Model 252
Label Printer/Applicator

Operator / Technical Manual

Welcome to ID Technology.

By selecting equipment from ID Technology, you've made a significant investment in your business – an investment that will pay you back through enhanced performance and increased production efficiencies. Year after year.

Not only do you have industry-leading systems for labeling, coding and marking, you also have the complete backing of IDT's nationwide service network to help keep you up and running. We're the specialists who know how to help you solve your product identification challenges.

The very best investments are the ones you never need to worry about. Call on ID Technology to be your specialists for labeling, coding and marking, with products and services that deliver proven results.

I. GENERAL

MANUAL
INTRODUCTION

Your **ID Technology Model 252 Label Printer/Applicator** was designed for ultimate efficiency and minimum maintenance. High quality performance can be maintained and prolonged if the Operation and Preventative Maintenance Care and Instructions provided in this manual are followed carefully and consistently.

⚠ CAUTION

READ BEFORE OPERATING EQUIPMENT

1. Introduction

   All operating and maintenance personnel must read this manual carefully and pay special attention to the warnings and cautions before operating or servicing the machinery.

2. Initial Operation of Equipment

   ID Technology equipment is carefully assembled and checked before it is shipped from the factory. Upon completion of field installation all fasteners, set screws, etc. should be checked for tightness. After an initial operating period of 40 to 60 hours, the equipment should again be thoroughly inspected for any signs of loose fasteners, set screws or other components and necessary corrections made.

3. Safety Symbols

The directions in this manual must be observed for the safety of people and machines. The followings symbols are used throughout this manual and located on your machinery to call attention to important safety issues. These warnings or cautions must be strictly observed.

Symbol		
	DANGER WARNING CAUTION	**General Danger** **Used when the life or health of the operator is in danger or considerable damage to property can occur**
	DANGER	**Electricity - Danger**
	ATTENTION	**Used when a task is mandatory for safe and disturbance free operation**
	INFORMATION COMMENT	**Used when additional information is needed or an item needs special attention**
	WARNING	**Do not touch, keep hands and limbs clear of machinery**
		Warning: Do not operate this machine without guards in place
		Warning: Machine or device automatically starts.

| | **DANGER** | Moving parts can crush and cut. Do not operate with guards removed. Follow lock-out procedure before servicing. |

| | **DANGER** | Pinch Point: Keep hands clear of rollers. Follow lock-out procedure before servicing. |

| | **DANGER** | Moving parts can crush and cut. Do not operate with guards removed. Follow lock-out procedure before servicing. |

| | **DANGER** | Burn Hazard: Hot surface, do not touch. |

| | **DANGER** | Moving parts can crush and cut. Do not operate with guards removed. Follow lock-out procedure before servicing. |

| | **MANDATORY ACTION** | Consult service manual. |

4. Safety Tips - General

1. **Prior to "starting" equipment, make sure that all personnel are clear of equipment and that all foreign objects and tools have been removed.**

2. **All guards shall be in place before operating equipment.** *SEE PAR. 3 - SAFETY SYMBOLS.*

3. **All starting and stopping devices must be clearly marked.** *SEE PAR. 3 - SAFETY SYMBOLS.* **The area around these devices shall be kept free of obstructions and permit ready access to them and a clear view of them at all times.**

4. **The area around all loading and unloading points on equipment must be kept free of obstructions to permit ready access to them and a clear view of them at all times.**

5. **No "riding" shall be permitted on any equipment.**

6. **No overload or safety device shall be removed from the equipment. Provisions should be made to prevent anyone, except a competent authorized person, from adjusting safety devices.**

7. **At no time shall any equipment be used for a purpose beyond its design limitations.**

8. **Good housekeeping shall be maintained at all times.**

5. Safety Tips – General Service & Maintenance

1.   **Do not service a machine until you are thoroughly qualified, trained and familiar with the tasks to be performed. Only trained personnel should be operating machines.**

2.   **Never operate any controls while other persons are performing maintenance on the machine.**

3.   **All personnel working on or near equipment shall be instructed in the location and operation of all stopping devices.**

4.   **Maintenance work should not be performed while equipment is in operation. If it is necessary to operate the equipment while servicing it, special safety provisions shall be used.**

5.   **When equipment is stopped for servicing purposes, the starting device shall be locked and tagged out by the person servicing the equipment. The equipment shall be restarted only by the person who locked and tagged the equipment.**

6.   **Before restarting equipment that has stopped due to an overload condition, an inspection of the equipment shall be made and the cause of the overload cleared before attempting to restart the equipment. The starting device shall be locked and tagged out before any attempt is made to remove the cause of an overload.**

7.   **Do not by-pass safety devices.**

8.   **Always use the proper tools for the job.**

9.   **Never open covers with the power on.**

10. **All air and hydraulic pressure must be relieved before performing maintenance or loosening connections on any pressurized system.**

11. **Air, hydraulic and electrical power is to be turned off unless absolutely required for the specific service being performed.**

⚠️   **For maximum protection, the power source should be locked out using a lock for which only one person has the key. This prevents anyone from accidentally turning on the power to the machine while it is being serviced.**

6. Safety Tips – General Electrical

1. **All electrical/electronic maintenance and service should be performed only by trained and authorized electricians.**

2. **Assume at all times that the power is** "ON". **Treat all conditions as live.**

3. **To remove load from circuit or equipment, open disconnect or breaker and lock in open position. For maximum protection, a locked out switch in open position using a lock for which only one person has the key, prevents anyone from accidentally turning on the power.**

4. **Make certain that the circuit is open by using the proper test equipment.**

    > Test equipment must be checked at regular intervals.

5. **Give capacitors time to discharge, otherwise discharge manually with care.**

6. **There may be circumstances where "troubleshooting" on live equipment may be required. Under such conditions, special precautions must be taken as follows:**

    a. **Make certain your tools and body are clear of the ground.**
    b. **Take extra safety measures in damp areas.**
    c. **Be alert and avoid any outside distractions.**

7. **Before applying power to any equipment, make certain that all personnel are clear of the machine.**

8. **Open control panel doors only to check out electrical equipment or wiring. After the panel door is closed, make certain that (on those panels, where applicable) the disconnect handle mechanism is operating properly.**

9. **Close all covers on junction panels before leaving any job.**

10. **Replace fuses only when electrical power is** "OFF" **(locked out).**

7. Cleaning Of Equipment

⚠ **Before attempting to clean any machinery, the machine must be turned off and the power and air locked out.**

ID Technology equipment is designed to be compatible with typical industrial packaging lines. Normally, paper and packaging residue can be removed with manual methods such as brushing, blowing or vacuuming the surfaces and components affected.

⚠ **If compressed air is used to blow loose material from machines, personnel must wear eye protection and follow normal safety practices for the use of compressed air.**

The use of strong caustic liquid or foam type chemical cleaners must be avoided as this type of cleaner can damage surface finishes and elastomeric materials such as bearing seals. The use of liquid cleaners is generally not recommended except for Isopropyl Alcohol to remove label adhesive buildup. If unusual circumstances require the use of liquid cleaner, the cleaner should first be tested on a small inconspicuous part of the machine finish. ID Technology equipment is not designed for general wash down. If a pressure type washer is used, damage to bearings, air cylinders, motors or other similar devices may result. Consult ID Technology Technical Services for questions concerning equipment cleaning.

⚡ **Keep all liquids away from electrical components.**

II. OPERATING FUNDAMENTALS

1. Introduction

The Model 252 label printer/applicator is designed to print and apply informational or decorative pressure sensitive labels to a wide variety of products and packaging. A variety of engines and label application modules can be fitted to the Model 252 to meet application specific labeling requirements. Application modules include multiple tamp options and corner wrap units. A further upgrade to the tamp options is available with the addition of tampjet pneumatics. Additional options to enhance control, operation, and interface are available as well.

ENGINE

APPLICATION MODULE
(SERVICE TAMP SHOWN)

PNUEMATIC
ASSEMBLY

SET
TILT
BLOCK

U-ARM

ELECTRONICS
ASSEMBLY

BACK COVER REMOVED
FOR ILLUSTRATION PURPOSES

OPERATOR
INTERFACE

UNWIND
ASSEMBLY

REWIND
ASSEMBLY

FILTER
REGULATOR
ASSEMBLY

LOW LABEL
SENSOR
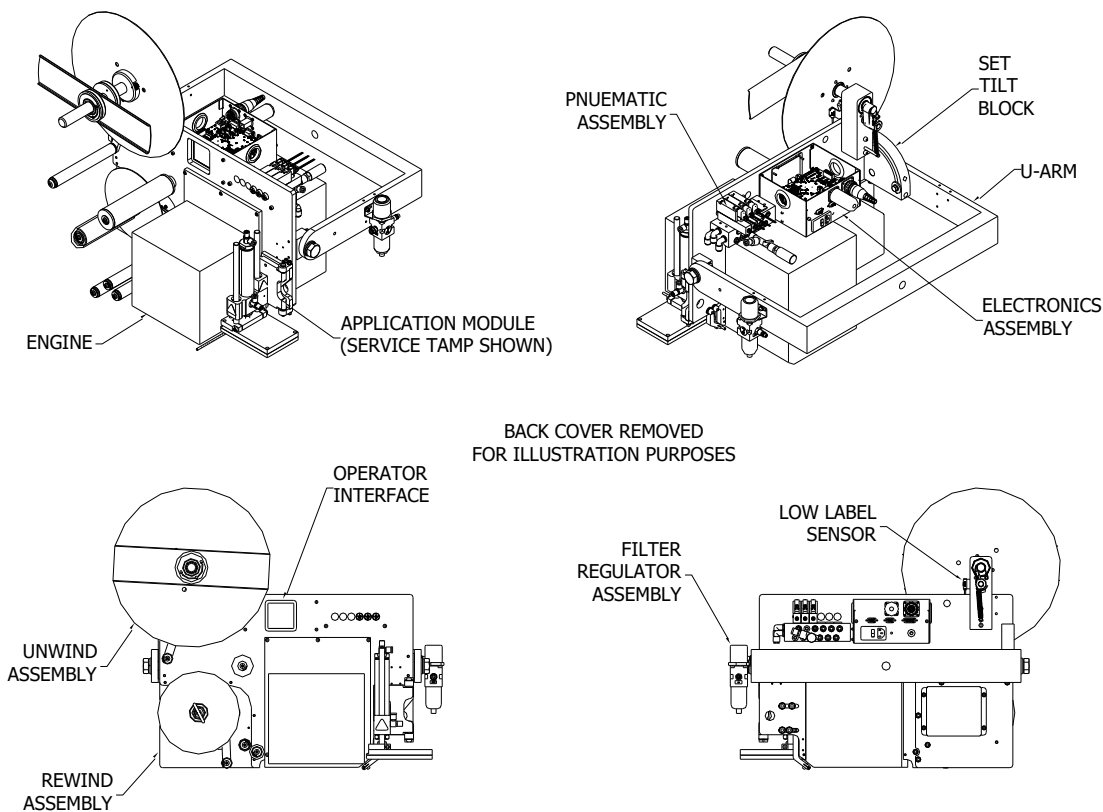
2. Unwind Assembly

The unwind assembly holds the roll of label stock and controls the tension of the web. The unwind assembly consists of an unwind spindle on two sealed roller bearings, a spring-loaded dancer arm and a brake mechanism. As the web pulls on the dancer arm, the brake pressure is released and the roll is free to spin. When sufficient stock is fed, the dancer returns to the rest position and the brake is reapplied.

3. Rewind Assembly

The sole purpose of the rewind is to accumulate the waste liner, keeping it from spooling on the floor. There are no adjustments needed. The waste rewind is controlled by a v-belt drive from the drive pulley. The drive pulley has a v-groove to provide positive drive to the belt and the rewind roller has a flat bottom groove and relies on belt tension and friction to spin the take up. Waste liner feed, used in conjunction with a tensioner arm and dancer roller, controls the activation of the rewind belt.

4. Electronics Assembly

The electronics assembly contains the components that control the functionality of the applicator, provide power to the various components, and connect to various sensors and indicators.

4.1 Operator Interface

The operator interface is the primary means of operator control and feedback. Various settings, such as speed and timing, are adjusted using the interface. The current machine operating status is displayed upon demand by way of the interface.

4.2 PCB

The PCB is the heart of the controls for the applicator. The PCB runs a proprietary control program written specifically for the Model 252 label printer/applicator. Timing cycles, interaction with various sensors, indicators and motor controller, as well as communications with the operator interface are all controlled by the PCB. Connections for the control of standard and optional equipment are located on the PCB.

4.3 Main Power Connection

A power entry module with an "ON-OFF" switch is located on the rear panel of the electronics module. Power for the entire label printer/applicator is provided through this connector. A separate power supply for the PCB is contained within the electronics module and a permanently attached power cord is used to provide power to the engine. A power cord with the appropriate connections is provided with each Model 252.

5. Pneumatic Assembly

The pneumatic assembly is the primary control and distribution center for the pressurized air used by the Model 252. All electrical control of the pneumatic assembly is done through connections to the electronics assembly.

6. Optional Accessories

6.1 Low Label Sensor

The low label sensor mounts to the Unwind Assembly and connects to the interface board. The sensor provides advance notification that the label supply will soon run out. This indication is displayed with the optional three-stage beacon and/or through the optional system status output connection.

6.2 Three Stage Beacon

The three-stage beacon provides visual indications for "Fault condition", "Low condition", and "All systems OK" machine conditions.

6.3 System Status Output

The system status output provides an interface with external devices or controls. The status of specific printer/applicator conditions can be monitored through the provided connection.

6.4 TS Series Mounting System

The TS series mounting system provides the components to allow the applicator to mount in virtually any application. A variety of modular components, including T-bases, H-bases, floor plates and adjustment components provide the flexibility to meet most mounting requirements.

6.5 Merge Module

The Merge module provides a passive method of applying the label to the product. The label is dispensed into the nip created by the application roller contacting the passing product. Since the label adheres to the product just as it released from the printer there is no need to match the dispense speed with the product speed. This module requires no compressed air and has no actively moving parts other than the fan.

6.6 PowerMerge™ Module

The PowerMerge module is used to receive the label from the printer and transport it to a position where it is applied to the passing carton at the appropriate time. The module uses two fans to generate vacuum pressure through a perforated belt. The belt carries the label, with exposed adhesive, from the printer to the carton in a continuous motion. The label is fed onto a roller that, when the carton contacts the label, assures that it is affixed to the carton smoothly as it is pulled from the belt. This module requires no compressed air.

6.7 Tamp Module

A tamp module allows a direct contact method for applying labels to products or packages. See the Tampjet Upgrade for a non-contact option. A label is fed onto the tamp pad and held in place by means of an adjustable vacuum. As the object to be labeled passes by, the tamp pad is extended to apply the label to the object. The tamp pad then retracts and the cycle is repeated for the next object. The tamp module is available in 2", 4", 6", and 8" stroke lengths. The vacuum tamp pad is machined specific to a label size which requires a different pad for each label size to be run on the applicator. Specific application requirements may require the use of another type of tamp module.

6.8 Centerline Tamp Module

A centerline tamp module performs the same as a standard tamp module. Centerline Tamp Modules are designed to be an adjustment free replacement alternative. If horizontal positioning is desired, removing the fixed position mounting plate allows adjustable mounting. The air cylinder has no vertical position adjustment and air pressure adjustment is available only at factory set internal controls. The tamp modules are available in 50mm,100mm,150mm, 200mm, and 250mm stroke lengths. The vacuum tamp pad is machined specific to a label size which requires a different pad for each label size to be run on the applicator. Specific application requirements may require the use of another type of tamp module.

6.9 Heavy Duty Tamp Module

A heavy duty tamp module, while operationally identical to the standard tamp module, may be needed in some applications. Larger diameter guide rods and bearings combined with a stabilizer clamp characterize this module. Stroke lengths over 10" require the use of the heavy duty tamp module. In addition, some application positions, such as "reels up", will benefit from the added strength and rigidity of a heavy duty unit to ensure correct label placement.

6.10 Service Tamp Module

The service tamp module performs exactly like a standard tamp module. The additional service feature allows the tamp pad and air cylinder/bearing block portion of the tamp assembly to be rotated in an outward direction. This allows for easier access when servicing the engine or performing tamp pad change-over operations. Tamp pad requirements remain the same.

6.11 Centerline Service Tamp Module

The centerline service tamp module provides the same performance as the standard service tamp module with two additional features. The first of these is a selectable mounting option providing fixed or horizontal adjustment mounting. The fixed position mounting is the preferred method, but adjustment is possible if required for special applications. The second feature is an air cylinder with fixed mounting and no external air pressure adjustment. No vertical position adjustment is provided and air pressure adjustment is available only at factory set internal controls. Tamp pad requirements remain the same.

6.12 252 Tamp Flow Control Kit

Some Centerline Tamp and Service Tamp applications may benefit from the addition of flow controls to adjust extend and retract speeds of the tamp air cylinder. Flow controls with quarter-turn accuracy position indicators are provided for both ports of the air cylinder in the kit. After adjustment of these flow controls, it is advised that the settings be recorded in the Configuration Settings table prior to any future changes. The flow control kit contains all required plumbing components.

6.13 Tampjet Upgrade

The tampjet upgrade kit converts the tamp pneumatics to add tampjet functionality. Tampjet adds a blast of compressed air at the end of the tamp stroke to propel the label from the tamp pad to the product. This is useful for applying labels to delicate products, fast moving products, or products with slightly irregular surfaces. The tampjet upgrade kit contains the tampjet valve and all required plumbing and electrical connections.

6.14 Smart Tamp Sensor

With the addition of a smart tamp sensor, tamp type applications can be used with products that may vary in size. The sensor is mounted just above the tamp pad and positioned to detect the product to be labeled. During label application, the sensor detects the product and provides a signal to the electronics module. This signal is used to control the activation timing of the tamp solenoid valve. This effectively adjusts the stroke length of the tamp assembly air cylinder to the correct label application position. Adjustments are provided for fine tuning the actions.

6.15 Tamp Home Sensor

The tamp home sensor is used to signal that the tamp unit has returned to the fully retracted or "home" position. This signal can be sent to the system status outputs for use with external printer applicator or other control systems. Only tamp units that use the SM312 type sensor are adjustable and that adjustment is to the sensitivity of the sensor. See the Component Information section for more information. The newer Centerline type tamp units use a non-adjustable Q12 type sensor.

6.16 Swing Tamp Module

Swingarm tamp modules can be used for some applications that require applying labels in restricted spaces or at odd angles. Several swingarm tamp modules are available and can be configured to match the Left Hand or Right Hand model 252. They can be mounted to the baseplate in swing out, swing left, or swing right directions.

> **i** **The swing left or swing right mounting must match the label feed direction and will place the adhesive side of the label facing that direction as well. The swing out direction will result in the adhesive facing to the front of the Model 252.**

6.17 Dual Panel Module

The Dual Panel Module is a special application unit that combines a straight tamp and a swing arm tamp to apply labels to two adjacent panels of a carton. The dual panel module utilizes special firmware to provide the controls required to perform the desired application cycles.

6.18 Three Panel Module

The Three Panel Module is a special application unit that combines a straight tamp with a special rotary secondary tamp to apply labels to three adjacent panels of a carton. The three panel module utilizes special firmware to provide the controls required to perform the desired application cycles.

6.19 Three Panel Module Tamp Home Sensor

The tamp home sensor is used to signal that the tamp unit has returned to the fully retracted or "home" position. This signal can be sent to the system status outputs for use with external printer applicator or other control systems. The sensor is a non-adjustable Q12 type sensor.

6.20 Corner Wrap Module/Centerline Corner Wrap Module

The Corner Wrap Module is a special application unit used to place labels on the corners of containers. The module allows equal lengths of a label to be applied on two adjacent sides of a box corner. A roller is used to apply pressure to the label as it comes in contact with the product. Supplied with the needed connections and hardware, the module is mounted to the baseplate in the same attachment location as the tamp units. Special orientation and setup may be required when using a corner wrap module.

6.21 Main Air Cutoff

The main air cutoff upgrade can be installed on the filter regulator assembly supplied with the tamp upgrade. The cutoff provides a quick method of disconnecting the applicator from plant air, venting all residual pressure in the applicator and providing a lockout point for maintenance. Installation instructions can be found in the drawings section of this manual.

6.22 Water Separator

The water separator upgrade can be installed on the filter regulator assembly supplied with the tamp upgrade. The water separator is useful when there is excessive dirt, oil or water present in the compressed air supply. The assembly provides an additional three stages of contamination removal to the standard filter regulator. Installation instructions can be found in the drawings section of this manual

III. INITIAL SETUP

1. General Specifications

1.1 Standard Features

- Choice of printers to suit every application. The 252 Applicator will accommodate standard Sato, Zebra, and Datamax print engines without modification.
- Microprocessor driven on a single board
- 4" Tamp stroke standard, capable of conversion to various stroke lengths from 2" to 8"
- Regulators and air gauges controlling Tamp, Air Assist, and Vacuum Pressures
- Right and Left Hand options for 252 and 252N models

1.2 Overall Dimensions
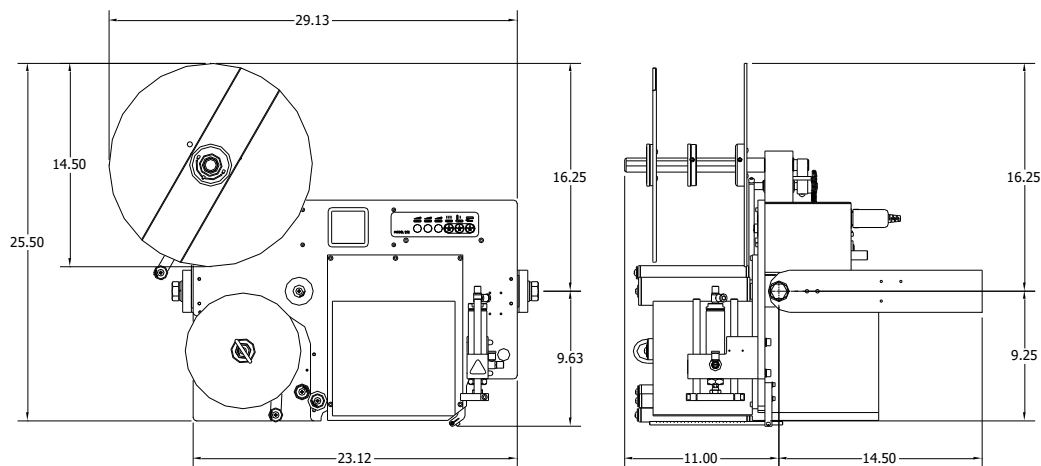
1.3 Weight

Model 252 Base w/o Print engine: 71 lbs.

1.4 Electrical

100-240 VAC, 50-60Hz, Single Phase, 3.0A-1.5A
See the manual for the type of print engine used for individual electrical requirements and adjustments.

1.5 Air Requirements

Clean, dry air at 80psi minimum to 120psi (approximately 6.1 bar) 3-5 CFM dependent on the application method and rate.

- The supply pressure must always be greater than the highest pressure being used on the applicator
- The applicator has a filter with drain on the plant infeed supply. To ensure reduced maintenance time, a pre filter upstream is recommended.

1.6 Label Roll Size
14" OD x 3" ID

1.7 Label Style
Pressure sensitive Die cut, waste removed, outside wound, 1/8" minimum gap in the running direction, 1/16" precision edge trim with no splices.

1.8 Standard Label Size
Label sizes are print engine dependent. Refer to the manual for the specific print engine installed.

1.9 Environmental Requirements
Temperature: 32°F - 104°F
Relative Humidity: 15%-85% (non-condensing)
See the manual for the specific print engine installed for additional individual requirements.

1.10 Noise
Noise emissions are dependent upon method of operation and settings. Noise is typically less than 76dBA. Hearing protection is not required by OSHA guidelines, but ID Technology recommends the use of hearing protection during periods of prolonged exposure.

1.11 Safety
The Model 252 can be used in a variety of applications and in conjunction with other machinery. The 252 has been designed and evaluated to comply with a number of industry and international directives. Due to the variety of possible uses of the Model 252, installation of the Model 252 may change the criteria for compliance. Once installed, it is the responsibility of the purchaser to evaluate and implement measures to return the Model 252 and the host system to compliance. Evaluation should include but is not limited to;

- Power and air cutoffs
- Emergency stops
- Electrical ground protection
- Guarding and interlocks
- Environmental enclosures

1.12 Declaration of Conformity

Declaration of Conformity

The manufacturer of the products covered by this declaration is

ID Technology, LLC
2051 Franklin Drive
Fort Worth, TX 76106
United States of America

+1 817 626 7779
www.idtechnology.com

The directives covered by this declaration

2006/42/EC   Machinery directive (consolidated edition)
2004/108/EC   Electromagnetic Compatibility (EMC) directive, as amended

The products covered by this declaration

ID Technology Model 252 Label Printer Applicator

This basis on which conformity is being declared

The products identified above comply with the protection requirements of the EMC directive, and the manufacturer has created the Technical Construction File number: *TCF-252-1*
which includes report/certificate number: *31360658*
from the EMC Competent Body: *TUV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nurnberg, Germany*

The products identified above also comply with the principal elements of the safety objectives of the Low Voltage directive, and with the essential health and safety requirements of the Machinery directive. The manufacturer has applied the following standards:

EN ISO 12100 – 2010 Safety of machinery -- General principles for design -- Risk assessment and risk reduction.
IEC 60204-1 (Fifth Edition) +A1:2008 Safety of machinery - Electrical Equipment of machines - Part 1 General requirements
IEC 61000-6-4:2007 Electromagnetic compatibility (EMC) - Part 6: Generic standards - Section 4: Emission standard for industrial environments
IEC 61000-6-2:2005 Electromagnetic compatibility (EMC) - Part 6: Generic standards - Section 2: Immunity for industrial environments

The technical documentation required to demonstrate that the products meet the requirements of the Low Voltage directive has been compiled and is available for inspection by the relevant enforcement authorities. The CE mark was first applied in: *2013*

Signed:...................................
Authorized:...............................   *Alan J. Shipman*
                                             Vice President and General Manager
Date:...................................... *15/11/2013*

Attention!

The attention of the specifier, purchaser, installer, or user is drawn to special measures and limitations to use which must be observed when these products are installed, taken into service, operated, and maintained, to maintain compliance with the above directives. Details of these special measures and limitations to use are available on request, and are contained in the product manuals.

2. Lifting and Moving

The ID Technology Model 252 has been delivered to you in a shipping carton on a skid along with any optional stand components purchased. It is recommended that the cartons not be removed from this pallet until it is in close proximity to the intended installation area. The first steps towards installation should involve unpacking and assembly of the stand components. Use caution when assembling the stand as some components are quite heavy and the stand may be unstable until it is fully assembled.

⚠️ **To prevent back injury, always use a lifting belt and lift with the legs, not with the back or arms.**

ℹ️ **Be sure to remove and retain the ¾ hex nut and washers from the adjustment slide/applicator mounting block of the stand. Be sure they are easily reachable prior to bringing the applicator to the stand.**

Once the stand is assembled and positioned near the point of use, open the carton containing the Model 252 label printer/applicator. Locate and set aside the package containing the standard and optional accessories, as well as any additional items that may have been included with the applicator. Carefully remove the applicator from the carton by lifting using the u-shape mounting yoke.

⚠️ **To prevent back injury, always use a lifting belt and lift with the legs, not with the back or arms.**

⚠️ℹ️ **During shipment, the bolts that lock the faceplate to the mounting u-arm may have loosened, allowing the faceplate to rotate freely. Use caution when lifting as fingers could be pinched. Support the faceplate when first lifting until you are sure it is secure. It is recommended that all packing material and the original shipping
carton be retained in case the unit must be sent back to the factory for upgrades, refurbishment or repair.**

❗ **Lifting the applicator by the rollers, applicator assembly, unwind or rewind spindle is not recommended. This can cause damage or misalignment that will cause the unit to not operate properly.**

2.1 Assembling the Stand Components

There are a multitude of mounting options available, depending on the application requirements. For use in a fixed location, two floor plate options are available. Both options require permanent attachment to the floor. The machine center of gravity must be taken into consideration when deciding which of the other configurations is to be used for the application.

⚠️ **Failure to follow mounting method requirements can cause unstable machine mounting resulting in damage and/or injury.**

WHEN THE TS8000 OR TS8001 FLOOR PLATE
IS NOT USED, THE APPLICATOR CENTER OF GRAVITY
MUST BE LOCATED WITHIN THE TRIANGULAR AREA
INDICATED TO ENSURE MACHINE STABILITY.
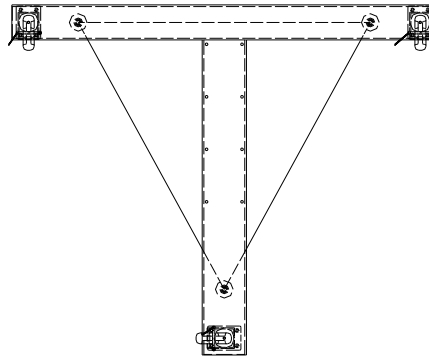
The basic "T" Base assembly consists of a TS2000 "T" Base and a TS1000 Upright Assembly. Normally, the TS1000 mounts directly to the TS2000. The Upright must be attached to the "T" Base with the applicator mounting bolt over the long leg of the base.
If in and out adjustment is needed, and the upright position can vary, a TS3000 Slide Base can be mounted between the TS2000 and the TS1000 Upright.
If the upright position must remain stationary, adding the TS4000 Traversing Post will allow the same range of adjustment. Also, the TS4000 is used when the applicator must be mounted from above.
An additional 12" of height is available by utilizing the TS5000 Extension Post. It can be mounted on the TS3000 Slide Base or directly to the TS2000 "T" Base.
Refer to the following illustration for guidance.

