Users Manual

Snap 700 Linear Knife

Addendum

AVERY DENNISON

Manual Edition 2.2

7 February 2014

Manual Part Number 621395

WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) this device may not cause harmful interference, and
2) this device must accept any interference that may cause undesired operations.

This Class A digital apparatus meets all requirements of the Canadian Interference
Causing Equipment Regulations. Cet appareil numerique de la classe A respecte toutes les exigences du Reglement sur le material broilleur du Canada

Contents

Scope

Introduction

This manual details the installation, operation, and maintenance of the AVERY DENNISON Model SNAP^{TM}700 Linear Knife. Use this manual together with the SNAP^{TM}700 User Manual for other operational questions regarding the SNAP 700 printer itself.

Safety Issues / Warnings

Cautions

The Linear Knife uses very sharp cutting blades that are spring-loaded together. The knife also has a well-guarded pinch points. The guarded covers provided with the knife are for operator protection. Under no circumstance should the covers be removed during operation.

Covers provide other functions beside safety. They affect cut quality and provide strength to the knife assembly.

Warranty Information

Warranty Policy

Avery Dennison Retail Branding & Information Solutions provides the following warranty policy.

Scope

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

Time

- New equipment and parts: 1 year return to depot
- 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, print heads, 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 Linearretion 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

170 Monarch Lane

Miamisburg, OH 45342

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

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

AVERY DENNISON Corporation

170 Monarch Lane

Miamisburg, OH 45342

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

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

Description / Specifications

Linear Knife Description

The SNAP Linear Knife is an add-on accessory for the SNAP 700 printer. It mounts in place of the down stacker and in turn provides a mounting for the down stacker.

The Linear Knife is designed to cut tag stock and stack into the down stacker. It does not work with flimsy material such as care label tapes or pressure sensitive materials.

The Linear Knife is removable if the other materials need to be processed on the printer using the rotary knife. A training technician is required because the entry into the printer electronics is required.

Linear Knife Specifications

Label Size	Length: Min 1 1/2" (38.10mm) Max (See Printer Specs) Width: Min: 1 1/2" (38.10 mm) TESTED, Max: 5 1/8" (130.18 mm) wide web
Print Speed	3ips, 4ips, 4.5ips, 5ips, 6ips, (RFID 2ips and 3ips) TESTED
Web Justification	Center
Stock	Coated and uncoated Tag Stock and RFID tag stock 10 point to 15 point TESTED
Cleaning	RFID supplies require knife blade cleaning every 25,000 cuts based on supply adhesive construction
Dimensions	11.00" (279.40 mm) wide x 17.25" (438.15 mm) deep x 18.00" (457.20 mm) high
Weight	34 Lbs. (15.5Kg.)
Electrical	DC Power, source is from the SNAP 700 Printer
Temperature	55°F - 95°F (12.7°C to 35°C)
Humidity	5% - 90% non-condensing without corrosion to finish
Registration System	Blank stock, 1/16"(1.5mm) to 1/8" (3mm) hole, notch 1/16"(1.5mm) min., top reflective, bottom reflective (80% contrast). Hole or reflective mark can be any were across the web.
Options	N/A

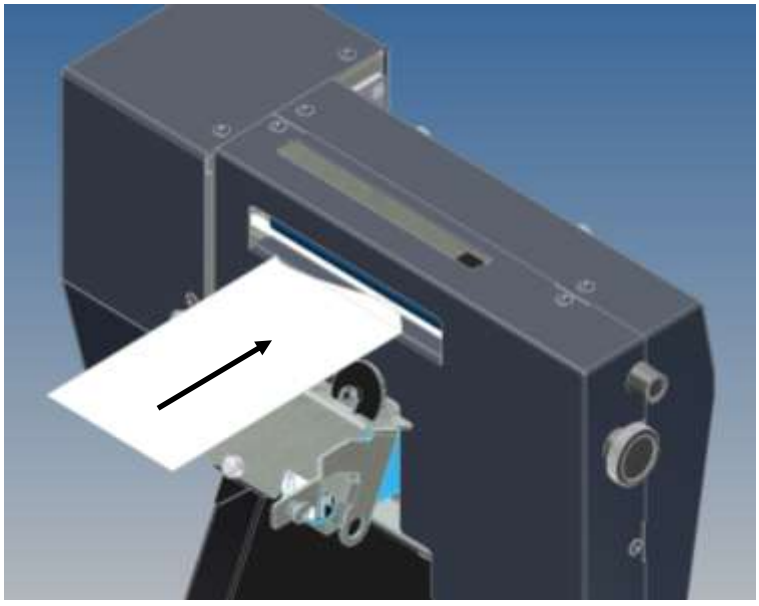
Installing Linear Knife – See Appendix A

See Appendix A for Linear Knife Installation Instructions.

Threading

To thread the stock through the SNAP 700 Linear Knife, bring the stock up to the entry point of the knife. Once the stock comes in contact between the upper and lower rollers, turn the feed knob clockwise. The stock will traverse through the knife and exit out the nip assembly.

You will need to rotate both the printer feed knob and the linear knife feed knob. The feed on the linear knife will not pull the material through the printer. The feed in the linear knife is for take-up tension only.



Maintenance

Cleaning Feed / Nip Rollers

The Linear Knife has a set of feed rollers that keep web tension between the printer feed and the accessory knife. These rollers will need cleaning daily or more often based on the materials being run,

1. Clean the rollers with isopropyl rubbing alcohol 70%. Do not use other cleaning products as they may have a long term effect to roller life.
2. Turn off the power to the printer to clean any moving part to avoid injury or damage to the printer
3. Apply the alcohol to a clean cloth and rub the rollers to remove any surface build up. The rubber roller may become stained for contact with the materials running through the printer. This should not harm the roller or the material.
4. The rubber roller should be replaced at least once a year or before due to ware or if the rubber starts to harden from age or UV lighting.

Knife Blade Replacement

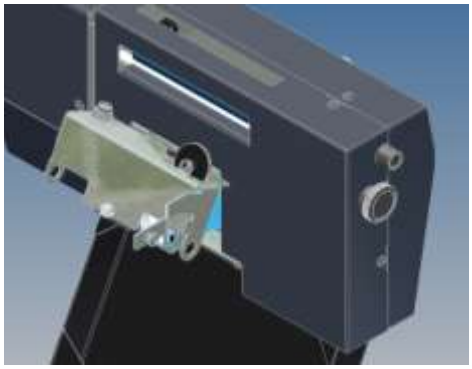
Replace the wheel blade when it becomes dull or nicked. The knife has a life expectancy of 3 million cuts. Monitor the number of cuts through PCMate since the printer does not have a cut counter. Stock both the wheel and stationary blades to avoid down time in case of blade damage or jams.

