Shibuya Hoppmann™

L3500PA Labeler

Installation & Maintenance Manual

Refer all servicing to qualified personnel.

This manual is intended for use by qualified mechanics and electricians who install or service the Shibuya Hoppmann L3500PA Print & Apply Labeler.

Record your serial plate information here for future reference

Model Number	Serial Number/Date

Headquarters
7849 Coppermine Dr.
Manassas, VA
20109
540.829.2564 t
800.368.3582 t
540.829.1726 f

Sales
1445 Brookville Way
Suite F
Indianapolis, IN 46239
317.322.0754 t
800.368.3582 t
317.322.0794 f

Manufacturing
291 Dillard Road
Madison Heights, VA
24572
434.929.4746 t
800.543.0915 t
434.929.4959 f

www.ShibuyaHoppmann.com | publications@Hoppmann.com

Thank You!

Thank You for Choosing Shibuya Hoppmann

Thank you for purchasing a labeler from Shibuya Hoppmann. Our labelers, prefeeders, feeders, and automated systems possess an industry-wide reputation of excellence for their quiet and rapid handling of parts, ease of use and low maintenance requirements.

About This Manual

Who Should Read

This manual is intended for those who install and/or operate the L3500PA Labeler. The manual is not intended to meet the training needs of persons new to labeling; nor is it intended to meet the needs of personnel who wish to completely overhaul the unit. These needs will require assistance of experienced personnel and are outside the scope of this manual. Please read the entire manual carefully before operating your labeler.

Caution Symbols and Messages

Caution symbols and messages in this manual call attention to hazardous voltages, moving parts, and other hazardous conditions.

The lightning bolt caution symbol denotes possible personal injury and/or damage to the equipment from electrical hazards.

The exclamation point caution symbol denotes possible personal injury and/or damage to the equipment.

Other Documentation

Product specifications and vendor subcomponents are incorporated into this manual at the discretion of the manufacturer.

Equipment Improvements & Document Revisions Notice

Shibuya Hoppmann Corporation (SHC) continually improves its products, and reserves the right to change or discontinue specifications and designs shown in this manual without notice and without incurring obligation. Occasionally older versions of equipment may have different spare parts/replacement parts requirements. Please be sure to contact SHC before ordering specific parts for older style prefeeders. SHC has made every effort to verify the information contained in this manual, but reserves the right to correct any error at the time of the manual's next revision. 10.2015.

Table of Contents

Table of Contents (continued)

Terms and Definitions

Term	Definition
Blow-On Module	Blow Module, Label Blow-On Applicator Module. Aids in applying the label to product with the use of blowing air.
Tamp-On Module	Tamp Module, Label Tamp-On Applicator Module. Aids in applying the label to product with the use of pushing the label onto the product with pneumatics.
FR Filter	Combination pneumatic pressure regulator and secondary particle filter.
Peeler Plate	Peeler Bar; An edged, flat piece of metal around which the backing or label web material is threaded–the prime function being a mechanical device which causes a pressure-sensitive label to be dispensed from the backing material.
Product	Any medium to which the labels are applied (boxes, bottles, containers, etc.)
Web	Webbing; Backing; Label Strip; Label Ribbon; Waste; Continuous Backing;
Flag	The part of the label with the adhesive exposed before the label is completely removed from the webbing.
Labeler	Label Applicator; Applicator; L3500PA
PA	Print & Apply; Indicates the labeler has a print engine.
Print Engine	Thermal transfer printer; thermal printer; in-line printer.
Print Head	Label applicator unit; Print & Apply label applicator; Labeler

Description & Specifications

1

The L3500PA Labeler

Function

The L3500PA Print & Apply Labeler integrates an industrial grade printer with an engineer applicator design to maximize product and to minimize maintenance and changeover time. This labeler can be integrated into an in-line product handling system, be used as a stand-alone unit, or dispense single labels as needed. It is designed to dispense blank or pre-printed labels. The standard L3500PA will dispense labels up to 5 1/2" wide.

Design features of the label applicator include:

- HMI touchscreen operator interface
- Standard 12" diameter label supply rolls
- Powered label drive and torque clutch adjustable rewind
- Rapid configuration and changeover of applicator modules
- Access to main components for maintenance and changeover
- Rugged stainless steel and black anodized construction
- Pneumatic assembly composed of ergonomic controls for individual component air pressure adjustments and test port access

Refer to Table 1-1 for applicator upgrades and options that will expand the capabilities of the L3500PA Labeler.

Available Options for L3500PA
Tamp-On, Blow-On, Tamp-Blow, Wipe-On, LEC, TEC, and Dual Panel Tamp modules
Soft-Tamp module detects product locations
Extended length tamp modules (up to 24")
Remote operator panel
Low label level sensor & beacon fault upgrades
Horizontal positioning device
Auxiliary air valve for add-on modules or for product handling pneumatics
Powered unwind spools
Optional 18" (457mm) powered supply roll upgrade
Adjustable stands and machine mount supports

Table 1-1. L3500PA Available Options

L3500PA Labeler Specifications

Accuracy	±0.032" (±0.81mm)
Controls	PLC based control, HMI touchscreen interface
Unwind Roll Diameter	12" (305mm) OD x 3" (76mm) ID
Product Detection	Photo Eye
Machine Interface	External sub-D connectors
Air Requirements	80psi @ 2.2CFM
Power Requirements	115 or 220VAC, 50/60 Hz, 6 amps
Environment	41-104˚ F (5-10˚C), 25-85% relative humidity

Table 1-2. L3500PA Product Specifications

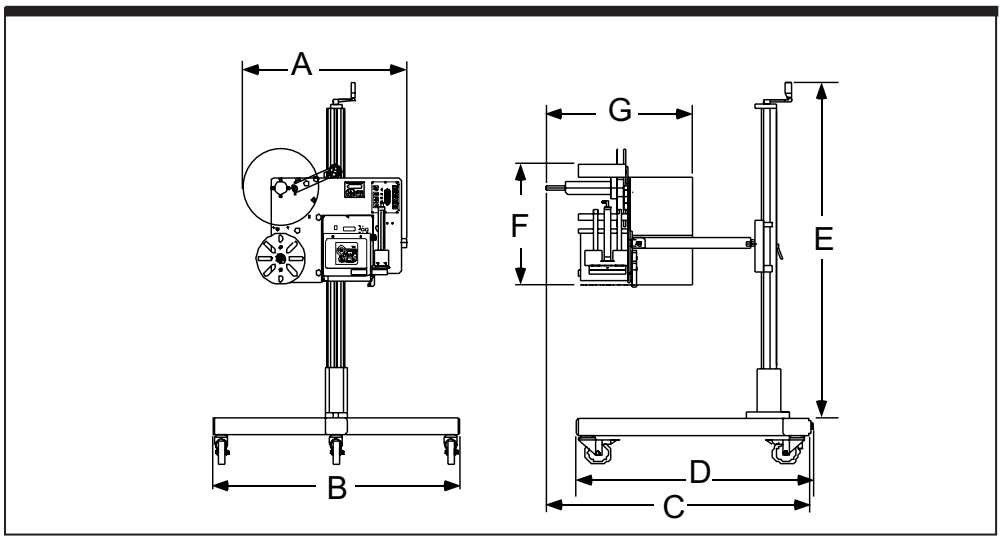
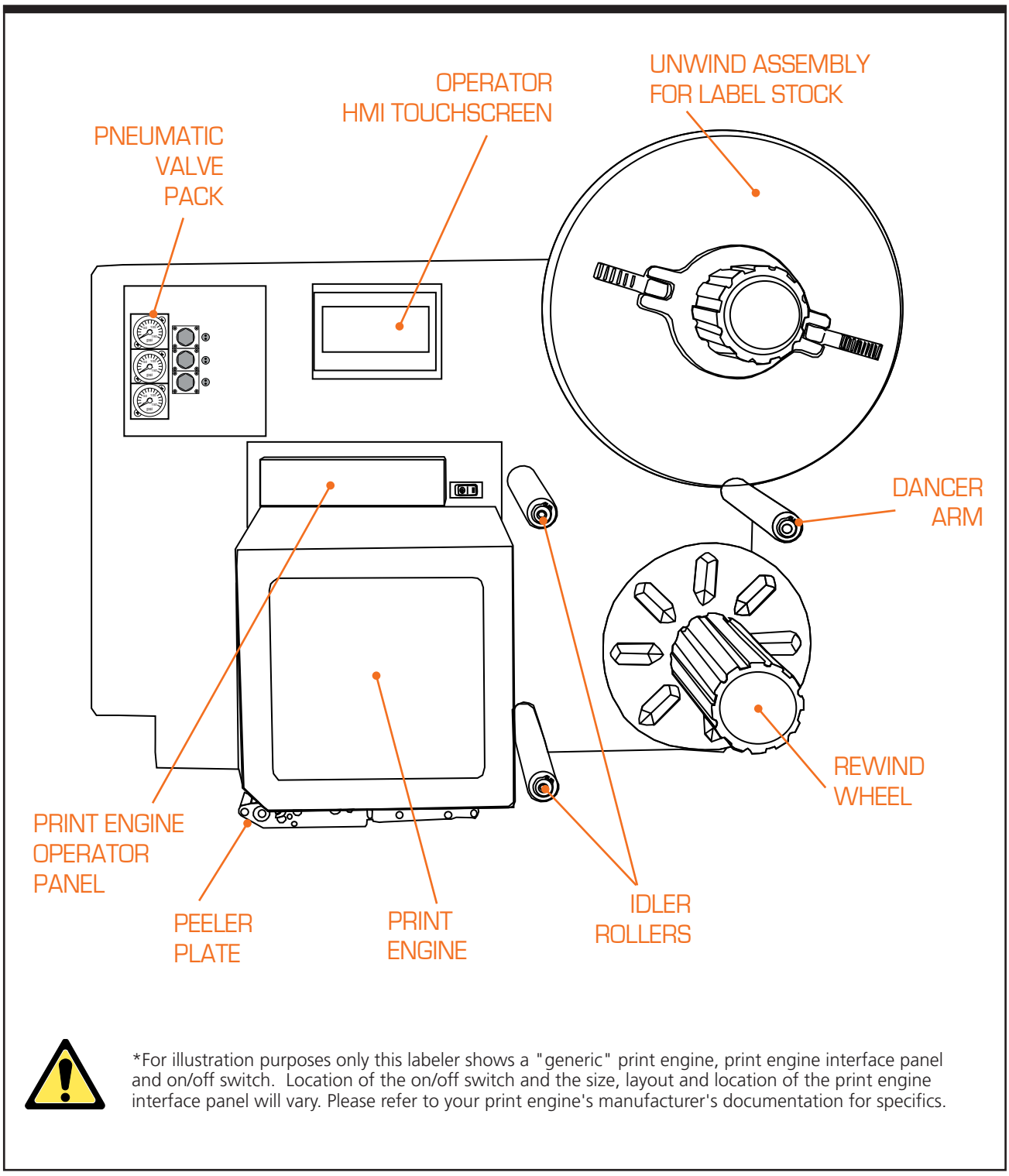


Figure 1-1. L3500PA Side and Front Views with Dimensions

Dimension Specifications		ANSI	Metric
A	Applicator Width	30.38"	772mm
B	Overall Width (With Stand)	45.50"	1155mm
C	Overall Depth (With Stand)	38.4"	956mm
D	Frame Depth	34.25"	870mm
E	Stand Height	62.52"	1588mm
F	Applicator Height	24.15	613mm
G	Applicator Depth	21.45"	545mm

Table 1-3. L3500PA Dimensions



*For illustration purposes only this labeler shows a "generic" print engine, print engine interface panel and on/off switch. Location of the on/off switch and the size, layout and location of the print engine interface panel will vary. Please refer to your print engine's manufacturer's documentation for specifics.

Figure 1-2. L3500PA Labeler - Left Hand

Applicator Options & Upgrades

The manufacturer or distributor may have changed specifications to match your desired application. Refer to the specifications listed on page 7 for applicator specifications, and see Table 1-4 below for Applicator Options and Upgrades.

Part Number	Part Description
L100FB001	Tri-color light tower beacon with mounting bracket and terminal points
L100LTB3CM	Low label detector sensor, tri-color beacon lamp for fault conditions
L100STP001	Soft tamp pad accessory for standard tamp on applicator
L100LECR01	Leading edge, front and side panel wrap module (right hand)
L100LECL01	Leading edge, front and side panel wrap module (left hand)
L100TECR01	Trailing edge, side, and rear panel wrap module (right hand)
L100TECL01	Trailing edge, side, and rear panel wrap module (left hand)
L100DPTR01	Dual panel tamp module for individual front/side or both panels (LH)
L100DPTL01	Dual panel tamp module for individual front/side or both panels (left hand)
L100UKV3R1	18" (457mm) unwind kit upgrade (right hand)
L100UKV3L1	18" (457mm) unwind kit upgrade (left hand)
L100ROP001	Remote start/stop
L100VST001	T-Stand, light duty, 60" (1524mm) tall with 39" (990mm) of vertical adj.
L100GK6001	T-Stand gusset kit to convert light duty stand to heavy duty
L100WVST01	T-Stand, heavy duty, 60" (1524mm) tall with 39" (990mm) of vertical adj.
L100UV3001	U-Arm
L100VA3601	Machine mount label head stand 36" (914mm) tall with vertical adj.
L100VA6001	Machine mount label head stand 60" (1524mm) tall with vertical adj.
L100HLA001	Horizontal linear adjuster (single axis)
L100BOMV3R	Blow-on module, 5" x 5" grid (right hand)
L100BOMV3L	Blow-on module, 5" x 5" grid (left hand)
L100TAV312	12" tamp stroke upgrade assembly
L100TAV318	18" tamp stroke upgrade assembly
L100TAV324	24" tamp stroke upgrade assembly

Table 1-4. L3500PA - Applicator Options and Upgrades

Safety Precautions

2

Safety Precautions

This labeler has been designed to be as safe as possible for operators. However, even well-built machines can be installed or operated in a hazardous manner. Safety precautions must be observed by users.

Specific Warnings & Cautions

Turn Power Off! Before servicing the labeler, make sure you have turned off compressed air and electrical power in a way that prevents accidental reactivation. Padlock, and clearly tag, the appropriate electrical and pneumatic disconnects. After disconnecting the electrical power, wait at least two minutes for the motor capacitor to discharge.

Dress Properly and Wear Safety Glasses! To reduce the risk of injury from moving parts, secure loose clothing. Do not wear jewelry or neckties near the machine. Wear safety glasses or other protective eye wear at all times. Never place hands or tools in the tamp, corner wrap, print head, or other movable parts of the labeler when the machine is operating.

Avoid Pinch Points! Exposed pinch points include the unwind and rewind assemblies, dancer arm, idler rollers, pull pins, the peeler plate and the different modules.

Avoid Dangerous Conditions! The standard labeler should not be placed in washdown environments nor is it designed to be used in explosive conditions. The L3500PA Applicator will be damaged when sprayed by a fire suppressant sprinkler system. Dry conditions are critical for long life duration of the machine. Potentially explosive environments, such as areas where flammable gas and vapors are present, should be avoided due to static electricity caused by normal operations.

Notes

Installation & Start-Up

3

This chapter covers unpacking, inspection, positioning and power and air hookups for the L3500PA Print & Apply Labeler.

Unpacking and Inspection

Step 1. **Check the Shipping Container.** Make a visual check of the inside of the shipping box. The box and packing in which the unit ships has been carefully designed to prevent damage during shipping. However, if you do find a problem, report any damage to the Shipping Carrier **immediately** and follow their instructions.

The applicator can weigh in excess of 115 pounds (53kg).

Step 2. **Unpack the Labeler.** Remove the top and sides of the shipping crate to expose the labeler. Remove the packing material. Inventory the container.

Labeler Positioning

The standard labeler is shipped with two 12mm threaded mounting holes for custom attachments. One is located on each side of the labeler. An optional U-Arm and/or T-stand are available for mounting.

Note: Positioning of the labeler may vary if an application module was purchased with your unit. Refer to Chapter 6: Application Modules, for more information.

The labeler must be positioned so that printed labels are applied to the product with the proper orientation. Once the correct orientation is obtained, the labeler is ready to be placed into position. The product and labeling surface should be parallel with each other at the point of contact (see Figure 3-1 and 3-2 on the following page).

Note: The labeler needs to be mounted in such a way that there is minimum vibration and rotation, or else the accuracy of the labeling may be compromised. It is also suggested that fine tuning adjustments be made after mounting the labeler.

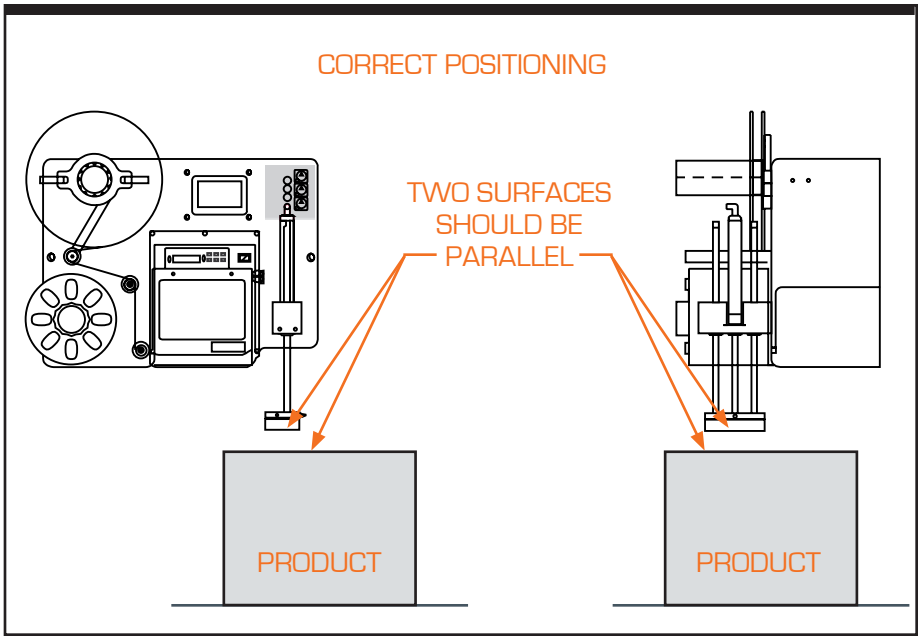


Figure 3-1. Correct Positioning of Labeler

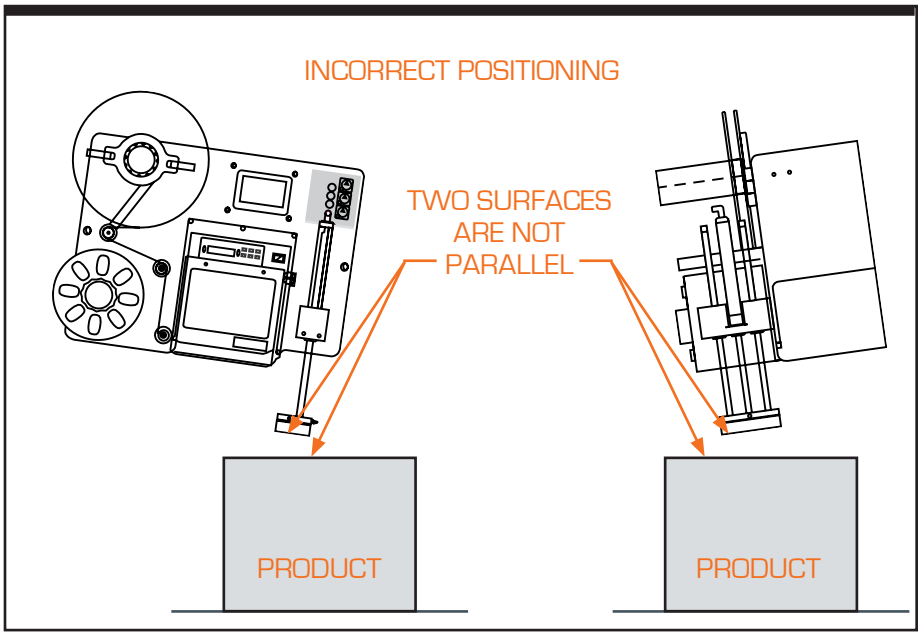


Figure 3-2. Incorrect Positioning of Labeler

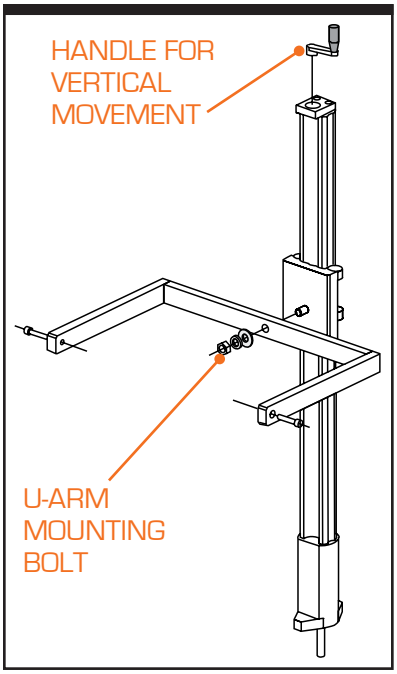


Figure 3-3. U-Arm Mounting

U-Arm and T-Stand

If a U-Arm and/or T-stand is/are purchased with your unit, refer to Figure 3-3 and Figure 3-4 for proper positioning. To pivot the labeler up or down, loosen the large hex nut which fastens the U-Arm to the T-stand. This allows the unit to rotate the peeler plate up or down. Tighten the same nut to secure the labeler's position (see Figure 3-4).

