T-300 / T-375
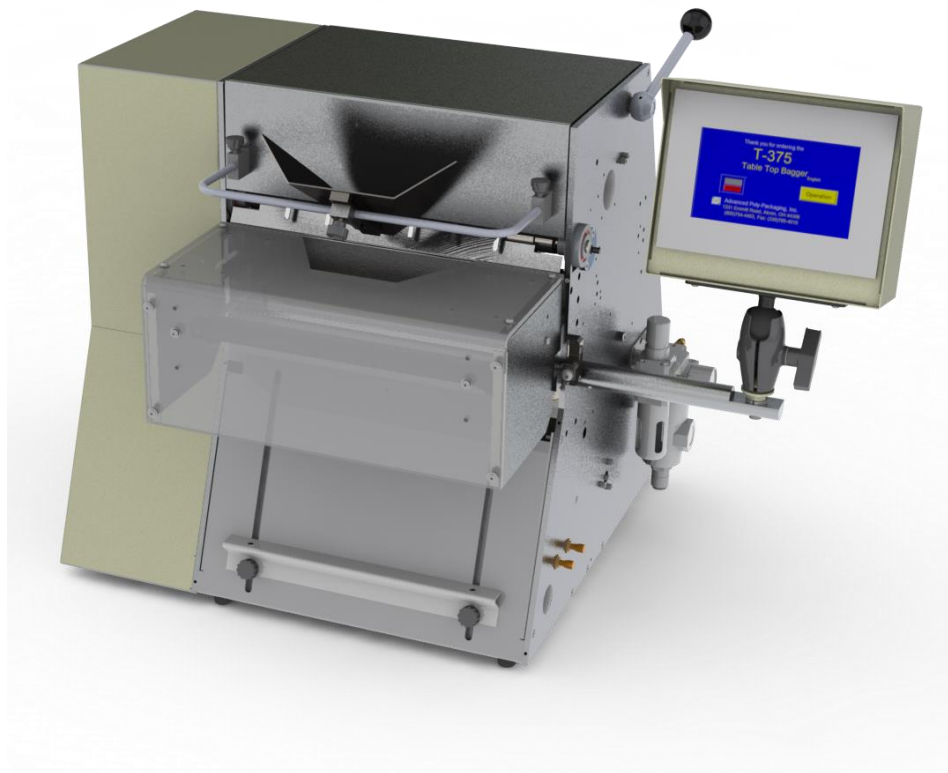# Table Top Bagger™

Operation Guide, Version 4 Revision D
Setup, Operation and Parts Manual

Advanced Poly-Packaging, Inc.

Acknowledgments

Written By: Charles Tolbert, updated by David Kolinski-Schultz
Reviewed By: Stuart Baker

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Limited Warranty and Disclaimer

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Chapter 1: Introduction

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1.1 Welcome

Thank you for upgrading your packaging facilities with the T-300 or T-375 Table Top Bagger from Advanced Poly-Packaging, Inc.! Our equipment, materials and services are designed to take your packaging capabilities to the next level. Where labor reduction and fast changeover are important, the T-300 / T-375 provides a reliable bagging solution by using pre-opened bags on rolls, manufactured by Advanced Poly-Packaging, Inc. The T-300 / T-375 can package various industrial, medical, molded and food products. With bag sizes that range from 2" x 3" to 11" x 16" and mil thickness from 1 mil to 4 mil, we hope the T-300 / T-375 will meet all of your bagging needs.

Note: As this manual is used for both machines, there are certain sections that only pertain to the T-300 or T-375. These sections are labeled for your convenience.

Note: Bag size availability varies by machine type. For more details, please contact an Advanced Poly Bag Sales Representative.

1.2 Overview

The T-300 / T-375 Table Top Bagger is designed to lower your packaging costs with high speeds, versatility, reliability, and simplicity.

High Speeds: Indexes, opens, seals, and tears off a bag at high speeds. Actual packaging speed depends on bag size, equipment options, product characteristics and loading method.

Versatility: Bags virtually any product including fasteners, hardware, injection molded parts, kits, crafts, foods, medical devices and more. Runs bags produced from LDPE, LLDPE, HDPE, Foil, Polypropylene, Tyvek™ and various barrier films. The T-300 / T-375 Automatic Tabletop Bagger/Printer™ is ideal for short runs where product, bag size or print changes are performed in minutes.

Reliability: Crafted from the highest quality components and materials to withstand the most rigorous manufacturing environment, sturdy mounts and rugged frame guarantee long life and usefulness with minimal maintenance.

Simplicity: A user-friendly, menu-driven touch screen program allows operators to set up the bag, options, and auxiliary equipment, save the settings in memory, and recall those settings for repeat runs.

1.3 Standard Features

The T-300 / T-375 is equipped with the following standard features:

T-375 Next Bag Out Printer: The T-375 is equipped with the APPI patented method of printing the next bag out in the bagging sequence. This feature prevents the mislabeling of pharmaceuticals, prescriptions, and other high cost items. Next bag out printing also allows the part number or other printing information to be changed for every bag without waste. *NOTE: This feature does not apply to the T-300.*

Energy Conservation and Component Saver: To extend its life and conserve energy in your plant, the T-300 / T-375 is programmed to sequentially shut components down when not in use for extended periods. Electric current to the heater bar will discontinue and place the T-300 / T-375 in Stop mode during a preset period of nonuse. Air flow can also be shut off to preserve compressed air. Finally, a screen saver is provided to extend the life of the touch screen.

Pass Code Protection: As an option, setting screens can be protected from alteration by unauthorized individuals. Once turned on, this function acts as a "screen save" feature. A timer causes the pass code screen to be displayed after a preset period of nonuse. Factory settings are protected by a Level 1 pass code and should only be accessed by authorized maintenance personnel.

Predetermining Counter: Preset the T-300 / T-375 to stop after a predetermined number of bags have been packaged. Set the quantity of finished bags to complete a work order or fill a shipping container. Once the work order is complete or the container is full, the T-300 / T-375 stops to alert the operator to begin the next work order or to push aside the box to begin filling another. Pressing the **Reset** button on the screen resets the counter and starts the bagging operation with minimum delay.

Totalizing Counter: Reset this counter at the beginning of each shift or day to record packaging production over a period of time.

Maintenance Counter/Chart: Periodically check this counter (total machine cycles) to determine preventive maintenance / component inspection intervals for inspection / maintenance criteria and intervals.

Continuous Strip Option: Leave bags connected in an "endless" strip or a predetermined number of strips of sealed bags.

Twin Seal Option: Change the sequence of operation to place a second seal on each bag, parallel to the first, to improve the integrity of the bag.

Communications Port: Allows for auxiliary communications.

Anti-Jam Device: During the loading and sealing operation, this device will detect obstructions and automatically reverse the pressure bar and discontinue the cycle operation if a blockage occurs.

Auxiliary Automatic Operation: Integrates automatically to vibratory counters, scales, and other infeed equipment.

1.4 System Integration
The T-300 / T-375 is specifically designed for hand-loading. However, limited automatic operations may be available.

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

1.5 Available Options
Although the T-300 / T-375 is equipped with many "built-in" options, various auxiliary options and equipment can easily be added for special purpose packaging. The following options may be purchased from Advanced Poly-Packaging, Inc.

Bag Deflator: Quickly mounts to the sealer bar, squeezing the air from the bag while sealing. Sponge and Rubber loop types available.

BO-20 Bag Open Sensor: This option will detect whether or not a bag is blown open, or whether or not a funnel is inserted into the bag for validation that the bag is ready to receive product.

BO-30 Bag Opening Device: This device enters the bag with one or more "fingers" and pulls the bag open to a stop**.**

CF-10 Counting Funnel: This funnel counts parts as they pass through the funnel for automatic cycle operation. A variety of optical frame or single beam sensors are available depending on the product.

Compartment Seal Option: Seals the bag twice to create two separate compartments within the same bag.

E-Stop: This option can be used to stop the cycle operation of the T-300 / T-375 and possibly other auxiliary infeed or outfeed equipment purchased with the T-300 / T-375.

FS-10 Flat Seal: Fingers enter the bag just before sealing to reduce wrinkles and increase the quality of the seal.

Funnels: The T-300 / T-375 comes with a universal adjustable funnel, but various size funnels can be purchased. APPI provides free product evaluations to determine proper funnel sizes and configurations.

LC-10 Light Safety Curtain: If funnels are removed, APPI highly recommends the addition of this option to prevent injuries. This option, when activated, prevents inputs to valves that cause the seal bar to activate. Additionally, the stepper motor stops when blocked.

LS-10 Load / Support Shelf: Provides support for heavier packages when dropped into bag. Sizes: 10", 15" or 20" long.

PT-10 Partition Table: Stainless table sits on top of the bagger to help build kits

PB-20 Dual Optical Palm Buttons: This option decreases the possibility of injury to hands and fingers. The operator must touch two optical buttons simultaneously to actuate seal bar.

QC-10 Quick Roll Change: Have an extra bag shaft and chucks with a roll of bags ready to go to reduce the time between rolls of bag.

TS-10 Trim Seal Assembly: Trims excess film from the bag above the seal to enhance the appearance of the package. Great for retail products.

Twin-Seal^{TM}: Seal the bag a second time, 3/8" from the first seal, for additional bag integrity.

Twinax/Coax Communication Port: An available option for the customer who has an IBM® AS/400® environment. In addition to communication with an IBM® AS/400® environment, the Twinax/Coax communication port acts as an EBCDIC to ASCII converter, with no additional configuration necessary.

ST-10 Adjustable Cart: Versatile table with features for table top baggers. Height adjustable for sitting or standing operations. Castors allow for mobility within in a plant. Lower shelf with tote to store bagged products or extra rolls of film. Powder coated finish to match bagger.

SS10 Stainless Steel: Upgrades major components to stainless steel for food or medical applications.

SP10 and SP20 Spare Parts Kits: Replacement parts kits for common and uncommon wear items.
NOTE: Other options may have been added since the date this list was printed. Please call APPI for additional or custom options pricing.

1.6 Using This Manual

This manual will function as one manual for both the T-300 and the T-375. Some sections of this manual will only apply to the T-375 while other sections of this manual will only apply to the T-300. These sections will be properly noted. If you have purchased the T-375, your bagger includes a printer.

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 T-300 / T-375 Table-Top Bagger.

- 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 Contact Information

To better serve your bagging needs, call **(330) 785-4000** or toll free **1-(800) 754-4403** for convenient service solutions, Monday through Thursday, 9:00 AM to 5:30 PM EST, or Friday 9:00 AM to 5:00 PM EST. For technical assistance with current machinery, ask for **Service**. To order spare parts for your system, ask for **Parts**. To order auxiliary equipment for your current system, ask for **Machine Sales**. To place an order for bags, ask for **Bag Sales**.

You may also contact any of these departments by email:

Reach Service at Service@advancedpoly.com

Reach Parts at Parts@advancedpoly.com

Reach Machine Sales at MachineSales@advancedpoly.com

Reach Bag Sales at Bagsales@advancedpoly.com

For general inquires: Sales@advancedpoly.com

Or visit us online at www.advancedpoly.com

In order to provide the best service possible, please have model and serial number ready.

1.8 Warranty Registration

This section must be completed and returned to Advanced Poly-Packaging, Inc. to register the T-300 / T-375 for Warranty Protection.

Serial Number:

_____

(Serial Number located on the back panel)

Company Name and Address	Contact Name(s) / Title(s) / Phone Number
_____	_____
_____	_____
_____	_____

Please email, fax, or mail this page to:

Service Manager
Advanced Poly-Packaging, Inc.
1331 Emmitt Road
Akron, OH 44306
USA

Fax # (USA) 330-785-4010

Email the information above to: service@advancedpoly.com

Chapter 2: Getting Started

Chapter Summary

Safety, Risks

Installation Procedures

Air and Power Requirements

Data and Power Cable Requirements

Assembly / Minor Adjustments

Air and Power Hookup

Main Power

Bag Threading

T-375 Ribbon Threading

Cycle Operation

Increasing Tension

Note on Adjustments

2.1 Chapter Summary

This chapter describes procedures to receive and set up the T-300 / T-375, including uncrating instructions, environmental, air and power requirements, and assembly instructions. Additionally, this chapter describes risks and required safety precautions, how to turn on the T-300 / T-375 and how to properly thread bags through the machine.

2.2 Safety, Risks

Many safety features have been included in the mechanical, electronic, and pneumatic systems of this machine. Despite these safety precautions, operators may receive lacerations, minor burns, or crushed or broken bone injuries if they come in contact with any moving components. Improper use, improper adjustment 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 the 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 move bagger without assistance, or without supporting the weight of the machine. Attempting to move the machine without assistance could cause severe injury to the operator and / or damage to the machine. APPI offers several optional accessories that can reduce the risk of injury during machine relocating. These accessories include carts, motorized height adjustment components and stabilizing bars.*

- *CAUTION: Ensure that any machine relocations allow for sufficient movement of the operator. Improper machine relocations 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 temperatures 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: 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: 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 crush, 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.*

- *CAUTION: Use only parts supplied or approved by Advanced Poly.*

2.3 Installation Procedures

The T-300 / T-375 is transported as a single unit in a custom crate designed to protect the machine during shipment. It is shipped completely assembled.

Unpacking: After removing the stretch wrapping, disassemble the crate as needed using the appropriate tools. Then, transport the T-300 / T-375 to the operating location using a cart.

CAUTION: Do not attempt to lift the T-300 / T-375 from the carton without first cutting all sides open. To prevent injury, do not attempt to lift the machine without assistance. APPI recommends lifting the unit with a pneumatic lift cart, or hoist specifically designed for lifting equipment of this weight.

Operating Environment/Location: The T-300 / T-375 should be placed in an area free of excessive heat, moisture, dirt, and dust. Operating room temperature should range from 50 to 100° Fahrenheit (10 to 37.7° Celsius). Choose an operating location considering traffic flow, availability of bag supplies and supply of product to and from the bagger.

2.4 Air and Power Requirements

Power Requirements: Provision must be made for 110 VAC, 60 Hz line current with ground (220V/50 HZ may have been supplied based on electrical requirements). The full load current for the T-300 / T-375 is 10 Amps.

CAUTION: A qualified electrician should ensure that the T-300 / T-375 power outlet is properly grounded, voltages are as required and amperage capacity is sufficient.
NOTE: APPI recommends a dedicated 20 Amp circuit for the T-300 / T-375.

Air Requirements: At least 2 CFM free air is required, regulated to 60 PSI (4.13 Bar). Air should be dry and oil-free.

NOTE: Running the T-300 / T-375 at a higher PSI setting than 60 PSI (4.13 Bar) will cause excessive wear and may cause damage to components on the machine or parts being packaged. The anti-jam function may also be adversely affected.

2.5 Data and Power Cable Requirements

You must supply all data and power cables or wireless cards for your printer application.

Data and Power Cables Ethernet cables do not require shielding, but all other data and / or power cables must be fully shielded and fitted with metal or metallized connector shells. Unshielded data and power cables may increase radiated emissions above the regulated limits. To minimize electrical noise pickup in the cable:

> • Keep data and power cables as short as possible.
> • Do not bundle the data and / or power cables tightly with the power cords.
> • Do not tie the data and / or power cables to power wire conduits

LPT: recommended 6' (1.83 m) long cable, 10' max (3 m). USB: 16.4 ft (5 m) max.

CAUTION: The printer data and power cables should NEVER be plugged back in to the printer head while power is on. All power should be disconnected in the printer; power off, unplug, and turn the power switch on to allow the components still holding power to discharge current, then plug in the data and / or power cables.

CAUTION: Some Main Logic Board components may hold a residual electrical charge after power is removed. If not properly dissipated, the discharge may cause damage to the print head and MLB components. (The data cable is attached to the MLB).

CAUTION: The printer data and power cables are attached to the MLB, which is where the formats are stored. Plugging the cable in with the power ON could corrupt saved files.

2.6 Assembly / Minor Adjustments

The T-300 / T-375 may require some minor adjustments to the funnel or chute. Two knobs, located on either side of the chute U bracket, can be loosened, and pushed in or out to allow for chute angle adjustment. The chute should be positioned approximately 1/2" from the top of the bag when the bag stops in the loading position. Adjust as required and tighten the knobs.

CAUTION: The seal bar should not come in contact with the funnel during sealing. Raise the funnel to avoid contact. To avoid injury, do not operate the T-300 / T-375 without a funnel, guard or covers properly positioned.

CAUTION: APPI offers a variety of funnels and chutes. You may need to add guarding to prevent operators from reaching in, around or under the guard or funnels.

CAUTION: To avoid injury, do not reach underneath guards while the machine is plugged in.

2.7 Air and Power Hookup

This section describes how to hook up air and power to the T-300 / T-375.

NOTE: A qualified electrician should ensure that voltages are as required, amperage is sufficient, power outlets are the required 115 VAC and power outlets are properly grounded before hooking up the power. If the unit is not properly grounded, it will produce a shock and will not function properly.

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The air supply should be fed to the T-300 / T-375 with 3/8" ID flexible tubing. This tubing affixes to the coupler adapter (quick disconnect not provided). Connect the air to the regulator by holding the regulator firmly in one hand and pushing the airline connector on the male regulator connector. After connecting air, the regulator should be adjusted so the gauge reads 60 PSI (4.13 BAR). Insert the T-300 / T-375 power cord into an 110VAC, 60Hz, grounded power outlet.

2.8 Main Power

The Main Power Switch is located on the side cover of the machine. To turn the T-300 / T-375 on, turn the switch clockwise from its vertical OFF position to its horizontal ON position. Next, turn the two rocker switches to the ON position. The green Power light on the touch screen will illuminate and the Introduction screen will be displayed. The Introduction screen will only appear for a few seconds until automatically changing to the Bagger Operation screen or Main Menu. See Figure 2-4

2.9 Bag Threading

Remove the top cover of the machine, unlatch, and raise the upper roller assembly. Then, remove the bag roll shaft from the rear of the machine. Loosen one of the knobs located on the chuck that secures the roll into position. Mount the roll of bags, center the roll onto the bag roll shaft and secure the bag roll into position with the chuck. Make sure the roll is going in proper direction, with the loose web of bags falling over the rear of the roll. Thread web under the idler roll and then over the steel driven roller.

The bag web should be centered under the air nozzle. Lower the upper roller assembly, lock the rollers into position using the handle, and replace the top cover.

Threading diagrams based on the possible configurations of the bagger and the options ordered are provided at the end of this chapter. See Figure 2-1 and Figure 2-2

CAUTION: Roller "fingers" may be sharp. To avoid injury when reaching into the T-300 / T-375, ensure that you do not come in contact with the roller "fingers."

NOTE: The roller guides are for fine adjustments only, after proper tracking has been achieved. If not tracking properly, the web of bags may "ride" up the side of the guides causing the bags to fold over.

2.10 T-375 Ribbon Threading

Remove the top cover of the machine and lower the entire printer mechanism by opening the latch. Remove the empty spool from the enhance ribbon take-up and replace with new ribbon so that the ribbon pays off in the clockwise direction. Thread the ribbon under the metal sensor bracket, making sure it stays over the metal block. Continue threading the ribbon over the print head and then over the upper center metal roller. Thread the ribbon under the static brush then onto the ribbon take-up spindle. The ribbon has two sides: a shiny side (Mylar) and a ribbon side (matte finish). The matte finish side should be in contact with the bag if threaded properly. Replace the print head assembly by lifting it close to the print roller. Center the print head over the bag and latch the locking mechanism. Turn the upper take-up ribbon spool to advance the ribbon to ensure that both the ribbon take-up spool and ribbon payoff spool turn freely without the ribbon breaking prematurely. See Figure 2-3

2.11 Cycle Operation

If all prior installation procedures have been performed properly, the T-300 / T-375 should be in its operating location with air and power connected. All guards, funnels and covers should be securely fastened and in position.

Locate the foot switch (if you are running the machine with a foot switch) and plug the foot switch into the rear foot switch connector. On the Touch Screen, go to **Main Menu>Tech Assist> (Enter Level 1**

Passcode)>Bagger Factory>Perf Registration and toggle between Foot Switch and Guard to select operation mode. *NOTE: Foot Switch will only operate when machine is toggled to "Foot Switch".* Press the foot switch to index one bag through the "nip" rollers. One bag should index, blow open and stop between the pressure bar and the heater bar. You may also use the guard switch or simply press the **MC** (**Manual Cycle**) button on the touch screen to cycle the machine. See Figure 3-61.

*NOTE: If the T-300 / T-375 is not up to temperature, the machine will not cycle unless the **RUN / SETUP** button is toggled to the SETUP position.*

If the web of bags breaks prematurely, further adjustments will be required. See Chapter 4 for troubleshooting. If one bag indexed through the machine, press the foot switch a few times more. Each previously indexed bag should detach completely from the web of bags. If the bag is not indexing and/or stopping or not tearing off properly, see Chapter 4 for settings adjustments and troubleshooting.

NOTE: The web of bags may track right or left for a few feet until "settled" on the web path. The roll of bags or the roller guide may require readjustments or realignment after the first few feet of bags are indexed.

NOTE: If bags were delivered with the T-300 / T-375 or the size of the bags were known to APPI, the T-300 / T-375 may be ready to run. Therefore, few changes to bag settings may be required.

2.12 Increasing Tension

To improve bag alignment, increased web tension may be required. You can increase tension by loosening one of the chucks that hold the roll in position on the shaft and pressing it inwards, toward the center of the roll of bags. Then, tighten while pressing inward. This increases drag on the roll of bags, increasing web tension. Also, if the bags pay off too much when the web advances, increasing drag will prevent bags from paying off excess film. For Table Top models only, the chucks have fabric to help grip the roll of bags. If fabric is worn, it will not provide enough friction to the bag rolls. Replace fabric as needed. See Figure 2-4.

2.13 Note on Adjustments

Upon receipt, it is not unusual for the T-300 / T-375 to be out of alignment due to shipping and excessive handling. Unless physically damaged, the bagger will function properly after minor adjustments are accomplished. Read Chapter 4 for information on adjustments of the T-300 / T-375.
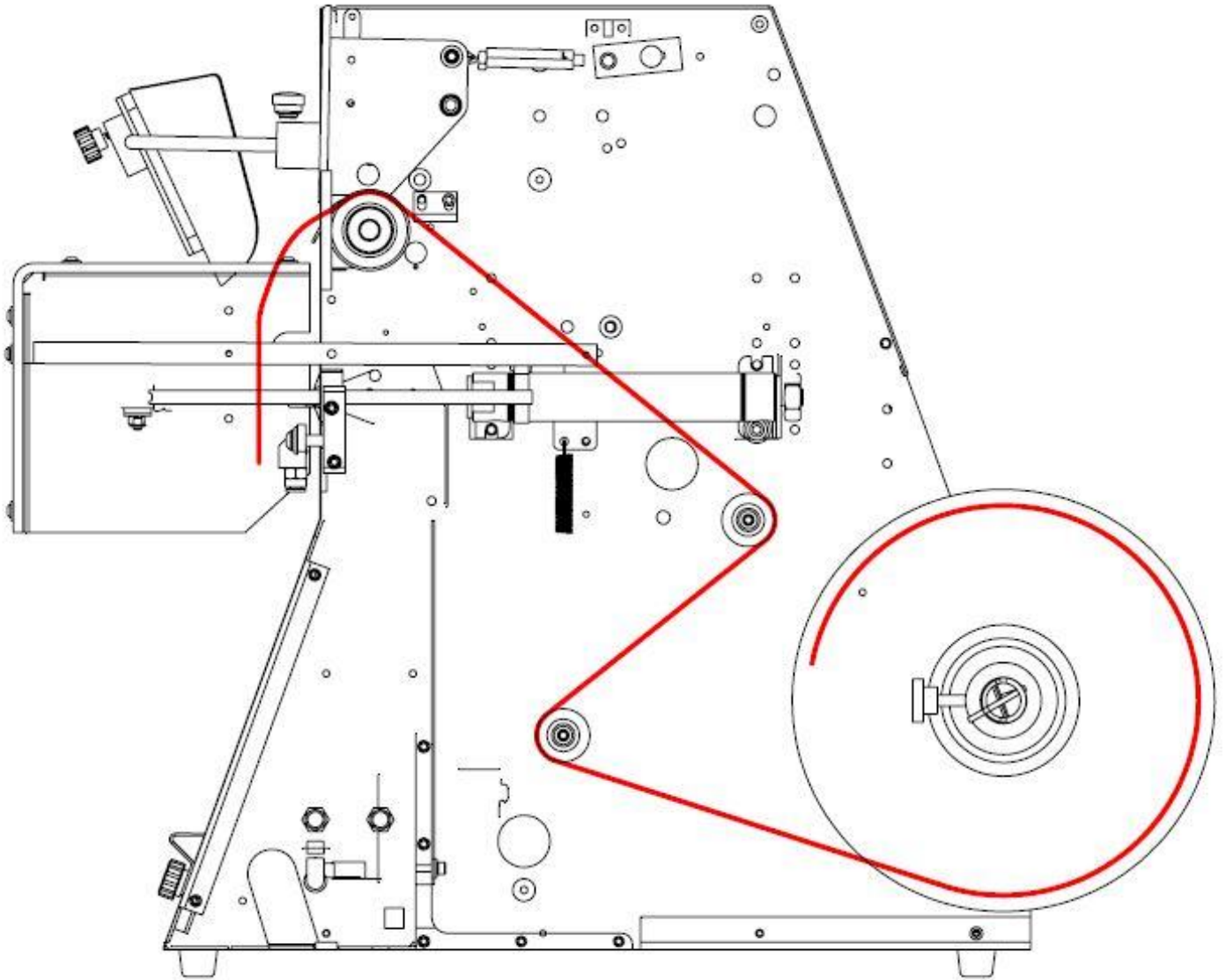
Figure 2-1

Figure 2-2

Figure 2-3

Figure 2-4

Main Power

Bag Chucks

Foot Switch Plug
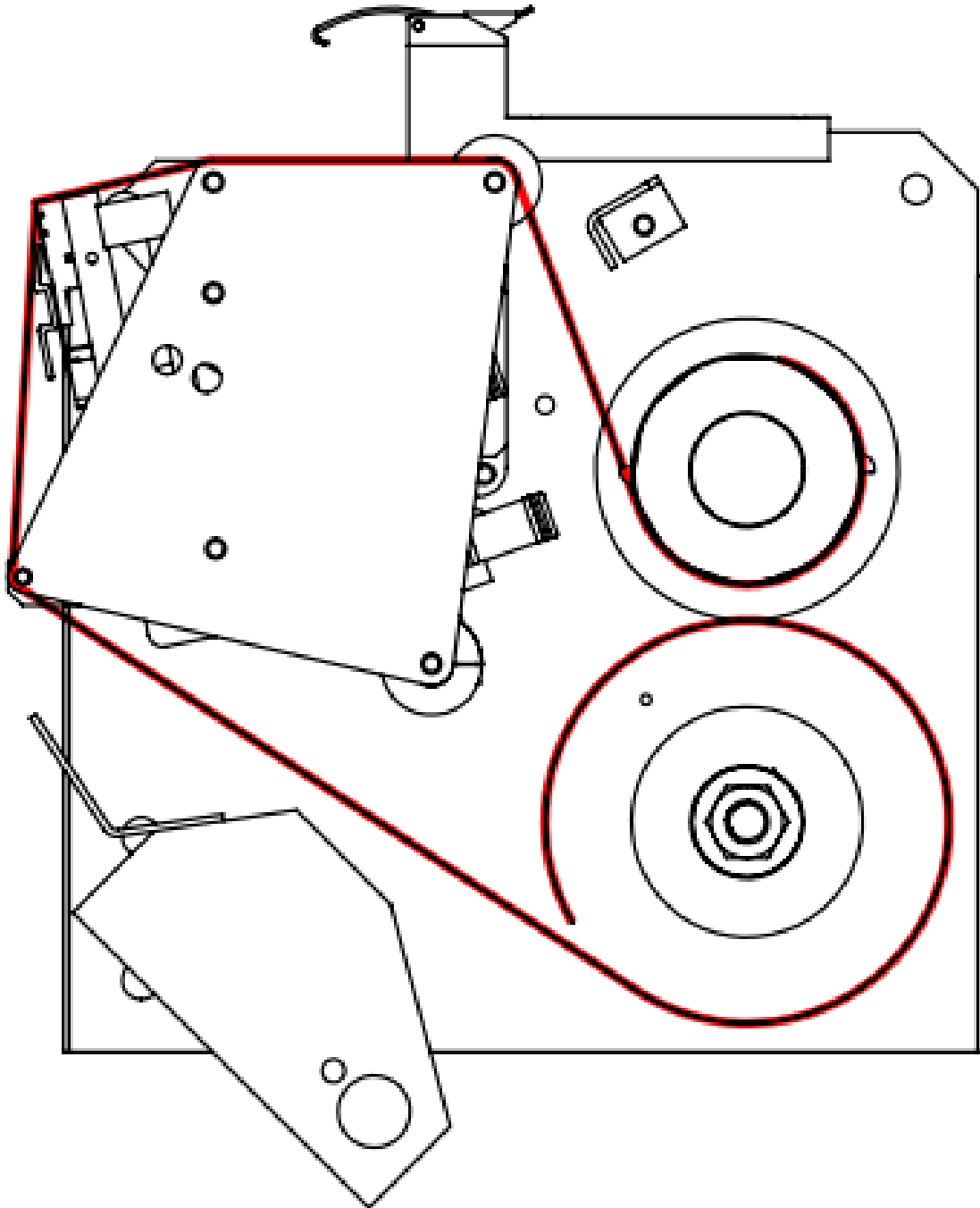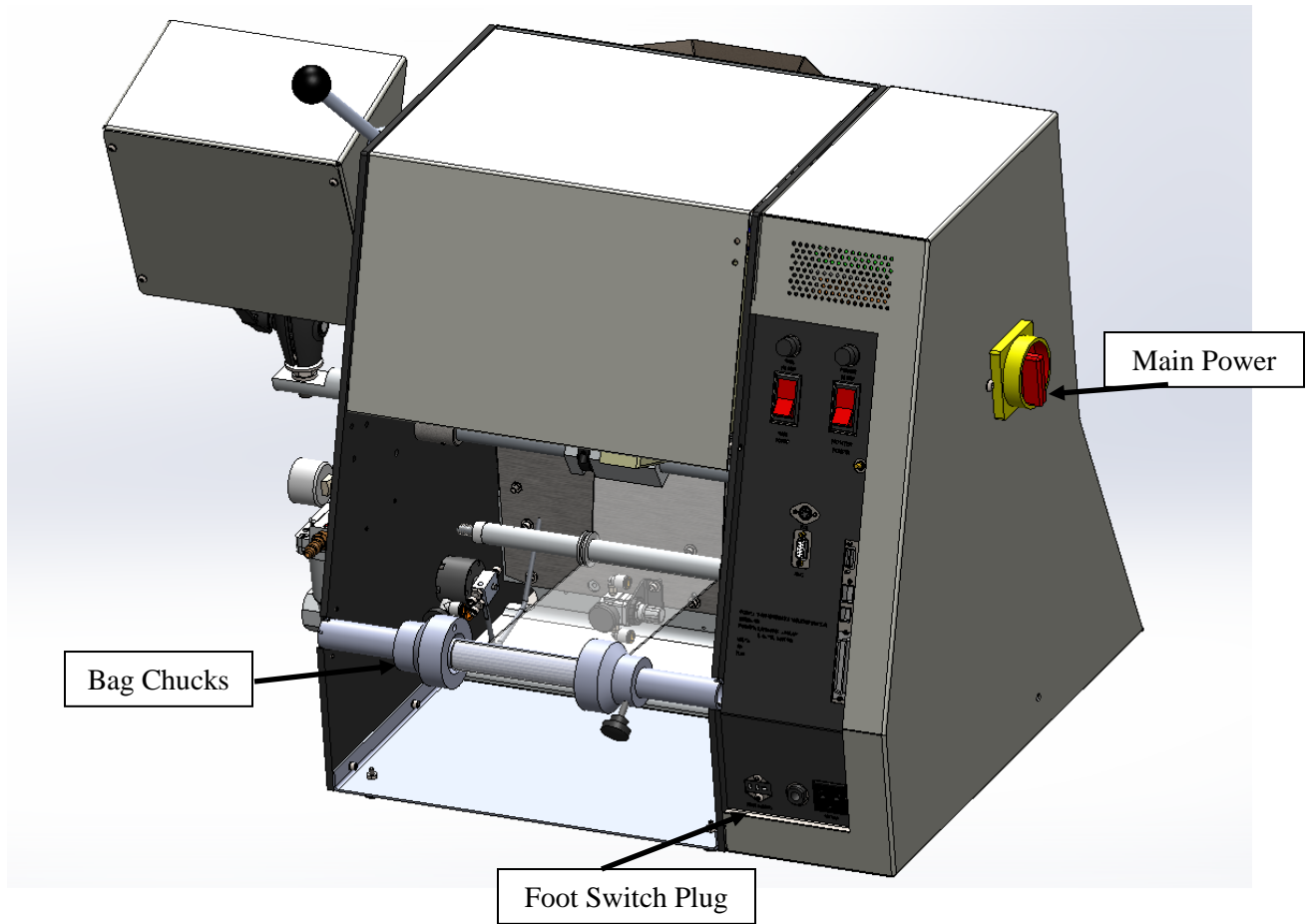
Chapter 3: Touch Screen Operation

3.1 Chapter Summary

This section describes the identification, operation, and adjustments of the touch screen program.

3.2 Touch Screen Specifications / Features

Screen, Resolution	7", 800 x 480 pixels, 65,536 TFT Colors
Features	Real time clock, recipes, USB
LCD	65,536 colors, TFT
Memory	11.6 MB
Communication	RS232C
Touch Key Resolution	Free, Analog
Languages	English, Spanish, French, German, Italian, Japanese, Chinese, Korean
Dimension	215 x 156 x 42 mm
Back Light	White LEDs (No maintenance)
Power Supply	24V DC, 0.2A
Protection (Front)	IP65
Conforming	CE, UL, cUL

CAUTION: Do not attempt to reprogram the PLC or touch screen. Doing so may cause an unsafe operating condition. Doing so will also void the warranty. Additionally, do not change the DIP switch settings.

3.3 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. Blue is used as a background or text-only color, which when pressed typically does nothing.

Yellow: Menu buttons which will take you to other areas in the program.

Green: Setting buttons used to change settings or mode of operation.

Red: Stop, off functions or warning messages.

3.4 Introduction Screen

When the T-300 / T-375 is turned on, the Introduction screen is displayed. The Introduction screen is a welcome screen, and it contains a button that will take the operator to the Operation screen. See Figure 3-1. When turned on, the machine will be in Stop mode.

3.5 T-375 Operation Screen

If you purchased the T-375 Table Top Bagger, the T-375 Operation screen will be displayed when the **Operation** button is pressed. See Figure 3-2.

The T-375 Operation screen is provided to function with the pass code function of the machine and is initially accessed from the Introduction screen. If the pass code function is enabled, the touch screen will default to the Operation screen after a preset amount of time has elapsed. This function prevents unauthorized operators from making setting changes that could affect the operation or performance of the unit. Since no settings are displayed on the Operation screen, the operator cannot change settings unless a pass code is enabled.
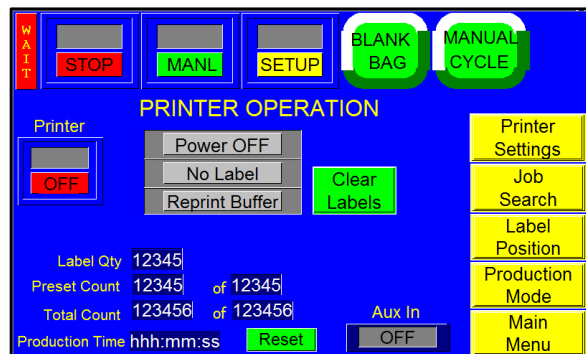
Figure 3-1

Figure 3-2

When the pass code function is active, the operator must enter the Level 2 pass code to access the Main Menu. Without this pass code, the operator will be restricted to the Operation screen. If the LED on the **Main Menu** button is green, access to the Main Menu is granted. If the LED is red, access to the Main Menu is denied, unless the pass code is entered.

NOTE: Contact APPI Technical Support if the pass code is unknown. APPI will describe how to gain access to the Password Setup Screen to view and change the codes. For more information on the pass code function, refer to the Password Setup section 3.36 in this chapter.

The Operation screen features several LEDs that indicate the status of the printer and illuminate and change during various stages of operation:

- **Power OFF**: This indicator can display "Power Off," "Self-Test," "Ready," and "No Ribbon" during various stages of operation. When Power Off is displayed, the printer is disabled. Self-Test is displayed when the printer is performing a test. Ready is displayed after self-testing or during startup if an error does not exist. "No Ribbon" is displayed when the printer runs out of ribbon.
- **No Label / Labels**: Indicates whether or not a label has been downloaded.
- **Reprint LEDs**: Indicate whether or not the Reprint function (when the printer is continuously printing a preset number of labels) is on, off or buffering.

Printer **ON / OFF**: Press button to turn label printer on or off.

The **Clear Labels** button can clear the downloaded label format or the label format that is recalled from stored memory.
Label Qty: Displays the number of labels printed for that job.

Preset Count: 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: 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 the **Reset** button to set this time to zero.

Press the **Manual Cycle** button to cycle the T-375. Press the **Blank Bag** button to index the next bag without printing a label.

3.6 T-300 Operation Screen

If you purchased the T-300, the T-300 Operation screen will be displayed when the **Operation** button is pressed. If the pass code function is enabled, access to the Main Menu and the rest of the touch screen program will require the input of a pass code. This prevents unauthorized operators from making setting changes that could affect the operation or performance of the unit. See Figure 3-3.
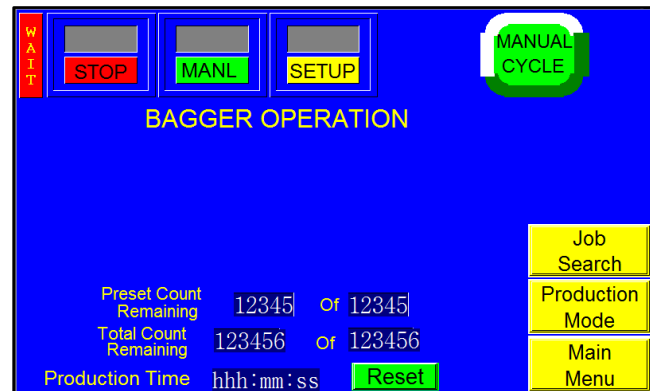
Figure 3-3

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 the **Reset** button to set this time to zero.

Job Search: Press to access the Job Search Screen. See section 3.28 for complete description.

Production Mode: Press to access the Production Mode Screen. See section 3.31 for complete description.

3.7 Main Menu

The Main Menu is initially accessed from the Operation screen and allows the operator to quickly navigate to other areas in the program. The T-300 (Figure 3-4) and the T-375 (Figure 3-5), each have a separate Main Menu Screen.

The yellow buttons located in the center of the Main Menu screen are menu command buttons. Pressing a menu command button changes the screen currently displayed on the touch screen. Press the corresponding menu command button to access another screen. Menu buttons appear throughout the touch screen program and are normally located on the right side of the screen.

NOTE: The Printer Setup Button appears when the Printer has been activated on the Options Enabled screen.

Mode toggle buttons are located at the top of many screens:

- **START / STOP**: This button controls the operation mode, the mode that allows the equipment to cycle. Toggle this button to START to begin operation. Toggle this button to STOP to stop operation.

Figure 3-4

Figure 3-5

- **MANL / AUTO**: This button can be toggled to enter the machine into either Automatic or Manual mode. Automatic mode allows the machine to cycle automatically. Manual mode requires the operator to press the **Manual Cycle** button, Lexan Cover, or foot switch to cycle the machine.

*Note: The foot switch has to be setup on the Perf Registration Screen. Go to **Tech Assist > Bagger Factory > Perf Registration** and toggle between Foot Switch and Guard to activate. When one is active, the other is not. See Figure 3-61*

- **RUN / SETUP**: This button can be used to deactivate functions and allow cycling when the heater bar is not up to temperature. Toggle this button to SETUP to stop counters, production

  NOTE: Setup Mode stops counters, production timers and auxiliary signals so the equipment can be operated independently. Toggle this button to RUN to allow continuous operation.

Ready / Waiting LED: Displays "Ready" when the temperature of the heater bar is within the range of acceptance. If "Ready" is displayed in the top left corner of the screen, the bagger is ready for full operation. "Waiting" is displayed when the bagger is not at temperature. If "Waiting" is displayed, operation will be paused, unless the bagger is in Setup mode.
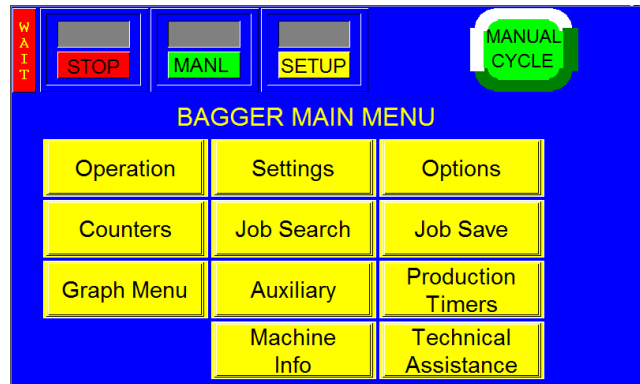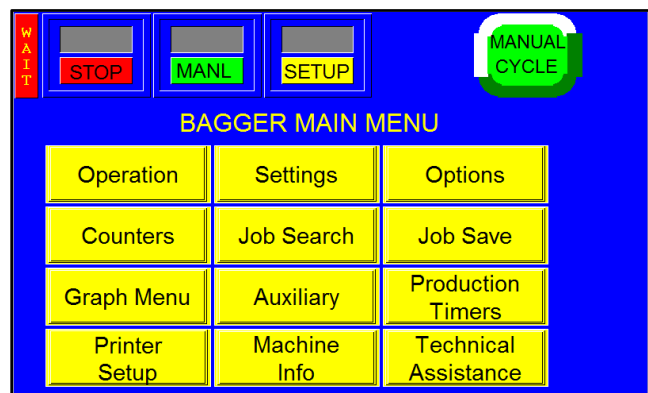
3.8 Bagger Settings Screen

The Bag Settings screen allows the operator to access, view, and adjust the basic machine settings. Bag size, thickness and product characteristics affect these settings. See Figure 3-6. Once set, the operator may save the bagger settings, along with the options settings and auxiliary settings, for later recall. This screen also displays the current, last, and average bag length.
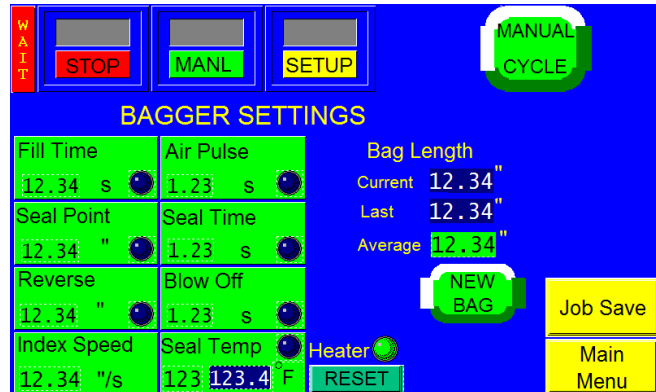
All settings will be entered numerically on a keypad. To adjust any value, press the green

Figure 3-6

button of the setting you would like to change and then enter the value on the numeric keypad, followed by the **ENT** button. If a setting is entered incorrectly, press the **CLR** button and enter the correct value. After changing a setting, test cycle the bagger several times to ensure the setting adjustment produces the desired results.

