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**Designers and Manufacturers of Pressure Sensitive Labeling  
Equipment and Custom Product Handling**

# **3600a PRINTER APPLICATOR MAINTENANCE & SERVICE MANUAL**

**REVISION 3600a-3a3.xx**

## Introduction

The 3600a-PA printer applicator is a high-speed labeler used to thermally print and apply pressure sensitive labels to moving products. A thermal transfer printer is integrated into an applicator to form a self-contained unit that will print variable data onto a label. The printer/applicator can be mounted in almost any position adjacent to product flow to apply labels to top, sides or bottom of products as they pass by.

Labels are supplied on rolls that consist of a liner on which the labels are held with adhesive. The labels may be preprinted with the variable information added by the printer or blank labels with the printer printing the entire label.

It is assumed that the reader of this manual has some experience with printer / applicators or has some factory training. Since this manual covers the standard 3600a, the dual action tamp and the corner wrap, some of the setup descriptions will be too general for an inexperienced technician. The following are descriptions of some of the labeling sequences:

In **Normal Tamp, Normal Swing Only (DAT)** or **Normal Side Only (DAT)** modes, the label is printed, dispensed out onto the label pad and held there by vacuum. When the product detect sensor turns on, the label pad moves toward the product using a pneumatic slide or rotary actuator. When the actuator is extended, an air blast will blow the label off the pad and onto the product.

In the **Inverted Tamp, Inverted Swing Only (DAT)** and **Inverted Side Only (DAT)** modes, the label is printed, dispensed onto the label pad and the actuator extends. The applicator will wait in this position until the product sensor turns on. The label is then blown off the pad onto the product.

The **Corner Wrap** sequence and starts with a label on the pad. When the product detect sensor turns on the label pad swings out under high pressure. Once the swing extend time is finished, the swing arm goes to a lower pressure so the product can push through it. When the tamp return sensor turns on, or low pressure timer is finished, the label pad swings home under high pressure. Depending on how the valve bank is plumbed, there may be an air blast or the vacuum will turn off when the swing extend time is finished.

For safe and trouble-free operation, the instructions in this manual must be followed carefully during the set-up, operation, media changes, cleaning and maintenance. Also the specified environmental conditions must be maintained.

**READ THE INSTRUCTIONS CAREFULLY AND COMPLETELY.** This manual includes all of the information that you'll need to set up the applicator under normal operating conditions. The instructions include important safety precautions, which must not be ignored.

**READ THE INSTRUCTIONS IN ORDER.** The instructions are written as numbered steps that will take you safely and efficiently through the setup process. Any steps performed out of sequence may result in a hazard and the applicator may not operate properly.

**WORK CAREFULLY.** Although setting up the applicator is not difficult, it does take time. Do not rush through the process. Careful work will produce good results.

**IF SOMETHING DOES NOT WORK PROPERLY TRY SETTING UP AGAIN.** Although applicator malfunction is possible, most problems happen because the applicator was not setup correctly. If the applicator doesn't operate correctly, back-up and start over.

**FOLLOW ALL SAFETY INSTRUCTIONS.** The 3600-PA has been provided with a number of safety features. Observe all safety warning and under no circumstances attempt to remove or defeat safeguards or operate the machine in a manner contrary to the instructions.

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## **Definition of Machine Terms**

### **Adhesive Strings**

Label adhesive that attaches to the label and liner while the label is dispensing onto the label pad. They can cause the label position on the label pad to become inconsistent.

### **Air Assist Tube**

A small diameter tube with small hole in it mounted under the peel edge. The purpose is to direct a stream of air to help the label onto the label pad.

### **Air Assist**

The stream of air from the Air Assist Tube.

### **Air Blast**

A blast of compressed air that moves the label from the label pad to the product. The duration of the blast is controlled by the Air Blast time accessible through the applicator display.

### **Air Filter**

A device on the inlet of the air supply that removes debris from the air supply.

### **Applicator Type**

The 3600a supports several different applicator noses. With each nose assembly, the applicator can change the sequence of labeling which is referred to as an applicator type. The different applicator types are described in the display section of this manual.

### **Critical Alarm**

This is an alarm that will stop the applicator from applying labels. Some critical alarms include end of web, out of labels (from printer) and no ribbon (from printer).

### **Cycle Time**

The amount of time it takes for the applicator to print and apply a label to a product and to be back in the start position, beginning with the product detect signal.

### **Dancer Arm**

The function of the dancer arm is to release the brake on the unwind when labels are being printed and to stop the unwind mandrel when printing stops.

### **Detector Lockout**

Time span after the applicator starts the labeling sequence that will cause the applicator to ignore any additional product signals. This is useful if a product triggers the product detect sensor more than once.

### **Extended Air Assist**

The air assist is always on while the label is being printed (dispensed). Extended air assist allows the air assist to stay on longer to aid in putting the label on the pad.

### **Extended Peel Edge**

An applicator nose assembly that adds a peel edge that moves with label flow. This will enable the back feed option to be turned off to the printer so higher labeling rates can be obtained.

**Inverted Tamp Blow (ITB)**

A mode of operation in which the tamp pad is in the extended position waiting for the product detect signal to start the labeling sequence.

**Label Feed**

The moving of the label stock through the machine.

**Label Liner**

The backing material that supports the labels before dispensing.

**Label Manifold**

The aluminum block mounted under the tamp slide. The label pad is mounted to it. Vacuum and/or the air blast are channeled through it to the pad.

**Label Pad**

Mounted under the manifold and is usually made from white delrin or aluminum. This part supports the label before application.

**Label Placement**

This the time or distance from when the product sensor is made to when the labeling sequence starts.

**Label Size**

The width and length (or feed) of a label. Length equals the distance from the leading edge to trailing edge of the label. Width is the distance across the label.

**Leading Edge**

Refers to the signal sent from a sensor when the first edge of a product or label is detected.

**LED**

Light Emitting Diode

**Long Tamp Length**

In Normal and Inverted Tamp modes, this is the distance the tamp slide will travel to apply the label. In Auto Tamp mode, this is the tamp stroke for the shortest product.

**Low Pressure Timer**

The time allowed for the corner wrap low pressure, after extend, and before retract.

**Normal Tamp Blow**

A mode of operation where a label is dispensed onto the label pad and the applicator waits for the product detect sensor to turn on before starting the labeling sequence.

**Parity**

A data bit that provides a means of checking for errors in the data stream.

**Peel Edge**

A sharpened part just before the label pad that when the liner is wrapped around it, the label is transferred off the liner to the pad.

**Rewind**

This is the rotating mandrel that takes up the liner after the labels have been removed.

**Static Stack**

When labels are applied to a stationary target on top of each other to check repeatability of the applicator.

**Tamp/Swing Extend Time**

The time allowed for the tamp slide or rotary actuator to fully extend.

**Tamp/Swing Retract Time**

The time allowed for the tamp slide or rotary actuator to return from its extended position to its retracted position.

**Trailing Edge**

Refers to the signal sent from a sensor when the last edge of a product or a label is detected.

**Unwind**

This is the rotating mandrel where the roll of labels is placed to be printed and applied.

**Valve Bank**

The typical valve bank for a tamp has three valves in it. Each valve has a built-in regulator and gauge. The assembly is made to be bolted on either side of the applicator.

**Warning Alarm**

This alarm serves as a warning that the applicator is low on labels or ribbon.

**Web Path**

The path the label liner follows leading from the unwind, through the printer and ends at the rewind.



## **System Requirements**

### **Electrical Requirements**

108-132 VAC, 1 Ø

5 AMPS

50/60 Hz

A three-meter long, three-wire cable with 16 AWG (1.00mm<sup>2</sup>) conductors rated at 10 amperes (in accordance with CENELEC HD-21) is provided for the electrical connection to the IEC 320 receptacle of the applicator. The end of the power cord is terminated with a NEMA5-15 plug.

### **Air Requirements**

80 - 90 PSI clean dry air

4 SCFM

### **Operating Environment**

Operating Temperature: 40-104 degrees F

Humidity: 20-95% RH, non-condensing

**NOTE: THE 3600a-PA IS NOT INTENDED TO BE OPERATED IN AN ENVIRONMENT WHERE FLAMMABLE OR EXPLOSIVE GASSES ARE PRESENT. THE 3600a-PA IS NOT TO BE USED IN DIRECT CONTACT WITH FOOD PRODUCTS.**

## 3600a Touch Screen Display

The following is general information about the display and changing values inside the display. Different screens and options available in the display are explained below as well.

### Types of Buttons Used in Display

The following are examples of buttons found in the display and what they represent. Not all buttons are shown.

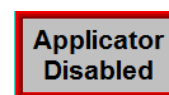
These buttons will move the operator to another screen. Buttons will be various colors but will be labeled with a destination. The home button will return the operator to the home screen at any point.



This style of buttons performs a function within the applicator. For example, they may jog the web or reset an active alarm. Various colors can be seen but they will be labeled based on their functionality.



This button will enable and disable the tamp. When enabled, the applicator will be ready to apply labels. Depending on the screen, either the center of the button will be green if enabled or just the frame.



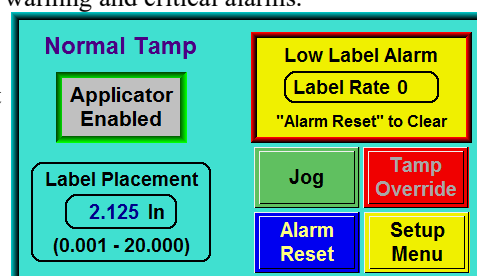
This style button will open a help menu with information pertinent to the section of the display the operator is in.



### Alarms

There are two categories of alarms generated by the 3600a applicator: warning and critical alarms.

**Warning alarms** will appear in the upper right hand corner of the main menu in the status box. These alarms are not serious and in most cases the applicator will not stop applying labels. If the applicator has an alarm light, the amber light will turn on and the green light will remain on if the tamp is enabled.



Below are some of the warning alarms monitored by the applicator:

**Low Label** – Low label sensor detects the unwind roll is getting too small.

**Low Ribbon** – If the printer sends a low ribbon signal to the controller.

**Printer Not Ready** – The printer is offline or in pause and will not print.

**Comp Warning** – This is a compensation alarm and occurs only when using an encoder. The PLC will calculate the encoder velocity and adjust the label placement value based on that velocity. The faster the encoder speed, more is subtracted from the label placement. If label placement gets to a negative number, this warning occurs telling the operator to increase the label placement value or the conveyor speed could be slowed.

**Rate Alarm** – This alarm occurs only in a dual action tamp applicator and will come up if the applicator is not ready to apply the second label by the time the second label placement value is complete. The problem can be corrected by increasing the print speed, lowering the actuator times for the first label application, or increasing the second label placement value.

**Bad Label on Pad** – This warning occurs when using RFID option and jogging a label onto the label pad while the applicator is disabled. It will notify the operator the label just printed was bad.

**Critical alarms** will stop the applicator (disable the tamp) and turn the red light on in the light stack (if provided). The alarm screen will cover the current screen explaining the alarm type with an alarm reset button at the bottom of the page to clear the alarm.



The following are some of the critical alarms:

**No Media Alarm** – If the printer cannot find labels or ribbon.

**End Of Web** – If the end of web sensor detects a break in the web.

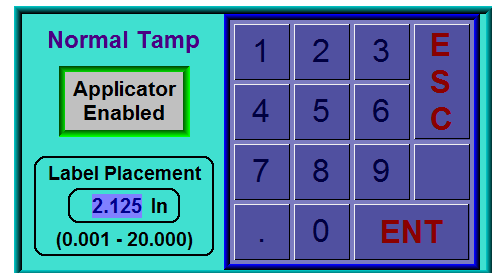
**Too Many Ejects in a Row** – This alarm occurs when using RFID option and the number of ejects in a row passes the *Eject Alarm Count value*.

**Ejected Label Stack Too High** – This occurs when in RFID mode and the label count for the eject paddle is greater than the *Eject Stack Preset value*.

## Changing Values

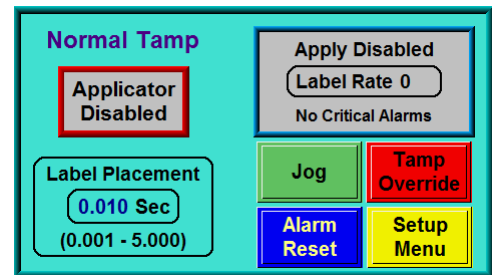
Values that can be changed are in boxes displaying the current value. The box will be labeled with the variable name as well as display the allowed limits of that variable.

To change a value the operator will touch the screen inside the box and a keypad will appear on the screen. As numbers are inputted into the keypad the value will change. Pressing “ENT” will close the keypad and confirm the change. Pressing “ES” will close the keypad and cancel the change. If the operator presses “ENT” after inputting a value outside of the limits the value will revert to its’ original value.



## Main Menu

After the power up sequence the display will come to the main menu. The main menu gives access to the label placement option, the jog and alarm reset buttons, the ability to enable and disable the applicator, and setup menu button. It also provides a status box in the right hand corner to display any alarms and the labeling rate if enabled or the applicator information if disabled. If the applicator is disabled the tamp override button can be used to extend the tamp.



The buttons in the upper left corner and a “?” box may appear as shown to the right if external print or feed blank labels is enabled. This is because the cycle behavior of the applicator changes and the button provides a menu to explain the differences.



**Jog** – If the applicator is enabled, the jog will cycle the applicator just like it was applying a label to a product. If the applicator was disabled, it would just blow and print another label.

**NOTE:** The jog button on a DAT only works when applicator is enabled.

**Alarm Reset** – Used to clear alarms from the status box in the top right of the screen. Some alarms, such as low label, do not clear automatically and will need to be cleared by the alarm reset button. If the alarm is not cleared when alarm reset is hit, then the condition that is creating the alarm is still present.

**Label Placement** – Adjusts the label placement value of the applicator. The distance (or time) after receiving product detect until the label is applied onto the product. If encoder based it will be in inches.

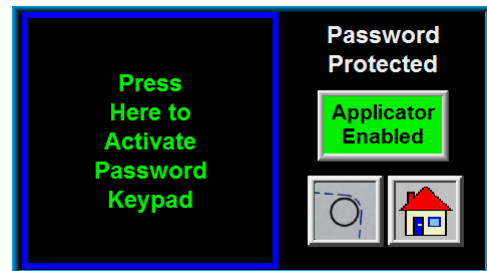
**Tamp Override** – When on, the tamp slide will extend which helps with setups and changing labels.

**Note: Not active while the applicator is enabled.**

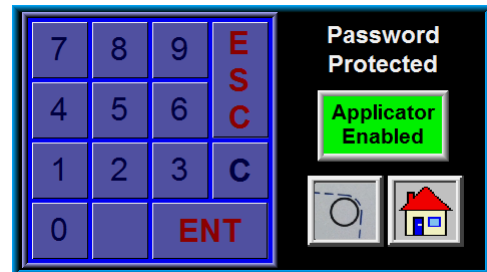
**Setup Menu** – Takes you to the password protected setup menus to change the configuration of the applicator.

## Password

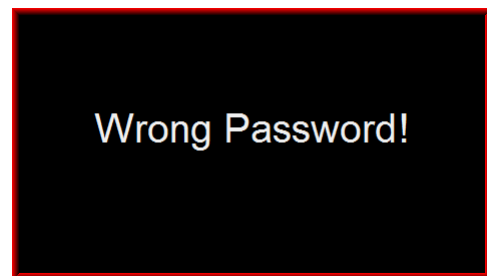
The setup area of the display is password protected. The standard password is “1800.” When you go to the setup menu you will get a popup telling you that the area is password protected. A keypad will appear if the box to the left is touched. Alternatively, you may return to the home screen from this screen.



Once the password has been entered you may hit “ENTER” to confirm it. If entered correctly you will advance to your desired screen. If an incorrect password is entered a screen will be shown to notify the operator. In the even that you know you have hit the wrong number pressing “C” will clear the current entry.



If the wrong password was entered, the screen to the right appears. The screen will appear for three second and then return to the first password screen.

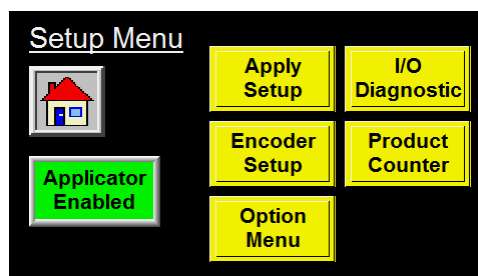


Pressing this key will display web paths for both right- and left-hand applicators as well as a threading diagram for Sato and Zebra print engines. This key is not enabled if the applicator is enabled. There is more information on this key in the Applicator Setup section.

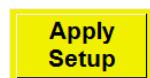


## Setup Menu

After entering the password the display will show the setup menu screen. The home key will take you back to the main menu. While in the setup menus the applicator can be disabled and enabled. The following submenus can be found in the setup menu:



### Apply Setup



Contains the settings for applying the label to a product. Includes all valve timers. See “Apply Setup” section of the manual.

### Encoder Setup



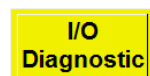
Contains options for setting up the encoder for the applicator. See “Encoder Setup” section of the manual.

### Option Menu



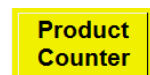
Contains various applicator options that can be toggled on and off. See “Option Menu” section of the manual.

### I/O Diagnostic



Contains a troubleshooting section that allows you to monitor the I/O in real-time. See “I/O Diagnostic” section of the manual.

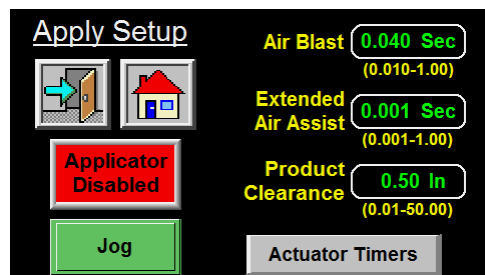
### Product Counter



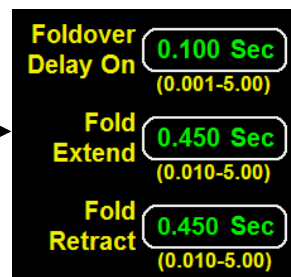
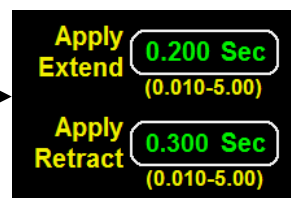
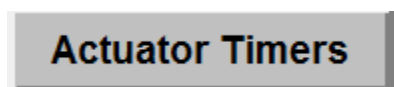
Contains a product counter that increments on product detects. See “Product Counter” section of the manual.

## Apply Setup

This section allows the operator to change settings pertaining to the application of the label to the product. This will include timers that affect the cycle. The “door” key will return you to the setup menu, while the home key will return you to the main menu. The applicator can be enabled and disabled while in this menu.



The buttons below will change what variables are displayed and adjustable.



**Air Blast** - The interval of time that the air blast valve is turned on. Allowed values are .010 - 1 second.

**Extended Air Assist** - The extended air assist time is the interval of time after the print is complete until the air assist is turned off. It is used to help get the label in place on the label pad prior to being blown onto the product. Allowed values are between .001 - 1 sec.

**Product Clearance** – This is the time or distance traveled after the last label in the sequence has been applied until the applicator will react to the product detect sensor. This is used to filter out multiple product detect signals from a single product.

**Extend Time** – Extend timer will have different names based on the type of applicator but is the allowed time for the actuator (rotary or linear) driving the label pad toward the product to get into position. If this was a DAT, then there would be one for the rotary actuator and one for the linear slide.

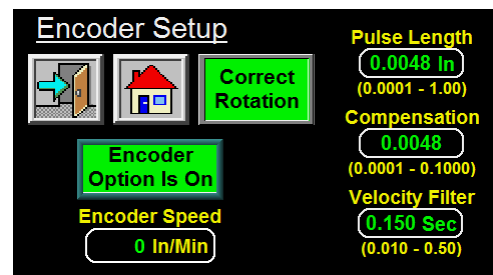
**Retract Time** – As with the extend timer, there will be different names but is the allowed time for the label pad to get home before a label is printed. If this was a DAT, then there would be one for the rotary actuator and one for the linear slide.

**Foldover Timers** – This option is only in the standard applicator and the timer values only appear when the foldover option is enabled. The foldover timer descriptions are in the option menu in the display section of the manual.

**RFID Variables** – This option is only available in the standard applicator and will appear only if the RFID option is turned on. The RFID variable descriptions are in the option menu in the display section of the manual.

## Encoder Setup

The encoder option is used when the velocity of the product varies or you want to be able to setup label placement in inches verses time. The applicator uses three of the four signals from an encoder for speed calculations and to verify the encoder is turning the correct direction. An encoder must be installed for the applicator to receive an encoder signal.



**Encoder Direction** - The block beside the home button will tell you whether the encoder is spinning in the correct direct. If reversed, switch the A+ and A- wires inside the applicator or remount the encoder so it is spinning in correct direction.

**Encoder Option** – The encoder option button is for turning this option on and off. If the option is on, the button will be green and the verbiage on the button will say it is on.

**Pulse Length** – The distance the product travels per pulse of the encoder. The pulse length may be calculated using the following formula:

$$\text{Pulse Length} = \frac{\text{Distance Product Moves Each Rev}}{(\text{Encoder Pulses Each Rev}) * 4}$$

**Pulse Length Example** – An encoder is mounted to a conveyor drive pulley and the circumference of that pulley is 18.75”. Therefore, the product on the conveyor will travel 18.75” per revolution of encoder. The encoder is a factory-installed encoder generating 2500 pulses per revolution.

$$\text{Pulse Length} = \frac{18.75"}{(2500) * 4} = .001875 \text{ in/pulse}$$

**Velocity Filter** – Velocity filter is the time the PLC takes to average the velocity of the encoder before acting on it and in most cases, should not be changed from factory set values. The higher the number, the more stable velocity is display but the reaction to a speed change will be slower. The lower the value, the faster the applicator will respond but the displayed value will be erratic. Look for a balance if you feel you must change it.

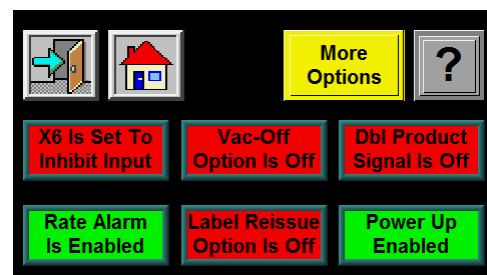
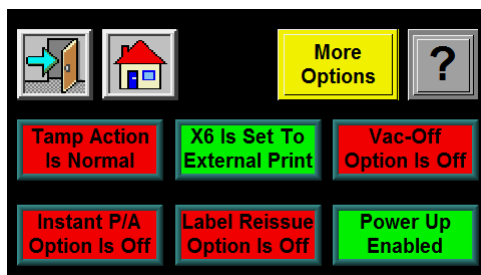
**Compensation** - Compensation is a number that functions within a formula to reduce the label placement value based on the encoder velocity. When products move faster on the conveyor, the label application must begin sooner to compensate for the static times of the application. When selecting a value for rate compensation start at 0.0048. Apply labels to the product at a slower speed. Then run the product at production speeds or faster. If the labels are applied in the same place, the compensation is correct. If the labels move back at higher speeds, **increase the compensation**. If the labels move forward, **decrease the compensation**. Whenever the rate compensation value is adjusted, it is advisable to re-run the product at various speeds to make sure that the labels are applied in the same position.

#### Notes regarding encoder use:

- 1) Label placement units with the encoder option on are in inches, not seconds.
- 2) The encoder option will not be accurate with a normal tamp applicator due to the tamp extend being time based. It will be accurate with an inverted tamp.
- 3) If product speeds are too fast causing the compensated label placement to lag the current label placement, a warning will be given to raise the label placement value.

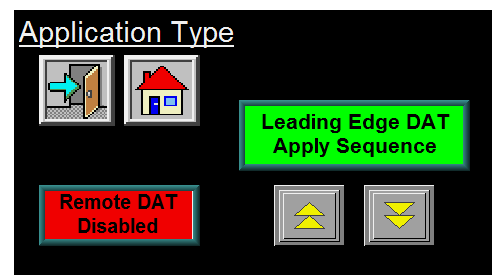
### Option Menu

Here an operator can turn options on and off and if there are variables tied to the options, they can be changed. Option screens will be different between the standard, dual action and corner wrap versions. The image below to the left shows the option menu of a standard applicator. The image below to the right shows the option menu of a DAT.



The help button in the top right will show a list of incompatibilities for the applicator options. There is also a chart in this section of the manual that shows all incompatibilities.

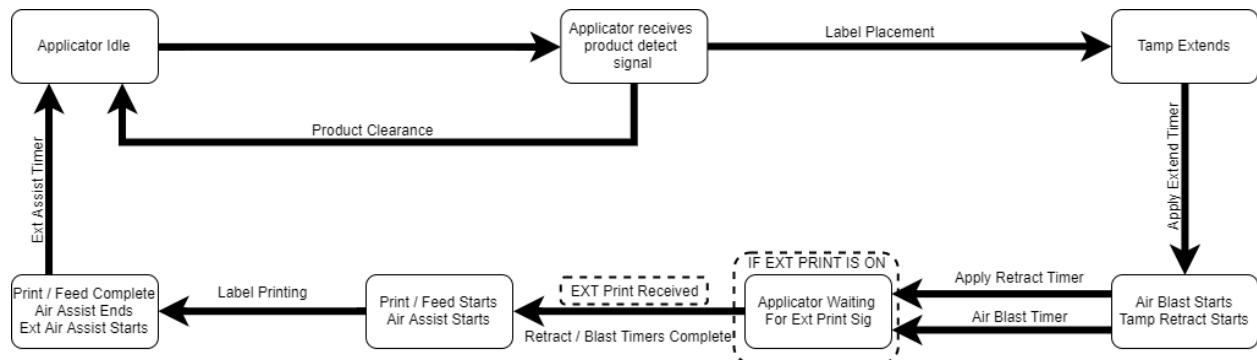
**Tamp Action** – If the applicator is set to standard the tamp action button will toggle between normal and inverted tamp options. If the applicator is a DAT the tamp action button will have its own submenu as shown to the right. This allows the operator to change between the different DAT types. If the applicator is a corner wrap the tamp action button is not functional. Below, each different tamp type is discussed.



**Normal Tamp Action** – This action also covers side and swing only modes of a DAT. The applicator will print a label (if label data is available) and wait idle with a label on the pad. Once a product detect is received the applicator will wait the label placement time or distance. Once the label placement has expired the selected actuator (swing or side) will extend for the extend time and blow the label onto the product. The actuator will then retract for the retract time and print a new label.

#### Normal Tamp Action Flow Chart

The below image depicts the cycle of a normal tamp. Any step that has multiple arrows into it means the timer / distances run concurrently and all must be complete before continuing.

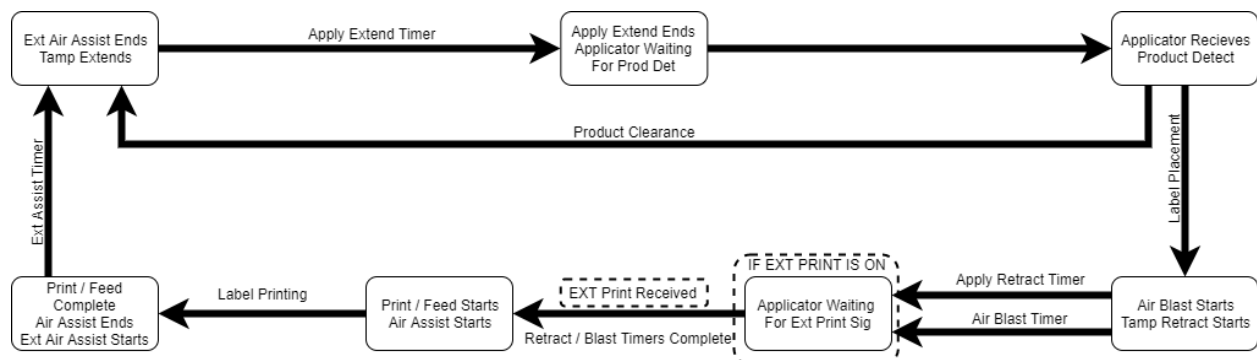


**NOTE:** If tamp / swing home and retract sensors are installed they will override the tamp / swing home / retract timers.

**Inverted Tamp Action** – This action also covers inverted swing only and inverted side only modes of a DAT. The applicator will print a label (if label data is available) and extend for the apply extend time. Once the extend time has expired the applicator will wait idle for a product detect signal. If a product detect is received the applicator will wait the label placement time or distance. Once the label placement has the applicator will blow the label onto the product. The actuator will then retract for the retract time and print a new label.

#### Inverted Tamp Action Flow Chart

The below image depicts the cycle of an inverted tamp. Any step that has multiple arrows into it means the timer / distances run concurrently and all must be complete before continuing.

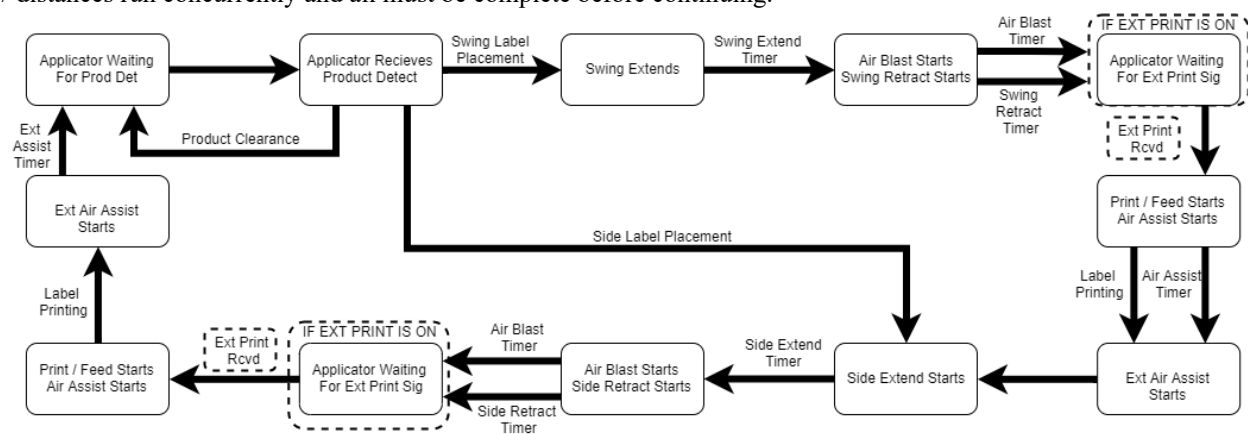


**Note:** If tamp / swing home and retract sensors are installed they will override the tamp / swing home / retract timers.



**Note:** The swing and side placements run concurrently. If the first portion of the cycle is not complete when the side placement has expired the applicator will apply the side label late and display a rate alarm if enabled.

The below image depicts the cycle of a leading edge DAT. Any step that has multiple arrows into it means the timer / distances run concurrently and all must be complete before continuing.

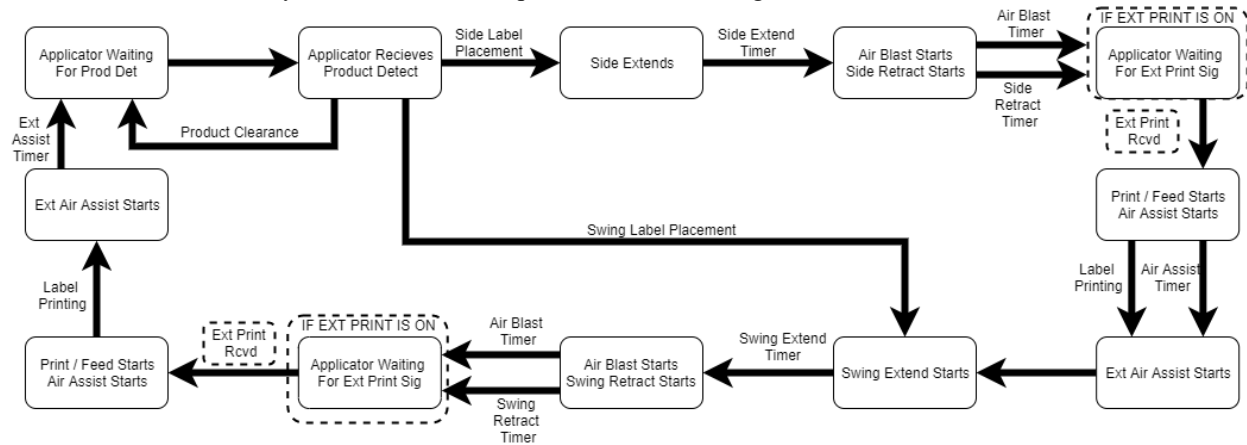


**Trailing Edge DAT** – The applicator will wait idle with a label on the pad. Once a product detect is received the applicator will wait the side label placement time or distance. Once the label placement has expired the side actuator will extend for the side extend time and blow the label onto the side of the product. The actuator will then retract for the side retract time and print a new label. The applicator will wait until the second label placement has expired and the swing actuator will extend for the swing extend timer. Then, the applicator will blow the label onto the back of the product before retracting for the swing retract time. Upon returning home the applicator will print another label if the data is present.

pg. 20

### Trailing Edge DAT Flow Chart

The below image depicts the cycle of a trailing edge DAT. Any step that has multiple arrows into it means the timer / distances run concurrently and all must be complete before continuing.



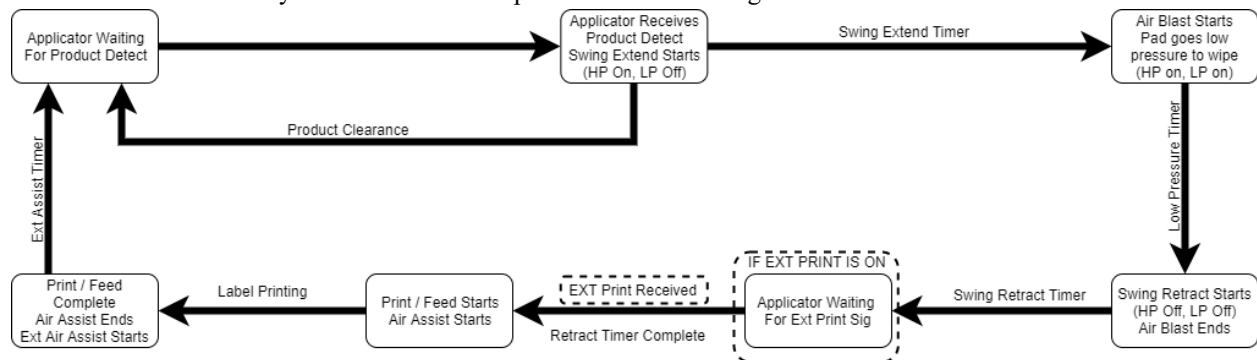
**Note:** If tamp / swing home and retract sensors are installed they will override the tamp / swing home / retract timers.

**Cornerwrap** – The applicator will wait idle with a label on the pad. Once the product detect is received the applicator will swing the pad out in front of the product and transition to low pressure. The product will then push the pad as it moves past to allow the label to wipe onto the front and side panel. Once the low pressure timer is expired the pad will swing back home for another label to be printed.

**Note:** If a swing back sensor is used it will override the low pressure timer.

### Cornerwrap Flow Chart

The below image depicts the cycle of a cornerwrap. Any step that has multiple arrows into it means the timer / distances run concurrently and all must be complete before continuing.



**Instant P/A Option** – This option is available for 3600a setup with normal tamp action. When enabled this option changes the sequence of the application so that no labels will be printed until the product detect signal is received. Once product detect is received a label will be printed out and applied immediately.

**Rate Alarm** – When the 3600a is set to DAT and this option is enabled it will produce a warning alarm if the second label placement has expired before the first half of the sequence is complete. If this option is disabled, the applicator will not acknowledge the delay.

**X6 Set to Inhibit / External Print** – This option is a toggle button that switches how the applicator responds to a certain input (X6). If the option is set to “inhibit” then when the applicator receives an NPN signal at X6 it will be inhibited, and not react to any new product detects. This condition will remain until the input is removed. If set to external print the applicator will not print a label until the input at X6 is received. At that time, it will print and cycle on product detect.

**Label Reissue** – When enabled, this option allows the applicator to tell the print engine to reprint the last label format that was sent to the printer multiple times. When using the reissue option ensure the print engine is also set up for reissue.

If using reissue with a Zebra go into the Zebra menu and enable the “Reprint Option.” The printer will continue to print the original label format until a new format is sent to the printer.

If using reissue with a S84ex go into the Advanced Mode settings and enable External Reprint. The Sato will reprint the last format sent to it until a new format is sent.

**Vac-Off** – When enabled the applicator will turn the vacuum on during the air assist and turn it off after the air blast. The vacuum will not run during the idle time. This will save on air consumption.

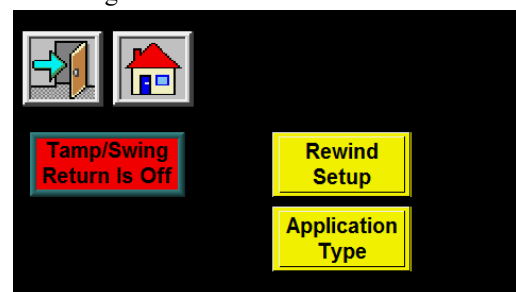
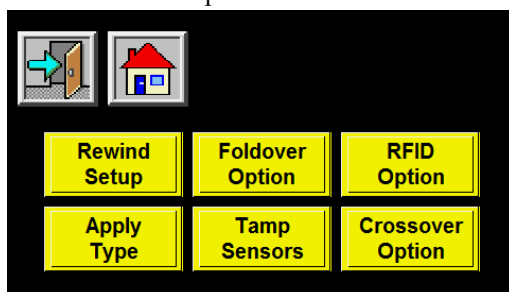
**Note:** The applicators are pre-wired, and the logic is provided for the vac-off option, but the hardware will need to be installed if you want this option to function. Please consult your distributor for the necessary items when installing this option in the field.

**Power Up Disabled / Enabled** – When enabled the applicator will power up into a “ready” state. The tamp will be enabled. However, this may still require the operator to feed a label onto the pad.

**Swing Back Input / Timer** – This option is available if the applicator is set to “cornerwrap.” This option will toggle whether a sensor (or input) is to be used to activate the swing retract or the applicator should use a timer.

## More Options

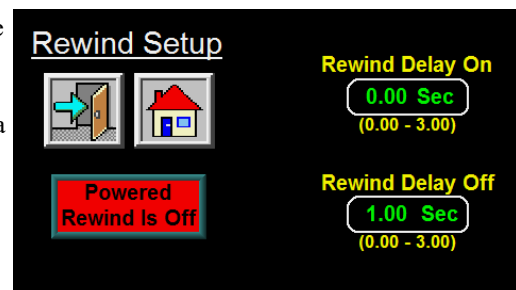
The more options button will take you to a second menu of options. This menu differs between a DAT and a normal applicator. The DAT menu (shown below to the right) includes an application type button. This menu was covered above in the “Tamp Action” section of the manual. The image below to the right is the menu for non-DAT.



**Rewind Setup** – Allows adjustments to the applicator’s rewind. The powered rewind option is not available with a DAT.

**Powered Rewind** – This option needs enabled if the applicator has a 16” high capacity unwind installed.

**Rewind Delay On / Off** – These timers delay how long the rewind waits to turn on and how long the rewind stays on during the printing sequence.

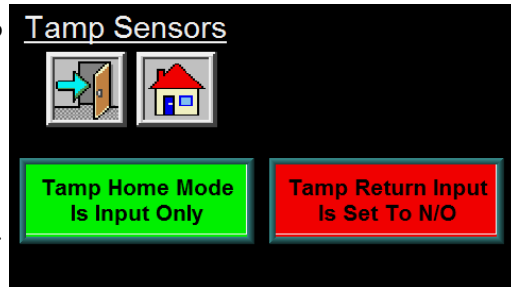


### *Tamp Sensors*

The tamp sensor menu is only available for non-DAT or cornerwrap applicators.

**Tamp Home Mode** - With the tamp home mode off, the applicator will look at both the retract time and the tamp home sensor to turn the tamp home output on and to start printing another label. If the option is on, then the applicator only looks at the tamp home sensor. This is helpful when reaching into a machine to label and knowing when the label pad is home and out of the way is important.

**Tamp Return Input** – By default the applicator treats the tamp return input as if the sensor or switch is normally open. For those times when the logic is reversed, you can set the input to normally closed.



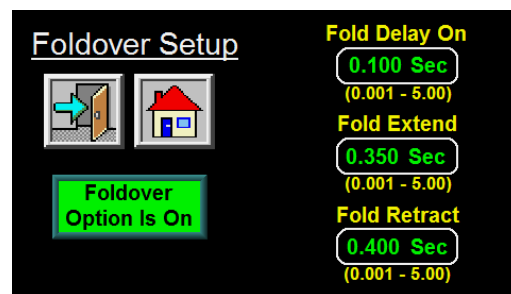
### *Foldover Setup*

The standard 3600a can control a foldover station. The foldover has a dedicated input to start the sequence so it will run independent of the labeling operation.

**Fold Delay On** – The time from the fold product detect until the fold valve turns on.

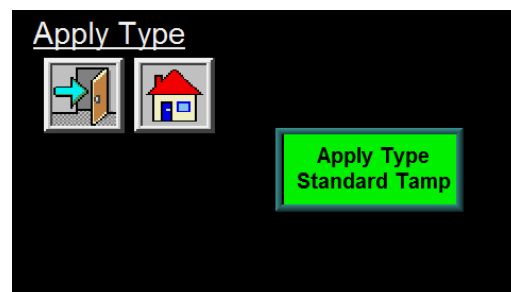
**Fold Extend** – The amount of time the fold valve will stay on.

**Fold Retract** – The amount of time the fold valve must be off for the applicator to react to another fold product detect.



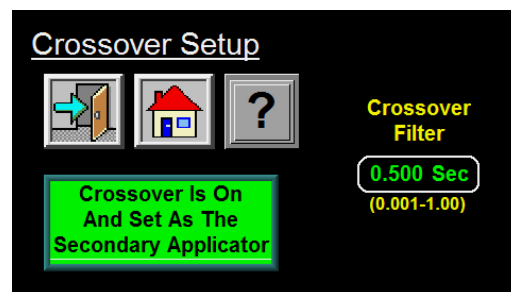
### *Apply Type*

Only available in non-DAT applicators. Pressing the toggle button allows the operator to switch between standard tamp and a cornerwrap sequence. These sequences are discussed in the “tamp action” section of the manual.



### *Crossover Option*

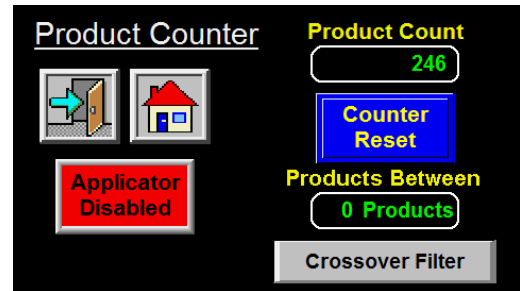
The standard 3600a can support crossover. Crossover is when two applicators are installed on a line where the applicator farthest upstream is setup as the primary applicator. It will attempt to label every product that goes by. The other applicator is mounted downstream and is setup to be the secondary head. It will start labeling when the primary is disabled or has a critical alarm. In this sequence, the secondary does all the work. The applicators are tied together with a crossover cable and the secondary monitors the primary's product detect and ready signals.



### *Crossover Product Counter*

When the crossover option is enabled the product counter screen will display the number of products between the two heads (only in the secondary head). When setting the crossover up, it will be a good idea to monitor this screen to verify the sensors are not double triggering.

**Note:** Disabling and enabling will reset the Products Between count.



### *Crossover Initial Setup*

**Note:** Before starting the crossover, make sure both applicators are setup to apply labels in the correct location. It does not matter for the primary, but you might have to turn the crossover off so the secondary can be run to verify the label application.

With nothing in between the primary and secondary applicators enable both. Have the secondary display set to the product counter screen. Start the products down the conveyor. As each product turns the primary's product sensor on you should see the products between counter increment by one. As products travel to the secondary when its product sensor turns on you should see the products between counter decrement by one. Doing this the secondary head always knows how many products are between and whether they are labeled or not. When the primary head is disabled or goes into a critical, the primary's ready signal is turned off. The secondary will push the products between count into an on-delay counter and decrement it every time the secondary product sensor turns on. When this counter is less than zero, the secondary will start labeling. If while the secondary is labeling and the primary is enabled again, the primary starts labeling and the secondary will push the products between count into an off-delay counter. This counter will be decremented every time the secondary product sensor turns on. When this counter is less than zero, the secondary applicator will stop labeling.

### *Additional tips for setting up crossover:*

1. Make sure the product detect sensors for both the primary and secondary do not trigger multiple times on one product. This is important so the products between count is always correct. A crossover filter is present to help ensure this doesn't happen. The filter recognizes the first product detect signal and ignores any other product signals for the set crossover filter time. If the products between count is a negative number then either the secondary product sensor is triggering more than once or the primary product sensor is missing products. If the count is too high then the primary product sensor is triggering too many times or the secondary sensor is missing products.
2. When disabling the primary head while it's in production, do it right after you hear it blow a label on to the product. This is about the same time a critical alarm would occur.
3. When enabling the primary head while the secondary is labeling, try to enable when there are no products in front of the primary product sensor.
4. If the primary is disabled, do not enable again until the secondary has started labeling. In the same way if the primary is enabled while the secondary is labeling, do not disable the primary until the secondary stops labeling. It is important for all transfers to be completed before another transfer occurs.
5. Crossover only works when labels are batch printed. Not for on-demand printing.

**RFID Option** - The standard 3600a will support an eject mechanism to get rid of labels the printer has deemed bad. When this option is on the applicator will monitor the *Bad Read* input on the PLC during the printing of the label. If the input turns on, the eject sequence starts.

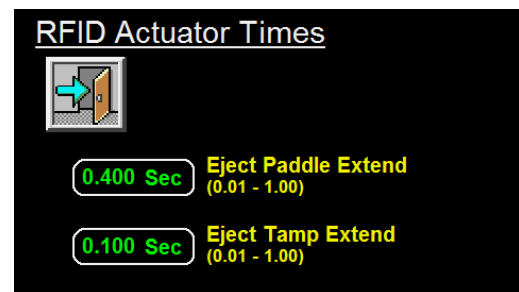
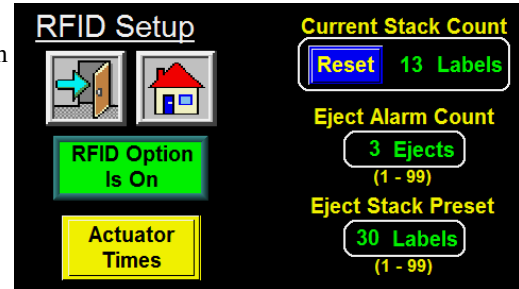
**Current Stack Count** – The count of total ejects on the paddle. If this number reaches the eject stack preset and alarm will occur. Can be reset using the reset button.

**Eject Alarm Count** – The number of consecutive ejects needed to trigger a “Too Many Ejects” alarm.

**Eject Stack Preset** – The programmable number of ejects that must occur before a “Stack Height Too High” alarm occurs.

**Eject Paddle Extend** – The amount of time the eject valve is turned on during the eject sequence.

**Eject Tamp Extend** – The amount of time the tamp is extended during the eject sequence. Will be overridden by a prox sensor.



### **RFID Setup**

In the i/o diagnostics, turn the spare valve on. This will cause the eject paddle to extend. Now lower the pressure to the tamp slide to about 20 PSI using the regulators on the tamp valve. Push down on the label pad and pay attention when the cylinder prox turns on. It should turn on about 1-1/2 inches above the eject paddle. If not move the prox up or down on the cylinder to get it. Once done, exit out of i/o diagnostics and go to the RFID option screen in the option menu. Set the paddle extend time to 0.500 seconds and the eject tamp extend time to 0.100 seconds. These are starter values and can be adjusted later. Now exit out to the main menu and enable the applicator. You will need to create some bad labels by destroying a few label tags just before they enter the print engine. Send label formats to the printer, enable the applicator and press jog. Continue pressing the jog key until the bad tag reaches the pad and pay attention to the eject sequence. Make sure the paddle is out before the tamp slide starts moving down but not too much time where it slows the eject sequence. The eject tamp extend is an override timer in case the applicator does not see the cylinder prox turn on so it will be hard to determine if it's too high. If too small the prox will not turn on before the slide returns home. Take notice how high the label pad was when the label was blown off. This should be about one inch and is determined by the position of the prox. You can move the prox up or down the cylinder to get the correct position.

There are two more parameters that can be set and they are eject alarm count and eject stack preset. Eject alarm count is the number of ejects in a row that will cause a too many ejects alarm. This is here so if there are a string of bad tags, the applicator does not continue to eject labels for a long period of time. The eject stack preset is here to define how many labels you want on the eject paddle before going into an ejected label stack too high alarm. This alarm will remind an operator to clean off the paddle. If the paddle is cleaned off before the alarm, the stack count can be reset through the RFID option menu or in the apply setup screen.

✓ = Options are compatible.

✗ = Options not compatible.

## 3600a Compatibility Chart

OPTIONS	Encoder	Tamp Sensors	Foldover	ITB Mode	Instant P/A	Reissue	Label Placement	Vac-off	Crossover	Feed Blank	External Print	Corner-wrap
Encoder		✓	✓	✓	✗	✓	✓	✓	✗	✓	✓	✗
Tamp Sensors	✓		✓	Tamp Home Only	✓	✓	✓	✓	✓	✓	✓	✗
Foldover	✓	✓		✓	✓	✓	✓	✗	✗	✓	✓	✗
ITB Mode	✓	Tamp Home Only	✓		✗	✓	✓	✗	✓	✓	✓	✗
Instant P/A	✗	✓	✓	✗		✓	✓	✓	✗	✓	✗	✗
Reissue	✓	✓	✓	✓	✓		✓	✓	✓	✗	✓	✓
Label Placement	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✗
Vac-off	✓	✓	✗	✗	✓	✓	✓		✓	✓	✓	✓
Crossover	✗	✓	✗	✓	✗	✓	✓	✓		✓	✓	✓
Feed Blank	✓	✓	✓	✓	✓	✗	✓	✓	✓		✓	✓
External Print	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓		✓
Corner-wrap	✗	✗	✗	✗	✗	✓	✗	✓	✓	✓	✓	

## I/O Diagnostics

This section allows the operator to monitor inputs and to manually turn outputs on and off. This section will serve as a diagnostic tool for the technician but be aware that some of the I/O names will change between the different applicator types.

### Inputs

The input screens (both X0-X7 and X8-XF) allow the operator to monitor the input status of all inputs to the PLC. When an input is on the corresponding indicator next to the input will turn light blue and display the word “on” (as seen with low ribbon and tamp home to the right).

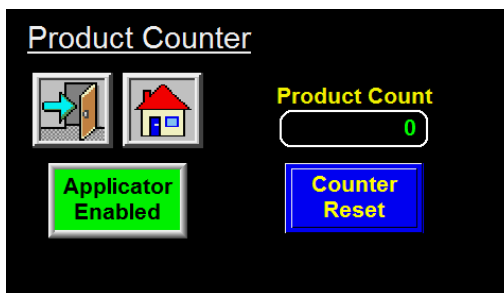
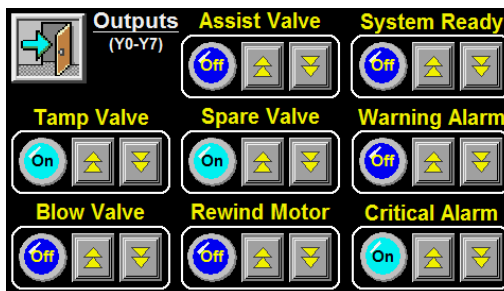
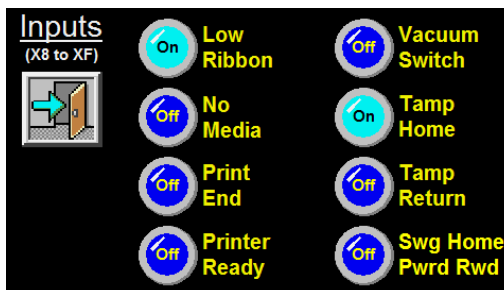
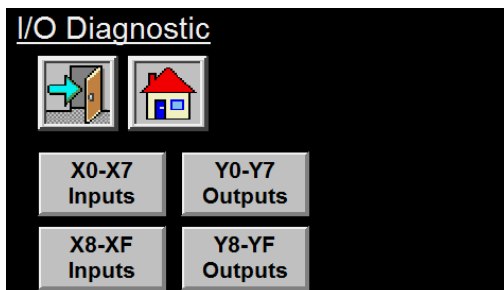
### Outputs

The outputs screens (both Y0-Y7 and Y8-YF) allow the operator to force outputs on from the PLC. Use the up arrow to turn the output on and the down arrow to turn it off. When turned on the indicator next to the output will turn light blue and display “on” (as shown with tamp valve, spare valve, and critical alarm).

## Product Counter

The product counter screen functions as a totalizing counter. It will increment every label cycle that is initiated by product detect signals. The counter will not increment on jogs. The counter is saved and will be restored after a power cycle. It can only be reset using the counter reset key.

**Note:** Crossover option changes the counter screen. This is discussed in the crossover section of the manual.





## Factory Default

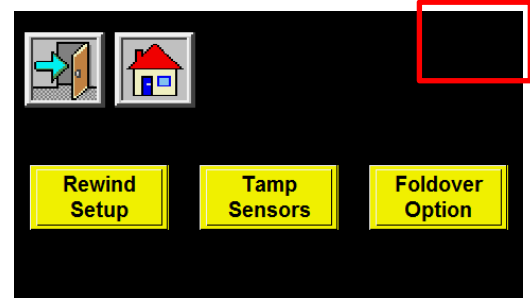
### Accessing Factory Default Menu

The factory default menu can be accessed in two different places. The first location is by touching the top right corner of the screen during the software version screen. This is shown by the red square to the right.



The second location is also accessed by touching the top right corner of the screen. However, this time it will be accessed from the More Options menu of the display. Both ways take you to the same factory default screen. While accessing the factory default screen the factory checkout and display setup bars should not be used.

**They are for factory use only.**



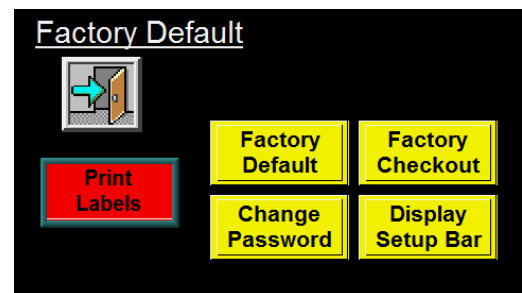
### Factory Defaulting the Applicator

The factory default button will lead to a confirmation screen prior to resetting the applicator. If confirmed, the applicator will be reset to factory settings. This is useful if an option was turned on that caused the applicator not to work.

**Change Password** – The change password button can be used to change the main password used to enter the setup menus. By default the password is “1800” but can be set to any number up to 9999. Leading zeroes are not registered.

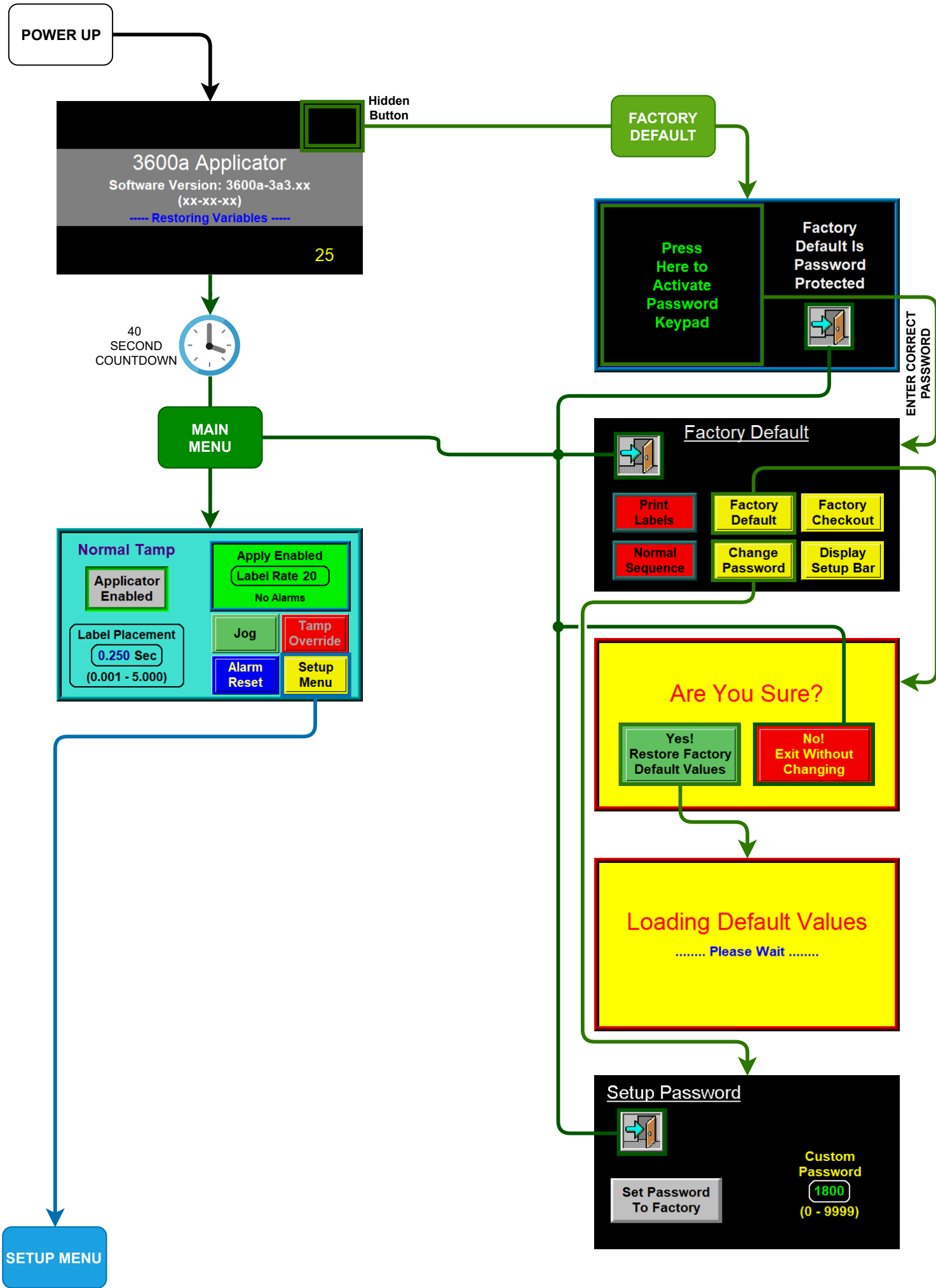
**Print Labels** – The print labels button can be toggled between “Print Labels” and “Feed Blank Labels”. This will allow you to cycle the applicator without sending label formats.

**Note:** Using feed blank labels with label formats in the buffer can lock up the print engine.



### **3600a Display Flow Chart**

This section contains a flow chart of the display menus of a 3600a. The flow chart can be scrolled through or navigated by clicking the buttons throughout the flow chart



SETUP MENU

APPLY SETUP

Press Here to Activate Password Keypad

Password Protected

Applicator Disabled

Apply Setup

Air Blast 0.040 Sec (0.010-1.00)

Extended Air Assist 0.001 Sec (0.001-1.00)

Product Clearance 0.01 In (0.01-50.00)

Actuator Timers

Jog

ENTER CORRECT PASSWORD

Setup Menu

Apply Setup

I/O Diagnostic

Option Menu

Product Counter

Encoder Setup

Applicator Disabled

Apply Extend 0.400 Sec (0.010-5.00)

Apply Retract 0.600 Sec (0.010-5.00)

Foldover Timers

Close Window

RH Standard Web Path

Sato

Zebra

Datamax

Tamp Override

Foldover Delay On 1.250 Sec (0.001-5.00)

Fold Extend 0.750 Sec (0.010-5.00)

Fold Retract 0.750 Sec (0.010-5.00)

Close Window

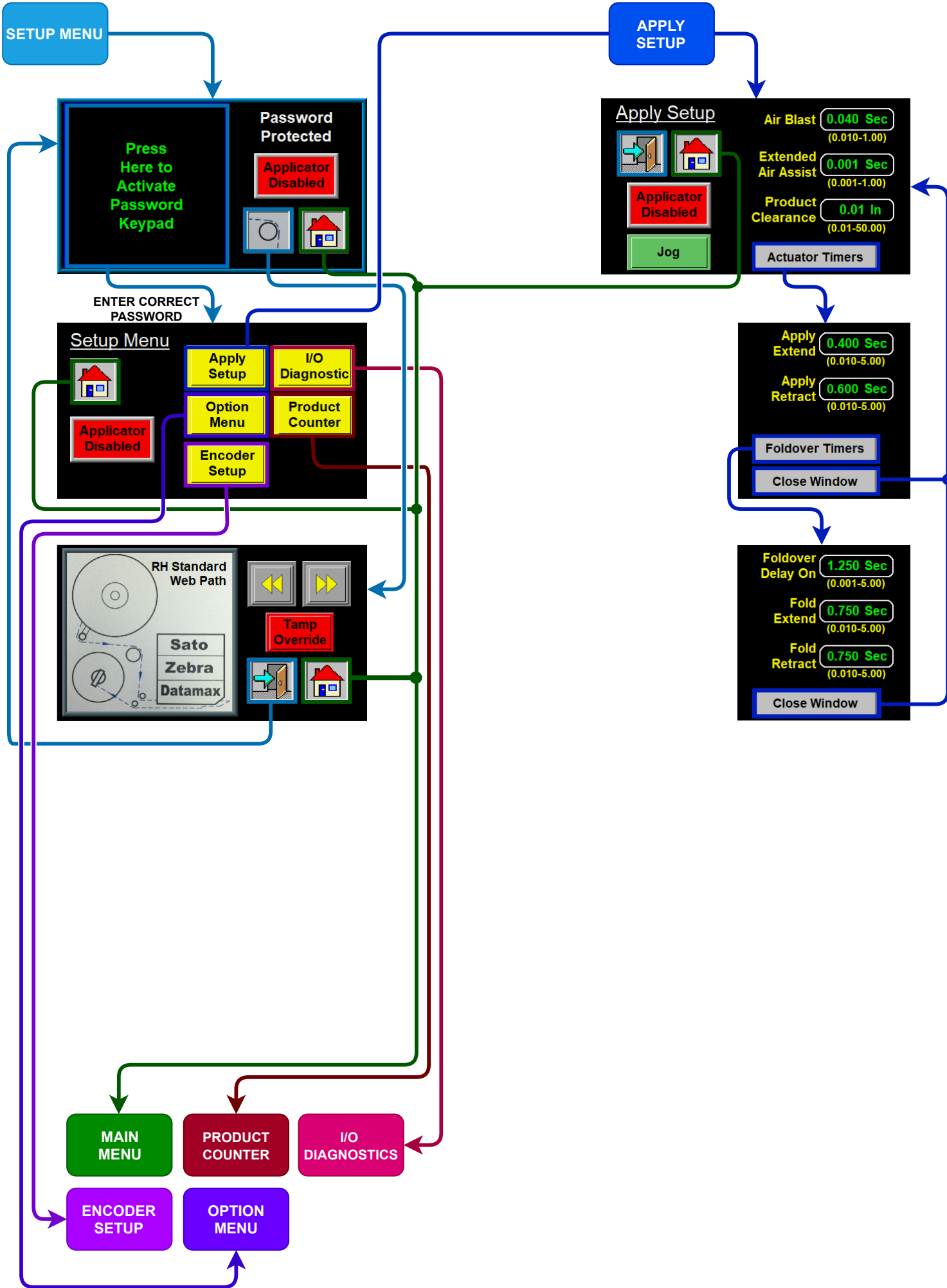
MAIN MENU

PRODUCT COUNTER

I/O DIAGNOSTICS

ENCODER SETUP

OPTION MENU



OPTION MENU

More Options ?

Tamp Action Is Normal X6 Is Set To Inhibit Input Vac-Off Option Is Off

Instant P/A Option Is Off Label Reissue Option Is Off Power Up Disabled

Hidden Button

Rewind Setup Foldover Option RFID Option

Apply Type Tamp Sensors Crossover Option

Rewind Setup

Rewind Delay On 0.00 Sec (0.00 - 3.00)

Rewind Delay Off 1.00 Sec (0.00 - 3.00)

Powered Rewind Is Off

Foldover Setup

Fold Delay On 1.500 Sec (0.001 - 5.00)

Fold Extend 0.750 Sec (0.001 - 5.00)

Fold Retract 0.750 Sec (0.001 - 5.00)

Foldover Option Is Off

RFID Setup

Eject Extend 0.250 Sec (0.01 - 1.00)

Eject Alarm Count 7 Ejects (1 - 99)

Eject Stack Preset 5 Labels (1 - 99)

RFID Option Is Off

Current Stack Count Reset 3 Labels

Apply Type

Apply Type Standard Tamp

Tamp Sensors

Tamp Home Mode Is Input Only

Tamp Return Input Is Set To N/O

Crossover Setup

Crossover Filter 0.010 Sec (0.001-1.00)

Crossover Is Off Or Set As The Primary Applicator

MAIN MENU


SETUP MENU

FACTORY DEFAULT

ENCODER  
SETUP

I/O  
DIAGNOSTICS

Encoder Setup



Correct Rotation

Encoder Option Is On


Encoder Speed  
1000 In/Min

Pulse Length  
0.0084 In  
(0.0001 - 1.00)

Compensation  
0.0050  
(0.0001 - 0.1000)

Velocity Filter  
0.010 Sec  
(0.010 - 0.50)

I/O Diagnostic



X0-X7 Inputs


Y0-Y7 Outputs

X8-XF Inputs

Y8-YF Outputs

PRODUCT  
COUNTER

Product Counter




Applicator Disabled

Product Count  
1567

Counter Reset

Inputs (X0 to X7)




	Channel A+		Low Label
	Channel B+		End Of Web
	Product Detect		Inhibit/Ext Prt
	Channel A-		Spare Input

Inputs (X8 to XF)




	Low Ribbon		Vacuum Switch
	No Media		Tamp Home
	Print End		Tamp Return
	Printer Ready		Swg Home Pwr Rwd

Outputs (Y0-Y7)



	Assist Valve		System Ready
	Tamp Valve		Spare Valve
	Blow Valve		Rewind Motor
			Critical Alarm

Outputs (Y8-YF)



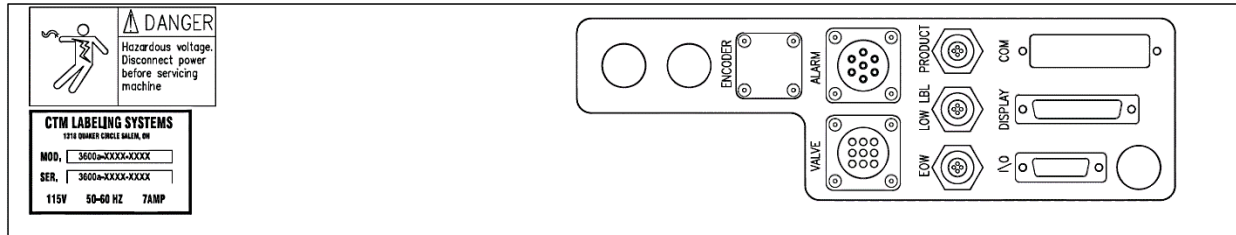
	Tamp Home		Spare Output
	Print Start		Spare Output
	Label On Pad		Not Used
	Reissue		Feed Blank Label

SETUP MENU

MAIN  
MENU

## Connector Faceplate

The connector faceplate, as seen below, contains various connection points for options or interfacing with the applicator.



## Connector Descriptions

### Valve

Valve bank connection. Valve banks are factory supplied and the current wiring will support up to a four-station valve bank.

### Alarm

Alarm light connection. Alarm lights are factory supplied and the current wiring will support up to three lights and an audible station.

### Product

A four pin connector for the product detect sensor.

### Low label

A five pin connector for the Low label sensor.

### EOW

A different five pin connector for the end of web sensor.

### Com

A communication port to the printer; can be serial, parallel, ethernet or USB.

### Display

A 25 pin connector to plug in the HMI.

### Encoder

A connection for an external encoder. There is 24 VDC at the connection to power the encoder.

### I/O

This 15 pin connector can be used for integrators to monitor applicator alarms and functions. It is important to remember that inputs to the 3600a are wired for 24 VDC NPN devices. This means when the device signal goes to 0 VDC, the applicator input will turn on. All outputs are 24 VDC NPN which means when they turn on, the applicator signal goes to 0 VDC.

**Note:** The max current for all the applicator outputs are 80ma. There are multiple outlets for some of the outputs so it is important to total the current draw of all devices using a certain output.

## I/O Port Pin Definitions

The following is a list of the pre-wired functions of the I/O port. If other functions are needed (i.e. tamp home switch), they can easily be added. All outputs are NPN (sinking) with 80 ma load. Inputs are also for sinking devices:

- **Pin #1** (DC Power): 0 VDC
- **Pin #2** (DC Power): 24 VDC at 200ma
- **Pin #3** (System Ready): If there are no critical alarms, the tamp is enabled, the inhibit is input off, and the printer is online, this ready output will be on. (24 VDC sinking output at 80ma)
- **Pin #4** (Warning Alarm): This output will turn on when the applicator receives a low label or low ribbon signal. The signal will stay low until the alarm is reset. (24 VDC sinking output at 80ma)
- **Pin #5** (Critical Alarm): This output will turn on when the applicator receives a no labels or no ribbon signal from the printer or if the end of web sensor is made. The signal will stay low until the alarm is reset. (24 VDC sinking output at 80ma)
- **Pin #6** (Tamp Valve): This output parallels the tamp valve and can be used for monitoring a sequence. (24 VDC sinking output at 40ma)
- **Pin #7** (Tamp Home): The output turns on whenever the tamp home switch is made or the tamp retract timer times out. (24 VDC sinking output at 80ma)
  - **Note:** Tamp home switch is an option and is purchased separately
- **Pin #8** (Label on Pad): After a label has finished printing, the controller will look at the output of a vacuum switch to see if the label is on the pad. If so, the output turns on. (24 VDC sinking output at 80ma)
  - **Note:** Vacuum switch is an option and is purchased separately
- **Pin #9** (Air Blow Valve): This output is on when the air blow valve is on and can be used for monitoring a sequence. (24 VDC sinking output at 40ma)
- **Pin #10** (Air Assist Valve): This output is on when the air assist valve is on and can be used for monitoring a sequence. (24 VDC sinking output at 40ma)
- **Pin #11** (Product Detect): Taking this input low will start the labeling sequence of the applicator.
- **Pin #12** (Inhibit/External Print): This input will either stop the applicator from applying labels or will enable the print engine to print depending on how the input is configured.

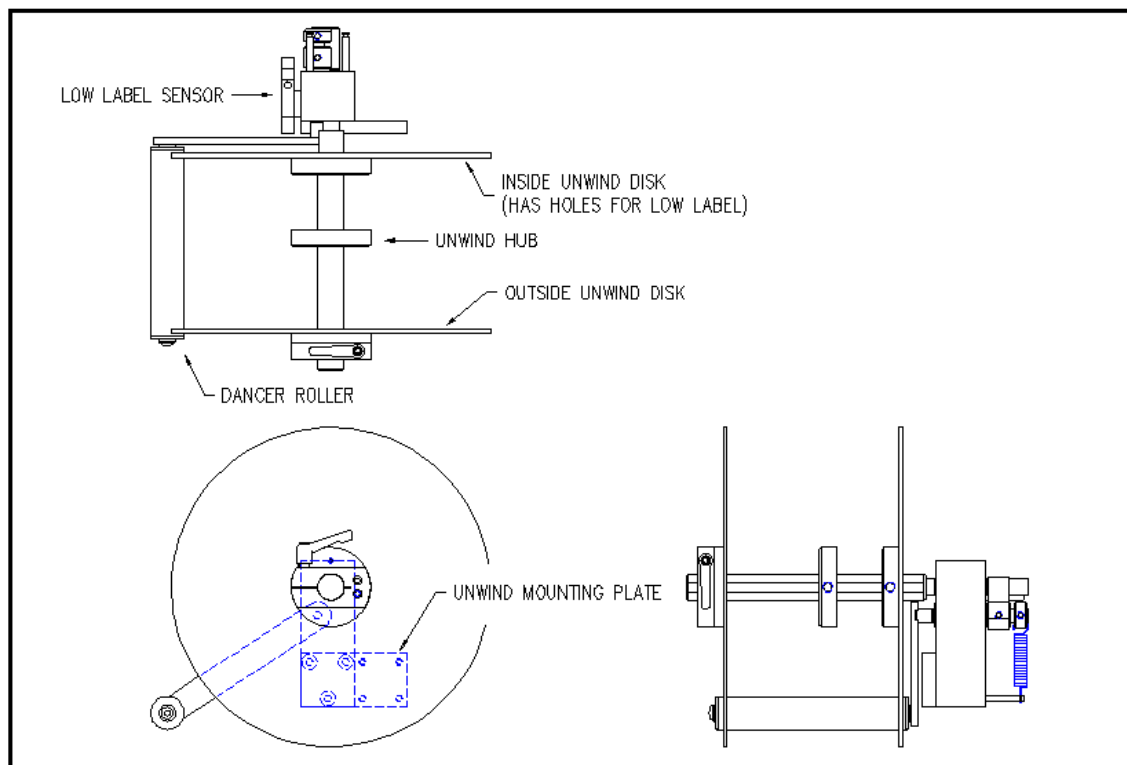


## Applicator Setup

When an applicator is shipped, it may be necessary to remove some assemblies in order to fit in the box. The following sections will show different assemblies to aid in assembling applicator back together so it can be set up.

## Unwind Assembly

The unwind assembly mounts to the applicator by fastening the two unwind mounting plates to the unwind assembly and to the applicator face in alternate positions to suit various orientation and clearance requirements. The two plates are held together using four flat head screws. One end of the two mounting plates fasten to the unwind bearing block with three flat head screws, and the other end fastens to the applicator face with four screws. The mounting plates can be configured so the unwind can be positioned in different locations to aid in certain applications.



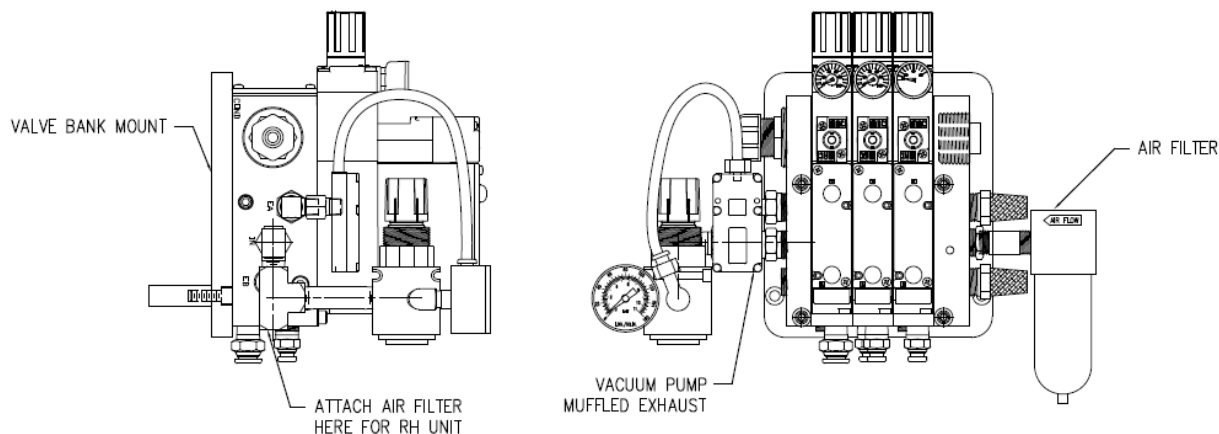
## Unwind Disks

The unwind disks include a Lexan disk and hub screwed together. The inboard assembly will have two holes in the disk for the low label sensor. The outboard assembly will have a solid disk and hub assembly that includes a ratchet handle for locking it in place. Place the inboard assembly so that the inside face of the disk is approximately 7/8" from the applicator face. This should match the web path of the printer. When fastening the disk assembly to the unwind shaft, make sure the set screw is engaging against the flat of the shaft. Position the loose hub just short of the label width. This hub is for supporting the outboard end of the roll of labels. The outboard disk assembly will slide onto the shaft against the roll of labels and will lock in place by tightening down the ratchet handle.

**Note:** When the applicator is in the reels-up position, an aluminum inside disk will be provided.

## Valve Bank

If the valve bank was removed and needs to be re-mounted, decide on which side of the applicator the valves should be mounted. Normally, the valves are mounted on the opposite side from the applicator nose. In a nose up application, it may be best to position the valves on the same side as the applicator nose. Mount the valve bank by putting two ¼ SHCS. through the two clearance holes on the side of the labeler housing. The bolts then screw into the valve bank mounting plate. Run the air lines into the manifold below the valve bank or directly into the applicator nose if the valves are mounted on the same side as the applicator nose.

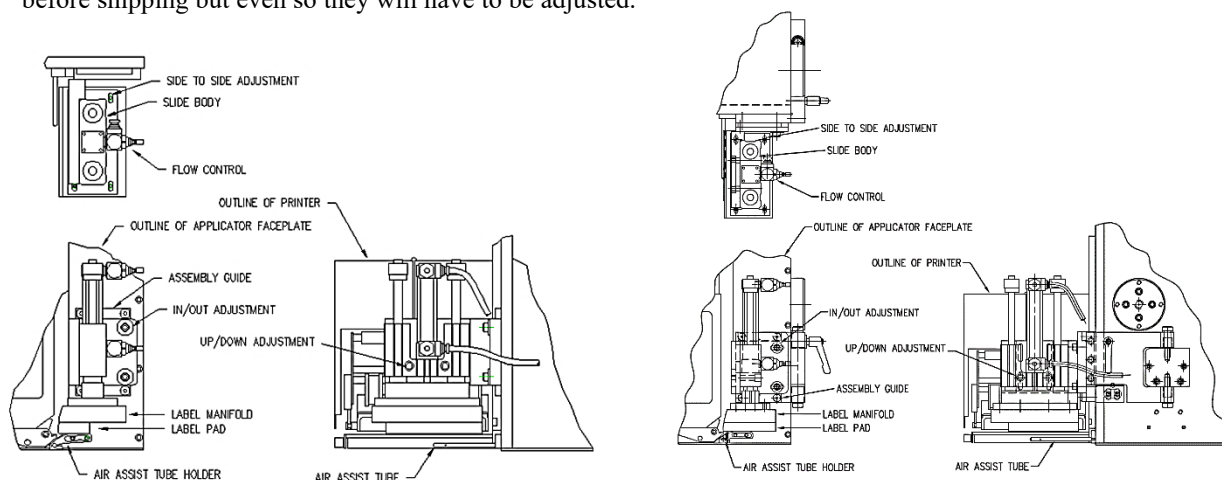


When the applicator is shipped, the air filter is off. The filter is sent with two 2" nipples and an elbow. The attitude of the machine will determine how the filter should be plumbed. There may be custom mounting or plumbing for various valve banks. If this is the case drawings will be provided with the applicator for the custom parts.

**Note:** In all cases it is important to have the filter bowl pointing down.

## Standard Tamp Assembly

There are two types of standard tamp assemblies, but they mount the same. One is a swing-away style to aid in print head maintenance while the other is stationary. It would be rare that either style would be removed before shipping but even so they will have to be adjusted.



*Standard Tamp Assembly*

*Swing-away Tamp Assembly*

## Standard Tamp Setup

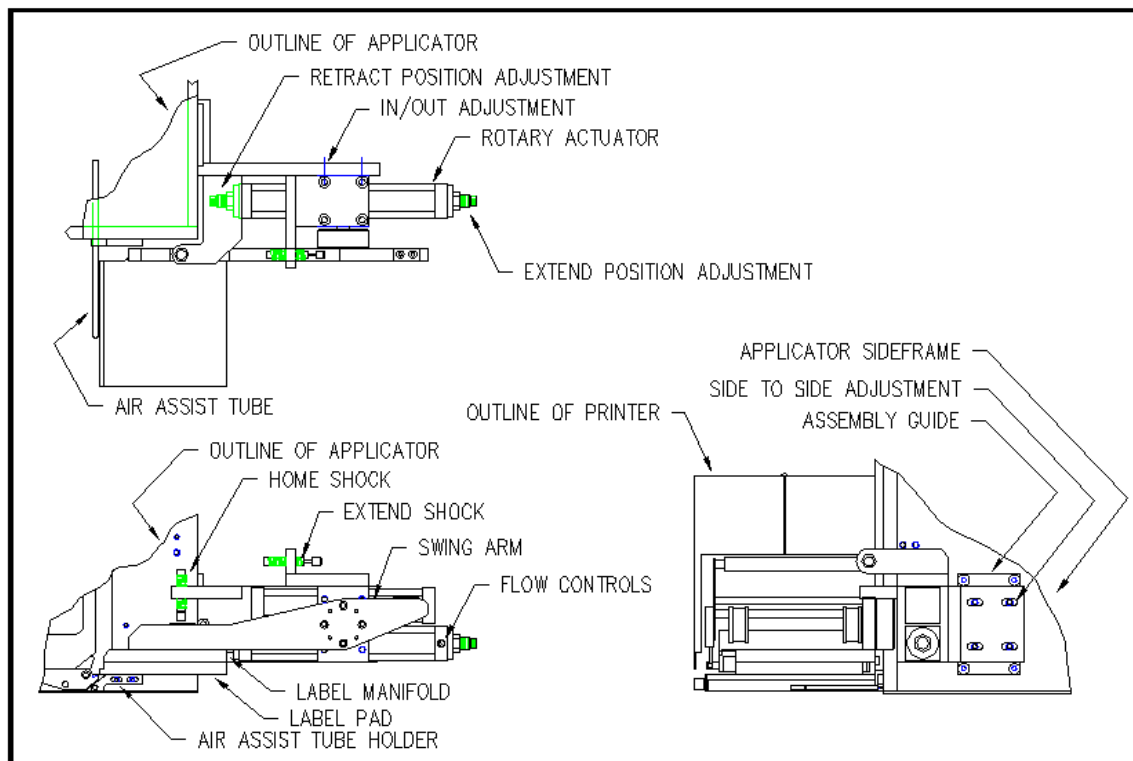
Both the standard tamps and swing away tamp assemblies can be moved up / down and in / out the same way. These adjustments are marked on the above drawings as in/out adjustment and up/down adjustments. The tamps may need moved to align the pads properly for various print engines. When running air line to the tamp cylinder ensure that the air line from the “A” port of the valve back goes to the top cylinder port. The “B” port of the valve bank will go to the bottom cylinder port. The in / out adjustment of the pad should be used to position the pad approximately 1/16” away from the printer peel edge. Ensure the pad stays square to the peel edge. Generally, the pad will be set up so that the surface of the pad is slightly below the apex of the printer peel edge. This creates a “dive” in the label as it feeds out of the printer. More adjustment will be needed with the air assist tube and the air pressures to properly setup the label feed. These will be addressed later in the manual in the “Label Setup” section of the manual.

## Standard Tamp Shock Absorbers

A standard tamp assembly doesn't have any internal stops. Instead, the tamp will extend and retract until the collars on the slide contact the actuator body. On longer slide lengths shock absorbers may be installed to cushion the stopping of the slide. When setting up the slide ensure that the shocks do no bottom out. The shocks should have approximately 1/4” of compression left (or 1/4” of the steel shaft visible) when they slide has stopped moving. This will ensure that the slide always stops at the hard stops but does not diminish the life of the shock absorbers prematurely.

## Swing Tamp Assembly

A swing tamp assembly is used to label leading or trailing edges of products with a side mounted applicator. It uses a rotary actuator to swing the label pad in front of / behind the product.



## **Swing Tamp Setup**

The swing tamps mounting brackets allow for both side to side movement and in and out movement. Like a straight tamp a swing tamp will be set up so that the pad is approximately 1/16" away from the printer peel edge. The pad should be square to the printer edge as well. When the pad is at the home position the pad will typically be just slightly lower than the printer peel edge creating a "dive" as the label feeds out. When plumbing air to the rotary actuator the air line from the "A" port of the valve bank will connect to the top rack port furthest from the applicator body. An air line will then run from that port to the lower rack port closest to the applicator body. The "B" port will run to the top rack port closest to the applicator body and to the lower rack port furthest from the applicator body. This will create an "X" with the airlines. The flow controls on the actuator should be set so that swing tamp does not bounce when extending or retracting and makes its swing in a fluid motion.

### ***Swing Tamp Internal Stops***

The rotary actuator has an internal stop for both directions of travel. These are labeled in the above drawing as "Retract Position Adjustment" and "Extend Position Adjustment." These internal stops should be set just outside of the desired range of motion of the shock. To set the retract position ensure there is air to the rotary actuator so that the pad is at the home position. Begin tightening the Retract Position Adjustment until the pad begins to move off the home position. Next, back the Retract Position Adjustment up until the pad is again resting at the home position.

Set the extend position by using the "Tamp Override" button on the display. This will cause the swing to swing outward. Ideally the pad should stop at a 90 degree angle from its home position. If the pad does not make it 90 degrees and the shock is not stopping it loosen the "Extend Position Adjustment" so the pad comes out further. If the pad makes it to 90 degrees tighten the extend position adjustment until the pad moves, then loosen slightly.

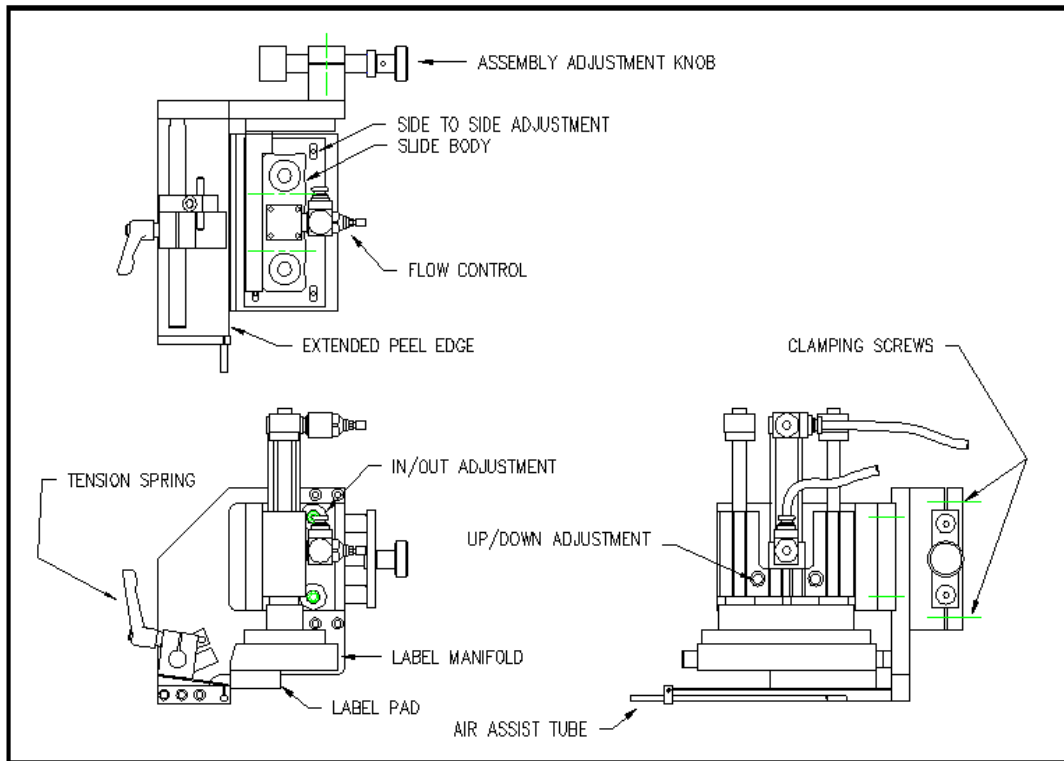
### ***Swing Tamp Shock Absorbers***

With the internal stops of the actuators set the shock absorbers can be set to cushion the swing. The home shock absorber will have a hard collar mounted on the shock. Approximately 1/8" of the shock should extend past the hard collar. With the 1/8" of the shock protruding from the hard collar and the pad in the home position the shock and collar can be moved outward until the shock is fully compressed and the hard collar is against the strike plate. Ensure that the position (height) of the pad did not change from the shock being moved.

The extend shock will be used as a cushion for the extended swing position. The shock should not be fully compressed when the pad is swung out. Instead, the shock should have only approximately 1/4" compression. The shock will work with the internal stop to stop the pad in a controlled manner.

## Extended Peel Edge Assembly

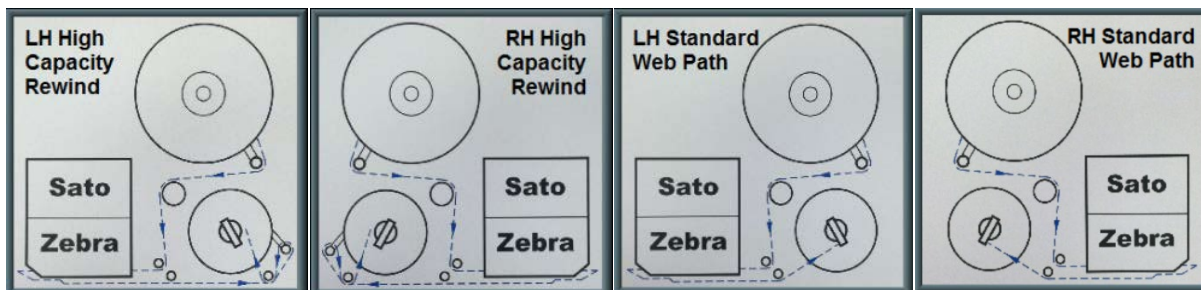
An extended peel edge assembly can be put onto the applicator when it is desired not to backfeed. By having an adjustable peel edge position, you can ensure that the label always stops at the correct area. This assembly doesn't differ from a standard tamp except that the whole assembly can move left to right using the Assembly Adjustment Knob shown in the drawing below.



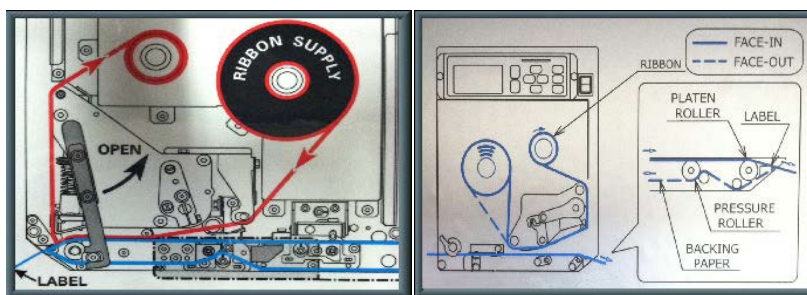
When setting up an extended peel edge you want to ensure that the label is stopping so that none of the previous label is still touching the peel edge and that none of the next label is hanging off the peel edge. More information about label feed setup can be found in the

## Loading Media

The 3600a P/A can be equipped with multiple different print engines. For the most up to date information always consult the print engine manual. When loading media into the print engine there is a help menu at the setup password screen. For information on accessing this help menu consult the “Display” portion of the manual. The images below are part of the help menu. They show the different web paths of the different models of applicators.



If you were to press Sato or Zebra on the above images it would change the help menu to display the below screens. These show the web path of ribbon and media inside the print engines. The left image represents a left handed Zebra while the right image represents a right handed Sato.



## Loading Ribbon

If using ribbon for your application, then load the ribbon using the path above. Ensure that the “ink” side of the ribbon is toward the label. Consult the print engine manual for additional information about loading ribbon into the print engine.

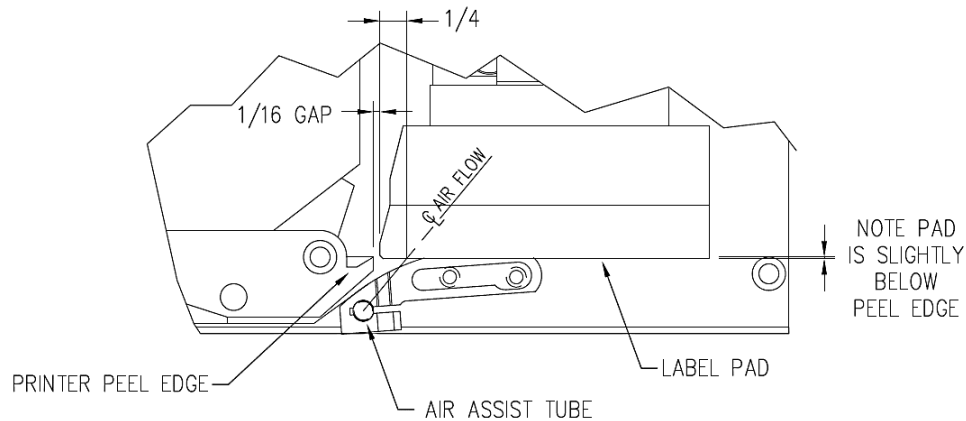
## Loading Labels

When loading labels onto the applicator the following steps can be taken to ensure correctness:

1. Loosen the ratchet handle that locks the outer unwind disk in place and remove disk.
2. Load a roll of labels onto the hubs on the unwind shaft. Make sure the labels are against the inner disk and are right side up.
3. Remove the first three feet of labels from the liner.
4. Thread the label stock around the dancer and guide rollers into the printer. Refer to the figure above for the web path from the unwind to the printer. Refer to the print engine manual as to how to thread the printer. Make sure the liner passes between the peel edge and the air assist tube.
5. Remove the rewind pin and wrap the liner over the rewind mandrel. Replace the rewind pin and rotate the rewind mandrel to take the slack out between the rewind and printer.
  - a. **Note:** The rewind mandrel always spins clockwise from the front, regardless of hand.
6. Make sure the labels track straight from the unwind into the printer. Adjust the inner unwind hub if necessary.
7. Bring the guide collars within 1/64” of the liner.
8. Make sure the print head and any other latches are closed within the printer. Close the printer cover.
9. Feed multiple labels to ensure correctness.