The labeler may also be positioned for top, side or bottom panel labeling. Loosen the two large socket head bolts that fasten the U-Arm to the labeler. Rotate the labeler into a position where the application module is parallel to the surface of the product to be labeled.

Use the handle at the top of the T-stand to raise or lower the labeler to the desired height relative to the product (see Figure 3-4). To change the horizontal position of the unit, simply unlock the casters on the bottom of the T-stand and roll the unit to the desired location. Lock the casters down once in position.

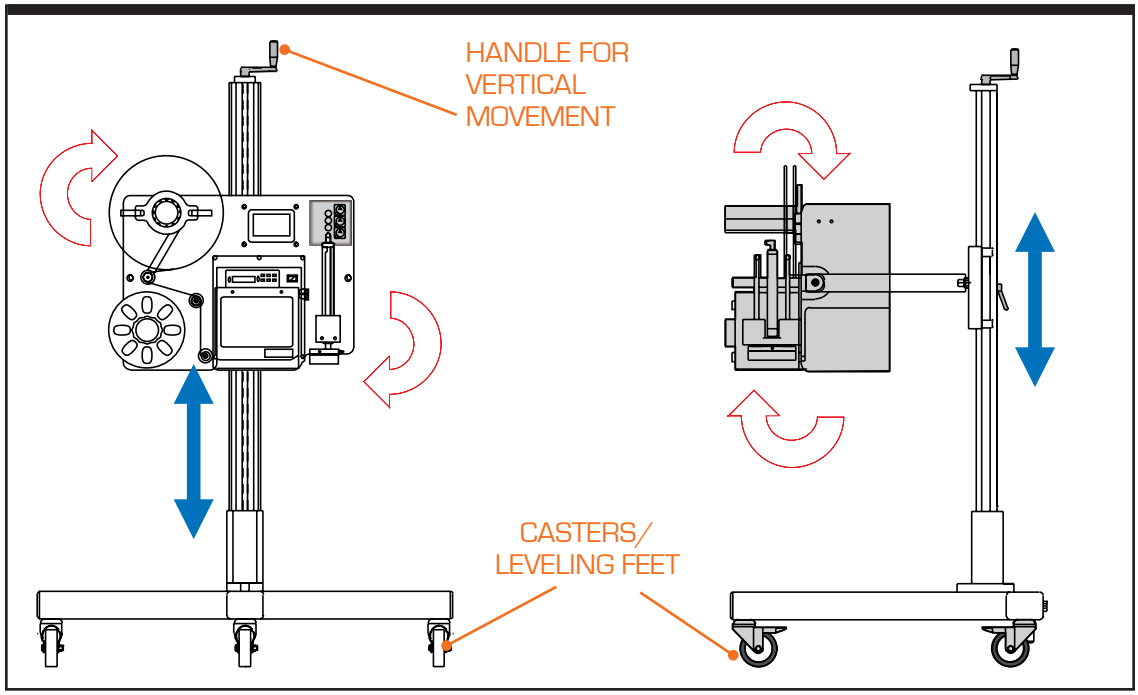


Figure 3-4. L3500PA on T-Stand

Power Supply

Supplying the unit with the correct supply voltage permits safe and efficient operation. Refer to specification chart on page 8.

Verify Main Power

The labeler is supplied with a power cord for AC operation. Plug the power cord into an outlet with the proper voltage (115 VAC, see Voltage Selection section if different voltage is required) and ground. Make sure the power cord is securely connected to the labeler (see Figure 3-5) and the outlet.

Due to the wide variety of plugs used world wide, the power cord that is shipped with the labeler has a standard U.S. plug. If you need a power cord with a different type of plug, purchase a power cord approved by local government or identified with an HAR (Harmonized Standard) label.

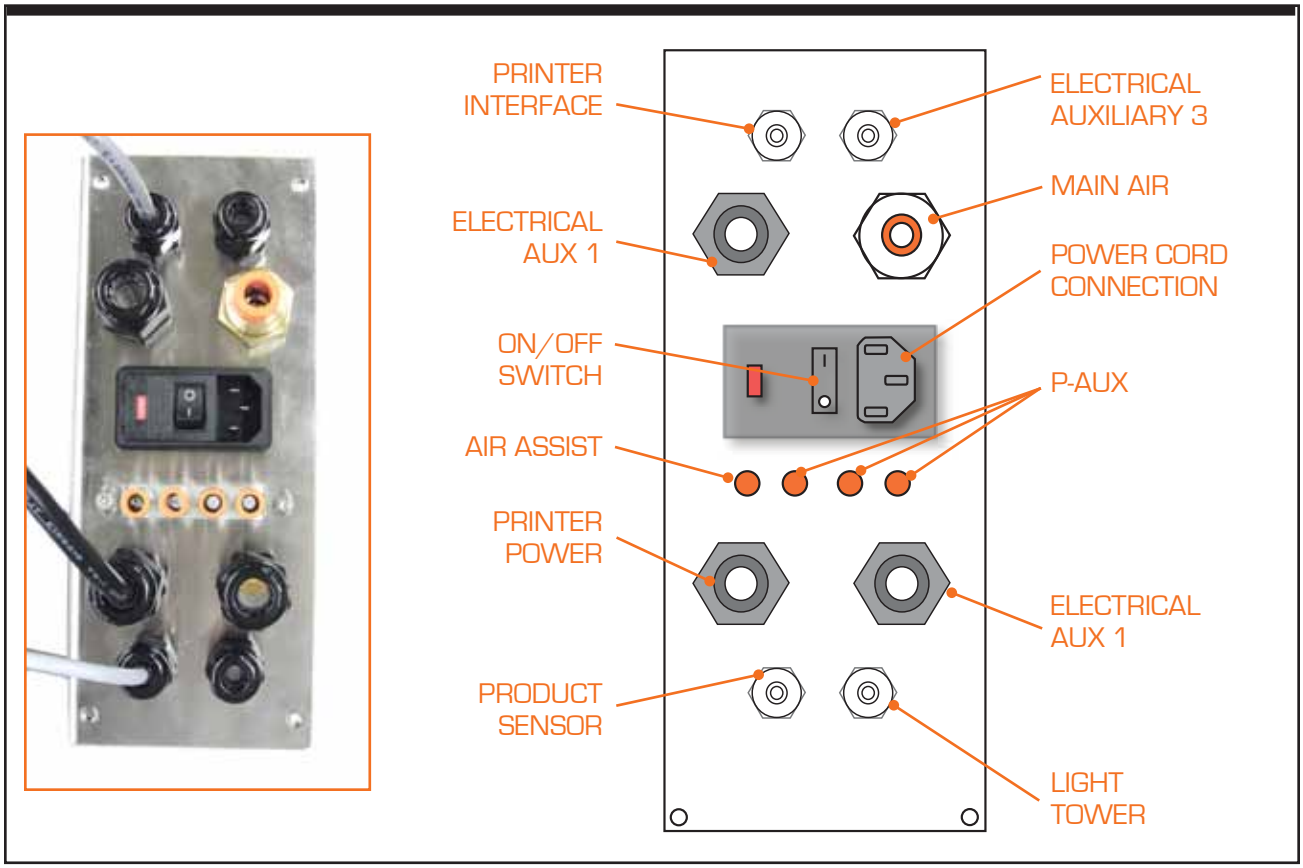


Figure 3-5. Module Interface Panel

To test the connection, turn the main power switch "ON" and then the print engine power switch "ON". The print engine will illuminate to verify the power connection.

Verify that the Sub-D connector is attached to the proper I/O port at the rear of the labeler. It should be firmly seated in the lowest of the three I/O ports (refer to Figure 3-6). The Sub-D connector interfaces with the controller.

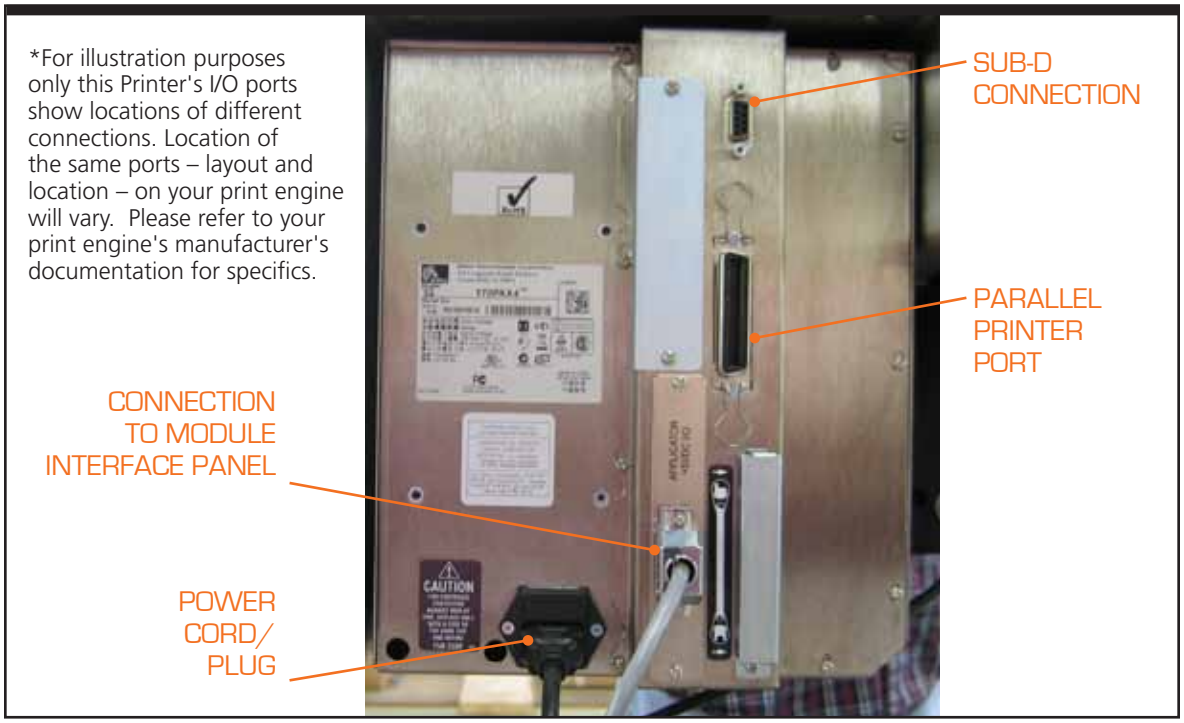


Figure 3-6. Printer I/O Ports (Example)

Air Supply

Connect Shop Air

Locate the FR (Filter-Regulator) that was shipped with the labeler. Mount the FR (the optional U-Arm provides a mounting position for the FR). Attach one end of the 3/8" main air line (hose) to the quick disconnect on the FR. Connect the other end of the host to the quick disconnect labeled "MAIN AIR" on the module interface panel (see Figure 3-5).

The moisture collected in the filter should be removed daily or as needed. To do this, press the bottom pin of the filter and allow the moisture to drain (refer to Figure 3-7).

This FR is intended to be used as a secondary filtration system to supplement existing facility water removal and filtration. It is not designed to be the primary filter/ regulator system. Be sure plant-supplied air is clean and dry.

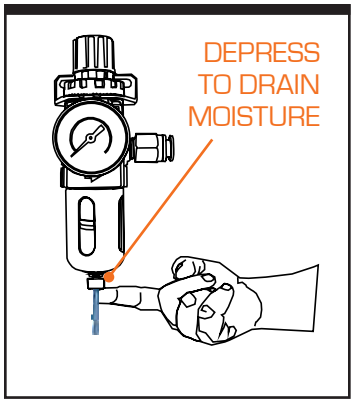


Figure 3-7. Filter Regulator

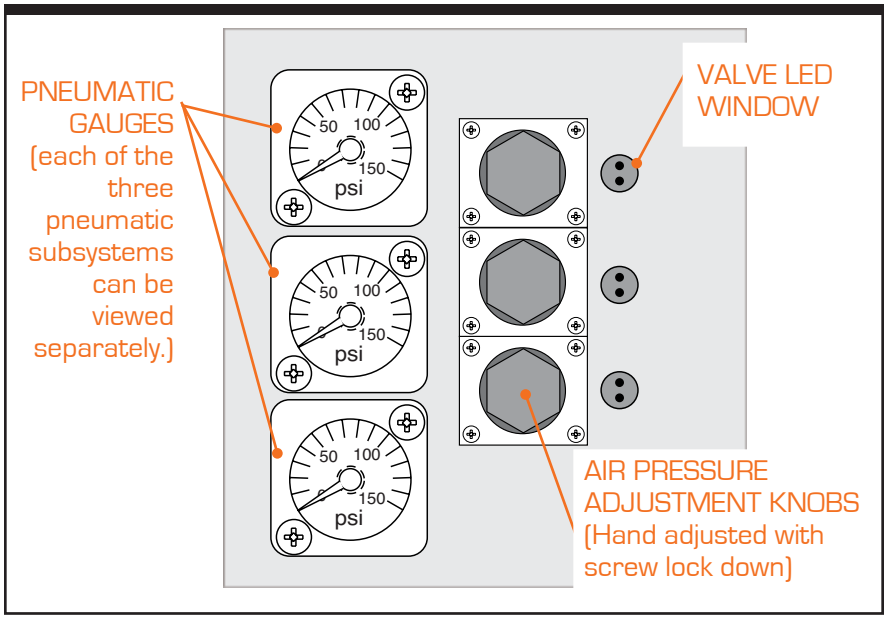


Figure 3-8. Pneumatic Valve Pack (Front View)

Pneumatics

The pneumatic valve pack and module interface panel are used for hookup and adjustment of various components on the labeler and any attached modules. These will be discussed in depth in Chapter 6: Applicator Modules.

For an overview of the pneumatic valve pack, refer to Figure 3-8.

- Set line supply pressure at FR to 80psi.
- The air pressure adjustment knobs are for adjusting air pressure to the various components.

- The pneumatic valve settings can be locked by tightening the nut located on the threads of the adjustment knob.
- The pneumatic gauges read the actual amount of air pressure supplied to the listed components.
- The valve override test points are used to activate and isolate the components for setup and troubleshooting.
- The valve pack can be easily removed for servicing.

Label and Web Specifications

Label and Web Specifications	
LABEL STYLE	Stripped out form only. Minimum spacing of 0.125" (3mm). Remove all die cut waste (skeleton). Label backing must have a release agent such as silicon. Label must free peel when pulled around a standard peeler plate with a minimum label gap of 0.125" (3mm).
ACCURACY	(A) Linear position of label relative to web or backing must be centered.
	(B) Die cutting and edge slitting must be controlled to avoid cutting or nicking of the web backing. Failure to regulate this will result in web failure and label dispensing problems.
	(C) Web must be a minimum of 0.25" (6mm) wider than label to be dispensed.
ROLL PUT-UP	Maximum O.D. of roll is 12" (305mm) with a core I.D. of 3" (76mm). Label orientation is based on equipment and product orientation. Wind labels to the outside of the roll.
SPLICES	Splices should be avoided as much as possible, but when splices are needed, please use "angle-style", flush to the edge on both sides of backing, using 1" (25mm) cellophane splice tape. Replace the label in the spliced area.
LABEL TOLERANCE	A label tolerance of ±0.032" (0.81mm) can be maintained provided that:
	(A) Labels are manufactured to the right label specification with no die cuts into the webbing.
	(B) Lateral position of labels is within 0.0025" (0.06mm) on the x and y axes.
CAPACITANCE	Capacitance sensors will be damaged by metal or foil labels.

Table 3-1. Label and Web Specifications Chart

Notes

Applicator Setup

4

This chapter covers mechanical setup of the labeler and printer, downloading label formats, label specifications and sensor setup.

Ribbon Threading

Before attempting to thread the print engine supply ribbon, consult your authorized supplier for precise ribbon specifications. Different print engines use different styles of ribbon. The wrong ribbon may cause damage to the print engine.

Most print engines use carbon as the print medium. The print medium can be on the outside or inside of the roll depending on the manufacturer or the model. Using the wrong ribbon will damage the printer. Only use the OEM replacement ribbon to maintain the warranty.

For details on ribbon threading instructions, refer to the printer operation manual which was shipped with your machine. A diagram of proper ribbon threading is also provided on most print engine's lift cover.

Note: Make sure the ribbon core is pressed all the way to the rear wall of the printer. To insure proper alignment, also make sure that the ribbon is threaded squarely through the printer.

After the supply roll has run out, use the empty supply roll as the rewind core. Always use a rewind core to collect the ribbon; it is very difficult to remove the ribbon if it is directly rewound on the rewind drum.

Not using a core on the rewind drum could cause the ribbon to ripple, resulting in poor print quality.

Label Threading

It is very important that the correct labels be used on the labeler. More information on label and web specifications is available later in this chapter.

It is also very important that the labels are threaded through the print engine correctly. Improper threading will result in poor operation. Refer to Figure 4-1 to assist in proper label threading. A label threading diagram is supplied on the front cover of the print engine.

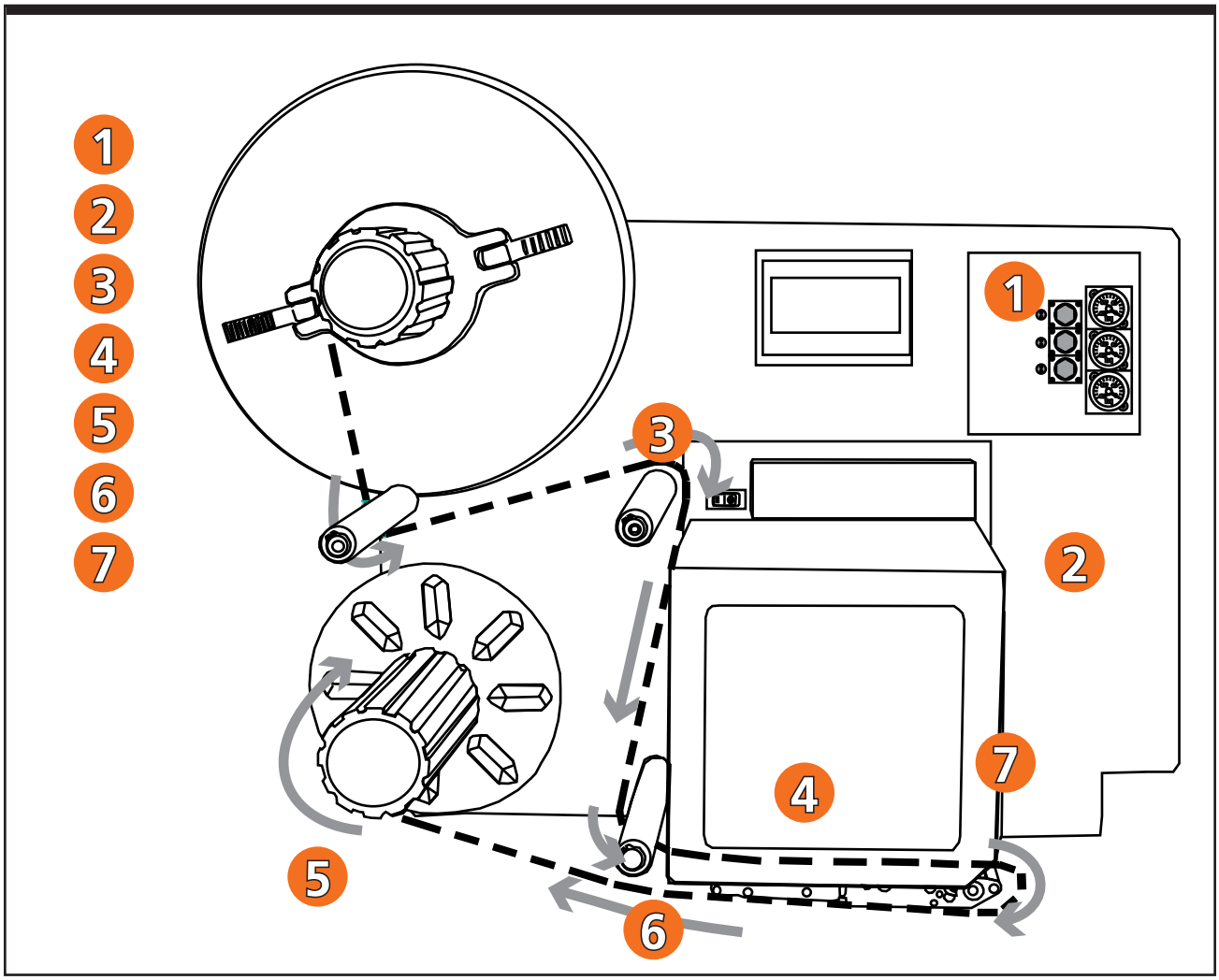


Figure 4-1. Web Path (Left Hand Labeler Shown)

Before installing a label roll, please read Tables 5-1 to insure the selection of proper label stock.

Heat damage may occur if label rolls are not stored in a cool, dry place.

Avoid contamination, edges of labels will pick up debris which could damage print head. Using contaminated label or ribbon stock will void print engine warranty.

Always use ribbon that is wider than the label stock. Failure to do so will cause print head damage.

Procedure Refer to the circled numbers (**1** through **7**) specifically positioned in Figure 4-1 to assist you in following this label threading procedure. To thread the label on a left hand unit, reverse the directions. (For example, if right hand unit is threaded "counterclockwise", reverse to clockwise for the left hand unit.)

Step 1. **Remove Locking Collar.** With the power off, remove the locking collar from the unwind and rewind assembly. Remove the locking collar by releasing the levers which hold the locking collar in position, and pull the outer disk assembly off the core.

Step 2. **Install Label Core.** Install the label core onto the unwind assembly, removing the previous core if applicable. Make sure supply roll is pushed to the inside disk of the unwind assembly. Replace the outer disk assembly by aligning the pins on the locking collar with the grooves on the unwind core. Lock by pushing the levers parallel to the outer disk.

