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

360a LABEL APPLICATOR
CE VERSION

MAINTENANCE
&
SERVICE MANUAL

REVISION 360a-4a.1.X.XXX

EC DECLARATION OF CONFORMITY

Declaration:	The listed product fulfils all the relevant provisions of the following Directive: Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on the approximation of the laws of the Member States relating to Machinery
Manufacturer:	CTM LABELING SYSTEMS 1318 Quaker Circle, Salem, Ohio 44460 USA
Machine Name:	360a Series Label Applicator
Model Number:	360a
Serial Number:	360a-CE-0101-0809
Drawing Identification:	ASS-200CE-0401, 1 Sheet, Rev. 6, Dated; 03-Mar-2008
Standards Used:	
EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN ISO 14120:2015	Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards
EN 1037:1995 +A1:2008	Safety of Machinery – Prevention of unexpected startup
EN ISO 13849-1:2015	Safety of machinery - Safety related parts of control systems – Part 1: General principles for design
EN ISO 13850:2008	Safety of Machinery – Emergency stop equipment, functional aspects – Principles for design
EN ISO 13857:2015	Safety of Machinery – Safety distances to prevent danger zones from being reached by upper and lower limbs
EN ISO 14119:2013	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
EN 60204-1:2006 +A1:2009	Safety of machinery – Electrical equipment of machines, Part 1: General requirements
Means of Conformity:	Technical File (TF): MS4581
Compiler of TF:	Safenet Ltd., UK Notified Body Number 1674, Denford Garage, Denford, Kettering, Northants., NN14 4EQ United Kingdom
Other Directives met:	Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast)

Signature: _____ Date: 2/2/17

CTM LABELING SYSTEMS
1318 Quaker Circle, Salem, Ohio 44460 USA

Testing Procedures
The 360a-CE applicator was tested as a merge with the product detect sensor and display attached. Because of the many configurations and options that are available for this model, there was no way to test all configurations. The only issue with the different noses will be machine safety. The integration of an applicator into a product line may cause pinch points or other dangerous situations that will need guarded. The responsibility for guarding lies with the integrator.

Safety Related Issues to Ensure Compliance

- End user is responsible for meeting the final protective ground requirements.
- The power inlet on the back of the applicator is the AC power disconnect. The end user is responsible for determining and providing a supply disconnect for the system.
- Voltages greater than 60 volts may be present inside the applicator after a discharge time of 5 seconds.
- The end user must provide protection concerning power interruptions/restoration, if needed.
- The end user must provide earth ground fault current protection, if required.
- The end user will provide any guarding needed after integration of the applicator.

Emergency Stop Actuators

EN/ISO 13850:2015 Clause 4.3.2 requires that an emergency stop device shall be located at each operator control station, except where the risk assessment indicates that this is not necessary.

Upon reviewing the machine with the manufacture, it was agreed that the risks posed by the labeling machine itself are not sufficient as to require a dedicated emergency stop pushbutton at the HMI console.

An entanglement test was preformed between the Nip and Drive rollers, and it was found that no significant pull was exerted on fabric, and that only a mild pinch was exerted on the fingers.

The main machine into which this machine is incorporated should have an emergency stop system that will remove power and air to the 360a system, thus removing all power to its actuators.

Acoustic Emissions Data

A weighted emission sound pressure levels at workstations do not exceed 70 dB(A).

Location	Level (dB)A
M1	81.9
M2	83.6
M3	79.8

Measurement Locations:
M1 –In front of label spindle
M2 –Operator's position when using the HMI
M3 –Rear of machine frame

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INTRODUCTION

The CTM Labeling Systems' 360a Series Modular Labeling System is a high-speed Applicator used to apply pressure sensitive labels to moving products on a production line. It is essentially a self-contained Module that may be mounted in almost any position to apply labels to the top, bottom, or sides of packages as they pass by on a production line.

The CTM Labeling Systems' 360a Series Modular Labeling System is unique in that the Main Module can be adapted to three different types of Applicators: Air Blow, Merge, or Tamp by changing the Nose Assembly. The symmetrical design of the Applicator allows labels to be dispensed to the right or left side of the Applicator. The Applicator Type and configuration (either left or right -handed) will depend on the type of product to be labeled and the arrangement of the production line.

If your application needs changed in the future, a different Nose Assembly may be purchased but the Main Module would remain the same. There is no need to purchase a completely new Applicator. The CTM Labeling Systems' 360a Series Modular Labeling System can be easily changed over to a different apply type by simply removing the existing Nose from the module and replacing it with a different Nose.

You can also change the configuration (right-hand or left-hand) by simply moving the Applicator Nose from one side of the Applicator to the other. All the parts are interchangeable*. Everything you need is already included with each Applicator Nose to make the change using your existing Module.
*** Tamp Pad & Manifolds as well as some Options are hand specific.**

The labels should be supplied on a liner web with a minimum label gap of 1/8". The Applicator will accept and dispense labels from rolls up to 20" O.D. Label accuracy is mostly dependant on product handling but the Label Stop at the Peel Edge will be within +/- 1/32 inch when using labels constructed with a liner that does not stretch.

For safe trouble free operation of the Applicator, carefully follow the instructions in this Manual during setup, operation, label roll changes, cleaning, and maintenance. The Applicator is designed to operate under the following environmental conditions:

ELECTRICAL SUPPLY: 207-253 Volts, 3 Amps, 50 - 60 Hertz, Single-Phase
108-132 Volts, 7 Amps, 50 - 60 Hertz, Single-Phase

AIR SUPPLY: The applicator requires clean and dry compressed air at pressures between 6.2 and 6.9 bar (90 - 100 P.S.I.) with a minimum flow rate of 113.3 L/min (4 S.C.F.M).

- **Note: In the tamp applicator, an increase in venturi vacuum pressure may lead to higher SCFM requirements.**

ENVIRONMENT: Operating temperature range is 10 to 35°C (50 to 95°F). Operating humidity range is 20 to 85% RH, non-condensing.

NOTE: THE 360a SERIES MLS IS NOT INTENDED TO BE OPERATED IN AN ENVIRONMENT WHERE FLAMMABLE OR EXPLOSIVE GASSES ARE PRESENT. THE 360a SERIES MLS IS NOT TO BE USED IN DIRECT CONTACT WITH FOOD PRODUCTS.
READ THE INSTRUCTIONS CAREFULLY AND COMPLETELY. This Manual includes all of the information needed to setup the Applicator under normal operating conditions. The instructions include important safety precautions that 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 IT UP AGAIN. Although an Applicator malfunction is possible, most problems happen because the Applicator is not setup correctly. If the Applicator doesn't operate correctly, back up and start over.

FOLLOW ALL SAFETY INSTRUCTIONS. The CTM 360a Series MLS applicator has been provided with a number of safety features. Observe all safety warnings and under no circumstances attempt to remove or defeat safeguards or operate the Applicator in a manner contrary to the instructions.

DEFINITION OF MACHINE TERMS

AIR BLAST JETS:

The flexible Air Blast Jets press-fit into the inside face of the Blow Box Grid and can be re-arranged to provide an air stream pattern that transfers labels of various sizes and shapes to the product. The Air Jets are connected via a Manifold to the output of the "Air Blast" Solenoid Valve located in the Valve Bank. The Regulator Assembly on the Valve Bank controls the air pressure to this Solenoid Valve. The duration of the Air Blast is controlled by the "Air Blast Time" function. Refer to the setup procedures for instructions.

NOTE: Any unused Air Jet Tubes should be inserted into the Storage Block at the rear of the Blow Box.

AIR ASSIST TUBE:

The Air Assist Tube is a small stainless steel tube, with an anti-stick coating, that is mounted on the underside of the Peel Edge. It helps to separate the label from the liner as it is being dispensed onto the Blow Box Grid or Tamp Label Pad for application.

APPLICATOR BLOW BOX NOSE:

The Blow Box Applicator Nose is used for dispensing labels via the Air Blow application. The Blow Box creates a vacuum to hold the label to the Blow Box Grid until it is dispensed onto the product. The Nose Assembly is easily converted from left-hand to right-hand and vice versa using the same parts. Also, the Blow Box Nose Assembly can be interchanged with the Merge, Tamp, or DAT Applicator Nose Assembly.

APPLICATOR MERGE NOSE:

The Merge Applicator Nose is used for dispensing labels via the wipe on/merge application. A label is dispensed from the Peel Edge and the brush wipes the label onto the product as it is traveling past the Applicator. The Merge Applicator Nose is easily converted from left-hand to right-hand and vice versa using the same parts. Also, the Merge Nose Assembly can be interchanged with the Air Blow, Tamp, or DAT Applicator Nose Assembly.

APPLICATOR TAMP NOSE:

The Tamp Applicator Nose is used for dispensing labels via the air blast/tamping application. A label is dispensed from the Peel Edge onto the Label Pad. The Air Cylinder extends the Tamp Assembly to the product and the label is applied with an air blast. The Tamp Extend and Retract Times are configured during Applicator Setup. The Tamp Applicator Nose is easily converted from left-hand to right-hand and vice versa using the same parts*. Also, the Tamp Nose Assembly can be interchanged with the Air Blow, Merge, or DAT Applicator Nose Assembly. *Tamp Pad & Manifold is hand specific.

APPLICATOR DAT NOSE:

The DAT (Dual Action Tamp) Applicator Nose is used for dispensing labels via an air blast to the side of the product with a tamping action and the leading or trailing panel of the same product with a swing action. SWING ONLY and SIDE ONLY operating modes are supported as well. A label is dispensed from the Peel Edge onto the Label Pad. Air Cylinders extend the Tamp or Swing Arm Assemblies to the product and the label is applied with an air blast. The Tamp/Swing Extend and Retract Times are configured during Applicator Setup.

BLOW BOX / VACUUM GRID:

The Blow Box/Vacuum Grid is the cube shaped assembly located next to the Peel Edge on a Blow Box Applicator. Two (2) Axial Fans mounted above the Grid create the vacuum needed to hold the label in place prior to application.

DANCER ARM:

The Dancer Arm is attached to the Unwind Block Assembly with a shoulder bolt, thrust bearing and a bushing. It appears immediately after the Unwind Mandrel in the web path. The Dancer Arm has a roller at one end that rides against the label liner and is interconnected to the Mandrel Tension Disk with a spring. The Dancer Arm maintains tension on the liner loop as it operates the brake on the Unwind Mandrel when labels are being dispensed. The spring tension should be large enough to properly tension the web but still allow proper operation of the brake. Do not over tension the Dancer Arm.

DRIVE ROLLER:

The Drive Roller is coupled to a Stepper Motor that provides the motive force for advancing the label liner. The Drive Roller in conjunction with the spring loaded Nip Roller, pull the label liner around the Peel Edge to dispense a label onto the product, Tamp Pad, or Blow Box Grid.

LABEL MANIFOLD:

The Label Manifold is the mounting block that attaches the Label Pad to the bottom of the Tamp Cylinder on the Applicator Nose. The Label Manifold is a custom part that is manufactured exactly to the label size being applied. If at any time the label size changes, a new Label Manifold must be purchased along with the Label Pad.

LABEL PAD:

The Label Pad is a white delrin material mounted onto the Label Manifold at the bottom of the Tamp Cylinder of the Tamp Applicator Nose. The Label Pad is a custom part that is manufactured exactly to the label size being applied. If at any time the label size changes, a new Label Pad must be purchased along with the Label Manifold.

LABEL TENSION BRUSH ASSEMBLY:

This is an adjustable Brush to help create tension on the label liner. The Brush can be released while threading the label liner.

NIP ROLLER:

The spring-loaded Nip Roller provides positive pressure to the label liner that passes between the Drive and Nip Roller Assemblies. These rollers ensure that the liner does not slip during the label dispense cycle. The tension on the rollers may be released by turning the knob located on the top of the Nip Roller Assembly.

PEEL EDGE:

The Peel Edge is the beveled plate located at the end of the Applicator's Nose. When the label liner is pulled around the Peel Edge, the label separates from the liner and is transferred to the Blow Box Grid, Tamp Pad, or product depending on the Applicator Type.

PEEL EDGE LABEL TENSION SPRING:

This Tension Spring is attached to the bottom of the Spring Block Assembly. It is used to keep the label liner flat on the Peel Edge surface and assist in controlling the dispensing of the label onto the Blow Box Grid, Tamp Pad, or product. The tension is adjustable to accommodate varying label thickness and release properties.

REWIND MANDREL / SLIP CLUTCH:

The Rewind Mandrel is provided to store the label liner after labels have been removed. It is equipped with a Slip Clutch and is driven by the Stepper Motor. The pressure exerted by the Slip Clutch is adjustable.

SINKING OUTPUT CONFIGURATION:

The 360a Applicator's Alarm, I/O, and Valve Outputs are wired in the sinking configuration. The load current for a sinking output flows into the output terminal. The load common connection is the positive power supply terminal (+V). When the output is active, current flows from the positive terminal of the load power supply through the load into the output terminal to ground. Io (max) = 80 mA

SOURCING INPUT CONFIGURATION:

The 360a Applicator's Low Label, Web/Tamp, and Product Detect Inputs are optically-isolated. The Sensors connected to these pins must be able to sink the opto-coupler's input current. The Sensor common connection is the negative power supply terminal (ground or -V). When the Sensor's output is active, current flows from the positive terminal of the load power supply through the optical coupler circuit and out of the input pin and through the sensor output (open collector/drain or SPST N.O relay) to ground. Iin (max) = 15 mA.

UNWIND ASSEMBLY:

The roll of labels is placed on the Unwind Assembly for dispensing onto the product. The Unwind Block is used to mount the Unwind Assembly to the Main Module. The Unwind Assembly can be removed and remounted on the opposite side of the Module for easy conversion from a right-hand to a left-hand Applicator or vice versa.

UNWIND ROLL MANDREL:

The Unwind Roll Mandrel is equipped with an adjustable Spring Tension Disk, a Brake, and a quick-change Outer Disc. The Unwind Roll Mandrel and the Dancer Arm maintain proper web tension and prevent excessive run-out of the label liner as labels are processed through the Applicator.

VALVE BANK:

The Valve Bank will consist of single (1) valve for a Merge Applicator with an Imprinter, two (2) valves for a Blow Box Applicator, three (3) valves for a Tamp Applicator or four (4) valves for a Dual Action Tamp Applicator. The Valve Bank has built in Regulators and Gauges, it plugs into the Valve Connector on the Rear Panel.

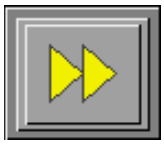
WEB PATH:

The web path is the path the label liner follows from the Unwind Assembly through the various rollers to the Applicator Nose & onto the rewind assembly.

360a TOUCH SCREEN DISPLAY

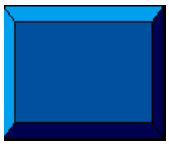
The following description provides general information about the Display and will tell the operator how to change values, explain the meaning of different screens, and describe the different options and how to set them up.

TYPES OF KEYS

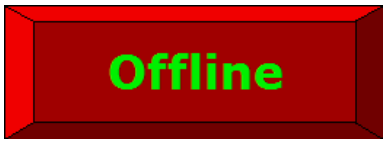


Or

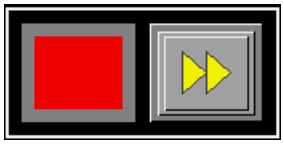
are “go to” keys and will move the operator to another screen.



This key is for setting something like an Applicator Type, jog or used as an Alarm Reset Key. The color of keys will vary depending on the application.



This key is for bringing the Applicator on and offline. When offline, it will be as what is shown to the left, but when the Applicator is online, it will be green with red letters.



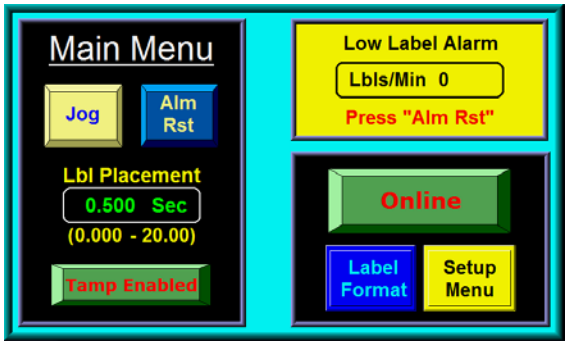
This block of keys usually turns something on or off. If the option is on, the lamp to the left of the keys will be green; otherwise it will be red.

This key will take you to the Main Menu even if you are in a setup screen.

ALARMS

There are two types of alarms generated in the 360a Applicator:

Warning Alarm
Critical Alarm



Warning Alarm Status Box

Critical Alarm Screen

Warning Alarms will appear in the upper right hand corner of the Main Menu in the Status Box. Since these alarms are not serious, the Applicator will not be stopped. During a Warning Alarm, the amber light on the Light-Stack (if provided) will be turned on.

Critical Alarms will stop the Applicator (take it offline) and turn a red light on in the Light-Stack (if provided). The Alarm Screen will cover the current screen explaining the alarm type. An Alarm Reset button appears at the bottom of the page to clear the alarm.

Warning Alarms

The following are Warning Alarms monitored by the Applicator:

Inhibit – This alarm occurs when an external device inhibits the Applicator from dispensing a label by activating the Inhibit Input on I/O Connector C2-12.

Tight Loop - If the Loose Loop Option is on and the Alarm Prox (upper Prox) turns on, this alarm occurs causing the Applicator to stop applying labels until the Lower Prox turns on. There is no Reset Button for this alarm since the Loose Loop Program controls whether the Applicator is functional or not. Although the Applicator is stopped, this is still considered a Warning Alarm since the Applicator will resume labeling as soon as the Printer catches up with the Applicator. The Tight Loop Status Box will have a red background instead of yellow to signal the alarm condition.

Low Label – This alarm occurs when the Low Label Sensor detects that the unwind roll is nearly out of labels.

Multi-Label C-C Distance Is Too Low – This alarm occurs when the Multi-Label Option is on and the Applicator cannot place labels at the desired Center-line Distance. If the application permits, increase the Label C-C Distance to correct the problem. For Non-Merge Applicators, you can try increasing the Web Speed value or decreasing the conveyor speed value. In Tamp Applicators, reduce the Tamp Extend/Retract Times to the minimum. In Air-Blow Applicators, reduce the Air Blast Time to the minimum and increase the Pre-Dispense Time if possible. In Merge applications contact the factory concerning appropriate Accel and Decel values for your application.

DAT Label Placements Are Too Close – If the Applicator Type is a Dual Action Tamp and the Second Label Placement is low enough that the second label is not out onto the Pad before it should be applied, this alarm will occur. Increasing the Second Label Placement will correct the problem. This also could be viewed as a rate alarm.

Conveyor Speed, Profile or OverSpeed % Too High Compared To MaxSpeed - This alarm occurs on Merge Encoder-Based Applicators when the conveyor speed or the product of conveyor speed times the Profile or Over Speed % yields a speed greater than MaxSpeed. If possible, decrease the conveyor speed or increase the Applicator's MaxSpeed value. In Over Speed or Profiling applications try decreasing the Pre-Apply Speed % or WebRatio % values respectively.

ALARMS (cont'd)

(WARNING ALARMS)

Label Placement is Too Low – This alarm occurs in Encoder-Based applications when the Label Placement distance is too small for encoder compensation to work correctly. During label placement a speed dependent distance is subtracted from the label placement value to properly position the label. If this alarm occurs, move the Product Detect Sensor upstream more, decrease the conveyor speed, or increase the Label Placement value.

Profile Or OverSpeed % Too High Compared To MaxSpeed – This alarm occurs in Merge Time-Based applications when the Profiling or Over Speed % times the Web Speed value yields a speed greater than the MaxSpeed. If possible, decrease the conveyor speed or increase the Applicator's MaxSpeed value. If possible, decrease the Over Speed Pre-Apply Speed % or the profiling WebRatio % values.

Imprint Dwell Too High For Label Cycle – This alarm occurs if the Imprinter Valve is on when the Applicator is ready to dispense a label to the product, Air-Blow Grid, or Tamp Pad. For Merge applications, no label will be dispensed. Air-Blow and Tamp Applicators will wait for the Imprint Dwell to timeout before dispensing a label to the Grid or Pad.

Critical Alarms

The following are the critical alarms monitored by the applicator:

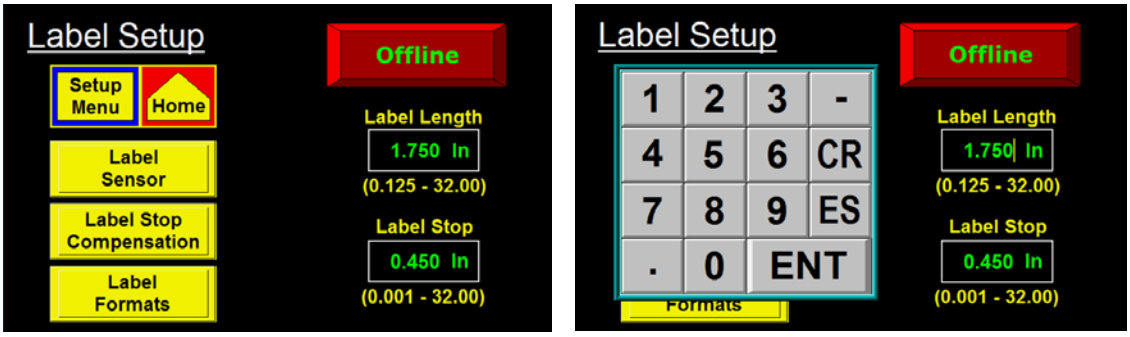
End Of Web – This alarm occurs when the End Of Web sensor detects a break in the web.

No Labels Found – This alarm occurs if the number of consecutive missing labels on the liner exceeds the Missing Label Count value. If a No Labels Found Alarm occurs when labels are present on the liner, re-teach the label sensor sensitivity settings.

Printer Not Ready - This alarm occurs when the Printer is paused while the Applicator is controlling a Printer in a Loose Loop format with the Printer Ready Input Signal active.

CHANGING VALUES

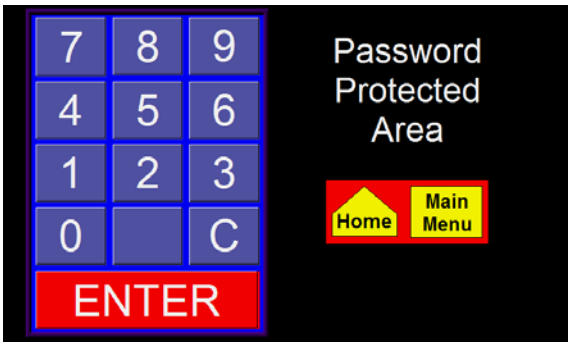
Values that may be changed are shown in boxes displaying the current value. In the example below, label length is shown to have a value of 1.75". To change this value, the operator will touch the screen in the label length field and a keypad will appear to the side of the variable being changed. The figure to the right shows what the Display should look like after touching the variable field. You can see a cursor has moved over the rightmost digit. Also the numeric keypad has appeared to the left of the variable. As you touch numbers on the keypad, the variable is zeroed and the new value is input to the variable box. Pressing "ENT" will finish the process. Pressing "ES" will allow you to escape without changing the value and "CR" will clear the value you're changing. **Note: In most cases, an out-of-range value will not produce a warning message but the variable will return to the original value after pressing "ENT".**



PASSWORD

The Setup Section of the Display is password protected. The Standard 360a password is "1800". When you get to a password-protected area, a screen similar to the one to the left will appear.

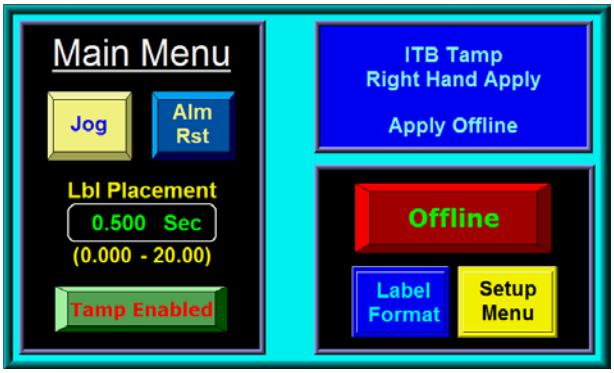
This screen notifies the operator that the area is password protected. Here the operator can choose to go back to the Main Menu or continue with password entry by touching within the box to the left to activate the keypad



When you touch a number on the keypad, it will highlight. This is the only indication that a key was pressed since the password is not displayed. If you know you've entered a wrong number, press "C" to clear what you have and start again. "ENTER" finishes the process.

If the wrong password was entered, the screen above appears. If the operator wants to try again, press the "Try Again" key. If you do not know the password, press the other key to go to the Main Menu.

MAIN MENU



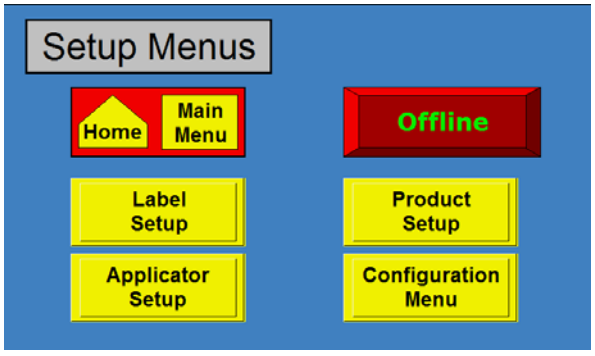
The Main Menu is divided into three sections. The upper right corner of the Display is a Status Window. The purpose of this box is to inform the operator of the status of the Applicator. The display shown to the left appears immediately after going offline. If the Applicator is online with no alarms, the Status Window will have a green background with the label rate displayed. If a Warning Alarm occurs, the background changes color and a message will appear indicating the nature of the alarm. Specific Warning Alarms were discussed previously.

The left side of the screen will change based on Applicator Type. There will always be Jog and Alarm Reset keys and access to Label Placement.

The lower right corner has buttons to place the Applicator on and offline and keys to take you to the Formats and Setup Menus. Placing the Applicator online applies power to the Drive Motor and arms the Applicator for labeling. The Format Key gives access to the operator to load a saved Format. The operator cannot change or erase Formats from here. The Setup Key takes the operator to a password-protected area to make changes to the operation of the Applicator.

The Display is equipped with a backlight saver function that automatically turns off the backlight after 60 minutes of inactivity. Pressing any part of the Display will turn the backlight on again. Also, the Applicator will initiate a backlight wake-up in response to any Critical Alarm condition. The later feature insures that the operator has a visual indication of a Critical Alarm condition in systems without a Light-Stack Assembly.

SETUP MENU

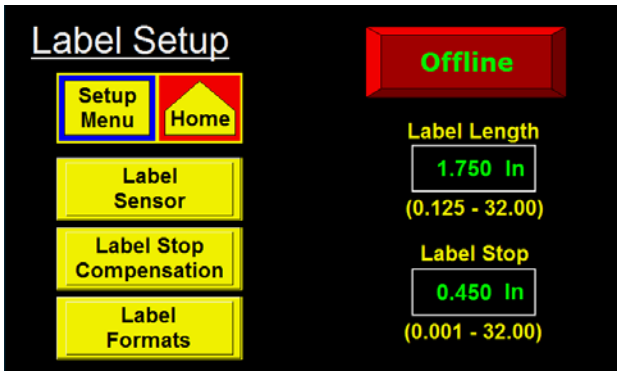


Because the Setup Menus are password-protected, pressing the Setup Key at the Main Menu will cause a password screen to appear. By entering the correct password will cause the Setup Menu to come up. From here the operator can go to the different setup sections. The operator can also bring the Applicator online while he changes the setups. Once the Applicator is setup and the operator exits the Setup Menu, the Applicator will save the new settings. If power is cycled to the Applicator before the Display is returned to the Main Menu, the new settings will not be saved.

Note: You must be offline to enter the Configuration Menu.

LABEL SETUP

The Label Setup menu is accessed from the Setup Menu by pressing the Label Setup Key. The label setup section gives the operator access to variables on the Applicator that pertain to the label.



The following items may be changed in this section:

- Label Stop
- Label Length
- Label Sensor Setup
- Label Stop Compensation
- Label Formats

Label Length -The label length is defined as the feed length of the label plus the width of the gap between labels. Stated another way, it is the distance from the leading edge of one label to the leading edge of the next label. Since each application cycle moves the label length distance, it is important to enter the exact label length value. Allowed values are between 0.125-32".

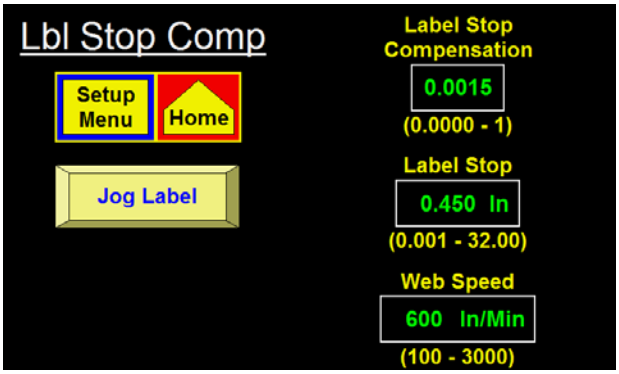
Label Stop -The Label Stop box lets you enter the label stop distance value. The Label Stop value is the distance from the label edge to the Label Sensor. Allowed values are between 0.03" and (label length – 0.06"). The Label Stop value may be changed while the Applicator is running.

Label Stop Comp –Although very rare, we have found the Label Stop would vary with Web Speed when running certain types of labels. This seems to do more with narrow labels and the materials used to convert them. Label Compensation is normally fixed but when Label Sop is moving with Web Speed, it was found making changes to it can make the label stop position better. Label stop compensation is a number that shortens the Label Stop value the higher the Web Speed. This corrects the problem of the label position creeping out the faster the Web Speed.

Note: This option is only for Encoder-Based Merge Applicators

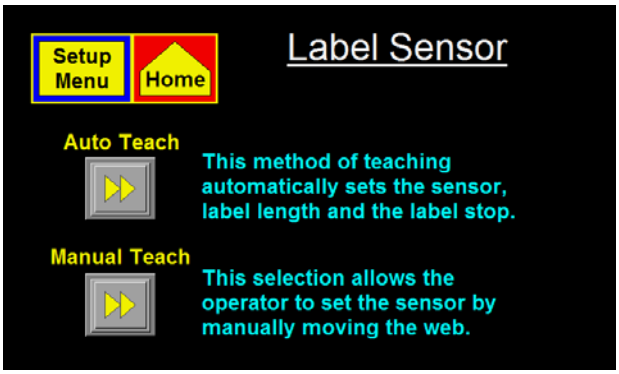
Label Stop Comp Setup

Before setting this up, make sure the Label Sensor, Label Length, Label Stop and Max Speed have all been setup. It is also important the Encoder Variables are correctly setup.



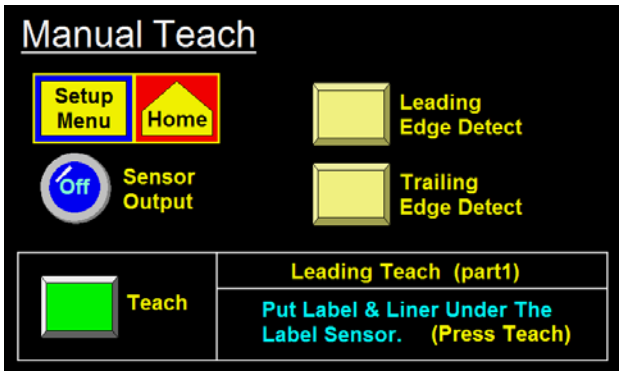
The default value for Label Stop Comp is 0.0015. Set the Web Speed to the slowest speed the product will be traveling (let's say 500 in/min). Use the Jog Key on the Display or the Jog Switch on the Applicator to dispense a couple of labels. Take note of where the label stops. Now change the Web Speed to the fastest the product will be traveling and jog a couple more labels. If the Label Stop position moved forward, increase the Label Stop Compensation. If the Label Stop moved back, decrease the Label Stop Compensation. It is unlikely that the compensation value will be less than 0.0015. If you can change Web Speeds and the Label Stop holds pretty well, you are finished. If needed, you can make adjustments to the label stop position so the Label Stop is back where you want it. When you exit the Label Stop Compensation screen, the Web Speed will return to the value set in the Applicator Setup Menu.

LABEL SETUP (cont'd)

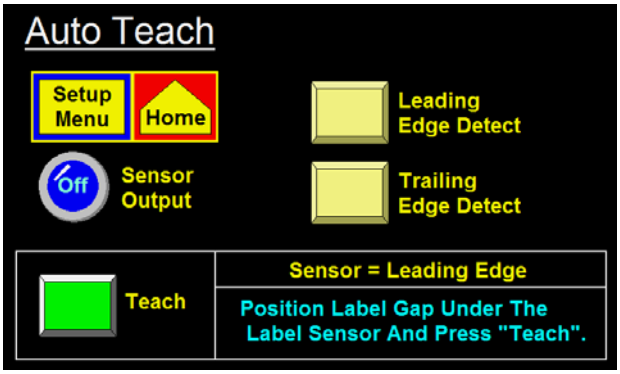


Label Sensor -Pressing this key will bring up the Label Sensor Menu. This is where the sensitivity of the Label Sensor is setup. The operator will have two choices:

Auto Teach
Manual Teach



Manual Teach
In the Manual Teach Mode, the operator will first choose whether they want to trigger on the leading or trailing edge of the label. The only reason for changing edges occurs when the Label Stop is either too small or too close to the Label Length. After selecting an edge detection mode, the Display will provide operator instructions at the bottom of the screen. For example, if leading edge is selected, the Display will prompt the user to move the label and liner under the Label Sensor and press the Teach Key on the screen. After a couple of seconds the user is prompted to move the liner under the sensor. Move the label stock by turning the Drive Roller to place the label gap under the sensor or remove a label. Again the operator will press the Teach Key. After a couple of seconds the process is finished. The operator can return to the Label Setup Menu by pressing the "Prev Menu" Key.



Auto Teach
The Auto-Teach function not only sets the Label Sensor Sensitivity but also calculates the Label Length and Label Stop values. When the Auto-Teach function is selected, the operator is prompted to move the label gap under the sensor. Pressing the Teach Key causes the Applicator to dispense 10 inches of labels while setting the Label Sensor Sensitivity. A Bypass Key is provided to skip the sensitivity setup for instances where the sensitivity is known to be correct or when a Clear Label Sensor is installed. Following the sensitivity setup, the operator is prompted to move the label to the Label Stop Position and press the Teach Key. Three labels are dispensed while calculating the Label Length and Label Stop values. If the Multi-Panel Option was on, an extra screen appears instructing the operator to move a label to the Peel Edge to allow the controller to calculate the Short Feed Distance. This will be discussed in more detail in the Applicator Setup section.
NOTE: The Label Sensor output lamp will be a light blue when the sensor is on. If the sensor is set to "Leading", the light will be on when the label is under the sensor. If "Trailing", the light will be on when the gap is under the sensor.

NOTE: See SPECIAL OPTIONS section for information regarding the Label Sensor Model setting if the Applicator is not responding correctly to label teach routines.

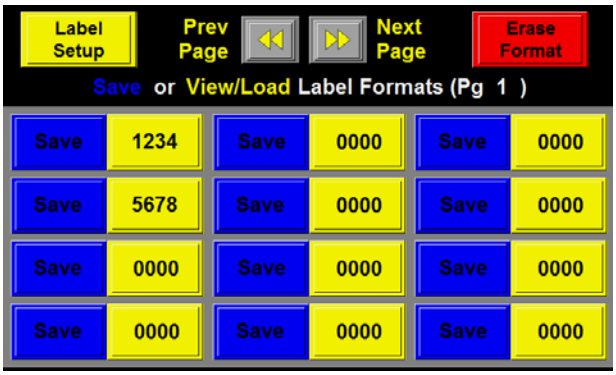
LABEL SETUP (cont'd)

Label Formats
This section allows the operator to save and load configuration setups for up to (48) different products and labels. This is useful if a customer is running several different products or labels over and over.
Note: The Label Format Key at the Main Menu only allows the operator to only load Formats.

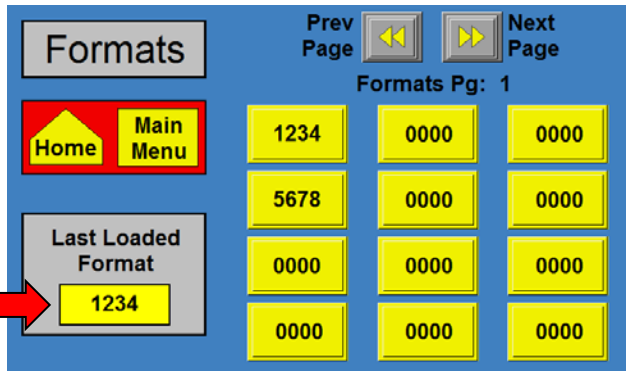
A format saves the following parameters:

Label Placement	Encoder Option
Label Length	Pulse Length
Label Stop	Compensation
Detector Lockout	Air Blast Time
Web Speed	Ext. Air Assist
Slew Speed	Tamp Extend
Max Speed	Tamp Retract
Accel	Pre-Dispense
Decel	
Options and Variables	

Consult factory for a complete list of Parameters saved.



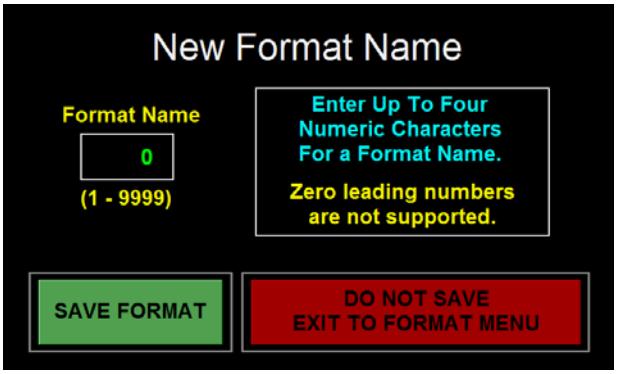
Main Format Screen



This screen will show the last Format loaded. If no Formats had been loaded, the value in the box would be "0000".

Main Menu Format Screen

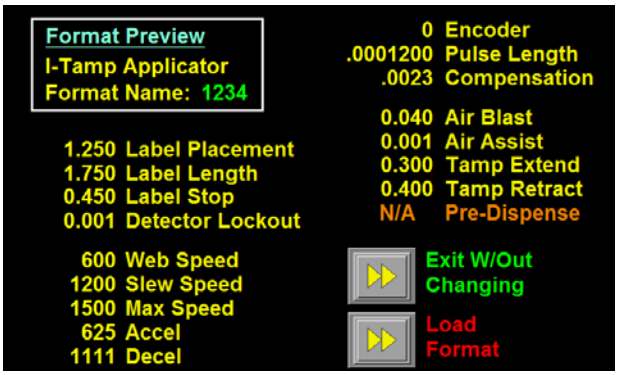
Saving a Format
If the current setup in the Applicator is performing correctly and you want to save it, press "Label Formats" in the Label Setup Menu. When a "Save" key is pressed, the Applicator will check to see if a Format already exists in the location selected. If it does, the operator will be prompted whether or not to overwrite its contents with the new information. If the name is "0000", the operator will be asked to enter up to four digits for the Format Name. Pressing the green Save Format key, saves the Format to the name shown in the Format Name box provided the name is not already used for another Format. If it is, the system prompts the user to select a different name. Pressing the red Exit Key on the screen allows the operator to exit without saving the Format.



LABEL SETUP (cont'd)

Viewing/Loading a Format

When the operator wants to view/load a Format File, they need to press the yellow portion of the key associated with the desired Format name. If the number is "0000", no Format is saved in that location. Selecting a "0000" Format will cause a screen to appear with a "No File Found" message.

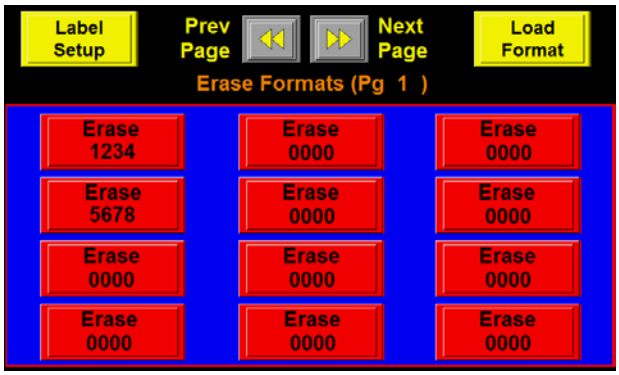


Pressing the View/Load Key will not immediately load the Format but will allow the operator to view the values within that Format. After reviewing the values, the operator may press "Load Format" to load the Format. If the wrong format was selected, the operator can press the "Exit W/Out Changing" key.

Deleting a Format

When the operator wants to delete a Format that currently exists, press the Erase Format Key in the upper right hand corner of the Display. The screen to the right will appear. Pressing any of the boxes with a name will cause that Format to be erased.

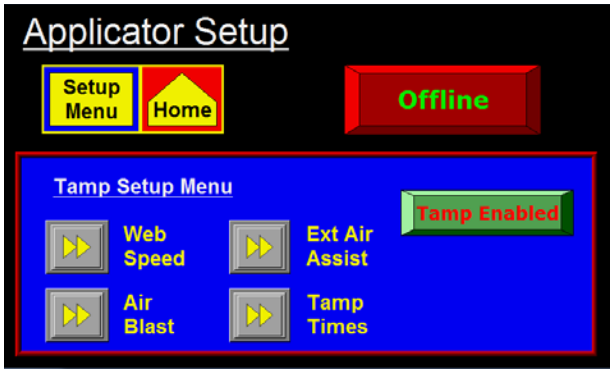
Note: There is no second step to this operation. Once you press the format box, the Format will be erased.



APPLICATOR SETUP

The Applicator Setup Menu is accessed from the Setup Menu by pressing the "Applicator Setup" Key. The screen is split into upper and lower sections. The upper part does not change and allows the operator to return to the Main or Setup Menus and place the Applicator on or offline. The lower section of the screen changes based on the Applicator Type selected.

Depending on the Applicator Type, the operator has access to the following variables:



Tamp/Swing Extend and Retract Times
Air Blast Time
Extended Air Assist Time
Web Speed
Pre-Dispense
Label Profile Configuration
Multi-Panel Option
Over Speed

The following serves as an explanation for each section.

Air Blast -The Air Blast Time is the interval of time that the Air Blast Valve is turned on. Allowed values are .005 - 1 second.

Tamp Extend -The Tamp Extend Time is the interval of time allotted for the Tamp Slide to extend. After the timer has timed out, the Air Blast will occur and the Tamp Slide will return home. To keep labeling speeds up, this value should be as low as possible. Allowed values are between .01 - 5 sec.

Tamp Retract -The Tamp Retract Time is the interval of time allotted for the Tamp Slide to return home before feeding another label. If this value is too small, a label will feed into the Pad or Manifold. Allowed values are between .01 - 5 seconds. **Note: In a Tamp Applicator, the Tamp Slide action may be disabled or enabled by pressing the "Tamp Enabled/Disabled" Keys.**

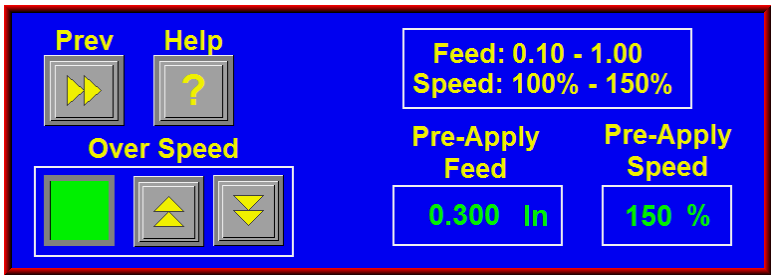
Extended Air Assist -The Extended Air Assist Time is the interval of time after the label feed until the Air Assist is turned off. It is used in Air Blow and Tamp Applicators to help hold the label in place on the Grid or Pad prior to being blown onto the product. Allowed values are between .000 - 1 sec.

Web Speed -The "Web Speed" Key allows the operator to enter the Applicator Web Speed value. Allowed values are between 100 and 3000 "/min with the upper limit depending on the Max Speed setting in the Configuration Menu. The specific limits are shown above the current Web Speed value. The Web Speed value may be changed while the Applicator is running.

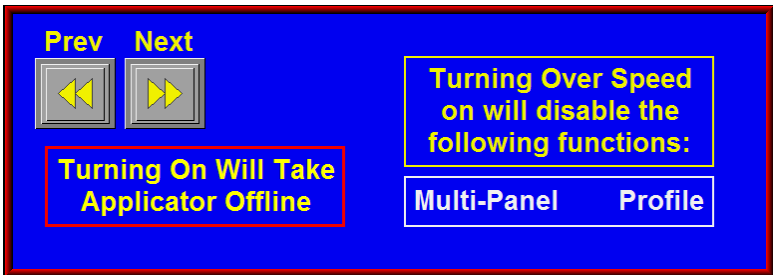
Pre-Dispense –This is the amount of time before the Air Blast turns-off that the Applicator begins the label dispense. **This Option applies only to Air Blow Applicators** and will speed-up the application rate. If the value is too high, the Applicator will start dispensing a label into the Air Blast stream causing the label to fall off the Grid. Ideally, the Pre-Dispense time allows the Applicator to get past the label Accel curve and place the label at the edge of the air stream when the Air Blast Valve turns off.

APPLICATOR SETUP (cont'd)

Over Speed – The Over Speed Option allows a Merge Applicator to get up to Web Speed faster by dispensing the "Pre-Apply Feed" distance at the (Pre-Apply Speed % x Web Speed). In Multi-Label mode, this will help place the labels closer together. **Note: This Option is only for Merge Applicators.**



(Over Speed Screen)



(Over Speed Help Screen)

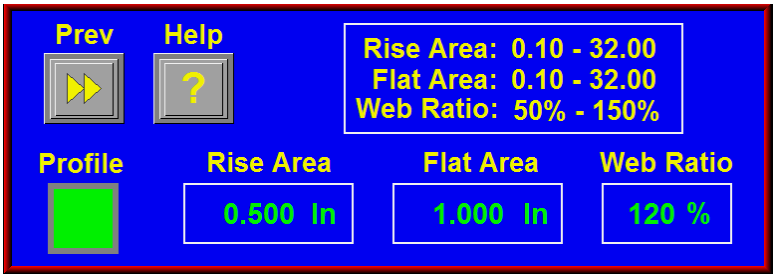
Note: The Help Screen will note what Functions are disabled when this Function is turned on.

Label Profile -Profiling is a Merge only Option used to aid in labeling products that have a concave or convex surface. If the surface of the product is convex and the web ratio is less than 100%, the Applicator will dispense a label at Web Speed during the "Rise Area" distance. After the "Rise area" distance, the Web Speed changes to (web speed) x (web ratio) during the "flat area" distance. After traveling the combined "rise" plus "flat" distances, the Applicator returns to Web Speed for the remainder of the move. The reason for this action is that convex products start out farther away from the Peel Edge than it will be by mid-product. The label is dispensed at normal speed at the beginning of the product. As the product surface moves closer, the label must slow down so that the labels do not wrinkle. As the product surface moves away, the label speeds-up. On concave products the label is dispensed at Web Speed initially. As the surface of the product moves away, the label is dispensed faster to force the label into the product (Web Ratio>100%). The label dispense speed is slowed as the product surface moves closer to the Peel Edge.

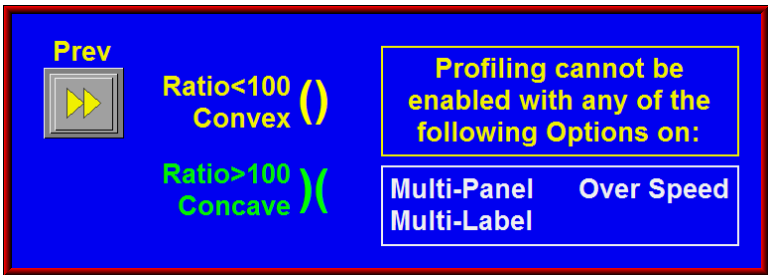
NOTE: 1) Label Profiling is a function of the Merge Applicator only.
2) Label Profiling is enabled when the "Web Ratio" is set to something different than "100%".
3) Max Speed for the Applicator is setup in the Configuration Menu and will range from 100 to 3000 in/min. If the Applicator exceeds the Max Speed *"Conveyor Speed, Profile or OverSpeed % Too High Compared To MaxSpeed"* Warning Alarm will occur. The Applicator will not exceed this speed even if the Web Ratio is set to a higher number.

APPLICATOR SETUP (cont'd)

(LABEL PROFILE)



(Profile Screen)



(Profile Help Screen)

Note: The Help Screen will note Options that are incompatible with the Profiling Option.

Profile Variables

Rise Area -This is the distance the label travels before changing to the mid-product labeling speed. Enter a value between 0.1 and 20. The Applicator will be running at Web Speed during this distance.

Flat Area -This is the distance the label travels while at the mid-product labeling speed. Enter a value between .1 and 20. The Applicator will be running at a percentage (Web Ratio) of the Web Speed during this distance.

WebRatio -The Web Ratio is a scaling percentage applied to the Web Speed or conveyor speed value to either slow-down or speed-up the Applicator during the Profile Flat Area. This number will vary depending on product shape and is usually determined by trial and error. Enter a value between 50% and 150%.

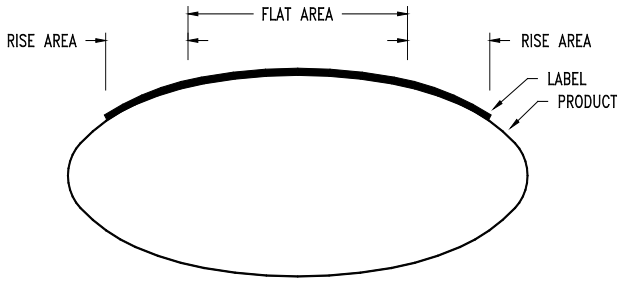
APPLICATOR SETUP (cont'd)

(LABEL PROFILE)

Estimating Rise and Flat Areas

This process will give you a starting point for setting Profile Variables. Some experimentation is necessary for best results. The example shown is for a convex or oval product.

1. Apply a label by hand to the product. Measure the Rise Area by looking at the beginning of the label to where it starts to flatten out. Also measure the length of the Flat Area. Use the diagram below as an example.



2. Use these numbers when inputting values to the Display.

3. When using this type of product, Web Ratio is set less than 100%. This will slow the Web Speed during the Flat Area.

PROFILING SUMMARY

Condition	Product Shape
WEB RATIO < 100	Convex
WEB RATIO = 100	Flat Surface
WEB RATIO > 100	Concave

Web Ratio Setting (%)	Speed during 0" to rise distance	Speed during rise to flat distance	Speed during flat to label length distance
< 100	web speed	(web speed) (web ratio)	web speed
= 100	web speed	web speed	web speed
> 100	web speed	(web speed) (web ratio)	web speed

APPLICATOR SETUP (cont'd)

(LABEL PROFILE)

Rise Area and Flat Area Final Adjustment

The system will work best with the smallest Rise Area value and the largest Flat Area value that properly applies the label. Use the instructions below to find these values.

1. With the Applicator online, send several products down the conveyor and observe the labels that are applied.

2. If the leading edges of the labels were all applied at the same position on the products, go on to step #3.

   If the leading edges of the labels were placed at various positions on the products, the Rise Area Length is too short.

   Slightly increase the Rise Area Length and run some more products. Repeat until the leading edge label placement is consistent.

3. If the leading edges of the label were applied at the required position on the product, go on to step #4.

   If the leading edge of the label is applied at the incorrect position, adjust the "LABEL PLACEMENT", or re-position the product detector. Run some more products. Repeat until the leading edge of the label is applied at the required position on the product.

4. If there are no wrinkles or bubbles in the first half of the applied labels, go on to step #5.

   If a wrinkle or bubbles appear from the top to the bottom of the first half of the label, the Rise Area is too long.

   Slightly decrease the Rise Area and run some more products. Repeat until the wrinkle in the first half of the label is removed.

5. If there is no wrinkle in the center of the label, go on to step #7.

   If a wrinkle appears from the top to the bottom at the center of the label, either the Web Ratio is too high, or the Flat Area is too short.

   The Web Ratio will be adjusted first. Before adjusting, note the Web Ratio setting. Slightly decrease the Web Ratio and run some more products. Repeat until the wrinkle is removed. Go on to step #7.

6. Increase the Flat Area slightly and run some more products. Repeat until the wrinkle is removed.

7. If the labels are applied wrinkle free from lead edge to trail edge, go on to step #8.

   If small horizontal wrinkles appear on the trailing edge on the label, the Flat Area is too long.

   Slightly decrease the Flat Area and run some more products. Repeat until wrinkles are eliminated.

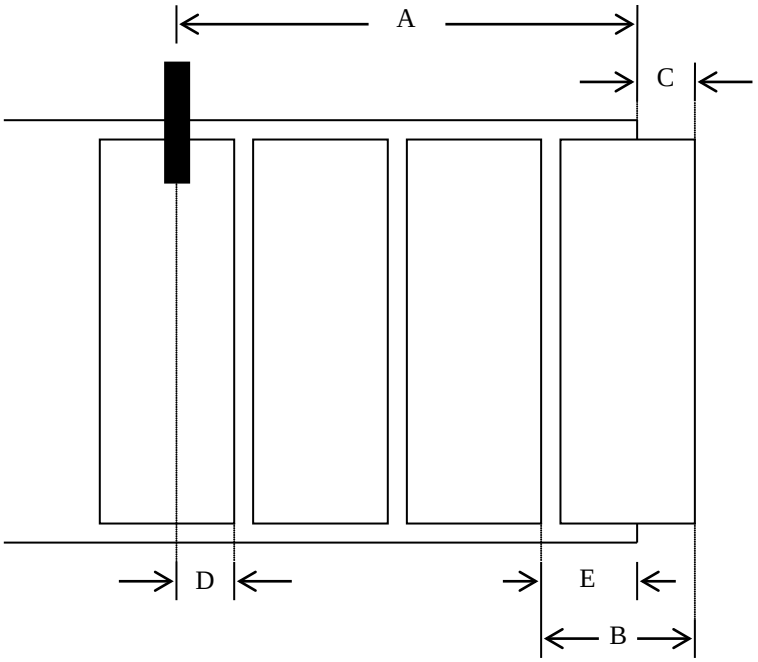
8. When the Web Ratio, Rise Area and the Flat Area are established, the setup is complete.

APPLICATOR SETUP (cont'd)

Multi-Panel Apply

The Multi-Panel Apply Option is used to merge a label onto two or three panels of a product. An example might include the leading, top, and bottom panels of a clamshell container. The Applicator is initially setup so that the label is flagged out in front of the product but is still supported on the liner. When a product detect signal is received, the Applicator will wait for the Label Placement distance. At Label Placement, the Applicator will feed the "Short Feed Distance" at encoder speed. This will place the next label at the Peel Edge. The Applicator will wait for the "Product Clearance" distance to allow the product to pass by the Peel Edge before moving the next label to the flagged out position (Label Stop) at Slew Speed. The figure below illustrates an example setup with four labels between the Peel Edge and the Label Sensor along with the measurement definitions:

A: label sensor to peel edge distance
B: label length
C: label flag distance
D': label stop distance with C = 0 (not shown)
D: label stop distance
E: short feed distance



When the Multi-Panel Option is turned on, the user is prompted to go to the Label Setup Menu and perform a Label Sensor Auto Teach operation. The **Auto Teach** feature will calculate all of the dimensions shown above if the option is enabled prior to running auto teach. The operator may override these settings by measuring values B through E above and entering them via the Display. **Note: Since the Multi-Panel Apply Option is distance based, the Encoder Option must be purchased.**

APPLICATOR SETUP (cont'd)

(MULTI-PANEL OPTION)

(Multi-Panel Screen)

(Multi-Panel Help Screen)

Note: The Help Screen will note Options that are disabled when this Option is turned on.

Configuring Multi-Panel Apply With Auto Setup

1. Make sure the Applicator is powered up and offline.
2. Perform the Encoder Setup procedure outlined in the Product Setup section.
3. Press "APPLICATOR SETUP" and select "MULTI-PANEL"
4. Toggle the Option on.
5. Enter the distance after the label is dispensed to when the product clears the Peel Edge to the Product Clearance box. The distance should be approximately equal to the product length.
6. Go back to the Main Menu and press "LABEL SETUP" then "LABEL SENSOR"
7. Select "AUTO SETUP" and follow the screen prompts (see: AUTO TEACH on page 3-7).

Configuring Multi-Panel Manually

1. Make sure the Applicator is powered and offline.
2. Perform the Encoder setup procedure outlined in the Product Setup section.
3. Using the hand wheel, position the label in the flagged out position.
4. Under "LABEL SETUP", enter the distance measured for dimension D shown above. **Note:** If the Label Sensor is set for trailing edge detection, add the label gap distance to dimension D.

APPLICATOR SETUP (cont'd)

(MULTI-PANEL OPTION)

5. While in "LABEL SETUP" enter the Label Length measured for dimension B.

6. Under "APPLICATOR SETUP", press the "MULTI-PANEL" button and turn the Option on.

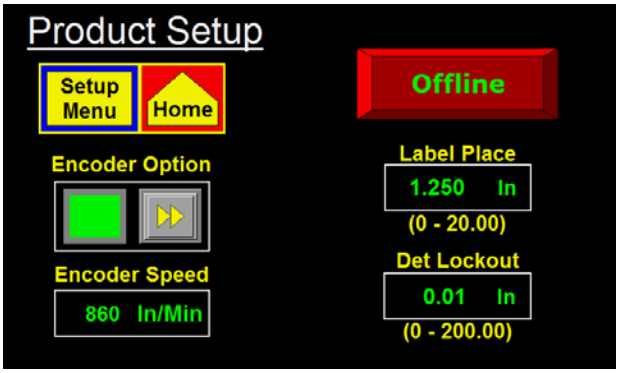
7. Set the Short Feed to the distance measured for dimension E.

8. Enter the distance after the label is dispensed to when the product clears the Peel Edge into the Product Clearance box. The distance should be approximately equal to the product length.

Note: During the last part of the dispense cycle (after the product clears the Peel Edge), the label is dispensed at Slew Speed. This is usually faster than the Web Speed and is set in the Configuration Menu.

PRODUCT SETUP

The Product Setup Menu is accessed from the Setup Menu by pressing the "Product Setup" Key.



The following parameters may be changed or monitored in this section:
Label Placement(s)
Detector Lockout
Encoder Speed (monitor)
Encoder Option

Label Placement -The Label Placement box lets you change the Label Placement value. Label Placement is the time or distance from the Product Detect Sensor to where the label is dispensed onto the product. If the value entered is out-of-range, the previous value will be restored after the "ENT" key is pressed. The allowed range of values, in seconds if time based or in inches if encoder based, are shown below the Label Placement Box. The Label Placement value may be changed while the Applicator is running.

Note: This Label Placement parallels the Main Menu and is located here so that the operator can do their setups without exiting to the Main Menu.

Detector Lockout -The Detector Lockout function is used when more than one product detect signal is generated per product. If the Encoder is on, Detector Lockout is in inches; if there is not an Encoder then it will be in seconds. The Lockout starts at the beginning of a labeling sequence and the Applicator will ignore Product Detect Signals until the lockout time or distance is finished. Allowed values are between .001 – 200 inches or seconds.

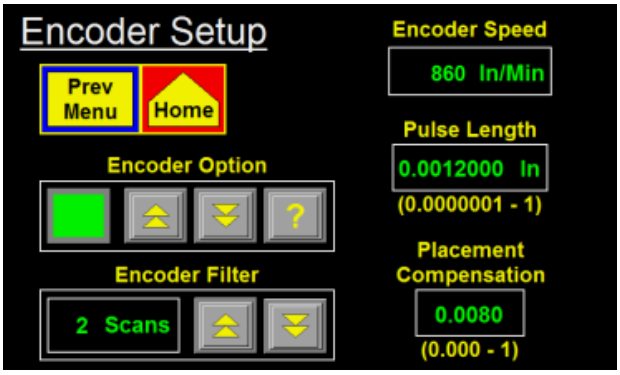
Encoder Speed -This box displays the conveyor velocity obtained from the Encoder Signal connected to the Applicator's Encoder Port. The value displayed is the number of (pulses/min from the encoder) x (the pulse length in inches/pulse).

Encoder Option -The Encoder Option is useful when the product velocity varies during the application cycle. An example of such an application is a Merge Applicator on a Forms Table. With the Encoder installed and enabled, the Applicator adjusts the label dispense speed to insure accurate label placement on the product.

PRODUCT SETUP (cont'd)

(ENCODER OPTION)

The Applicator has a differential quadrature incremental encoder interface with times four interpolation built into the controller board. The Encoder Connector, located on the rear panel, has 5 VDC supply to power the Encoder. The Encoder wiring diagram and pin-out information appear in the drawings section in this manual and should be consulted for user supplied encoders. Factory encoders generate 2500 pulses per revolution.



The following parameters may be changed or monitored in this section:

- Encoder Filter
- Encoder Option On/Off
- Encoder Speed (monitor)
- Pulse Length
- Compensation

Encoder Filter – In some applications, the Encoder speed varies significantly around some average value. This is especially problematic with Merge applicators, low-resolution Encoders and low conveyor speeds where fewer encoder pulses are captured during the velocity calculation interval. The Encoder Filter function allows the operator to average the Encoder Speed over a range of 1 to 10 scans to produce a smoother label dispense. As with all filters, the response of the Applicator to the change in Encoder Speed is proportional to the number of Scans. The lower scan numbers are more responsive to speed changes while the higher number produces a smoother/quieter application with more power in the Merge Applicator. In applications such as Forms Tables, where the conveyor performs start/stop moves, a lower scan number is appropriate. In constant conveyor speed applications, a scan number closer to 8 may be more suitable. In all instances, the performance of the system should be verified under a variety of conditions.

Encoder Option –The Encoder Option Keys are for turning this Option on and off. If the Option is on, the lamp to the left of the keys will be green. When the Encoder is on, Label Placement is in inches and not seconds.

Pulse Length -The distance the product travels per pulse of the Encoder. The pulse length may be calculated using the following formula:

Pulse Length = (Distance Product Moves / Rev) /
((Encoder Pulses / Rev) x 4)

EXAMPLE: An Encoder is mounted to a conveyor drive pulley and the circumference of that pulley is 18.75". Therefore, with one revolution of the Encoder, the product on the conveyor will travel 18.75". The Encoder is a factory-installed encoder generating 2500 pulses per revolution.

Pulse length = 18.75" / (2500 x 4)
Pulse length = 18.75" / 10000
Pulse length = 0.001875 in/pulse

PRODUCT SETUP (cont'd)

(ENCODER OPTION)

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 dispense must begin sooner to compensate for the acceleration time of the label to the product. The following explains how to setup compensation for the different applicators.

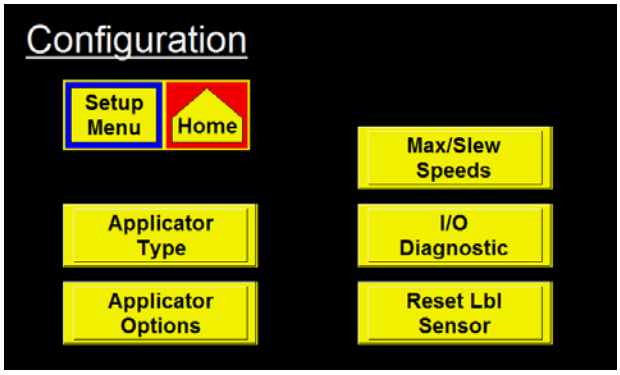
Air Blow and Tamp Compensation Setup
When selecting a value for rate compensation, start at 0.017. Apply labels to the product at a slower speed. Then run the product at production speeds or faster. If the labels are applied in the same place, the compensation is correct. If the labels move back at higher 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.

Merge Compensation Setup
When selecting a value for rate compensation, start at 0.008. 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 RATE COMPENSATION**. If the labels move forward, **DECREASE THE RATE COMPENSATION.** Whenever the rate compensation value is adjusted, you should re-run the product at slower and faster speeds to make sure that the labels are applied in the same position.

Notes:
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.**
3) **It's important to make sure that the Applicator is setup properly so labels are dispensed consistently.**
4) **If product speeds are too fast causing the compensated Label Placement to lag behind the current Label Placement, a warning will be given to raise the label placement value.**
5) **If the Encoder Option is turned off, all of the Encoder-Based Options will also turn off automatically. This is shown on the Display when the Help Key is pressed.**

CONFIGURATION SETUP

The Configuration Setup Menu is accessed from the Setup Menu by pressing the "Config Menu" key with the Applicator offline.

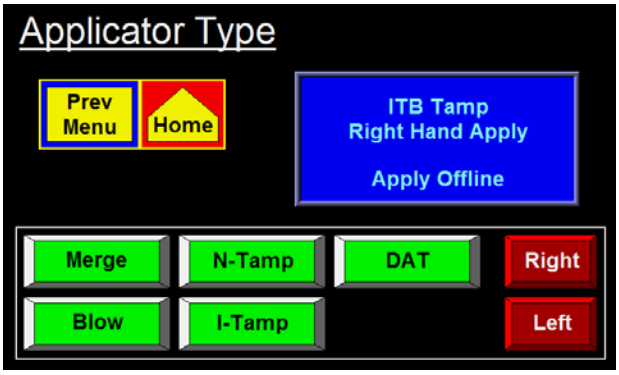


The Configuration Menu provides access to Applicator: Type Setup, Options, Motion Parameters, Diagnostics, and the Label Sensor reset function. The Applicator Setup may be monitored or changed by accessing the various submenus.

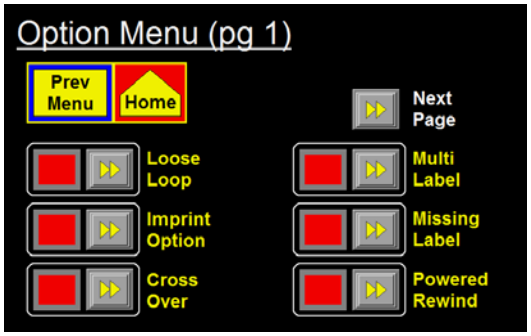
Applicator Type -The Applicator Type function allows the operator to choose the type of application (Air blow, Merge, Tamp, or DAT) and whether it will be in a Left-Hand or Right-Hand configuration.

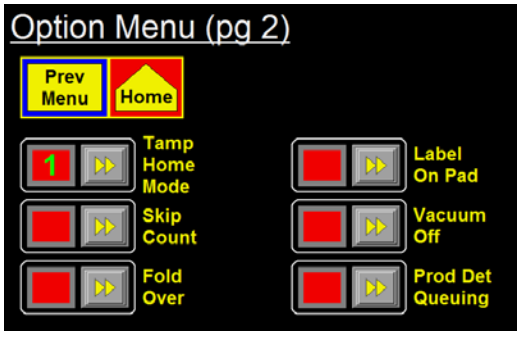
NOTE: If the Apply Hand (Right or Left) is changed, the user will be forced to cycle power to the Applicator

There is a Status Box on the right hand side of the screen that displays the current settings.



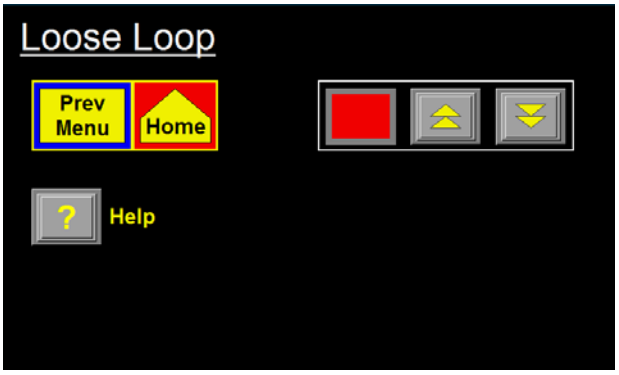
Applicator Options –It is here that an operator can look to see if an Option is turned on or not. Pressing the key will take you into the Option's Sub-menu so that the operator can toggle it on/off or set specific parameters pertaining to the Option. At each Option Sub-menu, there is a Help Key that will direct the user to a Help Screen that will explain the current Option's compatibility with other Options and Applicator Types. The Help Screen will also notify the user if turning the current Option on will change the state of any other Option or Function.





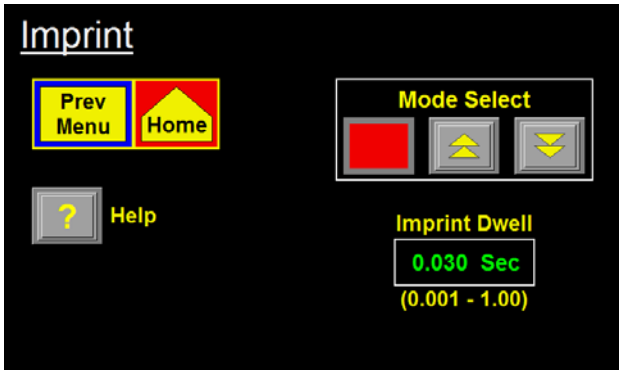
CONFIGURATION SETUP (cont'd)

(APPLICATOR OPTIONS)



Loose Loop - The Loose Loop Option allows labels to be printed and applied from one system by integrating a thermal printer into the web path of the Applicator. As the labels exit the printer, they go around a dancer arm to maintain web tension. Three (3) Proximity Switches monitor the dancer arm position. The loose loop dancer arm assembly should be free to travel from the "Loose" Loop Prox, past the "Tight" Loop Prox, up to the "Alarm" Loop Prox position. In the "at-rest" position, the lower "Loose" Prox switch is active and the printer is off. When the dancer arm assembly reaches the "tight" Loop Prox, the printer begins printing labels. If the upper "Alarm" Prox switch is active, the Applicator enters a Tight Loop Alarm condition and a "TIGHT LOOP" message is displayed in the Status Box on the Main Menu. The Applicator is inhibited from applying labels until the dancer arm returns to the lower "Loose" Loop position. When the Applicator is properly set-up under normal operating conditions, the arm will not reach the "Alarm" Prox position. **If the "Alarm" Prox is active, the 360a Applicator is dispensing faster than what the printer can print. To correct this issue, decrease the product rate or increase the printer speed.** Due to the variety of loop arrangements, the Loose Loop assembly is a factory-installed item.

This option has not been CE approved.



Imprinter - The Imprinter Option allows a hot stamp printer to be installed into the web path of the Applicator. It is useful in instances where one line printing or date coding is required.

There are two modes for the Imprinter. Mode 1 is the original sequence and is used if the Applicator is controlling the Imprint Valve. The Dwell Time in this case is how long the Imprint Valve is turned on. Mode 2 is used when the Imprinter has its own controller. The Dwell Value is now the delay the Applicator will wait before looking for the Sequence Complete Signal from the Imprinter. This delay should be close to matching the Imprinter's Dwell Time. The Help Key will also explain each Mode at the Display.

This option has not been CE approved.

CONFIGURATION SETUP (cont'd)

(APPLICATOR OPTIONS)

Crossover – The Crossover Option allows for "zero downtime" operation by interconnecting two (2) Applicators. Both Applicators are placed on the conveyor system one (1) upstream of the other. The upstream Applicator is the "Primary" labeler while the downstream applicator is the "Secondary" labeler.

The Crossover routine has changed after 360a-2c.0.031 program version. In the new Crossover routine, the Secondary still functions the same in that when it gets a signal from the Primary to turn on or off, it will track the On or Off Distance and change active state. The Primary now will wait for the next Product Detect signal after it stopped labeling to start the Changeover Sequence. The same is true of the Secondary. If the conditions are set for a "transfer to the primary", it will wait for an apply cycle before signaling the Primary to start. This will insure the transitions occur in the same place every time. Also changed is the Secondary will start labeling if the Primary goes into a Critical Fault or goes offline and will continue labeling, even if the Primary is brought back online.

Primary To Secondary Example

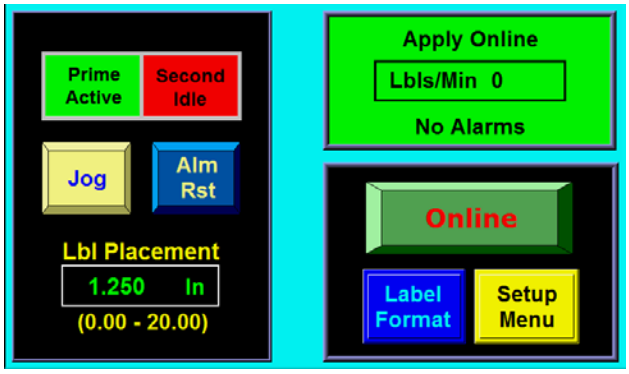
With the Primary labeling and the Secondary ready to label, if the operator either takes the Primary offline or it goes into a Critical Alarm, the Primary will stop labeling and waits for the next Product Detect Signal. When the Product Detect Input turns on, the Primary sends a signal to the Secondary to start the "transfer sequence." When the product has traveled the "On Distance", the Secondary will start labeling. The operator can now correct the problem with the Primary and bring it back online.

Secondary To Primary Example

If the Secondary is labeling when the Primary is brought online, the Primary will not automatically start labeling. In the new sequence, the Secondary continues labeling until it is taken offline, Critical or Low Label Alarm occurs, or the "Transfer" Key is pressed. Taking the Secondary offline or a Critical Alarm will cause products not to be labeled but if a Low Label Alarm occurs or the Transfer Key is pressed, the Secondary sends a signal to the Primary to start labeling while it continues to label. The signal occurs at the first apply cycle of the Secondary after the transfer is initiated. The Primary will then look for the next Product Detect Signal to start labeling again. When it gets the signal, the primary sends a signal to the Secondary to start the "Off Sequence." Doing this gives the Secondary a consistent starting point for either transition sequence.

Main Menu Changes

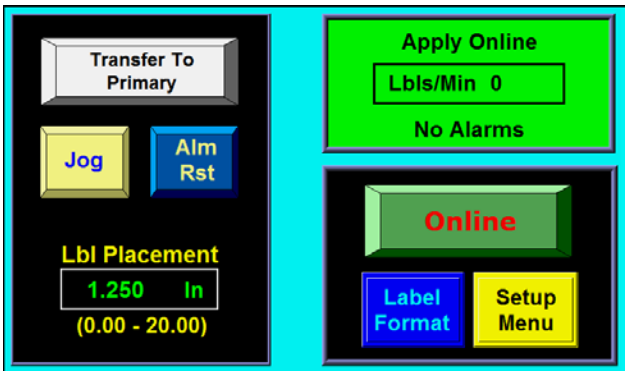
When the Crossover Option is on, the left side of the Main Menu will change. Depending whether it is setup as the Primary or the Secondary, it will look similar to the screens below.



The Primary has two lamps that show which Applicator is labeling. The reason is if the line stops and both Applicators were online, without this new setup, it would be impossible to know which was the active Applicator.

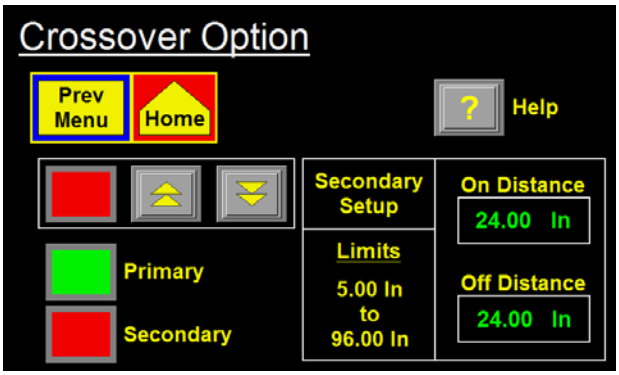
CONFIGURATION SETUP (cont'd)

(CROSSOVER OPTION)



The Secondary has a new button that if this Applicator is active, you can transfer the labeling back to the Primary with less chance of missing products. Pressing this button will start the Primary labeling (if it is online) and after the Off Distance, the Secondary stops.

Crossover Setup



1) Turn on the Encoder Option in the Product Setup Menu.

2) With the Option turned off on both Applicators, label some products to make sure the Applicators are setup properly and Label Placement is correct. When finished, turn the Option on in both Applicators.

3) Select the each Applicator to be either the Primary or the Secondary Applicator. The green lamp indicates the current setup.

4) If the Applicator is going to be the Secondary, measure the distance between the two application points, subtract ½ inch and enter this as the "On and Off Distances".

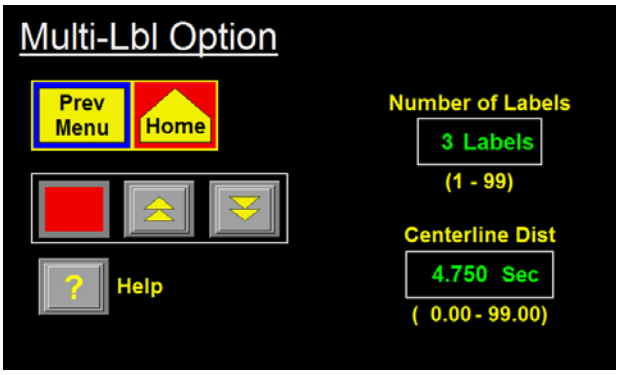
5) Bring both Applicators online and begin labeling products. Take the Primary offline the Secondary should label the first unlabeled product. If it started labeling too soon, increase the 'On Distance". If labeling started too late and a product was missed, decrease the "On Distance".

6) With the Secondary labeling and the Primary online, press the "Transfer" Key on the Secondary Display. The Primary should start labeling while the Secondary continues to label products between the two Applicators. When the first labeled product from the Primary reaches the Secondary, the Secondary should stop labeling. If the Secondary continues to label, lower the "Off Distance" value. If it stopped too soon, increase the value.

CONFIGURATION SETUP (cont'd)

(APPLICATOR OPTIONS)

Multi-Label – The Applicator has the ability to apply multiple labels per Product Detect Signal. The Number of Labels and the Center-to-Center Distance between the labels are configured in the Multi-Label Submenu. When the Applicator is online and a product moves in front of it, the Applicator receives a Product Detect Signal from the Sensor. The Applicator will wait the Label Placement value and apply a label. An internal counter is incremented and the Applicator waits the Centerline Distance before applying another label. This sequence continues until the Number of Labels has been satisfied. If the label rate is faster than what the Applicator can dispense, a warning will occur in the Status Box at the Main Menu.



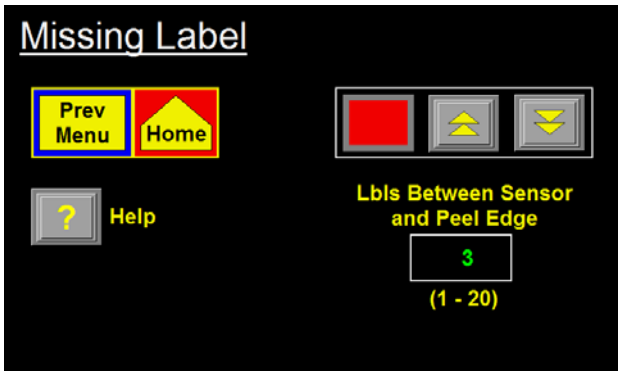
1) To setup, go to the Multi-Label Option Menu and turn the Option on.

2) Next, set the Number of Labels you want to apply to the product.

3) Set the Centerline Distance of the labels. If the Encoder is turned on the units will be in inches, otherwise it will be in seconds.

Note: The Minimum Value for the Centerline Distance is only a suggestion based on variables of the Applicator Setup. The actual Minimum Value could be considerably lower than the suggested value in some Applicator configurations. One of these configurations would be a Time-Based Inverted Tamp Applicator with both, Tamp Home and Tamp Return Sensors.

Missing Label – The Applicator has the ability to track missing labels between the Peel Edge and the Label Sensor. When a missing label is detected on the label liner, the Applicator will feed a new label to the Peel Edge at Slew Speed. After 3 missing labels in a row, a "No Labels Found" message will appear on the Display (see Note 3 below).



1) To setup this Option, go to the Missing Label Option Menu and turn the Option on.

2) Count the number of labels from the Peel Edge (include any that are hanging out past the edge) to the Label Sensor (count the one under the Sensor) and enter that number into the Lbls Between Sensor and Peel Edge box.

Note: 1) If the Applicator is taken offline with a missing label on the liner between the Sensor and the Peel Edge, the Applicator will quit tracking the blank spot. Unlike previous software versions, there is no Alarm Screen to notify the operator of this condition.

2) If the Label Length is changed, the Missing Label Option does not turn off as in previous software versions. Therefore, the number of Labels Between Sensor and Peel Edge may be incorrect.

3) The number of missing labels in a row before an alarm occurs is adjustable. Refer to the Special Options Section of the Manual on page 3-27.

CONFIGURATION SETUP (cont'd)

(MISSING LABEL OPTION)

Missing Label Mode 2

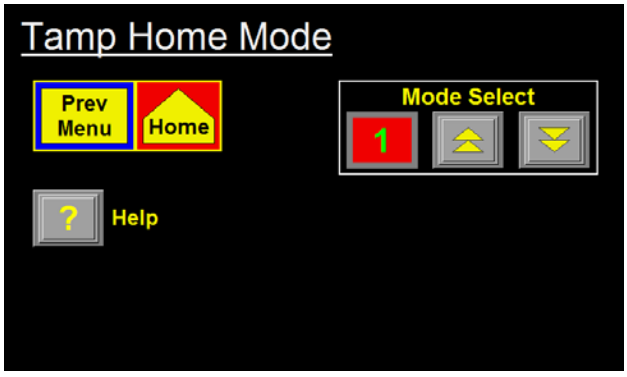
The Missing Label Option has two (2) Modes of Operation. If the Applicator Type is set to either Air Blow or Tamp (N or I) and the Missing Label Option is turned ON in the Missing Label Submenu, the operator can enter the Special Options Menu, see page 3-29, where they can select Mode 2. Missing Label Mode 2 was created to increase the cycle rate of the Applicator by moving the "liner only" condition at the Peel Edge during the Air Blast and/or the Tamp Retract Time. In previous software versions, this move was done after the apply sequence was complete. With Mode 2 selected, the Applicator moves the liner while it is waiting for the Air Blast Time and/or the Tamp Retract Time to finish. This should create faster cycle rates during missing label conditions because the Applicator Drive Roller is not sitting idle while the label is being applied.

NOTE: Since the "liner only" condition is going to be moved during the Air Blast Time and/or Tamp Retract Time, the Applicator WILL leave "liner only" conditions at the Peel Edge. The next label will be moved into position as the current label is applied. If the Applicator is taken offline with a missing label on the liner between the sensor and the Peel Edge, the Applicator will quit tracking the "liner only" condition.

Powered Rewind –With this Option on, the Applicator will drive a motor attached to the waste rewind. This Option is useful in higher speed applications or if a large rewind is needed to wind up more liner material.

This is a Factory-Installed Option. Please consult factory for more information on this Option.

This option has not been CE approved.



The default setting for this Option is Mode 1.

