

1318 QUAKER CIRCLE P.O. BOX 589 SALEM, OHIO 44460

PHONE: 330-332-1800 FAX: 330-332-2144

www.ctmlabelingsystems.com

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

# 360a Powered Unwind MAINTENANCE & SERVICE MANUAL

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#### INTRODUCTION

The CTM Integration 360a Powered Unwind 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 unwind and rewind modules are powered to handle the web better at higher speeds. When running above 2100 in/min with a label length longer than 4 inches, it is recommended to go to this applicator.

The CTM Integration 360a Powered Unwind 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 powered unwind unit differs from the standard line of 360a applicators in the sense they are hand specific. Because of the powered unwind this applicator will have to be ordered left or right handed and cannot be changed in the field.

If your application needs change 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 Integration 360a Powered Unwind can be easily changed over to a different nose by simply removing the existing nose from the module and replacing it with a different nose.

NOTE: Mechanically a tamp assembly can be mounted easily but the standard program does

#### not support the tamp applicator

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. In a typical setup, the applicator detects the leading edge of a package and applies a label. Label accuracy is mostly dependant on product handling but the label stop at the peel edge will be within +/-1/32 inch.

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:** 108 - 132 Volts, 8 Amps, 50 - 60 Hertz, Single-Phase

(There is a 90-240 volt version available)

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

**AIR SUPPLY:** Clean, dry air @ 90 – 100 PSI at 4\* SCFM per applicator (Tamp and Air

Blow applicators) \* Note: In the tamp applicator, an increase in venturi

vacuum pressure may lead to higher SCFM requirements.

**ENVIRONMENT:** Operating temperature: 40 - 104 degrees F

Humidity: 20 - 95% RH, non-condensing

NOTE: THE 360a POWERED UNWIND IS NOT INTENDED TO BE OPERATED IN AN ENVIRONMENT WHERE FLAMMABLE OR EXPLOSIVE GASSES ARE PRESENT. THE 360a POWERED UNWIND IS NOT TO BE USED IN DIRECT CONTACT WITH FOOD PRODUCTS.

THIS MANUAL IS TO BE USED IN CONJUNCTION WITH THE STANDARD 360a APPLICATOR MANUAL. This is a supplement to the standard 360a manual. If you need additional help or you cannot find the information that you need, please consult the standard 360a manual (360a-2c.1.0.31 and higher).

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 Powered Unwind 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 machine in a manner contrary to the instructions.

#### 360a POWERED UNWIND DISPLAY

The following is general information about the display and will tell you 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



A "go to" key 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. Color of keys will vary depending on application.



This key is for bringing the applicator on and offline. When offline, it will be as 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.



The color of the menu key label will notify you if the menu can be accessed or not. If the label is black in color, as shown to the left, then that menu can be currently accessed.



If the menu cannot be currently accessed then the label will be gray in color as shown to the left. This feature is found in programs 360a-PU.4.0.01 and newer.

#### **ALARMS**





**Warning Alarm Status Box** 

Critical Alarm Screen

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

Warning Alarm Critical Alarm

#### ALARMS (cont'd)

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 turn on.

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

#### **Warning Alarms**

The follow are some the warning alarms monitored by the applicator:

Low Label -If the feedback from the unwind sensor hits the low label level.

Rate Alarm –If doing multi-label and the centerline distance is too small for the applicator to keep up, a rate alarm will occur.

Comp Warning –If the label placement distance is too small for the compensation formula to work, the compensation alarm will turn on. **Note: Encoder is used in this application** 

Conveyor Too Fast –If the encoder is on, the applicator is a merge and the conveyor speed is higher than the 200% of max speed, this alarm will turn on.

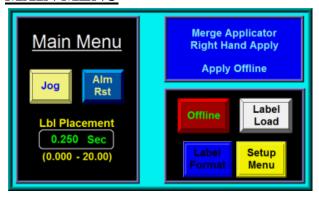
#### **Critical Alarms**

The following are some of the critical alarms:

No Labels Found –If the number of missing labels in a row on the liner exceeds the missing label count.

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

#### **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 appears 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 the following buttons:

Offline/Online: Enables and disables the applicator to apply labels

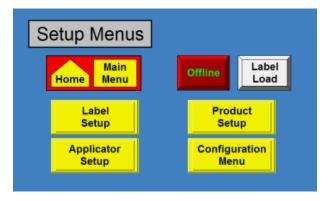
*Label Load:* This enables the rewind and unwind motors so when the operator manually turns the drive roller, label stock is pulled off the unwind and the rewind winds up the waste. This will be helpful when installing new labels. This key will appear anywhere the applicator can be brought online.

Label Format: The format key gives access to the operator to load saved formats. The operator cannot change or erase formats from here.

*Setup Menu:* The setup key takes the operator to a password-protected area to make changes to the operation of the applicator.

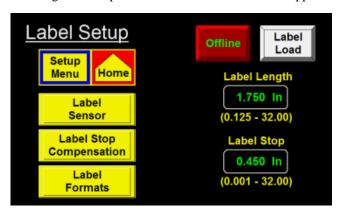
#### **SETUP MENUS**

Because the setup menus are password-protected, pressing the setup key at the main menu will cause a password screen to appear. 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 toggle the applicator on and offline while changing the settings. Exiting the setup section is the only time the applicator will save the new settings to non-volatile memory.



#### LABEL SETUP

The label setup menu is accessed from the main menu by pressing the label setup key. The label setup section gives the operator access to variables on the applicator that pertains to the label.



This menu is the same as the Standard Program except for the Load Label Key.

The following are changeable in this section:

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

Note: See the Standard 360a Manual for additional information about setting up the Label Sensor, Label Stop Compensation, the use of Label Formats, Label Length and Label Stop.

#### **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.



This menu is the same as the Standard Program except for the Load Label Kev.

Depending on the applicator type, the operator has access to the following variables:

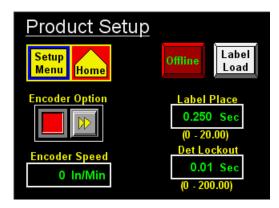
Web Speed Air Blast Time
Extended Air Assist Pre-Dispense
Over Speed Label Profile
Configuration

Multi-Panel Option

NOTE: See Standard 360a Manual for additional information regarding these variables.

#### PRODUCT SETUP

The product setup menu is accessed from the setup menu by pressing the "Product Setup" key.



This menu is the same as the Standard Program except for the Load Label Key.

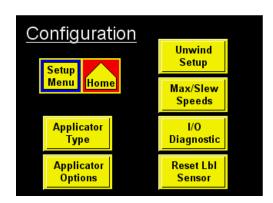
The following parameters may be changed or monitored in this section:

Label Placement(s)
Detector Lockout
Encoder Speed (monitor)
Encoder Option

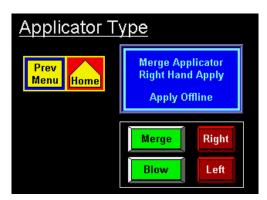
Note: See the 360a Standard Manual for additional information about the parameters found in this menu.

#### 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, unwind setup, 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 label applicator (air blow or merge) and whether it will be in a left-hand or right-hand configuration.

There is a status box on the right hand side of the screen that displays the current settings.

Because of the type of applicator this is, Tamp and DAT apply types were removed.

#### **CONFIGURATION SETUP** (cont'd)

(APPLICATOR OPTIONS)



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 so you can toggle it on/off or set specific parameters pertaining to the option.

NOTE: See the 360a Standard Manual for more information about these four (4) available options:

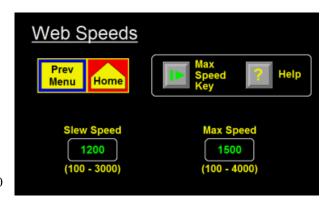
Missing Label Multi-Label Crossover Skip Count

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 4000

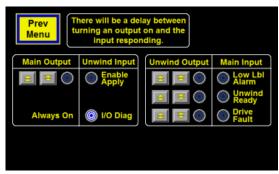
in/min.



Note: MaxSpeed Calculator only appears in merge encoder-based applications. More information about setting the Web Speed and Slew Speed can be found in the 360a Standard Manual.

**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. The screen to the lower-right is the Unwind Diagnostics menu (360a-PU.4.x.xx and newer)

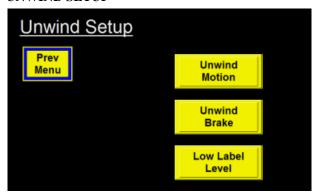




**Reset Label Sensor** –This will reset the label sensor to its factory values and will update the applicator and sensor to the trailing edge detection mode. After a factory default, the operator <u>must</u> re-teach the label sensor in the "Label Setup" section.

#### **CONFIGURATION SETUP** (cont'd)

#### UNWIND SETUP

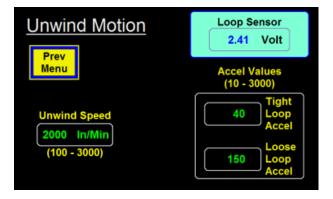


This is where you setup minimum and maximum brake voltages, low label level, unwind nip speed and accel/decel values. We'll look first at unwind motion.

#### **Unwind Motion**

#### Unwind Speed

The nip drive that pulls the label stock from the unwind roll can run at different speeds. It is always best to set the speed a little faster than what you need instead of leaving it at the highest value all the time. Label rate also plays into how fast you need to set the speed. Dispensing a 3 or 4 inch label at 3000 in/min at a label rate of 10 labels/min requires very little speed to keep up where as 200 labels/min requires a lot. Until you get a feel for where to set this, you may have to try a couple of values.

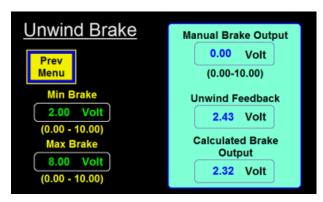


#### Tight and Loose Accel

When running, the nip drive speed will vary based on the position of the unwind dancer assembly. The closer the dancer assembly is to the nip drive, the faster the nip drive will run to replenish the supply. The controller will use different accel values when changing speeds. The accel value used is also based on the position of the dancer rollers. Once again, if the dancer rollers are too close to the nip drive, the accel values used are the tight loop which should be lower than the loose loop. The reason is while the loop is tight, we want the change in speed to be smooth. The loose loop accel is high because we need the nip to stop quicker. These values should not need changed unless the dancer rollers run against the stops on the nip drive side or if the nip drive stops after the roller assembly hits the long loop stops. Contact the factory for help with the new values.

#### **Unwind Brake**

In this section the operator can setup how much voltage is applied to the brake when the roll is small (min brake) and how much when the unwind roll is at its maximum diameter (max brake). To determine your values load a full roll of labels onto the unwind mandrel and replace the disk. Touch the Analog Output window and a keypad should appear. Enter about 8.00 volts to start with. This will send eight volts from the controller to the brake



power supply/controller, which will send out the appropriate voltage to the brake. Pull on the label stock.

#### **CONFIGURATION SETUP** (cont'd)

(UNWIND SETUP)

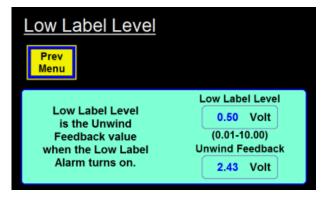
If it doesn't pull too hard, doesn't stretch the liner and the unwind roll stops when you stop pulling then enter that value into the *Max Brake* window. Now install a small roll that is close to the core but still has enough labels on it you can do a pull test. Set the analog output to around 0.50 volts and pull on the liner. Try to get the same feel as you did with the full roll and then enter that value into the *Min Brake* window. When the controller is running, it will look at the roll sensor and determine the roll diameter, then calculate what the brake voltage should be based on the high and low levels you just set. This is not hard to do but may take a couple of tries to get.

#### Calculated Brake Output

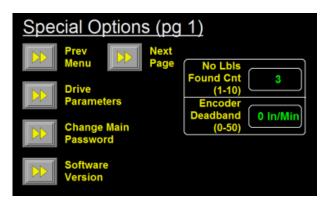
This window shows what the brake output should be based on the max and min brake output setting and the roll diameter. If you wanted to check the braking on an existing roll, enter the value displayed in this box into the manual brake output. Pull on the stock to make sure it feels right. If not adjust one of the limits and you will see the calculated number change. Now enter the new value and check the brake. This is not the right way to setup the brake but instead, more of a checking tool.

#### Low Label

Unlike the standard 360a where the low label is determined from a sensor looking at the side of the roll, this applicator will set a low label warning off based on the diameter of the roll of labels. We look at the diameter anyway to decide how much brake is needed so it makes sense to do the same for low label. In this menu, you can see what the roll sensor is sending to the controller (0-10 VDC). The lower the entered value, the smaller the roll. If you have a small roll of labels that is where you want to get an alarm, put it on and enter the *Unwind Feedback* value into the *Low Label Level* box.

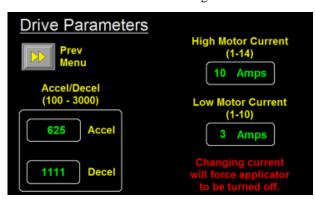


#### SPECIAL OPTIONS SECTION



This section is for: changing the motion parameters, changing the password, and the number of consecutive missing labels before a "No Labels Found" alarm. 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 acceleration and deceleration rates that can be achieved depend on the available motor torque and the Motor Current setting. 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 Drive High Motor Current setting should be set at 10 amps and the Low Motor Current is at 3 from the factory. It may be necessary to increase the current values for high speed/high rate applications but the factory should be consulted before going past 12 amps for the high current value.

NOTE: At this time, the current setting for the unwind current cannot be viewed or changed. It is fixed at 7 amps

The following are miscellaneous parameters that may need to be adjusted or altered. See the 360a Standard Manual for a full explanation of the following:

Gearing/Velocity Parameters Gearing/Velocity Parameters Change Main Password
No Labels Found Count
Software Version
Placement To Time
Auto Online Option
Product Detect Debounce Time

#### **REAR PANEL**



#### **CONNECTORS**

**VALVE:** This plug is used to power the valves and will drive up to 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 will drive a three-stack alarm light.

**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 heads in "ZERO DOWNTIME" applications. This port is only installed if the crossover is used.

**PRODUCT:** This is where the product detect sensor is connected.

**EOW:** This is where the end of web sensor plugs in.

**ROLL:** This is where the unwind ultrasonic sensor is plugged into. This sensor is responsible for measuring the diameter of the unwind roll

**LOOP:** The loop sensor plugs in here. The loop sensor tracts the position of the unwind dancer assembly

**UNWIND:** The unwind brake is powered here.

**REWIND:** The rewind motor is powered here.

# 360a POWERED UNWIND

# **SETUP**

# **PROCEDURES**

#### !!CAUTION!!

# DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE YOU THREAD LABELS OR YOU MAY BE CAUGHT BETWEEN THE DRIVE AND NIP ROLLERS IF THE MACHINE CYCLES UNEXPECTEDLY!

#### **JOB SETUP**

NOTE: When reading through this section of the manual, refer to section 5 for web path diagrams.

#### THREADING LABELS

- 1. With the power off remove the outer unwind disk.
- 2. Make sure the inside of the inner 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. 5 ft of labels from the liner on the leading part of the roll of labels.
- 5. Thread labels through the machine 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 (2 places).
  - b. If the applicator is a blow box or tamp, make sure the web goes between the peel edge and the air assist tube.
  - c. Make sure the two dancer roller assemblies are properly webbed.
- 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 both nip rollers so they comes into contact with the drive rollers.
- 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.
- 11. Power on and connect air supply. Press Label Load in the label setup menu and turn the main nip drive knob to move the label stock through the applicator until everything lines up.

#### UNWIND BRAKE SETUP

This powered unwind version of the 360a applicator has a magnetic particle brake instead of the traditional fiction brake. The advantage of this setup is that the brake tension can be changed as the roll diameter changes. Also there is no dancer arm on this setup. When the applicator is running at a high rate of labels per minute, dancer arms are sometimes hard to control.

An ultrasonic sensor is mounted to the faceplate of the applicator that looks at the roll of labels. It sends an analog signal back to the controller where the diameter of the roll is calculated. Based on the calculated diameter of the roll, the controller will send more or less voltage to the brake to keep consistent tension on the liner. The setup for the brake is a three-part operation. The first part is done at the factory and should only have to be done again if you have to change isolation or drive boards. The second part is setting the roll sensor. This is set at the factory but because of its position and how it's mounted, it may get rotated out of place. The third part is setting the minimum and maximum brake voltage. Different liner materials or different web widths may cause the operator change these values but overall when you find something that works, it will work with a lot of different stocks.

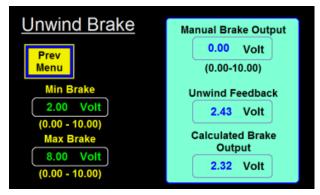


All components for the unwind and rewind are mounted on a common plate which is mounted on the side of the applicator in the same area of the main controller. The picture to the left shows this electrical plate. The drive on the upper left corner of the plate and the potentiometer are for the powered rewind motor. For this setup, we are only worried about unwind and its components.

#### <u>UNWIND BRAKE SETUP</u> (cont'd)

#### **Setting The Isolation And Drive Boards**

Go to the Unwind Setup in the configuration section and then into the Unwind Brake. See page 2-6 of this supplement manual for more details. Touch the analog output window and set its value to 10.00 volts. With the top cover off the applicator locate the isolation board. This board is mounted on the side of the housing on a common plate with the drives for the brake and rewind. Put your meter leads on terminals 9 and 10 on the isolation board. Make sure the positive lead is on terminal 10 and the negative on 9. Your meter should read between



9.50 and 9.75 volts. It does not have to be exact but should not be over 10.00 volts. If you need to adjust the board to get the correct voltage, use a small screwdriver and adjust the max pot on the board. Turning it



CW will increase the voltage while CCW will decrease. When you have it, set the analog output to 0.00 volts. Put the meter leads back in the same place and check the voltage output for the isolation board. It should be between 0.015 and 0.025 volts. Make sure the voltage is positive and not negative. If an adjustment is necessary turn the min pot until you get the voltage you want. If you had to adjust the min pot, go back and recheck the voltage when the analog output is at 10.00 volts and 0.00 volts. If everything still looks good, you're done.

On the brake drive board turn the MAX, MIN, ACCEL, and DECEL pots fully CCW. The IR and CL pots should remain at the factory settings. Touch the analog output window and set its value to 10.00 volts. Put your meter leads on TB3-7



and TB3-8. Make sure the positive lead is on terminal 7 and the negative on 8. Your meter should read about 85 volts. If not,

adjust the min pot on the brake drive until you are close. Now set the analog output to 0 volts and check the same terminals. Your meter should read 0 volts.



#### <u>UNWIND BRAKE SETUP</u> (cont'd)

#### **Setting The Roll Sensor**

The roll sensor is an ultrasonic sensor that is responsible for measuring the diameter of the label roll. This sensor may have to be setup after removing it from the box or if the sensor gets moved. The following is the procedure for doing that:



*Step1* Put an empty core on the unwind mandrel. We will use this to align the sensor and to teach the smallest diameter of the roll.



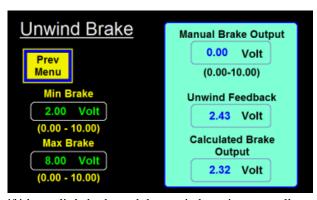
Step2 Rotate the sensor while it is in its mounting bracket until the power LED turns green. This means the sensor sees the target (the core). Continue to rotate until it changes back to red. Now rotate it back and try to split the distance it was green so you are looking directly at the core. Lock the sensor down.



Step3 Now add a label to the outside of the inside unwind disk. This will be our full roll target during the teaching of the sensor. With this label rolled out of the way of the sensor, press and hold the teach key on the sensor until the output LED turns a steady red. Now press the teach key for about ½ second. The output LED should start flashing. Now rotate the label in front of the sensor and press the teach button for another ½ second. If it was a successful teach, the output LED should turn amber.