Step 3. **Secure Label Stock.** Holding the unwind assembly, grab the label stock and tug to make sure the roll doesn't slip. Once secure, pull the label from the top and loop around the dancer arm clockwise [**1** and **2**].

Step 4. **Guide Label Stock into Print Engine.** From the dancer arm pull the label down, counterclockwise around the first idler roller [**3**] and clockwise around the second idler roller [**4**]. Then, loop the

label into the print engine, keeping the stock above the alignment pin and press against the inside guides on the printer.

At this point, the label stock is in position to be threaded through the printer. Refer to the appropriate section in the print engine manual for instructions. The printer's operator manual supplies detailed instructions on threading through the printer. There is also a diagram, for label threading, supplied on most print engines inside the lift cover. Route the label around the peeler plate of the print engine [**5**]. Do not block air assist bar when routing label through print engine.

The label stock must not loop around the air assist tube located under the peeler plate. If the air assist tube is blocked, proper alignment of labels will not be achieved, and/or the web will break.

Step 5. **Thread Label Stock**. Pull about 18" (457 mm) excess label stock through the top of the print engine to allow sufficient slack to thread to rewind assembly. At this point, align all the spring collar guides on the dancer and idler rollers in accordance with the inner printer guides to insure proper label stock alignment.

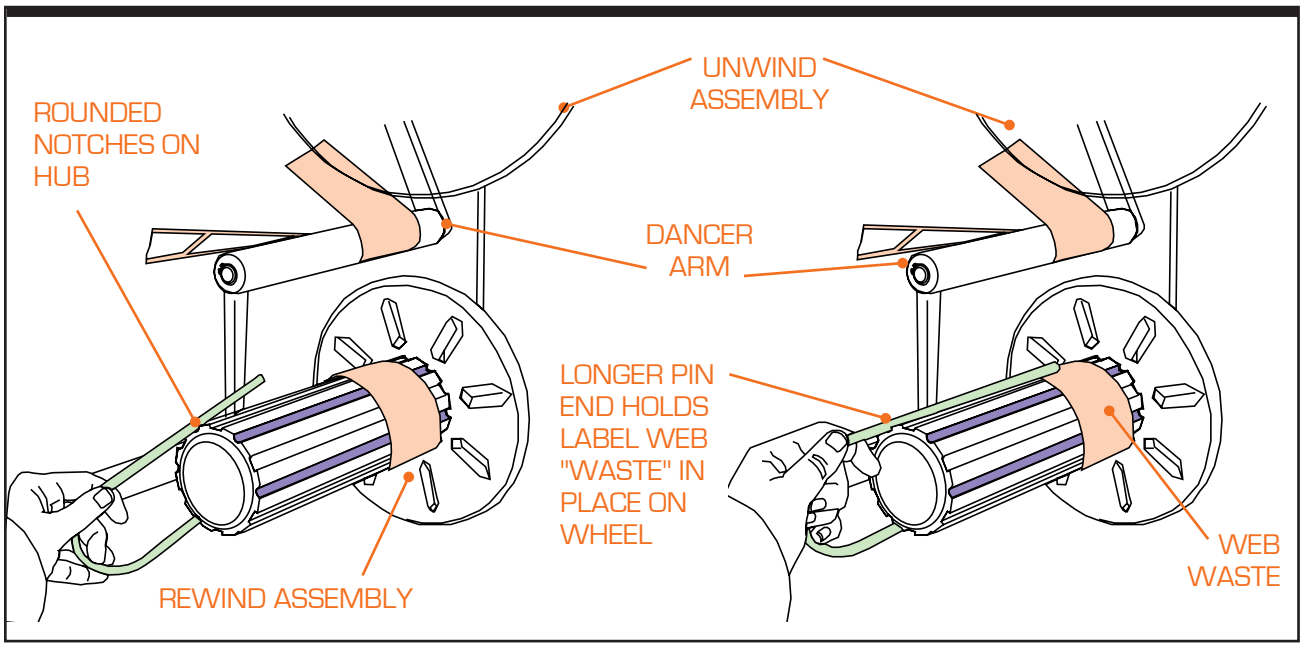


Figure 4-2. Web Holding Pull Pin on Rewind Wheel

Step 6. **Secure Excess Stock.** Once the label stock is threaded through the printer and aligned properly, pull the excess and loop around the return idler bar [**6**], then counterclockwise around the rewind assembly [**7**] (see Figure 4-2). Push the pull pin onto the rewind core to secure the label stock.

Step 7. **Remove Excess Label Stock.** The threading process is complete, now turn the power "ON" and remove any excess label slack by pulling the dancer arm down and rotating the supply assembly counterclockwise until tension is achieved.

Step 8. **Set Sensitivity and Label Pitch.** To adjust the label on the peeler plate, refer to the specific print engine manual as each type of engine has a different procedure.

Step 9. **Adjust the Label Position (if necessary).** Adjust the Label Position (if necessary). Observe the label to make sure it is protruding over the edge of the peeler plate tip approximately 0.016" (0.41 mm). If adjustment is needed refer to the specific print engine manual.

Step 10. **Completed Threading.** Once you have achieved the proper alignment and positioning of the label stock, you have completed the label threading process.

Unwind, Rewind and Clutch Assemblies

The following is an overview of how new labels are fed from the unwind assembly around the dancer arm, through the printer, and finally onto the rewind assembly.

The unwind assembly cannot dispense web (label backing) while the mechanical brake is engaged. When the machine is turned ON, the brake is automatically engaged.

Initially, the dancer arm holds a buffer of fresh labels under tension. As this supply is pulled into and consumed by the print engine, the additional tension on the web pulls the dancer arm in a clockwise direction (for a left hand unit; clockwise direction for

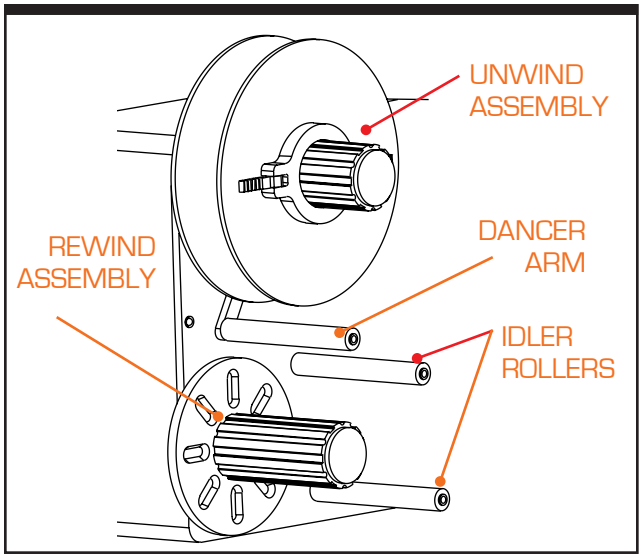


Figure 4-3. Unwind and Rewind Assembly Locations

a right hand unit). At a certain point, the dancer arm mechanically releases the brake, allowing the unwind assembly to dispense additional labels as needed. The feed rate of the unwind assembly is dependent on the printer speed.

As labels are dispensed, empty web leaves the print engine and is collected on the rewind assembly. Constant tension is applied by the rewind assembly to the ejected web to ensure it does not interfere with the dispensing of new labels. This tension is applied by a motor and can be manually adjusted by a clutch located inside the labeler (see Figure 4-3).

Adjusting the Clutch Assembly

The manually adjusted clutch controls the amount of tension an electric motor applies to the Rewind Assembly. This adjustment should be done during initial setup of the machine.

Step 1. **Remove the Back Cover.** Remove the cover from the back of the labeler, loosening and removing the screws holding it in place.

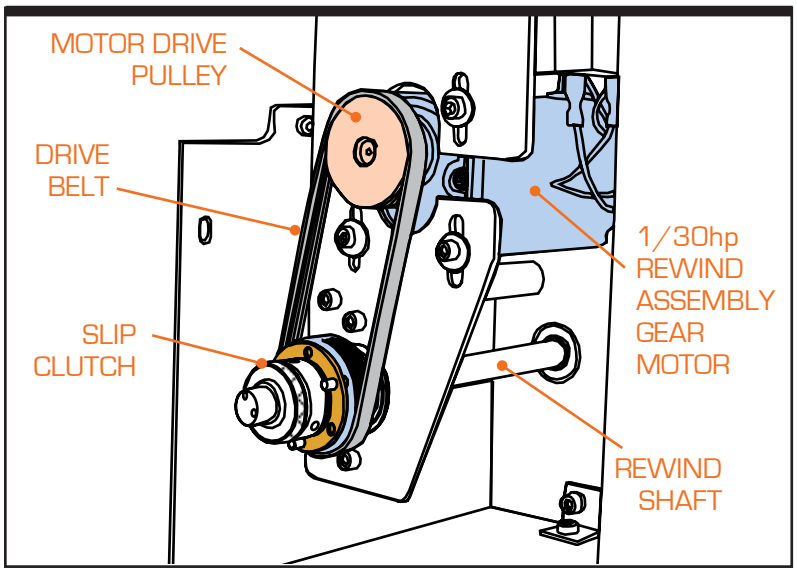


Figure 4-4. Clutch Assembly for Rewind Assembly (Rear of Labeler)

Step 2. Locate Clutch Assembly. The clutch assembly is on the end of the rewind shaft on the back side of the labeler. A drive belt connects a pulley on the rewind shaft to a pulley on the motor spindle (see Figure 4-4). The motor pulley is located above the rewind pulley.

Step 3. Adjust Clutch Tension. The operator can manually adjust the amount of rewind tension. If this dial is turned clockwise, the clutch applies more grip to the rewind shaft (less belt slippage).

The more grip to the rewind spindle, the greater the amount of tension the rewind exerts on the ejected web.

If the clutch is turned counterclockwise, it will apply less grip to the rewind shaft, increasing belt slippage. Less grip to the rewind shaft means less tension the rewind wheel exerts on the ejected web.

Make sure the tension is loose enough not to snap or tear the ejected web but tight enough to exert tension on the ejected web as the rewind assembly fills up. (When the rewind assembly fills with empty web it can become quite heavy.)

Printer

The unit is a versatile labeler in that it can accommodate various styles/models of print engines. These print engines are easy and quick to change out. The different manufacturer's print engines can easily bolt up to the labeler without any additional modifications. Refer to the OEM manual for answers to any questions regarding the print engine.

Note: Right or left justified printer can only be exchanged in like housing.

It is important to note that the documentation supplied with your print engine should be reviewed before operating the labeler.

See the general settings for SATO and ZEBRA print engines below which are required to communicate with the L3500PA. Please note these settings may different based on specific models:

SATO: DSW3 dip switch bank, switch #7 and #8 to "ON". Cycle the print engine for this to take effect.

ZEBRA: Applicator Port: MODE 1; Print Mode: APPLICATOR; Start Print Signal: LEVEL MODE; Reprint Mode: ENABLED.

Downloading Label Formats

Several software packages are available to produce multiple types of labels. Once a label is generated on your software, the format must be loaded into the print buffer of the print engine. Once in the printer, the label may be printed on demand. The following information is generic instructions on downloading a label from a personal computer or device which labels are stored.

Step 1. **Select the Desired Communication Interface.** There is typically a parallel port and/or serial port provided on print engines. Refer to the Operator's Manual of the particular printer that is provided on your labeler for more information.

Step 2. **Connect Cables.** Connect the correct cable between the printer and personal computer or other device used. Be sure that these cables are connected securely.

Step 4. **Turn on Main Power Supply.** Turn "ON" the main power of the unit and the power to the print engine. Make sure the printer is "ON-LINE" before attempting to download any labels.

Step 4. **Download Generated Labels.** Now you are ready to download the generated label. If PC software is used, typically, the print command is used to download a label. This queue typically prompts you to give quantities (or the number of "copies" you desire) along with various other information. *Download more quantities than needed so the labeler does not stop before complete production is finished. Setting up the labeler may use up several of the quantities downloaded.*

Step 5. **Verify Label Count.** Once "Print" or another command is used to download the label into the print buffer, the LCD of the printer will display the quantity of labels downloaded. If the quantity reads 000, the label was not downloaded correctly; try again. If the quantity displayed is correct, then you are ready to print your labels. *The labeler can be set up to print the same label multiple times. Refer to Chapter 7: Operator Interface. Also refer to printer manual for dip switch settings (SATO printers only).*

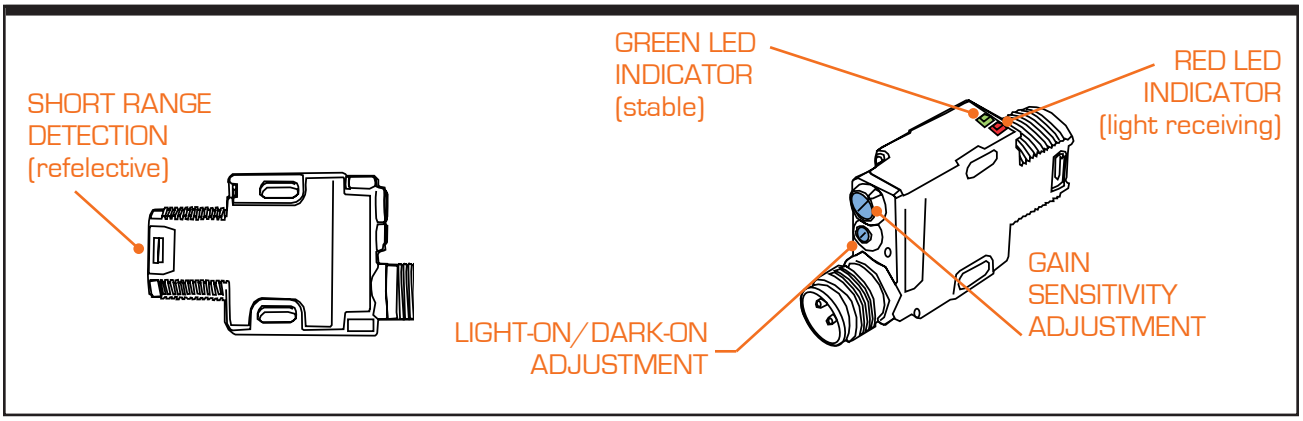


Figure 4-5. Product Sensor

Product Sensor

The sensor supplied with the labeler should be connected directly to the Module Interface Panel via a quick disconnect connector (refer to Figure 3-5, Module Interface Panel). This allows for quick changeover of sensor style as applications dictate.

This sensor (Figure 4-5) is shipped with a mounting bracket that should be mounted slightly upstream from the module that was purchased for your labeler (i.e. tamp pad applicator or blow module). Refer to the Sensor Setup section of your particular applicator module.

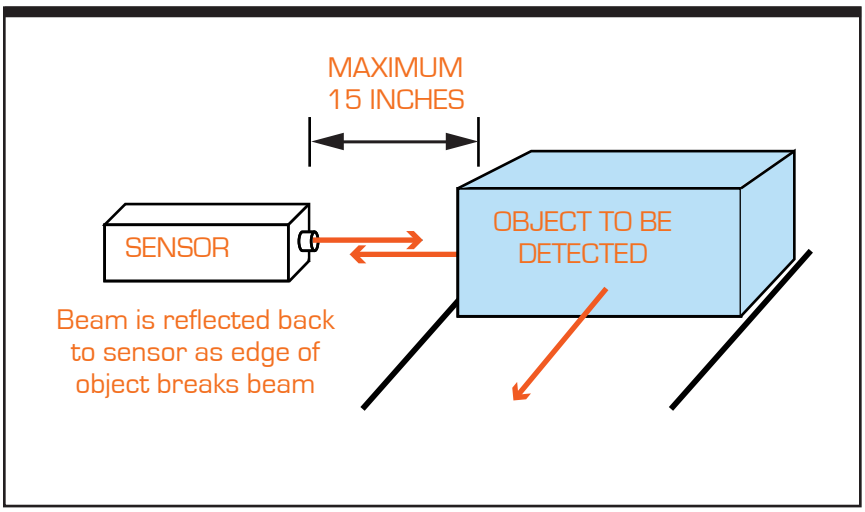


Figure 4-6. Setup for Product Sensor

The alignment and method of mounting is critical to the performance of the sensor (refer to Figure 4-6.) Excessive vibration may cause false readings. Anything behind the product that could cause a false sensor reading should be moved or placed as far away as possible.

To select between sensing the leading edge or the trailing edge of a product, use the following directions. Leave the sensor operate switch set to "light operate" at all times. In the operator interface, select TRAIL PRODUCT to detect the trailing edge, or select LEAD PRODUCT to detect the leading edge. (See Chapter 7, Operator Interface, for more details).

The standard sensor that is shipped with the labeler is set up for "light operate." Refer to Figure 4-5 for locations to adjust the sensor (gain control and light-on/dark-on adjustments).

Changing the sensor setting from light operate to dark operate will drastically affect the operation of the labeler and any modules being used.

Once the sensor is mounted and the product is in place, apply power and advance the GAIN control to maximum (clockwise rotation). If the sensor is "seeing" its reflected light, the sensor alignment red LED should be on. If a red pulse is not observable, reduce the GAIN control (counterclockwise rotation) to obtain a countable pulse rate.

Once you feel comfortable with the set GAIN, test by removing the object from the sensing position. The red LED indicator should go "off". If the LED indicator does not go "off", the sensor is reacting to light reflected from a background surface. Reduce the GAIN until the indicator goes "off", and check the sensor with the object once again. If the sensor indicator does not come "on" when the object is placed in position, then the sensor is receiving more light energy from the background than the object. Consider the following alternatives:

- ⇨ Move the sensor closer to the object, and reduce the sensitivity (GAIN).
- ⇨ Reduce the background reflectiveness by painting the background with flat-black paint, scuffing the background or cutting a hole through it.
- ⇨ Tilt the sensor or the background so that the sensing beam is not perpendicular to the background.

Applicator Modules

5

This chapter covers the change out and setup of individual applicator modules. This includes installation, setup and maintenance for each module. Table 5-1 suggests which model machine and module to use with a particular application.

Module Style	Description of Label Application
TAMP	Single label up to 9.5" (241mm) long on the top/bottom/side of container
SOFT TAMP/ TAMP BLOW	Single label on fragile parts
SOFT TAMP	Single label as product travels around a 90˚ turn
BLOW ON	Label applied without touching product (accuracy is not critical)
WIPE ON	Label applied to top, side or bottom as product moves by at a high rate of speed (can accommodate long labels)
TAMP-BLOW	Single label applied by extending tamp towards the product surface then blowing the label on the surface
LEADING EDGE, CORNER WRAP	Label application on the front corner of a product to 5" (127mm) width, 6" (152mm) to 16" (406mm) long
TRAILING EDGE, CORNER WRAP	Label application on the trailing corner of a product to 5" (127mm) width, 6" (152mm) to 12" (305mm) long
DUAL TAMP	Applying two labels on back and side of product, maximum label size 5" (127mm) x 8" (203mm)

Table 5-1. Applicator Modules

Tamp Module

The tamp module assembly (see Figure 5-1) is a mechanism used to apply a label to a product. The tamp module consists of a cylinder, tamp pad, vacuum pad, vacuum generator and various other components. The position of the tamp pad assembly is critical for proper label placement.

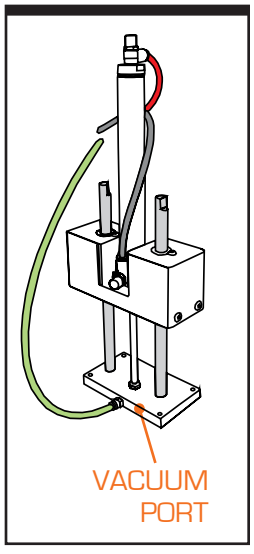


Figure 5-1. Tamp Assembly

Labeling Process

Once the tamp assembly is set up, labels should slide smoothly from the printer peeler plate to underneath the vacuum pad. The product sensor then detects the edge of the product, and the tamp extends to place

the label onto the product in the preferred location. The label is securely applied without damaging the product. The tamp retracts for another label. This whole process should occur with minimal vibration or erratic motion.

Installation

If your labeler does not already have a tamp module installed, use the following instructions for installation.

Step 1. **Align Mounting Holes.** Align the mounting holes of the tamp body with the two slotted holes in the machine housing near the print engine. Once aligned, insert the bolts and tighten to secure the tamp body. Make sure that the distance between the tamp body and the peeler plate is a minimum of 0.125" (3 mm) (refer to Figure 5-2).

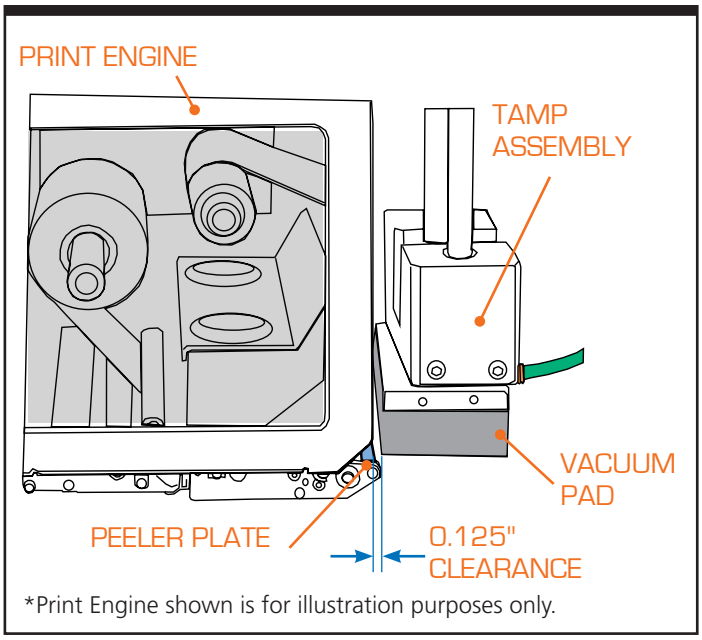


Figure 5-2. Tamp Clearance (Peeler Plate and Vacuum Pad)

Step 2. **Attach Red Air Hose.** Remove the cover and attach the read air hose (refer to Figure 5-3 on the next page) to the top of the air cylinder (extend). Plumb the hose through the hole in the housing into the "A" port of the solenoid valve marked "Tamp".

