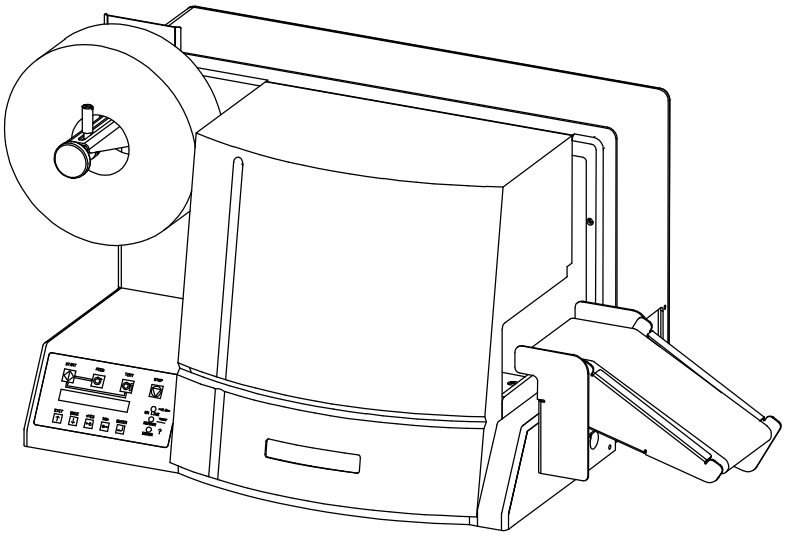
Users Manual

AVERY DENNISON®

Model 676



AVERY DENNISON
Manual Edition 9.0
09 June 2010
Manual Part Number 371398

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Contents

Scope

Introduction

This user manual was arranged for the person who is going to operate the machine. The information is arranged in the order that is needed to install and operate the machine. It starts with general information, then to unpacking the crate, installing the stock and ink ribbon, 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 676 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 machine has some pinch points. All of these areas have been well guarded and it is recommended that the safety features of this machine are never altered or defeated.

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.

Description / Specifications

Printer Description

The AVERY DENNISON MODEL 676 THERMAL PRINTER *(Figure 1)* is an electronic two-side 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 that allows for computer input or even design of a label with AVERY DENNISON'S PCMate Plus's "FORMATTER" program. The printer can generate a complete label printed on two sides, with up to two colors on the top and a third on the bottom.

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

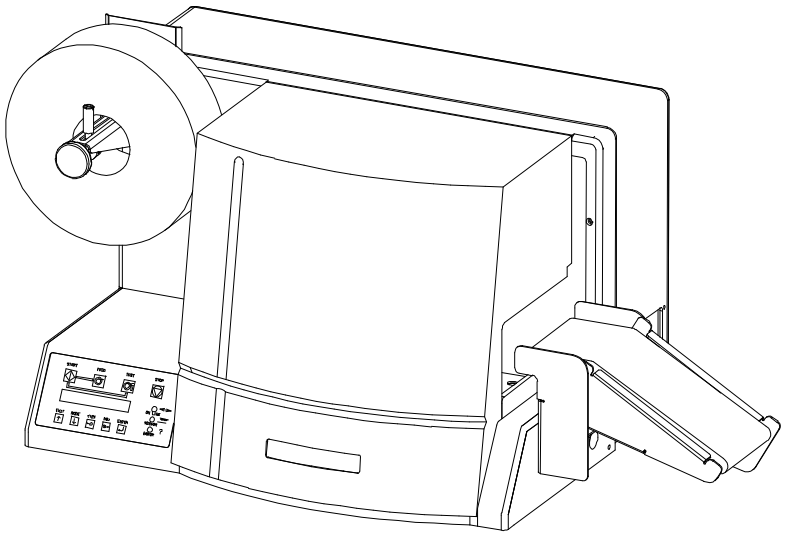


Figure 1 - AVERY DENNISON MODEL 676 LABEL PRINTER

Printer Specification

Print method:	Wide web thermal transfer or thermal direct two sided printer Speed - up to 5 IPS (127mm/second)
Label Size	Min: 1" (25.4mm) web x 1" (25.4mm) feed (standard stacker) 1" (25.4mm) web x 5/8" (15.8mm) feed (optional 4 ¼" stacker) Max: 5.125" (130.2mm) web x 7" (177.8 mm) feed (standard stacker) 4.25" (108mm) web x 1 ¾"" (44.45 mm) feed (optional 4 ¼" stacker) 5.125" (130.2mm) web x 14" (355.6mm) feed No stacker – optional rewind unit or cut without stacking
Print Area	Min: None Max: up to 5" (127mm) web x up to 13.875" (352.4 mm) feed - Except station #2 web reduced to 4.875" (123.8mm) for trap printing and electronic adjustment
Resolution	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), 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	17.0" (431.8mm) high x 35.75" (908.05mm) wide Including stacker x 20.0" (508.0mm) deep
Weight	98 Lbs. (44.45Kg.)
Electrical	90-132 / 180-265 VAC 50-60Hz 10Amp 1 Ph User selectable
Temperature	41°F (5°C) to 104°F (40°C)
Humidity	5% to 90% non-condensing

Other Features	- Downloading of information while machine is operating - Sequenced Fields - Time/Date Stamping (Both month/day/year and day/month/year format) - Life Counts - Operator adjustable: strobe, cut position, print position, baud rate, and buffer size - Error Detection of: stock out, ink out, print head open, feed open, full stacker, stacker jam, and print head over-temperature - Display: labels left to be cut and stacked in a batch, batch ID, total life inches, total life cuts - Self Diagnostics - Missed sense mark detection and correction - Slot / Notches/ Hole
Ink Ribbon	AVERY DENNISON standard thermal colors and widths
Options	- SV-100 Barcode Verifier System - 4 ½" Stacker - Downstacker - Rewind Unit (115V or 230V) - Reflective registration detection (Back of web only) - Optional Contrast registration detection - PCMate Plus w/Formatter - Spare Parts Kit - International Hardware Kit

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 676 Printer.

The AVERY DENNISON 676 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.

Customer Responsibility

Location of Printer

The printer weighs approximately 70 Lbs (32 Kg) and requires a table of sufficient quality and strength to handle this load while the printer is operating. AVERY DENNISON recommends an industrial type worktable having the approximate dimensions of 96" wide to 30" deep to 32" high. Refer to Figure 2.

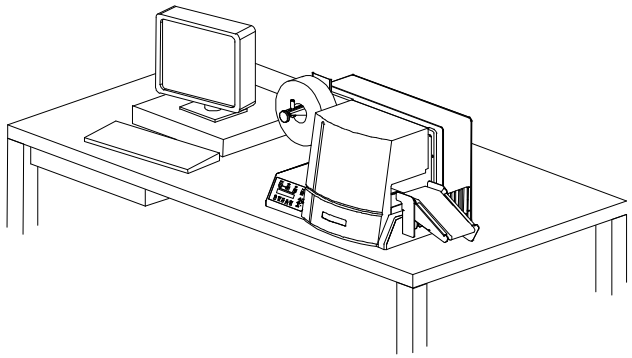


Figure 2 - Recommended Workstation Layout.

The location of the AVERY DENNISON 676 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 676 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 machine.

AC Power Line

AVERY DENNISON requires that the electric 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.

Printer Unpacking / Installation

Unpacking

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

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

NOTE: Unpacking in the shipping/receiving department is not recommended for the following reasons. *First:* The plywood crate 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 crate while it is being moved within your facility will help to protect the printer during the movements to this new location. Once the printer has reached its intended location you should begin the unpacking process.

Open the crate from the bottom by removing the six screws along the bottom of the cover near the floor (*See Figure 3*).

Remove the plastic over the printer.

Remove all the smaller loss items from in and around the printer.

Unbolt the shipping bracket from the crate bottom.

Lift the printer onto the table.

Remove the shipping brackets from the machine.

Inspect the machine for shipping damage. If obvious damage is discovered, contact AVERY DENNISON for further instructions - in the U.S.A. at (570) 888-6641. In countries other than the U.S.A. please contact your local AVERY DENNISON supplier.

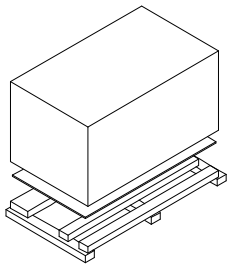


Figure 3 Shipping Crate.

Save the shipping materials to relocate the unit 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 676 shipping crate. If anything is missing, notify AVERY DENNISON immediately - in the U.S.A. at (570) 888-6641. In countries other than the U.S.A. please contact your local AVERY DENNISON supplier.

- AVERY DENNISON 676 "User's Manual" (See tool kit below)
- Stacker assembly
- A quick-disconnect power cord
- A serial communications cable with converter
- Optional software ordered to drive the printer.
- Tool kit

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

AVERY DENNISON 676 TOOL KIT (#371390)

241149	Anti-Static Gloves (2)
241132	Anti-Static Wrist Strap
921309	Hex Key Set
181301	2.5mm Ball Driver
101330	9/64” Ball Driver
921304	5/32” Ball Driver
921364	3/16" Long Ball Driver
351156	Chip Removal Tool
371398	676 Users Manual
921353	Phillips Head Screwdriver

Fuse Configuration

The main fuse(s) on the AVERY DENNISON 676 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 number in the window **DOES NOT** match the AC line intended to be supplied to the printer, **DO NOT** plug the power cord in. Re configure as follows:

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

WARNING: Attempting to open the AC entry with the AC power cord inserted into it will cause damage to the AC entry.

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 between the range of
90 - 132VAC @ 50 - 60Hz 1 Ph

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

2) Install one Fuse Jumper

See Figure FUSE1

Configuration Number Two: Line voltage between the range of
180 - 265VAC @ 50 - 60Hz 1 Ph

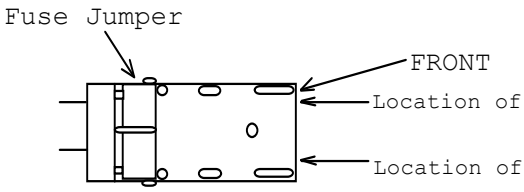
1) Install two 921168 10.0A 250V Fast Acting 5 x 20MM

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

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

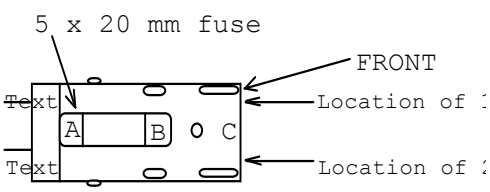
See Figure FUSE2

FIGURE FUSE1



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

FIGURE FUSE2



Two 5 x 20MM Fuses One Each Sid

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

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

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 must have the receptacle end of the connector removed and the proper plug installed. It is the customers' 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 676 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. The female end of the cable is made to fit a 9-pin male RS232 connector on the back of the PC.

Installing the PC Software

The software to drive the AVERY DENNISON family of printers is covered in separate documentation. The "Formatter" software to create formats for the AVERY DENNISON 676 printer is a Windows application. The original software "Selfform" will not create formats for the 676. The new "Formatter" package is capable of making formats for all AVERY DENNISON control printers.

The DOS version of "PCMate" has been updated to drive the 676 printer. PCMate DOS version 3.10 or higher is needed for its use.

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

TCB Dip Switch S2 Settings

DIP SWITCH #	DEFINITION	676
8	DOWNSTACKER / LOKPRINT	DOWNSTACKER ON LOKPRINT® OFF
7	UNUSED	OFF
6	UNUSED	OFF
5	STACKER JAM	ENABLE ON DISABLE OFF
4	MACHINE TYPE	ON
3	MACHINE TYPE	ON
2	UNUSED	OFF
1	DPI	N/A OFF 300 ON

Printer Operation

Loading Stock

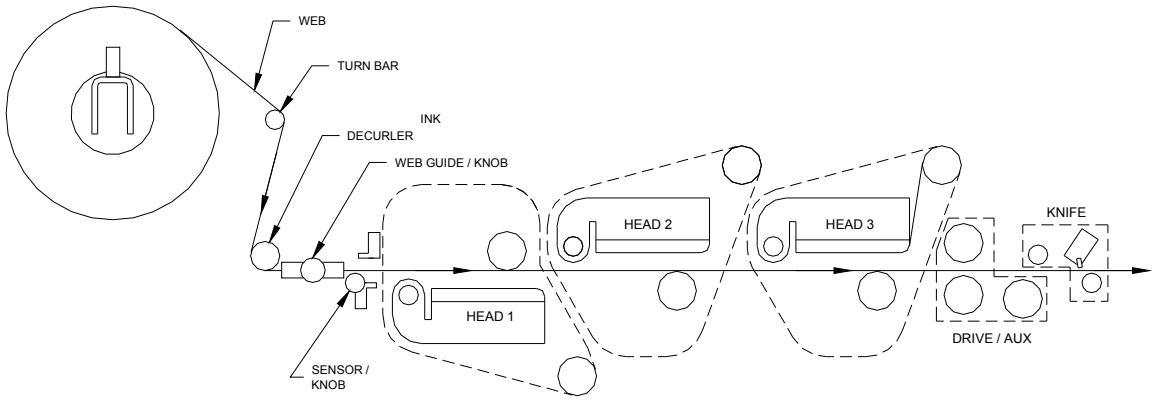


Figure 4 - Stock Threading

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 material was glued to the core, cut off all material that has glue on any surface.

4) Open the hinged cover to the machine.

5) Open all the print heads by pulling the release knob and then rotating the print head into the open latched position. The top two print stations have a pin in the rear to hold them open. The bottom print station has a hole in the rear to hold the print head slightly open to act as a bridge for the stock to pass over.

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

7) After looping the leading edge of the stock over the decurler slide it through the funnel containing the registration sensor system. Adjuste the web guide knob to the width of the stock. Do Not Pinch the edges of the material.

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

9) Once the stock reaches the feed rollers it may be necessary to hold the feed pressure knob open in order to pass between the rollers. After exiting the feed rollers enter the aux. feed and then through the knife into the stacker.

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

11) Close the feed roller and only the print stations needed for the format.

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 Splice

NOTE: DO NOT RUN BUTT SPLICES THROUGH THE PRINT STATIONS

The AVERY DENNISON 676 has been designed keeping the operators need to change supplies quickly and often in mind. Re-threading the stock is quicker than butt splicing. If however you have determined a butt splice is necessary, after loading a new roll of stock onto the unwind tape the free ends together. Remove all slack by rotating the supply roll counterclockwise. To prolong print head life it is highly recommended that all hand splices be advanced beyond all three print stations before printing is resumes. This can best be accomplished by using the stock presently in the print stations to manually pull the new stock through and into the stacker. Once the butt splice is in the stacker close the feed rollers and those print stations needed for the format.

NOTE: Whenever stock of a different type or width is put on the printer, a sample run should be performed. If the print quality / position is acceptable, you can immediately begin your production run. If the print quality / position needs to be optimized, refer to the Adjustments section and perform the procedure needed to make the necessary improvement.

Web Guides

The AVERY DENNISON 676 printer has been designed with the operators needs in mind. Therefore there are only three sets of web guides in the printer that need to be changed as the width of the rolls change for various width stocks. Neither of these adjustments requires a tool.

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 set 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 machine adjust this set of web guides down to the edges of the stock without deforming the

stock. If a large distance is to be covered loosen the plastic thumbscrew and slid the collar into the new position then retighten the thumbscrew.

The third are the funnel type guides located befor the print station. Rotate the adjustment guide until it contacts the edge of the material. Do No Pinch the sides of the web.

Print Head Operation

The print head modules are to be opened and closed for threading of stock and ink. The unit must also be opened to clean the head and for print head replacement. Later in the manual, under separate headings, cleaning and replacement will be covered.

For clarity the print stations have been assigned numbers one through three from left to right. The far-left print station prints the back; it is print station number one. The center and right print stations print on the top; they are stations two and three. Each print station has an interlock switch that prevents the printer from running with any or all print stations in the open position if that print station is assigned in the format being printed. If a print station is open, the display will read HEAD OPEN STATION X.

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

To open the print heads for threading supplies or cleaning pulling the release knob and then rotating the print head into the open latched position (see figure x). The top two print stations have a pin in the rear to hold them open. The bottom print station will remain open via gravity however it has a hole in the rear to hold the print head in a slightly open position to act as a bridge when one is threading stock.

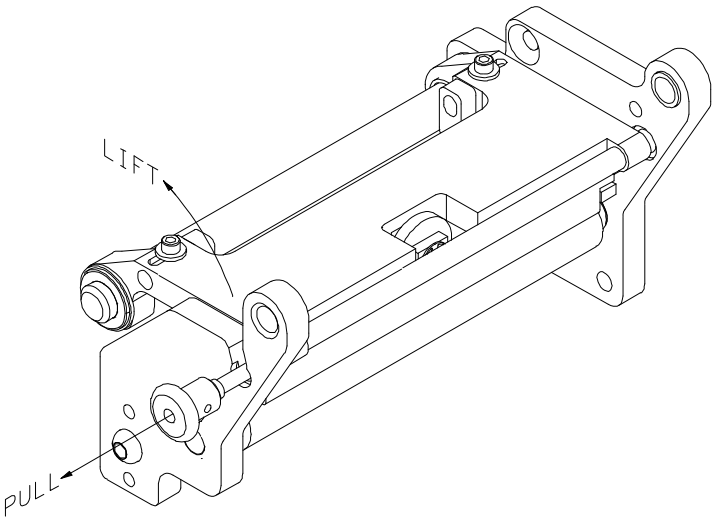


Figure 5 - Print Head Open / Closed

To close the head again pull the release knob and then rotating the print head into the closed latched position (See figure 5).

Installing Ink Ribbon

The ink ribbon comes pre-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 below for loading the ink.

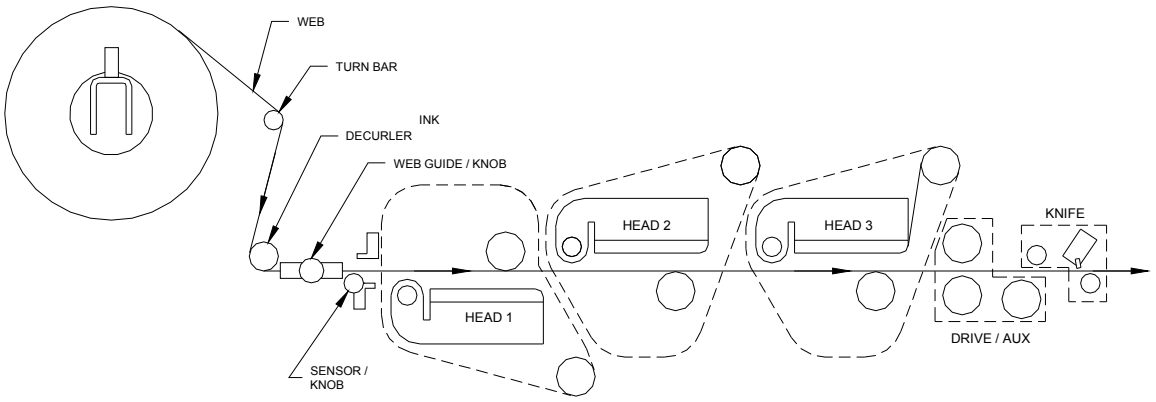


Figure 6

1) Unwrap the ink ribbon and put it on the ink-ribbon supply arbor for the print station to be loaded *(Figure 6)* 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 and is threaded as illustrated *(Figure 6)*.

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

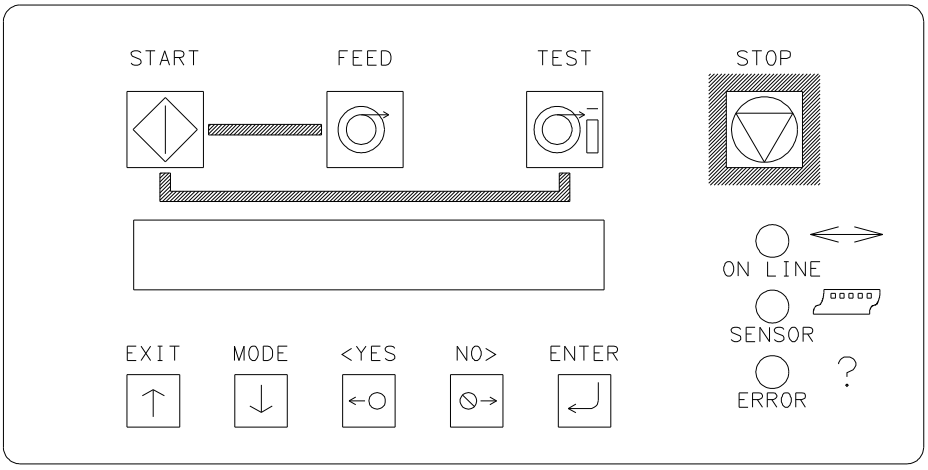
3) Place an empty ink-ribbon take-up core on the ink-ribbon take-up arbor for the print station to be loaded. The ink take-up core must be at least as wide as the ink supply.

4) Open the print head to the print station being loaded.

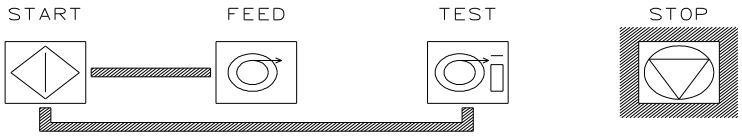
5) After starting the leader off the supply roll pull enough ink off to thread though the print station and onto the take up core. The adhesive on the supply roll of ink will be used to fasten the leader to the take up core.

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

Control Panel Operation



Printer Controls



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 print station one and the knife will be cut and stacked as finished labels
- Stock moves through in one continuous strip
- Stock moves through without printing
- Ink will advance, ink save on print station two will automatically be activated.
- The print heads must be latched in the down position.

Test

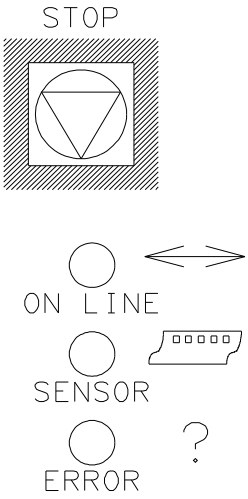
- TEST and START must both be used
- Test will stop when the buttons are released
- Labels between print station one and the knife will be cut and stacked as finished labels
- Stock moves through in one continuous strip
- Stock moves through with test pattern printing
- The ink will advance with the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

Stop

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

Indicator Lights

The AVERY DENNISON 676 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 web sensor mark
- Flashing light while the printer is running, - the sensor is in-line with the registration HOLES

ORANGE = REFLECTIVE SENSOR

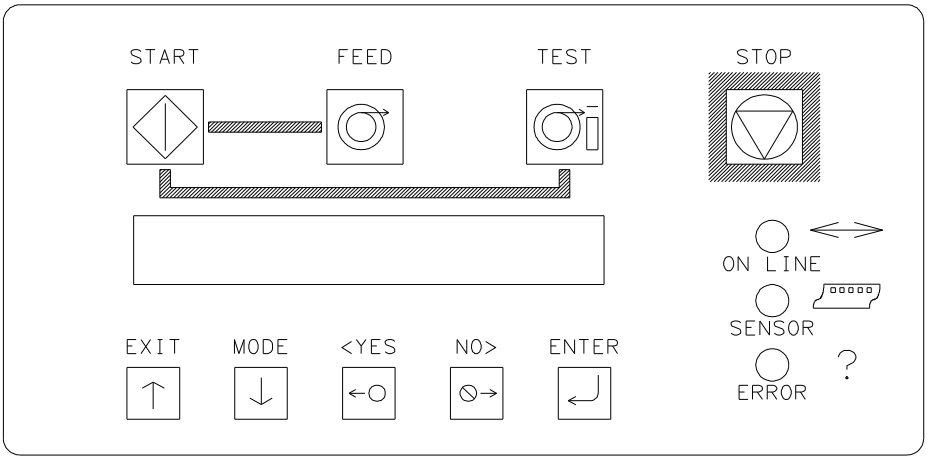
- Flashing light while the printer is running, - the sensor is in-line with the registration PRINTED MARKS

Error

ORANGE

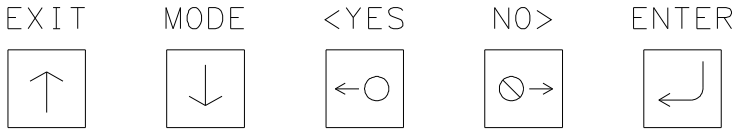
- System inter-lock triggered, display for error LCD Display

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.



Display Modes

There are four (4) 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:

Pressing the EXIT/Up arrow button will put the user at one of these two screens.

HOME SCREEN

R	E	A	D	Y		F	O	R		B	A	T	C	H	E	S							
6	7	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

Press the MODE/Down arrow button will cycle the panel through the following main screens.

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										

POWER UP DIAGNOSTICS

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 - (red, 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 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	7	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. Note: Look into suppressing leading zeros on batch quantity.

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 shown.

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 "PRINT/CUT POSITIONS" screen.

