T-300 / T-375

Operation Manual, Ver 2

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Item No. TM-T9-MAN

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Acknowledgments

Manual written by: Stuart Baker

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Trademarks

Limited Warranty & Disclaimer

Warranty period is 12 months or 1,000,000 cycles whichever comes first. The warranty commences on the date of delivery of the equipment to the Purchaser.

APPI warrants to the Purchaser that the equipment is free from defects in workmanship or material under normal use and service. During the warranty period, APPI agrees to repair or replace, at its sole option, without charge to Purchaser, any defective component part of the equipment. To obtain service, Purchaser must return the equipment or component to APPI or an authorized APPI distributor or service representative in an adequate container for shipping. Any shipping charges, insurance, or other fees must be paid by Purchaser and all risk for the equipment shall remain with Purchaser until such time as APPI takes receipt of the equipment. Upon receipt, APPI, the authorized distributor or service representative will promptly repair or replace the defective component and then return the equipment or component to Purchaser, shipping charges, insurance, and additional fees prepaid. APPI may use reconditioned or like new parts or units, at its sole option, when repairing any component or equipment. Repaired products shall carry the same amount of outstanding warranty as from original purchase. Any claim under the warranty must include a dated proof of delivery. In any event, APPI's liability for defective components or equipment is limited to repairing or replacing the components.

This warranty is contingent upon proper use of the equipment by Purchaser and does not cover: expendable component part such as Print Heads, thermocouple wire, heater cartridge, rollers, bushings, and the like; or if damage is due to accident, unusual physical, electrical or electromechanical stress, neglect, misuse, failure of electric power, water damage (from airlines), improper environmental conditions, transportation, tampering with or altering of the equipment, packaging of corrosive or contaminating products or other products damaging to components, and equipment or components not owned or in the possession of original Purchaser.

APPI will not be liable for loss of production, profits, lost savings, special, incidental, consequential, indirect, or other similar damages arising from breach of warranty, breach of contract, negligence, or their legal action even if APPI or its agent has been advised of the possibility of such damages or for any claim brought against the Purchaser by another party.

This warranty allocates risks of equipment failure between Purchaser and APPI. APPI's pricing reflects this allocation of risk and the limitations of liability contained in this warranty. The warranty set forth above is in lieu of all other express warranties, whether oral or written. The agents, employees, distributors, and dealers of APPI are not authorized to make modifications to this warranty, or additional warranties binding on APPI. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by APPI and should not be relied upon.

Warranty on equipment is considered void when outstanding balances become delinquent (over 30 days late - 60 days after ship date).

Equipment Integration to other Equipment: APPI assumes no responsibility for the integration of its products to other products or within a system unless APPI performs the integration, testing and provides the results of the tests to the purchaser in writing. Furthermore, APPI assumes no responsibility for bag sizing whether suggested or recommended.

T-300 / T-375
Table Top Bagger

Operation Guide, Ver 2

Setup, Operation and Parts Manual

Advanced
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Chapter 1, Introduction

Welcome
Overview
Special Features
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Warranty Registration

1.1 Welcome

Now that you've decided to upgrade your packaging facilities with the T-300 or the T-375 Table Top Bagger from Advanced Poly-Packaging, Inc., we thank you for selecting our equipment, materials and service. Where labor reduction and fast changeover is important, the T-300/T-375 uses Advanced Poly-Bags (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 a wide range of bag sizes (2" x 3" (standard frame only) to 11" x 16") and mil thickness (1 mil to 4 mil), we hope the T-300/T-375 will meet all of your bagging needs. This manual will function as one manual for both machines, If you have purchased the T-375 model, your bagger includes a printer and certain sections of this manual will only pertain to the T-375. These sections will be properly noted.

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 is dependent on the bag size, equipment options, product characteristics and method of loading.

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 setup the bag, options and auxiliary equipment, save the settings in memory, and recall those settings for repeat runs.

1.3 Special Features

Next bag out print: The T-375 has a patented method of printing the next bag out. This feature is critical to prevent mislableing of pharmaceuticals, prescriptions or high cost items. This feature also allows for part number or other printing information to be changed over for every bag without waste.

Energy Conservation & 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 the stop mode during a preset period of nonuse. Air flow can also be shut off preserving 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 being altered by unauthorized individuals. Once turned on, this function acts as a “screen save” feature whereas a timer causes the pass code screen to be displayed, from the Operations Menu. Factory settings are protected by a Level One pass code and should only be provided to authorized maintenance personnel.

Predetermined 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 Reset 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.

Antijam Device - During the loading and sealing operation, this device will detect obstructions and automatically reverse the pressure bar and discontinue the cycle operation.

1.4 System Integration

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

1.5 Available Options

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

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

Bag Deflator: Quickly mounts to the sealer bar squeezing the air from the bag while sealing.

Compartment seal option - After product “1” is inserted in the bag and sealed, product “2” can be inserted into the same bag. The bag is then sealed a second time above product “2” to provide a two compartment bag. This optional sequence of operation is offered to prevent product 1 from damaging product 2 or vice versa.

CF-10 Counting 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 being detected.

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 which causes the seal bar to activate. Additionally, the stepper motor stops when blocked.

BO-20 Bag Open Sensor - detects whether or not a bag is blown open for validation that the bag is ready to receive product.

MV-10 Medical Validation - additional components to provide a secondary means of detecting a failure or out of range condition for components that affect seal quality.

PB-20 Dual Optical Palm Buttons - Decrease the possibility of injury to hands and fingers. Operator must touch two optical buttons simultaneously to actuate seal bar. No pressure, optical buttons decrease operator fatigue.

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

1.6 Using this Manual - Typographical Conventions

The following manual conventions are frequently used to assist in understanding important information, alerting the operator of potentially dangerous or damaging practices, and the normal functions of the T-300/T-375 Bagger / Bagger/Printer.

text	Normal text
<ENTER>	<> Used to show Touch Screen keys
Italics	Used for emphasis
CAUTION:	Warning messages: To avoid physical harm, damage to equipment or damage to the product. Be sure to read these messages carefully.

1.7 Warranty Registration

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

T-300/T-375 Serial Number

_____

(Serial Number located on the back panel)

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

Please fax or mail this page to:

Stuart Baker
Advanced Poly-Packaging, Inc.
1331 Emmitt Road
Akron, OH 44306
USA

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Or email the information above to: stuart@advancedpoly.com

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Chapter 2, Getting Started

Installation Procedures
Air and Power Requirements
Assembly Instructions
Height Adjustment
Air & Power Hookup
Bag Threading
T-375 Ribbon Threading
Cycle Operation
Tension
Note on Adjustments

2. Getting Started

This chapter describes in detail procedures to receive and setup the T-300/T-375, including uncrating, environmental, air and power requirements, assembly, and height adjustments. Additionally, this chapter describes how to turn on power to the T-300/T-375 and properly thread bags through the machine.

2.1 Installation Procedures

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

Unpacking: After removing the stretch wrapping, remove the carton from the skid, open the top and cut all four corners using a safety knife. 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. Also, to prevent injury, do not attempt to lift the machine without assistance.

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 degrees Fahrenheit. Choose an operating location considering traffic flow, availability of bag supplies and supply of product to and from the bagger.

2.2 Air & Power Requirements

Power Requirements: Provision must be made for 110 VAC, 60 Hz line current with ground (220V/50hz) may have been supplied based on electrical requirements). Full Load Current for T-300/T-375: 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. *Note: Air should be dry and oil-free.*

Note: Running the T-300/T-375 at a higher PSI setting than 80 PSI will cause excessive wear and may cause damage to components on the machine or parts being packaged. The antijam function may also be adversely affected.

2.3 Assembly / Minor Adjustments

The T-300/T-375 may require some minor adjustment to the funnel/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: 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

2.4 Air & Power Hookup

This section describes in detail how to hook up air and power and the air and power requirements. *Note: A qualified electrician should ensure power outlets are the required 110 VAC and properly grounded before hooking up the power.*

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 air line connector on the male regulator connector. After connecting air, the regulator should be adjusted so the gauge reads 60 PSI. Insert the T-300/T-375 power cord into a 110VAC, 60Hz, grounded power outlet.

2.5 Main Power

The main power switch is located on the rear panel **.** Press the switch to ON position so that the Red main power light is illuminated. When the power is in the ON position, the Touch Screen will power up displaying the Introduction Screen. The Main menu is accessed from this screen. *Note: If the Touch Screen does not power up, see Chapter 7, Trouble- Shooting.*

2.6 Bag Threading

Remove the top cover, unlatch and raise the upper roller assembly. Then, remove the roll shaft from the rear of the machine. Loosen one of the knobs located on the chuck which secures the roll into position. Mount the roll of bags, centered onto the bag roll shaft and secure the bag roll into position with the chuck. Make sure 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 air nozzle. Finally, lower the upper roller assembly, lock the rollers into position using the handle, and replace the top cover. See Fig. 2-1 for the T-300 and Fig. 2-2 for the T-375.

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."

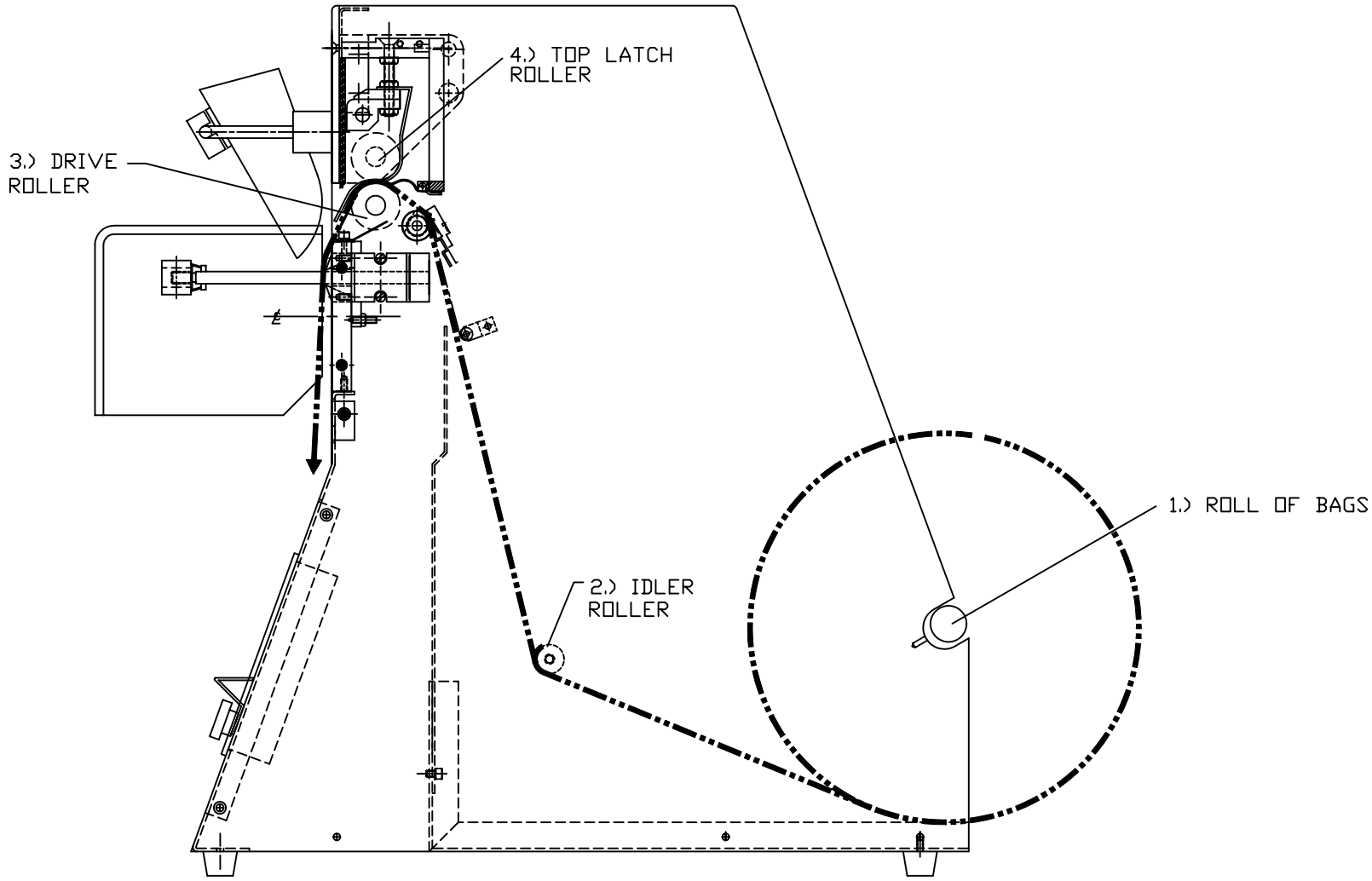
Note: The Roller Guides are for fine adjustments only, after proper tracking has been achieved. If not tracking properly, the web of bags may "ride" up the side of the guides causing the bags to fold over.

2.7 T-375 Ribbon Threading

Remove the top cover of the machine and lower the entire printer mechanism by opening the latch**.** Remove 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. There is two sides of the ribbon, shinny side (mylar) and the 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 Fig. 2-3.

2.8 Cycle Operation of the T-300 / T-375

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 in position and securely fastened.



QUANTITY	
MATERIAL	
FINISH	

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .XXX ON FRACTIONAL DIMENSIONS
+/- .XX ON TWO PLACE DECIMAL DIMENSIONS
+/- .XXX ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES

PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced
Poly Packaging Inc.
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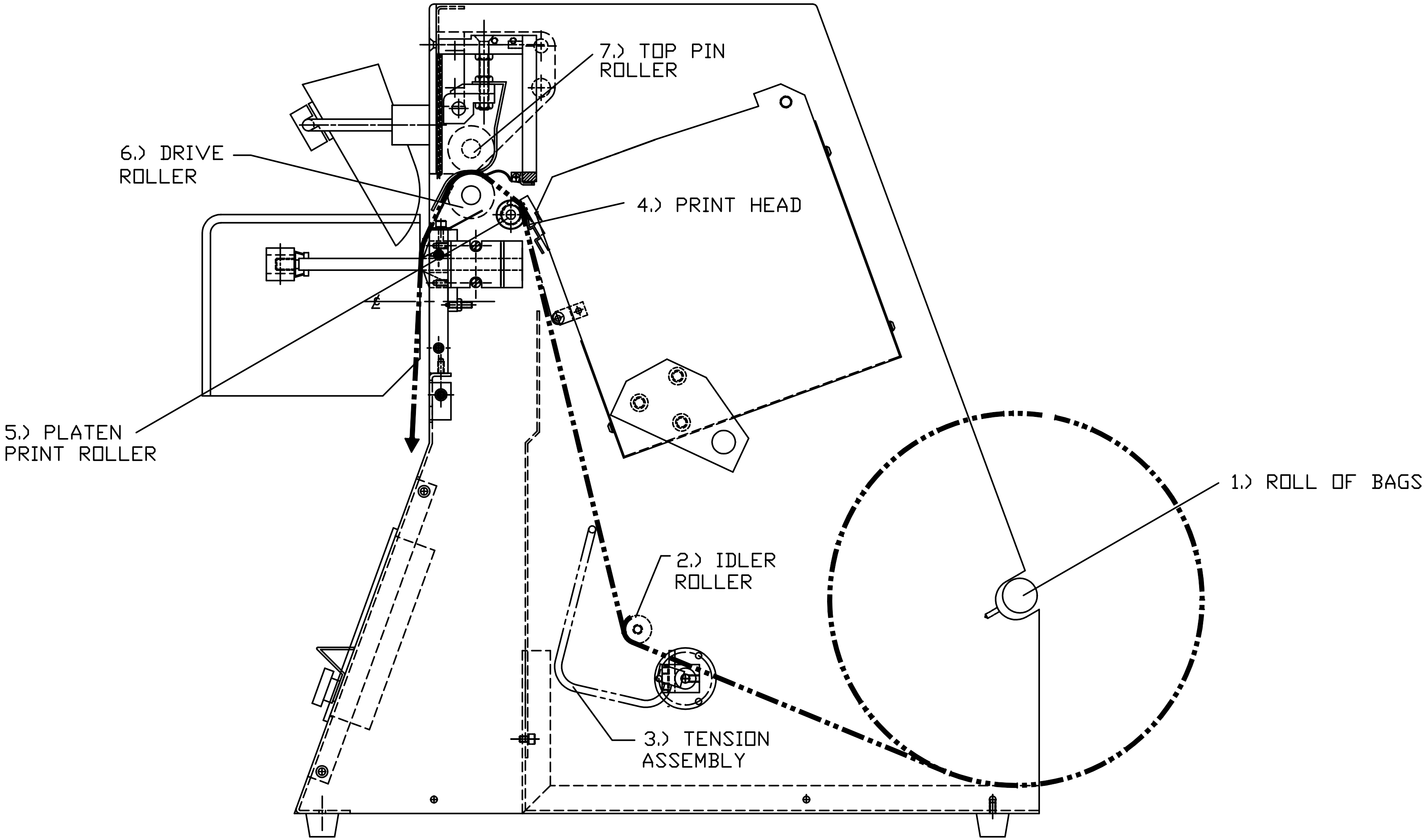
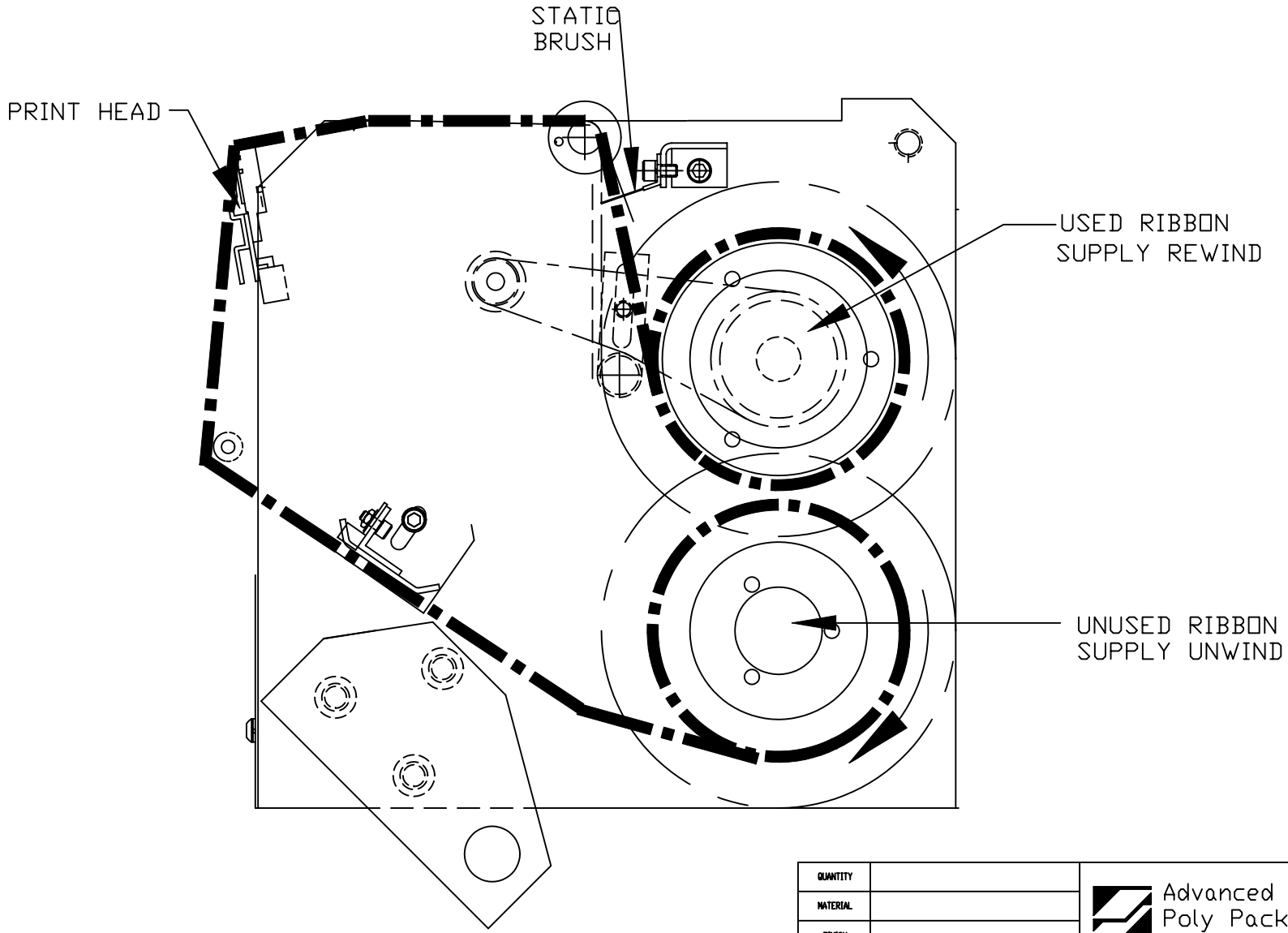
Phone 330-785-4400 • Fax 330-785-4500

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300 TABLE TOP BAGGER		
SCALE	DRAWN BY	APPROVED
	NAME	NAME
	DATE	DATE

TITLE	DRAWING NO.	REV.
BAG THREADING	FIG. 2-1	



QUANTITY		Advanced Poly Packaging Inc. 1331 Emmitt Road ■ Akron ■ Ohio 44306 Phone: 330-785-4000 ■ Fax: 330-785-4010			
MATERIAL					
FINISH					
TOLERANCES UNLESS OTHERWISE NOTED: +/- .015 ON FRACTIONAL DIMENSIONS; +/- .010 ON TWO PLACE DECIMAL DIMENSIONS; +/- .003 ON THREE PLACE DECIMAL DIMENSIONS; 125 ✓ ON MACHINED SURFACES; ALL DIMENSIONS ARE IN INCHES. PART MUST BE FREE OF BURRS AND SHARP EDGES		TYPE EQUIPMENT T-375 TABLE TOP BAGGER	B/M REF. NO.	PART NO.	
		SCALE	DRAWN BY NAME DATE	APPROVED NAME DATE	
NOTICE: THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND IT SHALL NOT BE USED OR REPRODUCED OR IT'S CONTENT DISCLOSED, IN WHOLE OR PART, WITHOUT THE PRIOR WRITTEN CONSENT OF ADVANCED POLY-PACKAGING INC.		TITLE BAG THREADING	DRAWING NO. FIG. 2-2	REV.	



QUANTITY	
MATERIAL	
FINISH	

TOLERANCES UNLESS OTHERWISE NOTED
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-375		
SCALE	DRAWN BY	APPROVED
	NAME	NAME
	DATE	DATE

TITLE	DRAWING NO.	REV.
T-375 PRINTER RIBBON THREADING	FIG. 2-3	

Locate the foot switch (if you wish to run the machine with a foot switch) and plug the foot switch in the rear foot switch connector. 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 MANL CYCLE button on the touch screen. If the T-300/T-375 is not up to temperature, the machine will not cycle unless the <Run> button is toggled to the <Setup> position.

If the web of bags breaks prematurely, further adjustments will be required. See Chapter 7, Trouble shooting. 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 3 for Settings Adjustment or Chapter 7, Troubleshooting.

Note: 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 SET UP may be required*.

2.9 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.

2.10 Note on Adjustments to the T-300/T-375

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.

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Chapter 3, Touch Screen Operation

Touch Screen Part Names
Specifications
Contrast Adjustment
Touch Screen Program

3. Touch Screen Operation

This section describes in detail, the identification, operation and adjustments of the Touch Screen Program.