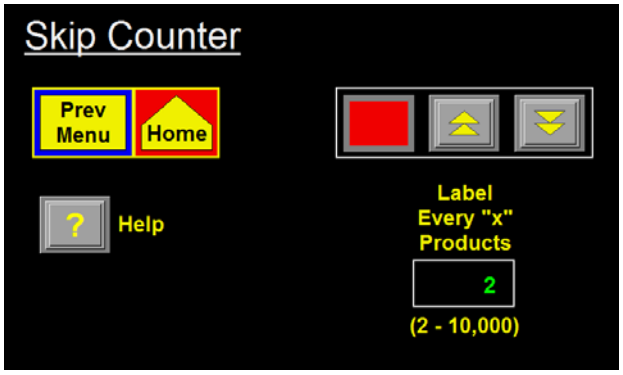
Tamp Home Mode- This Option Menu can only be accessed if the Apply Type is set as a Tamp. If the Option is set to Mode 1, the Applicator will turn on the Tamp Home Output when the tamp Retract Timer is finished or the Tamp Home Sensor (if equipped) is turned on by the Tamp Cylinder. A label will be fed out onto the Pad at this time. If Mode 2 is selected, the Tamp Home Output will only turn on when the Tamp Home Sensor (must be equipped) is turned on by the Tamp Cylinder. A label will only be fed out after this sensor turns on. At this Menu there is a Help Key that will explain each Mode.

CONFIGURATION SETUP (cont'd)

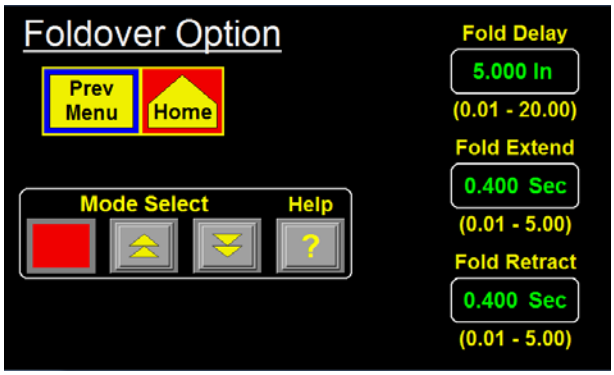
(APPLICATOR OPTIONS)

Skip Count – If it is desired, the Applicator can be setup to label every "x" product. If turned on, the Applicator will label the first product after going online and skip the next "x-1" products. For example the Applicator is set to label every 3 products. Bring the Applicator online and it will label the first product and skip the next two (2) products. When the fourth product triggers the Product Detect Sensor, it will be labeled.

To setup, toggle the Option on and set the number of products you want to skip.



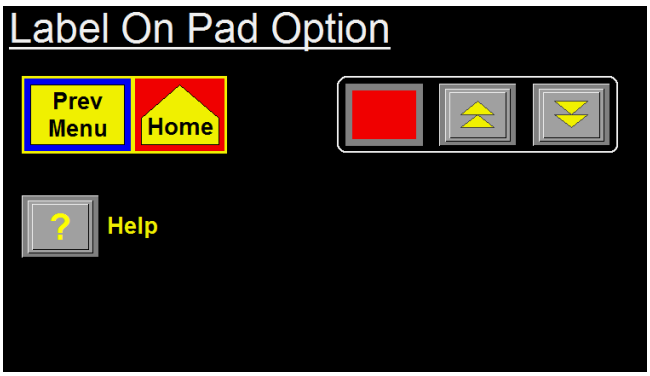
Foldover Option – Enabling this Option will allow the Applicator to control a fold station as part of the labeling sequence. The Option has two (2) modes and three (3) variables that the operator must set in order for the fold station to function correctly. The Fold Delay, in inches or seconds, is the distance/time the Applicator will wait after the Fold Input before turning on the Fold Valve. The Fold Extend and Retract Times are the times used to cycle the Fold Valve on and off. Mode 1 of the Foldover Option allows the label to be applied and fold station to cycle based on a single Product Detect Sensor. If Mode 1 is going to be used, the Product Detect Sensor MUST be set to leading edge. The Applicator will apply the label based off the leading edge of the product and will wait until the Product Detect Sensor Input turns off before setting the Fold Delay Time/Distance. If Mode 2 is selected, the Applicator will label the product based off the input from the Product Detect Sensor and will then cycle the fold station based off the input from the Fold Product Detect Sensor. With Mode 2 selected, both of the sensors can be set to trailing edge so that the labels are applied and the fold station cycles no matter the length of the product. This would be beneficial if the products vary in length so that the label placement on the product is always the same based on the trailing corner and the fold station cycles the same distance after the product passes the Fold Detect Sensor. If the Applicator is taken offline after the label is applied but before the fold station activates, the fold station will not cycle. If the product rate is high enough that another product passes in-front of the Fold Product Detect Sensor before the Fold Retract Time is complete, the fold station will not cycle for that product.



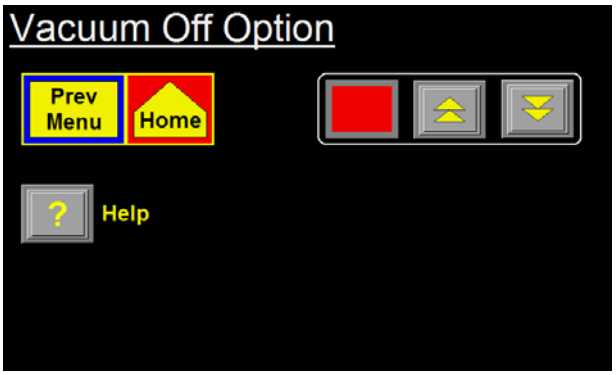
CONFIGURATION SETUP (cont'd)

(APPLICATOR OPTIONS)

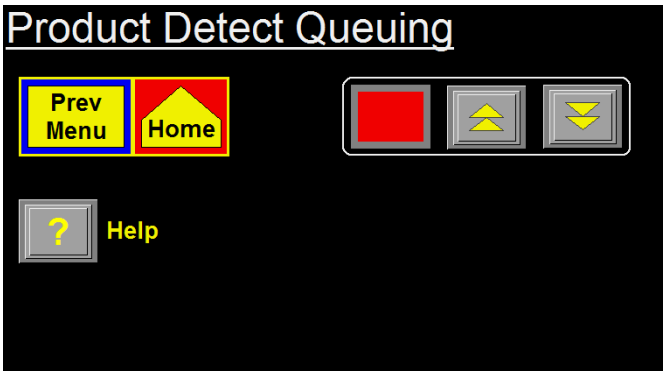
Label On Pad Option – The Label On Pad Option cannot be enabled if the Applicator Type is set to Merge. With the proper Vacuum Switch Sensor Assembly installed in the Applicator, the Label On Pad Output will match the current state of the Vacuum Switch Sensor while the Blow Valve is not active.



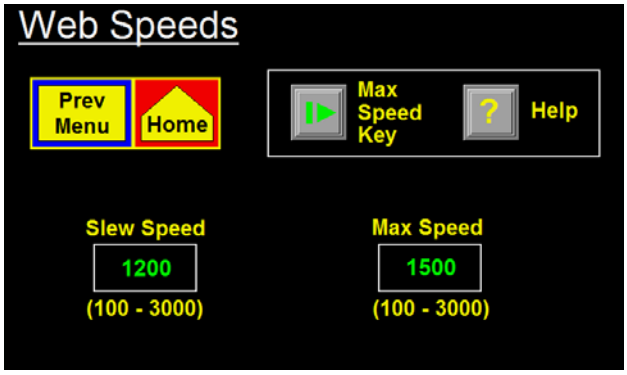
Vacuum Off Option – This Option requires the Applicator to be fitted with a Vacuum Off Valve Bank. This Option can only be enabled it the Applicator Type is set to N-Tamp. Enabling this Option will change the labeling sequence for the Applicator. With the Vacuum Off Option enabled and the Applicator online, the Applicator will wait for the Product Detect Input. Once the Product Detect Input is received, the Applicator will turn the Vacuum Valve on and a label will be fed out. When the Blow Valve is turned on to apply the label, the Vacuum Valve will be turned off. The Vacuum Valve will remain off until the next Product Detect Input is received. This labeling sequence will require a slower product rate and a higher Label Placement amount so that the Applicator has enough time to completely dispense the label and activate the Tamp Valve. If the product rate is too high for the labeling sequence, the Product Rate Warning will be generated on the Display.



Product Detect Queuing Option – Enabling this Option will allow the Applicator to queue the Label Placement locations for up to ten (10) products before the first product is labeled. This means that there can be up to ten (10) products to be positioned between the Product Detect Sensor and Peel Edge of the Applicator. This Option could be beneficial in applications where there is limited room in the area of the Peel Edge. If the Applicator is taken offline while there are products in the queue, those products will not be labeled. If there are products in the queue but the first label has not been applied and the Jog Key or Jog Switch is used, the first product will not be labeled. Once the first label of the queued set is dispensed, the Jog Function will be disabled until the queue is empty. The placement of queued labels might vary slightly due to how the positions are stored and this should be taken into consideration if tight tolerances for label placement are needed.



CONFIGURATION SETUP (cont'd)



Max And Slew Speeds -The Web Speeds Menu allows access to the Max and Slew Speed values for the Applicator. Other Motion Parameters (such as Accel and Decel) are accessed thru the Special Options Menu.

Slew Speed –This is the Web Speed value used to move a label to the Peel Edge during a missing label feed. It is also the Web Speed value used for the label flag distance during a Multi-Panel apply cycle.

Max Speed –This is the high speed limit of the Applicator and can be adjusted from 100 to 3000 in/min.

Note: Max Speed Calculator only appears in Merge Encoder-Based applications.

How to Determine the Max Speed Setting

In all instances, the Max Speed Parameter sets the maximum operational speed for the Applicator. In all applicators, except a Merge with the Encoder Option on, the Max Speed value may be set at any value higher than the desired Web Speed up to the Applicator's upper limit of 3000 in/min. The only reason for limiting it is to keep operators from setting the Web Speed to a higher value than what the Applicator's configuration will handle.

Note: Applicators running at speeds higher than 1500 in/min should have some type of Powered Rewind device installed. If the Web Speed is higher than 2100 in/min, a Powered Unwind should be used as well.

Merge Encoder Operation

Max Speed becomes more important when the Applicator is a Merge and the Encoder Option is used. If the Max Speed is set too high the label dispense will be sluggish but if set too low the Applicator will be stiff and unstable. In many cases the motor will lose enough power to stall during a label dispense. Therefore it will be important to read through the following and try to set the Max Speed close to optimum for best performance.

An Encoder mounted to the product handling equipment determines the speed of the product and in a Merge operation, the Applicator dispense speed follows the product. The Applicator will constantly vary it's dispense speed by coming up with a percentage of the Max speed. In other words, if the Max Speed is at 1000 in/min and the Encoder says the product is running 800 in/min, the Applicator will run 80% of its Max Speed. If the Encoder says it is running 1200 in/min the Applicator will dispense a label at 120% of Max Speed. This calculated percentage also has an effect on the Accel and Decel values of the Applicator. Without going into a lot of details that would only serve to confuse, a good rule of thumb is to set the Max Speed to 33% over the fastest speed the product handling equipment is going to run.

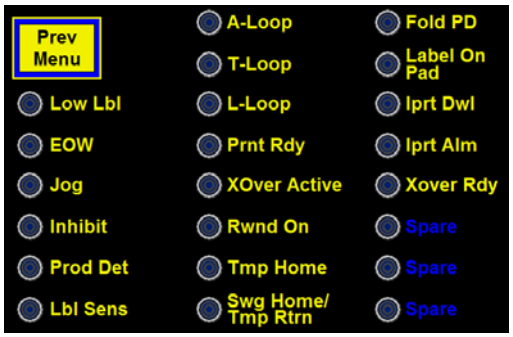
Example: Product speed = 1800 to 2100 in/min
Max Speed = 1.33 x Fastest Product Speed
Max Speed = 1.33 x 2100
Max Speed = 2800 in/min (approx.)

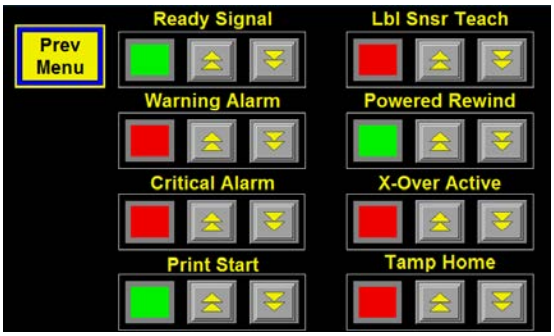
In the Max Web Speed Menu, if the Applicator was configured as a Merge and the Encoder is on, a calculator will appear in the upper right hand corner. With the product handling running at the fastest speed, the operator can press this key and the Applicator will calculate the optimum Max Speed value.

CONFIGURATION SETUP (cont'd)

There are other areas where Max Speed may have to be adjusted and that is if Profiling or Over Speed Options are used. If Max Speed is exceeded in those circumstances, a warning message will occur in the Status Box. Increase the Max Speed until the warning goes away.

I/O Diagnostics –This section allows the operator to monitor Inputs and to manually turn Outputs on and off. This serves as a diagnostic tool for a technician.

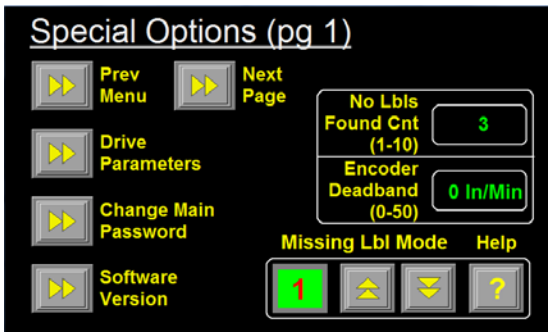


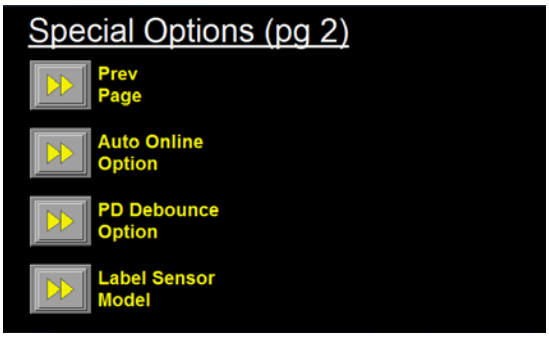


Reset Label Sensor –This will reset the Label Sensor to its factory values and will update the Applicator and Sensor to the Trailing Edge detection mode. After a Factory Default, the Display will go to the Label Sensor Setup Screen where the user can setup the Label Sensor again.

SPECIAL OPTIONS SECTION

This section is for: changing the Motion Parameters, changing the Password, adjusting the number of consecutive missing labels before a "No Labels Found" alarm and several other Options. To access this section, touch the upper right hand corner of the Display in the Configuration Menu. A Password Menu will appear. The Special Options Password is different from any other password and is "5115".

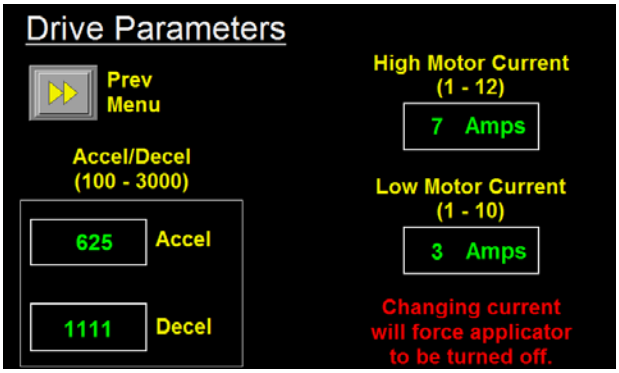




Drive Parameters - In this section, an operator can change the Accel/Decel rate of the motor and the maximum motor drive current setting

Accel/Decel -The larger the Acceleration and Deceleration values the faster the Applicator will start and stop. This will increase labeling rates but web handling may become erratic.

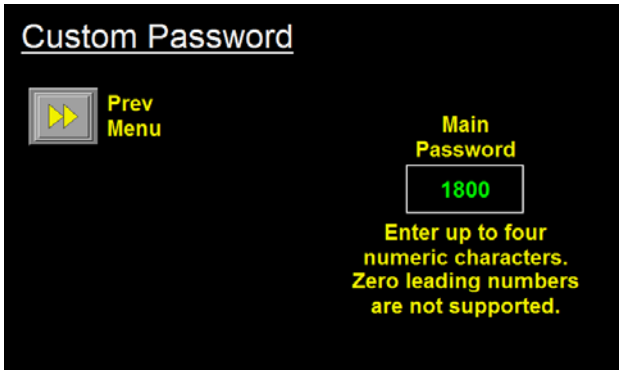
The maximum Accel and Decel rates that can be achieved depend on the available motor torque and Motor Current Setting.



SPECIAL OPTIONS SECTION (cont'd)

The inertia of the label roll and the system components, friction, and dancer arm spring tension are all factors in determining how much torque is required to operate at a given Web Speed and Acceleration/Deceleration rate. The factory should be consulted if you feel the default values need changed.

Current – The High and Low Current setting can be changed here. The High Motor Current setting should be set at 7 amps for a standard motor. If more than 7 amps are required, contact the factory since it is likely that another problem exists that they can help diagnose. **The Drive is able to supply non-standard motors with up to 12 amps of current.** Contact the factory for information concerning non-standard motors. The Low Current setting will rarely change. Consult factory before adjusting this value.

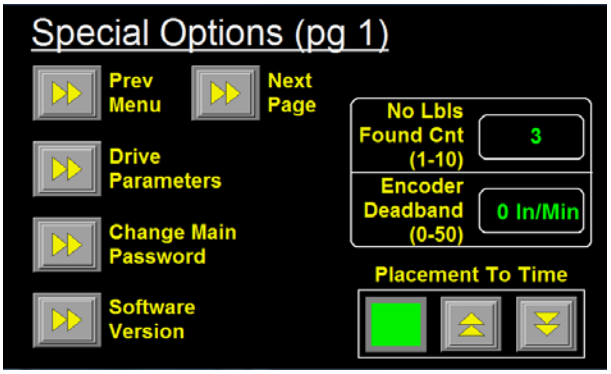


Customer Password - Here an operator can setup their own Password that applies to all password-protected areas except the Special Options Menu. The Password from the factory is "1800" but the new Password can be anything from 1 to 9999; **zero (0) leading numbers will not be supported.** If the Password was changed and no one can remember what it is, the operator can touch the upper right hand corner of the power-up software screen. Then they can select the Restore Password key from the Factory Default Menu to reset the password to "1800" (see page 3-30).

Software Version - This screen tells the operator the software version and date for the program. If the program is custom, additional feature information is provided in a Submenu.

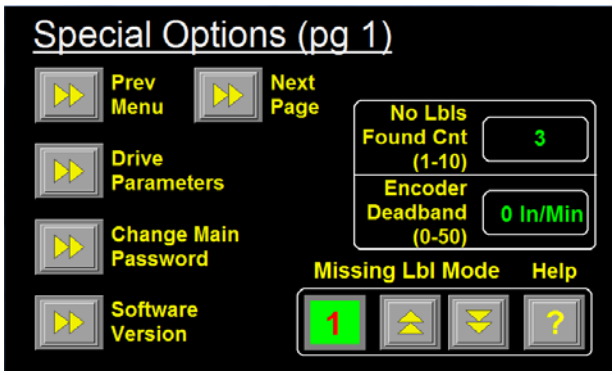
No Labels Found Count - This is the number of consecutive missing labels on the liner before a Critical Alarm occurs.

Encoder Deadband – Some Encoders at idle will send pulses to the Applicator due to vibration at the Encoder. This gives the operator the ability to set a value that if the velocity is equal to or less than, the Applicator will ignore it.



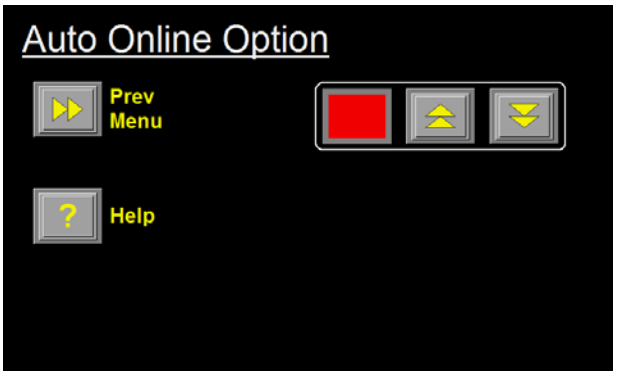
Placement To Time – This Option only appears if the Applicator Type is a Merge and the Encoder is turned on. You will use this when labeling in a Wrap Station that is equipped with an Encoder. This way the Applicator will dispense its label at the Encoder Speed but the start of the labeling sequence will not be dependent on the Wrap Belt position but instead will be time-based. This is good since the belt runs at a different speed than the conveyor, which is handling the product.

SPECIAL OPTIONS SECTION (cont'd)

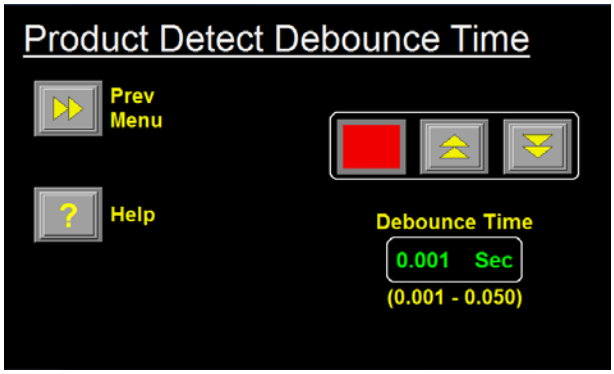


Missing Label Mode – This Option only appears if the Applicator Type is set to Air Blow or Tamp, Normal or Inverted, and the Missing Label Option is turned on in the Applicator Options Menu (pg. 3-24). Turning the Missing Label Option in the Applicator Options Menu only turns Mode 1 on. The Mode that is currently selected will be displayed. The operator can press the "Up" or "Down" Keys to change the Mode. The Missing Label Option cannot be turned off in the Special Options Menu; to turn the Option off the operator must do so in the Applicator Options Menu. There is a Help Key that gives a brief explanation of each Mode.

Auto Online Option – With this Option Enabled, after the Applicator has finished its power-up sequence, the Applicator will automatically be placed Online. If the Applicator Type is set to anything other than a Merge, the operator will be responsible for "jogging" the first label. If the Applicator is not manually cycled, the first product through will not be labeled as there was not a label on the Pad/Grid.

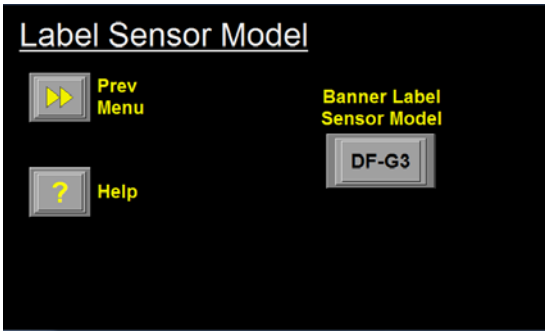


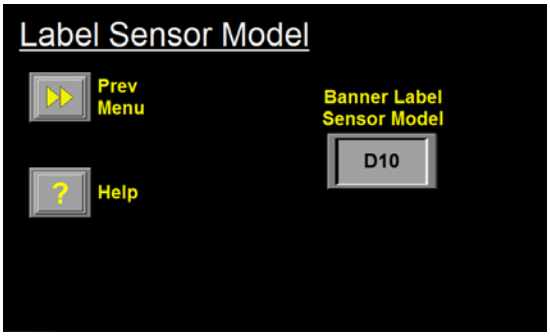
Product Detect Debounce Time – With this Option Enabled, the signal from the Product Detect Sensor must be active for longer than the time set for the Debounce Time. Once the Applicator receives the Product Detect Input, the Debounce Time is started. When the Debounce Time is finished, the Applicator will check the status of the Product Detect Input again. If the Input is still active, the Applicator will continue the labeling sequence. If the Input is not active, then that product detect will be ignored and the Applicator will begin to look for the next Product Detect Input.



SPECIAL OPTIONS SECTION (cont'd)

Label Sensor Model – Prior to spring 2016, the 360a Applicator used the Banner D10DNFP, referred to as D10, Sensor for the standard Label Sensor. In 2016, we began using the Banner DF-G3-ND-2M, referred to as DF-G3, as a replacement. The teach sequence for these two (2) sensors is not the same therefore the 360a program must send the correct signal pulses based on the sensor inside the Applicator. The Label Sensor Model setting must match the sensor model inside the Applicator. Once the Label Sensor Model has been selected, performing a Factory Default of the Applicator will NOT change this setting. A newly programmed control drive board will set this variable to the DF-G3 setting, therefore if the end user receives the drive as a part order this setting might have to adjusted once installed in the Applicator for the first time. Once the Sensor Model has been changed, the Applicator will automatically factory default the Label Sensor.





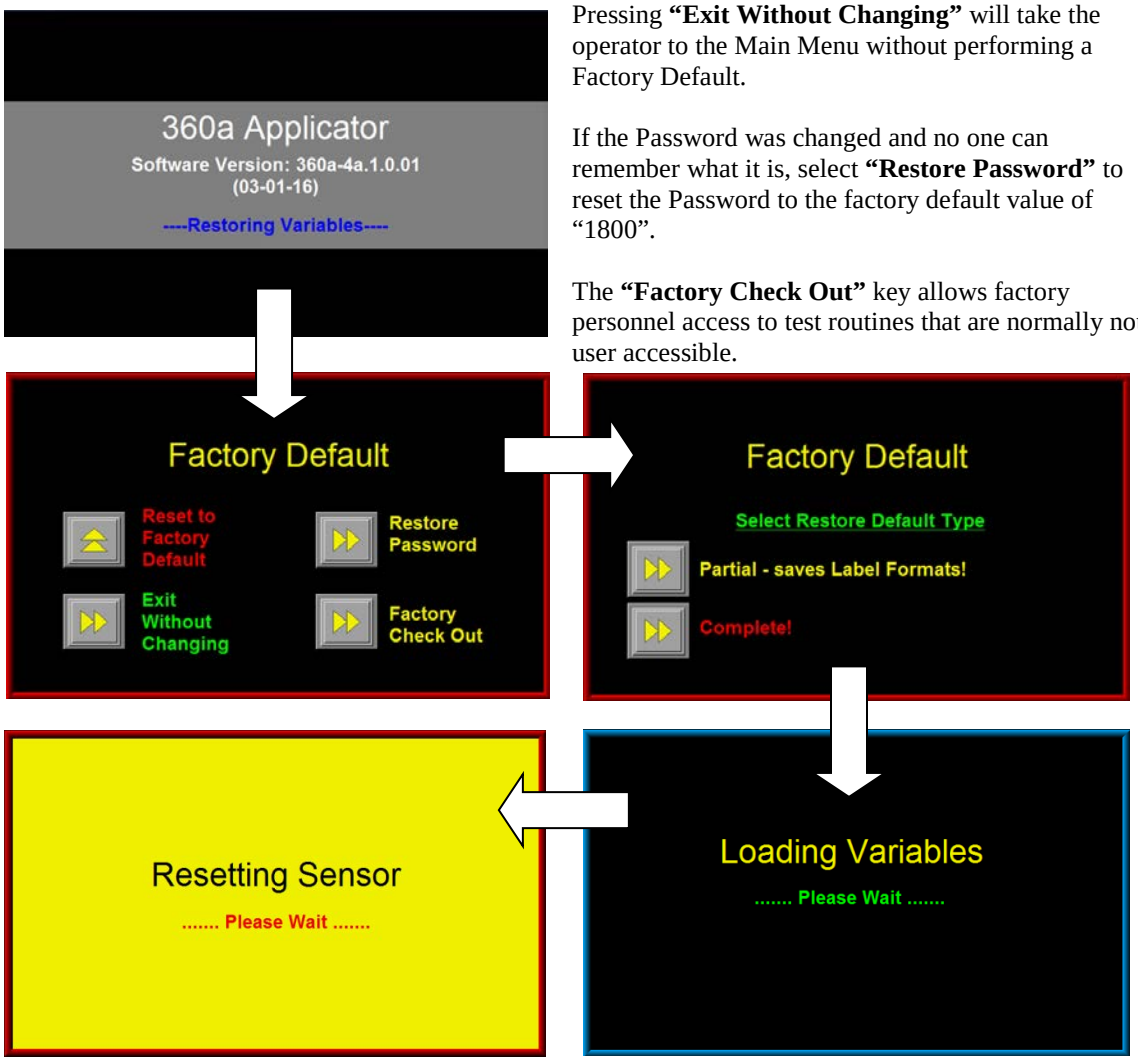
FACTORY DEFAULT

The ability to reset to factory defaults is useful when the Applicator will not dispense labels due to a configuration problem. Resetting to factory defaults will bring all of the settings to something that works and adjustments can be made from there. It will also reset the label sensor to its factory default values. One of the first things an operator should do after resetting to default values is to teach the Label Sensor.

The Factory Default Screen can be accessed from the power-up software screen:

On power up, the screen shown below will appear for about five seconds. Pressing the upper right hand corner of the Display causes the Factory Default Screen to appear.

Choosing "**Reset To Factory Default"** values causes the Select Restore Default Type menu to appear as shown above. The Partial selection allows the operator to retain the saved label formats while the Complete selection deletes the Label Formats. When a selection is made, the Restoring Variables screen appears while the applicator loads the factory default values. After restoring the variables, the Applicator resets the Label Sensor and proceeds to the Applicator's Main Menu.



Pressing **"Exit Without Changing"** will take the operator to the Main Menu without performing a Factory Default.

If the Password was changed and no one can remember what it is, select **"Restore Password"** to reset the Password to the factory default value of "1800".

The **"Factory Check Out"** key allows factory personnel access to test routines that are normally not user accessible.

REAR PANEL

CONNECTORS

VALVE: When using a Tamp, Blow Box, or a Merge Applicator with an Imprinter, a Valve Bank is mounted to the side of the Applicator. This plug is used to power the Valves and will drive up to four (4) Valves with the standard Harness.

ENCODER: The Encoder is connected to this plug. The Encoder is enabled through the Product Setup Menu.

ALARM: This connector is for an Alarm Light Stack. This connector will drive a three (3) stack Alarm Light where a red light will turn on for Critical Alarms, amber light will turn on for Warning Alarms and a green light will be on when the Applicator is ready to label.

PRODUCT: This is where the Product Detect Sensor is connected.

LOW LABEL: When the Low Label Option is used, the Sensor is connected here.

EOW: This is where the End of Web Sensor plugs in.

DISPLAY: This port is for connecting the Display to the Applicator.

I/O: This port is for integrating the Applicator with end user controls or to tie Options to the Applicator.

LINK: The Link Port is used to interconnect two labeling Applicators in “ZERO DOWNTIME” applications. See CROSSOVER in the SETUP section for more information. This port is only installed if the Crossover is used.

Note: The standard CE applicator only comes with a product detect and display connectors. When other options are ordered, the matching connector will be added.

360a SERIES

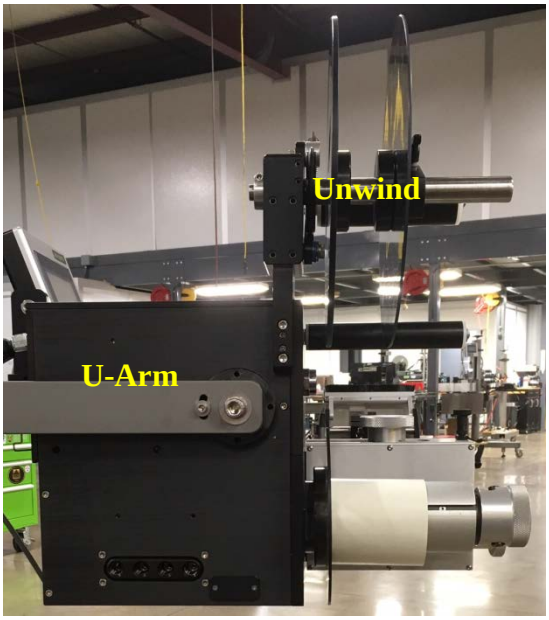
SETUP

PROCEDURES

DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE YOU PROCEDE!

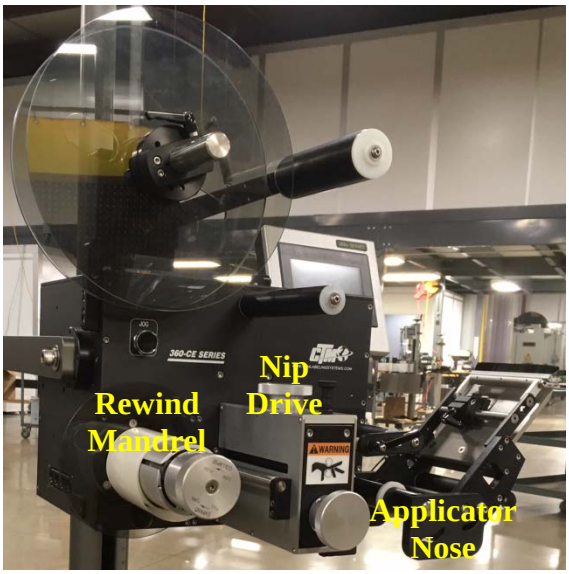
Moving the Applicator

The applicator is made to be mounted from its U-arm. The U-arm is a "U" shaped welded steel bar that is attached to both sides of the applicator. Removing the (2) ¼ SHCS that help lock the applicator in place and loosening the (2) ½ SHCS will allow the U-arm to swing over top the applicator. Most moving of the applicator is done by hand but if a crane is used then rotating the U-arm over the applicator and attaching to it is the preferred method.



Moving by hand will take at least two people. The U-arm should be rotated down in the position shown to the left. Have a person on each side of the applicator with the one on the applicator nose side lifting only off the U-arm. The one on the unwind side (shown in the picture) will lift with one hand on the U-arm and one on the unwind shaft. This will provide enough leverage so the applicator will not tumble out of the hands of the movers.

If more leverage is need or a third person is added they can use the nip drive assembly, rewind mandrel or the applicator nose assembly to hold onto. Still most of the lifting should be done from the U-arm.



Note: Do not lift off the housing roller or the dancer arm on the rewind!

DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE YOU PROCEDE!

JOB SETUP

NOTE: When reading through this section of the Manual, refer to section 14 for web path diagrams.

THREADING LABELS

1. With the power off remove the Outer Unwind Disk.

2. Make sure the inside of the Inner Un wind Disk is at least 1 1/4" away from the faceplate of the Applicator.

3. Slide a roll of labels over the Unwind Hubs and push against the Inner Disk. Make sure the labels are face up as they unwind. Replace the Outer Disk and lock in place.

4. Remove approx. 3 ft of labels from the liner on the leading part of the roll of labels.

5. Thread labels through the Applicator referring to the web path diagram section that applies to your configuration.

   a. When going between the Nip and Drive rollers, turn the knob on top of the Nip Assembly to spread the two rollers.

   b. If the Applicator is an Air Blow or Tamp, make sure the web goes between the Peel Edge and the Air Assist Tube.

6. Remove Rewind Pin, lay the label liner over the Pin Slot and replace Pin.

7. Align Guide Collars with the Unwind Assembly.

8. Lower the Nip Roller so that it comes into contact with the Drive Roller.

9. Make sure the Label Tension Brush is against the roller. This keeps the web tight between this point and the Peel Edge.

10. Re-locate the Spring Block Assembly so that it is in the center of the label and is applying slight pressure to the top of the labels. This aids in the dispensing of labels off of the Peel Edge.

LABEL SENSOR SETUP

The Label Sensor is a "U"-shaped Optical Sensor that is connected to the sensor electronics with Fiber Optic Cable. To insure proper operation of the Label Sensor, there should be no sharp bends in the Fiber Optic Cable from the Sensor to the Applicator Housing. The two sensor forks contain a light emitter and a receiver. For best accuracy, both surfaces should be kept free of contaminants and the light emitter should be in the lower fork. The web must be positioned inside the forks of the Sensor so that the Sensor can see the label surface. The contrast inside the label should be fairly uniform to avoid false edge detects. If the liner appears within the label, move the Sensor in or out to avoid this area on the label. The Label Sensor has two detection modes available for instances where the entire leading or trailing edge of the label is similar in contrast to the label gap. The terms Leading and Trailing Edge refer to the first and second label edges that the Sensor encounters as the label moves past the Sensor. Select the edge option that gives the most reliable performance for your particular label.

AUTO SETUP

In Auto Setup, the Applicator will automatically set the Label Sensitivity, Label Length, and Label Stop values. Also, it will calculate the "Short Feed Distance" if the Multi-Panel Apply Option is enabled prior to running Auto Setup. Refer to page 3-7 of the Display Section in this Manual. Select whether you want to sense the leading or trailing edge of the label and follow the instructions there.

MANUAL SETUP

The Manual Setup function is provided for those instances where Auto Setup does not work. Refer to page 3-7 of the Display Section in this Manual for instructions on how to setup the Sensor.

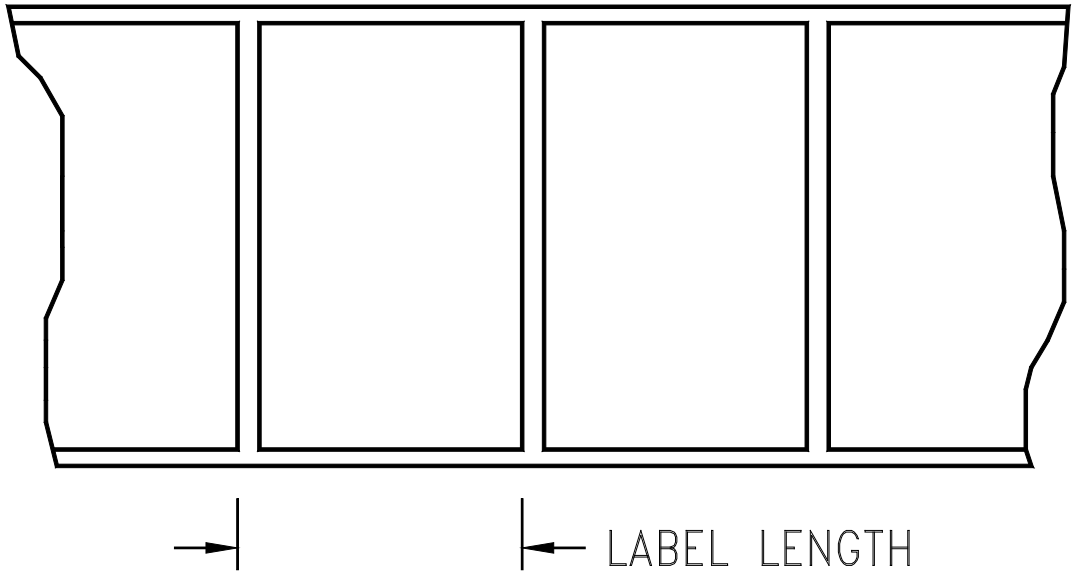
LABEL LENGTH SETUP

1. Measure the distance from the leading edge of one label to the leading edge of the next. This will be the "Label Length" value.

2. From the LABEL SETUP Menu change the Label Length. You may refer to page 3-6 for more details on Label Length and to page 3-3 for changing variables.

3. Enter the length and press "ENTER". If a value of less than 0.125" or more than 32"is entered, the display will automatically restore the previous value.

NOTE: It's important to set the Label Length to exactly what it is (don't guess). If there is a missing label on the liner, the web will feed the Label Length distance. This is important because of the Label Sensor's position relative to the Peel Edge.



LABEL STOP

1. The Label Stop value is the distance from the label edge to the Label Sensor. Allowed values are between 0.001" and (Label Length – 0.06").

NOTE: Any value less than .06 may cause the Label Stop to move when the web speed changes.

2. Press the "LABEL STOP" key from the "LABEL SETUP" menu. Enter a new value (you may refer to page 3-6 for more details on Label Stop and to page 3-3 for changing variables).

4. With the Applicator online, jog a label out. If the Label Stop is not where you want it, go back into the "LABEL STOP" Menu and enter a new value.

NOTE: This adjustment can be made while the Applicator is running.

WEB SPEED

Web Speed is the velocity of the label web in inches per minute. In a Merge application the Web Speed should be set at the velocity of the product. In Tamp or Air Blow applications the Web Speed will vary depending on the label size and product rate. Some labels will have to be run at a slower speed so that it will properly feed out onto the Label Pad/Grid.

Web Speed is under the Applicator Setup Menu. You may review page 3-10 of this Manual for more information on Web Speed.

NOTE: This adjustment can be made while the Applicator is running.

SLEW SPEED

The Slew Speed value allows the Applicator to speed-up the label dispense cycle in certain time critical applications. The Slew Speed Menu is located in the Configuration Menu (page 3-26).

Note: In order to improve performance, the slew speed setting must be larger than the current web speed or encoder rate value.

LABEL STATIC TEST

It's important to know if the Applicator can consistently place labels in the same place over and over on the product. Without knowing this, you will not know whether label placement problems that occur on the line are due to the Applicator or to the product being labeled. When the setup on the Nose Assembly (section 7) is finished, run through the following steps to verify your setup is complete.

TEST FOR TAMP OR AIR BLOW

1) Make sure the labels are consistently stopping in the same place on the Label Pad or Grid. 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 be 1/32" away from the Peel Edge. If this varies more than 1/32" with each cycle, reset the Label Sensor. If you still have the problems go to the Troubleshooting Section of the 360a Manual and follow its suggestions. When this is corrected, go back and try the static test again. If this was OK, go to step 3.
3) Make sure the Label Pad or Grid surface is clean. If clean, go to step 4. If not, clean and re-try the static test again.
4) Make sure the vacuum is set right. If the label flutters when feeding across the Pad, the vacuum is too high. If the label falls off or moves after the label has left the liner, the vacuum is too low. If the label feed looks smooth, go to the next step.
5) Work with the air pressure and the position of the Air Assist Tube until the label feeds more consistently onto the Pad or grid. Re-try the static test. If the results are still not good enough, go to step 6. Otherwise 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 or Grid to the product. If the distance is too large, the labels may float too much. Try lowering the Applicator so the Label Pad or Grid just clears the product (within 1/8").
8) If the Applicator Type is a Tamp or RVB, make sure the Label Pad is made for the label you're using. Exposed holes on the Pad will reduce the available vacuum used to hold the label in place and results will be uncertain.
9) If the Applicator Type is an Air Blow, make the Air Tube pattern is correct. If the Tubes are too heavy on one side, the label will not stack well.

TEST FOR MERGE

1) Apply one label to a product. Run the same product pass the Applicator at the same speed and none of the variables in the Applicator changed. If the two labels stack, you are finished.
2) Check label stop. If it is not consistent, reset the Label Sensor. Retry static test. If good you are done; if not make sure the product is being consistently presented to the Applicator.

MERGE APPLICATOR SETUP

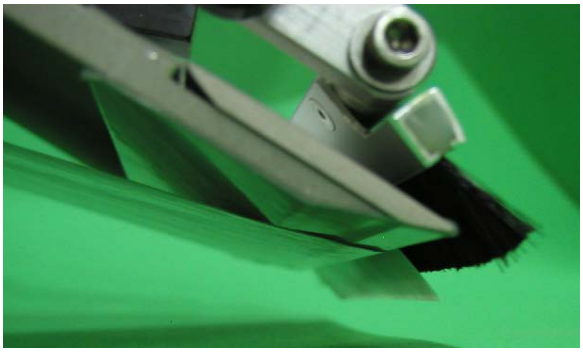
The Merge Applicator is used to apply labels to products moving on a conveyor. A label is fed onto the surface of the product at the same speed that the product is moving.

1. Under *Applicator Type* in the Configuration Menu on the Display, select "MERGE" Apply Type. Also, indicate whether it is in a Right-Hand or Left-Hand configuration. If there were any Options turned on, they will be turned off when changing Applicator Types. If the Dispense Direction is changed and the Applicator Type Menu is exited, the Applicator will force the operator to cycle the power to the Applicator before any other changes can be made.

2. Go through the General Setup procedure which is starts on page 6-1 of this Manual.

3. Position the Peel Edge so it's between 1/8" and 1/2" away from the product at approximately 20 degrees to the product surface.

4. Adjust the Applicator Brush so that it will lightly touch the product. It should be angled so that the label is supported as it is fed out. **NOTE: The Applicator Brush is used to aid in the tacking of the label to the product. It is not made to be a wipe down.**



5. Label Stop can be set so that the label is flagged past the Peel Edge but must miss the passing product.

6. Web Speed should be set to match the speed of the product.

7. Go to the Product Setup section of this Manual to turn on any of the Merge specific Options (i.e. Profile, Multi-Panel, etc.) you need. You may next go to the Applicator Options and turn on any other Options you will be using.

AIR BLOW APPLICATOR SETUP

The Air Blow Applicator is a versatile labeler in the sense that many different label sizes can be used without buying a new Pad or Manifold. Products can also be labeled at a stand still without contact. The Blow Box consists of two Axial Fans mounted in the top of the assembly that produce the vacuum needed to hold the label. Inside the Blow Box are eighteen flexible tubes that provide the air blast to apply the label. These tubes may be arranged in a variety of ways to apply many shapes and sizes of labels.

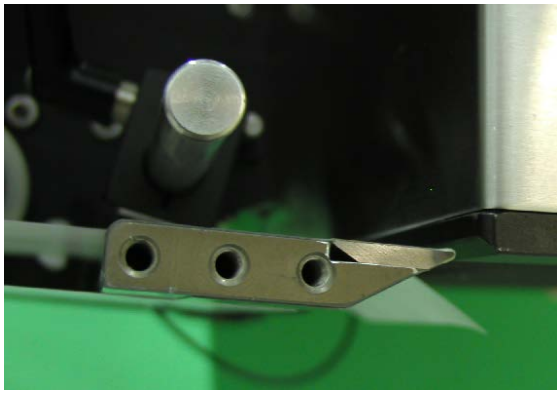
1. Under *Applicator Type* in the Configuration Menu of the display, select "Air Blow" Applicator. Also, indicate whether it is in a Right-hand or Left-hand configuration. If there were any Options turned on, they will be turned off when changing Applicator Types. If the Dispense Direction is changed and the Applicator Type Menu is exited, the Applicator will force the operator to cycle the power to the Applicator before any other changes can be made.

2. Place the Applicator as close to the product as you can without hitting it.

3. Go through the General Setup Section of this Manual which starts on page 6-1.

AIR BLOW PEEL EDGE ALIGNMENT

1. Turn power on to the Applicator and make sure it's offline.



2. Advance the web using the Drive Roller and notice how the label feeds onto the Grid. A normal paper label should deflect 5-10 degrees to the bottom surface of the Label Grid. A stiffer label should feed straight onto the Grid.

3. To adjust the Peel Edge, loosen the two 1/4 S.H.C.S. screws on the Peel Edge Faceplate and move the Assembly to a position close to the Grid. Allow enough room for the label and liner to pass between the Peel Edge and the Grid.

4. Repeat step #2 to check label angle. Re-adjust if needed.

Note: The top of the Peel Edge should be slightly higher than the bottom surface of the Label Grid. If a label on the Grid will slide back onto the Peel Edge, the Peel Edge is too low.

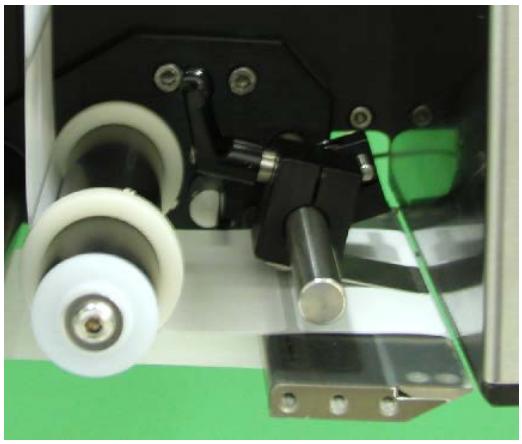
AIR BLOW APPLICATOR SETUP (cont'd)

AIR BLOW LABEL STOP

1. With the Applicator online, jog a couple of labels.

2. Label Stop position should be 1/32" from the Peel Edge Tip.

3. If needed, change the Label Stop value. (Refer to Label Stop setup in the Display Section or page 3-6)

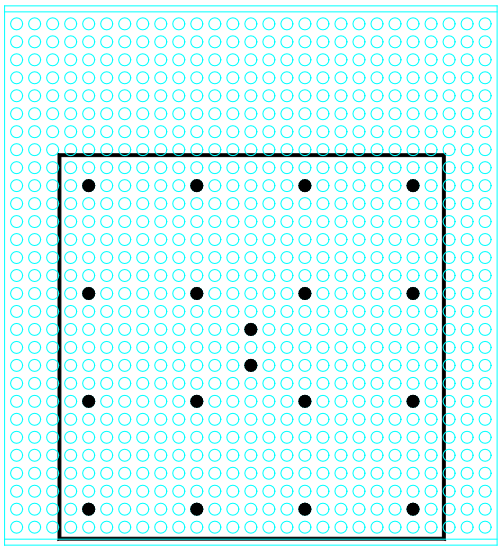


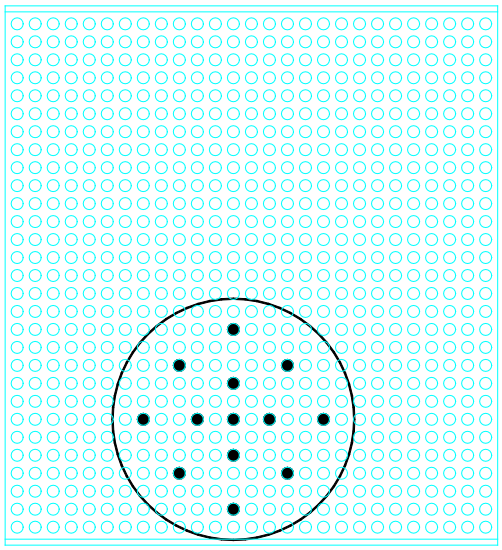
AIR BLOW GRID SETUP

1. With the power on and the Applicator online, jog a label onto the Grid and tape it in place.

2. Turn the power off and remove the Blow Box Cover. Arrange the Air Jet Tubes in a symmetrical pattern with most of the Tubes in the center of the label. Insert any unused tubes into the Storage Block. **WARNING: Make sure the Air Jet Tubes are not in the Axial Fan.**

3. The Blow Box is equipped with two (2) fans and a switch. With the switch in LOW position, only one (1) fan will run. With the switch in the HIGH position, both fans run. Select the appropriate switch position to insure that enough vacuum is generated to hold the label in place.

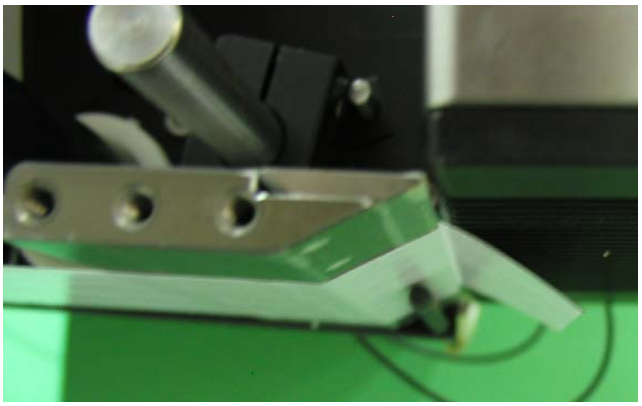




AIR BLOW APPLICATOR SETUP (cont'd)

AIR BLOW AIR ASSIST

The Air Assist Tube blows a stream of air onto the label to force it up against the Blow Box Grid during the label feed. The Air Assist starts to blow when the web starts to move and stops when the label is on the Grid. The Extended Air Assist Time allows the Air Assist to blow after the label feed to help stabilize the label.



1. Adjust the Air Assist Tube so it's blowing into the center of the label. Ensure that the label feeds out against the Grid properly.

2. The Regulator for the Air Assist is on the Valve Bank and should be set between 10 and 15 PSI. This is a typical setting but it may be changed as needed.

3. If a longer Air Assist is needed to help position the label, enter the Applicator Setup Menu on the Display and press the Ext Air Assist Key; here you can enter a value between .000-1 second. Refer to page 3-10 for additional information regarding this feature.

AIR BLOW AIR BLAST

The Air Blast transfers the label from the Grid to the product and is a function of time and air pressure. The Air Blast Pressure is regulated by the Air Blast Regulator assembly located on the Valve Bank.

1. The Regulator for the Air Blast should be set between 40-50 PSI. This is the typical setting but it may be changed as needed.

2. If the Air Blast Time needs changed, enter the Applicator Setup Menu on the Display and press the Air Blast Key; here you can enter a value between .005-1 second. Additional information can be found on page 3-10 in this Manual.

TAMP APPLICATOR SETUP

The Tamp Applicator consists of a Tamp Slide, Label Manifold, and a Label Pad. The label is fed out onto the Label Pad and is tamped within 1/8" of the labeling surface. The label is then blown off by an air blast. The Tamp Applicator has higher placement accuracy and is less dependent on product movement. **NOTE: Before proceeding, make sure you've selected Tamp in the APPLICATOR TYPE MENU on the Display. Choose one of the following types of tamping action:**

NORMAL TAMP: A label feeds out onto the Label Pad and the Applicator will wait for a Product Detect Signal to tamp and apply the label. After applying the label, the Tamp Pad returns home to receive another label.

ITB TAMP: A label feeds out onto the Label Pad and tamps. The Applicator will wait for a Product Detect Signal before applying the label and returning home to receive another label.

DAT TAMP: The Dual Action Tamp has a Swing Action to apply a label to the leading or trailing panel of the product and a Tamp Action to apply a label to a side panel of the product. The DAT Applicator has three (3) Modes of Operation: Swing first then Tamp (Leading), Tamp first then Swing (Trailing) or Inverted Swing then Inverted Tamp (Inverted). Within all modes, a Swing Only and a Side Only option is available.

1. In the Applicator Type Menu of the Display, select "N-TAMP" for Normal Tamp or "I-TAMP" for ITB (Inverted Tamp Blow) Tamp Applicator. Selecting DAT will take you to another screen to pick the type of Dual Action you want. Also, indicate whether it is in a Right-hand or Left-hand configuration. If there were any Options turned on, they will be turned off when changing Applicator Types. If the Dispense Direction is changed and the Applicator Type Menu is exited, the Applicator will force the operator to cycle the power to the Applicator before any other changes can be made.

2. With the Tamp Slide extended make sure the Label Pad is approx. 1/8" from the product.

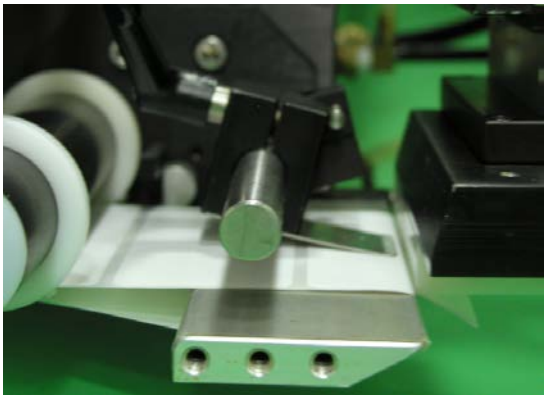
3. Go through the General Setup Section of this Manual which starts on page 6-1.

TAMP APPLICATOR SETUP (cont'd)

TAMP PEEL EDGE ALIGNMENT

1. Turn the power on, move the Tamp Assembly up and make sure the Applicator is offline.

2. Advance the web using the Drive Roller. Stop when half of the label is off the Peel Edge Tip. The label should be at an angle between 5 and 15 degrees from the Label Pad surface. The stiffer the label, the flatter the angle should be.



3. To adjust the Peel Edge, loosen the two 1/4 S.H.C.S. screws on the Peel Edge Faceplate and move the assembly close to the Tamp Pad. Allow some clearance distance between the Peel Edge and Tamp assembly. Repeat step #2 to check label angle. Re-adjust if needed.

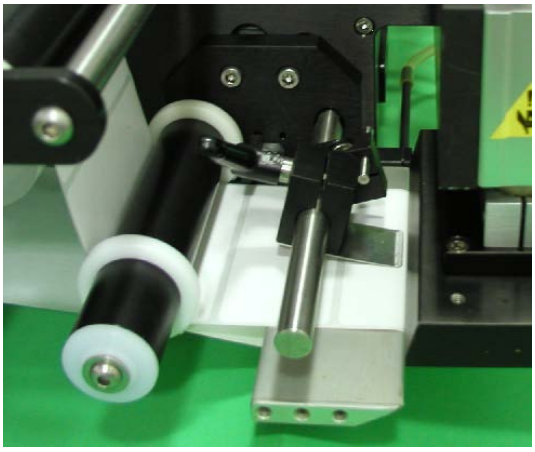
4. If OK go to Tamp Label Stop.

TAMP LABEL STOP

1. With the Applicator online, jog a couple of labels.

2. Label Stop position should be 1/32" from the Peel Edge Tip.

3. If needed change the Label Stop value. (Refer to Label Stop Setup in the General Job Setup page 6-5)



TAMP VACUUM

The Tamp Pad Vacuum is generated by a Vacuum Venturi located on the Applicator's Valve Bank. This vacuum is used to hold the label on the Label Pad until the air blast releases it. Too much or too little vacuum can affect label placement on the Pad. The amount of vacuum may be changed by adjusting the air pressure to the Vacuum Regulator feeding the Venturi. A setting of 20 PSI is typical but it may be changed as needed.

WARNING: It is important to match label size with the Label Pad size so that no holes are uncovered when the label is on the Pad. This may result in losing vacuum.

TAMP APPLICATOR SETUP (cont'd)

TAMP AIR ASSIST

The Air Assist Tube blows a stream of air onto the label to force it up against the Tamp Pad during the label feed. The air assist starts to blow when the web starts to move and stops when the label is on the Pad. The Extended Air Assist Time allows the air assist to blow after the label feed to help stabilize the label.

1. Adjust the Air Assist Tube so it's blowing in the center of label. Ensure that the label feeds out against the Label Pad.

2. The Regulator for the Air Assist is on the Valve Bank and should be set between 30 and 40PSI. This is a typical setting but it may be changed as needed.

3. If a longer Air Assist is needed to help position the label, enter the Applicator Setup Menu on the Display and press the Ext Air Assist Key; here you can enter a value between .000-1 second. Refer to page 3-10 for additional information regarding this feature.

TAMP AIR BLAST

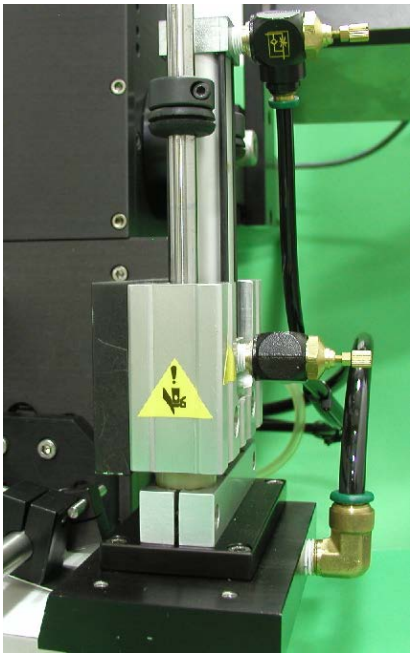
The air blast transfers the label from the Label Pad to the product and is a function of time and air pressure.

1. The Regulator for the Air Blast is on the Valve Bank and should typically be set between 40-50 PSI.

2. If the Air Blast Time needs changed, enter the Applicator Setup Menu on the Display and press the Air Blast Key; here you can enter a value between .005-1 second. Additional information can be found on page 3-10 in this Manual.

TAMP APPLICATOR SETUP (cont'd)

TAMP SLIDE



The Tamp Slide is used to move the Label Pad and Manifold toward the product. The speed at which it travels is a function of air pressure and airflow. The Valve and Regulator for the Tamp Assembly is part of the Valve Bank mounted to the side of the Applicator. Typically, the air pressure should be set between 40 and 50 PSI but it may be changed as necessary. Two adjustment knobs (flow controls) are provided on the Air Cylinder to adjust the Tamp Extend and Retract Speed. Turning the knobs clockwise will slow the movement of the Cylinder. Turning the knobs counter-clockwise will speed up the Cylinder. **Note: The Tamp Extend and Retract Times must be setup by the operator since they are dependent on the setting of the adjustment knobs. Both timers are in the APPLICATOR SETUP MENU of the Display.**

EXTEND TIME:

1. The Tamp Extend Time is the time allotted to fully extend the Tamp Slide Assembly. After the "Tamp Extend" Time, an air blast forces the label off of the Label Pad onto the product. In order to keep cycle times low, set the Extend Time so that the air blast occurs when the slide reaches the fully extended position.

2. To change the Tamp Extend Time enter the Applicator Setup Menu on the Display. Press "TAMP TIMES" and enter a value under "TAMP EXTEND" between .01-5 seconds. Additional information about adjusting Tamp Times can be found on page 3-10.

RETRACT TIME:

1. The Tamp Retract Time is the time allotted to fully retract the Tamp Slide Assembly. At the end of the "Tamp Retract" Time a label will be fed out onto the Pad. Too small of a value will cause a label to feed out before the Label Pad is in the home position. Too high of a value increases cycle times.

2. To change the Tamp Retract Time enter the Applicator Setup Menu on the Display. Press "TAMP TIMES" and enter a value under "TAMP RETRACT" between .01-5 seconds. Additional information about adjusting Tamp Times can be found on page 3-10.

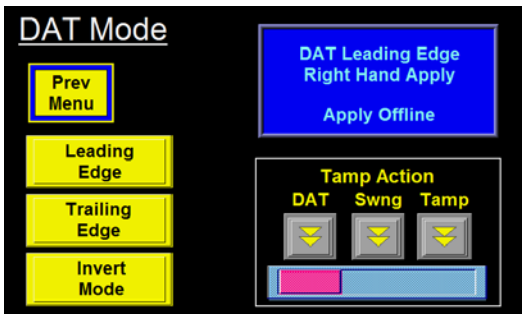
NOTE: If Tamp Switches are used, it is only necessary to set both Tamp Extend & Retract Times to a value higher than the time required. The Tamp Switches will override any excess time.

DUAL ACTION TAMP (DAT) SETUP

DAT: LEADING EDGE SEQUENCE (SWING & TAMP)
With the Applicator ONLINE and a label on the Pad, the labeler receives a Product Detect Signal. After waiting the Label Placement Distance or Time, the Label Pad swings out in front of the product. At the end of the Swing Extend Time, the Air Blast Valve turns on to apply a label to the leading panel of the product, the Swing Arm starts to return home, and the Swing Retract Timer is started. When the Swing Retract Timer finishes, a label is fed onto the Pad and the Applicator waits for the Second Label Placement Distance or Time. The Second Label Placement Distance or Time is started at the same time as the First Label Placement. When the Second Label Placement is reached, the Tamp Assembly extends toward the side of the product. The Applicator waits the Tamp Extend Time, blows the label onto the product, starts to retract the Tamp Assembly, and starts the Tamp Retract Timer. At the end of the Retract Time, another label is fed onto the Label Pad. **Note: If DAT: Trailing Edge (Tamp & Swing) is selected, the Action occurs first and the Swing Action applies a label to the back panel of the product.**

DAT: INVERTED SEQUENCE (INVERTED SWING & INVERTED TAMP)
With the Applicator ONLINE and a label on the Pad, the Label Pad swings out into product flow and waits for a Product Detect Signal. Once a signal has been received, the Applicator will start the Product Clearance and Second Label Placement Times or Distances while it waits the First Label Placement Time or Distance. When the First Label Placement is finished, the Applicator will blow the label off the Pad onto the front of the product. At the same time the Label Pad swings home and the Retract Timer starts. At the end of the Swing Retract Time, another label is fed out onto the Pad and the Tamp Valve turns on moving the pad to the side of the product. The Tamp Extend Timer starts here and when complete, the Applicator will wait for the Second Label Placement to finish. When both are done, the label is blown onto the side of the product, the Tamp Valve turns off causing the Label Pad to retract and the Tamp Retract Time starts. At the end of the Tamp Retract Time, another label is fed out onto the Pad. The Applicator will then wait for the Product Clearance Time or Distance to finish and then the Label Pad will swing back out into product flow, ready to start the sequence again.

APPLICATOR TYPE
If Dual Action Tamp (DAT) is selected from the Applicator Type menu, the Submenu shown at the right appears allowing the operator to define the type of motion that occurs during each product application cycle. The operator should select leading, trailing or invert depending on the Mode Type you need. The operator then can chose the Tamp Action within it (Dual, Swing Only or Tamp Only). When the DAT Type is changed, the Label Placement(s) will be changed to the factory default values of 0.25.



Note: With the Applicator Type set to DAT, jogging the Applicator will cause the Blow Valve to turn on for the Air Blast Time and a label feed. There will not be any movement from the Tamp Assembly.

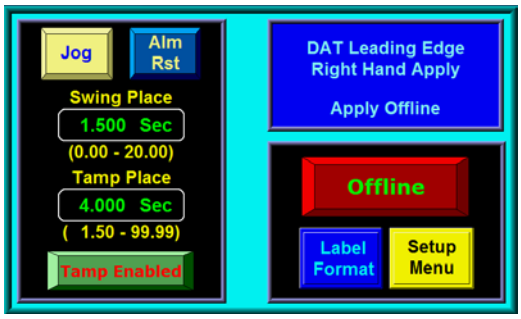
APPLICATOR OPTIONS
The following Options are not compatible with the DAT Applicator:

Loose Loop	Multi-Label
Imprinter	Powered Rewind

DUAL ACTION TAMP (DAT) SETUP (cont'd)

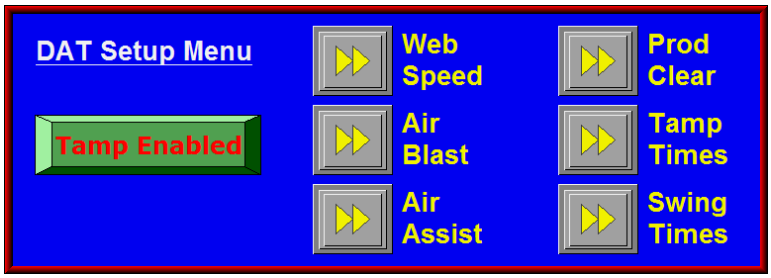
LABEL PLACEMENT

When the Applicator is set to DAT, a Second Label Placement Value appears in the Main and Product Setup Menus. The First Placement Value corresponds to the first Tamp Action while the Second Placement Value corresponds to the Second Tamp Action. The allowed values are between 0 and 20 seconds or inches for the First and between 0 and 99 for the Second Label Placement. A suggested lower range limit appears below the Second Label Placement Value. Its value varies depending on the First Label Placement, Extend and Retract Values for the Applicator.



APPLICATOR SETUP

Applicator Setup Menu for the DAT is shown to below. Once Tamp or Swing Times are selected, both Extend and Retract Timers are accessible for changing. The Extend Timers determine how long the Tamp or Swing valves are on before the air blast occurs. The Extend Timers should be set long enough to insure that the Label Pad is fully extended before the air blast occurs. The Retract Timers determine how long the valve will be off before a label is fed onto the Label Pad. The Retract Timer Values should be set long enough to ensure that the Label Pad is home before feeding a label.



Note: If the Encoder is enabled and the conveyor stops after a Product Detect Signal is received, the Applicator will wait for the Encoder Signal (conveyor) to resume before continuing with the Label Application Cycle. This feature is provided for instances when some operation must be performed on the product at standstill. The operator may abort the cycle by pressing "JOG" or going offline.

DUAL ACTION TAMP (DAT) SETUP (cont'd)

DAT GENERAL SETUP PROCEDURES

1) The Label Stop must be properly set for the Applicator to work correctly. Adjust the Label Stop Value to position the label at or slightly back from the Peel Edge.
2) Tamp height should be adjusted so that the label feeds out in contact with the Label Pad. If the Pad is too high, the label will not land consistently on the Pad. If the Label Pad is too low, the label will dispense into the back of the Pad and jam. Most of this adjustment is done with the Peel Edge and is discussed in the Tamp Applicator Setup Section of the Manual. It is important to adjust the Rotary Actuator so the Label Pad is level with the Applicator. **The Rotary Actuator's internal stops control 100% of where the swing arm stops – the shocks act as a "buffer" only!** See the Rotary Actuator Stop Adjustment Guidelines section.
3) Make sure the label is aligned with the Pad so there is no over-hang. To adjust this, move the liner web in or out by adjusting the Guide Collars and Unwind Disks.
4) Position the Air Assist Tube with the hole(s) centered on the label and pointing approximately ¼"in from the Label Pad Edge. The air pressure should be set at 20-30 PSI. Press "Jog" to dispense a label. If the label doesn't feed out against the Label Pad or the vacuum doesn't capture it, increase the air pressure. Continue until the vacuum captures the label.

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.

5) Air pressure for the Tamp Slide and Rotary Actuator should start at 40 PSI, the Air Blast at 40-60 PSI, and the Vacuum Pump at 20 PSI.
6) Air Blast Time is set through the Display and should be set long enough to apply a label firmly to the product. Setting the time too high results in fewer labels/min a value to start at is 0.06 seconds. The Air Blast Time applies to both the Swing and Tamp Sequences.

NOTE: To avoid injury, make sure the Applicator is offline for this adjustment!

ROTARY ACTUATOR STOP ADJUSTMENT GUIDELINES

1) Determine application – Reels-up, Overhead and Above etc. Keep in mind the gravity factor / weight of the Pad and Manifold as this will be a factor of the supplied air pressure coming from the Swing Valve Bank regulator – good starting pressure is 40 PSI.

2) Adjust Airflow Needle Valves, which are located on the side of the longest "tube" of the Rotary Actuator, with a flat blade screwdriver. Turning the screw CW – decreases the airflow. Turning the screw CCW – increases the airflow. Typical flow control setting is ½ turn CCW from full CW. **Note: proper settings = a smooth and controlled cycle!**

3) Proper set up for the 90-degree Swing Tamp. **The Rotary Actuator Internal Stops control 100% of where the Swing Arm Stops – the Shocks act as a "buffer" only!** With proper amount of air pressure going to the Rotary Actuator, loosen the Retract Jam Nut, which is located on the end of the longest Rotary Actuator Tube. Use a 3/16" Allen wrench and turn the stop set screw CW. This action will move the Swing Tamp Arm away from the Tamp Home Shock. The Tamp Home Shock should protrude from the Stop Coupling by 1/8" – 3/16". If this is not the case – make the necessary adjustments. Once this is set, turn the retract setscrew CCW until the Swing Arm has come to rest against the Home Stop Shock Coupling. Tighten the Jam Nut.

4) Set the Extend Rotary Stop as per above instructions. You will notice the Extend Shock does not have a Stop Coupling. This Shock should be adjusted to allow for one half of its travel to be compressed when the Swing Arm is extended.

DUAL ACTION TAMP (DAT) SETUP (cont'd)

DAT SHOCK ABSORBERS AND FLOW CONTROLS

Both the Linear and Rotary Actuators have Shock Absorbers that need to be adjusted. The Swing Home Shock has a Stop Collar installed. This Collar should be adjusted to provide 1/8" of shock travel. To adjust the Shock so the Swing Arm stops in the right position, press the Manual Override on the Rotary Actuator Valve and watch the movement of the Swing Arm. The Arm should hit the shock and stop without bouncing. If it bounces too much, slow the Actuator down by adjusting the Flow Controls. The Flow Controls are integrated into the Actuator and are located on each end of the longer cylinders. Turning the screw in with a small screwdriver slows the Arm's rotational speed and turning it out speeds the Arm up. The Slide Shock Absorbers are larger and have longer strokes to ensure a smooth stop when moving larger loads. The Shocks should be adjusted to ensure that there is at least 1/8" or more travel available when the Slide Stop hits the body of the Slide. Do not allow the Shocks to bottom-out. To adjust the Shocks, loosen the clamping screws on the Shock Mounts and screw the Shock in or out. When in position, re-tighten the clamp to ensure the Shock stays in place. The Flow Controls for the Slide are mounted on the Valve Bank. Screwing the knob in slows the speed of the Slide's action while turning the knob out speeds it up.

LABEL STATIC TEST

It's important to know if the Applicator can consistently place labels in the same place on the product. Without knowing this, you will not know whether label placement problems occurring on the line are due to the Applicator or the product being labeled.

To test repeatability, configure the Applicator for Tamp Only Action. Position the Applicator with the Tamp Assembly extended and the label pad approximately 1/8" away from the product. Jog several labels onto the product. If the label stack is within the desired tolerances, go to the "Product Setup" section of this insert. If not, go through the following suggestions to help find the problem.

1) Make sure that 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 be 1/32" away from the Peel Edge Tip. If this varies more than 1/32" with each cycle, reset the Label Sensor. If you still have the problem go to the Troubleshooting Section, page 10-1, of the 360a manual and follow its suggestions. When this is corrected, go back and try the static test again. If this was OK, go to step 3.
3) Make sure the Label Pad surface is clean. If clean, go to step 4. If not, clean and re-try the static test again.
4) Make sure the vacuum is set correctly. If the label flutters while feeding across the pad, the vacuum is too high. If the label falls off or moves after the label has left the liner, the vacuum is too low. If the label feed looks smooth, go to the next step.
5) Work with the air pressure and the position of the Air Assist Tube until the label feeds more consistently onto the Pad. Re-try the static test. If the results are still not good enough, go to step 6. Otherwise 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 moving the Applicator so the Label Pad just clears the product (within 1/8").
8) Is the Label Pad made for the label you're using? Exposed holes on the Pad will reduce the available vacuum used to hold the label in place and results will be uncertain.

DUAL ACTION TAMP (DAT) SETUP (cont'd)

POSITIONING THE APPLICATOR

The product must be presented to the Applicator in a consistent manner. Label accuracy cannot be maintained if the surface being labeled changes speed or distance relative to the Label Pad.

NOTE: The following directions are for the DAT Applicator. The Single Tamp Action is not discussed but its setup may be interpreted from the following instructions.

With the air and power off to the Applicator, rotate the Swing Arm to the extended position. Make sure the Slide is fully retracted. Push the product down the conveyor within the guides and stop in front of the Label Pad. Move the Applicator in or out and up or down to position the Pad where the label should be placed on the product. Retract the Swing Arm and move the product in front of the Applicator. Move the slide forward, making sure the Swing Arm is retracted, and stop when there is about 1/8" between the product and the Label Pad. You may need to move the Slide Extend Stop by loosening the clamping screw and sliding the Stop against the Slide Body. Some minor changes may be required before applying labels but this will get the label close to the desired position.

PRODUCT DETECT SENSRO POSITION

Before going through this section, make sure the Extend and Retract Times are properly setup.

NOTE: The setup described assumes no Encoder is used. For Encoder Applications some values may change.

Power-up the Applicator, turn on the air, and bring the Applicator ONLINE. Position the Product Detect Sensor about 6 inches upstream of the Extended Swing Arm. Set the First Label Placement to 0.001 and turn the conveyor on. Place a product on the conveyor and watch when the label is blown from the Label Pad. If the product hit the Label Pad before it retracted, move the Product Detect Sensor upstream more. If it retracted too soon, move the Sensor downstream. Ideally, the label will be blown onto the front of the product and retract without ever touching the product.

Now look at the position of the label on the side of the product. If it was applied too late, decrease the Second Label Placement. If it was applied too early, increase the Label Placement. If the Second Label Placement is too low compared to the cycle time for the first half of the labeling sequence, a Warning will be displayed saying "Label Placement Is Too Low".

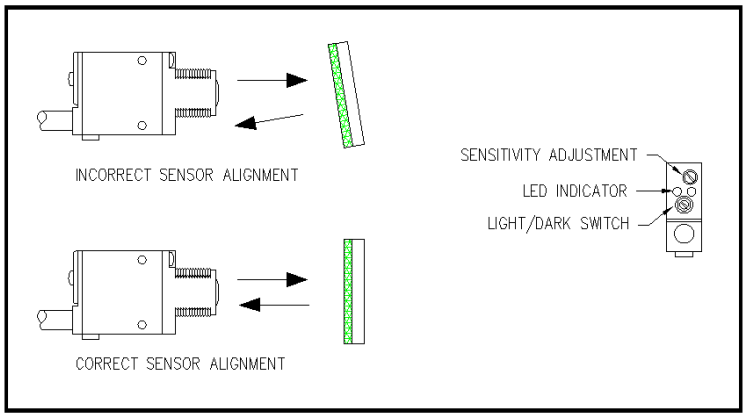
PRODUCT SETUP

The Applicator should be setup and have successfully passed the static test before continuing with this section. If you have skipped the Applicator Setup Section and have trouble with the application here, it will leave you with more areas to troubleshoot while fixing the problem.

Regardless of which type of Applicator Nose you are using, it is important to control the product prior to labeling. If you do not present the product to the Applicator in the same position at uniform speed, label positioning may not be consistent on the product. If necessary, install Guide Rails to insure products follow the same path along the conveyor.

STANDARD PRODUCT SENSOR SETUP (Banner SM312LV)

1- Plug the Sensor into the back of the Applicator.
2- Turn the power on and disable the Tamp (if applicable).
3- Remove the back cover of the Sensor and set the light/dark switch to DO by turning the switch counter-clockwise.
4- Make sure the Sensor is pointing at the Reflector or Reflective Tape. When the LED indicator is flashing at the fastest rate, the two are at the best alignment.

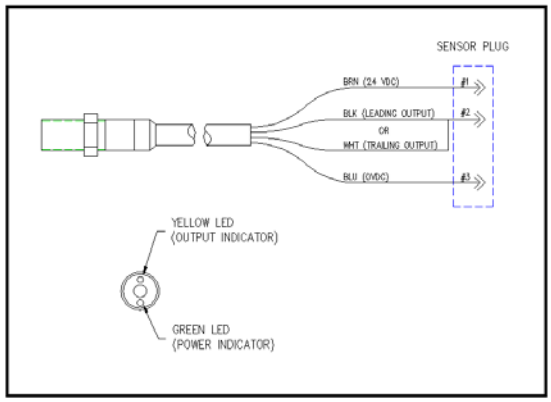


5- Place a product between the Sensor and the Reflector or Reflective Tape. The LED indicator should go out.
   a) On translucent products, the sensitivity may have to be reduced to avoid burn-through.
6- Replace back cover of Sensor.
7- When mounting the Sensor, position it slightly upstream of the Applicator Nose. It should be positioned to allow for fine adjustments of the Label Placement Value. An excessive upstream position requires large placement values leading to slow label rates.

OPTIONAL PRODUCT SENSOR SETUP (Banner S18SN6FF50)

This Sensor is an 18mm barrel type with a 50mm far limit cut-off. This means it will see objects that are less than 2" away and ignore the rest. There is nothing to adjust on the sensor except the physical position.

Sensor wiring determines whether the product detect will be setup for Leading or Trailing Edge. The #2 terminal in the Product Detect Plug at the end of the Sensor Cable is for the Output of the Sensor. The black wire is for Leading Edge and the white wire for Trailing Edge.



LABEL PLACEMENT

When a Product Detect Signal is received, the product must travel the "Label Placement" Time or Distance before the Applicator will apply a label. Label Placement Value gives you the ability to adjust where the label is applied on the product.

More Label Placement = label moves back on the product
Less Label Placement = label moves forward on the product

Label Placement can be changed from the Main Menu or the Product Setup Screen.

DETECTOR LOCKOUT

The Product Detector Lockout function is used if more than one Product Detect Signal is generated per product. If the Encoder is on, Detector Lockout is in inches; if no Encoder then it is in seconds. The Lockout starts at the beginning of a labeling sequence and the Applicator will ignore Product Detect Signals until the Lockout Time or Distance is finished.

To add Detector Lockout go to the Product Setup Menu and change the Detector Lockout Value. Refer to page 3-17 of this Manual for more information.

ENCODER SETUP

Adding an Encoder to the Applicator is a good way to handle products that are varying in speed. If setup properly, the Applicator will compensate the Label Placement position for all Applicator Types. In Merge Applications, the Encoder accounts for product speed changes during the label dispense to insure good labeling performance. Also, the Encoder changes the Label Placement Units to inches. This makes it much easier for the operator to setup the Applicator because the parameter is independent of the product speed.

There is a good description on setting up an Encoder in the Display Section of this Manual. Refer to pages 3-17 thru 3-19.

Notes: **Label Placement Units with the Encoder Option on are in inches; not seconds.**

The Encoder Option will NOT be accurate with the Tamp Applicator set to Normal Tamp.

It's important to make sure that the Applicator is setup properly so labels are dispensed consistently.

If product speeds are too fast causing the Compensated Label Placement to lag behind the current Label Placement, a Warning will be given to raise the Label Placement Value.

ENCODER MOUNTING

The method of coupling the Encoder to the conveying system is an important consideration since errors or stress can be introduced to the system. If the Encoder is coupled to a drive shaft, motor, etc., a flexible coupling should be used to compensate for any misalignment between the shaft and the Encoder. This compensation is required because the smallest misalignment can result in high radial loads that may induce premature bearing failure. If the Encoder is connected to the machine using belts and pulleys, be careful not to over tighten the belts.

An optional Mounting Kit may be purchased that has a rubber-coated Wheel on the Encoder Shaft. The Kit comes with a Mounting Plate and a spring loaded Pivot Plate to hold the Wheel against the conveyor surface.

NOTE: Since the Encoder Output Signal is rotation direction sensitive, it may be necessary to reverse the A+ & A- wires going to TB21 and TB22 in the Applicator.

WARNING: CHANGE WIRE LOCATIONS WITH THE APPLICATOR POWERED OFF AND THE POWER CORD DISCONNECTED FROM THE APPLICATOR.

360a SERIES

GENERAL

MAINTENANCE

PROCEDURES

MAINTENANCE

NOTE: Since all three types of Applicator are covered in this Section, some items discussed will not pertain to your application.

DAILY MAINTENANCE

1. Examine the Peel Edge, Blow Box Grid, Label Pad and Rollers for excessive adhesive build-up. If necessary, clean these surfaces with alcohol or similar solvent.

2. Examine Air Filter for water or oil collection. Drain if necessary.

3. Examine for loose screws, rollers, etc.

WEEKLY MAINTENANCE

1. Clean rollers, Blow Box Grid, Label Pad, and Peel Edge of adhesive build-up and dust.

2. Examine air lines and connections to make sure there are no leaks.

3. Examine for loose screws, rollers, etc.

4. Examine UHMW Tape on Peel Edge. Replace if needed.

MONTHLY MAINTENANCE

1. Examine Dancer Arm Tension and Unwind Brake O-Ring.

2. Examine Drive and Rewind Belts for wear and to make sure they are properly adjusted.

3. Examine Rollers for free rotation and play.

4. Examine Rewind Slip Clutch Disk for wear.

5. Replace the Air Inlet Filter.

6. Examine UHMW Tape on Peel Edge. Replace if needed.

SEMI-ANNUAL MAINTENANCE

1. Replace the Air Inlet Filter and clean Collection Bowl.

2. Clean inside and outside of Applicator using an industrial vacuum cleaner.

NOTE: Do not use compressed air to blow dust off of the electrical section of the Applicator.

