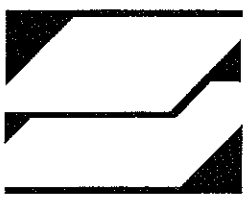
T-1000 ADVANCED POLY-BAGGER™

Operation Guide

Installation, setup and Operation guide



ADVANCED POLY-PACKAGING, INC.

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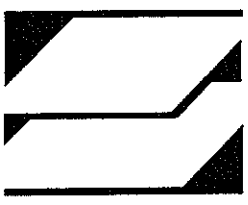

ADVANCED POLY-PACKAGING, INC.

Acknowledgements

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Kevin Rohm
John Doyle

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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 orreplace the defective component and then return the equipment or component toPurchaser, 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.

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ADVANCED POLY-PACKAGING, INC. (APPI)
Akron, Ohio

ALL ORDERS ACCEPTED BY APPI AND PRODUCTS SHIPPED TO PURCHASER ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

Outstanding Balances: Interest at the rate of 1.5% per month (18% annually) will be charged on any outstanding balances after 30 days late (60 days after ship date). Furthermore, any warrantee 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.

Delivery & Inspection: Customers are encouraged to inspect and test machinery and/or systems at APPI's facility prior to purchasing the equipment. Failure to do so constitutes acceptance of equipment performance to purchaser's specification.

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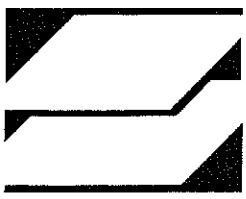


ADVANCED POLY-PACKAGING, INC.

1. INTRODUCTION

Welcome

Introducing the new

T-1000 Advanced Poly-Bagger™

Now that you've decided to upgrade your packaging facilities with

the

NEW T-1000 Advanced Poly-Bagger™,

welcome to the packaging system designed to lower your costs:

From Advanced Poly-Packaging, Inc., the

NEW T-1000 Advanced Poly-Bagger™

is easy to operate and quick to set up, making it

ideal for long or short packaging runs.

Where labor reduction and fast changeover is important, the

NEW T-1000 Advanced Poly-Bagger™

uses

Advanced Poly-Bags™

(pre-opened bags on rolls), manufactured by

Advanced Poly-Packaging, Inc. Extensively equipped with several

"built-in", ready to use options, the

NEW **T-1000 Advanced Poly-Bagger™**

can package various industrial, medical, molded and food products.

And, with a wide range of bag sizes (2" x 3" to 13-1/2" x 24")

and mil thickness (1 mil to 5 mil),

Increased Savings are in the Bag!

1.2

Overview

The T-1000 ADVANCED POLY-BAGGER™ is a system designed to lower your packaging costs with high speeds, versatility, reliability, and simplicity.

High Speeds - Indexes, opens, seals and tears off a bag at rates over 100 cycles per minute.

Versatility - Mobile on rugged castors for packaging at any production station throughout your facility. Ideal for numerous short runs with virtually no production loss for job changeovers since all that is required is a roll change and recalling the bag settings from memory.

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

Simplicity - A "user-friendly" menu-driven program allows an operator to setup the bag, options and auxiliary equipment, save the settings in memory, and recall those settings for repeat runs. Then, simply insert the product and press a footswitch.

1.3

Special Features

Energy Conservation & Component Saver - To extend its life and conserve energy in your plant, the T-1000 is programmed to sequentially shut components down when not in use for extended periods. First, the motor will shut off until the footswitch is pressed or a signal is received to initiate operation. Later, current to the heater bar will discontinue and place the T-1000 is the stop mode. Shortly thereafter, all air flow will be shut off preserving compressed air. A screen saver is also provided, which you may set to automatically shut off after 5 minutes or 15 minutes of non-use.

Predetermined Counter - Pre-set the T-1000 to stop with a predetermined number of bags packaged. Set at 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-1000 stops to alert the operator to begin the next work order or to push aside the box to begin filling another. <START> continues the 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 preventative maintenance / component inspection intervals for inspection / maintenance criteria and intervals.

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

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

Networking Capability - Allows remote access to PLC for production and status reports.

Communications Port/Modem - Allows for off-site access to PLC.

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

Castors Assembly - Rugged castors are standard for plant mobility.

1.4

System Integration

The T-1000 is pre-programmed to integrate automatically to major brand vibratory counters and feeders, weigh scales, volummetric fillers, auger fillers and in-feed conveyors. As an OEM for numerous equipment manufacturers of in-feed systems, we can offer the best available system, with the T-1000 Advanced Poly-Bagger as the integral packaging component.

FREE CONSULTATION AND PRODUCT EVALUATION:

We invite you to call to discuss your packaging requirements and our free product packaging analysis.

1.5

Additional Options Available

Although the T-1000 is extensively equipped with many "built-in" options described above, various auxiliary options and equipment can easily be added for special purpose packaging.

Options Description

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

FS-10 Flat Seal Assembly - Helps decrease / eliminate wrinkles in the seal by pulling sides of bag. Increase bag integrity.

BF-10 Bag Deflator (sponge) - Sponge pad flattens package by removing air from bag before sealing.

AF-10 Automatic Bag In-Feed - Simply insert the bag and press a switch; the bags are automatically indexed through the machine and through the nip rollers.

1.5

Additional Options Available, cont.

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

LSC-10 Concave Load Shelf - Provides support for heavier bulk products. Sizes: 10", 15" or 20".

LSV-10 Load Shelf Vibrator Kit - Settle product to bottom of bag to increase volume of product in bag.

LSL-10 Load Shelf Lift Kit - Lift product and bag to increase seal integrity. Allows proper function of FS-10 Flat Seal Assembly for heavy products.

PB-10 Dual Palm Buttons - Decrease the possibility of injury to hands and fingers. Operator must push two buttons simultaneously to actuate seal bar.

PB-20 Dual Palm Switches - Same operation as PB-10 Dual Palm Buttons. Optical switches to decrease operator fatigue.

TP-500 Hot Stamp Printer - Print part numbers, date codes, etc directly to the surface of the bag.

TI-1000 Thermal In-Line Imprinter - Print bar codes, graphics, etc. by down-loading pre-formatted labels, generated via label software.

(PC or Terminal & software required)

TI-2000 Dual Thermal In-line Printers - Print bar codes, graphics, etc. on both front and back of bag, directly to the surface of the bag, simultaneously with a "top & bottom" printer.

(PC or terminal & software required)

Bar Code/Product ID. Software - Computer software package, DOS or WIN Versions to generate labels, bar-codes or graphics.

1.5

Additional Options Available, cont.

"Gold", "Silver" or "Bronze" Bar Code/Product ID. Software - Computer software package, DOS or WIN Versions for use with VT-1000 Printer Terminal.

VT-1000 Printer Terminal & Scanner - No longer is a PC required to operate a thermal transfer printer. Vision T-1000 includes "big key" alphanumeric keypad with programmable function keys, printer controls, easy-to-read display, scanned input, and stored databases. Data can be imported directly from external devices such as scales or other test and measurement equipment. Designed for an industrial environment, this compact unit is sealed for protection and costs significantly less than most PCs.

AF-10 Accumulating Funnel - Increase production by allowing a continuous infeed of product into the funnel without regard for the operation of the T-1000. The Accumulating Funnel will collect the product while the bag is sealing. Once another bag is in position and blown open, the funnel discharges the product into the bag without stopping the flow of product into the funnel.

CF-10 Counting Funnel - Preprogrammed, the T-1000 Counting Funnel counts product entering the funnel or bag and signals the T-1000 to seal the bag when the preset quantity has been reached. The Counting Funnel may operate in conjunction with the Accumulating Funnel for fully automatic operations.

IC-10 Take-Away Conveyor - Remove the packaged product to a packing station or directly feed a carton or table, conveying the product from floor level. The conveyor perfectly fits underneath the T-1000 and takes the product away from the side or to the rear. Small, lightweight and equipped with castors, use this conveyor anywhere in the plant. Designed for 24 hour / 7 day a week operation.

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-1000 Advanced Poly-Bagger™.

text	Normal text
<START>	Used to show I.O.P. keys
>> MENU <<	Highlighted menu option
Italics	Used for emphasis
BOLDFACE	Used to identify heading names
!	Used to identify important information
***CAUTION*:**	Warning messages: To avoid physical harm, damage to equipment or damage to the product. Be sure to read these messages carefully.

Operation Guide

Chapter 2, Getting Started

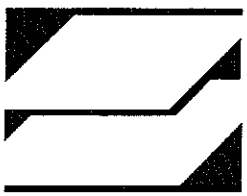
Installation Procedures

Assembly Instructions

Height Adjustment

Air & Power Hook-up

Bag Threading



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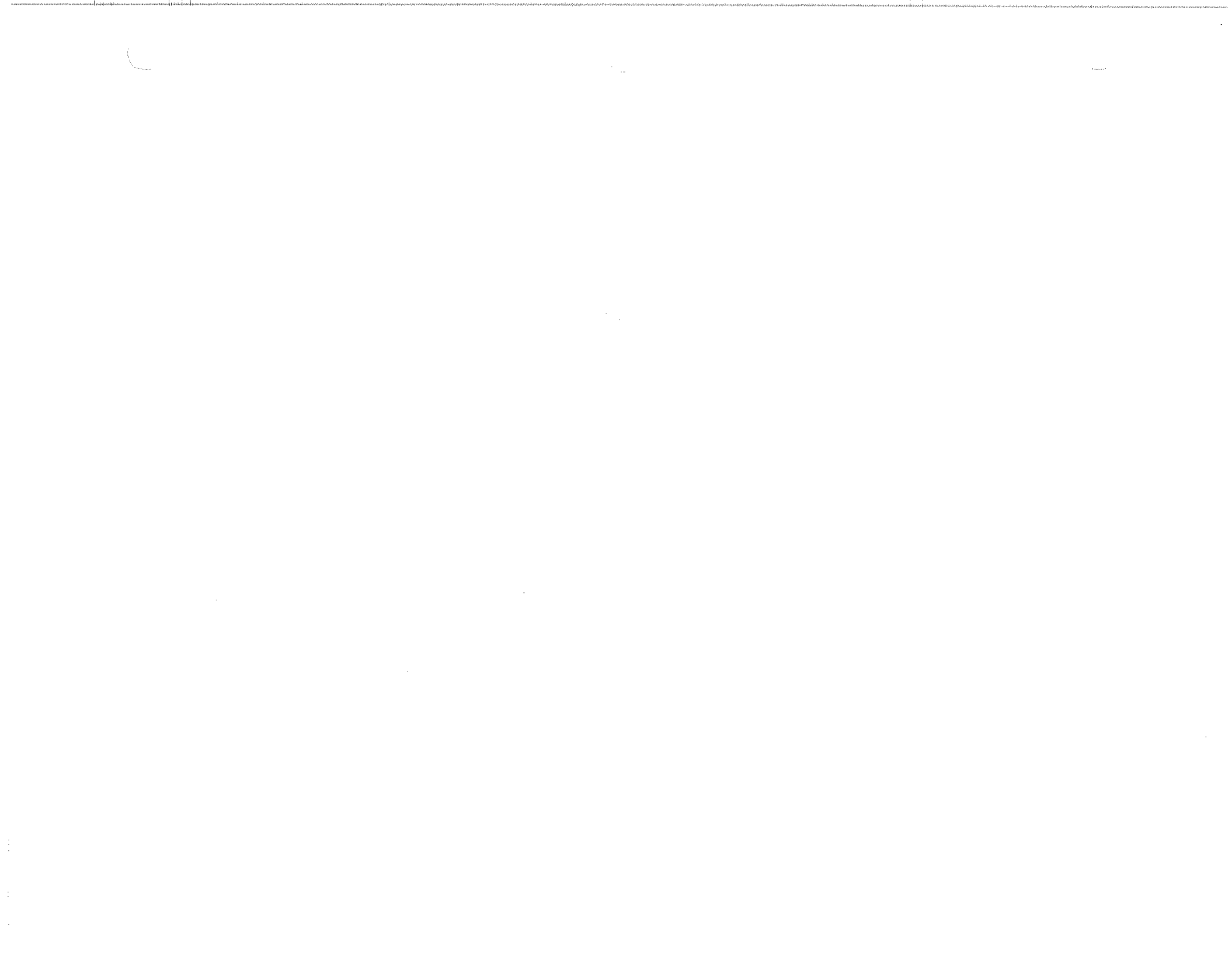

2. GETTING STARTED

This chapter describes in detail procedures to receive and setup the T-1000, including shipment (crating), uncrating, environmental, air and power requirements, assembly, and height adjustments.

Additionally, this chapter describes how to turn on power to the T-1000 and properly thread bags through the machine.

2.1

Installation Procedures

The T-1000 is transported as a single unit in a custom crate designed to protect the machine during shipment. It is shipped completely assembled except for a few items which are easily attached during installation with final adjustment for proper placement of IOP, dancer assembly, footswitch, funnel and guards. Refer to inspections, operation, packing and crating checklists in Appendix A for options included, accessories included and location of components shipped.

Uncrating

After removing the stretch wrapping, remove the outer crate from the skid which contains the T-1000. Then, remove the frame support leg at the base. When the outer wrapping, frame, and leg support is removed, unfasten the base support brace from the skid. Carefully lower the T-1000 from the skid. Transport the T-1000 to the operating location prior to placing the I.O.P. in position and unfastening the dancer assembly.

Operating Environment

The T-1000 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.

Power Requirements

Provisions must be made for 115 VAC, 50/60 Hz line current with ground.
Full Load Current for T-1000: 12 AMPS.

2.1

Installation Procedures, Continued.

CAUTION: *A qualified electrician should ensure that the T-1000 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-1000.

Air Requirements

At lease 2 CFM free air is required, regulated to 80 PSI.

Note: Air should be dry and oil-free.

2.2

Assembly Instructions

Choose an operating location, considering traffic flow, availability of bag supplies, supply of product to be packaged, take-a-way of finished packages, placement of auxiliary infeed equipment and placement of take-a-way conveyor(s). From its operating location, the first step is to remove any inner packaging, banding or wires.

I.O.P. Assembly/Position

The I.O.P. has been secured for transportation in a positioned "face in" with protective wrapping. Holding the I.O.P. module, loosen set screws to allow free movement of the I.O.P. module. (Fig 2-1). Position to allow full visibility to the operator.

CAUTION: *To avoid damage to the I.O.P. module, hold the I.O.P. until the screen is in the desired position and the set screws are securely tightened.*

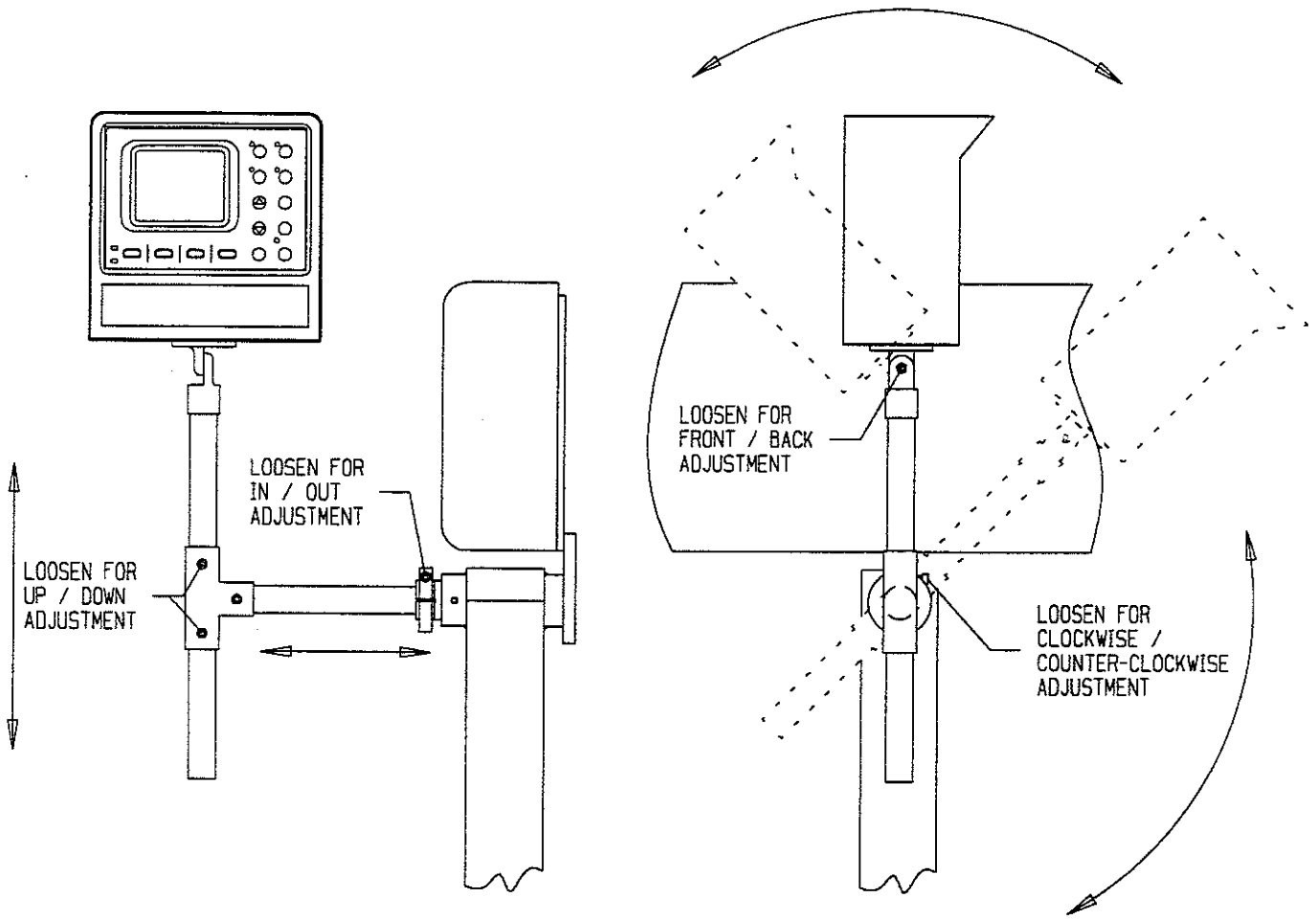

FIGURE 2-1

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000 I.O.P. ASSEMBLY / POSITION			
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1D01	

2.2

Assembly Instructions, Continued.

Dancer Assembly

The dancer assembly, located on the stand at the rear of the T-1000, is secured with tape strapping during shipment. After the removal of the strapping, the dancer should be checked to make sure that it will rotate freely in a semi-circular path. Ensure the brake strap and brake tension spring remain affixed to the dancer assembly (Fig. 2-2).

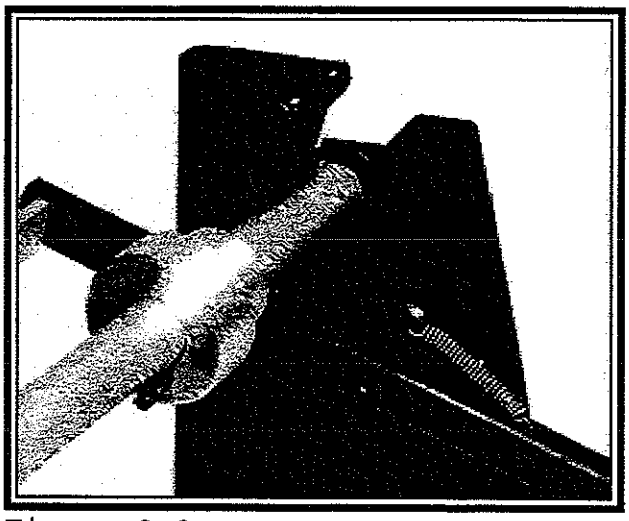

Figure 2-2

The shaft assembly may then be inserted into the dancer frame brackets so it is over the brake stop for tension. Once the bag roll shaft is inserted, the brake strap will be in a position under the bag roll shaft with a slight amount of tension on the dancer assembly. The dancer should be checked to insure that it rotates freely.

Assemble a Standard Funnel and Guard

The funnel and the funnel mounting brackets are contained in a corrugated carton, shipped with the T-1000.

2.2

Assembly Instructions, Continued.

Funnel Assembly & Adjustment

One standard funnel, any size, is provided with the T-1000. Other sizes and configurations may be purchased separately.

Mount the funnel brackets to the funnel using thumb-knobs screws through the three-slotted side of the brackets (Fig 2-3). The three slots are provided for height adjustment of the funnel.

With both the left and right bracket fastened to the funnel, position the funnel such that the small end of the funnel lies approximately **1/2"** above the center of the seal bar.

Secure the brackets to the upper face-plate slots with thumb-knob screws through the slotted brackets.

Position and hand-tighten the thumb-knob screws, sliding the funnel left or right centering the funnel over the bag.

Fine adjustments of the funnel may be achieved, including left to right, up and down, front to back and tilt angels.

CAUTION: Seal bar should not come in contact with the funnel during sealing. Raise the funnel to avoid contact.

Guard

Mount the plexiglass guard by first loosening the two nuts at the end of each extension rod. Then remove one of the two washers from each extending rod, leaving one washer in place. Position the guard on the extension rods so that the ends of each rod extend through the two holes on front of the guards. Replace the washers and nuts and securely fasten.

CAUTION: *Do not operate the T-1000 without a funnel, guard or covers properly positioned.*

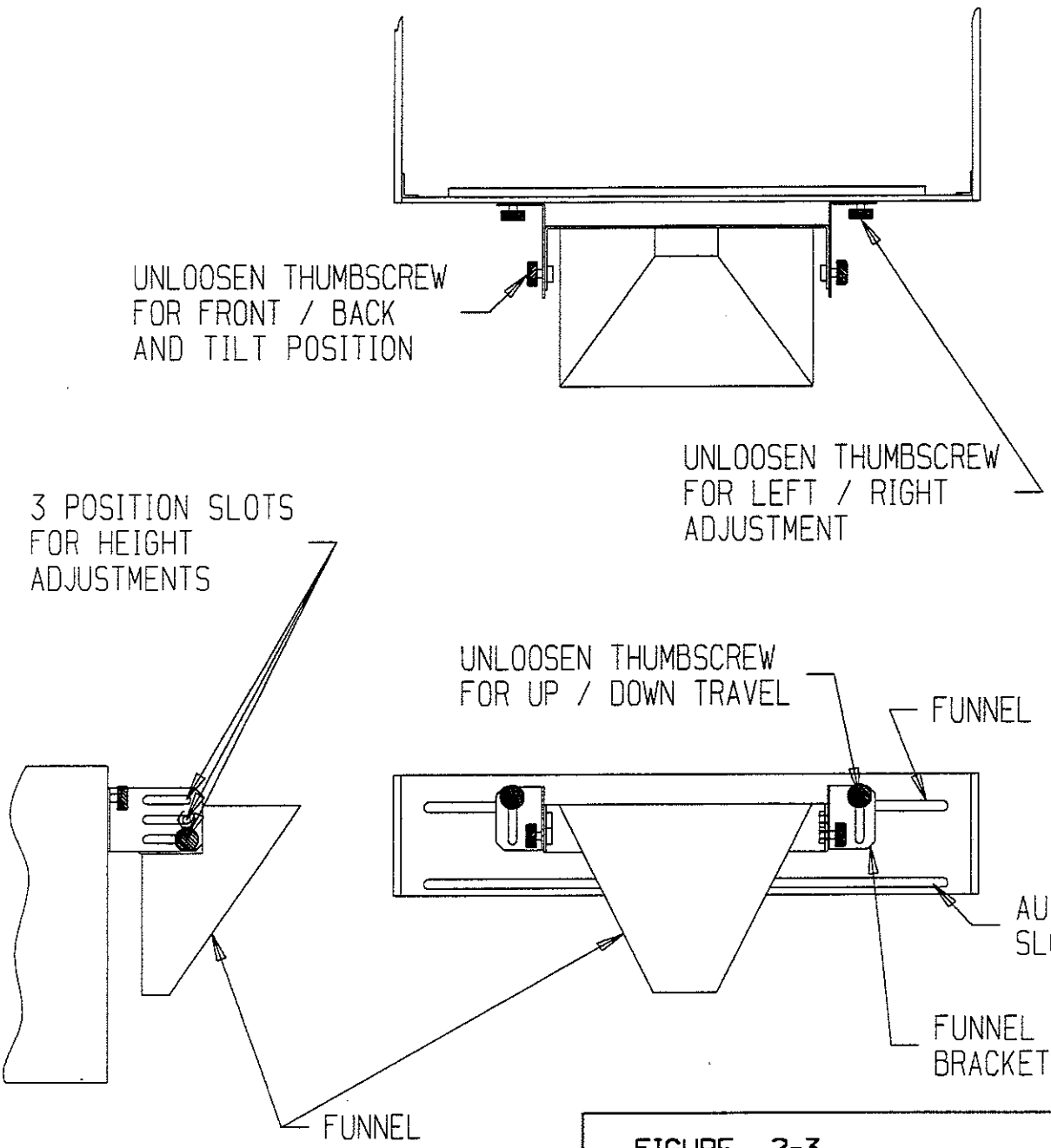

FIGURE 2-3

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000
FUNNEL ASSEMBLY AND ADJUSTMENT

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1D02	

2.3

Assembly Instructions, Continued.

Machine Height Adjustment

The height of the T-1000 is adjustable. To change the height of the machine, three (3) people total are required.

CAUTION: Do not attempt to adjust the height without assistance.

With two people holding the weight of the machine, loosen the two bolts located on the leg, clamping the outer leg to the inner leg (Fig 2-4). Raise or lower the T-1000 to the desired height, and retighten the two bolts.

CAUTION: Unless properly supported the T-1000 will drop suddenly when loosening the height adjust bolts.

2.4

Air & Power Hook-up

This sections 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 115 VAC and properly grounded before hooking up the power.

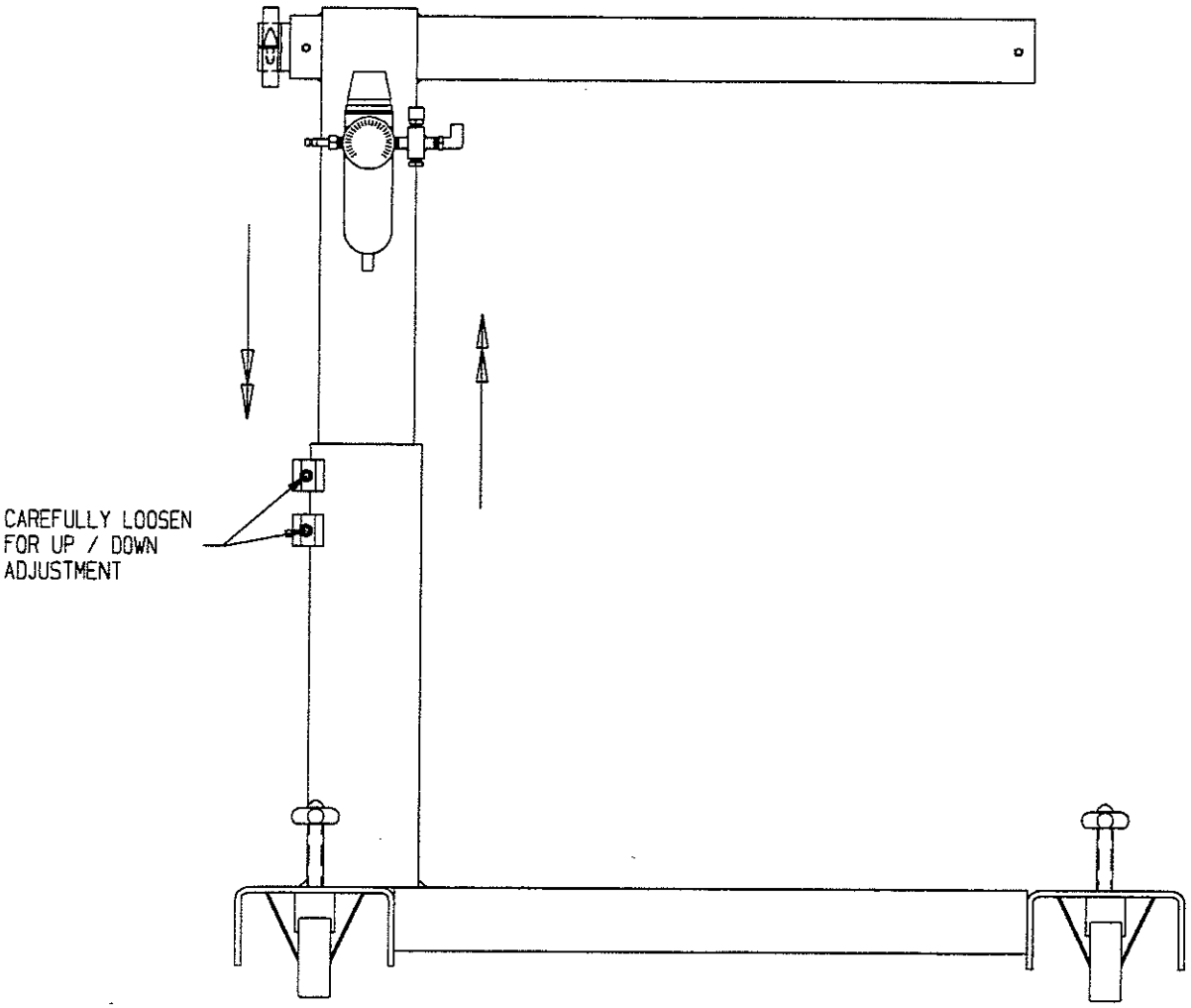

FIGURE 2-4

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000 MACHINE HEIGHT ADJUSTMENT			
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CHKD. BY: SPB	DATE: 12/01/95	DRAWING NO.	SHEET 1 OF 1
APPRD. BY:	SCALE: NTS	TP-TC01	

2.4

Air & Power Hook-up, Continued.

Air Hook-Up

The air supply should be fed to the T-1000 with 3/8 I.D. 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 80 PSI.

Power Hook-Up

Insert the T-1000 power cord into a 115 VAC, 50/60 Hz, grounded power outlet.

2.5

Main Power

The main power switch is located on the rear panel (Fig. 2-5). Press the switch to ON position so that the Red main power light is illuminated.

When the power is in the ON position, the I.O.P. screen power up displaying the Introduction Screen (T-1000 screen). The program version will also be identified. The introduction screen will only appear for a few seconds until automatically changing to the MAIN MENU.

Note: If the I.O.P. screen does not power up to the Introduction "T-1000" screen, see Chapter 6, Trouble-shooting steps.

LEFT PANNEL

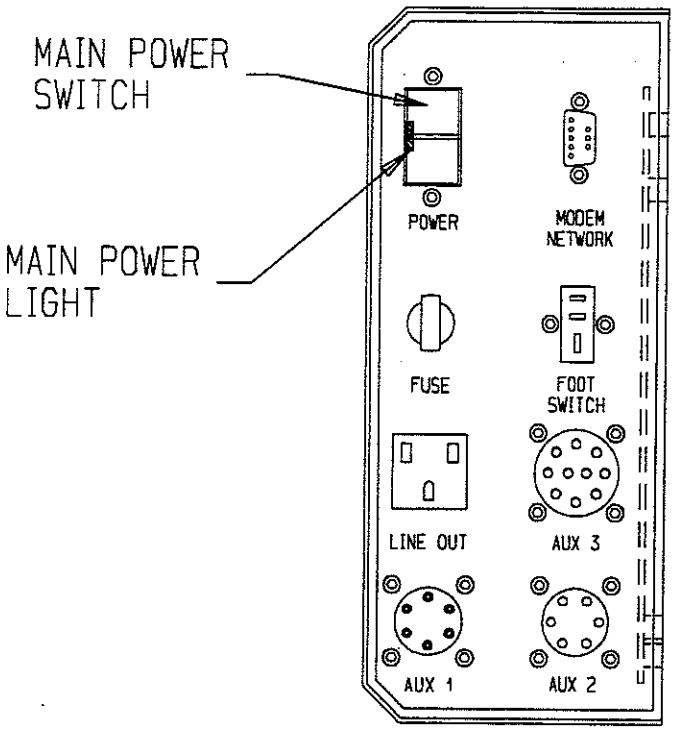

FIGURE 2-5

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 ELECTRICAL BACK PLATE MAIN POWER LOCATION		
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CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1E04	

2.6

Bag Threading

(Fig. 2-6 & 2-7, Threading Diagrams)

Roller Shaft

The first step to threading the machine is to place a roll of bags on the shaft. Remove one of the chucks from the shaft by loosening the chuck knob and slide the roll of bags over the shaft, locking the chuck pin in the small hole in the core plug. Retighten the chuck knob. Replace the second chuck also locking the chuck pin to the core plug. Remove the tape from the bags so that the bags fall freely and hang down from the top of the roll towards you or at the "front" of the roll. Insert the right side of the roll shaft in the right side of the shaft holder (circular holder). Insert the left side of the roll shaft in the left slot of the shaft holder (square open holder) (Fig 2-8).

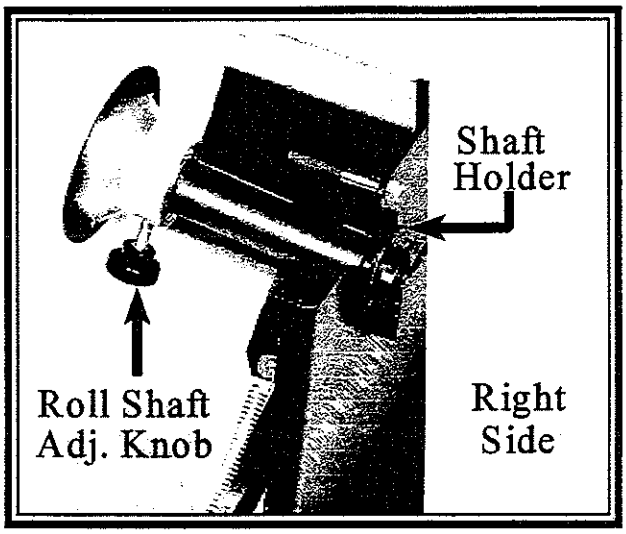

Figure 2-8

Center Roll of Bags on Shaft

Center the bags on the shaft by loosening the chuck knobs and sliding the roll of bags along with the chucks to the desired location. Ensure the chuck pins remain in the core plug holes when siding left or right.

Rollers

Pull the bags over the roller immediately above the dancer assembly, then down between the roll of bags and the outer dancer roller. Pull the bags around the outer dancer roller, over the rear "guide" roller and into the back of the T-1000. (Fig. 2-9). Push the bags at least half way through the machine.