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

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	S				

This screen follows the Batch ID/Batch Qty screen if there are batches to print, otherwise it follows the “Ready for batches”/ Model DPI “HOME” screen.

Pressing ENTER will take the user to the PRINTER ADJUSTMENTS 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.

PRINTER ADJUSTMENTS

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 PRINTER ADJUSTMENTS. 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 first screen of this group. 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		S	T	A	T	I	O	N		1
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 of station 1 to be adjusted.

The <YES / NO> buttons are used to change the 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 the MODE/Down Arrow key will take the user to the next screen.

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

P	R	I	N	T		P	O	S	I	T	I	O	N		S	T	A	T	I	O	N		2
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the first screen under PRINTER ADJUSTMENTS. This screen allows the print position of station 2 to be adjusted.

The <YES / NO> buttons are used to change the 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 the MODE/Down Arrow key will take the user to the next screen.

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

P	R	I	N	T		P	O	S	I	T	I	O	N		S	T	A	T	I	O	N		3
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows the second screen under PRINTER ADJUSTMENTS. This screen allows the print position of station 3 to be adjusted.

The <YES / NO> buttons are used to change the 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 the MODE/Down Arrow key will take the user to the next screen.

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

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 adjust screens. This screen allows the cut position to be adjusted. The <YES / NO> buttons are used to change the 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. Pressing the MODE/Down Arrow key will take the user to the next screen. Pressing the EXIT/Up Arrow key will take the user back to the "HOME" screen.

S	T	A	T	I	O	N		2		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 of station 2 to be adjusted in the WEB direction.

The <YES / NO> buttons are used to change the 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. (A dot is 1/300)

Pressing the MODE/Down Arrow key will take the user to the first screen under PRINTER ADJUSTMENTS.

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

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 "LIFE COUNTS/VERSIONS" 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		S	T	A	T	I	O	N		1	
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 for station 1. The <YES / NO> buttons are used to change the print 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.

Pressing the MODE/Down Arrow key will take the user to the next 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		S	T	A	T	I	O	N		2	
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows strobe adjust for station 1. This screen allows the user to adjust the strobe for station 2. The <YES / NO> buttons are used to change the print 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.

Pressing the MODE/Down Arrow key will take the user to the next 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		S	T	A	T	I	O	N		3	
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows strobe adjust for station 2. This screen allows the user to adjust the strobe for station 3. The <YES / NO> buttons are used to change the print 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.

Pressing the MODE/Down Arrow key will take the user to the next 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		S	T	A	T	I	O	N		1	
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows strobe adjust for station 3. The screen allows the user to enter the head category for station 1. The <YES / NO> buttons are used to change the head category value. The value ranges from 1 to 8. Pressing ENTER will change the head category value to the new value. This value should be changed only if the printhead is changed. See the section “PRINTHEAD REPLACEMENT” for instructions on setting the head category.

Pressing the MODE/Down Arrow key will take the user to the next 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		S	T	A	T	I	O	N		2	
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows HEAD CATEGORY STATION 1. The screen allows the user to enter the head category for station 2. The <YES / NO> buttons are used to change the head category value. The value ranges from 1 to 8. Pressing ENTER will change the head category value to the new value. See the section "PRINTHEAD REPLACEMENT" for instructions on setting the head category.

Pressing the MODE/Down Arrow key will take the user to the next 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		S	T	A	T	I	O	N		3	
V	A	L	U	E	:	±	X	X			N	E	W		V	A	L	U	E	:	±	Y	Y

This screen follows HEAD CATEGORY STATION 2. The screen allows the user to enter the head category for station 3. The <YES / NO> buttons are used to change the head category value. The value ranges from 1 to 8. Pressing ENTER will change the head category value to the new value. See the section "PRINTHEAD REPLACEMENT" for instructions on setting the head category.

Pressing the MODE/Down Arrow key will take the user to the next screen.

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

S	T	A	T	I	O	N		A	C	T	I	V	A	T	I	O	N				1	2	3
C	L	O	S	E		H	E	A	D	S		P	R	E	S	S		E	N	T	E	R	

This screen follows HEAD CATEGORY STATION3. The screen allows the user to configure the printer for the number of heads in the system. The numbers '1','2','3' stand for stations 1, 2, and 3. If the number appears on the screen then it means that station is activated. If the number doesn't appear on the screen then that station is not activated and the printer will not print, look for ink out, or look for head open on that print station.

The printer determines if a head is in the system by checking the head open switch when the 'Enter' button is pressed. If the user would like to disable a station that is in the machine for reasons of convenience then they can just open the head for that station and press enter.

If the operating system has been changed or TCBSETUP has been used to re-initialize the machine it will show all print stations active as the default. If it is a 1/1 printer that doesn't have station 3 installed then the user will have to come to this screen and press 'Enter' to deactivate station 3, otherwise the printer will show INK OUT STATION 3 errors when it is run.

Pressing the MODE/Down Arrow key will take the user to the first screen under PRINTHEAD SETUP.

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 “PRINT HEAD SETUP”.

Pressing the MODE/Down Arrow key will take the user to the next 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 stock under sensor until NEW VALUE reads its smallest value then press ‘Enter’.

Pressing the MODE/Down Arrow key will take the user to the next 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 HOLE/SLOT IN SENSOR under CALIBRATE SENSORS. Place stock under the sensor so that it blocks 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 next 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 HOLE/SLOT NOT IN SENSOR under CALIBRATE SENSORS. Place 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 next 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 TOP REFL OVER MARK under CALIBRATE SENSORS. Place 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 next 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 TOP REFL NOT OVER MARK under CALIBRATE SENSORS. Place 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 next 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 BOT REFL OVER MARK under CALIBRATE SENSORS. Place 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 next 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 BOT REFL NOT OVER MARK under CALIBRATE SENSORS. Place 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 next 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 STACKER BLOCKED under CALIBRATE SENSORS. 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 to the next 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 Count and Operating system version number Screens.

Pressing the MODE/Down Arrow key will take the user to the 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 since last counter reset.

Pressing the ENTER key will reset the counter.

Pressing the MODE/Down Arrow key will take the user to the next 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 since the factory. This counter is NOT resettable by the user.

Pressing the MODE/Down Arrow key will take the user to the next 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 SINCE FACTORY screen. This screen displays the total inches since the factory. This value is NOT resettable by the user. Pressing the MODE/Down Arrow key will take the user to the next 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 FRONT PANEL VERSION screen.

This screen shows operating system version for the controller (TCB).

Pressing the MODE/Down Arrow key will take the user to the next 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 number screen.

This screen shows operating system version for the imager (AT).

Pressing the MODE/Down Arrow key will take the user to the first screen under Counts \ Version.

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 screen.

Pressing ENTER shows the first screen under setup.

Pressing the MODE/Down Arrow key will take the user to the PRINT/CUT POSITIONS 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 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 next 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 next 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	1		
V	A	L	U	E	:	X	X	X			N	E	W		V	A	L	U	E	:	Y	Y	Y

This screen follows the EMULATION 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 for print station 1. The 630 and 650 do not send valid 676 transfer types in their PCL code. This default is used for those formats. Use the <YES and NO> keys change the number value at the cursor position. Pressing ENTER will update the current position with the selection and move the cursor to the next position. All three positions must be entered. (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 next 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	2		
V	A	L	U	E	:	X	X	X			N	E	W		V	A	L	U	E	:	Y	Y	Y

This screen follows the DEFAULT TRANSFER TYPE1 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 for print station 2. The 630 and 650 do not send valid **676** transfer types in their PCL code. This default is used for those formats. Use the <YES and NO> keys change the number value at the cursor position. Pressing ENTER will update the current position with the selection and move the cursor to the next position. All three positions must be entered. (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 next 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	3		
V	A	L	U	E	:	X	X	X			N	E	W		V	A	L	U	E	:	Y	Y	Y

This screen follows the DEFAULT TRANSFER TYPE2 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 for print station 3. The 630 and 650 do not send valid **676** transfer types in their PCL code. This default is used for those formats. Use the <YES and NO> keys change the number value at the cursor position. Pressing ENTER will update the current position with the selection and move the cursor to the next position. All three positions must be entered. (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 next 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 next 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 "INSAVE 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 inksave to be enabled or disabled. Inksave is an option that is available on certain models. It must be enabled in the format to operate. If inksave 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 HISITORY" 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

Feed Roller Pressure

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.

Sensors

Sensor Identification:

Stock Out

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

Hole / Slot Index Registration

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

Reflective Index Registration

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

Ink Out

Optical sensors located on each print station's ink unwind arbor allow the printer to monitor the availability of ink.

Roller Drop

An optical sensor on back of print station number two 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 in the stacker rails 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 Adjustments:

All the micro switches and optical sensors in your 676 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 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 stations.

2) Move the sensor in line with the registration hloes.

3) Move the stock by hand in the feed direction until the registration hole or slot desired is in under the sensor. The front panel LED with come on and off as the hole or slot moves under the sensor. Position the stock just before the sensor mark and the front panel LED is off.

4) Close the feed and those print stations needed for the format.

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 a screen indicating that there has been a missed sensor error.

1) Check that the web guides have been positioned properly on the unwind, decurler bar and the web guide funnels.

2) Check that the feed roller pressure has been set equally across the roller.

3) Check that the feed roller pressure has been set to pull 11 inches of media properly.

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

5) Repeat the sensor alignment procedure.

Feed Open

If the 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 heard the switch clicking. If not, the switch bale is adjusted by carefully bending it as needed.

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 effect their performance.

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.

Print Head

Tangent

Proper print head tangent is perhaps the most important adjustment to make on a thermal transfer printer. A printhead which is not properly adjusted will result in poor print quality, poor heat dissipation which can reduce print head life, and possible ink wrinkling problems. When the machine 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 therefore necessary to understand when and how to properly adjust the printhead tangent. Before making any adjustment to any of the three print station tangent points confirm the following:

- Is the ink and stock loaded in the printer correctly?
- Is the proper ink and stock loaded in the printer for the format downloaded?
- Is the strobe setting(s) on the front panel set according to the ink and stock loaded in the printer?
- Is the ink and stock of known types?

- Are the correct width platen rollers installed in the print stations for the stock width loaded in the printer?

To actually adjust the tangent continue as follows:

1) Determine the print station that adjustment is needed.

2) Using the sight hole on the front of that print station, observe the present location of the print line on the print head in relation to the platen roller.

3) As the printer is printing labels use the adjustment thumbscrew to move the head left and right. Since this adjustment is very precise, do not turn the thumbscrew more than 1/4 turn before evaluating the results of your adjustment. (See Note)

4) Continue adjusting the thumbscrew until obtaining optimum print quality. Most stocks and inks print the best with the tangent adjusted to just before top dead center.

5) Rerun some label to determine if any further adjustment is required, if so repeat steps three through seven.

NOTE: The print head mounting block is spring mounted so that tangent adjustment can be performed without loosening mounting screws.

Squareness

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 also be detected by looking at the front edge of the print head in reference to the printhead holder. To remedy this problem, power off the machine and remove the print head as outlined in the print head installation information. The printhead adjustment plate has been manufactured so when properly adjusted the head will be square. The printhead holder has a locator plate that must be slide up snug against the printhead mount plate. Reinstall the head and it should be square to the web.

Knife Squareness

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 the screws.

Stacker

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

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 upright nearest to the operator to the desired stock width position. Re tighten.

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. Re tighten.

Stacker Full Adjustment

The switch on the inboard stacker up right 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.

Machine Set Up Sequence

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

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

3) Power on the printer. After passing diagnostics tests the front panel should display READY FOR BATCHES if not resolve any remaining error conditions.

4) Arrow down to the PRINT / CUT POSITIONS mode and press enter. Cycle through all the prints, cut, and station two-dot shift values to get a feel for their present settings.

5) Cycle back to the beginning of the Printer Adjustment and press enter at Print Checkout Format.

6) Adjust as needed the print head tangent for optimum print quality on all print stations present. Refer to the Print Head Tangent adjustment section in the manual. If the machine will not pull stock for this step refer to step number seven.

7) Check the feed pull is 11.0" +- .032" of media. If the feed length is short check for tight unwind and web guides. After the machine is pulling the correct amount of media, make sure that the tracking line on the back of the label is at the center of the stock +- .032" through out the label. If it is not, adjust the outer webguide postion by loosening the thumb screw under the outer mount block. Rotate the adjustment nut in or out as needed and tighten the thumb screw. Re-verify that the label is 11.0" in length. If the print quality is inadequate refer back to step number six.

8) Using two consecutive labels back-to-back check the squarness of the cut. Adjust the knife module, as needed referring to the Knife Square adjustment section in the manual.

9) Using the front panel adjust the print positions so that the print lines for each print station present is 1.0" +- .032" from the leading edge of the label.

10) If both stations two and three are present, adjust station number two-dot shift on the front panel so that the tracking line on the front of the label becomes one continuous line.

NOTE: Once a production sense mark format is loaded, the cut position may be adjusted which will cause the print to move accordingly.

The machine is now ready for production formats at which time the operator should need only to fine-tune the prints, cut, and strobes via the front panel.

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

Maintenance

Cleaning

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 Printhead 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 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.

Clean Platen Roller

You may determine if the printhead has been adjusted properly by performing a test pattern as documented elsewhere in this manual. A properly adjusted print head will produce an even grid of chevrons when the test pattern is performed. **Before making any judgments as to the quality of the printhead, 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.

Cleaning Print Sensor

When print registration, in reference to sense mark, becomes inconsistent or erratic the Sensor and Light Bar may need to be cleaned.

Supplies:

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

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 placed in the machine.
- The 676 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 machine 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 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 media and ink from the machine for easy print head removal.

3) Unplug the cables that connect to the print head. Unplug the cable by firmly, but gently pulling it out.

4) Loosen the two 6-32 screws on the rear of the print head holder and slide the mounting pins inward.

5) 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 pulling the print head to the right of the machine. 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.

6) Remove the two print head mount screws located on the top of the print head with a Phillips head screwdriver.

7) Remove the old printhead carefully from the heat sink.

8) Place the new print head onto the heat sink. Check to see that the new printhead sits square on 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.

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

10) Replace the print head assembly in the printer, sliding the pins (Paragraph 4) into the holes in the mount plate. Make sure that the guide pins insert into both the front and back grooves. Secure the 6-32 screws.

11) Reconnect the print head cable connectors, making sure that the connectors are seated tightly.

NOTE: If the cable is not connected correctly, the print head will be destroyed when the machine is powered on. Check to see that the cable is tight by observing from underneath the print head. The cable's connectors should be inside of the connectors located on the print head.

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

Caution: Before printing - the printhead category must be set to match the new printheads mean resistance as labeled on the head itself.

A) On the front panel arrow down to PRINT HEAD SETUP using the MODE button and press ENTER.

B) Arrow down to HEAD CATEGORY for the print station you replaced the head in.

C) Using the left (<YES) or right (NO>) arrow key set the HEAD CATEGORY as called out in the PRINTHEAD CATEGORY CHART below.

D) Press the ENTER key to enter the value. The printer must be turned off and back on for the change to take effect.

PRINTHEAD CATEGORY CHART

MEAN RESISTANCE Obtained from printhead label	**PRINTHEAD CATEGORY** Entered in front panel for print station containing head
1190 – 1243	1
1244 – 1295	2
1296 – 1348	3
1349 – 1400	4
1401 – 1453	5
1454 – 1505	6
1506 – 1558	7
1559 – 1610	8

13) 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 chevrons. If you do not see such a grid, you may wish to reference the topic of print head tangent adjustment.

Lubrication Procedure

General

The 676 series printers are factory equipped with either composition bearings not requiring lubrication, pre-lubricated bronze bearings, or pre-lubricated needle 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 foam swab or other non-metallic device.

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

3) Some machines are equipped with a self-lubricating oiler system built into the knife protector. This is an oil-wick system and will require 2-3 drops of SAE 30 weight oil weekly. Be sure wick is in contact with cam. If not, press wick downward with any suitable blunt device that will fit through the oil cap.

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.

Electrical Trouble Shooting

Power Up / Sign On / Communications

Problem	Probable Cause	Corrective Action
Machine fails to power up with no light present in the AC power switch.	1) Incorrect power amplitude.	1) Confirm that the AC entry is configured for the line voltage intended to be applied to the machine. Failure to do so can damage the machine's internal power supply. Refer to the "Fuse Configuration".
	2) Lack of power to machine.	2) Check that both ends of the power cord are plugged in securely. 2A) Confirm that the outlet the machine is plugged into has power.
	3) Missing or blown fuse(s)	3) Check that the fuse(s) located inside the AC entry are present and intact. Replace as needed. Refer to the "Fuse Configuration".
Machine fails to power up with light present in the AC power switch.	1) Unconnected cable / connector inside machine.	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 supply. Refer to the "Electrical System Schematic".
	2) Thermal Control Board unplugged from the Mother Board	2) 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".

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.
Machine 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) Machine not powered on or has not completed diagnostics tests.	2) Power machine on and wait until machine displays "Ready for batches". Re download data.
	3) Data sent to wrong printer.	3) In PCMate change to the printer the data is intended to be sent.
	4) Configuration incorrect in PCMate.	4) Re configure PCMate for AVERY DENNISON PCL printer as per your PCMate manual.
	5) Faulty Thermal Control Board.	5) Replace Thermal Control Board.
	6) Jumpers not configured correctly.	6) 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 machine with start automatically).
	2) An interlock condition exists.	2) 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.	3) Check feed motor cable and or replace feed motor.
	4) Thermal Control Board unplugged or faulty.	4) Check Thermal Control Board / AT board connection and or replace Thermal Control Board.
	5) Feed roller not gripping stock.	5) Adjust the feed pressure. Refer to "Mechanical Adjustment Of Feed Roller Pressure".
	6) Feed rollers bound.	6) With power off check that all rollers turn freely.
	7) Stock bound.	7) 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 machine with start automatically).
	2) An interlock condition exists.	2) 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.	3) Check ink motor cable and or replace ink motor.
	4) Thermal Control Board unplugged or faulty.	4) Check Thermal Control Board / AT board connection and or replace Thermal Control Board.
	5) Ink roller bound.	5) With power off check that all rollers and arbors turn freely.
	6) Ink bound.	6) 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
Machine 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 slot or hole passes under the sensor.
	2) Miss adjusted print head position.	2) Set print head position. Refer to "Print Head Tangent Point".
	3) Miss adjusted print head pressure.	3) Set print head pressure. Refer to "Print Head Pressure Setting".
	4) Print head cable unconnected or faulty.	4) Power off the machine and reinsert the offending connector or replace cable.
	5) Print head faulty.	5) Replace print head.
	6) Head Driver Board unplugged or faulty.	6) Check Head Driver Board / AT board connection and or replace Head Driver Board.
Machine 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 slot or hole passes under the sensor.
	2) Stock registration sensor uncalibrated.	2) Recalibrate the sensor from the front panel using the “Calibrate Sensors” mode. Refer to "Optical Sensor Electrical Calibration".
Print registration is off in the feed direction.	1) Feed pressure setting is off.	1) Set feed pressure. Refer to "Mechanical Adjustment Of Feed Roller Pressure".
	2) Print position is incorrect.	2) Enter the setup menu and readjust the print setting as needed.
	3) Field(s) position incorrect in the format.	3) Using formatter check and readjust the field(s) position(s) as needed.
	4) Bound platen roller.	4) Check that the platen roller turns freely on it's shaft. If it does not replace it.

Problem	Probable Cause	Corrective Action
Print registration is off in the web direction.	1) Machine incorrectly threaded.	1) Check and rethread the media as needed. Refer to "Loading Stock".
	2) Web guides incorrectly adjusted.	2) Check and adjust as needed. Refer to "Web Guide Adjustment".
	3) Unwind incorrectly adjusted.	3) Check and adjust as needed. Refer to "Web Guide Adjustment".
	4) Incorrect DIP switch settings on the Thermal Control Board.	4) Check and reset DIP switches as needed. Refer to "TCB Dip Switch S2 Settings".
Print contrast is too light or dark.	1) Incorrect strobe setting selected in the format.	1) Using Formatter check and adjust the strobe setting according to the media and ink being used.
	2) Incorrect strobe setting in the machine setup.	2) Enter the setup menu and readjust the strobe as needed.
	3) Misadjusted print head position.	3) Set print head position. Refer to "Print Head Tangent Point".
	4) Misadjusted print head pressure.	4) Set print head pressure. Refer to "Print Head Pressure Setting".
Voids in print image in the feed direction.	1) Ink misaligned with format.	1) Adjust ink position on the arbors to achieve full ink coverage over all fields on the format.
	2) Print head dirty.	2) Power off the machine clean the print head and platen. Refer to "Print Head Cleaning".
	3) Faulty print head.	3) After cleaning head and running the test pattern to confirm that a void still exists, replace the print head.
	4) Misadjusted print head position.	4) Set print head position. Refer to "Print Head Tangent Point".
	5) Misadjusted print head pressure.	5) Set print head pressure. Refer to "Print Head Pressure Setting".
	6) Worn platen roller.	6) Replace platen roller.
Machine continually stops with an erroneous interlock condition.	1) Sensor uncalibrated.	1) Recalibrate the sensor from the front panel using the “Calibrate Sensors” mode. Refer to "Optical Sensor Electrical Calibration".
	2) Sensor position misadjusted.	2) Determine which sensor and relocate accordingly.
	3) Ink sensor type (light / dark) incorrect in the format for the ink type being used.	3) Either change the ink or the ink type in the format.

Cut / Stack

Problem	Probable Cause	Corrective Action
Machine fails to cut labels (the rotary knife does not rotate).	1) The cut is disabled in the setup menu.	1) Enable the knife in the setup menu via the front panel.
	2) Knife cable unconnected.	2) 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".
	3) Knife jammed causing auto resetting fuse to trip on the Thermal Control Board.	3) Remove cause of jam at the knife.
	4) Faulty knife motor.	4) Replace the knife motor.
	5) Faulty knife motor drive circuit on the Thermal Control Board.	5) 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 port on the Thermal Control Board.
	2) Faulty stacker motor.	2) Replace the stacker motor.
	3) Stacker jammed causing auto resetting fuse to trip on the Thermal Control Board.	3) Remove cause of jam at the stacker.
	4) Faulty stacker motor drive circuit on the Thermal Control Board.	4) 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 web guides to touch stock roll but not pinch the roll.
Machine fails to stop at end of roll.	1) Incorrect adjustment of stock-out sensor.	1) Adjust contact strip so that a “click” will be heard when supply roll is lifted.
Stock does not pull smoothly through printhead module.	1) Web guides on unwind arm too tight.	1) Adjust web guides to touch outer edges of stock with minimum pressure required to keep stock-out switch closed.
	2) Web guides on decurler arm too tight	2) Adjust collars on decurler bar to touch edge of stock.
	3Web guide funnels to tight .	3) Open the funnels slightly. Do Not Pinch the web with the funnels

Problem	Probable Cause	Corrective Action
Stock jams in bridge blade rollers or knife area.	1) Knife mounted bridge blade too close to stationary bridge blade.	1) Loosen screws in upper knife securing bridge blade roller assembly and slide up (holes in blade are slotted) until rollers just contact stock. Tighten screws.
	2) Knife not cutting full width of stock.	2) 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.	3) 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 machine too far forward so labels go under rear stacker rail.	2) Loosen stacker mounting knob and move stacker toward rear of machine - tighten.
	3) Incorrect rail position or stacker bed angle.	3) 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 "pac-man" in home position. If not - loosen "pac-man" set screws and readjust "pac-man" to stop with spring in detent.
	2) Partial cut	2) 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.	2) Align rear edge of ink with rear of print area (allow approximately 1/8" (3mm) overlap). Loosen thumb cap screw on ink out sensor mount plate and adjust until it touches rear of ink roll on unwind arbor. Lock slide rewind core toward rear of printer until it just contacts plate.
	3) Ink buildup on turn bar(s).	3) Clean with alcohol.
	4) Incorrect ink width.	4) 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) Assure roller does not bind and is clean. Adjust pressure knob to higher detent position if required.
	2) Take-up core binding on locator plate.	2) Move core .015" - .030" (.38mm - .76mm) away from plate.
	3) Ink unwind adjuster too tight.	3) Loosen knurled knob to a point flush with surface of mounting shaft.
	4) Take-up roller too full.	4) 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 tangent position.	1) Refer to tangent adjust procedure in Print Head section.
	2) Broken ink.	2) Replace ink and readjust (see INK trouble shooting).
	3) Ink not rewinding.	3) Readjust (see INK trouble shooting).

