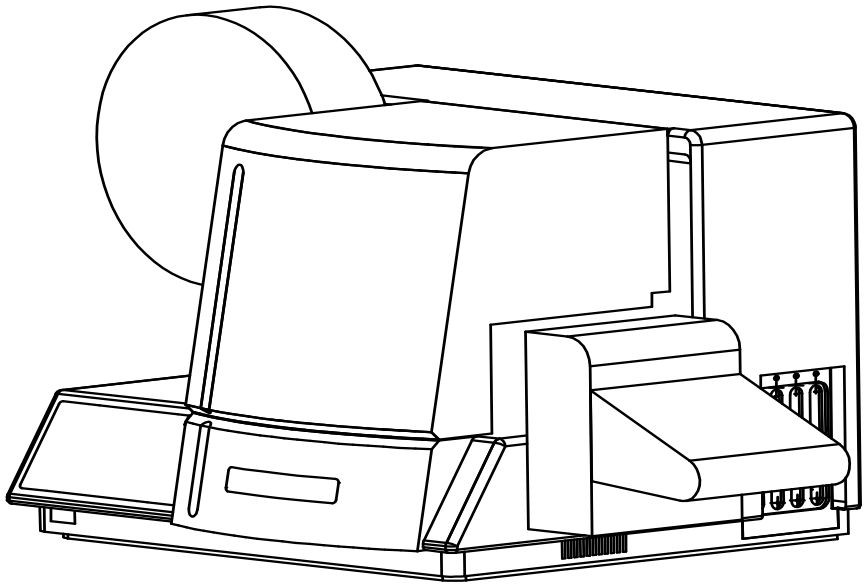
Users Manual

AVERY DENNISON®

Model 656 / 636



AVERY DENNISON
Manual Edition 8.1
01 January, 2012
Manual Part Number 511398

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Contents

Scope

Introduction

This user manual was arranged for the person who is going to operate the printer. The information is arranged in the order that is needed to install and then operate the printer. It starts with general information, then to unpacking the carton, setup, installing the ink and stock, printer operation, control panel operation, and finally care and maintenance of the printer.

We at AVERY DENNISON hope that you will come to appreciate the efforts and quality that have gone into producing your AVERY DENNISON 656 / 636 Printer and wish to remind you that you are our number one priority. We welcome any constructive comments or criticisms so that we may continue to offer you the best printer in the industry for years to come.

Safety Issues / Warnings

Caution

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

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warranty Information

Warranty Policy

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.

AVERY DENNISON Corporation

One Wilcox Street

Sayre, PA 18840

Call: 1-800-967-2927 or (570) 888-6641

Fax: (570) 888-5230

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

AVERY DENNISON Corporation

One Wilcox Street

Sayre, PA 18840

Call: 1-800-967-2927 or (570) 888-6641

Fax: (570) 888-5230

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

Customer Responsibility

Location of Printer

The printer weighs approximately 57 Lbs (~26Kg) and requires a table of sufficient quality and strength to handle this load while the printer is operating. AVERY DENNISON recommends an industrial type work table having the approximate dimensions of 96" wide to 30" deep to 32" high. (See *Figure 1)*.

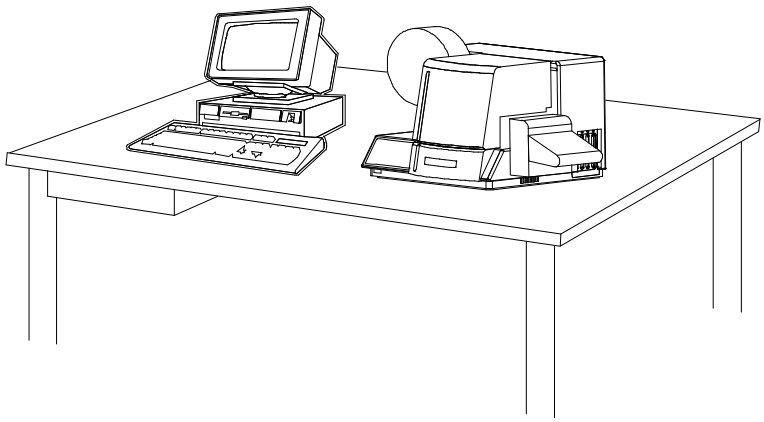


Figure 1 - Recommended Workstation Layout.

The location of the AVERY DENNISON 656 / 636 printer should be based on human factors. The printer should be located in an area that maintains optimum flow of your product while providing for the operator's comfort. AVERY DENNISON has taken significant steps to ensure that the operator controls and operations are easily accessible. This goal can only be met, however, if the printer is also located with human factors in mind. These include the height of the printer, the space around the printer, and the accessibility to the printer.

The AVERY DENNISON 656 / 636 printer is a high-resolution thermal printer. While AVERY DENNISON has designed the printer to be reasonably quiet, it is recommended to locate the printer in an area where printing and cutting repetitious noise is acceptable.

The unit should always be operated with the cover closed to minimize the amount of dust and dirt in the printer.

AC Power Line

AVERY DENNISON requires that the electrical service be 10 Amps @ 115VAC or 10 Amps @ 230VAC. This will allow the computer and any additional support or service equipment to be plugged into the same service.

Any electrical service that is supplying a AVERY DENNISON printer or peripheral equipment connected to a AVERY DENNISON printer should follow standard electrical code practices including proper grounding and neutral requirements.

The AVERY DENNISON printer was designed to operate in an industrial setting for extended periods of time; however, the printer is controlled by a microprocessor that is very sensitive to brownouts or power spikes. For this reason as well as the minimum recommended current supply, AVERY DENNISON recommends that a separate "clean" service be installed or reserved for the exclusive use of the AVERY DENNISON printer and it's peripherals.

Unpacking

The AVERY DENNISON printer is shipped in a large cardboard box that may be difficult to move by hand.

DO NOT REMOVE THE PRINTER FROM THE BOX OR UNPACK IN THE SHIPPING / RECEIVING DEPARTMENT.

NOTE: Unpacking in the shipping/receiving department is not recommended for the following reasons. *First:* The cardboard carton in which your AVERY DENNISON printer was shipped allows the printer to be moved with a forklift, forkcart or hand cart. Because of the weight of the printer, it is easier and safer to use one of these devices to move the printer to its intended installation location. *Second:* Leaving the printer in the carton while it is being moved within your facility will help to protect the printer during any movements to this location. Once the printer has reached its intended location you should begin the unpacking process.

Open the printer from the top of the box (See *Figure 2*). Do not cut deep into the carton, as there are items located just under the top. Remove the items located on the top insert. Remove the top insert. Lift the printer onto the table with the two banding straps. Remove the two straps and the plastic from the printer. Inspect the printer for shipping damage. If damage is discovered, contact AVERY DENNISON for further instructions - in the U.S.A. at (570) 888-6641. In other countries please contact your local AVERY DENNISON supplier. Once you are satisfied that there was no obvious shipping damage to the printer, the printer can now be lifted to its intended location.

In some cases, a double box has been used to ship your printer.

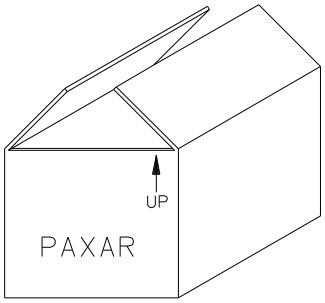


Figure 2 Shipping Carton.

Save the shipping materials to relocate the printer or return to factory for service.

Inventory of Components

The following list shows the additional parts (pieces) that should be included in your AVERY DENNISON 656 / 636 shipping container. If anything is missing, notify AVERY DENNISON immediately - in the U.S.A. at (570) 888-6641. In other countries please contact your local AVERY DENNISON supplier.

- AVERY DENNISON 656 / 636 "User's Manual"
- Tool kit
- A quick-disconnect power cord
- Stacker assembly
- Optional software ordered to drive the printer.
- A serial communications cable / converter.

NOTE: Some of the above parts may be inside of the envelope that contains the tool kit.

AVERY DENNISON 656 / 636 TOOL KIT (#351390)

241149	Anti-Static Gloves (2)
921309	Hex Key Set
921364	3/16" Long Ball Driver
181301	2.5mm Ball Driver
351156	Chip Removal Tool
511398	656 / 636 Users Manual
241132	Anti Static Wrist Strap
921338	T-T Printer Cleaning Kit

Printer Setup

Installing the Stacker

Remove the stacker from the separate packaging. Remove the packaging from around the stacker and save with the rest of the printer packing supplies.

Swing open the top cover to the printer. Locate the large knob and two round pins on the right hand side of the printer. Loosen the knob enough to allow the stacker to slide between the printer housing and the knob. The stacker will rest on the two pins. Slide the stacker to the back until it contacts the up-right frame. Tighten the knob. Adjusting the stacker is covered later.

Install the stacker up-right rails. Remove one of the thumbscrews. Insert the thumbscrew through the mating hole in the up-right rail assembly. Thread the thumbscrew into the mounting block. Repeat the above procedure for the other thumbscrew.

There is a cable with a connector leading from the back of the stacker that plugs into a socket on the TCB (Refer to the P.C. Board Identification section in this manual). The socket and plug are polarized. Rotate the plug until the polarized keyway and socket align and push the stacker connector into the socket.

Fuse Configuration

The main fuse(s) on the AVERY DENNISON 656 / 636 are located inside the AC power entry receptacle. The entry has a fuse drawer that holds the fuse(s) and selects the appropriate line voltage. If the voltage in the window **DOES NOT** match the AC line voltage intended to be supplied to the printer, **DO NOT** plug the power cord in. Reconfigure as follows:

1) Using a flat blade screwdriver, open the AC entry by lifting the tab just above the voltage indicator window.

2) Remove the red fuse drawer.

3) Remove all fuses and the fuse jumper if it is present.

4) Insert into the fuse drawer the correct number and style of fuses and fuse jumper for your application.

Configuration Number One: Line voltage within the range of

(See Figure 3A) 90 - 132VAC @ 50 - 60Hz

1) Install one 921167 - 10.0A 250V Fast Acting 1/4 x 1 1/4"

2) Install one Fuse Jumper

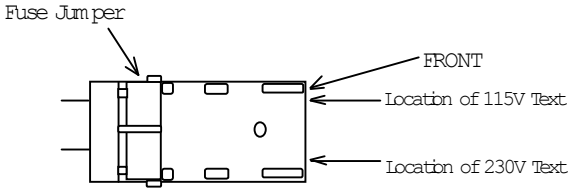
Configuration Number Two: Line voltage within the range of

(See Figure 3B) 180 - 265VAC @ 50 - 60Hz

1) Install two 921168 10.0A 250V Fast Acting 5 x 20MM

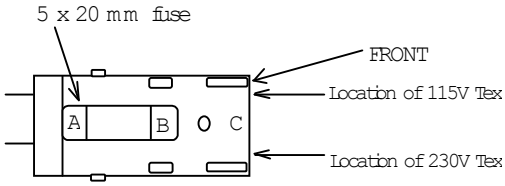
NOTE: The fuse jumper must be removed to install both 5 x 20mm fuses.

Figure - 3A



One 1/4 x 1 1/4" Fuse Far Side

Figure - 3B



Two 5 x 20MM Fuses One Each

The fuses must be between points A and B as shown not B and C.

4) Reinsert the fuse drawer into the AC entry with the desired voltage up.

5) Close the AC entry and verify the correct voltage is now visible.

P.C. Board Identification

Mother Bd. (371170)	- Horizontal on bottom of printer
Front Panel Bd. (511108)	- User interface system
Thermal Control Bd. (371105TT)	- AT Slot 2
Head Driver Bd. (341106TT)	- AT Slot 1

TCB Dip Switch Settings

DIP SWITCH #	DEFINITION	636	656
8	DOWNSTACKER / LOKPRINT	DOWNSTACKER ON LOKPRINT® OFF	DOWNSTACKER ON LOKPRINT® N/A
7	UNUSED	OFF	OFF
6	UNUSED	OFF	OFF
5	STACKER JAM	ENABLE ON DISABLE OFF	ENABLE ON DISABLE OFF
4	MACHINE TYPE	OFF	OFF
3	MACHINE TYPE	ON	OFF
2	UNUSED	OFF	OFF
1	DPI	240 OFF 300 ON	240 OFF 300 ON

Installing the Power Cord

A power cord is shipped with each printer. The cord for 115-volt printers will use the standard three-prong plug used in the U.S.A. A 230-volt printer and some other 115-volt configurations will have the plug end of the cable removed. It is the customer's responsibility to have the plug and alteration work done by a certified electrician. AVERY DENNISON supplies printers to many countries with many variations. Therefore we leave this to the customer to make the proper selection for their country.

Installing the PC Interface Cable

The 656 / 636 requires a 9-pin RS232 cable. This cable is provided with the printer. If the cable was not found it can be ordered from AVERY DENNISON (Part no. 351124).

The male end of the cable should be connected to the 9-pin D-shell female connector that is located on the right side of the printer at the TCB (refer to the P.C. Board Identification section in this manual). The female end of the cable is made to fit a 9-pin male RS232 connector on the back of a PC. In case a 9 pin serial port is not available a 9 to 25-pin converter is also shipped with all printers.

Installing the PC Software

The software to drive the AVERY DENNISON family of printers is covered in separate documentation. The "Formatter / PcMate Plus" software to create formats on site for the AVERY DENNISON 656 / 636 printer is a Windows application. The original "Selfform" will not create formats for the 656 / 636. The new "Formatter / PcMate Plus" package is capable of creating formats for all AVERY DENNISON control printers.

The original DOS version of "PcMate" has been updated to drive the 656 / 636 printer. PcMate DOS version 3.05 or higher is needed.

The printer is also capable of operating directly from a mainframe when using the RS232 interface and AVERY DENNISON's PCL command language.

Product Description

Printer Description

The AVERY DENNISON model 656 / 636 thermal printer *(See Figure 4)* is an electronic printer that can print on Fabric Tapes, Card Stock, Heat Seal, and Pressure Sensitive rolled stocks. The printer interfaces to a computer or a main frame system thus allowing electronic data input or even custom design of labels with AVERY DENNISON'S "Formatter / PcMate Plus" program. This printer can generate a complete label printed on one side.

- Design your own labels on a PC
- Computer interface = IBM Compatible
- Mainframe direct interface
- RS232 9 Pin D shell female Serial interface connector

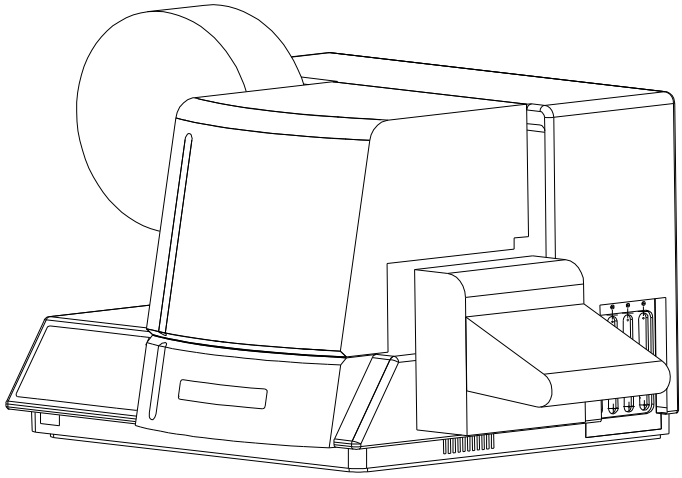


Figure 4 - AVERY DENNISON Model 656 / 636 Label Printer

Personal Computer Specifications

This specification describes the hardware and application software requirements for the Personal Computer that is used to download to the AVERY DENNISON 636 / 656 Printer.

The AVERY DENNISON 636 / 656 Printer uses a Windows version of "PcMate Plus / Formatter". This application will create the tag or label formats (layouts) then fill and transfer data to the printer through the serial port of the computer.

"PcMate Plus / Formatter " Requires the following;

- IBM® PC or compatible
- Microsoft Windows® 98 2nd edition or higher

  (Including Win 2000, ME, NT, and XP)
- 64 Megabytes RAM
- 1 Gigabyte Hard Drive
- Pentium or Pentium Type processor - 400 MHz or higher
- 3-1/2" floppy drive and CD Rom

DISK DRIVES: You will need a hard disk with at least 100 megabytes of free disk space to store the PcMate Plus program. Additional space will be required to store formats, batches, etc.

Refer to your specific software package for proper installation procedures.

Printer Specification

Print method:	Narrow web thermal transfer or thermal direct one sided printer Speed - up to 7 IPS (177.8mm/second)
Label Size	Max: up to 5.125" (130.2mm) web x up to 7" (177.8 mm) feed cut and stacked - Up to 14.0" (355.6mm) feed w/ rewind Min: 1" (25.4mm) web x 1" (25.4mm) feed
Print Area	Max: up to 5" (127mm) web x up to 13.875" (352.4 mm) feed Min: None
Resolution	240 DPI x 240 DPI 300 DPI x 300 DPI
Fonts	Two scalable fonts resident: condensed, standard, and bold typefaces, upper and lower case 4pt up to 96pt (300 DPI), 6pt up to 96pt (240 DPI) all rotations 0°, 90°, 180°, 270°
Logos	No restriction on number or size per tag (up to maximum image area) All rotations 0°, 90°, 180°, 270°
Care Symbols	Full Ginetex Care Symbol set and full NAFTA / ASTM Care Symbol Set Fully Scaleable All rotations 0°, 90°, 180°, 270°
Justification	Left, Right, and Center - field selectable

Stock	Support for blank or pre-printed fabrics, blank or pre-printed card stock and die cut blank or pre-printed pressure sensitive
Interface	AVERY DENNISON PCL via RS232 serial port - 9 pin D-shell
Control Panel	Push-button printer function with 2 Line x 24 Character International LCD Backlit Display
Dimensions	16.0" (406.4 mm) high x 27" (685.8 mm) wide including stacker x 18.5" (469.9mm) deep
Weight	57 Lbs. (26Kg.)
Electrical	90-132 / 180-265 VAC 50-60Hz 10Amp Switch selectable
Temperature	41°F (5°C) to 104°F (40°C)
Humidity	5% to 90% non-condensing
Other Features	- Downloading of information while printer is operating - Sequenced Fields - Time/Date Stamping - Life Counts - Operator adjustable: strobe, cut position, print position, baud rate, and buffer size - Error Detection of: stock out, ink out, print head open, full stacker, stacker jam, and print head over-temperature - Display: labels left to print in a batch, batch ID, total life inches, total life cuts - Self Diagnostics - Missed sense mark detection and correction - Slot, Notches, Hole or Reflective registration detection
Ink Ribbon	AVERY DENNISON standard thermal colors and widths
Options	- SV-100 Barcode Verifier System - Rewind Unit - Reflective Sensor (Back of web) - PcMate - Formatter / PcMate Plus - Spare Parts Kit - International Hardware Kit - Optional 4.25” Stacker - Optional Downstacker

Optional 4.25” Stacker Specifications

- 4.25” Web x 1 ¾” Feed
- Will work on 636, 656 & 676
- Old machines may require the knife strut to be replaced with one that has a mount hole – Part number 355018.
- Fabric and heat seal only - not for pressure sensitive or tags.
- Stack height dependent on material size and weight. (May not reach full stacker height)
- Jam sensor will require relocating the LED to the center position for the 676 and back set of holes for the 636 & 656.
- If changing from standard stacker to 4.25” stacker - the knife guard must be changed to match the stacker being used.

Printer Operation

Loading Ink

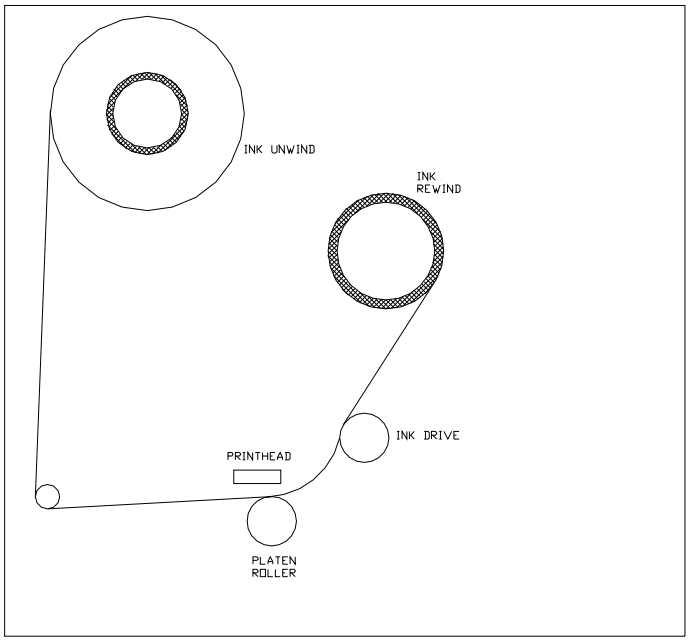


Figure 5 - Ink Threading Path

The ink ribbon comes packaged in a plastic bag. For best results, leave the ink ribbon wrapped in this bag until you are ready to use it in the printer. Use the procedure and diagram above for loading the ink.

1) Unwrap the ink ribbon and put it on the ink-ribbon unwind arbor (*See Figure 5*) by pressing it on to the arbor when the three slots are lined up.

2) Make sure the ink ribbon comes off the roll in the direction shown above and is threaded as illustrated.

NOTE: A new ink ribbon has a leader that makes it easier to use when threading the ribbon through the print area.

3) Put an empty ink-ribbon take-up core on the ink rewind arbor. The ink take-up core must be at least as wide as the ink supply. The adhesive on the supply roll of ink can be used to fasten the leader to the rewind core.

4) Advance the ink until ink starts to wrap around the take-up core.

5) You should rotate the ink arbors to keep excess slack ink from between the print head and the ink cores.

NOTE: Make sure that the ink-ribbon take-up core and the ink-ribbon supply roll are against the ink backer plate so that the ink ribbon tracks straight through the print station.

Loading Stock

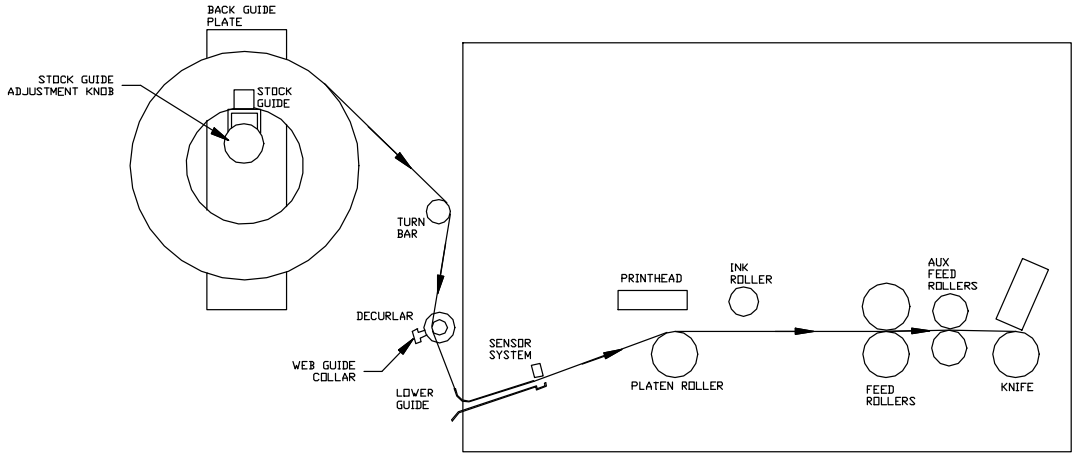


FIGURE 6 – Tag Stock Threading

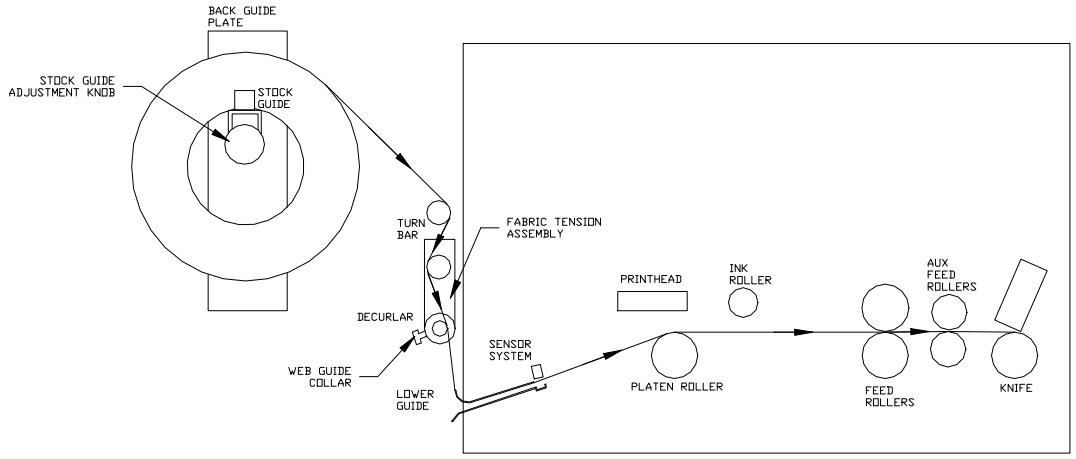


FIGURE 6A – Fabric Threading

LOADING STOCK FOR THE FIRST TIME

1) Adjust the unwind width wider than the roll of stock to be loaded. Set the stock roll on the unwind between the guides with the stock unwinding from the top clockwise. Adjust the unwind width down to the stock size without clamping the core.

2) Adjust the web guides on the decurler bar to a width wider than the stock.

3) Remove the tape or pull the glued end of the stock loose from the supply roll of stock. Pull off about 2 feet (.5 m) of stock to thread it through the printer.

NOTE: If the end of the material was glued down, cut off all material that has glue on any surface.

4) Open the hinged cover to the printer.

5) Open the print head by pushing the release lever and allowing the head to swing up.

6) Open the feed roller by rotating the feed pressure knob fully counter clockwise.

7) After looping the leading edge of the stock over the two decurler bars, slide it through the funnel containing the registration sensor and light bar. Keep the stock in the center, as the printer is center justified.

8) As the stock exits the sensor area, continue to slide the stock through the print station.

9) Once the stock passes though the feed rollers, slide it through the auxiliary feed then through the knife and into the stacker.

10) Check that the stock is center and tracking straight through the printer. Adjust as needed.

11) Close the feed roller and the print head.

12) Rewind any loose stock back onto the supply roll.

13) Adjust the web guides on the decurler down to the edges of the stock without deforming the stock.

Butt Splicing Stock

NOTE: DO NOT RUN BUTT SPLICES THROUGH THE PRINT STATION WITH THE PRINTHEAD CLOSED.

The AVERY DENNISON 656 / 636 has been designed so that supplies can be changed / replenished quickly. Removing the stock trailer remaining in the printer and re-threading the stock altogether can be quicker than butt splicing can. If however you have determined a butt splice is necessary, you can tape together the leader of the new stock roll & the trailer of the depleted stock still in the printer.

When the stock is depleted and the printer stops with a stock out error message, load a new supply roll onto the printer unwind following the procedure previously outlined. Make sure you have determined how the new roll should go on the unwind to prevent any twisting in the stock. Tape the two ends together and remove all slack by rotating the supply roll counterclockwise. Open the printhead and feed roller and manually advance the splice beyond the print station.

NOTE: Whenever stock of a different type or width is put on the printer, a sample run should be performed. If the print quality / registration is acceptable, you can immediately begin your production run. If the print quality / registration needs to be optimized, (Refer to the Printer Setup procedures and perform the procedure needed to make the necessary improvement).

Web Guide Adjustment

The AVERY DENNISON 656 / 636 printer has been designed with only three web guides in the printer that need to be changed as the width of the rolls change from format to format. None of these adjustments requires any tools.

The first guide is on the unwind itself. A knob located on the front of the unwind adjusts the width of the guides on the unwind while maintaining center justification. To increase the width turn the knob counter clockwise to decrease the width, turn the knob clockwise. Adjust the unwind width wider than the roll of stock to be loaded. Set the stock roll on the unwind between the guides with the stock unwinding from the top clockwise. Adjust the unwind width down to the stock size without clamping the core.

The second sets of guides are located on the decurler just to the left of the stock registration funnel. Once a stock is loaded and tracking straight through the printer adjust this set of web guides down to the edges of the stock without deforming the stock. Loosen the plastic thumbscrew and slide the collar into the new position then retighten the thumbscrew. Fine adjustments of the stocks web position can be made by simply moving the collar as a set in or out. If the guides are too tight, the stock will have rolled up edges.

The only other web guide adjustment is the stacker up-right rails (refer to the Stacker Adjustments section in this manual). To fine turn the location of the up-rights, loosen the knob behind each upright rail and slide the rail in or out as needed. The up-right rails should be located approx. 1/16" (1.5mm) to the back or front of the label or tag as it enters the stacker.

Print Head Operation

The print head module is to be opened and closed for threading the stock and ink. The head must also be opened to clean the head and for print head replacement. Later in the manual, under Print Head Cleaning, and Print Head Replacement, cleaning and replacement will be covered.

The print head has an interlock switch that prevents the printer from running with the head in the open position. If the head is open the display will read - HEAD OPEN.

WARNING: DO NOT TOUCH THE PRINT HEAD WITHOUT WEARING THE ANTI-STATIC GLOVES AND THE STATIC WRIST STRAP.

To open the print head for threading supplies, press the lower portion of the latch *(see figure 7)*. The head mount plate will hinge from the back to swing open.

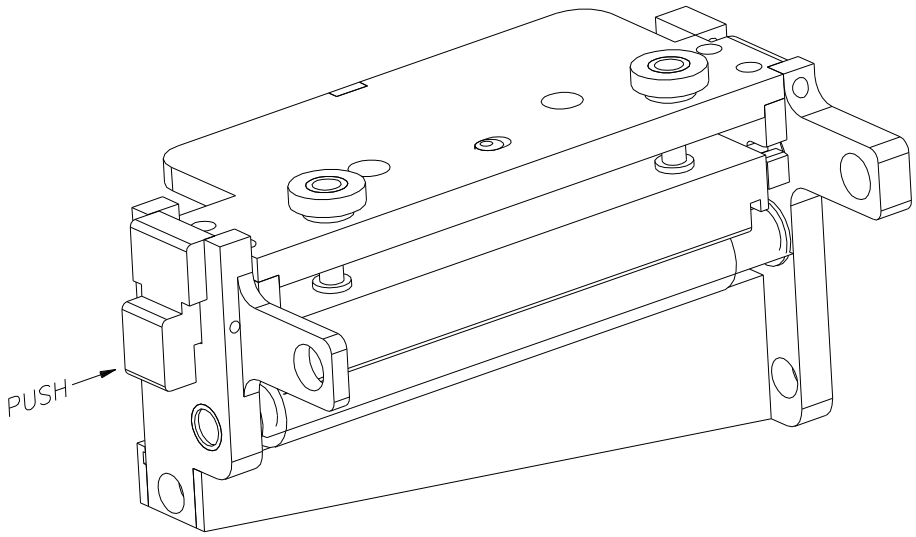
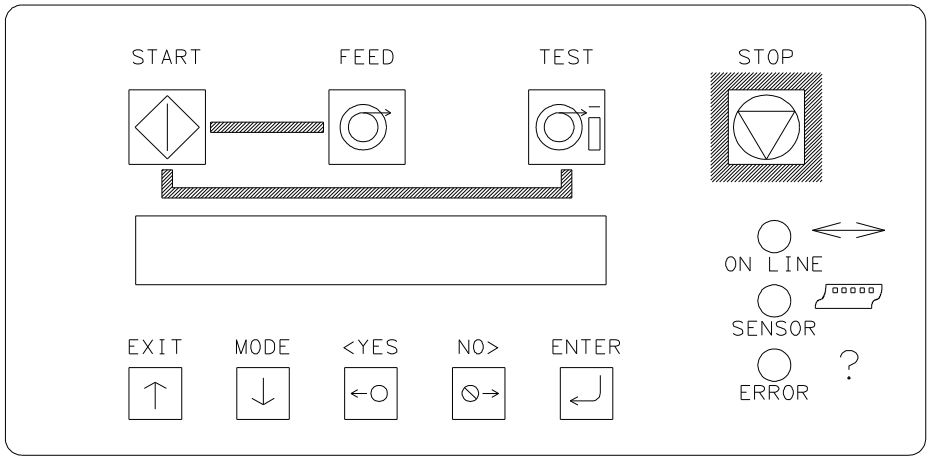


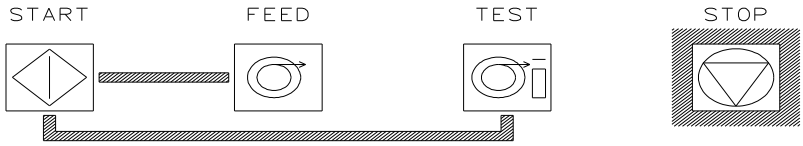
Figure 7 - Print Head Operation

To close the head mount plate, move the head down while depressing the latch. When the mount plate swings past the top of the latch release.

