



SS Finisher

Operation / Maintenance and Parts List

AVERY DENNISON
Manual Edition 3.0
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Manual Part Number 421385

WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference, and
- 2) this device must accept any interference that may cause undesired operations.

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Régulations. Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada



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Warranty Information

Avery Dennison Retail Information Systems, In-Plant Printing Solutions provides the following warranty policy.

Scope

Warranties against defects from workmanship for equipment and parts manufactured and sold from Sayre, PA. Includes time and material except as otherwise noted below.

Time

- New equipment and parts: 6 months
- Refurbished equipment and parts: 90 days
- Warranty period starts when equipment ships from selling location.

General Conditions

Avery Dennison extends warranty coverage under the following conditions.

- Equipment and parts will perform within published specifications. Promised or implied statements by any Avery Dennison employee or representative will not be deemed to vary the terms of the warranty.
- Equipment and parts must be installed and operated according to recommended procedures and operating conditions.
- Consumable elements are not covered. Consumable elements are those that show normal wear from typical equipment usage including, without limitation, printheads, knives, rollers in contact with the web, and sonic units. Avery Dennison reserves the right to determine which elements are defined as “consumable.”
- No customer maintenance may be performed except as directed by qualified Avery Dennison personnel.
- Equipment and parts damaged by negligence or abuse are not covered.
- Avery Dennison US reserves the right in its sole discretion to incorporate any modifications or improvements in the machine system and machine specifications which it considers necessary but does not assume any obligation to make said changes in equipment previously sold.

Equipment Purchased In US and Shipped In US

- Avery Dennison US covers warranty for equipment and parts installed and operated in the Americas (United States, Canada, Mexico, Central America, Caribbean Region, and South America excluding Brazil).
- Outside the US, the local Avery Dennison office is responsible for equipment and parts warranty. Customers must ensure coverage during machine purchase.
- Equipment purchased and exported to regions outside local Avery Dennison office coverage are not covered by warranty. The purchasing agent must acquire a service contract from the Avery Dennison office where the equipment or parts are operated to ensure machine coverage. For example, if an agent

purchases a printer in the US, exports to Brazil, and then needs warranty coverage, Avery Dennison Brazil has no obligation to provide warranty coverage. The agent must purchase services from Avery Dennison Brazil.

THE WARRANTIES PROVIDED HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY OR PERFORMANCE, WHETHER EXPRESS OR IMPLIED. EXCEPT THE WARRANTY OF TITLE, IN NO EVENT SHALL AVERY DENNISON BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF AVERY DENNISON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Service

When ordering machines and supplies in the U.S.A., reference all correspondence to the address below.

EVERY DENNISON Corporation

170 Monarch Lane

Miamisburg, OH 45342

Call: 1-800-214-0872 or (937) 865-2123

For spare parts, requests for service or technical support, contact

EVERY DENNISON Corporation

170 Monarch Lane

Miamisburg, OH 45342

Call: 1-800-214-0872 or (937) 865-2123

For parts and service in other countries, please contact your local AVERY DENNISON supplier.

Operation

Theory of Operation

The SS Finisher was designed to cut and stack pre-printed woven polyester stock. The machine uses ultrasonic vibrations to cut and seal the label producing a cut edge is as soft and smooth as the original label tape. The SS Finisher will accept label tapes that were printed on a variety of different machines.

Safety Issues / Warnings

This machine has some pinch points and hot surfaces. All of these areas have been well guarded and it is recommended that the safety features of this machine are never altered or defeated.

Since ultrasonic is high frequency sound, some noise will be produced as it makes its cut. It is recommended that people in the immediate area wear ear protection. (See appendix "A" for a list of manufacturers of hearing protection.)

Warning:

- High voltage is present in the power supply. Never attempt to operate the unit with the cover off.
- To prevent the possibility of electrical shock, make sure the power supply is properly grounded.
- Keep hands from under horn. High pressure and vibrations can cause injury to hands and fingers.
- Large plastic parts may vibrate within the audible frequency range when cutting. If this occurs, use ear protection to prevent possible injury.
- Do not allow the ultrasonically activated horn to touch a metal base or metal fixture.
- Do not press the "TEST" switch when the converter is removed from the equipment.

Customer Responsibility

Location of SS Finisher

The SS Finisher weighs approximately 114 Lbs. (52Kg). A table of sufficient quality and strength to handle the load of the SS Finisher and supplies must be supplied. The work surface recommended is 96" wide x 30" deep x 32" high.

The SS Finisher should be located in an area that the ultrasonic noise emitted from the cutting operation will not affect others. AVERY DENNISON has taken many steps to keep the SS Finisher noise to the lowest level. The SS Finisher is not recommended for an office environment.

The power source of the SS Finisher should be a dedicated line. The first sign that the SS Finisher is not being supplied with sufficient power is the ultrasonic's will stop cutting, but the rest of the SS Finisher will appear fully functional.

Specification

Label Size	<p>Max: up to 1.57" (40mm) – (1 9/16" (40mm) Tested) web x up to 5" (127 mm) feed - cut and stacked</p> <ul style="list-style-type: none"> - Up to 10.0" (255mm) feed – Without stacking - Add 05420048K Kit 10" tray to stack <p>Min: 5/8" (16mm) web x 1" (25.4mm) feed - See chart Appendix C</p>
Justification	Material must be centered over ultrasonic horn.
Sense Mark	The material must have a pre-printed sense mark on the top side. The sense mark must be a minimum of 1/8" (3.2mm) in the feed direction and 1/4" (6.35mm) across the web. The sense mark must have a clear space of at least 0.3" (7.6mm) just prior to the sense mark.
Speed	Operator adjustable to match speed of printer
Stock	100% polyester uncoated woven fabrics
Interface	Cabling to printers and to Sonics – Full stacker shut off only
Control Panel	Push-button SS Finisher functions with 2 Line x 24 Character International LCD Backlit Display
Dimensions	20.0" (508mm) high x 26" (660mm) wide x 15" (381mm) deep
Weight	114 Lbs. (52Kg.)
Electrical	90-132 / 180-265 VAC 50-60Hz 10/5 Amp - factory set
Temperature	41°F (5°C) to 104°F (40°C)
Humidity	5% to 90% non-condensing
Other Features	<ul style="list-style-type: none"> - Life Counts - Operator adjustable: cut position - Error Detection of: guard open, full stacker - Self Diagnostics - Missed sense mark detection and correction - Reflective Sensor (Top of Web Only)
Options	<ul style="list-style-type: none"> - Flag cutting – (Same length as label only) - Spare Parts Kit - International Hardware Kit - 05420048K – Kit, 10" stacker tray option - field

The SS Finisher is a modular design. It can be used with any of AVERY DENNISON fabric printers including the SNAP 500, SNAP 500 2 over 1 and SNAP 700.

Ultra Sonic Power Supply

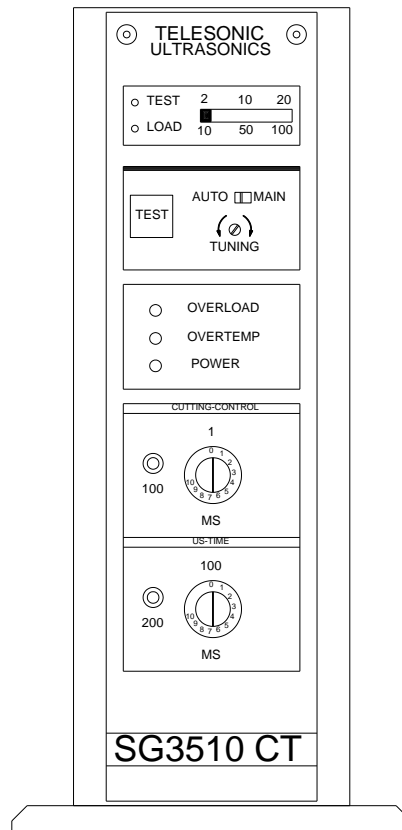
Caution

Only qualified technicians should service the power supply.

The ultrasonic attachment is made up of several components. They are the power supply, the horn assembly and the connecting cable. In addition there is a knife assembly with a changeable tool steel blade.

The power supply should be located next to the SS Finisher. This unit generates electrical pulses at 35 KHz to the converter. All guards must be closed for the Sonics to be activated. The power supply contains a "TEST" button, power indicator light, Auto/MAN switch, Cutting and US-Time controls and a relative power gauge.

NOTE: The power supply is adjusted for proper operation at the factory. **DO NOT** change any of the adjustments on the power supply.



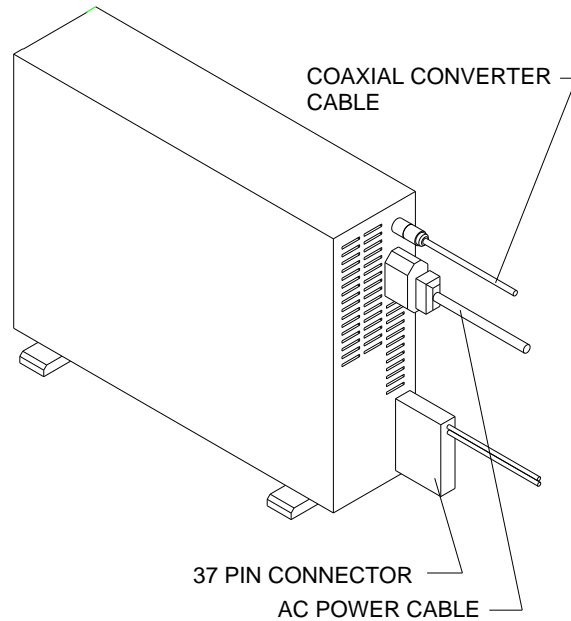
The Ultrasonic Power Supply is pre-programmed for the correct settings at the factory. The following instructions describe how to check and change these settings.

IMPORTANT: FOR PROPER OPERATION, USE THE FACTORY SETTINGS AT ALL TIMES. CHANGING THESE SETTINGS MAY RENDER THE SONIC KNIFE INOPERABLE, REDUCE THE QUALITY OF THE CUT AND/OR REDUCE THE RELIABILITY OF THE SONIC KNIFE.

Settings

The Power Supply is set properly at the factory. Any changes to the factory setting may result in improper operation. If necessary, the factory settings may be restored as follows:

AUTO/MAN switch	AUTO
CUTTING CONTROL	0
US-TIME	0



Test Button

The "**Test**" button can be used to check the operation of the sonic stack assembly. This is done by depressing the switch while observing the power indicator. If more than 2 bars are illuminated, the stack requires repair.

AUTO/MAN Switch

The AUTO/MAN switch should always be in the AUTO position.

CUTTING-CONTROL and US-TIME Controls

The CUTTING-CONTROL and US-TIME Controls should always be set to 0.

Power

"Power" on pilot light indicates when the power supply is on. This only indicates that the power supply is connected to the line power. Ultrasonic energy is only generated during the actual cut cycle. This is indicated by the green light next to the US_TIME control.

Connecting the Ultrasonic Power Supply Power Cord

Line cord

Plug the line cord into the mating receptacle on the back of the power supply and secure it with the metal bail. Plug the other end of the line cord into the line (mains) receptacle.

NOTE: The Ultrasonic Power Supply has a power switch. Once powered on the Ultrasonic energy is only generated during the cut cycle.

Sonic Stack Cable

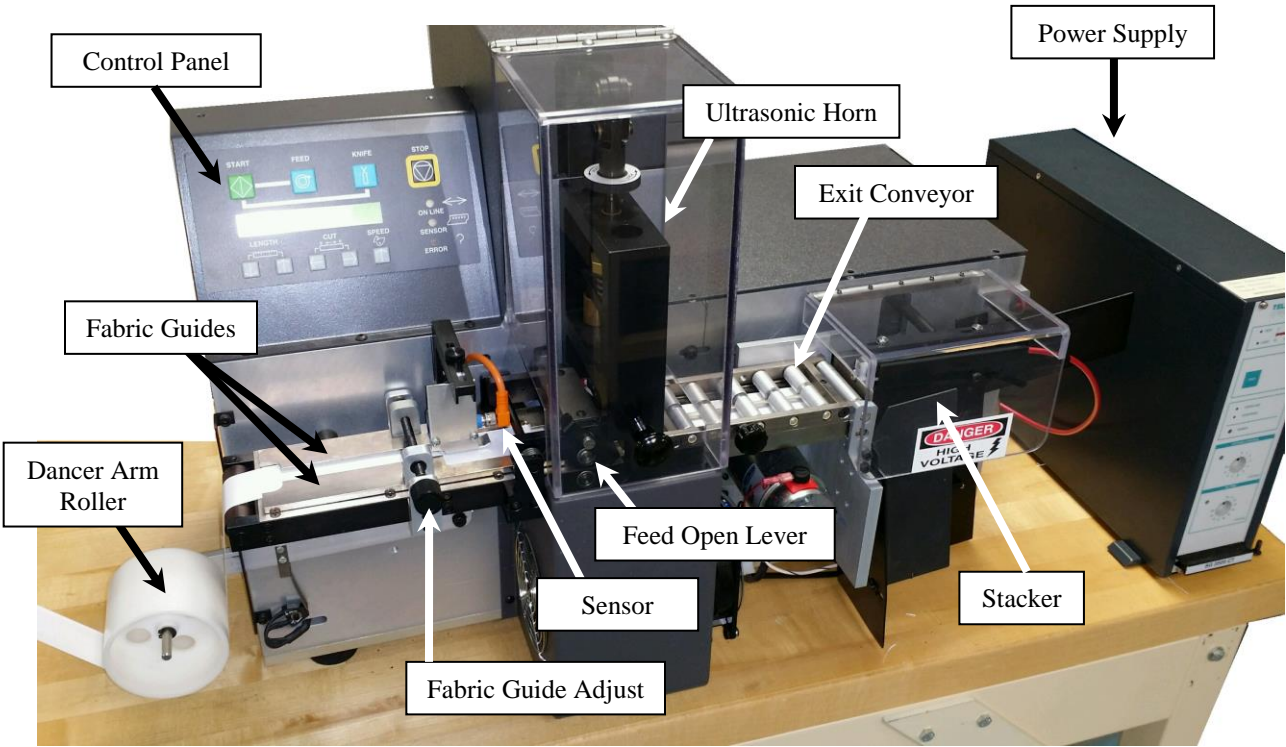
The Sonic Stack Cable plugs into the mating connector on the rear of the Power Supply. Insert the plug firmly into the socket until it is fully seated.

Power Supply Control Cable

The Power Supply Control Cable plugs into the 37-pin connector on the rear of the Power Supply. Plug in the cable and secure with the retaining screws.



Machine Parts



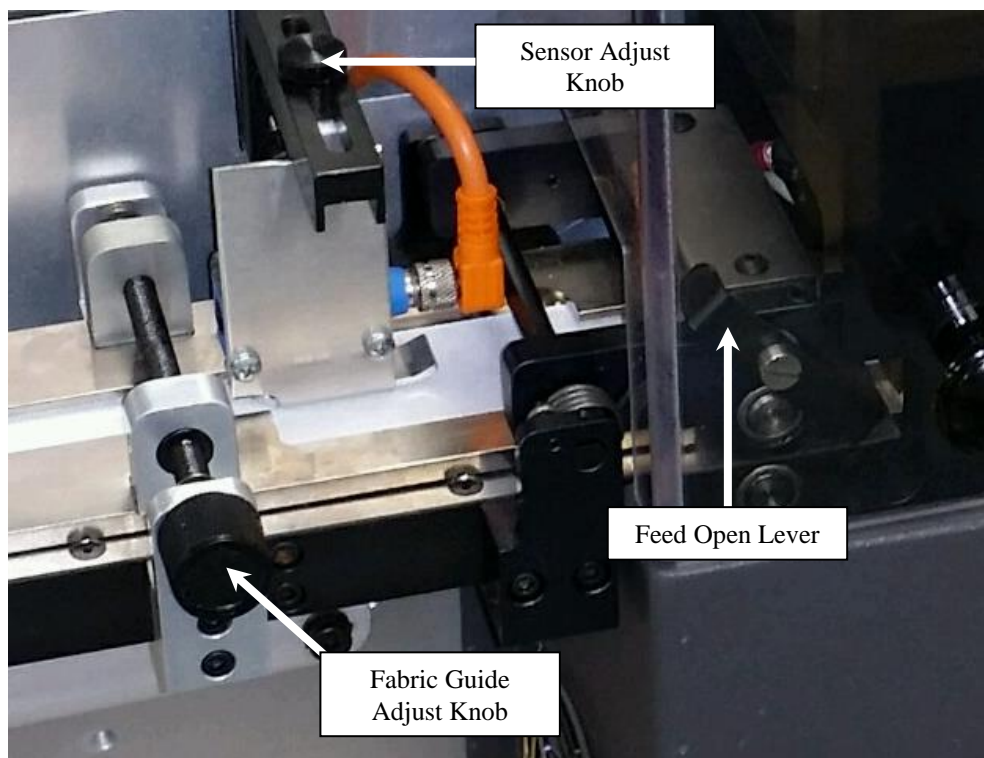
Threading Fabric

Preliminary Adjustments

Fabric Guide Adjustment - Rotate the Fabric Guide Adjust Knob until the self-centering guides are at the correct width. Slide the fabric in the slots of the two guides to test the width setting. The fabric should slide without buckling (too narrow) or excessive side-to-side motion (too wide). Adjust the guides evenly on both sides, as the fabric must run centered through the machine. If necessary, center the Fabric Guide over the fabric by adjusting the Fabric Guide Bar Adjust.