#### **Setting The Min And Max Brake Output**

Setting the minimum and maximum brake voltage is about getting the right amount of pull from the unwind brake for the diameter of the label roll. See page 3-7 of this supplement manual for more details. To set these values, go to the Unwind Brake screen in the configuration section. Put a full roll of labels on the unwind and set the analog output to a reasonably high value. 6-8 volts is a good starting point. Grab hold of the end of the label and liner and pull. Experience will speed this part up but you are looking to see if it feels like



too much brake to where the liner is stretching or if it's too little brake and the unwind continues to roll when you stop pulling. Continue to change to analog output until you get what you want and then set that value into the *Max Brake* window. Now put a roll of labels on that is close to the core. Set the analog output to 2 volts to start and pull. Try different values until you find something that feels right and set the value into the *Min Brake* window. The controller will now monitor the signal from the roll sensor and calculate the needed brake voltage. You may have to make some adjustments after the first couple rolls but short of drastically changing materials or widths, these values should not change much.

#### UNWIND DANCER ROLL SETUP

The unwind dancer roll assembly is located right after the unwind nip drive. Its purpose is to accumulate labels for the applicator to use so when the labels are coming off the roll, it is more of a steady flow rather than in short bursts. The assembly consists of 2" diameter rollers, linear slide and a spring-loaded cylinder. There is also an ultrasonic sensor (loop sensor) that looks at the position of the floating rollers to determine how fast the unwind nip drive will move. This sensor is the same as the roll sensor except it is a straight sensor where the other was a 90 degree sensor. Teaching the sensor is done the same way.



NOTE: For stiff labels, the array of rollers may be changed to stainless shoes where the label stock will ride around to help stop pre-dispense

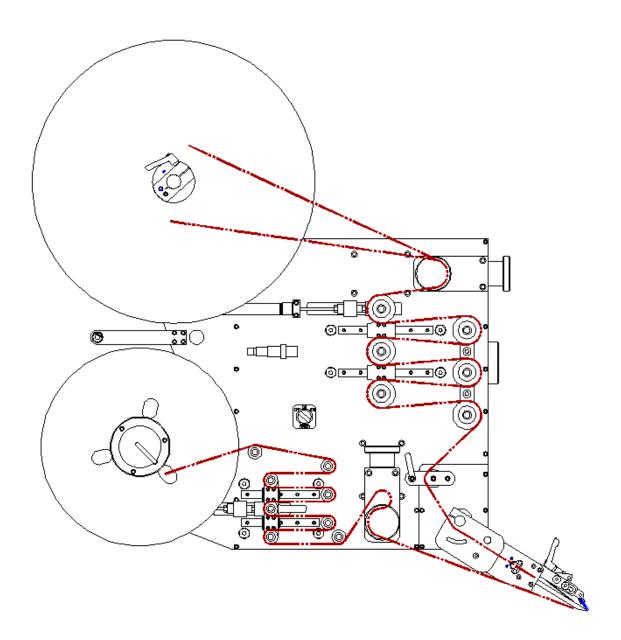
#### **Teaching The Loop Sensor**

- 1) Position the slide-mounted rollers so they are 1" off the stops that are closest to the sensor.
- 2) Press and hold the teach key on the sensor until the output LED turns a steady red.

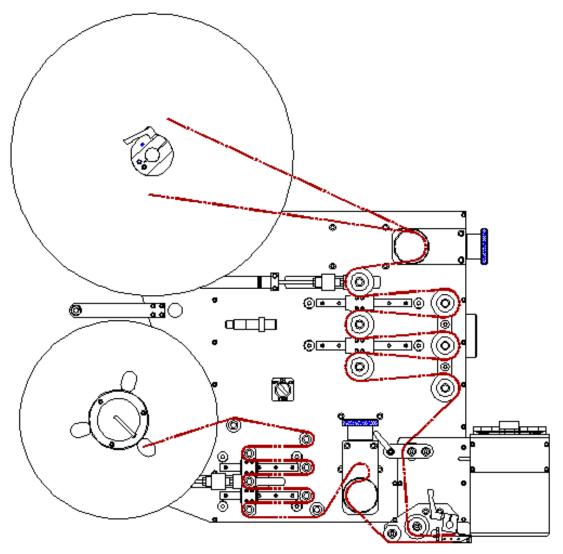


- 3) Now press the teach key for about ½ second and release. The output LED should start flashing.
- 4) Now move the roller assembly to the stops closest to the nip drive.
- 5) Press the teach button for another ½ second and release.
  - 6) If it was a successful teach, the output LED should turn amber.

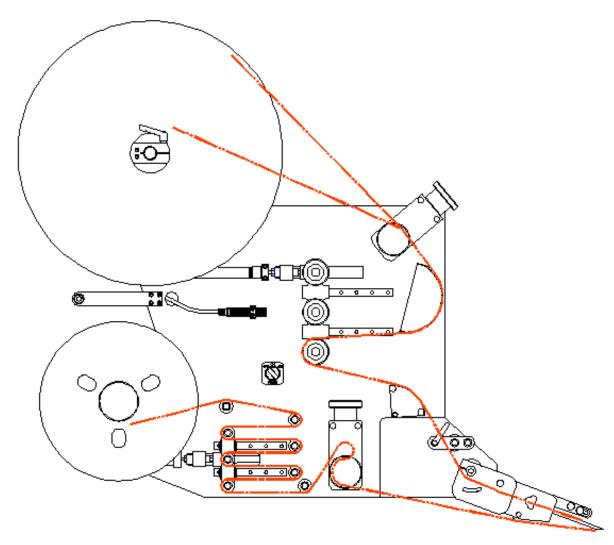
# **WEB PATHS**



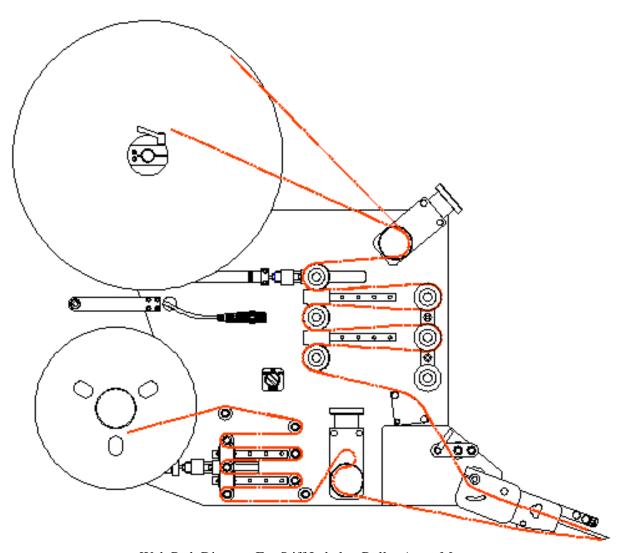
Web Path Diagram For Merge



Web Path Diagram For Air Blow



Web Path Diagram For Stiff Label Merge



Web Path Diagram For Stiff Label to Roller Array Merge

# **360a POWERED UNWIND**

**GENERAL** 

**MAINTENANCE** 

**PROCEDURES** 

!!CAUTION!! DISCONNECT THE AIR AND POWER FROM THE MACHINE BEFORE DOING THE FOLLOWING PROCEDURES. FAILURE TO FOLLOW THIS PRECAUTION COULD RESULT IN INJURIES FROM MOVING PARTS OR ELECTRICAL SHOCK.

#### **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, vacuum 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, vacuum 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 edges. Replace if needed.
- 5. Lubricate both Linear Slides. There might be a need to do this more than once a week due to high cycle rates. LPS 2 Heavy Duty Lubricant is the recommended product for this.

#### **MONTHLY MAINTENANCE**

- 1. Examine drive and rewind belts for wear and to make sure they are properly adjusted.
- 2. Examine rollers for free rotation and play.
- 3. Replace air inlet filter.
- 4. Examine UHMW tape on peel edges. Replace if needed.

#### **SEMI-ANNUAL MAINTENANCE**

- 1. Replace air filter and clean collection bowl.
- 2. Clean inside and outside of machine using an industrial vacuum cleaner.

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

- 3. Examine pulleys for wear.
- 4. Perform the monthly maintenance section.

#### **DISPLAY FAULTS**

The operator interface will display warnings and alarms that pertain to the application. Most the Display Faults are similar to the Standard 360a. A new alarm that can be created by this Applicator is described below.

#### **COM ALARM**



There are two drives in this applicator; one for labeling and one for the unwind. The unwind controller is a slave to the main. If communications are lost, this screen will appear. Try powering off and starting again. If the problem persist, make sure the Ethernet cable is plugged into both drives. If so, call the factory.

NOTE: Please consult the 360a Standard Manual for more Display Faults and Troubleshooting help.

#### **ACCESSORIES**

The following is only a partial list of accessories available for the 360a powered unwind.

#### ELECTRONIC CROSSOVER

The Electronic Crossover or "Zero Downtime" accessory is an electronic interface between two labeling heads positioned in series that will monitor the primary applicator's fault conditions and switch 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 if the system does not have one, an encoder assembly with a splitter cable.

#### 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 flash the red light on the alarm light stack (if purchased) to inform the operator that the label web is broken.

#### CORE ADAPTER

Standard core adapters for the 360 come in 3" and 6" diameters. If you need something custom, please contact the factory.

#### ALARM LIGHT STACK

The 360a can handle up to 3 alarm lights

\*Red -Critical Alarm (Steady)

\*Amber -Warning Alarm (Steady)

\*Green -Ready Signal (steady)

Light stacks can be purchased with one or three lights.

#### LINE RATE COMPENSATION

This kit includes encoder and cable. Splitter cables can be purchased so one encoder will drive up to five applicators.

#### CLEAR LABEL SENSOR

The 360a offers a label sensor that will detect a clear label on a clear liner.

#### HARDEN 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 harden peel edge for some models. Edges available for air blows, tamps, and merge applicators. Please contact the factory for details and availability.

#### **SNORKELS**

CTM has a large variety of snorkel option to get the applicator nose close to the labeling operation while the applicator body remains farther away. Consult the factory with all your requirements so the best solution can be found for your needs.

360a Series Powered Unwind 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	2	NIP ROLLER LIFT CAM		
PM-BELT1018	2	140XLO37 NIP TO MOTOR BELT		
RECOMMENDED SPARE PARTS				
Part Number	Recommended Qty	Description		
ASS-200a-0410	1	24VDC POWER SUPPLY		
MP-200-0242	2	5" DRIVE ROLL w/ COATING		
PE-FU2072	1	10 amp FUSE		
PE-RE1013	4	VALVE RELAY		
PE-RE1014	1	MCR RELAY		
PE-SE3080	1	FIBER OPTIC LABEL SENSOR		
C-PE-SE1019	1	ULTRASONIC SENSOR		
C-PE-SE1039	1	ULTRASONIC SENSOR		
ASS-200a-0451	1	JOG SWITCH ASSEMBLY		
ASS-200-0454	1	COOLING FAN ASSEMBLY		
PE-FAN1080	1	FAN GUARD		
PE-FAN1115	1	RF SCREEN		
EXTENDED SPARE PARTS				
Part Number	Recommended Qty	Description		
ASS-200-0427	1	SM312LV PRODUCT DETECT W/CONNECTOR		
PE-RT1000-6	1	REFLECTIVE TAPE (1" WIDE x 6" LONG)		
PE-CO1018	1	12' POWER CORD		
PE-DR1005	2	STEPPER MOTOR CONTROLLER (SPECIFY PROGRAM)		
PE-IN1112	1	APPLICATOR TOUCH SCREEN (SPECIFY PROGRAM)		
PE-MO1036	1	HIGH TORQUE STEPPER MOTOR (Burgandy) - 10 amp		
PE-MO1034	1	STEPPER MOTOR (Black) - 5 amp		
PM-BE1230	2	EW-5/8 LIFT THRUST WASHER		
PM-BE1232	2	EW-3/4 REWIND CLUTCH THRUST WASHER		
ASS-200-0128R <b>or</b>	1	REWIND BEARING BLOCK ASSEMBLY W/ SHAFT		
ASS-200-0128L	1	REWIND BEARING BLOCK ASSEMBLY W/ SHAFT		
SAS-200-0129O	2	OUTSIDE DRIVE ROLL SUPPORT ASSEMBLY		
SAS-200-0129I	2	INSIDE DRIVE ROLL SUPPORT ASSEMBLY		
SAS-200-0130 <b>or</b>	2	5" NIP ROLLER ASSEMBLY w/o SHAFT-COATED (refer to ASS-200-X129)		
SAS-200-2130	2	7.5" NIP ROLLER ASSEMBLY w/o SHAFT-COATED (refer to ASS-200-X129)		
SAS-200-0135 <b>or</b>	1	5" TENSION ROLLER ASSEMBLY w/o shaft		
SAS-200-2135	1	7.5" TENSION ROLLER ASSEMBLY w/o shaft		

360a SERIES POWERED UNWIND with POWERED REWIND SPARE PARTS LIST			
RECOMMENDED SPARE PARTS (20" POWERED UNWIND, UNWIND FESTOON SLIDE ROLLER and POWERED REWIND SLIDE ROLLER ASSEMBLIES)			
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	4	SOLID STATE RELAY	
PE-RE1014	1	100-120vac RELAY, G3NA-225B-AC100/120	
PE-SI1050	1	KB SIGNAL ISOLATOR BOARD	
PE-PO1030	1	5K POTENTIOMETER	
PE-SI1055	1	KBSI240D SIGNAL ISOLATOR BOARD	
PE-MC1110-1/8	1	MOTOR DRIVE WITH 1/8 RESISTOR	
ASS-200-0150AS	8	1" DIA. GUIDE ROLLER ASSEMBLY with SHAFT for 5" wide POWERED REWIND (ANTI-STATIC ROLLER INSERTS)	
ASS-200-2150AS	8	1" DIA. GUIDE ROLLER ASSEMBLY with SHAFT for 7.5" wide POWERED REWIND (ANTI-STATIC ROLLER INSERTS)	
ASS-200-0131AS	6	5" DANCER ROLLER ASSEMBLY with SHAFT - (ANTI-STATIC ROLLER INSERTS)	
ASS-200-2131AS	6	7.5" DANCER ROLLER ASSEMBLY with SHAFT - (ANTI-STATIC ROLLER INSERTS)	
ASS-215-0110	1	5" TENSION BRUSH	
ASS-215-2110	1	7.5" TENSION BRUSH	
PM-AC1003	1	AIR CYLINDER, 3/4" bore x 5" stroke - DOUBLE ACTING - NOSE MOUNTED, AIR RETURN	
PM-AC1273	1	BIMBA AIR CYLINDER 3/4"bore X 6.00"stroke (NS) (this was used on early versions, it was replaced by C-PM-AC1274)	
C-PM-AC1274	1	BIMBA AIR CYLINDER , DOUBLE ACTING 3/4" bore x 6.00" stroke	
PM-AC1263	2	AIR CYLINDER ALIGNMENT COUPLER, STANDARD, 1/4" THREAD	
PM-GD1040	2	THK MINIATURE LM GUIDE with 1 CARRIAGE and 140mm RAIL	
PM-GD1000	2	THK MINIATURE LM GUIDE, 170 mm Lg. with 1 carriage	
EXTENDED SPARE PARTS			
Part Number	Recommended Qty	Description	
C-PM-BRK1000	1	MAGNETIC PARTICLE BRAKE	
C-PM-BE1210	1	.75" BORE EXTENDED RACE BEARING (90 degree set screw offset)	

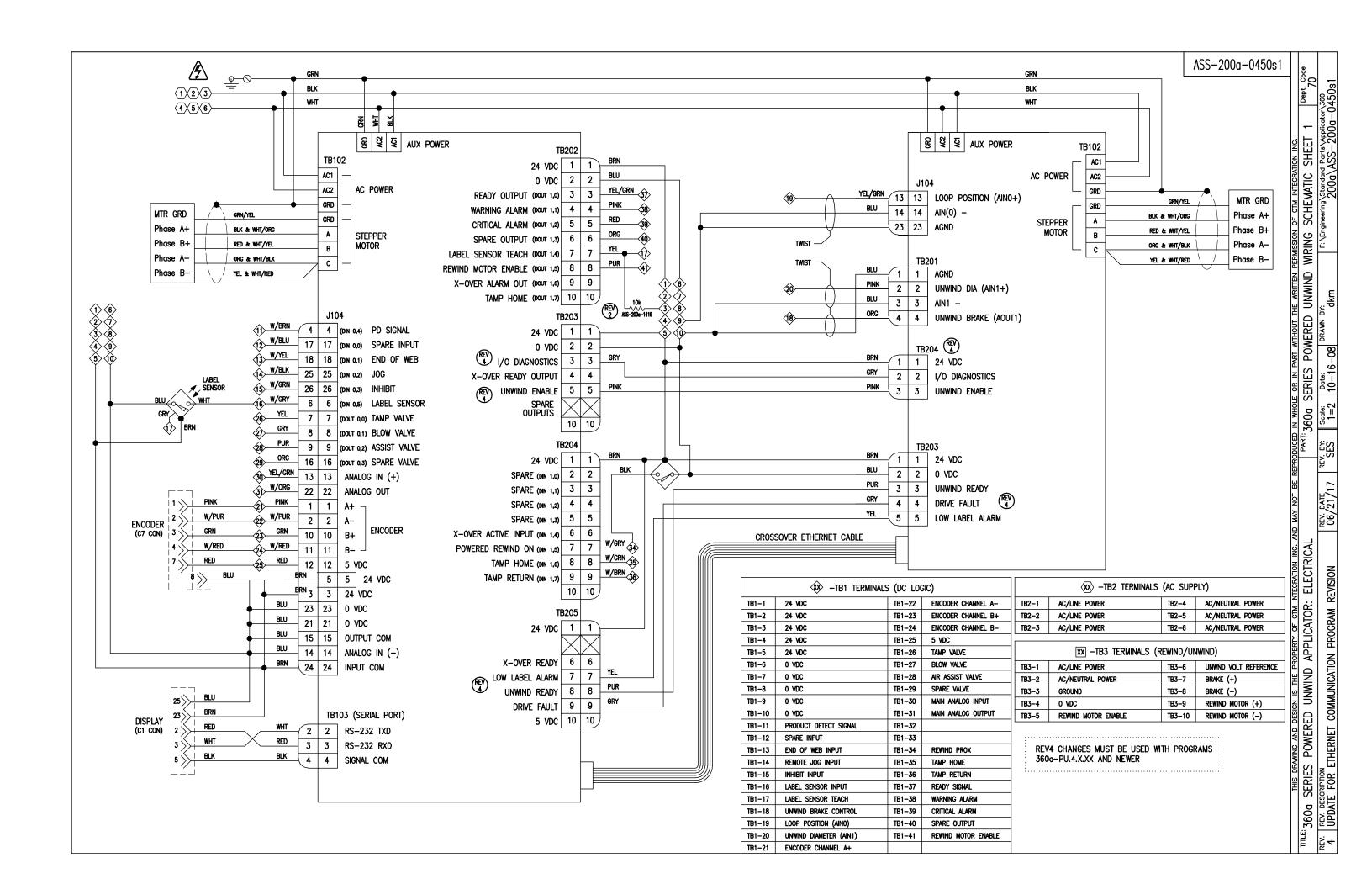
MERGE SPARE PARTS LIST			
WEAR ITEM			
Part Number	Recommended Qty	Description	
PM-T1000	1	UHMW TAPE FOR 5" PEEL EDGE ( 5 7/16" Wide x 7" Lg.)	
PM-T1015	1	UHMW TAPE FOR 7.5" PEEL EDGE (8" Wide x 7" Lg.)	
ASS-215-0110X-X	1	5" BRUSH/WIPER ASSEMBLY (specify length & material)	
ASS-215-2110X-X	1	7.5" BRUSH/WIPER ASSEMBLY (specify length & material)	
RECOMMENDED SPARE PARTS			
MP-215-0214	1	5" MERGE PEEL EDGE with TAPE	
MP-215-2214	1	7.5" MERGE PEEL EDGE with TAPE	
EXTENDED SPARE PARTS			
ASS-211-0108-2	1	FIBER OPTIC LABEL SENSOR ASSEMBLY with 2" MOUNTING ROD (SNS)	