TS4000 TRAVERSING POST
(OPTIONAL)

TS1000 VERTICAL POST

APPLICATOR MOUNTING
BOLT

TS3000 SLIDE BASE
(OPTIONAL)

TS5000 12" EXTENSION POST
(OPTIONAL)

TS8000 ROTATIONAL
FLOOR PLATE
(OPTIONAL)

TS8001 FLOOR PLATE
(OPTIONAL)
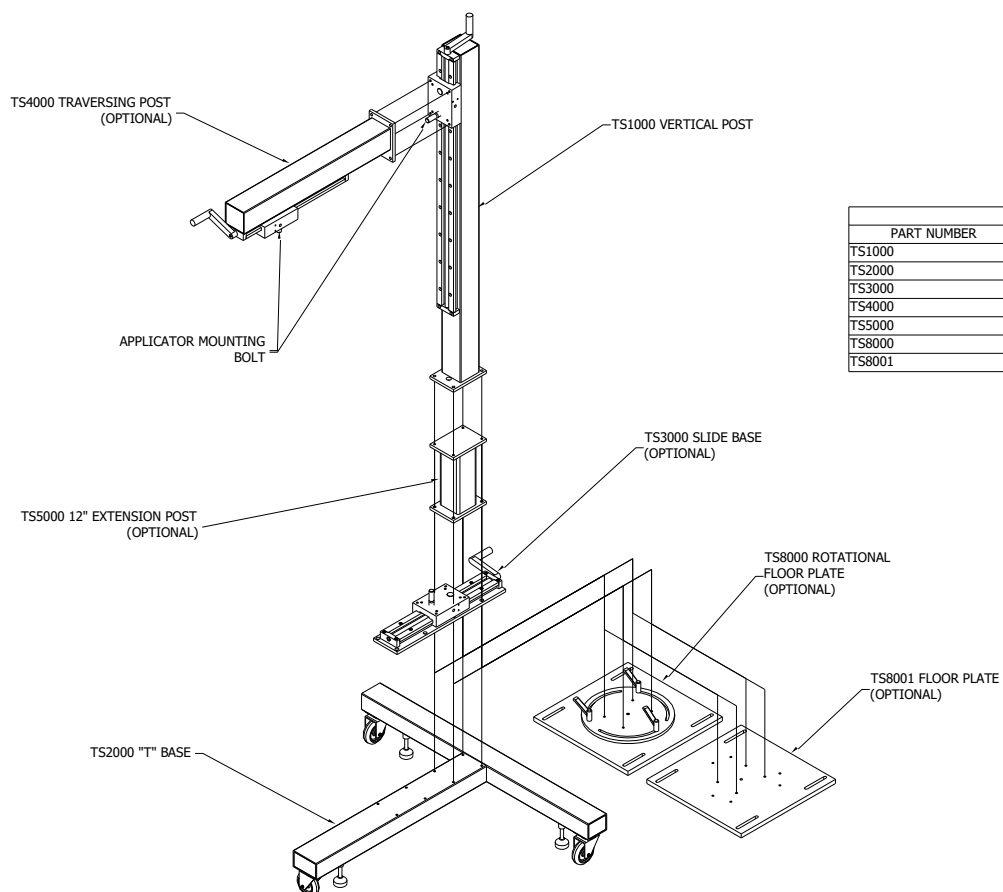
TS2000 "T" BASE

PARTS LIST	
PART NUMBER	DESCRIPTION
TS1000	POST,VERTICAL MOUNTING 60"
TS2000	"T" BASE
TS3000	SLIDE BASE
TS4000	TRAVERSING POST
TS5000	12" EXTENSION POST
TS8000	BASE,FLOOR PLATE ROTATIONAL
TS8001	PLATE,FLOOR

2.2 Mounting the 252 Applicator

Once the applicator is out of the carton, it is time to attach it to the stand. There are a multitude of mounting styles and orientation depending on the application, line configuration, product handling and label placement. The first determination of mounting will be the construction of the stand. In general, the applicator will be mounted from below, behind or above.

PRODUCT →
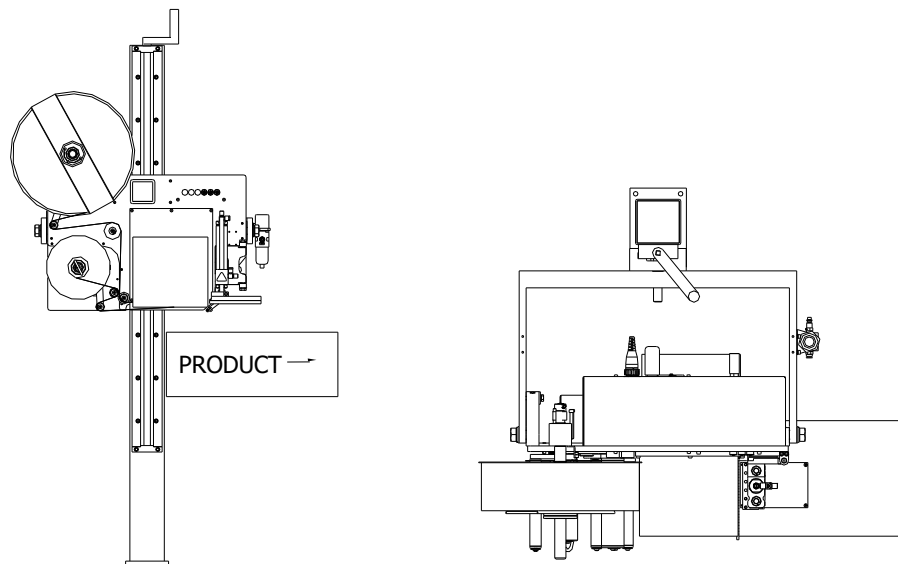
Once the desired mounting position is identified, lift the applicator by the u-arm and place it on the stand by inserting the mounting stud of the stand into the hole on the u-arm. Immediately install the washers and locking nut that came with the stand and tighten until the applicator is firmly secured. The Model 252 features an added set tilt mounting block. This allows the main attachment bolts on either side to be loosened in preparation for position adjustment while preventing uncontrolled rotation of the applicator. Slowly loosen the bolt securing the set tilt block until the applicator can be pivoted to the correct application position. Fully tighten the main attachment bolts and then tighten the set tilt bolt.

⚠ **If the applicator is to be mounted from the top, a second person must be assisting. One person must support the applicator while the other installs the washers and locking nut. Injury and/or damage can occur if installation is attempted alone.**

ℹ **When mounting from the side or bottom, the applicator will suspend itself from the mounting stud prior to the locking nut being installed. Do not leave the unit unattended or attempt operation until the locking nut has been firmly secured.**

2.3 Mounting the 252N Applicator

The 252N applicator can only be mounted in a "reels up" position. A short or tall upright must be used and provides height adjustment. An adjustment screw is used to make small applicator leveling adjustments. Before installing the applicator on the stand, retract the adjusting screw to minimum depth. Lift the applicator and place it on the stand by inserting the mounting stud of the stand into the hole in the mounting plate. Immediately install the washer and locking nut that came with the stand and tighten until the applicator is secured but still movable. Readjust the leveling screw as needed to position the applicator correctly and tighten the locking nut until secure.

LEVELING
ADJUSTMENT
SCREW

UPRIGHT
STAND

MOUNTING
STUD

FLAT WASHER
LOCK NUT
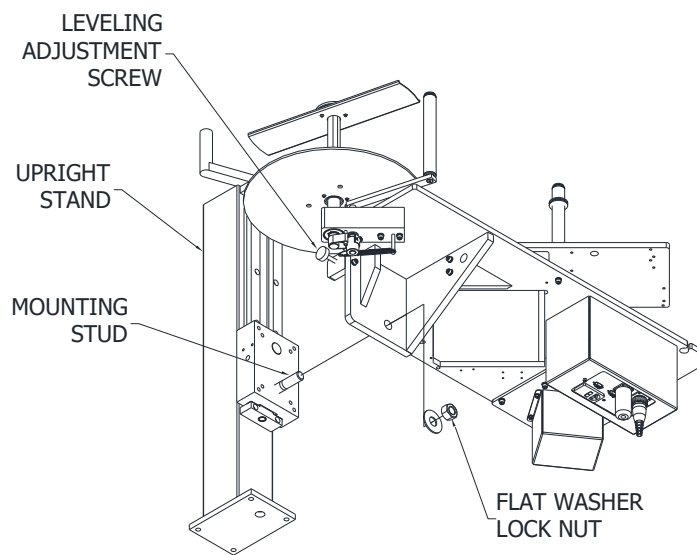
> **i** When mounting, the applicator will suspend itself from the mounting stud prior to the locking nut being installed. Do not leave the unit unattended or attempt operation until the locking nut has been firmly secured.

2.4 Mounting the 252E Applicator

The 252E Printer/Applicator can be mounted with two different basic mounting options. The first of the two is a "U" arm similar to the 252 "U" arm. The other option is an adjustable height pedestal base. The pedestal base option is normally used for fixed position application configurations.

2.4.1 252E U-Arm Installation

The 252E U-Arm Mounting Assembly is utilized to mount the 252E in the same manner as the 252. The "U" arm has an alternate enclosure mounting position which can be used to extend the applicator away from the upright. This is especially useful when used with a wide conveyor. A stabilizer block is provided with the 252E as extra support when the "U" arm is mounted in a vertical position. An adjustable tilt attachment is also included to aid in fine tuning to the optimum operating position.

If the "U" arm is not attached to the 252E from the factory, it should be installed before mounting to any other support. To install the "U" arm on the cabinet, remove the 20mm mounting bolts along with all of the associated washers from the cabinet. Position the "U" arm over the cabinet aligning the mounting holes. Place the washers in line with the mounting holes and, in the correct order, secure each set with the 20mm hex head bolt. Failure to install the washers in the correct order can affect proper sealing of the enclosure and result in damage to the equipment.
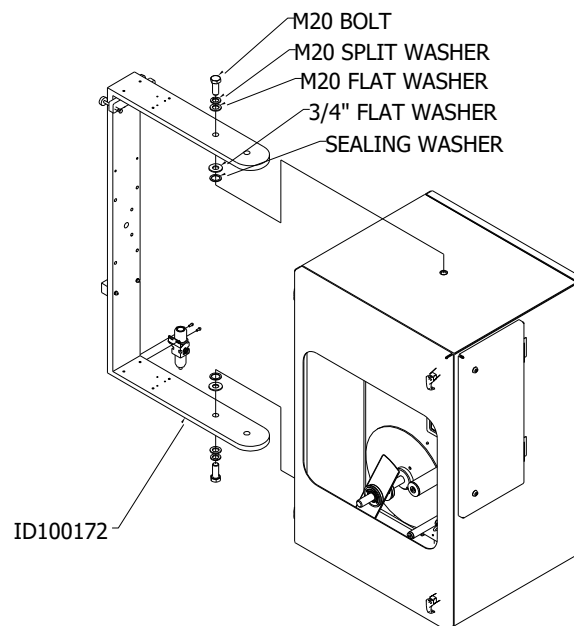
After the "U" arm has been secured to the cabinet, the complete assembly can be mounted to the upright or other supporting structure.

The "U" arm attaches to the upright using the washer and locking nut supplied with the upright. To mount the 252E to an upright, support the enclosure, and insert the mounting stud on the upright into the hole on the "U" arm. Immediately install the washer and locking nut that came with the stand and tighten until the applicator is secured but still movable. Adjust the tilt attachment screws and upright stand as needed to position the applicator correctly and tighten the locking nut until secure.
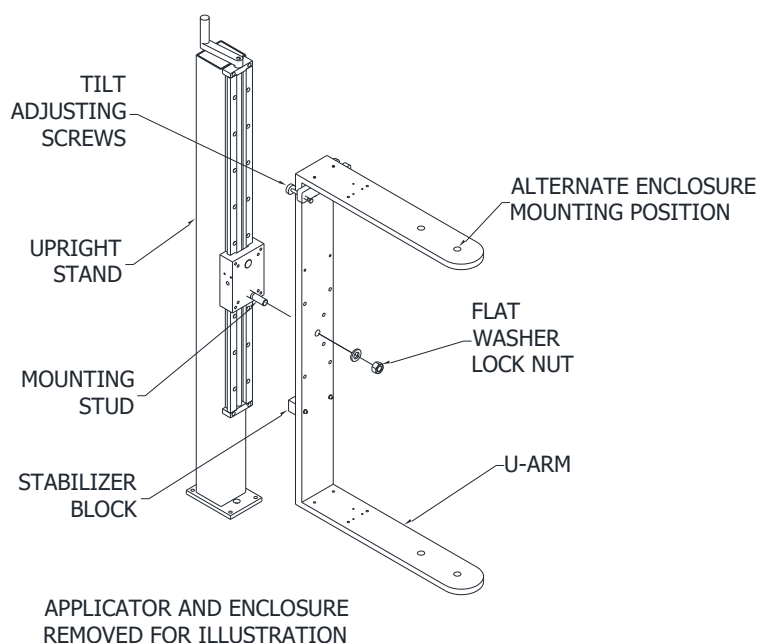
If the applicator is to be mounted from the top, a second person must be assisting. One person must support the applicator while the other installs the washers and locking nut. Injury and/or damage can occur if installation is attempted alone.

When mounting from the side or bottom, the applicator will suspend itself from the mounting stud prior to the locking nut being installed. Do not leave the unit unattended or attempt operation until the locking nut has been firmly secured.

2.4.2 252E Pedestal Base Installation

The 252E Pedestal Base Mount option allows the applicator to be mounted in a fixed position with adjustments to the vertical height of the application module. Two height range versions are available to fill application specific requirements.

The 252E can be attached to the base in either a nose up, or nose down orientation. To attach the cabinet to the base, orient the cabinet flush to the base rails and insert the bolt and washers through the mounting plate. Care should be taken to install the washers and bolt in the proper order to ensure the sealing of the cabinet is maintained. Notice that there are two holes in the attachment plate in the center of the base. One hole is used when orienting the cabinet in a nose down position. The other hole is used for a nose up position. Installation in the proper mounting hole will result in the sides (non-door sides) being flush with the pedestal base and the doors overhanging the base equally.

NEOPRENE FOAM STRIPS

SEALING WASHER

3/4" FLAT WASHER

M20 FLAT WASHER

M20 SPLIT WASHER

M20 HEX HEAD BOLT
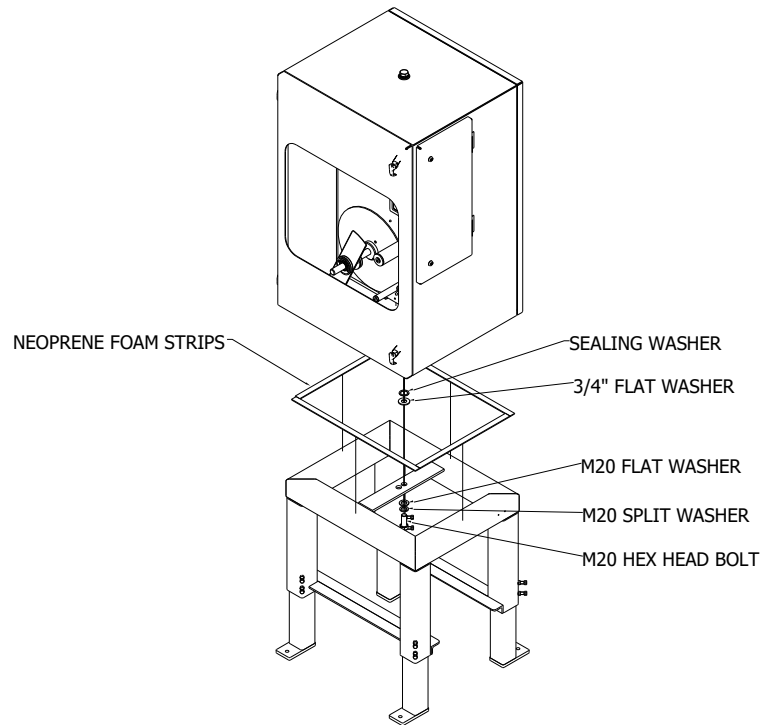
3. Installing the Accessories

Once the applicator is firmly attached to the stand, locate the accessory pack and other optional components provided.

3.1 Inner Unwind Flange

After unwrapping the flange pack, locate the inner flange. This can be identified by the lack of a locking instruction label on the hub. With the hub facing out, place the flange on the unwind shaft and slide it as far as it will go towards the faceplate. The flange will come to rest against the snap ring on the unwind shaft. Locate the tapped hole on the outer rim of the flange and align it with the flat on the shaft. Using a 4mm hex wrench, tighten the setscrew in this hole firmly against the flat on the unwind shaft. Note the locking spur on the edge of the hub. The spur is designed to increase pressure on the inside of the label roll core and prevent it from slipping on the hub. See the Loading the Labels section for instruction on using the locking spur.

i **Due to vibrations in shipping, the setscrew may have moved in, out or completely fallen out of the hub. It may be necessary to back the screw out in order to put the hub on the shaft. If there is no screw in the hub, please check the packaging that the flanges were in.**

3.2 Extra (Support) Hub

Depending on the width of the labels being used and/or the orientation of the applicator, it may be helpful or necessary to use the extra hub to support the outboard side of the label roll. Similar to the Inner Unwind Flange, the extra hub slides onto the unwind shaft and the set screw should be tightened against the flat on the shaft. At this point of installation, slide the extra hub near the inner flange and snug the setscrew against the shaft flat. Final adjustment of this hub will be done when labels are loaded.

i **Due to vibrations in shipping, the setscrew may have moved in, out or completely fallen out of the hub. It may be necessary to back the screw out in order to put the hub on the shaft. If there is no screw in the hub, please check the packaging that the flanges were in.**

3.3 Outer Unwind Media Retainer

The outer unwind media retainer (Outer Unwind Flange) is rectangular in shape and has the locking directions label on the hub as well as the soft hub locking insert. Using the diagram on the locking directions label, align the flat on the diagram with the flat on the unwind shaft and insert the unwind shaft into the retainer hub. Once the retainer is on the shaft, rotate the retainer either clockwise or counterclockwise until it locks into place.

3.4 Rewind Clip

Locate the rewind clip. Holding the rewind clip by the u-shaped bend, align the two legs with the grooves in the rewind spindle and slide the clip on until it stops.

REWIND CLIP

LABEL STOCK
REWIND ROLL
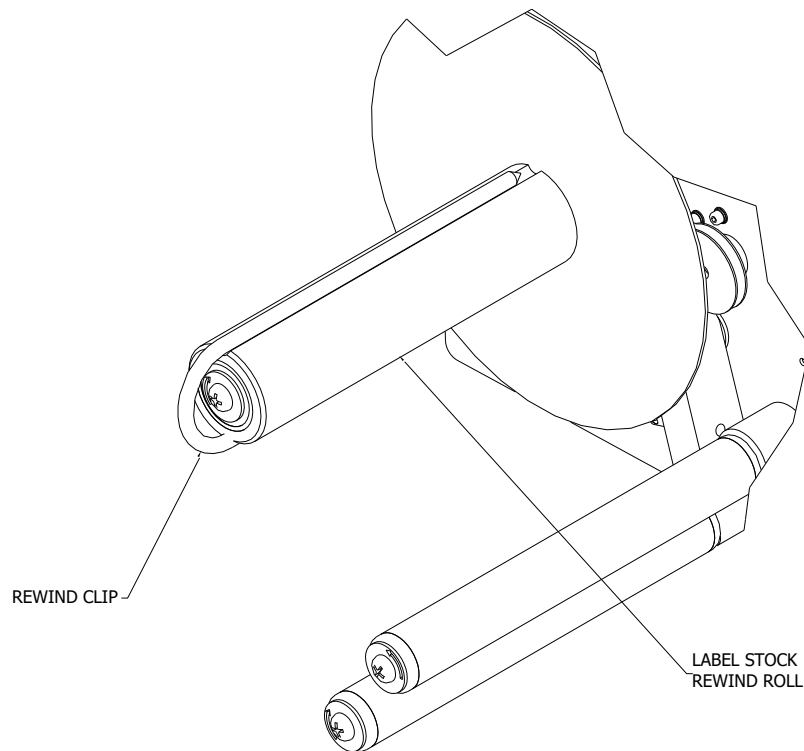
⚠ **Use caution when handling the rewind clip. The pointed ends may cause skin puncture or eye injury if dropped or otherwise mishandled.**

3.5 Product Detect Photocell

Locate the optional product detect photocell and optional mounting bracket. Depending on the type of photocell purchased, there may be a reflector and a second bracket kit included. Mount the photocell to the mounting bracket and install on the production line so the midpoint of the bracket adjustment sees either the leading or trailing edge of the product at approximately the same time as the label dispense should begin. If the photocell is a through beam type with a reflector, mount the reflector bracket on the opposite side of the conveyor with the reflector directly across from the sensor.
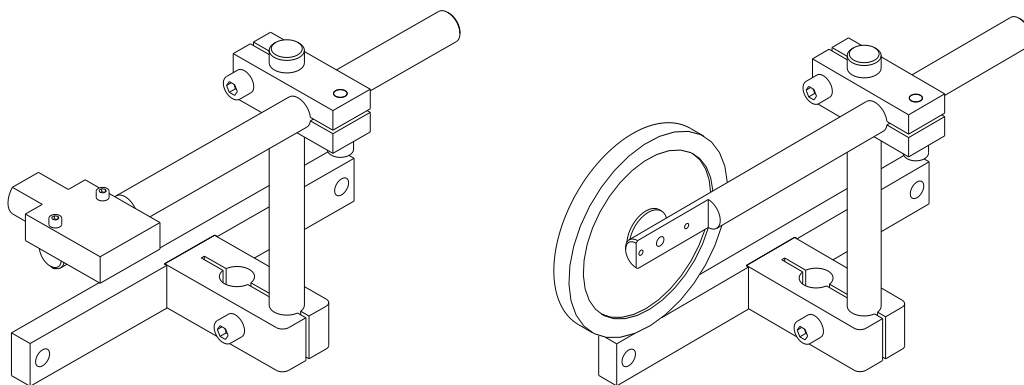
On the rear of the applicator, insert the nine pin D style connector into either of the two sockets available. It is not important which socket is chosen as any one will function properly with compatible accessories. Tighten the retaining screws on the connector body to insure it does not come loose during operation.

3.6 Interface and Power Cables

Plug the Printer Interface cable into the 15 pin "D" style connection on the rear panel of the electronic assembly. Plug the other end into the printer. Tighten the retaining screws on the connector bodies to insure they do not come loose during operation. Plug the main power cord into the power entry module on the rear panel of the electronic assembly. Do not plug the permanently attached power cord into the power entry module.

3.7 Three Stage Indicator Beacon

Locate the optional three-stage indicator beacon assembly and mount it in the desired location where it will be easily visible to the line operators. On the rear of the applicator, insert the nine pin D style connector into either of the two sockets available. It is not important which socket is chosen as any one will function properly with compatible accessories. Tighten the retaining screws on the connector body to insure it does not come loose during operation.

> **i** **The 252N applicator provides a suggested position for the three stage beacon. Alternate positions are available with the use of the included mounting bracket.**

3.8 Filter/Regulator

i **Be sure to mount the filter regulator with the bowl and drain pointing straight down. Mounting at an angle or upside down will cause the regulator to function incorrectly.**

Mount the filter/regulator to the u-arm with the provided M5 socket head screws and washers. If the bracket has been pre-installed, remove the mounting nut from the filter/regulator. Insert the threaded portion of the filter/regulator into the bracket from bottom to top, replacing the mounting nut on top. Tighten the nut, making sure the ports are easily accessed. Install the black 5/16" tubing from the output port on the filter/regulator to the "P" port fitting on the pneumatic assembly.

MOUNT UPRIGHT

TO "P" PORT FITTING

TO FILTER/REGULATOR OUTPUT PORT FITTING
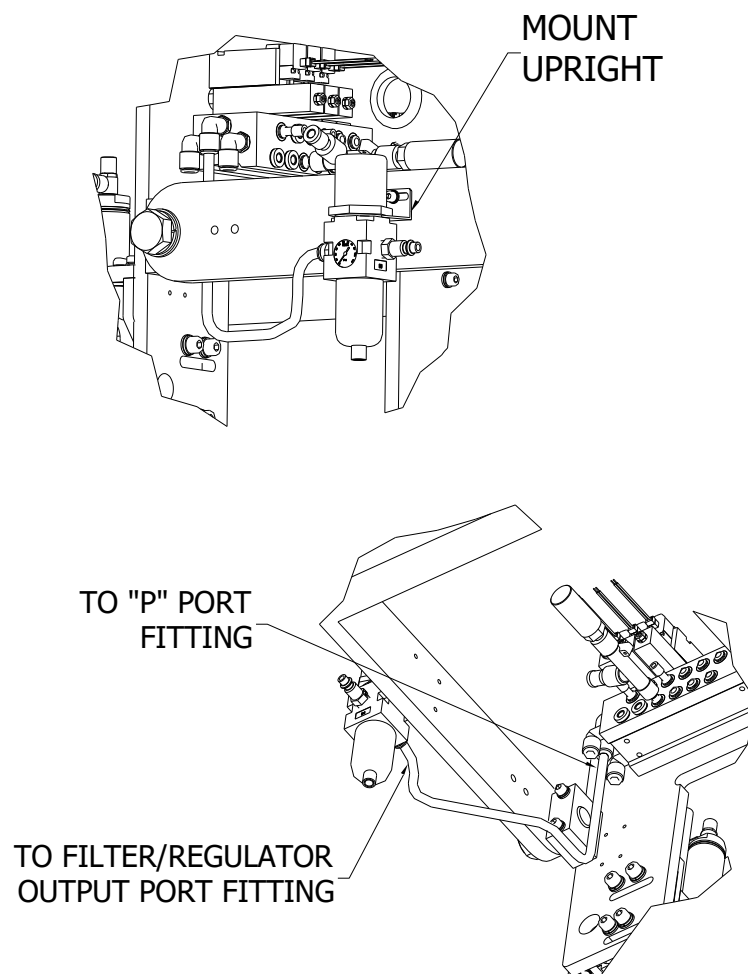
3.9 Merge Module

The Merge module assembly allows a direct contact method for applying labels to products or packages. The additional service feature allows the module to be moved for easier access when servicing the engine. To install the merge module, locate and remove the four M8 cap screws from the back. Align the merge module with the two slots in the baseplate and install the four M8 screws. Tighten the M8 cap screws using a 6mm hex wrench. Locate the fan power cord and route the connector through the grommeted hole on the closest side of the electronic module. Insert the plug into the 2 conductor connector on the PCB marked "J7" / "Fan". Replace the back cover and reconnect any cables disconnected during removal.

To service the engine, loosen the ratchet handle on the front of the module approximately one half turn. Lift the module upward and outward and tighten the ratchet handle. After performing the needed service, support the module and loosen the ratchet handle. Slide the module inward and downward to the home position and tighten the ratchet handle.

RUN POSITION

PUSH
OUT

LIFT
UP

SERVICE POSITION
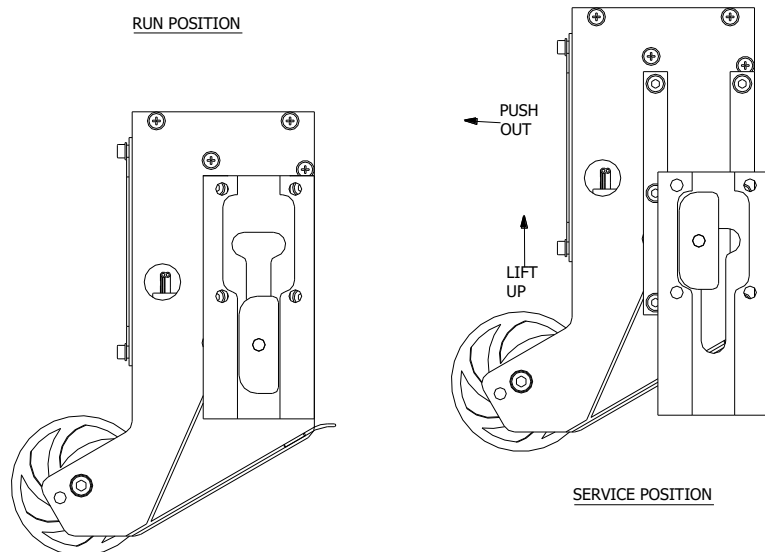
3.10 PowerMerge™ Module

The PowerMerge™ Module assembly allows a direct contact method for applying labels to products or packages. The unit mounts directly to the machine faceplate and is not adjustable. The machine should be aligned square to the conveyor which will ensure that the PowerMerge™ Module is set to the proper application angle. Only the spring-loaded roller should contact the product during label application. To install the PowerMerge™ module, locate and remove the four M8 cap screws from the back. Align the module with the two slots in the baseplate and install the four M8 screws. Tighten the M8 cap screws using a 6mm hex wrench. Locate the fan power and signal cable routing the connectors through the grommeted hole on the closest side of the electronic module. Insert the 4 conductor plugs into the connectors on the PCB marked "J5" / "Tamp", and "J6" / "SS". Plug the 2 conductor plug into the PCB connector marked "J26" / "AO". Refer to the schematic "ID100495-SCHEM" in the "Drawings and Diagrams" section before connecting the 3 conductor plug into the "J32" / "Spare" connector on the PCB. This connection must be correct for proper operation of this application module. Replace the back cover and connect the power cords in accordance with the illustration.