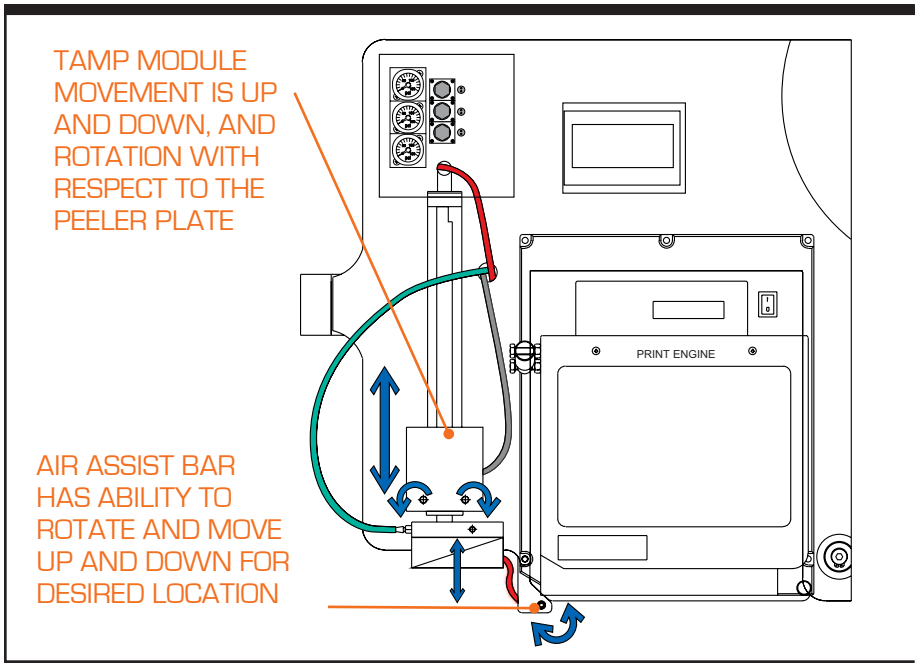


Figure 5-3. Tamp Assembly Hose Attachments and Movement

Step 3. **Attach Black Air Hose.** Attach the black air hose to the bottom of the air cylinder (retract). Plumb the hose through the supplied hole in the housing and into the "B" port of the solenoid valve marked "Tamp" (refer to Figure 5-3).

Step 4. **Plumb Green Air Hose.** Attach the green air hose into the quick disconnect fitting on the vacuum generator. Then plumb the hose through the hole in the housing and into the "A" port of the solenoid valve marked "Vac Valve."

Step 6. **Install Home Sensor.** Locate the tamp home sensor (with mounting clamp) supplied with the unit. It is found tied to the machine housing inside the labeler. Install the sensor on the top of the tamp air cylinder by using the instructions found below.

Position the tamp pad by adjusting the air for the tamp module so that the slide is fully retracted. Loosely clamp the tamp home sensor at the extreme top of the air cylinder and slowly move the sensor down the cylinder until the LED on the sensor illuminates.

Once the LED illuminates, continue to move the sensor down an additional 0.125" (3 mm). Tighten the sensor clamp to prevent movement.

Tie the air hose and wire so that the linear shafts of the tamp will not hit through its full travel.

Be sure the sensor is located in the correct position. Failure to do so may cause the placement of a double label or no label placement. Check periodically to make sure the clamp is tight on the cylinder to eliminate movement during production.

Step 6. **Replace Cover.** Replace back cover.

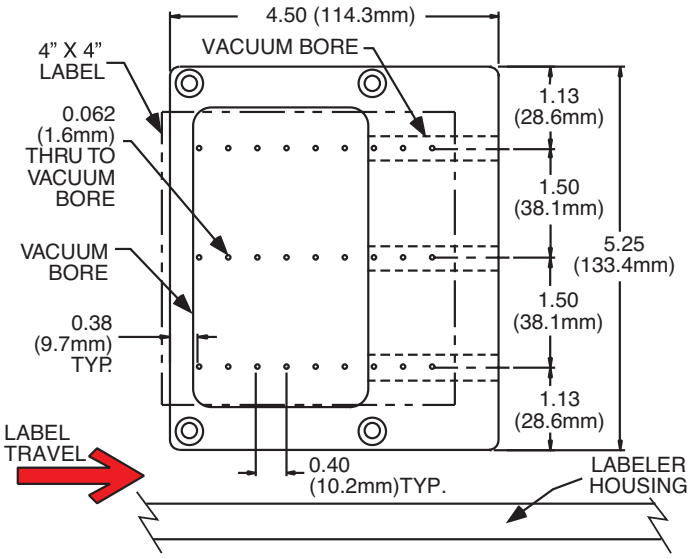
Step 7. **Verify Module Interface Panel Setup.** Make sure that the Module Interface Panel is set up with the correct connections (refer back to Figure 3-5). The tamp module is now installed and is ready for setup.

Modification of Tamp Pad

If your tamp module was shipped with a standard tamp pad (one with no holes), the pad will have to be modified to accommodate the label used on the labeler. The following instructions and illustrations are guidelines for modifying the tamp pad. For special applications/ labels call your authorized distributor for assistance.

Step 1. **Verify Tamp Pad Setup.** First, check that the tamp pad is parallel with the bottom of the front plate, and the bottom of the vacuum pad is approximately 0.031" – 0.125" (0.79 mm – 3 mm) below the peeler plate. Also, check that the tamp module assembly is a minimum distance of 0.125" (3 mm) from the peeler plate. This eliminates any interference during cycling (refer to Figure 5-2).

Step 2. **Thread Labels**. Thread the desired labels for the tamp pad you are modifying. Adjust the stop position so that the label is approximately 0.016" (0.41 mm) past the end of the peeler plate. Please refer to your specific print engine manual for instructions on how to adjust the stop position.



PROCEDURE:
When the label being used covers the entire vacuum bore area, including the three vacuum bore holes drilled in the side, then use the following procedure:

- Start by drilling three (3) 0.062" holes at 0.38" from the leading edge of the vacuum pad. The space between the rows of holes should coincide with the 3 vacuum bores in the side of the pad.
- Space additional holes .40" apart in the travel direction of the label (do not exceed the label travel onto the vacuum pad).
- Test the label on the pad. Additional holes in the direction of travel may be necessary to insure the label is fed far enough onto the pad.

PROCEDURE:
When the label being used does not cover the entire vacuum bore area, then use the following procedure:

- Start by drilling three (3) 0.062" holes at 0.38" from the leading edge of the vacuum pad. The outer rows should be spaced 0.25" from the side edge of the label. The middle row will be half the distance between the outer rows.
- Space additional holes .40" apart in the travel direction of the label (do not exceed the label travel onto the vacuum pad).
- Test the label on the pad. Additional holes in the direction of travel may be necessary to insure the label is fed far enough onto the pad.

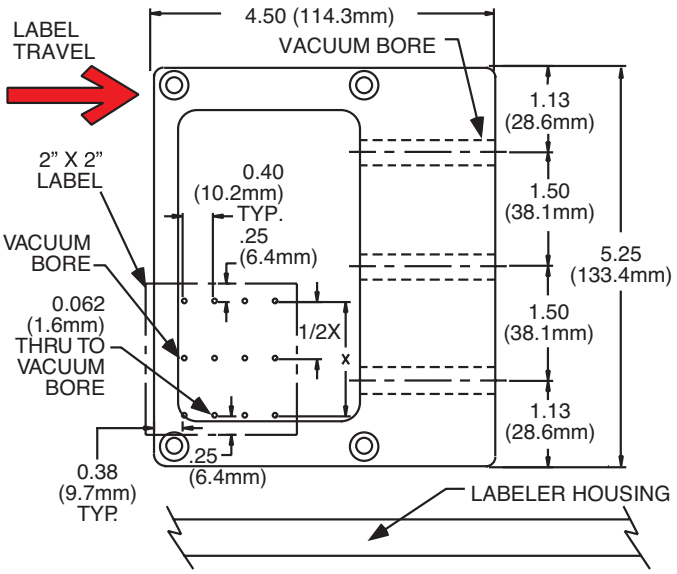


Figure 5-4. Modification of Tamp Pad

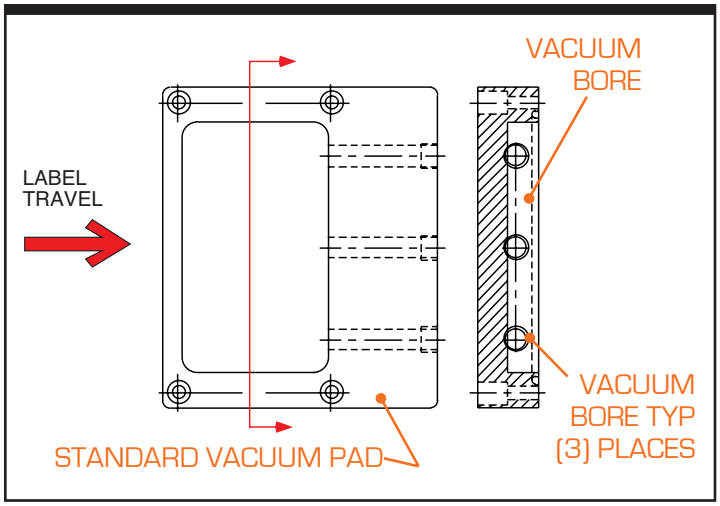


Figure 5-5. Modification of Tamp Pad (Continued)

Step 3. Mark Label for Modification. Make sure the print engine is "off-line", and feed a label onto the tamp pad on the printer. Use your index fingers to hold the label in place. This allows you to see approximately how the label will be dispensed onto the vacuum pad. Make initial marks on the vacuum pad. This will assist in the modification process.

Step 4. Modify Vacuum Pad. Refer to Figures 5-4 and 5-5 as general guidelines to modify the vacuum pad. The number and position of holes will vary depending on your label. Test the pad after the initial holes are drilled and modify as needed.

Step 5. **Determine Sufficient Vacuum**. To determine the sufficient vacuum for a particular label, use the tip of your index finger to guide a dispensed label onto the vacuum pad. Use the same finger tip to alternately hold the label against, and pull the label away from the tamp pad while adjusting the vacuum regulator so that there is slightly more vacuum than necessary to hold the label on the pad. Make sure that the label covers all the holes on the vacuum pad surface equally. The entire label should adhere to the vacuum pad when the vacuum is on. If the label is falling off the vacuum pad or erratic placement is being observed, additional vacuum holes may need to be added.

Make sure there is no interference between the tamp assembly and the peeler bar throughout the stroke of the air cylinder.

Feed a Label

Once the tamp pad position is initially set, it is now time to feed a label onto the vacuum pad. Download a formatted label into the printer. Make sure the labeler is in STOP mode before going to the JOG mode (refer to Chapter 7). Press the "green" (+) button to feed a label one by one. The goal is for the label to feed straight

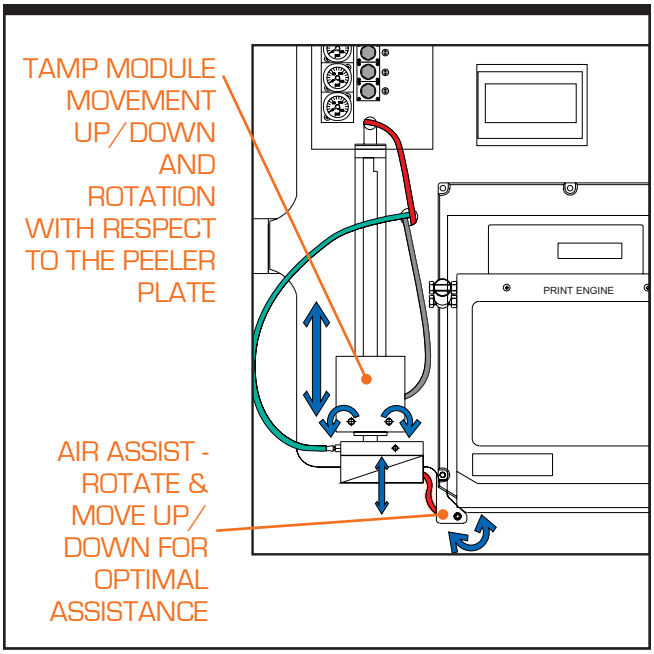


Figure 5-6. Tamp Adjustments When Feeding A Label

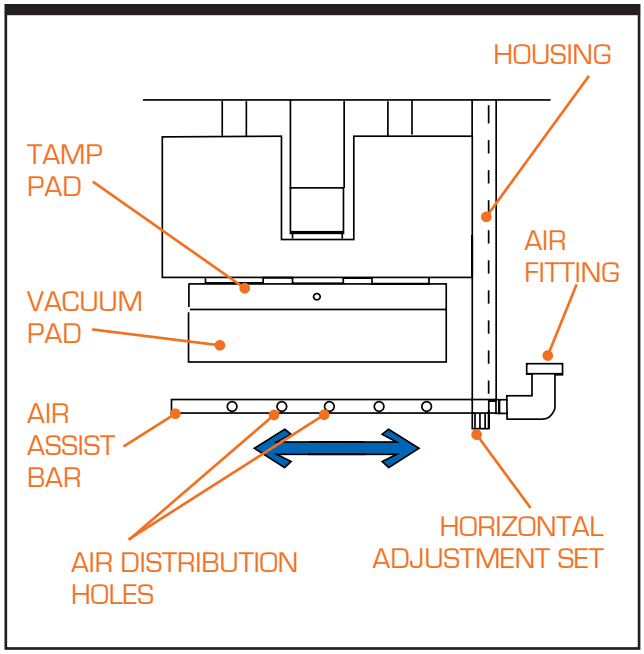


Figure 5-7. Air Assist Bar

from the peeler bar onto the vacuum pad without any flapping. You may need to adjust the tamp pad assembly up or down using the mounting slots in the housing (refer to Figure 5-6).

Air Assist Tube

The air assist tube's flow is used to help the transition of the label from the peeler plate to the vacuum pad. The air assist tube can be rotated (refer to Figure 5-6) or adjusted in or out (refer to Figure 5-7) after loosening the set screw located under the housing. The air assist can move up or down after loosening the bolts attaching the mounting bracket to the plate housing. The angle of the air assist tube is generally set upwards toward the front of the vacuum pad. The air holes in the air assist tube are generally centered on the width of the label. Air assist tubes with several holes are generally set to evenly distribute the air flow onto the label. Unused air ports not located under the label or tamp pad may be covered with tape if not required. The actual position of the air assist tube is determined by the size of the label.

Adjustments

The label should feed onto the vacuum pad as far from the peeler plate as possible. This will eliminate possible label jams

as the tamp assembly extends. There are many adjustments to accomplish this; it may require one or more of the following:

- Decrease the vacuum supplied using the appropriate flow knob on the pneumatic panel.
- Increase the air flow to the air assist bar using the appropriate flow knob on the pneumatic panel.
- Adjust the angle of the air assist bar.
- Decrease the air assist delay (AIR AST DEL) found in the operator's panel. Refer to Chapter 7. The air from the air assist bar starts sooner to push the label onto the vacuum pad.
- Increase the air assist dwell (AIR AST DWL) using the operator's panel. The air from the air assist bar stays on longer to push the label further away from the peeler plate.

Note: The air assist bar should be activated for as long as the label is moving.

- Increase the vacuum delay (VACUUM DEL) using the operator's panel. This delays the vacuum from being applied to the label through the tamp pad allowing the label to feed further onto the pad before being set by the vacuum.
- Drill additional vacuum holes in the tamp pad in the direction the label is traveling onto the tamp. This allows the label to feed further onto the vacuum pad and still adhere flat to the pad.

Excessive vacuum holes may cause loss in vacuum suction which will affect the label positioning. Add only one row of holes at a time.

- Adjust the angle of the tamp assembly with respect to the peeler plate. This allows the label to feed onto the pad further. The entire unit will have to be rotated in the opposite direction to accommodate the angle of the tamp, or the label will not be applied to the product squarely.

Apply Label to Product

Once the label is properly positioned onto the vacuum pad, it is now time to apply the label to the product. Position the labeler such that the tamp pad is parallel with the surface of the product to be labeled. Position the labeler so that when the tamp pad

contacts the desired product, it is as close to the tamp pad as possible– but not past the full extension of the tamp cylinders. If the tamp pad is fully extended when it applies the label, the label may only be partially applied to the product. To optimize cycle time, position the tamp as close to the product as possible.

Adjust Striking Force

Once the labeler is in position to apply the label, adjustment of the tamp pad contacting the product may be necessary. One or more of the following methods may be used in adjusting the striking force onto the product:

- Adjust the pressure to the cylinder using the appropriate knob (TMP/BLW) on the pneumatics panel. Increasing the flow causes the tamp pad to strike the product with more force. Decreasing the flow softens the applied force onto the product.
- Adjust the intake/exhaust flow controls for the tamp found on the air cylinder. Closing the intake (flow control which red airline is attached) decreases the speed extension, while opening it increases the rate the tamp pad extends. Closing the exhaust (flow control which black airline is attached) decreases the rate of return, while opening it increases the rate of the tamp pad return.
- Adjust the TMP DWL at the operators panel. TMP DWL is the amount of time the tamp will be away from its home position (retracted). This setting allows you to control the length of stroke by adjusting the time of dwell. Use this parameter to minimize or maximize the amount of force the tamp exerts on the product. A higher value extends the tamp longer. A lower value decreases the tamp extension time. Refer to Chapter 7: Operator Interface.
- Physically locate the labeler unit closer to or further away from the product. Lowering the unit will cause the tamp pad to apply more force onto the product, while raising the unit will decrease the force.

Note: Make above adjustments until the application of the label to the product is a smooth, non-vibrating process.

Label Placement

The final adjustment for the tamp pad assembly is the placement of the label on the product with respect to the edge of the

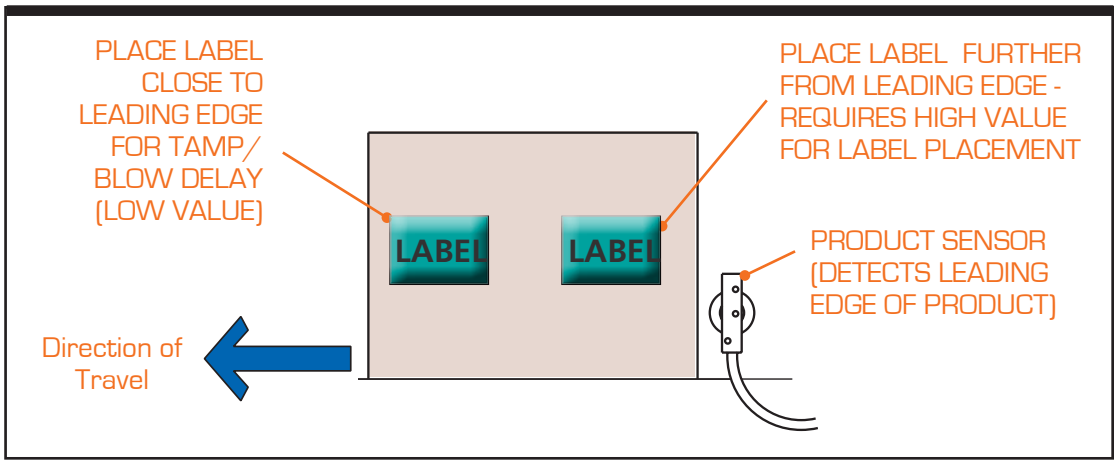


Figure 5-8. Fine Tuning Label Placement

product (refer to Figure 5-8). One or more of the following methods may be used for the desired adjustment.

- Adjust the TMP/BLW DEL found in the operators panel. Refer to Chapter 7. A higher value delays the tamp assembly from extending causing the label to be placed closer to the trailing end of the product. A lower value extends the tamp sooner and places the label closer to the leading edge.
- Adjust the PRODUCT LOCKOUT found in the operators panel. This adjustment prevents applying multiple labels or false hits on the same product. Increasing the value locks out the input from the product sensor for a longer amount of time, while decreasing the value shortens the time. Too long of a product lockout could cause a product to be missed.
- Adjust the PRODUCT DETECTION found in the operators panel. This activates the labeler on the leading or trailing edge of the product. Refer to Chapter 7: Operator Interface.

Removing Tamp Module

When removing the tamp module, follow the steps below. **The tamp assembly will fall off the machine if not supported as you remove the cap screws.**

Step 1. **Remove Cover.** Remove the back cover.

Step 2. **Remove Tamp Sensor.** Remove the tamp home sensor attached to the air cylinder and wire tie it inside the housing.

Step 3. **Remove Air Pressure.** Remove the pressure from the Tamp/Blow valve by turning the adjustment knob until the meter reads zero PSI.

Step 4. **Remove Air Lines.** Remove the two air lines on the air cylinder and the one vacuum line from the tamp pad.

Step 5. **Remove Mounting Screws**. Remove the two M6 socket head cap screws which mount the tamp to the housing.

