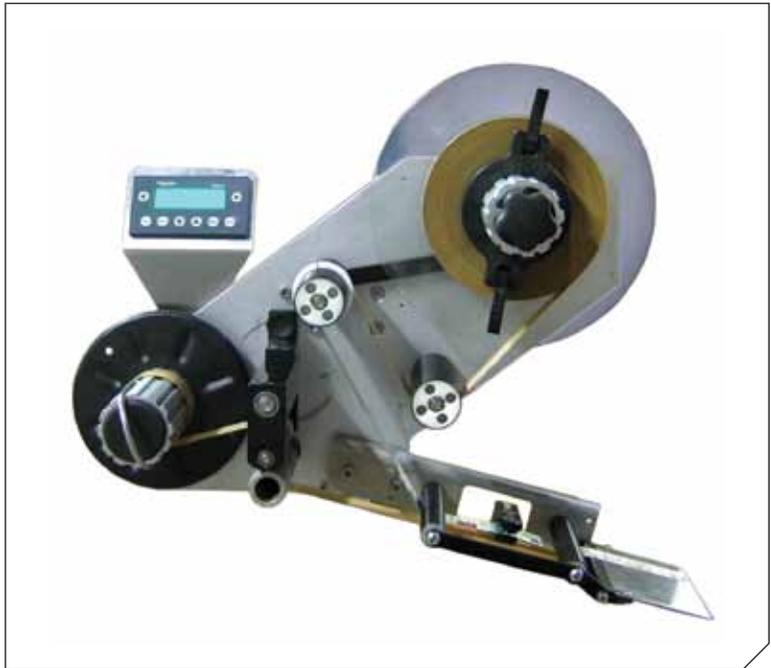


L200A Label Applicator

User Manual

Refer all servicing to qualified personnel.

This manual is intended for use by qualified mechanics and electricians who install or service the Hoppmann™ L200A Label Applicator.



Record your serial plate information here for future reference →

| Model Number | Serial Number/Date |
|--------------|--------------------|
| | |

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Quick Start

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

Assumptions

Shibuya Hoppmann Corporation assumes that all procedures contained in this manual will be performed by a qualified mechanic or electrician who must install or service the L200A Label Applicator.

Who Should Read

This manual is intended for those who install and/or operate the L200A Label Applicator. 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.

Equipment Improvements & Document Revisions Notice

Shibuya Hoppmann Corporation 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. Shibuya Hoppmann Corporation 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. 05.2013.

Other Documentation

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

Terms and Definitions

| Terms and Definitions | |
|-----------------------|--|
| Term | Equivalent Word, Definition and/or Abbreviation |
| 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 |

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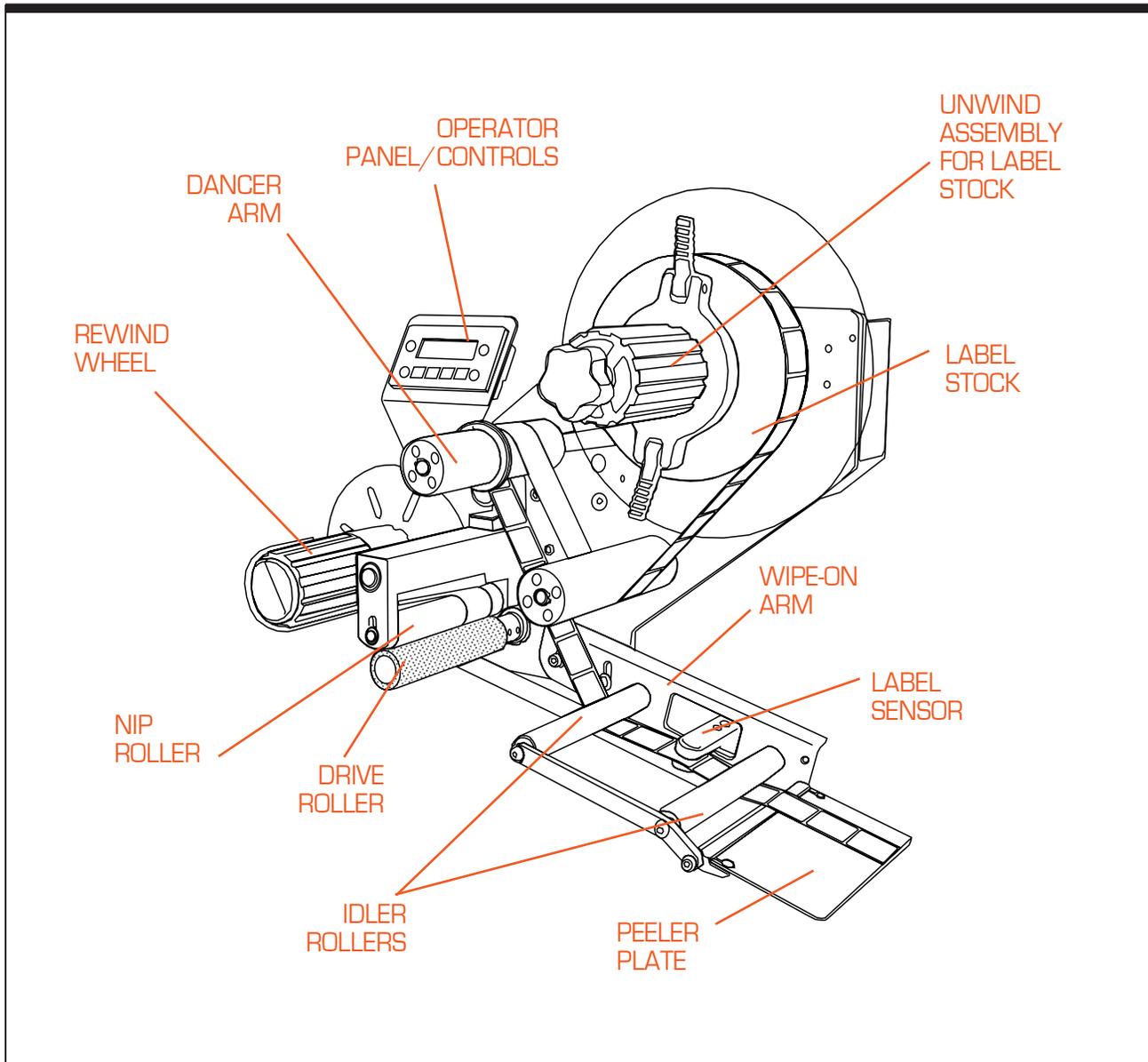


Figure 1-1. Front View of L200A Right Hand Applicator

Description & Specifications

1

The L200A Label Applicator

Function The L200A Label Applicator (see Figure 1-1 on Page 6) can be integrated into an inline product handling system, be used as a stand-alone unit, or dispense single labels as needed. This applicator is designed to dispense blank or pre-printed labels. The standard L200A will dispense labels up to 5 1/2" wide.

Design features of the label applicator include:

- Membrane or push button control
- Label to product speed matching
- Up to 12" diameter label rolls
- Powered label drive and torque clutch adjustable rewind
- Rapid configuration and changeover of applicator modules
- One button auto-teach for fast, easy, repeatable changeover
- Access to main components for maintenance and changeover
- Convertible from left-hand to right-hand

The label applicator is offered as a stand-alone unit or as a module which can be integrated into a product handling system. In either case, the applicator includes a controller, operator LCD interface and product detector.

Refer to page 8 for applicator upgrades and options that will expand the capabilities of the L200A Label Applicator.

Specifications of the L200A

Standard Features The L200A comes standard with on-board diagnostics, product recipe capabilities, "On-The-Fly" label adjustments, streamlined footprint, and no tool-required label changeover.

Optional Features Assorted modules, such as Tamp-On, Blow-On, Tamp-Blow and Wipe-On, are available, as well as a swing arm pallet, wipe-on brush accessory kits, harsh environment setup, line encoder kit, label low level sensor and beacon fault upgrades, and adjustable stands and machine mount supports.

Specifications Please refer to the tables below for L200A specifications:

| Specification | Description |
|----------------------|--|
| Labeling Rate (PPM) | 150ppm to 300ppm <i>(Dependent upon label and application)</i> |
| Label Head Speed | 1,000"/min (423mm/sec) |
| Accuracy | ± 0.02 " (±0.5mm) |
| Controls | Programmable Logic Controller |
| Label Drive Motor | High Torque Micro Stepper |
| Unwind Roll Diameter | 12 " (305mm) OD x 3 " (76mm) ID |
| Label Detection | Photo Electric |
| Power Requirements | 115/230 VAC, 50/60 Hz, 8 Amp |
| Environment | 41-104° F (5-40° C), 25-85% Relative Humidity |

Table 1-1. Applicator Specifications

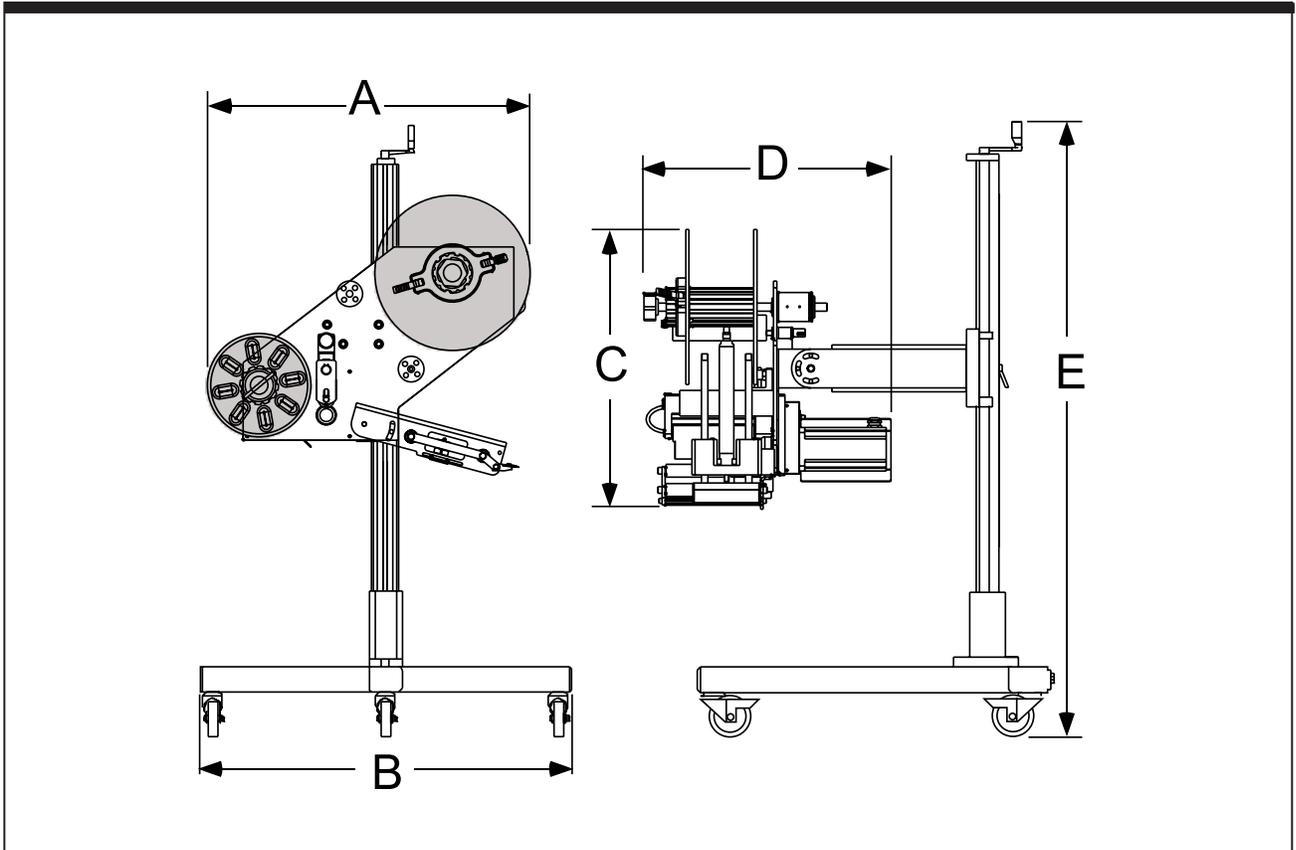


Figure 1-2. L200A Dimensional Views

| Dimension Specifications | | ANSI | Metric |
|--------------------------|---------------------------------|--------|--------|
| A | Applicator Width | 28.35" | 721mm |
| B | Overall Width (Including Stand) | 45.50" | 1155mm |
| C | Applicator Height | 24.90" | 632mm |
| D | Applicator Depth | 21.63" | 549mm |
| E | Stand Height | 67.77" | 1721mm |