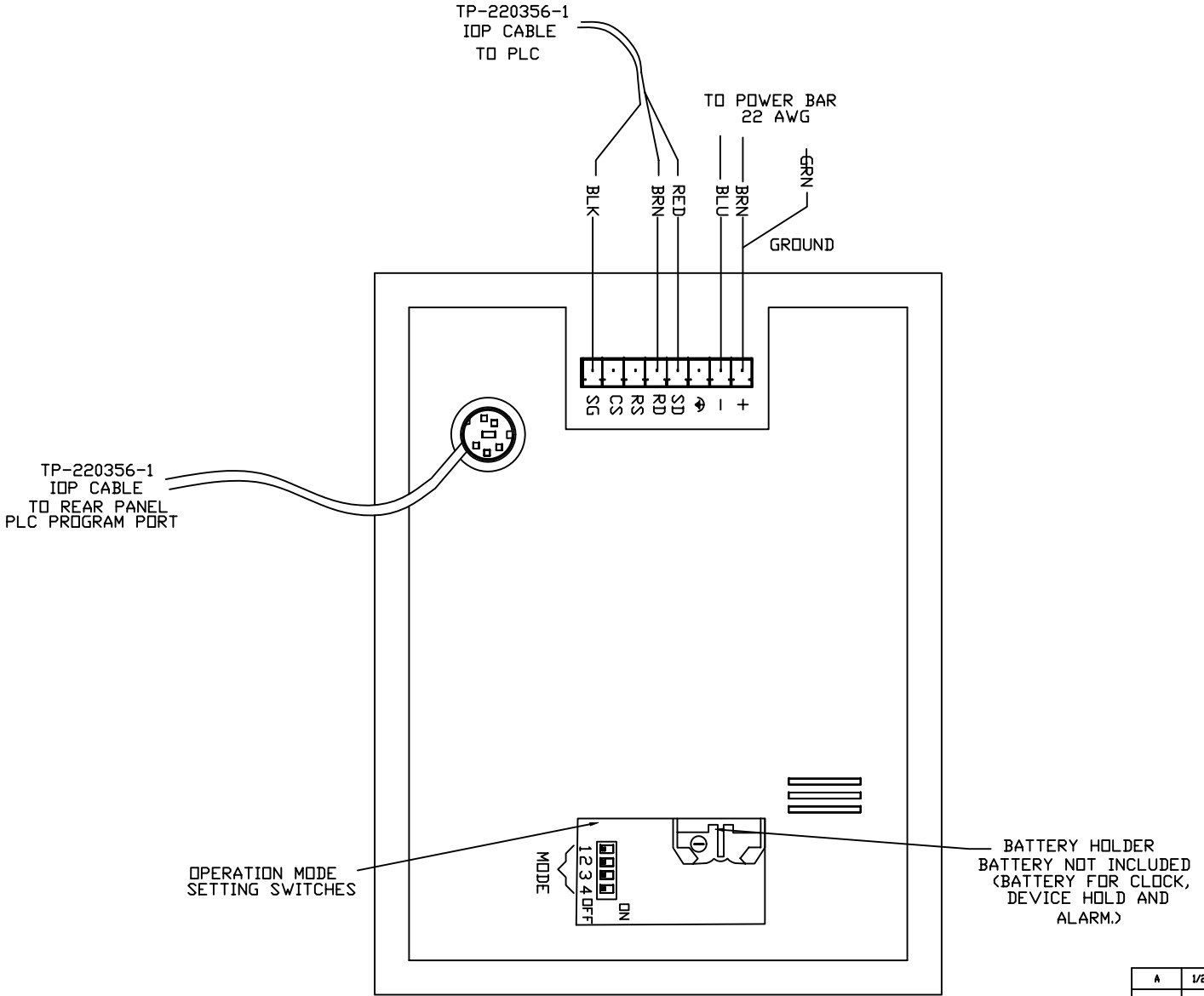
3.1 Touch Screen Part Names - Back Panel (See diagram 3.1.1)

IOP Cable to Touch Screen / PLC Program Port
PLC Wiring / Power
Battery Cover / Battery Location
DIP Switch Setting

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.

3.2 Touch Screen Specifications/Features

Specifications	
Screen, Resolution	4.7", 320 x 240 pixels, 256 STN Colors
Features	Real time clock, recipes
LCD	256 Colors, QVGA
Memory	6.5MB
Communication	RS232C
Touch Key Res.	Free, Analog
Languages	English, Spanish, French, German, Italian, Japanese, Chinese, Korean
Dimension	142x112x29.9mm (W, H, D)
Back Light	White LEDs (No maintenance)
Power Supply	24V DC, 0.2A
Protection (Front)	IP65
Conforming	CE, UL, cUL



SWITCH NO.	FUNCTION	OFF	ON
1	USAGE INHIBITED	SHOULD ALWAYS BE IN THE OFF POSITION WHEN UNIT IS USED	
2	INHIBITS SYTEM MENU SHIFT	SHIFT POSSIBLE	SHIFT IHIBAITANT
3	USAGE INHIBITED	SHOULD ALWAYS BE IN THE OFF POSITION WHEN UNIT IS USED	
4			

REV	DATE	BY	DESCRIPTION
A	1/23/02	C.N.K.	ADDED #10-32 X 3/8" DP. TAPPED HOLE

MATERIAL

FINISH

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

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Phone: 330-785-4000 ▪ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300-T-375	ASSM. DWG# TA-T10006	

SCALE	DRAWN BY	APPROVED
	NAME JLD	NAME
	DATE 12/4/06	DATE

TITLE	DRAWING NO.	REV.
REAR IOP PANEL	FIG. 3.1.1	

3.3 Touch Screen Program

The Touch Screen Program is a "user-friendly" menu-driven setup and operation program. Popup 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. Moving around through the program, entering menu levels and entering setup options are easily and quickly achieved by just one touch of the screen to set the options you choose. A general color scheme has been used for consistency with operation:

Blue: Background color. Blue is used as a background or text only color. Pressing this area will typically do nothing.

Yellow: Yellow buttons are Menu buttons which will take you to other available screens. Yellow buttons may be located anywhere on the screen.

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

Red: Stop functions, warning messages or off positions.

3.4 Introductory Screen

When the T-300 / T-375 is turned on, an Introductory screen is displayed. The introductory screen is a welcome screen and has a button to take you to the Main Menu. When powered up, the machine will be in the Stop mode. Press the Main Menu button to go to the Main Menu. See Fig. 3-1

3.5 Main Menu

The Main Menu is initially accessed from the Introductory Screen, This screen allows the operator to go to most other screen locations. See Fig. 3-2

On most screens, there are three toggle buttons and a MC (Manual Cycle) button.

Start / Stop: Toggle button controls operation mode; mode which enables the T-300/T-375 to cycle. The machine cannot cycle if in the Stop mode.

Manual/Auto: Toggle button to enter Automatic (paced rate) or Auxiliary Cycle mode.

Pause/Setup: Temporarily deactivates Predetermining Counter and Totalizing Counter until reset. Temporarily deactivates signal to auxiliary equipment. Allows cycle operation when heater bar is not up to temperature.

Ready/Waiting: Indicator LED. Displays Ready when heater bar is at the temperature set point. Waiting flashes when the machine is not at temperature.

3.6 Operation Screen

The Operation Screen acts as the Default screen when the Level 2 Pass Code has been enabled in the Technical Assistance / Bagger Pass code Setup screen (See Fig. 3-26). This screen has limited functionality, other than the toggle buttons described in section 3.5 See Fig. 3-3.

When the Pass code is active, the operator must enter the Level 2 Pass Code to go to the Main Menu. Without this pass code, the operator will be restricted to the Operation Screen only. An LED is located on the Main Menu button. If this LED is Green, access is granted to the Main Menu. If the LED is Red, the access 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 pass code setup screen, to view and change the codes.

Fig. 3-1

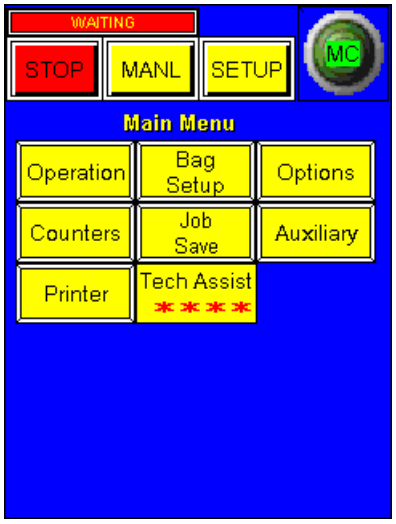

Fig. 3-2

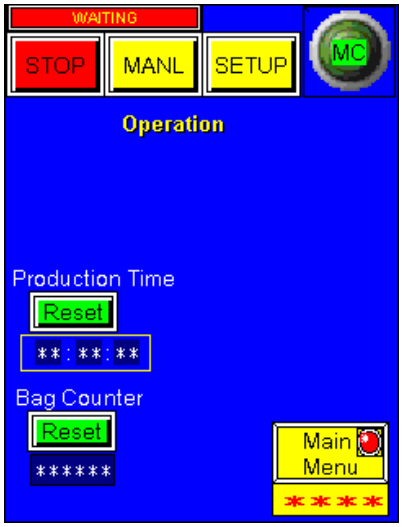

Fig. 3-3

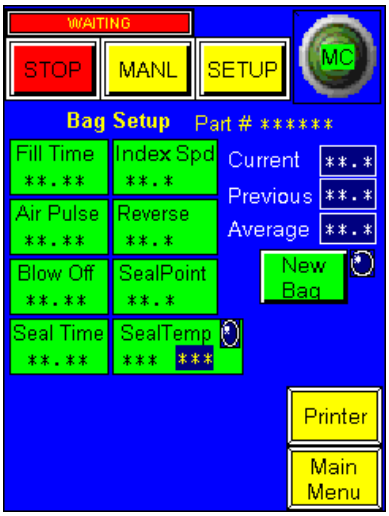

Fig. 3-4

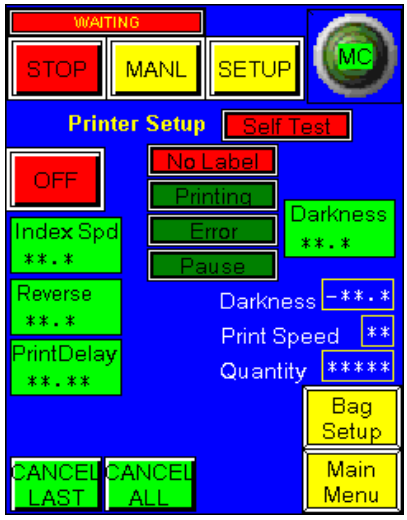

Fig. 3-5

Fig. 3-6

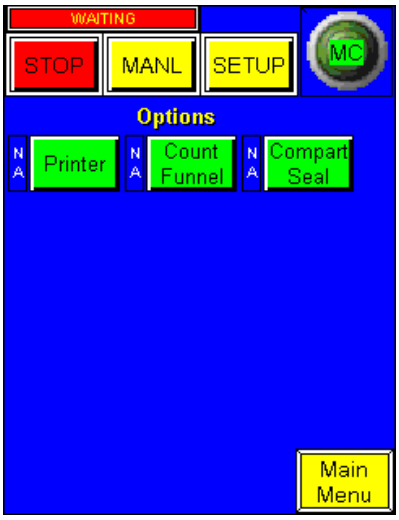

Fig. 3-7

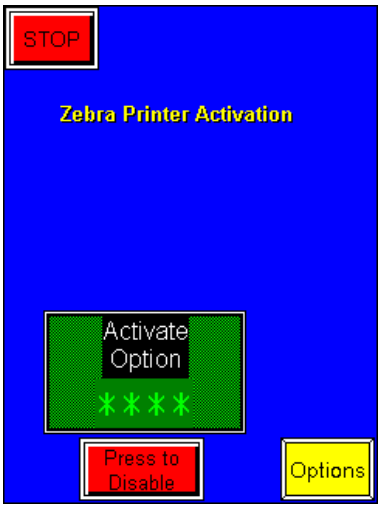

Fig. 3-8

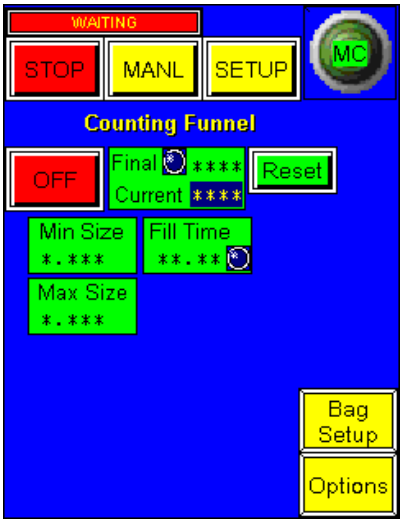

Fig. 3-9

3.7 Bag Setup Menu

The Bag Set Up Menu is used to change settings to cause the bag to seal and index properly. Bag thickness, length, width and product characteristics affect these settings. Once set, the operator may save the bag settings along with options settings and auxiliary settings for later recall. All settings will be entered numerically on a keypad, See Fig. 3-4.

The bag set up menu is the menu where most entries and machine operation setting will occur. When a new bag size or thickness is introduced, the T-300/T-375 must be *set up* to properly run the bags.

To adjust any of the following settings, touch the number below the text description. A number keypad will be displayed. To change the setting, press the <CLR> (Clear Value) button, the press the number (decimal point first, if less than 1) and then press <Enter>. To clear an incorrectly pressed value, press the highlighted <CLR> button and retype the correct value. Pressing <Enter> will return you to the Bag Setup Screen. After changing a setting, test cycle the bagger several times to ensure the setting produce the desired results.

Fill Time: In the AUTO mode operation, the Fill Time setting adjust the time the operator has to load the bag before the seal operation begins. In this "paced operation", increasing the fill time decreases the cycles per minute, allowing more time for filling.

In the MANL mode of operation, fill time starts when the guard switch, foot switch or <MC> button is pressed. To start the cycle operation immediately without a delay, change the setting to 0.00.

Caution! To avoid personal injury, do not operate the T-300/T-375 *in AUTO mode when funnels or guards are removed. Funnels should not be removed unless a light curtain or palm buttons or other approved safety device is installed. Guards should never be removed in an operation status.*

Air Pulse: Displays, in seconds, the amount of time that a burst of air will last, *initially* blowing the bag open. Wider bags and heavier gauge bags require a longer burst of air to initially open the bag. Narrower and thinner gauge bags require less air to initially open the bag. To adjust the value, press the <Air Pulse> button from the Bag Setup Menu to display the number keypad. Press the numbers on the keypad followed by the <Enter> button to return the Bag Setup Menu. Additionally, to increase the *volume* of air from the air pulse tubes, turn the Air Pulse valve counter-clockwise; turning the valve clockwise will decrease the volume of air. The Valves to adjust the air pulse air volume and blower air volume 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.

Blower: To preserve compressed air, the blower (air knife) will turn off after this preset amount of time. 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 5 minutes and 6 seconds. A typical value is between 3 and 5 minutes.

Seal Time: Displays, in seconds, the time 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 .5 seconds for 2 or 3 mil film.

Index Speed: Displays in inches per second the speed at which the bag will feed/index into position. For shorter bags, the speed can be significantly decreased (to 10"/Sec, for instance). For longer bags, the setting can be increased to the max. setting of 25" per second. A typical setting is between 15" and 25" per second. Press the guard switch or foot switch or otherwise cycle the bagger to test the new setting.

Reverse: Displays in inches the distance that 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 .5" and 1". Again, test the new setting several times.

Note: On Model T-375, the reverse setting changes the print location on the bag. Refer to Section 3.8 to find out more about print location settings.

Note: The Reverse speed may be changed in the Technical Assistance / Factory Setting screen.

Seal Point: Displays in inches the seal point position measured from 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 do narrower bags. Additionally, bags packaged with bulky products require greater sealing area than do bags packaged with thinner products. A typical setting for a mid side bag (5 x 7") would be .7" A typical setting for a large bag would be 1.5".

Seal Temperature: When the power 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 Bag Setup Screen while the element is receiving current. The longer the light is illuminating, the longer the "pulse" of current and the further away from the temperature setting. If the temperature of the heater bar is not within a set range around the set point, “Waiting” will be flashed on the top left screen.

Note on Seal Quality: Quality seals are achieved by making adjustments to SEAL TIME, SEAL TEMP., SEAL POINT and by having the proper seal pressure.

Note: Ensure Regulator Pressure is set to 60 PSI.

If, after making necessary adjustments, seal quality remains insufficient, additional options may be purchased to enhance seal appearance, integrity or strength.

Bag Length Displays: Current, Previous and Average bag lengths are displayed which should be close to the actual bag length. These values are displayed to assist with troubleshooting if bag seal point is erratic. Additionally, once the Average bag length is calculated, the bag will index to this position even if the perforation is not detected.

New Bag button: This button can be pressed at any time if the bag is not consistently stopping in the correct seal point. The New Bag button is used to start an internal program which calculates an average bag length. Again, this information is required if a perforation is not detected, so that the bag will stop in the correct seal position. Bag length information is displayed, but may not exactly match the bag length due to mechanical tolerances in the equipment (i.e.: roller diameter fluctuations). It is only useful to compare one bag length to the next. If the variance is too great a feed error message will be displayed.

Note: Feed errors are detected and displayed on the screen. Once a feed error occurs, the bagger will restart to calculate the bag length. Additionally, each time the upper rubber roll assembly is raised, the New Bag LED and program will automatically start. So, if a different bag size is threaded, the T-300 / T-375 will automatically detect the new bag size.

3.8 T-375 Printer Setup Screen: Print Location

To access the Printer setup menu, press the <Printer> from the Main Menu, Options screen or Bag Setup Screen. All functions pertaining to the print location will be accessed from this menu. See Fig. 3-4.

It is highly recommended that all bag settings are adjusted first from the Bag Setup Screen, while the printer is OFF. The bag should be feeding, blowing open and sealing and separating properly before attempting to print on the bag.

To change the print location on the bag, two settings on the Print Setup Screen are described in this section: Reverse and Print Delay. Print position is achieved by trial and error. However, some tips are described in this section to achieve the best results.

Printing on Smaller bags (3 to 7" in length): For smaller bags, the ability to print next bag out may be limited by the amount of print length required. For instance, 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 1/2 of the bag length be printed.

Recommended print location: It is recommended that you position the print 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 layer 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 chart offers some suggested settings based on the bag length: (NBO means Next Bag Out printing - versus printing one bag back). See Chart 1 if your machine has a standard frame or Chart 2 if your machine has a drop frame.

CHART 1: T-375 STANDARD FRAME MODEL

Setup #	Bag Length	NBO Y/N	Max Print Length	Bag Seal Point	Print Speed in/sec	Reverse	Print Delay	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

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 delay will move the print higher on the bag.
Note: Due to mechanical tolerances, setting to the above may achieve different results on your machine.
Note: Print speed is set in the Label Software.

CHART 2: T-375 DROP FRAME MODEL

Bag Length NBO Y / N Max Print Length

Setup #	Bag Length	NBO Y/N	Max Print Length	Bag Seal Point	Print Speed in/sec	Reverse	Print Delay	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 recommend to run on a Drop Frame configured T-300 or T-375.

Reverse: Displays in inches the distance the printer will reverse to separate the bags at the perforation. With smaller bags, the reverse must be set to the maximum to print next bag out. If not printing next bag out, the reverse should be set to the minimum distance required to separate the bags. For longer bags, the reverse should be set to the minimum required to consistently separate the bags at the perforation. If the reverse setting is adjusted, the Print Delay setting may also require adjustment to properly position the print.

Print Delay: This delay caused the print to be raised on the bag. However, if the print delay is too long, the printing may not occur in time, while the bag is feeding into the loading position. Use Chart 1 and Chart 2 to set the bag length initially. Then adjust the print delay to achieve the desired print location.

3.9 T-375 Printer Setup Screen: Print Quality and Other Settings

<ON> / <OFF> button : The printer ON/OFF button must be toggled on for the printer to operate. Additionally, the Power must be turned on to the printer (see reverse panel, next to the main power button). When the power button is first turned on, it will take approx. 20 seconds for the printer to become active as the printer powers up through its diagnostics.

Two machine settings/adjustment affect print quality: Print Speed and Darkness. Additionally, print head pressure and print head alignment affect print quality. If, after adjusting print speed and darkness, print quality does not improve, check to see if the operating pressure is a minimum of 60 psi. Refer to Section 4 for print head alignment adjustments.

Index Spd: The index 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.

Darkness: Darkness can be set between 1 and 30. Darkness settings can be set in your 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.

Note: APPI resells several software packages including: Labelview, Zebra Design Pro and Bartender. If you are using other than 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.

3.10 Printer Setup Screen: LEDs / Errors

There are several status LEDs on the Printer Setup Screen which provide the status of the printer. See Fig. 3-5.

Quantity: Labels are downloaded from label software and the quantity is entered in the software. The quantity remaining to print will be displayed.

<CANCEL LAST> button will reset the currently downloaded label. You may have to press this button several times, each time decreasing the remaining quantity of labels.

<CANCEL ALL> button deletes all downloaded labels.

Note: Pressing the the <CANCEL> buttons may cause the printer to lose its font settings. If this occurs, power off the printer and power it back on.

Self Test LED: This LED is lit when the printer is first powered on. This LED will be displayed for approx. 20 seconds.

No Label LED: When the last label is printed from a batch of downloaded labels has printed, and if no other labels have been downloaded, the No Label LED will be lit. Additionally, if the <CANCELL ALL> button is pressed, the No Label LED will be lit. If you attempt to cycle the machine with no labels in memory, a Printer Waiting screen will be displayed. See Fig. 3-6.

3.11 Options Available Menu

Options that can be added to the T-300/T-375 at the factory will be accessed from an Options Screen. If options were not installed at the factory, then N/A (Not available) will be displayed to the left of each options button. Otherwise, the button will display ON or OFF. Contact APPI Sales Support for additional options, programming or operations for automatic infeed operations. See Fig. 3-7.

Note: If options are added in the field, a pass code is required to Enable use of the option. Contact APPI for a pass code. Options which have been purchased separately must be installed by APPI or by qualified maintenance personnel.

The following sections describe how to setup optional equipment. If your T-300/T-375 is not equipped with these options, please disregard these sections.

3.12 TS-10 Trim Seal Assembly

The Trim Seal option is not included in the standard T-300/T-375 package and must be purchased separately. Used to enhance the appearance of packaged products, the Trim Seal option removes the excess film (trim) from the bag, above the seal. The *Blow-off time* indicates the time, in seconds, which a blower will remove the excess film from the bag (trim-off time). The Trim Seal option is ideal for 1) retail products for enhanced appearance and 2) hanging products for reduction of "shelf" space.

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" of film from the bag.

Press the ON/OFF toggle button to enable and disable the operation of the Trim Seal option. Press the value on the keypad to increase or decrease the Blow off Time value (trim-off time). Seal Point, Seal Time and Seal Temp. buttons are also available on this screen which are the same settings button that are on the Bag Setup Screen. Adjust all values 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 off the excess.

3.13 PB-20 Palm Buttons

The Palm Buttons option (Dual Palm Buttons) is not included in the standard T-300/T-375 package and must be purchased separately. 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.

Caution: To avoid personal injury, do not operate the T-300/T-375 *when funnels are removed. Advanced Poly-Packaging, Inc. recommends either the Palm Button or Light Screen options to safeguard operators.*

The Palm Button option operates in lieu of a foot switch. Two buttons, positioned on opposite (left and right) sides on the top of the T-300/T-375, must be *pressed* or *touched* simultaneously to cycle the bagger. If both buttons are not pressed at the same time, or if one of the buttons are held while the other button is pressed, the T-300/T-375 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.

3.14 LC-10 Light Curtain

The Light Curtain option is not included in the standard T-300/T-375 package and must be purchased separately. This option is typically 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.

Caution: To avoid personal injury, do not operate the T-300/T-375 *when funnels are removed. Advanced Poly-Packaging, Inc. recommends either the Palm Button or Light Screen options to safeguard operators.*

Caution: Do not attempt to reach under 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 from underneath will place your hands or fingers in the seal area!

As an additional safety function, the Automatic cycle mode is disabled when the Light Curtain option is turned ON. However, the foot switch input is not disabled when the Light Curtain option is turned ON so if pressed the machine will cycle.

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.

The Light Curtain option can be used as a means of initiating the cycle operation of the T-300/T-375 to cycle the bagger automatically after the light curtain sensing area is cleared, press the <Mode> toggle button to change from Safe to Auto.

Once in the Auto mode, the <Min Time> can be set to "debounce" the input signal. This means that the curtain must be blocked for at least this amount of time before the T-300/T-375 will automatically cycle. A typical setting for the Min Time is .3 seconds.

Also, in the Auto mode, the <Fill Time> can be set to delay the cycle operation. For instance, if the mode is set to Auto and the Fill Time is set to 1 sec., the machine will cycle only after the operator has removed their hands and after 1 second has elapsed.

A Message toggle, if pressed to ON will cause a message to be displayed during the time that the light curtain area is blocked. The message tells the operator that the machine will automatically cycle when they remove their hands.

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

3.15 CF-10 Counting Funnel

A Photo optic and preset Counting option not included in the standard T-300/T-375 package and must be purchased separately. This option is useful and will automatically cycle the bagger when a preset number of parts have fallen through the funnel.

Photo optic eyes may vary depending on your product, so parts should be sent to APPI for testing to determine the correct components. Parts must be separated to be counted accurately through the eye. If two parts fall at the same time, they may be counted as one. If loading automatically with minimal distance between parts, an accumulating funnel or method of diverting may be required for separation between the last part in the batch count and first part in the next batch. Contact APPI Sales Support for additional options, programming or operations for automatic infeed operations.

To turn ON the option, press the Mode toggle button. Press the <Reset> button to reset the count to the preset value.