The Feed Pressure Roller is spring-loaded which places constant pressure on the fabric. Use the Feed Open Lever to hold the Feed Pressure Roller open for easy threading. Lower the Feed Pressure Roller when ready to operate the machine.

Sensor Adjust - Adjust the sensor in the web direction so that the printed sensemark on the fabric will align with the sensor beam.



Fabric Threading Procedure



Adjust the Fabric Guide to the proper Fabric width

Open the Knife Assembly Plastic Cover

Place the Feed Open Lever in the vertical position, opening the Feed Pressure Roller.

Open the Exit Conveyor

Grasp the fabric material and thread as follows:

1. Under the dancer arm roller
2. Up into the Feed Guide
3. Between the Feed Guide slots
4. Under the sensor
5. Under the Feed Pressure Roller
6. Under the ultrasonic knife blade
7. Into the Exit Conveyor
8. Position the fabric so that a sensemark is 10-15mm before the sensor
9. Position the Feed Open Lever so that the Feed Pressure Roller closes.
10. Close the Exit Conveyor and Knife Assembly Plastic Cover.
11. Press the Start to operate the machine.

Adjustments

Ultra Sonic Horn "Stack"

The "Converter / Horn" assembly is called the "**Stack**". The stack generates the ultrasonic energy that cuts and fuses the ends of the fabric.

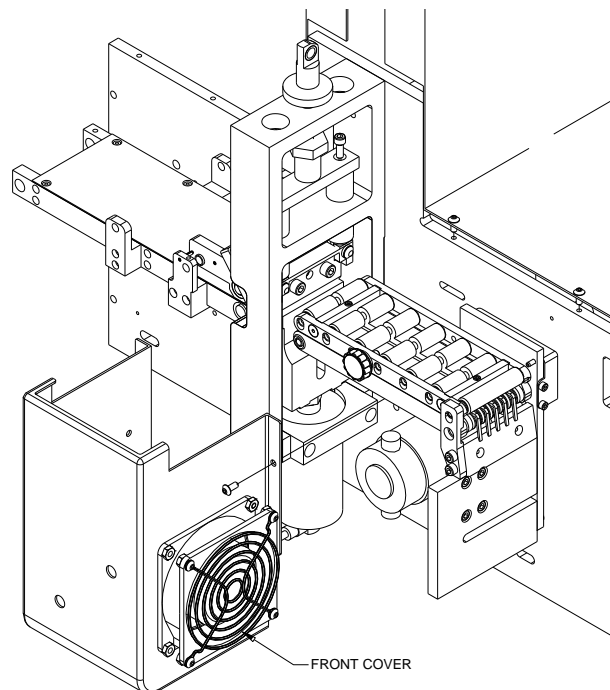
The converter receives the electrical pulses from the power supply and converts them to mechanical lineal motion. This motion is then amplified as it goes through the "Horn". This causes the horn to vibrate at 35 KHz acting like a tiny impact hammer. This action causes friction heat that cuts and fuses the label tape.

CAUTION: The horn can cause burns if touched during operation

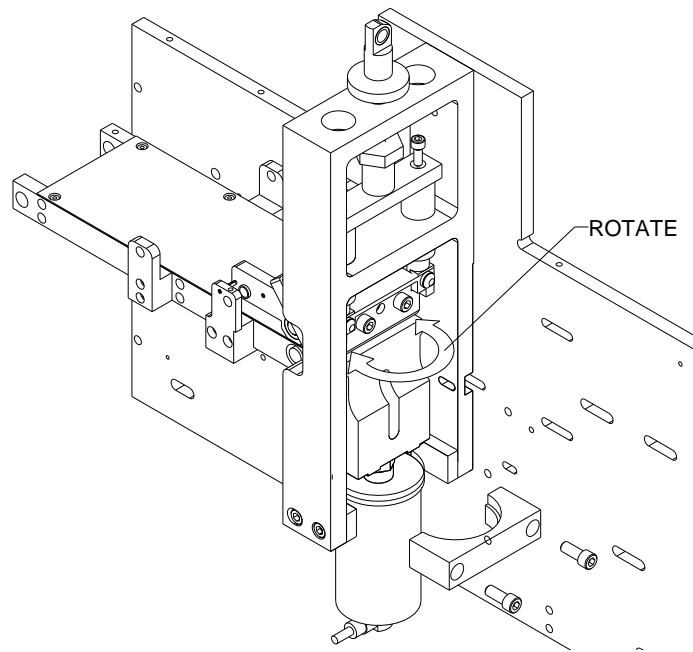
The SS Finisher has been set-up at the factory to run a checkout stock as the minimum checkout requirement. Depending on the shipping destination and the information supplied to the factory, the actual production job the customer has ordered will be tested.

At times the unit will require adjustment and maintenance. The top knife will need to be replaced and squared, the stack will also need to be adjusted to cut in a new location, and general tuning will need to be done to keep the SS Finisher in top running condition. The following sections are in order of procedure to set-up the knife and to keep the SS Finisher cutting properly.

Remove Front Cover to Make Adjustments



Squaring the Horn to the Blade



To square the Horn to the Blade, first loosen and remove the 2 cap screws, shown above. Remove the outer bracket as show. This will allow the stack to rotate. Once they are loose, place a 3/16 ball driver next to the deck (far side of horn) and slide entire stack against the ball driver as a guide to square the horn to the deck. Replace the bracket and 2 screws.

Ground Detection Sonic Cutter

The SS Finisher has a Ground Detect Circuit that turns the sonic power off after the blade has cut through the fabric. This reduces blade wear and increases the life and reliability of the blade.

The blade holder and blade is electrically isolated from the frame of the machine. A wire is attached to the blade holder. A circuit looks to see when the blade comes in contact with the horn surface and shuts down the sonic power source.

Leveling the Top Blade

CAUTION: Turn off the power to the power supply only.

Remove the material from the horn and knife blade area. Use a 5/32" "T"-handle or Allen wrench to loosen the two leveling screws located each side of the pivot pin on the knife blade holder. Jog the machine with the START/TEST buttons to bring the blade to the horn surface under full pressure. Evenly tighten the two leveling screws located each side of the pivot pin on the knife blade holder.

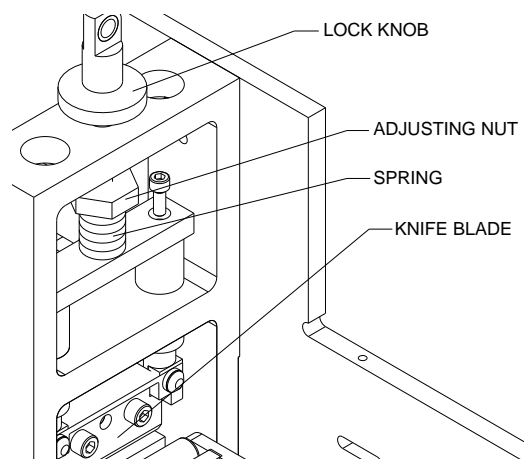
Turn the sonic power supply back on. Cut some fabric to determine if the blade is level. If not level – repeat the above procedure.

Adjusting Knife Spring Pressure:

The .750 gap setting shown below – under “Knife Pressure” - is the initial starting point for a new knife blade. As the knife begins to show intermittent labels not being cut clean then an adjustment is needed to the spring pressure.

If the knife is not cutting the label clean and delivering a cut single label to the stacker then the knife should be checked for level (see leveling procedure). **NOTE:** Never pull the labels apart to use them as they can fray when washed. If no improvement is seen, make sure the “Lock Knob” is tight, then increase the pressure one flat on the adjusting nut. If no improvement is seen then increase one more flat of the adjusting nut. This procedure can be repeated several times during the life of the upper blade until the pressure will no longer cut. At this point the pressure is greater than the power of the Sonics and will stall the horn, replace the blade.

Note: Bring the Adjusting Nut back to the .750” gap setting whenever a new blade is installed.



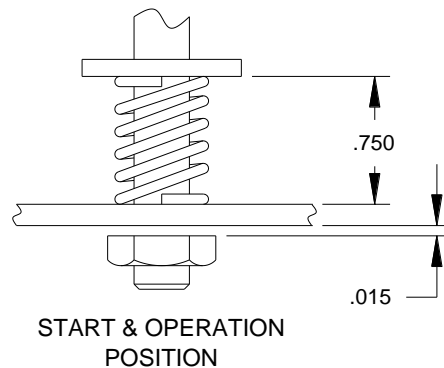
Adjusting Knife Pressure

This new design comes with factory set knife pressure. The following diagram shows the factory settings for pressure with a new top blade. Should the unit stop cutting, the knife blade should be leveled first, and if unsuccessful, add pressure with the “Adjusting Knife Spring Pressure” instructions above.

A means to adjust this pressure is built into the knife linkage. To make this adjustment, first the .015” gap must be set - followed by the .750” gap.

To set the .015” gap, jog the machine until the knife blade is in its full down position with no fabric under the blade. Loosen the LOCK KNOB and turn the ADJUSTMENT NUT until the gap is at .015”. Retighten the LOCK KNOB.

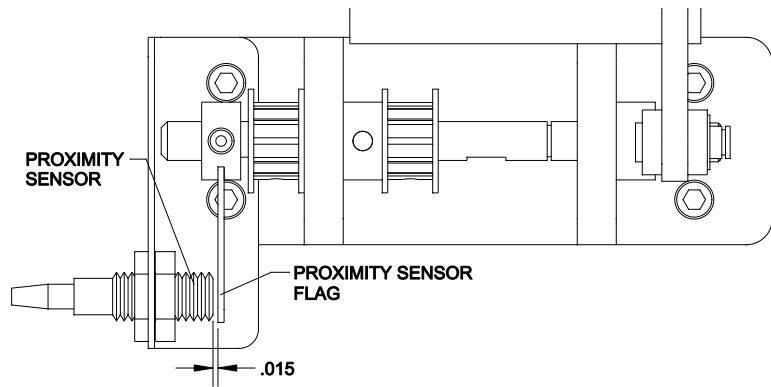
To set the .750” gap, jog the machine until the knife blade is in its full down position with no fabric under the blade. Loosen the screw on the ADJUSTING NUT; turn the ADJUSTMENT NUT until the gap is .750”. Tighten the setscrew.



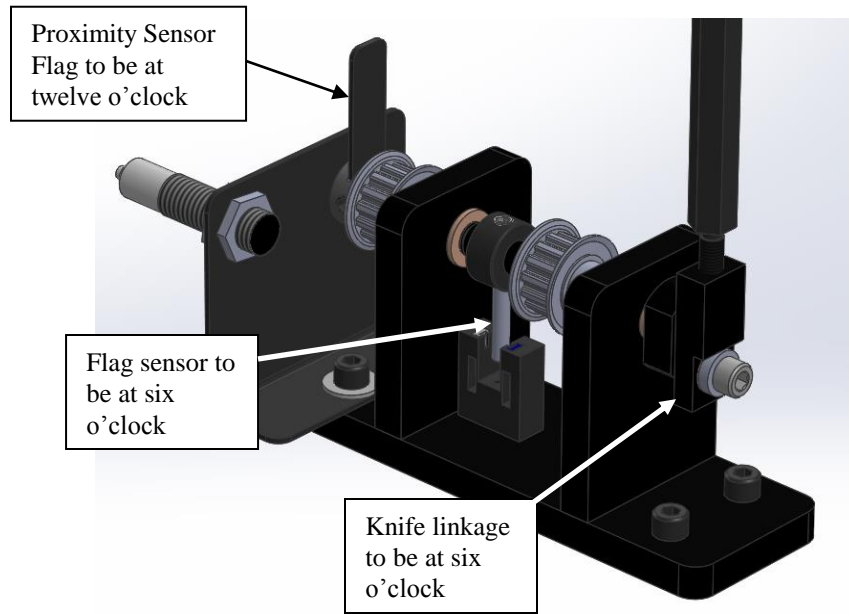
Proximity Switch Adjustment

The Proximity Switch triggers the Ultrasonic Power Supply to begin generating Ultrasonic energy during the cut. If the Proximity switch is not adjusted properly, the Power Supply will not be triggered and the unit will not cut.

The Proximity Sensor Flag (see illustrations below) should be adjusted as shown. The flag should be positioned so that there is a 0.015” (0.4mm) gap between the Flag and the face of the Switch. When the C-Sensor flag is in the six o'clock positions, the proximity flag should be approximately 90 degrees above the proximity sensor.



Note: Above view is looking down on top of machine.

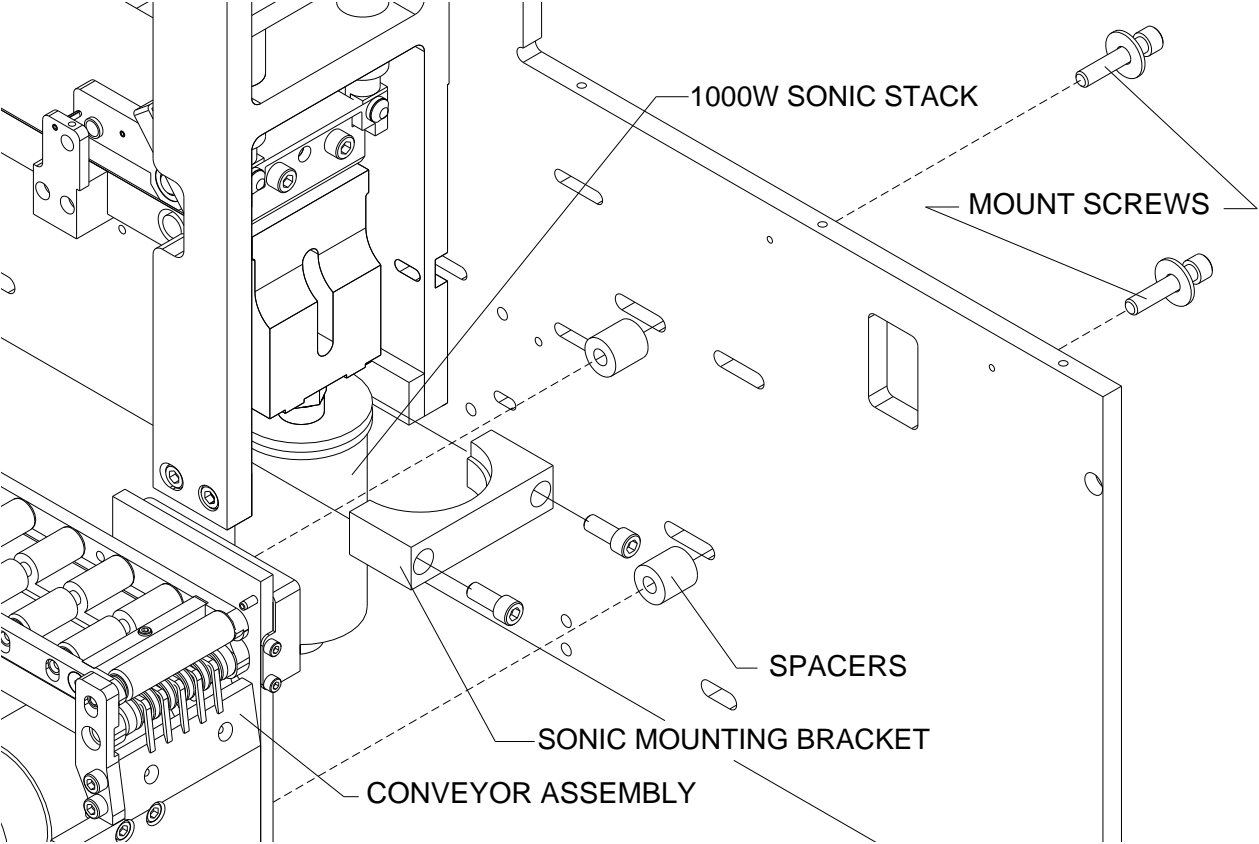


Note: Above view, looking at flag and sensor toward the exit conveyor side of machine.