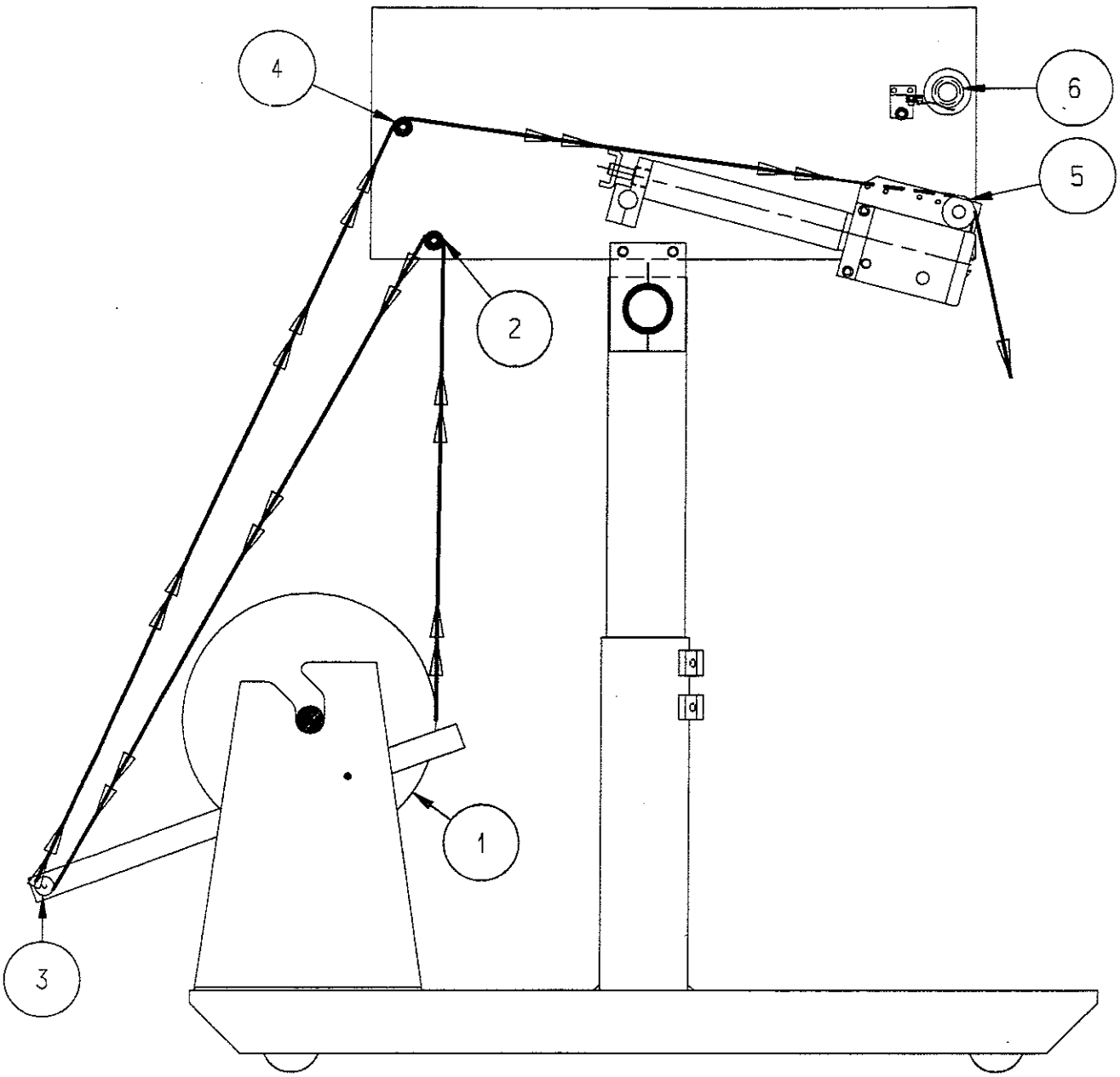

FIGURE 2-6

Advanced
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DRAWING TITLE: MODEL T-1000
THREADING DIAGRAM OF T-1000

DRAWN BY:	DATE:		
CHKD. BY:	DATE:	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE	TP-T1T01	

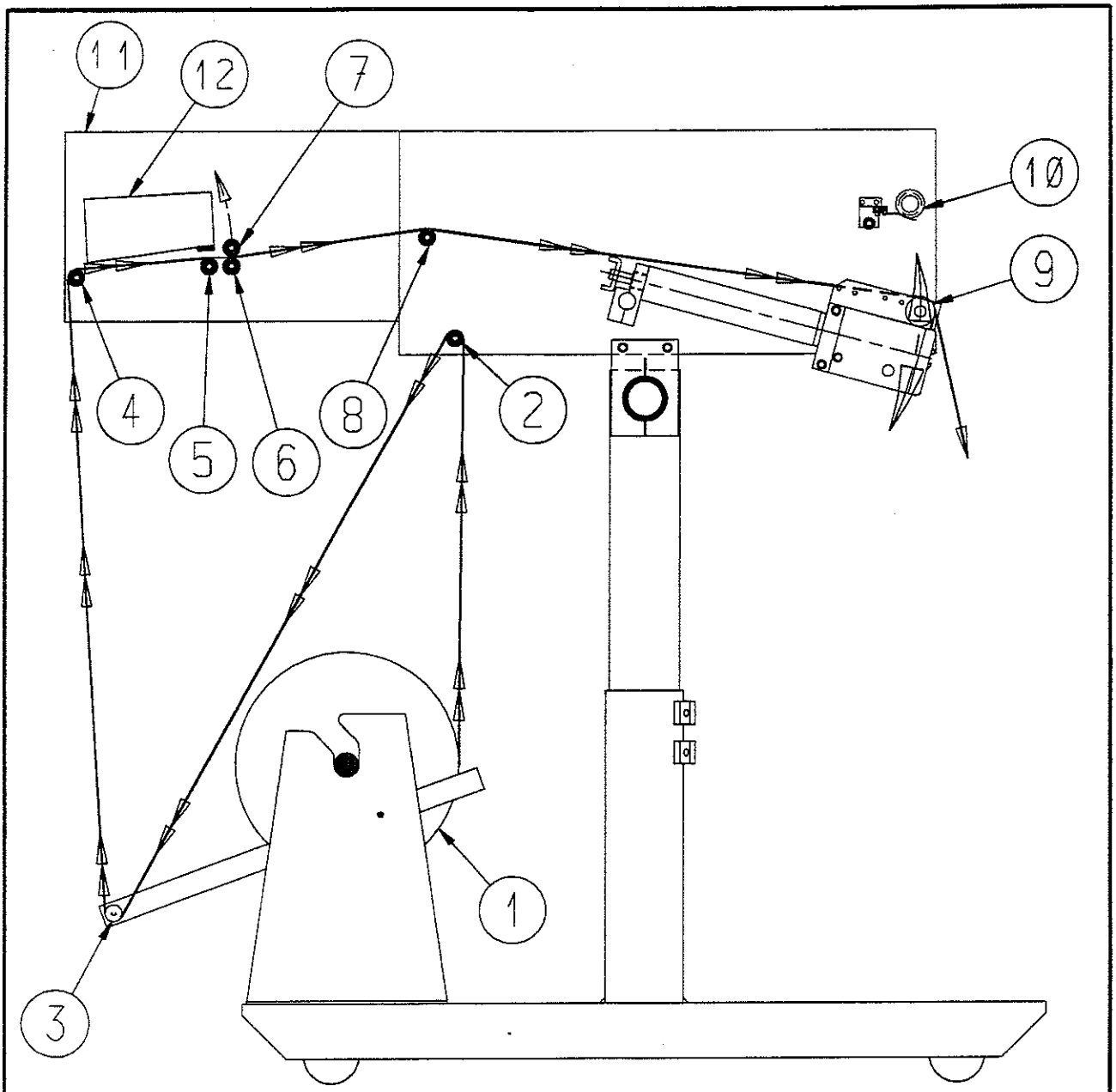

FIGURE 2-7

Advanced
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DRAWING TITLE:	MODEL T-1000 THREADING DIAGRAM OF T-1000 SHOWN WITH OPTIONAL PRINTER		
DRAWN BY:	DATE:		
CHKD. BY:	DATE:	DRAWING NO.	SHEET 1 OF 1
APPRD. BY:	SCALE	TP-T1T02	

2.6

Bag Threading, Continued.

Lower Frame

From the front of the T-1000, lower the frame by slowly pulling the frame handle forward and downward.

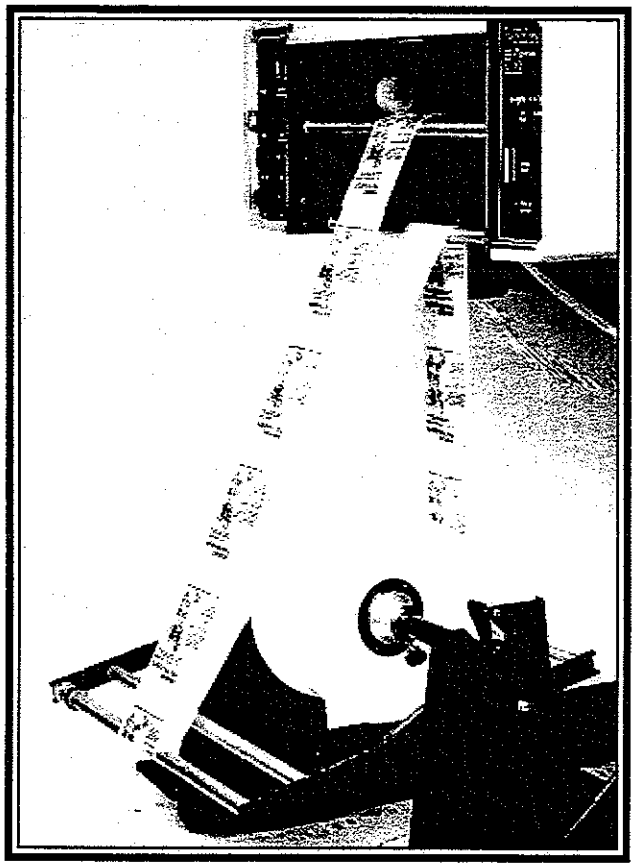


Figure 2-9

Carefully reach inside and pull the bags through the front of the T-1000 so that one bag is centered on the roller. Ensure only one (1) bag extends through the front of the machine. (Fig. 2-10)

Caution: Roller "Fingers" may be sharp. To avoid injury when reaching into the T-1000, ensure that you do not come in contact with the roller "fingers."

2.6

Bag Threading, Continued.

Slowly raise the frame by pulling forward and upward on the handle while holding the bag in position. When the handle locks into position, a *portion* (approximately 1 inch) of one bag should be extended from the front of the machine (Fig 2-10).

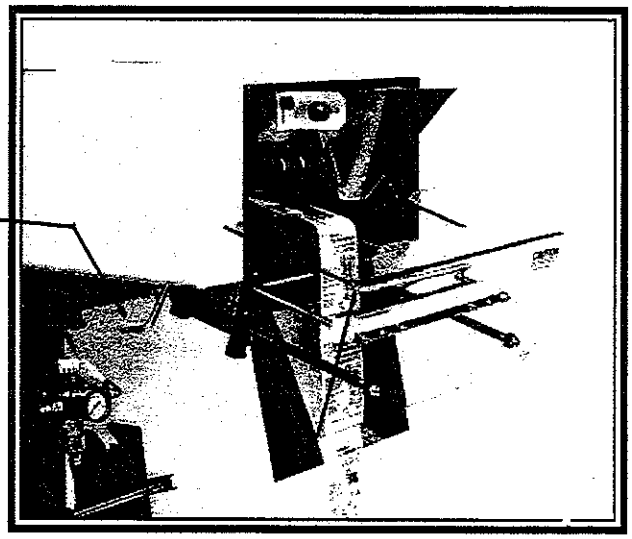


Figure 2-10

Note: When the inner frame is lowered, the T-1000 is automatically placed in the STOP mode. To reset the I.O.P., raise the frame and press the <START> button.

Excess Slack

From the rear of the T-1000, remove any "slack" in the web of bags by reversing the direction of the roll of bags. Reverse the roll until the dancer bar lifts above parallel and release the roll of the bags. The dancer bar should slowly drop without hitting the legs of the T-1000. To adjust the dancer bar, see tension springs/ brake strap adjustments earlier in this chapter.

Roller Guides

Holding the guide roller, slide the Roller Guides within approximately 1/8" from the sides of the bag to assist the tracking of the web of bags.

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

See Chapter 4.4, Tracking & Alignment Adjustments.

2.7

Assembly Instructions, Continued.

Footswitch

The footswitch is ties to the leg of the T-1000 for shipment. Cut loose the footswitch and insert the plug into the left rear panel labeled "FOOTSWITCH" (Fig. 2-5).

2.8

Cycle Operation of the T-1000

If all prior installation procedures have been performed properly, the T-1000 should be in its packaging location and hooked up with air and power. All guards, funnels and covers should be in position and securely fastened.

Again ensuring that all guards and covers are secured into position, press the footswitch to index one bag through the "nip" rollers. One bag should index, blow open and stop between the pressure bar and the heater bar.

If the web of bags threaded through the machine breaks prematurely, further adjustments will be required. See Chapter 6, Trouble-shooting.

If one bag indexed through the machine, press the footswitch 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 6, Trouble-shooting..

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

Note: If bags were delivered with the T-1000 or the size of the bags were known to APP, the T-1000 BAG SET-UP presets should have been saved as the DEFAULTS settings. Therefore, few changes to BAG SET-UP may be required.

2.9

Note on Adjustment of the T-1000

Upon receipt by the purchaser, it is not unusual for the T-1000 to be out of alignment due to shipping and excessive handling. Unless physically damaged, the T-1000 will function properly after minor adjustments are accomplished.

Read Chapter 4 for information on adjustments of the T-1000.

2.10

Energy Conservation & Component Saver

The T-1000 is programmed to automatically shut down components after various periods of non-use to preserve components and conserve energy.

After two minutes of non-use, the motor will stop. To resume packaging, press the footswitch or other input signal. When the footswitch is pressed, the motor immediately runs, the bag in position is sealed and ripped off and another bag is indexed and blown open.

The operator has the choice to enable a screen saver option on the I.O.P. (Intelligent Operator Panel) which will, after five minutes (or 15 minutes) of non-use, shut off the I.O.P screen, preserving the life of the LCD and back light. See Chapter 3.5 for instruction to enable the screen saver option.

After fifteen minutes of non-use, electrical current to the heater bar cartridge will stop and the T-1000 will enter the Stop mode. To resume packaging, press the <START> key.

After 25 minutes of non-use, the air will be shut off disconnecting air flow to the blower. To resume packaging, press the <START> key.

Note: We recommend that the screen saver option be enabled to preserve the life of the LCD and back light.

Operation Guide

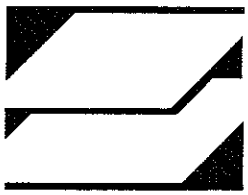
Chapter 3, I.O.P. Operation

I.O.P. Part Names

Contrast Adjustment

Screen Saver

I.O.P. Program Version 1.2



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3. I.O.P. Operation

This section describes in detail, the operation, identification and adjustments of the I.O.P.

3.1

I.O.P. Part Names - Front Panel Keys

(Fig 3-1)

1	**<START>**	Enters operations mode; mode which enables T-1000 to cycle.
2	**<STOP>**	Enters stop mode; T-1000 cannot cycle.
3	**<AUTO>**	Enters Automatic/Auxiliary Cycle mode.
4	**<MAN>**	Enters Manual Cycle mode.
5	**<RESET>**	Deactivates Pause mode. Push and hold reinstalls DEFAULTS settings.
6	**<ENTER>**	Engages option highlighted. Enters into lower level menus and settings screens.
7	**<UP ARROW>**	Moves highlighted option one space up.
8	**<DOWN ARROW>**	Moves highlighted option one space down.
9	**<ESC>**	Returns to previous (higher level) menus.
10	**<PAUSE>**	Temporarily deactivates Pre-determining Counter and Totalizing Counter until reset. Temporarily deactivates signal to auxiliary equipment.
11	**<F1>**	Function key: Turns option ON; Toggles option ON/OFF.
12	**<F2>**	Function key: Turns option OFF; Resets values.
13	**<F3>**	Function key: Increases values.
14	**<F4>**	Function key: Decreases values.

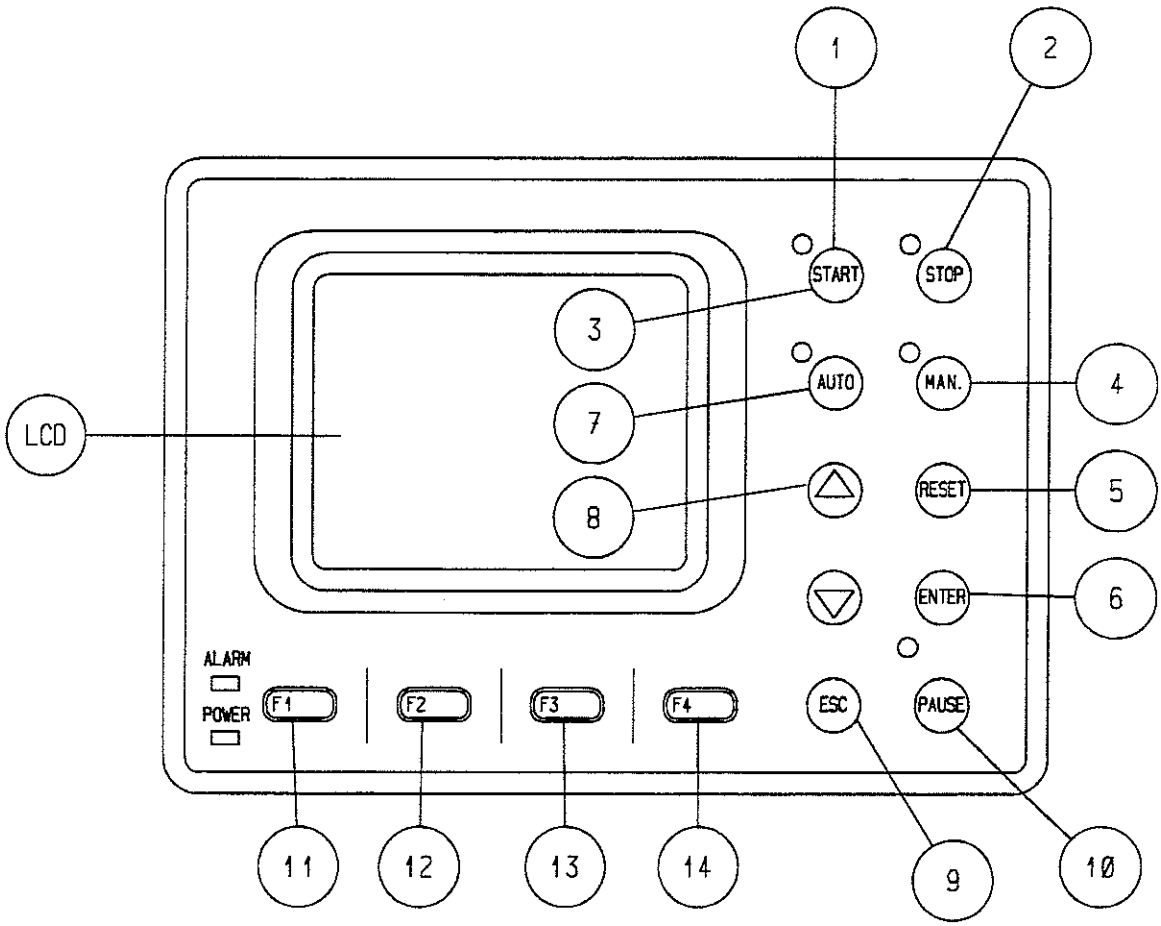


FIGURE 3-1

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 I.O.P. FRONT PANEL		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1
APPRD. BY:	SCALE: NTS	TP-T1G01	

3.2

I.O.P. Part Names - Front Panel, LEDs

(Fig 3-2)

15	**<START>**	Green
16	**<STOP>**	Red
17	**<AUTO>**	Green
18	**<MAN.>**	Green
19	**<PAUSE>**	Red
20	**Alarm**	Red (Lit if I.O.P is locked). To turn off, press System Reset Button on the rear panel of the I.O.P.
21	**Power**	Green (Lit when I.O.P. is turned on)

3.3

I.O.P. Part Names - Back Panel

(Fig. 3-3)

1	**RS-232 Connector**	Interface Cable from P.L.C.
2	**Programming Connector**	For APPI use only.
3	**Power Supply Terminal**	Power terminal for I.O.P. Operation.
4	**Contrast Adjustment**	Adjusts the contrast of the liquid crystal display (LCD).

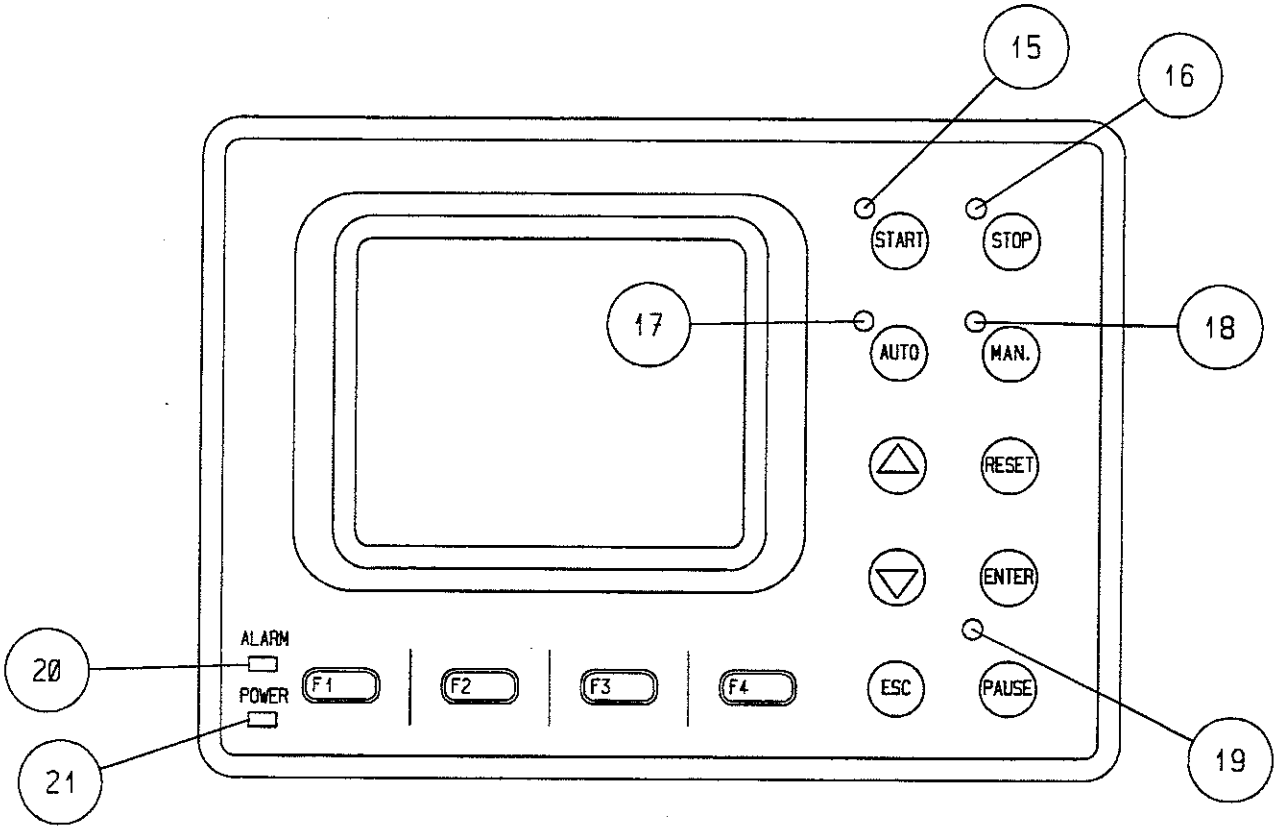


FIGURE 3-2

SEMPAC Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 I.O.P. LEDS DIAGRAM		
DRAWN BY: MFF	DATE: 10/31/95		
CHKD. BY: SPB	DATE: 10/31/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1G02	

3.3

I.O.P. Part Names - Back Panel, Continued.

(Fig. 3-3)

5	**DIP Switches**	See Fig. 3-4 through Fig. 3-6 for proper DIP Switch Settings.
6	**I.O.P. Reset Button**	Pressed after MODE is changed with the DIP Switches.
7	**ROM**	Program chip, currently Version 1.2.
8	**ROM Switching Jumper**	User memory assignments.
9	**Backup Battery**	Memory backup.
10	**System ROM**	I.O.P. System ROM.
11	**Set Screw**	Set Screw M4.

3.4

I.O.P. Specifications/Features

- Liquid-crystal display (LCD), dot matrix

- Dot number: 160 x 128

- Display area: 96mm x 76mm

- Back light life: 20,000 hours (normal temp. and humidity)

- Dust-proof, water-drop proof front panel

- Backup battery: lithium batter, continuous no-voltage life - 10,000 hours.

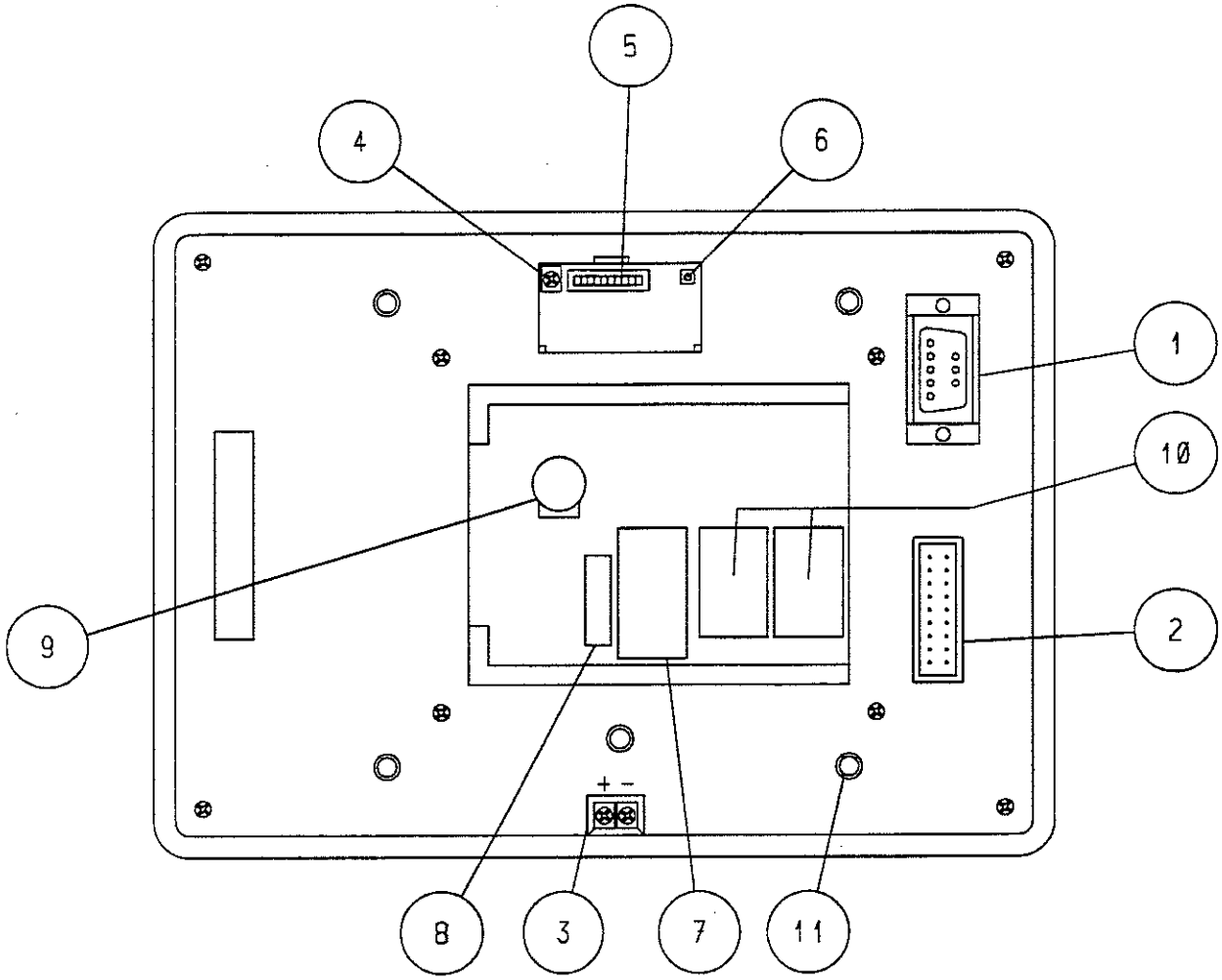


FIGURE 3-3

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 I.O.P. REAR PANNEL		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1G03	

3.5

I.O.P. Settings

Liquid Crystal Display (LCD) Contrast Adjustment

The contrast of the LCD may be adjusted if the screen is difficult to read. With a small flat head screw-driver, VERY carefully turn the adjustment screw (Fig. 3-3, Item #4) until the screen text is fully visible.

CAUTION: To avoid damaging the adjustment screw, DO NOT OVER - TURN. Full range (turn) of the contrast adjustment only about 1/2 of a full rotation. If the screw is over-adjusted and is damaged, the screen may not operate properly.

DIP Switch Settings

Normal Operation (No Screen Saver) (Fig 3-4)

Figure 3-4 (Screen Saver Off)

Normal Operation (Back light AUTO OFF in 5 minutes)
(Fig 3-5)

Note: To turn ON the back light, press the <ESC> key.

Figure 3-5 (Screen Saver AUTO OFF in 5 minutes)

Normal Operation (Back light AUTO OFF in 15 minutes) - (Fig 3-6)

Figure 3-6 (Screen Saver AUTO OFF in 15 minutes)

Note: To turn ON the back light, press the <ESC> key.

! When DIP switch settings are changed, you must press the SYSTEM RESET BUTTON (Fig 3-4) on the rear panel of the I.O.P..

3.6

I.O.P. Program Version 1.2

The I.O.P. (Intelligent Operator Panel) Program (Version 1.2) is a "user-friendly" menu-driven setup and operation program. Standard conventions for moving within the program, viewing setup information and manipulating the operation of the machine have been fully used.

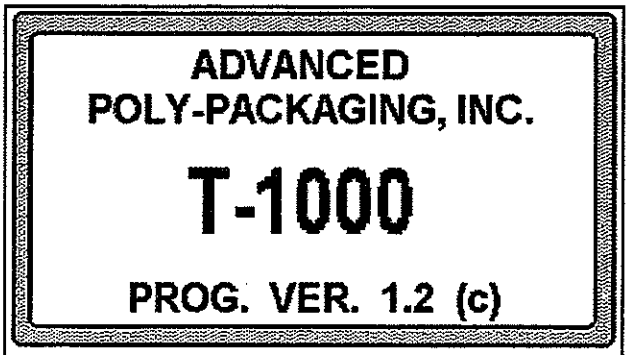
Moving around through the program, entering menu levels and entering setup options are easily and quickly achieved by scrolling with the up and down ARROW KEYS and by pressing <ENTER> and <ESC>.

The function keys (<F1>, <F2>, <F3>, <F4>) are reserved to quickly change settings and enable options.

3.7

I.O.P. Program Version 1.2, Introductory Screen
(Figure 3-7)

When the T-1000 is turned on, an Introductory screen is "flashed" on the I.O.P. screen for a few seconds (Fig. 3-7). The Intro. screen shows the current menu program version.



(Figure 3-7)

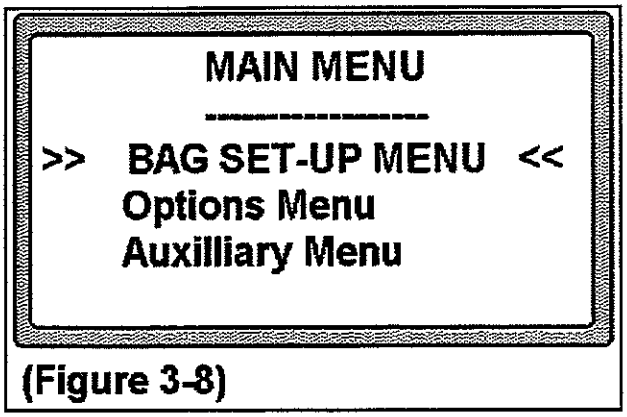
Low Battery Indicator

If either the I.O.P. Battery or P.L.C. battery are low, a *low batter indicator* will be displayed on the lower right side of the Introduction Screen and Main Menu screen. Refer to Chapter 4.22 for battery replacement.

3.8

I.O.P. Program Version 1.2, Main Menu

The Main Menu (Fig 3-8) is the first menu screen displayed after the Introduction is flashed on the screen. Three options are displayed on the Main Menu which control the operation of the T-1000: 1) Bag Set-Up Menu, 2) Options Menu and 3) Auxiliary Menu. These three options are fully described in the following sections.



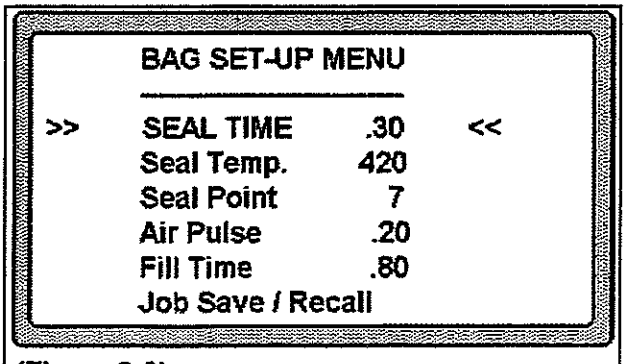
(Figure 3-8)

3.9

I.O.P. Program Version 1.2, Bag Set-Up Menu

The >> Bag Set-up Menu << prompts the operator to input the bags setting to properly index a bag into position, blow open the bag, seal the bag after it is filled with product, tear the bag from the web of bags and index another bag into the same position. This set-up procedure varies from bag to bag and from product to product with settings based upon bag thickness, length and width and product characteristics. Once set, the operator may save the bag settings along with options settings and auxiliary settings for later recall (Fig 3-9).

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-1000 must be *set-up* to properly run the bags.



(Figure 3-9)

3.10

>> 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).

To adjust the Seal Time value, press <ENTER> on highlighted >> SEAL TIME << menu option. The function keys <F3> and <F4> increase and decrease the SEAL TIME.

Test and further adjust if necessary, the current seal time prior to leaving the SEAL TIME SET-UP screen. Press <ESC> to return to the Bag Set-Up Screen.

3.11

>> SEAL TEMP. <<

When the power is ON, the heater bar element receives electrical current. The P.L.C pulses electrical current to the element until the temperature setting is reached. An amber indicator lamp illuminates while the element is receiving current. The longer the light is illuminating, the longer the "pulse" of current.

The heat indicator lamp will continue to "pulse" as the element maintains the temperature setting. The heat cycle continues automatically during T-1000 operation.

NOTE: It is normal for the indicator light to illuminate (pulse) during operation. The farther away from the set temperature the actual temperature reads, the longer the pulses will illiminate. As the actual temperature approaches the set temperature, the pulses will get shorter and shorter. When the heater bar is up the temperature, the pulses will be short, but will continue to illuminate.

NOTE: From a "cold" start, it takes approximately four minutes to reach the set temperature.

The I.O.P displays the seal bar temperature in degrees fahrenheit from within Bag Set-Up Menu (Fig. 3-9). The displayed temperature fluctuates in five degree increments.

Energy Saver: After 15 minutes of non-use, the heater bar current will be automatically shut off unitl the <START> key is pressed.

3.11

>> SEAL TEMP. << , cont.

To adjust the value, press <ENTER> on highlighted >> SEAL TEMP << menu option. The function keys <F3> and <F4> increase and decrease the *set* temperature. (Note: to see the *actual* temperature, return to the BAG SET-UP MENU (press <ESC>).

Note: You should make adjustments and test seal strength prior to returning to the previous screen.

Press <ESC> to return to the BAG MENU SET-UP MENU.

At the BAG SET-UP MENU, the *actual* temperature of the heater bar is displayed.

3.12

>> SEAL POINT <<

Displays the reference point; the position which the bag will be sealed (Fig. 3-9). Each increments adjusts the position approximately 1/8" up or down.

To adjust the value, press <ENTER> on highlighted >> SEAL POINT << menu option. From the SEAL POINT SET-UP screen, the function keys <F3> and <F4> increase and decrease the number.

Increasing the value (<F3>) increases the amount (length) of bag indexed from the front of the bagger. Decreasing the value (<F4>) decreases the amount of the bag indexed. Therefore, to place the seal lower on the bag, decrease the value; to place the seal closer to the top (opening) of the bag, increase the value.

3.12

>> SEAL POINT << , cont.

The new value is tested when the next bag is indexed into position. Cycle the bagger once to test current SEAL POINT setting.

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.

Press <ESC> to return to the Bag Setup Screen.

3.13

Note on Seal Quality

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

Note: Ensure Regulator Pressure is set to 80 PSI.

If, after making necessary adjustments, seal quality remains insufficient, additional options may be purchased to enhance seal appearance, integrity or strength. (See Chapter 1 for description of available options: FS-10 Flat Seal Assembly, TS-10 Trim Seal Assembly, BD-10 Bag Deflator, LS-10 Load Shelf, LSL-10 Load Shelf Lift Kit).

(See also, Chapter 1 for description of Twin Seal™ Option).

If included settings, included options or purchased options do not provide the required bag seal quality, you may consider purchasing an alternate seal bar width or configuration. Standard seal bar widths include: 1/16", 1/8" and 1/4" (custom seal bar configurations may also be available.)

3.14

>> AIR PULSE <<

Displays, in seconds, the time that a burst of air will last, *initially* blowing the bag open (Fig. 3-9). 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.

When making adjustments to initially open the bag, other factors must be considered which would make opening the bags more difficult, including air humidity, static electricity, and the film type used in the construction of the bags. Films other than the standard low density polyethylene affect bag openings: 1) polypropylene - brittle/stiff, 2) anti-stat - sticky, 3) high density polyethylene - stiffness, etc.

To adjust the value, press <ENTER> on highlighted >> AIR PULSE << menu option. The function keys <F3> and <F4> increase and decrease the AIR PULSE time. Press <ESC> to return to the BAG SET-UP MENU.

The volume of air can also be adjusted manually by turning the AIR PULSE flow control valve on the right rear panel (Fig 3-10). Turning the valve counter-clockwise will increase the volume of air; turning the valve clockwise will decrease the volume of air.

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

3.15

Blower

Once the bag is initially blown open, the bag opening must be maintained while the product is being loaded into the bag. The BLOWER (Venturi) provides a steady, adjustable volume of air into the bag.

To increase the volume of air flow, turn the BLOWER flow valve (Fig 3-10) counter-clockwise. To decrease the volume of air flow, turn the BLOWER flow valve clock-wise.

Energy Saver: After 25 minutes of non-use, the Blower will shut off. To resume packaging, press the <START> key, then press the footswitch (or other input device).

Note: The heater bar may not be up to temperature if shut off for an extended period of time.

RIGHT PANNEL

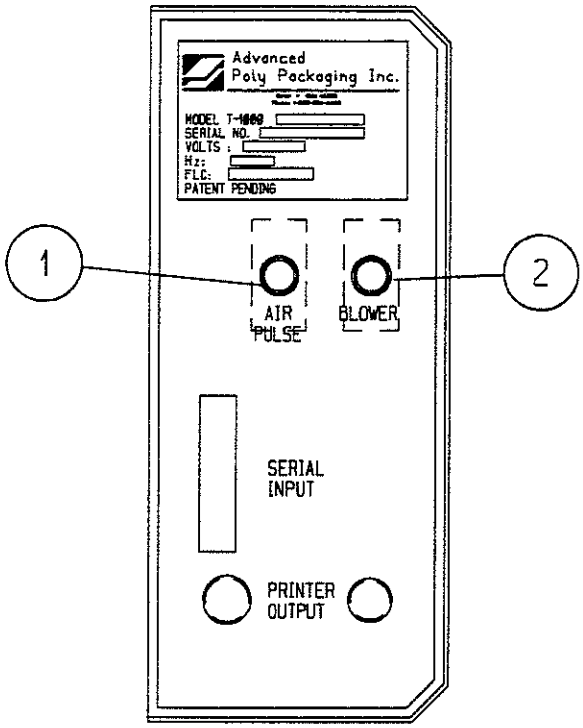


FIGURE 3-10

Advanced
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DRAWING TITLE:	MODEL T-1000 PNEUMATICS BACK PLATE		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1E02	

3.16

>> FILL TIME <<

FILL TIME functions differently dependent upon the MODE in which the T-1000 is operating: AUTOMATIC (<AUTO>) mode or AUXILIARY mode.

In the AUTO cycle mode, FILL TIME displays (Fig. 3-9), in seconds, the time between each cycle allocated for an operator to load product into the bag. Sometimes referred to as PACE RATE, the operator is allocated this time to *fill t*he bag with the product before the bag is automatically sealed and ripped off. In the AUTO mode, no footswitch or other actuator is used.