TO ELECTRONICS MODULE POWER PIGTAIL SOCKET

INSTALL (4) M8 SHCS FROM REAR OF FACEPLATE

TO PRINT ENGINE POWER CONNECTION
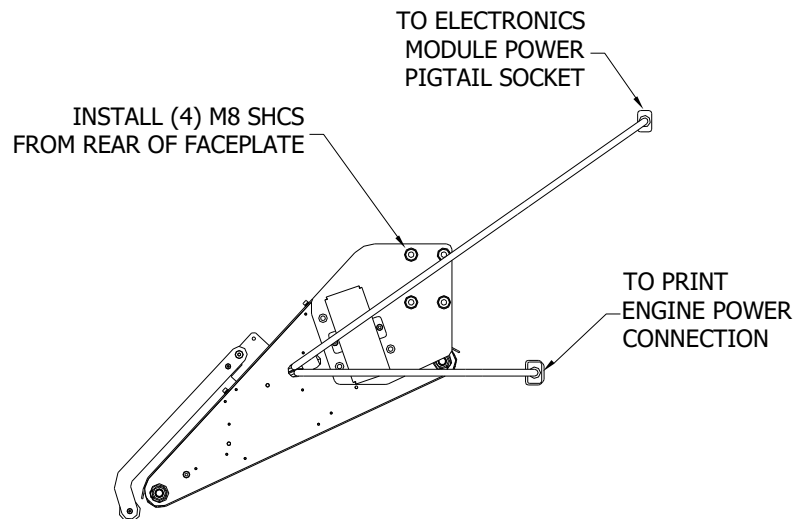
> **i** **Be sure to position the printer applicator such that the vacuum belt does not come in direct contact with the product to be labeled.**

PRODUCT FLOW ⟶

NO CONTACT BETWEEN
BELT AND PRODUCT

90°
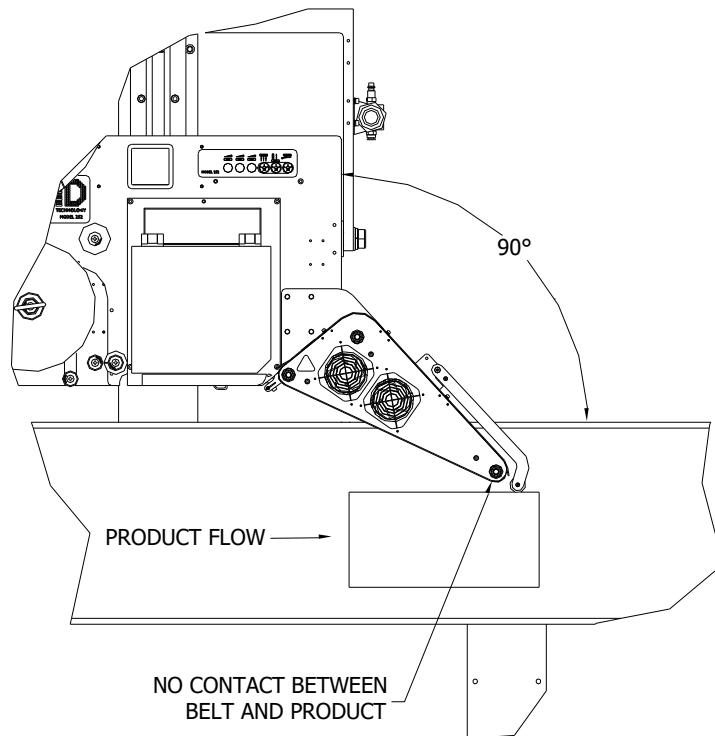
3.11 Tamp Module / Heavy Duty Tamp Module / Centerline Tamp Module

The tamp module provides the actuation to move the tamp pad from the retracted position, where it receives a label, to the extended position, where the label is transferred to the product. The tamp module consists of a tamp module and a vacuum tamp pad. If the printer/applicator was purchased as a tamp machine, the necessary components have all been assembled and installed prior to shipping. Only tamp pad position adjustments may be needed. Centerline Tamp modules have no tamp pad position adjustments. The tamp modules are available in varying stroke lengths to meet the application requirements. The vacuum tamp pad is machined specific to the label being applied; a different pad is needed for each label size. If the tamp module was purchased as a spare, replacement, or an upgrade, correct installation is required for satisfactory results.

3.11.1 Tamp Module Installation

All standard variations of the tamp modules mount to the Model 252 baseplate in the same location and with the same fasteners.
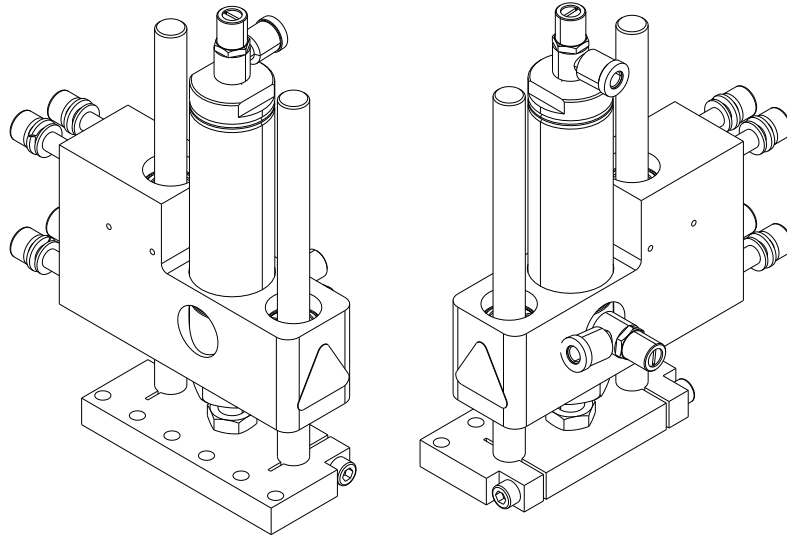
Locate the tamp module and remove the four M8 cap screws from the back. Align the tamp module with the two slots in the baseplate and install the four M8 screws. The series of six holes in the lower plate of the module should face towards the peel tip. If they do not, the tamp module must be reversed prior to installation. Tighten the M8 cap screws using a 6mm hex wrench. The exact position of the tamp module is not important at this stage. Finally, locate the vacuum tamp pad, which is specific to the label size being used, and remove the two M6 cap screws. Align the tamp pad with the bottom of the adapter plate, making sure the M6 hole closest to the faceplate matches the tamp adapter plate hole closest to the faceplate. Install both M6 cap screws, be sure the pad is square to the plate and tighten using a 5mm hex wrench.

Next, locate the tubing that was supplied with the tamp module. There should be a black, blue, yellow, and grey tube in 1/4" diameter and a black tube in 5/16" diameter. The 5/16" black tube should be routed from the "P" port fitting of the pneumatic assembly manifold to the filter regulator assembly. The filter regulator should be mounted in a convenient location near the applicator where it will not interfere with operation and can easily be drained. Multi-position mounting holes are provided on the u-arm for this purpose.

Be sure to mount the filter regulator with the bowl and drain pointing straight down. Mounting at an angle or upside down will cause the regulator to function incorrectly.

YELLOW TUBING

BLACK TUBING (1/4")

GREY TUBING

YELLOW TUBING

BLACK TUBING (5/16")

GREY TUBING

BLACK TUBING (1/4")

BLUE TUBING
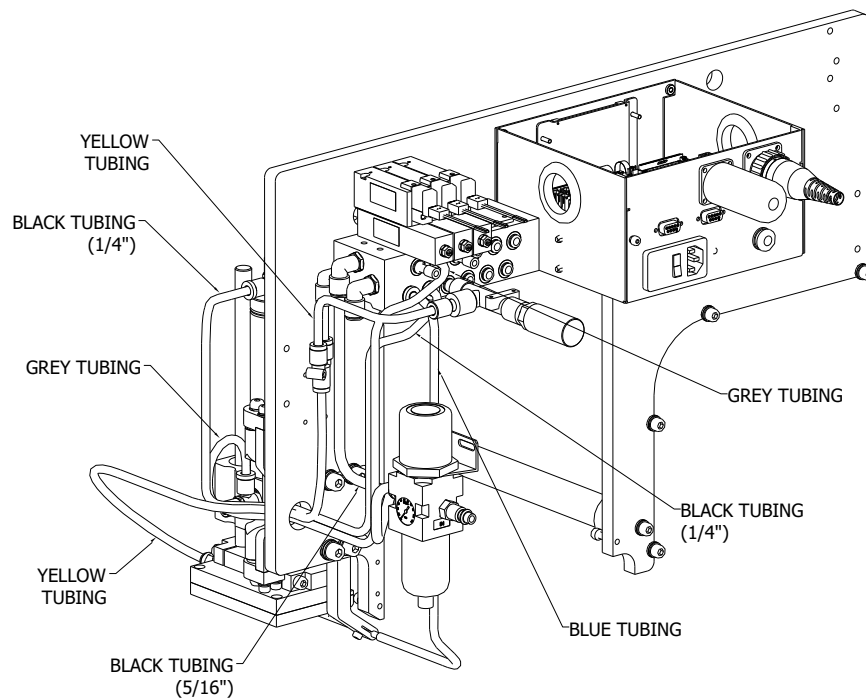
Shown with U-Arm removed for routing illustration.

Insert the 1/4" black, blue and grey tubes into the appropriate fitting in the manifold. A color cap on the fitting will aid in selecting the correct port. Install the yellow tube into the "Y" fitting on the vacuum generator, again looking for the colored cap designating the correct location. Replace the back cover and reconnect any cables disconnected during removal.
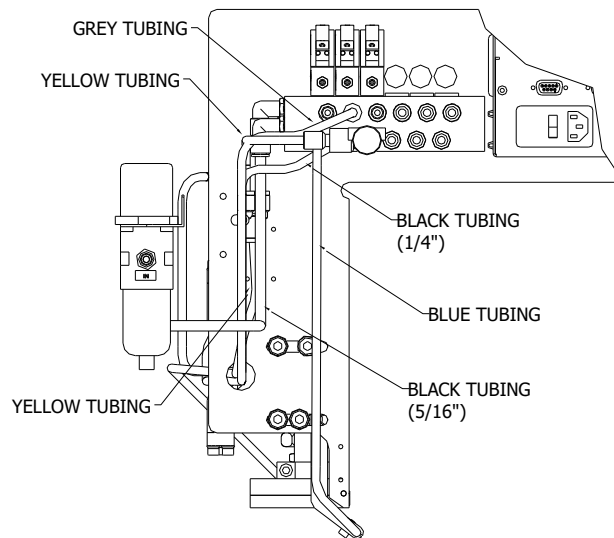
3.11.2 Centerline Tamp Module Installation

Centerline Tamp modules mount to the Model 252 baseplate in the same location and with the same fasteners. There are two mounting options provided for standard installation and special application situations.

FIXED POSITION MOUNTING PLATE

CENTERLINE TAMP ASSEMBLY MOUNTING (RIGHT HAND SHOWN)
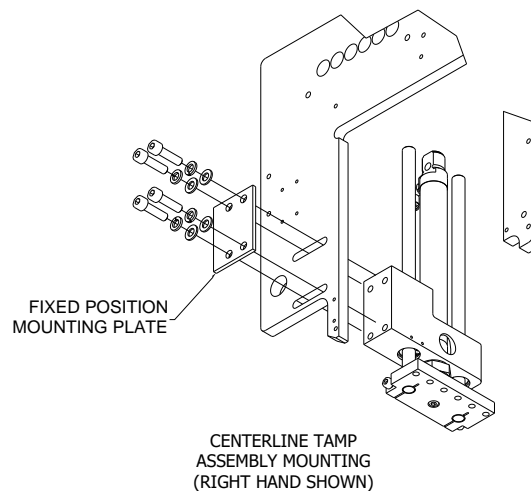
Locate the tamp module and remove the four M8 cap screws from the back along with the position adapter plate. The preferred mounting is the fixed position and uses the adapter plate provided. Place the adapter plate on the rear of the faceplate with the holes closest to the edge closest to the peel edge. The positioning tabs will fit in the slots. Align the tamp module with the holes in the adapter plate and install the four M8 screws. If adjustable mounting is required, remove the fixed position mounting plate, align the tamp module with the slots in the faceplate and install the four M8 screws. Retain the position adapter plate for possible future application requirements. The series of six holes in the lower plate of the module should face towards the peel tip. If they do not, the tamp module must be reversed prior to installation. Tighten the M8 cap screws using a 6mm hex wrench. The exact position of the tamp module is not important at this stage. Finally, locate the vacuum tamp pad, which is specific to the label size being used, and remove the two M6 cap screws. Align the tamp pad with the bottom of the adapter plate, making sure the M6 hole closest to the faceplate matches the tamp adapter plate hole closest to the faceplate. Install both M6 cap screws, be sure the pad is square to the plate and tighten using a 5mm hex wrench.

The pneumatic connections are the same as the non-centerline version except the connections on the air cylinder are direct without a flow control.

3.11.3 252 Tamp Flow Control Kit

The 252 Tamp Flow Control Kit is supplied as pieces and will need to be assembled before installation. See the Drawings and Diagrams section as needed for reference. For best results, install the 1/4" tube to 1/8NPT fitting on each flow control first. Then install a 1/4" tube nipple in each of those fittings. On one of the assemblies, install the plug-in elbow tube fitting on the nipple and the black color cap on the output of the flow control. On the other flow control, install the gray color cap on the output of the flow control. Disconnect the black and gray tubes for the tamp cylinder from the rear of the pneumatic module. Install the flow control with the elbow tube fitting in the pneumatic module port with the black color cap. It is recommended to position the elbow between the blue tubing and the orange plug above it. Install the other flow control (gray color cap) in the port identified with the gray color cap. Install the gray and black tamp cylinder tubes in the flow controls following the color code. The tamp cylinder extend and retract speeds can now be adjusted with the flow controls in the same manner as the adjustable tamp modules. See Section 5.14.4 - Setting the Tamp Motion for instructions.

3.11.4 Air Assist Bracket and Tube

Next, install the air assist bracket and tube. Locate the air assist bracket, a black slotted part that resembles a lower case "j" and install it on the rear of the baseplate. Using a 3mm hex wrench, install the M4x20 cap screws, split and flat washers, to affix the bracket to the baseplate. Using the same 3mm hex wrench, loosen the small M4x12 clamping cap screw at the lower end of the clamp. Locate the air assist tube, a stainless steel tube with a series of small holes along the length. Note that the holes are located nearer to one end of the tube than the other. Also, the end of the tube with the nearest holes is plugged. Insert the non-plugged end into the front of the bracket and slide the tube through the bracket until the plugged end reaches the outboard side of the peel tip. The holes in the air assist tube should roughly match the upward and outward angle of the slot in the air assist bracket. Tighten the clamp screw with the 3mm hex wrench. Finally, install the blue tube over the end of the air assist tube until approximately 1/4 to 1/2 inch of the air assist tube is inside the blue tube.

3.12 Service Tamp Assembly

The service tamp assembly, like the standard tamp assembly, allows a direct contact method for applying labels to products or packages. The additional service feature allows the tamp pad and air cylinder/bearing block portion of the tamp assembly to be rotated in an outward direction. This allows for easier access when servicing the engine or performing tamp pad change-over operations. The service tamp module is available in 2", 4", 6", and 8" stroke lengths. Refer to the standard tamp assembly positioning adjustment instructions to adjust the service tamp assembly. Unlike the standard tamp assembly, the air assist bracket and tube is included as part of the service tamp assembly. Once again, adjustments are done in the same way as the standard tamp assembly. Refer to the applicator specific Tampjet Upgrade for a non-contact option.

Specific application requirements may require the use of another type of tamp module.

OPERATING POSITION   SERVICE POSITION

TO ROTATE
GRIP HERE
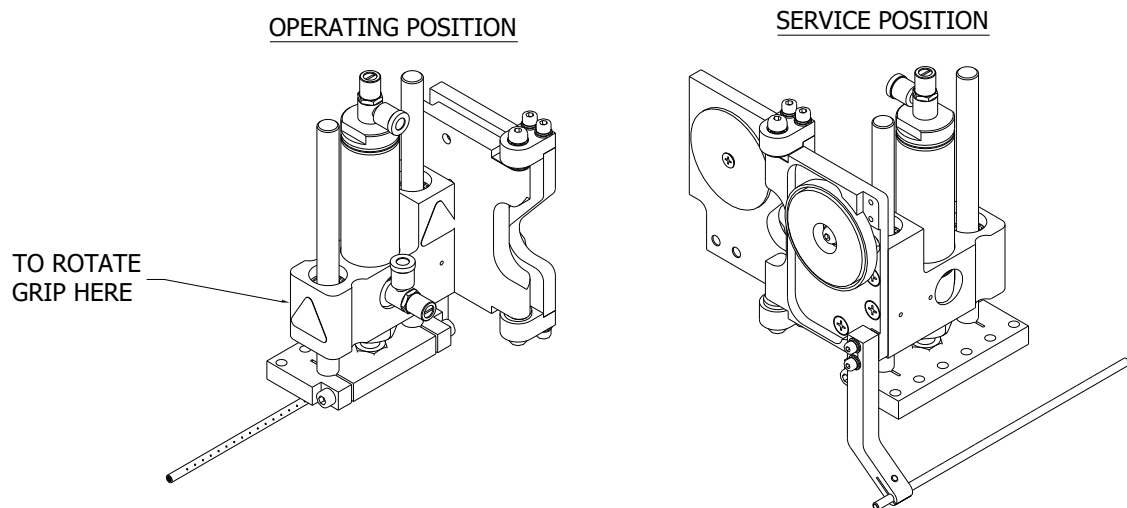
3.13 Centerline Service Tamp Assembly

The Centerline service tamp assembly, like the standard tamp assembly, allows a direct contact method for applying labels to products or packages. The additional service feature allows the tamp pad and air cylinder/bearing block portion of the tamp assembly to be rotated in an outward direction. This allows for easier access when servicing the engine or performing tamp pad change-over operations. The service tamp module is available in 2", 4", 6", and 8" stroke lengths. Unlike the standard tamp assembly, the air assist bracket and tube is included as part of the service tamp assembly. The preferred mounting of the Centerline service tamp is a fixed position. Other M8 mounting holes are provided for adjustable installation. The outer set of M8 holes (3 holes) are used to mount the assembly in a fixed position. Adjustable positioning is attained by using the inner set of M8 mounting holes. Once again, adjustments are done in the same way as the standard service tamp assembly. Refer to the applicator specific Tampjet Upgrade for a non-contact option.

Specific application requirements may require the use of another type of tamp module.
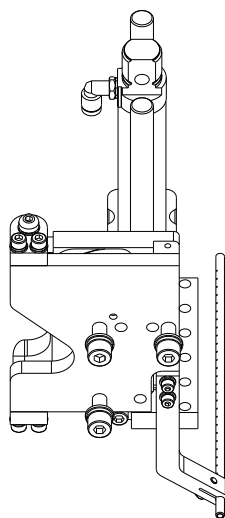
FIXED MOUNTING
POSITION
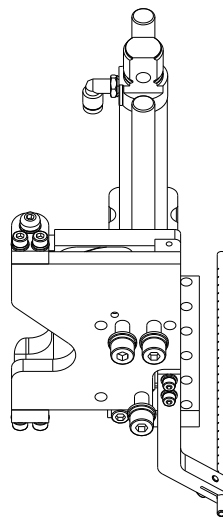
ADJUSTABLE MOUNTING
POSITION

3.14 Tampjet Upgrade

The tampjet upgrade adds an additional valve and plumbing to the pneumatics assembly. This gives the applicator the ability to propel the label from the vacuum tamp pad to the product using a directed blast of compressed air. A flow control is included in this kit to provide adjustment of the tamp pad vacuum pressure.

3.14.1 Tampjet Upgrade Installation

Start by removing the back cover from the applicator using a 3mm hex wrench.
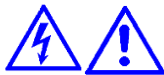
⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

Remove the yellow tubing (1/4") from the "R" port on the pneumatics assembly manifold. Next, remove the large black supply tube from the "P" port fitting on the manifold. Place the tampjet valve in position to be attached to the baseplate. Install the black tubing from the "P" port fitting on the tampjet valve to the "P" port fitting on the pneumatics assembly. Locate the yellow tubing extending from the tamp pad to the "Y" union. Remove the yellow vacuum tube from the single leg of the "Y" and install it in the "A" port fitting on the tampjet valve. Install the yellow tubing from the flow control to the vacuum generator fitting. Using a long 3mm hex wrench, attach the tampjet valve assembly to the baseplate with the included M4 cap screws.

YELLOW TUBE

VACUUM GENERATOR

BLACK TUBE

BLACK TUBE

P R A

TAMPJET VALVE

YELLOW TUBE
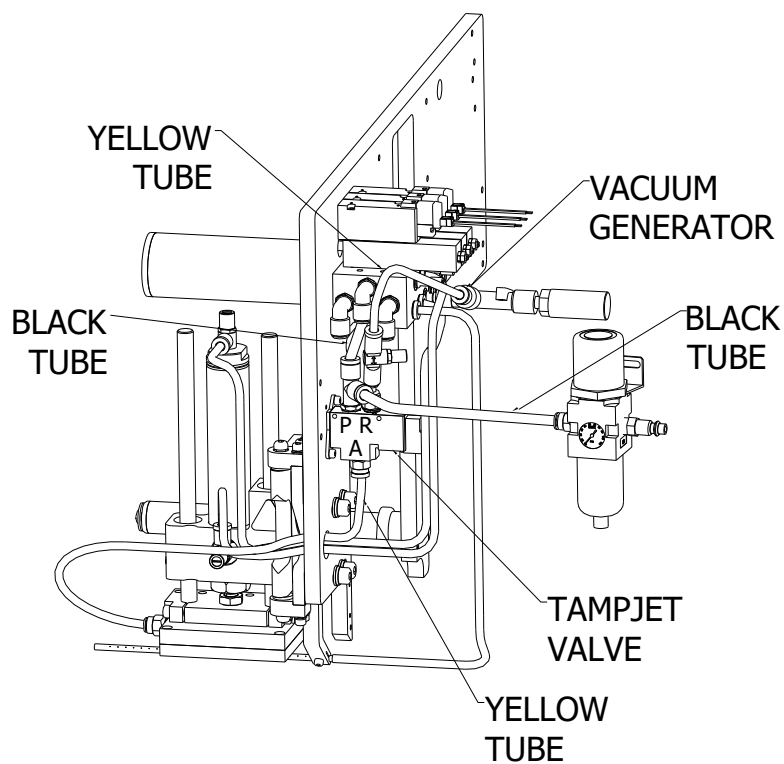
Tampjet Upgrade Installation

Install the black tubing from the filter/regulator assembly in the remaining "P" port fitting on the tampjet valve. Reinstall the back cover using a 3mm hex wrench. Adjusting the flow control will vary the vacuum pressure applied to the tamp pad.

3.15 Smart Tamp Sensor Installation

⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

The smart tamp sensor comes with all the needed hardware for installation. Start by removing the back cover from the applicator using a 3mm hex wrench. Remove the M6 socket head screw from the inboard side of the tamp adapter plate. Place the smart tamp sensor bracket in place and reinstall the M6 screw. Ensure that the angle of the bracket is installed as shown for proper operation. With the tamp air cylinder extended, route and secure the sensor cable along the air tubing through the baseplate to the rear of the applicator. Place the four conductor connector through the grommeted hole on the electrical module. Locating the J6 / SS connector on the pc board, plug the sensor in. Coil up any excess cable and store inside the electronics module. Replace the back cover and reconnect any cables disconnected during removal. Push the tamp pad back to the tamp home position and check for any interference or pinch points that may damage the sensor or cable.

SMART TAMP SENSOR

RIGHT HAND CONFIGURATION

SMART TAMP SENSOR

LEFT HAND CONFIGURATION

NOTE ANGLE DIRECTION
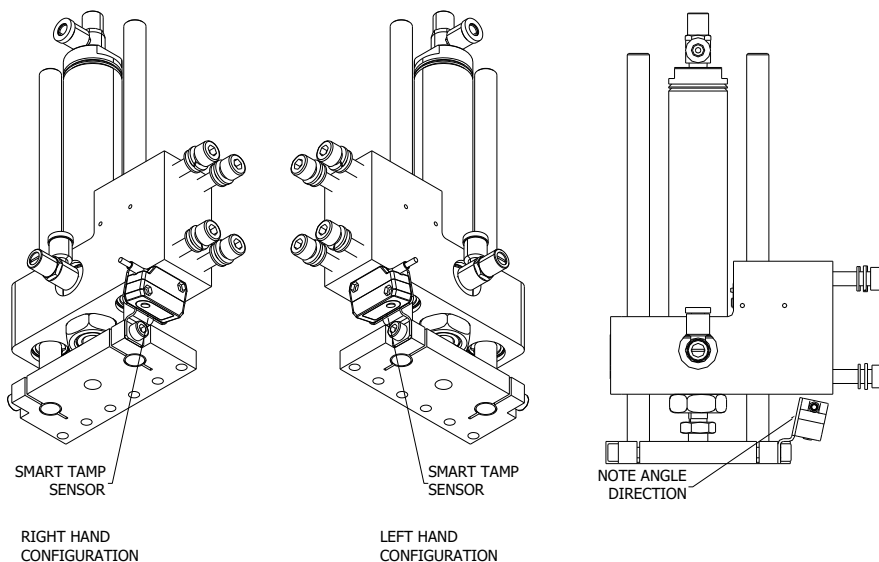
If a left hand configuration is desired, remove the two screws attaching the sensor to the bracket and reassemble as shown. The bracket/sensor assembly will attach to the tamp adapter plate as indicated.

3.16 Tamp Home Sensor Installation

⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

The tamp home sensor comes with all the needed hardware for installation. Start by removing the back cover from the applicator using a 3mm hex wrench. To determine the correct location for installation of the tamp home sensor, refer to the following illustrations for the application module used. After mounting the sensor, route and secure the sensor cable along the air tubing through the baseplate to the rear of the applicator. Place the four conductor connector through the grommeted hole on the electrical module. Locating the J5 / TAMP connector on the pc board, plug the sensor in. Coil up any excess cable and store inside the electronics module. Replace the back cover and reconnect any cables disconnected during removal.

MODEL 252 STANDARD TAMP ASSEMBLY
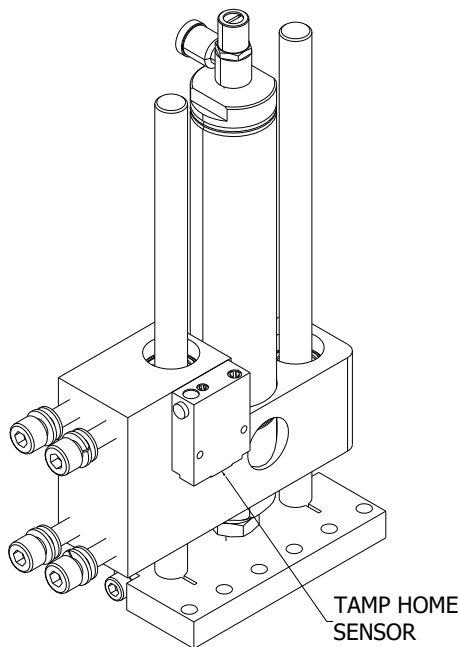
TAMP HOME SENSOR

RIGHT HAND CONFIGURATION

The sensor should be located over the six holes for either a left or right hand tamp configuration. Place the tamp home sensor in place on the side of the bearing block and secure with the two M3 screws and washers provided. The mounting peg, located on the sensor near the attached cable, should face toward the baseplate as shown.

The Tamp Home Sensor used on the Centerline Tamp and Service Tamp modules mounts in the same manner but uses a smaller sensor. The installation instructions are the same with the exception that the cable should face the baseplate as shown instead of the peg on the housing.

MODEL 252 CENTERLINE TAMP ASSEMBLY

TAMP HOME
SENSOR

RIGHT HAND
CONFIGURATION
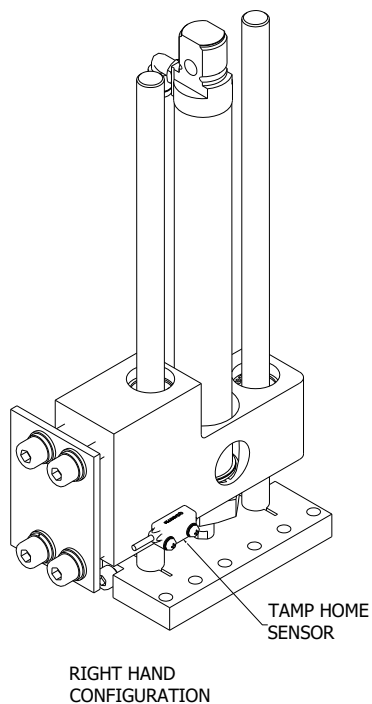
The Tamp Home Sensor used on the Three Panel Tamp Assembly modules mounts on the main mounting plate of the assembly. The complete sensor with bracket assembly attaches to the plate in position over the secondary tamp guide rod. Extend the main tamp assembly air cylinder by hand to provide access to the mounting location. Using a 4mm hex wrench, install the bracket with the two M5 screws and washers provided. Return the main air cylinder to the home position. Return to the main installation instructions to complete the process.

MODEL 252 THREE PANEL TAMP ASSEMBLIES
(SIMILAR ON NU/ND AND RU CONFIGURATIONS)

TAMP HOME
SENSOR ASSEMBLY
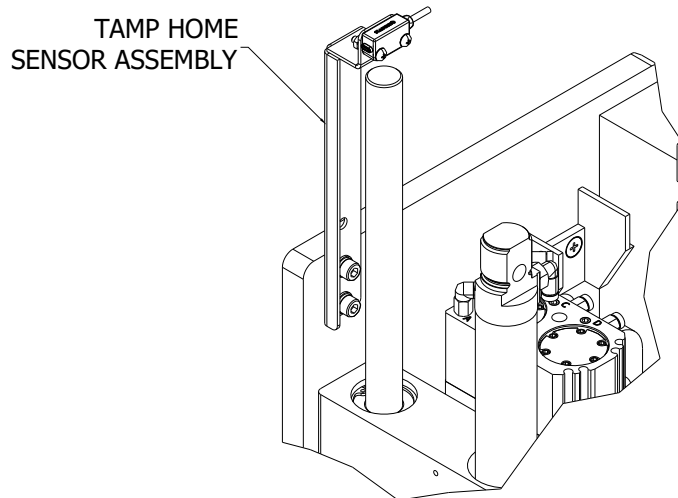
3.17 Swing Tamp Assembly Installation

Start by removing the back cover from the applicator using a 3mm hex wrench.

> ⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

The swing tamp assembly mounts to the baseplate using the same mounting slots as a regular tamp assembly. A spacer block, placed between the baseplate and the swing tamp frame, serves to position the unit at the proper distance from the baseplate. This spacer block is used for all mounting orientations.

To mount the swing tamp, remove the four supplied M8x50 socket head screws, flat, and spring washers, from the unit. Place the spacer block in position on the front of the baseplate over the slots. Insert one of the M8 screws, with washers, through the slots from the rear of the baseplate far enough to support the spacer block. Align the correct swing tamp unit mounting hole, and loosely attach the unit to the baseplate. Continue the process until all four screws have been attached. The series of six holes in the lower plate of the module should face towards the peel tip. Finally, locate the vacuum tamp pad, which is specific to the label size being used, and remove the two M6 cap screws. Align the tamp pad with the bottom of the adapter plate, making sure the M6 hole closest to the faceplate matches the tamp adapter plate hole closest to the faceplate. Install both M6 cap screws, be sure the pad is square to the plate and tighten using a 5mm hex wrench.

The pneumatic connections are very similar to the other tamp assemblies. Locate the tubing that was supplied with the tamp module. There should be a black, blue, yellow, and grey tube in 1/4" diameter. Two flow controls are also included and used to regulate the swing action speed.