## Applicator Nose Setup

Use the following steps to set up the label feed, including air pressure and pad positions. Reference below drawing for a visual representation of the setup:



1. Disable the applicator (refer to display section of this manual). This way adjustments can be made without the fear of the tamp slide actuating and injuring someone. Also load label formats into the print engine or turn on the “Feed Blank Label” option in the applicator.
2. The label stop must be properly set for the applicator to work successfully. This is done through the printer and will be referred to as “Offset”, “Top of Form”, “Pitch Offset”, or other terms dependent on the printer model. If the applicator has an extended peel edge, the peel edge assembly may need adjusted to position the label properly at the peel edge.
  - a) If the label stop is correct, the label should feed off the liner. If the next label out is flagged past the peel edge, the label stop must be decreased. If the label doesn’t dispense completely off, then increase label stop. Refer to the printer manual as to how to change label stop.
3. Tamp height needs to be set so a label feeds out in contact with the label pad. If the pad is too high, the label will not land consistently on the pad and the trailing edge of the label could contact the peel bar of the printer when the tamp slide extends. If the label pad is too low, the label will dispense into the back of the pad and jam.
  - a) Ideally the label pad should be barely below the peel edge. This will lead to the label diving off the pad chamfer as it feeds out.
4. The inboard edge of the label pad must match the inboard side of the label. Refer to the side to side adjustments to move the pad. If the side to side adjustment is not correct vacuum can be lost due to holes not being covered.
5. Position the air assist tube so the hole or holes are centered on the label and pointing approximately 1/4” from the front edge of the label pad. The air pressure should be set at 20-30 P.S.I. Press the jog key to dispense a label. If the label doesn’t feed out against the label pad and the vacuum doesn’t capture it, try increasing the air pressure. Continue until the vacuum captures the label.
  - a) **Warning:** There are other factors that can keep the label from staying on label pad. You may need more vacuum, increased or decreased label dive, or the air assist tube may need to be rotated. Only make one adjustment at a time so you can see whether it improves the feed.
6. Air pressure for the tamp slide should start at 40 PSI, for the air blast at 30-40 P.S.I., and for the vacuum pump at 10-20 P.S.I.
  - a) Different labels can require vastly different settings. This means there is no “one size fits all” setup. For example, thicker labels with memory issues may require a great deal more vacuum than smaller labels.

## Label Static Test

It's important to know if the applicator can repeat putting labels in the same place over and over. Without knowing this, when label placement problems occur on the line, you won't know whether the machine is not repeating, or the problem lies with the product.

To test repeatability, position the applicator so when the tamp is extended the label pad is approximately 1/8" away from the product. Jog several labels onto the product. If the label stack is within the allowable tolerances, go on to the product setup section. If not, go through the following suggestions to help find the problem.

- 1) Make sure the labels are consistently stopping in the same place on the label pad. If this is OK go to step 7; if not, go to step 2.
- 2) Check label stop. One label should be completely dispensed off the liner while the next label should not be touching it. If the label stop varies more than 1/32" with each cycle, refer to the printer manual to correct. When this is corrected, go back and try the static test again. If this was OK, go to step 3.
  - a. **Note:** A rewind set with too much tension can also cause labels to be pulled through the printer. Ensure the rewind is set correctly if needed.
- 3) Make sure the label pad surface is clean. If clean, go to step 4 and if not, clean and try static test again.
- 4) Make sure the vacuum is set right. If the label flutters when feeding across the pad then the vacuum is too high. If the label falls off or moves after the label has left the liner, then it's not high enough. If the label feed looks smooth go to the next step.
- 5) Work with the air assist pressure and the position of the air assist tube until the label feeds more consistent onto the pad. Re-try the static test. If the results are still not good enough, go to step 6 but if they're OK, go to 7.
- 6) Make sure you are working with good label stock. Try another roll of labels and see if you get the same results.
- 7) Check the distance from the label pad to the product. If the distance is too large, the labels may float too much. Try lowering the machine so the label pad just clears the product (within 1/8").
- 8) Is the label pad made for the label you're using? Look to see if the labels are laying down flat and stacking well. If the hole pattern does not match the label, results will be uncertain.

**Note:** Static testing the labels is best done with a standard 3600. If you have a dual action tamp, it can be set to side only to do the test. The corner wrap applicator cannot do the static test.



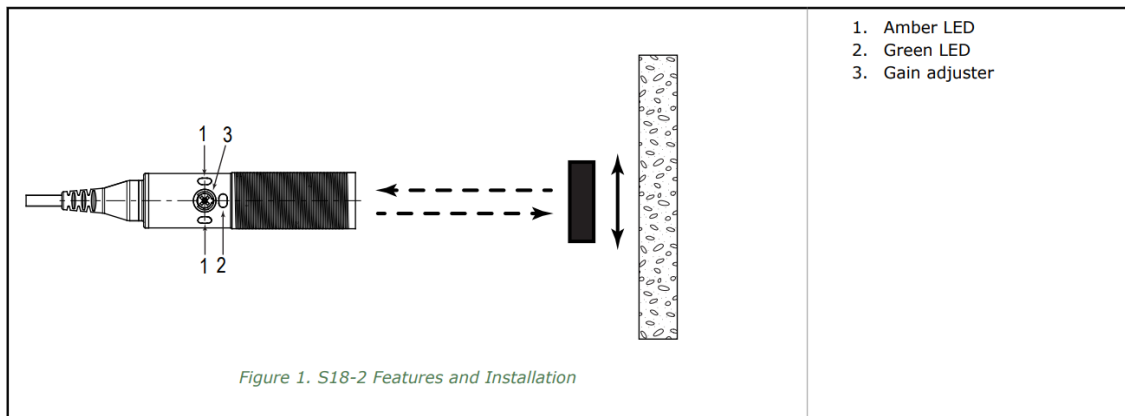
## General Sensor Setup

*The following are standard sensors CTM uses on applicators that require setting up. These may or may not be installed on your applicator. If there is a sensor on your applicator that is not covered, and you would like more information please contact the factory.*

## Product Detect Sensors

### **Banner S18-2 Sensor**

This style sensor can be a retroreflective, diffused, or polarized sensor that comes with various types of reflectors as well as a potted or quick disconnect cable.



### ***Retroreflective Setup***

Make sure there is power to the sensor and both it and the reflector are properly mounted. Ensure that the green LED is on when looking at the sensor. Move a product between the sensor and the reflector and the amber LED will turn on. To switch to trailing edge functionality the sensor will need the white and black wires switched inside of the applicator.

### ***Polarized Retroreflective Setup***

Make sure there is power to the sensor and both it and the reflector are properly mounted. Ensure that the green LED is on when looking at the sensor. Move a product between the sensor and the reflector and the amber LED will turn on. To switch to trailing edge functionality the sensor will need the white and black wires switched inside of the applicator. The polarized sensor will need a depolarizing reflector in order to sense clear products.

### ***Diffused Setup***

Ensure that the sensor is properly mounted. Place the product in front of the sensor and adjust the gain pot until the lights on the sensor are fully on and are no longer blinking. Remove the product from in front of the sensor and verify that the sensor turns off. If the product has multiple colors on it, set the gain using the darkest part of the product.

### ***Fixed Field Setup***

The fixed field version of the sensor has a 50- or 100-mm sensing range. Anything beyond that distance will be ignored. This setup is the same as diffused except it is unaffected by colors and has no stability indicator or potentiometer.

## Banner D10 Fiber Optic sensor

This fiber optic sensor is used to sense products on a system. There are two modes of teaching: Dynamic and Static

**Dynamic** method is used when teaching the sensor while the system is moving products.

**Static** teaching is the most common and involves teaching an on state then teaching the off state.

### Keys and LEDs

Two push buttons, Dynamic (+) and Static (-), may be used to access and set programming parameters.

The Output Select Indicator indicates the mode of operation:

Teach = RED

Run = GREEN

### Returning To Run Mode

TEACH and SETUP modes may be exited two ways: by allowing the 60-second time-out, or by canceling out of the process. In TEACH mode, the sensor will return to RUN mode without saving any of the new settings; in SETUP mode, the sensor will return to RUN mode but save all of the new settings. To cancel out of TEACH mode, press and hold the STATIC (-) button for 2 seconds; to cancel out of SETUP mode, press and hold both the STATIC (-) and Dynamic (+) button for 2 seconds.

### Dynamic Teach Procedure

Dynamic TEACH is used to program sensitivity during actual machine run conditions. During Dynamic TEACH, the sensor takes multiple samples of the light and dark conditions and automatically sets the sensitivity at the optimum level. Dynamic TEACH activates the sensor's adaptive threshold system, which continuously tracks minimum and maximum signal levels, and automatically maintains centering of the switch point between light and dark conditions. The adaptive threshold system remains in effect during RUN mode to automatically adjust for changes in the light or the dark conditions.

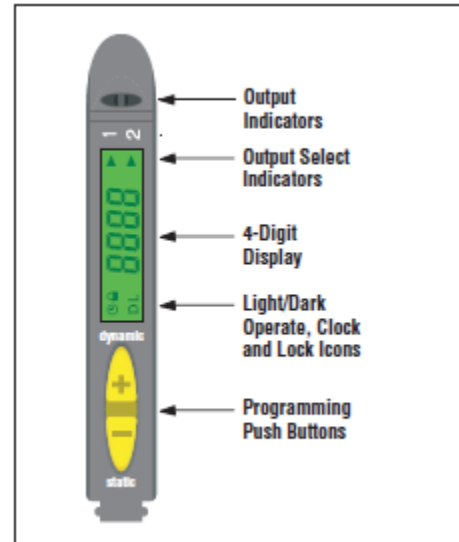
When Dynamic TEACH mode is used to program sensitivity, the output ON state (light or dark operate) will remain as it was last programmed. To change to either light or dark operate, use the SETUP mode.

Sensitivity may be adjusted at any time when the sensor is in RUN mode by clicking the (+) and (-) buttons. When a manual adjustment is made, the adaptive threshold system is disabled.

### Programming

Press and hold the (+) button while running products on the conveyor at production spacing past the sensor fiber. The display should show "dyn". Release the (+) button when a number of product have passed. The screen will display "PASS" if the teach was successful. A value is then displayed indicating the contrast value. The following table shows the scale for the contrast values.

Contrast Values	
500+	Excellent: Very stable operation.
100-500	Good: Minor sensing variables will not affect sensing reliability.
32-99	Low: Minor sensing variables may affect sensing reliability.
0-31	Marginal: Consider an alternate sensing scheme.

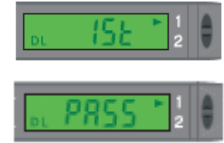


### ***Static Teach Procedure***

Static TEACH is the traditional setup method, used when two conditions can be presented by the user. The sensor locates a single sensing threshold (the switchpoint) midway between the two taught conditions, with the Output ON condition on one side, and the Output OFF condition on the other.

#### ***Programming***

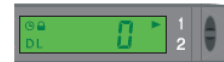
With power to the sensor body and the fiber optics mounted, place a product in front of the fibers. Press and hold the (-) button until “1St” is displayed. Press the (-) button. Remove the product and press the (-) button again. If it was a good setup the sensor display will read “PASS”.



### ***Configuration***

#### ***Active Channel Select***

Single-click both buttons simultaneously until the pointer moves to the channel 1 indicator.



#### ***Factory Default Settings***

Press and hold the (+) and (-) buttons until the display shows “lodo”.



Press the (-) button 3 times, slowly enough to allow the display to change with each push of the button until the display shows “HS”



Press the (-) button 4 times repeatedly until the display shows “tr y”.



Press the (-) button 2 times, slowly enough to allow the display to change with each push of the button until the display shows “Fd n”.



Press the (+) button to toggle the display to show “Fd y”.

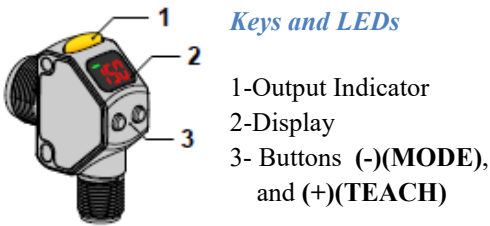


#### ***Return to Run Mode***

Either hold both (+) and (-) buttons simultaneously for 2 seconds or allow the 60-second time-out to occur.

## Banner Q3X Laser sensor

This laser sensor is used to sense products on a system. Basic instructions and descriptions are listed in this section. If additional information is required refer to the manufacture instruction literature.



1-Stability Indicator (STB = Green)

2-Active TEACH Indicators

- DYN = Dynamic TEACH selected (Amber)
- WND = Symmetric window thresholds are active (Amber)

### Laser Description and Safety Information



**CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not attempt to disassemble this sensor for repair. A defective unit must be returned to the manufacturer.

### Class 2 Lasers

Class 2 lasers are lasers that emit visible radiation in the wavelength range from 400 nm to 700 nm, where eye protection is normally afforded by aversion responses, including the blink reflex. This reaction may be expected to provide adequate protection under reasonably foreseeable conditions of operation, including the use of optical instruments for intrabeam viewing.

### Class 2 Laser Safety Notes

Low-power lasers are, by definition, incapable of causing eye injury within the duration of a blink (aversion response) of 0.25 seconds. They also must emit only visible wavelengths (400 to 700 nm). Therefore, an ocular hazard may exist only if individuals overcome their natural aversion to bright light and stare directly into the laser beam.



**Laser wavelength:** 655 nm

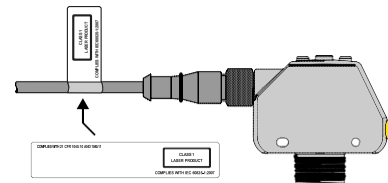
**Output:** < 0.42 mW

**Pulse Duration:** 5  $\mu$ s

The safety label must be installed on Q3X sensors that are used in the United States.

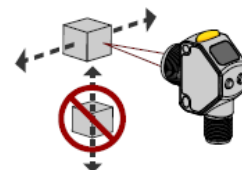
**NOTE:** Position the label on the cable in a location that has minimal chemical exposure.

1. Remove the protective cover from the adhesive on the label.
2. Wrap the label around the Q3X cable, as shown.
3. Press the two halves of the label together.



### Installation

Correct sensor-to-target orientation is important to ensure proper sensing. To ensure reliable detection, orient the sensor as shown in relation to the target to be detected









### *Basic TEACH Instructions*

Use the following instructions to teach the Q3X sensor.

1. Align the sensor to a stable reference surface.
2. Rigidly mount the sensor in this alignment.
3. Press and hold **TEACH** for longer than 2 seconds to start the TEACH mode.
4. Present the target.
- 5 Press TEACH to teach the reference surface. The reference surface is taught, the currently selected switch point value is displayed, and the sensor returns to run mode. Press TEACH to teach the target. The target is taught and the sensor waits for the second target, if required by the selected TEACH mode, or returns to Run mode. Complete steps 6 and 7 only if prompted by the sensor for the selected TEACH mode:
- 6 Present the second target.
- 7 Press TEACH to teach the target. The target is taught and the sensor returns to Run mode.

### *Manual Adjustments*

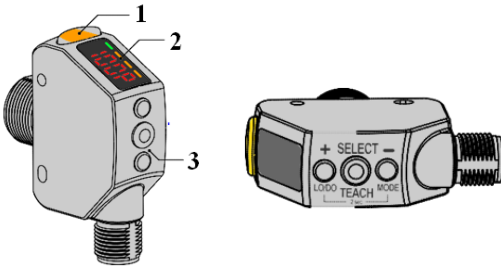
Manually increase or decrease gain using the  and  buttons.

1. From Run mode, press either  or  one time. The current signal strength value flashes slowly.
2. Press  to increase the sensor gain or  to decrease the sensor gain. After 1 second of inactivity, the new normalized signal strength value flashes rapidly, the new setting is accepted, and the sensor returns to Run mode.

## Banner Q4X Laser sensor

This laser sensor is used to sense products on a system. Basic instructions and descriptions are listed in this section. If additional information is required refer to the manufacture instruction literature.

### Keys and LEDs



1-Output Indicator

2-Display

3- Buttons (**SELECT**)(**TEACH**), **(+)**(**LO/DO**), and **(-)**(**MODE**)

### Laser Description and Safety Information



**CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not attempt to disassemble this sensor for repair. A defective unit must be returned to the manufacturer.

#### Class 1 Lasers

Class 1 lasers are lasers that are safe under reasonably foreseeable conditions of operation, including the use of optical instruments for intrabeam viewing.

COMPLIES WITH 21 CFR 1040.10 AND 1040.11  
EXCEPT FOR DEVIATIONS PURSUANT TO  
LASER NOTICE No. 50, DATED JUNE 24, 2007.  
BANNER ENGINEERING CORP.  
9714 10TH AVENUE NORTH  
MINNEAPOLIS, MN 55441

CLASS 1  
LASER PRODUCT

COMPLIES WITH IEC 60825-1:2007

**Laser wavelength:** 655 nm

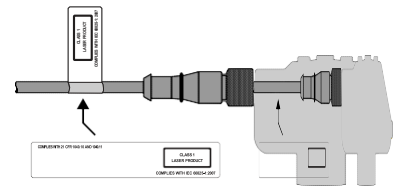
**Output:** < 0.20 mW

The safety label must be installed on Q4X sensors that are used in the United States.

**Pulse Duration:** 7  $\mu$ s to 2 ms

**NOTE:** Position the label on the cable in a location that has minimal chemical exposure.

1. Remove the protective cover from the adhesive on the label.
2. Wrap the label around the Q4X cable, as shown.
3. Press the two halves of the label together.



### Installation

Optimize the reliable detection of objects by applying these principals when selecting your reference surface, positioning your sensor relative to the reference surface, and presenting your target.

1. Select a reference surface with these characteristics where possible:
  - Matte or diffuse surface finish
  - Fixed surface with no vibration
  - Dry surface with no build-up of oil, water, or dust
2. Position the reference surface between 50 and 300 mm.
3. Position the target to be detected as close to the sensor as possible, and as far away from the reference surface as possible.
4. Angle the sensing beam relative to the target and relative to the reference surface 10 degrees or more.



### Basic TEACH Instructions





Use the following instructions to teach the Q4X sensor.



1. Align the sensor to a stable reference surface.
2. Rigidly mount the sensor in this alignment.
3. Press and hold **TEACH** for longer than 2 seconds to start the TEACH mode.
4. Press **TEACH** to teach the reference surface. The reference surface is taught, the currently selected switch point value is displayed, and the sensor returns to run mode.

The Q4X sensor records the distance to the reference surface and the amount of laser light returned by the reference surface. The output is switched when an object passing between the sensor and the reference surface changes the perceived distance or amount of returned light. The Q4X is able to detect the very small changes caused by transparent and clear objects. Typical reference surfaces are metal machine frame, conveyor side rail, or mounted plastic targets.

### Manual Adjustments

Manually adjust the sensor switch point using the  and  buttons.

3. From Run mode, press either  or  one time. The current switch point value flashes slowly.
4. Press  to move the switch point up or  to move the switch point down. After 1 second of inactivity, the new switch point value flashes rapidly, the new setting is accepted, and the sensor returns to Run mode.

After the TEACH process is completed, the taught reference point, a combination of the measured distance and returned signal intensity from the reference target, is recorded by the sensor. Use the push buttons to manually adjust the switch point. Manual adjustment changes the sensitivity of the thresholds around the taught reference point but does not move the taught reference point. Press  to increase the sensitivity and press  to decrease the sensitivity. After re-positioning the sensor or changing the reference target, re-teach the sensor.

The display shows the current match percentage relative to the taught reference point. The switch point defines the sensitivity; the output switches when the current match percentage crosses the switch point.

Your specific application may require some adjustment of the switch point, but these values are recommended starting switch points for common applications.

Switch point (%)	Typical Applications
75 (default)	Default, recommended for PET bottles and Trays
88	Recommended for thin films
50	Recommended for tinted brown, tinted green, or water-filled containers

### Light Operate/Dark Operate

The default output configuration is light operate. To switch between light operate and dark operate, use the following instructions:

1. Press and hold **LO/DO** for longer than 2 seconds. The current selection displays.
2. Press **LO/DO** again. The new selection flashes slowly.
3. Press **SELECT** to change the output configuration and return to Run mode.

**NOTE:** If neither **SELECT** nor **LO/DO** are pressed after step 2, the new selection flashes slowly for a few seconds, then flashes quickly and the sensor automatically changes the output configuration and returns to Run mode.

## Tamp Return Sensors

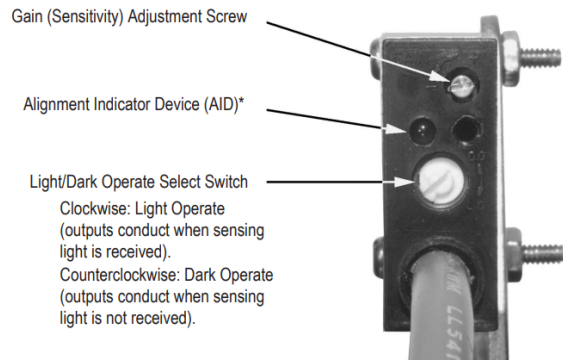
Multiple different tamp return sensors are used on the 3600a. The sensors will override the tamp extend timer if the signal is seen. These can be used to detect variable height products to allow the tamp to retract early.

### **Banner SM312W Diffused Tamp Return**

The Banner SM312W is a diffused sensor with a sensing range of 5 inches. It has an adjustable gain pot to allow it to be fine tuned to cause the tamp to stop at the correct position.

#### **Note:**

- Light condition: sensor output is ON when there is no object in the beam
- Dark condition: sensor output is ON when there is an object in the beam



#### *Setting the sensor*

With the sensor installed and powered on, turn air off to the applicator and let the tamp fall. Place a product underneath the sensor. The sensor should be “on” when looking at the product.

If the sensor is not on, increase the gain until it is on. Do not increase it too far or it could see objects in the background.

If the sensor is on, decrease it until it turns off, then increase slightly so it turns back on. This ensures that it won't see the surface the product is resting on.



## **Applicator Installation and Setup Notes**

If the applicator is feeding labels properly and you are confident in the setup of the applicator, it can be installed to a production line. Since every applicator and labeling system is different the process for installing the applicator will vary. Below are general tips and steps for installation that apply to most applicators.

### **Applicator Orientation**

The 3600a can mount in multiple different orientations depending on the labeling needs. This section gives a short description of each orientation and what changes with them.

#### **Upright and Above**

The upright and above orientation is where the applicator is mounted above the product and will tamp downward. This is typically used to apply labels to the top of a product. If using an inline DAT nose it may be used to label the front / back of the box and the top.

#### **Reels Up**

When the applicator is in the reels up orientation it is rotated on the u-arm so that the connector faceplate is facing the ground. This allows the labeling of the sides of the product. When an applicator is built to be reels up an aluminum inside unwind disk is sold with the applicator. This allows more support for the labels.

#### **Nose Down**

In a nose down orientation the applicator is rotated on the U-arm 90 degrees like the reels up orientation. The U-arm is then rotated on its mounting 90 degrees so that the unwind disk is at the top and the label pad is at the bottom. Nose down applications are often used for labeling the sides of boxes and have a smaller footprint side to side.

#### **Nose Up**

Nose up is like nose down except the U-arm would be rotated the opposite direction. This would create a situation where the unwind is toward the floor and the pad is at the top of the applicator. When an applicator is factory built for nose up application it is most common for the valve bank to be moved to the dispense side. If the valve bank was left on the unwind side, it would be less accessible.

#### **Bottoms Up**

In a bottoms up orientation the applicator is turned 180 degrees opposite upright and above. This means that a straight tamp would extend upwards away from the ground. The top cover of the applicator would be parallel to the ground. This is used to label the bottom of the product and is often used in conjunction with a system like a hugger.

### **Standard 3600a Installation**

Because a standard 3600a has straight tamp the setup is simple. Put the applicator in the correct orientation for labeling. See the above applicator orientation section for more information. Once in the correct orientation, ensure that the product handling is setup and present a product to the labeling position. With a product in the labeling position extend the tamp cylinder using the tamp override button. Move the applicator so the label pad is approximately 1/4" away from the product. Ensure that the label pad is square to the product. Adjust the height of the applicator to the proper labeling position. Once the pad is the correct distance from the product and the height is set the "flow direction position" of the label can be adjusted using the label placement variable in the display.

If using a product detect sensor ensure that it is positioned upstream of the applicator. The closer the sensor is to the applicator the lower the label placement will be. This will effectively allow a higher labeling rate. If the sensor is too close to the applicator, the applicator may not be able to hit the desired position on the product though.

## Dual Action Tamp (DAT) Installation

For this section all information assumes a leading edge DAT sequence. If set to trailing edge or inverted the information will still apply with slight modification (if the information says front of product for leading edge it would be back of product for trailing). Understanding a DAT's sequence is important before setting up. For more information about the different DAT sequences see the "Tamp Action" section in the "Options Menu" section of this manual. There are flow charts and descriptions that explain each sequence.

Set the applicator to the correct orientation. DATs are most commonly in the reels up, nose up, or nose down orientations. Ensure that the product handling is setup and present a product to the applicator. In the applicator display access the I/O Diagnostics menu and extend the swing tamp. Move the applicator in or out relative to the conveyor to position the front label properly on the product in the side to side direction. It is important to set the swing position first as it cannot be adjusted except by moving the applicator or moving the product. Next adjust the height of the applicator to adjust the height of the label on the product. Lock the applicator in place and turn off the swing valve. Advance the product so that it is directly in front of the label pad for side apply. Turn on the side valve. The straight tamp should extend out. Ideally the pad will be 1/4" away from the product. If the pad extends to far and will contact the product use the stop collars on the slide to choke the slide length. Make sure both stop collars are moved the same distance so that one side of the cylinder is not hitting first.

Next, position the product detect sensor upstream of the applicator. Set a label placement and run a product. Watch the pad as it swings out. The goal is for the pad to not contact the product. If the pad does contact the product then the placement was too long, and needs reduced. If the applicator blew the label from further than 1/4" – 1/2" then the label placement was too short and needs increased. Changes to actuator timers, air pressure, and flow controls will all affect the pads position and label placement.

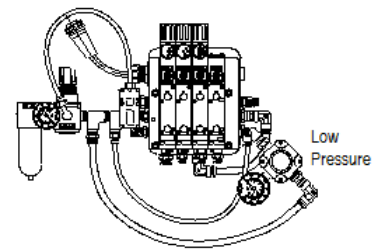
Once the leading edge application is setup watch the side apply. Adjustments to the second label placement value will affect the flow direction placement of the label on the side of the box. The second label placement runs concurrently with the first label placement. If the second label is being applied late and reducing the second placement is not corrected it then the first portion of the cycle may be too slow to allow the applicator to hit rate. In this case a rate alarm will be display (if the option is enabled, see "Options Menu" section of this manual). To correct this the print speed needs increased, the actuator timers need reduced (and/or flow controls opened), or the product needs slowed down. If the conveyor speed is slowed down, you may have to reevaluate the first label placement.

## Cornerwrap Installation

A cornerwrap applicator will be used nearly exclusively in the reels up orientation. Position the applicator properly and square it to the labeling surface. Set the extend / retract timers. The extend timer should be set so that after a product detect signal is given the pad will swing out in front of the product. Upon reaching 90 degrees the swing arm should go into a low pressure state. If the arm reaches 90 degrees and there is time before going low pressure, then the extend timer is too long. Upon receiving the swing back signal, the arm will retract to the home position. If there is a dwell between reaching the home position and printing the label, then the retract timer is too long.

With the timers setup present a product to the applicator. Use the tamp override button to extend the swing arm out at high pressure, then it will transition to low pressure. Ensure that the label will be applied square to the product. Adjust the height of the applicator to the proper position. The applicator can be moved in and out to set the amount of label that is tacked to the leading edge. If the applicator is moved inward more label will be applied on the front and less on the side. The opposite is true for moving the applicator away from the product.

Next, slowly jog the conveyor surface so that the product begins to push the arm back. If the product stalls on the conveyor then the low pressure needs reduced. This is done using the low pressure regulator plumbed on the side of the valve bank. The regulator has a precision knob on it. Adjust the low pressure so that it allows the product to push the arm, but ensure the pressure stays high enough to properly wipe the label on the product around the corner.



Next, install the product detect sensor. Ensure the sensor is set to leading edge detect. Because there is no label placement on a cornerwrap the sensor must be positioned properly to allow time for the swing arm to get out in front of the product. If the arm attempts to swing too early, it could contact the trailing edge of the previously labeled product. A second sensor, swing back sensor, is installed downstream of the labeling position. This sensor tells the arm to retract home. If the sensor is too far upstream the label may not be entirely wiped on. If the sensor is too far downstream the applicator may not hit rate.

## Applicator Setup Variables

This section will discuss the variables that affect the application of the label to the product. Before going through this setup guide, it is recommended that the label feed and applicator are positioned and setup properly.

### **Label Placement**

Label placement is the time (or distance if encoder based) that the applicator will wait after receiving a product detect signal before applying a label. Adjusting this will affect how early or late the label is applied. The variable is found on the main menu and can be changed while the applicator is running for “on the fly” adjustments. When adjusting the label place remember higher label placement will move the label further back on the product while lower label placement will move the label forward on the product.

### **Product Clearance**

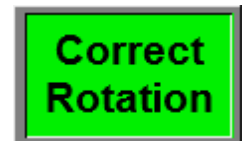
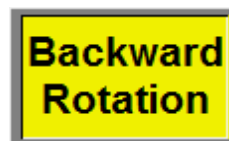
The product clearance function is used if more than one apply signal is generated per product. If the encoder is on, product clearance is in inches, if no encoder then it is in seconds. The clearance starts at the application of the last label applied. For a standard 3600a that would when the air blast starts. For a dual action tamp, it will be the second air blast of the labeling sequence and for the corner wrap, it is the leading edge of the swing return. Once the product clearance starts, the applicator will ignore any product detect signals it receives until completed.

### **Encoder Setup**

An encoder option can be used to convert the placement into distance units. If the applicator does not use an inverted tamp mode than the speed matching will not be entirely effective, as the tamp extend and retract times will still be time based. If using the encoder option and the product speed is too fast, a warning screen will be generated to tell the operator that the label placement was late.

#### *Changing Encoder Direction*

The encoder menu also has an indicator light that shows whether the encoder is spinning in the correct direction. The encoder should always spin to generate a positive value. If it is not, then the indicator light will turn yellow and say “backwards rotation.” This can be fixed by mounting the encoder to spin the other direction or switching the A+ and A- wires inside the applicator. For information on which wires are the A+ and A- wires see the electrical drawings in the drawings section of the manual.



#### *Encoder Compensation Value*

The encoder compensation value is an internal variable used to change label placement based on the encoder speed. As the product speed is increased the label placement must begin sooner to allow for latency times in the applicator. To test the accuracy of the compensation value, apply labels to the products at a slow speed. Increase the speed of the product and verify if the label moves at all. If the labels are applied in the same place the compensation is correct. If the labels move forward on the product then the applicator is overcompensating, and the compensation value should be lowered. If the labels moved backwards on the product the compensation value will need increased.

**Note:** This test will only be accurate in ITB mode.

### **3600a General Maintenance Procedures**

The following procedures detail the maintenance of various components that can be included with the 3600a.

#### **!!! CAUTION !!!**

**DISCONNECT AIR AND POWER TO THE APPLICATOR BEFORE PERFORMING THE FOLLOWING PROCEDURES. INJURY FROM MOVING PARTS AND/OR ELECTRICAL SHOCK MAY OCCUR.**



**!!! CAUTION !!!**

**DISCONNECT AIR AND POWER TO THE APPLICATOR BEFORE PERFORMING THE FOLLOWING PROCEDURES. INJURY FROM MOVING PARTS AND/OR ELECTRICAL SHOCK MAY OCCUR.**



### **Preventative Maintenance**

**Note:** Certain maintenance routines may not apply to your applicator. When performing less common maintenance routines also include the more common routines (if doing semi-annual, still do daily, etc).

#### **Daily Maintenance**

1. Clean the print head and platen roller each time you change ribbon. Refer to the printer manual for the correct procedure and additional daily checks.
2. Examine the air filter for water or oil collection. Drain if necessary.
3. Examine the tamp pad and the rollers used to guide the web for adhesive build up. Clean if needed with alcohol or similar solvent.
4. Look for loose screws, rollers, etc.

#### **Weekly Maintenance**

1. Clean peeler bar, rollers, and tamp pad.
2. Examine machine for air leaks.
3. Wipe down the outside of the applicator and product detect lens.
4. On extended peel edge noses, check the uhmw tape on the peel edge for wear or nicks. Replace if needed.

#### **Monthly Maintenance**

1. Examine dancer arm spring tension and unwind brake belt for wear.
2. Examine rewind belts for wear and to make sure of proper deflection.
3. Examine rollers for free rotation and play.
4. Examine rewind slip clutch disk for wear.
5. Replace the air inlet filter.

#### **Semi-Annual Maintenance**

1. Replace filters (both air inlet filter and dust filter).
2. Check vacuum pump for an accumulation of debris. Replace if necessary.
3. Examine pulleys, belts and rewind clutch for wear.
4. Clean inside and outside of applicator using an industrial vacuum cleaner.
  - a. **Do not use compressed air to blow dust off the electrical section of the applicator.**

**!!! CAUTION !!!**

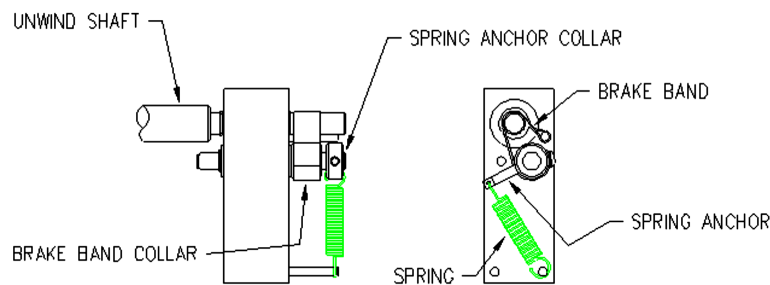
**DISCONNECT AIR AND POWER TO THE APPLICATOR BEFORE PERFORMING THE FOLLOWING PROCEDURES. INJURY FROM MOVING PARTS AND/OR ELECTRICAL SHOCK MAY OCCUR.**



### Dancer Arm Adjustment

The unwind assembly on a 3600a uses a spring for the dancer arm to release a brake band holding the unwind shaft. This is shown in the image below. Adjustments may need made to the brake band to ensure that it is applying the correct amount of pressure against the unwind shaft.

**Note:** Even if the unwind is setup perfectly, it will be of no value if the core of the label is slipping on the unwind hub. This can be prevented by making sure the unwind disks are tightened against the labels when installing a roll of labels.



#### RIGHT HAND CONFIGURATION

1. Hold the dancer arm in the position it should be when the brake is on. Loosen the collar that the brake band is anchored to, rotate it so the band is tight and tighten back down. Make sure the brake band is wound in the right direction.
2. Loosen the collar with the spring anchor and tighten so the dancer arm is held up with enough tension to stop the unwind from turning. It should not be so tight as to create too much “pull off” force when the printer is running as this may cause print registration problems.
3. Check the performance of the unwind with a full roll of labels and a small diameter roll. Make adjustments as necessary.

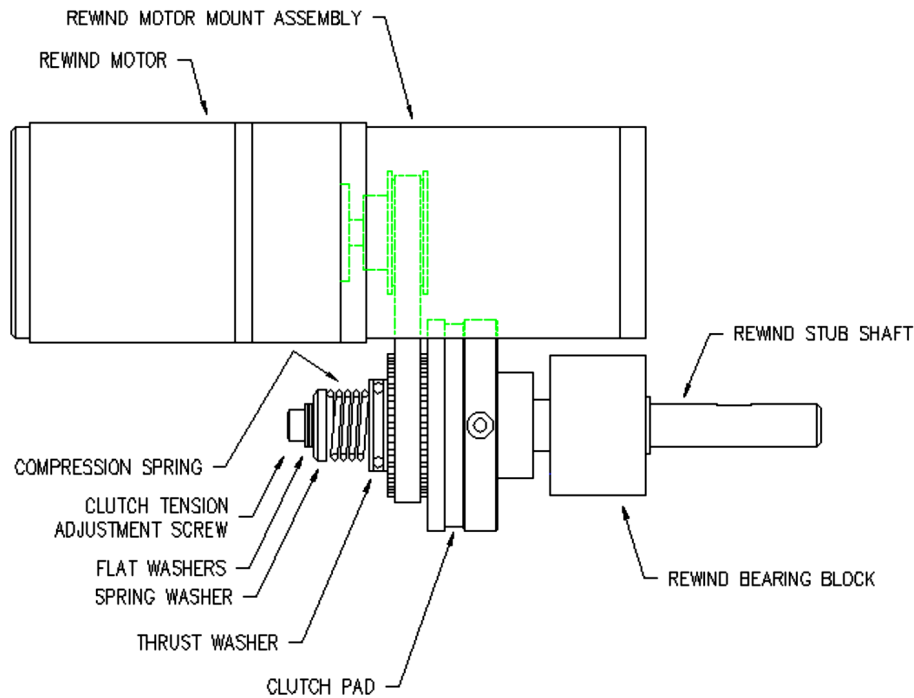
**!!! CAUTION !!!**

**DISCONNECT AIR AND POWER TO THE APPLICATOR BEFORE PERFORMING THE FOLLOWING PROCEDURES. INJURY FROM MOVING PARTS AND/OR ELECTRICAL SHOCK MAY OCCUR.**



### Rewind Clutch Adjustment

The rewind is used to take up liner after leaving the printer. It is important to set the rewind tension properly, so the liner is taken up regardless of the roll size. Also, if the tension is set too high the rewind may be able to pull the labels through the print engine and affect the label registration point. This can cause multiple labels to feed out as well as print quality issues.



### Adjusting Rewind Tension

1. Remove power and air to the machine.
2. Remove the lower stainless cover.
3. Carefully remove the tension adjustment screw and all washers (NOTE: the spring is under compression load). Keep track of how many flat washers are on the outboard and inboard sides of the “spring washer”.
4. If the rewind tension was too tight, move one or two of the flat washers from the outboard side of the “spring washer” to the inboard side (nested inside the compression spring). This will relieve the pressure on the clutch pad. If the tension was too loose, move one or two flat washers from inside the compression spring to the outboard side of the “spring washer”. This will increase pressure on the clutch pad.
5. Carefully re-apply the power and air to the machine and test. Re-adjust if necessary.
6. Remove power and air and replace the cover on the machine if everything tests OK.



**!!! CAUTION !!!**

**DISCONNECT AIR AND POWER TO THE APPLICATOR BEFORE PERFORMING THE FOLLOWING PROCEDURES. INJURY FROM MOVING PARTS AND/OR ELECTRICAL SHOCK MAY OCCUR.**



### **Changing Clutch Pad**

You may find that over time that the rewind loses its ability to collect waste fully. This could be due to the slip clutch pad inside the rewind becoming too worn and always slipping. The pad is replaceable by following the below steps.

1. Remove power and air to the machine.
2. Remove the stainless cover on the back of the machine.
3. Carefully remove the tension adjustment screw, flat washers, spring washer, spring and thrush washer.
  - a. **Note:** Keep track of how many flat washers are on the outboard and inboard sides of the “spring washer” to maintain the same pressure on the clutch pad when re-assembled.
4. Work the belt off the pulley/pressure plate and slip off the pressure plate.
5. Replace the clutch pad.
6. Re-assemble and adjust the tension for the new clutch pad.

### **Adjusting Rewind Belt Tension**

The rewind belt tension should not be adjusted as a tool to adjust the rewind. However, if the belt gets replaced or it is found to be setup improperly it is important to properly tension the belt.

1. Remove power and air to the machine.
2. Remove the stainless cover on the back of the applicator.
3. Proper Tension: 1/4”- 3/8 ” Belt Deflection.
4. Loosen the two 1/4” socket head cap screws that bolt through the side of the rewind motor mount assembly to the faceplate of the applicator.
5. Push the rewind motor assembly up and re-tighten the two 1/4” socket head cap screws.
6. Replace stainless cover.

## 3600a Troubleshooting Guide

The following section contains troubleshooting tips for some of the more common issues that arise. Not all issues are listed.

Problem	Possible Cause	Possible Solution
Nothing works	Power cord is loose, defective or not plugged in.	Inspect the power cord to find the problem
	A.C. line fuse blown	Find the cause of the electrical short and correct
Power switch on, printer is on, display is off	Bad power supply	Check power supply and voltage to power supply. Correct wiring / replace power supply if needed.
	Display cable is not plugged in or defective	Plug in display cable, check display cable wiring.
Power switch on, display is lit and working, printer is not lit or working	Printer turned off	Turn on printer
	Power cord going to printer is disconnected	Verify the power cord to the back of the print engine inside the applicator is plugged in
	Fuse is reversed	Verify the fuse is set to 120v not 220vdc.
Label liner is breaking	Labels are not threaded correctly	Re-thread labels per web path diagram
	Unwind / rewind disks or guide collars are not aligned with print engine	Adjust guide collars and disks to be aligned with print engine
	Adhesive build up on applicator	Clean as necessary
	Label jammed in printer / pad	Clear jam
	Bad roll of labels	Replace with new label roll
Labels are not consistently stopping on label pad	Vacuum pump not working	Clean or replace vacuum pump
	Too little or too much vacuum	Adjust vacuum pressure per manual setup guide
	Air assist too high or too low	Adjust air assist pressure per manual setup guide
	Tamp pad not positioned correctly to the peel edge	Verify tamp pad position in applicator setup section of manual
	Air assist tube not positioned correctly	Center air assist tube holes and adjust angle as needed
	Adhesive build up on tamp pad	Clean label pad

Problem	Possible Cause	Possible Solution
Labels are consistent on label pad, but not consistently applied to product	Product is not consistently presented to applicator	Correct product handling and product speed issues
	Air blast is too high or too low	Adjust air blast pressure per the manual setup
	Product detect sensor is not detecting product consistently	Adjust sensor / reteach sensor per factory instructions
	Labels are blown off before tamp is fully extended	Increase the tamp extend value or open tamp extend flow controls
	Label pad does not match the label	Install correct label pad
Valves do not turn on	Air pressure is too low	Ensure there is air to the valve. Increase supply air.
	Valve bank plug is not connected to the applicator	Plug in the valve bank connector in the connector faceplate.
	Valve spool is stuck	Consult factory for procedure to remove spool. Check air line for dirty / wet air
	Valve solenoid is bad	Replace valve solenoid. Check air line for dirty / wet air
	Dwell times too short	Increase dwell times of valves. See display section for access
Valve Turns on but nothing happens	Air pressure is too low	Increase air pressure
	Flow controls (if valve has them) are closed	Open flow controls
	Slide guide rails are bent (if tamp slide)	Replace slide
Machine will not cycle	No label formats in printer buffer	Send label formats and check print engine parameters for correctness
	No product detect signal	Use IO diagnostics to verify the product detect signal, replace sensor if needed
	Printer interface cable not plugged in	Reconnect cable and verify wiring of interface harness
	Printer is faulted	Correct fault condition and enable the print engine
	The applicator is not enabled	Enable the applicator
Label application rate is too fast for applicator to keep up	Printer is taking too long to process or print data	Increase print speed, send data sooner
	Excessive dwell times for valves	Walk through proper setup procedures to reconfigure valve dwells
	The label print and apply cycle is too slow for product rate	Decrease product rate

Problem	Possible Cause	Possible Solution
Applicator cycles at random	Loose or vibrating product detect sensor.	Verify mounting of product detect sensor. Monitor PD signal in IO diagnostics
	Product detect alignment is misaligned	Refer to the Sensor setup section of manual for proper setup procedure
	Loose wiring connections	Check cables and wiring harnesses inside applicator. Verify pins and terminal connections
	RF interference / noise	Isolate noise and correct. Avoid running cabling in parallel with AC power
No label is feeding out	Printer is not configured correctly	Refer to printer manual. See “Print Engine Setup” document in manual
	No label data in print buffer	Send label data to print engine or turn on feed blank label option
	No external print signal sent	If using external print option, verify the signal is being received
Compressed print on labels	Applicator unwind brake is too tight creating too much back pressure	Loosen unwind brake to proper tension
	Worn or damaged platen roller in print engine	Replace platen roller, consult print engine manual for setup
Printing registration is early	Rewind tension is too tight not allowing a full backfeed	Re-adjust slip clutch washer stack to provide less tension
Elongated print on labels	Rewind has too much tension and is pull labels	Re-adjust slip clutch washer stack to provide less tension
Poor print quality		Refer to printer manual for adjustments to print quality
Waste is not fully collected	Rewind does not have enough tension to turn waste roll	Re-adjust slip clutch washer stack to provide more tension
Labels print continuously without being applied	Printer configuration is wrong	Verify printer settings
	Print end signal was not received from printer	Contact factory for assistance in correcting
	Lost 24 VDC from power supply	
Alarm messages will not clear	Printer turned off	Turn printer on
	Alarm was still present when reset was pressed	Correct the source of the alarm before resetting
Display is showing “No Response from PLC”	Display cable is disconnected	Check cable connections
	Bad display cable	Replace cable

## **Print Engine Settings**

Every print engine has numerous settings used to configure the printer. Many are changed on an application to application basis. Some settings (seen below) are needed for every 3600a. A printer that has been factory defaulted or bought new may need these settings changed before they can function with an applicator. For all settings not listed below consult the print engine manual for information

<b>Zebra ZE500</b>	
<b>Parameter</b>	<b>Setting</b>
Print Mode	Applicator
Media Type	Non-continuous
Sensor Type	Web
Applicator Port	Mode 2
Start Print Sig	Pulse Mode
Ribbon Low	Active High

<b>Datamax "A" Class Mark II</b>	
<b>Parameter</b>	<b>Setting</b>
GPIO Device	Applicator
Error On Pause	APP2

<b>Sato S84ex</b>	
<b>Parameter</b>	<b>Setting</b>
Printer Type	Dispenser
External Signal	Enabled
External Signal	Type 4
Ext 9 Pin Select	Mode 2

### **3600a Standard Spare Parts**

The following drawings detail the spare parts that can be purchased for the 3600a.

# 3600a PRINTER APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 3600a

3600a P/A SERIES CORE UNIT SPARE PARTS LIST		
RECOMMENDED TOOL		
Part Number	Recommended Qty	Description
PE-TE6000	1	WIRING TOOL
RECOMMENDED SPARE PARTS LIST		
Part Number	Recommended Qty	Description
ASS-238-0124L or	1	LH 24VDC POWER SUPPLY ASSEMBLY
ASS-238-0124R	1	RH 24VDC POWER SUPPLY ASSEMBLY
PE-FU2090	1	6.3 AMP FUSE
EXTENDED SPARE PARTS LIST		
Part Number	Recommended Qty	Description
PE-SE0994-PD	1	PRODUCT DETECT W/ TAPE
PE-RT1000	1	1"W X 6"L REFLECTIVE TAPE
ASS-238a-0126	1	3600a DISPLAY ASSEMBLY <b>(Program specific)</b>
MP-PLC1046	1	PLC <b>(Program specific)</b>
PE-RE1015	1	MOTOR RELAY

# 3600a PRINTER APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 3600a

NON-POWERED UNWIND ASSEMBLY		
WEAR ITEMS (12" UNWIND)		
Part Number	Recommended Qty	Description
ASS-238-0180L or R	1	UNWIND BLOCK ASSY
PM-BB1030	1	UNWIND BRAKE BAND
PM-FASP30434	1	DANCER ARM UNWIND SPRING
REWIND ASSEMBLY		
WEAR ITEMS		
Part Number	Recommended Qty	Description
PM-BELT1015	1	REWIND BELT
MP-238-0274	1	3" CLUTCH PAD
PM-BE1232	1	REWIND CLUTCH THRUST BEARING
PM-FASP30540	1	MEDIUM DUTY REWIND CLUTCH SPRING
16" UNWIND ASSEMBLY w/HIGH CAPACITY REWIND		
RECOMMENDED SPARE PARTS		
Part Number	Recommended Qty	Description
PM-FASP30434	1	DANCER ARM SPRING (REWIND)
PE-SE10108	1	PROXIMITY SWITCH W/ QUICK DISCONNECT
HIGH CAPACITY REWIND ASSEMBLY for 16" UNWIND		
WEAR ITEMS		
Part Number	Recommended Qty	Description
PM-BELT1015	1	REWIND BELT
MP-238-0274	1	3" CLUTCH PAD
PM-BE1232	1	REWIND CLUTCH THRUST BEARING
PM-FASP30431	1	HEAVY DUTY REWIND CLUTCH SPRING



# 3600a PRINTER APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 3600a

TAMP SPARE PARTS LIST		
RECOMMENDED SPARE PARTS (STANDARD TAMP)		
Part Number	Recommended Qty	Description
MP-211-X217-X	1	AIR ASSIST TUBE <b>**JOB SPECIFIC**</b> (SEE DWGS)
RECOMMENDED SPARE PARTS (EXTENDED TAMP ASSEMBLY)		
Part Number	Recommended Qty	Description
PM-T1010	1	PEEL EDGE TAPE (6" WIDE x 4" LONG)
MP-211-X217-X	1	AIR ASSIST TUBE <b>**JOB SPECIFIC**</b> (SEE DWGS)
PM-BEBF0985	1	PEEL EDGE ADJUSTMENT BUSHING
ASS-238-0143	1	ADJUSTMENT KNOB ASSEMBLY
EXTENDED SPARE PARTS (STANDARD & EXTENDED TAMP ASSEMBLY)		
Part Number	Recommended Qty	Description
ASS-238-0129M	1	TAMP 3 STATION MAC VALVE BANK ASSEMBLY
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	30 PSI REGULATOR w/0-60 GUAGE (AIR ASSIST)
PM-VA2397M	1	80 PSI REGULATOR w/0-120 GUAGE (TAMP/BLOW)
SLIDE ASSEMBLIES (STANDARD & EXTENDED TAMP ASSEMBLY)		
Part Number	Recommended Qty	Description
ASS-214-0108-1	1	1" SLIDE ASSEMBLY
ASS-214-0108-2	1	2" SLIDE ASSEMBLY
ASS-214-0108-3	1	3" SLIDE ASSEMBLY
ASS-214-0108-4	1	4" SLIDE ASSEMBLY
ASS-214-0108-6	1	6" SLIDE ASSEMBLY
ASS-214-0108-8	1	8" SLIDE ASSEMBLY
ASS-214-0108-10	1	10" SLIDE ASSEMBLY
ASS-214-0108-12	1	12" SLIDE ASSEMBLY

**3600a PRINTER APPLICATOR SPARE PARTS LIST**  
**When ordering parts, present Serial Number of 3600a**

SWING AWAY TAMP SPARE PARTS LIST		
RECOMMENDED SPARE PARTS		
Part Number	Recommended Qty	Description
PM-INS1010	1	THREADED INSERT
PM-FANU30375	1	CAPTURE WASHER
PM-LL1002	1	LOCK LEVER
EXTENDED SPARE PARTS		
Part Number	Recommended Qty	Description
MP-238-0338	1	SS HEAVY WASHER
PM-BEBT1008	2	THRUST WASHER
PM-BEBF1070	2	FLANGE BUSHING
PM-FASB10045	2	SHOULDER BOLT
MP-238-0335	1	LOCATOR BLOCK

# 3600a PRINTER APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 3600a

SWING TAMP SPARE PARTS LIST		
RECOMMENDED SPARE PARTS (ROTARY SWING TAMP)		
Part Number	Recommended Qty	Description
PM-SA0990	1	SHOCK ABSORBER (HOME)
PM-SA1000	1	SHOCK ABSORBER (EXTEND)
RECOMMENDED SPARE PARTS (ROTARY SWING TAMP/CORNER WRAP)		
Part Number	Recommended Qty	Description
PM-SA0990	1	SHOCK ABSORBER (HOME)
PM-SA1000	1	SHOCK ABSORBER (EXTEND)
ROTARY ACTUATOR		
Part Number	Recommended Qty	Description
PM-AC1250	1	STANDARD DUTY ROTARY ACTUATOR **NOTE** CONTACT SALES DEPARTMENT FOR HEAVY DUTY ROTARY ACTUATOR

**3600a PRINTER APPLICATOR SPARE PARTS LIST**  
**When ordering parts, present Serial Number of 3600a**

DUAL ACTION TAMP (DAT) SPARE PARTS LIST		
RECOMMENDED SPARE PARTS (DUAL ACTION TAMP)		
Part Number	Recommended Qty	Description
PM-SA0950	2	SHOCK ABSORBER
PM-SA0990	1	SHOCK ABSORBER (HOME)
PM-SA1000	1	SHOCK ABSORBER (EXTEND)
PM-BELT1039	1	TIMING BELT (NOT REQ'D FOR INLINE DAT)
SLIDE ASSEMBLIES		
Part Number	Recommended Qty	Description
PM-AC1237 or	1	3" SLIDE ASSEMBLY
PM-AC1239 or	1	6" SLIDE ASSEMBLY
PM-AC1241	1	8" SLIDE ASSEMBLY
ROTARY ACTUATOR		
Part Number	Recommended Qty	Description
PM-AC1248	1	ROTARY ACTUATOR

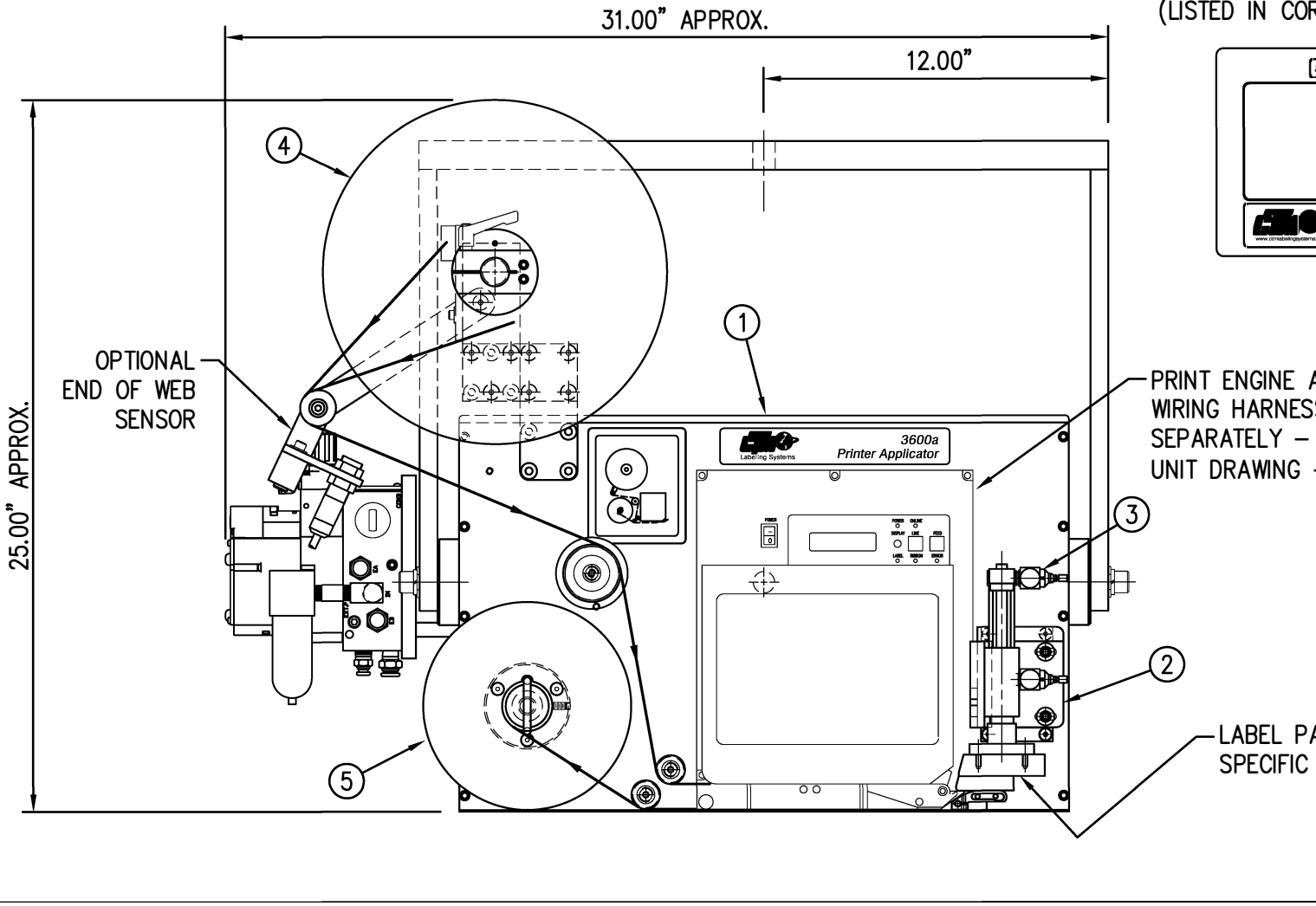
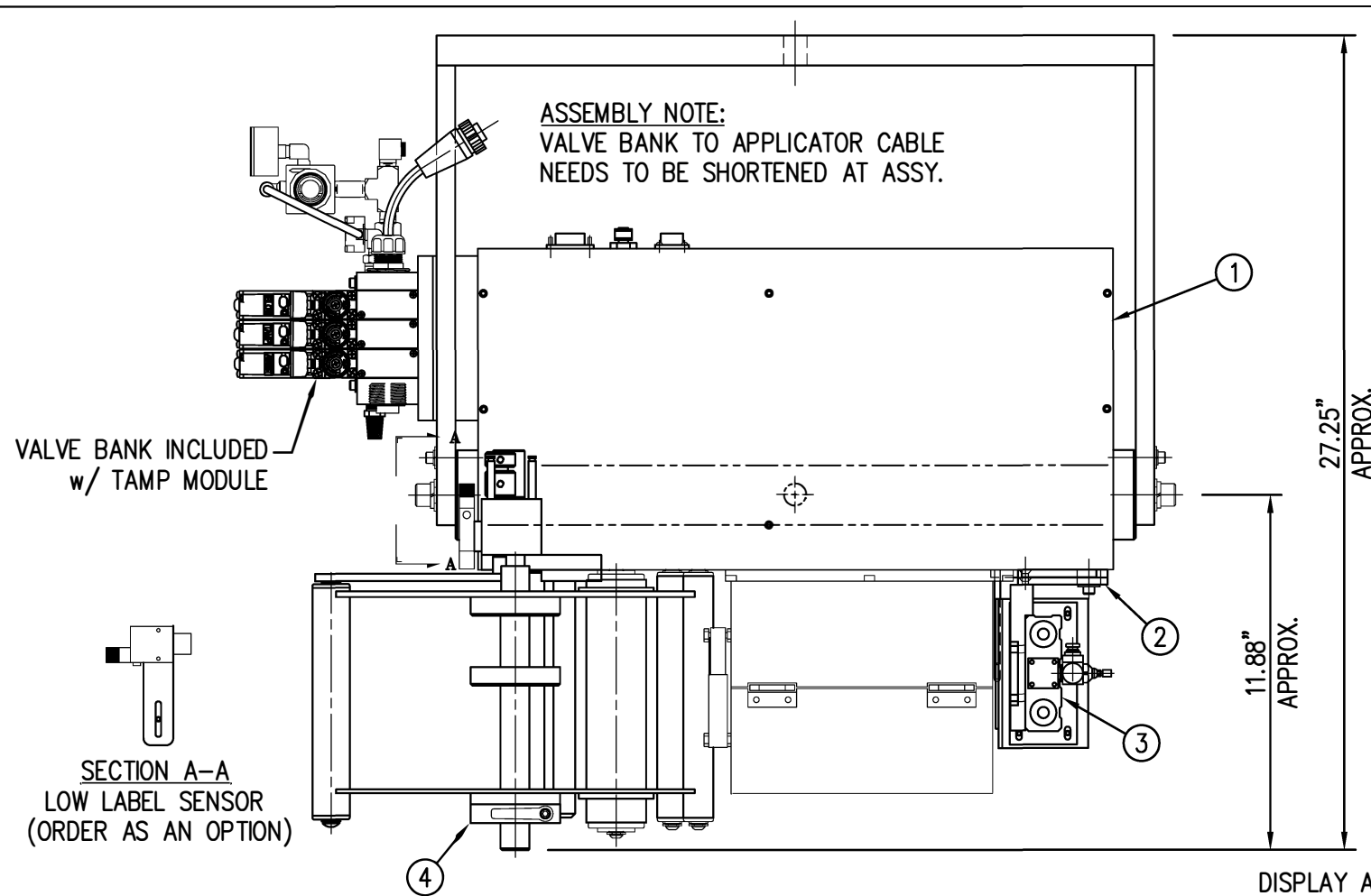
# 3600a PRINTER APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 3600a

3600a P/A OPTIONS SPARE PARTS LIST		
OPTIONS: RECOMMENDED SPARE PARTS (LOW LABEL, WEB BREAK ALARMS)		
Part Number	Recommended Qty	Description
PE-LI1088	1	RED,YELLOW,GREEN LED ALARM LIGHT (BANNER)
PE-SE1095-LL	1	LOW LABEL SENSOR (w/o BRACKET)
ASS-238-0480	1	LOW LABEL SENSOR (w/ BRACKET) FOR REPLACING ASS-200-0422
PE-SE1095-EOW	1	END OF WEB SENSOR (w/o BRACKET)
OPTIONS: RECOMMENDED SPARE PARTS (TAMP HOME SENSOR)		
Part Number	Recommended Qty	Description
ASS-238-0433	1	TAMP HOME SENSOR (w/o BRACKET)
** CYLINDER MUST BE DESIGNATED WITH AN "E"***		
OPTIONS: RECOMMENDED SPARE PARTS (TOUCH-AND-GO (TAG) - PROX)		
Part Number	Recommended Qty	Description
PE-SE1148	1	M8 INDUCTIVE PROXIMITY SWITCH
OPTIONS: RECOMMENDED SPARE PARTS (VACUUM OFF OPTION)		
Part Number	Recommended Qty	Description
ASS-200-0459	1	VACUUM SWITCH ASSEMBLY
OPTIONS: RECOMMENDED SPARE PARTS (QUICK DISCONNECT PAD & MANIFOLD)		
Part Number	Recommended Qty	Description
PM-FASSBP11000	4	BALL PLUNGERS
MP-238-0270	1	QUICK CHANGE SLIDE TRANSITION PLATE

### **3600a Standard Drawings**

The following drawings detail the components that can be included with a standard 3600a.



BILL OF MATERIAL			
CTM-238aR/L-TXX-12X-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-238a-0123R/L-XX	HOUSING ASSEMBLY / CORE UNIT
②	1	MOD-238-0124R/L	STANDARD TAMP MODULE
③	1	ASS-214-0103R/L-XN	STANDARD SLIDE ASSEMBLY
	1	ASS-214-0103R/L-XNQ	STD. SLIDE ASSEMBLY w/ QUICK CHG. PAD
④	1	MOD-238-0122R/L	12" UNWIND MODULE
	1	MOD-238-0122AR/L	12" UNWIND MODULE w/ ALUM. DISK
⑤	1	ASS-238-0144-12	STD. REWIND DISK ASSEMBLY
	1	ASS-238-2137	FILM REWIND DISK ASSEMBLY
⑥	1	SAS-238A-0124	AIR MANIFOLD ASSEMBLY

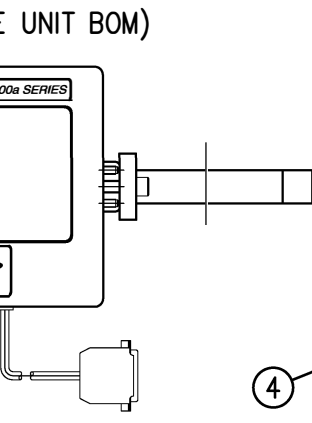
ORDER THESE ITEMS SEPARATELY

- 1.) PRINT ENGINE
- 2.) PRODUCT DETECT SENSOR
- 3.) LABEL PAD & MANIFOLD

FOR NOSE UP/DOWN ADD ASS-238-0165 (TILT ADJUSTMENT BLOCK) TO U-ARM

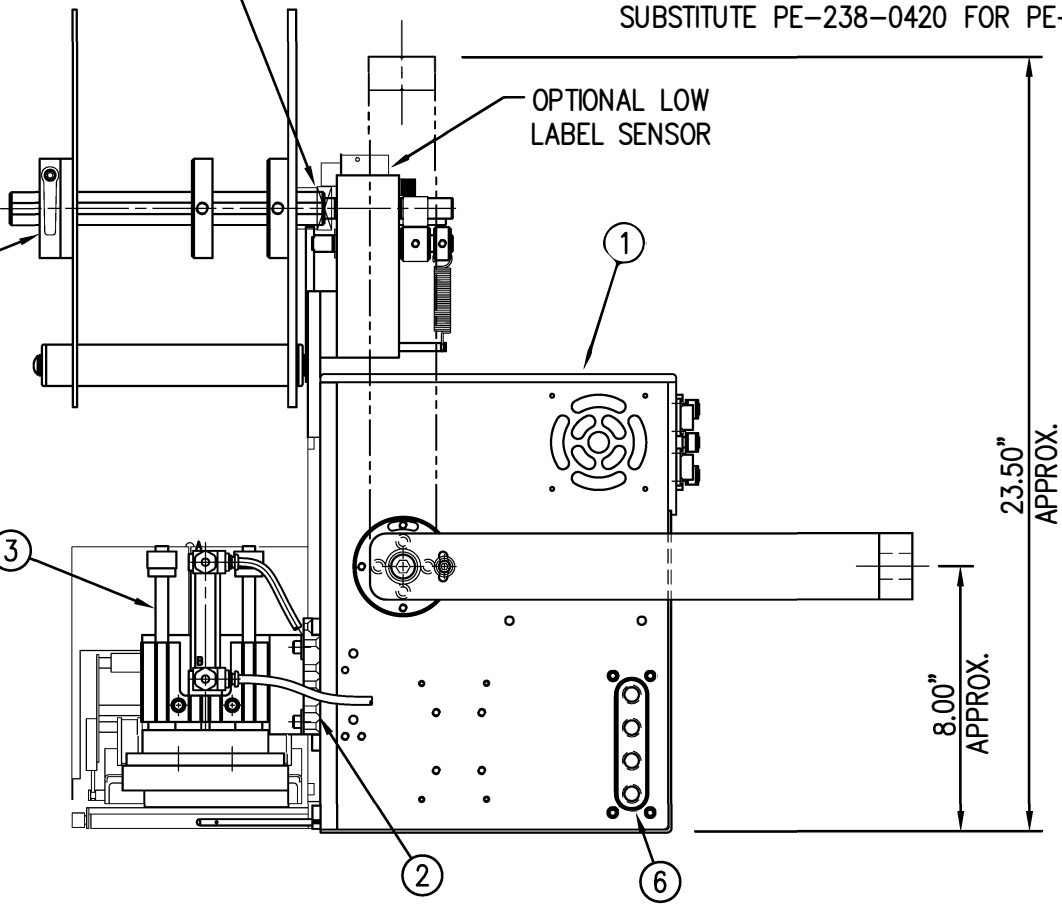
RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-

BUSHING & LOCK COLLAR  
ONLY USED FOR REELS UP  
ORIENTATION



PRINT ENGINE AND CORRESPONDING  
WIRING HARNESS TO BE ORDERED  
SEPARATELY - SEE CHART ON CORE  
UNIT DRAWING - (JOB SPECIFIC)

LABEL PAD/MANIFOLD IS JOB  
SPECIFIC ~ ORDER SEPARATELY



APPLICATOR TO PRINT ENGINE INTERFACE HARNESS REF. (INCLUDED w/ APPROPRIATE CORE UNIT)	
PAX OR A CLASS DATAMAX	PE-238-0418
SATO S84-EX & S86-EX	PE-238-0431

NOTE: IF USING OLDER SATO SE PRINT ENGINE  
SUBSTITUTE PE-238-0420 FOR PE-238-0431

CTM-238aX-TXX-12X-XX

RIGHT HAND ☐ R  
LEFT HAND ☐ L

STROKE LENGTH  
1, 2, 3, 4, 6, 8, 10, 12

STANDARD ☐ S  
QUICK CHG ☐ Q

STANDARD REWIND ☐ S  
FILM REWIND ☐ F

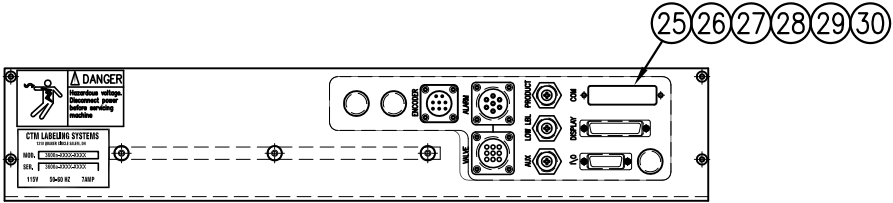
SATO ☐ -SX  
ZEBRA ☐ -ZX  
DATAMAX ☐ -DX  
SERIAL ☐ -XS  
PARALLEL ☐ -XP  
ETHERNET ☐ -XE  
USB ☐ -XU

BILL OF MATERIAL			
CTM-238a-0123R/L-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	CTM-238a-0123R/L	ADVANCED APPLICATOR CORE UNIT
25	1	ASS-238a-0405-9	SERIAL ADAPTER ASSEMBLY - 9 Ppin
26	1	PE-CA2500	PARALLEL CABLE
27	1	PE-CC1070	PARALLEL PORT CLIP KIT
28	1	PE-PA1040	FLAT RIBBON CLIP
29	1	ASS-238-0460	PARALLEL TO ETHERNET ADAPTER ASSEMBLY
30	1	ASS-238-0465	PARALLEL TO USB ADAPTER ASSEMBLY
31	1	SEE TABLE BELOW	PRINT ENGINE INTERFACE HARNESS (NOT SHOWN)

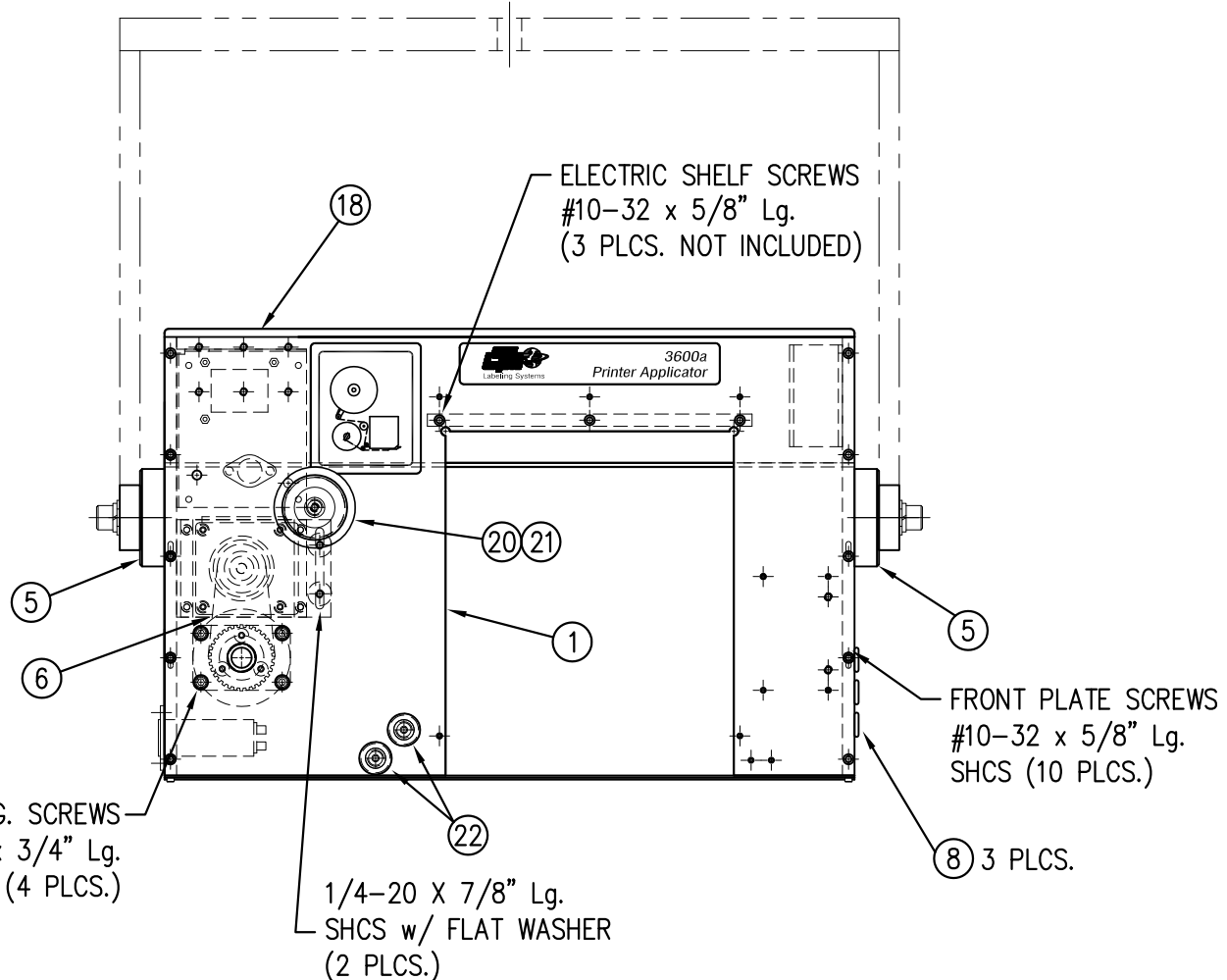
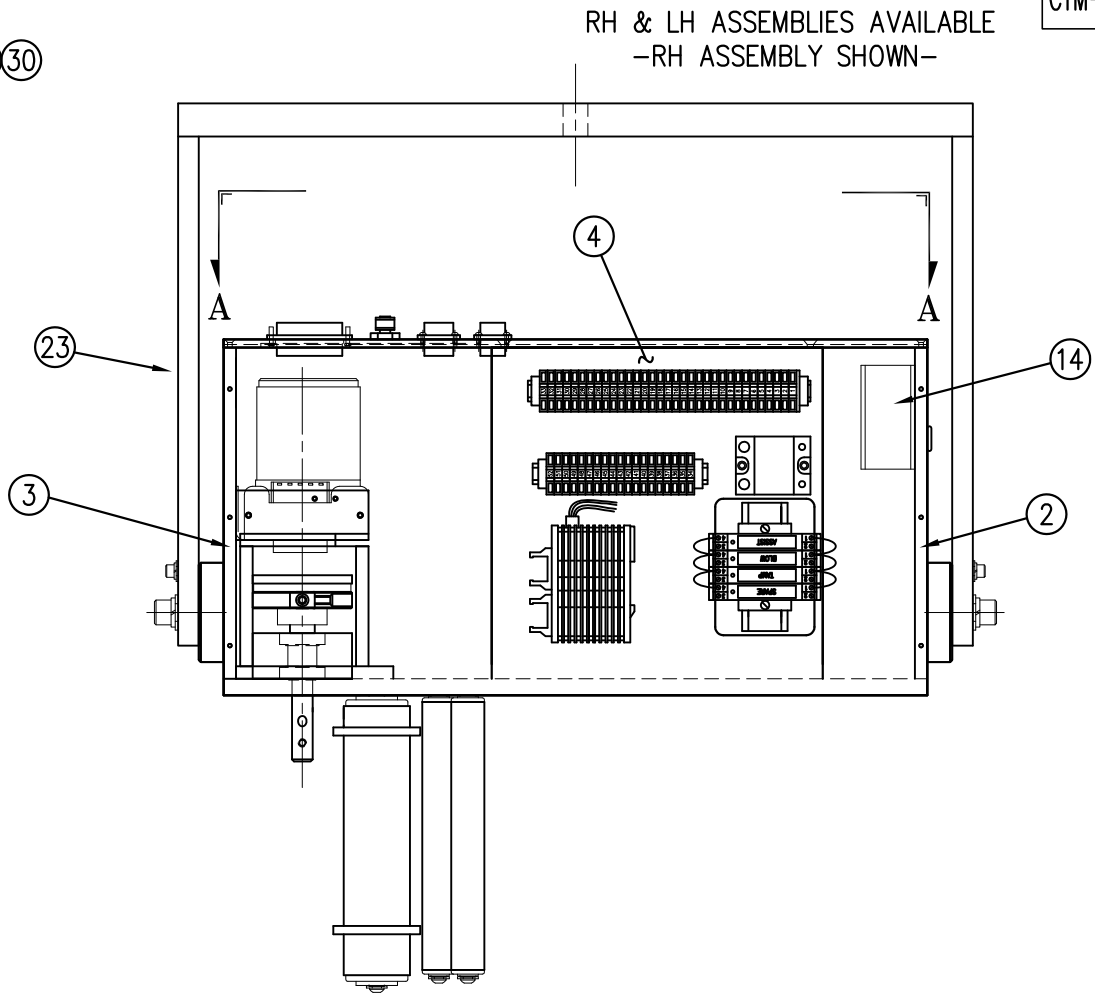
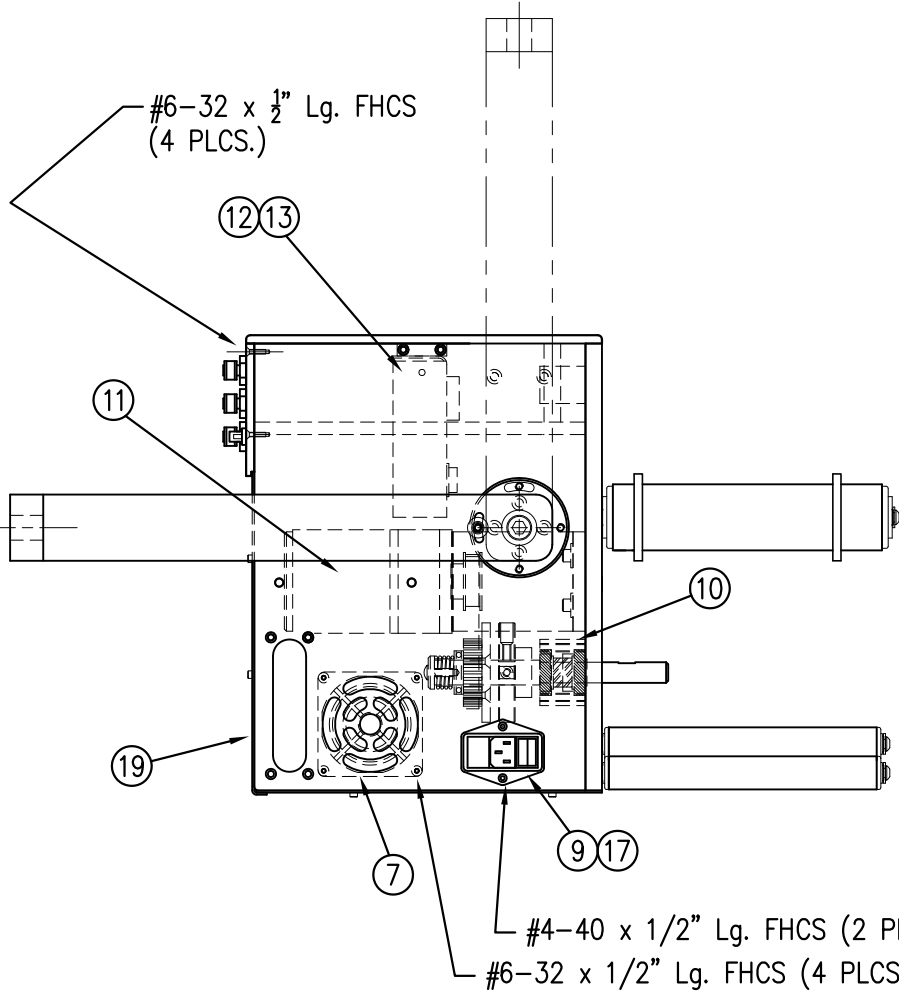
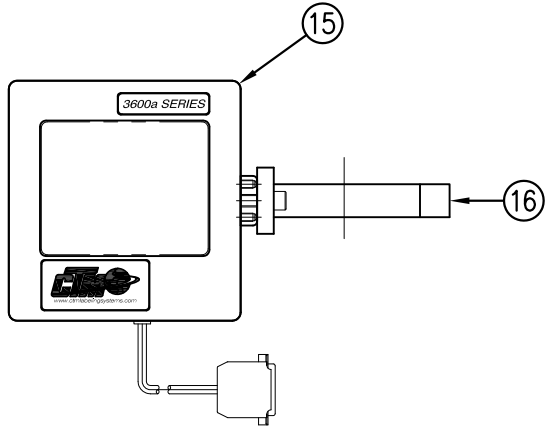
31	APPLICATOR TO PRINT ENGINE INTERFACE HARNESS (ORDER W/ PRINT ENGINE)	
	ZEBRA PAX or DATAMAX 'A'	PE-238-0418
	SATO SE	PE-238-0420
	SATO S86-EX	PE-238-0431

BILL OF MATERIAL			
CTM-238a-0123R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238a-0123R/L	ADVANCED APPLICATOR HOUSING (SHELF ASS'Y)
15	1	ASS-238a-0126	DISPLAY UNIT FOR 3600a
16	1	ASS-200-0138	DISPLAY UNIT MOUNT (CLAMPS to UPRIGHT)
17	1	PE-C01018	SELF LOCKING POWER CORD - 12 FT.
18	1	MP-238-0221	TOP COVER
19	1	ASS-238-0228	STAINLESS STEEL HOUSING COVER ASSEMBLY
20	1	ASS-238-0135	2" DIA. DANCER ROLLER
21	2	MP-238-0247	2" DIA. GUIDE COLLAR w/ SET SCREW
22	2	ASS-238-0134	1" DIA. ROLLER
23	1	WAS-238-0130	U-ARM WELDMENT
24	1	PM-WL1045	WARNING LABEL (NOT SHOWN)

BILL OF MATERIAL			
SAS-238a-0123R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	MP-238a-0226R/L	ADVANCED HOUSING FACEPLATE - RH/LH
2	1	MP-238-0224R/L	HOUSING SIDEFAME (NOSE SIDE) - RH/LH
3	1	MP-238-0225R/L	HOUSING SIDEFAME (UNWIND SIDE) - RH/LH
4	1	ASS-238a-0127R/L	3600a ELECTRIC SHELF ASSY - RH/LH
5	2	MP-200-0273	U-ARM / APPLICATOR PIVOT MOUNT
6	1	PM-BELT1015	REWIND TIMING BELT
7	1	PE-FAN1130	FAN FILTER KIT
8	3	PE-EN9055	1/2" HOLE PLUG
9	1	ASS-238-0412	AC POWER HARNESS & FILTER ASSEMBLY
10	1	ASS-238-0120C	REWIND CLUTCH ASSEMBLY
11	1	ASS-238-0133	REWIND MOTOR & PULLEY ASSEMBLY
12	1	ASS-238-0124R/L	24 VDC POWER SUPPLY ASSEMBLY - RH/LH
13	1	PE-CON9070	CAPACITOR COVER
14	1	PE-FAN1103	AXIAL FAN
	8	PE-PA1080	WHITE STICKY PAD
	3	PM-PA1050	1/4" ADHESIVE CABLE CLAMP
	1	PM-PT1070	1/4" O.D. SMC TUBING x 54.5" Lg.
	1	PM-PT1080	3/8" O.D. SMC TUBING x 19" Lg.
	18	PE-PA1060	WHITE WIRE TIE
	1	PM-LB1025	CTM LOGO
	1	PM-LB1027 or 1029	RH / LH WEB PATH LABEL



SECTION A-A  
CONNECTOR FACEPLATE



CTM-238a-0123R/L-XX

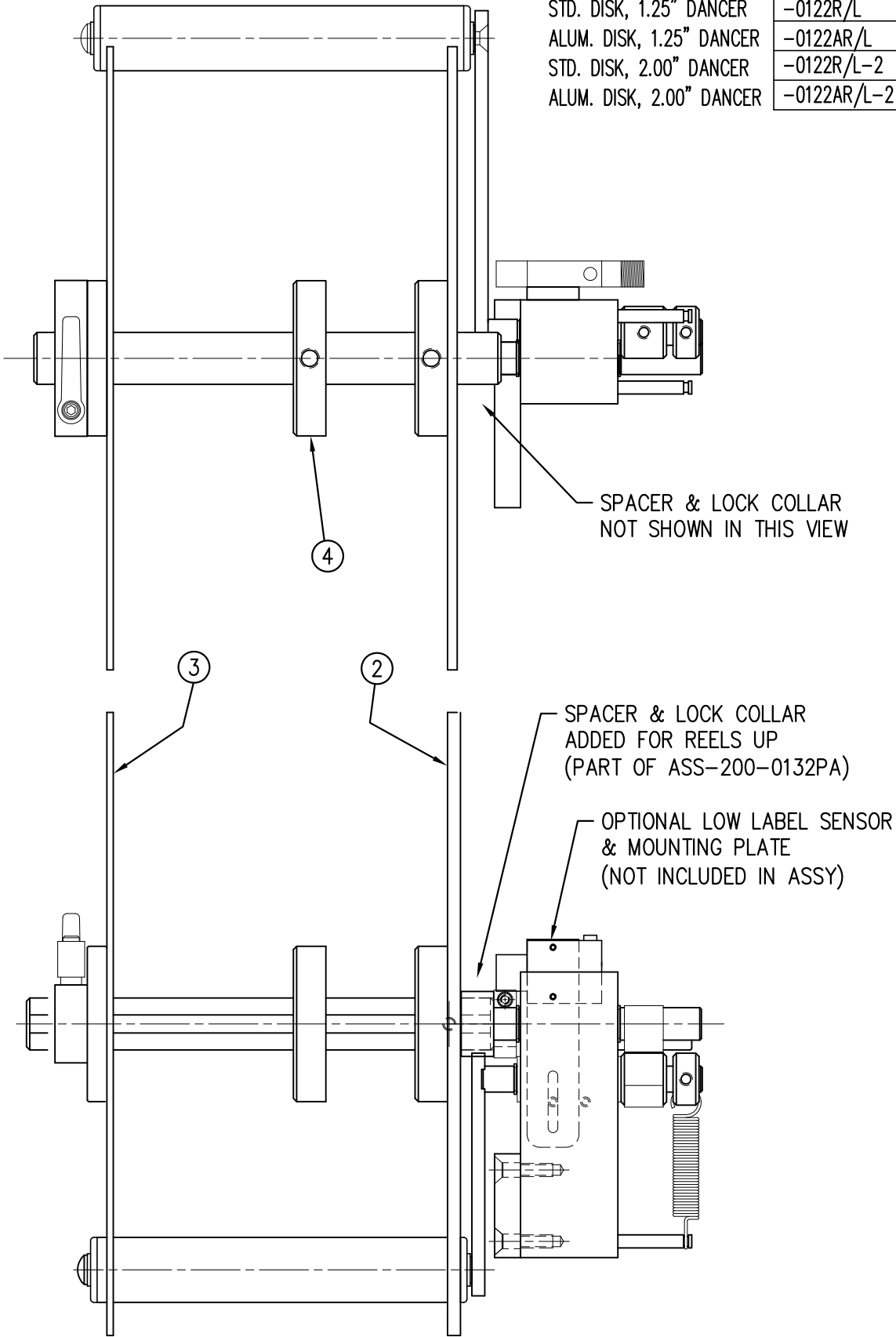
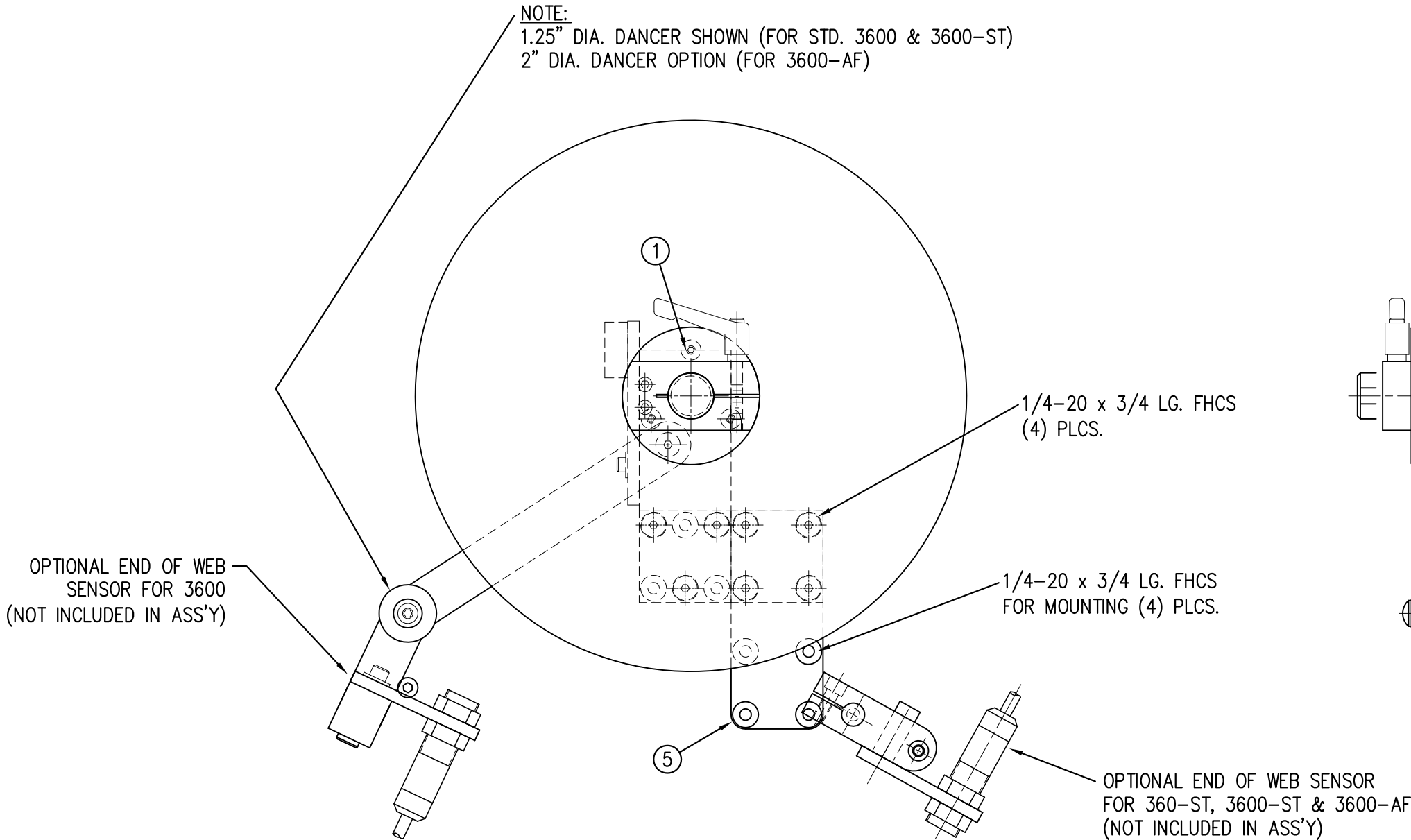
SATO -SX  
ZEBRA -ZX  
DATAMAX -DX  
SERIAL -XS  
PARALLEL -XP  
ETHERNET -XE  
USB -XU



BILL OF MATERIAL			
MOD-238-0122XR/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	SAS-238-0122R/L	UNWIND SHELF ASS'Y w/ 1.25" DIA. DANCER
	1	SAS-238-0122R/L-2	UNWIND SHELF ASS'Y w/ 2" DIA. DANCER
②	1	ASS-200-0132	12" INSIDE UNWIND DISK ASS'Y
	1	ASS-200-0132PA	12" ALUMINUM INSIDE UNWIND DISK ASS'Y
③	1	ASS-200-0133	OUTSIDE UNWIND DISK ASS'Y
④	1	MP-200-0267CS	CORE SUPPORT
⑤	1	MP-238-0236	MOUNTING PLATE
	4	PM-FAFH50619	FHCS, 1/4"-20 UNC x 3/4" Lg. S.S.