3. Replace Slip Clutch Disk. Clean both friction surfaces.

4. Check Roller Clutch on the Rewind Shaft for correct operation.

5. Examine Pulleys for wear.

6. Perform the monthly maintenance section.

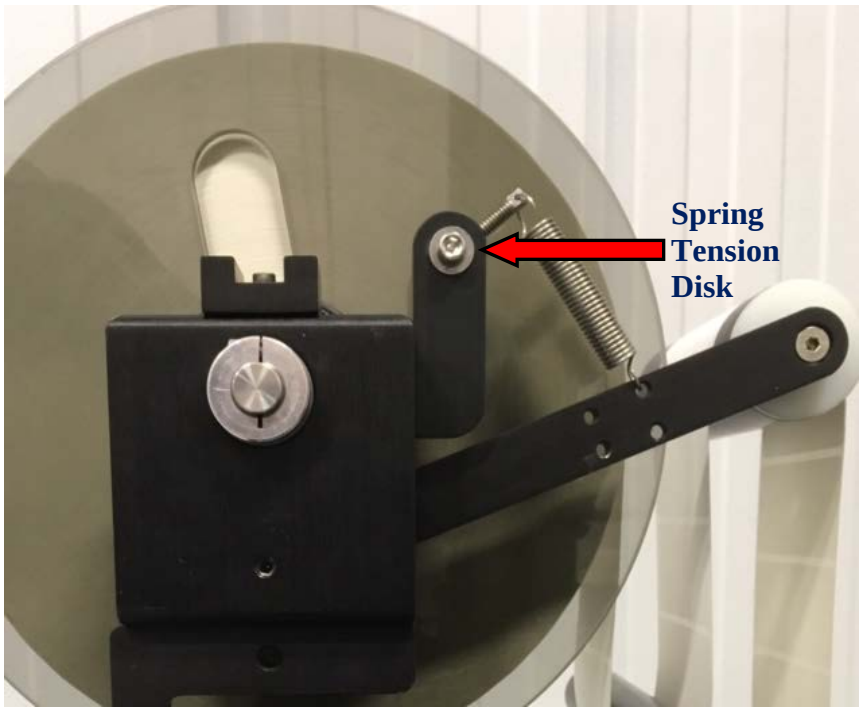
DANCER ARM ADJUSTMENT

The Dancer Arm maintains tension on the label liner and operates the Brake on the Unwind Mandrel when labels are dispensed. The Spring holding the Dancer Arm should be adjusted so that there is enough braking force to keep the Unwind Mandrel from continuing to roll after a label feed yet still releases the Unwind Mandrel when the Applicator is cycled.

1. Loosen the screw going to the Spring Tension Disk.

2. Rotate the Disk to set the proper spring tension.

3. Re-tighten screw.



DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE YOU PROCEDE!

REWIND SLIP CLUTCH ADJUSTMENT

More or less tension may be needed on the Rewind if the liner is being wound too loose or tight. Different conditions will warrant this adjustment:

1. Change in label width or length.
2. Applicator attitude.
3. Web speed changes.
4. Motor Acceleration or Deceleration value changes.

Use the following procedure to adjust the rewind tension or replace the slip clutch disk:

1. Remove all AC power and air to the Applicator.
2. Remove the lower stainless Cover.
3. Use 3/16” Allen wrench to remove the screw at the end of the Drive Roller Shaft.
4. Remove the Washers, Spring Keeper, and Spring from the Drive Roller Shaft.
5. If you’re replacing the Slip Clutch Disk, remove the Thrust Bearing and walk the Rewind Belt off of the Slip Clutch Pulley. Slide the Pulley for the Rewind off the Drive Roller Shaft. Clean friction surfaces, replace Clutch Disk, and replace Assembly.
6. If **more** rewind tension is needed, **remove** one shim Washer from the inboard side of the Spring Keeper and re-install on the outboard side of the Spring Keeper. If **less** tension is needed, **remove** one shim Washer from the outboard side of the Spring Keeper and re-install on the inboard side of the Spring Keeper.
7. Replace and tighten the screw on the end of the Drive Roller.
8. Replace the lower stainless Cover and tighten the mounting screws.
9. Re-connect AC power and air to Applicator.
10. Test the Applicator and observe the Rewind from beginning to end of a roll of labels.
11. Re-adjust if necessary.

DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE YOU PROCEDE!

DRIVE BELT ADJUSTMENT

1. Remove all AC power and air to the Applicator.

2. Remove the lower stainless Cover. Rotate the 360a so the Drive Roll Assembly is facing the floor. This orientation will aid you when it comes time to set angular alignment.

3. Remove the air lines interconnecting the two sides of the Applicator to gain access to the Drive Belt.

4. Remove both Splice Plates that are mounted on either side of the Motor. Use a 5/32" Allen wrench to remove the 12 screws holding the Splice Plates. There are enough remaining screws to keep Rewind and Applicator Plates in place. Discard broken/worn Belt. Check Pulley integrity and alignment – flanged Motor Pulley Hub should extend beyond the Motor Shaft approx. 1/16". The 3" Main Drive Pulley dimensioning, - 45/64" from the backside of the 360a Faceplate to the inside edge of the Pulley. Place replacement Belt onto flanged Motor Pulley. Cautiously / slowly walk the Belt over the Main Drive Pulley to keep from crimping / nicking the Belt's edge.

5. Loosen the four (4) screws on the side of the Motor Mounting Plate using a 5/32" Allen wrench.

6. Push the Motor Mount Assembly upward and re-tighten mounting screws. Make sure the Motor Assembly is 90 degrees from the Faceplate to insure proper angular alignment – *see note

7. Disengage Nip Roller and turn the Drive Roller. Make sure there is no severe catching as you turn the Roller.

8. Check the belt tension. With light finger pressure on one side of the Belt, adjust the tension so that the Belt deflects approximately 1/16" to 1/8".

NOTE: Do not over tighten the Belts. This may result in shortened Motor life. If the Belts are too loose, Label Stop may become erratic.

9. Replace the two Splice Plates.

10. Replace the air lines interconnecting the two sides of the Applicator.

11. Replace the stainless Cover and tighten the mounting screws.

12. Re-connect the AC power and air.

Note: One method to verify angular alignment is to use 2 pcs. of ½" wide X .025" thick banding material/strapping cut approximately 8" long. Place each piece between the Faceplate and the Motor Mount Side Frames. Place your hand on the end of the Motor and firmly push the Motor toward the Faceplate – making sure the Motor Mount Side Frames are running parallel to the Faceplate. Verify that the belt tension is correct – see step #8 above. Snug the 4 screws, remove banding strips, and finish tightening the 4 screws.

PROBLEM	POSSIBLE CAUSE	SOLUTION
WITH THE POWER SWITCH ON, NO COOLING FAN; NO DISPLAY	POWER CORD DEFECTIVE OR UNPLUGGED	INSPECT AND CORRECT
	AC FUSE BLOWN	DETERMINE CAUSE AND REPLACE FUSE
WITH THE POWER SWITCH ON, COOLING FAN ON; NO DISPLAY	DISPLAY CABLE NOT PLUGGED IN TO THE BACK OF THE APPLICATOR	RECONNECT CABLE
	LOSS OF 24 VDC	CALL A FACTORY REPRESENTATIVE
	DEFECTIVE CABLE	REPLACE CABLE
	DEFECTIVE DISPLAY BOARD	REPLACE DISPLAY BOARD
WITH THE POWER SWITCH ON, COOLING FAN ON; DISPLAY IS STUCK ON THE STARTUP SCREEN	MAKE SURE THE DRIVE IS RUNNING	CALL A FACTORY REPRESENTATIVE
LABEL LINER BREAKING	LABELS ARE THREADED INCORRECTLY	SEE THREADING DIAGRAM
	BAD ROLL OF LABELS	REPLACE LABEL ROLL
	SIDE NICKS IN LINER; HEAVY DIE CUT ON LINER	REPLACE LABEL ROLL
	ROLLER COLLARS ARE STRESSING THE LABEL STOCK ADHESIVE BUILD-UP ON PEEL EDGE	CHECK TO MAKE SURE GUIDE COLLARS LINE UP WITH UNWIND SHOULD HAVE 1/64" CLEARANCE BETWEEN LABEL STOCK AND COLLAR CLEAN PEEL EDGE SURFACE
	PEEL BAR TENSION SPRING TOO TIGHT	RELEASE SPRING TENSION

PROBLEM	POSSIBLE CAUSE	SOLUTION
LABEL DOES NOT ADVANCE WHEN THE APPLICATOR IS ONLINE AND JOG IS PRESSED	NIP ROLLER NOT ENGAGED AGAINST DRIVE ROLLER	INSPECT AND CORRECT
	DRIVE BELT IS BROKEN	REPLACE BELT
	LOST KEY IN DRIVE PULLEY	FOLLOW PROCEDURE FOR SLIP CLUTCH ADJUSTMENT. WHEN YOU GET TO STEP #6 AND HAVE REMOVED THE PULLEY GOING TO THE REWIND, GO AHEAD AND REMOVE THE DRIVE PULLEY. REPLACE KEY AND PUT BACK TOGETHER
LABEL DOES ADVANCE BUT DOES NOT STOP IN THE SAME PLACE EVERY TIME OR DOES NOT STOP IN THE RIGHT PLACE	LABEL SENSOR NEEDS SET UP	REFER TO LABEL SENSOR SETUP IN THE “LABEL SETUP” DISPLAY SECTION OF THIS MANUAL
	LABEL SENSOR NOT LOOKING AT A LABEL	MOVE LABEL SENSOR OVER THE LABEL PATH
	LABEL SENSOR OR FIBER CABLE IS DAMAGED	REPLACE LABEL SENSOR
	NIP ROLLER NOT ENGAGED AGAINST DRIVE ROLLER	INSPECT AND CORRECT
	LABEL LENGTH SET WRONG	REFER TO LABEL LENGTH SETUP IN THE “LABEL SETUP” DISPLAY SECTION OF THIS MANUAL
	LABEL STOP SET WRONG	REFER TO LABEL STOP SETUP IN THE “LABEL SETUP” DISPLAY SECTION OF THIS MANUAL

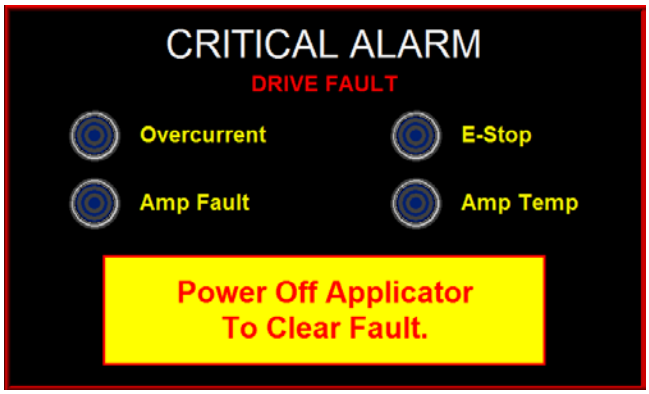
PROBLEM	POSSIBLE CAUSE	SOLUTION
LABEL LINER NOT WINDING UP	REWIND SLIP CLUTCH NEEDS TENSIONING OR REPLACED	SEE SLIP CLUTCH ADJUSTMENT IN THE MAINTENANCE SECTION
	ONE-WAY CLUTCH BEARING NOT WORKING	REPLACE REWIND SHAFT ASSEMBLY
	BROKEN BELT	REPLACE BELT
LABELS ARE NOT HELD ON LABEL GRID OR LABEL PAD	**AIR BLOW** VACUUM FAN NOT WORKING	CHECK FOR BLOWN FUSE
		OBSTRUCTION IN FAN
		REPLACE FANS
	TAMP NOT ENOUGH VACUUM ON PAD	INSPECT FOR CLOGGED OR DEFECTIVE VENTURI
		VENTURI EXHAUST IS BLOCKED
		NEEDS MORE AIR PRESSURE
	BOTH AIR BLOW & TAMP PEEL EDGE OUT OF ADJUSTMENT	REFER TO PEEL EDGE ALIGNMENT IN THE LABELER SETUP SECTION (SECTION 7)

PROBLEM	POSSIBLE CAUSE	SOLUTION
LABEL PLACEMENT ON GRID OR LABEL PAD NOT CONSISTENT	**AIR BLOW** IMPROPER VACUUM	YOU MAY HAVE TO MASK OFF THE HOLES NOT USED BY THE LABEL ON THE INSIDE OF THE VACUUM BOX
		YOU CAN ADD MORE VACUUM BY TURNING THE VAC SWITCH TO HIGH
	TAMP IMPROPER VACUUM	ADJUST AIR PRESSURE
	BOTH ADHESIVE STRINGS ON LABEL AND LINER	REPLACE LABEL ROLL
	BOTH PEEL EDGE OUT OF ADJUSTMENT	REFER TO PEEL EDGE ALIGNMENT IN THE LABELER SET UP SECTION
	BOTH INCORRECT EXTENDED AIR ASSIST TIME	EXAMINE AND CORRECT
	BOTH AIR ASSIST TUBE NOT ALIGNED PROPERLY	REFER TO AIR ASSIST SET UP IN THE LABELER SET UP SECTION
LABEL FAILS TO LEAVE THE LABEL GRID OR LABEL PAD	**AIR BLOW** TOO MUCH VACUUM	SWITCH TO LOW ON VAC SWITCH
		REMOVE MASKING
	BOTH NO AIR BLAST	AIR BLAST TIME TOO SMALL
		IF BAD VALVE; REPLACE
	AIR BLOW INCORRECT AIR JET PATTERN	INSPECT AND CORRECT

DISPLAY FAULTS

The Operator Interface will display Warnings and Alarms that pertain to the application. The following are screens that will help diagnose a Drive or Display problem that is more serious in nature than the standard Alarms.

DRIVE FAULT
The Drive Fault screen will list four (4) things that will stop the Applicator from running when they occur. Without this screen, it would be impossible to know why the Applicator stopped.



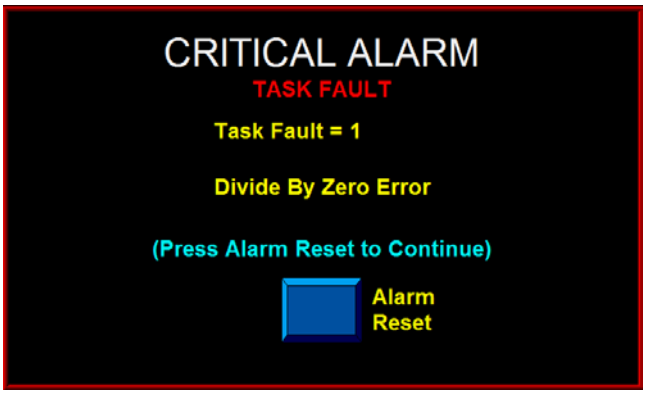
Overcurrent -This Fault occurs when the Drive Current has exceeded its configured maximum value. Ensure that there are no obstructions in the web path and that the Unwind Brake releases properly. If these items are correct, reduce the Motor Accel and Decel values to their factory default values and re-run the application. If the mechanical system and setup is correct, consult the factory to determine if the Drive Current value is appropriate for your application.

Amp Fault - If this occurs, there has been a failure on the Drive Board. The factory should be consulted if this occurs.

E-Stop - In the future, the operator will be allowed to enable the E-Stop Protection Circuit to the Drive. If this circuit were enabled and open, an E-Stop Fault would occur. **Currently this is disabled in the Applicator.**

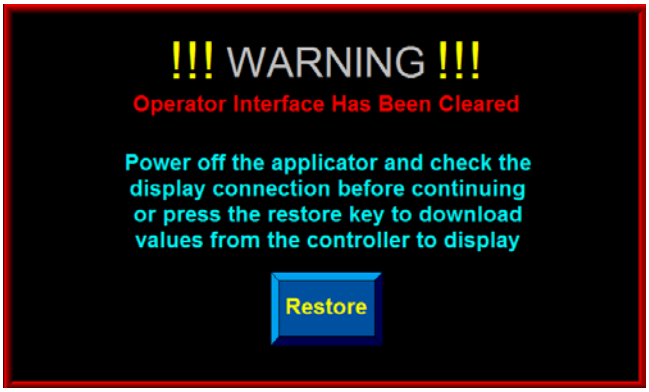
Amp Temp - This Alarm occurs when the Drive Amplifier Temperature exceeds the upper limit. If this Alarm occurs, clean the Applicator's Air filter and insure that the Cooling Fan is running properly. Also, ensure that there are no obstructions in the web path and that the Unwind Brake releases properly. If possible reduce Accel and Decel values to factory defaults and lower the application speed. If the mechanical system and setup is correct, consult the factory to determine if the Drive Current value is appropriate for your application.

TASK FAULT
If a Controller Task Fault occurs, the screen shown to the right appears. This occurs due to a programming issue. Contact the factory with the Task Fault number and Fault Explanation shown on the screen.



CLEARED DISPLAY VARIABLES

At power up, the Applicator's Controller sends all of the system variables to the Display. While the Applicator is powered, the Controller looks to see if the Display variables have changed. If for some reason the variables are reset to zero, a Warning Screen is displayed indicating that the Display has lost its variables. Pressing the "Restore" Key re-loads the variables and clears the Alarm. It has the same effect as powering the unit off and restarting the system.



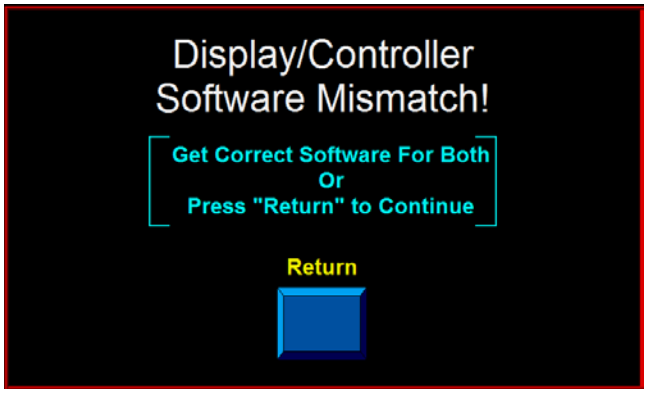
Typically, this situation occurs when the Display Cable is loose or unplugged.

DISPLAY WRITE ERROR

When necessary, the Controller attempts multiple reads or writes to the Display. If it gets no response, a Read/Write Error Screen is displayed. If this occurs, contact the factory since it is likely a programming issue or a hardware failure.

SOFTWARE MISMATCH ERROR

If the Display and Controller Programs do not match, a Software Mismatch Screen appears to warn the operator that both devices do not support some screens or functions. This can happen if the Drive Program is updated and the Display Program is not or vice versa.



ACCESSORIES

The following is only a partial list of Accessories available for the 360a Applicator.

ELECTRONIC CROSSOVER
The Electronic Crossover or "Zero Downtime" Accessory is an electronic interface between two labeling Applicators positioned in series on a conveyor system. The Crossover System monitors the Primary Applicator's Fault conditions and switches to a Secondary Applicator to prevent interruption of production flow. When purchasing this option, make sure you receive (2) Link Port Harnesses, (1) Crossover Cable and an Encoder Assembly with a Splitter Cable.

IMPRINTER
The Imprinter Accessory is a Hot Stamp Imprinter device mounted on special bracketry attached to the Applicator. This normally is a factory-installed unit. Please contact the factory concerning the types of Imprinters supported.

LOOSE LOOP
The Loose Loop Accessory is designed to integrate an Applicator with a Direct Thermal /Thermal Transfer Printer in a "Loose Loop" fashion. This Option includes electrical modifications to the Printer, Sensor Array to monitor Loop Position, and mounting hardware to support the Applicator and Printer from a vertical upright (includes Yard Arm). Since there are many Printers and configurations, please contact the factory with your specific needs.

LOW LABEL DETECTION
The Low Label Detection Accessory is a Sensor that generates a signal when the Unwind is low on labels. The Applicator will display an Alarm Status Box at the Main Menu, it will also activate the Amber Light on the Alarm Light Stack (if purchased) to inform the operator that the Unwind is about to run out of labels. This Option may be field installed.

TAMP SWITCH
A Tamp Switch Accessory is available for Tamp Applicators that uses one (1) or two (2) Sensors to control the Tamp Slide Assembly. When the Tamp Home Switch is activated, the Applicator dispenses a label onto the Tamp Pad. When the Tamp Return Switch senses a product, the label is applied to the product and the Tamp Pad returns to the Peel Edge.

WEB BREAK DETECTION
The Web Break Detection Accessory is a Sensor that generates a signal when there is a break in the web. The Applicator will display an Alarm Screen and activate the Red Light on the Alarm Light Stack (if purchased) to inform the operator that the label web is broken.

16" AND 20" UNWINDS
The factory can supply Applicators with larger Unwinds Assemblies for longer run applications. Before purchasing an Unwind Assembly, consult the factory to determine if the speed of application and the amount of waste requires a Powered Rewind Assembly.

POWERED REWIND
A Powered Rewind Assembly is used in high-speed applications and in cases where it is necessary to wind-up additional waste from an oversized Unwind Assembly. This is a factory-installed Option.

CLEAR FILM REWIND MANDRELS
There are several types of Rewind Mandrels designed to aid in the removal of liner waste when a film label liner is used. Please contact the factory with details of your application.

CORE ADAPTER
Standard Core Adapters for the 360a come in 3" and 6" diameters. Please contact the factory for non-standard diameters.

ALARM LIGHT STACK
The 360a can handle up to three (3) Alarm Lights:

Red - Critical Alarm (steady)
Amber - Warning Alarm (steady)
Green - Ready Signal (steady)

Light Stacks may be purchased in one (1) or three (3) light configurations.

LINE RATE COMPENSATION
This Kit includes an Encoder and Interface Cable. Splitter Cables may be purchased to allow one (1) Encoder to drive multiple Applicators.

CLEAR LABEL SENSOR
A Label Sensor is available for the 360a Applicator that detects clear labels on a clear liner.

HARDENED PEEL EDGE TIPS
For applications where changing the Peel Edge Tape is difficult or where the liner material is causing premature wear, CTM offers a Hardened Peel Edge for Air Blow, Tamp, and Merge Applicator types. Please contact the factory for details and availability.

SNORKELS
CTM has a large variety of Snorkel options to place the Applicator Nose close to the labeling operation while the Applicator's body remains farther away. Consult the factory to match a solution to your requirements.

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

360a Series Core Unit Spare Parts List		
RECOMMENDED TOOL		
Part Number	**Recommended Qty**	**Description**
PE-TE6000	1	ENTRELEC WIRING TOOL
WEAR ITEMS		
Part Number	**Recommended Qty**	**Description**
MP-200-0235	1	NIP ROLLER LIFT CAM
PM-BELT1018	1	140XLO37 NIP TO MOTOR BELT
RECOMMENDED SPARE PARTS		
Part Number	**Recommended Qty**	**Description**
ASS-200CE-0126	1	24VDC POWER SUPPLY
MP-200-0242 **or**	1	5" DRIVE ROLL w/ COATING
MP-200-2242 **or**	1	7.5" DRIVE ROLL w/ COATING
MP-200-5242	1	10" DRIVE ROLL w/ COATING
PE-FU2070	1	5 amp FUSE
PE-SE3080	1	FIBER OPTIC LABEL SENSOR
EXTENDED SPARE PARTS		
Part Number	**Recommended Qty**	**Description**
ASS-200-0427	1	PRODUCT DETECT W/CONNECTOR
PE-RT1000-6	1	REFLECTIVE TAPE (1" WIDE x 6" LONG)
PE-CO1020	1	214-3508 16/3 X 10' POWER CORD (BELDEN)
MP-DR1007	1	STEPPER MOTOR CONTROLLER
MP-IN1013	1	APPLICATOR TOUCH SCREEN
ASS-200A-1034 **or**	1	STEPPER MOTOR (BLACK) - 5 amp
ASS-200A-1036	1	HIGH TORQUE STEPPER MOTOR (Burgandy) - 10 amp
PM-BE1230	1	EW-5/8 LIFT THRUST WASHER
PM-BE1232	1	EW-3/4 REWIND CLUTCH THRUST WASHER
ASS-200-0128R **or**	1	REWIND BEARING BLOCK ASSEMBLY W/ SHAFT
ASS-200-0128L	1	REWIND BEARING BLOCK ASSEMBLY W/ SHAFT
SAS-200-0129O	1	OUTSIDE DRIVE ROLL SUPPORT ASSEMBLY
SAS-200-0129I	1	INSIDE DRIVE ROLL SUPPORT ASSEMBLY
ASS-200-0130 **or**	1	5" NIP ROLLER ASSEMBLY WITH SHAFT
ASS-200-2130 **or**	1	7.5" NIP ROLLER ASSEMBLY WITH SHAFT
ASS-200-5130	1	10" NIP ROLLER ASSEMBLY WITH SHAFT
SAS-200-0135 **or**	1	5" TENSION ROLLER ASSEMBLY w/o SHAFT
SAS-200-2135 **or**	1	7.5" TENSION ROLLER ASSEMBLY w/o SHAFT
SAS-200-5135	1	10" TENSION ROLLER ASSEMBLY w/o SHAFT
PE-FAN1115	1	REPLACEMENT FAN FILTER

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

NON-POWERED UNWIND ASSEMBLY SPARE PARTS LIST

WEAR ITEMS

Part Number	Recommended Qty	Description
PM-OR1007	1	O-RING

RECOMMENDED SPARE PARTS (12" NON-POWERED UNWIND)

Part Number	Recommended Qty	Description
SAS-200-0131 **or**	1	5" DANCER ROLLER ASSEMBLY w/o SHAFT
SAS-200-2131 **or**	1	7.5" DANCER ROLLER ASSEMBLY w/o SHAFT
SAS-200-5131	1	10" DANCER ROLLER ASSEMBLY w/o SHAFT
PM-BEBF1015	1	FF-520-10 DANCER ARM BUSHING
PM-BE1266	2	DANCER ARM THRUST BEARING
PM-FASP30437	1	TENSION SPRING
ASS-200-0134	1	UNWIND BEARING BLOCK ASSEMBLY

RECOMMENDED SPARE PARTS (16" & 20" NON-POWERED UNWIND)

Part Number	Recommended Qty	Description
SAS-200-0135 **or**	2	5" TENSION ROLLER ASSEMBLY w/o SHAFT
SAS-200-2135 **or**	2	7.5" TENSION ROLLER ASSEMBLY w/o SHAFT
SAS-200-5135	2	10" TENSION ROLLER ASSEMBLY w/o SHAFT
PM-BEBF1015	1	FF-520-10 DANCER ARM BUSHING
PM-BE1266	2	DANCER ARM THRUST BEARING
PM-FASP30480	1	TENSION SPRING
ASS-200-0134	1	UNWIND BEARING BLOCK ASSEMBLY

STANDARD REWIND ASSEMBLY SPARE PARTS LIST

WEAR ITEMS (STANDARD REWIND)

Part Number	Recommended Qty	Description
PM-BELT1023	1	180XLO37 NIP TO REWIND BELT
PM-CL1010	1	3" LEATHER CLUTCH PAD
ASS-200-0143	1	SLIP CLUTCH ASSEMBLY

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

NON-POWERED UNWIND with POWERED REWIND SPARE PARTS LIST (not CE approved)		
WEAR ITEMS		
Part Number	**Recommended Qty**	**Description**
PM-OR1040	1	CLEAR O-RING
RECOMMENDED SPARE PARTS (16" & 20" NON-POWERED with POWERED REWIND)		
Part Number	**Recommended Qty**	**Description**
ASS-200-0460	1	PROXIMITY SWITCH
PE-FU2065	1	3 AMP FUSE
PE-MC1109	1	MOTOR DRIVER CONTROLLER
PE-MO1008	1	LEESON GEAR MOTOR
PE-PO1030	1	5K SPEED POTENTIONMETER
PE-RE1063	3	RELAY
PE-RE1013	1	SOLID STATE RELAY
PE-SI1050	1	ISOLATER BOARD
PM-BEBF1015	1	FF-520-10 DANCER ARM BUSHING
PM-BE1266	2	DANCER ARM THRUST BEARING
PM-FASP30480	1	TENSION SPRING
ASS-200-0134	1	UNWIND BEARING BLOCK ASSEMBLY

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

MERGE SPARE PARTS LIST		
WEAR ITEM		
Part Number	**Recommended Qty**	**Description**
PM-T1000 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (5 7/16" Wide x 7" Lg.)
PM-T1015	1	UHMW TAPE FOR 7.5" & 10" PEEL EDGE (8" Wide x 7" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

AIR BLOW SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
PM-T1015	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 4" Lg.)
ASS-211-0113 **or**	1	AIR TUBE ASSEMBLY
ASS-211-0113E	1	AIR TUBE ASSEMBLY FOR EXTENDED BLOW BOX
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

Part Number	Recommended Qty	Description
MP-211-0217-7	1	AIR ASSIST TUBE ****THIS IS JOB SPECIFIC****
ASS-211-0103 **or**	1	AIR TUBE MANIFOLD ASSEMBLY
ASS-211-0103E	1	AIR TUBE MANIFOLD ASSEMBLY FOR EXT. BLOW BOX

EXTENDED SPARE PARTS

Part Number	Recommended Qty	Description
PM-FIL1010	1	WATTS FILTER
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	60 PSI AIR ASSIST REGULATOR
PM-VA2397M	1	120 PSI TAMP/BLOW REGULATOR
ASS-211-0106M	1	AIR BLOW 2-STATION VALVE BANK ASSEMBLY
ASS-211-0109	1	AIR FILTER REGULATOR ASSEMBLY

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

RVB SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
PM-T1015	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 4" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

Part Number	Recommended Qty	Description
MP-211-0217-7	1	AIR ASSIST TUBE ****THIS IS JOB SPECIFIC****

EXTENDED SPARE PARTS

Part Number	Recommended Qty	Description
PM-FIL1010	1	WATTS FILTER
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	60 PSI AIR ASSIST REGULATOR
PM-VA2397M	1	120 PSI TAMP/BLOW REGULATOR
ASS-211-0112M	1	RVB 2-STATION VALVE BANK ASSEMBLY

FFS SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

Part Number	Recommended Qty	Description
MP-211-0217-5	1	AIR ASSIST TUBE ****THIS IS JOB SPECIFIC****

EXTENDED SPARE PARTS

Part Number	Recommended Qty	Description
PM-FIL1010	1	WATTS FILTER
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	60 PSI AIR ASSIST REGULATOR
PM-VA2397M	1	120 PSI TAMP/BLOW REGULATOR
ASS-211-0117M	1	FFS STYLE 2-STATION VALVE BANK ASSEMBLY

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

TAMP SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
PM-T1015 **or**	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 4" Lg.)
PM-T1010	1	UHMW TAPE FOR 10" PEEL EDGE (6" Wide x 11" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

Part Number	Recommended Qty	Description
MP-211-0217-7	1	AIR ASSIST TUBE ****THIS IS JOB SPECIFIC****

EXTENDED SPARE PARTS

Part Number	Recommended Qty	Description
PM-FIL1010	1	WATTS FILTER
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	60 PSI AIR ASSIST REGULATOR
PM-VA2397M	1	120 PSI TAMP/BLOW REGULATOR
ASS-214-0105M	1	TAMP 3-STATION VALVE BANK ASSEMBLY

SLIDE ASSEMBLIES

Part Number	Recommended Qty	Description
ASS-214-0108-1 **or**	1	1" SLIDE ASSEMBLY
ASS-214-0108-2 **or**	1	2" SLIDE ASSEMBLY
ASS-214-0108-3 **or**	1	3" SLIDE ASSEMBLY
ASS-214-0108-4 **or**	1	4" SLIDE ASSEMBLY
ASS-214-0108-6 **or**	1	6" SLIDE ASSEMBLY
ASS-214-0108-8 **or**	1	8" SLIDE ASSEMBLY
ASS-214-0108-10 **or**	1	10" SLIDE ASSEMBLY
ASS-214-0108-12	1	12" SLIDE ASSEMBLY

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

SWING TAMP SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
PM-T1015 **or**	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 4" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

Part Number	Recommended Qty	Description
MP-211-0217-7	1	AIR ASSIST TUBE ****JOB SPECIFIC****

EXTENDED SPARE PARTS

Part Number	Recommended Qty	Description
PM-FIL1010	1	WATTS FILTER
PM-VA2395M	1	5.4 WATT DC SOLENOID
PM-VA2396M	1	60 PSI AIR ASSIST REGULATOR
PM-VA2397M	1	120 PSI TAMP/BLOW REGULATOR
ASS-214-0105M	1	TAMP 3-STATION VALVE BANK ASSEMBLY
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

360a APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 360a

DUAL ACTION TAMP SPARE PARTS LIST

WEAR ITEM

Part Number	Recommended Qty	Description
PM-T1010 **or**	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
PM-T1015 **or**	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 4" Lg.)
PM-T1010	1	UHMW TAPE FOR 10" PEEL EDGE (6" Wide x 11" Lg.)
ASS-215-0110X-X **or**	1	5" WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X **or**	1	7.5" WIPER ASSEMBLY (specify length & material)
ASS-215-5110X-X	1	10" WIPER ASSEMBLY (specify length & material)

RECOMMENDED SPARE PARTS

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	STANDARD DUTY ROTARY ACTUATOR **NOTE** CONTACT SALES DEPARTMENT FOR HEAVY DUTY ROTARY ACTUATOR

360a APPLICATOR SPARE PARTS LIST

When ordering parts, present Serial Number of 360a

360a 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)
ASS-200-0422	1	LOW LABEL SENSOR (w/o BRACKET)
ASS-200-0423	1	END OF WEB SENSOR (w/o BRACKET)

OPTIONS: RECOMMENDED SPARE PARTS (TAMP HOME SENSOR)

Part Number	Recommended Qty	Description
ASS-200A-0478	1	TAMP HOME SENSOR (w/o BRACKET)

**** CYLINDER MUST BE DESIGNATED WITH AN "E"****

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

OPTIONS: RECOMMENDED SPARE PARTS (SMART TAMP - PHOTOEYE)

Part Number	Recommended Qty	Description
PE-SE0985	1	SM312W-QD SENSOR ****JOB SPECIFIC****

OPTIONS: RECOMMENDED SPARE PARTS (SMART TAMP - MECHANICAL)

Part Number	Recommended Qty	Description
PE-SW1110 **or**	1	OMRON LIMIT SWITCH (ARM STYLE)
PE-SW1105 **or**	1	OMRON LIMIT SWITCH (BUTTON ROLLER STYLE)
PE-SW1100	1	OMRON LIMIT SWITCH (BUTTON STYLE)

OPTIONS: RECOMMENDED SPARE PARTS (VACUUM OFF OPTION)

Part Number	Recommended Qty	Description
ASS-200-0459	1	VACUUM SWITCH CABLE ASSEMBLY

OPTIONS: RECOMMENDED SPARE PARTS (LINE RATE COMP)

Part Number	Recommended Qty	Description
PE-MW1000	1	ENCODER WHEEL
PE-GE2105	1	90 Deg. PULSE ENCODER

OPTIONS: RECOMMENDED SPARE PARTS (LINE RATE COMP (CONVEYOR MOUNTED))

Part Number	Recommended Qty	Description
PE-GE2105	1	90 Deg. PULSE ENCODER

360a APPLICATOR SPARE PARTS LIST

When Ordering parts, present Serial Number of 360a

RETIRED UNWIND & REWIND SPARE PARTS LIST

RECOMMENDED SPARE PARTS (16" & 20" NON-POWERED with POWERED REWIND w/DANCER)

Part Number	Recommended Qty	Description
PM-BE1238	2	#R4 BALL BEARING
ASS-200-0460	1	PROXIMITY SWITCH
SAS-211-0120 **or**	2	5" IDLER ROLLER ASSEMBLY
SAS-211-2120 **or**	2	7.5" IDLER ROLLER ASSEMBLY
SAS-211-5120	2	10" IDLER ROLLER ASSEMBLY
PM-BE1250	2	#R8FF BALL BEARING
PE-FU2065	1	3 AMP FUSE
PE-MC1109	1	MOTOR DRIVER CONTROLLER
PE-MO1008	1	LEESON GEAR MOTOR
PE-PO1030	1	5K SPEED POTENTIONMETER
PE-RE1001	1	24VDC RELAY IDEC
PE-RE1012	1	CROUZET RELAY
PE-SI1050	1	ISOLATER BOARD
PM-BEBF1015	1	FF-520-10 DANCER ARM BUSHING
PM-BE1266	2	DANCER ARM THRUST BEARING
PM-FASP30480	2	TENSION SPRING
ASS-200-0134	1	UNWIND BEARING BLOCK ASSEMBLY

OPTIONS: RECOMMENDED SPARE PARTS (AC INCANDESCENT ALARM LIGHT (ALLEN BRADLEY)

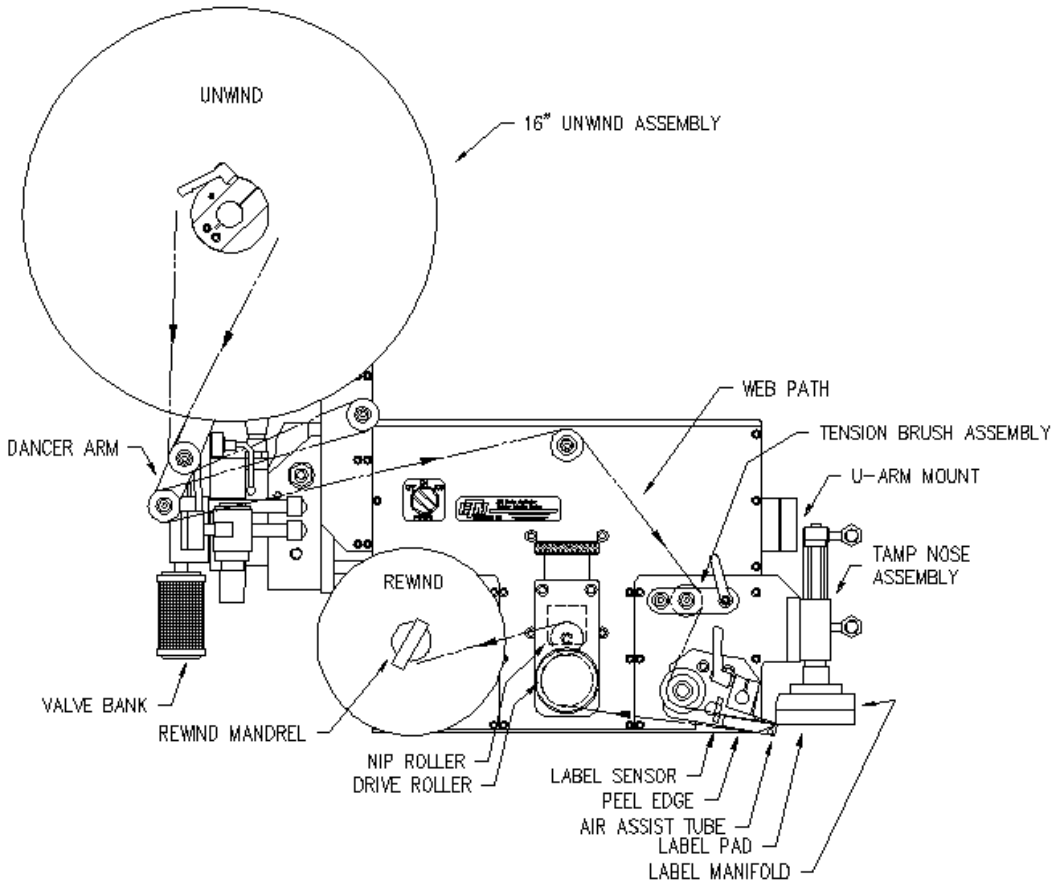
Part Number	Recommended Qty	Description
PE-LI2070	1	LAMP (FOR ALARM LIGHT)
PE-RE1001	1	RELAY (FOR ALARM LIGHT)

CHANGING TO OPPOSITE HAND DISPENSE

When performing an applicator changeover, the nose assembly, unwind assembly, rewind, and wiring are first changed to the opposite hand dispense. Then each component assembly is remounted on the opposite side of the applicator. The symmetry of the applicator main module and the individual parts facilitate the changeover process but it can be confusing if care is not exercised. The explanation and diagrams to follow will hopefully guide you through this process.

APPLICATOR CHANGEOVER

1) Remove the nose assembly (See: **NOSE ASSEMBLY REMOVAL**).
2) Change the applicator nose assembly to the opposite hand dispense (See: **NOSE ASSEMBLY CHANGEOVER**).
3) Remove the rewind assembly from the applicator (See: **REWIND REMOVAL).**
4) Change the rewind assembly to the opposite hand dispense (See: **REWIND CHANGEOVER**).
5) Change the wiring to the opposite side of the applicator (See: **WIRING CHANGEOVER**).
6) Change the unwind assembly to the opposite hand dispense.
7) If the applicator is a Tamp or Air Blow, move the valve assembly to the opposite side of the machine.
8) Install the rewind assembly on the opposite side of the machine (See: **REWIND INSTALLATION**).
9) Install the nose assembly on the opposite side of the machine (See: **NOSE ASSEMBLY INSTALLATION**).

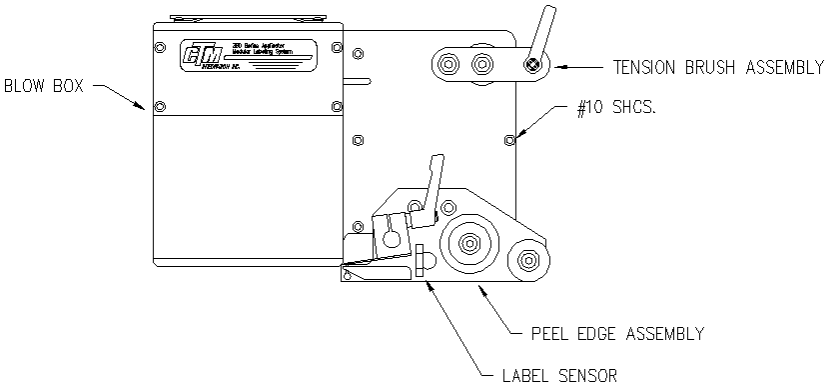


NOSE ASSEMBLY REMOVAL AND INSTALLATION INSTRUCTIONS

NOTE: DISCONNECT THE POWER CORD AND AIR SUPPLY FROM THE MACHINE BEFORE ATTEMPTING ANY OF THE FOLLOWING PROCEDURES. FAILURE TO FOLLOW THIS PRECAUTION COULD RESULT IN INJURIES FROM MOVING PARTS OR ELECTRICAL SHOCK!

BLOW BOX NOSE ASSEMBLY REMOVAL

1) Remove the stainless steel cover from the bottom of the applicator.
2) Remove the air tubes interconnecting the two sides of the applicator.
3) Disconnect the fiber optic cables from the label sensor mounted on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Gently remove the two fiber cables from the sensor.
4) Cut the tie wraps securing the fibers to the adhesive mounting pads and gently pull the fiber optic cable out of the wiring clamps and through the holes in the fiber optic mounting plate.
5) Unplug the blow box fan connector located on the underside of the electronic shelf.
6) Disconnect the hoses for the air assist tube and the air blast manifold at the applicator housing.
7) Remove the peel edge assembly to gain access to the #10 mounting screws.
8) Remove the six #10 mounting screws holding the nose assembly to the housing.



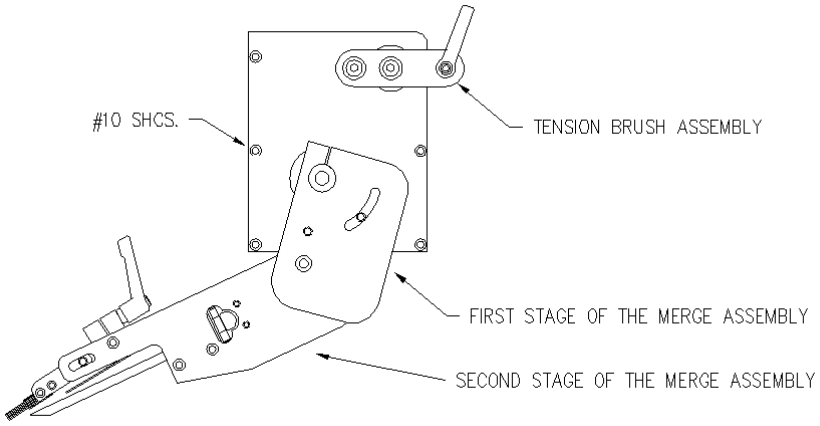
BLOW BOX NOSE ASSEMBLY INSTALLATION

1) Make sure that the peel edge assembly is removed from the blow box nose assembly.
2) Install the blow box nose assembly using the six #10 mounting screws making sure that the fan harness is tucked inside the applicator housing.
3) Plug the blow box fan harness into its connector on the underside of the electronic shelf.
4) Install the peel edge assembly using the two ¼" screws and the peel edge nut.
5) Make sure the label sensor is installed in the peel edge with the optical fibers running through the two holes in the peel edge side frame. Run the optical fibers through the two holes in the mounting plate.
6) Re-connect the fiber optic cable to the label sensor located on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Plug the emitter fiber (from the lower fork in the label sensor) into the out going arrow connection on the sensor housing and the detector (from the upper fork in the sensor) to the incoming arrow connection. Slide the cinching mechanism downward and close the top cover on the sensor.
7) Neatly tie wrap any excess fiber optic cable to the adhesive pads located near the fiber mounting plate. **Note: The excess fiber should be formed into a loop greater than 3" in diameter to avoid kinking the fiber.**
8) Install the air tubes interconnecting the two sides of the applicator.
9) Replace the stainless steel housing cover.

NOTE: DISCONNECT THE POWER CORD AND AIR SUPPLY FROM THE MACHINE BEFORE ATTEMPTING ANY OF THE FOLLOWING PROCEDURES. FAILURE TO FOLLOW THIS PRECAUTION COULD RESULT IN INJURIES FROM MOVING PARTS OR ELECTRICAL SHOCK!

MERGE NOSE ASSEMBLY REMOVAL

1) Remove the stainless steel cover on the bottom of the applicator.
2) Remove the air tubes interconnecting the two sides of the applicator.
3) Disconnect the fiber optic cables from the label sensor mounted on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Gently remove the two fiber cables from the sensor.
4) Cut the tie wraps securing the fibers to the adhesive mounting pads and gently pull the fiber optic cable out of the wiring clamps and through the holes in the mounting plate.
5) Remove the fiber optic mounting plate from the side of the applicator housing.
6) Rotate the first stage of the merge nose downward to gain access to the #10 mounting screws.
7) Remove the six #10 mounting screws holding the nose assembly to the housing.



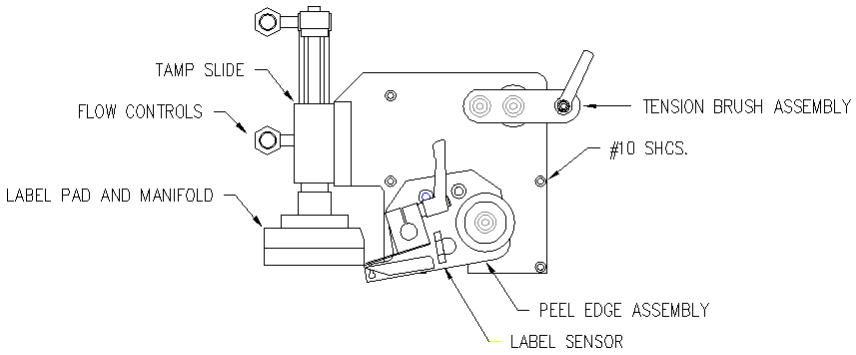
MERGE NOSE ASSEMBLY INSTALLATION

1) Rotate the first stage of the merge nose downward to gain access to the #10 mounting screws.
2) Install the merge nose assembly using the six #10 mounting screws.
3) Re-position the first stage of the merge nose.
4) Make sure the label sensor is installed in the peel edge. Run the optical fibers through the two holes in the mounting plate on the applicator housing.
5) Re-connect the fiber optic cable to the label sensor located on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Plug the emitter fiber (from the lower fork in the label sensor) into the out going arrow connection on the sensor housing and the detector (from the upper fork in the sensor) to the incoming arrow connection. Slide the cinching mechanism downward and close the top cover on the sensor housing.
6) Neatly tie wrap any excess fiber optic cable to the adhesive pads located near the fiber mounting plate. **Note: The excess fiber should be formed into a loop greater than 3" in diameter to avoid kinking the fiber.**
7) Install the air tubes interconnecting the two sides of the applicator.
8) Replace the stainless steel housing cover.

NOTE: DISCONNECT THE POWER CORD AND AIR SUPPLY FROM THE MACHINE BEFORE ATTEMPTING ANY OF THE FOLLOWING PROCEDURES. FAILURE TO FOLLOW THIS PRECAUTION COULD RESULT IN INJURIES FROM MOVING PARTS OR ELECTRICAL SHOCK!

TAMP NOSE ASSEMBLY REMOVAL

1) Remove the stainless steel cover from the bottom of the applicator.
2) Remove the air tubes interconnecting the two sides of the applicator.
3) Disconnect the fiber optic cables from the label sensor mounted on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Gently remove the two fiber cables from the sensor.
4) Cut the tie wraps securing the fibers to the adhesive mounting pads. Pull the fiber optic cable out of the wiring clamps.
5) Disconnect the hoses for the tamp cylinder, air assist tube, and air blast at the applicator housing.
6) Remove the peel edge assembly to gain access to the #10 mounting screws.
7) Remove the six #10 mounting screws holding the nose assembly to the housing.



TAMP NOSE ASSEMBLY INSTALLATION

1) Make sure that the peel edge assembly is removed from the tamp nose assembly.
2) Install the tamp nose assembly using the six #10 mounting screws.
3) Install the peel edge assembly using the two ¼" screws and the peel edge nut.
4) Make sure the label sensor is installed in the peel edge. Run the optical fibers through the two holes in the mounting plate.
5) Re-connect the fiber optic cable to the label sensor located on top of the power supply. Open the top cover on the sensor and slide the cinching mechanism located on the right side of the sensor housing upward. Plug the emitter fiber (from the lower fork in the label sensor) into the out going arrow connection on the sensor housing and the detector (from the upper fork in the sensor) to the incoming arrow connection. Slide the cinching mechanism downward and close the top cover on the sensor housing.
6) Neatly tie wrap any excess fiber optic cable to the adhesive pads located near the fiber mounting plate. **Note: The excess fiber should be formed into a loop greater than 3" in diameter to avoid kinking the fiber.**
7) Install the air tubes interconnecting the two sides of the applicator.
8) Replace the stainless steel housing cover.

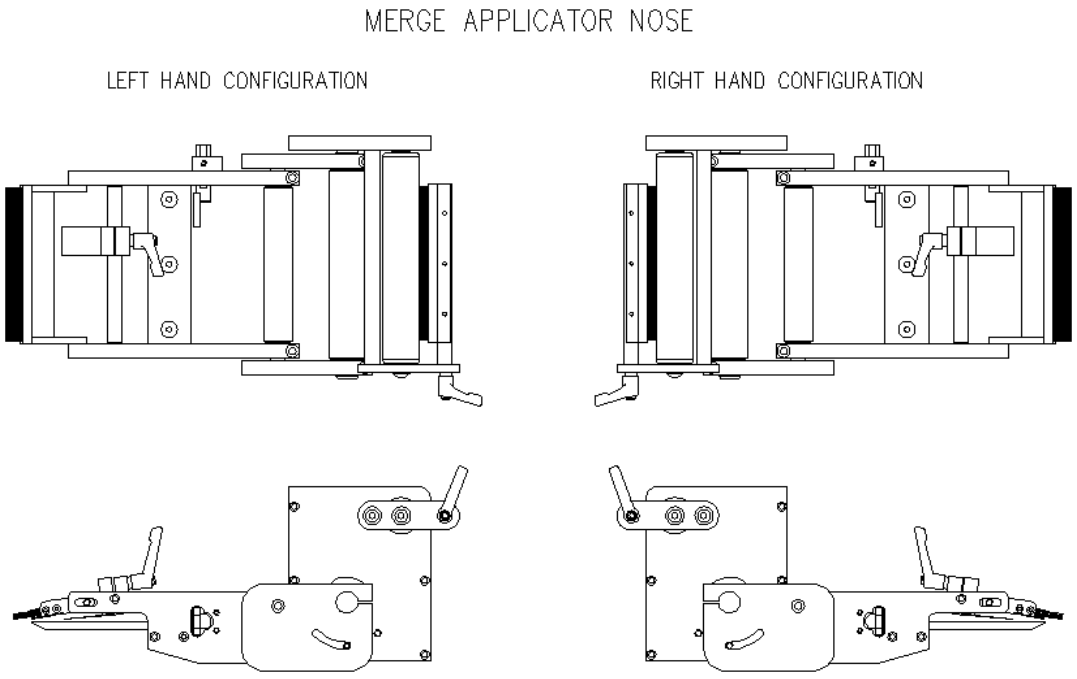
NOSE ASSEMBLY CHANGEOVER

When changing the nose assembly to the opposite hand dispense, all parts are first transferred to the opposite side of the mounting plate. Then the entire nose assembly is rotated 180 degrees and remounted to the opposite side of the applicator.

1) Remove the peel edge assembly from the nose assembly mounting plate. On a merge applicator, note the position of the bronze washers between the mounting plate and the peel edge assembly.
2) Change the applicator peel edge assembly to the opposite hand dispense (See: "APPLICATOR" **PEEL EDGE CHANGEOVER**).
3) Re-mount the peel edge assembly to the opposite side of the nose assembly mounting plate. On a merge applicator, re-install the bronze washers between the peel edge assembly and the mounting plate.
4) If the applicator is an air blow, change the blow box grid/fan to the opposite hand dispense (See: **BLOW BOX GRID/FAN ASSEMBLY CHANGEOVER**).
4) If the applicator is a tamp, change the tamp assembly to the opposite hand dispense (See: **TAMP ASSEMBLY CHANGEOVER**).
5) Remove the tension brush assembly and reassemble on the opposite side of the nose mounting plate.

MERGE PEEL EDGE CHANGEOVER

1) Remove the label sensor from the peel edge and remount on the opposite side rail. The open end of the U-shaped sensor should face towards the inside.



BLOW BOX PEEL EDGE CHANGEOVER

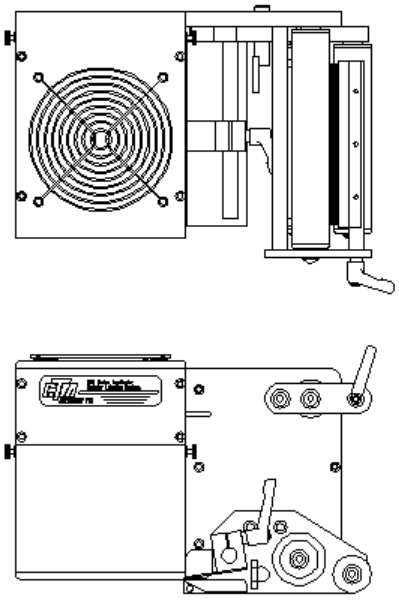
1) Remove the label sensor from the peel edge assembly and remount on the opposite side making sure that the fiber cables are threaded through from the opposite side. The open end of the U-shaped sensor should face towards the inside.
2) Remove the guide rollers and remount to the opposite side of the peel edge mounting plate.
3) Remove the peel edge and remount to the opposite side of the mounting plate using the tapped holes on the other end of the peel edge. Make sure the beveled edge is down and facing the same direction as it was originally.
4) Remove the label tension spring mounting bar and remount on the opposite side. The tension spring and the adjustment stop must be reversed on the mounting bar as well.
5) Remove the air assist tube and insert through the opposite side of the mounting plate and re-attach.

BLOW BOX GRID/FAN ASSEMBLY CHANGEOVER

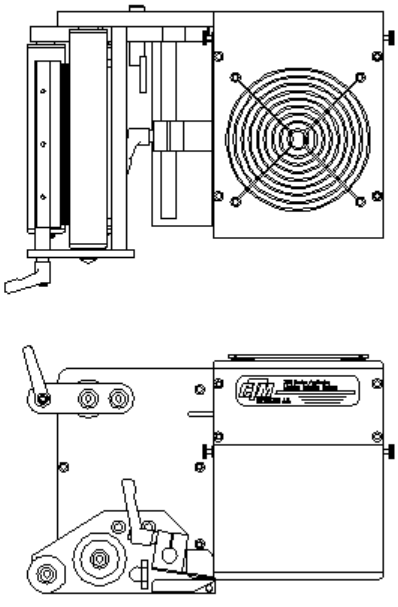
1) Remove the air blast fitting from the back of the nose assembly mounting plate and set aside.
2) Loosen the two knurled knobs on the back of the fan box and lock it in the upright position.
3) Remove the air blast manifold, label grid, and the air jet storage block. Remount on the opposite side of the nose assembly mounting plate.
4) Pull the fan wiring harness through the slotted opening in the nose mounting plate.
5) Remove the four screws holding the fan box hinge to the mounting plate and remount the fan box on the opposite side of the nose mounting plate.
6) Push the fan wiring harness through the slotted opening from the opposite side.
7) Re-install the air blast fitting in the nose assembly mounting plate.

BLOW BOX APPLICATOR NOSE

LEFT HAND CONFIGURATION



RIGHT HAND CONFIGURATION

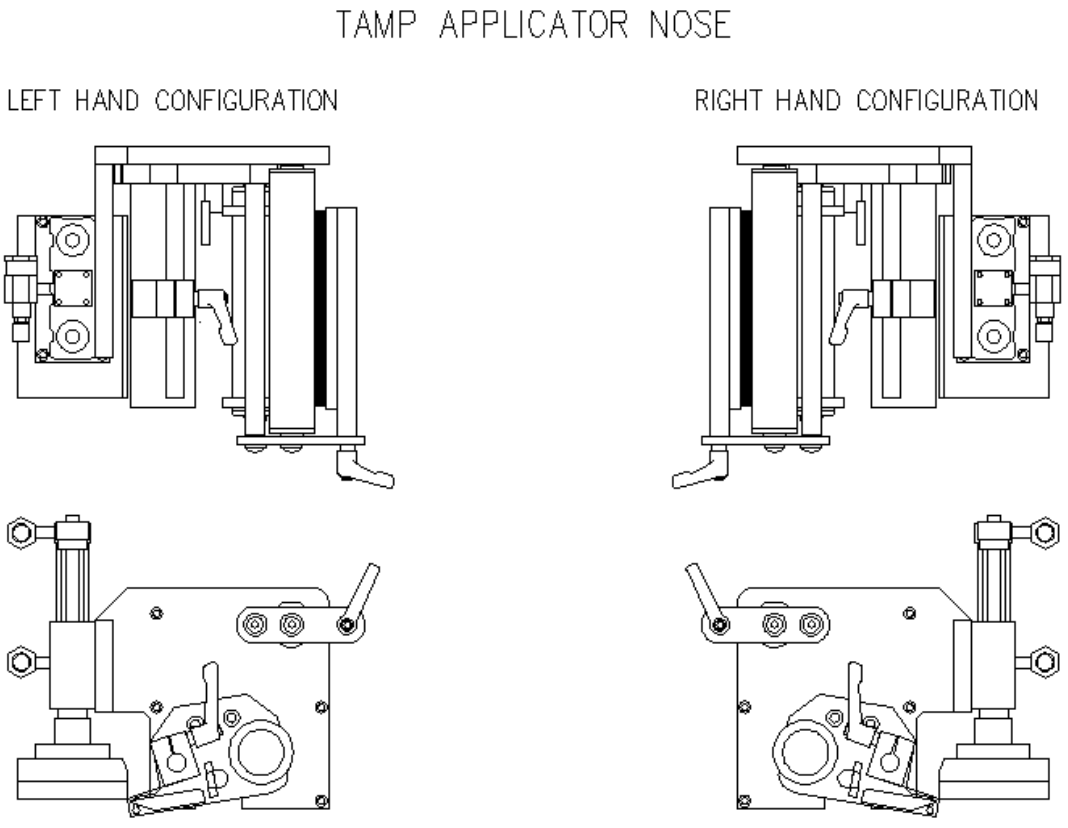


TAMP PEEL EDGE CHANGEOVER

1) Remove the label sensor from the peel edge assembly and remount on the opposite side making sure that the fiber cables are threaded through the holes from the opposite side. The open end of the U-shaped sensor should face towards the inside.
2) Remove the guide rollers and remount to the opposite side of the peel edge mounting plate.
3) Remove the peel edge and remount to the opposite side of the mounting plate using the tapped holes on the other end of the peel edge. Make sure the beveled edge is down and facing the same direction as it was originally.
4) Remove the label tension spring mounting bar and remount on the opposite side. The tension spring and the adjustment stop must be reversed on the mounting bar as well.
5) Remove the air assist tube and insert through the opposite side of the mounting plate and re-attach.

TAMP ASSEMBLY CHANGEOVER

1) Disconnect the air hoses for the tamp assembly at the applicator housing.
2) Remove the tamp assembly mounting plate from the nose assembly mounting plate.
3) Remove the two screws holding the tamp air cylinder to its mounting plate.
4) Mount the tamp air cylinder to the opposite side of the tamp assembly mounting plate.
5) Re-attach the tamp assembly mounting plate to the opposite side of the nose assembly mounting plate.



REWIND REMOVAL

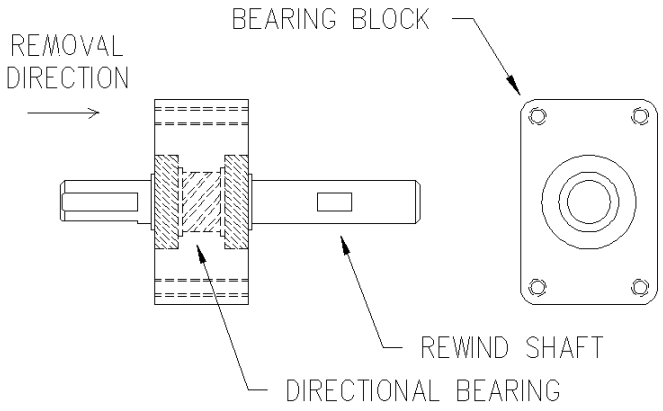
1) Remove the belt connecting the rewind clutch to the motor.
2) Remove the rewind mandrel from its drive shaft.
3) Remove the six #10 screws that hold the rewind mounting plate to the housing.

REWIND INSTALLATION

1) Attach the rewind mounting plate to the housing using the six #10 screws.
2) Install the rewind mandrel on the mandrel drive shaft.
3) Install the belt connecting the rewind clutch to the motor.

REWIND CHANGEOVER

1) Remove the bearing block that is mounted to the rewind transition plate.
2) Remove the pulley from the shaft making sure to note its position relative to the end of the shaft.
3) Remove the snap ring from the pulley side of the assembly and push the rewind shaft out through the mandrel side. **Note: The shaft diameter on the mandrel side is larger than it is on the pulley side. Do not attempt to force the shaft out through the pulley side!**
4) Re-install the shaft in the opposite side of the bearing block and replace the snap ring. **Note: The shaft can only rotate in one direction due to a directional bearing in the bearing block.**
5) Install the pulley on the shaft in the same position as it was previously.
6) Re-mount bearing block to the opposite side of the transition plate.



360a SERIES CE

MECHANICAL

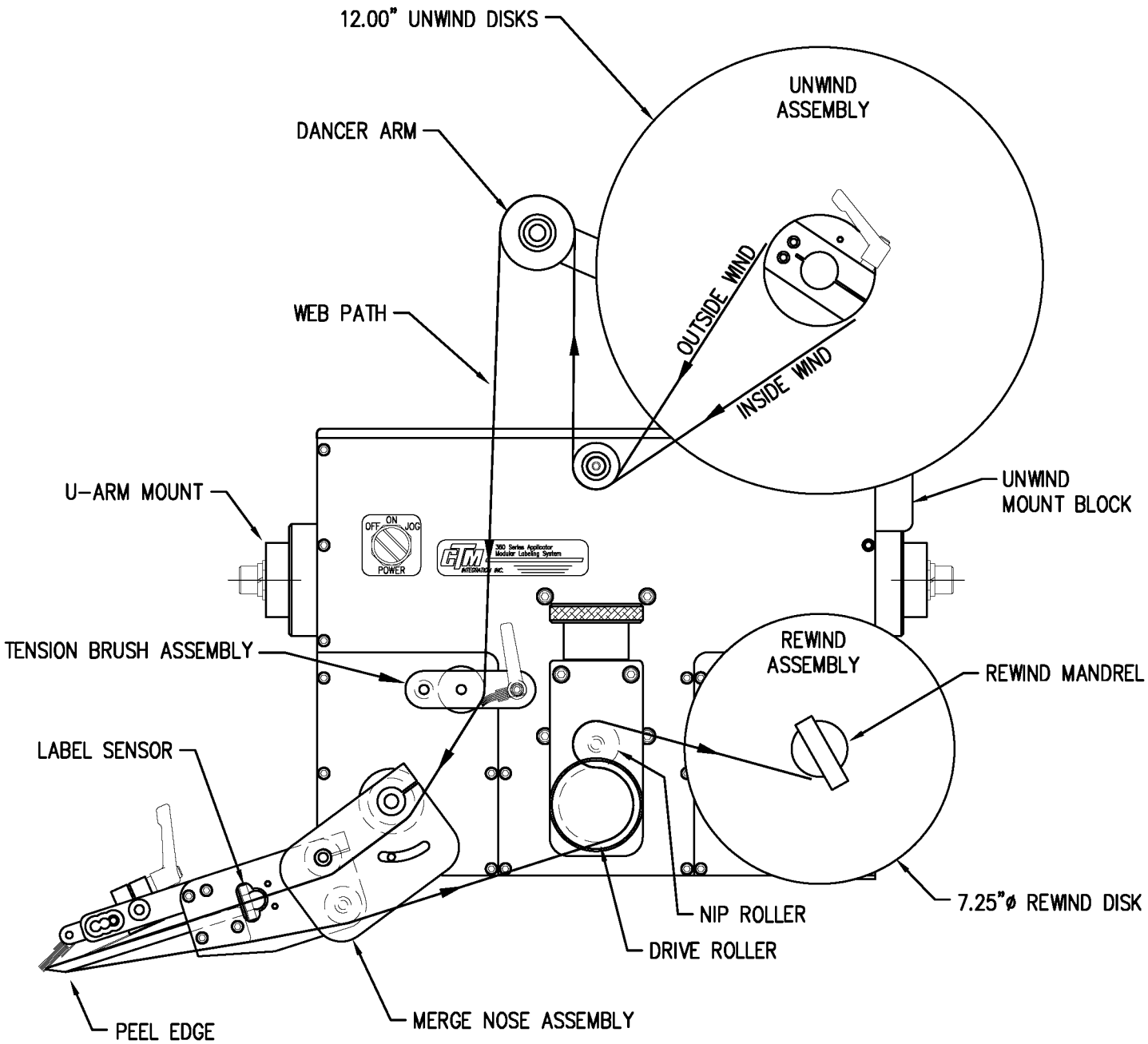
AND

ELECTRICAL

DRAWINGS

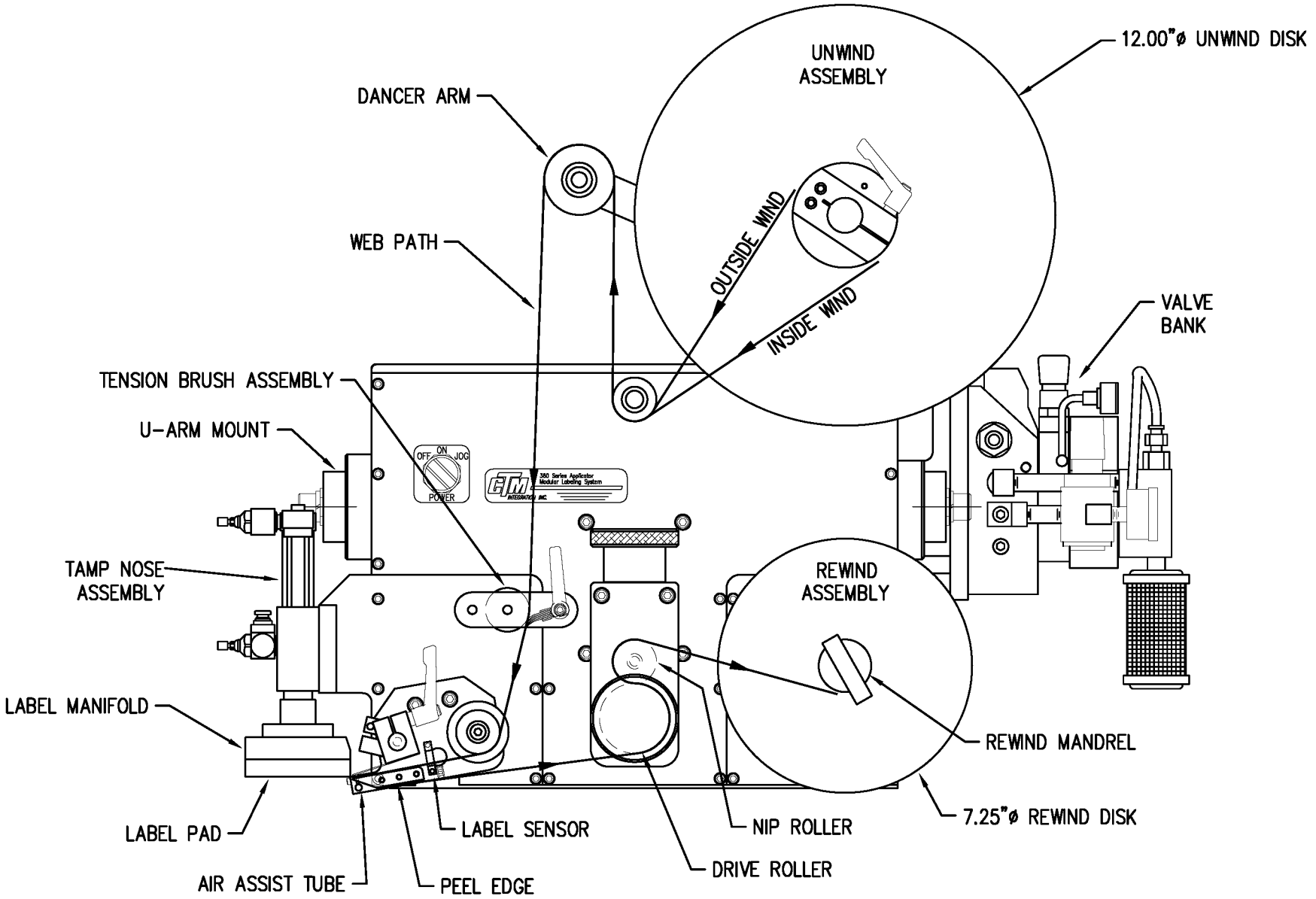
WEB PATH DIAGRAM

360 SERIES LEFT HAND MERGE APPLICATOR WITH 12" UNWIND



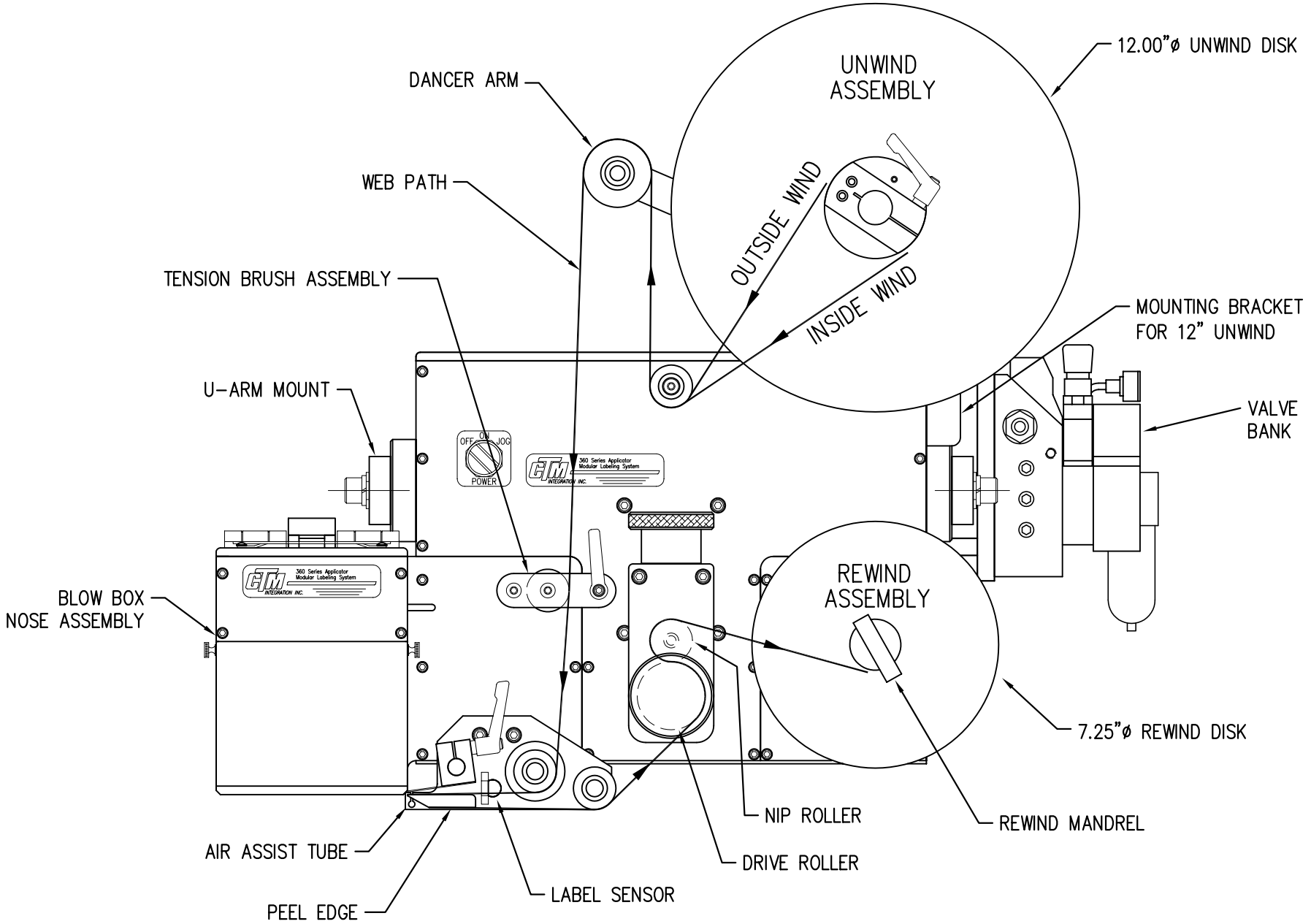
WEB PATH DIAGRAM

360 SERIES LEFT HAND TAMP APPLICATOR
WITH 12" UNWIND

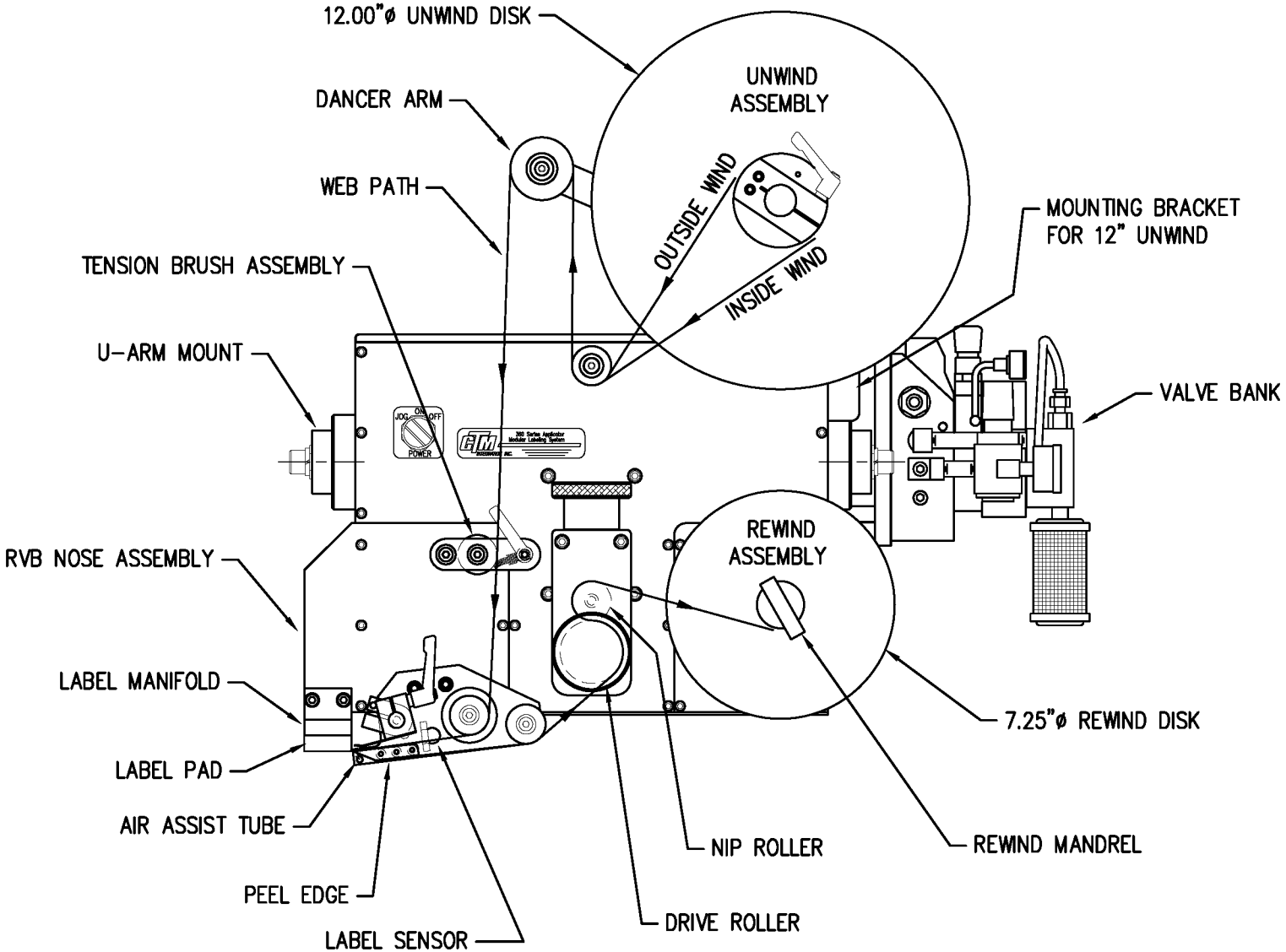


WEB PATH DIAGRAM

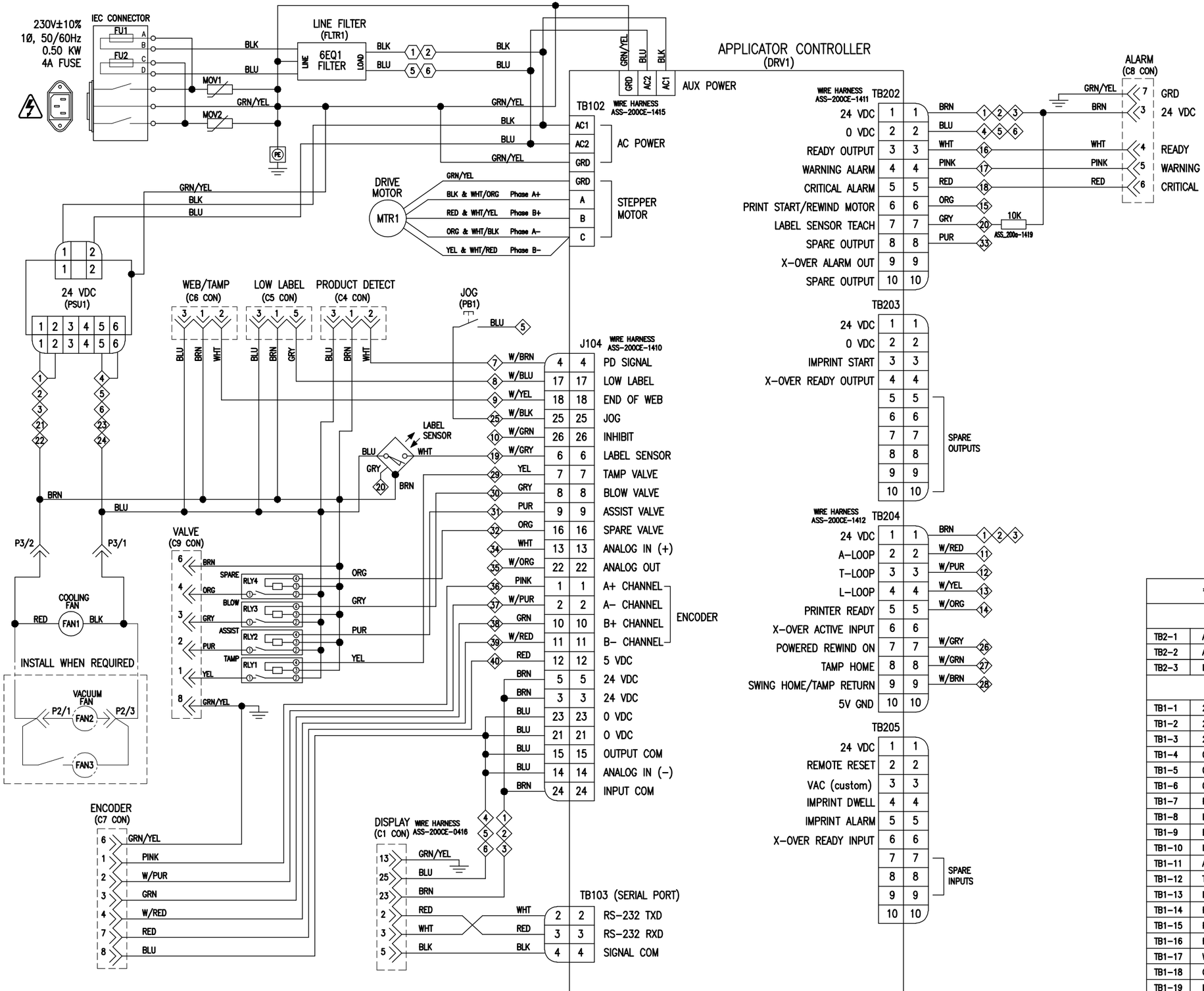
360 SERIES LEFT HAND AIR BLOW BOX APPLICATOR WITH 12" UNWIND



WEB PATH DIAGRAM
360 SERIES LEFT HAND RVB APPLICATOR
WITH 12" UNWIND



ASS-200CE-0401



****** ALL CONNECTORS ARE INSTALLED ONLY AS NEEDED ******

⟨XX⟩ –TB2 TERMINALS (AC POWER)

TB2–1	AC/LINE POWER	TB2–4	N/C
TB2–2	AC/LINE POWER	TB2–5	AC/NEUTRAL POWER
TB2–3	N/C	TB2–6	AC/NEUTRAL POWER

⟨XX⟩ –TB1 TERMINALS (DC LOGIC)