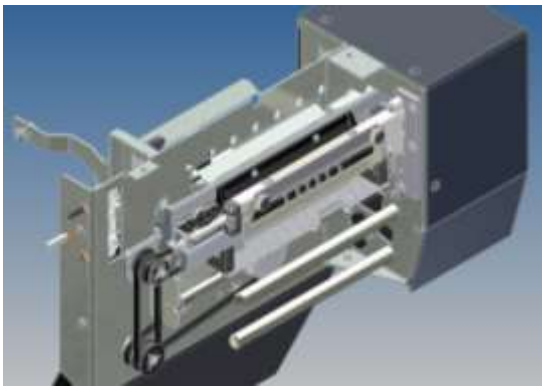
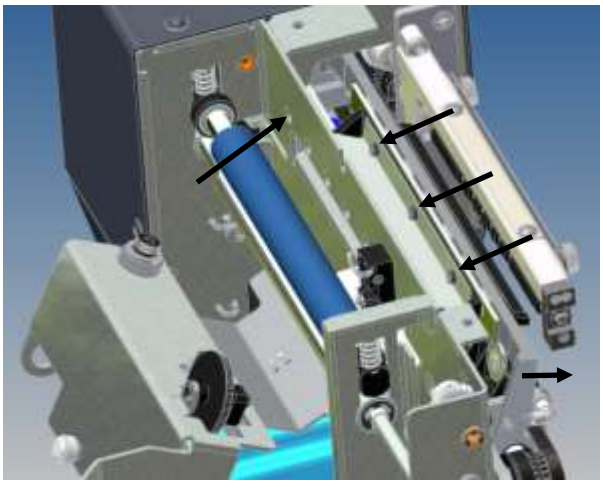
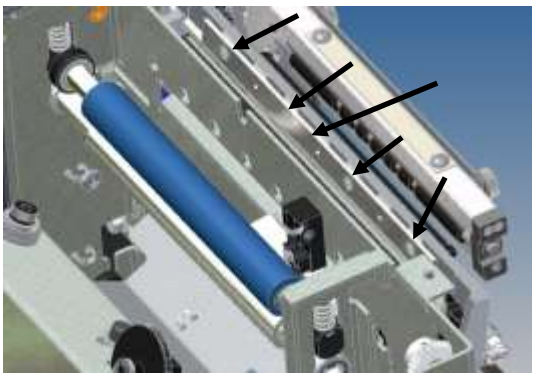
Note: Replace both the wheel blade and the stationary blade as a set only. Replacing only one can cause early failure of the blades.

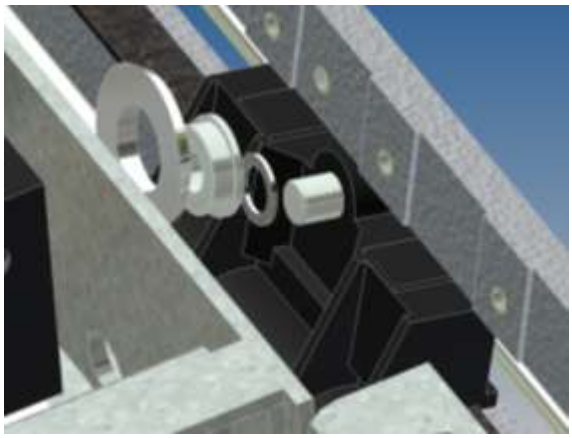
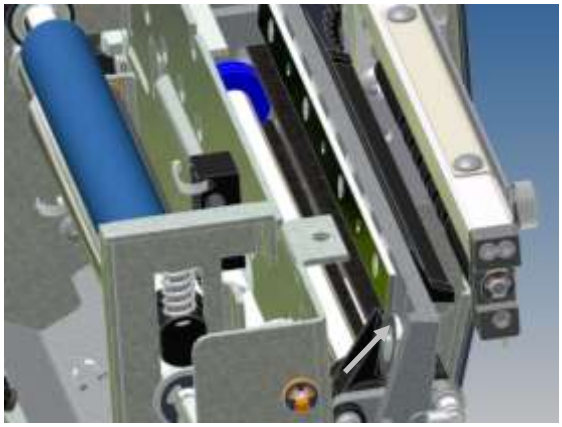
Warning: Follow knife adjustment procedure exactly or damage will occur.

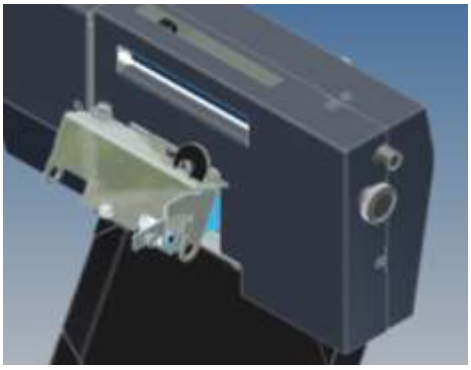
Warning: Turn off power to the printer to avoid personal injury when adjusting, removing, or replacing the knife assembly.

When following the instructions below, use extreme caution as the blades are very sharp.

1.	Turn off power to the printer.	
2.	Remove the feed knob and the sensor adjust knob.	

3.	Remove the six 8-32 Button Head Screws and remove the left and right side covers.	
4.	Remove the entry guide and deflector bracket by swinging the carriage assembly out and inserting a 2.5mm Allen Key or ball driver through the holes in the frame to gain access to the screws. Note: The upper sensor shaft is not shown for clarity purposes.	
5.	With the entry guide removed, see the four exposed Phillips flat head screws holding the upper stationary blade. Remove screws and blade with a #2 Phillips head screw driver.	

6.	Removing the upper stationary blade allows access to the wheel blade. Remove the wheel blade, bearing, and spacer. Replace the new parts in same order as removed and shown. Note: Be careful not to move the carriage assembly too much as the wheel blade will fall off.	
7.	Re-install the upper stationary blade with the four flat head screws removed from step 5. Be sure the wheel blade is behind the Stationary Blade and that the stationary blade is oriented so that the cutter edge is down.	
8.	Re-install the deflector bracket and entry guide.	

9.	Re-install the covers and knobs.	

Knife Blade Cleaning

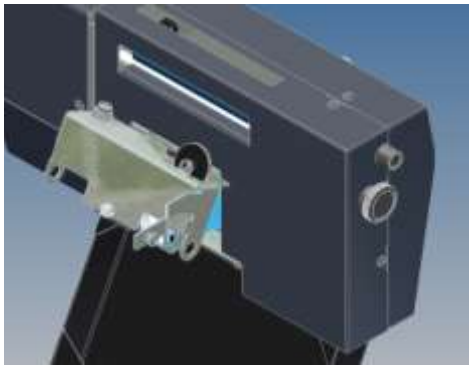
When the material starts to have poor cut along all or part of the cut edge, the knife blades will need to be removed and cleaned.

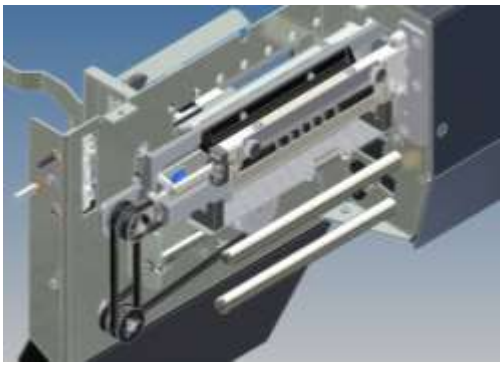
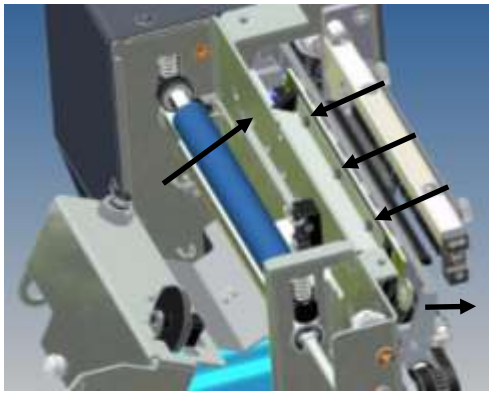
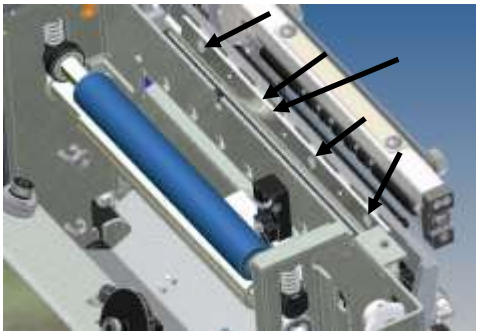
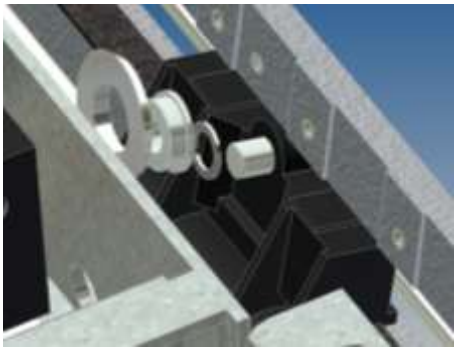
Note: When cutting RFID tag stock the knife may need to be cleaned every 25,000 cuts depending on the adhesive layer used to construct the tag material. This may vary in frequency base on the supplies. The knife blades will need to be taken apart as surface cleaning is insufficient.