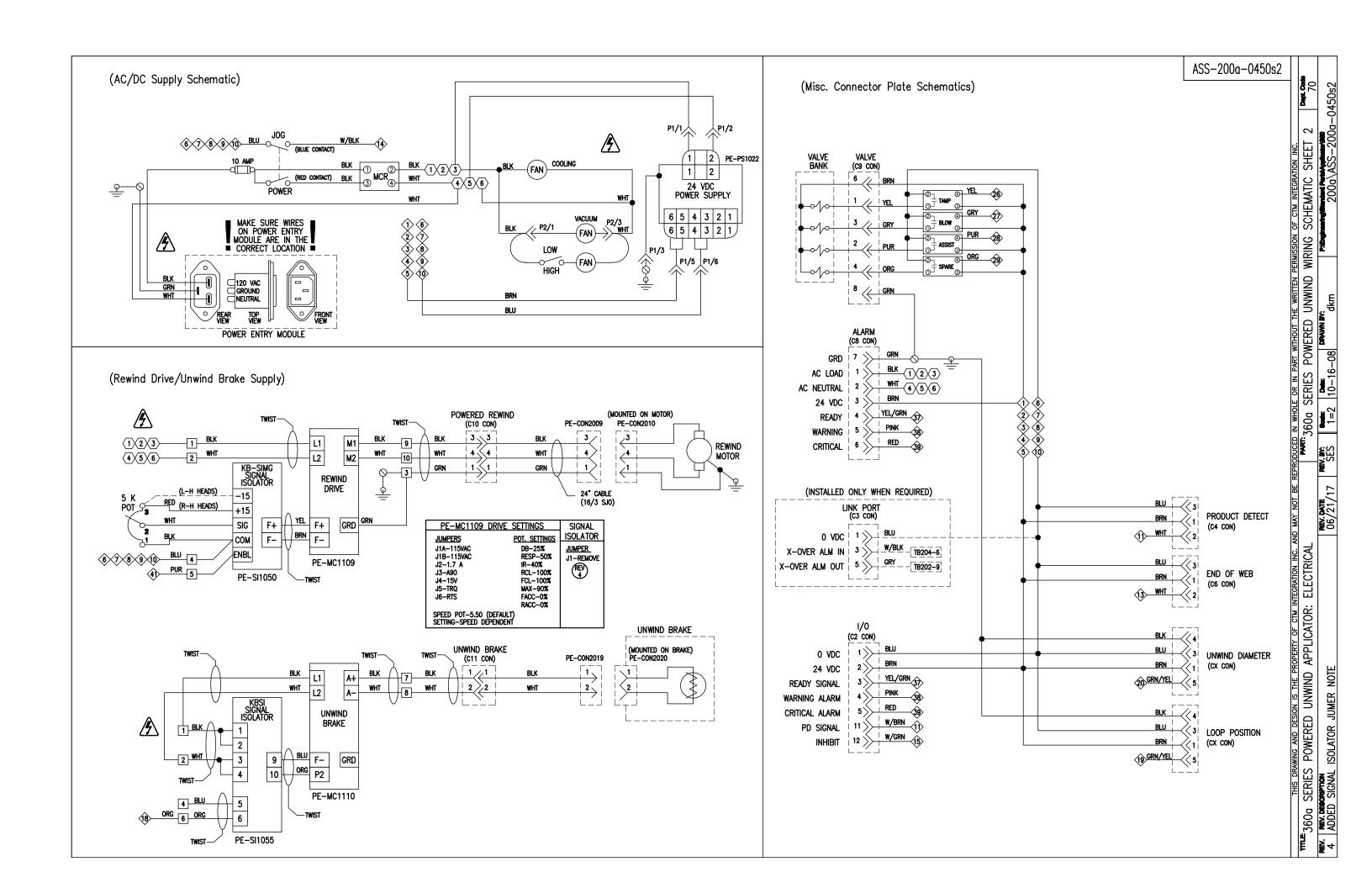
	AIR BLOW	SPARE PARTS LIST
WEAR ITEM		
Part Number	Recommended Qty	Description
PM-T1010 <b>or</b>	1	UHMW TAPE FOR 5" PEEL EDGE (6" Wide x 4" Lg.)
ASS-211-0113 <b>or</b>	1	AIR TUBE ASSEMBLY
ASS-211-0113E	1	AIR TUBE ASSEMBLY FOR EXTENDED BLOW BOX
ASS-215-0110X-X <b>or</b>	1	5" BRUSH/WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X	1	7.5" BRUSH/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 <b>or</b>	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
	RVB SI	PARE PARTS LIST
WEAR ITEM		
Part Number	Recommended Qty	Description
PM-T1010 <b>or</b>	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 7" Lg.)
ASS-215-0110X-X <b>or</b>	1	5" BRUSH/WIPER ASSEMBLY (specify length & material)
ASS-215-2110X-X	1	7.5" BRUSH/WIPER ASSEMBLY (specify length & material)
RECOMMENDED SPARE PARTS		
Part Number	Recommended Qty	Description  AIR ASSIST TUBE **THIS IS JOB SPECIFIC**
MP-211-0217-7	1	AIR ASSIST TUBE ""THIS IS JUB 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	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 <b>or</b>	1	5" BRUSH/WIPER ASSEMBLY (specify length & material)		
ASS-215-2110X-X	1	7.5" BRUSH/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	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		
ASS-211-0108-2	1	FIBER OPTIC LABEL SENSOR ASSEMBLY with 2" MOUNTING ROD (SNS)		

	TAMP S	PARE PARTS LIST	
WEAR ITEM			
Part Number	Recommended Qty	Description	
PM-T1010 <b>or</b>	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 7" Lg.)	
ASS-215-0110X-X <b>or</b> ASS-215-2110X-X	1	5" BRUSH/WIPER ASSEMBLY (specify length & material) 7.5" BRUSH/WIPER ASSEMBLY (specify length & material)	
RECOMMENDED SPARE PARTS		7.3 BIXOGENVIII EIX AGGENIBET (Specify leffgill & filaterial)	
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	
ASS-211-0108-2	1	FIBER OPTIC LABEL SENSOR ASSEMBLY with 2" MOUNTING ROD (SNS)	
SLIDE ASSEMBLIES			
Part Number	Recommended Qty	Description	
ASS-214-0108-1 <b>or</b>	1	1" SLIDE ASSEMBLY	
ASS-214-0108-2 <b>or</b>	1	2" SLIDE ASSEMBLY	
ASS-214-0108-3 <b>or</b>	1	3" SLIDE ASSEMBLY	
ASS-214-0108-4 <b>or</b>	1	4" SLIDE ASSEMBLY	
ASS-214-0108-6 <b>or</b>	1	6" SLIDE ASSEMBLY	
ASS-214-0108-8 <b>or</b>	1	8" SLIDE ASSEMBLY	
ASS-214-0108-10 <b>or</b>	1	10" SLIDE ASSEMBLY	
ASS-214-0108-12	1	12" SLIDE ASSEMBLY	

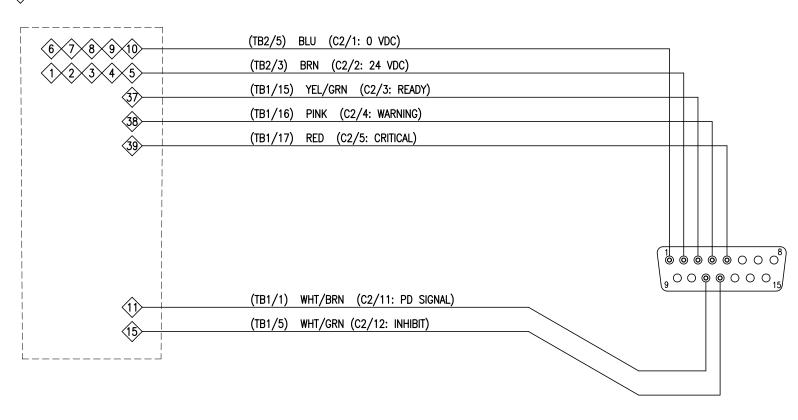
360a OPTIONS SPARE PARTS LIST			
OPTIONS: RECOMMENDED SPARE PARTS (LOW LABEL, WEB BREAK ALARMS)			
Part Number	Recommended Qty	Description	
PE-LI1088	1	RED,YELLOW,GREEN LED ALARM LIGHT (BANNER)	
ASS-200-0422	1	LOW LABEL SENSOR (w/o BRACKET)	
ASS-200-0423	1	END OF WEB SENSOR (w/o BRACKET)	
OPTIONS: RECOMMENDED SPARE PA	RTS (TAMP HOME SENSOR)		
Part Number	Recommended Qty	Description	
ASS-200A-0478	1	TAMP HOME SENSOR (w/o BRACKET)	
** CYLINDER MUST BE DESIGNATED V	VITH AN "E"**		
OPTIONS: RECOMMENDED SPARE PA	RTS (QUICK DISCONNECT P	AD & MANIFOLD)	
Part Number	Recommended Qty	Description	
PM-FASSBP11000	4	BALL PLUNGERS	
MP-238-0270	1	QUICK CHANGE SLIDE TRANSITION PLATE	
OPTIONS: RECOMMENDED SPARE PA	RTS (SMART TAMP - PHOTO	EYE)	
Part Number	Recommended Qty	Description	
PE-SE0985	1	SM312W-QD SENSOR **JOB SPECIFIC**	
OPTIONS: RECOMMENDED SPARE PA	RTS (SMART TAMP - MECHA	NICAL)	
Part Number	Recommended Qty	Description	
PE-SW1110 <b>or</b>	1	OMRON LIMIT SWITCH (ARM STYLE)	
PE-SW1105 <b>or</b>	1	OMRON LIMIT SWITCH (BUTTON ROLLER STYLE)	
PE-SW1100	1	OMRON LIMIT SWITCH (BUTTON STYLE)	
OPTIONS: RECOMMENDED SPARE PA	RTS (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	





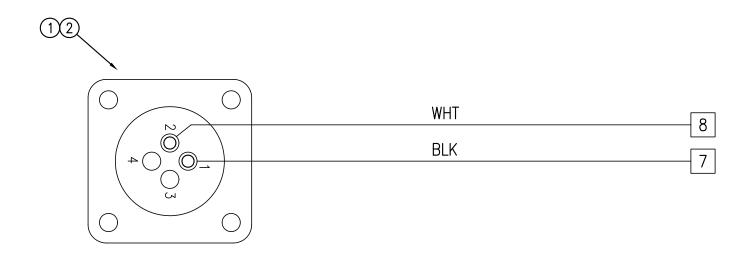
	BILL OF MATERIAL							
	ASS-200a-0490							
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION					
①	1	PE-CON2050	FEMALE (SOCKET) CONNECTOR					
2	7	PE-CON7057	FEMALE/SOCKET					
3	2	PE-S01028	JACK SCREW, L.W., F.W., NUT					
	1	PE-W1036	22 AWG (BLUE) WIRE x 16" LONG					
	1	PE-W1037	22 AWG (BROWN) WIRE x 16" LONG					
	1	PE-W1050	22 AWG (YEL/GRN) 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-W1043	22 AWG (WHT/GRN) WIRE x 16" LONG					

## √X −TB1 TERMINALS



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TITLE: 360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL		PART:	NTERNA	L WIRE H	ARNESS ASSEMBL	Y : I/O PORT TO TB1	Dept. Code 70
REV. REV. DESCRIPTION O -NEW DRAWING FOR 360a POWERED UNWIND-	REV. DATE 10-08-08	REV. BY: ES	Scale: 1=1.5	Date: 10-09-08	DRAWN BY: E. SANOR	F:\Engineering\Standard Parts\System	

	BILL OF MATERIAL								
ASS-200a-0491									
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION						
0	1	PE-CON2020	FEMALE (SOCKET) CONNECTOR						
@	2	PE-CON7048	FEMALE PIN/ SOCKET (22 Ga.)						
	1	PE-W1032	22 AWG (BLACK) WIRE x 4" LONG						
	1	PE-W1031	22 AWG (WHITE) WIRE x 4" LONG						

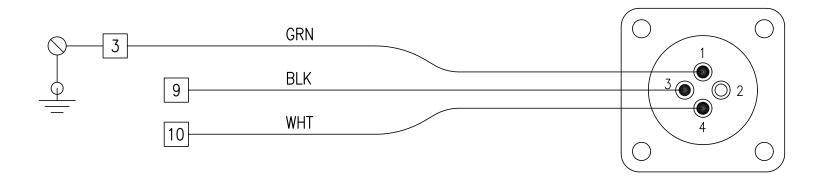


BACK SIDE OF CONNECTOR
UNWIND PORT @ CONNECTOR PLATE

XX -TB3 TERMINALS (REWIND/UNWIND)

	THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AN	ID MAY NOT BE F	REPRODUCED	IN WHOLE	OR IN PART V	WITHOUT THE WRITTEN PE	RMISSION OF CTM INTEGRATION INC.	
TITLE	360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL		PART:	INIMINIT	CONNICOT	OD LIADNECC AC	CEMPLY	Dept. Code
	360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL			UNWIND	CONNECT	OR HARNESS AS:	DEMBLI	70
REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F: \Engineering\Standard Parts\System C	
1,,5,			BMW					
	Corrected connector pins; 1 blk to TB3-7, 2 wht to TB3-8.	08-09-11	DIVIV	=	10-09-08	E. SANOR	200a\ASS-200a-	J491

	BILL OF MATERIAL							
ASS-200a-0492								
ITEM	ITEM QTY CTM PART NUMBER PART DESCRIPTION							
0	1	1 PE-CON2010 MOTOR CONNECTOR						
2	3	PE-CON7050	MALE PIN					
	1	PE-W1034	22 AWG (GREEN) WIRE x 6" LONG					
	1	PE-W1032	22 AWG (BLACK) WIRE x 4" LONG					
	1	PE-W1031	22 AWG (WHITE) WIRE x 4" LONG					

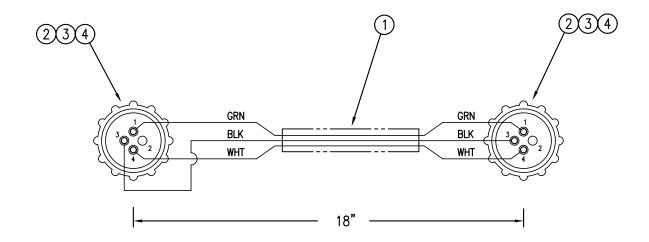


BACK SIDE OF CONNECTOR
REWIND PORT @ CONNECTOR PLATE

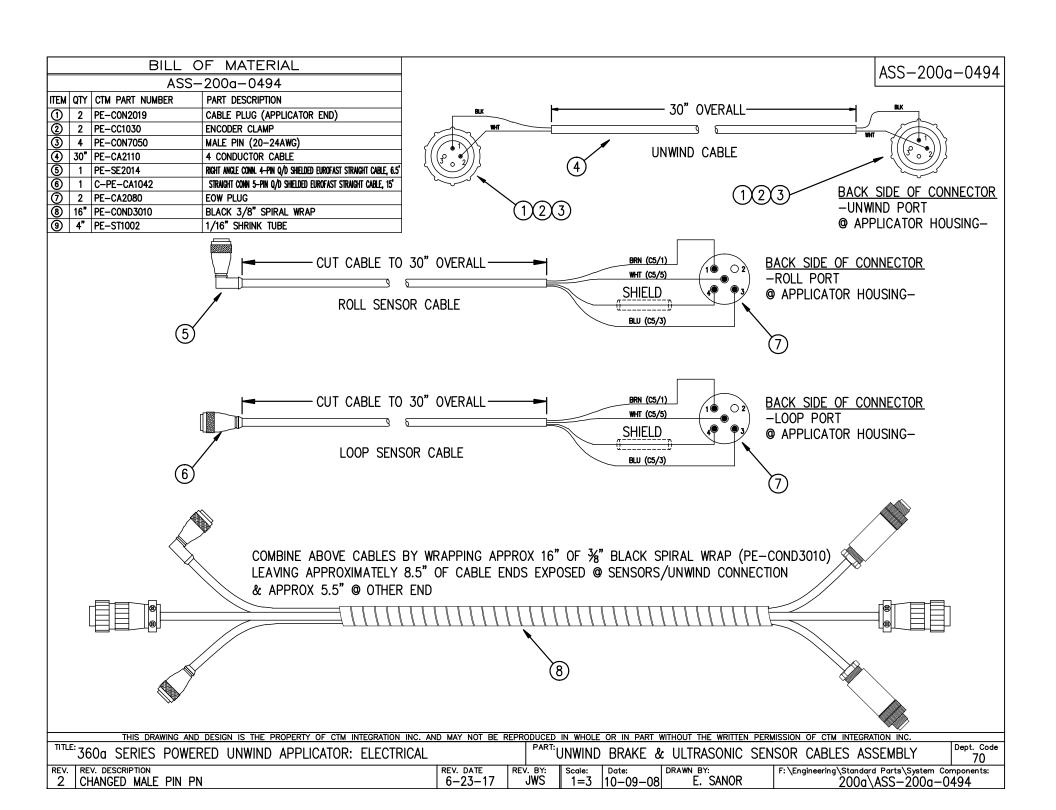
XX -TB3 TERMINALS (REWIND/UNWIND)

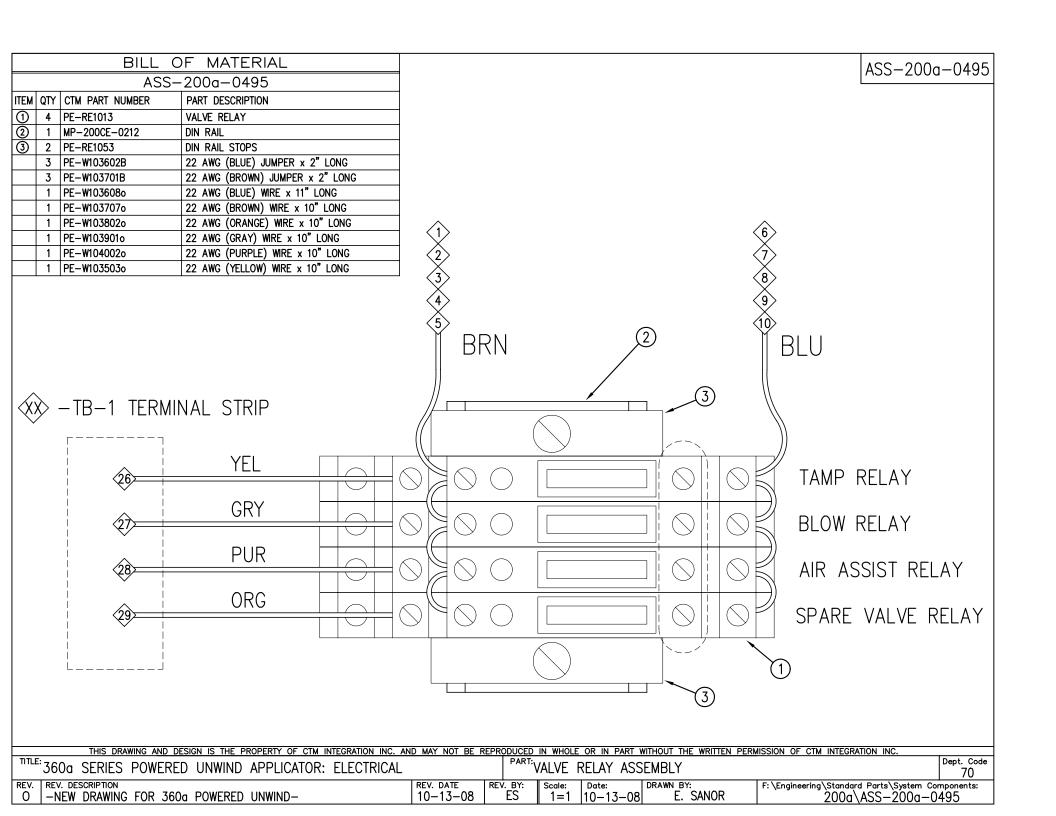
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AN	ID MAY NOT BE F	REPRODUCED	IN WHOLE	OR IN PART V	WITHOUT THE WRITTEN PER	MISSION OF CTM INTEGRATION INC.	
TITLE: 360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL		PART:	REWIND	CONNECT	OR HARNESS ASS	EMBLY	Dept. Code 70
REV. REV. DESCRIPTION O -NEW DRAWING FOR 360a POWERED UNWIND-	REV. DATE 10-08-08	REV. BY: ES	Scale: 1=1	Date: 10-09-08	DRAWN BY: E. SANOR	F:\Engineering\Standard Parts\System Co	

	BILL OF MATERIAL						
	ASS-200a-0493						
ITEM	ITEM QTY CTM PART NUMBER PART DESCRIPTION						
0	18"	PE-C03050	16/3 SJO CORD				
@ 3 4	2	PE-CON2009	FEMALE PLUG				
3	2	PE-CC1040	PLUG CLAMP				
4	6	PE-CON7052	FEMALE PIN				