3600 & 3600-ST
3600-AF
STD.
REELS UP

RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-



STD. DISK, 1.25" DANCER	-0122R/L
ALUM. DISK, 1.25" DANCER	-0122AR/L
STD. DISK, 2.00" DANCER	-0122R/L-2
ALUM. DISK, 2.00" DANCER	-0122AR/L-2

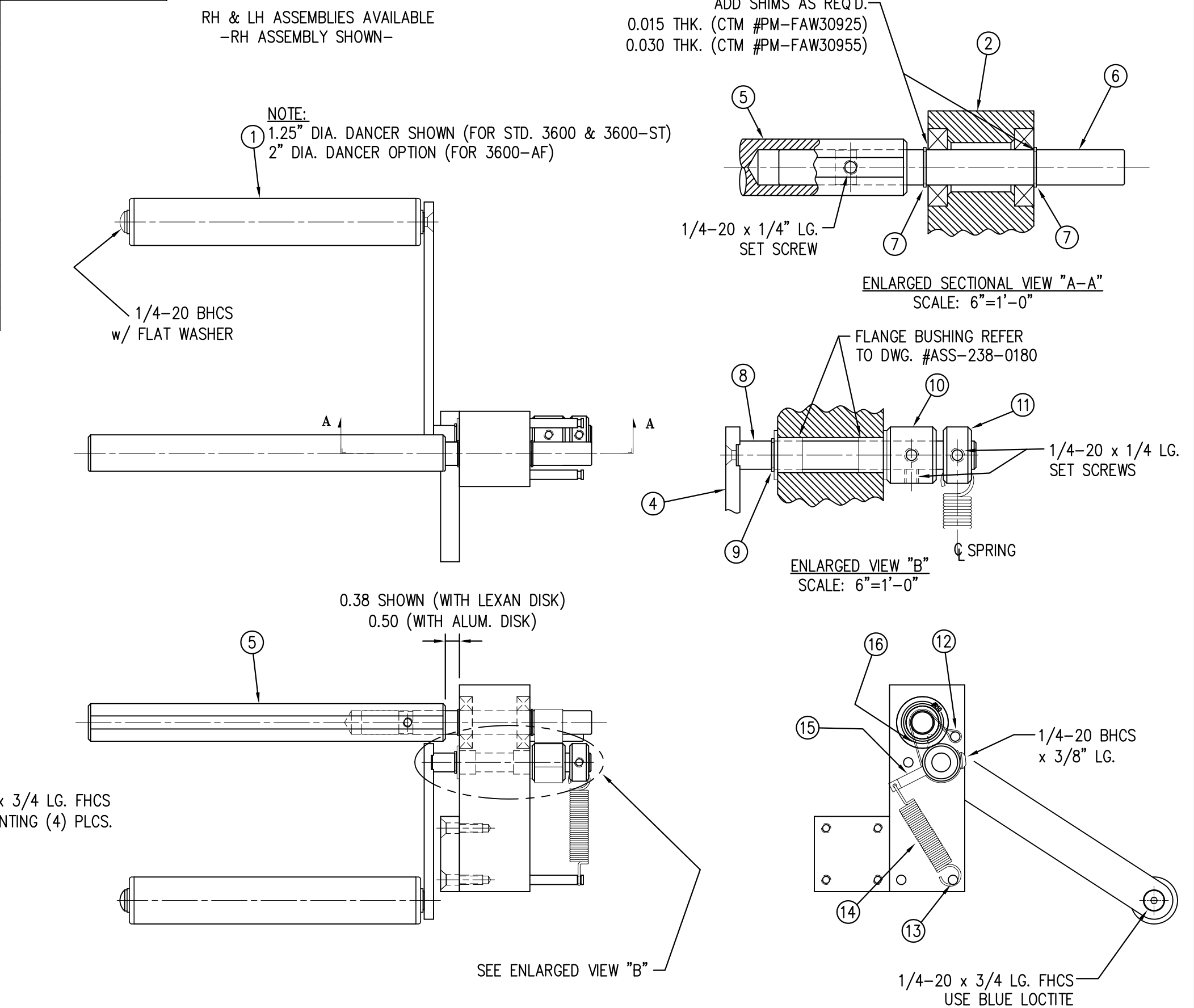
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.			
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: UNWIND ASSEMBLY	TITLE: 12" UNWIND ASSEMBLY w/ UNWIND DISK MODULES
REV. 6	REV. DESCRIPTION FIXED PICTURE OF SPACER & LOCK COLLAR FOR RU	REV. DATE 01/21/19	REV. BY: TDR
DRAWN BY: T. KELLY		Scale: 1=3	Date: 12/09/13
F:\Engineering\Standard Parts\Applcator\3600 SERIES\3600a\MOD\MOD-238-0122XR\		Dept. Code 70	

BILL OF MATERIAL			
SAS-238-0122R/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0137	1.25" DIA. DANCER ROLL
	1	ASS-200-0131	2" DIA. DANCER ROLL
②	1	ASS-238-0180	UNWIND BLOCK ASSEMBLY
③	1	MP-238-0210	MOUNT ARM
④	1	MP-238-0218	DANCER ARM
⑤	1	MP-238-0219	UNWIND HUB SHAFT
⑥	1	MP-238-0212	UNWIND STUD SHAFT
⑦	2	PM-FASR1010	5/8" DIA. SNAP RING
⑧	1	MP-238-0217	DANCER ARM SHAFT
⑨	1	PM-FASR1005	1/2" DIA. SNAP RING
⑩	1	MP-238-0215	INNER COLLAR
⑪	1	MP-238-0216	OUTER HUB
⑫	1	MP-238-0213	UNWIND BELT PIN
⑬	1	MP-238-0214	UNWIND SPRING PIN
⑭	1	PM-FASP30434	TENSION SPRING
⑮	1	PM-FASP30500	SPRING ANCHOR
⑯	1	PM-BB1030	BELT

OMIT (3600 & 3600-ST)
-2 (3600-AF)

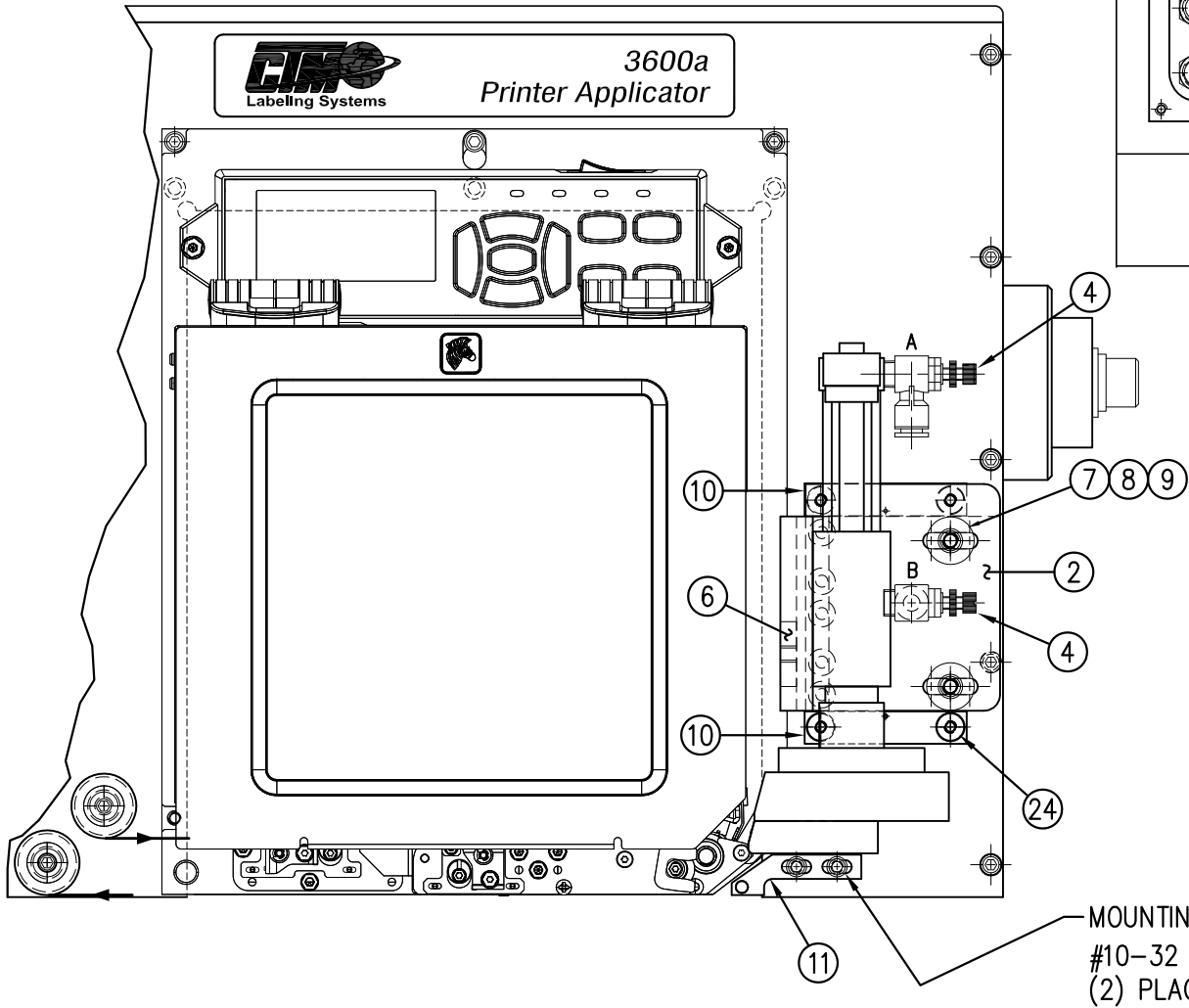
SAS-238-0122R/L-X	
1.25" DIA. DANCER	-0122R/L
2.00" DIA. DANCER	-0122R/L-2

THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.		TITLE: UNWIND ASSEMBLY		REV. DATE	REV. BY	SCALE	DATE	DRAWN BY	F:\Engineering\Standard Parts\Applcator\3600 SERIES\3600a\SAS\SAS-238-0122RL-X		Dept. Code
APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"		02/28/19	TDR	1=3	12/09/13	T. KELLY	3600a		70
REV. 2	REV. DESCRIPTION: DRAWING UPDATES		UNWIND								

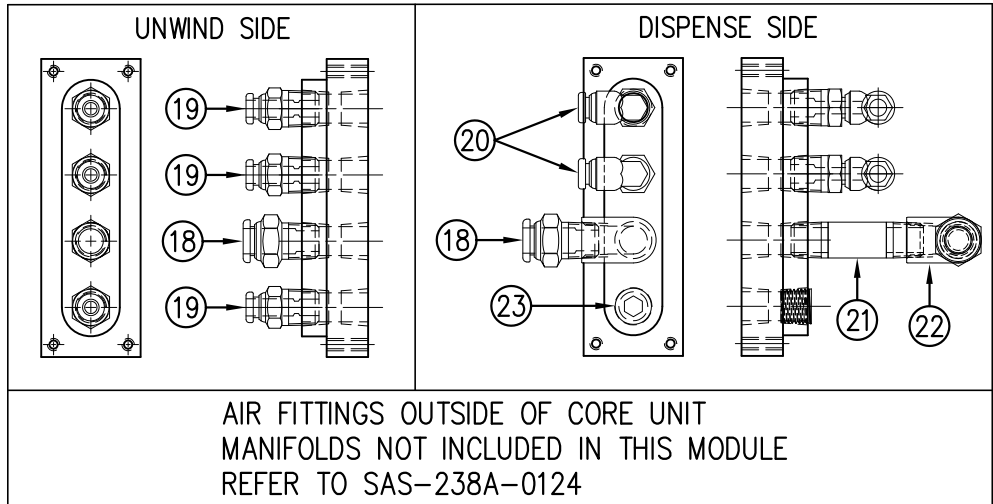
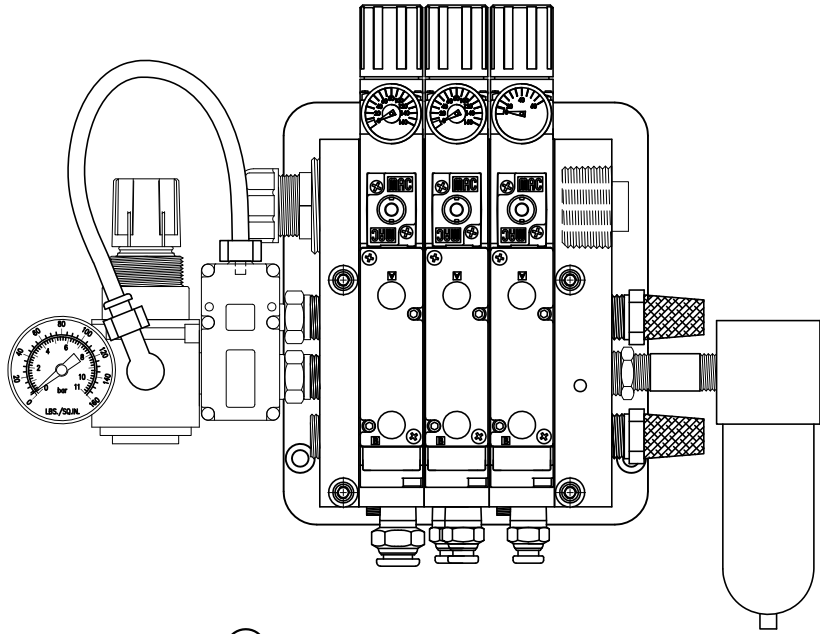
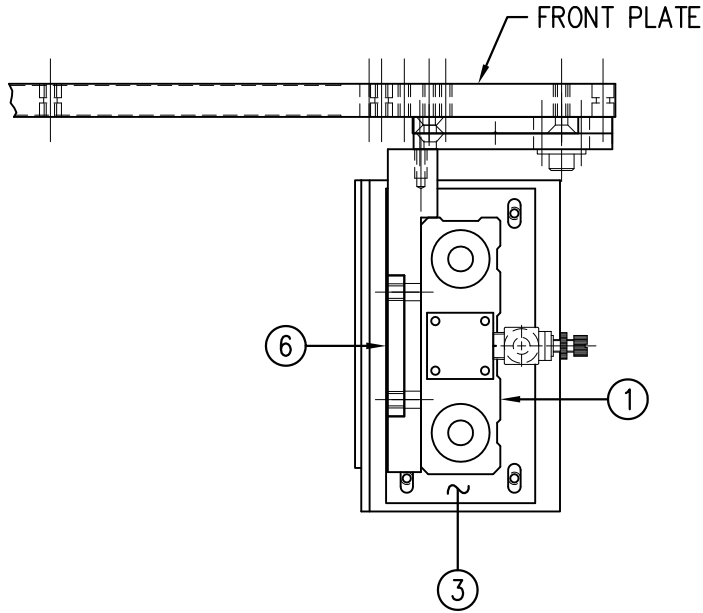


BILL OF MATERIAL			
MOD-238-0124R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
10	2	MP-238-0241	TAMP GUIDES
11	1	MP-238-0242	AIR ASSIST TUBE HOLDER
12	1	MP-211-0217-7	AIR ASSIST TUBE
13	1	PM-AH1000	15" OF AIR ASSIST TUBING
14	1	ASS-238-0129M	3 STATION VALVE BANK ASSEMBLY (TAMP)
15	1	MP-214-0206	VALVE MOUNTING PLATE
16	1	MP-238-0238	VALVE FASTENING PLATE
17	1	MP-238-0239	VALVE NUT PLATE
18	2	PM-PF1020	PRESTOLOK FITTING, 3/8" TUBE to 1/4" MALE NPTF
19	3	PM-PF1010	PRESTOLOK FITTING, 1/4" TUBE to 1/4" MALE NPTF
20	2	PM-PF1035	PRESTOLOK FITTING, 90deg. ELBOW SWIVEL, 1/4" TUBE to 1/4" MALE NPTF
21	1	PM-PF1145	PIPE FITTING, NIPPLE, 1/4" NPT X 2" LG.
22	1	PM-PF1175	PIPE FITTING, 90deg. ELBOW, 1/4" NPT female to 1/4" NPT female
23	1	PM-FI1200	< 1/4" SOCKET HEAD PLATED PLUG
24	4	PM-FAFH50611	#10-32 X .50" LG SS FHCS
1	1	PM-PT1070	1/4" O.D. SMC TUBING x 60" LG. (CUT TO SUIT)
1	1	PM-PT1080	3/8" OD SMC TUBING X 33" LG. (CUT TO SUIT)

ASS-214-0103R/L-XN (SHOWN FOR AN ASSEMBLY REFERENCE ONLY)			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	ASS-214-0108-X	X" LG. TAMP SLIDE ASSEMBLY
2	1	MP-238-0244R/L	SLIDE MOUNT ANGLE PLATE
3	1	MP-238-0245	SLIDE TO MANIFOLD TRANSITION PLATE
4	2	PM-PF2060	FLOW CONTROLS - 1/4" TUBE W/ 1/8" NPT
5	1	MP-238-0243	SLIDE MOUNT PLATE
6	1	MP-238-0240	SLIDE NUT PLATE
7	1	MP-238-0240E	H/D SLIDE NUT PLATE
8	2	PM-FASH40330	SHCS, 1/4"-20 x 1-1/4" Lg. SS
9	2	PM-FAW30297	1/4" HEAVY FLAT WASHER
9	2	PM-FAW30690	1/4" LOCK WASHER

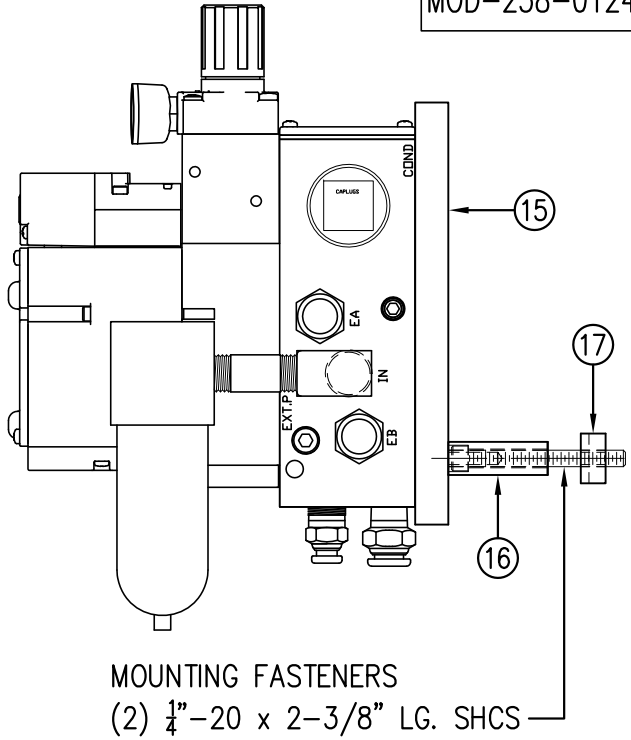
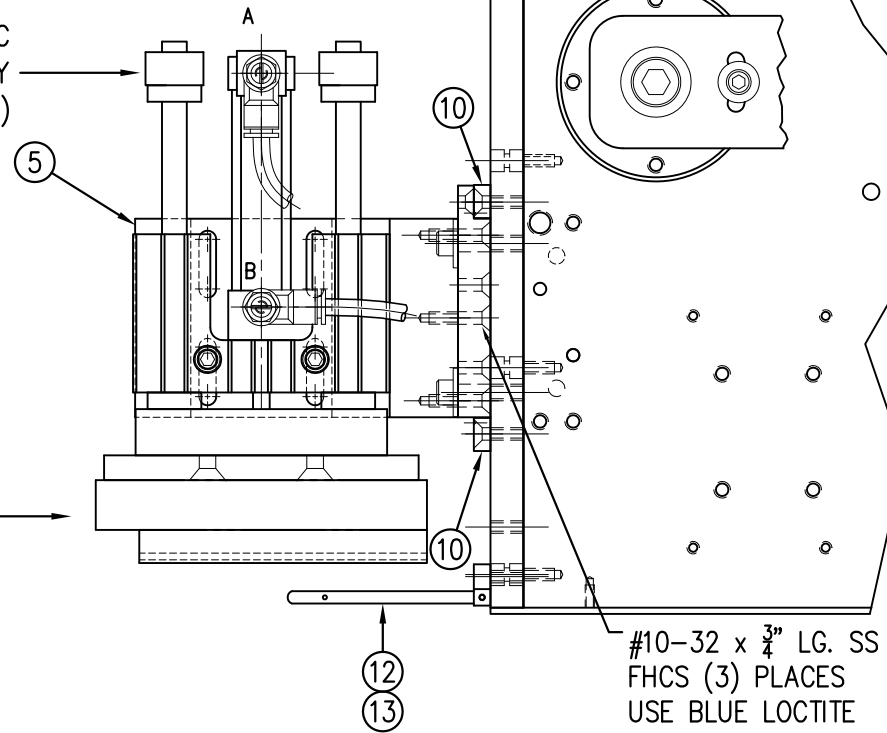


RH & LH CONFIGURATIONS AVAILABLE  
-RH CONFIGURATIONS SHOWN-



TAMP SLIDE STROKE LENGTH IS JOB SPECIFIC  
ORDER SLIDE & MTG. NUT ASS'Y SEPARATELY  
(REFER TO CTM #ASS-214-0103-XN)

PADS & MANIFOLDS ARE JOB SPECIFIC  
ORDER THEM SEPARATELY.  
(REFER TO CTM #MP-238-0246-X FOR  
MANIFOLD BLANK DETAIL)



MOD-238-0124R/L

THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.				Dept. Code 70	
APPLICATOR SERIES: 3600				TITLE: 3600-PA SERIES APPLICATOR: TAMP MODULE	
APPLICATOR WIDTH(S): 7.50"				F: Engineering\Standard Parts\Applcator\3600 SERIES\	
REV. DESCRIPTION 7 DRAWING SCALED UP AND RE-DRAWN TO SHOW MORE DETAIL & LATEST E2 BOM				3600a MOD-238-0124R/L	
REV. DATE 12/15/2016				DRAWN BY: BOB S.	
REV. DATE 04/03/00				Scale: 1=3	

## BILL OF MATERIAL

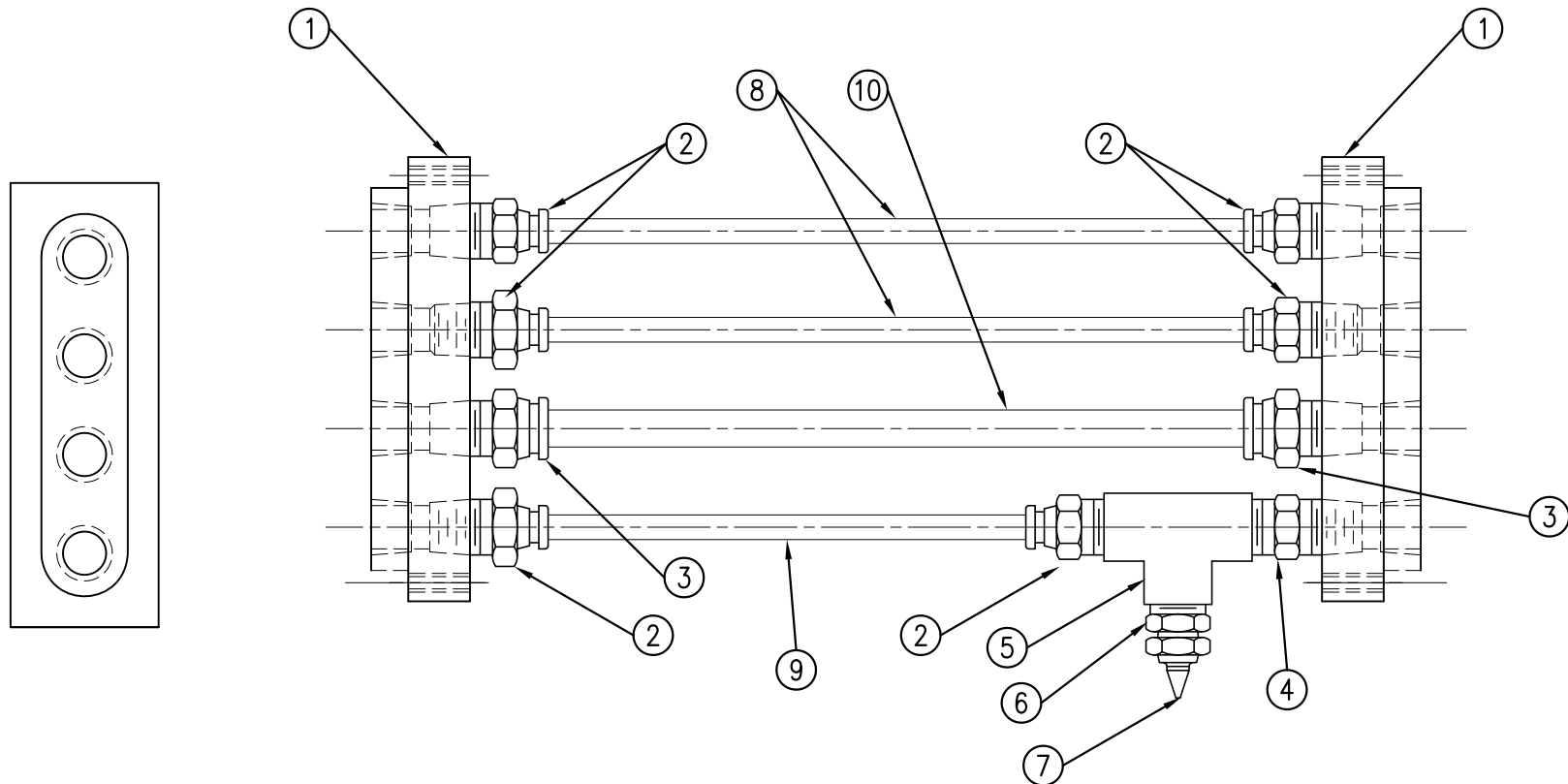
SAS-238a-0124

SAS-238a-0124

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	2	MP-200-0250	AIR MANIFOLD (4-HOLES)
②	6	PM-PF1010	FITTING, 1/4" NPT to 1/4" TUBE
③	2	PM-PF1020	FITTING, 1/4" NPT to 3/8" TUBE
④	1	PM-PF1153	FITTING, 1/4" NPT w 9/16" HEX. BRASS NIPPLE
⑤	1	PM-PF1200	TEE FITTING, 1/4" NPT (FEMALE)
⑥	1	PM-PF1105	FITTING, 1/4" NPT to 1/8" NPT RED. BUSHING
⑦	1	PM-FT1105	HOSE BARB, 1/8" NPT MALE x 1/4" TUBE
⑧	2	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 19.00" Lg
⑨	1	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 16.63" Lg
⑩	1	PM-PT1080	3/8" O.D. POLYURETHANE TUBING X 19.00" Lg

RH &amp; LH ASSEMBLIES AVAILABLE

-RH ASSEMBLY SHOWN-



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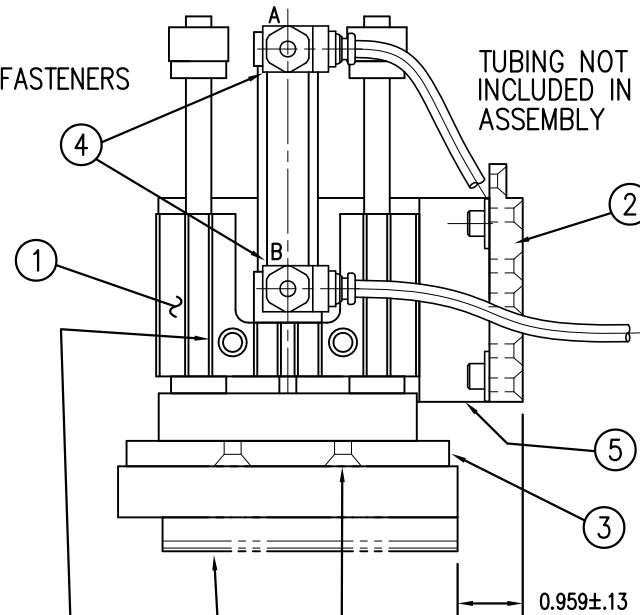
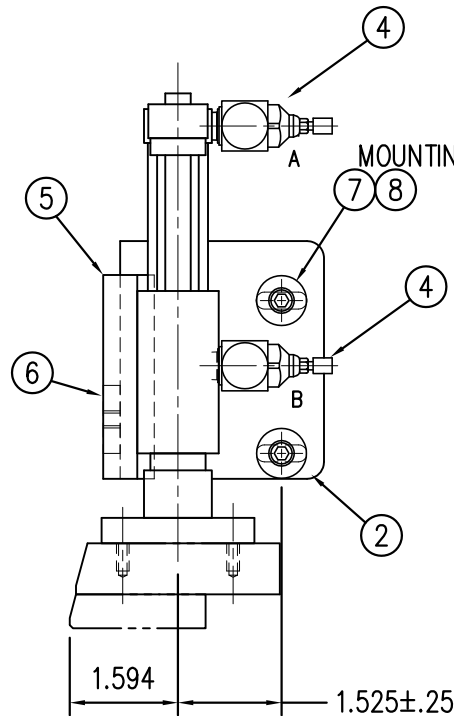
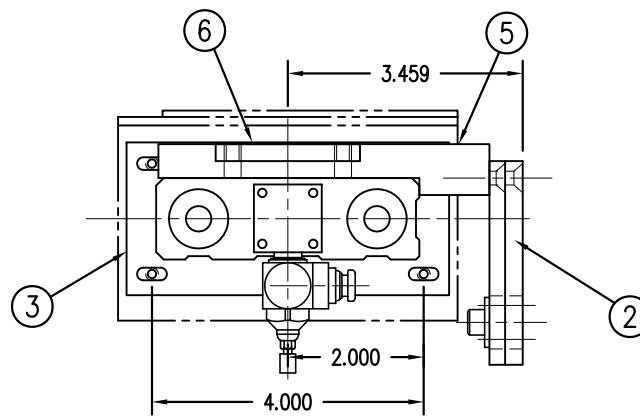
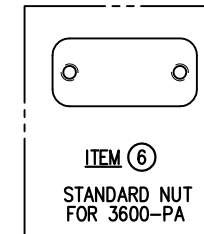
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: HOUSING SHELF ASSEMBLY	TITLE: AIR MANIFOLD ASSEMBLY	Dept. Code 70
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=2
		Date: 2/29/16	DRAWN BY: J. Greeneisen	F:\Engineering\Standard Parts\Applcator\3600 SERIES\ 3600a\SAS\SAS-238a-0124

RH & LH MOUNTING AVAILABLE  
(BOTH HANDS USE SAME PARTS)  
-RH MOUNTING SHOWN-

ASS-214-0103R/L-XX

1" STROKE	-0103R/L-1N
2" STROKE	-0103R/L-2N
3" STROKE	-0103R/L-3N
4" STROKE	-0103R/L-4N
6" STROKE	-0103R/L-6N
EXT PE: 1" STROKE	-0103R/L-1E
EXT PE: 2" STROKE	-0103R/L-2E
EXT PE: 3" STROKE	-0103R/L-3E
EXT PE: 4" STROKE	-0103R/L-4E
EXT PE: 6" STROKE	-0103R/L-6E

NOTE:  
USE HEAVY DUTY SLIDE  
FOR 8", 10" & 12" STROKES  
SEE SHEET 2



(2) 1/4-20 x 1-1/2 Lg. SHCS, SS  
w/ HIGH COLLAR LOCK WASHER  
(INCLUDED WITH STANDARD SLIDE)

ORDER SEPARATELY  
PAD & MANIFOLD (JOB SPECIFIC)  
FOR MANIFOLD BLANKS SEE  
MP-238-0246-X

### 3600-PA BILL OF MATERIAL

3600-PA BILL OF MATERIAL				SOLD
ASSEMBLY	ASS-214-0103R/L-XX			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
(1)	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
STD.	(2)	SLIDE MOUNT ANGLE PLATE	MP-238-0244R/L	.
EXT. P.E.	1	SLIDE MOUNT ANGLE PLATE FOR EXT. P.E.	MP-238-0255R/L	.
(3)	1	SLIDE TO MANIFOLD TRANSITION PLATE	MP-238-0245	.
(4)	2	FLOW CONTROL	PM-PF2060	S
STD.	(5)	SLIDE MOUNT PLATE	MP-238-0243	.
EXT. P.E.	1	SLIDE MOUNT PLATE FOR EXT. P.E.	MP-238-0254	.
(6)	1	SLIDE NUT FOR STANDARD CYLINDER	MP-238-0240	.
STD.	(7)	2 SHCS, 1/4-20 x 1-1/4 Lg. SS	PM-FASH40330	
	(8)	2 1/4 HEAVY FLAT WASHER	PM-FAW30297	
	(9)	2 1/4 LOCK WASHER	PM-FAW30690	
EXT. P.E.	(7)	2 SHCS, 1/4-20 x 1 Lg. SS	PM-FASH40320	
	(8)	2 1/4 FLAT WASHER	PM-FAW30275	
	(9)	2 1/4 LOCK WASHER	PM-FAW30690	

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: STANDARD SLIDE ASSEMBLY FOR 3600a-PA APPLICATOR				Dept. Code 70
REV. 9	REV. DESCRIPTION FIXED SLIDE MOUNTING PLATE; WAS DRAWN WRONG LENGTH	REV. DATE 04/29/16	REV. BY: TDR	Scale: 1=3	Date: 02/21/98	DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Applcator\3600 SERIES\ 360a\ASS\ASS-214-0103RL-XXs1

RH & LH MOUNTING AVAILABLE  
(BOTH HANDS USE SAME PARTS)  
-RH MOUNTING SHOWN-

ASS-214-0103R/L-XX

8" STROKE	-0103R/L-8N
10" STROKE	-0103R/L-10N
12" STROKE	-0103R/L-12N
EXT PE: 8" STROKE	-0103R/L-8E
EXT PE: 10" STROKE	-0103R/L-10E
EXT PE: 12" STROKE	-0103R/L-12E

REV 4

NOTE:  
USE STANDARD DUTY SLIDE  
FOR 1", 2", 3", 4" & 6" STROKES  
(SEE SHEET 1)

ITEM ⑥  
HEAVY DUTY NUT  
FOR 3600-PA

TUBING NOT  
INCLUDED IN  
ASSEMBLY

⑦ ⑧ MOUNTING FASTENERS  
⑨

### 3600-PA BILL OF MATERIAL

ASSEMBLY		ASS-214-0103R/L-XX		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
②	1	SLIDE MOUNT ANGLE PLATE	MP-238-0244R/L	.
E.	1	SLIDE MOUNT ANGLE PLATE FOR EXT. P.E.	MP-238-0255R/L	.
③	1	SLIDE TO MANIFOLD TRANSITION PLATE	MP-238-0245	.
④	2	FLOW CONTROL	PM-PF2060	S
⑤	1	SLIDE MOUNT PLATE	MP-238-0243	.
E.	1	SLIDE MOUNT PLATE FOR EXT. P.E.	MP-238-0254	.
⑥	1	SLIDE NUT FOR HEAVY DUTY CYLINDER	MP-238-0240E	.
⑦	2	SHCS, 1/4-20 x 1-1/4 Lg. SS	PM-FASH40330	
⑧	2	1/4 HEAVY FLAT WASHER	PM-FAW30297	
⑨	2	1/4 LOCK WASHER	PM-FAW30690	
⑦	2	SHCS, 1/4-20 x 1 Lg. SS	PM-FASH40320	
E.	⑧	2 1/4 FLAT WASHER	PM-FAW30275	
⑨	2	1/4 LOCK WASHER	PM-FAW30690	

ORDER SEPARATELY  
PAD & MANIFOLD (JOB SPECIFIC)  
FOR MANIFOLD BLANKS SEE  
MP-238-0246-X

(4) 1/4-20 x 3/4 Lg.FSHCS

(4) 1/4-20 X 1-1/2 Lg. SHCS  
w/ HIGH COLLAR LOCK WASHER  
(INCLUDED w/HEAVY DUTY SLIDE)

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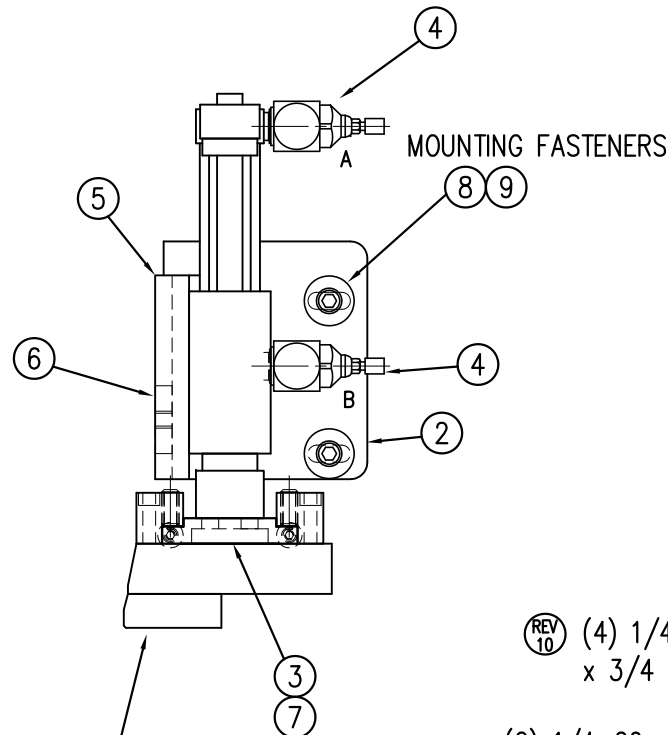
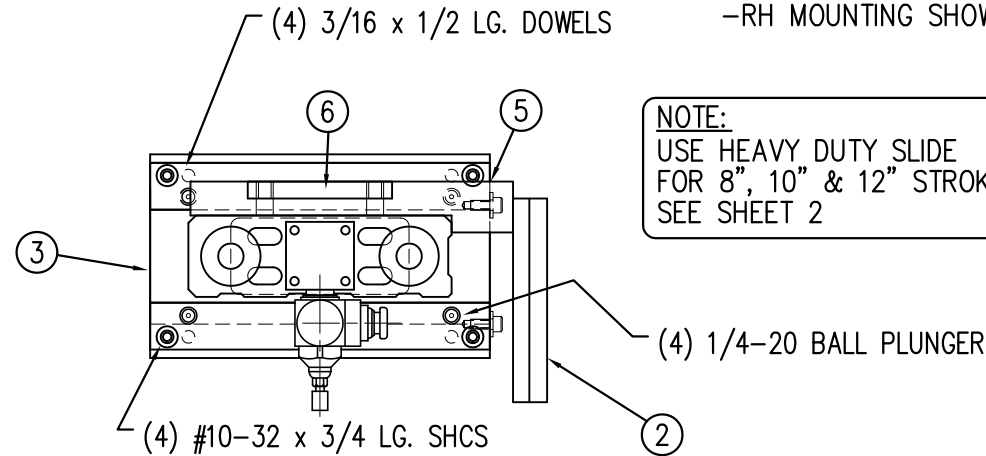
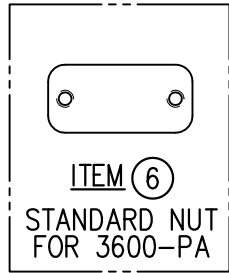
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: HEAVY DUTY SLIDE ASSEMBLY for 3600a-PA APPLICATOR	Dept. Code 70
REV. 4	REV. DESCRIPTION UPDATED SHOCK MOUNTING BRACKETS	REV. DATE 09/09/19	REV. BY: TDR	Scale: 1=4
		Date: 02/21/98	DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Applcator\3600 SERIES\ 360a\ASS\ASS-214-0103RL-XXs2

RH & LH MOUNTING AVAILABLE  
-RH MOUNTING SHOWN-

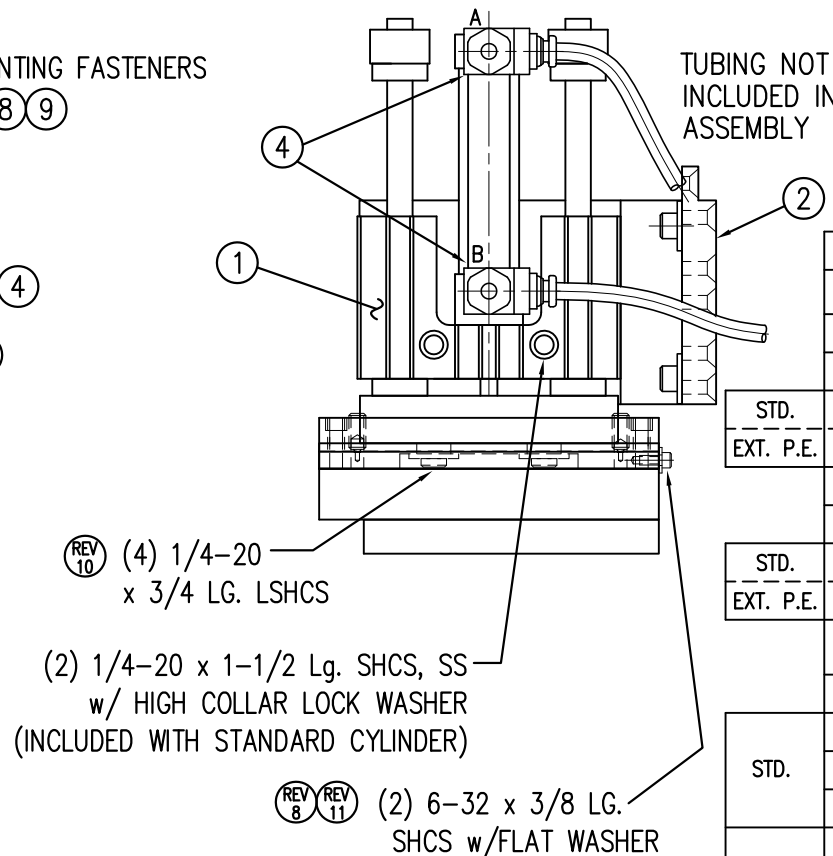
ASS-214-0103R/L-XXQ

1" STROKE	-0103R/L-1NQ
2" STROKE	-0103R/L-2NQ
3" STROKE	-0103R/L-3NQ
4" STROKE	-0103R/L-4NQ
6" STROKE	-0103R/L-6NQ
EXT PE: 1" STROKE	-0103R/L-1EQ
EXT PE: 2" STROKE	-0103R/L-2EQ
EXT PE: 3" STROKE	-0103R/L-3EQ
EXT PE: 4" STROKE	-0103R/L-4EQ
EXT PE: 6" STROKE	-0103R/L-6EQ

NOTE:  
USE HEAVY DUTY SLIDE  
FOR 8", 10" & 12" STROKES  
SEE SHEET 2



ORDER SEPARATELY  
PAD & MANIFOLD (JOB SPECIFIC)  
& CLAMPS & BALL PLUNGERS  
(ASS-214-0119)



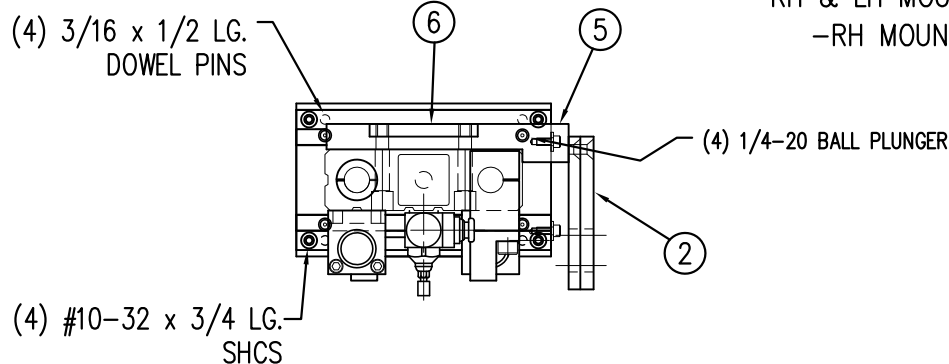
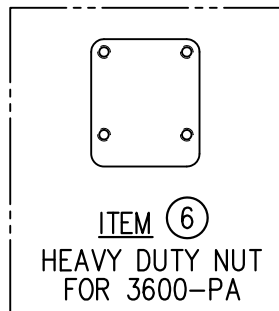
TUBING NOT  
INCLUDED IN  
ASSEMBLY

### 3600-PA BILL OF MATERIAL

ASSEMBLY	ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	SOLD
ASS-214-0103R/L-XNQ, -XEQ					S
STD.	(1)	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
EXT. P.E.	(2)	1	SLIDE MOUNT ANGLE PLATE	MP-238-0244R/L	.
		1	SLIDE MOUNT ANGLE PLATE FOR EXT. P.E.	MP-238-0255R/L	.
	(3)	1	SLIDE TO MANIFOLD TRANSITION PLATE	MP-238-0270	.
	(4)	2	FLOW CONTROL	PM-PF2060	S
STD.	(5)	1	SLIDE MOUNT PLATE	MP-238-0243	.
EXT. P.E.		1	SLIDE MOUNT PLATE FOR EXT. P.E.	MP-238-0254	.
	(6)	1	SLIDE NUT FOR STANDARD CYLINDER	MP-238-0240	.
	(7)	1	QUICK CHANGE NUT PLATE	PM-238-0271	.
STD.	(8)	2	SHCS, 1/4-20 x 1-1/4 Lg. SS	PM-FASH40330	
	(9)	2	1/4 HEAVY FLAT WASHER	PM-FAW30297	
	(10)	2	1/4 LOCK WASHER	PM-FAW30690	
EXT. P.E.	(8)	2	SHCS, 1/4-20 x 1 Lg. SS	PM-FASH40320	
	(9)	2	1/4 FLAT WASHER	PM-FAW30275	
	(10)	2	1/4 LOCK WASHER	PM-FAW30690	

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: STANDARD SLIDE ASS'Y for 3600a-PA APPLICATOR w/ QUICK CHANGE PAD	Dept. Code 70
REV. 11	REV. DESCRIPTION SHOWED #6-32 SHCS (QC STOPS) IN CORRECT LOCATION	REV. DATE 03/23/10	REV. BY: TDR	Scale: 1=3
		Date: 02/21/98	Drawn BY: BOB S.	F:\Engineering\Standard Parts\Appliator\360 SERIES\360a\ASS\ASS-214-0103RL-XXQs1

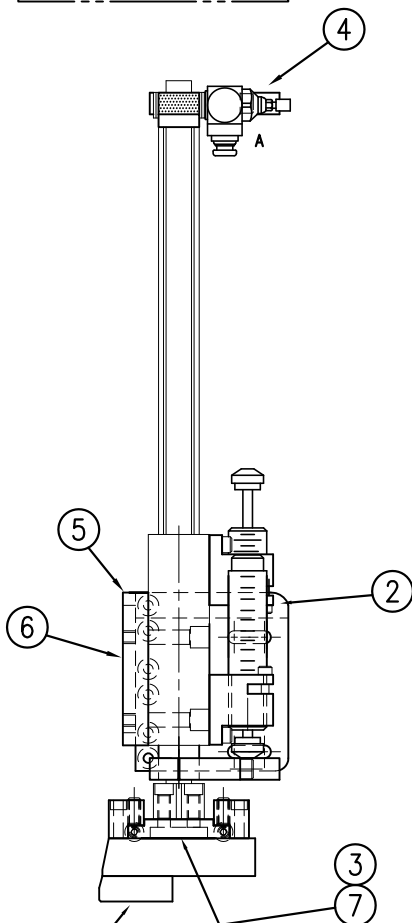


RH & LH MOUNTING AVAILABLE  
-RH MOUNTING SHOWN-

ASS-214-0103R/L-XXQ

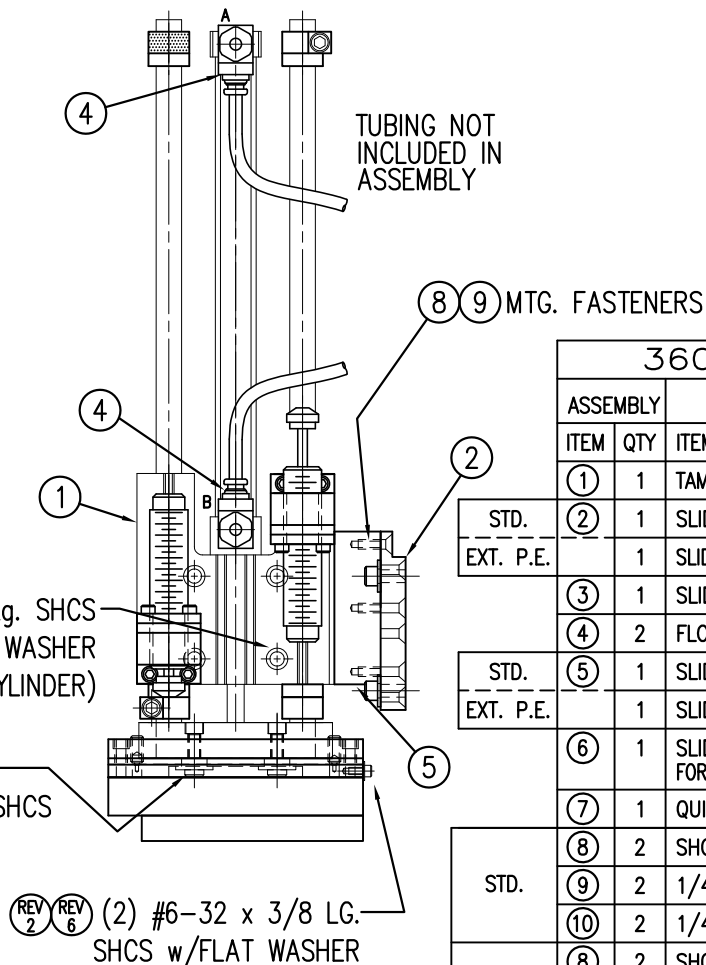
8" STROKE	-0103R/L-8NQ
10" STROKE	-0103R/L-10NQ
12" STROKE	-0103R/L-12NQ
EXT PE: 8" STROKE	-0103R/L-8EQ
EXT PE: 10" STROKE	-0103R/L-10EQ
EXT PE: 12" STROKE	-0103R/L-12EQ

NOTE:  
USE STANDARD SLIDE  
FOR 1", 2", 3", 4" & 6" STROKES  
(SEE SHEET 1)



(2) 1/4-20 x 1-1/2 Lg. SHCS  
W/ HIGH COLLAR LOCK WASHER  
(INCLUDED WITH STD CYLINDER)

(4) 1/4-20  
x 3/4 LG. LSHCS



3600-PA BILL OF MATERIAL				SOLD
ASSEMBLY	ASS-214-0103R/L-XNQ, XEQ			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
(1)	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
(2)	1	SLIDE MOUNT ANGLE PLATE	MP-238-0244R/L	.
	1	SLIDE MOUNT ANGLE PLATE FOR EXT. P.E.	MP-238-0255R/L	.
(3)	1	SLIDE TO MANIFOLD TRANSITION PLATE	MP-238-0270	.
(4)	2	FLOW CONTROL	PM-PF2060	S
(5)	1	SLIDE MOUNT PLATE	MP-238-0243	.
	1	SLIDE MOUNT PLATE FOR EXT. P.E.	MP-238-0254	.
(6)	1	SLIDE NUT FOR HEAVY DUTY CYLINDER	MP-238-0240E	.
(7)	1	QUICK CHANGE NUT PLATE	PM-238-0271	.
(8)	2	SHCS, 1/4-20 x 1-1/4 Lg. SS	PM-FASH40330	
(9)	2	1/4 HEAVY FLAT WASHER	PM-FAW30297	
(10)	2	1/4 LOCK WASHER	PM-FAW30690	
(8)	2	SHCS, 1/4-20 x 1 Lg. SS	PM-FASH40320	
(9)	2	1/4 FLAT WASHER	PM-FAW30275	
(10)	2	1/4 LOCK WASHER	PM-FAW30690	

ORDER SEPARATELY  
PAD & MANIFOLD (JOB SPECIFIC)  
& CLAMPS & BALL PLUNGERS  
(ASS-214-0119)

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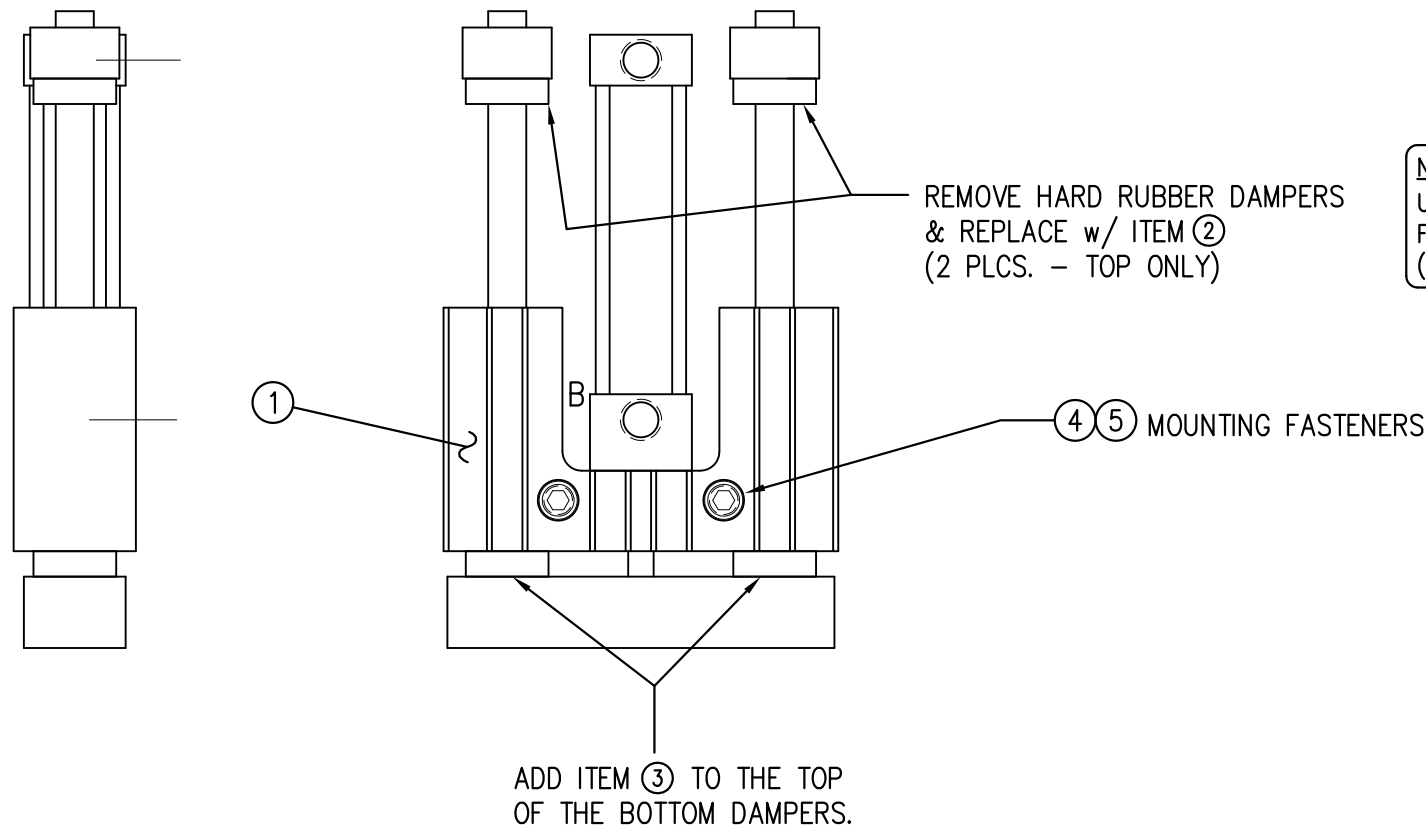
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: HEAVY DUTY SLIDE ASS'Y for 3600a-PA APPLICATOR w/QUICK CHANGE PAD				Dept. Code 70
REV. 6	REV. DESCRIPTION SHOWED #6-32 SHCS (QC STOPS) IN CORRECT LOCATION	REV. DATE 03/23/10	REV. BY: TDR	Scale: 1=4	Date: 02/21/98	DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Applicator\360 SERIES\360a\ASS\ASS-214-0103RL-XXQs2



ASS-214-0108-X

1" STROKE	-0108-1
2" STROKE	-0108-2
3" STROKE	-0108-3
4" STROKE	-0108-4
6" STROKE	-0108-6

NOTE:  
USE HEAVY DUTY SLIDE  
FOR 8", 10" & 12" STROKES  
(SEE SHEET 2)



BILL OF MATERIAL			
ASS-214-0108-1, -2, -3, -4, -6			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PM-AC2000-X	TAMP SLIDE ("X" STROKE LENGTH)
②	2	PE-C02018	3/8" ID RUBBER GROMMET
③	4	PM-OR1021	O-RING (BUNA-N)
④	2	PM-FASH430098	SHCS, 1/4"-20 x 1.375" Lg. SS
	2	PM-FASH430082	SHCS, 1/4"-20 x 1.50" Lg. SS
⑤	2	PM-FAW30690HC	1/4" HIGH COLLAR SS LOCK WASHER

SLIDE PROPERTIES  
 LINEAR BALL BUSHINGS  
 3/8"Ø OVERSIZE SHAFTS  
 3/4"Ø CYLINDER BORE  
 HALL EFFECT MAGNETIC POSITIONING  
 TRAVEL ADJUSTMENT & SHOCK PADS ON EXTENSION  
 SHOCK PADS ON RETRACTION

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APPLICATOR SERIES: 360/3600	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: TAMP ASSEMBLY	TITLE: STANDARD TAMP SLIDE (for 360a & 3600a-PA STD & EXT. TAMP)
REV. 4	REV. DESCRIPTION ADDED MTG FASTENERS FOR BOTH 360a & 3600a	REV. DATE 03/29/19	REV. BY: TDR
		Scale: 1=2	Date: 02/21/98
		DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Appliator\360 SERIES\360a\ASS\ASS-214\0108-Xs1

Dept. Code  
70

# BILL OF MATERIAL

ASS-214-0108-8, -10, -12, -14, -18

NOTE: HEAVY DUTY SLIDE w/8" STROKE SHOWN

ASS-214-0108X

8" STROKE	-0108-8
10" STROKE	-0108-10
12" STROKE	-0108-12
14" STROKE	-0108-14
18" STROKE	-0108-18

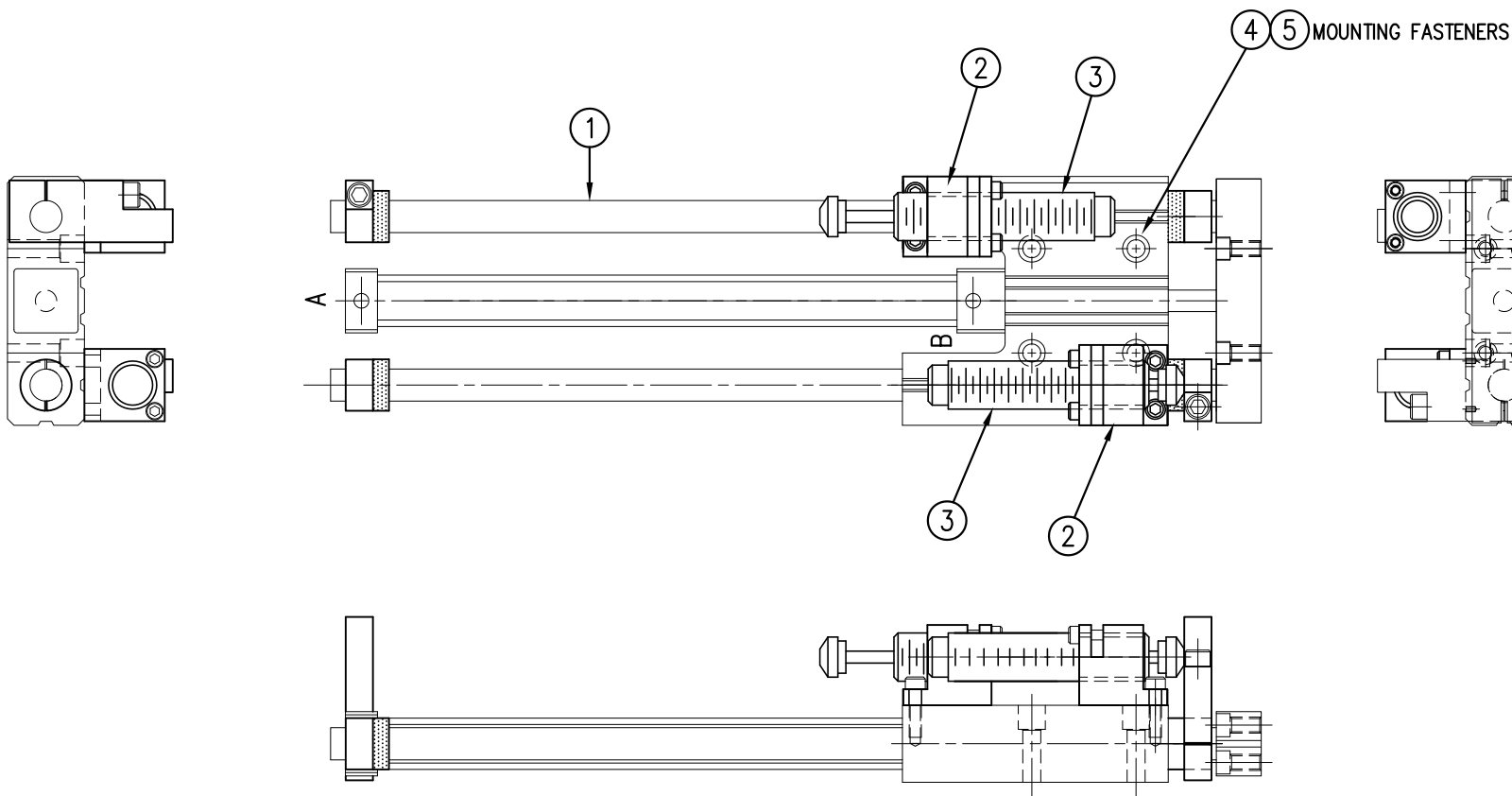
NOTE:  
USE STANDARD SLIDE  
FOR 1", 2", 3", 4" & 6" STROKES  
(SEE SHEET 1)

## SLIDE PROPERTIES

TC COMPOSITE BUSHINGS  
1/2"Ø OVERSIZE SHAFTS  
3/4"Ø CYLINDER BORE  
HALL EFFECT MAGNETIC POSITIONING  
SHOCK ABSORBERS READY ON EXTENSION & RETRACTION  
SHOCK PADS ON EXTENSION  
SHOCK PADS ON RETRACTION

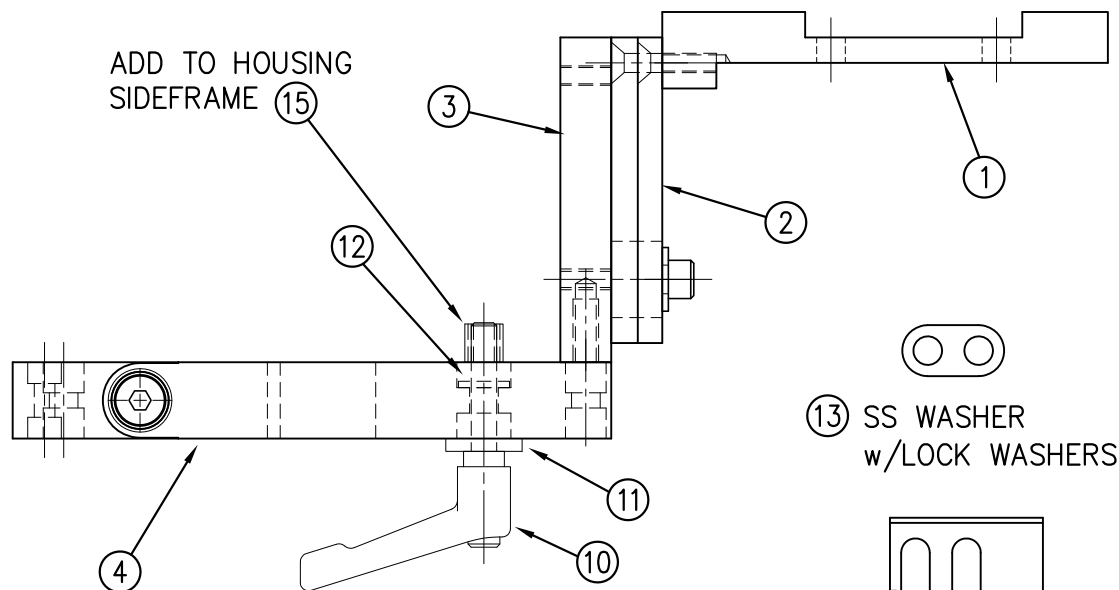
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	PM-AC2010-X	TAMP SLIDE (8", 10" or 12" STROKE)	
	1	PM-AC1184	TAMP SLIDE (14" STROKE)	
	1	PM-AC1289	TAMP SLIDE (18" STROKE)	
②	2	MP-238-0315	SHOCK ABSORBER MTG BRKT-EXTENDED	
③	2	PM-SA0950	SLIDE SHOCK ABSORBER	
④	4	PM-FASH430098	SHCS, 1/4"-20 x 1.375" Lg. SS	360a
	4	PM-FASH430082	SHCS, 1/4"-20 x 1.50" Lg. SS	3600a-PA
⑤	4	PM-FAW30690HC	1/4" HIGH COLLAR SS LOCK WASHER	

NOTE: SLIDE WITH SHOCK ABSORBERS TO BE USED IN CONJUNCTION WITH  
360 SERIES: MOUNTING PLATE (MP-214-0204, rev. 1)  
3600 SERIES: MOUNTING PLATE (MP-238-0244R/L or MP-238-0255, rev. 1)

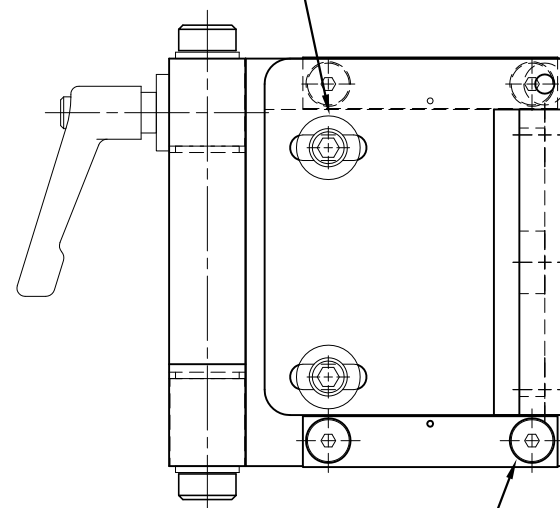


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APPLICATOR SERIES: 360/3600	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: TAMP ASSEMBLY	TITLE: HEAVY DUTY TAMP SLIDE (for 360a & 3600a-PA STD & EXT. TAMP)	Dept. Code 70
REV. 4	REV. DESCRIPTION UPDATED SHOCK MOUNTING BRACKETS	REV. DATE 09/09/19	REV. BY: TDR	Scale: 1=3
		Date: 02/21/98	DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Applcator\360 SERIES\360a\ASS\ASS-214-0108-Xs2

ADD TO HOUSING  
SIDEFRAME (15)(13) SS WASHER  
w/LOCK WASHERSUSE 1/4-20 x 1" Lg. SHCS  
TO MOUNT TO HOUSING  
(2) PLCS.

(14) LOCATOR BLOCK

USE BLUE LOCTITE  
ON SHOULDER BOLTS#10-32 x 1" Lg.  
SHCS (2) PLCS.1/4-20 x 7/8" Lg.  
SHCS (3) PLCS.THIS EDGE FLUSH w/ TOP  
FOR SLIDES w/ SHOCKS1/4-20 x 1" Lg. SHCS  
w/ HARD FW & LW1/4-20 x 7/8" Lg.  
SHCS (2) PLCS.#10-32 x 3/4" Lg.  
FHCS (3) PLCS.#10-32 x 1/2" Lg.  
FHCS (4) PLCS.

## BILL OF MATERIAL

## ASS-238-0114L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
(1)	1	MP-238-0336	TAMP CYLINDER MOUNTING PLATE
(2)	1	MP-238-0244L	SLIDE MOUNT ANGLE PLATE - LH
(3)	1	MP-238-0332	CYLINDER MOUNT SUPPORT PLATE
(4)	1	MP-238A-0214-AMZ	TAMP SLIDE PIVOT ARM
(5)	1	MP-238-0333	TAMP SLIDE PIVOT MOUNT
(6)	2	MP-238-0241	TAMP GUIDE
(7)	2	PM-FASB10045	SHOULDER BOLT
(8)	2	PM-BEBF1070	FLANGE BUSHING
(9)	2	PM-BEBT1008	THRUST WASHER
(10)	1	PM-LL1002	LOCK LEVER
(11)	1	MP-238-0338	SS HEAVY WASHER
(12)	1	PM-FANU30375	CAPTURE WASHER
(13)	1	PM-238-0337	SS WASHER
(14)	1	MP-238-0335	LOCATOR BLOCK
(15)	1	PM-INS1010	THREADED INSERT, 1/4-20 INT x 3/8-24 EXT

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 APPLICATOR SERIES: 3600  
 APPLICATOR WIDTH(S): 7.5"  
 GROUP: TAMP ASSEMBLY

 TITLE: SWING-AWAY TAMP SLIDE MOUNTING ASSEMBLY - LH  
 Dept. Code 70

 REV. 2  
 REV. DESCRIPTION: ADDED FASTENERS FOR LOCATOR BLOCK

REV. DATE: 10/27/17

REV. BY: TDR

Scale: 1=2

Date: 05/17/10

DRAWN BY: Tracy Rhodes

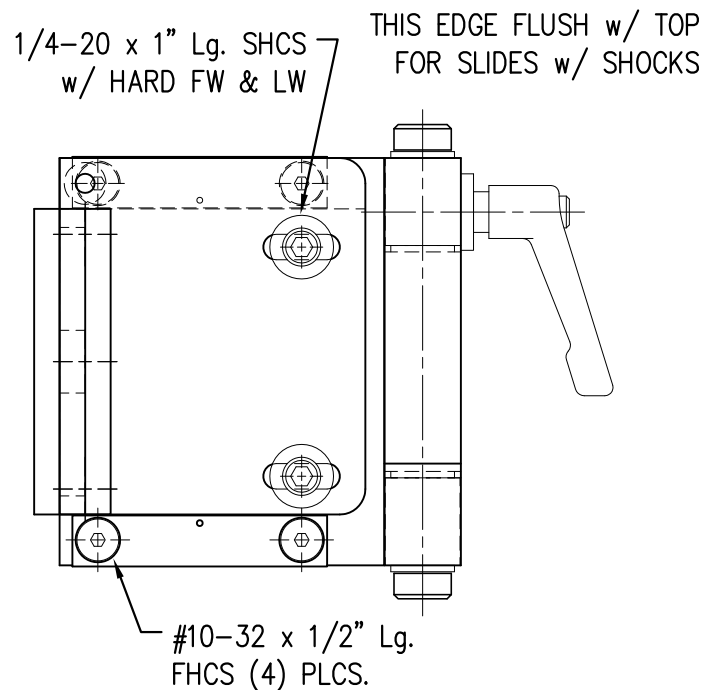
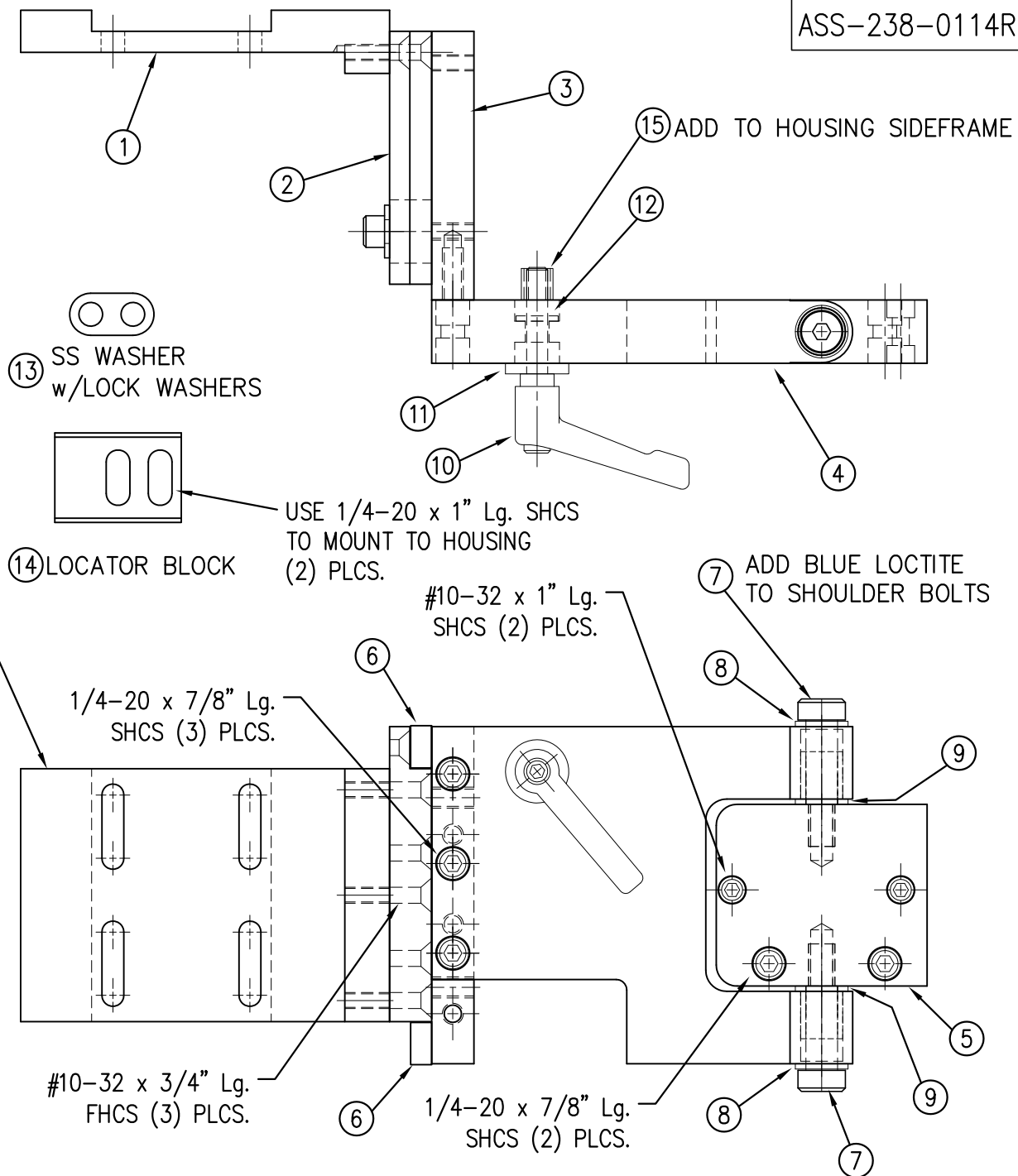
 F:\Engineering\Standard Parts\Applcator\3600 SERIES\  
 3600a\ASS\ASS-238-0114L

# BILL OF MATERIAL

ASS-238-0114R

ASS-238-0114R

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0336	TAMP CYLINDER MOUNTING PLATE
②	1	MP-238-0244R	SLIDE MOUNT ANGLE PLATE - RH
③	1	MP-238-0332	CYLINDER MOUNT SUPPORT PLATE
④	1	MP-238-0334	TAMP SLIDE PIVOT ARM
⑤	1	MP-238-0333	TAMP SLIDE PIVOT MOUNT
⑥	2	MP-238-0241	TAMP GUIDE
⑦	2	PM-FASB10045	SHOULDER BOLT
⑧	2	PM-BEBF1070	FLANGE BUSHING
⑨	2	PM-BEBT1008	THRUST WASHER
⑩	1	PM-LL1002	LOCK LEVER
⑪	1	MP-238-0338	SS HEAVY WASHER
⑫	1	PM-FANU30375	CAPTURE WASHER
⑬	1	PM-238-0337	SS WASHER
⑭	1	MP-238-0335	LOCATOR BLOCK
⑮	1	PM-INS1010	THREADED INSERT, 1/4-20 INT x 3/8-24 EXT

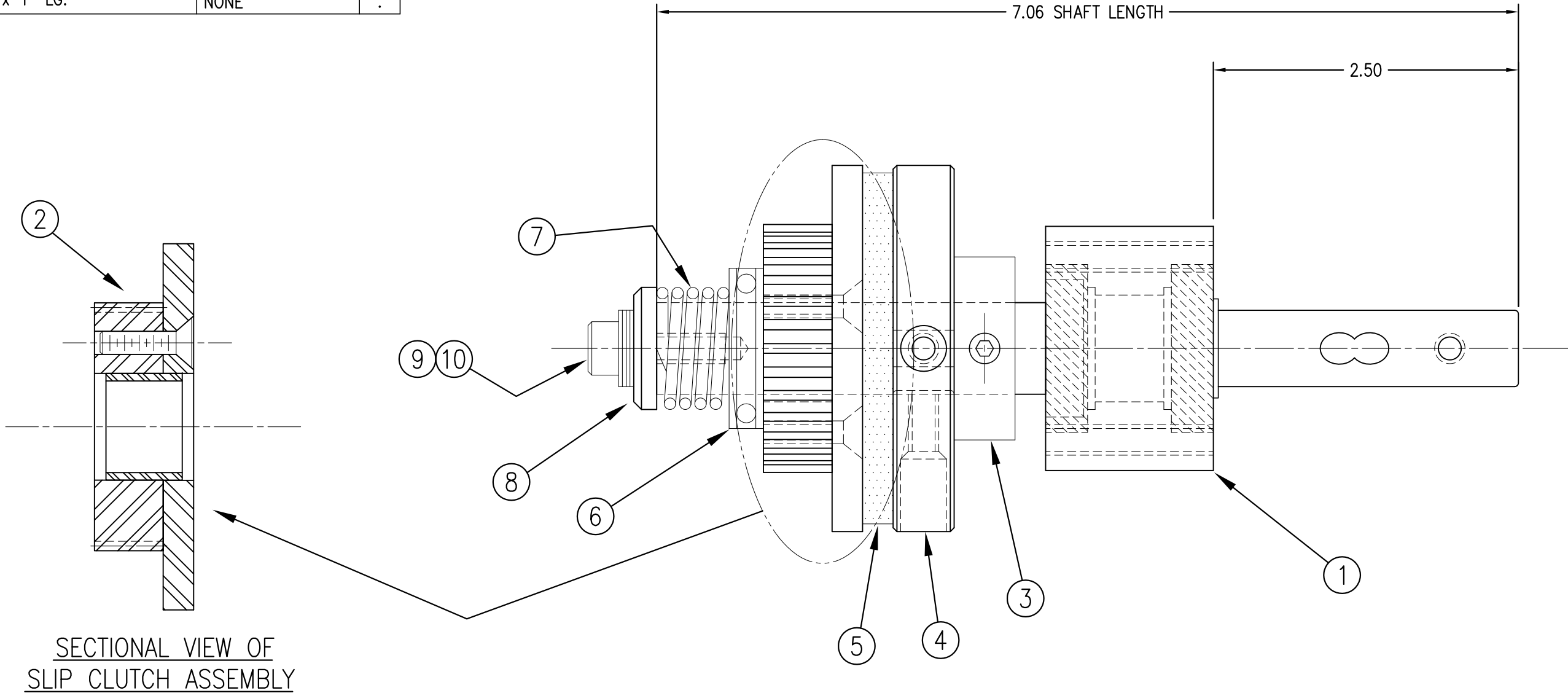


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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: SWING-AWAY TAMP SLIDE MOUNTING ASSEMBLY - RH	Dept. Code 70
REV. 2	REV. DESCRIPTION ADDED FASTENERS FOR LOCATOR BLOCK	REV. DATE 10/27/17	REV. BY: TDR	Scale: 1=2
		Date: 05/17/10	DRAWN BY: Tracy Rhodes	F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS\ASS-238-0114R

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0120C		.
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	REWIND BRG. BLOCK w/SHAFT	ASS-238-0121	S
②	1	SLIP CLUTCH ASSEMBLY	ASS-200-0143	S
③	1	LOCK COLLAR	PM-C01020	.
④	1	SLIP CLUTCH	MP-238-0202	.
⑤	1	CLUTCH PAD	MP-238-0274	S
⑥	1	THRUST BEARING	PM-BE1232	S
⑦	1	COMPRESSION SPRING (MEDIUM DUTY)	PM-FASP30540	S
⑧	1	CLUTCH SPRING KEEPER	MP-200-0229	.
⑨	10	FLAT WASHER, 1/4 NOM.	NONE	.
⑩	1	SHCS, 1/4-20 x 1" LG.	NONE	.

REV 1  
REV 2



ASS-238-0120C

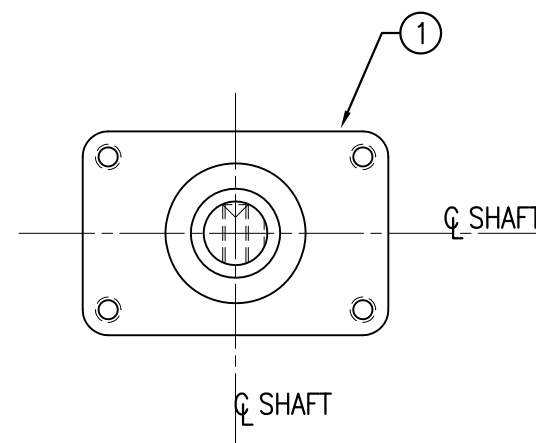
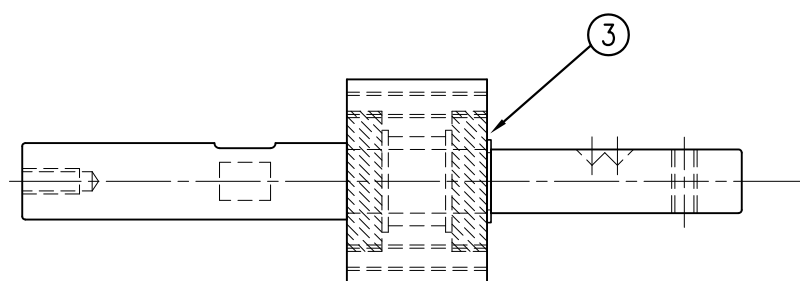
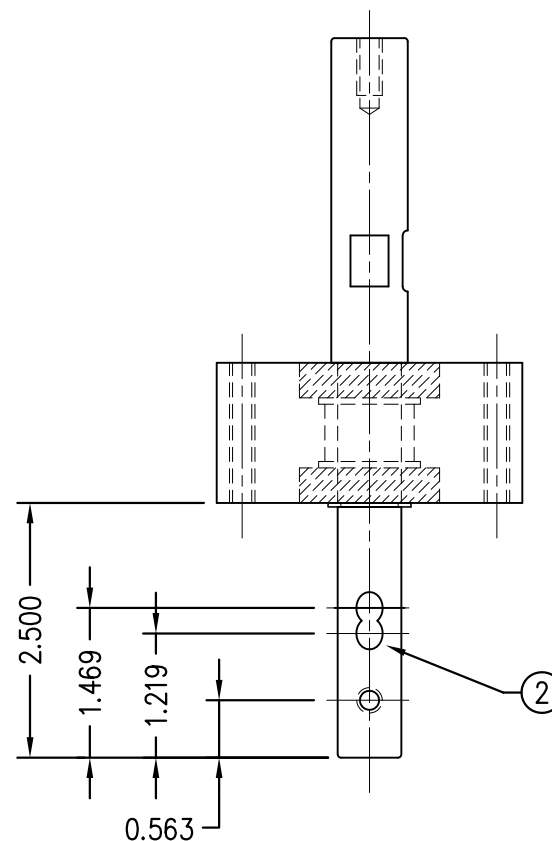
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.				Dept. Code 70	
APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"		TITLE: REWIND CLUTCH ASSEMBLY	
REV. 4	REV. DESCRIPTION UPDATED SHAFT CHANGES	REV. DATE 02/06/19	REV. BY: TDR	Scale: 1=1	Date: 03/24/00
		DRAWN BY: BOB S.		F:\Engineering\Standard Parts\Applcator\3600 SERIES\ 3600a\ASS-238-0120C	

# BILL OF MATERIAL

ASS-238-0121

ASS-238-0121

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	SAS-238-0121	REWIND BEARING BLOCK SHELF ASSEMBLY
②	1	MP-238-0205	REWIND SHAFT
③	1	PM-FASR1010	SNAP RING
	4	PM-FAFH50270	FHCS, 1/4"-20 UNC x 3/4" Lg.