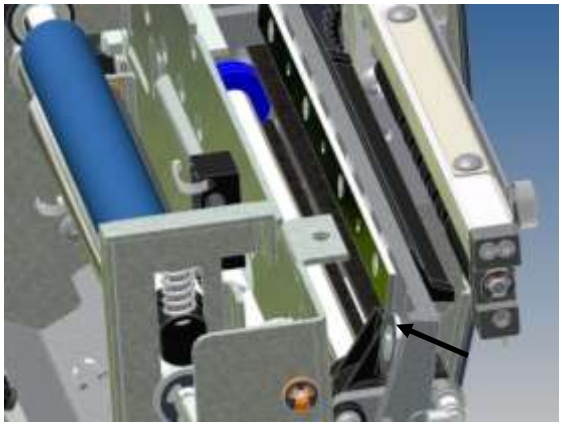
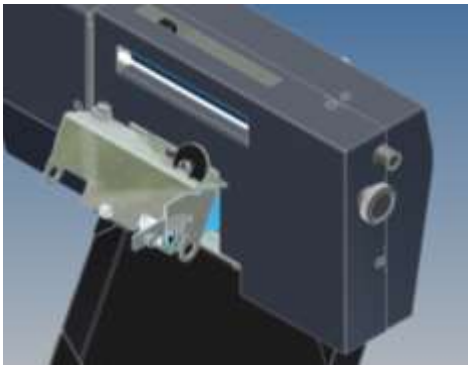
Warning: Follow knife adjustment procedure exactly or damage will occur.

Warning: Turn off power to the printer to avoid personal injury when adjusting, removing, or replacing the knife assembly.

When following the instructions below, use extreme caution as the blades are very sharp.

1.	Turn off power to the printer.	
2.	Remove the feed knob and the sensor adjust knob.	

3.	Remove the six 8-32 Button Head Screws and remove the left and right side covers.	
4.	Remove the entry guide and deflector bracket by swinging the carriage assembly out and inserting a 2.5mm Allen Key or ball driver through the holes in the frame to gain access to the screws. Note: The upper sensor shaft is not shown for clarity purposes.	
5.	With the entry guide removed, see the four exposed Phillips flat head screws holding the upper stationary blade. Remove screws and blade with a #2 Phillips head screw driver. Clean the blade with Isopropyl Alcohol. The blades are very sharp. Cut resistant gloves should be worn to avoid injury.	
6.	With the upper stationary blade removed there is access to the disc blade. Remove the disc blade. The bearing and spacer can stay on the carriage assembly. Clean the disc blade with isopropyl alcohol. Replace blade in same order as removed. Note: Be careful not to move the carriage assembly too much as the disc blade will fall off.	

7.	Re-install the upper stationary blade with the four Phillips flat head screws removed from step 5. Be sure the wheel blade is behind the stationary blade and that the stationary blade is oriented so that angle is down.	
8.	Re-install the deflector bracket and entry guide.	
9.	Re-install the covers and knobs.	

Adjustments

Web Tracking in Center of Printer

NOTE: Cut quality and straightness requires the stock to track down the center of the printer because the Linear Knife cuts across the web from both sides. Two settings adjust web tracking. The first setting is moving the web front to back as controlled by the Feed Roller Assembly. The second setting is the position of the Web Guide Assembly.

The Linear Knife makes one pass across the web for each tag cut. This means that if the knife starts its cut from the near side of the web and the next cut starts from the far side of the web. The cut is done while the web is moving through the printer. The knife has been designed when properly installed to be located in the center of the feed roller assembly and the print head assemblies. If one or both of these setting are not correct the cut will vary in width every other cut.

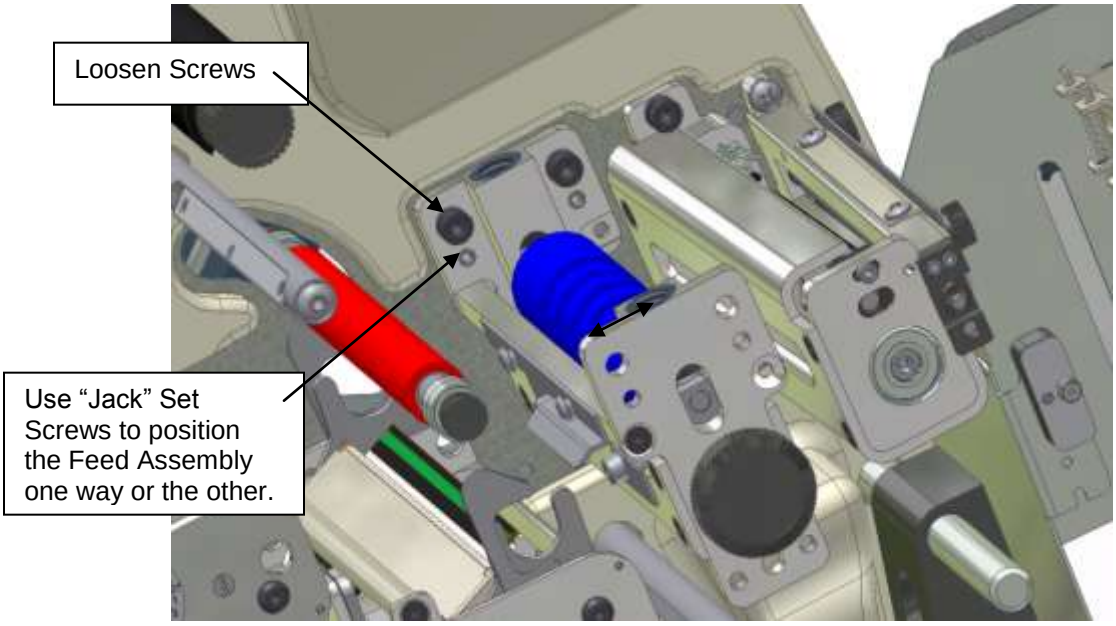
Setting the Web Tracking

Web tracking is the movement of the tag stock front to back in the Feed Assembly. To correct for this movement there are four "Jack" Set Screws located on the inner mount bracket on the Feed Assembly. These will be adjusted accordingly once the printer has been loaded with stock and run.

1. Load the printer with supplies (Stock & Ink) Make sure the tag stock supply roll is tight and the sides of the roll are flat. If the roll is not flat it will track off the center of the print heads.
2. Leave the web guide open so the guides do not control the material moving through the printer.
3. Load the internal test format (see SNAP 700 user manual). The wide test format image will look like this. The line running left to right should be in the center of the tag. The center of the line to the metal frame is 4" (101.6mm).

4. Start the printer, if the stock is walking toward the back of the printer, the outboard end of the Feed Assembly needs to move toward the stacker. (Don't worry if the knife cut is out of square, this will be corrected later)
5. Loosen the three ¼-20 cap screws and turn the two left set screws 1/8 of a turn so that it will force the outer end to move toward the stacker.
6. Snug the ¼-20 cap screws starting with the Upper right, then the lower, then the upper left.
7. Once all are snug, tighten the cap screws in the same order.