Control Panel Operation



Control Buttons



Start

- Starts the printer.
- ON LINE light must be GREEN.

(Batches downloaded to be printed)

Feed

- FEED and START must both be used.
- Feed will stop when the buttons are released.
- Labels between the head and knife will be cut and stacked as finished labels.
- Stock moves through in one continuous strip.
- Stock moves through without printing.
- Ink will not advance; ink save on the 656 will automatically be activated.
- The print head must be closed.

Test

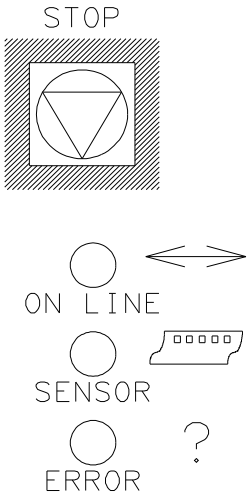
- TEST and START must both be used.
- Test will stop when the buttons are released.
- Labels between the head and knife will be cut and stacked as finished labels.
- Stock moves through in one continuous strip.
- Stock moves through with test pattern printing.
- The ink will advance with the stock.
- The print head must be closed.

Stop

- The stop button will stop the printer at the end of the current label being printed.

Indicator Lights

The AVERY DENNISON 656 / 636 has three Indicator lights. These lights are used along with the LCD display to tell the operator the current status of the printer.



On Line

OFF

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

<u>After Power Up Sequence:</u>

- Printer is running.

ORANGE

- System is operational.
- Ready for batches to be downloaded.

GREEN

- Batches to print, ready to start.

Sensor

GREEN = "C" SENSOR

- Printer is stopped, - light is on, - sensor is setting over a stock sensor mark hole.
- Flashing light while the printer is running, - the sensor is in-line with the registration HOLES.

ORANGE = REFLECTIVE SENSOR

- Flashing light while the printer is running, - the sensor is in-line with the registration PRINTED MARKS.

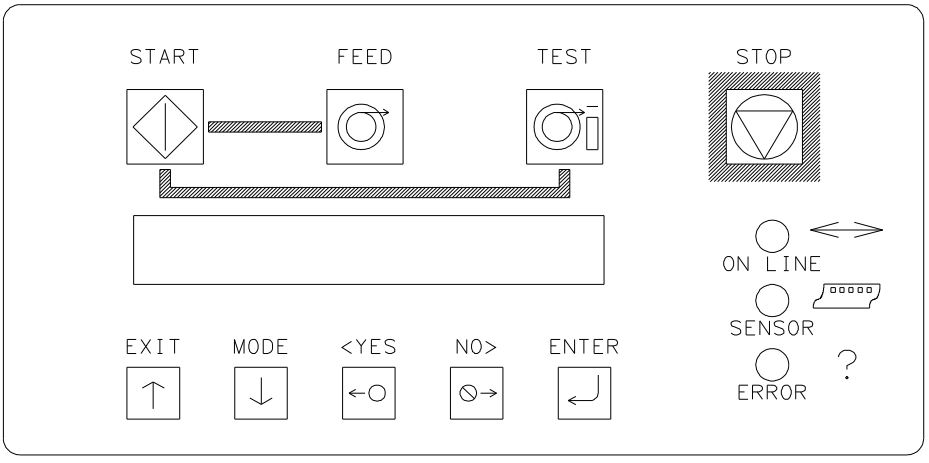
Error

ORANGE

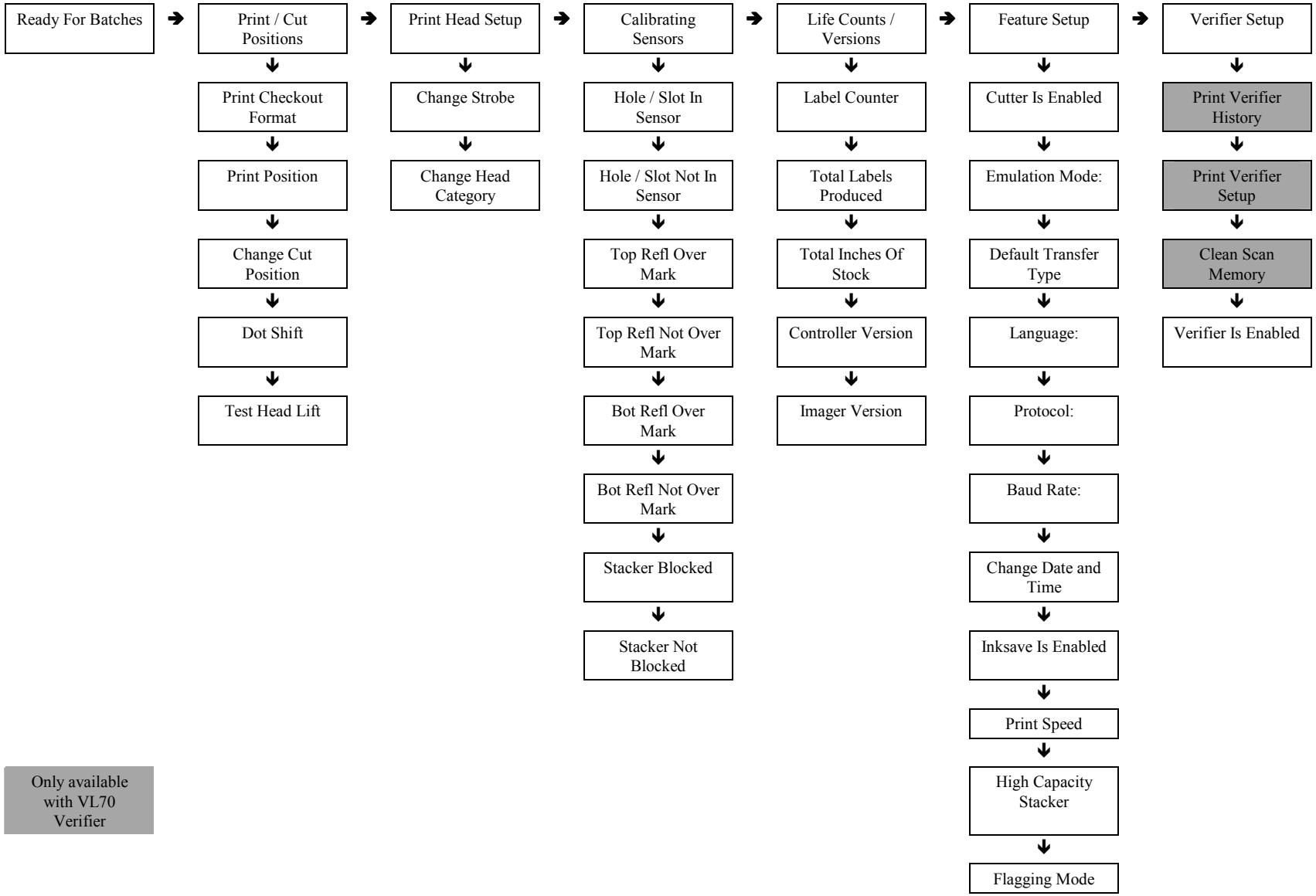
- System inter-lock triggered, display for error.

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.



Front Panel Menu Map



Front Panel Power Up / Home Screens

POWER UP (DIAGNOSTICS TESTS)

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

This screen is displayed while the Front Panel is initializing and waiting for the Thermal Control Board (TCB) response. While this screen is displayed the code will check the functionality of the LED's and the display. Each state of the LED's will be checked - (orange, green, amber and off). The LCD is checked 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:

(	B	U	T	T	O	N		N	A	M	E	)			K	E	Y		S	T	U	C	K

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 Thermal Control Board (TCB).

D	I	A	G	N	O	S	T	I	C		T	E	S	T		#	#	#					
T	C	B		V	E	R	S	I	O	N		0	0	.	0	0							

This screen will be updated with diagnostic numbers as the TCB and AT go through different stages of PowerPC initialization.

The diagnostic test screen will also be displayed when the Diagnostic tests that are runable from the front panel are being executed.

Once the diagnostic tests are complete, the Front Panel should display the HOME screen.

HOME SCREEN

R	E	A	D	Y		F	O	R		B	A	T	C	H	E	S							
6	X	6	/	3	0	0																	

OR

B	A	T	C	H		I	D								Q	U	A	N	T	I	T	Y
P	C	L	0	0	1																1	0

When the printer is powered up and all initializations are complete, if there aren't any Batches to print, the "HOME" screen will be "READY FOR BATCHES" and the model and print head density.

When there are Batches to be printed, the "HOME" screen will be the

"BATCH ID QTY" screen. The Batch ID / Batch Qty screen displays the currently cutting batch ID and labels remaining to be cut.

When the Batch Id/Qty screen is the home screen and the user presses the EXIT button the Model and DPI are displayed briefly before the Batch Id/Qty screen is displayed.

If the printer is performing a FEED or a TEST pattern, the screen will show "FEEDING" or "PRINTING TEST PATTERN" respectively on line two, the top line will be blank

F	E	E	D	I	N	G															

P	R	I	N	T	I	N	G		T	E	S	T		P	A	T	T	E	R	N	

Pressing the MODE/Down Arrow key will take the user to the various mode screens listed below (refer to the Front Panel Mode Descriptions section in this manual).

Pressing the EXIT/Up Arrow key at any time will take the user back to the "HOME" screen.

PRINTER ADJUSTMENTS

P	R	E	S	S		E	N	T	E	R		F	O	R								
P	R	I	N	T	/	C	U	T		P	O	S	I	T	I	O	N	S				

PRINTHEAD ADJUSTMENTS

P	R	E	S	S		E	N	T	E	R		F	O	R								
P	R	I	N	T		H	E	A	D		S	E	T	U	P							

CALIBRATE SENSORS

P	R	E	S	S		E	N	T	E	R		F	O	R								
C	A	L	I	B	R	A	T	I	N	G		S	E	N	S	O	R	S				

LIFE COUNTS/VERSIONS

P	R	E	S	S		E	N	T	E	R		F	O	R								
L	I	F	E		C	O	U	N	T	S	/	V	E	R	S	I	O	N	S			

SETUP SCREEN

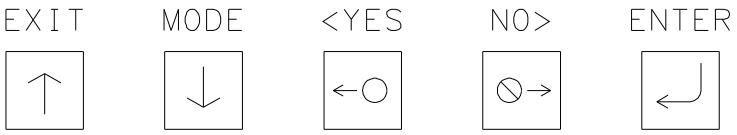
P	R	E	S	S		E	N	T	E	R		F	O	R									
F	E	A	T	U	R	E		S	E	T	U	P											

VERIFIER SETUP SCREEN

P	R	E	S	S		E	N	T	E	R		F	O	R									
V	E	R	I	F	I	E	R		S	E	T	U	P										

Front Panel Mode Descriptions

There are six (6) main mode levels that are selected and modified using the following function keys:



Use the MODE ↓ key to move through the main mode screens shown below:

PRESS ENTER FOR **PRINT / CUT POSITIONS**

PRESS ENTER FOR **PRINT HEAD SETUP**

PRESS ENTER FOR **CALIBRATING SENSORS**

PRESS ENTER FOR **LIFE COUNTS / VERSIONS**

PRESS ENTER FOR **FEATURES SETUP**

PRESS ENTER FOR **VERIFIER SETUP**

Use the EXIT ↑ to move to the HOME screens.

PRINT/CUT POSITIONS

P	R	E	S	S		E	N	T	E	R		F	O	R								
P	R	I	N	T	/	C	U	T		P	O	S	I	T	I	O	N					

This screen follows the "BATCH ID / BATCH QTY" screen if there are batches to be printed; otherwise it follows the "READY FOR BATCHES / MODEL DPI" home screen.

Pressing ENTER will take the user to the "PRINT / CUT POSITIONS" screens. Pressing the MODE / Down Arrow key will take the user to the "PRINTHEAD SETUP" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

P	R	E	S	S		E	N	T	E	R		T	O									
P	R	I	N	T		C	H	E	C	K	O	U	T		F	O	R	M	A	T		

This screen is the first screen under "PRINT / CUT POSITIONS". Pressing ENTER will cause the printer to print the checkout format. The printer will setup to do the checkout format and start printing. The front panel will remain on this screen so the user can use the MODE/Down Arrow key to get to the printer adjustments. When the EXIT/Up Arrow key is pressed the printer stops printing the checkout format and goes back to what it was doing before the checkout was requested.

Pressing the MODE/Down Arrow key will take the user to the "PRINT POSITION" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

P	R	I	N	T		P	O	S	I	T	I	O	N									
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the "PRINT CHECKOUT FORMAT" screen. This screen allows the print position to be adjusted in the feed direction.

The <YES / NO> buttons are used to change the new print value. The value is displayed in a positive/negative format. The value ranges for XX and YY can be from a -9 to a +9. Pressing ENTER will change the CURRENT PRINT value to the NEW PRINT value. A more positive number will move the print to the right while a more negative number will move the print to the left.

Pressing the MODE/Down Arrow key will take the user to the "CHANGE CUT POSITION" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

C	H	A	N	G	E		C	U	T		P	O	S	I	T	I	O	N				
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the "PRINT POSITION" screen. This screen allows the cut position to be adjusted. The <YES / NO> buttons are used to change the new cut value. The value is displayed in a positive/negative format. The value ranges for XX and YY can be from a -9 to a +9. Pressing ENTER will change the CURRENT CUT value to the NEW CUT value. A more positive number will move the cut to the right while a more negative number will move the cut to the left.

Pressing the MODE/Down Arrow key will take the user to the "DOT SHIFT" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

D	O	T		S	H	I	F	T														
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the "CHANGE CUT POSITION" screen. This screen allows the print position to be adjusted in the WEB direction. The <YES / NO> buttons are used to change the new shift value. The value is displayed in a positive/negative format. The value ranges for XX and YY can be from a -16 to a +16 dots. Pressing ENTER will change the CURRENT DOT SHIFT value to the NEW DOT SHIFT value. A more positive number will move the print to the front while a more negative number will move the print to the back.

Pressing the MODE/Down Arrow key will take the user back to the "PRINT CHECK OUT FORMAT" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

PRINTHEAD SETUP

P	R	E	S	S		E	N	T	E	R		F	O	R								
P	R	I	N	T	H	E	A	D		S	E	T	U	P								

This screen follows the "PRINT/CUT POSITIONS" screen.

Pressing ENTER will take the user to the "PRINTHEAD SETUP" screens. Pressing the MODE / Down Arrow key will take the user to the "CALIBRATING SENSORS" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

C	H	A	N	G	E		S	T	R	O	B	E										
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen is the first screen under "PRINTHEAD SETUP" screen. This screen allows the user to adjust the strobe. The <YES / NO> buttons are used to change the new value. The value is displayed in a positive/negative format. The value ranges for X and Y can be from a -7 to a +7. Pressing ENTER will change the CURRENT STROBE value to the NEW STROBE value. A more positive number will make the print darker while a more negative number will make the print lighter.

Pressing the MODE/Down Arrow key will take the user to the "CHANGE HEAD CATEGORY" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

H	E	A	D		C	A	T	E	G	O	R	Y										
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the "CHANGE STROBE" screen. The screen allows the user to enter the head category. The <YES / NO> buttons are used to change the new head category value. The value ranges from 1 to 8. Pressing ENTER will change the CURRENT HEAD category value to the NEW HEAD value. See the section “PRINTHEAD REPLACEMENT” for instructions for setting the head category.

Pressing the MODE / Down Arrow key will take the user back to the "CHANGE STROBE" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

CALIBRATE SENSORS

P	R	E	S	S		E	N	T	E	R		T	O								
C	A	L	I	B	R	A	T	E		S	E	N	S	O	R	S					

This screen follows the "PRINT HEAD SETUP" screen.

Pressing ENTER will take the user to the "CALIBRATE SENSORS" screens. Pressing the MODE / Down Arrow key will take the user to the "LIFE COUNTS / VERSIONS" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

H	O	L	E	/	S	L	O	T		I	N		S	E	N	S	O	R			
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0	

This is the first screen under "CALIBRATE SENSORS". Place the stock hole/slot sense mark under the sensor. Slowly move the stock under sensor until the NEW VALUE reading is its smallest value then press ‘Enter’.

Pressing the MODE/Down Arrow key will take the user to the "HOLE / SLOT NOT IN SENSOR" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

H	O	L	E	/	S	L	O	T		N	O	T		I	N		S	E	N	S	O	R	
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0	

This screen follows the "HOLE / SLOT IN SENSOR" screen. Place the stock under the sensor so that it blocks the sensor and when NEW VALUE is at its largest value press ‘Enter’.

Pressing the MODE / Down Arrow key will take the user to the "TOP REFL OVER MARK" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

T	O	P		R	E	F	L		O	V	E	R		M	A	R	K					
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0	

This screen follows the "HOLE/SLOT NOT IN SENSOR" screen. Place the stock under the sensor so that the reflective mark is under the sensor and when NEW VALUE is at is largest value press ‘Enter’.

Pressing the MODE/Down Arrow key will take the user to the "TOP REFL NOT OVER MARK" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

T	O	P		R	E	F	L		N	O	T		O	V	E	R		M	A	R	K		
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0	

This screen follows the "TOP REFL OVER MARK" screen. Place the stock under the sensor so that the stock is under the sensor but the reflective mark is not under the sensor and when NEW VALUE is at is smallest value press ‘Enter’.

Pressing the MODE/Down Arrow key will take the user to the "BOT REFL OVER MARK" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

B	O	T		R	E	F	L		O	V	E	R		M	A	R	K					
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0

This screen follows the "TOP REFL NOT OVER MARK" screen. Place the stock over the sensor so that the reflective mark is over the sensor and when NEW VALUE is at is largest value press 'Enter'.

Pressing the MODE/Down Arrow key will take the user to the "BOT REFL NOT OVER MARK" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

B	O	T		R	E	F	L		N	O	T		O	V	E	R		M	A	R	K		
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0

This screen follows the "BOT REFL OVER MARK" screen. Place the stock over the sensor so that the stock is over the sensor but the reflective mark is not over the sensor and when NEW VALUE is at is smallest value press 'Enter'.

Pressing the MODE/Down Arrow key will take the user to the "STACKER BLOCKED" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

S	T	A	C	K	E	R		B	L	O	C	K	E	D							
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0

This screen follows the "BOT REFL NOT OVER MARK" screen. Place the stock in the stacker jam sensor so that the stock is within the sensor site path and when NEW VALUE is at is highest value press 'Enter'.

Pressing the MODE / Down Arrow key will take the user to the "STACKER NOT BLOCKED" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

S	T	A	C	K	E	R		N	O	T		B	L	O	C	K	E	D				
V	A	L	U	E	:	0	0	0		N	E	W		V	A	L	U	E	:	0	0	0

This screen follows the "STACKER BLOCKED" screen. Remove any stock from the stacker jam sensor so that no stock is within the sensor site path and when NEW VALUE is at is lowest value press 'Enter'.

Pressing the MODE/Down Arrow key will take the user back to the "HOLE / SLOT IN SENSOR" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

LIFE COUNTS/VERSIONS

P	R	E	S	S		E	N	T	E	R		F	O	R							
L	I	F	E		C	O	U	N	T	S	/	V	E	R	S	I	O	N	S		

This screen follows the "CALIBRATE SENSORS" screen. Pressing ENTER will take the user to the "LIFE COUNTS / VERSIONS" screens.

Pressing the MODE / Down Arrow key will take the user to the "FEATURE SETUP" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

L	A	B	E	L		C	O	U	N	T	E	R	:	0	0	0	0	0	0				
P	R	E	S	S		E	N	T	E	R		T	O		R	E	S	E	T				

This screen is the first screen under "LIFE COUNTS / VERSIONS". This screen shows total labels produced since the last counter reset. Pressing the ENTER key will reset the counter to zero.

Pressing the MODE / Down Arrow key will take the user to the "TOTAL LABELS PRODUCED" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

T	O	T	A	L		L	A	B	E	L	S		P	R	O	D	U	C	E	D			
0	0	0	0	0	0	0	0	0	0														

This screen follows the "LABEL COUNTER" screen. This screen displays the total labels produced since the printer was built. This counter is NOT resettable by the user.

Pressing the MODE / Down Arrow key will take the user to the "TOTAL INCHES OF STOCK" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

T	O	T	A	L		I	N	C	H	E	S		O	F		S	T	O	C	K			
0	0	0	0	0	0	0	0	0	0														

This screen follows the "TOTAL LABELS PRODUCED" screen. This screen displays the total inches since the printer was built. This value is NOT resettable by the user.

Pressing the MODE/Down Arrow key will take the user to the "CONTROLLER VERSION" screen. Pressing the EXIT / Up Arrow key will take the user back to the HOME screen.

C	O	N	T	R	O	L	L	E	R		V	E	R	S	I	O	N						
2	.	1	6																				

This screen follows the "TOTAL INCHES OF STOCK" screen. This screen shows the operating system version for the controller (TCB).

Pressing the MODE / Down Arrow key will take the user to the "IMAGER VERSION" screen. Pressing the EXIT / Up Arrow key will take the user back to the HOME screen.

I	M	A	G	E	R		V	E	R	S	I	O	N										
2	.	1	6																				

This screen follows the "CONTROLLER VERSION" screen. This screen shows operating system version for the imager (AT).

Pressing the MODE/Down Arrow key will take the user back to the "LABEL COUNTER" screen.

Pressing the EXIT / Up Arrow key will take the user back to the HOME screen.

FEATURE SETUP SCREEN

P	R	E	S	S		E	N	T	E	R		F	O	R									
F	E	A	T	U	R	E		S	E	T	U	P											

This screen follows the "LIFE COUNT / VERSIONS".

Pressing ENTER will take the user to the "FEATURE SETUP" screens. Pressing the MODE/Down Arrow key will take the user to the "VERIFIER SETUP" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

C	U	T	T	E	R		I	S		E	N	A	B	L	E	D						
P	R	E	S	S		E	N	T	E	R		T	O		D	I	S	A	B	L	E	

OR

C	U	T	T	E	R		I	S		D	I	S	A	B	L	E	D					
P	R	E	S	S		E	N	T	E	R		T	O		E	N	A	B	L	E		

This screen is the first screen of the "FEATURE SETUP". This screen allows the cutter to be enabled or disabled. Pressing ENTER will toggle from ENABLED to DISABLED and vice versa. Pressing the MODE/Down Arrow key will take the user to the "EMULATION MODE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

E	M	U	L	A	T	I	O	N		M	O	D	E	:	N	O	N	E				
N	E	W		E	M	U	L	A	T	I	O	N		M	O	D	E	:	6	3	0	

This screen follows the "CUTTER ENABLE/DISABLE" screen. This screen allows the EMULATION MODE to be changed. Use the <YES and NO> keys to move between NONE, 630, and 650 modes. Pressing ENTER will update the emulation mode with the selection after new emulation mode. Pressing the MODE/Down Arrow key will take the user to the "DEFAULT TRANSFER TYPE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

D	E	F	A	U	L	T		T	R	A	N	S	F	E	R		T	Y	P	E			
V	A	L	U	E	:	X	X	X			N	E	W		V	A	L	U	E	:	Y	Y	Y

This screen follows the "EMULATION MODE" screen IF emulation mode is something other than none. This screen allows the DEFAULT TRANSFER TYPE to be changed. This transfer type is used when the printer is in 630 or 650 emulation mode. The 630 and 650 do not send valid **6X6** transfer types in their PCL code. This default is used for those formats. Use the <YES and NO> keys to change the number value at the cursor position. Pressing ENTER will update the current value with the new value (i.e. 053 for type 53). After ENTER is pressed on the last digit the TRANSFER TYPE on the top line will be updated. Pressing the MODE/Down Arrow key will take the user to the "LANGUAGE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

				L	A	N	G	U	A	G	E	:		X	X	X	X	X	X				
N	E	W		L	A	N	G	U	A	G	E	:		Y	Y	Y	Y	Y	Y				

This screen follows the "DEFAULT TRANSFER TYPE" screen. This screen allows the front panel display language to be changed. Use the <YES and NO> keys to move between the supported languages on the printer. Any number of front panel languages can be stored on the Flash Disk Module (dependent on available space). If no additional languages other than the default are available on the printer XXXXXX and YYYYYY will be the same value. Pressing ENTER will update the display

language with the selection. Pressing the MODE / Down Arrow key will take the user to the "PROTOCOL" screen. Pressing the EXIT / Up Arrow key will take the user back to the "HOME" screen.

Warning: Mis-matched communication protocols may result in the inability to communicate with the printer and / or loss of data.

				P	R	O	T	O	C	O	L	:		X	X	X	X	X	X			
N	E	W		P	R	O	T	O	C	O	L	:		Y	Y	Y	Y	Y	Y			

This screen follows the "LANGUAGE" screen. This screen allows the communications protocol to be changed between the supported types. Use the <YES and NO> keys to move between the supported protocols – RTS/CTS is considered hardware handshaking and XON/XOFF is considered to be software. Pressing ENTER will update the communications protocol with the selection. Pressing the MODE/Down Arrow key will take the user to the "BAUD RATE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

				B	A	U	D		R	A	T	E	:	X	X	X	X	X	X			
N	E	W		B	A	U	D		R	A	T	E	:	Y	Y	Y	Y	Y	Y			

This screen follows the "PROTOCOL" screen. This screen allows the serial communications speed to be changed. Use the <YES and NO> keys to move between the supported speeds – typical is 9600 dependent on serial communication cable length. Pressing ENTER will update the communications speed with the selection. Pressing the MODE/Down Arrow key will take the user to the "CHANGE DATE AND TIME" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

C	H	A	N	G	E		D	A	T	E		A	N	D		T	I	M	E			
0	3	/	1	4	/	0	0		1	2	:	0	5		P	M						

This screen follows the “BAUD RATE” screen. This screen allows the system date and time to be changed. When this screen appears, the first digit of the month will be blinking. (The date is shown in US format, MM/DD/YY.) Pressing the <YES and NO> keys will change the digit up and down respectively. Pressing ENTER will move to the next digit. Only the digits and the A or P in AM or PM can be changed. When all changes are complete, pressing the MODE/Down Arrow key will take the user to the “INKSAVE ENABLE/DISABLE” screen, and pressing the EXIT/Up Arrow key will take the user back to the “HOME” screen. If an illegal date or time is entered, this screen will be re-displayed with the original date or time. A valid date and time must be entered before the user can go on.

I	N	K	S	A	V	E		I	S		E	N	A	B	L	E	D					
P	R	E	S	S		E	N	T	E	R		T	O		D	I	S	A	B	L	E	

OR

I	N	K	S	A	V	E		I	S		D	I	S	A	B	L	E	D				
P	R	E	S	S		E	N	T	E	R		T	O		E	N	A	B	L	E		

This screen allows ink save to be enabled or disabled. Ink save is an option that is available on certain models. It must be enabled in the format to operate. If ink save is enabled in the format, it can be disabled using this screen. Pressing ENTER will toggle from ENABLED to DISABLED and vice versa. Pressing the MODE/Down Arrow key will take the user to the "CUTTER ENABLE/DISABLE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

VERIFIER SETUP

P	R	E	S	S		E	N	T	E	R		F	O	R									
V	E	R	I	F	I	E	R		S	E	T	U	P										

This screen follows the "FEATURE SETUP" screen.

Pressing ENTER will take the user to the "VERIFIER SETUP" screens. Pressing the MODE/Down Arrow key will take the user back to the "PRINT/CUT POSITIONS" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

Note: This screen for SV-70 Verifier only

P	R	E	S	S		E	N	T	E	R		T	O										
P	R	I	N	T		V	E	R	I	F	I	E	R		H	I	S	T	O	R	Y		

This screen is the first screen under "VERIFIER SETUP". Pressing ENTER will cause the printer to print a verifier history report containing bar code information for all the problem scans since the scan memory was last cleared.

Pressing the MODE/Down Arrow key will take the user to the "PRINT VERIFIER SETUP" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

Note: This screen for SV-70 Verifier only

P	R	E	S	S		E	N	T	E	R		T	O										
P	R	I	N	T		V	E	R	I	F	I	E	R		S	E	T	U	P				

This screen follows the "PRINT VERIFIER HISTORY" screen. Pressing ENTER will cause the printer to print a report containing the present verifier setup.

Pressing the MODE/Down Arrow key will take the user to the "CLEAR SCAN HISTORY" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

Note: This screen for SV-70 Verifier only

P	R	E	S	S		E	N	T	E	R		T	O										
C	L	E	A	R		S	C	A	N		M	E	M	O	R	Y							

This screen follows the "PRINT VERIFIER SETUP" screen. Pressing ENTER will clear the verifier scan memory.

Pressing the MODE/Down Arrow key will take the user to the "VERIFIER ENABLE" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

V	E	R	I	F	I	E	R		I	S		E	N	A	B	L	E	D					
P	R	E	S	S		E	N	T	E	R		T	O		D	I	S	A	B	L	E		

OR

V	E	R	I	F	I	E	R		I	S		D	I	S	A	B	L	E					
P	R	E	S	S		E	N	T	E	R		T	O		E	N	A	B	L	E			

This screen follows the "CLEAR SCAN HISTORY" screen. This screen allows the verification process to be enabled or disabled. Pressing ENTER will toggle from ENABLED to DISABLED and vice versa.

Pressing the MODE/Down Arrow key will take the user back to the "PRINT VERIFIER HISTORY" screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

Adjustments / Maintenance

Print Head Handling

Warning

Print heads can be damaged easily, and are subject to premature failure if not cleaned on a regular basis. Please follow the procedures carefully to help ensure print head life and print quality.

Thermal print heads are very sensitive and must be handled with care to help ensure longer print head life. Because print heads may be damaged through a number of ways, AVERY DENNISON has developed the following procedures;

Handling

Static discharge is very detrimental to thermal print heads. To avoid contacting print heads with a static charge, follow these simple procedures:

- All print heads should be kept in original anti-static bags until they are installed in the printer.
- The 656 / 636 printer is supplied with an anti-static wrist strap. Locate the strap - it must be worn at all times when handling the print heads.
- Do not touch any terminals extending from the print head or the print line.
- Anti-static gloves are provided with your printer upon installation and extras may be ordered from AVERY DENNISON. These gloves must be worn at all times when handling the print head. If an anti-static glove is not available, make absolutely certain to thoroughly wash and dry your hands before handling the print head. Oils from your hands can contaminate the print line and quickly destroy the printing elements.