TB1–1	24 VDC	TB1–21	24 VDC
TB1–2	24 VDC	TB1–22	24 VDC
TB1–3	24 VDC	TB1–23	0 VDC
TB1–4	0 VDC	TB1–24	0 VDC
TB1–5	0 VDC	TB1–25	JOG INPUT
TB1–6	0 VDC	TB1–26	POWERED REWIND ON
TB1–7	PRODUCT DETECT SIGNAL	TB1–27	TAMP HOME INPUT
TB1–8	LOW LABEL INPUT	TB1–28	TAMP RETURN INPUT
TB1–9	END OF WEB INPUT	TB1–29	TAMP VALVE
TB1–10	INHIBIT	TB1–30	BLOW VALVE
TB1–11	A–LOOP INPUT	TB1–31	ASSIST VALVE
TB1–12	T–LOOP INPUT	TB1–32	SPARE VALVE
TB1–13	L–LOOP INPUT	TB1–33	SPARE OUTPUT
TB1–14	PRINTER READY	TB1–34	ANALOG INPUT
TB1–15	PRINT START/REWIND MOTOR	TB1–35	ANALOG OUTPUT
TB1–16	READY SIGNAL	TB1–36	ENCODER CHANNEL A+
TB1–17	WARNING ALARM	TB1–37	ENCODER CHANNEL A–
TB1–18	CRITICAL ALARM	TB1–38	ENCODER CHANNEL B+
TB1–19	LABEL SENSOR INPUT	TB1–39	ENCODER CHANNEL B–
TB1–20	LABEL SENSOR TEACH	TB1–40	5 VDC

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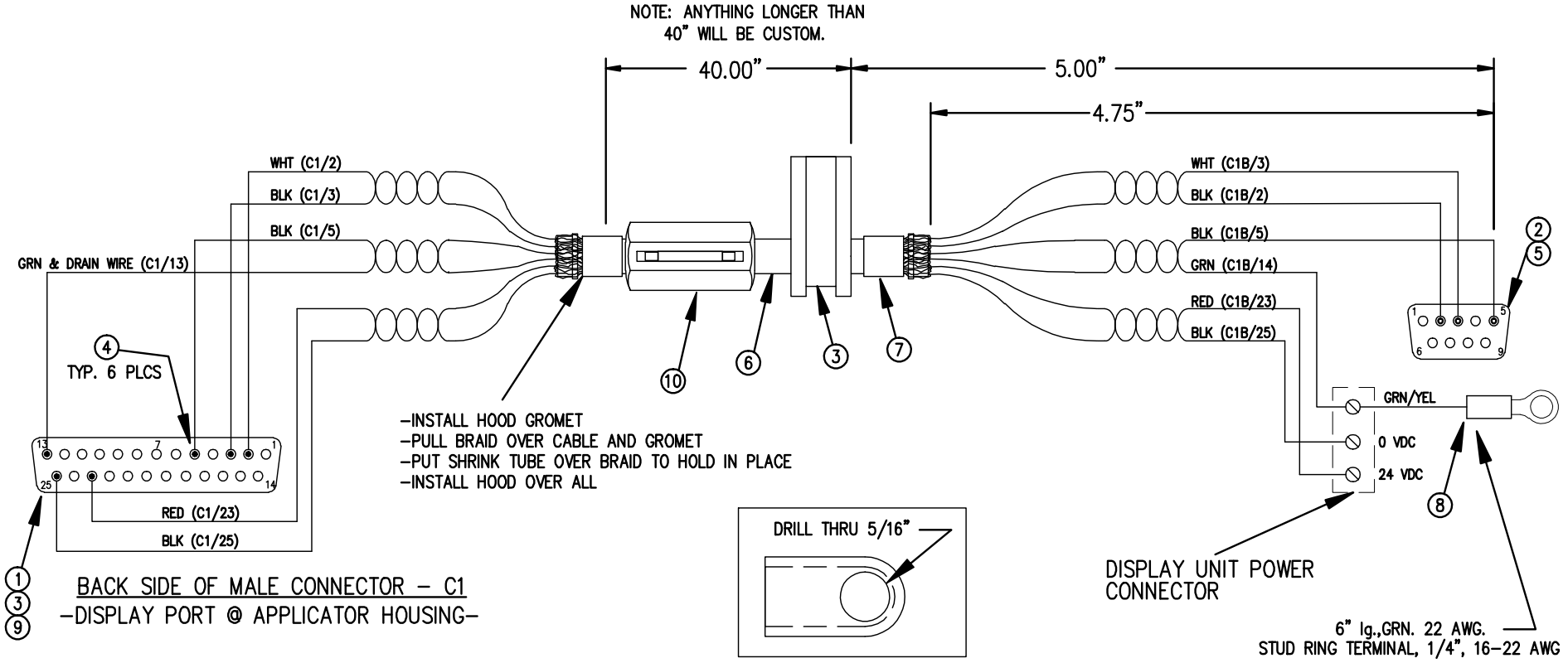
APPLICATOR SERIES: 360a–CE
APPLICATOR WIDTH(S): 5"/7.5"/10"
GROUP: ELECTRICAL
TITLE: WIRING FOR 360a–CE APPLICATOR (AEROTECH DRIVE)
Dept. Code 70
F:\Engineering\Standard Parts\Applicator\360a–CE\ELECTRICAL\ASS–200CE–0401
Scale: 1=2
Date: 03/03/08
DRAWN BY: DKM
REV. DESCRIPTION
7 Changed to IEC symbols when possible
REV. DATE 01–23–17
REV. BY: dkm

ASS-200CE-0407

BILL OF MATERIAL

ASS-200CE-0407

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2058	MALE (PLUG) CONNECTOR ~ 25 PIN
②	1	PE-CON2040	FEMALE (SOCKET) CONNECTOR ~ 9 PIN
③	1	PE-C01005	GROMMET (MODIFIED)
④	6	PE-CON7055	MALE PIN (APPLICATOR END)
⑤	3	PE-CON7057	FEMALE (SOCKET) DISPLAY UNIT END
⑥	40"	PE-CA1037	4 PR/24 AWG CABLE
⑦	2	PE-ST1025	1/2ø SHRINK TUBE
⑧	1	PE-WC1054	STUD RING TERMINAL
⑨	1	PE-CON3005	25-PIN HOOD HOUSING
⑩	1	PE-CA1008	FERRITE CABLE SUPPRESSOR



BACK SIDE OF MALE CONNECTOR – C1
-DISPLAY PORT @ APPLICATOR HOUSING-

BACK SIDE OF FEMALE CONNECTOR – C1B
-DISPLAY UNIT END-

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	APPLICATOR TO DISPLAY UNIT CABLE	70

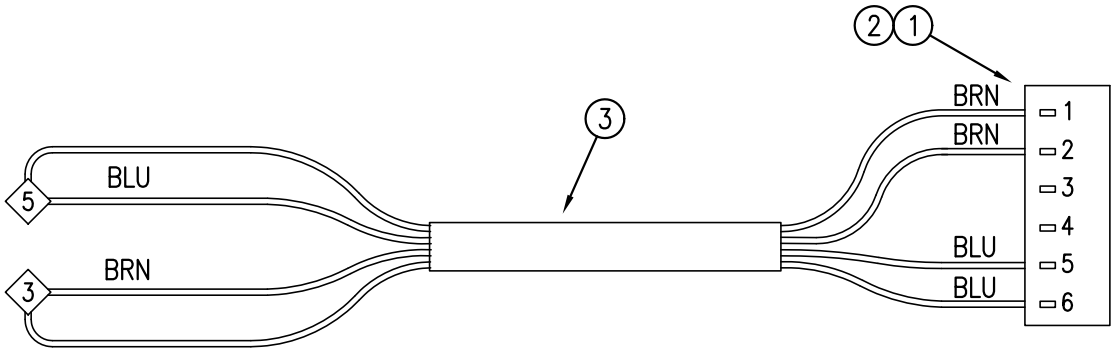
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
5	REVISED WHT AND BLK WIRE PINS	2/7/17	JWS	1=2	03/04/08	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0407

BILL OF MATERIAL

ASS-200CE-0411

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON7064	CONNECTOR HOUSING
②	2	PE-CON7066	FEMALE / SOCKET
③	1	PE-ST1010	3/16"ø SHRINK TUBE x 6" Lg.
	2	PE-W1036	22 AWG (BLUE) WIRE x 20" LONG
	2	PE-W1037	22 AWG (BROWN) WIRE x 20" LONG

ASS-200CE-0411



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0126

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: DC SUPPLY	70

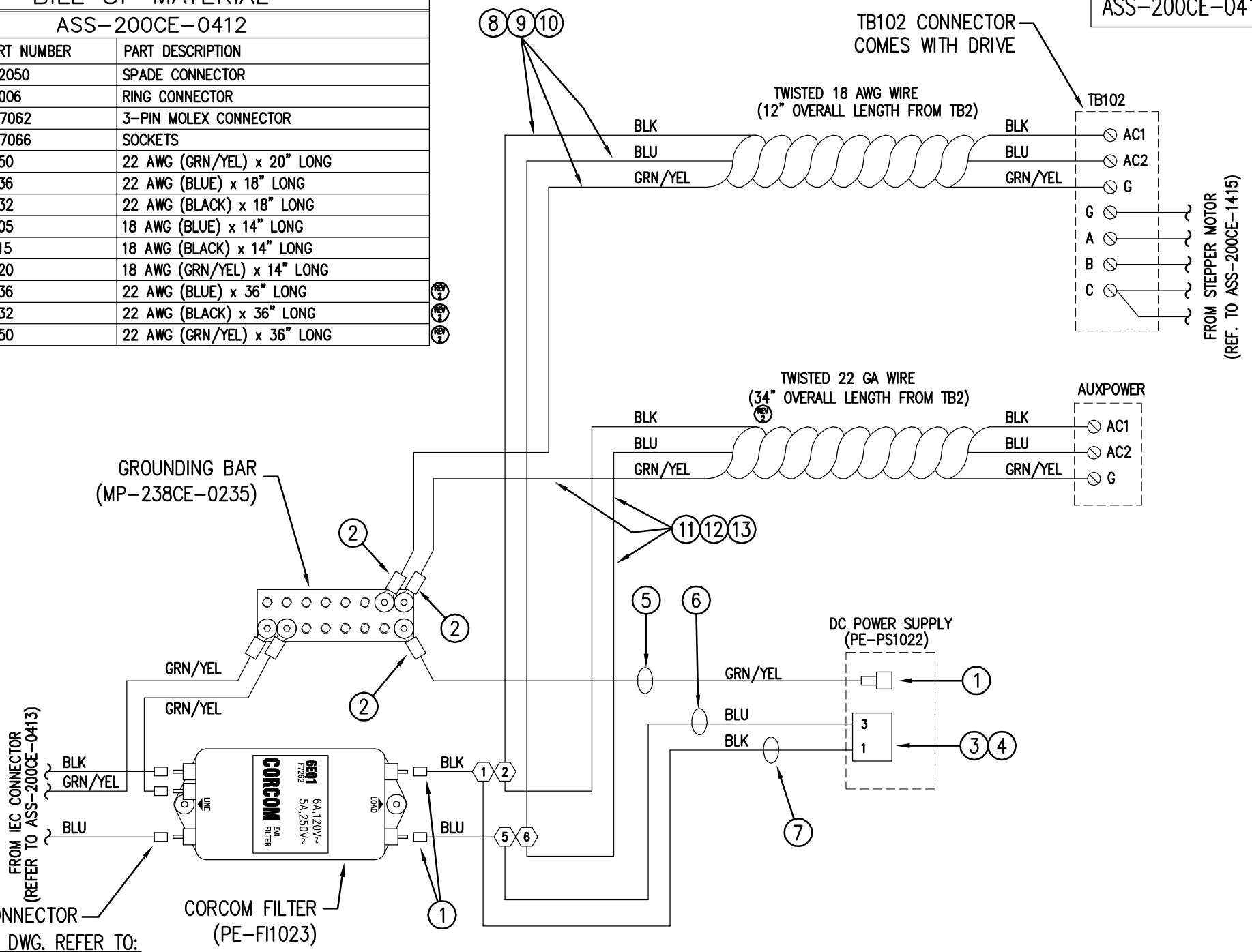
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
1	Move DC coms on power supply from terminals 3-4 to 1-2.	03-29-11	BMW	1=2	03/03/08	DKM	ELECTRICAL\ASS-200CE-0411

BILL OF MATERIAL

ASS-200CE-0412

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	3	PE-REC2050	SPADE CONNECTOR	
②	3	PE-WC1006	RING CONNECTOR	
③	1	PE-CON7062	3-PIN MOLEX CONNECTOR	
④	2	PE-CON7066	SOCKETS	
⑤	1	PE-W1050	22 AWG (GRN/YEL) x 20" LONG	
⑥	1	PE-W1036	22 AWG (BLUE) x 18" LONG	
⑦	1	PE-W1032	22 AWG (BLACK) x 18" LONG	
⑧	1	PE-W1605	18 AWG (BLUE) x 14" LONG	
⑨	1	PE-W1615	18 AWG (BLACK) x 14" LONG	
⑩	1	PE-W1620	18 AWG (GRN/YEL) x 14" LONG	
⑪	1	PE-W1036	22 AWG (BLUE) x 36" LONG	REV 2
⑫	1	PE-W1032	22 AWG (BLACK) x 36" LONG	REV 2
⑬	1	PE-W1050	22 AWG (GRN/YEL) x 36" LONG	REV 2

ASS-200CE-0412



FOR ASSEMBLY DWG. REFER TO: ASS-200CE-0120

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	AC POWER SUPPLY WIRING ASSEMBLY	70

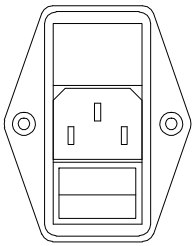
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
2	was 20" LG. (CHG'D PER SHOP MARKUP REF.# S.O.# 717671)	09/12/17	TK	1=2	03/03/08	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0412

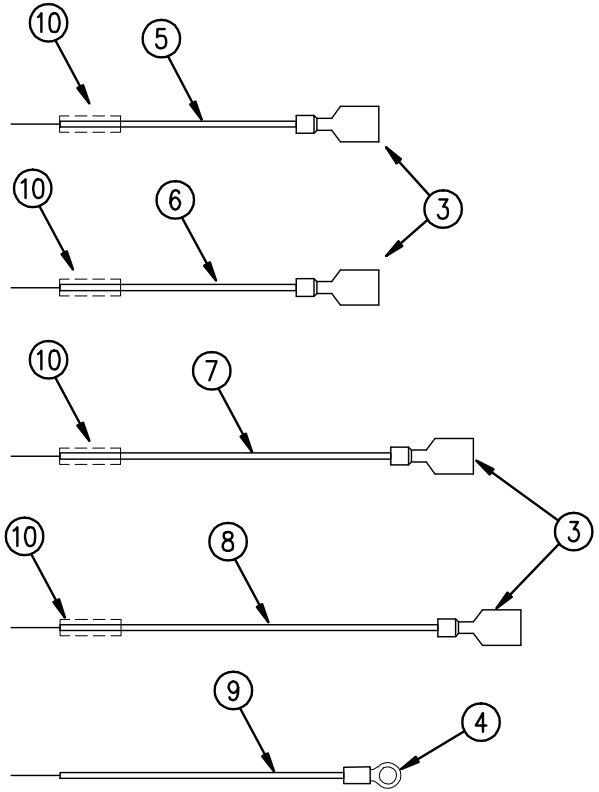
ASS-200CE-0413

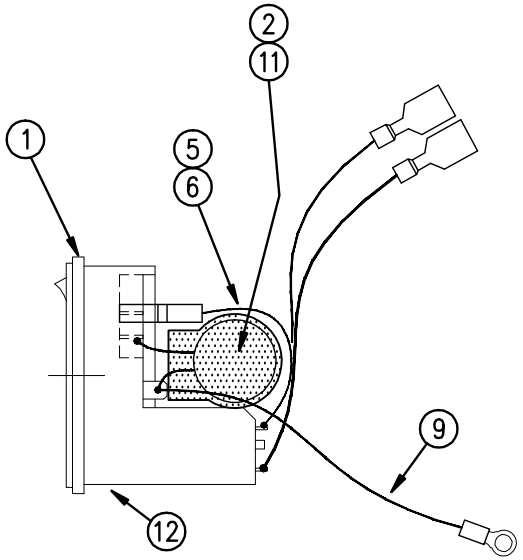
BILL OF MATERIAL

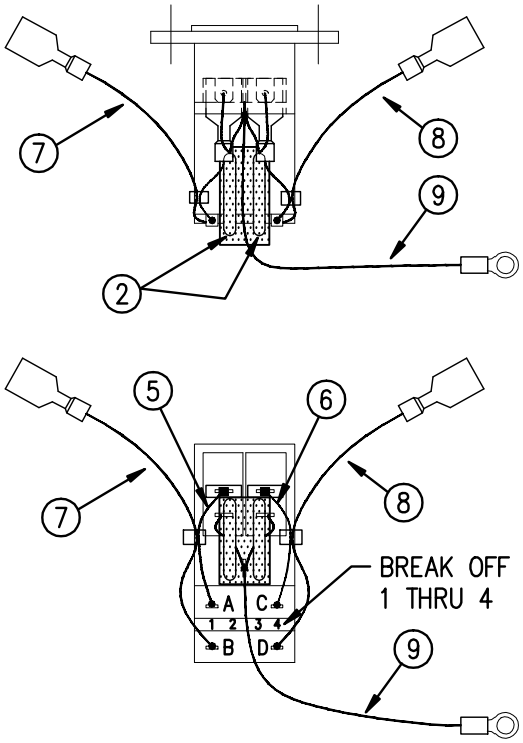
ASS-200CE-0413

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON1160	AC RECEPTACLE
②	2	PE-CB1015	VARISTOR
③	4	PE-REC2050	SPADE CONNECTOR
④	1	PE-WC1006	RING CONNECTOR
⑤	1	PE-W1605	18 AWG (BLUE) x 2-1/2" LONG
⑥	1	PE-W1615	18 AWG (BLACK) x 2-1/2" LONG
⑦	1	PE-W1605	18 AWG (BLUE) x 7" LONG
⑧	1	PE-W1615	18 AWG (BLACK) x 8" LONG
⑨	1	PE-W1620	18 AWG (GRN/YEL) x 6" LONG
⑩	4	PE-ST1010	3/16ø SHRINK TUBE x 3/4" Lg.
⑪	1	PE-ST1035	SHRINK TUBE x 1-1/4" Lg.
⑫	1	PE-FU1075	4 AMP FUSE









FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0121

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	AC POWER RECEPTACLE ASSEMBLY	70

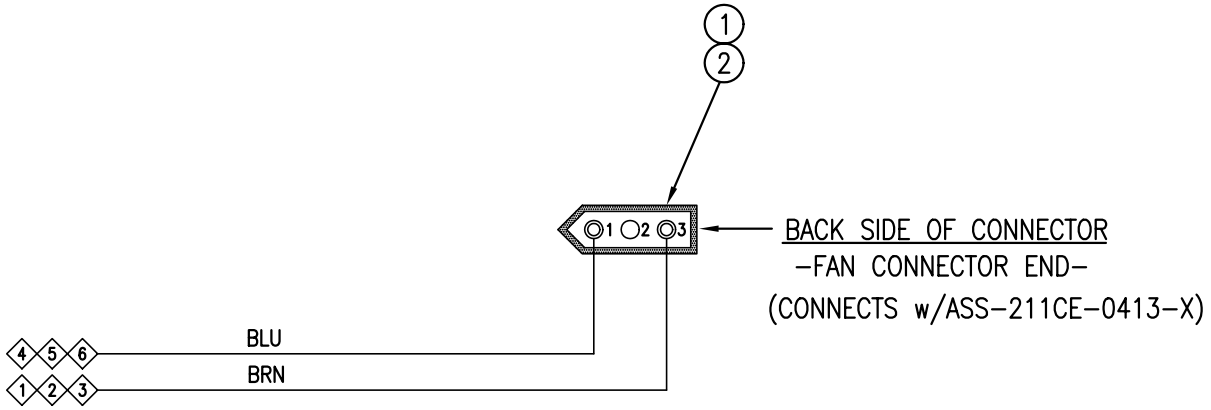
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
1	4AMP FUSE ADDED	10/6/16	JWS	1=2	03/03/08	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0413

BILL OF MATERIAL

ASS-200CE-0414

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON3027	WIRE HARNESS PLUG
②	2	PE-CON7060	FEMALE / SOCKET
③	1	PE-W1036	22 AWG (BLU) x 27" LONG
④	1	PE-W1037	22 AWG (BRN) x 27" LONG

ASS-200CE-0414



FOR ASSEMBLY DWG. REFER TO:
ASS-211CE-0104-X

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: VACUUM BOX FANS TO TB1	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	-	-	XXX	1=2	11/18/07	DKM	ELECTRICAL\ASS-200CE-0414

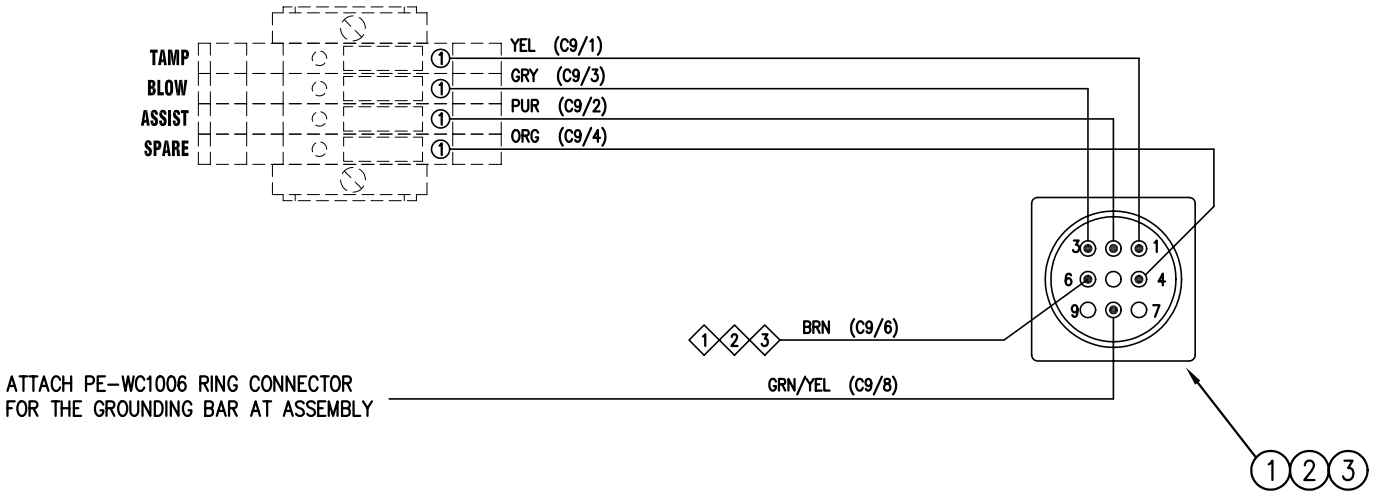
ASS-200CE-0415

BILL OF MATERIAL

ASS-200CE-0415

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2015	MALE (PLUG) CONNECTOR
②	6	PE-CON7050	MALE PIN
③	1	PE-CON7000	CONNECTOR CAP
	1	PE-W1050	22 AWG (GRN/YEL) WIRE x 27" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 24" LONG
	1	PE-W1038	22 AWG (ORANGE) WIRE x 24" LONG
	1	PE-W1039	22 AWG (GRAY) WIRE x 24" LONG
	1	PE-W1040	22 AWG (PURPLE) WIRE x 24" LONG
	1	PE-W1035	22 AWG (YELLOW) WIRE x 24" LONG

NOTE: THIS HARNESS IS NOT INCLUDED IN BASE MODEL IT MUST BE ADDED TO BOM WHEN USING A NOSE ASSEMBLY THAT REQUIRES A VALVE BANK.



NOT USED IN A STANDARD ASSEMBLY

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	VALVE CONNECTOR WIRING HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	XXX	1=2	03/04/08	DKM	ELECTRICAL\ASS-200CE-0415

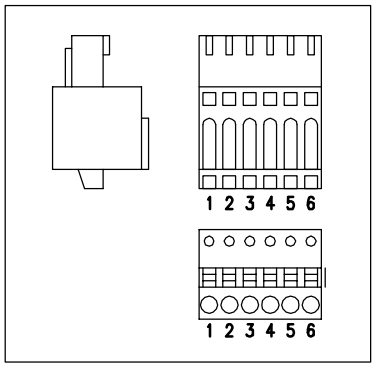
ASS-200CE-0416

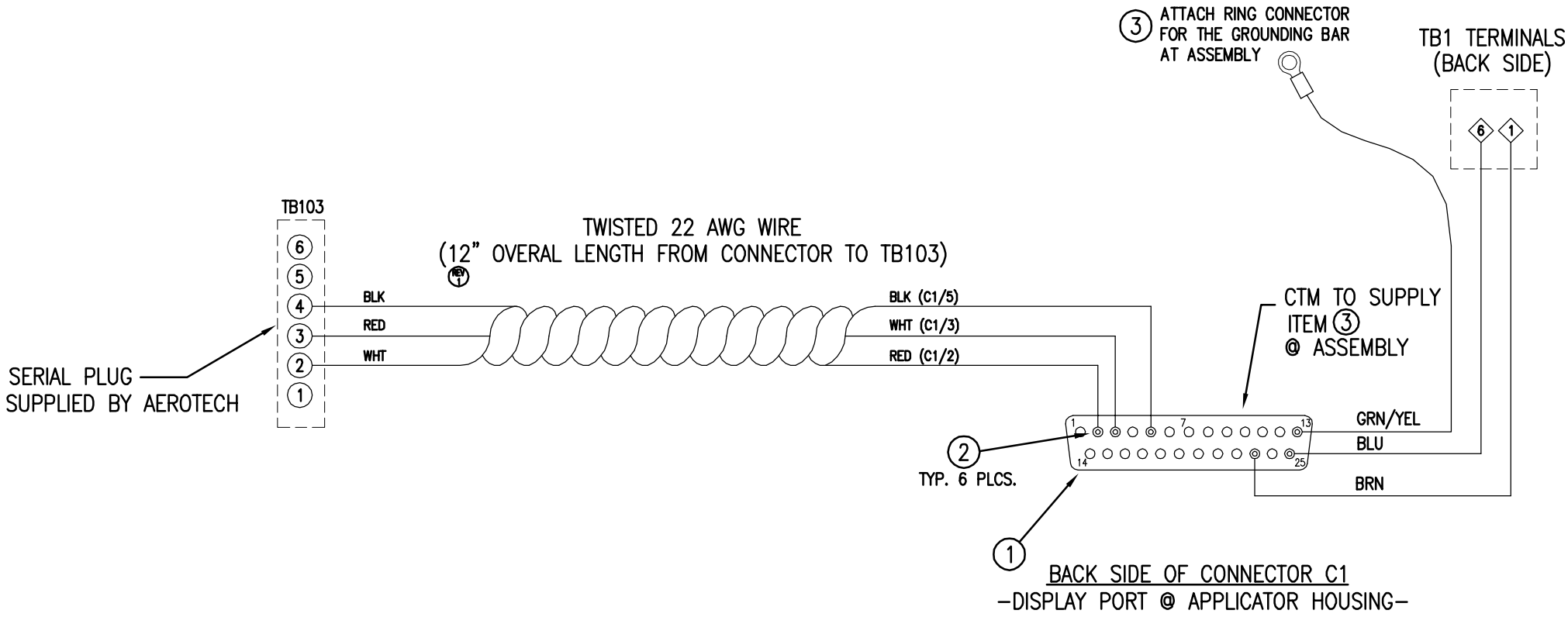
BILL OF MATERIAL

ASS-200CE-0416

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2060	FEMALE (SOCKET) CONNECTOR ~ 25 PIN
②	6	PE-CON7057	FEMALE / SOCKET
③	1	PE-WC1006	RING CONNECTOR
	1	PE-W01036	22 AWG (BLUE) WIRE x 10" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 10" LONG
	1	PE-W1033	22 AWG (RED) WIRE x 13.5" LONG (REV 1)
	1	PE-W1031	22 AWG (WHITE) WIRE x 13.5" LONG (REV 1)
	1	PE-W1032	22 AWG (BLACK) WIRE x 13.5" LONG (REV 1)
	1	PE-W1050	22 AWG (GREEN/YELLOW) WIRE x 27" LONG

TB103 CONNECTOR DRAWING





FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0121

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: DRIVER BOARD TO DISPLAY PORT	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
1	was 10" LG. (CHG'D PER SHOP MARKUP REF.# S.O.# 717671)	09/12/17	TK	1=2	03/05/08	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0416

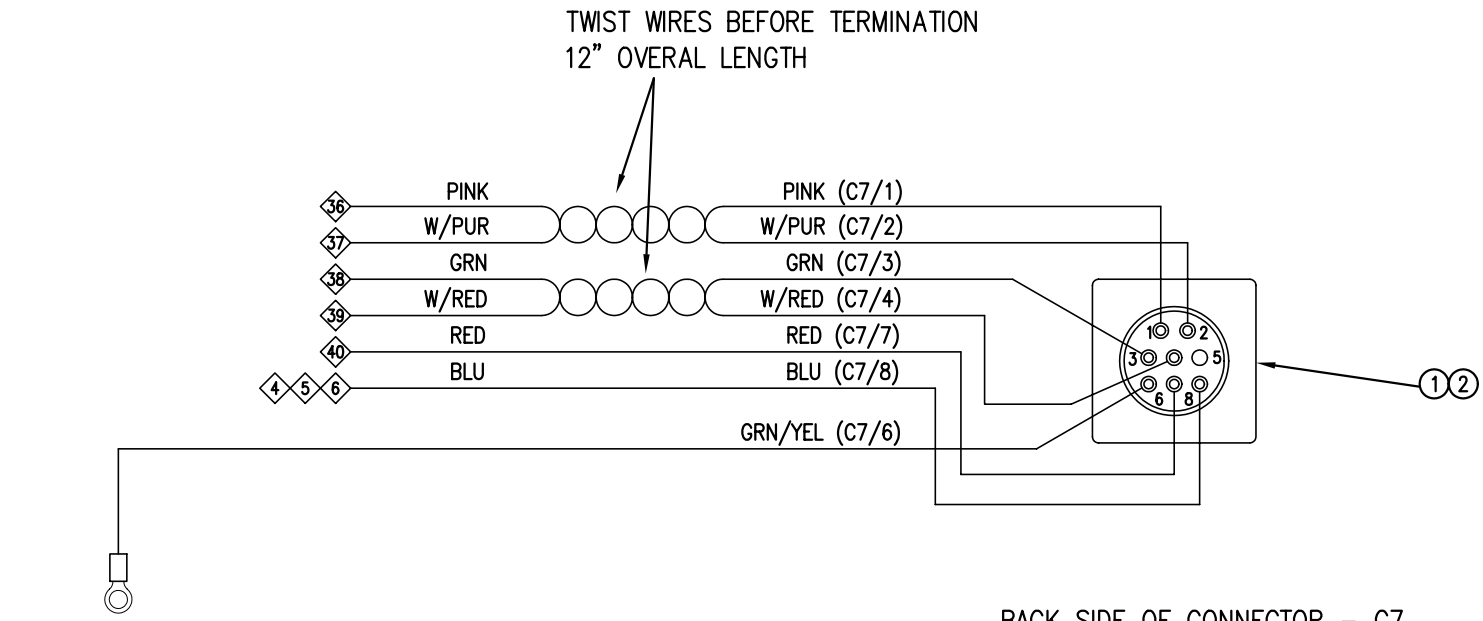
ASS-200CE-0418

BILL OF MATERIAL

ASS-200CE-0418

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2030	FEMALE (SOCKET) CONNECTOR ~ 25 PIN
②	6	PE-CON7057	FEMALE / SOCKET
③	1	PE-WC1006	RING CONNECTOR
	1	PE-W01060	22 AWG (PINK) WIRE x XX" LONG
	1	PE-W1049	22 AWG (WHT/PUR) WIRE x XX" LONG
	1	PE-W1034	22 AWG (GRN) WIRE x XX" LONG
	1	PE-W1042	22 AWG (WHT/RED) WIRE x XX" LONG
	1	PE-W1033	22 AWG (RED) WIRE x 12" LONG
	1	PE-W1036	22 AWG (BLUE) WIRE x 12" LONG
	1	PE-W1050	22 AWG (GREEN/YELLOW) WIRE x 27" LONG

NOTE: THIS HARNESS IS NOT INCLUDED IN BASE MODEL
IT MUST BE ADDED TO BOM WHEN USING AN ENCODER.



③ ATTACH RING CONNECTOR FOR THE GROUNDING BAR AT ASSEMBLY

BACK SIDE OF CONNECTOR – C7
–ENCODER PORT @ APPLICATOR HOUSING–

NOT USED IN A STANDARD ASSEMBLY

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: DRIVER BOARD TO ENCODER PORT	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
0	–	–	XXX	1=2	03/05/08	DKM	ELECTRICAL\ASS-200CE-0418

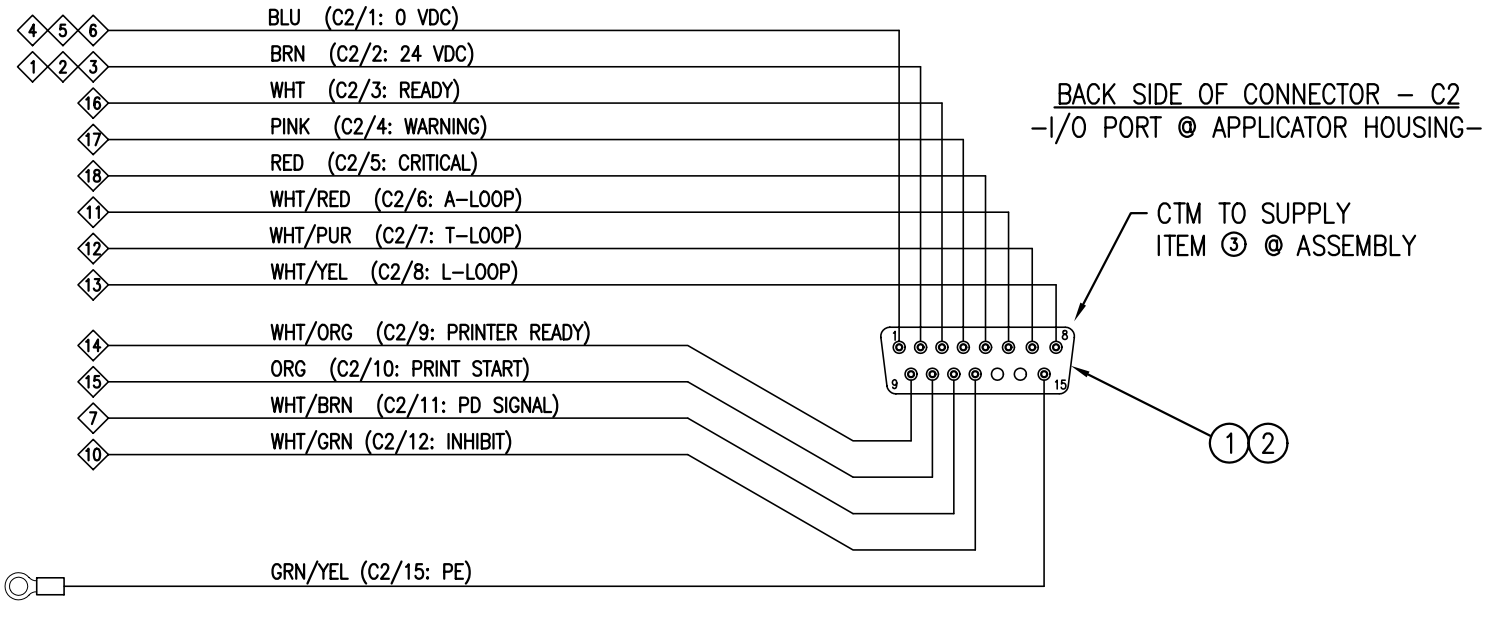
ASS-200CE-0419

BILL OF MATERIAL

ASS-200CE-0419

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2050	FEMALE (SOCKET) CONNECTOR
②	13	PE-CON7057	FEMALE / SOCKET
③	2	PE-SO1028	JACK SCREW, L.W., F.W., NUT
④	1	PE-WC1006	RING CONNECTOR
	1	PE-WO1036	22 AWG (BLUE) WIRE x 16" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 16" LONG
	1	PE-W1038	22 AWG (ORANGE) WIRE x 16" LONG
	1	PE-W1049	22 AWG (WHT/PUR) WIRE x 16" LONG
	1	PE-W1031	22 AWG (WHT) WIRE x 16" LONG
	1	PE-W1042	22 AWG (WHT/RED) WIRE x 16" LONG
	1	PE-W1043	22 AWG (WHT/GRN) WIRE x 16" LONG
	1	PE-W1044	22 AWG (WHT/YEL) WIRE x 16" LONG
	1	PE-W1060	22 AWG (PINK) WIRE x 16" LONG
	1	PE-W1033	22 AWG (RED) WIRE x 16" LONG
	1	PE-W1046	22 AWG (WHT/BRN) WIRE x 16" LONG
	1	PE-W1047	22 AWG (WHT/ORG) WIRE x 16" LONG
	1	PE-W1050	22 AWG (GREEN/YELLOW) WIRE x 27" LONG

NOTE: THIS HARNESS IS NOT INCLUDED IN BASE MODEL
IT MUST BE ADDED TO BOM WHEN I/O IS REQUIRED.



NOT USED IN A STANDARD ASSEMBLY

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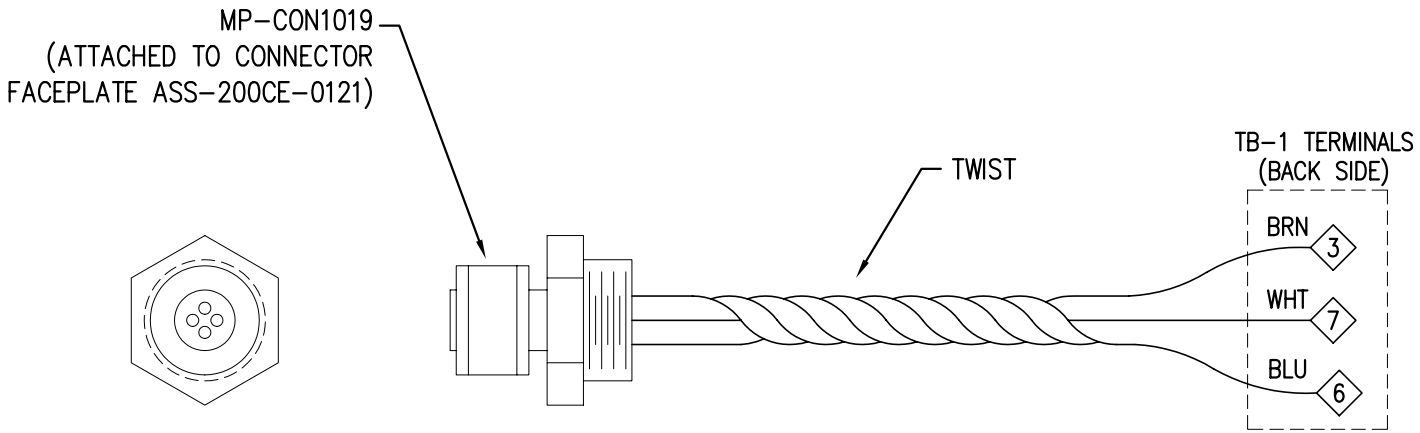
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: I/O PORT TO TB1/TB2	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	XXX	1=2	03/05/08	DKM	ELECTRICAL\ASS-200CE-0419

ASS-200CE-0421

VIEW PRINT



WIRING INFO. USED ON ASSY DWG:
ASS-200CE-0123

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360CE	5"/7.5"/10"	HOUSING: ELECTRICAL	PRODUCT DETECT PLUG WIRING DIAGRAM	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
0	–	–	XXX	1=2	11/19/07	DKM	ELECTRICAL\ASS-200CE-0421

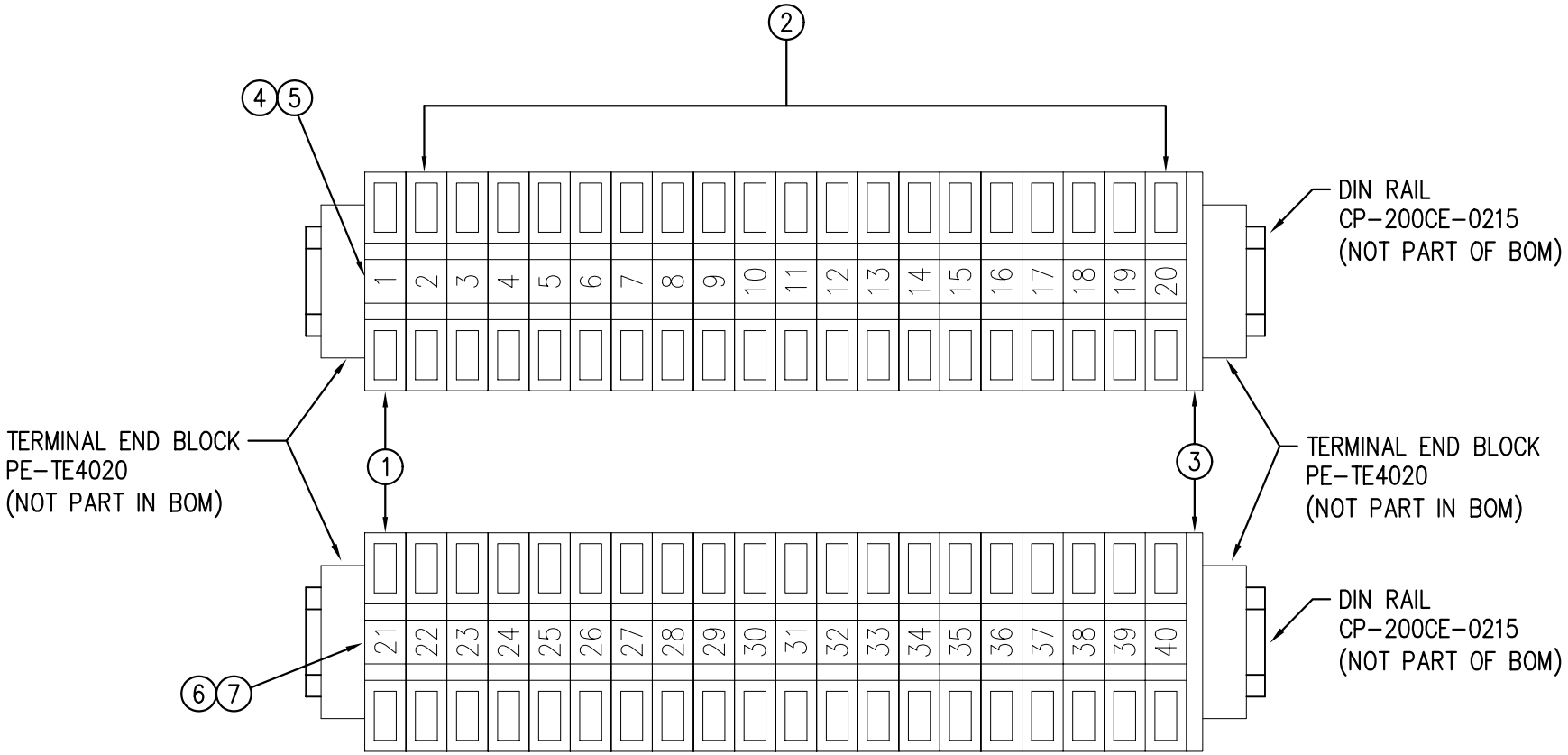
ASS-200CE-0422

BILL OF MATERIAL

ASS-200CE-0422

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	2	MP-TE4000	#1 TERMINAL END BLOCK (modified)
②	38	PE-TE4000	TERMINAL BLOCK
③	2	PE-TE4030	TERMINAL END BARRIER
④	1	PE-MA1020	#1-10 MARKING TAG
⑤	1	PE-MA1030	#11-20 MARKING TAG
⑥	1	PE-MA1040	#21-30 MARKING TAG
⑦	1	PE-MA1050	#31-40 MARKING TAG

NOTE: THERE ARE TWO ASSEMBLIES OF 20 TERMINALS
-ONE ASSEMBLY LABELED 1-20
-ONE ASSEMBLY LABELD 21-40



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0122

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	TB-1 TERMINAL ASSEMBLY	70

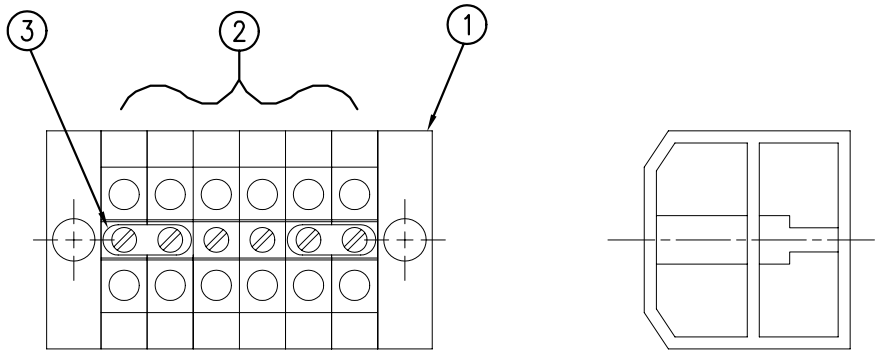
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
0	-	-	XXX	1=1	11/12/07	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0422

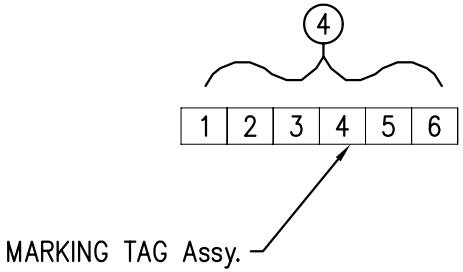
ASS-200CE-0423

BILL OF MATERIAL

ASS-200CE-0423

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	2	PE-TE3110	EPCMB4 TERMINAL BLOCK MOUNTING SECTION
②	6	PE-TE3100	CMB4 TERMINAL BLOCK
③	2	PE-TE3120	2-POLE INTERNAL JUMPER
④	1	PE-MA1110	#1-10 MARKING TAG





FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0120

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	TB-2 TERMINAL ASSEMBLY	70

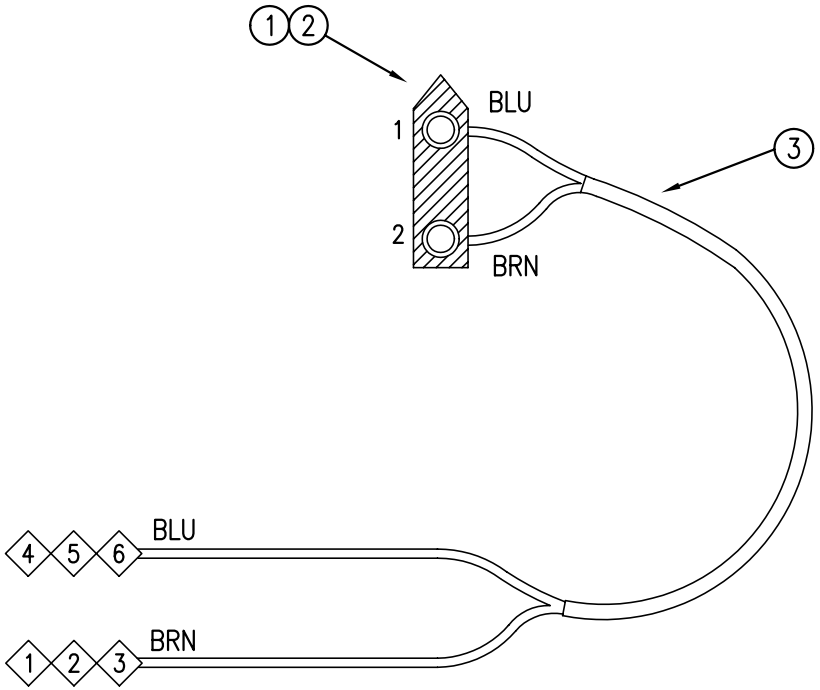
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
0	–	–	XXX	1=1	11/12/07	DKM	ELECTRICAL\ASS-200CE-0423

ASS-200CE-0426

BILL OF MATERIAL

ASS-200CE-0426

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON3024	CONNECTOR HOUSING
②	2	PE-CON7053	FEMALE / SOCKET
③	1	PE-ST1010	3/16"ø SHRINK TUBE x 6" Lg.
	1	PE-W1036	22 AWG (BLUE) WIRE x 20" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 20" LONG



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0124

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	HOUSING FAN HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	XXX	1=2	03/03/08	DKM	ELECTRICAL\ASS-200CE-0426

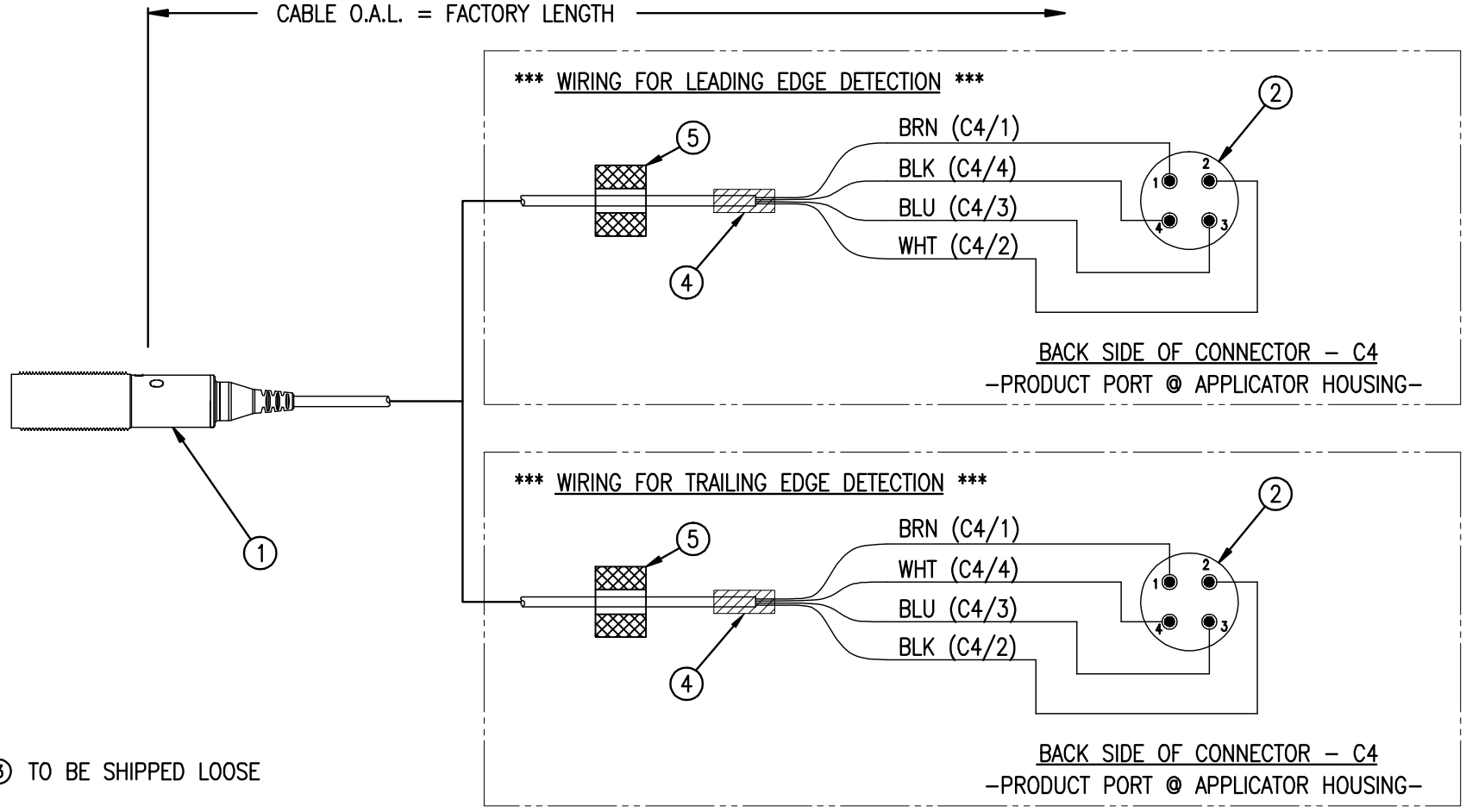
ASS-200CE-0427

BILL OF MATERIAL

ASSEMBLY		ASS-200CE-0427		SOLD
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	S
①	1	POTTED RETRO-REFLECTIVE SENSOR	PE-SE0994	.
②	1	PRODUCT DETECT PLUG	PE-CA2000	.
③	1	REFLECTIVE TAPE (CUT TO 6" LENGTH)	PE-RT1000	.
④	1	AIR ASSIST TUBING x 1/4" LONG	PM-AH1000	.
⑤	1	FERRITE CYLINDER	PE-FI1027	.

SENSOR INFORMATION	
MODE	RETROREFLECTIVE (POLARIZED)
SENSING RANGE	6m (19.7 ft)
CABLE LENGTH (FACTORY)	2m (6.5 ft)

NOTE: ADD PE-FI1027 TO CABLE 2" FROM CONNECTOR FOR CE OPTION



ITEM ③ TO BE SHIPPED LOOSE

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TITLE: 360 SERIES APPLICATOR: ELECTRICAL: PRODUCT DETECT	PART: PRODUCT DETECT: RETRO-REFLECTIVE SENSOR with 4-PIN CONNECTOR	Dept. Code 70

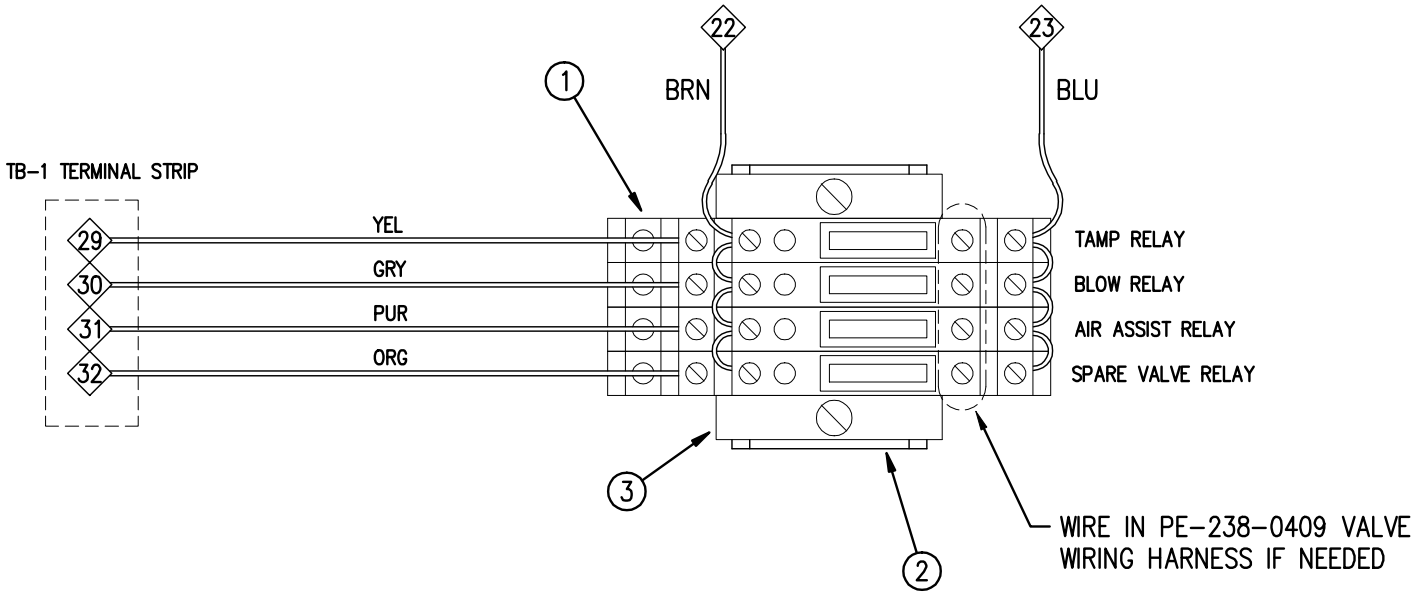
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360 200\ASS-200CE-0427
3	ADDED AIR ASSIST TUBING	04/26/16	SES	1=2	02/19/98	BOB S.	

ASS-200CE-0445

BILL OF MATERIAL

ASS-200CE-0445

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	4	PE-RE1013	VALVE RELAY
②	1	MP-200CE-0212	DIN RAIL (REV 1)
③	2	PE-RE1053	DIN RAIL STOPS
	3	PE-W103602B	22 AWG (BLUE) JUMPER x 2" LONG
	3	PE-W103701B	22 AWG (BROWN) JUMPER x 2" LONG
	1	PE-W103608o	22 AWG (BLUE) WIRE x 11" LONG
	1	PE-W103707o	22 AWG (BROWN) WIRE x 10" LONG
	1	PE-W103802o	22 AWG (ORANGE) WIRE x 10" LONG
	1	PE-W103901o	22 AWG (GRAY) WIRE x 10" LONG
	1	PE-W104002o	22 AWG (PURPLE) WIRE x 10" LONG
	1	PE-W103503o	22 AWG (YELLOW) WIRE x 10" LONG



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0122

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	VALVE RELAY ASSEMBLY	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
1	ITEM #2 WAS CP-200CE-0212	04/24/08	TDR	1=2	11/16/07	DKM	F:\Engineering\Standard Parts\Applicator\360a-CE\ELECTRICAL\ASS-200CE-0445

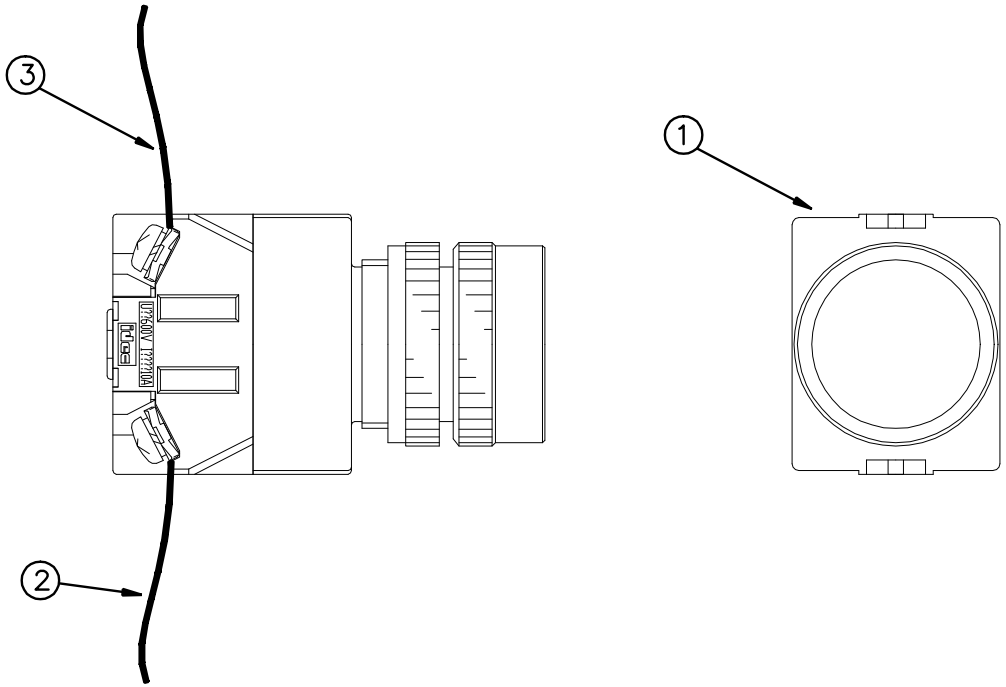
ASS-200CE-0451

BILL OF MATERIAL

ASS-200CE-0451

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SW2011	JOG SWITCH w/BLACK LENSE
②	1	PE-W1036	22 AWG (BLUE) x 10" LONG
③	1	PE-W1041	22 AWG (WHITE/BLACK) x 10" LONG

STRIP ENDS OF BOTH WIRES BEFORE INSERTING THEM INTO JOG SWITCH TERMINALS



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING	JOG SWITCH ASSEMBLY w/ BLACK LENSE	70

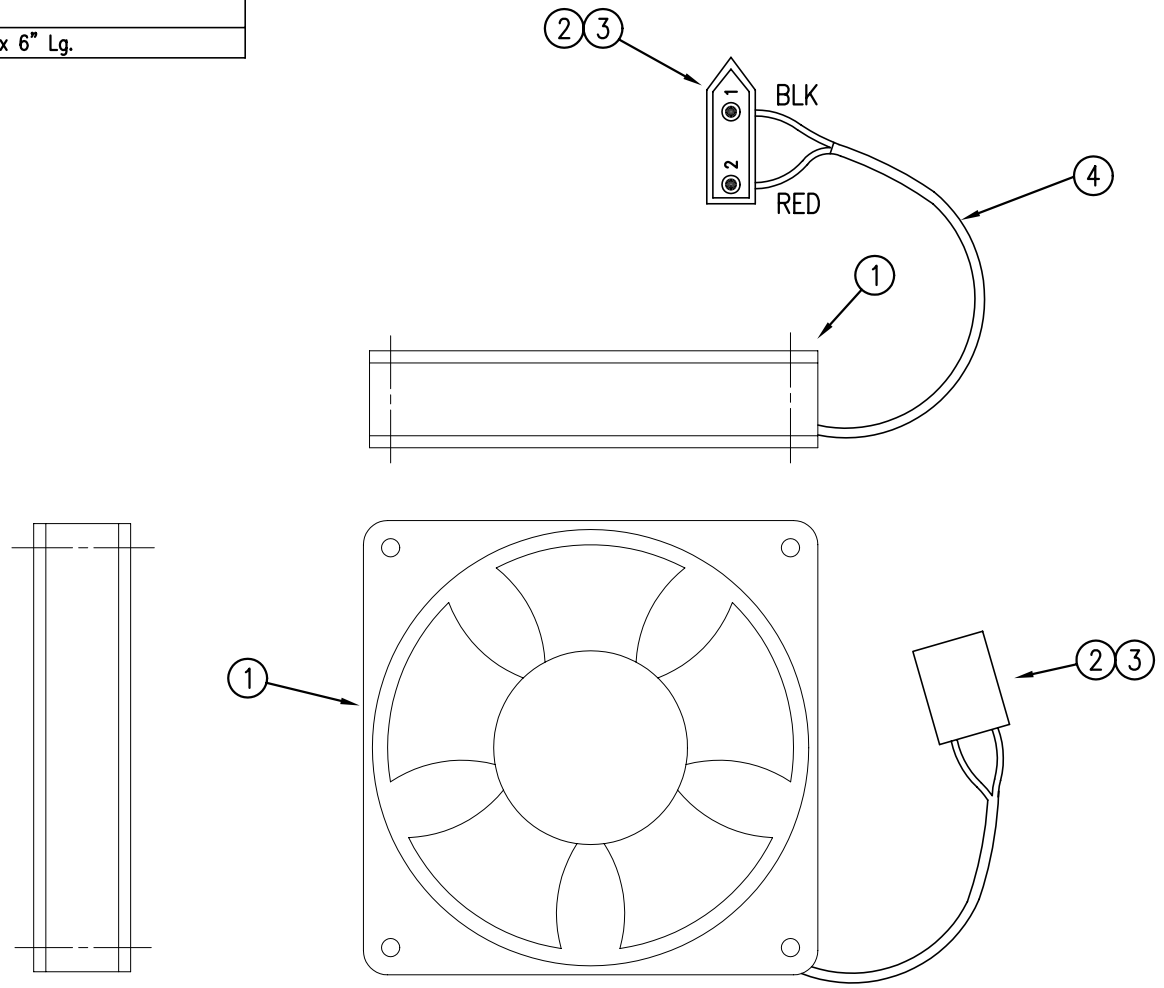
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
1	UPDATED TO INCLUDE PROPER PUSHBUTTON	11/10/15	JWS	1=1	03/12/08	Tracy Rhodes	ELECTRICAL\ASS-200CE-0451

ASS-200CE-0454

BILL OF MATERIAL

ASS-200CE-0454

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-FAN1023	COMAIR COOLING FAN
②	1	PE-CON3026	MOLEX CONNECTOR
③	2	PE-CON7061	MOLEX PIN
④	1	PE-ST1005	1/8ø SHRINK TUBE x 6" Lg.



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0124

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	COOLING FAN	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	XXX	1=2	11/21/07	DKM	ELECTRICAL\ASS-200CE-0454

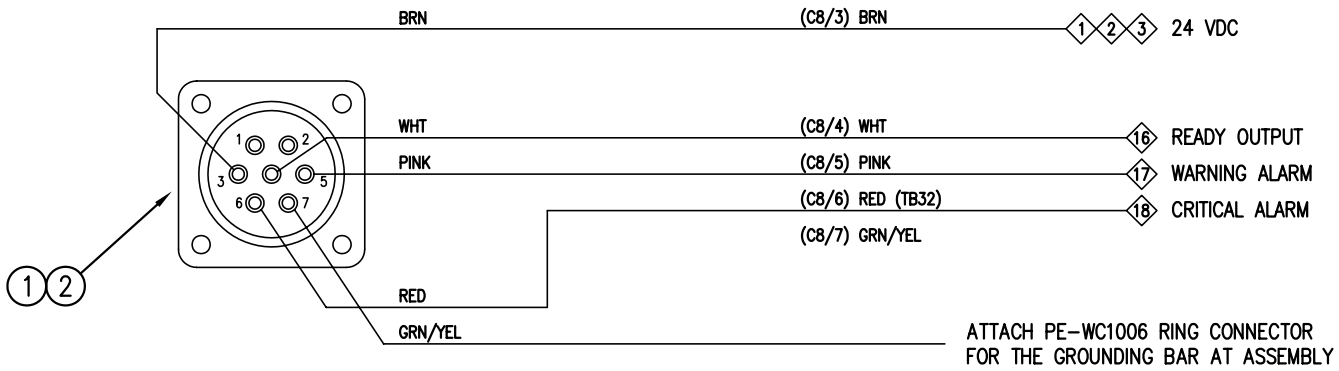
ASS-200CE-0481

BILL OF MATERIAL

ASS-200CE-0481

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2021	ALARM CONNECTOR
②	7	PE-CON7048	FEMALE PIN
	1	PE-W1037	22 AWG (BROWN) x 12" LONG
	1	PE-W1050	22 AWG (GREEN/YELLOW) x 27" LONG
	1	PE-W1060	22 AWG (PINK) x 12" LONG
	1	PE-W1033	22 AWG (RED) x 12" LONG
	1	PE-W1031	22 AWG (WHITE) x 12" LONG

NOTE: THIS HARNESS IS NOT INCLUDED IN BASE MODEL IT MUST BE ADDED TO BOM WHEN USING A ALARM LIGHT STACK ASSEMBLY.



BACK SIDE OF CONNECTOR – C8
–ALARM PORT @ APPLICATOR HOUSING–

NOT USED IN A STANDARD ASSEMBLY

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: ALARM PORT TO TB1/TB2	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE
0	Moved the 24 VDC wire from pin 1 to pin 3	02-16-11	dkm	1=2	03/06/08	DKM	ELECTRICAL\ASS-200CE-0481

BILL OF MATERIAL

ASS-200CE-1410

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON7063	26 PIN HIGH DENSITY HOUSING
②	24	PE-CON9045	MALE PIN
	1	PE-W1060	22 AWG (PINK) WIRE x 14" LONG
	1	PE-W1049	22 AWG (WHT/PUR) WIRE x 14" LONG
	3	PE-W1037	22 AWG (BROWN) WIRE x 14" LONG
	1	PE-W1046	22 AWG (WHT/BRN) WIRE x 14" LONG
	1	PE-W1048	22 AWG (WHT/GRY) WIRE x 14" LONG
	1	PE-W1035	22 AWG (YELLOW) WIRE x 14" LONG
	1	PE-W1039	22 AWG (GRAY) WIRE x 14" LONG
	1	PE-W1040	22 AWG (PURPLE) WIRE x 14" LONG
	1	PE-W1034	22 AWG (GREEN) WIRE x 14" LONG
	1	PE-W1042	22 AWG (WHT/RED) WIRE x 14" LONG
	1	PE-W1033	22 AWG (RED) WIRE x 14" LONG
	1	PE-W1031	22 AWG (WHITE) WIRE x 14" LONG
	4	PE-W1036	22 AWG (BLUE) WIRE x 14" LONG
	1	PE-W1038	22 AWG (ORANGE) WIRE x 14" LONG
	1	PE-W1045	22 AWG (WHT/BLU) WIRE x 14" LONG
	1	PE-W1044	22 AWG (WHT/YEL) WIRE x 14" LONG
	1	PE-W1047	22 AWG (WHT/ORG) WIRE x 14" LONG
	1	PE-W1041	22 AWG (WHT/BLK) WIRE x 14" LONG
	1	PE-W1043	22 AWG (WHT/GRN) WIRE x 14" LONG

ASS-200CE-1410

ARRANGED BY PIN NUMBER

STEPPER DRIVE

J104

1	PINK	TB1-36	(A+ CHANNEL)
2	W/PUR	TB1-37	(A- CHANNEL)
3	BRN	TB1-1	(24 VDC)
4	W/BRN	TB1-7	(PD SIGNAL)
5	BRN	TB1-1	(24 VDC)
6	W/GRY	TB1-19	(LABEL SENSOR)
7	YEL	TB1-29	(TAMP VALVE)
8	GRY	TB1-30	(BLOW VALVE)
9	PUR	TB1-31	(ASSIST VALVE)
10	GRN	TB1-38	(B+ CHANNEL)
11	W/RED	TB1-39	(B- CHANNEL)
12	RED	TB1-40	(5 VDC)
13	WHT	TB1-34	(ANALOG (+) IN)
14	BLU	TB1-6	(ANALOG (-) IN)
15	BLU	TB1-5	(OUTPUT COM)
16	ORG	TB1-32	(SPARE VALVE)
17	W/BLU	TB1-8	(LOW LABEL)
18	W/YEL	TB1-9	(END OF WEB)
21	BLU	TB1-5	(0 VDC)
22	W/ORG	TB1-35	(ANALOG OUT)
23	BLU	TB1-5	(0 VDC)
24	BRN	TB1-1	(INPUT COM)
25	W/BLK	TB1-25	(JOG)
26	W/GRN	TB1-10	(INHIBIT)

① ②

ARRANGED BY I/O TYPE

J104

1	PINK	TB1-36	(A+ CHANNEL)	ENCODER
2	W/PUR	TB1-37	(A- CHANNEL)	
10	GRN	TB1-38	(B+ CHANNEL)	
11	W/RED	TB1-39	(B- CHANNEL)	
12	RED	TB1-40	(5 VDC)	
21	BLU	TB1-5	(0 VDC)	
23	BLU			
4	W/BRN	TB1-7	(PD SIGNAL)	CAPTURE INPUTS
6	W/GRY	TB1-19	(LABEL SENSOR)	
3	BRN	TB1-1	(24 VDC)	
5	BRN			
13	WHT	TB1-34	(ALOG (+) IN)	ANALOG
14	BLU	TB1-6	(ALOG (-) IN)	
22	W/ORG	TB1-35	(ALOG OUT)	
15	BLU	TB1-5	(OUTPUT COM)	I/O
24	BRN	TB1-1	(INPUT COM)	
7	YEL	TB1-29	(TAMP VALVE)	
8	GRY	TB1-30	(BLOW VALVE)	
9	PUR	TB1-31	(ASSIST VALVE)	
16	ORG	TB1-32	(SPARE VALVE)	
17	W/BLU	TB1-8	(LOW LABEL)	
18	W/YEL	TB1-9	(END OF WEB)	
25	W/BLK	TB1-25	(JOG)	
26	W/GRN	TB1-10	(INHIBIT)	

FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0123

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: J104 WIRING HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	xxx	1=2	03/11/08	Tracy Rhodes	ELECTRICAL\ASS-200CE-1410

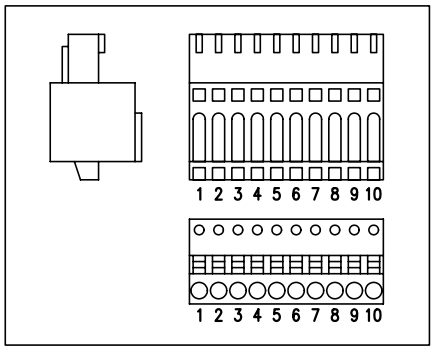
ASS-200CE-1411

BILL OF MATERIAL

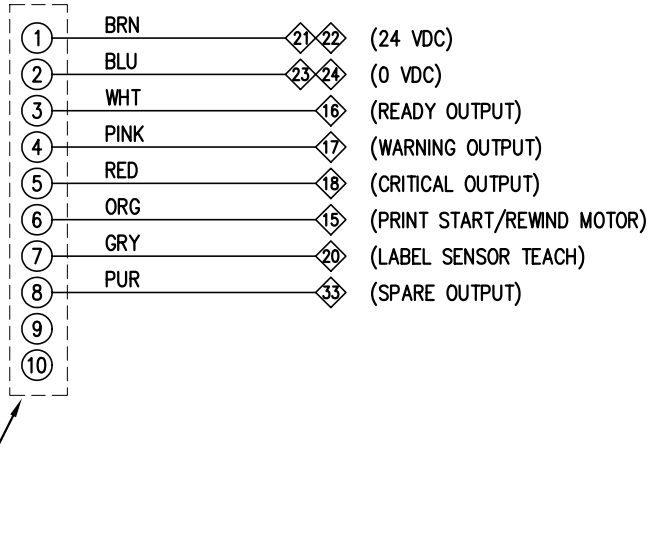
ASS-200CE-1411

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	PE-W1033	22 AWG (RED) x 10" LONG
	1	PE-W1039	22 AWG (GRAY) x 10" LONG
	1	PE-W1036	22 AWG (BLUE) x 10" LONG
	1	PE-W1037	22 AWG (BROWN) x 10" LONG
	1	PE-W1038	22 AWG (ORANGE) x 10" LONG
	1	PE-W1031	22 AWG (WHITE) x 10" LONG
	1	PE-W1060	22 AWG (PINK) x 10" LONG
	1	PE-W1040	22 AWG (PURPLE) x 10" LONG

TB202 CONNECTOR DRAWING



STEPPER DRIVE
TB202



10 PIN PLUG
(PROVIDED BY AEROTECH)

FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0123

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: TB202 WIRING HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	XXX	1=2	03/06/08	DKM	ELECTRICAL\ASS-200CE-1411

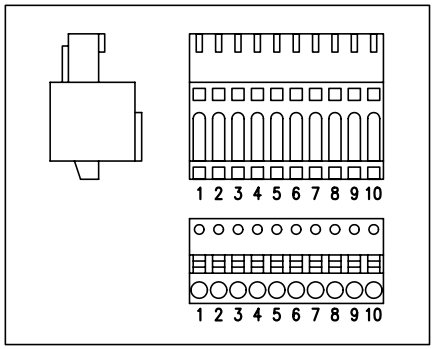
ASS-200CE-1412

BILL OF MATERIAL

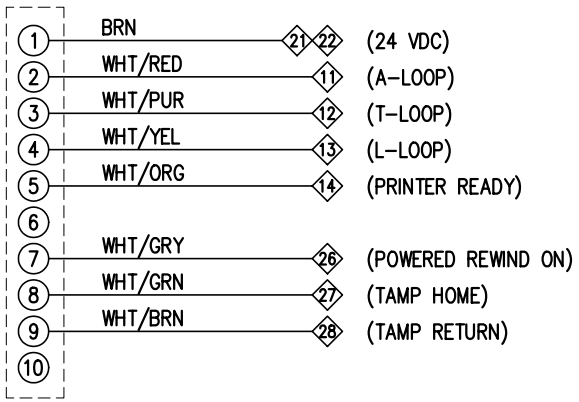
ASS-200CE-1412

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	PE-W1048	22 AWG (WHT/GRY) x 10" LONG
	1	PE-W1043	22 AWG (WHT/GRN) x 10" LONG
	1	PE-W1046	22 AWG (WHT/BRN) x 10" LONG
	1	PE-W1047	22 AWG (WHT/ORG) x 10" LONG
	1	PE-W1044	22 AWG (WHT/YEL) x 10" LONG
	1	PE-W1049	22 AWG (WHT/PUR) x 10" LONG
	1	PE-W1042	22 AWG (WHT/RED) x 10" LONG
	1	PE-W1037	22 AWG (BROWN) x 10" LONG

TB204 CONNECTOR DRAWING



STEPPER DRIVE
TB204



FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-0123

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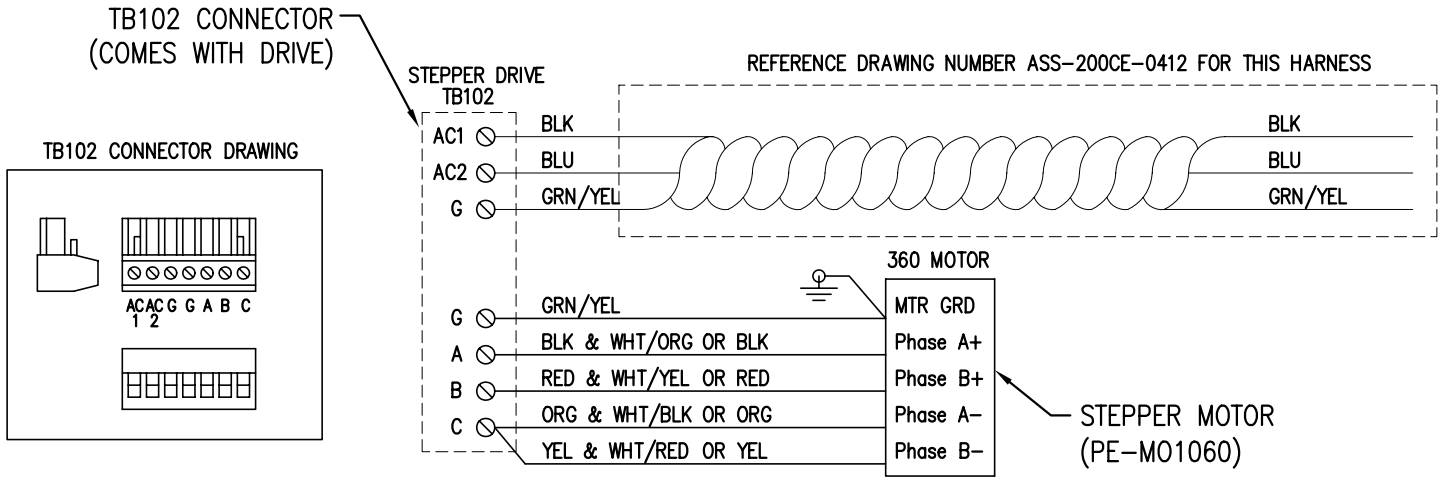
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: TB204 WIRING HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	-	-	XXX	1=2	03/06/08	DKM	ELECTRICAL\ASS-200CE-1412

ASS-200CE-1415

VIEW PRINT



WIRING INFO. USED ON ASSY DWG:
ASS-200CE-0123

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING: ELECTRICAL	INTERNAL WIRE HARNESS: TB102 WIRING HARNESS/POWER HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	-	-	XXX	1=2	03/06/08	DKM	ELECTRICAL\ASS-200CE-1415

BILL OF MATERIAL

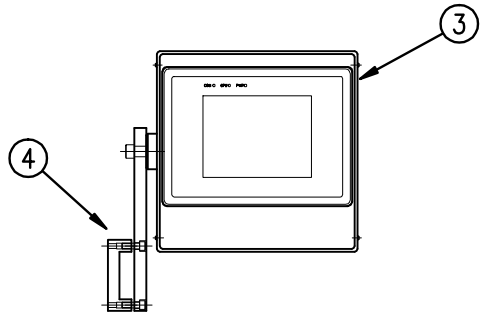
CTM-200CE-X150

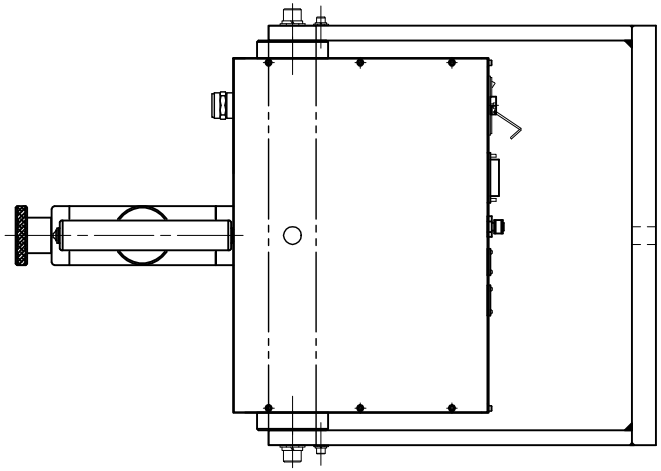
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200CE-X150	CORE UNIT ASSEMBLY
②	1	WAS-200-0247	U-ARM WELDMENT ASSEMBLY
③	1	ASS-200CE-0128	DISPLAY UNIT ASSEMBLY
④	1	ASS-200-0146	DISPLAY UNIT MOUNTING BRACKET

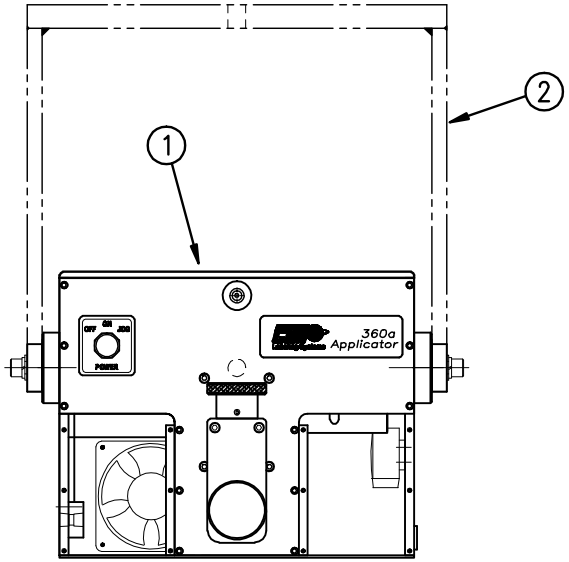
THIS CORE UNIT IS ONLY WIRED FOR DISPLAY & PRODUCT DETECT. OTHER CONNECTORS (ALARM, VALVE, ENCODER & I/O) MUST BE ADDED WHEN REQUIRED.