Knife

Problem	Probable Cause	Corrective Action
Double Cuts, extra knife cycle	1) Solenoid sticking in	1) Check proper assembly of washers. Clean plunger with alcohol and completely dry.
	2) Worn Trip Arm on Clutch actuator.	2) Replace Actuator
	3) Worn Stop roll pin on clutch	3) Replace Clutch if not solved above.
Skips cut, double length label	1) Solenoid did not pull in	1) Check gap on the trip arm to clutch body must be about .040 inches. If too large, solenoid has less force. Check assembly of spring and washers. Use latest engineering assembly procedure. Clean Solenoid.
	2) Trip arm sticking on clutch roll pin.	2) Check for burr on trip arm catching on clutch stop roll pin. File off burr on clutch roll pin and/or replace trip arm.
	3) Low voltage to solenoid	3) Check power supply voltage for 12 and 24 volts
	4) Weak solenoid driver	4) Substitute TCB. Change back if not solved.
	5) Bad Solenoid	5) Unusual, but replace Solenoid and adjust.
Noisy Rattle when not cutting but motor turning	1) Packman not visibly homing	1) Adjust Packman to center the home location of the packman to the quiet location. If the knife still does not home, clean knife cams and lubricate. If still does not home, replace blades. If still does not home, replace clutch.
	2) Packman homing ok but noisy.	2) Adjust Packman to center the home location of the packman to the quiet location .
	3) Dirty Clutch	3) Clean clutch and one drop of light oil.
	4) Packman slipping	4) Order improved set screws with multiple points that bite better to shaft.
	5) Bad Motor Gear Box	5) Replace Knife Motor

Problem	Probable Cause	Corrective Action
Knife stops during cut in stock	1) Check life of blades	1) If warn and dull, may stall in stock. If life is greater than 2 million, replace blades.
	2) Clean cams and lubricate	2) Make sure oiler is on knife. Instruct Operator to oil weekly. Make sure oil is available.
	3) Clutch worn out and can't stay engaged	3) Replace Clutch
Slight Long and Short Tags	1) Sticking Solenoid	1) Check gap on the trip arm to clutch body must be about .040 inches. If too large, solenoid has less force. Check assembly of spring and washers. Use latest engineering assembly procedure. Clean Solenoid.
	2) Sticking Trip Arm to Clutch Roll Pin	2) Check for burr on trip arm catching on clutch stop roll pin. File off burr on clutch roll pin and/or replace trip arm.
	3) Clutch has trouble picking up	3) Clean clutch and replace if not solved
Stock popping in front of knife	1) Slow knife rotation	1) Worn out blades create too much load for motor and knife slows down too much during cut. Replace Blades.
	2) Clutch has trouble engaging and stock runs into blades	2) Clean clutch and replace if not solved.
Knife does not cycle	1) Solenoid not engaging	1) Trip knife solenoid by hand to see if knife cycles. If cycles and cuts, check cable to solenoid, check solenoid adjustments and assembly, check gap and replace solenoid if necessary.
	2) Knife Motor Broken	2) Replace Knife Motor, good for 10 million labels by spec
	3) Clutch total failure	3) Unlikely, but change if necessary
	4) Solenoid Drive circuit failure	4) Replace Cable or TCB
	5) Knife motor not cycling	5) Replace Cable or TCB
Continuous Knife cycling	1) Solenoid stuck in	1) Clean and adjust solenoid.
	2) Circuit stuck on	2) Unplug solenoid wires from knife module connector and should stop cutting. If it does stop cutting, replace TCB.
	3) Very bad trip arm to stop pin on clutch	3) Unusual, but file roll pin and replace trip arm.

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.

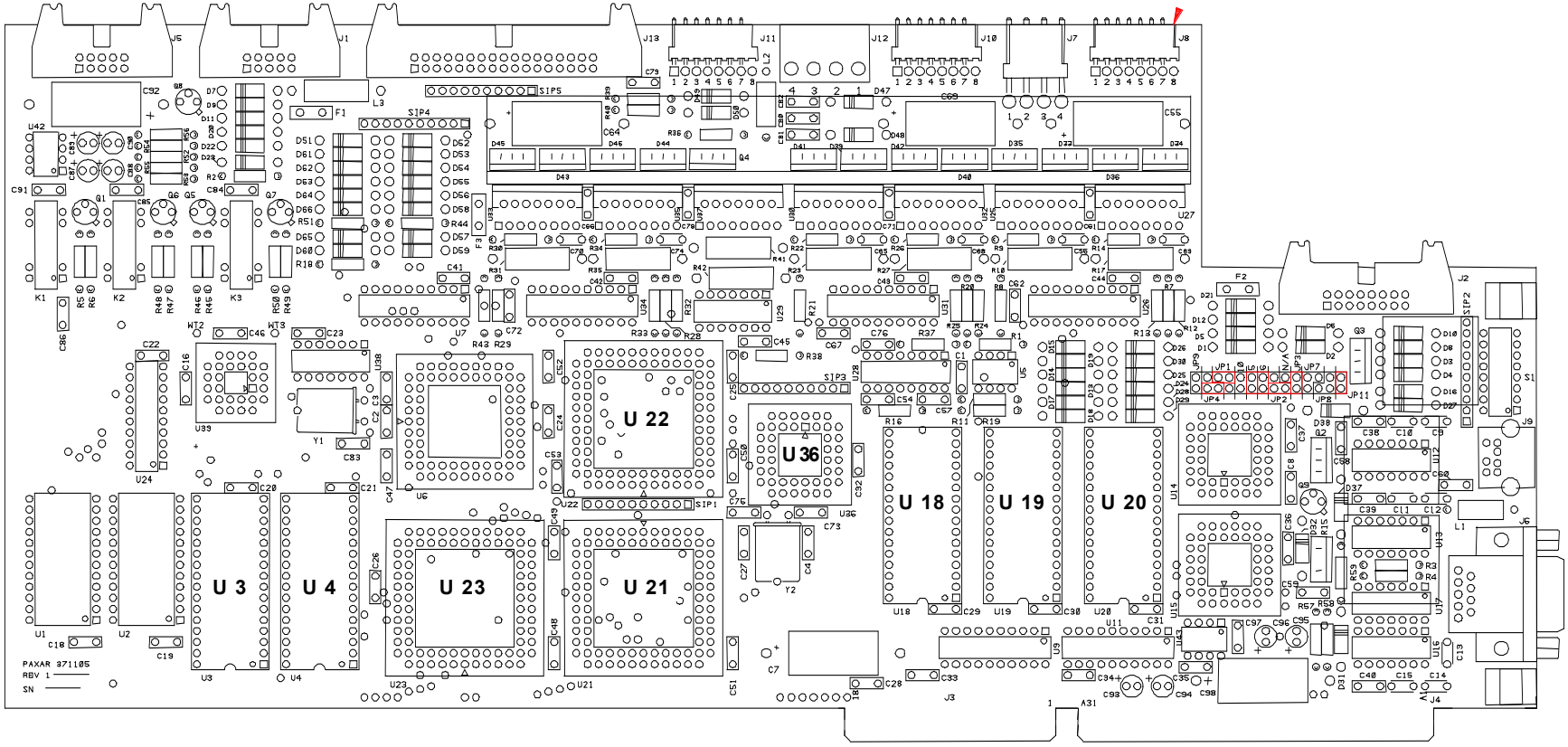
X	**X**		**E**	**R**	**R**	**O**	**R**	**(**	**S**	**)**												
S	**T**	**O**	**C**	**K**		**O**	**U**	**T**												**9**	**0**	**1**

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

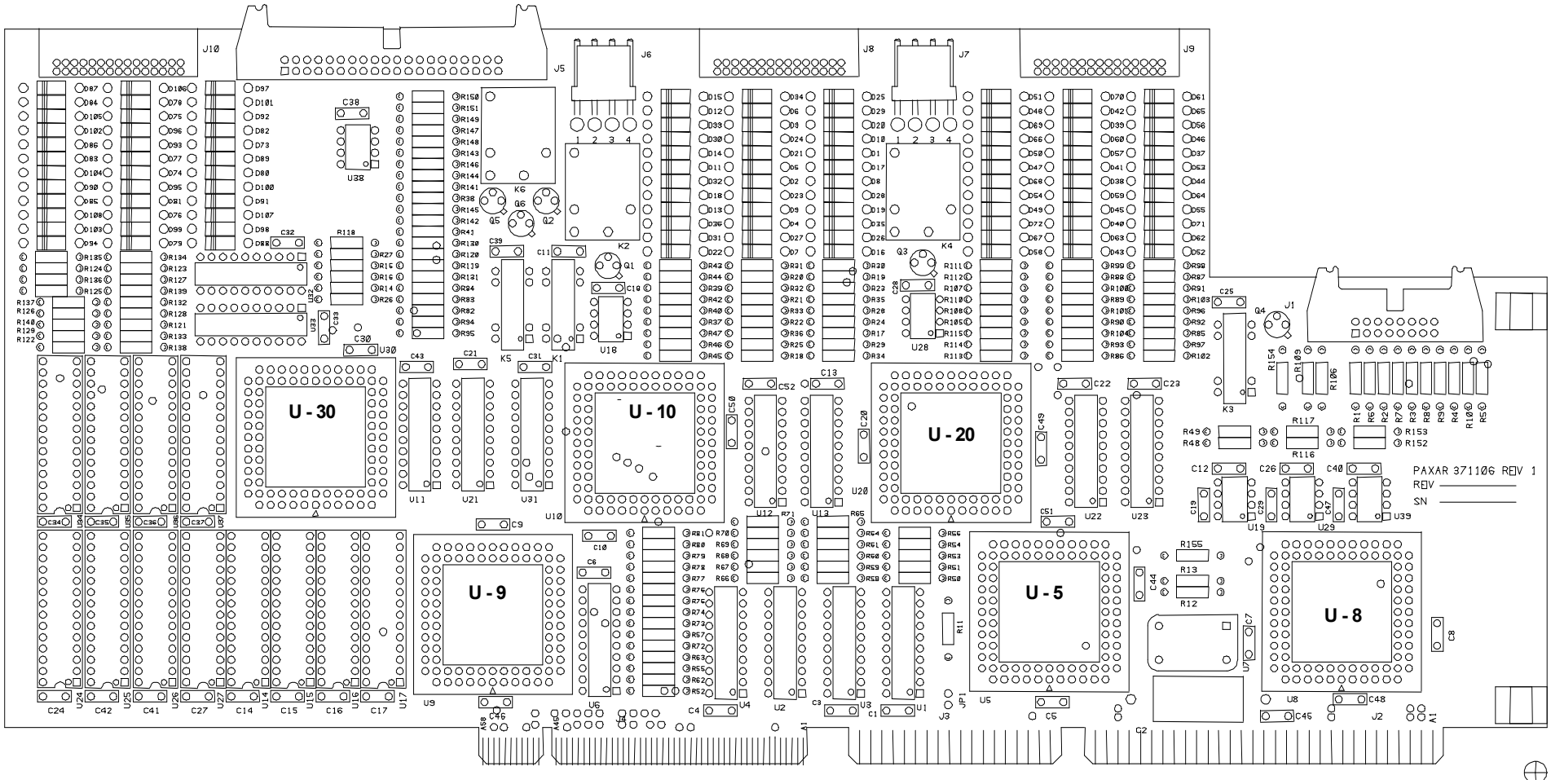
Thermal Control Board P/N 371105TT



THERMAL CONTROL BOARD

Align angled corners of chip with socket and arrow denotes pin #1 or dimple on chip.

Head Driver Board P/N 371106TT

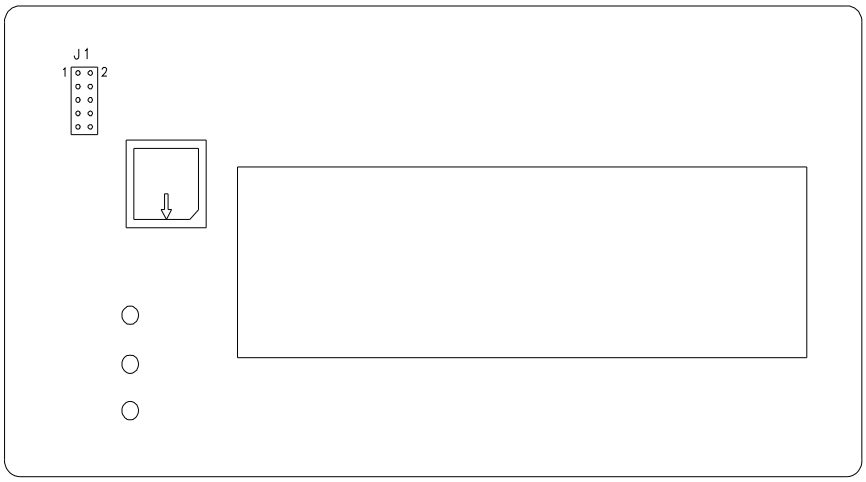


(Use chip removal tool p/n. 351156 for square I.C.'s)

HEAD DRIVER BOARD

Align angled corners of chip with socket and arrow denotes pin #1 or dimple on chip.

Front Panel Board P/N 351108



(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 * See note below
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

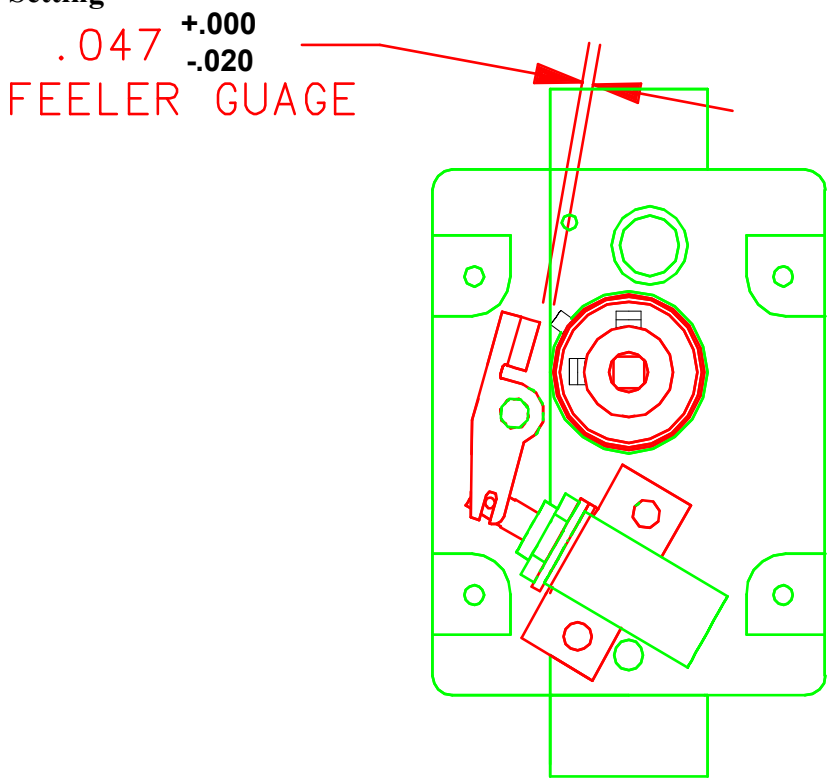
Value	Transfer Type
80	Pressure Sensitive & HR-4111 Ink
81	Uncoated Tag Stock & HR-4111 Ink
82	Fabric 2800 & HR-4111 Ink
83	Fabric 2795 & HR-4111 Ink
84	New Pressure Sensitive (no xfer) & TT-3111 Ink
85	New Pressure Sensitive (no xfer) & TT-1111 Ink
86	New Pressure Sensitive (no xfer) & TW-1111 Ink
87	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 (Blue)
99	4800 Fabric & GP-1111
100	2395NWT Fabric & CL-1111 (UK)
101	2395NWT Fabric & XC-3111 (UK)
102	2395NWT Fabric & HR-1111 (UK)
103	2495NWT Fabric & CL-1111 (UK)
104	2495NWT Fabric & XC-3111 (UK)
105	2495NWT Fabric & HR-1111 (UK)
106	4000NWT Fabric & CL-1111 (UK)
107	4000NWT Fabric & XC-3111 (UK)
108	4000NWT Fabric & HR-1111 (UK)
109	4002NWT Fabric & CL-1111 (UK)
110	4002NWT Fabric & XC-3111 (UK)
111	4002NWT Fabric & HR-1111 (UK)
112	G.S. Satin & XC-3111 (UK)
113	2012T Fabric & XC-3111 (UK)
114	1021T Fabric & XC-3111 (UK)
115	2800 Fabric & CT-1111
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
156	1800FRA & TW1111
157	1800FRA & GP1111
158	2085NWT / 2495NWT / 2360NWT & HS1111
159	2360NWT / 2800NWT & XC3111
160	2895NWT / 2800NWT & HS1111
161	2895NWT & XC3111
162	2895NWT & HC3111
163	1800MWA & GP1111
164	1800MWA & TW1111
165	604LKP / 601LKP & DS7501 / 7502 / 7504
166	604LKP / 601 LKP & DS7503
167	4800NBC Fabric & HS1011
168	2012T Fabric & HS1111/1112
169	4360NBT Fabric & SD1011
170	4041THS Fabric & HS1111
171	4700TWT Fabric & PL1111
172	4800TST Fabric & CT1111
173	4800TST Fabric & CT1112
174	4800TST Fabric & CT1114
175	4800TST Fabric & CT1115
176	4800TST Fabric & CT5137
177	4800TST Fabric & HS1111
178	770SWT Fabric & CT1112
179	770SWT Fabric & CT1114
180	770SWT Fabric & CT1115
181	770SWT Fabric & CT5137
182	772SWT Fabric & CT1112
183	772SWT Fabric & CT1114
184	772SWT Fabric & CT1115
185	772SWT Fabric & CT5137

Appendix D

Knife MFG Guideline

Solenoid Trigger Setting

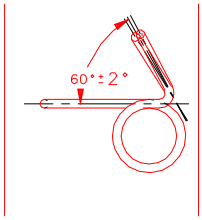


1. After the clutch and actuator is mounted to the knife, attach the solenoid assembly to the inside support using two 6-32 x 3/8 cap screws, flat washers, and lock washers. Make sure the plunger moves freely and does not bind. Motor and faceplate must be mounted also.
2. Check the gap between the actuator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

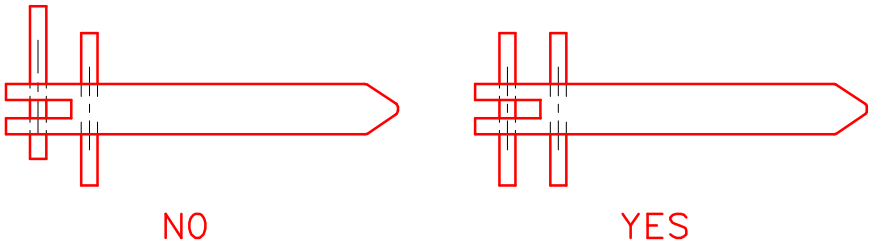
Other hints if there is still a problem:

- 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.

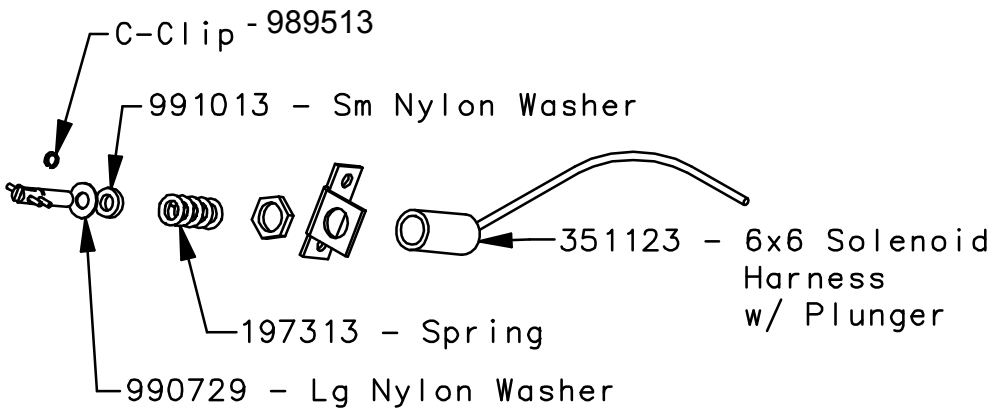


- Plunger pins should be centered on shaft. If either pin is loose **DO NOT** use the plunger. The pins should be checked before installing.

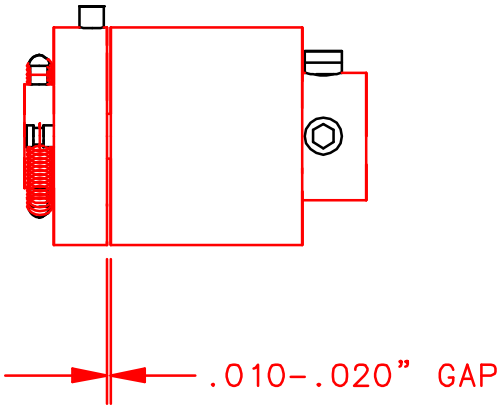


- (Rev 3) Replace both roll pins on all reworked assemblies.

- (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

NOTE: This section was written specifically for the 636/656 – but the information is useful and applicable for the 676 as well.

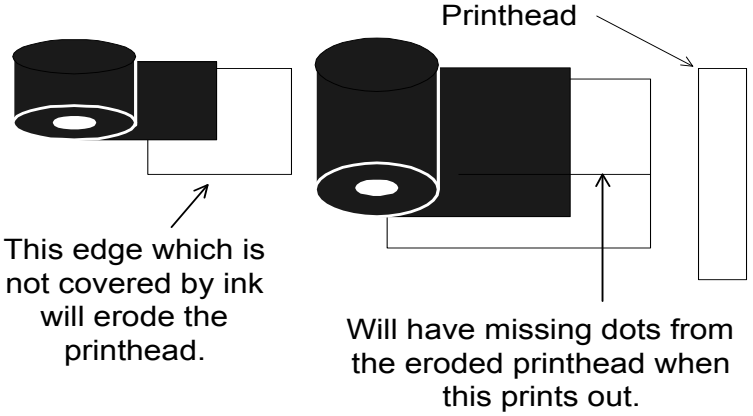
Matching stock and ink widths

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 customers 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.

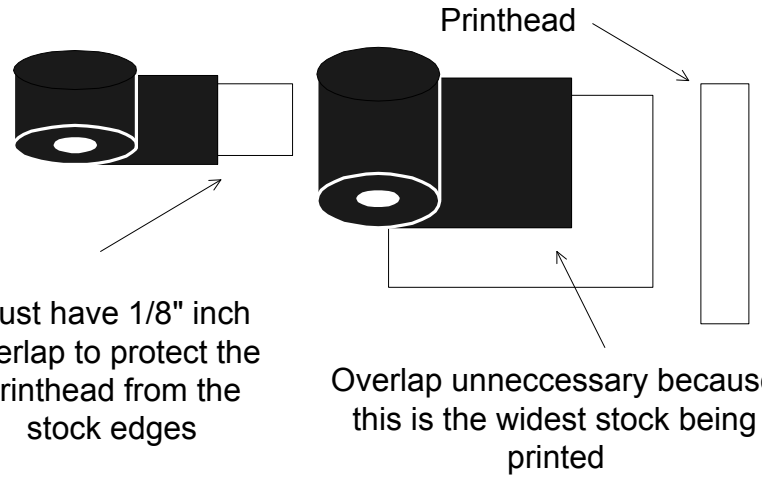
Here, the customer will have much shorter printhead life because of the edge of the narrower, uncovered stock.

WRONG!



The solution is to make sure that the narrower stocks have at **least 1/8"** 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.

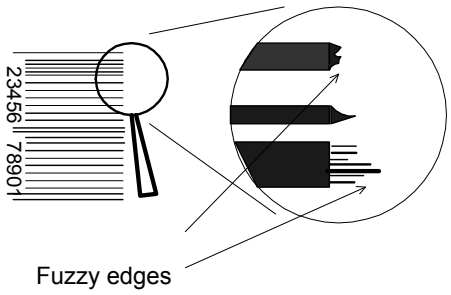
If problem continues: Remove the printhead and clean with hard pressure.

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.

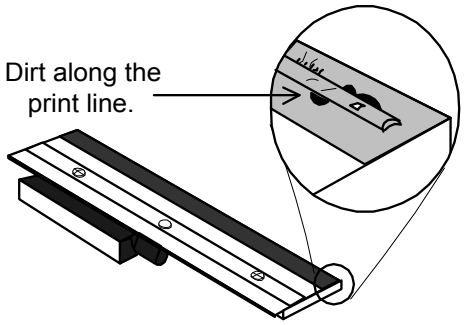
Printhead Cleaning Procedure

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.