Maintenance

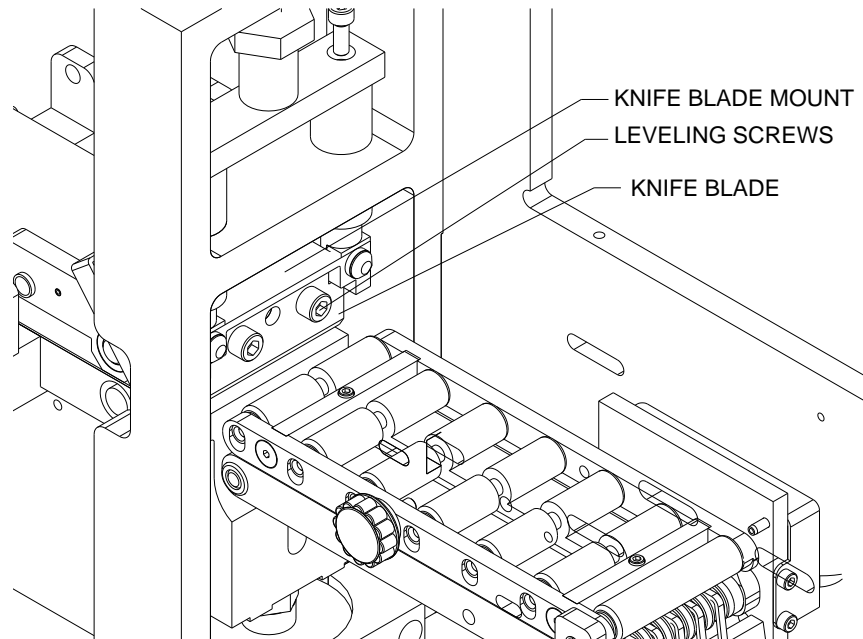
Horn Replacement

1. Remove the out feed Conveyor Assembly by loosening the mount screws located inside the machine, behind the machine upright plate.
2. Make sure to save the spacers that mount the out feed Conveyor Assembly away from the upright.
3. Removed the sonic mounting bracket by loosening the mounting bracket screws.
4. Remove the sonic stack and replace with a new, or rebuilt sonic stack assembly.
5. Install components in reverse order.



Replacing the Top Knife Blade

Upper blade wear is caused by the abrasion from the ultrasonic vibration when the horn face and the edge of the blade are in contact. There are four major adjustments that control the life of the upper blade. The first is a properly tuned power supply. Second is the blade parallel the horn face. Third is the amount of pressure between the blade and the horn (factory setting .750"). Fourth is the dwell time between the blade edge and the horn face after the cut has been made (factory setting .015"). The following is a guide to properly replace the upper knife blade.



Note:

When removing the knife blade, the blade may seem tightly mounted to the knife mount pin. Pull blade off of mount pin by pulling from the top of the blade.

Trouble Shooting

Ultrasonic Noise

Since ultrasonics is high frequency sound, some noise will be heard as it makes its cut. It is recommended that people in the immediate area wear ear protection. The noise can be minimized by making some of the following adjustments:

Cause	Solution
Bridge blade or other metal hitting horn	Maintain .015" clearance around horn
A component of the stack loose	Check all parts including clamps and the screws holding the stack to the machine.
Blade is loose in the sandwich	Check by trying to slide the blade endwise in the sandwich. If the blade slides - try tightening the sandwich screws to increase the clamp pressure.
Too much dwell of the blade	Re-adjust the upper blade. See procedure in Blade Replacement
Blade is not square to the horn face	Re-adjust the upper blade. See procedure in Blade Replacement
Blade not parallel to horn face.	Re-adjust the upper blade. See procedure in Blade Replacement

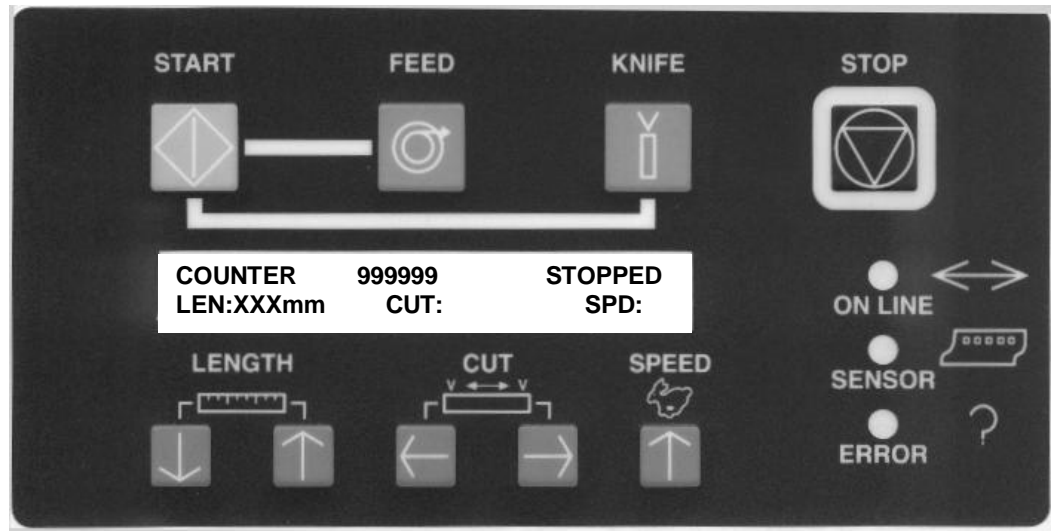
Sonic Troubleshooting

(See Section 4-5 of Branson Manual)

Problem	Probable Cause	Remedy
A - Sonics are not working and power supply light is off.	1 – Blown fuse	1 – Replace fuse on back end of power supply.
	2 – On / Off switch in “off” position	2 – Move switch to “on” position
	3 – Power lamp bulb burned out	3 – The lamp could be off but power supply cooling fan is running. Unit is OK to operate.
	4 - Interface cable not plugged in	4 – Check interface cable between power supply and SS Finisher
B - Sonic power supply is on but no vibration is felt at the converter in test mode.	1 - Cable to converter is bad.	1 – Replace the stack assembly.
	2 - Converter is bad.	2 – Replace the stack assembly
	3 - Horn is bad.	3 – Replace the stack assembly
	4 - Power supply is bad.	4 – Replace power supply – Return for rebuilding
	5 - Horn assembly not connected to power supply	5 – Check connection
C - Fabric cut is indented - but not severed in two.	1 - Improper power setting	1 – Turn on power supply – check all connections
	2 - Power supply not turned on	2 – Turn on power supply
	3 - Knife has become dull	3 – Change knife blade insert.
D - Fabric cuts on only one side.	1 - Knife anvil is not parallel with the horn.	1 – See knife-leveling procedure in the blade replacement section.

Control Panel Operation

SS Finisher Controls



Start

- Starts the SS Finisher
- ON LINE light must be GREEN
(SS Finisher waiting for material to cut)

Feed

- FEED and START must both be used
- Feed will stop when the buttons are released
- Stock moves through in one continuous strip
- Stock moves through without cutting

Knife

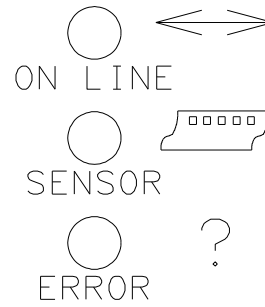
- KNIFE and START must both be used
- Knife movement will stop when the buttons are released
- The upper knife will move slowly towards the horn face. Machine will make a ticking sound.
- Allows the operator to visually see the gap between the knife and the horn face. – Make rough knife leveling adjustments.

Stop

- The stop button will stop the cutter at the end of the current label being sensed.

Indicator Lights

The AVERY DENNISON SS Finisher has three Indicator lights. These lights are used along with the LCD display to tell the operator the current status of the SS Finisher.



On Line

OFF

- Has not been powered on.
- Is in its power - up sequence.
- Failed the system test

ORANGE

- Passed system test
- Ready for operation.

GREEN

- Start button has been pressed - SS Finisher running
- Accumulator waiting for material.

Sensor

GREEN

- SS Finisher is stopped - light is on - sensor is positioned over a sense mark
- Flashing light while SS Finisher is running - the sensor is in line with the sense marks. See Color Mark Sensor Adjustment

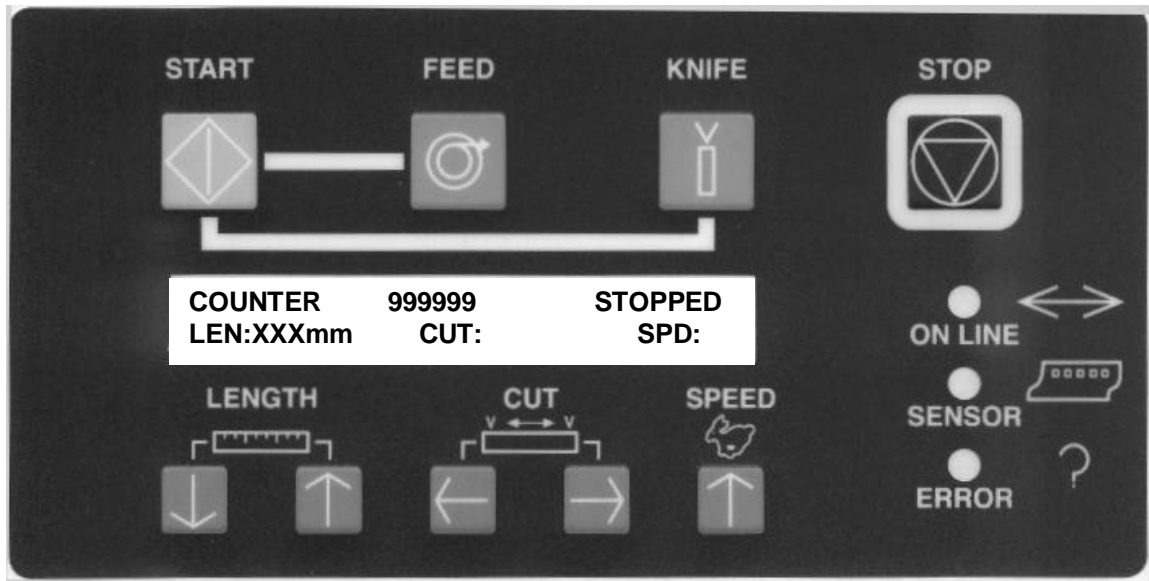
Error

ORANGE

- System inter-lock triggered, see display for error.
- See Appendix B - Error Messages

Instrument Panel

Single Screen Input

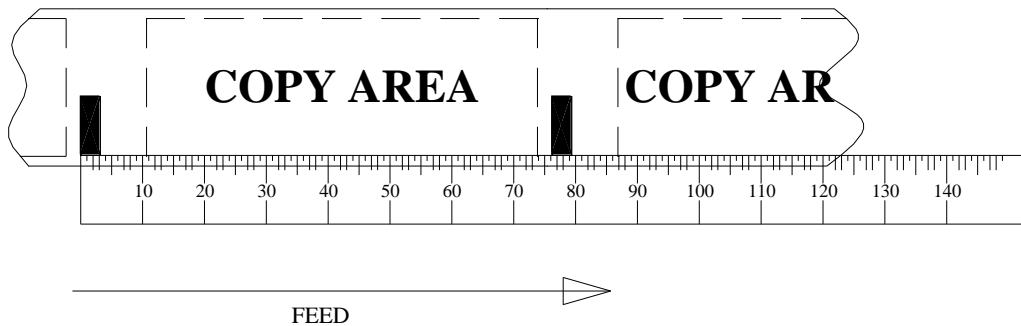


Overview

The display has only three operator-input fields displayed at all times. The left two gray keys at the bottom of the display control the cut length in millimeters. The next two buttons adjust the cut position and the last button is speed. The speed selection has little impact on machine throughput.

Feed Length

To enter the proper label feed length - measure the label desired to be cut from one registration mark to the exact same place on the next registration mark as illustrated below. The feed length should be set to 76mm.



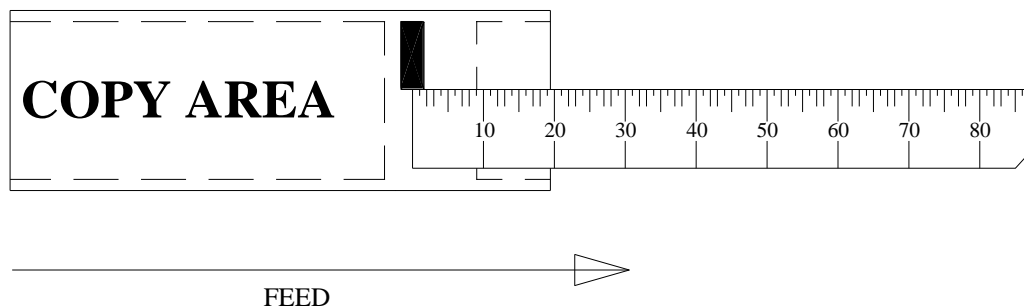
The feed length may have a value from 25mm to 129mm. Use the arrow keys to ↑ increase or ↓ decrease the displayed value. The value will change in single millimeter increments by holding the button or single button pulses. The value that is displayed will be the new length - no save or enter key is required.

Position the label registration mark so that the green light beam from the sensor is just to the right of the registration mark. The light should be in a

blank area of the label in the feed direction. This should be done manually.

Cut Position

When the desired feed length has been selected, start the printer and run labels into the stacker. After two or three labels have fallen into the stacker - stop the printer and remove the top label. Measure the distance from the end of the label to the desired cut location. Add or subtract the value from the value displayed. **DO NOT** input the value, it must be added to or subtracted from the current value. The maximum value is \pm the label length from zero. The cut value cannot be greater than the label length. The cut number for the label illustrated below should be decreased by 19mm to cut in the center of the registration mark.

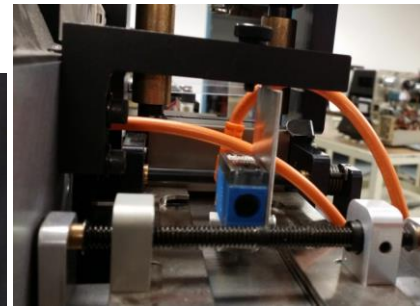


Use the arrow keys to \uparrow increase or \downarrow decrease the displayed value. The value will change in single millimeter increment by holding the button or single button pulses. The value that is displayed will be the new length, no save key is required.

Contrast Sensor Adjustment

Overview

The sensor is designed to register off a preprinted mark on a label. The label must have a no copy area measuring 7.8mm in the feed direction prior to the registration mark. The registration mark is to measure 3mm in the feed direction and 10mm across the web. The registration mark must be a solid bar. The registration mark must be black on a white material



Setup

Place a strip of the desired printed material through the web guides on the feed deck under the registration sensor and through the open feed roller. There must not be any drag from the web guides or the foot on the registration sensor. If there is drag from the web guides open them equal distance so the web tracks down the center of the feed deck. If the foot on the sensor contacts the web make sure the "Locating Clamp Screw" is snug. If this doesn't correct the drag, loosen the two "Mount Screws" that mount the sensor bracket to the upright frame. Insert a .015" shim or 3 layers of material between the feed deck and the "Sensor Foot". Retighten the two "Mount Screw" and remove the spacing material. If the foot drags on the web this will steer the web off center and not track correctly through the feed roller.

Turn on the Finishing Station. Loosen the "Location Clamp Screw" and place the green light beam in line with the registration mark on the label in the feed direction. Advance the web by hand with the feed open until the green sensor light is positioned just prior to the label registration mark. With the green light setting on blank material, turn the "Trim Pot" counterclockwise until the "Amber Light" below the "Trim Pot" goes out. Slowly turn the "Trim Pot" clockwise until the "Amber Light" comes back on. Move the web until the green light beam sets directly over the registration mark and the "Amber Light" should go out. If the "Amber Light" stays on - rotate the "Trim Pot" counterclockwise until it goes out. Move the web slightly left to right by hand so the green light moves from the registration mark to blank material and watch the "Amber Light". The light should quickly flash on and off. If the "Amber Light" is slow to react turn the "Trim Pot" 1/8 turn clockwise and retest until the light toggles quickly.

LCD Display

The LCD display is a 2 line, 24 character, with back lighting feature for easy readability. The first line of the display in most cases will be a prompt or question. The second line is the response to the prompt or question.

Diagnostic Tests

During power up the following tests and screens will be displayed.

DIAGNOSTIC TEST 1

This screen is displayed during the **Control Panel** test.

This screen will be displayed while the Front Panel is initializing and waiting for the MIB response.

The code will check the functionality of the LED's and the display. Each state of the LED's will be checked - (red, green, amber and off). The code will check the LCD display by writing a character to the display, checking for communications and then reading the character back and comparing with the code. If an error occurs, the code will halt the diagnostic test and blink the ERROR LED.

The keypad is also checked during DIAGNOSTIC TEST 1. Each key is tested to see if it is stuck on. If a fault condition is detected, the test is halted and the screen will display the first error key found with the following display:

(BUTTON NAME) KEY STUCK
DIAGNOSTIC TEST 1

The (BUTTON NAME) will be one of the push button names on the front panel - START, FEED, TEST, STOP, EXIT, MODE, <YES, NO>, OR ENTER.

When the code has finished the above tests, the code will attempt to communicate with the 196 Machine Control Board (MIB). If all tests are complete and no errors detected, then the system will go to the HOME screen.