Replacing Worn Parts

From time to time you may need to replace:

- Air cylinder
- Slide bushings

(Refer to the Spare Parts list in Chapter 9).

Troubleshooting

To isolate pneumatic problems to the Tamp Module, activate the "Tamp Assist Valve Override Test Point" found on the pneumatic panel. Confirm that the tamp extends and retracts properly. Refer to the Troubleshooting section in Chapter 10 for additional help.

Blow-On Module

The Blow-On Module is a mechanism used to apply a label when contact with the product is not desirable, or when labels need to be applied very rapidly. The Blow-On Module consists of a blow box with a fan to create a vacuum that holds the label until such time that the label is blown onto the product. A baffle knob on the front of the cover can be turned clockwise or counterclockwise to open or close a series of 1/2" holes to bleed off unwanted vacuum. A series of blow pipes connected to a manifold are located on the inside rear of the blow box with connector nozzles located on the other ends. These connector nozzles are inserted into the grid plate on the bottom of the blow assembly. They are simply pushed in until a snug fit has been attained. Any unused blow pipes must be inserted into the back plate when not used or there will be inconsistency when blowing the labels. A grid plate cover that slides in over the bottom grid plate (that you customize) is provided to stop vacuum loss when it blocks the holes on the

grid plate. The position of the Blow-On Module is critical for proper label placement.

Labeling Process

Once the Blow-On Module is set up, the printer will print the label. As the label slides smoothly across the peeler plate and through a series of timing sequences, the label is assisted onto the grid plate by the air assist bar and held to the grid plate by the vacuum generated by the fan. Next, the product sensor detects the edge of the product. Then, through another set of timing sequences started by the product sensor, the label is blown onto the product as the product passes under the blow box.

Installation

If your labeler does not already have a Blow-On Module installed, use the following instructions for installation.

Step 1. **Disconnect Power.** Disconnect power and air to the labeler. Remove any other modules installed.

Step 2. **Install Blow-On Module.** Install the Blow-On Module to the labeler with the two M6 x 30mm long socket head cap screws, flat washers and lock washers provided (refer to Figure 5-9 and Figure 5-10). The falt washers go against the housing and the lock washers go against the socket head cap screw. The Blow-On module grid plate should be level with the print engine peel plate.

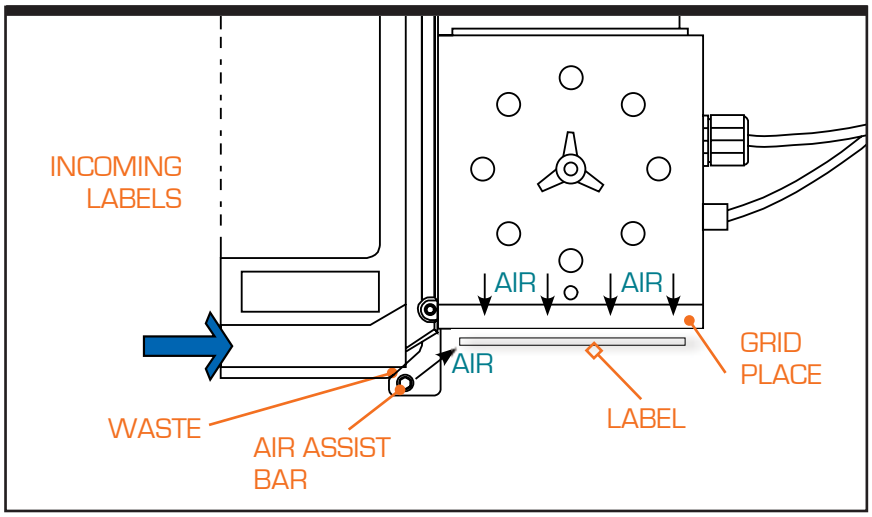


Figure 5-9. Blow Box

Step 3. **Connect Fan.** Connect the fan cord to the fan receptacle (110V Auxiliary power) on the module interface panel (refer to Figure 5-12).

Step 4. **Install Valve Assembly.** Install the valve assembly with the M10 x 20mm long socket head cap screws and flat washers provided. This assembly has the tag labeled "Blow-On Module Pressure" (refer to Figure 5-10).

Step 5. **Connect Red Tubing.** Connect the red 3/8" diameter tubing from the Blow-On Module to the port on the valve assembly labeled "Blow-On Module Pressure" (refer to Figure 5-10).

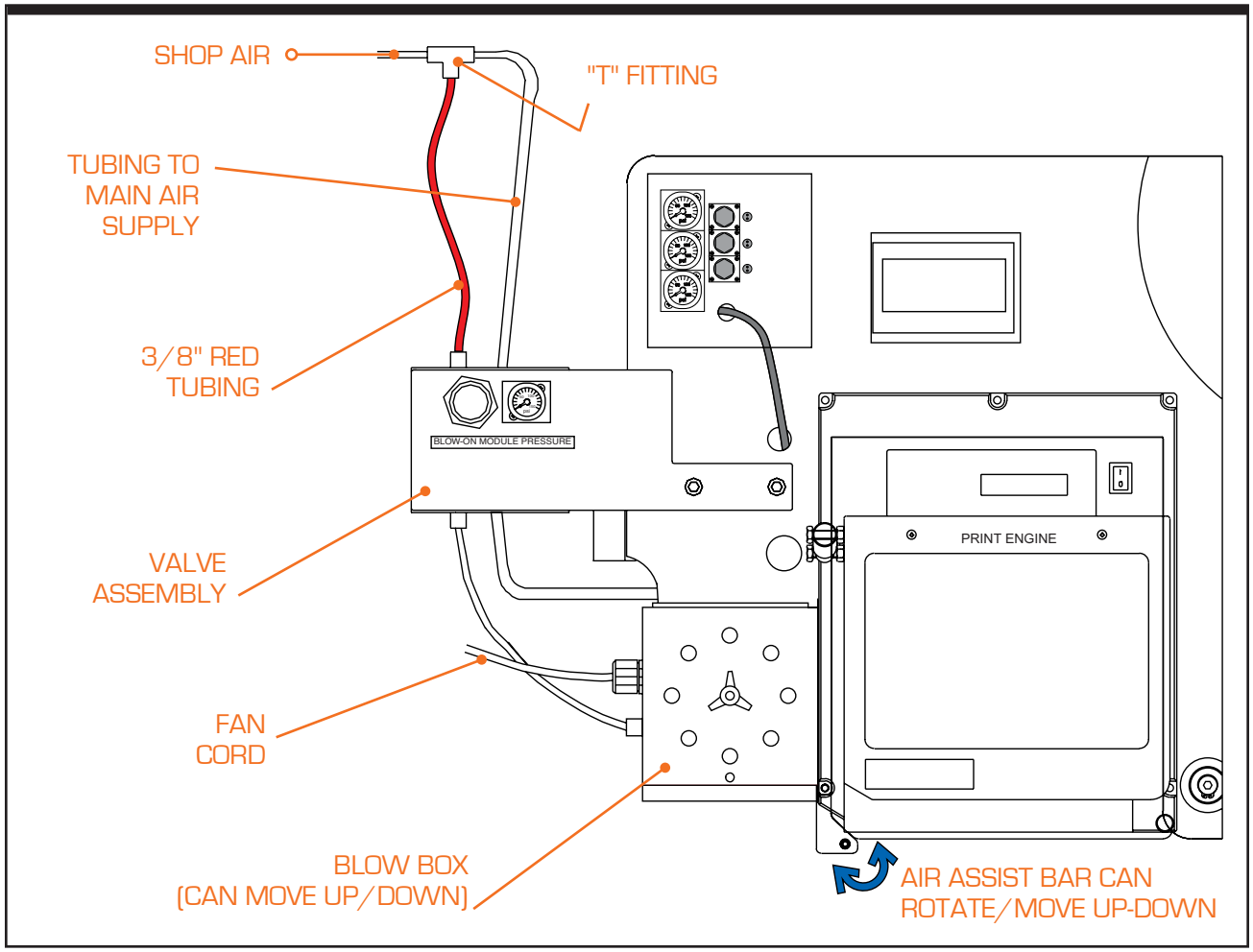


Figure 5-10. Blow-On Module Assembly

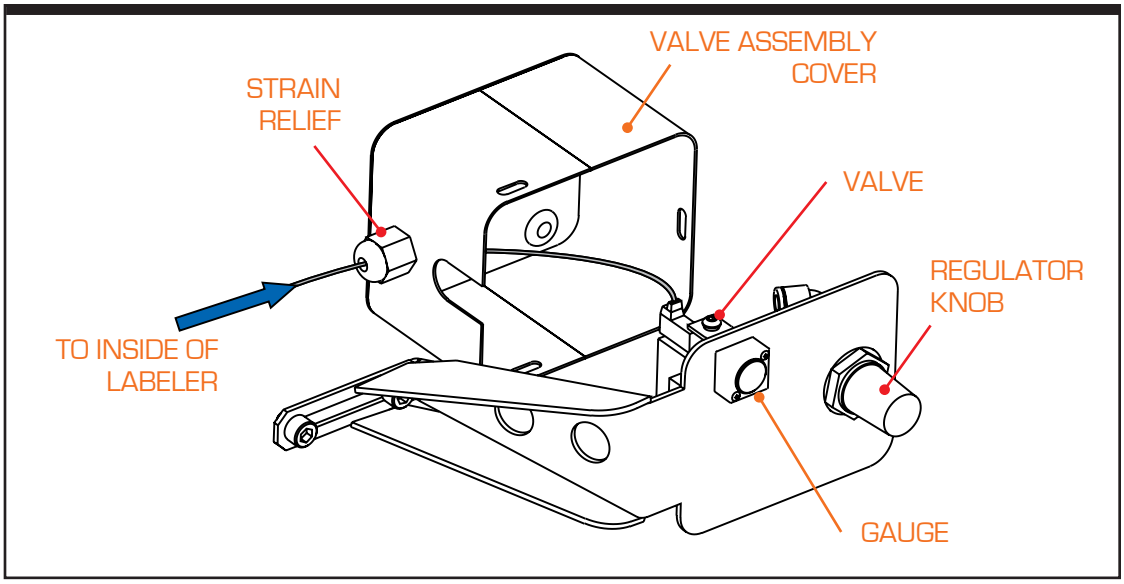


Figure 5-11. Valve Assembly Housing

Step 6. **Connect Air.** The main air hose will require a tee to supply the Blow-On Module with air. The tee fitting and hose are in the kit. Disconnect the 3/8" diameter air line from the Main Air port, insert it into the open port on the tee fitting, then insert the short hose from the tee fitting into the Main Air port on the labeler (refer to Figure 5-10).

Step 7. **Other Connections.** Remove the cover from the blow box valve housing (refer to Figure 5-11). Disconnect the Tamp Valve Connector found inside the labeler. This is the quick connect plug attached to the tamp valve (upper most valve) on the pneumatic valve pack. Route this connector through the opening in the front of the case (same opening as airlines are routed through), there is excess wire supplied for routing to the required location. At this point wrap the wire with the supplied spiral wrap and route through the strain relief on the blow box valve housing (refer to Figure 5-11). Plug the connector into the supplied valve as shown and tighten the strain relief. Confirm all connections are routed properly and tighten. Install cover.

Step 8. **Connect Air and Power.** Connect plant air (80 PSI min). and plug in power cord to the labeler.

Step 9. **Connect Nozzles.** Insert the Blow-On Module nozzles in the grid plate (more nozzles for larger labels, less for smaller labels) (Refer to Blow Nozzle Placement). Modify the lexan grid plate cover (refer to Grid Plate Cover) and adjust the blow and air assist pressures to meet the application needs.

Feed a Label

Once the Blow Box position is initially set, it is now time to feed a label onto the grid plate. Download a formatted label into the printer. The goal is for the label to feed straight from the peeler bar onto the grid plate without any flapping. You may need to adjust the Blow Box assembly up or down using the mounting slots in the housing (refer to Figure 5-10).

Air Assist Tube

The air assist tube's flow is used to help the transition of the label from the peeler plate to the grid plate. The air assist tube can be rotated (refer to Figure 5-10) or adjusted in or out (refer to Figure 5-12). Loosen the set screw located under the housing before rotating the air assist bar. The air assist can move up or down after loosening the bolts attaching the mounting bracket to the plate housing. The angle of the air assist tube is generally set upwards toward the front of the vacuum grid. The air holes in the air assist

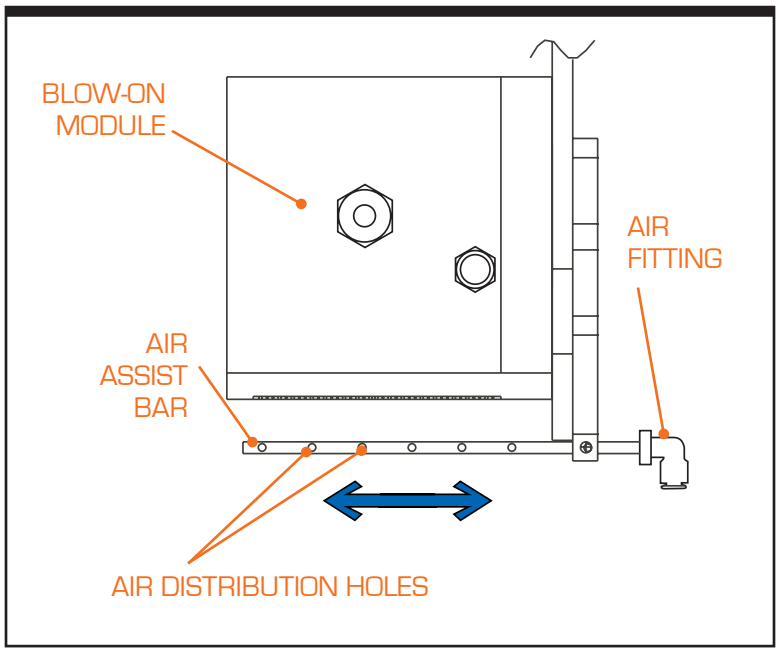


Figure 5-12. Air Assist Bar for Blow-On Module

tube are generally centered on the width of the label. Air assist tubes with several holes are generally set to evenly distribute the air flow onto the label. Unused air ports not located under the label or tamp pad may be covered with tape if not required. The actual position of the air assist tube is determined by the size of the label.

Troubleshooting

To isolate pneumatic problems to the Blow-On Module, activate the "Blow Assist Valve Override Test Point" found in the Valve Assembly. Confirm that the Blow Module blows properly. Refer to the Troubleshooting section in Chapter 10 for additional help.

Adjustments

The label should feed onto the grid plate as far from the peeler plate as possible. There are many adjustments to accomplish this; it may require one or more of the following:

- Increase the air flow to the air assist bar using the appropriate flow knob on the pneumatic panel.
- Adjust the angle of the air assist bar.
- Decrease the AIR AST DEL found in the operators panel. Refer to Chapter 7. This blasts air from the air assist bar sooner to push the label onto the vacuum pad.
- Increase the AIR AST DWL by using the operator panel. The air from the air assist bar is activated longer to push the label further away from the peeler plate.

Note: The air assist should blow as long as the label is moving.

Blow Nozzle Placement

Blow pipes are supplied to blow the label onto the product. Use as many as needed to sufficiently blow the label onto the product. Smaller labels will need fewer blow pipes, larger labels need more. They are simply pushed into the bottom grid plate until a snug fit has been attained. Arrange the blow pipes in a symmetrical pattern that matches the size and shape of the label.

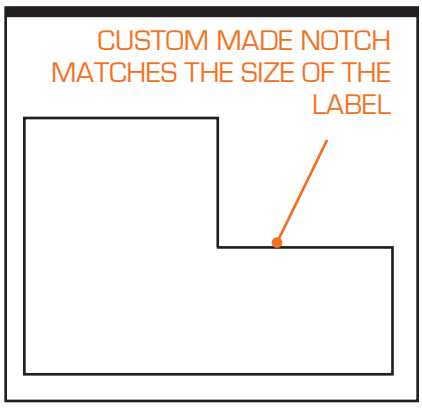


Figure 5-13. Grid Plate Cover

Finding the optimal pattern is more art than science; it may take several tries before locating an optimal pattern for your label. Any unused blow pipes must be inserted into the back plate when not used or there will be inconsistency when blowing the labels.

Grid Plate Cover

A grid plate cover made of clear lexan that slides in over the bottom grid plate is provided to stop vacuum loss when it blocks the holes on the grid plate. You will need to customize it by cutting it to fit the size of your specific label (refer to Figure 5-13).

Apply Label to Product

Once the label is properly positioned onto the grid plate, it is now time to apply the label to the product. Position the labeler such that the blow box is parallel with the surface of the product to be labeled. Position the labeler so that product is as close to the grid plate as possible. The closer the product is to the grid plate, the more accurate the label placement.

Label Placement

The final adjustment for the Blow-On Module assembly is the placement of the label on the product. One or more of the following methods may be used for the desired adjustment.

- Adjust the TMP/BLW DEL using the operator panel. Refer to Chapter 7. A higher value delays the blowing, causing the label to be placed closer to the trailing end of the product. A lower value blows sooner and places the label closer to the leading edge.

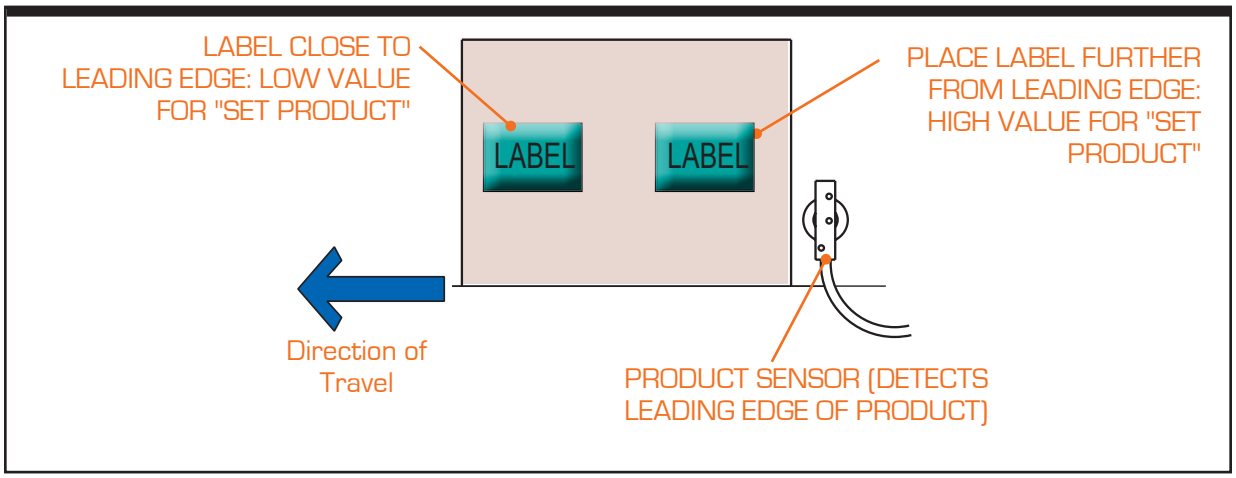


Figure 5-14. Fine Tuning Label Placement

- Adjust the LABEL PLACE found in the operators panel. This is a fine tuning adjustment of the Tamp/Blow Delay described above. A higher value delays the tamp assembly from extending and the label is placed closer to the trailing end of the product. A lower value extends the tamp sooner, and places the label closer to the leading edge.
- Adjust the PROD LOCKOUT using the operator panel. This adjustment prevents applying multiple labels or false hits on the same product. Increasing the value locks out the input from the product sensor for a longer period of time, while decreasing the value shortens the lockout time. A long lockout time could cause a product to be missed.
- Adjust the TRAIL/LEAD PRODUCT found in the operators panel. This activates the labeler on the leading or trailing edge of the product. Refer to the Operator Interface in Chapter 7.

Testing

The following is a checklist for starting your labeler. After this list is complete, you will be ready to move forward to Chapter 7: Operator Interface to learn about the actual controls of the labeler.

- ❑ All safety cautions are adhered to for safe operation.
- ❑ Verify all accessories and modules purchased are installed.
- ❑ Insure that the labeler is positioned properly and secured for proper performance.
- ❑ Air and power are properly supplied and attached.
- ❑ The proper ribbon is used and is threaded through the printer correctly.
- ❑ The label stock is properly threaded through the labeler.
- ❑ The desired labels are downloaded into the printer supplied.
- ❑ The product sensor is in position and properly adjusted for the required product.