CAUTION: *To avoid physical harm, DO NOT cycle the T-1000 in the AUTOMATIC mode without the funnel(s), guard(s) and covers in proper position.* Since the seal bar actuates automatically, operators must keep fingers, hands and other parts of the body well away from the sealing mechanism and all other moving parts at all times.

In the AUXILIARY cycle mode, FILL TIME displays, in seconds, the time for which a product, automatically filled by auxiliary equipment, has to be completely settled in the bag before the seal bar is actuated. This time is typically referred to as the DELAY TIME.

CAUTION: *To avoid physical harm, DO NOT cycle the T-1000 in the AUXILIARY mode without the funnel(s), funnel extension(s), guard(s) and covers in proper position.* Since the seal bar actuates automatically, operators must keep fingers, hands and other parts of the body well away from the sealing mechanism and all other moving parts at all times.

To adjust the value, press <ENTER> on highlighted >> FILL TIME << menu option. The function keys <F3> and <F4> increase and decrease FILL TIME. Press <ESC> to return to the BAG SET-UP MENU.

Note: Auxiliary mode is further described in Appendix B, if Auxiliary options or components were provided by APPI.

3.17

>> JOB SAVE/RECALL <<

The T-1000 is able to store 32 machine settings, called *jobs*, including BAG SETTINGS, OPTIONS SETTINGS and AUXILIARY SETTINGS.

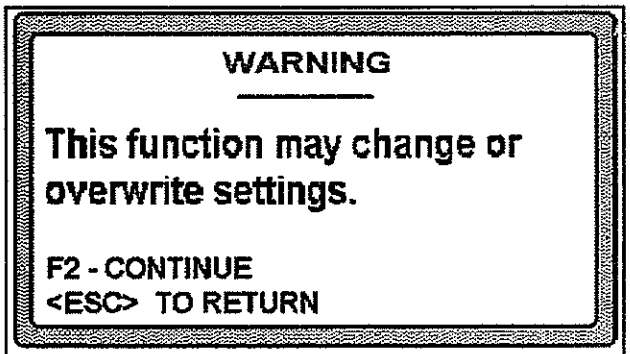
The DEFAULTS job setting and JOB 32 setting is preset by APPI. The DEFAULTS job setting may be overwritten by the operator along with JOB 2 through JOB 31. JOB 32 is the factory settings which cannot be overwritten by the operator.

NOTE: *Attempt to overwrite JOB 32 may cause the I.O.P. to halt or function improperly.*

The DEFAULTS settings are fed to the program when the T-1000 is turned ON. This job is typically reserved for the most commonly run job or the job just previously run, at the discretion of the operator.

To *save* a job, press <ENTER> at the >> JOB SAVE/RECALL << menu option (Fig. 3-9). When the WARNING screen is displayed (Fig. 3-11), press <F2> to continue or <ESC> to escape. Once <F2> is pressed, a job must be run or saved. Press <ESC> to exit the JOB SAVE/RECALL menu.

To *run* a job, use the same sequence as *save* except choose run instead of save.



(Figure 3-11)

Each job setting includes:

BAG SETTINGS: Seal Time, Seal Temp, Seal Point, Air Pulse, Fill Time

OPTIONS SETTINGS: ON/OFF & settings of Predetermining Counter, Totalizing Counter, Load Shelf, Palm Buttons, Cont. Strip, Trim Seal, Printer, Accum-Funnel, Flat Seal, Twin Seal, Count-Funnel.

AUXILIARY SETTINGS: ON/OFF & Option 1, 2 or 3.

3.17

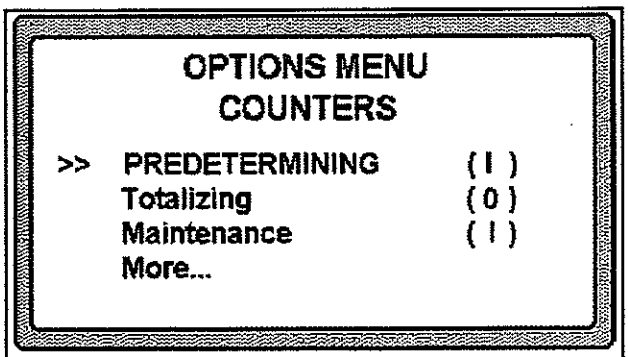
I.O.P. Program Version 1.2, Options Menu

For packaging the wide variety of products which the T-1000 was intended, *options* may have to be used which may be installed on the T-1000 or enabled in the function of the T-1000 to 1) increase packaging production, 2) enhance the appearance of the package, 3) increase the integrity of the seals or 4) identify the product by printing directly onto the bag.

The >> **OPTIONS MENU** << describes procedure to set-up: 1) options which are features of the T-1000 and which are included in the standard T-1000 package and 2) options which may be purchased separately, installed by APPI or installed in the field by qualified maintenance personnel.

For a general description of each options, refer to Chapter 1, Introduction.

The Options Menu displays the status of each specific option to the operator. "1" (In) indicates the option is currently active (ON). "O" (Out) indicates that the option is currently inactive or OFF (Fig 3-12).



(Figure 3-12)

To *highlight* a menu option use the cursor keys (<UP> or <DOWN> arrow keys). To enter a highlighted menu option, press <ENTER> at the highlighted option. To return to the previous screen (exit), press <ESC>.

>> MORE << menu option, quickly highlighted by pressing the <UP> arrow key, shows more options available. Press <ENTER> at the highlighted >> MORE << menu option to see more options.

3.18

>> PREDETERMINING COUNTER <<

The Predetermining Counter is one of three counters (Fig 3-12) included with the standard T-1000 package.

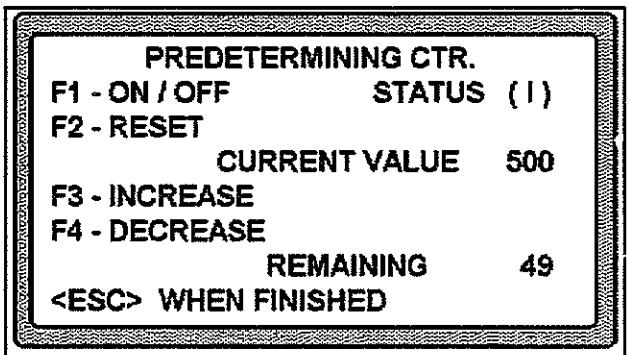
The Predetermining Counter displays the *remaining* number of *bags* to be packaged before the T-1000 will enter the STOP mode.

The operator will preset the number of bags required to: 1) fill an order, 2) complete a job, 3) fill a box, or 4) meet production requirements.

To turn ON this counter press <ENTER> at the >> PREDETERMINING << menu option (Fig 3-12).

Use the function key <F1> to toggle the counter ON or OFF. Press <F2> to RESET the counter to zero. To increase or decrease the current value, press <F3> or <F4>.

Note: The option must be OFF (status "O") to set the current value or reset the current value.



(Figure 3-13)

Once preset to the required number, toggle ON the counter (Fig. 3-13) <F1> for normal operation of the counter. To return to the Options Menu, press <ESC>.

The preset number will count down by one digit for each cycle (bag) until the remaining number equals zero. At this point, the T-1000 will stop.

When stopped, the operator must reset the T-1000 by pressing the <START> key. This resets the counter. Until turned OFF, the T-1000 will continue the function of counting down to zero, then stopping the T-1000.

! Press <PAUSE> during bag setup or roll change-over to *pause* the counter. When *paused* the remaining value will not change. Press <RESET> to clear Pause.

3.19

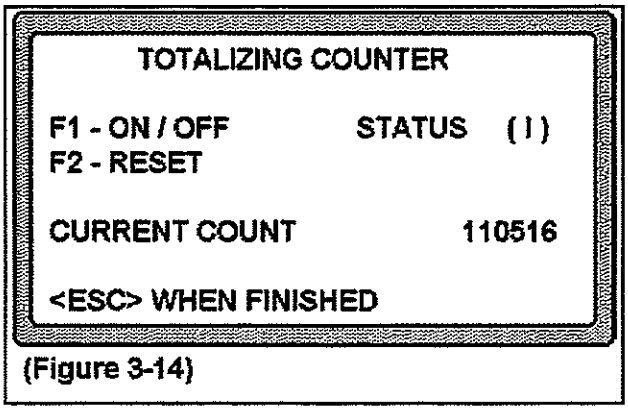
>> TOTALIZING COUNTER <<

The Totalizing Counter is used to determine the total production during a period of time. This counter displays the total cycles (bags) since the Totalizing Counter was last reset.

The operator will turn on this counter to function independently, or in conjunction with the Predetermining Counter to determine 1) the total production for a shift, day, week, etc., 2) the total bags produced so far for a particular job or run, 3) the total packaged products of a particular part number or 4) the total cycles since the last inspection of product.

To turn this counter on, press <ENTER> at the >> TOTALIZING << menu option (Fig. 3-12).

Press <F1> to toggle ON/OFF this counter. Press <F2> to reset the counter to zero. (Fig. 3-14).



(Figure 3-14)

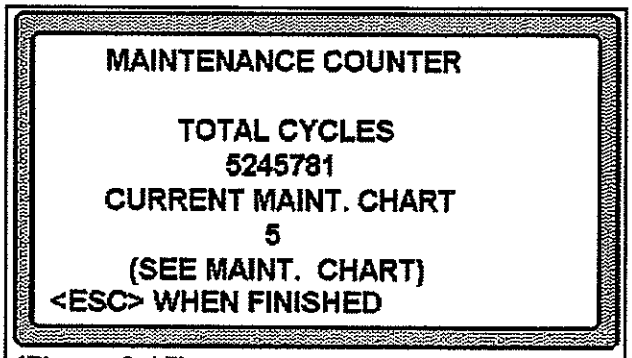
The Current Count value will count up by one digit for each cycle (bag) to 999,999 until reset or turned off. After the highest possible value (999,999) the counter will "flip" over to zero and continue counting.

! Press <PAUSE> during bag setup or roll change-over to *pause* the counter. When *paused* the remaining value will not change. Press <RESET> to turn off the Pause light.

3.20

>> MAINTENANCE COUNTER <<

The Maintenance Counter is used to alert qualified maintenance personnel to perform Scheduled maintenance: to inspect for wear and tear, inspect for loose, faulty or damaged components, or perform other procedures to properly care for the T-1000. Displays the total cycles of the T-1000 and the current Maint. Chart (Fig 15) .



(Figure 3-15)

Refer to Chapter 5 for Preventative and Scheduled maintenance requirements.

The total cycles value cannot be reset by the operator.

CAUTION: Tampering with or attempting to reset the Maintenance Counter will void any warrantee on the T-1000.

Maintenance personnel should routinely check both the Total Cycles value and Current Maint. Chart number and perform the recommended inspection, adjustments or maintenance.

To see the Total Cycles and Current Maint. Chart, press <ENTER> at the >> MAINTENANCE << menu option. After reviewing the total cycles, press <ESC> to return to the Options Menu.

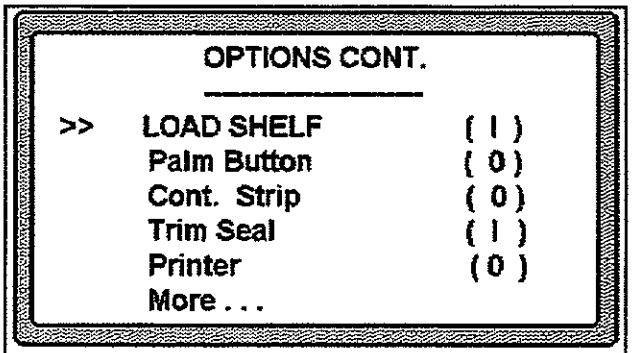
3.21

>> LOAD SHELF <<

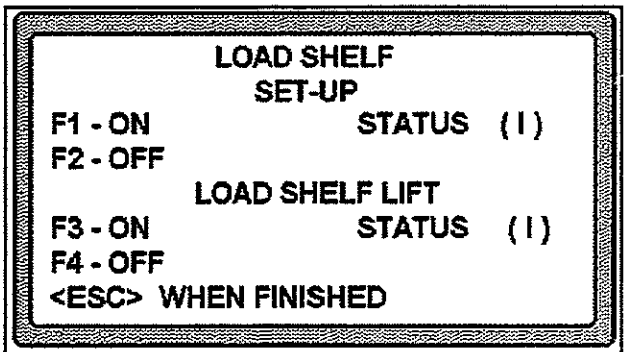
The Load Shelf option is not included in the standard T-1000 package and must be purchased separately. This options is used as a support shelf for the product. To stop the bag from being torn off at the perforation when the product hits the bottom of the bag, the Load Shelf allows the product to drop onto the shelf relieving the pressure on the bottom of the bag. It is also used to assist in the sealing of the bags if the shelf is lifted immediately prior to sealing.

If installed at the factory, instructions for use and adjustment will be included with this Operations manual. If purchased separately, instructions will not be included with this manual, but will included with the Load Shelf kit. See Appendix B, Auxiliary Equipment / Special Options Inserts for installation and operations instructions.

Several sizes and configurations of load (support) shelves are available, including the load shelf lift assembly.



(Figure 3-16)



(Figure 3-17)

If installed on the T-1000, the option must be turned on before the load shelf can be used. To turn on the load shelf, press <ENTER> at the highlighted >> LOAD SHELF << menu option (Fig. 3-16). Press <F1> to enable operation of the support shelf, <F2> to disable the operation of the Load Shelf. Press <F3> to enable the operation of the Load Shelf Lift, <F4> to disable the Load Shelf Lift. Press <ESC> to return to the Options Menu (Fig 3-17).

3.22

>> PALM BUTTON <<

The Palm Button option (Dual Palm Buttons) is not included in the standard T-1000 package and must be purchased separately. This options is used as a safety device to avoid personal injury by ensuring that fingers, hands or other parts of the body which might be caught in the seal mechanism during the cycle operation are physically removed from the seal mechanism (pressure bar).

The Palm Button option operates in lieu of a footswitch. Two buttons, positioned on opposite (left and right) sides on the top of the T-1000 covers, 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 is held while the other button is pressed, the T-1000 will not cycle. (Typically referred to as Anti-Tie Down).

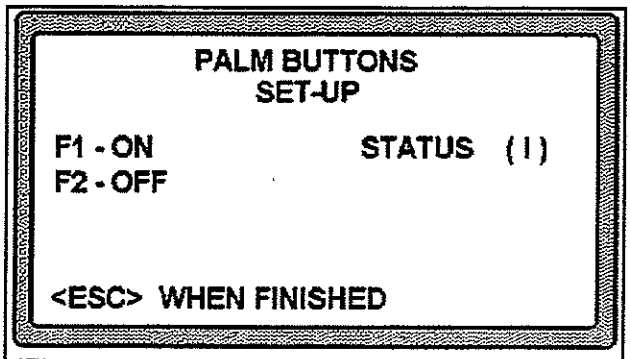
Furthermore, as an additional safety function, the AUTOMATIC cycle mode is disabled when using Dual Palm Buttons to cycle the bagger. Additionally, the footswitch input is disabled.

If installed at the factory, instructions for use will be included with this Operations manual. See Appendix B, Auxiliary Equipment / Special Options Inserts for installation and operations instructions. If purchased separately, instructions will not be included with this manual, but will be included with the Dual Palm Buttons kit.

Two types of Dual Palm Buttons are available: 1) PB-10 Dual Palm Buttons and 2) PB-20 Optical Dual Palm Switches. PB-10 and PB-20 function is the same manner to avoid the injury of operators, but PB-20 require less physical exertion to operator. PB-20 are infrared sensor switches which require breaking the "beam" with a finger.

If installed on the T-1000, the option must be turned on before the Dual Palm Buttons can be used. To turn ON the Dual Palm Buttons, press <ENTER> at the highlighted >> PALM BUTTON << menu option (3-16).

Press <F1> to enable operation of the Dual Palm Buttons, <F2> to disable the operation of the Dual Palm Buttons (Fig 3-18).



(Figure 3-18)

3.23

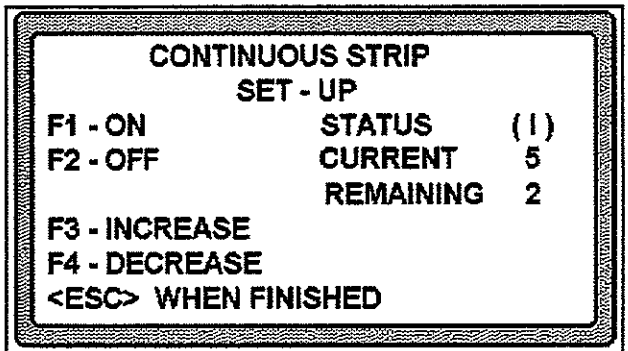
>> CONT. STRIP <<

The Continuous Strip option is included in the standard T-1000 package. This options is available to package products in bags which are connected, held together by the perforation between the bags. The product is sealed in bags is strips preset from 2 to 99. Or, the tear off feature may be disabled all together by making the Current Value equal zero.

The *remaining* value indicates the number of cycles (bags) yet to be sealed (packaged) before the *chain* of bags will be separated and the next chain started.

The Continuous Strip option is ideal for products packaged in bags where the bags are 1) sold in lots or batches (ie: by the dozen), 2) sold off a roll (flat products rewound back onto the bag roll) or 3) hung vertically in a strip.

To turn on the Continuous Strip option, press <ENTER> at the highlighted >> CONT. STRIP << menu option (Fig 3-16). Use the function keys to turn on (<F1>), turn off the counter (<F2>), increase the current value (<F3>), or decrease the current value (<F4>) - (Fig. 3-19). To return to the Options Menu, press <ESC>.



(Figure 3-19)

(Note: The Continuous Strip option must be turned OFF prior to setting the "Strip" current value)

The counter will count down by one digit for each cycle (bag) until the remaining number equals zero. When the value reaches zero, the T-1000 will tear off the strip of bags and continue sealing in strips of bags until reset or turned off.

! To disable the tear-off feature, set the Current Value to zero. The bags will not be torn off from the web of bags.

3.24

>> TRIM SEAL <<

The Trim Seal option is not included in the standard T-1000 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.

The *Current Value* 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.

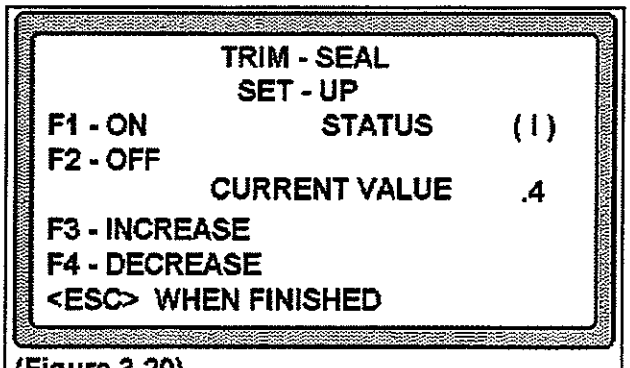
(Note: To properly "trim-off" excess film, the bag length may have to be increased to provide the required finished bag size.)

If installed at the factory, instructions for use will be included with this Operations manual. See Appendix B, Auxiliary Equipment / Special Option Inserts for installation and operations instructions.

If purchased separately, instructions will not be included with this manual, but be will included with the Trim Seal kit.

To turn ON the Trim Seal option, press <ENTER> at the highlighted >> TRIM SEAL << menu option (Fig 3-16).

Press <F1> to enable operation of the Trim Seal option, <F2> to disable the operation of the Trim Seal option, <F3> to increase the current value (trim-off time) and <F4> to decrease the current value (trim-off time) - (Fig 3-20).



(Figure 3-20)

3.25

>> PRINTER <<

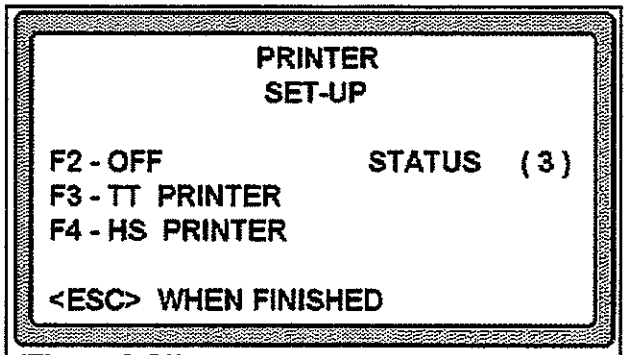
A Printer option is not included in the standard T-1000 package and must be purchased separately. Used for product identification, a Printer option prints information, graphic images or bar codes directly to the surface of the film.

APPI offers two printers as an option: 1) Thermal Inline Transfer Printer - prints text, graphics and bar codes, formatted in a separate software program. The label formats, saved in a database structure can be recalled and "down-loaded" to the printer. 2) Hot Stamp Printer - prints text (part numbers, date codes, lot numbers, etc.). Individual characters are placed onto a "grooved plate" which, when heated will transfer the ink (ribbon) directly onto the bag. Also, magnetic plates are offered.

Both the Thermal and Hot Stamp printers use ribbon (foil) to transfer ink to the surface of the bag.

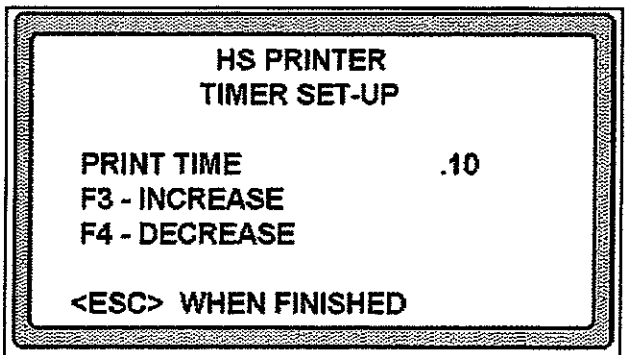
To turn ON the *signal* to the printer, press <ENTER> at the highlighted >> PRINTER << menu option (Fig 3-16).

Press <F3> to enable operation of the Thermal Transfer (TT) printer. Press <F4> to enable operation of the Hot Stamp (HS) printer and press <F2> to disable the operation of the printer (Fig 3-21).



(Figure 3-21)

If the <F4> key is pressed (choose HS printer), a secondary setup screen will automatically appear for further settings (Fig. 3-22). To enhance text/graphics print quality, adjust the Print Time (time, in seconds that the ribbon will be *stamped* on the bag) until required print quality is met. Press <ESC> when finished.



(Figure 3-22)

3.26

>> ACCUM-FUNNEL <<

The Accumulating Funnel Option is not included in the standard T-1000 package and must be purchased separately. This special purpose funnel has several functions: 1) to collect (accumulate) a product before dropping the full contents of the Accumulator into the bag, 2) to contain a product while the bagger is in a CYCLE operation (sealing, tearing off, and indexing a bag into position), 3) to insert the funnel into the bag and keep the product away from the sealing portion of the bag (Insert Funnel) and 4) to physically open the bag by dropping the *door (gate)* into the bag fully opening the bag while the products exits the door.

Increased production can be achieved in manual load or automatic load operations. In a manual operation, the operator can insert the product into the funnel without waiting for the bag to be in position and opened. When the bagger is ready to receive the product, the door at the bottom of the funnel will open, drop the product and shut, to allow the funnel to again be loaded.

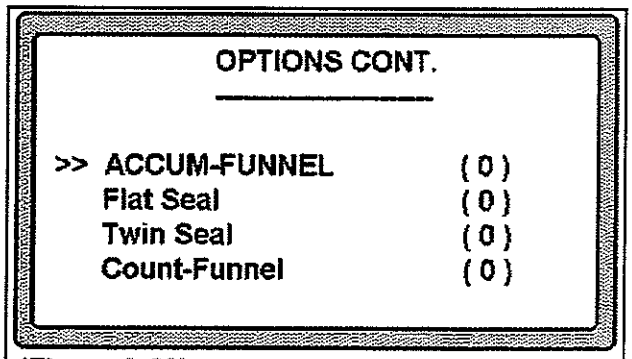
In an automatic operation, increased production can be achieved by allowing counters, fillers, scales and other infeed equipment to feed the funnel without regard for the status of the bagger.

Additionally, the funnel can be operated in an "Open Accumulator" mode or a "Closed Accumulator" mode.

In an Open Accumulator mode, the door is closed only during the CYCLE operation. When the door opens (when the bag is in position and blown open), the door will open and remain open until the bag has been filled with the required amount of product. The door will then close only until the next bag is in position.

In the Closed Accumulator mode, the door remains closed until the full contents has been inserted into the funnel. When the bag contents is reached in the funnel, the door will open and all of the product will enter the bag in one "dump".

To turn on and set the Accumulating Funnel, press <ENTER> at the highlighted >> ACCUM-FUNNEL << menu option (Fig. 3-23).



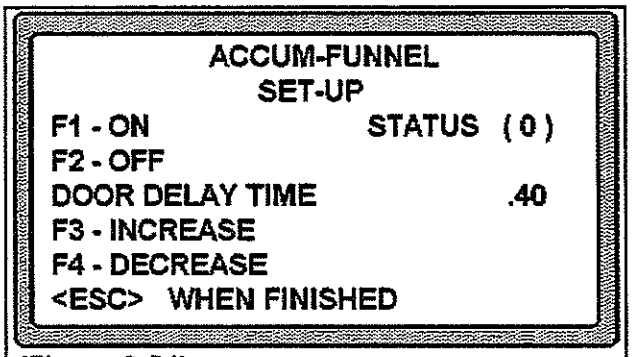
(Figure 3-23)

3.26

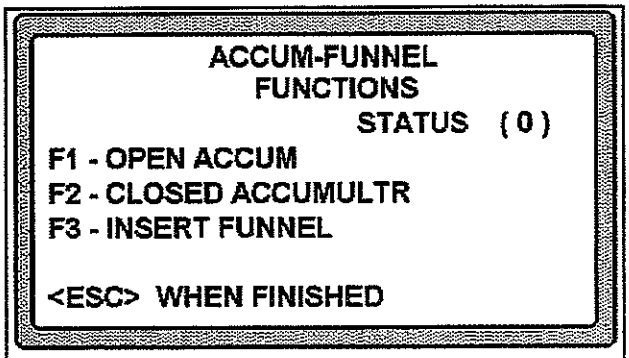
>> ACCUM-FUNNEL << , cont.

The Setup screen displays the time, in seconds, which the bagger will wait after the door opens (product dumps). To increase or decrease the delay time, press <F3> or <F4>. (Fig. 3-24).

The function of the Accumulating Funnel, Open, Closed or Insert Funnel can be set in a secondary Accum-Funnel Functions screen (Figure 3-25).



(Figure 3-24)



(Figure 3-25)

3.27

>> FLAT SEAL ASSY <<

The Flat Seal Assembly option is not included in the standard T-1000 package and must be purchased separately. Used to help decrease or eliminate wrinkles or folds when sealed, the Flat Seal Assembly can easily be attached. For products which require a high integrity bag, for retail products, bulky products or "air tight" packages, the Flat Seal Assembly is ideal.

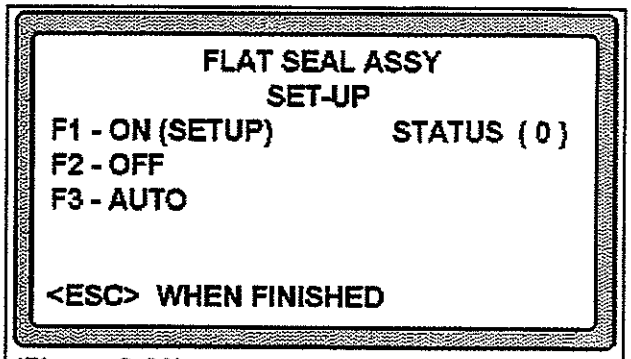
The Flat Seal Assembly, also called "fingers" flattens the seal portion of the bag (two layers of poly) by pulling the sides of the bag away from the center. The fingers enter the bag immediately before the pressure bar presses the two layers of the bag together, against the front sealer plate. Pulling on the sides of the bag cause the layers to flatten, decreasing the possibility of folds.

To turn the Flat Seal Assembly ON, press <ENTER> at the highlighted >> FLAT SEAL ASSY << menu option (Fig 3-23).

3.27

>> FLAT SEAL << , cont.

Each time the bag size (width) changes, the fingers must be adjusted to accept the new bag size. See Appendix B for instructions on how to mechanically adjust the fingers.



(Figure 3-26)

To test the mechanical adjustment, press <F1> to turn ON the fingers. This extends the fingers into the bag and remains extended to allow for precise placement of the fingers inside the bag.

Once the mechanical adjustment is complete, press <F3> for normal operation of the flat seal assembly. In the Auto mode, the fingers will automatically extend into the bag immediately prior to the pressure bar sealing the bag.

To turn off the Flat Seal Assembly option, press <F2>.

3.28

>> TWIN SEAL <<

The Twin Seal™ option is included in the standard T-1000 package. This option is available to place two seals on one bag. The product is sealed in the bag with two parallel seals approximately 3/8" apart. The Twin Seal™ option is a function of the program and requires no mechanical setup.

The Twin Seal™ option is ideal for products which: 1) require a shelf life, 2) are medical products and require medical/pharmaceutical packaging (non-sterile), 3) are heavy, 4) are bulky and difficult to seal and 5) require high integrity seals.

3.28

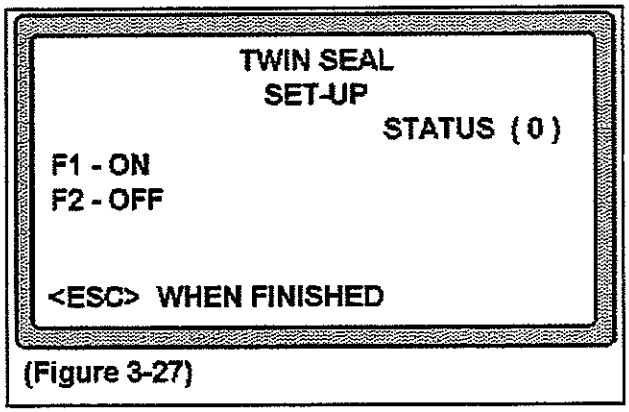
>> TWIN SEAL << , cont.

To turn on the Twin Seal™ option, press <ENTER> at the highlighted >> TWIN SEAL << menu option (Fig.3-23).

Use the function keys to turn the Twin Seal™ option on or off, <F1> or <F2>.

The T-1000 will seal each bag twice when this option is on.

To return to the Options Menu, press <ESC>.



(Figure 3-27)

Note: You may need to decrease the value of Seal Point setting to allow for two seals on the same bag.

3.29

>> COUNT-FUNNEL <<

The Counting Funnel option is not included in the standard T-1000 package and must be purchased separately. Used to count products entering the bag, the counting funnel may operate in conjunction with the Accumulating Funnel to load a predetermined number of a product into the bag, manually fed or automatically fed.

Products fed into the funnel from a vibratory bowl or in-feed conveyor can be counted while entering the bag or while being collected in the accumulating funnel.

Various infrared "eyes" are available which will "see" even the smallest of parts. The Eye typically mounts to the top of the funnel seeing the product as it enters the funnel. Once the preset count is reached, the product is loaded and the bag is sealed and torn off automatically. Once another bag is in position, the Eye continues to detect product entering the bag or funnel.

3.29

>> COUNT-FUNNEL << , cont.

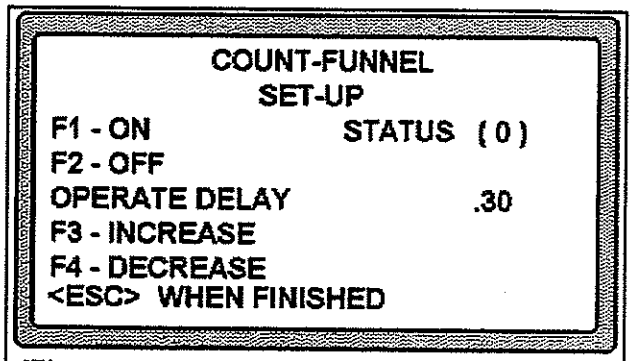
If installed at the factory, instruction for use and adjustment will be included with this Operations Manual (Section B). If purchased separately, instruction will not be included in this manual but will be included in the Counting Funnel kit.

To turn ON the Counting Funnel, press <ENTER> at the highlighted >> COUNT-FUNNEL << menu option (Fig. 3-23).

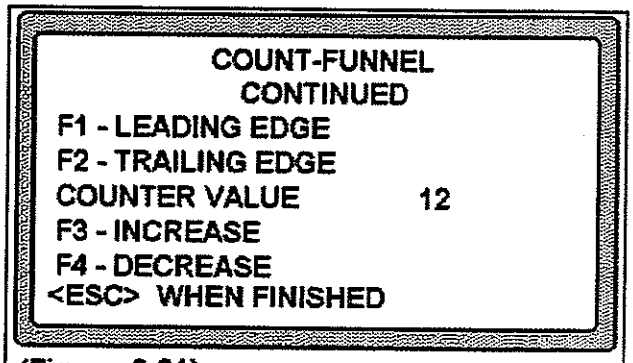
Press <F1> to turn ON the Counting Funnel option and <F2> to turn OFF the option (Fig. 3-30).

To increase or decrease the delay time, press <F3> or <F4>. The delay time is the amount of time between the point the final count is reached and the bagger begins the seal operation.

When <F1> is pressed (ON), a secondary setup screen will display (Fig. 3-31). The secondary screen further sets the counter.



(Figure 3-30)



(Figure 3-31)

To count the product when it first enters the *detection field,* choose the LEADING EDGE <F1> option. To count the product when it exits the *detection field,* choose the TRAILING EDGE <F2> option.

The LEADING EDGE setting is typically used for Automatic operations whereas the TRAILING EDGE setting used for manual operations.

Refer to Appendix B if the options has been installed on the T-1000.

To increase or decrease the preset value of product which is required in the bag, press <F3> or <F4>.

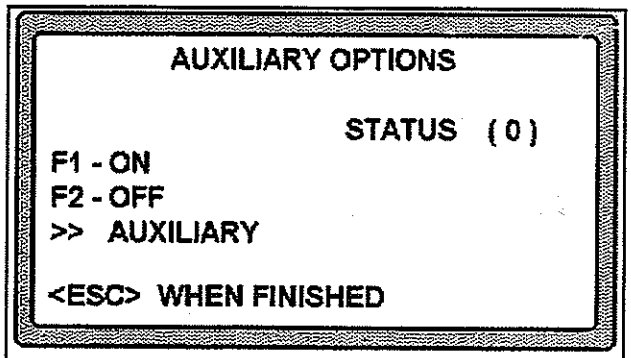
To return to the Options Menu, press <ESC> twice.

3.30

I.O.P. Program Version 1.2, Auxiliary Options

The T-1000 I.O.P. Program Version 1.2 is preprogrammed to accept almost all auxiliary equipment signals. Accepting the signals from other equipment so that the two or more pieces of equipment "talk" to each other is essential to a fully automatic packaging system.

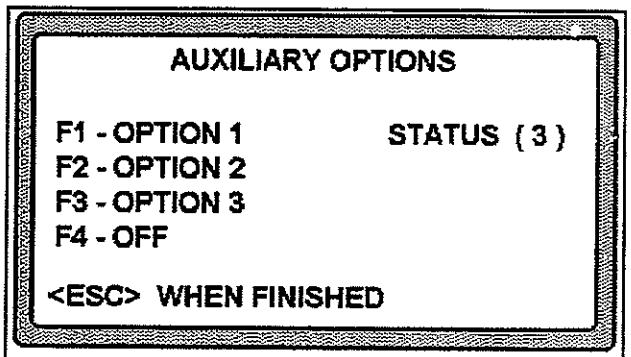
Rarely will reprogramming be necessary to interface auxiliary (in-feed) equipment. Additional cabling, however will be required which will transfer the signals between the T-1000 and your existing equipment. Three auxiliary plugs are provided with the T-1000 so that no splicing or additional modifications are required for the integration.



(Figure 3-28)

CAUTION: We recommend that APPI technicians provide the cable(s) linking the equipment. Contact APPI customer support for information which will be required for the integration.

Once connected, the function keys <F1> and <F2> will turn ON and OFF the signal between the T-1000 and auxiliary equipment (Fig. 3-28).



(Figure 3-29)

To choose the auxiliary signal (determined by APPI), press <ENTER> at the highlighted >> AUXILIARY option (Fig. 3-29). This will display a secondary Auxiliary Options settings screen.

Press the function key which APPI has determined will provide the appropriate signal between the equipment. The STATUS (option chosen) will be displayed on the screen.

When the Auxiliary setup procedures are complete, press the <AUTO> to place the T-1000 in the Automatic / Auxiliary mode.

Operation Guide

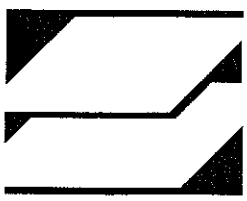
Chapter 4, Settings & Adjustments

Parts Identification

Machine Adjustments

Component Adjustments

Component Replacements



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POLY-PACKAGING, INC.

4.1 Operation, Settings and Adjustments of the T-1000

This section describes in detail, the identification of major components, assemblies, and individual components, including mechanical and electrical features of the T-1000. This section also describes component adjustments and replacements.