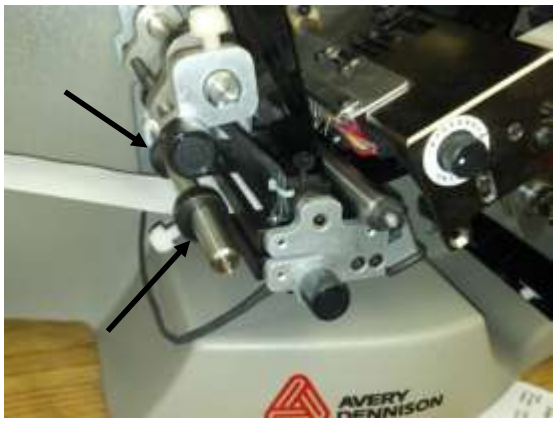
8. Run the printer again and see if there is a walking issue, if so repeat steps 4-6.
9. If the stock wants to walk toward the front of the printer, then position the feed assembly so that the outer edge move slightly away from the stacker side, and reverse steps as previously stated.



10. Once the stock is tracking through the printer without walking, the feed assembly can be secured.
11. The Printer is now ready for the latest Operating System Installation. Download and install Operating System Version 3.32.07.05 or later.

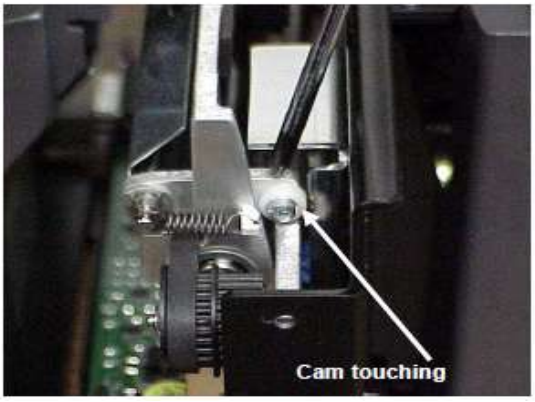
Setting the Web Guide

The web guide is located between the tag stock supply roll and the first print station in the web path. To set the web guide correctly, get the tracking of the printer centered first. There are two set collars with thumbs screws that will rest just off the material. Position these collars to steer the web correctly through the printer. Do not try and force the stock more then 1/4” (5mm) as it can damage the edge of the tag stock.



Knife Cam Adjustment

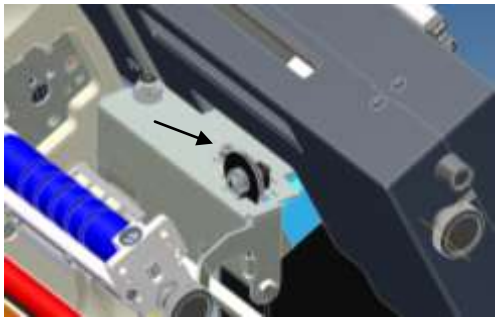
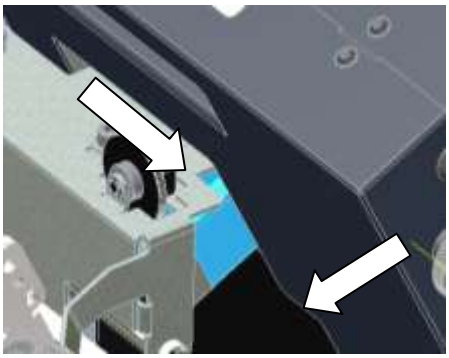
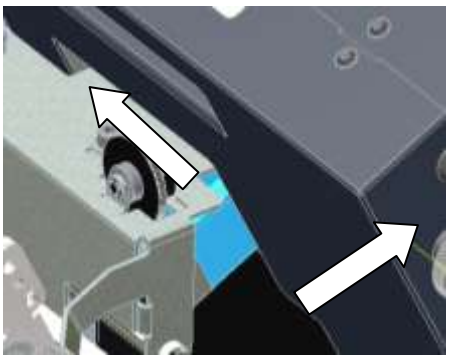
The cam adjustment keeps the frame from distorting during operation and affects the cut angle slightly.

1.	Move the rotary knife carriage to the center of the stationary knife.	
2.	Adjust the inboard and outboard cam to just barely touch the frame. Hold the came in the desired position while tightening the screws.	

Web Tracking Adjustment

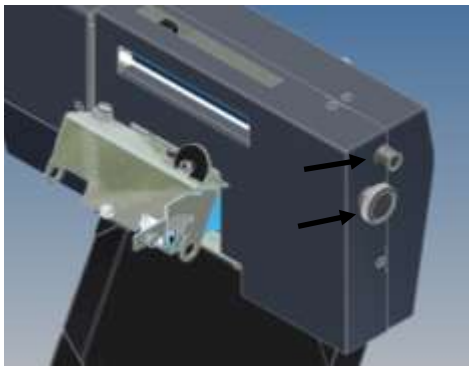
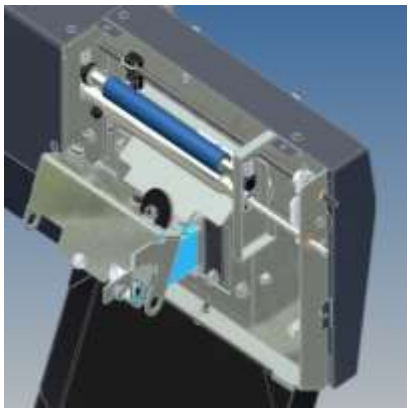
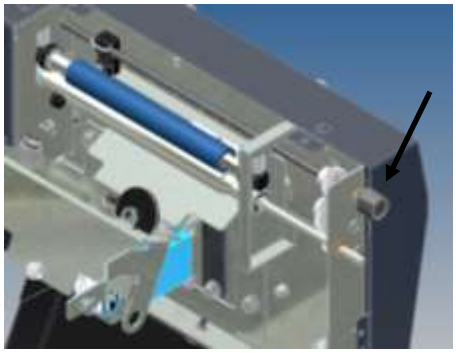
If the web is tracking through the SNAP 700 printer but is not tracking into the Knife square, there will be a buckle in the web. The tracking can be adjusted by rotating the thumb wheel on the Linear Knife located on the inboard side of the Knife.

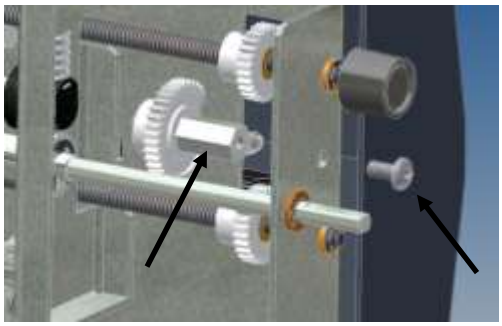
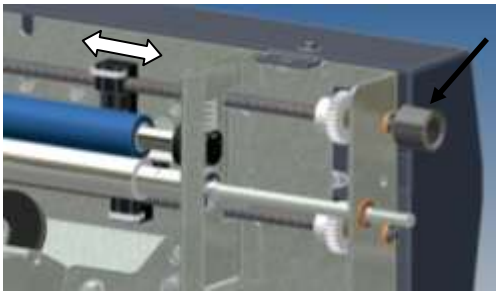
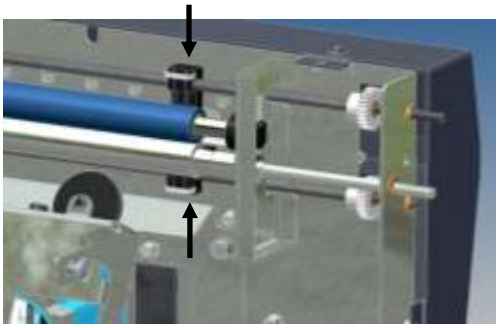
Buckle in Rear of Knife (Needs to be adjusted, cut will not be square.)	
Web tracking straight (No buckle) Ready to move to the next step	
Buckle in Front of Knife (Needs to be adjusted, cut will not be square.)	