Table 1-2. L200A Applicator Dimensions

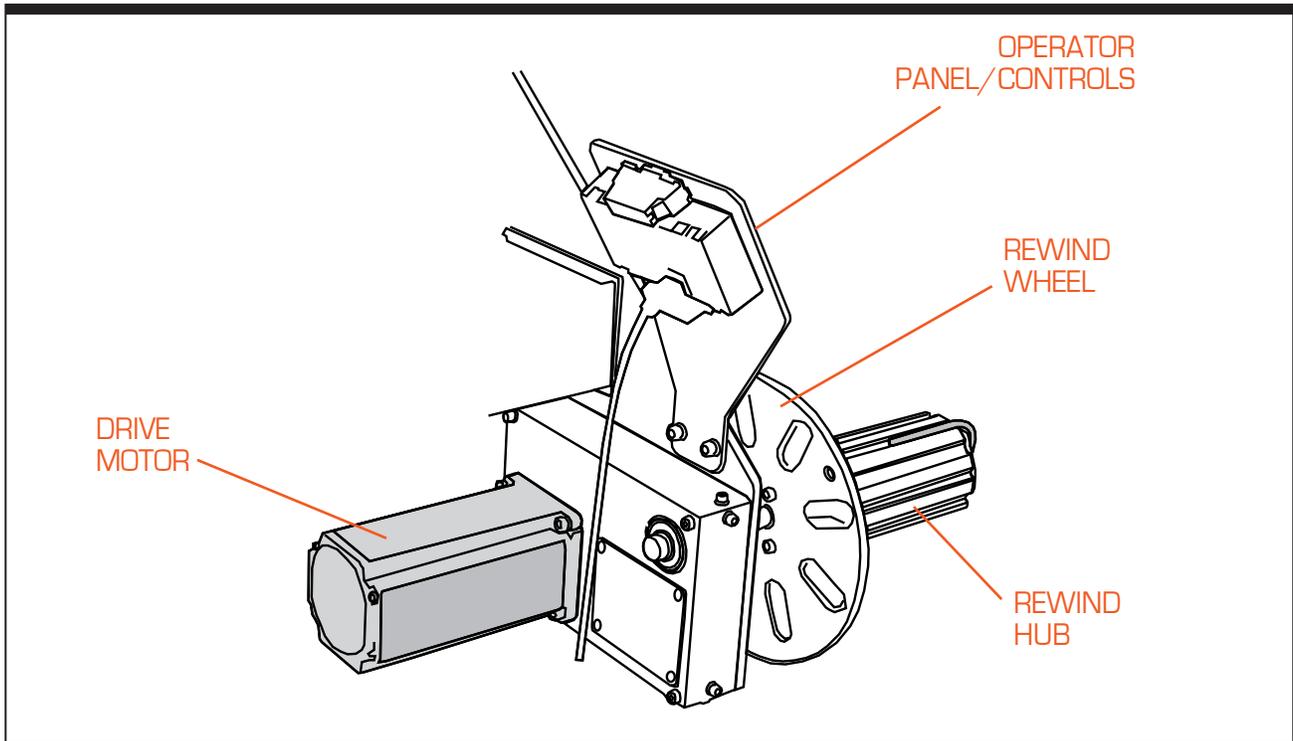


Figure 1-3. Rear View of Motor and Rewind Assembly (Right Hand Style)

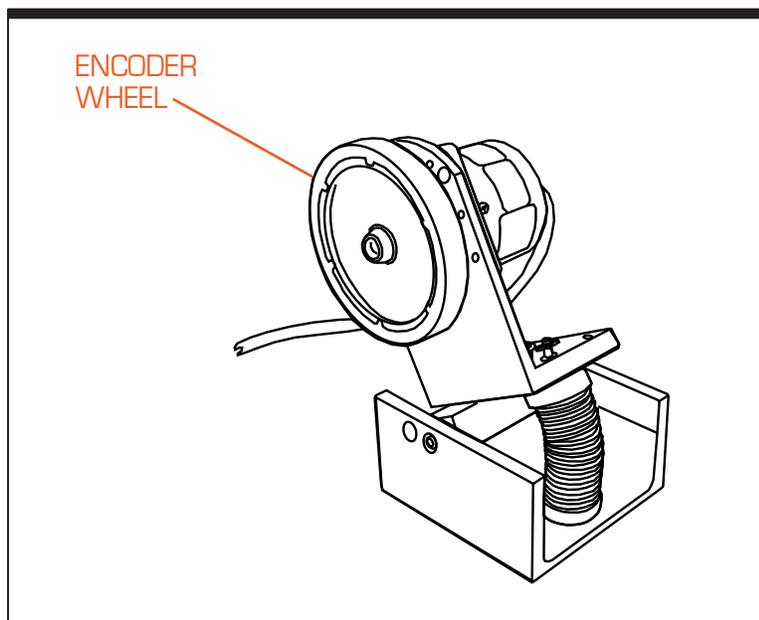


Figure 1-4. L200A Encoder Kit (Optional)

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.



Avoid Pinch Points! Exposed pinch points include the unwind and rewind assemblies, nip and drive rollers and shafts, dancer arm, idler rollers, pull pins, the wipe-on arm 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 L200A 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 label applicator.

Unpacking and Inspection

- Step 1. Check the Shipping Container.** The shipping container protects the applicator under most circumstances. Visually inspect the outside of the container and report any damage to the Shipping Carrier immediately.

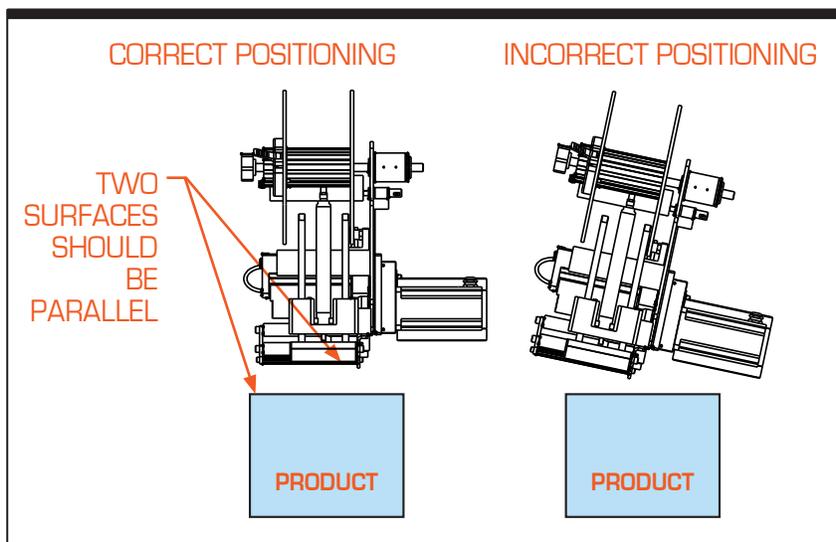


The applicator can weigh in excess of 100 pounds (68kg.).

- Step 2. Unpack the Applicator.** Remove the top and sides of the shipping crate to expose the applicator. Remove the packing material. Inventory the container.

Applicator Positioning

The standard applicator has mounting holes that are located on the back plate of the applicator. The optional U-arm supports the applicator at those mounting locations.



A smooth labeling operation requires correct positioning. Keep the applicator parallel to the product surface (refer to Figure 3-1).

Figure 3-1. Correct and Incorrect Positioning of Label Applicator

The rotational adjustment of the wiper arm places the flagged label as close to the product as possible. Adjust the wiper arm to an angle of 13 degrees relative to the product. Then rotate the peeler tip as needed. Refer to Figure 3-2. The peeler plate is located just above the product.

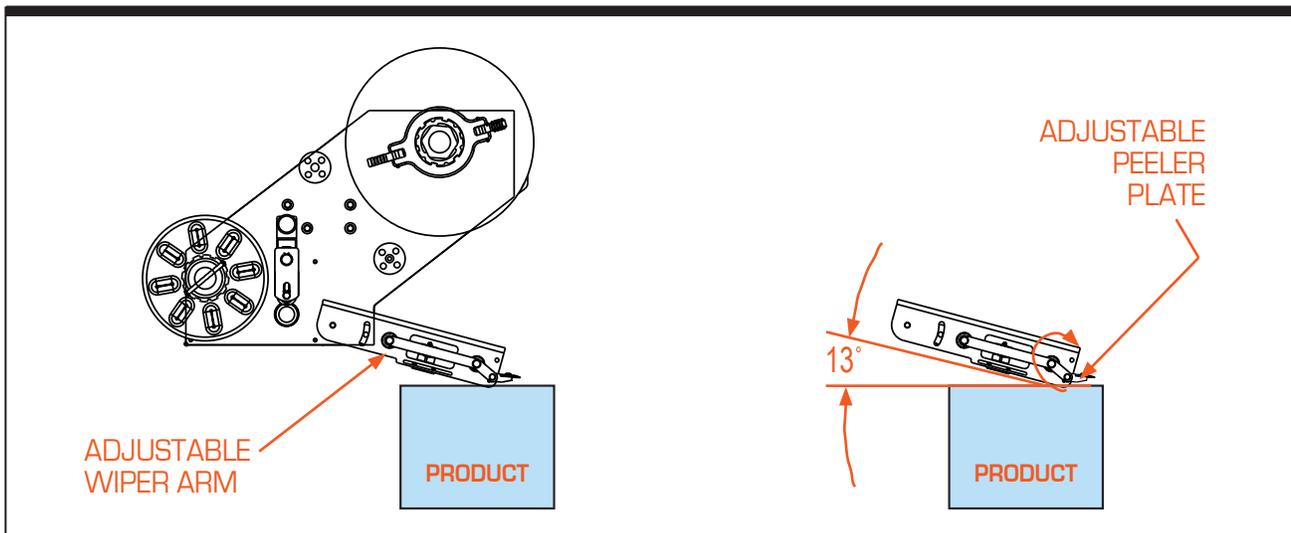


Figure 3-2. Peeler Tip Rotational Adjustment



Note: Any adjustments of the label placement to the product must result in a smooth, non-vibrating process.



The wiper arm and peeler plate do not "float." Damage to the applicator, peeler plate and the product may occur when the product hits them.



Position the applicator to prevent or minimize vibration and movement during operation. Vibration to the applicator during operation directly affects label placement accuracy. Make adjustments after mounting the applicator to the U-arm.

To position the peeler tip closer or further away from the product, rotate the applicator or the peeler plate, or both. To rotate the applicator, loosen the large hex nut that fastens the U-arm to the T-stand. Retighten the nut to secure the applicator's position. The amount of rotation is limited (see Figure 3-3).

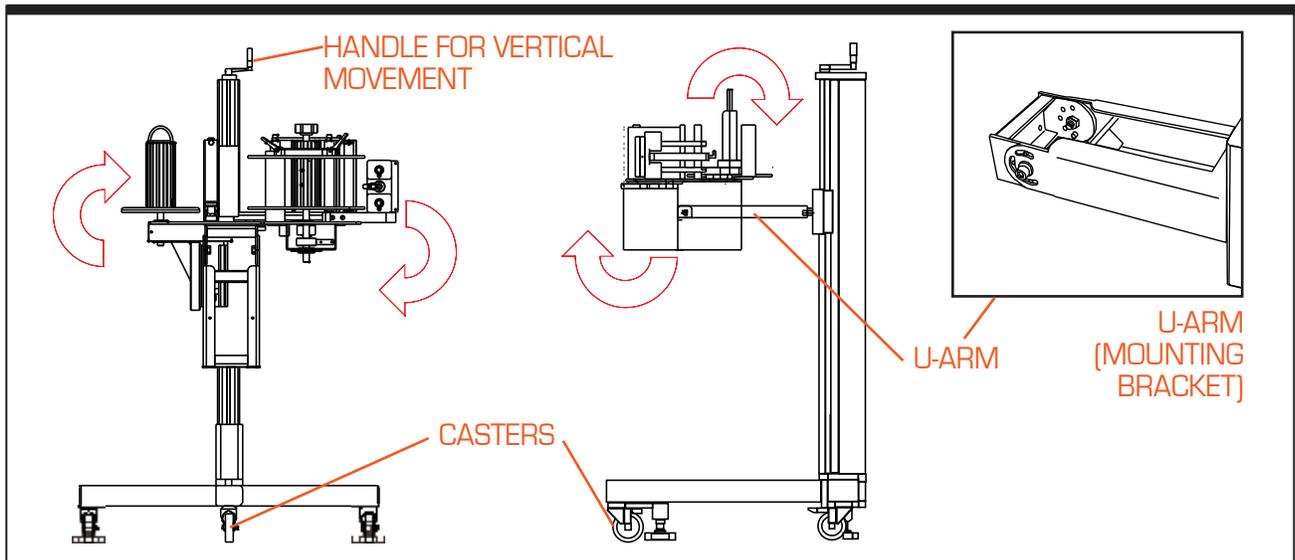


Figure 3-3. T-Stand and U-Arm Adjustments

To position the applicator for top, side, or bottom panel labeling; loosen the two socket head cap screws on the U-arm. Rotate the applicator into a position until the peeler plate or application module is parallel to the surface of the product. Retighten the U-arm mounting screws.