> ℹ **The flow controls must be installed correctly to provide the necessary speed control of the swing action. Incorrect installation will result in improper operation.**

TO AIR CYLINDER   TO SOLENOID VALVE

AS2001F
-07D

LARGE ARROW
SIDE

BLACK TUBING (1/4")

GREY TUBING

YELLOW TUBING

GREY TUBING

BLACK TUBING (1/4")

YELLOW TUBING

(2) FLOW
CONTROLS

With the air cylinder extended, install the yellow tube in the fitting located on the tamp pad. Route the tubing to the rear of the applicator through the provided access holes and plug the tube into the "Y" fitting on the pneumatic assembly. Push the grey tube over the end of the barb fitting on the lower end of the air cylinder until approximately 1/4 to 3/8 inch of the barb fitting is inside the grey tube. Push the black tube over the end of the barb fitting on the upper end of the air cylinder until approximately 1/4 to 3/8 inch of the barb fitting is inside the black tube. Route the grey and black tubes through the access hole (with the yellow tube) to the back of the applicator. A color cap on the fittings will aid in selecting the correct port or fitting to connect the tubes to. Plug the black and grey tubes into the color-coded fittings on the pneumatic manifold. By hand, push the tamp pad to the non-extended position and back to the extended position. Ensure that the black, grey, and yellow tubes are not restricted or pinched in any way. Position a flow control along the black tube in the approximate location of the tampjet solenoid valve mounting. Cut the tubing in two and insert the flow control in between the two ends observing the proper arrow orientation as indicated in the diagram. Repeat the process to install the flow control in the grey tube. Again, by hand, push the tamp pad to the non-extended position and back to the extended position. Ensure that the black, grey, and yellow tubes are not restricted or pinched in any way. It may be necessary to trim the tubing lengths for the best routing option. Replace the back cover and reconnect any cables disconnected during removal.

3.18 Dual Panel Tamp Assembly Installation

Start by removing the back cover from the applicator using a 3mm hex wrench.

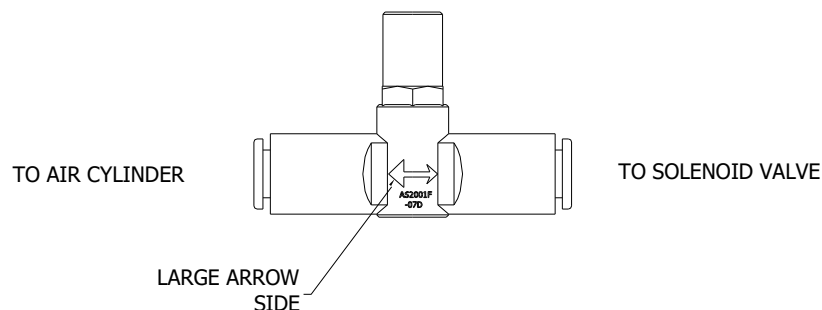⚠️⚠️ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

The dual panel tamp assemblies mount to the baseplate using the same mounting slots as a regular tamp assembly. The ID100241-12-XX units mount directly to the slots in the same manner as the other tamp units. The ID100240-12-XX units utilize a clamping plate arrangement to secure the unit to the baseplate using the same slots.
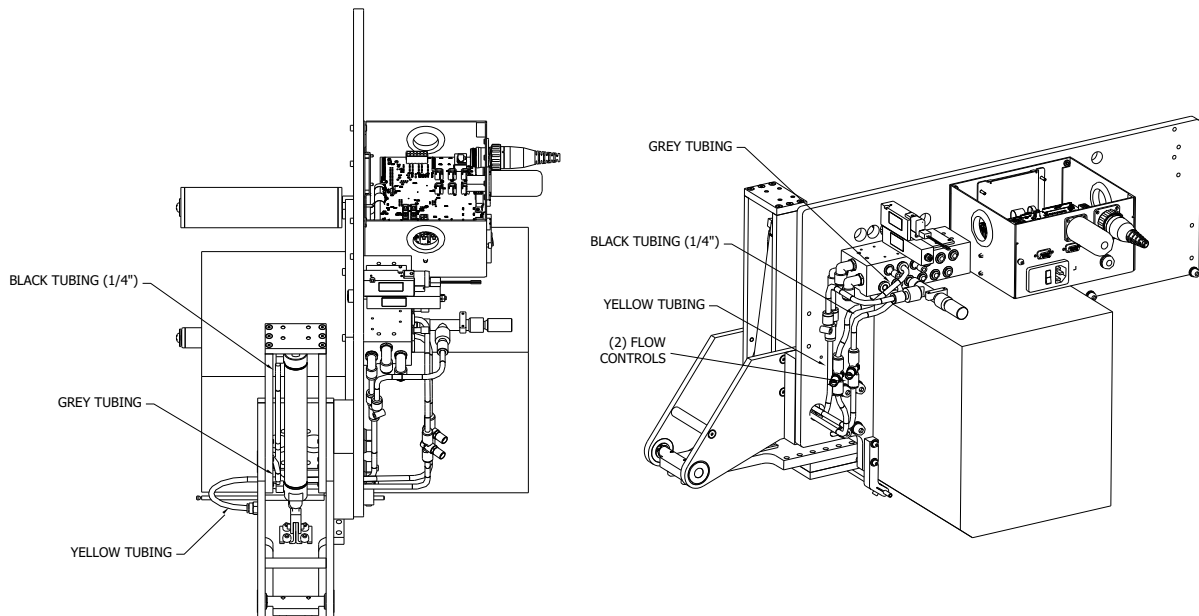
To mount the dual panel tamp, remove the four supplied M8x50 socket head screws, flat, and spring washers, from the unit. Place the tamp unit in position on the front of the baseplate over the slots. Insert one of the M8 screws, with washers, through the slots from the rear of the baseplate far enough to support the spacer block. Align the correct unit mounting hole, and loosely attach the unit to the baseplate. Continue the process until all four screws have been attached. The series of six holes in the lower plate of the module should face towards the peel tip. Finally, locate the vacuum tamp pad, which is specific to the label size being used, and remove the two M6 cap screws. Align the tamp pad with the bottom of the adapter plate, making sure the M6 hole closest to the faceplate matches the tamp adapter plate hole closest to the faceplate. Install both M6 cap screws, be sure the pad is square to the plate and tighten using a 5mm hex wrench.

Dual Panel Tamp units require the addition of an extra solenoid valve to the pneumatic manifold unit. It may be necessary to loosen or remove the screws attaching the pneumatic manifold. Locate the circles on the nameplate label surrounding the pneumatic gauges. With a sharp object, cut out the inner portion of the circle indicating where the solenoid valve/regulator is to be added. Use a small screwdriver to remove the blanking plate and gasket next to a valve/regulator on the pneumatic manifold assembly. Carefully align the provided solenoid valve, valve gasket, regulator, and regulator gasket. Attach the components to the manifold with the screws included with the regulator. Ensure that the gaskets are properly aligned, intact, and not pinched. Locate the tubing fittings on the manifold for the new valve/regulator just installed. On the upper tubing connection fitting, install the supplied green color cap. Place the red color cap on the lower tubing connection fitting. Install the wiring harness on the solenoid valve and route the wiring with the harnesses from the other valves. Plug the connector into the J20 connection on the Electrical Module PCB. Ensure that the regulator gauges fit in the cutout holes and reinstall the pneumatic module.

The pneumatic connections are very similar to the other tamp assemblies. Locate the tubing that was supplied with the tamp module. There should be a black, blue, yellow, red, green, and grey tube in 1/4" diameter. Two flow controls are also included and used to regulate the swing action speed.

i **The flow controls must be installed correctly to provide the necessary speed control of the swing action. Incorrect installation will result in improper operation.**

TO AIR CYLINDER   AS2001F -07D   TO SOLENOID VALVE

LARGE ARROW SIDE
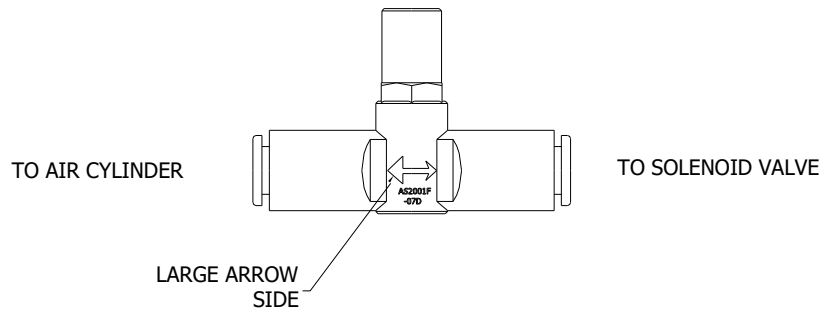
With both of the air cylinders extended, install the yellow tube in the fitting located on the tamp pad. Route the tubing to the rear of the applicator through the provided access holes and plug the tube into the "Y" fitting on the pneumatic assembly. With the yellow tubing installed, align the smart tamp sensor wiring along the same path. Push the connector and wire through the same hole in the faceplate to the rear of the machine. Route the connector through one of the holes in the electronics module and connect it to the J6/SS connector on the PC board.

Push the green tube over the end of the barb fitting on the lower end of the swing tamp air cylinder until approximately 1/4 to 3/8 inch of the barb fitting is inside the tube. Push the red tube over the end of the barb fitting on the upper end of the swing tamp air cylinder until approximately 1/4 to 3/8 inch of the barb fitting is inside the tube. Route the green and red tubes through the access hole (with the yellow tube) to the back of the applicator. A color cap on the fittings will aid in selecting the correct port or fitting to connect the tubes to. Plug the red and green tubes into the color-coded fittings on the pneumatic manifold. By hand, push the tamp pad to the non-extended position and back to the extended position. Ensure that the wiring and the red, green, and yellow tubes are not restricted or pinched in any way. Position a flow control along the red tube in the approximate location of the tampjet solenoid valve mounting. Cut the tubing in two and insert the flow control in between the two ends observing the proper arrow orientation as indicated in the diagram. Repeat the process to install the flow control in the green tube. Again, by hand, push the tamp pad to the non-extended position and back to the extended position to verify no tubing issues.

Install the grey tube in the flow control on the lower end of the 12" tamp air cylinder. Install the black tubing in the flow control on the upper end of the tamp air cylinder. By hand, push both of the air cylinders to the extended position. Route the black and grey tubing with the other tubes already installed. Connect the black and grey tubes to the indicated tubing fittings on the pneumatic manifold. By hand, extend and retract all of the air cylinders to ensure that none of the tubes or wires are restricted or pinched in any way.

It may be necessary to trim the tubing lengths for the best routing option. After all the tubing has been installed, coil up any excess wire and store inside the electronics module. Replace the back cover and reconnect any cables disconnected during removal.

3.19 Three Panel Tamp Assembly Installation

Start by removing the back cover from the applicator using a 3mm hex wrench.
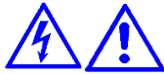
⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

The Three Panel Tamp Assemblies mount to the baseplate using the same mounting slots as a regular tamp assembly. The mounting plates have two sets of four M8 threaded mounting holes. The outer four are used for the preferred fixed mounting position. The other four are for the adjustable mounting position.

To mount the Three Panel Tamp, remove the four supplied M8x30 socket head screws, flat, and spring washers, from the unit. Place the tamp unit in position on the front of the baseplate over the slots. Insert one of the M8 screws, with washers, through the slots from the rear of the baseplate. Align the correct unit mounting hole, and loosely attach the unit to the baseplate. Continue the process until all four screws have been attached. The series of six holes in the lower plate of the module should face towards the peel tip. Finally, locate the vacuum tamp pad, which is specific to the label size being used, and remove the two M6 cap screws. Align the tamp pad with the bottom of the adapter plate, making sure the M6 hole closest to the faceplate matches the tamp adapter plate hole closest to the faceplate. Install both M6 cap screws, be sure the pad is square to the plate and tighten using a 5mm hex wrench.

Three Panel Tamp units require the addition of three extra solenoid valves to the pneumatic manifold unit. It may be necessary to loosen or remove the screws attaching the pneumatic manifold. Locate the circles on the nameplate label surrounding the pneumatic gauges. With a sharp object, cut out the inner portion of the circle indicating where the solenoid valve/regulator is to be added. Use a small screwdriver to remove the blanking plate and gasket next to a valve/regulator on the pneumatic manifold assembly. Carefully align the provided solenoid valve, valve gasket, regulator, and regulator gasket. Attach the components to the manifold with the screws included with the regulator. Ensure that the gaskets are properly aligned, intact, and not pinched. Locate the tubing fittings on the manifold for the new valve/regulators just installed. Install the six 1/4" to 1/8" reducer fittings in the "A" and "B" ports for the three new valves. Refer to the pneumatic schematic to determine the color cap for each port and install them on the fitting. Refer to the 252 wiring schematic and connect the wiring harness for each solenoid valve to the connection on the Electrical Module PCB. The connections are also noted on the pneumatic schematic. Route the wiring with the harnesses from the other valves. Ensure that the regulator gauges fit in the cutout holes and reinstall the pneumatic module.

The basic pneumatic connections are very similar to the other tamp assemblies. Locate the tubing that was supplied with the tamp module. There should be a black, blue, and grey 1/4" diameter tubes that are not contained within the energy chain attached to the Three Panel Tamp Assy. The only tube not pre-installed on the Three Panel Tamp Assembly is the blue tube. The rest of the required tubing is installed inside the energy chain and will only require routing and installation on the pneumatic manifold. Most, if not all, of the tubing can be cut to length when installed to eliminate any excess.
Install one end of the 1/4" blue tube over the end of the air assist tube until approximately 1/4" to 1/2" of the air assist tube is inside the blue tube. On the back of the pneumatic module, locate the 1/4" fitting with the dark blue color cap. Push the other end of the dark blue tube into the fitting until properly seated. Install the black and grey tubes on the back of the pneumatic manifold in the color coded fittings provided. Installation of the 1/4" yellow tubing is dependent of the configuration of the printer/applicator.
If the Tampjet Upgrade has been installed, refer to the section on Tampjet installation for the yellow tubing installation instructions. If no Tampjet Upgrade is present, install the yellow tube into the "Y" fitting on the vacuum generator, again looking for the colored cap designating the correct location. The remaining six 1/8" tubes are to be routed to the color-coded fittings on the rear of the pneumatic module. Any excess length can be eliminated from the tubes as the best routing is determined. Route the wiring for the Smart Tamp Sensor to the Electronic Module PCB and plug the 4 conductor connector into the J6 connector. Route the wiring for the Tamp Home Sensor to the Electronic Module PCB and plug the 4 conductor connector into the J5 connector. Coil up any excess wire and store inside the electronics module. Replace the back cover and reconnect any cables disconnected during removal.

3.20 Corner Wrap Assembly/Centerline Corner Wrap Assembly

The corner wrap units attach to the 252 or 252N baseplate utilizing the same dedicated slot configuration as a standard tamp unit. Start by removing the back cover from the applicator using a 3mm hex wrench.

Before attempting to service machinery, the machine must be turned off and the power and air locked out.
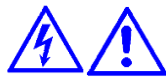
To mount either of the corner wrap unit, remove the four supplied M8x30 socket head screws, flat, and spring washers, from the unit. Place the mounting block in position on the back of the baseplate with the four mounting holes aligned with the slots. Insert the M8 screws with washers, through the slots from the front of the baseplate, and attach the unit to the baseplate. Adjusting the final position of the unit will not be important at this time. Locate the fan power cord and route the connector through the grommeted hole on the closest side of the electronic module. Insert the plug into the 2 conductor connector on the PCB marked "J7" / "Fan". Replace the back cover and reconnect any cables disconnected during removal.

3.21 System Status Output
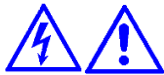
Before attempting to service machinery, the machine must be turned off and the power and air locked out.

Start by removing the back cover from the applicator using a 3mm hex wrench. Next, install the three yellow relays in the sockets marked K2, K3, and K4 on the main circuit board. Looking down on the top of the relay with the text showing, the black line on the relay must be to the inside of the board. Carefully install the black solid-state relay in the socket marked K1 on the main circuit board. Locate and remove the round hole plug on the back of the electronics module. From the outside of the electronics module, push the rectangular twelve conductor connector through the hole. Install the internal wiring harness with the four fasteners supplied in the kit. Plug the twelve conductor connector in the socket on the board marked J15. Replace the back cover and reconnect any cables disconnected during removal. Return power to the printer/applicator and set the outputs per the user manual. See the Drawings and Diagrams section for the user connection pin-out for the system status output kit.

3.22 Low Label Detector Installation

The low label sensor has been factory installed if ordered with the applicator. No adjustments are available.

SENSOR MOUNTING
BRACKET

LOW LABEL
SENSOR

If the low label sensor has been purchased as a separate item, it must be installed prior to use. Start by removing the inner flange and outer retainer as well as the support hub. Next, remove the back cover from the applicator using a 3mm hex wrench.

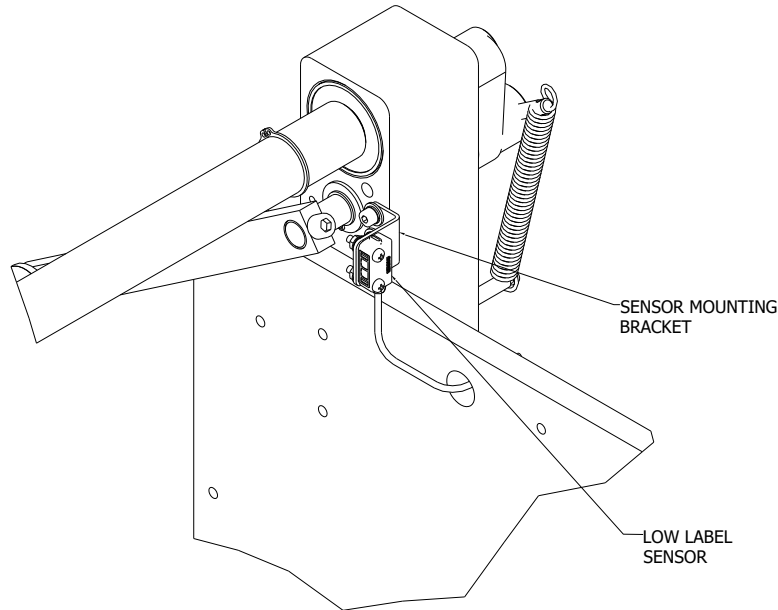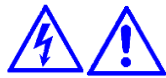**Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

Using a 3mm hex wrench, install the low label sensor on the side of the unwind mounting block as shown above. Route the sensor cable though the access hole in the baseplate and the access hole in the electronics module. Plug the 4 pin connector into the J17 / LL connector on the PCB. Secure any excess wire (coil inside electronics module), reinstall the back cover, the unwind module flanges, and return power to the unit.

4. User Interface Overview

The touch screen graphical user interface is the primary means of interaction between the user and the applicator settings. Through the various screens and icons, the operator can make changes to the configuration, obtain status of the applicator and control the functionality.

> **i** **Where up and down arrows appear, pressing the arrows scrolls through the available selections. When making a selection, with a checkmark, numerical value, or descriptive word, the "Enter" icon ↵ must be pressed to save the selection.**

4.1 Initial Startup Screen

Upon initial power up, the screen will display the ID Technology logo.

ID TECHNOLOGY
FW Ver. 1.40

A boot delay is provided to allow time for the print engine to perform a power on self-test. After that delay, the main menu will be displayed and ready to accept input signals.

4.2 Main Menu

The main user interface menu allows the operator to control the basic behavior of the applicator. The display is an icon based control that should take operators a short time to understand once they are familiar with the operation of the applicator.

4.2.1 ID Logo

The ID logo, located in the upper left of the display, is present on many of the screens. While in the Main menu, double pressing the ID logo icon rotates the screen in 90 degree increments to orient the screen to a convenient viewing position. This feature is desirable in cases where the printer/applicator may be positioned such that the operator interface would not be easily viewed.

4.2.2 Status

The status icon, directly to the right of the ID logo, provides a visual verification of the current machine operation settings. Use the up and down arrows to scroll through the various settings

Status Menu

Print S

Normal
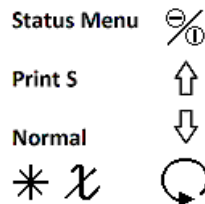
4.2.3 Security

The security icon opens the security menu which gives users the ability to limit access to the operation parameters of the Model 252. At the most limited setting, the operator only has the ability to view the status menu and recall any of the four saved setups. If it is enabled, the operator may also have the ability to change the Delay Apply value in order to alter the label position on the product. All other functions require a PIN number to be entered before access is allowed. Once logged in, pressing the χ icon several times to back down to the Password Entry menu will effectively log out of the protected area.

SECURITY MENU

Change Pin

Enable Security

Delay Access

PIN ENTRY SCREEN

2 1 1 2

❑ Change Pin – Once logged in, you have the ability to select a different PIN for the system. By using the same method as Password Entry above, select a new four digit PIN combination.

❑ Enable Security – Here, the user must enter the correct PIN. Pressing the ↵ icon will validate the entry and either allow or deny access. The default PIN when shipped from the factory is 1231. If you forget your PIN number, you will need to call for a service technician, reload the firmware or return the module to the factory.

❑ Delay Access – This menu item lets the user determine if the Delay Apply setting can be altered without requiring the PIN number. When set to Yes, there will be an additional item at the main menu level to access the Delay Apply setting. This setting is saved with each setup and can be set different for each of the four saved slots.

Keys to remember about Delay Access:
- Changing the values here will not affect stored setups. To apply the change to a stored setup, it is necessary to log in and re-save the appropriate setup.

- The Delay Access setting is stored with each setup. It is possible to allow access for some setups and deny access for others.

4.2.4 Online/Offline

The online/offline icon allows the operator to disable the photocell input to the printer/applicator. When the "Offline" function is selected, the icon will be shown with a dark shaded background. In addition, if the optional three stage beacon is installed, the red indicator lamp will be illuminated.

4.2.5 Save Setup

The save setup icon opens the Save Setup screen. Specific machine configurations can be saved to aid in changeover operations.
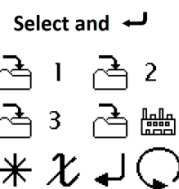
4.2.6 Vacuum Mode

Pressing the Vacuum mode icon accesses the menu for control of the vacuum generator. The vacuum generator is used to hold the label on the tamp pad prior to application to the product. There are two modes of operation controlling the valve that supplies compressed air to the vacuum generator.

Select and ↵

Normal
Conserve Air ✓

✳ 𝒳 ↵ ↻
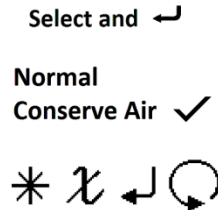
4.2.7 Print Mode

The print mode icon opens the print mode menu to allow setting the print sequence options. The sequence of operation between the printer and the applicator can be set to one of three options. As with the Vacuum mode, selection of an option will be indicated with a check mark. Save the selection by pressing the Enter icon.

NORMAL ✓

✳ 𝒳 ↵ ↻
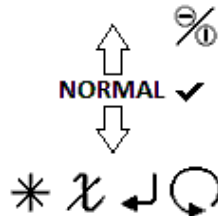
4.2.8 Apply Mode

The apply mode icon opens the (tamp) apply mode menu to allow setting the tamp application type. The mode (sequence of operation between the printer and the applicator) can be set to one of five options: Tamp, Tampjet, Reverse Tampjet, Airjet, or Passive

TAMP ✓

✳ 𝒳 ↵ ↻
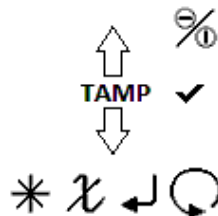
4.2.9 Recall Setup ⌣

The recall setup icon opens the Recall Setup screen.
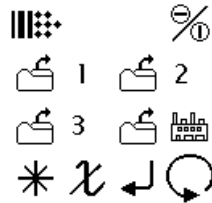
The three buffers containing custom setup configurations can be accessed from this menu. The fourth recalls the factory defaults or the settings saved by the technician at installation. Refer to the setup table in the Save/Recall section of the manual to determine the desired configuration and which buffer it is stored in.

4.2.10 Outputs ⇨

Pressing the Outputs icon will open the Outputs screen.
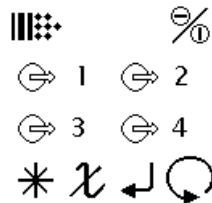
Each of the four outputs can be selected to open the configuration screen for that output.

OUTPUT 1

READY APPLY✔
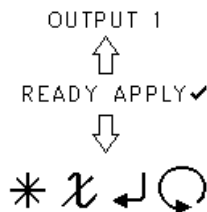
Each individual output can be configured to provide a total of four signals to the system status output connector. Selectable signals include Online, Supply Out, Supply Low, Ribbon Out, Label Out, Ribbon Low, Label Low, No Select, Accessory, Apply Ready, and Tamp Home.

> **i** **NOTE: The Accessory output signal is not available on 3 Panel Module equipped printer applicators.**

4.2.11 Dwells/Delays ⏱

Press the Dwells/Delays icon to access the screen for timing of specified actions or signals.
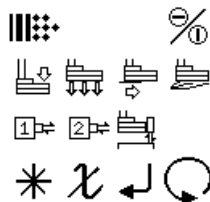
The individual Dwell and Delay icons and settings are examined in the Application Setup section.

4.2.12 Multiplier ✳

When changing the times in the Dwells and Delays section, there are two features to take note of:

Pressing the Multiplier icon when changing a time value will change the amount that each press of the up or down arrows will alter the value. The default when entering a screen is a jump of one. Pressing the icon once changes the jump value to ten. Pressing the icon a second time, the jump value will change to one hundred. Pressing the icon for a third time results in a change of one thousand. Pressing the icon again returns the jump value to single digits.

Changing the values affect the machine while it is running. For example, while the line is running, increasing or decreasing the Delay Apply value will affect the label position on the product in real time. Once the desired value is displayed, pressing the enter ↵ icon will set the value as current. If you do not wish to keep the change, simply press the back 𝒳 icon to discard the change and return to the previous value.

4.2.13 Back/Cancel 𝒳

The Back icon will cancel any unsaved changes and display the previous screen each time it is pressed.

4.2.14 Enter ↵

The Enter icon is used to select the item or save the value chosen.

4.2.15 Jog ↺

The Jog icon activates the printer/applicator for one machine cycle subject to built-in repeat time limitation and current print engine status.

4.2.16 Dual Panel

The Dual Panel firmware will display this icon to allow configuration of the dual panel modes.

4.2.17 Three Panel

The Three Panel firmware is specific for the application module and will have a dedicated display screen. Many, if not most, of the screens and functions will remain the same. Refer to the Three Panel Module User Interface section of this manual.

5. Application Setup

Once the applicator has been unpacked, attached to the stand and positioned on the production line, it is ready to be set up to apply labels to the product.

⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

5.1 Loading Labels

The first step in setting up the application is to load labels on the applicator. Begin by removing the unwind outer media retainer.

1) Extra Support Hub

    In cases where wide labels are used, it may be helpful or necessary to install the extra support hub. The extra hub can help support the added weight of wide labels on larger rolls. Place the extra support hub on the unwind shaft with the setscrew over the flat on the shaft. Position the hub so that it is located over half the width of the labels from the inner hub. Tighten the setscrew on the flat to secure the hub.

2) Lock Spur Positioning

    To load a roll of labels, rotate the inside unwind flange and hub until the lock spur on the hub is on the top. In a reels-up position, it may be necessary to rotate the lock spur to a "least exposed" position. This will aid in placing the label roll core on the hub prior to locking the core to the hub. As an added measure to ensure that the label roll core engages the lock spur, "flag" a small portion of the core liner toward the inside of the core. This adds an uneven surface to provide better grip with the lock spur.

3) Label Roll Installation

    Place the roll of labels on the unwind spindle. The roll should be positioned so the web unwinds from the top of the roll towards the peel tip. With the label core flush with the inner flange surface, rotate the flange and unwind shaft until the lock spur is no longer facing upward. Holding the unwind inner flange, turn the label roll until the lock spur grips the inner core tightly. Reinstall the outer media retainer and twist roughly ¼ turn to lock it in place.

4) Label Threading

   Next, peel off approximately 30 inches of labels from the liner and dispose. This will make threading and setup easier. Thread the web around the dancer roller, over the 2" idler roller, under the 1" idler roller, and to the print engine media entrance. Refer to the appropriate print engine documentation for routing of the web. If using the apply only module, follow the supplied threading diagram on the unit.

From the exit of the print engine or apply module, pass the web around the rewind dancer roller, around the 1" idler roller and then back over the roller to the waste take up. Continue to wrap the liner around the waste take up starting from the bottom. Install the lock pin to attach the liner to the waste take up. Align the front edge of the first label on the web with the peel edge.

> **i** On the applicator, be sure the liner passes between the peel edge and the air assist tube. If the liner goes around the tube, the label will not dispense properly onto the vacuum pad.

> **i** The end of each roller along the label web path has a washer on which you will find a directional arrow. The arrow indicates the direction that the label web should pass over the roller when correctly installed.

Refer to the appropriate label threading diagram for assistance as needed.
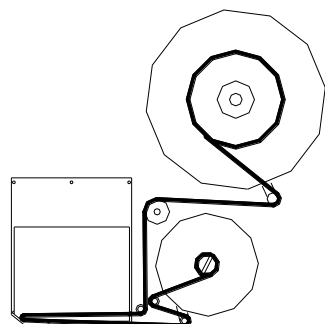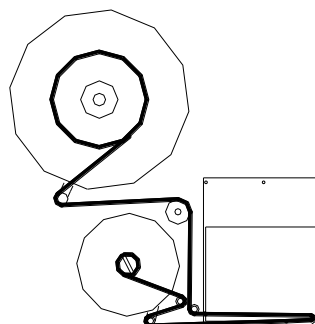
LH THREADING DIAGRAM   RH THREADING DIAGRAM
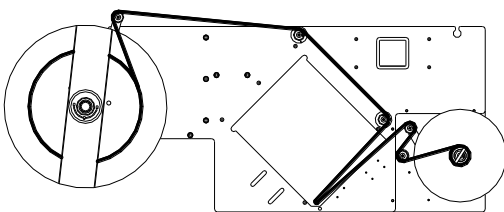
252N LH THREADING DIAGRAM   252N RH THREADING DIAGRAM
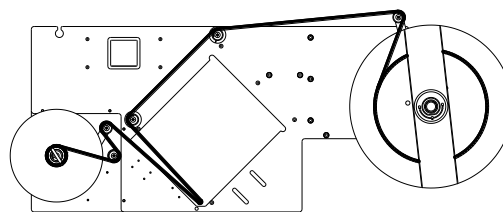
When a printer is used, follow the instructions for the print engine to install printer ribbon in the unit. Once the labels have been loaded onto the printer/applicator, the application specific configuration can be done.

Apply power to the printer/applicator and the print engine. Press the Applicator Online/Offline icon to take the system offline. Connect the air supply to the filter regulator and adjust to the appropriate pressure as shown in the Setting the Pressures section.

5.2 Vacuum Mode

To set the Vacuum Mode to the desired function, press the Vacuum mode icon. The screen displayed will show the available options. Pressing "Normal" or "Conserve Air" on the screen will result in a check mark indicating which option is selected. Pressing the Enter icon ↵ saves the selection. To provide for a more economical and longer operational life, the Conserve Air mode is recommended.