Operator Interface

6

Operator Interface Map

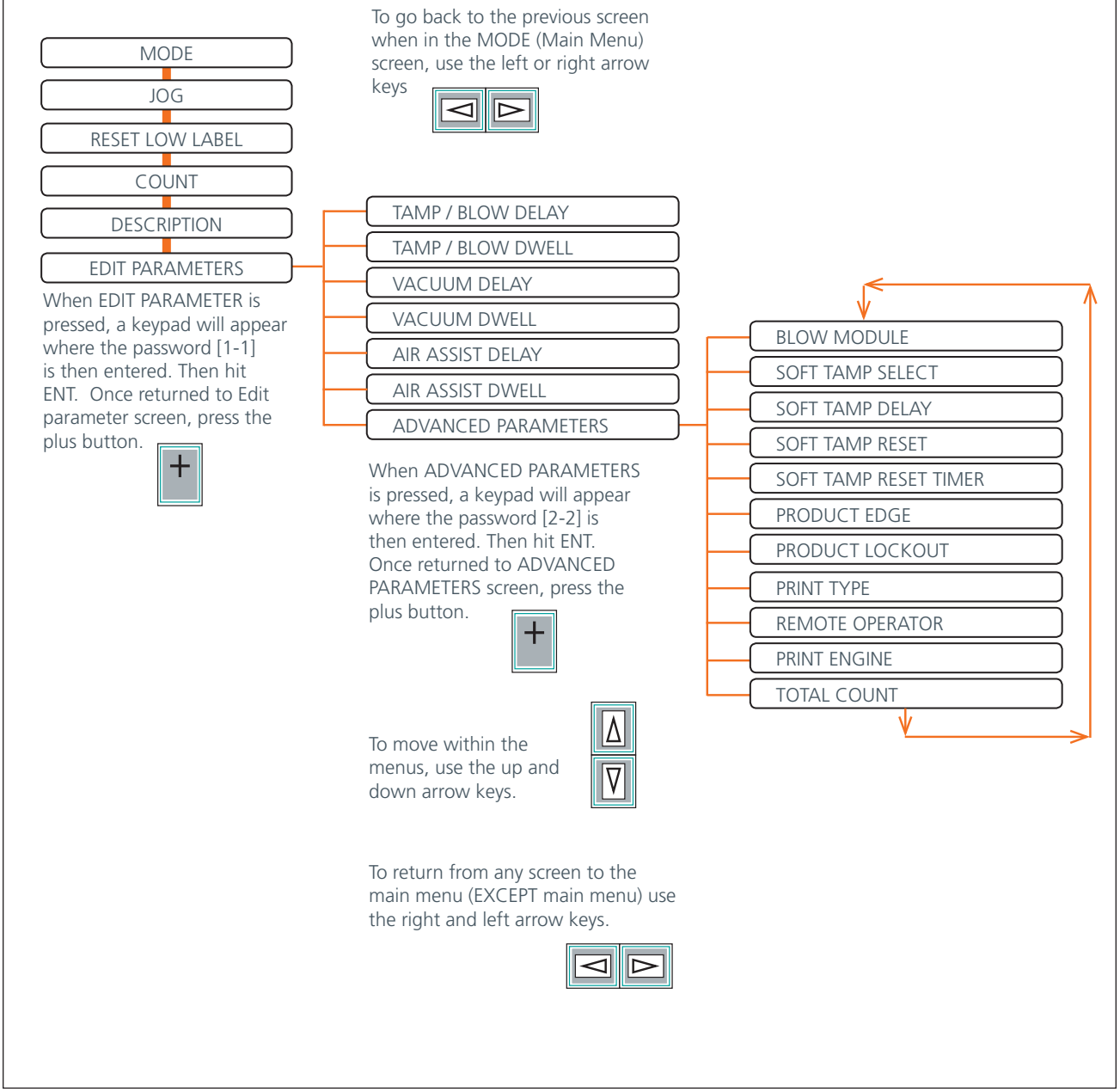
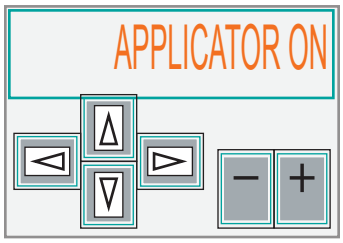


Figure 6-1. Mapping of the Operator Interface

The following pages of information explain the different parameters found within the operator panel. These parameters are extremely important in obtaining a reliable labeling operation. The operator should take time to sample various settings and observe how they affect the performance of the labeler. The more the operator understands the following information, the easier the transition from application to application will become. Below is a brief illustration of the program layout (Figure 6-1).

Read the entire Operator Interface chapter before setting the operating mode.

Main Menu



Mode: APPLICATOR ON/APPLICATOR OFF

Starts and stops the labeler and auxiliary equipment. Only when APPLICATOR OFF is displayed, can the JOG mode be turned on or off using the JOG screen.

After turning on the machine, the display reads the **MODE** screen. The default setting is APPLICATOR OFF.

APPLICATOR OFF pauses the labeler. The machine is stopped indefinitely. The labeler can only be jogged when in APPLICATOR OFF mode.

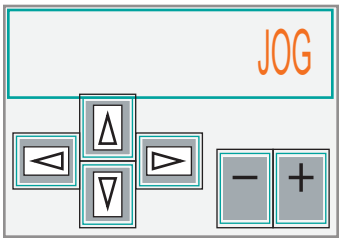
APPLICATOR ON locks out jog mode and lets the labeler run normally. Use the Plus (+) Minus (-) keys to toggle between APPLICATOR ON and APPLICATOR OFF.

The down key (▼) scrolls to the next screen.

The up key (▲) scrolls to the previous screen.

- APPLICATOR ON/APPLICATOR OFF switches the auxiliary equipment on or off.
- This selection is used to start and stop the labeler unless a separate stop button has been installed.

- Defaults to APPLICATOR OFF after power is cycled.
- In this screen only, to return to the previous screen, use the left or right arrow key(◀ ▶).



JOG

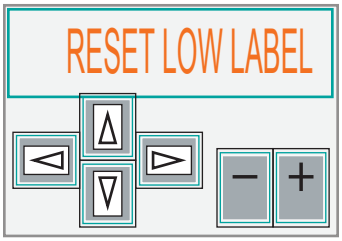
Turns jog mode on or off.

OFF lets the labeler run normally.

ON runs the labeler manually one cycle at a time or continuously and locks out other screens.

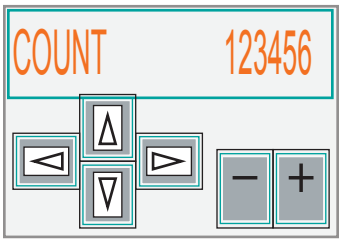
To cycle the machine **one time**, press the plus key once.

- Use Jog for troubleshooting or after loading labels or printer ribbon. JOG is only available after you choose APPLICATOR OFF on the "Run" screen.
- Defaults to OFF after power is cycled.



LOW LABEL (Reset Low Label)

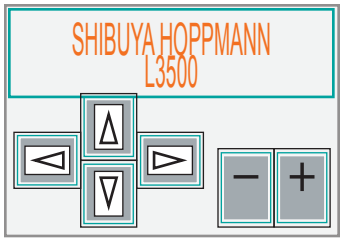
For use with a Low Label Sensor and Light Tower. This parameter resets a low label sensor "fault" which is displayed as an amber light on the Light Tower. After replenishing the label stock on the Unwind Assembly, press the (+) key.



COUNT

Counts the cycles since the counter was reset.

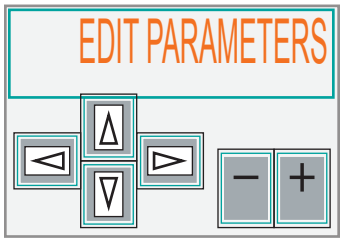
- Max: 99,999 units of product. The setting is retained when power is turned off.
- Min: 0 units of product.



SHIBUYA HOPPMANN
L3500

Indicates the model and operating system for the labeler.

Edit Parameter Menu



EDIT PARAMETERS

The EDIT PARAMETERS menu customizes the way the labeler operates. Press the EDIT PARAMETER key, and an keypad will apprear. Enter the password (1-1), and hit ENT.

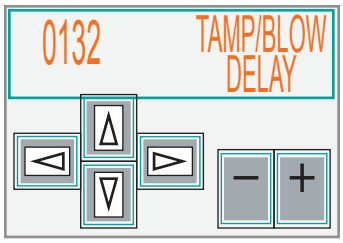
- To enter this menu, press the plus key (+) when the EDIT PARAMETERS screen is displayed.
- To exit, press the arrow keys (◀ ▶) to return to the MAIN MENU while in any screen

The down key (▼) scrolls to the next screen.

The up key (▲) scrolls to the previous screen.

Note: The parameters are retained even after power is turned off.

Incorrect changes in the EDIT PARAMETERS menu may cause the machine to operate improperly.

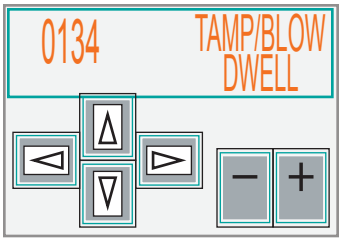


TAMP / BLOW_DELAY

Sets delay between sensing the product and activation of tamp or blow assembly.

Increase (+) to position label closer to trailing end of product.
Decrease (-) to position label closer to leading end of product.

- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is turned off.



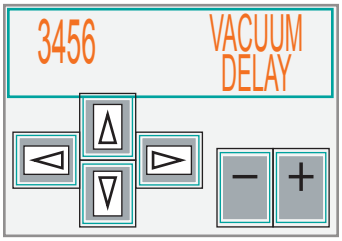
TAMP / BLOW_DWELL

Sets dwell time for the tamp or blow assembly.

Increase (+) to extend the time the tamp is extended or the blow box is activated.

Decrease (-) to reduce the time the tamp is extended or the blow assembly is activated.

- Maximum: 9999 (99.99sec) Minimum: 1 (0.01sec) Units: 0.01 sec.
- The setting is retained when power is turned off.

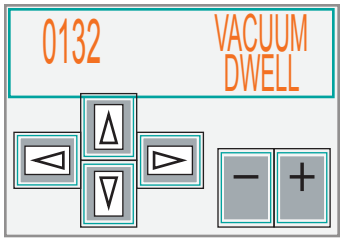


VACUUM DELAY

Delays activation of the vacuum that pulls the label onto the tamp pad. Used to smooth the transition of the label from the peeler bar to the tamp pad. See AIR ASSIST DELAY screen.

Increase (+) to turn the vacuum on later.
Decrease (-) to turn the vacuum on earlier.

- Delay starts when label begins printing. If the leading edge of the label does not arrive all the way to the edge of the tamp, then increase this setting.
- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is turned off.
- Vacuum delay is normally set to expire at the same time the label is finished feeding.



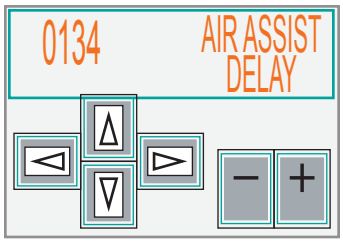
VACUUM DWELL

Sets a time value to keep the vacuum activated as the tamp is applying the label.

Increase (+) to keep the vacuum activated for more time.
Decrease (-) to keep the vacuum activated for less time.

- When a tamp is installed, VACUUM DWELL is used to prevent the label or a lightweight product to remain attached to the pad as the tamp retracts.
- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is turned off.

The value cannot exceed tamp dwell or the labeler will not function properly.

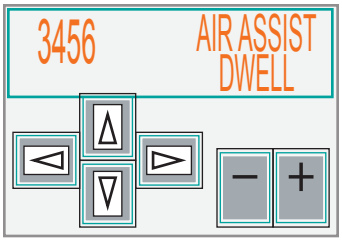


AIR ASSIST DELAY

Smooths the transition of the label from the peeler bar to the tamp pad or blow box. See VACUUM DELAY screen.

Increase (+) to turn the air assist on later.
Decrease (-) to turn the air assist on earlier.

- Delays activation of the air assist valve. Delay starts when the label begins printing.
- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is turned off.



AIR ASSIST DWELL

Helps push the label further onto the tamp pad or blow box.

Increase (+) to keep the air assist activated for more time.
Decrease (-) to keep the air assist activated for less time.

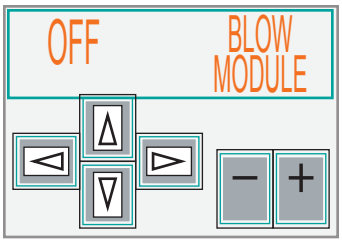
- Sets how long air assist valve stays activated to blow the label up onto the tamp pad or blow box.
- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is off.
- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. Setting is retained when power is turned off.

Advanced Parameter Menu

The ADVANCED PARAMETERS menu further customizes the way the labeler operates. Press the ADVANCED PARAMETER key, and an keypad will appear. Enter the password (2-2), and hit ENT.

- To enter this menu, press the plus key (+) when the ADVANCED PARAMETERS screen is displayed.
- To exit, press the arrow keys (◀ ▶) to return to the MAIN MENU while in any screen

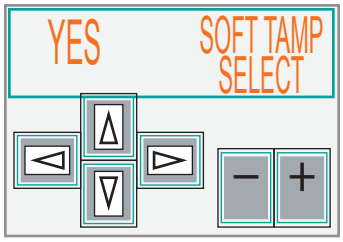
  The down key (▼) scrolls to the next screen.
  The up key (▲) scrolls to the previous screen.



BLOW MODULE

- Select YES when the blow-on module is installed.
  The setting is retained after the power is turned off.

Note: When setting this module to YES, all other modules must be set to NO.



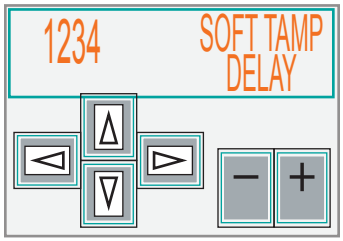
SOFT_TAMP_SELECT

Soft Tamp requires the installation of an optional sensor.

If SOFT TAMP is active, the tamp assembly retracts as soon as the soft tamp sensor is blocked. Retraction of the tamp may be delayed by entering a time into the Soft Tamp Delay screen.

Soft tamp can be used:

- To apply labels to fragile parts.
- To apply labels on products as they travel through a 90° transfer.
- To apply labels at various heights and widths.
- Choose YES when the soft tamp is installed. The setting is retained after the power is turned off. *Note: When setting this module to YES, all other modules must be set to NO.*

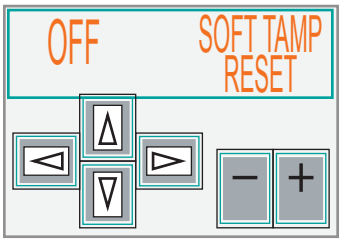


SOFT TAMP DELAY

The SOFT TAMP DELAY delays retraction of the tamp assembly. The delay starts when the soft tamp sensor is blocked.

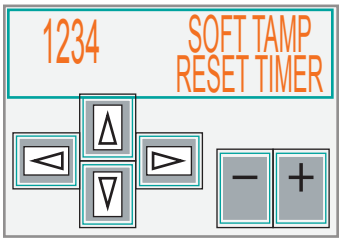
Increase (+) to delay return of tamp assembly after sensor activation.
Decrease (-) to speed return of tamp assembly after sensor activation.

- Maximum: 9999 (99.99 sec) Minimum: 0 (0 sec) Units: 0.01 sec. The setting is retained when the power is turned off.
- Soft Tamp requires the installation of an additional (optional) sensor.



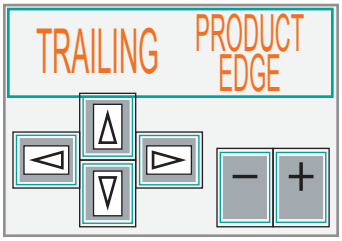
SOFT TAMP RESET

The SOFT TAMP RESET will allow the tamp assembly to automatically retract if the soft tamp sensor doesn't see the product in the amount of time set in the SOFT TAMP RESET TIMER. This time starts from when the tamp first starts extending, until the sensor detects the product.



SOFT TAMP RESET TIMER

The SOFT TAMP RESET TIMER is the time that the tamp assembly will take to retract automatically if no product is detected. SOFT TAMP RESET must be enabled for this function.



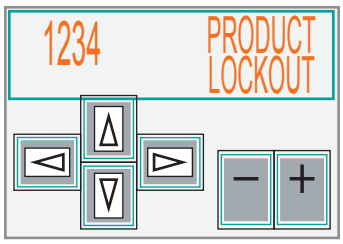
PRODUCT EDGE

The PRODUCT EDGE activates the labeler on the leading or trailing edge of the product.

LEADING activates the labeler on the leading edge of the product. TRAILING activates the labeler on the trailing edge of the product.

The setting is retained after the power is turned off.

- Correct operation of this feature depends on the proper setting of the product sensor. The light/dark operate switch on the sensor itself must be set to "L.O." (light operate).
- If this switch is reversed, operation of the Product Edge will be reversed.



PRODUCT LOCKOUT

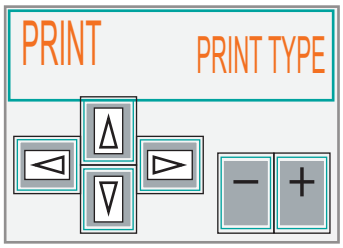
Product Lockout sets a time value to activate the labeler after a product sensor input signal is received. The labeler will not cycle again until this time value expires.

Increase (+) to lock out input from the product sensor for a longer time period.
Decrease (-) to lock out input from the product sensor for a shorter time period.

- Prevents accidentally placing an extra (or extra) labels on the same product.
- Maximum; 9999 (99.99 seconds). Minimum; 1 (0.01 second). Units: 0.01 second. Setting is retained when power is turned off.
- The product lockout settings affect the rate at which the labeler will cycle continuously in jog mode.

A high PRODUCT LOCKOUT value may cause the labeler to miss product(s).

A low PRODUCT LOCKOUT value may cause the labeler to apply multiple labels to the same product if false product senor inputs are received.



PRINT TYPE

Print type allows the operator to choose between two types of printing modes (PRINT and REPRINT).

PRINT is used when label information changes for each label.

Note: If the product sensor detects a product before a label is finished printing, the product will not be labeled.

When PRINT is active, the machine prints the number of labels loaded in the queue and then stops. The printing begins once the data is received by the print engine. If more than one label is sent, the labeler will print the first one and store the remaining labels in the queue. The label will stay on the vacuum pad until it is cycled.

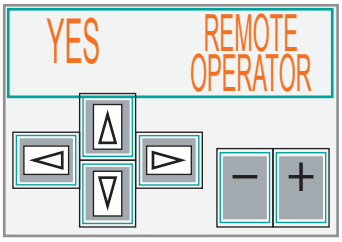
*For more information on individual printer Engine settings, refer to the manufacturer's operations manuals.

REPRINT is used when label information does not change.

When REPRINT is active, the machine finishes printing all the labels in the queue, then reprints the last label over and over. If only one label is loaded, the same label will be reprinted over and over.

- On SATO printers, for REPRINT to operate, "**DSW3 switch #8**" must be set to **ON**.
- On ZEBRA printers, for REPRINT to operate, "**REPRINT MODE**" in the print engine's operator screen must be set to **ENABLED**.

*For more information on the DSW3 switch, refer to the Installation and Configuration section of the SATO printer manual, Section 3.

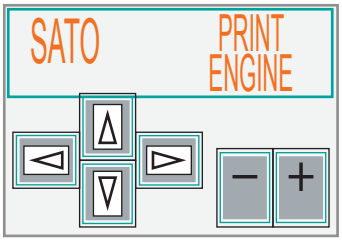


REMOTE OPERATOR

REMOTE OPERATOR allows the labeler to be stopped manually with an optional remote stop button.

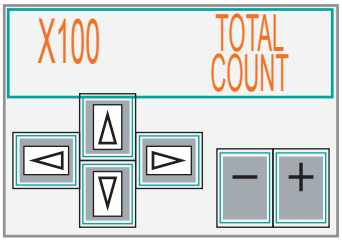
- Leave NO selected unless a remote stop button is installed on the equipment.
- Choose YES if the optional remote stop button is installed. Setting is retained when the power is turned off.

If you select YES but have no optional remote stop button installed, the machine is NOT RUN.



PRINT ENGINE

The PRINT ENGINE allows you to set the printer associated with the labeler (SATO or ZEBRA).



TOTAL COUNT

TOTAL COUNT displays the lifetime total number of labels printed. This value cannot be reset. Counts are in increments of 100.

Preventive Maintenance

7

Preventive Maintenance

Preventative maintenance should be scheduled regularly based on the working environment. Operators or technicians may add additional items to the PM list provided. If there are any service questions, contact your distributor.

The maintenance information is suggested for the base unit. Maintenance instructions for the print engine are included in the printer manual.

- Examine the drive rollers, vacuum pad, air assist bar, and peeler plate for adhesive buildup or dust collection. Isopropyl alcohol or mineral spirits may be used to clean problem areas. Do not use compressed air to blow dust from the labeler. Damage to the printer's electronics may occur.
- Check all electrical plugs for secure connections.
- Verify that all components and modules are securely fastened.
- Drain the filter regulator. Replace filter element if necessary.
- Inspect the unit for loose screws, guides or covers and tighten as necessary.
- Inspect the tamp cylinder guide rods for proper alignment. The tamp cylinder should extend and retract without hesitation.
- Inspect the pads on the clutch assemblies for excessive wear. Adjust the friction by using the clutch tool. Replace the clutch when the proper adjustment cannot be achieved.
- With the regulator set to the proper pressure, listen for air leaks. Reconnect air lines and tighten fittings as necessary.
- Clean any dust from the lens of the product sensor.

- Inspect all air hoses for wear. Replace as necessary.
- Use the manual override switch on the solenoid valves to verify smooth operation.
- Remove the vacuum pad, and clean any contamination within the vacuum chamber.
- Inspect the air assist bar for proper flow.

Replacement Parts

8

Replacement Parts

Replacement parts lists for the Shibuya Hoppmann L3500PA Print & Apply Label Applicator are listed on the following pages. When ordering replacement parts, please reference the model name and number of your labeler located on the serial plate (see Figure 6-1). This helps in making sure you receive the correct replacement parts.

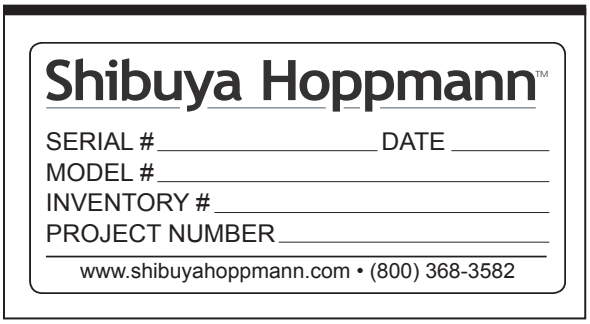


Figure 8-1. Sample Serial Plate

Having the serial number in addition to the part number you wish to order will help us to accurately assist you in getting the correct parts. You may order your labeler's spare parts directly from Shibuya Hoppmann by e-mail, phone or fax (see the contact information listed below).