Print Head Cleaning

CAUTION: TURN OFF THE POWER TO THE PRINTER BEFORE STARTING ANY CLEANING.

NEVER REMOVE THE HEAD FROM THE PRINTER EXCEPT FOR REPLACEMENT.

The Anti-static wrist strap (which must contact the skin and be tight) and anti-static gloves must be worn at all times when handling a print head to avoid damaging the print head.

Supplies:

- Always use clean supplies when cleaning the head.
- NEVER use anything abrasive to the head.
- NEVER use anything metallic on or near the printhead.
- Alcohol and a foam swab are the recommended items to use when cleaning the printhead.

RECOMMEND AVERY DENNISON "MASTER CLEANING KIT" # 921338

Procedure:

-The print head should be cleaned every two to four hours of continuous usage. A good cleaning of the print head after eight to twelve hours of continuous usage should be done. This cleaning must be done with the print head in the printer.

- Apply a liberal amount of alcohol to a foam swab.
- Rub the swab across the print line of the printhead to remove the build-up.
- The platen roller and feed rollers should also be cleaned with alcohol to remove ink and card dust build-up.

Print Head Replacement

NEVER REMOVE THE PRINT HEAD FROM THE PRINTER EXCEPT FOR REPLACEMENT.

TURN OFF THE POWER TO THE PRINTER BEFORE STARTING ANY ELECTRONIC COMPONENT REPLACEMENT.

NOTE: The Anti-static wrist strap (which must contact the skin and be tight) and anti-static gloves must be worn at all times when handling a print head to avoid damaging the print head.

1) Review the Printhead Handling Procedure Sheet packaged with each print head to determine if any procedures have changed before beginning this procedure.

2) Remove the ink from the printer for easy access to the print head.

3) Remove the outer screw holding the static brush / guard and rotate the brush / guard up to expose the print head cable connector on the print head.

4) Unplug the print head cable from the print head. Unplug the cable by gently pulling it straight out of the connector.

5) Back the print head pressure screw off counterclockwise as far as possible.

6) Place your hand (with static gloves on) underneath the print line of the print head and push up to release the locator pins on the heat sink, while moving the print head to the right of the printer. This will remove the print head assembly from the mount plate. You may need to "help" the print head out by pushing on the heat sink with your left hand.

7) Remove the two print head mount screws located on the top of the print head assembly with a 2.5mm ball driver.

8) Remove the old printhead from the heat sink.

9) Place the new print head into the heat sink. Check to see that the new printhead sits square in the heat sink and that there is no endplay. If there is endplay, or the head does not seat properly, the heat sink guide will need adjustment.

10) Replace the two print head lock screws. Be sure that the head is resting flat on the heat sink before tightening these screws.

11) Replace the print head assembly in the printer, making sure that the pin at the back of the heat sink goes into the hole in the mount plate. Make sure that the guide pins insert into both the front and back grooves.

12) Reconnect the print head cable, making sure that the connector is seated tightly. Swing the static brush / guard back into position and reinstall its mount screw.

NOTE: If the cable is not connected correctly, the print head will be damaged when the printer is powered on. Check to see that the cable is tight by observing from underneath the print head. The print head cable connector should be inside of the black connector located on the print head.

13) Replace the ink and double-check your work. Power the printer on and make sure that no adverse effects are noted.

14) Set the head category. Press the MODE key twice to get to the ENTER PRINTHEAD SETUP prompt. Press the ENTER key, the press the MODE key until the HEAD CATEGORY prompt appears. Use the <YES and NO> keys to select the head category. The head category is based on the mean resistance of the print head being used. The printhead will have a value for the average

printhead resistance, for example “Rav = 1438Ω”, printed on a label on the printhead. Look up the value in the following table and enter the appropriate head category. Press the ENTER key to enter the value. The printer must be turned off and back on for the change to take effect.

HEAD CATEGORY	AVERAGE RESISTANCE (Rav)
1	1320-1365
2	1366-1410
3	1411-1455
4	1456-1500
5	1501-1545
6	1546-1590
7	1591-1635
8	1636-1680

As a final test of the print head installation, run a test pattern to check the print quality. You should observe an even grid of rectangles. If you do not see such a grid, you may wish to reference the topic of print head tangent adjustment.

Print Head Adjustment

Clean Platen Roller

You may determine if the print head has been adjusted properly by performing a test pattern as documented under Control Buttons in this manual. A properly adjusted print head will produce an even grid of rectangles when the test pattern is performed. **Before making any judgments as to the quality of the print head, it is absolutely necessary to ensure that the platen roller and the printhead is clean of all debris.** Clean the platen roller located immediately beneath the print head with a clean cloth and a small amount of alcohol. Be careful not to damage the platen roller while cleaning. If the roller is worn, replace the roller.

Print Head Tangent Point

Proper print head tangent is perhaps the most important adjustment to make. A print head, which is not properly adjusted, will result in poor print quality, poor heat dissipation and possible ink wrinkling problems. When the printer was manufactured, the print head was adjusted to the proper tangent point on the platen roller, however, with print head replacements the tangent point for the new print head may change. It is necessary to understand how to properly adjust the print head.

The print head tangent adjustment must be done with the head pressure set light. Turn the pressure screw counterclockwise. Run a test pattern to determine the minimum adjustment required.

If the entire test pattern is broken up, the printhead is probably not adjusted to the proper tangent point. To adjust the tangent point loosen the two print head mount screws one half turn with a 2.5mm ball driver provided in your spare parts kit. Do not remove the print head from the printer. Once the screws have been loosened, use the adjustment thumbscrew to move the head right or left. Since the adjustment is very precise, do not turn the thumbscrew more than 1/4 of a turn before running another test pattern to determine if you are adjusting the print head in the proper direction. Tighten the two mount screws **(Do not over tighten).** Run a test pattern again to determine if further adjustment is required.

Print Head Pressure Setting

The print head pressure setting is very important. Keep the lightest setting possible. This will improve print head life while maintaining quality print.

The printer has been factory set. Further adjustment of the pressure adjusting screw should be minimal.

If readjustment is required, proceed as follows: Power on the printer. Remove the ink and stock from the printer. With the print head open, turn the pressure screw counterclockwise until it does not contact the printhead mount plate; it should slide freely back and forth. Close the print head. Slide the pressure screw until it sits directly over the center of the stock. Turn the pressure screw clockwise until it makes contact with the head mount plate plus 1/2 turn to add pressure. As the stock width changes adjust the pressure screw position accordingly.

Download the proper format for the stock that is loaded. Press start. The print quality should be acceptable if the pressure screw is properly positioned.

Once the print quality is acceptable, start to back off the screw until the print begins to fade. Once the print is starting to fade, increase the pressure by 4 clicks.

Minimum pressure should be used when running narrow stocks; wide stocks require slightly greater pressure. Additional print quality will be obtained by adjustments of the Tangent point (refer to Print Head Adjustment Tangent in this manual).

If you are unable to correctly adjust the screw for good print, call for service.

Squaring the Print Head

If the test pattern, printed on a wide web (4" (100mm) plus), is lighter on one edge than the other, it is possible that the printhead is out of square. This can be detected by looking at the front edge of the print head in reference to the print head holder. To remedy this problem, power off the printer and remove the print head as outlined in the Print Head Replacement section in this manual. The print head adjustment plate has been manufactured so when properly adjusted the head will be square. The print head holder has a locator plate that must slide up snug against the printhead mount plate. Install the head and it should be square to the web.

Stock Feed Roller Adjustment

General

The rubber pressure roller is supported by an eccentric shaft mounted in bearings located in vertical slots in the front and rear mounting plates of the drive module. This roller is mounted in an extension spring controlled arm so no pressure adjustment is required.

Knife Square Adjustment

The knife has an adjustment to square the cut to the stock. To make the adjustment, loosen the two cap screws, one on top of the knife and one below the knife, using the 3/16” ball driver in the tool kit. Move the knife in the direction desired to square the cut and retighten.

Stacker Adjustments

The stacker has four adjustments that can be made without a tool to accommodate different types and widths of stock.

Stock Length Adjustment

Loosen the two thumb screws at the base of the stacker uprights and slide the uprights to a position that allows the cut tag or label to hang over the last belt roller approximately 1/4" (6mm). Retighten.

Stock Width Adjustment

Loosen the two thumbscrews behind the stacker uprights and adjust the stacker uprights to the desired stock width position. Retighten.

Stacker Angle Adjustment

Loosen the lever located on the side of the stacker assemble nearest the operator and adjust the angle of the stacker with a few cut labels in the stacker so that there is a slight gap under the last label as it hangs over the last belt drive roller. Retighten.

Stacker Full Adjustment

The sensor on the inboard stack upright is used to stop the printer when the stack is full. A thumbscrew adjustment is provided to set the stack height.

Warning, some stock materials cannot be stacked to the full height of the stacker because of excessive weight.

Sensor Identification / Adjustment / Calibration

Sensor Identification:

Stock Out

A micro switch located on the back of the stock unwind will detect and stop the printer when the stock core is lifted because the stock is consumed.

Hole / Slot Index Registration

The stock hole / slot registration is via an optical sensor used in conjunction with an LED light bar located in the stock funnel which allows the printer to register to pre-punched or preprinted stock.

Reflective Index Registration

The same optical sensor used for stock hole / slot registration, allows the printer to register to preprinted stock by detecting a black mark when the LED light bar is turned off via the format.

Ink Out

An optical sensor located near the ink unwind arbor allows the printer to monitor the availability of ink.

Roller Drop (656)

An optical sensor on back of the printer upright allows the printer to control and register the platen roller position to perform ink save.

Feed Open

A micro switch on the back of the feed module will detect the position of the feed module pressure knob and only allow the printer to operate with the feed pressure knob closed.

Jam

An optical sensor located in the stacker will detect each cut label as it leaves the cutter. If a cut fails to occur or a label remains in the sensor sight path, the machine will stop.

Full Stacker

A micro switch on the stacker rail allows the printer to detect a full load of labels in the stacker. The stack full condition will stop the machine when the stacker is full.

Sensor Adjustment

All the micro switches and optical sensors in your 6X6 printer were calibrated at the time your printer was manufactured, however from time to time it may become necessary to readjust / recalibrate due to the large variety of stocks and inks that can be run on the machine.

Stock Out

With a full roll of stock loaded on the stock unwind with the unwind web guides properly adjusted you should heard the switch click as you raise and lower the roll. If not the switch bale is adjusted by carefully bending it as needed.

Print Registration Sensor

Web Position Adjustment

If you are running sense mark media with a hole or slot for registration the registration sensor web position must be adjusted for the sense mark media being run:

1) Open the feed roller and print head.

2) Move the stock by hand in the feed direction until the registration hold or slot desired is in the slot on the sensor funnel over the red LED light bar.

3) Close the feed and the print head.

4) Slide the sensor block assembly using the sensor handle while looking at the sensor LED on the front panel. When the LED turns on with the registration sensor over the media in the vicinity of the hole / slot, and stays on, the sensor is over the registration hole or slot.

If your machine stops, for no apparent reason, while it is in the middle of printing a batch, you may be missing sense marks (three consecutive tickets in a row in which a sense mark was not found). Check for the following:

- The front panel will display an error message indicating that there has been a missed sensor.

1) Check that the web guides have been positioned properly - both on the unwind and decurler.

2) Compare the actual feed length of the sense mark stock being run with the feed length set in the format.

3) Repeat the sensor alignment procedure.

Rotation Alignment

The optical sensor for the light from the LED bar for stock registration is mounted on a square shaft directly above the web plate assembly, just prior to the print station. Although this bar is factory adjusted prior to shipment, it may become necessary to readjust the bar to assure proper light reception. If after following the previous procedure the missed sense mark error continues to occur proceed as follows.

1) Remove the stock from the machine.

2) Slide sensor block to its furthest rear travel (away from the operator).

3) Remove the back cover of the machine.

4) While holding the screw that secures the square bar to the machine upright, rotate the square bar to align the sensor to the slot over the light bar. Retighten the screw as needed.

NOTE: In order to determine the optimum alignment us the front panel display (refer to the Sensor Calibration and Front Panel Mode Description sections in this manual)

5) Slowly slide the receiver block to its furthest forward position (towards the operator) while confirming that the sensor alignment is maintained throughout its travel. The change in the front panel should be last than 50.

Feed Open

If the feed open switch is in need of adjustment, first check and adjust as needed the feed pressure, as it will affect the switch adjustment. With the machine rear cover removed while opening and closing the feed pressure knob you should hear the switch clicking. If not, the switch bale is adjusted by carefully bending it as needed.

Sensor Calibration:

Optical Sensor Electrical Calibration:

Re calibration times are indicated in the troubleshooting section.

The following guidelines indicate the proper procedure used to calibrate these sensors.

Note: Clean all optical sensors with clean compressed air or canned air prior to adjustment, as dust and debris will adversely affect their performance.

Supplies:

- Always use clean supplies when cleaning the sensor and light bar.
- NEVER use anything abrasive on the sensor and light bar.
- NEVER use an alcohol-based solution when cleaning the sensor or light bar.
- Dry air or a cotton swab are the AVERY DENNISON recommended items to use when cleaning the sensor and light bar.

There are three basic steps to calibrating each optical sensor.

1) Select the sensor to be calibrated in the Calibrate Sensors mode on the front panel.

2) Place media or ink as the case maybe in the appropriate sensor and press the "enter" button on the front panel.

3) In the case of stock registration sensing reposition the media so that a hole / slot or black reflective mark is in the sight path of the appropriate registration sensor and press the "enter" button on the front panel. In the case of stacker jam sensor reposition the media so the media is not in the sight path of the jam sensor and press the "enter" button on the front panel.

Lubrication Procedure

General

The 636 / 656 series printers are factory equipped with either composition bearings not requiring lubrication or pre-lubricated bronze bearings. The one exception is the rub cams on either end of the rotary knife. Periodic cleaning of the printer and removal of dust will greatly enhance the length of the time the printer will function.

Cam - Lubrication Procedure

1) Clean dust and residue from cams (using alcohol or other suitable solvent) daily, or approximately every 100K cuts. Use any good quality general-purpose grease (not oil). Apply with cotton swab or other non-metallic device.

2) If lubrication is omitted, knife will squeak and draw attention to required lubrication.

Composition (Iglide) Bearings

1) If field replacement of an assembly fitted with an Iglide bearing is performed, a single drop of spindle oil should be applied to assist in bearing break-in.

2) If, after long use, an Iglide bearing starts to "squeak", disassemble the component containing the bearing and lightly abrade the shaft surface. Clean the bearing (dust or old oil) with alcohol, re-lubricate with 1 drop of light oil and reassemble.

No other printer lubrication should be required in normal use.

Printer Set Up Sequence

1) Power off the printer, remove the stock and ink and thoroughly clean the printer from the unwind to the stacker using alcohol and a clean soft cloth. The print head should be cleaned as per the Print Head Cleaning section in this manual.

- NEVER use an alcohol-based solution when cleaning the sensors or light bar.

2) Load a full roll of an average width stock and ink on the printer.

3) Power on the printer. After passing the diagnostics tests the front panel will display READY FOR BATCHES.

4) Arrow down to the Print / Cut Position mode and press enter.
At the Print Checkout Format screen press enter.

5) Press start. After several labels have been print and cut stop the printer and evaluate the last label out.

6) Adjust as needed the print head position and then pressure for optimum print quality (refer to the Print Head Adjustment section in this manual).

7) Confirm the centerline is actual in the center of the media. If it is not, first check and adjust as needed the unwind core guides, then adjust the decurler collars. If the print quality is inadequate refer back to step number six.

8) Using two consecutive labels back to back, check the squareness of the cut. Adjust the knife module as needed (refer to the Knife Square Adjustment section in this manual).

9) Using the front panel, adjust the label leading edge cut to be 1.0" +- .032" from the cut line printed on the label. The printer is now ready for production formats at which time you should need only to fine-tune the print, cut, and strobe via the front panel for individual formats.

NOTE: If the printer is used to print on multiple media types, the print head may need to be adjusted for optimum print quality on each media as they are ran.

Electrical Trouble Shooting

Power Up / Sign On / Communications

Problem	Probable Cause	Corrective Action
Printer 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 printer. Failure to do so can damage the printer's internal power supply (refer to the Fuse Configuration section in this manual).
	2) Lack of power to printer.	1) Check that both ends of the power cord are plugged in securely. 2) Confirm that the outlet the printer is plugged into has power.
	3) Missing or blown fuse(s)	1) Check that the fuse(s) located inside the AC entry are present and intact. Replace as needed (refer to the Fuse Configuration section in this manual).
	4) Unconnected cable / connector inside printer.	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 power supplies (refer to the Electrical System Schematic in this manual).
	5) Thermal Control Board unplugged from the Mother Board	1) Power off and remove the power cord from the AC entry. Remove the back cover and reseat the Thermal Control Board.
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 cable and connectors to and from the front panel (refer to the Electrical System Schematic section in this manual).

Problem	Probable Cause	Corrective Action
Front panel does not complete diagnostics test 2.	1) One or more PC board(s) unplugged from the Mother Board.	1) Power off and remove the power cord from the AC entry. Remove the back cover and reseat the offending board.
Printer does not receive batches.	1) Serial communications cable loose or unconnected.	1) Check and secure both ends of the serial cable with the thumbscrews.
	2) Printer not powered on or has not completed diagnostics tests.	1) Power printer on and wait until front panel displays "Ready for batches". Re-download data.
	3) Data sent to wrong printer.	1) In PcMate change to the printer the data is intended to be sent.
	4) Configuration incorrect in PcMate.	1) Reconfigure PcMate for AVERY DENNISON PCL printer as per your PcMate manual.
	5) Faulty Thermal Control Board.	1) Replace Thermal Control Board.
	6) Jumpers not configured correctly.	1) Contact AVERY DENNISON Service.

Stock / Ink Advance

Problem	Probable Cause	Corrective Action
Stock does not advance when the start button is depressed.	1) No batches to be printed.	1) Download batch (if batch downloaded uses the same format as a previously downloaded batch the printer with start automatically).
	2) 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 (Example "Error 901 Stock Out" reload stock).
	3) Feed motor unplugged or faulty.	1) Check feed motor cable and/or replace feed motor.
	4) Thermal Control Board unplugged or faulty.	1) Check Thermal Control Board / AT board connection and or replace Thermal Control Board.
	5) Feed roller not closed.	1) Close feed rollers and press start twice (once to clear the feed open error, and once to start printer).
	6) Feed rollers bound.	1) With power off check that all rollers turn freely.
	7) Stock bound.	1) With the print head and feed open check that the stock will pull through the printer with little to no resistance.
Ink does not advance when the start button is depressed.	1) No batches to be printed.	1) Download batch (if batch downloaded uses the same format as a previously downloaded batch the printer with start automatically).
	2) 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 (Example "Error 901 Stock Out" reload stock).
	3) Ink motor unplugged or faulty.	1) Check ink motor cable and or replace ink motor.
	4) Thermal Control Board unplugged or faulty.	1) Check Thermal Control Board / AT board connection and or replace Thermal Control Board.
	5) Ink roller bound.	1) With power off check that all rollers and arbors turn freely.
	6) Ink bound.	1) With the print head open check that the ink will pull through the printer with little to no resistance.

Print

Problem	Probable Cause	Corrective Action
Printer advances stock but does not print.	1) Stock registration sensor miss aligned.	1) Adjust sensor position so that the sensor light on the front panel flashes as a sense mark hole passes under the sensor.
	2) Miss adjusted print head tangent position.	1) Set print head tangent position (refer to Print Head Adjustment section in this manual).
	3) Miss adjusted print head pressure.	1) Set print head pressure (refer to Print Head Adjustment section in this manual).
	4) Print head cable unconnected or faulty.	1) Power off the printer and reinsert the offending connector or replace cable.
	5) Print head faulty.	1) Replace print head.
	6) Head Driver Board unplugged or faulty.	1) Check Head Driver Board / AT board connection and or replace Head Driver Board.
Printer stops after ever third label.	1) Stock registration sensor miss aligned.	1) Adjust sensor position so that the sensor light on the front panel flashes as a sense mark hole passes under the sensor.
	2) Stock registration sensor uncalibrated.	1) Calibrate the sensor (refer to the Sensor Calibration section in this manual).
Print registration is off in the feed direction.	1) Printer print position is incorrect.	1) Enter the Print / Cut Positions Mode on the front panel and readjust the Print Position setting as needed.
	2) Field(s) position incorrect in the format.	1) Using Formatter / PcMate Plus – check and readjust the field(s) position(s) as needed.
	3) Bound platen roller.	1) Check that the platen roller turns freely on its shaft. If it does not, replace it.
Print registration is off in the web direction.	1) Printer incorrectly threaded.	1) Check and rethread the stock as needed (refer to Loading Stock section in this manual).
	2) Web guides incorrectly adjusted.	1) Check and adjust as needed (refer to Web Guide Adjustment in this manual).
	3) Unwind incorrectly adjusted.	1) Check and adjust as needed (refer to Web Guide Adjustment in this manual).
	4) Incorrect DIP switch settings on the Thermal Control Board.	1) Check and reset DIP switches as needed (refer to TCB Dip Switch Settings section in this manual.

Problem	Probable Cause	Corrective Action
Print contrast is too light or dark.	1) Incorrect strobe setting selected in the format.	1) Using Formatter / PcMate Plus - check and adjust the strobe setting according to the stock and ink being used.
	2) Printer strobe setting is incorrect.	1) Enter the Print Head Setup Mode on the front panel and readjust the Strobe setting as needed.
	3) Miss adjusted print head position.	1) Set print head position (refer to Print Head Adjustment section in this manual).
	4) Miss adjusted print head pressure.	1) Set print head pressure (refer to Print Head Adjustment section in this manual).
Voids in print image in the feed direction.	1) Ink miss aligned with format.	1) Adjust ink position on the arbors to achieve full ink coverage over all fields on the format.
	2) Print head dirty.	1) Power off the printer clean the print head and platen (refer to Print Head Cleaning section in this manual).
	3) Faulty print head.	1) After cleaning head and running the test pattern to confirm that a void still exists, replace the print head.
	4) Miss adjusted print head position.	1) Set print head position (refer to Print Head Adjustment section in this manual).
	5) Miss adjusted print head pressure.	1) Set print head pressure (refer to Print Head Adjustment section in this manual).
	6) Worn platen roller.	1) Replace platen roller.
Printer continually stops with an erroneous interlock condition.	1) Sensor uncalibrated.	1) Determine which sensor and re-calibrate as needed (refer to Sensor Calibration section in this manual).
	2) Sensor position miss adjusted.	1) Determine which sensor and relocate accordingly.
	3) Ink sensor type (light / dark) incorrect in the format for the ink type being used.	1) Either change the ink or the ink type in the format.

Cut / Stack

Problem	Probable Cause	Corrective Action
Printer fails to cut labels (the rotary knife does not rotate).	1) The cut is disabled in the Feature Setup mode.	1) Enter the Feature Setup Mode on the front panel and Enable the knife.
	2) Knife cable unconnected.	1) Power off and remove the power cord from the AC entry. Remove the back cover and inspect the cable and connector to the knife module (refer to the Electrical System Schematic section in this manual).
	3) Knife jammed causing auto resetting fuse to trip on the Thermal Control Board.	1) Remove cause of jam at the knife.
	4) Faulty knife motor.	1) Replace the knife motor.
	5) Faulty knife motor drive circuit on the Thermal Control Board.	1) Replace the Thermal Control Board.
The stacker fails to run.	1) The stacker cable is unconnected.	1) Power off and insert the stacker cable in the stacker socket on the Thermal Control Board.
	2) Faulty stacker motor.	1) Replace the stacker motor.
	3) Stacker jammed causing auto resetting fuse to trip on the Thermal Control Board.	1) Remove cause of jam at the stacker.
	4) Faulty stacker motor drive circuit on the Thermal Control Board.	1) Replace the Thermal Control Board.

Mechanical Trouble Shooting

Stock

Problem	Probable Cause	Corrective Action
Stock will not roll or jumps	1) Incorrect adjustment of unwind web guides	1) Be sure stock roll is as flat as possible and does not extend over core.
		2) Adjust unwind knob until back plate and front post touch roll. Do not over-tighten. Roll must rotate smoothly.
		3) Adjust turn-bar collars to same position as unwind back plate and front post.
Printer fails to stop at end of roll.	1) Stock roll is too tight in guides.	1) Adjust unwind knob until back plate and front post touch roll. Do not over-tighten. Roll must rotate smoothly.
Stock does not pull smoothly through printhead module.	1) Turn bar collars too tight.	1) Adjust turn-bar collars to same position as unwind back plate and front post.
	2) Stock is slipping in drive or drive pressure is uneven.	1) Be sure cam lift knob is closed. Be sure springs are not improperly installed on bottom pins. Be sure cam lift surfaces are not holding lift arms up when knob is in the run position. Re-adjust unwind and collars to relieve possible stock "pinch".

Problem	Probable Cause	Corrective Action
Cracks or craze marks appear on face of finished labels.	1) Incorrect adjustment of decurler.	1) Move decurler turn-bar toward unwind end of printer until cracks no longer appear.
Stock jams in bridge blade rollers or knife area.	1) Drive mounted blade roller ass'y missing or rollers set too high.	1) Mount missing ass'y. Adjust roller position by loosen screws in slots in lower bridge blade mount and raising blade until .015-.020" of roller extends above plate.
	2) Knife not cutting full width of stock.	1) Loosen knife shear adjustment screws and move outer end of knife until full cut is accomplished.
	3) Stacker not operating or nip rollers not turning.	1) Check stacker connection to access port. Be sure nip roller is free to rotate and moves easily in the bearing slots.
Will not stack.	1) Stacker not operating.	1) See step 3 above.
	2) Stacker position on printer too far forward so labels go under rear stacker rail.	1) Loosen stacker mounting knob and move stacker toward rear of printer - tighten.
	3) Incorrect rail position or stacker bed angle.	1) Using a cut label, position stacker rails so that approximately 3/8" (9.5mm) overhangs the second grooved roller. Loosen quick-turn handle on stacker clamp and raise or lower stacker bed until opening between 1st label overhang and belt surface will allow entry of next label.
Knife will not cut or partial cut	1) Incorrect pre-load on clutch pawl.	1) With back cover removed and power off - operate solenoid by hand. When lever is moved, clutch pawl should move counter-clockwise about 1/32" (0.79mm) with the "Pacman" in home position. If not - loosen "Pacman" set screws and readjust "Pacman" to stop with spring in detent.
	2) Partial cut	1) Loosen shear adjustment screws and move outer end of knife until full cut is obtained.

Ink

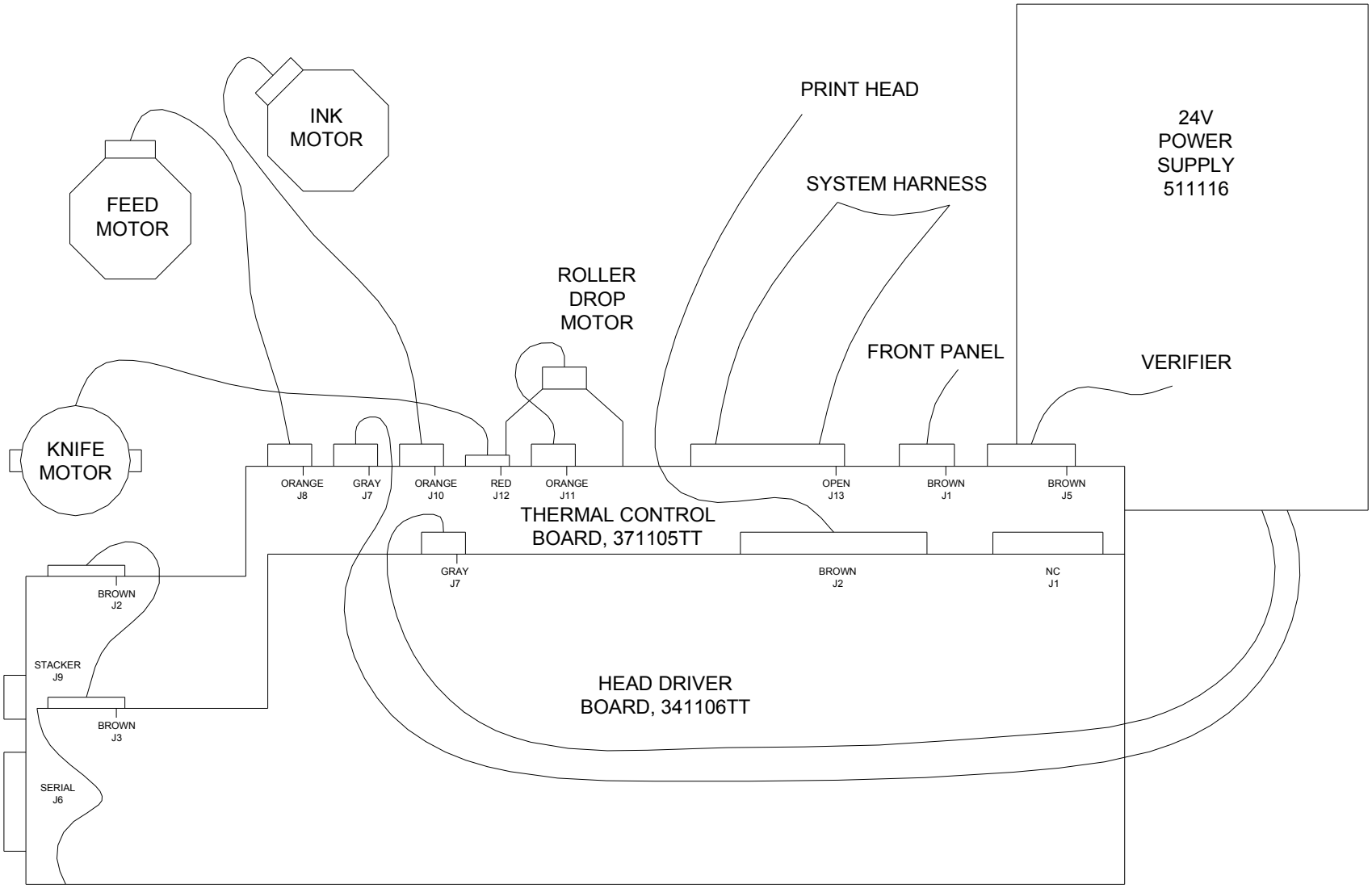
Problem	Probable Cause	Corrective Action
Ink wrinkles or will not pull smoothly.	1) Incorrect adjustment of unwind roller brake resistance.	1) Adjust knurled knob clockwise as far as possible without breaking ink or stalling ink motor. Do not bottom adjustment knob. Replacement of fiber brake disc may be required if printer has high hours.
	2) Unwind roller and ink take-up roller misaligned.	1) Align rear edge of ink with rear of print area (allow approximately 1/8" (3mm) overlap). Loosen thumb cap screw on ink roll locator plate and adjust until it touches rear of ink roll on unwind arbor. Slide rewind core toward rear of printer until it just contacts plate.
	3) Ink buildup on turn bar(s).	1) Clean with alcohol.
	4) Incorrect ink width.	1) Use an ink width no wider than stock being printed. This is especially critical when using a narrow web with cut down rollers.
Ink rolls loosely on take-up roller.	1) Take-up roller not turning.	1) Be sure belt is on rear drive sprocket. Be sure magnetic drive (rear of center frame) can turn freely. No adjustment for tension is available or required.
	2) Take-up core binding on locator plate.	1) Move core .015" - .030" (.38mm - .76mm) away from plate.
	3) Excessive back tension.	1) Adjust knurled knob clockwise as far as possible without breaking ink or stalling ink motor. Do not bottom adjustment knob. Replacement of fiber brake disc may be required if printer has high hours.
	4) Take-up roller too full.	1) Remove used ink roll. It is designed to hold only 1 full roll.