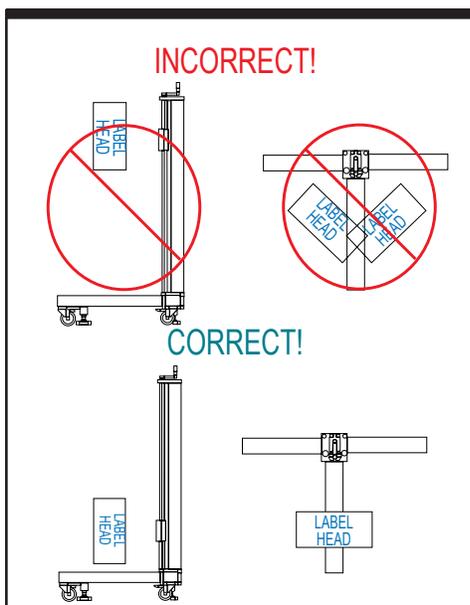


Figure 3-4. Warnings for T-Stand

Use the handle at the top of the T-stand to raise or lower the applicator to the desired height relative to the product.

To change the horizontal position, unlock the casters on the bottom of the T-stand and roll the applicator to the desired location. Re-lock the casters. **Note: A horizontal adjuster is optional.*



To avoid tipping and instability, keep label head center of gravity above front leg as shown in Figure 3-4.



Always adjust labeling head to lowest position before moving.

Applicator Setup

Label Specifications Only use labels that can be removed from the webbing. See the table below (Table 3-1) for label and web specifications additional requirements.

Before installing a label roll, read Table 3-1, Label & Web Specifications to insure the selection of proper label stock.

| 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 may 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 OD of roll is 12" (305mm) with a core ID 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. 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 | The 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; and (B) Lateral position of labels is within 0.0025" (0.06mm) on the x and y axis. |
| LABEL NOTE: |  Capacitance sensors will be damaged by metal or foil labels. |

Table 3-1. Label and Web Specifications Chart

Label Threading

Refer to numbered sequences in Figure 3-5 to thread labels through the labeler (shown: Right-Hand labeler).

- Step 1.** Remove the outside lexan cover on the unwind shaft by pulling the two outside tabs forward. Place the label stock spool onto the unwind shaft. Secure the outside lexan cover by pressing the lexan cover against the label stock and pushing the tabs back so they are parallel with the lexan cover. For the right-hand applicator, the labels run over the top and down the right hand side [1]. For left-hand, the labels run over the top and down the left side [1].
- Step 2.** The webbing is routed under the first idler bar [2] and up to the dancer arm [3].

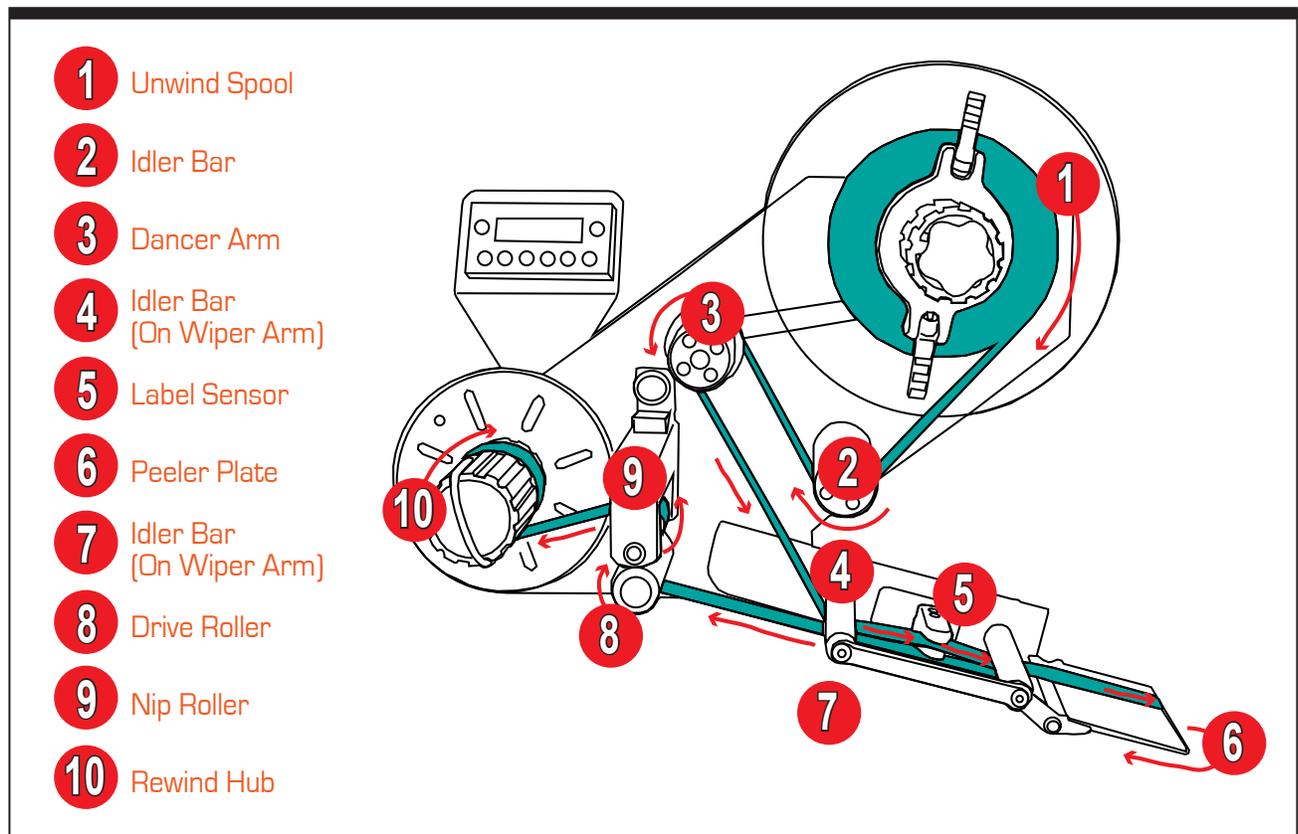


Figure 3-5. Label Threading

- Step 3.** The webbing goes over and around the dancer arm [3].
- Step 4.** The webbing is routed to the wiper arm, under the first idler bar [4], through the middle of the label sensor [5], and under the 2nd idler bar.
- Step 5.** The webbing is routed around the peeler plate [6], then back under the two idler bars on the wiper arm [7].
- Step 6.** Pull the nip roller knob (see Figure 3-6) out, disengaging the nip roller assembly. Then route the webbing under and then over the knurled drive roller [8]. Engage the nip roller [9], and route the webbing over the top of the roller (forming a reverse "S" shape).

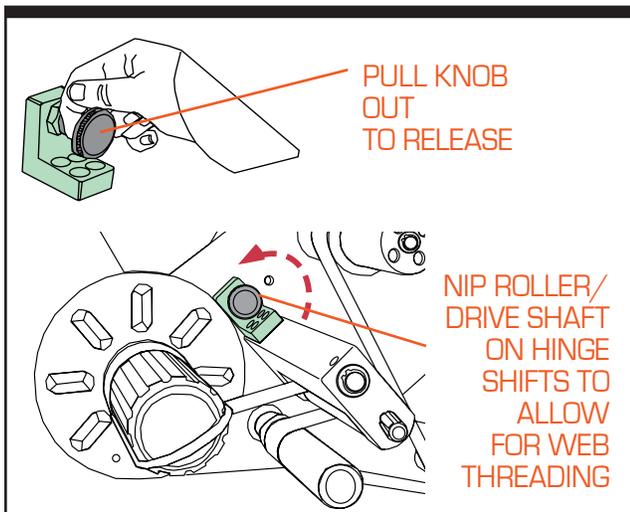


Figure 3-6. Disengage Nip Roller

- Step 7.** Remove the pull pin (see Figure 3-7) and wrap the webbing under, around the back and over the top of the Rewind Shaft [10]. Replace the pull pin so that the label stock is captured.

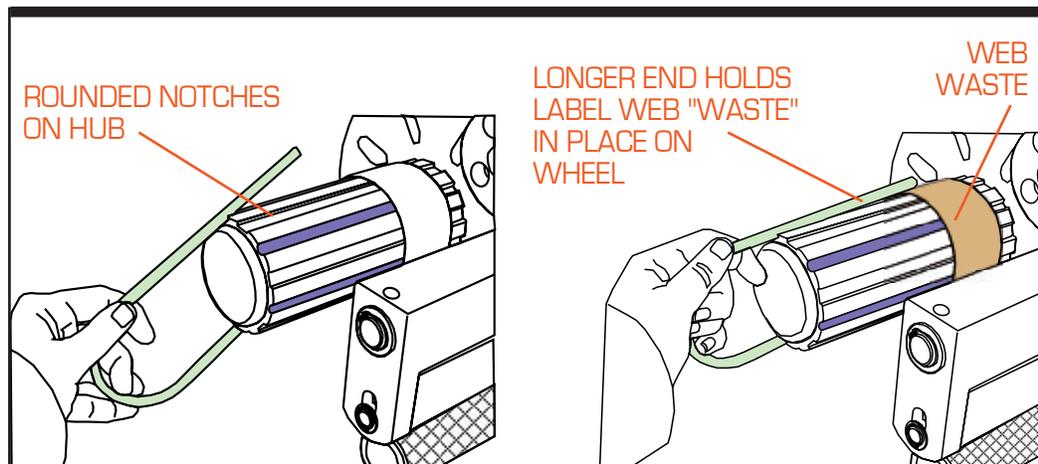


Figure 3-7. Web Holding Pin on Rewind Wheel

Interface Panel

Connections for the interface panel are found on the side of the labeler electrical box (see Figure 3-8). These connections are easily accessible for quick changeover between modes of operation. The following is an explanation of each device:

| | |
|---------------------------|--|
| POWER CORD | Cord supplies AC power to the labeler. |
| HMI CONNECTION | Plug in which the operator panel is connected. |
| ENCODER CONNECTION | Plug in which an optional encoder is connected. The encoder is used for synchronous mode labeling, which can apply the label at the speed the product is traveling. It is recommended to use an incremental encoder with at least 1024 increments. |
| PRODUCT SENSOR | Plug in which the product sensor is connected. |
| LABEL SENSOR | Plug in which the label sensor is connected. The label sensor is found on the wiper arm assembly. |
| MOTOR CONNECTION | Connects to the stepper motor. |

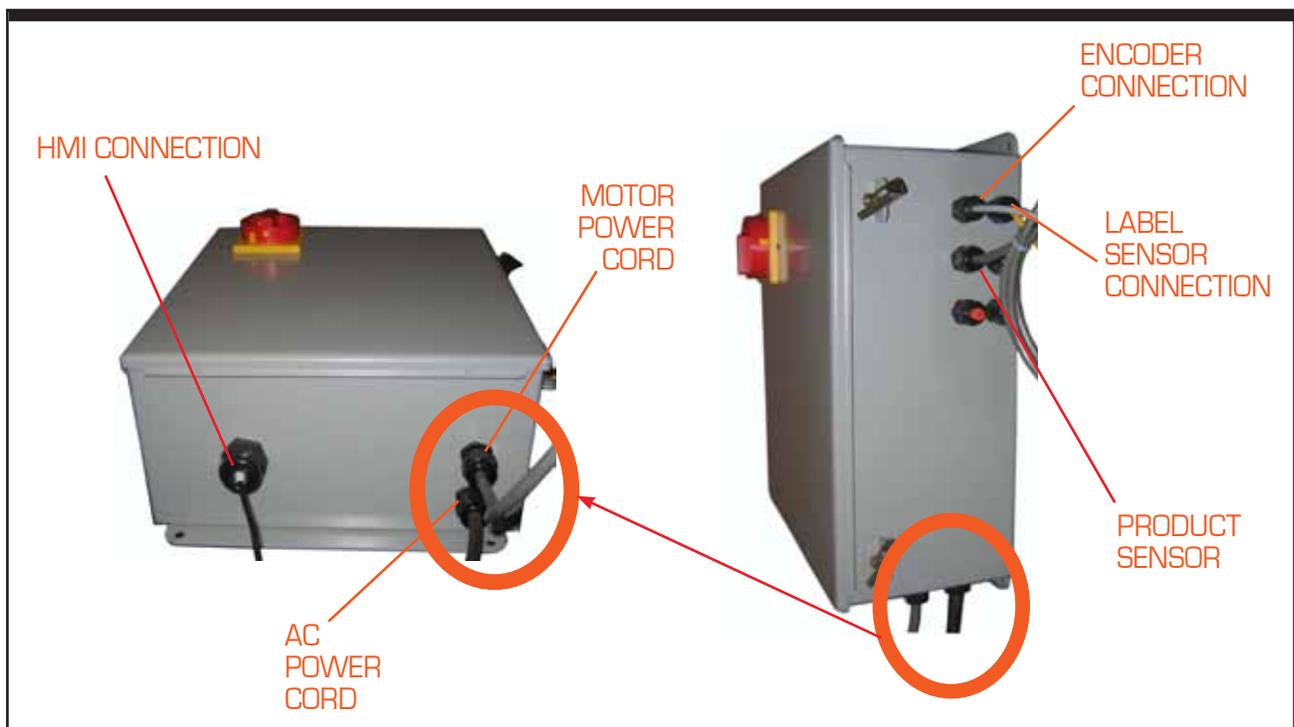


Figure 3-8. Electrical Connections and Interface Connections

Power Supply

Providing the unit with the correct supply voltage permits safe and efficient operation. Refer to Table 1-1 for exact specifications.