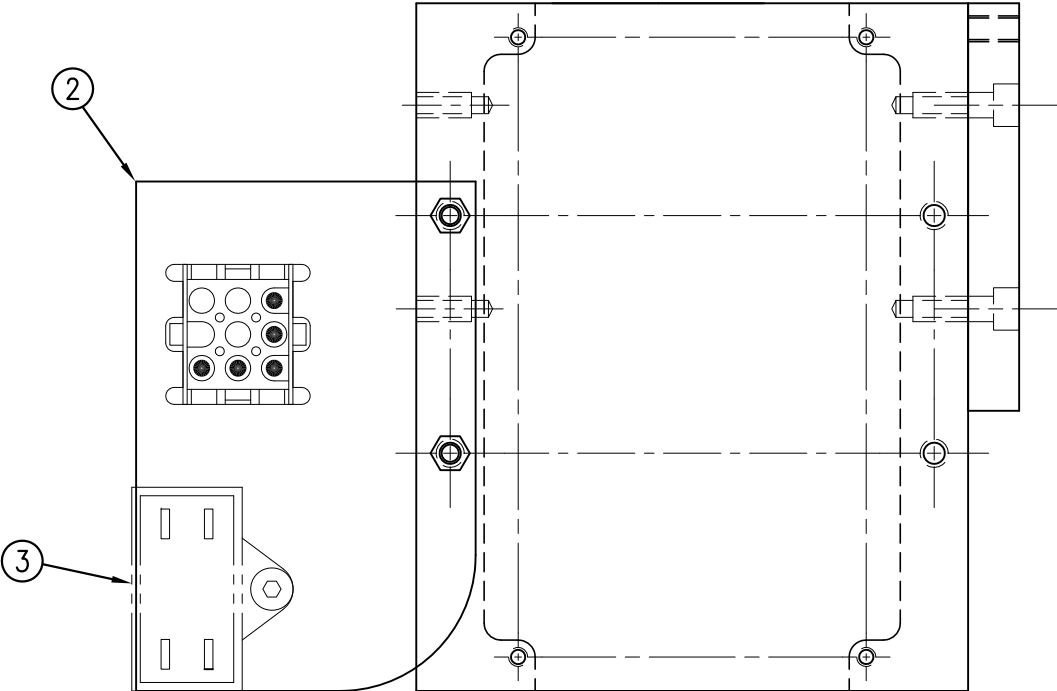
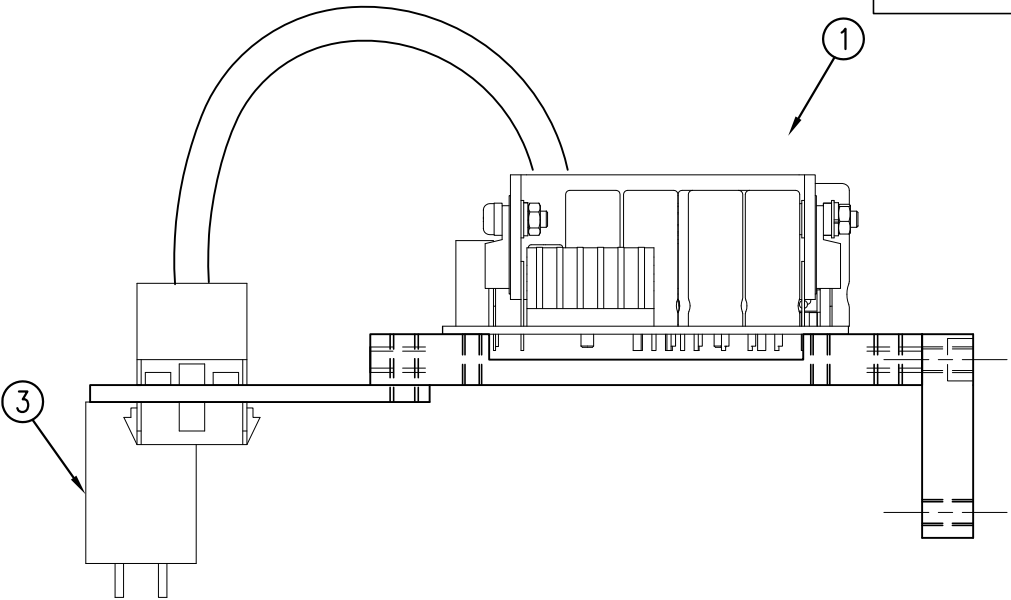
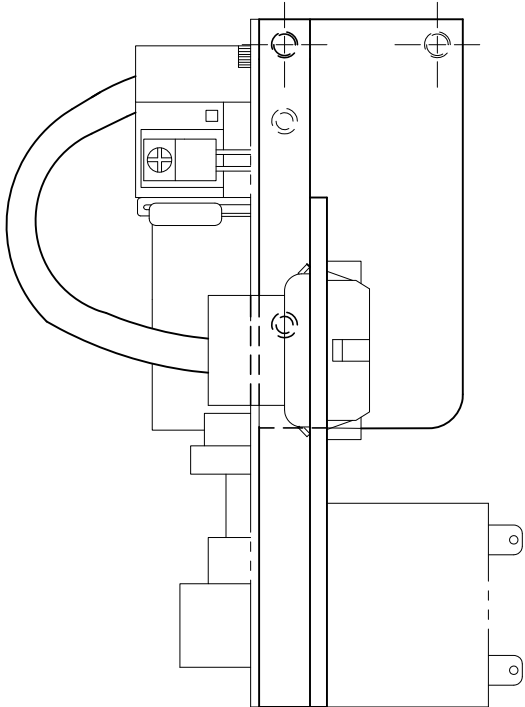


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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: REWIND ASSEMBLY	TITLE: REWIND BEARING BLOCK w/ SHAFT	Dept. Code 70
REV. 1	REV. DESCRIPTION UPDATED SHAFT CHANGES	REV. DATE 02/06/19	REV. BY: TDR	Scale: 1=2
			Date: 03/29/00	DRAWN BY: BOB S.
				F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0121

BILL OF MATERIAL			
ASS-238-0124R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0415	24 VDC POWER SUPPLY ASSEMBLY
②	1	MP-238-0237	CONNECTOR MOUNT
③	1	PE-CAP1025	CAPACITOR

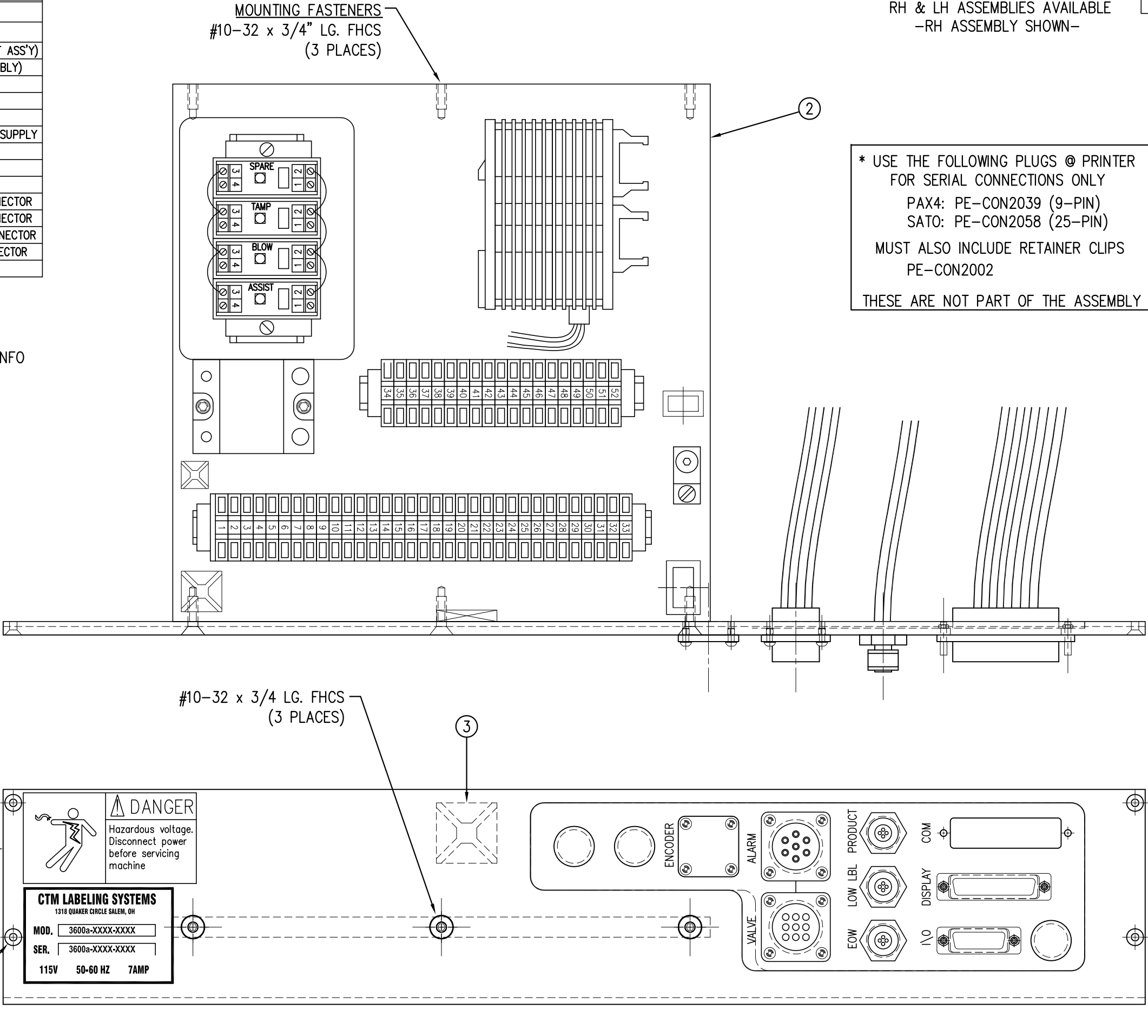
ASS-238-0124R/L



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	CORE UNIT : ELECTRICAL					70
3600								
REV. 2	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS\ASS-238-0124RL	
	ROTATED POWER SUPPLY 180 DEG.	08/30/19	BNT	1=1.5	01/04/13	DLM		

BILL OF MATERIAL			
ASS-238a-0127R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	SAS-238a-0127aR/L	RH/LH CONNECTOR FACE PLATE (SHELF ASS'Y)
②	1	SAS-238-0127bR/L	RH/LH ELECTRIC SHELF (SHELF ASSEMBLY)
③	1	PE-PA1080	WHITE STICKY PAD
	1	PE-238-0407	PLC INPUT WIRING HARNESS Y7
	1	PE-238-0408	PLC OUTPUT WIRING HARNESS Y7
	1	PE-238-0414	WIRING HARNESS FOR 24 VDC POWER SUPPLY
	1	PE-238-0421	PLC INPUT WIRING HARNESS Y8
	1	PE-238-0422	PLC OUTPUT WIRING HARNESS Y8
	1	PE-238-0429	REWIND MOTOR WIRING HARNESS
	1	PE-W110703CN	18 AWG BLACK WIRE x 5" Lg. w/CONNECTOR
	1	PE-W110704CN	18 AWG BLACK WIRE x 7" Lg. w/CONNECTOR
	1	PE-W103102CN	22 AWG WHITE WIRE x 30" Lg. w/CONNECTOR
	1	PE-W103711CN	22 AWG BROWN WIRE x 30" Lg. w/CONNECTOR
	1	ASS-C01025	POWER CORD

REFER TO ASS-238a-0400 SCHEMATIC FOR WIRING INFO

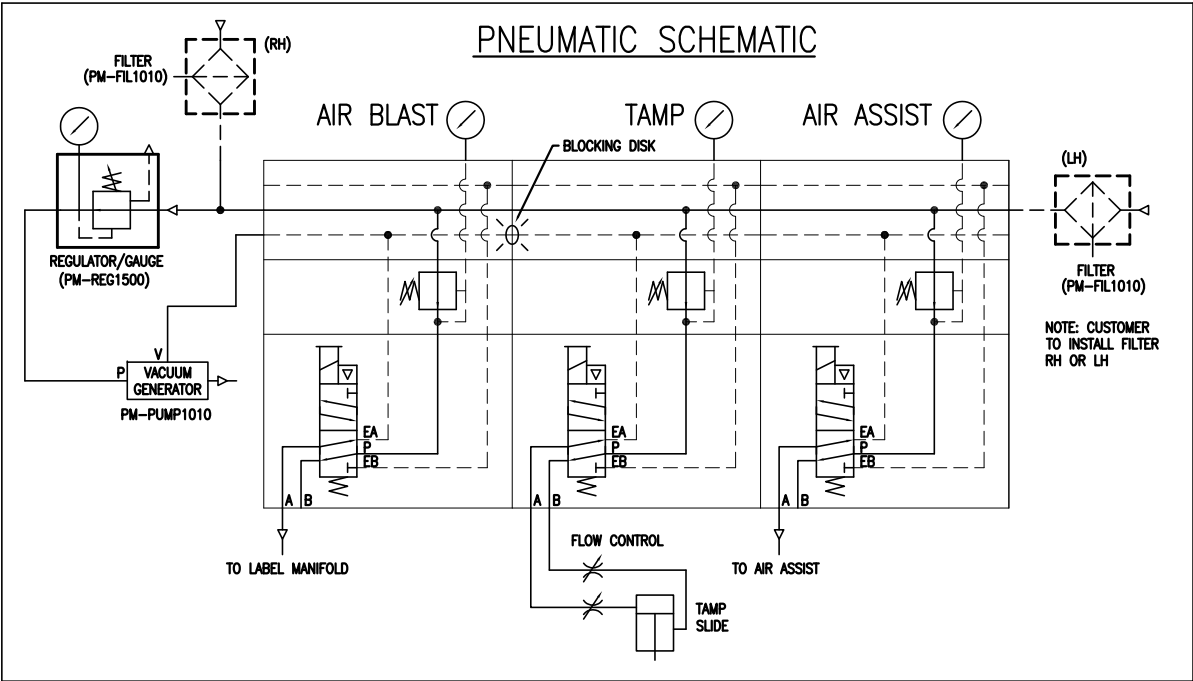


RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-

ASS-238a-0127R/L

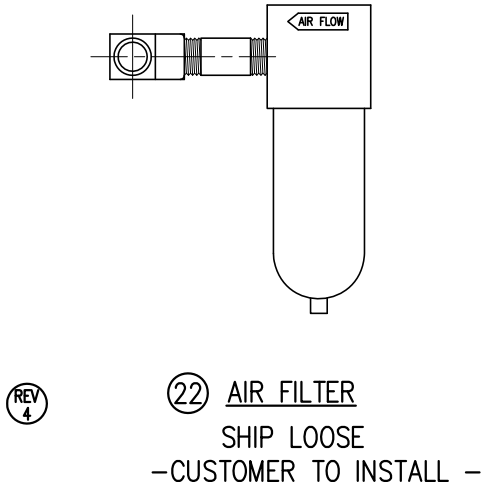
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.		Dept. Code	90
APPLICATOR SERIES: 3600a	APPLICATOR WIDTH(S): 7.5"	TITLE: ELECTRIC SHELF ASSEMBLY	F:\Engineering\Standard Parts\Applcator\3600 SERIES\
REV. 1	REV. DESCRIPTION: 1 EDITED SHELF TO MATCH SAS DRAWING	REV. BY: JWS	3600a\ASS-238a-0127RL
REV. DATE: 11/15/17	REV. SCALE: 1=2	DATE: 01/08/2016	ES



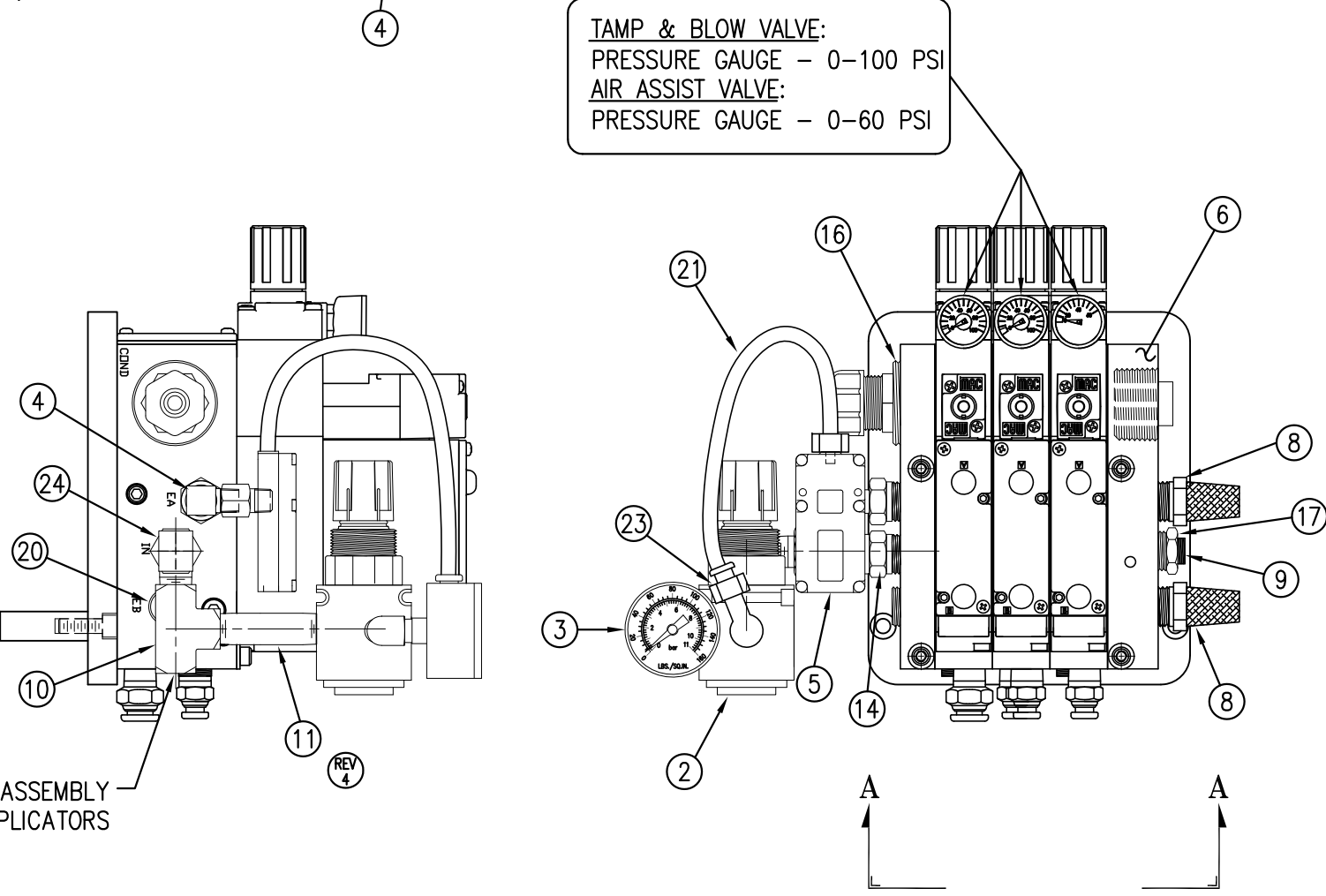
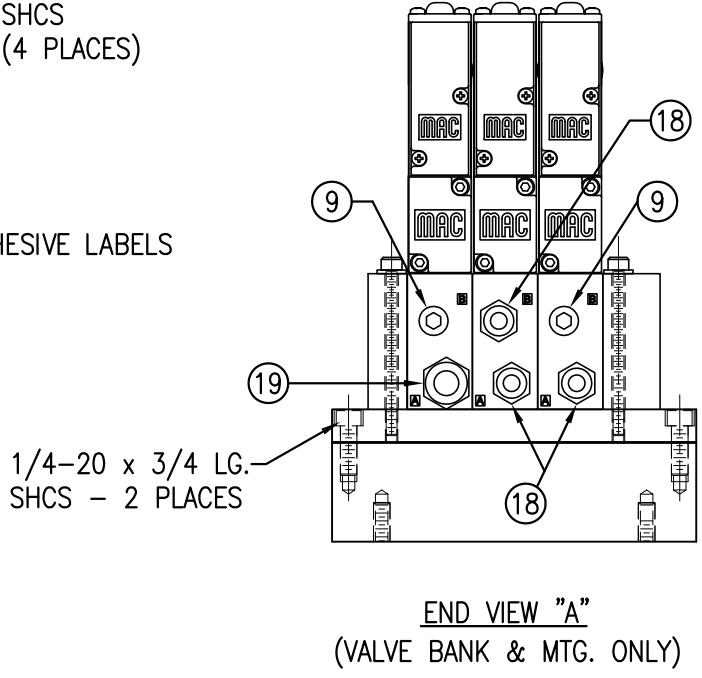
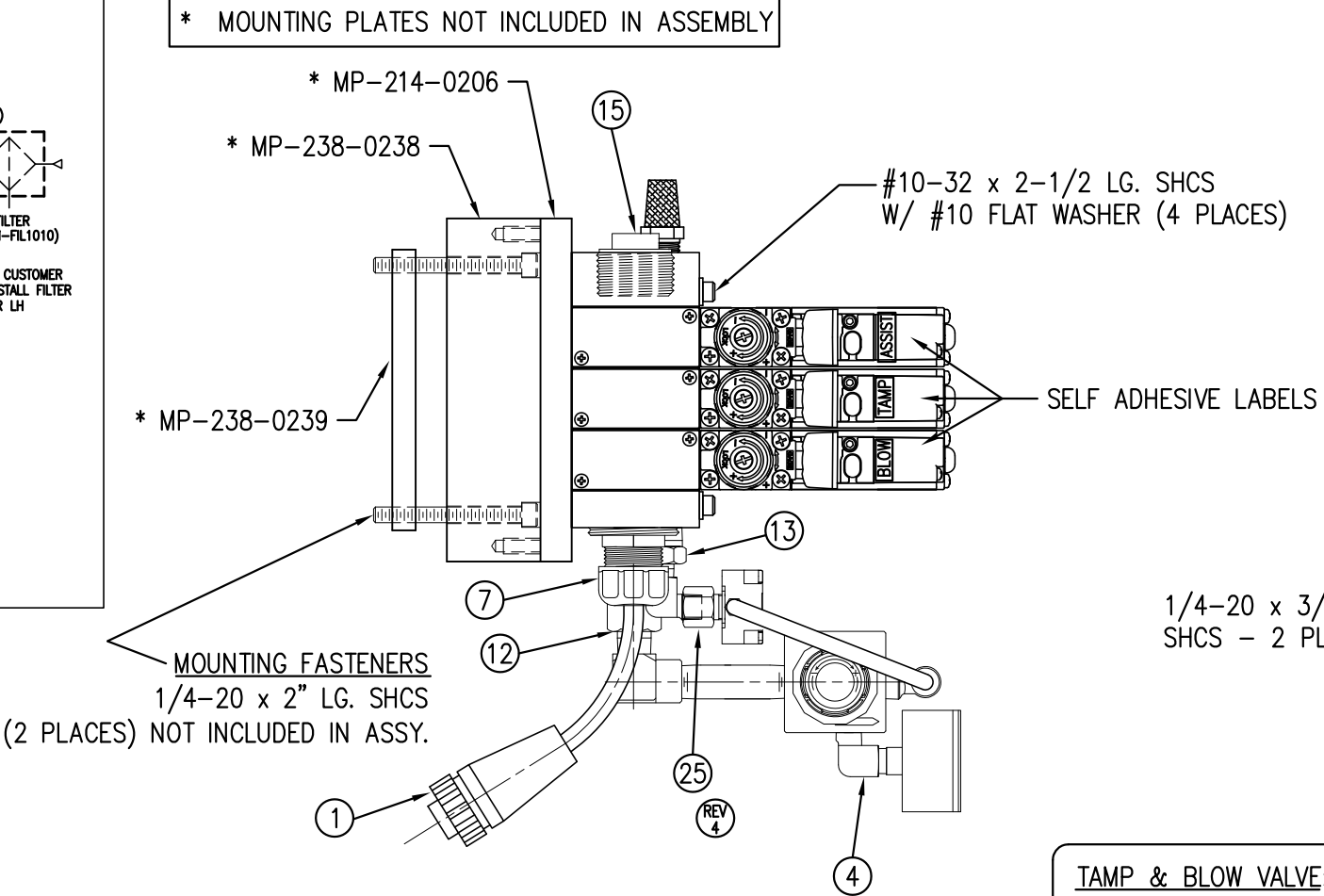


**VALVE BANK SPARE PARTS:**  
SOLENOID: #PM-VA2395M  
AIR ASSIST REGULATOR W/GAUGE: #PM-VA2396M  
BLOW/TAMP/IMPRINTER REGULATORS W/GAUGE: #PM-VA2397M  
AIR ASSIST REGULATOR GAUGE: #PM-VA2382M  
BLOW/TAMP/IMPRINTER REGULATOR GAUGES: #PM-VA2380M

BILL OF MATERIAL			
ASS-238-0129M			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200-0452M	VALVE CABLE
②	1	PM-REG1500	REGULATOR
③	1	PM-VA2384	0-160 PSI PRESSURE GAUGE
④	2	PM-PF1180	NPT 90° STREET ELBOW 1/8" FEMALE TO 1/8" MALE
⑤	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
⑥	1	PM-VA2355M	3 STATION MAC VALVE BANK
⑦	1	PE-C02000	CORD GRIP
⑧	2	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑨	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑩	1	PM-PF1200	TEE 1/4" NPT FEMALE 3 ENDS
⑪	1	PM-PF1145	NIPPLE, 1/4" NPT X 2" LG.
⑫	1	PM-PF1220	ADAPTOR, 3/8" NPT FEMALE TO 1/4" NPT MALE
⑬	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑭	1	PM-PF1159	FITTING, 3/8" NPT MALE BOTH ENDS
⑮	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑯	1	PE-COND1084	STEEL REDUCER
⑰	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑱	3	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑲	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑳	1	PM-PF1167	3/8" NPT SOCKET HEAD PLUG
㉑	10.5"	PM-PT1070	1/4" OD TUBING
㉒	1	ASS-214-0106	AIR FILTER
㉓	1	PM-PF1055	90° ELBOW 1/4" TUBE TO 1/4" NPT MALE
㉔	1	PM-PF1185	90° STREET ELBOW, 1/4 NPT MALE/FEMALE
㉕	1	PM-PF1216	ADAPTER, 1/8NPT MALE/FEMALE
4		PM-FASH429088	#10-32 x 2-1/2" Lg. SS SHCS
4		PM-FAW30265	#10 SS FLAT WASHER

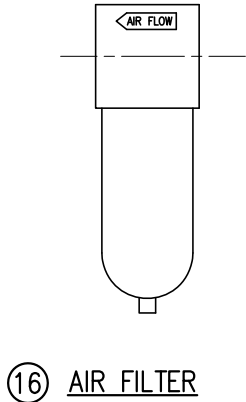


NOTE: AIR SUPPLY ALWAYS ENTERS FROM BACK OF APPLICATOR - CHANGE PIPING TO SUIT



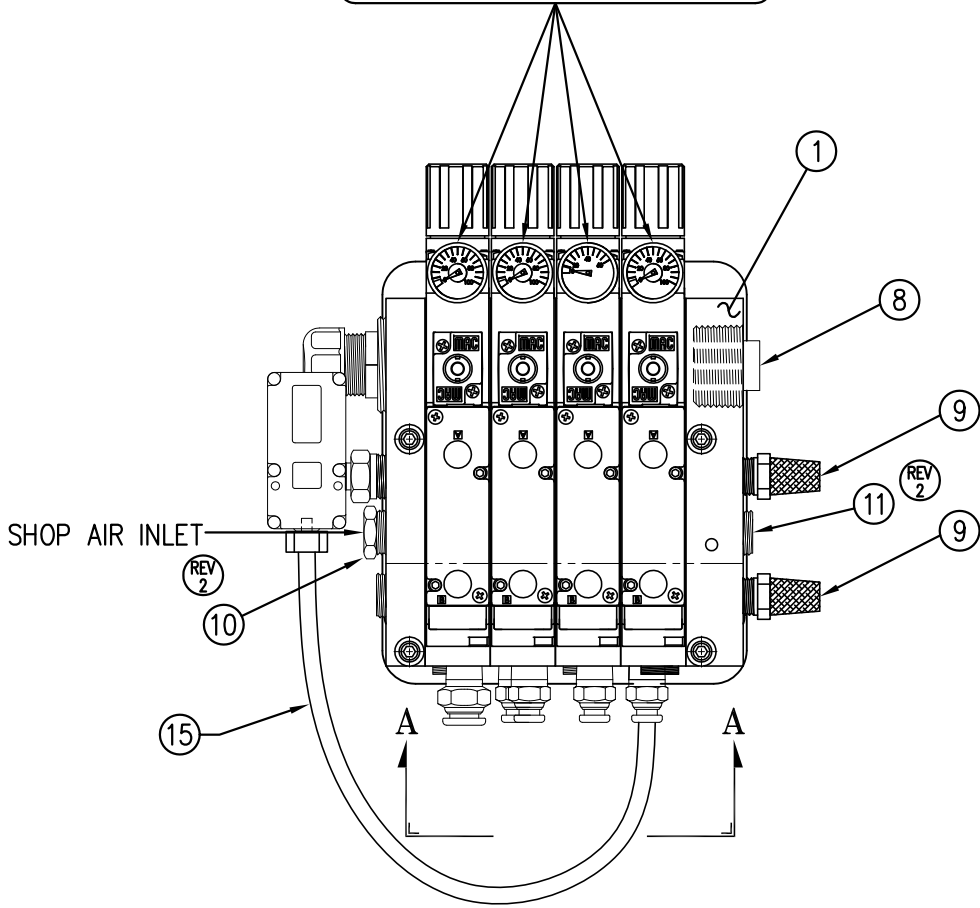
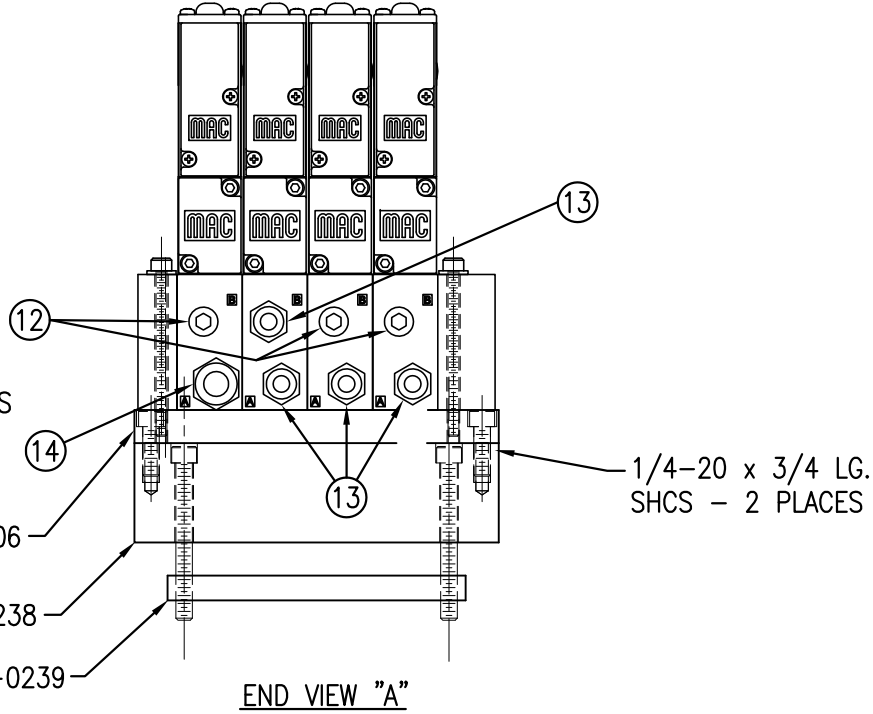
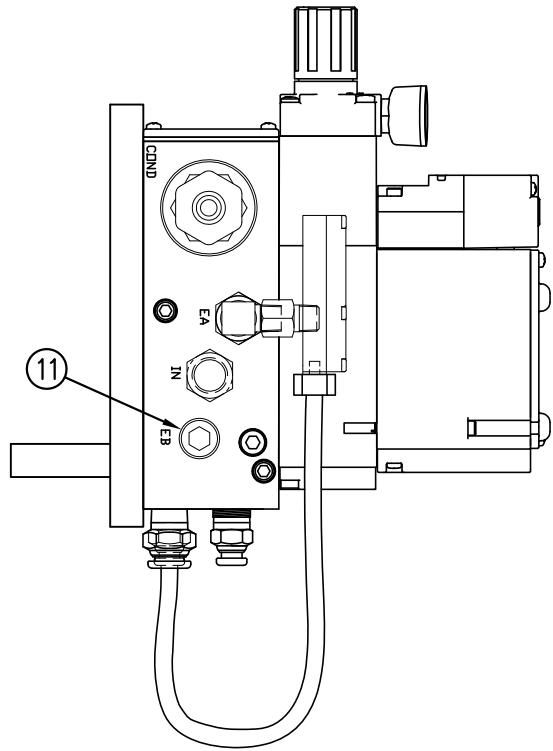
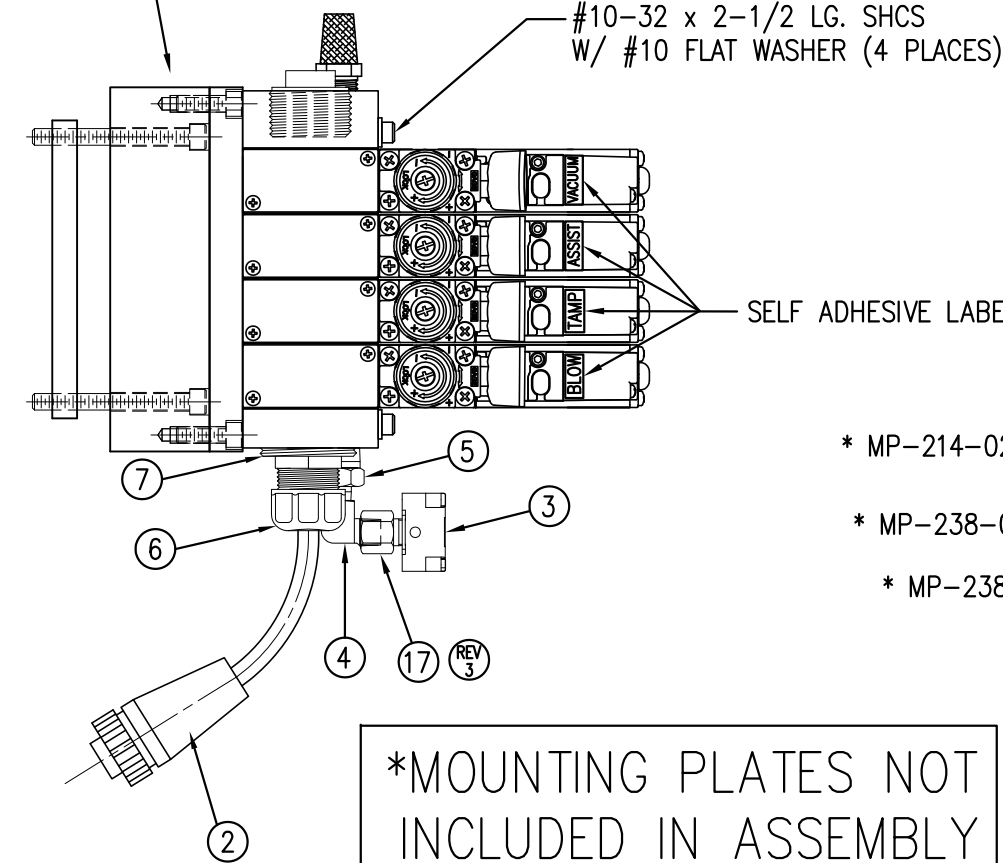
BILL OF MATERIAL			
ASS-238-0130M			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PM-VA2361M	4 STATION MAC VALVE BANK
②	1	ASS-200-0452M	VALVE CABLE
③	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
④	1	PM-PF1180	NPT 90° STREET ELBOW 1/8" FEMALE TO 1/8" MALE
⑤	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑥	1	PE-C02000	CORD GRIP
⑦	1	PE-COND1084	STEEL REDUCER
⑧	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑨	2	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑩	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑪	2	PM-PF1167	3/8" NPT SOCKET HEAD PLUG
⑫	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑬	4	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑭	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑮	9"	PM-PT1070	1/4" OD TUBING
⑯	1	PM-FIL1010	AIR FILTER
⑰	1	PM-PF1216	ADAPTER, 1/8 NPT MALE/FEMALE
○	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
○	4	PM-FAW30265	#10 SS FLAT WASHER

VALVE BANK SPARE PARTS:  
SOLENOID: #PM-VA2395M  
AIR ASSIST REGULATOR W/GAUGE: #PM-VA2396M  
BLOW/TAMP/IMPRINTER REGULATORS W/GAUGE: #PM-VA2397M  
AIR ASSIST REGULATOR GAUGE: #PM-VA2382M  
BLOW/TAMP/IMPRINTER REGULATOR GAUGES: #PM-VA2380M



REV 3

CHANGE MOUNTING PLATES  
FOR 360 SERIES



ASS-238-0130M

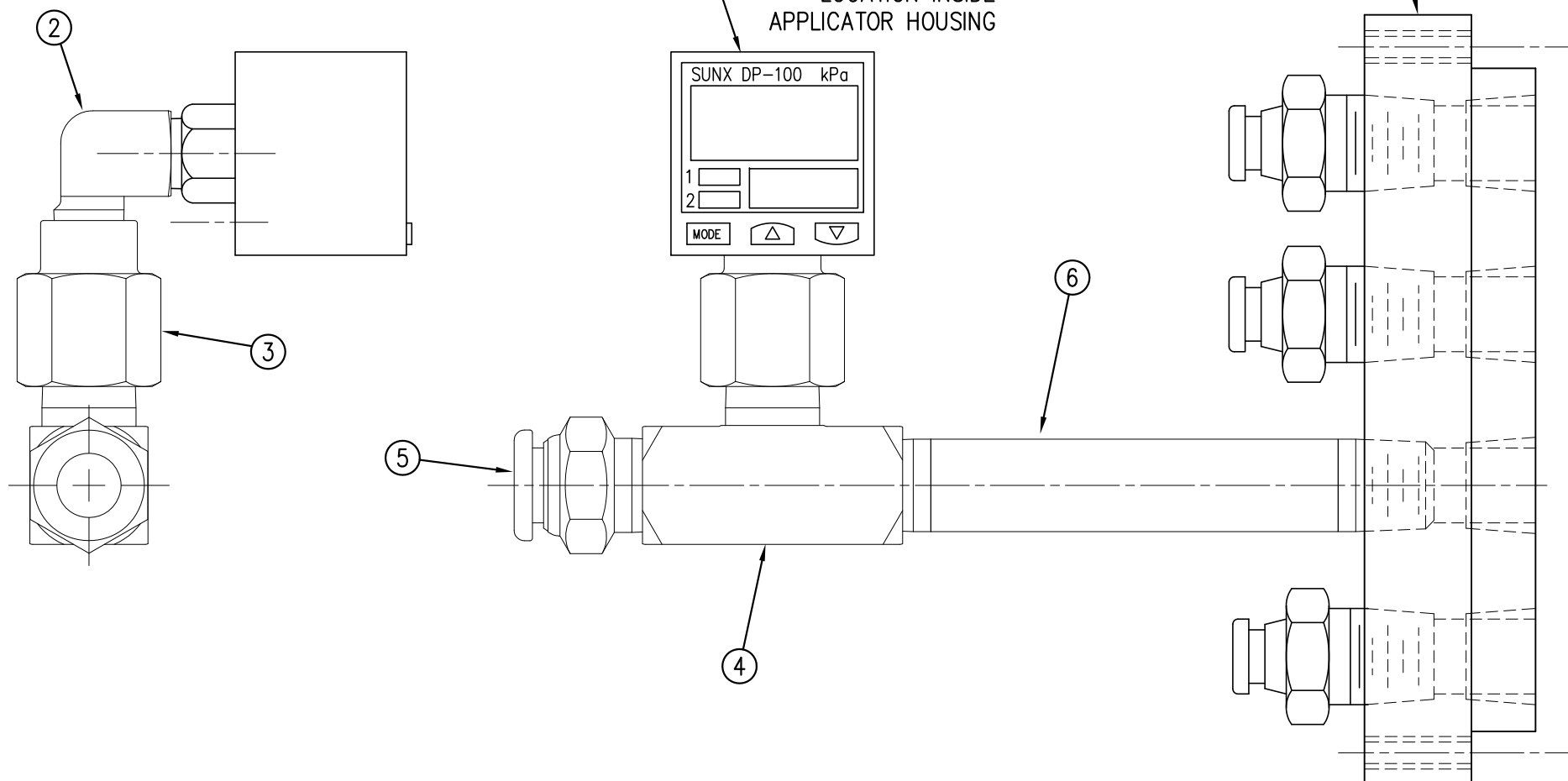
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.			
APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"	GROUP: VALVE BANKS
REV. 4	REV. DESCRIPTION	REV. DATE	REV. BY
	REPLACED 0-160 GAUGE WITH 0-100 GAUGE	12/20/18	BNT
TITLE: TAMP: VALVE BANK ASSEMBLY w/ VACUUM OFF OPTION		DATE: 04/09/07	DRAWN BY: E. SANOR
F:\Engineering\Standard Parts\Applcator\3600 SERIES\3600a\ASS-238-0130M		Scale: 1=3	Dept. Code 70

# BILL OF MATERIAL

ASS-238-0462

ASS-238-0462

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-SW1074	VACUUM SWITCH ASSEMBLY
②	1	PM-PF1180	1/8" NPT 90° STREET ELBOW
③	1	PM-PF1095	1/4" NPT to 1/8" NPT FEMALE COUPLING
④	1	PM-PF1202	1/4" NPT MALE to (2) 1/4" NPT FEMALE TEE
⑤	1	PM-PF1020	3/8" TUBE to 1/4" NPT MALE CONNECTOR
⑥	1	PM-PF1141	1/4" NPT PIPE NIPPLE x 3-1/2" LG.



SEE ASS-SW1074 FOR ELECTRICAL REQUIRED

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: ELECTRICAL	TITLE: VACUUM SWITCH PIPING FOR 3600 & 3600-DAT	Dept. Code 70
REV. 5	REV. DESCRIPTION UPDATED TITLEBLOCK	REV. DATE 03/01/18	REV. BY: TK	Scale: 1=1
		Date: 01/31/06	DRAWN BY: TDR/JLG	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0462

## BILL OF MATERIAL

ASS-SW1074

ASS-SW1074

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SW1074	VACUUM SWITCH
②	3	PE-SL1000	GRAY SOLDER SLEEVE 22-26 AWG
	1	PE-W1036	22 AWG (BLUE) WIRE x 10" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 10" LONG
	1	PE-W1032	22 AWG (BLACK) WIRE x 10" LONG

REV 3

NOTE: THIS SWITCH HAS THE FOLLOWING USES:

FOR STANDARD 3600: 1) LABEL REPRINT 2) LABEL ON PAD

FOR 3600-DAT: 1) LABEL REPRINT

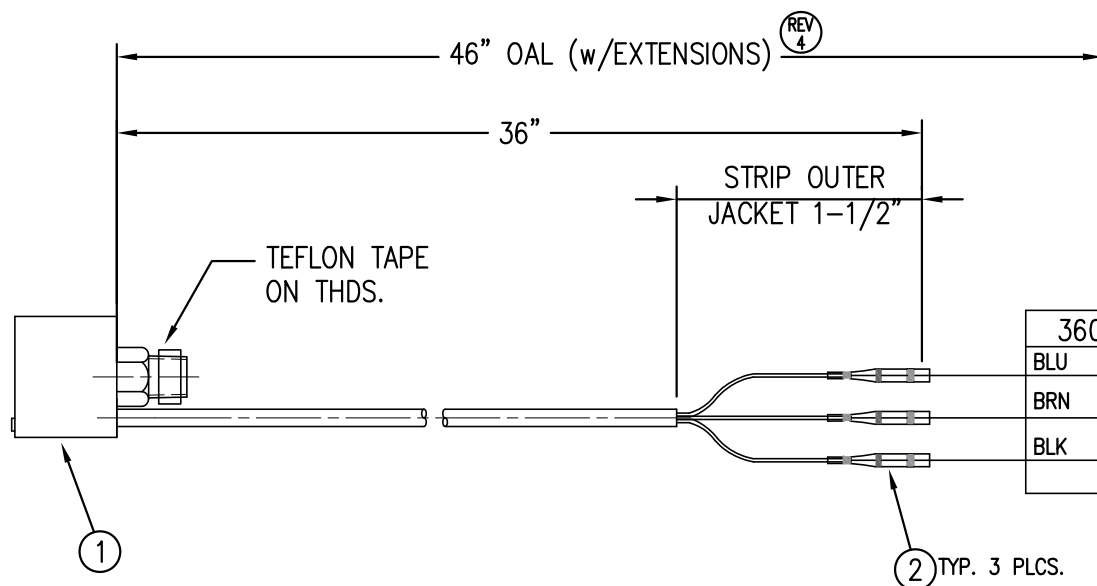
\*\*\*REMOTE ALARM RESET CANNOT BE USED WITH LABEL REPRINT OPTION ON DAT\*\*\*

## ASSEMBLY NOTES:

- 1) STRIP CABLE OUTER JACKET BACK 1-1/2" TO EXPOSE FOUR WIRES.
- 2) CUT AND REMOVE THE WHITE WIRE
- 3) STRIP EACH OF THE THREE WIRES BACK 3/8".
- 4) INSERT WIRE EXTENSIONS & CABLE WIRES INTO SOLDER SLEEVES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
- 5) ENSURE ONLY BARE WIRE IS IN THE SOLDER RING & HEAT WITH HEAT GUN UNTIL SOLDER MELTS
- 6) ALLOW SOLDER TO COOL BEFORE MOVING OR PULLING WIRE

SEE ASS-238-0462  
FOR ADDITIONAL PIPING REQUIRED

REV 4



3600	3600-DAT	3600AB	3600A	3600A-DAT	3600ST-AMZ
BLU 16	BLU 16	BLU 23	BLU 16	BLU 16	BLU 4
BRN 12	BRN 12	BRN 20	BRN 12	BRN 12	BRN 1
BLK 21	BLK 40	BLK 29	BLK 38	BLK 38	BLK 17

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TITLE: 3600 SERIES APPLICATOR: ELECTRICAL

PART: VACUUM SWITCH ASSEMBLY FOR 3600s

Dept. Code  
70REV. 11 REV. DESCRIPTION  
REVISED ASSEMBLY NOTESREV. DATE  
03/27/19REV. BY:  
BNTScale:  
1=2Date:  
10/3/14

DRAWN BY:

F: \Engineering\Standard Parts\Appliator\3600:  
238\ASS-SW1074

## BILL OF MATERIAL

ASS-238-0132

ASS-238-0132

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0278	END OF WEB - CLAMP BLOCK
②	1	MP-238-0279	END OF WEB - MOUNTING SHAFT
③	1	MP-200-3303	SENSOR MOUNTING FOR 18mm SENSOR
④	1	MP-200-0256	TENSION SUPPORT BRACKET
⑤	1	PE-SE1095-EOW	END OF WEB SENSOR ASSEMBLY ⑦

NOTE: SEND FASTENERS TO BOLT ASSEMBLY  
TO THE APPLICATOR IF FIELD KIT.

REV  
5

NOTE: DUE TO THIS ASSEMBLY'S MULTIPLE USES,  
REFER TO THE STANDARD PRINTER APPLICATOR  
HOUSING SCHEMATICS LISTED BELOW FOR THE  
PROPER END OF WEB CONNECTOR WIRING.

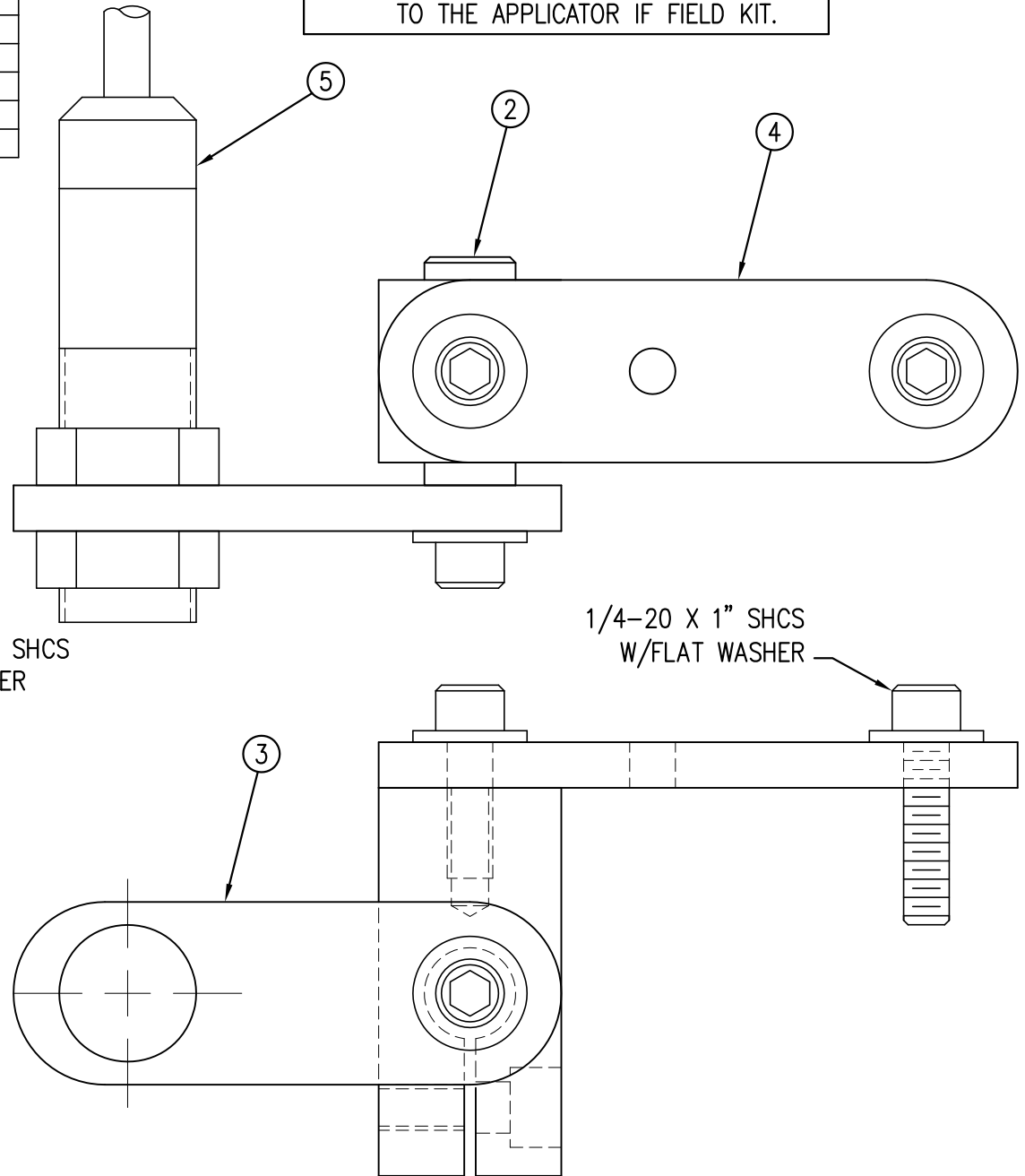
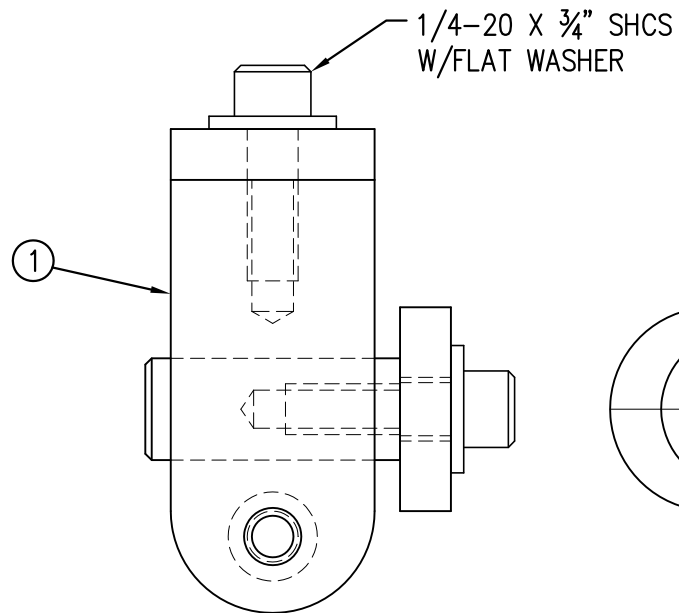
ASS-238-0402 FOR 3600 STANDARD

ASS-218-0402 FOR 1800

ASS-238-0403 FOR 3600 DAT

ASS-238CE-0401 FOR 3600CE STANDARD

ASS-238aCE-0401 FOR 3600aCE STANDARD



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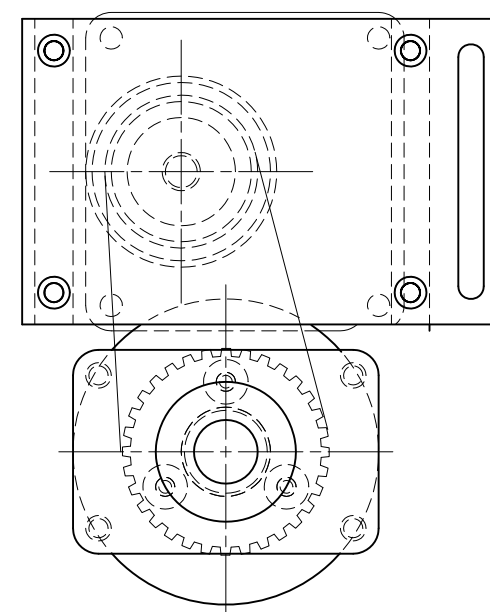
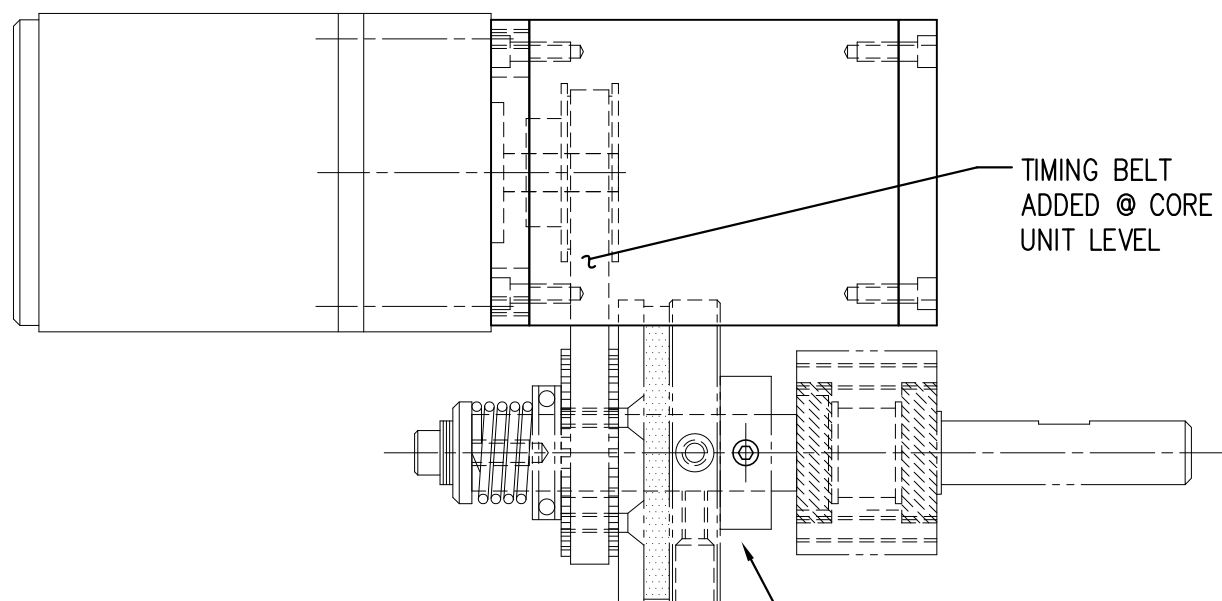
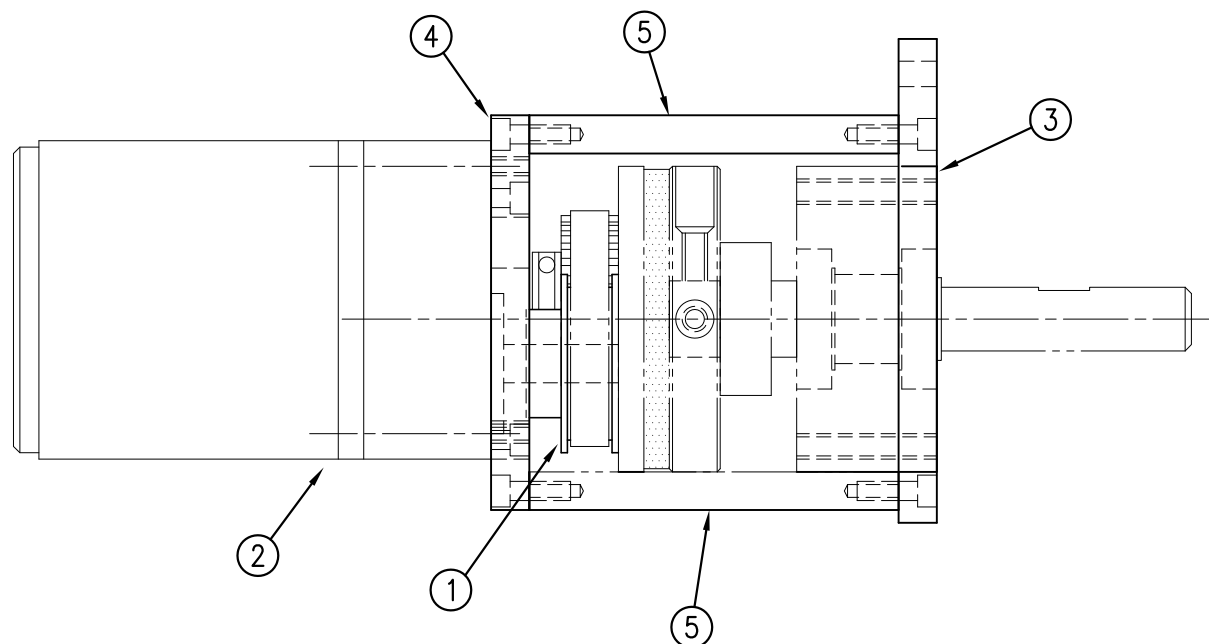
APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"		GROUP: SENSORS		TITLE: END OF WEB SENSOR w/ MOUNTING BRACKET				Dept. Code 70		
REV. 7	REV. DESCRIPTION UPDATED EOW SENSOR			REV. DATE 10/25/19		REV. BY: TDR	Scale: 1=1	Date: 06/04/01	DRAWN BY: DKM		F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0132	

ASS-238-0133

## BILL OF MATERIAL

ASS-238-0133

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0273	MOTOR PULLEY
②	1	ASS-238-0428	REWIND MOTOR
③	1	MP-238-0201	MOUNT PLATE
④	1	MP-238-0272	REWIND MOTOR MOUNT PLATE
⑤	2	MP-238-0204	MOTOR SIDE FRAME



REFER TO DWG. ASS-238-0120C  
OR ASS-238-0163R/L ON 16" UNWIND 3600a <sup>REV</sup>3  
FOR REWIND CLUTCH ASSEMBLY

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: REWIND ASSEMBLY	TITLE: REWIND MOTOR & PULLEY ASSEMBLY (FOR VH1425A-GV MOTOR)				Dept. Code 70
REV. 3	REV. DESCRIPTION ADDED NOTE FOR 16" UNWIND 3600a	REV. DATE 05/10/2017	REV. BY: ES	Scale: 1=2	Date: 03/29/00	DRAWN BY: DKM	F:\Engineering\Standard Parts\Applicator\3600 SERIES\ 3600a\ASS\ASS-238-0133

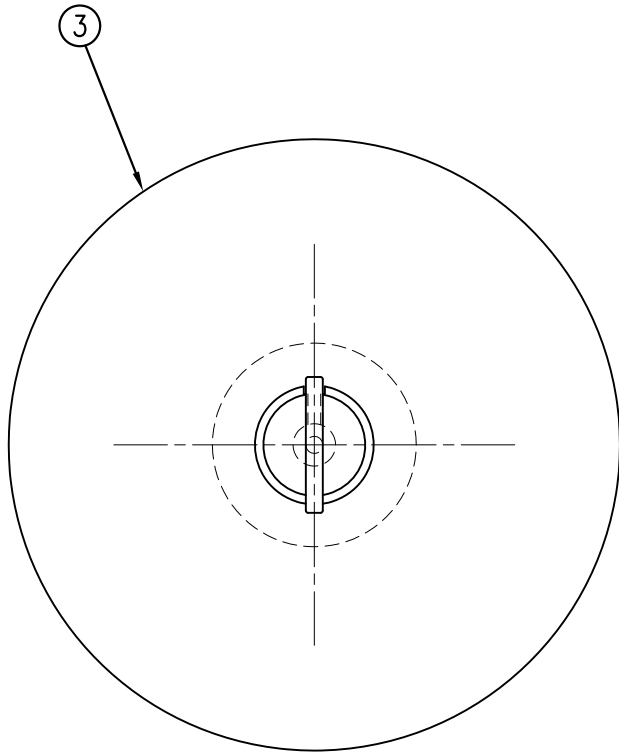
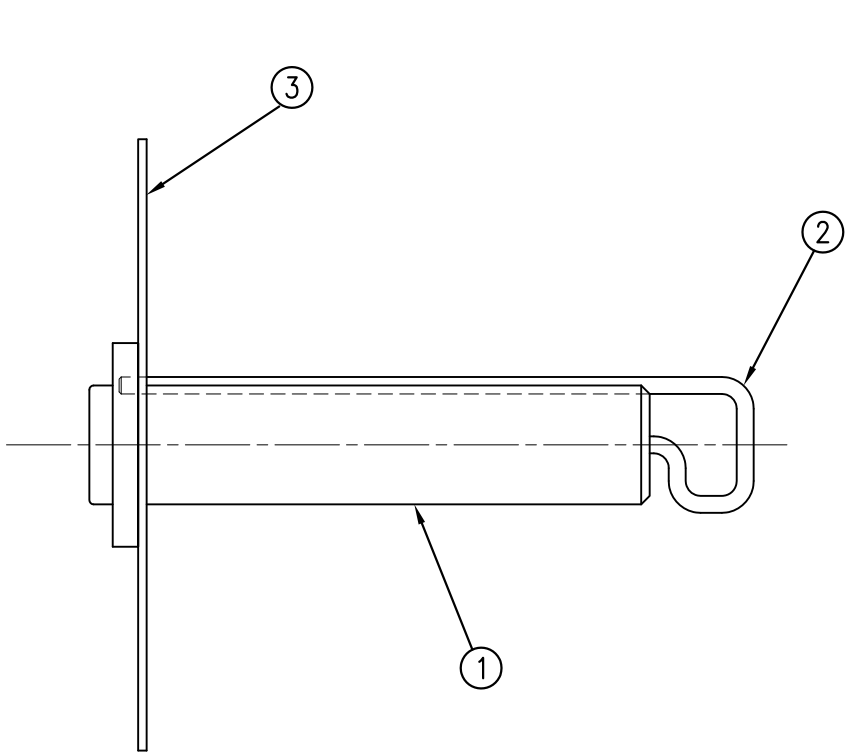
BILL OF MATERIAL			
ASS-238-0144-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0206	REWIND SPINDLE
②	1	PF-238-0207	REWIND PIN
③	1	ASS-200-0127	REWIND DISK ASS'Y (FOR 12" UNWIND)
	1	ASS-200-3158-16	REWIND DISK ASS'Y (FOR 16" UNWIND)
	1	ASS-238-0168	REWIND DISK ASS'Y (FOR 16" P.UNWIND)

ASS-238-0144-X

FOR 12" UNWIND -0144-12

FOR 16" UNWIND -0144-16

FOR 16" POWERED UNWIND -0144-16PU

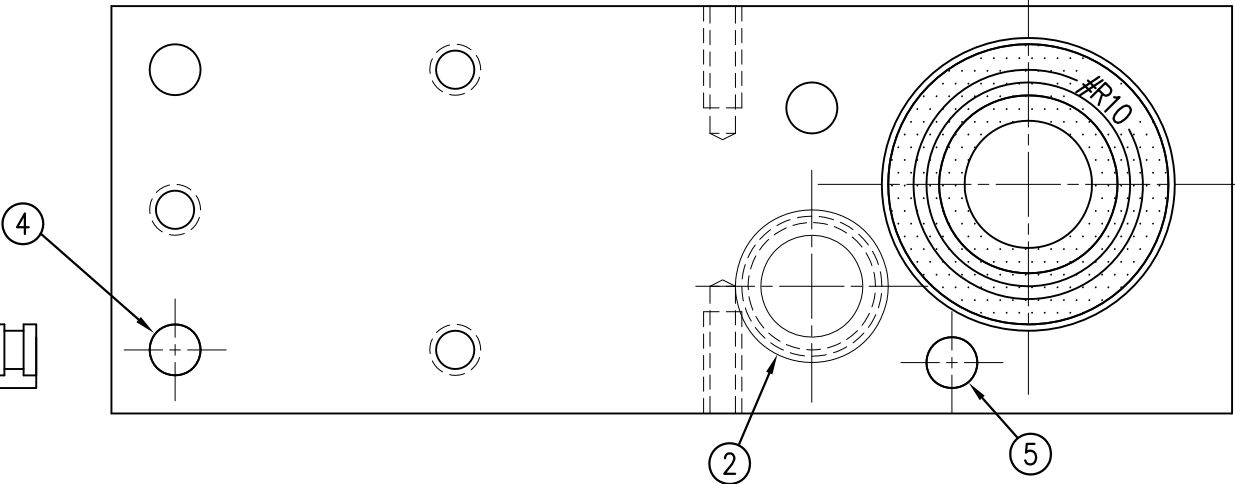
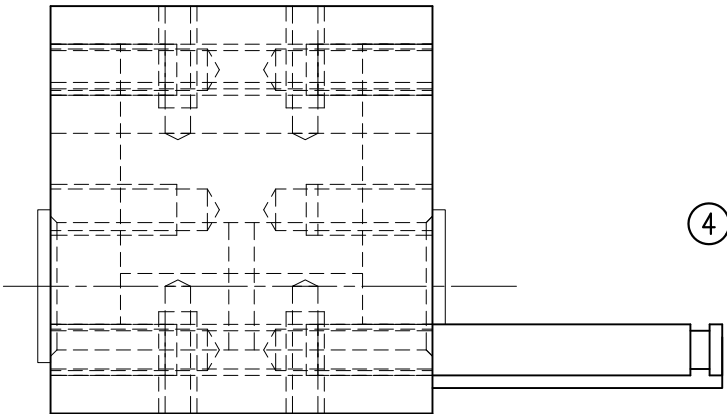
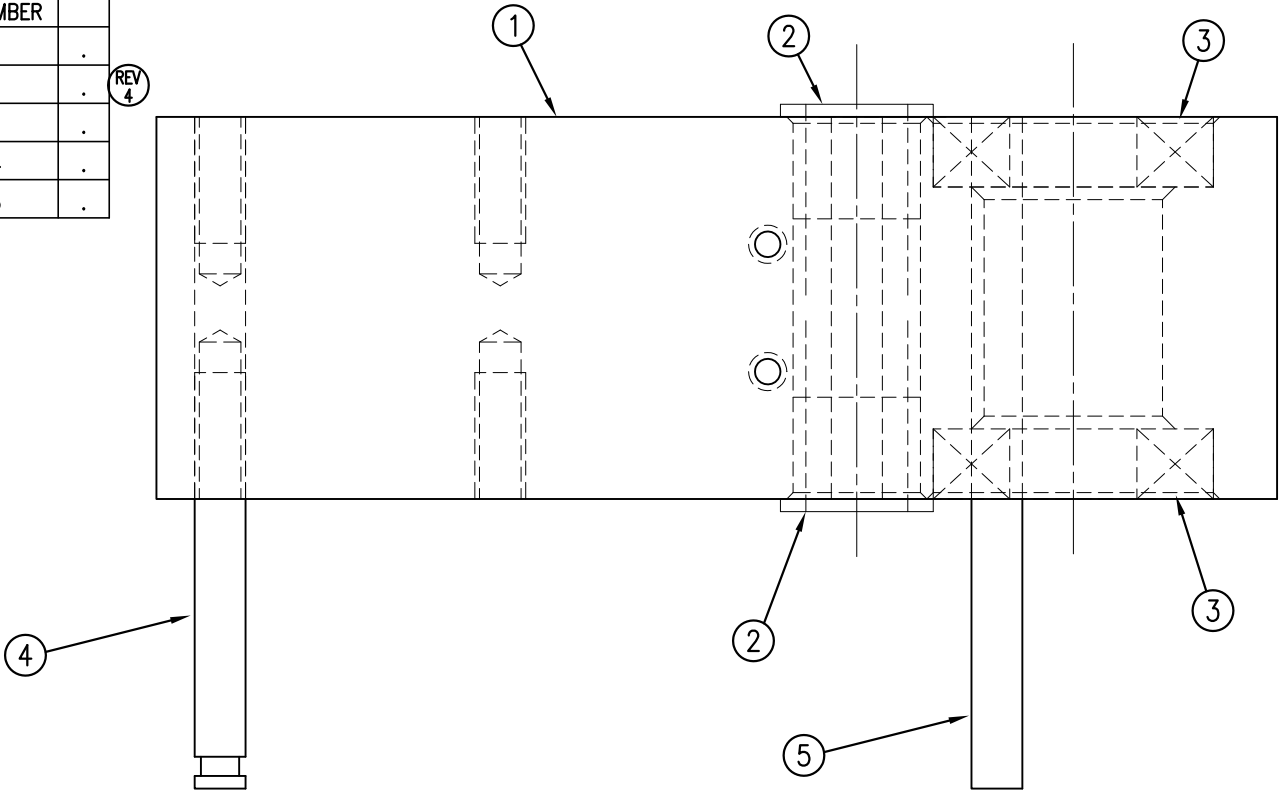


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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: REWIND ASSEMBLY			TITLE: STANDARD REWIND SPINDLE (FOR 12" & 16" UNWIND)				Dept. Code 70
REV. 1	REV. DESCRIPTION TABULATED FOR 16" POWERED UNWIND			REV. DATE 06/01/07	REV. BY: TDR	Scale: 1=3	Date: 01/14/04	DRAWN BY: DKM	F:\Engineering\Standard Parts\Applicator\3600 SERIES\3600a\ASS\ASS-238-0144-X

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0180R/L		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	UNWIND BLOCK	MP-238-0211	.
②	2	FLANGE BUSHING, 1/2" ID x 5/8" OD	PM-BEBF1017	.
③	2	#R10 BEARING	PM-BE1260	.
④	1	UNWIND SPRING PIN	MP-238-0214	.
⑤	1	UNWIND BELT PIN	MP-238-0213	.

RH & LH ASSEMBLIES AVAILABLE  
RH ASSEMBLY SHOWN <sup>(REV 3)</sup>

ASS-238-0180R/L



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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: UNWIND ASSEMBLY	TITLE: RH / LH UNWIND BLOCK ASSEMBLY				Dept. Code 70
REV. 4	REV. DESCRIPTION CHANGED BUSHING to BEBF1017 from 1016 - LENGTH	REV. DATE 4/28/17	REV. BY: KSM	Scale: 1=1	Date: 04/11/00	DRAWN BY: DKM	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0180RL



BILL OF MATERIAL			
MOD-238-X125R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-238-X125RL	EXTENDED TAMP ASSEMBLY
18	1	ASS-238-0129M	3600A TAMP MAC VALVE BANK
19	1	MP-214-0206	VALVE MOUNTING PLATE
20	1	MP-238-0238	VALVE FASTENING PLATE
21	1	MP-238-0239	VALVE NUT PLATE
22	1	PM-PT1070	1/4 OD TUBING x 60"Lg. (CUT TO SUIT)
23	1	PM-PT1080	3/8 OD TUBING x 33" Lg. (CUT TO SUIT)
24	1	PM-AH1000	AIR ASSIST TUBING x 15" Lg.
25	2	PM-PF1020	FITTING, 1/4 NPT to 3/8 TUBE
26	3	PM-PF1010	FITTING, 1/4 NPT to 1/4 TUBE
27	1	PM-PF1035	FITTING, 1/4 NPT to 1/4 TUBE 90° SWIVEL
28	1	PM-PF1145	1/4 NPT PIPE NIPPLE
29	1	PM-PF1175	1/4 NPT FEMALE 90° ELBOW
30	1	PM-PF1162	1/4 NPT PIPE PLUG

RH & LH ASSEMBLIES AVAILABLE  
- RH ASSEMBLY SHOWN -

\* ITEM #10 NOTE: USE EQUAL LENGTH SHAFTS

MAXIMUM LABEL FEED FOR THIS ASSEMBLY = 4.50"

BILL OF MATERIAL				
ASS-238-X125R/L				
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	MP-238-0260R/L	EXTENDED PEEL EDGE ASSEMBLY MOUNT PLATE	
②	1	MP-211-X208	5"/7.5" WIDE PEEL EDGE	
③	1	PM-211-X206	5"/7.5" WIDE PEEL EDGE	
④	1	ASS-211-0105-1	SPRING BLOCK ASSEMBLY	5 WIDE
	2	ASS-211-0105-1	SPRING BLOCK ASSEMBLY	7.5 WIDE
⑤	1	ASS-211-0110	SPRING BLOCK STOP COLLAR ASSEMBLY	5 WIDE
	2	ASS-211-0110	SPRING BLOCK STOP COLLAR ASSEMBLY	7.5 WIDE
⑥	1	MP-238-0252R/L	EXT. P.E. AIR ASSIST TUBE HOLDER	
⑦	1	ASS-211-0217-5	AIR ASSIST TUBE	5 WIDE
	1	ASS-211-0217-7	AIR ASSIST TUBE	7.5 WIDE
⑧	1	ASS-238-0143	EXT. TAMP ADJUSTMENT ASSEMBLY	
⑨	1	MP-238-0253	EXT. PEEL EDGE MOUNT BLOCK	
⑩	2	MP-200-3301	MOUNTING ROD	REV 10
⑪	1	MP-238-0257	EXT. PEEL EDGE SLIDE BLOCK	
⑫	1	PM-INS1010	THREAD INSERT, 1/4-20 INTERNAL/3/8-24 EXT.	REV 8
⑬	2	PM-FADPO930	3/16" DIA. x 1/2" Lg. DOWEL	REV 6
⑭	1	PE-PA1083	BOLT ON MOUNT - BLACK	
⑮	1	PM-FT2050	5/32 to 5/32 PLASTIC ELBOW	
⑯	1	PE-PA1075	4" BLACK WIRE TIE	
⑰	1	PM-AH1000	AIR ASSIST TUBING x 9" Lg.	
B1	4	PM-FASH430078	S.S. SHCS, 1/4-20 x 3/4" Lg.	

MOUNTING FASTENERS  
1/4-20 x 3/4 SHCS  
(4 PLACES)  
USE THREADED INSERT  
FOR ONE FASTENER

1/4-20 x 1 SHCS w/ F.W.  
(2 PLCS.)

\* SEE NOTE

PARTIAL SECTION "A-A"

PROJECTED END VIEW

SLIDE STROKE LENGTH IS JOB SPECIFIC  
ORDER SLIDE & MTG. NUT ASS'Y. SEPARATELY  
(REFER TO CTM #ASS-214-0103-XX OR  
#ASS-214-0103-XXQ FOR QUICK CHANGE)

#10-32 x 5/8 LG.  
SHCS (3 PLCS.)  
FAR SIDE

#10-32 x 5/8 LG.  
SHCS (4 PLCS.)  
USE BLUE LOCTITE

#6-32 x 3/8 LG.  
SHCS (1 PLC.)

1/4-20 x 1 LG.  
SHCS w/ F.W. & L.W.  
(2 PLACES)

#10-32 x 1/2" LG.  
LSHCS (3 PLCS.)

NOTE: USE 7.5" WIDE WITH THE FOLLOWING PRINT ENGINES:  
-ZEBRA PAX 170 SERIES -SATO 8460

MOD-238-X125R/L

ASS-238-X125R/L

5" WIDE -0125R/L

7.5" WIDE -2125R/L

#10-32 x 3/4 LG.  
SHCS (3 PLCS.)

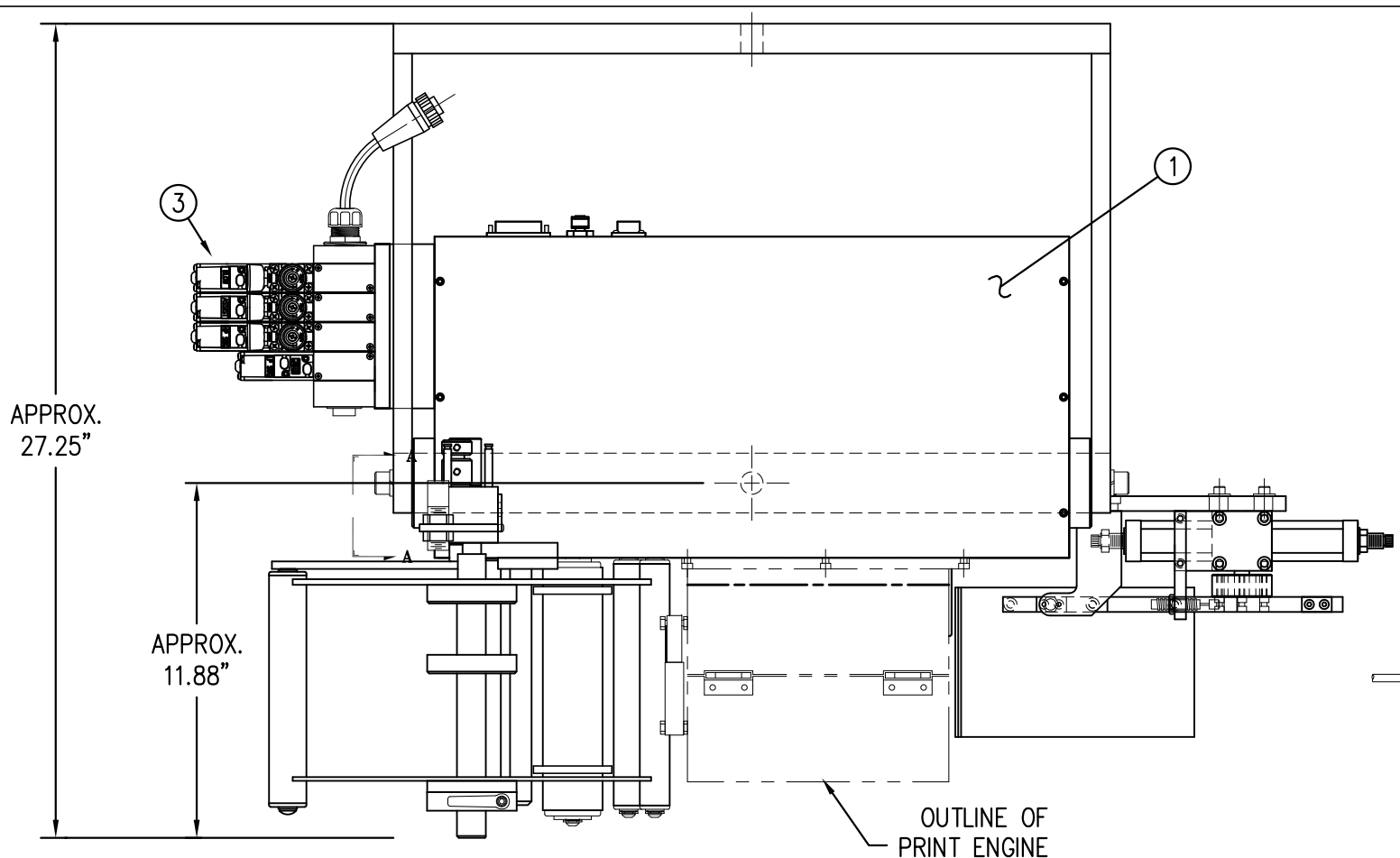
1/4-20 x 3/4 Lg.  
NYLON TIPPED  
SET SCREW w/  
JAM NUT

1/4-20 x 3/4 LG.  
SHCS (2 PLCS.)

1/4-20 x 3/4 LG.  
BHCS (2 PLCS.)

1/4-20 x 3/4 LG.  
FHCS (1 PLC.)  
USE BLUE LOCTITE

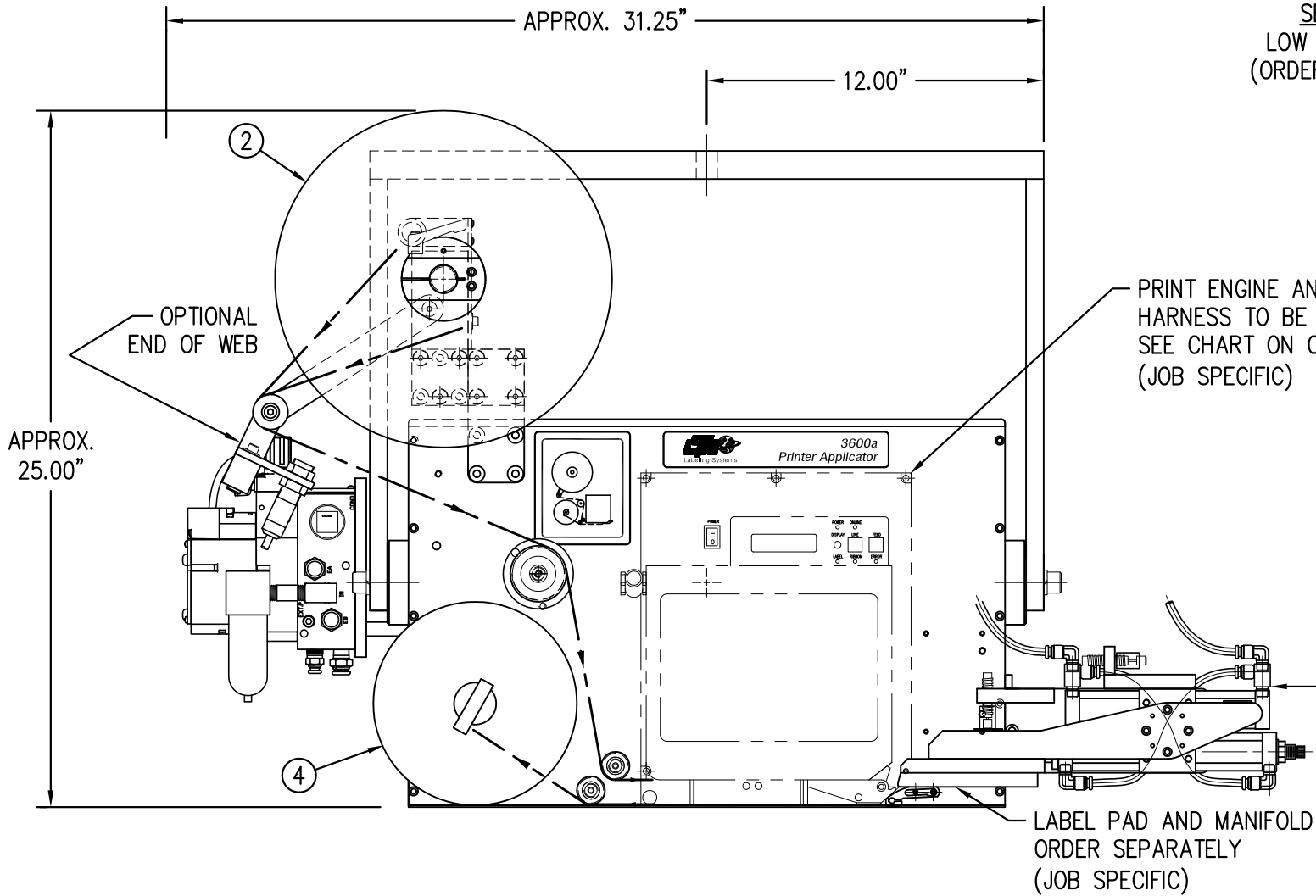
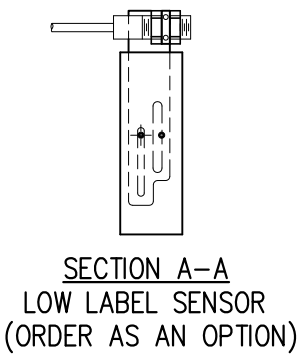
PAD & MANIFOLD ARE JOB SPECIFIC~ORDER SEPARATELY  
(REFER TO CTM #MP-238-0246-X FOR MANIFOLD BLANK DETAIL)



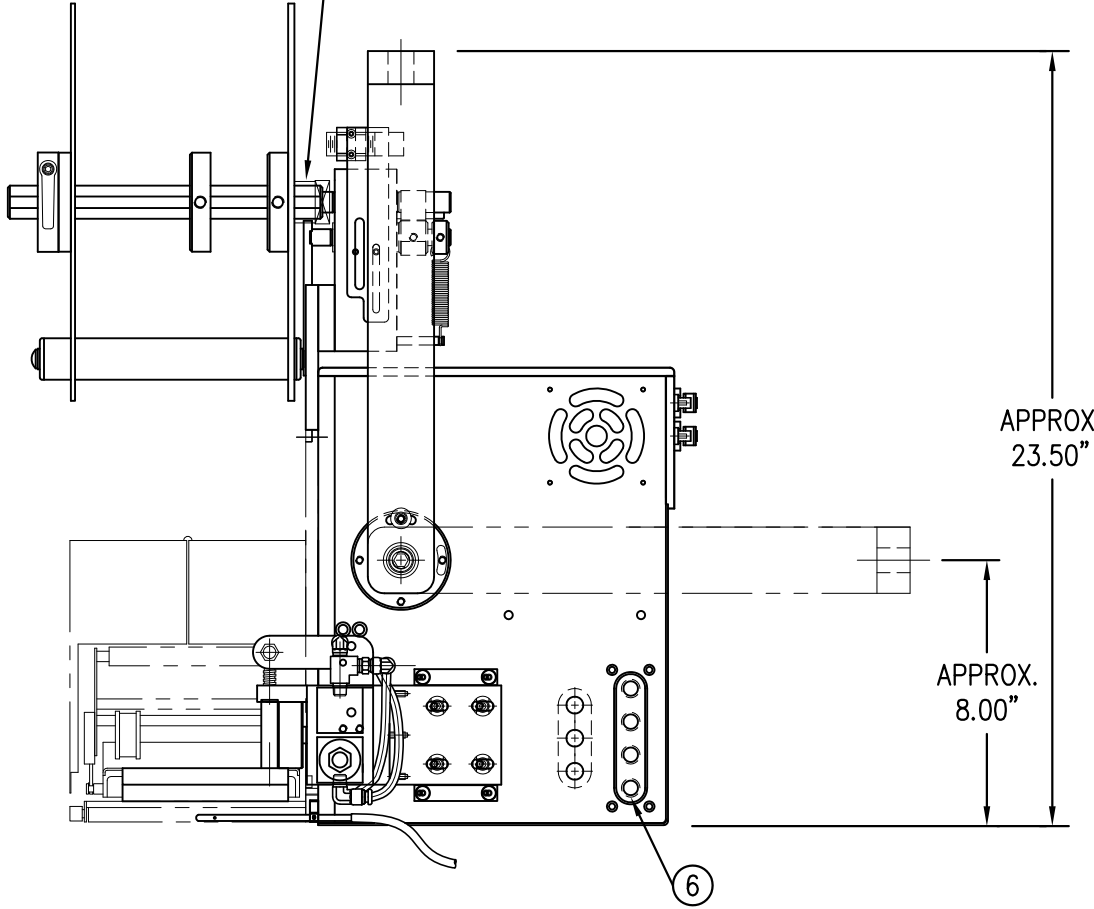
BILL OF MATERIAL			
CTM-238aR-XCWS-12S-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-238a-0123R-XX	3600a CORE UNIT & HOUSING ASSEMBLY - RH
②	1	MOD-238-0122AR	UNWIND MODULE with ALUMINUM DISK for "REELS UP" - RH
③	1	MOD-238-0127R	RH CORNER WRAP NOSE ASS'Y with VALVE BANK
④	1	ASS-238-0144-12	REWIND ASSEMBLY FOR 12" UNWIND
⑤	1	ASS-214-0103R-XN	SLIDE ASSEMBLY FOR 3600-PA APPLICATOR - RH
⑥	1	SAS-238A-0124	AIR MANIFOLD ASSEMBLY

- CHANGES TO STANDARD SWING TAMP TO MAKE HI/LOW:
- OPTIONS TO TRIGGER SWING BACK
    - 2nd PRODUCT DETECT SENSOR (NEED ADD'L INTERNAL HARNESS) **\*\*RECOMMENDED\*\***
    - USE LOW PRESSURE TIMER FEATURE IN DISPLAY MENU
  - USE PROGRAM 36002b2.4CNR or higher
- RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-

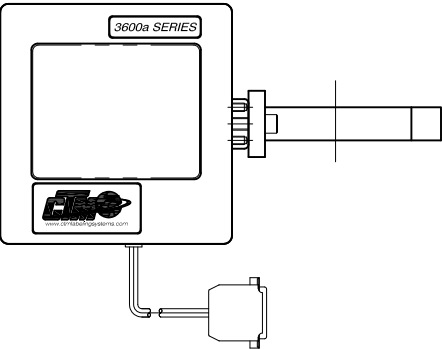
ASSEMBLY NOTE:  
VALVE BANK TO APPLICATOR CABLE  
NEEDS TO BE SHORTENED AT ASSY.



BUSHING & LOCK COLLAR  
ONLY USED FOR REELS UP  
ORIENTATION



DISPLAY ASSEMBLY  
(LISTED IN CORE UNIT BOM)



CTM-238aR-XCWS-12S-XX

- SATO -SX  
ZEBRA -ZX  
DATAMAX -DX  
SERIAL -XS  
PARALLEL -XP  
ETHERNET -XE  
USB -XU

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APPLICATOR SERIES: 3600a  
APPLICATOR WIDTH(S): 7.5"  
REV. DESCRIPTION: 3 ADDED OPTIONS FOR SWING BACK

REV. DATE: 07/29/19  
REV. BY: TDR

Scale: 1=6  
Date: 05/05/2016  
DRAWN BY: T. Rhodes

TITLE: RH 3600a ADVANCED PRINTER APPLICATOR CORNER WRAP

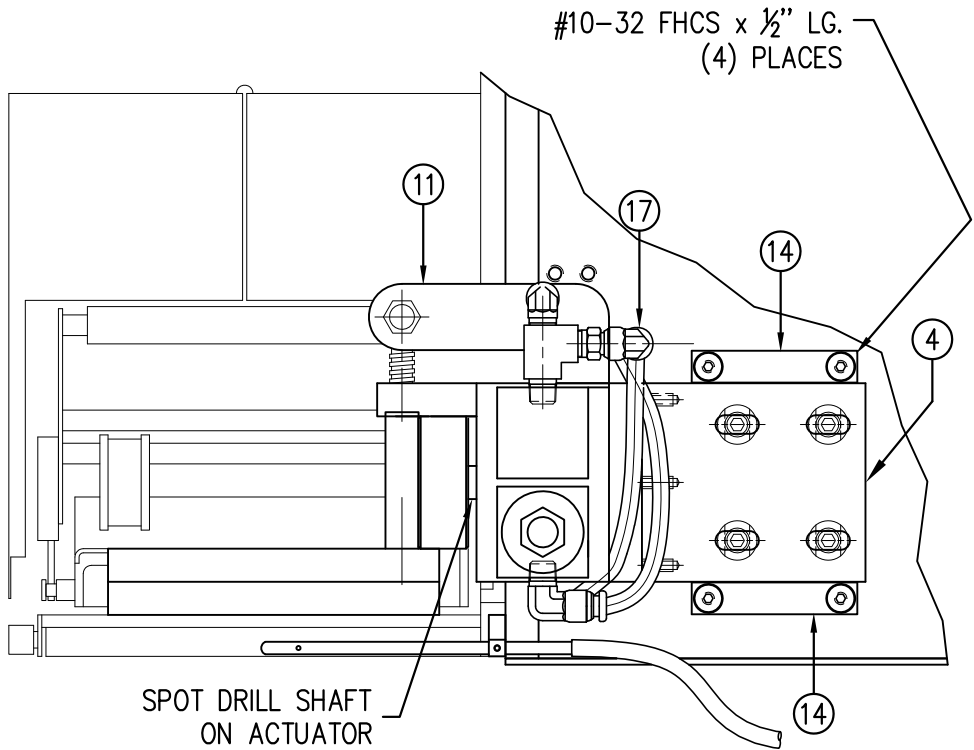
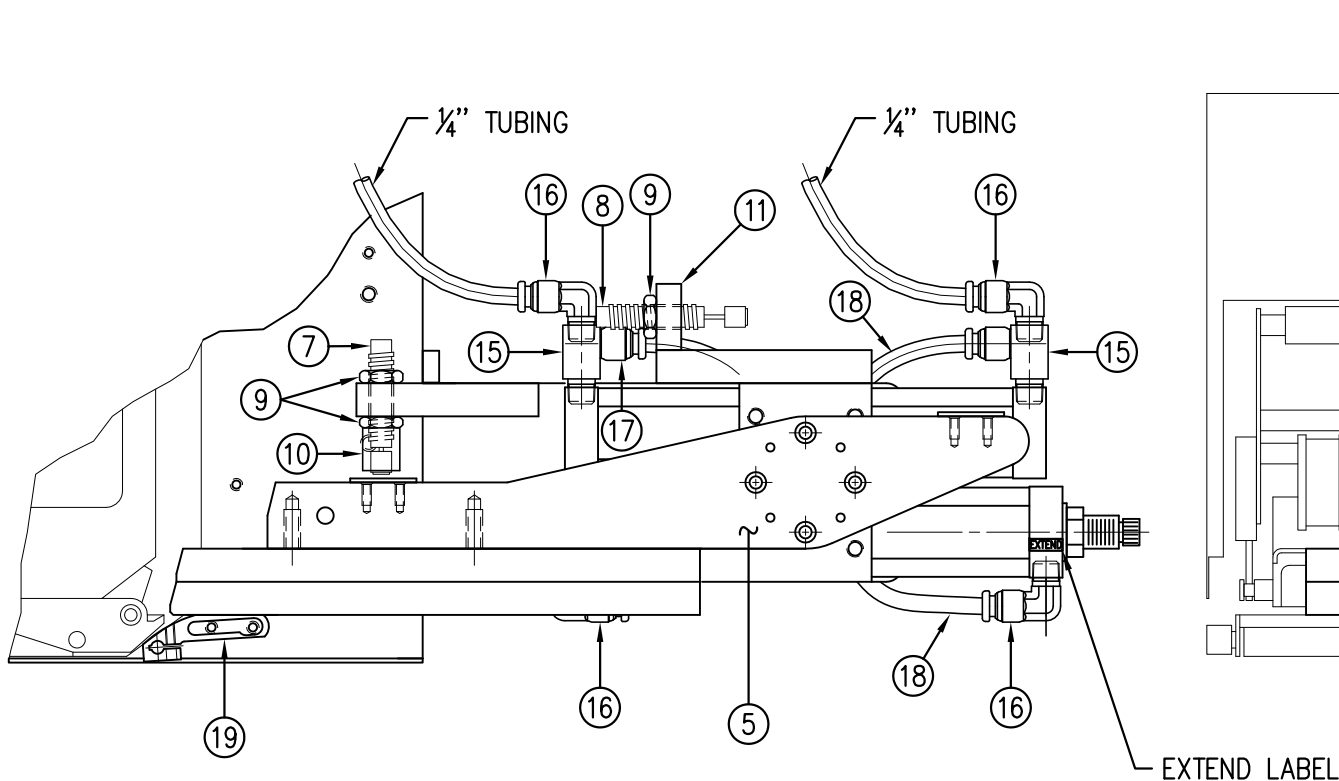
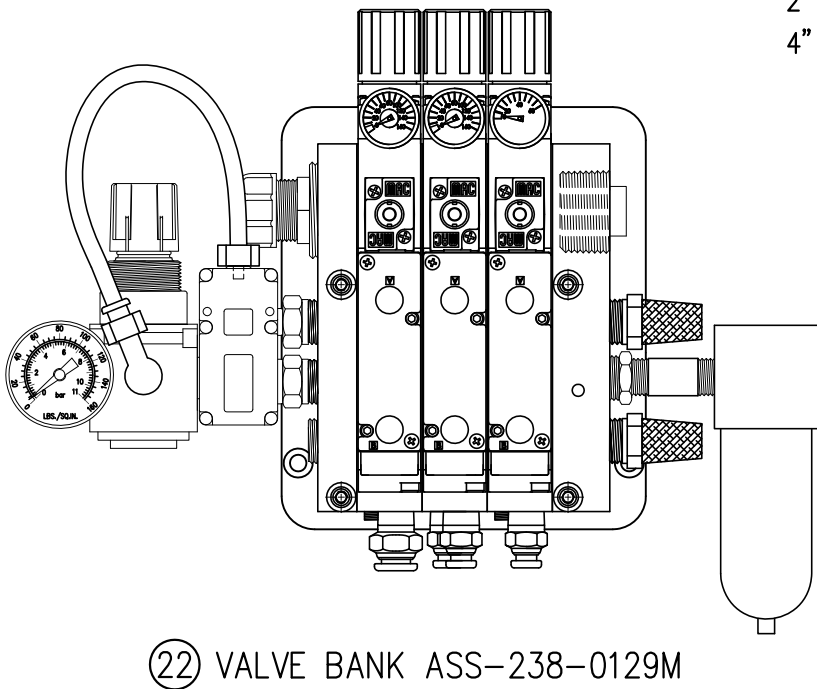
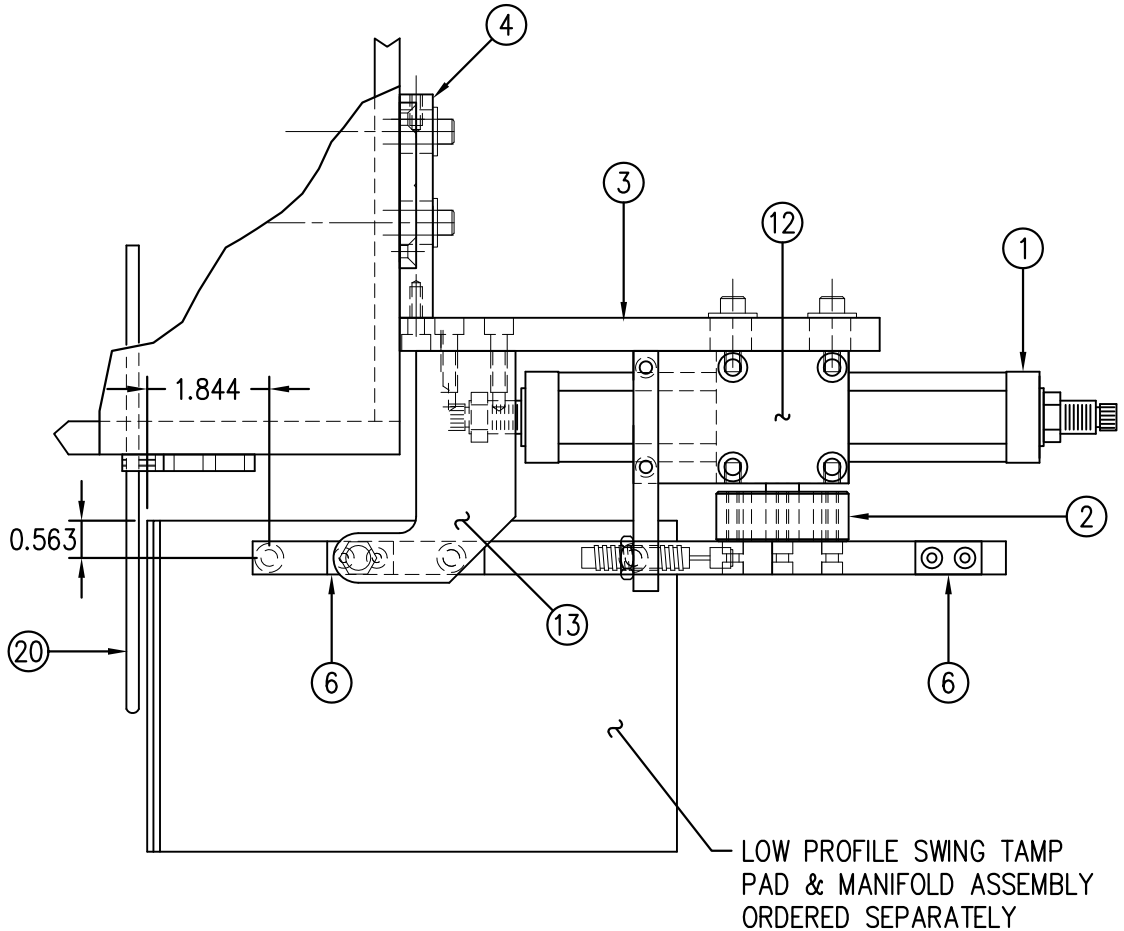
Dept. Code: 70  
F:\Engineering\Standard Parts\Applcator\3600 SERIES\CTM-238aR-XCWS-12S-XX

BILL OF MATERIAL				SOLD
ASSEMBLY	MOD-238-0126R/L-X			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
	1	SWING TAMP ASSEMBLY	ASS-238-0126R/L-X	S
(19)	1	AIR ASSIST TUBE HOLDER	MP-238-0242	.
(20)	1	AIR ASSIST TUBE (5" OR 7" LG.)	MP-211-0217-X	.
(21)	1	AIR ASSIST TUBING x 15" Lg.	PM-AH1000	S
(22)	1	3600 TAMP VALVE BANK	ASS-238-0129M	.
(23)	1	VALVE MOUNTING PLATE	MP-214-0206	.
(24)	1	VALVE FASTENING PLATE	MP-238-0238	.
(25)	1	VALVE NUT PLATE	MP-238-0239	.
(26)	1	1/4 O.D. SMC TUBING x 60" Lg. (CUT TO SUIT)	PM-PT1070	S
(27)	1	3/8" O.D. SMC TUBING x 33" Lg. (CUT TO SUIT)	PM-PT1080	S
(28)	3	FITTING, 1/4 NPT TO 1/4 TUBE	PM-PF1010	.
(29)	2	FITTING, 1/4 NPT TO 3/8 TUBE	PM-PF1020	.
(30)	1	FTG, 1/4 NPT TO 1/4 TUBE 90° SWIVEL	PM-PF1035	.
(31)	1	1/4 PIPE NIPPLE	PM-PF1145	.
(32)	1	1/4 NPT MALE 90° ELBOW	PM-PF1175	.
(33)	1	1/4 NPT PLUG	PM-FT1200	.

BILL OF MATERIAL				SOLD
ASSEMBLY	ASS-238-0126R/L-X			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
(1)	1	ROTARY ACTUATOR	PM-AC1250	S
(2)	1	ROTARY ACTUATOR HUB	MP-214-0211	.
(3)	1	ACTUATOR MOUNT (STD, 2 & 4 O.S.)	MP-238-0267-X	.
(4)	1	ASSEMBLY MOUNT PLATE	MP-238-0266	.
(5)	1	SWING ARM (STD, 2 & 4 O.S.)	MP-214-0217-X	.
(6)	2	SHOCK STRIKE PLATE	PM-214-0210	.
(7)	1	SHOCK ABSORBER-LIGHT DUTY	PM-SA0990	.
(8)	1	SHOCK ABSORBER-HEAVY DUTY	PM-SA1000	.
(9)	3	LOCK NUT (FOR LIGHT DUTY SHOCK)	MP-214-0242	.
(10)	1	STOP COLLAR	PM-C01040	.
(11)	1	EXTEND SHOCK MOUNT	MP-214-0214	.
(12)	1	EXTEND SHOCK/ACTUATOR TRANSITION PLATE	MP-214-0215	.
(13)	1	HOME SHOCK MOUNT	MP-238-0265	.
(14)	2	TAMP GUIDE	MP-238-0241	.
(15)	2	1/8 NPT STREET TEE: (1) MALE, (2) FEMALE	PM-PF1205	.
(16)	4	90 MALE ELBOW; 1/8 NPT to 1/4 TUBE	PM-PF1050	.
(17)	2	90 EL. SWIVEL; 1/8NPT to 1/4 TUBE	PM-PF1030	.
(18)	2	1/4" DIA. TUBING x 8" LG.	PM-PT1070	.
	4	SHCS, 1/4-20 x 7/8" LG.	PM-FASH430079	.
	4	FLAT WASHER, 1/4 NOM.	NONE	.
	1	1/8" X 5/8" Lg. KEY	PM-FAKS30503	.
	2	1/8" X 5/8" Lg SS DOWEL PIN	PM-PADP2570	.