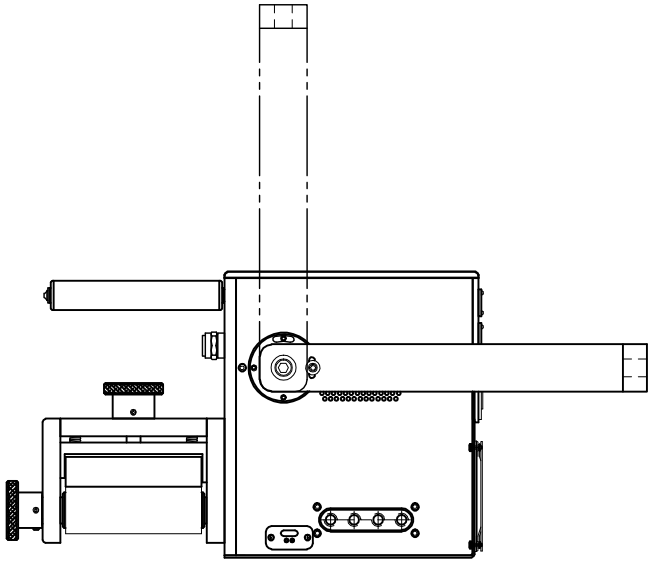
CTM-200CE-X150	
5" WIDE	-0150
7.5" WIDE	-2150
10" WIDE	-5150

USES STANDARD 360a PROGRAM









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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING	CORE UNIT COMPLETE WITH PROGRAM	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
1	DISPLAY UNIT WAS ASS-200CE-0125 & CHANGED MTG BRACKET	01/03/17	TDR	1=8	03/10/08	Tracy Rhodes	F:\Engineering\Standard Parts\Applicator\360a-CE\HOUSING\CTM-200CE-X150

BILL OF MATERIAL

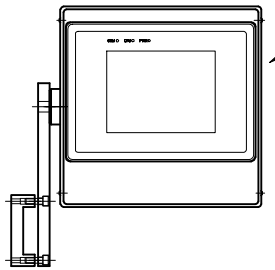
CTM-200CE-X150R/L-12C

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-X150	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-X121R/L	12" UNWIND ASSEMBLY
③	1	ASS-200-3167R/L	REWIND ASSEMBLY FOR COLLAPSIBLE
④	1	ASS-200-3140-X	5/7.5/10 COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)

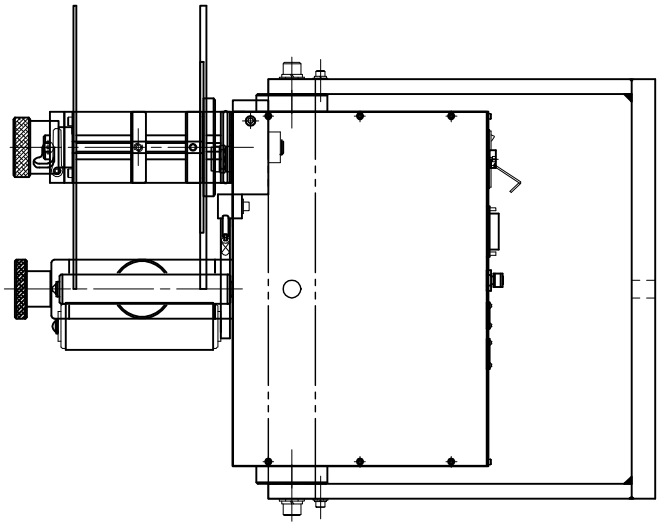
CTM-200CE-X150R/L-12C

5" WIDE -0150R/L-12C

7.5" WIDE -2150R/L-12C

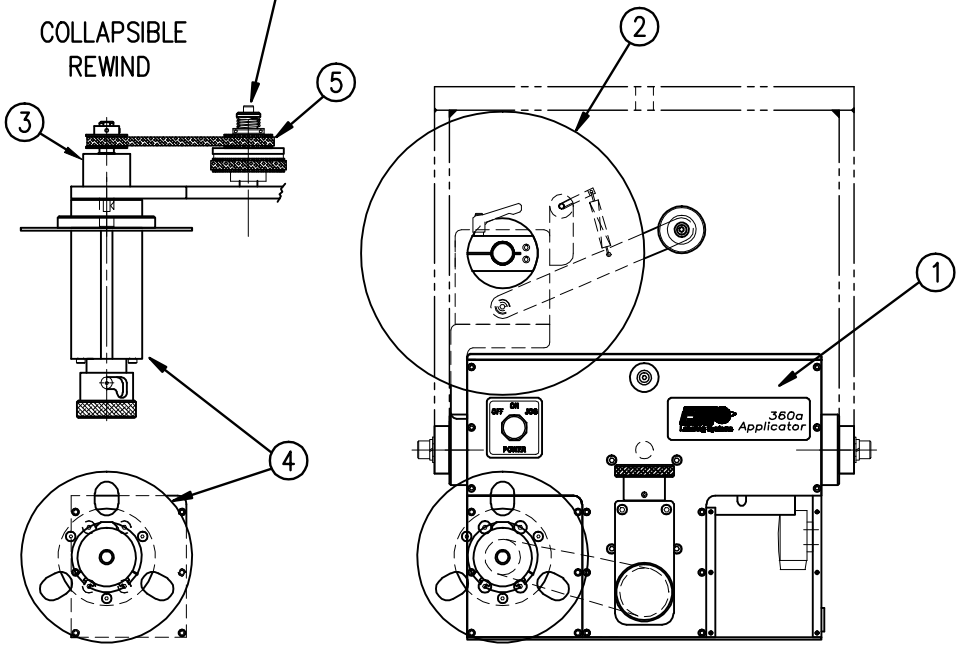


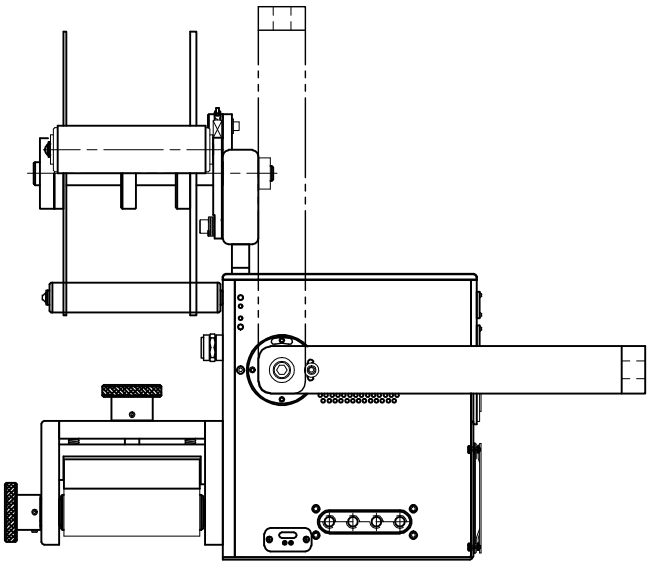
DISPLAY UNIT
& BRACKETRY



NIP DRIVE ASSEMBLY
(REF. TO ASS-200CE-X150)

COLLAPSIBLE
REWIND





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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING	PROGRAMMED CORE UNIT with 12" UWIND & COLLAPSE RWD	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a\
0	–	–	xxx	1=8	03/10/08	Tracy Rhodes	360a-CE\CTM-200CE-X150RL-12C

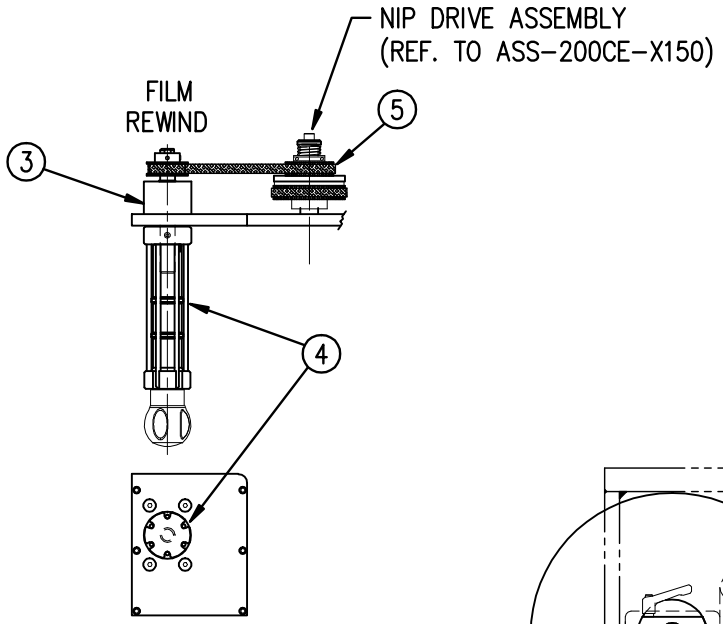
BILL OF MATERIAL

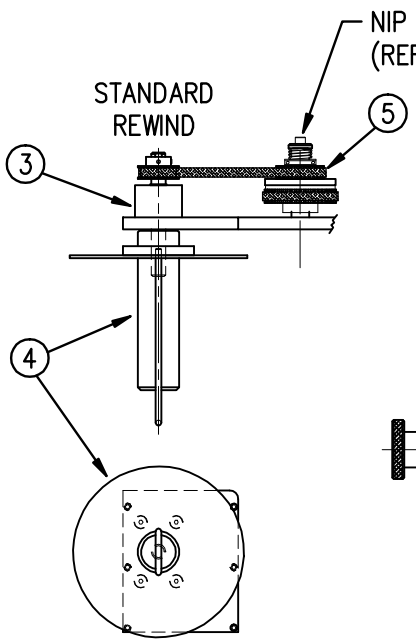
CTM-200CE-X150R/L-12S/F

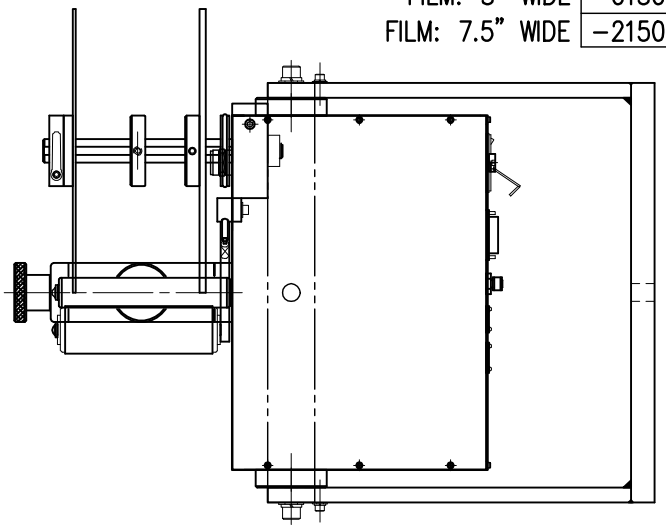
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-X150	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-X121R/L	12" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASSEMBLY FOR STANDARD & FILM
④	1	ASS-200-X147	5/7.5/10 STD REWIND MANDREL w/DISK
	1	ASS-200-X137	5/7.5/10 FILM REWIND MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)

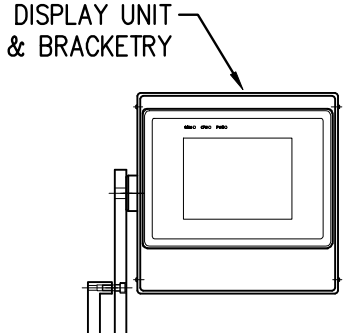
CTM-200CE-X150-12S/F

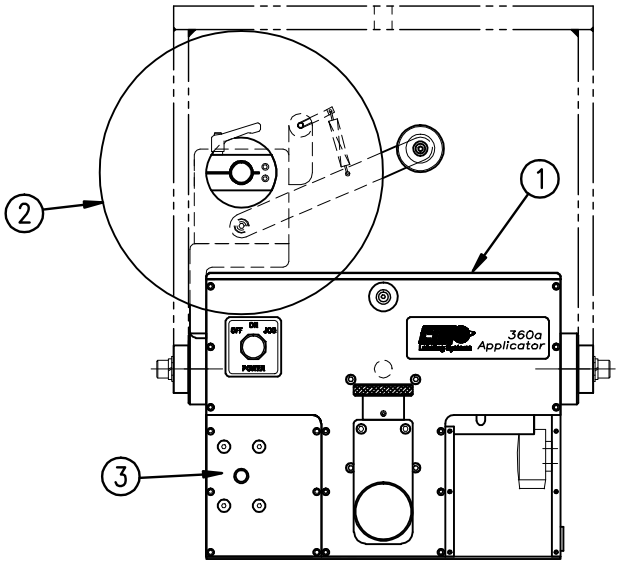
STD: 5" WIDE	-0150-12S
STD: 7.5" WIDE	-2150-12S
STD: 10" WIDE	-5150-12S
FILM: 5" WIDE	-0150-12F
FILM: 7.5" WIDE	-2150-12F

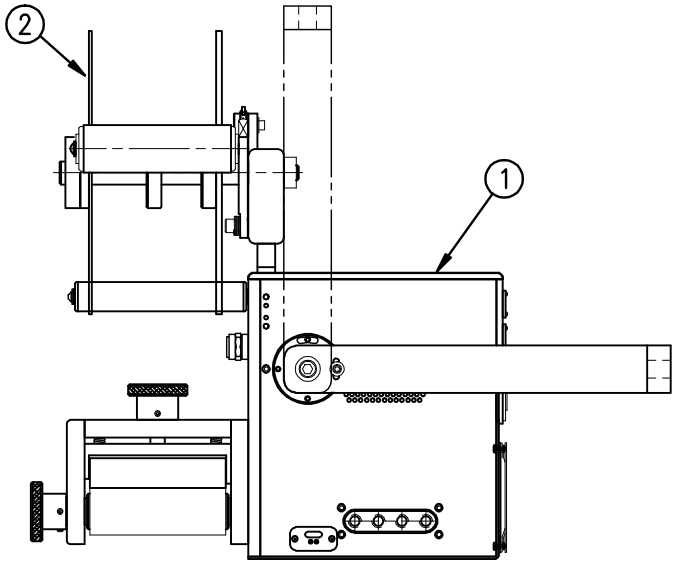












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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING	PROGRAMMED CORE UNIT with 12" UNWIND & STD or FILM RWD	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a\
0	-	-	xxx	1=8	03/10/08	Tracy Rhodes	360a-CE\CTM-200CE-X150-12SF

BILL OF MATERIAL

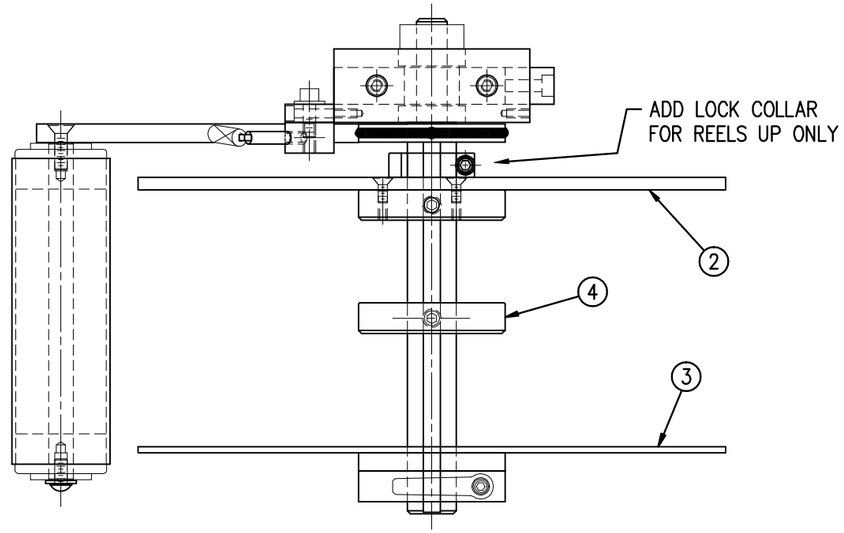
MOD–200–X121XL

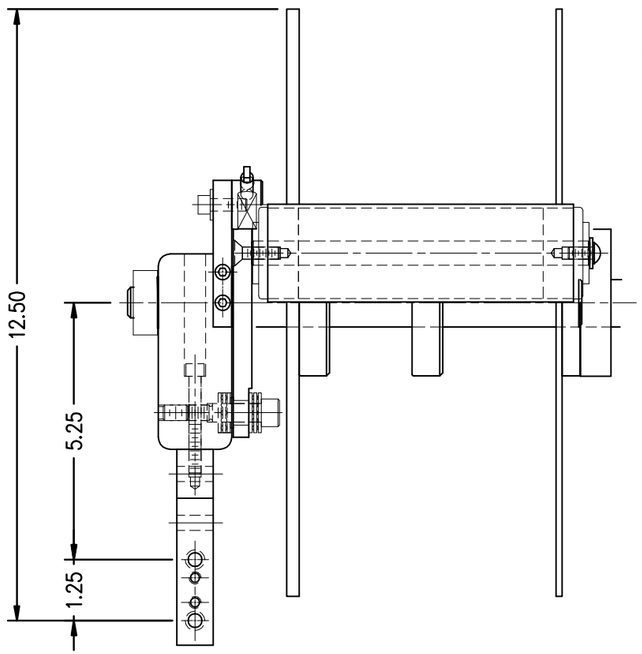
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	SAS–200–X121L	5"/7.5" UNWIND SHELF ASSEMBLY – LH	
②	1	ASS–200–0132	12" DIA. INSIDE UNWIND DISK – LEXAN	
	1	ASS–200–0132A	12" DIA. INSIDE UNWIND DISK – ALUMINUM	REELS–UP
③	1	ASS–200–0133	OUTSIDE UNWIND DISK	
④	1	MP–200–0267CS	UNWIND CORE SUPPORT SPACER	
⑤	2	PM–FADP0930	DOWEL PIN, 3/16" ø x 1/2" Lg.	
	2	PM–FASH430078	1/4"–20 x 3/4" Lg. SS SHCS	
	1	PM–C01025	1" SS LOCK COLLAR (** SEE NOTE)	REELS–UP

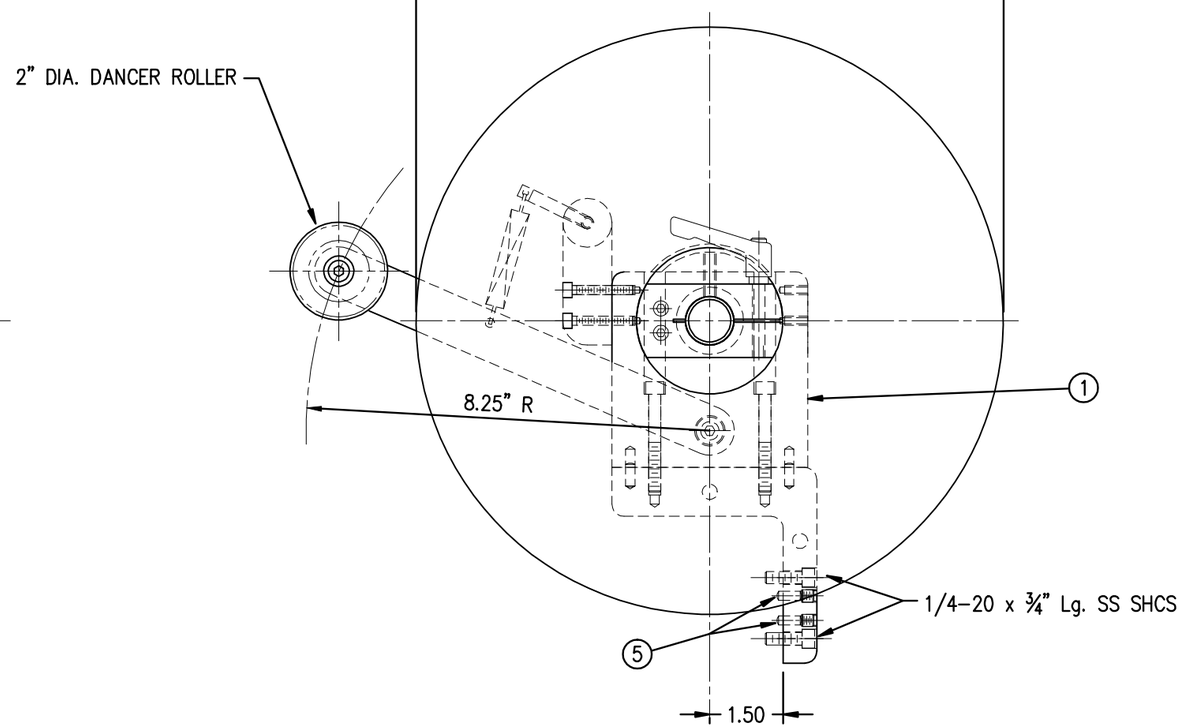
**NOTE: ADD PM–C01025 BEHIND THE INSIDE UNWIND DISK ON 5" WIDE & 7–1/2" WIDE APPLICATORS IN REELS–UP POSITION

REDESIGNED DANCER ARM MOUNTING
ANYTHING SOLD BEFORE 11/01/04
WILL BE THE OLD STYLE.
UNWIND BLOCK IN ASS–200–0134
& DANCER ARM MP–200–0202
ARE NEW DESIGNS AND THRUST BEARINGS
REPLACE BRONZE WASHERS.

MOD–200–X121XL	
5" WIDE	–0121L
7.5" WIDE	–2121L
5" WIDE (REELS UP)	–0121AL
7.5" WIDE (REELS UP)	–2121AL







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APPLICATOR SERIES: 360	APPLICATOR WIDTH(S): 5"/7.5"	GROUP: UNWIND ASSEMBLY	TITLE: LH UNWIND ASSEMBLY with 12" DIA. UNWIND DISKS	Dept. Code 70	
REV. 6	REV. DESCRIPTION CONDENSED THE BOM, ADDED SOME DIMENSIONS & TABULATED FOR REELSUP	REV. DATE 09/25/14	REV. BY: TDR	Scale: 1=3	Date: 06/02/98
				DRAWN BY: BOB S.	F:\Engineering\Standard Parts\Applicator\360\MOD–200–X121XL

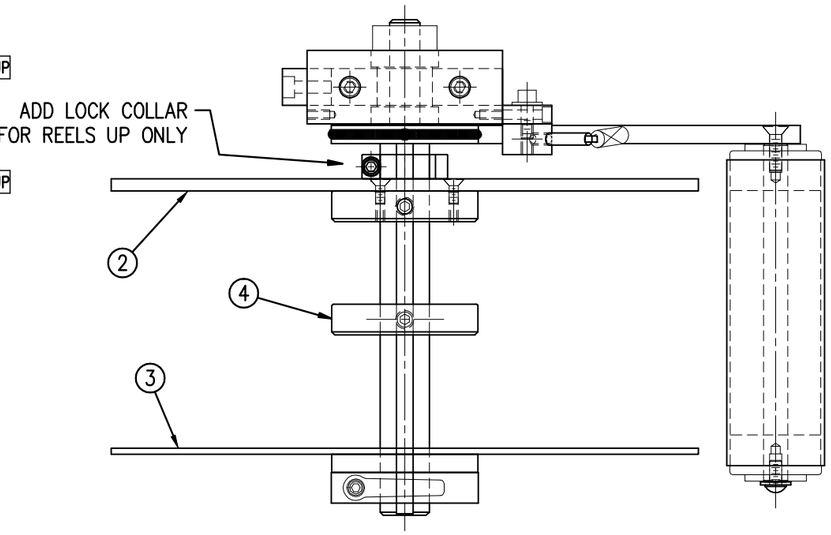
BILL OF MATERIAL

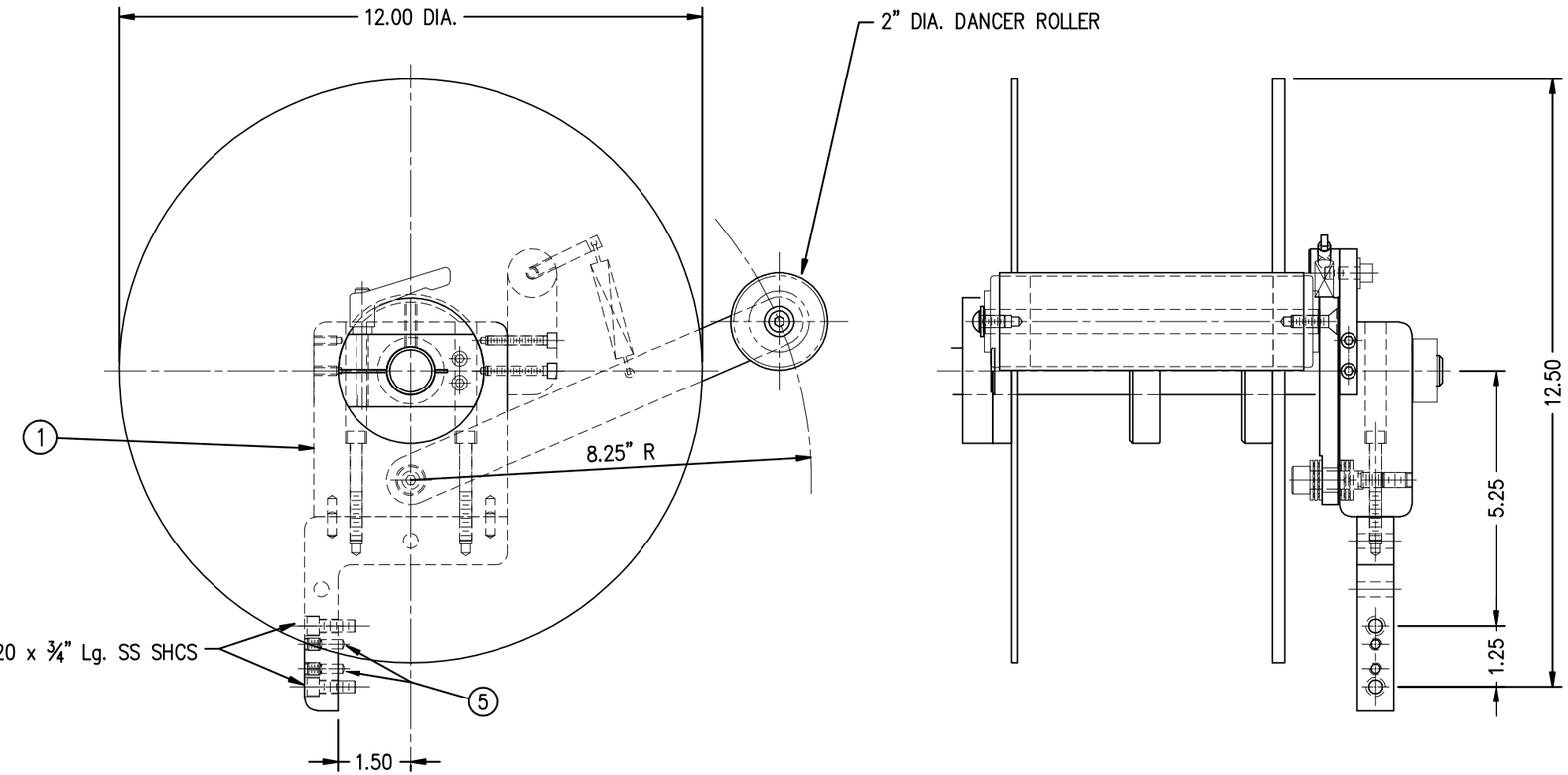
MOD–200–X121XR

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	SAS–200–X121R	5"/7.5" UNWIND SHELF ASSEMBLY – RH	
②	1	ASS–200–0132	12" DIA. INSIDE UNWIND DISK – LEXAN	
	1	ASS–200–0132A	12" DIA. INSIDE UNWIND DISK – ALUMINUM	REELS–UP
③	1	ASS–200–0133	OUTSIDE UNWIND DISK	
④	1	MP–200–0267CS	UNWIND CORE SUPPORT SPACER	
⑤	2	PM–FADP0930	DOWEL PIN, 3/16" ø x 1/2" Lg.	
	2	PM–FASH430078	1/4"–20 x 3/4" Lg. SS SHCS	
	1	PM–C01025	1" SS LOCK COLLAR (** SEE NOTE)	REELS–UP

**NOTE: ADD PM–C01025 BEHIND THE INSIDE UNWIND DISK ON 5" WIDE & 7–1/2" WIDE APPLICATORS IN REELS–UP POSITION

REDESIGNED DANCER ARM MOUNTING
ANYTHING SOLD BEFORE 11/01/04
WILL BE THE OLD STYLE.
UNWIND BLOCK IN ASS–200–0134
& DANCER ARM MP–200–0202
ARE NEW DESIGNS AND THRUST BEARINGS
REPLACE BRONZE WASHERS.





MOD–200–X121XR	
5" WIDE	–0121R
7.5" WIDE	–2121R
5" WIDE (REELS UP)	–0121AR
7.5" WIDE (REELS UP)	–2121AR

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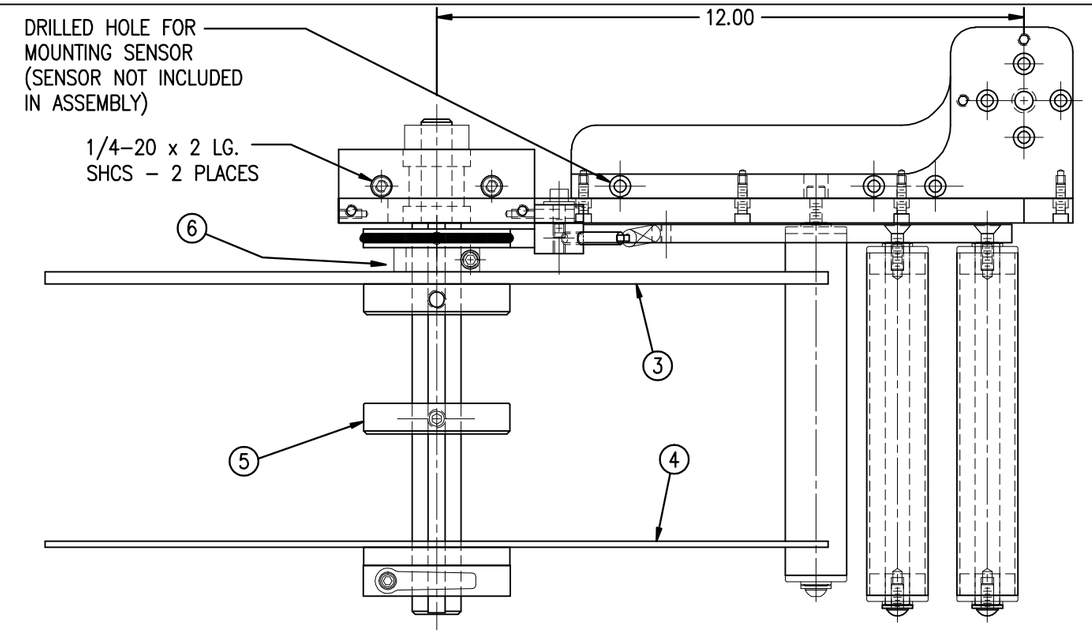
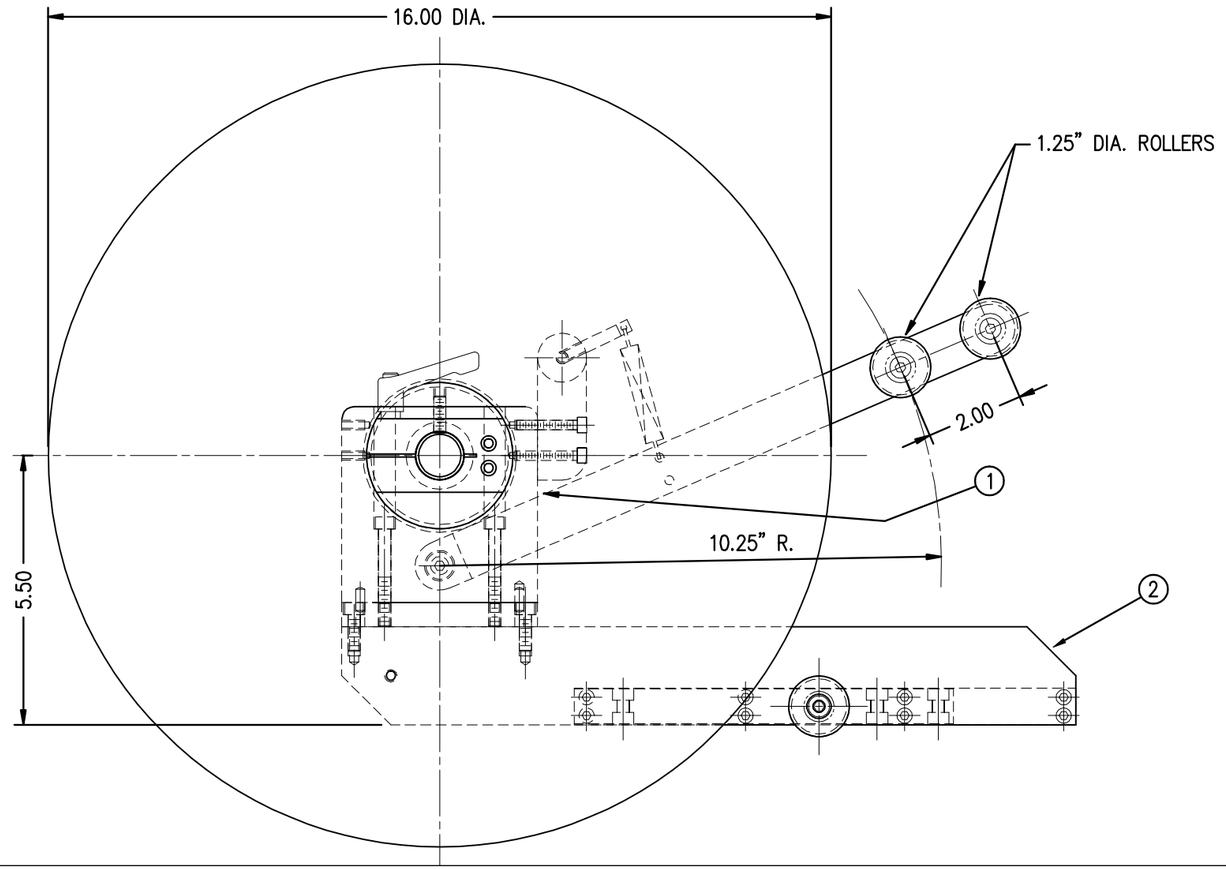
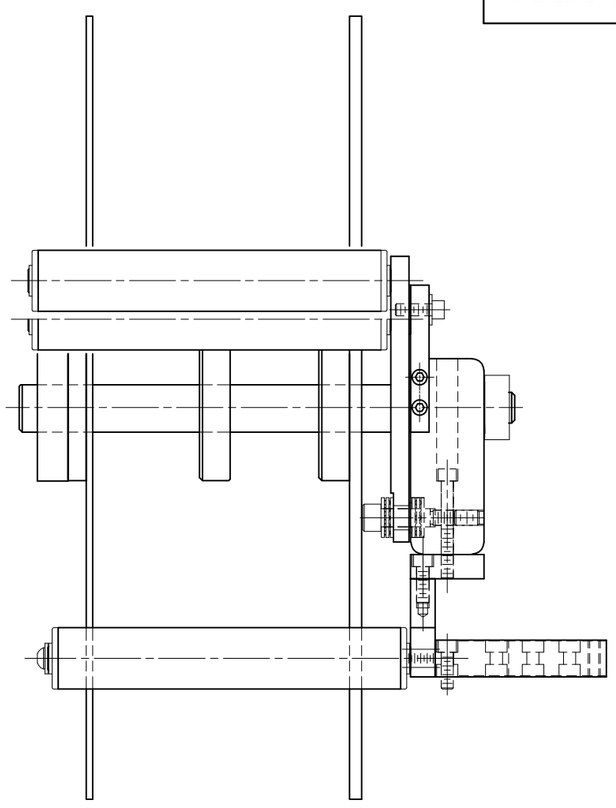
APPLICATOR SERIES: 360 | APPLICATOR WIDTH(S): 5"/7.5" | GROUP: UNWIND ASSEMBLY | TITLE: RH UNWIND ASSEMBLY with 12" DIA. UNWIND DISKS | Dept. Code 70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
6	CONDENSED THE BOM, ADDED SOME DIMENSIONS & TABULATED FOR REELSUP	09/25/14	TDR

Scale: 1=3 | Date: 06/02/98 | DRAWN BY: BOB S. | F:\Engineering\Standard Parts\Applicator\360\MOD–200–X121XR







BILL OF MATERIAL				
MOD–200–3121L–X				
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	SAS–200–3121AL–X	16" UNWIND ASSY FOR 5" WIDE CORE UNIT	
②	1	SAS–200–3121BL–X	16" UNWIND MOUNTING ASSY FOR 5" WIDE CORE UNIT	
③	1	ASS–200–3132	16" DIA. INSIDE UNWIND DISK – LEXAN	
	1	ASS–200–3132A	16" DIA. INSIDE UNWIND DISK – ALUMINUM	REELS UP
④	1	ASS–200–3133	16" DIAMETER OUTSIDE UNWIND DISK	
⑤	1	MP–200–0267CS	UNWIND CORE SUPPORT SPACER	
⑥	1	PM–C01025	LOCK COLLAR	REELS UP

NOTE: ADD PM–C01025 BEHIND THE INSIDE UNWIND DISK
ON 5" WIDE & 7–1/2" WIDE APPLICATORS
IN REELS–UP POSITION

MOD–200–3121XL–X	
5" WIDE	–3121L–5
7.5" WIDE	–3121L–7
5" WIDE/REELS UP	–3121AL–5
7.5" WIDE/REELS UP	–3121AL–7

REDESIGNED DANCER ARM MOUNTING
ANYTHING SOLD BEFORE 11/01/04
WILL BE THE OLD STYLE.
UNWIND BLOCK IN ASS–200–0134
& DANCER ARM MP–200–0202
ARE NEW DESIGNS AND THRUST BEARINGS
REPLACE BRONZE WASHERS.

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TITLE: 360 SERIES APPLICATOR: UNWIND ASSEMBLY

PART: 5/7.5 WIDE/LH/16" UNWIND MODULE

Dept. Code 70

Scale: 1=3 | Date: 03/22/99 | DRAWN BY: BOB S. | F:\Engineering\Standard Parts\Applicator\360 200\MOD–200–3121XL–X

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
3	CONDENSED BOM & TABULATED FOR REELS UP	09/30/14	TDR

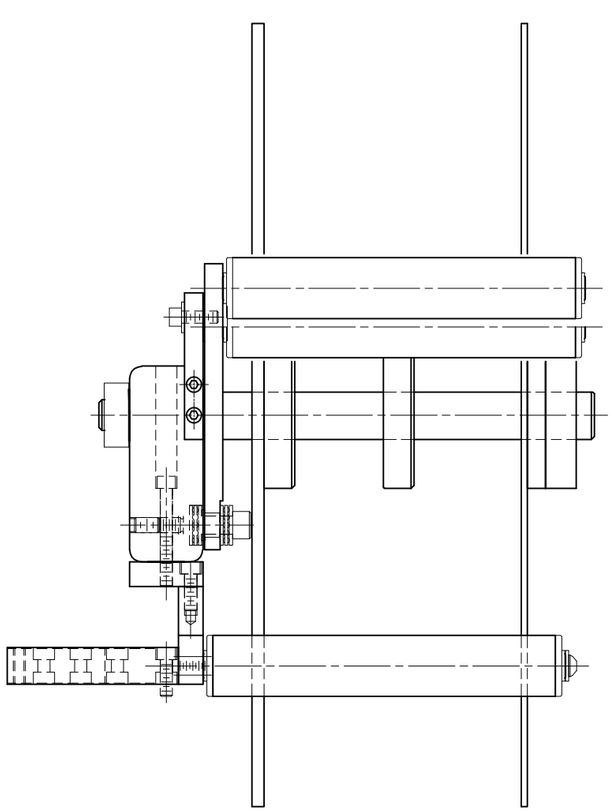
BILL OF MATERIAL

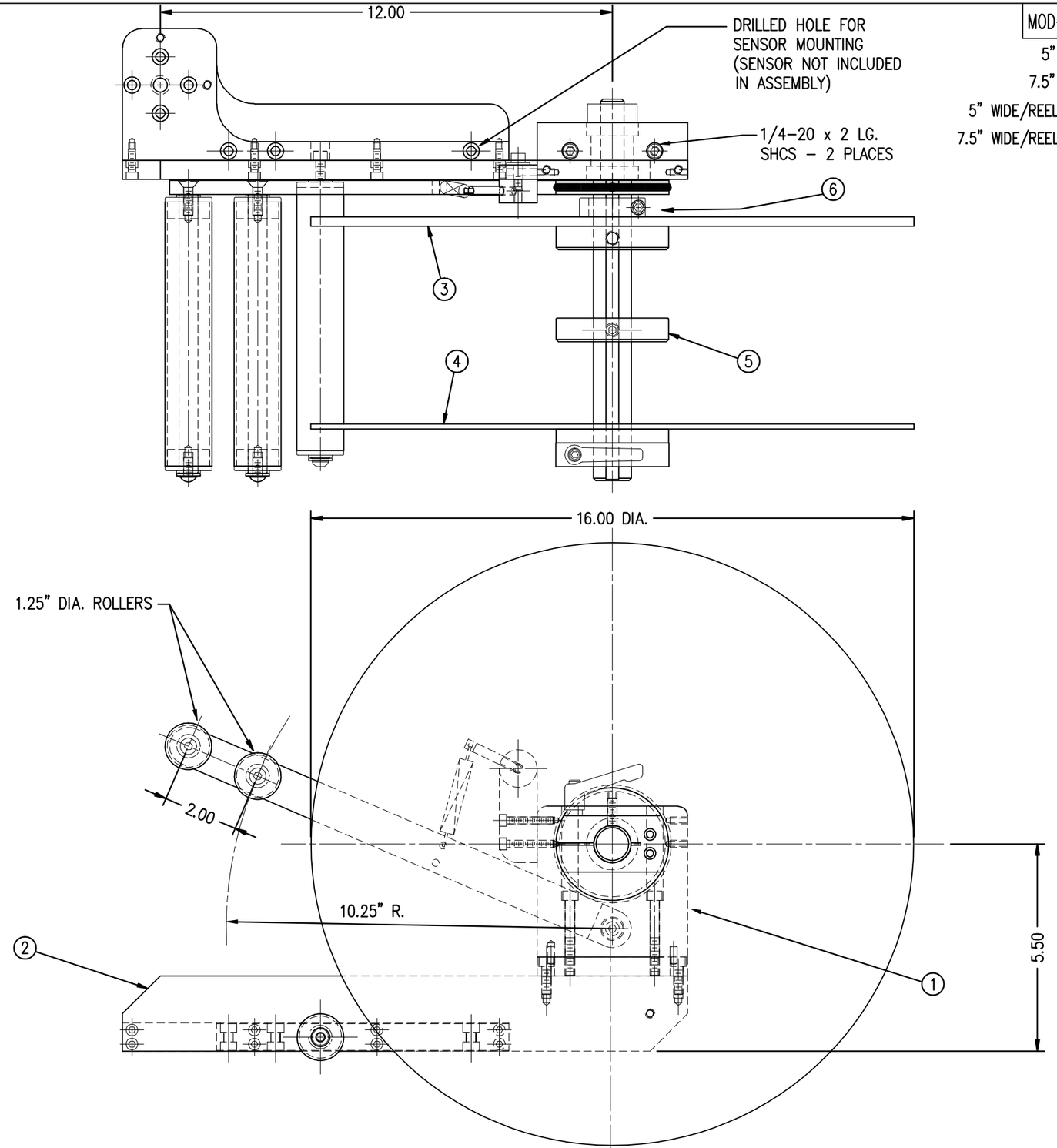
MOD–200–3121XR–X

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	SAS–200–3121AR–X	16" UNWIND ASSY FOR 5" WIDE CORE UNIT	
②	1	SAS–200–3121BR–X	16" UNWIND MOUNTING ASSY FOR 5" WIDE CORE UNIT	
③	1	ASS–200–3132	16" DIA. INSIDE UNWIND DISK – LEXAN	
	1	ASS–200–3132A	16" DIA. INSIDE UNWIND DISK – ALUMINUM	REELS UP
④	1	ASS–200–3133	16" DIAMETER OUTSIDE UNWIND DISK	
⑤	1	MP–200–0267CS	UNWIND CORE SUPPORT SPACER	
⑥	1	PM–C01025	LOCK COLLAR	REELS UP

NOTE: ADD PM–C01025 BEHIND THE INSIDE UNWIND DISK ON 5" WIDE & 7–1/2" WIDE APPLICATORS IN REELS–UP POSITION

REDESIGNED DANCER ARM MOUNTING
ANYTHING SOLD BEFORE 11/01/04
WILL BE THE OLD STYLE.
UNWIND BLOCK IN ASS–200–0134
& DANCER ARM MP–200–0202
ARE NEW DESIGNS AND THRUST BEARINGS
REPLACE BRONZE WASHERS.





MOD–200–3121XR–X	
5" WIDE	–3121R–5
7.5" WIDE	–3121R–7
5" WIDE/REELS UP	–3121AR–5
7.5" WIDE/REELS UP	–3121AR–7

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TITLE: 360 SERIES APPLICATOR: UNWIND ASSEMBLY: OPTIONS

PART: 5/7.5 WIDE/RH/16" UNWIND MODULE

Dept. Code 70

Scale: 1=3

Date: 03/22/99

DRAWN BY: BOB S.

F:\Engineering\Standard Parts\Applicator\360 200\MOD–200–3121XR–X

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
3	CONDENSED BOM & TABULATED FOR REELS UP	09/30/14	TDR

BILL OF MATERIAL
ASS-200CE-X150

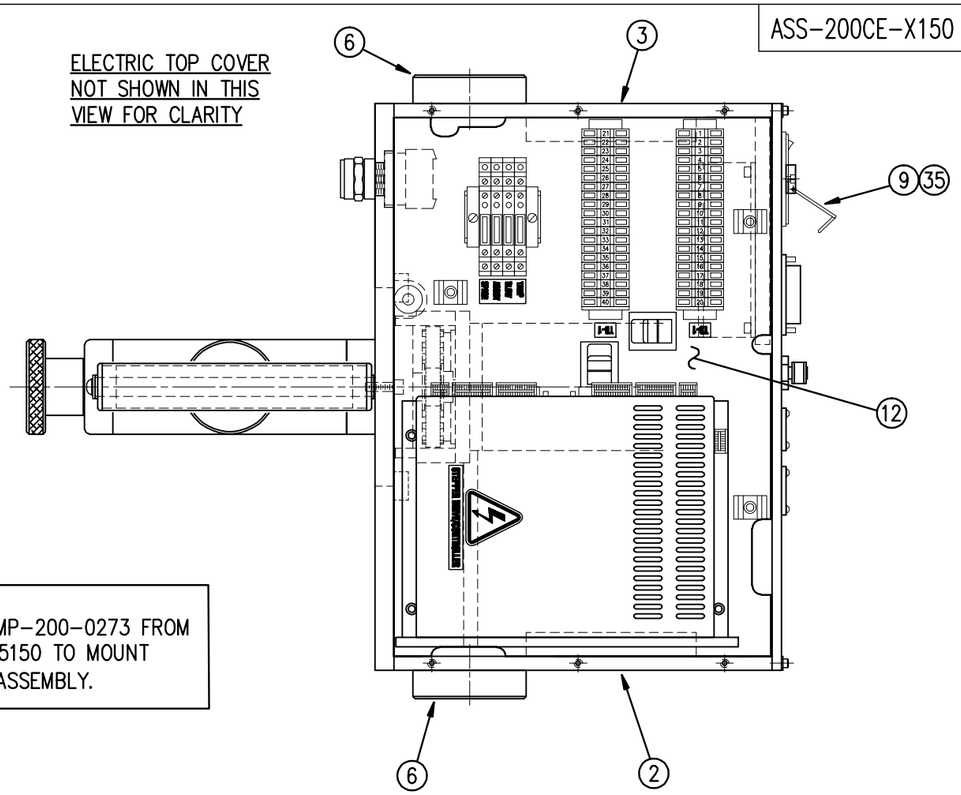
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS-200CE-X150	CORE UNIT SHELF ASSEMBLY – consisting of the following parts –
①		(1) MP-200-0260	T-PLATE
②		(1) MP-200CE-0258	HOUSING RIGHT SIDE FRAME
③		(1) MP-200CE-0259	HOUSING LEFT SIDE FRAME
④		(2) MP-200-0250	AIR MANIFOLD CONNECTOR
⑤		(2) MP-200-0251	TIE PLATE
⑥		(2) MP-200-0273	U-ARM MOUNT (SEE NOTE)
⑦		(1) ASS-200-X135	5/7.5/10 TENSION ROLLER ASSEMBLY
⑧		(1) ASS-200-X129	5/7.5/10 NIP DRIVE ROLL ASSEMBLY
⑨		(1) ASS-200-0148	POWER CORD CLIP ASSEMBLY
⑩		(1) ASS-200A-0453	MOTOR ASSEMBLY (with HIGH SPEED MOTOR)
⑪		(1) ASS-200CE-0124	COOLING FAN ASSEMBLY
⑫		(1) ASS-200CE-0123	WIRED BOARD ASSEMBLY
⑬		(1) PM-BELT1018	TIMING BELT
⑭		(1) PM-C01020	3/4" ID LOCK COLLAR
⑮		(1) MP-200-0233	DRIVE PULLEY
⑯		(1) PM-BE1232	THRUST BEARING
⑰		(1) MP-200-0229	CLUTCH SPRING KEEPER
⑱		(1) PM-FASP30540	COMPRESSION SPRING
⑲		(8) PM-FAW30297	1/4 SS FLAT WASHER
⑳		(1) PM-CL1010	LEATHER CLUTCH PAD
㉑		(1) ASS-200-0143	SLIP CLUTCH ASSEMBLY
㉒		(1) PM-PT1080	3/8" O.D. TUBE (CUT TO 12 -3/4" LG)
㉓		(3) PM-PT1070	1/4" O.D. TUBE (CUT TO 12 -5/8" LG)
㉔		(2) PM-PF1020	FITTING, 3/8" TUBE to 1/4" NPT STRAIGHT
㉕		(6) PM-PF1010	FITTING, 1/4" TUBE to 1/4" NPT STRAIGHT
㉖		(4) PE-WC1004	RING CONNECTOR (FOR HOUSING GROUND)
㉗		(1) MP-200CE-0248	BLANK COVER PLATE
㉘		(1) ASS-200CE-0120	AC POWER ENTRY ASSEMBLY
㉙		(1) MP-200-0248	LABEL SENSOR ACCESS COVER
㉚		(1) ASS-200CE-0451	JOG PUSH BUTTON ASSEMBLY
㉛		(1) ASS-200-0450	BANNER LABEL SENSOR
㉜		(1) ASS-200CE-0126	DC POWER SUPPLY ASSEMBLY

BILL OF MATERIAL
ASS-200CE-X150R/L (continued)

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
㉝	1	MP-200-0246	ELECTRICAL TOP COVER
㉞	1	ASS-200CE-0141	HOUSING COVER
㉟	1	PE-C01032	POWER CORD FOR APPLICATOR
㊱	4	PE-PA1083	BOLT ON MOUNT
㊲	2	PE-FU1075	FUSE
㊳	1	PM-LB1014	CTM LABEL
㊴	1	PM-LB1013	POWER / JOG LABEL

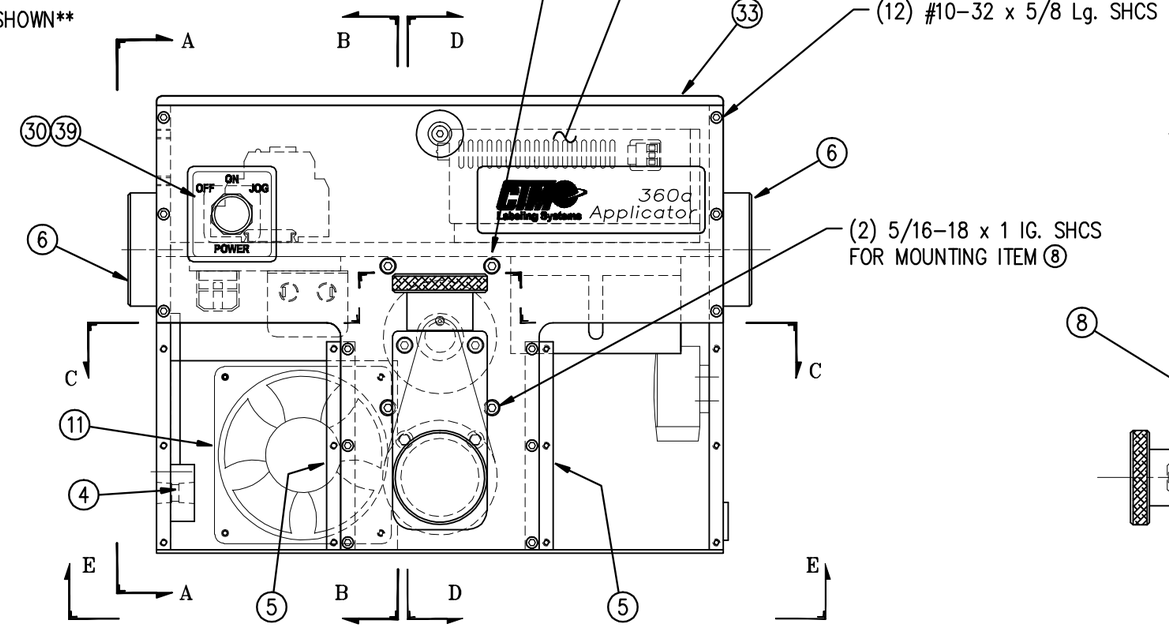
SHEET LEGEND	
BILL OF MAT'L	SHEET 1 of 4
END VIEW "A"	SHEET 2 of 4
SECTION "B"	SHEET 2 of 4
SECTION "C"	SHEET 3 of 4
SECTION "D"	SHEET 4 of 4
BOTT. VIEW "E"	SHEET 3 of 4
VIEW "F"	SHEET 2 of 4
VIEW "H"	SHEET 4 of 4

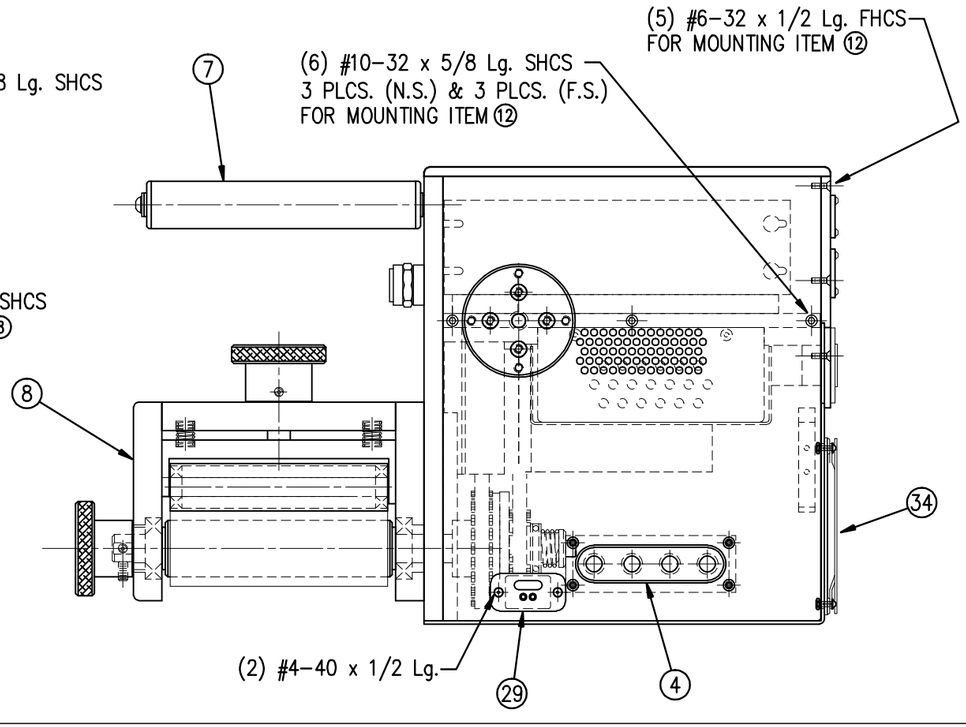
ELECTRIC TOP COVER NOT SHOWN IN THIS VIEW FOR CLARITY



NOTE:
REMOVE (1) MP-200-0273 FROM SAS-200CE-5150 TO MOUNT 10" UNWIND ASSEMBLY.

5" WIDE APPLICATOR SHOWN





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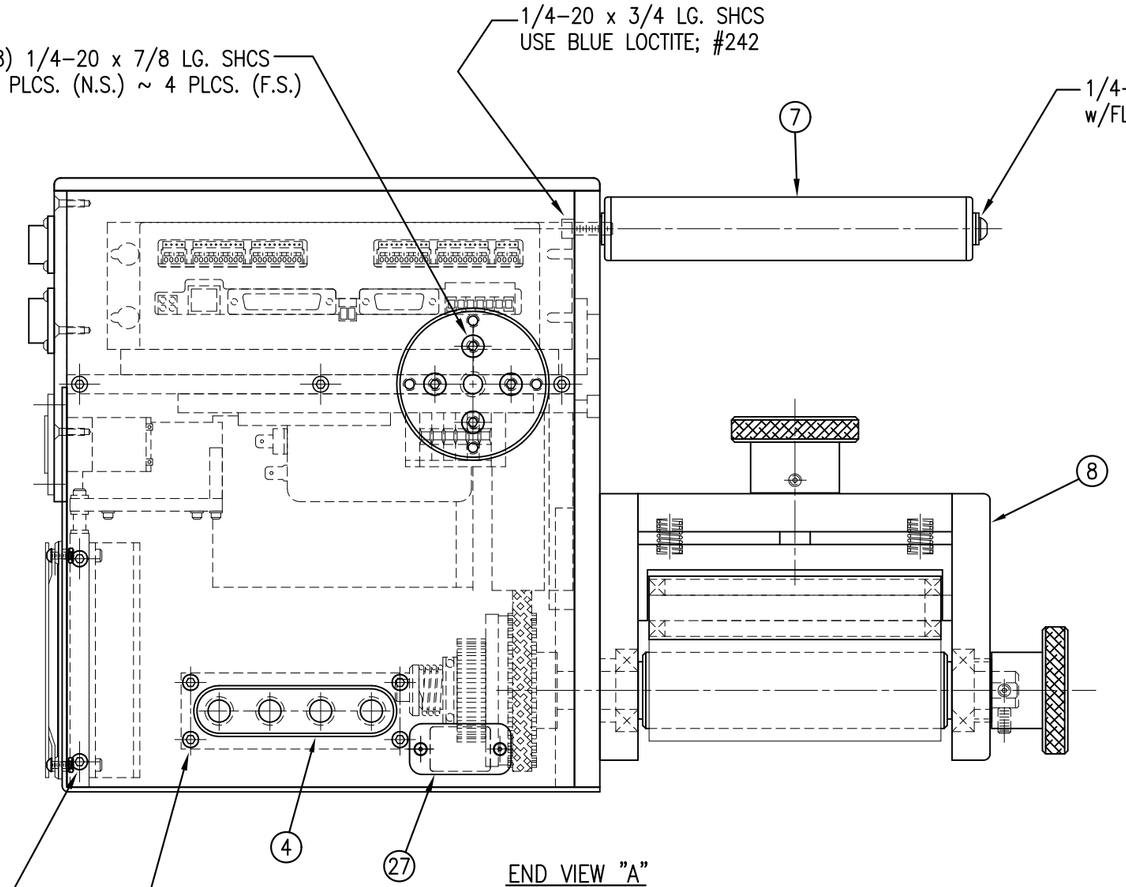
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:
360a-CE	5"/7.5"/10"	HOUSING	CORE UNIT ASSEMBLY (Sheet 1 of 4)

Dept. Code	Scale:	Date:	DRAWN BY:
70	1=4	03/07/08	DKM

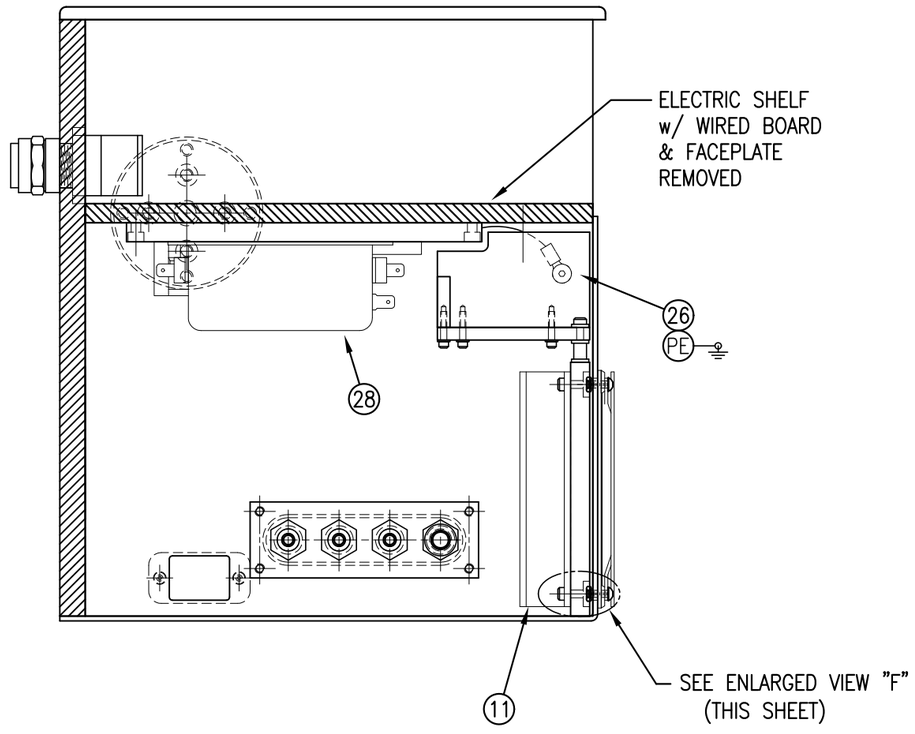
F:\Engineering\Standard Parts\Applicator\360a-CE\HOUSING\ASS-200CE-X150s1

REV.	REV. DESCRIPTION	REV. BY:	REV. DATE
1	ITEM #10 WAS ASS-200-0453; NOW HIGH SPEED	TDR	12/05/11

ASS-200CE-X150



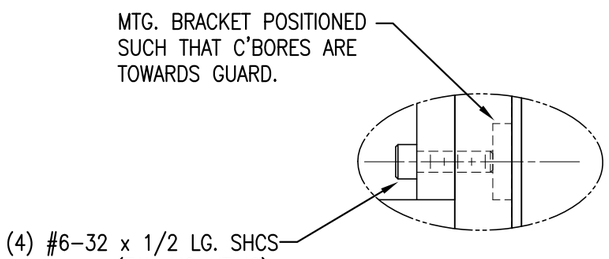
END VIEW "A"
(FROM SHEET 1)



SECTION "B"
(FROM SHEET 1)

#10-32 x 3/8 LG. SHCS
4 PLCS. (N.S.) ~ 4 PLCS. (F.S.)
8 PLACES TOTAL
FOR MTG. ITEM ④

(2) #10-32 x 5/8 LG. SHCS
FOR MTG. ITEM ⑪



ENLARGED VIEW "F"
(FROM THIS SHEET)
(SCALE: 1=1)

SHEET LEGEND	
BILL OF MAT'L	SHEET 1 of 4
END VIEW "A"	SHEET 2 of 4
SECTION "B"	SHEET 2 of 4
SECTION "C"	SHEET 3 of 4
SECTION "D"	SHEET 4 of 4
BOTT. VIEW "E"	SHEET 3 of 4
VIEW "F"	SHEET 2 of 4
VIEW "H"	SHEET 4 of 4

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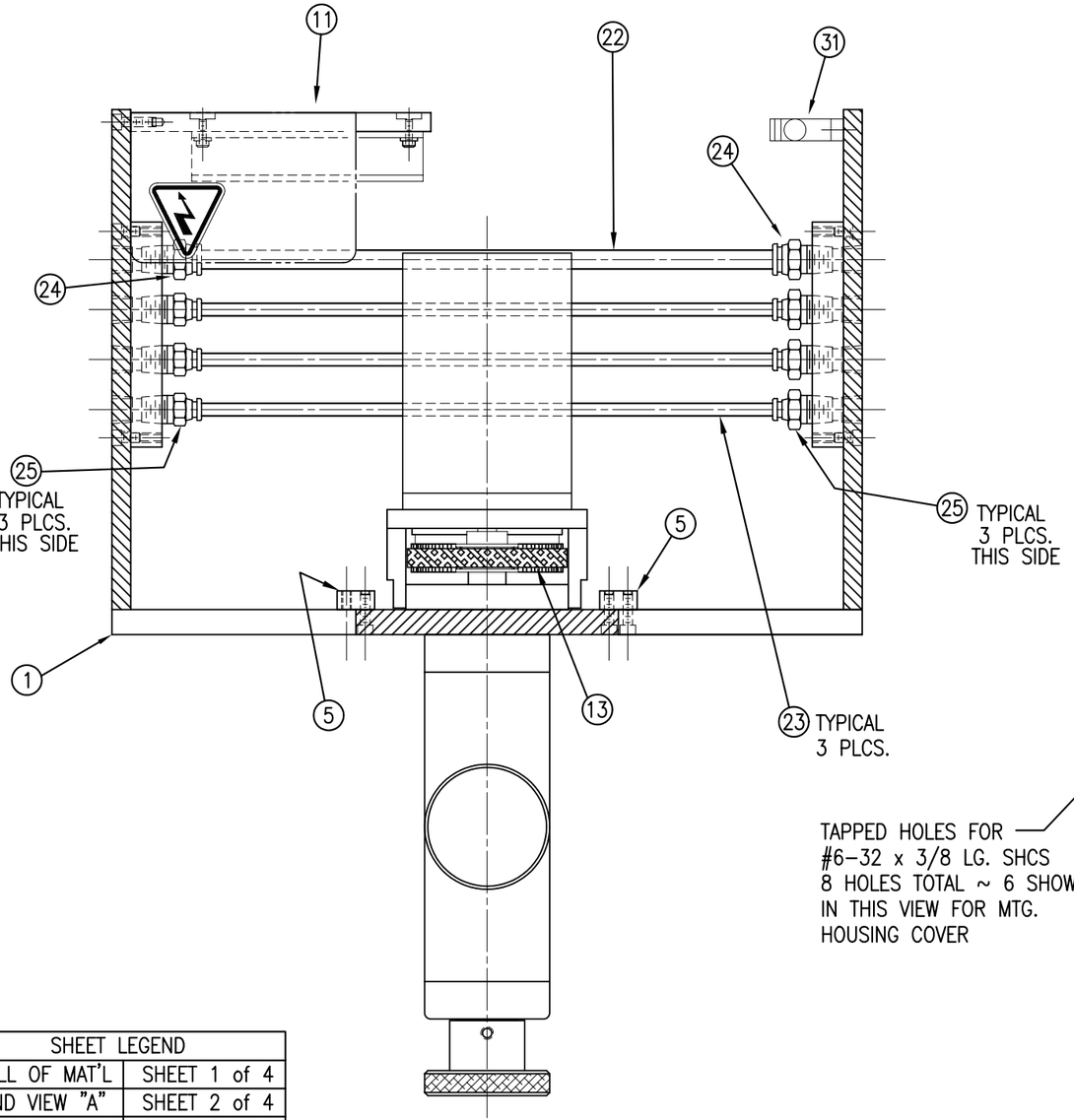
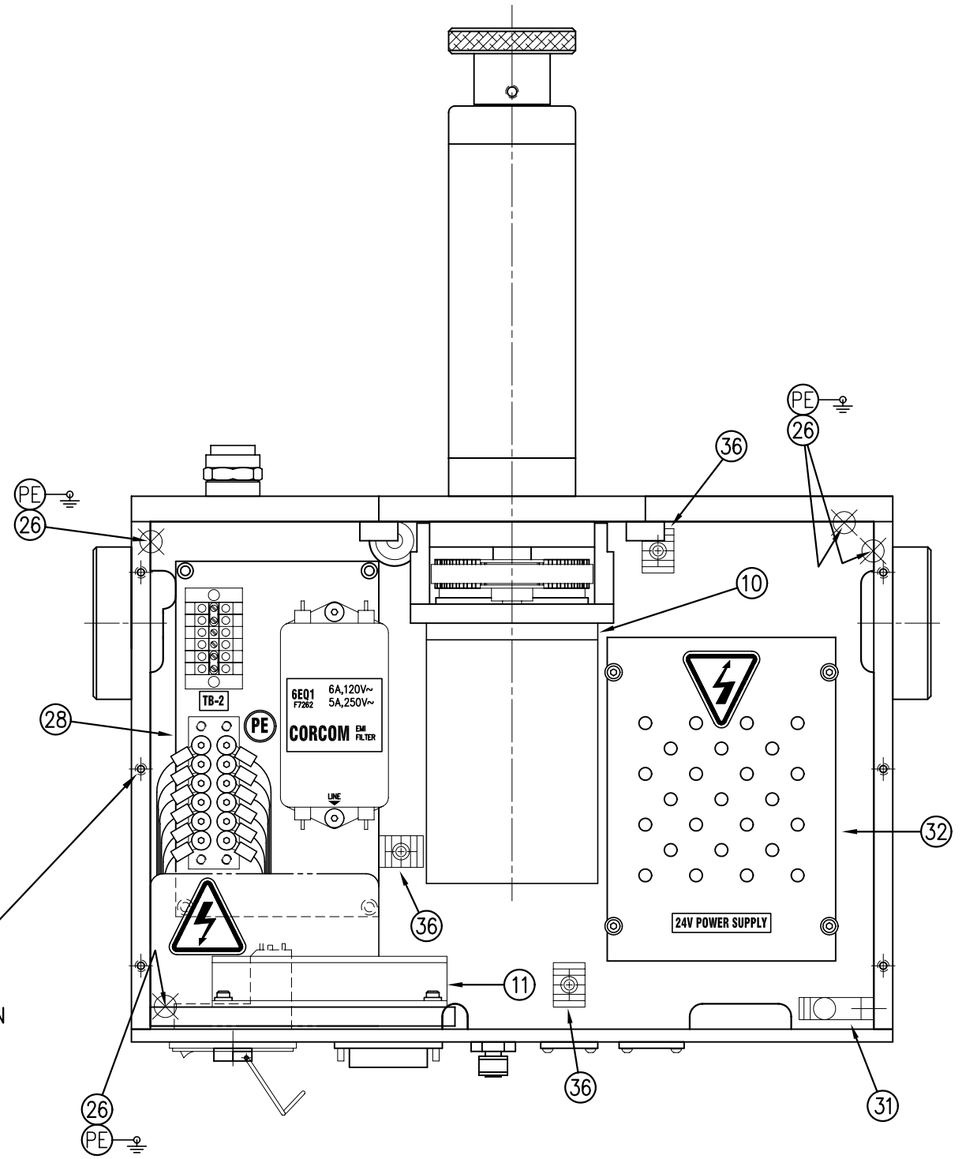
TITLE: CORE UNIT ASSEMBLY (Sheet 2 of 4)
Dept. Code 70
F:\Engineering\Standard Parts\Applicator\3600-CE\HOUSING\ASS-200CE-X150s2
APPLICATOR SERIES: 3600a-CE
APPLICATOR WIDTH(S): 5"/7.5"/10"
GROUP: HOUSING
Scale: 1=3
Date: 03/07/08
DRAWN BY: DKM
REV. BY: XXX
REV. DATE –
REV. DESCRIPTION –
REV. 0

ASS-200CE-X150



SECTION "C"
(FROM SHEET 1)

SHEET LEGEND	
BILL OF MAT'L	SHEET 1 of 4
END VIEW "A"	SHEET 2 of 4
SECTION "B"	SHEET 2 of 4
SECTION "C"	SHEET 3 of 4
SECTION "D"	SHEET 4 of 4
BOTT. VIEW "E"	SHEET 3 of 4
VIEW "F"	SHEET 2 of 4
VIEW "H"	SHEET 4 of 4



TAPPED HOLES FOR
#6-32 x 3/8 LG. SHCS
8 HOLES TOTAL ~ 6 SHOWN
IN THIS VIEW FOR MTG.
HOUSING COVER

BOTTOM VIEW "E"
(FROM SHEET 1)

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CORE UNIT ASSEMBLY (Sheet 3 of 4)

Dept. Code 70

APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:
360a-CE	5"/7.5"/10"	HOUSING	CORE

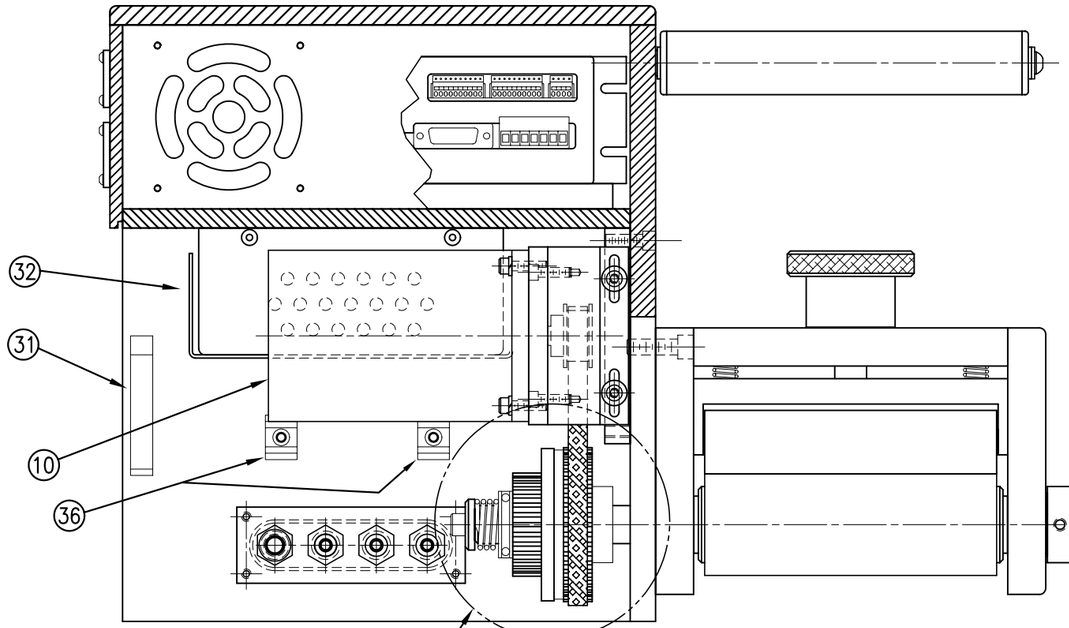
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
0	-	-	XXX

Scale: 1=3 | Date: 03/07/08 | DRAWN BY: DKM

F:\Engineering\Standard Parts\Applicator\360a-CE\HOUSING\ASS-200CE-X150s3

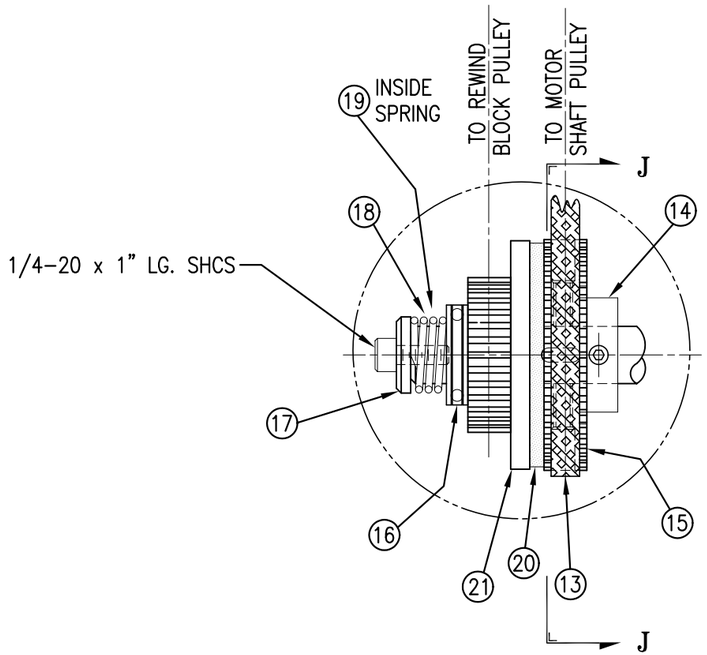
ASS-200CE-X150

SHEET LEGEND	
BILL OF MAT'L	SHEET 1 of 4
END VIEW "A"	SHEET 2 of 4
SECTION "B"	SHEET 2 of 4
SECTION "C"	SHEET 3 of 4
SECTION "D"	SHEET 4 of 4
BOTT. VIEW "E"	SHEET 3 of 4
VIEW "F"	SHEET 2 of 4
VIEW "H"	SHEET 4 of 4

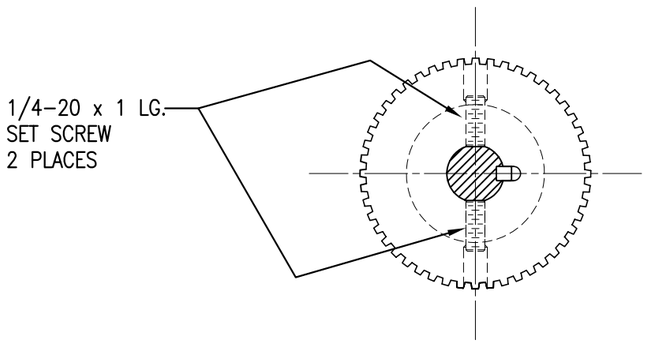


SEE ENLARGED VIEW "H" (THIS SHEET)

SECTION "D"
(FROM SHEET 1)



ENLARGED VIEW "H"
(FROM THIS SHEET)
(SCALE: 1=2)



ENLARGED SECTION "J"
(FROM THIS SHEET)
(SCALE: 1=2)

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:
360a-CE	5"/7.5"/10"	HOUSING

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
0	-	-	XXX

TITLE: CORE UNIT ASSEMBLY (Sheet 4 of 4)

Scale: 1=3 | Date: 03/07/08 | DRAWN BY: DKM

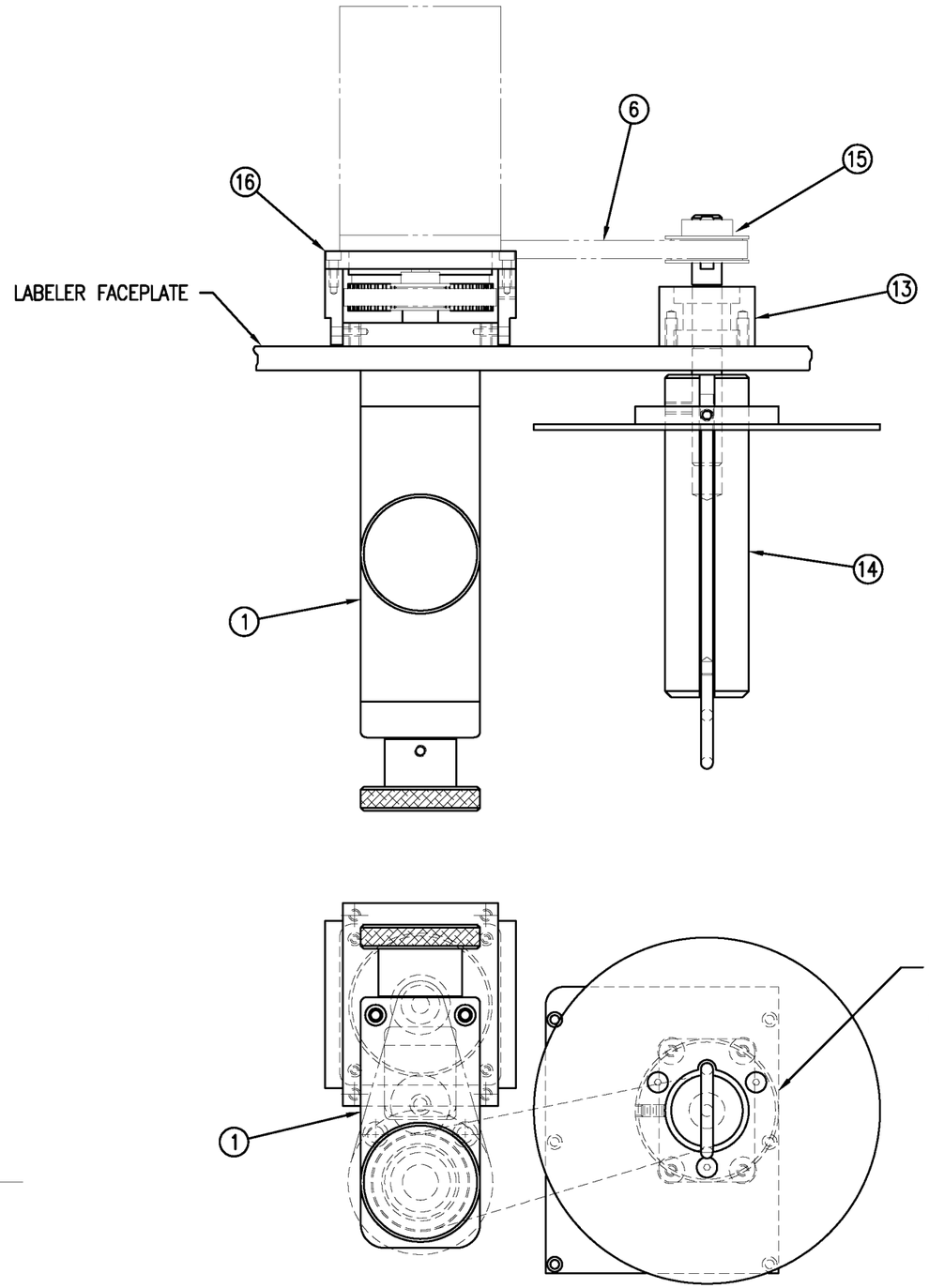
Dept. Code 70

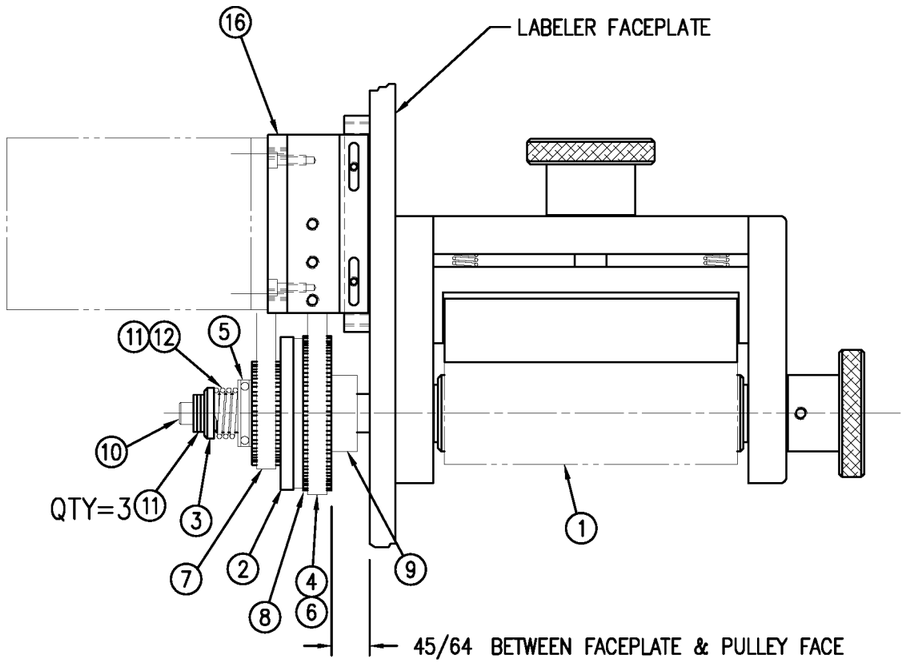
F:\Engineering\Standard Parts\Applicator\360a-CE\HOUSING\ASS-200CE-X150s4

BILL OF MATERIAL

ASS-200-X120R/L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-200-X142	NIP DRIVE w/REWIND & MOTOR PULLEYS – consisting of the following parts –
①		(1) ASS-200-X129	NIP ROLL DRIVE ASSEMBLY
②		(1) ASS-200-0143	SLIP CLUTCH ASSEMBLY
③		(1) MP-200-0229	CLUTCH SPRING KEEPER
④		(1) MP-200-0233	DRIVE PULLEY
⑤		(1) PM-BE1232	3/4" THRUST BEARING ASSEMBLY
⑥		(1) PM-BELT1018	TIMING BELT
⑦		(1) PM-BELT1023	TIMING BELT
⑧		(1) PM-CL1010	3" LEATHER CLUTCH PAD
⑨		(1) PM-CO1020	3/4" ID LOCK COLLAR – SS
⑩		(1) PM-FASH430080	SHCS, 1/4-20 x 1.00 LG. SS
⑪		(1) PM-FASP30540	COMPRESSION SPRING
⑫		(10) PM-FAW30275	FLAT WASHER – 1/4 NOM. – SS
	1	ASS-200-X140R/L	RWD. MANDREL w/BLOCK, SHAFT & PULLEY – consisting of the following parts –
⑬		(1) ASS-200-0128R/L	REWIND BEARING BLOCK ASSEMBLY
⑭		(1) ASS-200-X147	STANDARD REWIND MANDREL
⑮		(1) MP-200-0231	REWIND PULLEY
⑯	1	ASS-200-0453	MOTOR ASSEMBLY





ASS-200-X120R/L	
5" WIDE	-0120R/L
7.5" WIDE	-2120R/L
10" WIDE	-5120R/L

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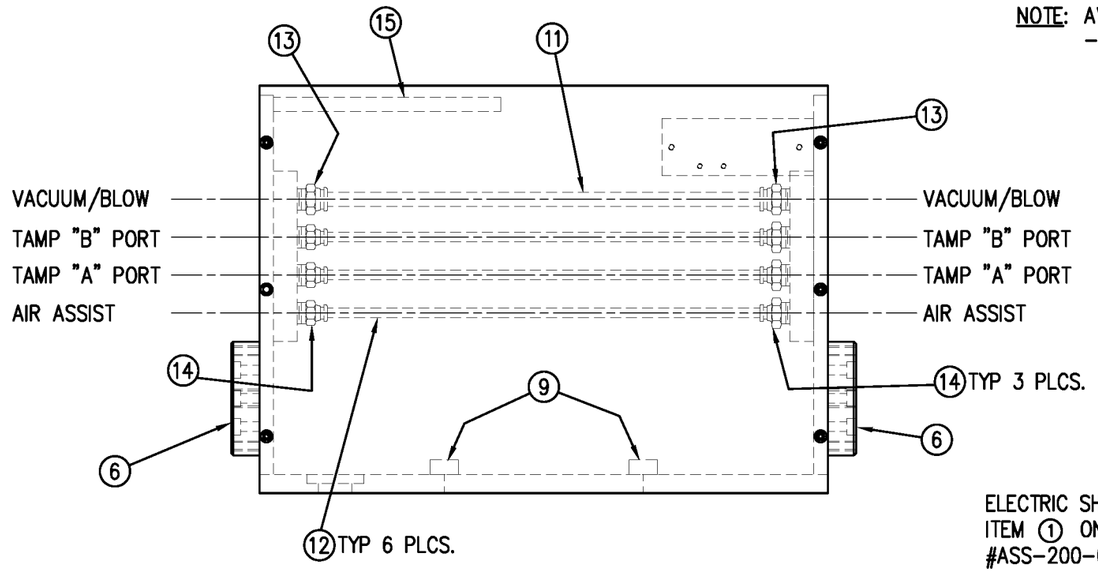
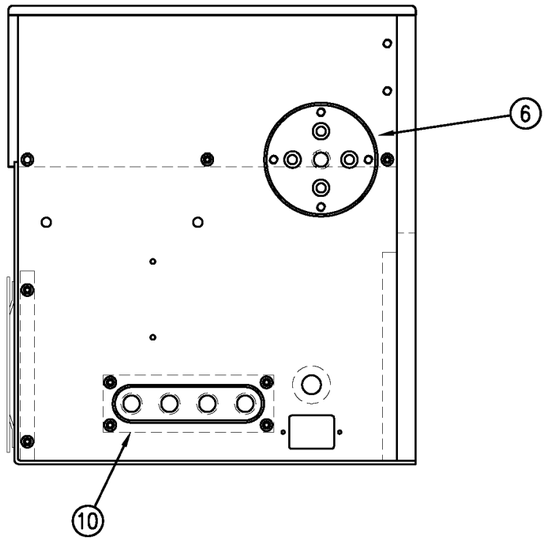
TITLE:	LABEL NIP / REWIND ASSEMBLY
APPLICATOR SERIES:	360
APPLICATOR WIDTH(S):	5"/7.5"/10"
GROUP:	HOUSING
REV.	3
REV. DESCRIPTION	UPDATED DWG., CHG'D PART/ITEM #'s
REV. BY:	TK
REV. DATE	10-12-04
Scale:	1=3
Date:	06/02/98
DRAWN BY:	BOB S.
Dept. Code	70
F:\Engineering\Standard Parts\Applicator\360\	HOUSING\ASS-200-X120RL

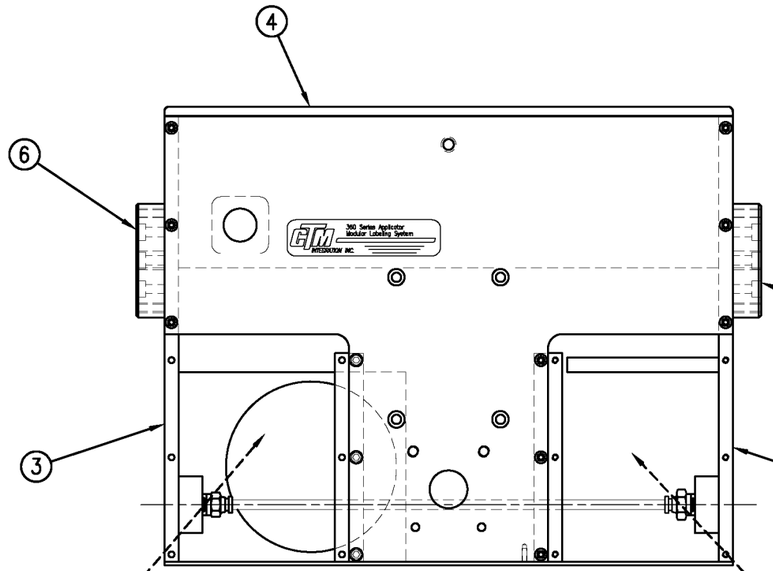
BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-200-0122R/L		.
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	T-PLATE	MP-200-0260	.
②	1	HOUSING RIGHT SIDE FRAME	MP-200-0258	.
③	1	HOUSING LEFT SIDE FRAME	MP-200-0259	.
④	1	ELECTRICAL TOP COVER	MP-200-0246	.
⑤	1	HOUSING COVER ASSEMBLY	ASS-200-0141	.
⑥	2	U-ARM MOUNT	MP-200-0273	.
⑦	1	PLUG	PE-EN9055	.
⑧	1	LABEL SENSOR ACCESS COVER	MP-200-0248	.
⑨	2	TIE PLATE	MP-200-0251	.
⑩	2	AIR MANIFOLD CONNECTOR	MP-200-0250	.
⑪	1	3/8" O.D. TUBING (CUT TO 12 3/4")	PM-PT1080	.
⑫	3	1/4" O.D. TUBING (CUT TO 12 5/8")	PM-PT1070	.
⑬	2	FITTING, 3/8" TUBE to 1/4" NPT STR.	PM-PF1020	.
⑭	6	FITTING, 1/4" TUBE to 1/4" NPT STR.	PM-PF1010	.
⑮	1	FAN MOUNTING PLATE	MP-200-0257	.