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) and ground (if 230VAC is required, refer to the section, "Converting to 230VAC, 50Hz Power, below). Make sure the power cord is securely connected to the labeler and the outlet.



Due to the wide variety of plugs used worldwide, 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.



115 VAC and 230 VAC are the two voltages accommodated for in the labeler. Improper voltage may cause harm and/or damage to the operator and/or the labeler.

Converting to 230VAC, 50Hz Power

- Step 1.** Remove power from the labeler.
- Step 2.** Remove jumper wire from terminals VS1EVS2 of the Stepper Drive.

Rewind Clutch Adjustment

The rewind clutch is located behind the large cap on the end of the rewind wheel (see Figure 3-9 on the following page). The clutch can be adjusted by turning the knurled end ring.

To increase take-up rate, turn the clutch on the rewind shaft clockwise to apply more pressure on the friction washer (less slip). To decrease the take-up rate, turn the clutch on the rewind shaft counterclockwise to reduce the pressure on the friction washer (more slip).

As the rewind shaft fills, the rewinding speed will slow. This is due to the increased diameter of web waste on the rewind shaft. To compensate for the slowdown, adjust the rewind speed as if the rewind shaft was full.

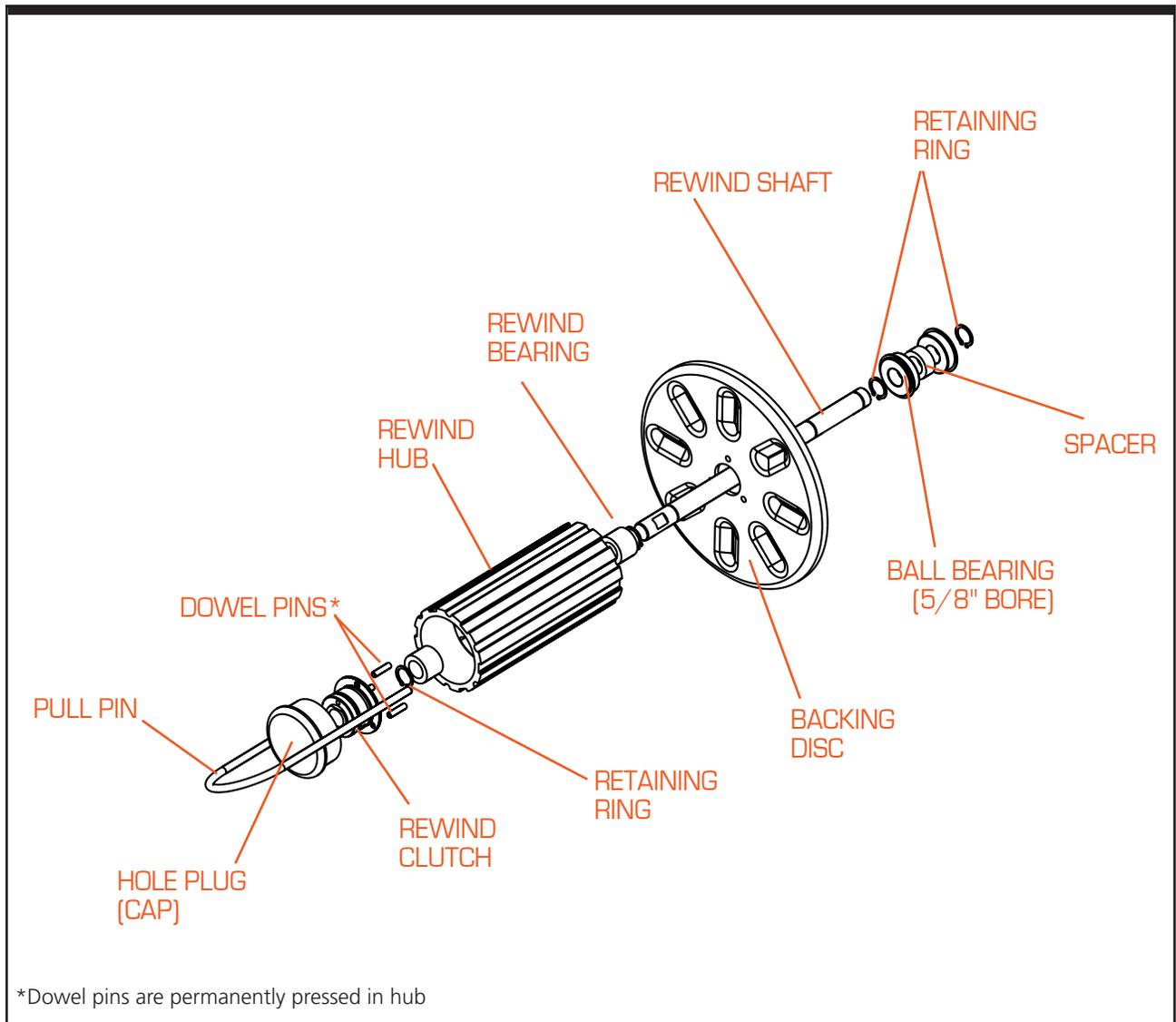


Figure 3-9. Rewind Assembly

Set-Up Instructions for the Label Sensor

The L200A uses the Label • Eye sensor, designed specifically for the detection of labels. The sensor, affixed to the wiper arm of the label applicator, has an AutoSet™ program for easy setup.

Normal Backing

To start AutoSet™, use the external alignment guides to position the gap between labels in line with the dot in the detection zone (see Figure 3-10). Once the label is in place, push the AutoSet™ button marked "NORMAL."



If the red and green LED indicators blink four times, the sensor cannot penetrate the backing materials or the presence of labels.

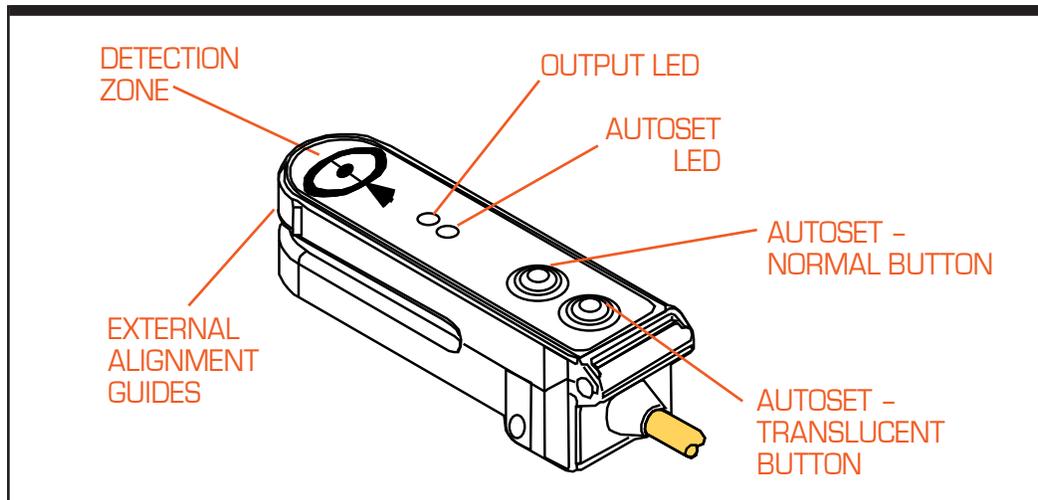


Figure 3-10. Label-Eye Label Sensor [Located on Wiper Arm]

Translucent Backing

The sensor cannot always detect transparent labels on transparent backing. However, in some cases it may detect the label. Use the AutoSet™ procedure above, placing the gap between the label between the external alignment guides, so that it is in line with the dot in the detection zone (see Figure 3-10). Once the label is in place, push the AutoSet™ button marked "TRANSLUCENT." If it is detectable, the red LED indicator should go on when the label passes through the detection zone.

Labeling System Setup

The labeling system is setup for dispensing the maximum number of labels at the maximum applicator speed.

There are different ways to set up a labeling system. A setup for maximum performance is described below:

- Step 1. Select Spool Size.** Use the largest spool with the largest label size intended to be dispensed.
- Step 2. Move Label to Dispense Position.** Move the label with the JOG function (see Chapter 4, Operation Procedures) to the dispense position (label flag). Using the JOG feature, press and hold the ENTER button to forward labels.
- Step 3. Place Label Sensor.** Place label sensor to the middle of a label.
- Step 4. Run Auto-Teach Function.** If system stalls, reduce the **ACCEL/DECEL** until the stalling stops.

Default setting for **ACCEL/DECEL** is 200 Hz/ms.
The system is now set up for maximum performance.

- Step 5. Set Asynchronous Speed.** If you know the maximum labeling speed already, set it as the **ASYNCHRONOUS SPEED** in the parameters then dispense labels in asynchronous mode. If you don't know the maximum labeling speed or should the system stall, increase the labeling speed step-by-step starting from 250 mm/sec (e.g. 250, 400, 508) and find out at which point the stepping motor stalls. If the motor stalls, reduce the maximum speed back to a safe rating.
- Step 6. Increase Acceleration/Deceleration Ramp.** Continue dispensing labels. Now increase the **ACCEL/DECEL**, step-by-step, starting from the default 200 Hz/ms. If the motor stalls, reduce the maximum acceleration /deceleration ramp back to a safe rating.

Note: Please consider that a high acceleration rate may stress the web and create a loose condition.

Step 7. Setup Complete. As a result of the actions 1 to 6, the system is now set up for maximum performance (most likely required on labeling machines).

Note: Reference all **BOLD CAPPED** terms in **Operator Interface Chapter**.

Operator Interface

4

Operator Interface Map

The following information explains 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. On the following page you will find a brief illustration of the program layout.



Figure 4-1. Operator Screen

Operating Mode

The two wipe-on operating modes available are **synchronous** and **asynchronous**. The operator may change between modes by simply choosing the appropriate setting within the operating display.

When **synchronous** mode is chosen, the labeler will dispense labels at the speed determined by the encoder pulses sent to the controller. This mode is used for high speed, precise labeling or varying conveyor speed applications.

When **asynchronous** mode is chosen, the labeler will dispense labels at a constant speed determined by the Values entered into the operator panel.



The settings the operator enters into the operator panel will affect the labeler differently depending on the mode the operator has chosen.