Print

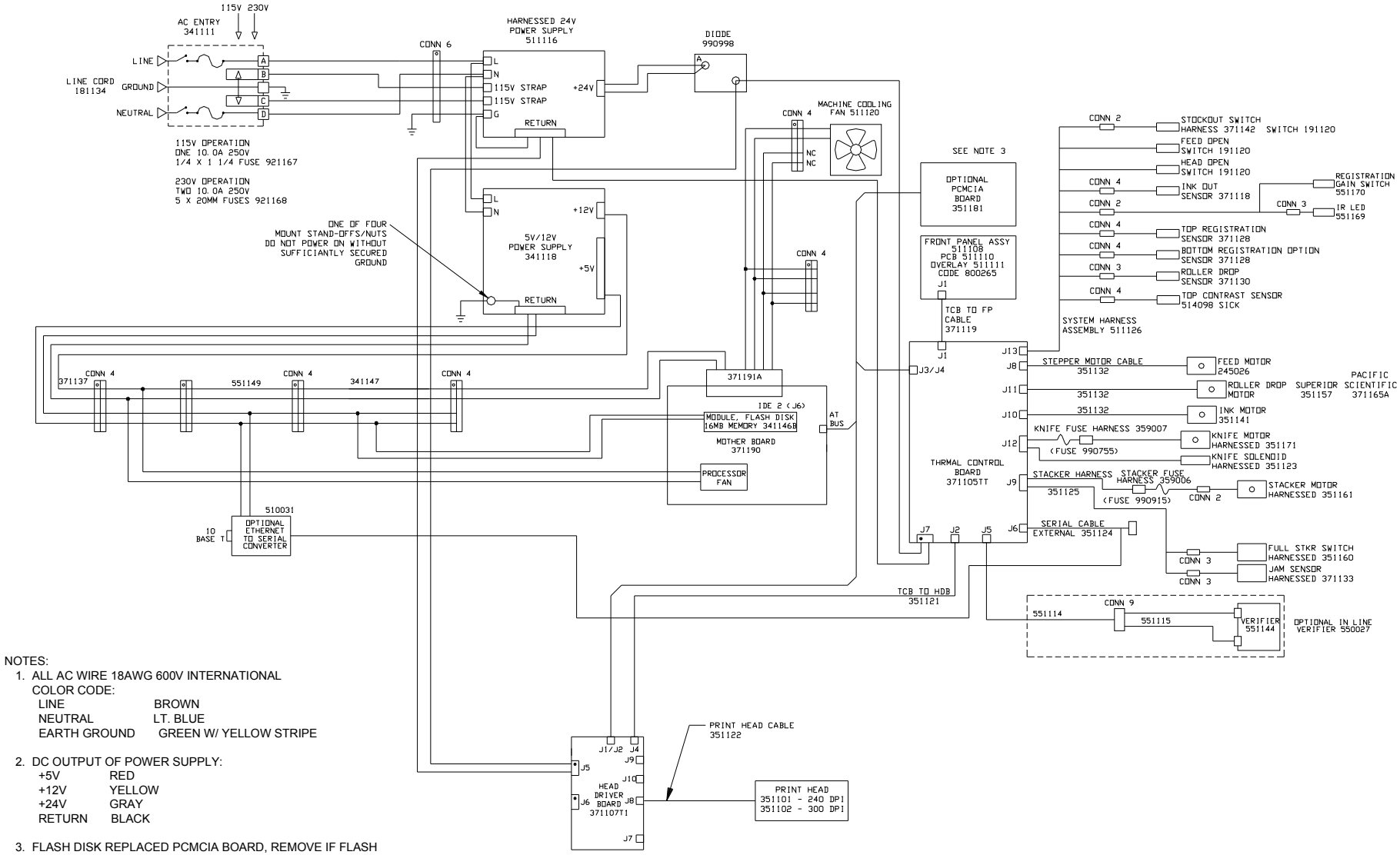
Problem	Probable Cause	Corrective Action
Poor print - uneven or no print (mechanical). Also see electrical trouble shooting.	1) Incorrect printhead pressure adjustment.	1) Remove stock and ink. Close printhead. Release pressure (knurled knob). Readjust pressure by turning knob clockwise until it just contacts printhead plate. Reinstall stock and ink. Turn adjuster clockwise approximately 1/8 turn (5 clicks of knob). As printer operates, increase pressure (2-3 clicks at a time) until best print is obtained. Slide knob in or out in slot to obtain even print across the face of the label. Narrow webs will require less pressure on adjuster. If print is still poor, loosen (2) M3 cap screws visible on outer edges of printhead carrier. Adjust tangent point to optimum print by rotating M3 knurled wheel in top center of printhead plate. Lock in place with 2 outer M3 cap screws.
	2) Broken ink.	1) Replace ink and readjust (See INK troubleshooting).
	3) Ink not rewinding.	1) Readjust (See INK trouble shooting).

Electrical Drawings

Printer Wiring


INK MOTOR
FEED MOTOR
KNIFE MOTOR
ROLLER DROP MOTOR
PRINT HEAD
SYSTEM HARNESS
FRONT PANEL
VERIFIER
24V POWER SUPPLY 511116
ORANGE J8
GRAY J7
ORANGE J10
RED J12
ORANGE J11
OPEN J13
BROWN J1
BROWN J5
THERMAL CONTROL BOARD, 371105TT
GRAY J7
BROWN J2
NC J1
BROWN J2
STACKER J9
BROWN J3
SERIAL J6
HEAD DRIVER BOARD, 341106TT

Electrical System Schematic



NOTES:

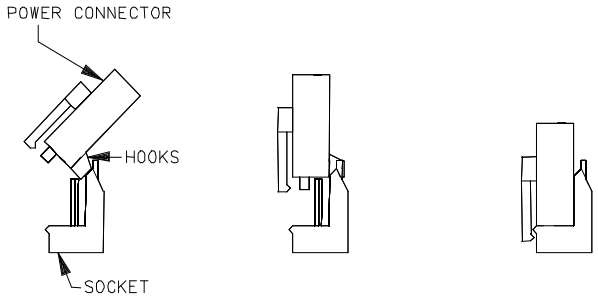
1. ALL AC WIRE 18AWG 600V INTERNATIONAL
   COLOR CODE:
   - LINE BROWN
   - NEUTRAL LT. BLUE
   - EARTH GROUND GREEN W/ YELLOW STRIPE
2. DC OUTPUT OF POWER SUPPLY:
   - +5V RED
   - +12V YELLOW
   - +24V GRAY
   - RETURN BLACK
3. FLASH DISK REPLACED PCMCIA BOARD, REMOVE IF FLASH DISK IS INSTALLED.

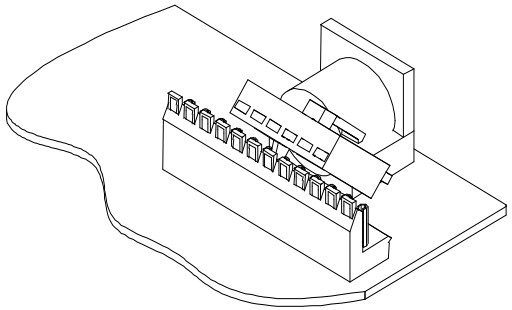
Motherboard Power Connectors

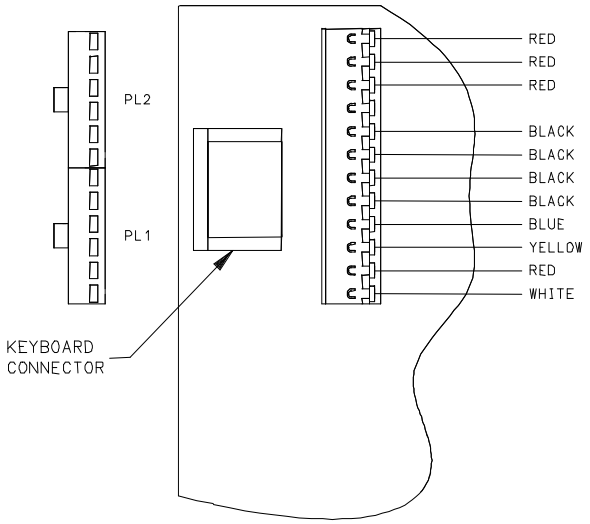
The power supply connector on any PC / XT or PC / AT compatible motherboard is made up of dual six-pin male connectors. Two female connectors from the power supply plug directly onto these male connectors. The following diagrams illustrate the proper method of attaching the connectors.

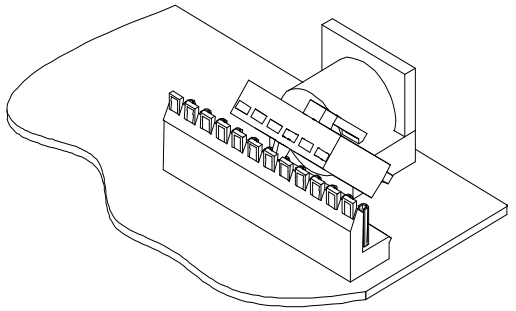
Ensure that all of the black wires are located next to each other in the center of the two connectors (as shown in the diagram below), and that the clamps on the backside of the connectors ate secured along the PCB header. All pins should be covered.

Warning: Connecting the power supply incorrectly may cause irreversible (unwarranted) damage! Ensure that the power is turned off before connecting the power supply. Make certain that the 115 / 230VAC fuse drawer is in the correct position.









LEFT REAR CORNER OF MOTHER BOARD

Appendix A

Error Messages

On the Machine's detection of errors/error, the displays will show the first error encountered and allow the displaying of any other errors with the <YES / NO> keys, which will "Scroll" through additional errors if any.

XX is the total number of errors at the time of error detection.

ERROR SCREENS:

The screen advances to next error with each depression of the "NO>" key
The screen retreats to prior error with each depression of the "<YES" key
The screen reverts back to the first error when the "EXIT" key is pressed.

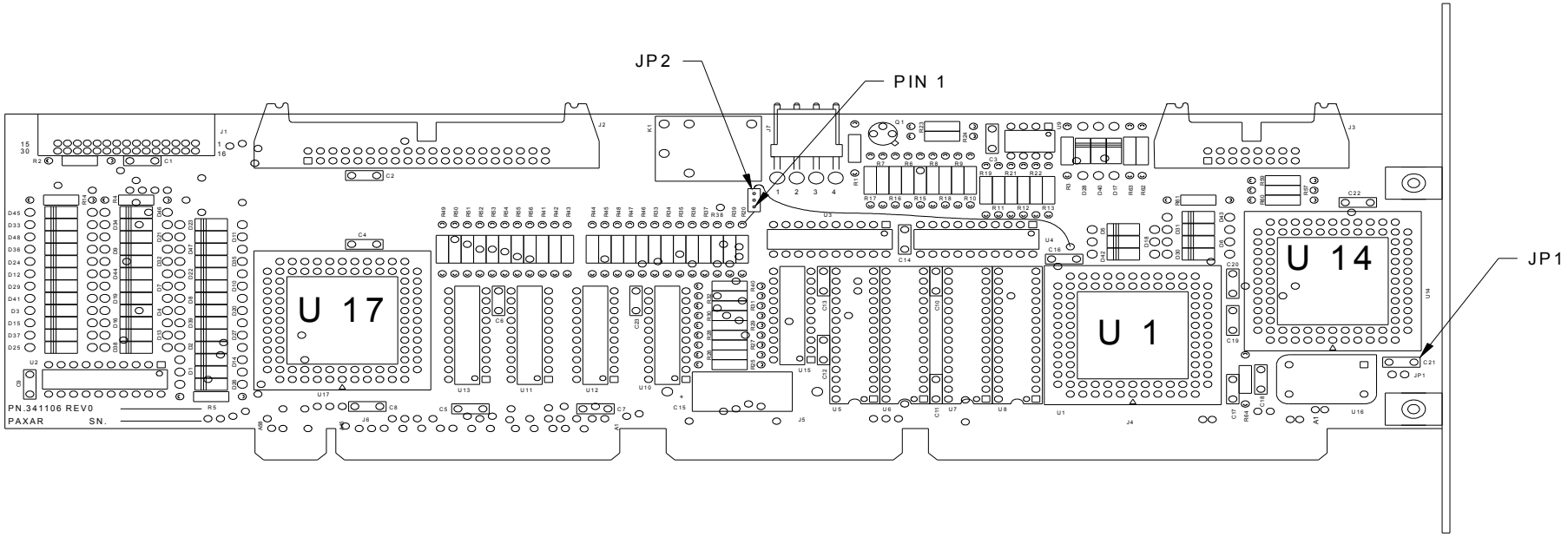
X	**X**		**E**	**R**	**R**	**O**	**R**	**(**	**S**	**)**											
S	**T**	**O**	**C**	**K**		**O**	**U**	**T**											**9**	**0**	**1**

Error Message	Error
HEAD 1 OVER TEMP	404
HEAD 2 OVER TEMP	405
HEAD 3 OVER TEMP	406
STOCK OUT	901
CHECK STACKER	902
INK OUT STATION 1	904
INK OUT STATION 2	905
INK OUT STATION 3	906
MISSED SENSE MARK	908
FEED OPEN	910
VERIFIER HALT 1	912
VERIFIER HALT 2	913
IMAGER ERROR	919
HEAD OPEN STATION 1	920
HEAD OPEN STATION 2	921
HEAD OPEN STATION 3	922

Appendix B

Software Upgrade Chip Placement Positions

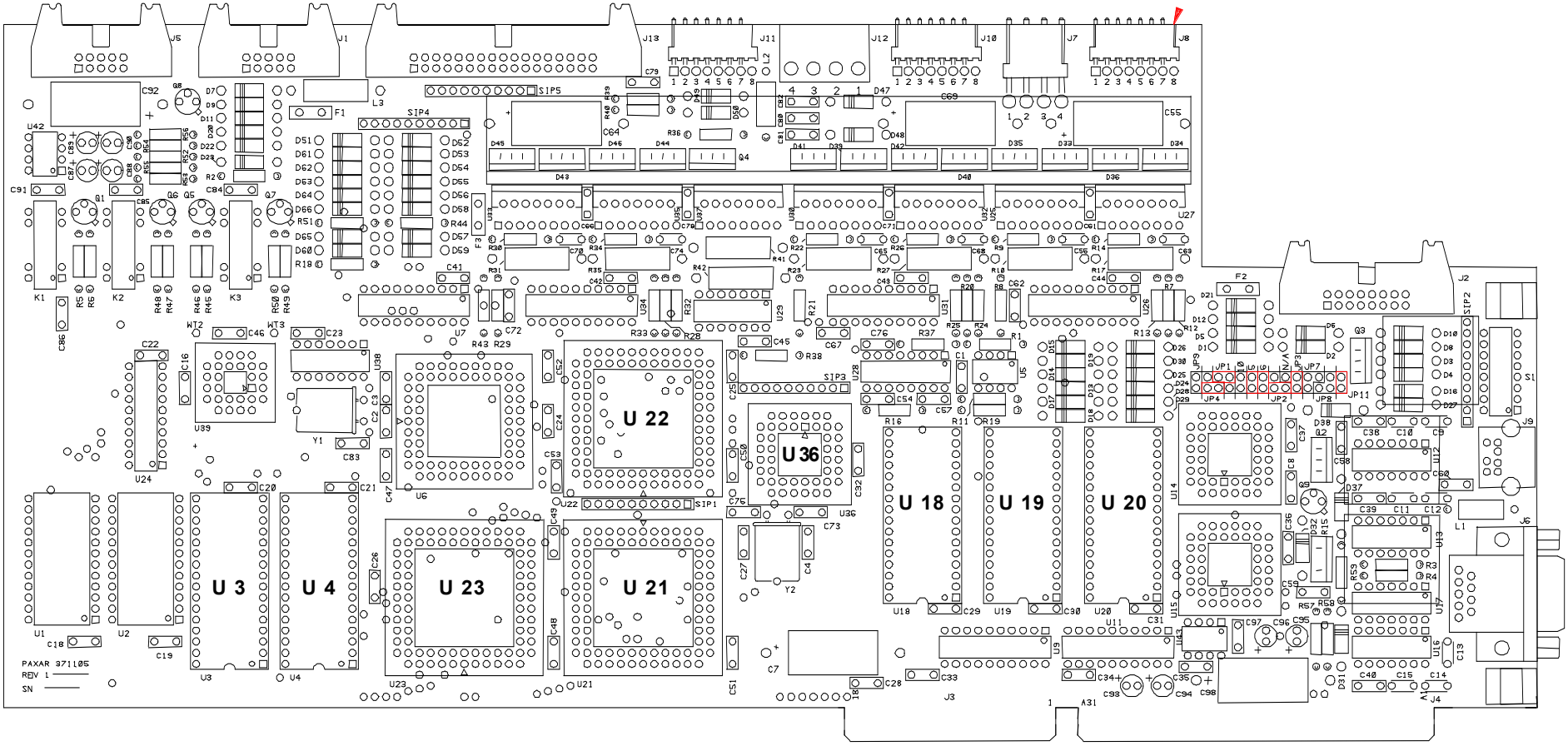
Head Driver Board P/N 341106TT



HEAD DRIVER BOARD, Upgradeable software I.C.'s include U1, U14, U17.
PLCC CHIPS align angled corner of chip with angled corner of socket that is counter clockwise to the arrow.
(Use chip removal tool P/N. 351156 for square I.C removal)

JUMPER	SETTING
JP1	On = 240DPI Off = 300 DPI
JP2	1 to 2

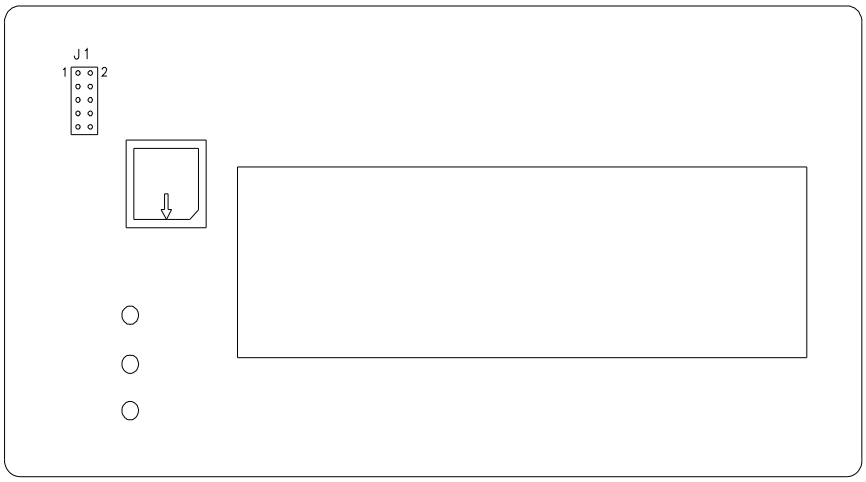
Thermal Control Board P/N 371105TT



THERMAL CONTROL BOARD, Upgradeable software I.C.'s include U3, U4, U18 - U23, U36.
PLCC CHIPS align angled corner of chip with angled corner of socket that is counter clockwise to the arrow.
DIP CHIPS align notch on chip with the notch on the socket (U3 & U4 chips are four pins smaller than U3 & U4 sockets, position chips towards top of socket so that the unused socket pins are at the bottom closest to the notch.

(Use chip removal tool p/n. 351156 for square I.C.'s)

Front Panel Board P/N 511108



(Use chip removal tool p/n. 351156 for square I.C.'s)

FRONT PANEL BOARD, Upgradeable software I.C.'s include U1.
Align angled corners of chip with socket and arrow denotes pin #1 or dimple on chip.

Front Panel Diagnostic Descriptions

Diagnostic Numbers	Descriptions
1	Front panel initialization
2	TCB Opsys initialization
5	Attempting Serial Host Initialization
6	Initializing Verifier
7	Executing Protected Mode Imaging Code
8	Checking Flash Disk Module
9	Attempting to read in scalable fonts.
10	Initializing Font Scaler
11	Attempting to load code pages
12	Attempting to read in logos
13	Attempting to read in care symbols
14	Waiting for Machine Definition from TCB
15	Attempting to create test pattern
16	Attempting to create strobe tables
17	Attempting to read in formats
18	Protected Mode Imaging Code initialization complete
19	Serial Communications Activated
0	Power up complete

Note: There must be a PCMCIA card installed in the slot if the PCMCIA option board is installed. If the PCMCIA card is not present – the front panel will stop at Diagnostic 2.

Appendix C

Ink and Stock Transfer Types

Transfer Type values associated with the XT commands.

Value	Transfer Type
51	Heat Seal & SD-1111 Ink
52	Topcoated card stock & TT-3111 Ink
53	Topcoated card stock & TT-1111 Ink
54	Topcoated card stock & HR-3111 Ink
55	Topcoated card stock & HR-1111 Ink
56	Topcoated Card Stock & TW-1111 Ink
57	Topcoated card stock & TW-1151 Ink
58	Pressure Sensitive & TT-3111 Ink
59	Pressure Sensitive Thermal Receptive & TT-1111 Ink
60	Pressure Sensitive Thermal Receptive & TW-1111 Ink
61	Pressure Sensitive & TW-1151 Ink
62	Pressure Sensitive & HR-3111 Ink
63	Uncoated Tag Stock & TT-3111 Ink
64	Uncoated Tag Stock & TT-1111 Ink
65	Uncoated Tag Stock & HR-3111 Ink
66	Uncoated Tag Stock & HR-1111 Ink
67	Uncoated Tag Stock & TW-1111 Ink
68	Uncoated Tag Stock & TW-1151 Ink
69	Fabric 2800 & TT-1111 Ink
70	Fabric 2800 & HR-3111 Ink
71	Fabric 2800 & TT-3111 Ink
72	Fabric 2800 & HC-3111 Ink
73	Fabric 2800 & HR-1111 Ink
74	Fabric 2795 & TT-1111 Ink
75	Fabric 2795 & HR-3111 Ink
76	Fabric 2795 & TT-3111 Ink
77	Fabric 2795 & HC-3111 Ink
78	Fabric 2795 & HR-1111 Ink
79	Coated Tag Stock & HR-4111 Ink

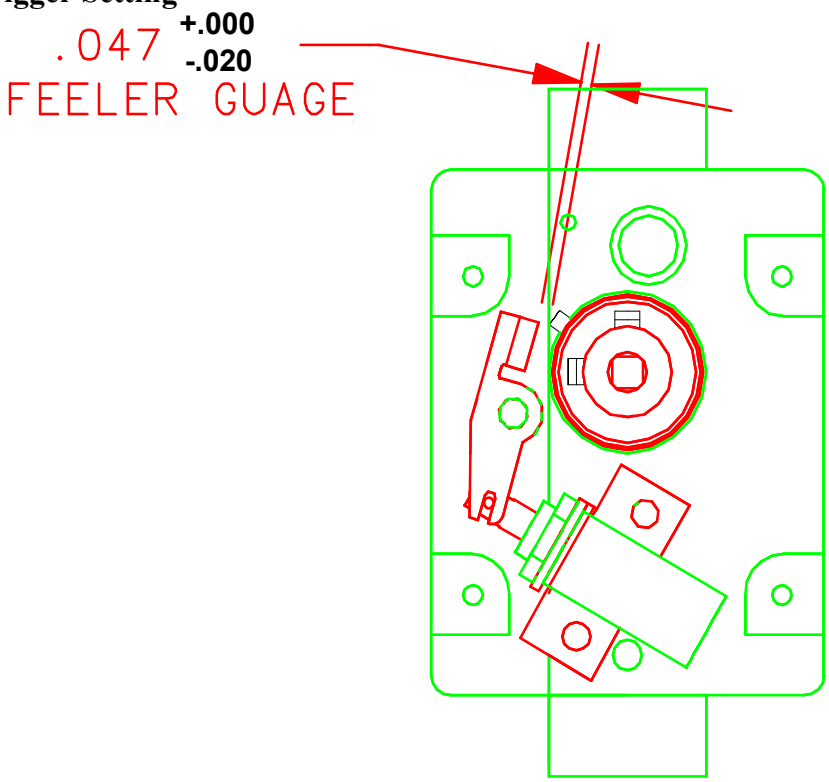
Value	Transfer Type
80	Pressure Sensitive & HR-4111 Ink
81	Uncoated Tag Stock & HR-4111 Ink
82	Fabric 2800 & HR-4111 Ink
83	Fabric 2795 & HR-4111 Ink
84	New Pressure Sensitive (no xfer) & TT-3111 Ink
85	New Pressure Sensitive (no xfer) & TT-1111 Ink
86	New Pressure Sensitive (no xfer) & TW-1111 Ink
87	New Pressure Sensitive (no xfer) & TW-1151 Ink
88	New Pressure Sensitive (no xfer) & HR-1111 Ink
89	New Pressure Sensitive (no xfer) & HR-3111 Ink
90	New Pressure Sensitive (no xfer) & HR-4111 Ink
91	Coated Tag Stock & GP-1111 Ink
92	Uncoated Tag Stock & GP-1111 Ink
93	New Pressure Sensitive (no xfer) & GP-1111 Ink
94	2800 Fabric & GP-1111 Ink
95	2795 Fabric & GP-1111 Ink
96	2795 Fabric & CT-1111 Ink
97	4800 Fabric & CT-1111 Ink
98	4800 Fabric & CT-1114 Ink (Blue)
99	4800 Fabric & GP-1111 Ink
100	2395NWT Fabric & CL-1111 Ink (UK)
101	2395NWT Fabric & XC-3111 Ink (UK)
102	2395NWT Fabric & HR-1111 Ink (UK)
103	2495NWT Fabric & CL-1111 Ink (UK)
104	2495NWT Fabric & XC-3111 Ink (UK)
105	2495NWT Fabric & HR-1111 Ink (UK)
106	4000NWT Fabric & CL-1111 Ink (UK)
107	4000NWT Fabric & XC-3111 Ink (UK)
108	4000NWT Fabric & HR-1111 Ink (UK)
109	4002NWT Fabric & CL-1111 Ink (UK)
110	4002NWT Fabric & XC-3111 Ink (UK)
111	4002NWT Fabric & HR-1111 Ink (UK)
112	G.S. Satin & XC-3111 Ink (UK)
113	2012T Fabric & XC-3111 Ink (UK)
114	1021T Fabric & XC-3111 Ink (UK)
115	2800 Fabric & CT-1111 Ink
116	591SST Fabric & CT-1111 Ink

Value	Transfer Type
117	591SST/601SST Fabrics & CT-1114 Ink
118	601SST Fabric & CT-1111 Ink
119	591SST/601SST Fabrics & CT-1115 Ink
120	591SST/601SST Fabrics & CT-1117 Ink
121	591SST Fabric & CT-1112 Ink
122	601SST Fabric & CT-1112 Ink
155	4900NWT / 4900HSA & HS1111 Ink
156	1800FRA & TW1111 Ink
157	1800FRA & GP1111 Ink
158	2085NWT / 2495NWT / 2360NWT & HS1111 Ink
159	2360NWT / 2800NWT & XC3111 Ink
160	2895NWT / 2800NWT & HS1111 Ink
161	2895NWT & XC3111 Ink
162	2895NWT & HC3111 Ink
163	1800MWA & GP1111 Ink
164	1800MWA & TW1111 Ink
165	604LKP / 601LKP & DS7501 / 7502 / 7504 Inks
166	604LKP / 601 LKP & DS7503 Ink
167	4800NBC Fabric & HS1011 Ink
168	2012T Fabric & HS1111/1112 Ink
169	4360NBT Fabric & SD1011 Ink
170	4041THS Fabric & HS1111 Ink
171	4700TWT Fabric & PL1111 Ink
172	4800TST Fabric & CT1111 Ink
173	4800TST Fabric & CT1112 Ink
174	4800TST Fabric & CT1114 Ink
175	4800TST Fabric & CT1115 Ink
176	4800TST Fabric & CT5137 Ink
177	4800TST Fabric & HS1111 Ink
178	770SWT Fabric & CT1112 Ink
179	770SWT Fabric & CT1114 Ink
180	770SWT Fabric & CT1115 Ink
181	770SWT Fabric & CT5137 Ink
182	772SWT Fabric & CT1112 Ink
183	772SWT Fabric & CT1114 Ink
184	772SWT Fabric & CT1115 Ink
185	772SWT Fabric & CT5137 Ink

Appendix D

Knife MFG Guideline

Solenoid Trigger Setting

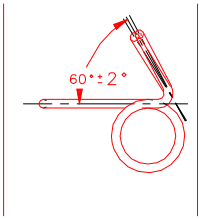


1. After the clutch and actuator is mounted to the knife, attach the solenoid assembly to the inside support using two 6-32 x 3/8 cap screws, flat washers, and lock washers. Make sure the plunger moves freely and does not bind. Motor and faceplate must be mounted also.
2. Check the gap between the actuator and the top of the pin on the clutch as shown in drawing. The plunger should be pushed in to make the measurement.

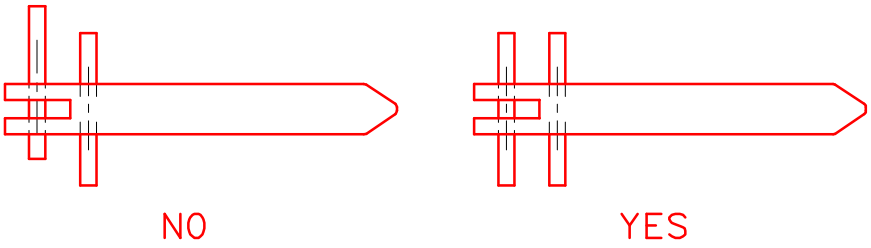
Other hints if there is still a problem:

- If the gap is greater then .047", an old solenoid bracket is being used. Replace (P/N 357003) or slot the bracket.
- If plunger binds, the solenoid is not parallel with the base of the bracket that mounts to the knife support, and/or the actuator slot is bottoming out on the roll pins that are on the plunger. Make adjustment or replace the bracket.

- Torsion Spring should be at an angle of 60±2°. Lay the spring over the drawing below to see if the spring is made properly.

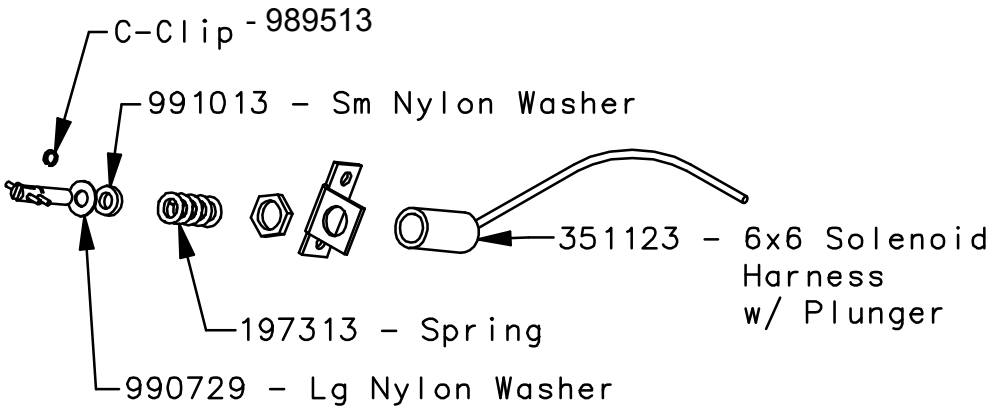


- Plunger pins should be centered on shaft. If either pin is loose **DO NOT** use the plunger. The pins should be checked before installing.