Recommended Spare Parts:

Qty.	Part #	Description (115 Volt Machine) – Kit Number 420009
1	571151	Power Supply, 500w 115v
1	356026	Timing Belt 1/5P 57T
1	571157	Sonic Horn Stack
1	424017	Roller – Molded Urethane
2	424020	Timing Belt 1/5P 52T
5	577056	Knife Blade
1	921168	Fuse - 10A, 5x20mm
4	990080	10:32 x 3/8" Cap Screw
7	991028	"O" Ring Drive Belt
1	990755	Fuse - 1.0A 250V time delay
1	990759	Fuse - 2.0A 250V time delay
1	990765	Fuse - 4.0A 250V time delay

Qty.	Part #	Description (230 Volt Machine) – Kit Number 420010
1	571155	Power Supply , 1000w 230v
1	356026	Timing Belt 1/5P 57T
1	571157	Sonic Horn Stack
1	424017	Roller - Molded Urethane
2	424020	Timing Belt 1/5P 52T
5	577056	Knife Blade
2	990669	Fuse - 5.0A 250V time delay
4	990080	10:32 x 3/8" Cap Screw
7	991028	"O" Ring Drive Belt
1	990755	Fuse, 1.0A 250V time delay
1	990759	Fuse, 2.0A 250V time delay
1	990777	Fuse, 0.5A 250V time delay

Troubleshooting Electrical

Power Up / Sign On Communications

Problem	Probable Cause	Remedy
A - Machine fails to power up	1 – Incorrect power amplitude	1 - Confirm that the AC entry is configured for the line voltage intended to be applied to the machine. Failure to do so can damage the machine's internal power supply. Refer to the "Fuse Configuration"
	2 – Lack of power to the machine	2 - Check that both ends of the power cord are securely plugged in. 2A - Confirm that the outlet the machine is plugged into has power.
	3 – Missing or blown fuse(s)	3 - Check that the fuse(s) located inside the AC entry are present and intact. Replace as needed. Refer to the Fuse Configuration.
	4 – Unconnected cable / connector inside machine.	4 - Power off and remove the power cord from the AC entry. Remove the back cover and inspect the cables and connectors to and from the power supply. Refer to the "Electrical System Schematic".
B - Front panel displays no text or nothing at all	1 – Front panel cable unplugged.	1 - Power off and remove the power cord from the AC entry. Remove the back cover and inspect the cables and connectors to and from the front panel. Refer to the "Electrical System Schematic".
C - Front panel does not complete diagnostic test 1.	1 – Front panel board unplugged from the main board.	1 - Power off and remove the power cord from the AC entry. Remove the back cover and check connectors.
D - Stock does not advance when the start button is pressed.	1 – An interlock condition exists.	1 - Determine the number and type of interlock(s) by reading the front panel display. As each is corrected, the number of errors will decrease.
	2 – Tag length or Offset values are invalid.	2 - Check values located in front panel and adjust.
	3 – Feed motor unplugged or faulty	3 - Check feed motor cable and/or replace feed motor.
	4 – Feed roller not gripping stock	4 - Adjust feed pressure. Refer to "Mechanical Adjustment of Feed Roller Pressure".
	5 – Feed rollers bound	5 - With power off, check that all rollers turn freely.
	6 – Stock Bound	6 - Check that stock will pull through the printer with little or no resistance.
E - The Stacker fails to run.	1- The stacker cable is not connected	1 - Power off and remove the power cord from the AC entry. Remove the back cover and inspect the cables and connectors.
	2 – Faulty Stacker Motor	2 - Replace Stacker Motor.
	3 – Stacker jammed.	3 - Remove cause of the jam at the stacker.

Appendix A — Manufacturers of Hearing Protectors

AMERICAN OPTICAL COMPANY
Department 4041
Safety Division, 14 Mechanic Street
Southbridge, MA 01550

BILSON INTERNATIONAL, INC.
109 Carpenter Drive
Sterling, VA 22170

E-A-R
A Division of the CABOT CORPORATION
7911 Zionsville Road
Indianapolis, IN 46268

FLENTS PRODUCTS COMPANY, INC.
Ely Industrial Part, Building #2
Norwalk, CT 06854

GLENDALE PROTECTIVE TECHNOLOGY, INC.
130 Crossways Park Drive
Woodbury, L.I., NY 11797

SELLSTROM MANUFACTURING COMPANY
Sellstrom Industrial Park
220 South Hicks Road, Box 355
Palatine, IL 60067

Appendix B – Error Messages

When the SS Finisher detects an error condition, the display will show the last error encountered. When the last error is removed – the display will show previous errors – if they exist.

When the machine is first powered on, the front panel will display the following screen;

D	I	A	G	N	O	S	T	I	C	T	E	S	T	1						

If the front panel display remains in this condition – it is indicating a failure to communicate from the front panel to the motherboard. Check connections to the motherboard.

When the machine has successfully completed initializing, the front panel will display one of the following two screens;

C	O	U	N	T	E	R		9	9	9	9	9	9				R	E	A	D	Y
L	E	N	:	X	X	X	M	M	C	U	T	:	X	X	X		S	P	D	:	

OR

C	O	U	N	T	E	R		9	9	9	9	9	9			S	T	O	P	P	E	D
L	E	N	:	X	X	X	M	M	C	U	T	:	X	X	X		S	P	D	:		

If the length of the label is not set correctly or there is a problem with the feed mechanism – the machine will not operate and the following error message will be displayed;

						A	L	I	G	N	S	T	O	C	K						
L	E	N	:	X	X	X	M	M	C	U	T	:	X	X	X		S	P	D	:	

If the guard door is open or if there is a faulty interlock switch – the machine will not operate and the following message will be displayed;

						C	L	O	S	E	G	U	A	R	D						
L	E	N	:	X	X	X	M	M	C	U	T	:	X	X	X		S	P	D	:	

Appendix C – Label/Machine Speed

The SS Finisher is capable of producing labels from 25mm to 259mm in length. Not all AVERY DENNISON printers will slow down sufficiently to produce the minimum feed so the SS Finisher will not fall behind creating a loop of material between the two products. AVERY DENNISON 6500 printer will run at the slower speeds labeled as “False”. AVERY DENNISON 636, 656, 676 and SNAP printers will slow down to 3” per second minimum feed rate. Use the chart below to make the proper format speed selection for the desired printer

636 and 656 printer speeds: 3”/sec, 4.5”/sec, 6”/sec and 7”/sec.

676 and 676LKP printer speeds: 3”/sec, 4”/sec and 5”/sec.

SNAP printer speeds: 3”/sec, 4.5”/sec, 6”/sec and 7”/sec.

Note: If running a SS Finishing Station with a LOKPRINT System – **DO NOT** run above 5” per second. The label will not be finished properly and may not hold up in the application.

Print Speed	Minimum Length
3 IPS	1” (25 mm)
4 IPS	1.6” (40 mm)
4.5 IPS	1.7” (42mm)
5 IPS	2” (52mm)
6 IPS	2.3” (58mm)
7 IPS	2.8” (70mm)

Labels Rate Chart

LABEL LENGTH	Machine Speed in Inches per Second						
	2 IPS	3 IPS	4 IPS	4.5 IPS	5 IPS	6 IPS	7 IPS
1.0" (25mm)	122	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
1.2" (30mm)	102	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
1.4" (35mm)	87	131	FALSE	FALSE	FALSE	FALSE	FALSE
1.6" (40mm)	76	114	FALSE	FALSE	FALSE	FALSE	FALSE
1.8" (45mm)	68	102	FALSE	FALSE	FALSE	FALSE	FALSE
2.0" (50mm)	61	91	122	FALSE	FALSE	FALSE	FALSE
2.2" (55mm)	55	83	111	125	FALSE	FALSE	FALSE
2.4" (60mm)	51	76	102	114	FALSE	FALSE	FALSE
2.6" (65mm)	47	70	94	106	117	FALSE	FALSE
2.8" (70mm)	44	65	87	98	109	FALSE	FALSE
3.0" (75mm)	41	61	81	91	102	FALSE	FALSE
3.2" (80mm)	38	57	76	86	95	114	FALSE
3.4" (85mm)	36	54	72	81	90	108	FALSE
3.5" (90mm)	34	51	68	76	85	102	FALSE
3.7" (95mm)	32	48	64	72	80	96	FALSE
4.0" (100mm)	30	46	61	69	76	91	107
4.1" (105mm)	29	44	58	65	73	87	102
4.3" (110mm)	28	42	55	62	69	83	97
4.5" (115mm)	27	40	53	60	66	80	93
4.7" (120mm)	25	38	51	57	64	76	89
5.0" (125mm)	24	37	49	55	61	73	85
5.1" (130mm)	23	35	47	53	59	70	82

How to Use Chart:

- Locate the desired label length or next highest length shown in the left hand column.
- Move across the top of the page to the desired speed
- Move down the column and match the label length selected
- This is the estimated labels per minute rate the SS Finisher will produce. All marginal size labels must be tested with the desired format.
- If the speed selected is listed as "False" move to the next slower speed available.
- Any speed between the "False" rate and the next highest allowed speed MAY run but must be tested on the desired format.

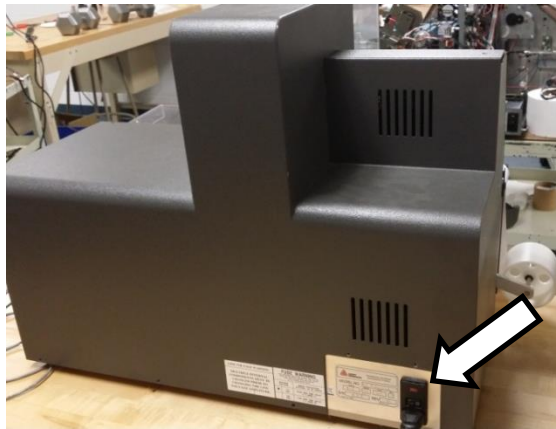
Appendix D – Multi-color Contrast Sensor

Sensor Installation - Option No. 05420050

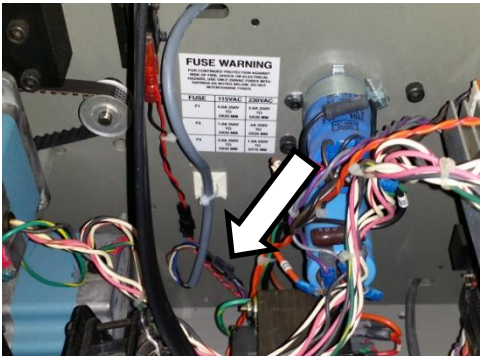
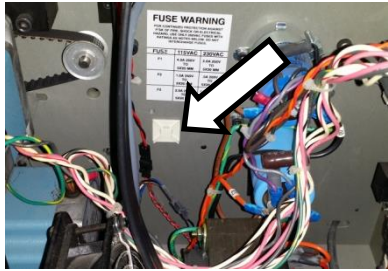
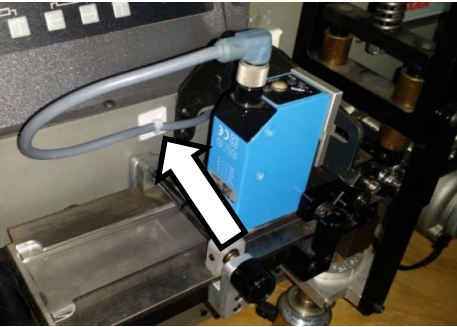
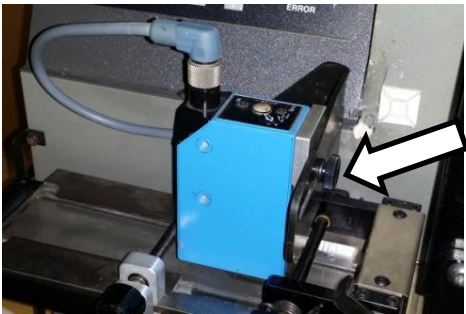
Removing the Rear Cover

1. Turn off the power to the SS Finisher and unplug the power cord.

Remove the back cover.



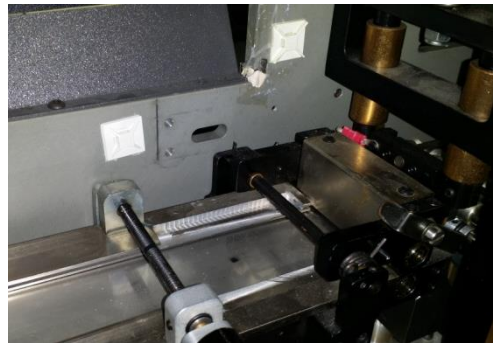
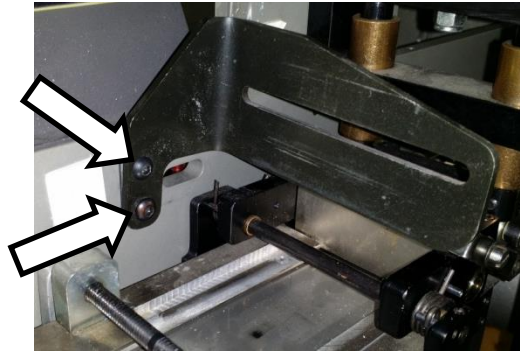
Removing the Existing Color Sensor Assembly

2. Disconnect the contrast sensor cable from the internal harness.	
3. Cut the wire tie holding the harness to the inside of the frame.	
4. Cut the wire tie holding the harness to the front of the frame.	
5. Remove the thumb screw and washer holding the sensor to the mounting bracket.	

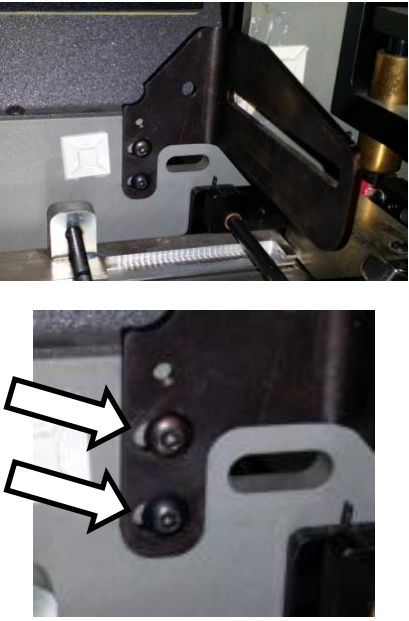

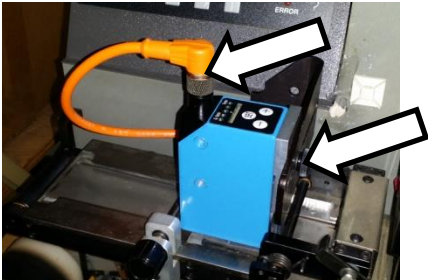
6. Carefully pull the harness through the slot in the frame.


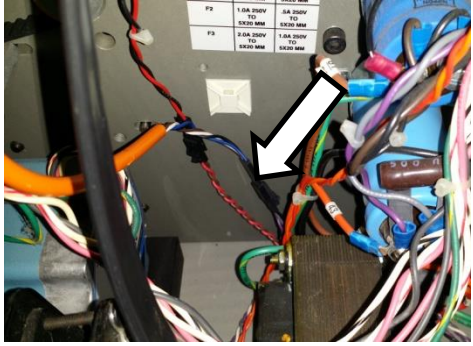



7. Remove the two button head screws to remove the mounting bracket from the frame.




Installing the New Color Sensor Assembly


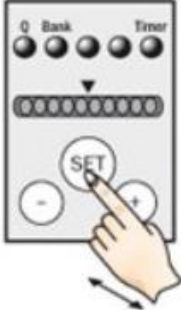


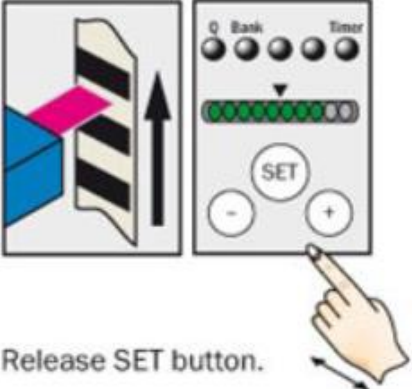
<p>8.</p>	<p>Install the mount bracket with the two button head cap screws from the kit.</p> <p>Position the bracket so that it mounts in the farthest back position as shown.</p> <p>The edges of the slot should be showing like in the figure to the right.</p>	
<p>9.</p>	<p>Insert the new sensor harness (connector end) into the slot in the frame as shown.</p>	
<p>10.</p>	<p>Screw the other end of the sensor harness to the sensor if not already done so.</p> <p>Install the sensor assembly onto the mounting bracket with the flat washer and thumbscrew.</p>	

11.	<p>Secure the harness to the frame with a wire tie. Leave approximately a 6" loop.</p> <p>If the wire tie mount is still intact, use it. If not, remove adhesive and clean area and place a new wire tie mount in the same location.</p>	
12.	<p>Connect the sensor harness back to the internal harness.</p>	
13.	<p>Secure the sensor harness to the inside of the frame.</p> <p>If the wire tie mount is still intact, use it. If not, remove adhesive and clean area and place a new wire tie mount in the same location.</p>	