Parts length test: With the option ON, go to the Parts Length Test Screen, press the <Reset> button. Toggle the T-300/T-375 to the Stop mode using the Toggle button located at the top left side of the screen. Then, drop parts individually through the photo sensor / funnel. You will notice that the Min and Max values will change as you drop parts through the eye. If the parts will be fed automatically, parts should pass through the eye as they would if feeding automatically.

Min Setting: The Minimum Setting is used to filter scrap. If through testing the min value detected was .2, setting the value to .1 would cause parts that are .1 or less not to be counted. If you set the Min. Setting too close to the actual minimum test value however, these parts may not be counted causing over counts. Setting the Minimum Setting to Zero will cause all parts to be counted.

Maximum Setting: The Max Setting is used to count parts connected or parts falling through the eye together (overlapped) as two parts. If when testing the parts length, the Max value was determined to be .5, you could set the Max Setting to .8. Then, if two parts overlapped go through the eye with a setting a .9, they would be counted as two parts. However, if you set the Max Setting too close to the Max Value, one part may be counted as two, causing undercounts. To disable this 2 count function, set the value to zero. A help screen is provided to further explain Min and Max Settings.

3.16 BO-20 Bag Open Sensor

A photo eye or closed contact sensor to detect the opening or presence of bag material is available for purchase, not included in the standard T-1000 package.

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 that bad is ready to receive product. This option is valuable for an automatic operation to decrease the chance of product falling on the floor.

3.17 CS-10 Compartment Seal

Special programming is required to seal the bag twice with compartments within the same bag. This option is not included in the standard T-300/T-375 package and must be purchased separately. For instance, it may be necessary to segregate a sharper object (screw) from a plastic component (mounting plate) to avoid the screw damaging the plastic part.

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.

First set Seal Point 1 by pressing the <Seal Point 1> button and typing in the value on the number keypad. Adjust the first seal point until the desired location is achieved. Then, turn the option ON by toggling ON the ON/OFF button. Adjust the second seal point by pressing <Seal Point 2> and entering a value in the number keypad. Adjust the value of the second seal point until the desired position is achieved. Each seal time may be adjusted if you wish the Trim Seal after the second seal has been placed on the bag.

3.18 TS-10 Twin Seal Feature

Special programming is available to seal the bag twice. This option is not included in the standard T-300/T-375 package and must be purchased separately. An additional seal can be placed on the bag based to increase the integrity of the bag.

To turn on the Twin Seal option, press the <Twin Seal> menu option and toggle the option ON. Adjust the second seal point.

Note: You may need to decrease the Seal Point value on the Bag Setup Screen 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.

3.19 MV-10 Medical Validation Assembly

The Medical Validation Assembly is not included in the standard T-300/T-375 package and must be purchased separately. APPI provided additional components to provide a secondary means detecting a failure or out of range condition for components that affect seal quality.

To cause a good seal and to confirm that each component required to obtain the seal is in range, we have added three validations to the T-300/T-375:

1. 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.
2. Pressure: a pressure sensor was added with an alarm output that alarms when the pressure falls out of the set range in the pressure sensor.
3. Temperature: a secondary controller was added with an alarm output that alarms when the temperature falls out of the set range in the temperature controller.

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

The Pressure Sensor may be also be added to the T-300/T-375 to validate only pressure, without adding the other two components. For application requiring this validation only, the bagger will not operate unless the sensor provides an output indicated that the pressure is above a minimum allowable setting.

3.20 Counters Screen

The T-300/T-375 is equipped with three internal counters as a standard feature. To access the counter screen press the <Counter> button from the Main Menu. See Fig. 3-20.

Continuous Strip Counter: This option allows you to seal bags in a strip, without separating them at the perforation. If you set this counter value to 10, for instance, you will have a strip of 10 bags connected. The bagger will then reverse to separate the 11th bag.

Press the <Reset> button to reset the counter to the set value. To disable the option, set the value to zero.

Note: If you don't want the bags separated ever, you can either set the counter value to very large number or simply change the Reverse setting to zero in the Bag Setup Menu.

Totalizing Counter: To track production, use the Totalizing Counter to count cycle operations of the T-300/T-375. Press the <Reset> button to reset the counter to zero. This counter value is also displayed on the Operation Screen.

Predetermining Counter: To halt production after a preset number of cycle operations, use the Predetermining Counter. When the final count has been reached, a message screen will be displayed.

Set the value by pressing the <Set> button and then type the value on the number keypad followed by the <Enter> button. To disable the Predetermining Counter set the value to "0".

3.21 Job Save / Recall

The T-300/T-375 is able to store 42 machine settings, called *jobs*, including BAG SETTINGS and OPTIONS SETTINGS. See Fig. 3-21.

Each time a setting is changed on the T-300/T-375, the settings are immediately saved in memory so that if power is lost, the T-300/T-375 will power on with the job that was running before power was lost.

To Save a job to a memory location, first enter the Recipe (memory location), from 1 through 42 and enter your Part Number (up to 6 digits). Then, press the <Save> button. You will prompted to confirm your the save function. See Fig. 3-23.

To Recall a Recipe that has already been saved to a memory location, enter the Recipe Number and then press the Settings button. You can then review the settings before pressing the <Load> button.

If you don't know the Recipe Number, enter your Part Number, then press the Part # Search button. You can then press the Settings button to view and load your settings. See Fig. 3-22.

3.22 Auxiliary Screen

The T-300/T-375 Touch Screen Program is preprogrammed to accept closed contact inputs so that the two or more pieces of equipment "talk" to each. Occasionally, reprogramming will be necessary to interface auxiliary (infeed) equipment that is not manufacturer by APPI. Special cabling may also be required. See Fig. 3-24.

Once connected and with both systems running independently, turn the Auxiliary Signal ON by pressing the ON/OFF toggle button from the Auxiliary Screen. An output time delay is provided which delays the bagger from sealing after the auxiliary infeed signal has cycled and signaled the bagger to seal. To adjust the delay timer, press the <Output Delay> button and enter the value, in seconds, on the number keypad.

When the Auxiliary setup procedures are complete, Press the <ON> button on the Auxiliary Screen. Then toggle the T-300/T-375 from <MANL> to <AUTO> by pressing the <MANL/AUTO> toggle button. This will place T-300/T-375 in the Automatic / Auxiliary mode.

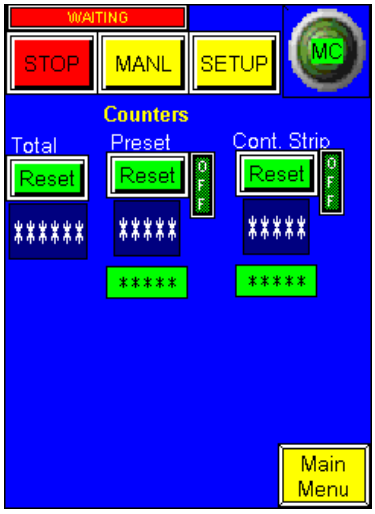

Fig. 3-20

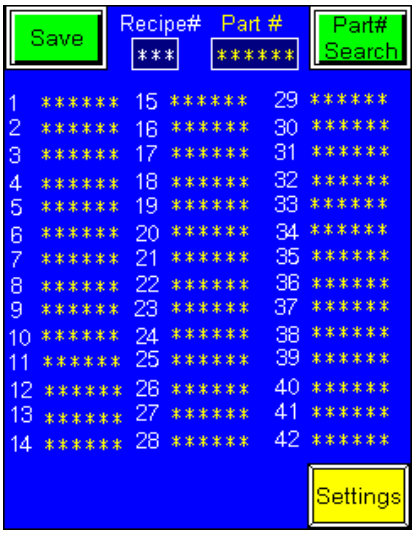

Fig. 3-21

Fig. 3-22

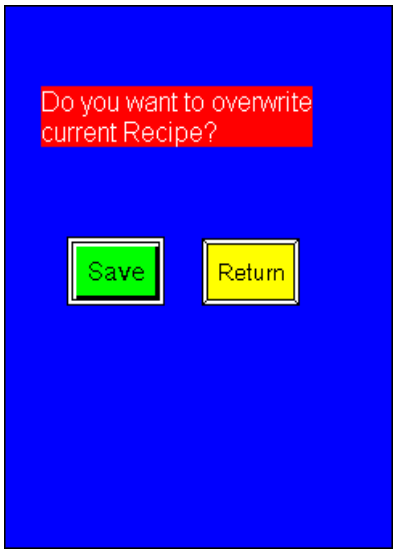

Fig. 3-23

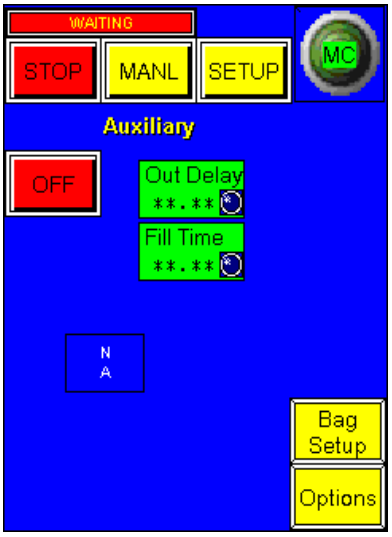

Fig. 3-24

Fig. 3-25

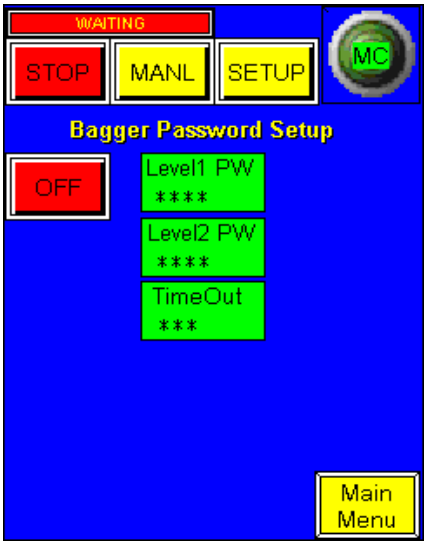

Fig. 3-26

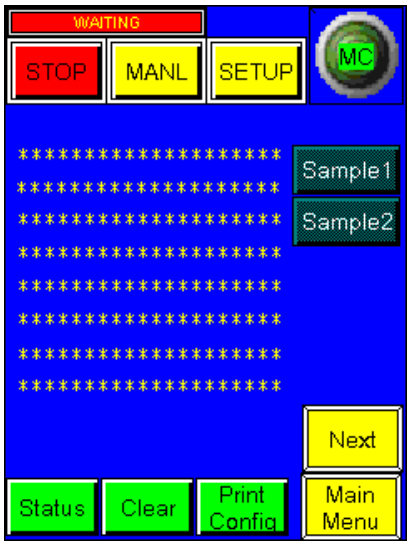

Fig. 3-27

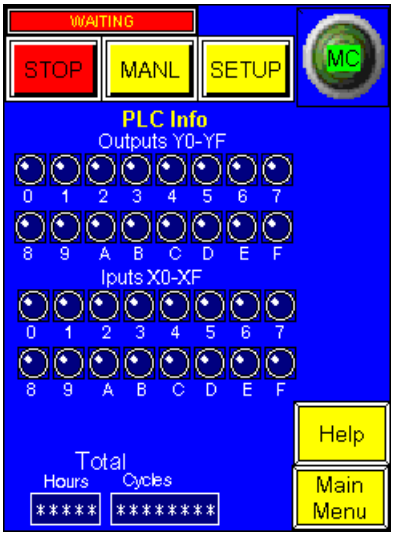

Fig. 3-28

3.23 Technical Assistance

Technical Assistance screen provides manufacturer information, printer status, factory settings adjustments and functions testing and troubleshooting. It also displays program version for PLC controller and touch screen. See Fig. 3-25.

Note: Before entering the Technical Assistance Screen, you must enter a Level 1 pass code.

3.24 Pass Code Setup Screen

Advanced Poly-Packaging, Inc. (APPI) has included a pass code function in all touch screen equipment to prevent operators from changing settings.

There are two pass code levels described as follows:
1. Level 1: This is the highest level pass code which prevents operators from accessing the Technical Assistance functions of the machine. The default pass code, when shipped from the factory, is 1001.

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. See Fig. 3-26.

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

Factory Set Pass Codes:
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 PassC> Then press ON to toggle the pass code function ON. If you change the pass codes, ensure that these codes are written down.

Once the pass code function is enabled, the operator will have a programmed amount of time (time-out time) to make changes. Once this time has elapsed, the Operation Screen will automatically be displayed. This time can be changed by accessing the Bagger Pass Code setup screen.

If you misplace or forget the pass codes, contact APPI Service Dept for assistance. APPI will prove a "factory code" so that the current pass codes can be displayed.

3.25 Printer Status Screen (Model T-375 only)

The Printer Status screen is used for troubleshooting the printer. See Fig. 3-27.

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.

You can also reset and recall the status by pressing the <Clear> and <Status> buttons.

Two Sample labels have been downloaded to the printer memory. Before selecting one of these sample labels, press the <Print Config> button. Then, press either Sample1 or Sample2. When one of these buttons is pressed, it will remain highlighted until pressed again. Before exiting this screen, you should press the highlighted button to turn off the Sample print function. If an error message is displayed here, contact APPI technical support.

3.26 PLC Info

The PLC I/O screen is provided for maintenance personnel to determine the status of the PLC and review the mode of Outputs and Inputs. PLC I/O screen(s) are also used to assist APPI Service Technicians, working with your Maintenance Personnel to troubleshoot the T-300/T-375 in the field. See Figures 3-29 through 3-30.

To determine the function of each Input / Output, press the Help button to display a brief description of each input or output LED. The PLC I/O screen also provide the run Hours and Cycles counters. These counters cannot be reset by the operator.

3.27 Factory Settings Screen: Default Settings

These settings are additional bagger settings which should only be set by qualified technicians or by the factory. See Fig. 3-31.

Heat Off: The bagger is programmed to shut off the heater bar if the machine is idle for this amount of time. The default setting is 60 minutes. To decrease this time, press the <Heat Off> button, enter the new time (in minutes) and press the enter key.

TempRng: The machine cannot cycle unless the heater bar temperature is within this range of the set temperature. If the heater bar temperature is within this set range, READY will be displayed in the top left corner of the screen. Otherwise, WAITING will be displayed. However, you can test cycle the machine while it is coming up to temperature by toggling to the SETUP mode.

FeedDist: Feed distance setting allows you to ignore horizontal perforations which could cause the bagger to stop at the wrong location. Since the perf sensor is "looking" for a perforation, a second perforation could be detected. If the horizontal perforation is 1" from the bag perforation, set this value to 2", for example. The default setting is 1".

SealDlay: A Seal Delay timer is provided to allow air to escape before the seal bar actuates. To decrease the volume of air remaining in the bag after sealing, increase this timer.

IndexDlay: An Index Delay timer is provided to allow the bag just sealed to drop before the next bag is indexed. If the bag below does not move out of the way fast enough, the bag feeding out could hit it, causing it not to open or feed properly. If the bag feeding contacts the bag below, increase the value of this timer.

3.28 Factory Settings Screen: Zero Perf, Zero Seal, Max Seal Program

A zero perf function is provided to register the seal point and provide a reference position for the seal point setting.

To determine if the seal point is registered, set the Seal Point setting to the lowest setting and press the MC button or press the guard switch. The bag should move so that the perforation is approx. 1/8" from the center of the heater bar. If the bag perforation is not approx. 1/8" from the perforation, perform the following procedure carefully. If you perform these steps out of order, the bagger will not function properly.

Step 1: Toggle the bagger to Stop, then back to Run.
Step 2: Press the <Zero Perf> button. Bag should feed slowly and stop so that the perforation behind the pinch rollers is located very close to the perforation sensor.
Step 3: Press and hold the <Jog+> button until the perforation come through the pinch rollers and feeds exactly centered on the heater bar.
Step 4: Press the <Zero Seal> button. Bag should now reverse the distance of the Reverse Setting.

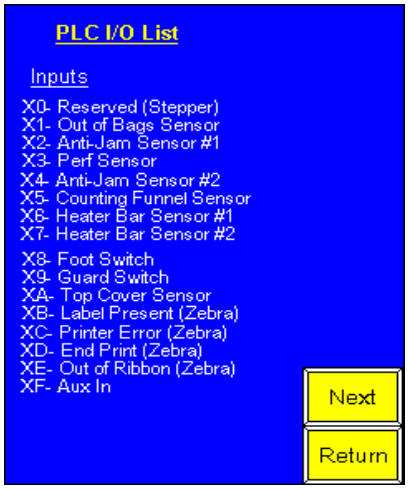

Fig. 3-29

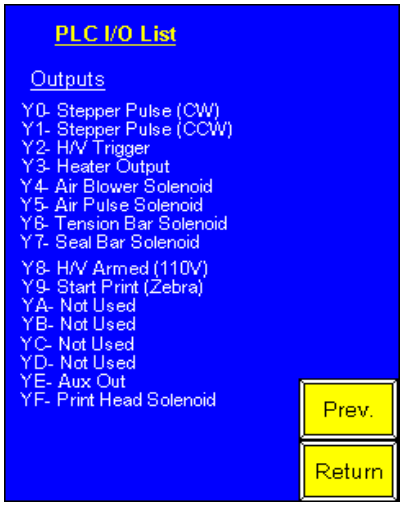

Fig. 3-30

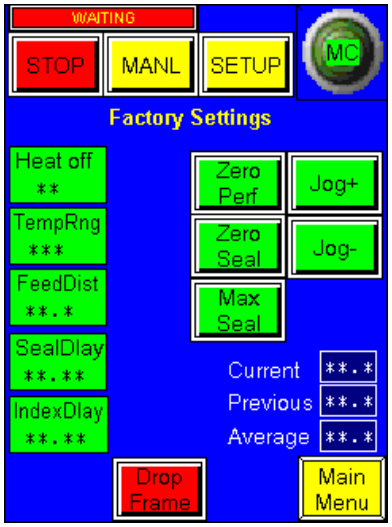

Fig. 3-31

Step 5: (for the T-300 only) Press and hold the <Jog - > button until the perforation that was just centered on the heater bar reverses to the pinch roller fingers.
Step 5: (for the T-375 only) Press and hold the <Jog - > button until the perforation is centered under the blue rubbon roller, but is still pinched between the rollers.
Step 6: Press the <Max Seal> button.

Note: If you perform these steps incorrectly, repeat from Step 1.

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

Also, since the procedure also set the maximum reverse value, enter 6" in the Max Reverse setting. If equipped with a Standard Frame bagger, this setting will be approx. 1.8" when the Seal Point Setting is .1". On a Drop Frame machine, the maximum setting will be approx. 2.7" when the Seal Point Setting is .1". Press the MC button and ensure that the bag does not reverse to far, to drop inside the machine.

3.29 Production Chart

APPI provides a simple graph to chart production throughout the day.

Press the < (left arrow key) to scroll back, 1 hour at a time, to review past production. Press the > (right arrow key) to check more recent production information. Press the <CURNT> Current button to display the current hourly production information.

Press the <Reset> button once to reset the production time and twice to reset the graph.

3.30 Temperature Graph

APPI provides a temperature graph to display the operating temperature during production. This information is useful if bags are found to have weak seals, in isolating the problem by reviewing previous operating temperatures.

The << (left arrow key) is used to view prior operating temperatures and the >> (right arrow key) is used to view more recent temperatures. Pressing the <Curnt> Current button will display the current hour of operating temperatures. Press the <Reset> button to reset the graph information.

3.31 Information Screens / Message Screens

If an error occurs the Touchscreen program will notify the operator with a red Warning Signal. For specific problems, detailed messages will appear with solutions to fix a specific problem. See Fig. 3-40 through Fig. 3-53.

Some messages provide functional messages that 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.

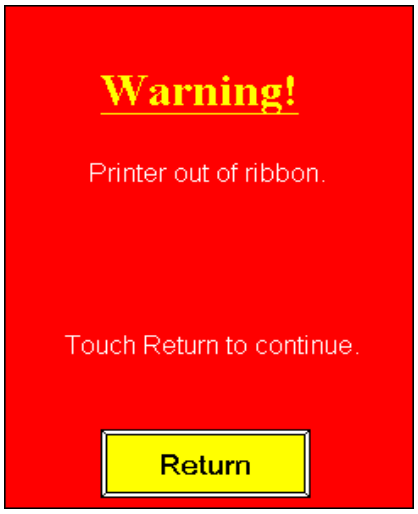

Fig. 3-40

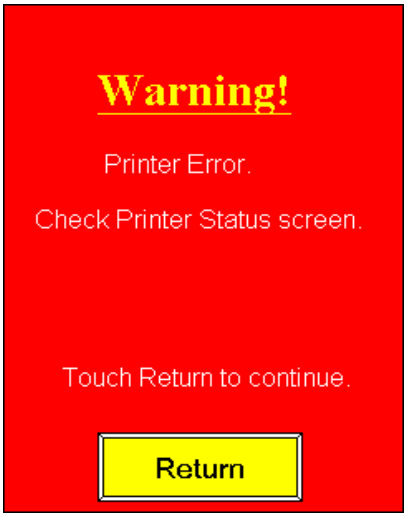

Fig. 3-41

Fig. 3-42

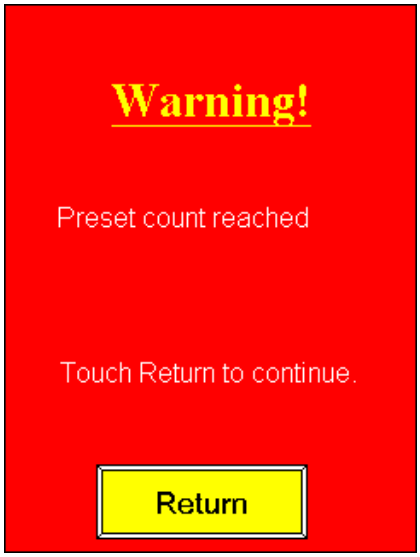

Fig. 3-43

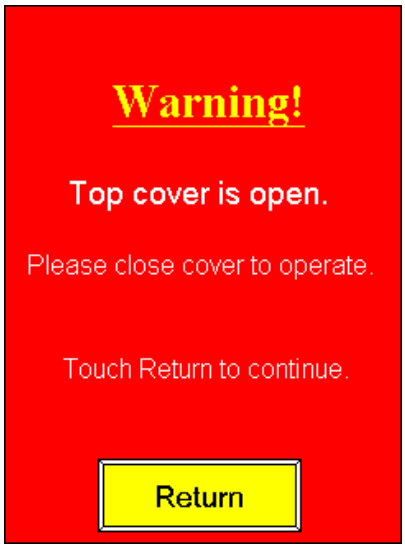

Fig. 3-44

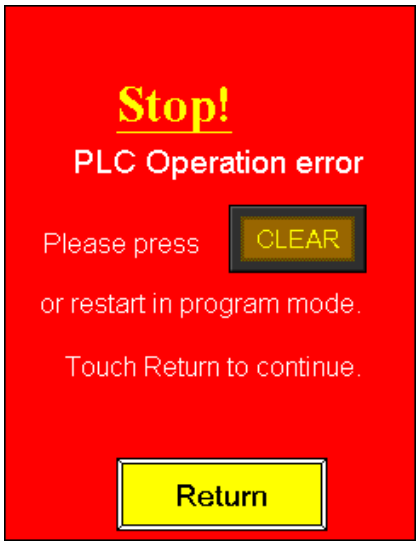

Fig. 3-45

Fig. 3-46

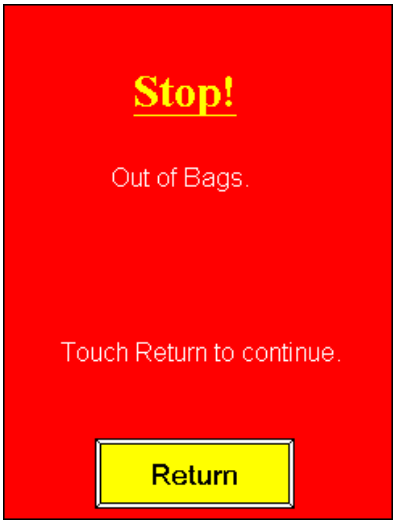

Fig. 3-47

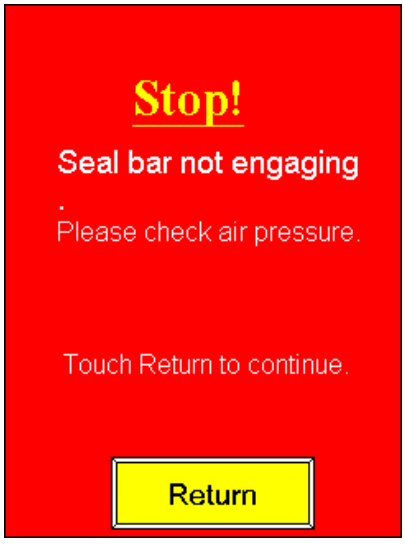

Fig. 3-48

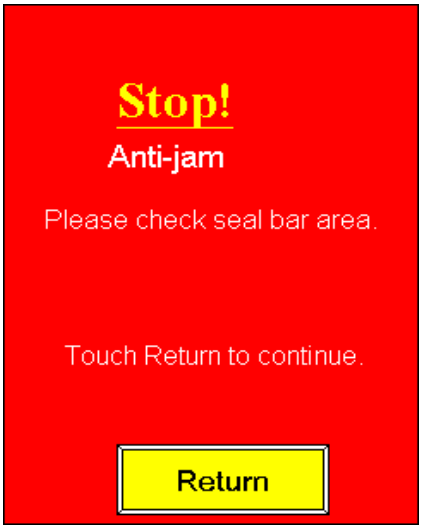

Fig. 3-49

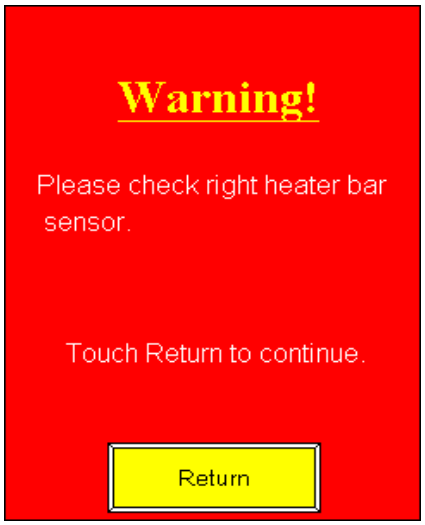

Fig. 3-50

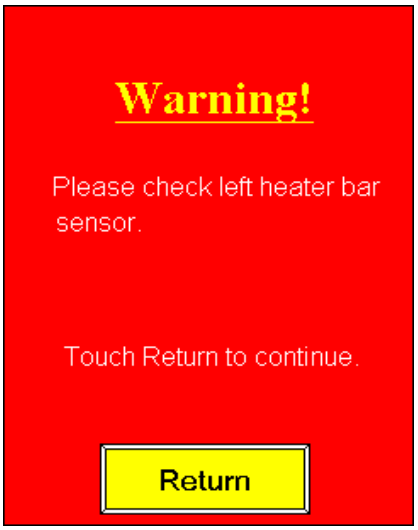

Fig. 3-51

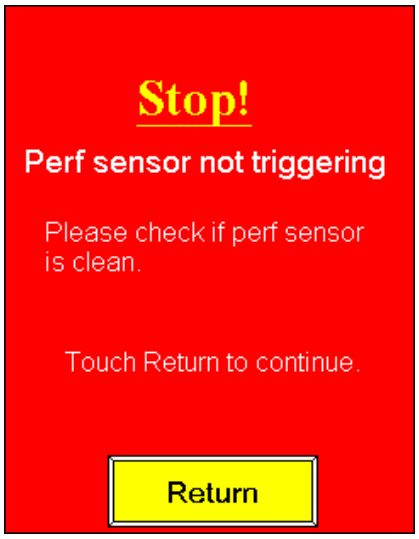

Fig. 3-52

Fig. 3-53

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Chapter 4, Settings & Adjustments

Machine Adjustments
Component Replacement

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, you should 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 Fig 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 free wheel (too little tension). For narrower or shorter bags, proper tension is more critical.