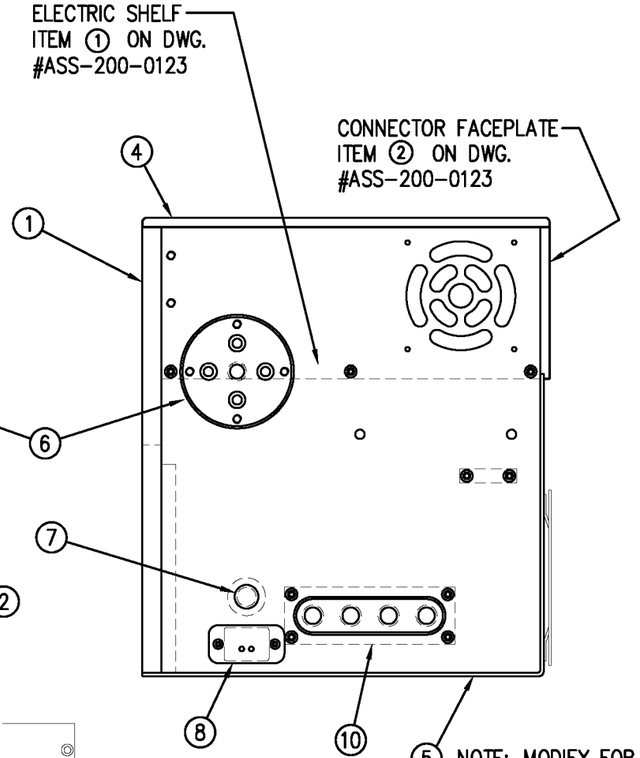
NOTE: AVAILABLE IN RH & LH ORIENTATIONS
– RIGHT HAND ASSEMBLY SHOWN –

ASS-200-0122R/L









NOTE: MODIFY FOR (REV 3) DROP DOWN SNORKLE PER DRAWING ASS-200-0141

NOTE: ITEMS ⑦ & ⑧ ARE LOCATED ON OPPOSITE SIDE OF HOUSING FOR LH ASSEMBLY.

REWIND TRANSITION PLATE~CTM PART #MP-200-0266
ORIENTATION & LOCATION FOR RH APPLICATOR
(NOT INCLUDED IN ASSEMBLY)

REWIND TRANSITION PLATE~CTM PART #MP-200-0266
ORIENTATION & LOCATION FOR LH APPLICATOR
(NOT INCLUDED IN ASSEMBLY)

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TITLE: 360 SERIES APPLICATOR: HOUSING ASSEMBLY

PART: APPLICATOR HOUSING ASSEMBLY

Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360 200\ASS-200-0122RL

Scale: 1=4 | Date: 06/19/97 | DRAWN BY: BOB S.

REV. 3 | REV. DESCRIPTION: ADDED MODIFICATION NOTE FOR HOUSING COVER | REV. DATE: 01/31/06 | REV. BY: TDR

ASS-200CE-0123

BILL OF MATERIAL

ASS-200CE-0123

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200CE-0121	CONNECTOR FACEPLATE ASSEMBLY
②	1	ASS-200CE-0122	ELECTRIC SHELF ASSEMBLY
③	1	ASS-200CE-1410	J104 WIRING HARNESS
④	1	ASS-200CE-1411	TB202 WIRING HARNESS
⑤	1	ASS-200CE-1412	TB204 WIRING HARNESS

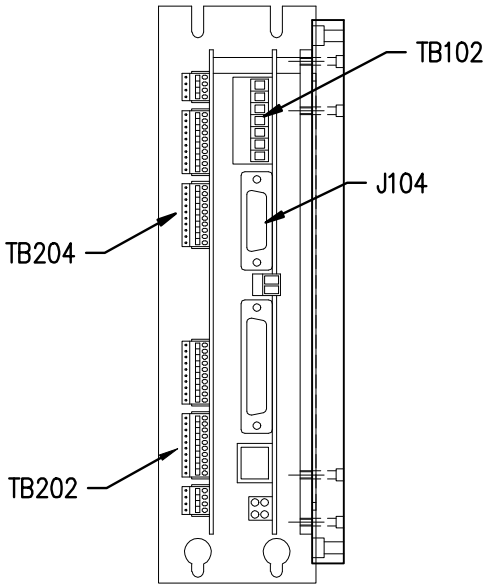
USE THE FOLLOWING DWGS FOR WIRING INFO:

ASS-200CE-0421 for Product Detect

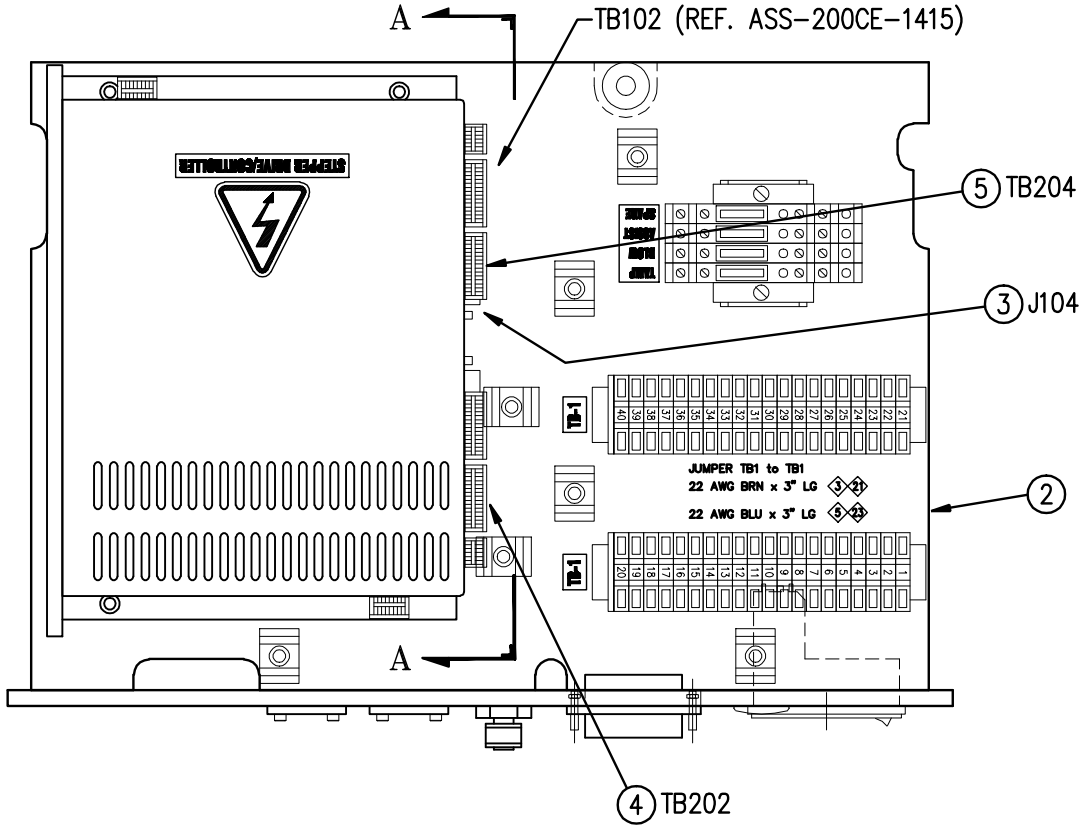
ASS-200CE-1410
ASS-200CE-1411
ASS-200CE-1412
ASS-200CE-1415
— for Stepper Drive to TB

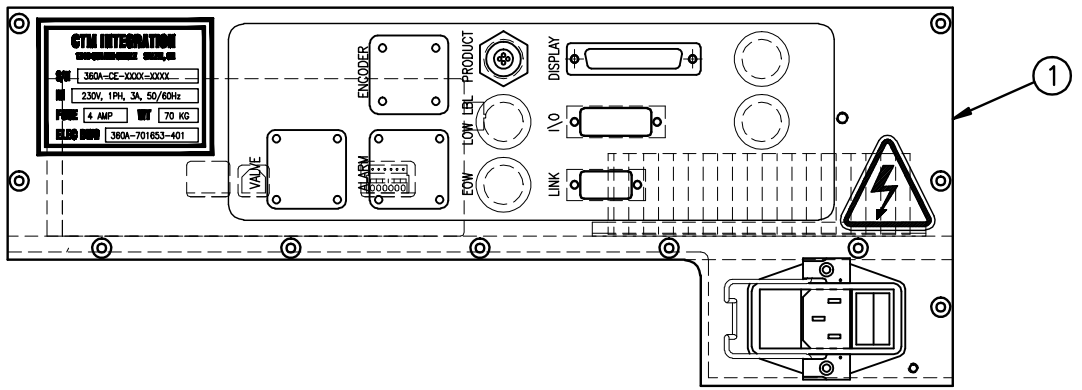
ASS-200CE-0416 for Display to TB & Stepper Drive

ASS-200CE-0445 for Valve to TB



"VIEW A-A"
END VIEW OF STEPPER DRIVE





FOR ASSEMBLY DWG. REFER TO:
ASS-200CE-X150

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	HOUSING	WIRED BOARD ASSEMBLY	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360a-CE\
0	–	–	xxx	1=3	03/01/08	Tracy Rhodes	HOUSING\ASS-200CE-0123

ASS-200CE-0128

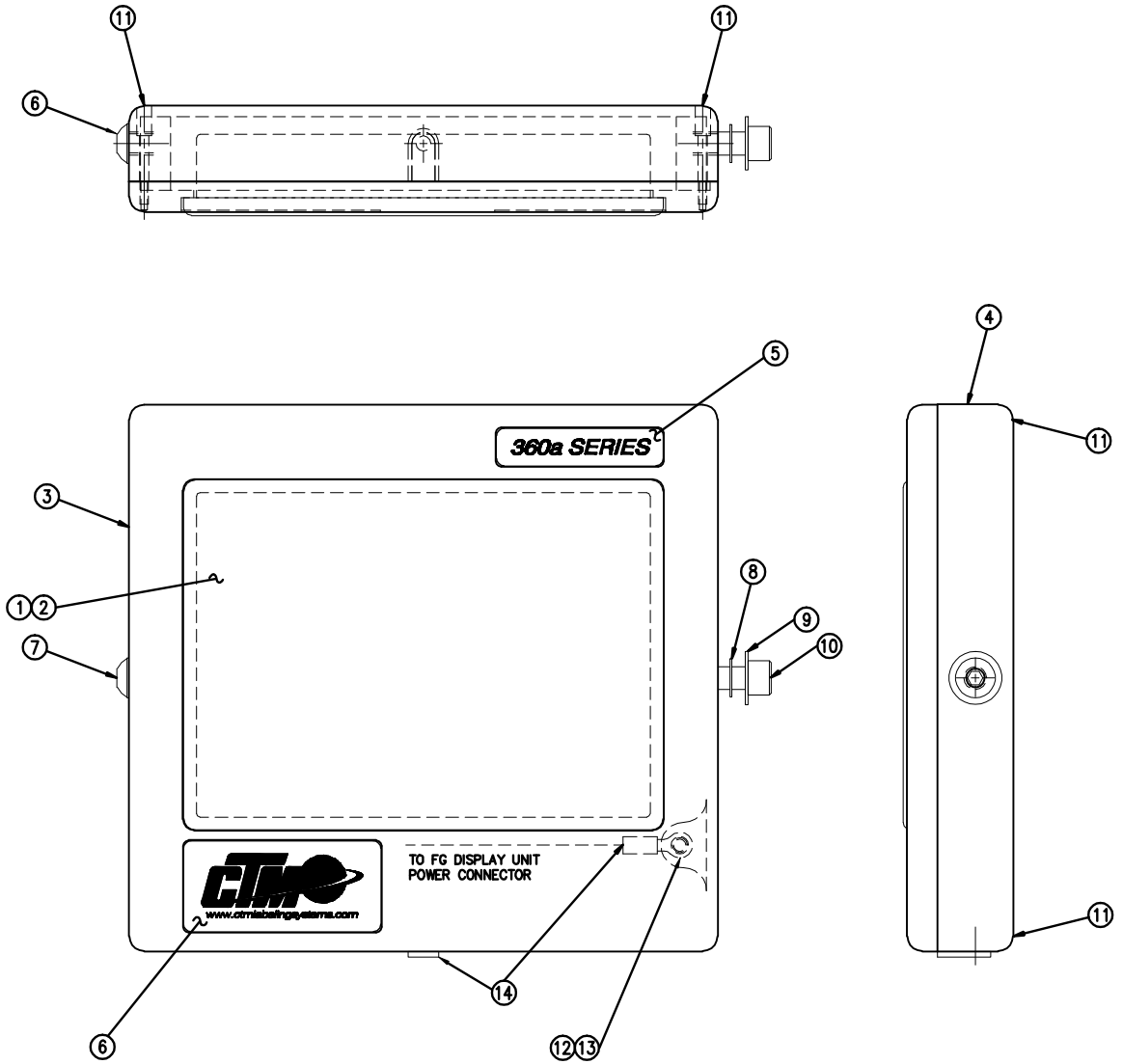
BILL OF MATERIAL

ASS-200CE-0128

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-IN1013	MAPLE DISPLAY INTERFACE (TOUCH SCREEN)
②	4	PM-FAPH10522	M4 X 16mm SS PAN HEAD PHILLIPS
③	1	MP-200a-0263	HMI 5070LB DISPLAY FACE PLATE
④	1	MP-200a-0264	HMI 5070LB DISPLAY BACK COVER
⑤	1	PM-LB1023	360a SERIES LABEL
⑥	1	PM-LB1021	CTM LABEL
⑦	1	PM-FABH3550	3/8-16 X 1/2 Lg. SS BHCS
⑧	1	PM-FAW32500	3/8 BLACK NYLON WASHER
⑨	1	PM-FAW30285	3/8" SS WASHER
⑩	1	PM-FASH430194	3/8"-16 x 1" LG. SS SHCS
⑪	4	PM-FASH428006	6-32 X 1" Lg SS SHCS
⑫	1	PM-FABH35500	1/4-20 X 1/2" Lg SS BHCS
⑬	2	PM-FAW30685	LOCK WASHER 1/4 EXTERNAL-TOOTH STN STL
⑭	1	ASS-200CE-0407	APPLICATOR TO DISPLAY CABLE

MOUNTING BRACKET NOT INCLUDED IN ASSEMBLY:

OPTIONAL U-ARM MOUNT ~ #ASS-200-0146
STANDARD UPRIGHT MOUNT ~ #ASS-200-0138



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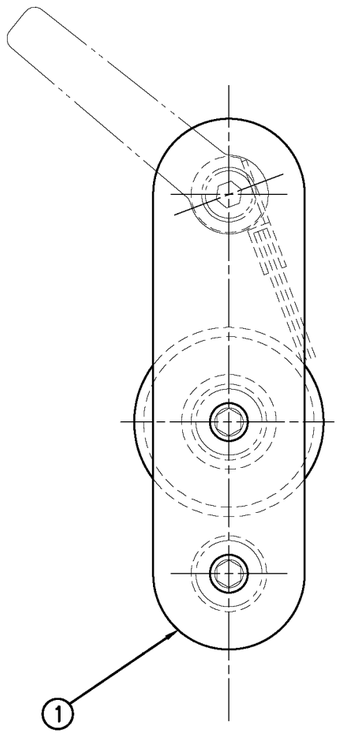
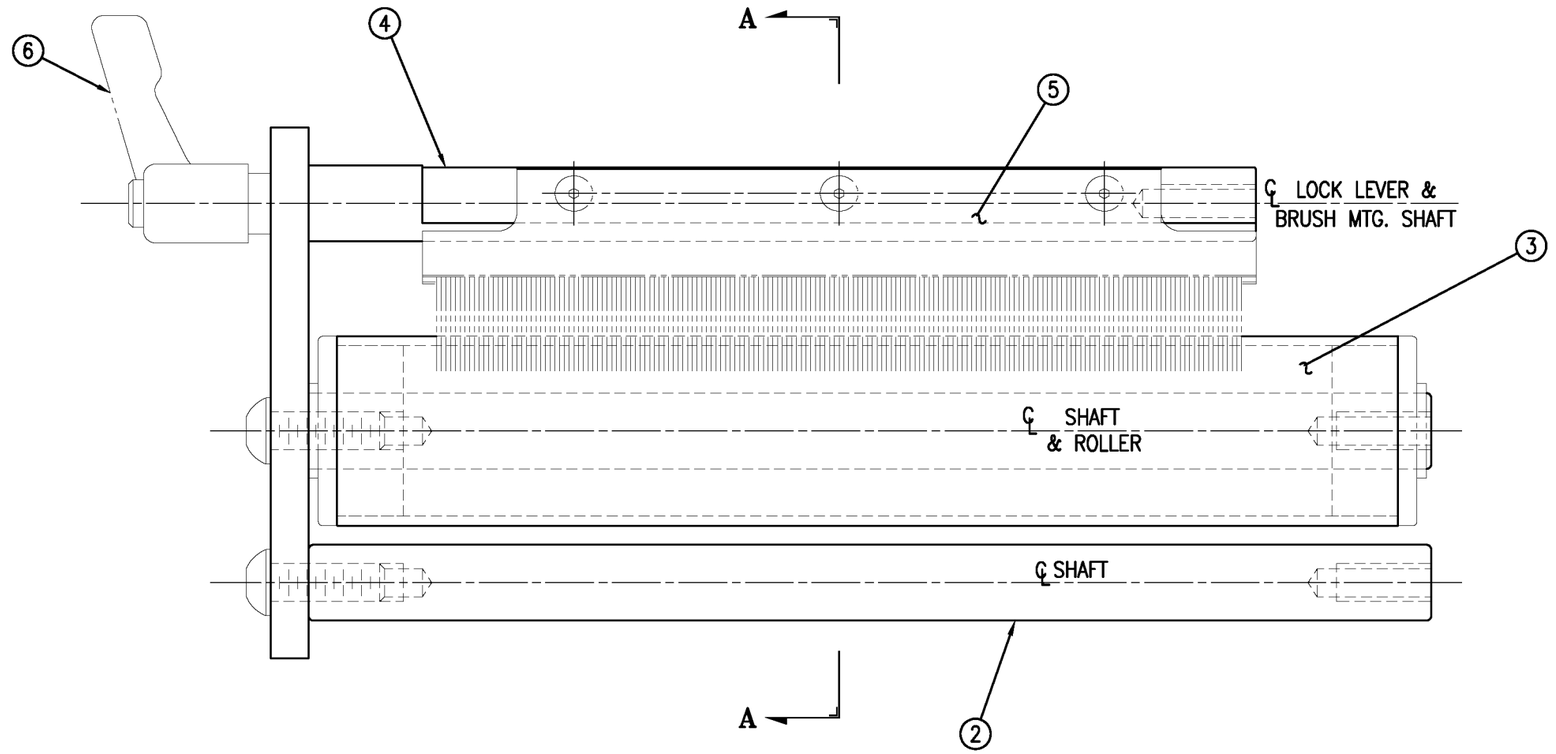
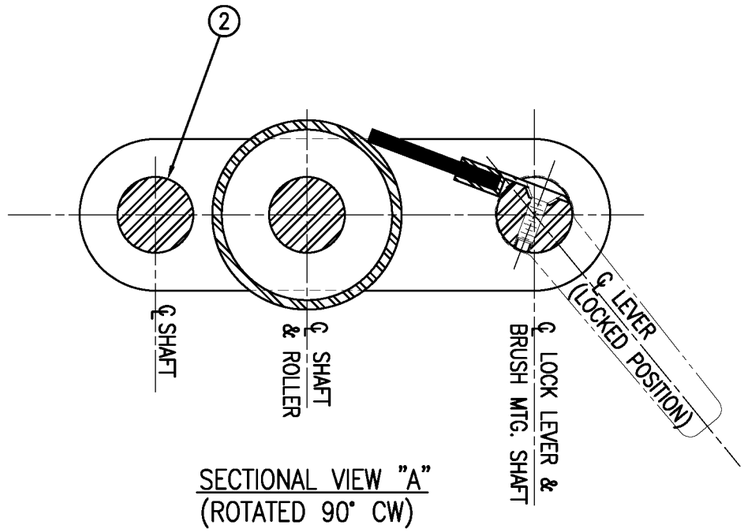
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360a-CE	5"/7.5"/10"	360a SERIES APPLICATOR	MAPLE DISPLAY UNIT ASSEMBLY	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
0	-	-	xxx	1=3	02/02/17	T. Rhodes	F:\Engineering\Standard Parts\Applicator\360a\360a-CE\ASS-200a-0128

ASS-200-X126L	
5" WIDE	-0126L
7.5" WIDE	-2126L
10" WIDE	-5126L







SECTIONAL VIEW "A"
(ROTATED 90° CW)

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-200-X126L		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
1	1	TENSION BRUSH ROLL MOUNTING BRKT.	MP-200-0256	.
2	1	5/7.5/10 TENSION ROLLER SHAFT	MP-200-X254	.
3	1	5/7.5/10 TENSION ROLL ASS'Y w/SHAFT	ASS-200-X135	S
4	1	5/7.5/10 TENSION BRUSH MTG SHAFT	MP-200-X253	.
5	1	5/7.5/10 TENSION BRUSH ASSEMBLY	ASS-215-X110	S
6	1	LOCK LEVER	PM-LL0850	.
	2	SHCS, 1/4"-20 UNC x 1" LG.	NONE	.
	2	FLAT WASHER, 1/4" NOM.	NONE	.
	2	BHCS, 1/4"-20 UNC x 3/4" LG.	NONE	.

REV 1

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TITLE: 360 SERIES APPLICATOR: HOUSING ASSEMBLY

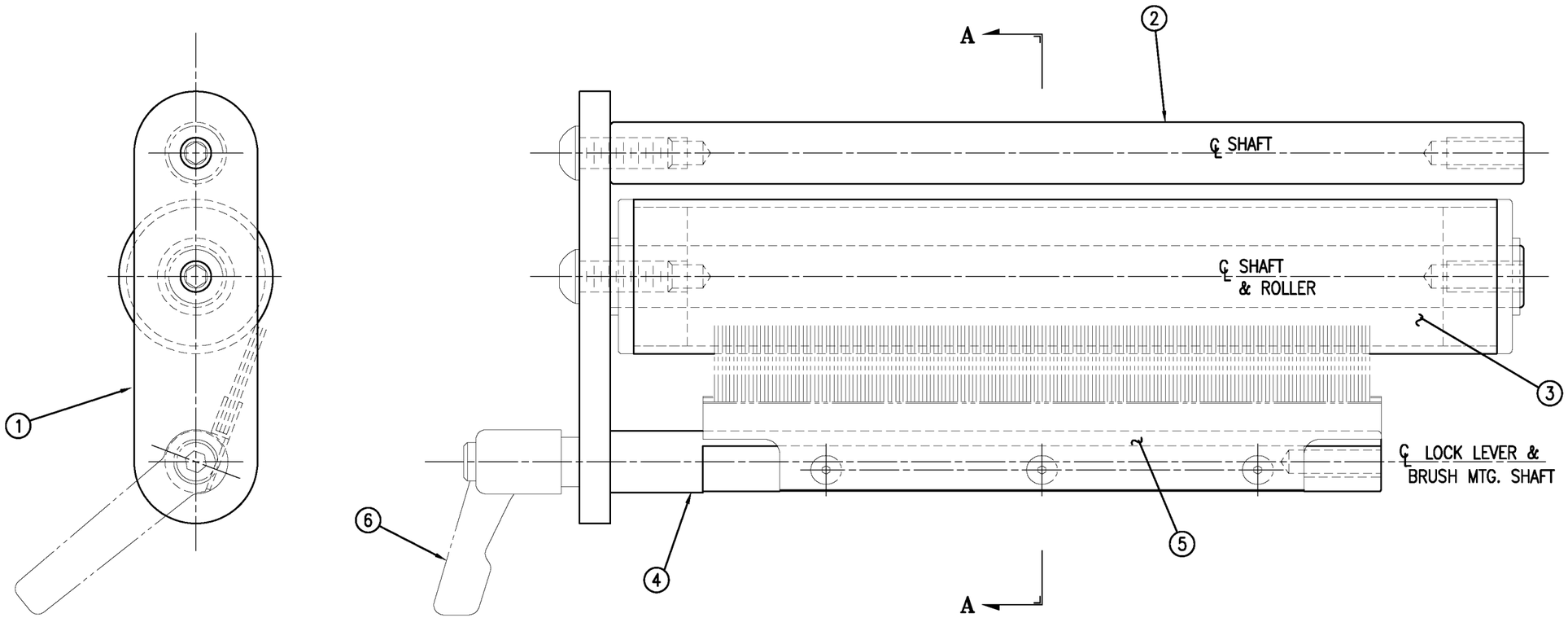
PART: TENSION BRUSH LH ASSEMBLY

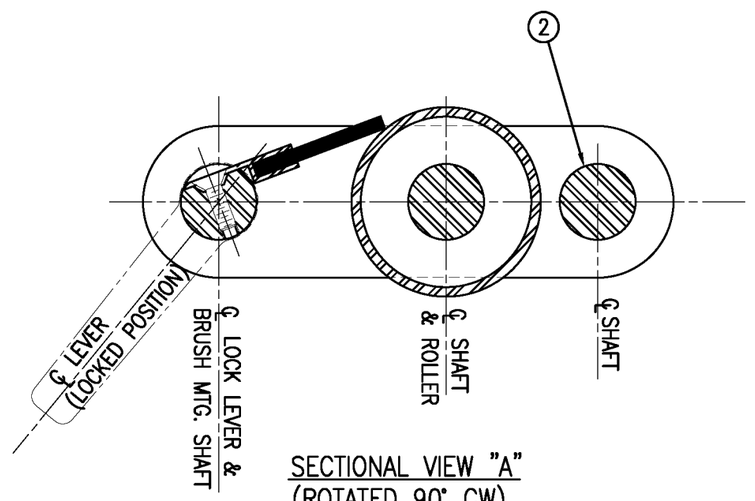
Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360 200\ASS-200-X126L

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:
1	BHCS WAS LHCS	8/8/05	JAM	1=1	06/02/98	BOB S.

ASS-200-X126R	
5" WIDE	-0126R
7.5" WIDE	-2126R
10" WIDE	-5126R





SECTIONAL VIEW "A"
(ROTATED 90° CW)

BILL OF MATERIAL				SOLD	
ASSEMBLY		ASS-200-X126R		S	
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER		
1	1	TENSION BRUSH ROLL MOUNTING BRKT.	MP-200-0256	.	
2	1	5/7.5/10 TENSION ROLLER SHAFT	MP-200-X254	.	
3	1	5/7.5/10 TENSION ROLL ASS'Y w/SHAFT	ASS-200-X135	S	
4	1	5/7.5/10 TENSION BRUSH MTG SHAFT	MP-200-X253	.	
5	1	5/7.5/10 TENSION BRUSH ASSEMBLY	ASS-215-X110	S	
6	1	LOCK LEVER	PM-LL0850	.	
	2	SHCS, 1/4"-20 UNC x 1" LG.	NONE	.	
	2	FLAT WASHER, 1/4" NOM.	NONE	.	
	2	BHCS, 1/4"-20 UNC x 3/4" LG.	NONE	.	REV 1

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PART: TENSION BRUSH RH ASSEMBLY

Dept. Code 70

TITLE: 360 SERIES APPLICATOR: HOUSING ASSEMBLY

Scale: 1=1 | Date: 06/02/98 | DRAWN BY: BOB S.

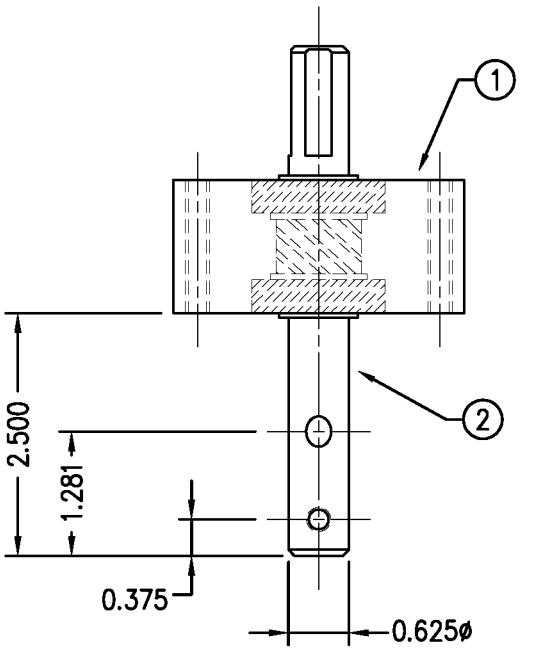
F:\Engineering\Standard Parts\Applicator\360 200\ASS-200-X126R

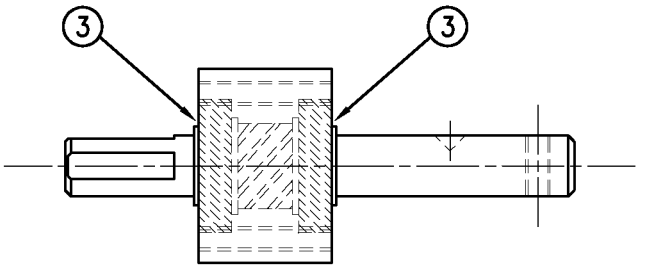
REV. BY: JAM | REV. DATE 8/8/05

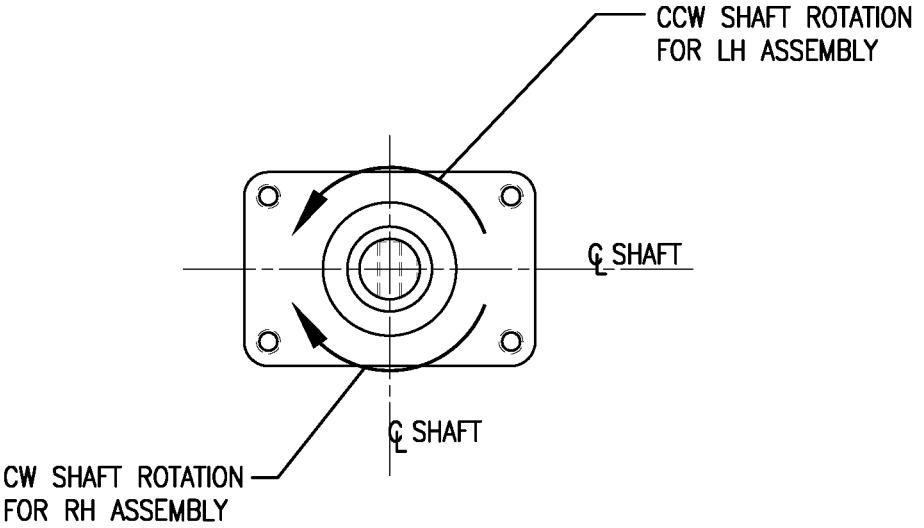
REV. 1 | REV. DESCRIPTION BHCS WAS LHCS

ASS-200-0128R/L

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-200-0128R/L		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	REWIND BEARING BLOCK ASSEMBLY	ASS-200-0139	.
②	1	REWIND SHAFT	MP-200-0220	.
③	2	SNAP RING	PM-FASR1010	.
	4	FHCS, 1/4"-20 UNC x 1" LG.	NONE	.







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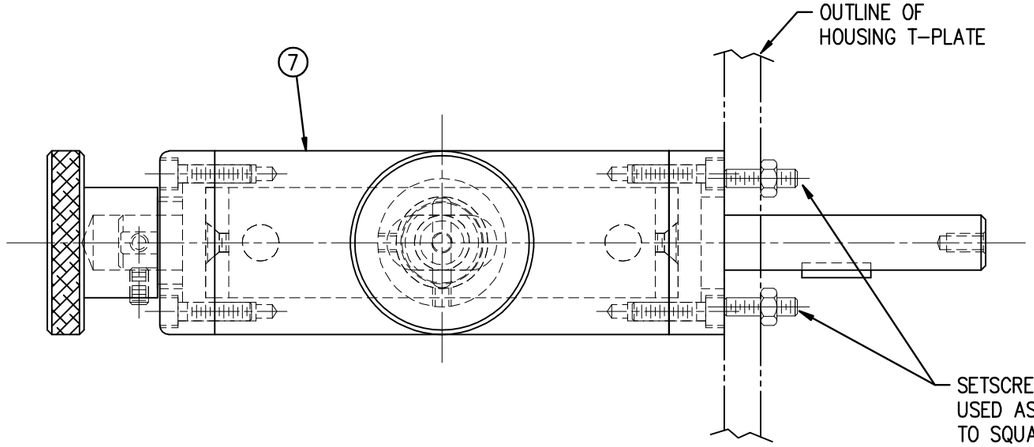
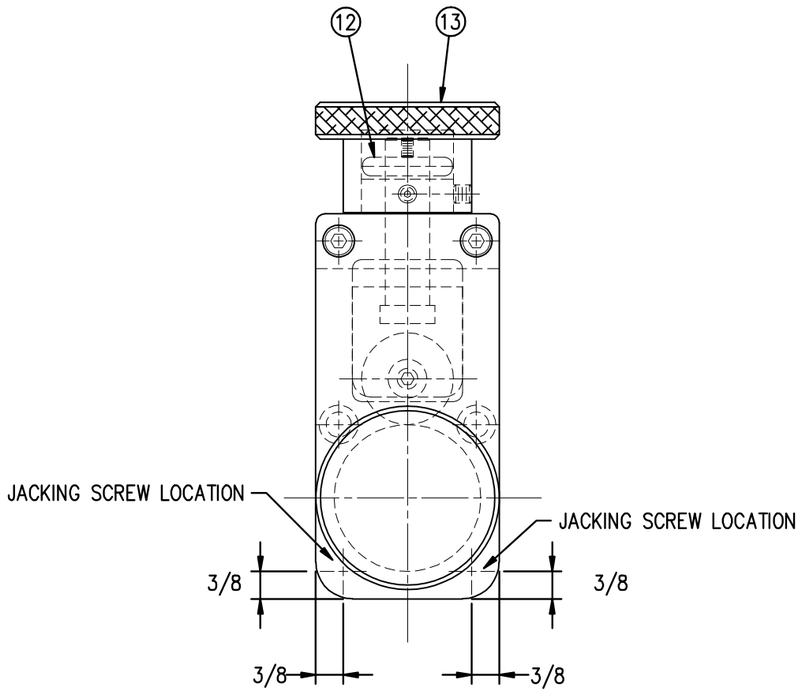
TITLE: 360 SERIES APPLICATOR: REWIND ASSEMBLY	PART: REWIND BEARING BLOCK ASSEMBLY	Dept. Code 70

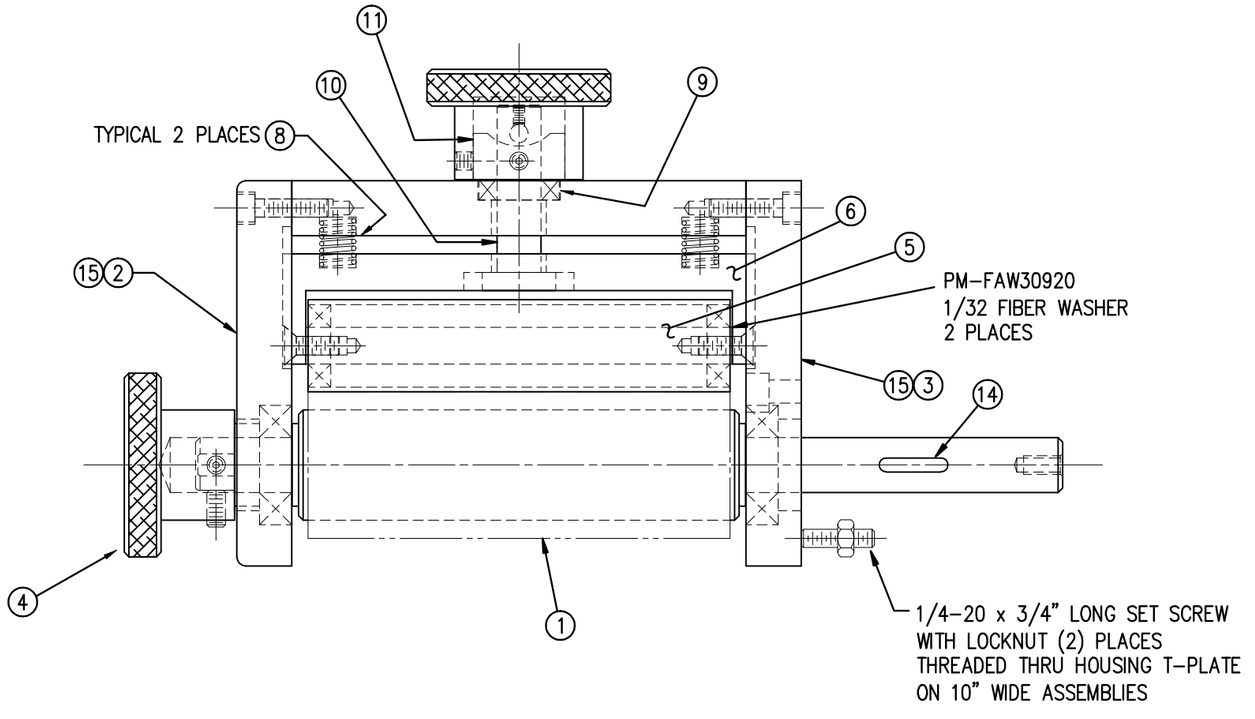
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360 200\ASS-200-0128RL
0	NEW TITLEBLOCK	02/05/03	TDR	1=2	02/21/98	BOB S.	

BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-200-X129		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	5/7.5/10 DRIVE ROLL	MP-200-X242	S
②	1	OUTSIDE DRIVE ROLL SUPPORT	MP-200-0236	.
③	1	INSIDE DRIVE ROLL SUPPORT	MP-200-0237	.
④	1	DRIVE ROLL KNOB	MP-200-0223	.
⑤	1	5/7.5/10 NIP ROLL ASSEMBLY w/SHAFT	ASS-200-X130	S
⑥	1	5/7.5/10 NIP ROLL YOKE	MP-200-X240	.
⑦	1	5/7.5/10 NIP ROLL TOP SUPPORT	MP-200-X239	.
⑧	2	COMPRESSION SPRING	PM-FASP30428	.
⑨	1	THRUST BEARING	PM-BE1230	.
⑩	1	LIFT ROD	MP-200-0214	.
⑪	1	LIFT CAM	MP-200-0235	.
⑫	1	LIFT ROD PIN	MP-200-0213	.
⑬	1	NIP ROLL KNOB	MP-200-0224	.
⑭	1	KEY	PM-FAKS30520	.
⑮	2	BALL BEARINGS	PM-BE1270	.
	2	SHCS, 5/16"-18 x 1" LG.	PM-FASH430154	.
	2	SET SCREW, 1/4-20 x 3/4" LG.	PM-FASS48058	.
	2	LOCKNUT, 1/4-20	PM-FANU20004	.
	2	RED 1/32 FIBER WASHER	PM-FAW30920	.
	2	SHCS, 1/4"-20 x 7/8" LG.	PM-FASH430079	.

ASS-200-X129	
5" WIDE	-0129
7.5" WIDE	-2129
10" WIDE	-5129







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TITLE: 360 SERIES APPLICATOR: HOUSING ASSEMBLY

PART: 5"/7.5"/10" NIP DRIVE ROLL ASSEMBLY

Dept. Code 70

Scale: 1=2 | Date: 02/21/98 | DRAWN BY: BOB S. | F:\Engineering\Standard Parts\Applicator\360 200\ASS-200-X129

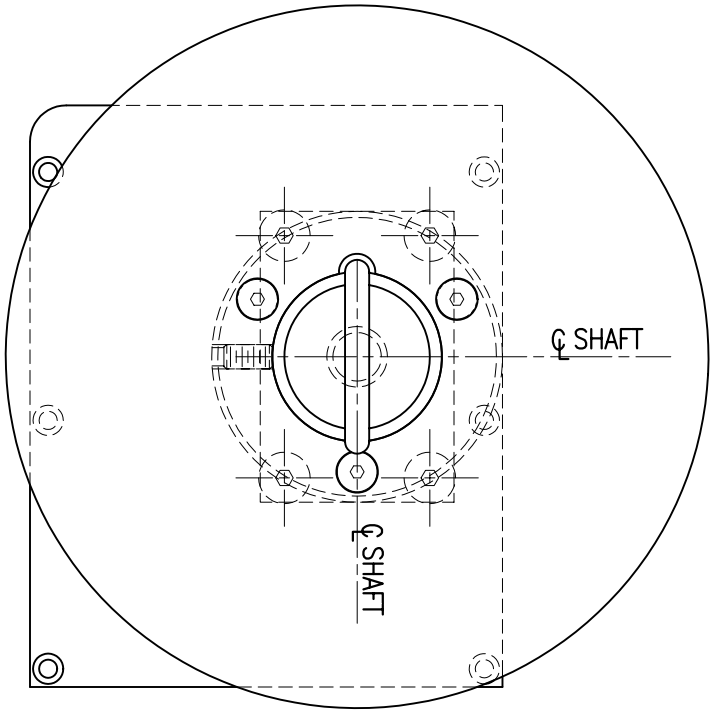
REV. | REV. DESCRIPTION | REV. DATE | REV. BY: | Scale:
1 | ADDED SET SCREWS & LOCKNUTS FOR JACK SCREW | 01/31/06 | TDR | 1=2

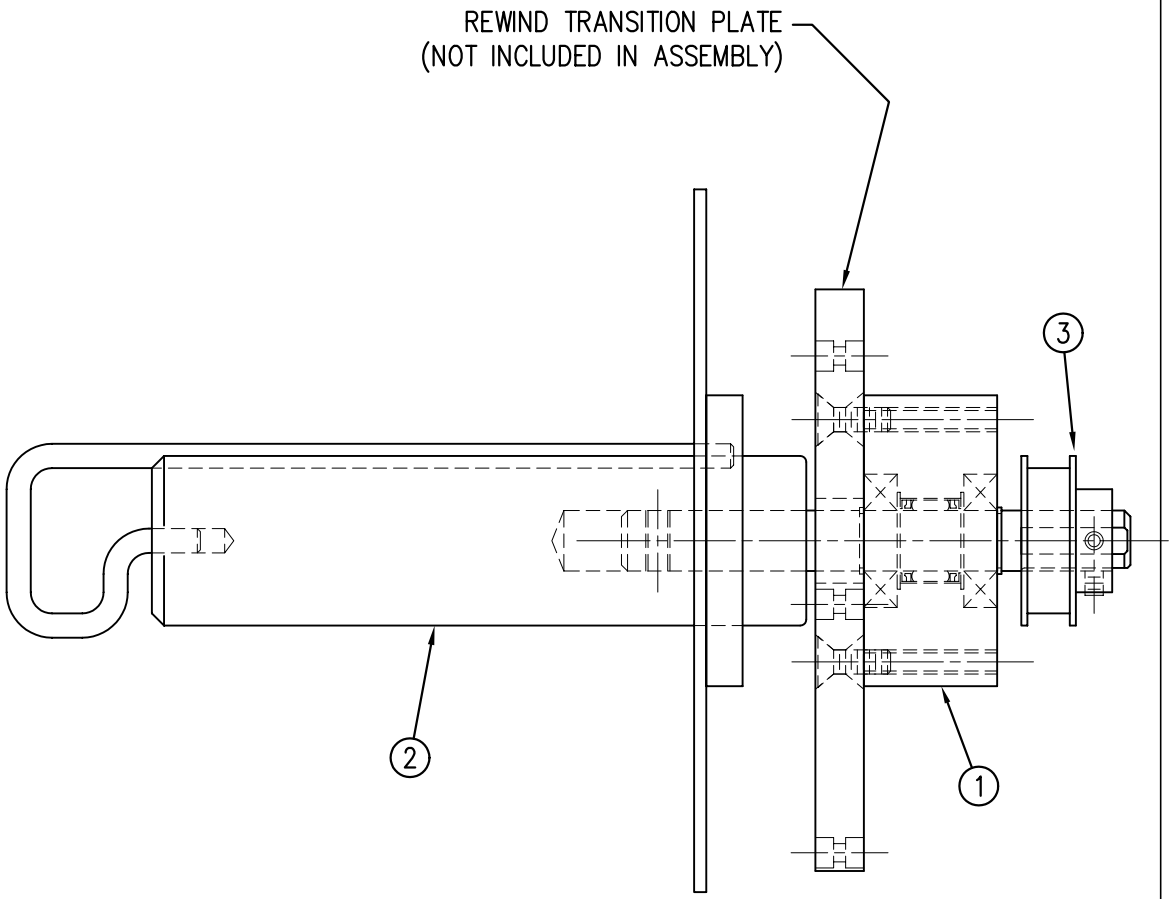
BILL OF MATERIAL

ASS-200-X140R/L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200-0128R/L	REWIND BEARING BLOCK ASSEMBLY
②	1	ASS-200-X147	STANDARD REWIND MANDREL
③	1	MP-200-0231	REWIND PULLEY

ASS-200-X140R/L	
5" WIDE	-0140R/L
7.5" WIDE	-2140R/L
10" WIDE	-5140R/L





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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360	5"/7.5"/10"	REWIND	REWIND MANDREL ASSEMBLY w/ BLOCK, SHAFT & PULLEY	70

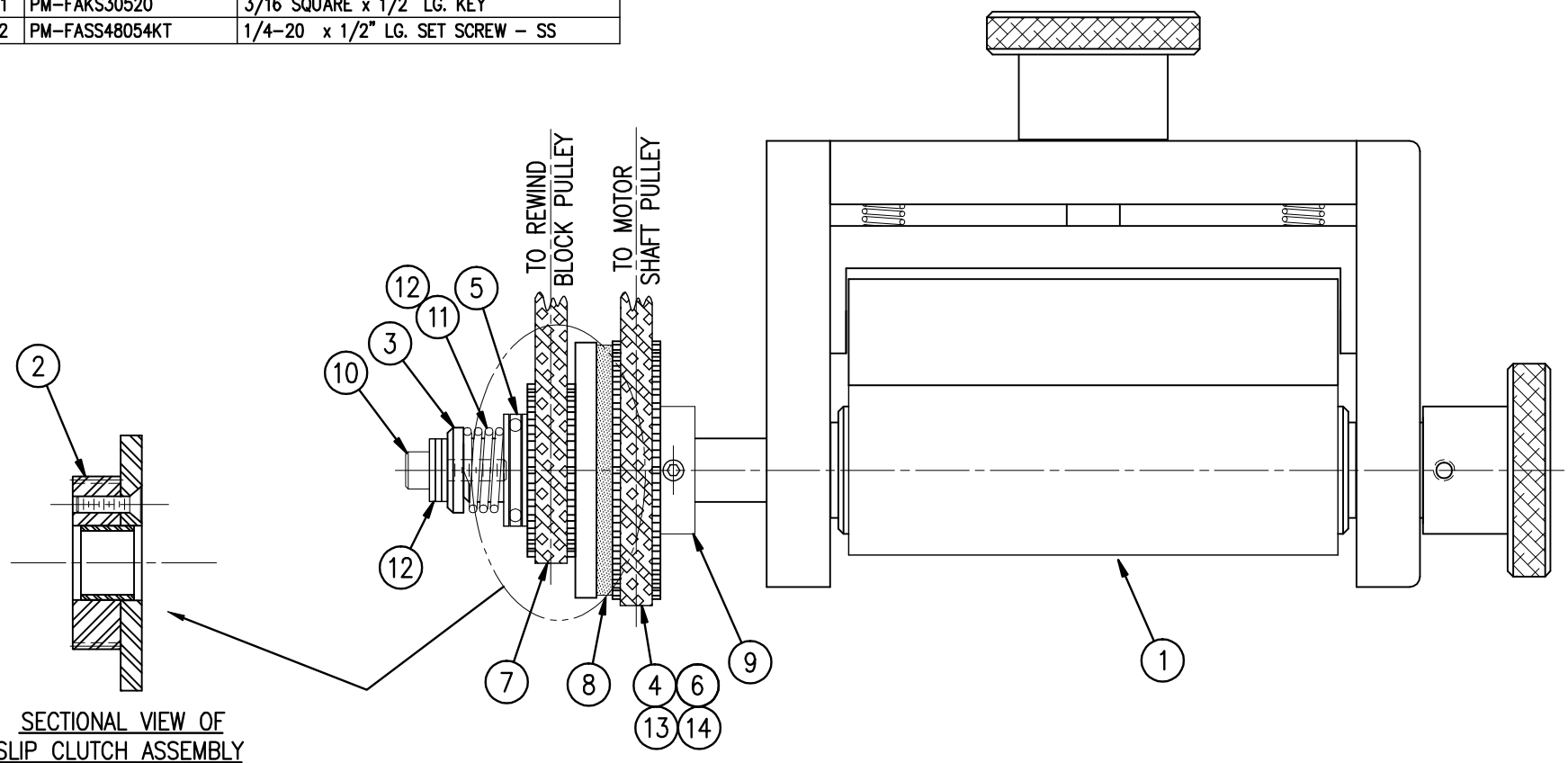
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
1	UPDATED B.O.M.	12/06/05	TDR	1=2	01/18/02	TDR	Unwind-Rewind\ASS-200-X140RL

BILL OF MATERIAL

ASS-200-X142

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-200-X129	NIP ROLL DRIVE ASSEMBLY
②	1	ASS-200-0143	SLIP CLUTCH ASSEMBLY
③	1	MP-200-0229	CLUTCH SPRING KEEPER
④	1	MP-200-0233	DRIVE PULLEY
⑤	1	PM-BE1232	3/4" THRUST BEARING ASSEMBLY
⑥	1	PM-BELT1018	TIMING BELT
⑦	1	PM-BELT1023	TIMING BELT
⑧	1	PM-CL1010	3" LEATHER CLUTCH PAD
⑨	1	PM-C01020	3/4" ID LOCK COLLAR - SS
⑩	1	PM-FASH430080	SHCS, 1/4-20 x 1.00 LG. SS
⑪	1	PM-FASP30540	COMPRESSION SPRING
⑫	10	PM-FAW30275	FLAT WASHER - 1/4 NOM. - SS
⑬	1	PM-FAKS30520	3/16 SQUARE x 1/2" LG. KEY
⑭	2	PM-FASS48054KT	1/4-20 x 1/2" LG. SET SCREW - SS

ASS-200-X142	
5" WIDE	-0142
7.5" WIDE	-2142
10" WIDE	-5142



SECTIONAL VIEW OF SLIP CLUTCH ASSEMBLY

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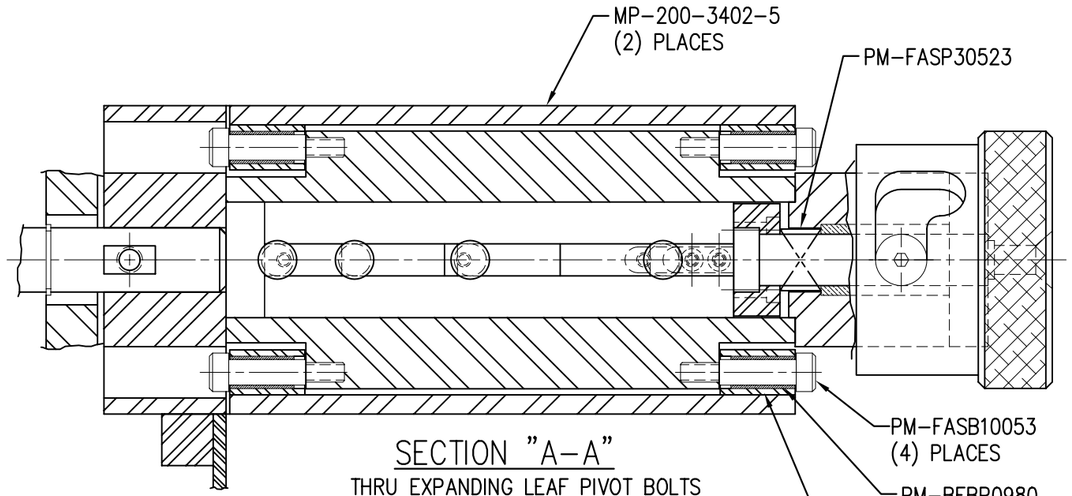
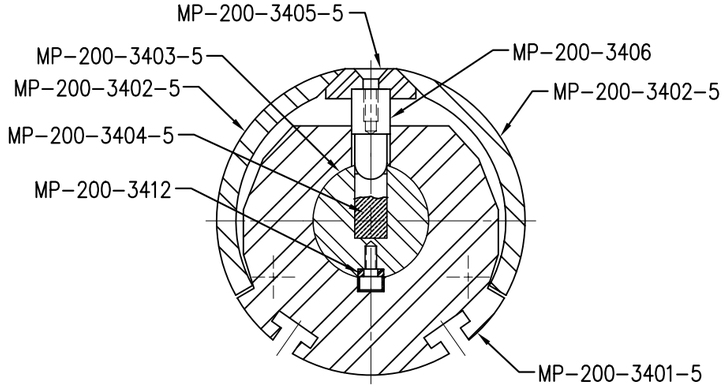
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360 SERIES	5"/7.5"/10"	NIP DRIVE	NIP DRIVE REWIND PULLEY & MOTOR PULLEY ASSEMBLY	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\Core Unit
2	ADDED ASS-200-X129 TO BOM & TABULATED FOR 5/7.5/10	02/19/09	TDR	1=2	06/02/98	BOB S.	NIP DRIVE\ASS-200-X142

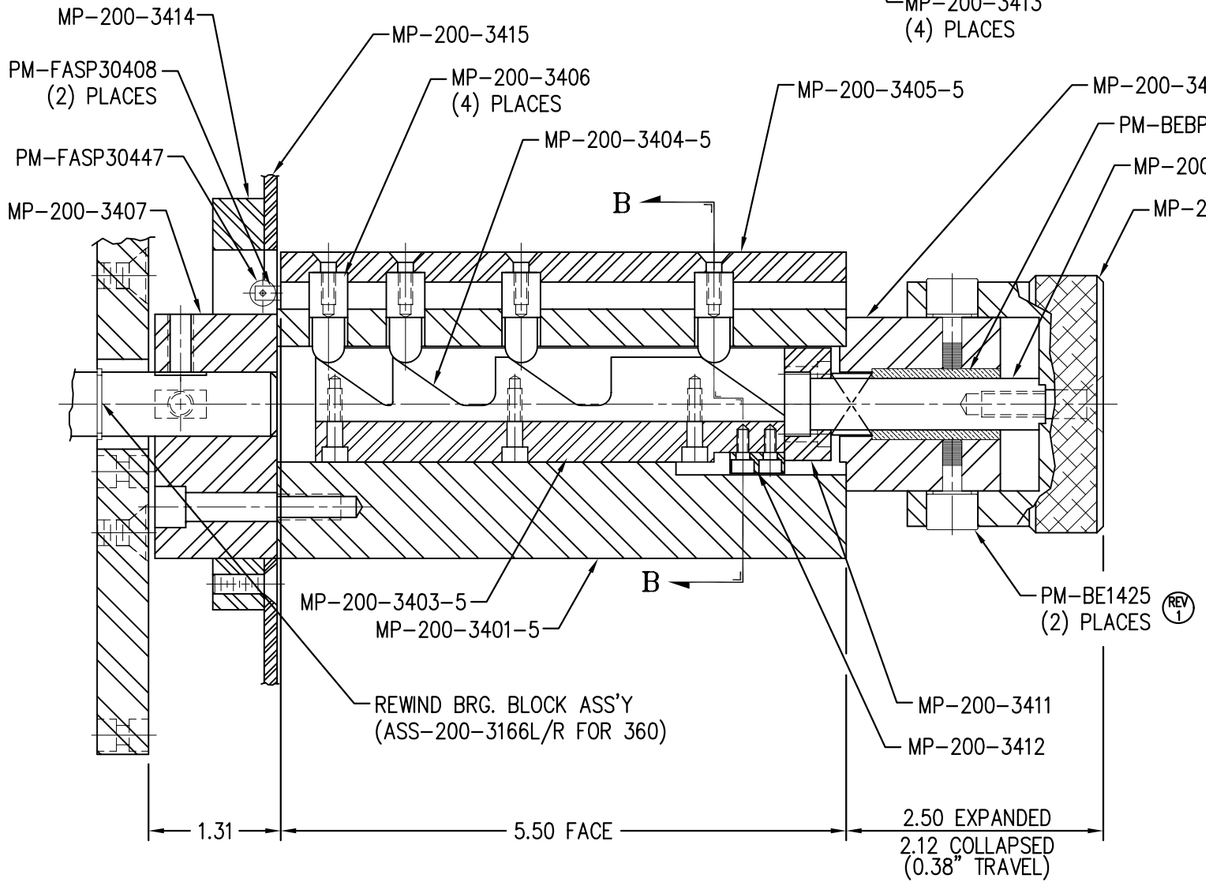
ASS-200-3140-5

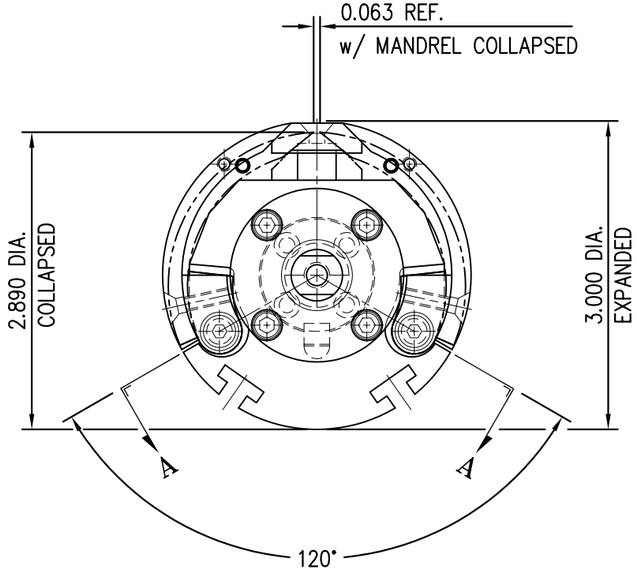


SECTION "A-A"
THRU EXPANDING LEAF PIVOT BOLTS

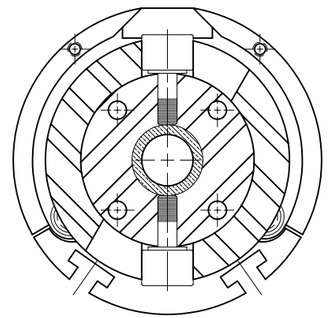


SECTION "B-B"
THRU EXPANSION PIN & WEDGE





END VIEW
WITH MANDREL EXPANDED AND w/
ACTUATOR CAP & CAMROLS REMOVED



SECTION THRU CAMROLS
REV 1

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APPLICATOR SERIES: 360 SERIES	APPLICATOR SERIES: 5" WIDE	GROUP: REWIND	TITLE: COLLAPSIBLE REWIND ASSEMBLY
Scale: 1=1.5	Date: 07/01/06	DRAWN BY: T. KELLY	Dept. Code 70
REV.	REV. DESCRIPTION	REV. BY:	REV. DATE
1	REPLACED PM-BE1415 (BALL BRGS) w/ PM-BE1425 (CAMROLS)	TK	09/19/06

F:\Engineering\Standard Parts\Applicator\360\Rewind
COLLAPSIBLE\ASS-200-3140-5

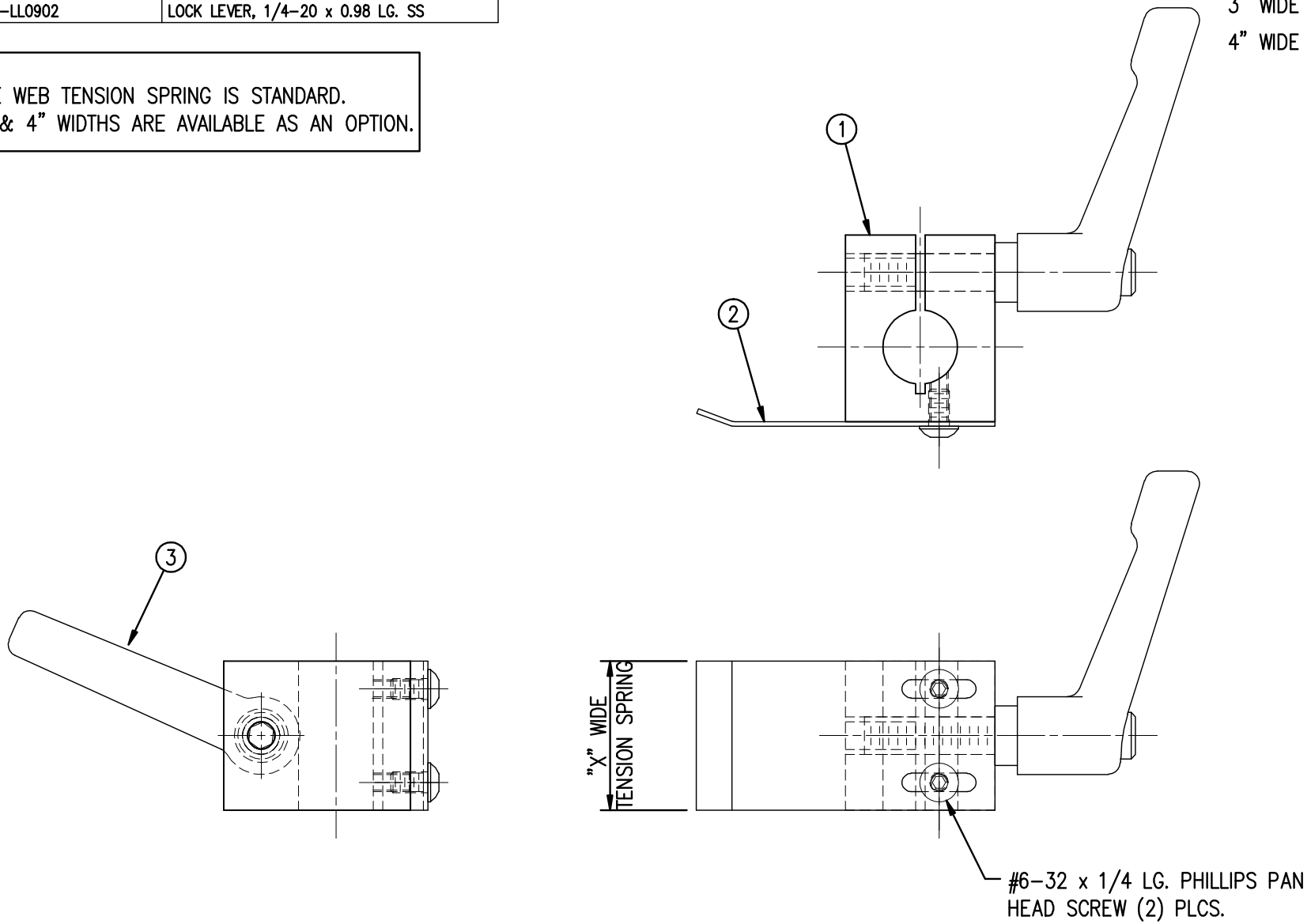
BILL OF MATERIAL

ASS-211-0105-X

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-211-0201	SPRING BLOCK
②	1	PM-211-0216-X	"X" WIDE WEB TENSION SPRING (see note)
③	1	PM-LL0902	LOCK LEVER, 1/4-20 x 0.98 LG. SS

NOTE:
1" WIDE WEB TENSION SPRING IS STANDARD.
2", 3" & 4" WIDTHS ARE AVAILABLE AS AN OPTION.