4.2

General Description (Identification of Major Components)

Front View of the T-1000, (Figure 4-1)

1 **I.O.P (Intelligent Operator Panel), (Fig. 3-1)**

2 **Covers**

3 **Guards**

4 **Pressure bar**

5 **Front Plate**

6 **Funnel**

7 **Fixed Support Shelf**

8 **Air Regulator (Air In)**

9 **Castor Assembly**

Back View of the T-1000, (Figure 4-2)

1 **Left Panel**

2 **Right Panel**

3 **Guide Roller**

4 **Lower Roller**

5 **Dancer Assembly**

4.3

General Description (Identification of Assemblies)

Left Side View of T-1000 (without cover) (Fig. 4-3)

Electrical Panel (Solid outline)

1 P.L.C. (Programmable Logic Controller)
(Fig. 4-8)

2 I.F. Board (Interface board)
(Fig. 4-9, Fig. 4-10, Fig. 4-11)

3 P.S. Board (Perf sensor board)
(Fig. 4-12)

4 R.F.I. Filter (Radio Frequency Interference)

5 Step Down Transformer

6 Capacitor, D.C. Unregulated

Mechanical Panel (Dashed outline)

7 Cylinder (tear off)

8 Brake

9 Belt (tear off)

10 Compression (nip roller) adjustment assembly

4.4

General Description (Identification of components)

Right Side View of T-1000 (Without cover) (Fig. 4-4)

1 Valve Manifold Assembly

2 Drive Shaft

3 Drive Belt

4 Belt Tension Assembly

5 Compression (nip roller) Adjustment Assembly

6 Electrical Panel (empty - reserved)

Inner Frame View of T-1000 (Figure 4-5)

1 Pressure Bar

2 Guide Rods

3 Seal Assembly

4 Pressure Bar Cylinder

5 Seal Bar Cylinders

6 Guide Rod Adjustment Channel

7 Lower Frame Mounting Bracket

8 Heater Bar

Upper Frame Top View of T-1000 (Figure 4-6)

1 Motor

2 Blower

3 Micron Filter

4 Air Pulse Manifold

4.4

General Description (Identification of components)

Rear Panels, (Fig. 4-7)

Left Panel (Electrical panel)

1 Main Power Switch

2 Main Fuse (12 amp)

3 Line Out (outlet)

4 Auxiliary 1 (Option 1) Port

5 Auxiliary 2 (Option 2) Port

6 Auxiliary 3 (Option 3) Port

7 Footswitch (Input)

8 Communications Port

Right Panel (Pneumatic panel)

9 Air Pulse Adjustment Valve

10 Serial Input (reserved)

11 Printer Output (reserved)

12 Printer Output (reserved)

13 Blower Adjustment Valve

14 Serial Number / ID Plate

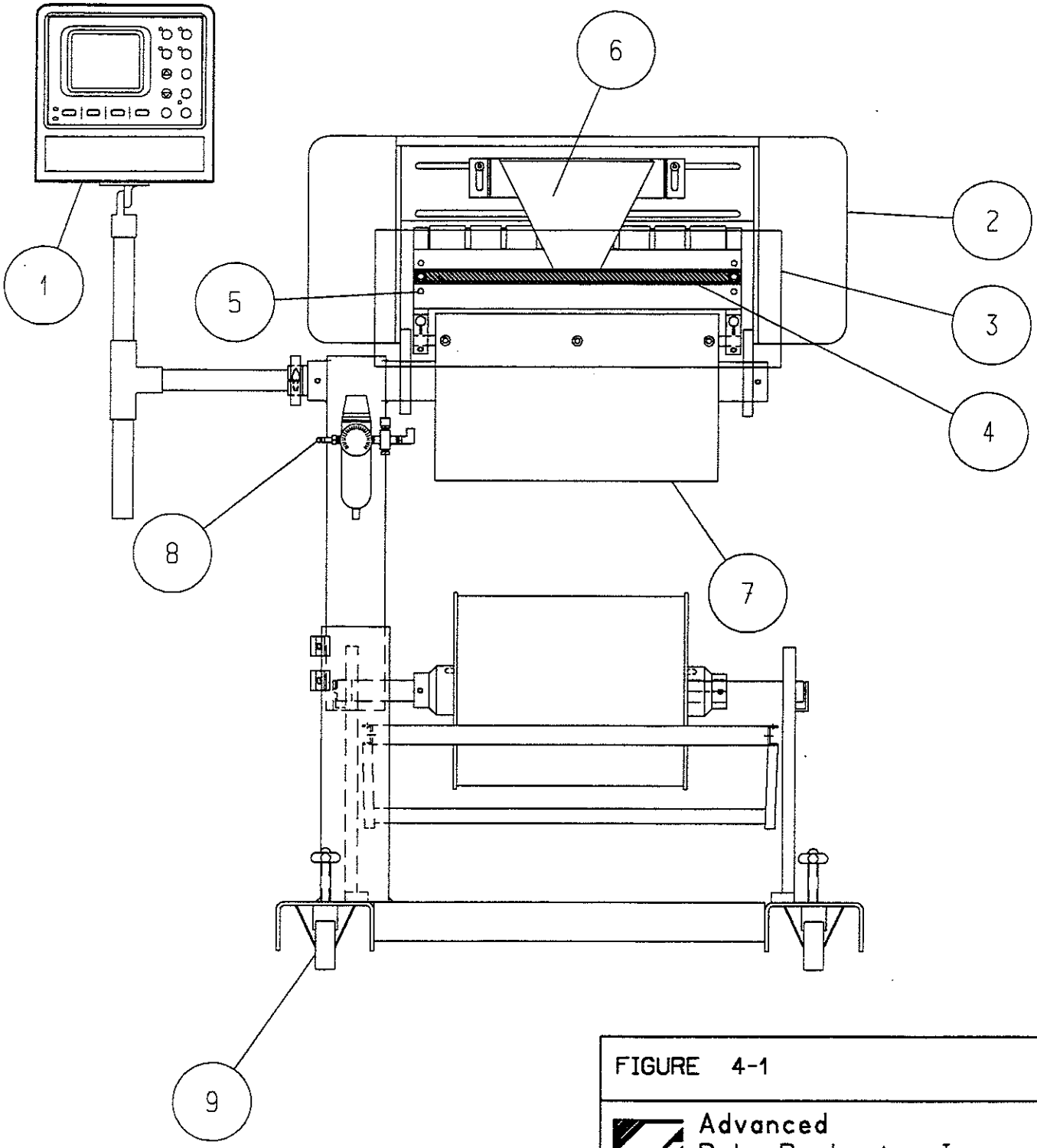

FIGURE 4-1

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DRAWING TITLE:	MODEL T-1000 FRONT VIEW OF THE T-1000		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1C	

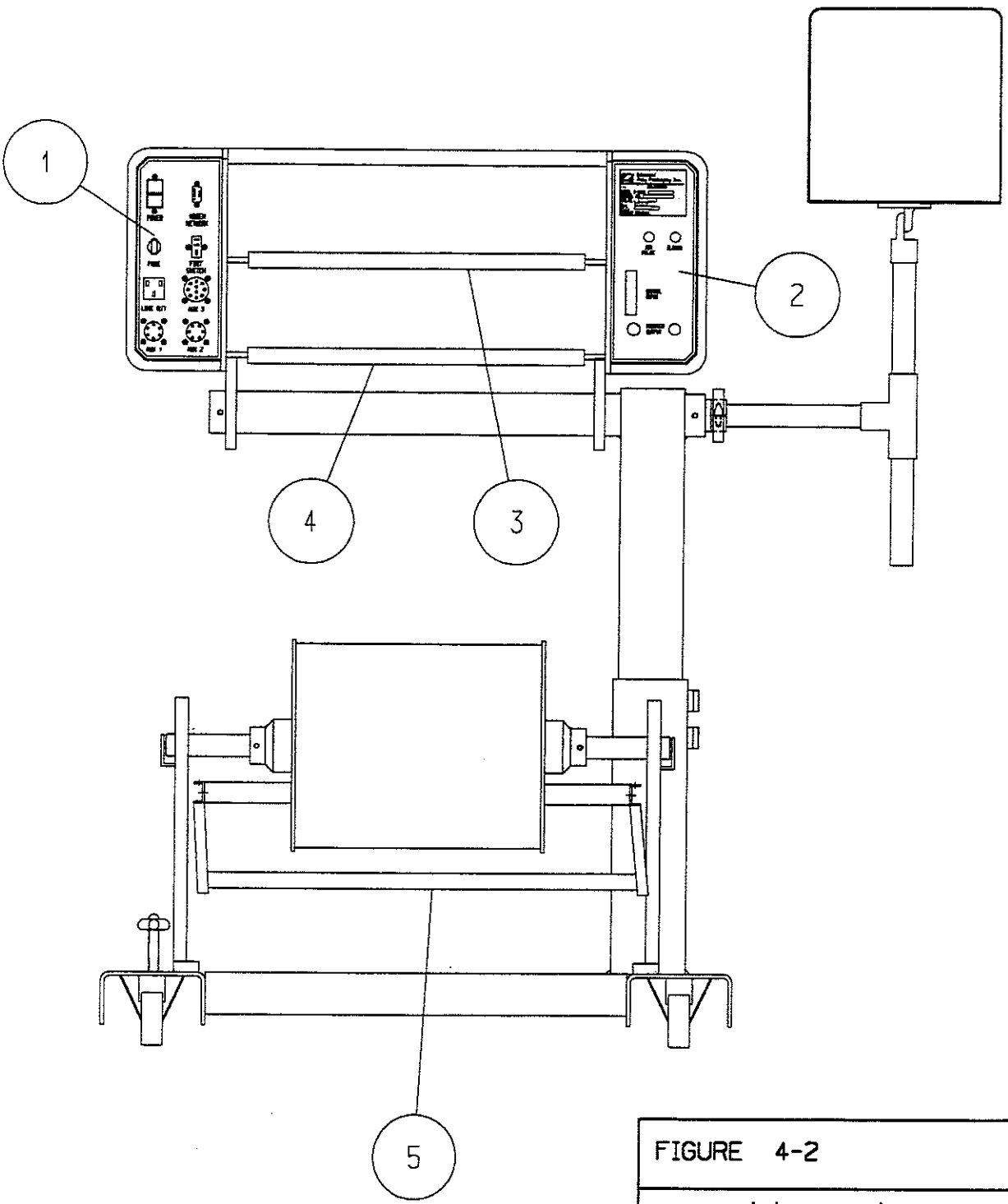


FIGURE 4-2

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000 BACK VIEW OF THE T-1000		
DRAWN BY: MFF	DATE: 10/01/95	
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO. SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1D

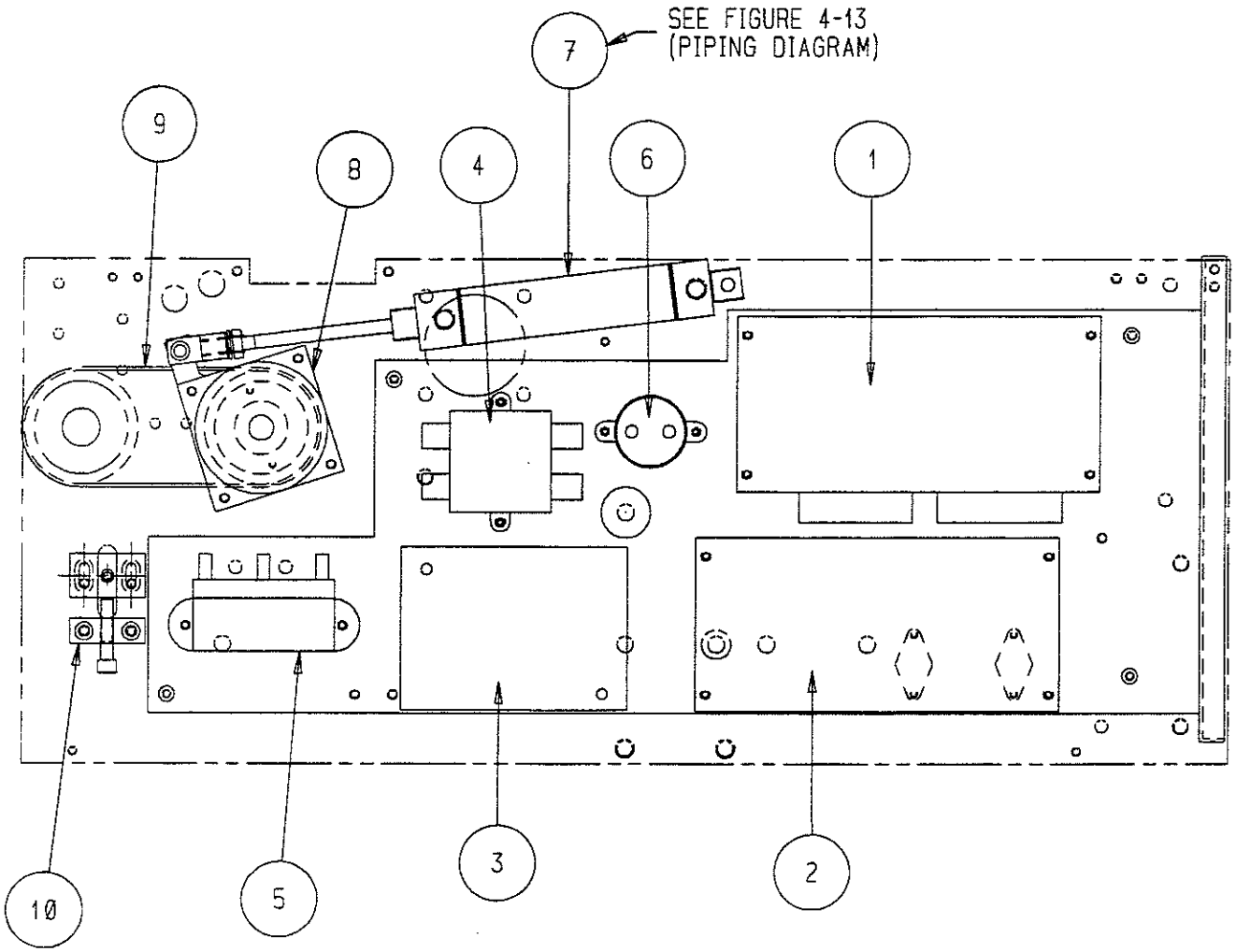


FIGURE 4-3

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 LEFT SIDE VIEW OF T-1000		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1E05	

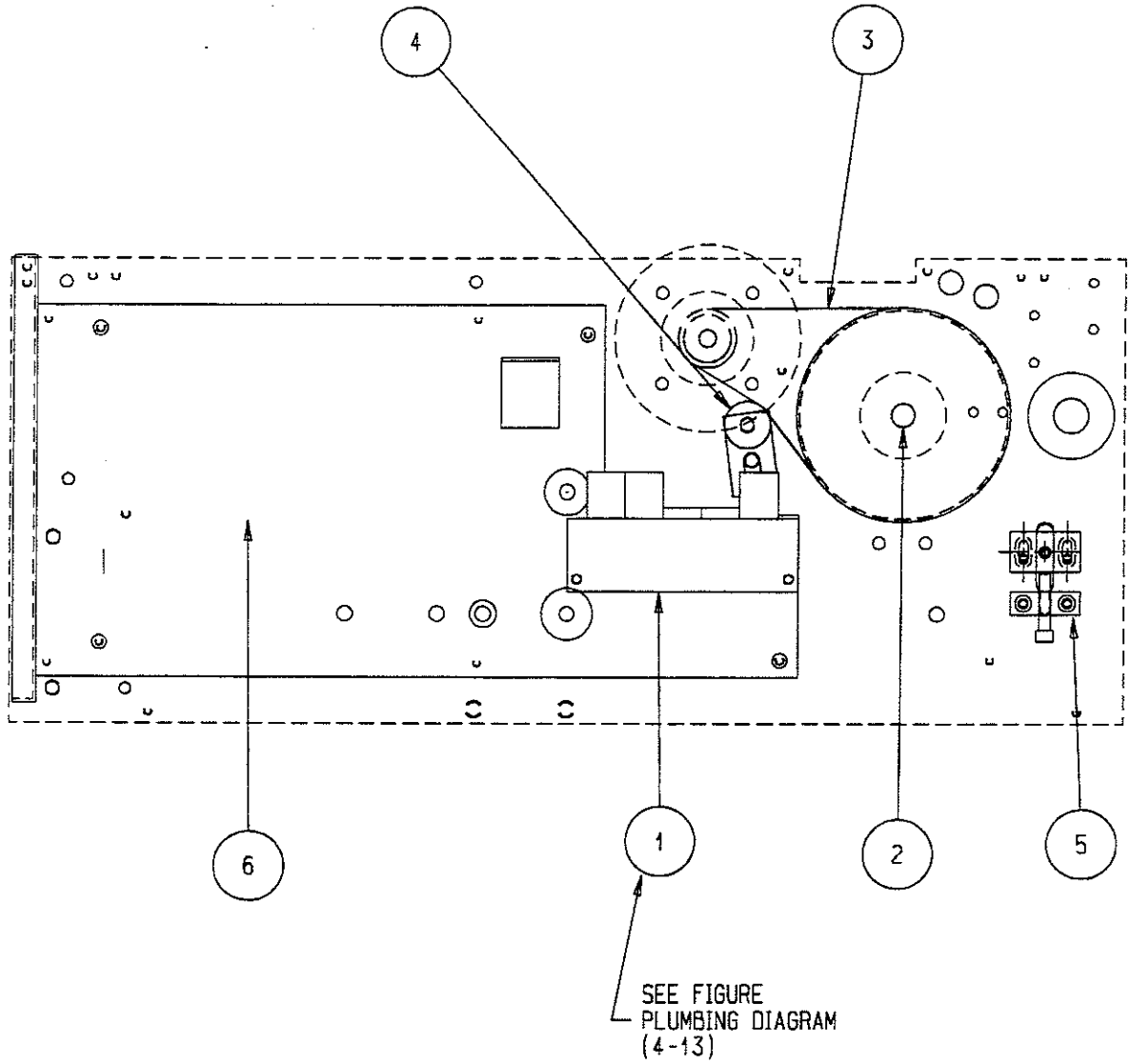


FIGURE 4-4

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 RIGHT SIDE VIEW OF T-1000		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1E06	

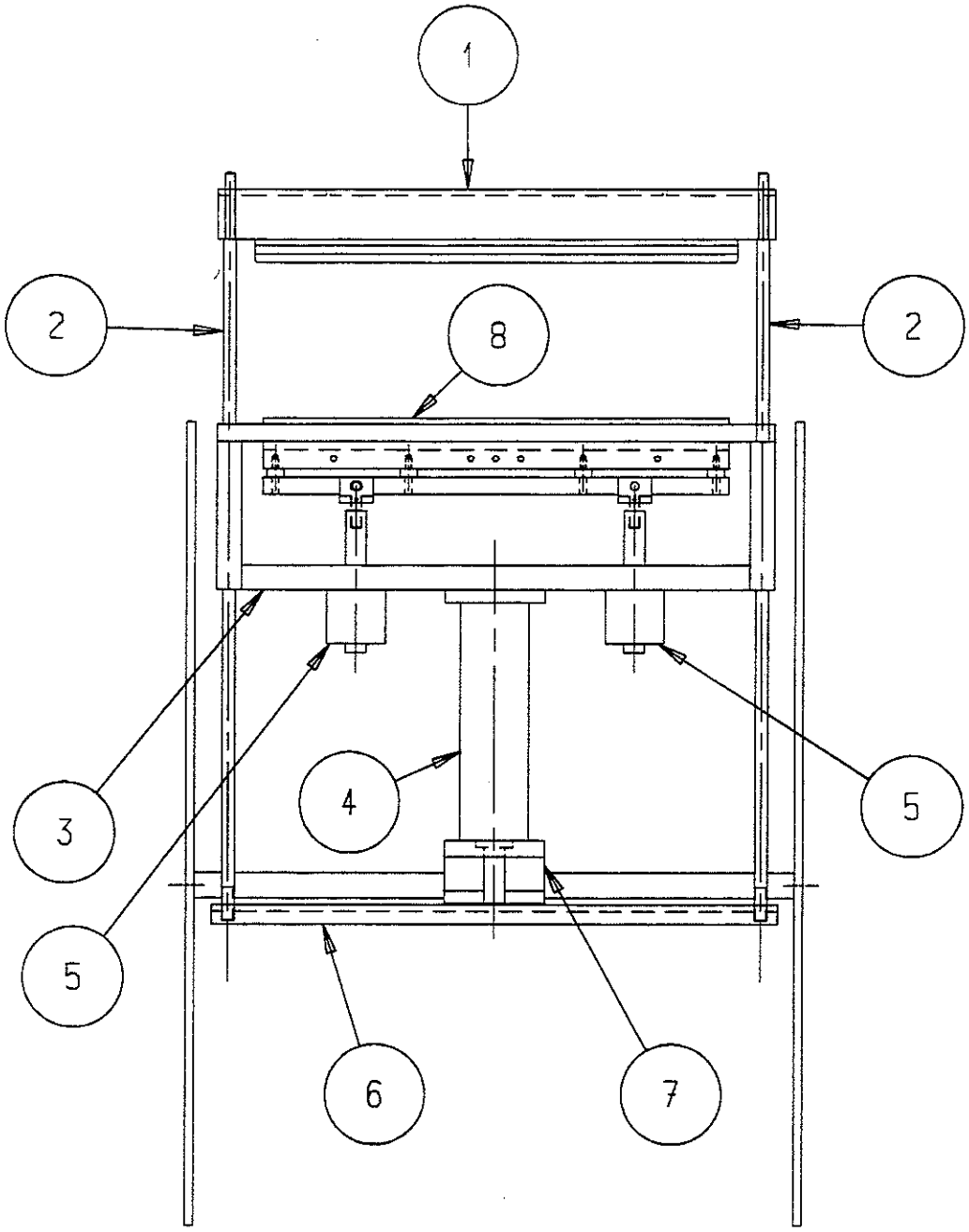


FIGURE 4-5

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 INNER FRAME VIEW OF T-1000		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1B	

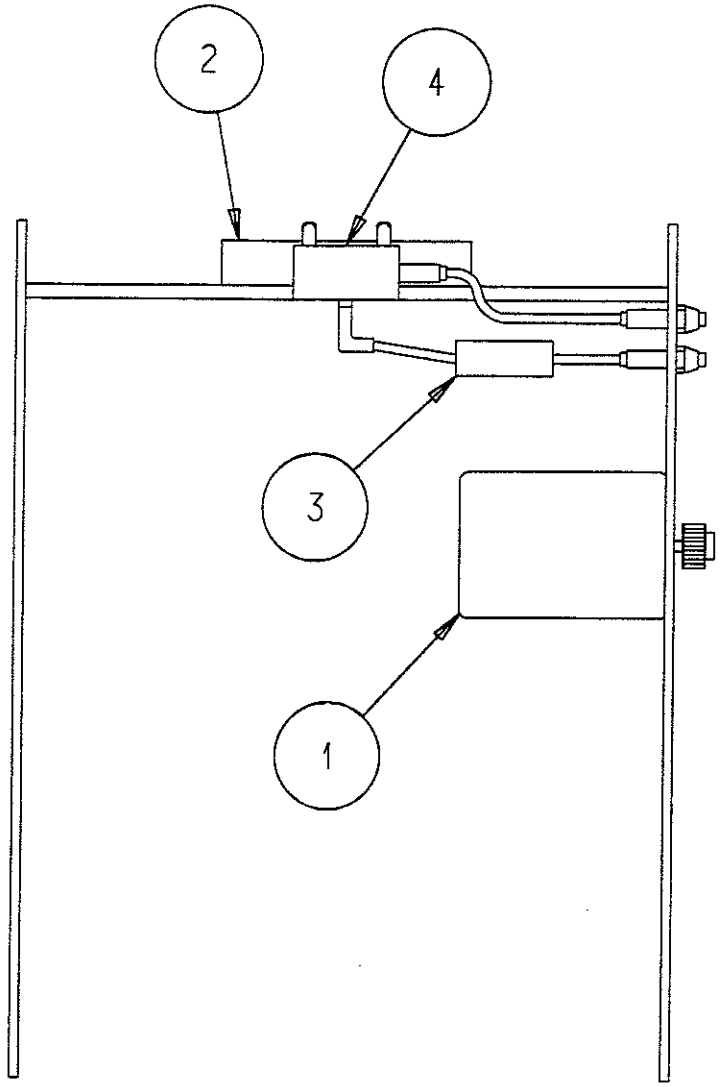


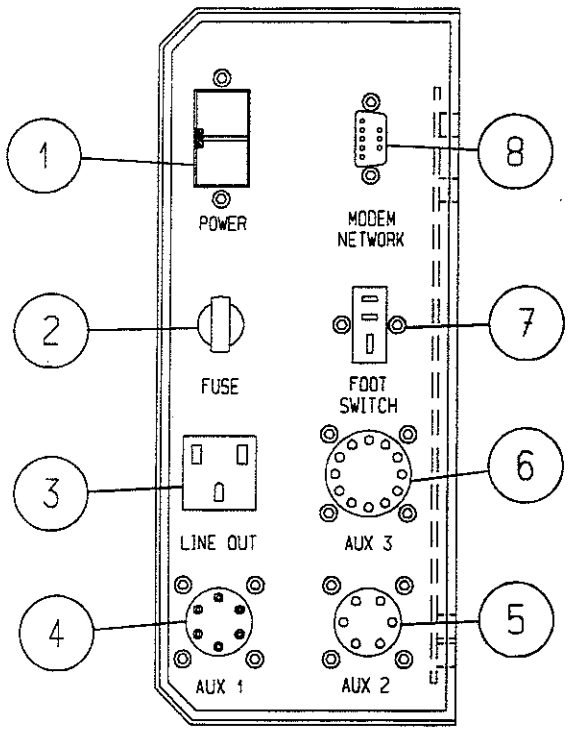
FIGURE 4-6

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000
UPPER FRAME TOP VIEW OF T-1000

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1B01	

LEFT PANNEL



RIGHT PANNEL

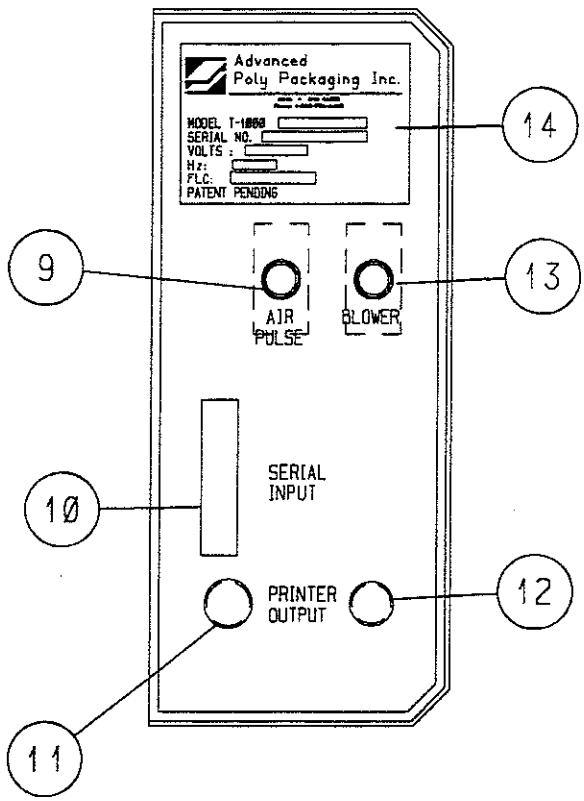


FIGURE 4-7

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 ELECTRICAL & PNEUMATICS BACK PLATES		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1E01	

* Power up
0 Start up

4.5

Component Identification, Circuit Boards

P.L.C. (Fig. 4-8)

Output Indicators (LEDs) Y

*	0	Heater Circuit - Blink - Green	
	1	Auxiliary Output (Bag Ready)	
o	2	Motor Run/Standby	IF27
	3	Pressure Bar	SAV1
	4	Flat Seal Assembly.	SAV7
	5	Heater Bar	SAV2
	6	Bag Tear Off (Perf Break).	SAV6
	7	Trim Seal Blow Off	SAV5
	8	Clutch / Perf Sensor Circuit	
	9	Air Pulse	SAV10
*	A	Blower	SAV9
	B	Load Shelf (drop)	SAV3
o	C	Brake Do Not	
o	D	~~Load Shelf (lift)~~	SAV4 Safety Light
	E	Accum-Funnel	SAV8
	F	Printer command	

4.5

Component Identification, Circuit Boards

P.L.C. (Fig. 4-8), Continued.

Input Indicators (LEDs) X

*	0	**Heater Bar Temperature Readout (Thermocouple)** - BLINK IF BAR. GREEN
	1	**Reserved**
	2	**Reserved**
*	3	**Anti-Jam Sensor (Pressure Bar)**
	4	**Footswitch**
	5	**Perf Sensor Position (P.S. Board)**
	6	**Auxiliary Input Signal (Dump product)**
	7	**Anti-Jam Over-ride Sensor (Pressure Bar)**
	8	**Palm Button (Left)**
	9	**Palm Button (Right)**
*	A	**Inner Frame Open Sensor**
*	B	**Open Thermocouple Alarm ~~(Caution: Should never be lit)~~** (OFF - OPEN THERMOCOUPLE)
	C	**Printer (No Foil) Alarm**
	D	**Counting-Funnel Sensor (Auto Detect)**
	E	**Printer (Busy)**
	F	**Bag out (no bags)**

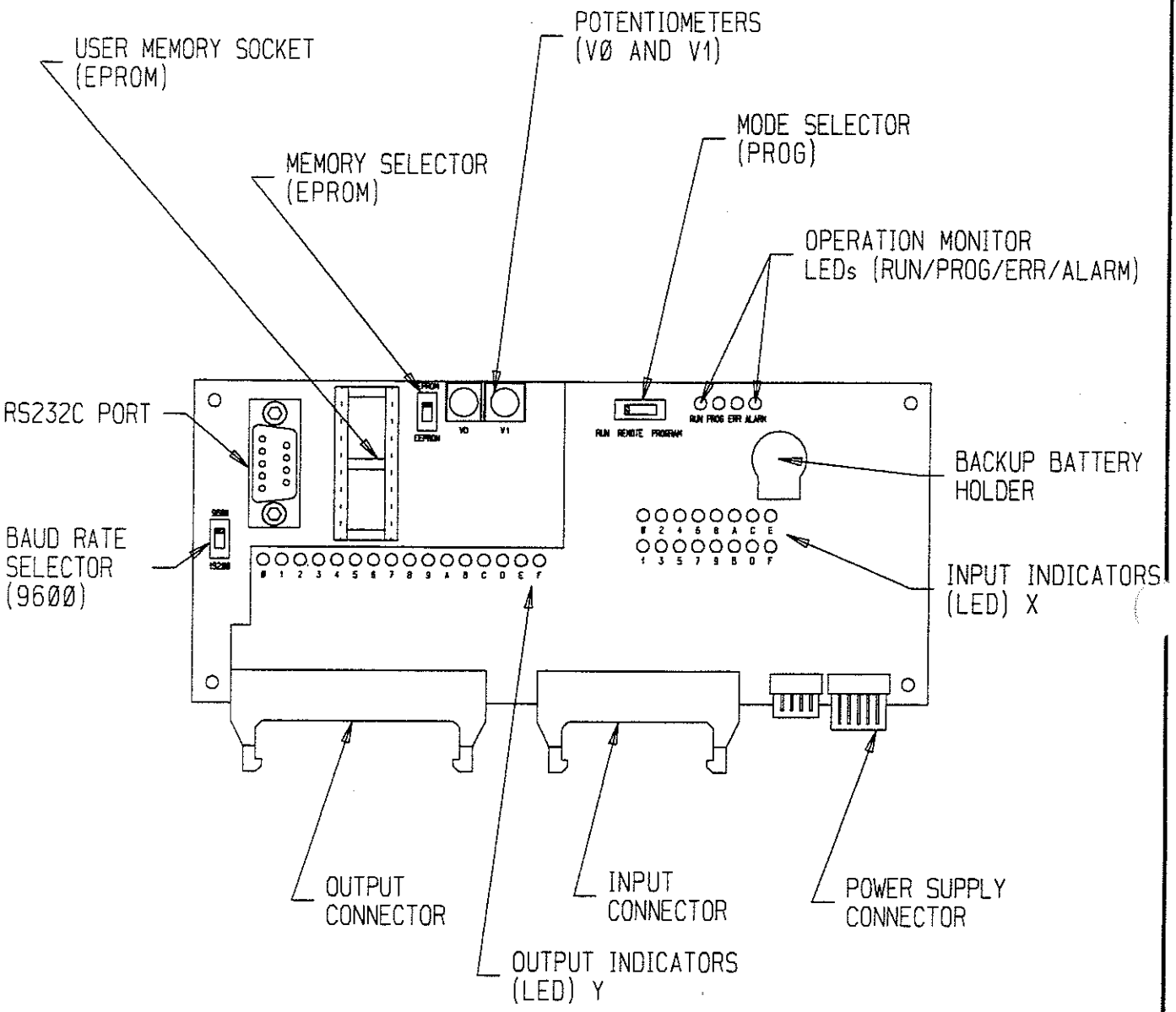


FIGURE 4-8

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 PLC CONTROLLER BOARD		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 01
APPRD. BY:	SCALE NTS	TP-T1E10	

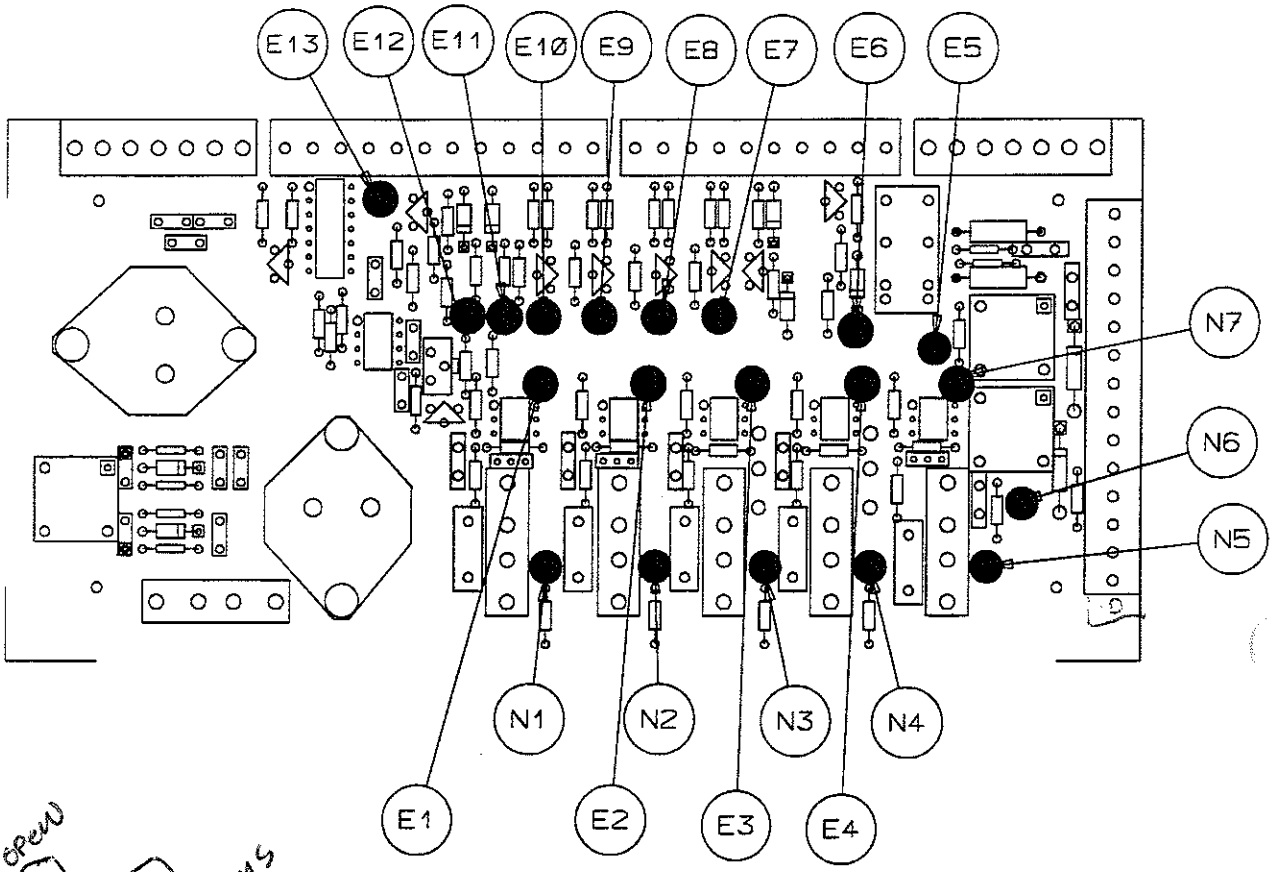
4.5

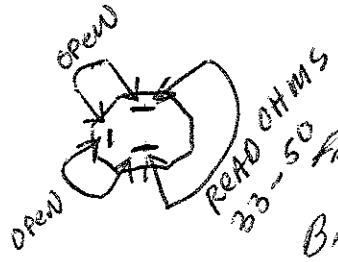
Component Identification, Circuit Boards

I.F. Board Lights (Fig. 4-9)

E1	Clutch	Red
E2	Brake.	Red
E3	Drive Motor	Green
E4	Heater	Amber
E5	Printer	Clear
E6	Auxiliary.	Red
E7	Palm Button (Left).	Red
E8	Palm Button (Right)	Red
E9	Optical Sensor (In).	Red
E10	Printer (No foil)	Red
E11	Auxiliary 3	Red - OUTPUT FAULT
E12	Reserved..	Red
E13	Open Thermocouple Alarm	Red - ~~BOND~~ - BAD THERMOCOUPLE
N1	Perf Sensor AC.	Neon
N3	Motor AC	Neon
N4	Heater Pulse AC	Neon
N5	Printer AC OFF	Neon
N6	Brake DC	Neon
N7	Clutch DC	Neon

INTERFACE BOARD LIGHTS





FRONT TRIAC - MOTOR (FRONT SET OF WIRES - BLK, PURP., RED)

BACK TRIAC - HEATER CART.