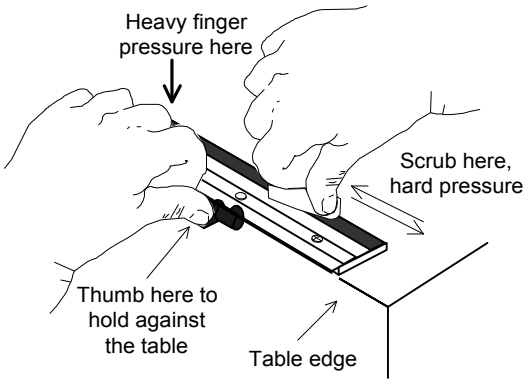
In Machine Cleaning Procedure

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 foam 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

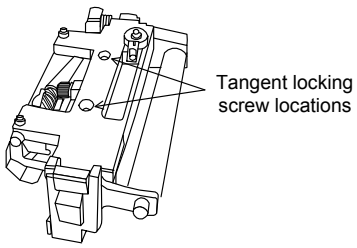
1. Remove the printhead.
2. Place the printhead upside down on the edge of a clean table with the connector pug over the edge of the table.
3. Soak a small amount of rubbing alcohol a foam swab and apply to the print line.
4. Scrub the printhead several times using HARD pressure with the “loop side”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



Printhead Installation and Removal Procedures

Printhead removal procedure

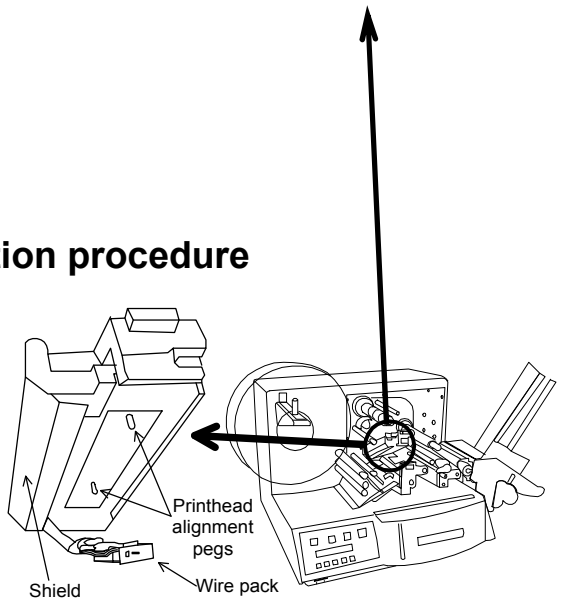
1. Attach the grounding strap to your wrist and the printer.
2. Turn the machine off.
3. Leaving the printhead shut, completely loosen the two tangent locking screws but leave them loose in the holes.
4. Slowly open the printhead carriage assembly. Maneuver the printhead down and to the right, pulling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

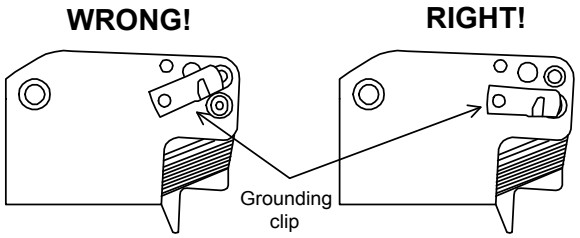


Open printhead carriage

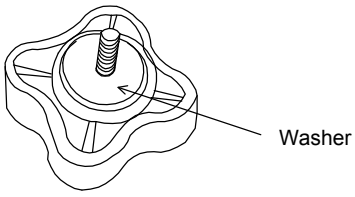
Static Checks for 636/656 Printers

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.



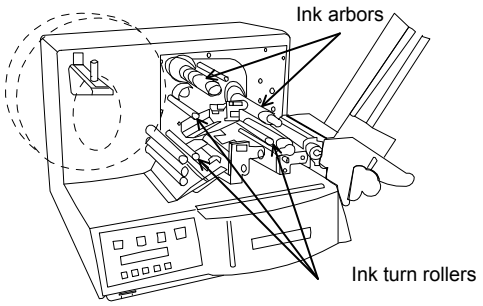
Machine side of the stacker



Stacker knob removed

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

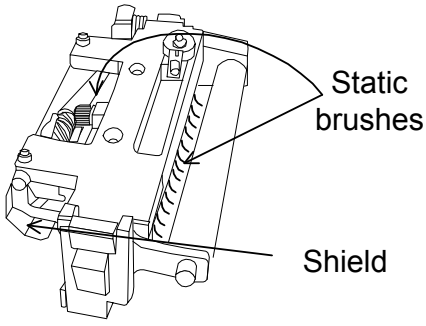
2. **Ink arbors:** With an ohmmeter, check for continuity on the two ink arbors and three ink turn rollers. Place one lead of the ohmmeter on the arbor and the other on the chassis ground screw.



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.



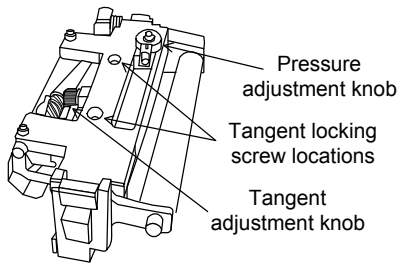
Steps for initial set up on a AVERY DENNISON 636 or 656

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

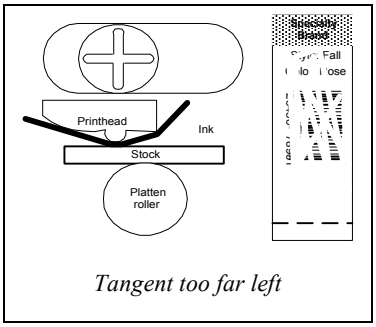
5. **Ink tension:** Back the tension on the ink unwind and take up to minimal. Turn the tension knobs left or counter-clockwise.

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.

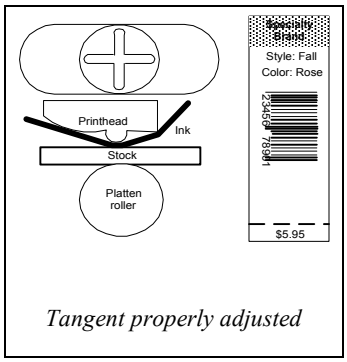
7. **Cleaning:** Clean the printhead with an approved printhead cleaning method. Use rubbing alcohol on a lint free cloth or the “Hook side” or Velcro. Always turnoff the machine and wear the wrist grounding strap. **Never** touch the printhead with a metal object like a knife or screwdriver.

Print Quality Adjustment

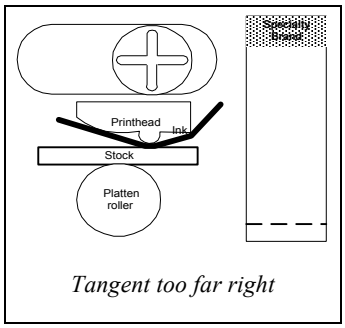
!. **Tangent** - Move the tangent adjust knob left or right to improve print quality. In general, the best print will be slightly to the left of center.



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

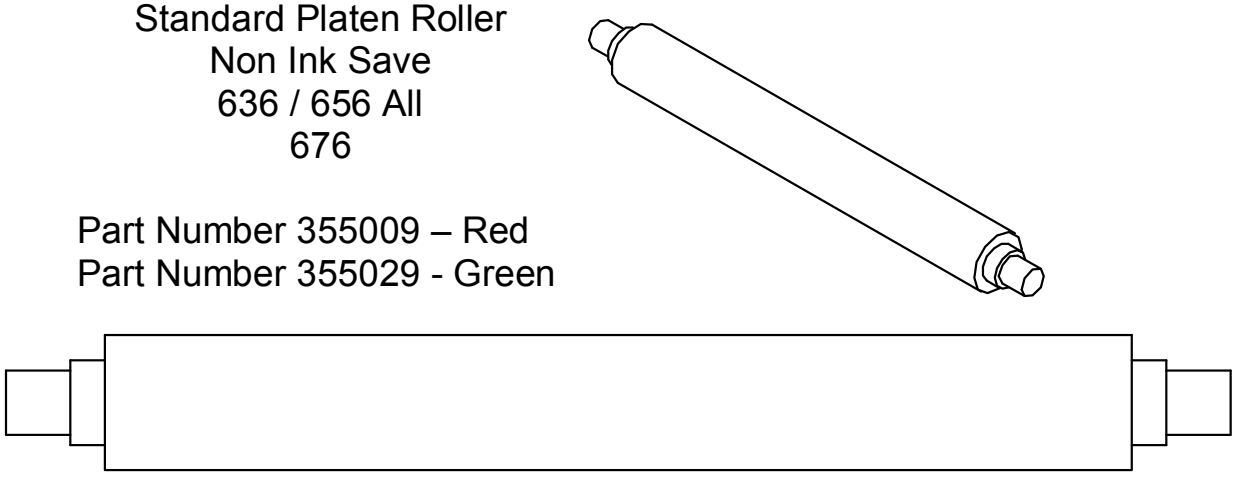
There are several types of platen rollers made for the 6x6 and the 676 series of controlled printers. The material printed will determine the color (hardness) of the roller as well as width of the cut down part of the platen. The green rollers are harder and used for fabric applications. The red rollers 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

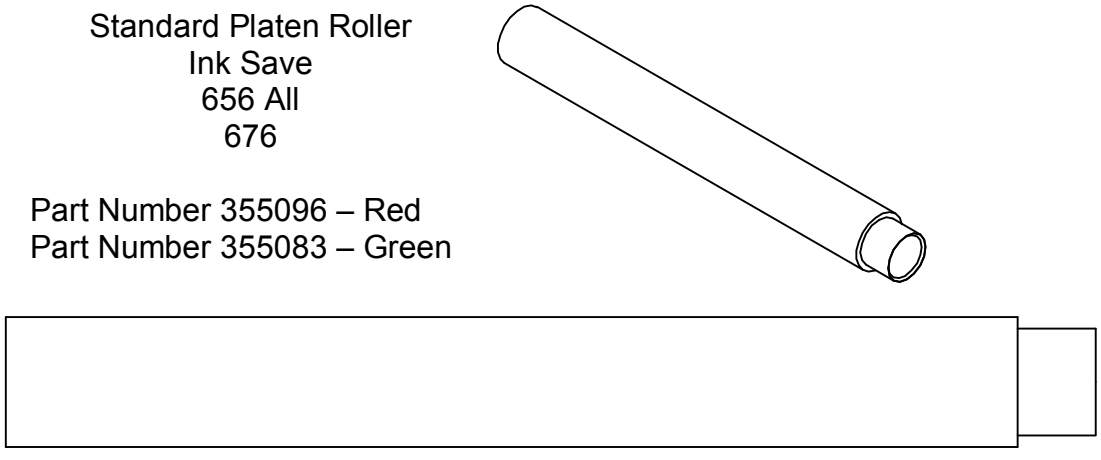
Standard Platen Roller
Non Ink Save
636 / 656 All
676

Part Number 355009 – Red
Part Number 355029 - Green



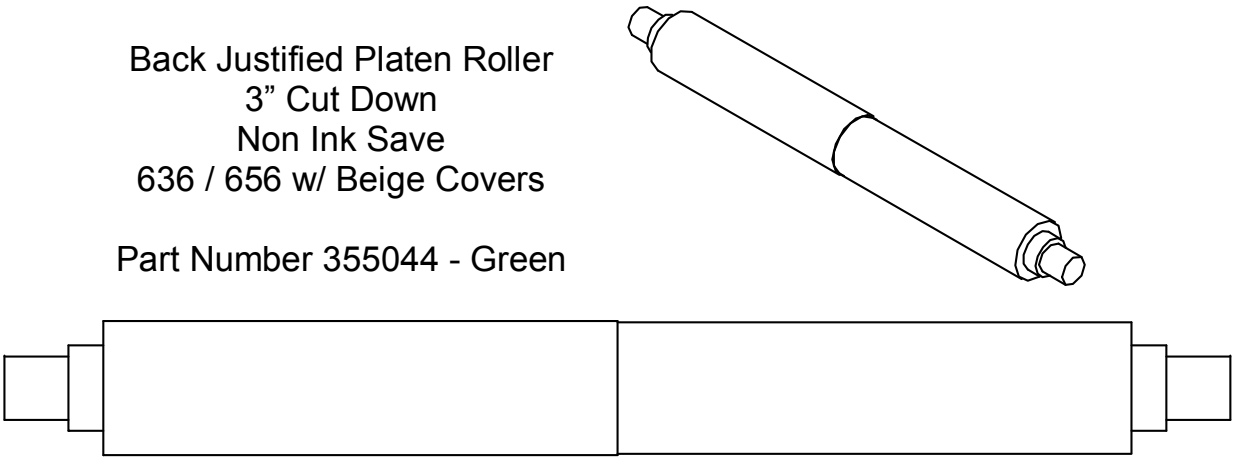
Standard Platen Roller
Ink Save
656 All
676

Part Number 355096 – Red
Part Number 355083 – Green



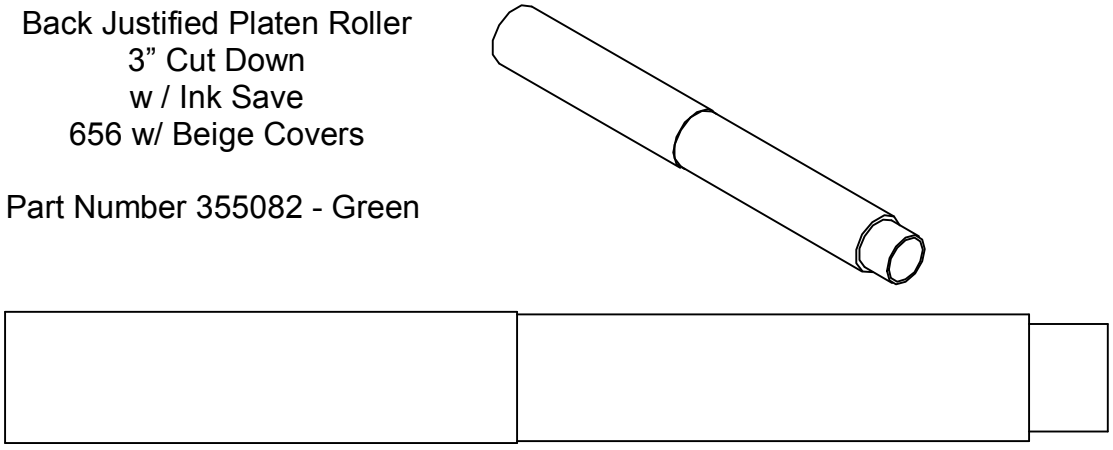
Back Justified Platen Roller
3” Cut Down
Non Ink Save
636 / 656 w/ Beige Covers

Part Number 355044 - Green



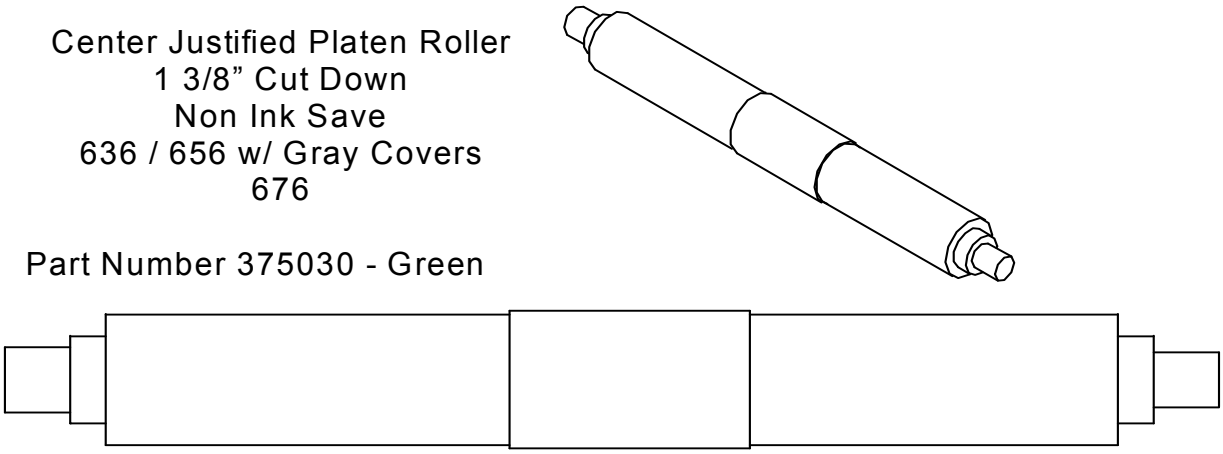
Back Justified Platen Roller
3” Cut Down
w / Ink Save
656 w/ Beige Covers

Part Number 355082 - Green



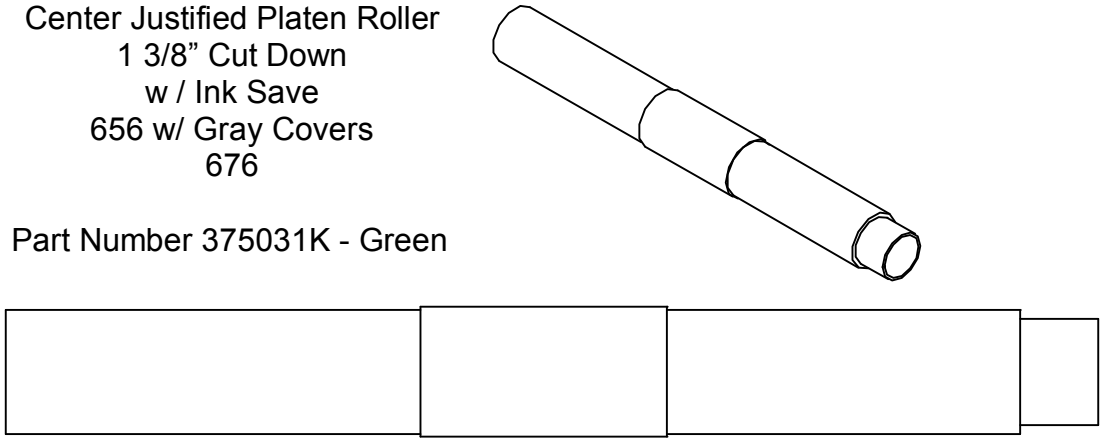
Center Justified Platen Roller
1 3/8” Cut Down
Non Ink Save
636 / 656 w/ Gray Covers
676

Part Number 375030 - Green



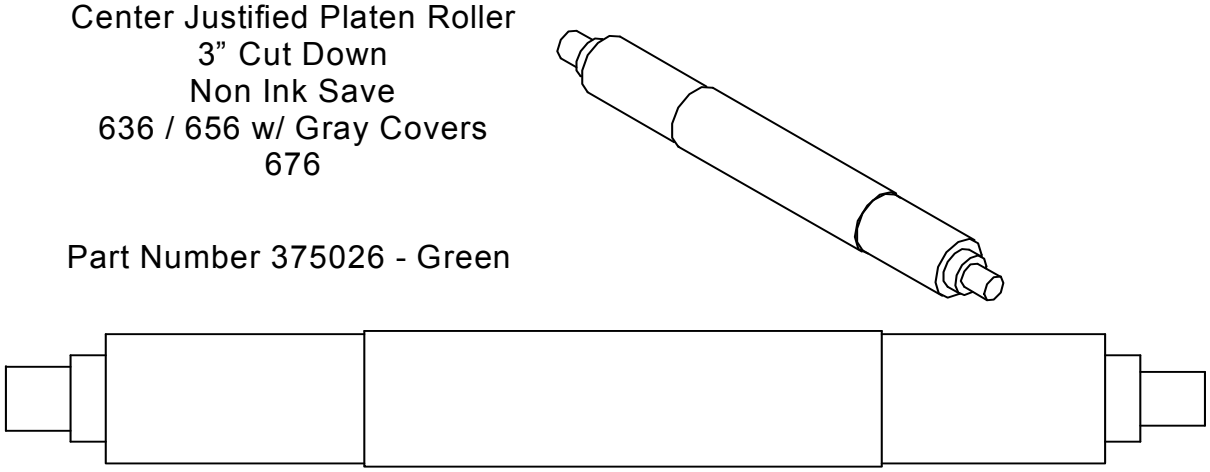
Center Justified Platen Roller
1 3/8” Cut Down
w / Ink Save
656 w/ Gray Covers
676

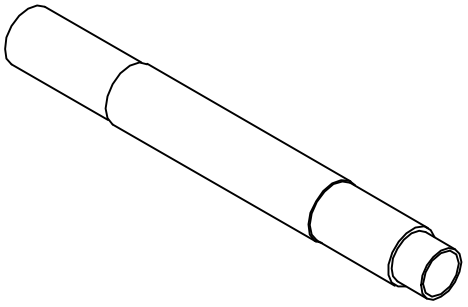
Part Number 375031K - Green



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

Part Number 375026 - Green



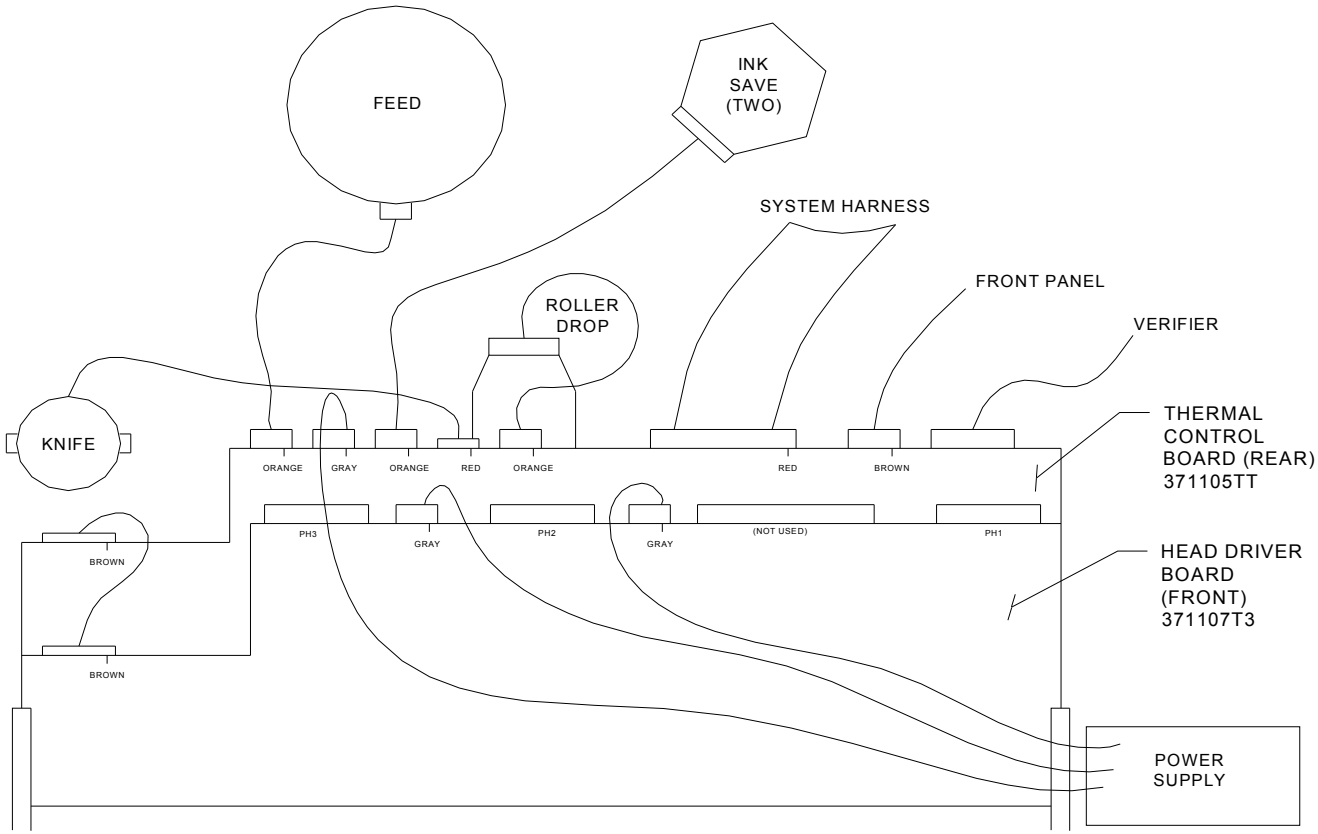


Center Justified Platen Roller
3” Cut Down
Ink Save
656 w/ Gray Covers
676

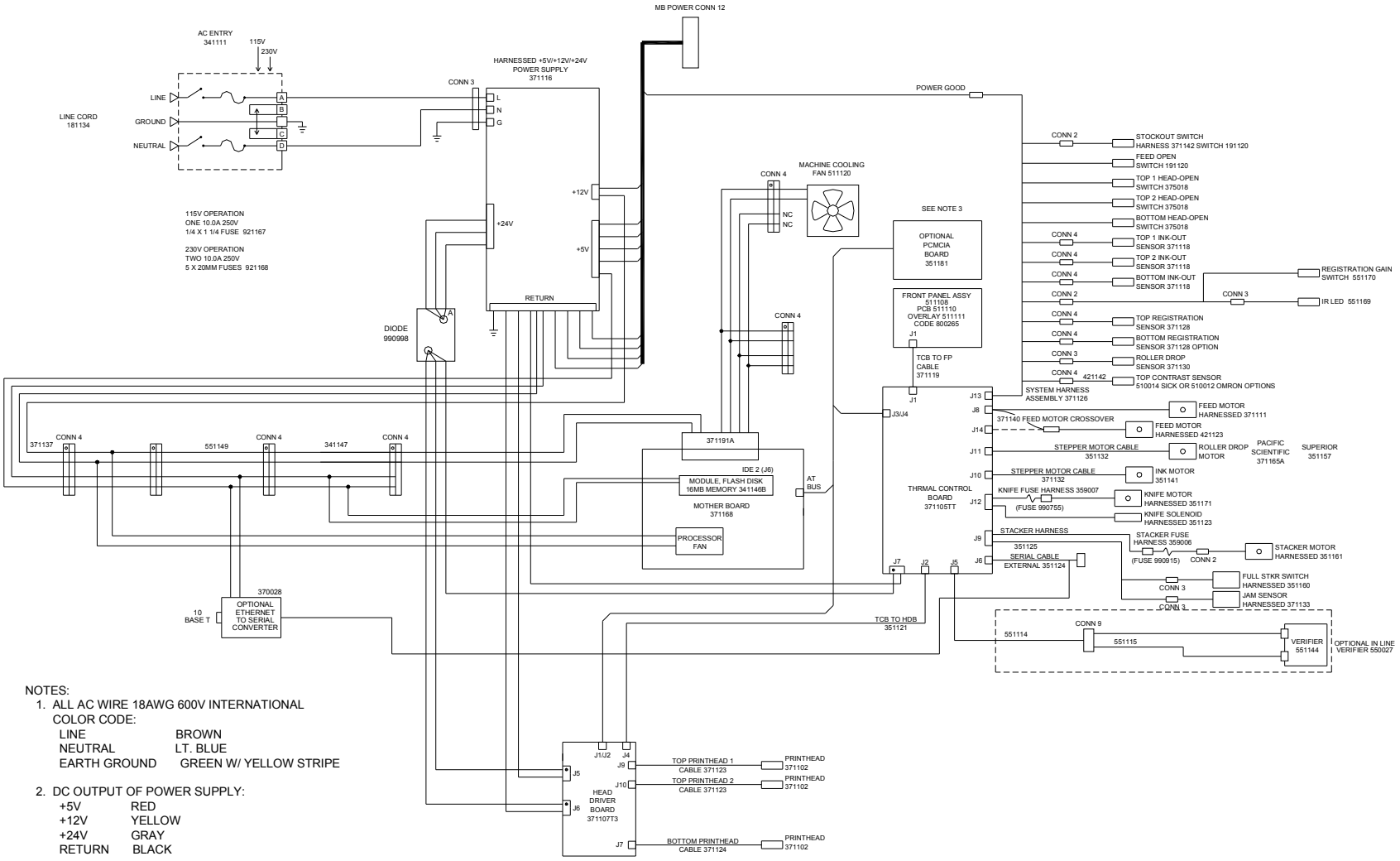
Part Number 375025K - Green

Electrical Assembly Drawings

Machine Wiring



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

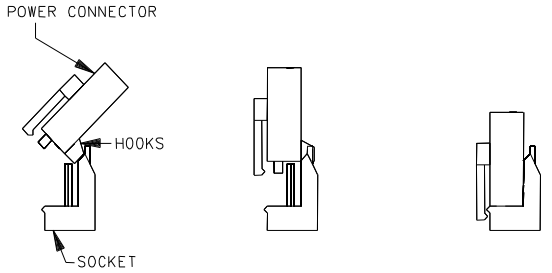
3. FLASH DISK REPLACED PCMCIA BOARD, REMOVE IF FLASH DISK IS INSTALLED.