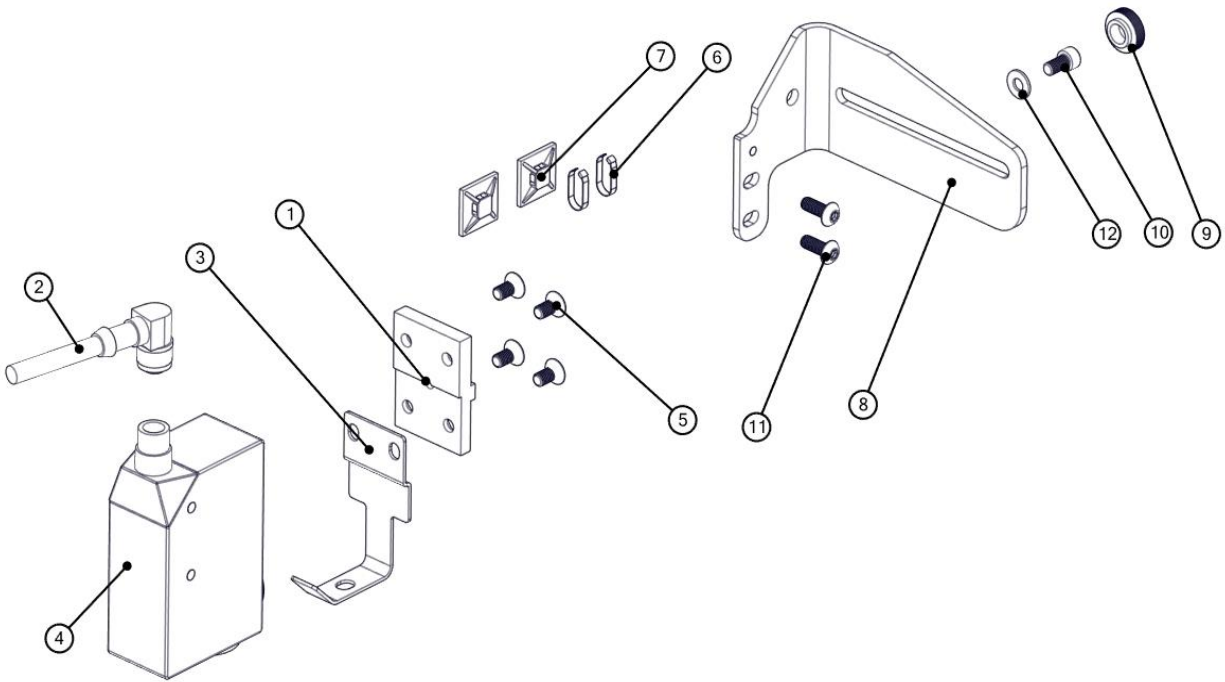
Re-installing the Rear Cover

14	<p>After all connections have been made and wires secure, the rear cover can be re-installed. Use the existing button head screws removed from step 1.</p>	
----	--	--

Teach-in Procedure

1.	Position tape with sensemark just before the sensor beam.	
2.	Press and hold SET button. Emitted light turns white	
3.	Move at least one repeat length using the light spot	
4.	Hold down SET button	
5.	Release SET Button	 <p>Release SET button.</p>

Color Contrast Sensor Option Assembly



ITEM	PART NO	DESCRIPTION	QTY
1	05421139	BRKT, MULTI COLOR SENSOR SLIDE	1
2	05421142	HARNESS, MULTI-COLOR SENSOR CABLE	1
3	05421154	BRACKET, SENSOR GUIDE	1
4	05421155	SENSOR, MULTI COLOR	1
5	05991140	M5 X 10MM SOC HD CAP FLAT	4
6	05990513	TIE WRAP, TY523M SMALL	2
7	05990533	MOUNT, ABMM-A	2

ITEM	PART NO	DESCRIPTION	QTY
8	05421140	BRKT,MULTI COLOR SENSOR MOUNT	1
9	05990313	KNOB, SZ 10 THUMB SCREW NS	1
10	05990080	10:32 X 3/8 CAP SCREW	1
11	05990091	10:32 X 1/2 BUTTON HEAD SCREW	2
12	05990144	WASHER, #10 FLAT	1

Appendix E – Checking Roll Direction

One procedure to diagnose issues of fraying is to check the roll direction of the label tape.

Labels in various stages of fraying



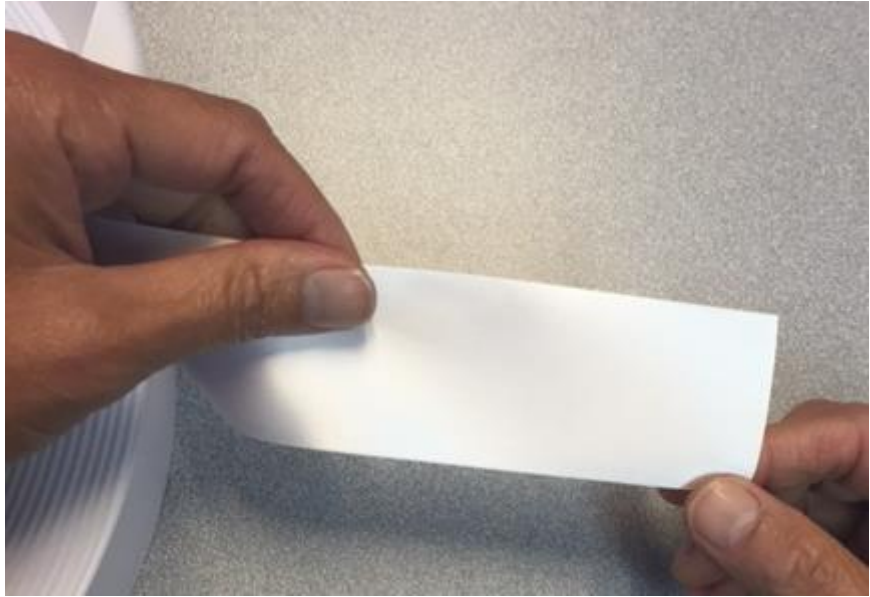
Good label



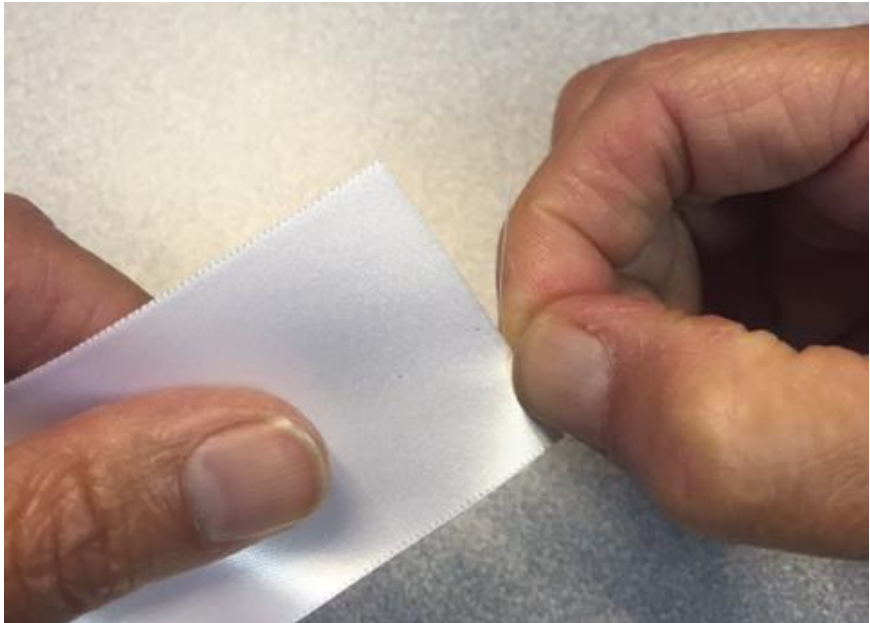
While you may get a few threads during rough stone washing, you should not see unraveling of the labels like those on the ends. A slight amount of fraying like the labels in the middle may occur occasionally but not consistently in any wash.

Woven polyester tape has a lock stitch in selvage of one side of the tape. This lock stitch must go through the sonic cutter in the right orientation or fraying could occur. If all the other machine settings are proper and you still get fraying, check a blank roll of stock as follows:

- a) Pull a small amount of tape off the end of the roll and cut a straight edge with a pair of scissors.



- b) With your finger and thumbnail, pick at the end of the tape until you can pull a thread off the edge of the tape, across the cut.

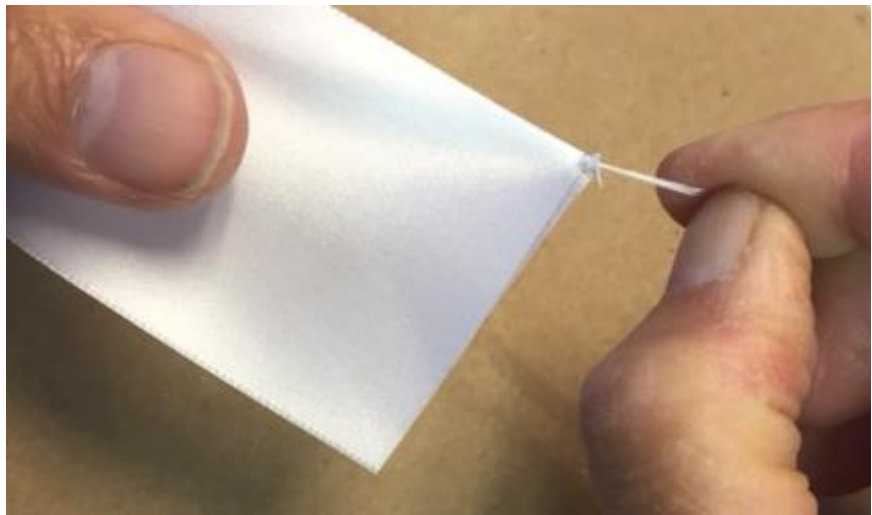


- c) Attempt to pull a continuous thread off the edge of the tape.

- d) If you are able to pull a continuous thread off the end of the tape, then your tape is NOT wound "ravel end to the core". If this edge is not sewn in, then the label will fray



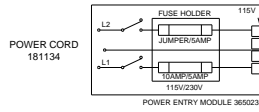
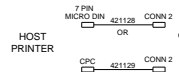
- e) If the thread locks on the edge and you cannot pull it continuously, then you have the tape wound "ravel end to the core." This edge can be used as the bottom of the cut-single label without fear of fraying.



Electrical Schematic

115V / 230V Schematic – Branson System

MACHINE PART NO.	OPTION 1	OPTION 2	OPTION 3	OPTION 4
420001	YES	NO	NO	NO
420002	YES	NO	NO	NO
420003	NO	NO	NO	YES
420006	NO	YES	YES	YES
420007	NO	YES	YES	YES



115V OPERATION
ONE 10.0A 250V TD
1/4 X 1 1/4 FUSE 921167

230V OPERATION
TWO 5.0A 250V TD
5 X 20mm FUSES 990669

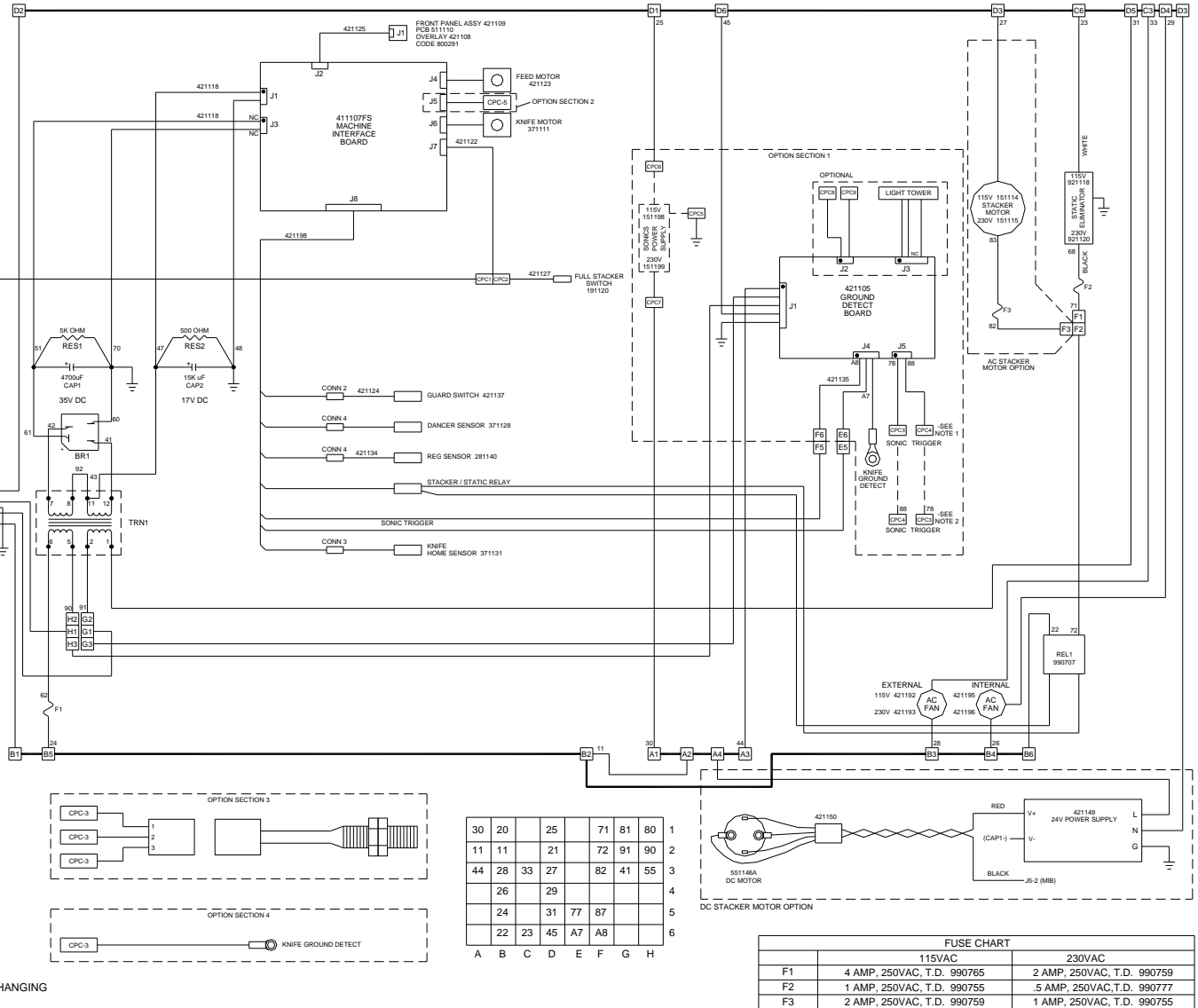
CPC CONNECTOR



VIEWED FROM CONTACT SIDE

NOTES:

- THIS WIRING FOR:
 - PS-150 (BLACK)
 - KET-1 (GREEN) WITH ADAPTER CABLE (P.N 151185)
- THIS WIRING FOR:
 - KET-1 (GREEN)
 - PS-150 (BLACK) WITH ADAPTER CABLE (P/N 151184)
- MULTIPLE COMPONENTS MUST BE CHANGED PRIOR TO CHANGING THE LINE VOLTAGE AMPLITUDE.