FIGURE 4-9

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 ELECTRIACL ASSEMBLY I.F. BOARD LIGHT DIAGRAGM		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPD	DATE: 10/01/95	DRAWING NO.	SHEET: 10
APPRD. BY:	SCALE NTS	TP-T1L01	

0

4.5 Led before fuse

Component Identification, Circuit Boards

I.F. Board Fuses (Fig. 4-10)

F1 **D.C. Power Supply. . . . . 2.5 AMP**

F2 **Clutch . . . . . 1 AMP**

F3 **Brake. . . . . 1 AMP** 1,000,-1,100 ohm

F4 **Motor . . . . . 3.15 AMP**

F5 **Heater . . . . . 10 AMP**

F6 **Auxiliary. . . . . 3.15 AMP**

I.F. Board Connectors (Fig. 4-11)

See wiring diagram for connectors identification (J1 - J5), Appendix C

Perf Sensor (P.S.) Board (Fig. 4-12)

E1 **Armed Sensor Light. . . . . Green**

E3 **Perf Detected Light . . . . . Red**

R9 **Perf Sensor Sensitivity Adjustment (Factory set only)**

H1 **Jumper Settings (Normal Operation - Jumper 1 & 2)**

J1 - J4 Connectors (See wiring Diagram, Appendix C)

INTERFACE BOARD FUSES

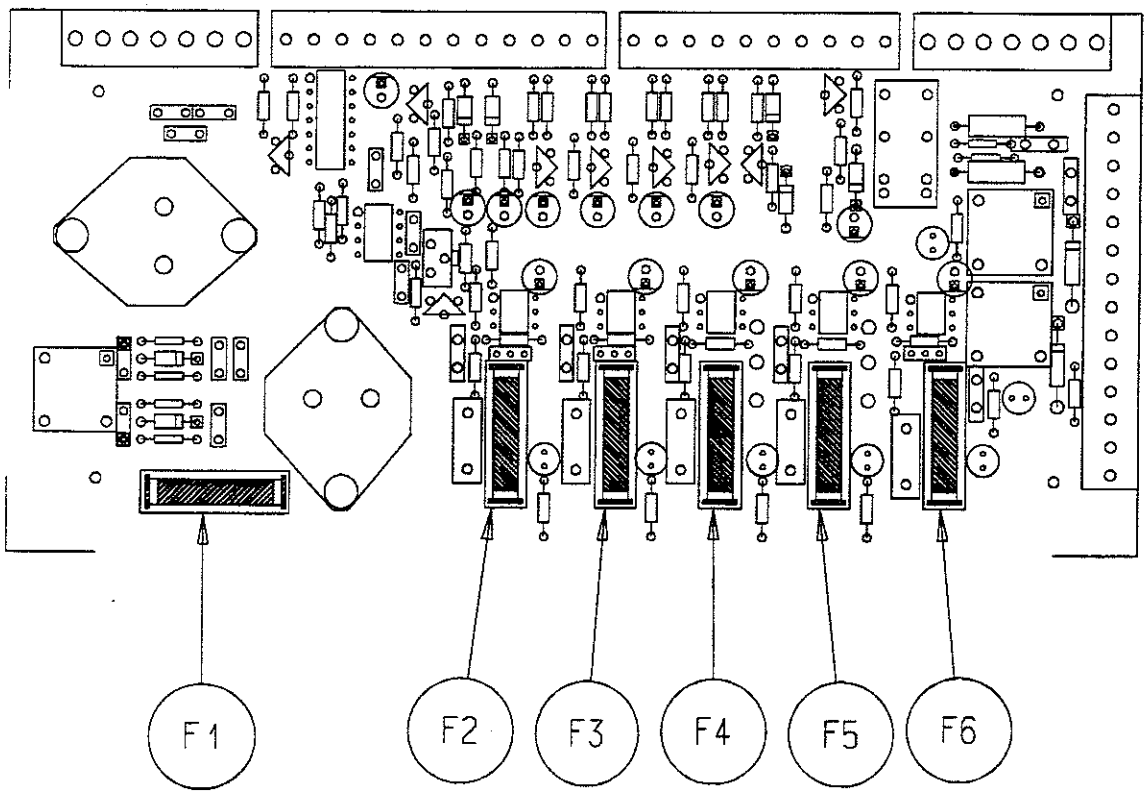


FIGURE 4-10

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 ELECTRIACL ASSEMBLY I.F. BOARD FUSE DIAGRAGM		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPD	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF
APPRO. BY:	SCALE NTS	TP-T1L02	

INTERFACE BOARD CONNECTORS

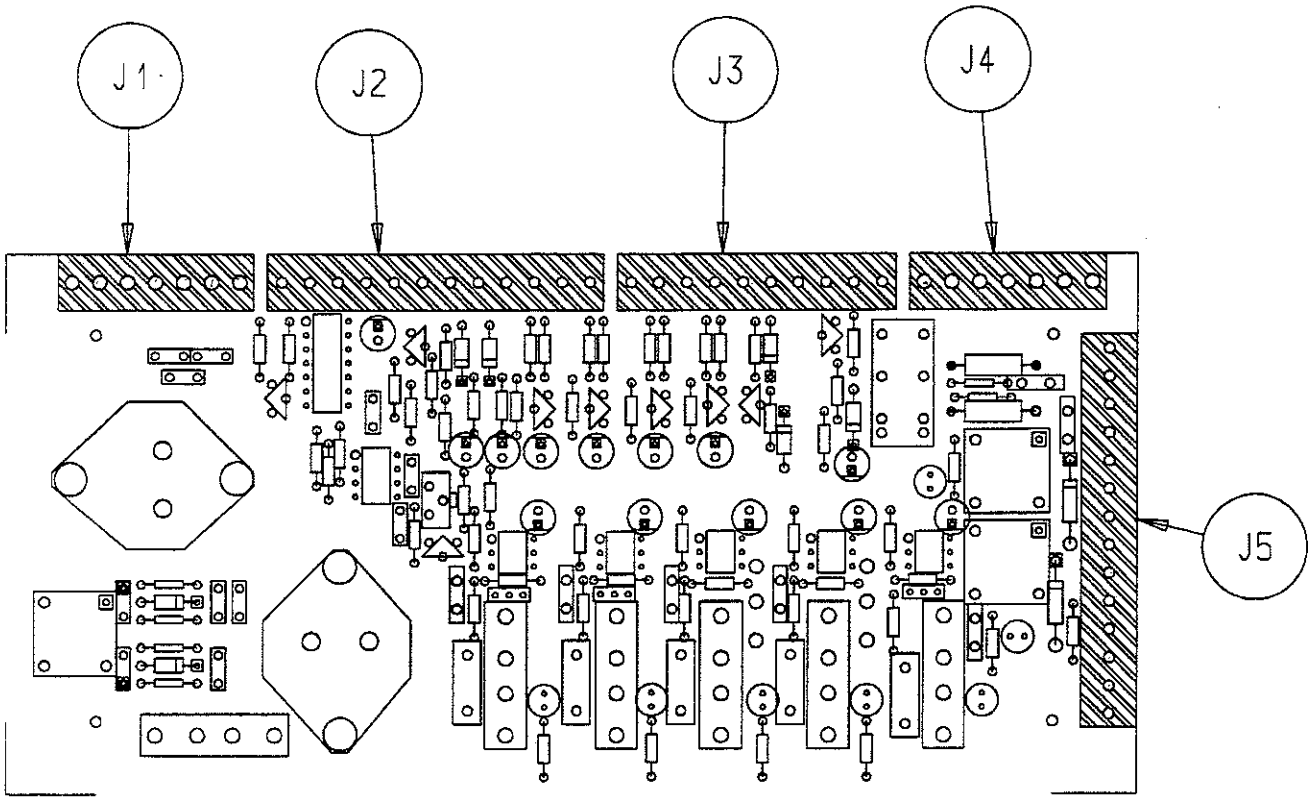


FIGURE 4-11

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 ELECTRIACL ASSEMBLY I.F. BOARD TREMINAL STRIP CONNECTOR DIAGRAGM		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPD	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1L03	

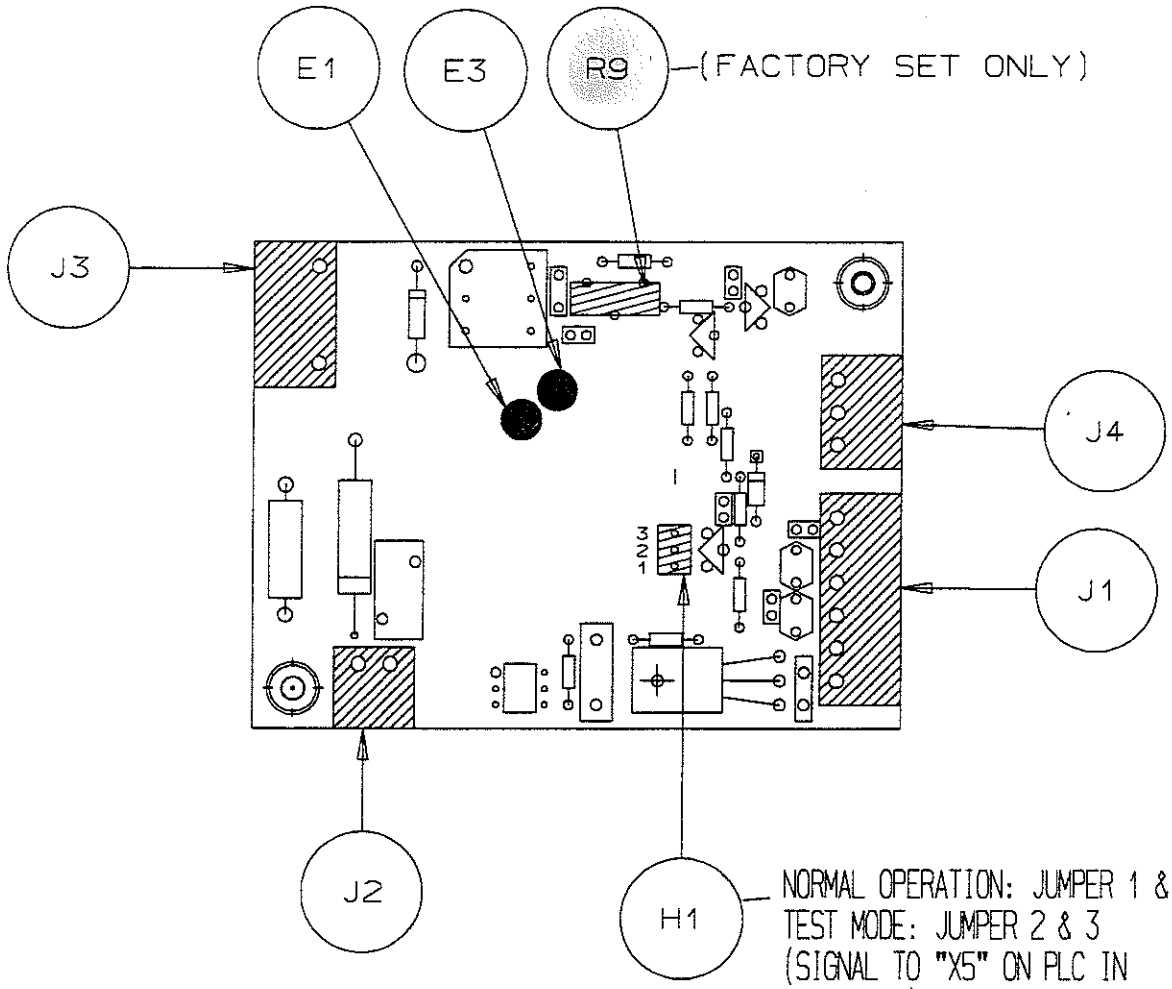


FIGURE 4-12

WARNING: HIGH VOLTAGE
DISCONNECT POWER CORD
PRIOR TO REMOVING
LEFT SIDE COVER

Advanced
Poly Packaging Inc.

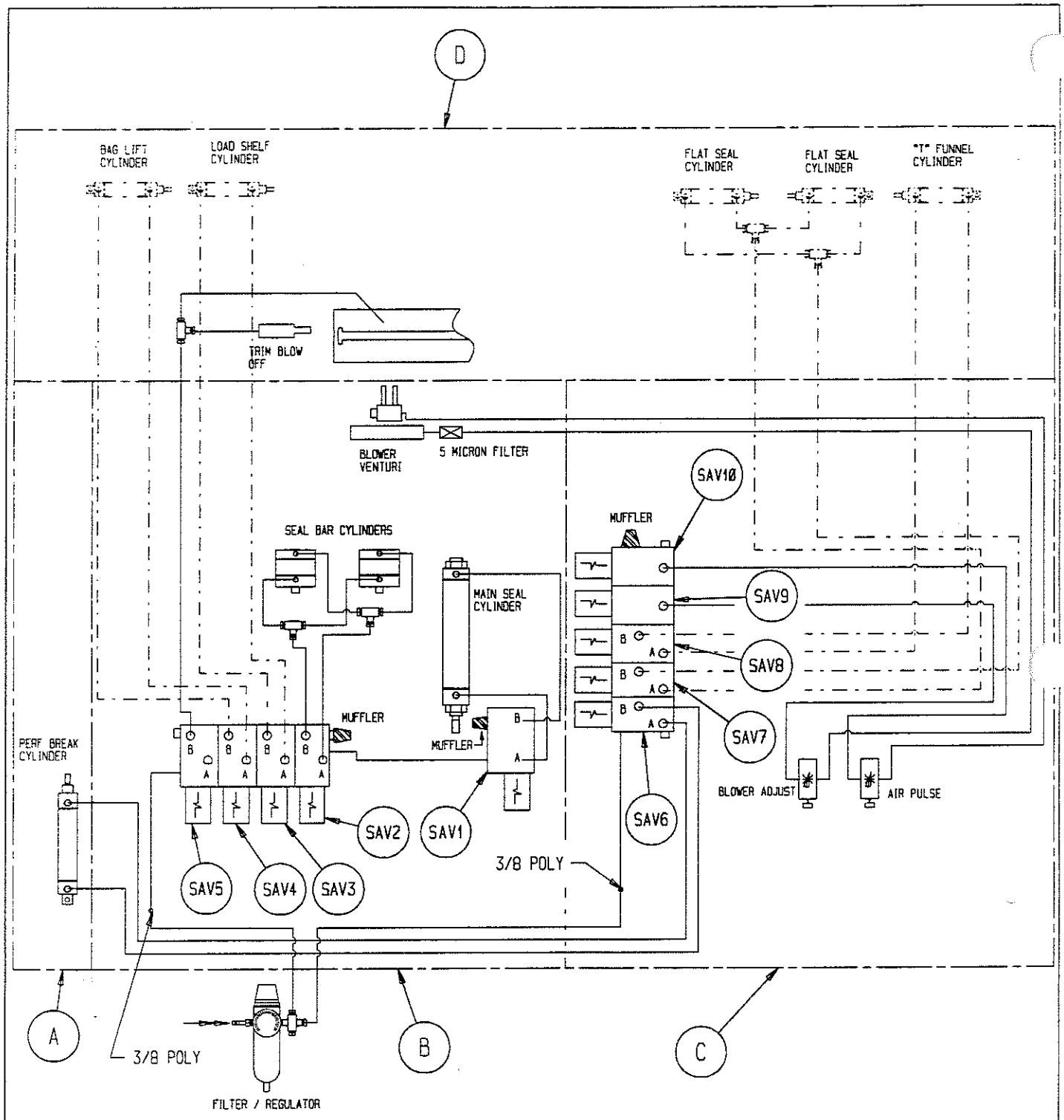
DRAWING TITLE:	MODEL T-1000 PERF SENSOR BOARD		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1L04	

4.5.1

Component Identification, Pnuematic Valves / Cylinders

Pnuematic Piping Diagram (Fig. 4-13)

SAV1	Pressure Bar Sol Valve.	Main Seal Cylinder	
SAV2	Heat Bar Sol Valve.	Seal Bar Cylinders (2)	
SAV3	Load Shelf Sol Valve (Option). . .	Load Shelf Cylinder	
SAV4	Load Shelf Sol Valve (Option). . .	Bag Lift Cylinder	
SAV5	Trim Seal Sol Valve (Option) . . .	Valve	Trim Blower
SAV6	Tear Off Sol Valve	Tear Off Cylinder	
SAV7	Flat Seal Sol Valve (Option)	Valve	Flat Seal Cylinders (2)
SAV8	Accum. Funnel (Option)	Accum. Funnel Cylinder	
SAV9	Blower	Valve	Filter . . . . Venturi
SAV10	Air Pulse	Valve	Air Pulse Tubes



LOCATION
A. LEFT SIDE PANNEL
B. INSIDE FRAME
C. RIGHT SIDE PANNEL
D. FRONT OF MACHINE

REPRESENTS OPTIONAL EQUIPTMENT - - - - - -

FIGURE 4-13

SEMPAC Advanced Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000
PNEUMATICS PIPING DRAWING

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1M	

4.6

Machine Adjustments

Periodically, the T-1000 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.

4.7

Tracking and Alignment Adjustments

To avoid spillage of product in an automatic loading operation and loss of production in a manual loading operation, make machine adjustments to correct the tracking and alignment of the web of bags.

4.8

Compression (NIP) Roller Adjustment

The drive roll compression is the force that exists between the two feed rolls (rubber covered grooved roll and grooved aluminum 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, motor, clutch and brake mechanisms.

Turn the power switch to the OFF position and unplug the power cord. Remove the left and right side covers. The compression adjustment is located on the lower outside right and left side-plates (Fig. 4-14 & Fig. 4-15).

Compression adjustment is a two step process. First, the upper and lower roller are adjusted to make the lower roller parallel to the upper roller. Then, the lower roller is adjusted (raised) for proper compression.

LEFT SIDE PANNEL

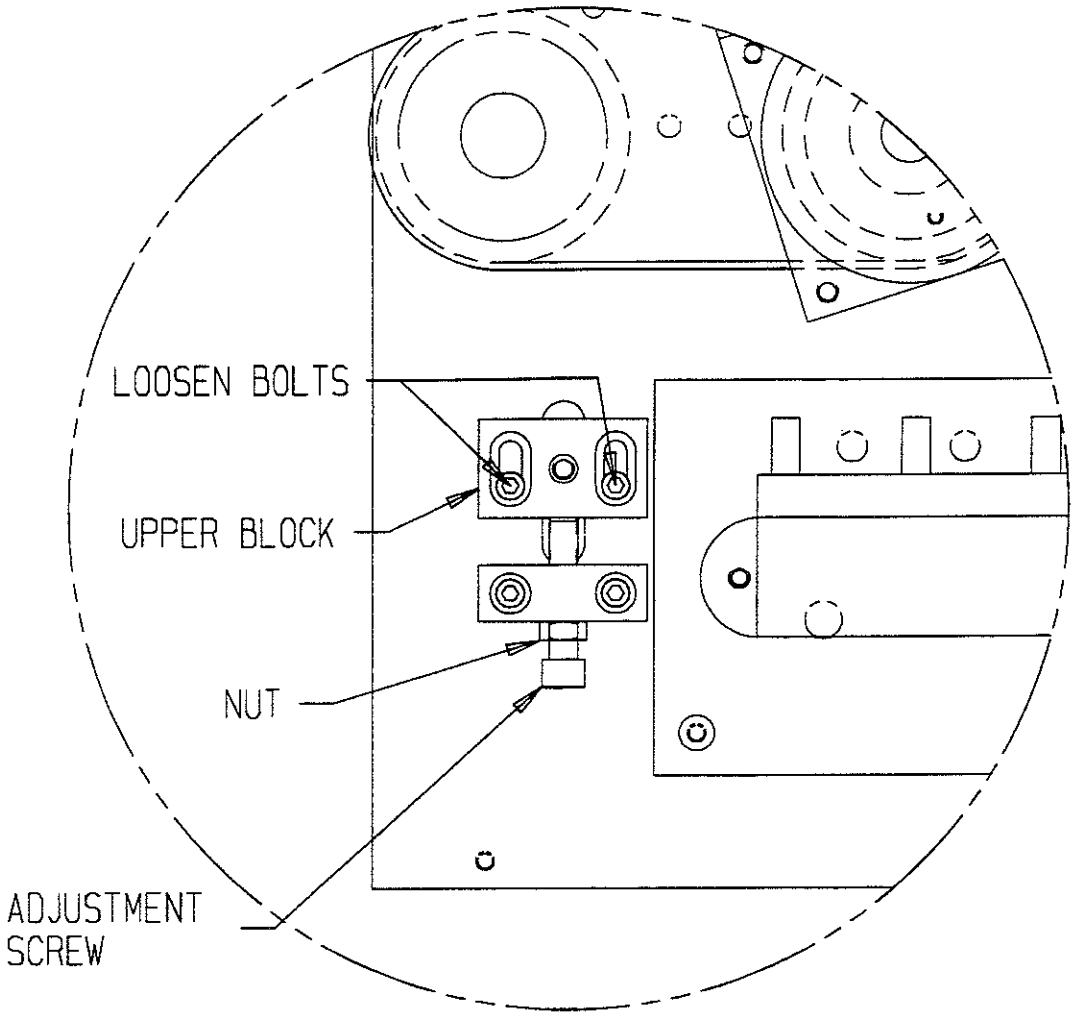


FIGURE 4-14

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 COMPRESSION (NIP) ROLLER ADJUSTMENT		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1E08	

RIGHT SIDE PANNEL

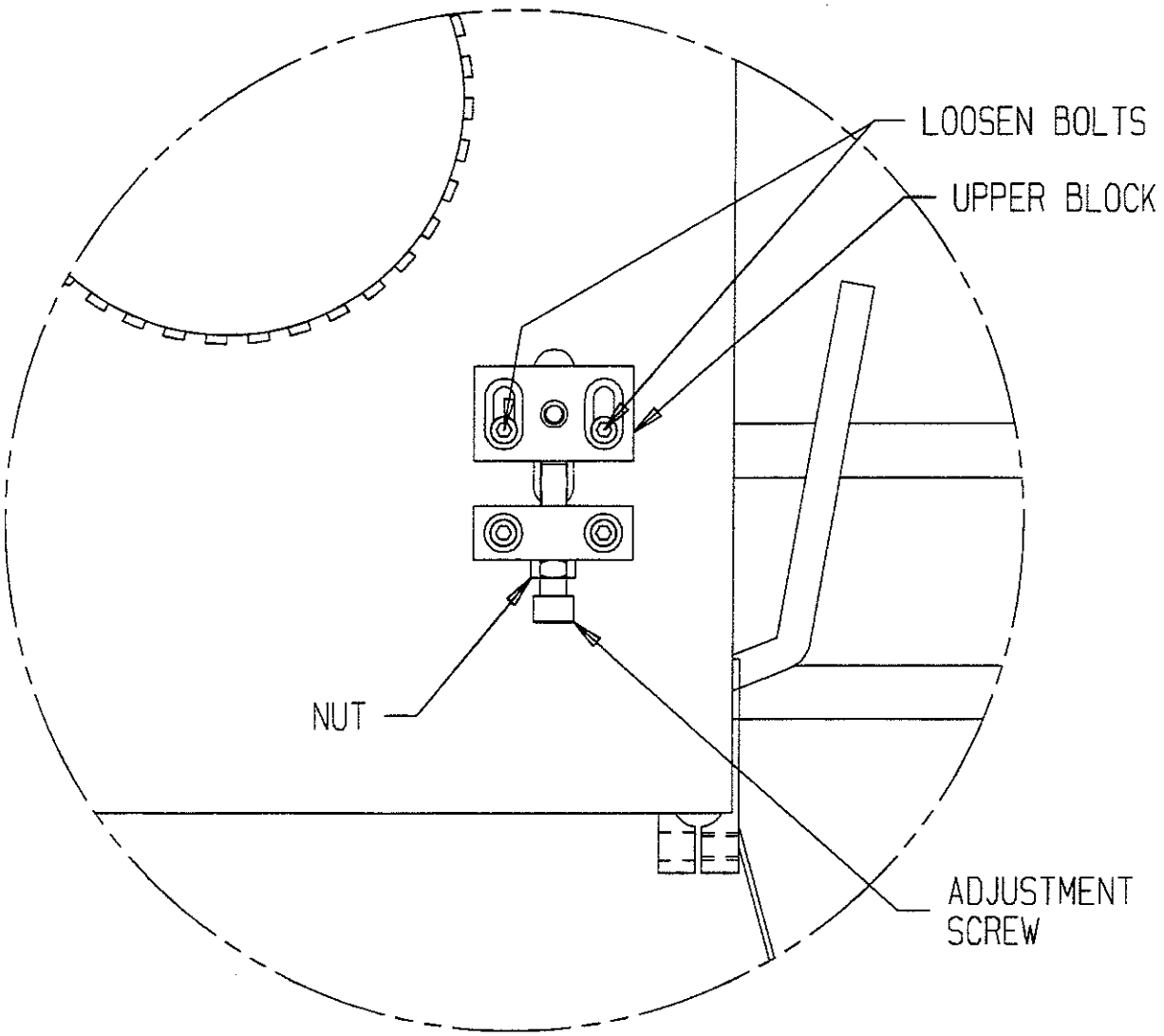


FIGURE 4-15

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 COMPRESSION (NIP) ROLLER ADJUSTMENT		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1E07	

4.8

Compression Roller Adjustment, Cont.

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-clockwise until the lower roller is parallel to the upper roller and leaving 1/16" gap between the rollers. Turn the adjustment screw clock-wise 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-1000 showing light in the gap of the rollers will assist in judging whether the upper and lower roller are parallel.

With the rollers slightly touching and parallel, turn each adjustment screw approximately 1/2 turn clockwise. Then test the compression by putting a bag between the rollers. Holding the brake pulley to stop it from turning, attempt to pull the bag between the rollers. If the bag pulls out easily turn the compression adjustment screws 1/2 turn clockwise. Continue this adjustment until the bag is slightly difficult to pull out of the rollers.

***Caution**: Over-tightening of the compression adjustment screws may cause damage to the upper (rubber) roller or the motor and excessive wear on the clutch.*

When you are satisfied with the compression, slightly lower the inner frame and slowly raise 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 on the upper block of the compression tension assembly. Then re-tighten the nut on the adjustment screws.

Replace the covers, plug the cord into the power outlet and turn the main power on.

4.9

Dancer Assembly Adjustments (Roller Shaft)

A roller shaft, holding in position a roll of bags, will rest on the side-plates of the dancer assembly. The roller shaft must be parallel to the upper and lower guide rollers to allow proper tracking through the center of the T-1000. If the roller shaft is not parallel, the web of bags may track to the left or right.

Note: The roller shaft should not be out of alignment unless damaged or jolted in shipment.

4.10

Dancer Bar & Brake Strap Adjustment

The dancer assembly maintains proper bag web tension throughout the stop-start feed motion of the T-1000.

Web tension is required for proper tracking. If the tension is insufficient, the web may track left or right. Thinner bags require less tension than thick bags. Web tension is created by friction of the brake strap along with the weight of the dancer bar pulling downward on the web of bags. Friction of the brake is created by the weight of the bag roll and the spring tension on the brake strap. As the dancer bar raises, spring tension is decreased and friction is decreased.

If the web of bags is slack between the dancer roller and nip rollers, there is not enough tension on the bags. If the web of bags break prematurely, the tension is too high.

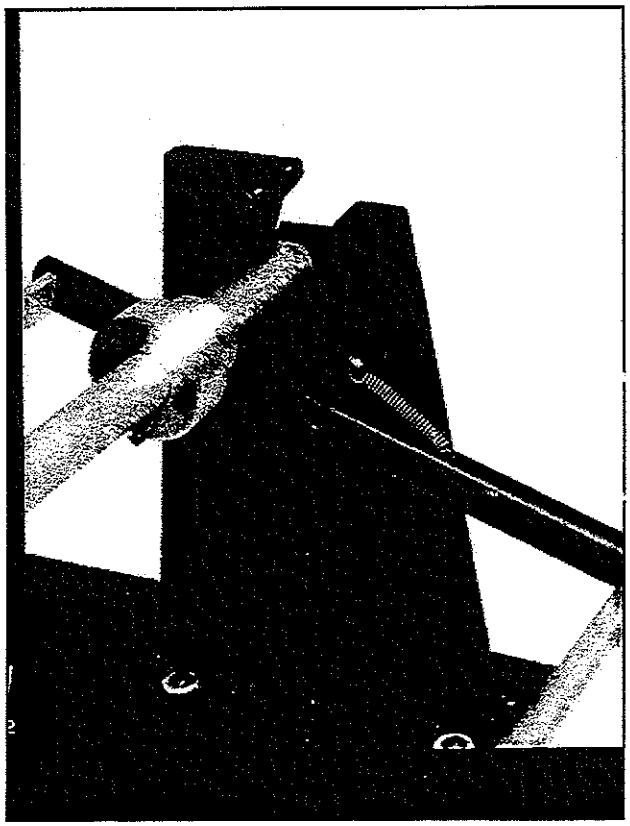


Figure 4-16

4.10

Dancer Bar & Brake Strap Adjustment, Cont.

To correct the web tension, the dancer bar or brake strap spring must be adjusted (Fig. 4-16).

To increase brake strap tension, relocate the spring on the dancer rail, one hole at a time, closer to the dancer roller. To decrease tension with the brake strap, move the spring on the dancer bar, one hole at a time, away from the dancer roller.

The dancer bar pivots on two shoulder bolts which extend from the side-plates. The downward force can be adjusted by repositioning the pivot point. To increase tension with the pivot position, move the pivot position away from the dancer roller. To decrease tension, move the pivot position closer to the dancer roller.

Note: Inspect the dancer bar to ensure that it is parallel to the roller shaft.

4.11

Upper Roller Guides

Two aluminum web guides, are located on the upper rear roll of the T-1000 used for *fine* adjustment of tracking. Once the web is tracking within +/- 1/8" left to right, the aluminum web guides can be used to further assist tracking. Hold the upper roller in place while turning and sliding the aluminum guides close to the bags without touching the bags.

NOTE: If the bags are not tracking properly, the aluminum 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 as described in section 4.8.

NOTE. If bags have an air relief hole or hanger hole shift the bag to the right or left of center to avoid having the hole pass directly under the perf sensor.

NOTE. Use the web guides for minor adjustment only. Major adjustment of the guides requires relocation of the bag roll on the bag roll shaft.

4.12

PTFE Adjustment

An anti-stick sheet which prevents the bag from sticking to heater bar surfaces is located immediately behind the front plate. The sheet should periodically be inspected for wear or damage. If holes or tears exist, the rolls can be turned (rotated) to cover the contact surfaces with fresh material.

If a change of material is required, turn the main power to the OFF position and unplug the power cord. Lower the inner frame by pulling the handle downward. The rollers are located on the outside lower frame, on the left and right side of the inner frame which extends beneath the side-plates (Fig. 4-17).

To adjust the material, turn the lower roller clockwise approximately 1/4 turn using a flat-head screw-driver. When fresh material is in place, turn the roller counterclockwise releasing ALL of the tension on the sheet.

CAUTION: If sheet tension is not released, the material will tear when the seal bar engages.

4.13

PTFE Replacement

Turn the power to the OFF position and unplug the power cord. Remove the four screws which hold the front plate to the inner frame. Pull the front plate from the inner frame and slide the front plate along the guide rods away from the seal assembly.

Then slide the rollers and the roller holder away from the heater bar as a unit. Remove and discard the anti-stick sheet. Replace the sheet and rollers with the new material wrapped on the upper roller. Place the rollers on the roller holder, ensuring springs are seated in the grooves on the rollers. Replace the rollers and holder as an assembly (with the unexpended material on the upper roller). Replace the front plate and retighten the four screws. Adjust the sheet as described in section 4.12.

Note: Fiber spacers are located behind the front gripper plate which may fall when removing the front plate screws.

RIGHT SIDE

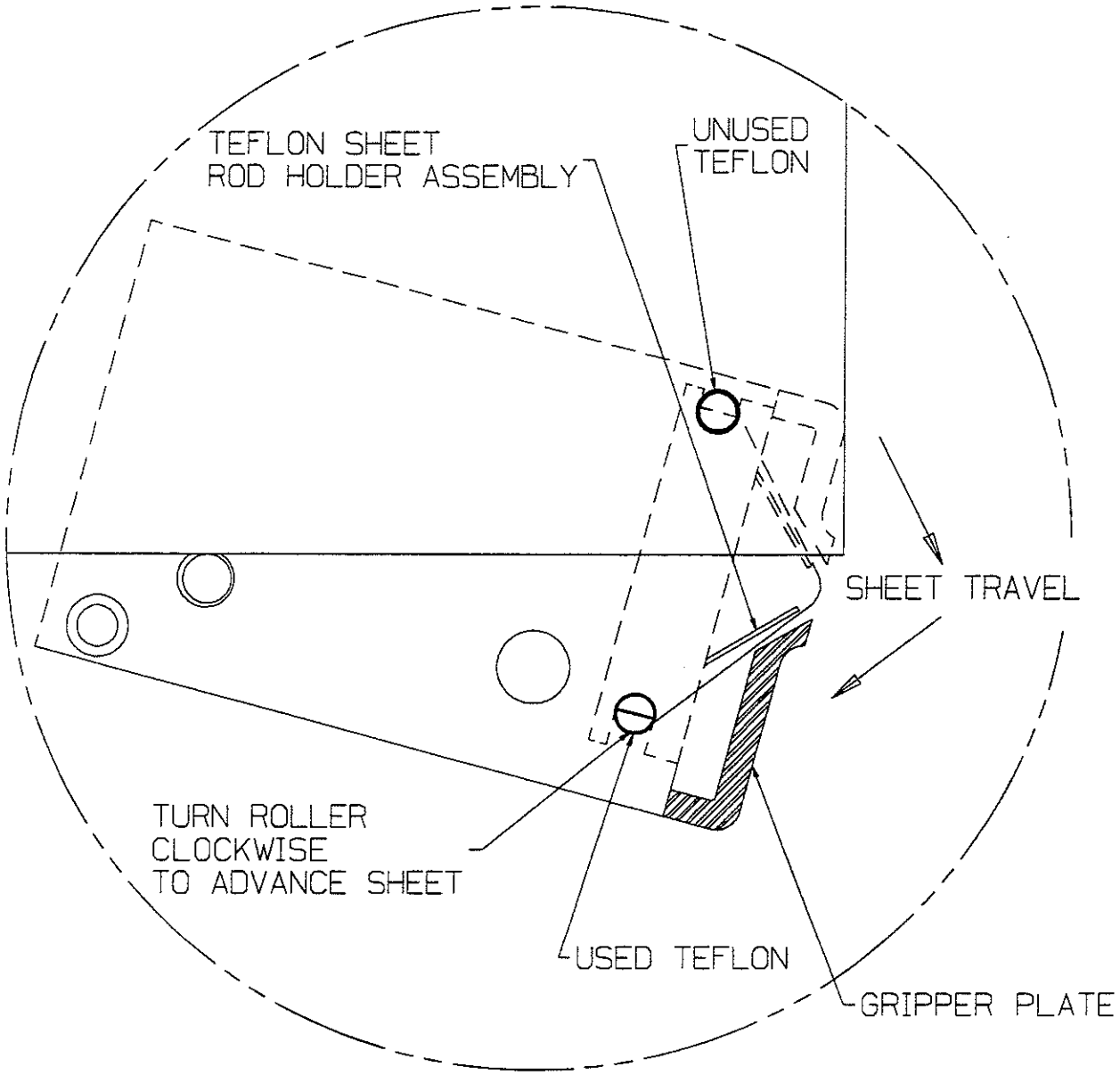


FIGURE 4-17

Advanced
Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000
TEFLON ADJUSTMENT FOR THE T-1000

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1T03	

4.14

Pressure Bar Adjustment

The pressure bar, when actuated by the seal cylinder, is forced against the front plate. The pressure bar must be parallel to front plate to avoid excessive wear of components.

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. As the pressure bar approaches the front plate, you can see whether the pressure bar is parallel to the front plate. If it is not, remember which side of the pressure bar touches first along with the distance of the gap on the opposite side.

To make the pressure bar parallel to the front plate, the rear channel which holds the guide rods, must be adjusted. Loosen the nuts inside the channel. On the side opposite of the "touching" side, turn the nut, located on back side of the channel, clockwise the same distance the pressure bar was out of alignment. Retighten the inner-channel nuts and test the pressure bar again by sliding it in and out a few times. Ensure it is parallel to the front plate by slowly pushing it against the front plate. Readjust the nuts on the rear channel as required.

Note: Pressure bar adjustment should only be necessary after rod or bushing replacement.

4.15

Drive Belt Tension Adjustment

The T-1000 has two belts, one of which will periodically require adjustment.
The drive belt (Fig. 4-18) will require adjustment if it becomes loose during normal operation.

Turn the power to the OFF position and unplug the power cord. Remove the right cover and inspect the tension of the belt by pressing down on the belt between the drive pulleys.

The belt should flex approximately 1/4". If the belt appears too loose, loosen the screw which is fastened to the drive belt tension assembly and push bearing tightly against the belt. Retighten the screw and test the tension. If sufficient, replace the cover, plug in the power cord and turn on the T-1000.

Note: If the belt "chatters", it is too tight.