The Settings Menu is where most entries and machine operation settings will occur to setup a new bag size or to run a new product.

The **New Bag** button starts an internal program that calculates average bag length. This information is required so that if a perforation is not detected, the bag will still stop in the correct seal position. Press the **New Bag** button if bags are not consistently stopping at the correct seal point or after switching bag size. To manually adjust the average bag length, press the green numeric button under Average, enter a value on the numeric keypad and press the **ENT** button.

NOTE: A Feed Error message will be displayed if the perforation is not detected within the accepted bag length range. Once a Feed Error occurs, the bagger will restart to calculate bag length.

Bag Length displays: The current, previous, and average bag lengths are displayed on the Settings screen to assist with troubleshooting if the seal point becomes inconsistent and erratic. These values should be close to the actual bag length. Once the average bag length is calculated, the bag will index to this position even if the perforation is not detected.

1. **Fill Time**: In Automatic mode, Fill Time is the amount of time in seconds, the operator has to load the bag before seal operation begins. In this paced operation, increasing the Fill Time decreases the cycles per minute and allows more time for loading product. In Manual mode, Fill Time will delay the operation from starting until this preset amount of time has passed. To start operation immediately without any delay, set Fill Time to zero.

CAUTION: To avoid physical harm, DO NOT operate the equipment in Automatic mode if the funnel, guards, or covers are removed. Funnels should not be removed unless a Light Curtain, Palm Buttons or other approved safety device is installed. Guards should never be removed when the machine is operating.

2. **Air Pulse**: The amount of time, in seconds, that a burst of air will initially blow the bag open. Wider bags and heavier gauge bags require a longer burst of air to initially open the bag. Narrow and thinner gauge bags require less air to initially open the bag. Additionally, to increase the volume of air from the air pulse tubes, turn the Air Pulse valve counterclockwise. Turn the valve

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clockwise to decrease the volume of air. The flow control valves are located on the right lower side of the seal frame assembly.

NOTE: The volume of air set should be the minimum amount and duration required to consistently open the bag.

3. **Seal Time**: The amount of time, in seconds, the pressure (rubber) bar will remain touching the surface of the bag for proper sealing. Sometimes referred to as "dwell time", Seal Time is one of three critical components to obtain a strong seal (other critical factors include Seal Temperature and Seal Pressure). A typical value is 0.5 seconds for 2 or 3 mil film.

4. **Seal Point**: The distance, in inches, between the seal point position and the top perforation. The proper positioning of the seal on the bag varies due to bag size and product characteristics. Wider bags generally require greater sealing area than narrower bags. Additionally, bags packaged with bulky products require greater sealing area than bags packaged with thinner products. A typical Seal Point setting for a mid-size bag (5 x 7") would be 0.7". A typical setting for a large bag would be 1.5".

5. **Seal Temperature**: The temperature on the heater bar must reach the set temperature before full operation can begin. When the T-300 / T-375 is on, the heater bar element receives electrical current. The PLC pulses electrical current to the element until the temperature setting is reached. An amber indicator lamp illuminates on the Bagger Settings screen while the element is receiving current. The longer the light is illuminating, and the longer the "pulse" of current, the further away the machine is from the temperature setting.

If the temperature of the heater bar is not within a preset range around the preset Seal Temperature, "Waiting" will be displayed on the top left screen. If "Waiting" is displayed on the top left corner of the screen, the bagger can only be operated in Setup mode. When the heater bar is up to temperature, "Ready" will be displayed on the top left of the screen. If "Ready" is displayed in the top left corner of the screen, the bagger is ready for full operation. Maximum temperature is reached at 600 degrees Fahrenheit or 260 degrees Celsius, depending on the standard or metric units selected.

NOTE: After making adjustments, test the seal strength prior to beginning production. It is normal for the Seal Temperature indicator light to illuminate (pulse) during operation. As the actual temperature approaches the set temperature, the pulses will grow shorter and shorter. From a "cold" start, it takes approximately four minutes for the machine to reach the set temperature.

NOTE ON SEAL QUALITY:

Quality seals are achieved by making adjustments to Seal Time, Seal Temperature and Seal Point and by having the proper seal pressure. As an additional seal function, an adjustment of the Cool Time setting may also be required for heavy or bulky products. If too hot, the seal may separate when the pressure bar releases the bag after sealing. Cool Time is considered a factory setting and can be adjusted on the Bagger Factory Settings screen.

If after making necessary adjustments the seal quality remains insufficient, additional options may be purchased to enhance seal appearance, integrity, or strength. See Chapter 1 for a description of available options such as the FS-10 Flat Seal Assembly, TS-10 Trim Seal Assembly, BF-10 Bag Deflator and LS-10 Load Shelf. Wider seal bars are also available to increase the consistency of seals.

NOTE: Ensure regulator pressure is set to 60 PSI (4.13 BAR).

6. **Index Speed**: The speed, in inches per second, at which the bag will feed/index into position. For shorter bags, the speed can be significantly decreased (to 10"/sec, for example). For longer bags, the setting can be increased to the maximum setting of 25" per second. A typical setting is between 15 and 25"/sec.

7. **Reverse**: The distance, in inches, the rollers will reverse the bag to separate it at the perforation. The reverse action occurs while the pressure bar is gripping the bag to separate the bag being loaded from the bag above. For wider bags, the reverse distance may need to be increased. A typical setting is between 0.5" and 1".

NOTE: On the T-375, Reverse changes the print location on the bag. Refer to 4.13 Suggested Printer Settings for more information about print location settings. The Reverse speed may be changed in the Technical Assistance / Factory Settings screen.

8. **Blow Off**: The amount of time, in seconds, the air blower removes bags from the PTFE Anti-Stick Sealing Sheet. A blow off tube is provided to decrease the possibility of bags sticking to the Material. Increase the blow off time if bags are not falling from the machine. Typically, the blow off time is set to 0.15 to 0.25 seconds.

3.9 Options Menu

Several options can be added to the T-300 / T-375 at the factory and then set up and adjusted from the Options screen. If options were not installed at the factory, then N/A (Not Available) will be displayed to the left of each option button. Otherwise, the button will display ON or OFF, See Figure 3-7 and Figure 3-8.

NOTE: If options are added in the field, a pass code is required to enable use of the option. Contact APPI for pass codes. Options that have been purchased separately must be installed by specialized maintenance personnel.

Figure 3-7

To determine if a specific option has been activated, press the **Options** button from the Main Menu. The Options screen will be displayed. Press the button of the option you wish to view (i.e. Load Shelf, Trim Seal). If an information screen is shown with an **Activate Option** button at the bottom of the screen, then the option has not been activated yet. Contact APPI Technical Support for information on how to activate the option. If the option has been activated, a settings or operation screen will be displayed after the option button is pressed.
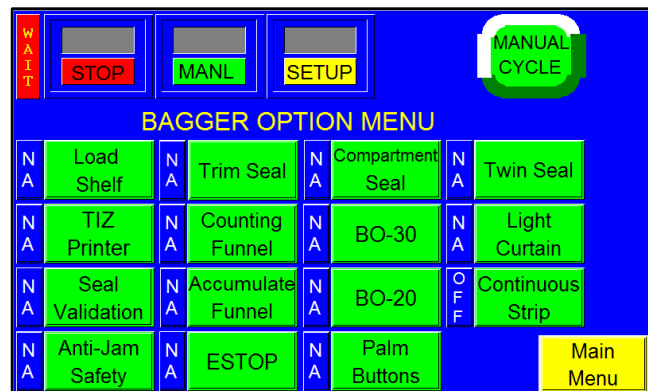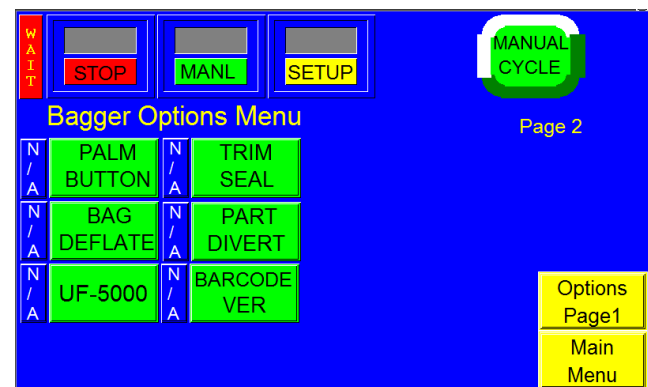
Figure 3-8

NOTE: If the option was purchased with the machine, the option will be activated at the factory. Otherwise, contact APPI Service Department for instructions on how to enable options.

The following sections describe the settings for optional equipment. If the T-300 / T-375 is not equipped with these options, please disregard these sections. Most of the listed options are not standard and must be purchased separately. Setting changes require testing prior to beginning production.

NOTE: Due to the specialized nature of some options or if your machine has custom programming, settings descriptions may not be included in this manual. Please contact APPI for special instructions.

3.10 LS-10 Load Shelf

This option is used to support bagged product. It prevents the bag from prematurely tearing off at the perforation once product is inserted in the bag. The Load Shelf allows bagged product to drop onto the shelf, relieving pressure on the bottom of the bag. See Figure 3-9.

The Load Shelf Setup screen allows the operator to control and adjust the Load Shelf and its settings. See Figure 3-10

ON / OFF button: Press to turn the Load Shelf on and off.

Tapper ON / OFF button: Press to toggle the vibratory tapper on and off. The tapper vibrates the Load Shelf and settles product in the bottom of bag.

Shelf Down Time: The length of time the shelf is in the down position. To adjust this setting, press the **Shelf Down** button, enter a value into the numeric keypad and press the **ENT** button. Increase the time for longer bags.

Figure 3-9

Figure 3-10

Vibration Rate: The bottom of the load shelf has a vibrating function that shakes the bag so that the product settles to the bottom. To set number of vibrations per second, simply touch the **Vibration Rate** button and enter the value into the numeric keypad and touch **Enter**. A typical setting is 1 vibration per second.

3.11 CS-10 Compartment Seal

This option seals the bag a second time to create two separate compartments within the same bag. This option is useful for separating different parts or protecting against damage caused from part contact. See Figure 3-11. Both seal points can be adjusted by the operator to increase or decrease the size of each compartment. See Figure 3-12

Fill Time: The amount of time, in seconds, auxiliary infeed equipment or an operator has to
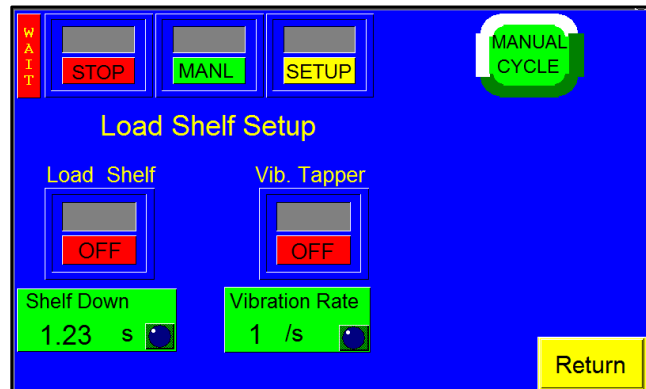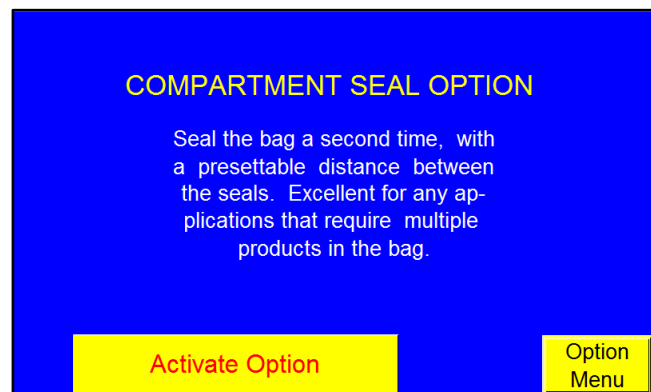
Figure 3-11

load product into the bag before seal operation begins.

To adjust this setting, press the **Fill Time** button, enter a value on the numeric keypad and then press the **ENT** button.

Seal Point: The position of the first seal, in inches, measured from the top perforation of the bag. To set the first seal point, press the **Seal Point** button, enter the value on the numeric keypad, and press the **ENT** button.

2nd Seal: The position of the second seal, in inches, measured from the top perforation of the bag. To set the second seal point, press the **2nd Seal** button, enter the value on the numeric keypad, and press the **ENT** button.
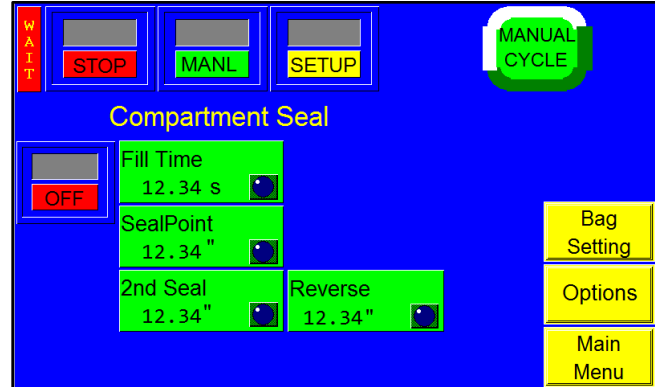
Figure 3-12

Reverse: The distance, in inches, the rollers will reverse the bag into the T-300 / T-375, while the pressure bar grips the bag, in order to break the perforation between bags. To adjust this setting, press the **Reverse** button, enter a value into the numeric keypad and press the **ENT** button.

Set the first seal point by pressing the **Seal Point** button and entering a value on the numeric keypad. Adjust the first seal point until the desired location is achieved. Then, turn the Compartment Seal option on by toggling the **ON / OFF** button to ON. Adjust the second seal point by pressing the **2nd Seal** button and entering a value on the numeric keypad. Adjust the value of the second seal point until the desired position is achieved. Both seal points can be adjusted by the operator to increase or decrease the size of each compartment. However, the larger object should be placed into the bag first.

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3.12 TS-10 Trim Seal

The Trim Seal option removes excess film from the bag above the seal to enhance the appearance of packaged products. The Trim Seal option is ideal for retail products. See Figure 3-13 and Figure 3-14

NOTE: To properly "trim off" excess film, the bag length may have to be increased to provide the required finished bag size. We recommend trimming at least 1.5" of film from the bag.

Figure 3-13

Seal Time: The amount of time, in seconds, the pressure (rubber) bar will remain touching the surface of the bag for proper sealing. To adjust this setting, press the **Seal Time** button, enter a value on the numeric keypad and then press the **ENT** button.

Cool Time: The amount of time, in seconds, the pressure bar is released to ensure the seal is cool enough to be torn off after the pressure bar and heater bar have come in contact with the bag. To adjust this setting, press the **Cool Time** button, enter a value on the numeric keypad and then press the **ENT** button.

Seal Temperature: The temperature the heater bar must reach before operation can begin. To adjust this setting, press the **Seal Temp** button, enter a value on the numeric keypad and then press the **ENT** button.

Trim Delay: The amount of time, in seconds, before the trimming assembly activates after the bag is sealed. To adjust this setting, press the **Trim Delay** button, enter a value on the numeric keypad and then press the **ENT** button.
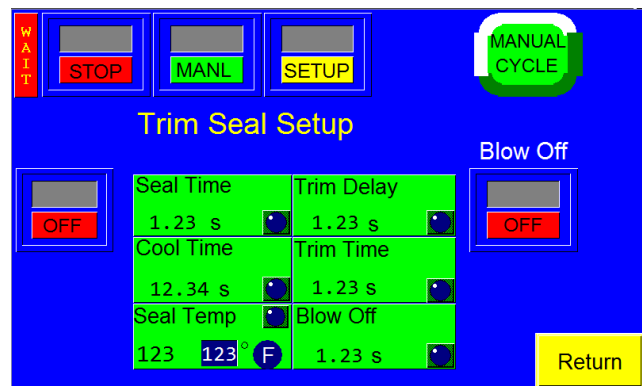
Figure 3-14

Trim Time: The amount of time, in seconds, the trimming assembly removes excess film from the bag. To adjust this setting, press the **Trim Time** button, enter a value on the numeric keypad and then press the **ENT** button.

Blow Off: The amount of time, in seconds, that the blow off tube will release a burst of air to remove sealed bags from the machine. To adjust this setting, press the **Blow Off** button, enter a value on the numeric keypad and then press the **ENT** button.

Press the **ON / OFF** toggle button to enable and disable the operation of the Trim Seal option. Adjust the settings featured on this screen until bags are trimming consistently.

NOTE: Operating the TS-10 option may cause production to decrease due to the additional time required for sealing and trimming. The normal trimming function increases maintenance required on the PTFE Anti-Stick Sealing Sheet, heater bar and cylinders.

NOTE: Valve # X indicates the Valve Station number assigned to this option. Valve #0 indicates that no valve is assigned to this option. The option will not operate unless a Valve Station number greater than zero is assigned.

3.13 TW-10 Twin Seal

Special programming is available to seal the bag twice, to increase the integrity of the bag. See Figure 3-15. The Twin Seal setting can be adjusted on the Bagger Factory Settings screen. To turn on the Twin Seal option, press the **Twin Seal** menu option and toggle the option ON. The second seal should be very close to the first.

NOTE: The Seal Point value on the Bagger Settings Screen may need decreased to allow space for two seals on the same bag.

NOTE: Weight of the product, special load shelves or other options, funneling and bag size will affect the operation of this option. Contact APPI Sales Support for more information.
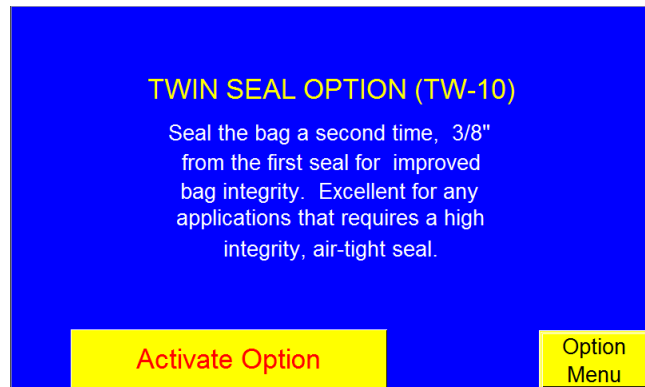
Figure 3-15

3.14 ES-10 E-Stop

This option can be used to stop the cycle operation of the T-300 / T-375 and possibly other auxiliary infeed or outfeed equipment. The E-Stop is useful for full systems that will run in an automatic operation. Multiple E-Stop buttons may be equipped. See Figure 3-16. One or more Estop buttons may be equipped.

If depressed, the Estop button will cut power to the drive motors, turn off air pressure or otherwise halt moving components within the system. However, due to the wide range of equipment options, E-stops may function differently from one system to another depending on the components and safety requirements requested. When the Estop is pressed, a message screen will be displayed.

Figure 3-16

3.15 LC-10 Light Curtain

This option is used as a safety device to avoid personal injury by ensuring that fingers or hands are not in the seal area during the cycle operation of the T-300 /T-375. This option disables air power when the active area is obstructed.

To enable the Light Curtain option, press the button labeled **Press to Enable**. Once enabled, you will not be able to disable the option without knowing the correct pass code. See Figure 3-17

Figure 3-17

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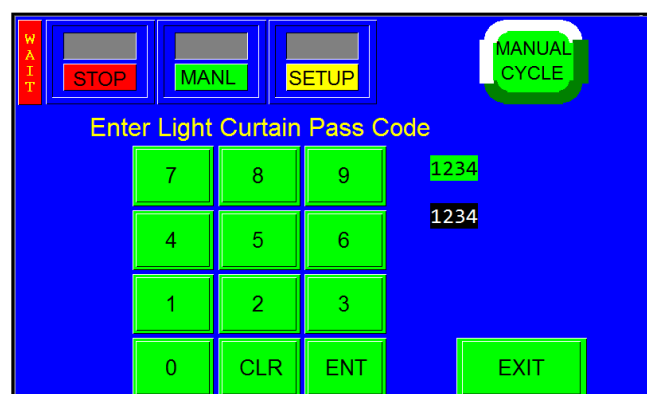
As an additional safety function, Automatic cycle mode is disabled when the Light Curtain option is activated. However, the foot switch input is not disabled when the Light Curtain option is turned on, so if the foot switch is pressed, the machine will cycle.
See Figure 3-18 for the following descriptions:

Figure 3-18

Mode SAFE / AUTO button: This button allows the operator to control how operation begins when the Light Curtain option is enabled. When this button is toggled to AUTO, the Light Curtain option can be used as a means of initiating the cycle operation of the bagger automatically after the Light Curtain sensing area is cleared. When this button is toggled to SAFE, cycle operation must be initiated manually using a foot switch or the **Manual Cycle** button.

Message ON / OFF button: If this button is toggled to ON, a message is displayed every time the Light Curtain area is blocked. The message tells operators to check for an obstruction. See Figure 3-19. Remove the obstruction to continue operation. If this button is toggled to OFF, a message will not be displayed when the Light Curtain area is blocked.

Figure 3-19

Min Time: In Automatic mode, Min Time is the amount of time, in seconds, the Light Curtain must be blocked for before the T-300 / T-375 can automatically cycle. To set Min Time, press the **Min Time** button, enter a value using the numeric keypad and then press the **ENT** button.

Fill Time: In Automatic mode, Fill Time is the amount of time, in seconds, before the machine cycles after the detection area is clear. For example, if the mode is set to Automatic and the Fill Time is set to one second, the machine will cycle only after the operator has removed his or her hands and after one second has elapsed. To set Fill Time, press the **Fill Time** button, enter a value using the numeric keypad and then press the **ENT** button.

Fault Delay: The amount of time, in seconds, the Light Curtain can be blocked before a warning message is displayed and machine operation is stopped. For operation to continue after a blockage occurs, the Light Curtain must either be unblocked or deactivated. To set Fault Delay, press the **Fault Delay** button, enter a value using the numeric keypad and then press the **ENT** button.

The **LC Count** is a function that counts how many times the Light Curtain beam has been broken before the bagger will cycle. For example, if there are three parts that need to be entered into the bag individually, set the **LC Count** to 3. The bagger will cycle once the beam has been broken for the third time.

To enable the Light Curtain option, press the **Press to Enable** button. Once enabled, the Light Curtain cannot be disabled without entering the correct pass code.
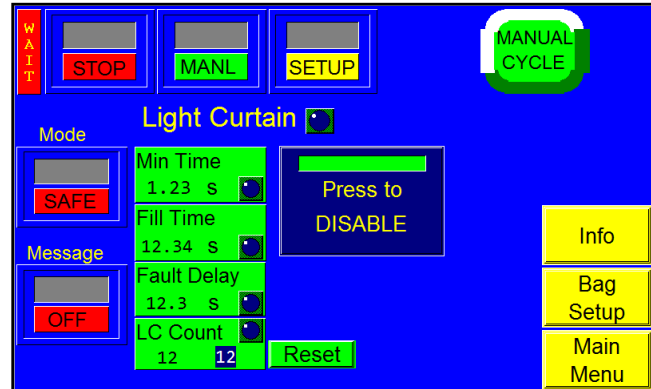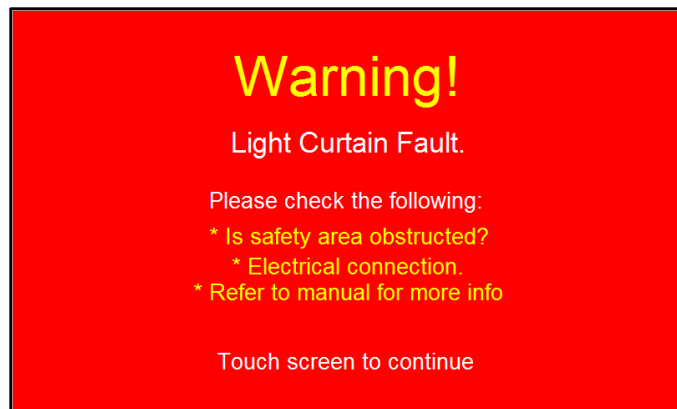
If a funnel or chute needs to be added that causes the Light Curtain area to be permanently blocked, and this funnel or chute also prevents the operator from reaching into the seal area, the Light Curtain can be deactivated. To deactivate the Light Curtain, press the **Press to Disable** button on the Light Curtain settings screen. A keypad will be displayed. See Figure 3-17. The special deactivation pass code must be entered on the keypad in order to disable this option. Contact the APPI Service Department for the pass code.

CAUTION: To avoid personal injury, do not attempt to disable the Light Curtain option unless a funnel is added that physically blocks the path to the heater bar.

CAUTION: To avoid injury, do not operate the T-300 / T-375 when funnels are removed. APPI recommends either the Palm Buttons or Light Curtain options to safeguard operators.

CAUTION: Do not attempt to reach under the guards for any reason. This may defeat the safety feature of the LC-10 Light Curtain option. The Light Curtain only deactivates the motor and seal/pressure bar when enabled and when the light curtain beam is broken from above the seal bar. Reaching underneath will place your hands or fingers in the seal area.

3.16 PB-20 Optical Palm Button

The Palm Button option can be used to cycle the machine instead of a foot switch. Two buttons, positioned on opposite sides on the machine must be *touched* simultaneously to cycle the bagger. If both buttons are not touched at the same time, or if one of the buttons is held while the other button is touched, the machine will not cycle. As an additional safety function, the Automatic cycle mode is disabled when the Palm Button option is turned ON. The foot switch input is also disabled when the Palm Button option is turned ON. See Figure 3-20.

Figure 3-20

3.17 CF-10 Counting Funnel

This photo optic, preset counting option is useful to automatically cycle the bagger when a preset number of parts have fallen through the funnel.

Photo optic eyes may vary depending on the product, so parts should be sent to APPI for testing to determine the correct components. Parts must have separation to be counted accurately through the eye. If two parts fall at the same time, they may be counted as one. Contact APPI Sales Support for additional options, programming, or operations for automatic infeed equipment. Refer to Figure 3-21 for the following descriptions.
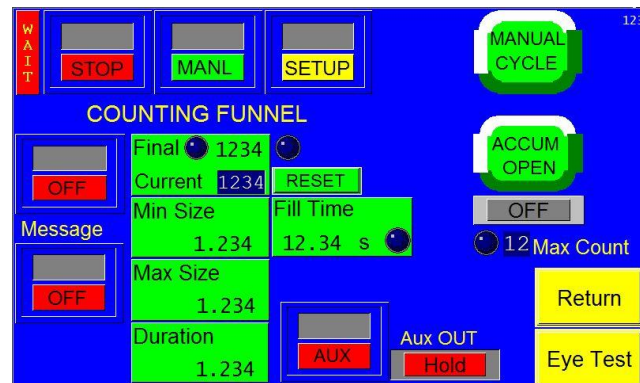
Figure 3-21

Final / Current: Final displays the total, preset count. Current displays the count the machine is processing. Press the green **Final / Current** button, enter a value on the numeric keypad and press the **ENT** button to adjust the final count. The Final LED will illuminate when the final count is reached.

ON / OFF button: Press to turn the Counting Funnel on and off. Press the **Reset** button to reset the count to the preset value.

Min Size: This setting affects how parts are counted and is used to filter scrap. Min Size can either be manually set by the operator or automatically set after an eye test is performed. If manually set, Min Size should be set to reflect the minimum size that can be counted as one part. For example, if the Min Size is set to 0.4, a part measured at 0.3 would not be counted, while a part measured at 0.5 would be counted as one part (assuming 0.5 falls below the Max Size setting). If automatically calculated, Min Size is 80% of the Min measurement. To adjust Min Size manually, press the green **Min Size** button on the Counting Funnel screen, enter a value on the numeric keypad and press the **ENT** button.

Max Size: This setting affects how parts are counted and is used to count connected parts or parts falling through the eye together as two parts. Max Size can either be manually set by the operator or automatically set after an eye test is performed. If manually set, Max Size should be set to reflect the maximum size that can be counted as one part. For example, if the Max Size is set to 0.8, a part measured at 0.6 would be counted as one part (assuming 0.6 is above the Min Size setting), while a part measured at 0.9 would be counted as two parts. If automatically calculated, Max Size is 160% of the Max measurement. To adjust Max Size manually, press the **Max Size** button, enter a value on the numeric keypad and press the **ENT** button. To adjust Max Size manually, press the green **Max Size** button on the Counting Funnel screen, enter a value on the numeric keypad and press the **ENT** button.

NOTE: If Min Size is set too close to the actual minimum test value, some parts may not be counted, causing over counts. If Max Size is set too close to actual maximum test value, one part may be counted as two, causing undercounts.

Duration: The length of the time (time out time) the eye does not take a measurement while reading a part. Press the **Duration** button, enter a value on the numeric keypad, and press the **ENT** button to adjust the value.

Message ON / OFF button: If this function is turned on, a message will be displayed when the final count is reached. This message will inform the operator to stop loading until the bagger is ready to receive the next batch. See Figure 3-22

Aux Out: The **Aux Out** button will display either READY or HOLD (or OFF if there is no auxiliary equipment). When Aux Out displays READY, the bagger is ready to drop bagged parts. When Aux Out displays HOLD, the bagger is still cycling.
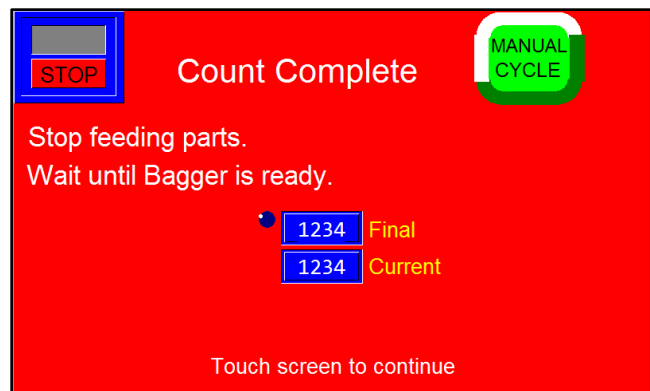
Figure 3-22

Max Count LED: Max Count is the maximum number of parts that can be in the funnel. When this maximum number has been reached, this indicator light will illuminate.
To manually open the accumulator and drop product into a bag, press the **Accum Open** button. Press the **Reset** button on the Eye Test screen to reset the sample values.

Parts Length Test (Eye Test): To ensure the accuracy of the count, an eye test must be performed. Press the yellow **Eye Test** button on the Counting Funnel screen to display the Eye Test screen and perform an eye test.

To start the Parts length test (Eye Test), turn the Counting Funnel option ON, go to the Parts Length Test Screen and press the **Reset** button. Toggle the **Start / Stop** button to stop then drop parts (samples) individually through the photo sensor / funnel. The Min and Max values will change as you drop parts through the eye. If

Figure 3-23

parts will be fed automatically, parts should pass through the eye as they would if feeding automatically. See Figure 3-23.
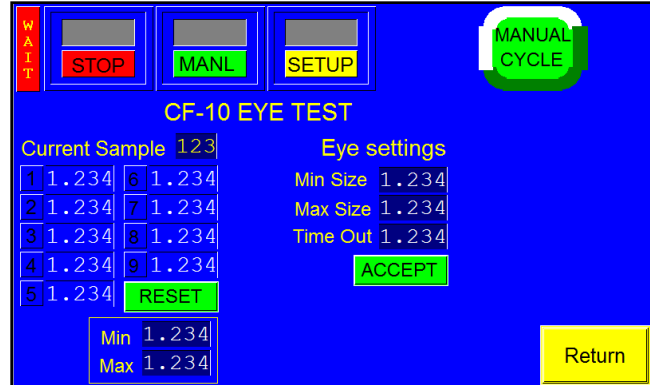
NOTE: While the Eye Test screen only displays the last nine part readings, there is no limit to the number of parts that can be used and tested during an eye test.

Min Size: The Smallest size recorded during a test.
Max Size: The largest size recorded during a test.

Time Out: This setting is automatically calculated based on the "sample" parts values and the eye test results. Time Out displays the period of time the eye does not take a measurement while reading a part. These settings will be set automatically based on the "sample" parts values. Settings can be fine-tuned by manually entering the settings.

Press the **Accept** button if the Min / Max values do not change after dropping many sample parts. If the Min / Max values continue to change, continue dropping samples until the values do not change. Once the values remain consistent, press the **Accept** button and return to the Counting Funnel screen. Test the settings by dropping one part at a time, ensuring that each count is a value of one. If not counting correctly, return to the Eye Test screen or change the Min / Max Size settings manually. If the eye is blocked for an extended period of time (parts jam), the machine will stop and a message will be displayed.

3.18 IF-10 Insert Funnel

The Insert Funnel is a special funnel that enters the bag so product does not contaminate the seal area or so the air can be shut off to facilitate proper loading. See Figure 3-24. The funnel enters the bag and remains in the bag until signaled with a foot switch or until signaled automatically by auxiliary equipment.

NOTE: A sensor input is required to confirm that the funnel is in the bag, prior to providing an auxiliary output. If the sensor does not detect the presence of the bag around the funnel, no signal output will be provided and the system will be halted.

Figure 3-24

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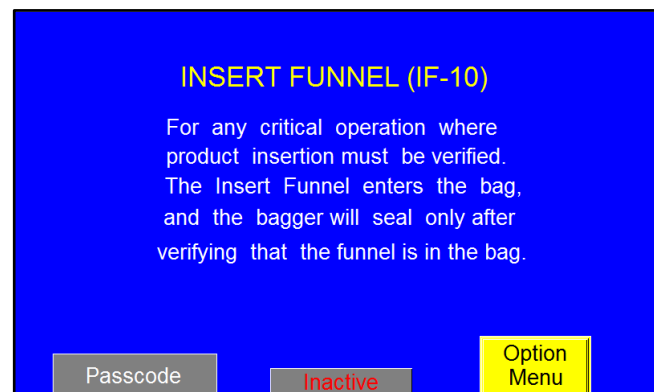
3.19 BO-20 Bag Open Detector

This photo optic, closed contact sensor detects the opening or presence of bag material. See Figure 3-25.This option will detect whether or not a bag is blown open or whether or not a funnel is inserted into the bag for validation that the bag is ready to receive product. The Bag Open Detector is valuable for an automatic operation to decrease the chance of product falling on the floor. To turn this option on, toggle the **ON / OFF** button to ON. See Figure 3-26 The Bag Open Detector screen features two LEDs:

- **Blocked**: Illuminates when the sensor detects a blockage.
- **Latched**: Illuminates to indicate the sensor detected the bagger is latched.

Detect Time: The time allotted for the sensor to detect the bag before stopping the machine.
Min Time: The minimum amount of time, in seconds, the sensor has to detect the bag. A message will be displayed if the bag fails to open.

3.20 BO-30 Bag Opening Device

This optional device enters the bag with one or more "fingers" and then pulls the bag open to a stop. The stop holds the bag open during loading and also validates that there is bag material present in the "gripper." Air can also be shut off at this point. See Figure 3-27.

There are several settings on the Bag Opener screen that alter operation: (Figure 3-28)
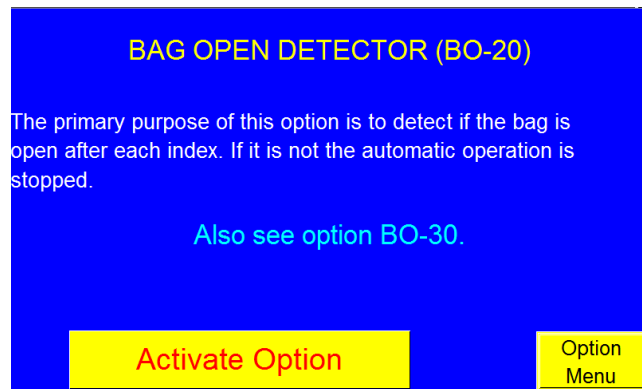
Figure 3-25
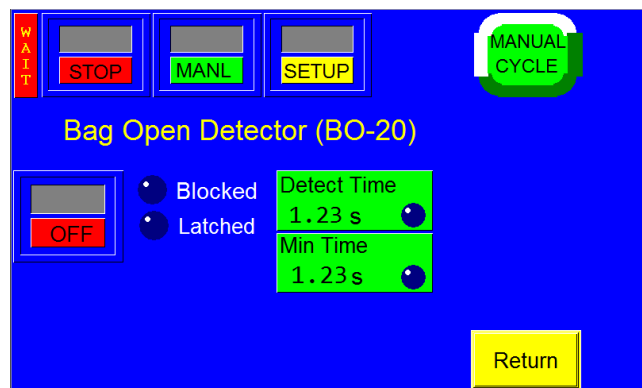
Figure 3-26

Figure 3-27

38
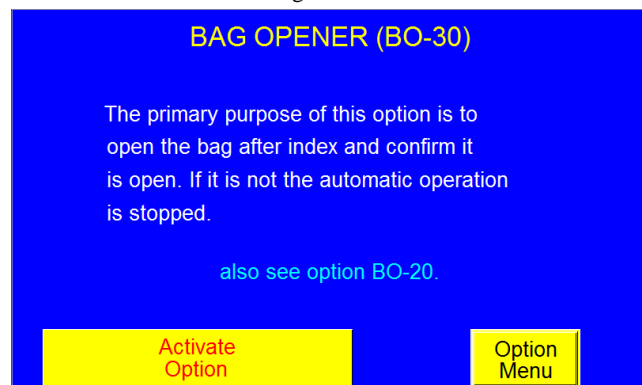
- **Down Delay**: The delay time, in seconds, before the fingers will attempt to enter the bag after the bag is initially blown open.
- **Close Delay**: The amount of time, in seconds, after the fingers have entered the bag before the fingers will pull the bag to the gripper point.

- **Ready Delay**: The amount of time, in seconds, it takes the fingers to cycle before the machine looks for an error.
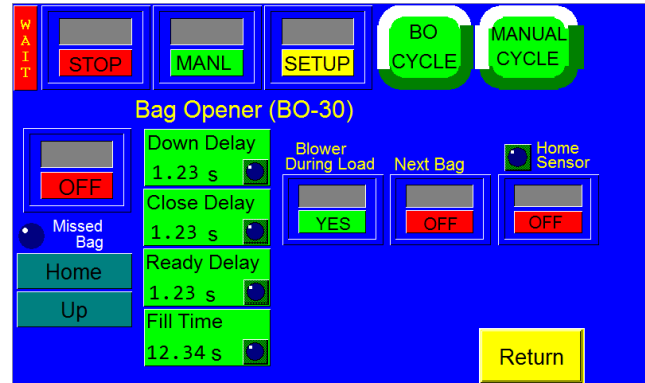
Figure 3-28

- **Fill Time**: The amount of time, in seconds, auxiliary infeed equipment or an operator has to load product into the bag before seal operation begins.

NOTE: It is very important that Ready Delay is set correctly, as the entire operation of the machine is affected by this setting. If Ready Delay is too short, the machine could drop the product before it confirms the bag opening. The bag will not be ready and an error will occur. If Ready Delay is too long, the machine will cycle slower and there will be a loss of production.

The **Next Bag** toggle button can be turned ON to automatically reject an empty bag and continue operation after failed attempts to open the bag. If this option is OFF and an error occurs, an error message will be displayed and the machine will not continue to another bag.

Blower During Loading: When this button is toggled to YES, air will be blown into the bag while the product is dropped. When this button is toggled to NO, the air will shut off after the bag is grabbed by the bag opener fingers.

Home Sensor: The T-300 / T-375 is equipped with a sensor that monitors the position of the bag opener fingers. If the sensor does not detect movement from the fingers during the appropriate times in the operation sequence, the home sensor LED will illuminate and an error message will be displayed. To turn the home sensor off and prevent the display of an error message, toggle the **Home Sensor** button to OFF. To activate the home sensor, toggle the button to ON.

Home / **Away** and **Up** / **Down** display the operation of the fingers. When the fingers are withdrawn, Home and Down are displayed. When the fingers are out and the product is in the bag, Away and Up are displayed.

Missed Bag LED: Indicates a Bag Opener Error. If the Next Bag option is on, the machine will move on to another bag and continue operation if this error occurs. If the Next Bag option is off, an error message will be displayed if this error occurs and operation will stop.

The **BO Cycle** button allows the operator to test cycle the Bag Opening Device alone, without initiating other equipment or the T-300 / T-375 seal operation.

3.21 Barcode Verifier

The verifier is on when the bagger is on and is always ready to use. The verifier feature can be turned off in the bagger option screen. The verifier still runs, but the bagger PLC ignores any signals from the verifier. It also never triggers the verifier to scan. See Figure 3-29
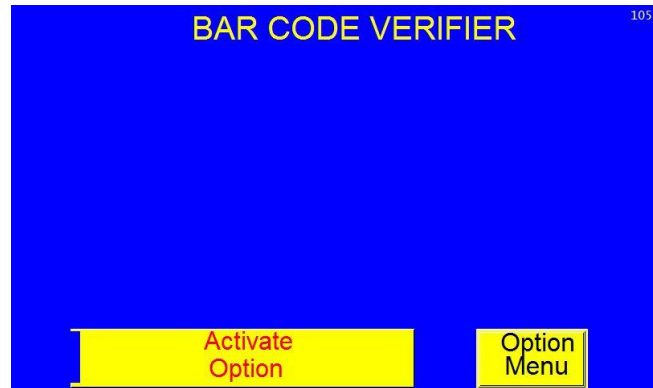
Next Bag Reprint (ON/OFF button on the screen). If this button is 'ON' and BCV records 'No Read' error after the first scan, second scan is triggered.

If still "No Read":
a) In Auto mode 'Label Reprint' is turned on, next bag is indexed automatically and same label is printed a second time. If 'Good Read', 'Label Reprint' is turned off and operation continues. If 'No Read', Bagger switches to Manual mode and 'No Read' warning screen is displayed. See Figure 3-30.
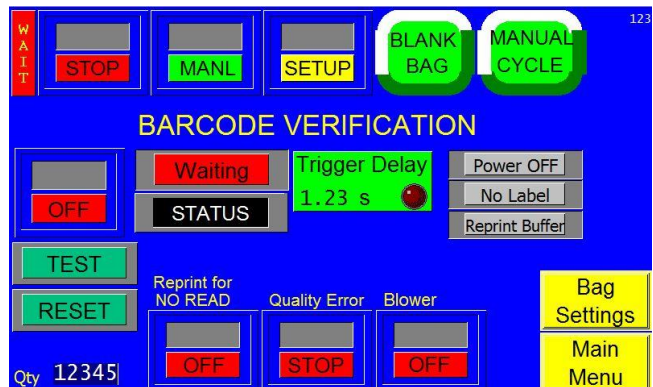
b) In Manual Mode, a warning "No Read. Touch screen to reprint label" is displayed before label is reprinted, See Figure 3-.

Figure 3-29

Figure 3-30

'Stop/Continue' button. If 'Poor Quality' is detected, select 'Continue' to ignore poor quality reading. Select 'Stop' to run the same sequence as 'No Read' in Auto mode. In Manual Mode, Quality Warning message is displayed: "Do you want to reprint? Press YES or NO to continue", See Figure 3-.