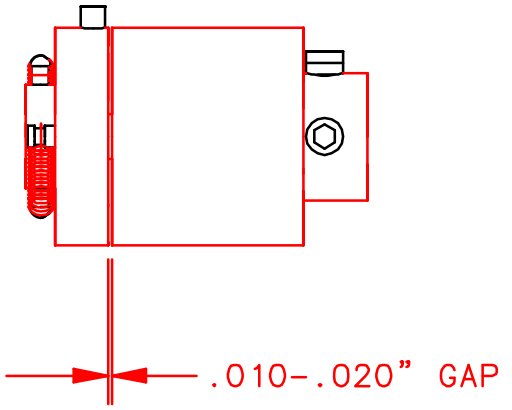


- (Rev 3) Replace both roll pins on all reworked assemblies.

- (Rev 4) Effective 3/3/97 a large nylon washer will be added **between the coil pin and the c-clip on the plunger**. To install, the c-clip has to be removed, then put the large washer on the plunger and push it down against the coil pin. While holding it in that location, re-install the c-clip. Now the Small nylon washer and spring can be put on the plunger and inserted into the solenoid.



- There should be a .010-.020 gap (for roller clutch only) between the two clutch pieces.



- (Test on the solenoid test box.) The knife must cut both fabric and card stock. The solenoid should operate on both the high and low settings.
- Excessive motor drag must be minimal at start/stop and while running. Replace or repair problem component. On old knife assemblies, there are bronze bushings in outer support. They may be causing a bind. Ream bushing and retest. (Do not ream if it is a roller bearing.)
- (Rev 1) Pre-load setting adjustment. While motor is running, not while cutting, loosen set screws on "pac-man" and rotate the rotary blade clockwise, mark the stopping position on the "pac-man", rotate counterclockwise, mark the "pac-man", then rotate the blade to the middle of the two marks and tighten the set screws.
- (Rev 2) All new knife assemblies have a blue clutch. The clutch outer race bushing has an I.D. of .500 and the 2 extension springs are .012 dia wire.
- (Rev 2) The 2 extension springs on all rebuilt clutches must have the .009 dia. wire springs replaced with .012 wire springs.
- (Rev 5) Replace Knife Actuator 357020, if it is worn or if there is a "bulge" at the 90-degree bend.
- (Rev 6) Changed feeler gauge tolerance from .047 MIN

Appendix E

Printhead Life Extension

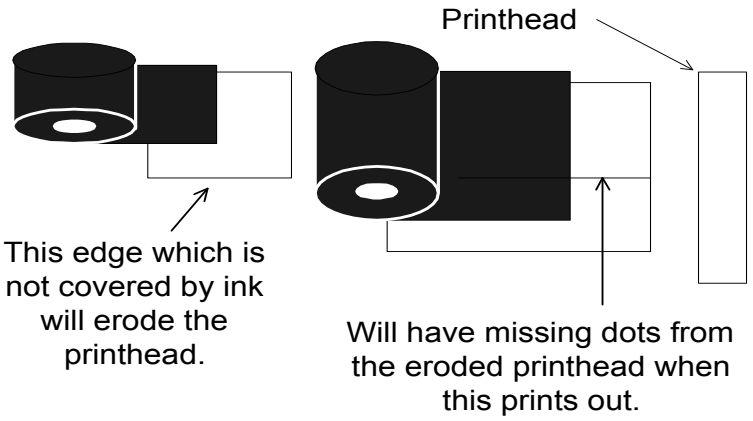
Matching stock and ink widths

If your customer is running multiple media and multiple widths on their AVERY DENNISON machine, Great! They are taking advantage of one the most compelling features of our printers: multimedia capability. Our printers can also reduce the width of the ink to only that area being printed. However, we run into printhead problems when customer combine both these features.

The edge of the narrower stock not covered by the ink will gouge the printhead and cause dots to be out.

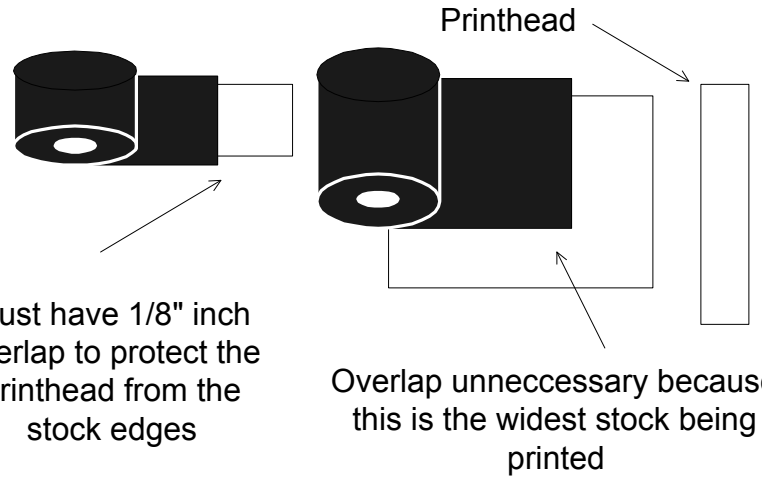
Here, the customer will have much shorter printhead life because of the edge of the narrower, uncovered stock.

WRONG!



The solution is to make sure that the narrower stocks have at **<u>least 1/8”</u>** of ink coverage over the edge. The widest stock does not need full ink coverage.

RIGHT!



Printhead Fail Modes

Symptoms, Causes, Solutions

Symptom #1: A dot is leaving a line in the print direction. The dot appears to be dragging or failed on, sometimes in the print area, and sometimes not. If in a barcode, the verifier will halt the printer.

Cause: Paper dust or dirt on the printhead causing the ink to print without printhead firing. The dot is NOT failed on. The printhead is DIRTY.

If not addressed immediately: the line will go from black or gray to white and the dot will fail. The printhead will be damaged.

Solution: Immediately stop the printer and clean the printhead in the machine.

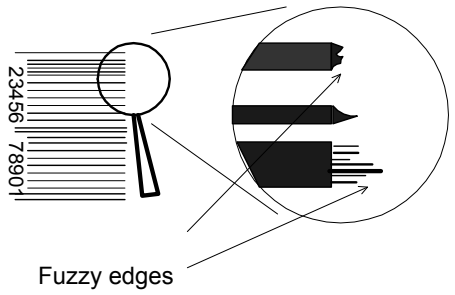
If problem continues: Remove the printhead and clean with hard pressure.

Symptom #2: Edges of barcode and text do not appear crisp and sharp.

Cause: Strobe is too high. Printhead is dirty.

Solution: Reduce front panel strobe one increment at a time until fuzzy printing goes away.

If problem continues: Clean the printhead as described below.



Symptom #3: While printing along fine early in the printheads life (< 300,000 inches), a dot suddenly appears missing. The verifier will halt the machine if the missing dot is in a barcode.

Cause: Most likely, the printhead failed from static.

Solution: Replace the printhead.

If problem continues: Check that the machine has all the static upgrades. Double check the connections and wires.

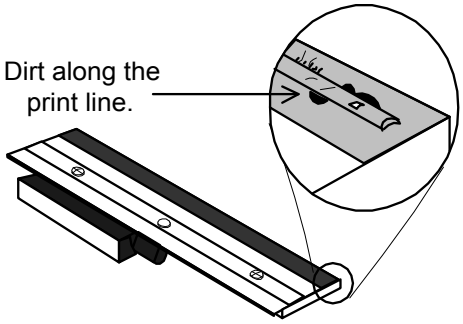
Printhead Cleaning Procedure

Printhead performance and life are influenced by proper handling and cleaning.

- Dirt on the printhead that causes problems is often too small to see.
- Exercise care in handling printheads, as they are very susceptible to static. Use the wrist grounding strap and anti-static gloves when handling.
- It is OK to scrub the printhead HARD to clean it. Use rubbing alcohol and the “loop side” or “wool side” of Velcro, followed by drying with rough, brown paper towels.
- If the printhead doesn’t work, take it out and clean it again.
- For maximum printhead life, clean the printhead after <u>every</u> roll change of ink or every 20,000 inches.

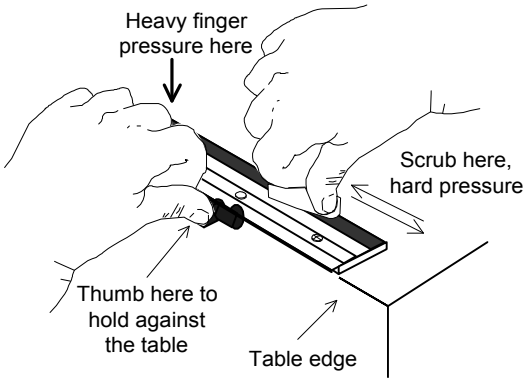
In Machine Cleaning Procedure

1. Stop the machine after the last batch has printed to avoid loosing data.
2. Turn the machine off.
3. Open the printhead carriage assembly.
4. Soak a small amount of rubbing alcohol on a cotton swab and apply to the printhead.
5. Scrub the printhead several times with hard force using the “wool side” of Velcro.
6. Dry the printhead with a dry, brown paper towel.
7. Shut the printhead carriage assembly and resume printing.
8. If a problem continues, remove the printhead and clean it.



Printhead cleaning when removed from the printer

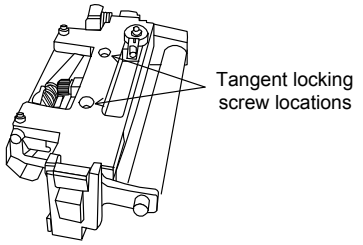
1. Remove the printhead.
2. Place the printhead upside down on the edge of a clean table with the connector pug over the edge of the table.
3. Soak a small amount of rubbing alcohol on a cotton swab and apply to the print line.
4. Scrub the printhead several times using HARD pressure with the “loop side” of Velcro.
5. Dry with a dry, brown paper towel.
6. Replace the printhead.



Printhead Installation and Removal Procedures

Printhead removal procedure

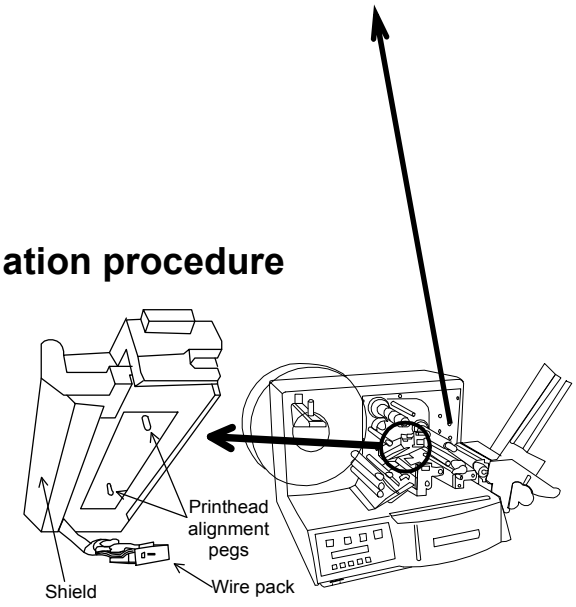
1. Attach the grounding strap to your wrist and the printer.
2. Turn the machine off.
3. Leaving the printhead shut, completely loosen the two tangent locking screws but leave them loose in the holes.
4. Slowly open the printhead carriage assembly. Maneuver the printhead down and to the right, pulling the wire pack out from the shield.
5. Disconnect the wire pack and carefully remove the printhead.



Printhead Carriage Assembly

Printhead installation procedure

1. Position the printhead loosely under the printhead carriage assembly.
2. Connect the wire pack.
3. Position the printhead in the printhead carriage assembly so that the alignment pegs match up and the printhead fits snugly.
4. Shut the printhead while maintaining snug fit on the printhead.
5. Tighten the tangent set screws.

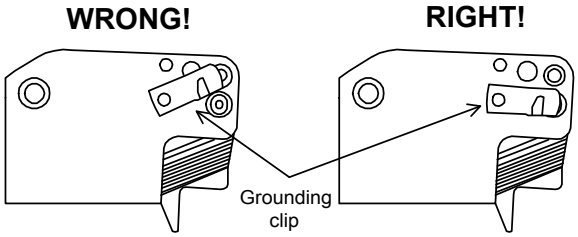


Open Printhead Carriage

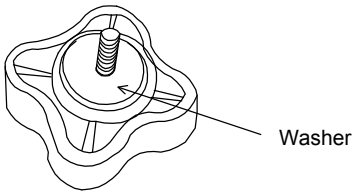
Static Checks for 636/656 Printers

1. **Stacker:** With an ohmmeter, check continuity between the main stacker roller, which has the belts on it, and the chassis ground. Chassis ground can be any screw near the serial cable. Check that these two important enhancements are functioning:

a) Check the grounding clip is installed and making physical contact with the main stacker roller. Sometimes, the clip is installed but moved off the roller.



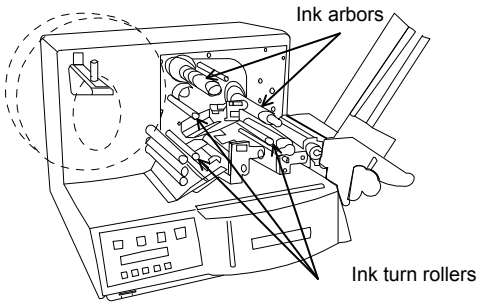
Machine side of the stacker



Stacker knob removed

b) Check the stacker mounting knob has a large washer installed. Make sure to tighten the knob all the way.

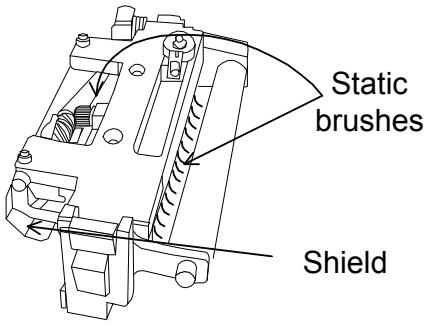
2. **Ink arbors:** With an ohmmeter, check for continuity on the two ink arbors and three ink turn rollers. Place one lead of the ohmmeter on the arbor and the other on the chassis ground screw.



3. **Printhead static protections**. Check for proper installation.

a) Static brushes. Make sure the brushes are installed and just barely touching the stock and ink. Too much dragging and they wear; too little contact and they don't dissipate the static.

b) Static shield. Make sure the static shield is installed and the screws are tight.



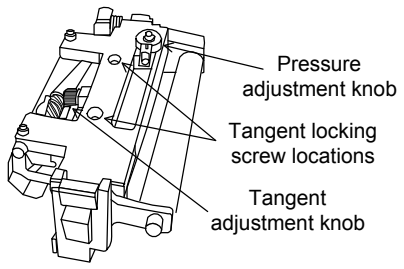
Steps for initial set up on a AVERY DENNISON 636 or 656

1. **Software:** In Formatter, open the format. From the Format menu, select Attributes. Select the "Ink Setup" tab. Check that the combination of stock and ink types matches what is running on the machine.

2. **Pressure:** Open the printhead such that it hangs at an angle. Loosen the printhead pressure knob enough to that it just sticks and does not slide from gravity. Position the knob in the center of the ink. Close the printhead, tighten 3/4 of a turn.

3. **Tangent:** Set the tangent so that the locking screw is centered when looking down on the printhead.

4. **Strobe:** Using the arrow keys, select "Setup" on the front panel. Using the arrow keys again, select "Strobe". If not 0, return the strobe setting to zero using the arrow keys, and then the "Enter" key.



Printhead Carriage Assembly

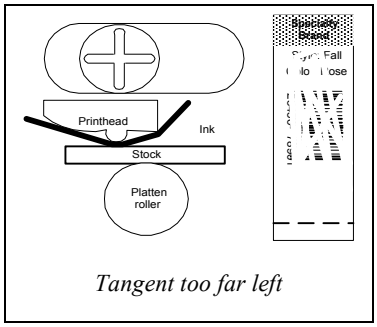
5. **Ink tension:** Back the tension on the ink unwind and take up to minimal. Turn the tension knobs left or counter-clockwise.

6. **Stock widths:** The width of the ribbon must be greater than the supply width. Since some supplies are more abrasive to printheads than others, using a ribbon wider than your supply helps protect the printhead. Failure to do this may void your warranty. Replacement printheads are expensive.

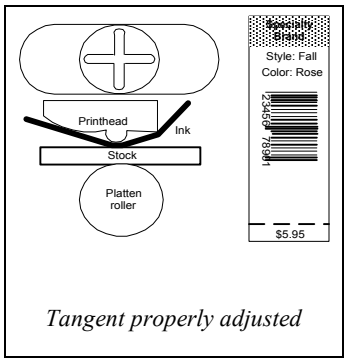
7. **Cleaning:** Clean the printhead with an approved printhead cleaning method. Use rubbing alcohol on a lint free cloth or the "Hook side" of Velcro. Always turn off the machine and wear the wrist grounding strap. **Never** touch the printhead with a metal object like a knife or screwdriver.

Print Quality Adjustment

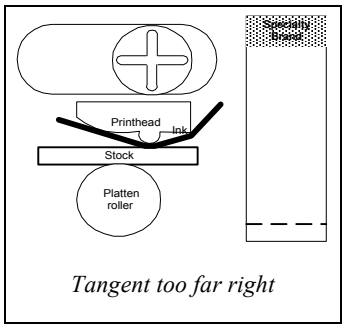
!. **Tangent** - Move the tangent adjust knob left or right to improve print quality. In general, the best print will be slightly to the left of center.



Tangent too far left



Tangent properly adjusted



Tangent too far right

2. **Pressure** - Adjust printhead pressure to get desired print definition. If the pressure seems like it is getting too tight, readjust tangent. Don't tighten the printhead to maximum or damage to the printhead could occur.
3. **Strobe** - Adjust strobe for print darkness and bar code scanability. Adjust one increment at a time.
4. **Ink** - Use ink unwind and take-up tensions adjustments to eliminate any ink wrinkles or skid marks.

Appendix F

Platen Rollers for 6x6 and 676 Printers

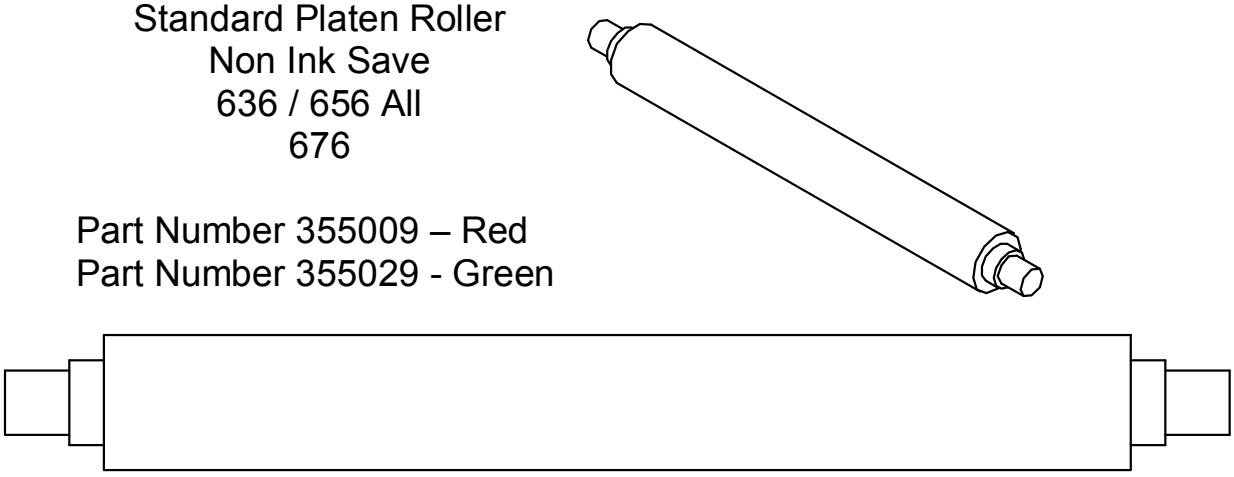
There are several types of platen rollers made for the 6x6 and the 676 series of controlled printers. The material printed will determine the color (hardness) of the roller as well as width of the cut down part of the platen. The green rollers are harder and used for fabric applications. The red rollers are softer and are used for tag applications. The rollers are determined by tapes / tags and is not dependant on the ink selection. The width of the fabric will determine the width of the cut down part of the green platen roller. The ink should not extend beyond the edge of the cut down part of the platen. The 1 3/8" roller can be used for fabric from the minimum 1" to 1 1/8" wide. The 3" cut down platen roller can be used from 1 1/8" to 2 ½" in width. Fabric from 2 ½" wide up to the full 5" width of the printer should use the regular full size platen rollers.

The following pages will show the platen rollers used in the 6x6 and 676 controlled printers. They are approximately full size. Just compare the roller you are using to one of the pictures and using the following chart – select the replacement part number. The first 6x6 machines had beige colored covers and the web path was back justified. The later model of 6x6 has gray colored covers and has a web path that is centered on the platen rollers in the same way as the 676.

Machine	Part Number	Platen Roller Description and Use
636/656 Beige Covers	355009	Standard Full Width Tag Stock - Red – wo / Ink Save
Back Justified Web Path	355096	Standard Full Width Tag Stock - Red – w / Ink Save (656)
	355029	Standard Full Width Green - Fabric – wo / Ink Save
	355083	Standard Full Width Green - Fabric – w / Ink Save (656)
	355044	3" Cut Down Green - Fabric – wo / Ink Save
	355082	3" Cut Down Green - Fabric – w / Ink Save (656)
636/656 Gray Covers	355009	Standard Full Width Tag Stock - Red – wo / Ink Save
Center Justified Web Path	355096	Standard Full Width Tag Stock - Red – w / Ink Save (656)
	355029	Standard Full Width Green - Fabric – wo / Ink Save
	355083	Standard Full Width Green - Fabric – w / Ink Save (656)
	375030	1 3/8" Cut Down Green - Fabric – wo / Ink Save
	375031K	1 3/8" Cut Down Green - Fabric – Ink Save (656)
	375026	3" Cut Down Green - Fabric – wo / Ink Save
	375025K	3" Cut Down Green - Fabric – w / Ink Save (656)
676	355009	Standard Full Width Tag Stock - Red – wo / Ink Save
Center Justified Web Path	355096	Standard Full Width Tag Stock - Red – w / Ink Save
	355029	Standard Full Width Green - Fabric – wo / Ink Save
	355083	Standard Full Width Green - Fabric – w / Ink Save
	375030	1 3/8" Cut Down Green - Fabric – wo / Ink Save
	375031K	1 3/8" Cut Down Green - Fabric – w / Ink Save
	375026	3" Cut Down Green - Fabric – wo / Ink Save
	375025K	3" Cut Down Green - Fabric – w / Ink Save

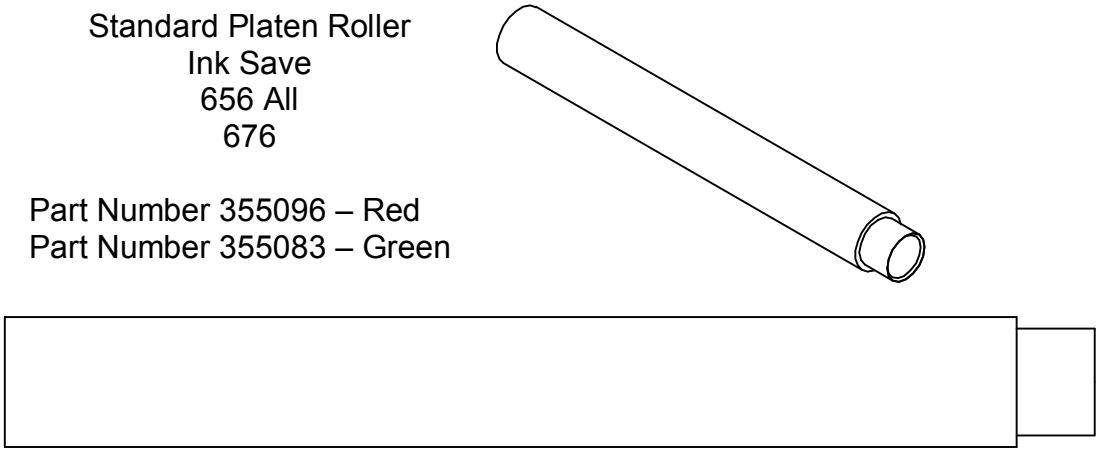
Standard Platen Roller
Non Ink Save
636 / 656 All
676

Part Number 355009 – Red
Part Number 355029 - Green



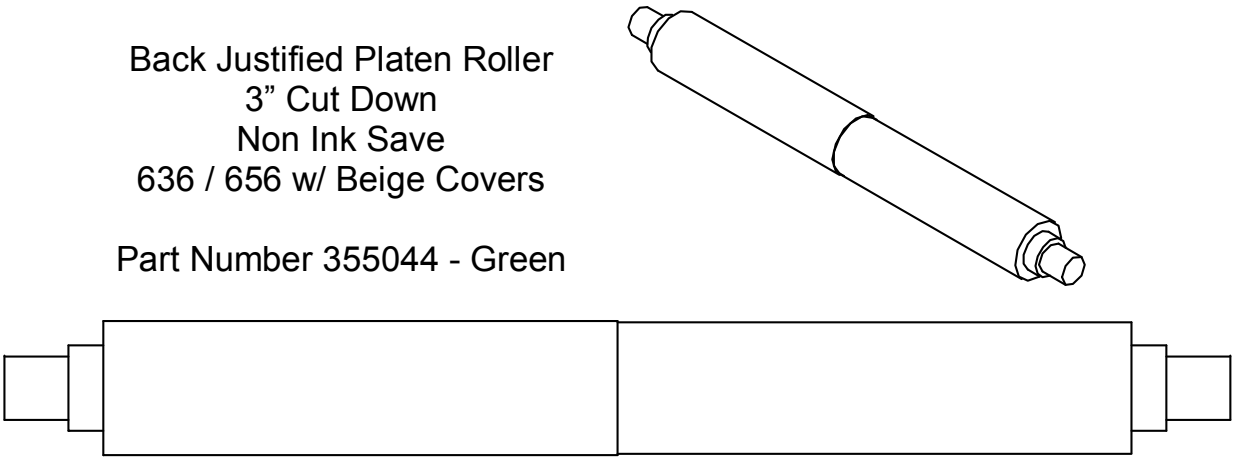
Standard Platen Roller
Ink Save
656 All
676

Part Number 355096 – Red
Part Number 355083 – Green



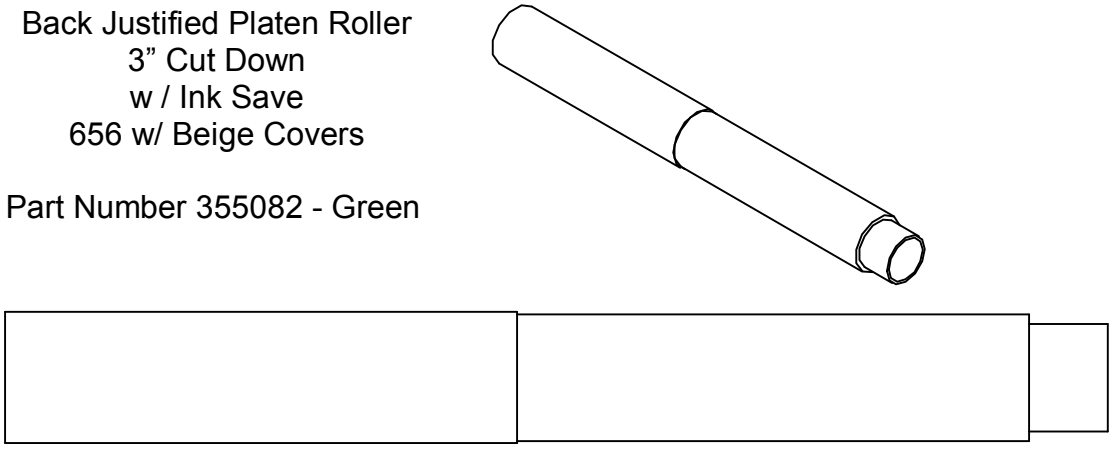
Back Justified Platen Roller
3” Cut Down
Non Ink Save
636 / 656 w/ Beige Covers

Part Number 355044 - Green



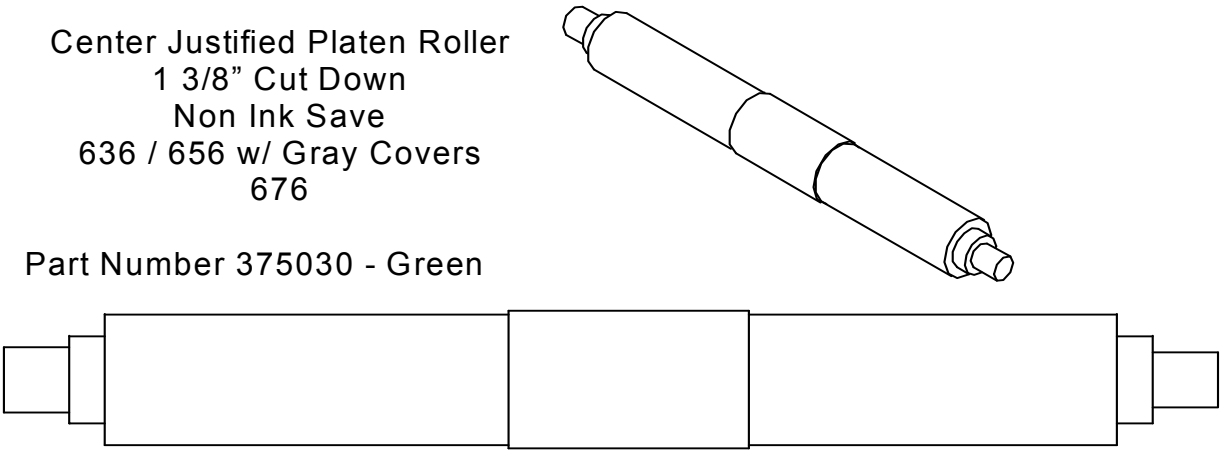
Back Justified Platen Roller
3” Cut Down
w / Ink Save
656 w/ Beige Covers