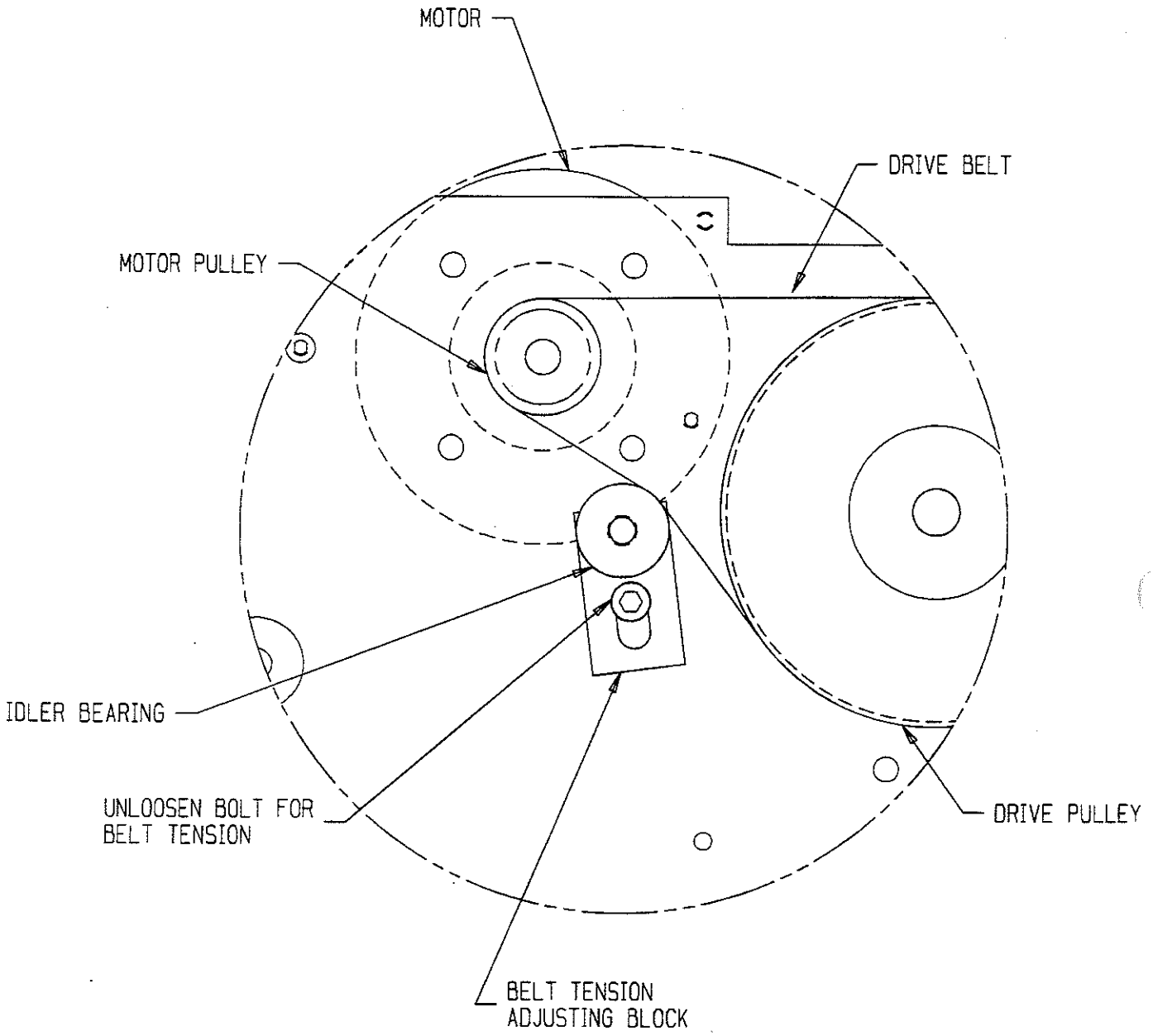


FIGURE 4-18

Advanced
Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 DRIVE BELT TENSION ADJUSTMENT		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1E09	

4.16

Sealer Cylinder Adjustment

Two "speed controls" operate the speed of the cylinder 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.

The valve which controls the pressure bar cylinder is located next to the heater bar cylinders on the inner frame. (Fig. 4-19).

The adjustment screw labeled "B" controls the speed of the pressure bar INWARD (towards the front plate). The adjustment screw labeled "A" controls the speed of the pressure bar OUTWARD (away from the front plate).

To increase the speed of the pressure bar INWARD, turn the screw labeled "B" counter-clockwise.

To decrease the speed of the pressure bar INWARD, turn the screw labeled "B" clock-wise.

To increase the speed of the pressure bar OUTWARD, turn the screw labeled "A" counter-clockwise.

To decrease the speed of the pressure bar OUTWARD, turn the screw labeled "A" clock-wise.

Adjust the speed of the pressure bar so that is moves in and out rapidly, in a fluid manner, without causing the pressure bar to "bang" in or out.

Note: If the T-1000 is in a Drop Frame configuration, the pressure bar valve will be located on the opposite side of Figure 4-19.

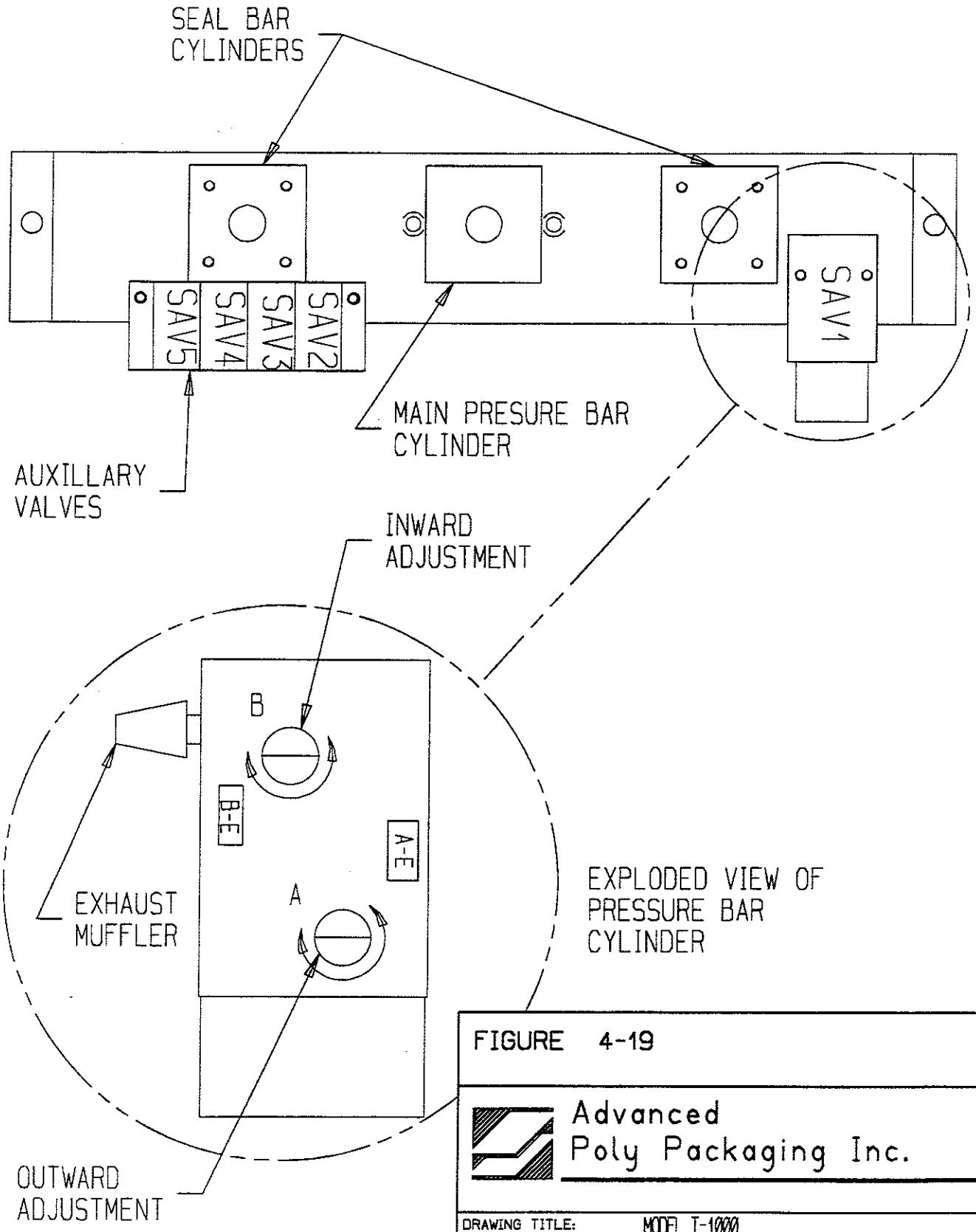


FIGURE 4-19

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 INNER FRAME VALVE ADJUSTMENTS (SAV1) PRESSURE BAR CYLINDER		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1B06	

4.17

Pressure Bar (Rubber) Replacement

Located along the inside of the pressure bar is a strip of rubber, held on the pressure bar by a channel, pressing on the edges of the rubber.

The rubber compresses against the front (gripper) plate holding the bag in place during sealing and during bag tear off. If the rubber become brittle, torn, gouged, or otherwise worn, it should be replaced to assure strong seals.

To replace the pressure bar rubber, simply pull one end of the rubber from the channel. The rubber will come out of the channel quickly and easily.

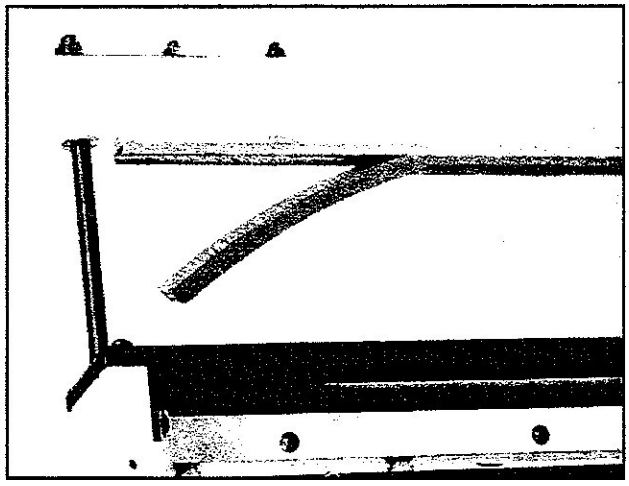


Figure 4-20

To install a fresh piece of rubber, press one edge of the rubber into the channel then the other edge. Work the rubber into the channel in small increments along the length of the channel (Fig. 4-20).

If you used PTFE anti-stick tape to cover the surface of the rubber, place the PTFE on the rubber along its length. If the PTFE extends beyond the rubber, cut off the excess.

Note: PTFE may be added to the pressure bar rubber if the bag sticks to the rubber after loading and sealing. The bag may stick to the rubber if the product and bag is light in weight and if the rubber is dirty.

Note: Frequently clean the rubber with alcohol to remove buildup of dirt or other contaminants.

4.18

Anti-Jam Adjustment

The anti-jam device is designed to protect the T-1000 from damage when an obstruction is encountered in the seal area (area between the pressure bar and front (gripper) plate). If properly adjusted, the pressure bar will retract if an obstruction is encountered in the seal area.

4.18

Anti-Jam Adjustment

The anti-jam device is designed to protect the T-1000 from damage when an obstruction is encountered in the seal area (area between the pressure bar and front (gripper) plate). If properly adjusted, the pressure bar will retract if an obstruction is encountered in the seal area.

The pressure bar houses springs which cause the rubber and holder to compress. When the rubber holder compresses, a sensor is activated causing the pressure bar to retract. The sensor is defeated when the pressure bar is approximately 1/8" from the gripper plate (Fig. 4-21).

The anti-jam can quickly be tested while the T-1000 is operating using care, but should be thoroughly tested by disconnecting air and power and removing covers. To quickly test the anti-jam device, place a 3/8" diameter flexible poly tube against the front (gripper) plate perpendicular to the seal bar opening. Press the footswitch allowing the pressure bar to compress the poly tube against the front plate. If the pressure bar does not immediately retract and place the T-1000 in the STOP mode, the anti-jam device is not properly adjusted. Test the anti-jam device along the entire length of the pressure bar using the 3/8" poly tubing as a test device.

CAUTION: *To avoid personal injury, do not place fingers or hands into the seal area of the T-1000 while power is ON or air is attached. Do not test the anti-jam device with hands or fingers. Ensure the poly tube which is used for testing is long enough to keep fingers or hands away from the seal area of the T-1000.*

To thoroughly test and adjust the anti-jam device, you must first turn the power to the OFF position, disconnect the air line from the T-1000 and remove the top and left side cover. With the covers removed and air disconnected, turn the power to the ON position.

To test the pressure bar sensor, locate the "X3" LED on the P.L.C. Board (Fig. 4-8) and ensure the light is illuminated (ON). Then, compress the rubber and holder into the pressure bar (nylon holder). As soon as the rubber is pressed into the nylon holder, the "X3" LED should turn OFF. The LED should remain OFF while the rubber is held compressed into the nylon holder. If the "X3" LED shuts OFF while the rubber bar is pressed into the nylon holder, the pressure bar sensor is functioning properly.

To test the anti-jam over-ride sensor, locate the "X7" LED on the P.L.C. board (Fig. 4-8) and ensure that the light is OFF. Then, standing in front of the T-1000, push the pressure bar slowly towards the front plate, keeping hands and fingers out of the seal area. While pushing the pressure bar towards the front plate do not compress the rubber into the nylon holder or touch the round nuts on the pressure bar (Fig. 4-21).

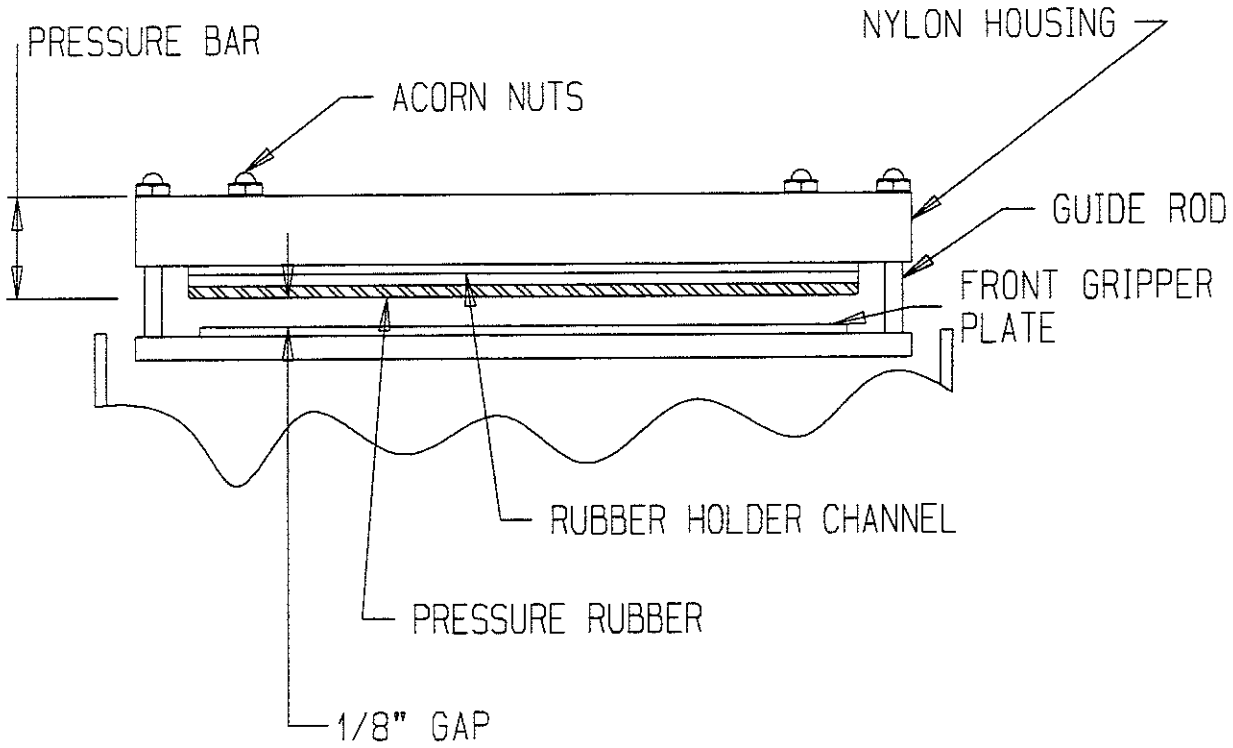


FIGURE 4-21

Advanced Poly Packaging Inc.

DRAWING TITLE: MODEL T-1000
ANTI-JAM DEVICE ADJUSTMENT

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1B02	

4.18

Anti-Jam Adjustment, Continued.

When the pressure bar rubber is approximately 1/8" from the front plate, "X7" LED should illuminate (ON).

If the LED illuminates prematurely (when the rubber is farther than 1/8" from the front plate), the anti-jam over-ride sensor must be adjusted. An aluminum block, located on the right guide rod in the inner frame, houses a magnet (Fig. 4-22). The anti-jam over-ride sensor detects the magnetic field sending the signal to the P.L.C. If illuminated prematurely, the "magnetic block" should be moved toward the front of the T-1000 along the guide rod.

If the LED illuminates when the rubber is closer than 1/8" to the front plate or when the rubber is touching the rubber plate (illuminates late), the magnetic block should be adjusted by moving the magnetic block toward the rear of the T-1000 along the guide rod.

To move the magnetic block, loosen the screw on the block which secures it to the guide rod. Loosen the screw just enough to allow the magnet block to slide along the guide rod without pivoting.

After moving the magnetic block, pull the pressure bar away from the front plate and check the illumination of "X7" LED by pushing the pressure bar slowing toward the front plate. If out of alignment, move the magnetic block in 1/8" increments until properly positioned. In its final position along the guide rod, the magnetic block should be parallel to the side-plate.

If the magnetic block, when parallel to the side-plate and adjacent to the over-ride sensor, does not cause the LED to illuminate, adjust the over-ride sensor so that the sensor is closer to the magnetic block.

The over-ride sensor is secured to the side-plate with two plastic nuts, one on either side of the side-plate. To bring the sensor closer to the magnetic block, loosen the nuts and turn the sensor counter-clockwise, from inside the frame. Turn the sensor 1/2 turn at a time or until the "X7" LED is illuminated. When illuminated, turn 1/4 turn more.

CAUTION: *To avoid damaging the plastic over-ride sensor, position the sensor so that it does not contact the magnetic block when the pressure bar is moving. To avoid "stripping" the threads of the sensor, do not over-tighten the securing nuts.*

When properly positioned, secure the sensor by tightening the securing nuts. When properly adjusted and thoroughly tested, tighten the screw on the magnetic block, replace covers and connect the air line to the regulator.

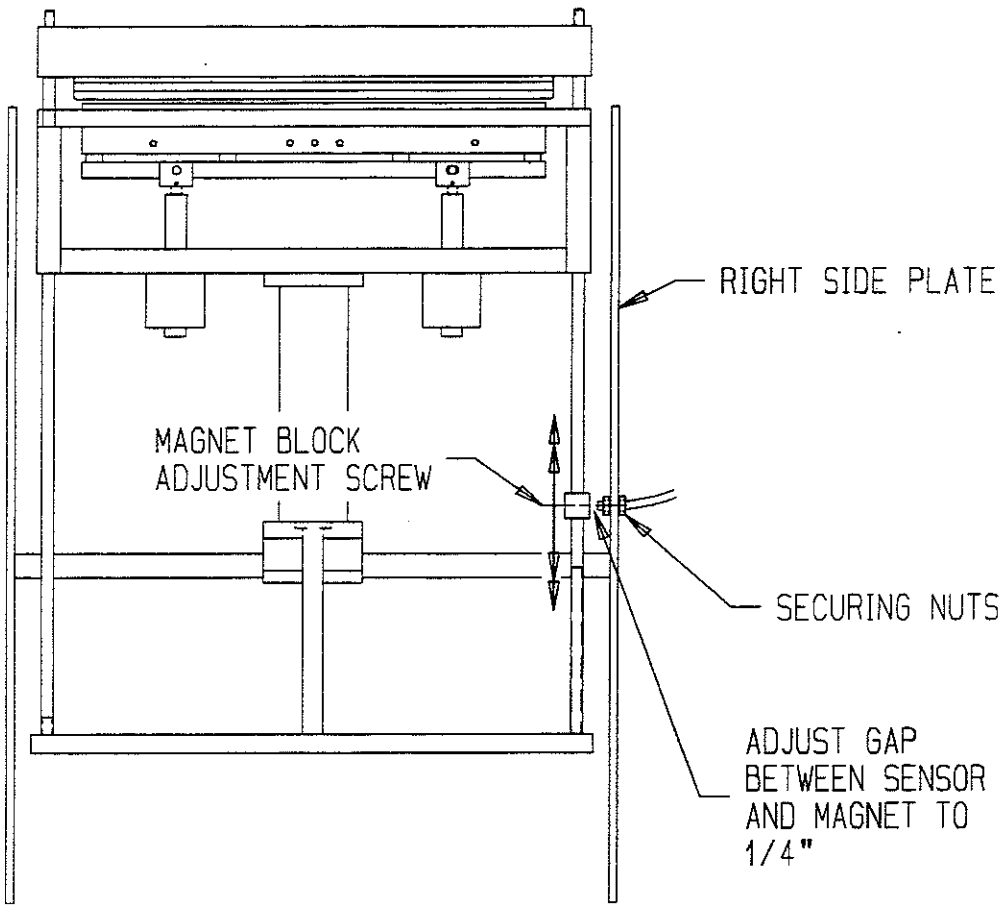


FIGURE 4-22

Advanced
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DRAWING TITLE: MODEL T-1000
ANTI-JAM OVER-RIDE AJUSTMENT

DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1B03	

4-19

Heater Cartridge Replacement

A cylinder-shaped cartridge (element), located inside the heater bar, heats the bronze bars which contain it. This cartridge is considered a normal wear item and will infrequently fail, requiring replacement.

To determine if the heater cartridge is bad, follow the following trouble-shooting steps: 1) Locate "Y0" LED (Heater Circuit) on the P.L.C. Board (Fig. 4-8) or the Heater Status Light on the I.O.P. Front Cabinet, beneath the I.O.P. Screen (if installed on the T-1000). Press the <START> key if the T-1000 is in the Stop mode. If "Y0" illuminates in long pulses without increasing the Temperature on the Bag Setup Screen (Fig. 3-9), proceed to step two. 2) Check the heater fuse (F5), on the Interface Board (Fig. 4-10). If the fuse is good, proceed to step three. 3) Locate "N4" Neon Light (Heater Pulse AC) on the Interface Board (Fig. 4-9). If the neon remains ON continuously, but at "half brightness", proceed to the final test. 4) Disconnect the heater connector labeled "Heater" in the inner frame and check the resistance with an Ohms meter. If the meter reads greater than 10 ohms, the heater cartridge should be replaced.

Note: If you do not have an Ohms meter, replace the heater cartridge after step three.

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

Disconnect the heater cartridge wire at the connector. From underneath the inner frame, loosen and remove the screws which holds the wire clamp and lower heater bar plate to the upper heater bar plate (Fig. 4-23). Then remove the two remaining screws which hold the lower heater bar plate to the upper heater bar plate. Remove the heater cartridge wires from the wire clamp. Place a new cartridge into the heater bar slot and replace the lower heater bar plate. Place the wires into the wire clamp and secure to the lower heater bar plate. Reconnect the heater cartridge wires ensuring that the heater bar can extend fully without stretching the heater cartridge wires.

Plug the cord into the outlet, turn the power to the ON position and connect the air line to the regulator. Press <START> on the I.O.P. and verify that the temperature increases.

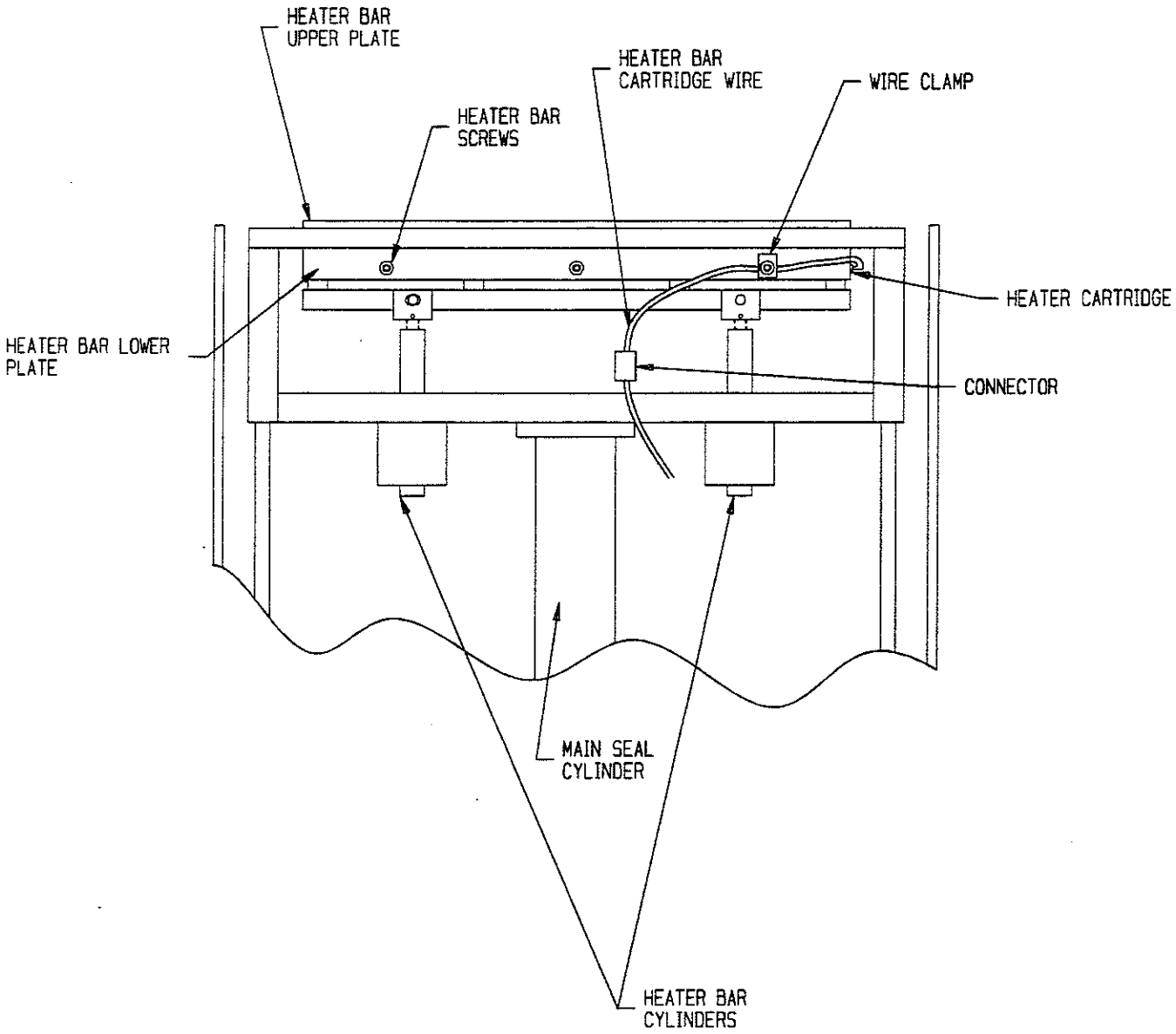

FIGURE 4-23

Advanced
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DRAWING TITLE:	MODEL T-1000 HEATER BAR CARTRIDGE REPLACEMENT DRAWING (VIEW FROM UNDERNEATH INNER FRAME)		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE: NTS	TP-T1004	

4.20

Replace Thermocouple Wire

A thermocouple wire brazed to a ring terminal and secured to the top of the upper 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.

To determine if the thermocouple is bad, follow these trouble-shooting steps: 1) Locate the "E13" light (Open Thermocouple Alarm) on the Interface Board (Fig. 4-9). If the light is ON, proceed to step two. 2) Another indicator that the thermocouple wire is bad is the "XO" (Heater Bar Temp. Readout) LED on the PLC Board (Fig. 4-8) will flash slowly. 3) Additionally, the “YO" (Heater Circuit) LED (Fig. 4-8) will not be illuminated (unless the Energy Saver has shut off the heater bar after 25 minutes).

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, as described in Chapter 4.13. Remove the screws which holds 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 free to bend during heater bar movement.*

Replace the PTFE assembly and front plate as described in Chapter 4.13.

4.21

Brake Gap Adjustment

Once the brake is adjusted (at the factory), it should not require adjustment. But, if the brake is not functioning properly, adjustment may be required.

To check the brake gap, turn the power to the OFF position, disconnect air and remove the left panel cover. Using a .014 Feeler Gauge, insert the gauge between the outer plate and the second plate. If the gauge is "snug", the gap is properly set.

If the gauge is too loose or cannot be inserted between the plates, loosen the two set screws located on the brake collar. (Fig. 4-24). Place the Feeler Gauge between the plates and press the outer plate against the feeler gauge. Press the brake collar against the outer plate and tighten the set screws.

Replace the left cover, plug in the power cord, connect the air line and turn the main power to the ON position.

4.22

Battery Replacement

The T-1000 has two backup batteries, located on the rear of the I.O.P. (Fig. 3-3) and on the P.L.C. board (Fig. 4-8).

Battery Types:
I.O.P. Battery - Model No. AFB8801
P.L.C. Battery - Model No. AFB8801

Lithium Battery, BR2032/CR2032 type or equivalent.

The I.O.P. Introductory Screen (Fig. 4-26) will display a small battery figure when the I.O.P. battery is low.

The life the I.O.P. battery is 10,000 operation hours (approximately 2 years)

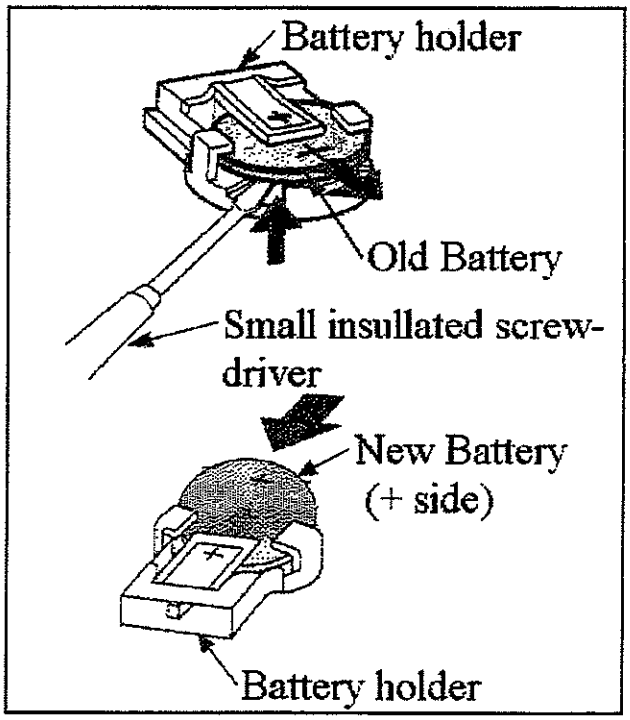


Figure 4-25

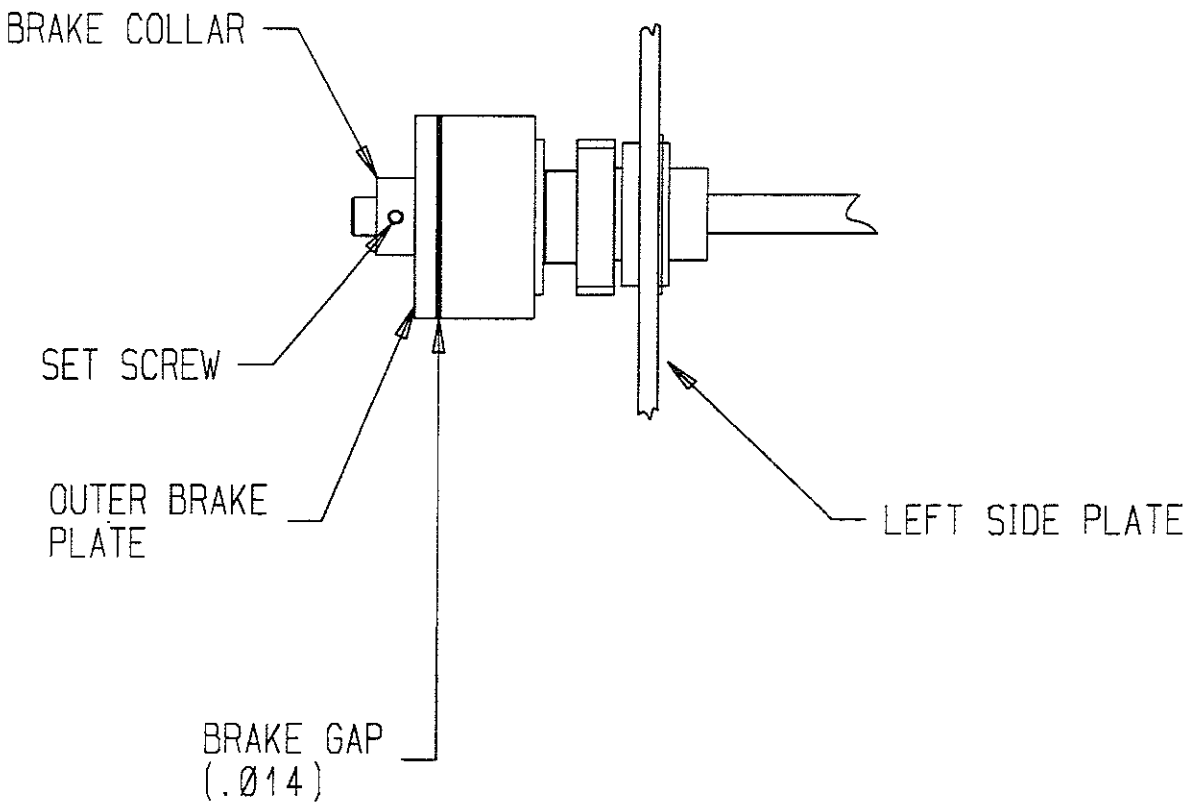


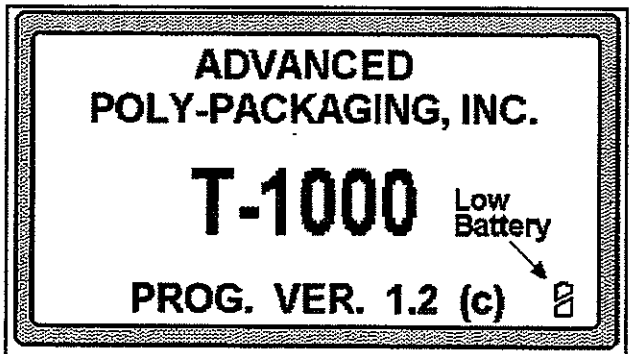
FIGURE 4-24

Advanced Poly Packaging Inc.

DRAWING TITLE:	MODEL T-1000 BRAKE GAP ADJUSTMENT (TOP VIEW)		
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1B05	

4.22

Battery Replacement, Continued.



(Figure 4-26)

The P.L.C. battery stores *current* configuration settings of the program. When "BATT" appears on the Main Menu, replace the battery.

You should replace the battery within 30 days after the battery sign or "BATT" is displayed to avoid losing user settings.

To replace the battery from the I.O.P., open the large cover on the rear panel of the I.O.P. (Fig. 3-3). To replace the battery from the P.L.C. remove the left cover and PLC plastic cover. Remove the battery as illustrated on Figure 4-25, using a small insulated screw driver, with the positive side (+) facing you.

When replacing the battery, you will not lose settings if a new battery is replaced within 3 minutes after the low battery has been removed.

The I.O.P. Main Menu Screen (Fig. 4-27) will display "BATT" when the P.L.C. battery is low.

The life of the P.L.C. battery is 53,000 hours (approx. 6 years).

The I.O.P. battery stores the User Settings stores as JOB 1 (Defaults) through Job 32. When the battery figure appears, replace the battery.

(Figure 4-27)

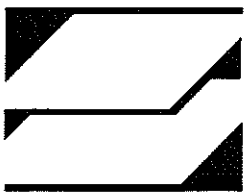
CAUTION: *If you fail to use insulated tools, they may cause a short-circuit between the battery and the equipment.*

Operation Guide

Chapter 5, Preventative Maintenance & Scheduled Maintenance

PM Checklist

Schedule Maintenance
(CHART)



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5.1

Preventative Maintenance & Scheduled (CHART) Maintenance

To extend the life of the T-1000, qualified maintenance personnel must perform all required maintenance tasks. Failure to perform scheduled and preventative maintenance may cause excessive wear to components and will void the warranty.

For the purpose of this manual, preventative 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-1000 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 Preventative Maintenance Checklist

D	Daily
W	Weekly
M	Monthly

5.2

Preventative Maintenance Checklist

ITEM	DESCRIPTION	PERIOD
Filter / Air regulator	Drain water from filter	D
Air regulator	Adjust pressure to 80 PSI	D
Anti-jam device	Check operation, adjust as needed (Chapter 4.10)	D
Pressure bar (rubber)	Clean with alcohol	D
Perforation sensor	Clean sensor assembly with alcohol	W
Upper (rubber) roller	Inspect for nicks or cuts, clean with alcohol	W
Lower (alum.) roller	Clean with alcohol	W
Micron filter / Venturi	Inspect for contamination of filter, replace as needed Inspect for blockage / air restriction	M
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
Side-plates	Clean and wipe down with lightweight oil (based upon environmental - humidity conditions)	M
Drive belts	Inspect for wear / fraying, replace if needed	M
Drive belt (right panel)	Inspect for looseness, tighten as required	M
I.O.P. cabinet / arms	Tighten set screws	M
Height adjustments screws	Tighten bolts	M

CAUTION: *Unplug power cord and disconnect air line prior to removing guards, funnels or covers.*

Preventative Maintenance must be performed by qualified maintenance personnel.

5.3

Scheduled Maintenance Chart

ITEM	DESCRIPTION	CHART 1	2	3	4	5	6	7	8	9	10
Drive belt (right panel)	Adjust/Inspect for wear replace when necessary	O	O	O	O	O	O	O	O	O	O
Drive belt (left panel)	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 assembly	Disassemble, clean, inspect springs for wear, breakage (frequency dependent on environment and product)	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 when necessary		O		O		O		O		O
Upper rubber roll	Inspect for cuts, unevenness	O		O	O	O	O	O	O	O	O
Lower aluminum roller	Clean w/ alcohol, inspect for burs	O	O	O	O	O	O	O	O	O	O
Printed circuit boards	Blow off with clean, dry air, inspect for loose wires, connectors	O	O	O	O	O	O	O	O	O	O
Main Seal Cylinder	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
	INITIALS										

(Note: Each chart change represents 1MM cycles)

5.3

Preventative Maintenance (PM) Chart, Continued.