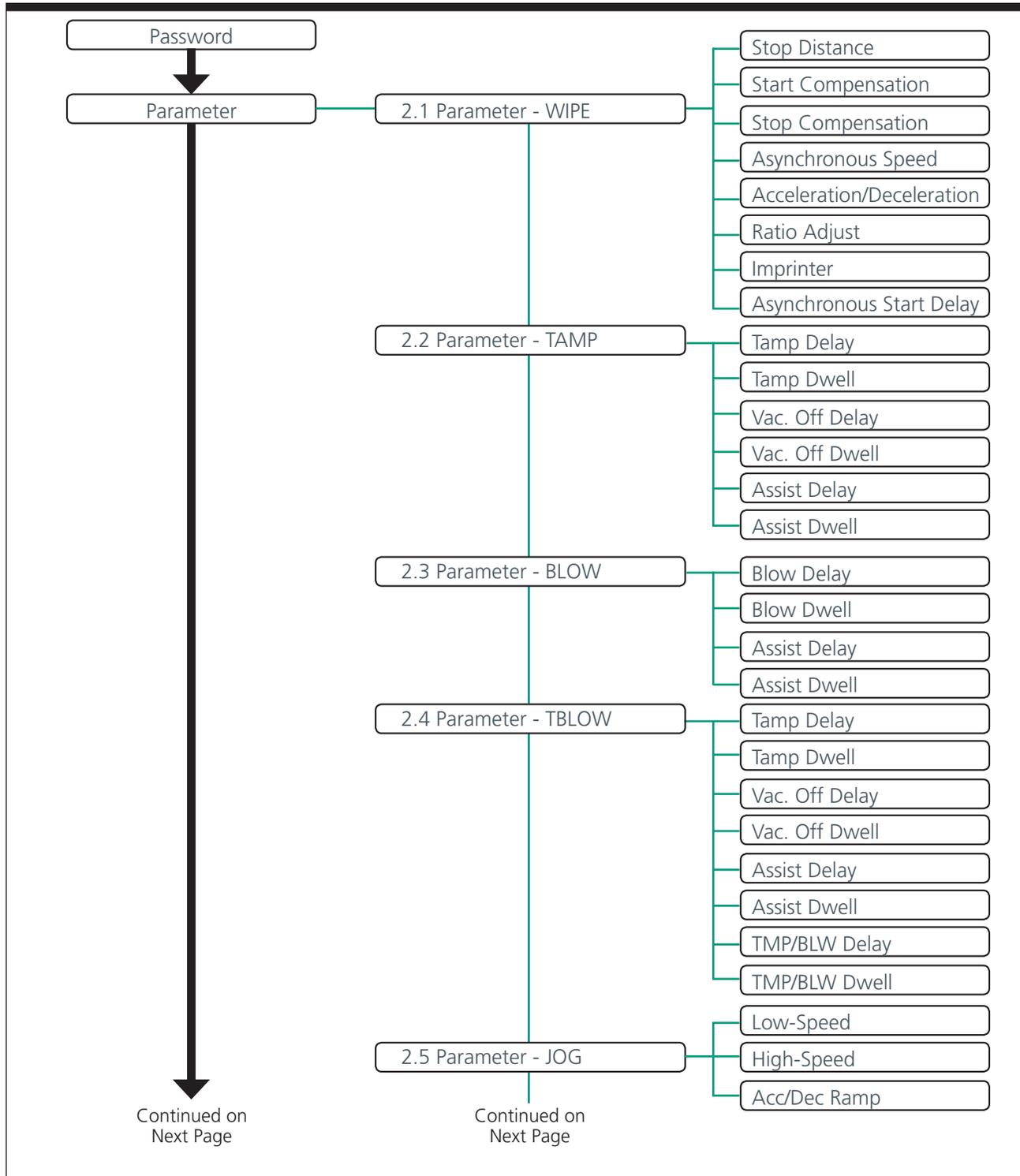


Figure 4-2. Mapping of the Operator Interface

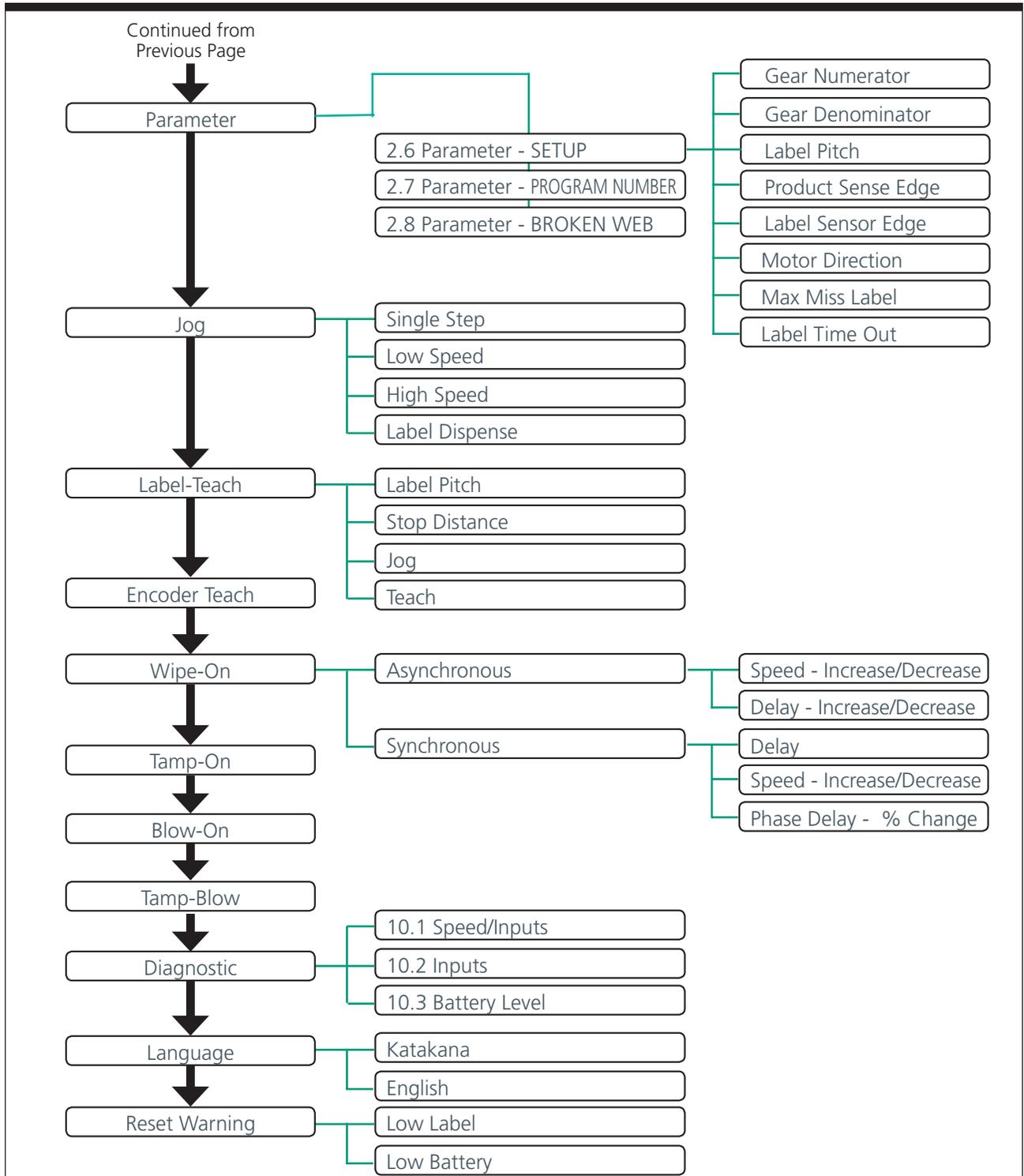


Figure 4-2. Mapping of the Operator Interface (Continued)

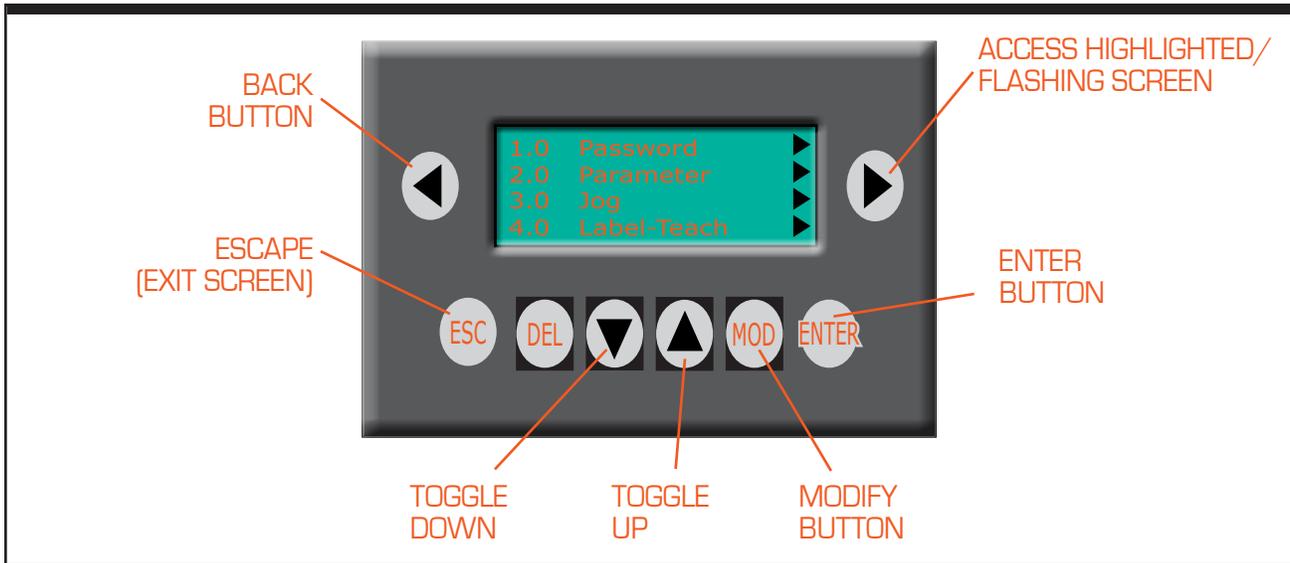


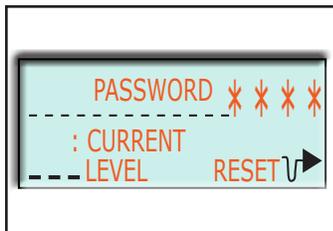
Figure 4-3. Operator Screen

Operating Screen

When the labeler has been loaded and the power supplied to the equipment, the Operator Interface will boot up to the main operating screen. A list of different screens will show, screen 1 (Password) through 11 (Language). Refer to Figure 4-3. Use the "up" [▲] and "down" [▼] arrows to go through the screens (as you move down, each line will flash as you toggle over it).

The various operating screens are shown below:

- Screen 1.0 Password**
- Screen 2.0 Parameter** (Parameter screen is password protected and cannot be randomly accessed).
- Screen 3.0 Jog**
- Screen 4.0 Label-Teach**
- Screen 5.0 Encoder Teach**
- Screen 6.0 Wipe-On**
- Screen 7.0 Tamp-On**
- Screen 8.0 Blow-On**
- Screen 9.0 Tamp-Blow**
- Screen 10.0 Diagnostic**
- Screen 11.0 Language**
- Screen 12.0 Reset Warning**



Password Screen

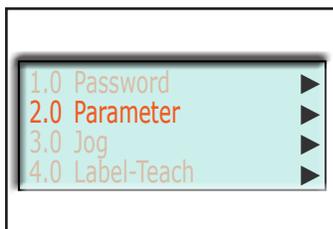
To enter the Parameter screens the operator must first enter the password. Use the toggle arrows to move up and down the screen list until the password screen (1.0) is flashing. Use the right "arrow" [▶] to enter the password screen.

To enter the current password, press the MOD button [MOD]. Use this button whenever a modification to a Value needs to be made during operation. The " * * * * " (password Value) will be highlighted and flashing. Use the right and left arrows to move the cursor over the four asterisks. When just one asterisk is flashing, use the up and down arrows to input the password Value, then use the right or left arrow to move the cursor to the next Value. Once the password is correct, press enter [ENTER], and then to leave this screen, use the ESC button [ESC].

The operator can now access the parameter screens.

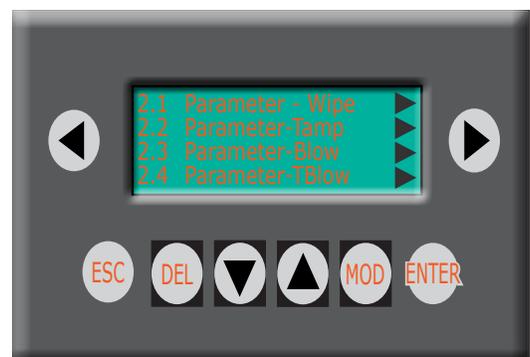
➔ **Default password: 0000**

Parameter Display Screen

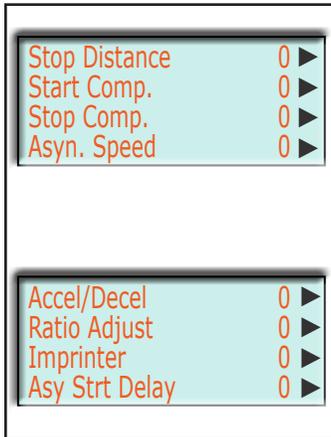


The Parameter Group Screens allows the operator to select the group (parameter) to display or edit. Use the up and down arrows (▼▲) to choose the parameter. The choices are as follows:

- ➔ 2.1 Parameter - Wipe
- ➔ 2.2 Parameter - Tamp
- ➔ 2.3 Parameter - Blow
- ➔ 2.4 Parameter - TBlow
- ➔ 2.5 Parameter - Jog
- ➔ 2.6 Parameter - Setup
- ➔ 2.7 Program Number
- ➔ 2.8 Broken Web



Parameter Menu - Wipe

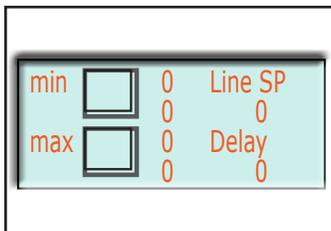


STOP DISTANCE

The Stop Distance parameter defines the position of the label sensor relative to the label. It references the position from which each dispensing cycle is started.

The "Label-Teach" function acquires this Value automatically based on the label flag requirement. Refer to Label-Teach operation further in this chapter.

- **Min Value: 0 (steps); Max Value: 65535 (steps)**
- **Default setting: 0**
- **Setting is retained when power is turned off.**



START COMPENSATION

The Start Compensation is a linear interpolation of the product delay between low speed and high speed in Synchronous mode. As the product speed increases while in Synchronous mode, the label will tend to drift back on the product. This can be overcome by determining a compensation Value between low speed and high speed. By executing the below procedure, a linear interpolation is calculated, and will assist in maintaining the correct label position when adjusting the product/conveyor speed from low to high.

How to Setup the Start Compensation:

- Step 1:** Enter into Start Comp. within the Parameter Screen or within the Delay screen in Synchronous (std) screens.
- Step 2:** Run the product/conveyor at the lowest production speed required and begin to adjust the "Delay" until the label is in the correct position. To dispense a label, press the "Enter" button. To adjust the "Delay", press "Mod" button until the "Delay" value is flashing. Adjust the up and down arrows to change the value, then press "ESC" to exit the delay adjust. Press "Enter" to see label location change and continue this delay adjustment until the label is in the correct position at this speed.