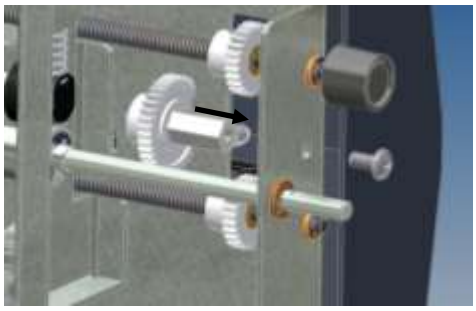
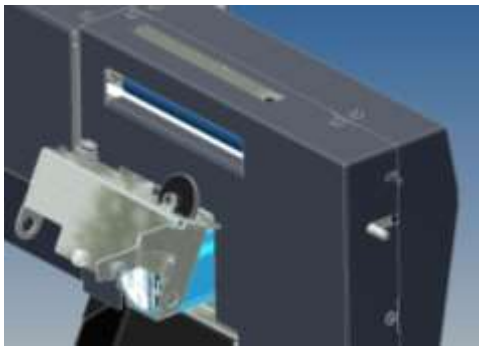
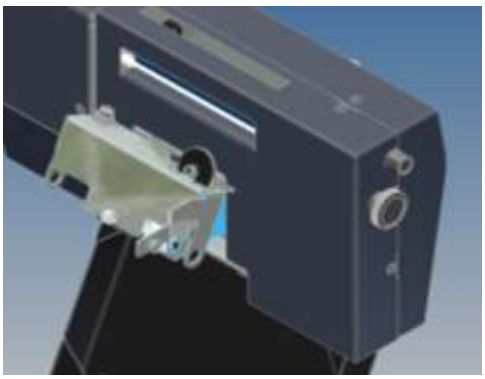
1.	Loosen the ¼-20 cap screw shown. Rotating the thumb wheel will rotate the knife in one direction or the other.	
2.	Rotate the thumb wheel toward the operator to move the outer edge of the knife to the left.	
3.	Rotate the thumb wheel away from the operator to move the outer edge of the knife to the right. After the knife is in the desired location, tighten the ¼-20 cap screw.	

Adjusting the Sensor

The SNAP 700 Linear Knife has the capability to sense through hole, slot, top reflective, or bottom reflective sense marks. The sensors are assembled so that the sender and receiver are opposite each other. See instructions below to line up the sensors if they need to be re-aligned.

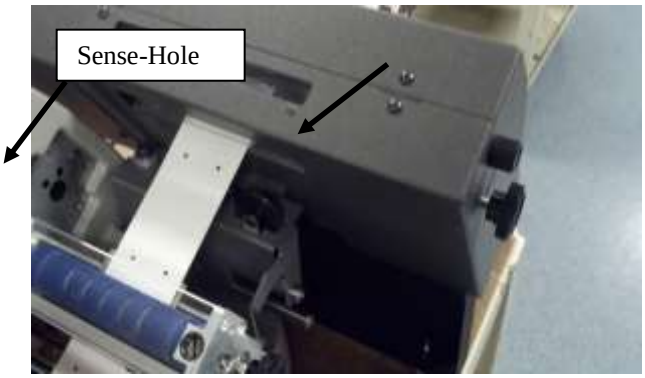
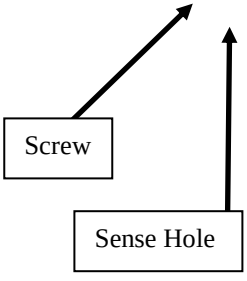
1.	Remove the feed knob and the sensor adjust knob.	
2.	Remove three 8-32 button head screws and the left side cover	
3.	Temporarily re-install the sensor adjust knob.	

4.	Remove the Phillips head screw securing the idler gear standoff shown and remove the standoff with gear so that the top and bottom sensor do not traverse together.	
5.	Rotate the sensor adjust knob so that the upper sensor travels directly over the lower sensor. This will ensure the sensors are in the correct location with each other.	
6.	After the sensors are directly over each other, remove the sensor adjust knob from the end of the shaft.	

7.	Re-install the idler gear removed from Step 4.	
8.	Re-install the left side cover and secure with the three 8-32 button head screws.	
9.	Re-install the sensor adjust knob and the feed knob.	

Positioning the Sensor

To position the sensor correctly for a thru-hole format, the web must be tracking through the printer and knife correctly. If not, see the section in this manual on web tracking. The center of the sensor block will need to be slightly off center to the hole that is being sensed.

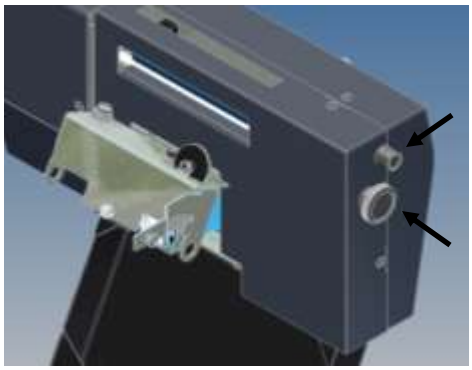
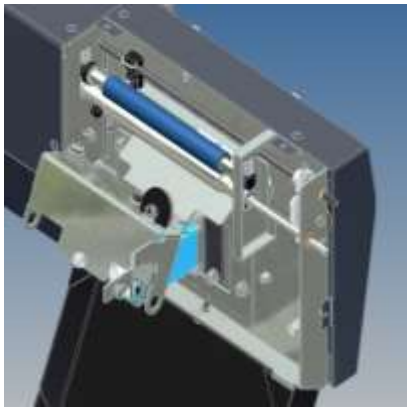
1.	Load supplies on and through the printer and knife and be sure the web is tracking correctly. Move the sensor in the proximity of the hole that is in the web.	
2.	Download a format that has a thru-hole sense mark. The printer will need to be hooked up to PCMate and a format created with the size stock that is being run. Start the printer, the printer will say "calibrating	

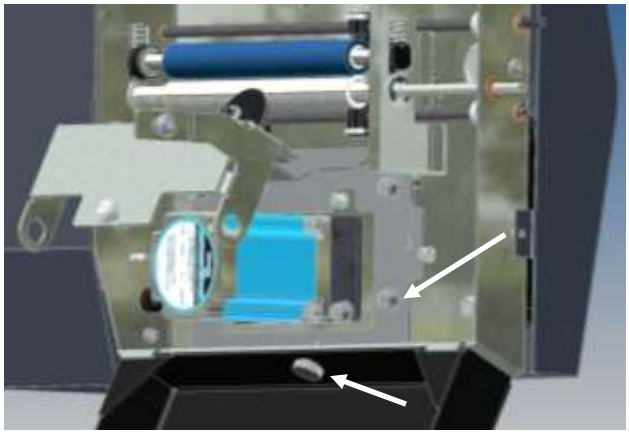
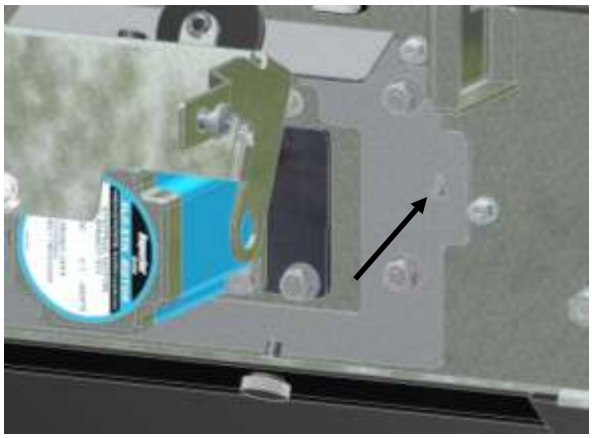
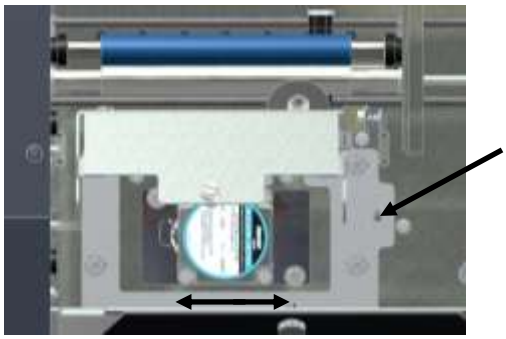
	sensors" and begin to run. If the sensor is not in the correct position, the printer will stop. Traverse the sensor over the hole so that the screw on the sensor is just to the left of the hole in the stock.	