(Options / Auxiliary Equipment)

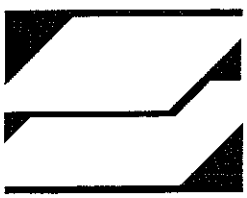
ITEM	DESCRIPTION	CHART 1	2	3	4	5	6	7	8	9	10
	Inspected by: (Initials)										

(Note: Each chart change represents 1MM cycles)

Operation Guide

Chapter 6

Trouble-Shooting



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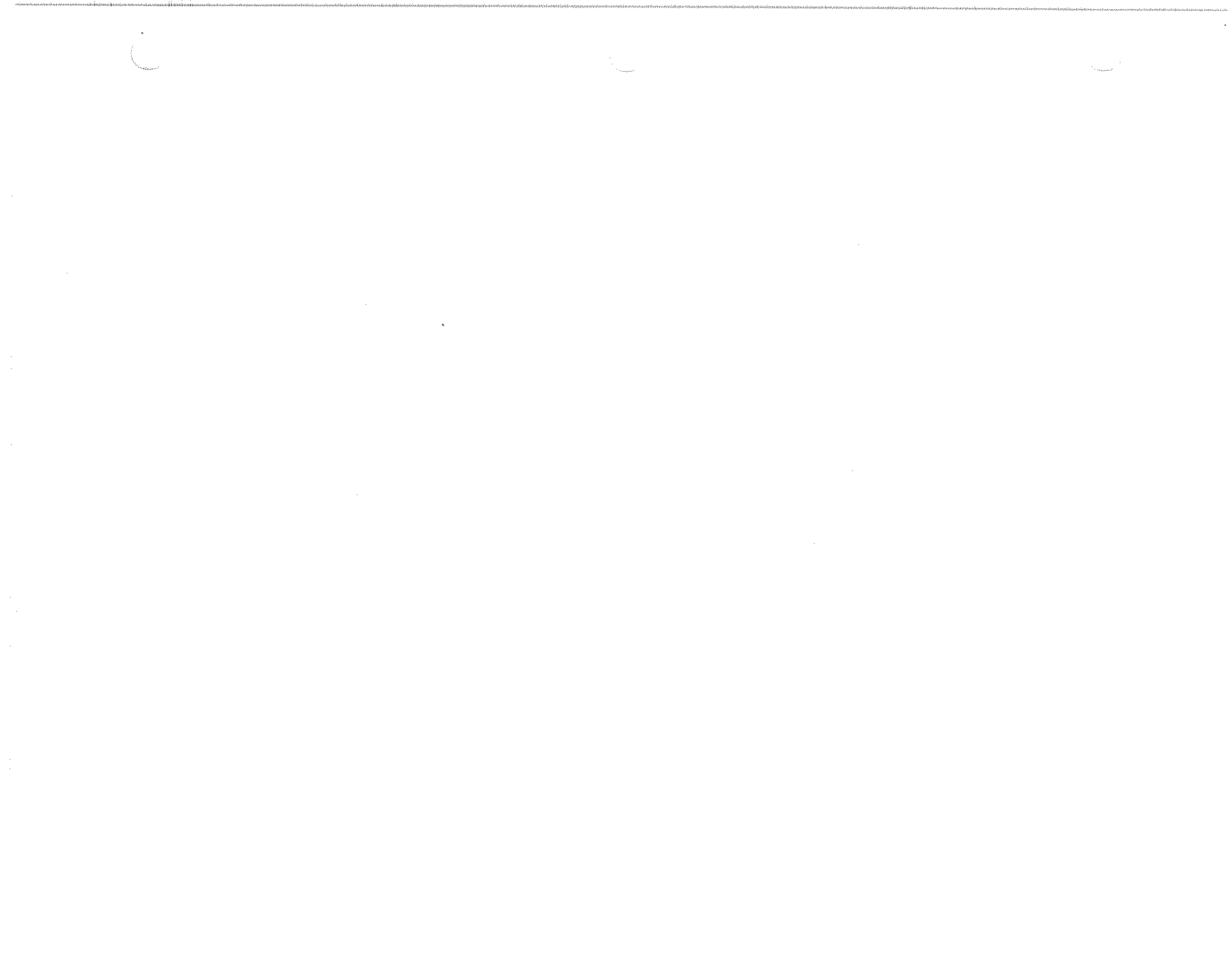


6.1 TROUBLE SHOOTING

The items included in this section cover the common causes of trouble which an operator might encounter during the operation of the T-1000.

When operating difficulties occur, the best procedure is to observe what is happening; then search out the causes; and effect the correction. Make only one adjustment at a time, checking the results of each adjustment. If an adjustment does not help or escalates the problems, return the settings back to the former position.

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

NOTE: When trouble shooting an T-1000 functioning within a system (ie: with conveyors, scales, feeders, counters, etc.), always isolate the equipment and operate each machine individually.

6.2

Trouble Shooting Checklist

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
I.O.P. screen does not display	1. Power off 2. Loose connection 3. Fuse blown 4. Contrast out of adjustment	1. Plug in power cord / turn on 2. Tighten connections 3. Replace fuse(s) 4. Adjust screen contrast
No main power light	1. Blown fuse 2. Bulb out	1. Replace fuse 2. Replace bulb
Pressure bar does not move when footswitch is operated	1. Disconnected air line/footswitch 2. Power off	1. Hook-up air line 2. Turn on power
Pressure bar move inward but does not reach the front plate (retracts immediately)	1. Anti-jam improperly adjusted 2. Misalignment of guide rods 3. Insufficient air pressure 4. Loose/broken ground wire on guide rods	1. Adjust anti-jam (section 4.10) 2. Align guide rods (section 4.8) 3. Increase air pressure 4. Connect/tighten ground wires
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. Misalignment of guide rods 6. Teflon folded over 7. Heater bar not extending 8. Seal cylinder bad 9. Heater bar cylinder(s) bad	1. Increase in bag setup screen 2. Increase in bag setup screen 3. Replace heater cartridge 4. Increase air pressure 5. Align guide rods 6. Turn teflon 7. Check heater bar cylinders / valve 8. Replace cylinder / valve 9. Replace cylinder / valve
Bag sticks to teflon or pressure (rubber) bar	1. Seal temp. too high 2. Seal time too high 3. Teflon in poor condition 4. Rubber is dirty / contaminated	1. Decrease temp in bag setup screen 2. Decrease seal time in bag setup screen 3. Turn / replace teflon 4. Clean / replace pressure bar 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

6.2

Trouble Shooting Checklist

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Two bags index from rollers	1. Bag is folded over 2. Perf sensor dirty / damaged 3. Perf sensitivity out of adjustment 4. Ungrounded outlet causing electrical noise 5. Auxiliary equipment - noise 6. Seal point value too high	1. Lower inner frame and straighten bag 2. Clean / replace perf sensor 3. Contact APPI for perf adj. 4. Plug into "clean" power source 5. Contact APPI for solution 6. Set value lower
Bag does not completely index	1. Perf is sensing hole in bag (vent) 2. Seal position setting too low	1. Reposition bag 2. Increase seal position in bag setup screen
Bag web indexing to floor level without stopping on bag	1. Perf Sensor not sensing bag 2. Dirty / damaged sensor 3. Perf sensor out of adjustment	2. Clean / replace sensor 1 & 3. Contact APPI for adjustment
Bags web breaking prematurely in machine	1. Improper web tension 2. Web dragging foreign objects 3. Bag roll side-plates bent inward	1. Adjust tension 2. Remove obstructions 3. Repair / remove side-plates

Operation Guide

APPENDIX A

Checklists

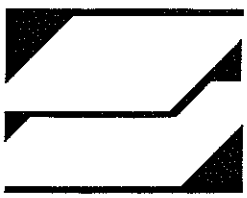
Identification Checklist

APPI Adjustments

APPI Testing

Packaging Checklist

Crating / Shipping Checklist



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Identification Checklist & Registration Information:

Identification Item:	APPI Inspector:	Purchaser's Inspection:
T-1000 S/N		
P.L.C. S/N		
I.O.P. S/N		
IF Board S/N		
PS Board S/N		
Other:		
Other:		
Other:		
Other:		
Program Version, Revision		
Funnel Size		
Footswitch		
Manual Date/Revision		

REGISTRATION INFORMATION:

(This section must be completed and returned to Advance Poly Packaging, Inc. to register the T-1000 for Warranty Protection)

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

Adjustment, Operation & Testing Checklist:

APPI Inspection Items:	Tech. Initials	Insp. Initials
IF Board Tested : Passed PS Board Tested: Passed PLC Board Tested: Passed		
Electronics: Board connections grounded, secure		
Electronics: Wiring connectors securely fastened		
Electronics: Battery installation. Date: _____		
Electronics: Perf sensor sensitivity adj.		
Electronics: I.O.P. contrast adj.		
Electronics: EEPROM/Program installation/test		
Electronics: Wire ties, wire fastened, away from moving parts		
Electronics: Fuses installed/amp/placement		
Mech Assembly: Air lines security fastened, no loose air lines		
Mech Assembly: Valves/Cylinders, no leaking air		
Mech Assembly: Tracking, compression/alignment adj.		
Mech Assembly: Belts, tension adj.		
Mech Assembly: Screws & fasteners secured, no loose mech components		

Inspection Items, Continued:	Tech. Initials	Insp. Initials
Mech Assembly: Anti-jam adj./tested		
Mech Assembly: Rollers freely spinning		
Mech Assembly: Dancer assembly, adj.; Web tension, adj.		
Mech Assembly: Perf. sensor tension spring, alignment, adj.		
Mech Assembly: Frame Lower sensor test, adj.		
Mech Assembly: Brake Gap, adj.		
Total hours run/tested: _____		
Total cycles tested: _____		
Bags tested: SIZE (W x L x Mil): Qty:		
Bags tested: SIZE: Qty:		
Bags tested: SIZE: Qty:		
Bags tested: SIZE: Qty:		
Bags tested: SIZE: Qty:		
Purchaser's sample product tested: YES / NO		

Standard Items Shipping & Packaging Checklist

Inc. "X"	Standard Items Included / Description	Location / Condition	Crater / Packer
	Funnel(s) Qty: _____		
	Footswitch (1)		
	Guard (1)		
	Covers (3)		
	Manual (1)		
	Roll shaft (1)		
	Bag roll chucks (2)		
	PACKAGING / CRATING		
	I.O.P. "Face-in" and wrapped		
	Dancer assembly banded securely		
	Covers securely fastened		
	Guard attached		
	Support post mounted		
	Base lagged to skid		
	Footswitch bagged and tied to leg		
	Power cable tied to leg		
	T-1000 stretch-wrapped		
	Skid nailed securely		
	Skid stretch wrapped		
	Labels attached to skid w/ pkg slip		
	Other:		
	Other:		
	Other:		
	Other:		

Options, Assessories, Shipping Checklist

Inc. "X"	Option Description	Type / Size / Serial Number	Inspector
	Drop Frame Configuration		
	TS-10 Trim Seal Assembly		
	FS-10 Flat Seal Assembly		
	BF-10 Bag Deflator		
	AF-10 Automatic Bag In-Feed		
	LS-10 Flat Load Shelf		
	LSC-10 Concave Load Shelf		
	LSV-10 Load Shelf Vibration Kit		
	LSL-10 Load Shelf Lift Kit		
	PB-10 Dual Palm Buttons (push button)		
	PB-20 Dual Palm buttons (optical)		
	TP-500 Hot Stamp Printer		
	TI-1000 Thermal Inline Printer		
	TI-2000 Dual Thermal Inline Printers		
	Easylabel Software (DOS/WIN)		
	"Gold" Software (DOS/WIN)		
	VT-1000 Printer Terminal		
	Wedge Scanner		
	AF-10 Accumulating Funnel		
	CF-10 Counting Funnel		
	Other:		
	Other:		
	Other:		
	Other:		
	Other:		

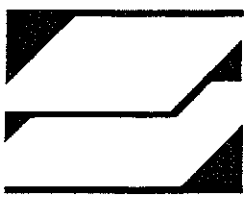
Operation Guide

APPENDIX B

Inserts

AuxiliaryEquipment
Installation, Adjustment & Operation Inserts

Optional Equipment / Accessories Installation,
Adjustments & Operation



ADVANCED
POLY-PACKAGING, INC.

SP-IO Spare Parts Kit (Level 1)

(P/N T-SP-IO)

APPI Part Number	Quantity.	Description
TP-TIP00145	10’	1/4" poly tubing
TP-TIP00146	5’	3/8" poly tubing
TP-TIP00181	2	Filters, micron filter (blower)
TP-TIMOO115-A	1	Tension (brake) strap
TP-200189	3	1 AMP Fuses
TP-200205	3	10 AMP Fuses
TP-200206	3	2.5 AMP Fuses
TP-200203	3	3.15 AMP Fuses
TP-200345	3	5 AMP Fuses
TP-TIP00216	4	O-Rings (Web Guides)
TP-T1MB00124-A	1	Perf Sensor Assembly
TP-TIMB00032-A	1	Pressure Bar Rubber
TP-TIP00155	2	Pressure Bar Springs
TP-TIP00116	2	Heater Cartridges
TP-TIP00182	1	Drive Belt
TP-TIP00102	2	Drive Belt
TP-TIP0018	2	PTFE Sheet
TP-200346	2	Thermocouple Wire w/ Connector

Operation Guide

APPENDIX C

Drawings

Assembly

Views

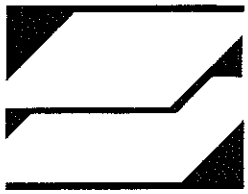
Electronic Boards

Air lines (piping)

Wiring Diagram

Threading

Other Drawings / Charts



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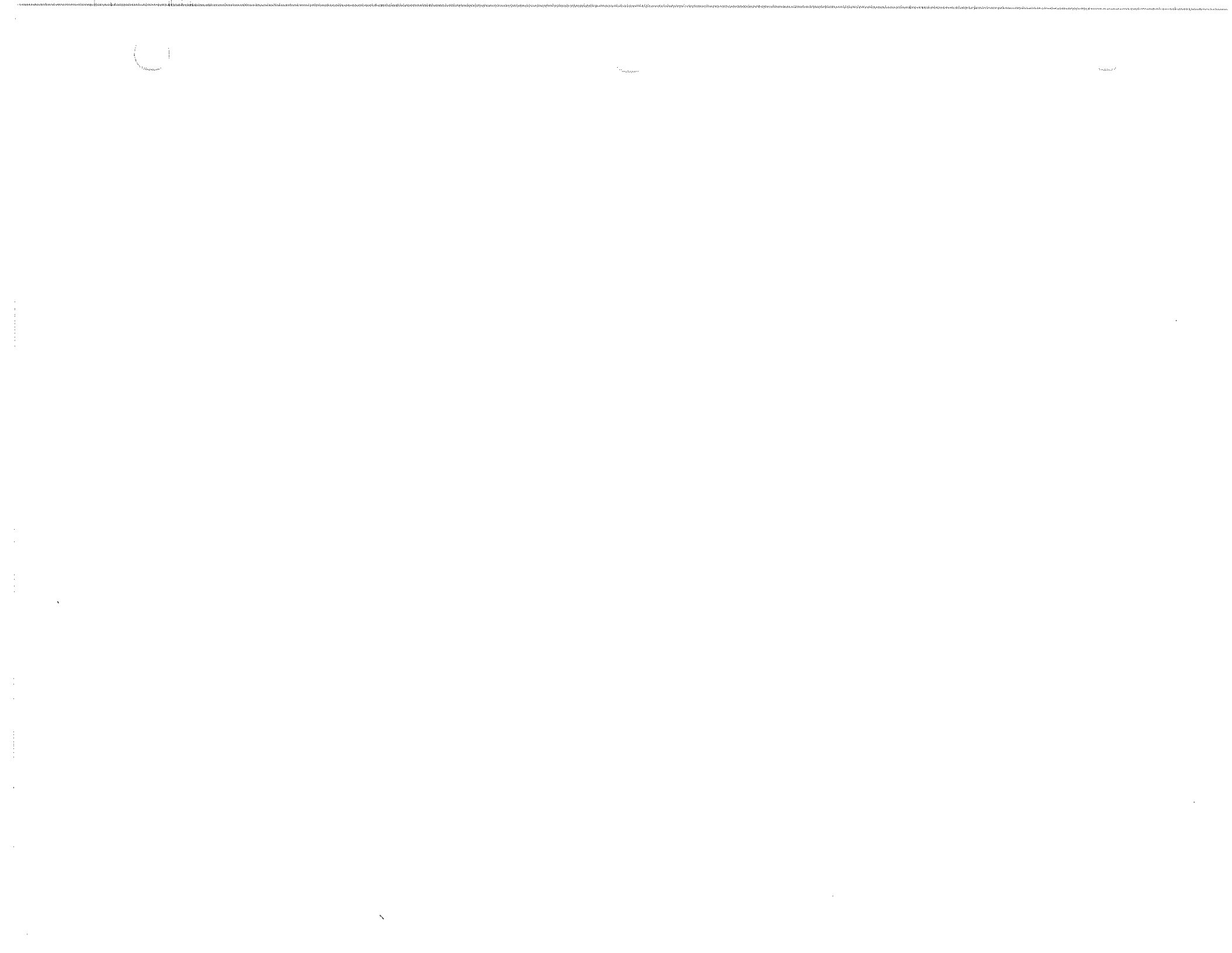
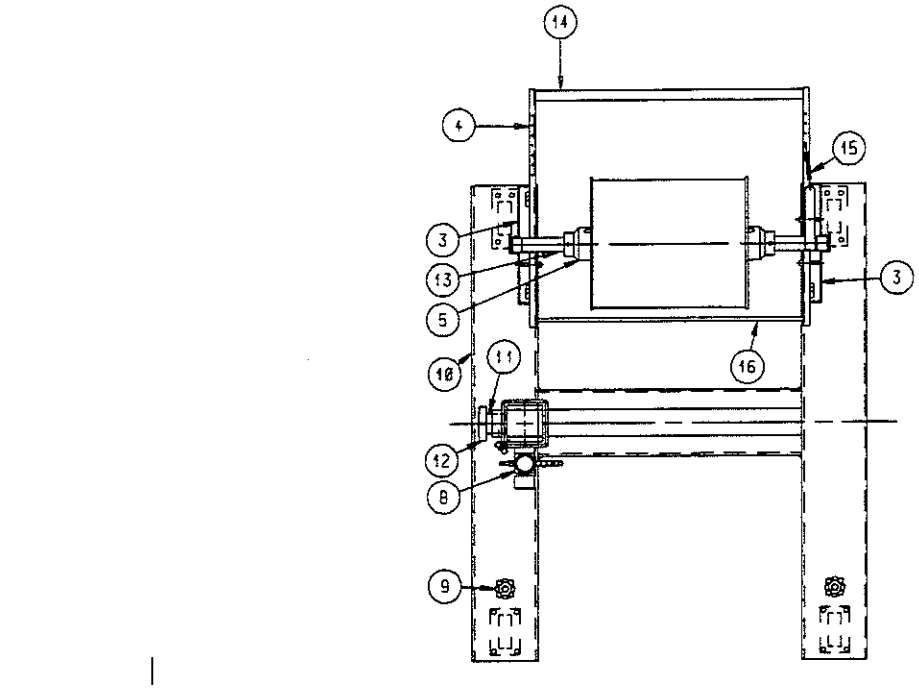
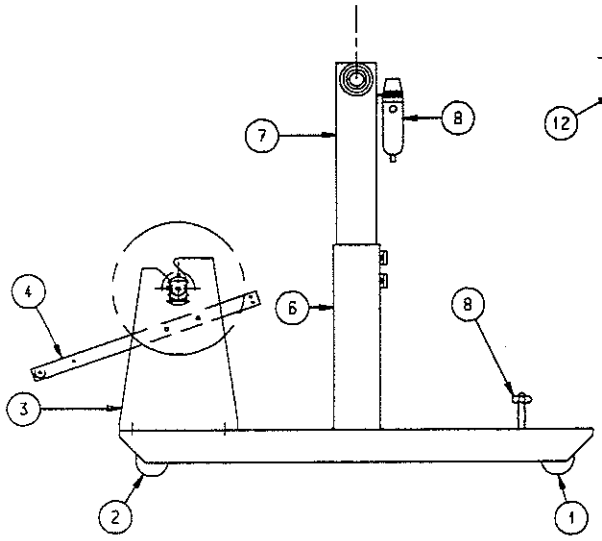
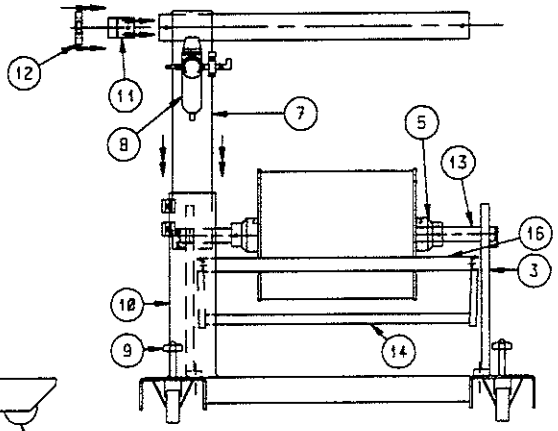








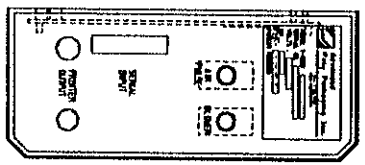
Advanced
Poly Packaging Inc.
1145 Highbrook Avenue • Akron • Ohio 44301
Phone: 216-535-4058 • Fax: 216-535-4056

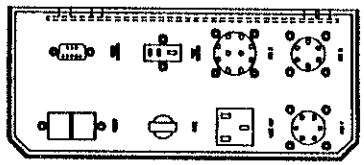
GENERAL INSTRUCTIONS

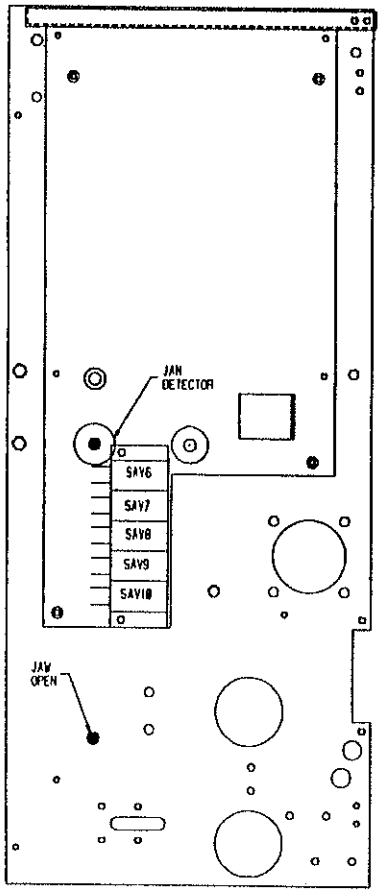
1. MACHINE TOLERENCES
   FRACTIONAL DIM ±.015
   ALL .XX DIM ±.005
   ALL .XXX DIM ±.002
   ANGULAR DIM ± 1/2°
2. FOR WELDING DIMENSIONS ±1/32 TOLERANCE
3. REMOVE ALL BURRS BREAK ALL SHARP EDGES
4. DO NOT SCALE BLUEPRINT

DRAWING TITLE: MODEL T-1000 BASE ASSEMBLY

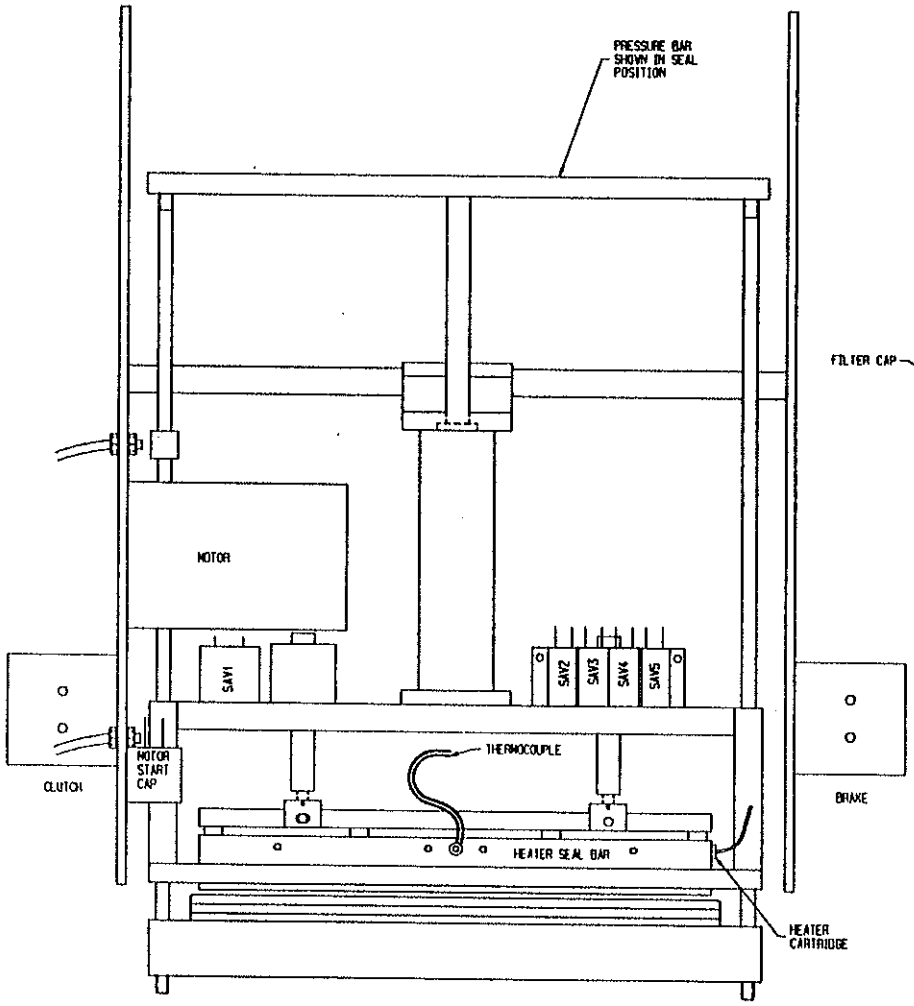
DRAWN BY: MFF	DATE: 10/01/95		
CHKD. BY: SPB	DATE: 10/01/95	DRAWING NO.	SHEET: 1 OF 1
APPRD. BY:	SCALE NTS	TP-T1A	

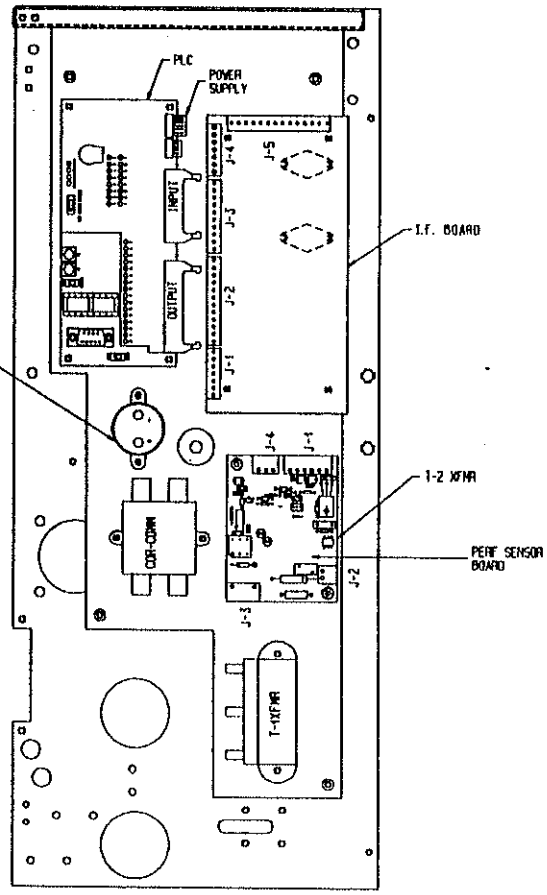






RIGHT SIDE





LEFT SIDE

T-1000 WIRING TAB LIST

REV-A-WKR 11-95

SEAL BAR IN

(2 PIN MOLEX)

```
BLK-->1--1<-----WHT/BLK/BL----->PLC INPUT-PIN-23
WHT-->2--2<-----WHT/GRN-------->PLC INPUT-PIN-14
```

JAW OPEN

(2 PIN MOLEX)

```
BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----ORG-------->IF/BD-J1 PIN-7
```

JAM DETECT

(2 PIN MOLEX)

```
BLK-->1--1<-----PINK------->PLC INPUT-PIN-19
BLK-->2--2<-----WHT/GRN---->PLC INPUT-PIN-13
```

HEATER BAR

(2 PIN MOLEX)

```
BLK-->1--1<-----PURPLE----->IF/BD-J5 PIN-13
BLK-->2--2<-----WHITE------>IF/BD-J5 PIN-5
```

THERMOCOUPLE (2 PIN CONN.)

```
POS. +<-----WHITE------>IF/BD-J2 PIN-2
NEG. -<-----RED-------->IF/BD-J2 PIN-3
```

BRAKE (SCREW CONN)

```
1<-----PURPLE----->IF/BD-J5 PIN-9
2<-----PURPLE----->IF/BD-J5 PIN10
```

CLUTCH (SCREW CONN)

```
1<-----GRAY------->IF/BD-J5 PIN-6
2<-----GRAY------->IF/BD-J5 PIN-8
```

MOTOR

(5 PIN MOLEX)

```
BLACK---->1--1<-----BLACK----->IF/BD-J5 PIN-14
BLUE----->2--2<-----BLACK---- >JUMPED TO PIN-1
BLACK---->3--3<-----WHITE----->IF/BD-J5 PIN-4
                  ---->(MOTOR STARTER CAP. PIN-1)
BLUE----->4--4<-----BLUE------>MOTOR STARTER CAP. PIN-3
GRN/YEL-->5--5<-----GREEN----->TO CHASSIS GROUND
```

SOLENOID AIR VALVES (2 PIN MOLEX)

SAV-1 (MAIN SEAL PRES.)

```
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/RED---->PLC OUTPUT-PIN-27
```

24 DC VALVES

SAV-2 (HEATER SEAL BAR)

```
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/BRN---->PLC OUTPUT-PIN-25
```

SAV-3 (LOAD SHELF)
BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BRN---->PLC OUTPUT-PIN-11

SAV-4 (BAG LIFT)
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN1
BLK-->2--2<-----WHT/BLK/GRN---->PLC OUTPUT-PIN-9 AND
IF/BD J2-PIN-8

SAV-5 (TRIM SEAL)
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/VOL---->PLC OUTPUT-PIN-23

SAV-6 (PERF BREAK)
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/GRY---->PLC OUTPUT-PIN-24

SAV-7 (FLAT SEAL)
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/BL---->PLC OUTPUT-PIN-26

SAV-8 (ACCUM. FUNNEL)
BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/YEL---->PLC OUTPUT-PIN-8

SAV-9 (VENTURI BLOWER)
BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK---->PLC OUTPUT-PIN-12

SAV-10 (AIR PULSE)
BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BL----->PLC OUTPUT-PIN-13

IOP (CABLE 4 CONT.)

PIN-(+)<-----RED----->IF/BD J1-PIN-6
PIN-(-)<-----GRN----->IF/BD J1-PIN-3,4

HEAT INDICATER (LED)
IOP-(+)<-----RED----->TO YEL LED
IF/BD J3-PIN-8<-----WHT----->TO 1.2k RES. ON LED

HIGH VOLTAGE BOARD

J-1 (6 PIN CONN)
PIN-1<-----BLUE---->IF/BD-J5 PIN-7
PIN-2<-----BLK----->T-2 PIN-10 XFMR
PIN-3<-----ORG----->IF/BD-J3 PIN-5
PIN-4<-----NOT USED
PIN-5<-----GRN----->TO CORCOM GROUND AND
T-2XFMR GROUND
PIN-6<-----WHT----->IF/BD-J5 PIN-2

J-2 (3 PIN CONN)
PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----RED----->PLC INPUT-PIN-21

J-3 (2 PIN CONN)
PIN-1<-----NOT USED
PIN-2<-----YEL-------->TO H.V SENSOR

J-4 (4 PIN CONN)

PIN-1<-----BLK----->T-2XFMR
PIN-2<-----NOT USED
PIN-3<-----NOT USED
PIN-4<-----BLK----->T-2XFMR

PLC BOARD

OUTPUTS (34 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----NOT USED
PIN-4<-----NOT USED
PIN-5<-----NOT USED
PIN-6<-----NOT USED
PIN-7<-----WTH/ORG-------->IF/BD J3-PIN-10,AUX-3 PIN-E
PIN-8<-----WHT/BLK/YEL---->SAV-8
PIN-9<-----WHT/BLK/GRN---->SAV-4,IF/BD J2-PIN-8
PIN-10<----BRN------------>IF/BD J3-PIN-7
PIN-11<----WHT/BRN-------->SAV-3
PIN-12<----WHT/BLK-------->SAV-9
PIN-13<----WHT/BL--------->SAV-10
PIN-14<----RED------------>IF/BD J3-PIN-6
PIN-15<----NOT USED
PIN-16<----NOT USED
PIN-17<----NOT USED
PIN-18<----NOT USED
PIN-19<----NOT USED
PIN-20<----NOT USED
PIN-21<----NOT USED
PIN-22<----NOT USED
PIN-23<----WHT/BLK/VOL---->SAV-5
PIN-24<----WHT/BLK/GRY---->SAV-6
PIN-25<----WHT/BLK/BRN---->SAV-2
PIN-26<----WHT/BLK/BL----->SAV-7
PIN-27<----WHT-BLK/RED---->SAV-1
PIN-28<----WHT/GRY-------->IF/BD J3-PIN-8
PIN-29<----BLUE------------>IF/BD J4-PIN-3
PIN-30<----PINK------------>IF/BD J3-PIN-9
PIN-31<----NOT USED
PIN-32<----NOT USED
PIN-33<----NOT USED
PIN-34<----NOT USED

INPUT (30 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----WHT/BLK/ORG---->AUX-3 PIN-I
PIN-4<-----YEL------------>AUX-3 PIN-H
PIN-5<-----WHT/VIO-------->IF/BD J2-PIN-11
PIN-6<-----WHT/BL--------->IF/BD J2-PIN-9
PIN-7<-----NOT USED
PIN-8<-----NOT USED
PIN-9<-----NOT USED
PIN-10<----NOT USED
PIN-11<----WHT/GRN-------->**SEE NOTE:1**
PIN-12<----WHT/GRN-------->IF/BD J1-PIN-3 OR 4
PIN-13<----WHT/GRN-------->JAM DETECT PIN-2
PIN-14<----WHT/GRN-------->SEAL BAR IN PIN-2
PIN-15<----BRN------------>IF/BD J2-PIN-4
PIN-16<----WHT/YEL-------->IF/BD J4-PIN-2
PIN-17<----WHT/BLK/GRY---->IF/BD J3-PIN-3
PIN-18<----WHT/BLK/BRN---->IF/BD J3-PIN-1
PIN-19<----PINK------------>JAM DETECT PIN-1
PIN-20<----WHT/GRY-------->AUX-2 PIN-A

PIN-21<----RED---------->HV/BD J2-PIN-3
PIN-22<----WHT/ORG-------->FOOT SWITCH PIN-2
PIN-23<----WHT/BLK/BL----->SEAL BAR IN PIN-1
PIN-24<----NOT USED
PIN-25<----NOT USED
PIN-26<----WHT/RED-------->IF/BD J2-PIN-1
PIN-27<----NOT USED
PIN-28<----NOT USED
PIN-29<----NOT USED
PIN-30<----NOT USED

POWER SUPPLY (5 PIN CONN)
PIN-1<-----BRN---------->IF/BD J1-PIN-6
PIN-2<-----RED---------->IF/BD J1-PIN-3 OR 4
PIN-3 REMOVED
PIN-4<-----YEL---------->IF/BD J1-PIN-3 OR 4
PIN-5<-----GRN---------->IF/BD J1-PIN-7

IF BOARD

J-1 (7 PIN CONN)
PIN-1<-----RED---------->T-1XFMR PIN-6
PIN-2<-----RED---------->T-1XFMR PIN-10
PIN-3<-----GRN---------->TO CORCOM GROUND, FELTER CAP (-)NEG.
PIN-4<--
PIN-5<-----RED---------->FILTER CAP (+)POS.
PIN-6<-----BRN---------->PLC POWER SUPPLY PIN-1
PIN-7<-----GRN---------->PLC POWER SUPPLY PIN-5

J-2 (12 PIN CONN)
PIN-1<-----WHT/RED-------->PLC INPUT PIN-26
PIN-2<-----WHITE---------->THEROCOUPLE (+) POS. CONN
PIN-3<-----RED---------->THEROCOUPLE (-) NEG. CONN
PIN-4<-----BRN---------->PLC INPUT PIN-15
PIN-5<-----NOT USED
PIN-6<-----NOT USED
PIN-7<-----WHT/BLK/RED---->AUX-3 PIN-J
PIN-8<-----WHT/BLK/GRN---->PLC OUTPUT PIN-9
PIN-9<-----WHT/BL--------->PLC INPUT PIN-6
PIN-10<----NOT USED
PIN-11<----WHT/VIO-------->PLC INPUT PIN-5,OPT.PART SENSE PIN-3
PIN-12<----VIO---------->OPTICAL PART SENSE PIN-2

J-3 (10 PIN CONN)
PIN-1<-----WHT/BLK/BRN---->PLC INPUT PIN-18,TOUCH BUTTON-2 PIN-3
PIN-2<-----TAN---------->OPT. TOUCH BUTTON-2 PIN-2
PIN-3<-----WHT/BLK/GRY---->PLC INPUT PIN-17,TOUCH BUTTON-1 PIN-3
PIN-4<-----GRY---------->OPT. TOUCH BUTTON-1 PIN-2
PIN-5<-----ORG---------->HV/BD J1-PIN-3
PIN-6<-----RED---------->PLC OUTPUT PIN-14
PIN-7<-----BRN---------->PLC-OUTPUT PIN-10
PIN-8<-----WHT/GRY-------->PLC OUTPUT PIN-28
PIN-9<-----PINK---------->PLC OUTPUT PIN-30
PIN-10<----WHT\OGR-------->PLC OUTPUT PIN-7,AUX-3 PIN-E

J-4 (4 PIN CONN)
PIN-1<-----YEL---------->JAW OPEN SW. PIN-1
PIN-2<-----WHT/YEL-------->PLC INPUT PIN-16
PIN-3<-----BLUE---------->PLC OUTPUT PIN-29
PIN-4<-----NOT USED
PIN-5<-----NOT USED
PIN-6<-----BLUE---------->AUX-2 PIN-E, AUX-1 PIN-E
PIN-7<-----WHT/BL--------->AUX-2 PIN-C, AUX-1 PIN-C

J-5 (15 PIN CONN)

PIN-1<-----BLACK---------->T-1XFMR PIN-1,CORCOM-LOAD (AC)
PIN-2<-----WHITE---------->T-1XFMR PIN-2, HV/BD J1-PIN-6
PIN-3<-----BLACK---------->T-1XFMR PIN-4, JUMPER TO IF/BD J5-PIN-1
PIN-4<-----WHITE---------->T-1XFMR PIN-5, JUMPER TO IF/BD J5-PIN-2,
MOTOR PIN-3
PIN-5<-----WHITE---------->HEATER PIN-2,CORCOM-LOAD (NEUTRAL)
PIN-6<-----GRAY----------->CLUTCH PIN-1
PIN-7<-----BLUE----------->HV/BD J1-PIN-1
PIN-8<-----GRAY----------->CLUTCH PIN-2
PIN-9<-----PURPLE--------->BRAKE PIN-1
PIN-10<----PURPLE--------->BRAKE PIN-2
PIN-11<----VIO------------>AUX-3 PIN-A
PIN-12<----WHT/VIO-------->AUX-3 PIN-B
PIN-13<----PURPLE--------->HEATER BAR PIN-1
PIN-14<----BLACK---------->MOTOR PIN-1

AUX-3 (10 PIN CONN)

PIN-A<-----VIO------------>IF/BD J5 PIN-11, AUX-1 PIN-A
PIN-B<-----WHT/VIO-------->IF/BD J5 PIN-12,AUX-1 PIN-B
PIN-C<-----GREEN---------->IF/BD J1 PIN-3 OR 4,AUX-1 PIN-F,AUX-2 PIN-F,
PIN-D<-----ORG------------>IF/BD J1 PIN-7
PIN-E<-----WHT/ORG-------->PLC OUTPUT PIN-7
PIN-F<-----BLACK---------->MAIN POWER SW. PIN-3
PIN-G<-----WHITE---------->MAIN POWER SW. PIN-4
PIN-H<-----YEL------------>PLC INPUT PIN-4
PIN-I<-----WHT/BLK/ORG---->PLC INPUT PIN-3
PIN-H<-----WHT/BLK/RED---->IF/BD J2-PIN-7

AUX-1 (6 PIN CONN)

PIN-A<-----VIO------------>AUX-3 PIN-A
PIN-B<-----WHT/VIO-------->AUX-3 PIN-B
PIN-C<-----WHT\BL--------->AUX-2 PIN-C
PIN-D<-----NOT USED
PIN-E<-----BL------------->AUX-2 PIN-E
PIN-F<-----GREEN---------->AUX-3 PIN-C,AUX-2 PIN-F,IF/BD J1 PIN-3 OR 4

AUX-2 (6 PIN CONN)

PIN-A<-----WHT/GRY-------->PLC INPUT PIN-20
PIN-B<-----WHT/GRN-------->IF/BD J1-PIN-3 OR 4, FOOT SW. PIN-3
PIN-C<-----WHT/BU--------->IF/BD J4-PIN-7
PIN-D<-----NOT USED
PIN-E<-----BLUE----------->IF/BD J4-PIN-6
PIN-F<-----GREEN---------->IF/BD J1 PIN-3 OR 4, AUX-1 PIN-F,AUX-3 PIN-C

FOOT SW. (3 PIN CONN)

PIN-1<-----GREEN---------->CORCOM STANDOFF
PIN-2<-----WHT/GRN-------->IF/BD J1-PIN-3 OR 4
PIN-3<-----WHT/ORG-------->PLC INPUT PIN-22

MAIN POWER SW.