Part Number 355082 - Green



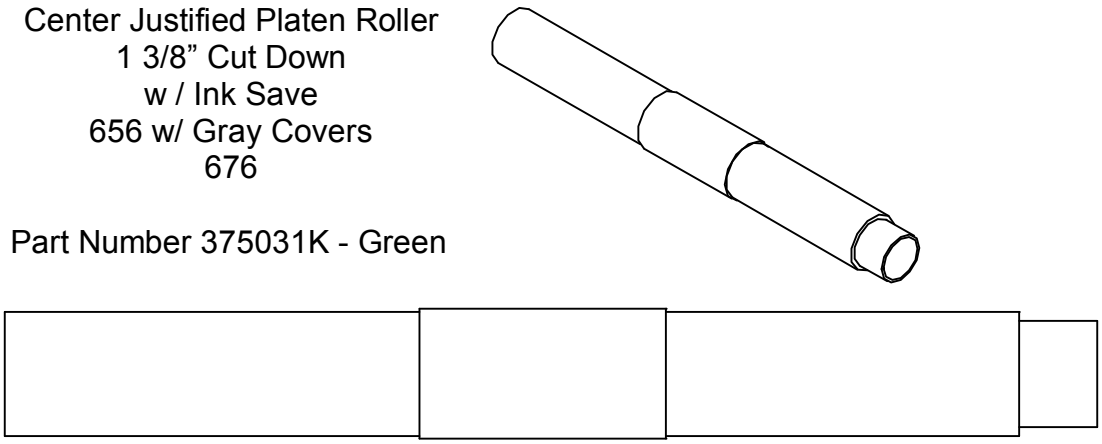
Center Justified Platen Roller
1 3/8” Cut Down
Non Ink Save
636 / 656 w/ Gray Covers
676

Part Number 375030 - Green



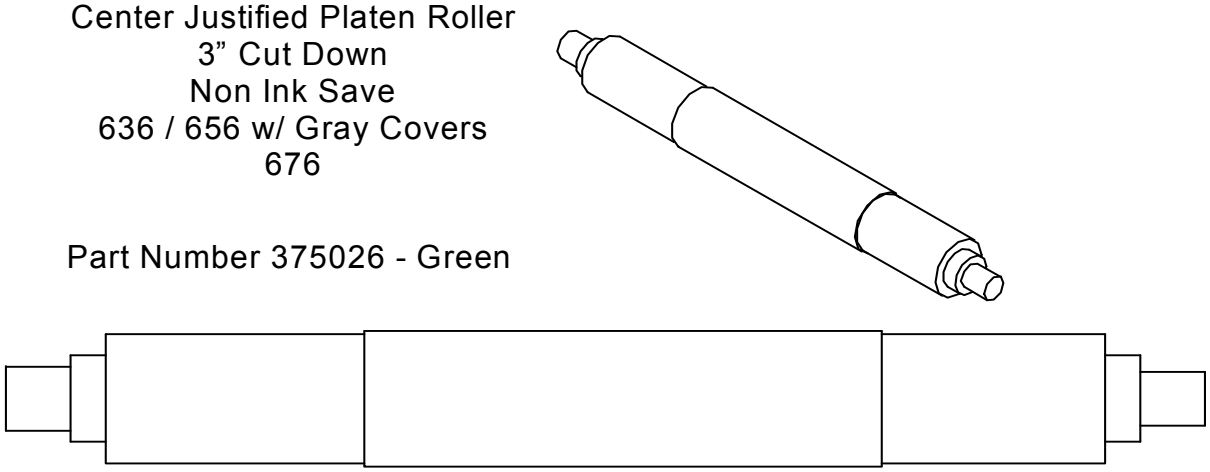
Center Justified Platen Roller
1 3/8” Cut Down
w / Ink Save
656 w/ Gray Covers
676

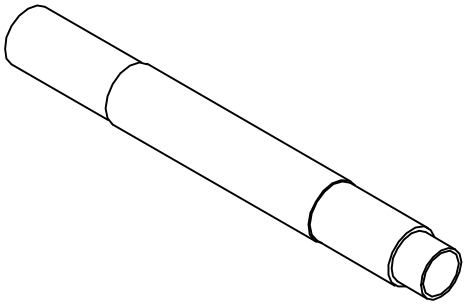
Part Number 375031K - Green



Center Justified Platen Roller
3” Cut Down
Non Ink Save
636 / 656 w/ Gray Covers
676

Part Number 375026 - Green



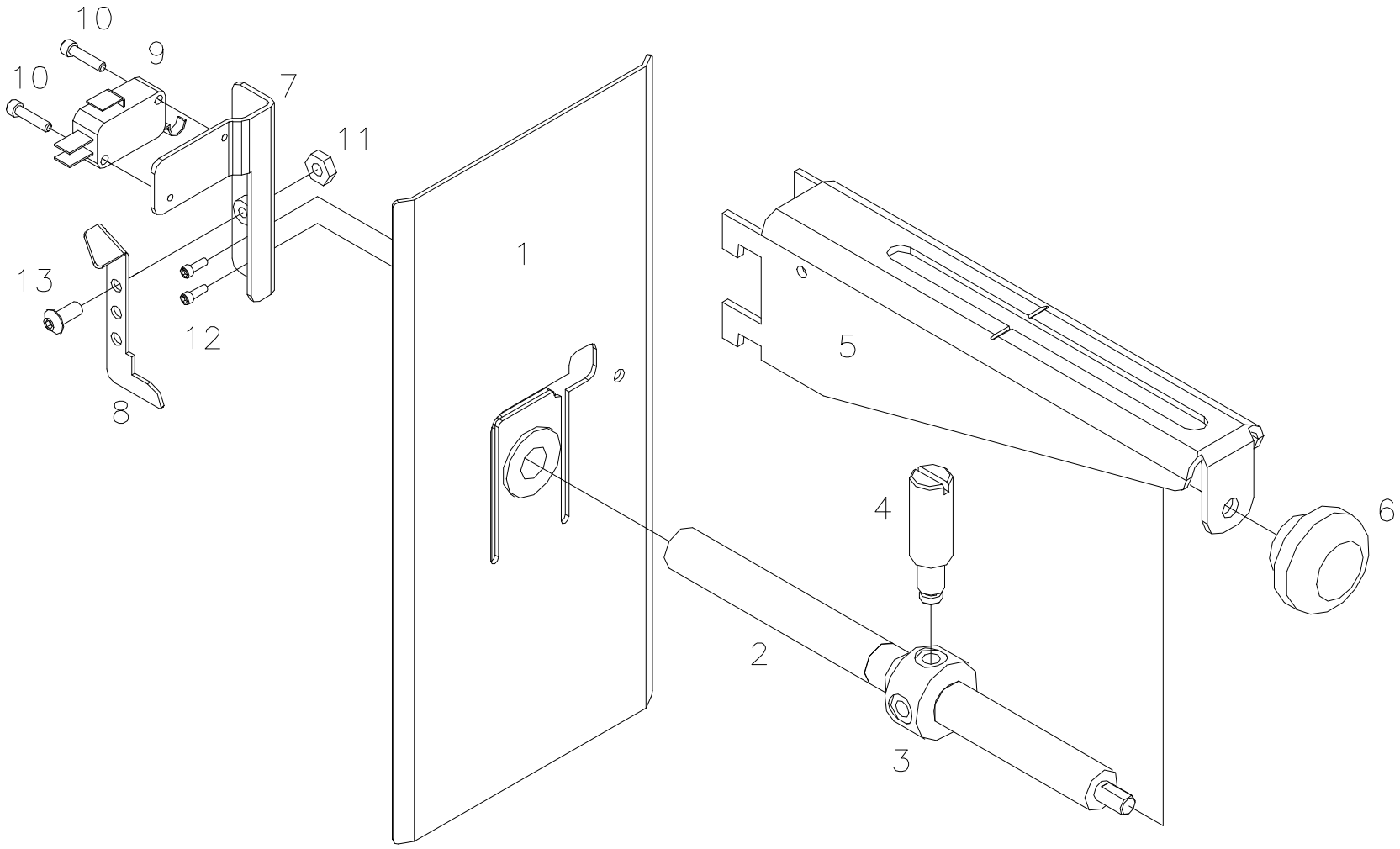


Center Justified Platen Roller
3” Cut Down
Ink Save
656 w/ Gray Covers
676

Part Number 375025K - Green

Assembly Drawings

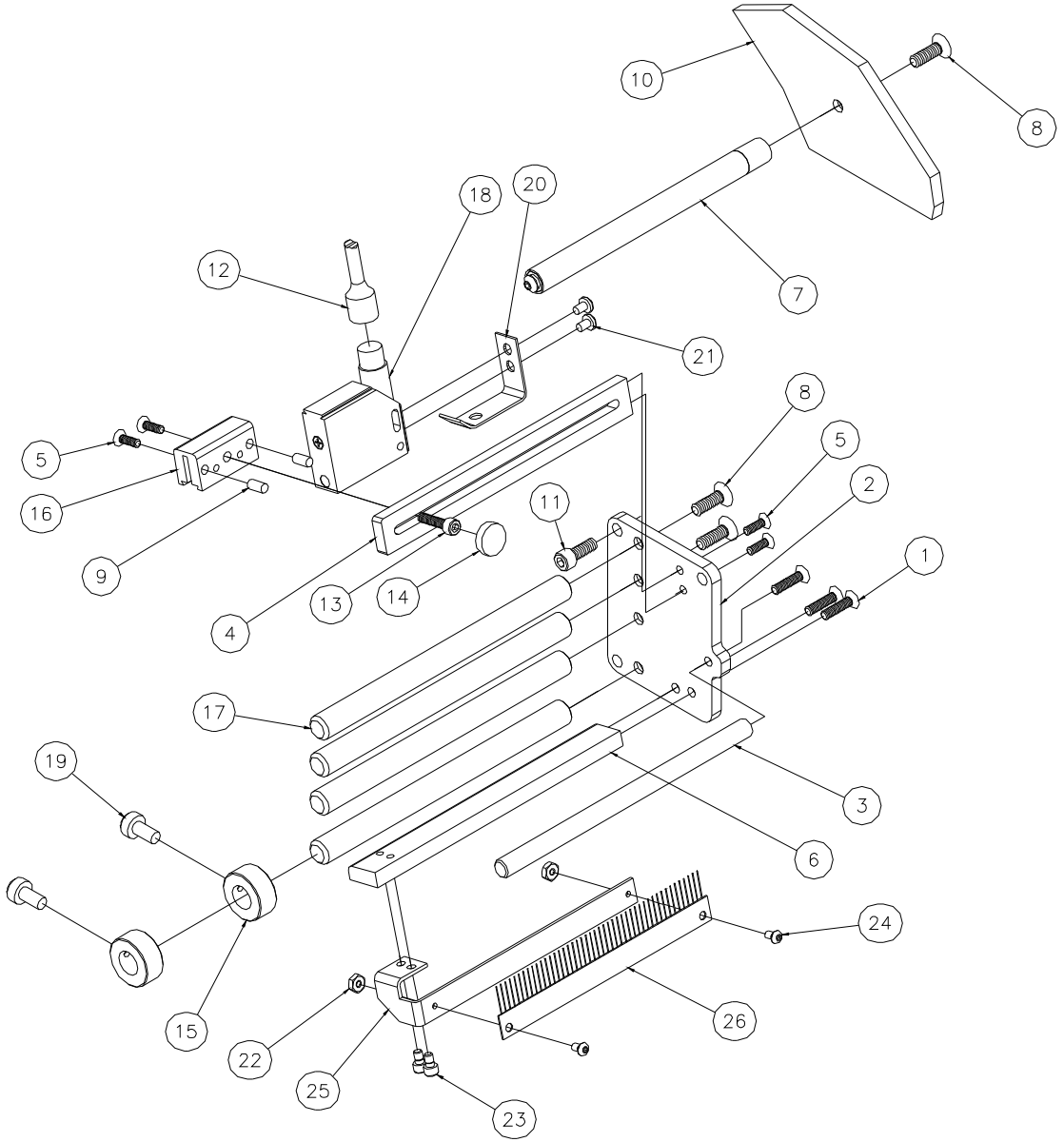
Unwind Assembly Drawing



Unwind Parts List

Item	Part #	Description	Qty
1	373012	Web guide, Rear	1
2	373009	Lead screw, Tape unwind	1
3	373011	Adjuster, Outer web guide	1
4	373010	Rod, Web guide, Outer	1
5	353002	Bracket, Unwind	1
6	105023	Impression Adjust, Knob/SS Kit	1
7	373014	Bracket, Sensor mount	1
8	373013	Bracket, Stock out	1
9	191120	Micro switch	1
10	989973	4-40 x ½ Cap screw	2
11	990069	8-32 Hex nut	1
12	990000	2-56 x ¼ Cap screw	2
13	990065	8-32 x 3/8 Button head screw	1
14	371142	Stock out switch harness (*NS)	1
15	990513	Small wire tie (*NS)	1

Contrast Sensor Drawing

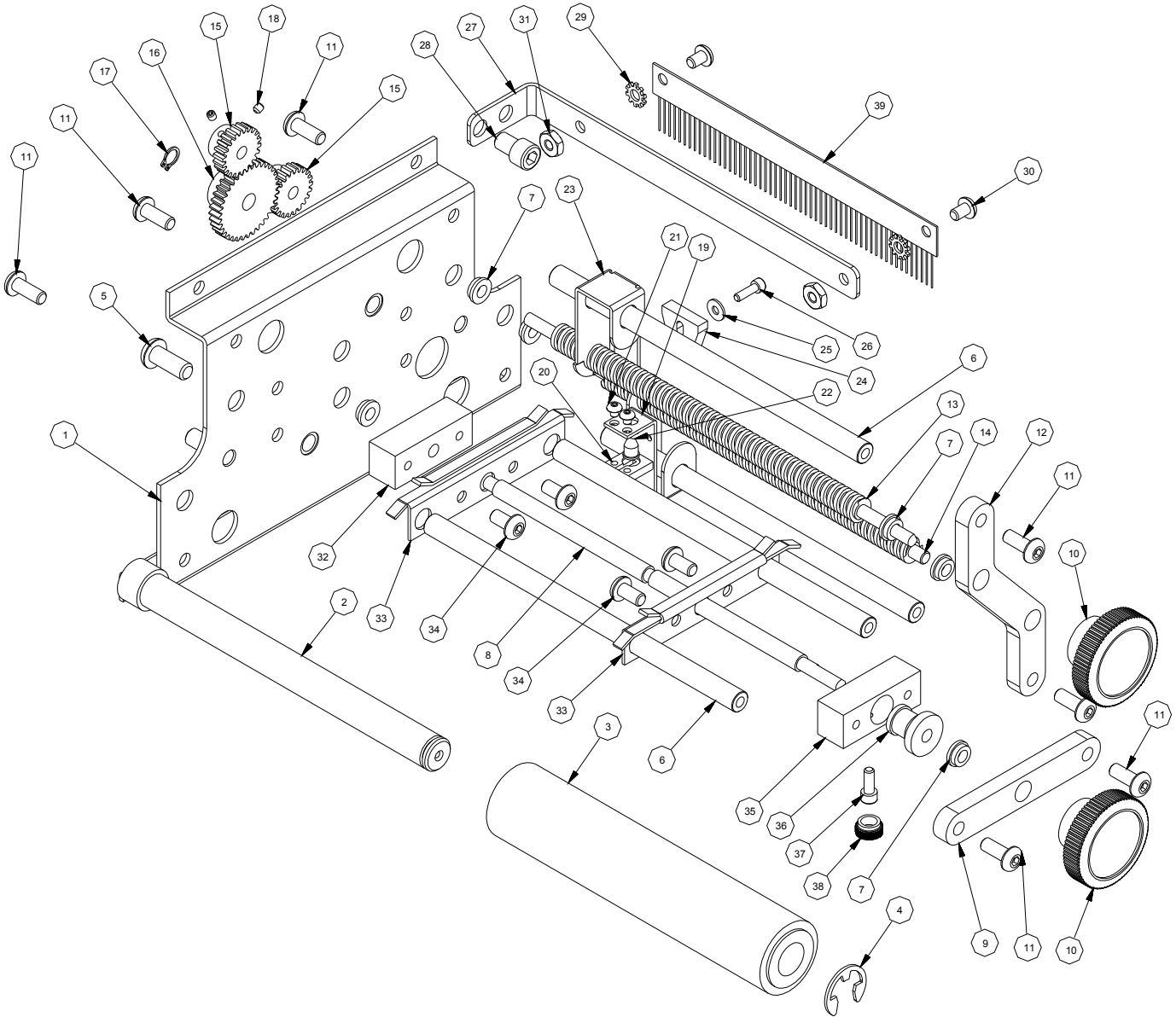


Contrast Sensor Parts List

Item	Part #	Description	Qty
1	990111	10-32 x 3/4 Flat head screw	3
2	514016	Bracket, Sensor ass'y	1
3	514017	Shaft, Ink turn bar	1
4	514019	Bracket, Sensor mount	1
5	990056	8-32 x 1/2 Flat head screw	4
6	514018	Bracket, Sensor guide	1
7	376086	Roller, Ass'y	1
8	990133	1/4-20 x 3/4 Flat head screw	5
9	990268	Dowel pin, 3/16 x 1/2	2
10	511206	Frame, 636/656B Upright	1
11	990121	1/4-20 x 5/8 Cap screw	3
12	511112	Cable, Contrast sensor	1
13	990083	10-32 x 3/4 Cap screw	1
14	990313	Thumb screw knob, #10	1

Item	Part #	Description	Qty
15	990374	Collar, 1/2"	2
16	514020	Sensor, Mount block	1
17	194020	Web turn shaft	4
18	281140	Scanner, Contrast	1
19	990484	1/4-20 x 1/2 Nylon screw	2
20	424044	Bracket, Sensor hold down	1
21	989534	4mm x 6mm Pan hd Phil screw	2
22	990038	Hex nut, 6-32	2
23	990050	8-32 x 1/4 Cap screw	2
24	990019	6-32 x 1/4 Button head screw	2
25	376057	Bracket, Static brush	1
26	355039	Static brush	1
	514098	Can be ordered as an assembly	

Web Guide / Sensor Assembly Drawing

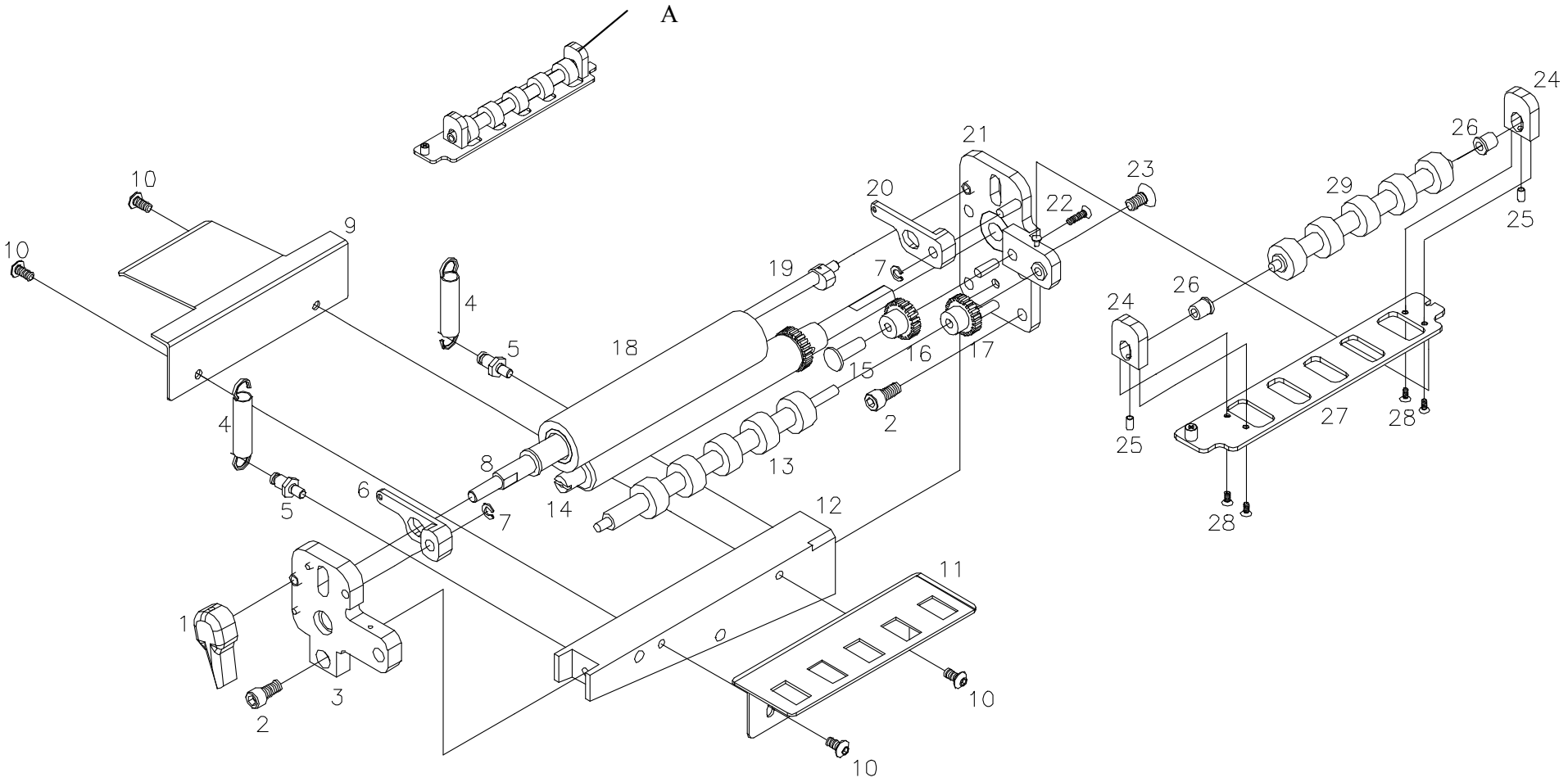


Web Guide / Sensor Assembly Parts List

Item	Part #	Description	Qty
1	514102	BRACKET WEB/SENSOR GUIDE MOUNT ASSY	1
2	554017	SHAFT, DECURLER ROLLER	1
3	514090	TAPE ROLL IDLER, MOLDED	1
4	990328	E-RING, 1/2	1
5	990166	1/4-20 X 5/8 BHCS	1
6	374059	SHAFT, SENSOR GUIDE	4
7	999100	BUSHING FL, 3/16 X 5/16 X 1/8	6
8	374060	SHAFT, WEB GUIDE ADJUST	1
9	374061	WEB GUIDE HOLDER	1
10	105023K	IMPRESSION ADJ. KNOB	2
11	990091	10-32 X 1/2 BHCS	8
12	374055	BRACKET, FRONT PLATE	1
13	554058	SHAFT, THREADED ROD UPPER	1
14	554059	SHAFT, THREADED LOWER	1
15	554064A	GEAR, SENSOR ADJ. ALT	2
16	374058	GEAR, IDLER, 36T	1
17	990262	SNAP RING, 1/4	1
18	990007	4-40 X 1/8 KNURLED CUP POINT	4
19	374049	BRACKET, MOUNT LED	1
20	532015	CLAMP, SENSOR	1

Item	Part #	Description	Qty
21	991279	4-40 X 1/8 BHCS	2
22	551169	SENSOR, LED WIRED	1
23	374050	BRACKET, SENSOR MOUNT	1
24	371128	TOP & BOTTOM REFLECTIVE SENSOR HARNESS	1
25	990448	WASHER, .125 X .313 X .031	1
26	990424	4-40 X 3/8 SHCS	1
27	516001	BRACKET, STATIC BRUSH, INK	1
28	990119	1/4-20 X 3/8 SHCS	1
29	989978	#8 STAR WASHER	2
30	990066	8-32 X 1/4 BHCS	2
31	990069	8-32 HEX NUT	2
32	554004	BRACKET, WEB GUIDE MOUNT	1
33	374051	BRACKET, WEB GUIDE	2
34	990090	10/32 X 3/8 BHCS	4
35	554006	BRACKET, WEB GUIDE MOUNT FRONT	1
36	554005	ADAPTER, WEB GUIDE	1
37	990016	6-32 X 3/8 SHCS	1
38	990312	THUMB SCREW KNOB, #6	1
39	355039	STATIC BRUSH	1

Drive Assembly Drawing



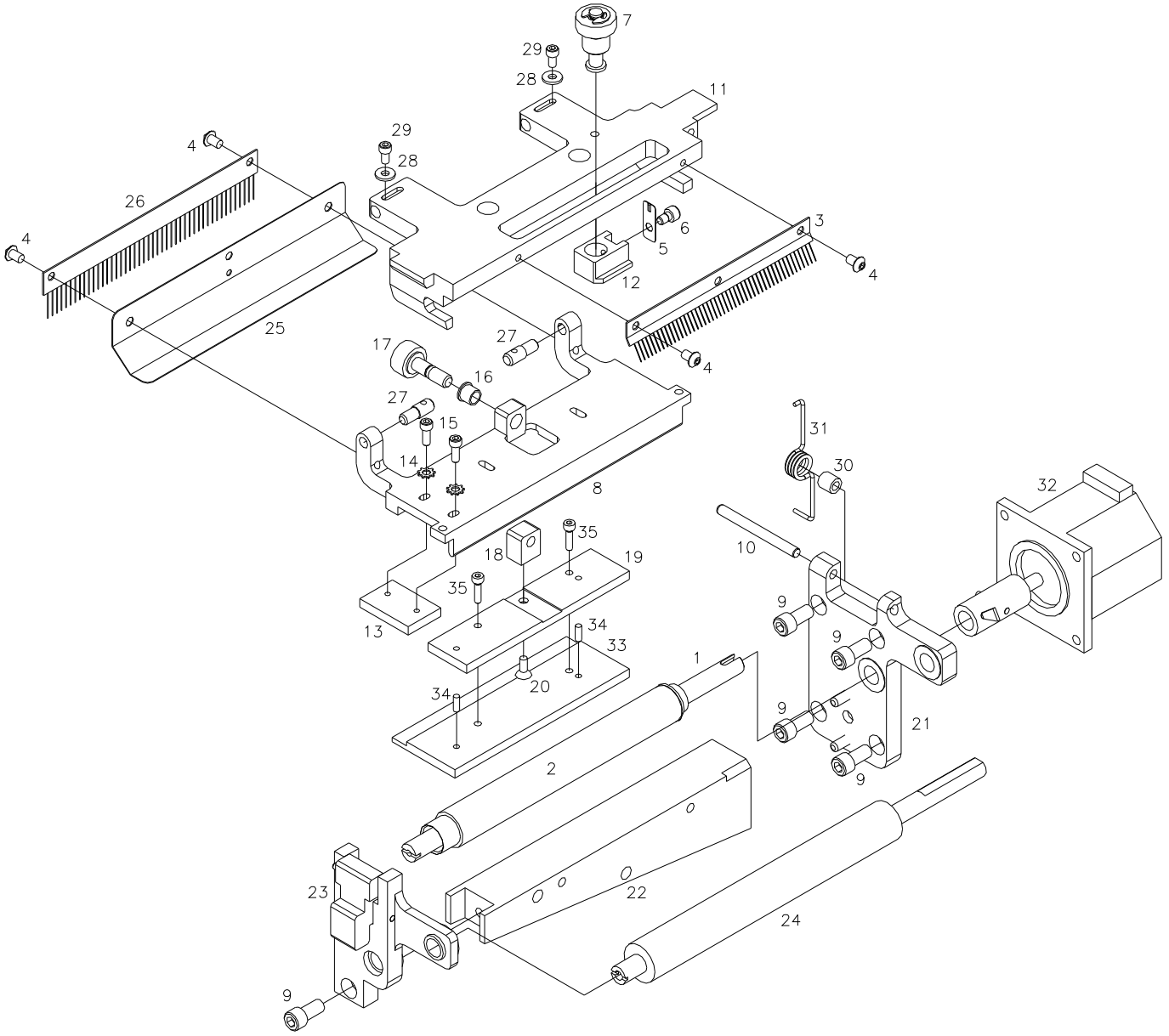
Drive Parts List

Item	Part #	Description	Qty
1	514012	Feed knob / SS	1
2	990120	¼-20 x ½" Cap screw	5
3	514093	Front drive support Ass'y	1
4	991085	Extension spring	2
5	514003	Pin, Spring anchor	2
6	514009K	Spring lever, Front	1
7	990325	3/16" "E" Ring	2
8	514001	Shaft, Idler roller	1
9	514011	Bridge plate, Web	1
10	990090	10-32 x 3/8" Button head screw	4
11	354004	Bridge blade, Lower	1
12	355018	Support, Knife/Drive/Print	1
13	354014	Driven roller, Molded	1
14	354094	Roller, Drive Ass'y	1
15	354017	Shaft, Idler gear	1
16	354008A	Gear, Idler	1

Item	Part #	Description	Qty
17	354009A	Gear, Driven	1
18	514090	Tape roll idler, Molded	1
19	514094	Lift cam Ass'y	1
20	514010K	Spring lever, Rear	1
21	514092	Rear drive support, Ass'y	1
22	990023	6-32 x ½" Flat head screw	1
23	990416	¼-20 x ½" Flat head screw	1
24^{A}	374026	Plate support	2
25^{A}	354022	Spring, Eccentric lift	2
26^{A}	999070	3/16 x 5/16 x 5/16" Fl. Bushing	2
27^{A}	374025	Pre-feed plate	1
28^{A}	990003	4-40 x ¼" Flat head screw	4
29^{A}	354013	Idler roller, Molded	1
A	374094	Roller, Drive Ass'y	1
B	514091	Feed assembly, Spring loaded	1

KEY: Index Numbers 1^{A} are components of assembly A.
All items above are included in the B assembly

Printhead Assembly Drawing

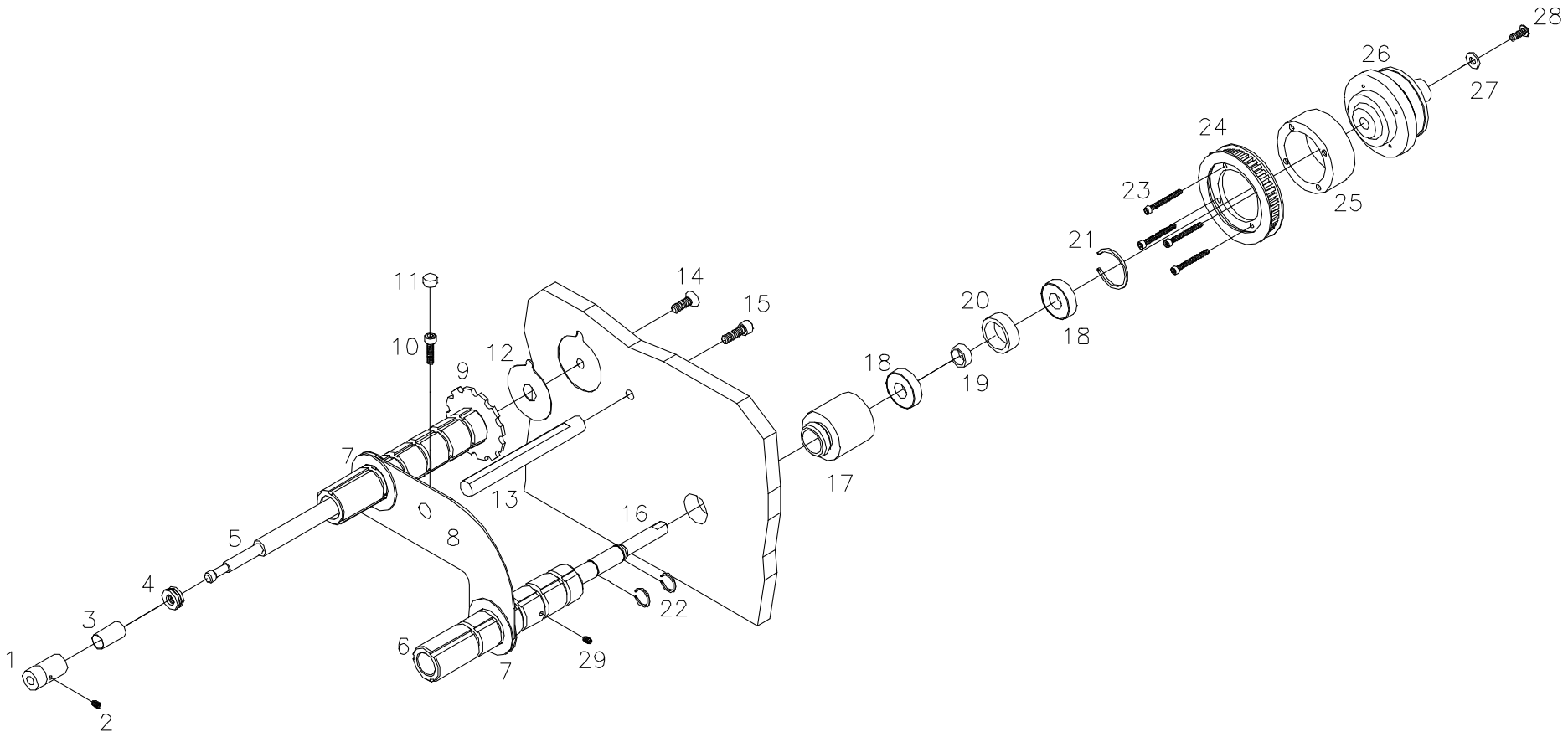


Printhead Parts List

Item	Part #	Description	Qty
1	515002	Shaft, Eccentric	1
2	355096	Platen roller (See Appendix F)	1
3	357011	Static brush	1
4	990066	8-32 x 1/4 Button head screw	4
5	355038	Knob clip	1
6	990047	8-32 x 1/8 Cap screw	1
7	355094	Assembly, Adjuster, Print head	1
8	355032	Plate, Print head mount	1
9	990120	1/4-20 x 1/2 Cap screw	5
10	990250	Dowel pin, 3/16 x 2	1
11	355031	Holder, Print head	1
12	355035	Pressure, Adjuster	1
13	355042	Plate, Locator print head	1
14	989976	Washer, #6 Star	2
15	990016	6-32 x 3/8 Cap screw	2
16	999041	Iglide, 1/4 x 5/16 x 1/4 Flange	1
17	355034	Shaft, Adjustment	1
18	355040	Block, Head adjust	1