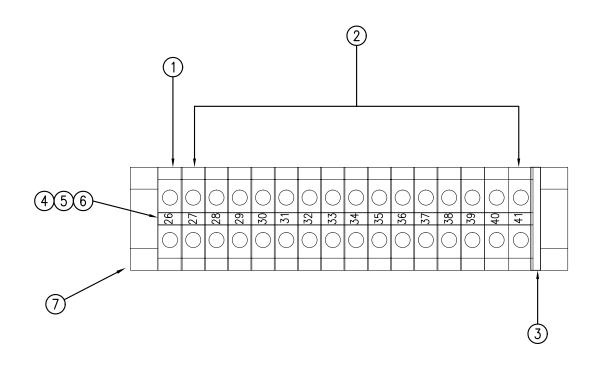


THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. A	<u>IND MAY NOT BE R</u>	EPRODUCED	IN WHOLE	OR IN PART V	<u>WITHOUT THE WRITTEN PERI</u>	MISSION OF CTM INTEGRATION INC.	
TITLE: 360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL		PART:	REWIND	MOTOR C	CABLE		Dept. Code 70
REV. REV. DESCRIPTION O -NEW DRAWING FOR 360a POWERED UNWIND-	REV. DATE 10-08-08	REV. BY: ES	Scale: 1=2	Date: 10-09-08	DRAWN BY: E. SANOR	F:\Engineering\Standard Parts\System Ca	mponents:



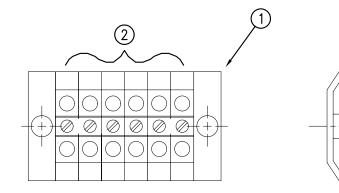


	BILL OF MATERIAL							
	ASS-200a-0496							
ITEM	QTY	CTM PART NUMBER PART DESCRIPTION						
Θ	1	MP-TE4000 #1 TERMINAL END BLOCK (modified)						
(	1	PE-TE4000 TERMINAL BLOCK						
<u> </u>	1	PE-TE4030	TERMINAL END BARRIER					
ூ	1	PE-MA1040	TERMINAL BLOCK WIRE Nos. (#21-#30)					
<b>⑤</b>	1	PE-MA1050 TERMINAL BLOCK WIRE Nos. (#31-#40)						
(	1	PE-MA1060	TERMINAL BLOCK WIRE Nos. (#41-#50)					
6	2	PE-TE4020	END STOP					



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TITLE: 360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL		PART:-	ΓB1 <b>#'</b> S	5 26-41	TERMINAL BLOCK	ASSEMBLY	Dept. Code 70
REV. REV. DESCRIPTION O -NEW DRAWING FOR 360a POWERED UNWIND-	REV. DATE 10-13-08	REV. BY: ES	Scale: 1=1	Date: 10-13-08	DRAWN BY: E. SANOR	F:\Engineering\Standard Parts\System Co	

	BILL OF MATERIAL							
	ASS-200a-0497							
ITEM	QTY CTM PART NUMBER PART DESCRIPTION							
0	2	PE-TE3110	EPCMB4 TERMINAL BLOCK MOUNTING SECTION					
@	6	PE-TE3100	CMB4 TERMINAL BLOCK					
3	1	PE-MA1110	#1-10 MARKING TAG					



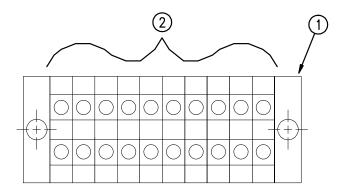
1 2 3 4 5 6 (3) MARKING TAG ASSY.

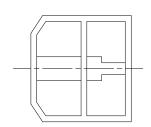
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.

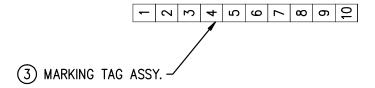
| PART: TB-2 | TERMINAL ASSEMBLY | TERMI

	BILL OF MATERIAL							
ASS-200a-0498								
ITEM	QTY CTM PART NUMBER PART DESCRIPTION							
Θ	2	PE-TE3110	EPCMB4 TERMINAL BLOCK MOUNTING SECTION					
<u>@</u>	6	PE-TE3100	CMB4 TERMINAL BLOCK					
ල	1	PE-MA1110	#1-10 MARKING TAG					

Dept. Code





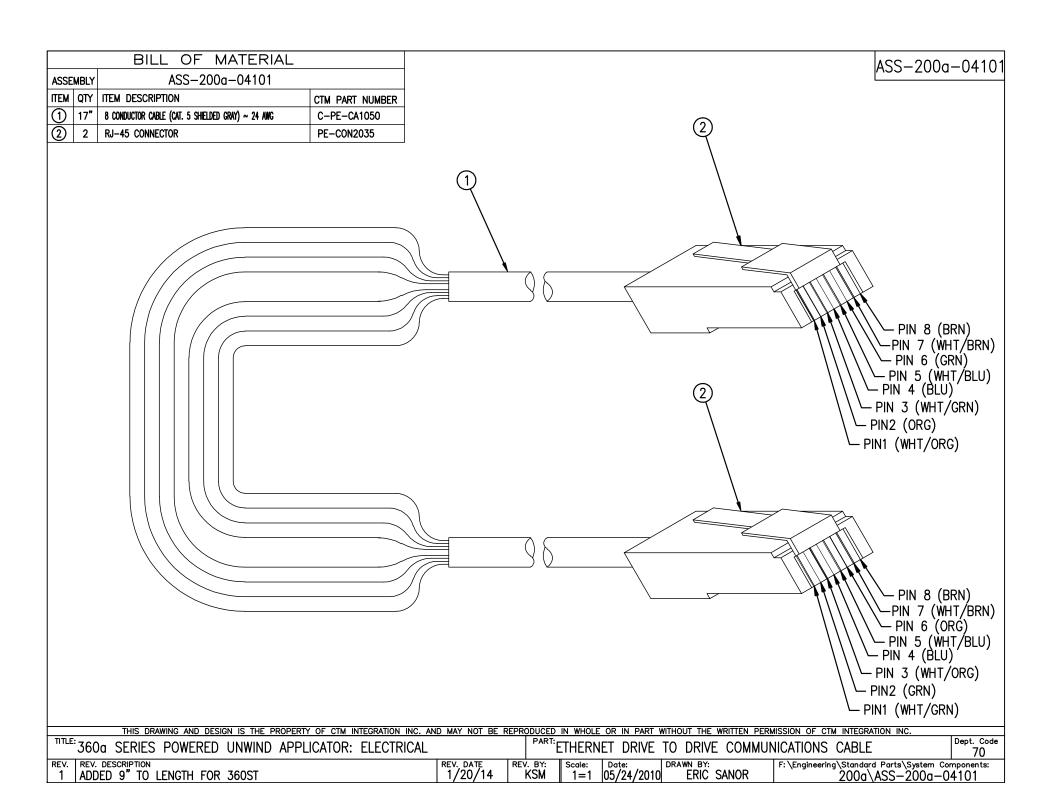


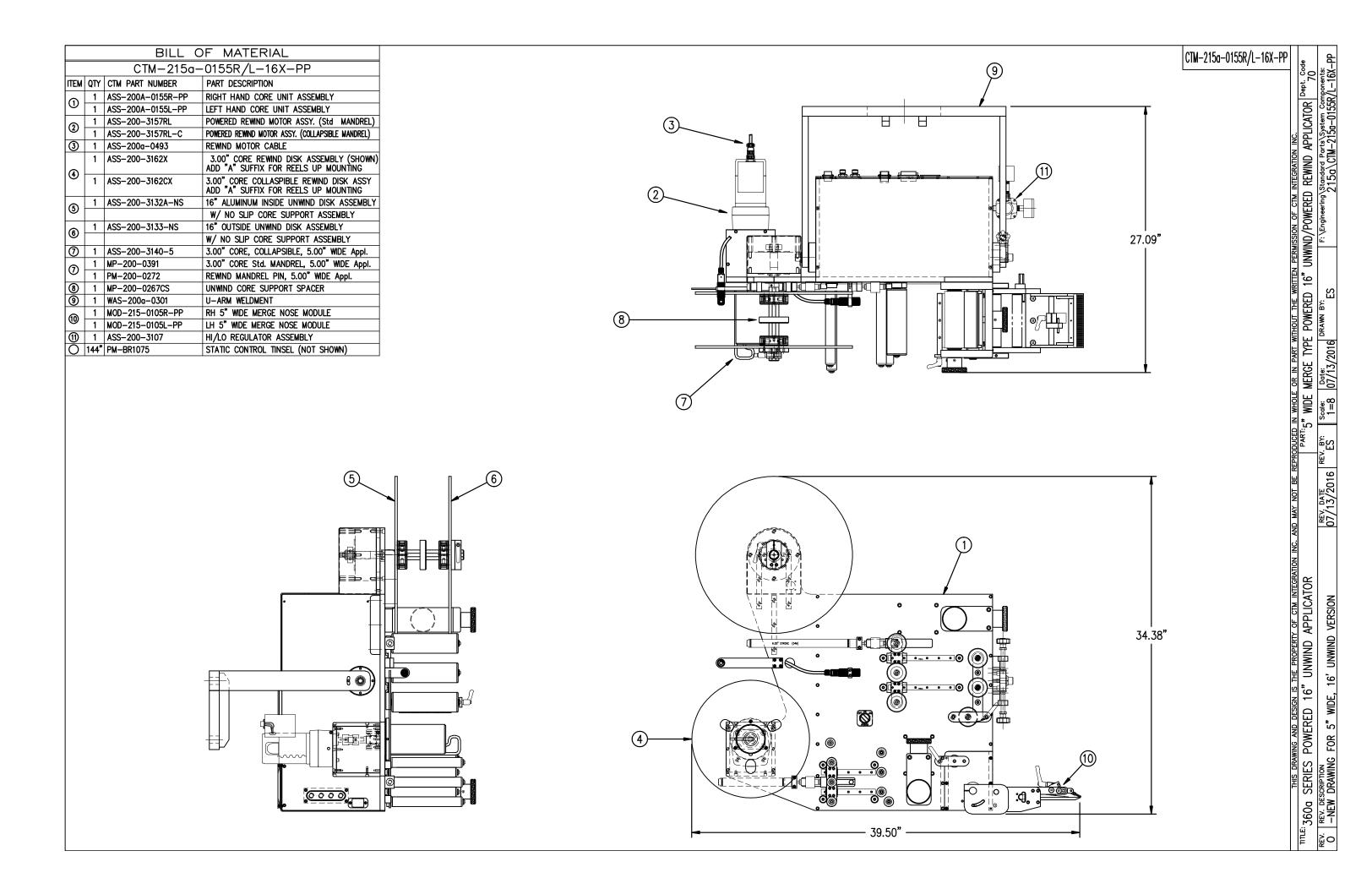
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF CTM INTEGRATION INC.

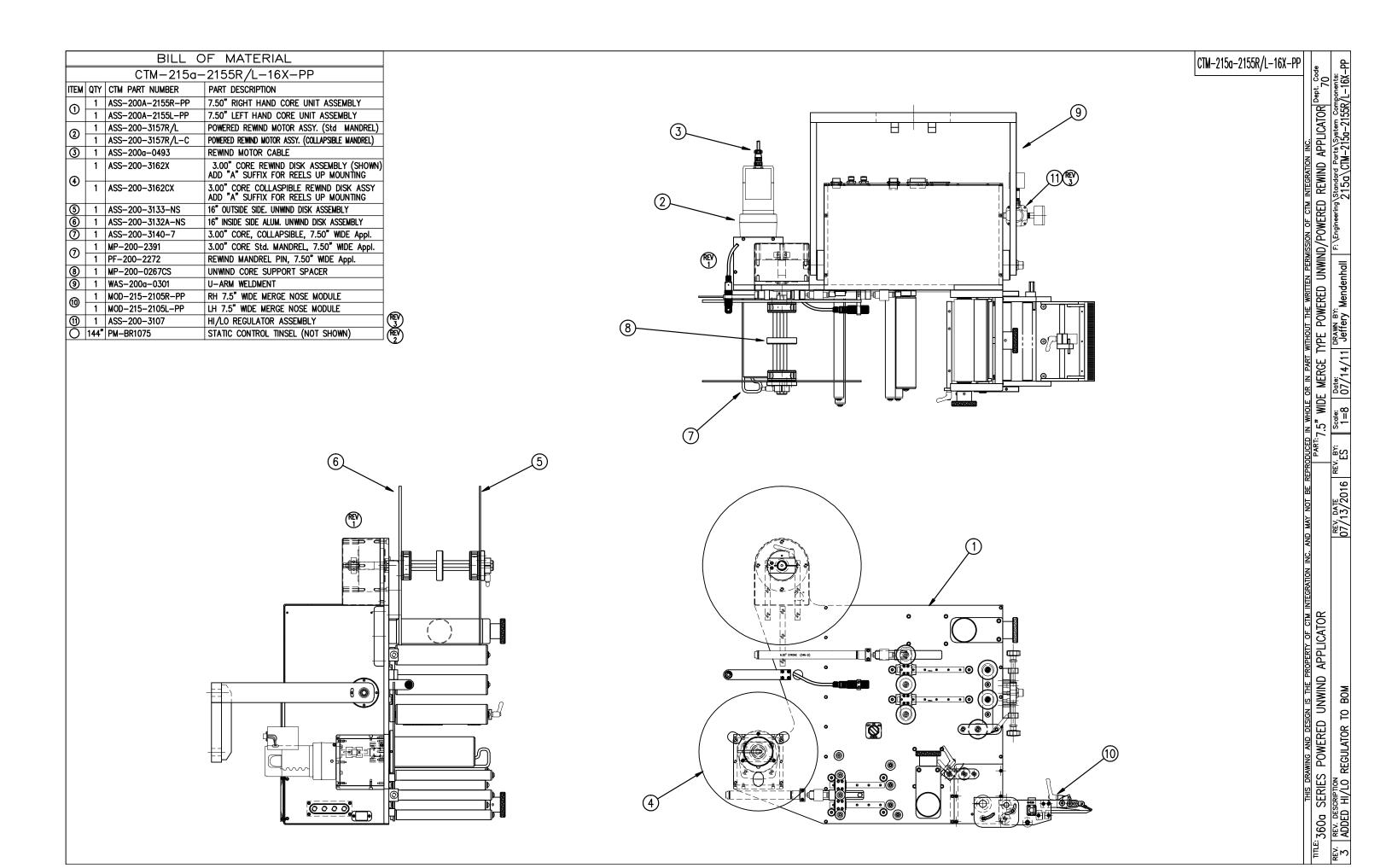
TITLE: 360a SERIES POWERED UNWIND APPLICATOR: ELECTRICAL

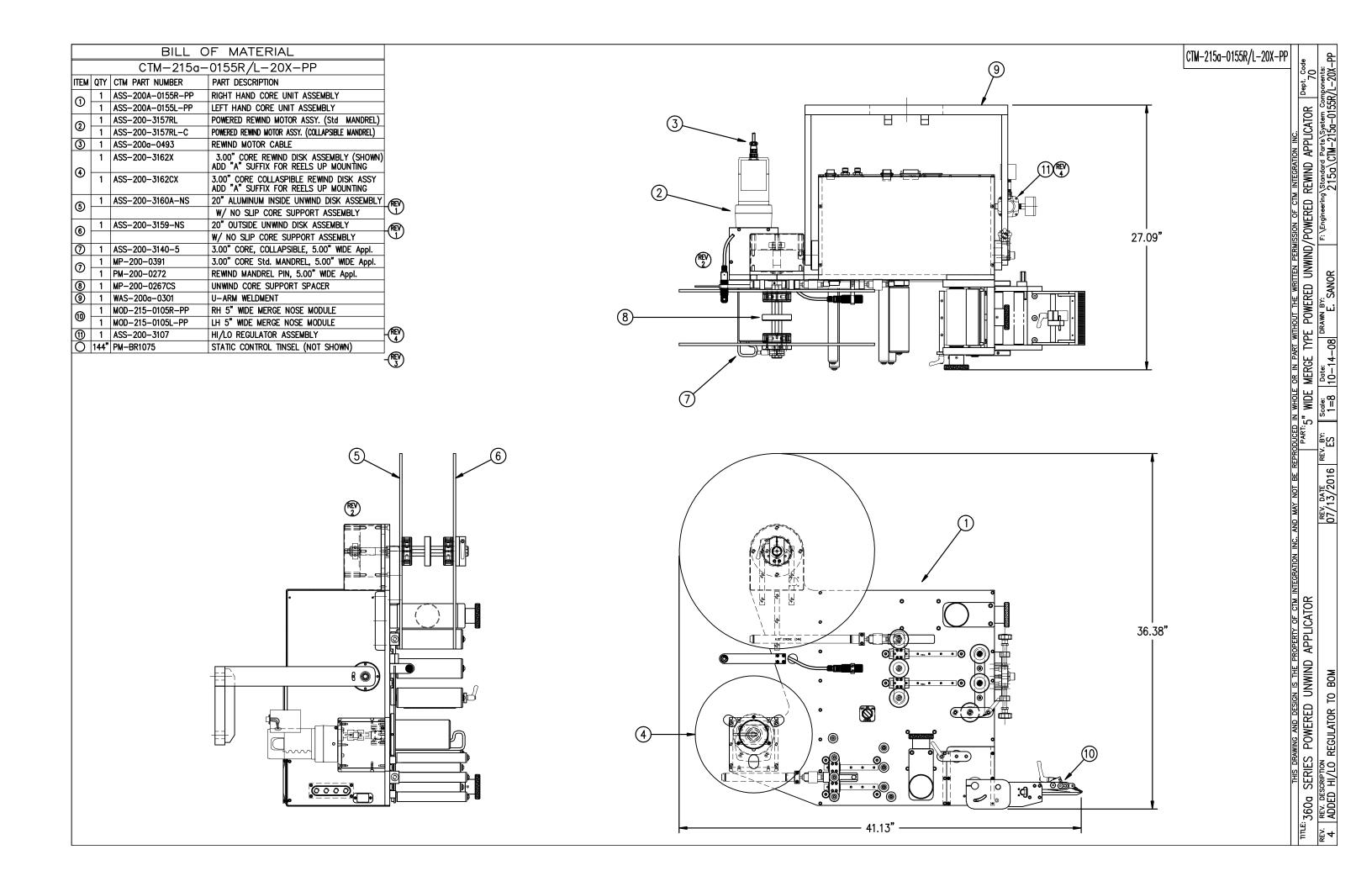
PART: TB3 UNWIND/REWIND TERMINAL BLOCK ASSEMBLY