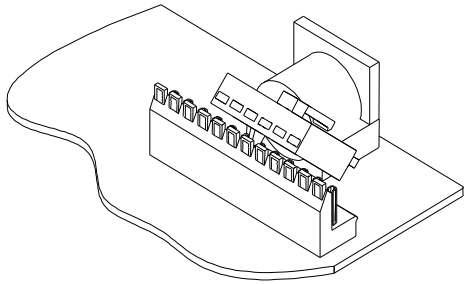
Motherboard Power Connectors

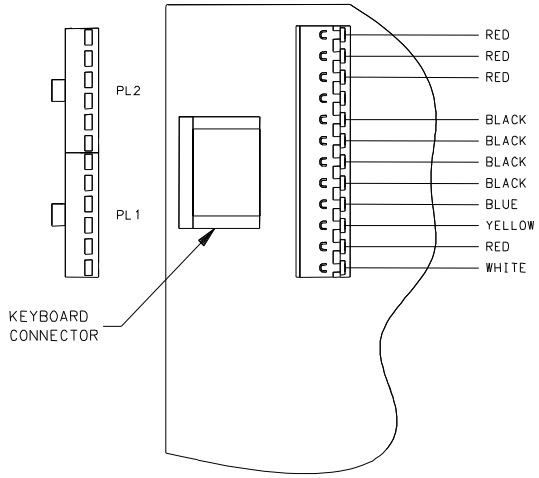
The power supply connector on any PC / XT or PC / AT compatible motherboard is made up of dual six-pin male connectors. Two female connectors from the power supply plug directly onto these male connectors. The following diagrams illustrate the proper method of attaching the connectors.

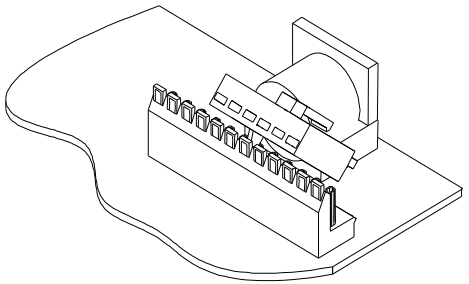
Ensure that all of the black wires are located next to each other in the center of the two connectors (as shown in the diagram below), and that the clamps on the back side of the connectors ate secured along the PCB header. All pins should be covered.

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





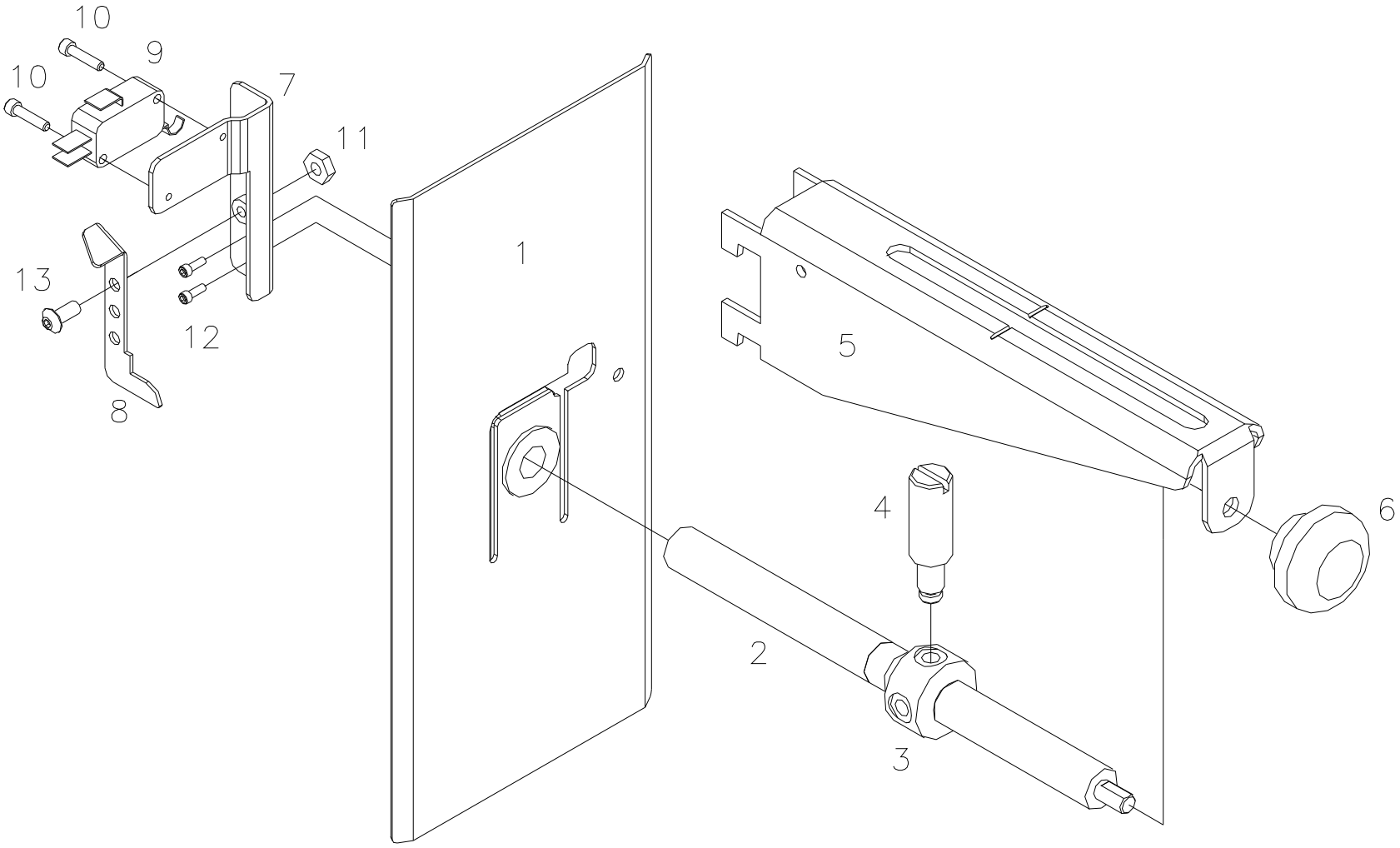




LEFT REAR CORNER OF MOTHER BOARD

Mechanical Assembly Drawings

Unwind Assembly Drawing

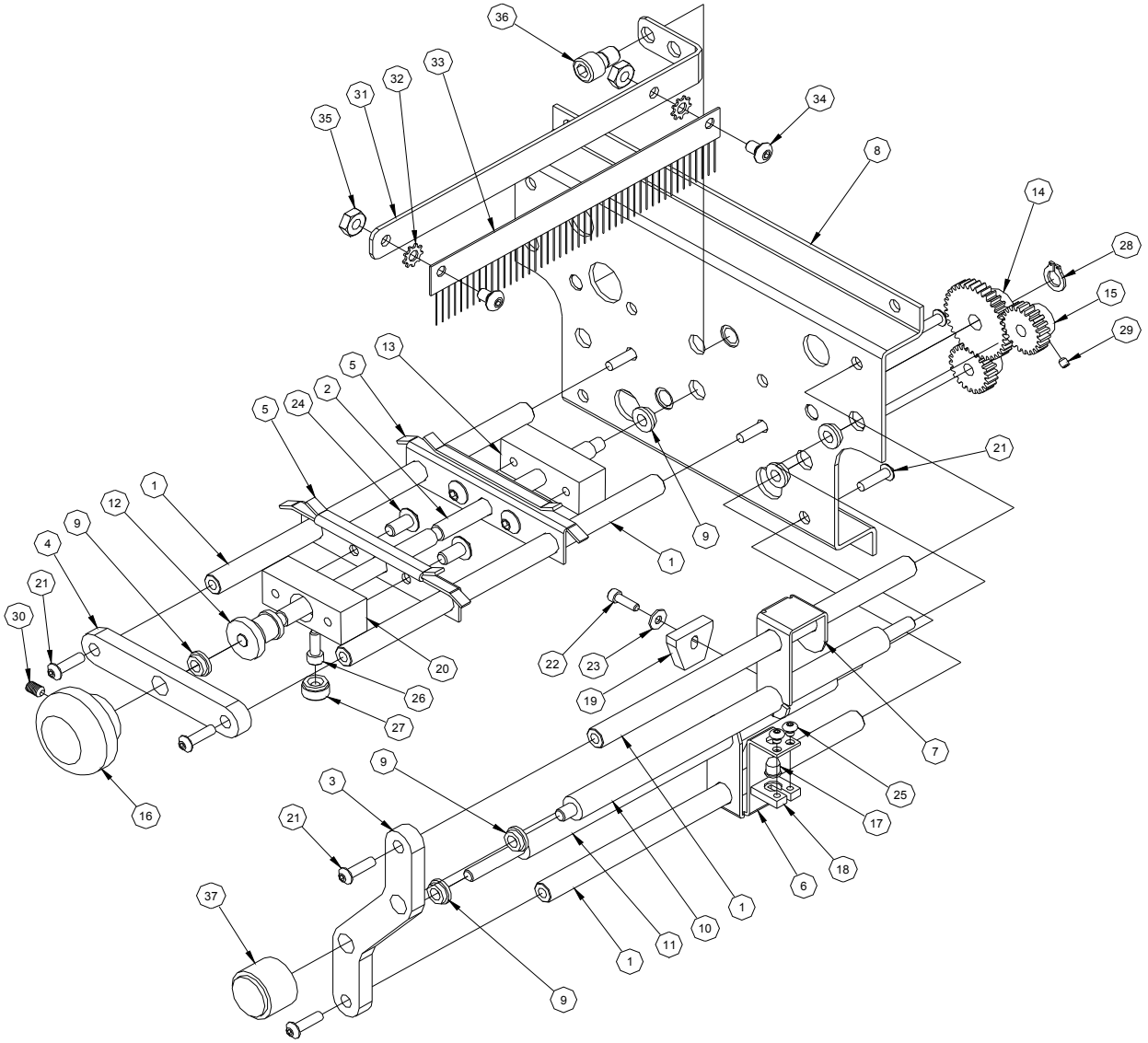


Unwind Parts List

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 adj, 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

(*NS) = Not Shown

Web Guide / Light Bar Assembly Drawing

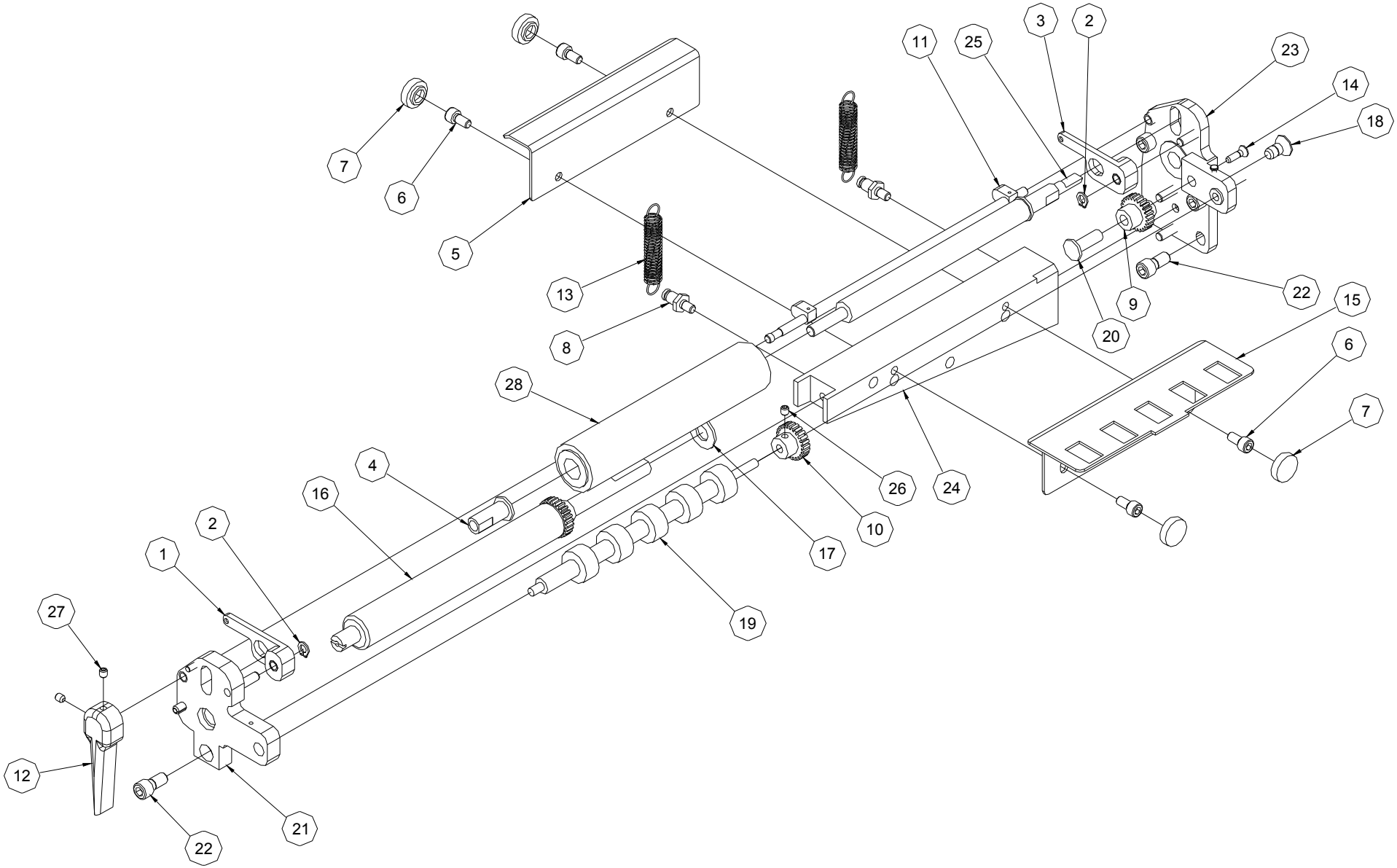


Web Guide / Light Bar Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	374059	SHAFT, SENSOR GUIDE	4
2	374060	SHAFT, WEB GUIDE ADJUST	1
3	374055	SENSOR GUIDE HOLDER	1
4	374061	WEB GUIDE ADJUST	1
5	374051	BRACKET, WEB GUIDE	2
6	374049	BRACKET, LED MOUNT	1
7	374050	BRACKET, SENSOR MOUNT	1
8	514102	ASSY.MOUNT	1
9	999100	BUSHING, FLANGE,3/16 X 5/16 X 1/8	6
10	554059	SHAFT, THEADED LOWER	1
11	554058	SHAFT, SENSOR ADJUST	1
12	554005	DRIVE, WEB GUIDE ADAPTOR	1
13	554004	BRACKET, WEB GUIDE MOUNT	1
14	374058	GEAR, 36T	1
15	554064A	DRIVER, SENSOR ADJUS GEAR	2
16	105023K	KNOB, IMPRESSION ADJUST	1
17	551169	SENSOR, LED WIRED	1
18	532015	CLAMP, SENSOR	1
19	371128	TOP&BOTTOM REFLECT SENSOR	1

ITEM	PART NO.	DESCRIPTION	QTY
20	554006	BRACKET, WEB MOUNT, FRONT	1
21	990091	#10-32 X 1/2B.H.C.SCREW	8
22	990424	#4-40 X 3/8 S.H.C. SCREW	1
23	990448	WASHER 1/8	1
24	990090	#10-32 X 3/8 B.H.C.SCREW	4
25	991279	4-40 X 1/8 B.H.C.SCREW	2
26	990016	#6-32 X 3/8 S.H.C.SCREW	1
27	990312	#6 THUMB KNOB	1
28	990262	1/4 SNAP RING	1
29	990007	#4-40 X 1/8 SET SCREW	4
30	990058	#8-32 X 1/4 SET SCREW	1
31	516001	BRACKET, STATIC BRUSH	1
32	989978	#8 STAR WASHER	2
33	355039	STATIC BRUSH	1
34	990066	8-32 X 1/4 BUTTON HEAD CAP SCREW	2
35	990069	#8 HEX NUT	2
36	990119	1/4-20 X 3/8 CAP SCREW	1
37	196028	KNOB, BLACK (GLOSS)	1

Drive Assembly Drawing

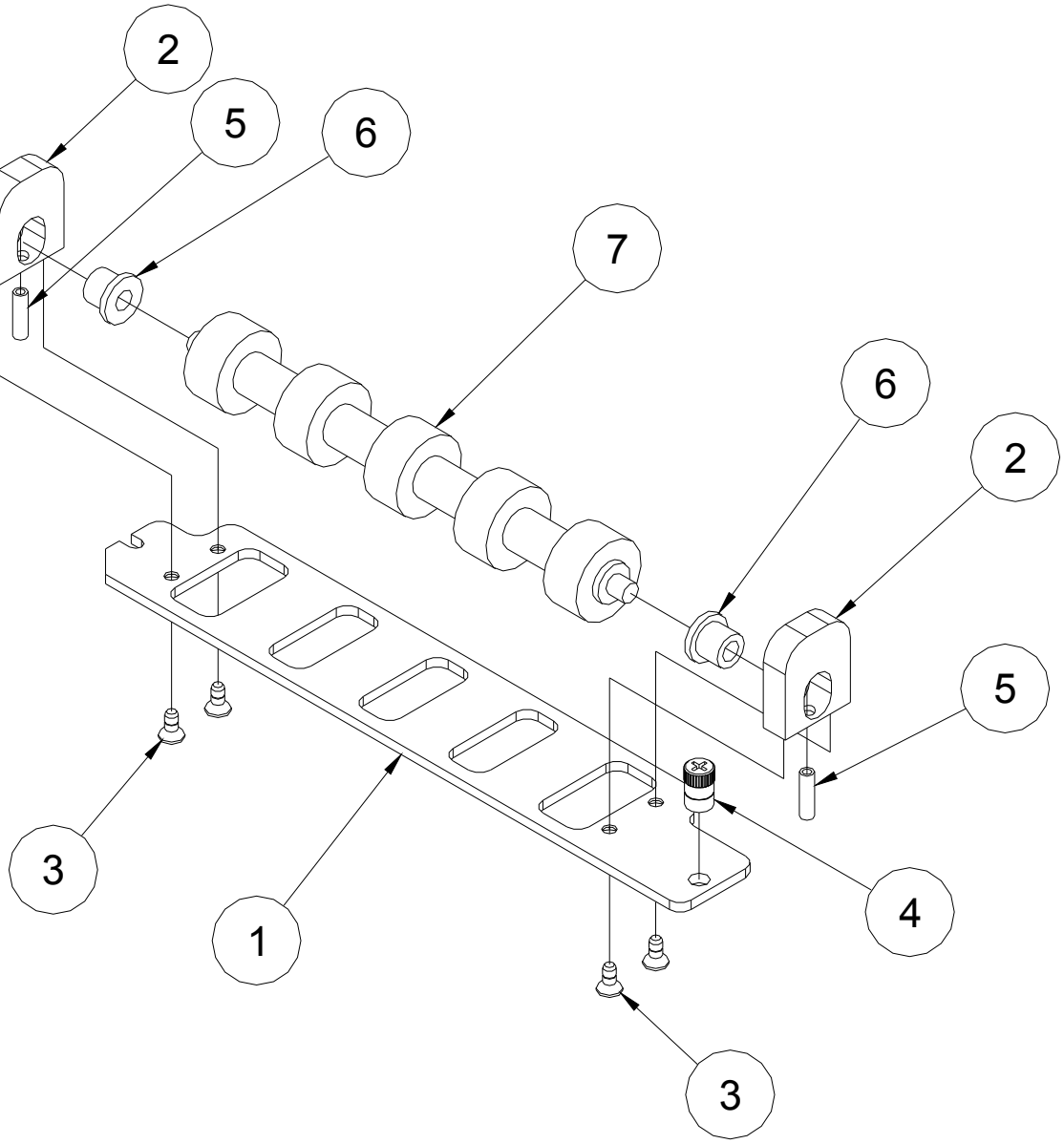


Drive Parts List

Item	Part #	Description	Qty
1	514009K	Spring lever, Front	1
2	990261	Snap ring, 3/16	2
3	514010K	Spring lever, Rear	1
4	514002	Slide, Idler shaft	1
5	374044	Bridge plate, Web	1
6	990080	10-32 x 3/8 Cap screw	4
7	990313	Thumb screw knob, #10	4
8	514003	Pin, Spring anchor	2
9	354008A	Gear, Idler	1
10	354009A	Gear, Driven	1
11	514094	Lift cam ass'y	1
12	374047	Feed knob / SS	1
13	991170A	Extension spring	2
14	990023	6-32 x 1/2 Flat head screw	1

Item	Part #	Description	Qty
15	374016	Bridge blade, Lower	1
16	354094	Roller, Drive ass'y	1
17	991019	Bushing, 3/8 x 3/4 x 1/16	1
18	990416	1/4-20 x 1/2 Flat head screw	1
19	354014	Roller, Molded	1
20	354017	Shaft, Idler	1
21	374087	Ass'y, Outer drive support	1
22	990120	1/4-20 x 1/2 Cap screw	5
23	374088	Ass'y, Rear drive support	1
24	355018	Support, Knife / Drive / Print	1
25	514001	Shaft, Idler roller	1
26	990057	8-32 x 1/8 Knurled cup point	1
27	990058	8-32 x 1/4 Knurled cup point	2
28	514090	Tape roller molded, Ass'y	1