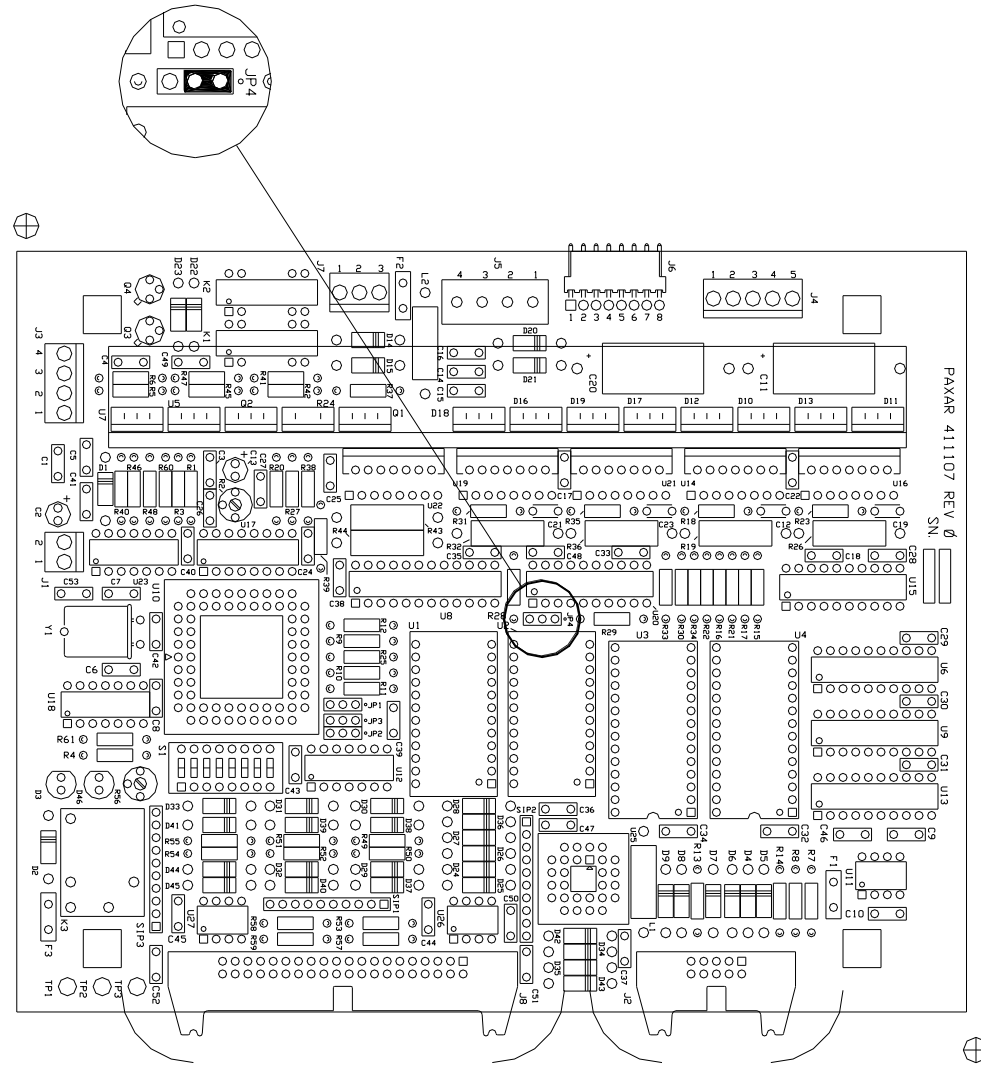
30	20	25	71	81	80	1	
11	11	21	72	91	90	2	
44	28	33	27	82	41	3	
26	29					4	
24	31	77	87			5	
22	23	45	A7	A8		6	
A	B	C	D	E	F	G	H

FUSE CHART			
	115VAC		230VAC
F1	4 AMP, 250VAC, T.D.	990765	2 AMP, 250VAC, T.D. 990759
F2	1 AMP, 250VAC, T.D.	990755	.5 AMP, 250VAC, T.D. 990777
F3	2 AMP, 250VAC, T.D.	990759	1 AMP, 250VAC, T.D. 990755

Machine Interface Board Jumper Position

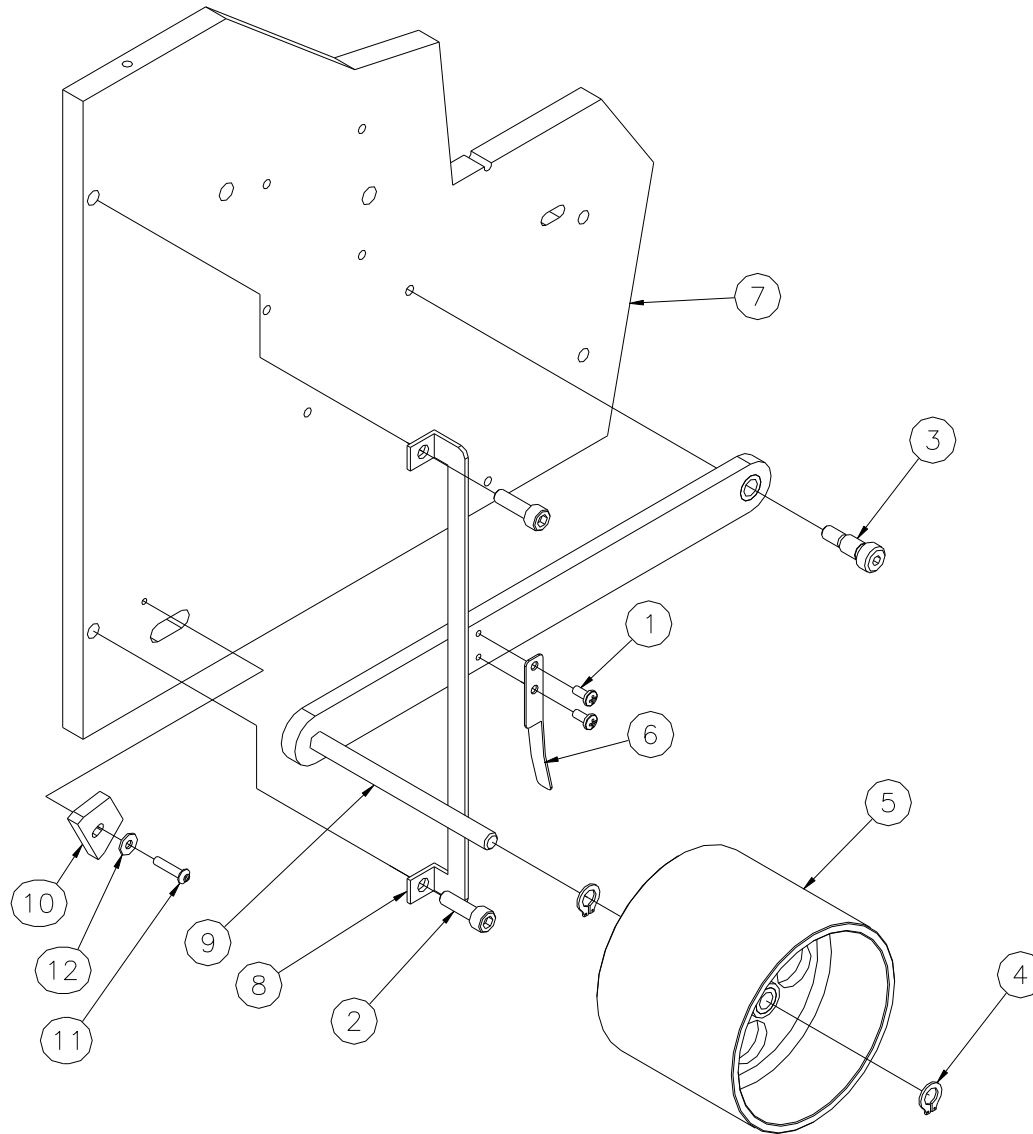
SS FINISHER

JP4 JUMPER IS PLACED ON
THE MIDDLE AND RIGHT PINS



Assembly Drawings Mechanical

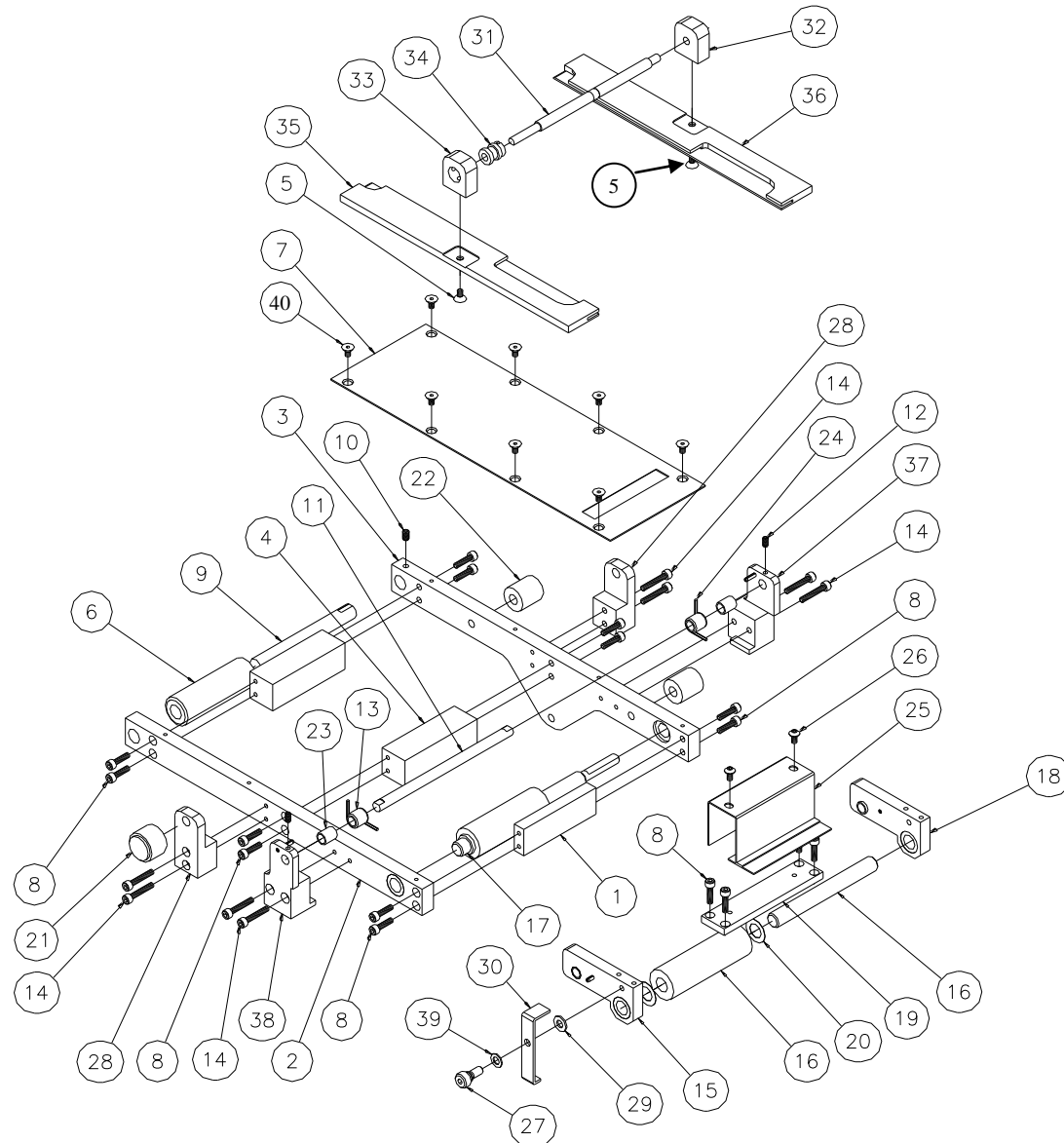
Unwind Assembly



Unwind Parts List

Item	Part #	Description	Qty
1	989983	4-40 x 1/4 Pan head slotted	2
2	990083	10-32 x 3/4 Cap screw	2
3	990228	1/4 x 3/8 Shoulder screw	1
4	990262	Snap ring, 1/4"	2
5	424093	Assembly, Dancer pulley	1
6	423012	Bracket, Arm flag	1
7	421002	Front plate	1
8	423005	Guide, Unwind arm	1
9	423010	Arm, Fabric feed assembly	1
10	371128	Top & bottom sensor harness	1
11	990455	4-40 x 1/2 Button head screw	1
12	990448	Washer, .125 x .313 x .031 FL	1

Feed Pressure Roller Assembly

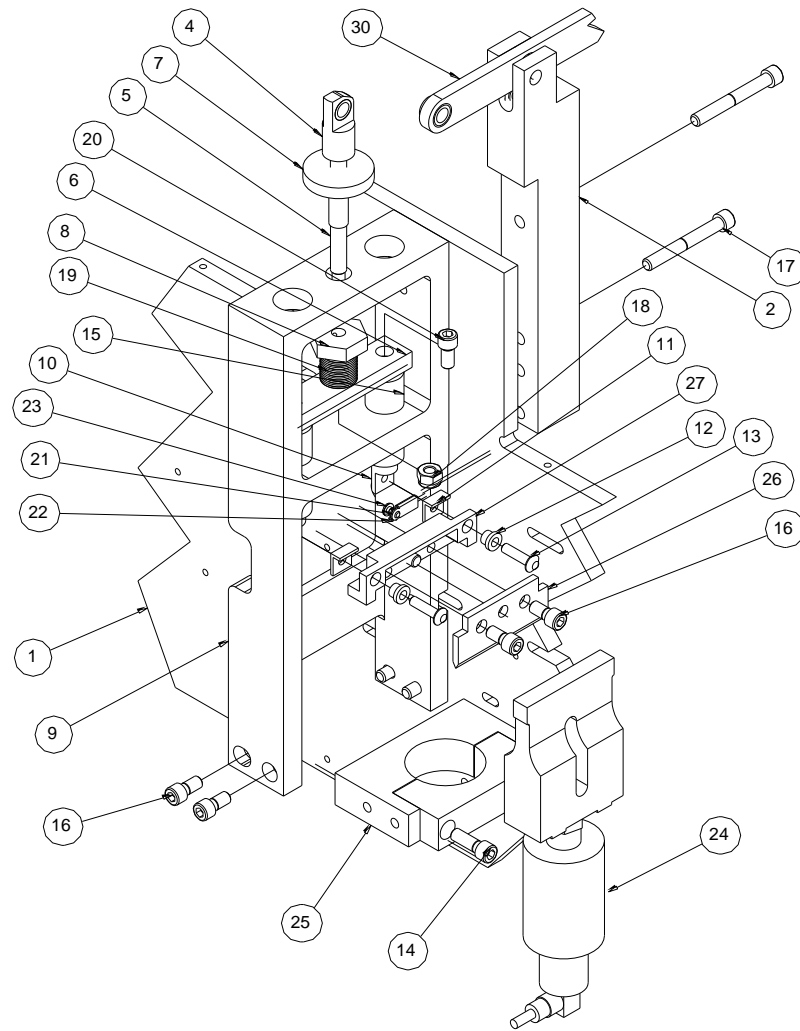


Feed Pressure Roller Parts List

Item	Part #	Description	Qty
1	424005	Brace - Drive	1
2	424028	Right side, Support assembly	1
3	424027	Left side, Support assembly	1
4	424012	Support guide bar	2
5	990072	8-32 x 1/4 Flat Head Screw	2
6	143018	Tape roller assembly	1
7	424001	Cover, drive	1
8	990017	6-32 x 1/2 Cap screw	16
9	423006	Shaft, Turn roller	1
10	990058	8-32 x 1/4 Knurled cup point	1
11	424036	Shaft, Pressure roller	1
12	990025	6-32 x 1/4 Set screw	2
13	357033A	Spring, Front torsion	1
14	990018	6-32 x 3/4 Cap screw	8
15	424040	Side plate assembly, Front	1
16	424017	Roller, Molded urethane	1
17	424026	Drive shaft assembly	1
18	424041	Side plate assembly, Rear	1
19	424006	Plate, Top drive	1
20	990282	Washer, 3/8 x 5/8 x .005 Shim	2

Item	Part #	Description	Qty
21	196028	Adj knob / SS - Plain black	1
22	424010	Collar - Drive	3
23	999096	Bushing, 1/4 x 5/16 x 3/8	2
24	357034A	Spring, Rear torsion	1
25	424025	Blade, Fabric stripper	1
26	990019	6-32 x 1/4 Button head screw	2
27	990225	3/16 x 1/8 Hex skt. SS shld screw	1
28	424050	Bracket, Adjuster mount	2
29	990469	Washer, Nylon, .031 Thick	1
30	424037	Lever, Feed open	1
31	424051	Shaft, Web adjust screw	1
32	424048	Bracket, Guide mount	1
33	424049	Bracket, Guide mount	1
34	424047	Bearing, Web adjust bushing	1
35	424053	Drive, Front web guide	1
36	424052	Drive, Rear web guide	1
37	424054	Ass'y, Support - Rear pressure	1
38	424055	Ass'y, Support - Front pressure	1
39	990273	Washer, #10 Belleville	1
40	990003	4-40 x 1/4 Flat Head Screw	8

Knife Assembly

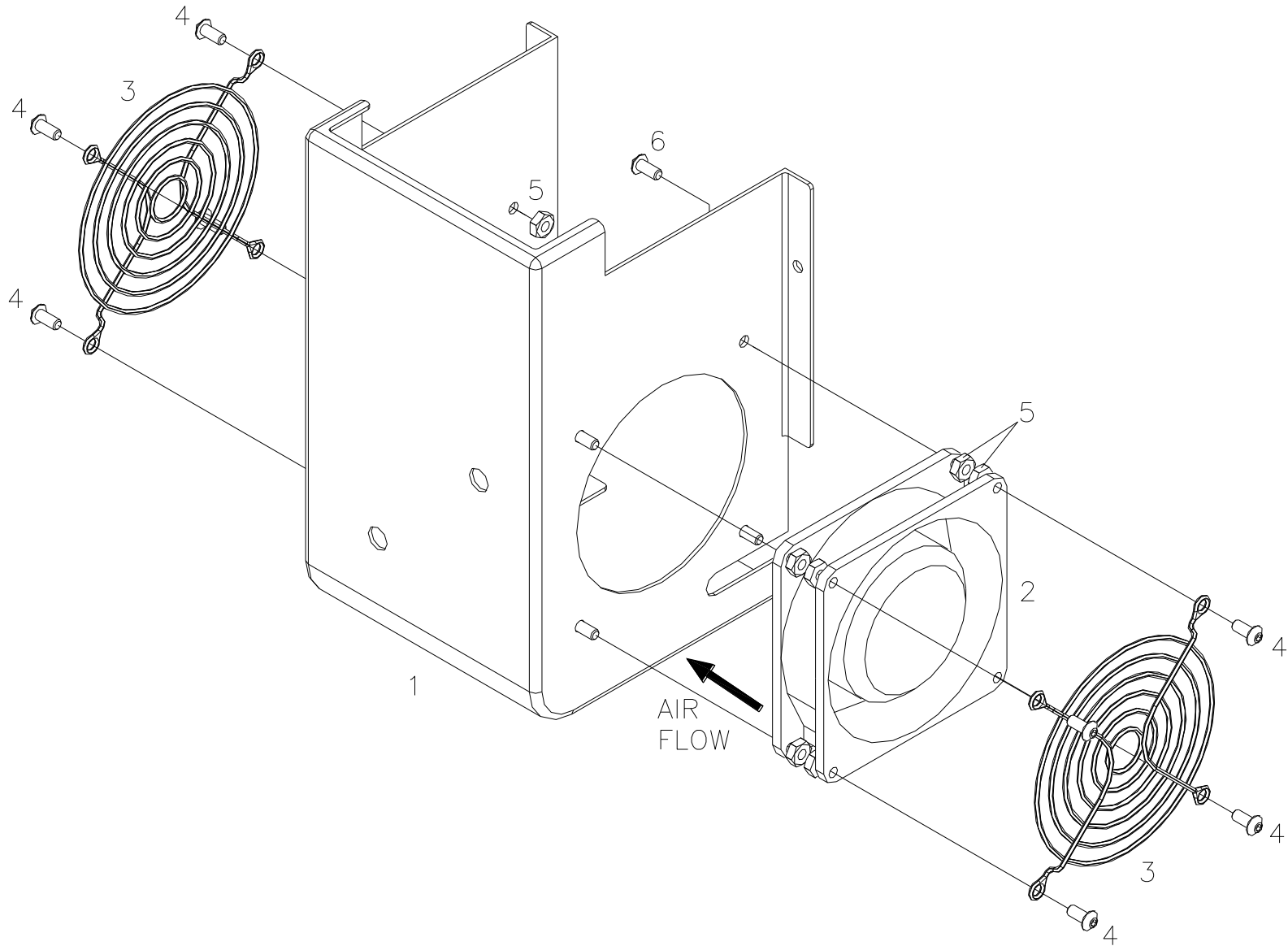


Knife Parts List

Item	Part No.	Description	Qty
1	421002	FRONT PLATE	1
2	427018	SUPPORT, ROCKER ARM	1
3	422012	LINK PLATE ASSEMBLY	2
4	427033	LINK SLIDER ASSEMBLY	1
5	427041	SCREW, KNIFE ADJUSTER	1
6	427007	TIE PLATE	1
7	427042	LOCK KNOB	1
8	427026	NUT, ADJUSTMENT	1
9	421012	FRAME, KNIFE W/ BUSHINGS (999146)	1
10	427002	SLIDER, KNIFE ADJUST	2
11	427062	INSULATOR, KNIFE HOLDER	2
12	427061	BUSHING, INSULATOR	2
13	990092	10-32 X 1/2" BUTTON HD CAP SCR	2
14	990122	1/4-20 X 3/4" SOCKET HD CAP SCR	2
15	999142	BUSHING, 1/2 X 3/4 X 2"	2