Shibuya Hoppmann Spares and Service Department

- **E-mail**: Spares@Hoppmann.com
- **Phone**: 434.929.4746 (1.800.543.0915)
- **Fax**: 434.929.4959
- **Mail**: Shibuya Hoppmann Corporation
  Attn: Spares Department
  29 Dillard Road, P.O. Box 879
  Madison Heights, Virginia 24572 USA
  www.ShibuyaHoppmann.com

L3500PA Labeler Replacement Parts

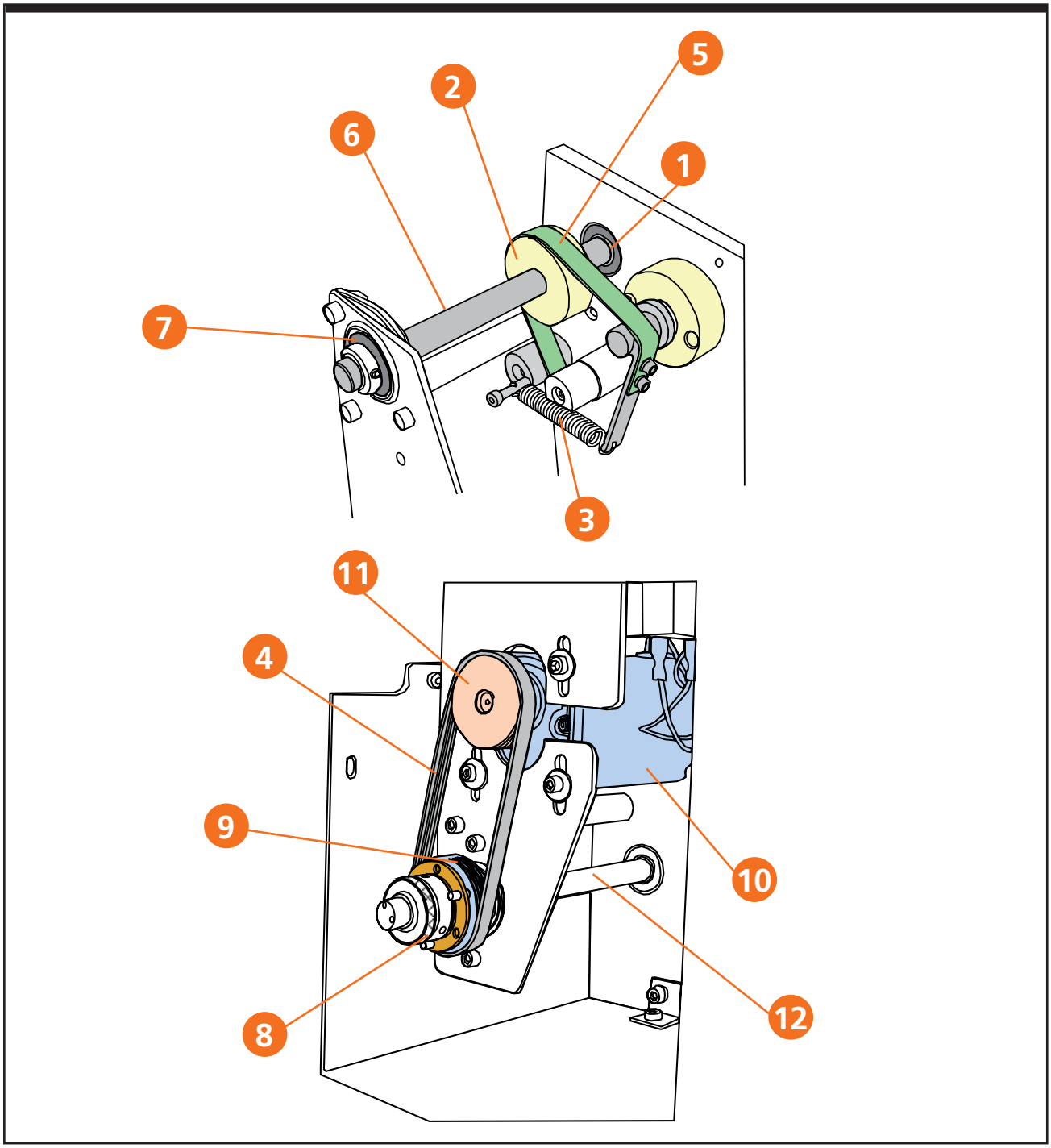


Figure 8-2. L3500PA Replacement Parts Callouts

L3500PA Labeler - Replacement Parts			
Loc.	**Part Number**	**Description**	**Qty.**
1	BRNGBALL18	Ball Bearing, 5/8" Bore	6
	CA809C1024D	Contactor	1
2	L050500046	Brake Drum	1
	L080130203	Vacuum Cube	1
	MDL-6	Fuse, 6 Amp	1
	PZG42CB	Product Sensor	1
3	SPRE000001	Extension Spring, Brake	1
4	BELTJ4V160	Clutch Belt, Poly-V, 16"	1
	L050600049	Locking Collar Assembly	1
5	L050603092	Drive Brake Belt	1
6	L050500071	Unwind Shaft	1
7	BRNG00031	Bearing, 5/8" Bore	1
8	TORQPOLY01	Slip Clutch, 2 Disc	1
9	L050600016	Clutch Pulley	1
10	MTRG000008	Gear Motor, 1/30 hp, 10:1	1
	L050601134	Rewind Pull Pin	1
11	L050603063	Drive Pulley	1
12	L050500070	Rewind Shaft	1

Tamp Module Spare Parts List			
Loc.	**Part Number**	**Description**	**Qty.**
1	MAGSWITCH1	Magnetic Reed Switch	1
2	MAGWIREC30	Magnetic Reed Switch Wire	1
3	BUSHBALL15	Linear Tamp Bushing	4
4	L050120718	Linear Tamp Shaft, 7" Stroke	2
5	ORING42518	Vacuum Pad O-Ring Seal	1
6	L080510420	Air Cylinder, 7" Stroke	1
7	AIRF000058	Air Fitting with Flow Control	2
8	L040800005	Stop Washer	4
9	AIRFITN034	Air Fitting, Vacuum	1

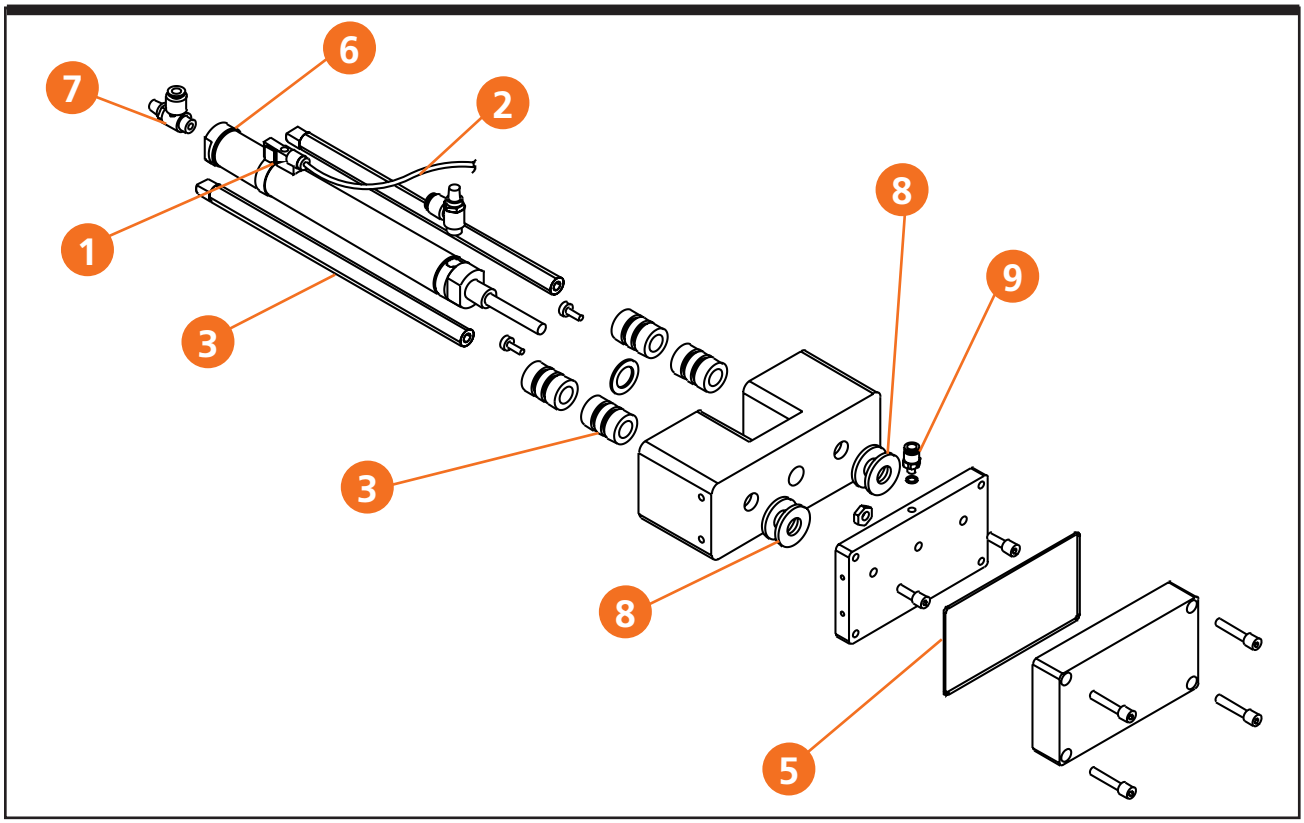


Figure 8-3. L3500PA Tamp Module Parts Callouts

Troubleshooting

9

Unwind Assembly Troubleshooting		
Problem	**Possible Cause**	**Solution**
Unwind Assembly Does Not Limit Label Feed	The electric brake is not working properly.	Check to make sure the rocker arm is properly set to initiate the brake.
Web Tears	Labels are not correctly threaded.	Thread labels correctly. Refer to Figure 4-1 for proper label threading.
	Quality of the labels (label stock) is poor.	Nicks and die cuts in the liner may cause the label to break at lower than expected tensions. See "Web Specification" section in appendix.
Label Supply Roll Feeds Erratically or Not At All	Labels are not correctly threaded around the dancer arm.	Remove label stock and re-thread the labels correctly. See Figure 4-1 for proper label threading. If not correctly threaded, the unwind brake will not release during dispensing and the supply roll will not rotate.
	The clutch is not supplying enough friction to turn the supply roll.	Tighten the clutch on the unwind assembly for proper friction.
Labels Do Not Track Squarely Around the Dancer Arm	Label supply roll is not positioned on the unwind assembly squarely.	When loading labels onto the unwind assembly, make sure to adjust the roll so it is positioned squares. Make sure locking collar is tightly fit.
	Adjustable guides are not used or are improperly positioned.	Adjust the spring collars so that the web path is uniform throughout.

Unwind Assembly Troubleshooting

Label Roll Does Not Fit Onto the Unwind Assembly	Previous supply roll core has not been removed from the roller.	When the supply roll of labels is empty, remove the core before loading the new roll.
	Inner diameter of label roll core is deformed.	Inspect the inner surface and edges of the core for damage. Straighten if possible.
	Inner diameter of label roll core is undersized.	Rewind the roll of labels onto a core with the correct inner diameter: 3.0" (76mm) in diameter.

Power Supply / Electrical Components Troubleshooting

Problem	Possible Cause	Solution
Labeler (Applicator) Does Not Turn On	The main power switch is not on.	Turn the main switch on. Do not confuse the labeler power switch with the print engine power switch.
	Power cord is not plugged in.	Plug in the cord to the labeler.
	Main fuse is blown.	Unplug the unit. Replace the main fuse located on the electrical DIM rail.
	Power supply is the wrong voltage, phase, or frequency.	Refer to Table 1-1 for power requirements. Consult distributor for possible solutions.
Printer (Print Engine) Does Not Turn On	The power switch for the printer is not turned on.	Turn the printer power on. Do not confuse the printer power switch with the labeler power switch.
	Power cord is not plugged into the rear of the print engine (printer).	The plug may only be inserted one way. May sure the plug is fully inserted into the receptacle.
	Printer fuse is blown.	Disconnect the power. Replace the fuse if blown (refer to printer manufacturer's manual).

Printer (Print Engine) Troubleshooting

Problem	Possible Cause	Solution
Labels Do Not Track Squarely Through the Printer	Label roll is not threaded correctly.	Thread labels correctly. See Figure 4-1 for proper label threading.
	Labels in the printer are threaded wrong.	Thread labels correctly through the printer - refer to the printer's documentation.
	Label guides are positioned wrong.	Correctly position the adjustable label guides. Refer to the Label Threading section in Chapter 4.
Labels are Jammed in the Printer	The printer is not threaded correctly.	Thread labels correctly through the printer - refer to the printer's documentation.
	The printer drive roller needs to be cleaned.	Label material may have built up on the printer drive roller. Refer to the Printer Manual for more information.
	Labels are curled and peeling from the web.	Old and thick labels may curl from the web as they wind through the labeler. Use new labels with correct specifications.
	Label sensor is positioned wrong.	Position the sensor so it does not interfere with the web path. Refer to the Printer Manual.
	Label adhesive is weak.	Make sure the label adhesive quality is acceptable.
Printer Error LED Signal is Lit	One or more of the printer error conditions exist.	A label-out or ribbon-out condition may exist. Refer to the Printer Manual for replacing ribbon and the Label Threading section of this manual for replacing label supply.

Printer (Print Engine) Troubleshooting

Problem	Possible Cause	Solution
Labels Feed Through Printer but Do Not Print	Printer has "just been" turned on.	The printer may print a couple blank labels when first started.
	Label data has not been downloaded to the printer.	Make sure the downloaded label data is present in the printer.
	Printer is "off-line".	The printer only prints a label if it is "on-line". Press the line button on the control panel.
	Ribbon is depleted/torn/jammed or not threaded properly.	If the red warning LED on the printer face is lit, the ribbon supply is depleted. Open the cover of the printer to check error condition.
Labels Feed Through Printer But Do Not Print	Ribbon is not advancing.	If the ribbon is torn, jammed or incorrectly threaded, the ribbon fault may not light even though there is an error. Check the condition of the ribbon.
	Label software is not set up for the printer.	Configure the software so that is corresponds with the make and model of the printer.
	Label software is not compatible with the printer.	Some software packages are not compatible with all makes and models of printers. Contact the software manufacturer.
	Temperature setting is too low and the print speed too fast.	The elements of the print head are not heating to the required temperature to supply carbon to the label. Increase the temperature and decrease the print speed.

Printer (Print Engine) Troubleshooting

Problem	Possible Cause	Solution
Printer Does Not Feed or Print Labels	Printer is not turned on.	Turn power on.
	Green printer on-line LED is not lit.	Check that the cover to the printer is closed, the print head latch is locked and the printer error LED is not lit. Make sure the printer is on-line and press the feed button on the control panel to test feed a label.
	At least one label format is not present in the print buffer.	Press the line button for the printer. Once on-line, download a label format to the printer. The display should not read 0000 after a label is downloaded. Refer to the Downloading Labels section of this manual.
Printer Prints Labels with Missing Information	Printed images for label are outside the printing area.	The label format file may be too large for the label stock. Reposition the label or reformat the label file.
	Ribbon has run out.	Make sure the ribbon LED on the printer control panel is lit. Refer to the Printer Manual on replacing the Printer ribbon.
	Only a portion of the ribbon is contacting the label.	Make sure the ribbon extend across the entire width of the desired portion of the label to be printed.
Label Printing is Compressed	Printer is not correctly threaded.	Refer to the Printer Manual for label threading instructions.
	Drive roller for the printer is not locked into place.	Refer to the Printer Manual for instructions on how to manipulate the drive roller.

Printer (Print Engine) Troubleshooting		
Problem	**Possible Cause**	**Solution**
Poor Print Clarity	Print image darkness is not set correctly.	Refer to the Printer Manual for image control adjustment instructions.
	Wrong label and/or ribbon combination has been selected.	Consult suppliers for correct combinations. Certain combinations of labels, ribbons and printers are required.
Labels Advance Erratically in Printer	Drive roller for the printer is not locked into place.	Refer to the Printer Manual for instructions on how to manipulate the drive roller.
	Unwind tension is too tight.	Loosen Unwind Clutch (see "Adjusting Clutch Assembly" in Chapter 4.)
	Drive mechanism of the printer needs to be cleaned.	Refer to the Printer Manual for cleaning instructions.
	Printer drive belts are worn/ damaged.	Replace printer drive belts.
	Platen rollers are worn/damaged.	Replace platen rollers.
Labels Do Not Advance in the Printer	The printer is not threaded correctly.	Thread labels correctly through the printer - refer to the printer's documentation.
	Drive roller for the printer is not locked into place.	Refer to the Printer Manual for instructions on how to manipulate the drive roller.
	Printer drive belts are worn/ damaged.	Replace printer drive belts.
	Platen rollers are worn/damaged.	Replace platen rollers.

Printer (Print Engine) Troubleshooting

Problem	Possible Cause	Solution
Print Engine is Not Printing Quickly Enough	Correct print speed for the printer is not set.	Refer to the Printer Manual regarding instructions on how to adjust the print speed of the print engine.
	Drive mechanism for the printer is slipping.	Inspect the internal drive components of the printer for wear. Replace parts as needed.
	Drive motor for the printer is damaged.	Verify that the drive motor for the printer is spinning smoothly. If not, replace motor.
	Printer is not receiving the correct power supply.	Verify that the labeler is connected to the correct power supply. Refer to the power requirements listed in Table 1-1.

Label Placement Accuracy Troubleshooting

Problem	Possible Cause	Solution
A Section of the Label is Not Fully Impressed onto the Product	Tamp pad is not parallel with the product surface.	Reposition the labeler and the tamp pad as directed in Figure 3-1. The tamp pad must contact the entire product for proper label impressions.
	Tamp pad barely contacts the product at maximum extension.	The tamp pad should contact the product a minimum of 0.125" (3.18mm) from maximum extension. Refer to Chapter 3 and Chapter 5 for tamp pad and labeler positioning.
	Tamp pad is too large for label.	Order a custom size tamp pad to fit the label.

Label Placement Accuracy Troubleshooting

Problem	Possible Cause	Solution
Label Falls From Tamp Pad Before Application	Strength of vacuum may vary.	Increase the pressure supplied to the vacuum of the tamp pad.
	Vacuum dwell time is too short.	Increase vacuum dwell time (see Chapter 6 regarding changing dwell time values).
	Air assist pressure is incorrectly adjusted.	Refer to the Tamp Module section for the proper adjustment of the air assist pressure.
	Air assist pressure remains on after label has been dispensed.	Refer to Air Assist Dwell section in the Operator's Interface (Chapter 6). Adjust as necessary.
At Some Point After Application, Label Falls From Product	Label is not fully applied to the product when the tamp pad begins to retract.	The tamp pad should contact the product at a minimum of 0.125" (3.18") from maximum extension. Refer to the Tamp Module section for proper setup.
	Label adhesive is not strong enough to stick to dusty or porous surfaces.	Industrial labeling applications require strong adhesives to stick labels to pallets, cases and other irregular or dusty surfaces. Check the label specifications.
After Tamp Cycles, The Label Remains on the Vacuum Tamp Pad	Label does not contact the product when the tamp pad begins to retract.	The tamp pad should contact the product a minimum of 0.125" (3.18mm) from maximum extension. Refer to Chapter 3 and Chapter 5 for tamp pad and labeler positioning.
	Tamp Dwell setting is too low.	Increase Tamp Dwell setting. See Operator's Interface in Chapter 6 for more information.
	Vacuum Dwell is too high.	Decrease Vacuum Dwell setting. See Operator's Interface in Chapter 6 for more information.

Label Placement Accuracy Troubleshooting

Problem	Possible Cause	Solution
Accurate Label Placement is Not Repeatable	Products are not properly controlled at the point of label application.	Products must be properly aligned for the labels to be applied (within the positioning tolerances). Guide rails may be required for smaller products.
	Product surface is inconsistent.	Even if products are positioned repeatedly, the surfaces to be labeled may differ between products. Labels are applied to within the surface tolerance of the product.
	Product sensor is set up wrong.	Refer to the Product Sensor section (Chapter 4) and make sure the sensor is set up correctly.
	Label is sticking to the tamp pad.	Adhesive buildup may cause the label to stick (remain on the tamp pad after extension). Clean the tamp pad.
	Compressed air supply is not constant.	Provide constant air supply (see Table 1-1, Specifications).
Product Passes Without Being Labeled	Products are too close together.	Increase spacing between products and/or increase print speed of the print engine.
	Product sensor is not properly calibrated.	Refer to the Product Sensor section (Chapter 4) and make sure the sensor is set up correctly.
	Quantity of labels downloaded into the printer is 0000.	If the quantity of labels supplied to the printer drops to 0000, the labeler will not operate unless in the "reprint" mode.
Label is Positioned Too Close to the Leading Edge	Tamp delay is not long enough.	Increase Tamp Delay setting. Refer to the Operator's Interface in Chapter 6 for more information.