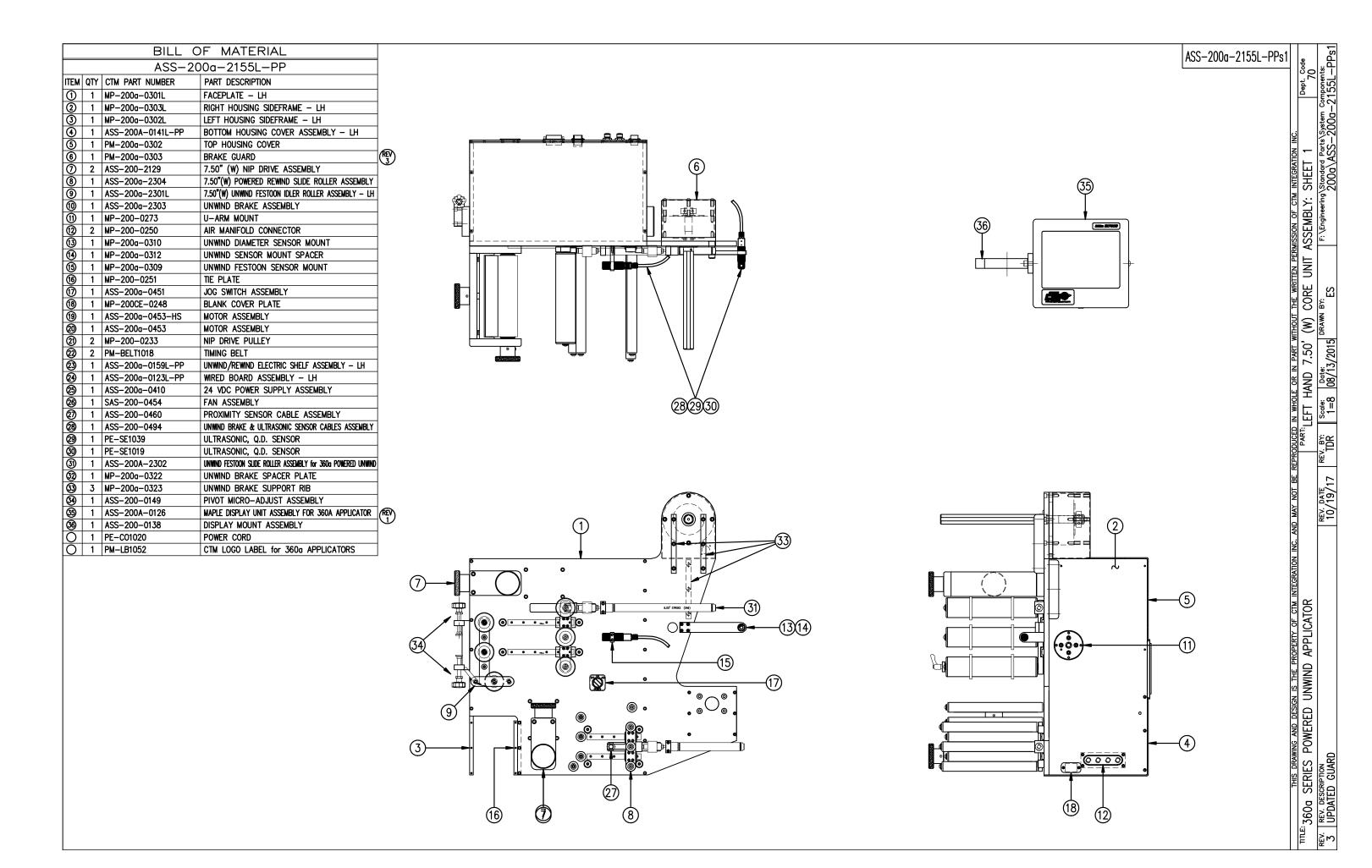
REV. DATE REV. DATE REV. BY: Scale: Date: DRAWN BY: F: Engineering Standard Parts System Components: 1 REMOVED JUMPERS FROM DRAWING 1=1 10-13-08 E. SANOR 200a ASS-200a-0498