- Step 3:** Once the "Delay" Value is correct at the lowest production speed, press "Enter". To enter this established Value into memory, press "Mod" until the "Min" Value is flashing and then hit "Enter". You will see the Value reside in the "Min" parameter.
- Step 4:** Run the product/conveyor at the highest production speed required and begin to adjust the "Delay" until the label is in the correct position. To dispense a label, press the "Enter" button. To adjust the "Delay" press "Mod" button until the "Delay" value is flashing. Adjust the up and down arrows to change the value, and press "ESC" to exit the delay adjust. Press "Enter" to see label location change and continue this delay adjustment until the label is in the correct position at this speed.
- Step 5:** Once the "Delay" Value is correct at the highest production speed, press "Enter". To enter this established Value into memory, press "Mod" until the "Max" Value is flashing and then hit "Enter". You will see the Value reside in the "Max" parameter.

At this point you have completed the Start Compensation for Synchronous Mode. Please note this procedure is not necessary for Asynchronous Mode.



STOP COMPENSATION

The Stop Compensation Value is set by the factory and should not be adjusted.



ASYNCHRONOUS SPEED

Asynchronous speed is the speed at which the label dispenses from the peeler tip. This speed is typically set to the product line speed.

(Information continued on next page)

ASYNCHRONOUS SPEED CALCULATION: *(*Factory Setting based on gearing)*

Product/Conveyor Speed: 100ft/min
 Resolution of Applicator: 0.06mm/step*

CALCULATION:

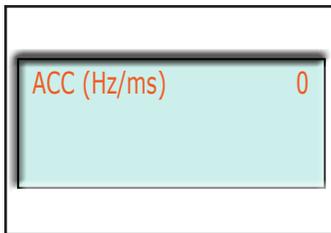
$$\left(\frac{100\text{ft}}{\text{min}}\right) \left(\frac{12\text{in}}{1\text{ft}}\right) \left(\frac{25.4\text{mm}}{1\text{in}}\right) \left(\frac{1\text{min}}{60\text{sec}}\right) \left(\frac{\text{Step}}{0.06\text{mm}}\right) = 8466 \text{ step/sec (or 8466 Hz)}$$

Conveyor/Product Speed Unit Conversion Applicator Resolution

- **Min Value: 100 (Hz)**
- **Max Value: 20000 (Hz)**
- **Default Value: 7000**

Note: Screen input is only relevant in the **ASYNCHRONOUS mode**. It cannot exceed the maximum speed of the labeler.

The asynchronous speed Value (Hz) is dependent on the motor resolution setting and gear factor. Please see example of calculating asynchronous speed at left.



ACCEL./DECEL

This defines the acceleration and deceleration ramp for the synchronous and asynchronous dispensing operation mode.



A ramp that is set too high can cause the stepping motor to stall and a loss of position will occur.

- **Min Value: 1 (Hz/ms); Max Value: 1000 (Hz/ms)**
- **Default Value: 320**

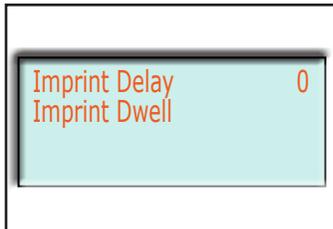


RATIO ADJUST

The Ratio Adjust is used to override the gear factor set by the gear numerator and gear denominator (thereby overriding the encoder pulses). This parameter is only used in the synchronous dispensing mode and represents a percentage of the theoretical speed.

- **Min Value: 50 (%); Max Value: 150 (%)**
- **Default Value: 110**

To slow the label dispense speed enter a Value less than 100. To increase the label dispense speed, enter a Value greater than 100.



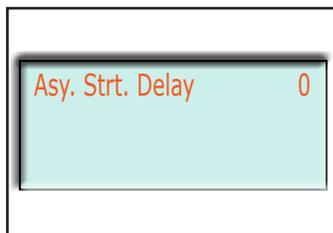
IMPRINTER

The Imprinter timer is started in Wipe-On mode when the label cycle is completed. It can be used to trigger peripheral equipment (counters, etc.).

Imprint Delay is a time in milliseconds (ms) that the signal is delayed in being sent to the device.

Imprint Dwell is the length of time in milliseconds (ms) of the signal duration that is sent to the device.

- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 10**



ASYNCHRONOUS START DELAY

The start delay parameter is used to adjust the position of the label on the product. Once the product sensor detects the product, the Asynchronous start delay (in ms) is the amount of time until the label dispenses.

- **Min Value: 1 (ms); Max Value: 2000 (ms)**
- **Default Value: 250**

Parameter Menu - Tamp

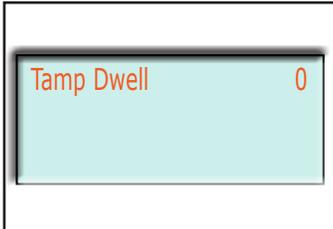


TAMP DELAY

Sets delay between sensing of product and activation of tamp assembly.

Larger number to position label closer to trailing edge of product. Smaller number to position label closer to leading edge of product.

- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 1000**



TAMP DWELL

Sets dwell time for the tamp assembly.

Larger number to extend the time the tamp is extended.
Smaller number to reduce the time the tamp is extended.

- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 500**



VACUUM DELAY

The Vacuum Delay sets the amount of time the vacuum stays off while the label is fed onto the pad. Setting is initiated when the tamp home sensors goes "high" (tamp is retracted).

Larger number to keep the vacuum off for a longer period of time.
Smaller number to turn the vacuum on sooner.

- **If the leading edge of the label does not arrive all the way to the far edge of the vacuum pad, it is recommended to increase the setting.**
- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 1000**



VACUUM DWELL

Sets how long the vacuum stays on as the tamp is applying a label to the product. Setting is initiated when the tamp home sensor goes "low" (tamp begins to extend).

A larger number keeps the vacuum on longer during the tamp cycle.

A lower number turns the vacuum off sooner during the tamp cycle.

- **If the label is retracting with the vacuum pad instead of being applied to the product, lower this value to ensure vacuum is not still on during label application.**
- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 500**



AIR (ASSIST) DELAY

Used to smooth the transition of the label from the peeler tip to the tamp pad. See also VACUUM DELAY screen.

Larger number to turn the air assist valve on later.
Smaller number to turn the air assist valve on earlier.

- **Delays activation of the air assist valve. Delay starts when the tamp assembly is fully retracted (tamp home position).**
- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 1000**



AIR (ASSIST) DWELL

Used to help push the label further onto the tamp pad.

Larger number to keep the air assist valve activated for more time.
Smaller number to keep the air assist valve activated for less time.

- **Sets how long air assist valve stays activated to blow the label up onto the tamp pad.**
- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 500**

Parameter Menu - Blow



BLOW DELAY

Sets delay between sensing of product and activation of blow assembly.

Larger number to position label closer to trailing edge of product.
Smaller number to position label closer to leading edge of product.

- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 1300**



BLOW DWELL

Sets dwell time for the blow assembly.

Larger number to extend the time the blow assembly is activated.
Smaller number to reduce the time the blow assembly is activated.

- **When a blow assembly is installed, VACUUM DWELL affects how firmly the label is affixed to the product.**
- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 500**



AIR (ASSIST) DELAY

Used to smooth the transition of the label from the peeler tip to the blow assembly.

Larger number to turn the air assist valve on later.
Smaller number to turn the air assist valve on earlier.

- **Delays activation of the air assist valve.**
- **Min Value: 0 (ms); Max Value: 65535 (ms). Default Value: 500**



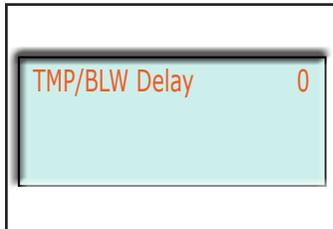
AIR (ASSIST) DWELL

Used to help push the label further onto the blow assembly.

Larger number to keep the air assist valve activated for more time.
Smaller number to keep the air assist valve activated for less time.

- **Sets how long air assist valve stays activated to blow the label up onto the blow assembly.**
- **Min Value: 0 (ms); Max Value: 65535 (ms). Default Value: 1000**

Parameter Menu - Tamp-Blow*

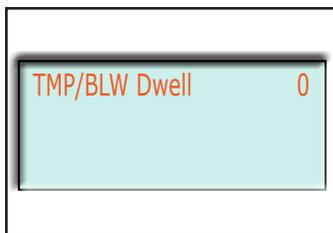


TMP/BLW (TAMP-BLOW) DELAY

Sets delay before the blow is activated.

Larger number to position label closer to trailing edge of product.
Smaller number to position label closer to leading edge of product.

- **Min Value: 0 (ms); Max Value: 65535 (ms).**
- **Default Value: 1300**

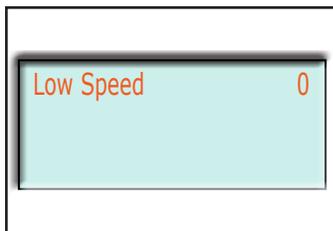


TMP/BLW (TAMP-BLOW) DWELL

Sets dwell time (how long the blow is activated) for the tamp-blow assembly.

- **Min Value: 0 (ms); Max Value: 65535 (ms)**
- **Default Value: 500**

Parameter Menu - Jog



LOW SPEED

Sets the low speed in the jog mode. It also defines the speed in LABEL TEACH mode.

- **Min Value: 1 (Hz); Max Value: 20000 (Hz)**
- **Default Value: 500**

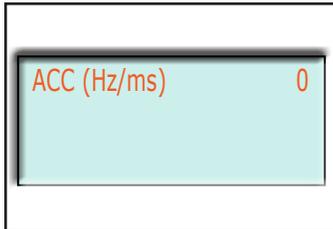


HIGH SPEED

Sets the high speed in the jog mode.

- **Min Value: 1 (Hz); Max Value: 20000 (Hz)**
- **Default Value: 5000**

*Other parameter settings, such as Tamp-Delay, Vacuum Off Delay, etc., are covered in the above parameter menus (Parameter-Tamp, Parameter-Blow, etc.). Refer to those sections for more information



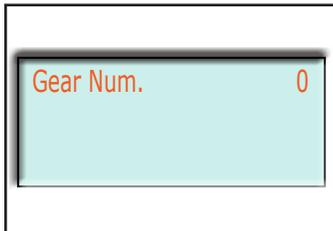
ACCEL./DECEL

This defines the acceleration and deceleration ramp for the jog speed mode.

A ramp that is set too high can cause the stepping motor to stall and a loss of position will occur.

- **Min Value: 1 (Hz/ms); Max Value: 1000 (Hz/ms)**
- **Default Value: 250**

Parameter Menu - Setup



GEAR NUMERATOR

This is the factory default Value established from the size of the drive roller and gearing of the labeler.

- **Min Value: 0; Max Value: 65535**
- **Default Value: 1607**

The value shouldn't changed unless authorized by the manufacturer.



GEAR DENOMINATOR

This factor defines the rate of "incoming" encoder increments to the stepper drive. It is used to speed match the label dispense speed to the product speed.

Using the ENCODER TEACH, this Value can automatically be obtained. When using a non-manufacturer supplied encoder, refer to the section in this chapter for the ENCODER TEACH instructions.

To manually calculate required Value for a certain encoder connection, see examples on the following page.

RATIOS:
 $\frac{720}{100} = 7.2 : 1$ ratio Total Ratio = 28.8 : 1
 $\frac{80}{20} = 4:1$ ratio

Therefore, 20 RPM Turret = 576 RPM Encoder Shaft

CALCULATION:
720mm dia. = (720mm) * (π) = 2262mm Circumference
 $\left(\frac{2262\text{mm}}{\text{Rev}}\right) \left(\frac{\text{Rev}}{5000 \text{ Inc}}\right) \left(\frac{1}{28.8}\right) = 0.0157 \text{ mm/inc.}$

Resolution of Encoder

REQUIRED INCREMENTS FOR 100mm: $\left(\frac{100}{0.0157}\right) = 6369$

CALCULATION:
(127mm diameter) * (π) = 398.98mm Circumference
 $\left(\frac{398.98\text{mm}}{\text{REV}}\right) \left(\frac{\text{REV}}{1024\text{pulses}}\right) = 0.0389\text{mm/inc.}$

REQUIRED INCREMENTS FOR 100mm: $\left(\frac{100}{0.0389}\right) = 2570$

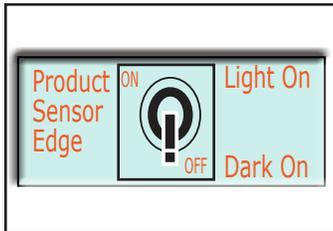


LABEL PITCH

The label pitch is the sum of the label length and the gap between the label and the next label. If known, the pitch can be manually entered as a parameter.

This is calculated automatically using the LABEL-TEACH programming which will determine the exact pitch length and will automatically enter the information into the operator system.