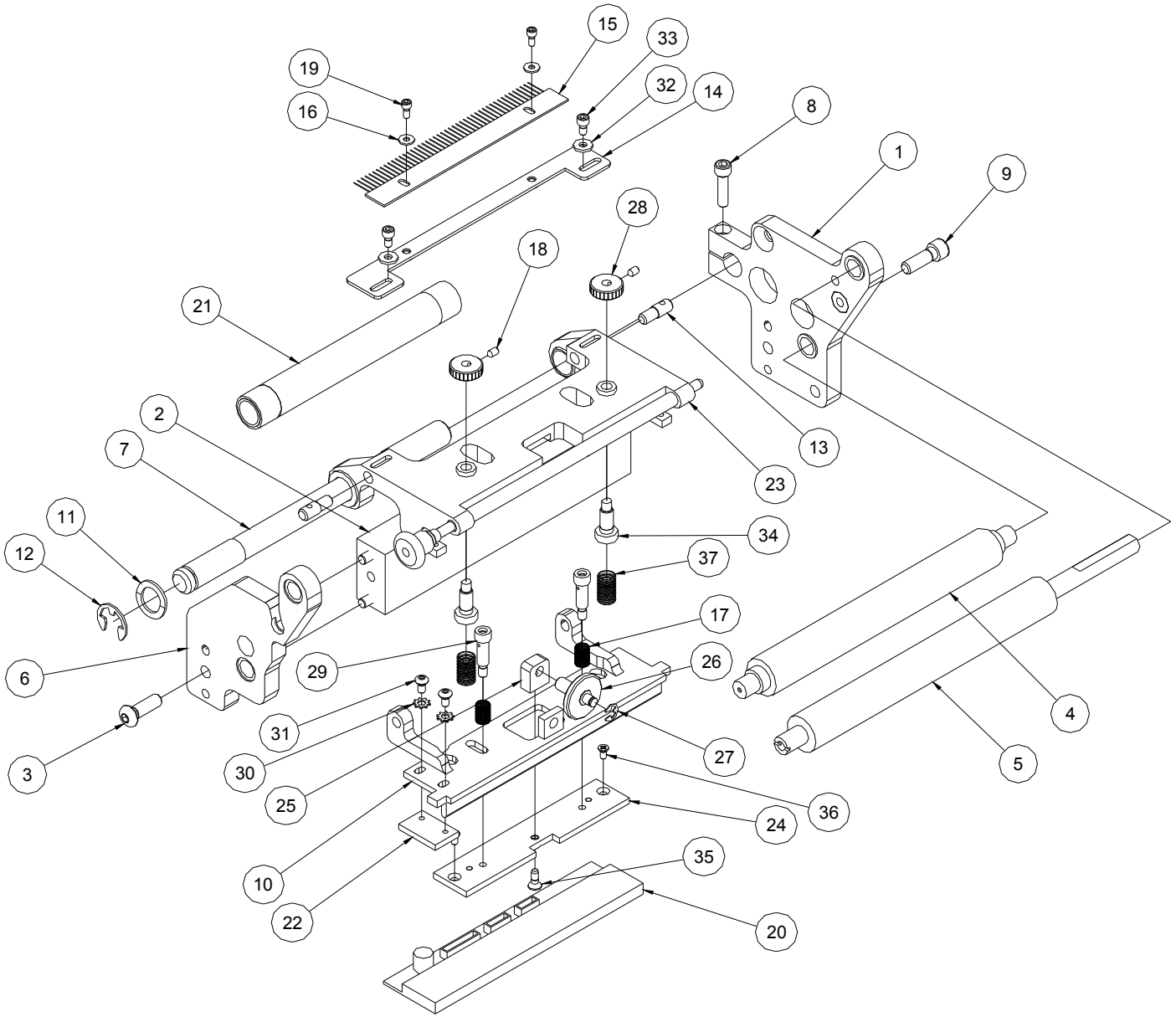
Top Auxiliary Feed Assembly Drawing



Top Auxiliary Feed Parts List

Item	Part #	Description	Qty
1	374025	Pre-feed plate	1
2	374026	Plate, Support	2
3	990003	4-40 x 1/4 Flat head screw	4
4	991051	4-40 Captive screw	1
5	354022	Spring, Eccentric lift	2
6	999070	Bushing, 3/16 x 5/16 x 5/16 Fl Oilite	2
7	354013	Idler roller, Molded	1

Top - Printhead Assembly Drawing



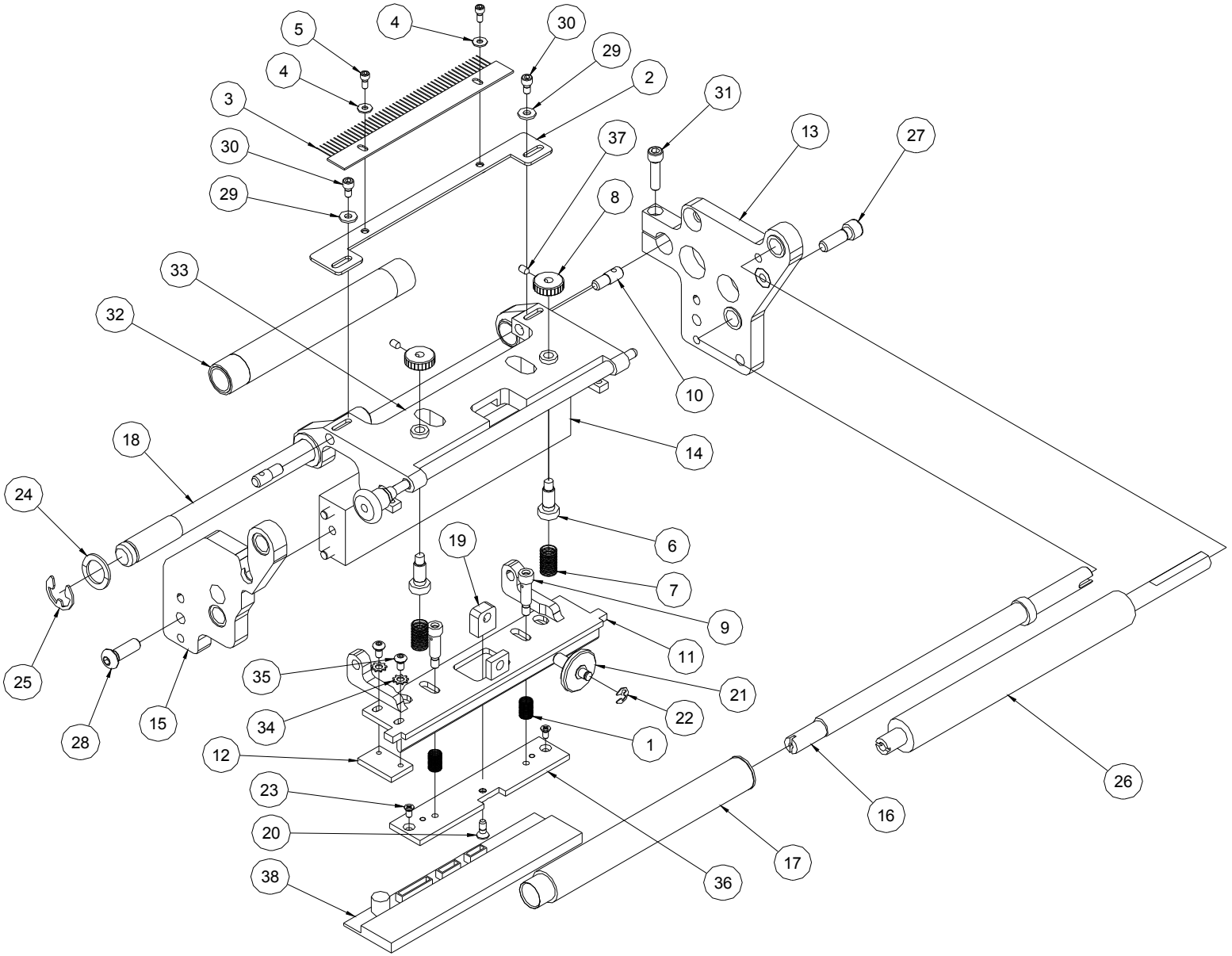
Top - Printhead Parts List

Item	Part #	Description	Qty
1	375087	Support rear ass'y	1
2	375085	Support beam print assembly	1
3	990135	1/4-20 x 3/4 Button head screw	1
4	355029	90 Durometer molded roller 636	1
5	356020	Roller, Molded (ink)	1
6	375088	Support front assembly	1
7	375014	Shaft, Head mount	1
8	990083	10-32 x 3/4 Cap screw	1
9	990122	1/4-20 x 3/4 Cap screw	1
10	375005	Plate, Print head mount	1
11	990497	Washer, 1/2" Wave	1
12	990328	Snap ring, 1/2 "e" Ring	1
13	355037	Pin, Pivot ns	2
14	376051	Bracket, Static brush, mount	1
15	376052	Electrical, Static brush bracket	1
16	990448	Washer, .125 x .313 x .031 FL	2
17	991081	Spring, Compression	2
18	991025	6-32 x 3/16 Cone point set screw	2
19	990006	4-40 x 1/4 Cap screw	2

Item	Part #	Description	Qty
20	371102	Printhead, 676, 300 DPI, LS5405	1
21	376032	Assembly, Ink turn roller	1
22	375016	Plate, Locator, Print head	1
23	375089K3	Printhead holder ass'y kit (sta 3)	1
24	375086	Plate printhead mount	1
25	375021	Block, Head adjust	1
26	375022	Knob, Head adjust	1
27	990325	Snap ring, 3/16 e-Ring	1
28	375043	Knob, Adjustment	2
29	375039	Shaft, Head lock	2
30	989976	Washer, #6 Star	2
31	990019	6-32 x 1/4 Button head screw	2
32	990037	Washer, #6 SAE	2
33	990016	6-32 x 3/8 Cap screw	2
34	375044	Holder, Spring	2
35	990028	6-32 3/8 Flat head screw	1
36	989543	3mm x 6mm Flat head screw	2
37	991124	Spring, Compression	2

(*NS) = Not Shown

Ink-Save Printhead Assembly Drawing



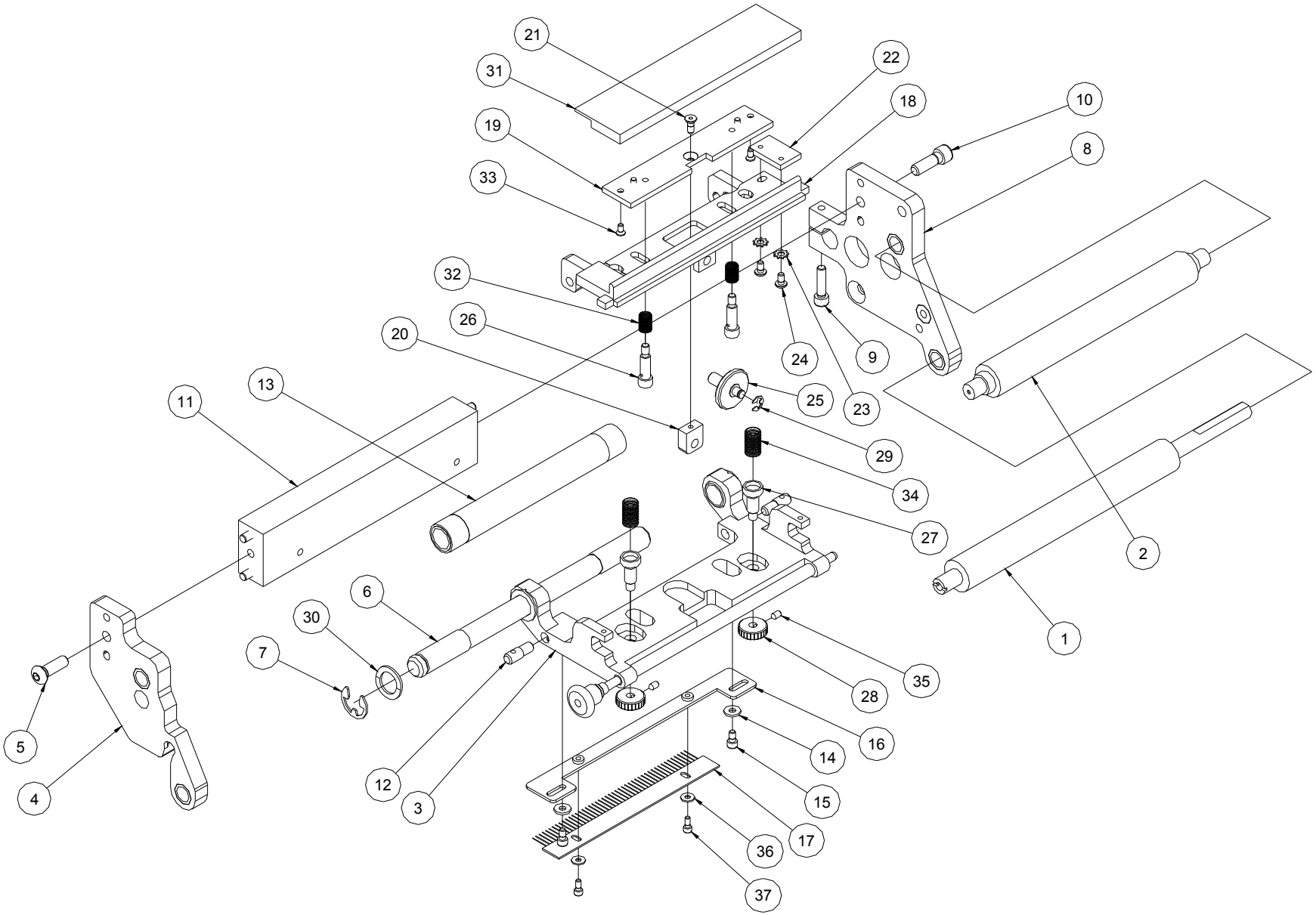
Ink - Save Printhead Parts List

Item	Part #	Description	Qty
1	991081	Spring, Compression	2
2	376051	Bracket, Static brush, Mount	1
3	376052	Bracket, Static brush	1
4	990448	Washer, .125 x .313 x .031	2
5	990006	4-40 x 1/4 Cap screw	2
6	375044	Spacer, Spring holder	2
7	991124	Spring, Compression	2
8	375043	Knob, Adjustment	2
9	375039	Shaft, Head lock	2
10	355037	Pin, Pivot	2
11	375005	Plate, Print head mount	1
12	375016	Plate, Locator, Print head	1
13	375087	Support, Rear ass'y	1
14	375085	Support beam, Print ass'y	1
15	375088	Support, Front ass'y	1
16	355004	Shaft, Eccentric (print)	1
17	355083	656 Roller ass'y, 90 Durometer	1
18	375014	Shaft, Head mount	1
19	375021	Block, Head adjust	1

Item	Part #	Description	Qty
20	990028	6-32 x 3/8 Flat head screw	1
21	375022	Knob, Head adjust	1
22	990325	Snap ring, 3/16 e-ring	1
23	989543	3mm x 6mm Flat head screw	2
24	990497	Washer, 1/2 Wave	1
25	990328	Snap ring, 1/2 e-Ring	1
26	356020	Roller, Molded	1
27	990122	1/4-20 x 3/4 Cap screw	1
28	990135	1/4-20 x 3/4 Button head screw	1
29	990037	Washer, #6 SAE	2
30	990016	6-32 x 3/8 Cap screw	2
31	990083	10-32 x 3/4 Cap screw	1
32	376032	Ass'y, Ink turn roller	1
33	375089K2	Print head holder ass'y kit (st 2)	1
34	989976	Washer, #6 Star	2
35	990019	6-32 x 1/4 Button head screw	2
36	375086	Plate, Print head mount	1
37	991025	6-32 x 3/16 Cone point set screw	2
38	371102	Print head, 676, 300 dpi, LS5405	1

(*NS) = Not Shown

Bottom - Printhead Assembly Drawing



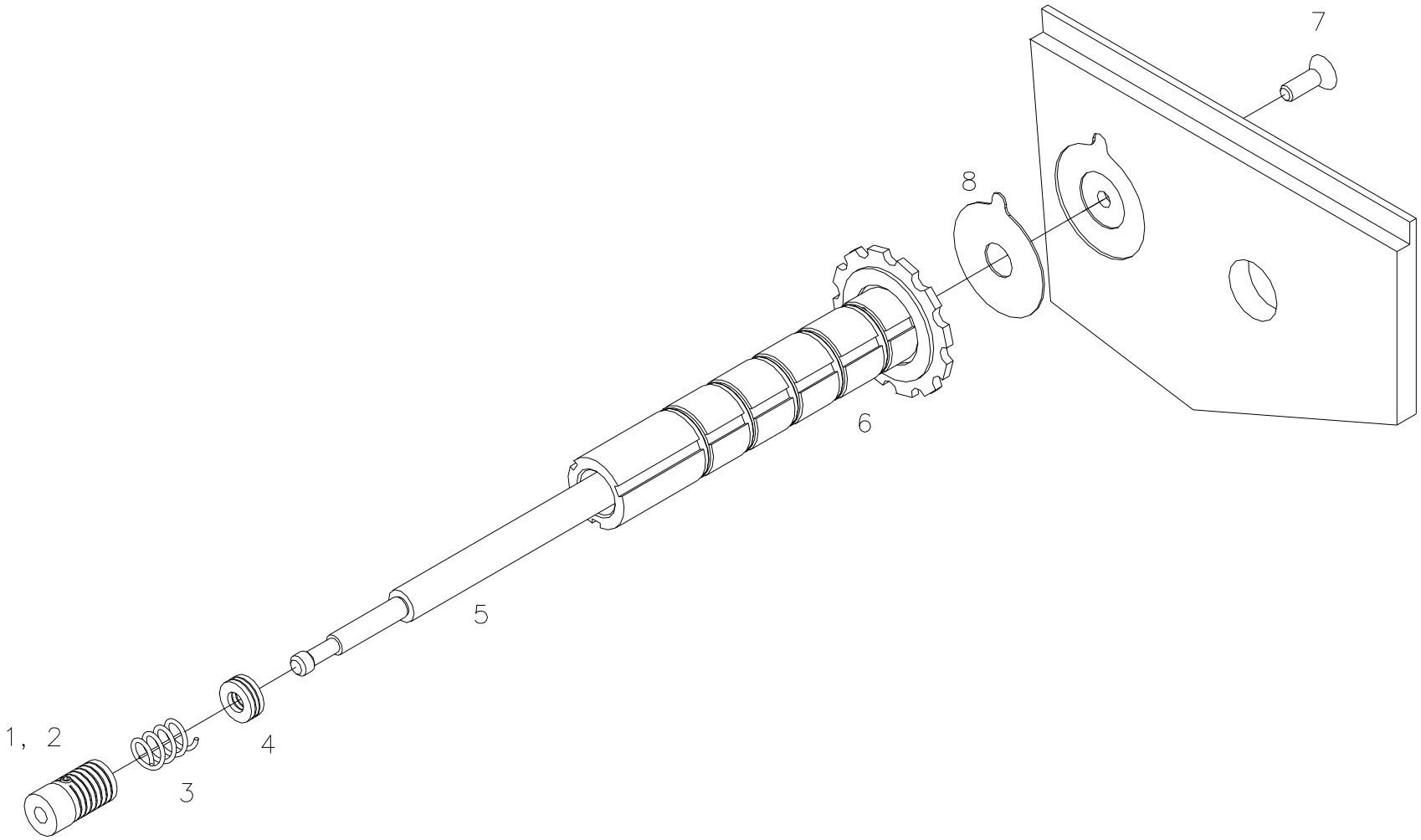
Bottom - Printhead Parts List

Item	Part #	Description	Qty
1	356020	Roller, Molded (ink)	1
2	355029	90 Durometer molded roller	1
3	375089K1	Print head holder ass'y kit (sta #1)	1
4	375083	Support front ass'y (bottom)	1
5	990135	1/4-20 x 3/4 Button head screw	1
6	375014	Shaft, Head mount	1
7	990328	Snap ring, 1/2 e-Ring	1
8	375084	Support rear ass'y (bottom)	1
9	990083	10-32 x 3/4 Cap screw	1
10	990122	1/4-20 x 3/4 Cap screw	1
11	375085	Support beam print ass'y	1
12	355037	Pin, Pivot	2
13	376032	Ass'y, Ink turn roller	1
14	990037	Washer, #6 SAE	2
15	990016	6-32 x 3/8 Cap screw	2
16	376051	Bracket, Static brush mount	1
17	376052	Bracket, Static brush	1
18	375003	Plate, Print head mount	1
19	375086	Ass'y, Plate, Print head mount	1

Item	Part #	Description	Qty
20	375021	Block, Head adjust	1
21	990028	6-32 x 3/8 Flat head screw	1
22	375016	Plate, Locator, Print head	1
23	989976	Washer, #6 Star	2
24	990019	6-32 x 1/4 Button head screw	2
25	375022	Knob, Head adjust	1
26	375039	Shaft, Head lock	2
27	375044	Spacer, Spring holder	2
28	375043	Knob, Adjustment	2
29	990325	Snap ring, 3/16 e-Ring	1
30	990497	Washer, 1/2 Wave	1
31	371102	Print head, 676, 300 DPI, LS5405	1
32	991081	Spring, Compression	2
33	989543	3mm x 6mm Flat head screw	2
34	991124	Spring, Compression	2
35	991025	6-32 x 3/16 Cone point set screw	2
36	990448	Washer, .125 x .313 x .031	2
37	990006	4-40 x 1/4 Cap screw	2

(*NS) = Not Shown

Ink Unwind Assembly Drawing

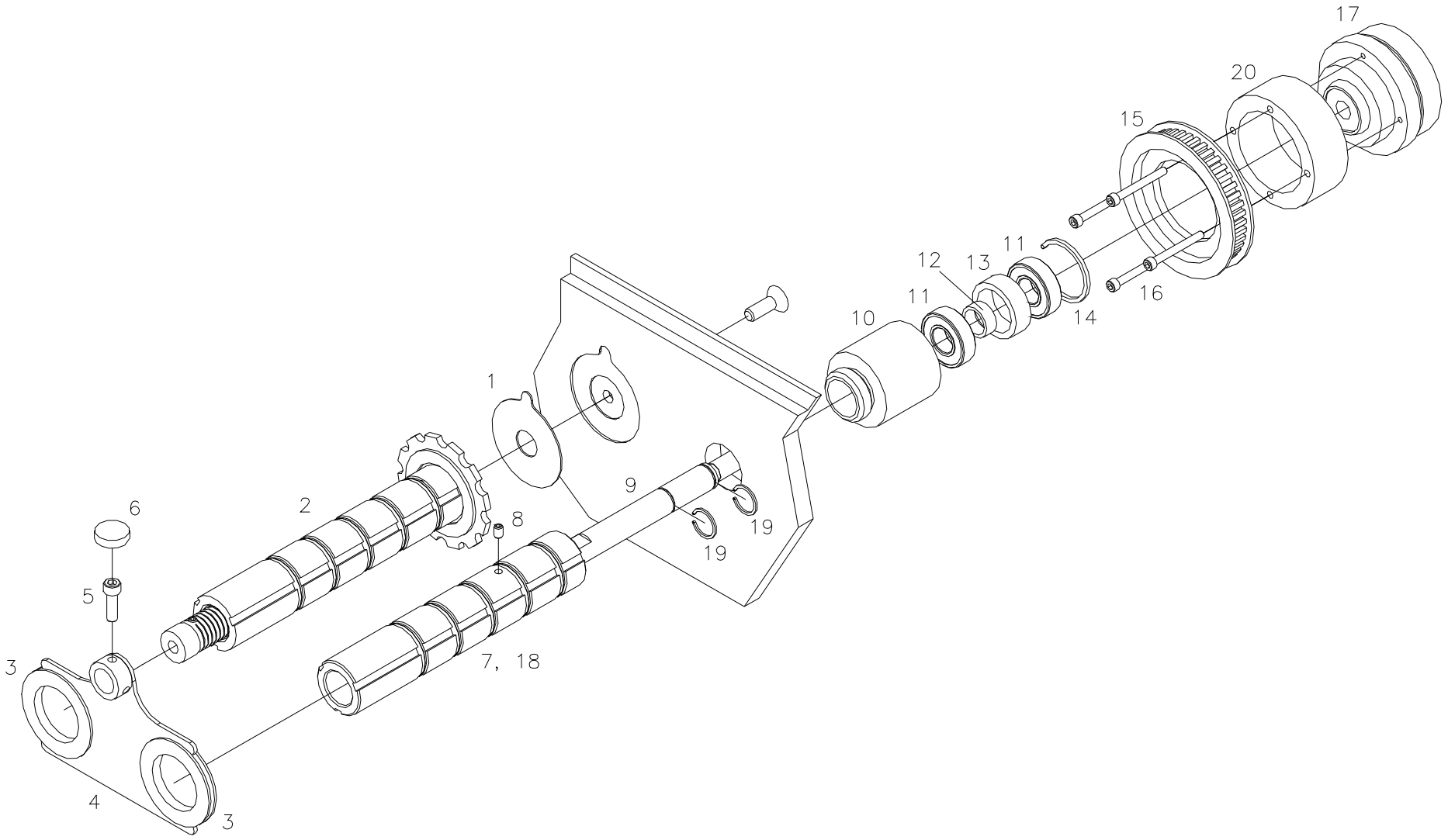


Ink Unwind Parts List

Item	Part #	Description	Qty
1	356010	Shaft, Lock	1
2	990042	8-32 x 3/16 Knurled Cup Point	1
3	990490	Spring, Comp	1
4	999009	5/16 Thrust Bearing	1
5	356053	Shaft, Unwind	1
6	376088	Arbor, Unwind Assembly	1
7	990133	¼-20 x ¾ Flat Head Screw	1
8	376026	Unwind Fiber Spacer	1