Item	Part #	Description	Qty
19	355033	Adjustment, Plate, Print head	1
20	990028	6-32 x 3/8 Flat head screw	1
21	355092	Ass'y, Print head, Inner support	1
22	355018	Support, Knife / Drive / Print	1
23	355093	Ass'y, Print head, Outer Support	1
24	356020	Roller, Molded (Ink)	1
25	355041	Static shield	1
26	355039	Static brush	1
27	355037	Pin, Pivot	2
28	990037	Washer, #6 SAE	2
29	990015	6-32 x 1/4 Cap screw	2
30	999051	Bushing, 3/16 x 5/16 x 5/16 Oilite	1
31	355008	Spring, Torsion print head	1
32	515087	Head lift motor assembly	1
33	351101 351102	Print head, 6X6, 240 DPI Print head, 6X6, 300 DPI	1 1
34	990492	Dowel pin, 3mm x 8mm	2
35	990444	3m x 14mm Cap screw	2

Ink Unwind / Rewind Assembly

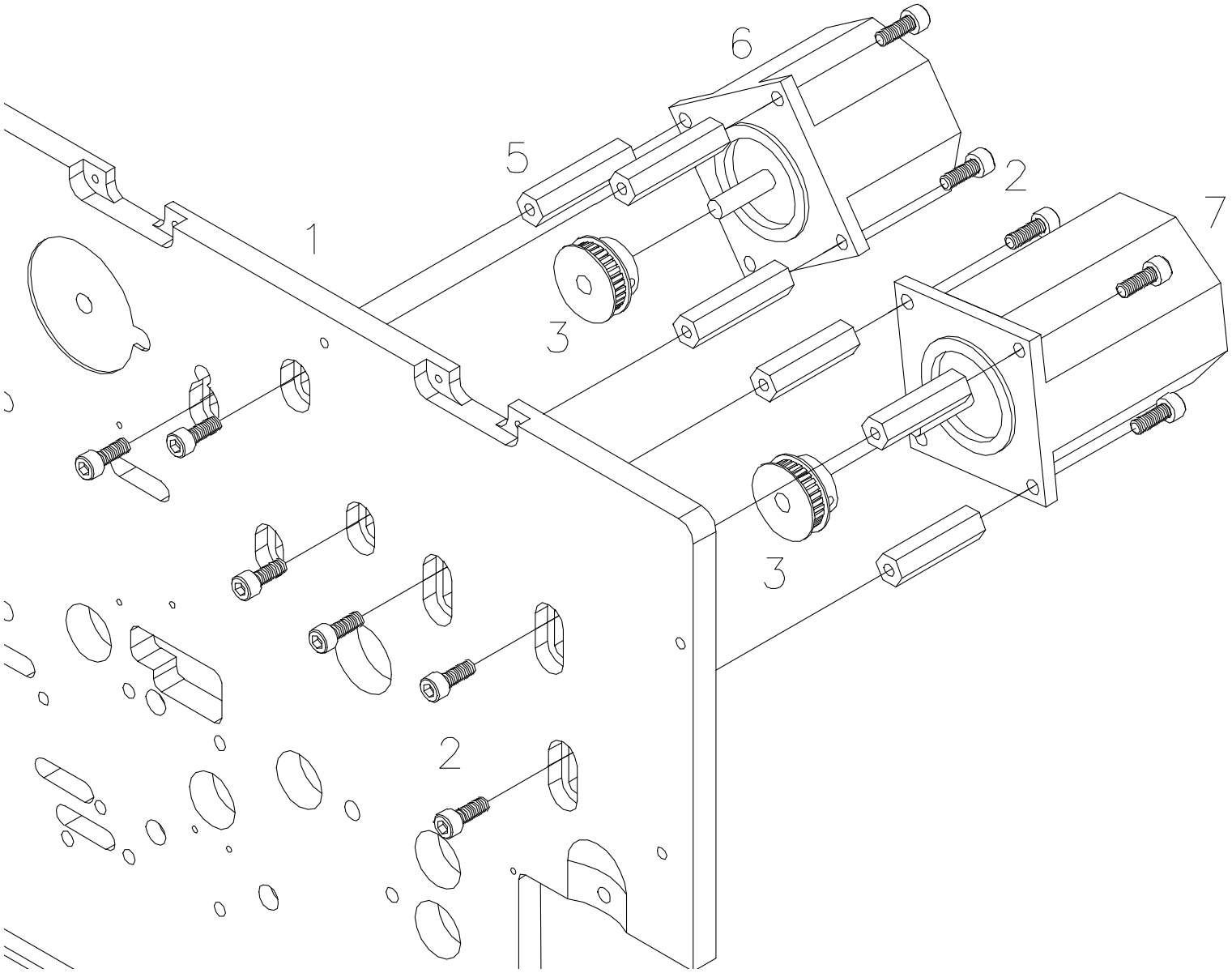


Ink Unwind / Rewind Parts List

Item	Part #	Description	Qty
1	356010	Shaft lock	2
2	990042	8-32 x 3/13" Set screw	2
3	990490	Spring	2
4	999009	5/16" Thrust bearing	2
5	356053	Unwind shaft	1
6	356204K	Arbor rewind assembly	1
7	376003	Ink arbor guide	2
8	516113	Ink guide	1
9	376088	Arbor unwind assembly	1
10	990083	10-32 x ¾" Cap screw	1
11	990313	#10 Thumb cap	1
12	376026	Unwind fiber spacer	1
13	356016	Shaft, Foil bracket	1
14	990133	¼-20 x ¾" Flat head	1
15	990122	¼-20 x ¾" Cap screw	1

Item	Part #	Description	Qty
16	356203	Shaft, Rewind	1
17	376016	Bearing Housing	1
18	999002	Bearing	2
19	376023	Bearing spacer	1
20	376025	Bearing spacer	1
21	991018	Internal snap ring	1
22	991089	½" Retainer ring	2
23	991086	6-32 x 1 ¼" Cap screw	4
24	376022	Sprocket, Altered	1
25	356202	Collar, Sprocket mount	1
26	356201	Magnetic clutch	1
27	990102	#10 SAE Washer	1
28	990091	10-32 x ½" Button head	1
29	990058	8-32 x ¼" Set screw	1

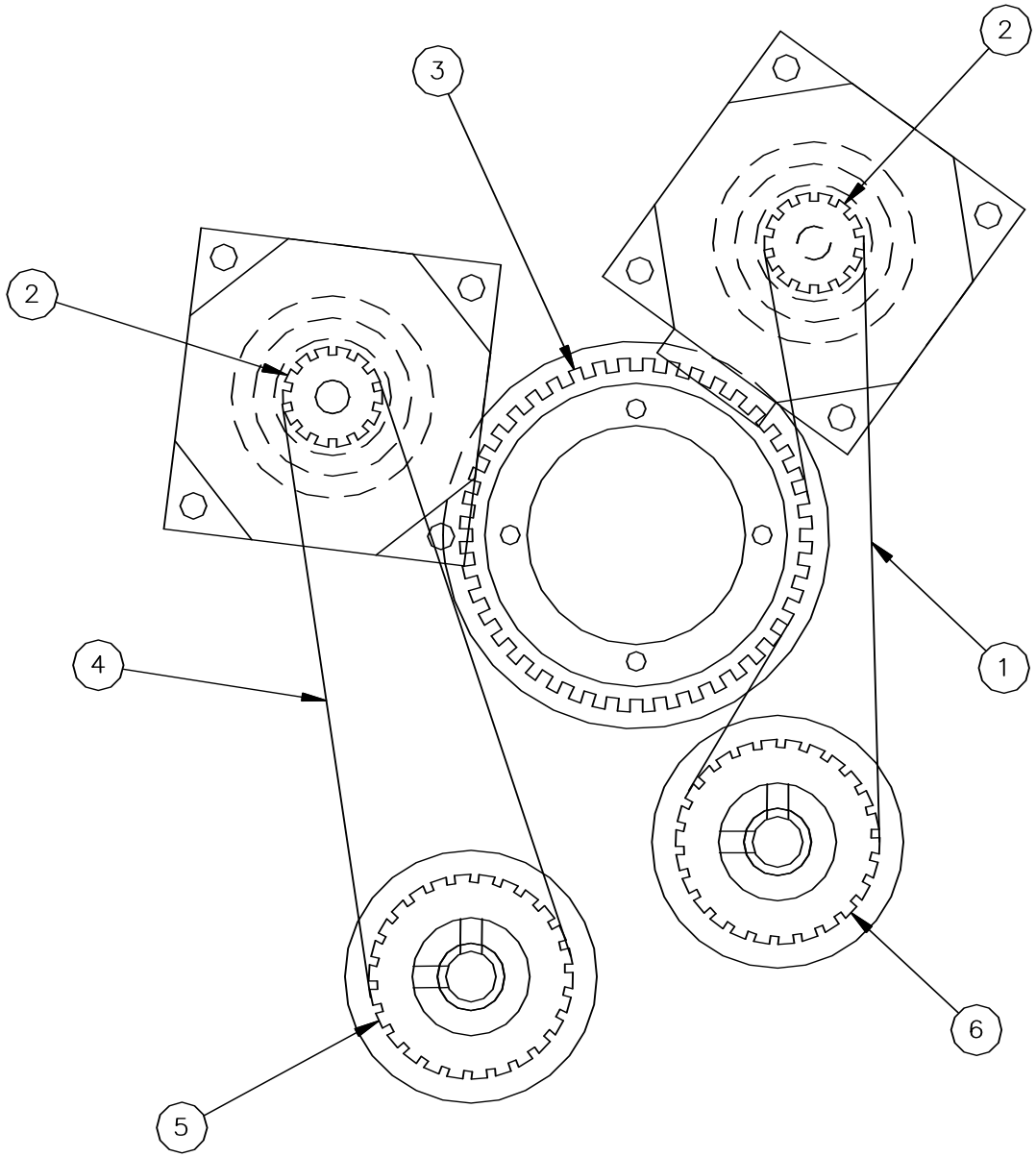
Feed & Ink Drive Assembly



Feed & Ink Drive Parts List

Item	Part #	Description	Qty
1	511206	Frame, Upright	1
2	990081	10-32 x ½” Cap screw	12
3	284025	14 Tooth pulley	2
5	990451	1 9/16” Stand-Off	6
6	351141	Ink motor	1
7	245026	Feed motor	1
8	990067	#8 Flat Washer (NS)	6
N/A	356109	Ink timing belt (85 Tooth)	1
N/A	356110	300DPI Feed timing belt (60 Tooth)	1
N/A	356026	240DPI Feed timing belt (57 Tooth)	1

Timing Belt Threading Diagram

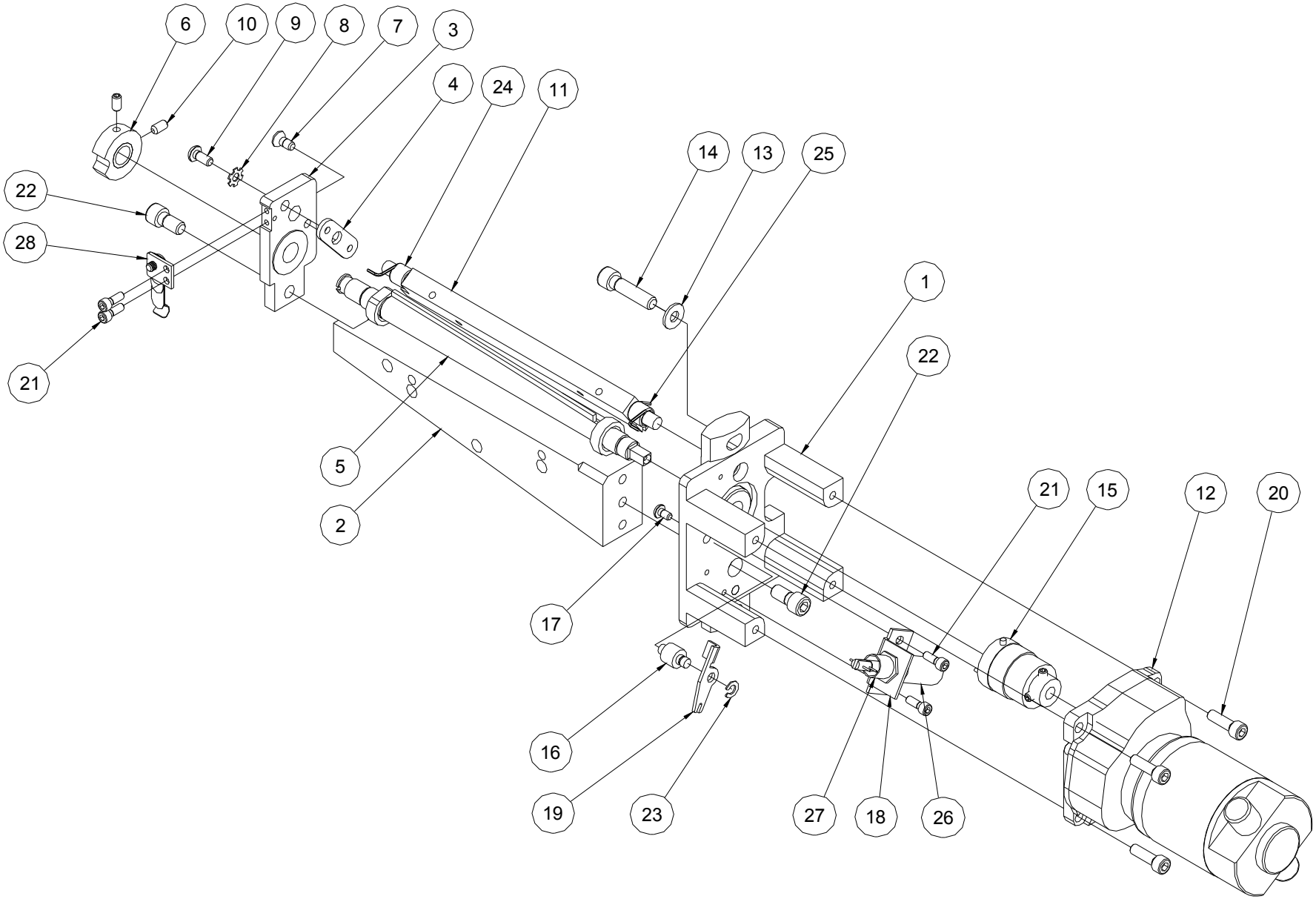


Timing Belt Parts List

Item	Part #	Description	Qty
1	356111	65T Timing belt, Double sided	1
2	284025	14 Tooth pulley	2
3	376090	Ink rewind assembly	1
4	356110	60 T Timing belt (300DPI)	1
5	356029 356030	26 Tooth pulley (300DPI) 21 Tooth pulley (240DPI) (*NS)	1 1
6	356029	26 Tooth pulley	1

(*NS = Not shown)

Knife Assembly Drawing

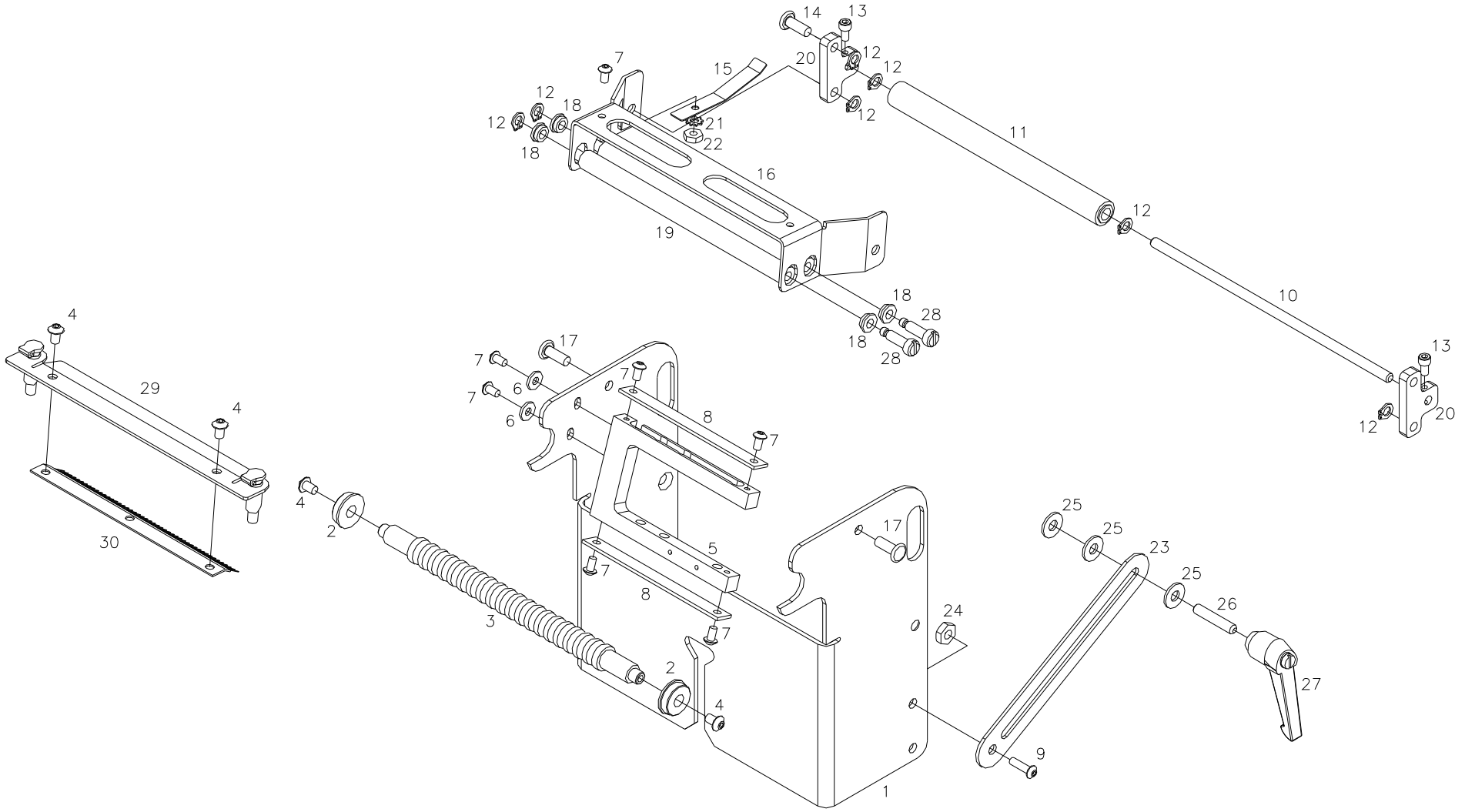


Knife Parts List

Item	Part #	Description	Qty
1	357091	Bracket, Inner knife assembly	1
2	355018	Support, Knife / Drive / Print	1
3	357092	Bracket, Outer knife ass'y	1
4	197308	Adjuster, Knife	1
5*[3]	357094	Ass'y, Ground rotary (6x6)	1
6*[2]	197311	Cam, Knife homing	1
7	990055	8-32 x 3/8 Flat head screw	1
8	989978	Washer, #8 Star	1
9	990065	8-32 x 3/8 Button head screw	1
10*[2]	991067	8-32 x 5/16 Knurled cup point	2
11*[3]	357093	Knife, Stationary ass'y	1
12	517099	Assembly, Knife motor, 600 rpm	1
13	990102	Washer, #10 SAE	2
14	990123	1/4-20 x 1 Cap screw	2
15*[2]	357019	Clutch, 6 roller, Sq drive	1
16	357016	Standoff, Solenoid arm	1

Item	Part #	Description	Qty
17*[3]	990019	6-32 x 1/4 Button head screw	1
18*[1,2]	357003	Mount, Solenoid	1
19*[1,2]	357020	Actuator, Knife	1
20	990082	10-32 x 5/8 Cap screw	4
21*[1]	990016	6-32 x 3/8 Cap screw	4
22	990120	1/4-20 x 1/2 Cap screw	2
23*[1,2]	990325	Snap ring, 3/16 "e" ring	1
24*[3]	197319	Torsion spring, Right	1
25*[3]	357029	Torsion spring light, Back	1
26*[1,2]	351123	Knife solenoid, Harnessed	1
27*[1,2]	197317	Compression spring, Solenoid	1
28*[1,2]	357089	Ass'y, Cam spring	1
* 1	357096	6x6 Solenoid kit	
* 2	357097K	6x6 Knife Solenoid / Clutch kit	
* 3*[2]	357098K	6x6 Solenoid / Clutch / Blade kit	
	921178	Finger Guard (install when knife is removed for safety - NS)	1
	357095	Oiler Assembly (NS)	1
	357090K	Knife Module Assembly (NS)	1

Stacker Assembly Drawing (Part 1)

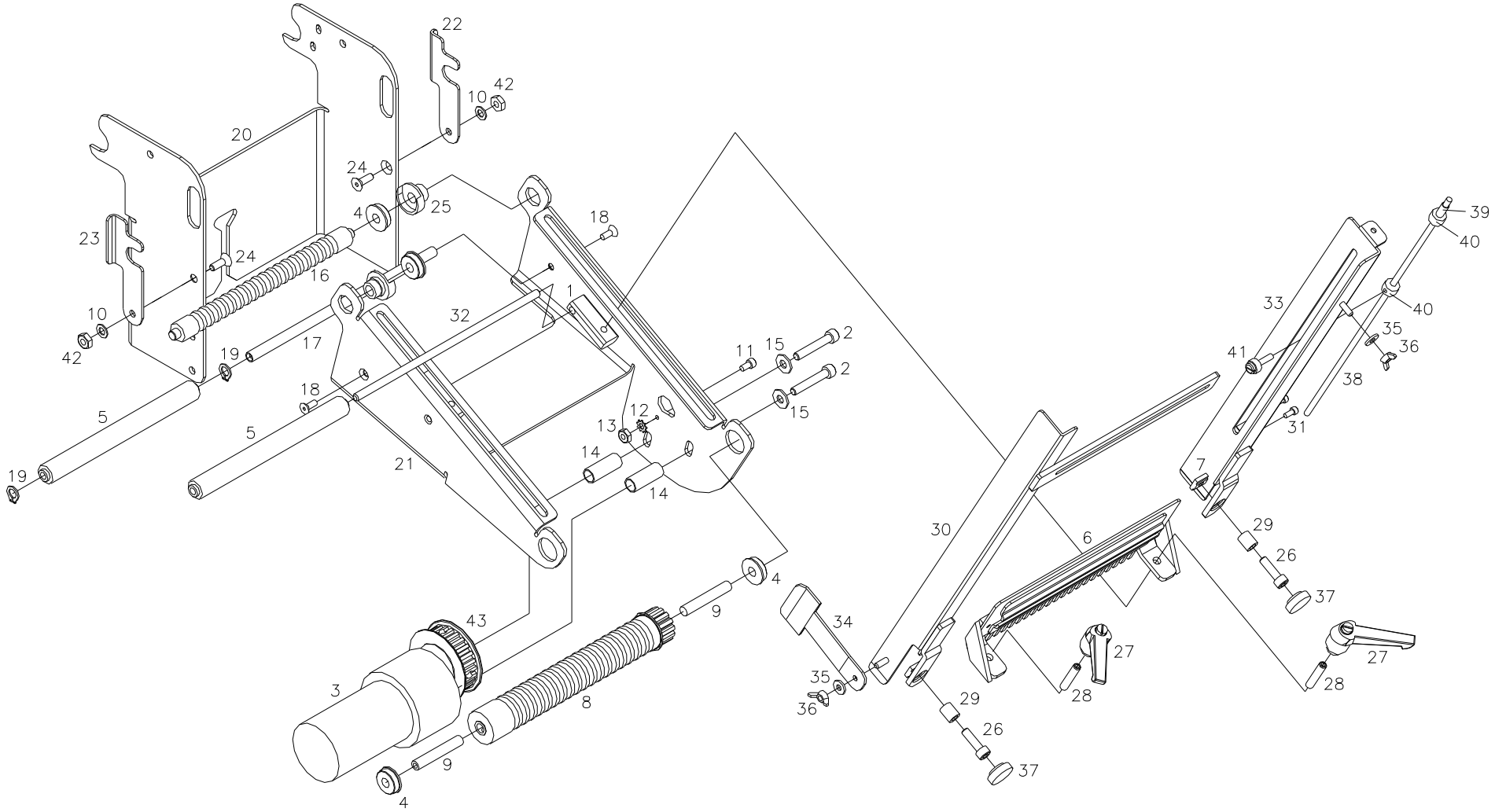


Stacker Parts List (Part 1)

Item	Part #	Description	Qty
1	558002	Bracket, Stacker support	1
2	999014	1/4 x 5/8 Flange ball bearing	2
3	378055	Roller, Front idler	1
4	990066	8-32 x 1/4 Button head screw	4
5	378064	Bracket, Jam sensor	1
6	990037	#6 SAE Washer	2
7	990019	6-32 x 1/4 Button head screw	7
8	378060	Bracket, Sensor guard strip	2
9	990091	10-32 x 1/2 Button head screw	1
10	358016	Shaft, Roller	1
11	378048	Ass'y, Belt tension roller	1
12	990261	Snap Ring, 3/16	7
13	990015	6-32 x 1/4 Cap screw	2
14	990404	Rivet, 1/4 x 3/4	1
15	518001	Bracket, Roller clip	1

Item	Part #	Description	Qty
16	378054	Bracket, Roller mount	1
17	990403	Rivet, 3/16 x 1/2 Flat head	2
18	999100	Bushing, FL. 3/16 x 5/16 x 1/8	4
19	378050	Roller, Pressure	2
20	518002	Bracket, Roller mount	2
21	989976	#6 Star washer	1
22	989987	6-32 E-S Nut	1
23	378057	Bracket, Lock	1
24	990104	10-32 E-S Nut	1
25	990102	#10 SAE Washer	3
26	989979	10-32 x 1 Knurled cup point	1
27	144034	Feed lock knob	1
28	990446	.188 x .50 x 8-32 Shoulder screw	2
29	357095	Oiler mount assembly	1
30	357011	Static brush	1

Stacker Assembly Drawing (Part 2)



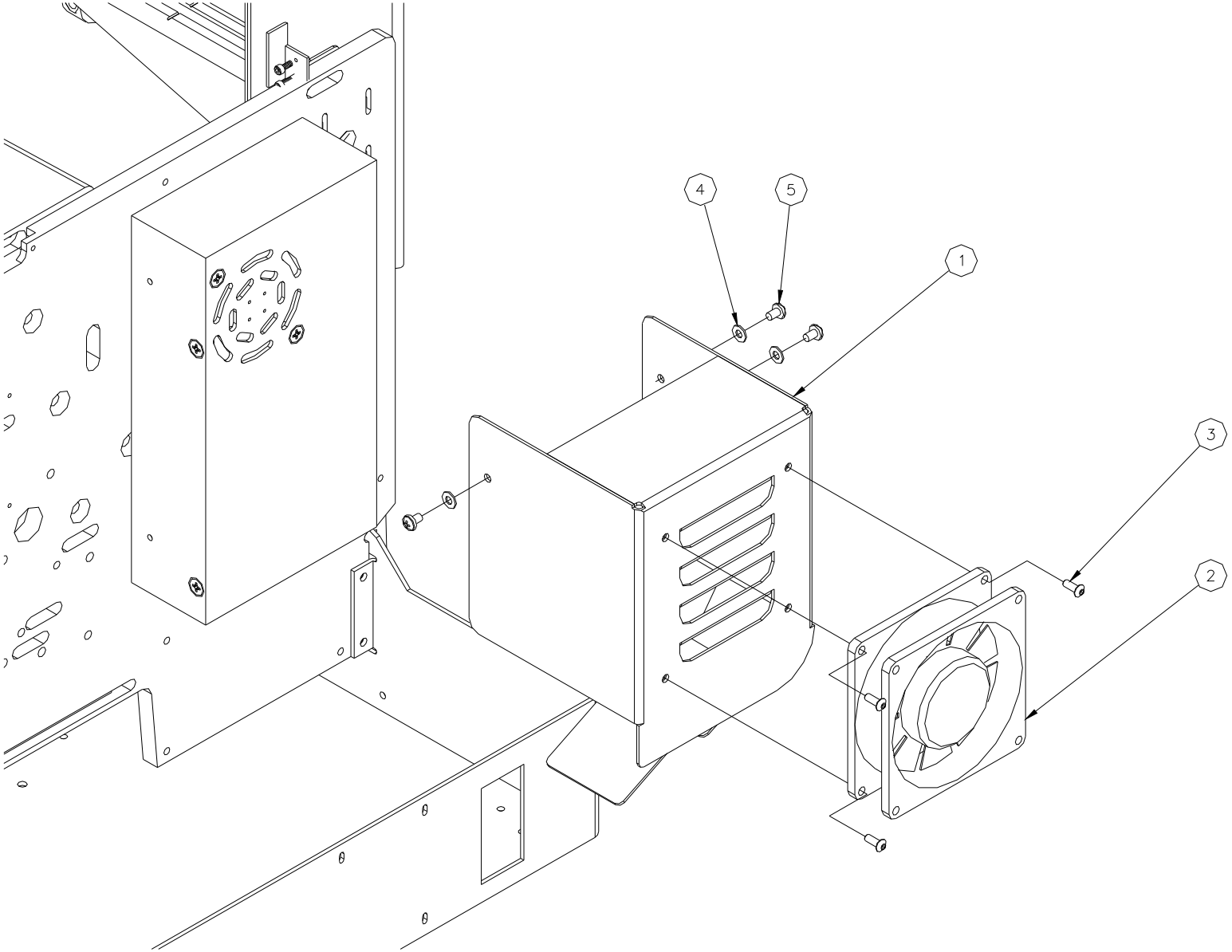
Stacker Parts List (Part 2)