4.3 Compression (NIP) Roller Adjustment

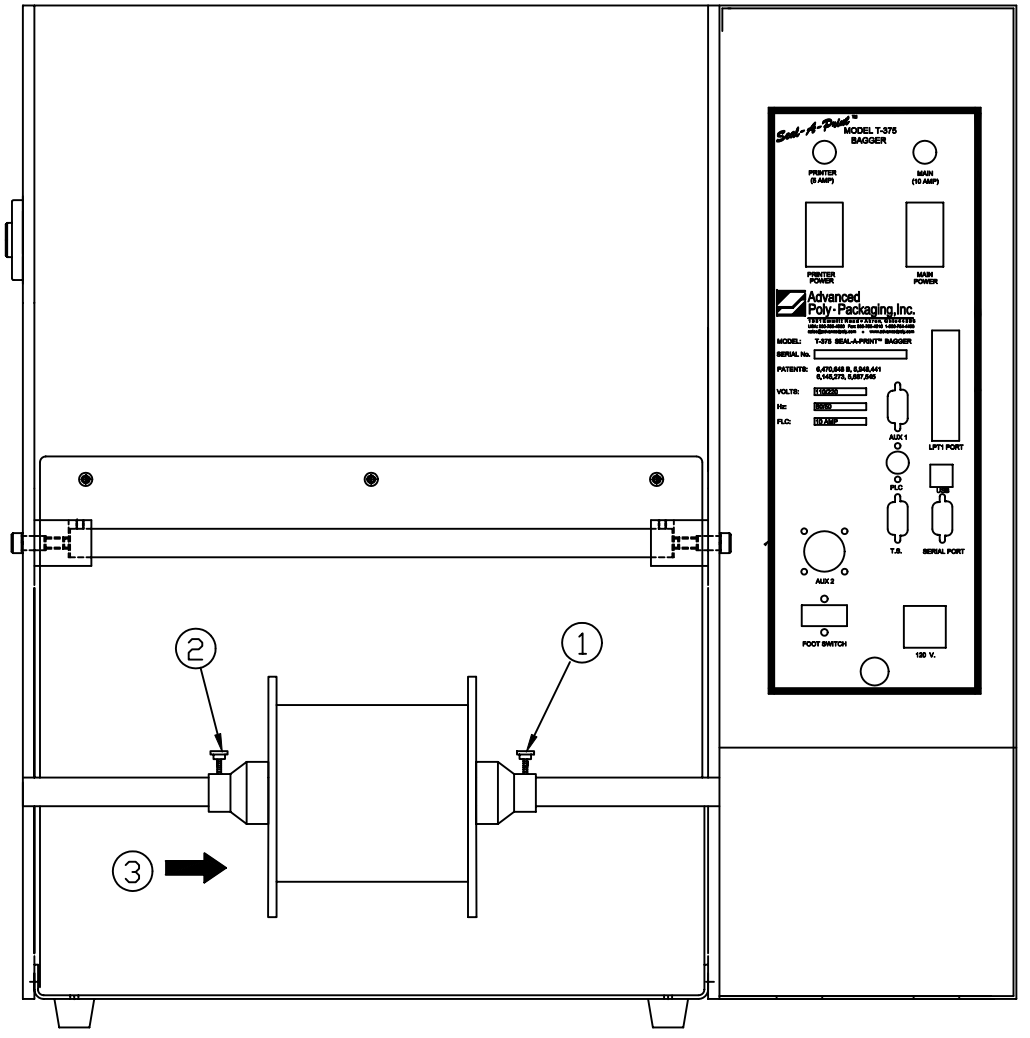
The drive roll compression is the force that exists between the two feed rolls (rubber covered grooved roll and grooved steel roll). Not enough drive roll compression will prevent the bags from *tearing off* after each sealing operation. Too much drive roll compression will cause extra wear on the drive roll and the motor.

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 Fig. 4-2.

Compression adjustment is a three step process. First, the upper and lower roller are adjusted to make the lower roller parallel to the upper 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.
Step 1: Parallel adjustment.
On both the left panel and right panel, loosen the two locking bolts on the upper block of the compression tension assembly. Loosen the nut on the adjustment screw. With the inner frame locked in the UP position, lower the lower roller by turning the adjustment screws counter-clock wise until the lower roller is parallel to the upper roller and leaving 1/16" gap between the rollers. Turn the adjustment screw clockwise alternatively, keeping the lower roller parallel with the upper roller until the rollers come in contact across the width of the rollers. Slightly lower the inner frame and raise again to ensure that when raised again, the rollers touch simultaneously. Then "snug" the upper block bolts and recheck the alignment.

Note (TIP): A light source (lamp) positioned to the rear of the T-300 / T-375 showing light in the gap of the rollers will assist in judging whether the upper and lower roller are parallel.

WEB ADJUSTMENT

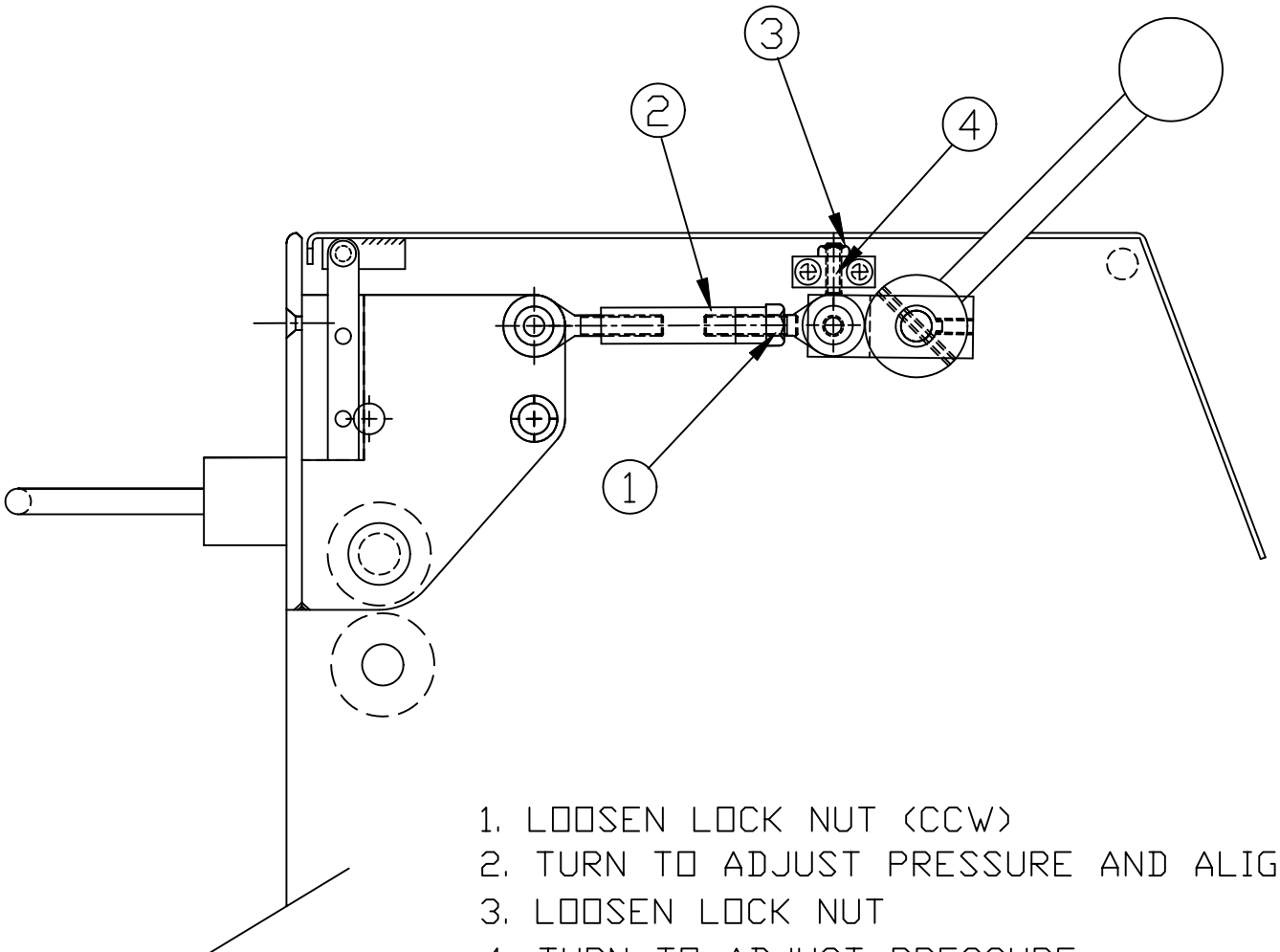


REAR VIEW

1. TIGHTEN TO LOCK INTO POSITION
2. LOOSEN KNOB
3. PRESS ROLL CHUCK TO THE RIGHT TO INCREASE WEB TENSION

QUANTITY		Advanced Poly Packaging Inc.	
MATERIAL			
FINISH			
TOLERANCES UNLESS OTHERWISE NOTED +/- .015 ON FRACTIONAL DIMENSIONS +/- .010 ON TWO PLACE DECIMAL DIMENSIONS +/- .005 ON THREE PLACE DECIMAL DIMENSIONS 125 ✓ ON MACHINED SURFACES ALL DIMENSIONS ARE IN INCHES PART MUST BE FREE OF BURRS AND SHARP EDGES	TYPE EQUIPMENT T/300-T-375 TABLE TOP BAGGER	BVH REF. NO.	PART NO.
	SCALE	DRAWN BY	APPROVED
		NAME J.D	NAME
		DATE 11/1/06	DATE
NOTICE! THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND IT SHALL NOT BE USED OR REPRODUCED OR IT'S CONTENT DISCLOSED, IN WHOLE OR PART, WITHOUT THE PRIOR WRITTEN CONSENT OF ADVANCED POLY-PACKAGING INC.	TITLE WEB ADJUSTMENT	DRAWING NO. Fig. 4-1	REV.

NIP ROLL ADJUSTMENT



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

QUANTITY	
MATERIAL	
FINISH	

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .005 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .005 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES

PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced
Poly Packaging Inc.
1526 Ewald Road • Akron • Ohio 44306
Phone 330-785-4600 • Fax 330-785-4610

TYPE EQUIPMENT: T/300-T-375 TABLE TOP BAGGER		R/M REF. NO.	PART NO.
SCALE		DRAWN BY	APPROVED
		NAME J.D	NAME
		DATE 11/1/96	DATE

TITLE: NIP ROLL ADJUSTMENT	DRAWING NO. Fig. 4-2	REV.

Step 2: Compression Adjustment
With the rollers slightly touching and parallel, turn each adjustment coupler approximately 1/2 turn clockwise. 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 coupler another 1/2 turn clockwise. Continue this adjustment until the bag is slightly difficult to pull out of the rollers. Turning the coupler equally on both sides keeps the rollers parallel. Raise and lower the upper roller assembly to ensure that it latches properly without having requiring 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 roller assembly and slowly lower it until it almost touches the upper roller. If the gap is consistent across the width of the rollers and it appears parallel, lock the inner frame upward and re-tighten the two locking bolts that hold the coupler in position.

Step 3: Stop Bolt Adjustment
If the compression is sufficient when lowering the upper roller assembly, but then the compression is lost due to over extending, the latch mechanism, the stop screws must be adjusted. Loosen the locking nuts that hold the stop bolts into position. Then, the turn stop bolts 1/2 turn each. Then lower the roller assembly and check the compression when the coupler is against the stop bolts.

When in the rollers and latch mechanism has 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 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 be separated or the bag not sealed properly.

Check for free movement of the spring loaded gripper plate: The power off and the when the heat has dissipated from the heater bar, press inward on the front gripper plate with sufficient force to move the gripper plate inward on both sides. Then, press in on one side only, one side at a time, and ensure that the gripper plate springs back outward when released.

If the gripper plate does not spring back, adjustments are required.

With power turned off air removed, remove four screws holding the face / gripper plate to the front plate. Pull the assembly out carefully as not to disconnect or damage wiring. Disconnect the thermocouple wire at the connector and the heater connectors and pull out the assembly.

Inspect the springs for breaks or damage and replace as required. Inspect for debris and clean as required. Press the gripper plate inward evenly, then on one end, then the other, searching for the specific location causing the binding. Two blocks slide in a housing. Ensure that the blocks are not binding in the housing. If this is where the binding is occurring, loosen the screws and reposition the block. Then tighten and test for free movement. Clean all components and reassemble.

With the assembly complete reassembled and mounted in the machine, attach air and power and turn on the unit.

4.6 Pressure Bar Alignment / Cylinders Speed Adjustment

The pressure bar must come in evenly, so as to contact the gripper plate at the same time all the way across. If one side of the pressure bar contacts the gripper plate prematurely, the antijam 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 do not bind with the screws loose, then 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 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 "speed 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 causing the pressure bar to "bang", excessive wear will occur. 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 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 (A) clockwise.

Adjust the speed of the pressure bar so that it moves in and out rapidly, in a fluid manner, without causing the pressure bar to "bang" 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. Remove air from the unit, turn the T-300 / T-375 power "OFF" and unplug the power cord.
2. Remove the worn rubber pad by pulling from the end corner of the rubber strip. Once started, the rubber will easily slide out from the metal pressure strip housing.
3. Clean out the metal slot with alcohol and a cloth or brush.
4. Slide the new extruded rubber strip into the metal housing slot starting at one end and continuing to work the rubber along the length of the slot. When into position, the rubber strip should be loose in the slot.

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.

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

4.8 PTFE Anti-Stick Spool Advancement

The anti-stick material will wear with continued use and prematurely tear if contacting the product when sealing. If the PTFE Anti-Stick Sheet wears or tears affecting the seals, the sheet can be advanced to bring new surface in the seal area.

To advance the sheet, 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 4-3.

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), the material may tear during the seal operation.

4.9 PTFE Anti-Stick Sheet Replacement

When the sheet has been exhausted, it will become loose from the upper rod and will require replacement. To replace the sheet, follow these procedures:

1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord.
2. Remove the top cover and lift the funnel assembly upwards
3. Remove four screws from the guard assembly and remove the Lexan guard.
4. Allow the sealer mechanism to cool for at least 30 minutes.
6. Pull one side (right or left side) of the seal assembly out from the front plate. Since the seal assembly is tight, some maneuvering may be required to remove the assembly from the machine. To avoid damage to components or wiring, do not force the assembly.
7. Disconnect all wire connectors and remove the complete assembly.
8. Remove gripper plate from heater bar assembly.
9. Unwind and remove Anti-Stick Sheet from upper and lower rods.
9. Peel backing off of one side of new sheet.
10. Attach new PTFE Anti-Stick sheet to the top rod.
11. Roll new sheet on to top rod.
12. Attach to bottom rod.
13. Reverse steps 1-8 for re-assembly.

4.10 Heater Cartridge Replacement

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 Sheet. If the heater bar does not come to temperature fully or does not heat whatsoever, the entire heater bar must be replaced.

Follow these procedures to replace the element:

1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord.
2. Remove four screws from the guard assembly and remove the Lexan guard.
3. Allow the sealer mechanism to cool for at least 30 minutes.
4. Remove the two screws located on the left and right side of the seal bar which hold the seal assembly.
5. Pull one side (right or left side) of the seal assembly out from the front plate. Since the seal assembly is tight, some maneuvering may be required to remove the assembly from the machine. To avoid damage to components or wiring, do not force the assembly.
6. Disconnect all wire connectors and remove the complete assembly.
7. Remove gripper plate from heater bar assembly.
8. Unwind and remove PTFE Anti-Stick Sheet from upper and lower rods.
9. Remove screws that hold the support bar cap on both sides.
10. Remove screws from the brace assembly on each side.
11. Pull seal bar away from brace.
12. Cut braided wires so that old heater bar can be removed.
13. Insert new crimp pins into new Molex connectors.
14. Reverse steps 1-11 for re-assembly
15. Reconnect the wire connectors and install the heater bar ensuring that the full rod is positioned at the top. Secure seal assembly with two screws and mount guard.

4.11 Description of Antijam Circuit

The antijam mechanism decreases the possibility of damage to the T-300 if product or other objects are in the seal area. The operation of the antijam circuit should be tested prior to production on a daily basis. Although the antijam unit may also prevent or decrease the opportunity for injuries during the sealing or heating operation, the antijam is not designed as a safety device. If not adjusted properly, damage may result from obstructions in the seal area or personal injury may result from fingers or hands being 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 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.

4.12 Antijam Adjustments / Testing

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

Test 1: With air applied and the power on, position an object over 1/4" in thickness on the far-left side of the seal bar with the object in contact with the gripper plate, but not pressing in the gripper plate. Then press the foot switch. If the pressure bar retracts, the antijam circuit is working properly.

If the pressure bar does not retract when an obstruction of at least 1/4" in thickness is present anywhere in the seal area, follow these procedures to adjust and test the circuit:

1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord.
2. Remove the top (stainless) cover and side (painted) cover.
3. Locate the two magnetic sensors which are clamped on the end of each seal bar cylinder.
4. Reach under the Lexan guard and manually push the pressure bar inward until rubber strip slightly *touches* the gripper plate evenly across the pressure bar but does not press in the springs.

4.10 Heater Cartridge Replacement

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 Sheet. If the heater bar does not come to temperature fully or does not heat whatsoever, the entire heater bar must be replaced.

Follow these procedures to replace the element:

1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord.
2. Remove four screws from the guard assembly and remove the Lexan guard.
3. Allow the sealer mechanism to cool for at least 30 minutes.
4. Remove the two screws located on the left and right side of the seal bar which hold the seal assembly.
5. Pull one side (right or left side) of the seal assembly out from the front plate. Since the seal assembly is tight, some maneuvering may be required to remove the assembly from the machine. To avoid damage to components or wiring, do not force the assembly.
6. Disconnect all wire connectors and remove the complete assembly.
7. Remove gripper plate from heater bar assembly.
8. Unwind and remove PTFE Anti-Stick Sheet from upper and lower rods.
9. Remove screws that hold the support bar cap on both sides.
10. Remove screws from the brace assembly on each side.
11. Pull seal bar away from brace.
12. Cut braided wires so that old heater bar can be removed.
13. Insert new crimp pins into new Molex connectors.
14. Reverse steps 1-11 for re-assembly
15. Reconnect the wire connectors and install the heater bar ensuring that the full rod is positioned at the top. Secure seal assembly with two screws and mount guard.

4.11 Description of Antijam Circuit

The antijam mechanism decreases the possibility of damage to the T-300 if product or other objects are in the seal area. The operation of the antijam circuit should be tested prior to production on a daily basis. Although the antijam unit may also prevent or decrease the opportunity for injuries during the sealing or heating operation, the antijam is not designed as a safety device. If not adjusted properly, damage may result from obstructions in the seal area or personal injury may result from fingers or hands being 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 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.

4.12 Antijam Adjustments / Testing

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

Test 1: With air applied and the power on, position an object over 1/4" in thickness on the far-left side of the seal bar with the object in contact with the gripper plate, but not pressing in the gripper plate. Then press the foot switch. If the pressure bar retracts, the antijam circuit is working properly.

If the pressure bar does not retract when an obstruction of at least 1/4" in thickness is present anywhere in the seal area, follow these procedures to adjust and test the circuit:

1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord.
2. Remove the top (stainless) cover and side (painted) cover.
3. Locate the two magnetic sensors which are clamped on the end of each seal bar cylinder.
4. Reach under the Lexan guard and manually push the pressure bar inward until rubber strip slightly *touches* the gripper plate evenly across the pressure bar but does not press in the springs.
5. Turn the power ON and press the Tech Assist button, then PLC IO button on the touch screen to display the Inputs/Outputs. Locate X2 and X4 input LEDs on the touch screen.

6. By manually pulling out and pushing in the pressure bar, keeping it parallel to the PTFE Anti-Stick Sheet, X2 and X4 should come ON at the same time, before the spring-loaded gripper plate moves. It is important that the inputs come on at the same time and that when they do, the pressure bar rubber is close to the gripper plate.
7. To adjust the sensitivity of the sensors, loosen the retaining claim by turning the screw located on the black magnetic sensor, positioned at the end of the cylinders. Then, slide the sensor along the cylinder to achieve the correct input results.
8. Test the circuit by manually pushing in the pressure bar. Again, the magnetic cylinder sensors in the proper position if the X2 and X4 inputs come on at the same time and when they come on, the pressure bar rubber is near the gripper plate.
9. Turn of the power OFF, replace all covers, apply air and power and test cycle the machine, further testing the anti jam circuit.