MOD ALSO INCLUDES  
ITEMS (21) THRU (33)  
WHICH ARE NOT SHOWN

RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-



MOD-238-0126R/L-X

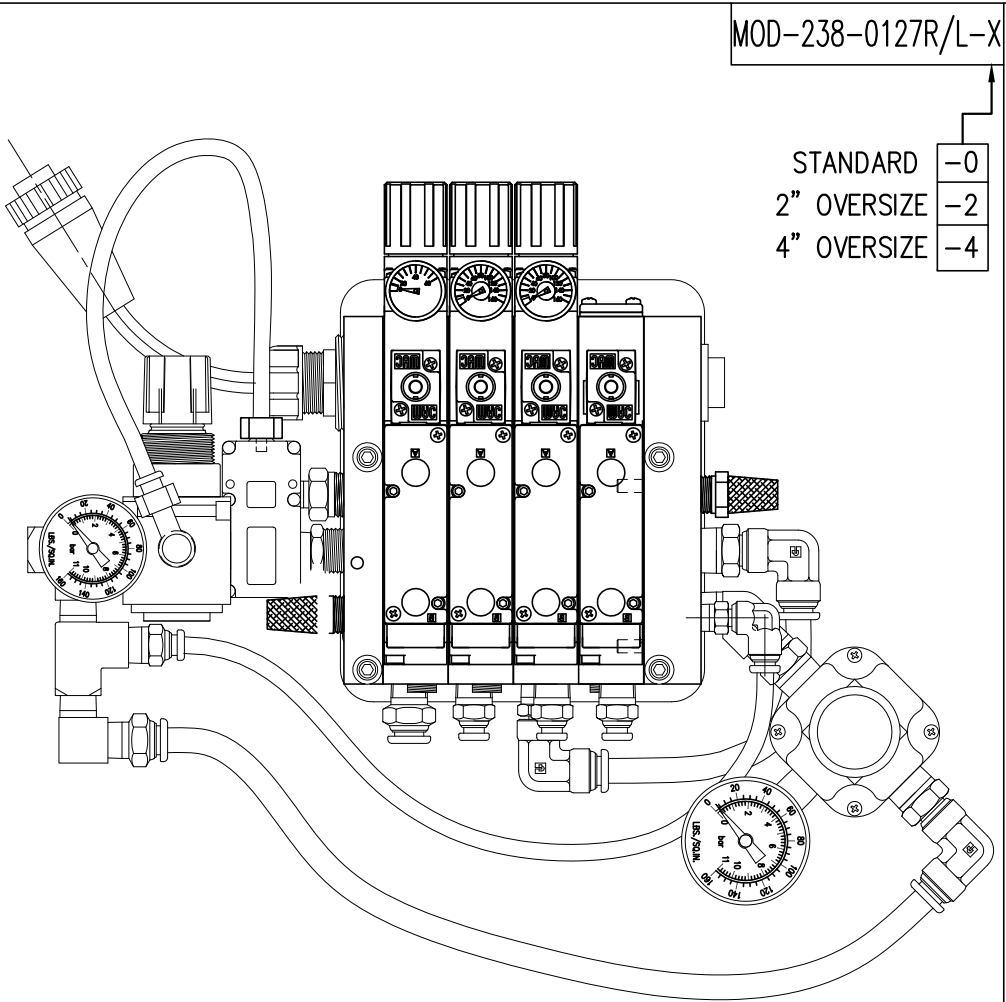
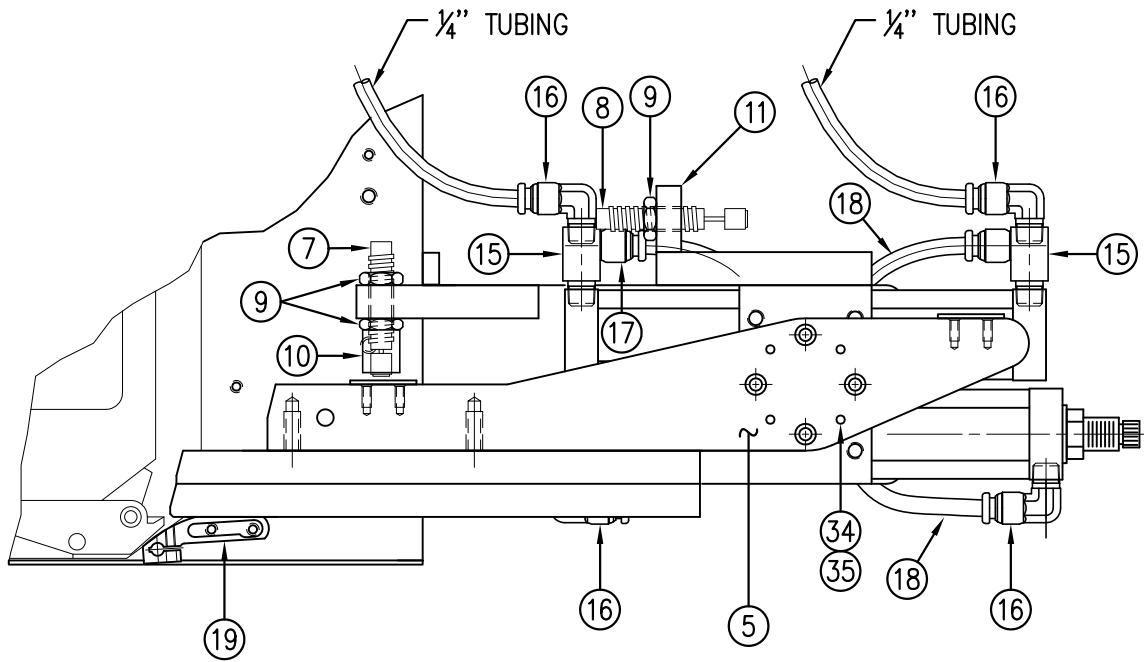
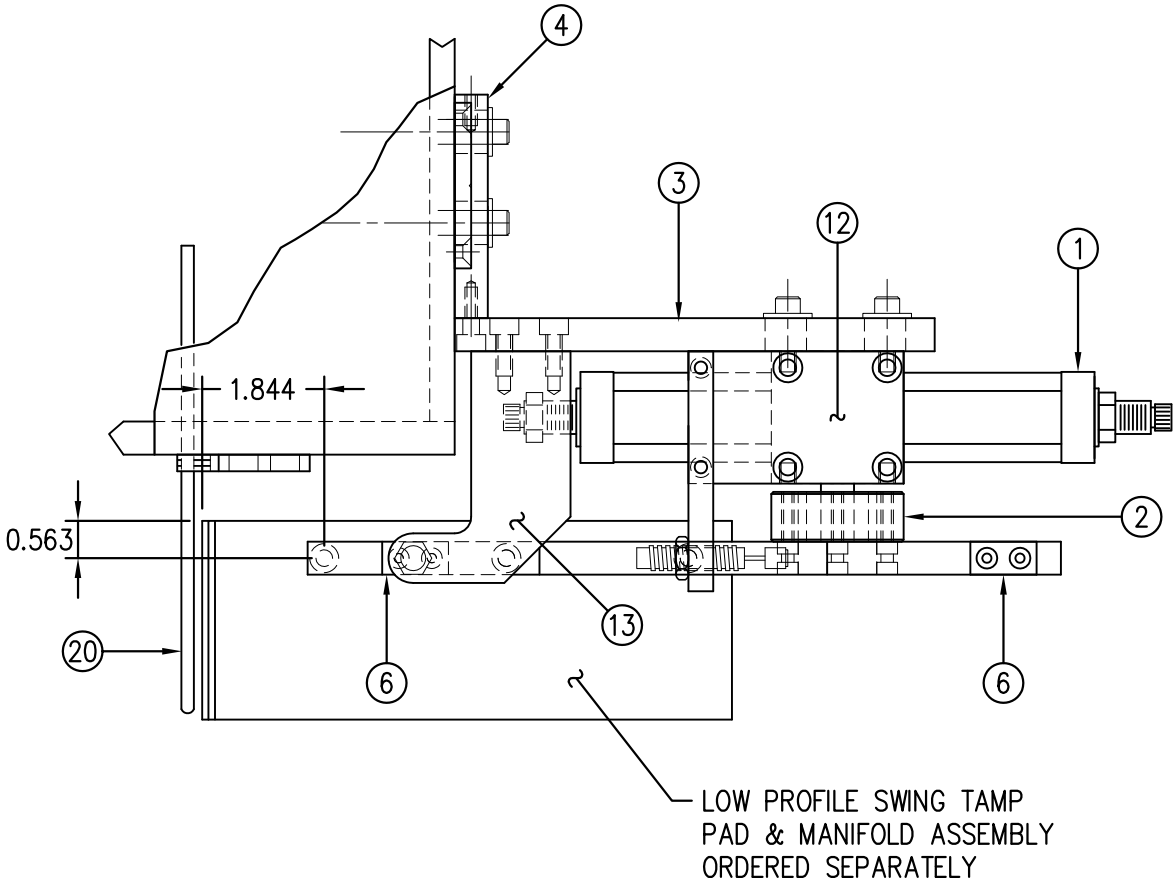
STANDARD -0  
2" OVERSIZE -2  
4" OVERSIZE -4

BILL OF MATERIAL				SOLD
ASSEMBLY	MOD-238-0127R/L-X			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
	1	SWING TAMP ASSEMBLY	ASS-238-0126R/L-X	S
(19)	1	AIR ASSIST TUBE HOLDER	MP-238-0242	.
(20)	1	AIR ASSIST TUBE (5" OR 7" LG.)	MP-211-0217-X	.
(21)	1	AIR ASSIST TUBING x 15" Lg.	PM-AH1000	S
(22)	1	CORNER WRAP SWING TAMP VALVE BANK	ASS-214-0111RM/LM	.
(23)	1	VALVE MOUNTING PLATE	MP-214-0206	.
(24)	1	VALVE FASTENING PLATE	MP-238-0238	.
(25)	1	VALVE NUT PLATE	MP-238-0239	.
(26)	1	1/4 O.D. SMC TUBING x 60" Lg. (CUT TO SUIT)	PM-PT1070	S
(27)	1	3/8" O.D. SMC TUBING x 33" Lg. (CUT TO SUIT)	PM-PT1080	S
(28)	3	FITTING, 1/4 NPT TO 1/4 TUBE	PM-PF1010	.
(29)	2	FITTING, 1/4 NPT TO 3/8 TUBE	PM-PF1020	.
(30)	1	FTG, 1/4 NPT TO 1/4 TUBE 90° SWIVEL	PM-PF1035	.
(31)	1	1/4 PIPE NIPPLE	PM-PF1145	.
(32)	1	1/4 NPT MALE 90° ELBOW	PM-PF1175	.
(33)	1	1/4 NPT PLUG	PM-FT1200	.
(34)	1	1/8" X 5/8" Lg. KEY	PM-FAKS30503	.
(35)	1	1/8" X 5/8" Lg SS DOWEL PIN	PM-PADP2570	.

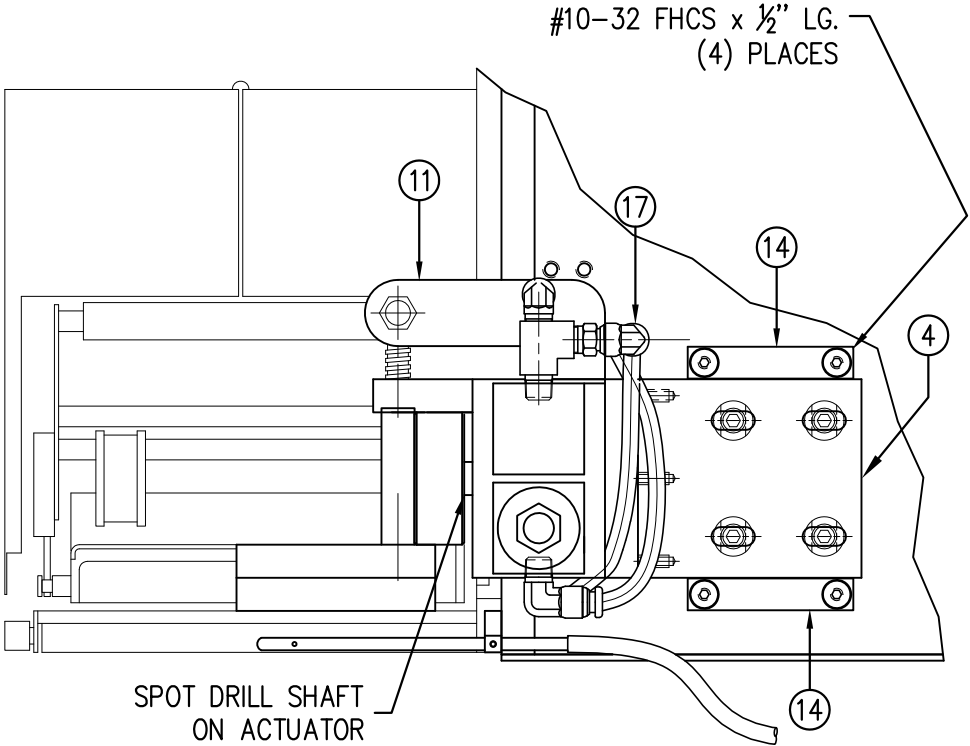
BILL OF MATERIAL				SOLD
ASSEMBLY	ASS-238-0126R/L-X			S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
(1)	1	ROTARY ACTUATOR	PM-AC1250	S
(2)	1	ROTARY ACTUATOR HUB	MP-214-0211	.
(3)	1	ACTUATOR MOUNT (STD, 2 & 4 O.S.)	MP-238-0267-X	.
(4)	1	ASSEMBLY MOUNT PLATE "LOW PROFILE" REVISION 4	MP-238-0266	.
(5)	1	SWING ARM (STD, 2 & 4 O.S.)	MP-214-0217-X	.
(6)	2	SHOCK STRIKE PLATE	PM-214-0210	.
(7)	1	SHOCK ABSORBER-LIGHT DUTY	PM-SA0990	.
(8)	1	SHOCK ABSORBER-HEAVY DUTY	PM-SA1000	.
(9)	3	LOCK NUT (FOR LIGHT DUTY SHOCK)	MP-214-0242	.
(10)	1	STOP COLLAR	PM-C01040	.
(11)	1	EXTEND SHOCK MOUNT	MP-214-0214	.
(12)	1	EXTEND SHOCK/ACTUATOR TRANSITION PLATE	MP-214-0215	.
(13)	1	HOME SHOCK MOUNT	MP-238-0265	.
(14)	2	TAMP GUIDE	MP-238-0241	.
(15)	2	1/8 NPT STREET TEE: (1) MALE, (2) FEMALE	PM-PF1205	.
(16)	4	90 MALE ELBOW; 1/8 NPT to 1/4 TUBE	PM-PF1050	.
(17)	2	90 EL. SWIVEL; 1/8NPT to 1/4 TUBE	PM-PF1030	.
(18)	2	1/4" DIA. TUBING x 8" LG.	PM-PT1070	.
	4	SHCS, 1/4-20 x 7/8" LG.	NONE	.
	4	FLAT WASHER, 1/4 NOM.	NONE	.

MOD ALSO INCLUDES  
ITEMS (21) THRU (33)  
WHICH ARE NOT SHOWN

RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-



(22) VALVE BANK ASS-214-0111RM



BILL OF MATERIAL			
MOD-238-0160R/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-238-0160R/L-X	PERPENDICULAR SWING TAMP ASSEMBLY
29	1	PM-INS1010	THREADED INSERT, 1/4"-20 INT X 3/8"-24 EXT
30	1	MP-211-X217-X	AIR ASSIST TUBE - COATED
31	1	MP-238-0242	AIR ASSIST TUBE HOLDER
32	1	PM-AH1000	AIR ASSIST TUBING X 15" LONG
33	1	ASS-238-0129M	3-STATION TAMP VALVE BANK ASSEMBLY
34	1	MP-214-0206	VALVE MOUNTING PLATE
35	1	MP-238-0238	VALVE FASTENING PLATE
36	1	MP-238-0239	VALVE NUT PLATE
37	84"	PM-PT1070	1/4" SMC TUBING (CUT TO SUIT)
38	68"	PM-PT1080	3/8" SMC TUBING (CUT TO SUIT)
39	2	PM-PF1035	FTG, 1/4 TUBE X 1/8 NPT 90° MALE EL SW
40	1	PM-PF1045	FTG, 3/8 TUBE X 1/4 NPT 90° MALE EL SW
41	2	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
42	2	PM-PF1010	FTG, 1/4 TUBE X 1/4 NPT STRT
43	1	PM-PF1020	FTG, 3/8 TUBE X 1/4 NPT STRT

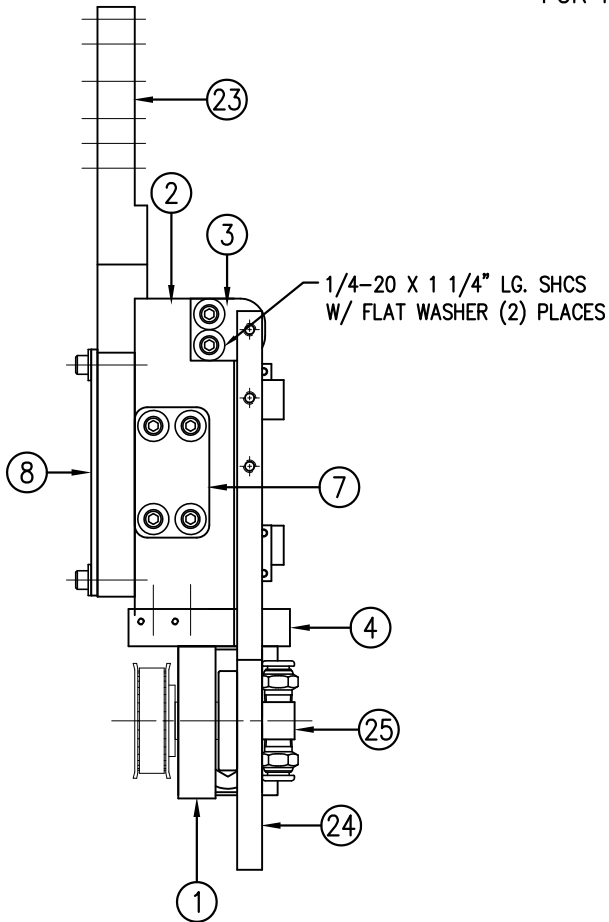
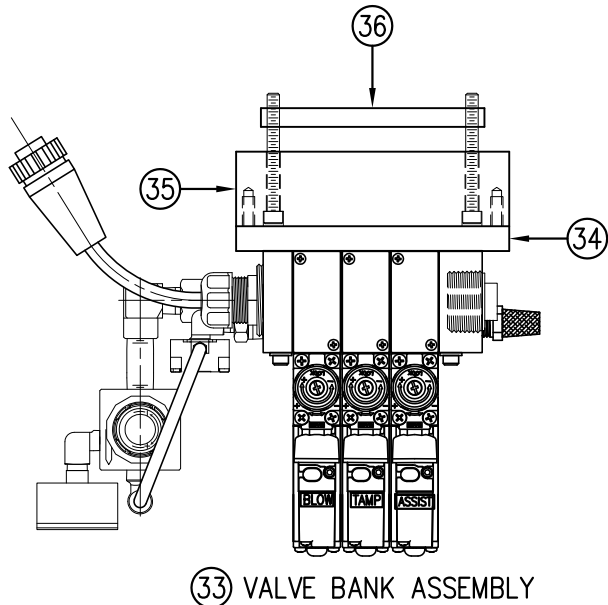
BILL OF MATERIAL			
ASS-238-0160R/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238-0160R/L	PERPENDICULAR SWING TAMP SHELF ASSEMBLY
23	1	MP-238-0301R/L-X	PERP DAT/SWING MOUNTING ARM
24	1	MP-238-0312R/L-X	DAT SWING ARM
25	1	MP-238-0313	SWING ARM AIR MANIFOLD
26	1	PM-238-0319R/L	SWING ASSEMBLY DRIVE GUARD (NOT SHOWN)
27	2	PM-214-0210	SHOCK STRIKE PLATES
28	2	PM-PF1020	3/8" TUBE X 1/4" NPT MALE CONN.

BILL OF MATERIAL			
SAS-238-0160R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	ASS-238-0141R/L	SWING ARM PIVOT ASSEMBLY
2	1	MP-238-0302R/L	SLIDE TRANSITION PLATE
3	1	MP-238-0303	SWING HOME SHOCK MOUNT
4	1	MP-238-0304R/L	ROTARY ACTUATOR MOUNT PLATE
5	1	PM-238-0305	ROTARY MOUNT NUT PLATE
6	1	PM-238-0306	ROTARY ACTUATOR NUT PLATE
7	1	PM-238-0307	SLIDE NOSE NUT PLATE
8	1	PM-238-0308	SLIDE BODY NUT PLATE
9	1	MP-238-0324	SLIDE DUMMY BLOCK
10	1	MP-238-0316	GUARD SUPPORT
11	1	MP-238-0318	ROTARY ACTUATOR PULLEY
12	1	PM-AC1248	ROTARY ACTUATOR
13	1	PM-SA1000	MC25H SWING EXTEND SHOCK
14	1	PM-SA0990	MC25L SWING HOME SHOCK
15	1	PM-C01040	SHOCK STOP COLLAR
16	2	MP-214-0242	LOCK NUT FOR MC25L SHOCK
17	1	PM-BELT1039	SWING ARM TIMING BELT
18	2	PM-PF1203	1/8" NPT BRANCH TEE
19	4	PM-PF1005	FITTING, 1/4 TUBE X 1/8 NPT STRT
20	2	PM-PF1050	FITTING, 1/4" TUBE X 1/8" NPT ELBOW
21	2	PM-PF1180	90deg. STREET ELBOW, 1/8" NPT female to 1/8" NPT male
22	2	PM-PT1070	1/4" OD SMC TUBING X 7" LG.

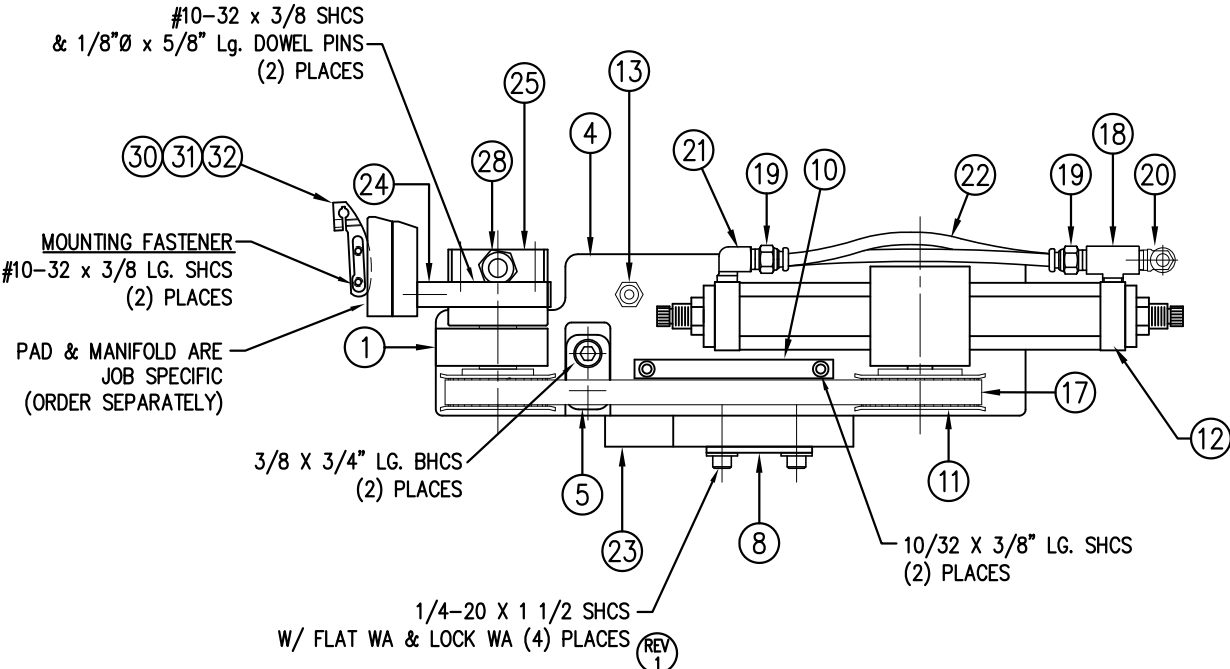
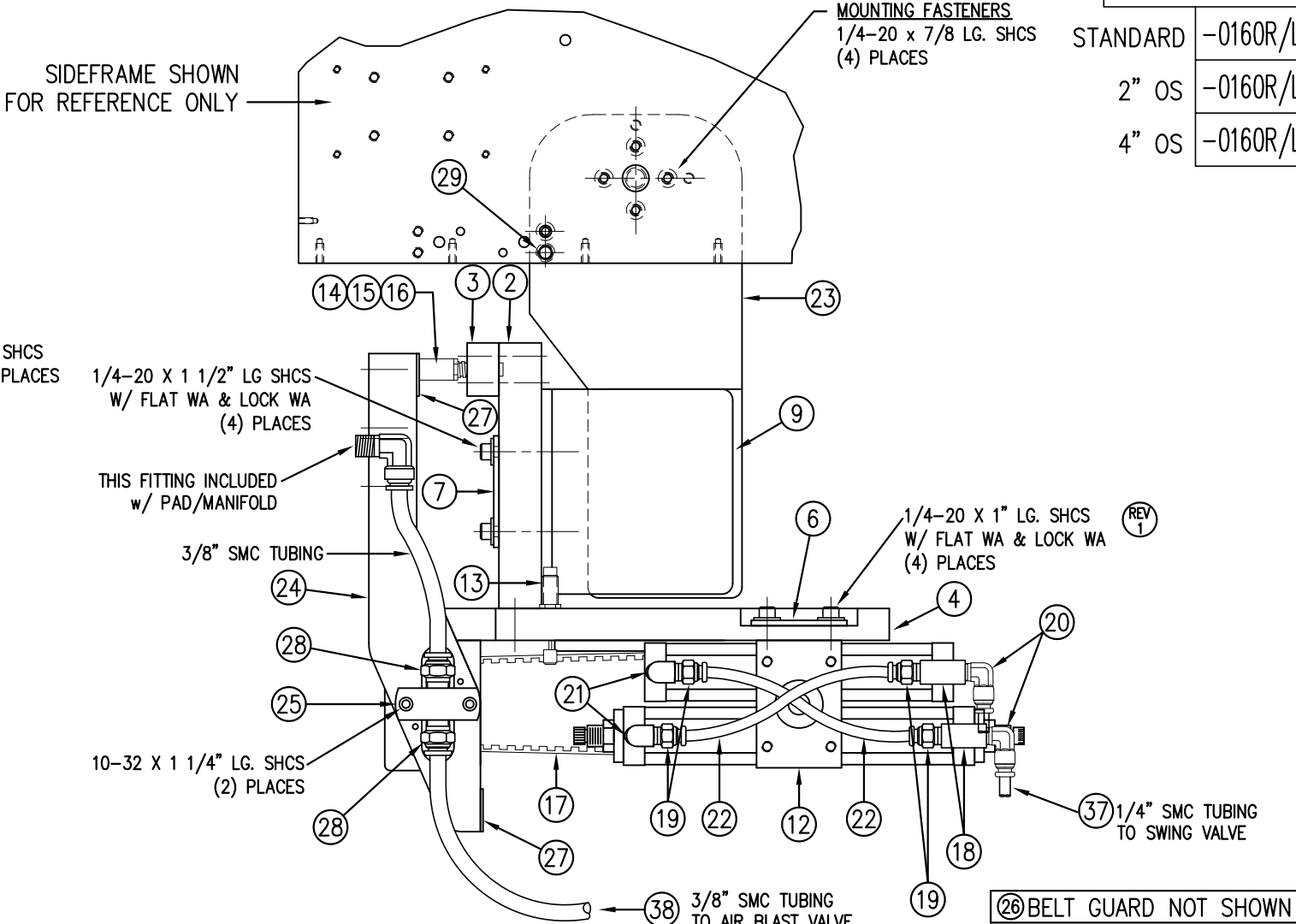
MOD ALSO INCLUDES  
ITEMS 39 THRU 43  
WHICH ARE NOT SHOWN.

DISPENSE SIDE  
MANIFOLD  
1 EA. MANIFOLD  
VALVE SIDE  
MANIFOLD

REV 1

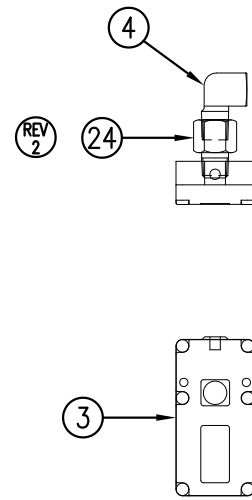
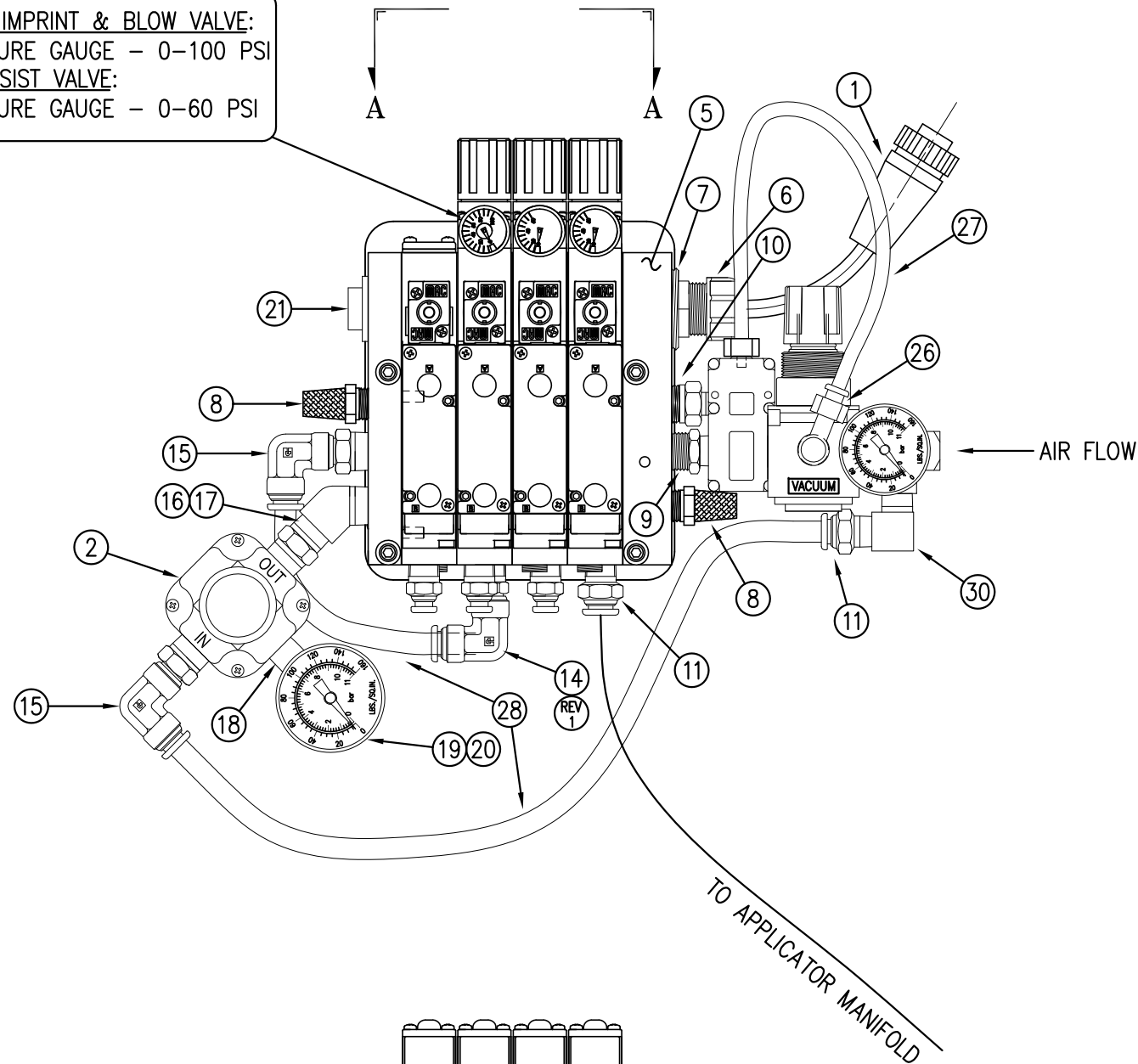


RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-

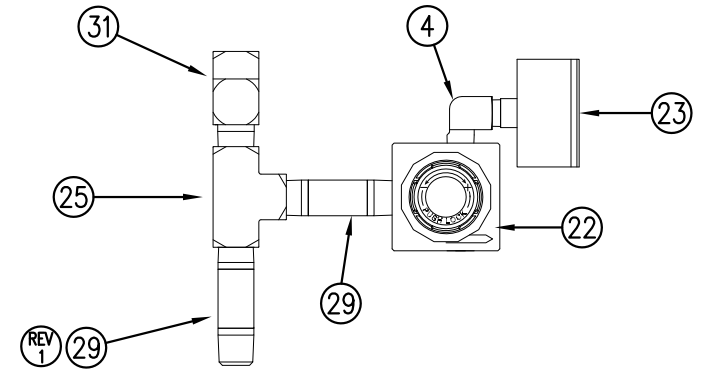


MOD-238-0160R/L-X	
ASS-238-0160R/L-X	
SAS-238-0160R/L	
STANDARD	-0160R/L-0
2" OS	-0160R/L-2
4" OS	-0160R/L-4

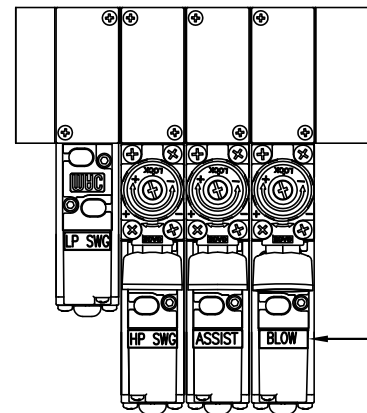
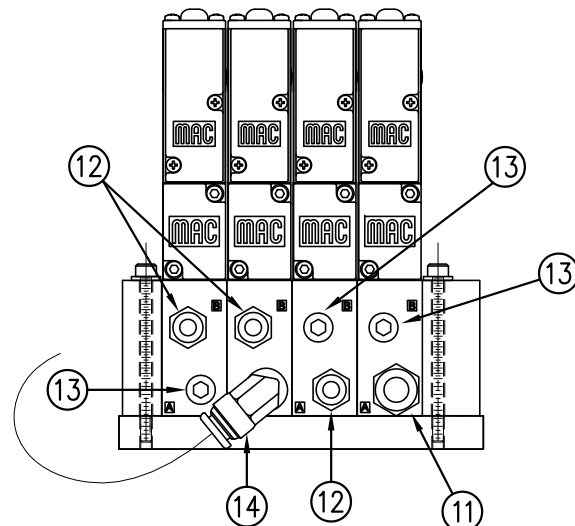
TAMP, IMPRINT & BLOW VALVE:  
PRESSURE GAUGE - 0-100 PSI  
AIR ASSIST VALVE:  
PRESSURE GAUGE - 0-60 PSI



VAC PUMP AND FITTING



REGULATOR AND FITTINGS



END VIEW "A"  
(VALVE BANK ONLY)

SELF ADHESIVE LABELS

**\*\*MOUNTING PLATES NOT INCLUDED IN ASSEMBLY\*\***  
MP-214-0206, MP-238-0238 & MP-238-0239

WORK THIS WITH DRAWING ASS-200-0518L

BILL OF MATERIAL

ASS-214-0111LM

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200-0452M	VALVE CABLE
②	1	PM-REG1535	PRECISION REGULATOR
③	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
④	2	PM-PF1180	NPT 90° STREET ELBOW 1/8" FEMALE TO 1/8" MALE
⑤	1	PM-VA2330M	VALVE BANK
⑥	1	PE-CO2000	CORD GRIP
⑦	1	PE-COND1084	STEEL REDUCER
⑧	2	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑨	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑩	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑪	2	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑫	3	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑬	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑭	1	PM-PF1045	1/4" NPT to 3/8" TUBE 90° ELBOW
⑮	2	PM-PF1046	3/8" TUBE TO 3/8" NPT SWIVEL, 90°
⑯	1	PM-PF1118	45° STREET ELBOW, NPT 3/8" MALE TO 3/8" FEMALE
⑰	1	PM-PF1159	3/8" to 3/8" HEX. NIPPLE
⑱	1	PM-PF1125	1/4" NPT X 7/8" LG. NIPPLE
⑲	1	PM-PF1175	90° ELBOW 1/4" NPT FEMALE TO 1/4" NPT FEMALE
⑳	1	PM-VA2383	GAUGE FOR PM-REG1535
㉑	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
㉒	1	PM-REG1500	WATTS REGULATOR
㉓	1	PM-VA2384	0-160 PSI PRESSURE GAUGE
㉔	1	PM-PF1216	ADAPTER, 1/8 NPT MALE/FEMALE
㉕	1	PM-PF1200	STREET TEE 1/4" FEMALE-3 ENDS
㉖	1	PM-PF1055	FITTING, 1/4" TUBE to 1/4" NPT ELBOW
㉗	12"	PM-PT1070	1/4" OD TUBING
㉘	24"	PM-PT1080	3/8" O.D. POLYURETHANE TUBING (CUT TO SUIT)
㉙	2	PM-PF1145	1/4" NPT X 2.00" LG. NIPPLE
㉚	1	PM-PF1185	90° ELBOW NPT 1/4" FEMALE TO 1/4" MALE
㉛	1	PM-PF1210	STREET TEE 1/4" MALE TO 1/4" FEMALE-2 ENDS
○	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
○	4	PM-FAW30265	#10 SS FLAT WASHER

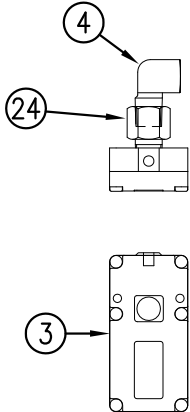
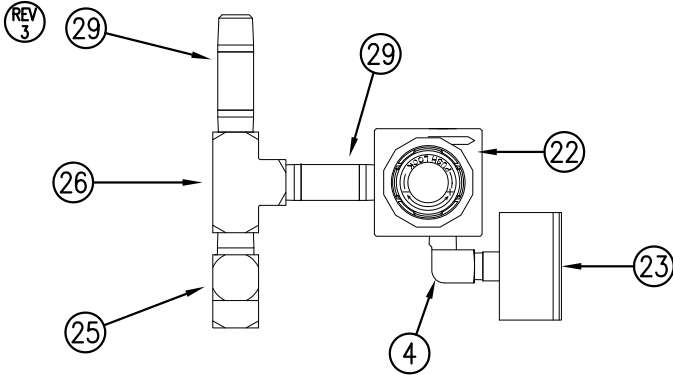
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VALVE BANK SPARE PARTS:  
ALL 24 VDC VALVES LESS BASE: #PM-VA2395M  
AIR ASSIST REGULATOR W/GUAGE: #PM-VA2396M  
BLOW/TAMP/IMPRINTER REGULATORS W/GUAGE: #PM-VA2397M  
AIR ASSIST REGULATOR GUAGE: #PM-VA2382M  
BLOW/TAMP/IMPRINTER REGULATOR GUAGE: #PM-VA2380M

TAMP & BLOW VALVE:  
PRESSURE GAUGES: 0-100 PSI  
AIR ASSIST VALVE:  
PRESSURE GAUGE: 0-60 PSI

REGULATOR AND FITTINGS

VAC PUMP AND FITTINGS



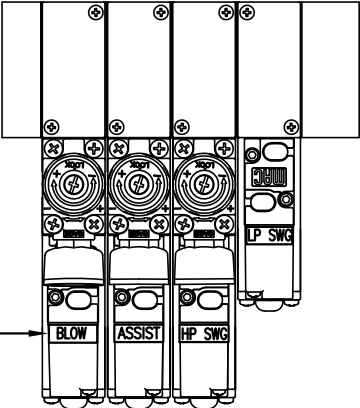
BILL OF MATERIAL

ASS-214-0111RM

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	ASS-200-0452M	VALVE CABLE
2	1	PM-REG1535	PRECISION REGULATOR
3	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
4	2	PM-PF1180	NPT 90° STREET ELBOW 1/8" FEMALE TO 1/8" MALE
5	1	PM-VA2332M	VALVE BANK
6	1	PE-CO2000	CORD GRIP
7	1	PE-COND1084	STEEL REDUCER
8	2	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
9	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
10	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
11	2	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
12	4	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
13	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
14	1	PM-PF1045	1/4" NPT to 3/8" TUBE 90° ELBOW, SWIVEL
15	2	PM-PF1046	3/8" TUBE to 3/8" NPT SWIVEL, 90°
16	1	PM-PF1118	45° STREET ELBOW, NPT 3/8" MALE to 3/8" FEMALE
17	1	PM-PF1159	3/8" to 3/8" HEX. NIPPLE
18	1	PM-PF1125	1/4" NPT X 7/8" LG. NIPPLE
19	1	PM-PF1175	90° ELBOW 1/4" NPT FEMALE TO 1/4" NPT FEMALE
20	1	PM-VA2383	GAUGE FOR PM-REG1535
21	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
22	1	PM-REG1500	WATTS REGULATOR
23	1	PM-VA2384	0-160 PSI PRESSURE GAUGE
24	1	PM-PF1216	ADAPTER, 1/8 NPT MALE/FEMALE
25	2	PM-PF1210	STREET TEE 1/4" MALE TO 1/4" FEMALE-2 ENDS
26	1	PM-PF1200	STREET TEE 1/4" FEMALE-3 ENDS
27	1	PM-PF1055	FITTING, 1/4" TUBE to 1/4" NPT ELBOW
28	1	PM-PF1030	90° ELBOW 1/4" TUBE to 1/8" MALE NPTF, SWIVEL
29	2	PM-PF1145	1/4" NPT X 2" LG. NIPPLE
30	10.5"	PM-PT1070	1/4" OD TUBING
31	14"	PM-PT1080	3/8" O.D. POLYURETHANE TUBING (CUT TO SUIT)
32	1	PM-PF1185	90° ELBOW NPT 1/4" FEMALE TO 1/4" MALE
33	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
34	4	PM-FAW30265	#10 SS FLAT WASHER

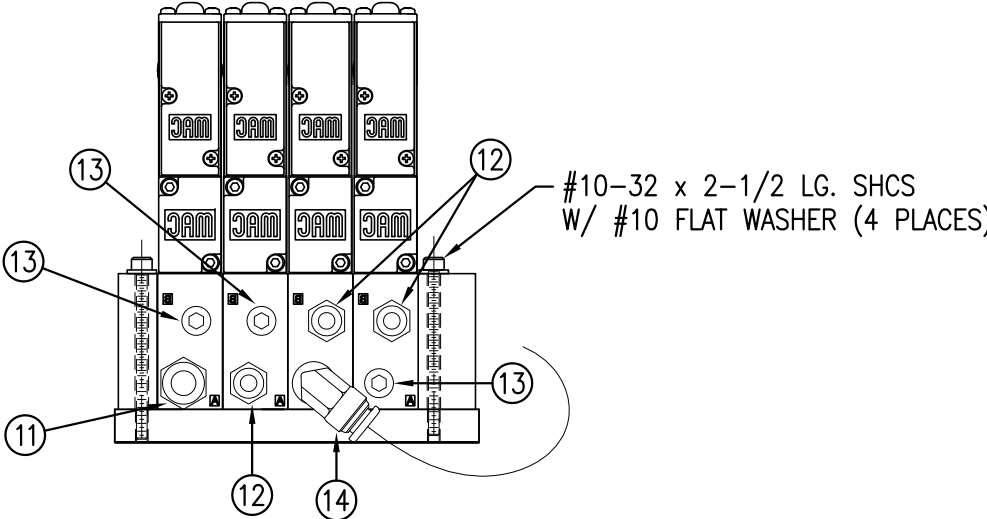
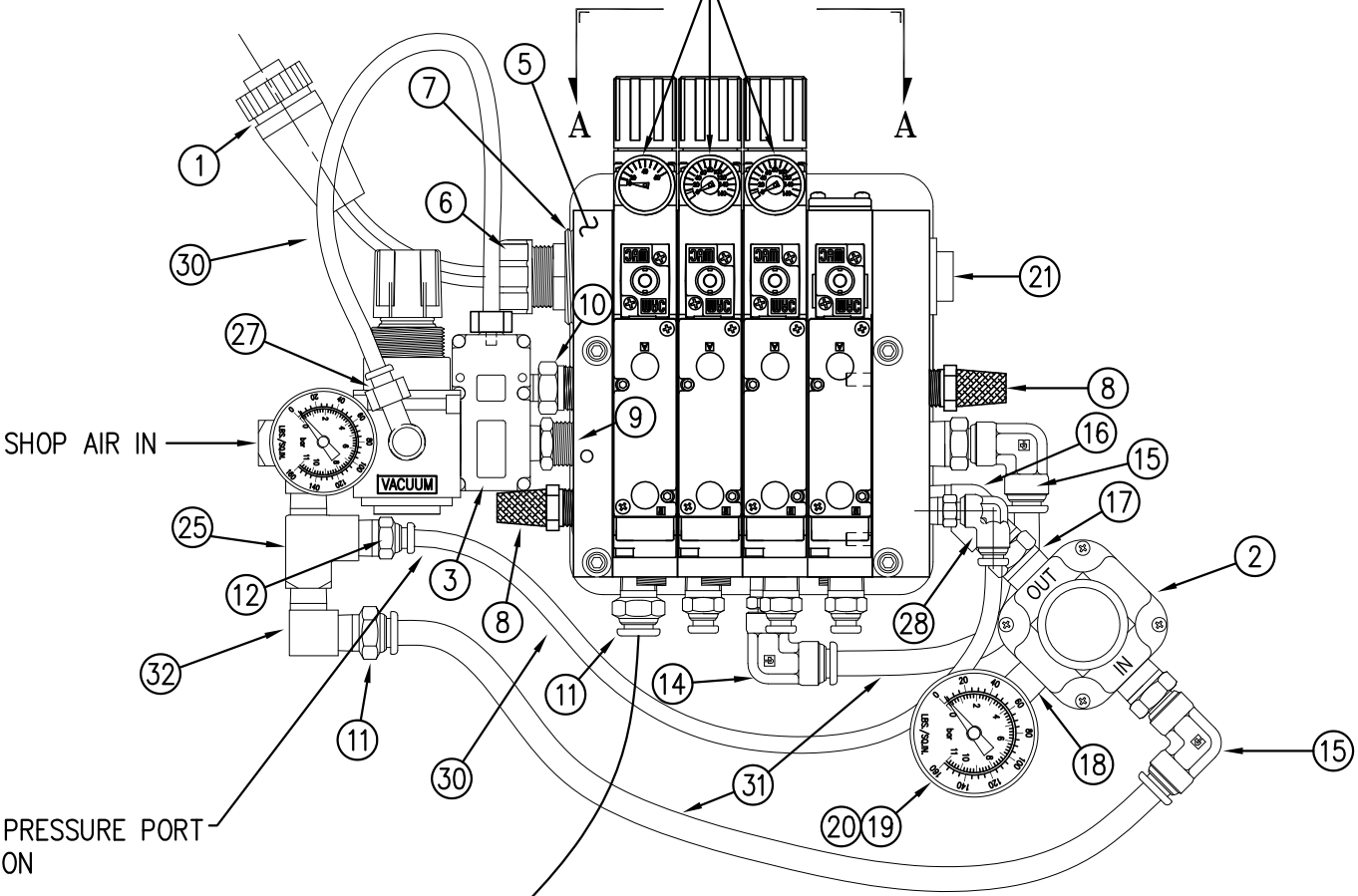
\*\*\*AIR SUPPLIED TO OTHER SIDE DUE TO BLOCKING DISCS IN PRESSURE PORT  
SEE ASS-200-0518RM & PM-VA2332M FOR MORE INFORMATION

SELF ADHESIVE LABELS



END VIEW "A"  
(VALVE BANK ONLY)

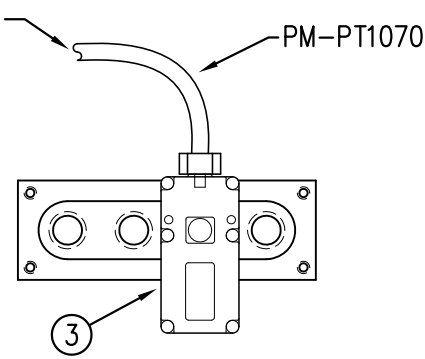
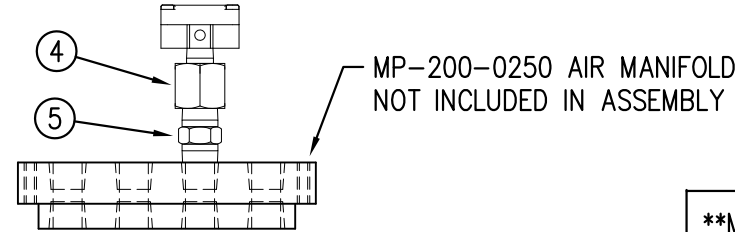
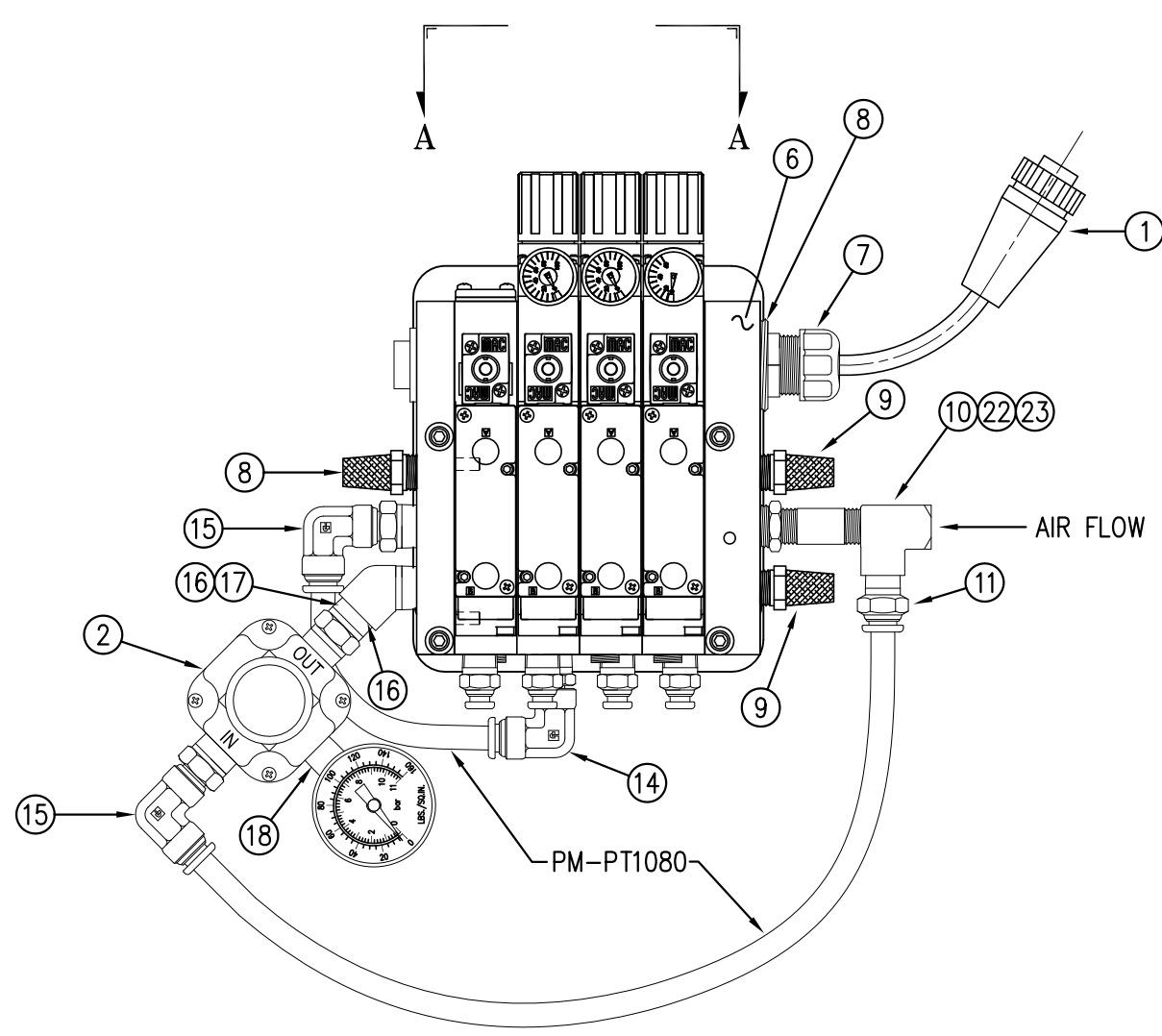
\*\*MOUNTING PLATES NOT INCLUDED IN ASSEMBLY\*\*  
MP-214-0206, MP-238-0238 & MP-238-0239



#10-32 x 2-1/2 LG. SHCS  
W/ #10 FLAT WASHER (4 PLACES)

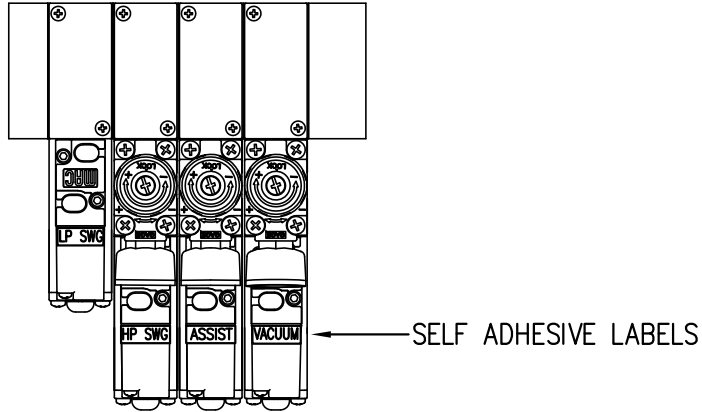
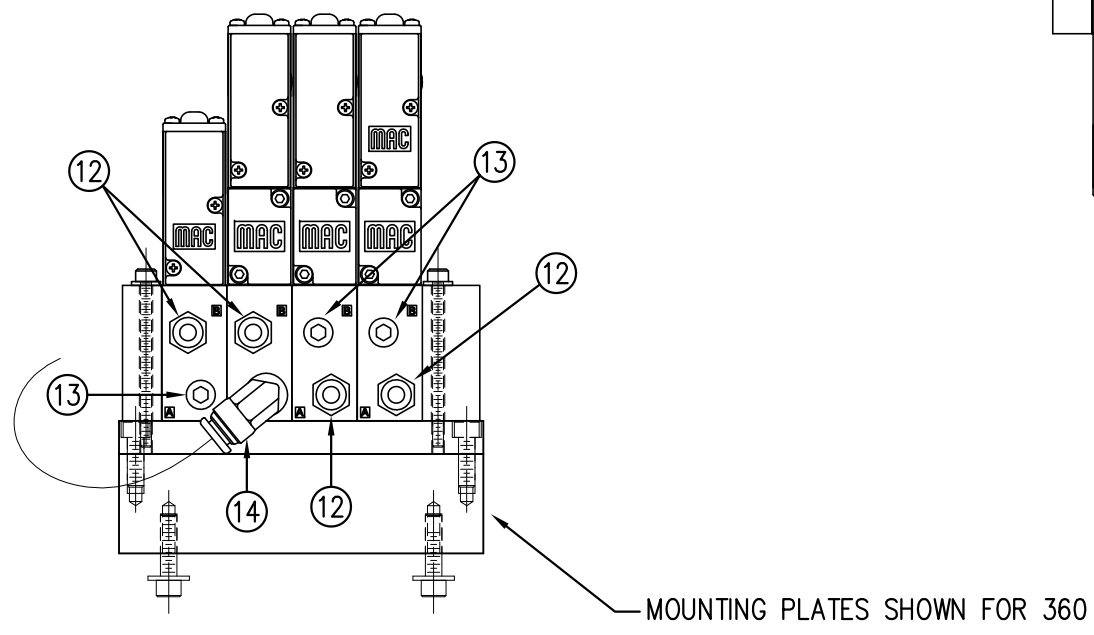
WORK THIS WITH DRAWING ASS-200-0518RM





**\*\*MOUNTING PLATES NOT INCLUDED IN ASSEMBLY\*\***  
FOR 360: MP-214-0206 & MP-214-0202  
FOR 3600: MP-214-0206 & MP-238-0238  
& MP-238-0239

**VALVE BANK SPARE PARTS:**  
SOLENOID: #PM-VA2395M  
VACUUM REGULATOR W/GUAGE: #PM-VA2396M  
BLOW/TAMP/ASSIST REGULATORS W/GUAGE: #PM-VA2397M  
VACUUM REGULATOR GUAGE: #PM-VA2382M  
BLOW/TAMP/ASSIST REGULATOR GUAAGES: #PM-VA2380M

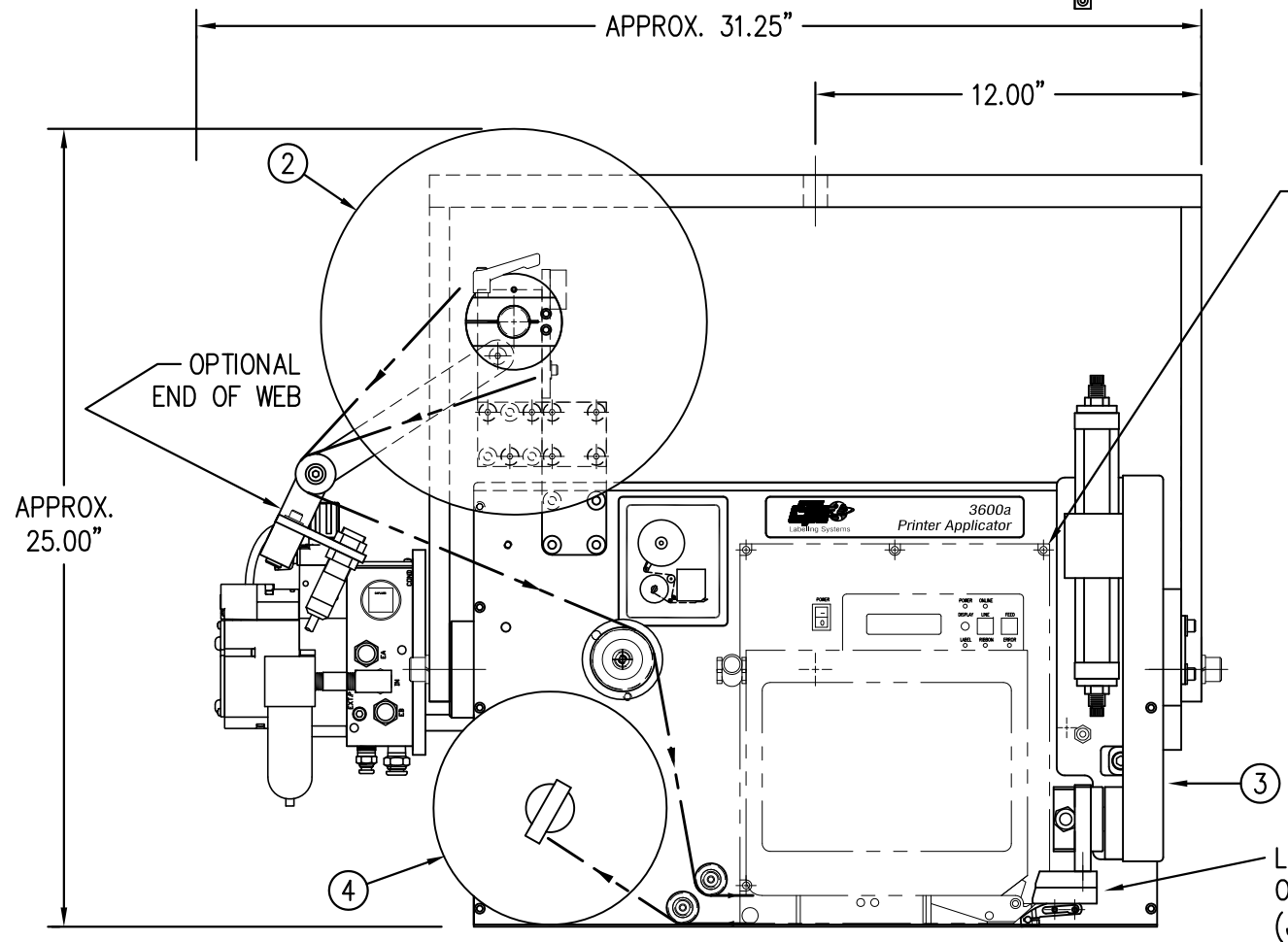
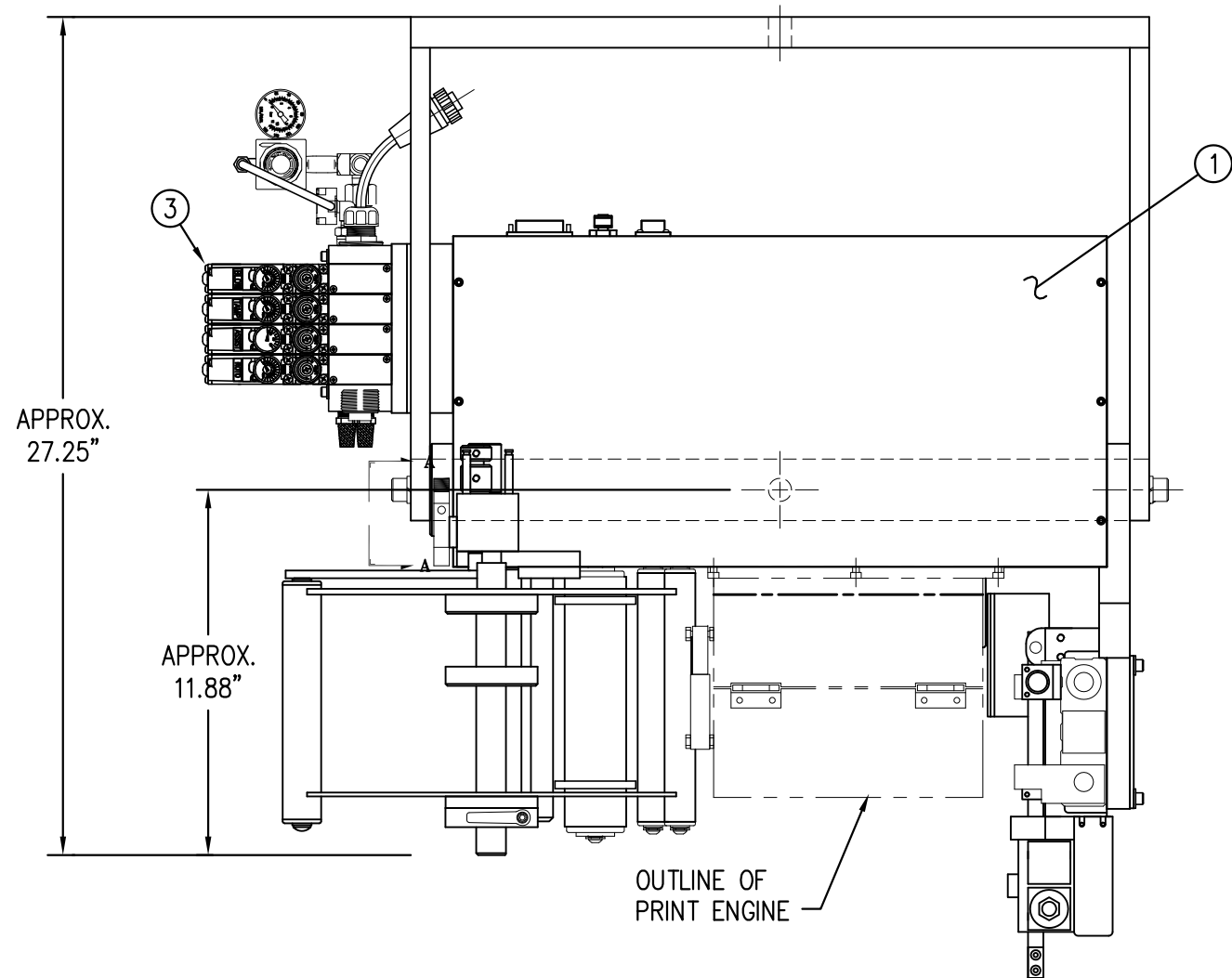


BILL OF MATERIAL  
ASS-214-0112LM

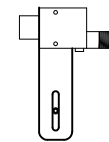
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200-0452M	VALVE CABLE
②	1	PM-REG1535	PRECISION REGULATOR
③	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
④	1	PM-PF1217	FITTING ADAPTOR 1/4" FEMALE TO 1/8" MALE
⑤	1	PM-PF1153	FITTING, HEX NIPPLE 1/4" NPT w/ 9/16" HEX
⑥	1	PM-VA2330M	VALVE BANK
⑦	1	PE-C02000	CORD GRIP
⑧	1	PE-COND1084	STEEL REDUCER
⑨	3	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑩	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑪	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑫	4	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑬	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑭	1	PM-PF1060	1/4" NPT to 3/8" TUBE 90° ELBOW
⑮	2	PM-PF1046	3/8" TUBE to 3/8" NPT SWIVEL, 90°
⑯	1	PM-PF1118	45° STREET ELBOW, NPT 3/8" MALE to 3/8" FEMALE
⑰	1	PM-PF1159	3/8" to 3/8" HEX. NIPPLE
⑱	1	PM-PF1125	1/4" NPT X 7/8" LG. NIPPLE
⑲	1	PM-PF1175	90° ELBOW 1/4" NPT FEMALE TO 1/4" NPT FEMALE
⑳	1	PM-VA2383	GAUGE FOR PM-REG1535
㉑	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
㉒	1	PM-PF1143	1/4" x 1-1/2" LG. NIPPLE
㉓	1	PM-PF1210	STREET TEE 1/4" MALE TO 1/4" FEMALE-2 ENDS
○	6"	PM-PT1070	1/4" OD TUBING
○	24"	PM-PT1080	3/8" O.D. POLYURETHANE TUBING (CUT TO SUIT)
○	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
○	4	PM-FAW30265	#10 SS FLAT WASHER







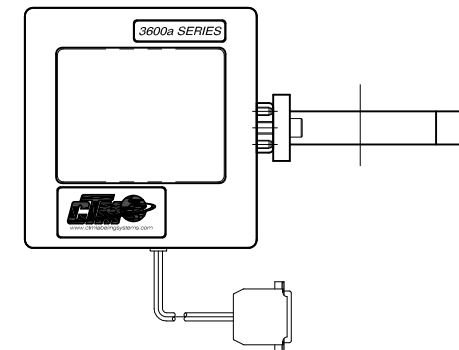
BILL OF MATERIAL			
CTM-P238aR-XDATXS-12S-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-238a-0150R-XX	3600a DAT CORE UNIT & HOUSING ASS'Y - RH
②	1	MOD-238-0122R	UNWIND MODULE with 12" DISKS - RH
③	1	MOD-238-0122AR	UNWIND MODULE with ALUMINUM DISK for "REELS UP" - RH
④	1	MOD-238-0140R	RH PERP. DAT NOSE ASSEMBLY with VALVE BANK
⑤	1	ASS-238-0144-12	REWIND ASSEMBLY FOR 12" UNWIND
⑥	1	PM-AC1237	3" STROKE TAMP SLIDE FOR DAT
	1	PM-AC1239	6" STROKE TAMP SLIDE FOR DAT
	1	PM-AC1241	8" STROKE TAMP SLIDE FOR DAT
⑥	1	SAS-238A-0124-DAT	DAT AIR MANIFOLD ASSEMBLY



SECTION A-A  
LOW LABEL SENSOR  
(ORDER AS AN OPTION)

BUSHING & LOCK COLLAR  
ONLY USED FOR REELS UP  
ORIENTATION

DISPLAY ASSEMBLY  
(LISTED IN CORE UNIT BOM)



OPTIONAL LOW LABEL

SLIDE STROKE LENGTH  
IS JOB SPECIFIC

⑤

APPROX. 23.50"

APPROX. 8.00"

CTM-P238aR-XDATXS-12S-XX

SWING ARM SIZE

STROKE LENGTH

SATO -SX

ZEBRA -ZX

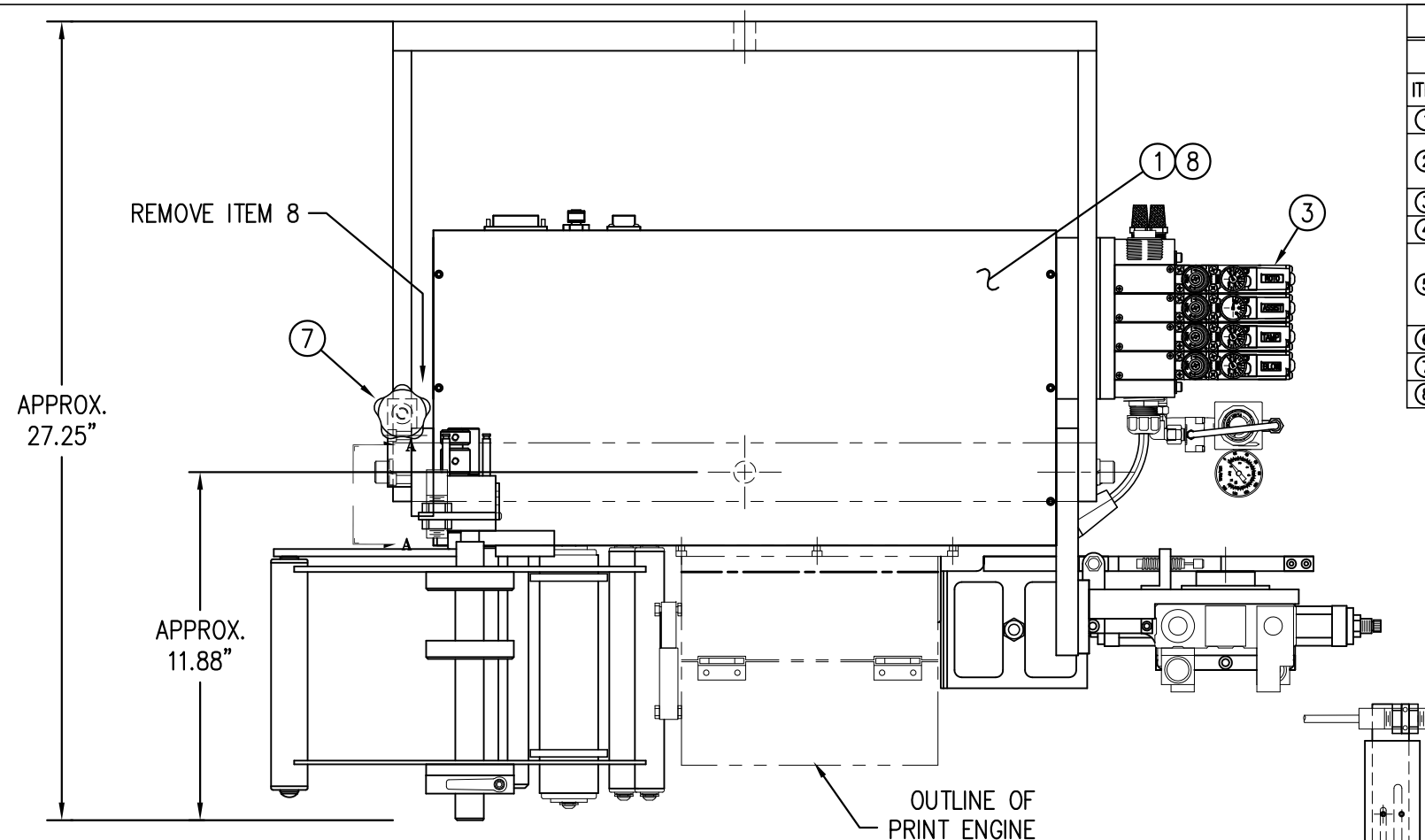
DATAMAX -DX

SERIAL -XS

PARALLEL -XP

ETHERNET -XE

USB -XU



BILL OF MATERIAL			
CTM-1238aR-XDATXS-12S-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-238a-0150R-XX	3600a DAT CORE UNIT & HOUSING ASS'Y - RH
②	1	MOD-238-0122R	UNWIND MODULE with 12" DISKS - RH
③	1	MOD-238-0122AR	UNWIND MODULE with ALUMINUM DISK for "REELS UP" - RH
④	1	MOD-238-0145R	RH IN-LINE DAT NOSE ASSEMBLY with VALVE BANK
⑤	1	ASS-238-0144-12	REWIND ASSEMBLY FOR 12" UNWIND
⑥	1	PM-AC1237	3" STROKE TAMP SLIDE FOR DAT
⑦	1	PM-AC1239	6" STROKE TAMP SLIDE FOR DAT
⑧	1	PM-AC1241	8" STROKE TAMP SLIDE FOR DAT
⑨	1	SAS-238A-0124-DAT	AIR MANIFOLD ASSEMBLY
⑩	1	ASS-200-0149	MICRO PIVOT ADJUST
⑪	-1	MP-200-0273	U-ARM APPLICATOR PIVOT MOUNT

CTM-1238aR-XDATXS-12S-XX

SWING ARM SIZE

STROKE LENGTH

SATO -SX

ZEBRA -ZX

DATAMAX -DX

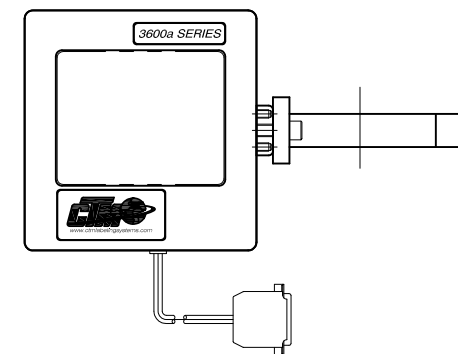
SERIAL -XS

PARALLEL -XP

ETHERNET -XE

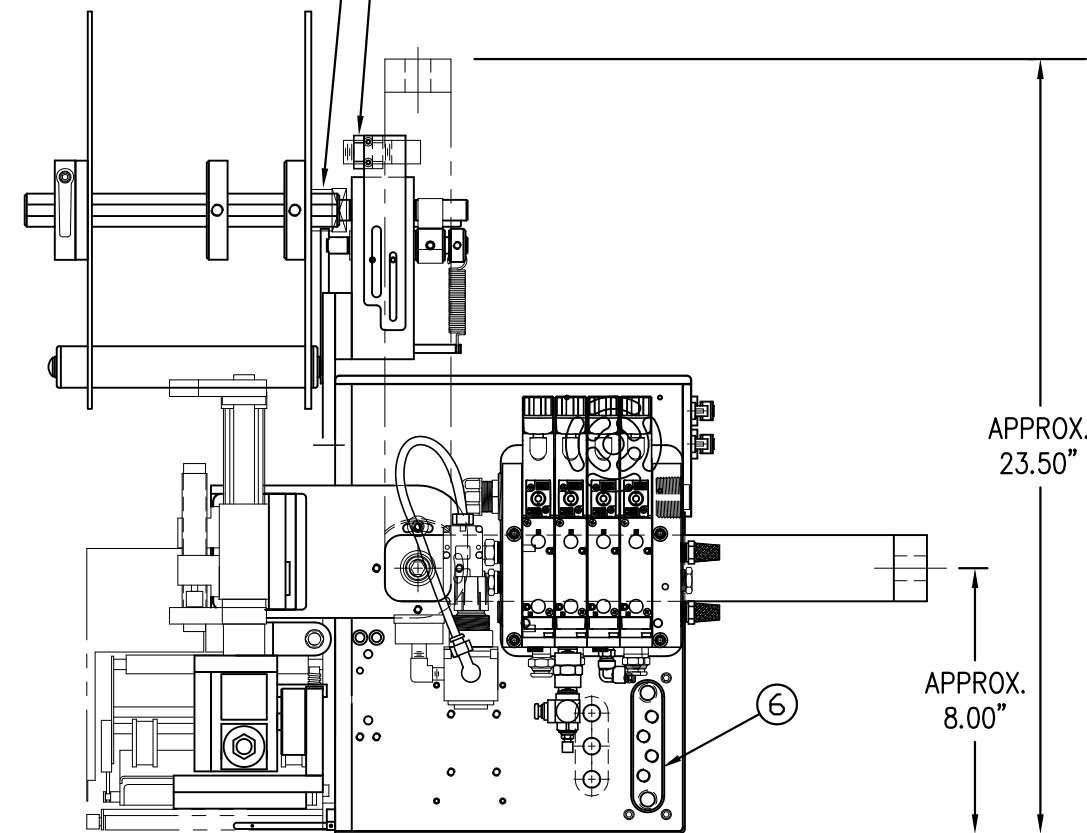
USB -XU

DISPLAY ASSEMBLY  
(LISTED IN CORE UNIT BOM)



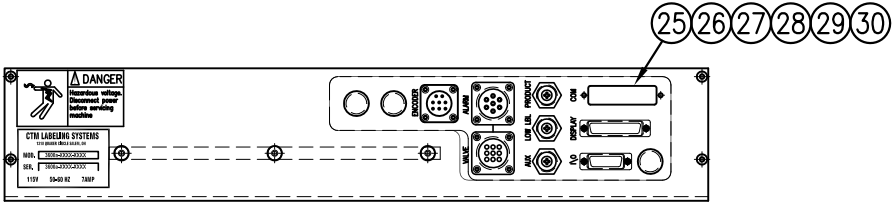
BUSHING & LOCK COLLAR  
ONLY USED FOR REELS UP  
ORIENTATION

OPTIONAL LOW LABEL

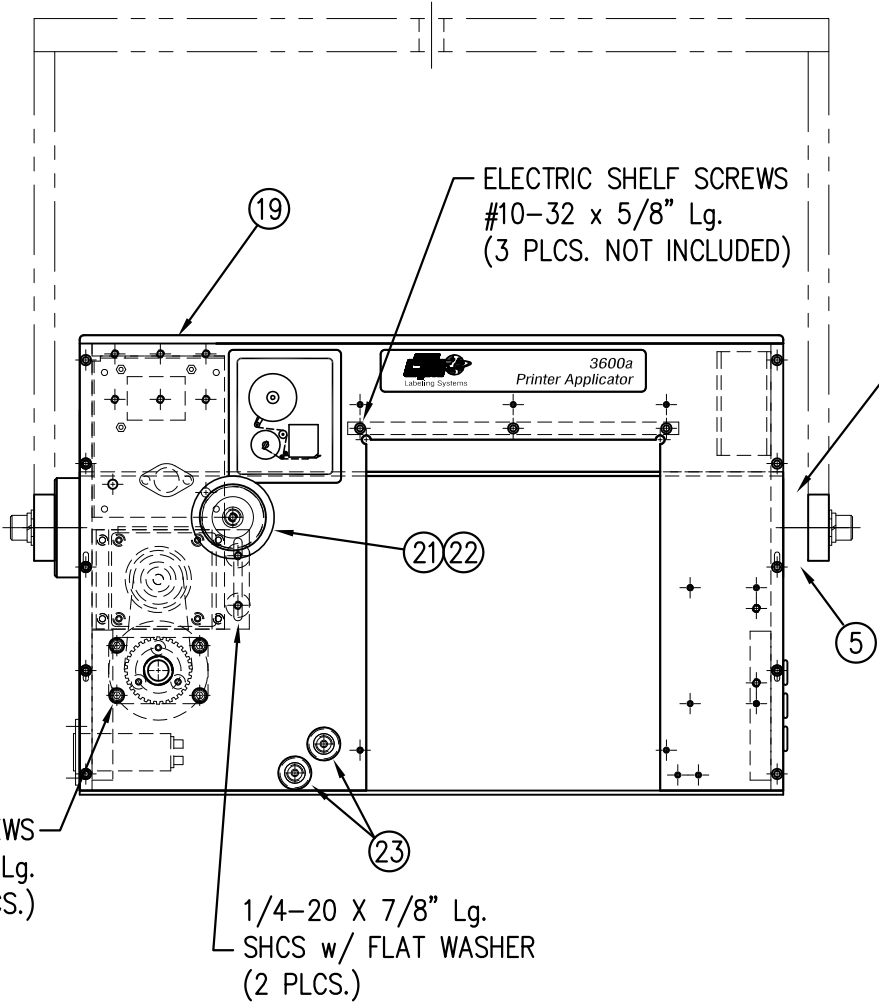
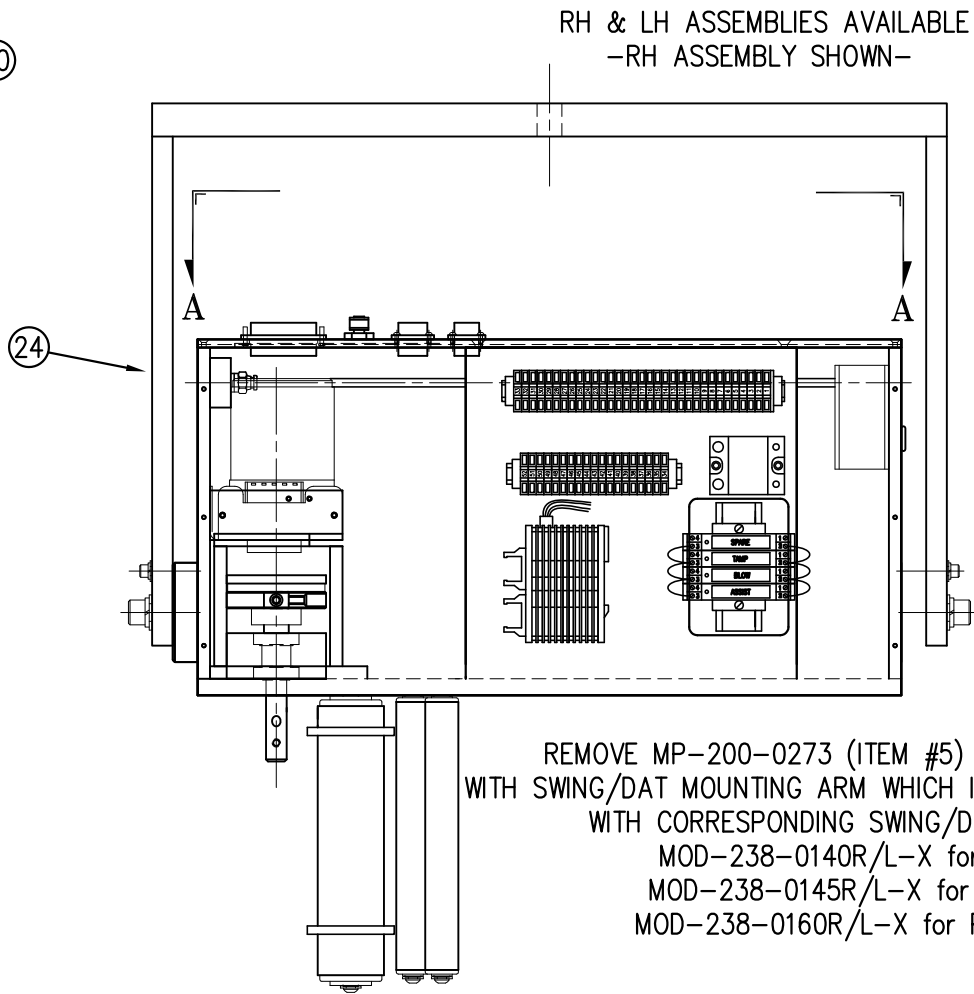
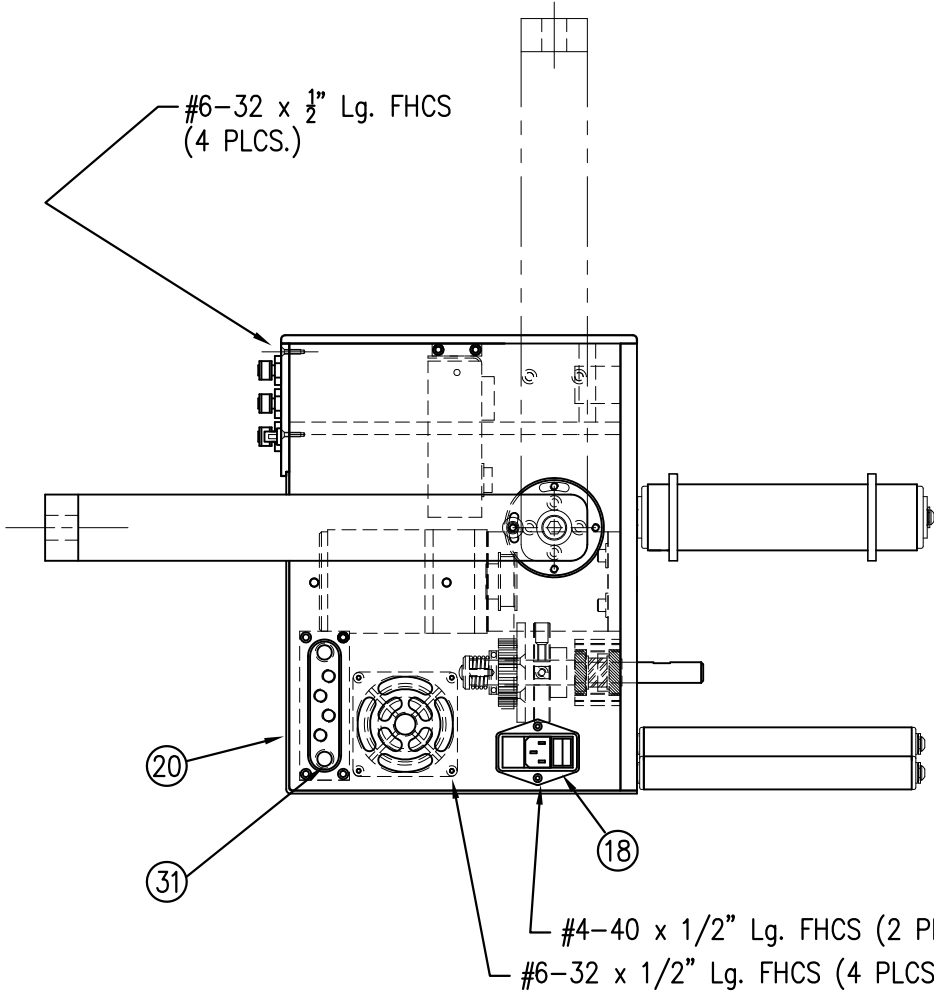
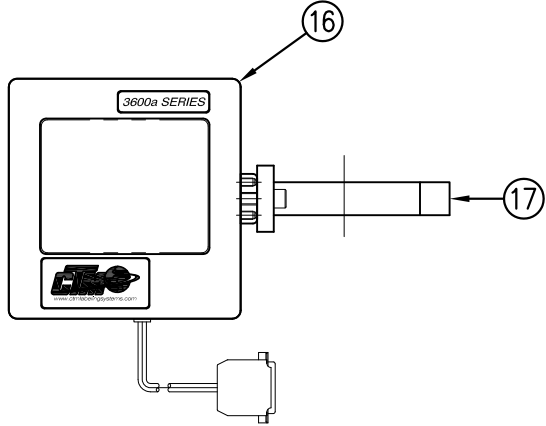


BILL OF MATERIAL			
CTM-238a-0150R/L-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238a-0123R/L	ADVANCED APPLICATOR HOUSING (SHELF ASS'Y)
⑤	-1	MP-200-0273	U-ARM / APPLICATOR PIVOT MOUNT
⑯	1	ASS-238a-0126	DISPLAY UNIT FOR 3600a
⑰	1	ASS-200-0138	DISPLAY UNIT MOUNT (CLAMPS to UPRIGHT)
⑱	1	PE-C01018	SELF LOCKING POWER CORD - 12 FT.
⑲	1	MP-238-0221	TOP COVER
⑳	1	MP-238-0228	STAINLESS STEEL HOUSING COVER
㉑	1	ASS-238-0135	2" DIA. DANGER ROLLER
㉒	2	MP-238-0247	2" DIA. GUIDE COLLAR w/ SET SCREW
㉓	2	ASS-238-0134	1" DIA. ROLLER
㉔	1	WAS-238-0130	U-ARM WELDMENT
㉕	1	ASS-238a-0405-9	SERIAL ADAPTER ASSEMBLY - 9 Ppin
㉖	1	PE-CA2500	PARALLEL CABLE
㉗	1	PE-CC1070	PARALLEL PORT CLIP KIT
㉘	1	PE-PA1040	FLAT RIBBON CLIP
㉙	1	ASS-238-0460	PARALLEL TO ETHERNET ADAPTER ASSEMBLY
㉚	1	ASS-238-0465	PARALLEL TO USB ADAPTER ASSEMBLY
㉛	1	SAS-238A-0124-DAT	6 HOLE AIR MANIFOLD ASSEMBLY
32	1	SEE TABLE BELOW	PRINT ENGINE INTERFACE HARNESS (NOT SHOWN)
33	1	PM-WL1045	WARNING LABEL (NOT SHOWN)

㉜	APPLICATOR TO PRINT ENGINE INTERFACE HARNESS (ORDER W/ PRINT ENGINE)	
	ZEBRA PAX or DATAMAX 'A'	PE-238-0418
	SATO SE	PE-238-0420
	SATO S86-EX	PE-238-0431



SECTION A-A  
CONNECTOR FACEPLATE



CTM-238a-0150R/L-XX

SATO -SX  
ZEBRA -ZX  
DATAMAX -DX  
SERIAL -XS  
PARALLEL -XP  
ETHERNET -XE  
USB -XU

THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.		TITLE: 3600a-P/A ADVANCED SERIES DAT CORE UNIT w/ PROGRAM		Dept. Code 70
APPLICATOR SERIES: 3600a	APPLICATOR WIDTH(S): 7.5"	GROUP: CORE UNIT	DATE: 04/18/16	DATE: 04/18/16
REV. 3	REV. DESCRIPTION: UPDATED TO SHOW MOST RECENT RELAYS	REV. BY: BNT	REV. DATE: 01/18/19	REV. BY: BNT
F:\Engineering\Standard Parts\Applcator\3600 SERIES\3600a\CTM\CTM-238a-0150RL-XX		DRAWN BY: T. Rhodes		Scale: 1=6

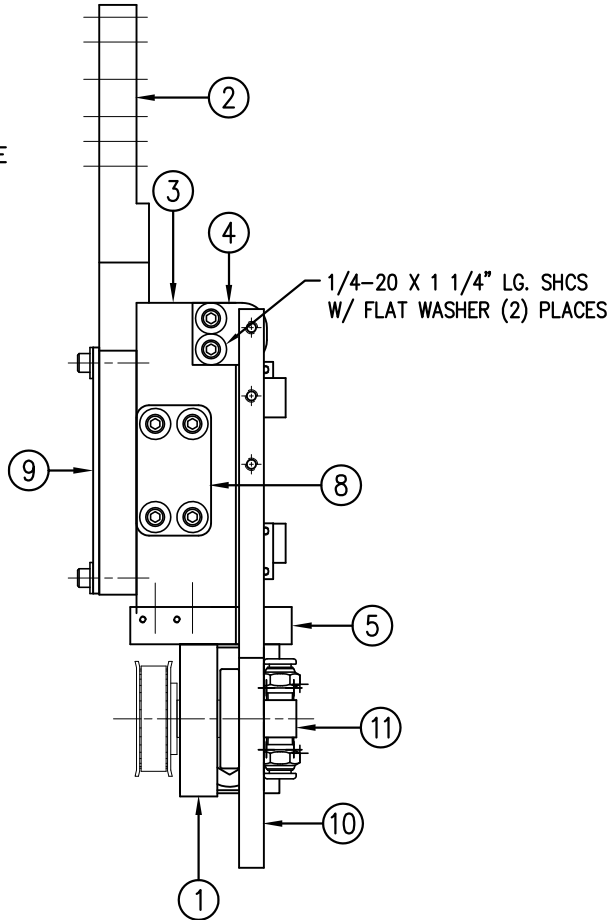
BILL OF MATERIAL			
MOD-238-0140R/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-238-0140R/L-X	PERPENDICULAR DAT ASSEMBLY
31	1	PM-INS1010	THREADED INSERT, 1/4"-20 INT X 3/8"-24 EXT
32	1	MP-211-X217-X	AIR ASSIST TUBE -- COATED
33	1	MP-238-0242	AIR ASSIST TUBE HOLDER
34	1	PM-AH1000	AIR ASSIST TUBING X 15" LONG
35	1	ASS-238-0142M	DAT 4-STATION VALVE BANK ASSEMBLY
36	1	MP-214-0206	VALVE MOUNTING PLATE
37	1	MP-238-0238	VALVE FASTENING PLATE
38	1	MP-238-0239	VALVE NUT PLATE
39	169"	PM-PT1070	1/4" SMC TUBING (CUT TO SUIT)
40	68"	PM-PT1080	3/8" SMC TUBING (CUT TO SUIT)
41	4	PM-PF1030	FTG, 1/4 TUBE X 1/8 NPT 90° MALE EL SW
42	1	PM-PF1045	FTG, 3/8 TUBE X 1/4 NPT 90° MALE EL SW
43	1	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
44	4	PM-PF1005	FTG, 1/4 TUBE X 1/8 NPT STRT
45	1	PM-PF1010	FTG, 1/4 TUBE X 1/4 NPT STRT
46	1	PM-PF1020	FTG, 3/8 TUBE X 1/4 NPT STRT

BILL OF MATERIAL			
ASS-238-0140R/L-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238-0140R/L	PERPENDICULAR DAT SHELF ASSEMBLY
2	1	MP-238-0301R/L-X	PERP DAT/SWING MOUNTING ARM
10	1	MP-238-0312R/L-X	PERP DAT/SWING ARM
11	1	MP-238-0313	SWING ARM AIR MANIFOLD
16	1	PM-238-0319R/L	SWING ASSEMBLY DRIVE GUARD (NOT SHOWN)
17	2	PM-214-0210	SHOCK STRIKE PLATES
30	2	PM-PF1020	3/8" TUBE X 1/4" NPT MALE CONN.