Item	Part No.	Description	Qty
16	990120	1/4-20 X 1/2" SOCKET HD CAP SCR	6
17	990127	1/4-20 X 2" SOCKET HD CAP SCR	2
18	990148	1/4-20 E-S NUT	1
19	427035	COMPRESSION SPRING	1
20	990081	10-32 X 1/2 SOCKET HJD CAP SCR	2
21	151186	SONIC CONTROL IMPUT HARNESS	1
22	989976	#6 STAR WASHER	1
23	990019	6-32 X 1/4" BUTON HD CAP SCR	1
24	571157	STACK ASSEMBLY, 1000W	1
25	427096	FRAME, HORN MOUNT	1
26	577056	KNIFE BLADE	1
27	427086	KNIFE MOUNT	1
28	999071	BUSHING 5/16 X 1/2 X 3/8"	1
29	999105	BUSHING 5/16 X 7/16 X 1/4"	1
30	427006	ARM, LEVER	1

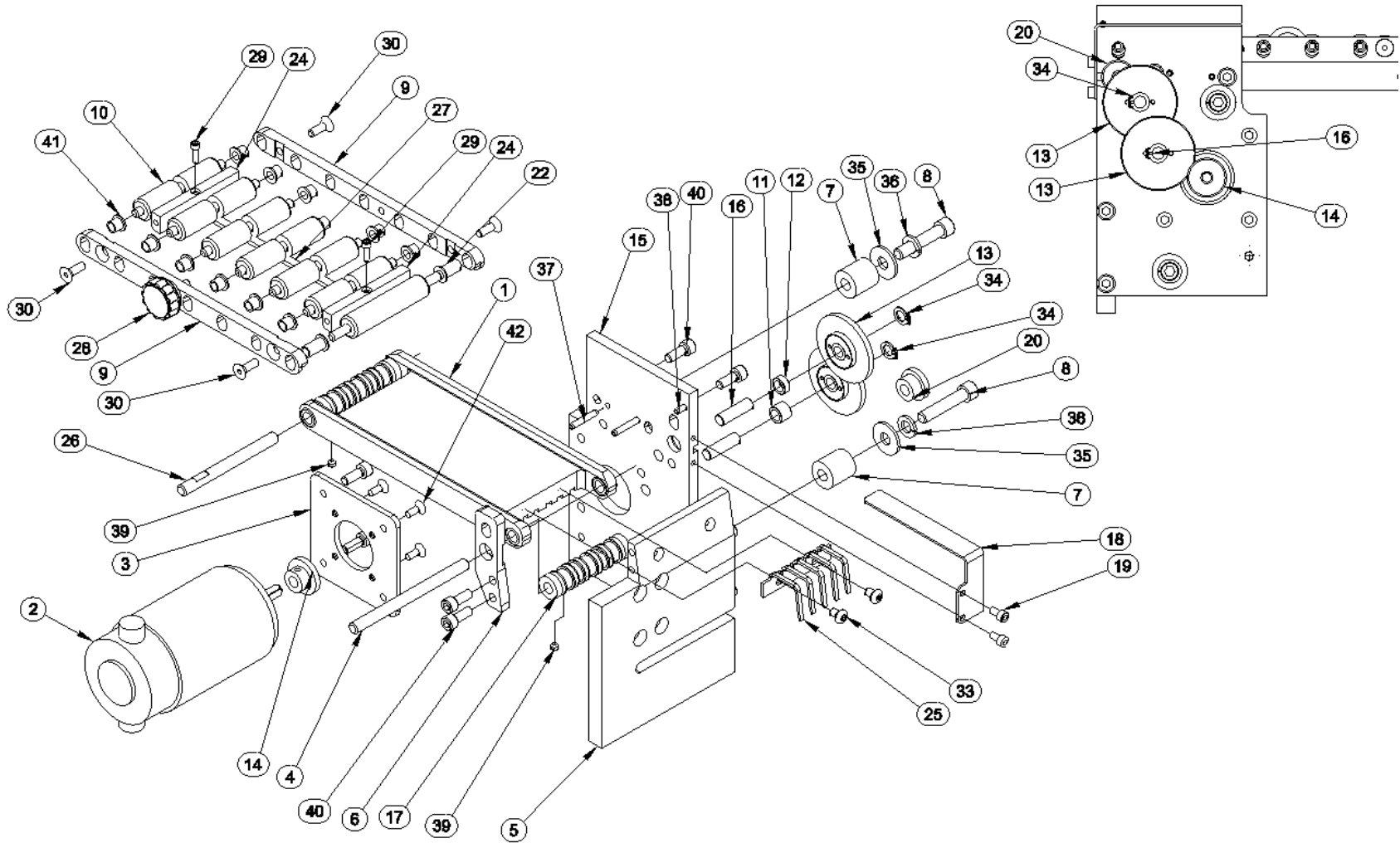
External Fan Assembly



External Fan Parts List

Item	Part #	Description	Qty
1	421202	Cover, Front horn	1
2	421192	External ac fan assembly – 115v	1
	421193	External ac fan assembly – 230v	1
3	281105	Guard, Finger	2
4	991054	8-32 x 3/8 SS Button head screw	8
5	990069	#8 Hex nut	12
6	990065	8-32 x 3/8 Button head screw	4

Conveyor Assembly

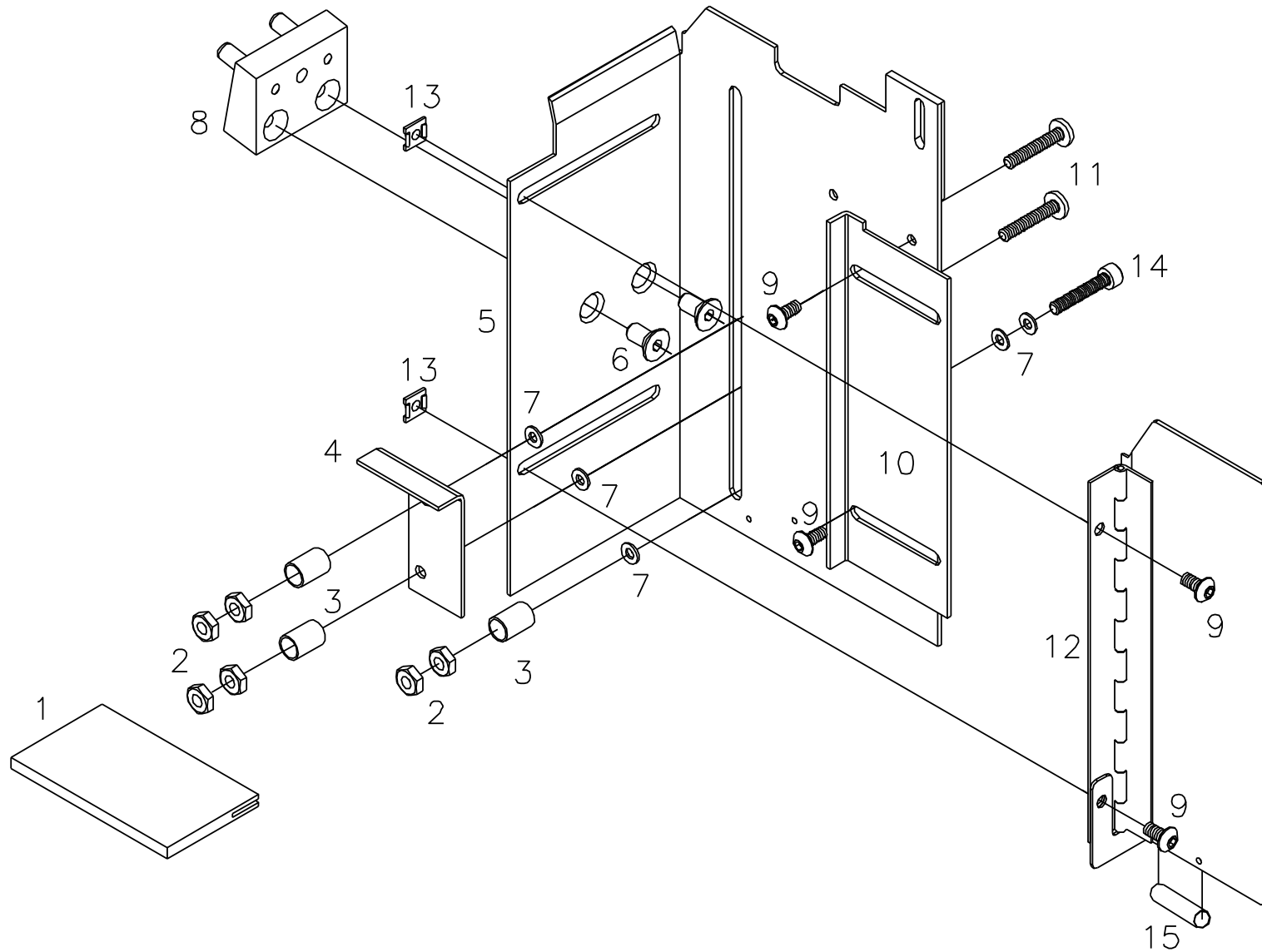


Conveyor Parts List

Item	Part #	Description	Qty
1	428103	Assembly, Conveyor bottom	1
2	551146A	Motor, Ink save, Alt	1
3	224067	Bracket, Motor mount ns	1
4	422029	Shaft, Drive roller	1
5	428059	Conveyor, Main frame	1
6	428041	Support, Outboard	1
7	428031	Spacer, Conveyor plate	2
8	990125	1/4-20 x 1 1/2" Cap screw	2
9	428035	Frame, Conveyor side	2
10	428048	Roller, Conveyor	6
11	422034	Bearing, 1/4 x .29 Spacer	1
12	422033	Bearing, 1/4 x .15 Spacer	1
13	422026	Gear, 72T / 36T Combo	2
14	422032	Gear, 36T Reworked	1
15	422028	Bracket, Motor plate	1
16	991068	Dowel pin, 1/4 x 7/8"	2
17	428061	Pulley, Drive	2
18	422030	Guard, Gear	1
19	990015	6-32 x 1/4" Socket hd cap screw	2
20	422031	Gear, 30T Reworked	1

Item	Part #	Description	Qty
22	999082	Bushing, I-glide	2
23	428047	Roller, Lap drop	1
24	428049	Bracket, Conveyor	2
25	428062	Bracket, Stripper	1
26	428056	Shaft, Conveyor idler	1
27	428052	Bar, Conveyor stripper	1
28	206042	Thumb screw knob	1
29	990424	4-40 x 3/8" Cap screw	2
30	990056	8-32 x 1/2 Flat hd cap screw	4
33	990066	8-32 x 1/4" Button hd cap screw	2
34	990262	Snap ring, 1/4"	2
35	990167	Washer, 1/4" Flat	2
36	990145	Washer, 1/4 Lock	2
37	990242	Roll pin, 1/8 x 3/4"	2
38	990247	Roll pin, 1/8 x 1/2"	1
39	990057	8-32 x 1/8" Set screw	2
40	990081	10-32 X 1/2 socket head cap screw	9
41	999081	Bushing, I-glide	12
42	990028	6-32 X 3/8 Flat head cap screw	4
	991028	"O" Ring drive belt (not shown)	6

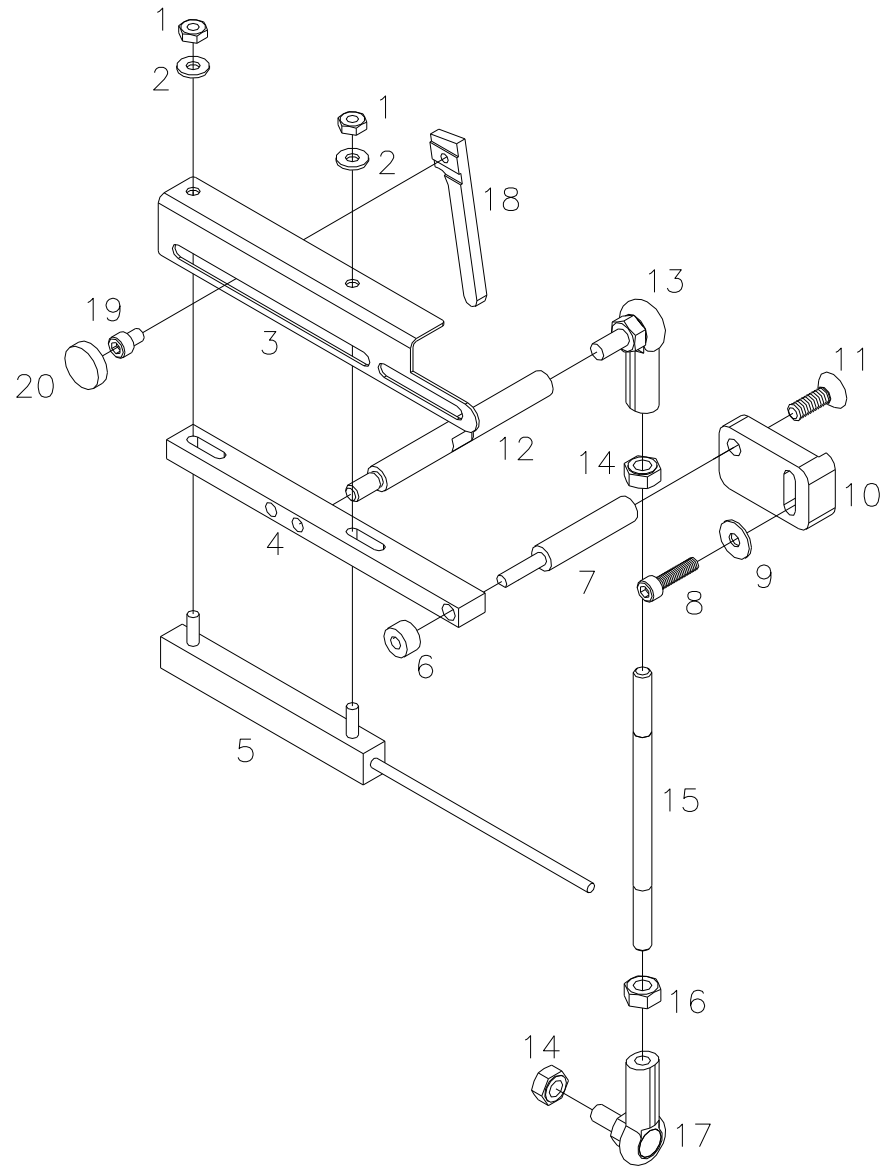
Stacker Assembly



Stacker Parts List

Item	Part #	Description	Qty
1	928002	Platform shim	1
2	990103	10-32 Hex nut	6
3	928012	Spring	3
4	158110	Base platform shim	1
5	428016	Guard back stacker	1
6	990416	¼-20 x ½" Flat head screw	2
7	990469	.031 Nylon washer	5
8	428019	Back guide mount assembly	1
9	990089	10-32 x ¼" Button head screw	4
10	158112	Stop, Stacker	1
11	990468	10-32 x 1" Binding head screw	2
12	428022	Stacker assembly, Outer	1
13	928008	Lock, Stacker side	2
14	990084	10-32 x 1" Cap screw	1
15	201455	Spring	1
		Can be ordered as an assembly	
	428093	2" stacker assembly	