Blower ON/OFF button allows to stop the Blower during BCV setup.
If Read trigger signal is sent to BCV and there is no response (neither Good nor No Read) after 6 seconds, "BCV Not Responding" alarm message is displayed. See Figure 3.

This verifier will scan every bar code that is being printed on the bags. It will halt the bagger if the barcode is unreadable or of bad quality.

If the bagger is used with a PC connected to it, the same PC can be used for setup and monitoring of the verifier. The verifier can also be remote monitored via Ethernet.

Each bar code and its settings must be stored as a profile in a bank on the verifier. There are 16 banks. This means there can be sixteen active bar code profiles at any given time. The banks can be all different profiles, or some banks can have the same bar code, but different settings. For example, a UPC code may need different settings when it is being printed on different types of bags.

The settings and profiles can be saved in a file to be stored on a computer. These files can be saved and loaded at any given time. This would come into play if there is need for more than 16 bar code profiles to be saved.

The settings can be made into a scan sheet with instructions so the verifier can be set up without being connected to a PC. The settings can be downloaded and uploaded to and from the verifier like a PLC.

There can be more than one bar code on the bag, and the verifier will recognize them, as long as they are set up. They must all be visible to the verifier at the same time. If set up to do so, the verifier can stop if one or more of the bar codes are missing.

The verifier can read Datamatrix codes and grade according to the following standards:
- ISO/IEC15415
- ISO/IEC TR 29158 (AIM DPM-1-2006)
- SAE AS9132
- SEMI T10-0701
- Japanese Pharmaceutical Code quality verification
- ISO/IEC16022

Multiple Barcodes

The scanner can handle multiple bar codes simultaneously. The bar codes to be read have to be set up, and available at the same time from the banks. The bar codes must be set up in the label so that they are all visible to the verifier at the same time. This is setup in the PC software under *Reading*.

- Click **Codes to read.**
- Type in the number of codes in **Codes to read**.
- If **Allow Reduced Detection** is unchecked, the verifier will give an error if it sees less bar codes than is set in **Codes to read.**
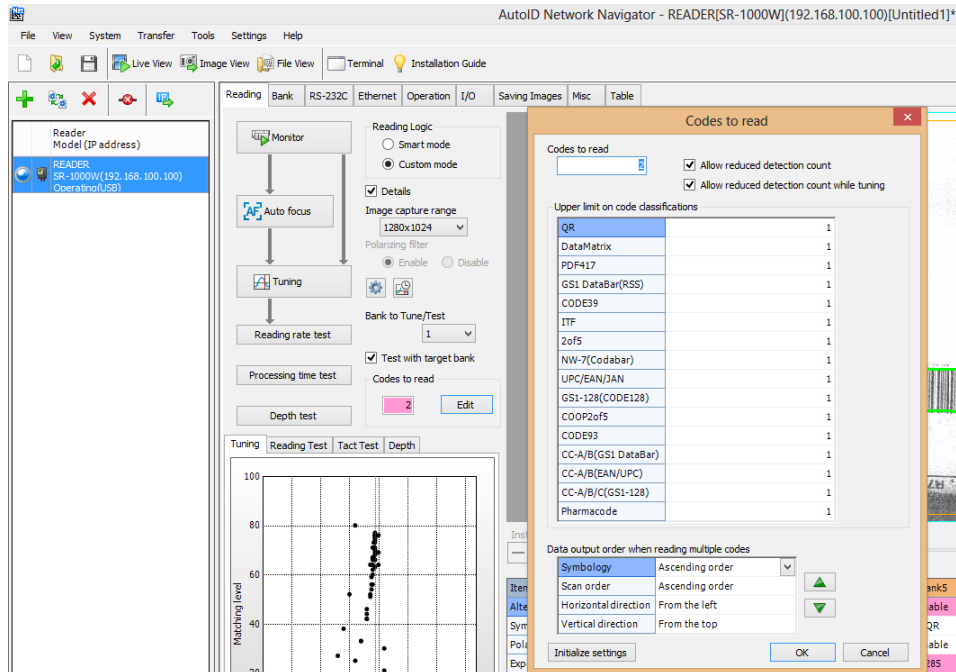
Label Design

Label design does not differ from "regular" labels except the bar code must be visible to the scanner at any time. This means that the label must be set up in such a manner that the bar code has to be outside the bagger. The bar code does not have to stay in the same place on different labels, such as left or right side on the bag; it just has to be visible.

Hardware/Software Installation Guide

Below are instructions for mounting, installing, and activating the Barcode Verifier.

Mounting to the Bagger

The Barcode Verifier will come already mounted from APPI. It will be connected to the bagger PLC from the factory.

Software Installation Guide

Software will be provided on a CD or a USB drive by APPI. It will install like any other Microsoft Windows software. Once set up, it will automatically detect the scanner when it is plugged into a USB port.

Tuning

PC Tuning

In the *Reading* screen, click **Bank to Tune/Test** to choose the Bank. Click Tuning. The process is automatic and will be saved to the Bank you chose.
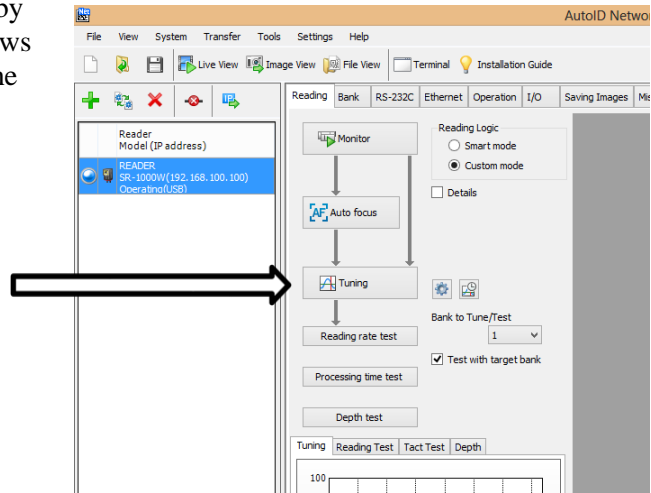
Verifier Tuning

To tune use the buttons on the top of the verifier to perform the Tuning. The process is automatic. When the verifier is done, select the data bank where the results will be saved.
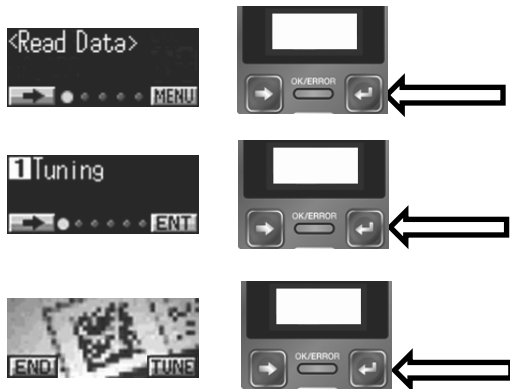
Standard PC Settings
The following are the standard settings that the verifier should be set to in the PC software. These settings enable the verifier to work with the T-375.

RS-232C
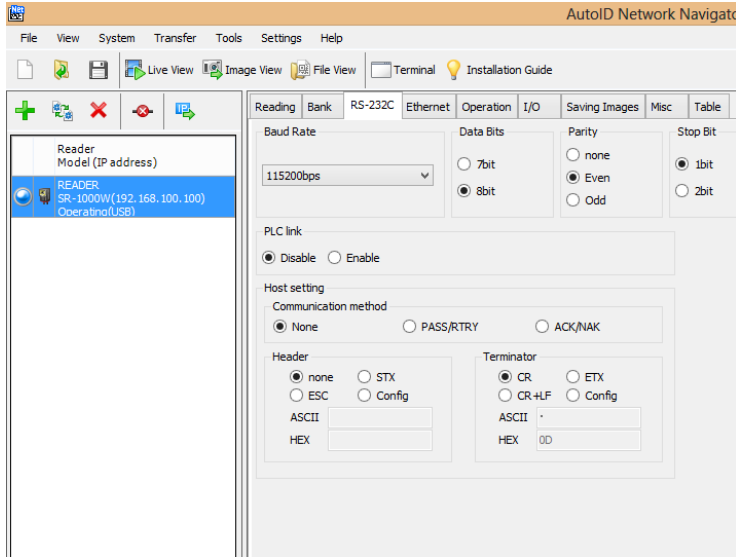
Ethernet

For Ethernet settings, the network information will be entered under the Ethernet tab.
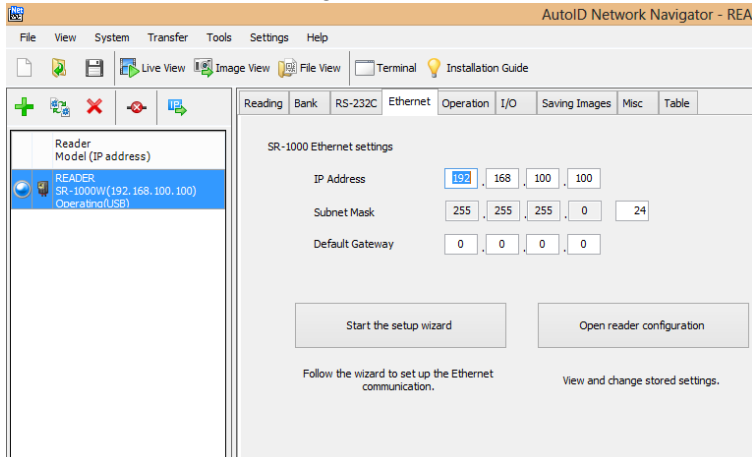
Operation

This setting is for 2D barcodes only. Verification Threshold can be adjusted and the operator can choose which standard(s) to verify by.
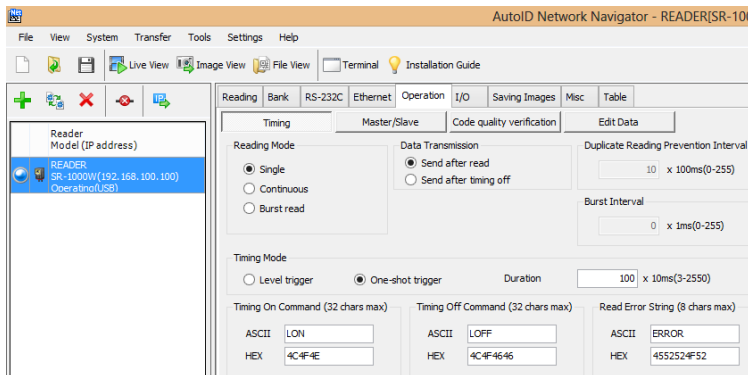
When saving scans, more data can be added on the screens here.
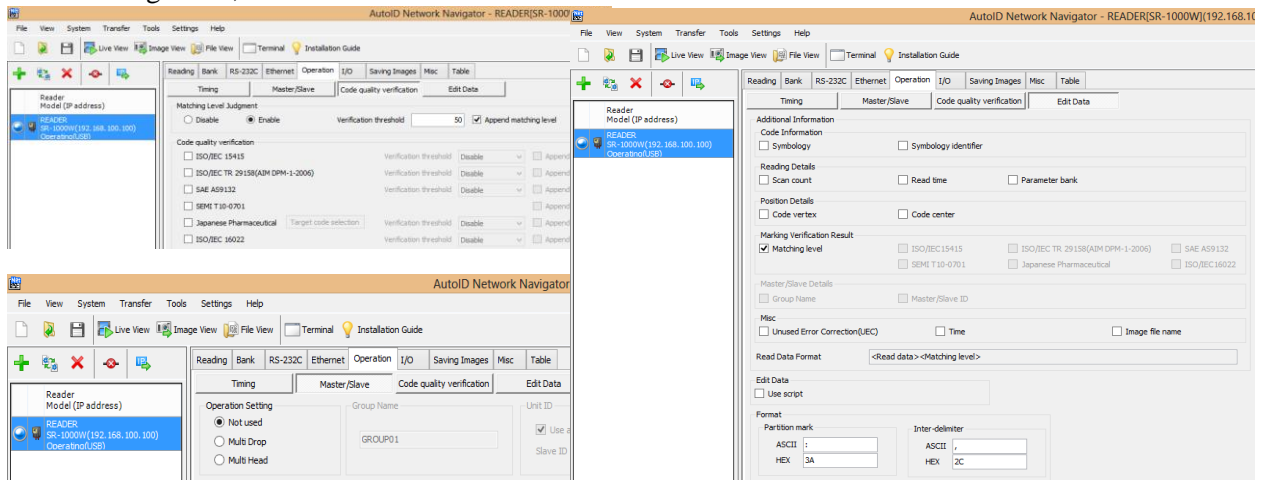
I/O
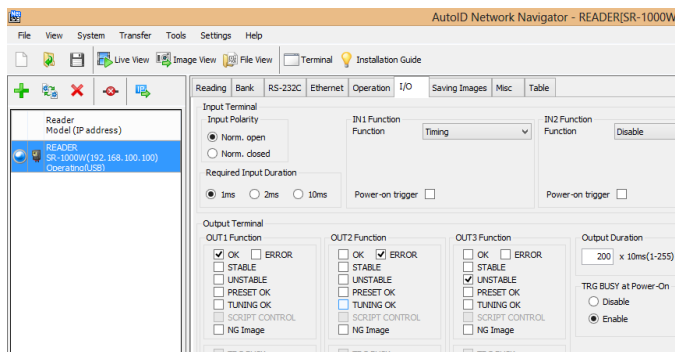
Saving Images

Misc.

Table

3.22 MV-20 Seal Validation

Seal validation is provided by adding additional components to detect failures or out of range condition for components that affect seal quality. See Figure 3-31.

To create a good seal and to confirm that each component required to obtain the seal is in range, three validations have been added to the T-300 and T-375 Tabletop Baggers. See Figure 3-32

- **Seal Temperature**: A secondary controller was added with an alarm output that alerts the operator when the temperature falls out of the set range in the temperature controller.

- **Seal Time**: Sensors were added to the seal bar to measure how long the seal bar is engaged to validate that the heater bar is extended within an acceptable time compared to the set Seal Time.

- **Seal Pressure**: A pressure sensor was added with an alarm output that alerts the operator when the pressure falls out of the set range.

Range: The range of variation from the Seal Time set point. The Seal Time must be set within this range for the machine to operate properly. To adjust the Seal Time range, press the **Range** button, enter a value on the numeric keypad and press **ENT**.

Typically, medical companies require seal validation as a secondary means to detect out of range conditions or to stop the operation when the condition exists. A message will be displayed if any of the three validation components are out of range. See Figure 3-33.

The pressure sensor may also be added to the T-300 / T375 to validate only pressure, without adding the other two components. For applications requiring this validation only, the bagger will not operate unless the sensor provides an output indicating that the pressure is above a minimum allowable setting.
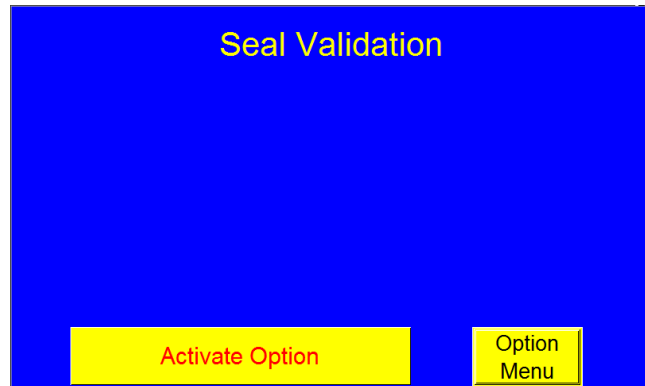
Figure 3-31
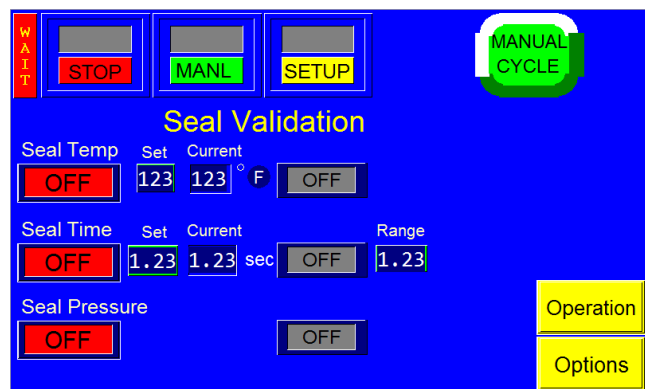
Figure 3-32

Figure 3-33

3.23 T-375 Printer Setup Screen

The Printer Setup screen provides access to all functions pertaining to the print location. To access the Printer Setup screen, press the **Printer** button from the Options screen or from the Main Menu, see Figure 3-34.

NOTE: It is highly recommended that all bag settings are adjusted from the Bagger Settings screen first while the printer is off. Bags should be feeding, blowing open, sealing, and separating properly before attempting to print on the bag.
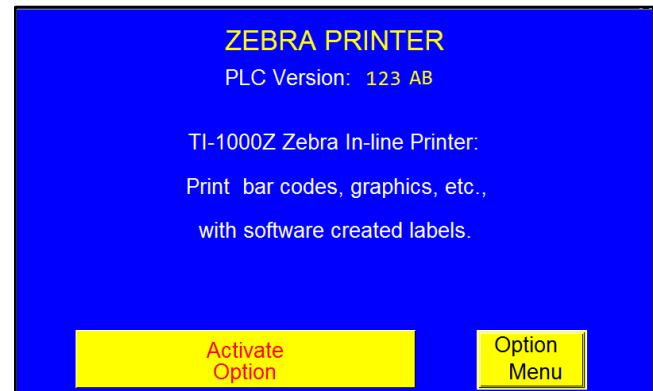
Figure 3-34

ON / OFF button: The printer **ON / OFF** button must be toggled to ON for the printer to operate.

Additionally, power to the printer must be turned on (The printer power switch is located on the rear panel, next to the main power button). When power is first turned on, it will take approximately 20 seconds for the printer to become active as it powers up through its diagnostics.

The Printer Setup screen allows for adjustment of settings that affect print quality (Index Speed and Darkness) and settings that affect print location (Reverse and Print Offset). See Figure 3-35.
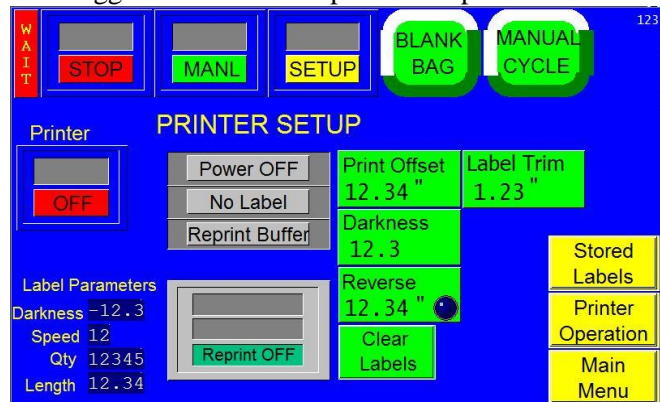
Figure 3-35

NOTE: Print position is achieved by trial and error. However, some tips are described in this section to achieve the best results.

Print Offset: This delay causes the print to be raised on the bag. However, if the Print Offset is too long, the printing may not occur in time when the bag is feeding into the loading position. Use the charts in 4.13 Suggested Printer Settings to set the bag length initially, then adjust the Print Offset to achieve the desired print location.

Darkness: Darkness can be set between 1 and 30. Darkness settings can be set in the label software but can also be overridden by adjusting the Darkness setting on the Printer Setup screen. Increase the Darkness setting to improve print quality. A typical setting is 20.

Reverse: The distance, in inches, the bagger will reverse to separate the bags at the perforation. The higher the reverse setting, the lower on the bag the print will start, down to the minimum distance required to prevent the bag from slipping out of the index roller. With smaller bags, Reverse must be set to the maximum distance required to print the next bag out. If not printing the next bag out, Reverse should be set to the minimum distance required to separate the bags. If Reverse is adjusted, the Print Offset setting may also require adjustment to properly position the print.

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Label Trim: Distance at the top of the label. When this portion of the label is reached, print head goes up while printer continues to print and rewind ribbon. This takes up some extra ribbon at the end of print to reduce wrinkles and to avoid ribbon sticking to the film. When label trim is set, the same distance must be added to the label length when the label is created in Label View, otherwise top portion of the label may not be printed.

NOTE: *In addition to the settings described above, print head pressure and print head alignment affect print quality. If, after adjusting print speed and darkness, the print quality does not improve, check to see if the operating pressure is a minimum of 60 PSI (4.13 BAR).*

NOTE: APPI resells several software packages, including LabelView, Zebra Design Pro and Bartender. If you are using other software, APPI may not be familiar with the specific settings available in your software. Refer to your software manual for print speed and darkness settings.

The Printer Setup screen features several rectangular indicators that display the printer's status:

- **Power OFF**: Indicates that the printer is off. This box will also display "Self Test" when the printer is first turned on, "Ready" during startup if an error does not exist and "No Ribbon" when the printer runs out of ribbon.
- **No Label / Labels**: Indicates whether or not a label has been downloaded.
- **Reprint Buffer**: Indicates that the printer is preparing to print a preset amount of the same label.
- **Printing**: Illuminates when the printer is printing.
- **Error**: Illuminates when an error occurs.

Reprint ON / OFF: Indicates whether the Reprint function is on or off. If Reprint is ON, the printer is continuously printing the same label until it is cleared and another is selected. If Reprint is OFF, the printer is printing a preset number of labels and will pause when that number is reached, displaying a "Printer Waiting" message until a new label is loaded.

The **Clear Labels** button deletes the last batch of downloaded labels. If you have more than one batch of labels queued up or label batches are stored in the Windows Print Buffer on your computer, you may need to press this button more than once.

The Printer Setup screen also displays the label parameters set in the label software: Darkness, Print Speed, Quantity and Length.

- **Print Speed**: Print speed is automatically set based on the print speed in the label format. APPI recommends that the print speed be set to 6-8 inches per second. The print speed is set in your label software or via ZPL commands and cannot be set on the T-375. To improve print quality, reduce the print speed in your label software.
- **Quantity**: The number of labels remaining to be printed. Label quantity is set within the label software.
- **Length**: The length of the label set in the label software.

There are three modes in which the printer can queue labels, Overwrite, Reprint On, and Reprint Off. The Reprint On mode allows a label to be printed over and over again until the label is cleared and another is selected. The Reprint Off mode allows for a certain number of labels to be printed before the printer stops. Overwrite mode allows for the label to be changed without having to clear the previous label. Toggle between modes by pressing the Mode Box in the bottom center of the Printer Setup screen.

Reprint On: When the printer is in the Reprint On mode, the label that is selected will print until the label is cleared and a new label is selected. In this mode, you can either download a label from your PC/Software or recall a label from Stored Labels screen. If downloading a label, you need only download a quantity of 1 label. In the Reprint mode, you should not download more than 1 copy (Quantity 1) since clearing the labels using the Clear label button may not clear all labels downloaded.
If using the Stored Label function, there is no quantity to select. Recalling a Stored Label automatically causes the Reprint function to turn ON. Additionally, downloading a different stored label automatically causes the previously stored label to be cleared.

To clear a downloaded label, touch **Clear Labels.** A "No Label" message should appear in the LED message screen in the middle of the screen. If the labels do not clear, press the Clear Label button again. If there are queued labels, or you have downloaded a high quantity of labels, you may need to clear the buffer in your PC/Printer settings, or power off the printer using the ON/OFF button on the rear panel of the printer.

Reprint Off: In the Reprint Off mode, the printer will pause and display a "Printer Waiting" message, after the downloaded quantity of labels have been printed.

Note: The label quantity is strictly a function of the PC Software. If using LabelView, Bartender or other Label software, the quantity can be selected during the download process.

Overwrite: The Overwrite mode is similar to the Reprint mode, but if another label is downloaded, the previous label is automatically cleared. The new label is then accepted and the Reprint mode is automatically turned ON. This Overwrite function is useful in eliminating the step of clearing the label.

Note: Operators should be very careful when using the Overwrite function to avoid mislabeling. For instance, if using a wireless system, or when printing over an Ethernet connection where the PC is at another location or by another operator, the operator at the machine may not know that the label was changed.

In Overwrite mode, the label downloaded will immediately start printing, without the need to clear the previous label. To turn ON this mode, toggle the Mode Box to **Overwrite** and select a label from the label software on a separate computer.

Note: If using LabelView or other PC label software, all parameters must be properly set to achieve the functionality above. Each software will have different parameters which will affect how the printer functions, which may cause issues with printing.

Refer to Chapter 4 for more information regarding adjustment of printer settings.

3.24 Label Position Screen

The Label Position screen allows the operator to view and adjust settings that affect the label position. See Figure 3-36. This screen is accessed by pressing the **Label Position** button on the NBO Printer Operation screen.

Print Offset: The distance the bag advances from the Perforation to where the print head lowers to print the label. When the Print Offset is set to zero, it will start printing immediately as it senses the Perf. Increasing the Print Offset will increase the amount of the bag that passes before it starts to print, causing the label to be closer to the top of the bag. Use the charts in 4.13 Suggested Printer Settings for Standard

and Drop Frame printer settings. To change this setting, press the **Print Offset** button, enter a value into the numeric keypad and press the **ENT** button.

NOTE: When the printer is ON, Darkness (or Temperature), and Label Length are the only settings that can be changed on the Touch Screen. All other settings (i.e. Index Speed) are controlled by the Label Parameters set in LabelView or similar software.

Seal Point: The position of the seal, in inches, measured from the top perforation of the bag. To change this setting, press the **Seal Point** button, enter a value on the numeric keypad and press the **ENT** button.

Reverse: The distance, in inches, the rollers will reverse the bag into the bagger, while the pressure bar grips the bag, in order to break the perforation between bags. To adjust this setting, press the **Reverse** button, enter a value on the numeric keypad and then press the **ENT** button.

The Label Position screen provides detailed information for two methods of printing: first bag printing and second bag printing. Second bag printing allows a larger area of the bag to be printed. The blue box in the center of the screen displays several label settings for the first and second bag that affect the label position and are automatically calculated based on the label length. These settings include:

- **Max Label**: The maximum, acceptable length of the label.
- **Seal Point Overrun**: The amount of bag beyond the seal point that is printed. The bag will reverse to the seal point once the machine has finished printing.
- **Min Print Offset**: The minimum amount the print can be raised on the bag.
- **Max Print Offset**: The maximum amount the print can be raised on the bag.
- **Print Start**: The location where the printer begins printing.
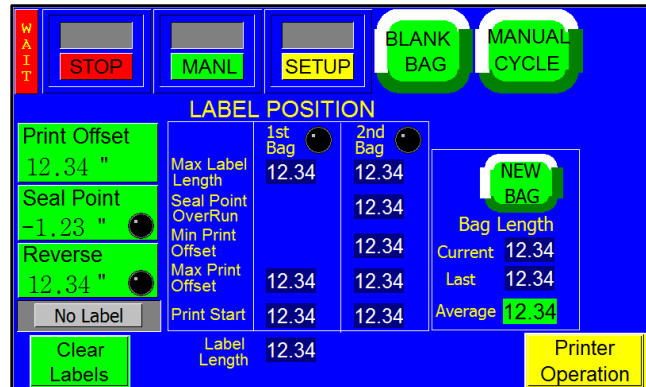
Figure 3-36

The LEDs at the top of the 1st Bag and 2nd Bag column indicate whether or not the settings for that method of printing are acceptable. If one LED is green, the settings for that method of printing are acceptable. If one LED is Red, the settings for that method of printing exceeded the acceptable parameters. If both LEDs are green, the settings for both methods are acceptable. If both LEDs are red, the print will likely cross over from the first bag onto the second bag, printing a portion on both bags.

Press the **New Bag** button after switching bag size to count the bags and start an internal program that calculates average bag length. The perforation is used for registration. If a perforation is not detected, the bag will stop in the correct seal position, based on the average bag length measurement. A Feed Error message will be displayed if the perforation is not detected within the accepted bag length range.

Press the **Manual Cycle** button to cycle the T-300 / T-375. Press the **Blank Bag** button to index the next bag without printing a label.

3.25 T-375 Printer Status Screen

The Printer Status screen is used to troubleshoot the T-375 printer. See Figure 3-37. This screen contains additional printer settings and should only be accessed by qualified technicians.

The printer sends a status message when powered on and after each print. If an Error LED on the Printer Setup screen is displayed, the actual error message will be displayed on the Printer Status screen. The status can also be reset by pressing the **Clear Status** button and recalled by pressing the **Read Status** button.
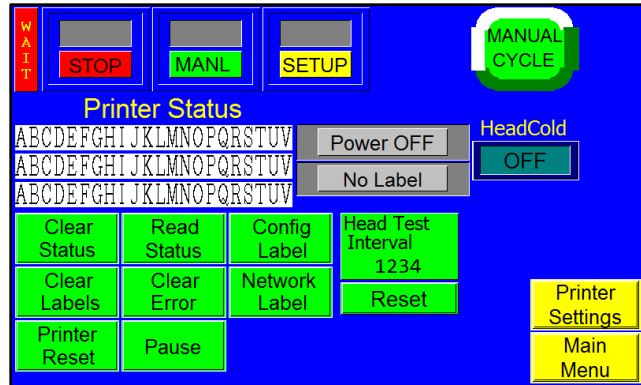
Figure 3-37

Config Label: Press this button to print the parameters for the printer.

The **Clear Labels** button deletes the last batch of downloaded labels. If you have more than one batch of labels queued up or label batches are stored in the Windows Print Buffer on your computer, you may need to press this button more than once.

Clear Error: When an error occurs, it will be displayed in the Printer Status bar. To clear the message and the error, press the **Clear Error** button.

Network Label: Press this button to print the network configuration, including the current IP address.

Printer Reset: Press this button to clear labels and start a self-test.

Pause: Pressing the **Pause** button puts the printer in pause.

Head Test Interval: The number of labels that are printed between tests. To disable this function, set the interval to zero. Press the **Head Test Reset** button to set the Head Test Interval to zero.

The **Head Cold ON / OFF** toggle button allows the operator to turn the Head Cold Warning feature on and off. If the Head Cold Warning feature is on, the machine will automatically stop if the print head gets too cold.

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3.26 Counters Screen

The T-300 / T-375 is equipped with two internal counters as a standard feature. To access the counter screen, press the **Counters** button from the Main Menu. See Figure 3-38.

Preset Counter: This counter stops production after a preset number of cycle operations. When the preset count has been reached, a message screen will be displayed and operation will cease. To enter a value for this counter, press the green button under the count and enter a value using the numeric keypad. Then press the **ENT** button. To reset this counter, press the **Reset** button. To disable the option, set the value to zero.

Total Counter: To track production, use the Total Counter to count the total number of machine cycles. Press the **Reset** button to reset the counter to zero.

To set a value for these counters, press the green button below the counter you wish to change, enter a value on the displayed keypad and press the **ENT** button.
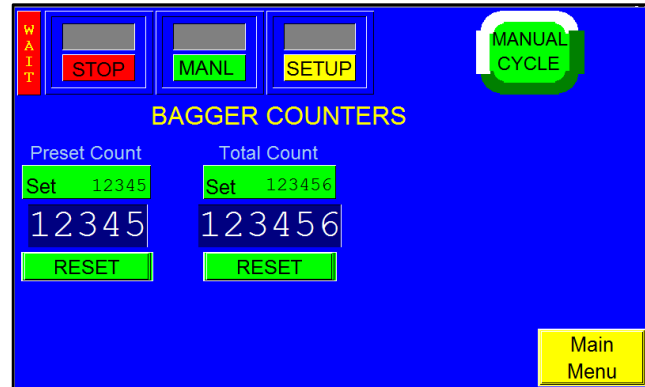
Figure 3-38

3.27 Continuous Strip Counter

This counter allows bags to be sealed in a continuous strip without separating them at the perforation. If this counter is set to a value of 10, for example, the bagger will produce a strip of 10 connected bags. The bagger will then reverse to separate the eleventh bag. To enter a value for this counter, press the green button under the count and enter a value using the numeric keypad. Then press the **ENT** button. To reset this counter, press the **Reset** button. To disable the option, set the value to zero. See Figure 3-39.
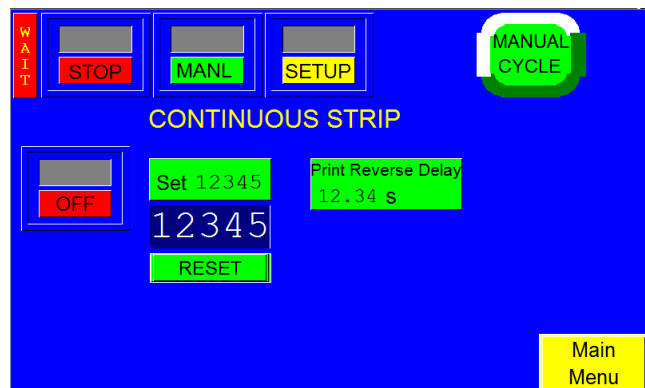
Figure 3-39

NOTE: If the bags should always remain in a continuous strip and never separate, set the Continuous Strip counter to a very large number, or change the Reverse setting to zero on the Bagger Settings screen.

3.28 Recipe Management

There are two options to save recipes, *internally* to the PLC or *externally* to a USB (not included). To change from one to the other, go to the **Main Menu,** touch **Technical Assist,** and enter the Level 1 Pass Code. Touch the **Bagger Factory** button to access the Bagger Factory screen. From there, touch the **Perf Registration** button located along the right-hand side of the screen, See Figure 3-40. Once in the Perf Registration screen, locate the **Job Save toggle button** along the bottom of the screen. If the toggle button reads "**PLC**" the machine will save all jobs
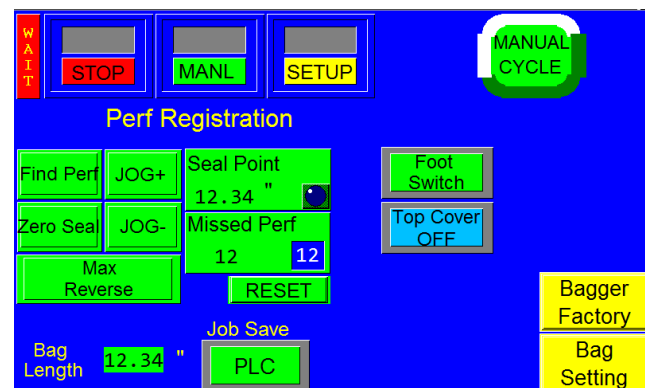
Figure 3-40

internally on the PLC. If the button reads "**USB**" all jobs will be saved externally to a USB memory stick. Press the button to toggle between the two. Once you have made your selection exit back to the **Main Menu** by pressing the **Tech Assist** button and press **Exit** when the numeric keypad is accessed.

NOTE: There must be a USB Flash Drive / Memory Stick inserted into the machine for the External Memory function to operate. If there is no memory stick inserted, ensure the Job Save is in PLC mode in order to save job recipes.

There are benefits to using either memory option. The PLC Internal option allows the user to save up to 24 jobs to the PLC without any extra hardware required. The USB External option allows the user to save an unlimited number of jobs to the USB memory stick. A file will be automatically created on the memory stick that contains Recipes, Alarm data, and Production data from the machine. These files can be viewed when the memory stick is inserted into a PC. Please see 4.14 Recipe Management: Files on the Memory Stick for explination of Files on the Memory Stick.

NOTE: Remove the back cover of the touch screen housing to locate the USB port and insert a memory stick (not included).

NOTE: These instructions are for saving bagger settings only. Labels are saved using printer software (such as LabelView).

3.29 Internal Memory (PLC)

Saving a job to Internal Memory: Select **PLC** in the Perf Registration screen (as described above) and exit to the **Main Menu**. Go to **Settings** and set the specifications for your job. Once the job is set, touch **Job Save** on the right side of the screen to access the **Bagger Job Save** screen, see Figure 3-41. Select the designation under PN where you would like to save the job (#1-24), which will access a green numeric key pad. Enter a numeric name for your job and touch **Ent**. A warning screen will ask if you would like to overwrite the job. The PN of the

Figure 3-41

current job at that location will be displayed in a box to the side. This box will display "0" if it is not being used. Select **Yes** to overwrite and continue. Your job is now saved to the Internal Memory on the PLC.

To recall a job from Internal Memory: Touch **Job Search** on the **Main Menu** to access the **Part Save / Recall** screen, see Figure 3-43. The jobs that are saved to the PLC will be displayed in this table. Touch the job you would like to recall. This will take you to the **Job Load** screen that displays the settings for this job, see Figure 3-42. Ensure this is the correct job and touch **Load**. This will take you to the **Bagger Settings** screen with all the settings loaded and ready to start the job.

Figure 3-43

Figure 3-42

3.30 External Memory (USB)

To save a job to the External Memory: Select **USB** in the Perf Registration screen (as described in Section 0Recipe Management) and exit to **Main Menu**. Go to **Settings** and set the specifications for your job. Once the job is set, touch **Job Save** which will take you to the Job Save screen, see Figure 3-44. Press the box that reads "**Part**" which will access a keypad. In the USB Mode, Jobs can be saved by either numbers or letters. Enter the name or number you wish to save the job as and press enter. To enter a note,

Figure 3-44

press the box that says **Note**, and enter the information using the keypad that is displayed. Touch **Enter** to continue or **Exit** to cancel. Touching the **QTY** box will access a green numeric keypad where the operator can enter the number of products that will go into each bag. For instance, if three items go into the bag before it is sealed, the number 3 can be entered into that field. When all the information is setup touch **Save** to save to the External memory stick.

*Note: In the Job Save screen there is a **Recipe List** button and an **Options Settings** button. When the **Recipe List** button is pressed, the recipe list screen will be accessed. A record "REC0000" will be displayed. This is the file created by the program which records all the activity on the bagger and where the recipe information is stored. This information can only be viewed when the USB is plugged into a PC. To recall a job, you must type in the name of the job and hit enter in the **Job Load** screen. When the **Options Settings** button is pressed all the information for that recipe is displayed. The **Part**, **Note**, and **QTY** information can all be changed in this screen. If you do choose to change the information on this screen, go back to the **Job Save** screen and press **Save** to ensure your changes are saved.*

To recall a job from External Memory: Press **Job Search** from the **Main Menu** to access the Job Search screen, see Figure 3-45. From there either scan (if you have a bar code reader option) or enter the job name using the keypad, (accessed by pressing the area under the heading "Current Scan") and press **Search**. This will access a screen listing all of the Bag and Factory Settings for this job, see Figure 3-46. Press **Load**. This will take you to the Printer Operation Screen with all the settings loaded and ready to start the job.
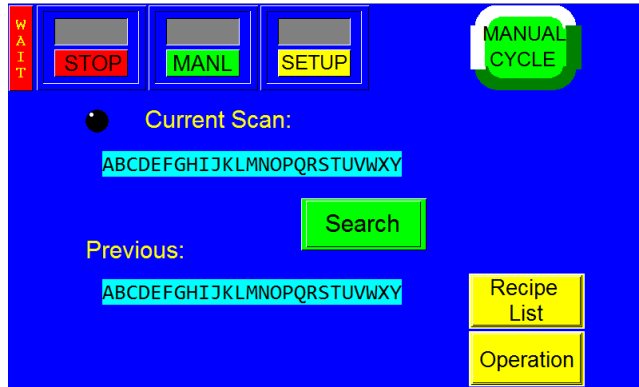
Figure 3-45

Figure 3-46

3.31 Bagger Production Mode

Operation Time, Stop Time and Setup Time can all be viewed on the Bagger Production mode time, see Figure 3-47.

Toggle between **Start/Stop** to start or stop the counters.

Operation: Tracks the amount of time the machine has been in Operation Mode.

Stop: Tracks the amount of time the machine has been in Stop Mode.

Setup: Tracks the amount of time the machine has been in Setup Mode.

Press **Reset** to reset the counters back to zero.
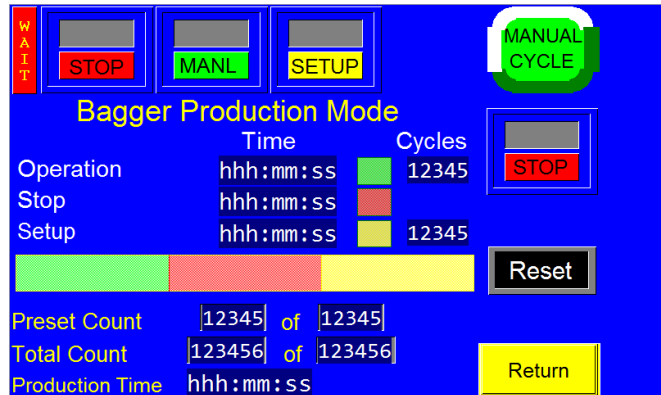
Figure 3-47

The bar in the middle of the screen displays the percentage of completeness for the Preset Count. As the cycles progress the percentage bar increases. When the preset count is reached the bar will display as full.

Preset Count: 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: 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 the **Reset** button to set this time to zero.

Return takes you back to the Bagger Operation Screen.

3.32 Auxiliary Options Screen

The T-300 / T-375 touch screen program is preprogrammed to accept most infeed equipment signals so that two or more pieces of equipment can "talk" to each other. Occasionally, reprogramming will be necessary to interface auxiliary (infeed) equipment that is not manufactured by APPI. Additional cabling may be required to transfer the signals between the bagger any existing equipment. See Figure 3-48.
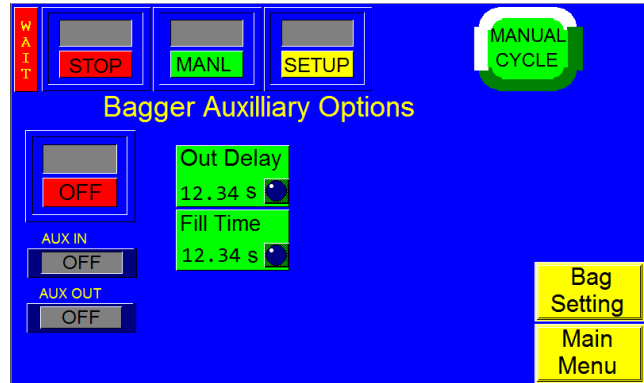
Figure 3-48

Once the equipment is connected and both systems are running independently, turn the auxiliary signal on by toggling the **ON / OFF** toggle button to ON.

Aux Out: Displays the status of the bagger's communication to the auxiliary equipment. When Aux Out displays READY, the bagger is ready to drop bagged product to the auxiliary equipment. When Aux Out displays HOLD, the bagger is still cycling. If Aux Out displays OFF, no auxiliary equipment is present.

Aux In: Displays the status of the infeed auxiliary equipment's communication to the bagger. When Aux In displays READY, the auxiliary equipment is ready to receive product. When Aux In displays HOLD, the auxiliary equipment is still cycling. Aux In displays OFF when no auxiliary equipment is present.

Output Delay: This setting controls the delay time between the cycling of the auxiliary infeed equipment (i.e. scale, counter, conveyor, and other bagger) and the cycling of the bagger. Output Delay is the amount of time, in seconds, before the bagger seals the bag after the auxiliary infeed equipment has cycled and signaled to the bagger to seal. To adjust the delay timer, press the **Out Delay** button and enter the value, in seconds, on the numeric keypad and press the **ENT** button.

When Auxiliary setup procedures are complete, ensure the **ON / OFF** toggle button on the Auxiliary Operation screen is toggled to ON and then toggle the T-300 / T-375 from **MANL** to **AUTO**. This will place the T-300 / T-375 in Automatic/Auxiliary mode.