(*NS) = Not Shown

Ink Rewind Assembly Drawing



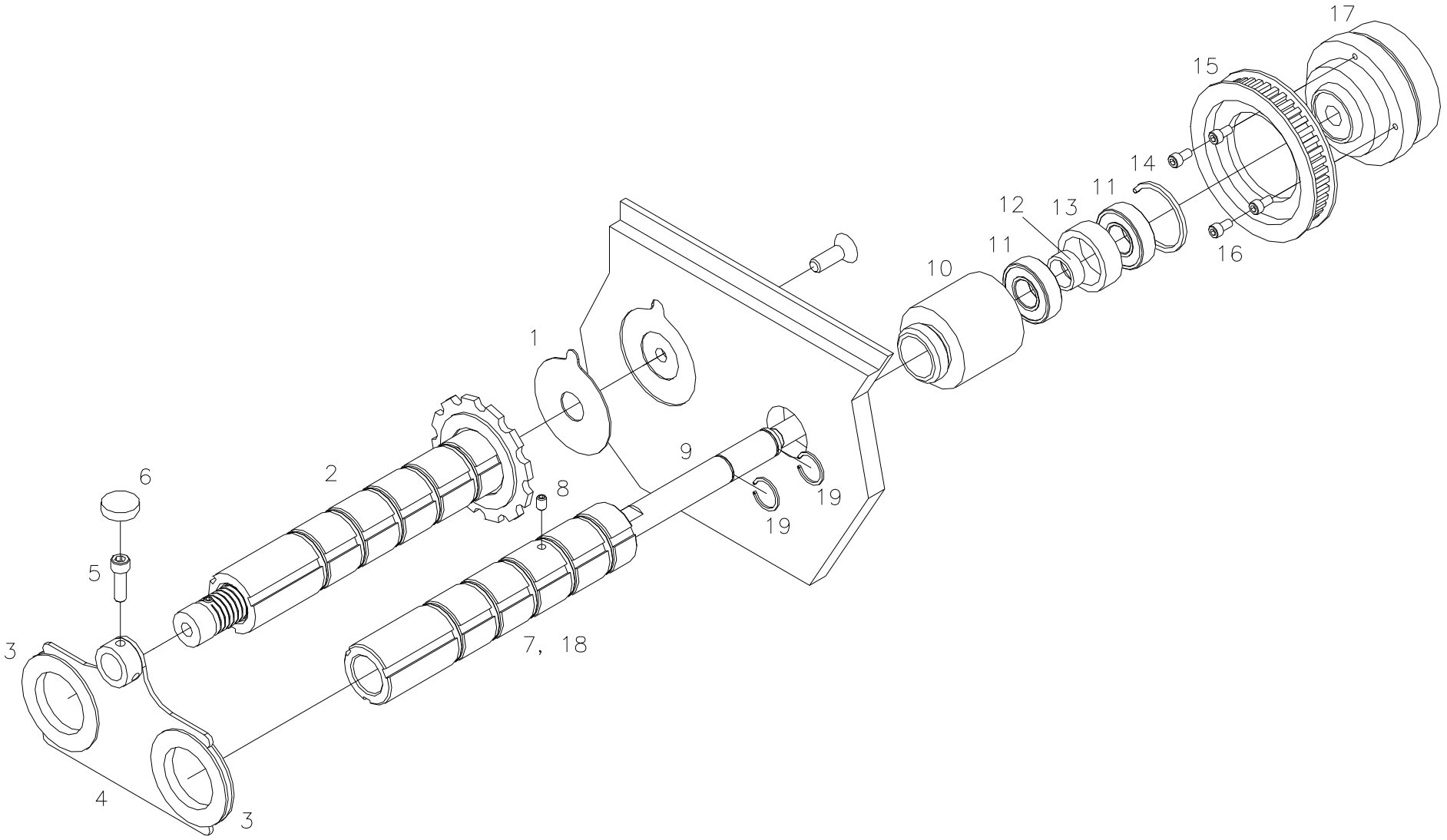
Ink Rewind Parts List

Item	Part #	Description	Qty
1	376026	Unwind Fiber Spacer	1
2	376092	Arbor Unwind Assembly	1
3	376003	Collar Foil Guide	2
4	376002	Ink Guide	1
5	990080	10-32 x 3/8 Cap Screw	1
6	990313	#10 Thumb Cap	1
7	356204K	Arbor Rewind Assembly	1
8	990058	8-32 x ¼ Set Screw	1
9	356203	Shaft, Rewind	1
10	376016	Bearing Housing	1

Item	Part #	Description	Qty
11	999002	Bearing	2
12	376023	Bearing Spacer	1
13	376025	Bearing Spacer	1
14	991018	Internal Snap Ring	1
15	376022	Sprocket Altered	1
16	991086	6-32 x 1 ¼ Cap Screw	4
17	356201	Magnetic Clutch	1
18	990355	O-Ring ¾”	5
19	991089	Retaining Ring ½”	2
20	356202	Collar, Sprocket Mount	1

(*NS) = Not Shown

Ink Rewind w/ Head-Lift Assembly Drawing



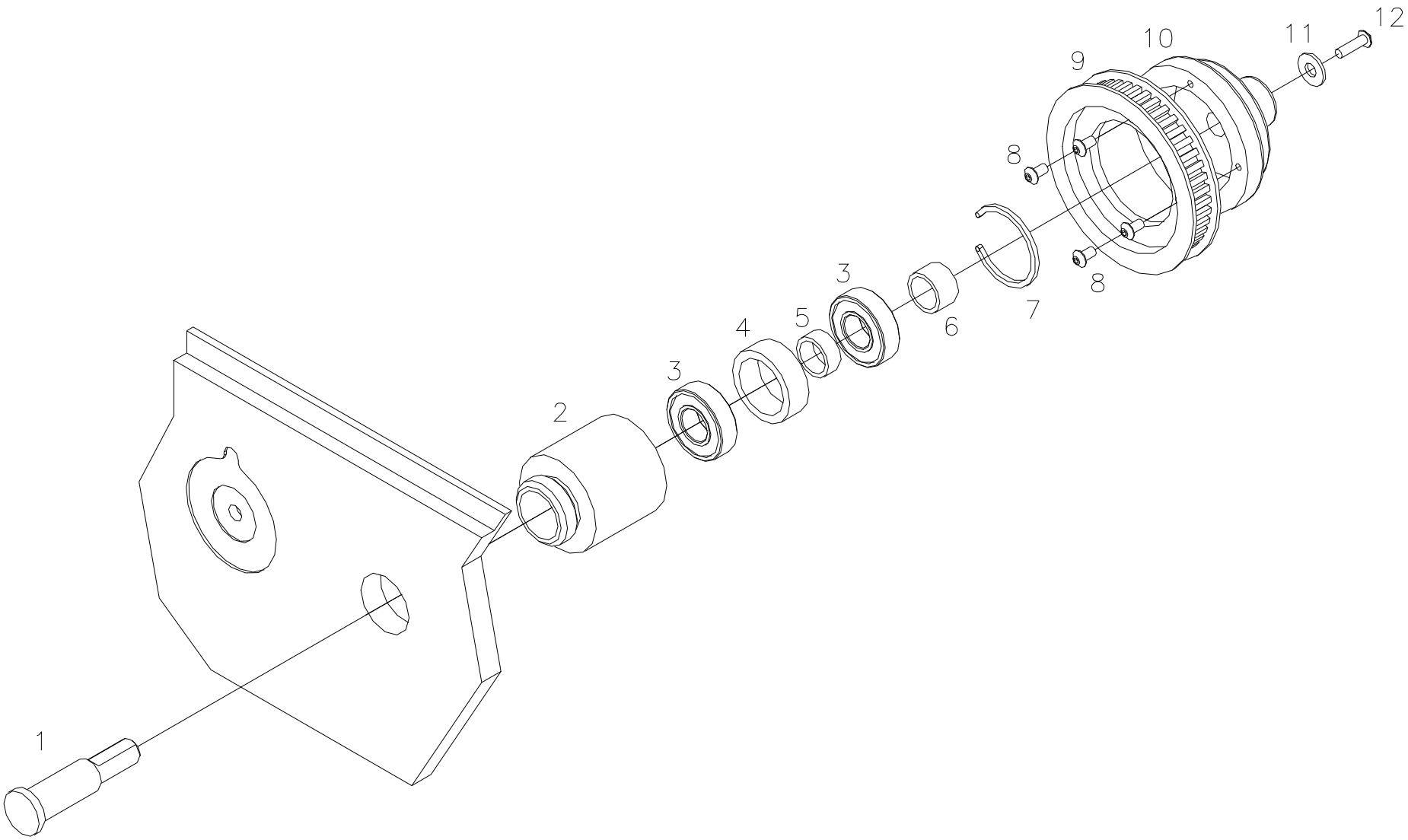
Ink Rewind w/Head-Lift Parts List

Item	Part #	Description	Qty
1	376026	Unwind Fiber Spacer	1
2	376092	Arbor Unwind Assembly	1
3	376003	Collar Foil Guide	2
4	376002	Ink Guide	1
5	990080	10-32 x 3/8 Cap Screw	1
6	990313	#10 Thumb Cap	1
7	356204	Arbor	1
8	990058	8-32 x ¼ Set Screw	1
9	356203	Shaft, Rewind	1
10	376016	Bearing Housing	1

Item	Part #	Description	Qty
11	999002	Bearing	2
12	376023	Bearing Spacer	1
13	376025	Bearing Spacer	1
14	991018	Internal Snap Ring	1
15	376022	Sprocket Altered	1
16	990015	6-32 x ¼ Cap Screw	4
17	356201	Magnetic Clutch	1
18	990355	O-Ring ¾”	5
19	991089	Retaining Ring ½”	2

(*NS) = Not Shown

Ink Rewind - Station 3 - 1 over 1 - Assembly Drawing



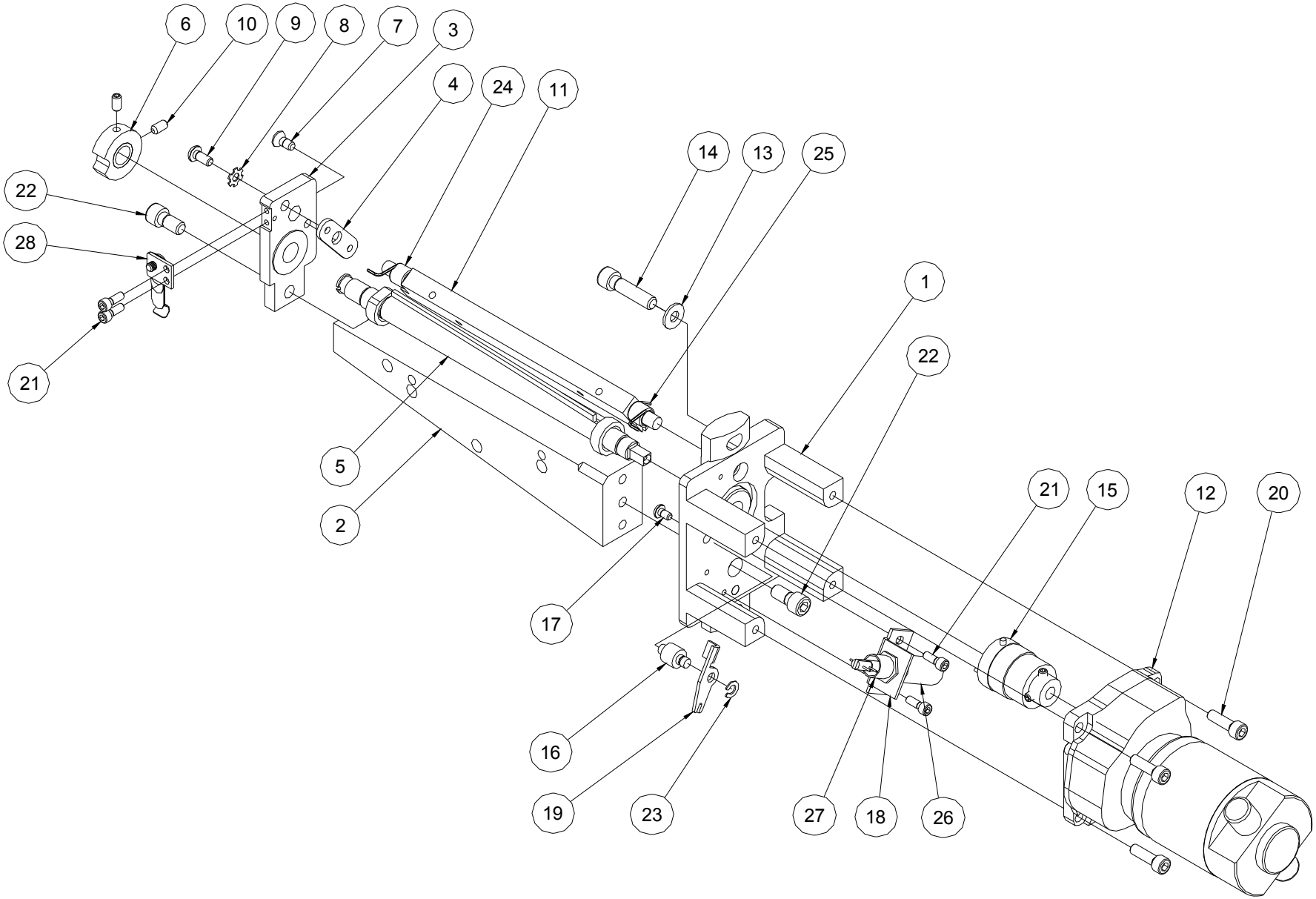
Ink Rewind - Station 3 – 1 over 1 - Parts List

Item	Part #	Description	Qty
1	376028	Stub Shaft, Ink Rewind	1
2	376016	Bearing Housing	1
3	999002	Bearing	2
4	376025	Bearing Spacer	1
5	376023	Bearing Spacer	1
6	376024	Bearing Spacer	1
7	991018	Snap Ring, Internal	1

Item	Part #	Description	Qty
8	990019	6-32 x ¼ Button Head Screw	4
9	376022	Sprocket Altered	1
10	376014	Adapter, Ink Sprocket	1
11	990102	Washer, #10 SAE	1
12	990091	10-32 X ½ Button Head Screw	1
13	991084	8-32 x ¼ Set Screw (*NS)	1

(*NS) = Not Shown

Knife Assembly Drawing

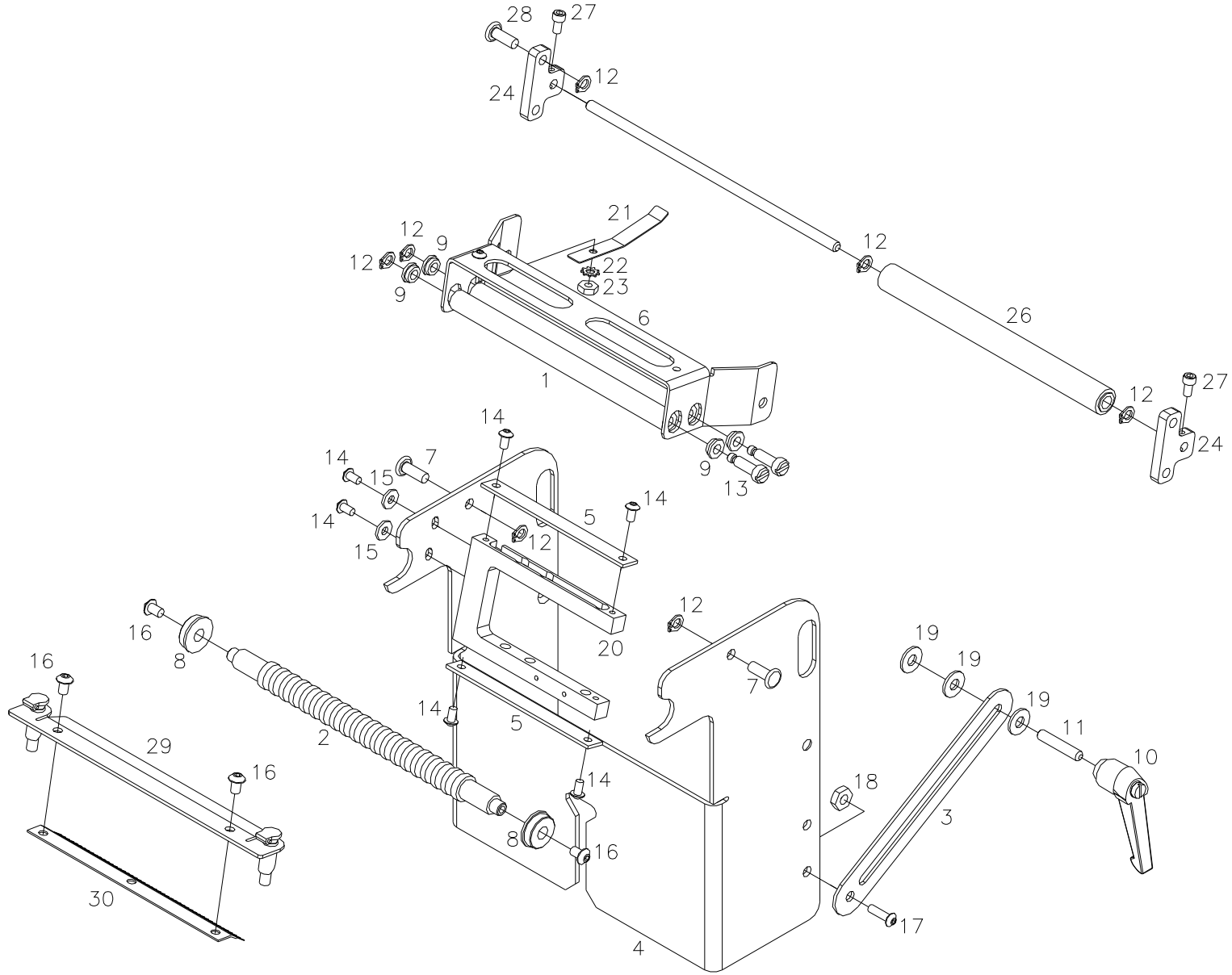


Knife Parts List

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 lite, 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	

Stacker Assembly Drawing (Part 1)

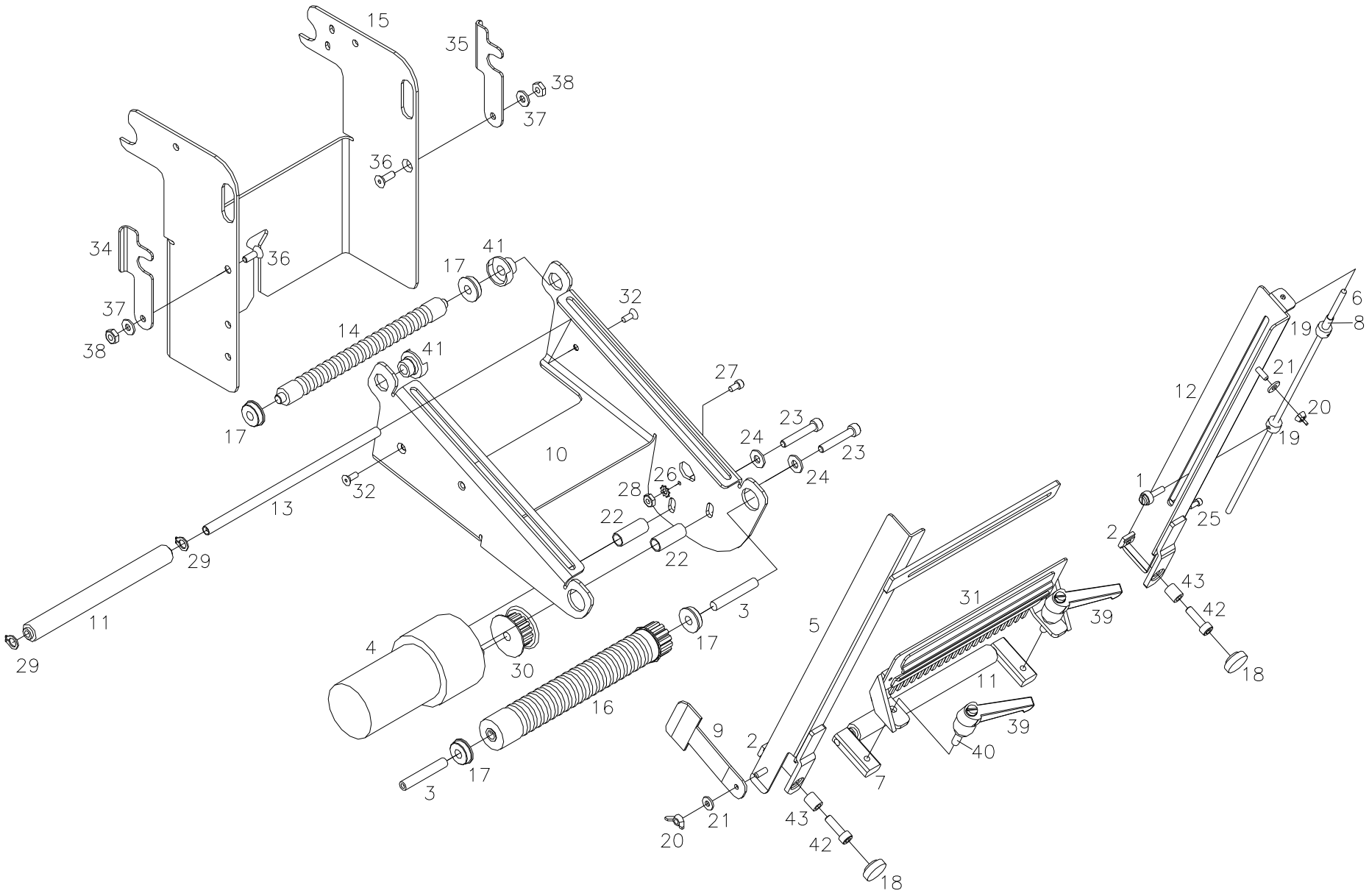


Stacker Parts List (Part 1)

Item	Part #	Description	Qty
1	378050	Roller, Pressure	2
2	378055	Roller, Front Idler	1
3	378057	Bracket, Lock	1
4	378058	Bracket, Stacker Base	1
5	378060	Bracket, Sensor Guard Strip	2
6	378054	Bracket, Roller Mount	1
7	990403	Rivet, 3/16 x 1/2 Flat Head	2
8	999014	1/4 x 5/8 FL. Ball Bearing	2
9	999100	Bushing, FL. 3/16 x 5/16 x 1/8	4
10	144034	Feed Lock Knob	1
11	989979	10-32 x 1 Knurled Cup Point	1
12	990261	Snap Ring, 3/16	7
13	990446	.188 x .50 x 8-32 Shoulder Screw	2
14	990019	6-32 x 1/4 Button Head Screw	7
15	990037	Washer, #6 SAE	2

Item	Part #	Description	Qty
16	990066	8-32 x 1/4 Button Head Screw	4
17	990091	10-32 x 1/2 Button Head Screw	1
18	990104	10-32 E-S Nut	1
19	990102	Washer, #10 SAE	3
20	378064	Bracket, Jam Sensor	1
21	518001	Bracket, Roller Clip	1
22	989976	Washer, #6 Star	1
23	989987	6-32 E-S Nut	1
24	518002	Bracket, Roller Mount	2
25	358016	Shaft, Roller	1
26	378048	Ass'y, Belt Tension Roller	1
27	990015	6-32 x 1/4 Cap Screw	2
28	990404	Rivet, 3/16 x 3/4	1
29	357095	Oiler Mount Assembly	1
30	357011	Static Brush	1

Stacker Assembly Drawing (Part 2)