ASS-211-0105-X	
1" WIDE	-0105-1
2" WIDE	-0105-2
3" WIDE	-0105-3
4" WIDE	-0105-4



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360/3600	5"/7.5"/10"	TAMP/BLOW/MERGE/RVB	SPRING BLOCK ASSEMBLY	70

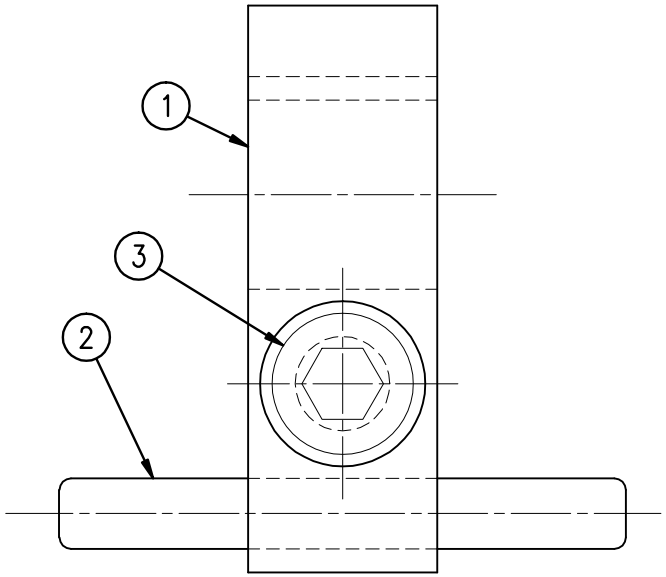
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\Shared Parts
1	UPDATED BOM & TITLE BLOCK	03/17/06	TK	1=1	02/21/98	BOB S.	PEEL EDGE\ASS-211-0105-X

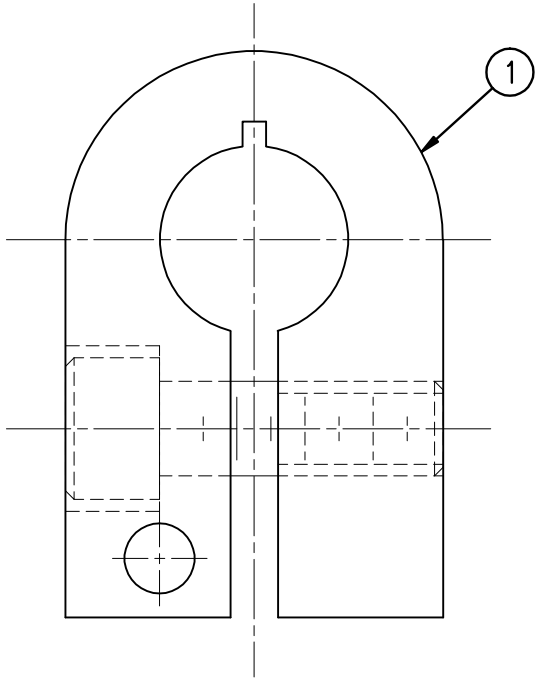
BILL OF MATERIAL

ASS-211-0110

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-211-0223	SPRING BLOCK STOP COLLAR
②	1	PM-FADP1001	DOWEL PIN, 3/16" DIA. x 1.50 LG.
③	1	PM-FASH430078	SHCS, 1/4-20 x 0.75 LG. SS

ASS-211-0110





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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360/3600	5"/7.5"/10"	TAMP/BLOW/MERGE/RVB	SPRING BLOCK STOP COLLAR ASSEMBLY	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\Shared Parts
1	UPDATED BOM & TITLE BLOCK	03/14/06	TK	2=1	02/18/02	TDR	PEEL EDGE\ASS-211-0110

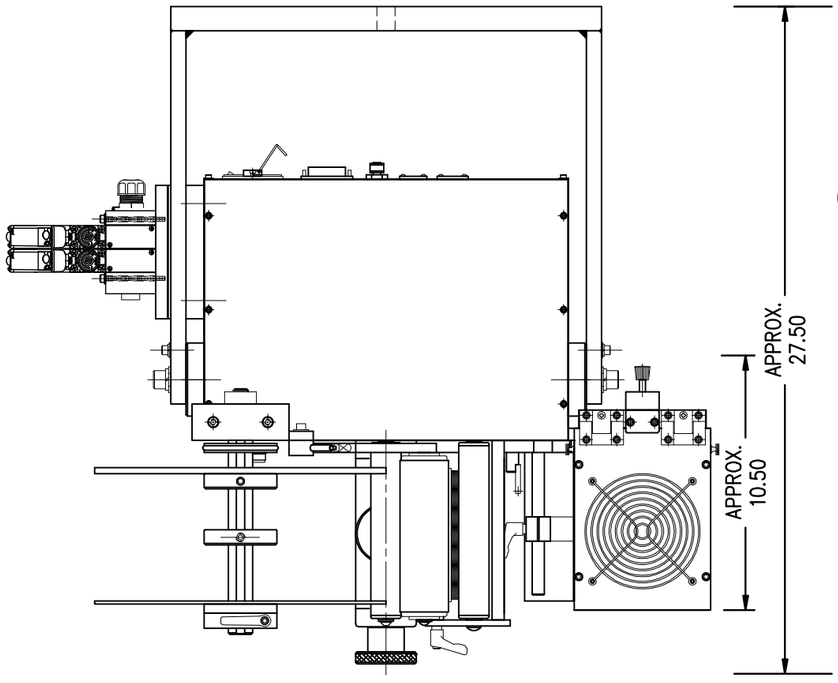
BILL OF MATERIAL

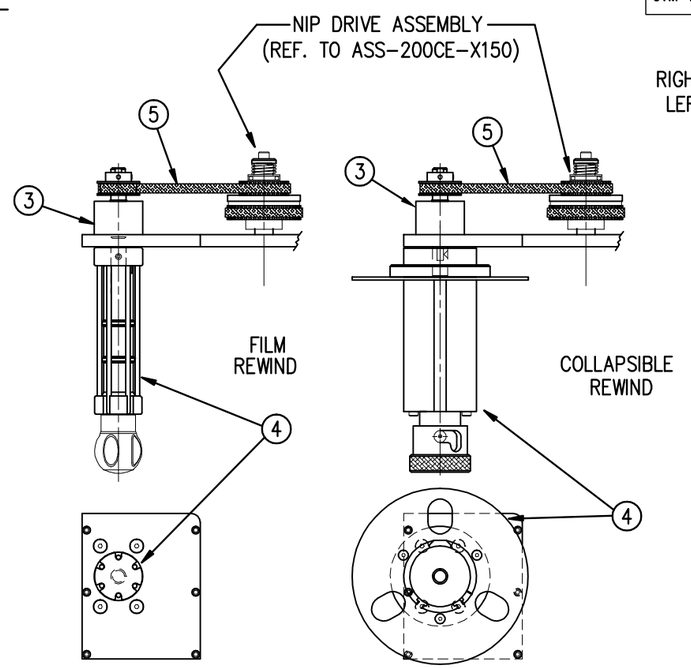
CTM-211CE-0101R/L-12S/F/C

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-0150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-0121R/L	12" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-0147	5" STD REWIND MANDREL w/DISK
	1	ASS-200-0137	5" FILM REWIND MANDREL
	1	ASS-200-3140-5	5" COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-211CE-0101R/L	5" WIDE AIR BLOW NOSE ASSEMBLY
⑦	1	ASS-200-0152R/L-2	NIP GUARD w/ ENTRY & EXIT GUIDES
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST

RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)

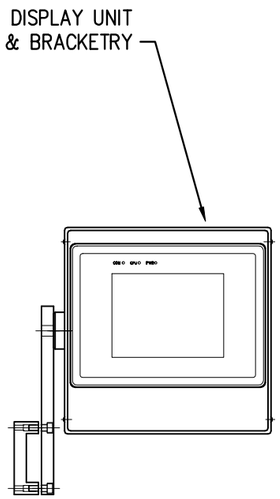


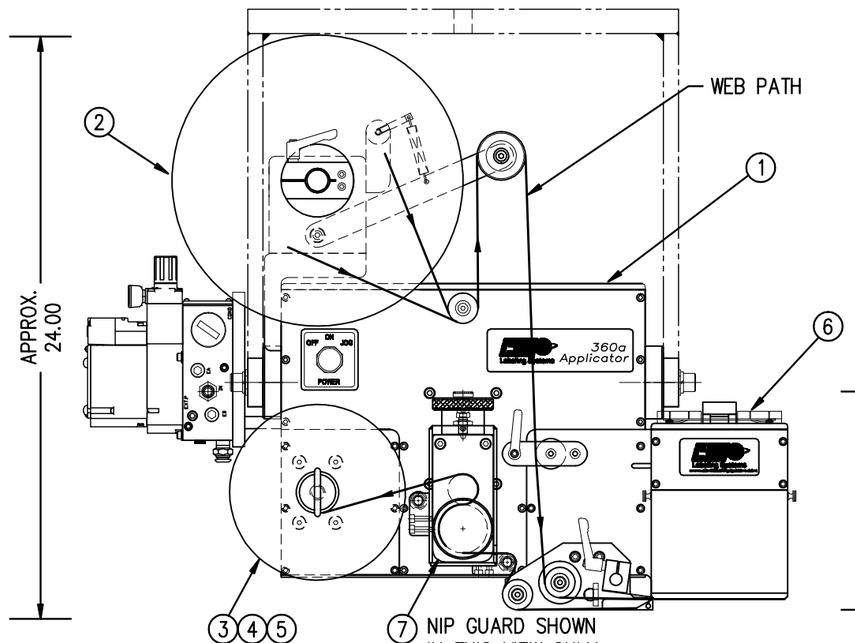


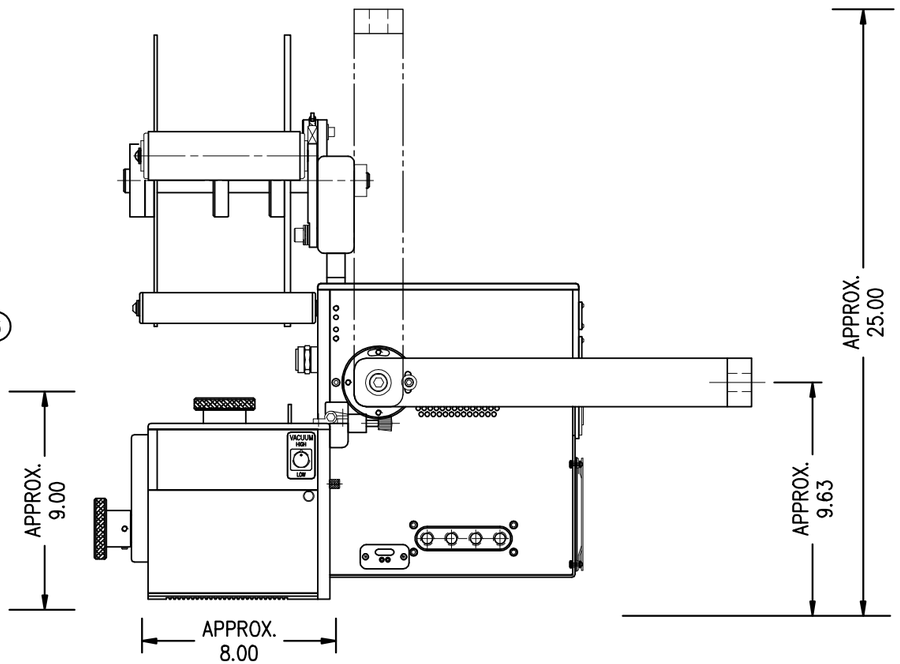
CTM-211CE-0101R/L-12X

RIGHT R
LEFT L

STD. RWD. S
FILM RWD. F
COLLAPSE C







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APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"	GROUP: AIR BLOW ASSEMBLY	TITLE: AIR BLOW APPLICATOR w/ 12" UNWIND	Dept. Code 70	F:\Engineering\Standard Parts\Applicator\360a\360A-ce\CTM-211CE-0101RL-12X
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX	Scale: 1=6	Date: 03/14/08	DRAWN BY: Tracy Rhodes	CHK'D BY: XXX

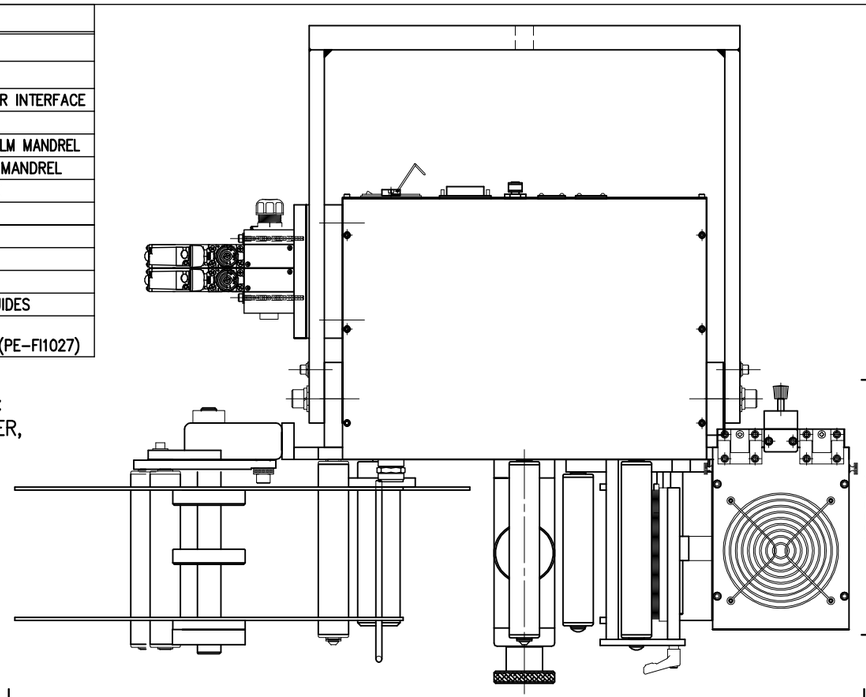
BILL OF MATERIAL

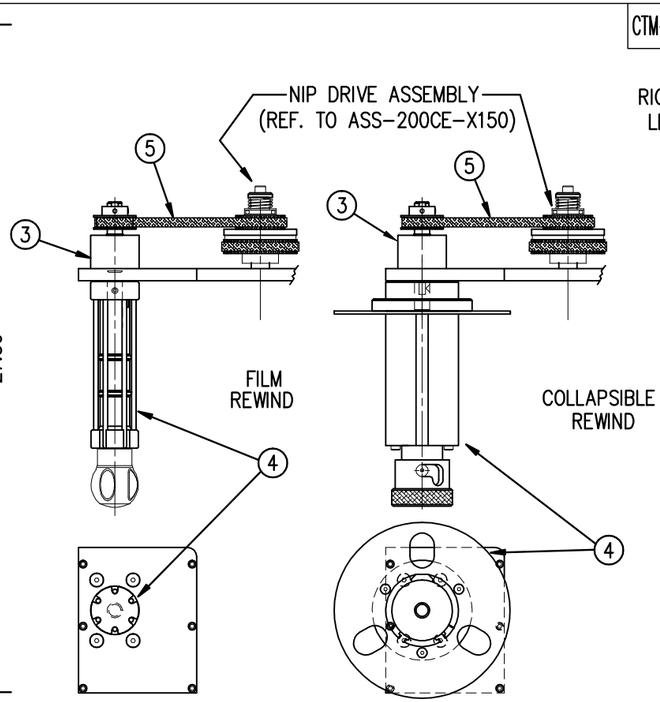
CTM-211CE-0101R/L-16S/F/C

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-0150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-3121R/L-5	16" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-0147	5" STD REWIND MANDREL w/DISK
	1	ASS-200-0137	5" FILM REWIND MANDREL
	1	ASS-200-3140-5	5" COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-211CE-0101R/L	5" AIR BLOW ASSEMBLY
⑦	1	ASS-200-0152R/L-2	NIP GUARD w/ ENTRY & EXIT GUIDES
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)

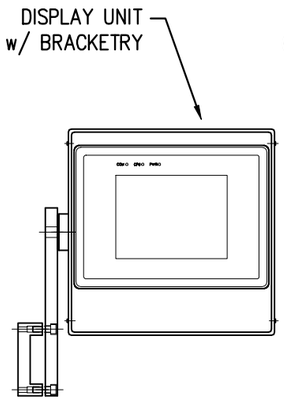


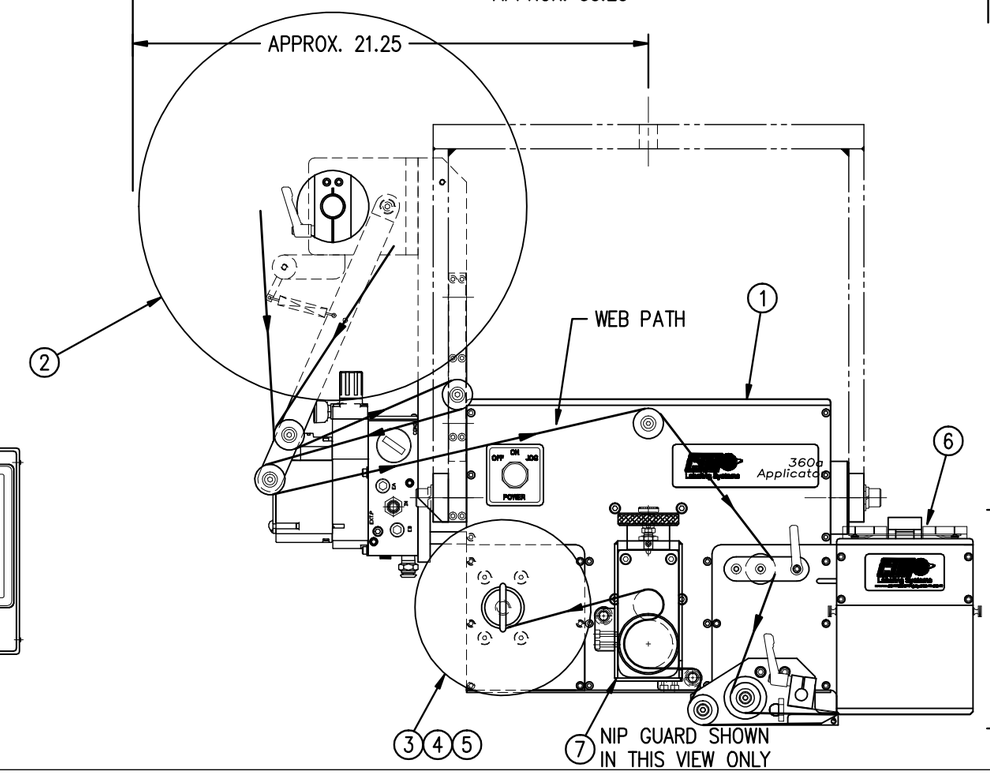


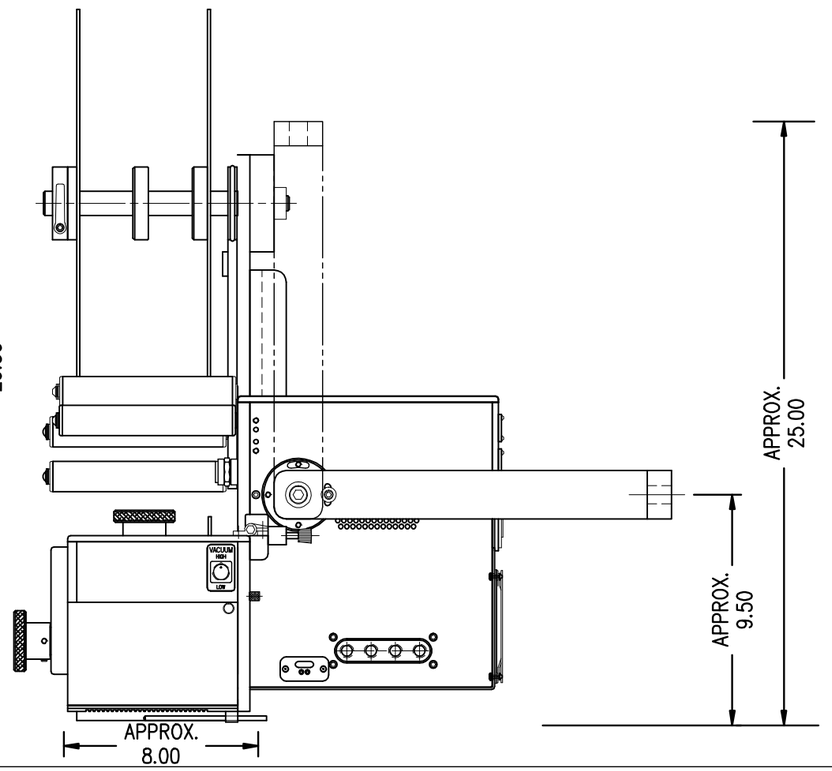
CTM-211CE-0101R/L-16X

RIGHT R
LEFT L

STD. RWD. S
FILM RWD. F
COLLAPSE C







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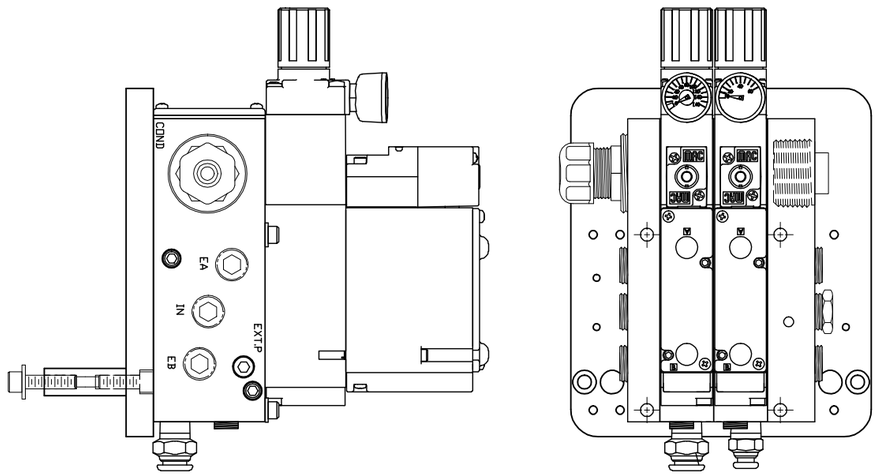
APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"	GROUP: AIR BLOW ASSEMBLY	TITLE: AIR BLOW APPLICATOR w/ 16" UNWIND	Dept. Code 70	F:\Engineering\Standard Parts\Applicator\360a\360a-CE\CTM-211CE-0101RL-16X
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX	DRAWN BY: Tracy Rhodes	Date: 02/02/17
					Scale: 1=6

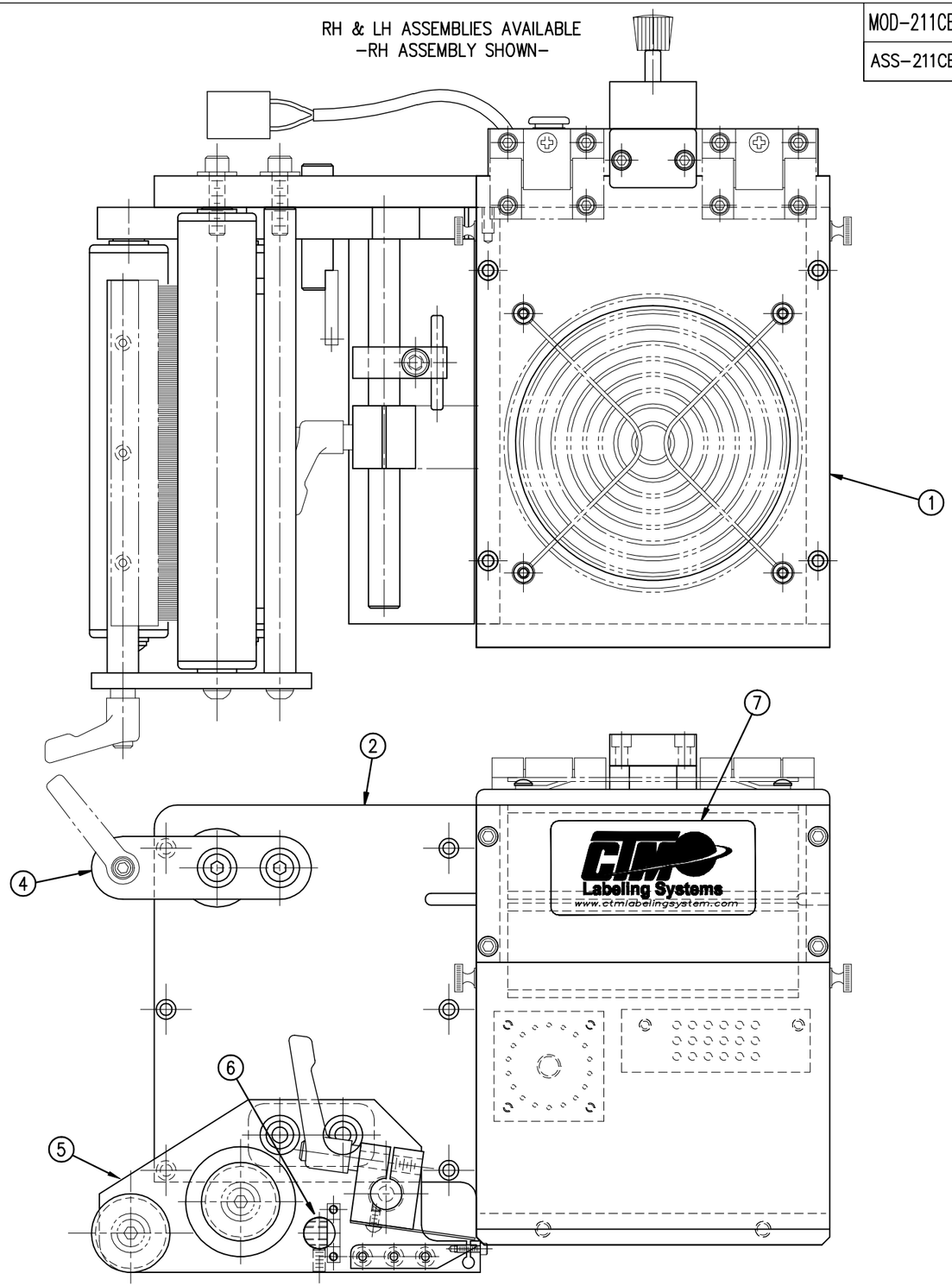
BILL OF MATERIAL			
MOD–211CE–0101R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS–211CE–0101R/L	AIR BLOW BOX w/ TRANSITION PLATE
⑧	1	ASS–211–0106M	AIR BLOW VALVE BANK ASSEMBLY (MAC)



NOT TO SCALE

⑧ VALVE BANK ASSEMBLY

RH & LH ASSEMBLIES AVAILABLE
–RH ASSEMBLY SHOWN–



BILL OF MATERIAL			
ASS–211CE–0101R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	SAS–211CE–0101R/L	BLOW BOX SHELF ASSEMBLY – consisting of the following parts –
①		(1) ASS–211CE–0104–A	AIR BLOW BOX
②		(1) MP–211–0215	AIR BLOW TRANSITION PLATE
③		(1) PE–PA2030	PLASTIC LOOP STRAP
④	1	ASS–200–0126R/L	TENSION BRUSH ASSEMBLY
⑤	1	ASS–211–0102R/L	AIR BLOW PEEL EDGE ASSEMBLY
⑥	1	ASS–211–0108–2	FIBER OPTIC SENSOR w/2" Lg. MTG. SHAFT
⑦	1	PM–LB1021	CTM LOGO
	6	PM–FASH40128	SHCS, #10–32 x 5/8" Lg. SS

MOD–211CE–0101R/L

ASS–211CE–0101R/L

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TITLE: 5" AIR BLOW BOX w/ TRANSITION PLATE

Dept. Code 70

APPLICATOR SERIES: 360a–CE | APPLICATOR WIDTH(S): 5" | GROUP: OPTIONS: AIR BLOW

Scale: 1=2 | Date: 02/02/17 | DRAWN BY: Tracy Rhodes | F:\Engineering\Standard Parts\Applicator\360a\360a–CE\MOD–211CE–0101RL

REV. | REV. DESCRIPTION | REV. DATE | REV. BY:
0 | – | – | XXX

BILL OF MATERIAL

ASS-211-X102R/L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION	
①	1	MP-211-0212	PEEL EDGE MOUNTING PLATE	
②	1	MP-211-X208	PEEL EDGE (w/ TAPE)	
③	1	MP-211-0207	PEEL EDGE TIE NUT	
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	PM-211-X206	SPRING BLOCK MOUNTING SHAFT	
⑦	2	ASS-211-X120	IDLER ROLLER ASSEMBLY	
⑧	2	MP-211-0210	GUIDE COLLAR w/ SET SCREW	
⑨	1	MP-211-X217-X	AIR ASSIST TUBE	
10	2	PM-FASH430081	SHCS, 1/4-20 x 1.25 LG. SS	

ORDER ONE OF THE FOLLOWING SENSOR OPTIONS SEPARATELY
#ASS-211-0108 ~ SENSOR (STD. MTG. ROD)
#ASS-211-0107 ~ SENSOR (EXTENDED REACH)

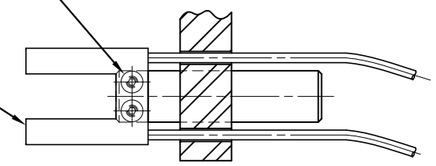
RH & LH ASSEMBLIES AVAILABLE
-RH ASSEMBLY SHOWN-
-5" WIDE SHOWN-

ASS-211-X102R/L	
5" WIDE	-0102R/L
7.5" WIDE	-2102R/L

REFER TO CTM DWG.# ASS-214-5102R/L FOR 10" WIDTH

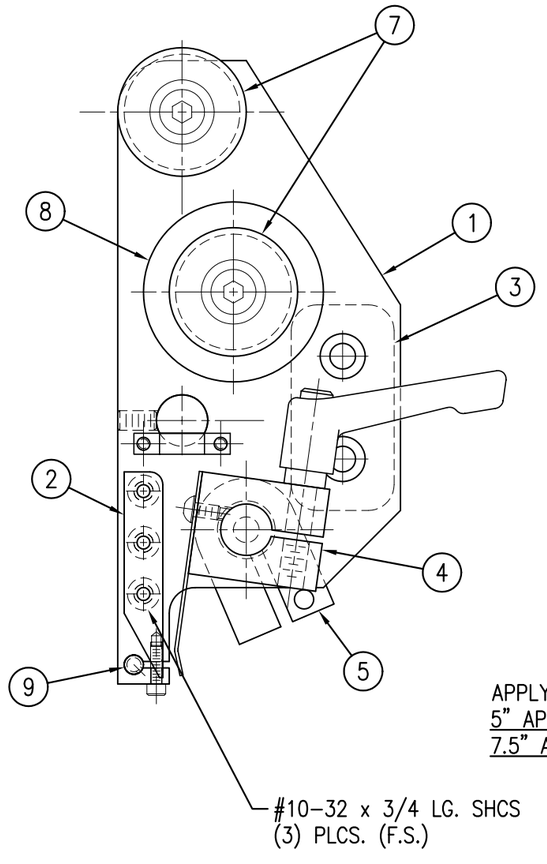
#4-40 x 3/8 LG. BHCS - 2 PLACES

NOTE: SENSOR NOT INCLUDED IN ASS'Y ORDER SEPARATELY ~ SEE B.O.M. NOTE

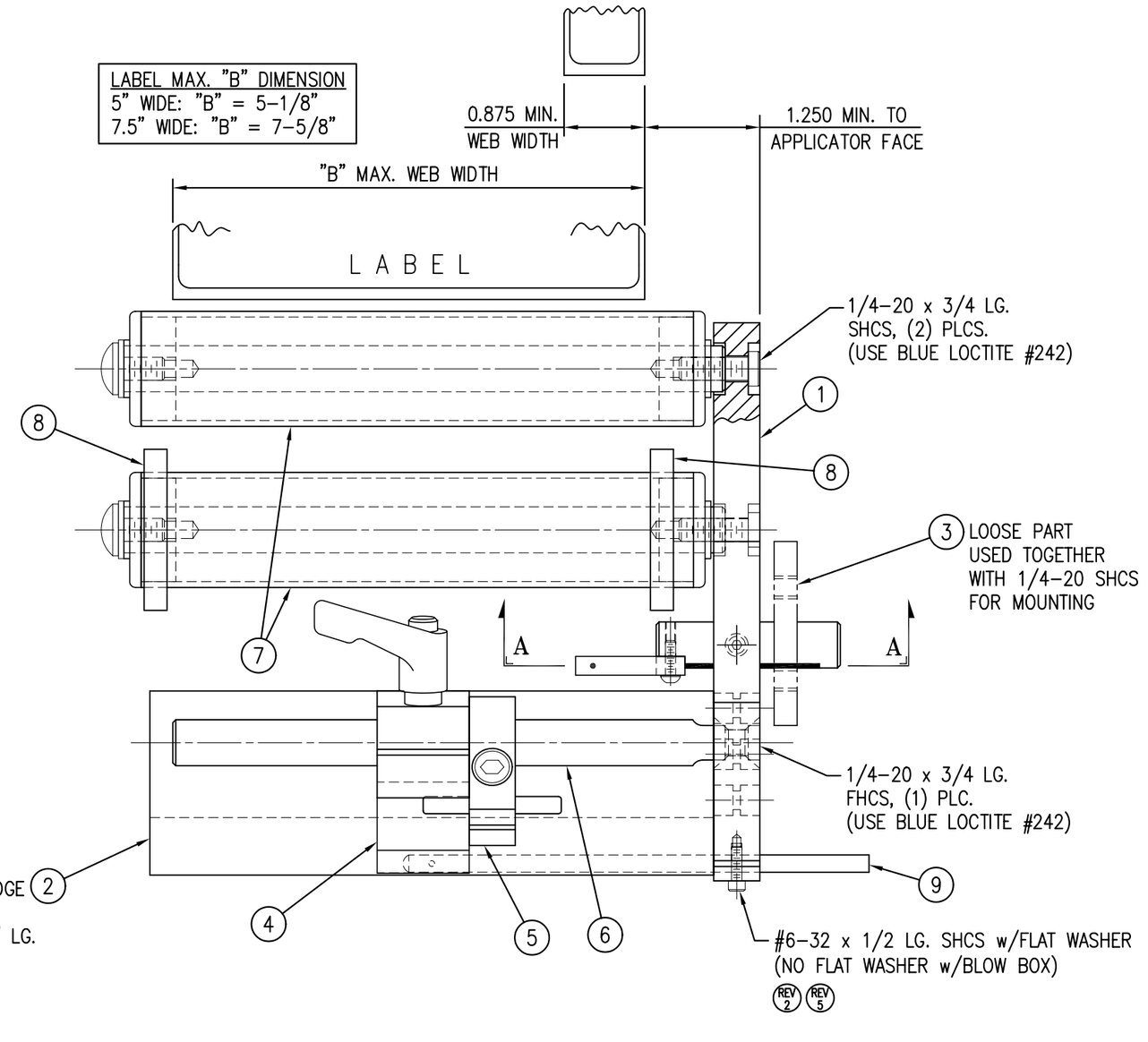


SECTION "A"

LABEL MAX. "B" DIMENSION
5" WIDE: "B" = 5-1/8"
7.5" WIDE: "B" = 7-5/8"



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



APPLY (1) STRIP OF UHMW TAPE TO PEEL EDGE
5" APPLICATOR ~ 6" WIDE x 4-1/8" LG.
7.5" APPLICATOR ~ 5-7/16" WIDE x 9-5/8" LG.

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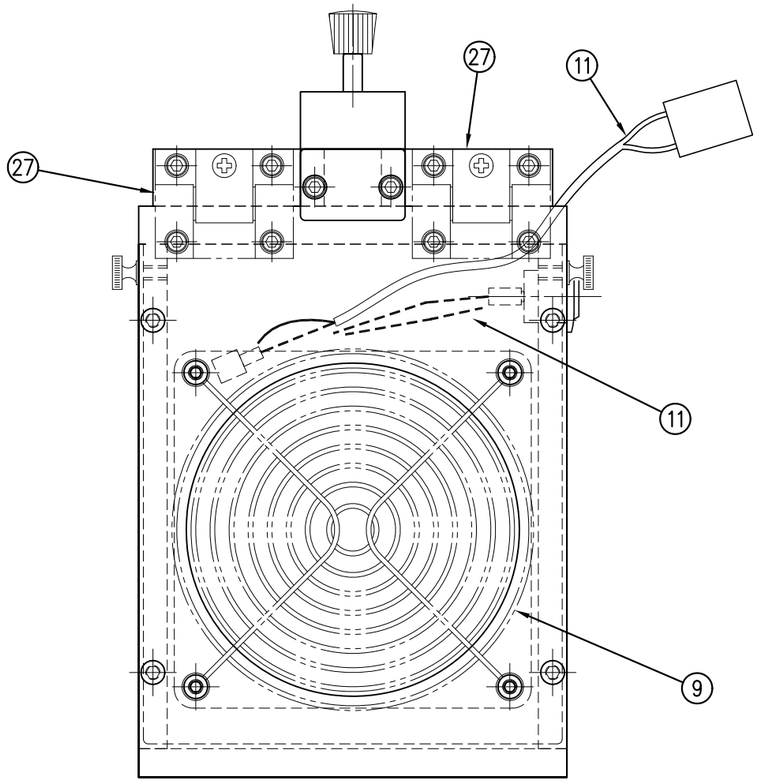
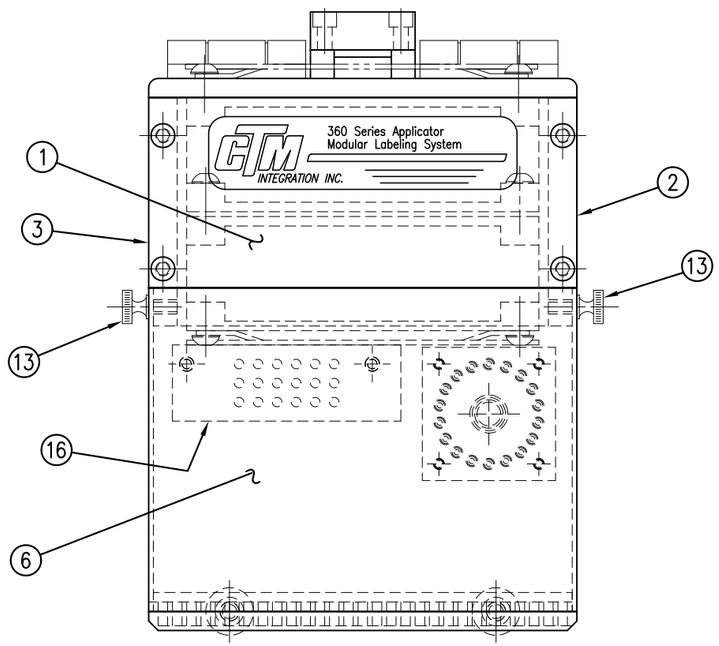
APPLICATOR SERIES: 360 SERIES	APPLICATOR SERIES: 5"/7.5"	GROUP: AIR BLOW/RVB/TAMP SNORKLES	TITLE: PEEL EDGE ASSEMBLY	Dept. Code 70	
REV. DESCRIPTION		REV. DATE	REV. BY:	Date: 06/23/97	DRAWN BY: BOB S.
REV. 6 UPDATED BOM & TITLE BLOCK		04/18/06	TK	Scale: 1=1.5	F:\Engineering\Standard Parts\Applicator\360\Shared Parts PEEL EDGE\ASS-211-X102RL





BILL OF MATERIAL

ASS-211CE-0104-X

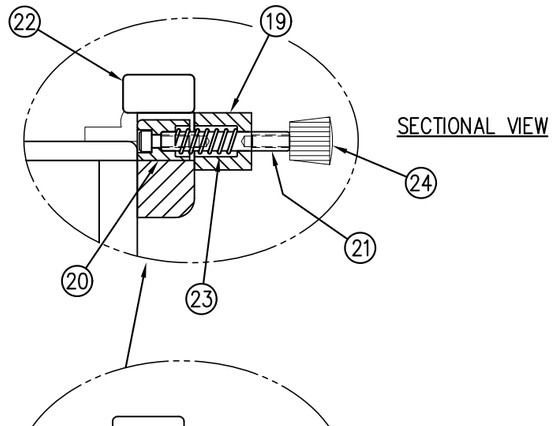
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-211-0203	FAN BOX FRONT
②	1	MP-211-0202R	FAN BOX SIDE (SILK SCREEN)
③	1	MP-211-0202L	FAN BOX SIDE
④	1	MP-211-0213	FAN BOX TOP
⑤	1	MP-211-0214	BLOW BOX GRID
⑥	1	PM-211-0211	BLOW BOX ACCESS DOOR
⑦	1	MP-211CE-0218	BLOW BOX TOP FAN
⑧	1	MP-211CE-0219	BLOW BOX BOTTOM FAN
⑨	2	PE-FAN1080	HOUSING FAN GUARD
⑩	1	PE-SW3000	HI/LO AIR BLOW SWITCH
⑪	1	ASS-211CE-0413-A	BLOW BOX FAN WIRING HARNESS FOR STANDARD BLOW BOX
	1	ASS-211CE-0413-B	BLOW BOX FAN WIRING HARNESS FOR 6" & 12" SNORKLES
	1	ASS-211CE-0413-C	BLOW BOX FAN WIRING HARNESS FOR 18" & 24" SNORKLES
⑫	1	PM-PF1020	PRESTOLOK BRASS FITTING (1/4 NPT MALE - 3/8 TUBE FEMALE)
	1	PM-PF1060	TUBE FITTING, 90 Deg. ELBOW (3/8 TUBE - 1/4 NPT)
⑬	2	PM-TS1010	BRASS THUMB SCREW
⑭	1	MP-211-0220	AIR BLOW TUBE MANIFOLD SUB-BASE
⑮	1	ASS-211-0103	AIR BLOW TUBE MANIFOLD ASSEMBLY
⑯	1	MP-211-0222	AIR BLOW AIR TUBE HOLDER
⑰	1	MP-211-0227	BLOW BOX GRID COVER
⑱	1	MP-211-0240	HINGE BRACKET

BILL OF MATERIAL

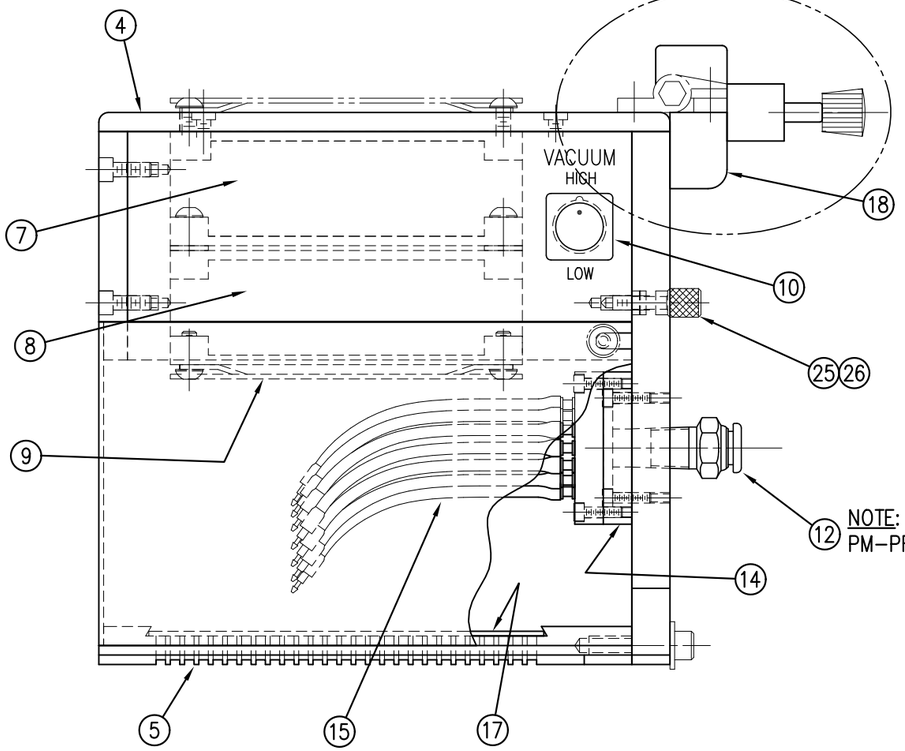
ASS-211CE-0104-X (continued)

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
⑲	1	MP-211-0241	SPRING PIN BRACKET
⑳	1	MP-211-0242	STOP BLOCK
㉑	1	MP-211-0243	SPRING PIN
㉒	1	MP-211-0244	STOP BLOCK
㉓	1	PM-FASP30430	COMPRESSION SPRING
㉔	1	PM-HK1070	PLASTIC KNOB
㉕	2	PM-TS1050	CAPTIVE SCREW
㉖	2	PM-FAW30615	SPLIT WASHER
㉗	2	PM-HI1030	ADJUSTABLE FRICTION HINGE
	1	PM-WL1220	WARNING LABEL

ASS-211CE-0104-X	
FOR STD. BLOW BOX	-0104-A
6 & 12 SNORKLES	-0104-B
18 & 24 SNORKLES	-0104-C



SECTIONAL VIEW



NOTE: CHANGE TO ELBOW PM-PF1060 FOR SNORKLES

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TITLE: 360 SERIES APPLICATOR: AIR BLOW BOX

PART: HINGED AIR BLOW BOX

Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360 211\ASS-211CE-0104-X

DRAWN BY: BOB S.

Date: 02/21/98

Scale: 1=2

REV. BY: TDR

REV. DATE 10/12/06

REV. | REV. DESCRIPTION
2 | SNORKEL WIRE HARNESS NUMBERS WERE "PE"

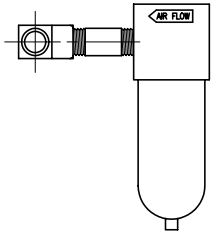
BILL OF MATERIAL

ASS-211-0106M

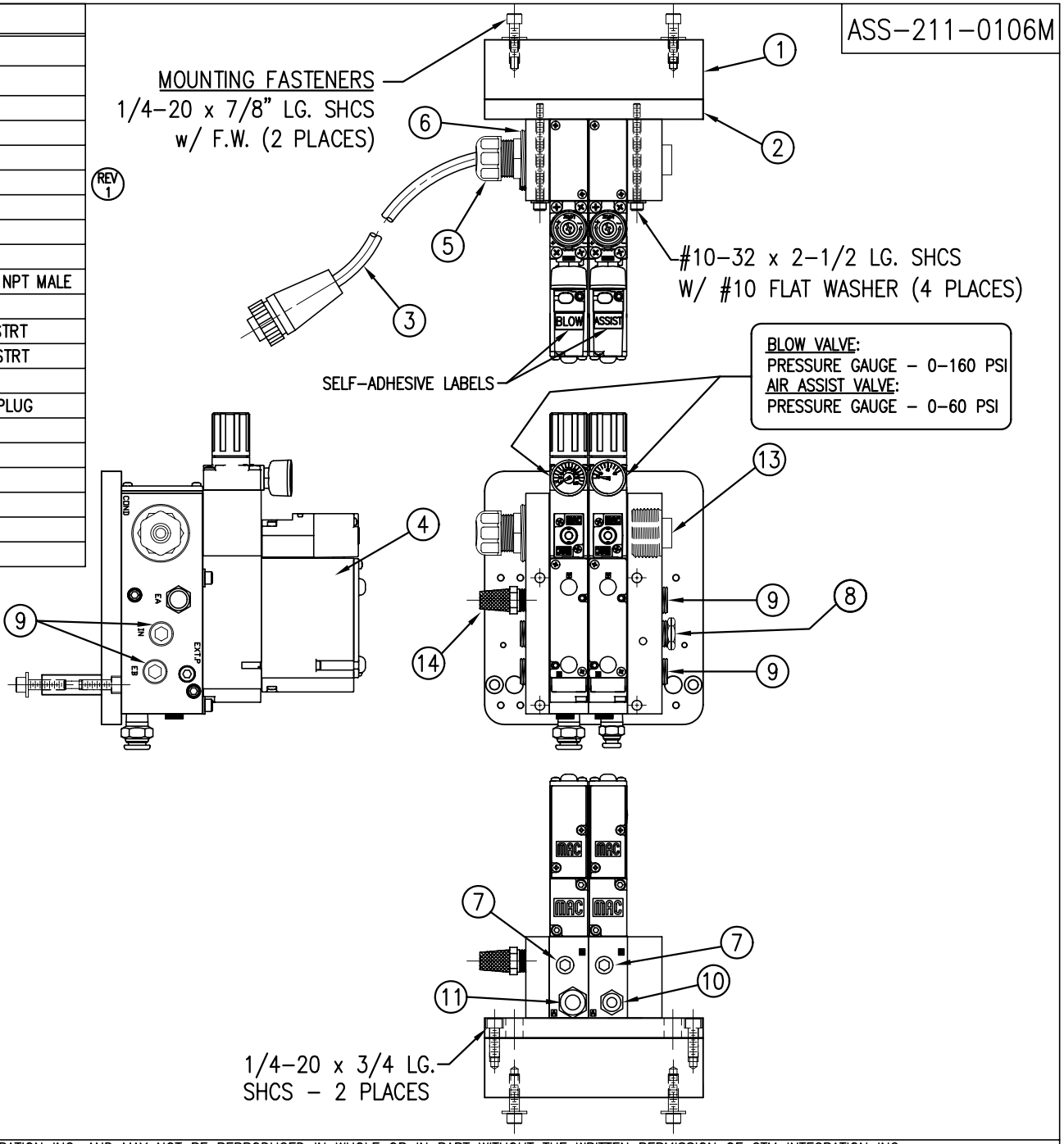
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-214-0202	VALVE FASTENING PLATE
②	1	MP-214-0206	VALVE MOUNTING PLATE
③	1	ASS-200-0452M	VALVE CABLE
④	1	PM-VA2358M	2 STATION MAC VALVE BANK
⑤	1	PE-C02000	CORD GRIP
⑥	1	PE-COND1084	STEEL REDUCER
⑦	2	PM-FT1200	1/4" NPT PLUG
⑧	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑨	5	PM-PF1167	3/8" NPT SOCKET HEAD PLUG
⑩	1	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑪	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
⑫	1	ASS-214-0106	AIR FILTER ASSEMBLY
⑬	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑭	1	PM-MU1027	MUFFLER
◯	2	PM-FASH430079	1/4"-20 UNC x 7/8" LG. SS SHCS
◯	2	PM-FASH430078	1/4"-20 UNC x 3/4" LG. SS SHCS
◯	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
◯	4	PM-FAW30265	#10 SS FLAT WASHER
◯	2	PM-FAW30275	1/4" SS FLAT WASHER

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



⑫ AIR FILTER
SHIP LOOSE
-CUSTOMER TO INSTALL -



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360	5"/7.5"/10"	VALVE BANKS	AIR BLOW 2 STATION VALVE BANK ASSEMBLY with FILTER	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
2	ADDED MUFFLER	12/09/09	TDR	1=4	04/03/07	E. SANOR	360\ASS-211-0106M

BILL OF MATERIAL

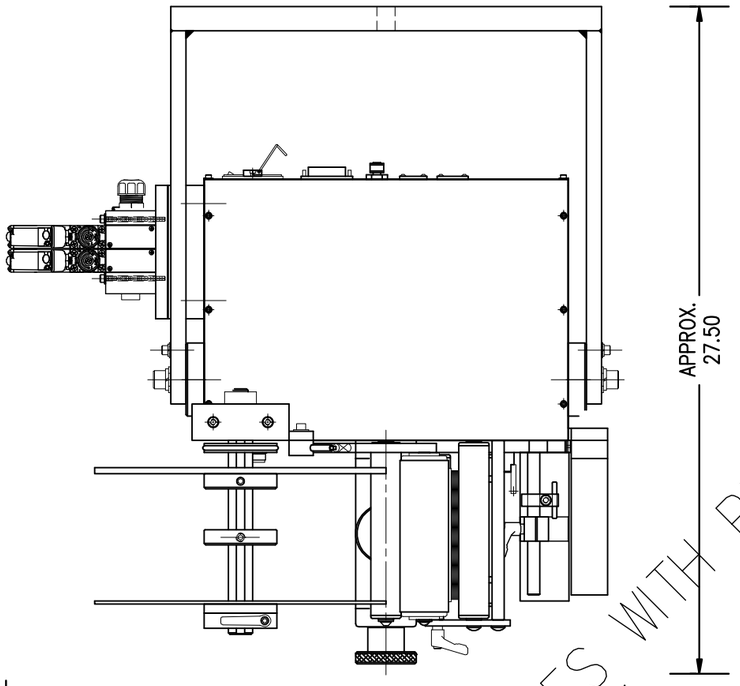
CTM-211CE-0111R/L-12S/F/C

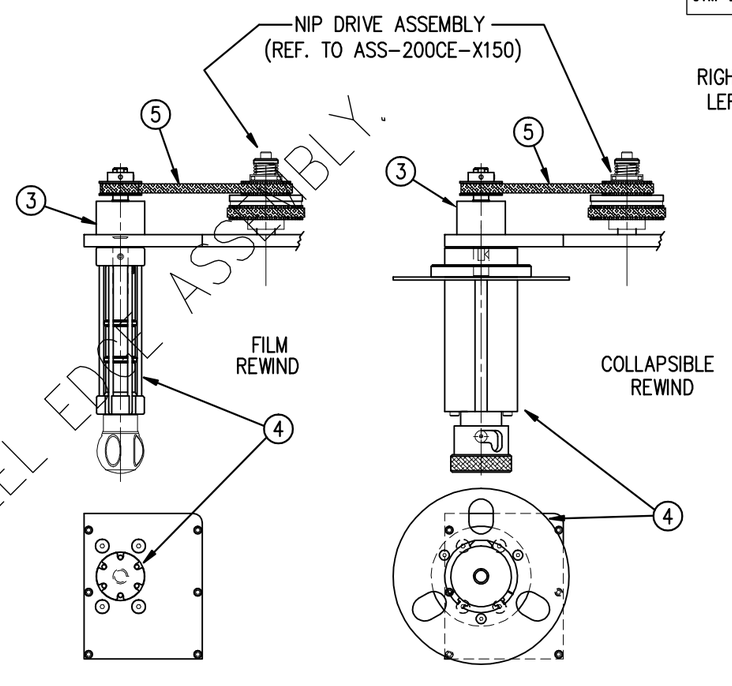
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-0150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-0121R/L	12" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-0147	5" STD REWIND MANDREL w/DISK
	1	ASS-200-0137	5" FILM REWIND MANDREL
	1	ASS-200-3140-5	5" COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-211-0111R/L	5" RVB NOSE ASSEMBLY
	1	ORDER SEPARATELY	PAD & MANIFOLD MANIFOLD BLANK (MP-211-0238-X)
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)

NOTE:
MANIFOLD TEMPLATES AVAILABLE FOR 2", 3", 4" AND 5" WIDE LABELS. OTHER SIZES ARE CUSTOM.

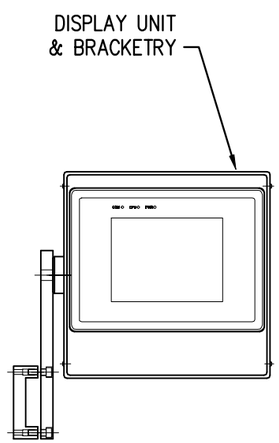


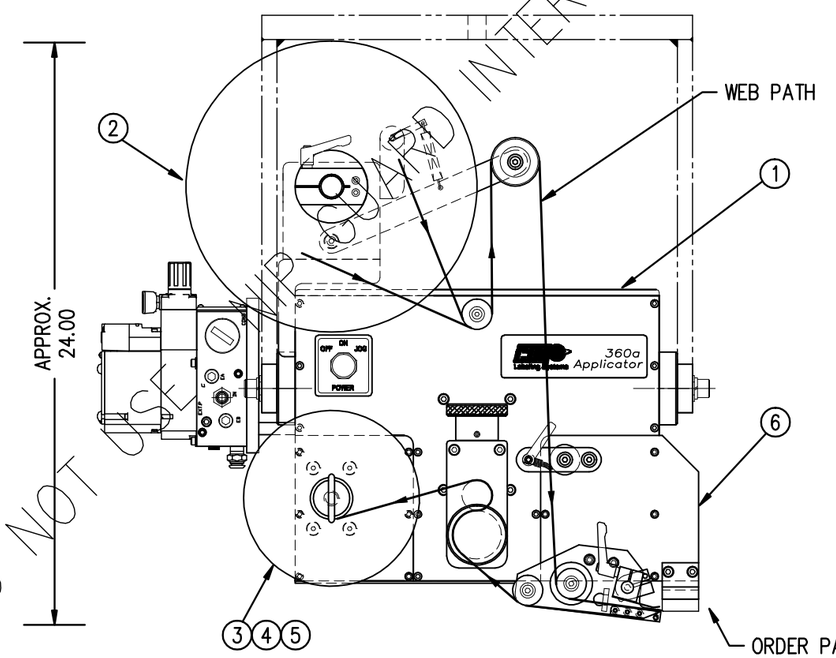


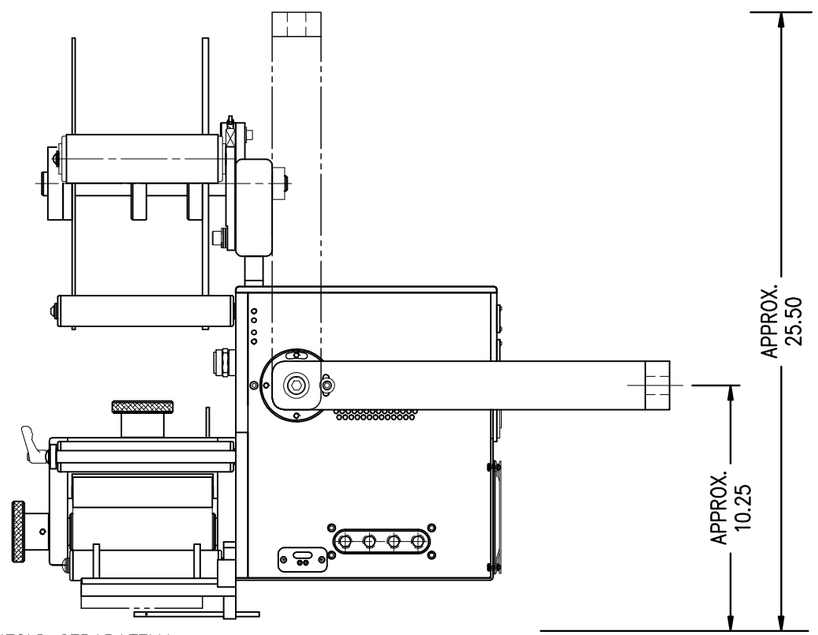
CTM-211CE-0111R/L-12X

RIGHT R
LEFT L

STD. RWD. S
FILM RWD. F
COLLAPSE C







DO NOT USE IF LABEL BOARD INTERFERES WITH PEEL EDGE ASSEMBLY.

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APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"	GROUP: RVB ASSEMBLY	TITLE: RVB APPLICATOR with 12" UNWIND
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX
Scale: 1=6	Date: 02/02/17	DRAWN BY: Tracy Rhodes	Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360a\360a-CE\CTM-211CE-0111RL-12X

BILL OF MATERIAL

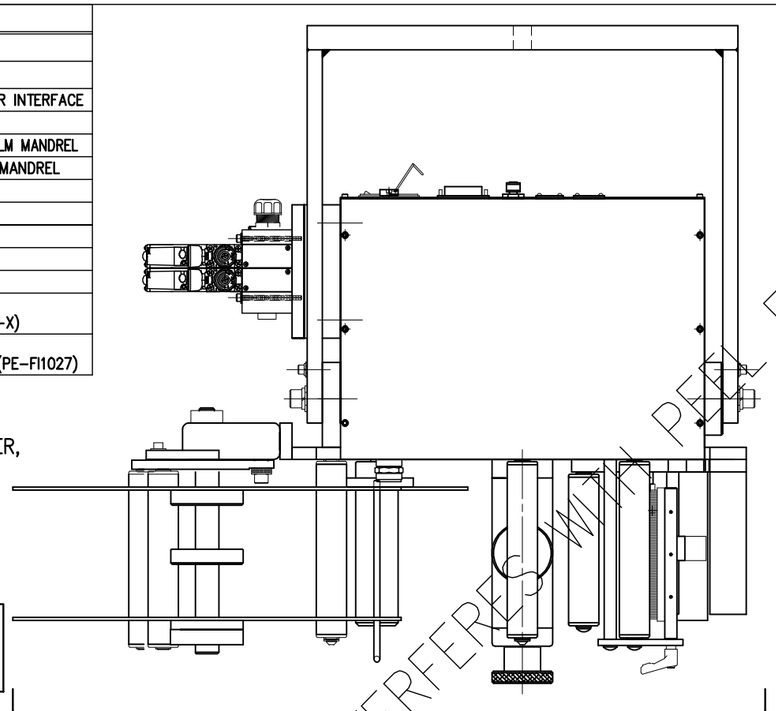
CTM-211CE-0111R/L-16S/F/C

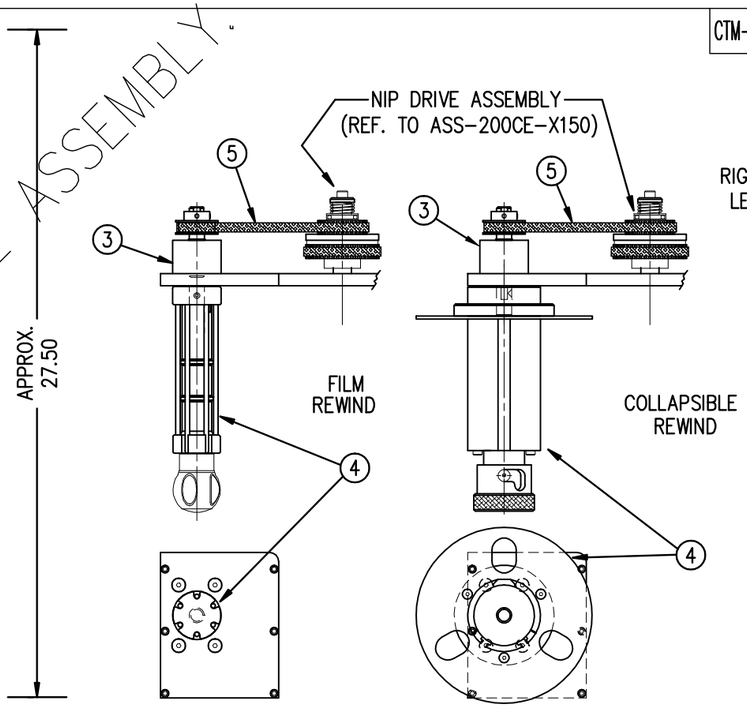
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-0150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-3121R/L-5	16" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-0147	5" STD REWIND MANDREL w/DISK
	1	ASS-200-0137	5" FILM REWIND MANDREL
	1	ASS-200-3140-5	5" COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-211-0111R/L	5" RVB ASSEMBLY
	1	ORDER SEPARATELY	PAD & MANIFOLD MANIFOLD BLANK (MP-211-0238-X)
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)

NOTE:
MANIFOLD TEMPLATES AVAILABLE FOR 2", 3", 4" AND 5" WIDE LABELS. OTHER SIZES ARE CUSTOM.

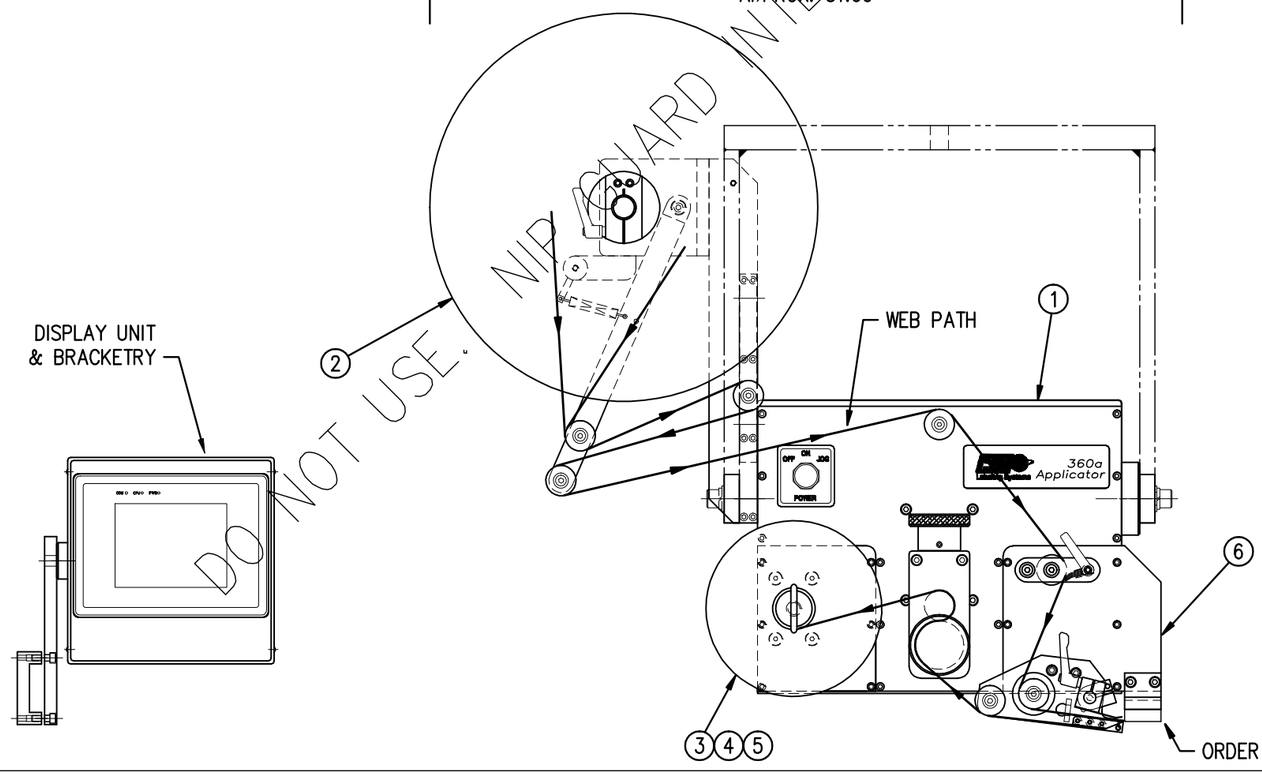


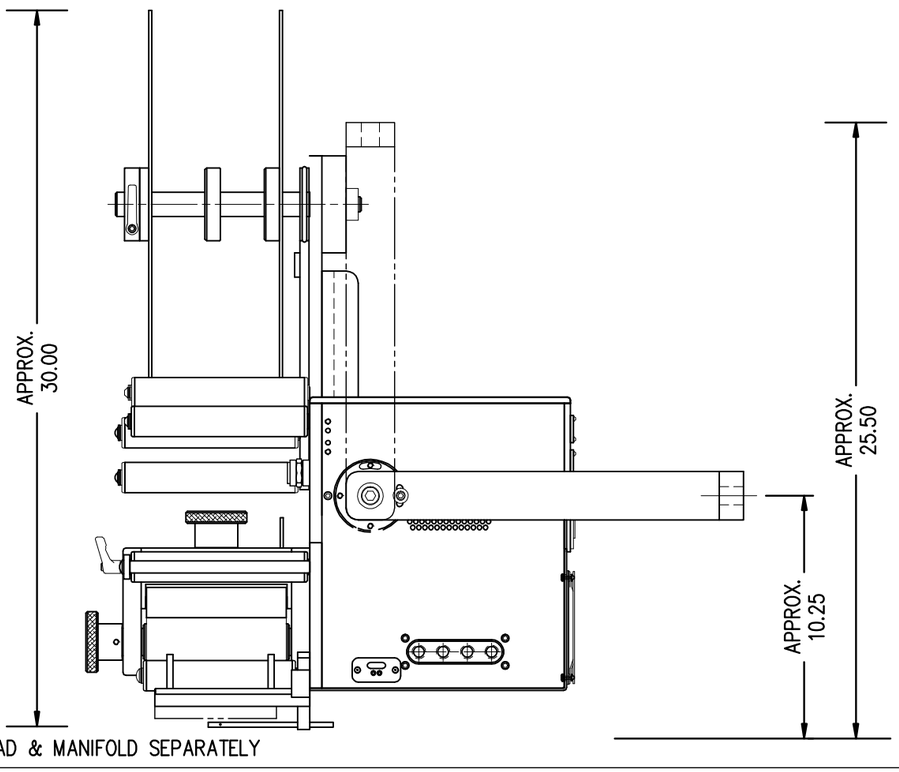


CTM-211CE-0111R/L-16X

RIGHT R
LEFT L

STD. RWD. S
FILM RWD. F
COLLAPSE C





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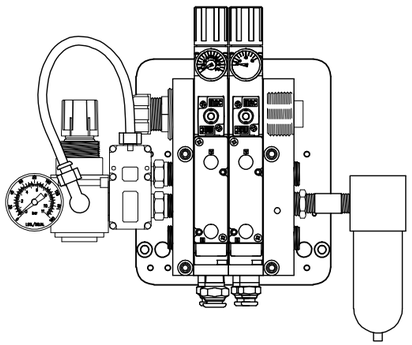
APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"	GROUP: RVB ASSEMBLY	TITLE: RVB APPLICATOR with 16" UNWIND	Dept. Code 70	F:\Engineering\Standard Parts\Applicator\360a\360a-CE\CTM-211CE-0111RL-16X
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX	Scale: 1=6	Date: 02/07/17	DRAWN BY: Tracy Rhodes

BILL OF MATERIAL			
MOD–211–0111R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS–211–0111	RVB w/ TRANSITION PLATE
⑤	1	ASS–211–0112M	RVB VALVE BANK ASSEMBLY (MAC)

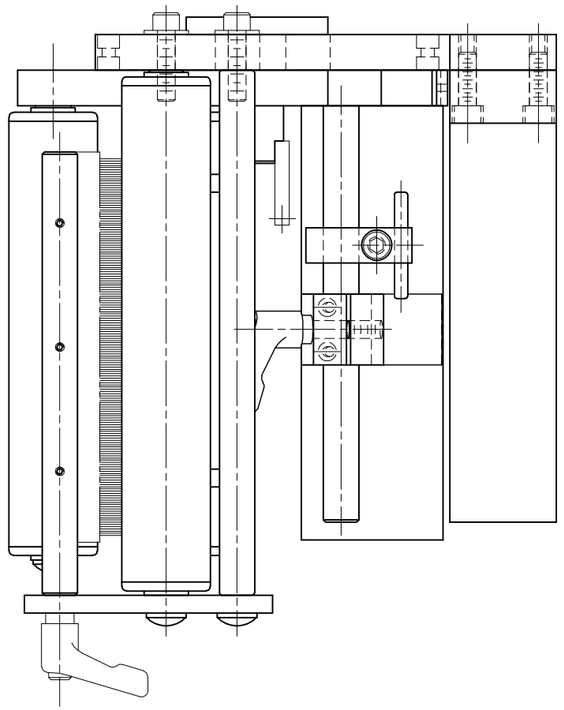
NOTE:
PAD & MANIFOLD ARE JOB SPECIFIC. CUSTOMER TO ORDER SEPARATELY. (FOR MANIFOLD BLANKS REFER TO DWG. #MP–211–0238–X)

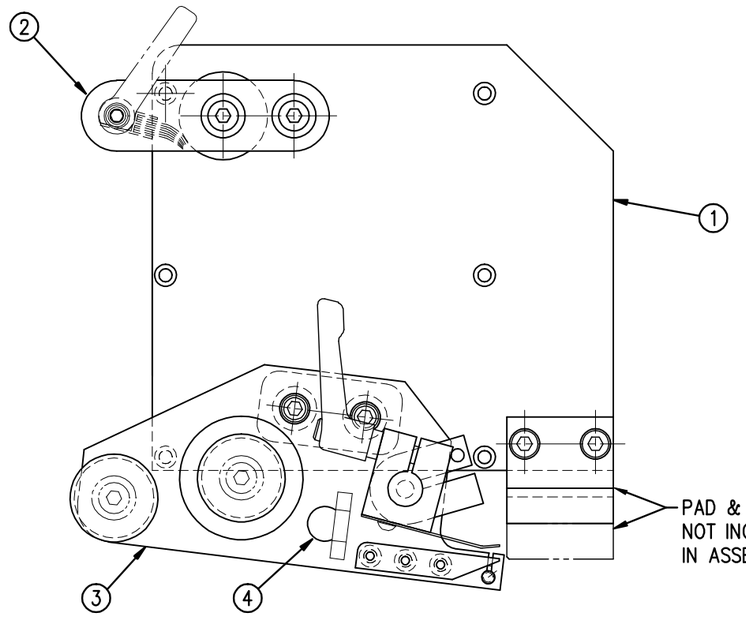
MANIFOLD TEMPLATES AVAILABLE FOR 2", 3", 4" AND 5" WIDE LABELS. OTHER SIZES ARE CUSTOM.



⑤ VALVE BANK ASSEMBLY
SCALE: 3"=1'–0"

RH & LH ASSEMBLIES AVAILABLE
–RH ASSEMBLY SHOWN–





BILL OF MATERIAL			
ASS–211–0111R/L			
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP–211–0235	RVB TRANSITION PLATE
②	1	ASS–200–0126R/L	TENSION BRUSH ASSEMBLY
③	1	ASS–211–0102R/L	AIR BLOW PEEL EDGE
④	1	ASS–211–0108–2	FIBER OPTIC SENSOR w/2" MTG. SHAFT
	6	PM–FASH429075	SHCS, #10–32 x 5/8" Lg. SS

MOD–211–0111R/L

ASS–211–0111R/L

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Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360 211\MOD–211–0111RL

TITLE: 360 SERIES APPLICATOR: RVB

PART: 5" WIDE RVB NOSE ASSEMBLY

DRAWN BY: BOB S. | Date: 09/01/99 | Scale: 1=2 | REV. BY: JLG

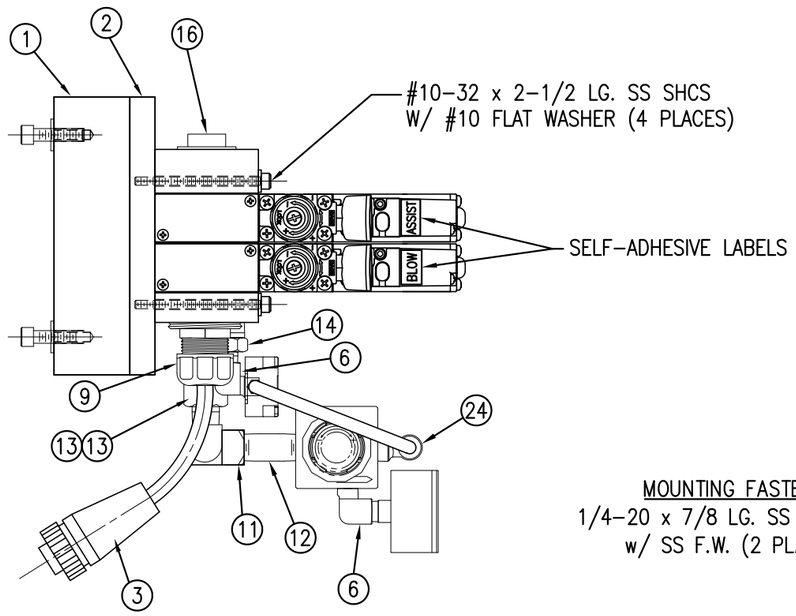
REV.	REV. DESCRIPTION	REV. DATE
1	REMOVED MP–211–0237 MNTG BLOCK FROM ASSEMBLY BOM	11/23/15

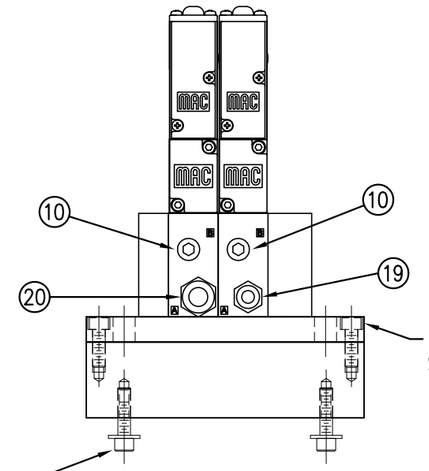
BILL OF MATERIAL

ASS-211-0112M

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-214-0202	VALVE FASTENING MOUNTING PLATE
②	1	MP-214-0206	VALVE MOUNTING PLATE
③	1	ASS-200-0452M	VALVE CABLE
④	1	PM-REG1500	REGULATOR
⑤	1	PM-VA2384	0-160 PSI PRESSURE GUAGE
⑥	2	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	1	PM-VA2358M	2 STATION MAC VALVE BANK
⑨	1	PE-CO2000	CORD GRIP
⑩	3	PM-FT1200	1/4" NPT SOCKET HEAD PLUG
⑪	1	PM-PF1200	TEE 1/4" NPT FEMALE 3 ENDS
⑫	1	PM-PF1143	NIPPLE, 1/4" NPT X 1 1/2" LG.
⑬	1	PM-PF1220	ADAPTOR, 3/8" NPT FEMALE TO 1/4" NPT MALE
⑭	1	PM-PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑮	1	PM-PF1159	FITTING, 3/8" NPT MALE BOTH ENDS
⑯	1	PE-EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑰	1	PE-COND1084	STEEL REDUCER
⑱	1	PM-PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑲	1	PM-PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
⑳	1	PM-PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
㉑	3	PM-PF1167	3/8" NPT SOCKET HEAD PLUG
㉒	10.5"	PM-PT1070	1/4" OD TUBING
㉓	1	ASS-214-0106	AIR FILTER
㉔	1	PM-PF1055	90° ELBOW 1/4" TUBE TO 1/4" NPT MALE
㉕	1	PM-PF1185	90° STREET ELBOW, 1/4" NPT
◯	2	PM-FASH430079	1/4"-20 UNC x 7/8" LG. SS SHCS
◯	2	PM-FAW30275	1/4" SS FLAT WASHER
◯	2	PM-FASH430078	1/4"-20 UNC x 3/4" LG. SS SHCS
◯	4	PM-FASH429088	10-32 X 2 1/2" LG. SS SHCS
◯	4	PM-FAW30265	#10 SS FLAT WASHER

ASS-211-0112M



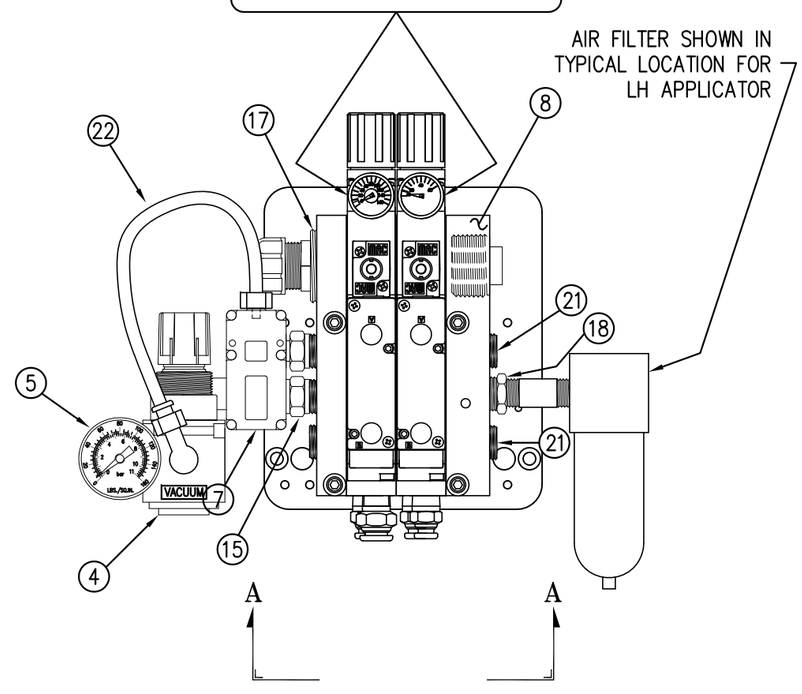


MOUNTING FASTENERS
1/4-20 x 7/8 LG. SS SHCS
w/ SS F.W. (2 PLACES)

VIEW "A"
(VALVE BANK & MTG. ONLY)

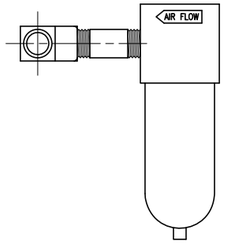
TAMP & BLOW VALVE:
PRESSURE GAUGE - 0-160 PSI
AIR ASSIST VALVE:
PRESSURE GAUGE - 0-60 PSI

AIR FILTER SHOWN IN TYPICAL LOCATION FOR LH APPLICATOR

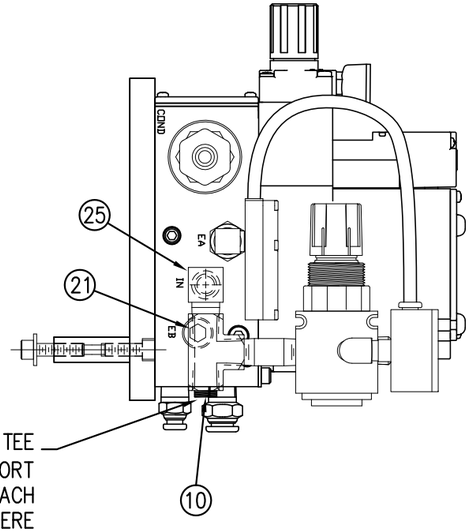


VALVE BANK SPARE PARTS:

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



㉓ AIR FILTER
SHIP LOOSE
-CUSTOMER TO INSTALL -



MOVE PLUG FROM TEE ON THIS SIDE TO "IN" PORT ON OPPOSITE SIDE & ATTACH AIR FILTER ASSEMBLY HERE (TO TEE) FOR RH APPLICATORS

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TITLE:	RVB 2 STATION VALVE BANK ASSEMBLY
Dept. Code	70
APPLICATOR SERIES:	360
APPLICATOR WIDTH(S):	5"/7.5"/10"
GROUP:	VALVE BANKS
DRAWN BY:	E. SANOR
Date:	04/03/07
Scale:	1=3
REV. BY:	XXX
F:\Engineering\Standard Parts\Applicator\360\	360\ASS-211-0112M

REV.	REV. DESCRIPTION	REV. DATE
0	-	-

BILL OF MATERIAL

CTM-214CE-X101R/L-12S/F/C

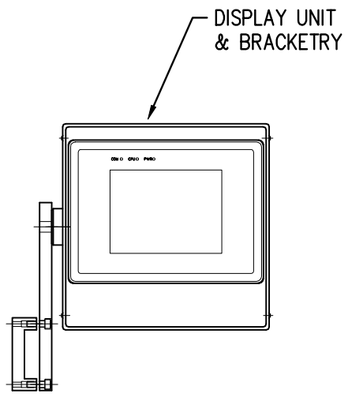
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-X150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-X121R/L	12" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-X147	5/7.5/10 STD REWIND MANDREL w/DISK
	1	ASS-200-X137	5/7.5 FILM REWIND MANDREL
	1	ASS-200-3140-X	5/7.5 COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-214-X101R/L	5/7.5/10 TAMP NOSE ASSEMBLY
⑦	1	ASS-200-X152R/L-2	NIP GUARD w/ ENTRY & EXIT GUIDES
	1	ORDER SEPARATELY	TAMP SLIDE ASSEMBLY (STROKE LG IS JOB SPECIFIC) ASS-214-0103R/L-X
	1	ORDER SEPARATELY	PAD & MANIFOLD (LABEL SIZE IS JOB SPECIFIC) MANIFOLD BLANK MP-214-X201R/L-X
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

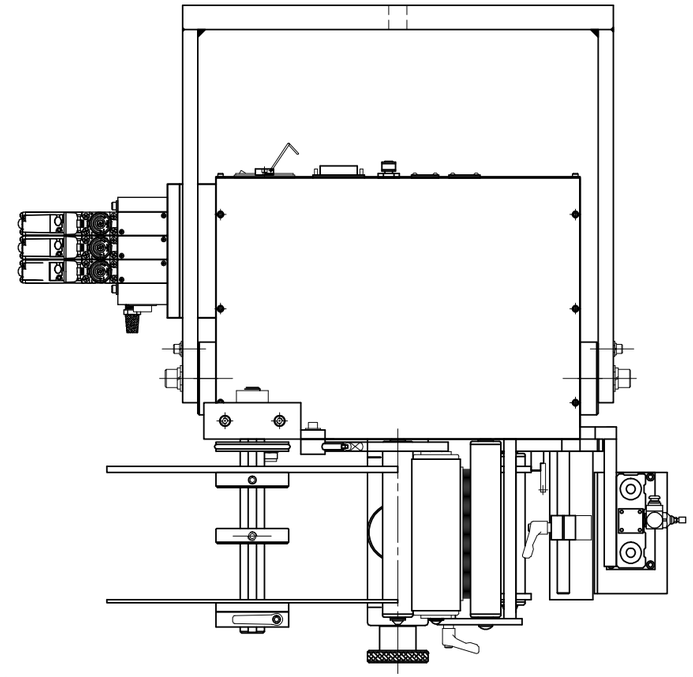
BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

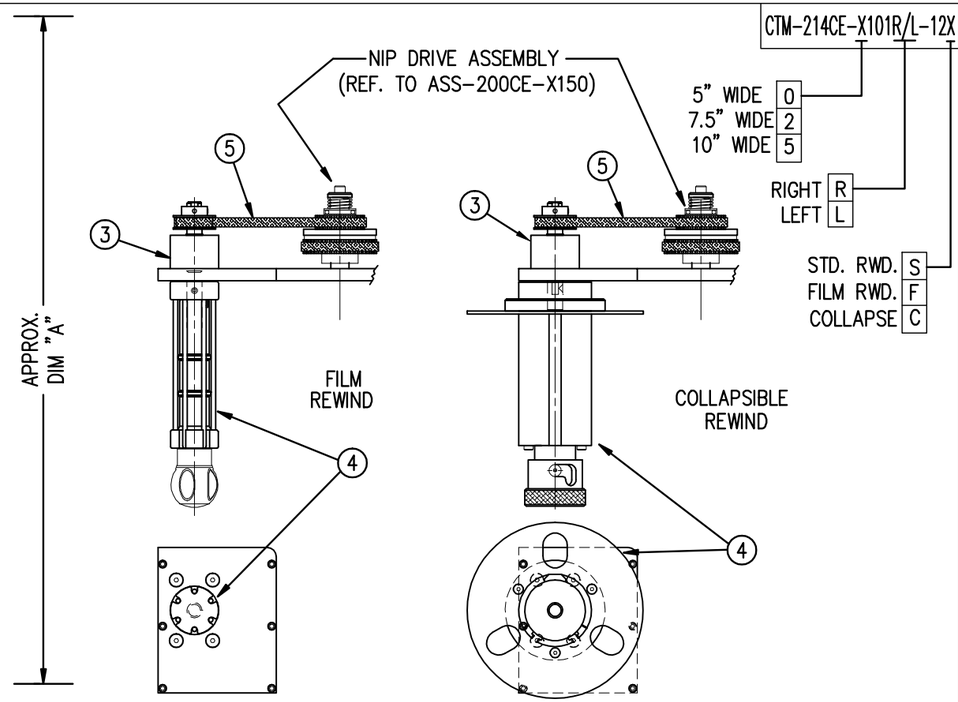
PART NO.	DIM "A"
CTM-214CE-0101R/L-12X	27.50
CTM-214CE-2101R/L-12X	30.00
CTM-214CE-5101R/L-12X	32.50

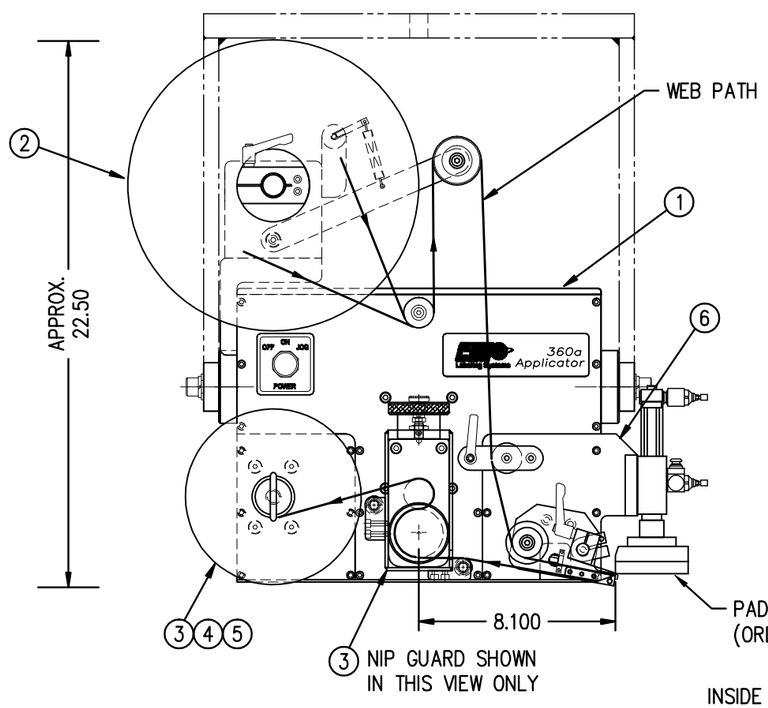
RH & LH ASSEMBLIES AVAILABLE (5" WIDE; RH ASSEMBLY SHOWN)

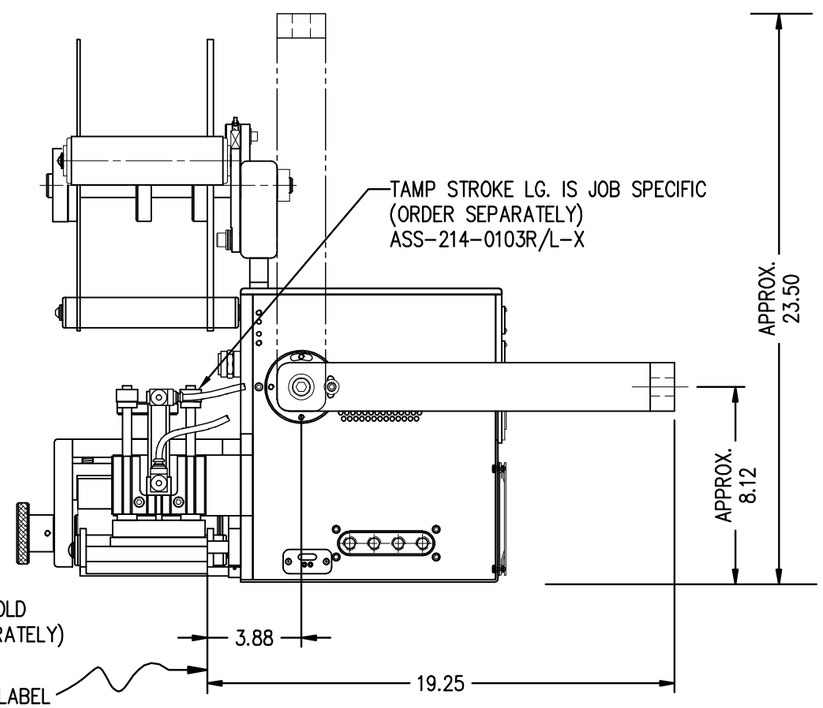
NOTE: UNWIND MTG. BRACKET FOR 5" & 7.5" WIDE APPLICATORS DIFFERS FROM 10" WIDE. FOR 10" WIDE MTG. BRACKET REFER TO DWG. MP-200-5216











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APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: TAMP ASSEMBLY	
REV. 0	REV. DESCRIPTION -	REV. BY: xxx	REV. DATE -

TITLE: TAMP APPLICATOR w/ 12" UNWIND

Scale: 1=6 | Date: 02/02/17 | DRAWN BY: Tracy Rhodes | Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360a\360a-CE\CTM-214CE-X101RL-12X

BILL OF MATERIAL

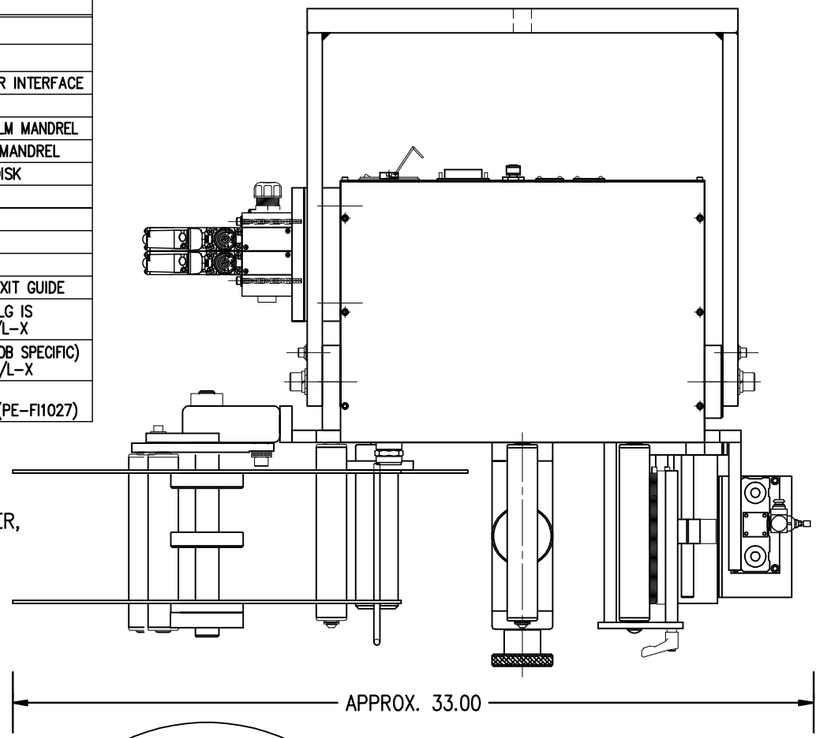
CTM-214CE-X101R/L-16S/F/C

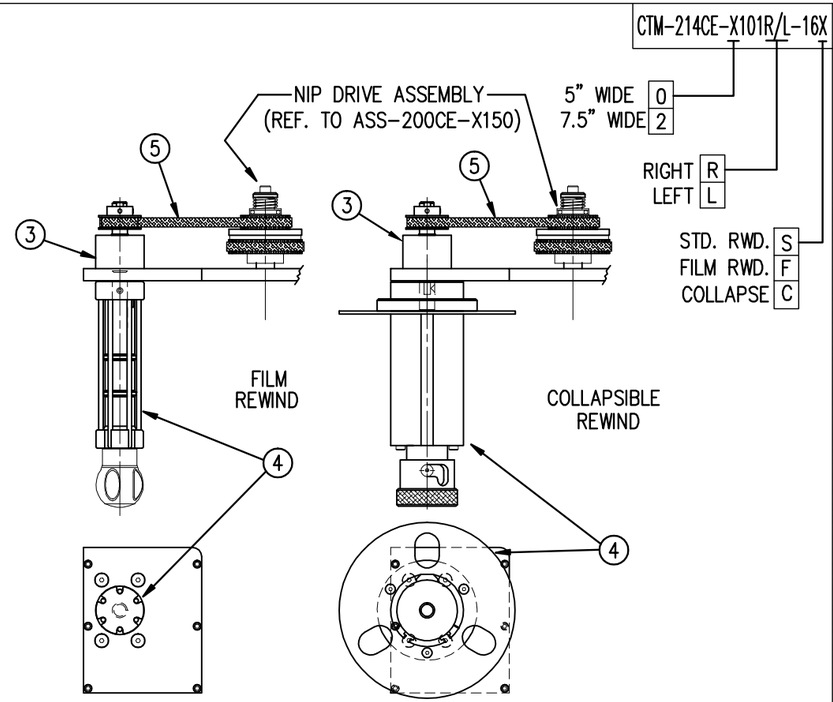
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-X150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-3121R/L-X	16" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-X147	5/7.5 STD REWIND MANDREL w/DISK
	1	ASS-200-X137	5/7.5 FILM REWIND MANDREL
	1	ASS-200-3140-X	5/7.5 COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-214-X101R/L	5/7.5/10 TAMP ASSEMBLY
⑦	1	ASS-200-X152R/L-2	NIP DRIVE GUARD w/ ENTRY & EXIT GUIDE
	1	ORDER SEPARATELY	TAMP SLIDE ASSEMBLY (STROKE LG IS JOB SPECIFIC) ASS-214-0103R/L-X
	1	ORDER SEPARATELY	PAD & MANIFOLD (LABEL SIZE IS JOB SPECIFIC) MANIFOLD BLANK MP-214-X201R/L-X
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

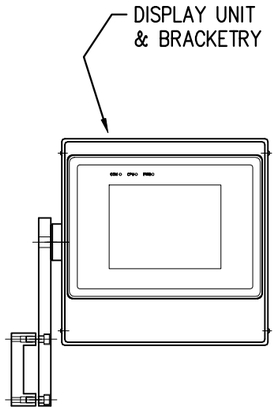
BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

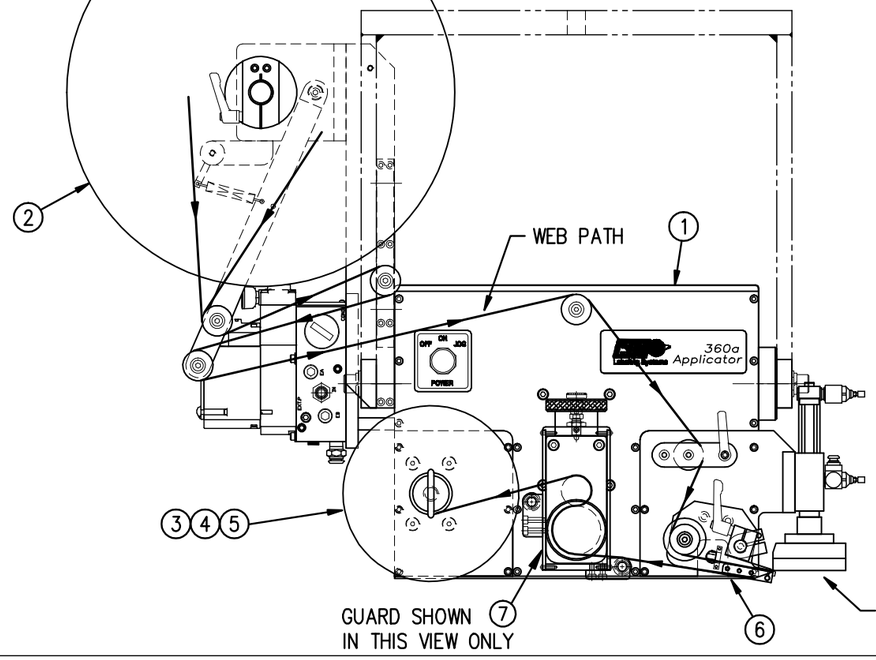
PART NO.	DIM "A"
CTM-214CE-0101R/L-16X	27.50
CTM-214CE-2101R/L-16X	30.00
CTM-214CE-5101R/L-16X	32.50

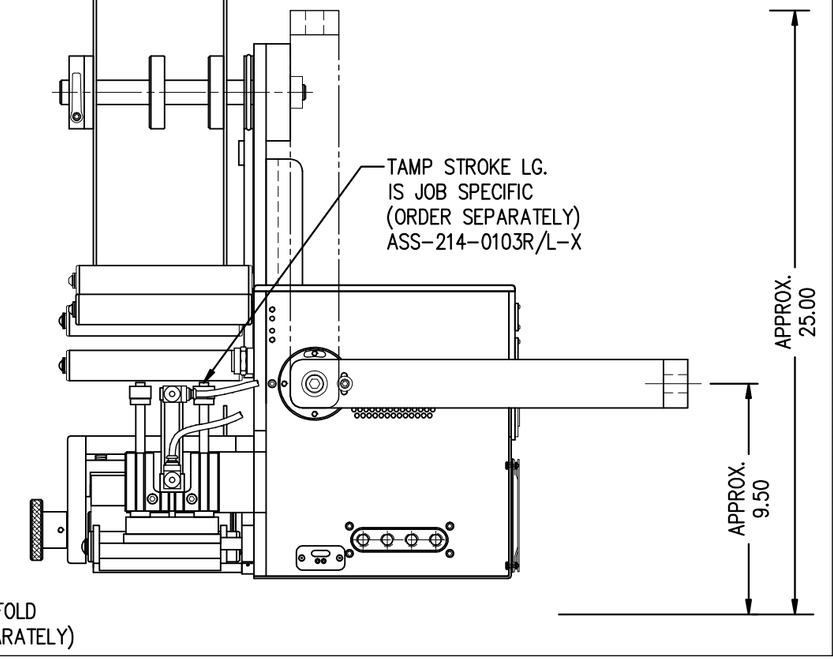
RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)











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APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"/7.5"	GROUP: TAMP ASSEMBLY	TITLE: TAMP APPLICATOR with 16" UNWIND & STD or FILM REWIND	Dept. Code 70	F:\Engineering\Standard Parts\Applicator\360a\360a-CE\CTM-214CE-X101RL-16X
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: xxx	Scale: 1=6	Date: 02/02/17	DRAWN BY: Tracy Rhodes

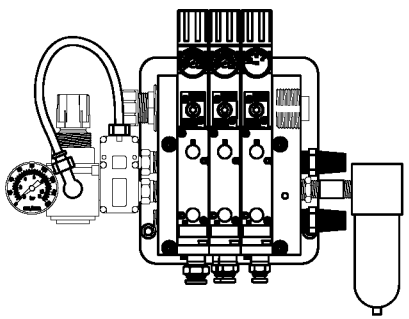
BILL OF MATERIAL

MOD-214-X101R/L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
	1	ASS-214-X101R/L	TAMP ASSEMBLY w/TRANSITION PLATE
⑤	1	ASS-214-0105M	TAMP VALVE BANK ASSEMBLY (MAC)
	1	PM-AH1000	AIR ASSIST TUBING x 12" Lg.
	5	PM-PF1010	1/4 TUBE to 1/4 NPT MALE CONNECTOR
	2	PM-PF1020	3/8 TUBE to 1/4 NPT MALE CONNECTOR
	1	PM-PF1105	1/8 NPT FEMALE to 1/4 NPT MALE BUSHING
	1	PM-PF1169	1/4 TUBE TO 1/8 NPT MALE HOSE BARB ELBOW
	1	PM-PT1070	1/4" OD SMC TUBING x 40" Lg.
	1	PM-PT1080	3/8" OD SMC TUBING x 36" Lg.