3.33 Production Graph

APPI provides a simple graph to chart production throughout the day, see Figure 3-49. To access this graph, press the **Production Graph** button on the Main Menu.
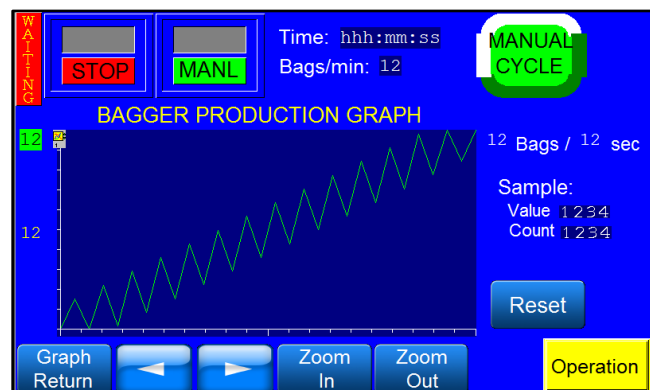
Figure 3-49

The Production Graph screen also displays the number of bags indexed per minute and the production time. Press the **Reset** button once to reset the production time and twice to reset the graph.

3.34 Temperature Graph

APPI provides a temperature graph to display the operating temperature during production. This information isolates the problem if bags are found to have weak seals by allowing the operator to review previous operating temperatures. See Figure 3-50

Press the **Reset** button once to reset the graph. Press the **Detail Graph** button to display the Detail Temperature Graph and view the most current temperature readings. See Figure 3-51.
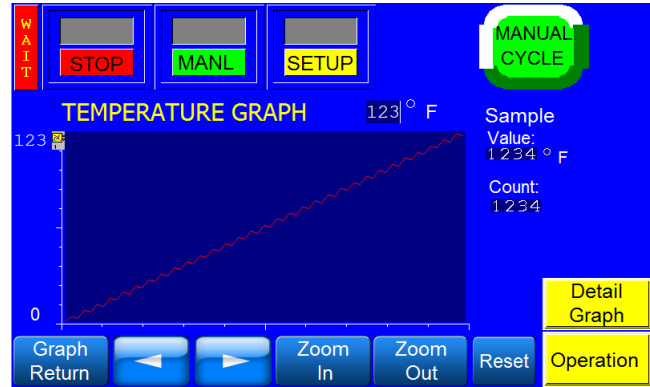
The Temperature display can be switched between Fahrenheit and Celsius by means of DIP switch #3 on Analog Card. See T1kST-E38-TC4 in Section 4.21 .

3.35 Technical Assistance

The Technical Assistance screen provides manufacturer information, factory settings adjustments, functions testing, and troubleshooting. It also displays the program version for the PLC controller and the touch screen. See Figure 3-52.
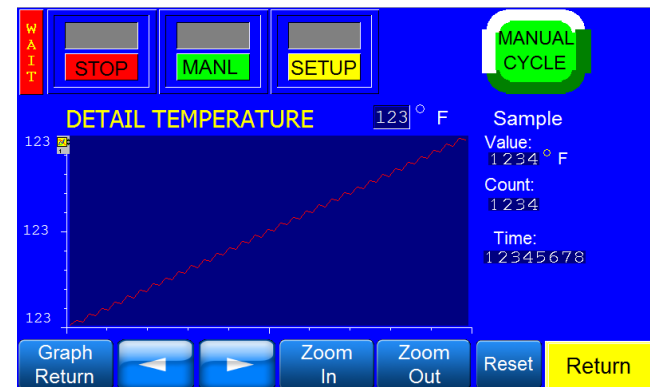
Figure 3-50

Figure 3-51

The screen is protected from access with a Level 1 pass code. The pass code is set by default (from the factory) to 1001. This code can and should be changed when the system is put into operation.

The technical assistance sections of the touch screen program are provided for troubleshooting and advanced setup and should only be accessed by specialized personnel.

NOTE: Before accessing the Technical Assistance screen, a Level 1 pass code must be entered.
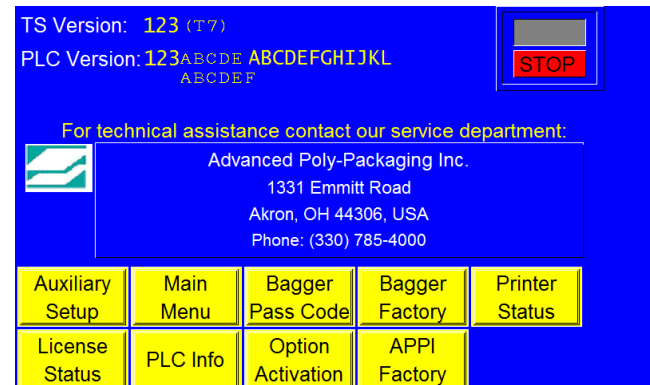
Figure 3-52

3.36 Bagger Password Setup

APPI has included a pass code function in all touch screen equipment to prevent unauthorized operators from changing settings. See Figure 3-53.

There are two pass code levels, described as follows:

1. **Level 1**: This is the highest-level pass code. It prevents operators from accessing the Technical Assistance functions of the machine. The default pass code, when shipped from the factory, is 1001. To change this code, press the **Level 1 PW** button on the Password Setup Screen, enter a new code on the numeric keypad, and press the **ENT** button. See Figure 3-54.

2. **Level 2**: This level pass code, when the pass code function is enabled, prevents the operator from accessing settings screens that affect the operation of the equipment. To change this code, press the **Level2 PW** button on the Password Setup Screen, enter a new code on the numeric keypad, and press the **ENT** button. See Figure 3-55.

Pass codes prevent unauthorized individuals from tampering with settings. When equipment is shipped, APPI uses the following factory set pass codes that should be changed prior to putting the T-300 / T-375 into operation:

1. **Level 1 pass code**: 1001
2. **Level 2 pass code**: 1002

To enable the pass code function, press the **Tech Assist** button from the Main Menu. Type in the Level 1 pass code (1001 by default from APPI). Press **Bagger PassW** to display the Bagger Password Setup screen. Then toggle the **ON / OFF** button to ON to activate the pass code function. If the pass codes are changed, ensure that these codes are written down.

Once the pass code function is enabled, the operator will have a programmed amount of time (TimeOut time) to make changes. Once this time has elapsed, the Operation screen will automatically be displayed. Timeout time can be changed by pressing the **TimeOut** button on the Password Setup screen, entering a value in the numeric keypad, and pressing the **ENT** button.
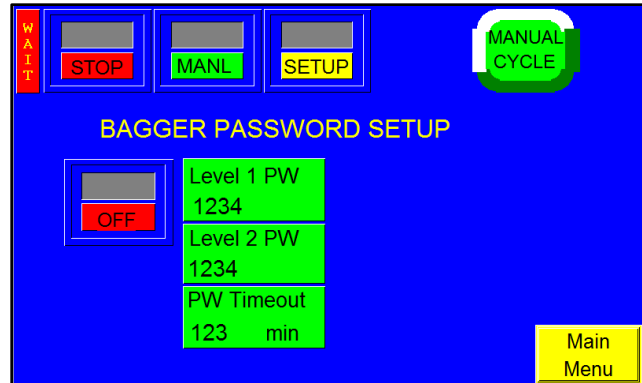
Figure 3-53
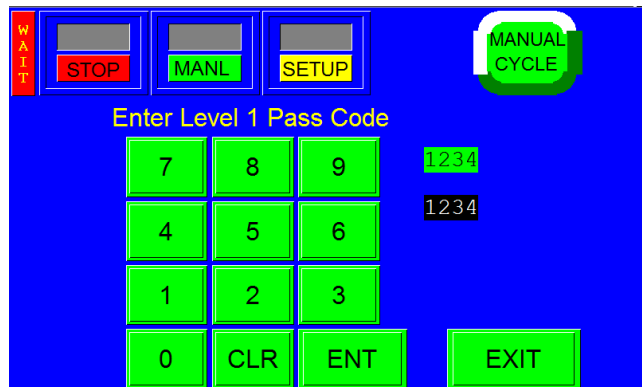
Figure 3-54
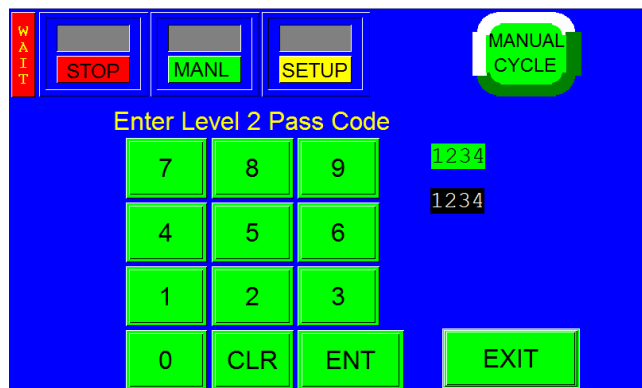
Figure 3-55

To change the pass codes, press the **Level 1 PW** button or the **Level 2 PW** button, enter a new code on the numeric keypad and press the **ENT** button.

If the pass codes are misplaced or forgotten, contact the APPI Service Department for assistance. APPI will provide a "factory code" so that the current pass codes can be displayed.

3.37 Options Enable Screen

The Options Enable Screen is used at the factory to "enable" options for use by the operator. It is accessed by pressing the **Option PassCode** button on the Technical Assistance screen. This screen should only be accessed by qualified technicians or by the factory.

A status box is located to the left of each option to indicate if the option is available to the operator; see Figure 3-56. If the status box displays ON, the option has been activated. If the status box displays OFF or N/A, the option has not been activated. A password is required to enable inactive options. To obtain the password, the option must first be purchased from Advanced Poly-Packaging, Inc. Contact the APPI Service Department for more information regarding available options for the T-300 / T-375 and for instructions on how to activate options.
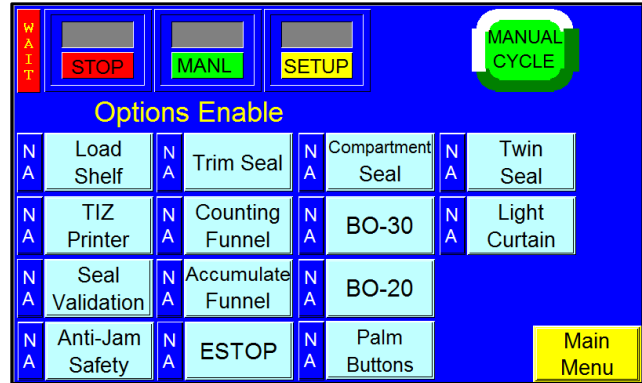
Figure 3-56

3.38 PLC Info

The PLC I/O screens are provided for maintenance personnel to determine the status of the PLC and to review the mode of outputs and inputs. PLC I/O screens are also used to assist APPI service technicians as they work with maintenance personnel to troubleshoot the T-300 / T-375 in the field. See Figure 3-57 and Figure 3-58.

To determine the function of each input and output, press the LED to display a brief description. The PLC I/O screen also provides the run Hours and Cycles counters. The Hours counter displays the amount of time the machine has been on. The Cycles counter displays the current number of complete cycles. These counters cannot be reset by the operator.
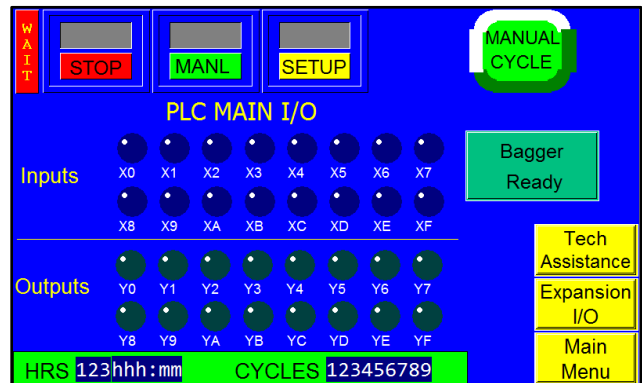
Figure 3-57
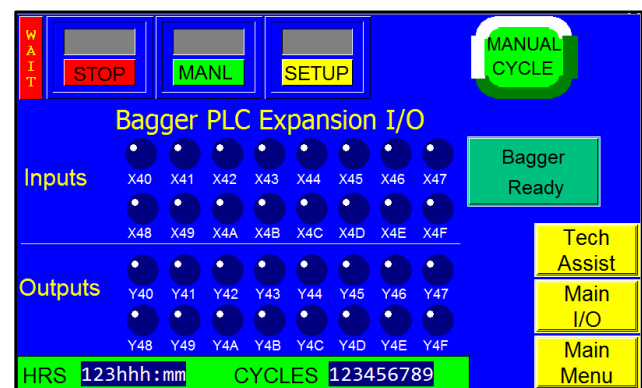
Figure 3-58

3.39 Bagger Factory Settings

This screen contains additional bagger settings that should only be set by qualified technicians or by the factory. See Figure 3-59.

Heat Off: The amount of time, in minutes, the machine can remain inactive before the heater bar will automatically turn off. The machine will remain on even if the heat is off. To adjust this setting, press the **Heat Off** button on the Bagger Factory Settings screen, enter a value on the numeric keypad, and press the **ENT** button.
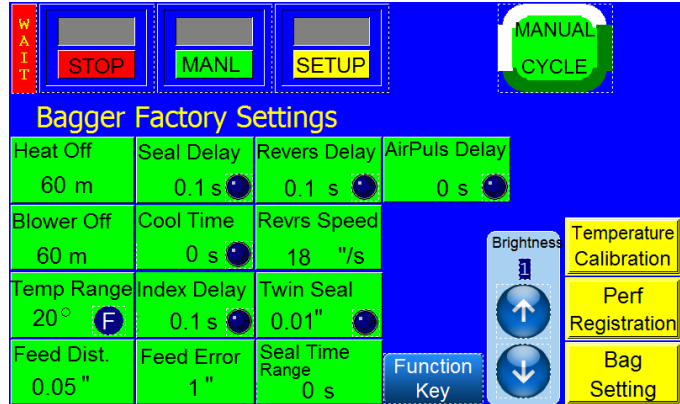
Figure 3-59

Blower OFF: To preserve compressed air, the blower (air knife) will turn off after this preset amount of time has passed. The value is set in minutes and fractions of a minute. For instance, a setting of 5.1 would turn the air off if the machine is not in use for a period of five minutes and six seconds. A typical value is between three and five minutes.

TempRange: The temperature range above and below the Seal Temperature set point the heater bar must reach for the T-300 / T-375 to operate fully. For example, if the Seal Temperature is set to 360°F and the Temp Range is set to 10°F, the temperature would be within the acceptable range if the heater bar temperature was between 350°F and 370°F. If the temperature is within the acceptable range, the bagger will display "Ready" and the T-300 / T-375 can begin normal operation. If the temperature is out of this range, the bagger will display "Waiting" and the T-300 / T-375 will only be able to cycle in Setup mode. To change this setting, press the **Temp Range** button, enter a value on the numeric keypad and press the **ENT** button. A suggested setting for Temperature Range is 20°F.

Feed Dist: The bag length distance, in inches, the perforation sensor does not look for a perforation in the bag when the machine is indexing the bag. To change this setting, press the **Feed Dist** button, enter a value on the numeric keypad and press the **ENT** button.

Seal Delay: The amount of time, in seconds, before the seal operation begins after the air is turned off. This delay setting allows air to escape the bag. To change this setting, press the **Seal Delay** button, enter a value on the numeric keypad and press the **ENT** button.

Cool Time: The amount of time, in seconds, the pressure bar is released to ensure the seal is cool enough to be torn off after the pressure bar and heater bar have come in contact with the bag. To adjust this setting, press the **Cool Time** button, enter a value on the numeric keypad and then press the **ENT** button.

Index Delay: The amount of time, in seconds, the previous bag has to exit the seal area after it is released and the next bag is fed into place. This delay prevents the next bag from feeding and prevents the seal bar from coming into contact with the previous bag and causing a bag jam. To change this setting, press the **Index Delay** button, enter a value on the numeric keypad and press the **ENT** button.

Feed Error: The amount of acceptable variation, in inches, from the set bag length. For example, if the bag length is 15" and the Feed Error is set to 3", bags with 12-18" lengths would be accepted, but bags with a length of 19" would cause operation to stop and an error message would be displayed. To change this setting, press the **Feed Error** button, enter a value on the numeric keypad and press the **ENT** button.

Reverse Delay: The amount of time, in seconds, after the bag has been filled and sealed before the bag is reversed. To change this setting, press the **Rev. Delay** button, enter a value on the numeric keypad and press the **ENT** button.

Reverse Speed: The speed, in inches per second, at which the bagger reverses to separate the bag at the perforation. To change this setting, press the **Reverse Speed** button, enter a value on the numeric keypad and press the **ENT** button.

Twin Seal: The pressure bar seals for the first time, then reverses and seals the bag a second time, below the first seal. Press the green button to access the numeric keypad and set the distance between Twin Seals. A typical distance is ¼".

Seal Time Range: Used for Medical Seal Validation, the bagger can be set to seal within a certain range of time before an error screen appears. For example, set the range to be 1 second +/- 1/4 second allows the bagger a window of ¾ seconds to 1 ¼ seconds to be sealed before an error message is displayed. Press the green **Seal Time Range** button to access the numeric keypad and enter the desired time range. Press **Enter** if value is correct or **Clear** to clear the value and reenter a new value.

Air Pulse Delay: The amount of time, in seconds, before the air pulse initiates to blow the bag open after the perforation is detected. This setting prevents short bags from jumping over the seal bar. To change this setting, press the **AirPls Delay** button, enter a value on the numeric keypad and press the **ENT** button.

Brightness Control. **UP** & **Down** buttons set brightness to 4 different levels, with "1" being the brightest and 4 being the dimmest.

3.40 Temperature Calibration

APPI offers the ability to calibrate the heater bar. Calibration is required and the position and age of the thermocouple may affect the actual reading. A calibrated readout will provide for more consistency in sealing. See Figure 3-60.

To access the **Temperature Calibration** Screen, start at the **Main Menu** and select **Tech Assist** (Enter **Level 1 Passcode**) > **Bagger Factory** > **Temperature Calibration.**
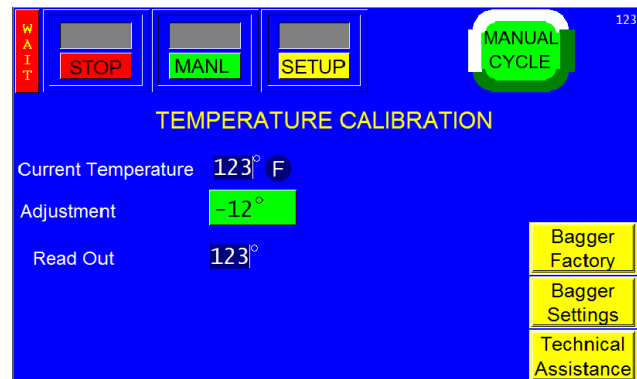
Figure 3-60

Follow these steps to calibrate the heater bar:

1. Using a controlled measurement device, clamp the measurement tip or pad to the heater bar surface as close to the thermocouple connection as possible.
2. Take the difference between the Current Temperature and the temperature measured in Step 1 and enter that number in the **Adjustment** field.
3. Return to the Temperature Calibration screen to confirm the Current Temperature matches the Read Out.

Note: APPI does not supply measurement devices, but uses the following components which have produced consistent measurements: FLUKE Thermocouple Thermometer, Model 51/52 II (Part Number FLUKE-52-2 60Hz).

Note: If the PLC (Current) temperature is very different from the temperature that is measured, there may be a problem with the method of measuring the temperature, a problem with the thermocouple cable or connection, or a different problem. Please contact APPI Technical Support for assistance before making any manual temperature adjustments.

Current Temperature Reading: This function displays the current temperature of the heater bar in Fahrenheit or Celsius.

Adjustment: An entry field to enter an adjusted temperature. If there is an outside source to read the temperature of the heater bar and there is a variance between the bagger and the outside source temperature gauge, the <Adjustment> button allows for that variance to be accounted for. For example, if the outside calibration equipment reads 403°F and the bagger shows 400°F, a value of -3° can be entered into Adjustment, allowing the variation to be known. By pressing the green button, a numeric keypad is accessed where two digits, negative or positive can be entered into this field.

Read Out: This display shows the difference between the PLC temperature and the Adjusted Temperature that has been entered manually.

3.41 Perf Registration

The Perf Registration screen allows the operator to set up the perforation, switch the Job Save mode, and select to operate with either the foot switch or guard. See Figure 3-61. To access this screen, start at the **Main Menu** and select **Tech Assist** (Enter **Level 1 Passcode**) > **Bagger Factory** > **Perf Registration**.
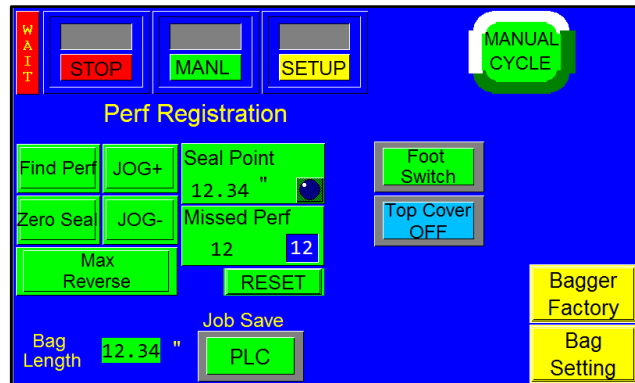
To determine if the seal point is registered, set the Seal Point setting to the lowest possible setting. Then press the **Manual Cycle** button or press the foot switch. The bag should move so that the perforation is approximately 1/8" from the center of the heater bar. If the bag perforation is not approximately 1/8" from the perforation, perform the following procedure carefully. If these steps are performed out of order, the bagger will not function properly.

Follow these steps to set up the perforation:

Figure 3-61

1. Press the **Perf Registration** button on the Bagger Factory Settings screen. The Bag Registration screen will be displayed.
2. Ensure **STOP / START** button is toggled to **START**.
3. Press the **Find Perf** button. The bagger will advance until the perforation sensor finds the perforation, and then the bag will stop.
4. Hold the **JOG+** button until the perforation moves down to the middle of the Heater Bar gap.
5. Release the **JOG+** button.
6. Push the **Zero Seal** button once.
7. Hold the **JOG-** button until the perforation moves up to just in front of the nip rollers.
8. Push the **Max Reverse** button once.

NOTE: If these steps are performed incorrectly, toggle STOP / START button 3 times then leave in START to reset. Then repeat the sequence from Step 3.

When complete, test the Seal Point setting by entering 0.1" and pressing the **Manual Cycle** button. The bag should feed so that the perforation is approximately 1/8" from the center of the heater bar.

Since the procedure sets the maximum reverse value as well, enter 6" in the Max Reverse setting. If equipped with a standard frame bagger, this setting will be approximately 1.8" when the Seal Point setting is 0.1". On a drop frame machine, the maximum setting will be approximately 2.7" when the Seal Point setting is 0.1". Press the **Manual Cycle** button and ensure that the bag does not reverse too far, to drop inside the machine. After successfully performing the above steps, the Perf Registration screen is ready for bag indexing.

Foot Switch / Guard: This button allows the operator to select whether manual operation will be initiated by a foot switch or by a guard. When Footswitch is selected, the operator must press the footswitch to initiate operation. When Guard is selected, the operator must push down on the Lexan guard to initiate operation.

Top Cover OFF / ON: Press this button to enable and disable the Top Cover feature. If the Top Cover button is toggled to ON, operation will stop and an error message will be displayed if the top cover is open. If the Top Cover button is toggled to OFF, operation will not stop if the top cover is opened.

Miss Perf: The maximum number of perforations the sensor can miss before operation stops and an error message is displayed. To adjust this setting, press the **Miss Perf** button, enter the desired value on the numeric keypad and press the **ENT** button.

3.42 License Activation

The License Activation screen features several LEDs that indicate the status of the license and trial period and illuminate and change during various stages of operation. This screen should only be accessed by a qualified technician.

As shown in Figure 3-62 the License portion of the screen will display "Inactive" in grey if the License has not been activated yet, 'In Progress" in green if the trial is in progress, and "Expired" in red if the License has expired.
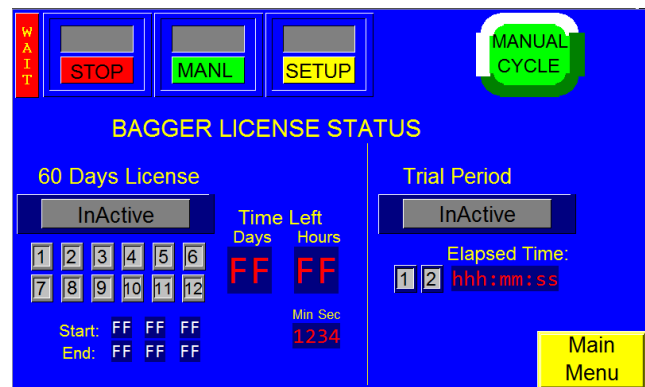
Figure 3-62

The **Time Left** will be displayed in days, hours, minutes, and seconds.

Start: Displays when the license period has begun.

End: Displays when the License period will end.

The Trial Period will read either "Inactive" in grey, "1st 40-hour" in green to indicate the first 40 hours of the trial period, "2nd 40-hour" in yellow to indicate the second 40-hour trial, "Used" in light blue to indicate that the trial has been used and "Expired" in red when the trial is over. Bagger is forced to stop and all outputs are disabled until new license code is entered. Please see 4.19 Troubleshooting Guide and Checklist for more information.

Elapsed Time displays the amount of time that has passed since the machine has been activated.

65

3.43 Warning and Message Screens

Normal operating messages and fault messages will be displayed automatically to alert the operator of situations on the machine. Some messages describe errors or the status of equipment and some provide instructions for operators to follow to bring the bagger back online. To reset a message screen, clear the condition first (if required) and then touch the screen. See Figure 3-63 through Figure 3 for examples of messages that indicate the status of the machine.

Bagger Error

Printer Out of Bags

Please check the following:

* Are bags threaded properly?
* Refer to manual for more info

Touch screen to continue

Figure 3-63

Bagger Error

Seal Bar not Engaging

Please check the following:

* Is air attached & at 60 psi?
* Refer to manual for more info

Touch screen to continue

Figure 3-64

Bagger Stop

Preset Count Reached

Touch screen to continue

Figure 3-65

Barcode Verification
NO READ

Touch the screen to continue.

Figure 3-66

Bagger Error

Anti-Jam Triggered

Please check the following:

* Is seal bar area obstructed?
* Refer to manual for more info

Touch screen to continue

Figure 3-67

Barcode Verification

Quality Error

Touch the screen to continue.

Figure 3-68

Warning!

Barcode verifier not responding

Please check the following:
* Electrical connection.
* Refer to manual for more info

Touch the screen to continue.

Figure 3-69

3.44 Notes

Date	Description

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Chapter 4: Adjustments, Maintenance and Troubleshooting

Machine Adjustments

Tracking and Alignment Adjustments

Compression (Nip) Roller Adjustment

Idler Roller Guides

Heater Bar Adjustment

Pressure Bar Alignment / Cylinders Speed Adjustment

Rubber Strip Replacement

PTFE Anti-Stick Sealing Sheet Spool Advancement

Replacements for Heater Bar Assemblies

Description of Anti-Jam Circuit

Anti-Jam Adjustments

Print Head Replacement

Suggested Printer Settings

Recipe Management: Files on the Memory Stick

Preventive Maintenance & Scheduled Maintenance

T-300 / T-375 Preventative Maintenance Checklist

Scheduled Maintenance Chart

Spare Parts Kits

Troubleshooting Guide and Checklist

Pneumatic Drawings

Schematics

4.1 Machine Adjustments

Periodically, the T-300 / T-375 will require readjustment or realignment of components to ensure proper operation. Adjustments may be required after transportation, excessive handling or due to normal wear and tear.

CAUTION: Machine adjustments, electrical troubleshooting and component replacement should be performed by qualified maintenance technicians, familiar with safety practices including but not limited to equipment lock-out/tag-out, voltages and pneumatics. If you are not familiar with the equipment or have not received training on the T-300 / T-375, consult with APPI technical support before attempting adjustments or repairs.

4.2 Tracking and Alignment Adjustments

Bags that are not tracking properly can cause product to spill out of the chute or funnel onto the floor. Tracking problems can also cause the thermally printed information to be out of the proper location. To avoid spillage or printing problems, machine adjustments to correct the tracking and alignment of the web of bags may be required.

However, before considering adjustment, check that there is sufficient tension on the web of bags. When feeding or stopping, the bag roll should not spin freely or feed excess film. The web of bags should not come in contact with the bottom plate inside the machine. To increase web tension, loosen the knob that holds the roll and chucks in position, push the roll to the right, into the plastic core plug on the bag roll and tighten the knob. When pressing the left chuck to the right, the right chuck must not move. See Figure 4-1.

Unwind the bags by hand and check the tension. Then, cycle the machine several times to ensure that the bags do not break prematurely (too much tension), or does not spin freely (too little tension). For narrower or shorter bags, proper tension is more critical.

4.3 Compression (Nip) Roller Adjustment

The drive roll compression is the force that exists between the two feed rolls (the blue rubber covered grooved roll and grooved steel roller). Too little drive roll compression will prevent the bags from tearing off after each sealing operation. Too much drive roll compression will cause extra wear on the drive roll and the motor. To adjust the Compression (Nip) Roller, follow the instructions below or contact APPI Service for assistance.

Turn the power switch to the OFF position and unplug the power cord. Remove the top cover. The compression adjustment is located on the latch assembly. See Figure 4 2.

Compression adjustment is a three-step process. First, the upper Blue Roller is adjusted to be parallel to the lower Steel Roller. Then, the upper roller is adjusted (lowered) for proper compression. Finally, the stop bolts are checked to ensure that the latch mechanism is not overextending.

NOTE: All views and adjustments are made from the rear of the Bagger.

Step 1: Parallel adjustment

Raise the Blue Roller so that there is a slight gap (1/16" or less) between the Blue Roller and the Steel Roller, so they are almost touching. The goal is to check the parallelism between the rollers by looking through the gap.

Figure 4-1
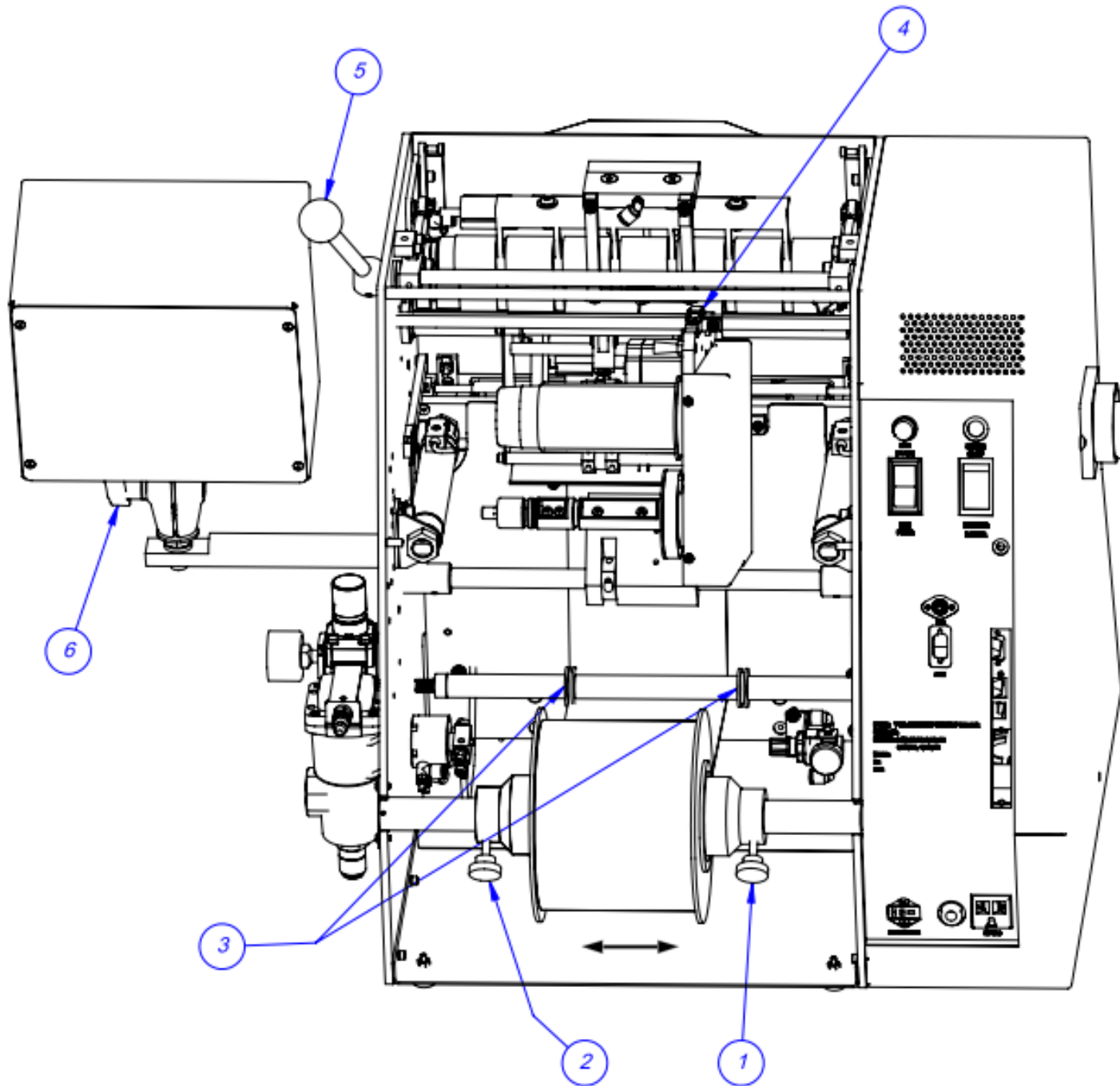
1) Bag Roll Chucks and Knob
2) Knob, (TP-109212).
3) Web Guides, TP-111010
4) Printer Latch, unlocks printer.
5) Handle, Opens top latch.
6) Touch Screen adjustment.

NIP ROLL ADJUSTMENT
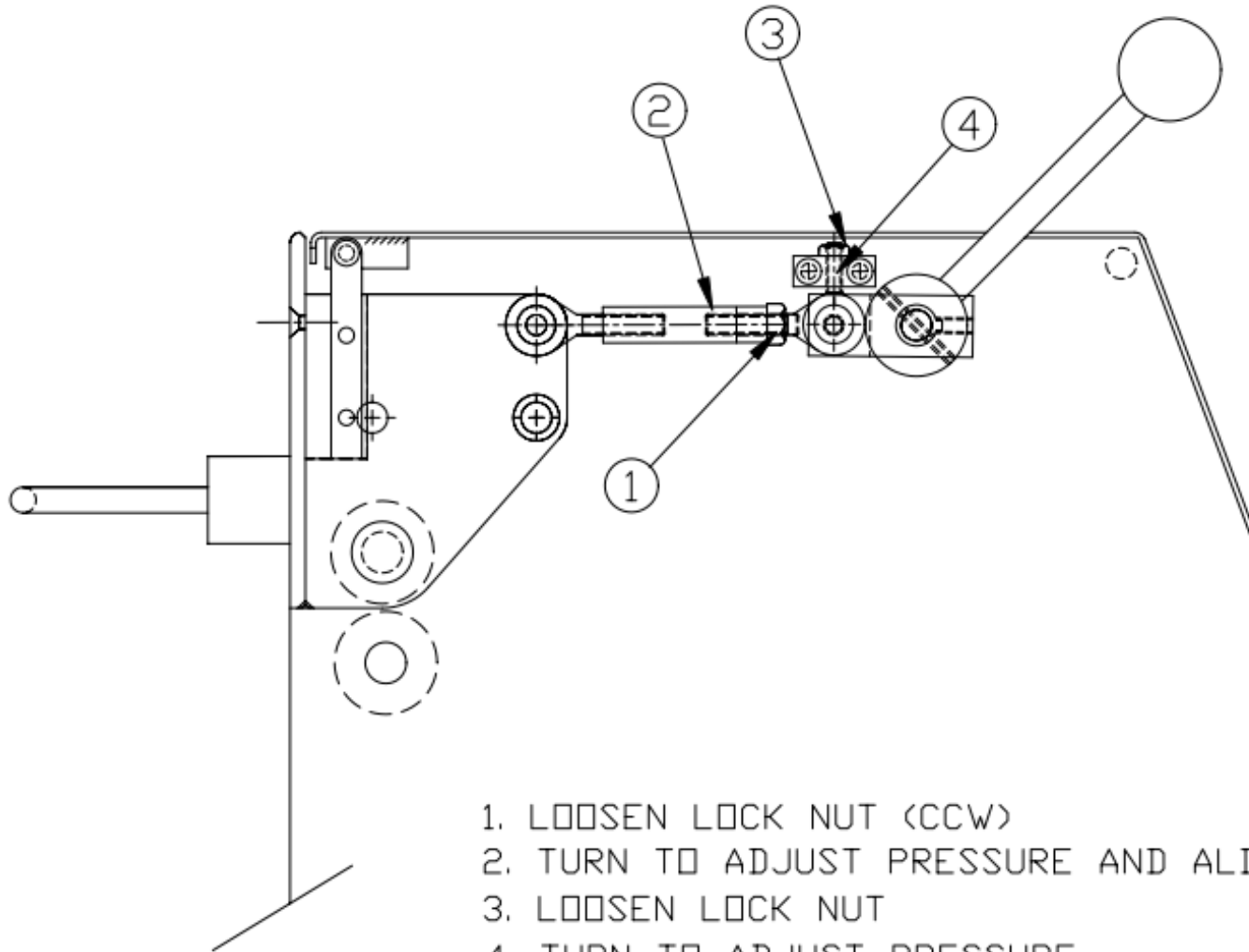
1. LOOSEN LOCK NUT (CCW)
2. TURN TO ADJUST PRESSURE AND ALIGNMENT
3. LOOSEN LOCK NUT
4. TURN TO ADJUST PRESSURE

Figure 4-2

The gap between the Blue Roller and the Steel Roller should be even and parallel and can be adjusted by turning the turnbuckles on either side of the machine. Adjusting the turnbuckle clockwise (or to the right) will make the gap wider, while turning the turnbuckle counter clockwise (or to the left) will make the gap smaller.

NOTE: To assist in determining whether the upper and lower roller are parallel, position a light source (lamp) in the front of the T-300 / T-375 to shine through the rear, illuminating the gap between the rollers.

Step 2: Compression adjustment

With the rollers slightly touching and parallel, turn each adjustment turnbuckle approximately one "Face" turn counter-clockwise. *Note: the turnbuckle has several flat sides which are referred to as a "Face".* Then test the compression by putting a bag between the rollers. Attempt to pull the bag between the rollers. If the bag pulls out easily, turn the compression adjustment turnbuckle another "Face" turn counter-clockwise. Continue this adjustment until the bag is slightly difficult to pull out of the rollers. Adjust the turnbuckles equally on both sides to keep the rollers parallel. Raise and lower the upper roller assembly to ensure that it latches properly without requiring excessive pressure.

CAUTION: Over-tightening of the compression adjustment screws may cause damage to the rubber roller or the motor.

When you are satisfied with the compression, slightly raise the upper Blue Roller assembly, and slowly lower it until it almost touches the lower Steel Roller. If the gap is consistent across the width of the rollers and it appears parallel, lower the blue roller, and tighten the locknuts holding the turnbuckle in position.

Step 3: Stop bolt adjustment

If the compression is sufficient when lowering the upper roller assembly, but the compression is lost due to over extending, the latch mechanism stop screws must be adjusted. Loosen the locking nuts that hold the stop bolts into position. Then, turn the stop bolts half a turn each. Lower the roller assembly and check the compression when the turnbuckle is against the stop bolts.
When the rollers and latch mechanism have been properly adjusted, the upper latch assembly will lower and lock into position when the latch handle is pressed all the way downward. Additionally, the compression will be sufficient for the bag to separate, but not too tight to cause the motor to stall or "chatter."

4.4 Idler Roller Guides
Two plastic web guides are located on the rear idler roller. These guides are used for *fine* adjustment of tracking. Once the web is tracking within +/- 1/8" left to right, the plastic web guides can be used to further assist in tracking. Hold the upper roller in place while turning and sliding the plastic guides close to the bags without touching the bags.

NOTE: If the bags are not tracking properly, the plastic guides could cause the bag web to turn or fold over. If this occurs, slide the guides further away from the web and make adjustments to correct tracking issues.

4.5 Heater Bar Adjustment

The pressure bar, when actuated by the seal cylinder, is forced against the front gripper plate. The pressure must be great enough to grip the bag so that the bag does not move when the rollers reverse. If the bag slips through the pressure bar and gripper plate, the bag may not separate or seal properly. Contact APPI Service for adjustment instructions.

4.6 Pressure Bar Alignment / Cylinders Speed Adjustment

The pressure bar must come in evenly and contact the entire surface of the gripper plate simultaneously. If one side of the pressure bar contacts the gripper plate prematurely, the anti-jam may activate, the bag may not be sealed or excessive wear or machine damage could occur.

Check for free movement of the pressure bar: Turn the power to the OFF position and unplug the power cord. Remove the air line from the regulator and remove the top cover. Once the air is removed, the pressure bar can freely be pushed toward the front plate. If the pressure bar binds, adjustments will be required. Binding may be caused by: 1) cylinder rods not being parallel to each other, 2) failing seal cylinders or 3) bent seal cylinder rods.

To test for parallelism, with the power off and air removed, loosen the screws holding the pressure bar onto the seal cylinder rods. With the screws loose, press in the pressure bar and check for binding. If the cylinders were previously binding with the screws loose, the cylinders were most likely not parallel. Tighten the screws while the pressure bar is touching the gripper plate. Then pull the pressure bar back out, checking for binding. If there is no further binding, attach air and power on the unit and test cycle by pressing the foot switch or guard switch. If binding still occurs, then the cylinders themselves must be aligned to make them parallel to each other. This is accomplished by placing shimming material between the cylinder mounting brackets and the side walls. Contact APPI Technical Support before proceeding.

To test for failing or bent seal cylinders, with power off and air removed, remove the pressure bar entirely. Then, push each cylinder rod inward individually. If the cylinder rod binds when not attached to the pressure bar, then the cylinder must be replaced.

If the cylinders are not binding, check for proper pressure bar movement inward and outward. Watch the operation of the pressure bar for several cycles to ensure that the pressure bar contacts the gripper plate at the same time all the way across. If one side of the pressure bar contacts the gripper plate prematurely, the seal cylinder speed must be adjusted.

Two "flow controls" operate the speed of each cylinder's in and out motion that brings the pressure bar against the front plate (gripper plate). Increasing the speed of the pressure will increase production, but if the pressure bar moves in or out too fast, this will cause the pressure bar to "bang". See Figure 4-3

Pressure Bar In Speed Adjustment: The adjustment knob to the rear of the unit controls the speed of the pressure bar INWARD (towards the front plate). To decrease the speed of the pressure bar INWARD, turn the knob counterclockwise. To decrease the speed of the pressure bar
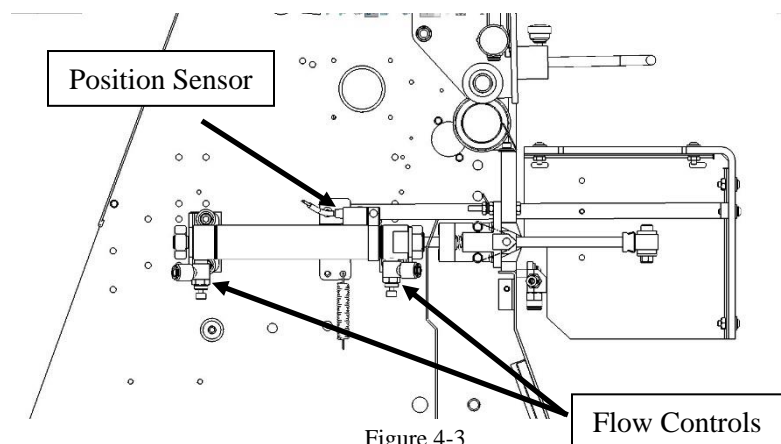
Figure 4-3

INWARD, turn the knob counterclockwise.