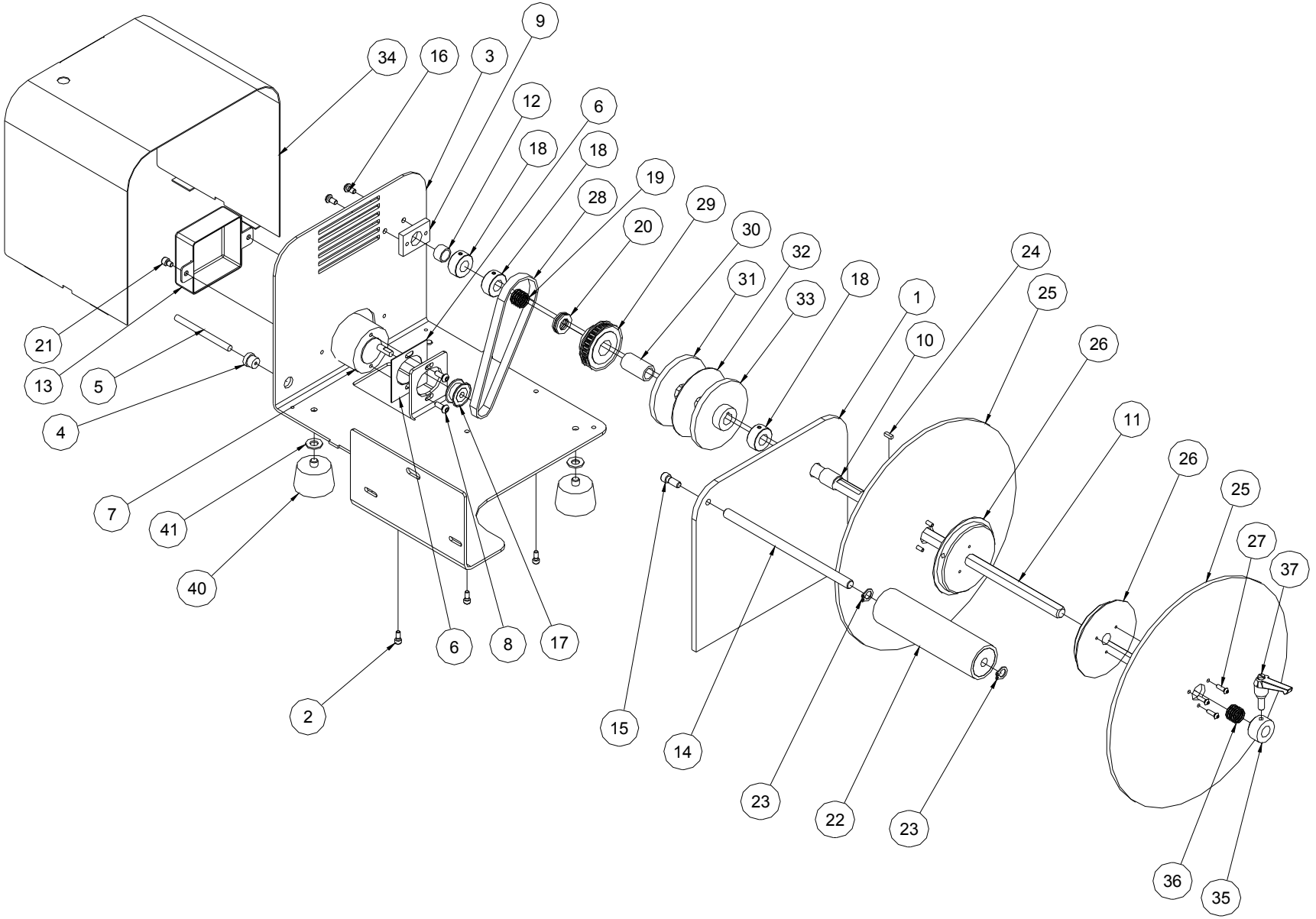
Stacker Parts List (Part 2)

Item	Part #	Description	Qty
1	184002	Thumb Screw Lock Knob	1
2	188008	"T" Nut, Machined Square	2
3	348015	Shaft, Roller Pin	2
4	351161	Stacker Motor Harnessed	1
5	358007	Rail, Front Stacker	1
6	358013	Trip Rod	1
7	358015	Support, Roller	1
8	358017	Spring, Trip Rod	2
9	358020	Support, Label Side	1
10	358033	Bracket, Stacker Support	1
11	358094	Roller, Stacker Support Ass'y	2
12	378005	Rail, Rear Stacker	1
13	378052	Shaft, Tension Roller	1
14	378056	Roller, Idler Center	1
15	378058	Bracket, Stacker Base	1
16	378097	Assembly, Stacker Roller	1
17	999014	1/4 x 5/8 FL. Ball Bearing	4
18	990313	#10 Thumb Screw Knob	2
19	990369	1/8" Collar	2
20	990641	6-32 Wing Nut	2
21	990037	Washer, #6 SAE	2
22	990450	Standoff, 3/8 x 15/16 Round Spacer	2

Item	Part #	Description	Qty
23	990085	10-32 x 1-1/4 Cap Screw	2
24	990102	Washer, #10 SAE	2
25	990006	4-40 x 1/4 Cap Screw	2
26	989976	Washer, #6 Star	1
27	990015	6-32 x 1/4 Cap Screw	1
28	990038	#6 Hex Nut	1
29	990262	Snap Ring, 1/4"	2
30	991007	Pulley, 15T, 1/4 ID, 1/5	1
31	378061	Slide, Stacker Rail	1
32	990028	6-32 x 3/8 Flat Head Screw	2
33	378041	O-Ring (*NS)	19
34	558006	Bracket, Roller Lock, Front	1
35	558007	Bracket, Roller Lock, Rear	1
36	990056	8-32 x 1/2 Flat Head Screw	2
37	990272	Washer, #8 Belleville	2
38	991157	8-32 E-S Nut	2
39	144034	Feed Lock Knob	2
40	989979	10-32 x 1 Knurled Cup Point	2
41	558008	Drive, Bearing Support	2
42	990082	10-32 x 5/8 Cap Screw	2
43	999095	3/16 x 5/16 x 3/8 Bushing	2

(*NS) = Not Shown

Rewind Assembly Drawing



Rewind Parts List

Item	Part #	Description	Qty
1	111030	Upright, 656 Rewind	1
2	989974	8-32 x 3/8 Cap screw	3
3	111029	Base, 656 Rewind	1
4	990812	Strain relief	1
5	351183	636 / 656 Rewind harness	1
6	112036	Insulator, Motor	1
7	351161	Stacker motor, Harnessed	1
8	990091	10-32 x 1/2 Button head screw	2
9	112037	Support, Shaft bearing	1
10	999147	Bushing, 1/2 x 5/8 x 3/4	1
11	112033	Shaft, 6x6 Rewind	1
12	999116	Bushing, 1/2 x 5/8 x 3/8	1
13	111034	Cover, Drive motor	1
14	112034	Shaft, Decurler	1
15	990121	1/4-20 x 5/8 Cap screw	1
16	990090	10-32 x 3/8 Button head screw	2
17	197078	Pulley, Turn roller driven	1
18	990374	Collar, 1/2	3
19	990465	Spring	1
20	999017	1/2 Thrust ball bearing	1
21	990079	10-32 x 1/4 Cap screw	2

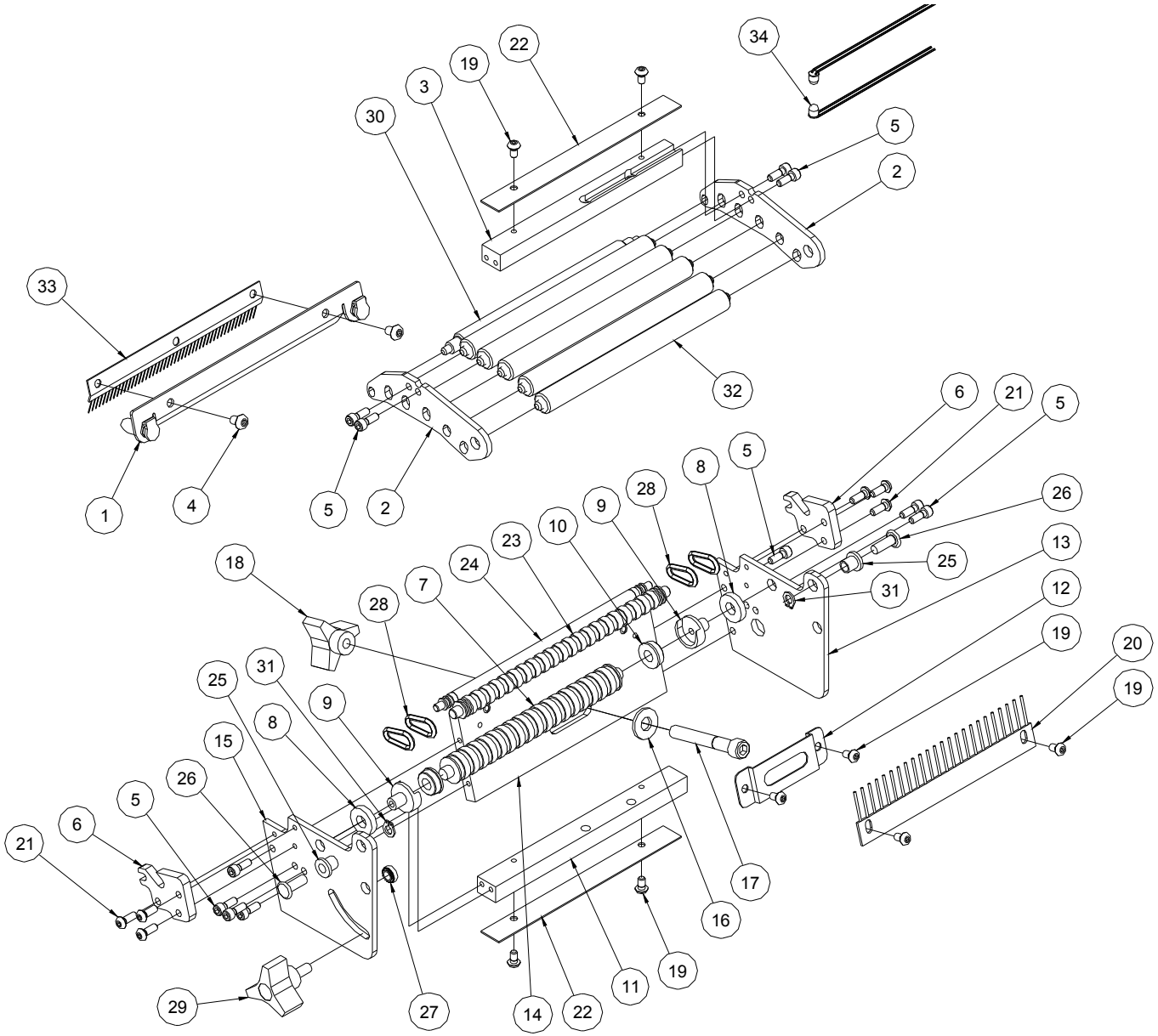
Item	Part #	Description	Qty
22	111027	Roller, Decurler assembly	1
23	990264	Snap ring, 3/8	2
24	112035	Key, 1/8 x 1/8 x 3/8	1
25	111031	Disc, 10' Rewind	2
26	111033	Hub, 3" Core insert	2
27	990192	6-32 x 1/2 Button head screw	6
28	112031	Timing belt, 67T, 1/5P	1
29	112005	Pulley, 2/8T, 1/5P, Alt	1
30	999053	1/2 x 3/4 Needle bearing	1
31	112030	Disc, Drive	1
32	112032	Disc, Friction	1
33	112028	Disc, Driven	1
34	111201	Cover, 6x6 Rewind	1
35	111006	Pressure collar	1
36	111017	Press collar spring	1
37	112009	Rewind lock knob	1
38	111110	Harness, Toggle switch (NS)	1
39	359006	Fuse, Stacker harness (NS)	1
40	191004	Foot, Machine	3
41	990180	Washer, 5/16 SAE	3

(*NS) = Not Shown

Optional 4 1/4” Stacker Specifications

- 4 ¼” (108mm) Web x 3 1/2” (89mm) Feed
- Will work on 636, 656, 676 and 545
- 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 & 545 and the 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.

Optional 4 1/4” Pick-up Assembly



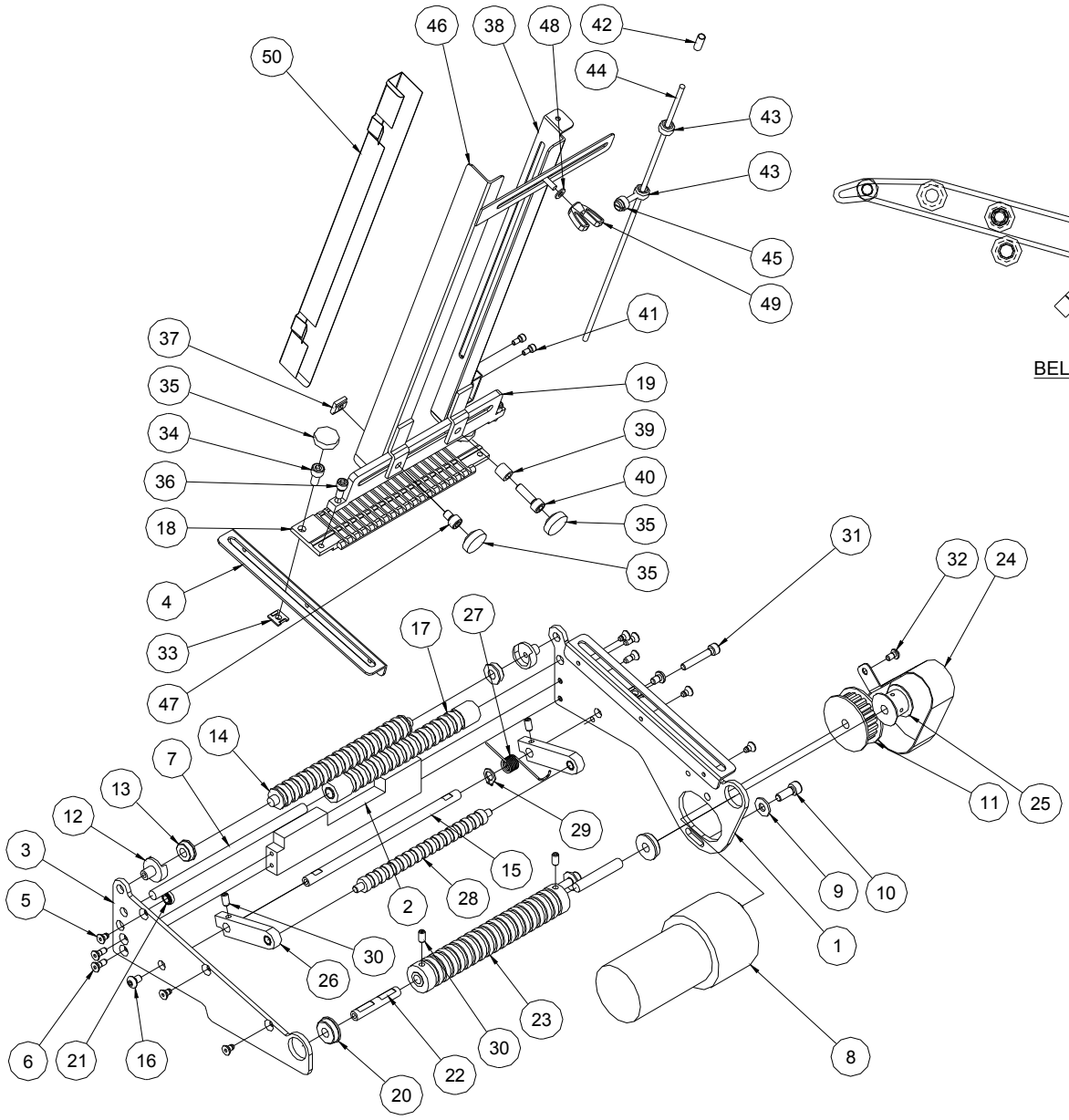
Optional 4 1/4” Pick-up Parts List

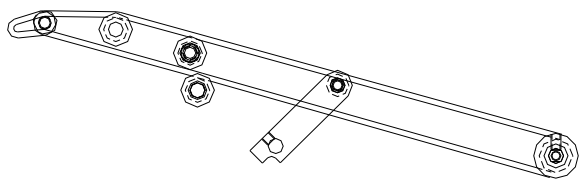
Item	Part #	Description	Qty
1	378291	Oiler mount / Knife protector	1
2	348107	Support, Roller	2
3	378204	Sensor, Mount upper	1
4	990066	8-32 x 1/4 Button head screw	2
5	990016	6-32 x 3/8 Cap screw	12
6	348105	Support, Pick-up roller	2
7	348021	Roller, Idler	1
8	348109	Spacer, Pivot roller	2
9	348016	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 1/4” Stacker Assembly





BELT DIAGRAM

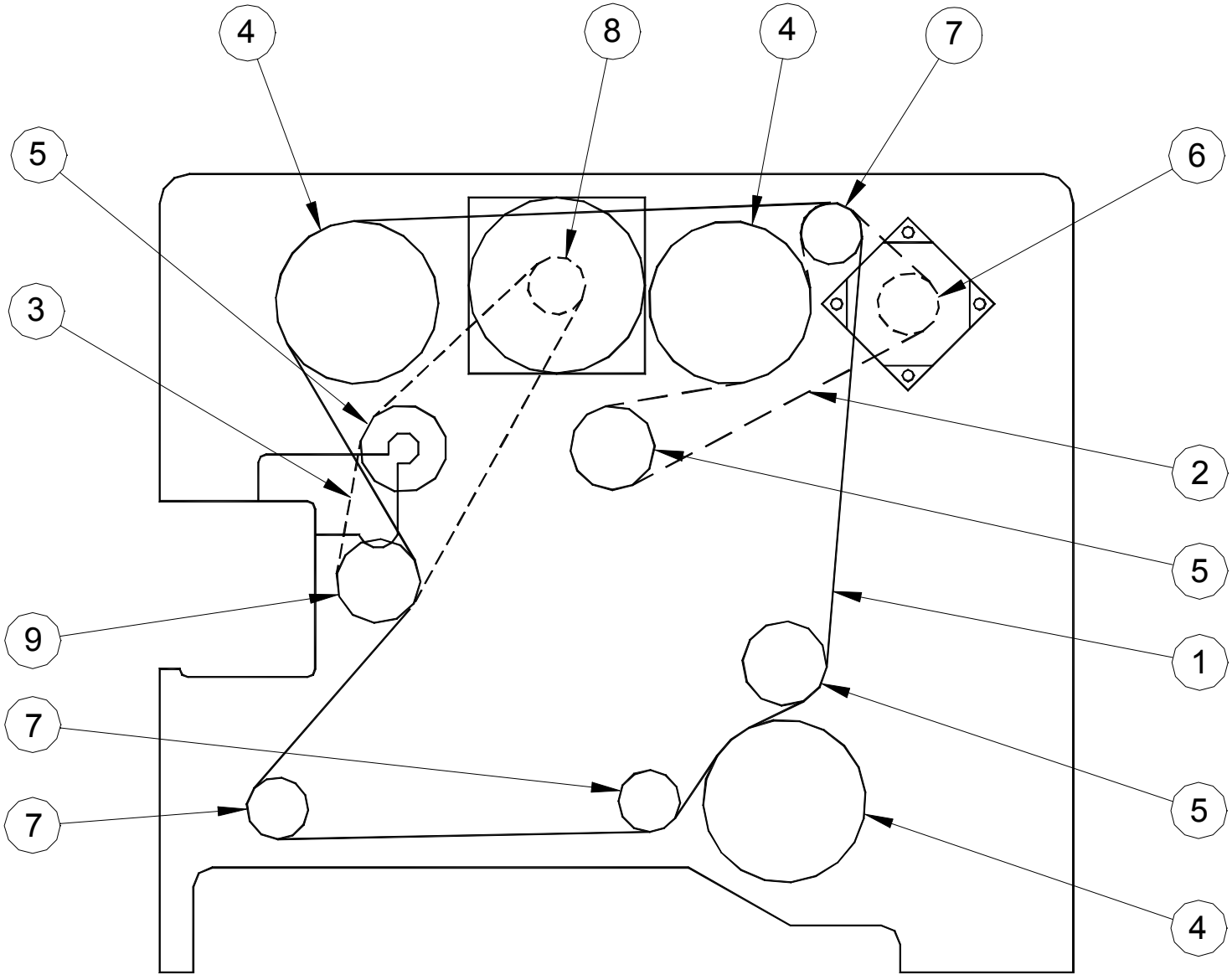
Optional 4 1/4” Stacker Parts List

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

(*NS) = Not Shown

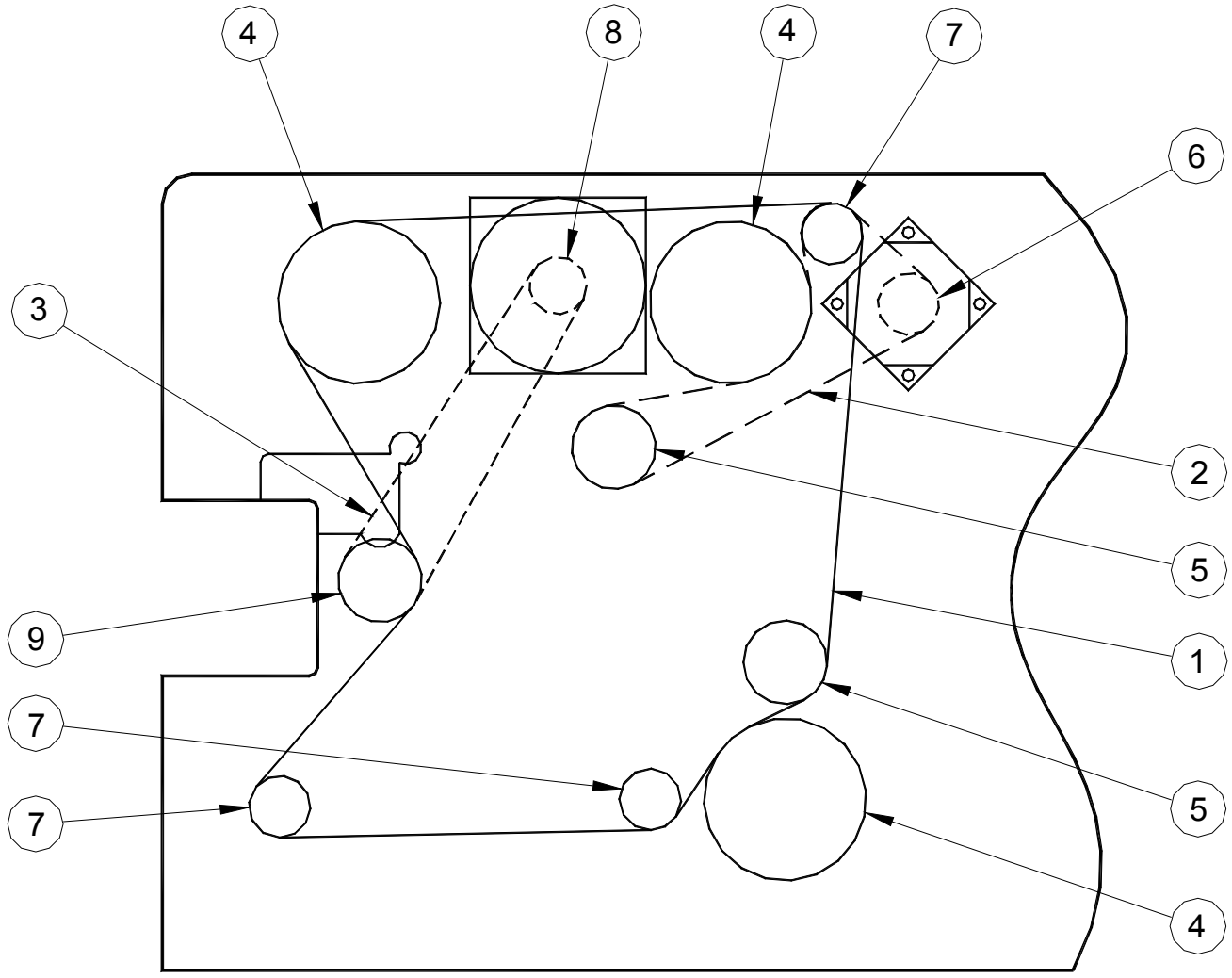
Drive Belt Routing (2 over 1) Drawing



Drive Belt Routing (2 over 1) Parts List

Item	Part #	Description	Qty
1	374006	“Long Belt” Double Sided	1
2	374020	“Short Belt” Double Sided	1
3	374005	“Short Belt” Single Sided – 86T	1
4	376022	Sprocket Altered	3
5	356029	Pulley, 26T 1/5P	3
6	284025	Pulley, 14T DFL ¼ ID	1
7	244012	Pulley, 14T SFL ¼ ID	3
8	374028	Pulley, 14T DBL 3/8 ID	1
9	374007	Pulley, Double Drive	1

Drive Belt Routing (1 over 1) Drawing



Drive Belt Routing (1 over 1) Parts List

Item	Part #	Description	Qty
1	374006	“Long Belt” Double Sided	1
2	374020	“Short Belt” Double Sided	1
3	374021	"Short Belt” Single Sided - 84T	1
4	376022	Sprocket Altered	3
5	356029	Pulley, 26T 1/5P	2
6	284025	Pulley, 14T DFL ¼ ID	1
7	244012	Pulley, 14T SFL ¼ ID	3
8	374028	Pulley, 14T DBL 3/8 ID	1
9	374007	Pulley, Double Drive	1