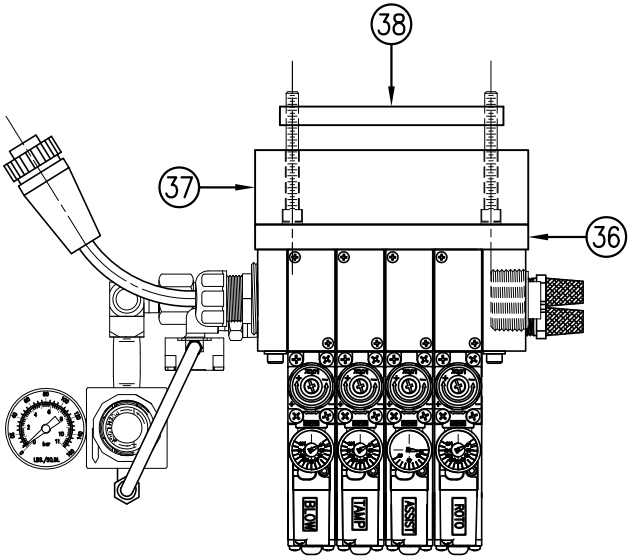
BILL OF MATERIAL			
SAS-238-0140R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	ASS-238-0141R/L	SWING ARM PIVOT ASSEMBLY
3	1	MP-238-0302R/L	SLIDE TRANSITION PLATE
4	1	MP-238-0303	SWING HOME SHOCK MOUNT
5	1	MP-238-0304R/L	ROTARY ACTUATOR MOUNT PLATE
6	1	PM-238-0305	ROTARY MOUNT NUT PLATE
7	1	PM-238-0306	ROTARY ACTUATOR NUT PLATE
8	1	PM-238-0307	SLIDE NOSE NUT PLATE
9	1	PM-238-0308	SLIDE BODY NUT PLATE
12	1	MP-238-0314	SLIDE HOME SHOCK MOUNT
13	1	MP-238-0315	SLIDE EXTEND SHOCK MOUNT
14	1	MP-238-0316	GUARD SUPPORT
15	1	MP-238-0318	ROTARY ACTUATOR PULLEY
18	1	PM-SA1000	MC25H SWING EXTEND SHOCK
19	1	PM-SA0990	MC25L SWING HOME SHOCK
20	1	PM-AC1248	ROTARY ACTUATOR
21	1	PM-C01040	SHOCK STOP COLLAR
22	1	MP-214-0242	LOCK NUT FOR MC25L SHOCK
23	2	PM-PF1203	1/8" NPT BRANCH TEE
24	6	PM-PF1005	FITTING, 1/4" TUBE TO 1/8" MALE NPTF
25	2	PM-PF1050	1/4" TUBE X 1/8" NPT ELBOW
26	2	PM-SA0950	SLIDE SHOCK ABSORBER
27	1	PM-BELT1039	SWING ARM TIMING BELT
28	2	PM-PT1070	1/4" OD SMC TUBING X 7" LG.
29	2	PM-PF1180	90deg. STREET ELBOW, 1/8" NPT female to 1/8" NPT male

← LABEL SIZE SPECIFIC  
ORDER SEPARATELY

MOD ALSO INCLUDES  
ITEMS 41 THRU 46  
WHICH ARE NOT SHOWN.



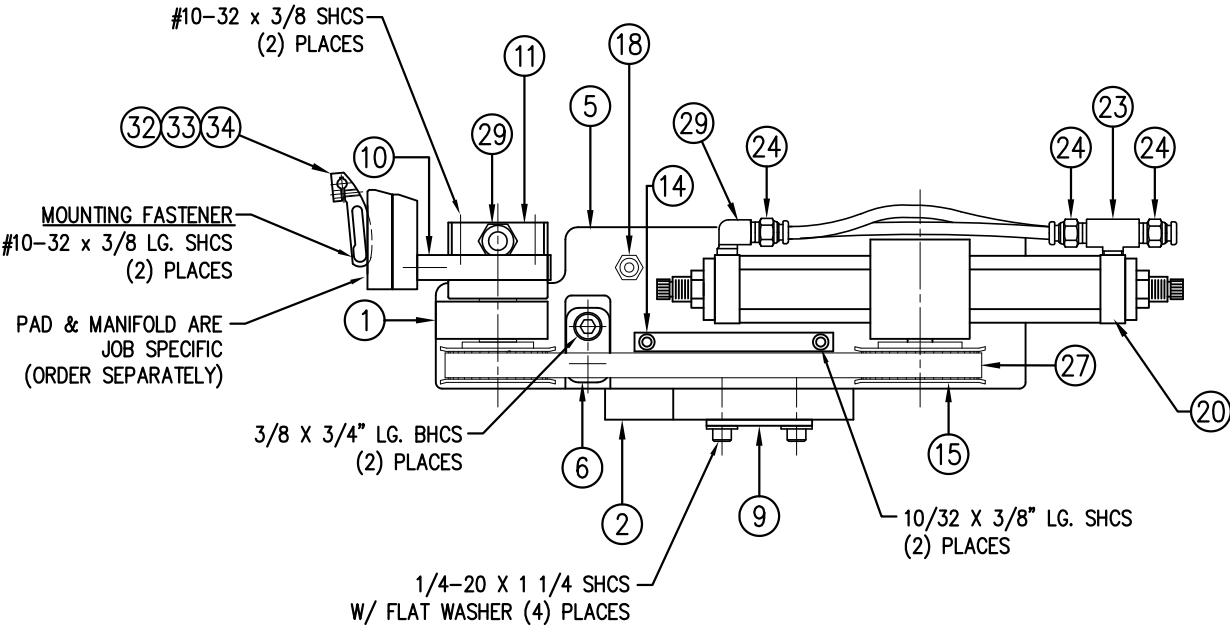
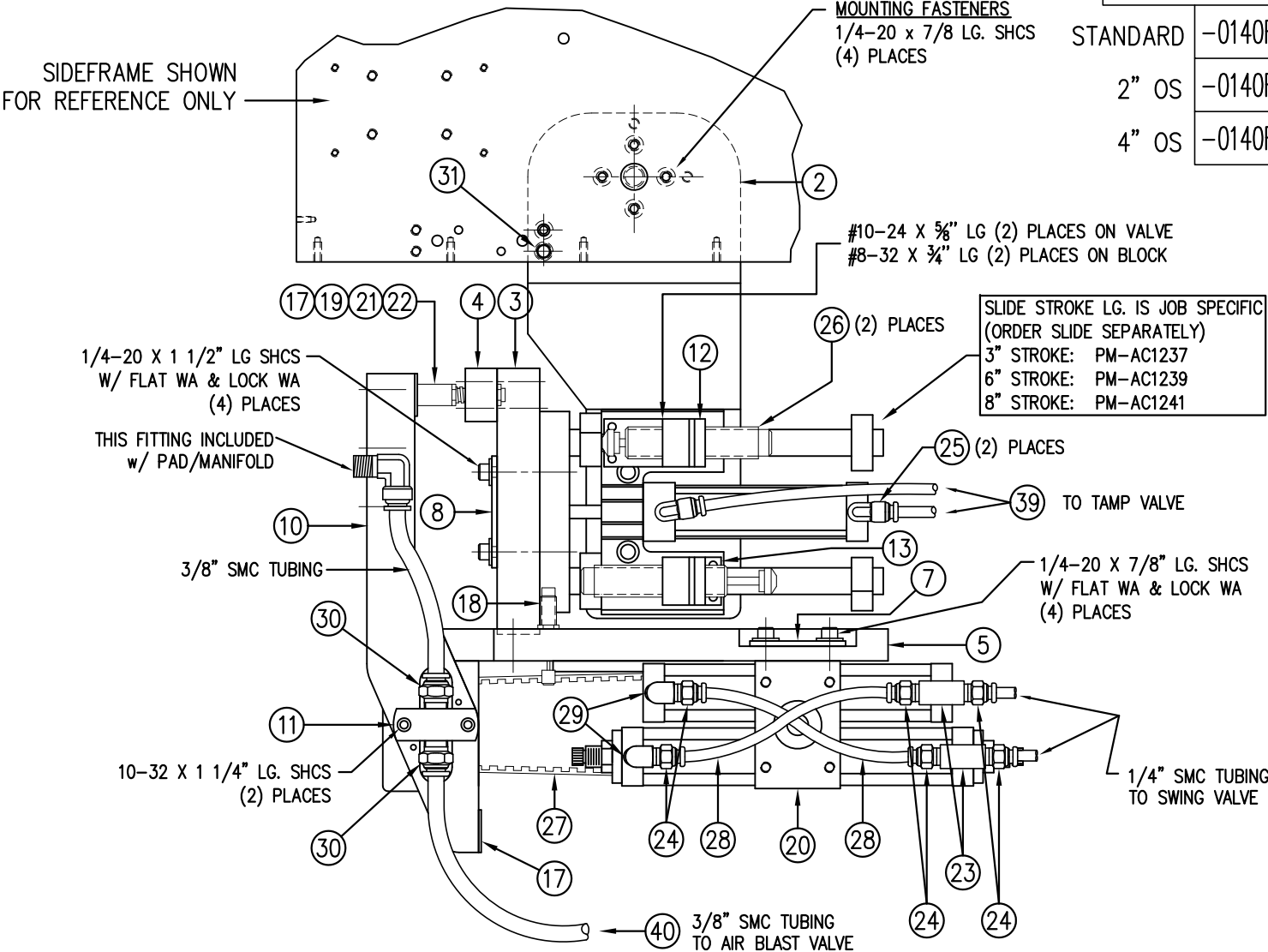
REV 1



35 VALVE BANK ASSEMBLY

RH & LH ASSEMBLIES AVAILABLE  
-RH ASSEMBLY SHOWN-

16 BELT GUARD NOT SHOWN



MOD-238-0140R/L-X	ASS-238-0140R/L-X	SAS-238-0140R/L
STANDARD	-0140R/L-0	-0140R/L-2
2" OS	-0140R/L-2	-0140R/L-4
4" OS	-0140R/L-4	



## BILL OF MATERIAL

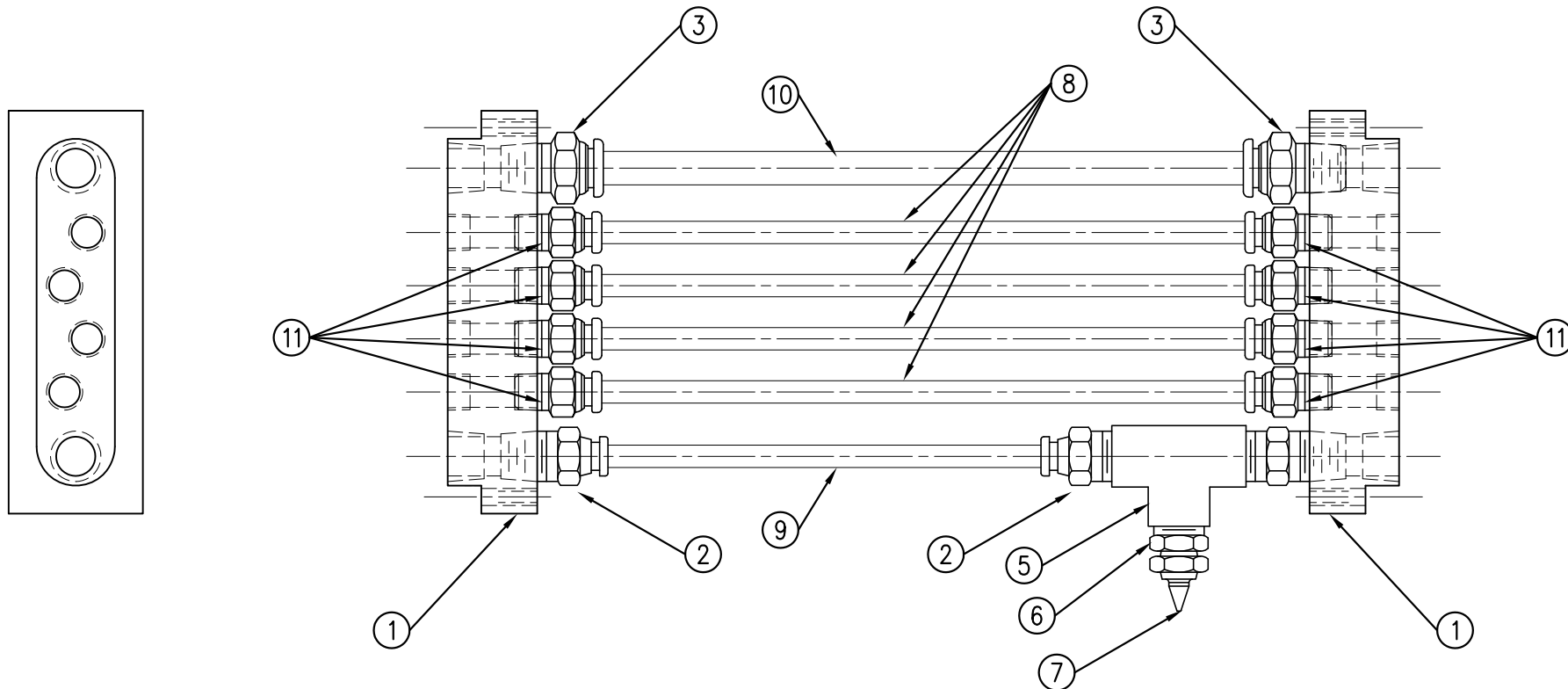
SAS-238a-0124-DAT

SAS-238a-0124-DAT

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	2	MP-200-0249	AIR MANIFOLD (6-HOLES)
②	2	PM-PF1010	FITTING, 1/4" NPT to 1/4" TUBE
③	2	PM-PF1020	FITTING, 1/4" NPT to 3/8" TUBE
④	1	PM-PF1153	FITTING, 1/4" NPT w 9/16" HEX. BRASS NIPPLE
⑤	1	PM-PF1200	TEE FITTING, 1/4" NPT (FEMALE)
⑥	1	PM-PF1105	FITTING, 1/4" NPT to 1/8" NPT RED. BUSHING
⑦	1	PM-FT1105	HOSE BARB, 1/8" NPT MALE x 1/4" TUBE
⑧	4	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 19.00" Lg
⑨	1	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 16.63" Lg
⑩	1	PM-PT1080	3/8" O.D. POLYURETHANE TUBING X 19.00" Lg
⑪	8	PM-PF1005	FITTING, 1/8" NPT to 1/4" TUBE

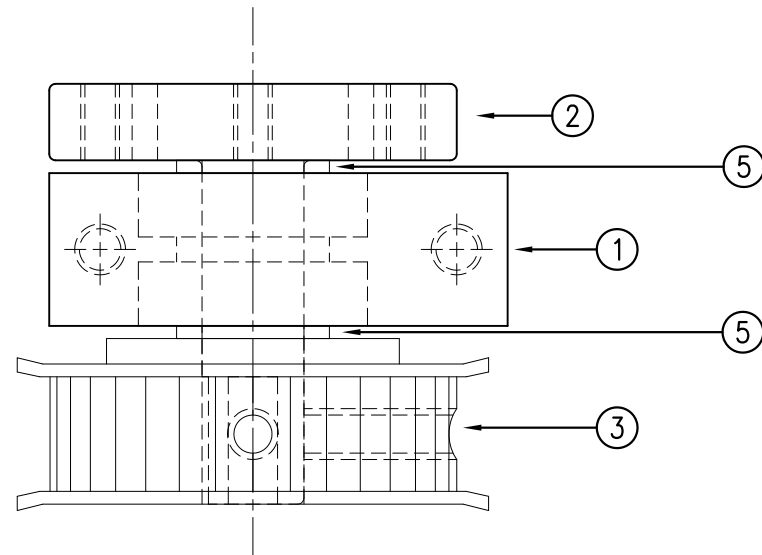
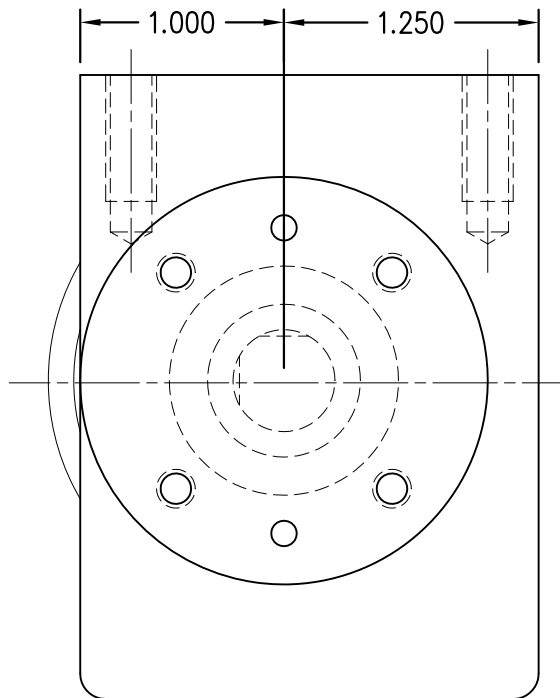
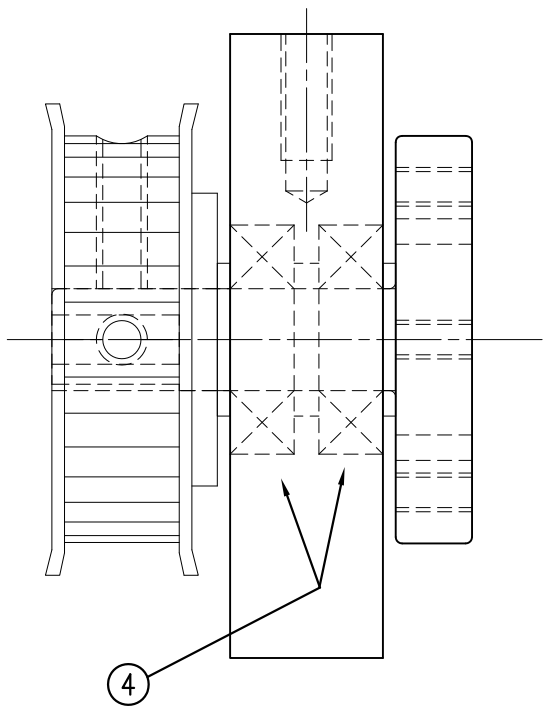
RH &amp; LH ASSEMBLIES AVAILABLE

-RH ASSEMBLY SHOWN-



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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: HOUSING SHELF ASSEMBLY	TITLE: AIR MANIFOLD ASSEMBLY FOR DAT APPLICATOR	Dept. Code 70
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=2
			Date: 2/29/16	DRAWN BY: J. Greeneisen
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# BILL OF MATERIAL

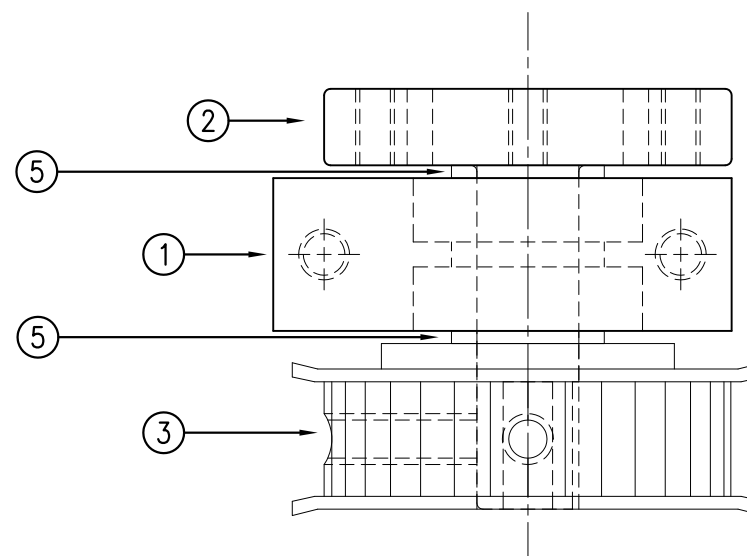
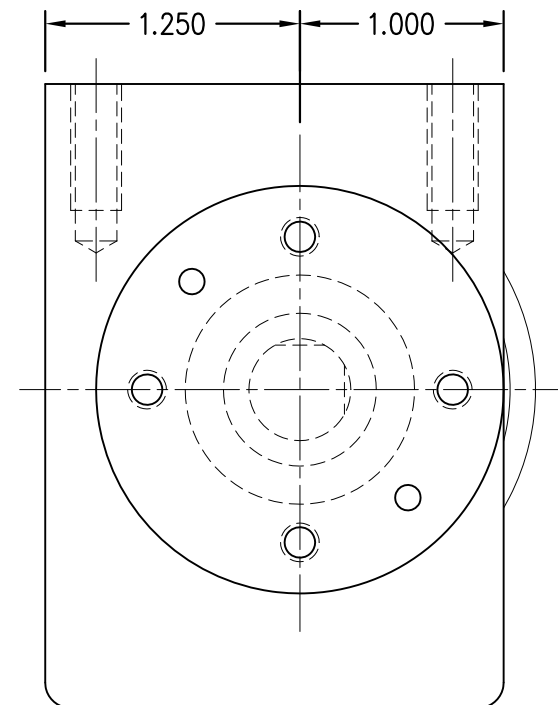
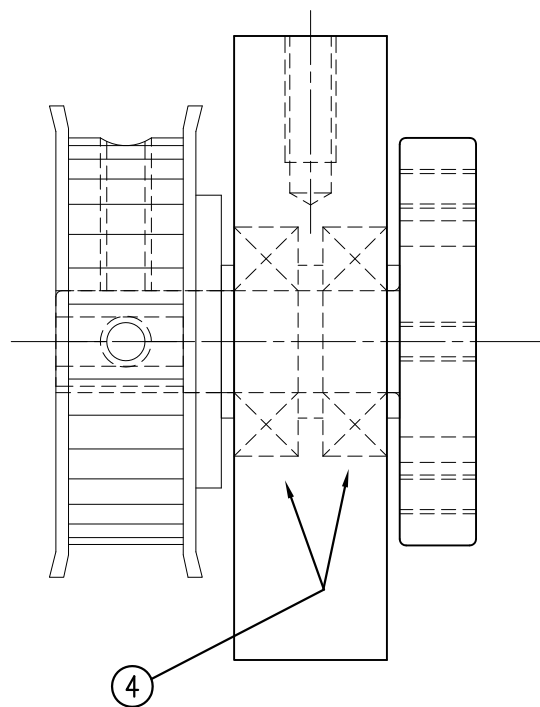
ASS-238-0141L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0309	DAT SWING ARM BEARING BLOCK
②	1	MP-238-0311	DAT SWING ARM PIVOT SHAFT
③	1	MP-238-0317	DAT SWING ARM PULLEY
④	2	PM-BE1250	#R8 BALL BEARING
⑤	2	PM-BEBT1016	1/2" ID BRONZE THRUST WASHER

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APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"	GROUP: DAT ASSEMBLY			TITLE: SWING ARM PIVOT ASSEMBLY					Dept. Code 70
REV. 0	REV. DESCRIPTION —			REV. DATE —	REV. BY: xxx	Scale: 1=1	Date: 11/30/01	DRAWN BY: JLG		F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0141L	





## BILL OF MATERIAL

ASS-238-0141R

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0309	DAT SWING ARM BEARING BLOCK
②	1	MP-238-0311	DAT SWING ARM PIVOT SHAFT
③	1	MP-238-0317	DAT SWING ARM PULLEY
④	2	PM-BE1250	#R8 BALL BEARING
⑤	2	PM-BEBT1016	1/2" ID BRONZE THRUST WASHER

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: DAT ASSEMBLY	TITLE: SWING ARM PIVOT ASSEMBLY	Dept. Code 70
REV. 0	REV. DESCRIPTION —	REV. DATE —	REV. BY: xxx	Scale: 1=1
			Date: 11/30/01	DRAWN BY: JLG
				F:\Engineering\Standard Parts\Applicator\3600 SERIES\ 3600a\ASS\ASS-238-0141R

BILL OF MATERIAL			
ASS-238-0142M			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PM-VA2361M	4 STATION MAC VALVE BANK
②	1	ASS-200-0452M	VALVE CABLE
③	1	PE-C02000	CORD GRIP
④	1	PM-REG1500	REGULATOR
⑤	1	PM-VA2384	0-160 PSI PRESSURE GAUGE
⑥	5	PM-PF1180	NPT 90° STREET ELBOW 1/8" FEMALE TO 1/8" MALE
⑦	1	PM-PUMP1010	VACUUM PUMP, 55 PSI FEED PRESSURE, MUFFLED EXHAUST
⑧	2	PM-MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑨	2	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑩	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑪	1	PM-PF1200	TEE 1/4" NPT FEMALE 3 ENDS
⑫	2	PM-PF1145	NIPPLE, 1/4" NPT X 2" LG.
⑬	1	PM-PF1055	FTG, 1/4 TUBE to 1/4 NPT 90° ELBOW
⑭	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑮	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑯	1	PE-COND1084	STEEL REDUCER
⑰	1	PM-PF1167	3/8" NPT SOCKET HEAD PLUG
⑱	2	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑲	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑳	11.0"	PM-PT1070	1/4" OD TUBING
㉑	1	PM-PF1085	FTG, 1/4 NPT COUPLING
㉒	2	PM-PF2070	FLOW CONTROL, 1/4 TUBE x 1/4 NPT
㉓	1	PM-PF1035	FTG, 1/4 TUBE to 1/4 NPT 90° SWVL.
㉔	1	PM-PF1120	1/8 NPT CLOSE NIPPLE (3/4" Lg.)
㉕	1	PM-PF1170	FTG, 1/8 NPT to 1/8 NPT 90° FEMALE ELB.
㉖	1	PM-PF1125	FTG, CLOSE NIPPLE, 1/4" NPT x 7/8" Lg.
㉗	1	PM-PF1185	FTG, 90° STREET ELBOW 1/4" NPT FEMALE TO 1/4" NPT MALE
㉘	1	PM-PF1216	ADAPTER, 1/8 NPT MALE/FEMALE
○	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
○	4	PM-FAW30265	#10 SS FLAT WASHER

REV 4

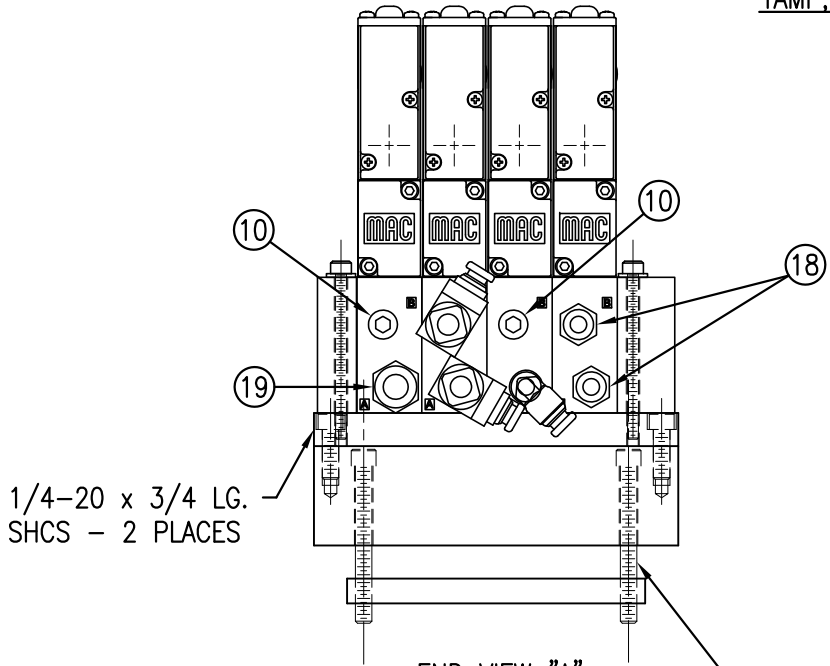
REV 4

\* MOUNTING PLATES NOT INCLUDED IN ASSEMBLY

VALVE BANK SPARE PARTS:

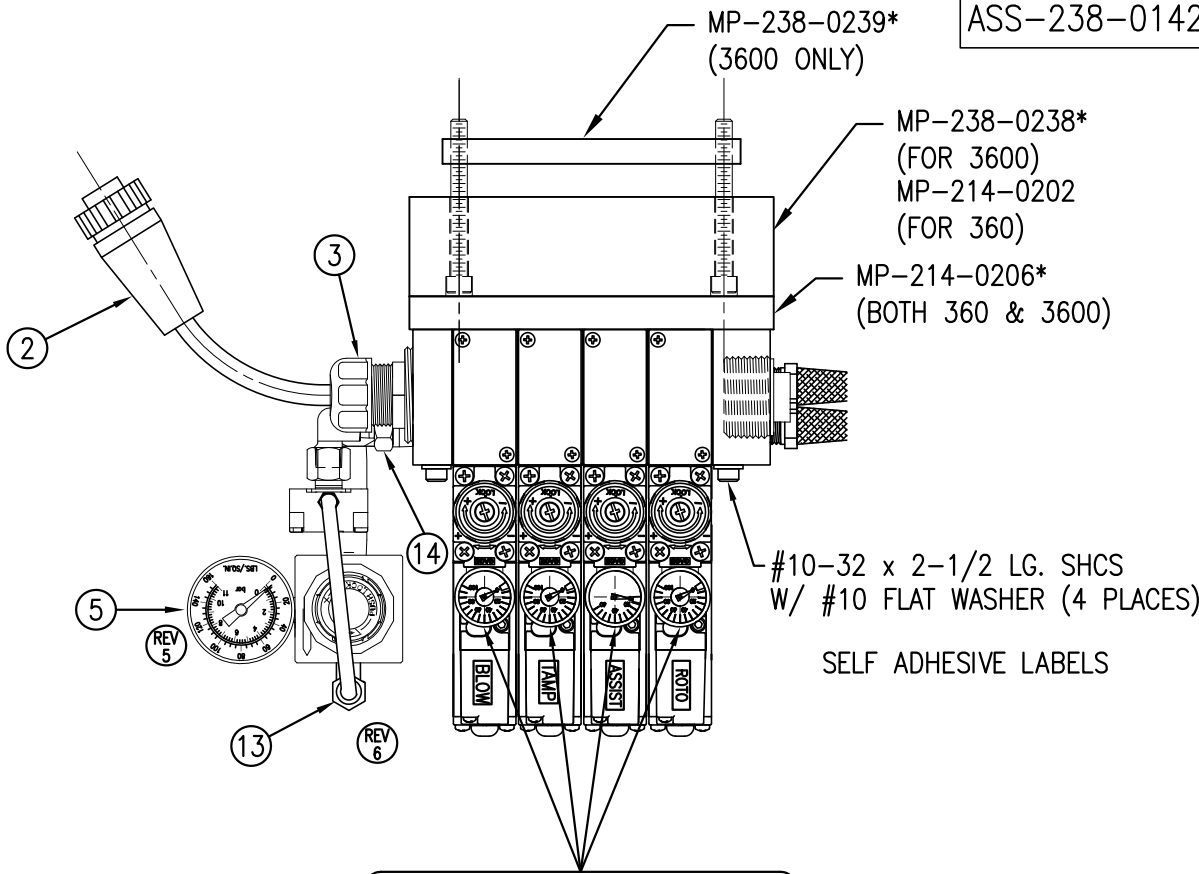
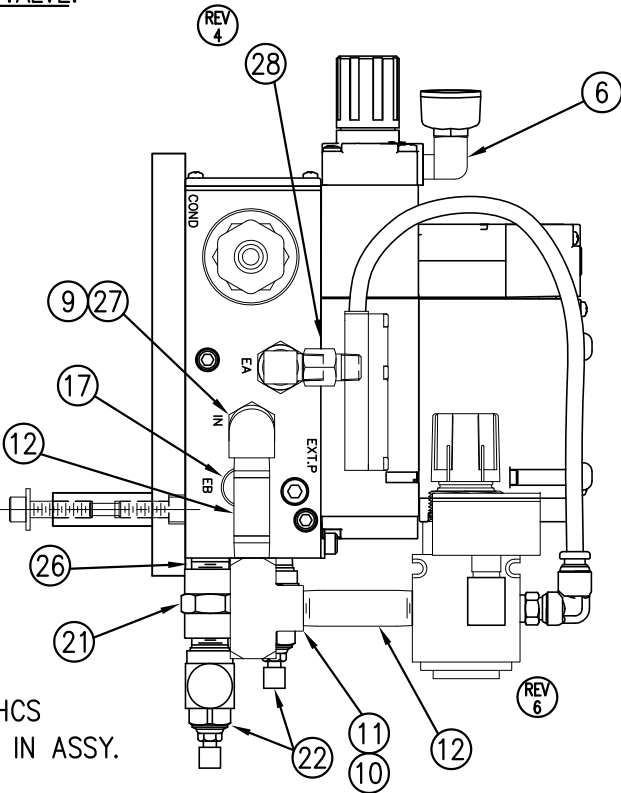
SOLENOID: #PM-VA2395M  
AIR ASSIST REGULATOR W/GAUGE: #PM-VA2396M  
BLOW/TAMP/IMPRINTER REGULATORS W/GAUGE: #PM-VA2397M  
AIR ASSIST REGULATOR GAUGE: #PM-VA2382M  
BLOW/TAMP/IMPRINTER REGULATOR GAUGES: #PM-VA2380M

TAMP, IMPRINT & BLOW VALVE:

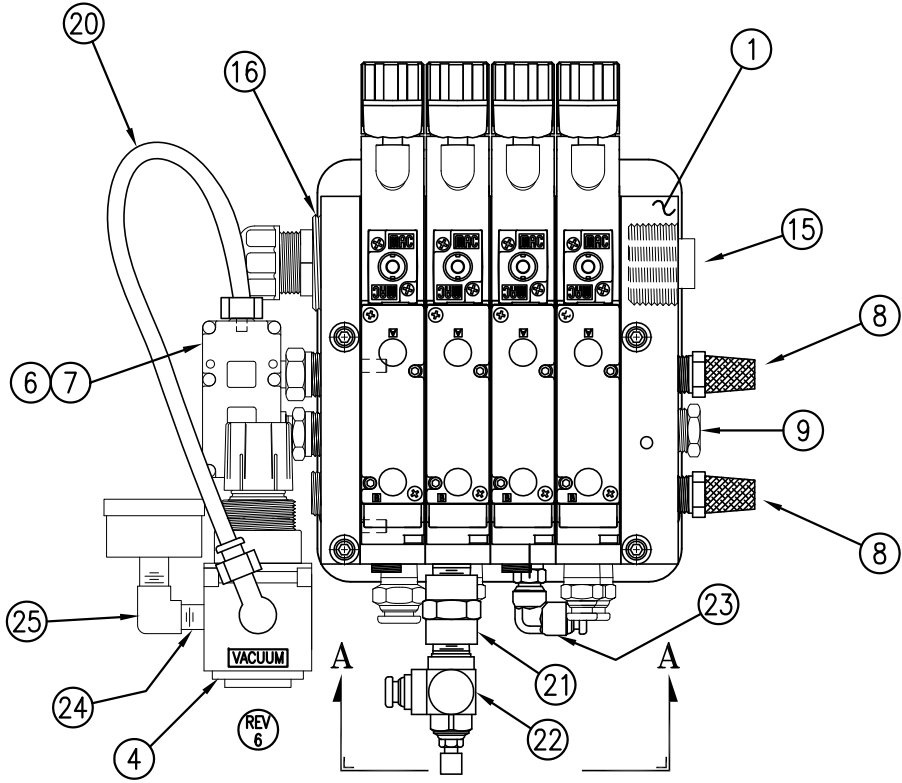


END VIEW "A"

MOUNTING FASTENERS  
1/4-20 x 2-1/4 LG. SHCS  
(2 PLCS) NOT INCLUDED IN ASSY.



TAMP, IMPRINT & BLOW VALVE:  
PRESSURE GAUGE - 0-100 PSI  
AIR ASSIST VALVE:  
PRESSURE GAUGE - 0-60 PSI



FLOW CONTROL (N.S.)  
NOT SHOWN FOR CLARITY

# BILL OF MATERIAL

ASS-238-0166X

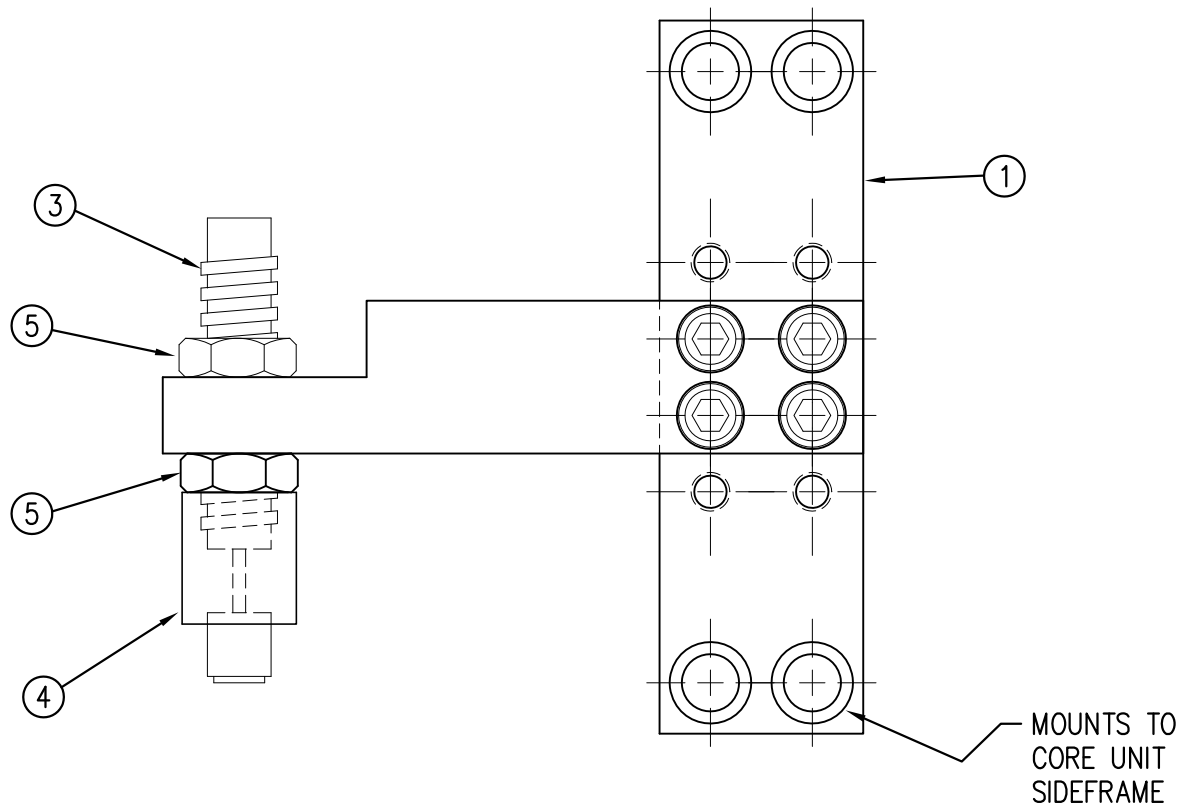
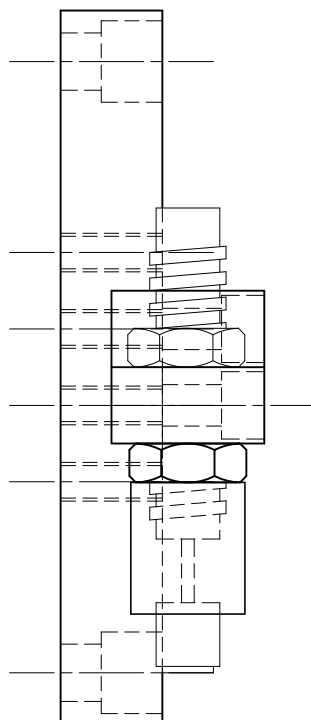
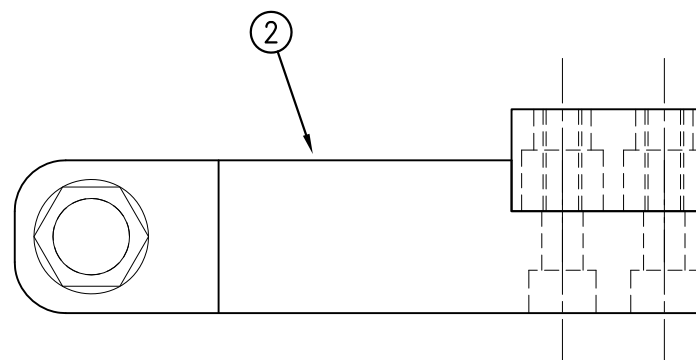
ASS-238-0166X

-0166

LOW PROFILE

-0166LP

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0296	DAT (IN-LINE) SHOCK MOUNTING PLATE
②	1	MP-238-0297	DAT (IN-LINE) SHOCK MOUNT
	1	MP-238-0297LP	DAT (LOW PROFILE IN-LINE) SHOCK MOUNT
③	1	PM-SA0990	LIGHT DUTY SHOCK ABSORBER
④	1	PM-C01040	STOP COLLAR
⑤	2	MP-214-0242	NUT FOR SHOCK ABSORBER



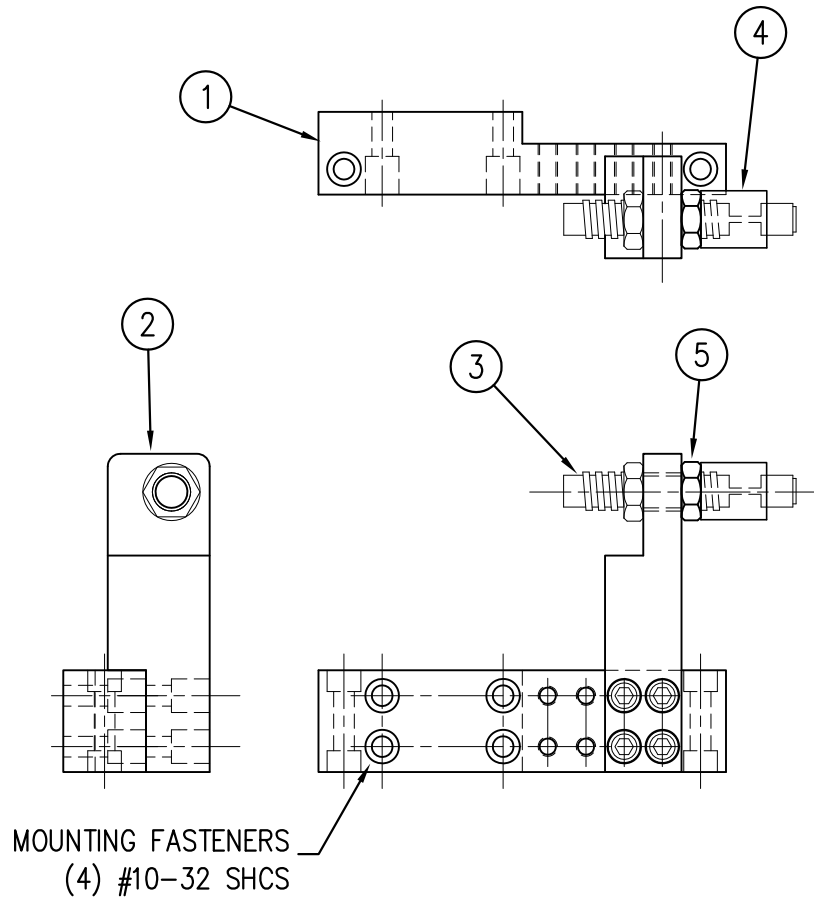
LOW PROFILE ASSEMBLY SHOWN

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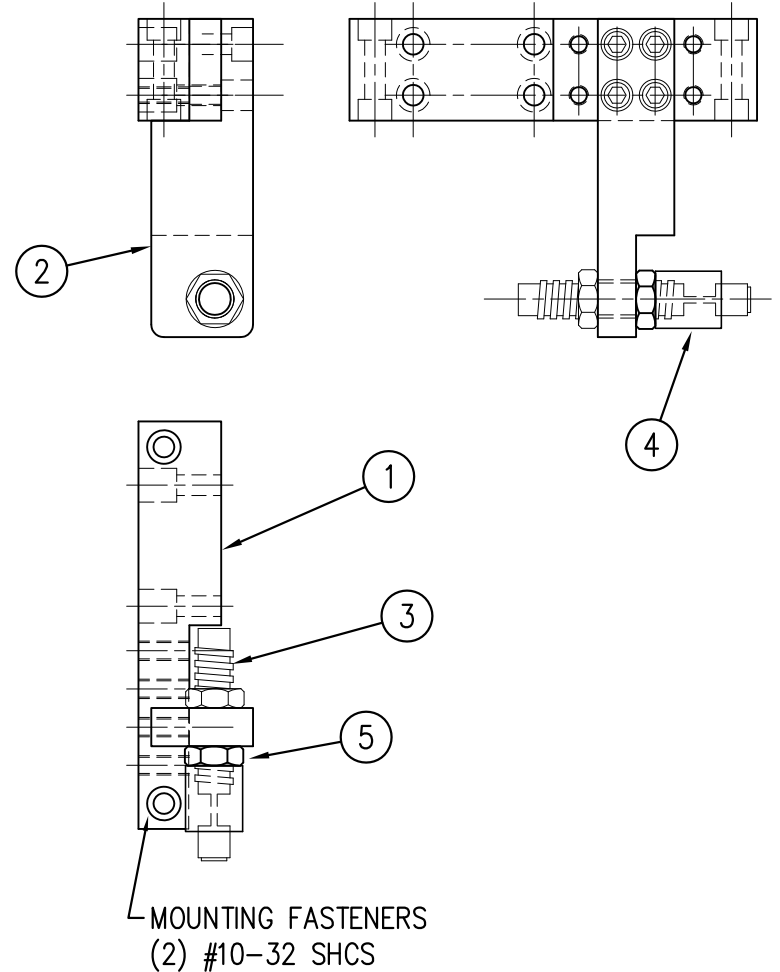
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: DAT ASSEMBLY	TITLE: OPTIONAL SHOCK ASSY for 3600 IL-DAT	Dept. Code 70
REV. 2	REV. DESCRIPTION UPDATED TITLE BLOCK	REV. DATE 03/01/18	REV. BY: TK	Scale: 1=1
		Date: 07/20/06	DRAWN BY: TDR/JLG	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0166X

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0167		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	DAT (IN-LINE) SHOCK MOUNTING PLATE	MP-238-0298	.
②	1	DAT (IN-LINE) SHOCK MOUNT	MP-238-0299	.
③	1	LIGHT DUTY SHOCK ABSORBER	PM-SA0990	.
④	1	STOP COLLAR	PM-C01040	.
⑤	2	NUT FOR SHOCK ABSORBER	MP-214-0242	.

ASS-238-0167



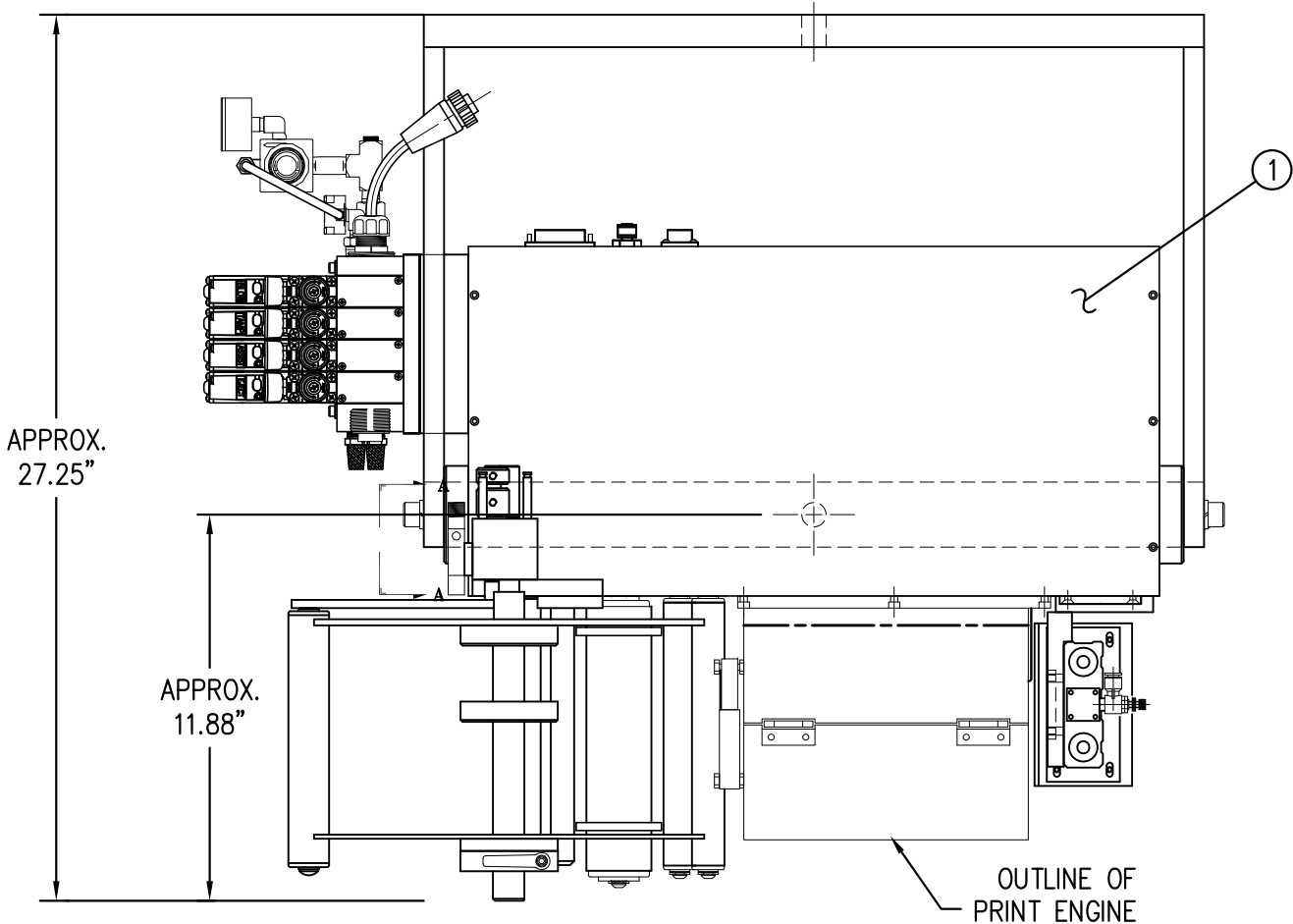
LAYOUT FOR 3600 IN-LINE DAT ②



LAYOUT FOR 360 & 3600-PA PERPENDICULAR DAT

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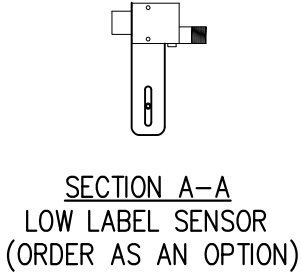
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: DAT ASSEMBLY	TITLE: OPTIONAL SHOCK ASSY for 360/3600 PERP. DAT & 360 IL-DAT				Dept. Code 70
REV. 3	REV. DESCRIPTION UPDATED TITLE BLOCK	REV. DATE 03/01/18	REV. BY: TK	Scale: 1=2	Date: 07/31/06	DRAWN BY: TDR	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0167



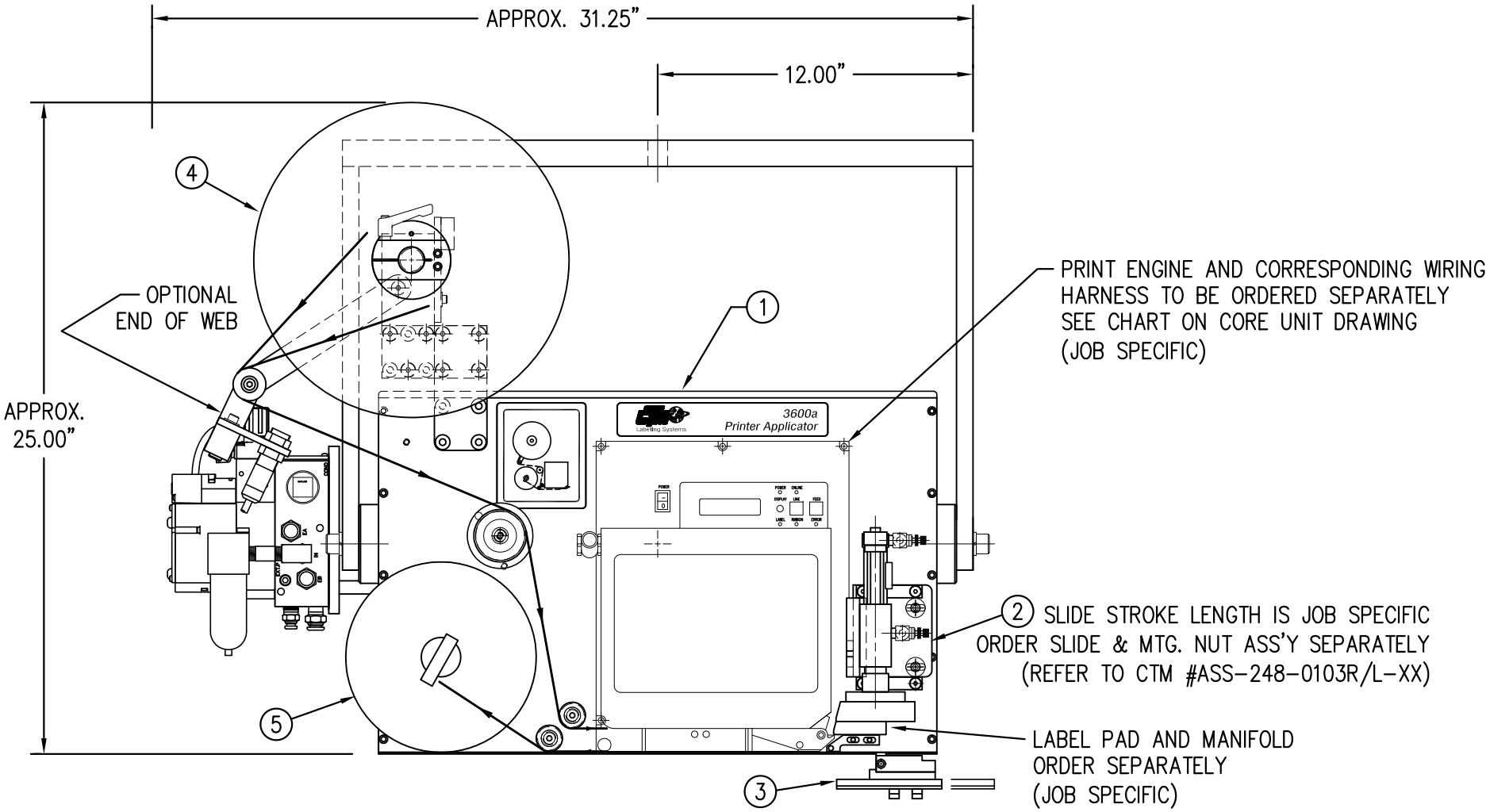
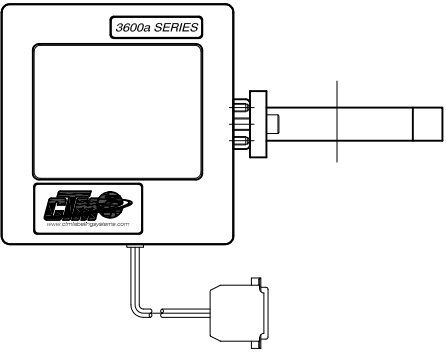
APPLICATOR TO PRINT ENGINE INTERFACE HARNESSSES: (ORDER W/ PRINT ENGINE)			
ZEBRA PAX	ASS-248-0418		
SATO SE	ASS-248-0420		

BILL OF MATERIAL				
CTM-248aR/L-TXS-12S-XX-X				
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	CTM-248a-0150RL-X	3600a RFID APPLICATOR HOUSING	
②	1	MOD-248-0124R/L	3600 RFID TAMP NOSE ASSEMBLY	
③	1	ASS-248-0170-X	LABEL EJECT SLIDE ASSEMBLY	
④	1	MOD-238-0122R/L	UNWIND MODULE W/ 12" DISCS	STANDARD
	1	MOD-238-0122AR/L	12" UNWIND MODULE w/ ALUM. DISKS	REELS UP
⑤	1	ASS-238-0144-X	STANDARD REWIND DISC ASSEMBLY	
	1	ASS-200-2137	FILM REWIND DISC ASSEMBLY	

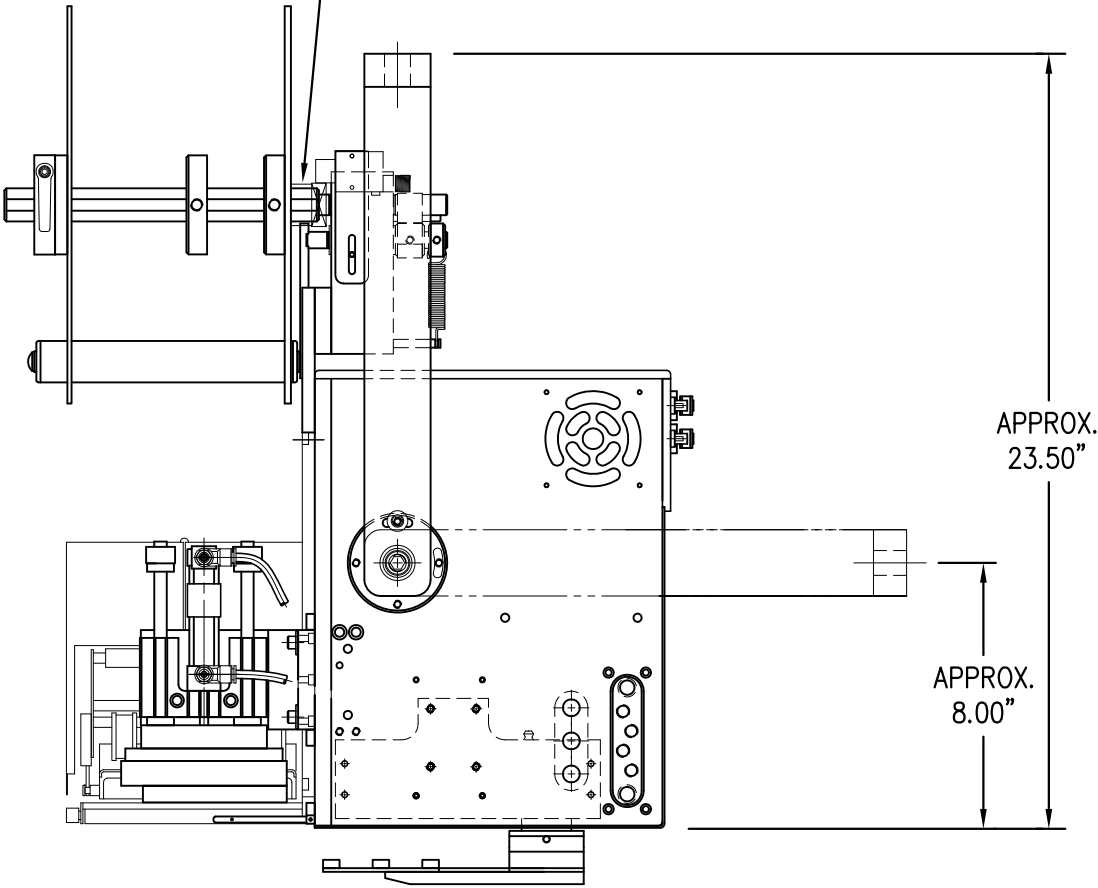
CTM-248aR/L-TXS-12S-XX			
SATO	-SX		
ZEBRA	-ZX		
DATAMAX	-DX		
SERIAL	-XS		
PARALLEL	-XP		
ETHERNET	-XE		
USB	-XU		



DISPLAY ASSEMBLY  
(LISTED IN CORE UNIT BOM)



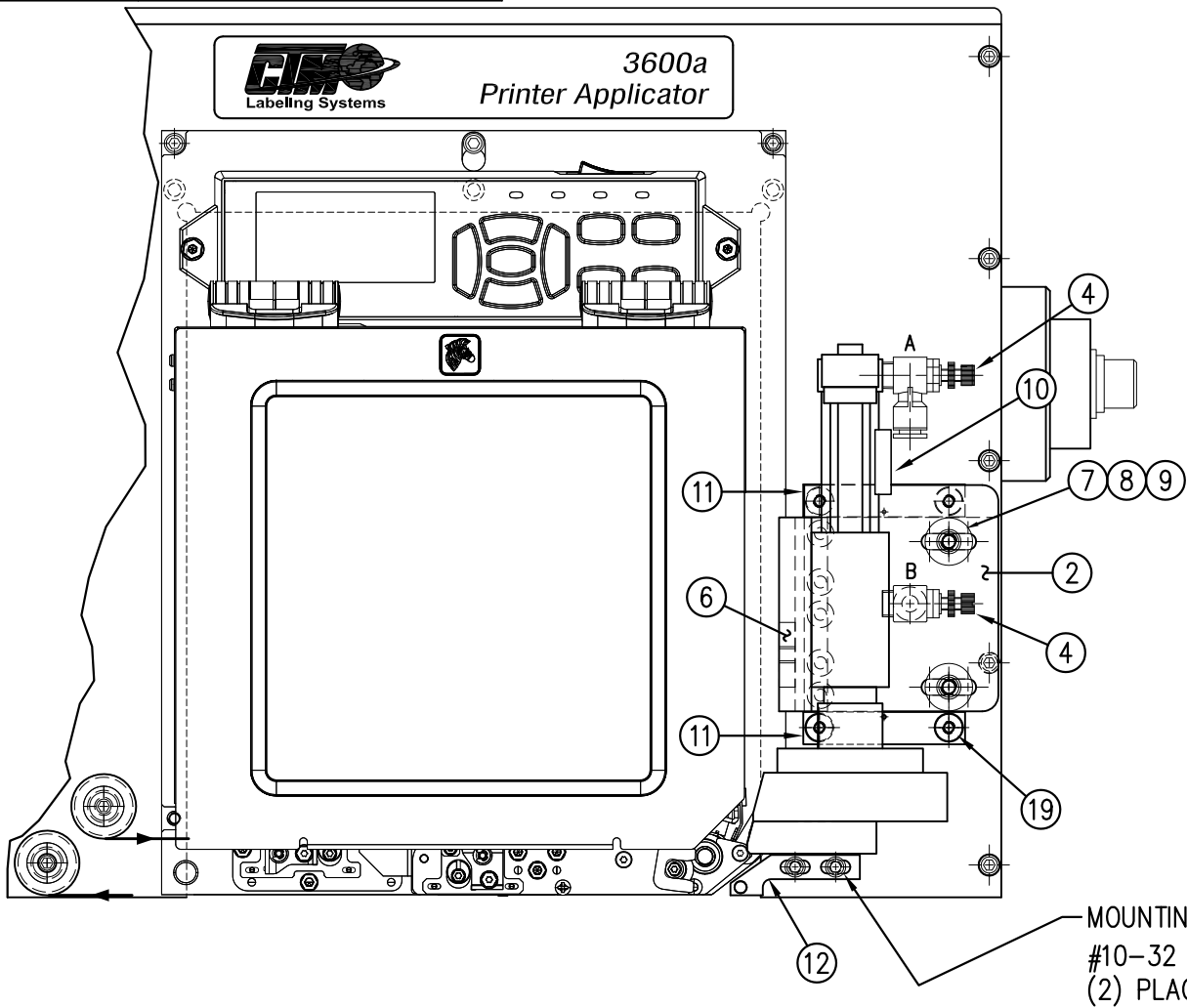
BUSHING & LOCK COLLAR  
ONLY USED FOR REELS UP  
ORIENTATION



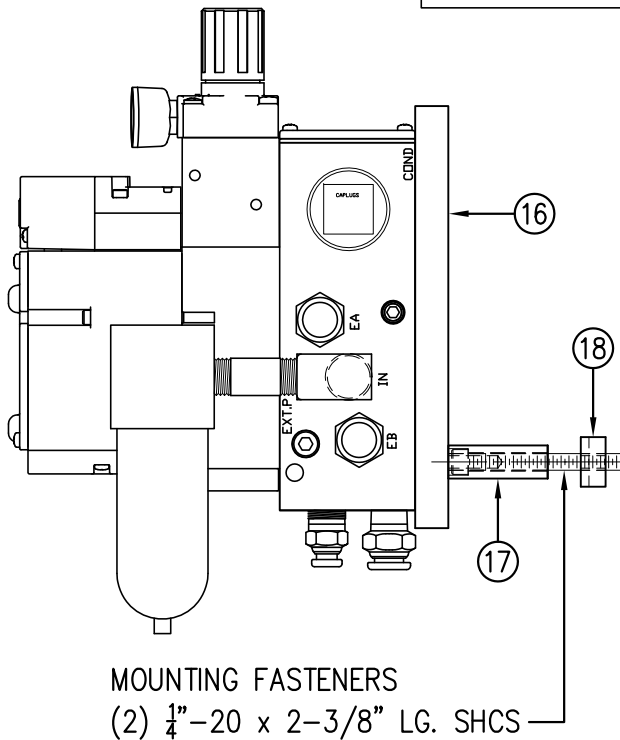
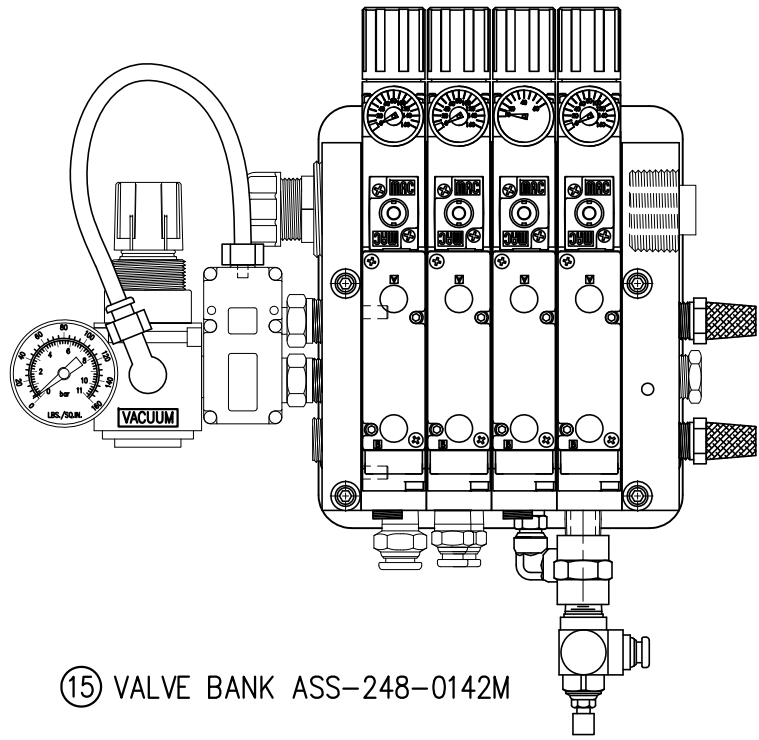
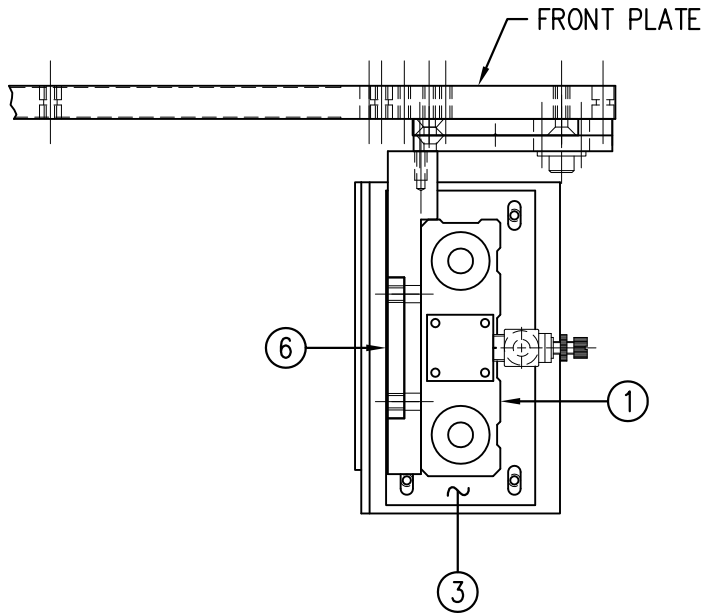


BILL OF MATERIAL			
MOD-248-0124R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-248-0103R/L-XN	TAMP SLIDE w/ MOUNTING (order separately)
⑪	2	MP-238-0241	TAMP GUIDES
⑫	1	MP-238-0242	AIR ASSIST TUBE HOLDER
⑬	1	MP-211-0217-7	AIR ASSIST TUBE
⑭	1	PM-AH1000	15" OF AIR ASSIST TUBING
⑮	1	ASS-248-0142M	4 STATION VALVE BANK ASSEMBLY (TAMP)
⑯	1	MP-214-0206	VALVE MOUNTING PLATE
⑰	1	MP-238-0238	VALVE FASTENING PLATE
⑱	1	MP-238-0239	VALVE NUT PLATE
⑲	4	PM-FAFH50611	#10-32 X .50" LG SS FHCS
○	2	PM-PF1020	PRESTOLOK FITTING, 3/8" TUBE to 1/4" MALE NPTF
○	3	PM-PF1010	PRESTOLOK FITTING, 1/4" TUBE to 1/4" MALE NPTF
○	2	PM-PF1035	PRESTOLOK FITTING, 90deg. ELBOW SWIVEL, 1/4" TUBE to 1/4" MALE NPTF
○	1	PM-PF1145	PIPE FITTING, NIPPLE, 1/4" NPT X 2" LG.
○	1	PM-PF1175	PIPE FITTING, 90deg. ELBOW, 1/4" NPT female to 1/4" NPT female
○	1	PM-FT1200	< 1/4" SOCKET HEAD PLATED PLUG
	1	PM-PT1070	1/4" OD SMC TUBING x 60" Lg. (CUT TO SUIT)
	1	PM-PT1080	3/8" OD SMC TUBING x 33" Lg. (CUT TO SUIT)

BILL OF MATERIAL			
ASS-248-0103R/L-XN			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-214-0103R/L-XN	TAMP w/ MOUNTING BRACKETRY - consisting of the following parts -
①		(1) ASS-214-0108-X	X" LG. TAMP SLIDE ASSEMBLY
②		(1) MP-238-0244R/L	SLIDE MOUNT ANGLE PLATE
③		(1) MP-238-0245	SLIDE TO MANIFOLD TRANSITION PLATE
④		(2) P-PF2060	FLOW CONTROLS - 1/4" TUBE w/ 1/8" NPT
⑤		(1) MP-238-0243	SLIDE MOUNT PLATE
⑥		(1) MP-238-0240	SLIDE NUT PLATE
		(1) MP-238-0240E	H/D SLIDE NUT PLATE
⑦		(2) PM-FASH40330	SHCS, 1/4"-20 x 1-1/4" Lg. SS
⑧		(2) PM-FAW30297	1/4" HEAVY FLAT WASHER
⑨		(2) PM-FAW30690	1/4" LOCK WASHER
⑩	1	ASS-238-0433-A	TAMP HOME SENSOR



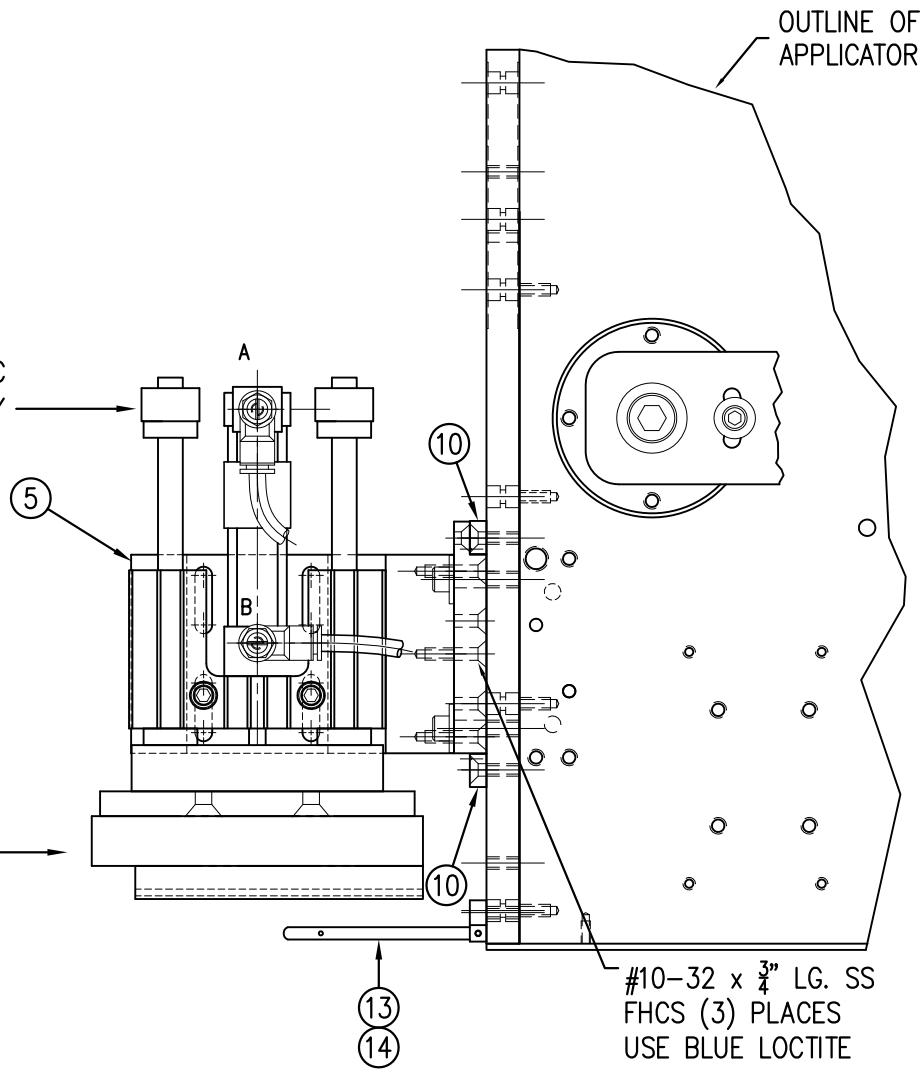
RH & LH CONFIGURATIONS AVAILABLE  
-RH CONFIGURATIONS SHOWN-



TAMP SLIDE STROKE LENGTH IS JOB SPECIFIC  
ORDER SLIDE & MTG. NUT ASS'Y SEPARATELY  
(REFER TO CTM #ASS-248-0103R/L-XN)

PADS & MANIFOLDS ARE JOB SPECIFIC  
ORDER THEM SEPARATELY.  
(REFER TO CTM #MP-238-0246-X FOR  
MANIFOLD BLANK DETAIL)

MOUNTING FASTENERS  
#10-32 x 3/8" LG. SS SHCS  
(2) PLACES



#10-32 x 3/4" LG. SS  
FHCS (3) PLACES  
USE BLUE LOCTITE

MOD-248-0124R/L

# BILL OF MATERIAL

ASS-248-0103R/L-XN

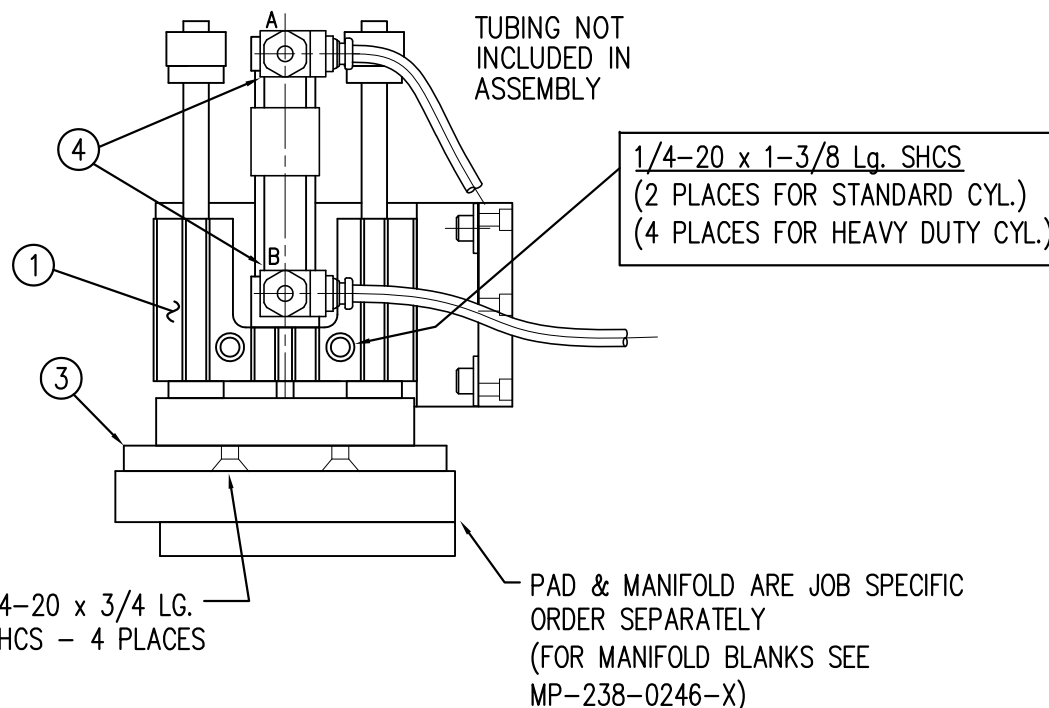
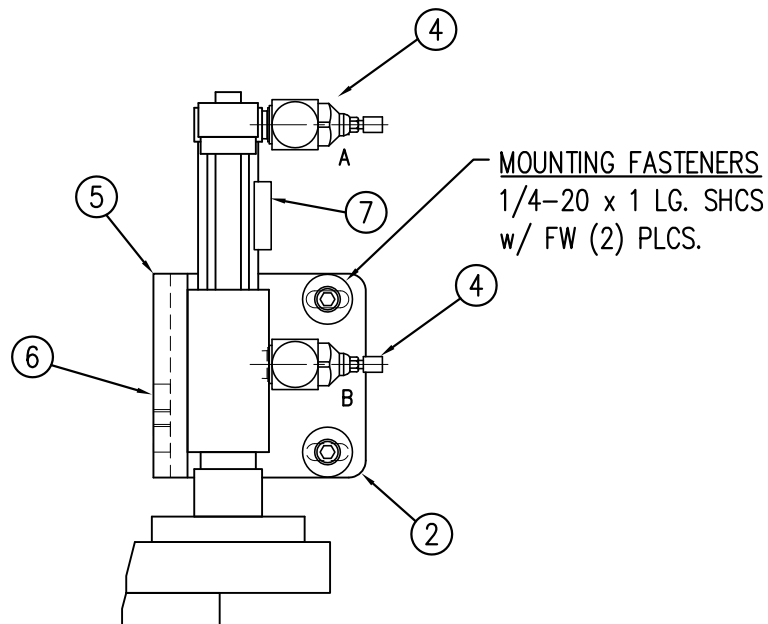
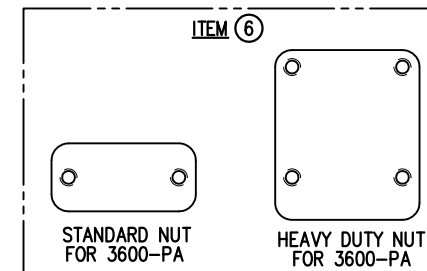
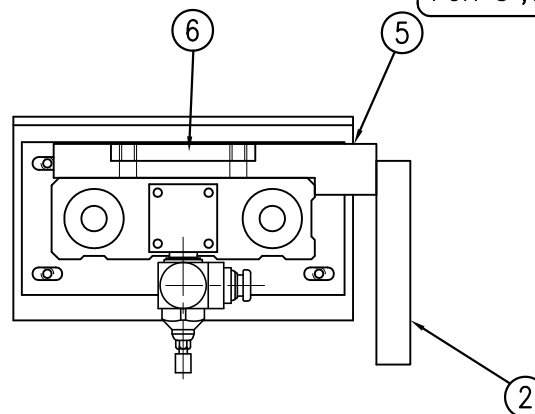
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-214-0103R/L-XN	SLIDE ASSEMBLY FOR 3600-PA - consisting of the following parts -
①		(1) ASS-214-0108-X	PNEUMATIC SLIDE ("X" STROKE LENGTH)
②		(1) MP-238-0244R/L	SLIDE MOUNT ANGLE PLATE
③		(1) MP-238-0245	SLIDE to MANIFOLD TRANSITION PLATE
④		(2) PM-PF2060	FLOW CONTROL w/ KNOB
⑤		(1) MP-238-0243	SLIDE MOUNT PLATE
⑥		(1) MP-238-0240	SLIDE NUT PLATE (STANDARD)
		(1) MP-238-0240E	SLIDE NUT PLATE (HEAVY DUTY)
⑦	1	ASS-238-0433-X	TAMP HOME SENSOR
	2		SHCS, 1/4-20 x 1" Lg.
	2,4		SHCS, 1/4-20 x 1-3/8" Lg.

RH & LH MOUNTING AVAILABLE  
(BOTH HANDS USE SAME PARTS)  
-RH MOUNTING SHOWN-

NOTE:  
USE HEAVY DUTY SLIDE  
FOR 8",10" & 12" STROKES

ASS-248-0103R/L-XX

1" STROKE	-0103R/L-1N
2" STROKE	-0103R/L-2N
3" STROKE	-0103R/L-3N
4" STROKE	-0103R/L-4N
6" STROKE	-0103R/L-6N
8" STROKE	-0103R/L-8N
10" STROKE	-0103R/L-10N
12" STROKE	-0103R/L-12N



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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: TAMP ASSEMBLY	TITLE: SLIDE ASSEMBLY for 3600a-RW (RFID) APPLICATOR	Dept. Code 70
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: -	Scale: 1=3
			Date: 12/15/04	DRAWN BY: Jeffery Mendenhall
				F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a-RW\ASS\ASS-248-0103RL-XX



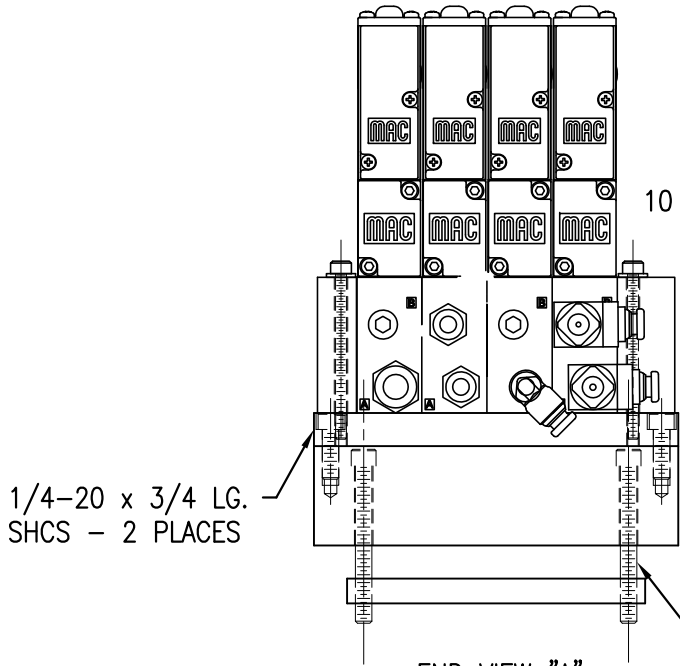
BILL OF MATERIAL			
ASS-248-0142M			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0142M	4 STATION VALVE BANK FOR 3600 DAT - remove the following items
	-1	PM-PF1120	CLOSE NIPPLE, 1/8" NPT x 3/4" Lg.
	-1	PM-PF1170	ELBOW, 1/8" NPT
	-1	PM-PF1185	STREET ELBOW, 1/4" NPT
②	1	PM-PF1180	STREET ELBOW, 1/8" NPT

\* PARTS REMOVED WERE FROM THE REGULATOR MOUNTING.  
REFER TO DRAWING ASS-238-0142M FOR DIFFERENCES

\* MOUNTING PLATES NOT INCLUDED IN ASSEMBLY

VALVE BANK SPARE PARTS:

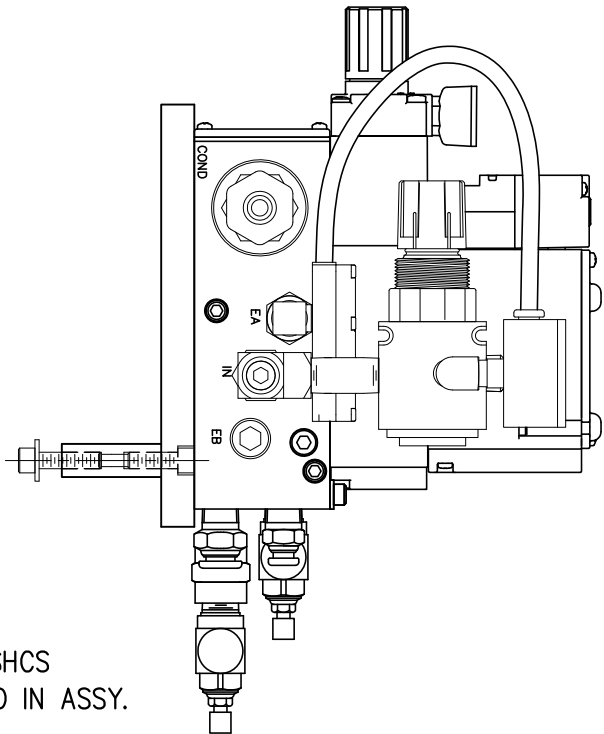
SOLENOID: #PM-VA2395M  
AIR ASSIST REGULATOR W/GUAGE: #PM-VA2396M  
BLOW/TAMP/IMPRINTER REGULATORS W/GUAGE: #PM-VA2397M  
AIR ASSIST REGULATOR GUAGE: #PM-VA2382M  
BLOW/TAMP/IMPRINTER REGULATOR GUAGES: #PM-VA2380M



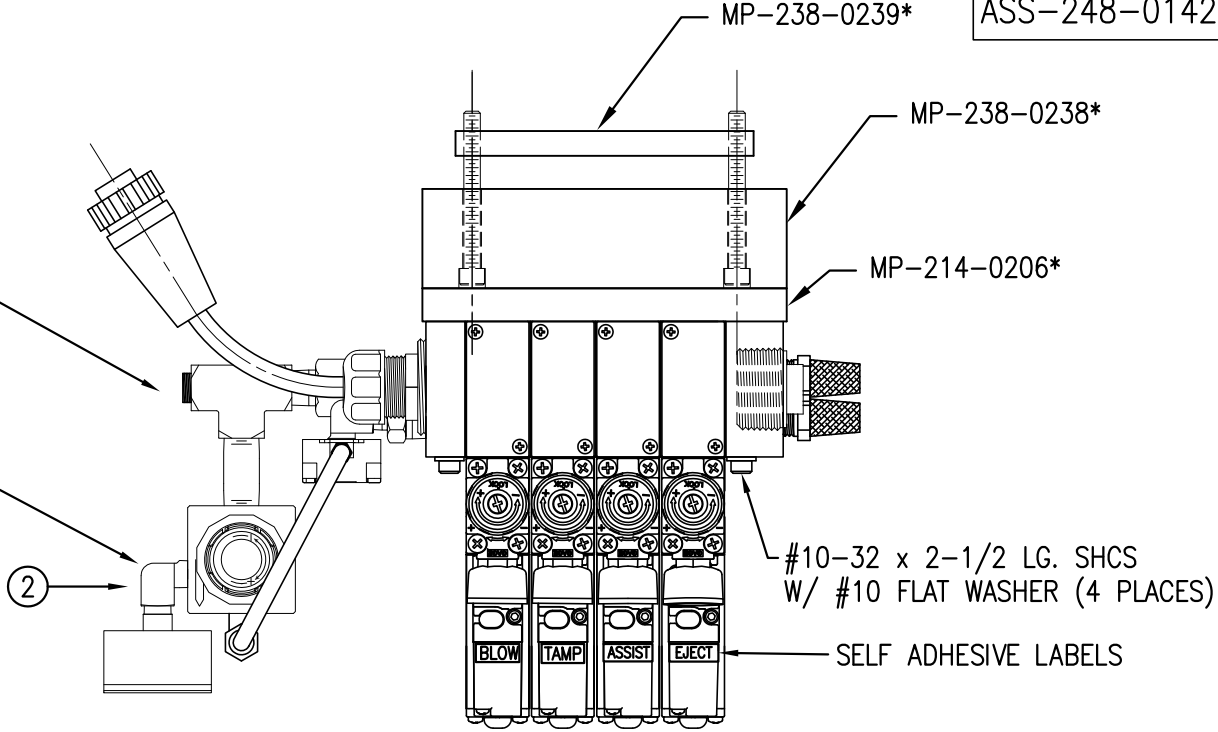
MOUNTING FASTENERS  
1/4-20 x 2-1/4 LG. SHCS  
(2 PLCS) NOT INCLUDED IN ASSY.