Pressure Bar OUT Speed Adjustment:
The adjustment knob toward the front of the unit controls the speed of the pressure bar OUTWARD (away from the front plate). To increase the speed of the pressure bar OUTWARD, turn the knob clockwise. To decrease the speed of the pressure bar OUTWARD, turn the knob clockwise.

Adjust the speed of the pressure bar so that it moves in and out rapidly, in a fluid manner, without "banging" when moving in or out.

4.7 Rubber Strip Replacement
Through normal use, the rubber strip will wear, causing seal quality problems. The rubber will also wear prematurely if contacting the product during the seal operation.
When the wear affects the seal quality or causes the bags not to separate in the gripper mechanism, replace the rubber strip by following these procedures:

1. Turn power OFF.
2. Remove air.
3. Remove Lexan Cover.
4. Loosen Nyloc Nuts and Shoulder Bolts that hold the pressure bar onto the seal rods, one from each side.
5. Remove Pressure Bar.
6. Remove Rubber strip form Rubber Strip Holder. *CAUTION: Rubber Strip Holder may be Sharp!*
7. Insert new rubber into the Rubber Strip Holder, dovetail DOWN.
8. Clean rubber surface with isopropyl alcohol. You may also want to replace the PTFE Anti-Stick Sealing tape on the rubber strip to reduce the occurrence of the bags sticking to rubber strip.
9. Put pressure bar back on seal rods.
10. Replace shoulder bolt and Nylocs. *NOTE: Do Not over tighten the Nyloc, it will bind the Pressure Bar. The Pressure Bar should be able to pivot.*
11. Put Lexan cover ON.
12. Turn power ON.

CAUTION: Metal housing for rubber strip has sharp corners and sharp edges. When rubber is removed, carefully clean slot with a thick cloth, avoiding contact with your fingers or hands.

Note: If bags stick to the new rubber, PTFE Anti-Stick Sealing tape can be added to the center of the rubber strip.

4.8 PTFE Anti-Stick Sealing Sheet Spool Advancement

The material will wear with continued use and prematurely tear if contacting the product when sealing. If the material wears or tears and affects the seals, it can be advanced to bring new Material to the seal area.

To advance the material, insert a small flathead (common) screwdriver into the bottom 1/4" hole located on the right-side panel of the unit. When you feel the screwdriver enter into the slot of the rod, turn the screwdriver counterclockwise to advance new Material into position. See Figure 4-4.

After turning new material into position, turn the rod clockwise slightly so that there is very little tension on the sheet.

NOTE: If the sheet is too tight (too much tension), it may tear during the seal operation.

Figure 4-4

RIGHT SIDE PLATE

GRIPPER PLATE

TURN ROLLER
CLOCKWISE
TO ADVANCED
SHEET
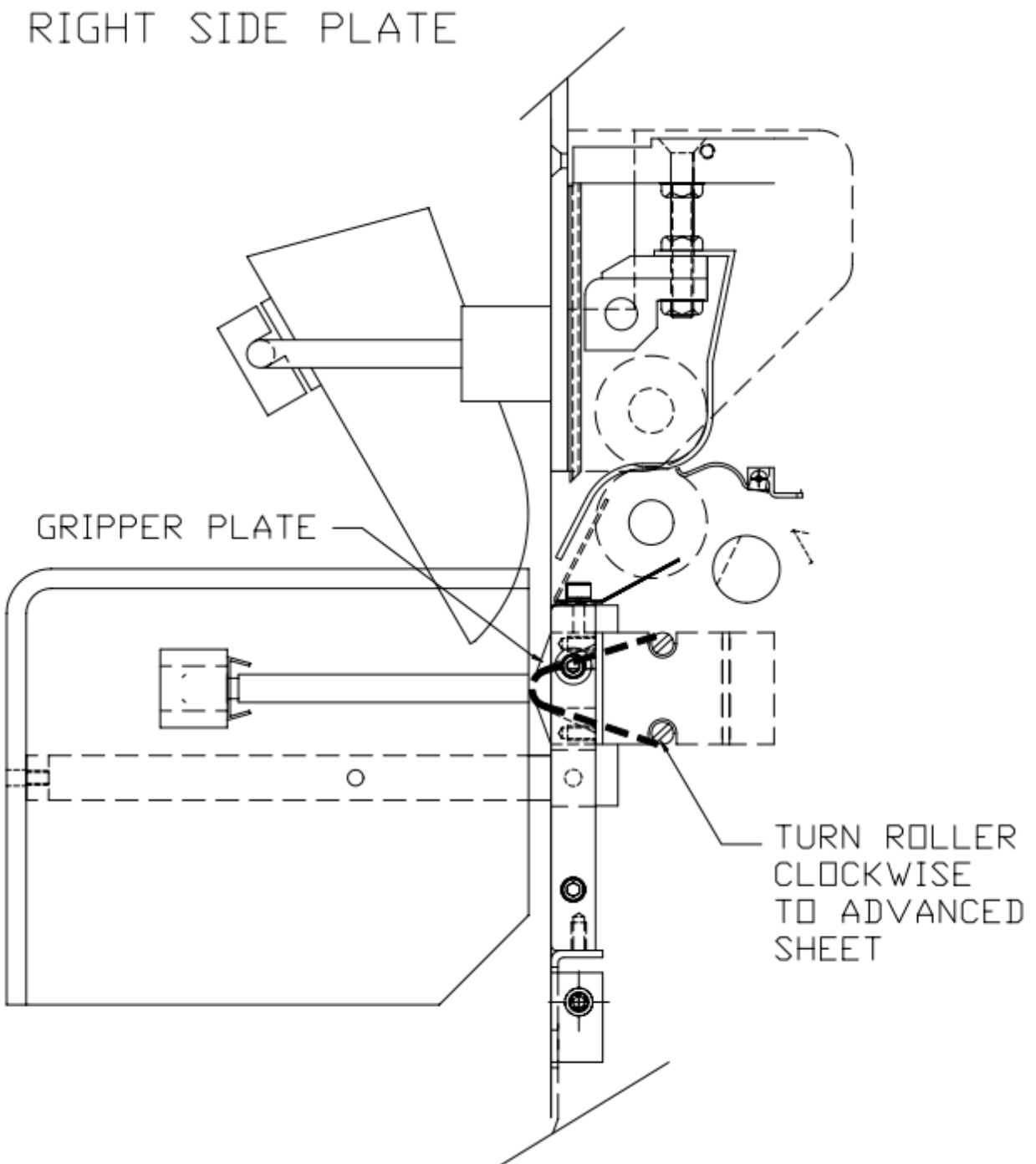
4.9 Replacements for Heater Bar Assemblies

The purpose of this instruction is to show step-by-step how to remove the Front (Gripper) Plate and access the Heater Bar. This process is used when replacing the Heater Cartridge, Thermocouple or PTFE Anti-Stick Sealing Sheet. You may use the Main Frame assembly drawing TA-T14-4000 (section 5.2) and the Seal Bar assembly drawing TA-T14-2000 (section 5.4) as a reference. Follow these instructions to get to the Heater Bar then use the corresponding directions for your replacement. For further assistance, contact the APPI Service Department. If your machine is equipped with a Light Curtain, please contact APPI Service for specific instructions.

Descriptions

A. Heater Cartridge

Since the heater element is a normal wear item, it will require replacement when burned out. Heater element and heater bar life span may be increased by timely adjustment of PTFE Anti-Stick Sealing Sheet. If the heater bar does not come to temperature fully or does not heat whatsoever, the entire heater bar must be replaced.

B. Thermocouple Wire

A thermocouple wire, brazed to a ring terminal and secured to the bottom of the heater bar, detects the amount of heat the heater bar is emitting. The thermocouple wire is considered a normal wear item and will infrequently fail, requiring replacement.

The thermocouple should be replaced when excessive fluctuations occur or incorrect temperature is displayed in the Bag Settings screen. The thermocouple should also be replaced when a visual inspection reveals frayed insulation or broken wire. If the above conditions are met, the thermocouple is bad and the current to the heater bar has been turned OFF.

C. PTFE Anti-Stick Sealing Sheet

When the PTFE Anti-Stick Sealing sheet has been exhausted, it will become loose from the upper rod and will require replacement.

Part 1: Disassembly

1. Turn Main Power OFF.

2. Let machine cool.

3. Prop up the machine so the rubber feet are off the surface, using a 2 x 4 or similar object.

CAUTION: Bagger is heavy, use caution when propping up.

4. On the Front Lexan Guard, remove the four Button Head Cap Screws (BHCS).

Note: Keep all hardware that has been removed in a safe place to reuse later.

5. Remove the Lexan Cover.

6. Remove the Bag Blow-Off.

7. Remove two #8 Socket Head Cap Screw (SHCS) on the RIGHT side of the bagger that hold the Front Plate into place. One screw is located on the top of the Bag Blow-Off Block and the other is directly above the Blow-off Block, about 2 inches.

8. Remove the two #8 SHCS from the LEFT side of the bagger, adjacent from the screws on the Right side of the machine. One may have a green ground wire attached to it.

9. Remove two #8 Flat Head Cap Screws (FHCS) from the Front Plate, one on each side.

10. Carefully pull Front Plate and Lexan Guard Bracket out and unscrew the Pivot Pins (TP-T14M2035), one on each side of the Front Plate.

11. Slide out the Gripper Plate and Front Plate.

12. Access the Heater Cartridge Cables and Thermocouple wire by removing three screws on each side of the Front Cover.

13. With the Front Cover raised, remove wire ties as needed to access and disconnect the Heater Cartridge Cables and the Thermocouple Wire.

14. At the back of the PTFE Anti-Stick Sealing Sheet Assembly there are two Heater Bar sensors, one on each side. (They are connected to white wires). Unplug each of the sensors.

15. Slide out the Heater Bar Assembly.

16. On the Heater Bar Assembly, remove the right and left springs (TP-108153) that hold the sheet shafts in place.

17. Remove Sheet Shafts from the grooves to expose the Heater Bar.

NOTE: If you are NOT replacing the PTFE Anti-Stick Sealing Sheet, set aside to reuse.

Part 2: Replacement
From this point, you will either be replacing (A) the Heater Cartridge (B) the Thermocouple Wire or (C) the PTFE Anti-Stick Sealing Sheet.

A. Heater Cartridge Replacement
1. Remove double set screws on each side of the Heater Bar, See Figure 4-5.

2. Slide the old Heater Cartridges from the Heater Bar.

3. Insert new Heater Cartridges into Heater Bar.

4. Fasten set screws back into place.

5. Continue to Part 3: Reassembly

Note: If the cartridges do not slide out, contact APPI Service Department for further instruction.
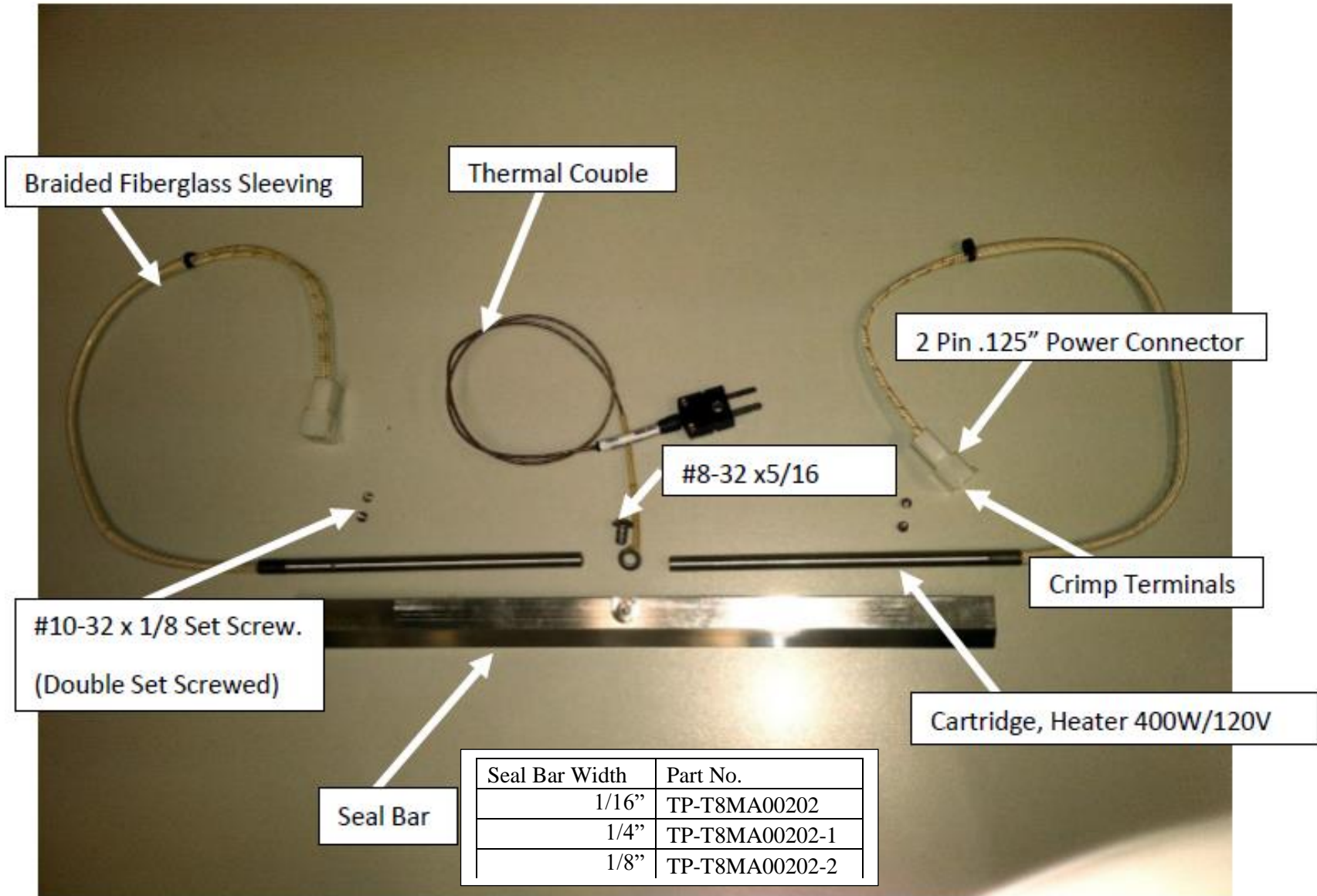
Figure 4-5

Seal Bar Width	Part No.
1/16"	TP-T8MA00202
1/4"	TP-T8MA00202-1
1/8"	TP-T8MA00202-2

B. Thermocouple Wire

1. Remove the 8-32 x 5/16 BHCS that holds the Thermocouple Wire in place, see Figure 4-5.
2. Remove the old Thermocouple Wire.
3. Replace with the new Thermocouple Wire so that the grooved side of the ring sits against the Heater Bar and the dome side is facing out, secure into place. See Figure 4-6.
4. Continue to Part 3: Reassembly.

C. PTFE Anti-Stick Sealing Sheet Replacement

1. With the Sheet Shafts removed from the bracket, take a piece of tape, and wrap it around the end of the Shaft where the sheet stops. Repeat to the same side of each shaft.
2. Remove the old sheet.
3. Line up and center the new sheet with the tape on the ends of each Shaft.
4. Remove adhesive backing and position the Shaft onto the sheet. Roll Shaft so the adhesive is no longer exposed, ensuring there are no wrinkles or bubbles.
5. Repeat for the other end of the sheet. Be sure the sheet wraps around the outside of both ends, See Figure 4-7.
6. Turn the Top Shaft and wind up the sheet until it is all on the one side. This is now the Supply Shaft.
7. Continue to Part 3: Reassembly.
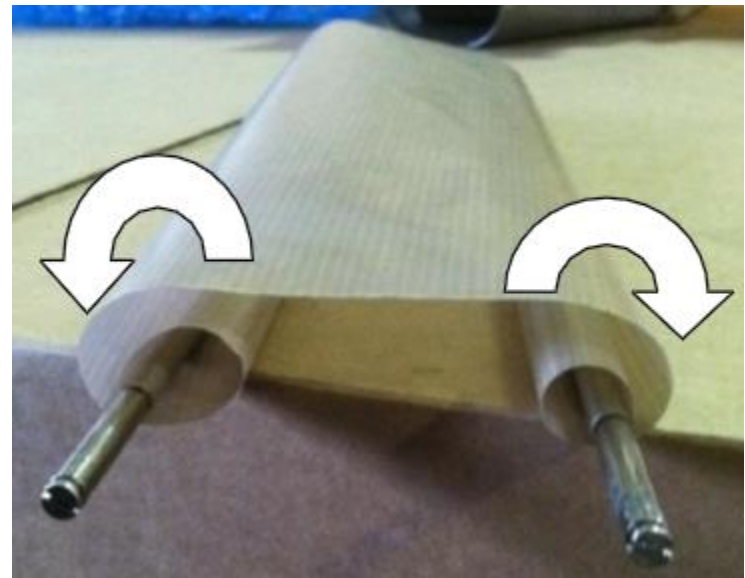
Part 3: Reassembly

1. Reattach the Sheet Shafts to the bracket, placing the Supply Shaft side on the Top of the Bracket.
2. Zip tie the shafts in place and re-hook springs. Remove zip tie when springs are securely in place.
3. Slide Heater Bar Assembly back into the bagger.
4. Reconnect the Heater Bar Sensors, Heater Cartridge Cables and Thermocouple Wire.
5. Neatly zip-tie wires into place.
6. Lower Front Cover. Reattach with three screws on each side.
7. Slide Gripper Plate and Front Plate to line up with Pivot Pin Hole. Insert Pivot Pin and tighten. Do this for both sides on the machine.
8. Push Front Plate and Gripper Plate into position.
9. Attach two #8 SHCS and ground wire on the LEFT side of the machine.
10. Attach the two #8 SHCS on the RIGHT side of the machine.
11. Attach the two FHCS into the Front Plate. *Note: It may help to reach behind and push the Heater Bar Brace forward to the Front Plate.*
12. Reattach the Bag Blow-Off.
13. Replace Lexan Cover and four BHCS.
14. You may now reattach the power supply.

Grooved side faces Seal Bar

Dome side faces out

Figure 4-6

Figure 4-7

4.10 Description of Anti-Jam Circuit

The anti-jam mechanism decreases the possibility of damage to the T-300 / T-375 if product or other objects are in the seal area. The operation of the anti-jam circuit should be tested prior to production on a daily basis.

Although the anti-jam unit may prevent or decrease the opportunity for injuries during the sealing or heating operation, the anti-jam is not designed as a safety device. If not adjusted properly, damage may result from obstructions in the seal area or personal injury may occur if fingers or hands are in the seal area when sealing.

If properly adjusted, a jam is detected when 1) the rubber pressure strip does not contact the PTFE Anti-Stick Sealing Sheet at one or both sides of the gripper plate or 2) the gripper plate is pressed prior to the rubber pressure strip contacting the gripper plate.

4.11 Anti-Jam Adjustments

The anti-jam mechanism consists of 1) two sensors that detect the spring-loaded gripper plate and 2) two cylinder magnetic switches that detect the cylinder position. If the anti-jam circuit is not functioning properly, follow these procedures to test and/or adjust the anti-jam components: See Figure 4-3

With the air OFF and power ON, go to the Main Menu on the touch screen and access **Tech Assist**. Enter the Level 1 Passcode (1001, unless otherwise changed) and press **PLC Info** to access the **I/O List**.

On the machine, locate the two adjustment screws on the gripper plate and loosen the nut. Then with a small Allen Wrench, turn the plunger out, repeat to each side. See Seal Bar Assembly drawing in Chapter 5.4 for illustration of parts. With the Pressure Bar all the way out, X6 and X7 should be turned ON. If they are both ON, turn the adjustment screw Counter-Clockwise till X6 and X7 go out, then turn clockwise till they turn ON. Then turn 1/8 of a turn more. Carefully tighten the lock nut. ***CAUTION: Do not over tighten, the plunger may break.*** Move the Pressure Bar in until it just touches the Gripper Plate, then push all the way in. X2 and X4 should illuminate. If not, proceed to next paragraph.

With a Phillip's head screwdriver, loosen the magnetic switch on the air cylinder. (The magnetic switch looks like a black box clamped onto the air cylinders). Move the Magnetic Switch back and forth until X2 and /or X4 lights up. Repeat to other cylinder.

Note (Recap): When Pressure Bar is OUT all the way X6 and X7 should be lit. When the Pressure Bar is pressed IN all the way, X2 and X4 should be ON and X6and X7 should be OFF.

4.12 Print Head Replacement

Print head instructions will be included with each print head. Otherwise, contact APPI tech support for further instructions.

4.13 Suggested Printer Settings

It is highly recommended that all bag settings are adjusted first on the Bagger Settings screen while the printer is off. The bag should be feeding, blowing open, sealing, and separating properly before attempting to print on the bag.

NOTE: Changes in seal point affect the resting position of the bag, which affects the print position. It is recommended that the Seal Point setting is adjusted before positioning the print.

Printing on Smaller Bags (3"-7" in length): For smaller bags, the ability to print next bag out may be limited by the amount of print length required. For example, on a 3" long bag, you may only be able to print 1/2" length if printing next bag out. This is caused by the location of the print head in relationship to the bottom of the bag when the bag has reversed the maximum distance into the machine. However, if you print one bag back on the 3" long bag, you will be able to print more of the bag length.

For smaller bags, it is recommended that less than half of the bag length be printed.

Recommended Print Location: It is recommended that the print is positioned as low as possible on the bag and as close as possible to the manufactured bottom seal. It is in this area that the two layers of bag material are the most stable, causing the best print quality. The area closer to the opening of the bag is the least stable. Additionally, there may be wrinkles near the open end of the bag that may affect print quality.

The following charts offer some suggested settings based on the bag length. Refer to Chart 1 if your machine has a standard frame. Refer to Chart 2 if your machine has a drop frame.

NOTE: These settings were calculated with a standard T-375 without the DR-10 Driven Print Roller Option.

CHART 1: T-375 STANDARD FRAME MODEL

Setup No.	Bag Length	NBO Y/N	Max Print Length	Bag Seal Point	Print Speed in/sec	Reverse	Print Offset	Comment
1	3"	N	1"	0.5"	4	0.5"	0.07	Print is centered
2	4"	Y	1.25"	0.5"	4	2.1"	0.00	Print is 2.5" from bottom
3	4"	N	1.5"	0.5"	4	.5"	0.20	Print is centered
4	5"	Y	2.5"	0.5"	5	2.1"	0.00	Print is centered
5	5"	N	2"	0.5"	5	.5"	0.30	Print is centered
6	6"	Y	3"	0.5"	6	2.1"	0.00	Print is centered
7	6"	N	2"	0.5"	6	.5"	0.45	Print is centered
8	7"	Y	3.5"	0.5"	7	1.7"	0.00	Print is centered
9	7"	N	2.5"	0.5"	7	0.5	0.45	Print is 1.5" from bottom
10	8"	Y	4"	0.5"	7	1.2"	0.00	Print is centered
11	9"	Y	4"	0.7"	7	.7"	0.00	Print is centered
12	10"	Y	4"	0.7"	7	1.5"	0.20	Print is centered

NOTE: Due to mechanical tolerances, setting your machine to the above settings may achieve different results.

Increasing the Bag Seal Point will cause the maximum reverse to decrease and print to move closer to the bottom of the bag. Increasing the Print Offset will move the print higher on the bag.

NOTE: Print speed is set in the label software.

CHART 2: T-375 DROP FRAME MODEL

Setup No.	Bag Length	NBO Y/N	Max Print Length	Bag Seal Point	Print Speed in/sec	Reverse	Print Offset	Comment
13	5"	Y	2.5"	0.7	5	4"	0.00	Print 2" from bottom
14	5"	N	2.5"	0.7	5	.7"	0.25	Print is centered
15	6"	Y	3"	0.7	6	4"	0.00	Print 2" from bottom
16	6"	N	2.5"	0.7	6	.7"	0.45	Print 1.5" from bott.
17	7"	Y	3.5"	0.7	6	4"	0.00	Print is centered
18	7"	N	3.5"	0.7	6	.7"	0.50	Print 1" from bottom
19	8"	Y	3.5"	0.7	6	4"	0.10	Print is centered
20	9"	Y	3.5"	0.7	6	3"	0.00	Print is centered
21	10"	Y	3.5"	0.7	6	2"	0.00	Print is centered

NOTE: 5" is the minimum bag length recommended to run on a Drop Frame configured T-300 or T-375.

4.14 Recipe Management: Files on the Memory Stick

The memory stick contains several types of data from the machine, including Recipe Management, Alarm Data and Production Data. To access this information, plug in the memory stick from the bagger to your PC and open the DAT0000 folder. There will be a list of folders that have been set up by the touch screen program, (see Figure 4-8). The two folders that contain the Recipe Data and Production Data are called **Recipe** and **Sample**.
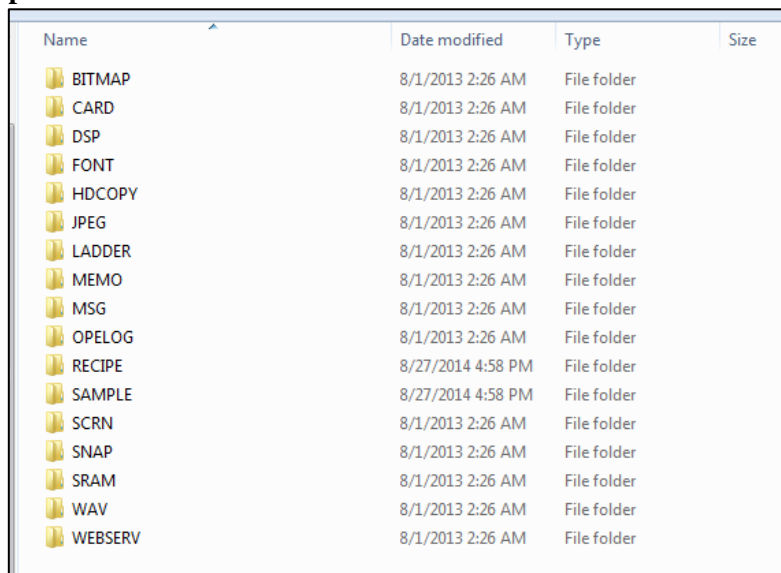
Figure 4-8

Inside DAT000 Folder:

BITMAP, CARD, DISP, FONT, HDCOPY, JPEG, LADDER, MEMO, MSG, OPELOG, SCRN, SNAP, SRAM, WAV, and **WEBSERV** are folders used by the touch screen software and will appear empty on the PC. Do not store any information in these files as it will alter the program and will not function when the memory stick is re-inserted in the touch screen.

RECIPE—contains REC0000.CSV which is a list of all the jobs / recipes saved to the USB memory stick. To access this information, click on **Recipe** and then on **REC0000**, this will open an Excel file containing all the information pertaining to each job as it was saved on the bagger. This file must be saved (copied) to the PC without the original file changed. Once the file has been saved as a different name than the original, then the operator can use the file and save it as a MS Excel file for full use of the MS Excel formulas. On the spreadsheet, each row is a separate job / recipe that has been saved in the USB mode on the bagger, and the columns list all the specifications as it was set on the bagger. Information for each of the jobs starts at column "C" and goes all the way through column "DU". Some of the common settings are in column C-QTY, AF-Blow-off, AG-Seal Point, AH-Reverse, AI-Seal Temp, AJ-Index Speed, AK-Fill Time, AL-Seal Time, AM-Air Pulse, AN Bag Length, AS-Feed Distance, AT-Seal Delay, AU-Cool Time, AV Reverse Delay, AW-Temp Range, AY-Aux Out.

Note: The program does not save headings for the information being recorded. Also, the data logged is specific to each job; more data is acquired the longer the machine is run. It is recommended that you record each setting for your initial job. This information will be used the first time the spreadsheet is viewed by matching / updating the data to improve your records.

Note: DO NOT change the data in the memory stick. However, you can copy the files and past them into a folder on your PC and then use MS Excel to manipulate the data.

Note: If you are going to change anything on this file, remember to "Save As" a different name to keep the original intact.

SAMPLE—contains .BIN files and .CSV files. Use the .CSV files to view the spreadsheet for each file that contains a different kind of data. The files are: Cycle Log – SMP0003.CSV; Production Time Log – SMP0004.CSV; Event Logs – SMP0005.CSV, SMP0006.CSV and SMP0007.CSV (see below for full description of files). This data can be used to provide information about the machine, including number of parts per month. However, these files must be saved (copied) to a PC without the original file changed. Then, the files can be used and saved as MS Excel files for full use of the MS Excel formulas.

Note: There are .BIN files and .CSV files in the Sample folder. DO NOT try to open or change the program used to run the .BIN files. This is the file the touch screen uses to read the information and if it is changed the program will no longer recognize the file. Use the files that have been saved as .CSV. Note: If you wish to change the data listed in the spreadsheet, "Save As" a different name, then make your changes, keeping the original intact.
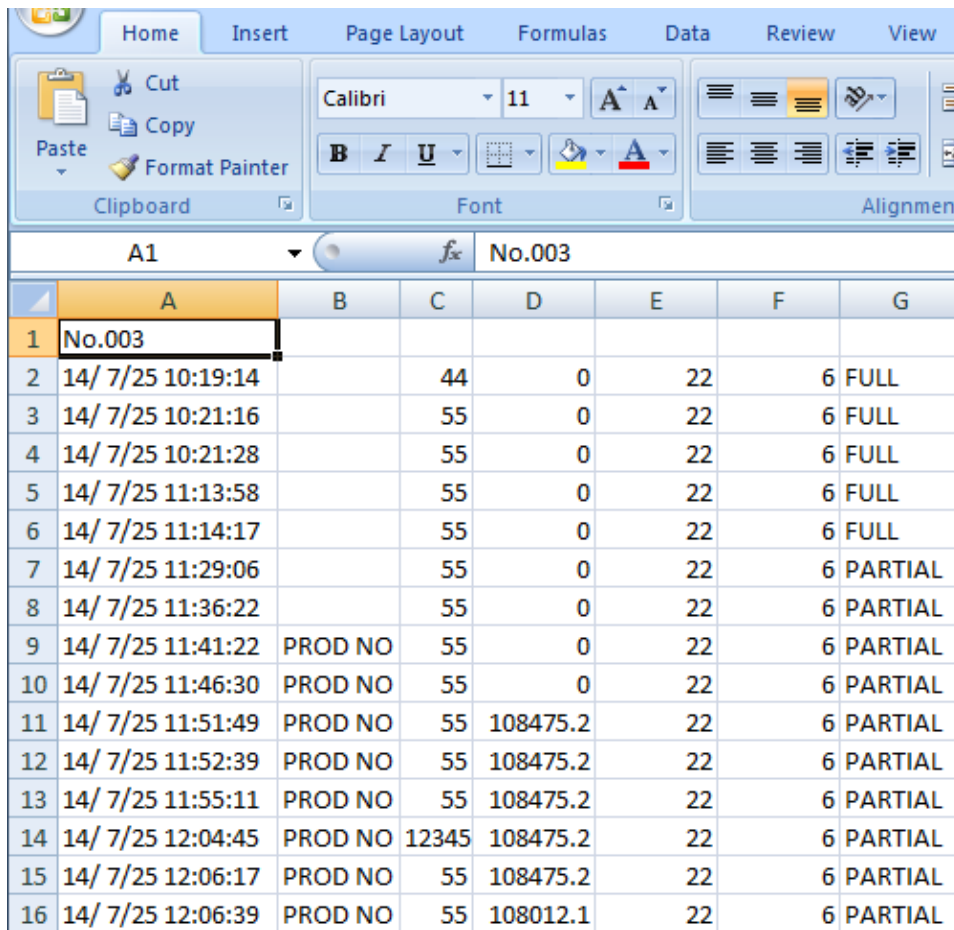
Note: Some files may not be used depending on the options of the machine. For instance, if your machine does not have a scale, you will not have any information recorded in the SMP0003.CSV file.

SMP0003.CSV Cycle Log – records every Scale production cycle. (See Figure 4-9) The data recorded in each column is as follows:

A). Date & Time—Records when the occurrence happened
B). Production#--the number assigned to the production run.
C). Part#--the number to identify each part.
D). Part weight—the weight of the part
E). Target quantity—records the quantity that is to go in the bag.
F). Actual quantity—records the actual quantity that is in the bag.
G). FULL/PARTIAL mode—records if the kit is in Full or Partial mode.

Note: There is a Backup Period every day at midnight. A new backup file with full day data is created; old data is then cleared from the buffer to start the new day.

	A	B	C	D	E	F	G
1	No.003						
2	14/ 7/25 10:19:14		44	0	22	6	FULL
3	14/ 7/25 10:21:16		55	0	22	6	FULL
4	14/ 7/25 10:21:28		55	0	22	6	FULL
5	14/ 7/25 11:13:58		55	0	22	6	FULL
6	14/ 7/25 11:14:17		55	0	22	6	FULL
7	14/ 7/25 11:29:06		55	0	22	6	PARTIAL
8	14/ 7/25 11:36:22		55	0	22	6	PARTIAL
9	14/ 7/25 11:41:22	PROD NO	55	0	22	6	PARTIAL
10	14/ 7/25 11:46:30	PROD NO	55	0	22	6	PARTIAL
11	14/ 7/25 11:51:49	PROD NO	55	108475.2	22	6	PARTIAL
12	14/ 7/25 11:52:39	PROD NO	55	108475.2	22	6	PARTIAL
13	14/ 7/25 11:55:11	PROD NO	55	108475.2	22	6	PARTIAL
14	14/ 7/25 12:04:45	PROD NO	12345	108475.2	22	6	PARTIAL
15	14/ 7/25 12:06:17	PROD NO	55	108475.2	22	6	PARTIAL
16	14/ 7/25 12:06:39	PROD NO	55	108012.1	22	6	PARTIAL

Figure 4-9

SMP0004.CSV Production Time Log – records the length of time the machine has been in production and gives details on the length of time the machine has been in the modes listed below. (See Figure 4-10) The data recorded in each column is as follows:

A). Date & Time—records the date and time the mode was switched.
B). Power On time—the length of time the power has been turned on.
C). Auxiliary mode time—the length of time the machine has been in Aux Mode.
D). Auto mode time—the length of time the machine has been in Auto Mode.
E). Manual mode time—the length of time the machine has been in Manual Mode.
F). Stop time—the length of time the machine has been in Stop Mode.
G). Setup time—the length of time the machine has been in Setup Mode.
H). Power On total cycles—the number of cycles made since the machine has been powered on.
I). Auxiliary mode cycles—the number of cycles made since the machine has been in Auxiliary Mode.
J). Auto cycles—the number of cycles made since the machine has been in Auto Mode.
K). Manual cycles—the number of cycles made since the machine has been in Manual Mode.
L). Setup cycles—the number of cycles made since the machine has been in Setup Mode.

Note: There is a Backup Period every day at midnight when a new production record is added to the list and saved to the .CSV file. Previous records are not erased. Cycle count and timing start over from Zero every day.

	A	B	C	D	E	F	G	H	I	J	K	L
1	No.004											
2	13/ 9/ 6 14:20:30	14645	0	0	1252	12049	1344	0	0	0	0	0
3	13/ 9/ 6 14:20:35	14650	0	0	1252	12049	1349	0	0	0	0	0
4	13/ 9/ 6 14:20:46	14661	0	0	1258	12049	1354	0	0	0	0	0
5	13/ 9/ 6 14:20:49	14664	0	0	1261	12049	1354	0	0	0	0	0
6	13/ 9/ 6 15:01:52	2449	0	0	0	2449	0	0	0	0	0	0
7	13/ 9/ 6 15:01:55	2453	0	0	0	2453	0	0	0	0	0	0
8	13/ 9/ 6 15:08:04	2822	0	0	0	2822	0	0	0	0	0	0
9	13/ 9/ 6 15:08:07	2825	0	0	0	2825	0	0	0	0	0	0
10	13/ 9/ 6 15:08:10	2828	0	0	0	2828	0	0	0	0	0	0

Figure 4-10

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SMP0005.CSV, SMP0006.CSV and SPM0007.CSV Event Logs record every Bagger fault event during operation, (See Figure 4-11). The data recorded in each column is as follows:

A). Fault description—the name of the error that has occurred.
B). Occurrence time—the initial time the occurrence happened.
C). Clear time—the time the error was acknowledged / reset. *Note: Dashes (---) or asterisks (***) in a field on the spreadsheet indicate no data was recorded for that error.*

Note: There is a Backup Period on 1st of the month at midnight a new backup file with the event list is created. Then old data is cleared from the buffer to start new month.

Figure 4-11

Manual Backup: Data is recorded and saved automatically as described above. It can also be done manually using buttons on Log screens: 'Write' - overwrite (save) the same file; 'Backup' - create new file (save as); 'Record' - add a new record; 'Reset' - clear buffer.

4.15 Preventive Maintenance & Scheduled Maintenance

To extend the life of the T-300 / T-375 qualified maintenance personnel must perform all required maintenance tasks. Failure to perform scheduled and preventive maintenance may cause excessive wear to components and will void the warranty. For the purpose of this manual, preventive maintenance (PM) tasks are considered periodic tasks which should be performed on a daily, weekly, or monthly basis.

Scheduled maintenance tasks are performed when the T-300 / T-375 Maintenance Chart Number changes to a higher number. Scheduled maintenance tasks (CHART items) are performed dependent upon the number of machine cycles and therefore are not considered "periodic" tasks.

Legend for Preventive Maintenance Checklist

M	Monthly
W	Weekly
D	Daily

4.16 T-300 / T-375 Preventative Maintenance Checklist

Item	Description	Period
Filter / Air regulator	Drain water from filter	D
Air Regulator	Adjust pressure to 60 PSI	D
Anti-Jam Device	Check operation, adjust as needed (Chapter 4.10)	D
Drive Rollers	Clean with alcohol	D
Performance Sensor	Clean sensor assembly with alcohol	D
Platen Print Roller	Inspect for nicks or cuts, clean with alcohol	D
Print Head	Clean with alcohol (also after each ribbon change)	D
Micro Filter / Venturi	Inspect for contamination of filter, replace as needed, Inspect for blockage / air restriction	W
Wiring / Connectors	Inspect for loose wiring / connectors, tighten as needed	M
Air Lines / Valves / Cylinders	Inspect for loose air lines, listen for leaks, tighten, or replace poly tubing as needed	M
Compartments / Covers	Remove all covers, clean, and blow out compartments with compressed air to remove dust and dirt	M
Compression (Driven Rollers)	Inspect to ensure parallel w/ each other (bag tracking)	M
Drive Belt	Inspect for wear / fraying, replace if needed	M
Drive Belt Print Head Assembly	Inspect for wear, looseness, tighten as required	M

CAUTION: Unplug power cord and disconnect air line prior to removing guards, funnels, or covers. Preventive Maintenance must be performed by qualified maintenance personnel.

4.17 Scheduled Maintenance Chart

Perform every 500,000 cycles

Item	Description	1	2	3	4	5	6	7	8	9	10
Drive belt (Left Panel)	Adjust / Inspect for wear, replace when necessary										
Heater Element & Wiring	Inspect for fraying, cuts, loose connections										
Pressure Bar Rubber Strip	Clean, inspect for wear, replace if required										
Guide Rollers	Inspect for free movement										
Roller Bearings	Inspect for free movement										
Perf Sensor & Spring	Inspect for wear, replace if required										
Rubber Drive Roll	Inspect for cuts, unevenness										
Steel Upper Roll	Clean with alcohol, inspect for burs										
Printed Circuit Boards / Wiring	Blow off with clean, dry air, inspect for loose wires, connectors										
Seal Cylinders	Listen for air leakage, replace or repair as required										
Air Blower Filter	Inspect for contamination, replace as necessary										
Air Lines & Connectors	Inspect for wear, cuts, leakage, replace if required										
Print Platen Roller	Inspect for free movement, inspect for wear, replace roller or bearings as required										
Print Head Belt	Inspect for tightness and wear, tighten, or replace as required										
	INITIALS										

4.18 Preventative Maintenance (PM) Chart, Continued…

ITEM	DESCRIPTION	1	2	3	4	5	6	7	8	9	10
	INITIALS										

4.18 Spare Parts Kits

This section provides a list of common wear items that may require occasional replacement for the T-300 and T-375.

TO-T14-SP10 T-300 / T-375 Spare Parts Kit, Level 1

Item	Part No.	Description	Qty
1	TP-T8MA00130	PTFE Sheet, T-300/T-375	1
2	TP-T8MA00140	Seal Bar Rubber Strip	1
3	TP-207043	Fuse, 10A 250V AGC10 Fast Acting	2
4	TP-217117	Cartridge, Heater 400W/120V	2
5	TP-221416	Thermocouple Wire w/ Connector	1
6	TP-404268	Tubing, 1/4" Dia. Blue (20M Roll)	16 ft.
7	TP-406181	Filter, 4 Micron (Air Knife)	1
8	TP-503101	Drive Belt (Clutch Track)	1
9	TP-402255	Valve, SY3120-5MNZ-N7	1
10	TP-401285	Gasket for SY3120 Valve	1
11	TP-108164	Spring, Seal Bar Compress. T-300	2
12	TP-403014	Cylinder, NCMZ1-G2K02-0400	1
13	TP-108153	Extension Spring	2
14	TA-T1-00124-1	High Voltage Sensor	1
15	TP-214111	Battery, PLC	1

TO-T14-SP20 T-300 / T-375 Spare Parts Kit, Level 2

Item No.	Part No.	Description	Qty.
1	TP-T8MA00130	PTFE Sheet	1
2	TP-T8MA00140	Rubber Strip	1
3	TP-207043	10A Fuse	2
4	TP-221416	Thermocouple	1
5	TP-404268	Tubing	5ft
6	TP-406181	Filter	1
7	TP-503101	Drive Belt	1
8	TP-402255	Valve	1
9	TP-401285	Gasket	1
10	TP-108164	Spring	1
11	TP-112300	Bumper	4
12	TA-T1-00124-1	Perf Sensor	1
13	TP-403014	Cylinder	1
14	TP-214111	Battery	1
15	TP-211386	Transformer	1
16	TP-T1ME00301	PCB	1
17	TP-213361	Power Supply	1
18	TP-219455-2	PCB, Aux Relay	1
19	TP-215000	Relay	1
20	TP-501165	Motor	1
21	TA-T1-00124-3	Ground Sensor	1

22	TP-501169-1	Driver, Motor	1
23	TP-217117	Heater Cartridge	2

T-375 Optional Parts

These parts may be ordered individually. Please note if your machine is 200 dpi or 300 dpi print head.