Label Placement Accuracy Troubleshooting

Problem	Possible Cause	Solution
Label is Positioned Too Close to the Trailing Edge	Tamp delay is too long.	Decrease Tamp Delay setting. See Operator's Interface in Chapter 6 for more information.
Label is Skewed on the Product	Tamp pad is skewed with respect to the product surface being labeled.	Refer to the Positioning section in Chapter 3 and reposition the labeler so that the pad is parallel with the surface to be labeled.
	Tamp pad is parallel with the surface to be labeled, but the label is skewed on the pad.	See the Tamp Module section (Chapter 5) and reposition the label on the tamp pad correctly.

Tamp Pad Assembly Troubleshooting

Problem	Possible Cause	Solution
Label Skews as it is Dispensed Onto the Pad	Leading edge of the tamp pad is not parallel with the dispensing edge of the printer.	Refer to the Tamp Setup section. Align the vacuum tamp pad with the dispensing edge of the printer.
	Ports of the air assist bar are not centered below the vacuum tamp pad.	Refer to the Tamp Setup to correctly position the air assist bar.
	Adhesive has built up along the bottom surface of the tamp pad.	Clean the tamp pad.
Tamp Pad Does Not Extend With Jog Button/Product Signal	Air supply is not attached.	Connect an adequate air supply to the inlet of the labeler (see Table 1-1 for specifications).
	Air supply is not at an adequate pressure level.	Connect an adequate air supply to the inlet of the labeler (see Table 1-1 for specifications).
	Air lines to the tamp cylinder are not connected.	Two 0.25" (6.35mm) diameter air lines should be connected to the tamp cylinder. Refer to Figure 5-1 and 5-3.

Tamp Pad Assembly Troubleshooting

Problem	Possible Cause	Solution
Tamp Pad Does Not Extend With Jog Button/Product Signal	Timer for the tamp pad return is too quick. The tamp does not have enough dwell time to extend.	Refer to the Operator's Interface section for setting the tamp cylinder dwell time. If the dwell is too short, the tamp cylinder will not extend.
	Product sensor is not connected.	Make sure that the 4-pin connector for the product sensor is securely fastened to the labeler. See Product Sensor instructions in Chapter 4 and electrical schematics for the sensor.
	Solenoid valve has seized.	Press the *Tamp/Blow* valve override switch found on the pneumatic panel. This will activate the tamp cylinder.
	Sliding rod of the tamp cylinder is damaged.	Turn off the labeler. Disconnect air and remove both flow control ports on the tamp cylinder. Inspect both rods for deformities when the pad is extended and retracted. Replace if necessary.
	Tamp home sensor is not located properly.	See Tamp Module section regarding proper installation.
Tamp Pad Extends Too Quickly	Air tamp pressure is too great.	Refer to the Tamp Module instructions to adjust air tamp pressure.
	Air flow control ports are open too far.	See Tamp Module instructions to adjust air flow control ports.
Tamp Pad Extends Too Slowly	Air tamp pressure is too light.	Refer to the Tamp Module instructions to adjust air tamp pressure.
	Air flow control ports are closed too far.	Refer to the Tamp Module instructions to adjust air flow control ports.

Tamp Pad Assembly Troubleshooting

Problem	Possible Cause	Solution
Tamp Pad Returns Too Quickly	Air tamp pressure is too light.	See Tamp Module instructions to adjust air tamp pressure.
	Air flow control ports are closed too far.	See Tamp Module instructions to adjust air flow control ports.
Tamp Pad Returns Too Slowly	Air tamp pressure is too light.	Refer to the Tamp Module instructions to adjust air tamp pressure.
	Air flow control ports are closed too far.	Refer to the Tamp Module instructions to adjust air flow control ports.
Tamp Pad Does Not Extend or Return Smoothly	Air tamp pressure is too light.	Refer to the Tamp Module instructions to adjust air tamp pressure.
	Air flow control ports are closed too far.	Refer to the Tamp Module instructions to adjust air flow control ports.
	Air supply flow is not sufficient or dependable.	Refer to the specifications for air supply requirements. Provide specified air supply.
	One of the sliding rods of the tamp cylinder is damaged.	Inspect the two steel rods for damage. Manually extend and retract the pad, checking for rough sections of travel.
	One or both of the sliding rods of the tamp cylinder require lubrication.	Lubricate as necessary.
Next Label Partially Dispenses Onto the Tamp Pad	Printer pitch offset setting is incorrect.	Refer to the Printer Manual for instruction on pitch offset adjustment procedures.
	Tamp home sensor is not positioned properly.	Refer to installation of Tamp Module (Chapter 5) for the correct positioning of the tamp home sensor.

Tamp Pad Assembly Troubleshooting

Problem	Possible Cause	Solution
The Label Sticks to the Air Assist Bar Instead of Dispensing onto the Tamp Pad	Label tamp pad vacuum is insufficient.	Refer to the Tamp Module instructions on how to adjust the vacuum for the tamp pad label.
	Label is not completely dispensing from the web.	Adjust the air assist pressure to further separate the label from the liner as it passes around the peeler plate.
	Air assist pressure is too low.	Refer to Tamp Module instructions on adjustment procedures (Chapter 5).
	Ports on the air assist delivery tube are not positioned correctly.	See Tamp Module instructions on air assist delivery tube positioning and adjustment procedures (Chapter 5).
Labels Do Not Dispense onto the Tamp Pad Accurately	Vacuum for the label tamp pad is not adjusted correctly.	Refer to the Tamp Module instructions on how to adjust the vacuum for the label tamp pad.
	Extreme air assist pressure is blowing the label across the tamp pad.	Refer to the Tamp Module instructions on the proper setup of the air assist delivery tube.
	Vacuum for the tamp pad is not sufficient to hold label into place.	Refer to the Tamp Module instructions on how to adjust the vacuum for the label tamp pad.
	Tamp pad is not positioned properly.	Refer to the Tamp Module instructions on how to set up the label tamp pad.

Tamp Pad Assembly Troubleshooting

Problem	Possible Cause	Solution
Leading Edge of the Label Contacts the Tamp Pad Side	Tamp pad is positioned too low below the dispensing edge of the printer.	Refer to the Setup of Tamp Module (Chapter 5) for adjustment procedures to raise the tamp pad to the correct position in from the dispensing edge of the printer.
	Air assist pressure is too high.	Refer to the Tamp Module instructions on how to regulate the air assist delivery ports.
	Air assist delivery ports are angled incorrectly.	Refer to the Tamp Module instructions for information on how to adjust the angle of the air assist delivery ports.
	Air assist delay is too short.	Increase air assist delay (refer to Operator's Interface).

Label Dispensing Troubleshooting

Problem	Possible Cause	Solution
Multiple Labels Dispense During Power Up	System has just been turned on.	During the power up the printer may feed a couple of blank labels. Remove the labels and continue with normal operations.
Web Tears at the Dispensing Edge of the Printer	Die cuts have perforated the web.	Die cuts may extend into the label web and weaken it. Replace the defective labels.
	Rewind is set too fast.	Adjust the rewind speed on the rewind assembly. Lessens the pull or tug on the label web.
Labels Do Not Dispense From the Web	Pitch offset control has positioned the label too far back from the normal stop position.	Refer to Setup of Tamp Module for adjustment procedures to raise the tamp pad to the correct position in from the dispensing edge of the printer.
	The wrong label format is downloaded.	Make sure the dimensions of the formatted label match the label stock.
	The supplied labels are the wrong size.	The label size must match the dimensions of the label defined in the formal file. Either replace the labels with the correct size or reformat the label file.
	Labels are not threaded around the peeler plate.	Thread labels correctly. See Figure 4-1 for proper label threading.
	Die cuts do not completely perforate the adhesive.	Replace the defective labels with good ones. Refer to Label and Web Specifications.
	Air assist pressure is not strong enough.	Increase air pressure.

Appendix

10

Pneumatic/Electrical Schematics

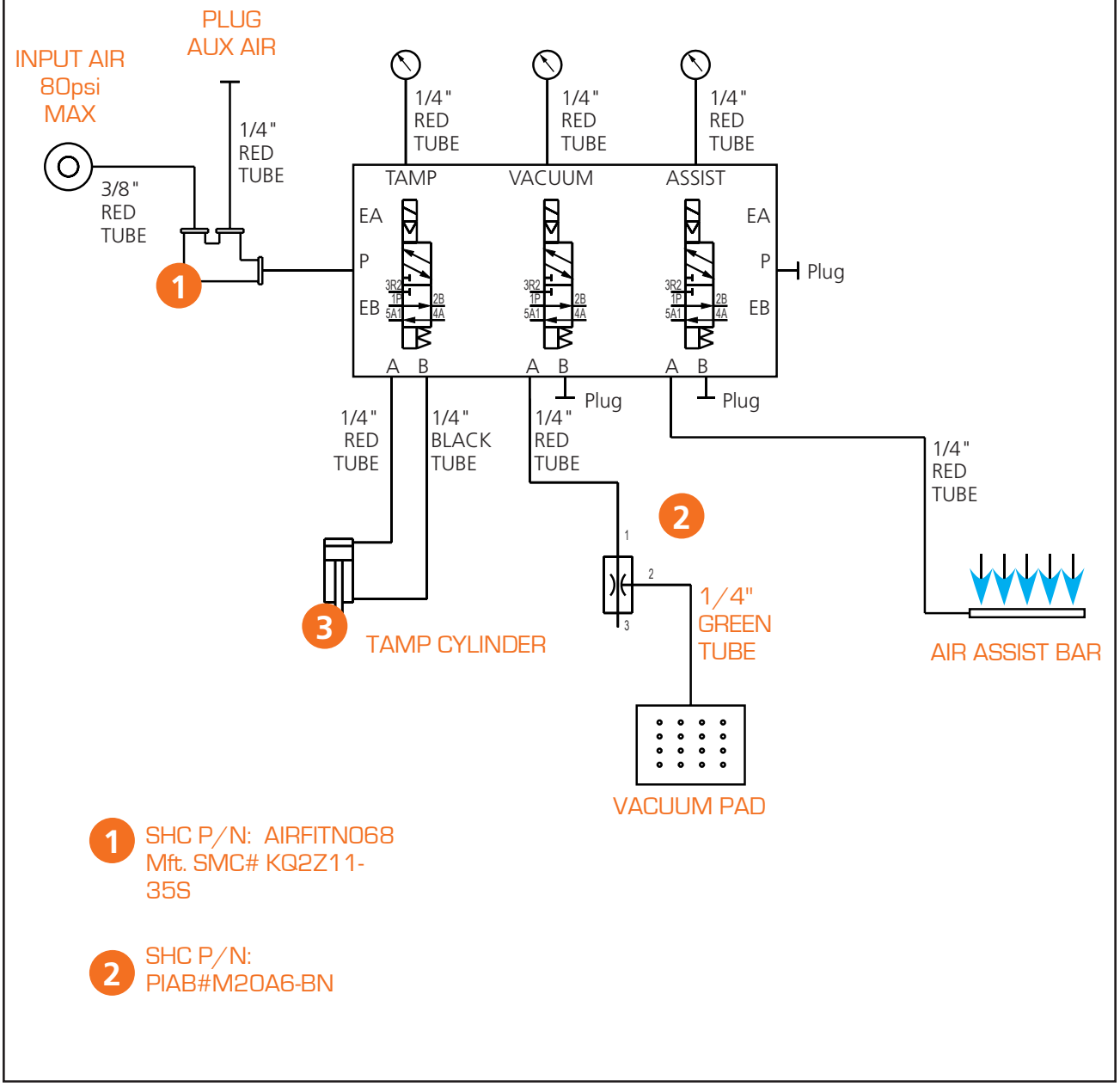


Figure 10-1. Pneumatic Schematics

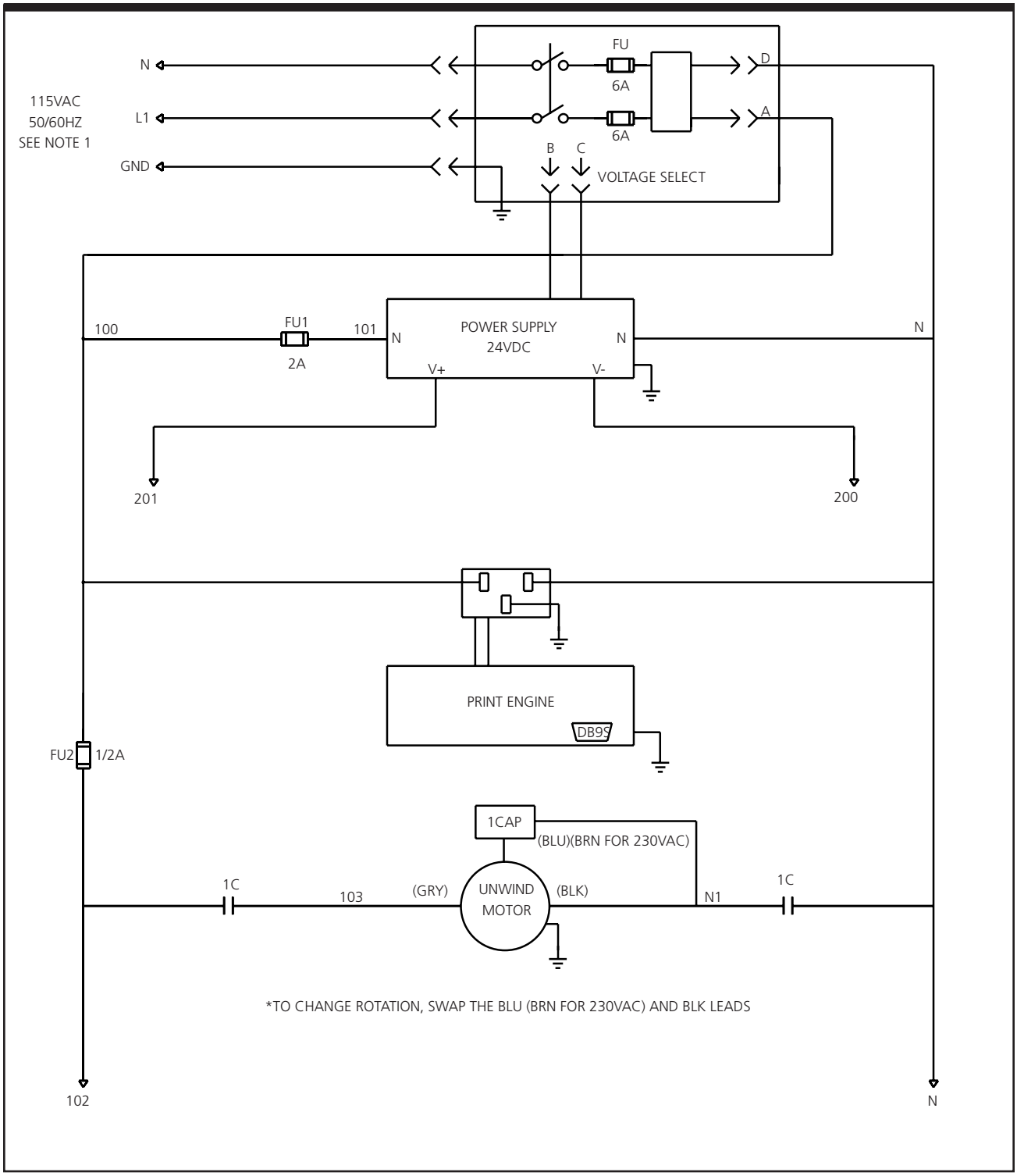


Figure 10-2. Labeler System Power/Control Wiring (Part 1)

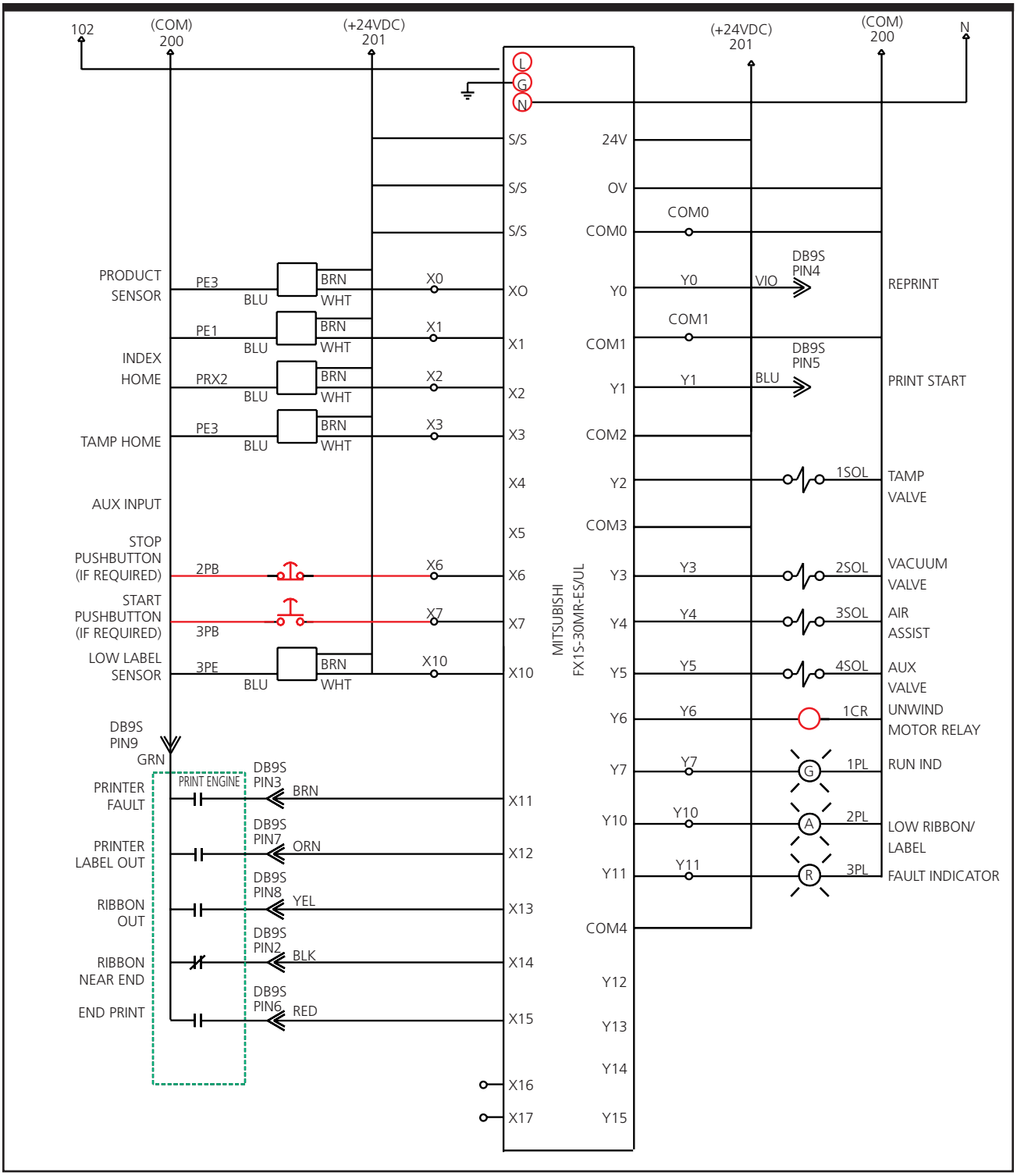


Figure 10-2. Labeler System Power/Control Wiring (Part 2)

Notes

Warranty

11

Warranty

Shibuya Hoppmann Corporation warrants that each item of its own manufacture delivered hereunder shall, at the time of delivery and for a period of twelve (12) months thereafter, be free from defects in materials or workmanship; and if any such item shall prove to be defective in material or workmanship under normal intended usage and maintenance during the warranty period, upon examination by Shibuya Hoppmann Corporation, then Shibuya Hoppmann Corporation shall repair or replace, at its sole option, such defective item at its own expense; provided, however, that the owner shall be required to ship such defective item, freight prepaid, to Shibuya Hoppmann Corporation's plant in Virginia. The warranty on components not manufactured by Shibuya Hoppmann Corporation, but a part of the system, is limited to the warranty provided by the original manufacturer of said components to the extent, and only to the extent, that such original manufacturer actually honors such warranty.

ALL WARRANTIES HEREUNDER ARE EXPRESSLY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE ITEMS AS SET FORTH HEREIN, AND IN NO EVENT SHALL SHIBUYA HOPPMANN CORPORATION BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BY REASON OF ANY BREACH OF WARRANTY OR DEFECT IN MATERIAL OR WORKMANSHIP. SHIBUYA HOPPMANN CORPORATION SHALL NOT BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ITEMS WHICH HAVE BEEN SUBJECTED TO NEGLECT, ACCIDENT OR IMPROPER USE, OR WHICH HAVE BEEN ALTERED BY OTHER THAN AUTHORIZED SHIBUYA HOPPMANN CORPORATION PERSONNEL.

THIS WARRANTY IS IN LIEU OF OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

Shibuya Hoppmann™

Shibuya Hoppmann offers a wide selection of products:

- Hoppmann Centrifugal Feeders™
- Prefeeders
- Continuous Motion Assembly Turrets
- Placement Systems
- Fillers and Cappers
- Conveyors
- Product Handling Equipment
- Aseptic Filling Systems
- Labelers
- Decontamination Equipment
- Intermittent Motion Assembly Systems
- Complete Integrated Product Lines

Headquarters
7849 Coppermine Dr.
Manassas, VA
20109
540.829.2564 t
800.368.3582 t
540.829.1726 f

Sales
1445 Brookville Way
Suite F
Indianapolis, IN 46239
317.322.0754 t
800.368.3582 t
317.322.0794 f

Manufacturing
291 Dillard Road
Madison Heights, VA
24572
434.929.4746 t
800.543.0915 t
434.929.4959 f