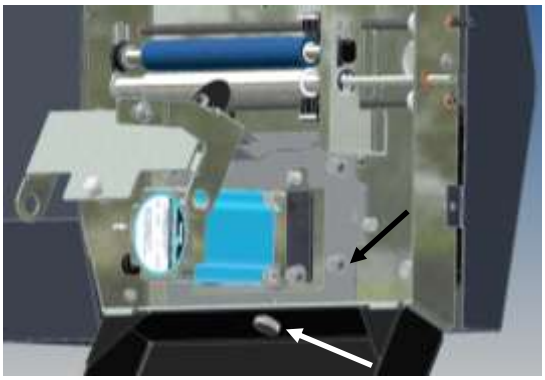
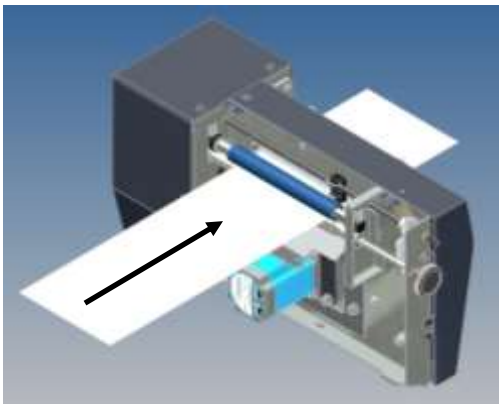
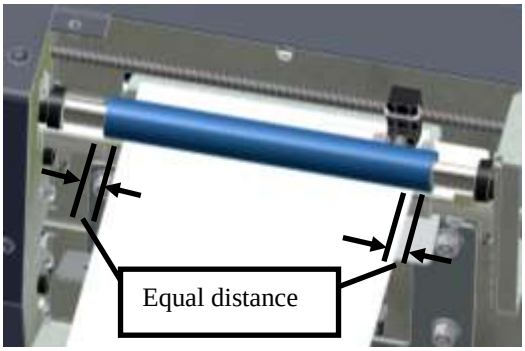
3.	Start the printer back up, as the stock passes through the knife, the supply light on the 700 should light up each time the sensor senses a hole. If the printer stops and gives another sense mark error, repeat step 2 to move the sensor slightly.	

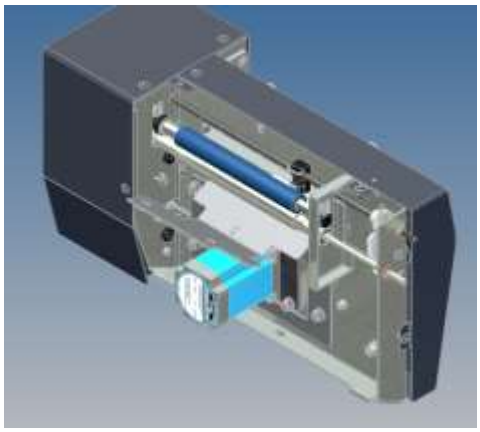
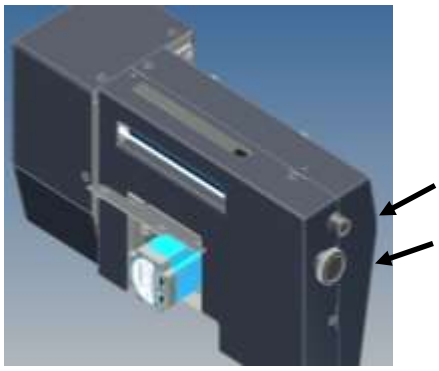
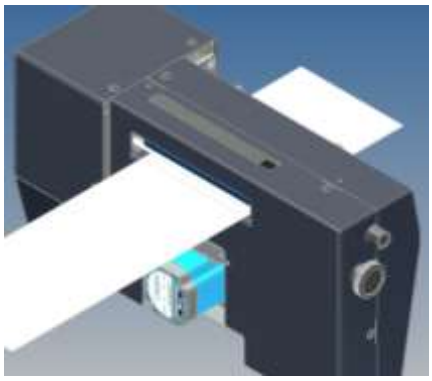
Centering the Knife to the Web

After the web is tracking through the printer and into the knife straight, it may still need to be centered going into the knife.

1.	Turn off power to the printer. Unplug the stacker and remove it from the linear knife. Unplug the Linear Knife from the Snap 700 printer.	
2.	Remove the feed knob and the sensor adjust knob. For clarity purposes the knife if shown not attached to the printer. These instructions are stepped as if the knife was attached to a printer.	
3.	Remove three 8-32 button head screws and the left side cover	

4.	Loosen the thumb screw holding the upper and lower halves of the Linear Knife together. Loosen the lower right 10-32 E-S Nut mounting the knife pivot bracket to the main frame. The other three nuts are just tight enough to be able to slide with a Belleville washer.	
5.	Insert a flat blade screwdriver into the triangle and rotate left or right depending on which way the knife wants to move.	
6.	With the hex nuts loose, the bracket will now slide front to back. Depending on where the stock was running through the knife will determine which way the bracket needs to move. If the stock was running more on the outside of the knife, the bracket will need to move right. If the stock was running more on the inside of the knife, the bracket will need to move left.	

7.	Tighten the E-S Nut and the thumbscrew.	
8.	Feed the web through the knife and run some sample labels to see if the web is centered through the knife.	
9.	If web is not centered, repeat steps to take off upper half of knife and move mounting bracket to a more desired location. Repeat until there is the same amount of distance between the edge of the rollers and the sides of the web.	

10.	Once the web is centered, remove the web from the Linear Knife and remove the feed knob.	
11.	Install the left cover and reinstall the feed knob and the sensor adjust knob.	
12.	Thread the Linear Knife and run samples to check centering of the web.	

Trouble Shooting

Problem	Probable Cause	Corrective Action
Cut is out of square	1. Web not centered in printer	1. Adjust printer feed assembly
	1. Incorrect cam adjustment	1. Re-calibrate Cam.
	1. Knife is not square	1. Rotate thumbwheel to remove web buckle.
	1. Knife is not centered to web	1. Center knife to web
Blade(s) are not cutting clean edges.	1. Incorrect adjustment of blade	1. Check the blade is touching the upper blade. 2. Check that the extension springs on each side of slide shaft are engaged.
	1. Dull or nicked blades	1. Replace both upper and lower blades as a set. Do not replace only one as that will shorten the life of both blades.
	1. Blades need cleaning	1. Remove blades from mounting and clean.
Cutting blade is not rotating	1. Bearing in cutting blade is jammed or gummed up	1. Replace cutting blade bearing
Knife won't cut or tags not the same width	1. Bad C-Sensor	1. Replace C Sensor(s)
	1. Linear knife not connected to the printer	1. Check the harness connection to the printer both outside and inside
	1. Web is tracking off center	1. Re-set tracking of web on the Printer
Cut edge of tag looks ragged	1. Blades need cleaning	1. Remove blades and clean
	1. Blades are dull	1. Replace blades as a set
	1. Wheel knife bearing is dirty or damaged	1. Replace ball bearing
Tag are dirty	1. In feed rollers are dirty	1. Clean rollers
	1. Adhesive on tag	1. Clean knife blades
Missed sensor error	1. Sensor not aligned with hole	1. Move sensor over hole or slot to register 2. Top and bottom sensor not over each other see section on Adjusting the Sensor.
	1. Registration hole is below spec	1. Re-place stock with material to spec
	1. Three registration holes in a row blocked	1. Restart printer or replace stock
	1. Web is not tracking straight	1. Check printer feed, unwind back tension,

	1. Damaged sensor	1. Replace sensor harness assembly.
Reflective sensor error	1. Sensor not aligned with mark	1. Move senor in align with registration mark
	1. Sensor mark to small	1. Registration mark spec is 1/8” wide in the feed direction and 3/8” wide across the web.
	1. Sense mark contrast range to close	1. Supplies not compatible with sensor
Knife did not home	1. Carriage may be out of sensor range	1. Place carriage between front and back sensors.
	1. Knife pulley may have become loose missing.	1. Tighten or replace set screws on the knife pulley.