Item No.	Part No.	Description	Qty.
1	TP-503113	Timing Belt, Synchro-Link .08" Pitch	1
2	VP-Z-P1004238	Zebra xi4 (200 dpi)	1
3	VP-Z-P1004239	Zebra xi4 (300 dpi)	1
4	TP-T14M1097	Print Roller	1

4.19 Troubleshooting Guide and Checklist

The items included in this section cover the common causes of trouble that an operator might encounter during the operation of the T-300 / T-375. When operating difficulties occur, the best procedure is to observe what is happening, identify the causes and effect the correction. Make only one adjustment at a time, checking the results of each adjustment. If an adjustment does not help or escalates the problem(s), return the settings back to the former position.

*CAUTION: **These tests and repairs should be performed only by qualified mechanics or electricians and at their own risk.***

NOTE: When troubleshooting a T-300 / T-375 functioning within a system (i.e. with conveyors, scales, feeders, counters, etc.), always isolate the equipment and operate each machine individually.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
60 Day Trial Expired screen appears	60 Day Trial expired	Call APPI Service
Bags not tearing off	1. Continuous Strip is ON 2. Reverse Distance is too low 3. Reverse Speed too low	1. Turn Continuous Strip OFF 2. Increase Reverse Distance 3. Increase Reverse Speed
Low Battery screen appears	It is recommended to replace battery once every three years.	If the Low Battery Screen displays on the touch screen, DO NOT turn off the machine, it will erase the operating program and any stored settings. Call APPI Service to reorder battery (TP-214111) and for replacement instructions.
Touch Screen does not display	1. Screen saver is active 2. Power off 3. Loose connection 4. Fuse blown 5. Cable shorted / failed	1. Touch the screen 2. Plug in power cord / turn on 3. Tighten connections 4. Replace fuse(s) 5. Replace cable
No main power light	1. Blown fuse 2. Bulb out	1. Replace fuse 2. Replace bulb
Pressure bar does not move when foot switch is operated	1. Heat not up to temperature 2. Disconnected air line 3. Disconnected foot switch 4. Power off 5. Option enabled preventing foot switch operation. 6. Foot switch defective	1. Toggle to setup mode, attempt to cycle. Wait for temperature to increase. 2. Connect air line 3. Connect foot switch to rear panel 4. Turn on power 5. Turn off options 6. Replace foot switch

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Pressure bar moves inward but retracts before sealing	1. Anti-jam sensors improperly adjusted	1. Adjust anti-jam
	2. Cylinder speed mismatch	2. Adjust speed controls on seal cylinders
	3. Insufficient air pressure	3. Increase air pressure
	4. Broken contact on anti-jam circuit	4. Check continuity across anti-jam circuit
Pressure bar presses against front plate but does not seal bag	1. Seal time too low	1. Increase seal time setting
	2. Heat (temp.) too low	2. Increase temperature setting
	3. Heater cartridge bad	3. Replace heater cartridge
	4. Insufficient air pressure	4. Increase air pressure
	5. PTFE folded over or missing	5. Inspect or replace PTFE
Bag sticks to PTFE or pressure (rubber) bar	1. Seal temp. too high	1. Decrease temp in bag setup screen
	2. Seal time too high	2. Decrease seal time in bag setup screen
	3. PTFE in poor condition	3. Turn / replace PTFE
	4. Rubber is dirty / contaminated	4. Clean / replace pressure bar rubber
	5. No PTFE on rubber strip	5. Add PTFE tape to rubber
Bag does not tear off completely	1. Bag slipping through rollers	1. Clean upper and lower rollers with alcohol to remove slip and dirt build-up
	2. Compression pressure insufficient	2. Adjust roller compression
	3. Drive roller not reversing	3. Check tear off cylinder
	4. Bag did not index properly	4. Index another bag for test
	5. Seal rubber dirty / worn	5. Clean / replace rubber
Two bags index from rollers	1. Bag is folded over	1. Straighten bag, thread bags again
	2. Perf sensor dirty / damaged	2. Clean / replace perf sensor
	3. Perf sensitivity out of adjustment	3. Adjust pot on High Voltage PCB
	4. Ungrounded perf sensor circuit	4. Attach grounding rod to roller
	5. Seal point value too high	5. Change seal point setting
	6. Feed distance too high	6. Set value to zero
	7. Zero perf function incorrectly set	7. Reset Zero Perf.
Bag does not completely index	1. Perf is sensing hole in bag (vent)	1. Reposition bag left or right
	2. Seal position setting too low	2. Increase seal position setting

	3. Zero perf function incorrectly set	3. Reset Zero Perf.
PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Uneven Sealing	Heater Bar is Binding	Contact APPI for Further instructions.
First bag after threading indexing multiple bags	1. Thread bags at proper seal position	1. Pull bags through pinch rollers to proper seal point, then cycle machine again.
	2. Perf Sensor not sensing bag	2 & 3. Clean / replace sensor
	3. Dirty / damaged sensor	
	4. Pot on High Voltage PCB out of adjustment	4. Adjust Pot
Bags web breaking prematurely in machine	1. Improper web tension	1. Adjust tension
	2. Index speed too high	2. Reduce speed setting
	3. Improper threading / web contact	3. Rethread / remove obstructions
	4. Bag roll side-plates bent inward	4. Repair / remove side-plates

4.20 Pneumatic Drawings

Pneumatic drawings are provided to assist in troubleshooting the T-300 / T-375 Tabletop Baggers. See Figure 4-12 for the T-300 pneumatic drawing and Figure 4-13 for the T-375 pneumatic drawing.
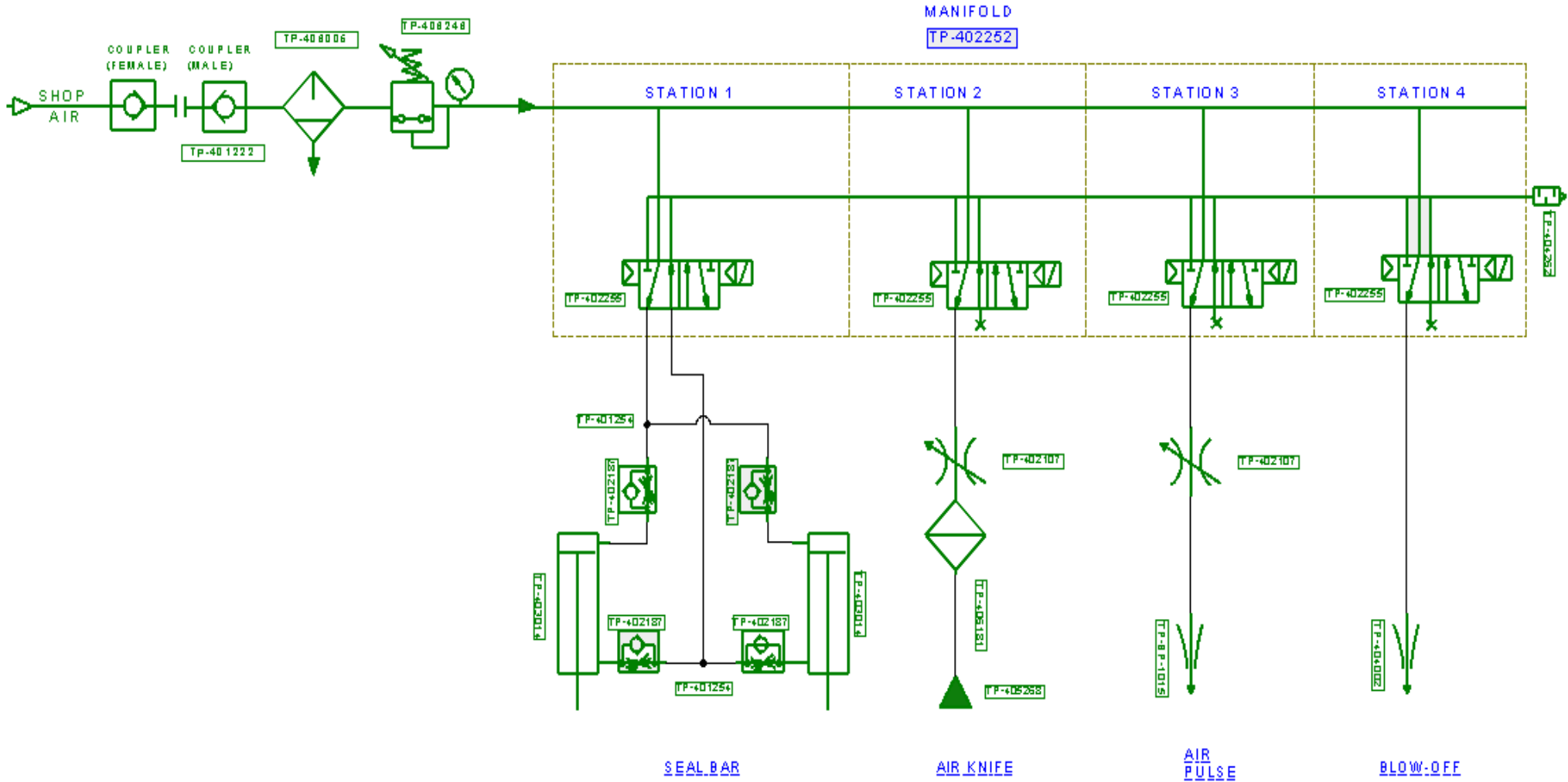
Figure 4-12

Figure 4-13
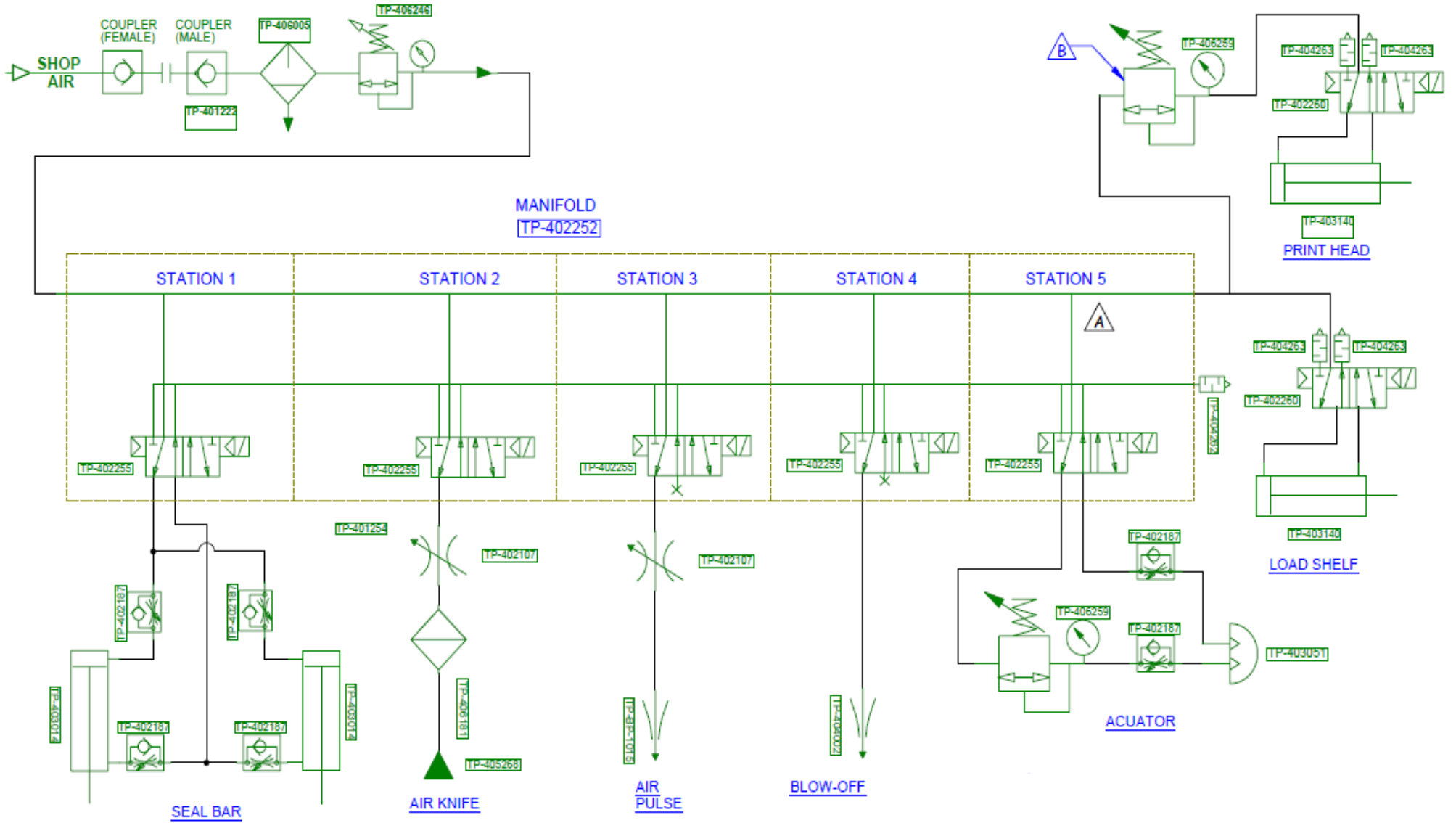
4.21 Schematics

Electrical drawings are provided below for Troubleshooting purposes.

110V Circuit

Circuit drawings are provided to assist in troubleshooting the functionality of the T-300 / T-375 and also the interface signaling with auxiliary infeed equipment. A circuit diagram of the 110V circuit is comprised of main power to the bagger, through the fuse, Corcom filter, motor controller, solid state relay, heater element, line out, and into the power supply printed circuit board. See Dwg T375-E1_110VAC.

FPG-IO

A Dwg is provided which illustrates the PLC LEDs along with wire colors / pin-outs. See Dwg T-375Z-E2_FPG-IO_rev4.

Analog Card, Temperature Controller, Heater Circuit

A circuit diagram of the Analog controller FPO-TC4 with correct Dip switch settings is provided. With a Thermocouple input (TC), the analog card has built in PID and auto tuning functions with 16-bit resolution for very accurate temperature controls. See Dwg T375-E38_TC4.

Stepper Motor Circuit

A circuit diagram of the stepper motor controller is provided with correct Dip switch and Pot settings. See Dwg T375-E4.-RKD.

(HV Board) H.V. PCB

APPI manufactures the printed circuit board for accurate and consistent perforation detection, for accurate bag positioning and registration. A circuit diagram is provided for this PCB. See Dwg T375Z-E5_HV_rev1 and No. NTI275B.

Zebra 110PAX4 Interface PCB

The T-375 Incorporates a Zebra 110PAX4 Interface PCB to provide the status of the Zebra Main CPU and Print Head. Wiring and descriptions of IO is described on this drawing. See Dwg T-375-E6 _Zebra_rev1.

SAV Manifold Wiring Circuit

The T-300 / T-375 is equipped with individual solenoid valve mounted to a manifold. Valves 1 through 5 are standard. Additional solenoid valves may be added for optional equipment. See Dwg T300-E8_SAV_rev2.

AUX IF

Allows bagger to be connected to other machinery. See Dwg T375ZEL-E12.

FPG EXP IO

Illustrates the expansion PLC LEDs along with wire colors and pin-outs. See Dwg T375Z-E14.

Touch Screen Circuit

The T-300 / T-375 is equipped with a color touch screen. Wiring circuit is provided in this drawing. See Dwg T375Z-E17_COM2-TS7.

Barcode Verifier

The T-375 has an option for a barcode verifier to ensure that printed labels can be read before heading to further processing. See Dwg T375Z-E35_BCV_Keyence SR.

Palm Buttons

The T-300/375 has an option for an additional safety measure utilizing optical palm buttons to cycle the bagger, keeping the operators hands out of the loading zone. See T375Z-E9_PalmB

Light Curtain

The T-300/375 has an option for an additional safety measure utilizing a light curtain to detect when an object enters the sealing/loading zone during cycle operation. See T375Z-E10_LC-AB

Safety, E-Stop

The T-300/375 has an option for safety E-stop buttons that will stop all functions of the bagger when pressed. See T375Z-E11_Safety_rev3

110V Circuit

T375-E1_110VAC

FPG IO

T375Z-E2_FPG-IO_rev4

FPG-C32
X0-7

RESERVED		0	1 BLK	BAG OUT SENSOR
JAM SENSOR #1	WHT/RED	2	3 WHT/ORG	PERF SENSOR
JAM SENSOR #2	WHT/RED	4	5 WHT	COUNTING PHS
HEAT BAR SR #1	WHT	6	7 WHT	HEAT BAR SR #2
24VDC	BRN			

FPG-C32
X8-F

FOOT SWITCH	WHT/BLK	8	9 BLK	GUARD SWITCH
FRAME OPEN PROX	BLK	A	B VIO	LABEL READY
PRINTER ERROR	GRN	C	D BLK	PRINT END
PRINTER RIBBON OUT	WHT	E	F	SPARE

FPG-C32
Y0-7

PULSE TRAIN CW	GRY	0	1 PNK	PULSE TRAIN CCW
HV TRIGGER	RED	2	3 ORG	HEATER SSR
AIR BLOWER SOL (#2)	YEL	4	5 GRN	AIR PULSE SOL (#3)
BAG TENSION SOL (#5)	VIO	6	7 BLK	SEAL BAR SOL (#1)
24VDC	BRN		BLU	OVDC

FPG-C32
Y8-F

HV TRIGGER 110VAC	RED	8	9 GRY	PRINT START
RIBBON DRIVE	WHT	A	B WHT/YEL	REPRINT
BLOW OFF SOL	WHT/BLU	C	D RED	LOAD SHELF SOL
PRINTER PAUSE	WHT/GRY	E	F ORG	PRINT HEAD SOL (#4)

Stepper Motor Circuit

T375Z-E37_RKSD507-A

Dwg No: NTI275B

Pin 2

Pin 1

Pin 6

BLK

RED

PRI-A
115VAC

WHT

Pin 2

BLK/WHT

SEC-1
2400VAC
@0.001A

PRI-B
115VAC

Pin 4

Pin 6

WHT/BLK

RED

3.75

RED   RED

Above Wires go to
Green 6 Pin Connector

2.25

Above Wires go to Green
4 Pin Connector.

TP-211386

3.1250

.25' (2)

BLK   WHT   BLK/WHT   WHT/BLK

DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED: XX = ± .05 XXX = ± .03 XXXX = ± .005 ANGLES = ± 2'	DRAWN BY PC	DATE 08-21-96	NICOLLET TECHNOLOGIES, CORP. 711 FIFTEENTH AVE. N.E. MPLS., MN 55413		
	CHECKED BY	DATE	TITLE 3VA 50/60HZ H.V. POWER		
	DESIGNED BY PC	DATE	DWG NUMBER NTI275B		REV C
	FILE NAME	G:\NTI\NTI275B.SKD		SCALE 1 : 2	SHEET 4 of 4

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High Voltage Board

T375Z-E5_HV_rev1

H/V BOARD

TB2

3	W/ORG	X3
2		
1		

TB1

6	WHT	N
5	RED	Y2
4		
3	BRN	24VDC
2		
1	BLK	BLK

110VAC

L

BLK
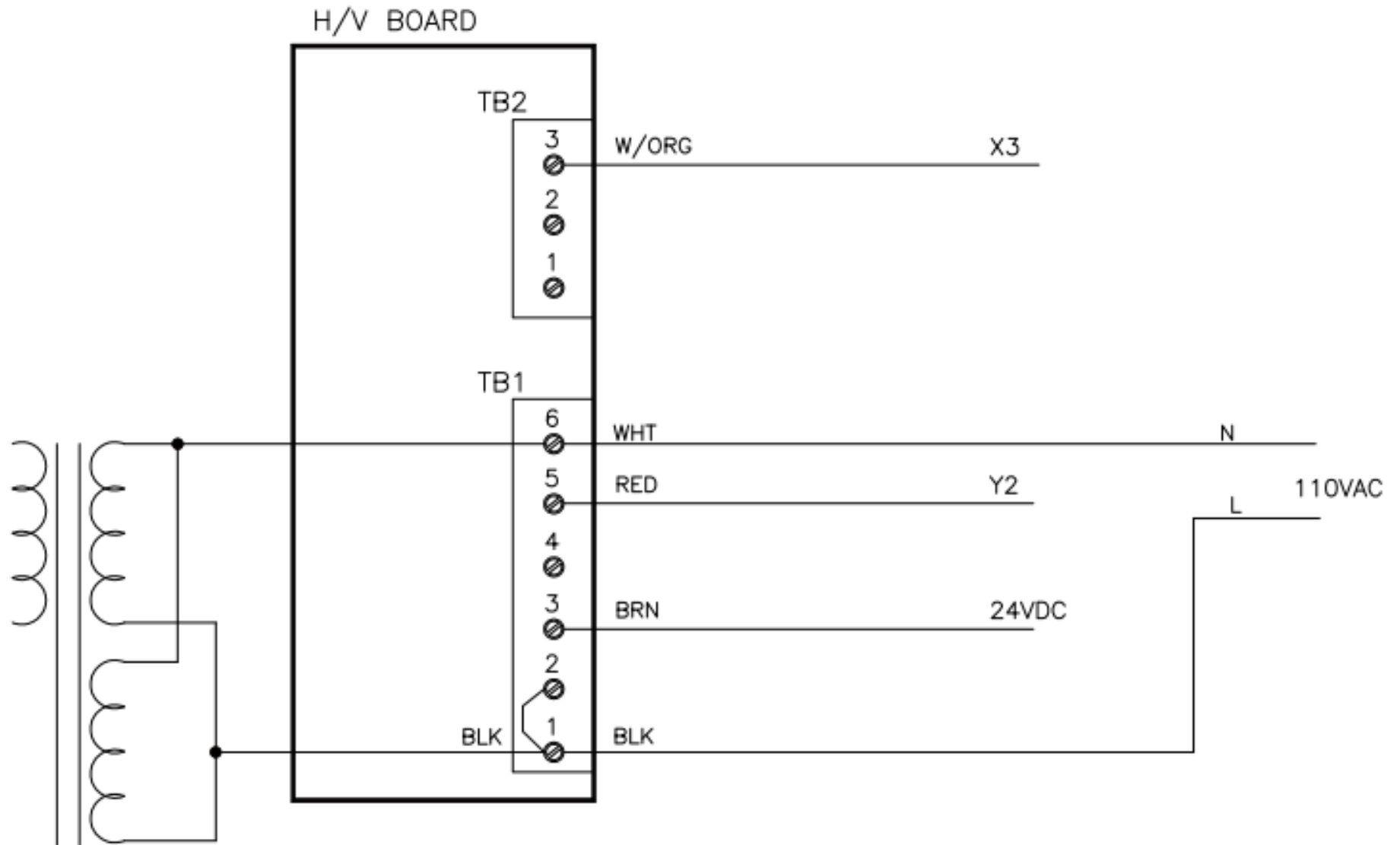
Zebra 110PAX4 Interface PCB

T375-E6 _Zebra_rev1
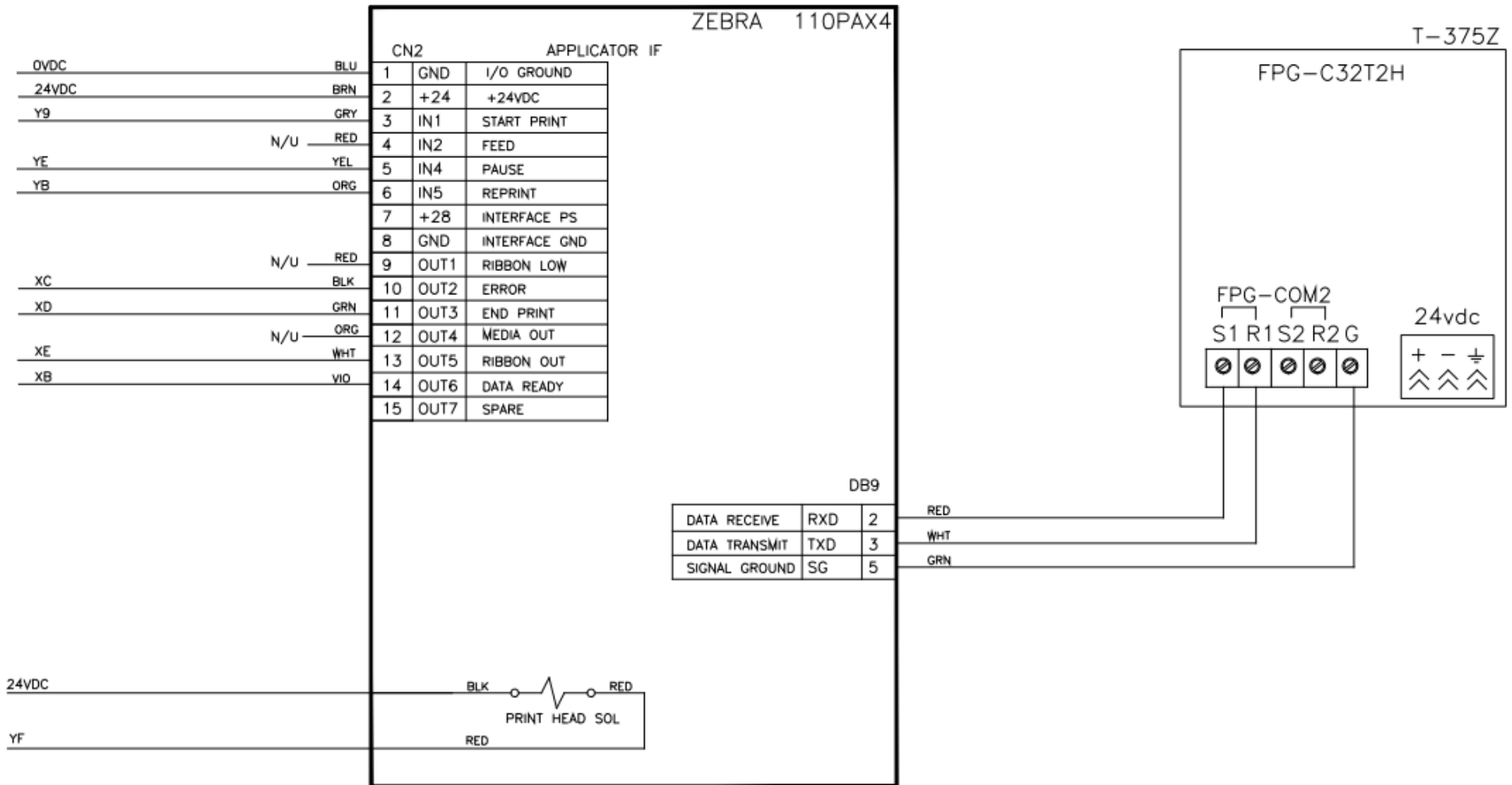
SAV Manifold Wiring Circuit

T375Z-E8_SAV_rev2

T375ZEL-E12_AuxIF

FPO-E32T
X40-47

AIX IN	BRN	0
		1 — WHT/BLK/BLU — LIGHT CURTAIN BIM
PALM BUTTON LEFT	BLK	2
		3 — RED — PALM BUTTON RIGHT
BAG OPEN SENSOR	ORG	4
		5 — WHT — TOP COVER SENSOR
ESTOP	BRN	6
		7 — WHT/BLK/VIO — BCV QUALITY ERROR
24VDC	BRN	

FPO-E32T
X48-4F

US5K TRAY HOME SENSOR	8	9 — US5K TRAY OUT SENSOR
SPARE	A	B — RED — MV-10 PRESSURE SENSOR
BCV GOOD READ	C	D — SPARE
BAGS LOW SENSOR	BLK — E	F — BCV NO READ

FPO-E32T
Y40-47

AUX OUT	0	1 — WHT/BLK/GRN — LIGHT CURTAIN POWER RELAY
AUX FAULT	2	3 — WHT/VIO — ACCUM FUNNEL SOL
US5K DUMP TRAY SOLENOID	WHT/GRN — 4	5 — BO-30 UP/DOWN SOL
BCV TRIGGER	WHT/BLK — 6	7 — BO-30 FORWARD
24VDC	BRN	BLU — OVDC

FPO-E32T
Y48-4F

FLAT SEAL SOLENOID	BLK — 8	9 — PILL FEED NEW BAG
STACK LIGHT 1 RED	BLK — A	B — WHT — STACK LIGHT 1 GREEN
TRIM SEAL SOLENOID	C	D — WHT — STACK LIGHT YELLOW (BAGS LOW)
SPARE	E	F — COUNT FUNNEL AUX OUT

111

Touch Screen Circuit

T375-E17_COM2-TS7
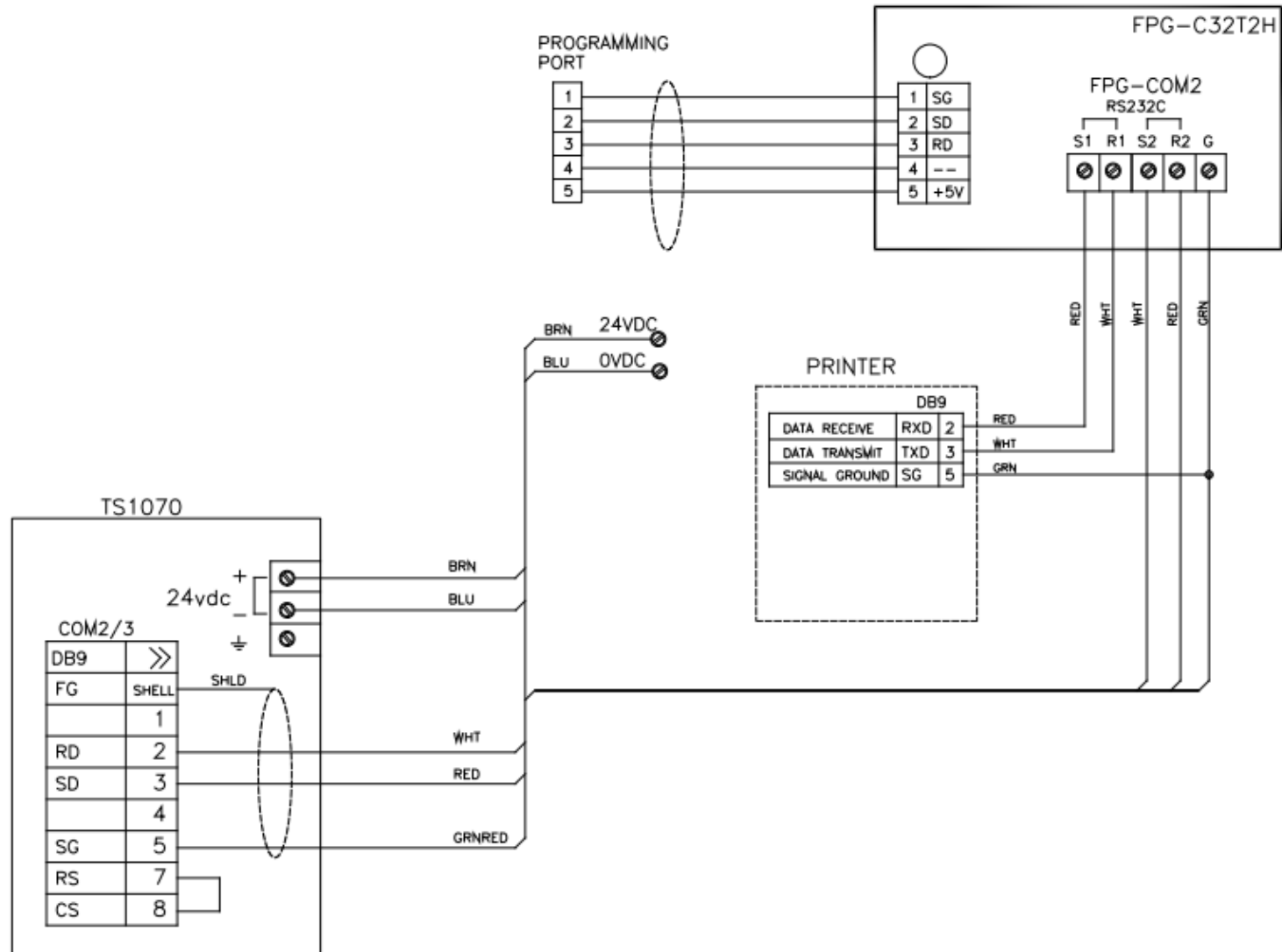
Barcode Verifier

T375Z-E35_BCV_Keyence SR

T375Z-E9_PalmB

PALM BUTTON LEFT	BANNER OTBVP6	+ BRN	1 RED 24VDC
		N.O. BLK	2 BLK X42
		N.C. WHT	3
		− BLU	4 GRN COM

PALM BUTTON RIGHT	BANNER OTBVP6	+ BRN	1 RED 24VDC
		N.O. BLK	2 BLK X43
		N.C. WHT	3
		− BLU	4 GRN COM
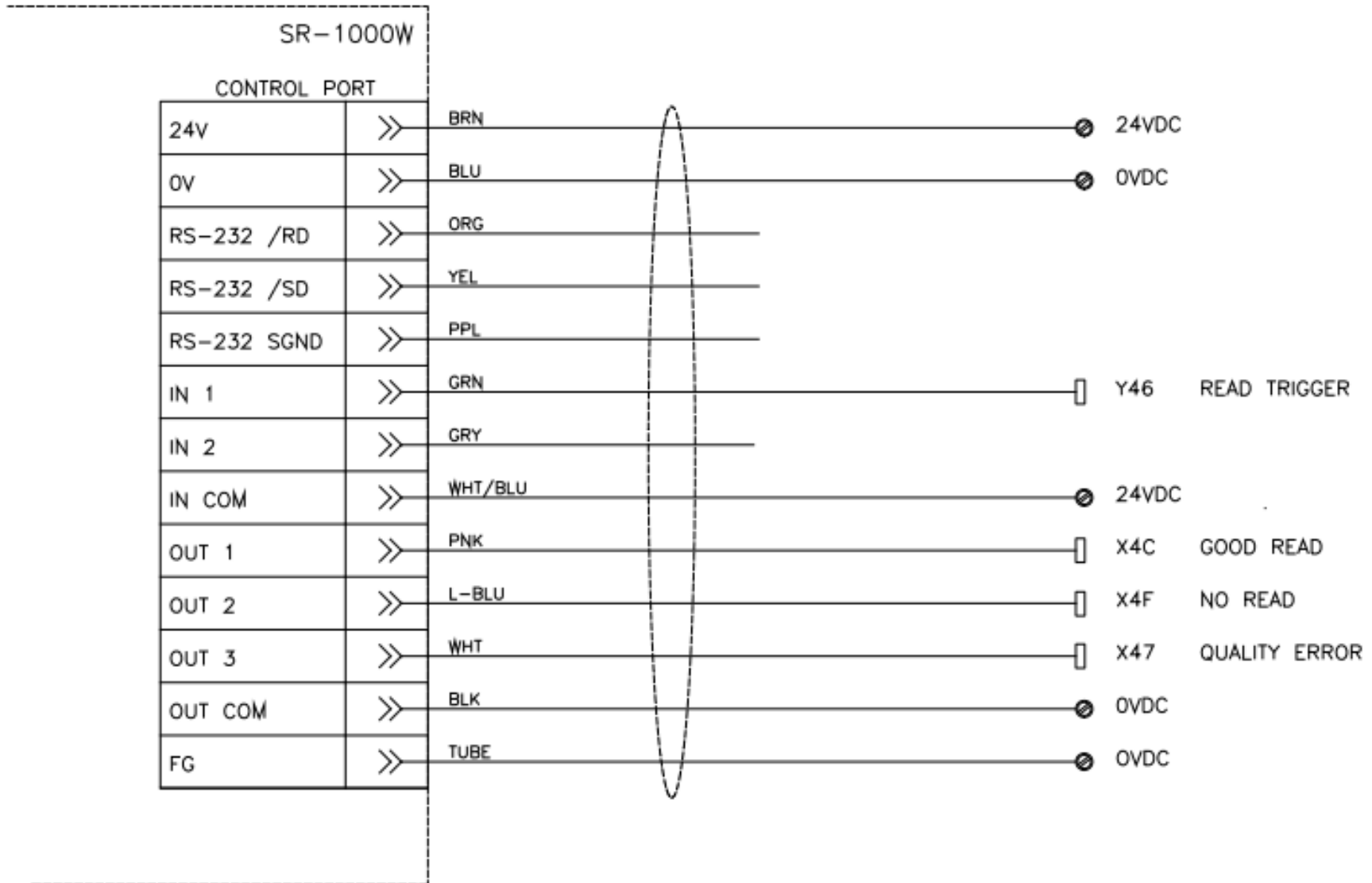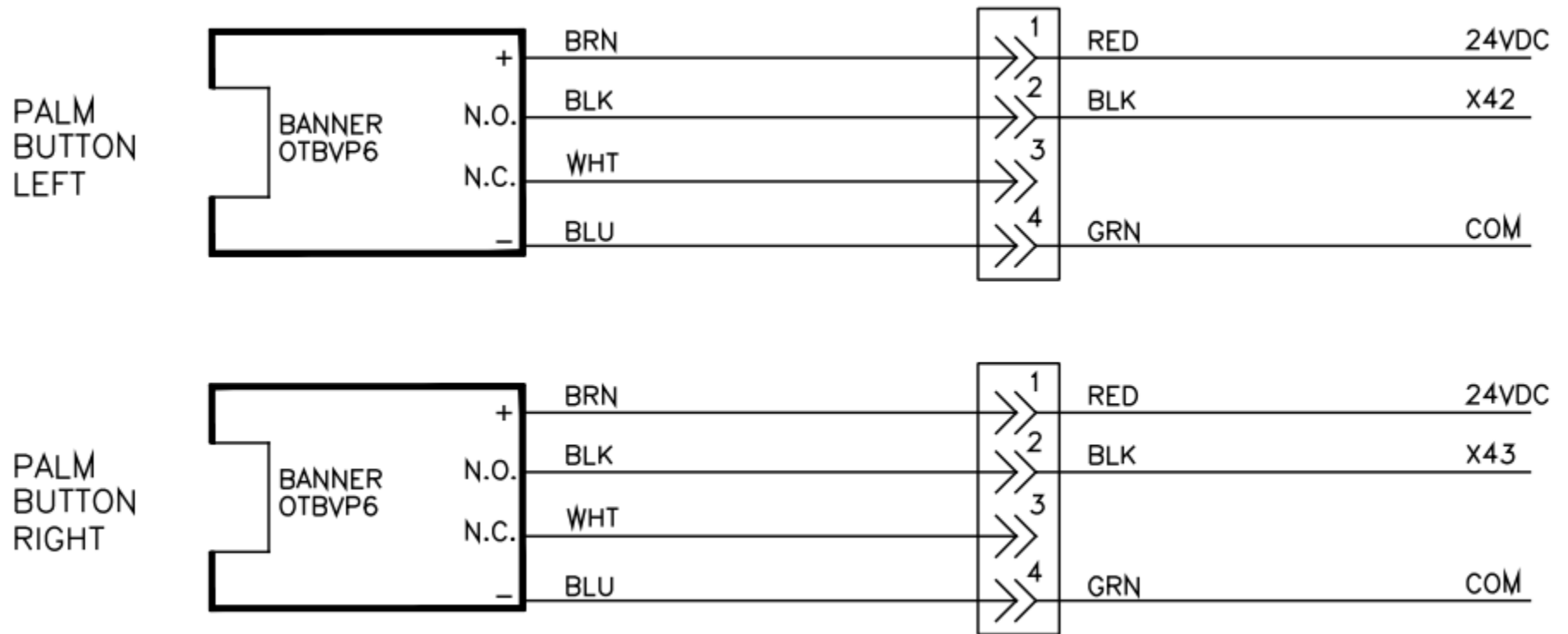
Light Curtain

T375Z-E10_LC-AB
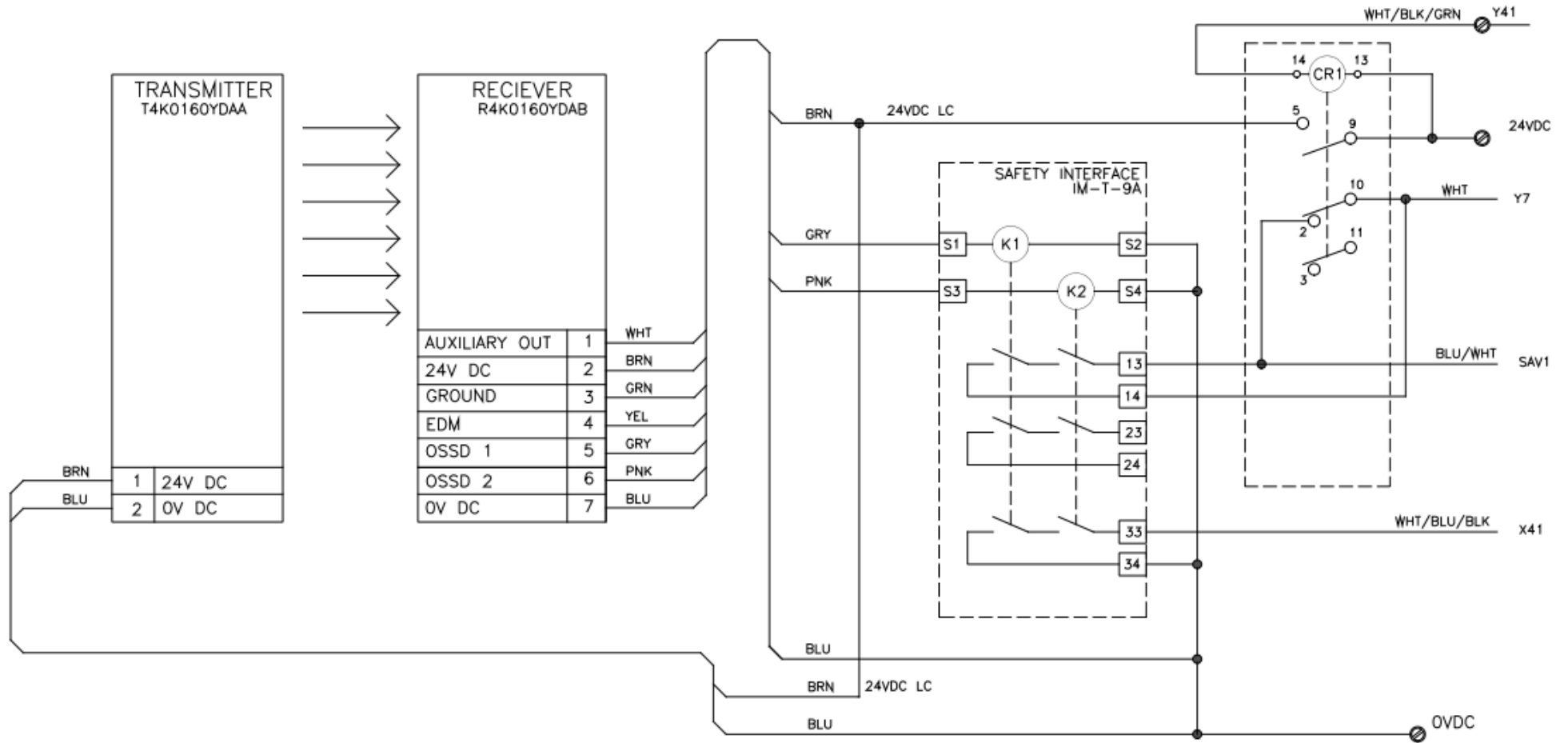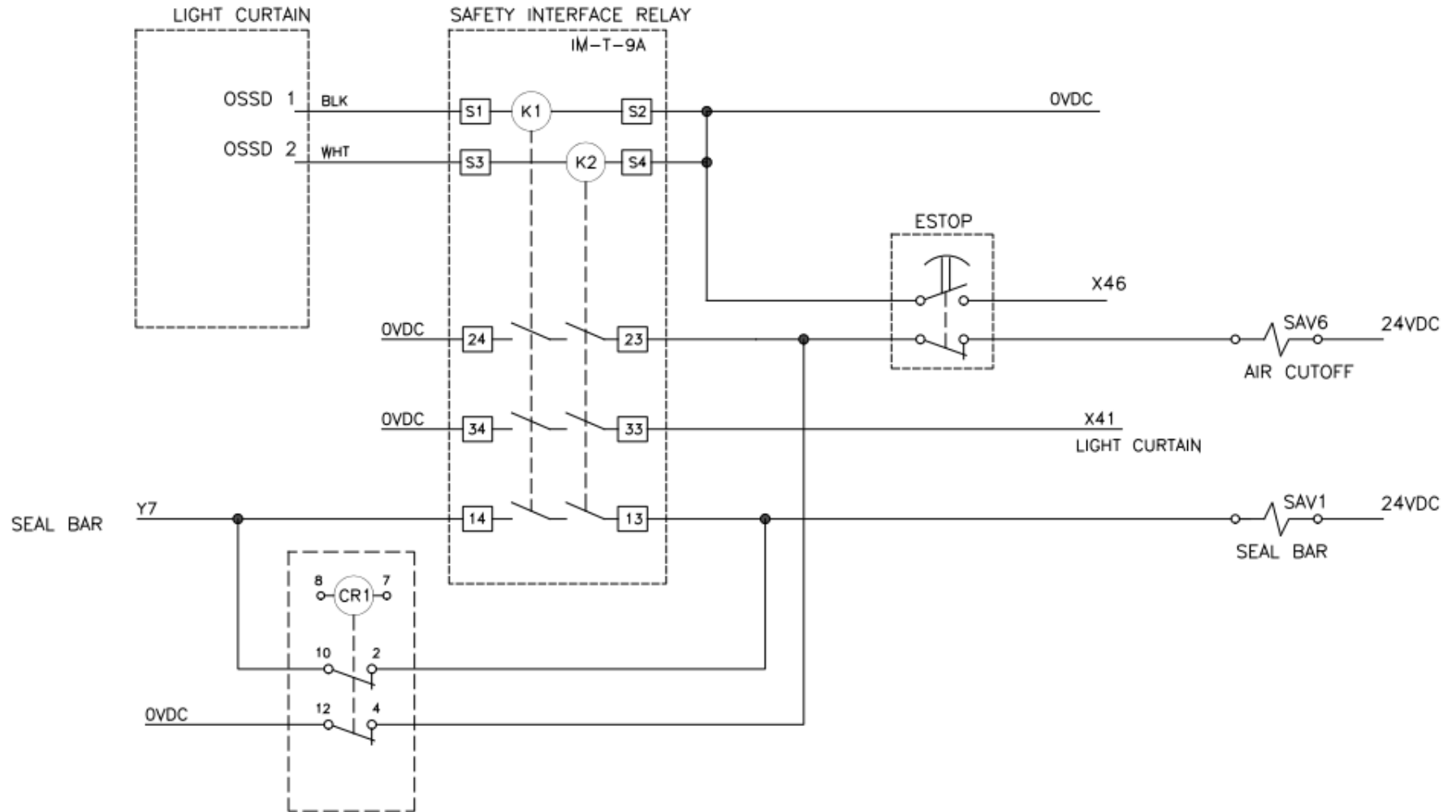
PLC I/O List

The PLC I/O List is included for troubleshooting.