Select and ↵

Normal
Conserve Air ✓

✳ 𝒳 ↵ ↻
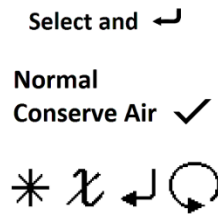
❑ Normal – In this state, the vacuum is always running when the unit is powered up and there is a supply of compressed air available.

❑ Conserve Air – This mode turns on the vacuum at the start of label feed and turns it off when the apply cycle is complete. When operating in reverse print mode or not printing labels in batches, this will reduce the amount of compressed air the machine consumes and also reduce the amount of dirt and debris that will be drawn in through the tamp pad.

5.3 Printer Mode

When using a print engine, the print mode must be set to the proper function sequence. Use the up and down arrows to select the mode required. Either press the screen to the right of the text (Normal, Reverse, or Data …) to select the mode and save it by pressing the Enter icon or simply press the Enter icon. A checkmark should indicate the selection has been made.

⇧ ‰
NORMAL ✓
⇩
✳ 𝒳 ↵ ↻
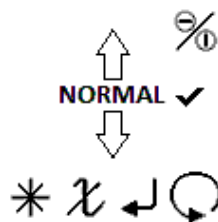
5.3.1 Normal Mode

In Normal mode, data is downloaded to the print engine buffer from a computer or other label generating device, a label is printed, and dispensed to the application module. The air assist and rewind module will be activated only during the time the label is being dispensed. When the product detector photocell senses a product, the applicator is triggered, and the label is applied to the product. At the end of the application cycle, another label is automatically printed and dispensed to the application module. This cycle is repeated until the label quantity (operator designated) has been reached.

5.3.2 Reverse Mode

With the Reverse mode selected, label data and quantity is loaded into the print engine buffer. When the product detector senses a product, the label is dispensed to the application module. The air assist and rewind again will be active only while the label is being dispensed. The application module is activated and the label is applied to the product. User adjustable delays allow the operator to adjust the time delay from when the photocell input is triggered to when the applicator begins the labeling cycle. This setting allows the operator to accurately place the label on the product in the desired location.

5.3.3 Data Driven Mode

If you select the Data Driven mode print sequence, the system will be controlled by another system and typically used with a PLC. Data is downloaded to the print engine buffer and is printed only when given information from another upstream system. (i.e.: a weight scale or a bar code scanned on the side of a product) When the external system transfers data to the print engine, a label is printed and dispensed to the application module. The air assist and rewind module are active while the label is being dispensed. As soon as the transfer is complete, the application module is activated and the label is applied to the product. The cycle completed, the printer/applicator waits for another trigger signal from the external system. The cycle will continue until the external system is deactivated or a fault condition exists within the printer/applicator.

i **Specialty firmware versions may not support this mode of operation. These versions will not display this option.**

5.4 Apply Mode

When using a print and apply application module, the apply mode must be set to the proper operation sequence. Using the up and down arrows, scroll through the available options. Pressing the screen to the right of the text selects that option which is indicated with a check mark. Press the Enter icon ↵ to save the entry.
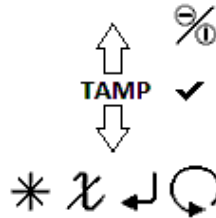
5.4.1 Tamp Mode

Tamp – This selection enables the configuration of the applicator to apply a label using a vacuum tamp pad mounted on an air cylinder. Also, enables the pneumatics used in tamp mode and disables all other configurations.

The Tamp Mode Cycle:

1) The label is printed and dispensed onto the tamp pad.
2) The vacuum valve is enabled, creating a vacuum through the holes in the tamp pad, which holds the label in place.
3) When the application cycle is triggered, the air cylinder extends and makes contact with the product.
4) Adhesive on the label attaches the label to the product as the air cylinder retracts.

5.4.2 Tampjet Mode

Tampjet – This selection enables the configuration of the applicator to apply a label using a vacuum tamp pad mounted on an air cylinder. Also, enables the pneumatics used in tampjet mode and disables all other configurations.

The Tampjet Mode Cycle:

1) The label is printed and dispensed onto the tamp pad.
2) The vacuum valve is enabled, creating a vacuum through the holes in the tamp pad, which holds the label in place.
3) When the product detection signal is received, the air cylinder extends and stops just short of the product.
4) As the air cylinder reaches the end of its travel, the tampjet valve opens releasing a blast of air which is routed through the holes in the vacuum tamp pad.
5) The label is aerodynamically propelled toward the product.
6) Adhesive on the label attaches the label to the product as the air cylinder retracts.

ℹ **The primary difference between the Tampjet and Reverse Tampjet is;**
In Tampjet mode, the air cylinder extends only when receiving a signal from the product detector.
In Reverse Tampjet mode, the air cylinder extends at the end of the label dispense cycle, staying extended until the product detector send a trigger signal to active the tampjet valve.

5.4.3 Reverse Tampjet Mode

Reverse Tampjet – This selection enables the configuration of the applicator to apply a label using a vacuum tamp pad mounted on an air cylinder. Also, enables the pneumatics used in reverse tampjet mode and disables all other configurations.

The Reverse Tampjet Mode Cycle:

1) The label is printed and dispensed onto the tamp pad.
2) The vacuum valve is enabled, creating a vacuum through the holes in the tamp pad, which holds the label in place.
3) As soon as the label has been dispensed the air cylinder extends and stops just short of the product.
4) When a product detector signal is received, the tampjet valve opens releasing a blast of air which is routed through the holes in the vacuum tamp pad.
5) The label is aerodynamically propelled toward the product.
6) Adhesive on the label attaches the label to the product as the air cylinder retracts.

ℹ **Specialty firmware versions may not support this mode of operation. These versions will not display this option.**

5.4.4 Airjet Mode

This selection enables the configuration of the applicator to apply a label using a vacuum tamp pad mounted on an air cylinder. The pneumatics used in the airjet mode are enabled and all other configurations are disabled.

The Airjet Mode Cycle:

1) The label is printed and dispensed onto the tamp pad.
2) The vacuum valve is enabled, creating a vacuum through the holes in the tamp pad, which holds the label in place.
3) When a product detector signal is received, the tampjet valve opens releasing a blast of air which is routed through the holes in the vacuum tamp pad overcoming the vacuum.
4) The label is aerodynamically propelled toward the product.
5) Adhesive on the label attaches the label to the product.

> **i** **Specialty firmware versions may not support this mode of operation. These versions will not display this option.**

5.4.5 Passive Mode

This selection enables the configuration of applications that do not actively apply the label to the product. These include the leading edge corner wrap and the merge module. Both of these rely on the passing product to drive the apply cycle. The passive mode removes many of the setup options from the display and simplifies the cycle considerably.

The Passive Mode Cycle:

1) The system is idle awaiting a product detect signal.
2) The system waits for the time specified by Delay Apply for the detect signal triggered.
3) The printer is given the go ahead to print and dispense a label.
4) The label is fed out onto the vacuum grid
   i. The label meets up with the passing product on the Merge Module application roller.
   ii. The label is held on the Leading Edge Corner Wrap Module until the product is passed through.

5.4.6 Belt Mode

This selection enables the configuration of the PowerMerge™ Module which does not actively apply the label to the product. Like the leading edge corner wrap and the merge module, it relies on the passing product to drive the apply cycle. The belt mode removes many of the setup options from the display and simplifies the cycle considerably.

The Belt Mode Cycle:

1) The vacuum belt is continuously running awaiting a product detect signal.
2) The system waits for the time specified by Delay Apply for the detect signal triggered.
3) The printer is given the go ahead to print and dispense a label.
4) The label is fed out, adhesive side exposed, onto the vacuum belt.
   i. The label meets up with the passing product on the PowerMerge™ Module application roller.
   ii. Adhesive on the label attaches the label to the product as it passes and the roller aids proper contact.

5.5 Setting Online/Offline ①/⊖

When taking the applicator offline, the optional three stage beacon will change to red. While the printer/applicator is offline, the operator may make changes to the setup, change speeds and/or delays, jog the printer/applicator and simulate label application. The printer/applicator will remain offline and not respond to any photocell inputs until the Online/Offline button is pressed again and indicates and "Online" condition.

5.6 Setting the Label Sensor (Apply Only Module)

If the printer/applicator is to be used with a Model 250A Label Feed Module, refer to the Model 250A Operator/User Manual for set up procedures.

5.7 Air Assist Delay ⛴

Open the Dwells and Delays Menu 🕓 to locate the Assist Delay icon. ⛴ Pressing the Assist icon opens the adjustment screen. Air Assist Delay is used to allow the label to partially feed out before the air assist is turned on. Adjust the delay time with the up or down arrows and press the Enter icon to save the value. Press the Back icon to discard the changes.
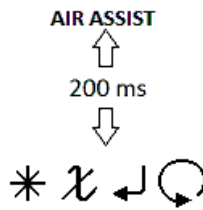
AIR ASSIST
⇧
200 ms
⇩

✳ 𝒳 ↵ ↻

ℹ **Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**

5.8 Tamp Dwell

The Tamp Dwell screen allows the operator to adjust the length of time the tamp valve is energized. The dwell time should be set just long enough for the tamp cylinder to reach full stroke prior to retracting. Located within the Dwells and Delays menu, the Tamp Dwell icon is pressed to access the adjustment screen. Adjust the time value with the up and down arrows, pressing the Enter icon to save the value. Increasing the value of this setting will cause the tamp to remain in the extended position longer. Decreasing the value will shorten the time the cylinder stays extended. This adjustment does NOT affect the speed or power of the cylinder extending or retracting. To adjust the speed at which the cylinder extends, adjust the flow control valve on the top of the cylinder. To control the speed at which the cylinder retracts, adjust the flow control valve on the bottom of the cylinder. This also affects the power at which the cylinder extends. Care should be taken in using these adjustments to avoid crushing the product or damaging the cylinder module.

TAMP DWELL
⇧
200 ms
⇩

✳ 𝒳 ↵ ↺
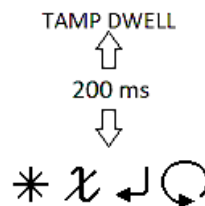
**i** **A good starting point is 50mS of dwell per inch of stroke. A four inch tamp will be set near 200mS. Variances in air pressure and flow control settings will affect this value.**

i **Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**

5.9 Blast Dwell

The Blast Dwell screen allows the operator to adjust the length of time the blast valve is energized. The Blast Dwell time should be set just long enough for the label to fly to the product and adhere. Upon accessing the Blast Dwell screen, the current set value is displayed. The time value displayed is in milliseconds. Press the up and down arrows to adjust the time value. Once the desired value is reached, press the Enter icon to save the setting.

BLAST DWELL
⇧
200 ms
⇩

✳ 𝒳 ↵ ◯
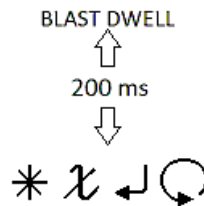
> **i** A good starting point is 80mS of blast at 80-90psi main air pressure. It is important to note that more blast time does not necessarily mean the label will fly or apply better.

> **i** Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.

5.10 Label Feed Delay

Label Feed Delay is used to synchronize the print engine print and dispense process to the tamp applicator action. The delay is used to suspend label feed before the tamp pad has fully returned to the home position. It is especially useful with tamp units using slower speeds or longer cylinder lengths. To adjust label feed delay, open the Dwells and Delays menu. Press the Label Feed Delay icon to access the adjustment screen. Pressing the up or down arrows will adjust the time value in milliseconds. When the desired value has been reached, press the Enter icon to save the setting.
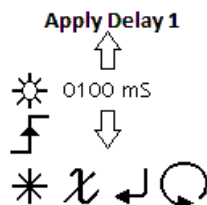
LABEL FEED
⇧
200 ms
⇩

✳ 𝒳 ↵ ◯
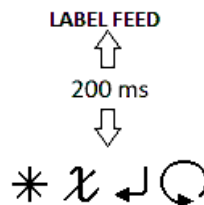
> **i** Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.

5.11 Apply Delay [1] [2]

There are two product detector selections as well as a smart delay selection. Delay can be independently introduced for each of the three selections, but leading or trailing edge triggering is only available for the product detectors.

Once the printer/applicator is properly loaded, accurately printing and dispensing labels, the last step is to fine tune the placement of the label on the product. Establish the approximate physical location of the product detector sensor and the optimum edge detection method.
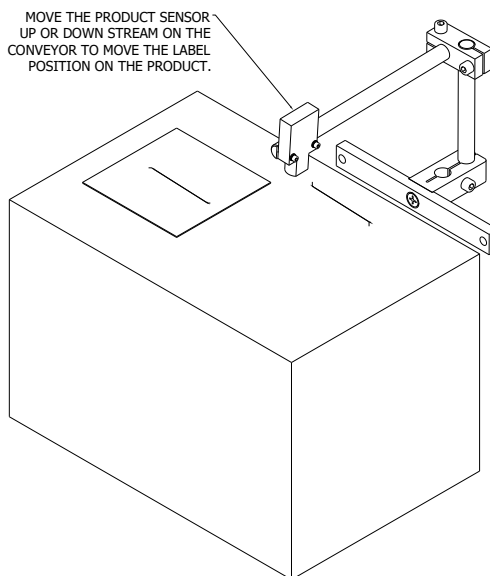
When set to Leading Edge, the label placement is referenced to the front edge of the product. The trigger signal is sent when the product to be labeled obscures the photocell. When set to Trailing Edge the operation is opposite. The trigger signal is sent when the product completely passes by the photocell. Label placement is referenced to the back edge of the product. To change the reference edge, press the icon (1 or 2) associated with the photocell to be set. The Apply Delay menu for the photocell will open.
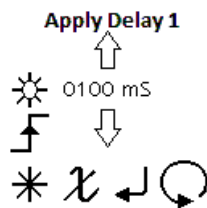
Apply Delay 1

⇧

☼ 0100 mS

⇩

⌇ 𝒳 ↵ ◯

The Apply Delay screen for each photocell will indicate that the photocell is ☼ enabled or ● disabled. Press the icon to change the status of the photocell to the desired setting. Press the Enter icon to save the setting. To scroll through the photocell triggering modes, press the triggering icon. Select the leading edge trigger icon ⌐ or the trailing edge trigger icon ⌙ depending on the sensing method desired. Pressing the Enter icon will save the setting.

Once the triggering method has been set, introduce a product into the labeling system and watch where the label is applied to the product. With the apply delay setting at zero, the label will begin dispensing as soon as the product detect photocell, or other trigger device, goes active. To achieve desired placement, it may be necessary to alter several settings.

Before applying any delay, adjust the physical location of the trigger photocell itself. If label application is too close to the leading edge of the product, it may be necessary to adjust the sensor closer to the in feed side of the product handling system. If the label is being applied too close to the trailing edge, it may be necessary to adjust the sensor closer to the out feed side of the product handling system. It is always desirable to move the photocell trigger position as close as possible to achieve desired label placement rather than to compensate with time delays.

MOVE THE PRODUCT SENSOR UP OR DOWN STREAM ON THE CONVEYOR TO MOVE THE LABEL POSITION ON THE PRODUCT.

The most precise adjustment can be achieved by using the Apply Delay setting. This allows for fine-tuning the amount of time from when the trigger is received until label application begins. Once the trigger sensor is properly positioned and the appropriate edge is detected, the delay apply setting causes the applicator to pause briefly before beginning the label dispense process. If the label is applied too close to the leading edge of the product, increase the delay value. If the label is applied too far from the leading edge of the product, decrease the delay value. If the delay value is zero and proper placement cannot be achieved, it may be necessary to adjust the position of the photocell or other trigger device. To adjust the Apply Delay for the product detector, again open the Apply Delay menu. The Apply Delay screen allows the operator to insert an adjustable time delay into the selected product detector output signal. Upon accessing the apply delay screen for the enabled photocell, the current set delay value is displayed. The value is entered in milliseconds.

Apply Delay 1

0100 mS

To adjust the value, press the up or down arrows until the desired value is displayed. Once the new value is entered, be sure the applicator is online and allow several products to pass. If the label is being applied too soon, increase the delay value or move the photocell in the direction of product travel. If the label is being applied too late, decrease the value or move the photocell against the direction of product travel. Repeat the above adjustments until the label is applied in the proper position on the product.

Once the correct apply delay time is set, press the Enter ↵ icon to save the value. Press the Back icon 𝒳 to return to the main menu.

> **i** Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.

5.12 Smart Delay ⊟ᵢ Smart Tamp
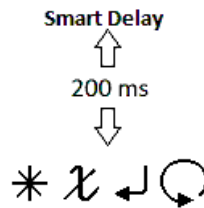
Pressing the Smart Delay icon opens the Smart Delay screen.

Smart Delay
⇧
200 ms
⇩

✳ 𝒳 ↵ ↻

There are two adjustments available when using a Smart Tamp Sensor option. The first is the sensitivity or gain adjustment located on the sensor itself. See the Component Information section for more information. It is very useful when compensating for variation in products. The second adjustment, the Smart Delay, is used to adjust the timing of the smart tamp sensor output signal. As soon as the smart tamp sensor detects the product, the tamp solenoid valve is deactivated, and the tamp pad returns to its home position. If the sensor detects the product too soon, it is possible that the label will not be properly applied. Inserting a delay into the sensor signal allows the tamp cylinder to be activated for a greater period of time, or "over-travel", increasing the stroke length (up to the maximum stroke length) traveled. This allows the operator to adjust the stroke distance for proper application of the label to the product. As with the product detector photocell delay, pressing the up or down arrows will adjust the time value in milliseconds. When the desired value has been reached, press the Enter icon to save the setting. Press the Back icon 𝒳 to return to the main menu.

> **i** Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.

5.13 Tamp Home Sensor Setup

Once installed, sensor sensitivity is the only adjustment available for the tamp home sensor. See the Component Information for further information about sensitivity adjustment. The output signal from the tamp home sensor is available on any or all of the system status outputs when supplied. See the drawings and diagrams section for information on the outputs.

5.14 Setting up Tamp Applications

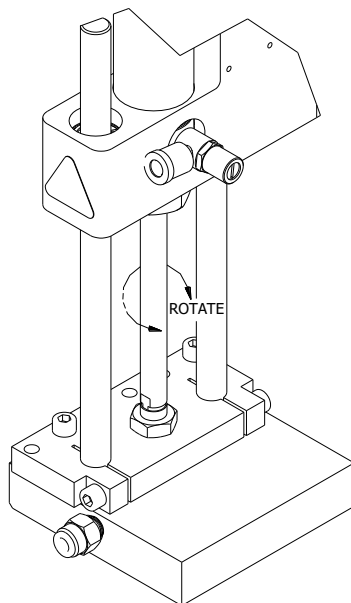## 5.14.1 Setting the Tamp Position (Adjustable)

Begin by loosening the four M8 bolts holding the tamp module to the faceplate using a 6mm hex wrench. Slide the tamp module in the mounting slots until the tamp pad is approximately 1/8" from the peel tip. Be sure the tamp module is straight up and down then re-tighten the mounting bolts.
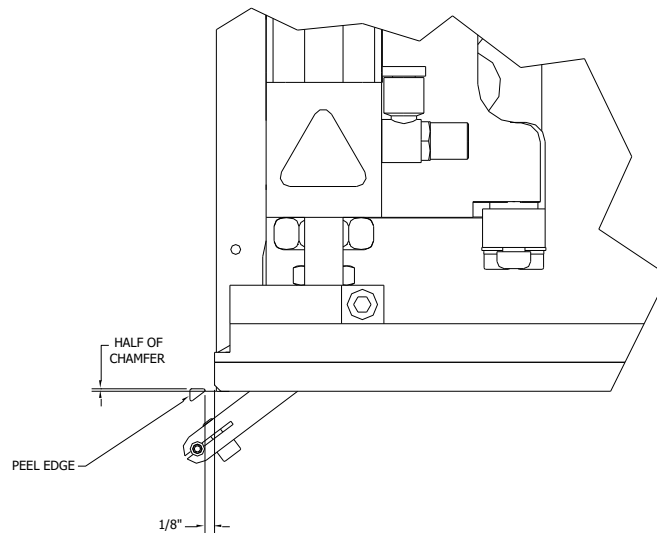
With the cylinder all the way home, note the position of the chamfer to the peel edge. The top surface of the peel plate should, if drawing an imaginary line, intersect the tamp pad midway up the chamfer (the angled cut across the front edge). If the position is not correct, use a small adjustable wrench to loosen the cylinder adjust nut.
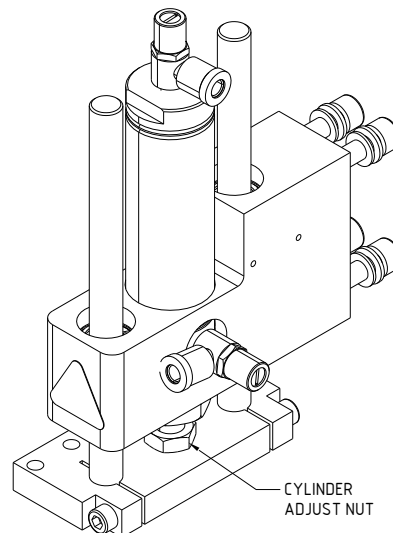
Extend the tamp cylinder and twist the cylinder rod to move the position of the tamp pad. Return the cylinder to the home position and check the pad position again. Readjust as necessary until the position is correct.

Once the position is correct, return the cylinder to the home position and re-tighten the adjust nut.

5.14.2 Setting the Tamp Position (Centerline/Fixed Model)

The Centerline Tamp Module is designed to use the fixed position mounting plate and should require no adjustment. In difficult applications where some adjustment is required, the mounting plate can be removed and horizontal adjustment can be made in the same manner as a standard tamp assembly. The innermost set of M8 mounting holes should be used to attach the tamp module to the faceplate. Slide the tamp module in the mounting slots until the tamp pad is approximately 1/8" from the peel tip. Be sure the tamp module is straight up and down then re-tighten the mounting bolts.

i **If necessary, the vertical position of the tamp pad can be lowered by adding a shim between the air cylinder piston rod and the top of the tamp pad adapter plate.**

5.14.3 Setting the Pressures

The main system pressure is set at the filter regulator assembly. Pull up on the adjusting knob to unlock it, and then rotate the knob to set the pressure. The setting is displayed on a gauge on the side of the assembly. The main pressure should be set around 80 to 90 psi.

The pressure settings for the tamp cylinder, air assist and vacuum are individually adjustable and can be fine-tuned for the application. To adjust the pressures, remove the two M4 screws that secure the back cover using a 3mm hex wrench. Remove the back cover.

Using a small adjustable wrench, loosen the locking nut on the regulator to be adjusted. Adjust the pressure setting by inserting a flat blade screwdriver into the adjusting screw. To increase the pressure setting, turn counterclockwise, to decrease turn clockwise.
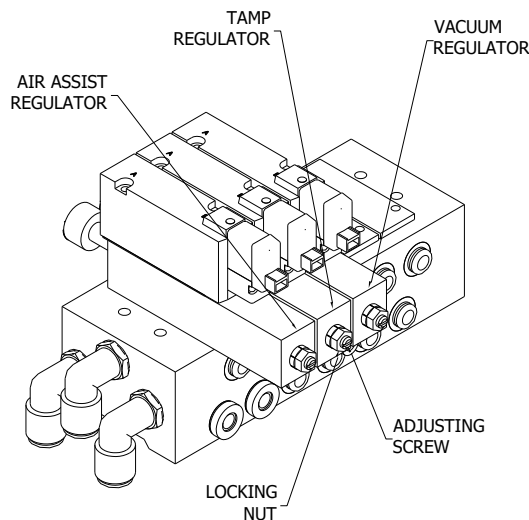
Check the pressure setting on the gauges located on the front of the baseplate. Each pressure regulator should normally be set as close as possible to 0.5 MPa.
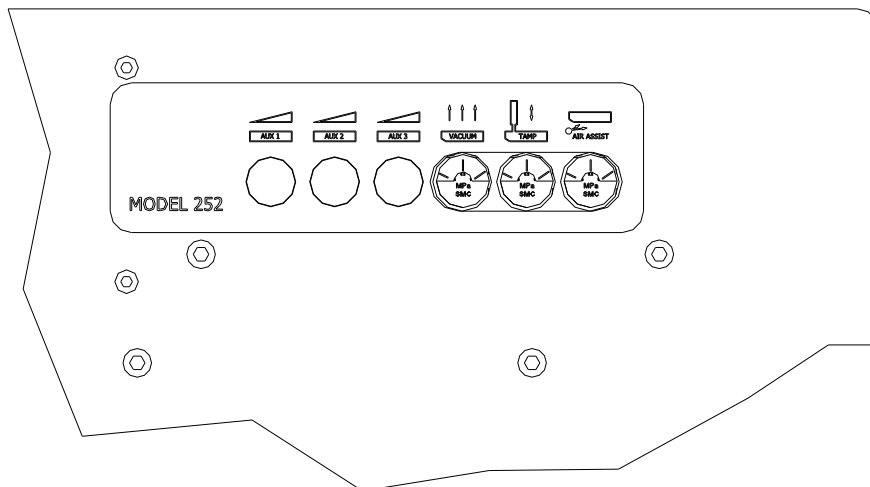

> **i**   **The small gauges display the pressure in MPa (Mega Pascals). The main filter regulator displays the pressure in PSI (Pounds per Square Inch). 1 MPa equals 145psi, 0.5 MPa equals 72.5 psi.**

> **i**   **It is not possible to set the individual regulators to a higher pressure than the main filter regulator setting. Increase the main regulator pressure if higher individual pressures are necessary.**

A manual check for correct operation of standard pneumatic functions as well as optional equipment is possible with the use the manual override button on each valve. Using a small Phillips screwdriver or similar tool, press the override button (manual actuator) on the valve. The valve will remain activated as long as the button is pressed.
Once the pressure settings are correct, re-tighten the locking nut and reinstall the back cover.
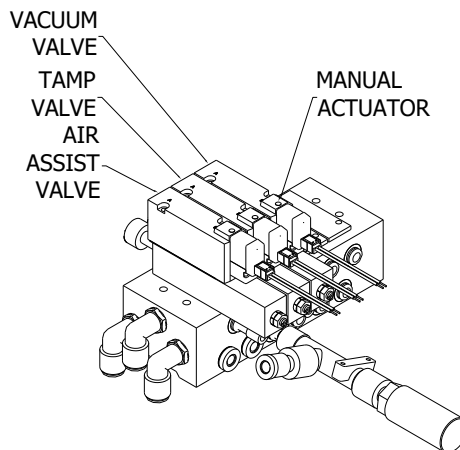
5.14.4 Setting the Tamp Motion (Adjustable)

The tamp motion is controlled by three factors; air pressure, dwell time and flow controls. The air pressure adjustment procedure is covered in the Setting the Pressure section. The tamp dwell adjustment can be found in the section under Tamp Dwell. The third setting, speed, is adjusted by the flow controls. One flow control is located at each end of the tamp cylinder. Using a flat blade screwdriver, adjust the flow control screw to change the speed of the tamp motion. Turning the screw clockwise will slow the motion; counterclockwise will speed up the motion. The upper flow control, with the black tube, controls the return speed of the cylinder. The lower flow control, with the grey tube, controls the extend speed of the cylinder.

CYLINDER RETRACT
FLOW CONTROL

CYLINDER EXTEND
FLOW CONTROL
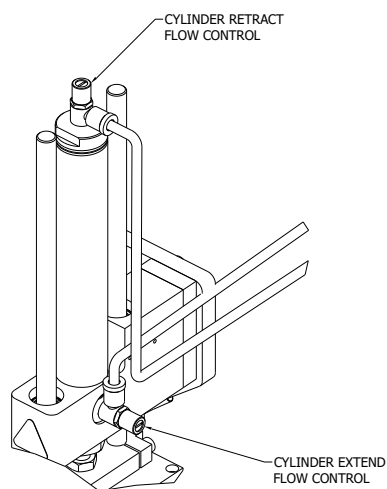
i   **The speeds should be set such that the cylinder operates smoothly and does not bang excessively at either end.**

i   **Setting the retract speed slower than the extend speed can cause timing issues and the next label will begin feeding before the tamp pad is fully retracted and in the feed position. Always set the retract speed the same or slightly faster than the extend speed.**

To check the speed of the cylinder, press the jog button on the user interface. It is also possible to use the manual override button on the tamp valve to activate the cylinder. The back cover must be removed to access the manual override button. Using a small Phillips screwdriver or similar tool, press the override button (manual actuator) on the valve.

VACUUM
VALVE

TAMP
VALVE

MANUAL
ACTUATOR

AIR
ASSIST
VALVE

Keep clear of the peel tip, tamp pad or tamp module as the actuator will cycle when performing any of these steps.

5.14.5 Setting the Tamp Motion (Centerline/Fixed Model)

The Centerline model tamp motion is normally controlled by only two factors; air pressure, and dwell time. The air pressure adjustment procedure is covered in the Setting the Pressure section. The tamp dwell adjustment can be found in the section under Tamp Dwell.

To check the speed of the cylinder, press the jog button on the user interface. It is also possible to use the manual override button on the tamp valve to activate the cylinder. The back cover must be removed to access the manual override button. Using a small Phillips screwdriver or similar tool, press the override button (manual actuator) on the valve.
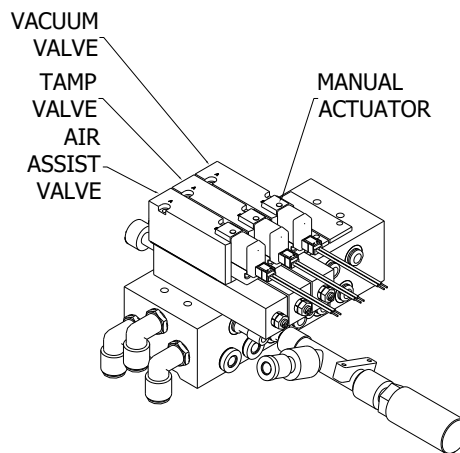

Keep clear of the peel tip, tamp pad or tamp module as the actuator will cycle when performing any of these steps.

The speeds should be set such that the cylinder operates smoothly and does not bang excessively at either end.

The addition of the Tamp Flow Control Kit allows air pressure adjustments for controlling the tamp motion. The kit is installed on the pneumatic module located inside the back cover. To install or adjust this kit, the back cover must be removed. See the Drawings and Diagrams section for installation instructions.