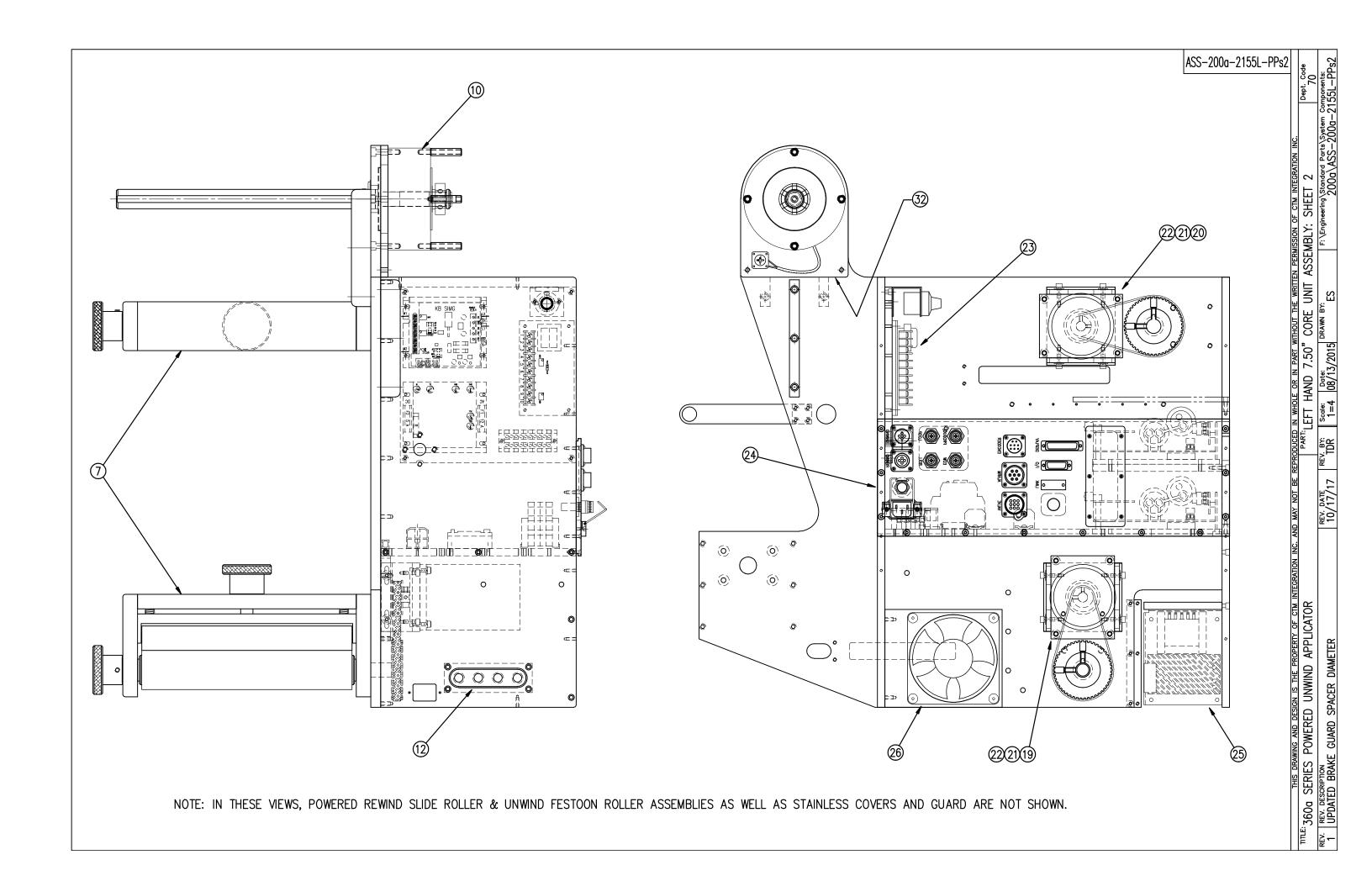


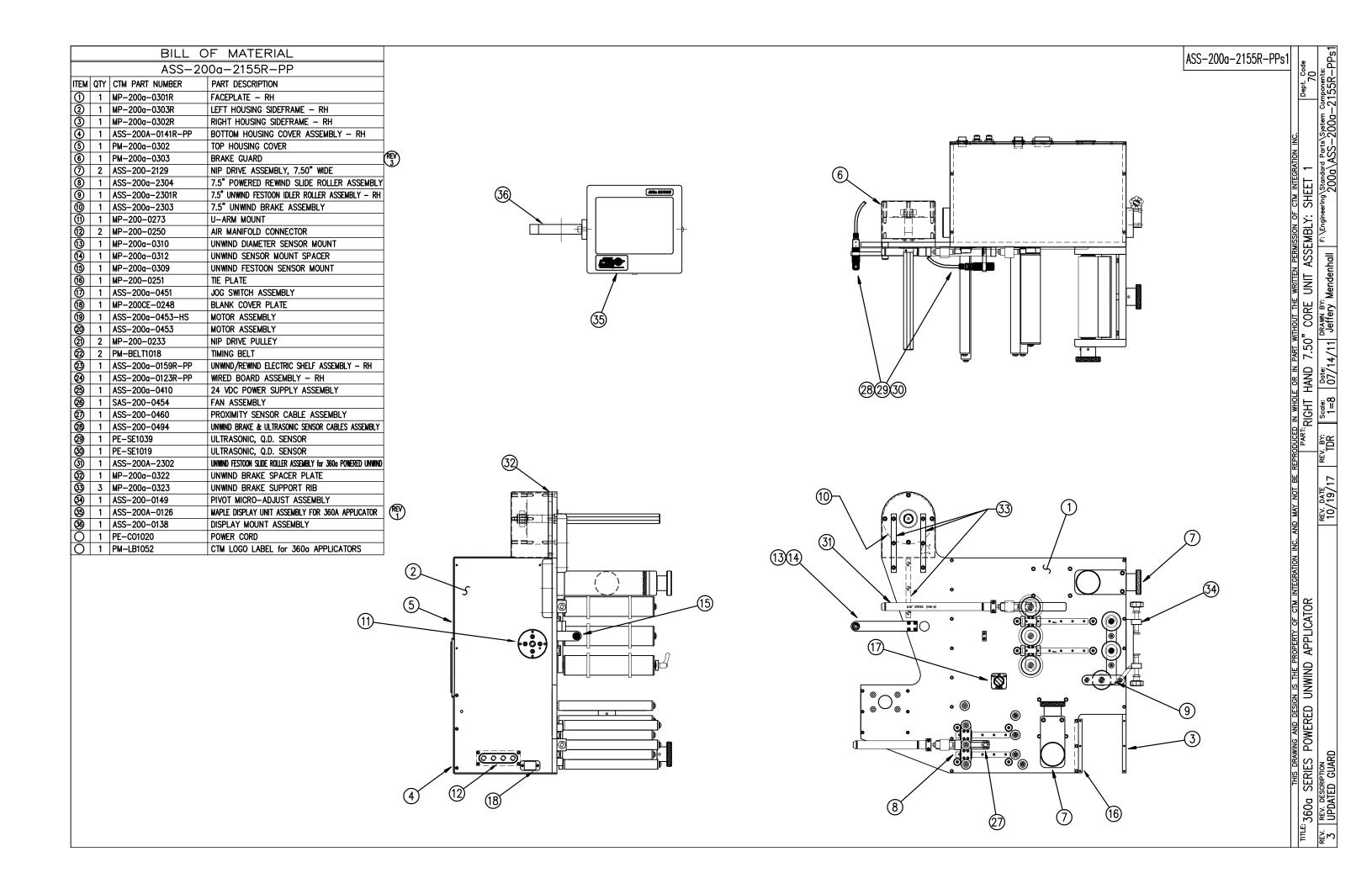


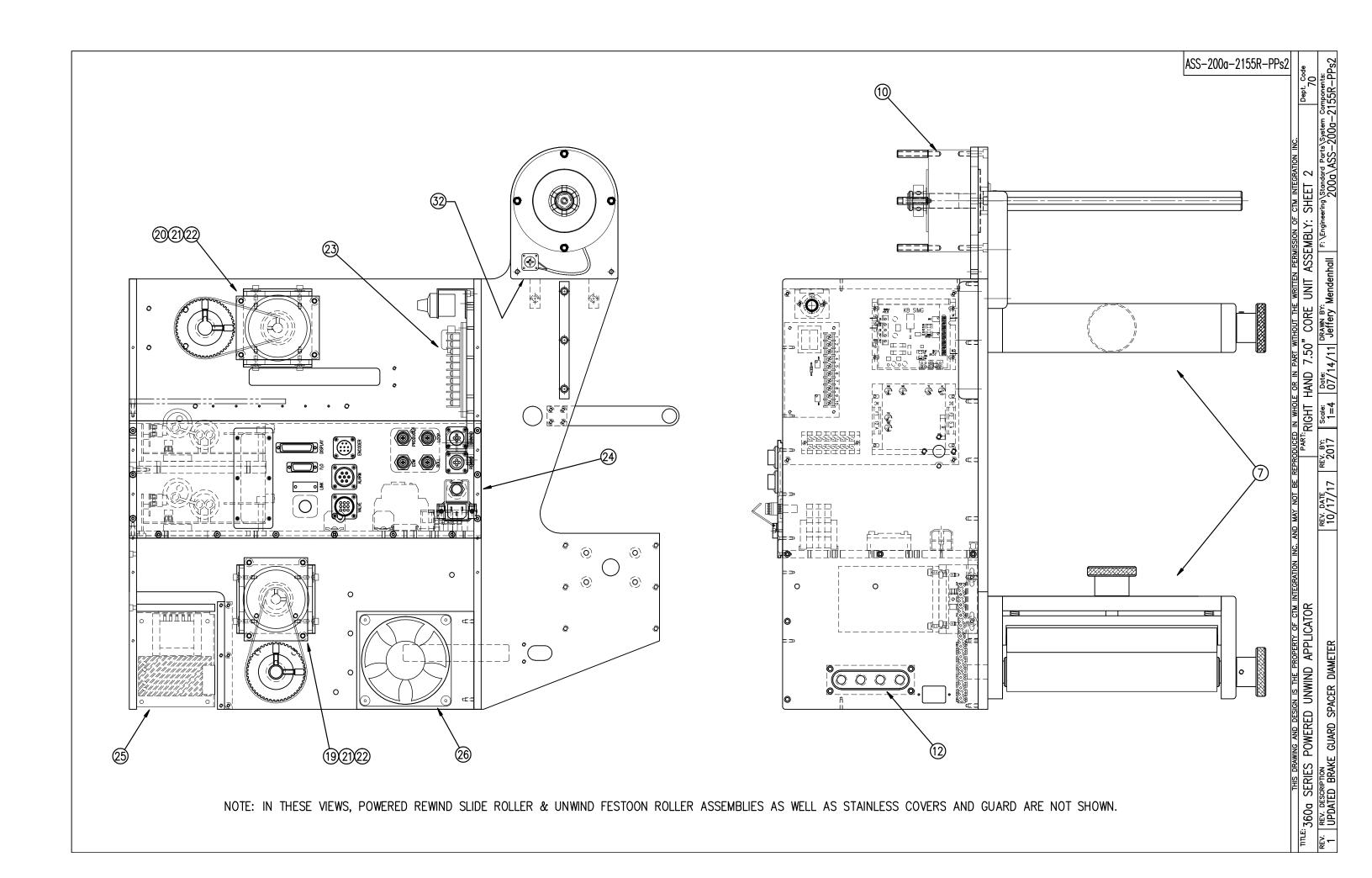


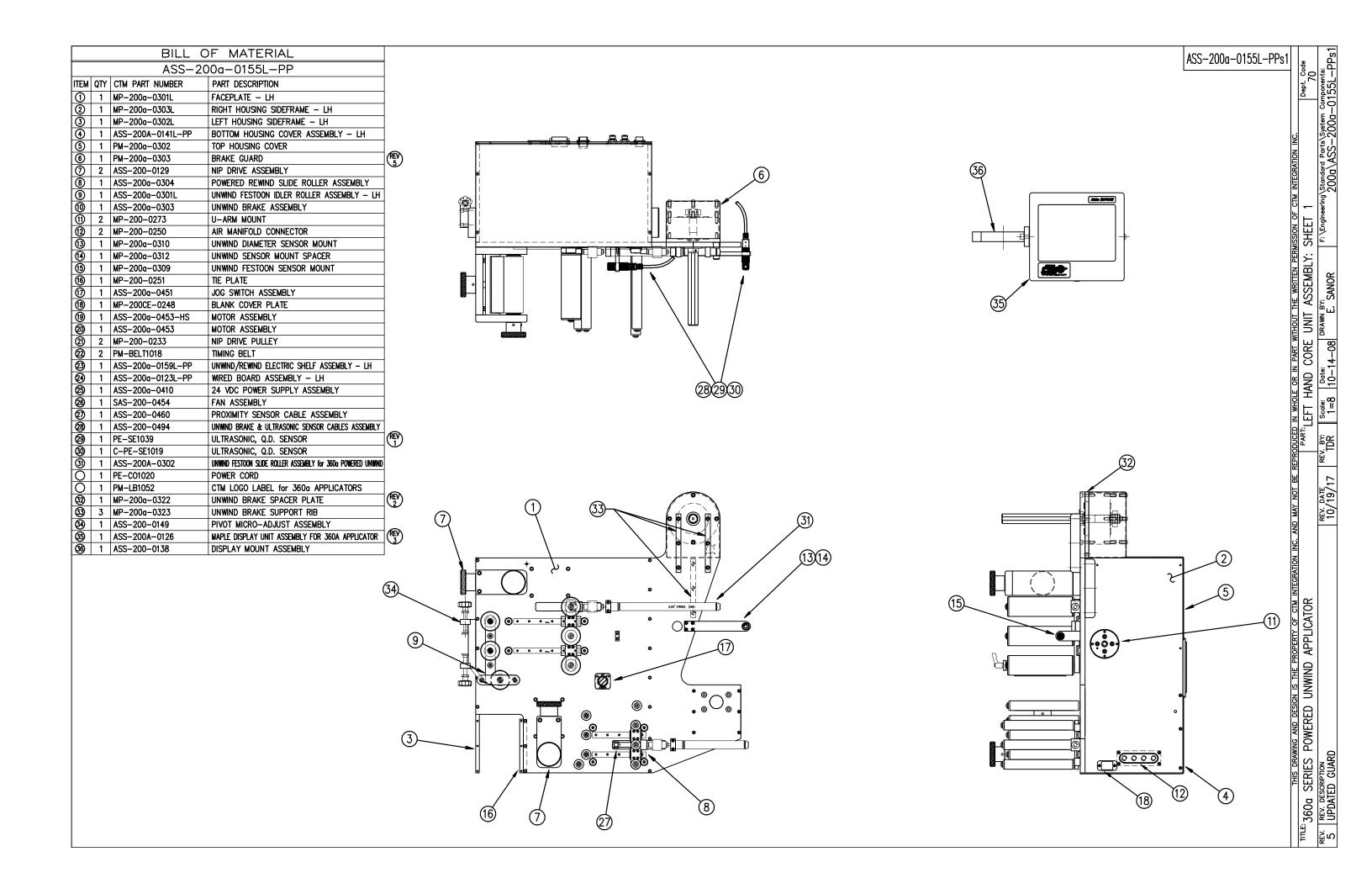


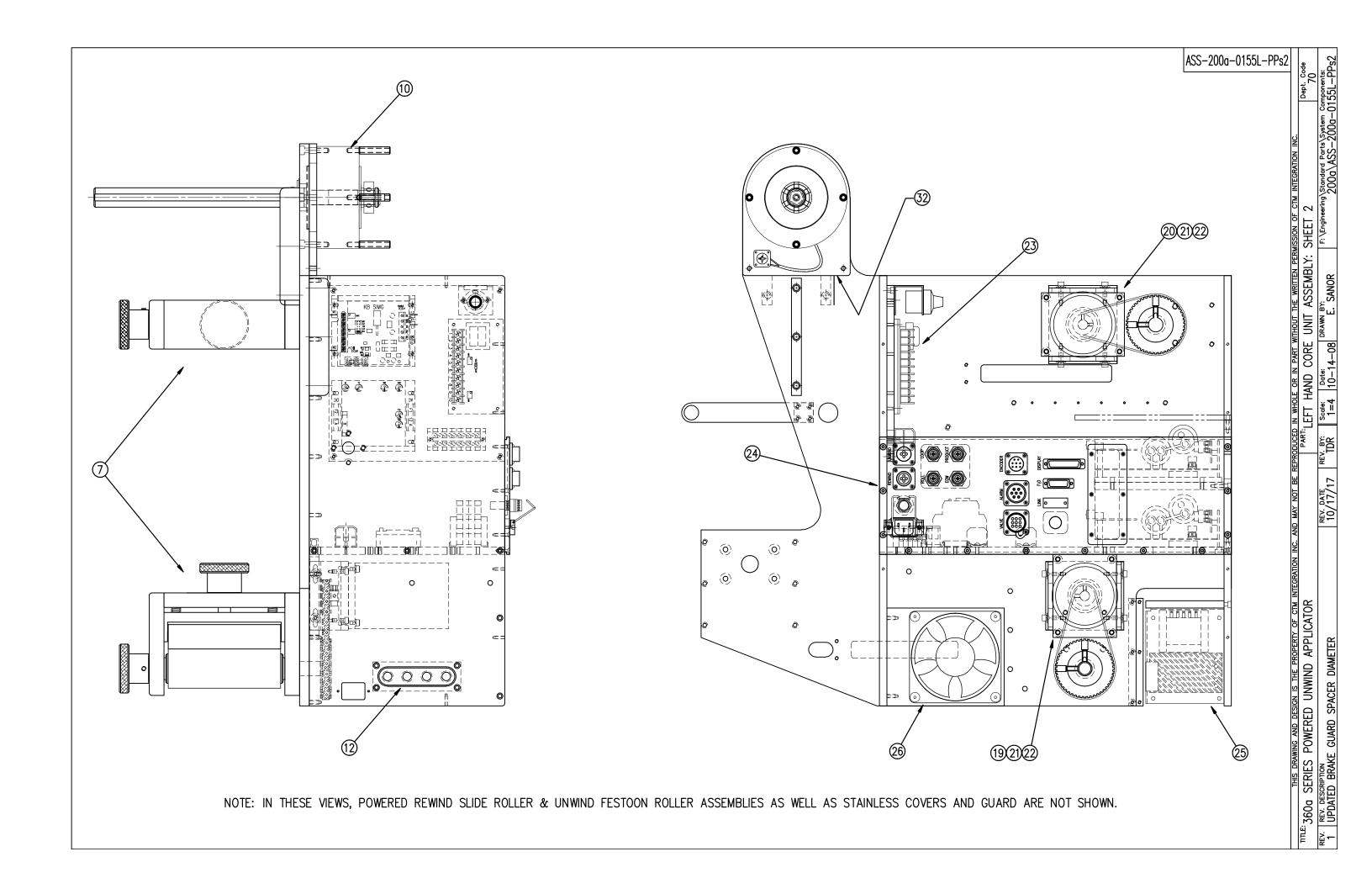


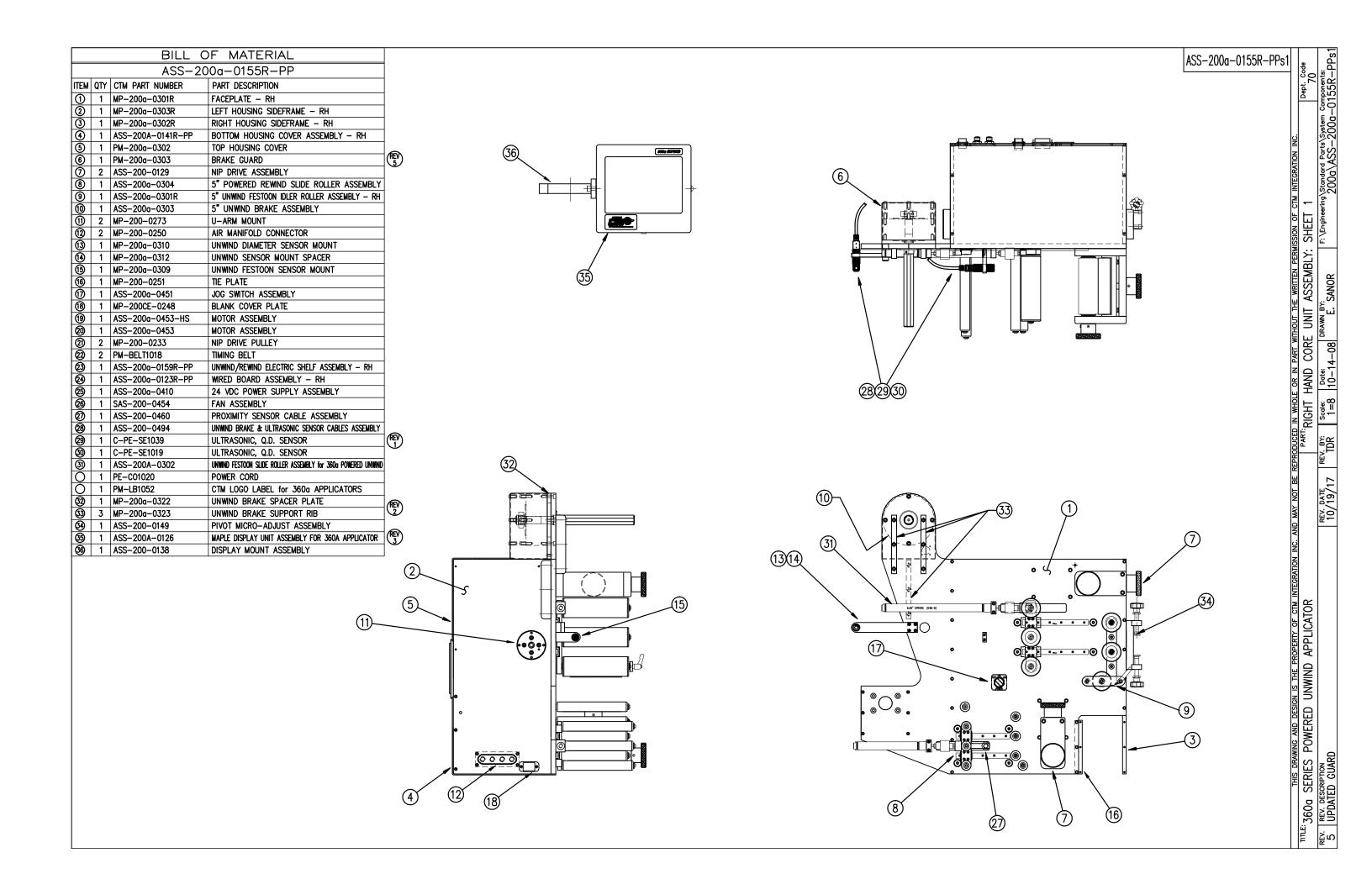


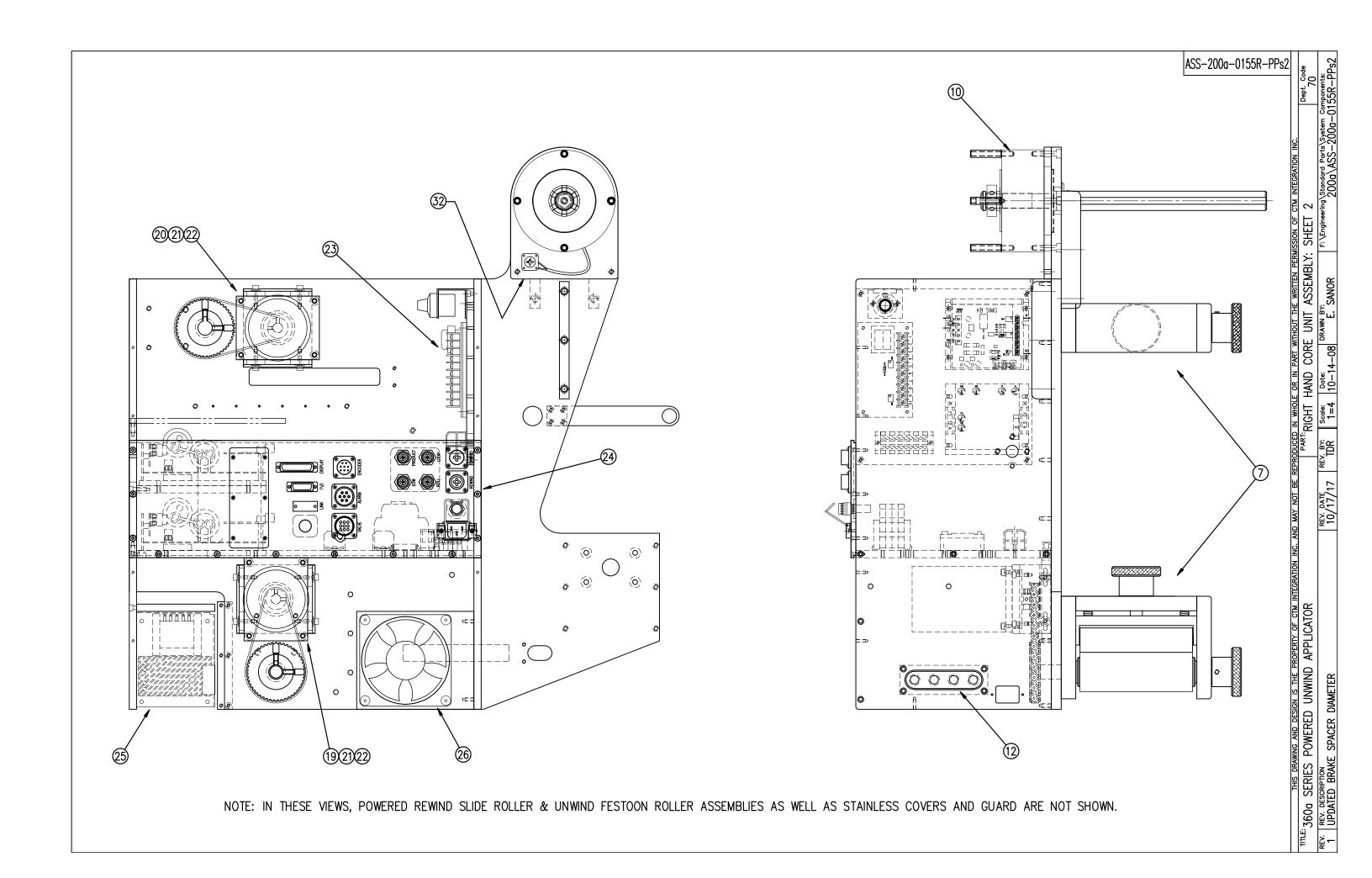


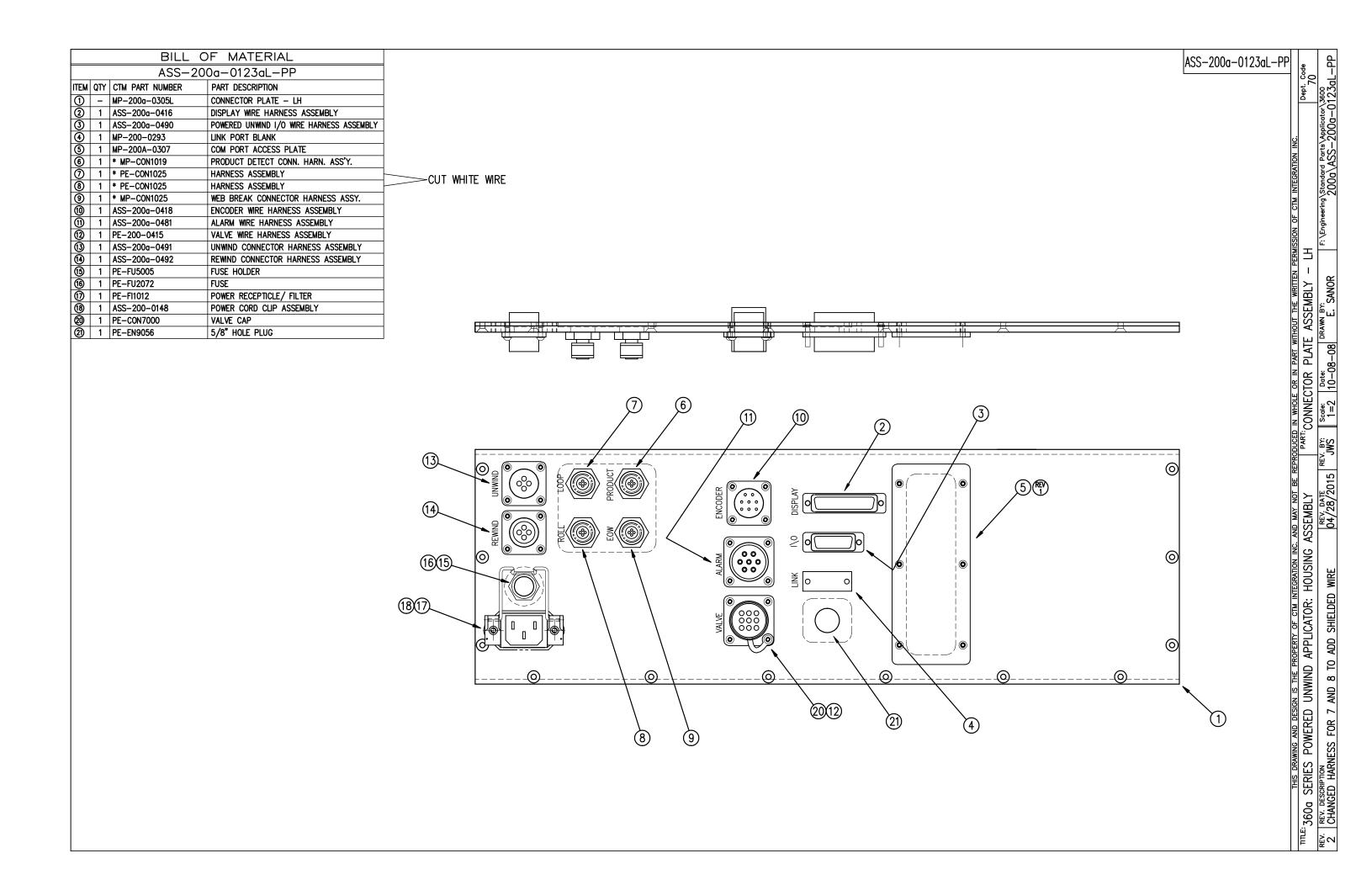


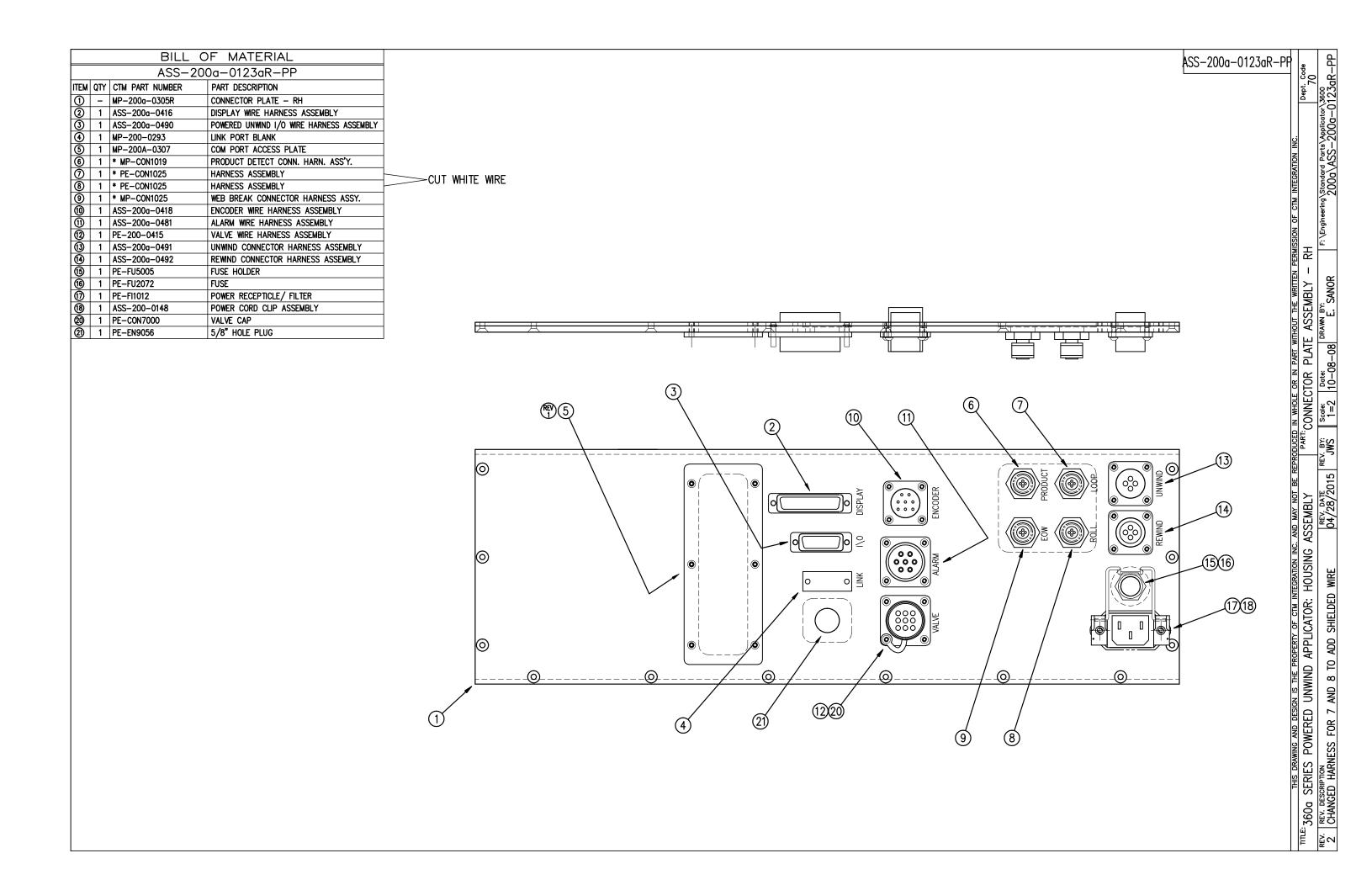


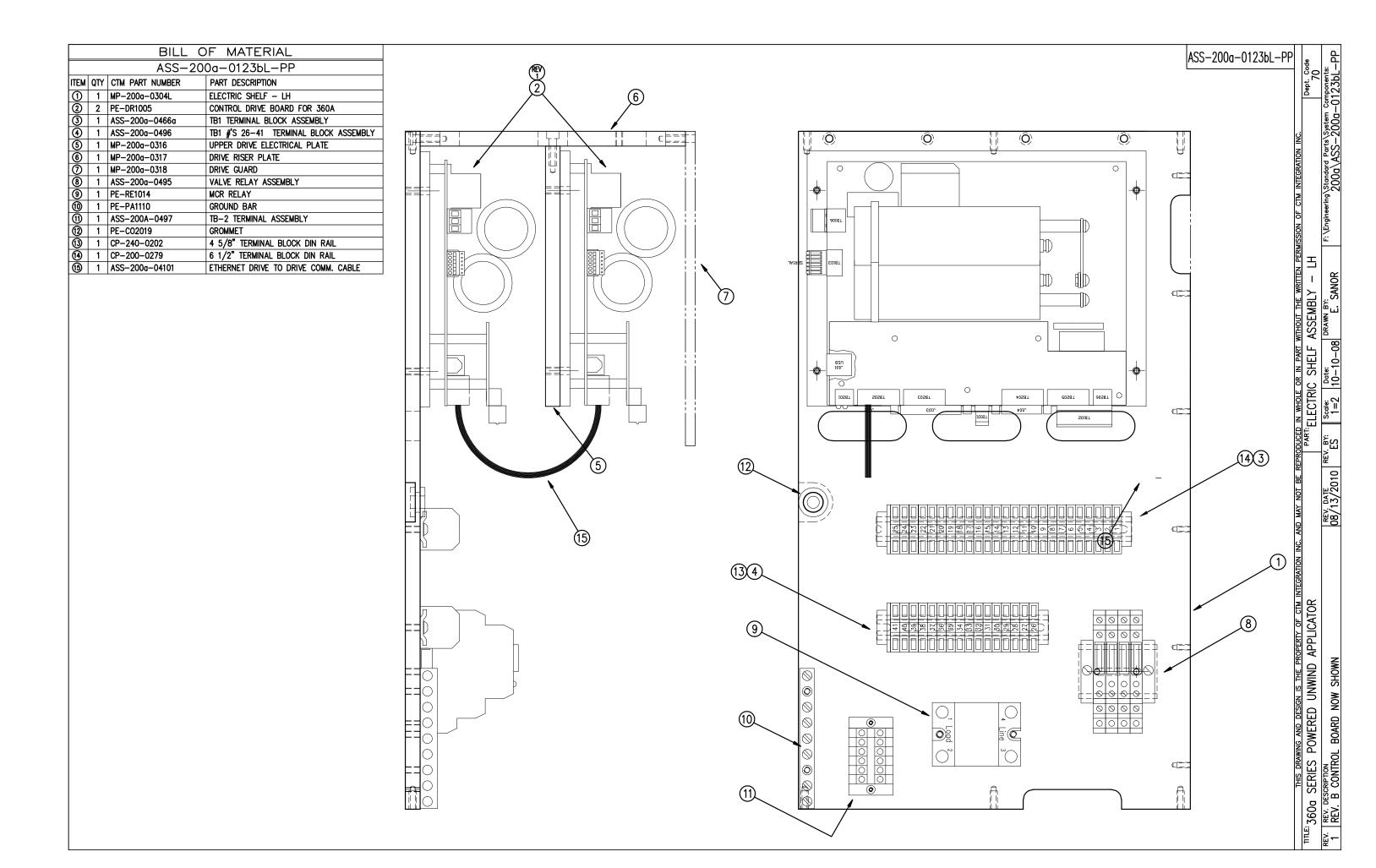


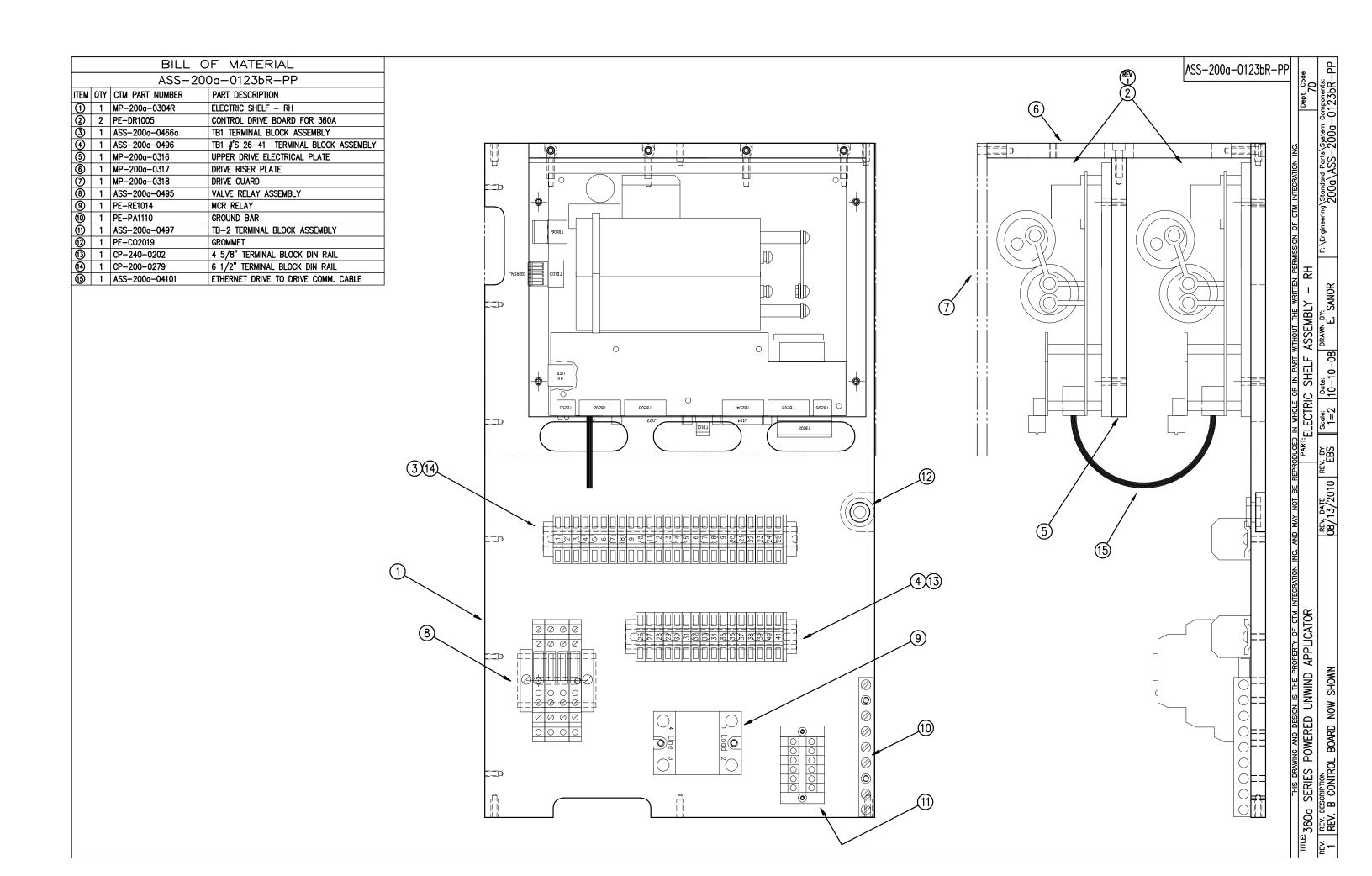




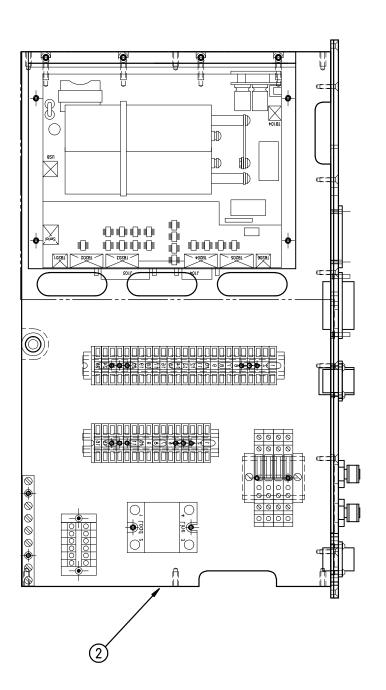


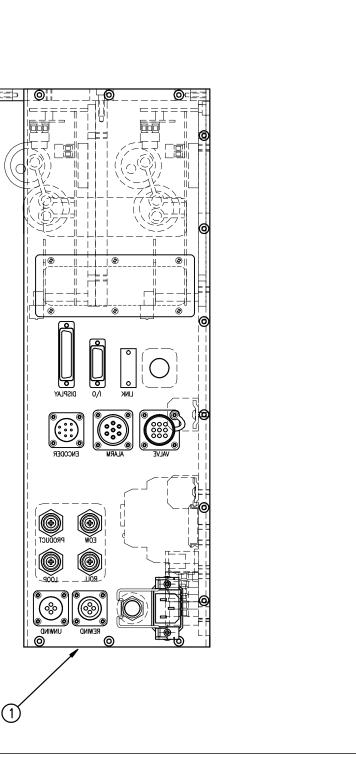






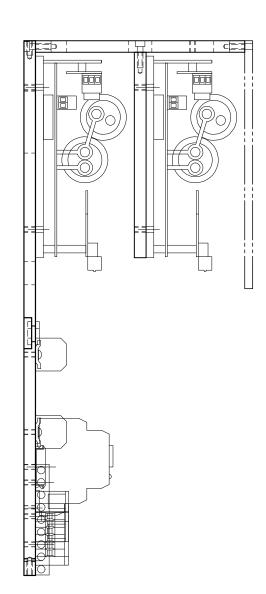
	BILL OF MATERIAL							
	ASS-200a-0123L-PP							
ITEM	EM QTY CTM PART NUMBER PART DESCRIPTION							
0	1 ASS-200a-0123aL-PP CONNECTOR PLATE ASSEMBLY - LH							
<u> </u>	1	ASS-200a-0123bL-PP	ELECTRIC SHELF ASSEMBLY - LH					





ASS-200a-0123L-PP

F: \Engineering\Standard Parts\Applicator\3600 2000\ASS-2000-0123L-PP



	RILL OF MATERIAL				
	BILL OF MATERIAL				
	ASS-200a-0123R-PP				
	1 .	CTM PART NUMBER	PART DESCRIPTION		