I/O List	T-375Z			
Card:	**Address**		**Description**	**Normal State**
	Inputs			
Main PLC	X	0	Reserved for Stepper control	NA
Main PLC	X	1	Out of Bags Sensor	on
Main PLC	X	2	Seal Bar left sensor	off
Main PLC	X	3	Perf Sensor	off
Main PLC	X	4	Seal Bar right sensor	off
Main PLC	X	5	CF-10 Part Counting Eye	off
Main PLC	X	6	Heater Bar left sensor	on
Main PLC	X	7	Heater Bar right sensor	on
Main PLC	X	8	Foot Switch	off
Main PLC	X	9	Guard switch	off
Main PLC	X	A	Frame Open Sensor	on
Main PLC	X	B	Label ready (from Zebra)	off
Main PLC	X	C	Printer error (from Zebra)	off
Main PLC	X	D	End Print (printing) (from Zebra)	off
Main PLC	X	E	Ribbon out (from Zebra)	off
Main PLC	X	F	Not Used - Available	NA
Main PLC	X	10	Not Used - Not Available	
Main PLC	X	11	Not Used - Not Available	
Main PLC	X	12	Not Used - Not Available	
Main PLC	X	13	Not Used - Not Available	
Main PLC	X	14	Not Used - Not Available	
Main PLC	X	15	Not Used - Not Available	
Main PLC	X	16	Not Used - Not Available	
Main PLC	X	17	Not Used - Not Available	
Main PLC	X	18	Not Used - Not Available	
Main PLC	X	19	Not Used - Not Available	
Main PLC	X	1A	Not Used - Not Available	
Main PLC	X	1B	Not Used - Not Available	
Main PLC	X	1C	Not Used - Not Available	
Main PLC	X	1D	Not Used - Not Available	
Main PLC	X	1E	Not Used - Not Available	
Main PLC	X	1F	Not Used - Not Available	
PLC Exp1	WX	2	Thermocouple Input TC1	
PLC Exp1	WX	3	Input TC2: Not Used - Available	
PLC Exp2	X	40	Auxiliary In	off
PLC Exp2	X	41	Light Curtain Signal	off
PLC Exp2	X	42	Palm Button Left	off
PLC Exp2	X	43	Palm Button Right	on
PLC Exp2	X	44	BO-20 Sensor	off
PLC Exp2	X	45	Top Cover Open Sensor	off
PLC Exp2	X	46	ESTOP	off

PLC Exp2		X	47	Barcode Verifier Quality error	NA
PLC Exp2		X	48	Not Used - Available	NA
PLC Exp2		X	49	Not Used - Available	NA
PLC Exp2		X	4A	Not Used - Available	NA
PLC Exp2		X	4B	MV10 - Pressure sensor	off
PLC Exp2		X	4C	Barcode Verifier Good read	NA
PLC Exp2		X	4D	Not Used - Available	NA
PLC Exp2		X	4E	Bags low sensor	off
PLC Exp2		X	4F	Barcode Verifier No read	NA
PLC Exp2		X	50	Not Used - Not Available	
PLC Exp2		X	51	Not Used - Not Available	
PLC Exp2		X	52	Not Used - Not Available	
PLC Exp2		X	53	Not Used - Not Available	
PLC Exp2		X	54	Not Used - Not Available	
PLC Exp2		X	55	Not Used - Not Available	
PLC Exp2		X	56	Not Used - Not Available	
PLC Exp2		X	57	Not Used - Not Available	
PLC Exp2		X	58	Not Used - Not Available	
PLC Exp2		X	59	Not Used - Not Available	
PLC Exp2		X	5A	Not Used - Not Available	
PLC Exp2		X	5B	Not Used - Not Available	
PLC Exp2		X	5C	Not Used - Not Available	
PLC Exp2		X	5D	Not Used - Not Available	
PLC Exp2		X	5E	Not Used - Not Available	
PLC Exp2		X	5F	Not Used - Not Available	
	Outputs				
Main PLC		Y	0	Stepper Pulse Train CW	
Main PLC		Y	1	Stepper Pulse Train CCW	
Main PLC		Y	2	H/V Trigger	
Main PLC		Y	3	Heater control	
Main PLC		Y	4	Air Blower Solenoid	
Main PLC		Y	5	Air Pulse Solenoid	
Main PLC		Y	6	Reverse Tension Solenoid	
Main PLC		Y	7	Seal Bar Out Solenoid	
Main PLC		Y	8	HV trigger (110VAC)	
Main PLC		Y	9	Start Print (to Zebra)	
Main PLC		Y	A	Ribbon Drive Enable	
Main PLC		Y	B	Reprint (to Zebra)	
Main PLC		Y	C	Bag Blow Off Solenoid	
Main PLC		Y	D	Load Shelf Solenoid	
Main PLC		Y	E	Pause (to Zebra)	
Main PLC		Y	F	Print Head Solenoid	
Main PLC		Y	10	Not Used - Not Available	
Main PLC		Y	11	Not Used - Not Available	
Main PLC		Y	12	Not Used - Not Available	

Main PLC		Y	13	Not Used - Not Available	
Main PLC		Y	14	Not Used - Not Available	
Main PLC		Y	15	Not Used - Not Available	
Main PLC		Y	16	Not Used - Not Available	
Main PLC		Y	17	Not Used - Not Available	
Main PLC		Y	18	Not Used - Not Available	
Main PLC		Y	19	Not Used - Not Available	
Main PLC		Y	1A	Not Used - Not Available	
Main PLC		Y	1B	Not Used - Not Available	
Main PLC		Y	1C	Not Used - Not Available	
Main PLC		Y	1D	Not Used - Not Available	
Main PLC		Y	1E	Not Used - Not Available	
Main PLC		Y	1F	Not Used - Not Available	
PLC Exp2		Y	40	Auxiliary Out	
PLC Exp2		Y	41	LC-10 Relay Enable	
PLC Exp2		Y	42	Auxiliary Fault (NC Signal)	
PLC Exp2		Y	43	Accumulator Funnel Solenoid	
PLC Exp2		Y	44	Double Count Fault / New Bag Length	
PLC Exp2		Y	45	BO-30 Up/Down Solenoid	
PLC Exp2		Y	46	Barcode Verifier Trigger	
PLC Exp2		Y	47	BO-30 Forward Solenoid	
PLC Exp2		Y	48	Stack Light 2 Red	
PLC Exp2		Y	49	Stack Light 2 Green	
PLC Exp2		Y	4A	Stack Light 1 Red	
PLC Exp2		Y	4B	Stack Light 1 Green	
PLC Exp2		Y	4C	Trim Seal Solenoid	
PLC Exp2		Y	4D	Stack Light 2 Amber (Bags Low)	
PLC Exp2		Y	4E	Stack Light 1 Amber (Preset Count)	
PLC Exp2		Y	4F	Counting Funnel Auxiliary Out	
PLC Exp2		Y	50	Not Used - Not Available	
PLC Exp2		Y	51	Not Used - Not Available	
PLC Exp2		Y	52	Not Used - Not Available	
PLC Exp2		Y	53	Not Used - Not Available	
PLC Exp2		Y	54	Not Used - Not Available	
PLC Exp2		Y	55	Not Used - Not Available	
PLC Exp2		Y	56	Not Used - Not Available	
PLC Exp2		Y	57	Not Used - Not Available	
PLC Exp2		Y	58	Not Used - Not Available	
PLC Exp2		Y	59	Not Used - Not Available	
PLC Exp2		Y	5A	Not Used - Not Available	
PLC Exp2		Y	5B	Not Used - Not Available	
PLC Exp2		Y	5C	Not Used - Not Available	
PLC Exp2		Y	5D	Not Used - Not Available	
PLC Exp2		Y	5E	Not Used - Not Available	
PLC Exp2		Y	5F	Not Used - Not Available	

4.22 Notes

Date	Description

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Chapter 5: Parts and Drawings

T-300 System Layout
T-300 / T-375 Main Frame Assembly
T-300 Electronics Assembly
T-300 / T-375 Seal Bar Assembly
T-300 / T-375 Vertical Support Subassembly
T-300 / T-375 Top Cover Latch Assembly
T-300 / T-375 Pneumatics Assembly
T-300 / T-375 Completion Assembly
T-300 / T-375 IOP Touch Screen
T-375 System Layout
T-375 Electronics Assembly
T-375 Printer Assembly
T-375 Zebra Printer Assembly
Bag Blow-Off Option
Bag Deflator Option
Load Shelf Option
Light Curtain Option
Notes

5.1 T-300 System Layout

T-T300

Item No.	Part No	Description
1	TA-T14-1000	Electronics Assembly
2	TA-T14-2000	Drop Seal Bar Assembly
3	TA-T14-4000	Main Frame Assembly
4	TA-T14-5000	Top Cover Latch Assembly
5	TA-T14-6000	Pneumatics Assembly
6	TA-T14-7000	Completion Assembly
7	TA-T14-7500	IOP (Touch Screen)

Note: Item 2 could be either a Drop Frame Assembly (shown) or a Standard Frame Assembly Depending on the option chosen.
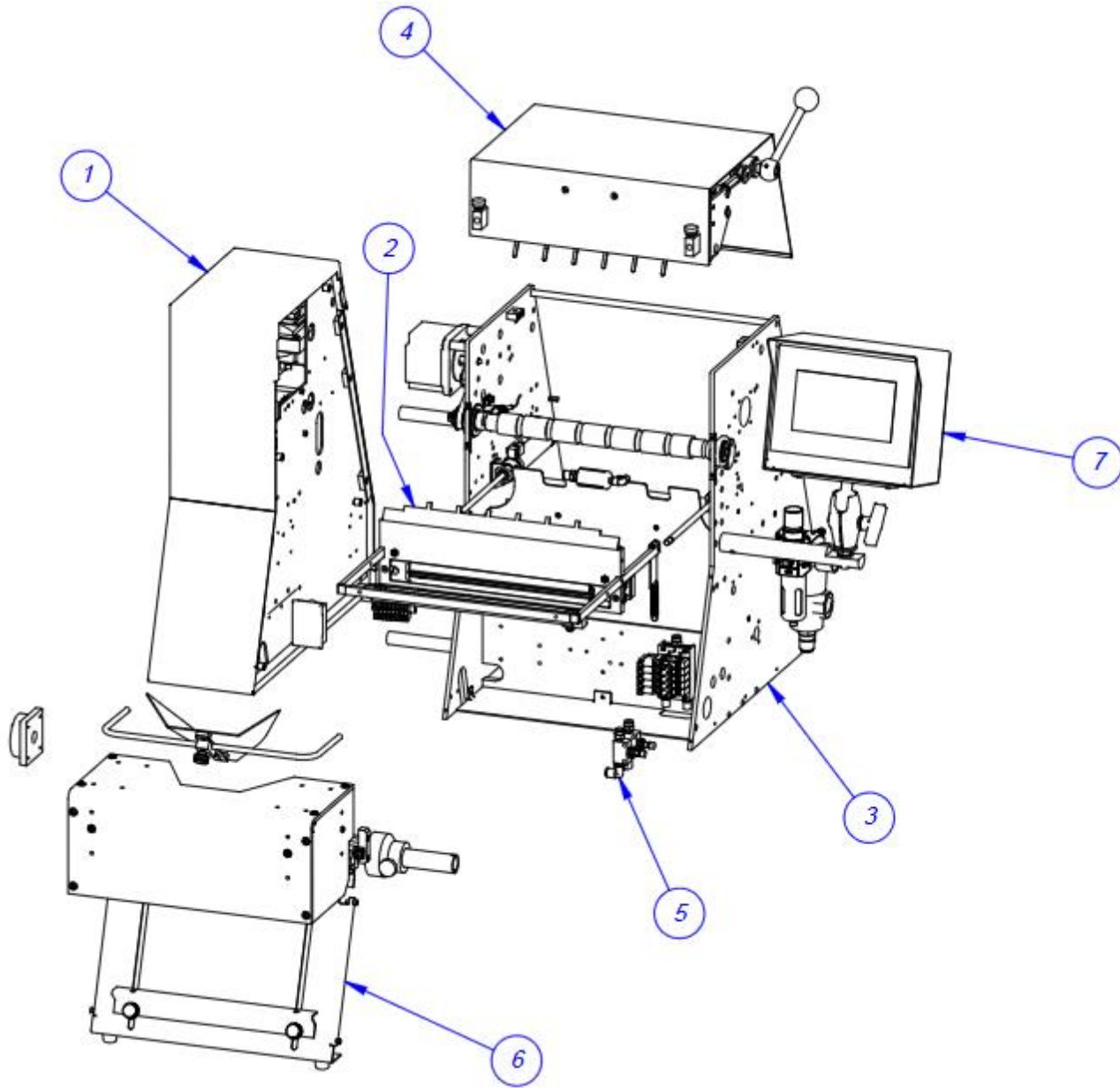
5.2 T-300 / T-375 Main Frame Assembly

TA-T14-4000

Item No.	Qty.	Part No.	Description
1	1	TP-T14M1093	Angle Brace
2	1	TP-T14M1003	Left Side Plate
3	1	TP-T14M1004	Right Side Plate
4	2	TP-T14M1048	Standoff Left Cover
5	1	TP-T14M1070	Inside Cover
6	1	TP-501165	Motor
7	3	TP-T14M1043	Standoff, Motor
8	1	TP-T14M1007	Roller Pulley
9	1	TP-T14M1027	Motor Pulley
10	2	TP-T14M8047	Stop Block
11	2	TP-T8MA00176	Bearing Keeper
12	1	TP-T14M1025	Floor Pan
13	1	TP-T1MC00091	Belt Tensioner
14	1	TP-504132	Cam Follower
15	1	TP-T14M1091	Cross Brace
16	1	TP-T8MA00132	Roller Stop
17	2	TP-T14M1096	Spacer Cylinder Mount
18	2	TP-T14M1094	Spacer Cylinder Mount
19	1	TP-403014	Cylinder
20	1	TP-403014	Cylinder
21	1	TP-T14M1108	Blank Cap
22	1	TP-T14M1109	Front Floor Pan
23	1	TP-406260-1	Filter/Dryer/Regulator
24	1	TP-401292	Straight Connector
25	1	TP-401222	Quick Connect Nipple
26	2	TP-106129	Spring Pin
27	1	TP-106126	Spring Pin
28	1	TP-108220	Spring Plunger
29	1	TP-308397	Key stock
30	1	TP-402252	5 Station Manifold
31	2	TP-401134	Hex Plug
32	2	TP-404262	Muffler
33	5	TP-402255	Valve
34	1	TP-401258	Straight Connector, 1/4" Tube X 1/8 NPT
35	4	TP-401278	Plug, 1/4" Tube
36	1	TP-503101	Drive Belt
37	10	TP-401284	Valve Screws
38	1	TA-T1-00124-1	Perf Sensor, High Voltage
39	1	TP-T14M4014	Sensor Mount

Item No.	Qty.	Part No.	Description
40	1	TP-111250	Thick Dome Plug 1.125"
41	1	TP-111251	Thick Dome Plug 1.500"
42	1	TP-111248	Thick Dome Plug .625"
43	2	TP-111249	Thick Dome Plug 1"
44	1	TP-208342	Wire Terminal
45	1	TP-T14M1062	Steel Driven Roller
46	2	TP-504114	Bearing
47	2	TP-T14M1037	Guide Roller
48	4	TP-504101	Nylon Bearing
49	4	TP-106106	Spring Pin
50	2	TP-108160	Spring
51	4	TP-111010	Spring Closure Collar
52	1	TP-216112	Photo Electric Sensor

NOTE: This assembly is used on both the T-300 and T-375 table top baggers. Part numbers TP-14M1108 (blank cap), TP-111248 (thick dome plug .625) and TP-111249 (thick dome plug 1") QTY 2 are not needed on the T-375 models because of the addition of a printer.

NOTE: Item 47, (TP-T14M1037 Dancer Roll), Item 50 (TP-108160 Spring), and Item 51 (TP-111010 Spring Closure Collar) are only used in the T-375 to guide the bag web path around the printer and are not used in the T-300 model.

NOTE: Item 19 and 20, (TP-403014) are for standard pass-through (3"). For (4") extended pass-through, items 20 and 21 will be (TP-403015). For (5") extended pass-through, items 20 and 21 will be (TP-403013).

*NOTE: Item 52 (TP-216112) is only used for the T-375 as a bag-out sensor for the printer.*

THIS GUIDE ROLLER WITH BEARINGS, SPRING PINS AND SPRING IS ONLY USED WHEN THIS ASSEMBLY IS PART OF A T-300. IT IS NOT USED WHEN THIS ASSEMBLY IS INSERTED INTO A T-375
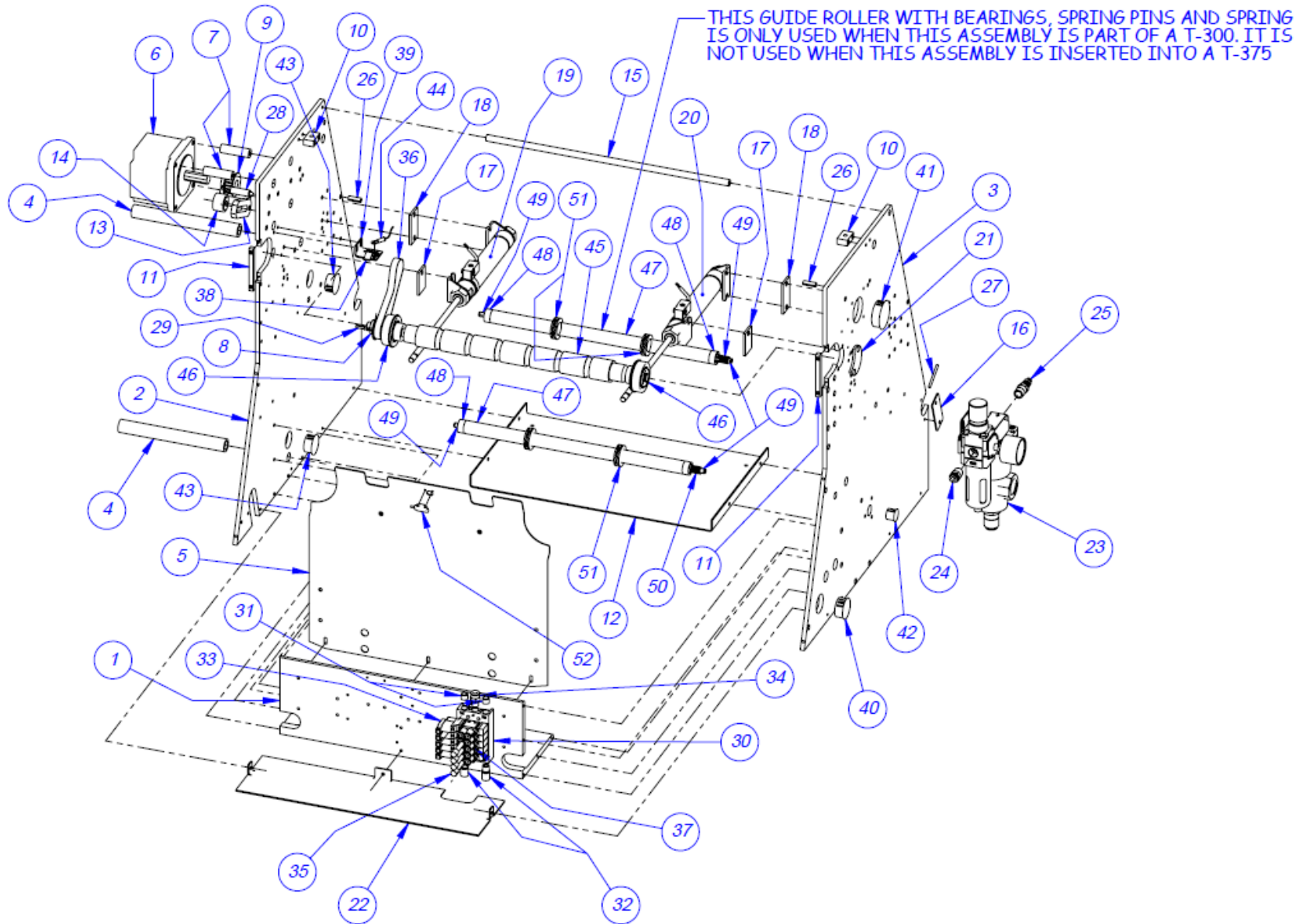
5.3 T-300 Electronics Assembly

TA-T14-1000

Item No.	Qty.	Part No	Description
1	1	TP-T14M1046	Electrical Panel
2	4	TP-107177	Bushing
3	1	TP-T14M1009	Rear Control Plate
4	1	TP-207216, TP- 207344	Fuse Holder & Fuse 10A
5	1	TP-215384	Power Switch
6	1	TP-212242	3-Pin Socket W/Angle Bracket
7	1	TP-112240	Power Cord Strain Relief
8	1	TP-212410	Ac Outlet
9	1	TP-212160	5-Position Mini Dim
10	1	TP-T14M2009	Mylar Over-Lay
11	1	TP-213361	24vdc, 3amp Power Supply
12	4	TP-214273	Stand-Off, Nylon, 1/2", #4-40
13	1	TP-T14M1028	Transformer Mount
14	1	TP-205108	Emi Filter, Corcom
15	1	TP-211386	Transformer
16	1	TP-T1ME00301	High Voltage Board
17	1	HP-58243A1	Heat Shield
18	1	TP-218021	Din Rail
19	21	TP-208142	Large Terminal Block
20	2	TP-214285	Stand-Off 1-1/2" Long 6-32
21	1	TP-220508	PLC Analog Module
22	1	TP-220511	PLC, Fpg-C32t2h Gray
23	1	TP-218020	Din Rail
24	2	TP-T15M8050	Stand Off
25	1	TP-215005	Switch
26	1	TP-T14M1010	Side Cover-Left
27	1	TP-215000	Solid State Relay
28	1	TP-215000A	Cover
29	1	TP-218021	Din Rail
30	1	TP-501169-1	Motor Driver

NOTE: Item 30, (TP-501169-1) is for 120V systems. For 240V systems, item 30 will be (TP-501175-2).
NOTE: Item 22, (TP-220511) requires a battery, part # for the battery is (TP-214111).

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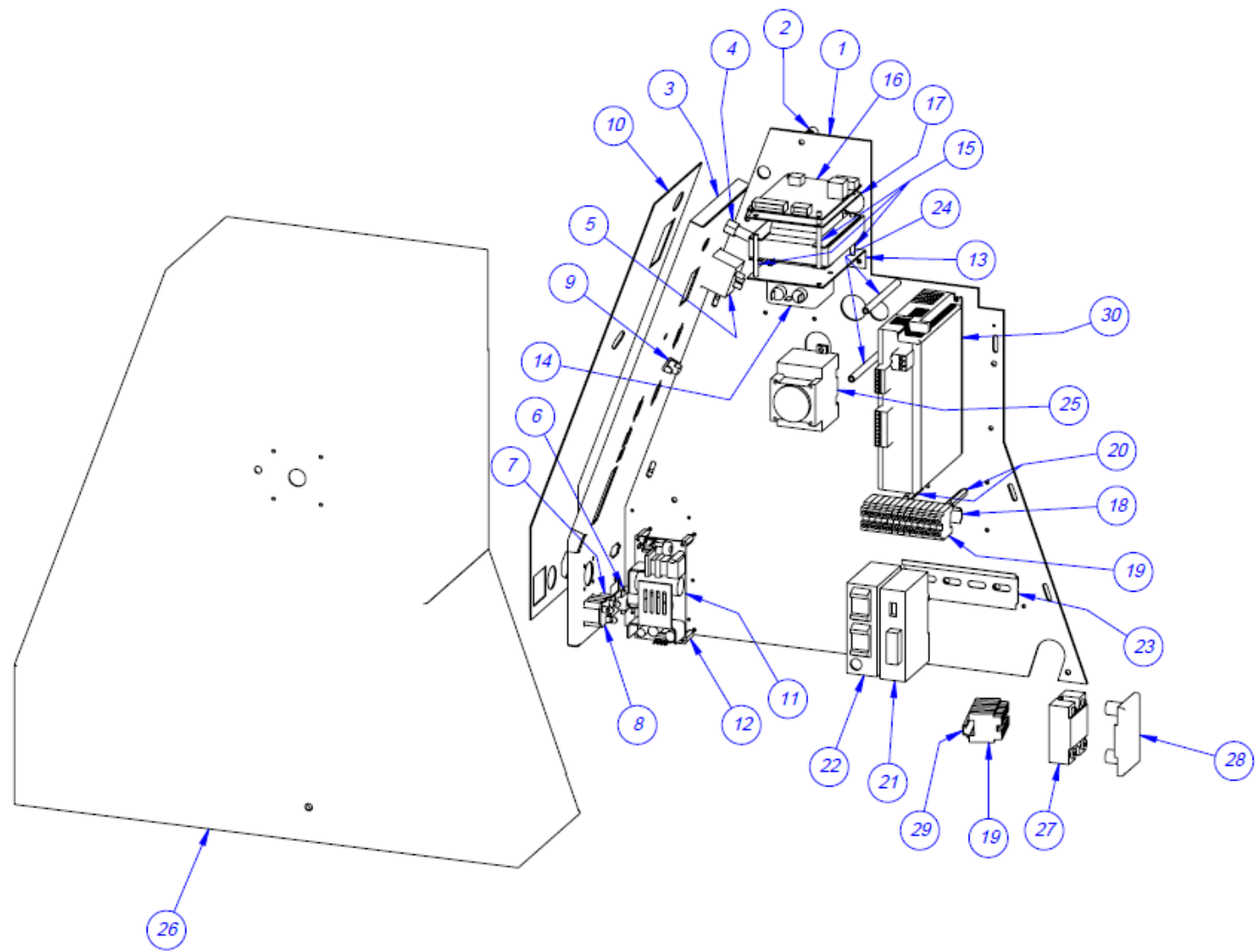
5.4 T-300 / T-375 Seal Bar Assembly

TA-T14-2000

Item No.	Qty.	Part No	Description
1	1	TP-T14M2023	Brace
2	1	TP-T8MA00130	PTFE Sheet
3	1	TP-T8MA00202	Seal Bar 1/16"
4	1	TP-T14M1075	Front Plate (Upper)
5	2	TP-T14M2005	Rod - PTFE Tape
6	2	TA-T14-2100	Vertical Support Assembly
7	2	TP-T14M2025	Bracket
8	2	TP-T14M2026	Spring Socket
9	1	TP-T14M2027	Gripper Plate
10	2	TP-T14M2035	Pivot Pin
11	2	TP-108166	Spring
12	1	TP-T8MA00178	Exit Plate
13	1	TP-T14M2033	Lexan Guard Bracket
14	2	TP-T14M2034	Flag, Lexan Guard Sensor
15	1	TP-T8MA00110	Pressure Bar
16	2	TP-T14M2028	Pivot Block
17	1	TP-T8MA00109	Rubber Strip Holder
18	1	TP-T8MA00140	Rubber Strip
19	2	TP-217117	Heater Cartridge
20	2	TP-108089	Extension Spring
21	2	TP-108153	Extension Spring
22	2	TP-108223	Spring Plunger
23	2	TP-T14M2036	Anti-Jam Contact Screw
24	1	TP-221416	Thermocouple Wire

NOTE: Standard Frame models and Drop Frame models have all the same parts; the upper Front Plate (#4) TP-T14M1075 is flipped depending on the type of frame.

NOTE: Item 19, (TP-217117) is for 120volt systems, for 240volt systems use (TP-217117-1).

NOTE: Item 3, (TP-T8MA00202) is for 1/16" seal bar. Other sizes are available, 1/8" (TP-T8MA00202-2), ¼" (TP-T8MA00202-1), and 1/32" (TP-T8MA00202-3).

Drop Frame

Standard Frame
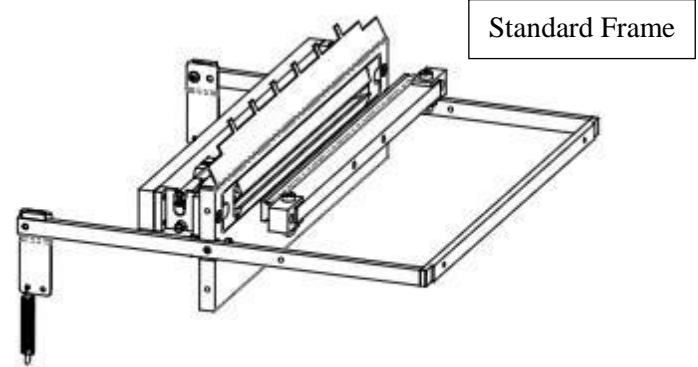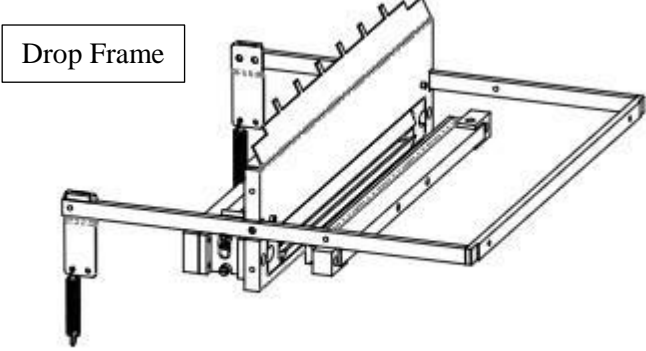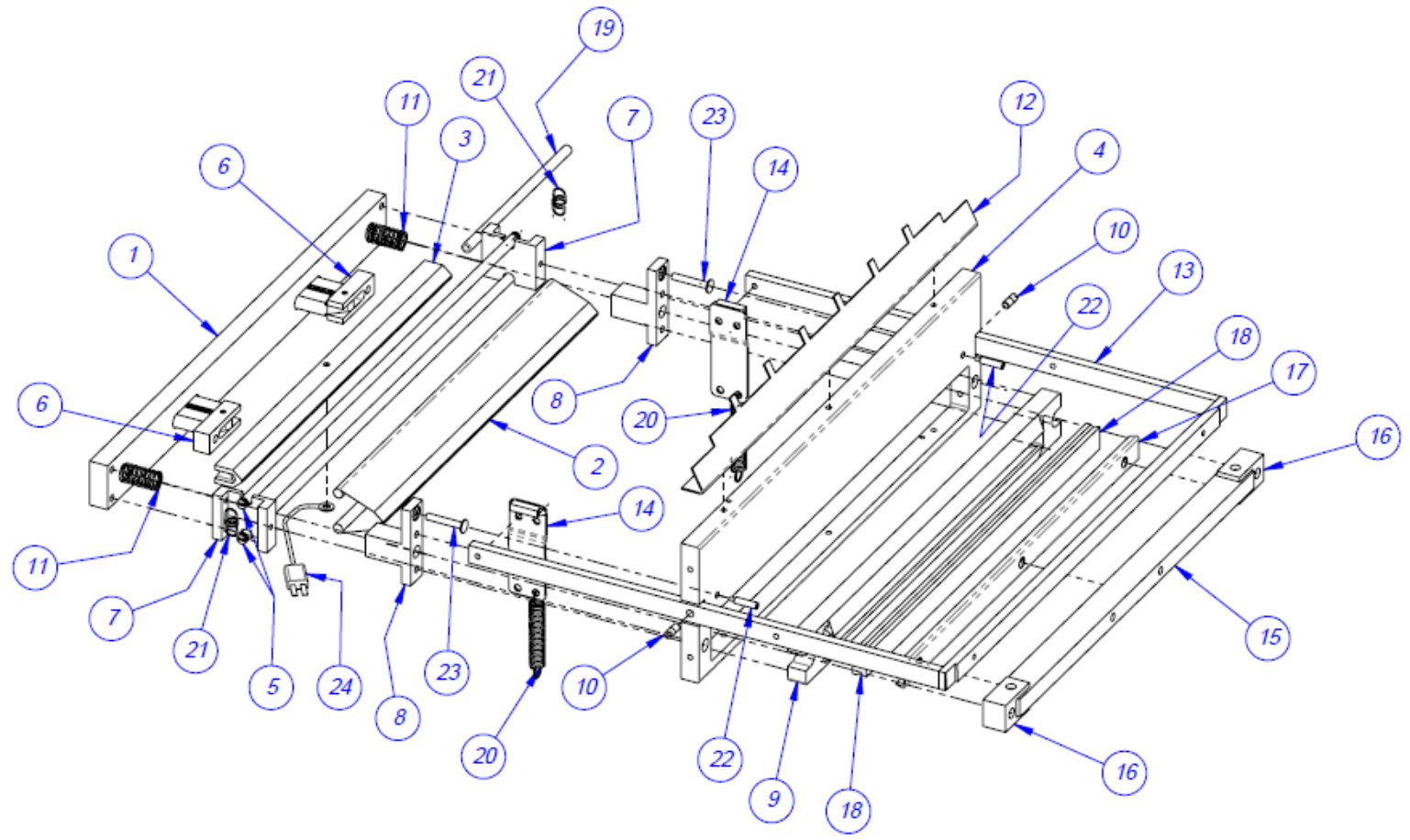
5.5 T-300 / T-375 Vertical Support Subassembly
TA-T14-2100

Item No.	Qty.	Part No.	Description
1	1	TP-T14M2017	Support Bar Clamp
2	1	TP-T14M2024	Vertical Support Bar
3	1	TP-T14M2016	Spring Retainer
4	1	TP-T14M2018	Pivot Block
5	1	TP-108164	Compression Spring
6	1	TP-106115	Pivot Block Pin
7	2	TP-102153	Washer, #8 Lock
8	2	TP-103016	Screw, SHCS 8-32 X 5/8
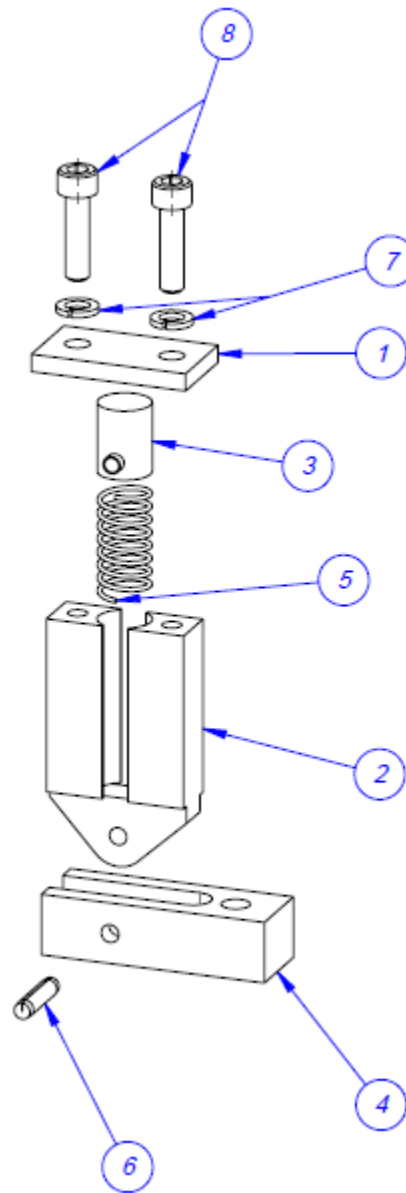
5.6 T-300 / T-375 Top Cover Latch Assembly

TA-T14-5000

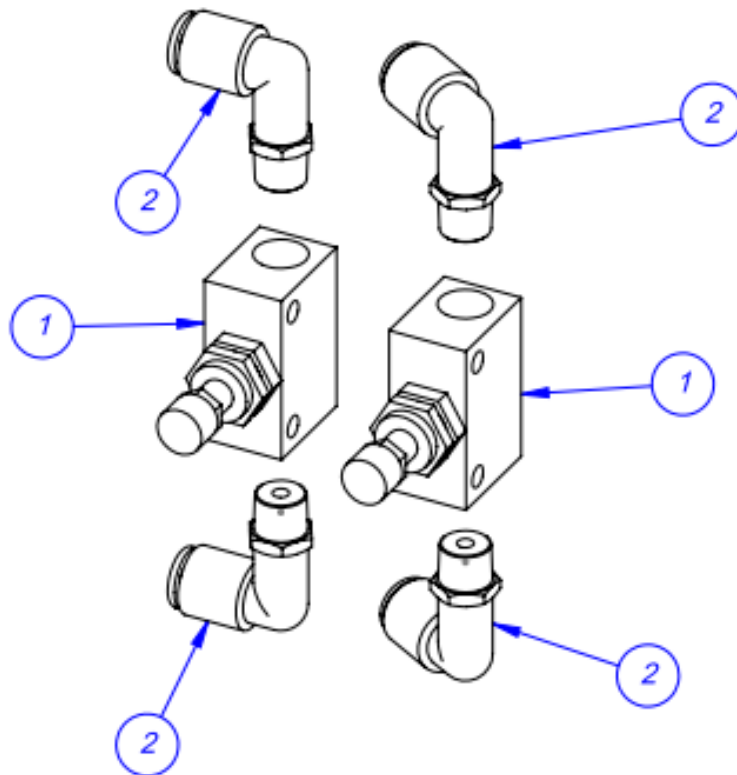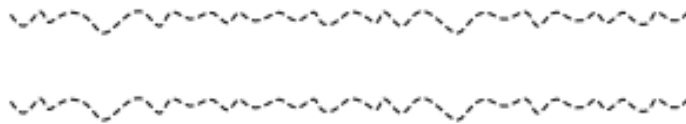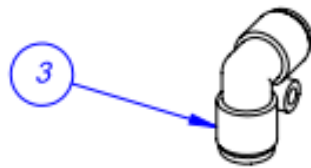| Item No.	Qty.	Part No	Description
1	1	TP-BP-1013-S14	Mounting Bar
2	1	TP-T14M1016-1	Side Plate - Back Up Roll- Right
3	2	TP-107170	Flange Bearing
4	2	TP-T14M1102	Sensor Mounting Bar
5	1	TP-T14M1016-2	Side Plate - Back Up Roll- Left
6	2	TP-504098	Threaded Ball Joint
7	2	TP-504099	Ball Joint Rod End
8	2	TP-T14M2031	Latch Adjuster
9	1	TP-T1MC00083	Insulator (High Voltage Sensor)
10	1	TP-T14M1005	Rubber Back-Up Roll
11	2	TP-504107	Bearing, 1/2 Id X 1.25 Od, .38 Wide
12	1	TP-T14M1008	Shaft Steel Back Up
13	1	TP-T14M1011	Finger Plate
14	1	TP-T14M2032	Latch Pivot Shaft
15	2	TP-T14M2029	Latch Control Arm
16	1	TP-T14M2037	Handle
17	1	TP-T14M8046	Cover Arm
18	2	TP-T14M1065	Top Cover
19	2	TP-107339	Thrust Washer
20	1	TP-106154	Spring Pin
21	4	TP-102146	Washer
22	2	TP-109213	Knob
23	1	TP-214373	¼" Cable Clamp
24	1	TP-107340	Bearing
25	1	TP-401227	Elbow
26	1	TP-208342	Wire Terminal
27	2	TP-T8MA00138	Rod Mounts
28	1	TP-T14M1015	Front Plate
29	1	TA-T1-00124-1	High Voltage Sensor
30	1	TP-BP-1015-S14	Air Nozzle
31	1	TP-405268	Air Knife (Venturi)
32	1	TP-401292	Straight Connector
33	1	TP-406181	Air Filter

Note: Item 29, (TA-T1-00124-1) has a yellow cable that connects to it, part # for cable is (TP-T1ME00302-2).