Appendix A

The SNAP 700 Printer will need minor alterations to have a Linear Knife installed. These alterations apply to both a new printer and a field installation.

For new printer installation, see instruction “Installing the Linear Knife” and “Installing the Stacker on the Linear Knife”.

For field installation, replace the original equipment rotary knife by beginning below.

NOTE: Avoid personal injury or damage to the electronics in the printer by turning off the printer and disconnect the power cord.

Removing the Stacker

Remove the stacker as shown. It will be installed later on the Linear Knife.

1.	Unplug the stacker cable from the printer. There is an outer ring in the stacker connector that will slide back to release the cable connection.	
2.	Loosen the thumb screw that clamps the stacker to the mount shafts. Slide stacker off the mount shafts and set aside to be installed later. Note: The two mount shafts are used to mount the Linear Knife.	

Removing the Nip Assembly

The Linear Knife will use the existing nip assembly and mount hardware from the printer.

1.	The nip assembly is removed with a long #2 Phillips screw driver. Loosen the two 10-32 X ¾" Phillips head screws that mount the assembly to the frame and then remove the two screws.	
2.	Save the nip assembly and the two screws. They will be used to remount the assembly to the new linear knife.	

Removing the Knife Assembly

The Linear Knife has its own feed and will reuse the existing printer nip assemblies. The standard rotary knife assembly needs to be removed from the printer. Save this unit to convert back to a standard printer in the future.

1.	To remove the knife loosen the two ¼”-20 x ½” cap screws using a 3/16” hex tool.	 
2.	Retain the knife and screws for any future needs. These are not part of the new knife accessory.	

3.	Remove the feed / knife tie bracket. There are two 10-32 x1/4" Button head screws to removed using a 1/8" hex tool.	
4.	Printer is ready for the new knife to be installed.	

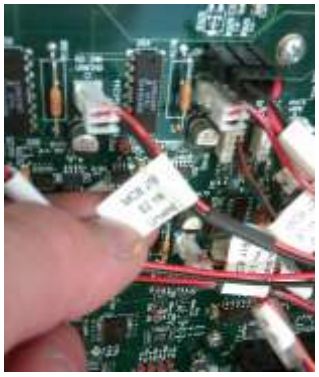
Removing the Rear Cover

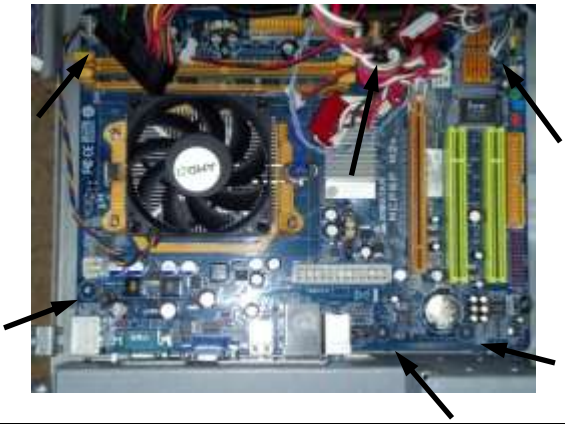
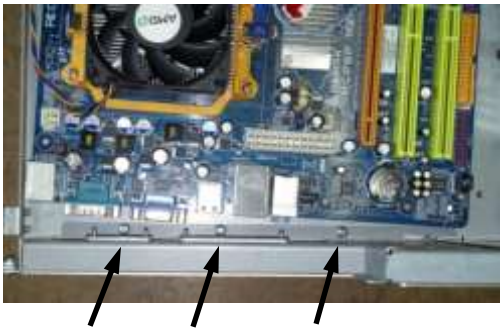
1.	Turn off the power to the printer at the end of a batch so not to lose downloaded data and disconnect power cord.	
2.	Unplug all peripherals such as stacker, remote display, verifier, etc. Unplug power cord from wall outlet. Remove the stock and ink. Remove the back cover of the printer by removing (10) button head cap screws using a 3/32 Allen Key or T-Handle.	

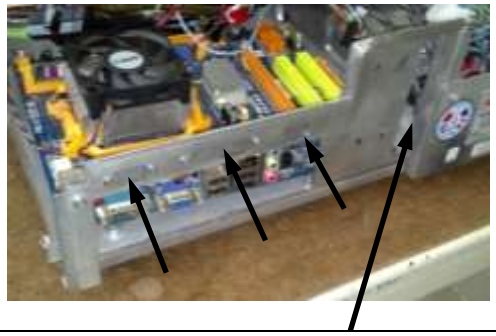
Installing the Linear Knife - Electrical Updates

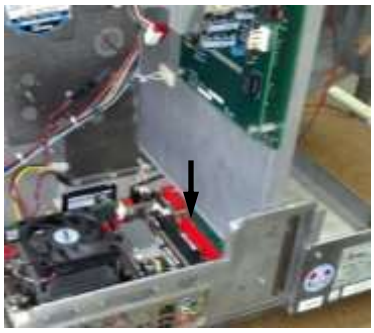
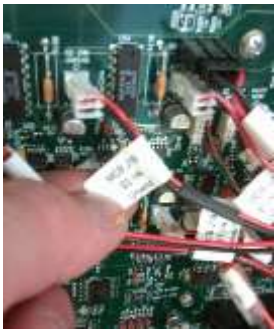
Replace the Motherboard Entry

On field upgrades to the SNAP 700 printer, the motherboard entry bracket may need to be replaced. See the steps below to replace the entry bracket. A new SNAP 700 printer with the Linear Knife installed will already have the motherboard entry bracket installed onto the Snap 700 frame.

1.	Label each connector to the MCB with the appropriate plug name printed on the board. Remove the connector from the board after labeling it.	
2.	Remove the two 6-32 Phillips head screws from the rear of the upright bracket holding it to the printer housing.	
3.	Remove the two Phillips head screws mounting the upright bracket to the main rear frame. With all of the connectors disconnected from the MCB, the entire bracket can be removed from the printer. This will allow access to the mother board screws.	

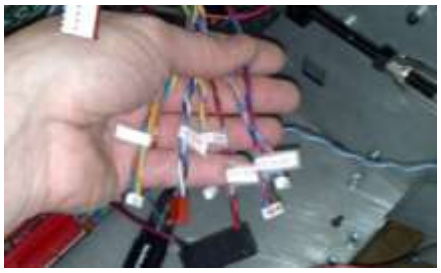
4.	Remove the six screws holding down the motherboard.	
5.	Slide the motherboard back and out of the way to expose the three screws mounting the motherboard entry bracket. Remove the three screws. .	
6.	Pop out the motherboard plate from the opening and save to re-install into the new entry bracket.	

7.	Remove the last two screws holding the motherboard entry bracket to the base frame. Remove motherboard entry bracket.	
8.	With the motherboard entry bracket removed the printer should look something like this… .	
9.	Install the new motherboard entry bracket (with the 5 existing screws) back into the same place the old one was removed. Notice the new bracket now has three accessory openings for mounting harness connectors. Remove PCI bracket from existing motherboard entry bracket and place onto the new bracket with the same screw.	
10.	Install the existing motherboard plate into the opening on the new mother board entry bracket. Slide the motherboard back into place and secure with the screws from step 4.	