5.14.6 Adjusting the Air Assist

The air assist is controlled by two factors; air pressure and air assist tube position. The air pressure adjustment procedure is covered in the Setting the Pressures section. To set the air assist tube position, be sure the tamp pad is in the home position. Locate the row of small holes in the side of the air assist tube and loosen the clamp screw. Rotate the air assist tube until the row of small holes is roughly aimed at the midpoint of the tamp pad and then tighten the clamp screw.
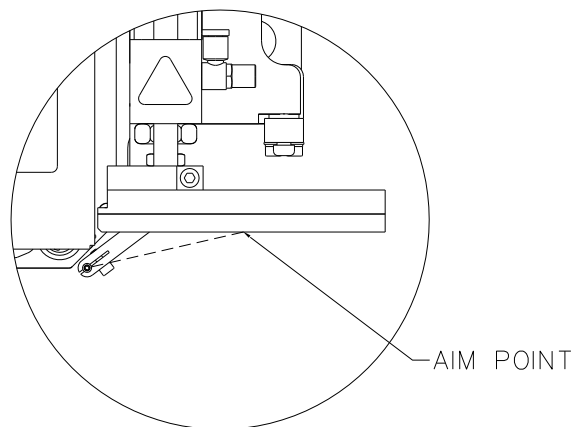
To check the assist tube setting, use the manual override button on the valve. The back cover must be removed in order to perform a manual override. Using a small Phillips screwdriver or similar tool, press the override button on the valve.

⚠️ **Use appropriate eye protection. This step will release a jet of compressed air from the air assist tube.**

5.14.7 Setting the Vacuum

The vacuum pressure is controlled by the air pressure setting on the vacuum valve regulator. The pressure must be set high enough so the label will stick to the tamp pad once it is dispensed.

If the unit is fitted with the tampjet option, there is an additional adjustment that can be made. A flow control, located between the tamp pad and the vacuum generator venturi, regulates the vacuum pressure applied to the tampjet pad. Using a flat blade screwdriver, rotate the flow control screw counterclockwise as far as it will go. Cycle the applicator and note the way the label feeds onto the tamp pad. If the label flaps or flutters during dispense, adjust the flow control screw clockwise until the label dispense is smooth, even and consistent.

5.15 Swing Tamp Setup

The Swing Tamp Module requires adjustments to provide correct operation and application of the label to the product. Begin by loosening the four M8 bolts holding the swing tamp module to the faceplate using a 6mm hex wrench. Slide the tamp module in the mounting slots until the tamp pad is approximately 1/8" from the peel tip. Be sure the tamp module is straight up and down then re-tighten the mounting bolts.

With the cylinder all the way home, note the position of the chamfer to the peel edge. The top surface of the peel plate should, if drawing an imaginary line, intersect the tamp pad midway up the chamfer (the angled cut across the front edge). If the position is not correct, extend the tap pad to the apply position, locate the red bumper, and loosen the locking nut. Adjust the bumper height until the tamp pad chamfer is properly aligned with the peel edge when the fully retracted to the home position. Tighten the locking nut to secure the red bumper.

HALF OF CHAMFER

PEEL EDGE

1/8"
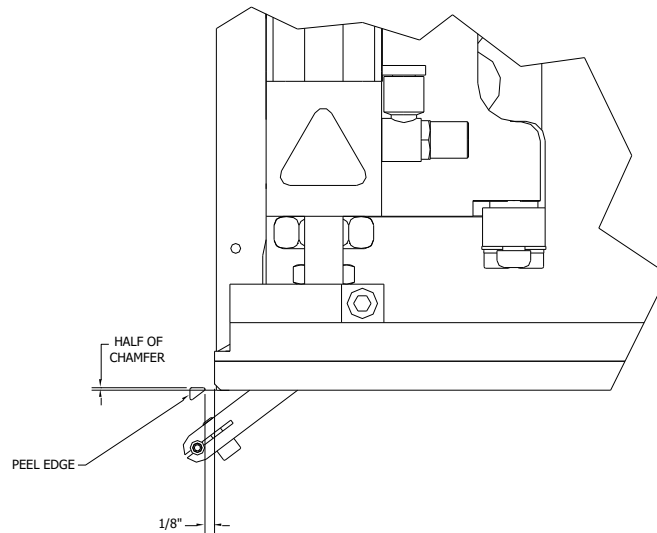
5.16 Dual Panel Tamp Setup

The Dual Panel Tamp Module requires adjustments to provide correct operation and application of the label to the product. Begin by loosening the four M8 bolts holding the dual panel tamp module to the faceplate using a 6mm hex wrench. Slide the module in the mounting slots until the tamp pad is approximately 1/8" from the peel tip. Be sure the tamp module is straight up and down then re-tighten the mounting bolts.

With the cylinders all the way home, note the position of the chamfer to the peel edge. The top surface of the peel plate should, if drawing an imaginary line, intersect the tamp pad midway up the chamfer (the angled cut across the front edge). If the tamp pad height position is not correct, extend the tamp cylinder to the apply position by hand. Locate and loosen the lock nut on the air cylinder piston rod. Push the tamp cylinder back into home position. Adjust the threaded rod in or out until the tamp pad chamfer is properly aligned with the peel edge when in the fully retracted to the home position. Tighten the locking nut to secure the air cylinder piston rod.

The angle of the tamp pad in the home position should be parallel to the edge of the faceplate. To adjust the angle, extend the swing arm to the apply position, locate the red bumper, and loosen the locking nut. Adjust the bumper height until the tamp pad angle is correct in the home position. It may be helpful to perform this adjustment in conjunction with the tamp pad height adjustment.

The angle of the tamp pad/paddle should be adjusted for proper application of the label on the product. Normally, the label should be applied at the same angle as the product. To adjust the tamp paddle angle, extend the paddle to maximum by hand. Place a product in position to be labeled. If the angle is incorrect, locate and loosen the lock nut on the air cylinder rod end clevis. Adjust the rod in or out until the proper angle is reached and retighten the lock nut. Return all cylinders to the home position.

5.17 Three Panel Tamp Setup

If the Three Panel Tamp Module is being added to an existing printer applicator, it may be necessary to align the rotary actuator prior to aligning the tamp pad with the peel edge.

⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out**

5.17.1 Rotary Actuator Position Adjustment

The Rotary Actuator Position is normally installed and set at the factory and needs no further adjustment. If the Three Panel Tamp Assembly is purchased as a separate unit, perform the alignment adjustments after installation and before using.

The first adjustment is to align the center position of the rotary actuator. It is helpful to have the tamp pad installed on the adapter plate prior to performing this adjustment.
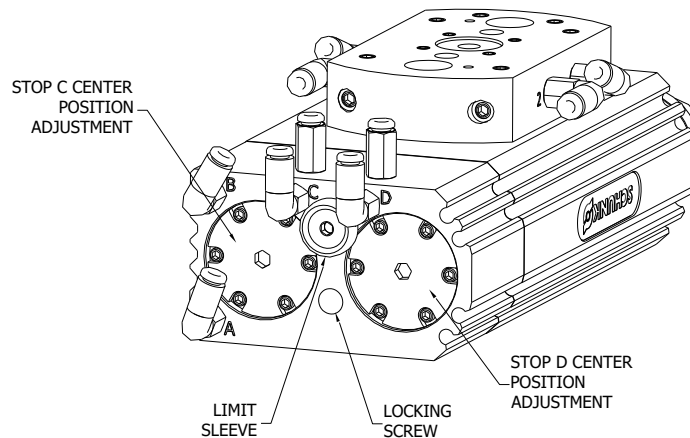
ROTARY ACTUATOR CENTER POSITION ADJUSTMENT

By hand, extend the primary tamp air cylinder until the rotary actuator can be rotated both directions without interference. Using a 4mm hex wrench, loosen the locking screw about one turn. Unscrew stops C and D to the limit sleeve. Rotate the actuator and with the 4mm hex wrench, adjust the stop that corresponds with the direction of rotation until the approximate center position is reached. Return the primary tamp air cylinder to the home position. Using the print engine peel edge as a reference, adjust the same stop to set the angle of the tamp pad to the peel edge. The tamp pad edge should be parallel to the peel edge. Extend the primary tamp air cylinder again. Use the 4mm hex wrench to turn the other stop. Adjust the stop until there is no longer any play in the center position. Retighten the locking screw. It is advised that power and air pressure be restored to the printer/applicator and several test activations of the tamp process be performed to ensure correct positioning has been set.

The second position adjustment to be performed is the 0 and 180 degree rotation adjustment. Prior to performing this adjustment, the power and air should be removed from the printer/applicator.

STOP B
ADJUSTER

STOP A
ADJUSTER

LOCKING
SLEEVE/SCREW
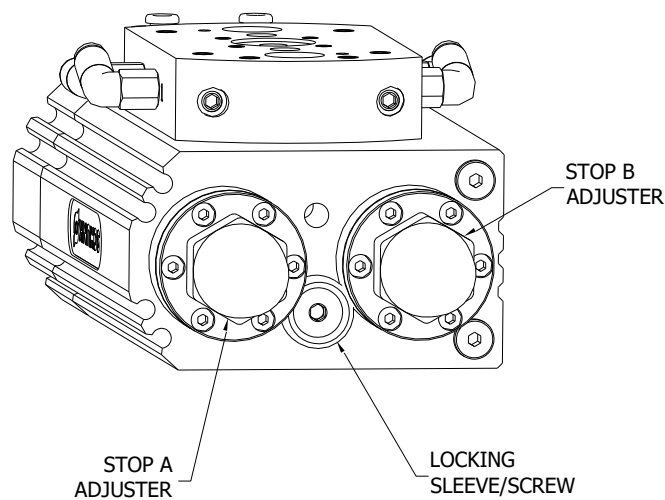
ROTARY ACTUATOR 0 AND 180 DEGREE ROTATION ADJUSTMENT

By hand, extend the primary tamp air cylinder until the rotary actuator can be rotated both directions without interference. Using a 4mm hex wrench, loosen the locking sleeve/screw. Fully rotate the actuator in one direction and using a 19mm wrench, adjust the stop that corresponds with the direction of rotation until the correct 0 or 180 degree angle is reached. Fully rotate the actuator in the opposite direction and adjust the appropriate stop until the correct angle is reached. Fully rotate the actuator in both directions repeatedly to verify the correct adjustment. Tighten the locking sleeve/screw and return the primary tamp air cylinder to the home position. It is advised that power and air pressure be restored to the printer/applicator and several test activations of the tamp process be performed to ensure correct positioning has been set.

5.17.2 Tamp Pad Alignment

The Three Panel Tamp Module is designed to provide correct operation and application of the label to the product with as few adjustments as possible. The preferred fixed mounting position reduces the number of adjustments. If the adjustable mounting position was chosen during installation, begin by loosening the four M8 bolts holding the dual panel tamp module to the faceplate using a 6mm hex wrench. Slide the module in the mounting slots until the tamp pad is approximately 1/8" from the peel tip. Be sure the tamp module is straight up and down, then re-tighten the mounting bolts.

With the cylinders all the way home, note the position of the chamfer to the peel edge. The top surface of the peel plate should, if drawing an imaginary line, intersect the tamp pad midway up the chamfer (the angled cut across the front edge). If the tamp pad height position is not correct, extend the primary tamp cylinder several inches by hand. Locate and loosen the lock nut on the air cylinder piston rod. Push the tamp cylinder back into home position. Adjust the threaded rod in or out until the tamp pad chamfer is properly aligned with the peel edge when in the fully retracted to the home position. Tighten the locking nut to secure the air cylinder piston rod.
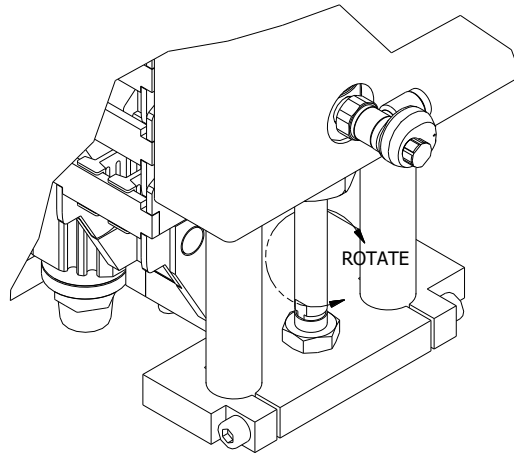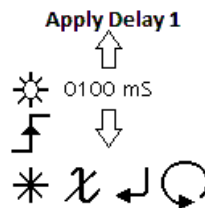

Other adjustments are available are to control the air pressure/speed to extend and retract the primary tamp air cylinder. Flow controls with quarter-turn accuracy position indicators are provided on both ports of the air cylinder. These have been set at the factory for optimum performance. Should adjustment of these flow controls be needed, it is advised that the original settings be recorded in the Configuration Settings table prior to any changes.

5.18 Merge Module Setup

While two product detectors connections are available, only the normal Apply Delay adjustment can be used for each detector. All other configurations and associated adjustments are disabled or otherwise unavailable. There are two product detector selections. Delay can be independently introduced for each of the selections as well as leading or trailing edge triggering.

Once the printer/applicator is properly loaded, accurately printing and dispensing labels, the last step is to fine tune the placement of the label on the product. Establish the approximate physical location of the product detector sensor and the optimum edge detection method.
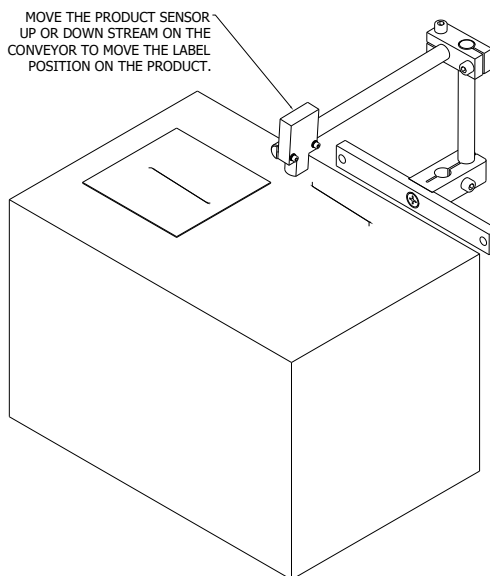
When set to Leading Edge, the label placement is referenced to the front edge of the product. The trigger signal is sent when the product to be labeled obscures the photocell. When set to Trailing Edge the operation is opposite. The trigger signal is sent when the product completely passes by the photocell. Label placement is referenced to the back edge of the product. To change the reference edge, press the icon (1 or 2) associated with the photocell to be set. The Apply Delay menu for the photocell will open.
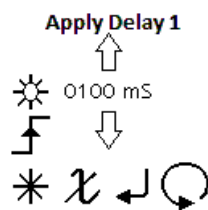
Apply Delay 1

⇧

☼ 0100 mS ⇩

⌐⌐ ＊ 𝒳 ↵ ⟲

The Apply Delay screen for each photocell will indicate that the photocell is ☼ enabled or • disabled. Press the icon to change the status of the photocell to the desired setting. Press the Enter icon to save the setting. To scroll through the photocell triggering modes, press the triggering icon. Select the leading edge trigger icon ⌐ or the trailing edge trigger icon ⌐ depending on the sensing method desired. Pressing the Enter icon will save the setting.

Once the triggering method has been set, introduce a product into the labeling system and watch where the label is applied to the product. With the apply delay setting at zero, the label will begin dispensing as soon as the product detect photocell, or other trigger device, goes active. To achieve desired placement, it may be necessary to alter several settings.

Before applying any delay, adjust the physical location of the trigger photocell itself. If label application is too close to the leading edge of the product, it may be necessary to adjust the sensor closer to the in feed side of the product handling system. If the label is being applied too close to the trailing edge, it may be necessary to adjust the sensor closer to the out feed side of the product handling system. It is always desirable to move the photocell trigger position as close as possible to achieve desired label placement rather than to compensate with time delays.

MOVE THE PRODUCT SENSOR
UP OR DOWN STREAM ON THE
CONVEYOR TO MOVE THE LABEL
POSITION ON THE PRODUCT.

The most precise adjustment can be achieved by using the Apply Delay setting. This allows for fine-tuning the amount of time from when the trigger is received until label application begins. Once the trigger sensor is properly positioned and the appropriate edge is detected, the delay apply setting causes the applicator to pause briefly before beginning the label dispense process. If the label is applied too close to the leading edge of the product, increase the delay value. If the label is applied too far from the leading edge of the product, decrease the delay value. If the delay value is zero and proper placement cannot be achieved, it may be necessary to adjust the position of the photocell or other trigger device. To adjust the Apply Delay for the product detector, again open the Apply Delay menu. The Apply Delay screen allows the operator to insert an adjustable time delay into the selected product detector output signal. Upon accessing the apply delay screen for the enabled photocell, the current set delay value is displayed. The value is entered in milliseconds.

Apply Delay 1

0100 mS

To adjust the value, press the up or down arrows until the desired value is displayed. Once the new value is entered, be sure the applicator is online and allow several products to pass. If the label is being applied too soon, increase the delay value or move the photocell in the direction of product travel. If the label is being applied too late, decrease the value or move the photocell against the direction of product travel. Repeat the above adjustments until the label is applied in the proper position on the product.

Once the correct apply delay time is set, press the Enter ↵ icon to save the value. Press the Back icon χ to return to the main menu.

> **ℹ Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**

5.19 PowerMerge™ Module Setup

From the Apply Mode screen, set the mode to Belt Mode and save the selection. Once the PowerMerge™ module is properly installed, selected, and the printer/applicator is properly loaded, accurately printing and dispensing labels, the last step is to fine tune the placement of the label on the product. Establish the approximate physical location of the product detector sensor and the optimum edge detection method.

The vacuum belt speed must be set correctly before any adjustment of the product sensor signal timing will be required. For reference, IPS x 5 = FPM. The belt speed must always be set equal to or greater than the print speed (IPS) of the print engine being used. For the label to be applied correctly, the belt speed must also be set to a speed that is equal to or slower than the line speed of the product on the conveyor (FPM). To adjust the vacuum belt speed, open the Dwells and Delays menu from the main menu screen. The Belt Dwell and Delay screen will be displayed.
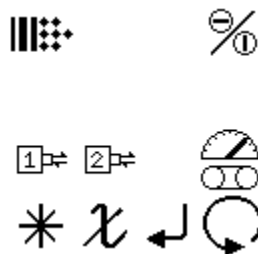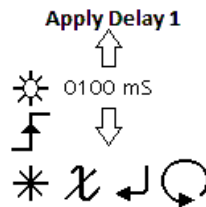
Press the Speed Adjust icon to open the Belt Speed Setting screen.
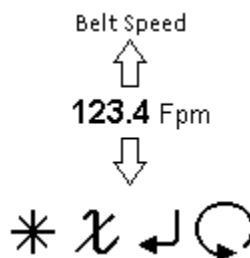
Belt Speed
⇧
123.4 Fpm
⇩

To increase or decrease the belt speed, press the appropriate arrow until the desired speed is reached. Press the Enter icon ↵ to save the setting. It may be necessary to print and apply several labels to establish the correct application speed.
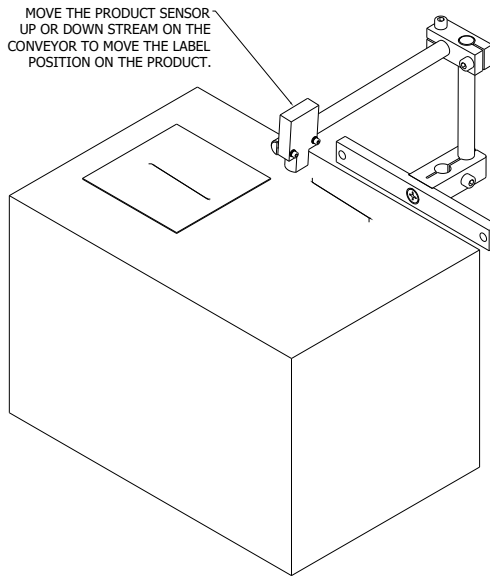
Once the vacuum belt speed has been adjusted, the label placement on the product can be fine tuned. Before applying any delay, adjust the physical location of the trigger photocell itself. If label application is too close to the leading edge of the product, it may be necessary to adjust the sensor closer to the in feed side of the product handling system. If the label is being applied too close to the trailing edge, it may be necessary to adjust the sensor closer to the out feed side of the product handling system. It is always desirable to move the photocell trigger position as close as possible to achieve desired label placement rather than to compensate with time delays.

When set to Leading Edge, the label placement is referenced to the front edge of the product. The trigger signal is sent when the product to be labeled obscures the photocell. When set to Trailing Edge the operation is opposite. The trigger signal is sent when the product completely passes by the photocell. Label placement is referenced to the back edge of the product. To change the reference edge, press the icon (1 or 2) associated with the photocell to be set. The Apply Delay menu for the photocell will open.
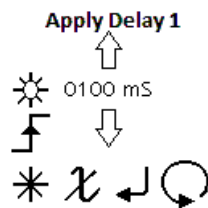
Apply Delay 1

⇧

☼ 0100 mS

⇩

The Apply Delay screen for each photocell will indicate that the photocell is ☼ enabled or ● disabled. Press the icon to change the status of the photocell to the desired setting. Press the Enter icon ↵ to save the setting. To scroll through the photocell triggering modes, press the triggering icon. Select the leading edge trigger icon ⌐ or the trailing edge trigger icon ⌐ depending on the sensing method desired. Pressing the Enter icon will save the setting.

Once the triggering method has been set, introduce a product into the labeling system and watch where the label is applied to the product. With the apply delay setting at zero, the label will begin dispensing as soon as the product detect photocell, or other trigger device, goes active. To achieve desired placement, it may be necessary to alter several settings.

MOVE THE PRODUCT SENSOR
UP OR DOWN STREAM ON THE
CONVEYOR TO MOVE THE LABEL
POSITION ON THE PRODUCT.

The most precise adjustment can be achieved by using the Apply Delay setting. This allows for fine-tuning the amount of time from when the trigger is received until label application begins. Once the trigger sensor is properly positioned and the appropriate edge is detected, the delay apply setting causes the applicator to pause briefly before beginning the label dispense process.

If the label is applied too close to the leading edge of the product, increase the delay value. If the label is applied too far from the leading edge of the product, decrease the delay value. If the delay value is zero and proper placement cannot be achieved, it may be necessary to adjust the position of the photocell or other trigger device. To adjust the Apply Delay for the product detector, again open the Apply Delay menu. The Apply Delay screen allows the operator to insert an adjustable time delay into the selected product detector output signal. Upon accessing the apply delay screen for the enabled photocell, the current set delay value is displayed. The value is entered in milliseconds.

Apply Delay 1

0100 mS

To adjust the value, press the up or down arrows until the desired value is displayed. Once the new value is entered, be sure the applicator is online and allow several products to pass. If the label is being applied too soon, increase the delay value or move the photocell in the direction of product travel. If the label is being applied too late, decrease the value or move the photocell against the direction of product travel. Repeat the above adjustments until the label is applied in the proper position on the product. Once the correct apply delay time is set, press the Enter ↵ icon to save the value. Press the Back icon χ to return to the main menu.

> **i** Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.

5.20 Corner Wrap Setup

Corner wrap setup is a two part process that requires setup of the label dispense function before adjusting the label application process.
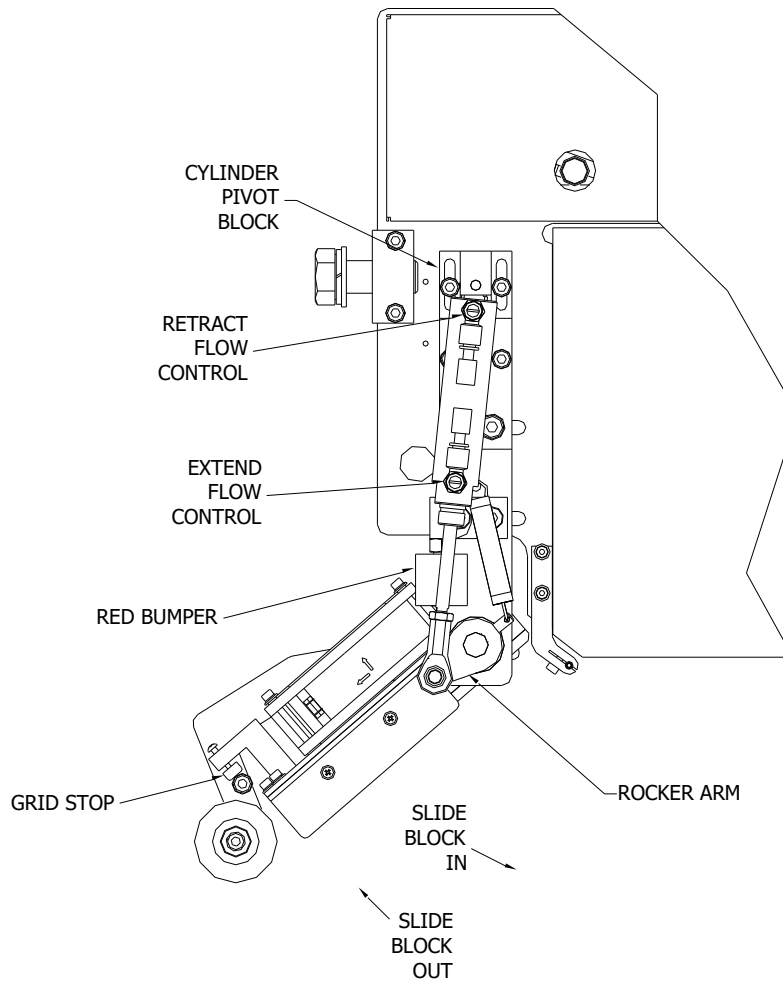
> **i** The roller arm can be reconfigured to the bottom of the grid if overhead clearance is an issue.
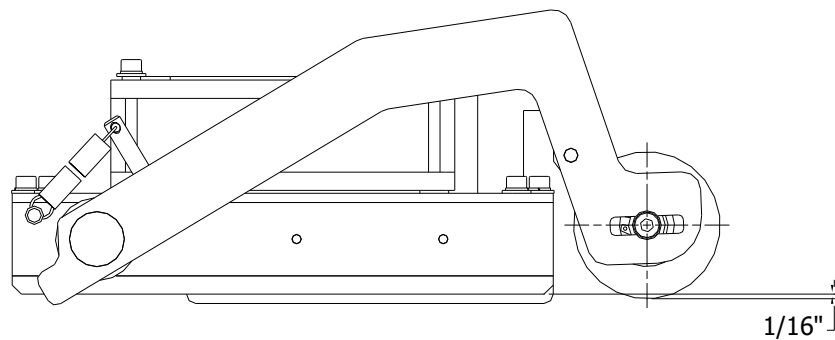
5.20.1 Label Dispense Adjustments

The angle between the corner wrap vacuum grid and the label as it comes off the peel edge must be adjusted for a smooth label feed. To adjust the angle, loosen the two M6x25 screws securing the cylinder pivot. Slide the block to adjust the grid to an approximate 45 degree angle from the edge of the baseplate. Sliding the block out increases the angle, whereas sliding the block in will decrease the angle. If the angle is improperly adjusted, labels may jam during the dispense cycle.

The grid stop position must be adjusted to ensure that the roller fully contacts the label during application. Locate the #6 phillips head screw directly behind the grid stop rubber bumper. With a small phillips head screwdriver, loosen the #6 screw. Adjust the bumper so that the gap between the grid and the roller is approximately 1/16". Tighten the #6 screw to lock the bumper in place.
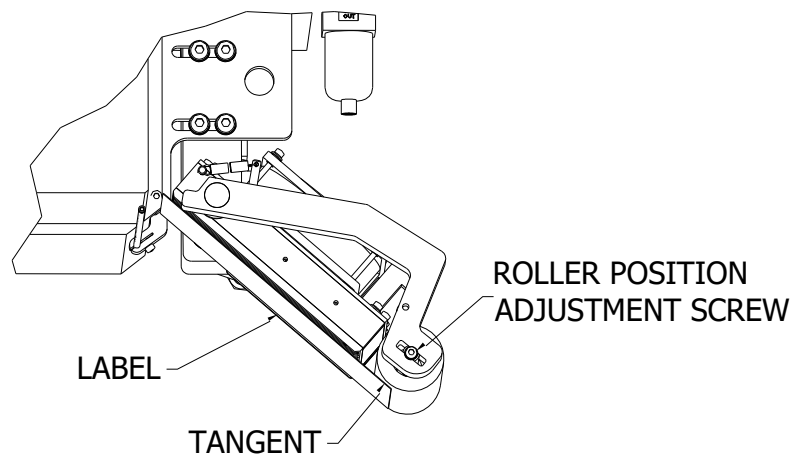
The label must be fed onto the grid and roller to the proper starting point for application. This is necessary to ensure that the label is properly attached to the carton. Feed a label onto the grid and note the position of the leading edge of the label. Loosen the roller position adjustment screw and position the roller such that the end of the label is at or slightly past the tangent point on the roller. Tighten the roller position adjustment screw and verify the label stop position is correct by feeding a label or two.

CYLINDER
PIVOT
BLOCK

RETRACT
FLOW
CONTROL

EXTEND
FLOW
CONTROL

RED BUMPER

GRID STOP

ROCKER ARM

SLIDE
BLOCK
IN

SLIDE
BLOCK
OUT

Rear view of Corner Wrap Module

1/16"

Grid stop adjustment gap

Roller position adjustment

5.20.2 Label Application Adjustments

Once the label dispense adjustments have been made, the application setup adjustments can be made. Proper applicator positioning is required for proper label positioning on the product. The applicator should be positioned to apply a label to the product.

Position a box on the conveyor in place to be labeled. Move the applicator in or out so that the corner of the carton strikes the centerline of the label.