Test 2: With air applied and the power on, position a stiff object of at least 1/4" in thickness on the far left side of the seal bar. Then, push the spring-loaded gripper plate with the object so that it moves inward. While pressing in the spring-loaded gripper plate, X7 input should light up, and the screen Will display "Please check left heat bar sensor" See Fig. 3-25, repeat same test for right side sensor looking for X6 input and "please check right side heat bar sensor"

If pushing the gripper plate in on either side fails to light its respective input, follow the following procedure.
1. Remove air from the unit, turn the T-300 power "OFF" and unplug the power cord and wait until the heater bar is fully cooled down.
2. Remove the top (stainless) cover and side (painted) cover.
3. Locate and inspect the two photo sensor boards and ensure that the two rectangular black and white photo components are flat and parallel to each other. If not, carefully reposition the sensors.
4. Turn the power ON and locate the two photo sensor printed circuit boards. You should notice that a threaded rod extends through the photo eyes. The threaded rods move inward and outward with the movement of the spring-loaded gripper plate. Additionally, when the threaded rod enters the photo sensor, X7 (left sensor input) and X6 (right sensor input) are lit on the PLC.
5. Turn the power ON and test the X7 and X6 inputs by pressing inward on the spring-loaded gripper plate. You will notice also, that the touch screen displays a message for both the left and right photo sensors.
6. When the spring-loaded gripper plate is not pressed (home position), the X6 and X7 inputs should be off and the touch screen should display a normal operation. However, when the spring-loaded gripper plate is pressed slightly inward, the inputs should come on and the Warning message displayed. You will notice that the Warning message is displayed when the rod passes through the photo sensors.
7. To adjust the sensitivity of the spring loaded "U" channel, loosen the nut on the left rod. With the spring-loaded gripper plate in the HOME position, turn the threaded rod with a flat head screwdriver, so that the spring-loaded gripper plate when slightly pressed, causes the X7 to come on.

4.13 Replace 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 occurs or incorrect temperature is displayed in the Bag Setup menu. 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.

To replace the thermocouple wire, turn the main power to the OFF position, unplug the power cord and disconnect the air line.

Remove the front plate and PTFE Anti-Stick assembly. Remove the screws which hold the ring terminal and the jacketed wire clamp. Disconnect the connector and remove the wire. Reverse these steps to replace the wire.

CAUTION: To avoid stretching or breaking the wire during heater cylinder extension, ensure that the wire is looped and free to bend during heater bar movement.

Replace the PTFE Anti-Stick assembly and front plate.

4.14 Print Head Replacement

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

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Chapter 5, Parts

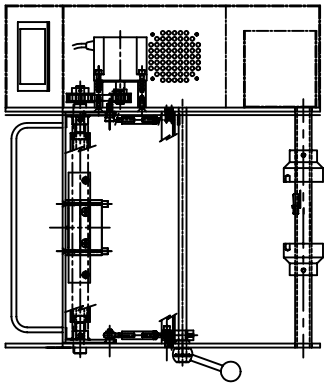
Mechanical Drawings
Parts Listing / Bill of Materials

Advanced Poly-Packaging, Inc.

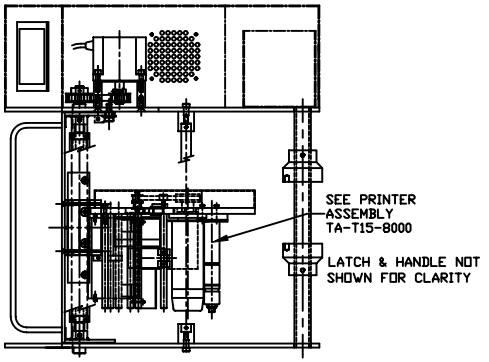
Bill of Materials Top Level Report for 12/11/2006
(see Drawing No. T-T300/T375)

Assembly --> T-T300/T-375 T-300/T375 Table-Top Bagger/Printer

Item	Item No.	Description
1	TA-T14-1000	T-300 Electronics Assy
2	TA-T14-2000	T-300 Seal Bar Assy
3	TA-T14-4000	T-300 Main Frame Assy
4	TA-T14-5000	T-300 Cover Top Latch Assy
5	TA-T14-6000	T-300 Air/Pnuematics Assy
6	TA-T15-8000	T-375 Zebra Printer Assy

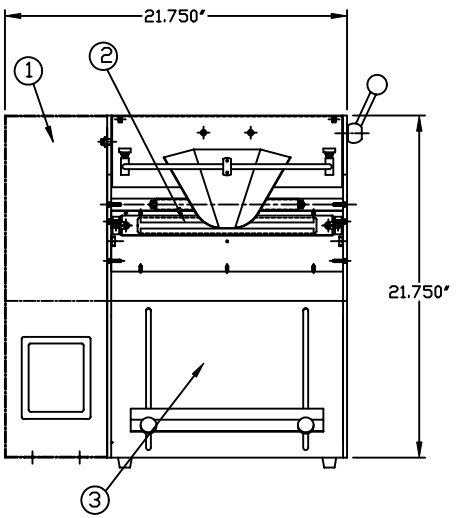


TOP VIEW- T-300

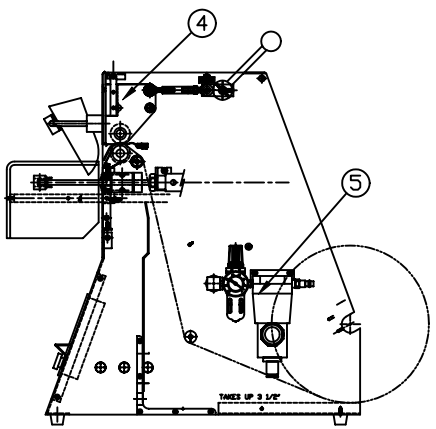


TOP VIEW- T-375

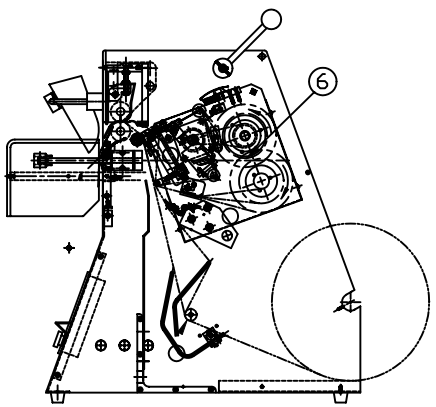
COVER/TOP LATCH ASS'Y.



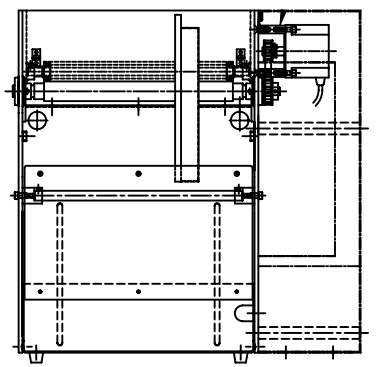
FRONT VIEW- T-300/T-375



SIDE VIEW T-300



SIDE VIEW T-375



REAR VIEW- T-375

QUANTITY	QUANTITY
MATERIAL	MATERIAL
FINISH	FINISH

TOLERANCES UNLESS OTHERWISE NOTED
+/- .XXX ON FRACTIONAL DIMENSIONS
+/- .XX ON TWO PLACE DECIMAL DIMENSIONS
+/- .X ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced
Poly Packaging Inc.
1526 Diehl Road • Akron • Ohio 44306
Phone 330-785-4000 • Fax 330-785-4020

TYPE EQUIPMENT T-300/T-375 TABLE TOP BAGGER "NEXT-BAG-OUT"	B/M REF. NO. TA-T375	PART NO.
SCALE	DRAWN BY	APPROVED
	NAME J.D	NAME
	DATE 12/11/06	DATE

TITLE: T-300/T-375
DRAWING NO.: T-300/T-375
REV.

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 11/9/2006
(see Drawing No. TA-T14-1000)

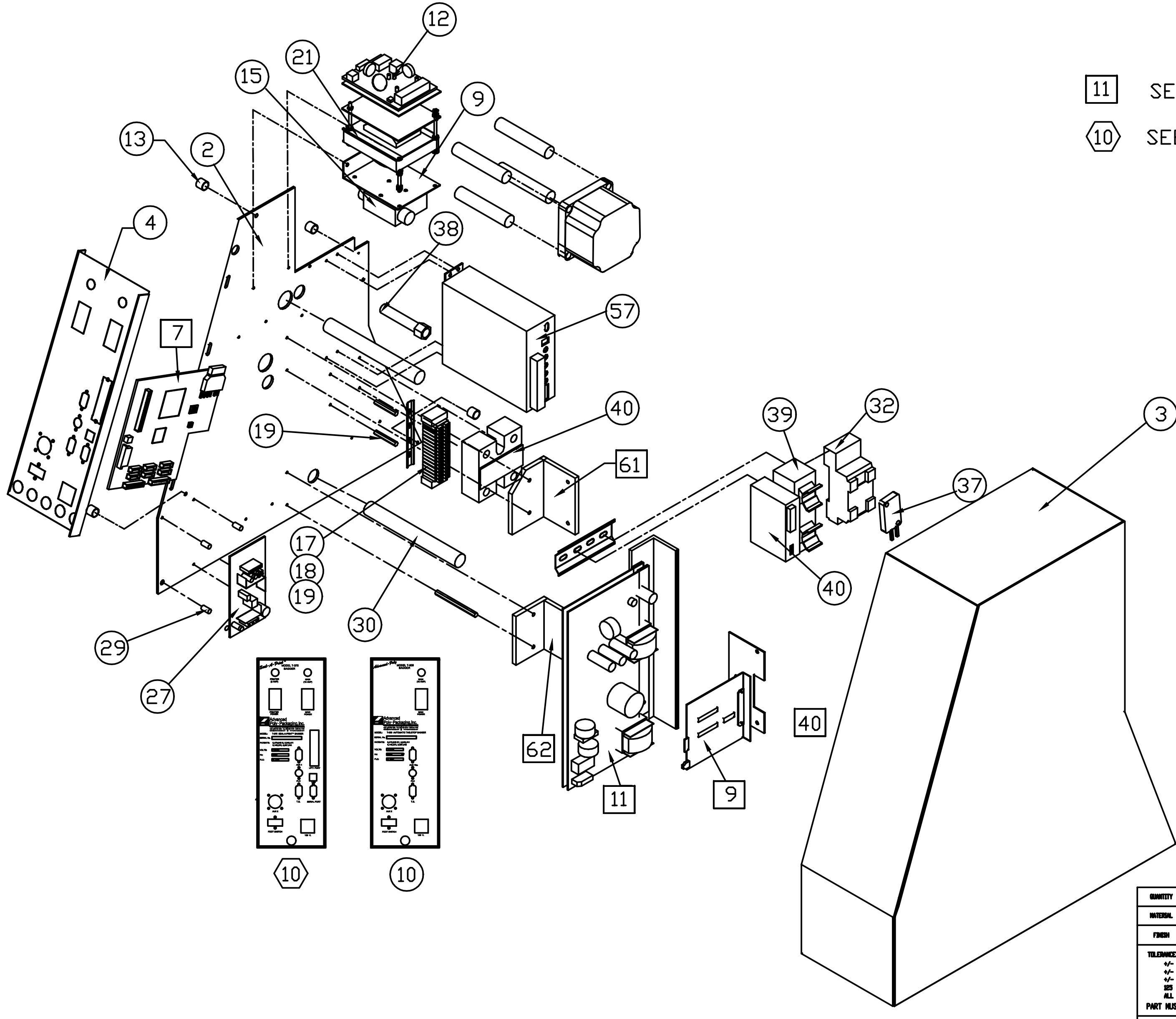
Assembly --> TA-T14-1000 T-300 Electronics Assy

Item	Item No.	Description
1	TC-T14-1000	Wiring Harness, T-300
2	TP-T14M1046	Electronic Panel (T-300/375Z)
3	TP-T14M1010	Side Cover-Left (T-300/375Z)
4	TP-T14M1009	Rear Control Plate (T-300/375Z)
5	PENDING	Pending Item Number or N/A
6	PENDING	Pending Item Number or N/A
7	TP-T14M1051	Stand-Off, Electronic Panel (T-300)
8	PENDING	Pending Item Number or N/A
9	TP-T14M1028	H.V. Transformer Mounting Plate
10	TP-T14M2009	Rear Ctrl. Panel Mylar Ovly. T-300
11	PENDING	Pending Item Number or N/A
12	TP-T1ME00301	PCB, High Voltage Board Finished
13	TP-107177	Bushing, 1/4"ID x 3/8"OD x 3/8"Lg
14	TP-203421	2Pin Subminiature Thermo Female Con
15	TP-205108	Filter, RFI Power Line, 10 Amps
16	TP-207216	Fuse Holder (110v/220v,30Amps)
17	TP-208141	Term.Block,Screw Clamp,15mm AKZ 1.5
18	TP-208149	Fixed Bridge, 10 Position
19	TP-208410	Terminal Blocks, Direct Mount, PCB
20	PENDING	Pending Item Number or N/A
21	TP-211386	Transformer, Dual Voltage
22	TP-212167	6 Pin Circular Fem Conn (Box Rcpt)
23	TP-212242	3 Pin Socket w/Angle Bracket(Fem)
24	TP-212247	9 Pin D-Sub Female (Solder Cup)
25	TP-212410	Receptacle, Snap-In QC Tabs
26	TP-213266	Cable, Power Supply Cord 12'Long
27	TP-213358	Power Supply,25W 4.00"x2.50"x0.860"
28	TP-214111	Battery for FP Sigma
29	TP-214270	Standoff, 2" Round Alum 6-32 Thread
30	TP-214272	Standoff, 3/4" 6-32
31	TP-215000	Relay, Solid State 10A G-Series
32	TP-215341	Track MountRelaySocket/Base(ForLY2)
33	TP-219455-2	Aux Relay Upgrade
34	PENDING	Pending Item Number or N/A
35	PENDING	Pending Item Number or N/A
36	TP-215384	Switch, Rocker SPST 250V @ 10A
37	TP-215022	Limit Switch
38	TP-216151	Sensor, Proximity:8mm,Shielded,(FO)
39	TP-220508	PLC Anolog Module, FPO-A21-A
40	TP-220511	PLC, FPG-C32T2H-Gray
41	PENDING	Pending Item Number or N/A
42	PENDING	Pending Item Number or N/A
43	PENDING	Pending Item Number or N/A
44	PENDING	Pending Item Number or N/A
45	TP-214267	Standoff,HexThreadedAlum. 5/8"
46	TP-220358	Touch Screen Display- 4 "
47	PENDING	Pending Item Number or N/A
48	PENDING	Pending Item Number or N/A
49	PENDING	Pending Item Number or N/A
50	PENDING	Pending Item Number or N/A
51	PENDING	Pending Item Number or N/A
52	PENDING	Pending Item Number or N/A
53	PENDING	Pending Item Number or N/A
54	PENDING	Pending Item Number or N/A
55	PENDING	Pending Item Number or N/A
56	PENDING	Pending Item Number or N/A
57	TP-501169-1	5 Phase Driver,US-4000,NBO,S-14,300
58	TP-220356-1	Cable, T-275/T375

MATERIAL LIST			
ITEM	APPI NO	NO REQ	DESCRIPTION

11 SEE BILL VA-Z-110XI3PLUS

10 SEE BILL TA-T15-8000



REV	DATE	BY	DESCRIPTION
C	5/23/06	C.N.K.	ADDED REVISED GUARD SUPPORT & SENSOR
B	9/16/05	C.N.K.	REMOVED BLANK COVER PLATE FOR PRINTER CONTROLS
A	6/28/05	C.N.K.	ADDED NEW MICRO SWITCH & BELT TENSIONER

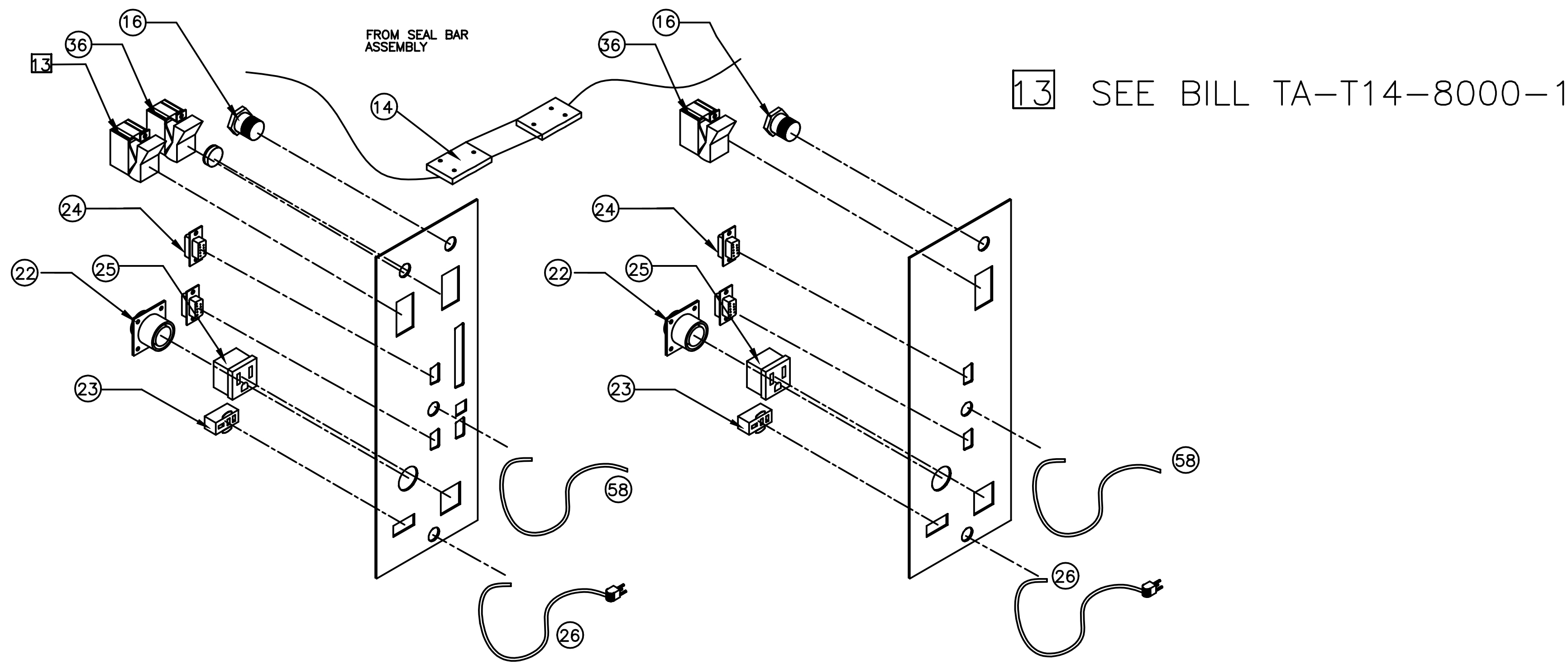
QUANTITY	1
MATERIAL	
FINISH	

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced Poly Packaging Inc.
1331 Emmitt Road ■ Akron ■ Ohio 44306
Phone: 330-785-4000 ■ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO. TA-T14-1000	PART NO.
SCALE 1:2	DRAWN BY NAME J.L.D DATE 10/6/06	APPROVED NAME DATE
TITLE ELECTRONIC COMPONENT LAYOUT	DRAWING NO. TA-T14-1000	REV.

MATERIAL LIST			
ITEM	APPI NO	NO REQ	DESCRIPTION



REV	DATE	BY	DESCRIPTION

QUANTITY
MATERIAL
FINISH

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
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TYPE EQUIPMENT	B/M REF. NO. TA-T14-1000	PART NO.
SCALE	DRAWN BY	APPROVED
	NAME	NAME
	DATE	DATE

TITLE	DRAWING NO.	REV.
REAR ELECTRONIC PANEL COMPONENT LAYOUT		

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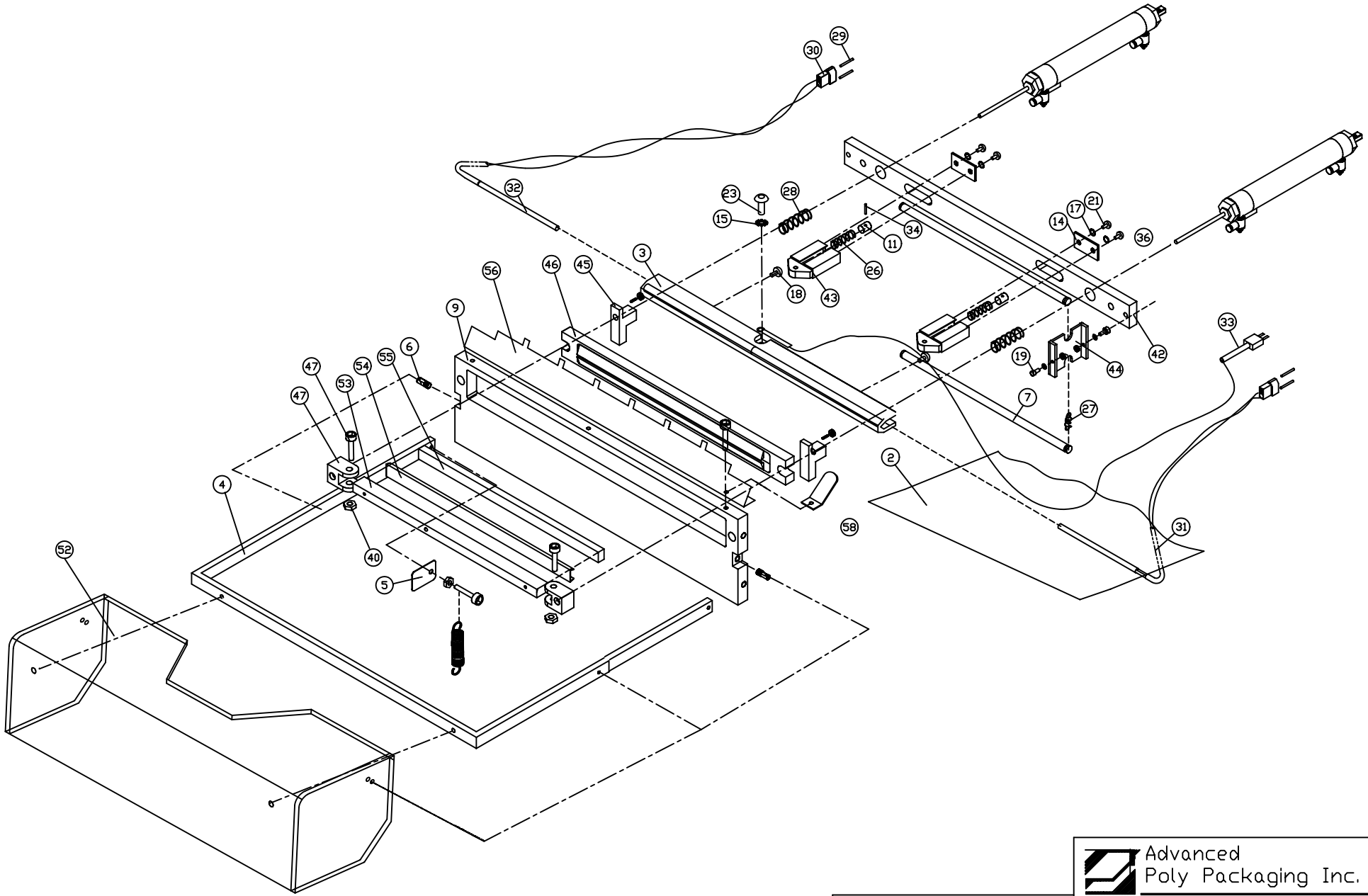
Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/11/2006

(see Drawing No. TA-T14-2000)