- **Min Value: 1 (steps); Max Value: 65535 (steps)**
- **Default Value: 5300**



PRODUCT SENSOR EDGE

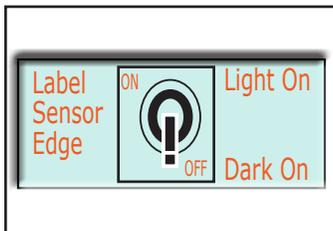
Toggles between Lead and Trail detection on the product sensor. Press "MOD" then use "ENTER" to switch to "Light On" for leading, or "Dark On" for trailing.

(Light On) – Lead (Default)
(Dark On) – Trail

Lead – Initiates timing on the leading edge of the product.
Trail – Initiates timing on the trailing edge of the product.

Note: Settings valid if product sensor is set to light operated mode.

➔ **Default Value: Leading Edge**



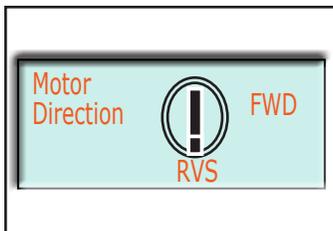
LABEL SENSOR EDGE

Toggles between Lead and Trail detection on the label sensor. Press "MOD" then use "ENTER" to switch to "Light On" for leading, or "Dark On" for trailing.

(Light On) – Lead (Default)
(Dark On) – Trail

Trail – Detects trailing edge of the label.
Lead – Detects leading edge of the label.

➔ **Default Value: Leading Edge**

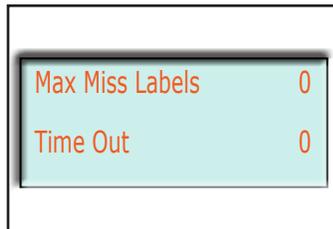


MOTOR DIRECTION

Allows the motor rotation to switch from clockwise (forward) to counterclockwise (reverse). Press "MOD" then use "ENTER" to switch to between FWD and RVS.

(FWD) – CW Rotation (positive) [Looking on top of motor shaft]
(RVS) – CCW Rotation (negative) [Looking on top of motor shaft]

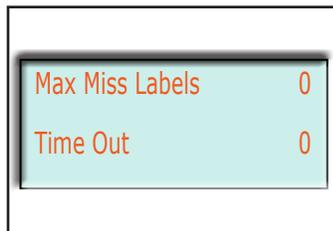
➔ **Default Value: CW (Forward)**



MAX. MISSING LABELS

Defines how many consecutive missing labels (on the web, or media) that can occur before the controller will show a label error situation.

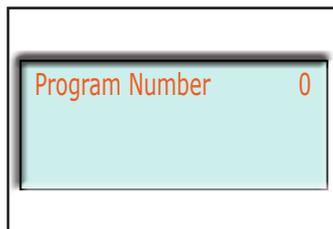
- **Min Value: 0 (select); Max Value: 65535 (select)**
- **Default Value: 0**



LABEL TIMEOUT

This parameter is used to ensure the controller does not fault out when dispensing long labels. If the label sensor does not see an edge of a label in a certain period of time, the controller will fault on the assumption of max missing labels. If a long label is being dispensed, the time can be increased using this parameter, which allows the label sensor additional time to detect the label edge. If after this time the label sensor still does not detect the edge, the controller will fault with the max missing label message.

Parameter Menu - Program Number

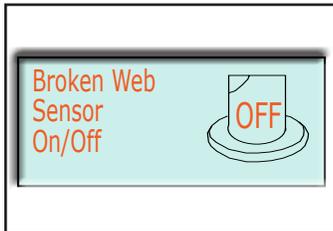


PROGRAM NUMBER

The HMI controller can store up to 10 different labeling programs. The program selection is from 0 to 9. You select the program number you want, then set up your parameters for that particular program.

The parameters will be saved even if the unit loses power or is shut down. The only way the programs can be erased is if the software program resets it.

Parameter Menu - Broken Web



BROKEN WEB SENSOR

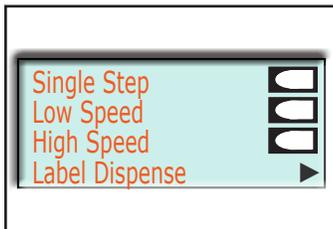
The broken web sensor (optional) can be turned on or off. The sensor will detect if the web is broken at any point and the labeler will stop.

To activate the sensor, press MOD, then ENTER. The display will show the sensor to be "on".

➤ **Default Value: Off**

Note: Broken web sensor is optional and the parameter is only valid if installed.

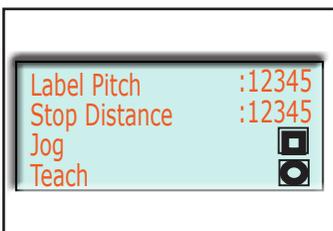
Jog Menu



The JOG function allows the operator to jog the labeler when loading labels into the labeler, to line up the labels, or to use LABEL-TEACH. The different levels (set in the Parameter Jog – Menu) of JOG are:

- **SINGLE STEP:** Labeler cycles one single motor step.
- **LOW SPEED:** Labeler cycles slowly to dispense one label.
- **HIGH SPEED:** Labeler cycles faster (yet still slow) to dispense one label.
- **LABEL DISPENSE:** Once JOG speed has been chosen, press , and then press  to dispense one label.

Label-Teach Menu



This function is used to determine the length of a label pitch and the stop distances used for the labeling process. It begins when START is pressed. The speed for the Label-Teach mode is the low jog speed. The stepper controller determines the position of the motor while the motor is running in relation to the label sensor input signal.

There are two ways to enter the label pitch and stop distance for the Label-Teach operation (Automatic and Manual):

Option 1. [Automatic Entry - Recommended] Place label web using jog to the dispensing position. Then activate the LABEL-TEACH to start teach in procedure (Note: motor moves with the low jog speed).

While setting up the labeling machine, the JOG operation is required to move the label to the correct position at the peel plate. The LABEL-TEACH learning movement function is used to determine the requested label position for the AUTOMATIC OPERATION.

The LABEL-TEACH learning movement is started by selection LABEL-TEACH in the main menu. The function advances the web 3-4 label lengths with the manual low speed.

With feedback from the LABEL SENSOR, a total of 3 label lengths including the gaps between the labels are measured and the average length of the 3 label lengths is then calculated as a set Value (LABEL PITCH) then later used in the actual labeling operations. In addition, the position of the label sensor is determined and automatically entered into the STOP DISTANCE parameter.

Problems with the adjustment of the label sensor or with label web itself can be detected with the learning movement. It is recommended to move the label sensor further away from the label edge if the sensor is located close to the leading edge or trailing edge of the label. The close proximity to the label edges may cause false errors during operation.

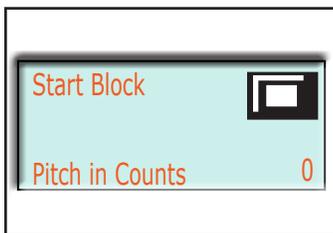
Only after an error free LABEL-TEACH learning movement all the measuring results are accepted by the controller and saved as operating parameters permanently.

1. The label pitch (pitch = label length + gap between labels)
2. The stop distance.

Option 2. [Manual Entry - Not Recommended] Measure label pitch (length + gap) and stop distance and enter as parameters using the terminal. Note: All Values are in motor steps.

STOP DISTANCE is the distance from the end of the previous label to the label sensor. If the label sensor is too close to the edge of the label, it may not read the edge. The operator may need to move the sensor.

Encoder-Teach Menu



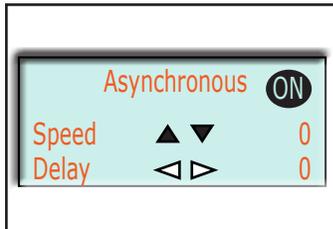
This function is used in conjunction with the encoder and the product conveyor. Using a 100mm block on the conveyor, start the ENCODER TEACH. The labeler's product sensor will detect the leading edge of the block and the trailing edge of the block and calculate the encoder pulses received throughout the 100mm. A Value is then automatically calculated and entered into the Gear Denomination Value.

Note: It is recommended to run the conveyor and 100mm block at the slowest operating speed when performing this operation.

Operational Modes - Wipe-On Mode

The WIPE-ON mode can operate in either Asynchronous or Synchronous mode. The mode is selected by entering the Wipe-On screen and using the up/down arrows until the required mode is flashing. Then use the arrow [▶] to enter the mode selected. To enable this mode, press MOD on the keypad until the flashing cursor is on the ON object. Press ENTER, and at this point, the labeler is now active and labels will dispense if product is presented to the product sensor.

Ensure hands and clothing are clear of labeler's moving parts prior to entering the Asynchronous Mode or Synchronous Mode screen.

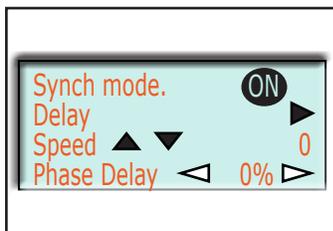


ASYNCHRONOUS MODE

This mode is used when an encoder is not connected. The label dispense speed is manually entered based on the product/conveyor speed. See Asynchronous Speed parameter within this manual to determine the appropriate Value to enter.

NOTE: To enable, press  to activate mode.

The Speed and Delay can be adjusted “on the fly” while labeling continues. To adjust these parameters, use the MOD key to toggle through the Speed and Delay up/down arrows. For example, to increase the Delay, press the MOD key until the flashing cursor is over the arrow [], then press the ENTER [] key to increase the existing Value. This process is identical for increasing or decreasing the Speed or Delay Values.



SYNCHRONOUS MODE

This mode is used when an encoder is connected and automatic tracking of the product/conveyor speed is necessary. The GEAR DENOMINATOR Value must be correct to ensure proper label speed tracking and label placement. See GEAR DENOMINATOR parameter within this manual to determine the correct Value. In addition, it is recommended to setup the START COMPENSATION prior to labeling production. See START COMPENSATION parameter within this manual to determine the correct Values.

NOTE: To enable, press  to activate mode.

The Speed and Delay can be adjusted “on the fly” while labeling continues. To adjust these parameters, use the MOD key to toggle through the Speed and Phase Delay up/down arrows. For example, to increase the Delay, press the MOD key until the flashing cursor is over the right arrow [], of the Phase Delay, then press the ENTER [] key to increase the existing Value. This process is identical for increasing or decreasing the Speed or Delay Values.

You will note there is both a Phase Delay and Delay option.

Delay

When selecting the Delay option, you will be prompted with the START COMPENSATION screen. This is the same screen as found in the Parameter menu and is used to compensate label placement

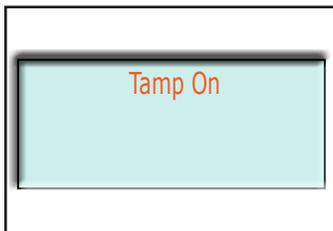
between low and high speeds. See START COMPENSATION parameter within this manual for further explanation of this operation. When performing this operation, it can be accommodated through the Synchronous Mode or the Parameter screens, the Values obtained are stored in both locations. The Phase Delay option adjusts the label placement once the delay (START COMPENSATION) is executed.

Phase Delay

Use the MOD key to toggle to the arrow keys [◀ or ▶] and press the ENTER [ENTER] key to adjust the Value. This adjusts the label placement location on the product and is used in conjunction with the Start Compensation. Please note the Delay (Start Compensation) should be executed before adjusting the Phase Delay.

Operational Modes:

Tamp-On, Blow-On, and Tamp-Blow

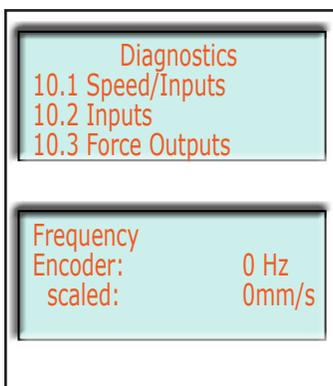


Using the main screen, different operating modes can be chosen: Tamp-On, Blow-On, Tamp-Blow or Wipe-On (previously discussed.) To enable this mode, press MOD on the keypad until the flashing cursor is on the ON object. Press ENTER, and at this point, the labeler is now active and labels will dispense if product is presented to the product sensor.

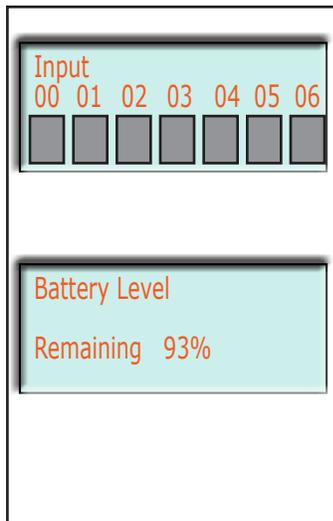
Diagnostics

DIAGNOSTICS

The diagnostics mode can be used to check the function of all the sensors, encoder status and battery level status.



SPEED/INPUTS shows the Encoder speed (in Hz) and the scaled speed in millimeters per second.



INPUTS shows the inputs occurring in the system. Reference electrical schematic for details of inputs.