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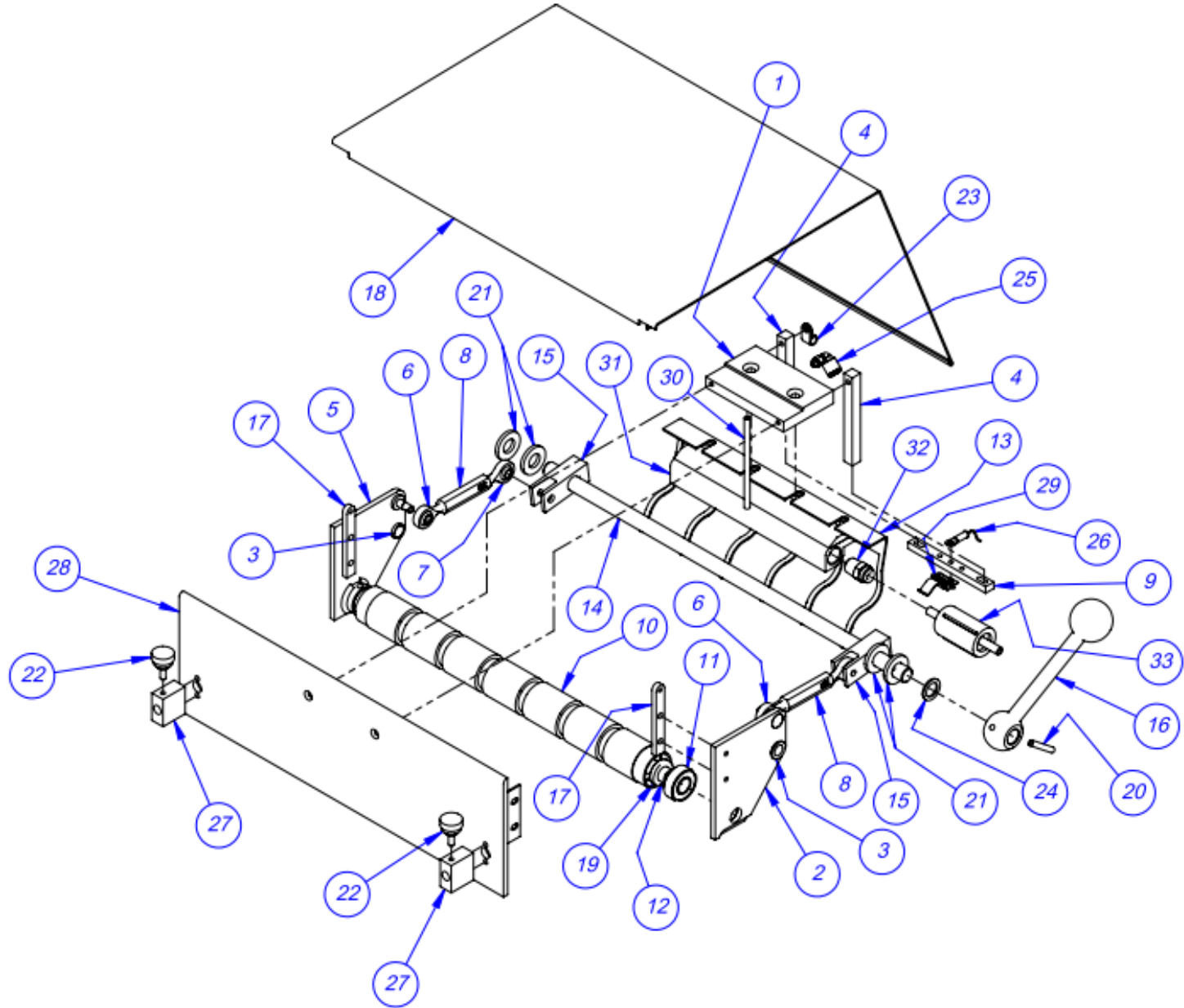
5.7 T-300 / T-375 Pneumatics Assembly
TA-T14-6000

Item No.	Qty.	Part No.	Description
1	2	TP-402107	Flow Control Valve
2	4	TP-401257	ELBOW,1/4" TUBE x 1/4 NPT
3	1	TP-401291	Elbow, ¼" Tube x ¼" Tube

5.8 T-300 / T-375 Completion Assembly

TA-T14-7000

Item No.	Qty.	Part No.	Description
1	1	TP-T14M1092	Lexan Guard
2	1	TP-T14M1089	Lexan Guard Side - Right
3	1	TP-T14M1090	Lexan Guard Side - Left
4	1	TP-T14M1076	Front Plate (Lower)
5	1	TP-T8MA00126	Load Shelf
6	1	TP-T8MA00127	Bag Roll Shaft
7	2	TP-T1MA00049	Film Tension Hub
8	1	TP-T8MA00136	Funnel Mount
9	1	TP-T8MA00141	Universal Funnel
10	1	TP-T8MA00142	Funnel Mount
11	1	TP-T8MA00143	Adjusting Bar
12	1	TP-TS10-106	Trim Seal Blow-Off
13	1	TP-404002	Nozzle, Safety Blow Gun
14	1	TP-401258	Straight Connection
15	1	TP-T14M-BB10-1	Blow-Off Block
16	2	TP-109152	Knob
17	2	TP-109212	1/4-20 X 1.00" THREADED KNOB
18	1	TP-109215	Fluted Grip Knob, #8-32 Thread
19	4	TP-112300	Rubber Tapered Bumper
20	1	TP-215004	LOTO Knob

NOTE: Item 7 (TP-T1MA00049) Film Tension Hubs, require fabric to provide the proper grip to the bag rolls. Part number for replacement fabric is (TP-306015-1).

NOTE: Item 5 (TP-T8MA00126) If you purchased an optional load shelf, your machine will not have this part.

NOTE: Item 9 (TP-T8MA00141) If you purchased an optional funnel or light curtain, your machine will also come with the universal funnel.

NOTE: Item 17, (TP-109212) can be difficult to secure in place over time. Use a "T" knob (TP-109212-1) if chucks slip.

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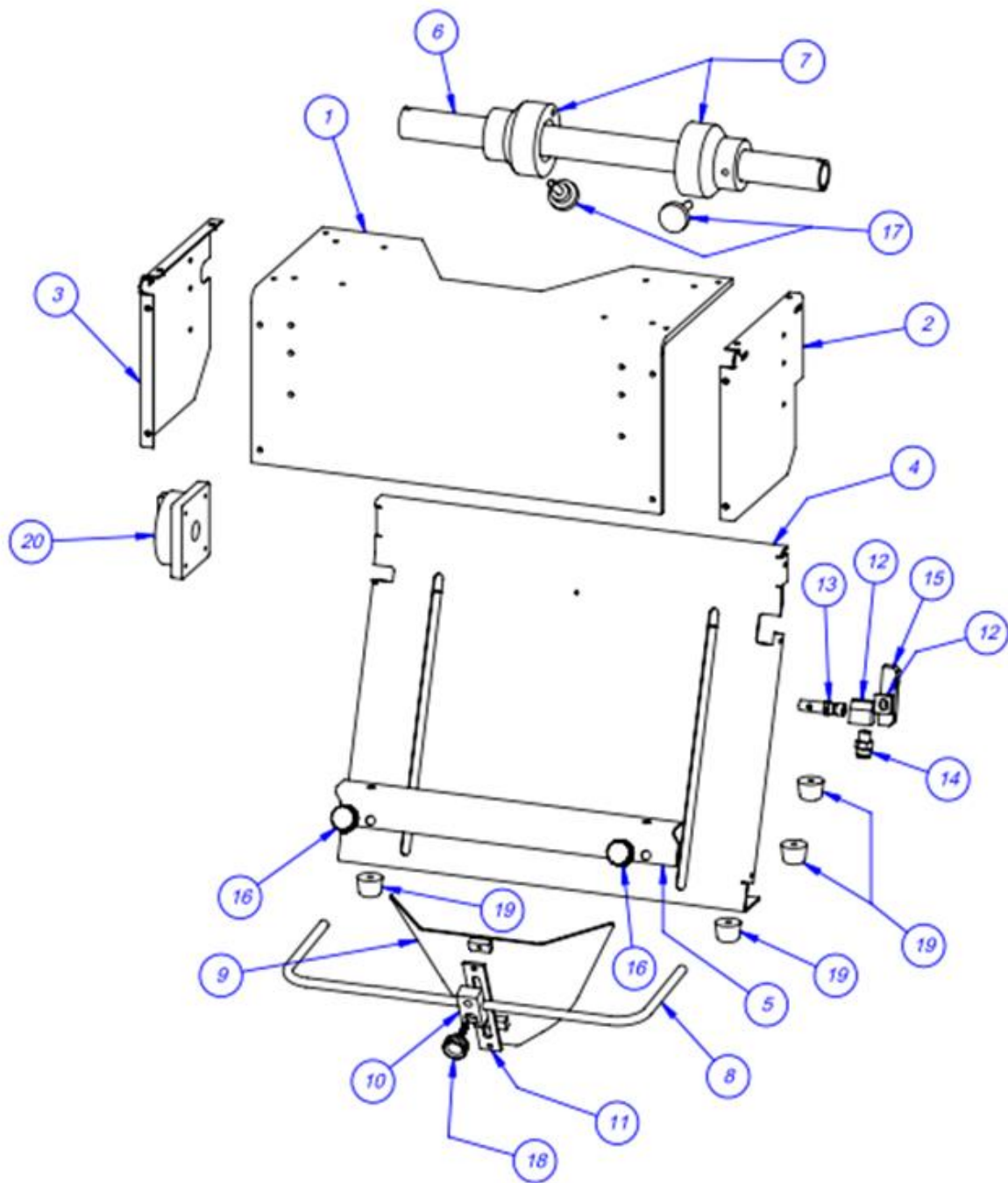
5.9 T-300 / T-375 IOP Touch Screen

TA-T14-7500

Item No.	Qty.	Part No.	Description
1	1	TP-T14M00109	Mounting Bar
2	1	TP-T1MD00040	Touch Screen Housing
3	1	TP-111131	Ball-Grip Positioning Arm
4	1	TP-111125-2	Socket Arm
5	4	Part of Touch Screen	Stud, part of touch screen
6	4	Part of Touch Screen	Clip, Part of touch screen
7	1	TP-220363	Touch Screen
8	1	TP-T1MD00040-1	Back Cover

NOTE: There is a gasket between the touch screen and housing. This helps to reduce vibrations and moisture from damaging the touch screen.
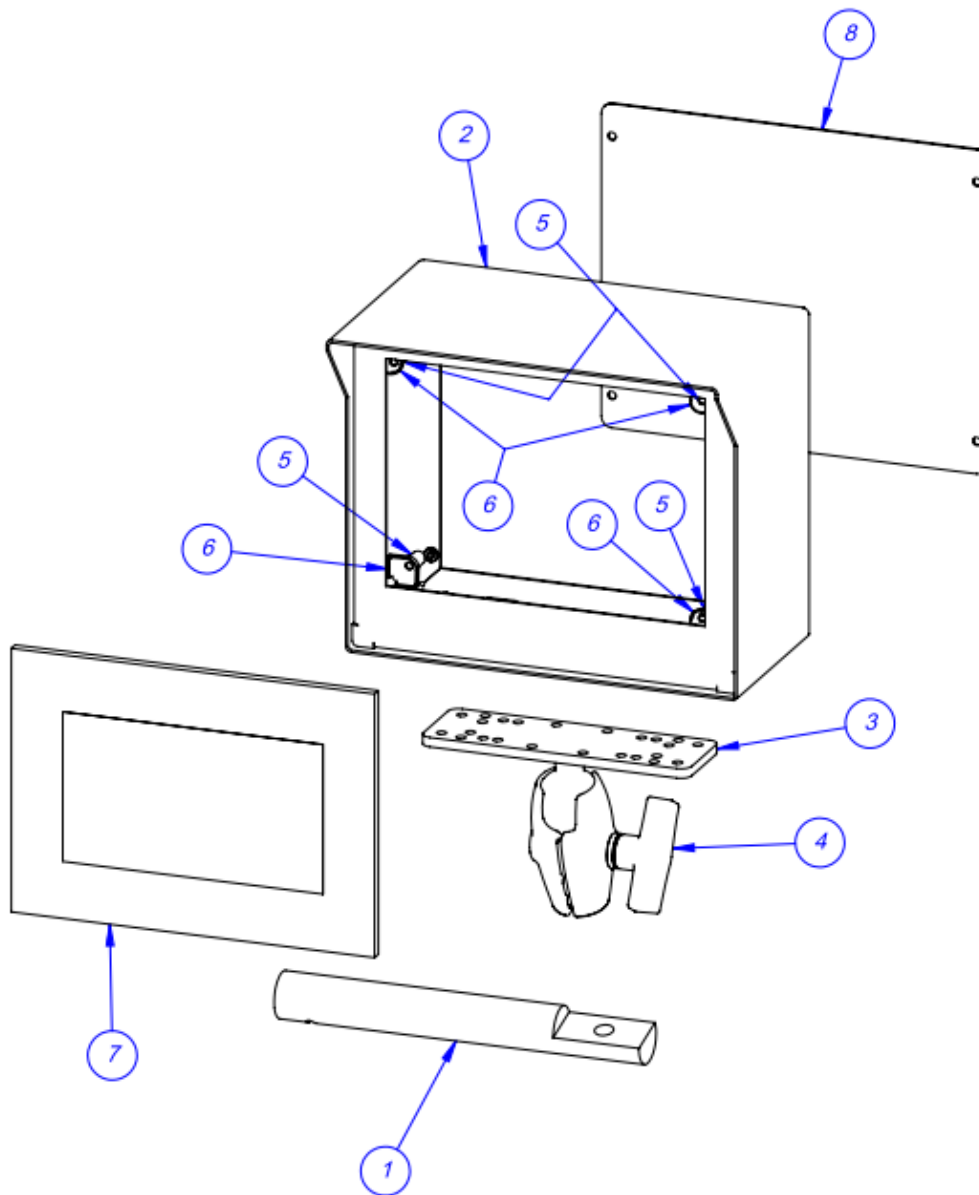
5.10 T-375 System Layout

T-T375

Item No.	Part No.	Description
1	TA-T15-1000	Electronics Assembly
2	TA-T14-2000	Drop Seal Bar Assembly
3	TA-T14-4000	Main Frame Assembly
4	TA-T14-5000	Top Cover Latch Assembly
5	TA-T14-6000	Pneumatics Assembly
6	TA-T14-7000	Completion Assembly
7	TA-T14-7500	IOP (Touch Screen)
8	TA-T15-8010	T-375 Printer Additional Parts

Note: Item 2 could be either a drop seal bar assembly (shown) or a standard seal bar assembly depending on the option chosen.
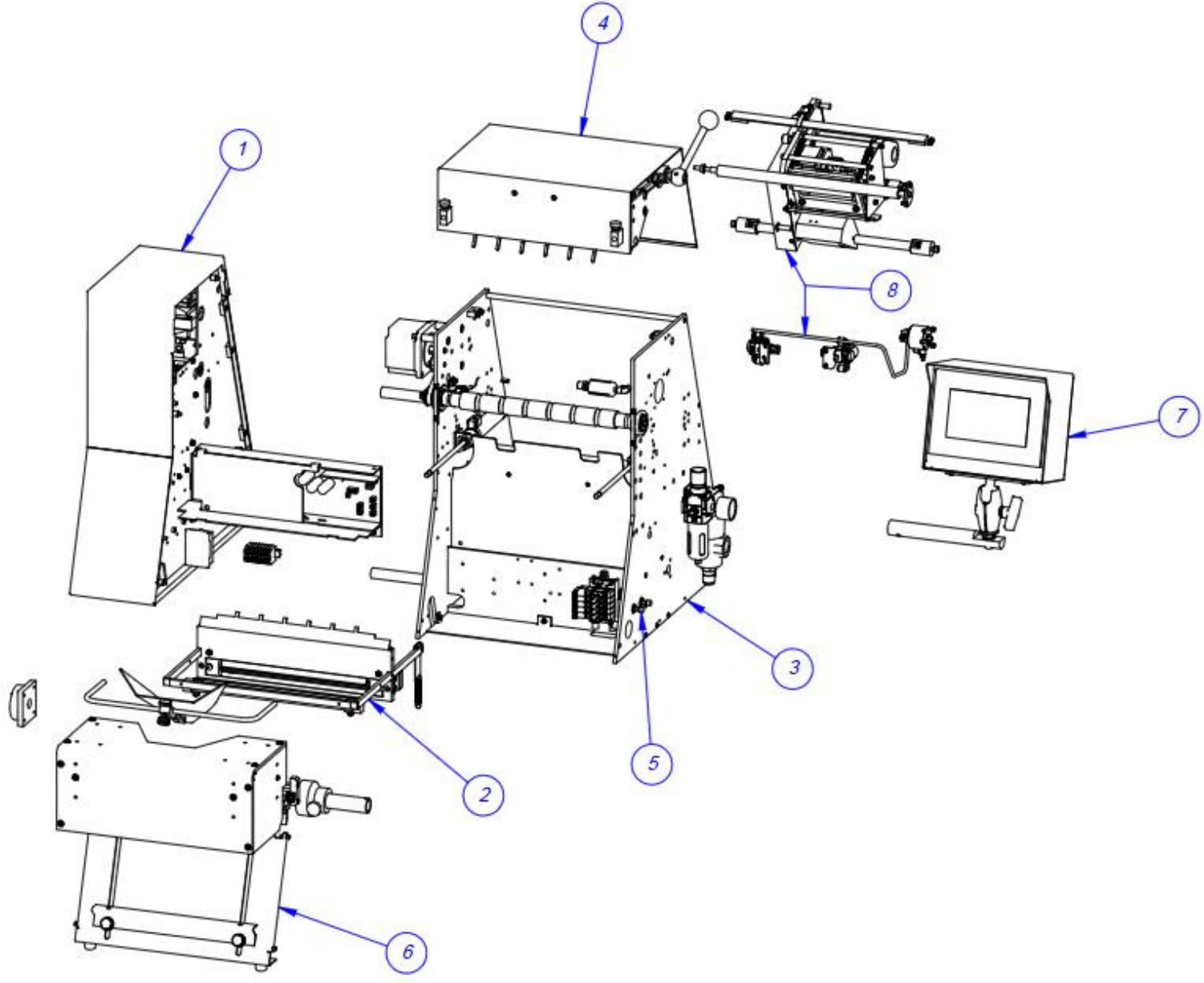
5.11 T-375 Electronics Assembly

TA-T15-1000

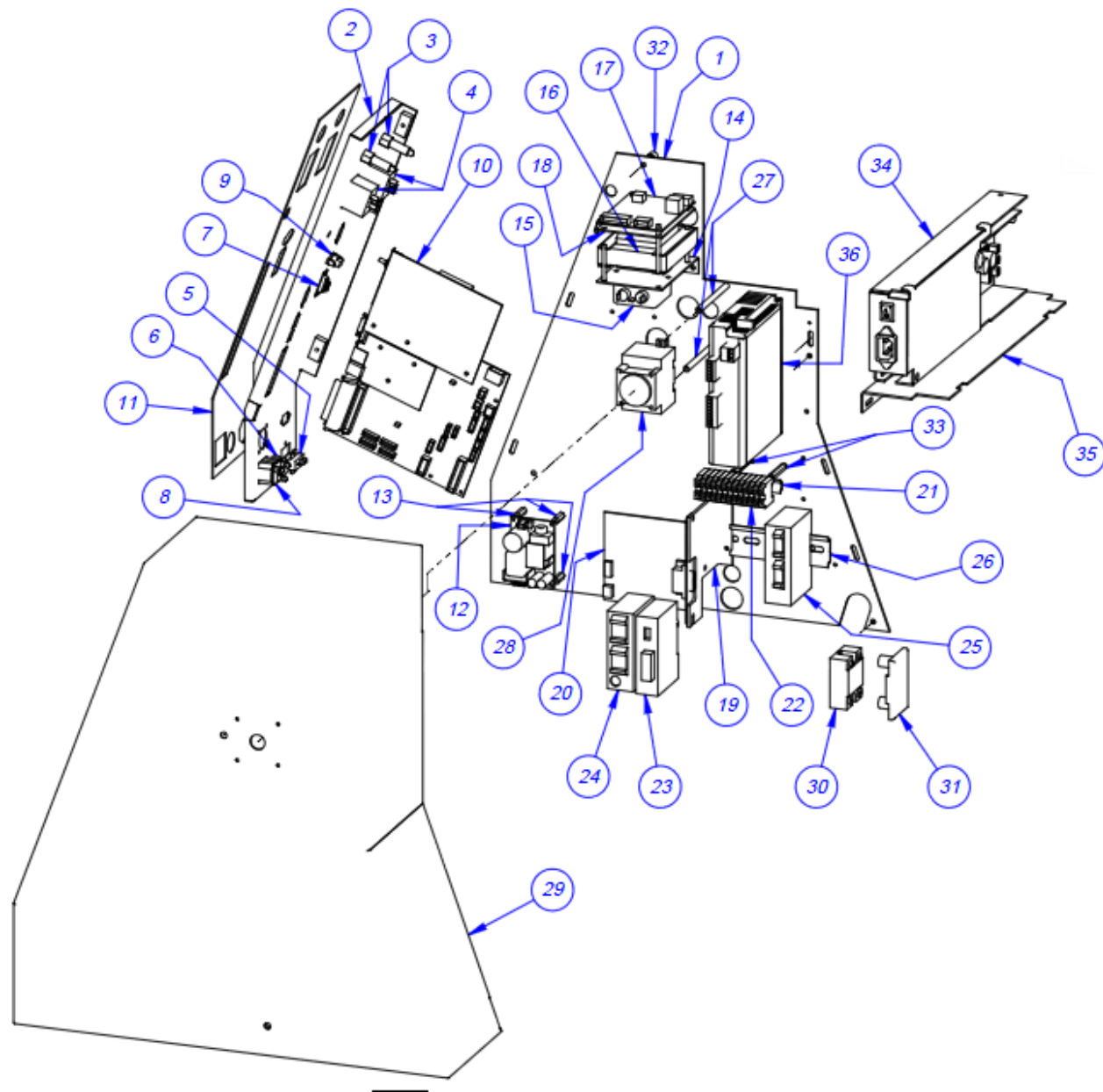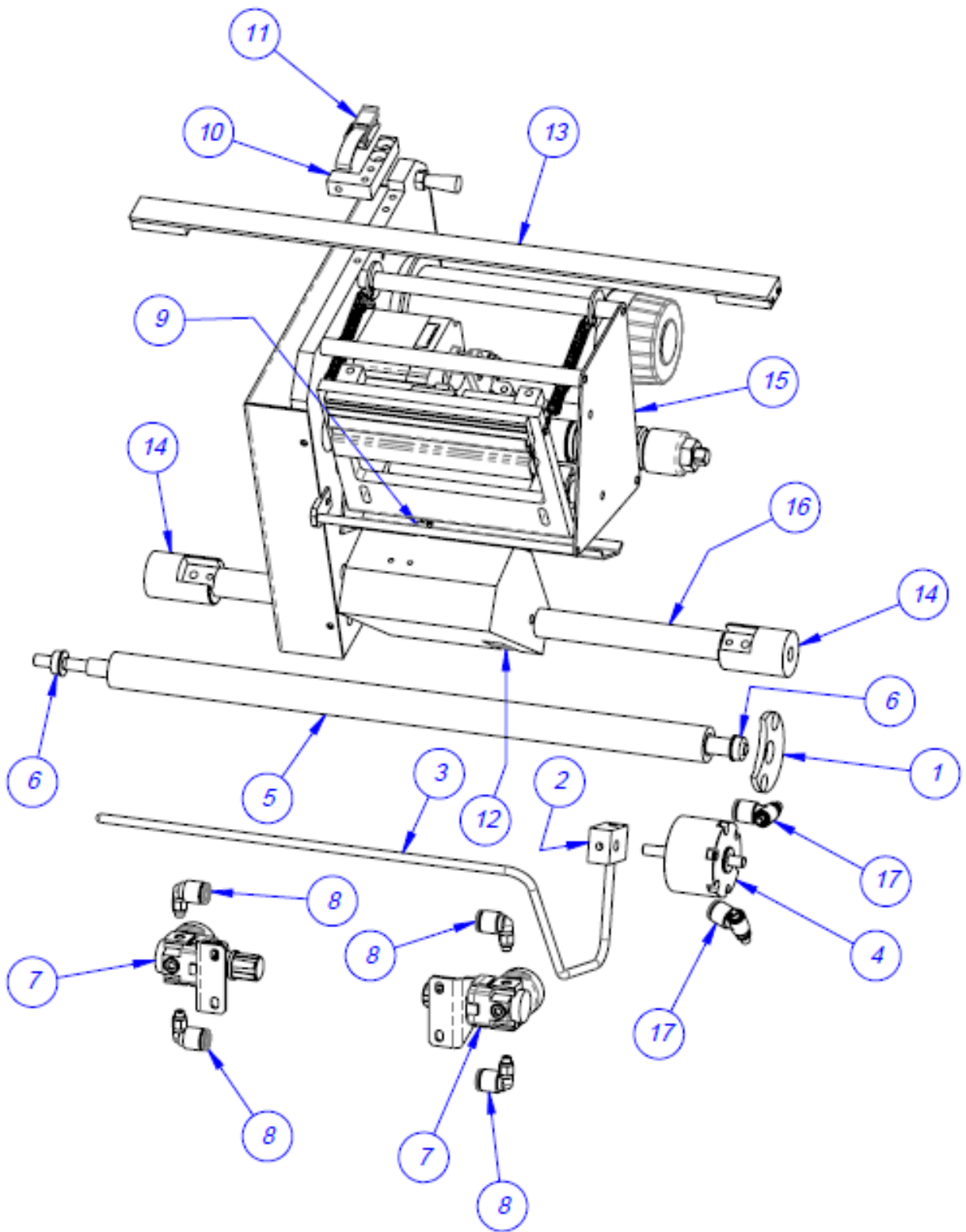| Item No.	Qty.	Part No	Description
1	1	TP-T14M1046	Electrical Panel
2	1	TP-T14M1009	Rear Control Panel
3	2	TP-207216, TP- 207344	Fuse Holder & Fuse
4	2	TP-215384	Power Switch
5	1	TP-212242	3 Pin Socket W/Angle Bracket
6	1	TP- 112240	Power Cord Strain Relief
7	1	TP-212247	Connector, Multipole Rectangular
8	1	TP-212410	Ac Outlet
9	1	TP-212160	5 Position Mini Dim
10	1	V-Z-P1053360-016	Logic Board
11	1	TP-T14M1021	Mylar Over-Lay
12	1	TP- 213361	24vdc, 3amp Power Supply
13	4	TP-214273	Stand-Off, Nylon, 1/2", #4-40
14	1	TP-T14M1028	Transformer Mount
15	1	TP-205108	Emi Filter, Corcom
16	1	TP-211386	Transformer
17	1	TP-T1ME00301	High Voltage Board
18	1	HP-58243A1	Heat shield
19	1	TP- T15M1055	Angle Bracket (Long)
20	1	VP-Z-P1011156	Applicator Interface Board
21	1	TP-218021	Din Rail
22	13	TP- 208142	Large Terminal Block
23	1	TP-220508	Plc Analog Module
24	1	TP-220511	Plc, Fpg-C32t2h Gray
25	1	TP-220514	Plc, Fpo-E32t-A Expansion I/O
26	1	TP-218020	Din Rail
27	2	TP-T15M8050	Stand Off
28	1	TP-215005	Switch
29	1	TP-T14M1010	Side Cover-Left
30	1	TP-215000	Solid State Relay
31	1	TP-215000A	Cover
32	4	TP-107177	Bushing
33	2	TP-214285	Stand-Off 1-1/2" Long 6- 32
34	1	VP-Z-P1058301	Zebra Power Supply (Rev A)
35	1	TP-T15M1001	Power Supply Mount
36	1	TP-501169-1	Motor Drive

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5.12 T-375 Printer Assembly

TA-T15-8010

Item No.	Qty.	Part No.	Description
1	1	TP- T15M1108	Bearing Cap
2	1	TP-T15M1073	Pivot Block
3	1	TP-T15M1074	Bag Take-Up
4	1	TP-403051	Rotary Actuator
5	1	TP-T14M1097	Print Roll
6	2	TP-504097	Precision Flanged Ball Bearing
7	2	TP-406259	MiniReg - Bracket - Gauge
8	4	TP-401277	Elbow
9	1	VP-Z-P1006134	Zebra Ribbon Out Sensor
10	1	TP-T15M0037	Stop Bar
11	1	TP-T15M8105	Blade Draw Latch
12	1	TP-T15M3026	Lock Collar
13	1	TP-T14M1014	Latch Bar
14	2	TP- T14M1035	Guide Rod Holder
15	1	TA-T15-8000	4" Universal Printer
16	1	TP-T14M1034	Guide Rod
17	2	TP-402186	Flow Control, #10-32

PN: TA-T15-8010

5.13 T-375 Zebra Printer Assembly

TA-T15-8000

Item No.	Part No.	Description	Qty.
1	TP-T15M-8001	Printer Side Plate	1
2	TP- T15M8002	Mounting Plate Print Head	1
3	TP- T15M8003	Adjustment Block	2
4	TP-T15M8004	Support Rod	5
5	TP- T15M8005	Cam-Print Head	1
6	TP-T15M8006	Cylinder Mount	1
7	TP- T15M8007	Belt Tensioner	1
8	TP-T15M8008	Belt Guard	1
9	TP-T15M8010	Locating Spacer	1
10	TP-T15M-8011	Sensor Bracket	1
11	TP-T15M8012	Spring Mount	2
12	TP-T15M8013	Adjustment Rod	2
13	TP-T15M8014	Adjustment Rod Block	2
14	TP-T15M8030	End Plate	1
15	TP-T15M8031	Roller Shaft	1
16	TP-T15M8032	Shaft Mount	1
17	TP-T15M0036	Pivot Block	1
18	TP- T15M8038	Wear Surface	1
19	TP-T15M8042	Ribbon Take-Up Pulley	1
20	TP-T15M8043	Locating Spacer	1
21	TP- T15M8044	Supply Spool Spacer	1
22	VP-Z-41150M	Ribbon Take-Up Spindle	1
23	TP-108133	Spring	2
24	TP- 108099	Compression Spring.040 Gauge, .359 Od.	2
25	TP-106304	10mm Dowel Pin	2
26	TP-111107	Collar Clamp	2
27	TP-402260	Pneumatic Valve	1
28	TP-401265	Air Fitting	1
29	TP-403140	Air Cylinder	1
30	TP-404263	Muffler	2
31	VP-Z-P1006058	Xi4 Ribbon Supply Spindle Maintenance Kit	1
32	VP-Z-P1004230	Print Head	1
33	VP-Z-46198M	200 dpi Zebra Motor	1
34	TP-401277	Elbow	2
35	TP-404148	Clevis	1
36	TP-402175	Bracket	1
37	TP-109225	Finger Knob	1
38	TP-504138	Cam Follower	1
39	TP-503113	Belt	1
40	TP-504175	Clutch Bearing	1
41	TP-107116	Sleeve Bushing	1
42	TP-102119	Nylon Washer	2

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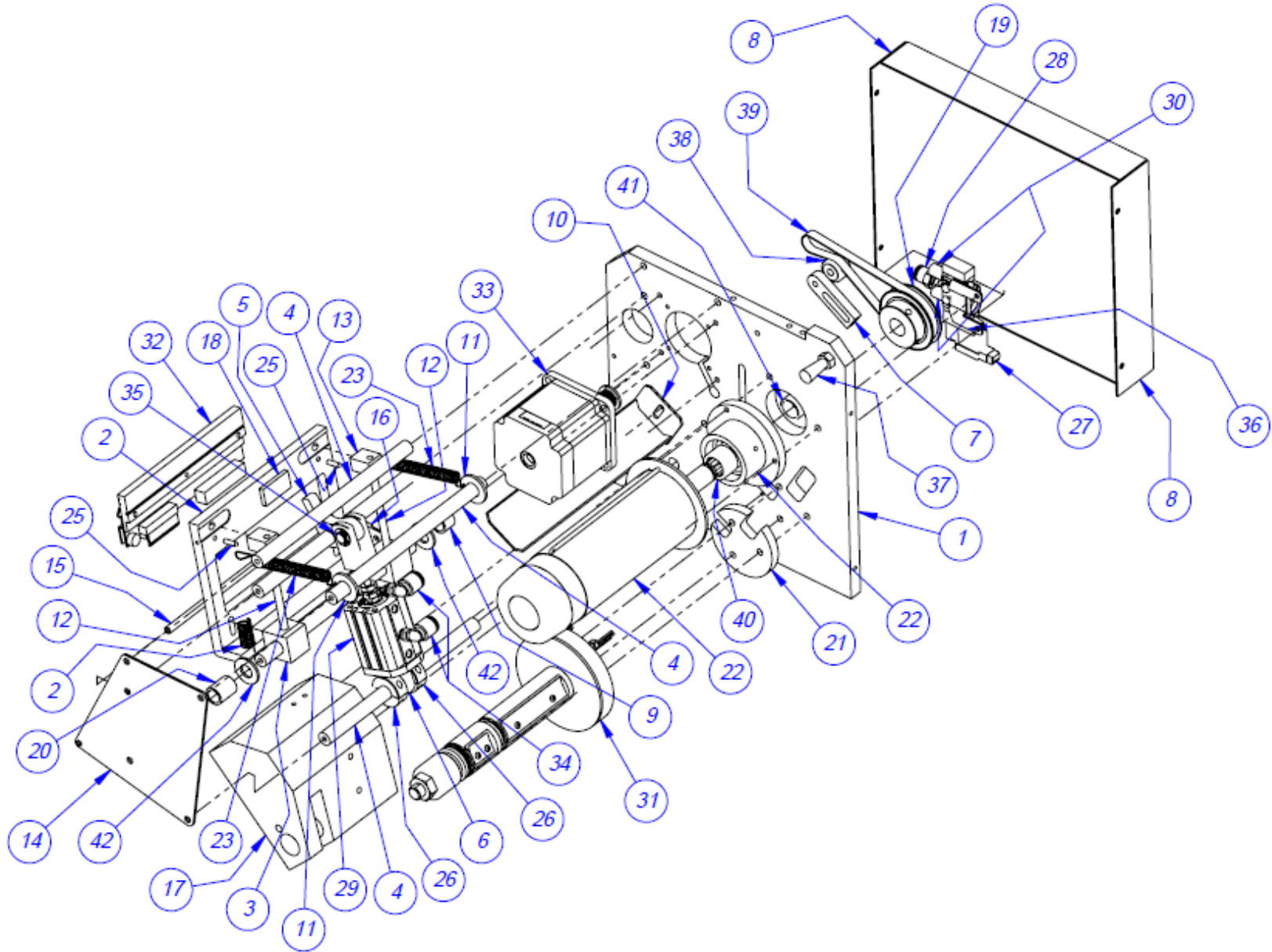
5.14 Bag Blow-Off Option
TO-T14-BB10

Item No.	Qty.	Part No.	Description
1	1	TP-TS10-106	Trim Seal Blow-Off
2	1	TP- 404002	Nozzle, Safety Blow Gun
3	1	TP-401258	Male Connector
4	1	TP-T14M-BB10-1	Blow-Off Block
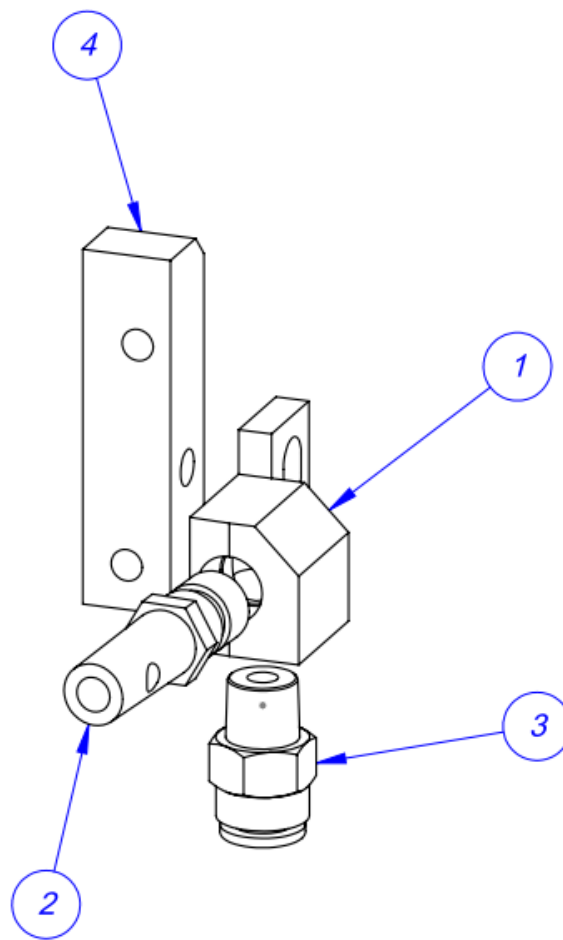
5.15 Bag Deflator Option

TO-T14-BF10

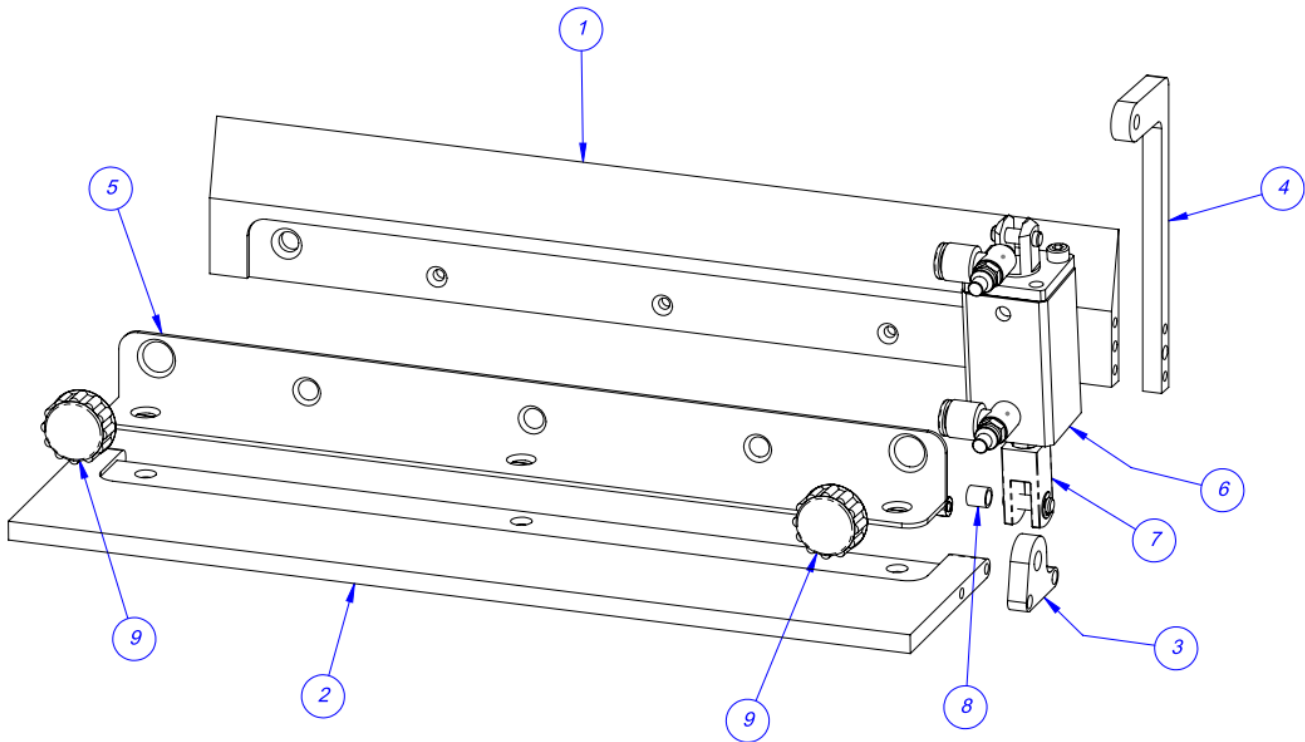| ITEM NO.	QTY.	Part No.	Description
1	1	TP- T8MA00215	Deflator Plate
2	1	HP-35027A1-375	Foam Sponge
3	1	TP-BF10-157	Plate Clamp

NOTE: Rubber loops and shorter sponges are available
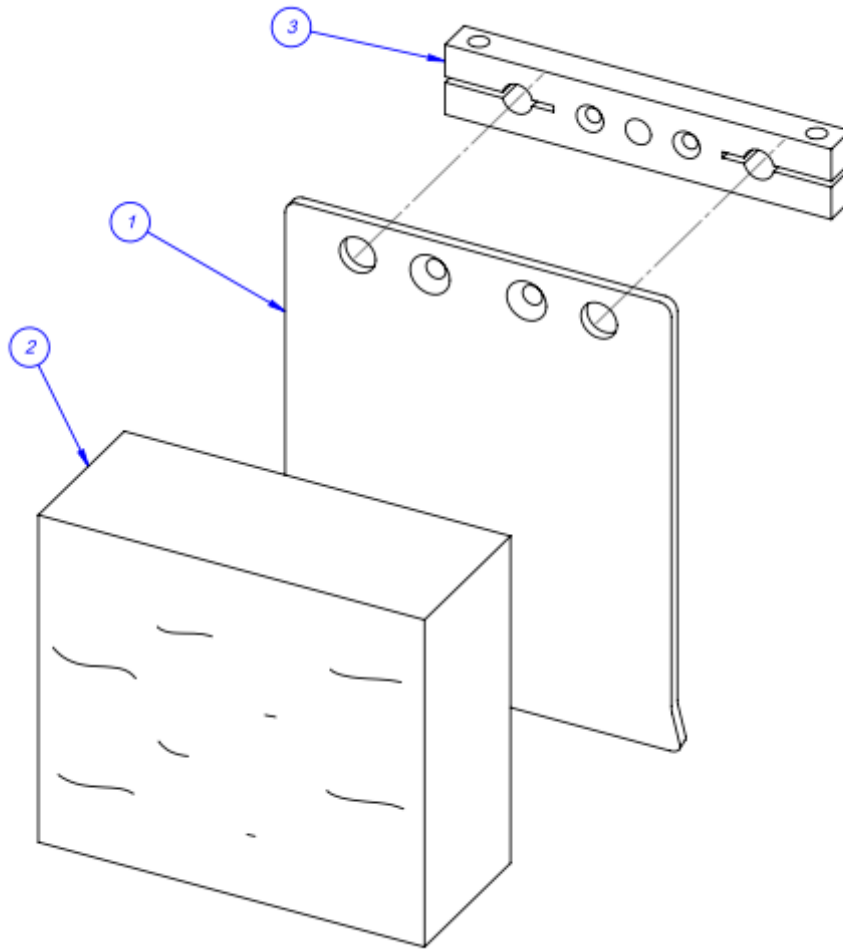
5.16 Load Shelf Option

TO-T14-LS10

Item No.	Qty.	Part No.	Description
1	1	TP-T14LS10-001CE	Load Shelf Mount
2	1	TP-T14LS10-002CE	Load Shelf Lip
3	1	TP-T14LS10-003CE	Pivot Arm
4	1	TP-T14LS10-004CE	Cylinder Arm
5	1	TP-T14LS10-005	Load Shelf Hinge
6	1	TP-403085	Cylinder
7	1	TP-404137	Clevis for Cylinder
8	1	TP-107123	Bushing
9	2	TP-109152	Knob

5.17 Light Curtain Option

Item No.	Qty.	Part No.	Description
1	1	TP-T14M1089	Lexan Guard Side - Right
2	1	TP-T14M1090	Lexan Guard Side - Left
3	4	TP-LC002	Light Curtain Mounting Tab
4	2	TP-216188	Light Curtain
5	2	TP-216188-1	Light Curtain Extension Cable