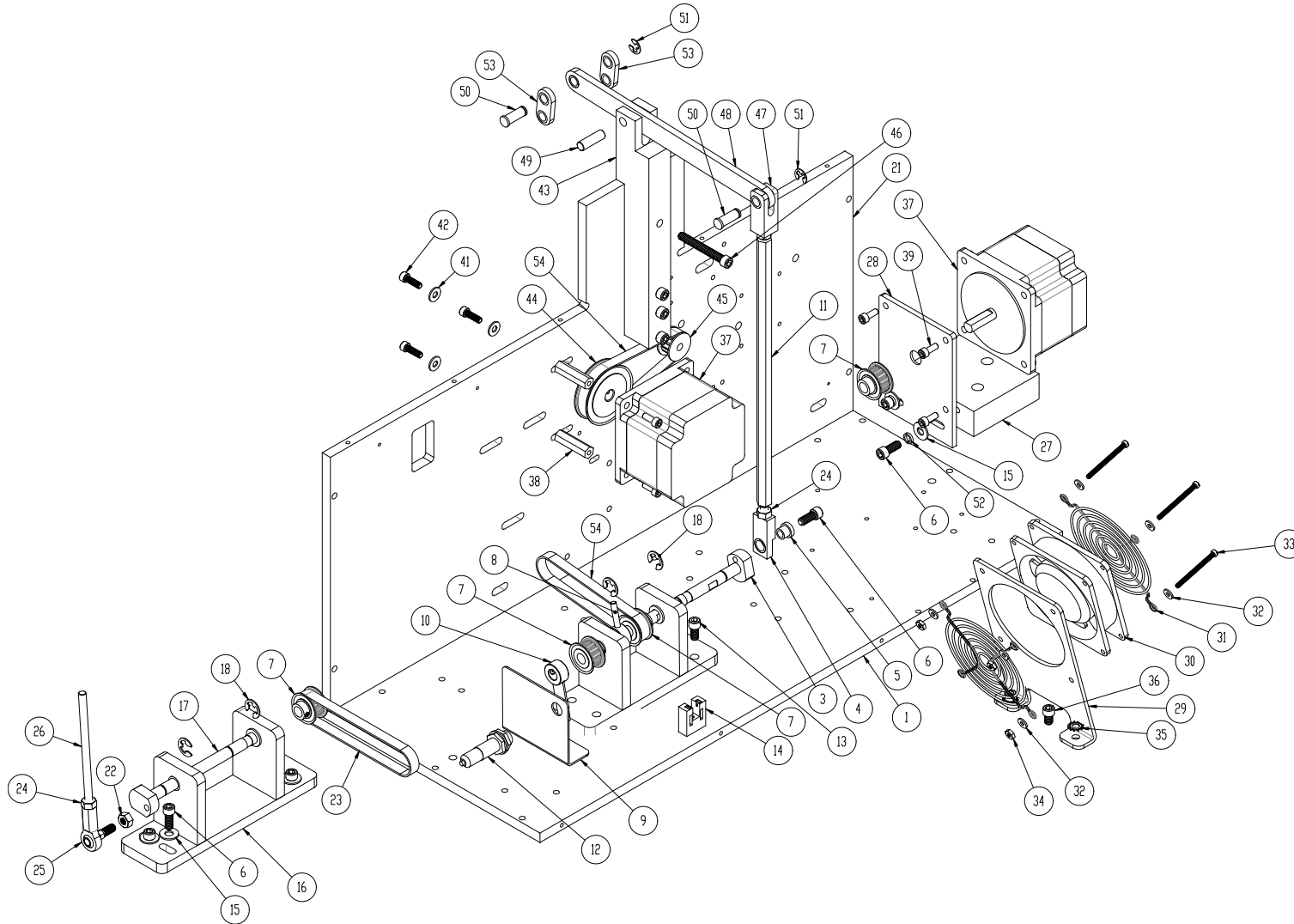
Tamper Assembly



Tamper Parts List

Item	Part #	Description	Qty
1	990069	#8 Hex nut	2
2	989978	#8 Star washer	2
3	428033	Bracket, Label stop mount	1
4	428026	Mount, Static bar	1
5	151141	Static bar assembly	1
6	990370	3/16" Collar	1
7	428027	Pin, Pivot	1
8	990085	10-32 x 1 1/4" Cap screw	1
9	990102	#10 SAE washer	1
10	428028	Bracket, Tamper mount	1
11	990133	1/4-20 x 3/4" Flat head screw	1
12	428014	Shaft, Static bar	1
13	999068	Rod end F w/stud 1/4-28 rh	1
14	990147	1/4-28 Hex nut	2
15	428013	Shaft, Tamper	1
16	991069	1/4-28 Hex nut lt. Hand thd	1
17	999069	Rod end F w/stud 1/4-28 LH	1
18	428066	Bracket, Label stop	1
19	990079	10-32 x 1/4" Cap screw	1
20	990313	#10 Thumb screw knob	1

Drive Assembly

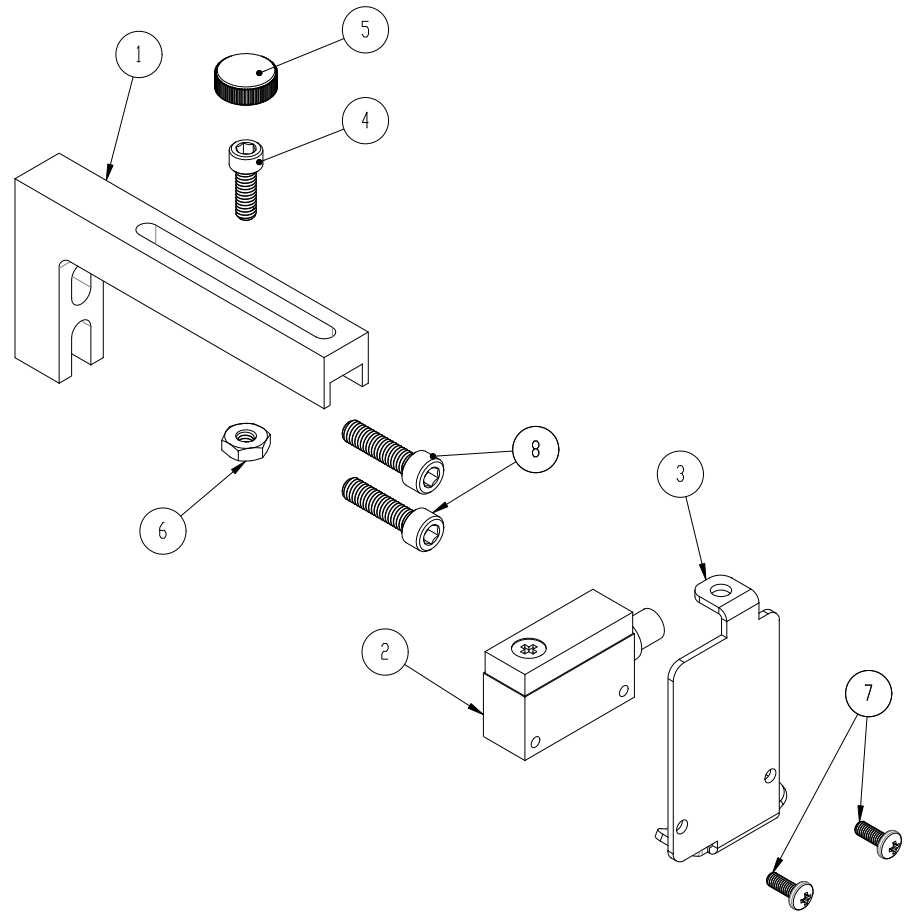


Drive Parts List

Item	Part #	Description	Qty
1	05421001	BASE, PLATE	1
2	05422020	SUPPORT BEARGIN ASSEMBLY	1
3	05422004	SHAFT, DRIVE	1
4	05422021	CRANK ASSEMBLY	1
5	05927009	BUSHING, ST. KNIFE LINK	1
6	05990121	1/4:20X5/8 CAP SCREW	7
7	05424019	PULLEY, 1/5, 14T 38ID .37 (ALT)	4
8	05422010	SENSOR FLAG	1
9	05427049	BRACKET, PROX SENSOR	1
10	05427050	ASSEMBLY, SENSOR FLAG	1
11	05427017	ROD, DRIVE	1
12	05575004	SONIC "KIT, 115V 1000W"	1
13	05990120	1/4:20 X 1/2 CAP SCREW	4
14	05571112K	KIT, INK OUT SENSOR	1
15	05990167	WASHER, 1/4 SAE	8
16	05428020	ASSY, SUPPORT TAMPER	1
17	05422005	SHAFT, DRIVE	1
18	05990486	E-RING, 3/8	4
19	05421003	PLATE, RIGHT SIDE	1
20	05421004	PLATE, LEFT SIDE	1
21	05421002	FRONT PLATE	1
22	05990147	1/4:28 HEX NUT	2
23	05356026	TIMING BELT 57T 1/5P	1
24	05991069	1/4-28 HEX NUT LT. HAND THD.	2
25	05999069	ROD END F W/STUD 1/4-28 LH THD	1
26	05428013	SHAFT, TAMPER	1
27	05422007	SUPPORT, MOTOR	1
28	05422006	PLATE, SUPPORT MOTOR	1
29	05421126	BRACKET FAN	1
30	05421195	115V AC FAN ASSEMBLY	1
	05421196	230V AC FAN ASSEMBLY	1

Item	Part #	Description	Qty
31	05281105	GUARD, FINGER	2
32	05990037	WASHER, #6 SAE	6
33	05990034	6-32 X 1 3/4 FILLISTER HEAD SCREW	3
34	05990038	NO.6 HEX NUT	3
35	05990434	WASHER, 1/4" EXTERNAL TOOTH	2
36	05990119	1/4:20X3/8 CAP SCREW	2
37	05371111	FEED MOTOR HARNESSED	2
38	05194023	STANDOFF, 1-3/8"	3
39	05990081	10:32X1/2 CAP SCREW	7
40	05990103	NO.10-32 HEX NUT	4
41	05990102	WASHER, #10 SAE	3
42	05990082	10:32X5/8 CAP SCREW	3
43	05427018	SUPPORT, ROCKER ARM	1
44	05424021	PULLEY, 1/5, 30T, 3/8 ID, .37	1
45	05424022	PULLEY, 1/5, 12T, 1/4"ID, .37	1
46	05990127	1/4:20X2 CAP SCREW, TFL	4
47	05427029	LEVER CLEVIS ASSEMBLY	1
48	05427031	LEVER ASSEMBLY	1
49	05990258	DOWEL PIN, 1/4 X 1	1
50	05427019	PIN, PIVOT	2
51	05990326	SNAP RING, 1/4 "E" RING	2
52	05990145	WASHER, 1/4 LOCKWASHER	2
53	05422012	LINK PLATE ASSEMBLY	2
54	05424020	TIMING BELT 52T 1/5P	2

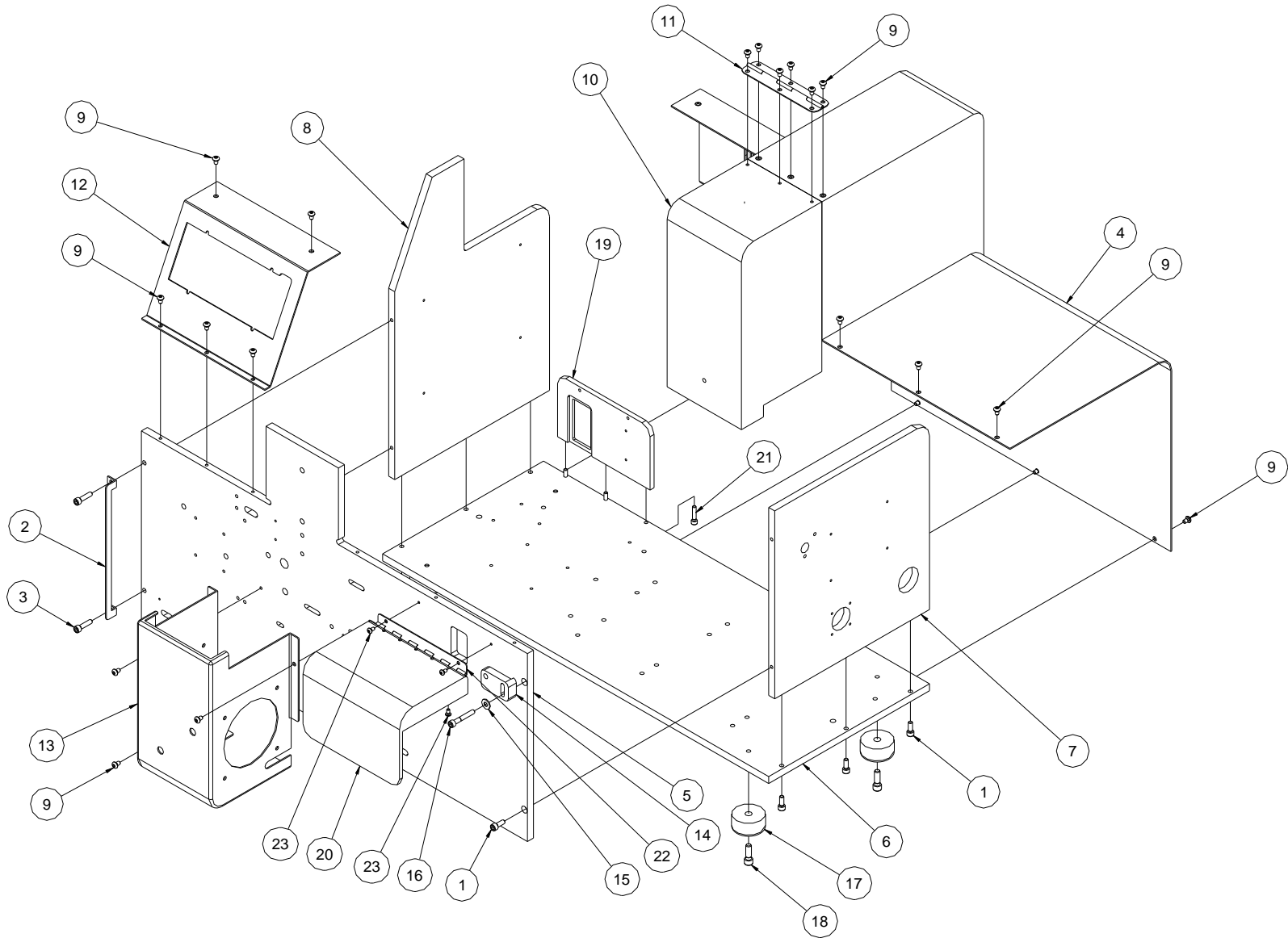
Contrast Sensor Assembly



Contrast Sensor Parts List

Item	Part #	Description	Qty
1	05424042	BRACKET, SENSOR MOUNT	1
2	05424063	SENSOR, CONTRAST	1
3	05424062	BRACKET, SENSOR MOUNT	1
4	05990052	8:32 X 1/2 CAP SCREW	1
5	05990314	NO.8 THUMB SCREW KNOB	1
6	05990069	NO.8 HEX NUT	1
7	PB00735150	SCREW-MC-0.5X8 PHIL PAN HD	2
8	05990083	10:32X3/4 CAP SCREW	2

Cover Assembly



Cover Parts List

Item	Part #	Description	Qty
1	990081	10-32 x 1/2 Cap screw	7
2	423005	Guide, Unwind arm	1
3	990083	10-32 x 3/4 Cap screw	2
4	421201	Cover, Back	1
5	421002	Front plate	1
6	421001	Base, Plate	1
7	421003	Plate, Right side	1
8	421004	Plate, Left side	1
9	990066	8-32 x 1/4 Button head screw	23
10	421203	Cover, Plexiglas	1
11	421207	Hinge, Plexiglas horn	1
12	421208	Cover, Electrical panel	1
13	421202	Cover, Front horn	1
14	428028	Bracket, Tamper mount	1
15	990102	Washer, #10 SAE	1
16	990085	10-32 x 1 1/4 Cap screw	1
17	341210	Feet, 1 1/2 Dia. Rubber	4
18	990122	1/4-20 x 3/4 Cap screw	4
19	371004	Plate, AC entry	1
20	421205	Cover, Stacker	1
21	990053	8-32 x 3/4 Cap screw	3
22	421204	Hinge, Stacker cover	1
23	990019	6-32 x 1/4 Button head screw	7

Revision Record

<u>Revision</u>	<u>Date</u>	<u>Description</u>
2.1	12/04/12	Removed CE mark from manual as not required Update FCC ID and moved to page 2 Moved WEEE symbol to page 2
3.0	3/23/15	Updated Appendix D to show new color sensor configuration. (Pages 37-39) ECN No. 3010299 Update Proximity Switch Adjustment page 22. Update manual pages 52, 53, 58, 59, 64, 65, 66, 67 Added threading documentation Added Appendix "E" for material trouble shooting