PIN-1<-----NOT USED
PIN-2<-----BLACK---------->FUSE PIN-2
PIN-3<-----BLACK---------->AUX-3 PIN-3,CORCOM LINE (AC),LINE OUT PLUG
PIN-4<-----WHITE---------->PWR CORD,CORCOM LINE (NEU),AUX-3 PIN-G,
LINE OUT PLUG
PIN-5<-----NOT USED
PIN-6<-----NOT USED

MAIN FUSE

PIN-1<-----BLACK---------->PWR CORD
PIN-2<-----BLACK---------->MAIN POWER SW. PIN-2

LINE OUT PLUG

BLK WIRE<----------->MAIN POWER SW. PIN-3
GREEN<----------->CORCOM CASE GROUND
WHITE<----------->MAIN POWER SW. PIN-4

OPTICAL TOUCH BUTTON (4 PIN MOLEX)

PLAM BUTTON-2 (LEFT SIDE)

PIN-1<-----ORG---------->IF/BD J1 PIN-7,PLAM BUTTOM-1 PIN-1
PIN-2<-----TAN---------->IF/BD J3 PIN-2
PIN-3<-----WHT/BLK/BRN---->IF/BD J3 PIN-1
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,PLAM BUTTOM-1 PIN-4

PLAM BUTTOM-1 (RIGHT SIDE)

PIN-1<-----ORG---------->IF/BD J1 PIN-7,PLAM BUTTOM-2 PIN-1
PIN-2<-----GRY---------->IF/BD J3 PIN-4
PIN-3<-----WHT/BLK/GRY---->IF/BD J3 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,PLAM BUTTOM-2 PIN-4

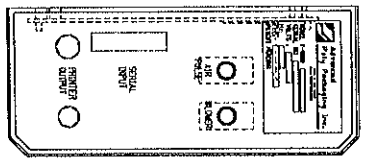
OPTICAL PART SENSE/COUNT (4 PIN MOLEX)

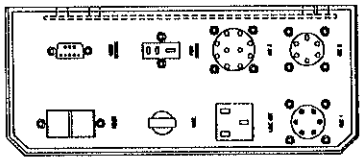
SENSER-2 (LEFT SIDE)

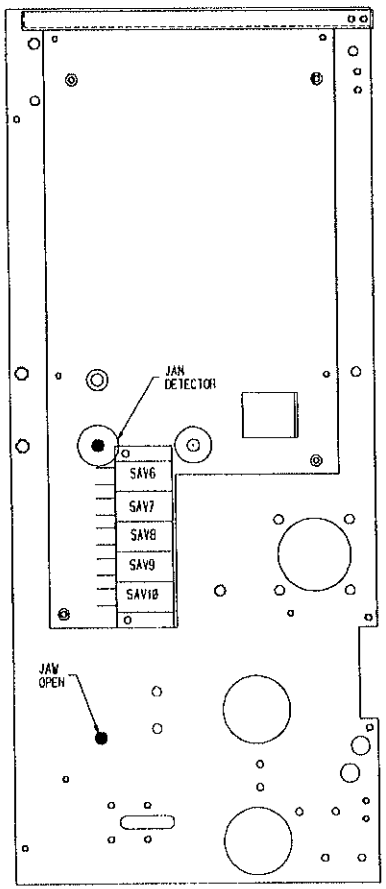
PIN-1<-----ORG---------->IF/BD J1 PIN-7,SENSER-1 PIN-1
PIN-2<-----VIO---------->IF/BD J2 PIN-12,SENSER-1 PIN-2
PIN-3<-----WHT/VIO---------->IF/BD J2 PIN-11,SENSER-1 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,SENSER-1 PIN-4

SENSER-1 (RIGHT SIDE)

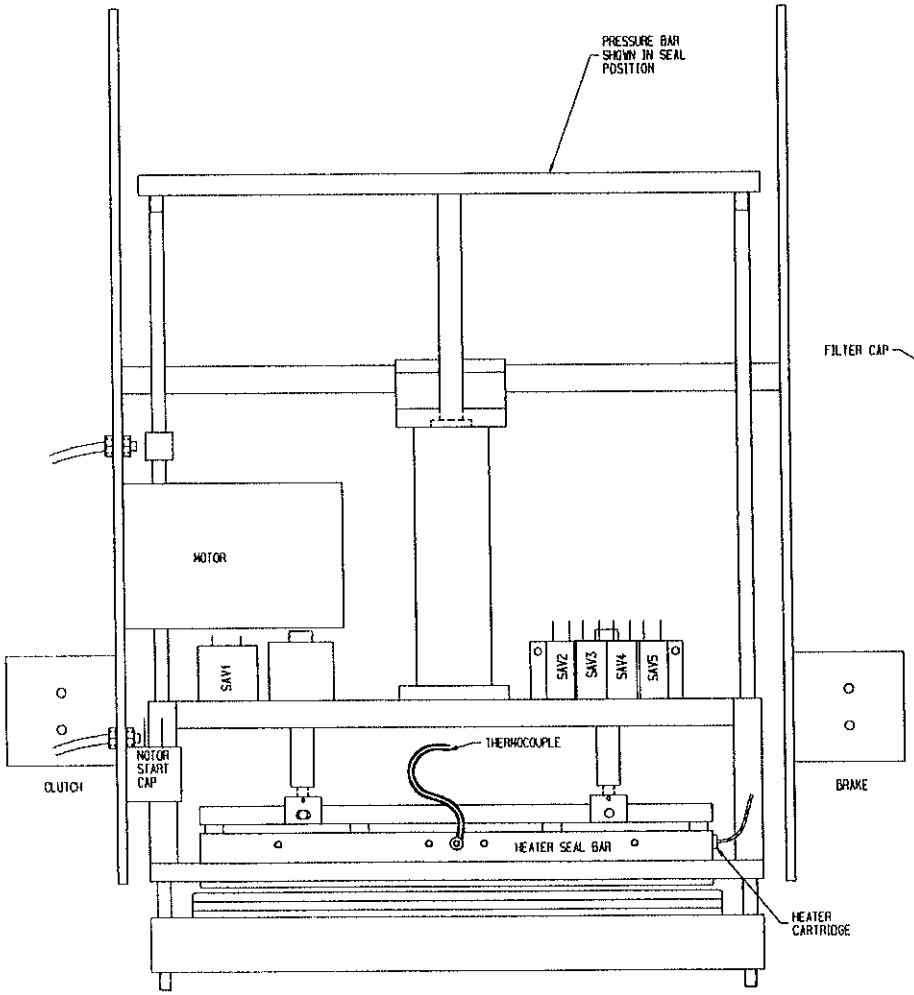
PIN-1<-----ORG---------->IF/BD J1 PIN-7,SENSER-2 PIN-1
PIN-2<-----VIO---------->IF/BD J2 PIN-12,SENSER-2 PIN-2
PIN-3<-----WHT/VIO---------->IF/BD J2 PIN-11,SENSER-2 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,SENSER-2 PIN-4

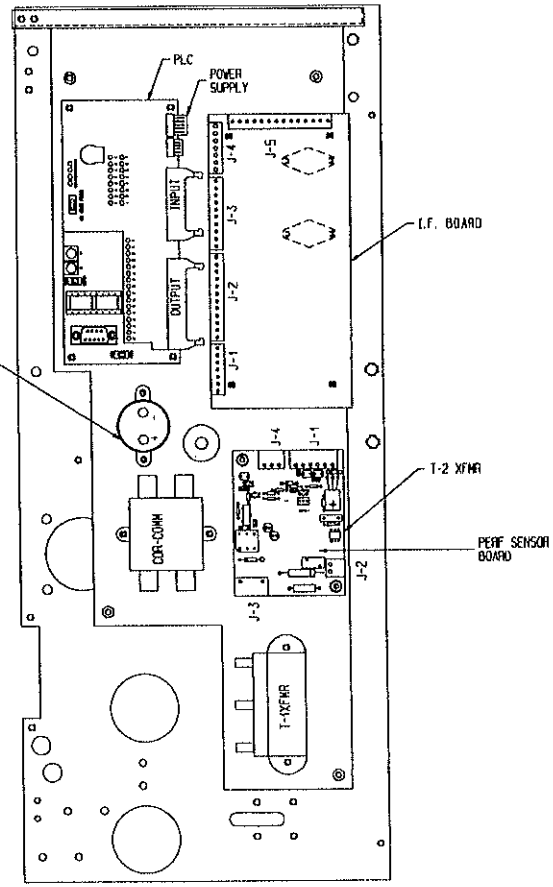






RIGHT SIDE





LEFT SIDE

T-1000 WIRING TAB LIST

REV-A-WKR 11-95

SEAL BAR IN

(2 PIN MOLEX)
BLK-->1--1<-----WHT/BLK/BL----->PLC INPUT-PIN-23
WHT-->2--2<-----WHT/GRN-------->PLC INPUT-PIN-14

JAW OPEN

(2 PIN MOLEX)
BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----ORG-------->IF/BD-J1 PIN-7

JAM DETECT

(2 PIN MOLEX)
BLK-->1--1<-----PINK------->PLC INPUT-PIN-19
BLK-->2--2<-----WHT/GRN---->PLC INPUT-PIN-13

HEATER BAR

(2 PIN MOLEX)
BLK-->1--1<-----PURPLE----->IF/BD-J5 PIN-13
BLK-->2--2<-----WHITE------>IF/BD-J5 PIN-5

THERMOCOUPLE (2 PIN CONN.)

POS. +<-----WHITE------>IF/BD-J2 PIN-2
NEG. -<-----RED-------->IF/BD-J2 PIN-3

BRAKE (SCREW CONN)

1<-----PURPLE----->IF/BD-J5 PIN-9
2<-----PURPLE----->IF/BD-J5 PIN10

CLUTCH (SCREW CONN)

1<-----GRAY------->IF/BD-J5 PIN-6
2<-----GRAY------->IF/BD-J5 PIN-8

MOTOR

(5 PIN MOLEX)
BLACK---->1--1<-----BLACK----->IF/BD-J5 PIN-14
BLUE----->2--2<-----BLACK---- >JUMPED TO PIN-1
BLACK---->3--3<-----WHITE----->IF/BD-J5 PIN-4
----->(MOTOR STARTER CAP. PIN-1)
BLUE----->4--4<-----BLUE------>MOTOR STARTER CAP. PIN-3
GRN/YEL-->5--5<-----GREEN----->TO CHASSIS GROUND

SOLENOID AIR VALVES (2 PIN MOLEX)

SAV-1 (MAIN SEAL PRES.)
BLK-->1--1<-----YEL---------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/RED---->PLC OUTPUT-PIN-27

SAV-2 (HEATER SEAL BAR)
BLK-->1--1<-----YEL---------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/BRN---->PLC OUTPUT-PIN-25

SAV-3 (LOAD SHELF)

BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BRN---->PLC OUTPUT-PIN-11

SAV-4 (BAG LIFT)

BLK-->1--1<-----YEL------------>IF/BD-J4 PIN1
BLK-->2--2<-----WHT/BLK/GRN---->PLC OUTPUT-PIN-9 AND
IF/BD J2-PIN-8

SAV-5 (TRIM SEAL)

BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/VOL---->PLC OUTPUT-PIN-23

SAV-6 (PERF BREAK)

BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/GRY---->PLC OUTPUT-PIN-24

SAV-7 (FLAT SEAL)

BLK-->1--1<-----YEL----------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/BL---->PLC OUTPUT-PIN-26

SAV-8 (ACCUM. FUNNEL)

BLK-->1--1<-----YEL------------>IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK/YEL---->PLC OUTPUT-PIN-8

SAV-9 (VENTURI BLOWER)

BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BLK---->PLC OUTPUT-PIN-12

SAV-10 (AIR PULSE)

BLK-->1--1<-----YEL-------->IF/BD-J4 PIN-1
BLK-->2--2<-----WHT/BL----->PLC OUTPUT-PIN-13

IOP (CABLE 4 CONT.)

PIN-(+)<-----RED----->IF/BD J1-PIN-6
PIN-(-)<-----GRN----->IF/BD J1-PIN-3,4

HEAT INDICATER (LED)

IOP-(+)<-----RED----->TO YEL LED
IF/BD J3-PIN-8<-----WHT----->TO 1.2k RES. ON LED

HIGH VOLTAGE BOARD

J-1 (6 PIN CONN)

PIN-1<-----BLUE---->IF/BD-J5 PIN-7
PIN-2<-----BLK----->T-2 PIN-10 XFMR
PIN-3<-----ORG----->IF/BD-J3 PIN-5
PIN-4<-----NOT USED
PIN-5<-----GRN----->TO CORCOM GROUND AND
T-2XFMR GROUND
PIN-6<-----WHT----->IF/BD-J5 PIN-2

J-2 (3 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----RED----->PLC INPUT-PIN-21

J-3 (2 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----YEL-------->TO H.V SENSOR

J-4 (4 PIN CONN)

PIN-1<-----BLK----->T-2XFMR
PIN-2<-----NOT USED
PIN-3<-----NOT USED
PIN-4<-----BLK----->T-2XFMR

PLC BOARD

OUTPUTS (34 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----NOT USED
PIN-4<-----NOT USED
PIN-5<-----NOT USED
PIN-6<-----NOT USED
PIN-7<-----WTH/ORG-------->IF/BD J3-PIN-10,AUX-3 PIN-E
PIN-8<-----WHT/BLK/YEL---->SAV-8
PIN-9<-----WHT/BLK/GRN---->SAV-4,IF/BD J2-PIN-8
PIN-10<----BRN------------>IF/BD J3-PIN-7
PIN-11<----WHT/BRN-------->SAV-3
PIN-12<----WHT/BLK-------->SAV-9
PIN-13<----WHT/BL--------->SAV-10
PIN-14<----RED------------>IF/BD J3-PIN-6
PIN-15<----NOT USED
PIN-16<----NOT USED
PIN-17<----NOT USED
PIN-18<----NOT USED
PIN-19<----NOT USED
PIN-20<----NOT USED
PIN-21<----NOT USED
PIN-22<----NOT USED
PIN-23<----WHT/BLK/VOL---->SAV-5
PIN-24<----WHT/BLK/GRY---->SAV-6
PIN-25<----WHT/BLK/BRN---->SAV-2
PIN-26<----WHT/BLK/BL----->SAV-7
PIN-27<----WHT-BLK/RED---->SAV-1
PIN-28<----WHT/GRY-------->IF/BD J3-PIN-8
PIN-29<----BLUE----------->IF/BD J4-PIN-3
PIN-30<----PINK----------->IF/BD J3-PIN-9
PIN-31<----NOT USED
PIN-32<----NOT USED
PIN-33<----NOT USED
PIN-34<----NOT USED

INPUT (30 PIN CONN)

PIN-1<-----NOT USED
PIN-2<-----NOT USED
PIN-3<-----WHT/BLK/ORG---->AUX-3 PIN-I
PIN-4<-----YEL------------>AUX-3 PIN-H
PIN-5<-----WHT/VIO-------->IF/BD J2-PIN-11
PIN-6<-----WHT/BL--------->IF/BD J2-PIN-9
PIN-7<-----NOT USED
PIN-8<-----NOT USED
PIN-9<-----NOT USED
PIN-10<----NOT USED
PIN-11<----WHT/GRN-------->**SEE NOTE:1**
PIN-12<----WHT/GRN-------->IF/BD J1-PIN-3 OR 4
PIN-13<----WHT/GRN-------->JAM DETECT PIN-2
PIN-14<----WHT/GRN-------->SEAL BAR IN PIN-2
PIN-15<----BRN------------>IF/BD J2-PIN-4
PIN-16<----WHT/YEL-------->IF/BD J4-PIN-2
PIN-17<----WHT/BLK/GRY---->IF/BD J3-PIN-3
PIN-18<----WHT/BLK/BRN---->IF/BD J3-PIN-1
PIN-19<----PINK----------->JAM DETECT PIN-1
PIN-20<----WHT/GRY-------->AUX-2 PIN-A

PIN-21<----RED---------->HV/BD J2-PIN-3
PIN-22<----WHT/ORG-------->FOOT SWITCH PIN-2
PIN-23<----WHT/BLK/BL----->SEAL BAR IN PIN-1
PIN-24<----NOT USED
PIN-25<----NOT USED
PIN-26<----WHT/RED-------->IF/BD J2-PIN-1
PIN-27<----NOT USED
PIN-28<----NOT USED
PIN-29<----NOT USED
PIN-30<----NOT USED

POWER SUPPLY (5 PIN CONN)
PIN-1<-----BRN---------->IF/BD J1-PIN-6
PIN-2<-----RED---------->IF/BD J1-PIN-3 OR 4
PIN-3 REMOVED
PIN-4<-----YEL---------->IF/BD J1-PIN-3 OR 4
PIN-5<-----GRN---------->IF/BD J1-PIN-7

IF BOARD

J-1 (7 PIN CONN)
PIN-1<-----RED---------->T-1XFMR PIN-6
PIN-2<-----RED---------->T-1XFMR PIN-10
PIN-3<-----GRN---------->TO CORCOM GROUND, FELTER CAP (-)NEG.
PIN-4<--
PIN-5<-----RED---------->FILTER CAP (+)POS.
PIN-6<-----BRN---------->PLC POWER SUPPLY PIN-1
PIN-7<-----GRN---------->PLC POWER SUPPLY PIN-5

J-2 (12 PIN CONN)
PIN-1<-----WHT/RED-------->PLC INPUT PIN-26
PIN-2<-----WHITE---------->THEROCOUPLE (+) POS. CONN
PIN-3<-----RED---------->THEROCOUPLE (-) NEG. CONN
PIN-4<-----BRN---------->PLC INPUT PIN-15
PIN-5<-----NOT USED
PIN-6<-----NOT USED
PIN-7<-----WHT/BLK/RED---->AUX-3 PIN-J
PIN-8<-----WHT/BLK/GRN---->PLC OUTPUT PIN-9
PIN-9<-----WHT/BL--------->PLC INPUT PIN-6
PIN-10<----NOT USED
PIN-11<----WHT/VIO-------->PLC INPUT PIN-5,OPT.PART SENSE PIN-3
PIN-12<----VIO---------->OPTICAL PART SENSE PIN-2

J-3 (10 PIN CONN)
PIN-1<-----WHT/BLK/BRN---->PLC INPUT PIN-18,TOUCH BUTTON-2 PIN-3
PIN-2<-----TAN---------->OPT. TOUCH BUTTON-2 PIN-2
PIN-3<-----WHT/BLK/GRY---->PLC INPUT PIN-17,TOUCH BUTTON-1 PIN-3
PIN-4<-----GRY---------->OPT. TOUCH BUTTON-1 PIN-2
PIN-5<-----ORG---------->HV/BD J1-PIN-3
PIN-6<-----RED---------->PLC OUTPUT PIN-14
PIN-7<-----BRN---------->PLC-OUTPUT PIN-10
PIN-8<-----WHT/GRY-------->PLC OUTPUT PIN-28
PIN-9<-----PINK---------->PLC OUTPUT PIN-30
PIN-10<----WHT\OGR-------->PLC OUTPUT PIN-7,AUX-3 PIN-E

J-4 (4 PIN CONN)
PIN-1<-----YEL---------->JAW OPEN SW. PIN-1
PIN-2<-----WHT/YEL-------->PLC INPUT PIN-16
PIN-3<-----BLUE---------->PLC OUTPUT PIN-29
PIN-4<-----NOT USED
PIN-5<-----NOT USED
PIN-6<-----BLUE---------->AUX-2 PIN-E, AUX-1 PIN-E
PIN-7<-----WHT/BL--------->AUX-2 PIN-C, AUX-1 PIN-C

J-5 (14 PIN CONN)

PIN-1<-----BLACK---------->T-1XFMR PIN-1,CORCOM-LOAD (AC)
PIN-2<-----WHITE---------->T-1XFMR PIN-2, HV/BD J1-PIN-6
PIN-3<-----BLACK---------->T-1XFMR PIN-4, JUMPER TO IF/BD J5-PIN-1
PIN-4<-----WHITE---------->T-1XFMR PIN-5, JUMPER TO IF/BD J5-PIN-2,
MOTOR PIN-3
PIN-5<-----WHITE---------->HEATER PIN-2,CORCOM-LOAD (NEUTRAL)
PIN-6<-----GRAY----------->CLUTCH PIN-1
PIN-7<-----BLUE----------->HV/BD J1-PIN-1
PIN-8<-----GRAY----------->CLUTCH PIN-2
PIN-9<-----PURPLE--------->BRAKE PIN-1
PIN-10<----PURPLE--------->BRAKE PIN-2
PIN-11<----VIO------------>AUX-3 PIN-A
PIN-12<----WHT/VIO-------->AUX-3 PIN-B
PIN-13<----PURPLE--------->HEATER BAR PIN-1
PIN-14<----BLACK---------->MOTOR PIN-1

AUX-3 (10 PIN CONN)

PIN-A<-----VIO------------>IF/BD J5 PIN-11, AUX-1 PIN-A
PIN-B<-----WHT/VIO-------->IF/BD J5 PIN-12,AUX-1 PIN-B
PIN-C<-----GREEN---------->IF/BD J1 PIN-3 OR 4,AUX-1 PIN-F,AUX-2 PIN-F,
PIN-D<-----ORG------------>IF/BD J1 PIN-7
PIN-E<-----WHT/ORG-------->PLC OUTPUT PIN-7
PIN-F<-----BLACK---------->MAIN POWER SW. PIN-3
PIN-G<-----WHITE---------->MAIN POWER SW. PIN-4
PIN-H<-----YEL------------>PLC INPUT PIN-4
PIN-I<-----WHT/BLK/ORG---->PLC INPUT PIN-3
PIN-H<-----WHT/BLK/RED---->IF/BD J2-PIN-7

AUX-1 (6 PIN CONN)

PIN-A<-----VIO------------>AUX-3 PIN-A
PIN-B<-----WHT/VIO-------->AUX-3 PIN-B
PIN-C<-----WHT\BL--------->AUX-2 PIN-C
PIN-D<-----NOT USED
PIN-E<-----BL------------->AUX-2 PIN-E
PIN-F<-----GREEN---------->AUX-3 PIN-C,AUX-2 PIN-F,IF/BD J1 PIN-3 OR 4

AUX-2 (6 PIN CONN)

PIN-A<-----WHT/GRY-------->PLC INPUT PIN-20
PIN-B<-----WHT/GRN-------->IF/BD J1-PIN-3 OR 4, FOOT SW. PIN-3
PIN-C<-----WHT/BU--------->IF/BD J4-PIN-7
PIN-D<-----NOT USED
PIN-E<-----BLUE----------->IF/BD J4-PIN-6
PIN-F<-----GREEN---------->IF/BD J1 PIN-3 OR 4, AUX-1 PIN-F,AUX-3 PIN-C

FOOT SW. (3 PIN CONN)

PIN-1<-----GREEN---------->CORCOM STANDOFF
PIN-2<-----WHT/GRN-------->IF/BD J1-PIN-3 OR 4
PIN-3<-----WHT/ORG-------->PLC INPUT PIN-22

MAIN POWER SW.

PIN-1<-----NOT USED
PIN-2<-----BLACK---------->FUSE PIN-2
PIN-3<-----BLACK---------->AUX-3 PIN-3,CORCOM LINE (AC),LINE OUT PLUG
PIN-4<-----WHITE---------->PWR CORD,CORCOM LINE (NEU),AUX-3 PIN-G,
LINE OUT PLUG
PIN-5<-----NOT USED
PIN-6<-----NOT USED

MAIN FUSE

PIN-1<-----BLACK---------->PWR CORD
PIN-2<-----BLACK---------->MAIN POWER SW. PIN-2

LINE OUT PLUG

BLK WIRE<----------------->MAIN POWER SW. PIN-3
GREEN<-------------------->CORCOM CASE GROUND
WHITE<-------------------->MAIN POWER SW. PIN-4

OPTICAL TOUCH BUTTON (4 PIN MOLEX)

PLAM BUTTON-2 (LEFT SIDE)

PIN-1<-----ORG------------>IF/BD J1 PIN-7,PLAM BUTTOM-1 PIN-1
PIN-2<-----TAN------------>IF/BD J3 PIN-2
PIN-3<-----WHT/BLK/BRN---->IF/BD J3 PIN-1
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,PLAM BUTTOM-1 PIN-4

PLAM BUTTOM-1 (RIGHT SIDE)

PIN-1<-----ORG------------>IF/BD J1 PIN-7,PLAM BUTTOM-2 PIN-1
PIN-2<-----GRY------------>IF/BD J3 PIN-4
PIN-3<-----WHT/BLK/GRY---->IF/BD J3 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,PLAM BUTTOM-2 PIN-4

OPTICAL PART SENSE/COUNT (4 PIN MOLEX)

SENSER-2 (LEFT SIDE)

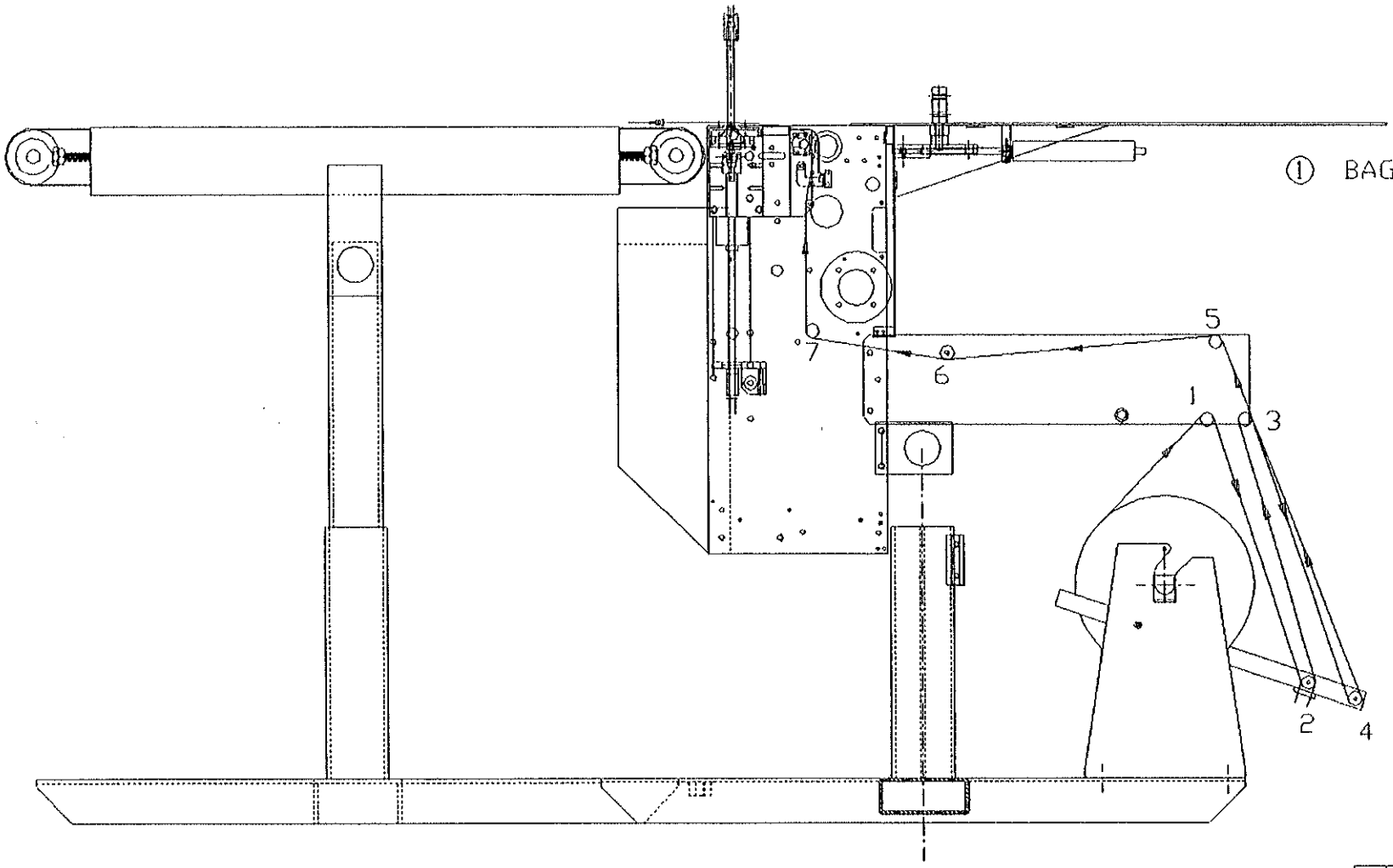
PIN-1<-----ORG------------>IF/BD J1 PIN-7,SENSER-1 PIN-1
PIN-2<-----VIO------------>IF/BD J2 PIN-12,SENSER-1 PIN-2
PIN-3<-----WHT/VIO-------->IF/BD J2 PIN-11,SENSER-1 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,SENSER-1 PIN-4

SENSER-1 (RIGHT SIDE)

PIN-1<-----ORG------------>IF/BD J1 PIN-7,SENSER-2 PIN-1
PIN-2<-----VIO------------>IF/BD J2 PIN-12,SENSER-2 PIN-2
PIN-3<-----WHT/VIO-------->IF/BD J2 PIN-11,SENSER-2 PIN-3
PIN-4<-----GREEN---------->IF/BD J1 PIN-3 OR 4,SENSER-2 PIN-4

Notes

Date	Note



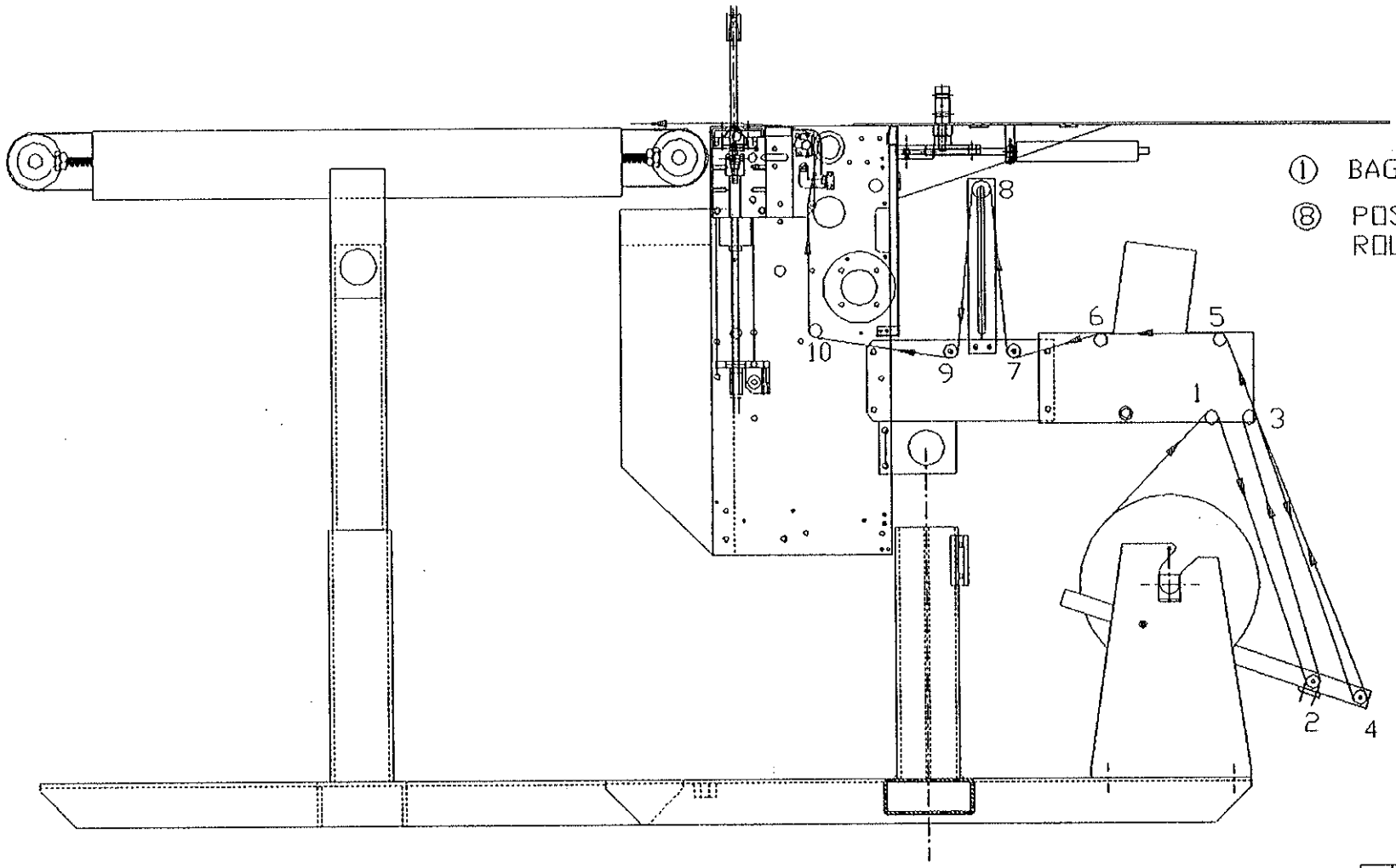
21A

T-1000 "HORIZONTAL" ADVANCED POLY-BAGGER™ THREADING DIAGRAM.

Advanced Poly Packaging Inc.

T1-1000/T-1000

BAG THREADING



T-1000 "HORIZONTAL" ADVANCED POLY-BAGGER™ THREADING DIAGRAM. (WITH PRINTER)

Advanced Poly Packaging Inc.

TYPE DRAWING: T1-1000/T-1000

SCALE: 1:3

TITLE: BAG THREADING

21B