BATTERY LEVEL shows the battery level remaining of the external battery. Once level goes to 0% a battery warning will be displayed as a flashing green on the light beacon (optional). This warning can be reset through the “Reset Warning” screen. The battery level can also be viewed on the PLC within the electrical control, if the percentage is less than 50%, the “Batt” led on the front face will flash. If the battery level is at 0%, the “Batt” led will be a steady “red”.



Caution – Once the external battery level is depleted, if power remains Off for more than three days, the PLC has the potential to boot in “Stop” mode. Therefore it is recommended to replace the external battery per controller’s instructions once these warning conditions arise.

Note – Replacement external battery for PLC is 1/2AA, 3.6V, lithium battery. Please call factory for pricing and availability.



Language

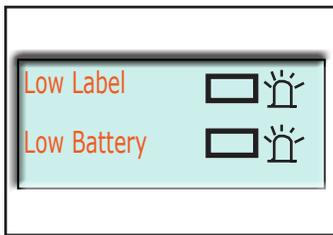
LANGUAGE

The language function allows the operator to choose the display language used on the operations screens. Press MOD, then use the up/down [▲] [▼] arrows keys to switch between Katakana (Japanese) and English. Once the language is selected, press the enter [ENTER] key, then ESC to return to the main menu.

Reset Warning

RESET WARNING

This screen provides means to reset Low Label and Low Battery warning lights on the light beacon (optional). If one or both of the conditions are true, the light icon within the screen will be ON. To reset, use the MOD button to select the appropriate icon and press the enter [] key on the membrane.



Note – The warning condition must be satisfied to reset the light.

Maintenance and Troubleshooting

5

Preventive Maintenance

The following are guidelines for preventative maintenance on the applicator. This information can be used for producing a maintenance schedule, which should be performed routinely. Once familiar with the unit, operators or technicians may add additional items to the list. If there are any service questions, please contact your distributor.

- Examine the drive roller, idler rollers and peeler tip for excessive adhesive buildup or dust collection. Rubbing alcohol may be used to clean problem areas. Do not use compressed air to blow dust from the labeler.
- Examine the nip rollers for excessive adhesive buildup or dust collection. A mild detergent solution may be used to clean problem areas. Do not use compressed air to blow dust from the labeler.
- Inspect all electrical plugs for secure connections.
- Verify that all components and modules are securely fastened.
- Inspect the unit for loose screws, guides, or covers and tighten as necessary.
- Gently clean dust from the lens of the product sensor.
- Inspect the drive belt for proper tension. Adjust idler if additional tension is needed.

Troubleshooting

Drive Errors

Drive errors, or “fatal errors” that stop each action immediately and involve the stepper motor. If a “fatal error” occurs, your current label may not be applied properly.

Stepper driver errors can be: over-temperatures (of motor or power amplifier), short circuit (between two motor phases or between motor phase against PE), over-voltage, low-voltage, rotation monitoring (RM) fault, power amplifier deactivation, or motor current free. Refer to the LED status display of the stepper motor drive inside the electrical cabinet (see Figure 5-1).

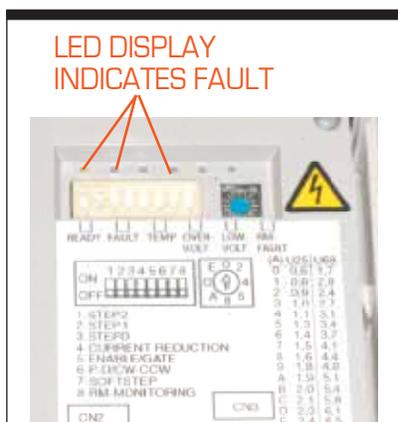


Figure 5-1. Stepper Drive Motor Fault Display

Labeling Errors Labeling errors can be caused by missing labels on the label web, label paper in the gaps, wrongly adjusted or defective label sensor or an empty supply roll.

Motor Rotation Positive motor direction is defined as the direction on which the label web is moved forward towards the peeler plate.

How to Check the Motor Rotation:

- Step 1.** Make sure adequate jog speeds are set in the parameters. Recommended are 100 Hz for the slow speed and 1000 Hz for the high speed.
- Step 2.** Press the JOG button to start movement in positive direction.
- Step 3.** Check if the web is moving forward towards the peeler plate.
- Step 4.** Release JOG button to stop web at desired position.

If the motor is rotating in the wrong direction, you will need to follow the steps below to correct:

Solution 1: The hardware solution: If using a 3 phase BERGER LAHR stepping motor system interchange two motor wires (only at shut down system with no mains power connected). For other systems refer to the manual. Some of the drives (e.g. BERGER LAHR 5 phase stepper systems have a direction switch).

Solution 2: The software solution: Change the corresponding parameter with the terminal. See chapter parameter setup for this.

Replacement Parts

6

Replacement Parts

Replacement parts lists for the Shibuya Hoppmann L200A Label Applicator 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.

If you received a customized Shibuya Hoppmann system which incorporated your labeler, please refer to your system's Operation Manual when ordering spares, as your system may have been altered.

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 email, phone or fax (see the contact information listed below).

Shibuya Hoppmann Spares and Service Department

- ➔ **Email:** Spares@Hoppmann.com
- ➔ **Phone:** 540.829.2564 (1.800.368.3582)
- ➔ **Fax:** 540.829.1726
- ➔ **Mail:** Shibuya Hoppmann Corporation
Attn: Spares Department
13129 Airpark Drive, Suite 120
Elkwood, Virginia 22718 USA
www.ShibuyaHoppmann.com

Shibuya Hoppmann™

SERIAL # _____ DATE _____

MODEL # _____

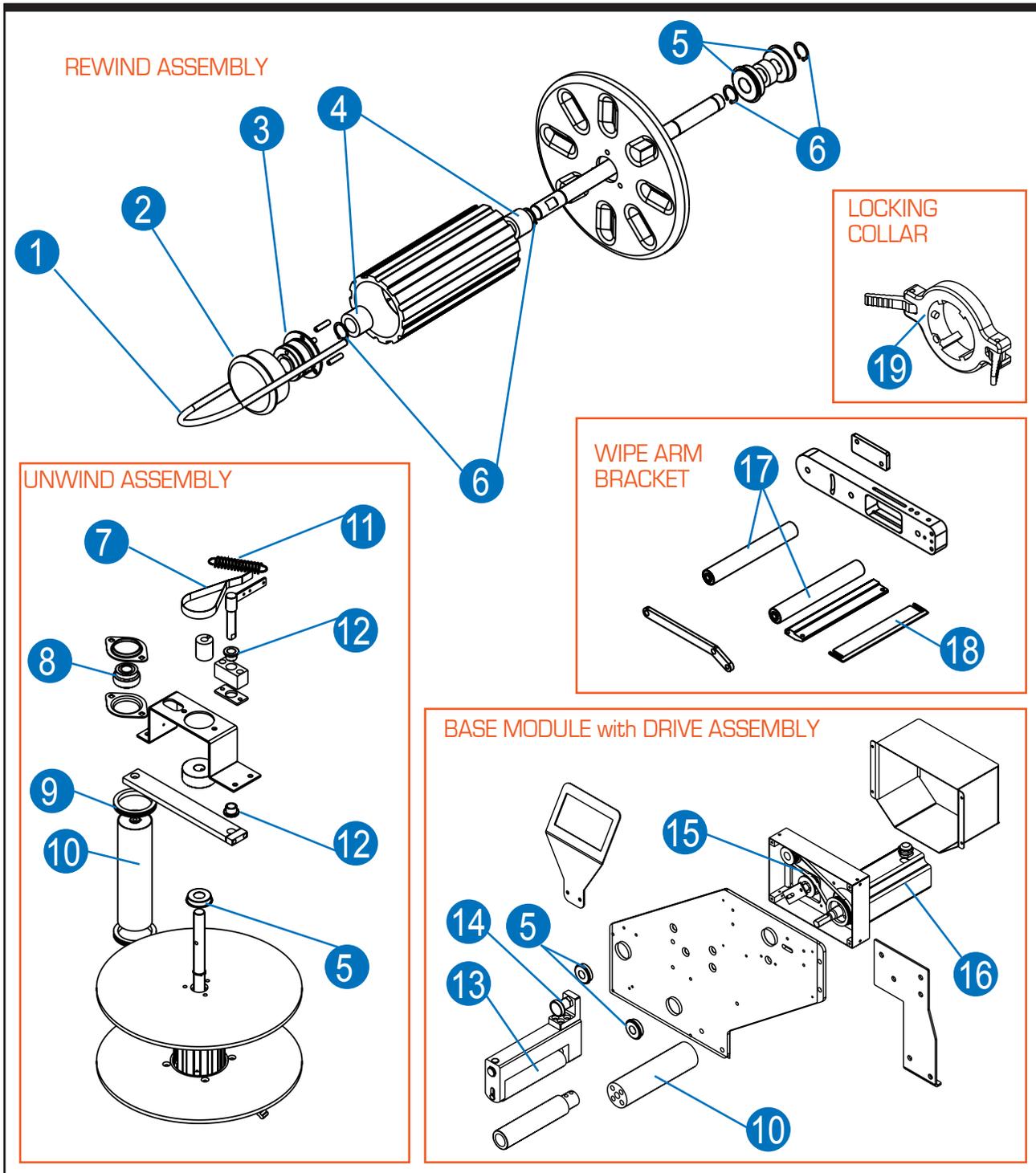
INVENTORY # _____

PROJECT NUMBER _____

www.shibuyahoppmann.com • (800) 368-3582

Figure 6-1. Sample Serial Plate (2013)

L200A Label Applicator Replacement Parts



| L200A Label Applicator - Mechanical Replacement Parts | | | |
|--|--------------------|---|-------------|
| Loc. | Part Number | Description | Qty. |
| 1 | L050601134 | Rewind Pull Pin | 1 |
| 2 | HOLE000001 | Hole Plug, 2.43 " Diameter, Unwind/Rewind Cap | 1 |
| 3 | TORQPOLY01 | Slip Clutch, 2 Disc | 1 |
| 4 | L050600719 | Rewind Bushing | 2 |
| 5 | BRNGBALL18 | Flange Bearing, 1/2 " ID x 5/8" OD x 1/2 " | 2 |
| 6 | RRNG000004 | Retaining Ring, .625 " Nom Ext. | 1 |
| 7 | L050600780 | Brake Belt | 1 |
| 8 | BRNG000031 | Bearing, 5/8 " Bore | 1 |
| 9 | L020800509 | Spring Collar, 2 " Roller | 1 |
| 10 | L050400004 | Idler Roller, 2 " | 2 |
| 11 | SPREXT0007 | Extension Spring, Music Wire | 1 |
| 12 | BUSHFB8104 | Bearing, Flange 5/8 " OD x 1/2 " | 2 |
| 13 | L050400906 | Nip Friction Roller, 6 " | 1 |
| 14 | LEVR000006 | Indexing Plunger, M16 Non-Lock | 1 |
| 15 | BELT000039 | Timing Belt, 1/5 " P, 1/4 " Wide, 17 " Long | 1 |
| 16 | L030120106 | Stepper Motor | 1 |
| 17 | L050601118 | Gap Sensor Idler Roller (Wiper Arm) | 1 |
| 18 | L070100065 | Peeler Plate, 6 " x 4 " | 3 |
| 19 | L050600049 | Locking Collar Assembly | 1 |

L200A Label Applicator - Electrical Replacement Parts

| Part Number | Description | Qty. |
|------------------|---|------|
| SWITLOK001 | Enclosed Disc, 20-250A | 1 |
| PZG42CB | Sensor, Diffuse, 24VDC | 1 |
| DR4524 | Power Supply, 2A, 24VDC | 1 |
| SD326DU24S2 | SD3 Stepper Drive, 2.6A | 1 |
| XBT29980 | Cable, 6' RJ45 | 1 |
| XBTN400 | HMI Terminal, 4 Line | 1 |
| TM238LDD24DT | PLC, 14 IN, 10 OUT, Stepper Controller | 1 |
| 7000080610110500 | Cable, 4 Pin, Nano (M8) Female, 5 Meter | 1 |
| LERC | Label-Eye Sensor | 1 |
| 8533640000 | Terminal Relay Coupler | 3 |
| FNQ-10 | 10 Amp Fuse | 5 |
| MDL-6 | 6 Amp Fuse | 5 |
| MDL-2 | 2 Amp Fuse | 5 |

Warranty

7

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 Elkwood, Virginia. The warranty on components not manufactured by Shibuya Hoppmann Corporation, but a part of the feeder, 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 NEGLIGENCE, ACCIDENT OR IMPROPER USE, OR WHICH HAVE BEEN ALTERED BY OTHER THAN AUTHORIZED SHIBUYA HOPPMANN CORPORATION PERSONNEL.

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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

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800.368.3582 t
540.829.1726 f

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Indianapolis, IN 46239
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800.368.3582 t
317.322.0794 f

Manufacturing

281 Dillard Road
Madison Heights, VA
24572
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800.543.0915 t
434.929.4959 f