LABEL
CENTER
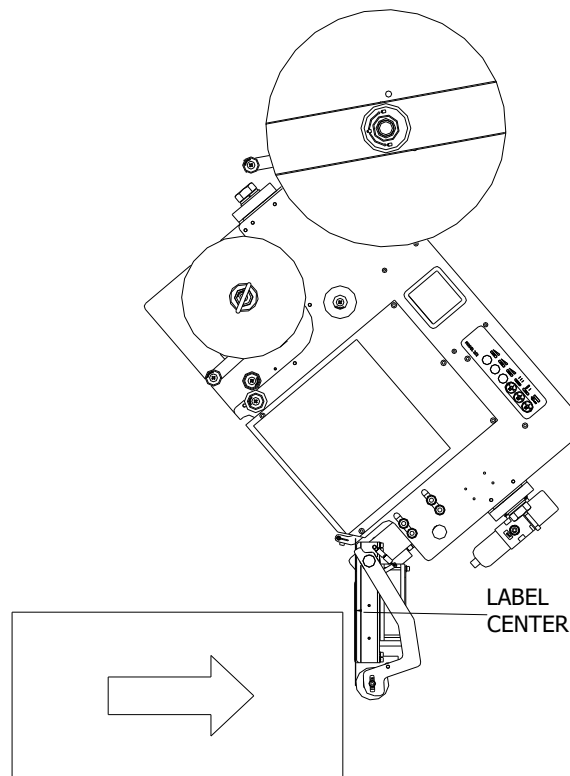
Push the carton through the corner wrap unit until the roller is on the side panel of the box. Locate the large red bumper and jam nut on the rear of the corner wrap unit. Loosen the jam nut and adjust the red bumper until it presses on the rocker arm. Tighten the jam nut to lock the red bumper in position.
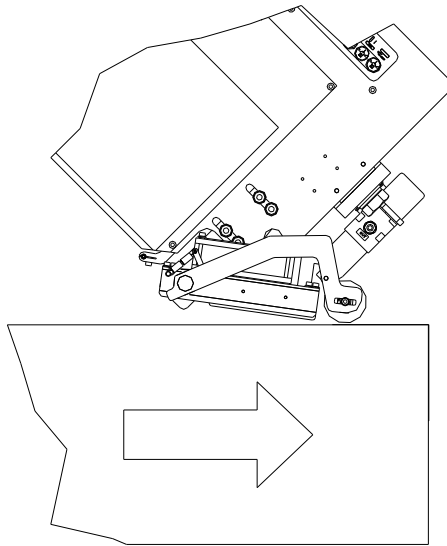
To ensure the proper action of the grid and roller arm, the air cylinder is used as a damper/spring system. Two flow controls are provided to adjust the movement of the air cylinder. The retract flow control is used to provide pressure during the application of the label. Adjusting the retract flow control will increase or decrease the amount of force applied by the roller. The extend flow control, (located on the piston rod end), can be adjusted to provide an anti-bounce feature to the grid and roller of the corner wrap module. To adjust the extend flow control, remove the carton and pull back the roller arm until it stops. Release the arm and adjust the extend flow control until the return action is smooth and there is no bounce.

5.21 Centerline Corner Wrap Setup

The Centerline Corner Wrap setup has been simplified to only require repeatable setting modifications.

> **i** **The roller arm can be reconfigured to the top or bottom of the grid if clearance is an issue.**

5.21.1 Roller Arm Spring/Dampening Setting

To ensure the proper action of the grid and roller arm, the air cylinder is used as a damper/spring system. Two flow controls are provided to adjust the movement of the air cylinder. Each flow control has an indicator which allows returning to a predetermined setting. The retract flow control is used to provide pressure during the application of the label. Adjusting the retract flow control will increase or decrease the amount of force applied by the roller. The extend flow control, (located on the piston rod end), can be adjusted to provide an anti-bounce feature to the grid and roller of the corner wrap module. To adjust the extend flow control, remove the carton and pull back the roller arm until it stops. Release the arm and adjust the extend flow control until the return action is smooth and there is no bounce. Additional adjustments may be needed when setting the roller pressure index wheel during label placement adjustments.

RETRACT
FLOW
CONTROL

EXTEND
FLOW
CONTROL

RED BUMPER
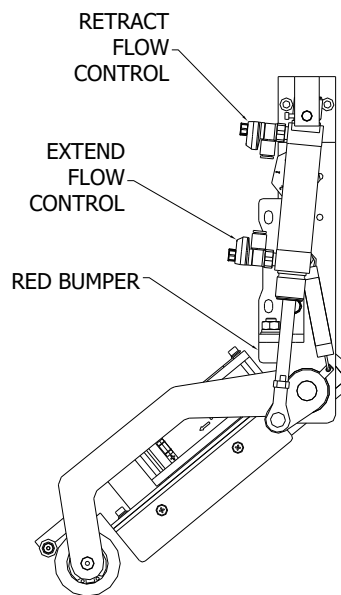
Rear view of Corner Wrap Module

5.21.2 Label Application Adjustments

Once the preliminary dampening settings have been made, the application setup adjustments can be made. Proper applicator positioning is required for proper label positioning on the product. The applicator should be positioned to apply a label to the product.

Position a box on the conveyor in place to be labeled. Move the applicator in or out so that the corner of the carton strikes the centerline of the label.
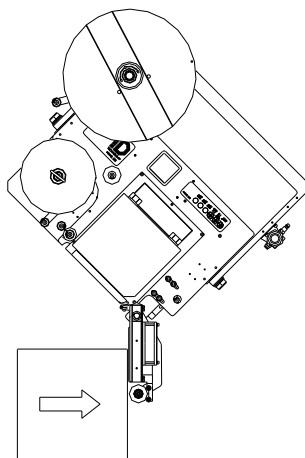
Push the carton through the corner wrap unit until the roller is on the side panel of the box.
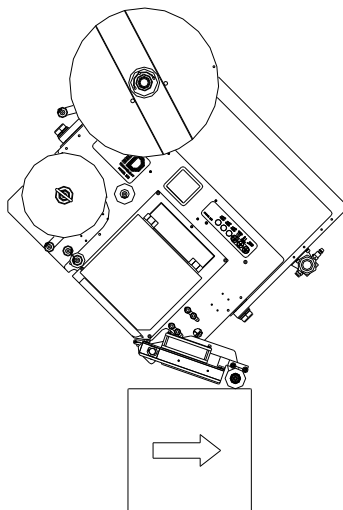
Locate the red bumper position index wheel (#4) on the rear of the corner wrap unit. Loosen the hex head screw (#1) until the wheel is loose enough to rotate freely. Loosen, but do not remove, the two hex head screws (#2) securing the stop bumper mounting bracket (#3). With the roller in contact with the box, push the mounting bracket forward until the red bumper (#5) comes in contact with the stop cam (#6). Rotate the index wheel to a position which secures the red bumper in contact with the stop cam. Tighten the hex head screw to secure the index wheel, and then the two hex head screws securing the stop mounting bracket. This sets the maximum travel position of the roller. When properly set, the stop cam should be held in such a position by the red bumper as to put pressure on the roller arm ensuring that the label is firmly adhered to the product.
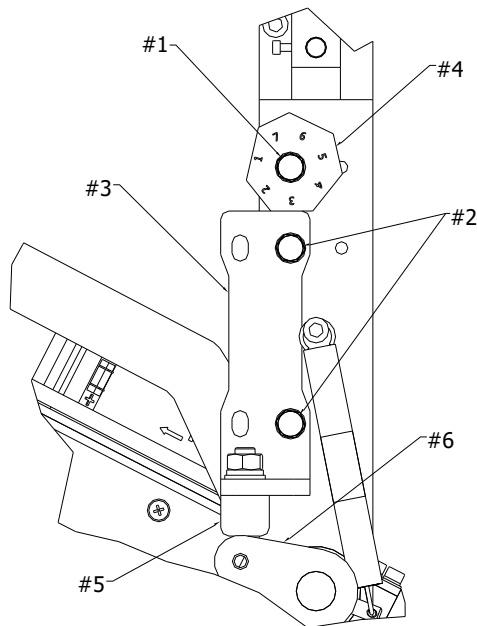
5.22 Low Label Detection Verification

Once the low label sensor is installed, it is necessary to verify correct operation. To test for correct operation, place the unwind assembly inner flange in a position to block the low label sensor beam. Press the jog icon and verify that no low label indication is shown (Use of a three stage beacon or system status output is required). Rotate the flange until the low label sensor beam is not blocked. As soon as the low label sensor is not covered, the Low Label condition is set and is indicated by the appropriate output signal. If the low label sensor is again blocked and remains blocked after five label feeds via the jog or product sensor triggers, the low label signal is reset. Alternatively, the low label condition will reset when the printer is changed from an offline to an online state. No low label indication would be present at the three stage beacon or system status outputs.

6. Save/Recall

The Save and Recall menus allow users to save three, and recall four, different label, application and product configurations.

> **ℹ** **The applicator configuration is stored as well as the set values. Recalling a wipe on setup when a tamp upgrade is installed will cause the tamp not to operate. Recalling a tamp setup with no tamp installed will cause the applicator to behave like there is excessive apply delay.**

> **ℹ** **Record the settings for each location in the table provided at the end of this section.**
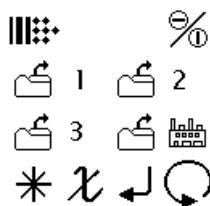
6.1 Save Configuration

Three individual machine configurations can be saved in numbered buffers. For example; a machine configuration for label #1 has Delay and Dwell settings that vary from the configuration used for label #2. After completing the configuration for label #1, save the settings to buffer #1. When the configuration for label #2 has been completed, save the settings to buffer #2. This will allow the operator to recall and apply the settings for the label being applied (label #1 or label #2) in order to reduce changeover time. To save a setup to a buffer, complete the settings needed for proper printing and application of the desired label/product combination. Press the Save Setup icon to open the save menu.

Select and ↵

🖫 1 🖫 2
🖫 3 🖫 🏭
✳ 𝒳 ↵ ↻
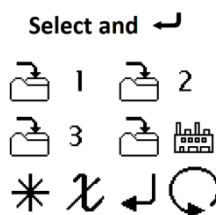
To save the setup you selected in a session to one of the three buffers listed, press the icon 🖫 with the buffer number where you want to save the settings. Note: The Save Factory buffer can only be accessed by factory technicians and representatives. Press the "Enter" icon ↵ to save the settings. Annotate the saved setup on the table provided in this manual. Enter the parameter set with either an "X" or the numeric value used. Note: This will overwrite any previously stored settings.

6.2 Recall Configuration ⌂

To recall a configuration from a saved buffer location, press the Recall icon on the main menu to open the locations menu. Refer to the configurations listed on the table created when the setup was saved for the desired settings.

From the four buffers shown, select the desired configuration buffer (1, 2, 3, or Factory) and press the enter icon. This sets the current configuration to the predetermined settings saved in the buffer selected.

⚠️ **The recalled setup may be for a very different setup. Unexpected motion may occur when the machine is cycled for the first time.**

6.3 System Configuration Information

Use this page to record your settings

#	DESCRIPTION	ASSIST DELAY	TAMP DWELL	BLAST DWELL	FEED DELAY	APPLY DELAY	SMART DELAY
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							

7. Dual Panel Application

The Dual Panel modes are for labeling two adjacent panel of a carton utilizing a single applicator.

> **i** **The Dual Panel functionality requires the use of special dual panel firmware. On the bootup display, the firmware version will end with DP**

7.1 Dual Panel Mode

The Dual Panel Mode menu allows the applicator to be configured in one of 5 Dual Panel modes. Available Print modes are Normal and Reverse and available apply modes are Tamp and Tampjet. The two cycles of a dual panel are the equivalent of a tamp application and a swing arm application. Refer to the appropriate sections for cycle setup.

> **i** **Cycle 1 and Cycle 2 are defined by the plumbing and electrical setup. Cycle 1 is controlled by connector J9 (Tamp) and cycle 2 is controlled by connector J20(V5). Either the straight cycle or the swing cycle can be plumbed to be cycle 1 depending on application requirements.**

7.1.1 Mode 1

In this mode, photocell 1 fires cycle 1 and photocell 2 fires cycle two. Each photocell can be configured individually using Apply Delay 1 and Apply Delay 2.

> **i** **Mode 1 requires the use of two photocells and a dual photocell adapter cable. The adapter cable is p/n: ID100067. Alternately a Dual Photocell bare end cable, p/n: ID100076, can be utilized to control the triggers from an external source such as a PLC.**

7.1.2 Mode 2

In this mode, a single photocell is used to initiate both cycles in sequence. In Mode 2, cycle 1 fires first, followed by cycle 2. Apply delay 1 is used to delay cycle 1 and apply delay 2 is used to delay the second cycle.

7.1.3 Mode 3

In this mode, a single photocell is used to initiate both cycles in sequence. In Mode 2, cycle 2 fires first, followed by cycle 1. Apply delay 1 is used to delay cycle 1 and apply delay 2 is used to delay the second cycle.

7.1.4 Mode 4

In this mode, the dual panel module may be used to apply a single label by only activating cycle 1.

7.1.5 Mode 5

In this mode, the dual panel module may be used to apply a single label by only activating cycle 2.

7.2 Dual Panel Tamp Dwell

The Dual Panel Firmware adds a second setting to the Tamp Dwell menu. There is a setting for each action of the dual panel module and both can be changed independently. Selecting Cycle 1 modifies the dwell settings for that cycle. Selecting Cycle 2 modifies the dwell settings for the other cycle. Pressing the ↵ key will accept both settings and pressing the χ key will discard changes to both settings.

> **i** **Cycle 1 and Cycle 2 are defined by the plumbing and electrical setup. Cycle 1 is controlled by connector J9 (Tamp) and cycle 2 is controlled by connector J20(V5). Either the straight cycle or the swing cycle can be plumbed to be cycle 1 depending on application requirements.**

7.3 Dual Panel Smart Delay

The Dual Panel Firmware adds a second setting to the Smart Delay menu. There is a setting for each action of the dual panel module and both can be changed independently. Selecting Cycle 1 modifies the delay settings for that cycle. Selecting Cycle 2 modifies the delay settings for the other cycle. Pressing the ↵ key will accept both settings and pressing the χ key will discard changes to both settings.

> **i** **Cycle 1 and Cycle 2 are defined by the plumbing and electrical setup. Cycle 1 is controlled by connector J9 (Tamp) and cycle 2 is controlled by connector J20(V5). Either the straight cycle or the swing cycle can be plumbed to be cycle 1 depending on application requirements.**

8. Three Panel Module Application

The Three Panel modes are for labeling three adjacent panels of a carton utilizing a single applicator.

> **i** **The Three Panel functionality requires the use of special three panel firmware.**

8.1 Three Panel Module User Interface

The normal 252 startup sequence and associated screen views will be displayed upon initial power up. This section shows the menus and functions that are specific to the Three Panel Application Module. The procedures for entering and saving the settings are the same as the regular 252. All other menus and functions can be found in the 252 user interface section.

8.1.1 Printer Mode

When using a print engine, the print mode must be set to the proper function sequence. Use the up and down arrows to select the mode required. Either press the screen to the right of the text (Normal, or Reverse) to select the mode and save it by pressing the Enter icon or simply press the Enter icon. A checkmark should indicate the selection has been made.
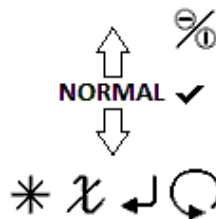
8.1.2 Apply Mode

Unlike standard 252 printer applicators, there is only one application type available with three panel module equipped units. Selecting the Apply Mode will open a dwell select menu. From this menu, the tamp dwell settings for the four pneumatic motions can be set and saved.
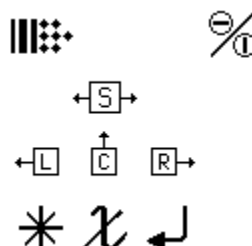
Pressing one of the four selections will open a Tamp Dwell Set menu for that motion. The selections are Center, Secondary, Left, and Right. These refer to the motions of the three pneumatic actuators on the module.

8.1.3 Tamp Dwell Adjustments

The Tamp Dwell screen allows the operator to adjust the length of time the tamp valve is energized. The dwell time should be set just long enough for the tamp cylinder to reach full stroke prior to retracting. Press the icon corresponding to the pneumatic actuator that is to be adjusted to open the dwell setting menu. Adjust the time value with the up and down arrows, pressing the Enter icon to save the value. Increasing the value of this setting will cause the actuator to remain in the extended position longer. Decreasing the value will shorten the activation time of the actuator. This adjustment does NOT affect the speed or power of the cylinder extending or retracting. Adjustments are available to control the air pressure/speed to extend and retract the primary tamp air cylinder. Flow controls with quarter-turn accuracy position indicators are provided on both ports of the air cylinder. To adjust the speed at which the cylinder extends, adjust the flow control valve on the top of the cylinder. To control the speed at which the cylinder retracts, adjust the flow control valve on the bottom of the cylinder. This also affects the power at which the cylinder extends. Care should be taken in using these adjustments to avoid crushing the product or damaging the cylinder module.

These flow controls have been set at the factory for optimum performance. Should adjustment be needed, it is advised that the original settings be recorded in the Configuration Settings table prior to any changes.

i   **Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**
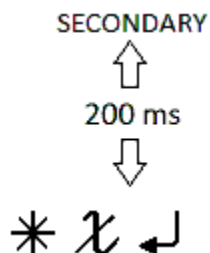
To set the tamp dwell time for the primary tamp, press the "C" icon.
This will open the "Center" dwell setting menu and allow adjustment to the dwell duration for the primary tamp air cylinder.

<div align="center">

CENTER
⇧
200 ms
⇩

✳   𝒳   ↵   ↺

</div>
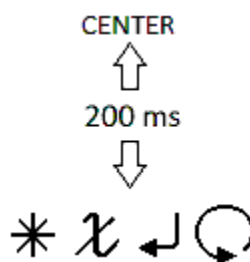
To set the dwell time for the secondary tamp, press the "S" icon. ◄⬚S➤
This will open the "Secondary" dwell setting menu and allow adjustment to the dwell
duration for the secondary tamp air cylinder.

SECONDARY
⇧
200 ms
⇩
✳ 𝒳 ↵

To set the dwell time for the left rotate motion, press the "L" icon. ◄⬚L
This will open the "Left" dwell setting menu and allow adjustment to the dwell duration
for the left rotation of the rotary actuator.
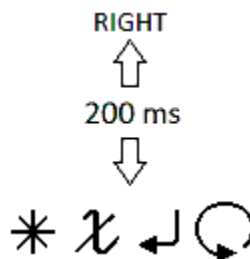
LEFT
⇧
200 ms
⇩
✳ 𝒳 ↵ ↻
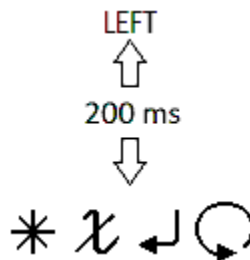
To set the dwell time for the right rotate motion, press the "R" icon. ⬚R➤
This will open the "Right" dwell setting menu and allow adjustment to the dwell duration
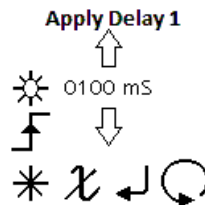for the right rotation of the rotary actuator.

RIGHT
⇧
200 ms
⇩
✳ 𝒳 ↵ ↻

8.1.4 Apply Delay ☐1 ☐2 ☐3

There are three product detector selections as well as a smart delay selection. Delay can be independently introduced for each of the three selections, but leading or trailing edge triggering is only available for the product detectors.
Apply Delay 1 affects the signal of product detector 1, used for the side apply function. Apply Delay 2 modifies the signal of product detector 2. Apply Delay 3 controls the signal of product detector 3. Product detectors 2 and 3 trigger the front and back label application depending on the product flow direction.

Once the printer/applicator is properly loaded, accurately printing and dispensing labels, the last step is to fine tune the placement of the label on the product. Establish the approximate physical location of the product detector sensor and the optimum edge detection method.

When set to Leading Edge, the label placement is referenced to the front edge of the product. The trigger signal is sent when the product to be labeled obscures the photocell. When set to Trailing Edge the operation is opposite. The trigger signal is sent when the product completely passes by the photocell. Label placement is referenced to the back edge of the product. To change the reference edge, press the icon (1, 2, or 3) associated with the photocell to be set. The Apply Delay menu for the photocell will open.
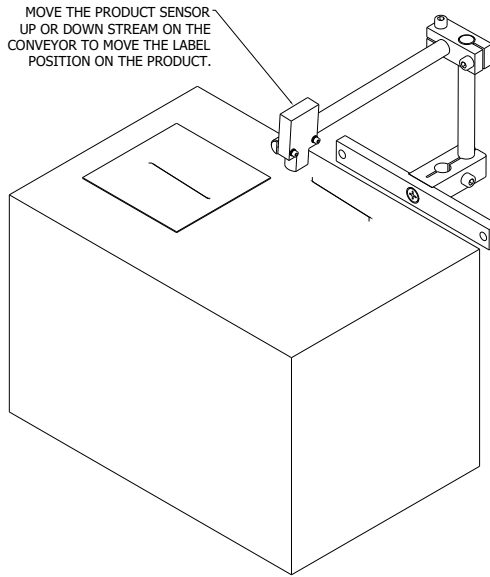
Apply Delay 1

⇧

☀ 0100 mS

⇩

✳ 𝒳 ↵ ⟲

The Apply Delay screen for each photocell will indicate that the photocell is ☀ enabled or • disabled. Press the icon to change the status of the photocell to the desired setting. Press the Enter icon to save the setting. To scroll through the photocell triggering modes, press the triggering icon. Select the leading edge trigger icon ⌐ or the trailing edge trigger icon ⌐ depending on the sensing method desired. Pressing the Enter icon will save the setting.
Once the triggering method has been set, introduce a product into the labeling system and watch where the label is applied to the product. With the apply delay setting at zero, the label will begin dispensing as soon as the product detect photocell, or other trigger device, goes active. To achieve desired placement, it may be necessary to alter several settings.

Before applying any delay, adjust the physical location of the trigger photocell itself. If label application is too close to the leading edge of the product, it may be necessary to adjust the sensor closer to the in feed side of the product handling system. If the label is being applied too close to the trailing edge, it may be necessary to adjust the sensor closer

to the out feed side of the product handling system. It is always desirable to move the photocell trigger position as close as possible to achieve desired label placement rather than to compensate with time delays.

MOVE THE PRODUCT SENSOR
UP OR DOWN STREAM ON THE
CONVEYOR TO MOVE THE LABEL
POSITION ON THE PRODUCT.

The most precise adjustment can be achieved by using the Apply Delay setting. This allows for fine-tuning the amount of time from when the trigger is received until label application begins. Once the trigger sensor is properly positioned and the appropriate edge is detected, the delay apply setting causes the applicator to pause briefly before beginning the label dispense process. If the label is applied too close to the leading edge of the product, increase the delay value. If the label is applied too far from the leading edge of the product, decrease the delay value. If the delay value is zero and proper placement cannot be achieved, it may be necessary to adjust the position of the photocell or other trigger device. To adjust the Apply Delay for the product detector, again open the Apply Delay menu. The Apply Delay screen allows the operator to insert an adjustable time delay into the selected product detector output signal. Upon accessing the apply delay screen for the enabled photocell, the current set delay value is displayed. The value is entered in milliseconds.

Apply Delay 1

⇧

☀ 0100 mS

⇩

＊ χ ↵ ↺

To adjust the value, press the up or down arrows until the desired value is displayed. Once the new value is entered, be sure the applicator is online and allow several products to pass. If the label is being applied too soon, increase the delay value or move the photocell in the direction of product travel. If the label is being applied too late, decrease

the value or move the photocell against the direction of product travel. Repeat the above adjustments until the label is applied in the proper position on the product.

Once the correct apply delay time is set, press the Enter ↵ icon to save the value. Press the Back icon $\mathcal{X}$ to return to the main menu.

ℹ **Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**

8.1.5 Smart Delay ⊟ Smart Tamp

Pressing the Smart Delay icon opens the Smart Delay screen.
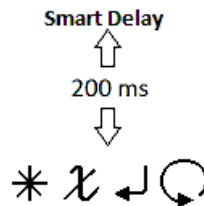
Smart Delay
⇧
200 ms
⇩

✳ $\mathcal{X}$ ↵ ↺

There are two adjustments available when using a Smart Tamp Sensor option. The first is the sensitivity or gain adjustment located on the sensor itself. It is very useful when compensating for variation in products. The second adjustment, the Smart Delay, is used to adjust the timing of the smart tamp sensor output signal. As soon as the smart tamp sensor detects the product, the tamp solenoid valve is deactivated, and the tamp pad returns to its home position. If the sensor detects the product too soon, it is possible that the label will not be properly applied. Inserting a delay into the sensor signal allows the tamp cylinder to be activated for a greater period of time, or "over-travel", increasing the stroke length (up to the maximum stroke length) traveled. This allows the operator to adjust the stroke distance for proper application of the label to the product. As with the product detector photocell delay, pressing the up or down arrows will adjust the time value in milliseconds. When the desired value has been reached, press the Enter icon to save the setting. Press the Back icon $\mathcal{X}$ to return to the main menu.

ℹ **Use the multiplier icon ✳ to make changes in the "times" factor when adjusting the dwells and delays timing - x1, x10, x100, or x1000ms. Refer to the Multiplier section for further assistance.**

8.1.6 Tamp Home Sensor Setup

Once installed, there are no adjustments available for the tamp home sensor. The output signal from the tamp home sensor is available on any or all of the system status outputs when supplied. See the drawings and diagrams section for information on the outputs.

IV. CARE, MAINTENANCE AND TROUBLESHOOTING

1. Maintenance Schedule

⚠️ **Disconnect power for all steps unless necessary for inspection of component functionality. Do not operate machine without guards in place.**

The maintenance schedule shown is a suggested timetable based on a single shift five day week operation under normal operating conditions. Schedule should be accelerated when operating under multi-shift or harsh environments. Blank lines have been provided for additional items as required. See the print engine manual for recommended print engine maintenance schedule. See the Label Dispense Module manual for apply only maintenance schedule.

	TASK	ROLL CHANGE	WEEK	MONTH	PARA.
1	Blow off paper dust	X			I.7
2	Clean Photocell		X		I.7
3	Clean Peel Tip		X		I.7
4	Clean adhesive residue from web path		X		I.7
5	Check all fasteners			X	
6	Check belts and bearings for wear			X	
7	Clean Tamp Pad		X		I.7
8	Inspect / Drain Air Filter Regulator	X			
9	Inspect Hoses and Fittings			X	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

2. General Cleaning and Inspection

Any maintenance procedure should include a thorough inspection of the complete unit. In addition to inspecting all of the items listed in the maintenance schedule, check the entire applicator for loose fasteners, cuts or abrasion on wires or wire carriers, chipped paint that may lead to corrosion and other indicators of potential problems. Oil and grease drips should be wiped clean. Dirt and dust should be wiped away or blown off with compressed air. Debris from products should be removed so they will not become entangled in moving parts.

⚠️ **Use of eye protection is required when using compressed air to clean the unit.**

3. Bearings

Ball bearing units are pre-lubricated and sealed by the manufacturer. No maintenance is necessary and the bearings should only need replacement if they show signs of excessive wear or are damaged in any way.

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4. Troubleshooting

| SYMPTOM	POSSIBLE CAUSE	REMEDY	PARA.
No waste take-up	Broken/missing drive belt	Replace drive belt	IV.12.2
	Broken/missing tension spring	Replace tension spring	IV.12.1
Label Falls Off Tamp Pad	No / Low Vacuum	Check unit is in tamp, rev. Tampjet, or tampjet mode	III.5.14.7
		Check Air Pressures	III.5.14.3
		Check Valve Operation	III.5.14.3
		Clean Tamp Pad	I.7
	Pad Position not correct	Reposition Tamp Pad	III.3.9.1
	Tamp Pad wrong size	Install correct Pad	III.3.9
No Tamp Cycle	Tamp Mode disabled	Enable Tamp Mode	III.5.4
	Tamp Dwell too short	Increase Tamp Dwell	III.5.8
No Tampjet Blast	Tampjet Mode disabled	Enable Tampjet Mode	III.5.4
	Blast Dwell too short	Increase Blast Dwell	III.5.9
Motor rotation wrong	Unit set to wrong hand	Change motor direction connection	IV.6
Unwind free spins	Broken/missing tension spring	Replace tension spring	IV.11
	Broken/missing brake band	Replace brake band	IV.11
Label Pulls off pad/sticks to Peel tip during cycle	Label Stop too short	Adjust per printer manual instructions	See printer manual
	Label Stop too long		
	Tamp pad too high	Reposition Tamp Pad	III.3.9.1

5. Main Voltage Selection

The Model 252 has been designed to run on voltages from 120VAC to 240VAC 50/60Hz. No voltage selector switching or changes to the applicator are required. Refer to the printer manual for possible required changes.

6. Motor Direction Selection

The Model 252 rewind assemblies (left hand or right hand) use the same motor, the direction of which can be easily reversed to match the required rotation direction. If the motor is rotating in the wrong direction, the rewind assembly will not work. The directional arrow located on the end of the rewind spindle indicates the rotation direction required. Reversing the motor rotation direction is as simple as plugging the motor into the provided connector on the PCB in the electronics assembly.

Start by removing all power and air from the applicator. Next, remove the back cover from the applicator using a 3mm hex wrench.
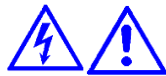
Before attempting to service machinery, the machine must be turned off and the power and air locked out.

On the PCB, locate the connectors labeled RH (J14A) and LH (J14B). Remove the motor lead wire plug from the connector it is now plugged into, (LH or RH), and plug it into the connector labeled for the opposite direction. The motor should now be rotating in the opposite direction. After the correct motor rotation direction has been selected, carefully reinstall the back cover.

Most of the illustrations in this manual depict a Right Hand applicator. When viewing the operator interface such that the print engine or apply only module is directly below it, if the peel tip or the label feed direction is to the right, it is a Right Hand applicator. If the peel tip or label feed direction is to the left, it is a Left Hand applicator.

7. Changing the Fuses

The Model 252 has one set of fuses. The pair is on each leg of the incoming power. They are accessible from the outside of the applicator.
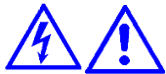
Before attempting to service machinery, the machine must be turned off and the power and air locked out.

The AC Main fuses are located in a tray in the power entry module. Remove the power cord from the applicator, then, using a small flat blade screwdriver, pry the tray out of the power entry module. The tray is located between the power cord socket and the power switch. Test and replace any blown fuses with 5x20mm Slow Acting (or Time Lag) fuses of the appropriate rating for the incoming voltage being used.

8. Electronics Assembly

Start by removing all power and air from the applicator. Next, remove the back cover from the applicator using a 3mm hex wrench.