Assembly --> TA-T14-2000 T-300/375 Seal Bar Assy

Item	Item No.	Description
1	PENDING	Pending Item Number or N/A
2	TP-T8MA00130	PTFE Sheet, T-200/T-275
3	TP-T8MA00202	Seal Bar T-250/T-275/T-300/T-375
4	TP-T14M2033	Bracket, Lexan Guard (T-300/375Z)
5	TP-T14M2034	Flag, Lexan Guard Sensor
6	TP-T14M2035	Pivot Pin- Lexan Guard
7	TP-T14M2005	Rod, PTFE Tape (T-300)
8	PENDING	Pending Item Number or N/A
9	TP-T14M1075	Front Plate-Upper (T-300/T-375)
10	PENDING	Pending Item Number or N/A
11	TP-T14M2016	Spring Retainer
12	TP-T14M2018	Pivot Block ** use only on first te
13	PENDING	Pending Item Number or N/A
14	TP-T14M2017	Support Bar Cap
15	TP-102103	Lockwasher,#8 Int Tooth Pltd Zinc
16	TP-102151	Washer, Med Split Lock #4
17	TP-102153	Washer, #8 Med Split Lock
18	TP-103103	Screw, SHCS 4-40 x 3/8
19	TP-103015	Screw, SHCS 8-32 x 3/8
20	TP-103117	Screw, SHCS 8-32 x 3/4
21	TP-103182	Screw, BHCS 8-32 x 5/8
22	TP-103201	Screw, BHCS 4-40 x 1/4
23	TP-103211	Screw, BHCS 8-32 x 3/8
24	TP-103428	Screw, FHCS 10-24 x 1/2
25	TP-101096	Self Lock Socket Set Screw 6-32x3/4
26	TP-108099	Compression Spring,Guide Rollers,MW
27	TP-108153	Extension Spring,.36"x.037"MWx.75"L
28	TP-108166	Compression Spring .48od x 1 1/2 lg
29	TP-208355	Crimp Terminal, Male .125" 16-18AWG
30	TP-212356	2 Pin .125" Power Connector (Plug)
31	TP-213004	Braided Fiberglass Sleeving 100'/Rl
32	TP-217117	Cartridge, Heater 400W/120V
33	TP-221416	Thermal-Couple Wire w/ Connector
34	TP-106118	Spring Pins, Steel 1/8 x 1/2
35	TP-103280	Screw, BHCS 1/4-20 x 2
36	PENDING	Pending Item Number or N/A
37	TP-108164	Spring, Seal Bar Compress. T-300
38	PENDING	Pending Item Number or N/A
39	TP-103198	Screw, BHCS 6-32 x 1-1/4
40	TP-101140	#6-32 Hex Nylon Insert Locknut
41	TP-102152	Washer, #6 Med Split Lock
42	TP-T14M2023	Brace- (T-300/T-375)
43	TP-T14M2024	Vertical Support Bar (T-300/T-375)
44	TP-T14M2025	Bracket- (T-300/T-375)
45	TP-T14M2026	Spring Socket- (T-300/T-375)
46	TP-T14M2027	Gripper Plate- (T-300/T-375)
47	TP-T14M2028	Pivot Block- (T-300/T-375)
48	PENDING	Pending Item Number or N/A
49	PENDING	Pending Item Number or N/A
50	PENDING	Pending Item Number or N/A
51	TP-108222	Spring Plunger, Round Nose 8-32X5/8
52	TP-T14M1092	Lexan Guard, T-300/375Z
53	TP-T8MA00110	Holder, Pressure Bar
54	TP-T8MA00109	Rubber Strip Holder
55	TP-T8MA00140	Seal Bar Rubber Strip
56	TP-T8MA00178	Exit Plate T-275
57	PENDING	Pending Item Number or N/A
58	TP-T14M8048	High Voltage Ground T-300/375Z



TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced
Poly Packaging Inc.
1331 Evnitt Road ▪ Akron ▪ Ohio 44306
Phone: 330-785-4000 ▪ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300/T-375		
SCALE	DRAWN BY	APPROVED
N.T.S	NAME JLD	NAME
	DATE 10/19/05	DATE

TITLE	DRAWING NO.	REV.
T-300/T-375 TABLE TOP SEAL BAR ASSY	TA-T14-2000	B

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/11/06
(see Drawing No. TA-T14-4000)

Assembly --> TA-T14-4000 T-300 Main Fram Assy

Item	Item No.	Description
1	TP-T14M1003	Left Side Plate (T-300/T-375)
2	TP-T14M1004	Right Side Plate (T-300/T-375)
3	TP-T14M1025	Floor Pan (T-300/T-375)
4	TP-T14M1091	Cross Brace, T-300/375Z
5	TP-T14M1093	Angle Brace- T-300/375Z
6	TP-T8MA00126	Load Shelf
7	TP-T8MA00127	Bag Roll Shaft
8	TP-T1MA00049	Film Tension Hub (2/Unit)
9	TP-T14M1062	Driven Roll, Steel (T-300)
10	TP-T14M1027	Motor Pulley (T-300/T-375)
11	TP-T14M1007	Roll Pulley (T-300/T-375)
12	TP-T14M1043	Stand-Off, Motor (T-300/T-375)
13	PENDING	Pending Item Number or N/A
14	TP-T8MA00176	Bearing Keeper
15	TP-T14M1048	Stand-Off, Left Cover (T-300/T-375)
16	TP-501165	Motor, Vexta drive (T-300/375)
17	TP-503101	Drive Belt (Clutch Track)
18	TP-504114	Bearing, 7608 DLG NICE
19	TP-108220	Spring Plunger, w/Locking Element
20	TP-401277	Elbow, 1/4" Tube x 10/32 Thread
21	TP-101105	Nut, 10-32 Hex Mach Screw
22	TP-112300	Bumper,Rubber Tapered 7/8" x 5/8"
23	TP-109212	Knob, Torque 1/4-20 x 1"Steel Stud
24	TP-109152	Knob, Fluted Grip 1/4"-20 x 1/2"
25	TP-106126	Springs Pins,420SS 1/8"Diax1-1/2"Lg
26	TP-103316	Screw, Sock Shldr 3/16x 1/4Lg x8-32
27	TP-504132	Cam Follower
28	TP-T1MC00091	Bracket, Belt Tensioner
29	PENDING	Pending Item Number or N/A
30	TP-108156	Extension Spring, PTFE Rod Assy
31	TP-103305	Screw, Sock Shldr 1/4 x 3/4
32	TP-101094	Set Screw, 5/16"-24 Thread x 1/4"Lg
33	TP-106106	Spring Pins, SS 1/4"Dia. x 1-1/4"Lg
34	PENDING	Pending Item Number or N/A
35	PENDING	Pending Item Number or N/A
36	TP-T14M1070	Inside Cover, T-300/375Z
37	TP-103269	Screw, BHCS 6-32 x 5/16
38	TP-102152	Washer, #6 Med Split Lock
39	TA-T100124-3	Grounding Sensor
40	TP-T14M1076	Front Plate-Lower (T-300/T-375)
41	TP-T8MA00132	Roller Stop
42	TP-504101	Roller Bearing, Nylon Interol
43	TP-T14M1037	Dancer Roll
44	TP-106106	Spring Pins, SS 1/4"Dia. x 1-1/4"Lg
45	TP-108099	Compression Spring,Guide Rollers,MW
46	TP-101114	Nut, 3/8-16 Finished Hex Pltd
47	TP-T14M8047	Stop Block, Cover/Latch T-300/375Z
48	TP-103116	Screw, SHCS 8-32 x 1/2
49	TP-103409	Screw, FHCS 8-32 x 1/2
50	TP-103418	Screw, FHCS 1/4-20 x 3/4
51	TP-103140	Screw, SHCS 1/4-20 x 1
52	TP-103229	Screw, BHCS 5/16-18 x 3/4
53	TP-103237	Screw, BHCS 5/16-18 x 1
54	TP-103015	Screw, SHCS 8-32 x 3/8
55	TP-103130	Screw, SHCS 10-32 x 3/4
56	TP-103016	Screw, SHCS 8-32 x 5/8
57	TP-102155	Washer,1/4 Med Split Lock
58	TP-102153	Washer, #8 Med Split Lock
59	TP-102133	Washer, #8 SAE Flat
60	TP-403014	Cylinder, NCMZ1-G2K02-0400

Item	Item No.	Description
61	TP-T14M8049	Cylinder Foot Mt. Modification
62	TP-403491	Cylinder, Foot Bracket, NCM-L075
63	TP-T14M1094	Spacer, Cylinder Mount T-300/375Z
64	TP-T14M1096	Spacer, Cylinder Mount

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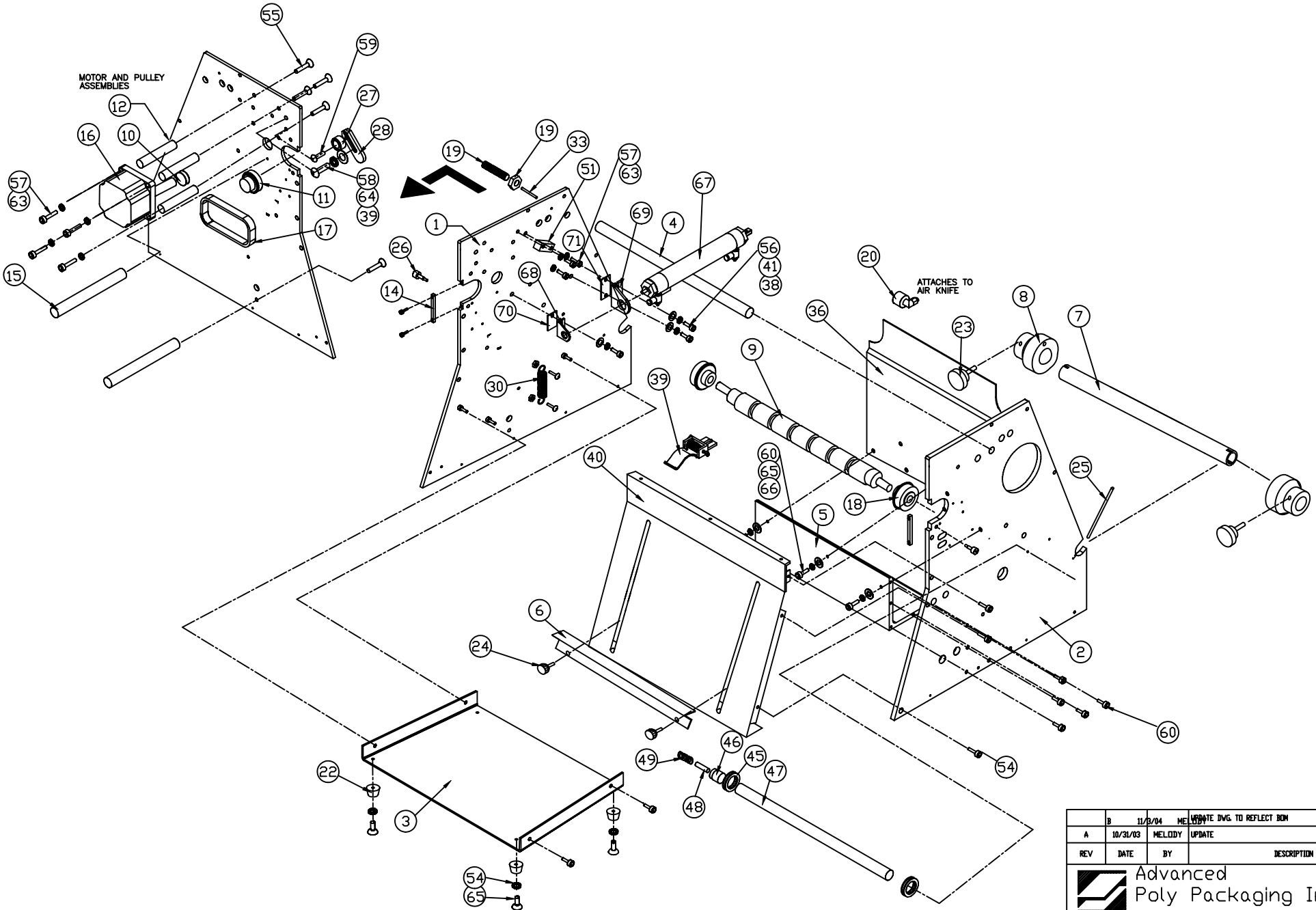

REV	DATE	BY	DESCRIPTION
B	11/3/04	MELODY	UPDATE DWG. TO REFLECT BOM
A	10/31/03	MELODY	UPDATE

Advanced Poly Packaging Inc.
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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300		
SCALE	DRAWN BY	APPROVED
N.T.S	NAME JLD	NAME
	DATE 12/12/06	DATE

TITLE	DRAWING NO.	REV.
T-300/T-375 TABLE TOP MAIN FRAME ASSEMBLY	TA-T14-4000	B

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/12/2006
(see Drawing No. TA-T14-5000)

Assembly --> TA-T14-5000 T-300 Top Cover/Latch Assy

Item	Item No.	Description
1	TP-T14M1005	Rubber Back-Up-Roller (T-300/375)
2	TP-T14M1008	Shaft, Back-Up Roller (T-300/375)
3	TP-T14M1011	Finger Plate (T-300/T-375)
4	PENDING	Pending Item Number or N/A
5	PENDING	Pending Item Number or N/A
6	TP-T14M1015	Front Plate Back-Up Roll(T300/375)
7	TP-T14M1016	Side Plate Back-Up Roll(T-300/375)
8	PENDING	Pending Item Number or N/A
9	PENDING	Pending Item Number or N/A
10	PENDING	Pending Item Number or N/A
11	PENDING	Pending Item Number or N/A
12	TP-BP-1013-S14	Mounting Bar, Air Knife T-1000-S14
13	PENDING	Pending Item Number or N/A
14	TP-T14M1065	Cover, Top (T-300/T-375)
15	TP-T8MA00138	Rod Mounts
16	TP-T8MA00135	Funnel Mount Block
17	TP-T8MA00136	Funnel Mount Bar
18	TP-T8MA00137	Funnel
19	TP-BP-1014	Alum Unthrd Round Spacer 1/4 Screw
20	TP-BP-1015-S14	Air Nozzle, T-1000-S14
21	TP-109215	Knob, Fluted Grip 8-32 x 3/4"
22	TP-405268	Air Knife (Venturi) 6"
23	TP-109213	Knob, Torque 10-32 x 1/2"Steel Stud
24	TP-T1MC00125S14	Sensor Mounting Bar, T-1000-S14
25	PENDING	Pending Item Number or N/A
26	PENDING	Pending Item Number or N/A
27	TP-107131-1	Bearing,Flange 3/8"IDx1/2"ODx5/8"Lg
28	TA-T100124-1	High Voltage Sensor
29	TP-T1MC00083	Insulator, High Volt Sensor
30	PENDING	Pending Item Number or N/A
31	TP-215249	Footswitch Assy w/Cord
32	PENDING	Pending Item Number or N/A
33	TP-107344	Bearing,Thrust 1/2ID x 1"OD x 1/8Lg
34	TP-103269	Screw, BHCS 6-32 x 5/16
35	PENDING	Pending Item Number or N/A
36	TP-103208	Screw, BHCS 6-32 x 1/2
37	PENDING	Pending Item Number or N/A
38	TP-T14M2029	Latch Control Arm (T-300,375,375Z)
39	PENDING	Pending Item Number or N/A
40	TP-T14M2031	Latch Adjuster (T-300,375,375Z)
41	TP-T14M2032	Latch Pivot Shaft (T-300,375,375Z)
42	TP-504098	Ball Joint Rod End-R.H. Thread
43	TP-504099	Ball Joint Rod End- L.H. Thread
44	TP-109223	Clamp Lever, t-300/375Z
45	TP-504107	Bearing, Nice 1616
46	TP-T14M8046	Cover Arm- T-300/375Z
47	TP-101126	Nut, Hex Jam Mach Screw 10-32 SS
48	TP-102132	Washer, #6 SAE Flat
49	TP-102152	Washer, #6 Med Split Lock
50	TP-102153	Washer, #8 Med Split Lock
51	TP-102155	Washer,1/4 Med Split Lock
52	TP-103316	Screw, Sock Shldr 3/16x 1/4Lg x8-32
53	TP-107339	Thrust Washer, 1/2"X7/8"X3/16"Lg.
54	TP-103009	Screw, SHCS 6-32 x 5/8
55	TP-103117	Screw, SHCS 8-32 x 3/4
56	TP-103131	Screw, SHCS 10-32 x 7/8
57	TP-103247	Screw, BHCS 1/4-20 x 7/8
58	TP-103138	Screw, SHCS 1/4-20 x 5/8
59	TP-103395	Screw, FHCS 8-32 x 5/8
60	TP-103390	Screw, FHCS 1/4-20 x 2

Item	Item No.	Description
61	TP-101121	Nut, 1/4-20 Jam Hex Pltd
62	TP-102142	Washer, 1/4" SAE Flat

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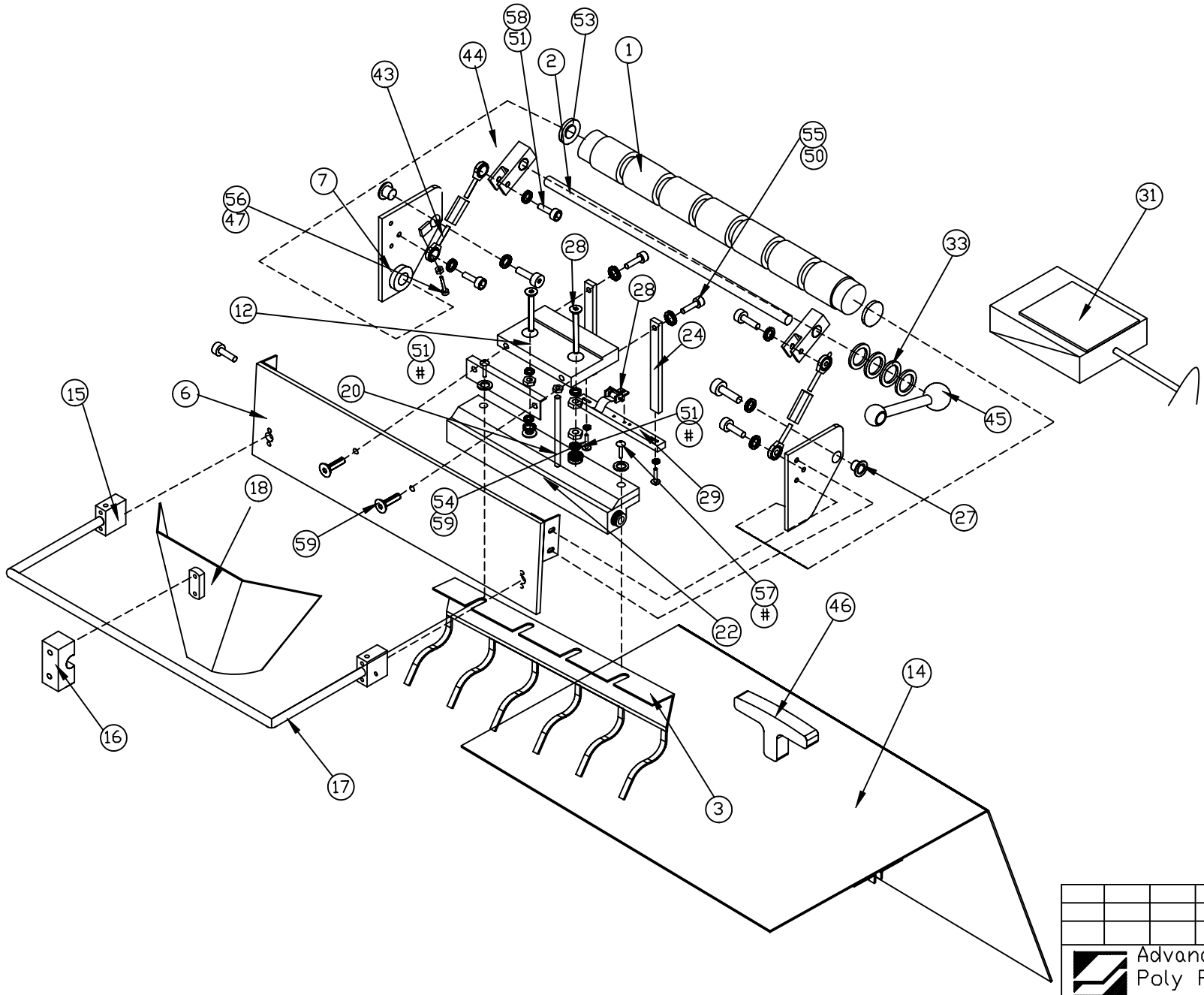

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Advanced
Poly Packaging Inc.
1331 Ewatt Road ■ Akron ■ Ohio 44306
Phone: 330-785-4000 ■ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300		
SCALE	DRAWN BY	APPROVED
N.T.S	NAME JLD	NAME
	DATE 10/06/06	DATE

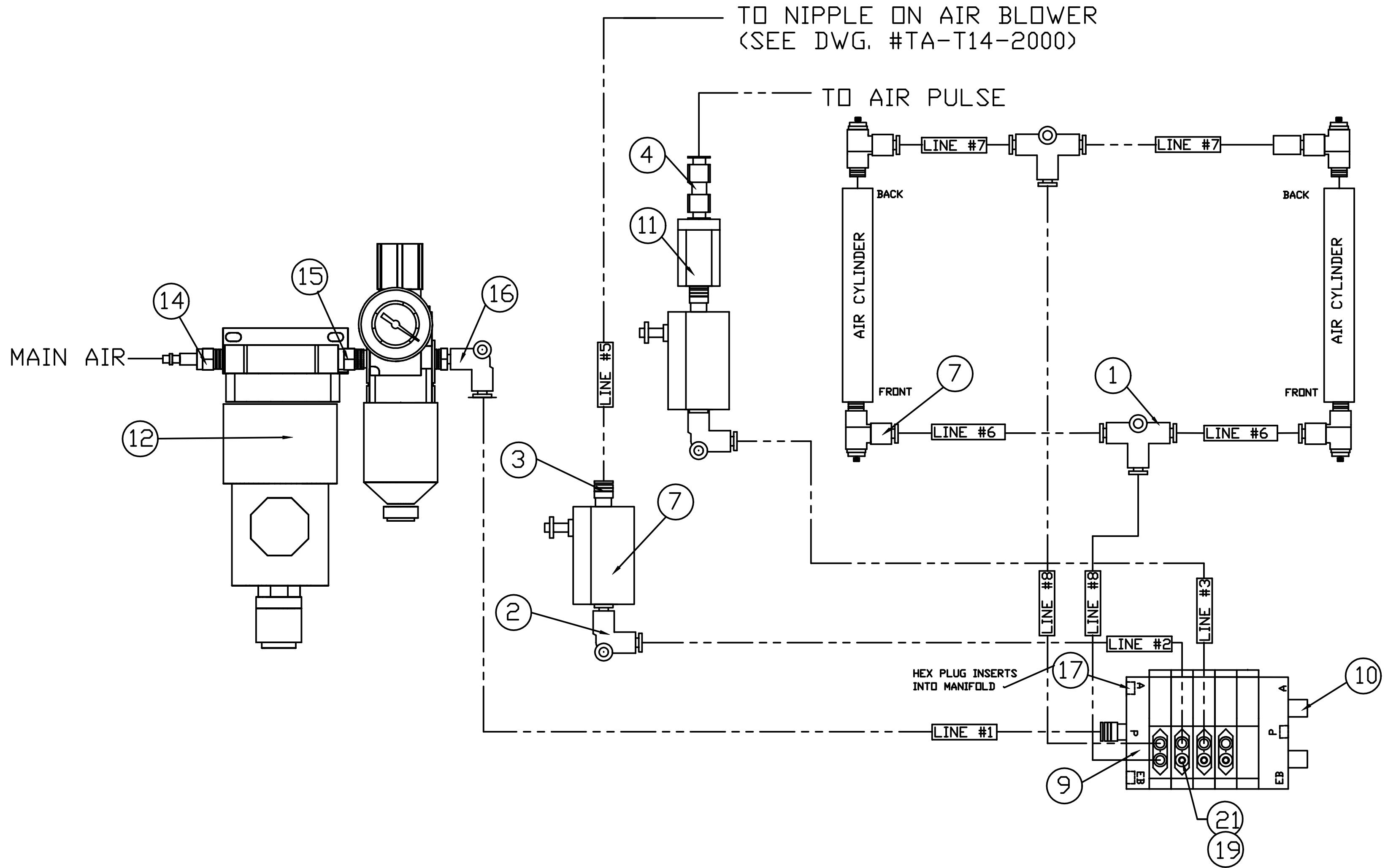
TITLE	DRAWING NO.	REV.
T-300 AUTOFEED TABLE TOP TOP COVER/LATCH ASSY	TA-T14-5000	

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/12/2006
(see Drawing No. TA-T14-6000)

Assembly --> TA-T14-6000 T-300 Air/Pneumatics Assy

Item	Item No.	Description
1	TP-401254	Union Tee Fitting, 1/4" Tube
2	TP-401257	Elbow, 1/4" Tube x 1/8" NPT
3	TP-401258	Straight Conn, 1/4"Tube x 1/8"NPT
4	TP-401262	Union, Straight 1/4" Tube
5	TP-401278	Plug, 1/4" Tube
6	TP-402107	Flow Control Valve (Panel Mount)
7	TP-402187	Flow Control (Flat Seal & Tear Off)
8	PENDING	Pending Item Number or N/A
9	TP-402252	5 Station Manifolds Assembled
10	TP-404262	Muffler, Sintered Bronze 1/8"NPT
11	TP-406181	Filter, 4 Micron (Air Knife)
12	TP-406260	Filter/Dryer/Regulator Assy. SMC
13	PENDING	Pending Item Number or N/A
14	TP-401222	Nipple, 1/4" NPT Quick Connect
15	TP-401224	Nipple, 1/4" Hex
16	TP-401261	Elbow, 1/4"Tube x 1/4"NPT
17	TP-401134	Hex Plug, 1/8" x 3/4" Brass
18	TP-101095	Socket Set Screw, 1/4"-28 x 1/4"
19	TP-401285	Gasket for SY3120 Valve
20	TP-401284	Screws for SY3000 Series Valves
21	TP-402255	Valve, SY3120-5MNZ-N7
22	TP-401292	Straight, 1/4" Poly x 1/4" NPT