① ②	1	ASS-200a-0123aR-PP	CONNECTOR PLATE ASSEMBLY - RH		
2	1	ASS-200a-0123bR-PP	ELECTRIC SHELF ASSEMBLY - RH		

ASS-200a-0123R-PP

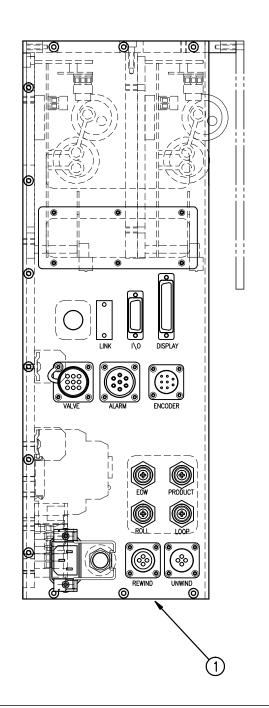
F: \Engineering\Standard Parts\Applicator\3600 2000\ASS-2000-0123R-PP

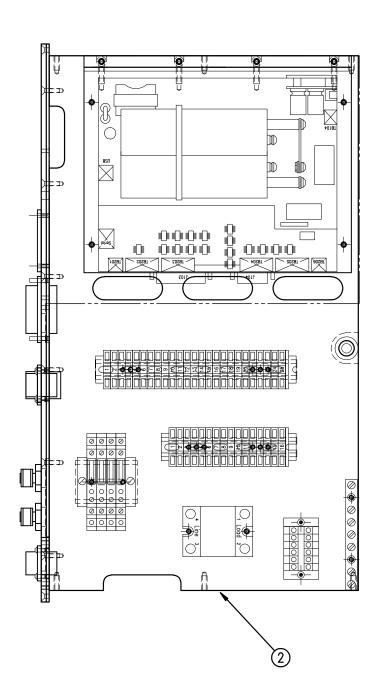
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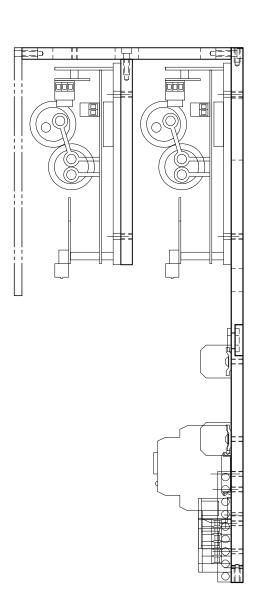
REV. REV. DESCRIPTION

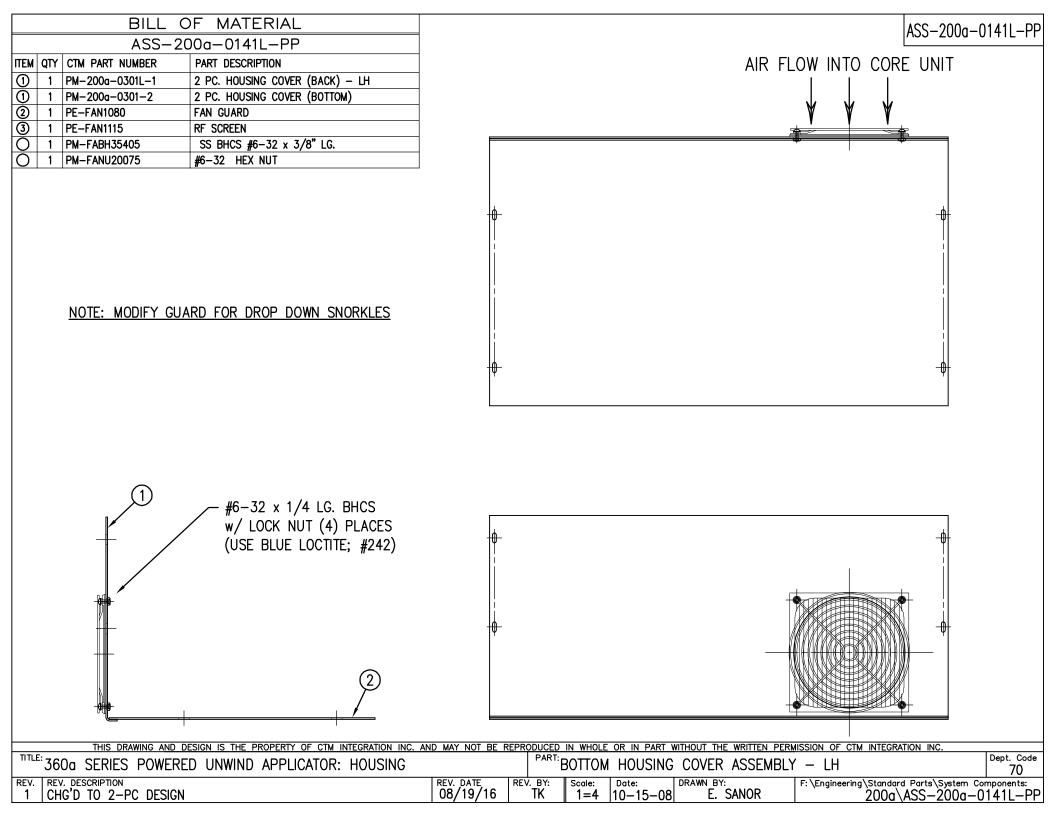
1 CORRECT PROGRAMMING PORT LOCATION NOW SHOWN

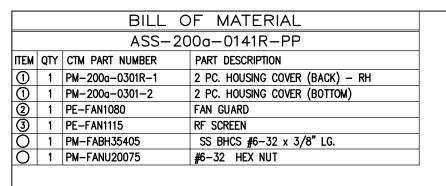
1 CORRECT PROGRAMMING PORT PROGRAMMING PORT



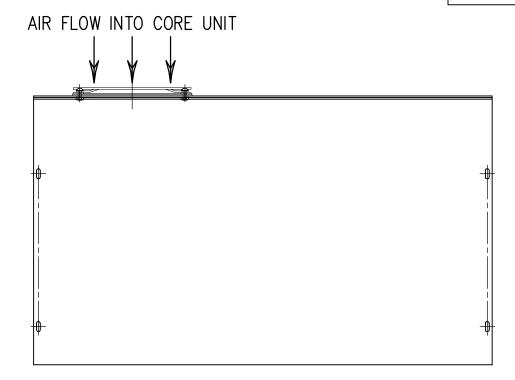




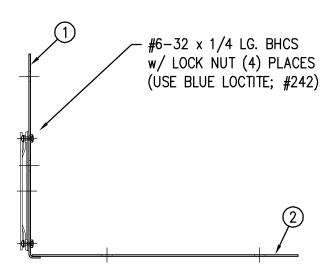


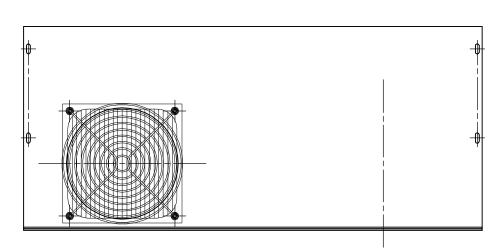


ASS-200a-0141R-PP



NOTE: MODIFY GUARD FOR DROP DOWN SNORKLES





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TITLE: 360a SERIES POWERED UNWIND APPLICATOR: HOUSING

PART: BOTTOM HOUSING COVER ASSEMBLY - RH

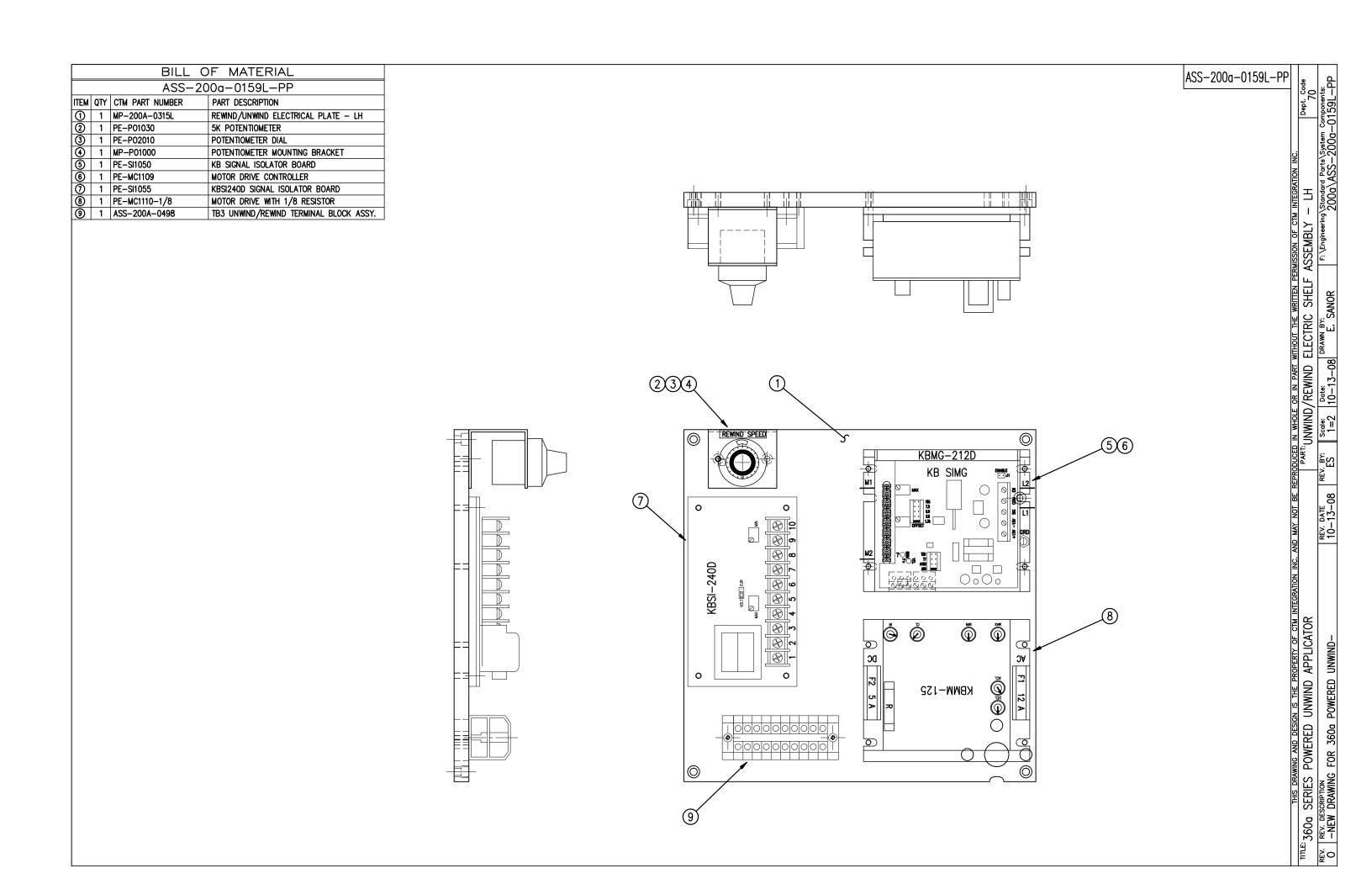
Dept. Code 70

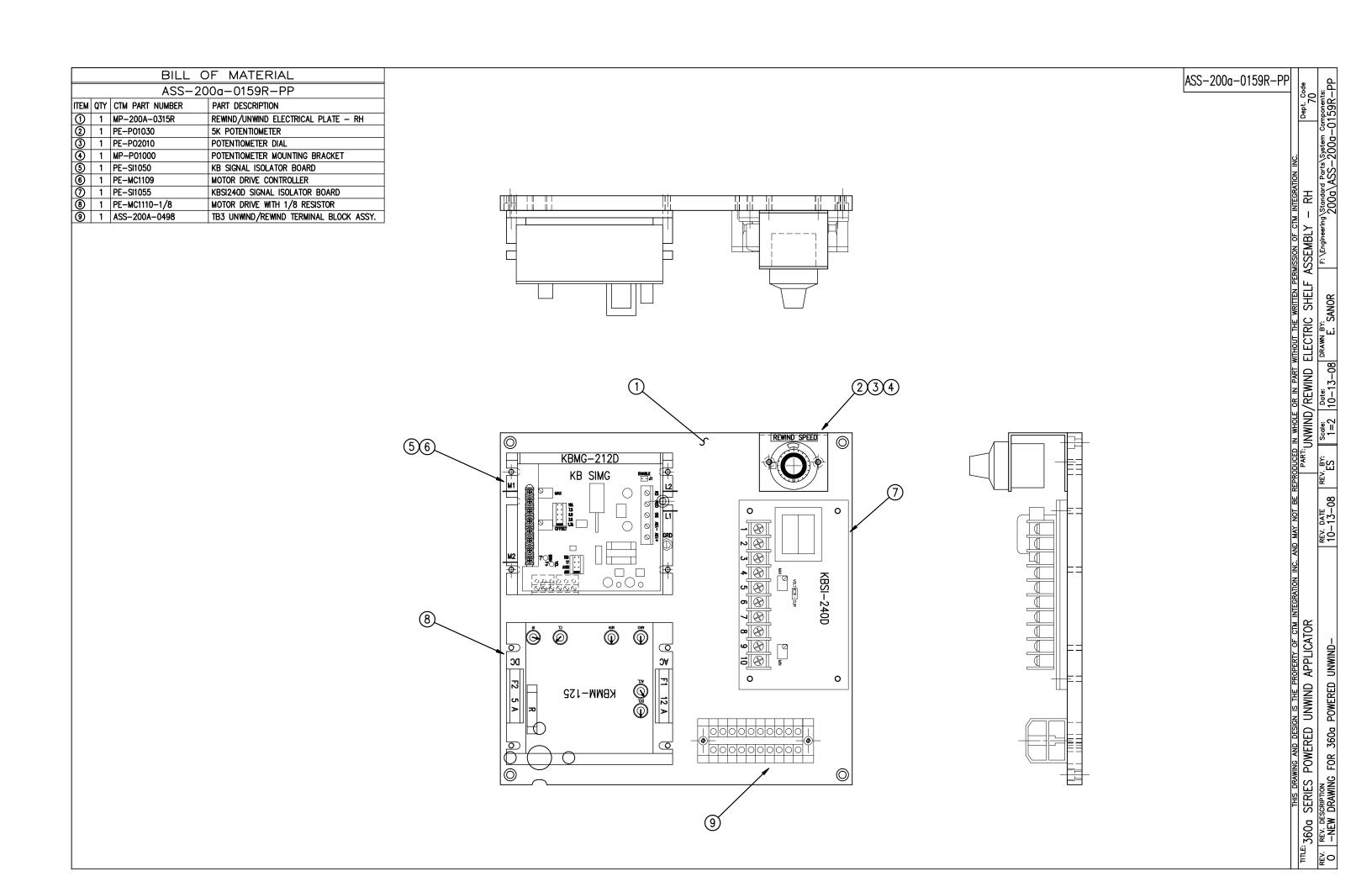
REV. REV. DESCRIPTION
1 CHG'D TO 2-PC DESIGN