REMOVE 1/4" NPT STREET ELBOW FROM ASS-238-0142M

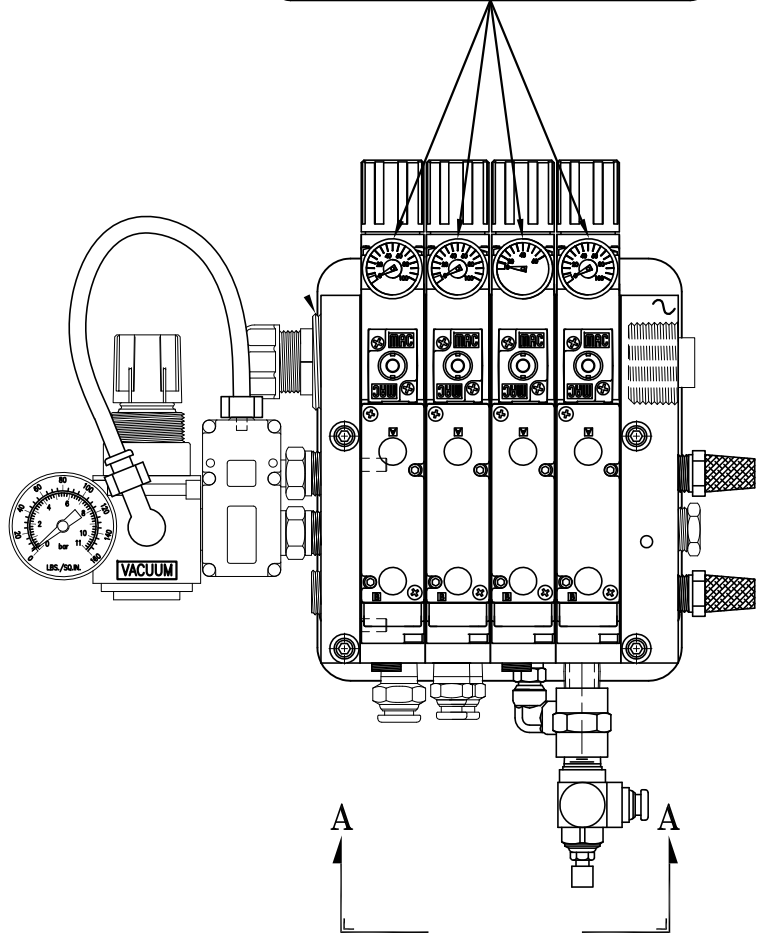
REMOVE 1/8" PIPE NIPPLE & 1/8" NPT ELBOW  
FROM ASS-238-1042M & REPLACE WITH 1/8" NPT STREET ELBOW



②

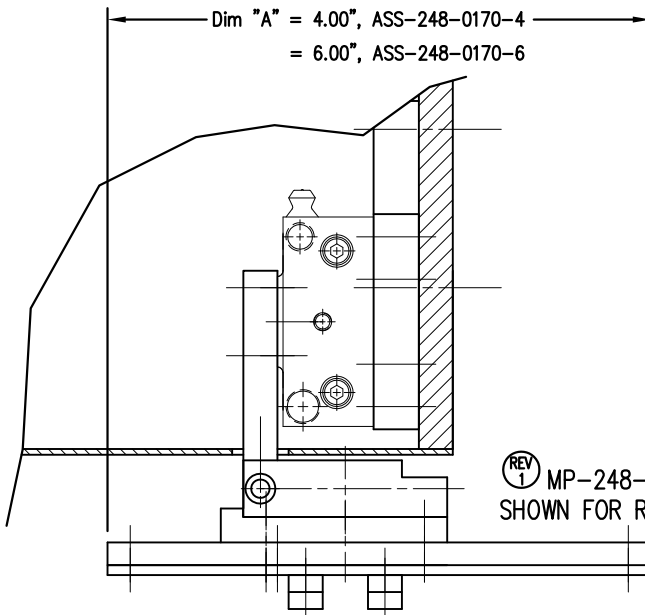
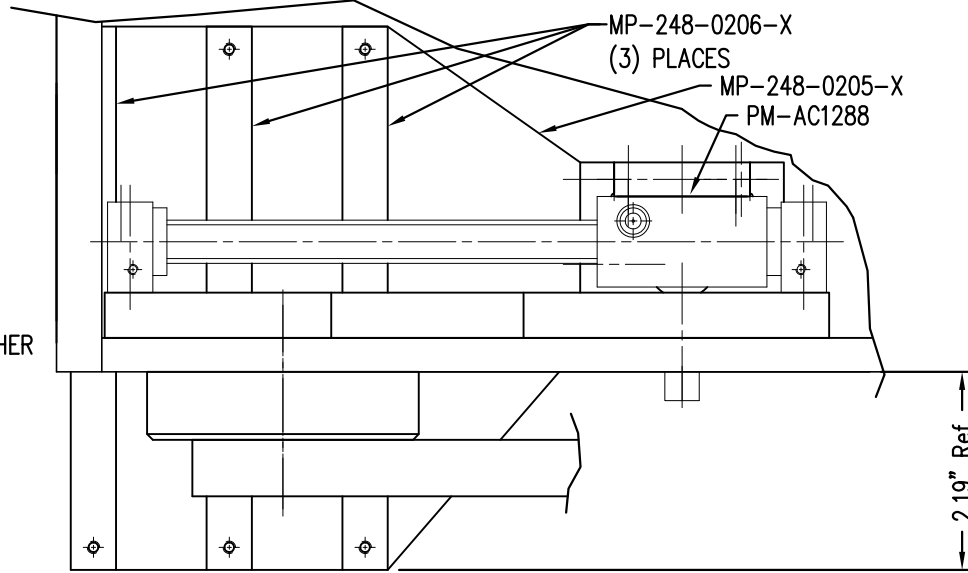
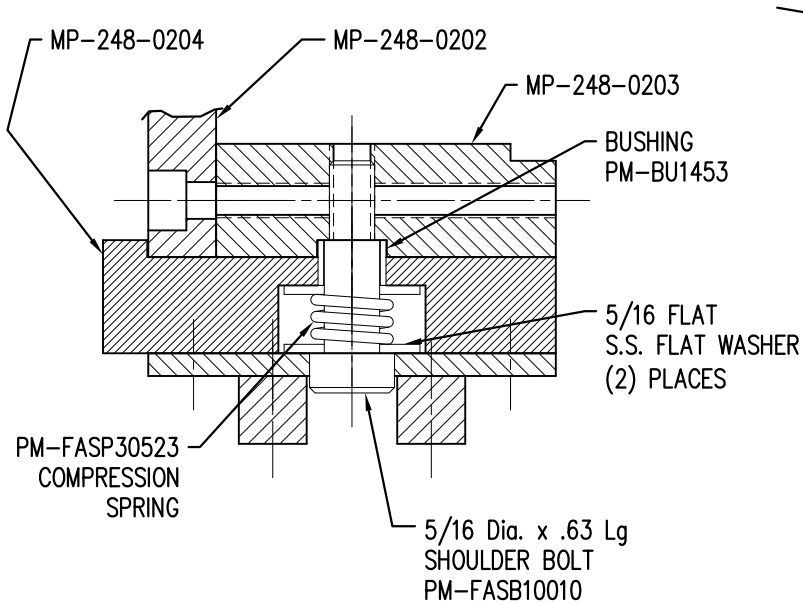


TAMP, IMPRINT & BLOW VALVE:  
PRESSURE GAUGE - 0-100 PSI  
AIR ASSIST VALVE:  
PRESSURE GAUGE - 0-60 PSI

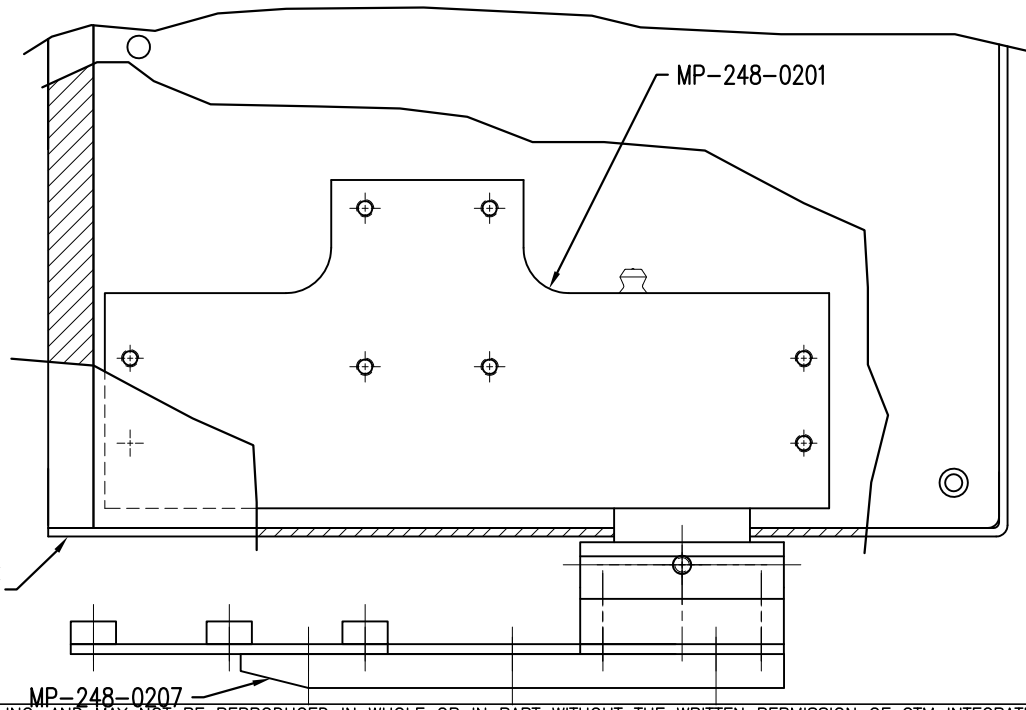


REAR FLOW CONTROL  
NOT SHOWN FOR CLARITY

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APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 5" / 7.5" / 10"		GROUP: VALVE BANKS		TITLE: 4-STATION VALVE BANK ASSEMBLY FOR 3600 RFID		Dept. Code 70	
REV. 3	REV. DESCRIPTION REPLACED 0-160 GAUGE WITH 0-100 GAUGE			REV. DATE 12/20/18	REV. BY: BNT	Scale: 1=3	Date: 04/10/07	DRAWN BY: E. SANOR	F:\Engineering\Standard Parts\Applcator\3600 SERIES\ 3600g-RW\ASS-248-0142M



REV 1 MP-248-0228R/L  
SHOWN FOR Ref. ONLY



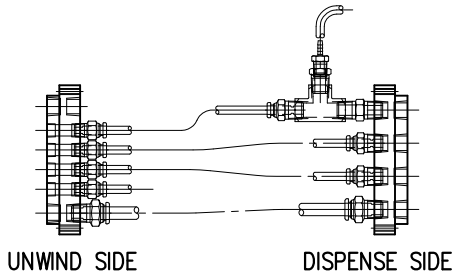
PADDLE

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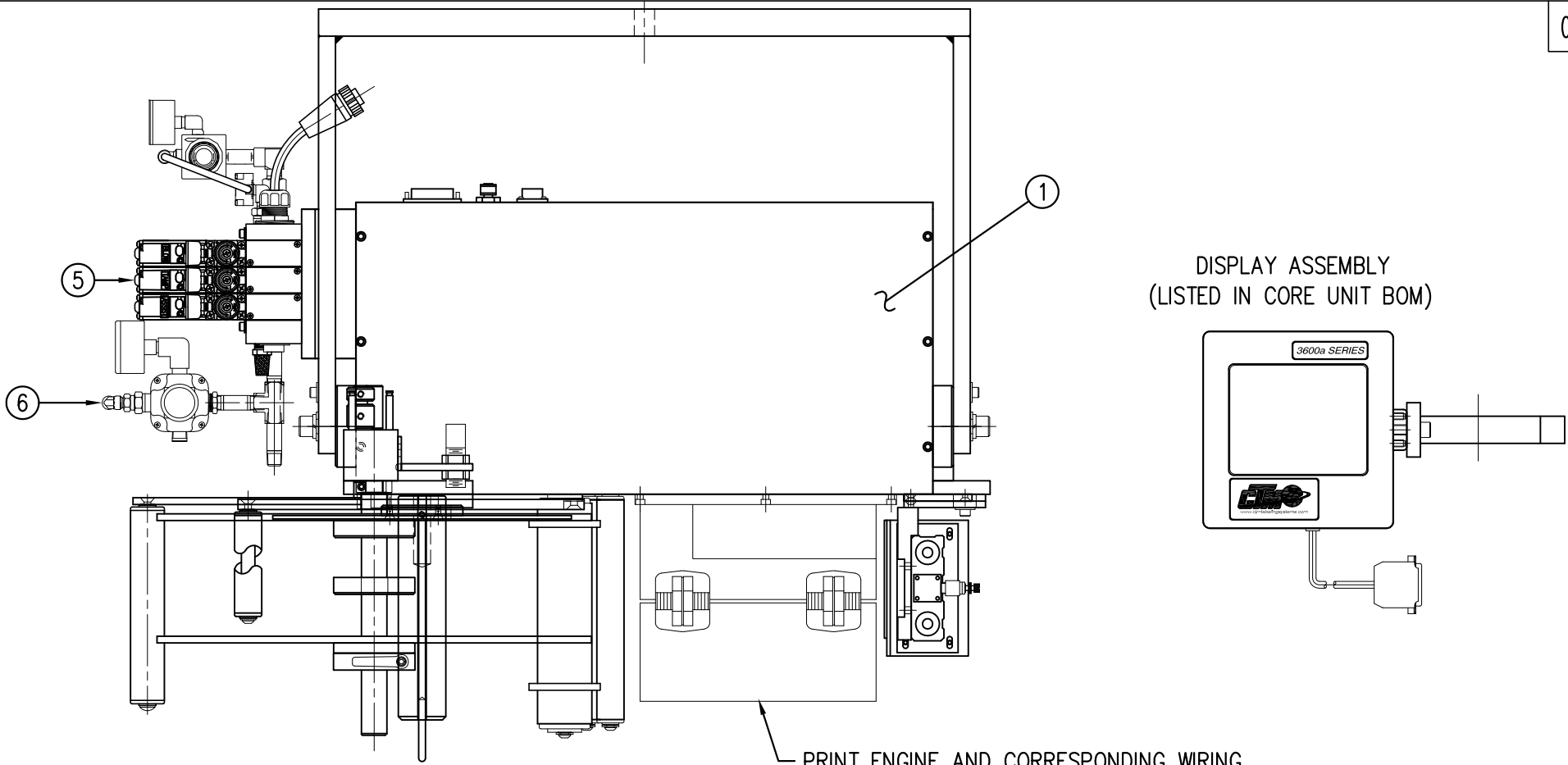
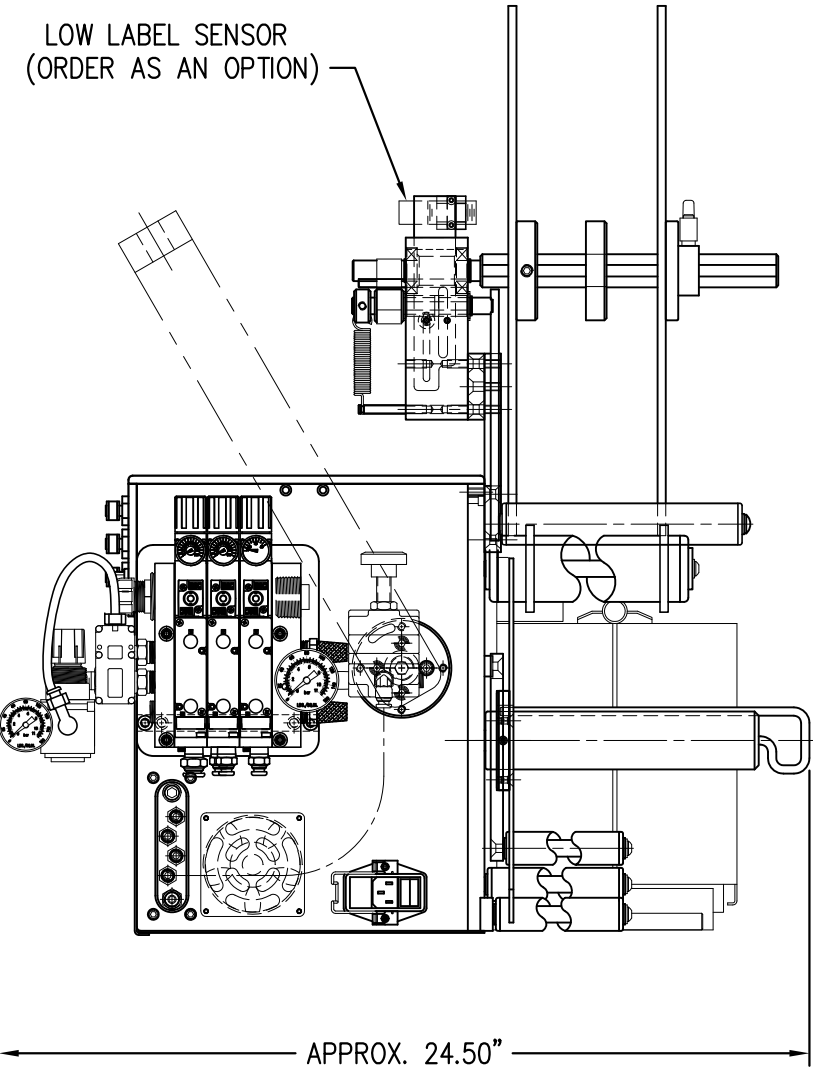
APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"		GROUP: TAMP ASSEMBLY		TITLE: LABEL EJECT SLIDE ASSEMBLY for 3600a-RW (RFID) APPLICATOR					Dept. Code 70		
REV. 1	REV. DESCRIPTION ADDED PART# FOR LH COVER				REV. DATE 08/30/13 TK		REV. BY:	Scale: 1=2	Date: 12/15/04	DRAWN BY: Jeffery Mendenhall		F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a-RW\ASS\ASS-248-0170-X	

BILL OF MATERIAL			
CTM-238aR-TXS-16S-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-238a-0124R-XX	3600a CORE UNIT & HOUSING ASSEMBLY - RH
②	1	MOD-238a-3121R	UNWIND MODULE with 16" DISKS - RH
	1	MOD-238a-3121AR	UNWIND MODULE with ALUMINUM DISK for "REELS UP" - RH
③	1	MOD-238a-0124RL-16	TAMP MODULE FOR 3600a 16" UNWIND VERSIONS - RH or LH
④	1	ASS-214-0103RL-XN	STANDARD SLIDE ASSEMBLY FOR 3600-PA APPLICATOR
⑤	1	ASS-238-0129M	TAMP 3 STATION MAC VALVE BANK ASSEMBLY with FILTER
⑥	1	ASS-200-3106	HI/LO REGULATOR ASSY, (FOR EXISTING VALVE BANKS)
⑦	1	ASS-238-0144-16PU	REWIND ASSEMBLY FOR 16" POWERED UNWIND
⑧	1	SAS-238A-0124-16	AIR MANIFOLD ASSEMBLY

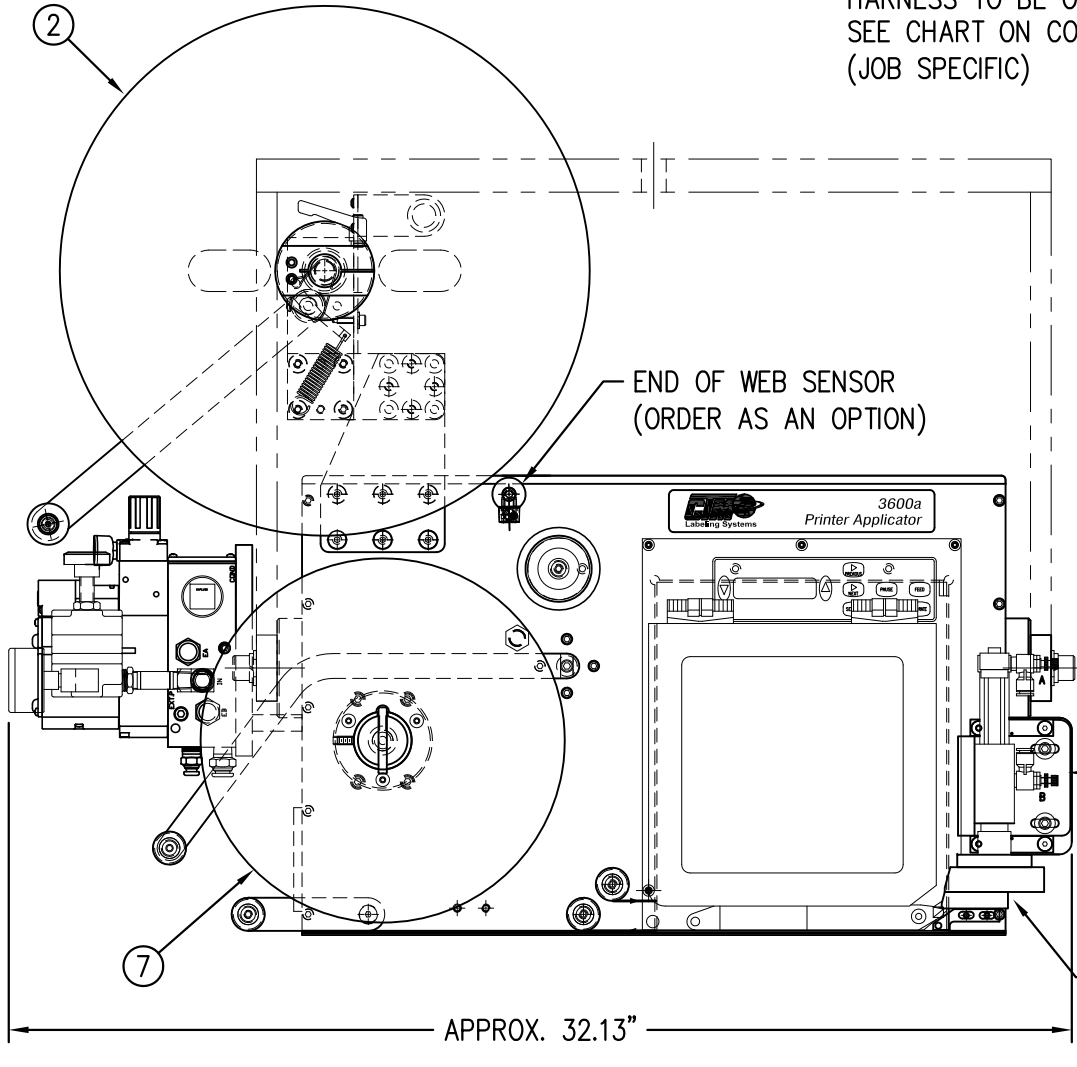
ITEM ⑧ (INSIDE FITTINGS ONLY)



LOW LABEL SENSOR  
(ORDER AS AN OPTION)



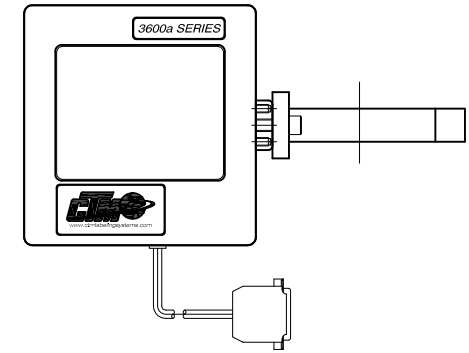
PRINT ENGINE AND CORRESPONDING WIRING  
HARNESS TO BE ORDERED SEPARATELY  
SEE CHART ON CORE UNIT DRAWING  
(JOB SPECIFIC)



END OF WEB SENSOR  
(ORDER AS AN OPTION)

LABEL PAD AND MANIFOLD  
ORDER SEPARATELY  
(JOB SPECIFIC)

DISPLAY ASSEMBLY  
(LISTED IN CORE UNIT BOM)



OUTSIDE OF CORE UNIT  
AIR FITTINGS ARE PART  
OF THE TAMP MODULE

CTM-238aR-TXS-16S-XX

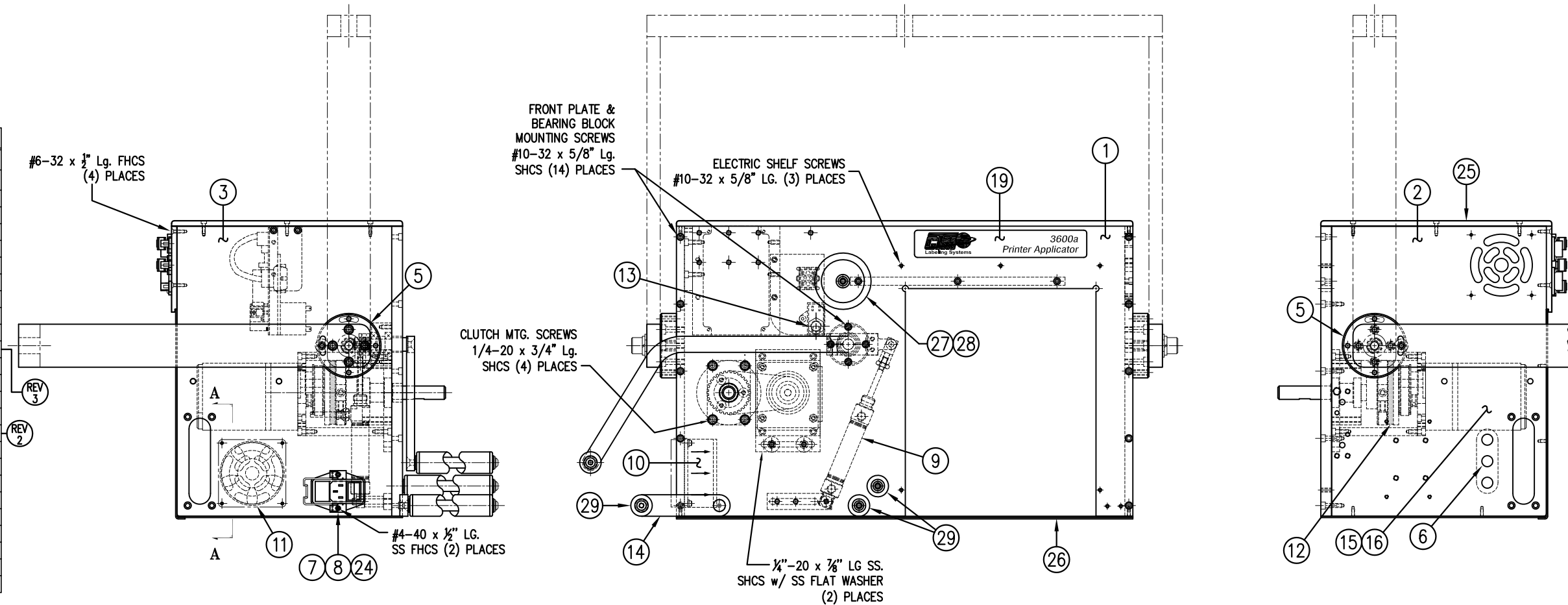
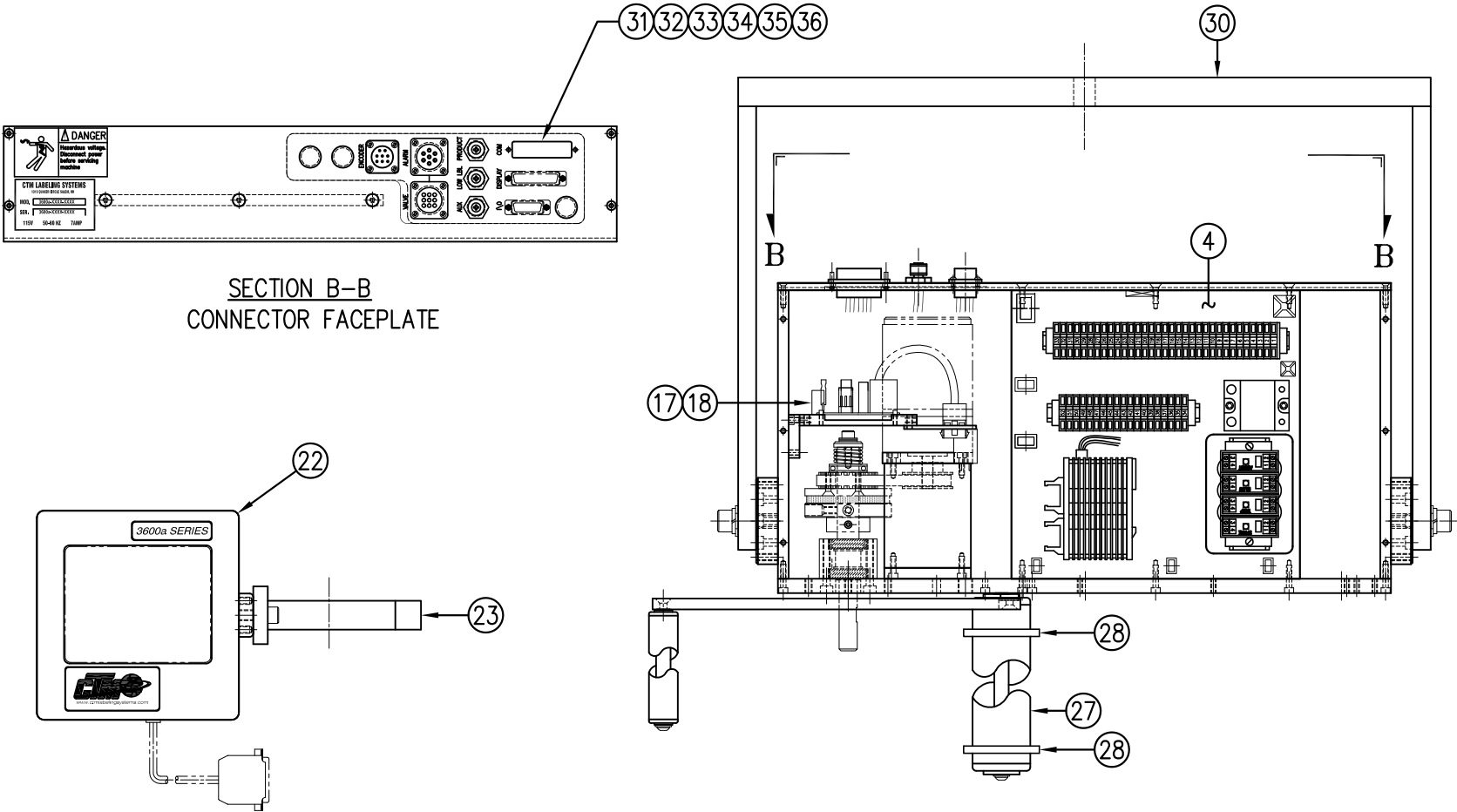
- SATO -SX
- ZEBRA -ZX
- DATAMAX -DX
- SERIAL -XS
- PARALLEL -XP
- ETHERNET -XE
- USB -XU

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APPLICATOR SERIES: 3600a SERIES				70	
REV. DESCRIPTION				F:\Engineering\Standard Parts\Applcator\3600a	
2	REVISED TO SHOW NEW LOW LABEL SENSOR AND MOUNTING	REV. DATE	03/15/19	REV. BY	BNT
TITLE: 3600a ADVANCED PRINTER APPLICATOR				Scale:	1=6
Date:				02/19/2016	
DRAWN BY:				ERIC SANOR	
F:\Engineering\Standard Parts\Applcator\3600a				16" UNWIND VERSION\CTM-238aR-TXS-16S-XX	

BILL OF MATERIAL			
CTM-238a-0124R/L-XX			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238a-0124R/L	16" UNWIND ADVANCED P/A HOUSING SHELF ASSEMBLY
22	1	ASS-238a-0126	DISPLAY UNIT FOR 3600a
23	1	ASS-200-0138	DISPLAY UNIT MOUNT (CLAMPS to UPRIGHT)
24	1	PE-C01020	16-3 POWER CORD - 10 FT.
25	1	MP-238-0221	TOP COVER
26	1	ASS-238-0228	STAINLESS STEEL HOUSING COVER ASSEMBLY
27	1	ASS-238-0135	2" DIA. DANCER ROLLER
28	2	MP-238-0247	2" DIA. GUIDE COLLAR w/ SET SCREW
29	3	ASS-238-0134	1" DIA. ROLLER
30	1	WAS-238-0130	U-ARM WELDMENT
31	1	ASS-238a-0405-9	SERIAL ADAPTER ASSEMBLY - 25 pin
32	1	PE-CA2500	PARALLEL CABLE
33	1	PE-CC1070	PARALLEL PORT CLIP KIT
34	1	PE-PA1040	FLAT RIBBON CLIP
35	1	ASS-238-0460	PARALLEL TO ETHERNET ADAPTER ASSEMBLY
36	1	ASS-238-0465	PARALLEL TO USB ADAPTER ASSEMBLY
37	1	SEE TABLE BELOW	PRINT ENGINE INTERFACE HARNESS (NOT SHOWN)
38	1	PM-WL1045	SMASHED HAND WARNING LABEL (NOT SHOWN)

37	APPLICATOR TO PRINT ENGINE INTERFACE HARNESS (ORDER W/ PRINT ENGINE)	
	ZEBRA PAX or DATAMAX 'A'	PE-238a-0418
	SATO SE	PE-238a-0420
	SATO S86-EX	PE-238a-0431

BILL OF MATERIAL			
SAS-238a-0124R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1	1	MP-238a-0270	3600a & 3600ST P/A FACEPLATE for 16" UNWIND
2	1	MP-238-0224R/L	HOUSING SIDEFRAME (NOSE SIDE)
3	1	MP-238-0225R/L	HOUSING SIDEFRAME (UNWIND SIDE)
4	1	ASS-238a-0127R/L	3600a ELECTRIC SHELF ASSY - RH/LH
5	2	MP-200-0273	U-ARM / APPLICATOR PIVOT MOUNT
6	3	PE-EN9055	1/2" HOLE PLUG
7	1	ASS-238-0412	AC POWER HARNESS & FILTER ASSEMBLY
8	1	ASS-200-0148	POWER CORD CLIP ASSEMBLY
9	1	ASS-238ST-0170R/L	PNEUMATIC REWIND DANCER ASSEMBLY
10	1	ASS-238a-0464	FAN ASSEMBLY
11	1	PE-FAN1130	FAN FILTER KIT
12	1	PM-BELT1015	REWIND TIMING BELT
13	1	ASS-238Aa-0454	REWIND SENSOR ASSEMBLY
14	1	MP-238-0375	ROLLER MOUNTING PLATE
15	1	ASS-238-0163R/L	REWIND MOTOR & PULLEY ASSEMBLY (CLUTCH BEARING TYPE)
16	1	PE-238-0429	REWIND MOTOR WIRING HARNESS
17	1	ASS-238-0124R/L	24 VDC POWER SUPPLY ASSEMBLY
18	1	PE-CON9070	CAPACITOR COVER
19	1	PM-LB1025	3600a P/A FRONT PLATE ID LABEL
8	1	PE-PA1080	WHITE STICKY PAD
3	1	PE-PA1050	1/4" ADHESIVE CABLE CLAMP
1	1	PM-PT1070	1/4" O.D. SMC TUBING x 54.5" Lg.
1	1	PM-PT1080	3/8" O.D. SMC TUBING x 19" Lg.
18	1	PE-PA1060	WHITE WIRE TIE



CTM-238a-0124R/L-XX

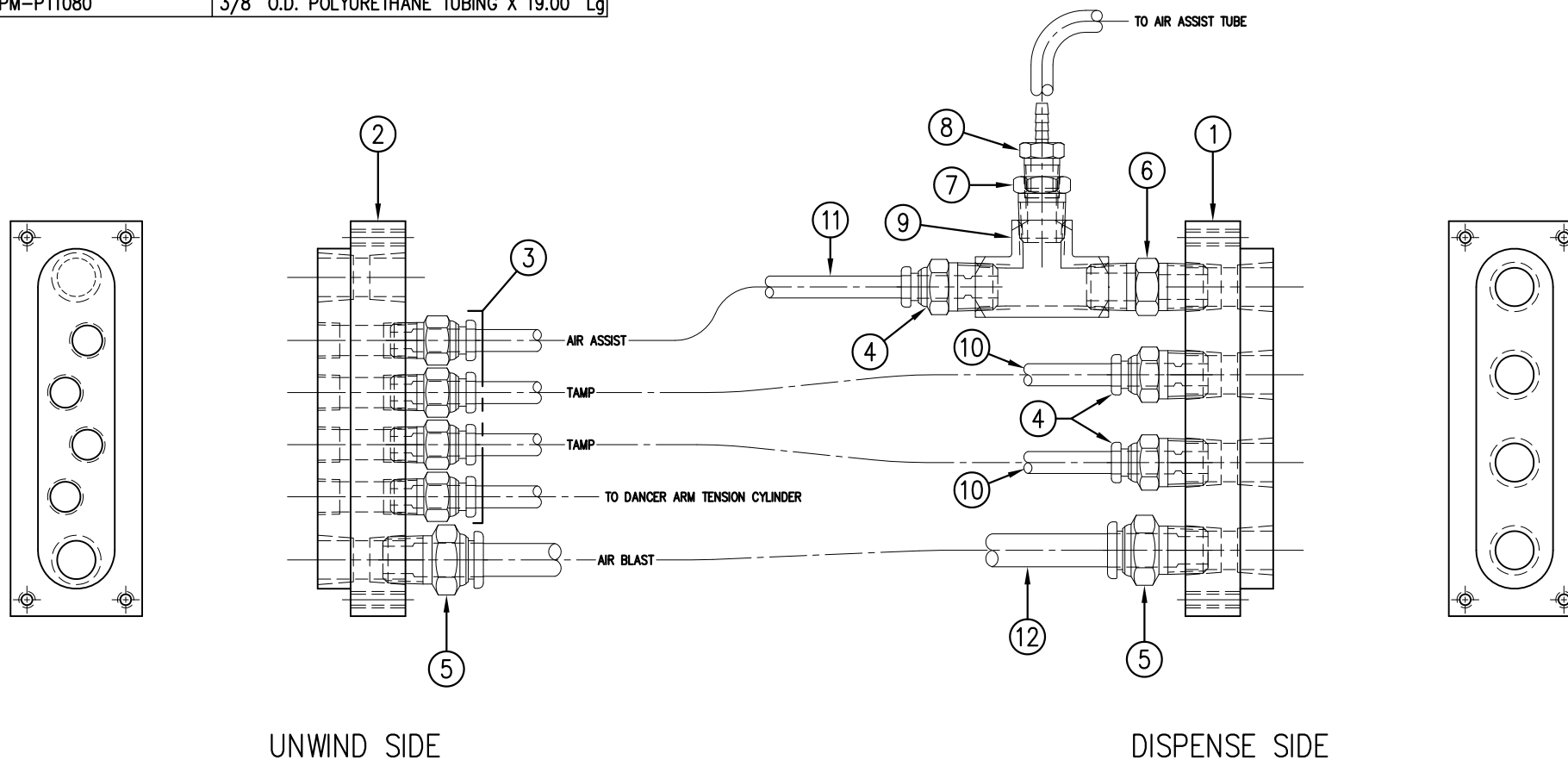
SATO -SX  
ZEBRA -ZX  
DATAMAX -DX  
SERIAL -XS  
PARALLEL -XP  
ETHERNET -XE  
USB -XU

# BILL OF MATERIAL

SAS-238a-0124-16

SAS-238a-0124-16

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-200-0250	AIR MANIFOLD (4-AIR LINES)
②	1	MP-200-0249	AIR MANIFOLD (6-AIR LINES)
③	4	PM-PF1005	FITTING, 1/8" NPT to 1/4" TUBE
④	3	PM-PF1010	FITTING, 1/4" NPT to 1/4" TUBE
⑤	2	PM-PF1020	FITTING, 1/4" NPT to 3/8" TUBE
⑥	1	PM-PF1153	FITTING, 1/4" NPT w 9/16" HEX. BRASS NIPPLE
⑦	1	PM-PF1105	FITTING, 1/4" NPT to 1/8" NPT RED. BUSHING
⑧	1	PM-FT1105	HOSE BARB, 1/8" NPT MALE x 1/4" TUBE
⑨	1	PM-PF1200	TEE FITTING, 1/4" NPT (FEMALE)
⑩	2	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 19.00" Lg
⑪	1	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 16.63" Lg
⑫	1	PM-PT1080	3/8" O.D. POLYURETHANE TUBING X 19.00" Lg

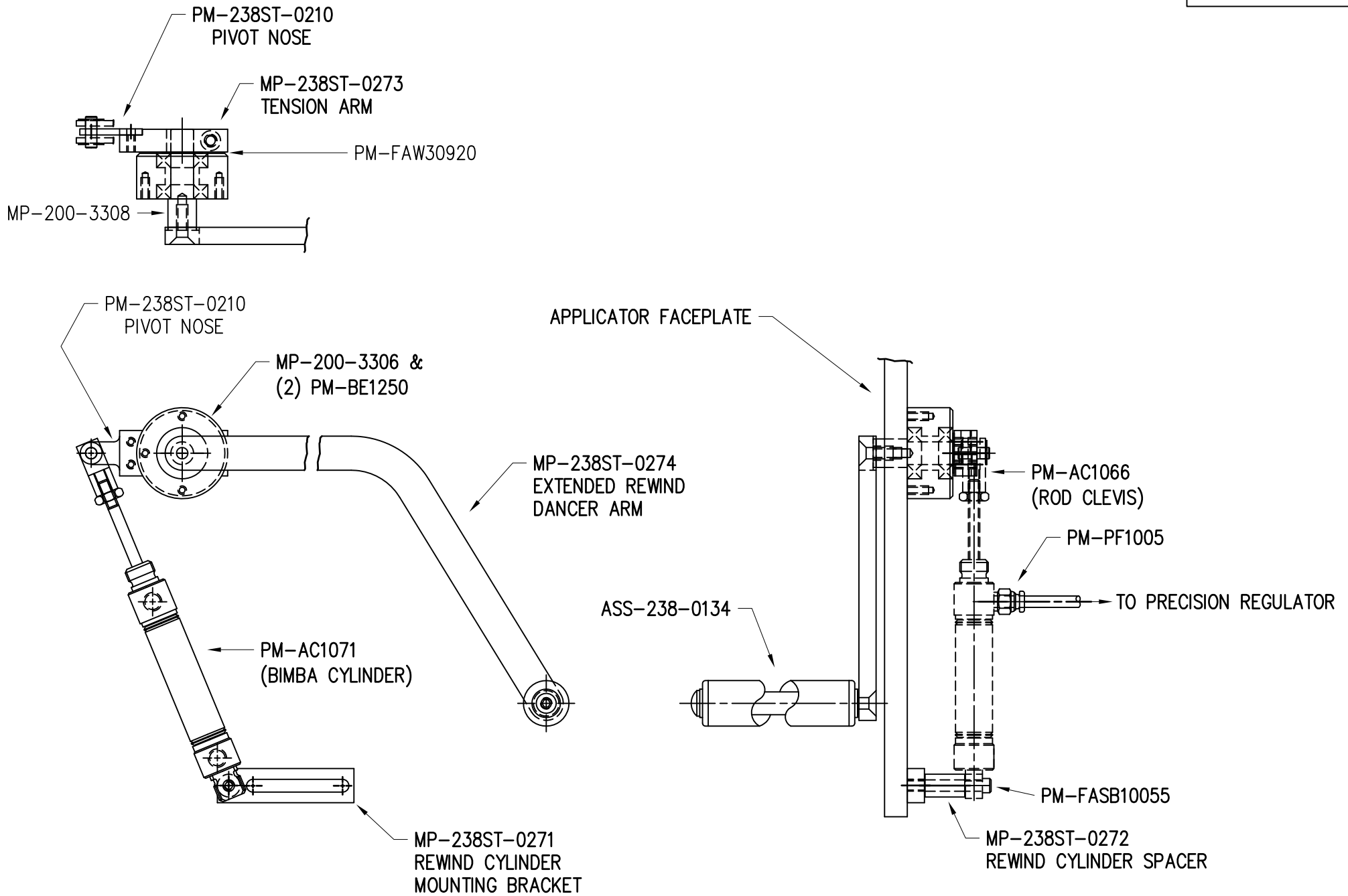


UNWIND SIDE

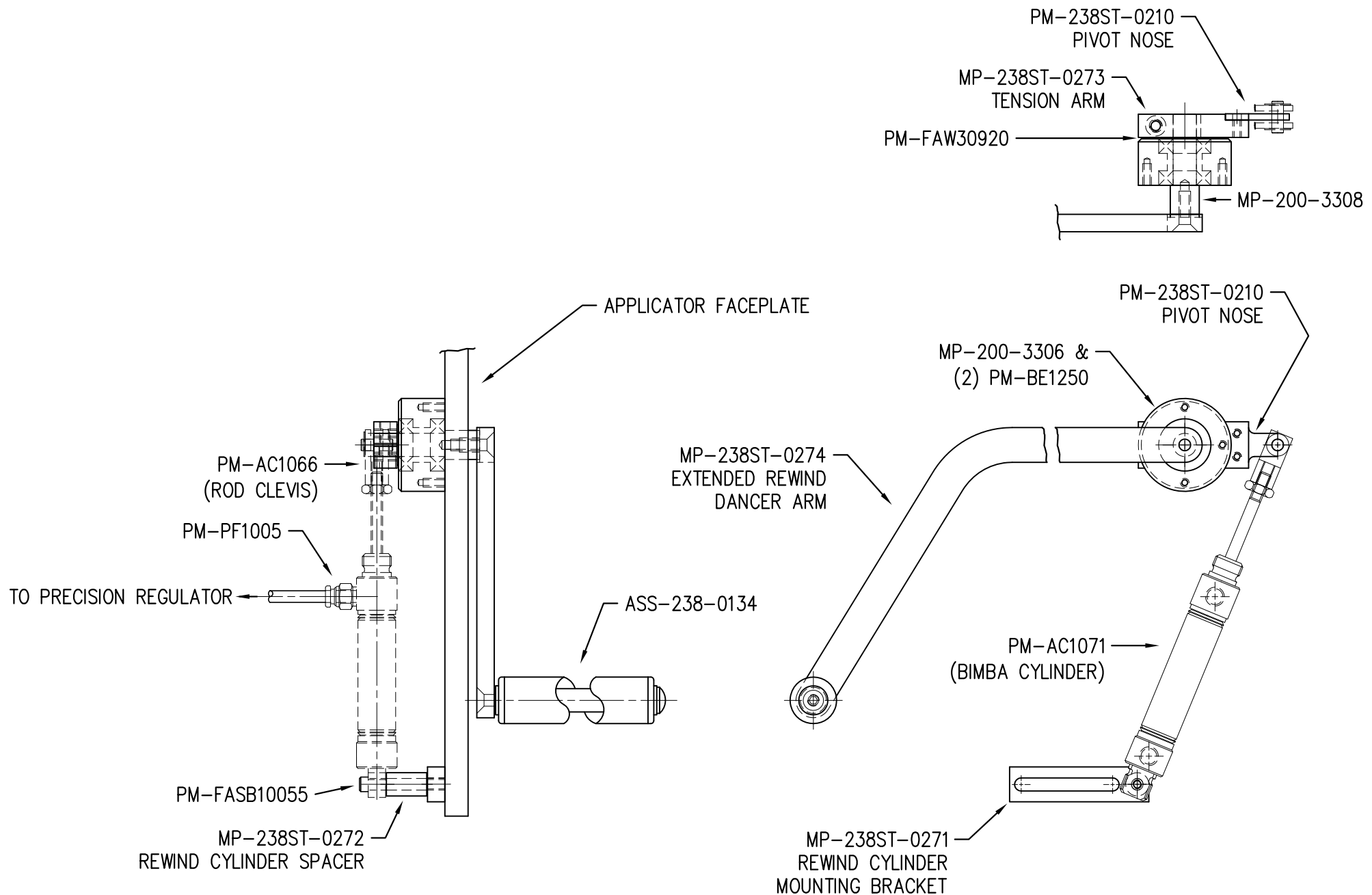
DISPENSE SIDE

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: 16" UNWIND 3600a SERIES APPLICATOR	TITLE: AIR MANIFOLD ASSEMBLY FOR 16" UNWIND 3600a (STRAIGHT & SWING TAMP)	Dept. Code 70
REV. 0	REV. DESCRIPTION —	REV. DATE —	REV. BY: XXX	Scale: 1=2
			Date: 10/26/2016	DRAWN BY: ES
				F:\Engineering\Standard Parts\Applicator\3600a\16" Unwind Version 238a\SAS-238a-0124-16



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APPLICATOR SERIES: 16" UW 3600a/3600ST	APPLICATOR WIDTH(S): N/A	GROUP: SERVO TAMP W/ 16" UNWIND	TITLE: PNEUMATIC REWIND DANCER ASSEMBLY - LH				Dept. Code 70		
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=3	Date: 10/26/2012	DRAWN BY: ERIC SANOR	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600-ST\16UW\ASS-238ST-0170L		



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APPLICATOR SERIES: 16" UW 3600a/3600ST		APPLICATOR WIDTH(S): N/A	GROUP: SERVO TAMP W/ 16" UNWIND	TITLE: PNEUMATIC REWIND DANCER ASSEMBLY – RH					Dept. Code 70
REV. 0	REV. DESCRIPTION –			REV. DATE –	REV. BY: xxx	Scale: 1=3	Date: 10/26/2012	DRAWN BY: ERIC SANOR	F:\Engineering\Standard Parts\Applicator\3600 SERIES\ 3600-ST\16UW\ASS-238ST-0170R

## BILL OF MATERIAL

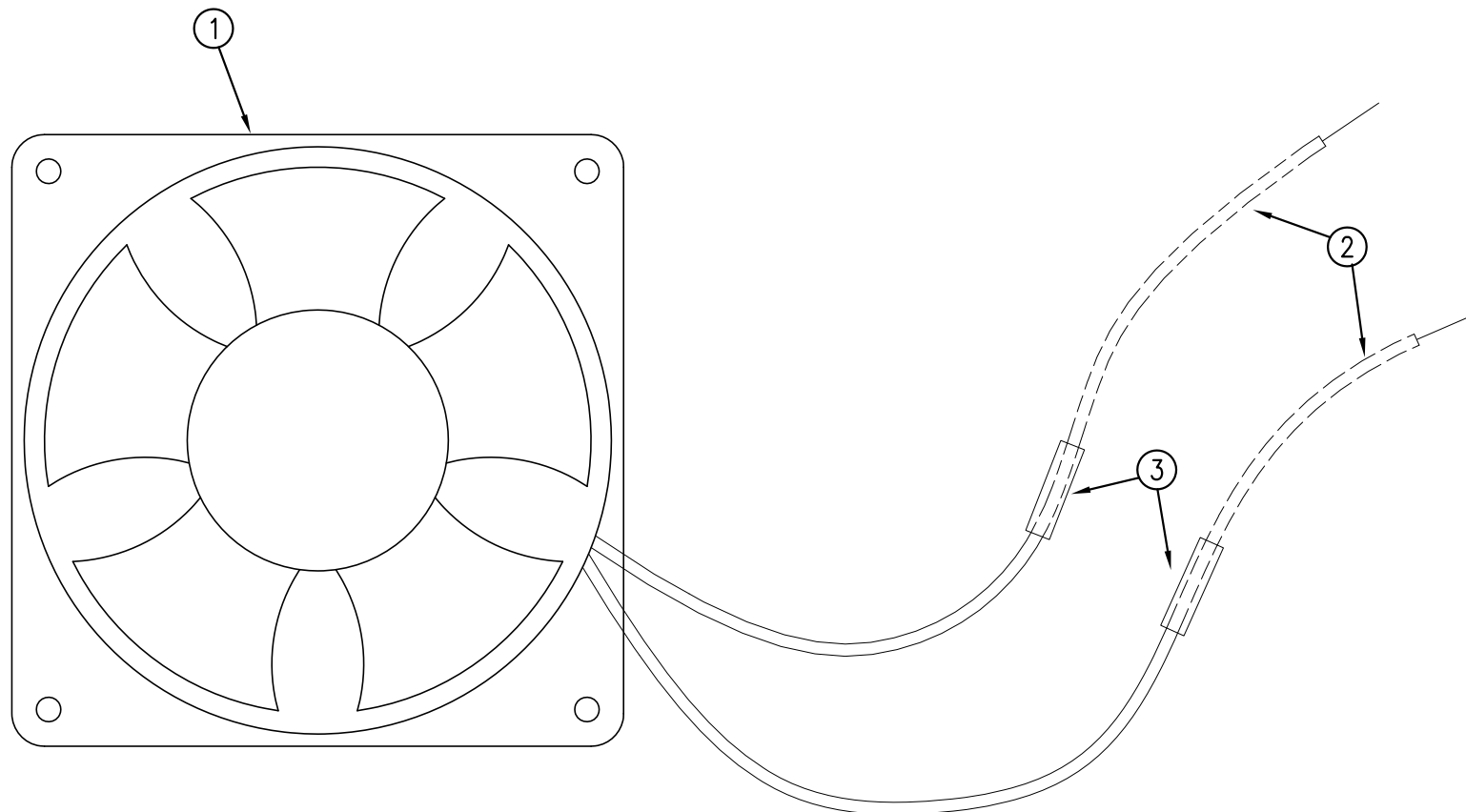
ASS-238a-0464

ASS-238a-0464

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-FAN1103	AXIAL FAN
②	2	PE-W1032	22 AWG, BLACK x 25" Lg.
③	2	PE-SL1000	GRAY SOLDER SLEEVE 22-26 AWG

ASSEMBLY INSTRUCTIONS

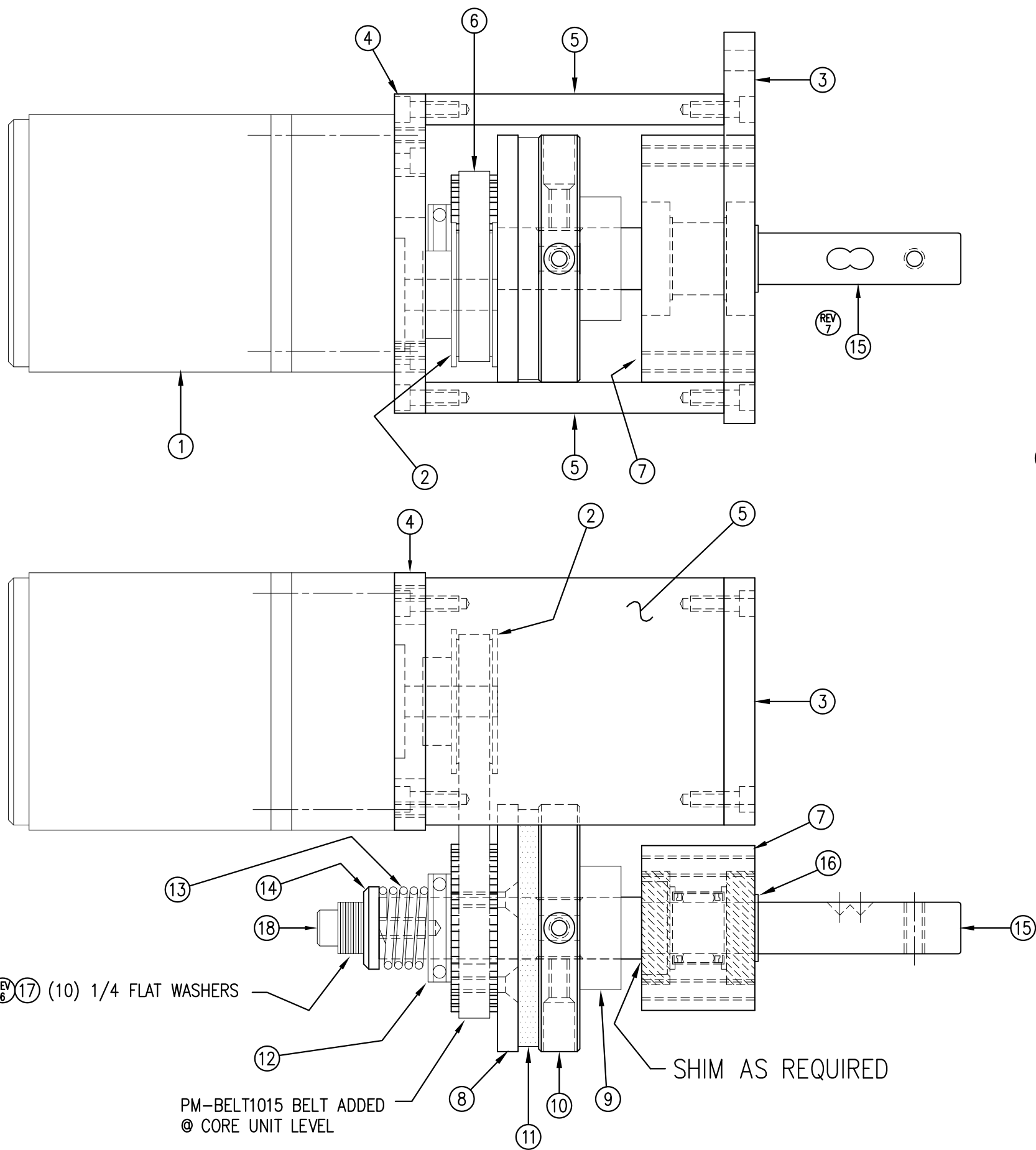
SOLDER 25" LENGTH OF 22AWG BLACK WIRE TO EACH OF THE FAN LEADS. SOLDER WITH GRAY SOLDER SLEEVES.



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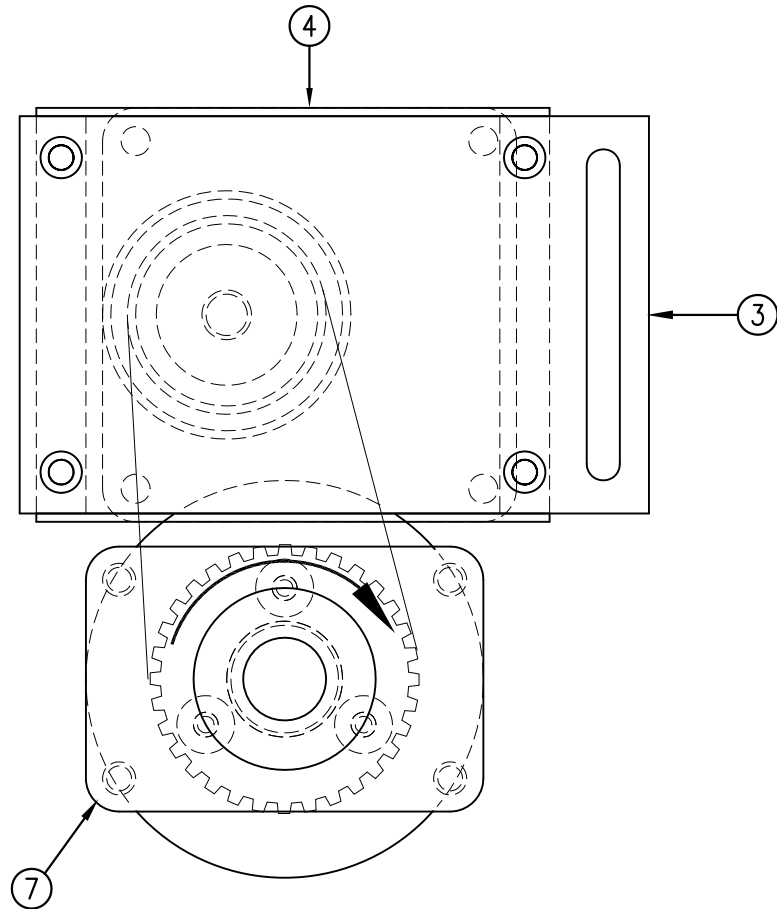
APPLICATOR SERIES: 3600a	APPLICATOR WIDTH(S): 7.5"	GROUP: POWERED UNWIND: ELECTRICAL	TITLE: FAN ASSEMBLY	Dept. Code 70
REV. 1	REV. DESCRIPTION REPLACED 1/8" SHRINK TUBE WITH GRAY SOLDER SLEEVE	REV. DATE 02/08/19	REV. BY: BNT	Scale: 1=1
			Date: 06/16/17	DRAWN BY: SES
				F:\Engineering\Standard Parts\Appliator\3600a\ 3600a\ASS-238a-0464



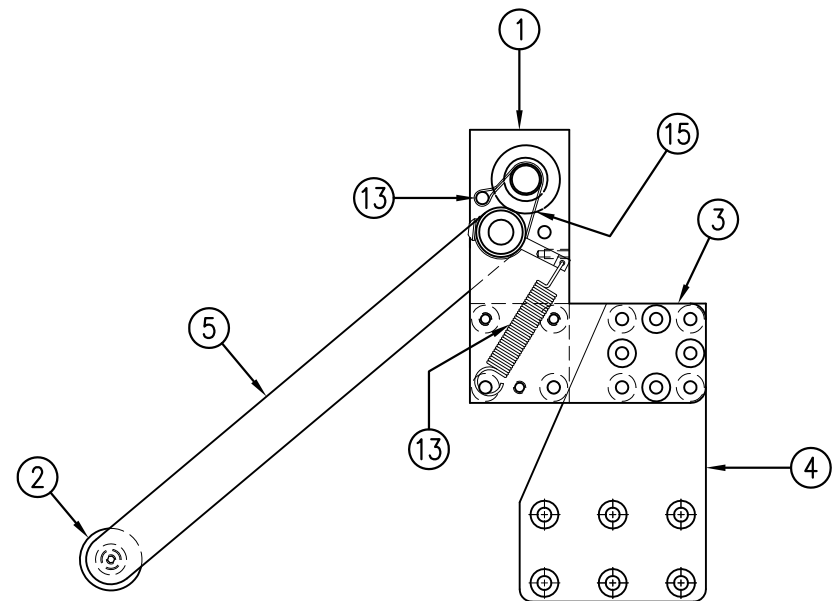
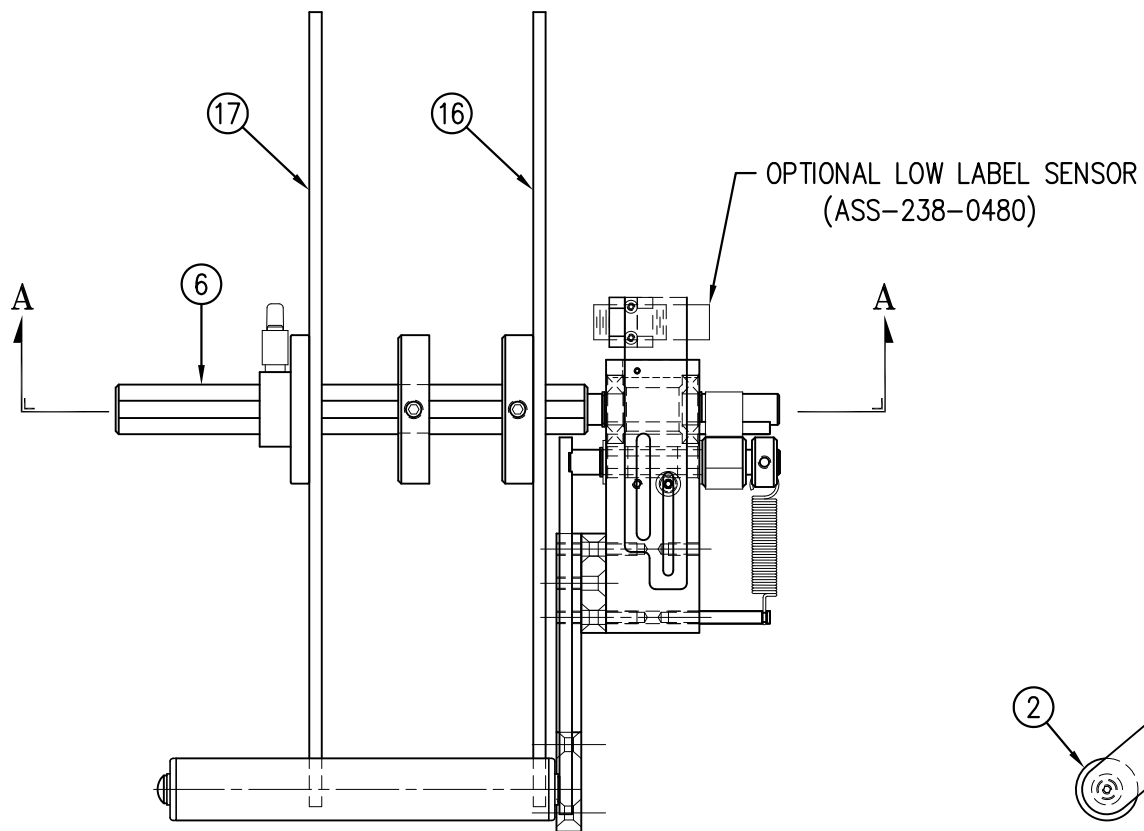
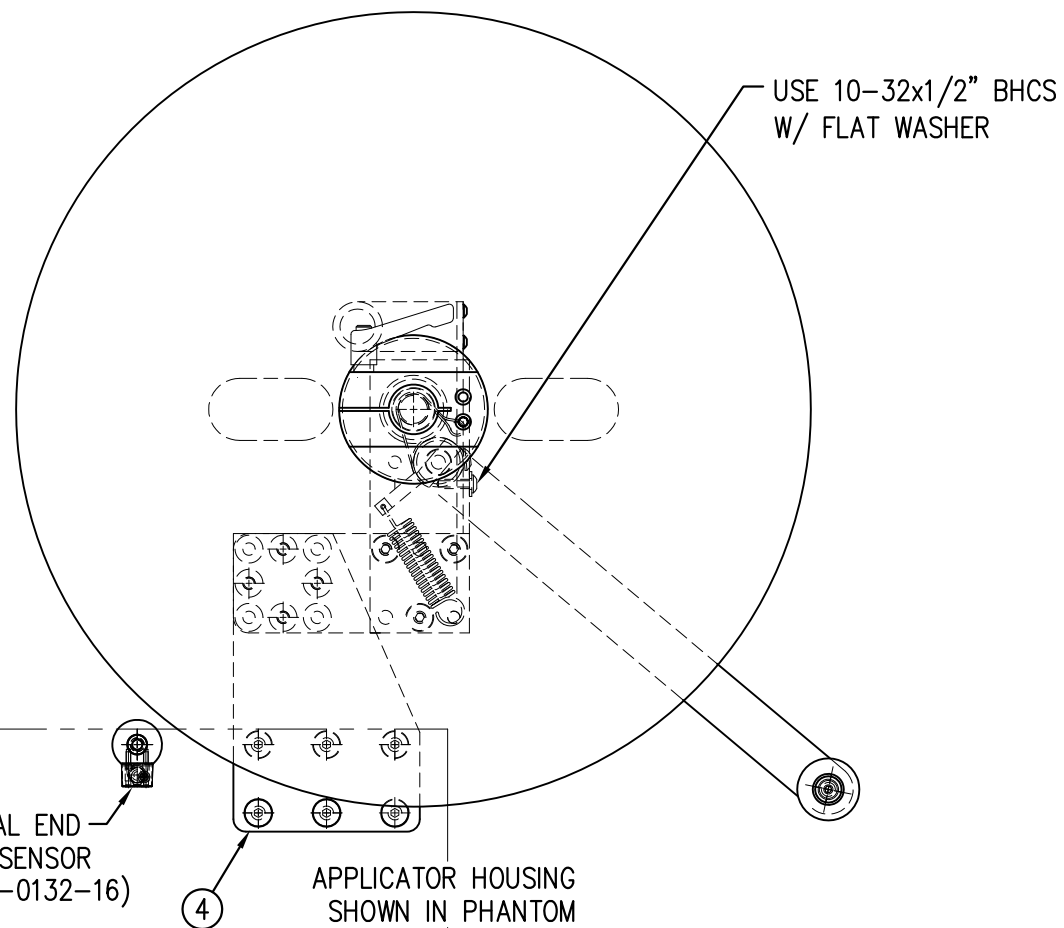
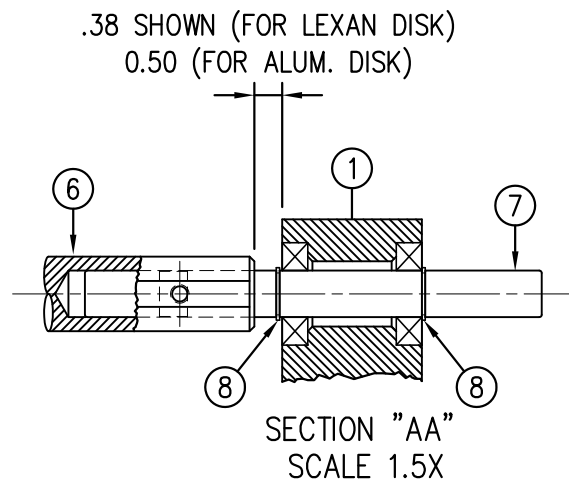
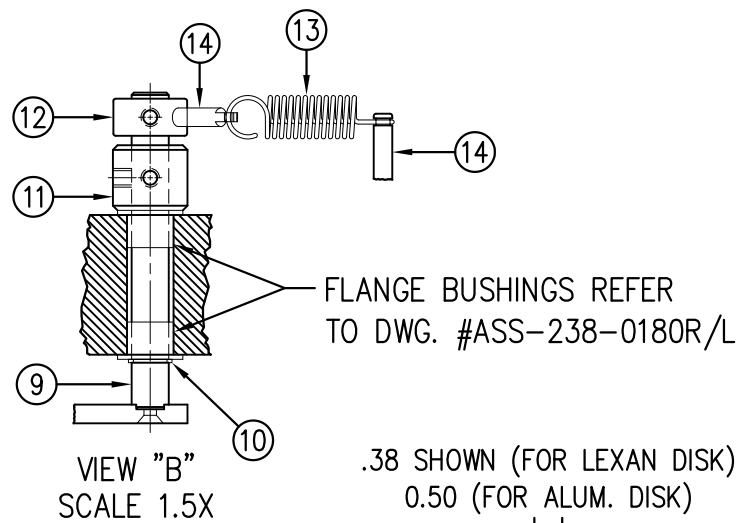
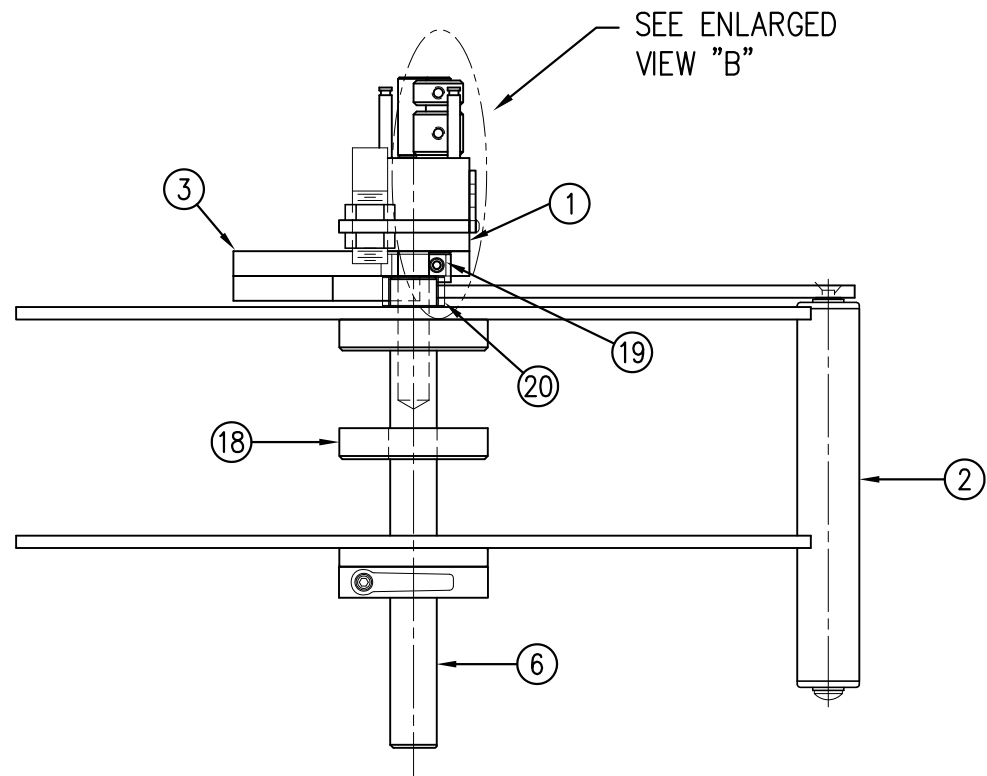


BILL OF MATERIAL			
ASS-238-0133			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0428	REWIND MOTOR
②	1	PM-238-0273	MOTOR PULLEY
③	1	MP-238-0201	MOUNT PLATE
④	1	MP-238-0272	REWIND MOTOR MOUNT PLATE
⑤	2	MP-238-0204	MOTOR SIDE FRAME

BILL OF MATERIAL			
ASS-238-0163R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
1-5	1	ASS-238-0133	REWIND MOTOR & PULLEY ASSEMBLY
⑦	1	ASS-200-0139	REWIND BEARING BLOCK ASSEMBLY
⑧	1	ASS-200-0143	SLIP CLUTCH ASSEMBLY
⑨	1	PM-C01020	LOCK COLLAR
⑩	1	MP-238-0202	SLIP CLUTCH
⑪	1	PM-CL1010	LEATHER CLUTCH PAD
⑫	1	PM-BE1232	THRUST BEARING
⑬	1	PM-FASP30431	COMPRESSION SPRING (HEAVY DUTY)
⑭	1	MP-200-0229	CLUTCH SPRING KEEPER
⑮	1	MP-238-0205	REWIND SHAFT
⑯	1	PM-FASR1010	SNAP RING
⑰	10	PM-FAW30275	FLAT WASHER, 1/4 NOM.
⑱	1	PM-FASH430080	SHCS, 1/4-20 x 1" LG.



ASS-238-0163R/L



MOD-238a-3121XL			
BILL OF MATERIAL			
SAS-238a-3121L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0180L	LH UNWIND BLOCK ASSEMBLY
②	1	ASS-238-0137	DANCER ROLLER ASSEMBLY W/SHAFT
③	1	MP-238-0236	MOUNTING PLATE FOR UNWIND to PRINTER APPLICATOR
④	1	MP-238ST-0277	16" UNWIND MOUNTING BRACKET
⑤	1	MP-238ST-0276	16" UNWIND TENSION ARM
⑥	1	MP-238-0219	UNWIND HUB SHAFT
⑦	1	MP-238-0212	UNWIND STUD SHAFT
⑧	2	PM-FASR1010	5/8" DIA. SNAP RING
⑨	1	MP-238-0217	DANCER ARM SHAFT
⑩	1	PM-FASR1005	1/2" DIA. SNAP RING
⑪	1	MP-238-0215	INNER COLLAR
⑫	1	MP-238-0216	OUTER HUB
⑬	1	PM-FASP30434	TENSION SPRING
⑭	1	PM-FASP30500	SPRING ANCHOR
⑮	1	PM-BB1030	BRAKE BAND with H.D. RIVET

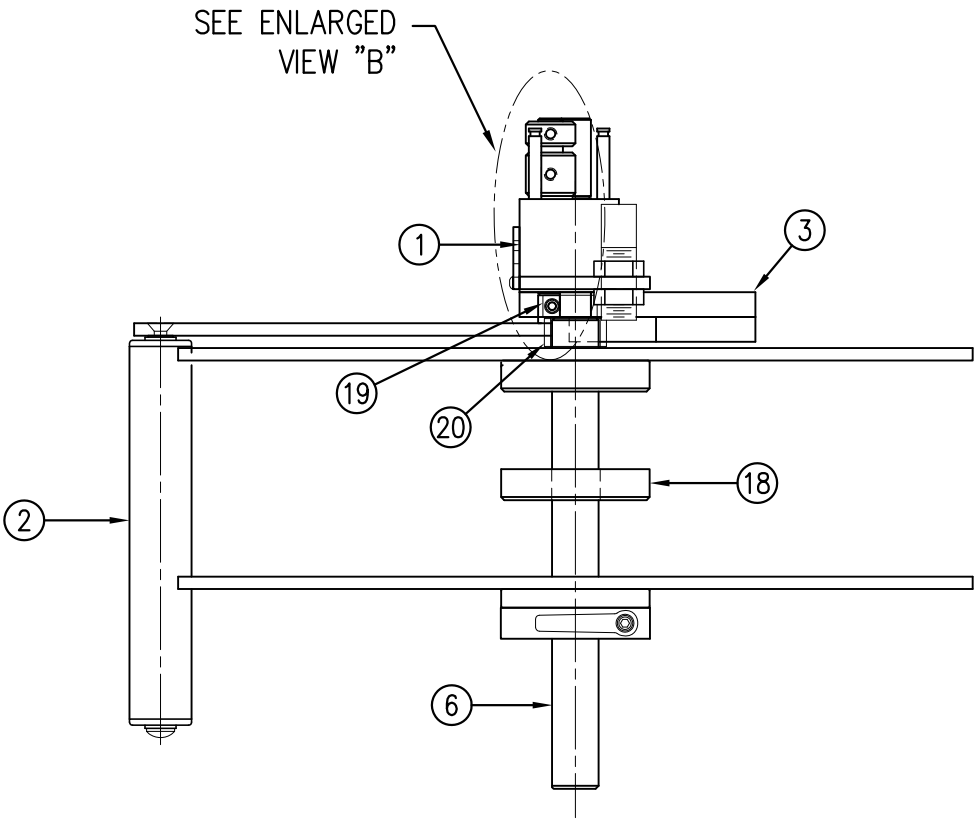
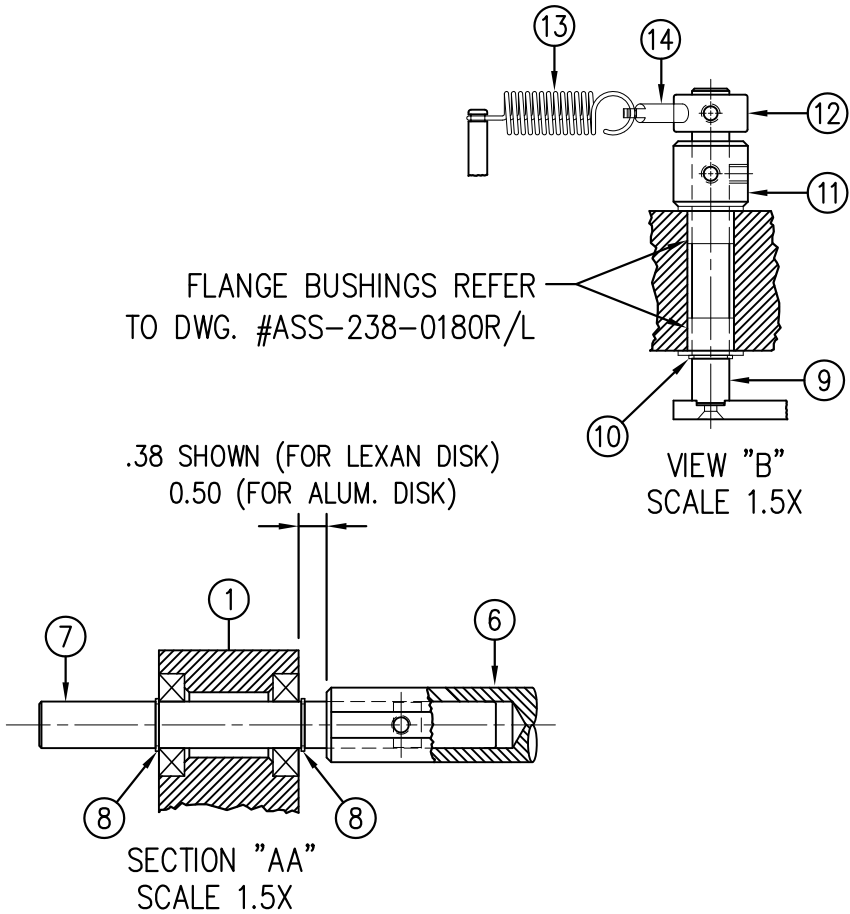
MOD-238a-3121XL			
BILL OF MATERIAL			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	SAS-238a-3121L	3600-ST 16" UNWIND SHELF ASSEMBLY
②	1	ASS-200-3132	LEXAN INSIDE UNWIND DISC ASSEMBLY
③	1	ASS-200-3132A	ALUMINUM INSIDE UNWIND DISC ASSEMBLY
④	1	ASS-200-3133	OUTSIDE 16" UNWIND DISC ASSEMBLY
⑤	1	MP-200-0267CS	UNWIND CORE SUPPORT SPACER
⑥	1	PM-C01015	5/8" ID STAINLESS STL LOCK COLLAR
⑦	1	PM-BU1475	1" ID x 1-1/4" OD x 5/8" Lg. BRONZE BUSHING

BILL OF MATERIAL			
SAS-238a-3121R			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-238-0180R	RH UNWIND BLOCK ASSEMBLY
②	1	ASS-238-0137	DANCER ROLLER ASSEMBLY W/SHAFT
③	1	MP-238-0236	MOUNTING PLATE FOR UNWIND to PRINTER APPLICATOR
④	1	MP-238ST-0277	16" UNWIND MOUNTING BRACKET
⑤	1	MP-238ST-0276	16" UNWIND TENSION ARM
⑥	1	MP-238-0219	UNWIND HUB SHAFT
⑦	1	MP-238-0212	UNWIND STUD SHAFT
⑧	2	PM-FASR1010	5/8" DIA. SNAP RING
⑨	1	MP-238-0217	DANCER ARM SHAFT
⑩	1	PM-FASR1005	1/2" DIA. SNAP RING
⑪	1	MP-238-0215	INNER COLLAR
⑫	1	MP-238-0216	OUTER HUB
⑬	1	PM-FASP30434	TENSION SPRING
⑭	1	PM-FASP30500	SPRING ANCHOR
⑮	1	PM-BB1030	BRAKE BAND with H.D. RIVET

BILL OF MATERIAL			
MOD-238a-3121XR			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-238a-3121R	3600-ST 16" UNWIND SHELF ASSEMBLY
⑯	1	ASS-200-3132	LEXAN INSIDE UNWIND DISC ASSEMBLY
	1	ASS-200-3132A	ALUMINUM INSIDE UNWIND DISC ASSEMBLY
⑰	1	ASS-200-3133	OUTSIDE 16" UNWIND DISC ASSEMBLY
⑱	1	MP-200-0267CS	UNWIND CORE SUPPORT SPACER
⑲	1	PM-C01015	5/8" ID STAINLESS STL LOCK COLLAR
⑳	1	PM-BU1475	1" ID x 5/8" Lg. BRONZE BUSHING

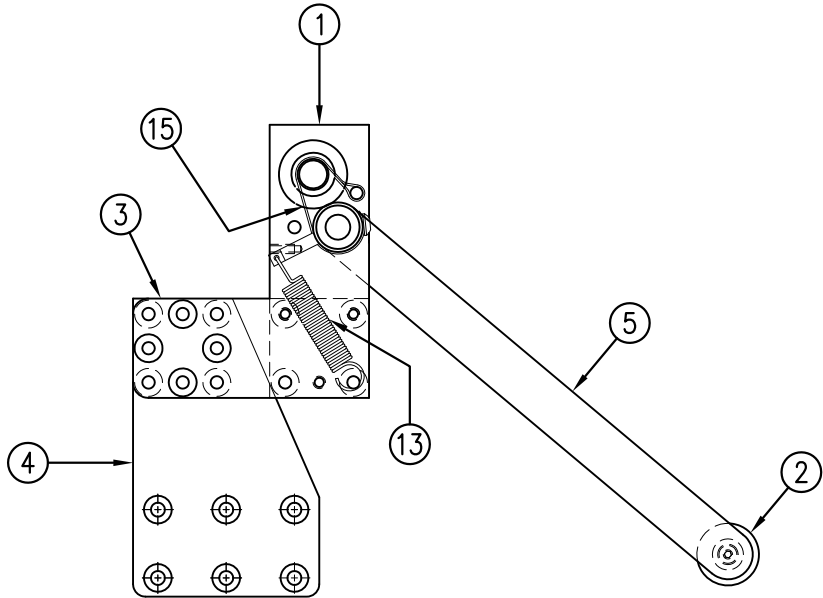
STANDARD  
REELS UP

REELS UP  
ONLY

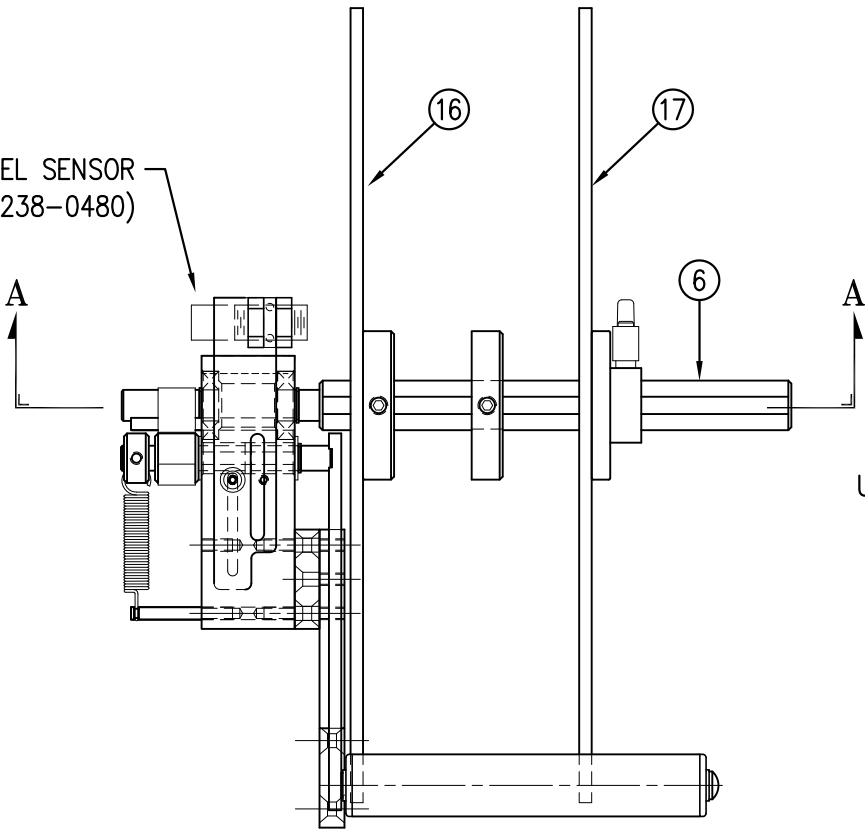


MOD-238a-3121XR

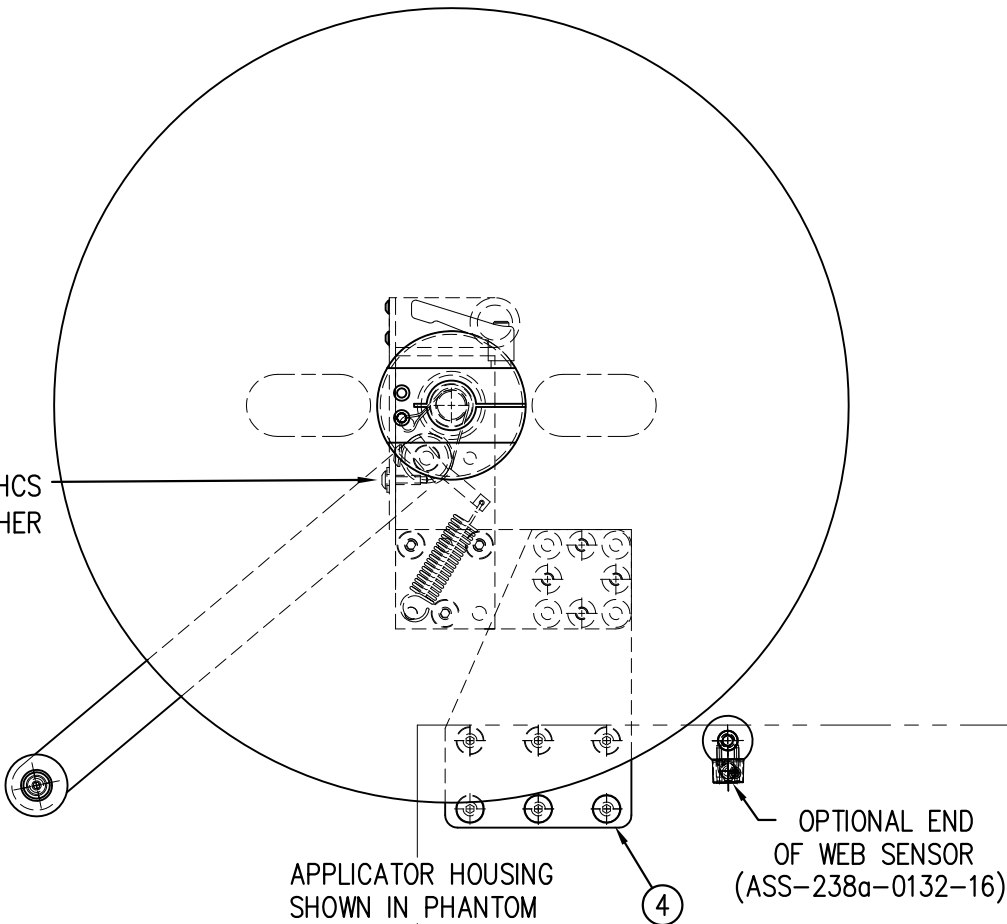
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APPLICATOR SERIES: 16" UW 3600a/3600ST	APPLICATOR WIDTH(S): 7.5"	GROUP: SERVO TAMP APPLICATOR: HOUSING	TITLE: 3600a & 3600-ST 16" UNWIND MODULE - RH
REV. 5	REV. DESCRIPTION	REV. DATE	REV. BY:
	REVISED TO SHOW NEW LOW LABEL SENSOR AND MOUNTING	03/19/19	BNT
		Scale: 1=4	Date: 11/08/2012
		Drawn By: ERIC SANOR	F:\Engineering\Standard Parts\Applcator\3600ST
			3600a\MOD-238a-3121XR
			Dept. Code 70



OPTIONAL LOW LABEL SENSOR  
(ASS-238-0480)



USE 10-32x1/2" BHCS  
W/ FLAT WASHER



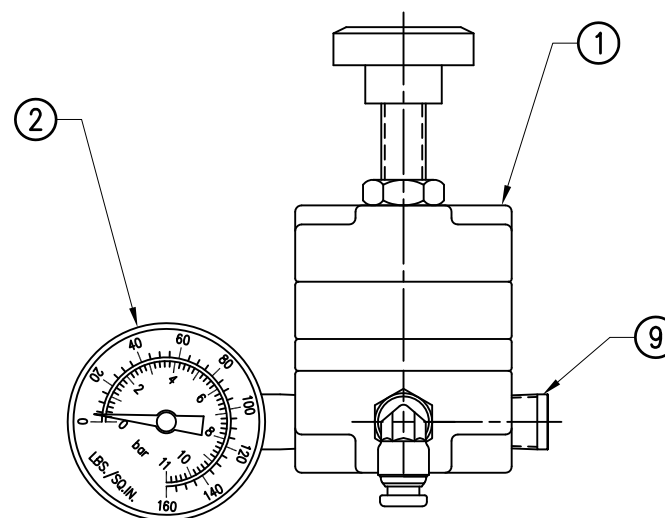
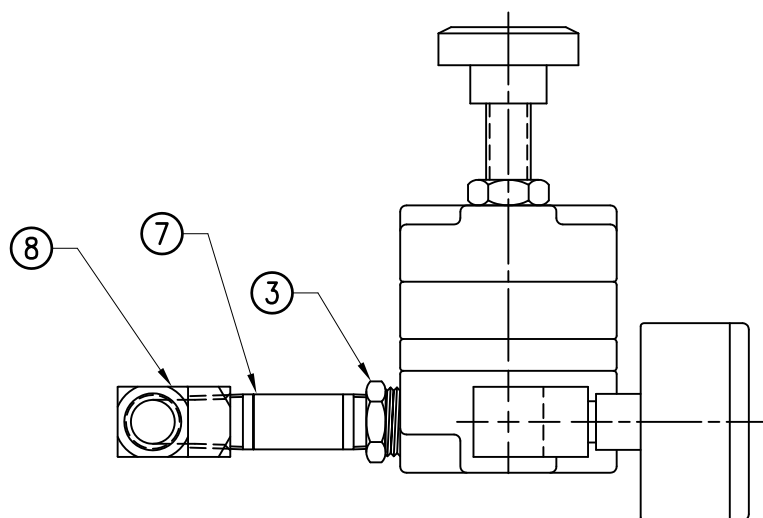
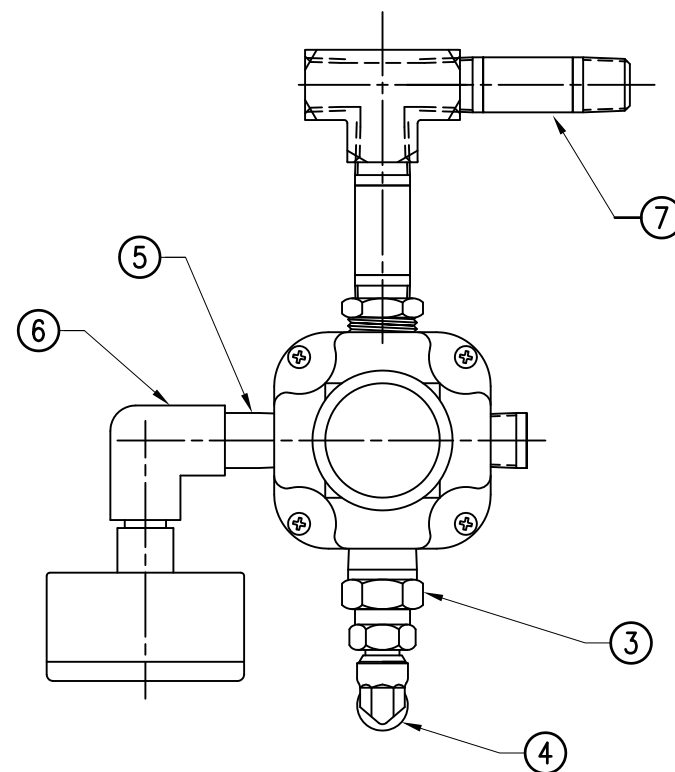
DISC ASSEMBLIES OMITTED FROM THIS VIEW

# BILL OF MATERIAL

SOLD

ASS-200-3106

ASSEMBLY		ASS-200-3106		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	HI / LO PRESSURE REGULATOR	PM-REG1535	.
②	1	HI / LO REGULATOR GAUGE	PM-VA2383	.
③	2	PIPE FITTING, BUSHING, 1/4 NPT Female TO 3/8 NPT Male	PM-PF1110	.
④	1	PIPE FITTING, 90° ELBOW SWIVEL, 1/4 TUBE TO 1/4 MALE NPTF	PM-PF1035	.
⑤	1	PIPE FITTING, CLOSE NIPPLE, 1/4 NPT x 7/8 Lg.	PM-PF1125	.
⑥	1	PIPE FITTING, 90° ELBOW, 1/4 NPT FEMALE TO 1/4 NPT FEMALE	PM-PF1175	.
⑦	2	PIPE FITTING, NIPPLE, 1/4 NPT x 2.00" Lg.	PM-PF1145	.
⑧	1	PIPE FITTING, BUSHING, 1/4 NPT Female 3 ENDS	PM-PF1200	.
⑨	1	PIPE FITTING, PLUG, 1/4 NPT	PM-FT1200	.