REV	DATE	BY	DESCRIPTION

MATERIAL	-
FINISH	-

TOLERANCES UNLESS OTHERWISE NOTED:
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1331 Emmitt Road ■ Akron ■ Ohio 44306
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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-300		NA
SCALE	DRAWN BY	APPROVED
N/A	NAME JLD	NAME
	DATE 10/19/05	DATE

TITLE	DRAWING NO.	REV.
PNEUMATICS	TA-T4-6000	

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/12/2006
(see Drawing No. TA-T15-8000)

Assembly --> TA-T15-8000 T-375 Zebra Printer Assembly

Item	Item No.	Description
1	VA-Z-110XI3PLUS	Zebra 110XI3PLUS Purchased Parts
2	TP-T15M8001	Printer Side Plate (Zebra)
3	TP-T15M8002	Mounting Plate, Print Head (Zebra)
4	TP-T15M8003	Adj. Block, Print head (Zebra)
5	TP-T15M8004	Support Rod, (Zebra)
6	TP-T15M8005	Cam-Print Head (Zebra)
7	TP-T15M8006	Cylinder Mount (Zebra)
8	TP-T15M8007	Adjust. Plate-Belt tensioner(Zebra)
9	TP-T15M8008	Belt Guard, T-375 (Zebra Printer)
10	TP-T14M1021	Rear Ctrl. Panel Mylar Ovly. T-375Z
11	TP-T15M8010	Locating Spacer T-375 (Zebra)
12	TP-T15M8011	Sensor Bracket T-375(Zebra)
13	TP-T15M8012	Spring Mount T-375 (Zebra)
14	TP-T15M8013	Adjust. Rod- Print Head (Zebra)
15	TP-T15M8014	Adjust. Rod Block (Zebra)
16	TP-T14M1034	Guide Rod (T-300/T-375)
17	TP-T14M1035	Guide Rod Holder
18	TP-T14M1014	Latch Bar (T-300/T-375)
19	TP-T15M0037	Stop Bar
20	TP-T15M8030	End Plate, T-375 (Zebra)
21	TP-T15M8031	Roller Shaft, T-375 (Zebra)
22	TP-T15M8032	Shaft Mount, T-375 (Zebra)
23	TP-T15M8033	Long Spacer, T-375 (Zebra)
24	TP-T15M8034	Short Spacer, T-375 (Zebra)
25	TP-T15M8036	Wall Mount-Print Roll (T-375 Zebra)
26	TP-T15M8035	Print Roll (T-375 Zebra)
27	TP-T15M8039	Mounting Strip- Static Brush
28	TP-T15M8040	Bracket, Bag out Sensor (T-375Z)
29	TP-T15M8041	Circuit Board Mounting Bracket
30	TP-T15M8042	Pulley, Ribbom Take Up (T-375Z)
31	TP-T15M8043	Locating Spacer- (T-375Z)
32	TP-101103	Nut, 8-32 Hex Mach Screw Pltd Zinc
33	TP-101143	Locknut, Hex Nylon Insert 1/4-20
34	TP-102131	Washer, SAE Flat #4
35	TP-102151	Washer, Med Split Lock #4
36	TP-102152	Washer, #6 Med Split Lock
37	TP-103111	Screw, SHCS 6-32 x 1/2
38	TP-103116	Screw, SHCS 8-32 x 1/2
39	TP-103142	Screw, SHCS 1/4-20 x 1-1/2
40	TP-103168	Screw, SHCS 5/16-18 x 1-1/2
41	TP-115111	Blade Draw Latch
42	TP-103170	Screw, SHCS 10-32 x 5/8
43	TP-103016	Screw, SHCS 8-32 x 5/8
44	TP-103117	Screw, SHCS 8-32 x 3/4
45	TP-103101	Screw, SHCS 4-40 x 1/4
46	TP-103147	Screw, SHCS 1/4-20 x 2-3/4
47	TP-103256-1	Screw, SHCS M3-10
48	TP-103310	Screw, Sock Shldr 5/16 x 1/2x1/4-20
49	TP-103391	Screw, FHCS 8-32 x 3/4
50	TP-103505	Screw, Socket Set 8-32 x 3/4
51	TP-103531	Screw, Socket Set 1/4-28 x 1/2
52	TP-101109	Nut,1/4-28 Hex Jam Pltd
53	TP-111129	Captive Screw, 3M X 5/16" Lg.
54	TP-102103	Lockwasher,#8 Int Tooth Pltd Zinc
55	TP-102156	Washer, 5/16 Med Split Lock
56	TP-102154	Washer, #10 Med Split Lock
57	TP-102153	Washer, #8 Med Split Lock
58	TP-102151	Washer, Med Split Lock #4
59	TP-102144	Washer, SAE Flat 3/8"
60	TP-102134	Washer, #10 SAE Flat Zinc

Item	Item No.	Description
61	TP-102133	Washer,#8 SAE Flat
62	TP-103211	Screw, BHCS 8-32 x 3/8
63	TP-103316-1	Screw,Slttd Hd Shldr 3/16 X 3/4LG
64	TP-106304	Pin, Dowel M3 Dia.X 10MM Lg.
65	TP-108127	Spring, Extension-Elongated
66	TP-111107	Clamp Collar 1 pc Split 3/8 Bore SS
67	TP-403140	Cylinder, 3/4 Bore X 1/4 Strk
68	TP-404148	Clevis, SMC Double Rod
69	TP-504138	Camrol Cam Follower (Zebra Printer)
70	TP-T15M1054	Angle Bracket-Long, Electronic Bd.
71	TP-T15M1055	Angle Bracket-Short, Electronic Bd.
72	TP-T15M1073	Pivot Block- T-375 Only
73	TP-T15M1074	Control Arm, Bag Take-Up- T-375
74	TP-T1MC00124-1	Sensor, High Voltage
75	TP-T1MC00124-3	High Voltage Sensor Mount
76	TP-T1MC00124-2	High Voltage Sensor (Top)
77	TP-403051	Rotary Actuator (SMC) NCRB1BW20-90S
78	TP-504097	Precision Ball Bearing, Miniature
79	TP-T15M0036	Pivot Block
80	TP-402255	Valve, SY3120-5MNZ-N7
81	TP-406259	MiniReg/Bracket/Gauge/10-32 Ports
82	TP-216155	Sensor, Clear Material Photoelect.
83	TP-102119	Washer,Nylon1/8"I.Dx 3/4"O.Dx1/16"T
84	TP-111108	Clamp Collar 1pc. 5/8"Bore
85	TP-404263	Muffler
86	TP-402175	Bracket, SX3000-16-1A
87	TP-401294	1/8"Tube x 10-32 Str Male (TI-1000)
88	TP-402260	Valve, SY3120-5L0Z-M5
89	TA-T15-8000-1	Electronic Components-Zebra Printer
90	TP-503113	Timing Belt, Synchro-Link .08"Pitch
91	TP-503117	Pulley, 60 Tooth 1/4" Bore
92	TP-401258	Straight Conn, 1/4"Tube x 1/8"NPT
93	TP-401277	Elbow, 1/4" Tube x 10/32 Thread
94	TP-401254	Union Tee Fitting, 1/4" Tube
95	TP-401265	Str Connector:1/4"x 10-32(M5)Thread
96	TP-401277	Elbow, 1/4" Tube x 10/32 Thread
97	TP-103009	Screw, SHCS 6-32 x 5/8
98	TP-103409	Screw, FHCS 8-32 x 1/2
99	TP-103221	Screw, BHCS 10-32 x 3/4
100	TP-103190	Screw, BHCS 10-32 x 7/8
101	TP-401258	Straight Conn, 1/4"Tube x 1/8"NPT

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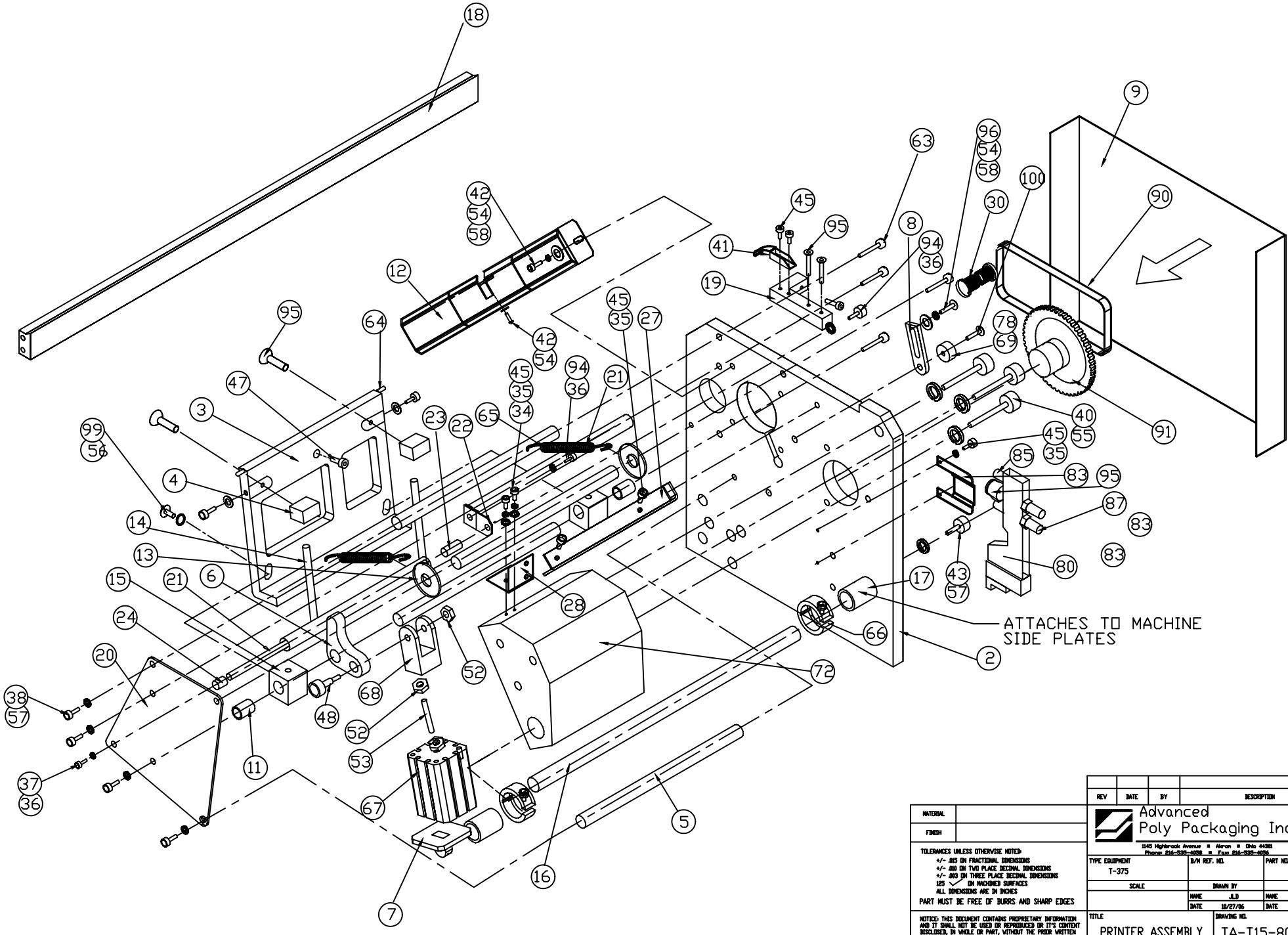

REV	DATE	BY	DESCRIPTION

MATERIAL

FINISH

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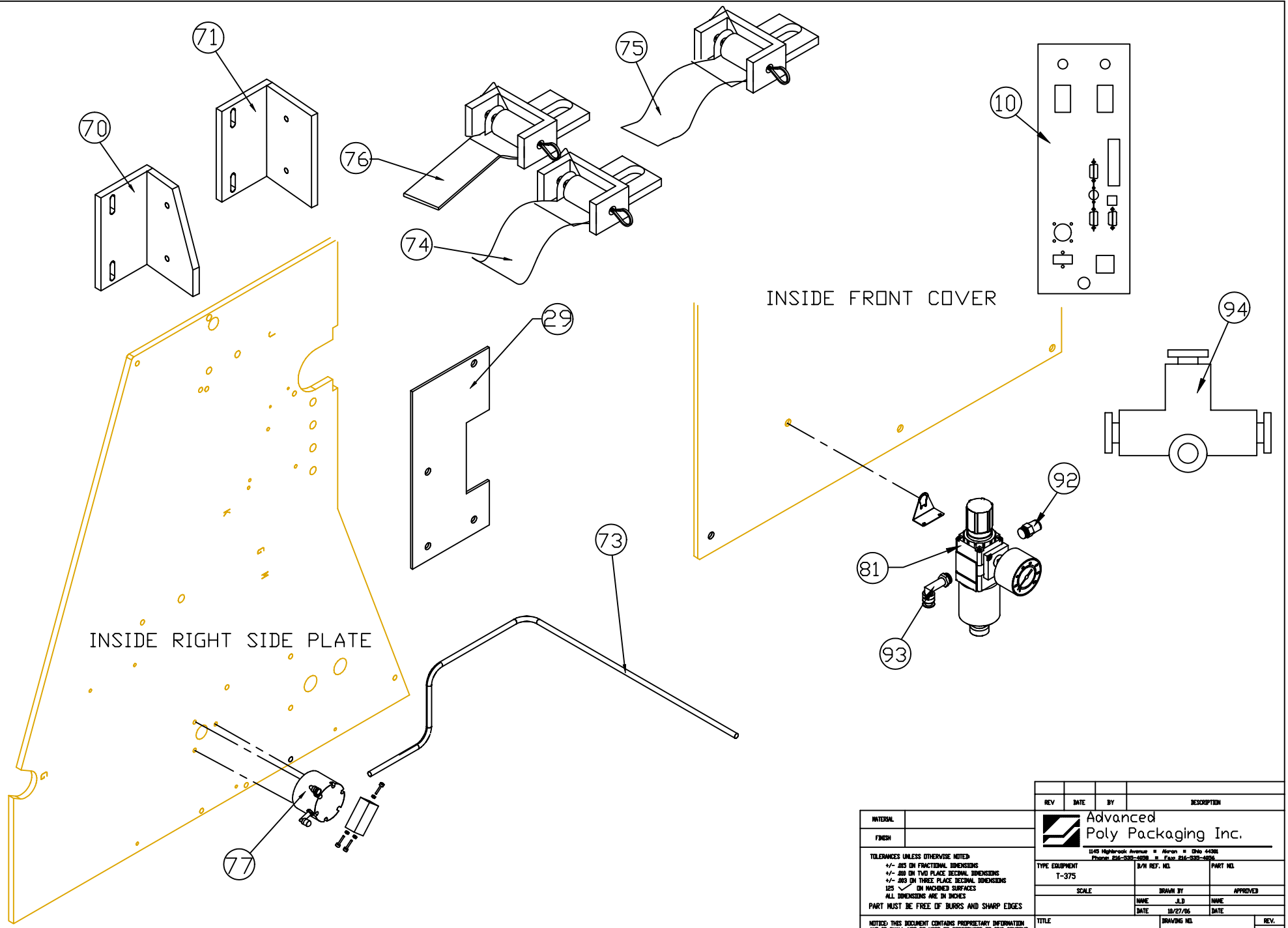
Advanced
Poly Packaging Inc.
1145 Highbrook Avenue ■ Akron ■ Ohio 44301
Phone 216-535-4028 ■ Fax 216-535-4054

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-375		
SCALE	DRAWN BY	APPROVED
	NAME J.D	NAME
	DATE 10/27/06	DATE

TITLE: PRINTER ASSEMBLY

DRAWING NO.: TA-T15-8000

REV.



REV	DATE	BY	DESCRIPTION

Advanced Poly Packaging Inc.

1145 Highbrook Avenue ■ Akron ■ Ohio 44301
Phone 216-535-4898 ■ Fax 216-535-4856

MATERIAL

FINISH

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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-375		

SCALE	DRAWN BY	APPROVED
	NAME JLD	NAME
	DATE 10/27/06	DATE

TITLE	DRAWING NO.	REV.
PRINTER ASSEMBLY	TA-T15-8000	

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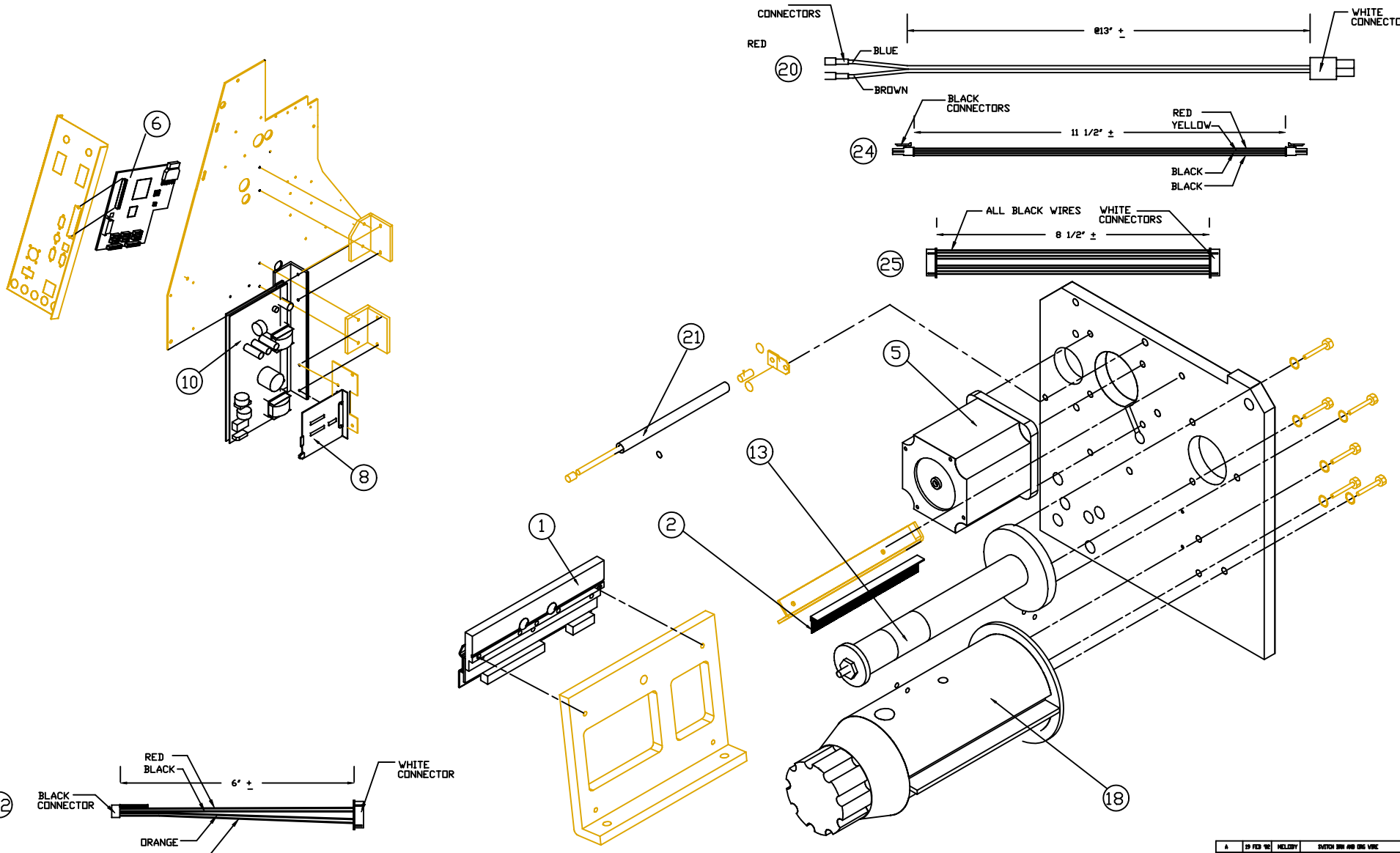
Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 11/28/2006
(see Drawing No. VA-Z-110XI3PLUS)

Assembly --> VA-Z-110XI3PLUS Zebra 110XI3PLUS Purchased Parts

Item	Item No.	Description
1	VP-Z-41000M	Printhead Maintenance Kit(200dpi)
2	VP-Z-41069	Static Brush (200 & 300 dpi) Zebra
3	PENDING	Pending Item Number or N/A
4	PENDING	Pending Item Number or N/A
5	VP-Z-46198M	Stepper Motor & Pulley Maint.Kit
6	VP-Z-41008M	Main Logic Bd. Maint. Kit (Zebra)
7	PENDING	Pending Item Number or N/A
8	VP-Z-57389M	Applicator Interface Assy.24V ZEBRA
9	PENDING	Pending Item Number or N/A
10	VP-Z-33050M	AC/DC Power Supply Maint. Kit(203)
11	PENDING	Pending Item Number or N/A
12	PENDING	Pending Item Number or N/A
13	VP-Z-41150M	Enhanced Ribbon Take-Up Upgrade kit
14	PENDING	Pending Item Number or N/A
15	PENDING	Pending Item Number or N/A
16	PENDING	Pending Item Number or N/A
17	PENDING	Pending Item Number or N/A
18	VA-Z-41151M	Ribbon Supply Spindle Maint. Kit
19	PENDING	Pending Item Number or N/A
20	VP-Z-33127-012	Power Switch Cable (Zebra)
21	VP-Z-47009-11	Roller, .037 0.312 x 5.437
22	VP-Z-46665M	Ribbon Sensor Maint. Kit
23	VP-Z-33128	CPU Power Cable (Zebra)
24	VP-Z-57356-012	Cable, Applicator Interface PCB PWR
25	VP-Z-49600-008	Cable, Applicator Interface PCB SPI
26	VP-Z-HW33804	Zebra Printer Hardware
27	PENDING	Pending Item Number or N/A



REV	DATE	BY	DESCRIPTION
A	19 FEB '08	MELODY	SWITCH 3RW AND 6RG WIRE

MATERIAL –
FINISH –

TOLERANCES UNLESS OTHERWISE NOTED
+/- .005 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .005 ON THREE PLACE DECIMAL DIMENSIONS
125 √ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced Poly Packaging Inc.

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-375		–
SCALE	DRAWN BY	APPROVED
1:1	NAME J.D	NAME
	DATE 10/17/06	DATE

TITLE: PRINTER PARTS
DRAWING NO.: VA-Z-110XI3PLUS
REV.

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 12/12/2006
(see Drawing No. TA-T15-8000-1)

Assembly --> TA-T15-8000-1 Electronic Components-Zebra Printer

Item	Item No.	Description
1	TP-208141	Term.Block,Screw Clamp,15mm AKZ 1.5
2	TP-208149	Fixed Bridge, 10 Position
3	TP-208219	4 Pin .062" Square Power Conn(Rcpt)
4	TP-208220	4 Pin .062" Square Power Conn(Plug)
5	TP-208224	Crimp Terminal, M, .062" 18-24 AWG
6	TP-208225	Crimp Terminal, F, .062" 18-24 awg
7	TP-208342	Terminal, Ring, #6Stud/22-18Awg,Red
8	TP-208354	Terminal Crimp,Female,.093"18-22AWG
9	TP-212091	9 Pin D-Sub Backshell/Hood
10	TP-212246	9 Pin D-Sub Male (Solder Cup)
11	TP-212247	9 Pin D-Sub Female (Solder Cup)
12	TP-212252	15 Pin Connector D-Sub Male(T-375)
13	TP-212340	Terminal, Female INS 16-14AWG Blue
14	TP-212342	Terminal,Fem.Insul 12-10AWG Yellow
15	TP-214327	Screws, Jack 4/40 x .625" Set
16	TP-215384	Switch, Rocker SPST 250V @ 10A
17	TP-220513	PLC, Communication Cassette
18	VP-Z-33141	Printhead Power Cable 39" Lg. Zebra
19	VP-Z-33129	Printhead data Cable 39"Lg.-Zebra

Chapter 6, Preventive Maintenance & Scheduled Maintenance

PM Checklist
Schedule Maintenance (CHART)

6.1 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

D	Daily
W	Weekly
M	Monthly

6.2 Preventive Maintenance Checklist

ITEM	DESCRIPTION	PERIOD
Filter / Air regulator	Drain water from filter	D
Air regulator	Adjust pressure to 60 PSI	D
Antijam device	Check operation, adjust as needed (Chapter 4.10)	D
Drive rollers	Clean with alcohol	D
Perforation 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
Micron 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 (drive 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.