> ⚡ ⚠ **Before attempting to service machinery, the machine must be turned off and the power and air locked out.**

BACK COVER
SCREWS
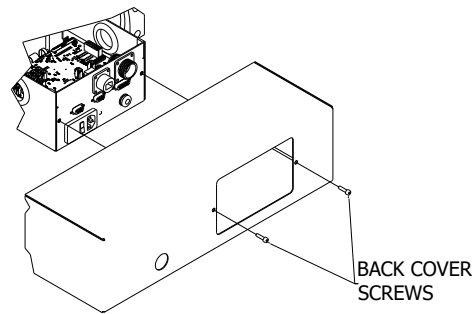
Disconnect the external components with removable connections from the PCB (Solenoid valves, Rewind motor, Low Label Sensor, etc.) and carefully remove them through the grommeted holes. Disconnect the permanently attached power cord from the print engine. Loosen the screws securing the "D" style connectors to the rear panel and remove the cable assemblies. Disconnect the network connection and the system status output connector if equipped. Using a 3mm hex wrench, remove the four M4 socket head screws securing the electronics assembly to the baseplate.
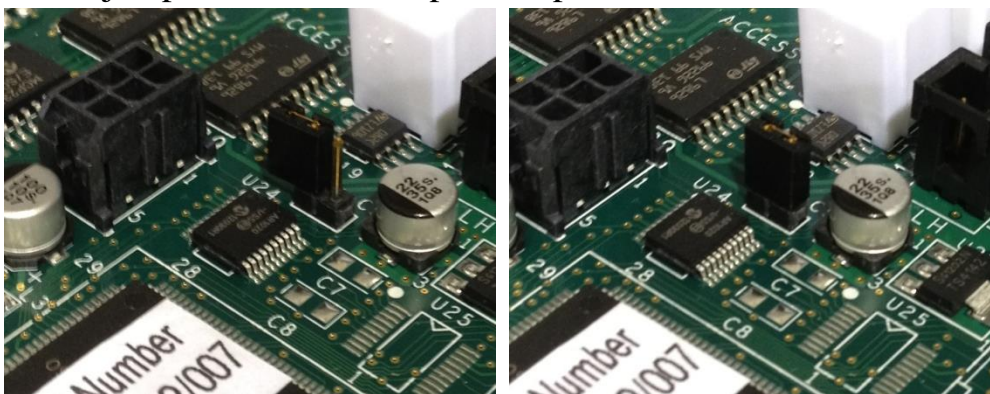
ELECTRONIC MODULE
MOUNTING SCREWS
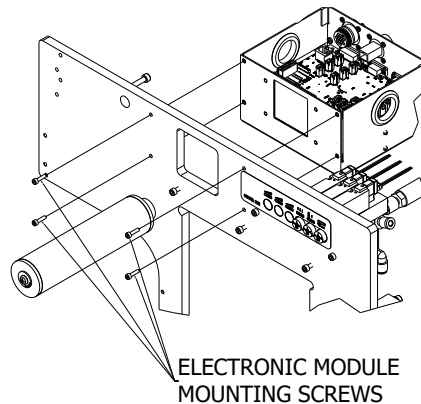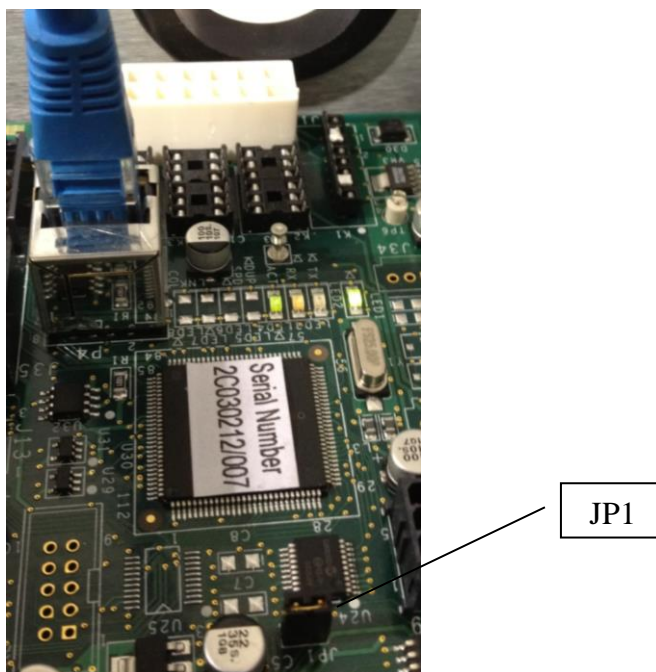
9. 252 Firmware Update

Before attempting to service machinery, the machine must be turned off and the power and air locked out.

1) Locate jumper JP1 and short pin 1 to pin 2.


2) Connect the unit via Ethernet hub or a crossover cable.

JP1

Note JP1 is shown at the bottom of the picture.

3) Power the unit on. A link is indicated on the RX and ACT LEDs near the network connector.


i   **When using a crossover cable it may be necessary to change the PC Ethernet adapter settings in order to establish a connection. In the network adapter settings, change the Speed from Auto to 10Mb Full or 100Mb Full**
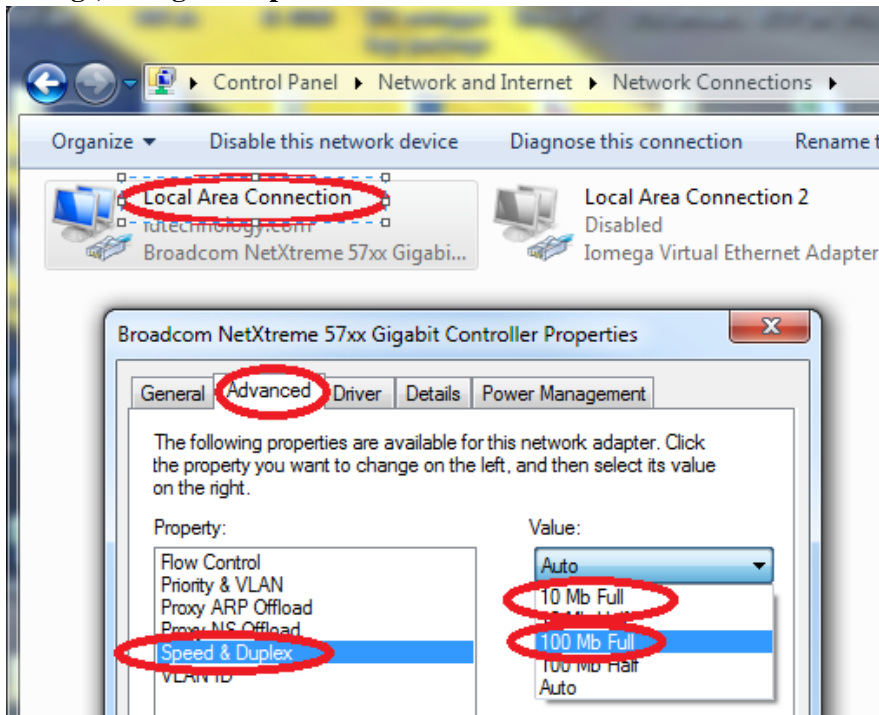
4) In a web browser, navigate to 192.168.0.9 to open the uploader. It may be necessary to modify the computer's IP address and subnet mask in order to obtain a connection.
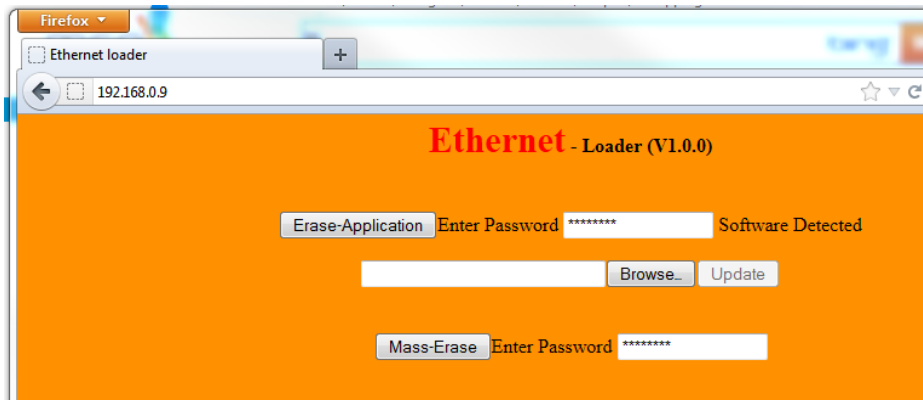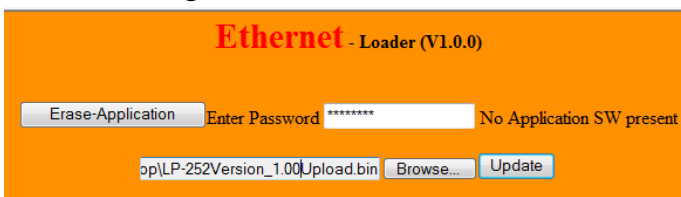

5) The existing firmware must first be erased. Enter the password WW65ss and press "Erase Application".
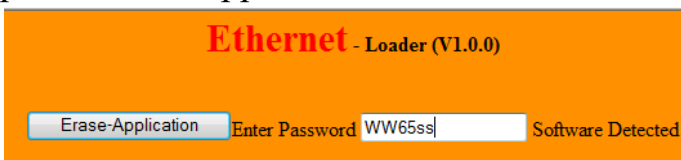
6) After a successful erase, the page will show "No Application SW present"

7) Select the Browser button to locate the desired .bin file for the firmware version being installed.

8) Select "Update". The file will be sent and the unit will restart.

LP-252 - SW Update

Upload successful. The device will now reset and start the new program. Please wait 5s...

9) The page will refresh and show that the software has been detected.

Ethernet - Loader (V1.0.0)

Erase-Application   Enter Password ********   Software Detected
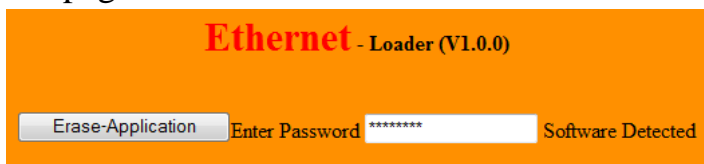
10) Turn off power, remove the Ethernet connector, and remove the jumper from JP1.

11) Turn the power back on and check the display for the proper firmware
version.
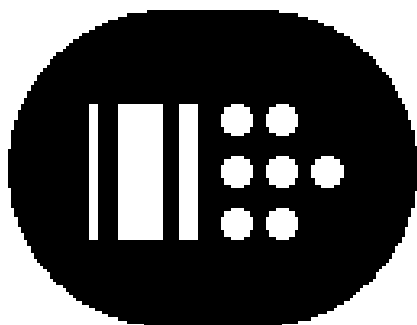
ID TECHNOLOGY
FW Ver. 1.40

12) Recall the factory default settings. Refer to section III.6.2 of this manual.

## 10. Printer/Applicator Interface Cable Pin Mapping

| FUNCTION	Model 250 "Printer" Connector 15 Pin "D" Connector PIN	62501 Zebra "PAX"/ "ZE500" Series Printer DataMax "A Class" Series Printer 15 Pin "D" Connector PIN	62503 Sato "Se" Series Printer 14 Pin Centronics Connector PIN	62509 Sato "EX" Series Printer 25 Pin "D" Connector PIN
0 V	1	1	2	14,15
5 VDC	2	2	13	12,24
Print enable	3	3	5	20
Feed	4	4		21
Pause	5	5		
Reprint	6	6	7	8
N/C	7	7		
N/C	8	8		
Low ribbon	9	9	10	18
Service Required	10	10,14	4	4
Print end	11	11	6	5
Label out	12	12	1	17
Ribbon out	13	13	3	16
Online	14		9 *	6
N/C	15	15		

i *** Sato "Se" series printers require "Ext Pin 9" configured to Mode 2. Consult printer manual "Service Mode Configuration" section for setup procedure.**

11. Unwind Brake and Dancer Arm

The unwind brake and dancer arm are designed to have no adjustments.

DANCER SPRING
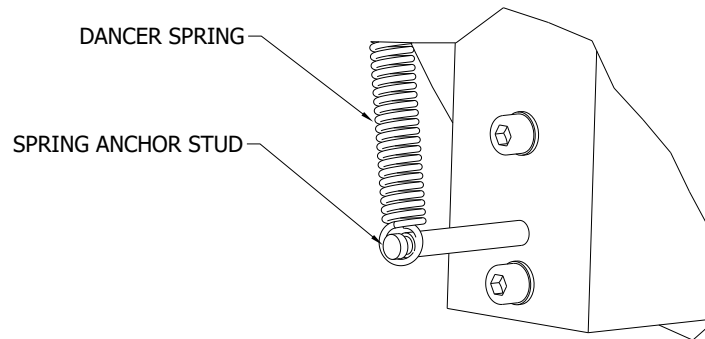
SPRING ANCHOR STUD

If the brake band is being replaced, begin by unhooking the dancer spring from the spring anchor stud. Remove the old brake band from the anchor pin and, using a 5mm hex wrench, remove the retaining screw holding the brake band to the shaft collar. Install the new brake band on the anchor pin and around the unwind shaft, taking care to face the smooth shiny side of the band inwards against the collar and unwind shaft. Be sure the brake band is routed according to the illustration below for the appropriate hand applicator. Next, rotate the dancer shaft and collar until the brake band attachment hole lines up with the hole in the collar. Install the retaining screw and secure the brake band.
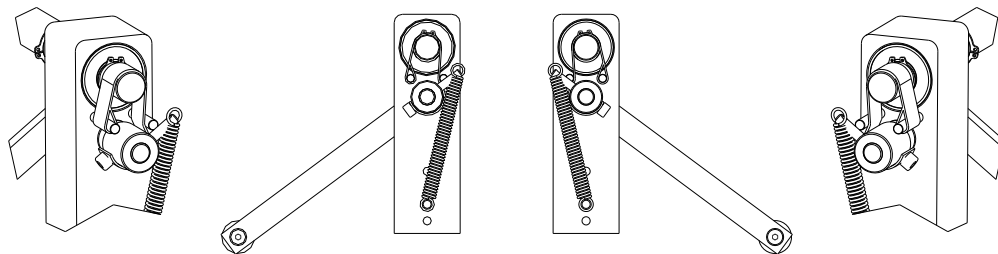
LEFT HAND CONFIGURATION   **RIGHT HAND CONFIGURATION**

i   **Most of the illustrations in this manual depict a Right Hand applicator. When viewing the operator interface such that the drive roller is directly below it, if the peel tip is to the right or the drive roller it is a Right Hand applicator. If the peel tip is to the left of the drive roller, it is a Left Hand applicator.**

Finally, rotate the dancer away from the peel tip end of the applicator, stretch the dancer spring and reattach it to the spring anchor stud. The loop end of the spring should rest in the groove of the stud.

The dancer roller should rest in a position near the edge of the faceplate. In this position, the unwind shaft should offer resistance to spinning by hand unless the dancer arm is manually rotated towards vertical.

DANCER ARM
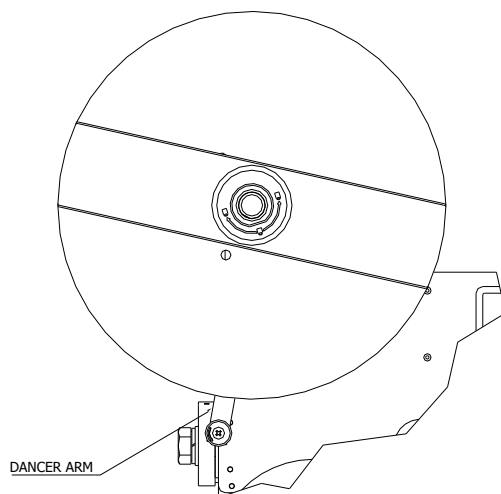
12. Rewind Assembly Maintenance

Refer to the drawings and diagrams section for assistance when performing maintenance on the rewind assembly. No adjustments are needed other than setting the belt tension when required. Drive belt removal and installation is the same for both rewind assembly versions. Pulley and motor maintenance is version specific.

REWIND BELT

REWIND ROLLER

DRIVE PULLEY
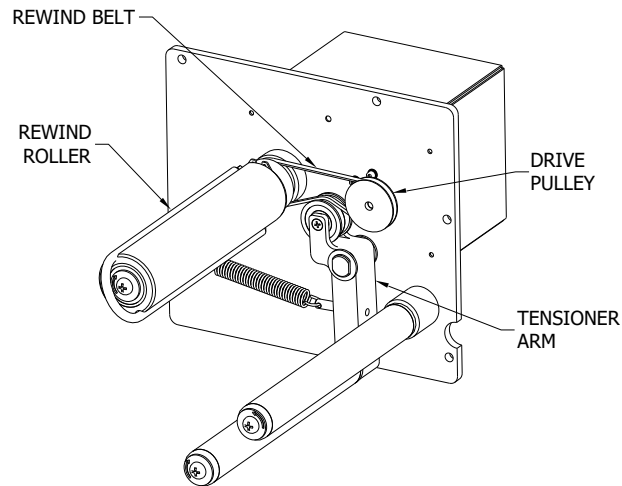
TENSIONER ARM

Rewind Flange not shown for illustration purposes.

12.1 Drive Belt Removal

After removing the rewind clip, remove the screw and directional washer retaining the rewind spindle on the shaft. Rotate the tensioner arm to remove tension on the belt and remove the belt from the drive pulley. Slide the rewind spindle off of the shaft making sure that the shim remains on the shaft. The drive belt can be removed and replaced at this point.

REWIND CLIP

REWIND SPINDLE

DIRECTIONAL WASHER

DRIVE BELT

DRIVE MOTOR MOUNTING SCREWS

ROTATE ARM

DRIVE PULLEY

TENSIONER ARM
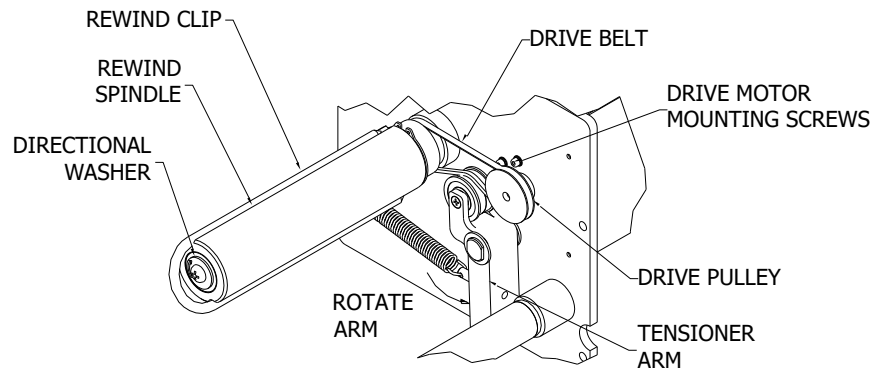
Rewind Flange not shown for illustration purposes.

12.2 Drive Belt Replacement

To replace the drive belt, place the belt in the drive groove on the rewind spindle. Holding the belt from the top of the flange, slide the rewind spindle onto the shaft. Rotating the tensioner arm as before, rotate the belt toward the drive pulley, ensuring that the belt is placed properly over the bearings. Slip the top portion of the belt over the top of the drive pulley and pull the belt or rotate the pulley until the belt is seated in the drive pulley. If the belt tension is too tight to install the belt in the normal manner, it may be necessary to reposition the rewind spindle shaft. Refer to Section 12.2.1 for this procedure. Release the tensioner arm and verify that tension is applied to the belt. Best operation has been seen when the tensioner arm is at 90 degrees to the lower edge of the mounting plate while in a free state. 252N rewind assemblies are configured differently and therefor use another angle as reference for the tensioner arm position. See the figures for more information. Rotate the tensioner arm and verify that tension is removed from the belt before the arm is rotated half of the overall travel. If the tension is too tight, label web breakage can occur causing errors during operation. If the tension is too loose, the tensioning roller can contact the drive pulley and waste may not be taken up during operation. If either condition exists, the tension setting must be repositioned.

252 Model   252N Model
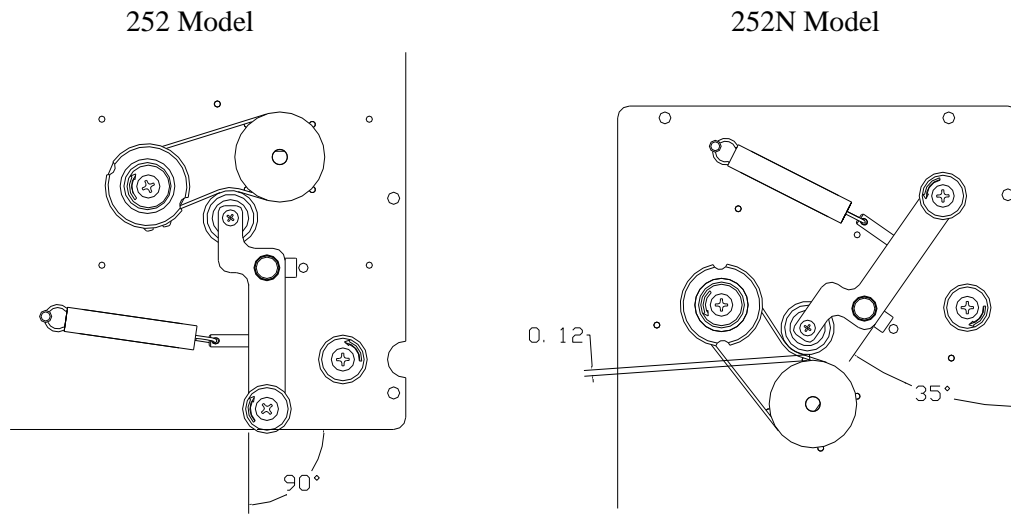
A gap between the drive pulley and the tensioning roller of approximately 1/8" is a normal result when the tensioner arm is set to the indicated angles.

12.2.1 Drive Belt Tension Setting

The drive belt tension must be set correctly to reduce belt wear and ensure proper operation of the rewind assembly. This setting is done at the factory and may only require reposition whenever the belt is replaced. For that purpose, a three position stop block is located under the cover on the back of the rewind assembly. To set the belt tension after replacing the belt, loosen the screw retaining the rewind spindle shaft until it can be moved in the slot in the plate. Note the position of the stop block in relation to the rewind spindle shaft mounting screw. Remove the two screws attaching the stop block. If the tension is too tight, reposition the stop block to allow the shaft to be moved toward the drive pulley. If the tension is too loose, the shaft must be moved away from the drive pulley. Reinstall the two stop block mounting screws. When the proper tension has been set, hold the rewind spindle in such a way as to press the screw head against the stop block and tighten the screw. Recheck the operation of the tensioner arm and belt tension to ensure proper operation of the rewind assembly.

Stop Block Positions
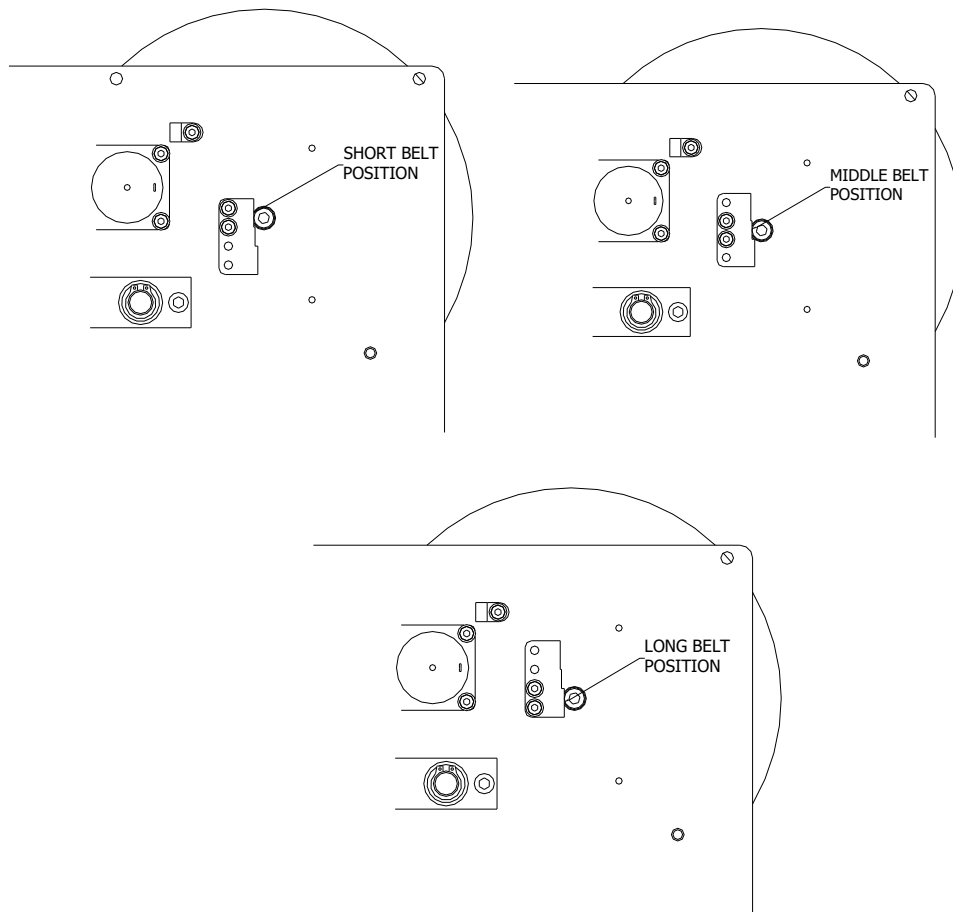
12.3 Drive Pulley Replacement

To replace the drive pulley, remove the drive belt and rewind spindle. Rotate the drive pulley until the set screw holding the pulley in place on the motor shaft is exposed. Remove the set screw, and slide the drive pulley off of the motor shaft. Place the new drive pulley on the motor shaft, install the set screw, and tighten, positioning the drive pulley hub as shown.
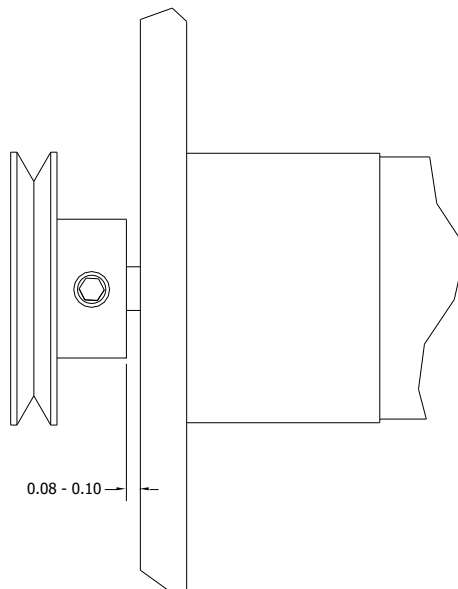
0.08 - 0.10

Once the new drive pulley is correctly installed, reinstall the drive belt and rewind spindle.

12.4 Drive Motor Replacement

To replace the drive motor, the drive belt and the drive pulley must be removed. Remove both by following the above removal processes. Using a 3mm hex wrench, remove the four M4 screws and washers and the secured rear cover to expose the motor. With a 4mm hex wrench, remove the M5 screw and washers securing the cable clamp. Remove the cable clamp from the motor power lead. The motor can now be detached from the rewind mounting plate. With a 2.5mm hex wrench, remove the four M3 screws retaining the drive motor. To install a new drive motor, perform the steps in reverse order.

To prevent damage to the motor mount threads, use caution to not over-tighten the M3 screws.

REMOVE SCREWS, WASHERS, AND COVER
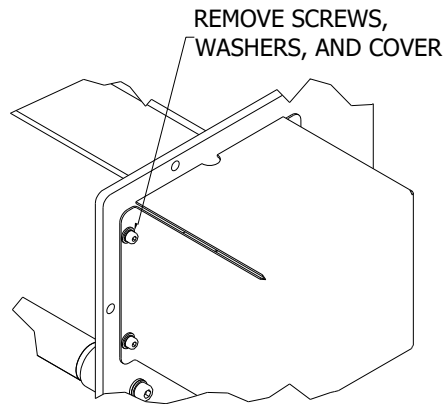
12.5 Drive Pulley Replacement 2014 Rewind

To replace the drive pulley, remove the drive belt and rewind spindle. Rotate the drive pulley until the set screw holding the pulley in place on the motor shaft is exposed. Remove the set screw, and slide the drive pulley off of the motor shaft. Place the new drive pulley on the motor shaft, aligning the set screw with the flat on the drive motor shaft. Install the set screw, applying blue threadlocker, and hand tighten until snug on the shaft or until no side to side rotation is present. Loosen the set screw approximately 1/8 turn allowing the pulley to slide on the motor shaft, again with little or no side to side rotation. Gently push the pulley down on the motor shaft until the set screw rests on the step of the flat and tighten the set screw.
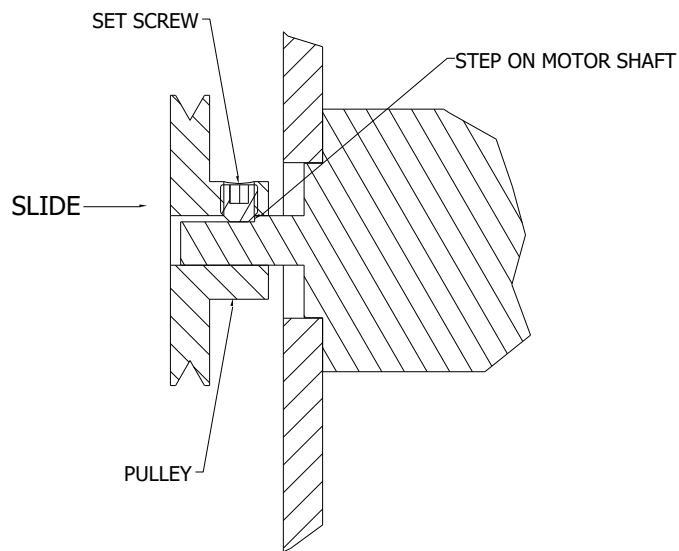
Once the new drive pulley is correctly installed, reinstall the drive belt and rewind spindle.

12.6 Drive Motor Replacement 2014 Rewind

To replace the drive motor, the drive belt and the drive pulley must be removed. Remove both by following the above removal processes. Using a 3mm hex wrench, remove the four M4 screws and washers and the secured rear cover to expose the motor. With a 4mm hex wrench, remove the M5 screw and washers securing the cable clamp. Remove the cable clamp from the motor power lead. The motor can now be detached from the rewind mounting plate. With a 3mm hex wrench, remove the four M4 screws retaining the drive motor. To install a new drive motor, perform the steps in reverse order.

REMOVE SCREWS,
WASHERS, AND COVER
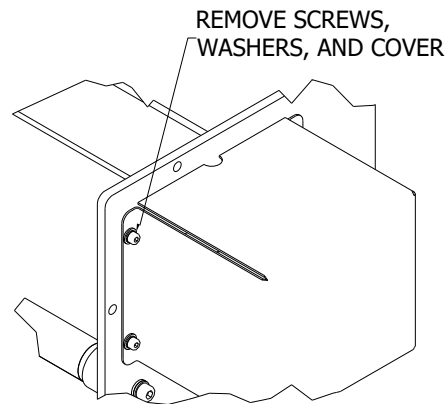
V. DRAWINGS AND DIAGRAMS

Figure 1: 252 with Standard Tamp Dimensions

STANDARD TAMP DIMENSIONS