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APPLICATOR SERIES: 360		APPLICATOR WIDTH(S): 5"/7.5"		GROUP: POWERED REWIND ASSEMBLY		TITLE: HI/LO REGULATOR ASSY (for EXISTING VALVE BANKS)					Dept. Code 70	
REV. 0	REV. DESCRIPTION —			REV. DATE —		REV. BY: XXX	Scale: 1=2	Date: 02/20/08	DRAWN BY: Jeffery Mendenhall		F:\Engineering\Standard Parts\Appliator\360 SERIES\ PWRD RW\ASS\ASS-200-3106	

# BILL OF MATERIAL

ASS-238-0144-X

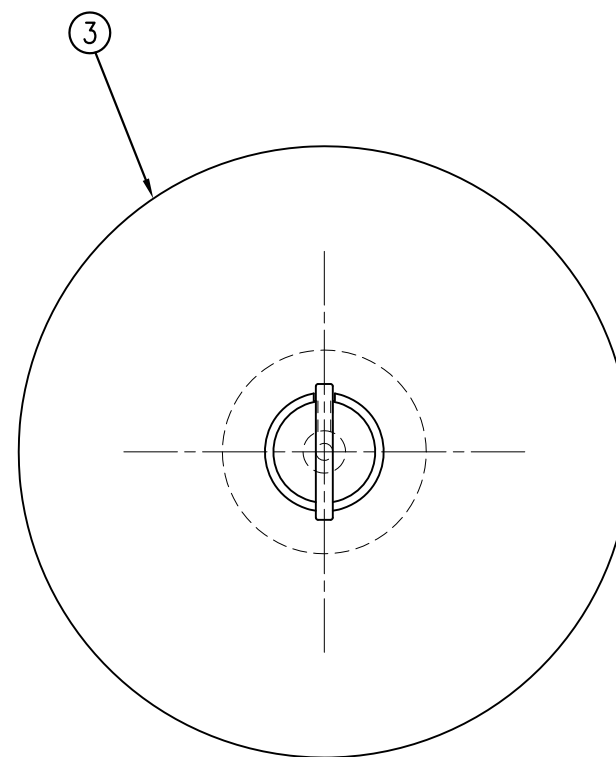
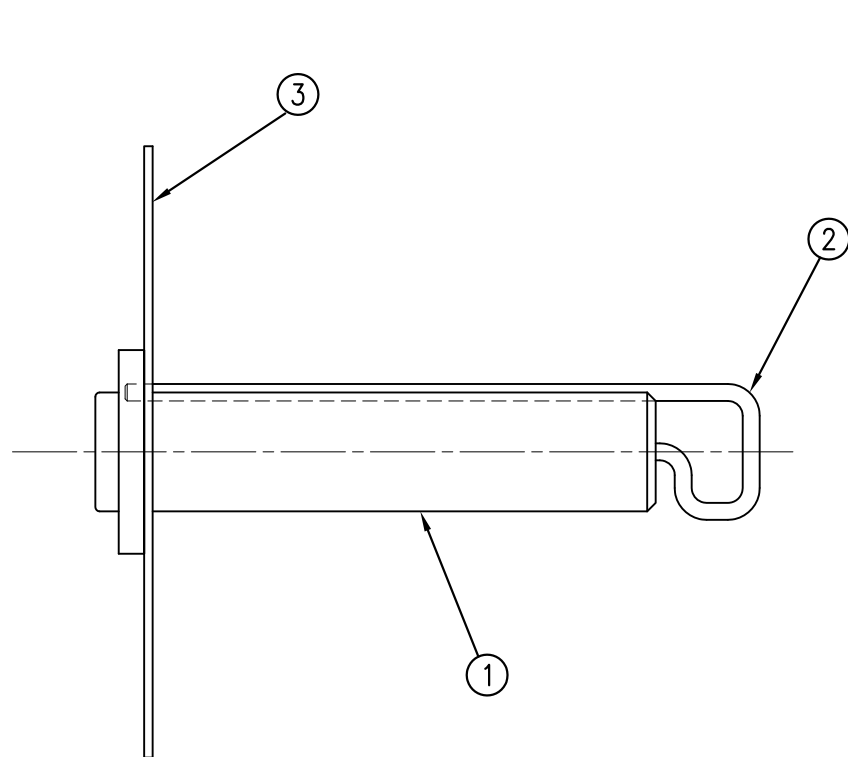
ASS-238-0144-X

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-238-0206	REWIND SPINDLE
②	1	PF-238-0207	REWIND PIN
③	1	ASS-200-0127	REWIND DISK ASS'Y (FOR 12" UNWIND)
	1	ASS-200-3158-16	REWIND DISK ASS'Y (FOR 16" UNWIND)
	1	ASS-238-0168	REWIND DISK ASS'Y (FOR 16" P.UNWIND)

FOR 12" UNWIND -0144-12

FOR 16" UNWIND -0144-16

FOR 16" POWERED UNWIND -0144-16PU



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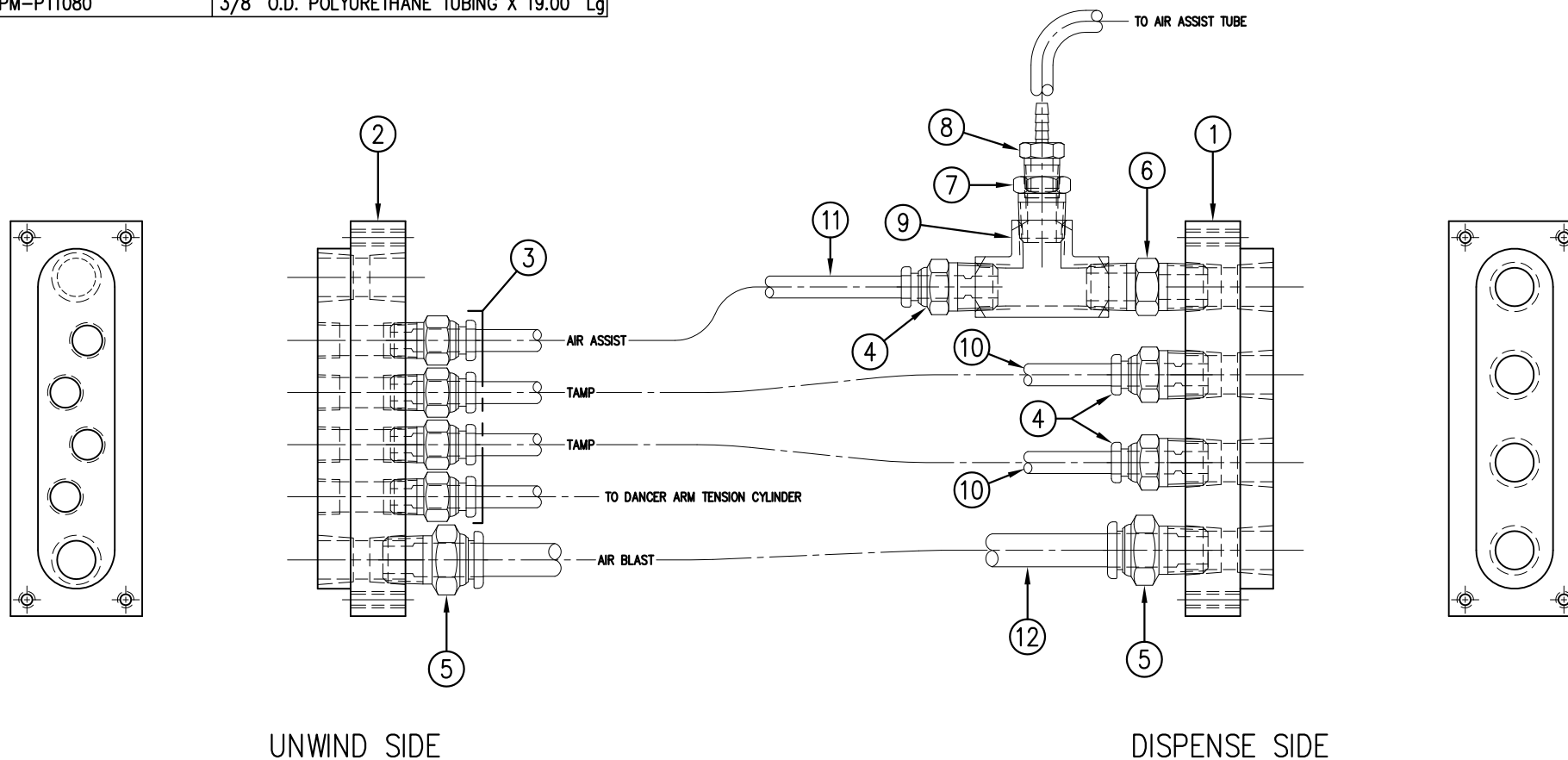
APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: REWIND ASSEMBLY	TITLE: STANDARD REWIND SPINDLE (FOR 12" & 16" UNWIND)	Dept. Code 70
REV. 1	REV. DESCRIPTION TABULATED FOR 16" POWERED UNWIND	REV. DATE 06/01/07	REV. BY: TDR	Scale: 1=3
			Date: 01/14/04	DRAWN BY: DKM
				F:\Engineering\Standard Parts\Applicator\3600 SERIES\ 3600a\ASS\ASS-238-0144-X

# BILL OF MATERIAL

SAS-238a-0124-16

SAS-238a-0124-16

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-200-0250	AIR MANIFOLD (4-AIR LINES)
②	1	MP-200-0249	AIR MANIFOLD (6-AIR LINES)
③	4	PM-PF1005	FITTING, 1/8" NPT to 1/4" TUBE
④	3	PM-PF1010	FITTING, 1/4" NPT to 1/4" TUBE
⑤	2	PM-PF1020	FITTING, 1/4" NPT to 3/8" TUBE
⑥	1	PM-PF1153	FITTING, 1/4" NPT w 9/16" HEX. BRASS NIPPLE
⑦	1	PM-PF1105	FITTING, 1/4" NPT to 1/8" NPT RED. BUSHING
⑧	1	PM-FT1105	HOSE BARB, 1/8" NPT MALE x 1/4" TUBE
⑨	1	PM-PF1200	TEE FITTING, 1/4" NPT (FEMALE)
⑩	2	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 19.00" Lg
⑪	1	PM-PT1070	1/4" O.D. POLYURETHANE TUBING X 16.63" Lg
⑫	1	PM-PT1080	3/8" O.D. POLYURETHANE TUBING X 19.00" Lg

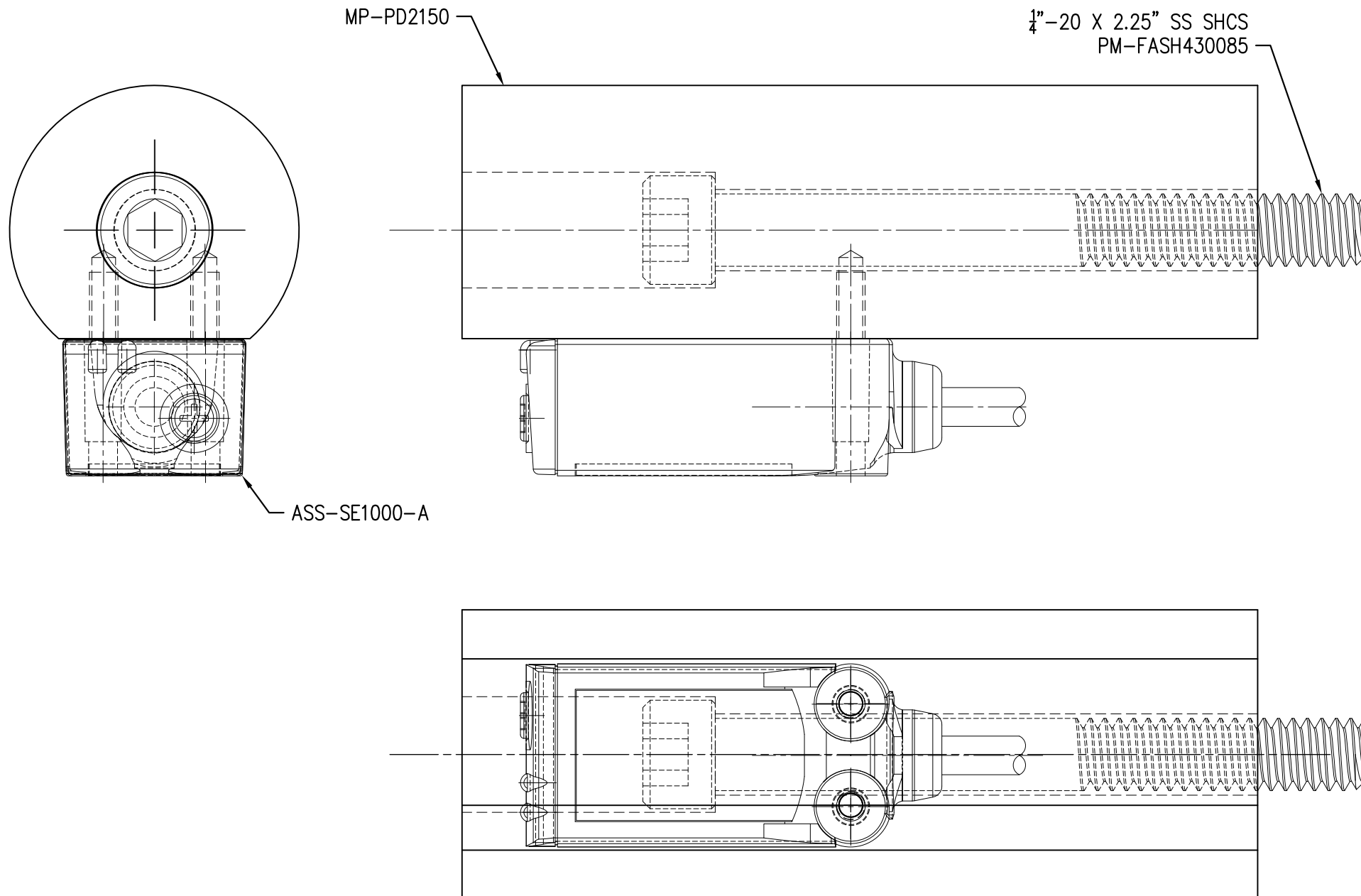


UNWIND SIDE

DISPENSE SIDE

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: 16" UNWIND 3600a SERIES APPLICATOR	TITLE: AIR MANIFOLD ASSEMBLY FOR 16" UNWIND 3600a (STRAIGHT & SWING TAMP)	Dept. Code 70
REV. 0	REV. DESCRIPTION —	REV. DATE —	REV. BY: XXX	Scale: 1=2
			Date: 10/26/2016	DRAWN BY: ES
				F:\Engineering\Standard Parts\Applicator\3600a\16" Unwind Version 238a\SAS-238a-0124-16



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APPLICATOR SERIES: 16" UW 3600a/3600ST		APPLICATOR WIDTH(S): 5.0"/7.5"		GROUP: SERVO TAMP APPLICATOR: SENSORS		TITLE: END OF WEB SENSOR ASSEMBLY w/ MOUNTING BRACKETRY FOR 16" UNWINDS				Dept. Code 70	
REV. 1	REV. DESCRIPTION PART NUMBER WAS ASS-238ST-0132-16			REV. DATE 01/09/2017		REV. BY: ES	Scale: 2=1	Date: 10/17/2016	DRAWN BY: ES		F:\Engineering\Standard Parts\Applcator\3600-ST 3600-ST\ASS-238a-0132-16

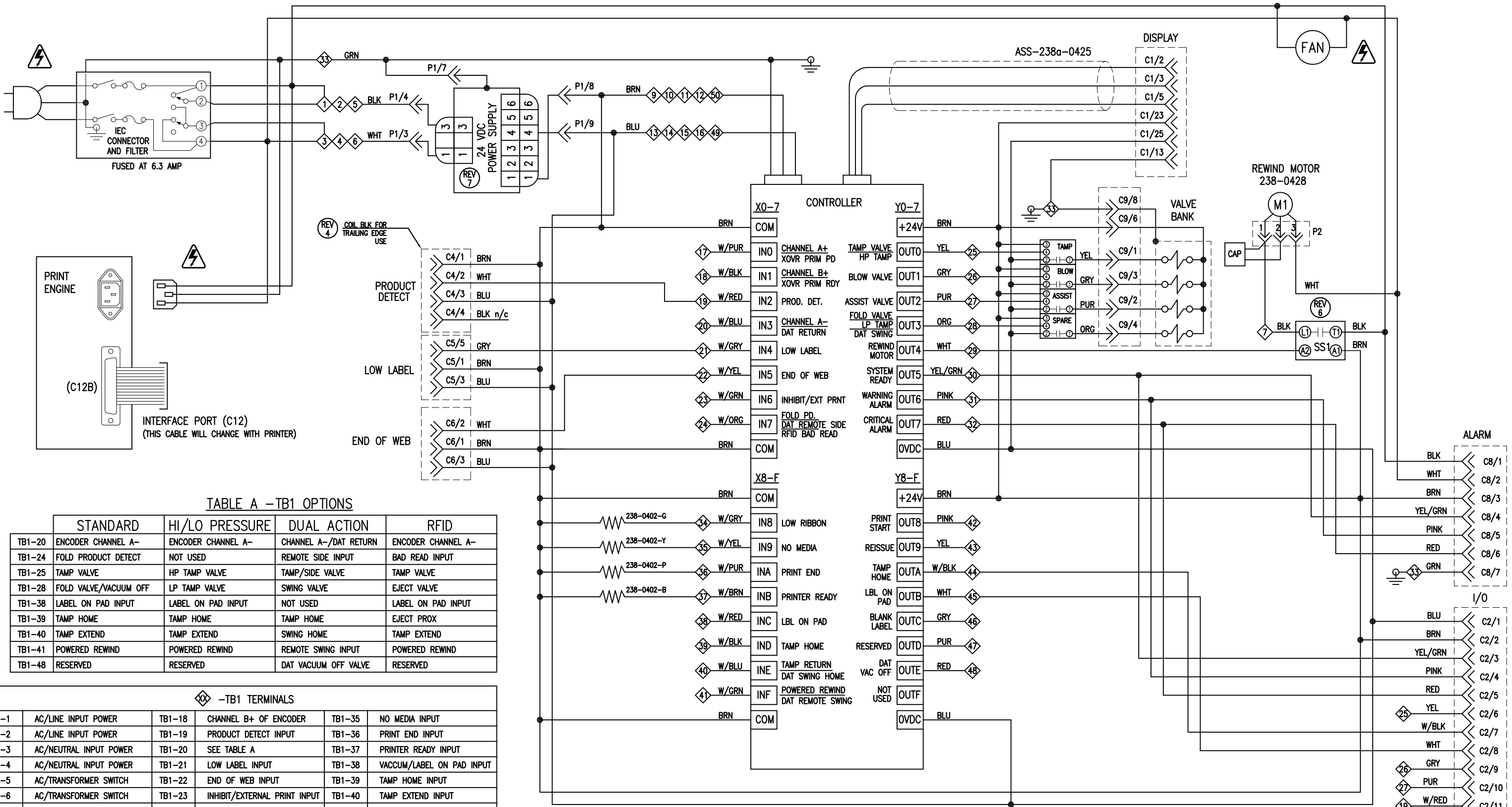
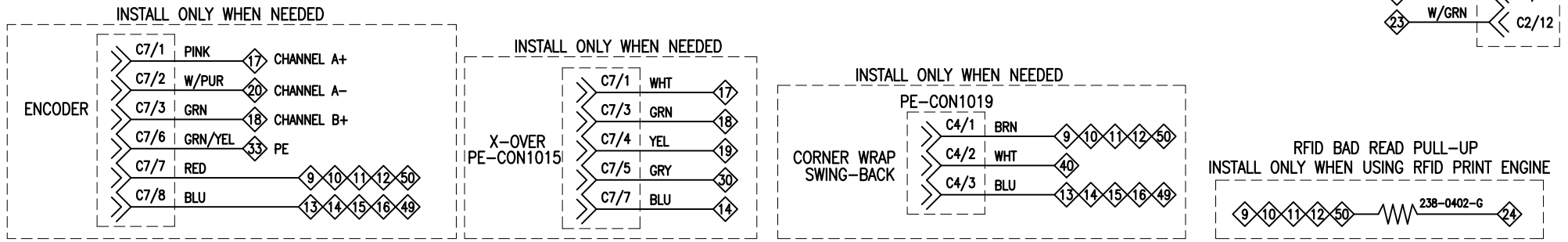


TABLE A -TB1 OPTIONS

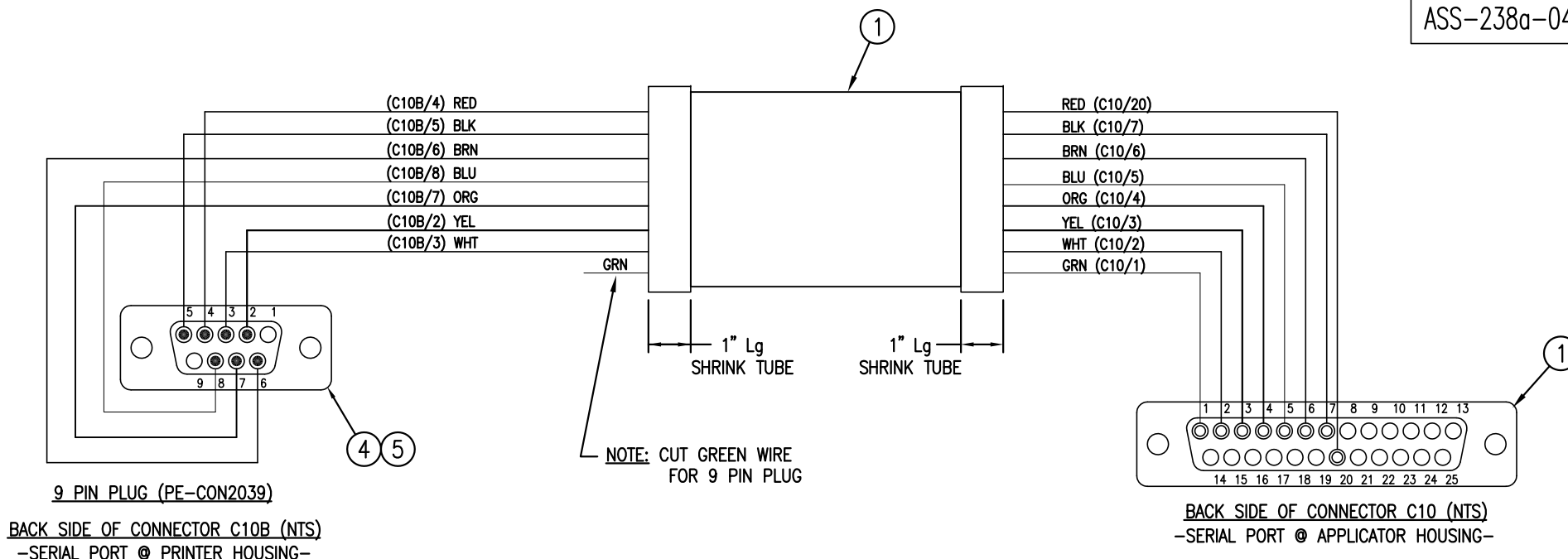
	STANDARD	HI/LO PRESSURE	DUAL ACTION	RFID
TB1-20	ENCODER CHANNEL A-	ENCODER CHANNEL A-	CHANNEL A-/DAT RETURN	ENCODER CHANNEL A-
TB1-24	FOLD PRODUCT DETECT	NOT USED	REMOTE SIDE INPUT	BAD READ INPUT
TB1-25	TAMP VALVE	HP TAMP VALVE	TAMP/SIDE VALVE	TAMP VALVE
TB1-28	FOLD VALVE/VACUUM OFF	LP TAMP VALVE	SWING VALVE	EJECT VALVE
TB1-38	LABEL ON PAD INPUT	LABEL ON PAD INPUT	NOT USED	LABEL ON PAD INPUT
TB1-39	TAMP HOME	TAMP HOME	TAMP HOME	EJECT PROX
TB1-40	TAMP EXTEND	TAMP EXTEND	SWING HOME	TAMP EXTEND
TB1-41	POWERED REWIND	POWERED REWIND	REMOTE SWING INPUT	POWERED REWIND
TB1-48	RESERVED	RESERVED	DAT VACUUM OFF VALVE	RESERVED

-TB1 TERMINALS

TB1-1	AC/LINE INPUT POWER	TB1-18	CHANNEL B+ OF ENCODER	TB1-35	NO MEDIA INPUT
TB1-2	AC/LINE INPUT POWER	TB1-19	PRODUCT DETECT INPUT	TB1-36	PRINT END INPUT
TB1-3	AC/NEUTRAL INPUT POWER	TB1-20	SEE TABLE A	TB1-37	PRINTER READY INPUT
TB1-4	AC/NEUTRAL INPUT POWER	TB1-21	LOW LABEL INPUT	TB1-38	VACCUUM/LABEL ON PAD INPUT
TB1-5	AC/TRANSFORMER SWITCH	TB1-22	END OF WEB INPUT	TB1-39	TAMP HOME INPUT
TB1-6	AC/TRANSFORMER SWITCH	TB1-23	INHIBIT/EXTERNAL PRINT INPUT	TB1-40	TAMP EXTEND INPUT
TB1-7	REWIND MOTOR	TB1-24	SEE TABLE A	TB1-41	SEE TABLE A
TB1-8		TB1-25	SEE TABLE A	TB1-42	PRINT START OUTPUT
TB1-9	24 VDC	TB1-26	BLOW VALVE	TB1-43	REISSUE OUTPUT
TB1-10	24 VDC	TB1-27	AIR ASSIST VALVE	TB1-44	TAMP HOME OUTPUT
TB1-11	24 VDC	TB1-28	SEE TABLE A	TB1-45	LABEL ON PAD OUTPUT
TB1-12	24 VDC	TB1-29	REWIND MOTOR	TB1-46	FEED BLANK LABEL OUTPUT
TB1-13	0 VDC	TB1-30	READY OUTPUT	TB1-47	RESERVED (OUTPUT)
TB1-14	0 VDC	TB1-31	WARNING ALARM OUTPUT	TB1-48	SEE TABLE A
TB1-15	0 VDC	TB1-32	CRITICAL ALARM OUTPUT	TB1-49	0 VDC
TB1-16	0 VDC	TB1-33	GROUND	TB1-50	24 VDC
TB1-17	CHANNEL A+ OF ENCODER	TB1-34	LOW RIBBON INPUT		







ASSEMBLY NOTE: FEED CABLE THROUGH ADAPTER PLATE THEN INSTALL 9-PIN CONNECTOR. BOLT ADAPTER PLATE TO APPLICATOR THEN BOLT 25 PIN CONNECTOR END TO ADAPTER PLATE.

NOTE: USE FOR THE FOLLOWING PRINT ENGINES WHEN INSTALLING THEM INTO THE 3600a:

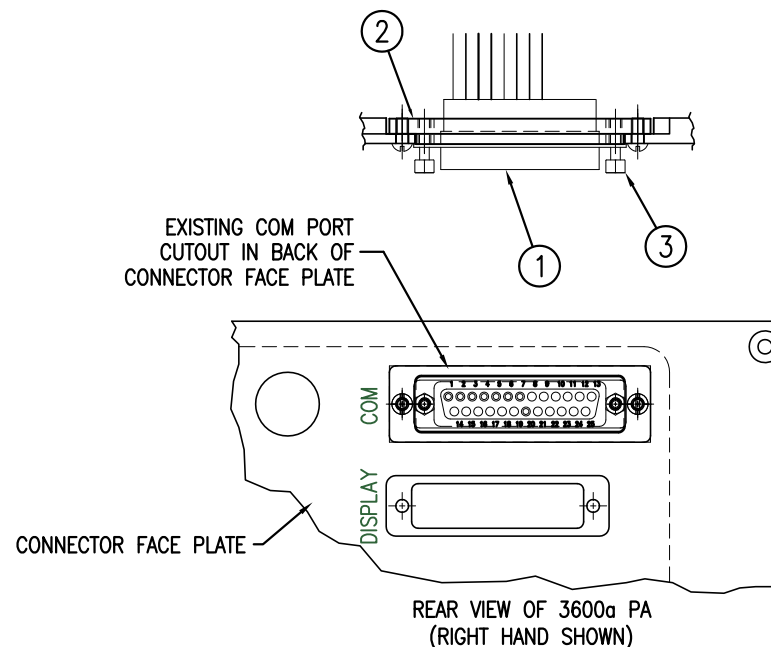
- SATO ex SERIES
- ZEBRA ZE-500 SERIES
- DATAMAX A CLASS

# BILL OF MATERIAL

ASS-238a-0405-9

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-238-0405	PRINTER TO APPLICATOR SERIAL COMM. CABLE
②	1	MP-238a-0203	3600a COM PORT: 25 PIN SERIAL CONNECTOR ADAPTOR PLATE
③	2	PE-S01028	< NUT-SCREW-WASHERS ASSEMBLY (BULK)
④	1	PE-CON2039	DB-09 PIN male PLUG
⑤	1	PE-CON2002	SCREW RETAINER

## SERIAL ADAPTOR PLATE INSTALLATION IN CONNECTOR FACEPLATE



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APPLICATOR SERIES: 3600a	APPLICATOR WIDTH(S): 7.5"	GROUP: ELECTRICAL	TITLE: SERIAL ADAPTOR ASSEMBLY WITH 9 PIN INTERNAL CONNECTOR	Dept. Code 70
REV. 2	REV. DESCRIPTION ADDED PE-CON2002	REV. DATE BNT	REV. BY: 06/26/19	Scale: 1=2
			Date: 08/31/2016	DRAWN BY: ES
				F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS\ASS-238a-0405-9

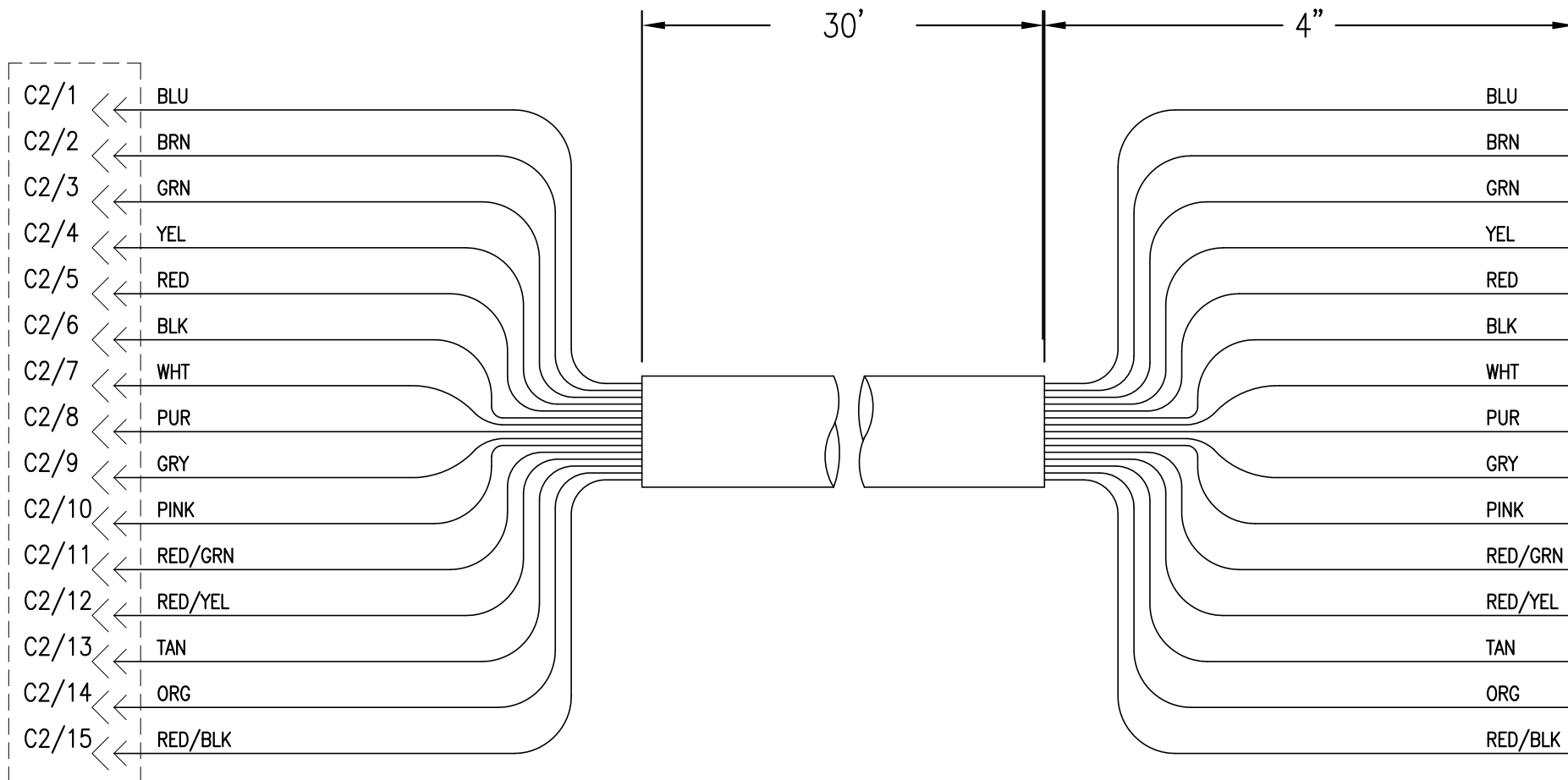
# BILL OF MATERIAL

ASS-238a-0410

ASS-238a-0410

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-238a-0410-AMZ	15 Conductor I/O Cable

SEE APPLICATOR DRAWING FOR PROPER PINOUT



MALE CONNECTOR

-15-PIN SUB D W/OVERMOLD-

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APPLICATOR SERIES: 360/3600	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: APPLICATORS	TITLE: 30' I/O CABLE WITH FLYING LEADS 360a/3600a	Dept. Code 70
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=1.5
			Date: 3/6/18	DRAWN BY: JWS
				F:\Engineering\Standard Parts\Appliator\360 SERIES\ 360-ASS\ASS-238a-0410

# BILL OF MATERIAL

ASS-238-0431-Q

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SE0980	BANNER SENSOR, PHOTO EYE TAMP RETURN
③	1	PE-CA2080	WEB BREAK PLUG
②	1	MP-CON1025	AUX. CONNECTOR HARNESS

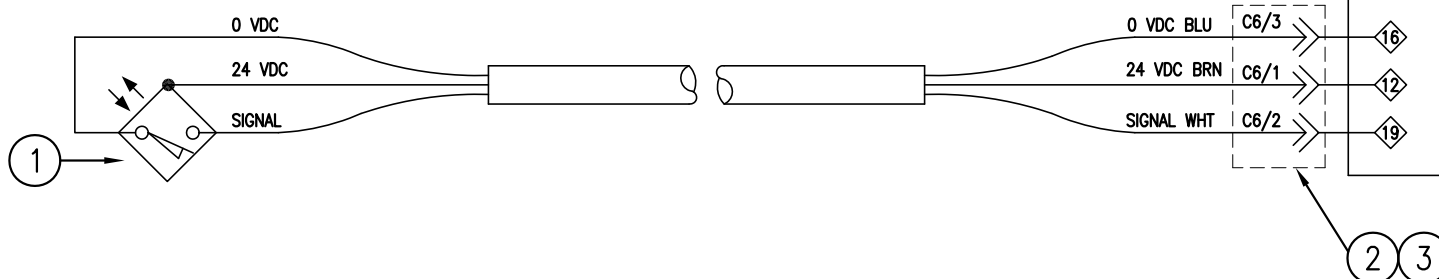
# BILL OF MATERIAL

ASS-238-0431-T

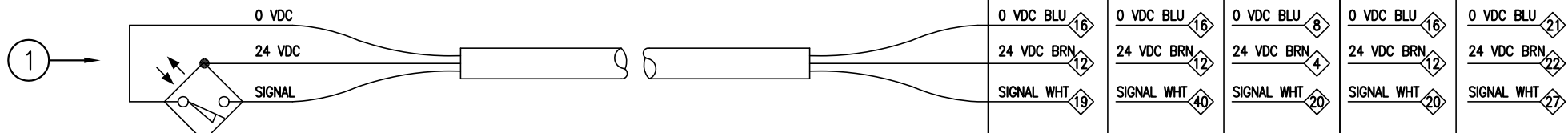
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
○	1	PE-C02019	GROMMET
①	1	PE-SE0980	BANNER SENSOR, PHOTO EYE TAMP RETURN

OPTIONAL MOUNTING PLATE: MP-214-0243

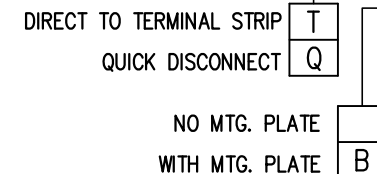
ASS-238-0431-Q: REMOVE 1 PE-EN9056 FROM THE CONNECTOR FACEPLATE AND INSTALL ITEM 2 IN ITS PLACE, MP-CON1025 (LABEL "TAMP RETURN"). WHEN INSTALLING ON A 3600, USE THE PRE INSTALLED AUX CONNECTOR IF POSSIBLE. SEE BELOW FOR CONNECTOR TERMINATIONS



ASS-238-0431-T: THE SENSOR CABLE WILL ENTER THE HOUSING THROUGH ONE OF THE (4) ACCESS HOLES. USE PE-C02019 GROMMET IN HOLE.



ASS-238-0431-XX



NOTE: TURN WHITE POTENTIOMETER ON SENSOR FULLY CW TO OPERATE PROPERLY

COVER REMOVED

NO MTG. PLATE  
WITH MTG. PLATE

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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: ELECTRICAL	TITLE: TAMP RETURN SENSOR (PHOTO-ELECTRIC) WIRING	Dept. Code 70
REV. 8	REV. DESCRIPTION REVISED NOTES & ADDED TERMINATION LOCATIONS FOR CONNECTOR HARNESS	REV. DATE 06/12/19	REV. BY: BNT	Scale: 1=2
		Date: 07/11/01	DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS\ASS-238-0431-XX

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0432XX-Q		.
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	LIMIT SWITCH with PIN PLUNGER	PE-SW1100	.
	1	LIMIT SWITCH with ROLLER PLUNGER	PE-SW1105	.
	1	LIMIT SWITCH with ROLLER LEVER	PE-SW1110	.
②	1	WEB BREAK PLUG	PE-CA2080	.

OPTIONAL MOUNTING PLATE: MP-214-0243

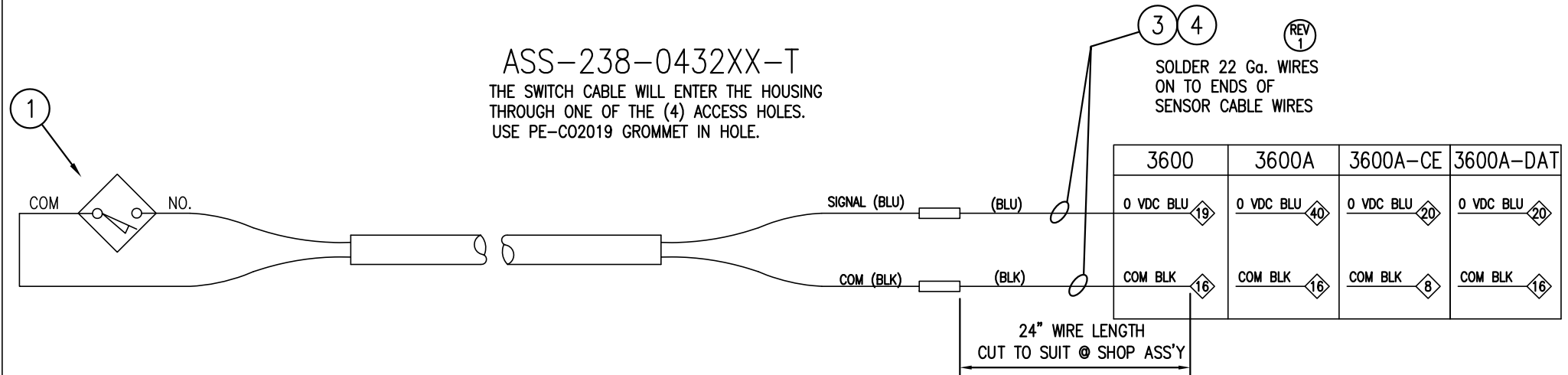
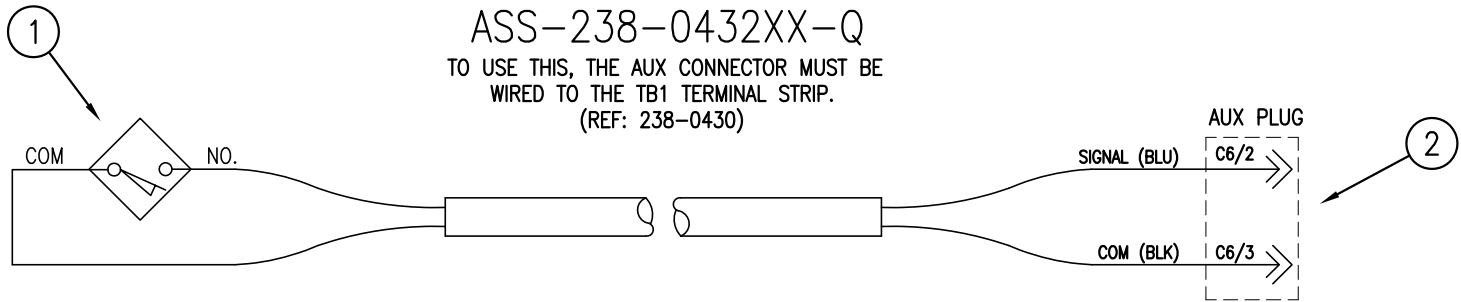
BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0432XX-T		.
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	LIMIT SWITCH with PIN PLUNGER	PE-SW1100	.
	1	LIMIT SWITCH with ROLLER PLUNGER	PE-SW1105	.
	1	LIMIT SWITCH with ROLLER LEVER	PE-SW1110	.
2	1	GROMMET	PE-C02019	.
③	1	22 AWG BLUE WIRE x 24" Lg.	PE-W1036	.
④	1	22 AWG BLACK WIRE x 24" Lg.	PE-W1032	.

ASS-238-0432XX-XX

PIN PLUNGER PP  
ROLLER LEVER RL  
ROLLER PLUNGER RP

DIRECT TO TERMINAL STRIP T  
QUICK DISCONNECT Q

NO MTG. PLATE  
WITH MTG. PLATE B

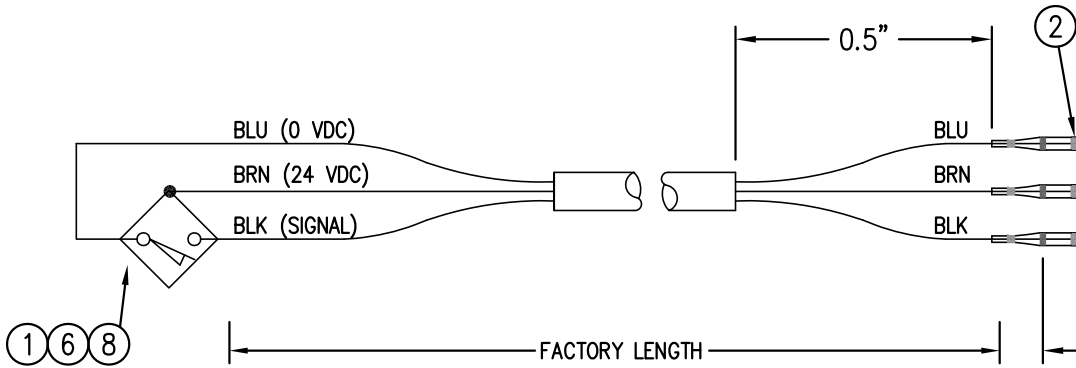


BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0433		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	HOME PROX	PE-SE1035	S
②	3	GRAY SOLDER SLEEVE 22-26 AWG	PE-SL1000	.
③	1	22 AWG (BROWN) WIRE x 6" LONG	PE-W1037	.
④	1	22 AWG (BLACK) WIRE x 6" LONG	PE-W1032	.
⑤	1	22 AWG (BLUE) WIRE x 6" LONG	PE-W1036	.
⑥	1	GROMMET	PE-C02019	.

ASS-238-0433-X

REV  
6

3600 TAMP OR SWING HOME SENSOR ASSEMBLY without MOUNTING BRACKET		-0433
3600 TAMP HOME SENSOR ASSEMBLY with MOUNTING BRACKET FOR 3/4" BORE CYLINDER (FOR STANDARD TAMPS WHICH USE PHD 22 SIZE TAMP SLIDES)		-0433-A
3600 TAMP or SWING HOME SENSOR ASSEMBLY with MOUNTING BRACKET FOR 1" BORE CYLINDER (FOR CUSTOM HEAVY DUTY TAMP, DAT TAMP & TAG UNITS USING PHD 23 SIZE TAMP SLIDES) ALSO USED ON SWING TAMP AND DAT SWING W/STANDARD DUTY ROTARY ACTUATORS		-0433-B
3600 TAMP HOME SENSOR ASSEMBLY with MOUNTING BRACKET FOR 1 1/8" BORE CYLINDER (FOR CUSTOM HEAVY DUTY TAMP or DAT TAMP SLIDE APPLICATIONS USING PHD 24 SIZE TAMP SLIDES)		-0433-C
3600 SWING HOME SENSOR ASSEMBLY with MOUNTING BRACKET FOR 1 3/8" BORE CYLINDER (USED ON SWING TAMP AND DAT SWING W/HEAVY DUTY ROTARY ACTUATORS)		-0433-D



NOTE: LENGTHS FOR DAT 3600 TO BE DETERMINED AT ASSEMBLY

3600 TAMP HOME	3600 SWING HOME	3600DAT TAMP HOME	3600DAT SWING HOME	3600AB TAMP HOME	3600AB SWING HOME	3600CE
BLU 16	BLU 16	BLU 51	BLU 51	BLU 22	BLU 23	BLU 8
BRN 12	BRN 12	BRN 52	BRN 52	BRN 21	BRN 21	BRN 4
BLK 18	BLK 18	BLK 38	BLK 39	BLK 26	BLK 28	BLK 30
3600A CE SWING HOME	3600A CE TAMP HOME	3600A TAMP HOME	3600A SWING HOME	3600A-DAT TAMP HOME	3600A-DAT SWING HOME	
BLU 8	BLU 8	BLU 16	BLU 16	BLU 16	BLU 16	
BRN 4	BRN 4	BRN 12	BRN 12	BRN 12	BRN 12	
BLK 20	BLK 19	BLK 39	BLK 39	BLK 39	BLK 40	

ASS-238-0433: THE SENSOR CABLE WILL ENTER THE HOUSING THROUGH ONE OF THE (3) ACCESS HOLES. USE PE-C02019 GROMMET IN HOLE.

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0433-A, -B, -C, -D		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
	1	SENSOR	ASS-238-0433	S
⑦	1	MOUNTING BRACKET (FOR 3/4" CYL.)	PE-SE1036	. -A
	1	MOUNTING BRACKET (FOR 1" CYL.)	PE-SE1037	. -B
	1	MOUNTING BRACKET (FOR 1 1/8" CYL.)	PE-SE1038	. -C
	1	MOUNTING BRACKET (FOR 1 3/8" CYL.)	PE-AC1482	. -D

WIRE PREPARATION NOTES:

- 1) STRIP EACH OF THE THREE WIRES BACK 3/8".
- 2) INSERT WIRE EXTENSIONS & CABLE WIRES INTO SOLDER SLEEVES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
- 3) ENSURE THAT ONLY BARE WIRE IS IN THE SOLDER RING & HEAT WITH HEAT GUN UNTIL SOLDER HAS MELTED.
- 4) ALLOW SOLDER TO COOL BEFORE MOVING OR PULLING WIRES.

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APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): 7.5"		GROUP: ELECTRICAL		TITLE: TAMP/SWING HOME SENSOR (CYLINDER MOUNT)			Dept. Code 70	
REV. 9	REV. DESCRIPTION REPLACED 1/8" SHRINK TUBE WITH GRAY SOLDER SLEEVE			REV. DATE 02/08/19	REV. BY: BNT	Scale: 1=2	Date: 12/18/03	DRAWN BY: DKM	F:\Engineering\Standard Parts\Applicator\3600 SERIES\ 3600a\ASS\ASS-238-0433-X	

# BILL OF MATERIAL

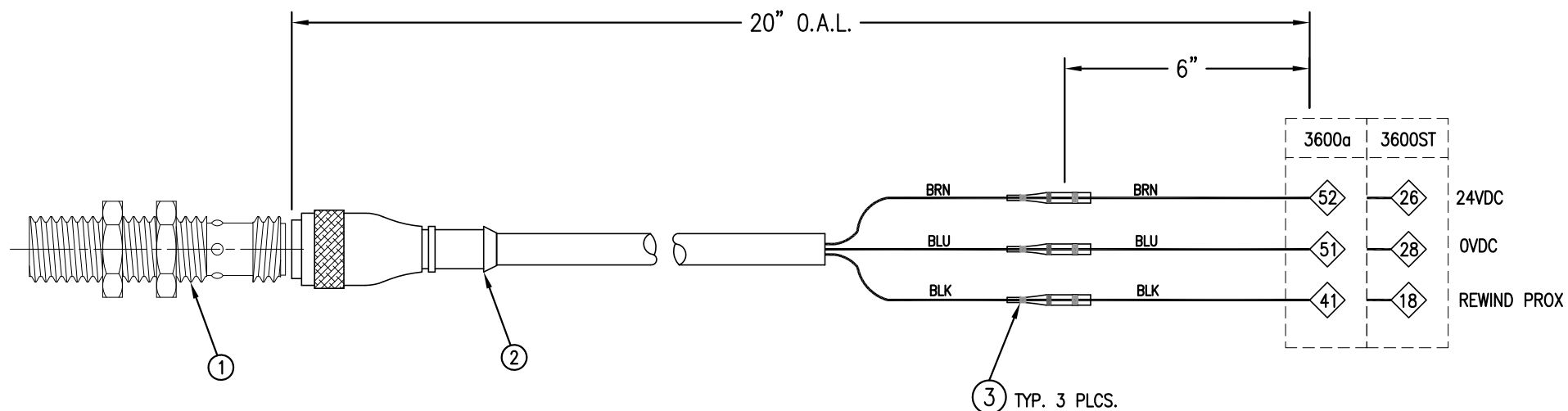
ASS-238a-0454

ASS-238a-0454

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SE10108	3 mm Q.D. INDUCTIVE PROX. SENSOR
②	1	PE-SE3045	4-PIN EUROFAST 6-1/2' STRAIGHT CABLE
③	3	PE-SL1000	GRAY SOLDER SLEEVE 22-26 AWG
⊖	1	PE-W1037	22 AWG (BROWN) WIRE x 6" LONG
⊖	1	PE-W1032	22 AWG (BLACK) WIRE x 6" LONG
⊖	1	PE-W1036	22 AWG (BLUE) WIRE x 6" LONG

## WIRE PREPARATION NOTES:

- 1) CUT CABLE TO 14" AND STRIP INSULATION BACK ABOUT 2"
- 2) STRIP WIRES BACK ABOUT 3/8"
- 3) INSERT 6" WIRE EXTENSIONS & CABLE WIRES INTO SOLDER SLEEVES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
- 4) ENSURE THAT ONLY BARE WIRE IS IN THE SOLDER RING & HEAT WITH HEAT GUN UNTIL SOLDER HAS MELTED.
- 5) ALLOW SOLDER TO COOL BEFORE MOVING OR PULLING WIRES.



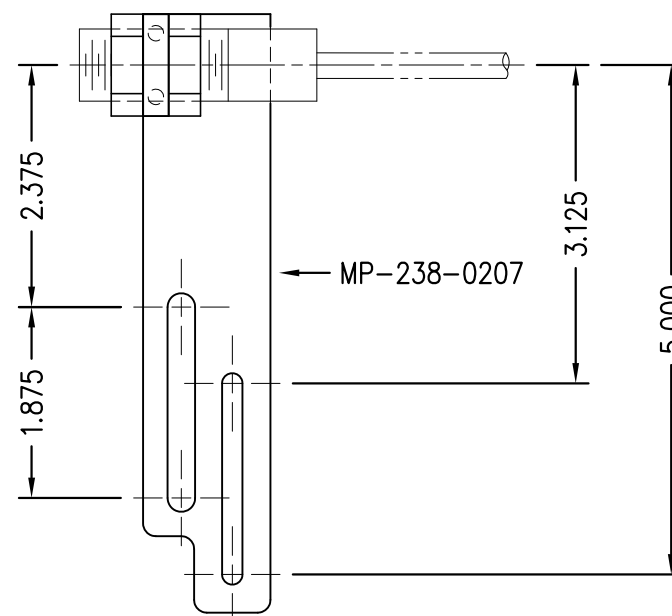
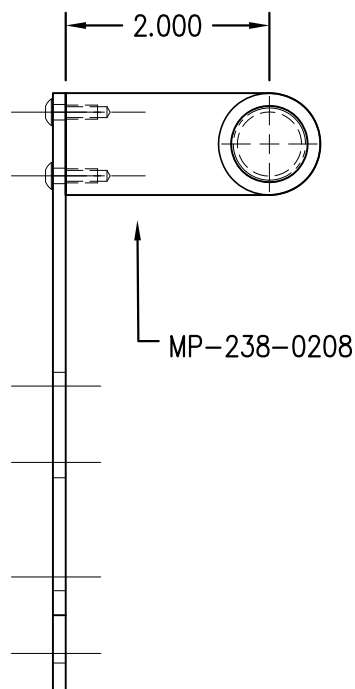
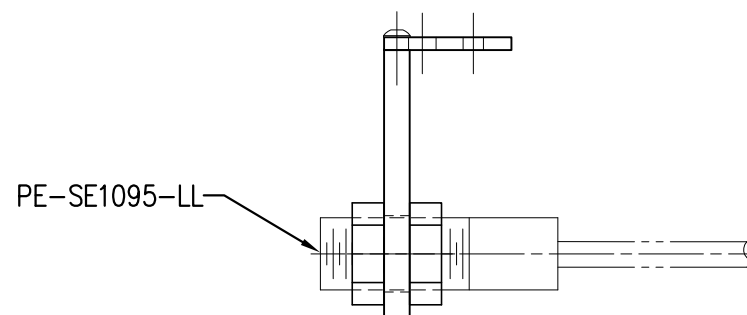
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TITLE: 3600a-PA SERIES APPLICATOR: ELECTRICAL

PART: 16" UNWIND: REWIND SENSOR WIRING

Dept. Code  
70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:
2	ADDED 3600ST TABULATION	10/09/19	SES	1=2	10/21/16	JWS	F:\Engineering\Standard Parts\Appliator\3600 238a\ASS-238a-0454

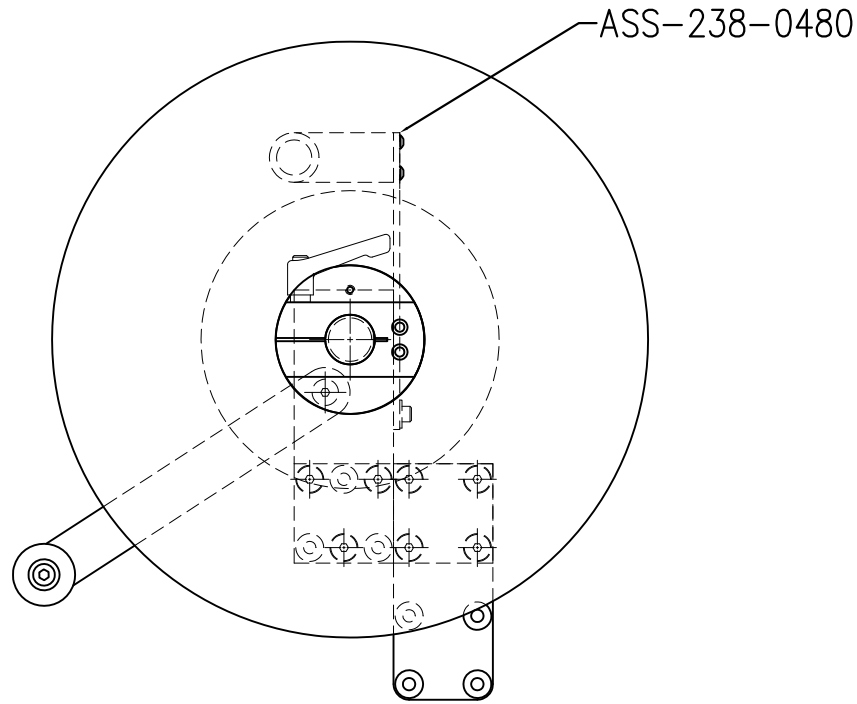


NOTE

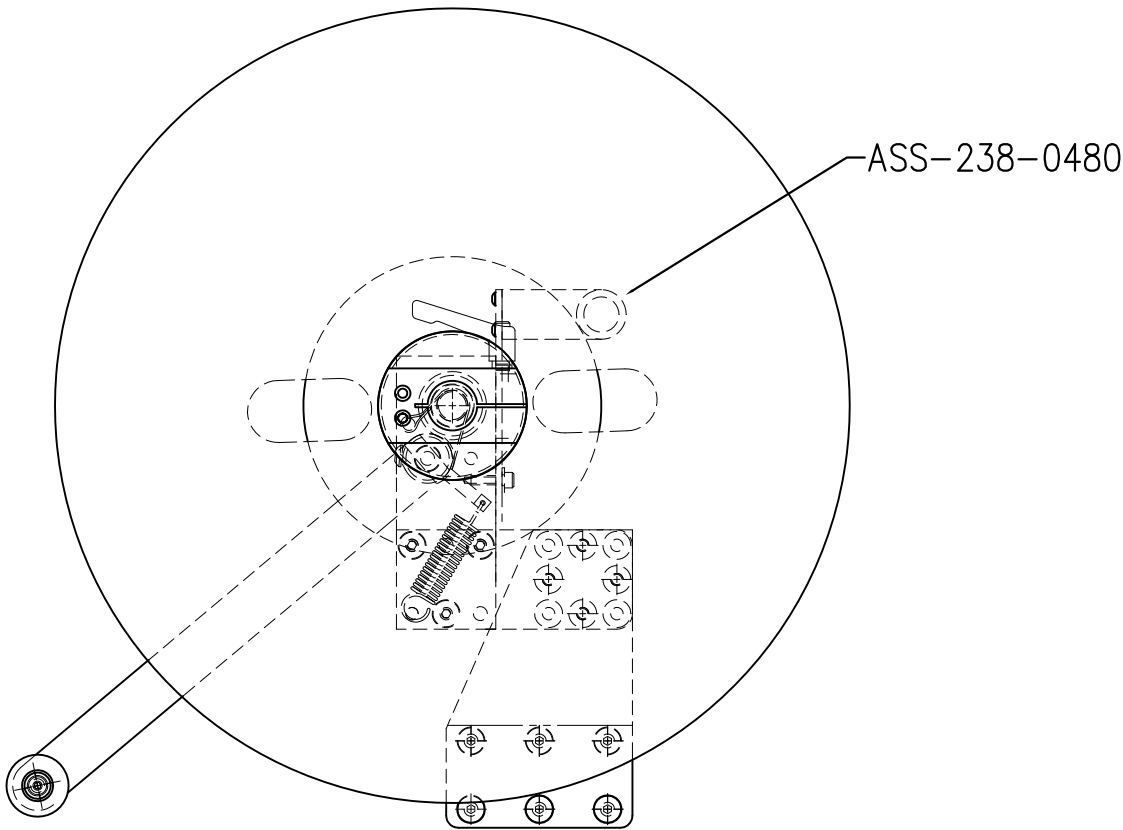
SEE s2, s3 AND s4 FOR SENSOR MOUNT ORIENTATIONS RELATIVE TO UNWIND ASSEMBLIES

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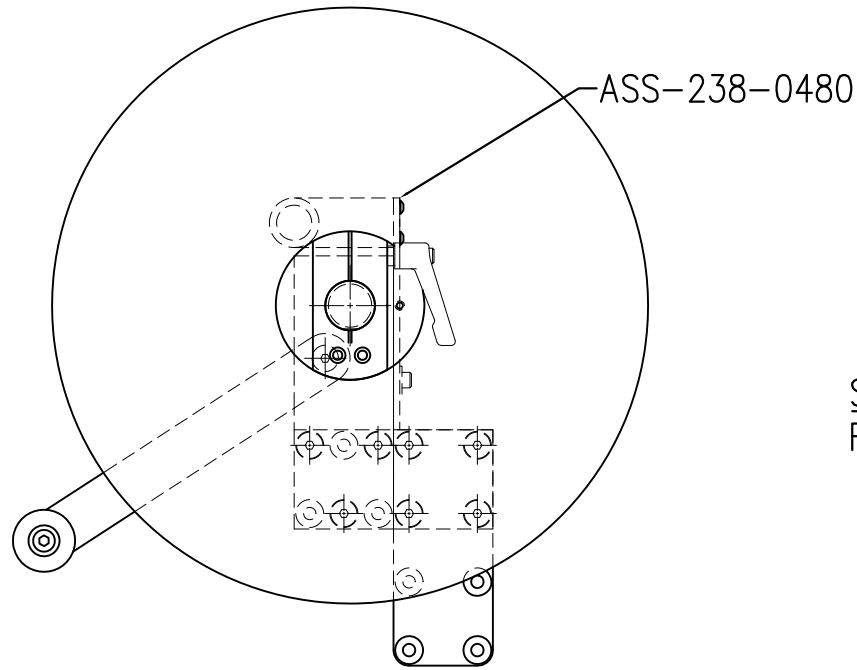
APPLICATOR SERIES: 360/3600	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: ELECTRICAL	TITLE: MOLDED LOW LABEL SENSOR w/ MOUNTING BRACKETRY	Dept. Code 70
REV. 3	REV. DESCRIPTION ADDED 4TH SHEET	REV. DATE 09/27/19	REV. BY: BNT	Scale: 1=2
			Date: 12/19/18	DRAWN BY: T. Rhodes
				F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0480s1



3600a RH W/ 12" UNWIND & 6" CORE SUPPORT ADAPTER

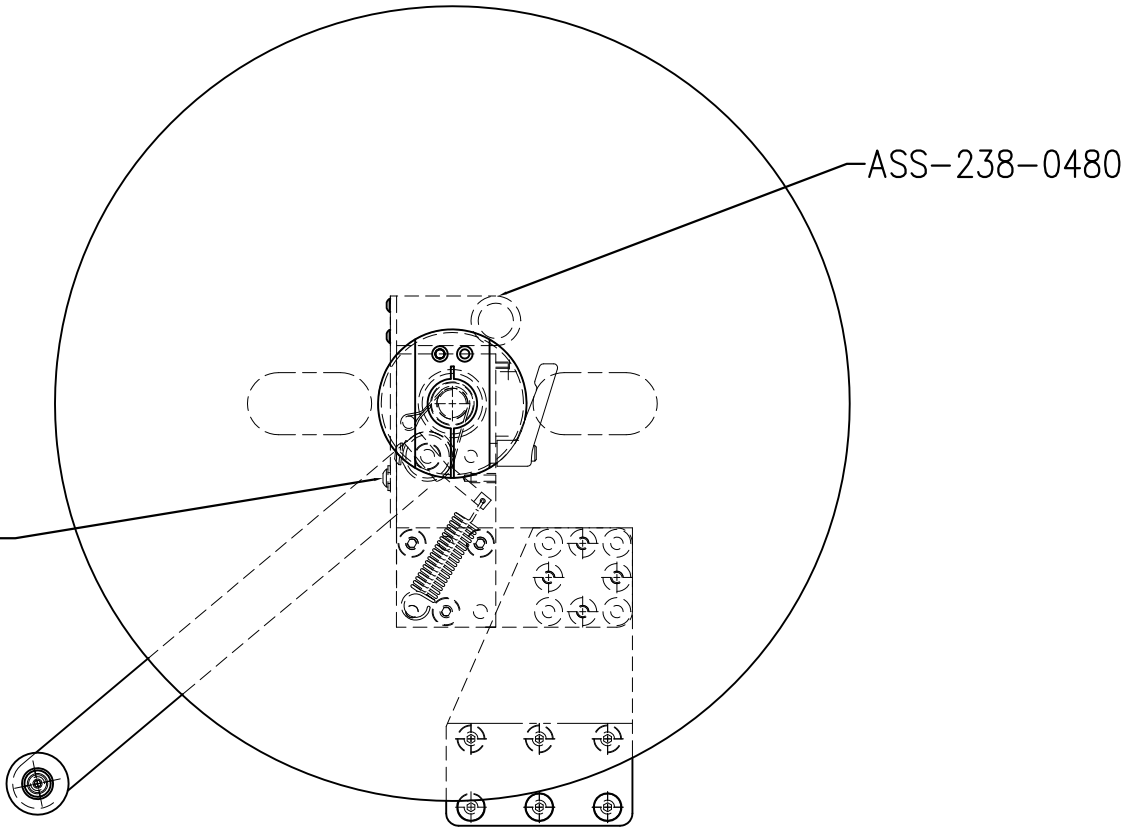


3600a RH W/ 16" UNWIND & 6" CORE SUPPORT ADAPTER



3600a RH W/ 12" UNWIND & 3" CORE SUPPORT

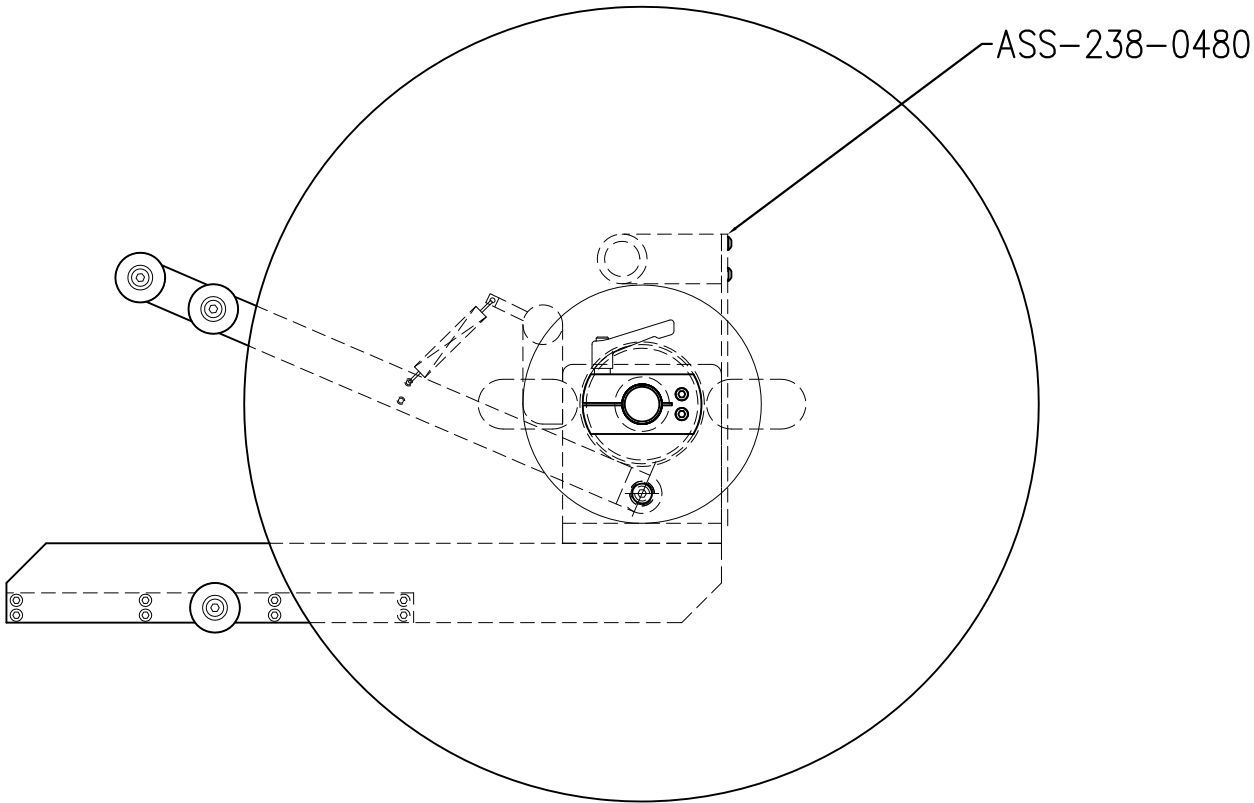
SWAP 10-32 SOCKET HEAD  
FOR BUTTON HEAD



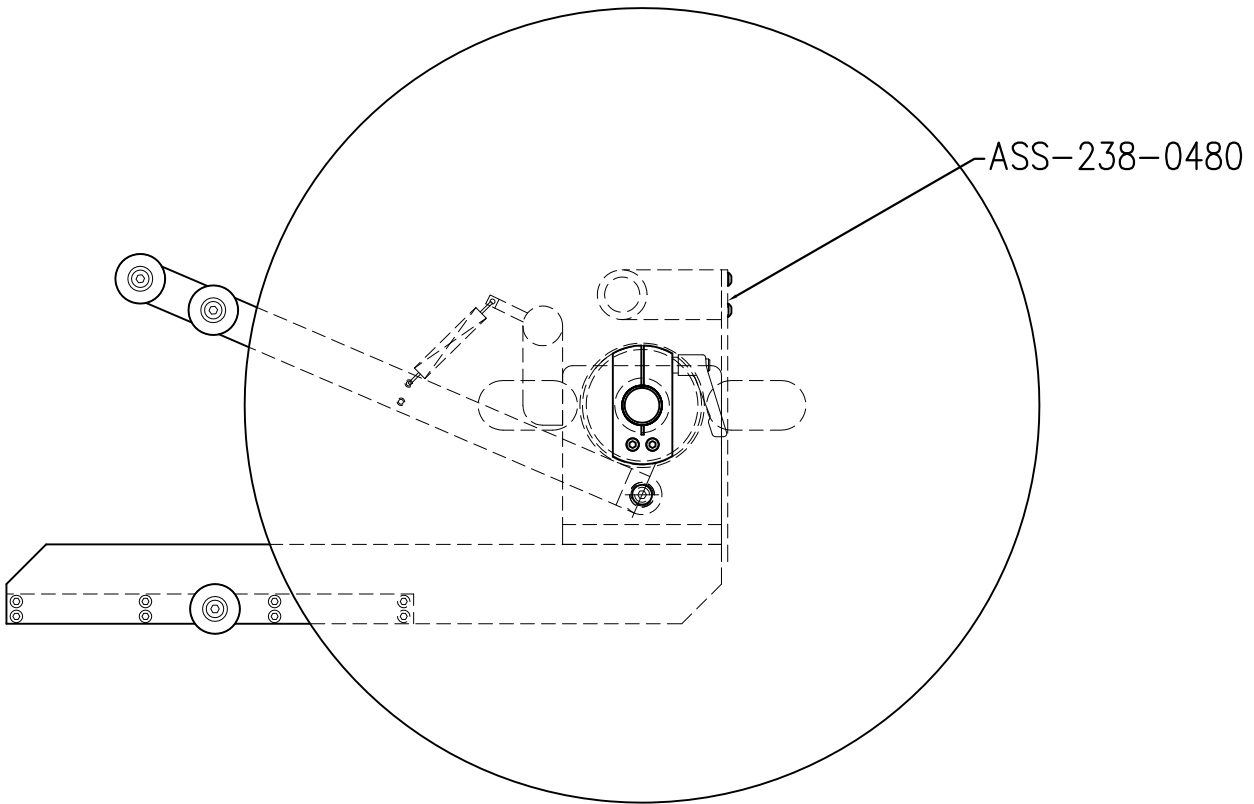
3600a RH W/ 16" UNWIND & 3" CORE SUPPORT



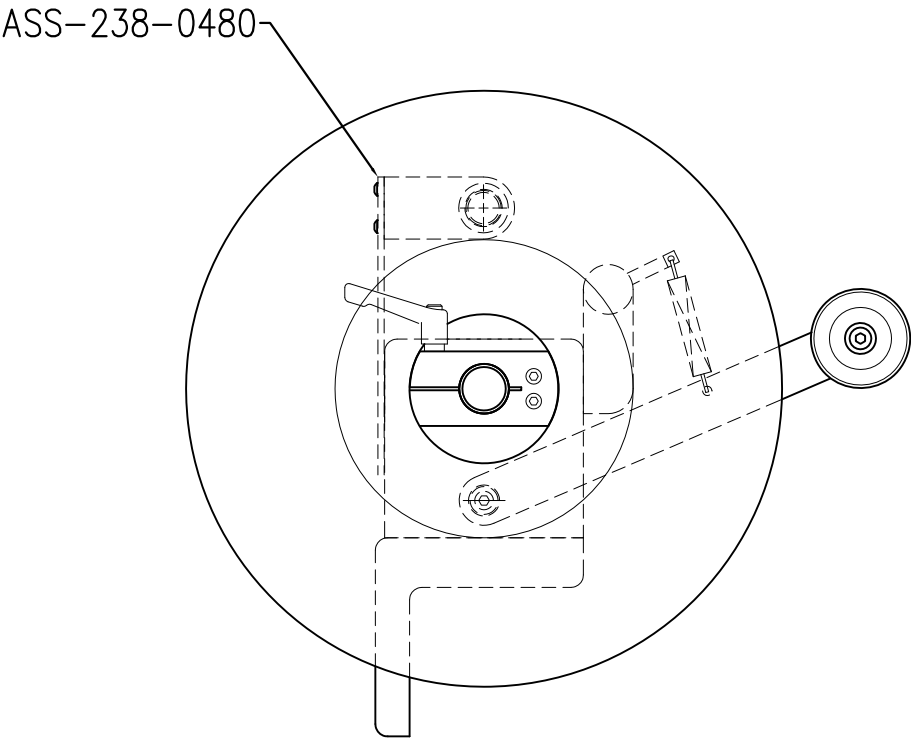
APPLICATOR SERIES: 360/3600		APPLICATOR WIDTH(S): 5" / 7.5" / 10"	GROUP: STANDARD GROUP	TITLE: LOW LABEL SENSOR WITH BRACKETRY	Dept. Code 70
REV: 3	REV. DESCRIPTION: ADDED 4TH SHEET	REV. DATE: BNT	REV. BY: BNT	Date: 03/15/19	F:\Engineering\Standard Parts\Applcator\3600 SERIES\3600a\ASS-3600-0480s3



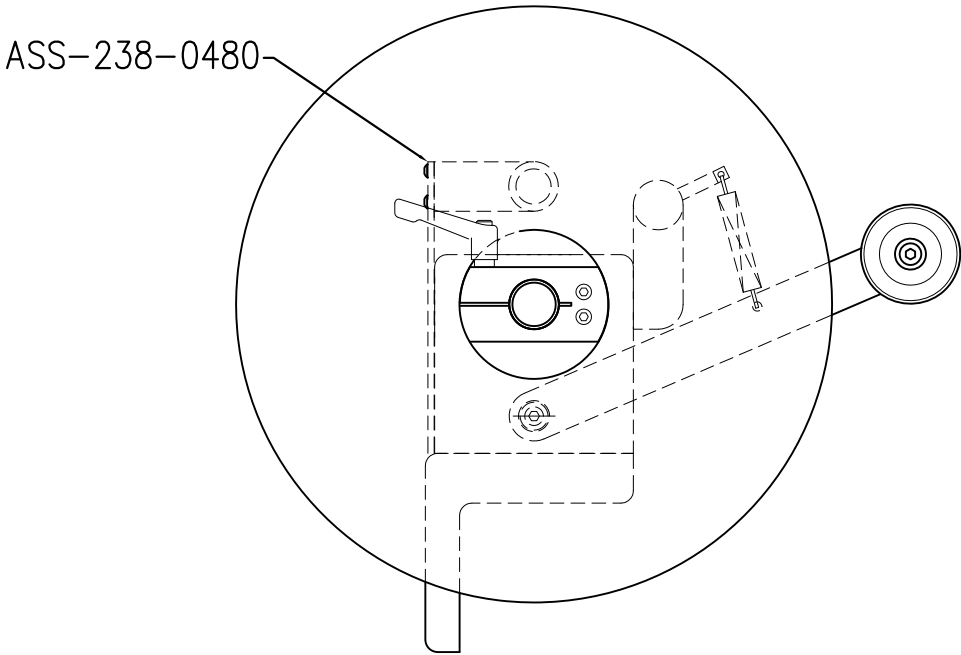
360a RH W/ 16" OR 20" UNWIND & 6" CORE SUPPORT ADAPTER



360a RH W/ 16" OR 20" UNWIND & 3" CORE SUPPORT

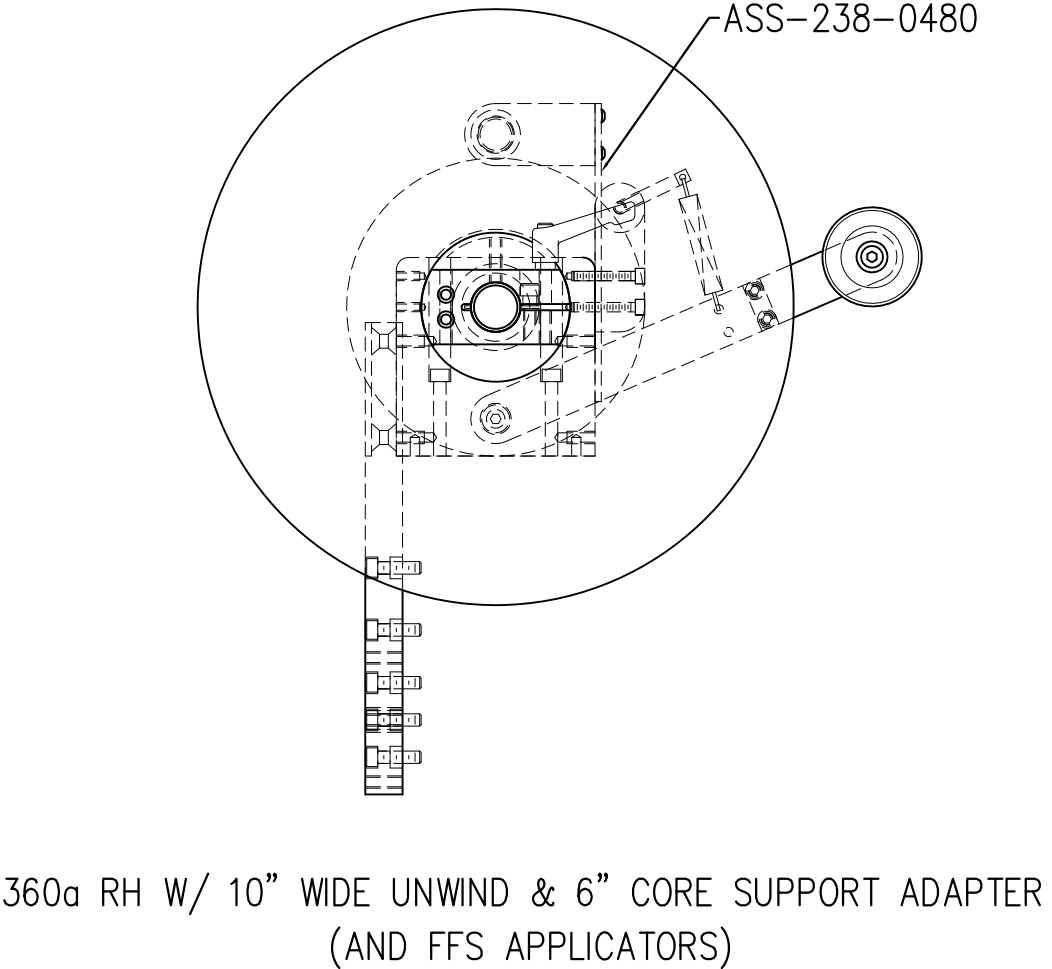
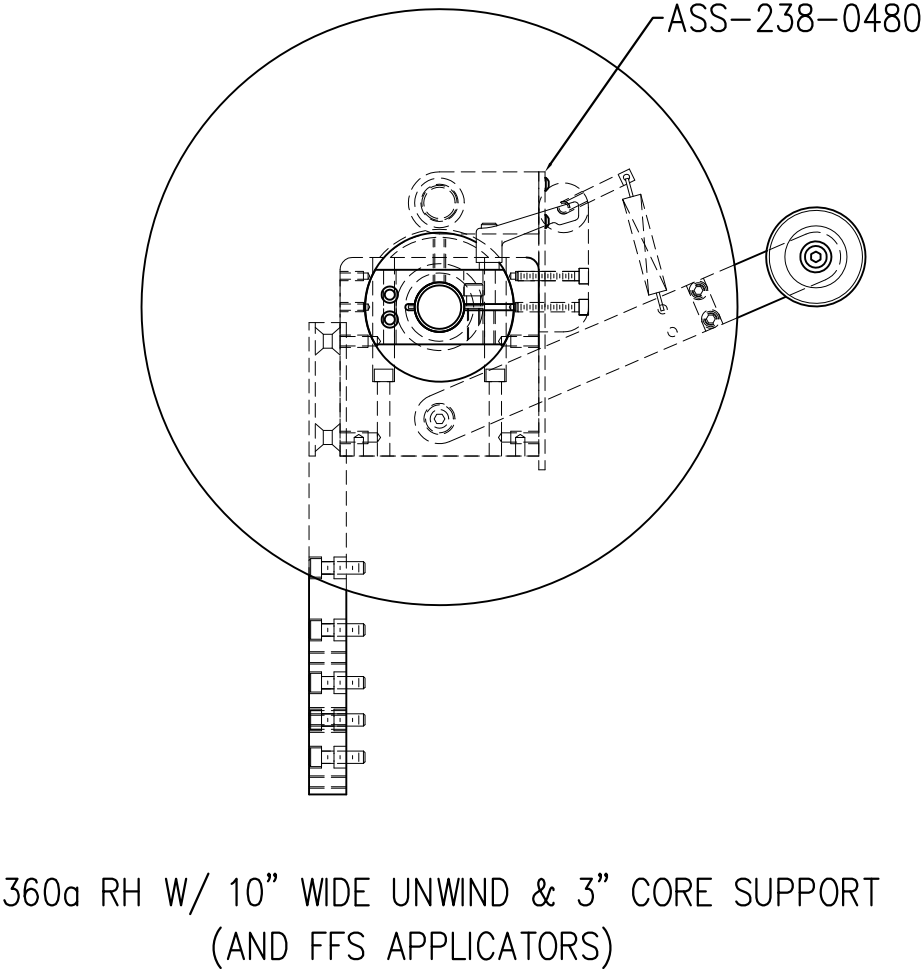


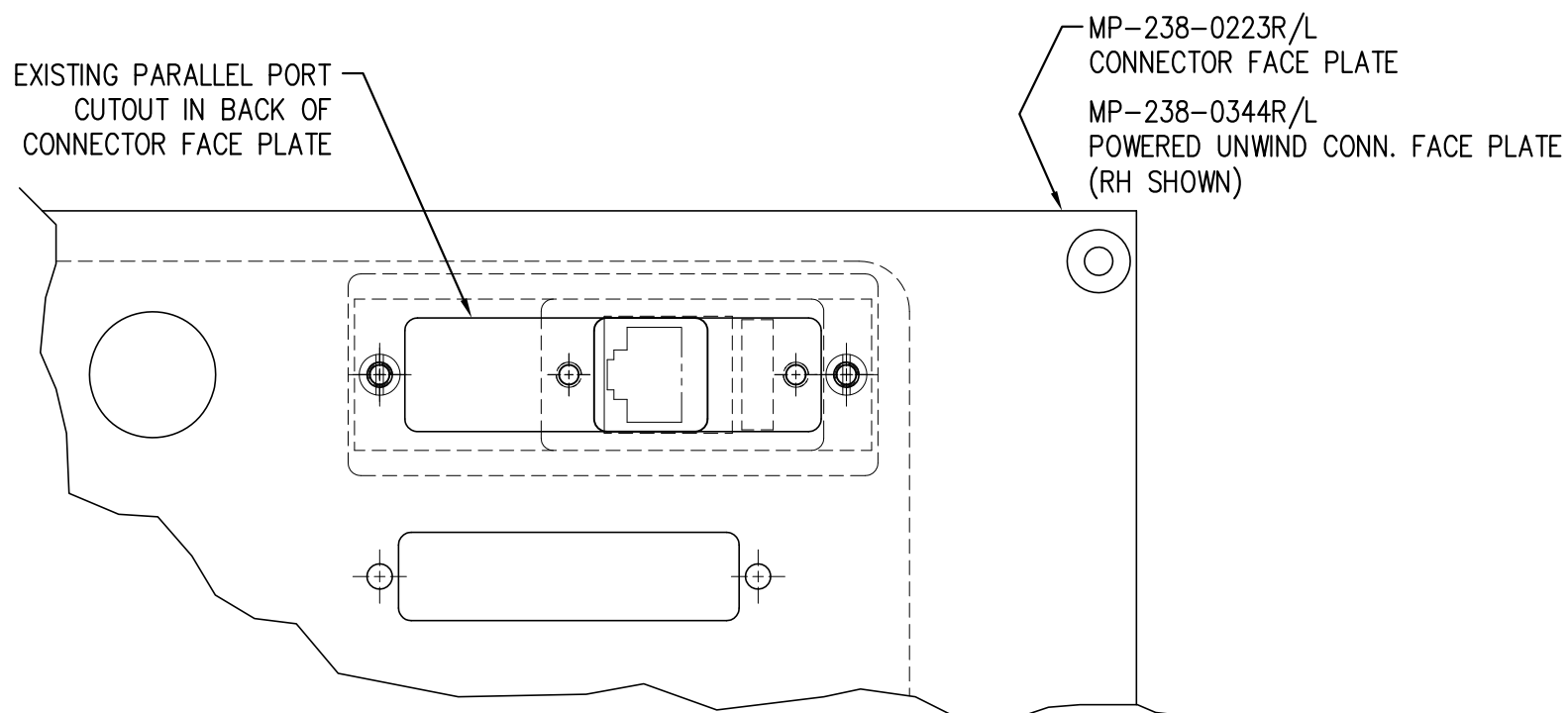
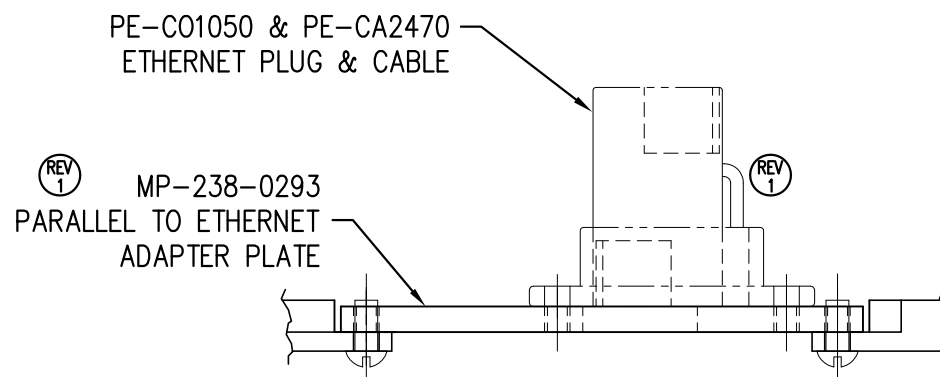
360a RH W/ 12" UNWIND & 6" CORE SUPPORT ADAPTER



360a RH W/ 12" UNWIND & 3" CORE SUPPORT

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APPLICATOR SERIES: 360/3600		APPLICATOR WIDTH(S): 5" / 7.5" / 10"		TITLE: LOW LABEL SENSOR WITH BRACKETRY	
REV. 0	REV. DESCRIPTION	REV. DATE	REV. BY: XXX	DATE: 09/27/19	F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS-3600-0480s4
				DRAWN BY: BNT	
				Scale: 1=4	





REAR VIEW OF 3600 PA  
(RIGHT HAND SHOWN)

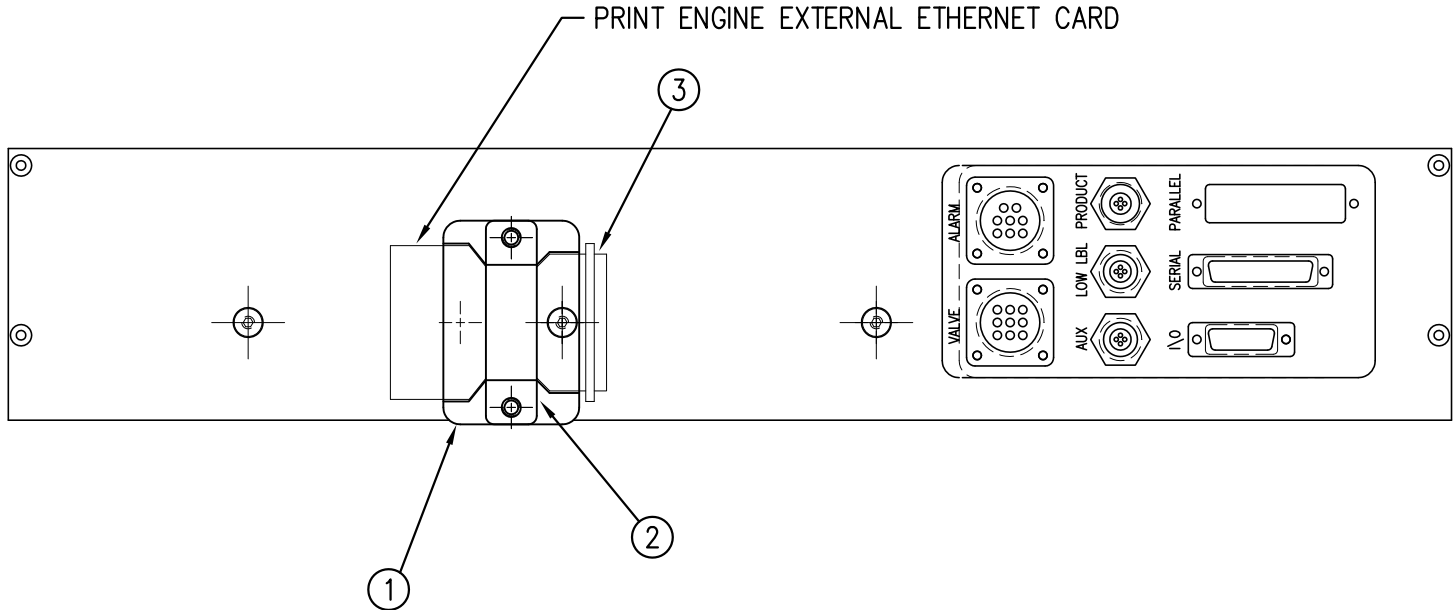
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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: ELECTRICAL ASSEMBLY	TITLE: PARALLEL TO ETHERNET ADAPTER ASS'Y	Dept. Code 70
REV. 2	REV. DESCRIPTION UPDATED TITLEBLOCK	REV. DATE 03/01/18	REV. BY: TK	Scale: 1=1
		Date: 10/03/03	DRAWN BY: T. KELLY	F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0460

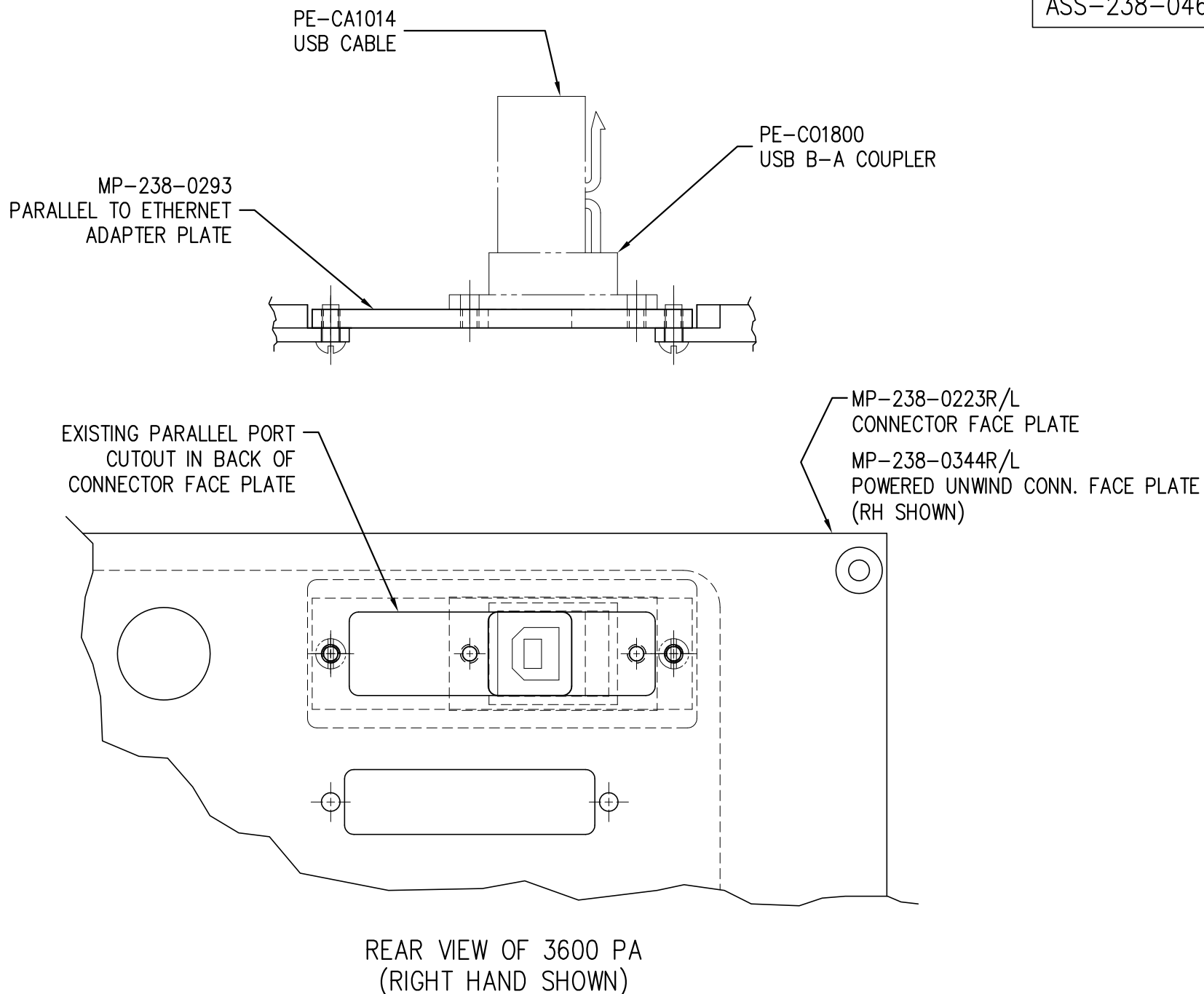
BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-238-0461		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	EXTERNAL ETHERNET CARD MTG. PLATE	MP-238-0370	.
②	1	EXTERNAL ETHERNET CLAMP PLATE	MP-238-0371	.
③	1	DEXT36MF C36 M/F EXTENSION	PE-CA2220	.

ASS-238-0461

NOTE:  
ELECTIC SHELF FACEPLATE MTG. SHOWN.  
ALTERNATE MTG WITHIN REACH OF CABLE



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APPLICATOR SERIES: 3600		APPLICATOR WIDTH(S): N/A		GROUP: ELECTRICAL		TITLE: EXTERNAL ETHERNET ASSEMBLY				Dept. Code 70
REV. 0	REV. DESCRIPTION UPDATED TITLEBLOCK			REV. DATE 03/01/18	REV. BY: TK	Scale: 1=3	Date: 04/18/04	DRAWN BY: J. Greeneisen	F:\Engineering\Standard Parts\Appliator\3600 SERIES\3600a\ASS\ASS-238-0461	

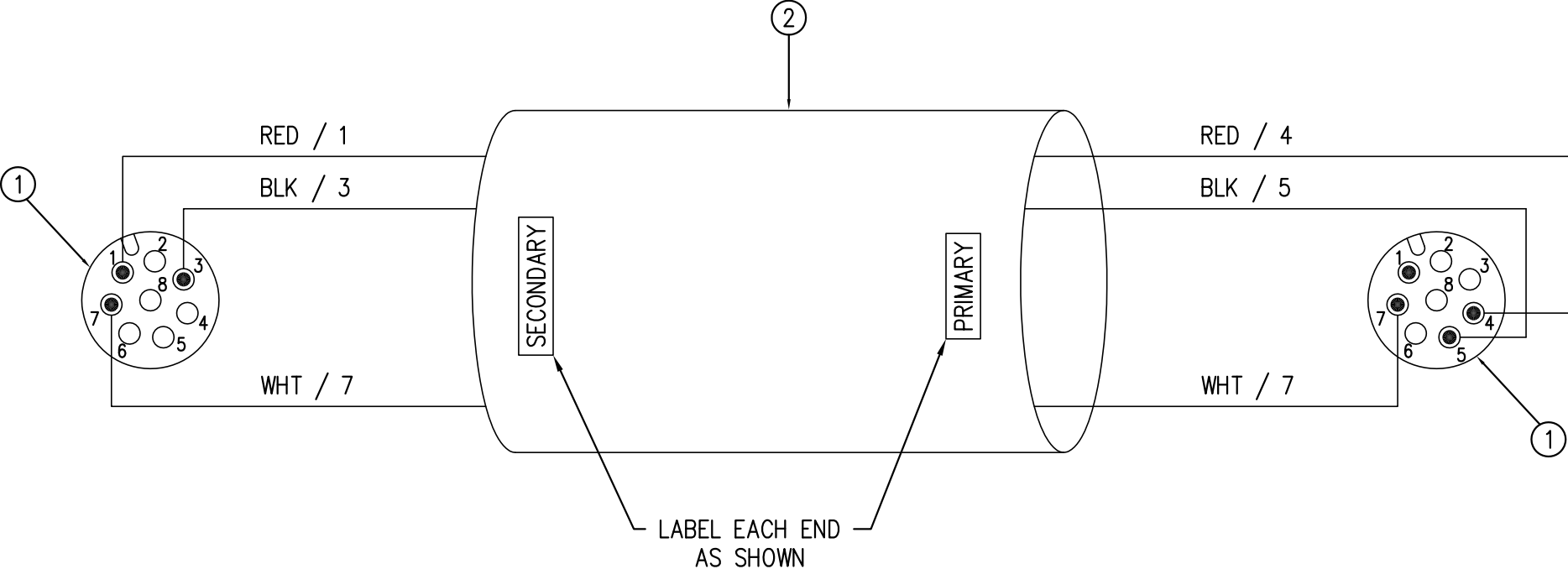


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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): 7.5"	GROUP: ELECTRICAL	TITLE: USB ADAPTER ASSEMBLY	Dept. Code 70
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=1
			Date: 04/14/11	DRAWN BY: BMW
				F:\Engineering\Standard Parts\Appliator\3600 SERIES\ 3600a\ASS\ASS-238-0465

BILL OF MATERIAL			
ASS-238a-0471-X			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	2	PE-CA2005	8 PIN CONNECTOR PLUG W/ HOOD. MALE
②	1	PE-CA2110	22 AWG 4 CONDUCTOR CABLE. "X" LONG

ASS-238a-0471-X	
10' LONG	-10
15' LONG	-15
20' LONG	-20
25' LONG	-25



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APPLICATOR SERIES: 3600	APPLICATOR WIDTH(S): -	GROUP: ELECTRICAL	TITLE: 3600a CROSSOVER CABLE ASSEMBLY			
REV. 0	REV. DESCRIPTION -	REV. DATE -	REV. BY: xxx	Scale: 1=1.5	Date: 07/22/19	Dept. Code 70
			DRAWN BY: BNT	F:\Engineering\Customer Standards\Amazon\PAC\3600a-PAC\3600a\ASS\ASS-238a-0471-X		