Item	Part #	Description	Qty
1	358015	Support, Roller	2
2	990085	10-32 x 1 1/4 Cap screw	2
3	351161	Stacker motor, Harnessed	1
4	999014	1/4 x 5/8 FL. Ball bearing	4
5	358094	Roller, Stacker support ass'y	2
6	378061	Slide, Stacker rail	1
7	188008	#10 "T" Nut, Machined square	2
8	378097	Assembly, Stacker roller	1
9	348015	Shaft, Roller pin	2
10	990272	#8 Belleville washer	2
11	990015	6-32 x 1/4 Cap screw	1
12	989976	#6 Star Washer	1
13	990038	#6 Hex Nut	1
14	990450	Standoff, 3/8 x 15/16 Round	2
15	990102	#10 SAE Washer	2
16	378056	Roller, Idler center	1
17	378052	Shaft, Tension roller	1
18	990028	6-32 x 3/8 Flat head screw	2
19	990262	Snap Ring, 1/4"	2
20	558002	Stacker Base	1
21	358033	Stacker Support	1
22	558007	Bracket, Roller lock, Rear	1
23	558006	Bracket, Roller lock, Front	1

Item	Part #	Description	Qty
24	990056	8-32 x 1/2 Flat head screw	2
25	558008	Bearing support	2
26	990082	10-32 x 3/8 Cap screw	2
27	144034	Feed Lock Knob	2
28	989979	10-32 x 1 Knurled cup point	2
29	999095	3/16 x 5/16 x 3/8 Bushing	2
30	358007	Rail, Front stacker	1
31	990006	4-40 x 1/4 Cap screw	2
32	358016	Shaft, Roller	1
33	378005	Rail, Rear stacker	1
34	358020	Support, Label side	1
35	990037	#6 SAE Washer	2
36	990641	6-32 Wing Nut	2
37	990313	#10 Thumb screw knob	2
38	358013	Trip rod	1
39	358017	Spring, Trip rod	1
40	990369	1/8" Collar	2
41	184002	Thumb screw lock, Web guide	1
42	991157	8-32 E-S Nut	2
43	991007	Pulley, 15T, 1/4 ID, 1/5	1
44	378041	O-Ring (*NS)	19
45	358018	Timing Belt, 40T (*NS)	1
46	358023	Knob, Stacker (mount to machine NS)	1

(*NS = Not shown)

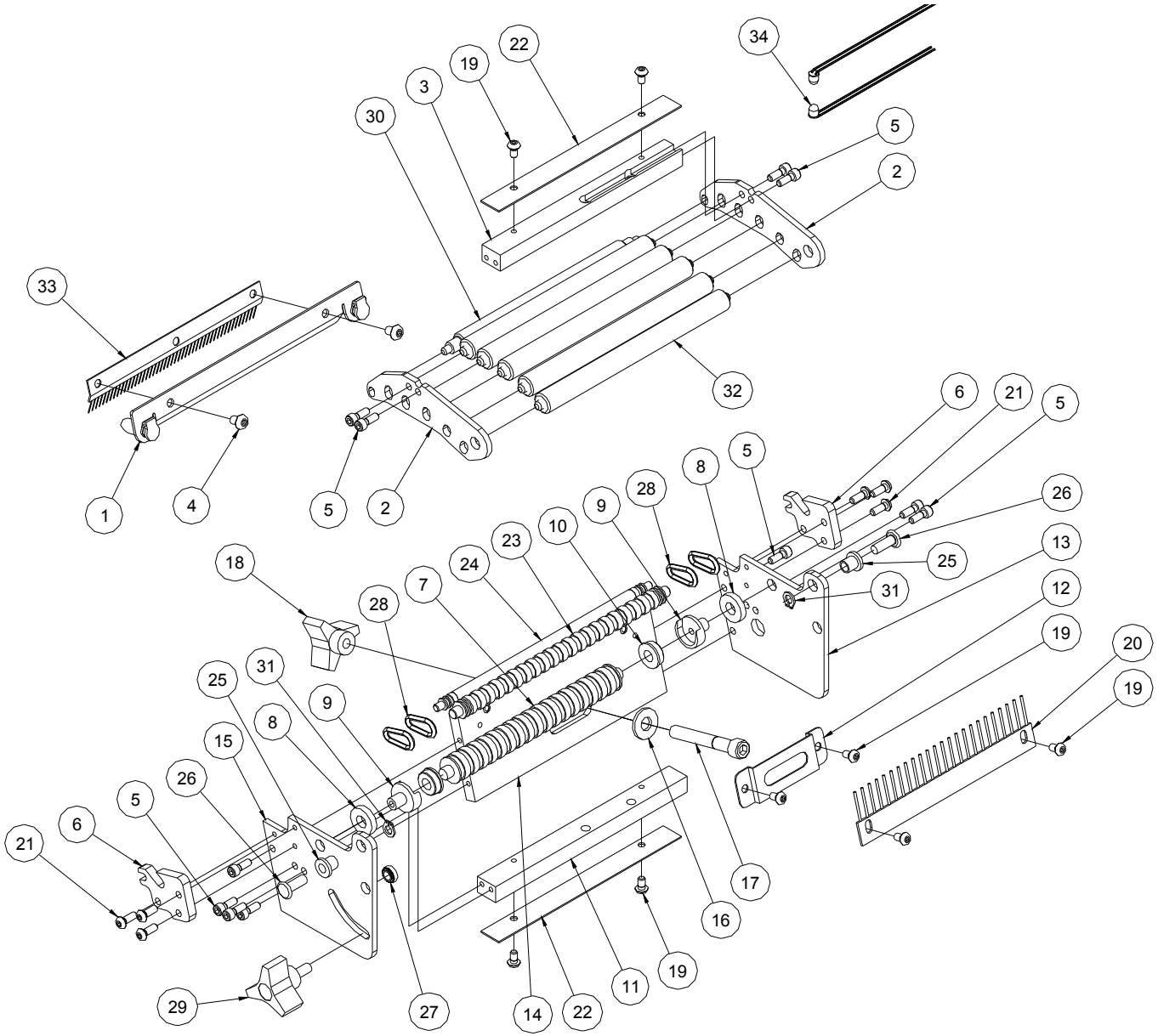
Cooling Fan Assembly Drawing



Cooling Fan Parts List

Item	Part #	Description	Qty
1	511122	Bracket, Fan mount	1
2	511120	Ass'y, Fan cooling	1
3	990020	6-32 x 3/8 Button head screw	4
4	989508	4mm Flat washer	3
5	989534	4mm x 6mm Pan Hd Phil screw	3

Optional 4.25” Pickup Assembly



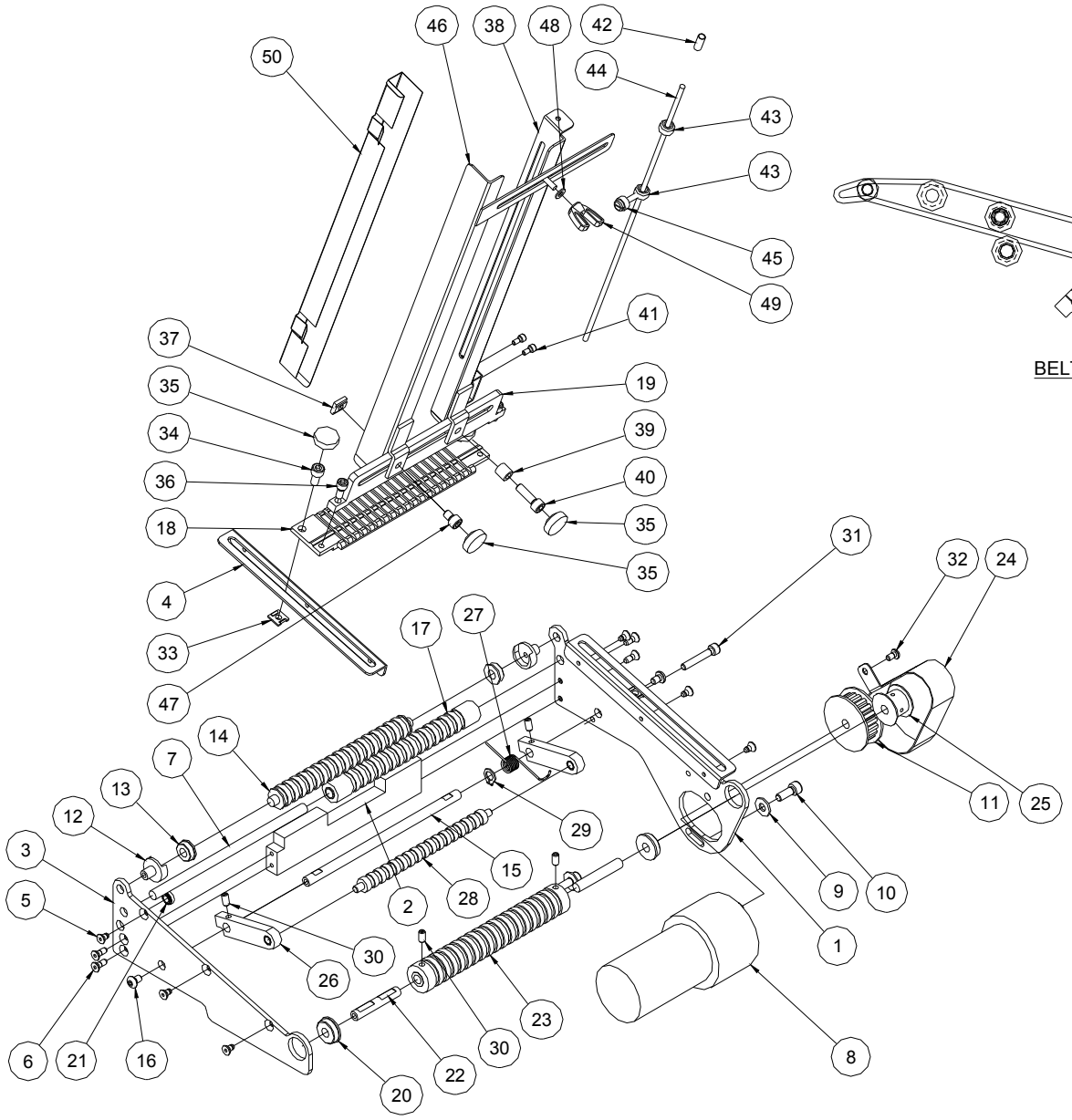
Optional 4.25” Pickup Parts List

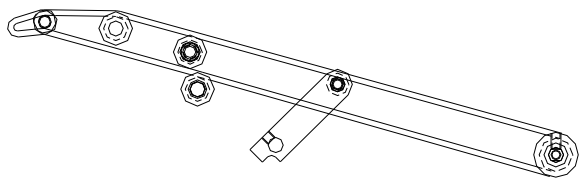
Item	Part #	Description	Qty
1	378291	Oiler mount / Knife protector	1
2	348107	Support, Roller	2
3	378204	Sensor, Mount upper	1
4	990066	8-32 x 1/4 Button head screw	2
5	990016	6-32 x 3/8 Cap screw	12
6	348105	Support, Pick-up roller	2
7	348021	Roller, Idler	1
8	348109	Spacer, Pivot roller	2
9	348016	Conveyor, Bearing mount	2
10	999012	Bearing, 1/4 x 1/2 Flg ball	2
11	378216	Sensor, Mount, Lower	1
12	348006	Bracket, "T" Nut retainer	1
13	348101	Frame, Rear stacker	1
14	348094	Ass’y, Base plate	1
15	348102	Frame, Front stacker	1
16	990167	Washer, 1/4 SAE	1
17	990126	1/4-20 x 1 3/4 Cap screw	1

Item	Part #	Description	Qty
18	991060	Knob, 1/4-20 Thru	1
19	990019	6-32 x 1/4 Button head screw	8
20	188014	Static brush	1
21	990020	6-32 x 3/8 Button head screw	6
22	378203	Sensor lock	2
23	378208	Roller, Center drive	1
24	378213	Roller, Pick up	1
25	224053	Bushing, Lever pivot	2
26	990403	Rivet, 3/16 x 1/2	2
27	990117	10-32 Press nut	1
28	991032	"O" ring	4
29	991029	Knob, 3 Prong, 10-32 Stud	1
30	378201	Roller, Pressure	1
31	990261	Snap ring, 3/16	2
32	378287	Pressure roller ass’y	5
33	357011	Static brush	1
34	371133	Jam sensor harness	1

(*NS = Not shown)

Optional 4.25” Stacker Assembly





BELT DIAGRAM

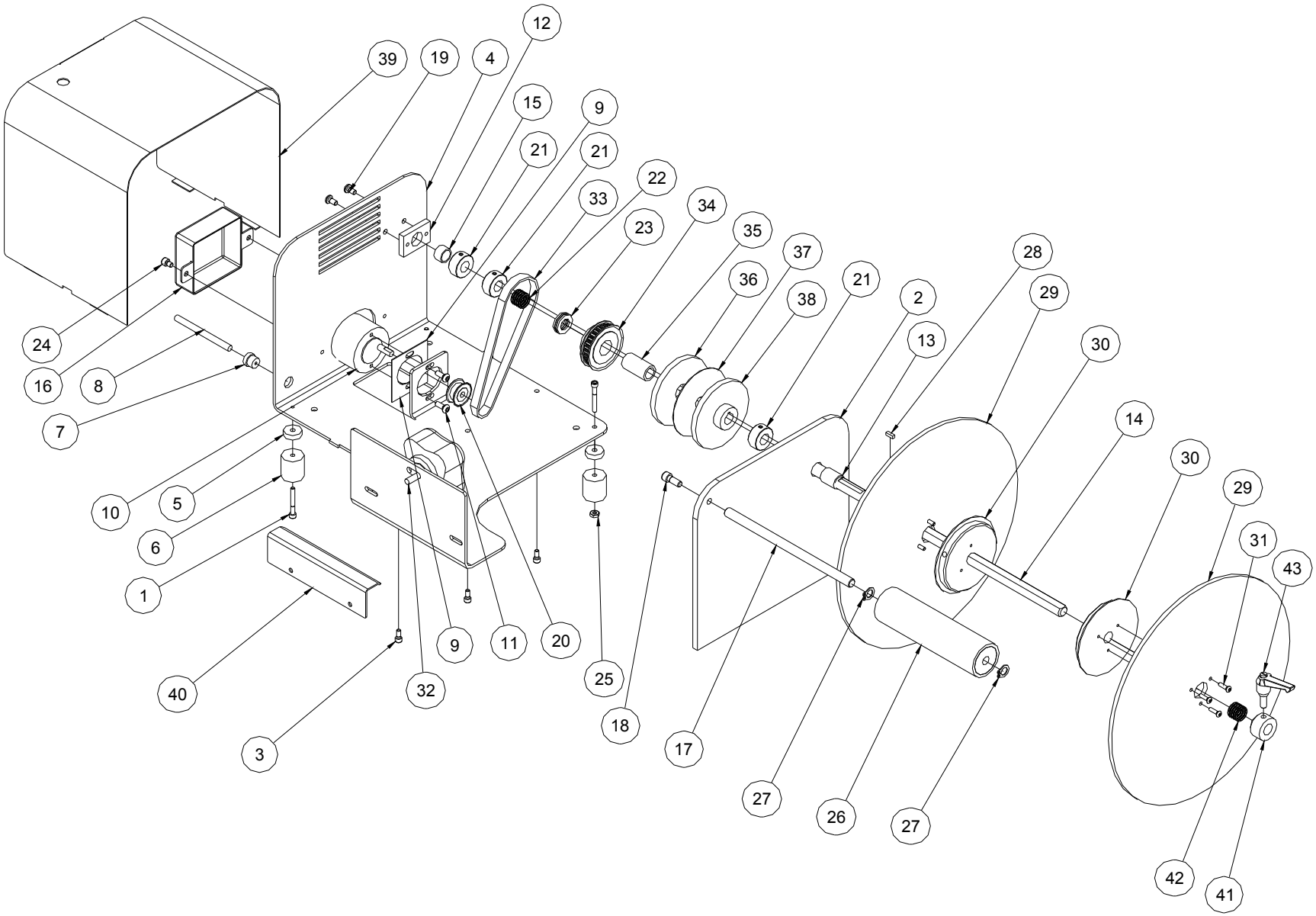
Optional 4.25” Stacker Parts List

Item	Part #	Description	Qty
1	348026	Frame, Stacker, Rear	1
2	348106	Plate, Stacker support	1
3	348027	Frame, Stacker, Front	1
4	348028	Bracket, Rail slide	2
5	990029	6-32 x 1/4 Flat head screw	6
6	990028	6-32 x 3/8 Flat head screw	4
7	348020	Shaft, Roller	1
8	351161	Stacker motor, Harnessed	1
9	990102	Washer, #10 SAE	2
10	990081	10-32 x 1/2 Cap screw	2
11	348024	Drive, Pulley 20 tooth	1
12	348016	Bushing, Conveyor bearing mount	2
13	999012	1/4 x 1/2 Flg ball bearing (3/16 thick w/3/64 x 9/16 Flg)	2
14	348021	Roller, Idler	1
15	348040	Shaft, Support arm pivot	1
16	990066	8-32 x 1/4 Button head screw	2
17	348093	Assembly, Drive roller	1
18	348014	Bracket, Stacker rail base	1
19	348035	Mount, Stacker rail	1
20	999014	1/4 x 5/8 Flg ball bearing (3/16 long w/1/32 x 11/16 Flg)	2
21	990117	10-32 Press nut	1
22	348015	Shaft, Roller pin	2
23	348019	Roller, Drive	1
24	348042	Cover, Belt guard	1
25	348009	Drive, Pulley 10 tooth	1
26	348039	Arm, Support roller	2
27	348041	Spring, Torsion, Formed	1

Item	Part #	Description	Qty
28	348038	Roller, Center drive	1
29	990262	Snap ring, 1/4"	1
30	991067	8-32 x 5/16 Knurled cup point	4
31	990054	8-32 x 1 Cap screw	1
32	990019	6-32 x 1/4 Button head screw	1
33	928008	"T" Nut #10 Formed	2
34	990080	10-32 x 3/8 Cap screw	2
35	990313	#10 Thumb screw knob	4
36	990051	8-32 x 3/8 Cap screw	2
37	188008	"T" nut #10 Machined square	2
38	348036	Rail, Stacker up-right (rear)	1
39	999051	Bushing, 3/16x5/16x5/16 Oilite	1
40	990082	10-32 5/8 Cap screw	1
41	990006	4-40 x 1/4 Cap screw	2
42	358017	Spring, Trip rod	1
43	990369	1/8" Collar	2
44	358013	Trip rod	1
45	184002	Thumb screw lock, Web guide	1
46	348037	Rail, Stacker up-right (front)	1
47	990079	10-32 x 1/4 Cap screw	1
48	990466	Washer, 1/8 Nylon	1
49	990641	6-32 wing nut	1
50	348108	Bracket, Stacker rail	1
51	991307	O-ring, 161 (NS)	16
52	351160	Full stacker switch harness (NS)	1
53	351125	Stacker harness (NS)	1
54	991306	1/5P, 31T, Timing Belt (NS)	1

(*NS = Not shown)

Rewind Assembly Drawing



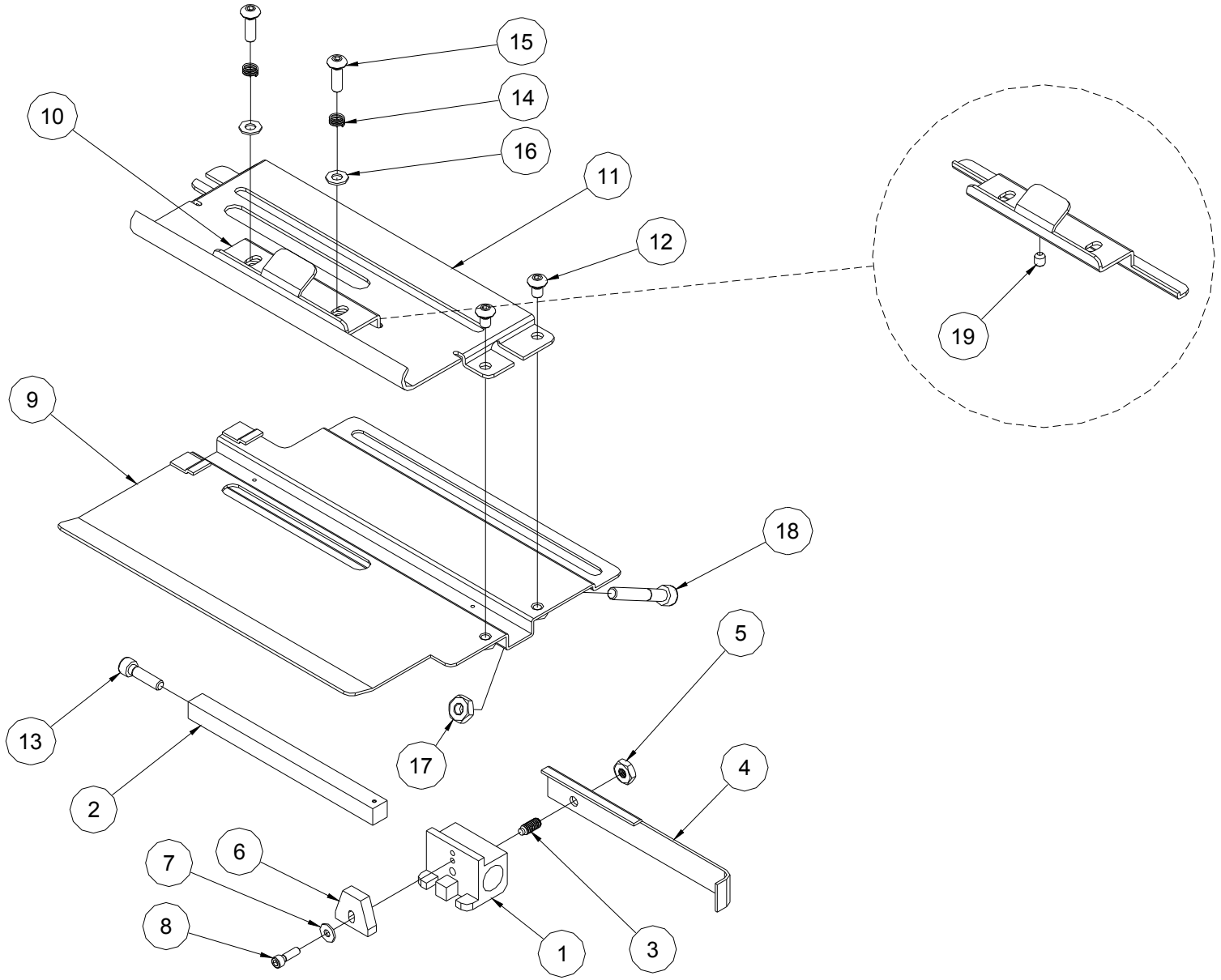
Rewind Parts List

Item	Part #	Description	Qty
1	991168	8-32 x 1 1/4 Cap screw	4
2	111030	Upright, 656 Rewind	1
3	989974	8-32 x 3/8 Cap screw	3
4	111029	Base, 656 Rewind	1
5	991169	.203 x .75 x .219 Flat washer	4
6	111032	Feet, Rubber	4
7	990812	Strain relief	1
8	351183	636 / 656 Rewind harness	1
9	112036	Insulator, Motor	1
10	351161	Stacker motor, Harnessed	1
11	990091	10-32 x 1/2 Button head screw	2
12	112037	Support, Shaft bearing	1
13	999147	Bushing, 1/2 x 5/8 x 3/4	1
14	112033	Shaft, 6x6 Rewind	1
15	999116	Bushing, 1/2 x 5/8 x 3/8	1
16	111034	Cover, Drive motor	1
17	112034	Shaft, Decurler	1
18	990121	1/4-20 x 5/8 Cap screw	1
19	990090	10-32 x 3/8 Button head screw	2
20	197078	Pulley, Turn roller, Driven	1
21	990374	Collar, 1/2	3
22	990465	Spring	1
23	999017	1/2 Thrust ball bearing	1

Item	Part #	Description	Qty
24	990079	10-32 x 1/4 Cap screw	2
25	990069	Hex nut, 8-32	2
26	111027	Roller, Decurler assembly	1
27	990264	Snap ring, 3/8	2
28	112035	Key, 1/8 x 1/8 x 3/8	1
29	111031	Disc, 10' Rewind	2
30	111033	Hub, 3" Core insert	2
31	990192	6-32 x 1/2 Button head screw	6
32	358023	Knob assembly	1
33	112031	Timing belt, 67T, 1/5P	1
34	112005	Pulley, 2/8T, 1/5P, Alt	1
35	999053	1/2 x 3/4 Needle bearing	1
36	112030	Disc, Drive	1
37	112032	Disc, Friction	1
38	112028	Disc, Driven	1
39	111201	Cover, 6x6 Rewind	1
40	374017	Bridge blade, Short	1
41	111006	Pressure collar	1
42	111017	Press collar spring	1
43	112009	Rewind lock knob	1
44	111110	Harness, Toggle switch (NS)	1
45	359006	Fuse, Stacker harness (NS)	1

(*NS = Not shown)

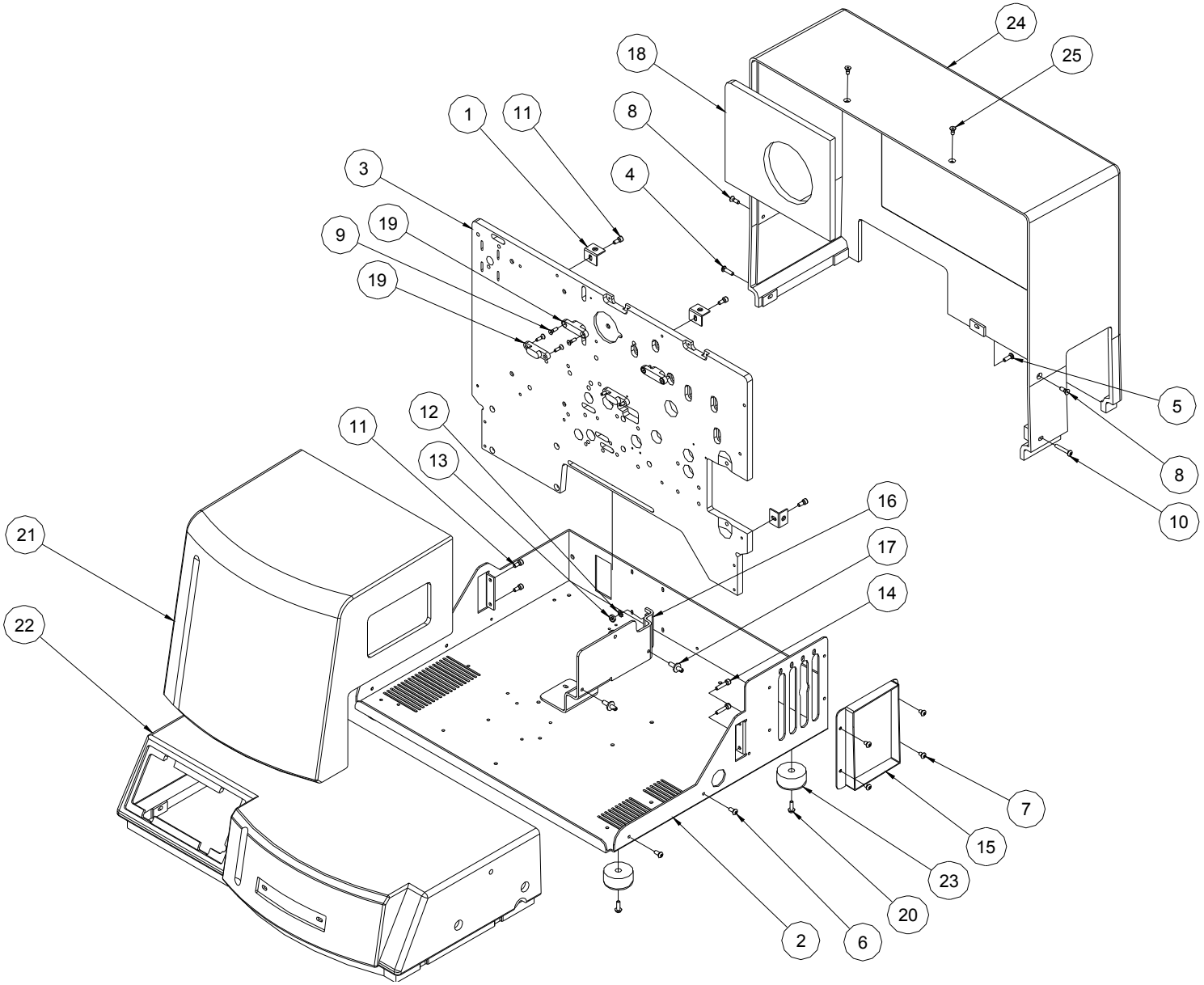
Contrast Sensor Webguide Option Drawing



Contrast Sensor Webguide Option Parts List

Item	Part #	Description	Qty
1	354023	Sensor block	1
2	371156	Shaft, 676 Lower reflective sensor	1
3	990921	8-32 x 3/8" Ball plunger set screw	1
4	514022	Bracket, Handle	1
5	990069	8-32 Hex nut	1
6	371128	Top & bottom reflective sensor harness	1
7	990448	Washer, .125 x .313 x .031 fl	1
8	990424	4-40 x 3/8 Cap screw	1
9	354006	Bracket, Web guide sensor	1
10	354024	Bracket, Tape pressure	1
11	354027	Guide, Plate, Web mount	1
12	990066	8-32 x 1/4 Button head screw	2
13	989974	8-32 x 5/8 Cap screw	1
14	990494	Spring, Compression	2
15	990073	8-32 x 1/2 Button head screw	2
16	989508	Washer, 4mm	2
17	990103	Hex nut, 10-32	1
18	990085	10-32 x 1 1/4 Cap screw	1
19	990058	8-32 x 1/4 Knurled cup point	1

Cover Assembly Drawing



Cover Parts List

Item	Part #	Description	Qty
1	511209	Bracket, Angle	4
2	511203	Base plate	1
3	511206	Frame, 636 / 656B Upright	1
4	990044	8-32 x 5/8 Button head screw	1
5	990073	8-32 x 1/2 Button head screw	1
6	990065	8-32 x 3/8 Button head screw	4
7	990066	8-32 x 1/4 Button head screw	4
8	990056	8-32 x 1/2 Flat head screw	2
9	990023	6-32 x 1/2 Flat head screw	8
10	991402	8-32 x 1 Button head screw	1
11	990051	8-32 x 3/8 Cap screw	6
12	989978	Washer, #8 Star	2
13	990069	Hex nut, 8-32	2
14	990018	8-32 x 3/4 Cap screw	2
15	511208	Bracket, Filler	1
16	351004	Bracket, Stacker mount	1
17	378105	Pin, Stacker mount	2
18	511214	Cover, Sound foam	1
19	341209	Hinge, 101 Invisible	2
20	991079	8-32 1/2 Thread forming screw	4
21	511204	Hinged cover	1
22	511201	Front cover	1
23	341210	Feet 1 ½” Dia. Rubber	4
24	511202	Back cover	1
25	990055	8-32 x 3/8 Flat head screw	2