ORDER THESE ITEMS SEPARATELY:

1.) TAMP SLIDE w/MOUNTING PLATE....ASS-214-X103R/L-X
2.) LABEL PAD
3.) LABEL MANIFOLD



⑤ VALVE BANK ASSEMBLY
SCALE: 2"=1'-0"

BILL OF MATERIAL

ASS-214-X101R/L

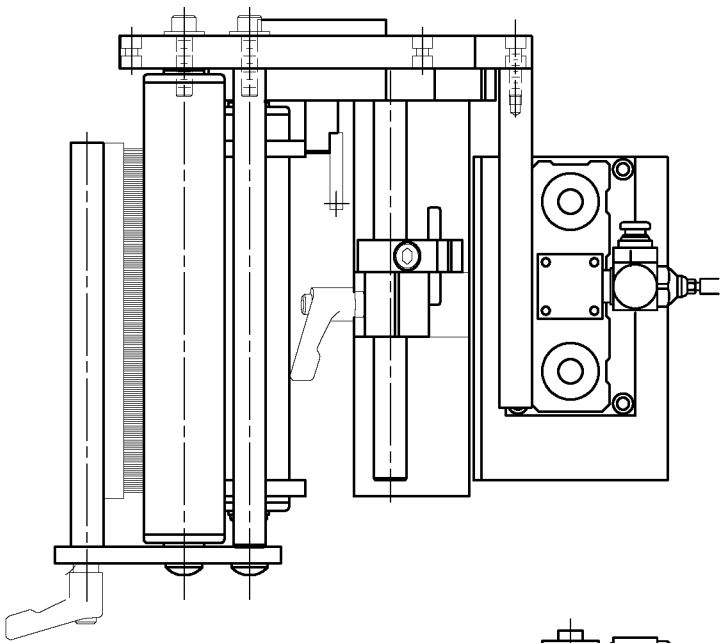
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP-214-0207	TAMP TRANSITION PLATE
②	1	ASS-200-X126R/L	TENSION BRUSH ASSEMBLY
③	1	ASS-214-X102R/L	TAMP PEEL EDGE ASSEMBLY
④	1	ASS-211-0108-2	FIBER OPTIC SENSOR w/ 2" MTG. SHAFT
	6	PM-FASH429075	SHCS, #10-32 x 5/8" Lg. SS

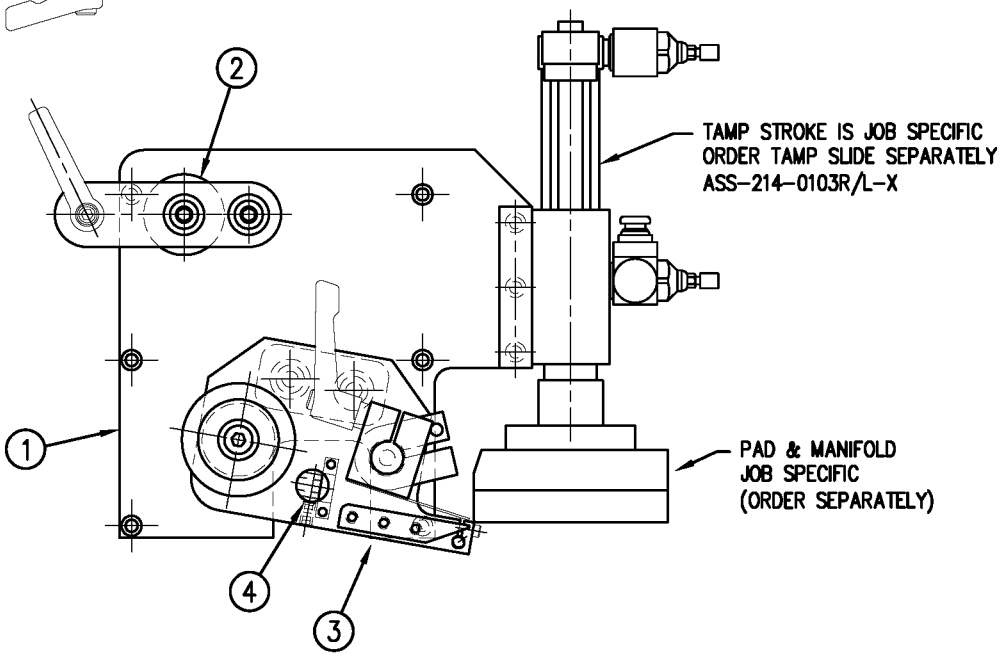
RH & LH ASSEMBLIES AVAILABLE
-RH ASSEMBLY SHOWN-

MOD-214-X101R/L

ASS-214-X101R/L

5" WIDE	-0101R/L
7.5" WIDE	-2101R/L





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TITLE:	PART:	Dept. Code
360 SERIES APPLICATOR: TAMP ASSEMBLY	TAMP ASSEMBLY w/ TRANSITION PLATE	70

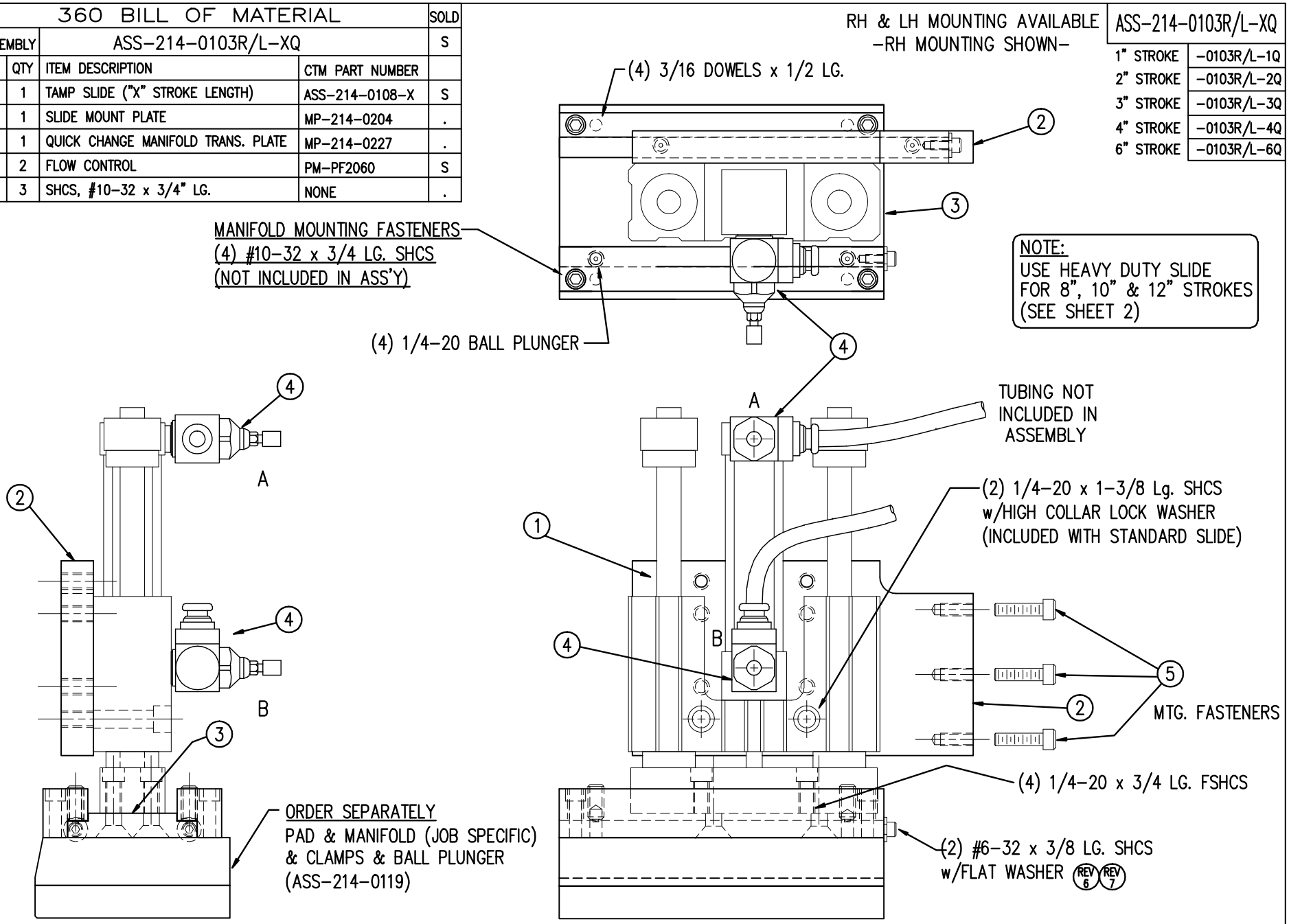
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360
0	NEW TITLEBLOCK	04/08/03	TDR	1=3	06/14/97	BOB S.	214\MOD-214-X101RL

360 BILL OF MATERIAL

ASSEMBLY		ASS-214-0103R/L-XQ		SOLD
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
1	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
2	1	SLIDE MOUNT PLATE	MP-214-0204	.
3	1	QUICK CHANGE MANIFOLD TRANS. PLATE	MP-214-0227	.
4	2	FLOW CONTROL	PM-PF2060	S
5	3	SHCS, #10-32 x 3/4" LG.	NONE	.

RH & LH MOUNTING AVAILABLE
-RH MOUNTING SHOWN-

ASS-214-0103R/L-XQ	
1" STROKE	-0103R/L-1Q
2" STROKE	-0103R/L-2Q
3" STROKE	-0103R/L-3Q
4" STROKE	-0103R/L-4Q
6" STROKE	-0103R/L-6Q



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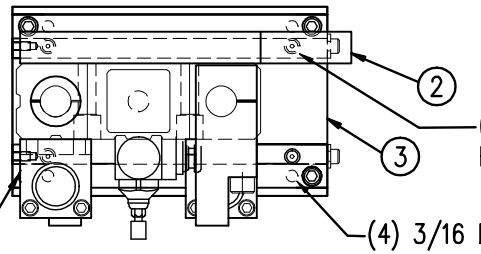
TITLE: 360 SERIES APPLICATOR: TAMP ASSEMBLY (SHEET 1 of 2)	PART: STANDARD SLIDE ASS'Y FOR 360 APPLICATOR w/QUICK CHANGE PAD	Dept. Code 70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360
7	SHOWED #6-32 (QC STOPS) IN CORRECT LOCATION	03/23/10	TDR	1=2	02/21/98	BOB S.	214\ASS-214-0103RL-XQs1

360 BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-214-0103R/L-XQ		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
①	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
②	1	SLIDE MOUNT PLATE	MP-214-0204	.
③	1	QUICK CHANGE MANIFOLD TRANS. PLATE	MP-214-0227	.
④	2	FLOW CONTROL	PM-PF2060	S
⑤	3	SHCS, #10-32 x 3/4" LG.	NONE	.

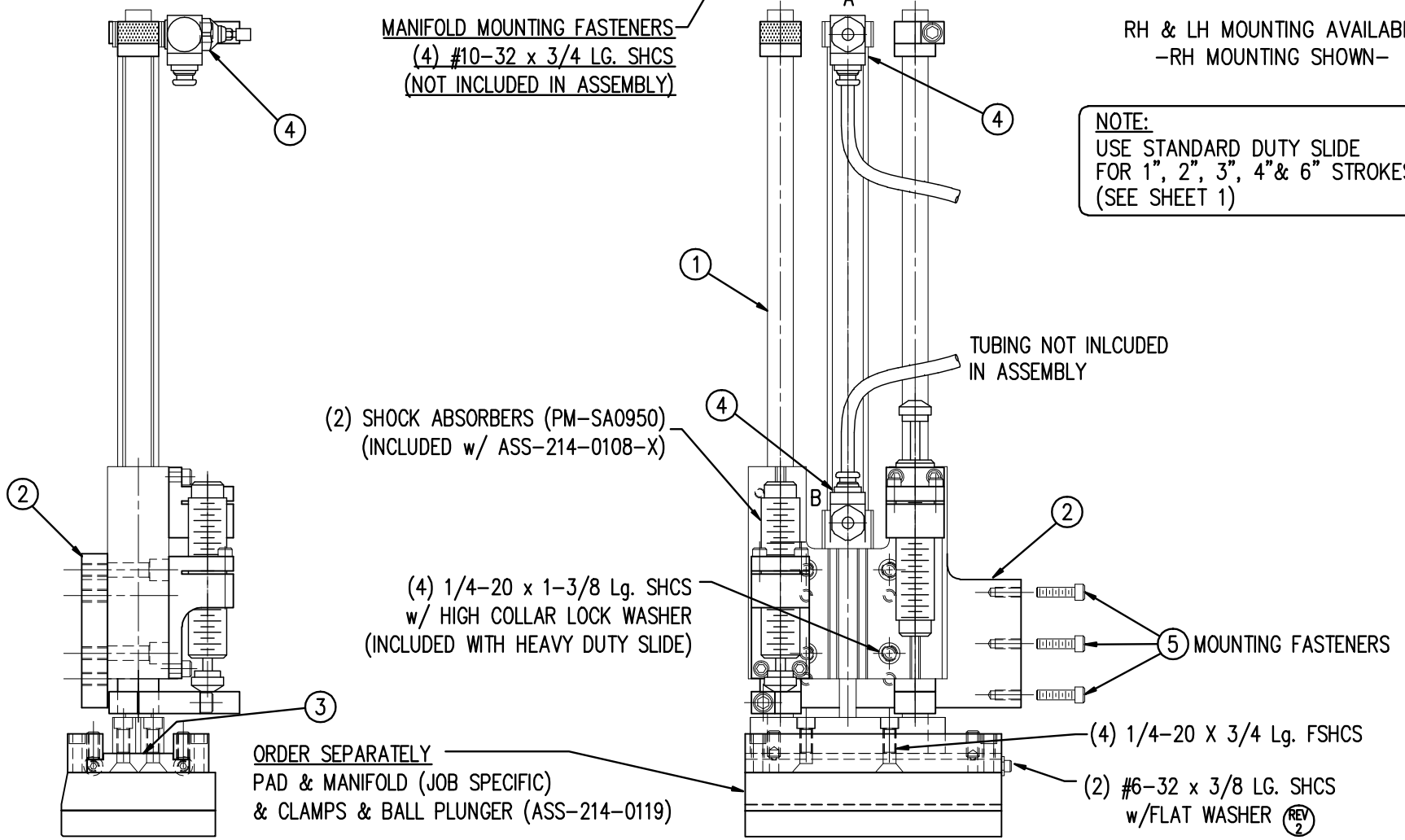
ASS-214-0103R/L-XQ	
8" STROKE	-0103R/L-8Q
10" STROKE	-0103R/L-10Q
12" STROKE	-0103R/L-12Q



MANIFOLD MOUNTING FASTENERS
(4) #10-32 x 3/4 LG. SHCS
(NOT INCLUDED IN ASSEMBLY)

RH & LH MOUNTING AVAILABLE
-RH MOUNTING SHOWN-

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



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TITLE: 360 SERIES APPLICATOR: TAMP ASSEMBLY (SHEET 2 of 2)	PART: HEAVY DUTY SLIDE ASS'Y FOR 360 APPLICATOR w/QUICK CHANGE PAD	Dept. Code 70

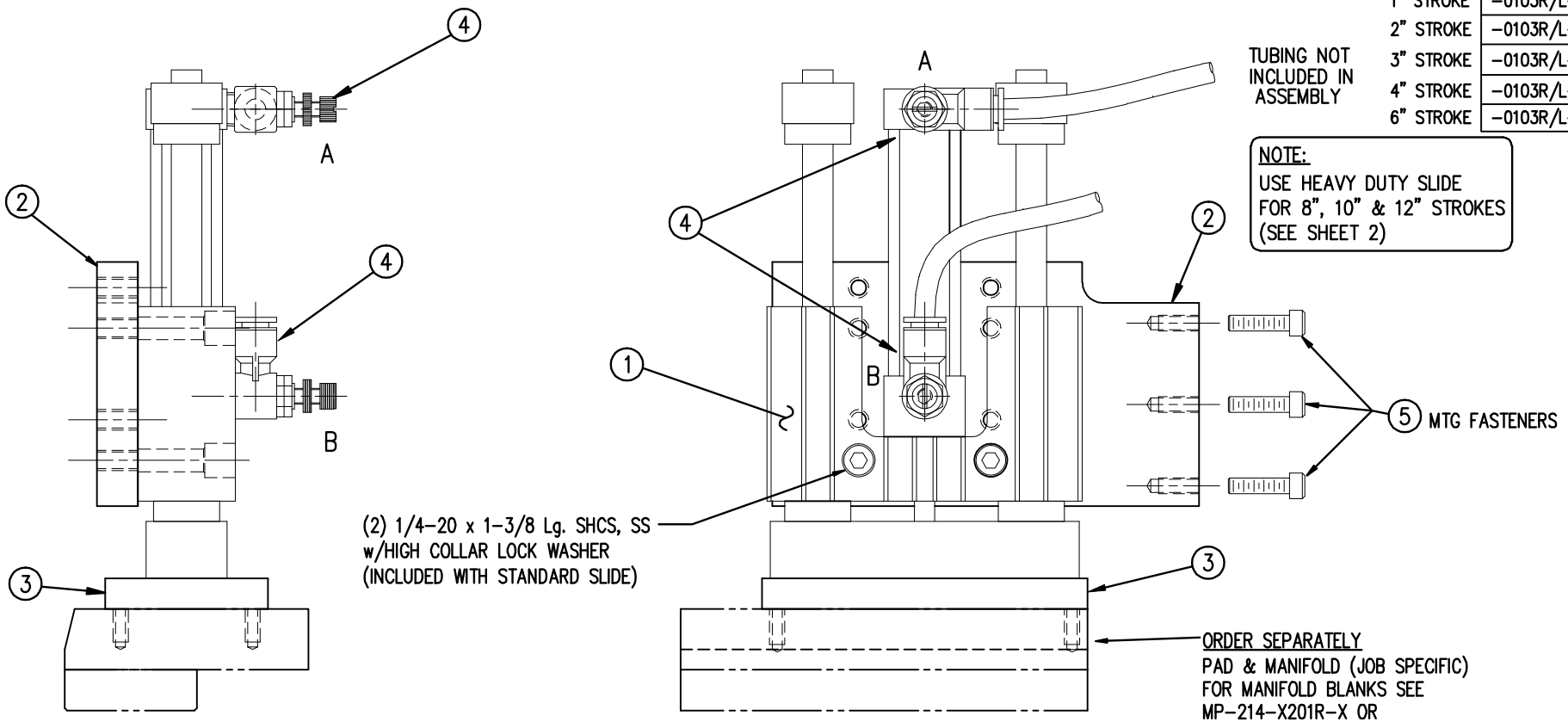
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360
3	SHOWED #6-32 SHCS (QC STOPS) IN CORRECT LOCATION	03/23/10	TDR	1=3	02/21/98	BOB S.	214\ASS-214-0103RL-XQs2

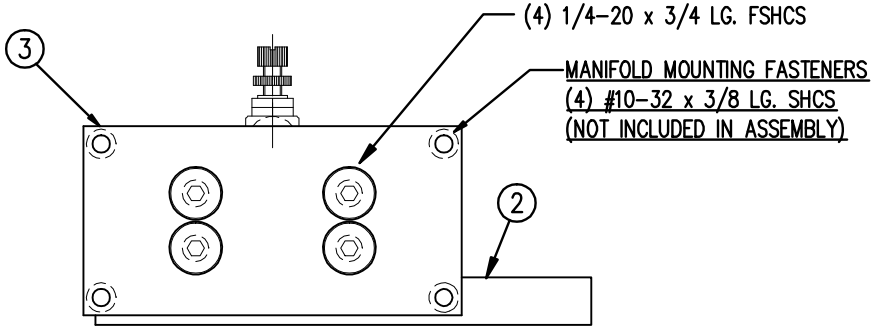
RH & LH MOUNTING AVAILABLE
-RH MOUNTING SHOWN-

ASS-214-0103R/L-X	
1" STROKE	-0103R/L-1
2" STROKE	-0103R/L-2
3" STROKE	-0103R/L-3
4" STROKE	-0103R/L-4
6" STROKE	-0103R/L-6

TUBING NOT INCLUDED IN ASSEMBLY

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





360 BILL OF MATERIAL				SOLD
ASSEMBLY		ASS-214-0103R/L-X		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
1	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS-214-0108-X	S
2	1	SLIDE MOUNT PLATE	MP-214-0204	.
3	1	TAMP MANIFOLD TRANSITION PLATE	MP-214-0203	.
4	2	FLOW CONTROL	PM-PF2060	S
5	3	SHCS, #10-32 x 3/4" LG.	PM-FASH430078	.

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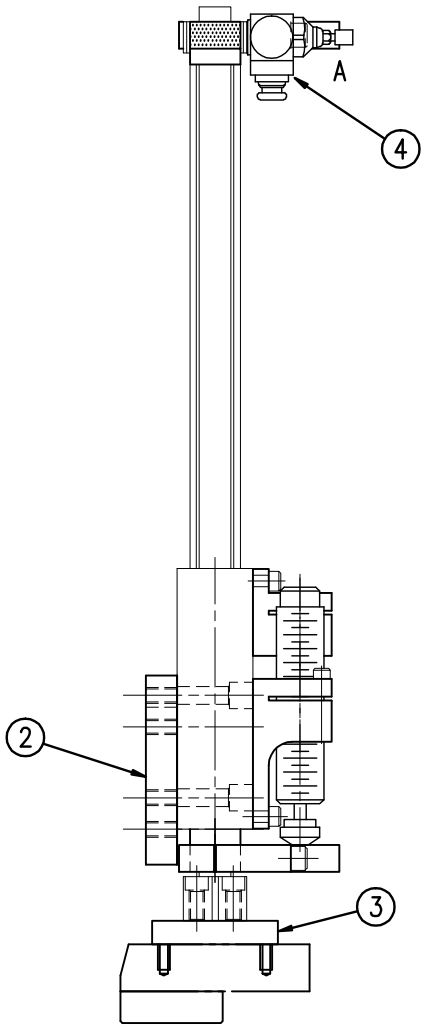
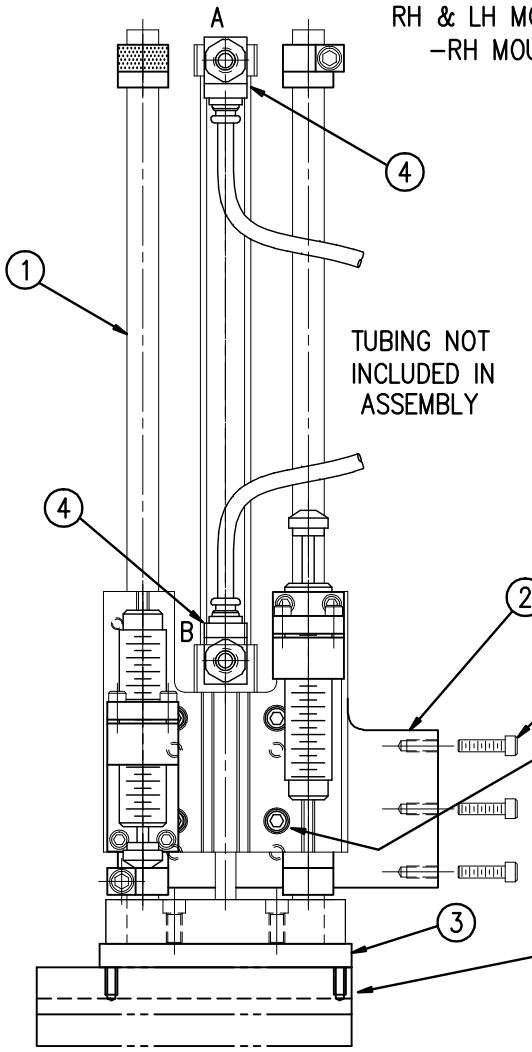
TITLE:	PART:	Dept. Code
360 SERIES APPLICATOR: TAMP ASSEMBLY (SHEET 1 of 2)	STANDARD SLIDE ASSEMBLY FOR 360 APPLICATOR	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360
6	UPDATED FLOW CONTROLS	11/02/11	JLM	1=2	02/21/98	BOB S.	214\ASS-214-0103RL-Xs1

RH & LH MOUNTING AVAILABLE
–RH MOUNTING SHOWN–

ASS-214-0103R/L-X	
8" STROKE	–0103R/L-8
10" STROKE	–0103R/L-10
12" STROKE	–0103R/L-12





TUBING NOT INCLUDED IN ASSEMBLY

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

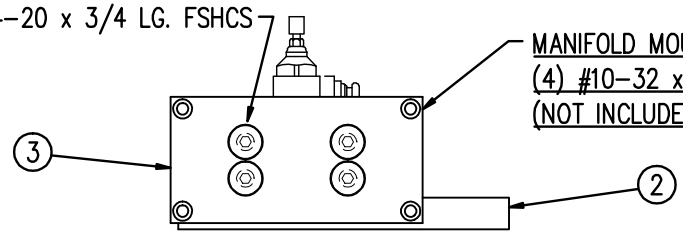
5 MOUNTING FASTENERS

(4) 1/4–20 x 1–3/8 Lg. SHCS, SS w/ HIGH COLLAR LOCK WASHER (INCLUDED WITH HEAVY DUTY SLIDE)

ORDER SEPARATELY
PAD & MANIFOLD (JOB SPECIFIC)
FOR MANIFOLD BLANKS SEE
MP–214–X201R–X OR
MP–214–X201L–X

(4) 1/4–20 x 3/4 LG. FSHCS

MANIFOLD MOUNTING FASTENERS
(4) #10–32 x 3/8 LG. SHCS
(NOT INCLUDED IN ASSEMBLY)



360 BILL OF MATERIAL				SOLD
ASSEMBLY		ASS–214–0103R/L–X		S
ITEM	QTY	ITEM DESCRIPTION	CTM PART NUMBER	
1	1	TAMP SLIDE ("X" STROKE LENGTH)	ASS–214–0108–X	S
2	1	SLIDE MOUNT PLATE	MP–214–0204	.
3	1	TAMP MANIFOLD TRANSITION PLATE	MP–214–0203	.
4	2	FLOW CONTROL	PM–PF2060	S
5	3	SHCS, #10–32 x 3/4" LG.	PM–FASH430078	.

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TITLE:	PART:	Dept. Code
360 SERIES APPLICATOR: TAMP ASSEMBLY (SHEET 2 of 2)	HEAVY DUTY SLIDE ASSEMBLY FOR 360 APPLICATOR	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
1	NEW SHEET 2	03/21/06	TDR	1=3	02/21/98	BOB S.	F:\Engineering\Standard Parts\Applicator\360 214\ASS–214–0103RL–Xs2

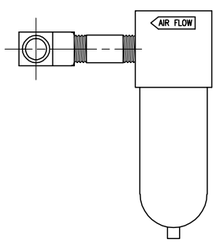
BILL OF MATERIAL

ASS–214–0105M

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	MP–214–0202	VALVE FASTENING MOUNTING PLATE
②	1	MP–214–0206	VALVE MOUNTING PLATE
③	1	ASS–200–0452M	VALVE CABLE
④	1	PM–REG1500	REGULATOR
⑤	1	PM–VA2384	0–160 PSI PRESSURE GUAGE
⑥	2	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	1	PM–VA2355M	3 STATION MAC VALVE BANK
⑨	1	PE–CO2000	CORD GRIP
⑩	2	PM–MU1027	3/8" NPT MALE BRONZE EXHAUST MUFFLER
⑪	3	PM–FT1200	1/4" NPT SOCKET HEAD PLUG
⑫	1	PM–PF1200	TEE 1/4" NPT FEMALE 3 ENDS
⑬	1	PM–PF1143	NIPPLE, 1/4" NPT X 1 1/2" LG.
⑭	1	PM–PF1220	ADAPTOR, 3/8" NPT FEMALE TO 1/4" NPT MALE
⑮	1	PM–PF1157	REDUCER, 3/8" NPT TO 1/8" NPT
⑯	1	PM–PF1159	FITTING, 3/8" NPT MALE BOTH ENDS
⑰	1	PE–EN9125	1 1/4" BLACK PLASTIC THREADED PLUG
⑱	1	PE–COND1084	STEEL REDUCER
⑲	1	PM–PF1110	BUSHING, 1/4" NPT FEMALE TO 3/8" NPT MALE
⑳	3	PM–PF1010	FITTING, 1/4" TUBE w/ 1/4" NPT STRT
㉑	1	PM–PF1020	FITTING, 3/8" TUBE w/ 1/4" NPT STRT
㉒	1	PM–PF1167	3/8" NPT SOCKET HEAD PLUG
㉓	10.5"	PM–PT1070	1/4" OD TUBING
㉔	1	ASS–214–0106	AIR FILTER
㉕	1	PM–PF1055	90° ELBOW 1/4" TUBE TO 1/4" NPT MALE
㉖	1	PM–PF1185	90° STREET ELBOW, 1/4 NPT MALE/FEMALE
	2	PM–FASH430079	1/4"–20 UNC x 7/8" LG. SS SHCS
	2	PM–FAW30275	1/4" SS FLAT WASHER
	2	PM–FASH430078	1/4"–20 UNC x 3/4" LG. SS SHCS
	4	PM–FASH429088	#10 x 2–1/2" Lg. SS SHCS
	4	PM–FAW30265	#10 SS FLAT WASHER

VALVE BANK SPARE PARTS:

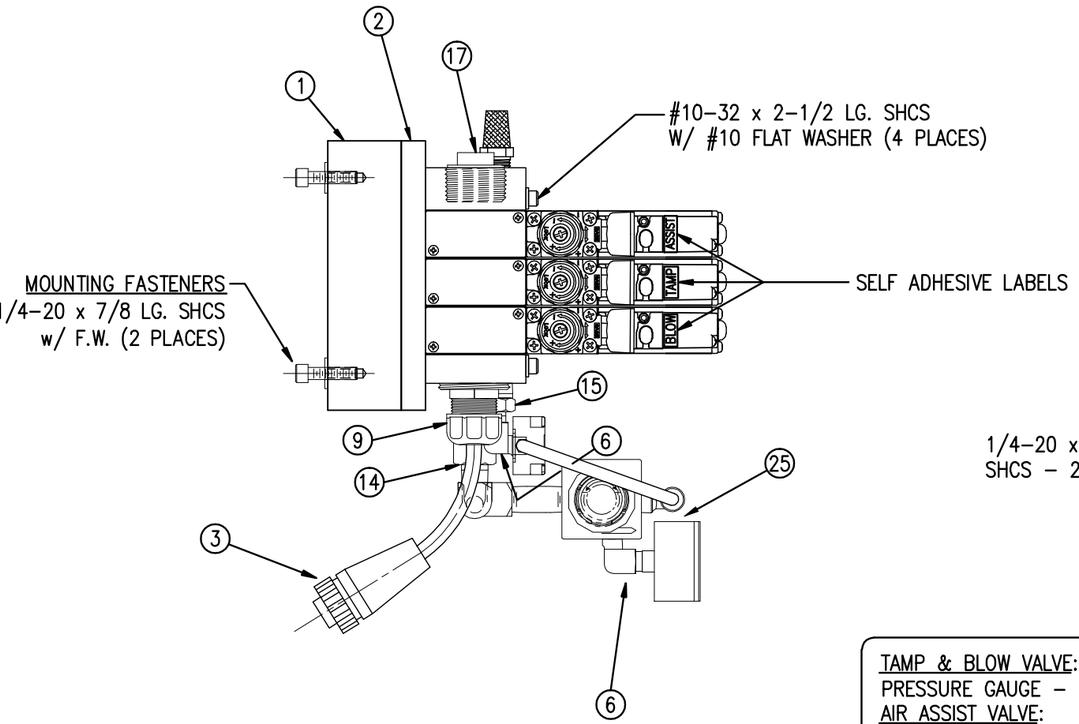
SOLENOID: #PM–VA2395M
AIR ASSIST REGULATOR W/GUAGE: #PM–VA2396M
BLOW/TAMP/IMPRINTER REGULATORS W/GUAGE: #PM–VA2397M
AIR ASSIST REGULATOR GUAGE: #PM–VA2382M
BLOW/TAMP/IMPRINTER REGULATOR GUAGES: #PM–VA2380M

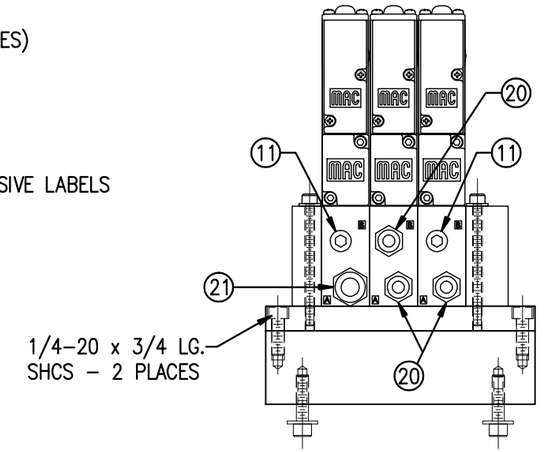


㉔ AIR FILTER
SHIP LOOSE
–CUSTOMER TO INSTALL –

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

ASS–214–0105M

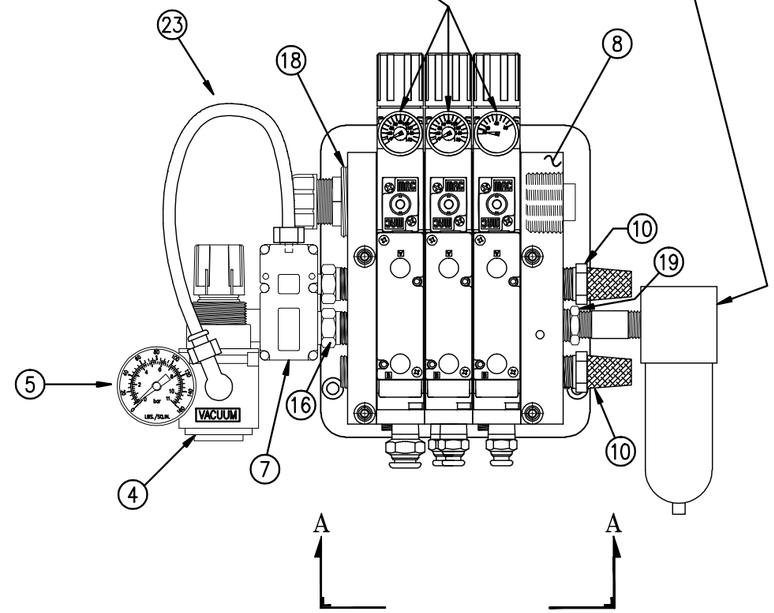


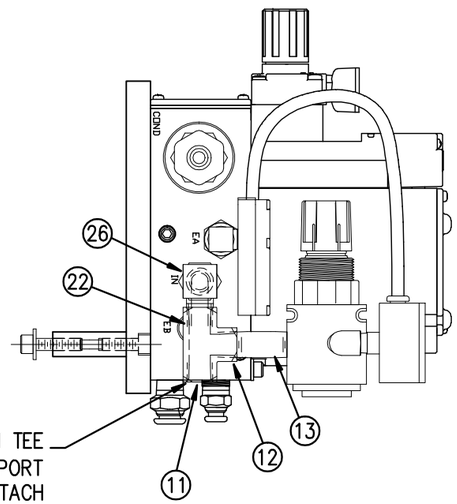


END VIEW "A"
(VALVE BANK & MTG. ONLY)

TAMP & BLOW VALVE:
PRESSURE GAUGE – 0–160 PSI
AIR ASSIST VALVE:
PRESSURE GAUGE – 0–60 PSI

AIR FILTER SHOWN IN
TYPICAL LOCATION FOR
LH APPLICATOR





MOVE PLUG FROM TEE
ON THIS SIDE TO "IN" PORT
ON OPPOSITE SIDE & ATTACH
AIR FILTER ASSEMBLY HERE
(TO TEE) FOR RH APPLICATORS

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TITLE: 3 STATION VALVE BANK ASSEMBLY (TAMP)
Dept. Code 70
APPLICATOR SERIES: 360
APPLICATOR WIDTH(S): 5"/7.5"/10"
GROUP: VALVE BANKS
DRAWN BY: E. SANOR
Date: 03/28/07
Scale: 1=3
REV. BY: TDR
F:\Engineering\Standard Parts\Applicator\360\ 360\ASS–214–0105M
REV. DATE 12/12/14
REV. DESCRIPTION
REV. 2 CHANGED PIPING – TURNED ELBOW & TEE ON REGULATOR

BILL OF MATERIAL

CTM–215CE–X105R/L–12S/F/C

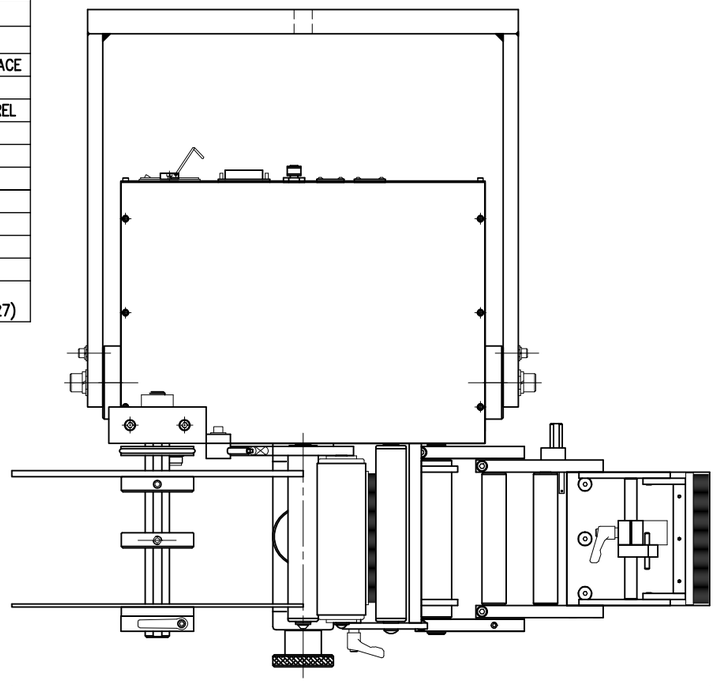
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM–200CE–X150R/L	360a–CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD–200–X121R/L	12" UNWIND ASSEMBLY
③	1	ASS–200–0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS–200–3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS–200–X147	5/7.5/10 STD REWIND MANDREL w/DISK
	1	ASS–200–X137	5/7.5 FILM REWIND MANDREL
	1	ASS–200–3140–X	5/7.5 COLLAPSIBLE MANDREL
⑤	1	PM–BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD–215–X105R/L	5/7.5/10 MERGE NOSE ASSEMBLY
⑦	1	ASS–200–X152R/L–2	NIP GUARD w/ ENTRY & EXIT GUIDES
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE–FI1027)

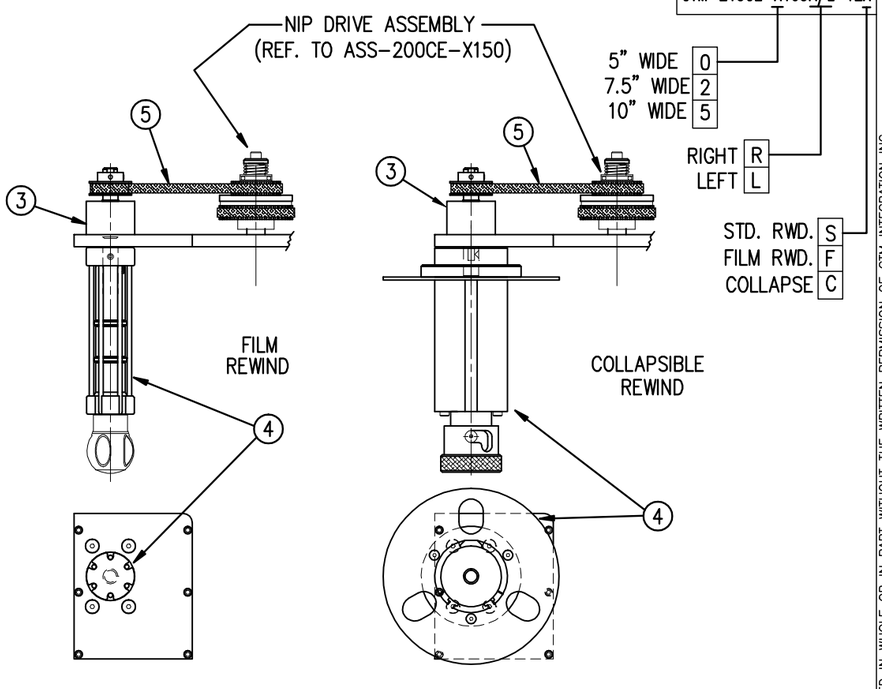
BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

PART NO.	DIM "A"
CTM–215–0105R/L–12X	27.50
CTM–215–2105R/L–12X	30.00
CTM–215–5105R/L–12X	32.50

RH & LH ASSEMBLIES AVAILABLE (5" WIDE; RH ASSEMBLY SHOWN)

NOTE: UNWIND MTG. BRACKET FOR 5" & 7.5" WIDE APPLICATORS DIFFERS FROM 10" WIDE. FOR 10" WIDE MTG. BRACKET REFER TO DWG. MP–200–5216



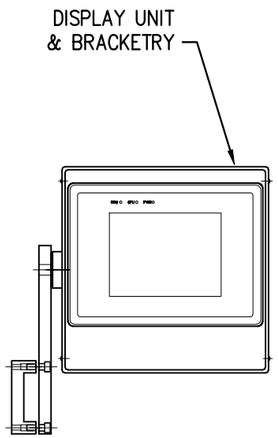


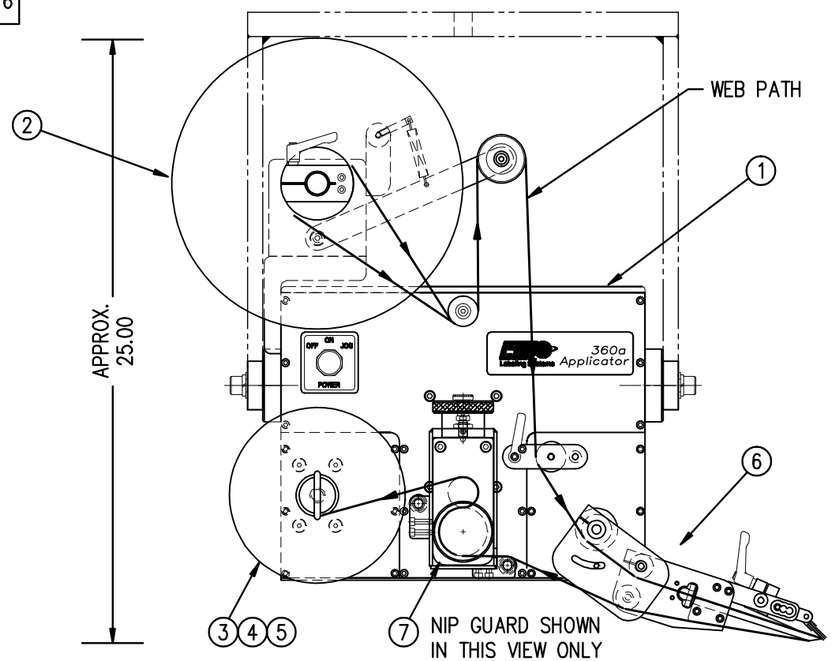
CTM–215CE–X105R/L–12X

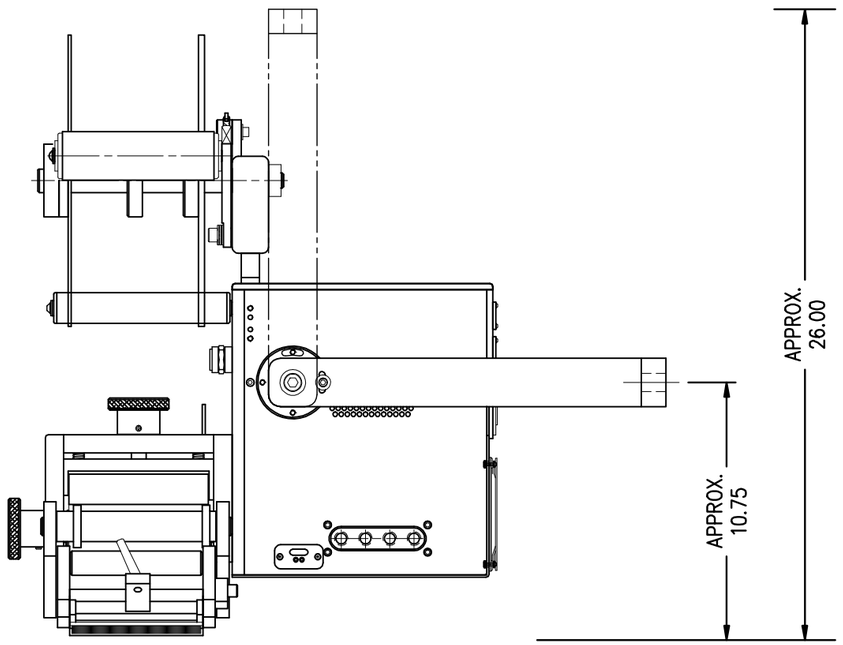
5" WIDE 0
7.5" WIDE 2
10" WIDE 5

RIGHT R
LEFT L

STD. RWD. S
FILM RWD. F
COLLAPSE C







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APPLICATOR SERIES: 360a–CE	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: MERGE ASSEMBLY	TITLE: MERGE APPLICATOR w/ 12" UNWIND	Dept. Code 70	F:\Engineering\Standard Parts\Applicator\360a\360a–CE\CTM–215CE–X105RL–12X
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX	Scale: 1=6	Date: 02/07/17
				DRAWN BY: Tracy Rhodes	CHK'D BY: XXX

BILL OF MATERIAL

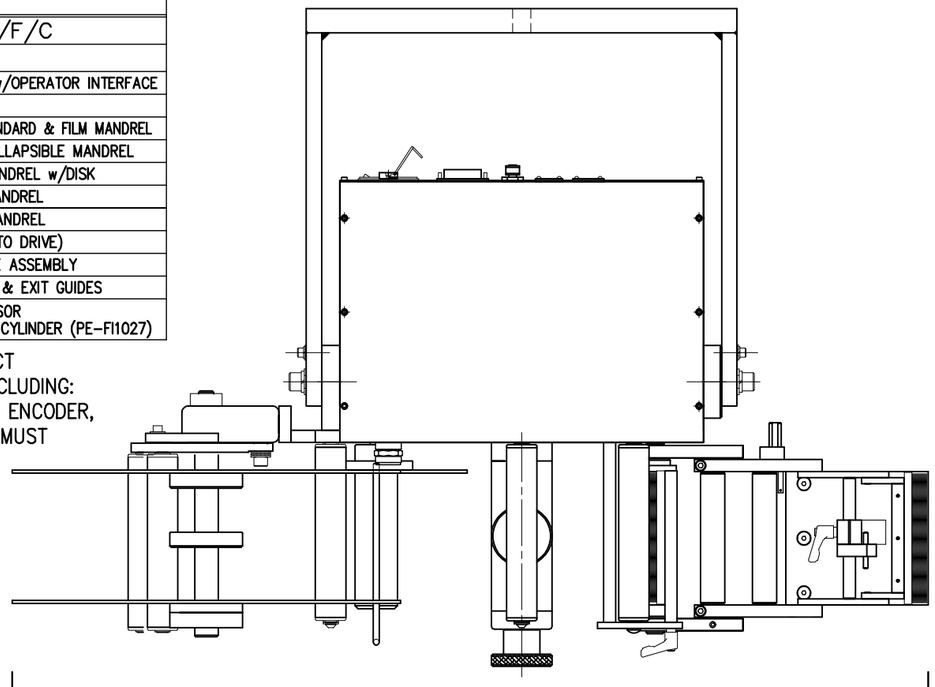
CTM-215CE-X105R/L-16S/F/C

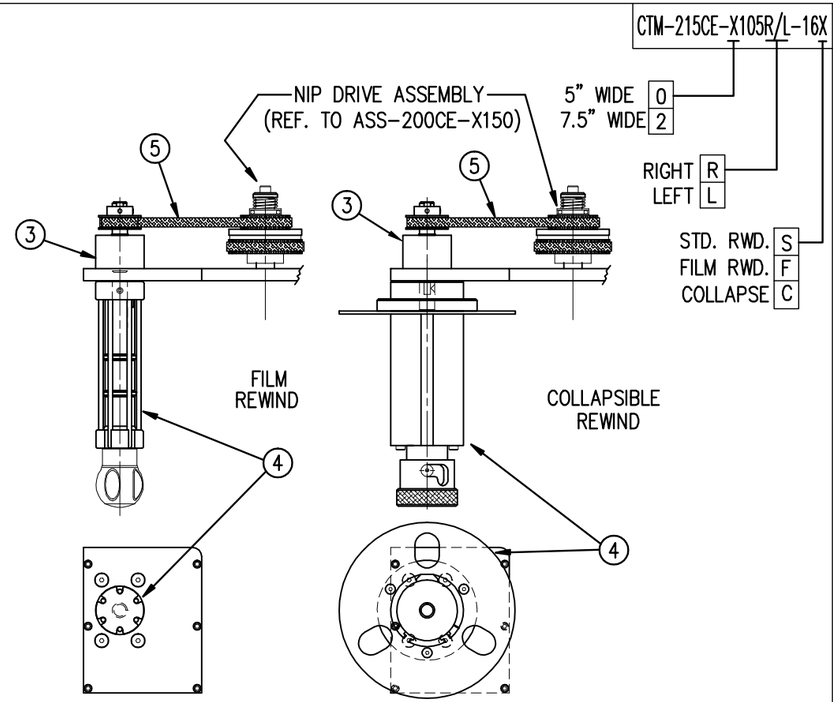
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	CTM-200CE-X150R/L	360a-CE CORE UNIT w/OPERATOR INTERFACE
②	1	MOD-200-3121R/L-X	16" UNWIND ASSEMBLY
③	1	ASS-200-0145R/L	REWIND ASS'Y FOR STANDARD & FILM MANDREL
	1	ASS-200-3167R/L	REWIND ASS'Y FOR COLLAPSIBLE MANDREL
④	1	ASS-200-X147	5/7.5 STD REWIND MANDREL w/DISK
	1	ASS-200-X137	5/7.5 FILM REWIND MANDREL
	1	ASS-200-3140-X	5/7.5 COLLAPSIBLE MANDREL
⑤	1	PM-BELT1023	TIMING BELT (REWIND TO DRIVE)
⑥	1	MOD-215-X105R/L	5/7.5/10 MERGE NOSE ASSEMBLY
⑦	1	ASS-200-X152R/L-X	NIP GUARD w/ ENTRY & EXIT GUIDES
	1	ORDER SEPARATELY	PRODUCT DETECT SENSOR w/CLAMP ON FERRITE CYLINDER (PE-FI1027)

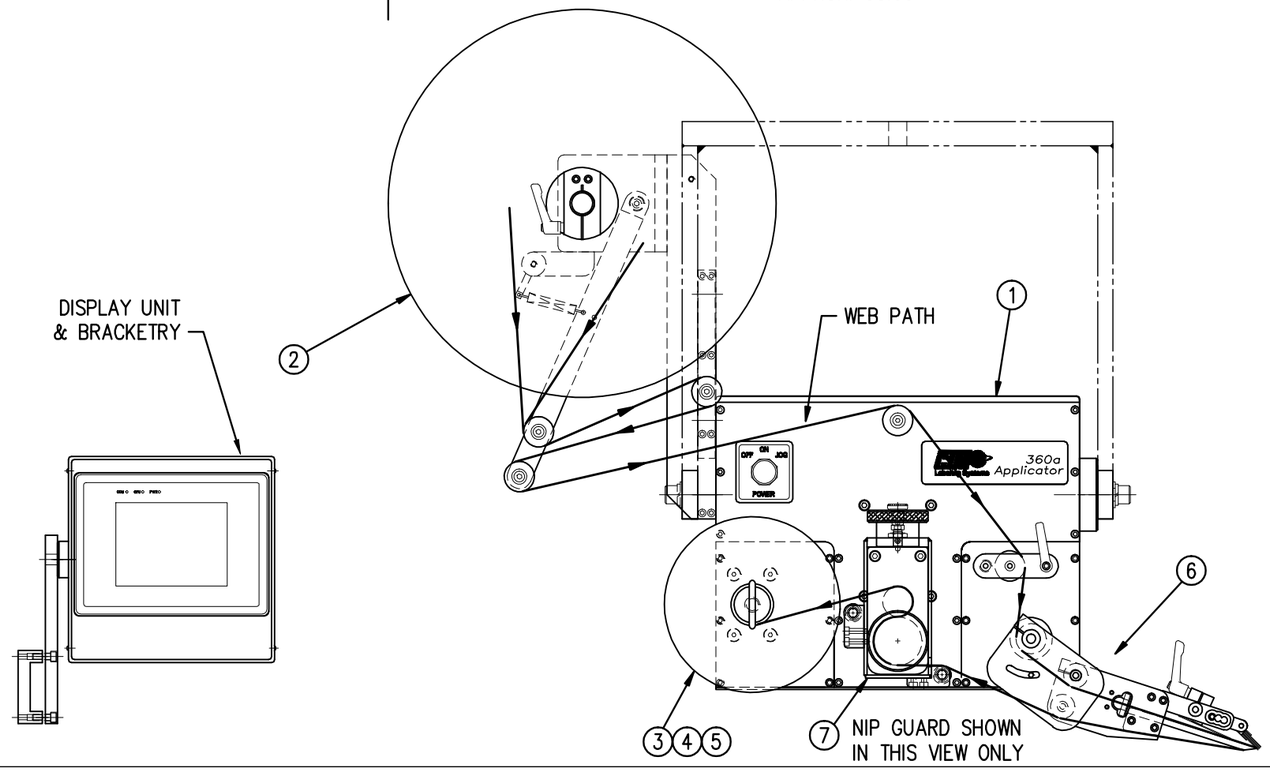
BASE MODEL WIRED FOR DISPLAY & PRODUCT DETECT ONLY. FOR ALL OTHER OPTIONS INCLUDING: LOW LABEL, END OF WEB, ALARM LIGHTS, & ENCODER, THE CORRESPONDING CONNECTOR HARNESS MUST ALSO BE ADDED TO THE B.O.M.

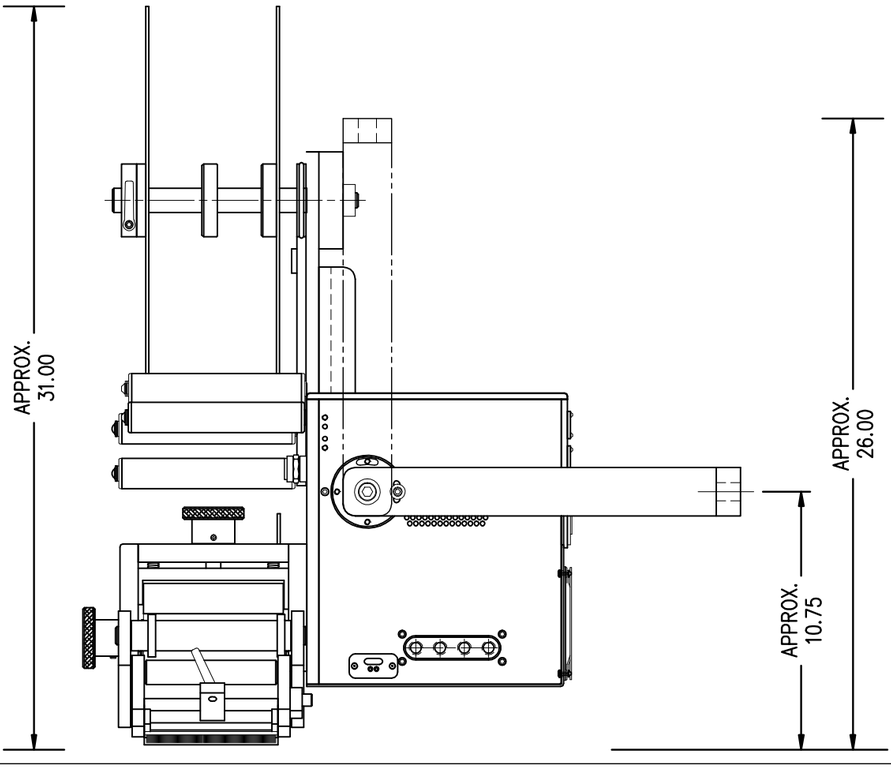
PART NO.	DIM "A"
CTM-215-0105R/L-16X	27.50
CTM-215-2105R/L-16X	30.00

RH & LH ASSEMBLIES AVAILABLE
(5" WIDE; RH ASSEMBLY SHOWN)









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APPLICATOR SERIES: 360a-CE	APPLICATOR WIDTH(S): 5"/7.5"	GROUP: MERGE ASSEMBLY	TITLE: MERGE APPLICATOR w/ 16" UNWIND
REV. 0	REV. DESCRIPTION –	REV. DATE –	REV. BY: XXX

Scale: 1=6 | Date: 02/07/17 | DRAWN BY: Tracy Rhodes | Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360\360a-CE\CTM-215CE-X105RL-16X

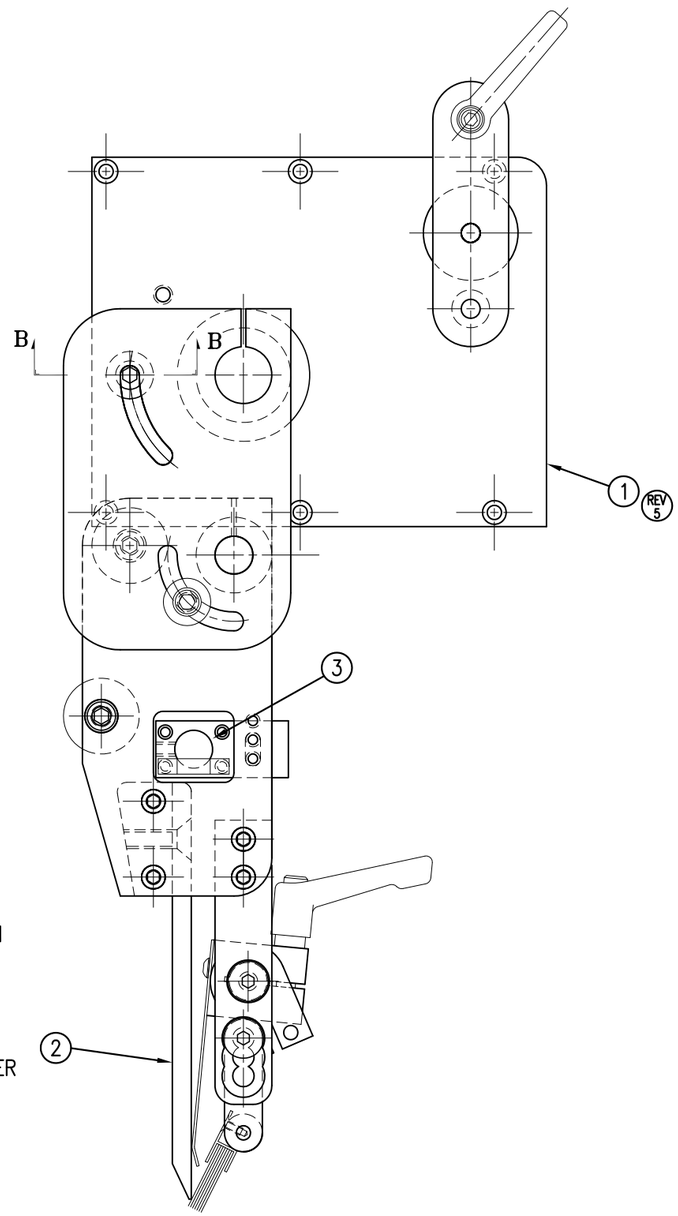
BILL OF MATERIAL

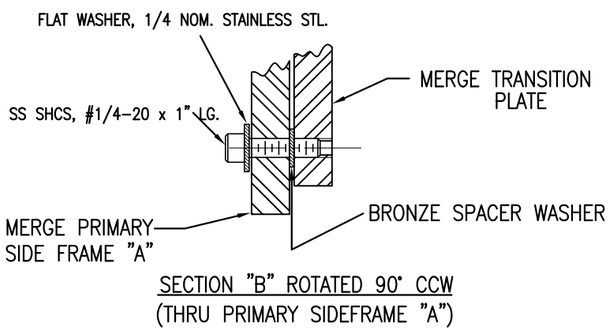
MOD–215–X105R/L

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	SAS–215–X105BR	MERGE NOSE MOUNTING ASSEMBLY – RH
	1	SAS–215–X105BL	MERGE NOSE MOUNTING ASSEMBLY – LH
②	1	SAS–215–X105AR	MERGE NOSE ASSEMBLY – RH
	1	SAS–215–X105AL	MERGE NOSE ASSEMBLY – LH
③	1	ASS–211–0108–2	FIBER OPTIC LABEL SENSOR ASSEMBLY with 2" MOUNTING ROD
	6	PM–FASH429075	SS SHCS, #10–32 x 5/8" LG.

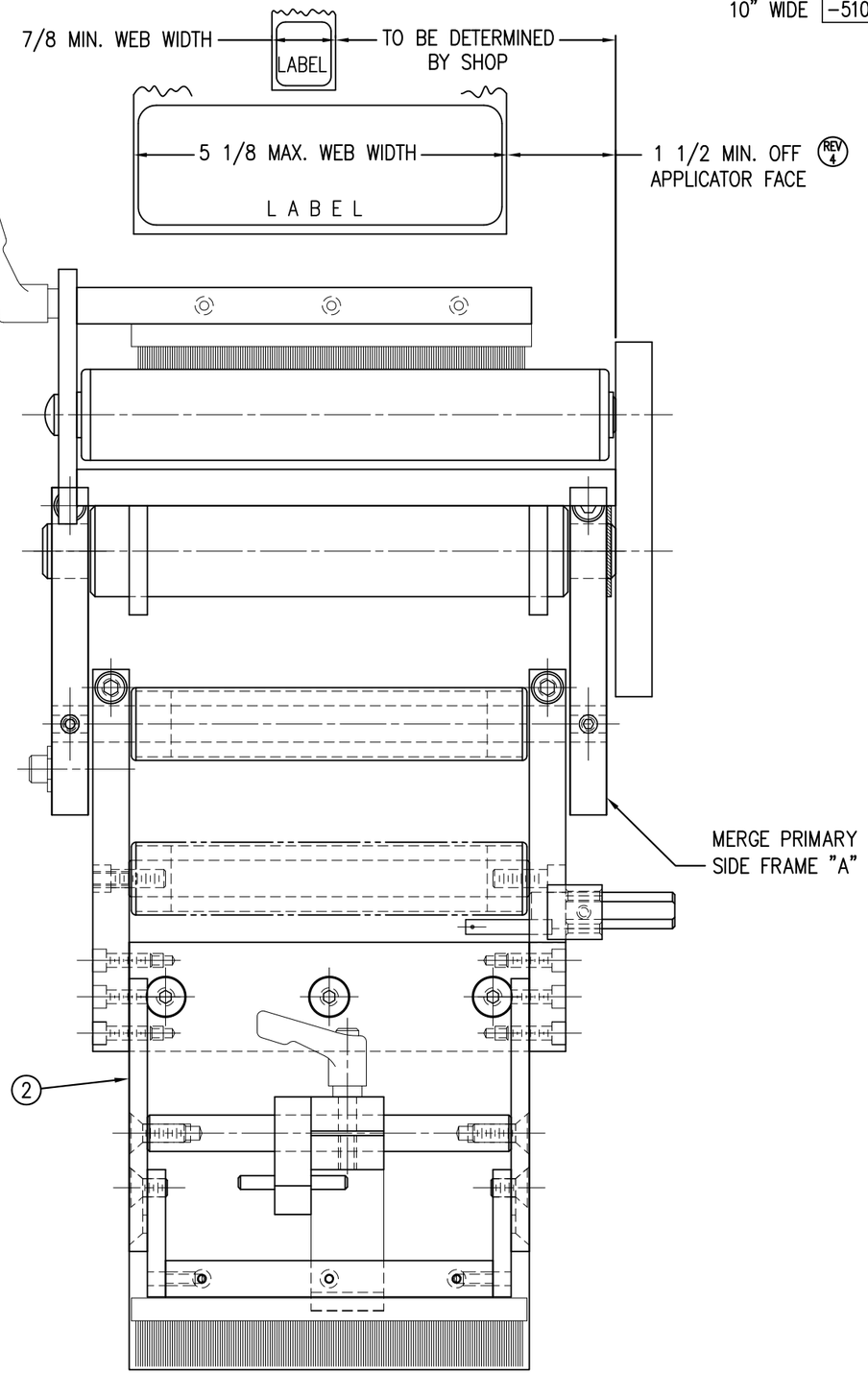
RH & LH MODULES AVAILABLE
–RH MODULE SHOWN–

MOD–215–X105R/L	
5" WIDE	–0105R/L
7.5" WIDE	–2105R/L
10" WIDE	–5105R/L





SECTION "B" ROTATED 90° CCW
(THRU PRIMARY SIDEFRAME "A")



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TITLE: STANDARD NOSE ASSEMBLY WITH TRANSITION PLATE

Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360\215\MOD–215–X105RL

APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	DRAWN BY:	Scale:	Date:
360/360A	5"/7.5"/10"	MERGE	BOB S.	1=2	02/11/00

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:
5	CORRECTED BALL NOTE #1 TO INDICATE MERGE NOSE MOUNTING	03/21/12	BMW

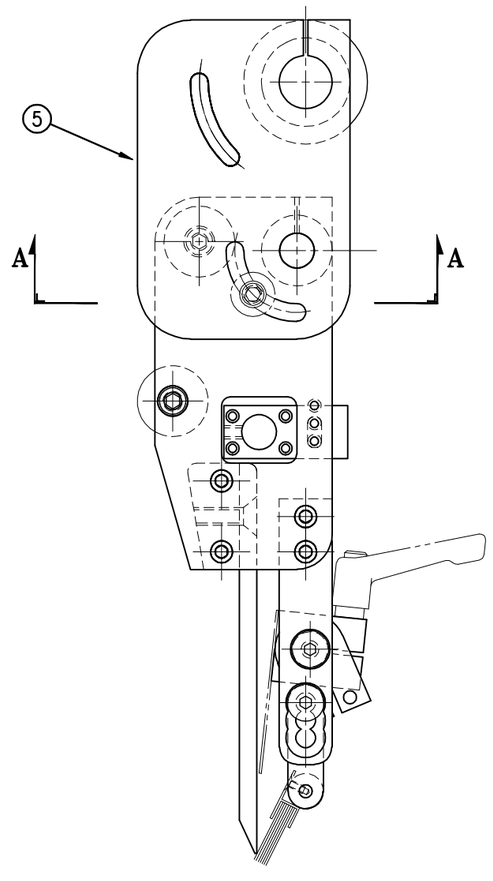
BILL OF MATERIAL

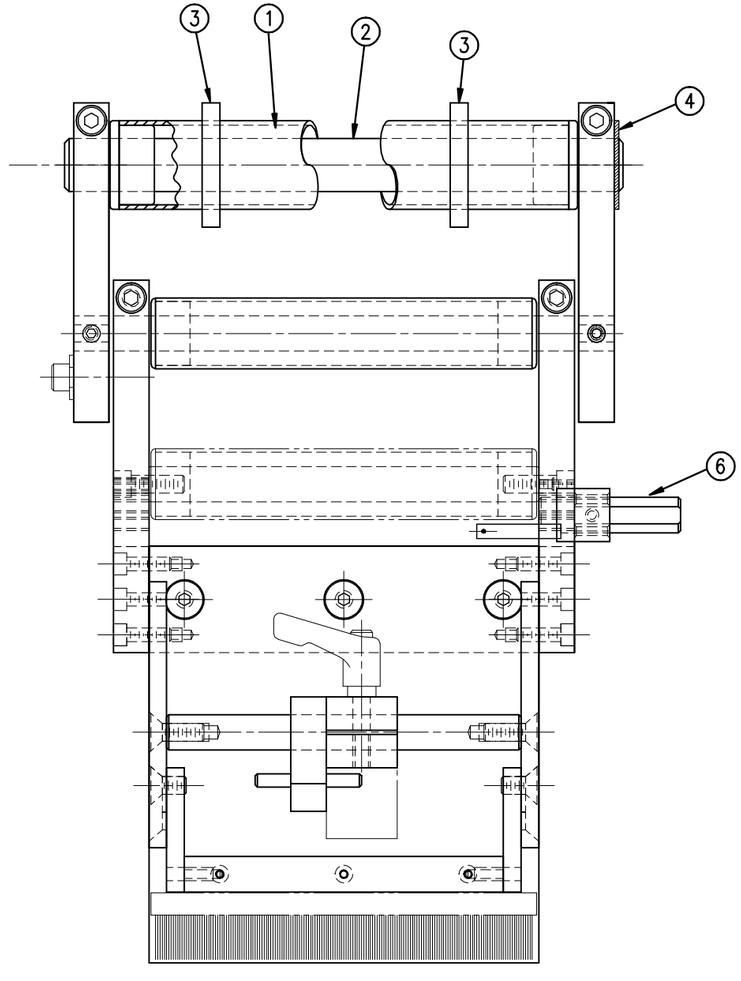
ASS-215-X106R/L

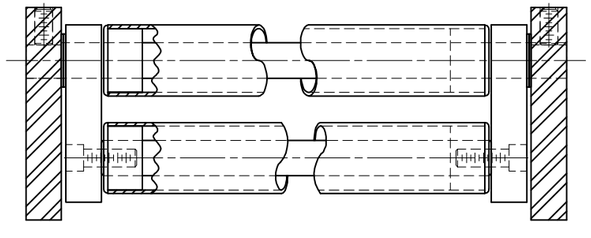
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-215-X115	MERGE PRIMARY ROLLER ASSEMBLY
②	1	MP-215-X209	5/7.5/10 PRIMARY ROLLER SHAFT
③	2	MP-211-0210	GUIDE COLLAR
④	1	PM-BEBT1028	BRONZE WASHER
⑤	1	SAS-215-X105AR/L	MERGE NOSE ASSEMBLY
⑥	1	ASS-211-0108-2	FIBER OPTIC LABEL SENSOR ASSEMBLY with 2" MOUNTING ROD
◯	1	PM-BEBT1000	BRONZE WASHER

RH & LH ASSEMBLIES AVAILABLE
-RH ASSEMBLY SHOWN-

ASS-215-X106R/L	
5" WIDE	-0106R/L
7.5" WIDE	-2106R/L
10" WIDE	-5106R/L







SECTION "A" – ROTATED 90° CCW
(SHOWING SECONDARY MERGE ROLLERS)

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APPLICATOR SERIES: 360/360A	APPLICATOR WIDTH(S): 5"/7.5"/10"	GROUP: MERGE	TITLE: 5/7.5/10 NOSE ASSEMBLY		
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale: 1=2	Date: 02/11/00
2	DOUBLE FEED ROLLER NOW STANDARD – REMOVED NOTE	01/10/11	TDR	DRAWN BY: BOB S.	

Dept. Code 70

F:\Engineering\Standard Parts\Applicator\360\360\ASS-215-X106RL

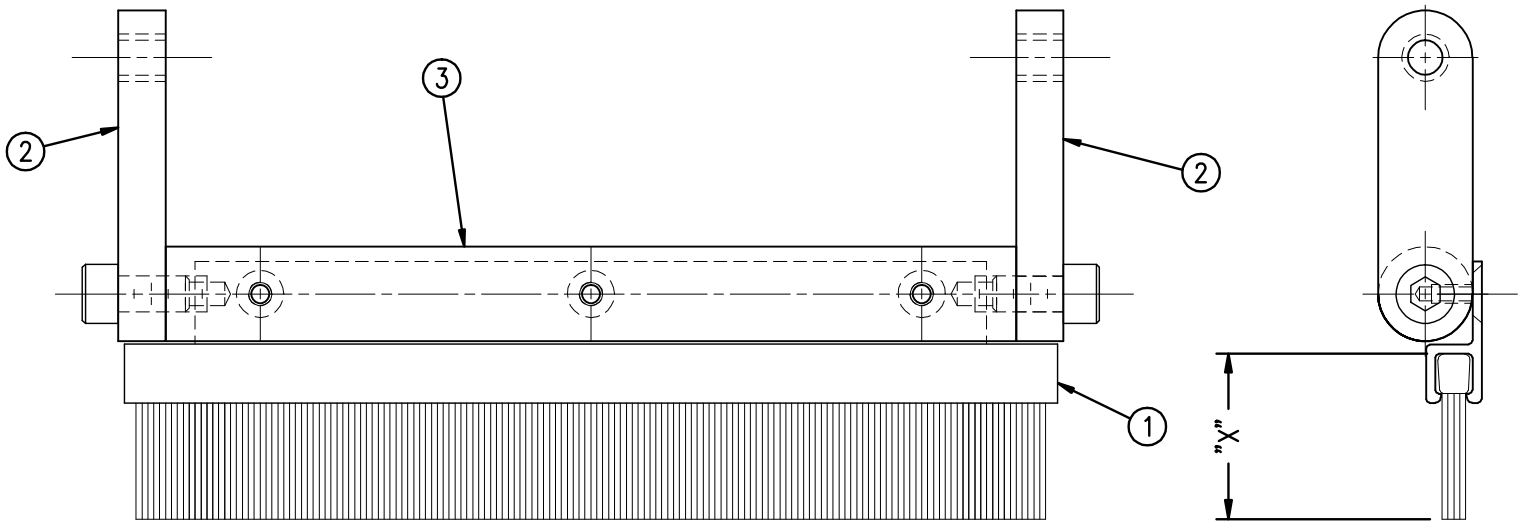
BILL OF MATERIAL

ASS-215-X107-X

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	ASS-215-X110-X	5/7.5/10 TENSION BRUSH ASS'Y x "X" Lg.
②	2	MP-215-0218	BRUSH SUPPORT ARM
③	1	MP-215-X223	5/7.5/10 BRUSH HOLDER

ASS-215-X107-X		
5" WIDE	-0107	-X
7.5" WIDE	-2107	-X
10" WIDE	-5107	-X

"X"	BRUSH LENGTH
	7/8"
1.25	1-1/4"
2	2"
3	3"
4	4"



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
360/360A	5"/7.5"/10"	MERGE	BRUSH WIPER ASSEMBLY for MERGE NOSE	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\360\
2	REMOVED RUBBER TABULATION & ADDED BRUSH LG. TABULATION	04/24/09	TDR	1=1	02/11/00	BOB S.	215\ASS-215-X107-X