REV. DATE 08/19/16 REV. BY:

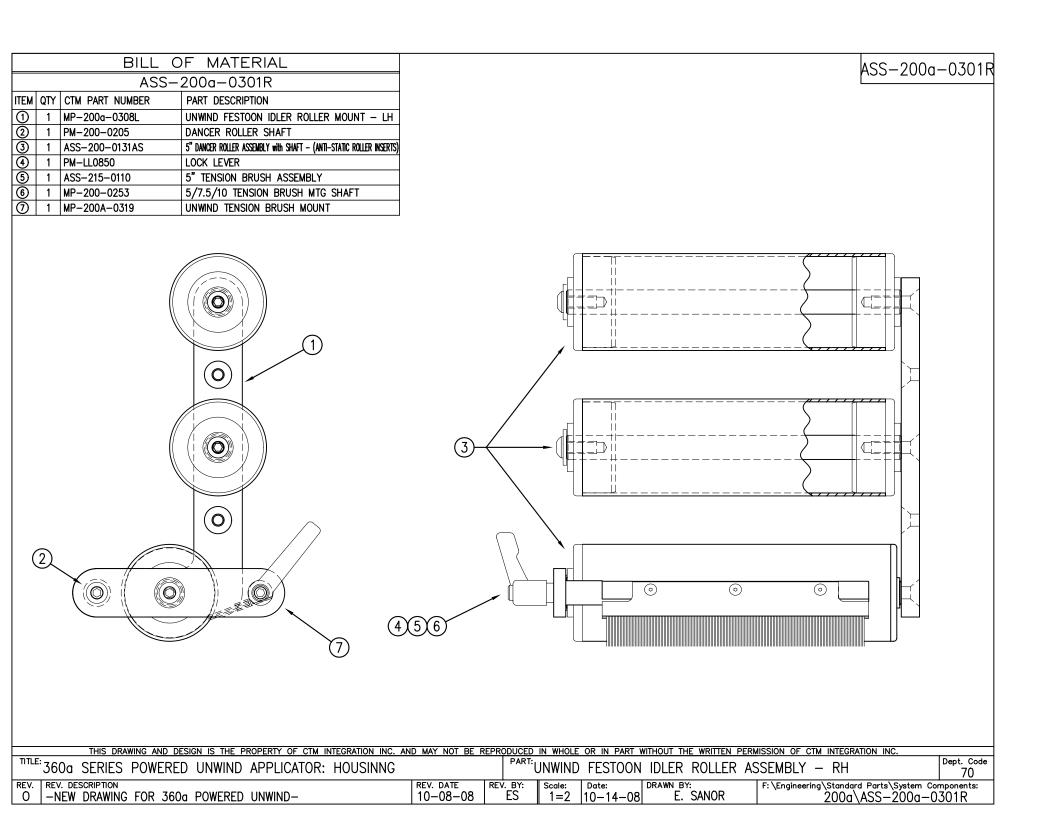
Scale: Date: 1=4 10-15-08

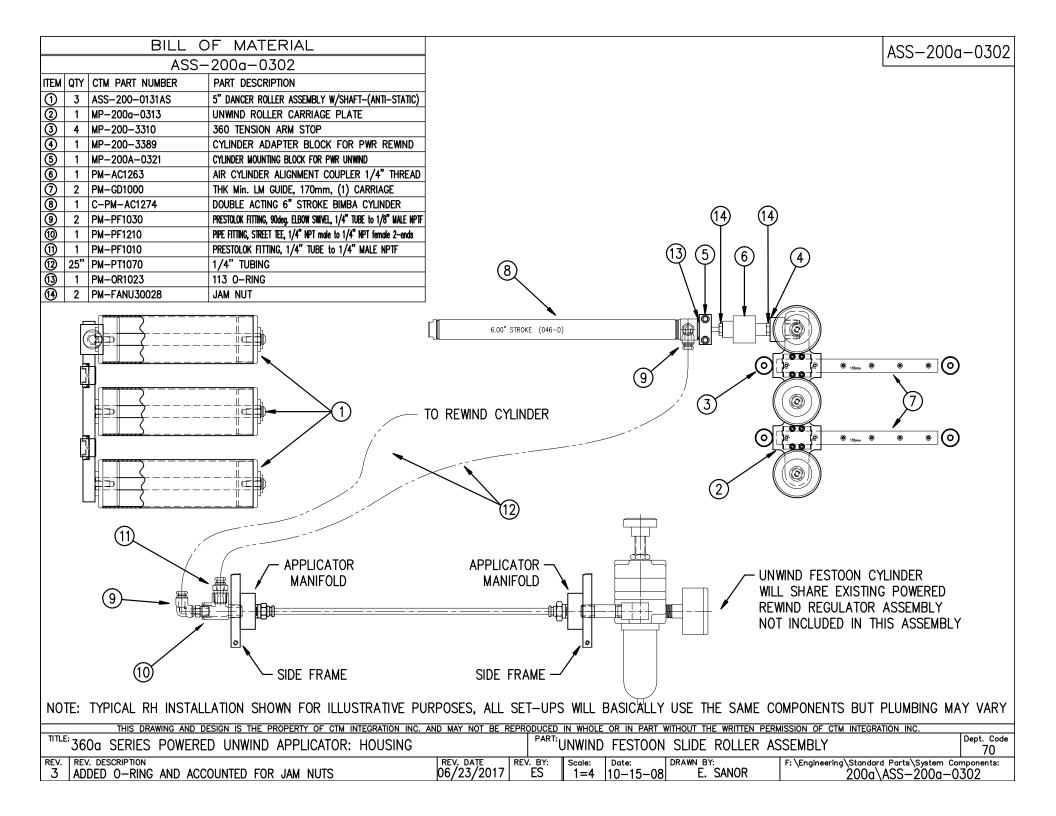
DRAWN BY: E. SANOR F:\Engineering\Standard Parts\System Components: 200a\ASS-200a-0141R-PP

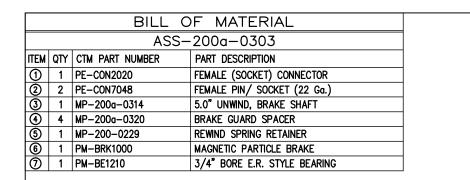




BILL (	DF MATERIAL				٨٥٥	200~ 07011
	-200a-0301L				AS	S-200a-0301L
ITEM QTY CTM PART NUMBER	PART DESCRIPTION					
1 MP-200a-0308L	UNWIND FESTOON IDLER ROLLER MOUNT - LH					
② 1 PM-200-0205	DANCER ROLLER SHAFT					
③   1   ASS-200-0131AS	5" DANCER ROLLER ASSEMBLY with SHAFT - (ANTI-STATIC ROLLER INSERTS)					
④ 1 PM-LL0850	LOCK LEVER					
⑤ 1 ASS-215-0110	5" TENSION BRUSH ASSEMBLY					
6 1 MP-200-0253 7 1 MP-200A-0319	5/7.5/10 TENSION BRUSH MTG SHAFT UNWIND TENSION BRUSH MOUNT					
()   1  MF-200A-0319	UNWIND TENSION BROSH MOUNT					
THIS DRAWING AND	© © © ©  DESIGN IS THE PROPERTY OF CTM INTEGRATION INC.	AND MAY NOT BE REPRODUCED	3) 456	THOUT THE WRITTEN PER	RMISSION OF CTM INTEGRATION	
TITLE: 360a SERIES POWERI	ED UNWIND APPLICATOR: HOUSINNG	PART	UNWIND FESTOON	IDLER ROLLER A	SSEMBLY - LH	Dept. Code
REV. REV. DESCRIPTION O -NEW DRAWING FOR 36		REV. DATE REV. BY: 10-08-08 ES	Scale: Date: 1=2 10-14-08	DRAWN BY: E. SANOR	F:\Engineering\Standard Part	s\System Components:
O   - NEW DIAMING FOR 30	OU I OHLINED OHHIND	110 00 00   13	1-2  10-14-00	L. UNITOIN		200u-0301L





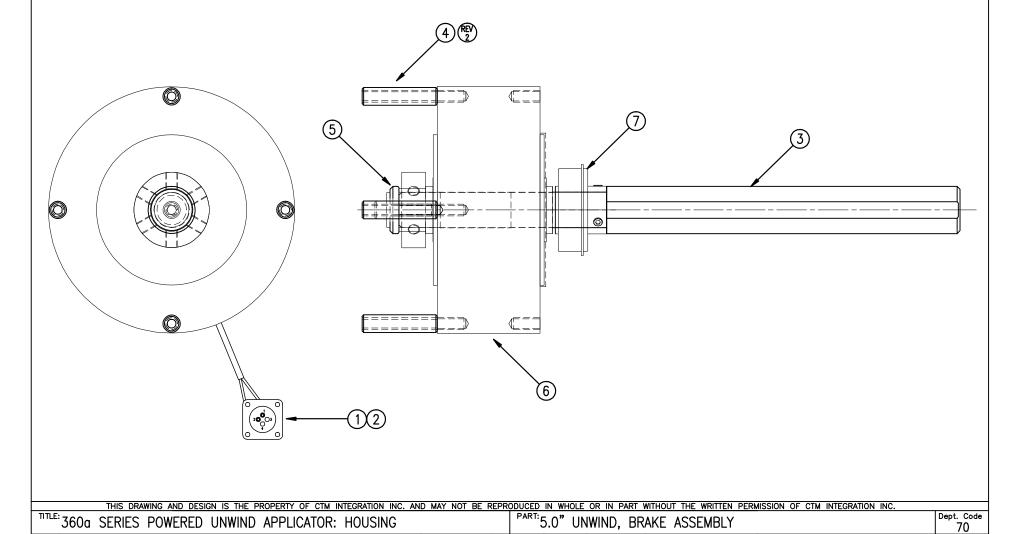


BRAKE GUARD SPACERS WERE 1/2 DIA. NOW 3/8 DIA.

ASS-200a-0303

Dept. Code

F:\Engineering\Standard Parts\System Components: 200a\ASS-200a-0303



REV. BY: TDR

REV. DATE 10/17/17

PART: 5.0" UNWIND, BRAKE ASSEMBLY

10-14-08

Date:

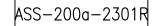
Scale:

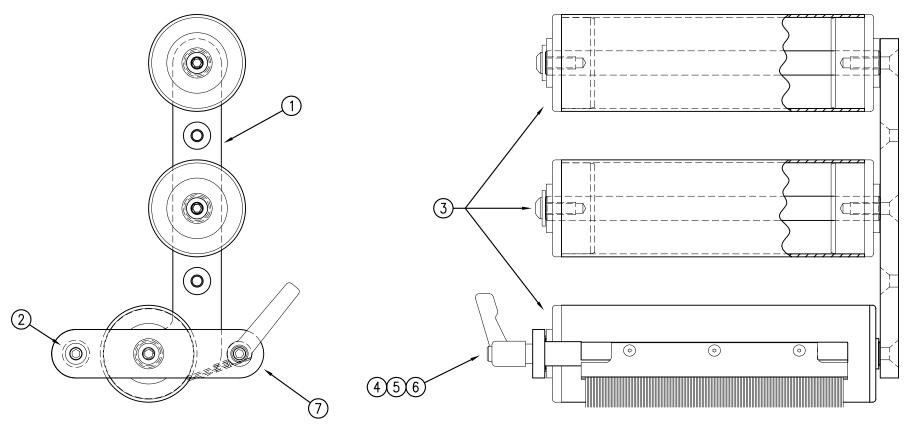
DRAWN\_BY:

E. SANOR

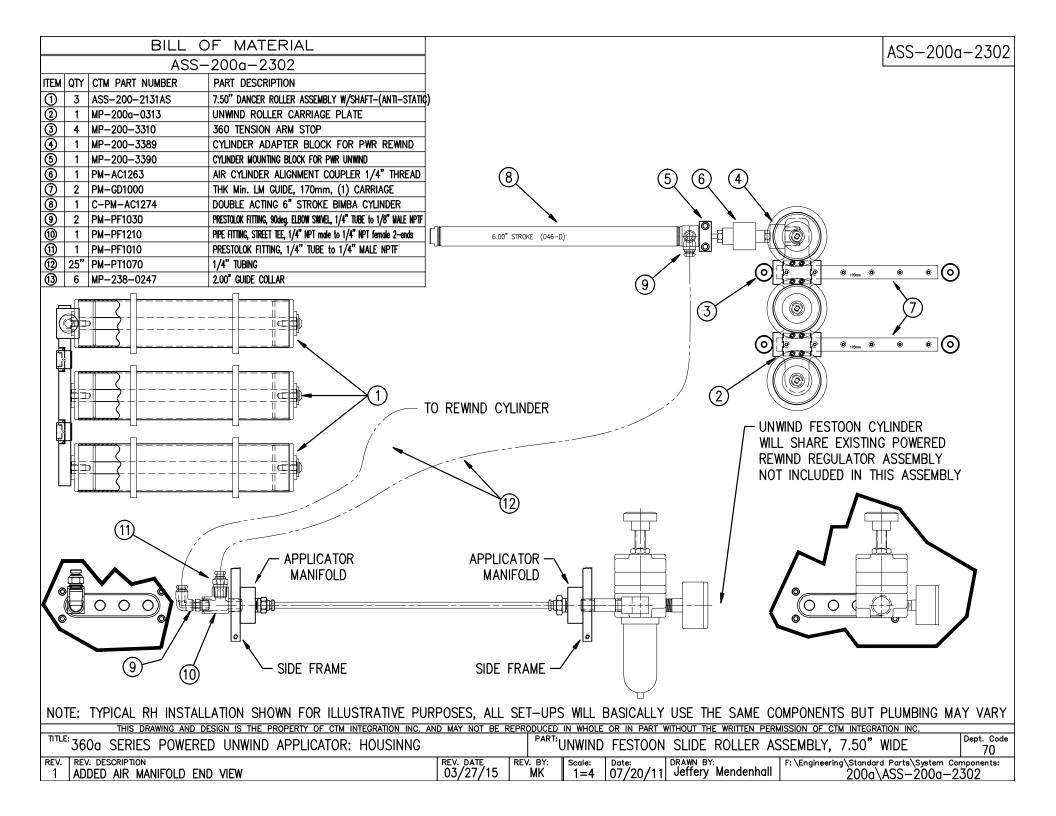
OF MATERIAL  SS-200-0304  PART DESCRIPTION  THK Min. LM GUIDE, 140mm, (1) CARRIAGE  CYLINDER MOUNTING ASSEMBLY  ROLLER CARRIAGE PLATE FOR PWR REWIND  360 TENSION ARM STOP  1.00**ø GUIDE ROLLER ASSEMBLY-(ANTI-STATIC)  POWERED REWIND CARRIAGE PROX. FINGER  CYLINDER ADAPTER BLOCK FOR PWR REWIND		ASSEMBLY IS AMBIDEXTROUS  — SHOWN MOUNTED ON A RH APPLICATOR—  ASSEMBLY  ASSEMBLY  Fig. Code of the co
	3	The state of the s

	BILL OF MATERIAL								
	ASS-200a-2301R								
ITEM	M QTY CTM PART NUMBER PART DESCRIPTION								
0	1	MP-200a-0308R	UNWIND FESTOON IDLER ROLLER MOUNT - LH						
(1)	1	PM-200-0205	DANCER ROLLER SHAFT						
3	3	ASS-200-2131AS	7.5" DANCER ROLLER ASSEMBLY with SHAFT - (ANTI-STATIC ROLLER INSERTS)						
4	1	PM-LL0850	LOCK LEVER						
(6)	1	ASS-215-2110	7.5" TENSION BRUSH ASSEMBLY						
6	1	MP-200-2253	7.5 TENSION BRUSH MTG SHAFT						
0	1	MP-200A-0319	UNWIND TENSION BRUSH MOUNT						
			//						





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TITL	<sup>E:</sup> 360a	SERIES	7.50"	WIDE	POWERED	UNWIND	APPLICATOR	HOUSING	PART:	7.50" V	VIDE UNWI	ND FESTO	ON IDLEF	ROLLER	ASSEMBLY	′ – RH	Dept. Code 70
REV.		SCRIPTION DRAWING	FOR 3	60a PC	WERED UNV	WIND-		REV. DATE 10-08-08	REV. BY: ES	Scale: 1=2	Date: 07/14/11	DRAWN BY: Jeffery Me	endenhall	F: \Engineerin		ts\System Co 5—200a—2	



BILL (	OF MATERIAL				ASS-200a-2303
ASS-	-200a-2303				7100 2000 2000
ITEM QTY CTM PART NUMBER	PART DESCRIPTION				
① 1 PE-CON2020	FEMALE (SOCKET) CONNECTOR				
② 2 PE-CON7048	FEMALE PIN/ SOCKET (22 Ga.)				
③ 1 MP-200a-2314	7.50" UNWND, BRAKE SHAFT				
4 MP-200g-0320	BRAKE GUARD SPACER	-			
(3) 1 MP−200α−2314 (4) 4 MP−200α−0320 (5) 1 MP−200−0229 (6) 1 C−PM−BRK1000	REWIND SPRING RETAINER MAGNETIC PARTICLE BRAKE				
① 1 C-PM-BE1210	3/4" BORE E.R. STYLE BEARING				
	5	II '15 A' I	7	(3)	
0	====				

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TITL	<sup>LE:</sup> 360a SERIES POWERED UNWIND APPLICATOR: HOUSING		PART:-	7.50"	UNWIND, BRAKE ASSEMBLY	Dept. Code 70
REV.	REV. DESCRIPTION  —	REV. DATE	REV. BY: XXX	Scale: 1=2	Date: DRAWN BY: Jeffery Mendenhall	F:\Engineering\Standard Parts\System Components: 200a\ASS-200a-2303

0.000

ASS-200a-2304	Dept. Code 70	onents: 4
EREPRO	PART.7.50" WIDE POWERED REWIND SLIDE ROLLER ASSEMBLY	REV. DATE REV. BY: Scale: Date: DRAWN BY: 10-13-08 ES 1=3 07/14/11 Jeffery Mendenhall F:\Engineering\Standard Parts\System Components:
THIS DRAWING AND DESIGN IS THE PROPERTY OF CTM INTEGRATION INC. AND MAY NOT BI	"THE 3600 SERIES, 7.50" WIDE POWERED UNWIND APPLICATOR	REV. REV. DESCRIPTION O  -NEW DRAWING FOR 360a POWERED UNWIND-

	BILL OF MATERIAL							
	ASS-200-2304							
ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION					
①	2	PM-GD1040	THK Min. LM GUIDE, 140mm, (1) CARRIAGE					
2	1	ASS-200-3168	CYLINDER MOUNTING ASSEMBLY					
3	1	MP-200-3387	ROLLER CARRIAGE PLATE FOR PWR REWIND					
4	4	MP-200-3310	360 TENSION ARM STOP					
(5)	8	ASS-200-2150AS	1.00" GUIDE ROLLER ASSEMBLY-(ANTI-STATIC)					
6	1	PM-200-3388	POWERED REWIND CARRIAGE PROX. FINGER					
7	1	MP-200-3389	CYLINDER ADAPTER BLOCK FOR PWR REWIND					
8	2	MP-215-0202	1.00" Dia. GUIDE COLLARS					

THIS ASSEMBLY IS AMBIDEXTROUS
-SHOWN MOUNTED ON A RH APPLICATOR-