6.3 Scheduled Maintenance Chart (perform every 500,000 cycles)

ITEM	DESCRIPTION	CHART 1	2	3	4	5	6	7	8	9	10
Drive belt (left panel)	Adjust/Inspect for wear replace when necessary.	O	O	O	O	O	O	O	O	O	O
Heater element & wiring	Inspect for fraying, cuts, loose connections.	O	O	O	O	O	O	O	O	O	O
Pressure bar rubber strip	Clean, inspect for wear, replace if required.	O	O	O	O	O	O	O	O	O	O
Guide rollers	Inspect for free movement	O	O	O	O	O	O	O	O	O	O
Roller bearings	Inspect for free movement	O	O	O	O	O	O	O	O	O	O
Perf sensor & spring	Inspect for wear, replace if required.	O	O	O	O	O	O	O	O	O	O
Rubber drive roll	Inspect for cuts, unevenness	O	O	O	O	O	O	O	O	O	O
Steel upper roll	Clean w/ alcohol, inspect for burs	O	O	O	O	O	O	O	O	O	O
Printed circuit boards / wiring	Blow off with clean, dry air, inspect for loose wires, connectors	O	O	O	O	O	O	O	O	O	O
Seal Cylinders	Listen for air leakage, replace or repair as required	O	O	O	O	O	O	O	O	O	O
Air blower filter	Inspect for contamination, replace as necessary	O	O	O	O	O	O	O	O	O	O
Air lines & connectors	Inspect for wear, cuts, leaking, replace as required	O	O	O	O	O	O	O	O	O	O
Print platen roller	Inspect for free movement, inspect for wear, replace roller or bearings as required.	O	O	O	O	O	O	O	O	O	O
Print head belt	Inspect for tightness and wear, tighten or replace as required.	O	O	O	O	O	O	O	O	O	O
Print head	Clean, inspect for wear, inspect print quality (missing pixels), replace as required.	O	O	O	O	O	O	O	O	O	O
	INITIALS										

6.3 Preventive Maintenance (PM) Chart, Continued...

		CHART									
ITEM	DESCRIPTION	1	2	3	4	5	6	7	8	9	10
	Inspected by: (Initials)										

6.4 SP-10 T-300 Spare Parts Kit
BOM Ref. No. TO-T14-SP10 (TO-T14-SP10-1 FOR 220V (UK) Machines)

Item	Item no.	Description
1	TP-T8MA00130	PTFE Sheet, T-200/T-275
2	TP-T8MA00140	Seal Bar Rubber Strip
3	TP-207043	Fuse, 10A 250V AGC10 Fast Acting
4	TP-217117	Cartridge, Heater 400W/120V
5	TP-221416	Thermocouple Wire w/ Connector
6	TP-404268	Tubing, 1/4” Dia. Blue (20M Roll)
7	TP-406181	Filter, 4 Micron (Air Knife)
8	TP-503101	Drive Belt (Clutch Track)
9	TP-402255	Valve, SY3120-5MNZ-N7
10	TP-401285	Gasket for SY3120 Valve
11	TP-108164	Spring, Seal Bar Compress. T-300
12	TP-112300	Bumper, Rubber Tapered 7/8” x 5/8”
13	TA-T100124-1	High Voltage Sensor
14	TP-403014	Cylinder, NCMZ1-G2K02-0400
15	TP-214111	Battery for FP Sigma

6.5 SP-10 T-375 Spare Parts Kit (Lev.1)

BOM Ref. No. TO-T15-SP10 (TO-T15-SP10-1 FOR 220V (UK) Machines)

Item	Item no.	Description
1	TP-T8MA00130	PTFE Sheet, T-200/T-275
2	TP-T8MA00140	Seal Bar Rubber Strip
3	TP-207043	Fuse, 10A 250V AGC10 Fast Acting
4	TP-217117	Cartridge, Heater 400W/120V
5	TP-221416	Thermal-Couple Wire w/ Connector
6	TP-404268	Tubing, 1/4” Dia. Blue (20M Roll)
7	TP-406181	Filter, 4 Micron (Air Knife)
8	TP-503101	Drive Belt (Clutch Track)
9	TP-402255	Valve, SY3120-5MNZ-N7
10	TP-401285	Gasket for SY3120 Valve
11	TP-108164	Spring, Seal Bar Compress. T-300
12	TP-112300	Bumper, Rubber Tapered 7/8” x 5/8”
13	TA-T100124-1	High Voltage Sensor
14	TP-403014	Cylinder, NCMZ1-G2K02-0400
15	TP-503113	Timing Belt, Synchro-Link .08” Pitch
16	TP-214111	Battery for FP Sigma

Chapter 7

Trouble Shooting

7.1 Trouble Shooting Guide

The items included in this section cover the common causes of trouble which 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 and attempt to isolate the problem. Make only one adjustment at a time, checking the results of each adjustment. If an adjustment does not help or escalates the problems, return the settings back to the former position.

CAUTION: These tests and repairs should be performed only by qualified mechanics or electricians.

7.2 Troubleshooting Checklist

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
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
Pressure bar moves inward but retracts before sealing	1. Antijam sensors improperly adjusted 2. Cylinder speed mismatch 3. Insufficient air pressure 4. Broken contact on antijam circuit	1. Adjust antijam 2. Adjust speed controls on seal cylinders 3. Increase air pressure 4. Check continuity across antijam circuit
Pressure bar presses against front plate but does not seal bag	1. Seal time too low 2. Heat (temp.) too low 3. Heater cartridge bad 4. Insufficient air pressure 5. PTFE folded over or missing	1. Increase seal time setting 2. Increase temperature setting 3. Replace heater cartridge 4. Increase air pressure 5. Inspect or replace PTFE
Bag sticks to PTFE or pressure (rubber) bar	1. Seal temp. too high 2. Seal time too high 3. PTFE in poor condition 4. Rubber is dirty / contaminated 5. No PTFE on rubber strip	1. Decrease temp in bag setup screen 2. Decrease seal time in bag setup screen 3. Turn / replace PTFE 4. Clean / replace pressure bar rubber 5. Add PTFE tape to rubber

Bag does not tear off completely	1. Bag slipping through rollers 2. Compression pressure insufficient 3. Drive roller not reversing 4. Bag did not index properly 5. Seal rubber dirty / worn	1. Clean upper and lower rollers with alcohol to remove slip and dirt build-up 2. Adjust roller compression 3. Check tear off cylinder 4. Index another bag for test 5. Clean / replace rubber
Two bags index from rollers	1. Bag is folded over 2. Perf sensor dirty / damaged 3. Perf sensitivity out of adjustment 4. Ungrounded perf sensor circuit 5. Seal point value too high 6. Feed distance too high 7. Zero perf function incorrectly set	1. Straighten bag, thread bags again 2. Clean / replace perf sensor 3. Adjust pot on High Voltage PCB 4. Attach grounding rod to roller 5. Change seal point setting 6. Set value to zero 7. Reset Zero Perf.
Bag does not completely index	1. Perf is sensing hole in bag (vent) 2. Seal position setting too low 3. Zero perf function incorrectly set	1. Reposition bag left or right 2. Increase seal position setting 3. Reset Zero Perf.
First bag after threading indexing multiple bags	1. Thread bags at proper seal position 2. Perf Sensor not sensing bag 3. Dirty / damaged sensor 4. Pot on High Voltage PCB out of adjustment	1. Pull bags through pinch rollers to proper seal point, then cycle machine again. 2. Clean / replace sensor 3. Adjust Pot
Bags web breaking prematurely in machine	1. Improper web tension 2. Index speed too high 3. Improper threading / web contact 4. Bag roll side-plates bent inward	1. Adjust tension 2. Reduce speed setting 3. Rethread / remove obstructions 4. Repair / remove side-plates

7.3 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.

7.4 PLC IO LEDs

A Dwg is provided which illustrates the PLC LEDs along with wire colors / pin-outs. See Dwg T375-E2.

7.5 Analog Card, Temperature Controller, Heater Circuit

A circuit diagram of the Analog controller FPO-A21 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-E3.

7.6 Stepper Motor Circuit

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

7.7 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 T375-E5

7.8 Zebra 110PAX4 Interface PCB

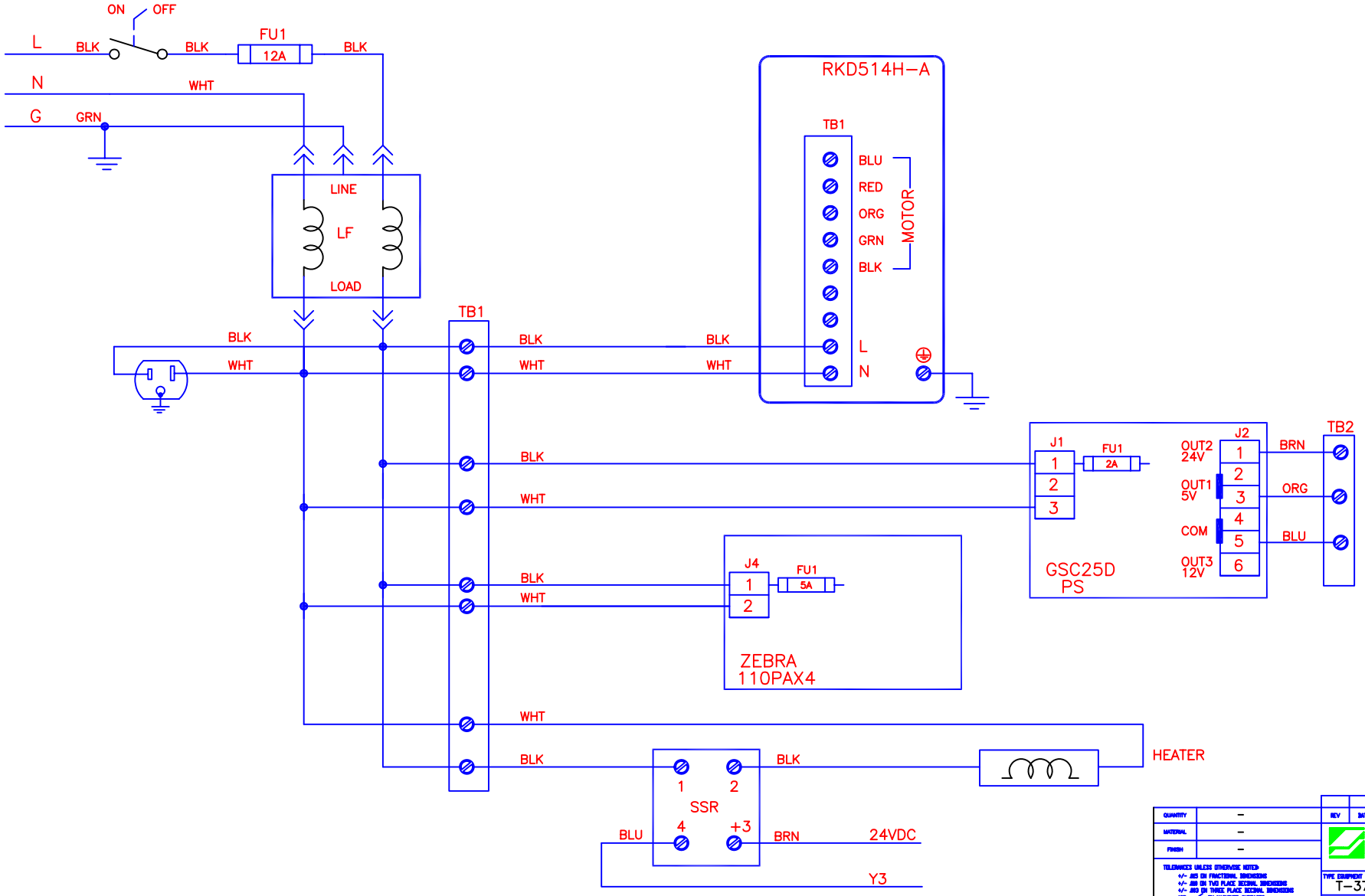
The T-375 Incorporates a Zebra 110PAX4 Interface PCB to provide the status of the Zebra Main CPU and Print Head. Wiring and descriptions of IO is described on this drawing. See Dwg T375-E6.

7.9 Touch Screen Circuit

The T-300 / T-375 is equipped with a color touch screen. Wiring circuit is provided in this drawing. See Dwg T300-E7.

7.10 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.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OUT3
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Advanced
Poly Packaging Inc.
T-375
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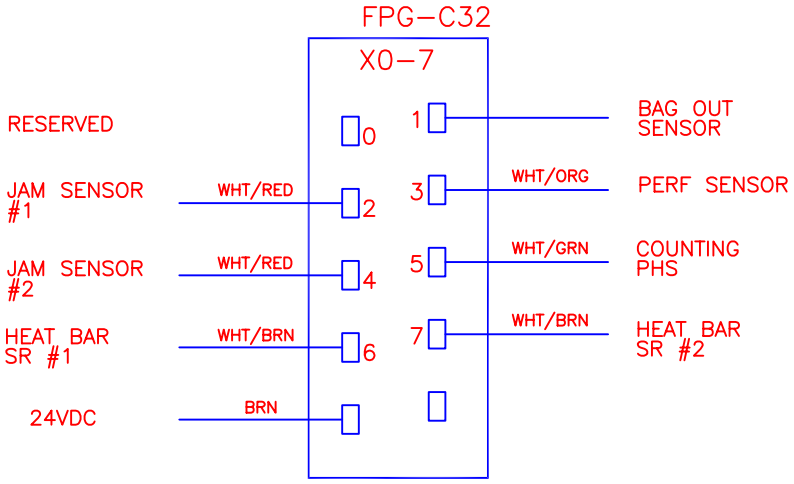
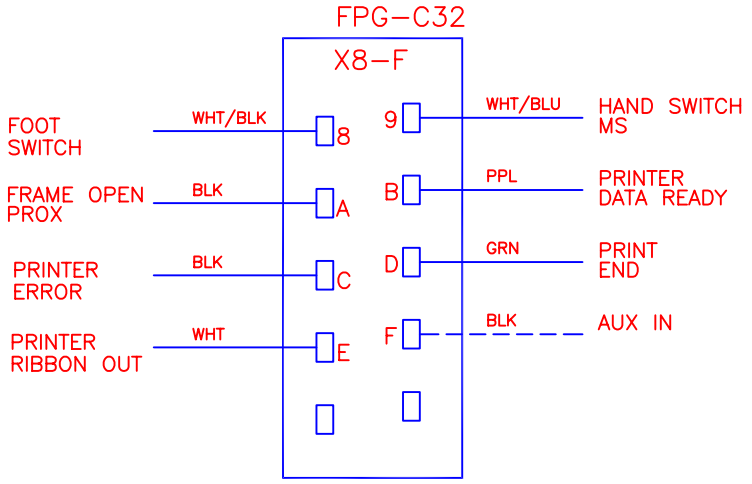
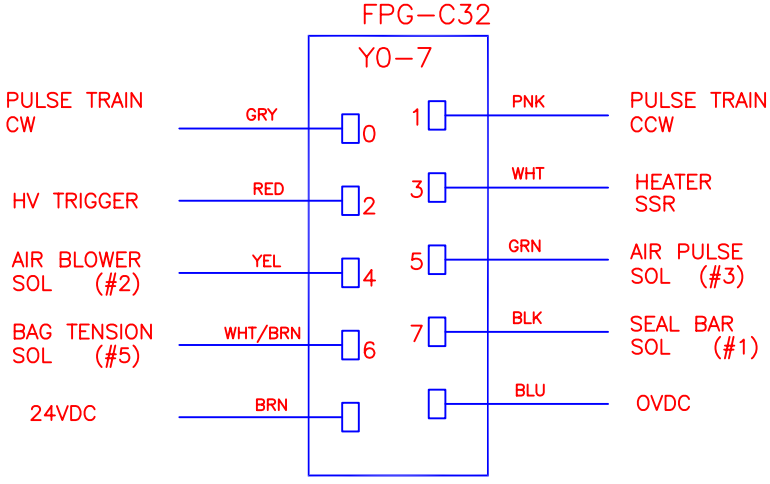
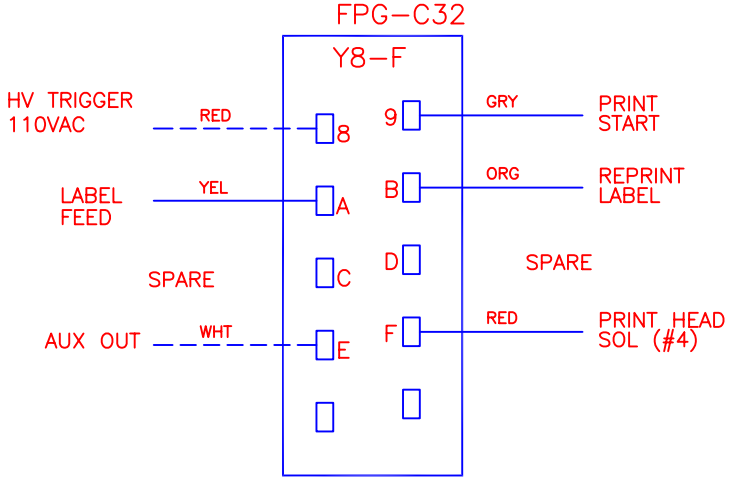
T375-E1









QUANTITY	–	REV	DATE	BY / DESCRIPTION
MATERIAL	–			
FINISH	–			

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .005 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .005 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

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Advanced Poly Packaging Inc.

TYPE EQUIPMENT: T–375	B/M REF. NO.	PART NO.	
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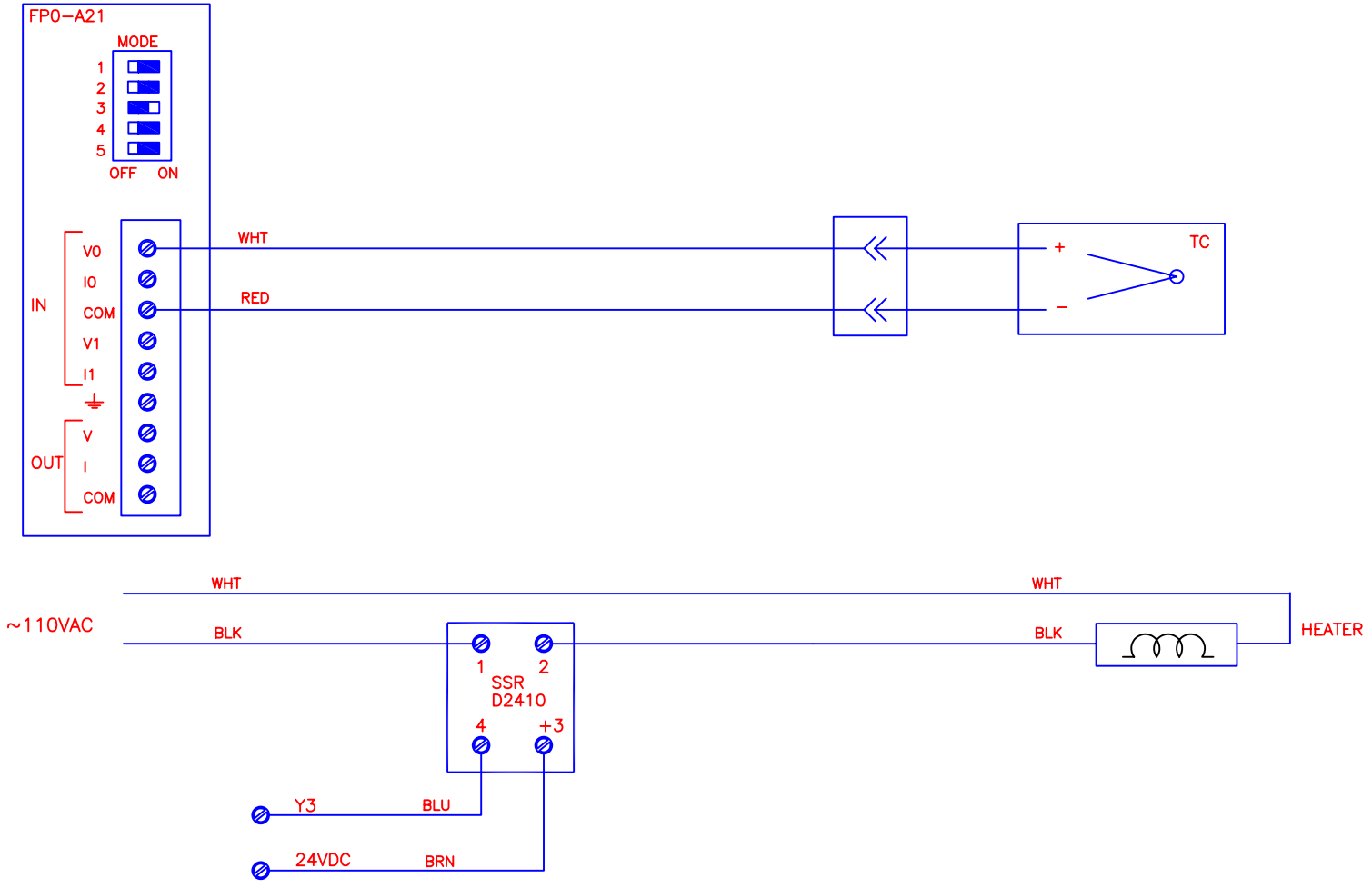

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MATERIAL	–				
FINISH	–				

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .025 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .005 ON THREE PLACE DECIMAL DIMENSIONS
125 ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

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TYPE EQUIPMENT: T-375	B/M REF. NO.	PART NO.: –	
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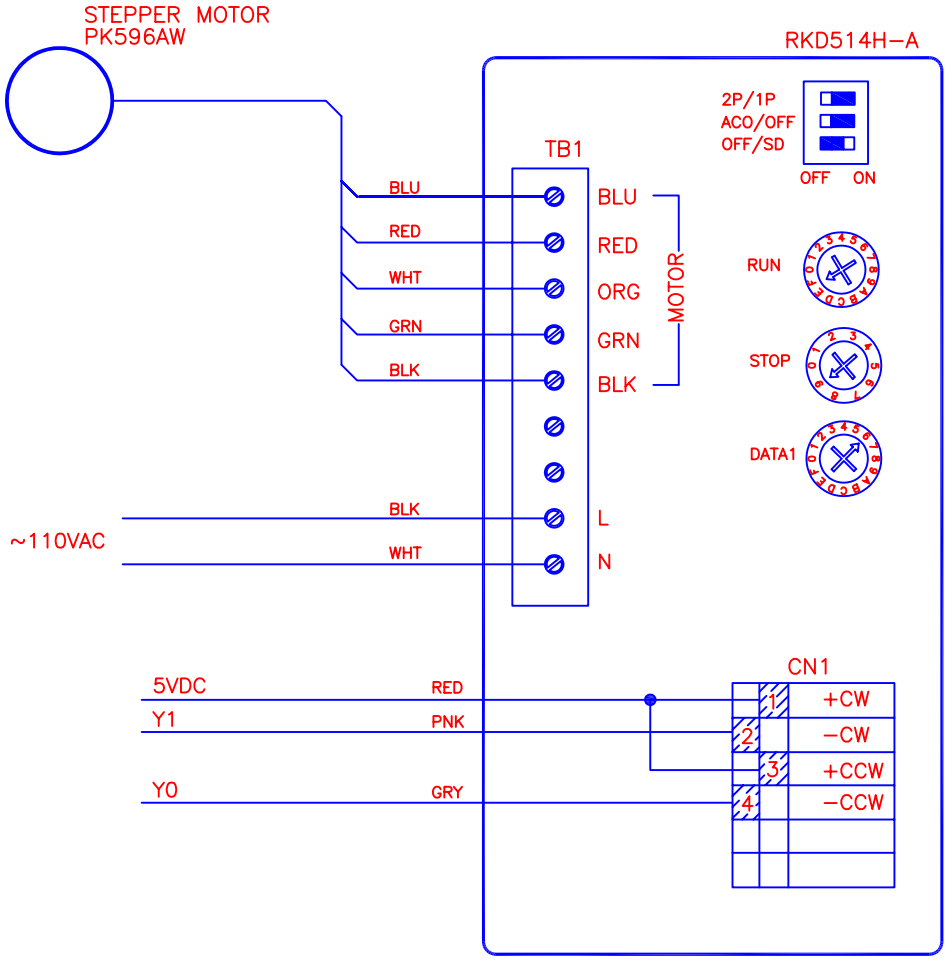

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MATERIAL	-				
FINISH	-				

TOLERANCES UNLESS OTHERWISE NOTED
+/- .XXX ON FRACTIONAL DIMENSIONS
+/- .XX ON TWO PLACE DECIMAL DIMENSIONS
+/- .XXX ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

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Poly Packaging Inc.

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-375		-
SCALE	DRAWN BY	APPROVED
1:1	NAME LF	NAME
	DATE 05/10/2006	DATE

TITLE	DRAWING NO.	REV.
STEPPER	T375-E4	-