11.	Slide the MCB upright back into the slot on the motherboard.	
12.	Install the screws mounting the upright bracket to the motherboard entry tray. .	
13.	Secure the upright bracket to the rear frame with the existing hardware as shown.	
14.	Reinstall all connectors to the MCB from the labels attached to each harness applied in step 1. * DO NOT RECONNECT THE SENSORS FROM THE SNAP 700 LOCATED AT ***J26 TOP REFLECTIVE OPTION HOLE*** ***J27 KNIFE HOME*** ***J28 OPTIONAL BOTTOM REFLECTIVE*** THE LINEAR KNIFE SENSORS WILL GET PLUGGED BACK INTO THESE THREE CONNECTOR HOUSINGS.	

Install Internal Harnesses

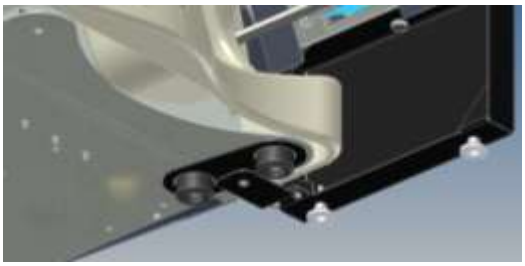
1.	Remove the two connector plates covering the large slot and hole as shown.	
2.	Find the Power Harness (05621139) and remove the nut. Slide one connector at a time through the nut.	
3.	Insert the two connectors from the power harness through hole in the motherboard entry bracket.	
4.	Once the harness is inserted into the hole, insert the nut over the connectors and secure the harness body to the motherboard entry tray. Be sure to line up the tang on the round harness connector and the key slot in the motherboard tray.	
5.	Install connectors to the corresponding connectors on the daughterboard and MCB. Note: If the Snap 700 printer has the RFID upgraded knife motor, be sure to disconnect the motor connector from the daughterboard. Having both knife motors plugged in to the daughterboard will make the Linear Knife motor fail.	 

6.	Find the other internal harness (05621138) and remove the hardware mount kits and install onto the motherboard entry bracket from the back.	
7.	With all hardware removed, install the connector from the back of the motherboard entry bracket. Place one washer onto the standoff, insert through the hole of both the bracket and connector. Secure, with another washer, lock washer and nut.	
8.	Route harness between the upright frame and the rear frame. Install connectors to the corresponding connectors on the MCB.	 

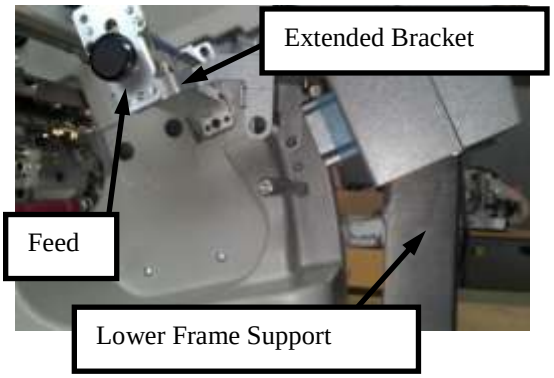
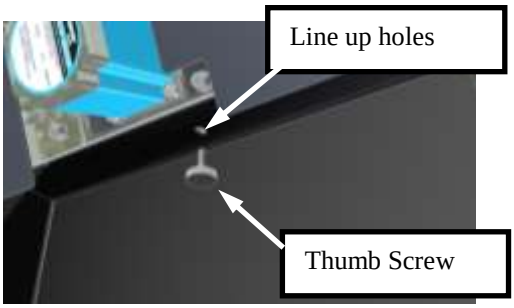
Installing the Linear Knife – Mechanical Updates

The Linear Knife is ready to install on the printer. Position the printer where you want to use the system. Relocating the printer with Linear Knife installed is not advised as they are too heavy and not stable enough to move without damage.

Installing the Lower Frame Support for the Linear Knife

1.	Remove the upper mount shaft for ease of installing the Linear Knife. It will be re-assembled a little later. Locate the lower frame support and Install it on the end of the SNAP 700	
2.	Lift the end of the SNAP 700 and place the bracket with the two large holes over the corresponding feet of the SNAP 700.	
3.	Place the SNAP 700 back onto table.	

Installing Linear Knife onto the Lower Frame Support

4.	Position the knife unit so that it rests onto the lower frame support. Position it so that the extended bracket sits behind the Feed of the SNAP 700. The rear end of the mounting bracket should be resting against the front cover. **<u>NOTE:</u> The knife will be centered to the web path when the bracket is in contact with the back cover. This is critical to knife cut registration**	
5.	Install a ¼-20 x ½ Phillips Head Screw through the SNAP 700 Feed and into the Extended Bracket of the Linear Knife. Be sure that the Knife is still resting on the lower frame support.	
6.	Line up the upper knife unit and the lower frame support and secure with the thumbscrew provided.	

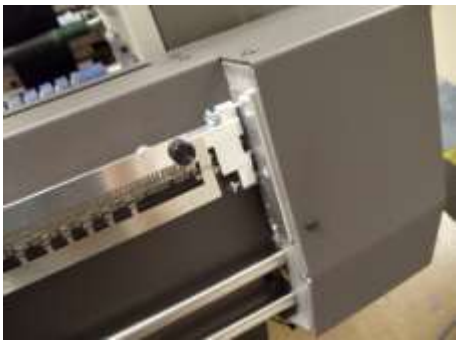
7.	Install the stacker mount shaft removed earlier through both holes of the knife mounting bracket.	
8.	Secure stacker mount shaft with existing ¼-20 x ½ Screw.	
9.	Reinstall the rear cover. Note: All but one cover mount screw will be re-used. The screw that sits behind the Linear Knife may be too hard to reach and thus will be left out.	

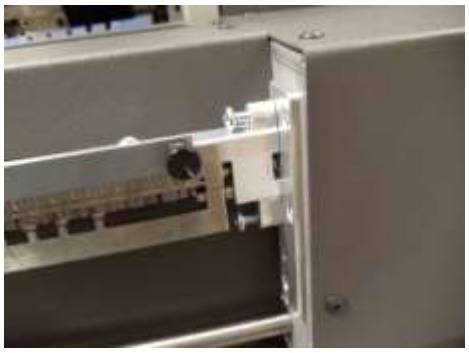
Making Electrical Connections

1.	Plug the D-Shell connector from the Linear Knife into mating receptacle on the printer. Tighten thumbs screws on connector.	
2.	Plug the round connector from the Linear Knife into the mating connector on the Printer. Screw the outer housing to secure the connector to the printer.	
3.	Plug power cord into the AC Entry. Do not plug into wall at this time. Connect any other cables that need to be connected to the printer.	

Installing the Nip Assembly

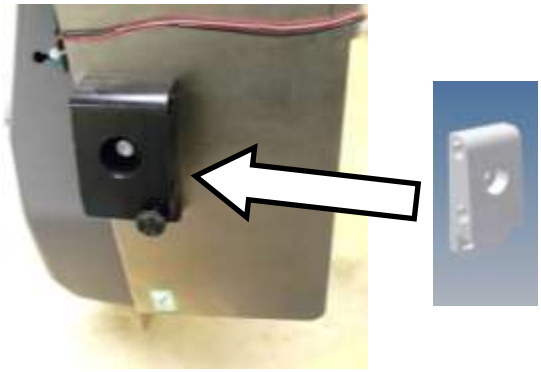
The nip assembly that was removed from the printer to make room for the new knife will be installed on the Linear knife. Skip this section if the Linear Knife already has a Nip Roller Assembly.

1.	The nip assembly will be installed using the same screws that mounted it to the Printer.	
2.	Place the top screw back through the original mount hole and install the screw but leave it loose by approx 3/8" (9mm). Start the bottom screw but do not tighten that screw as well.	
3.	Push the nip assembly towards the frame that it's being mounted to and turn the shaft to engage the drive with the driven roller.	

4.	The nip assembly will be installed using the same screws that mounted it to the printer.	
5.	Holding the nip assemble tight to the frame with the drive engaged tighten the two mount screws.	
6.	Finished installed assembly.	

Installing the Stacker on the Linear Knife

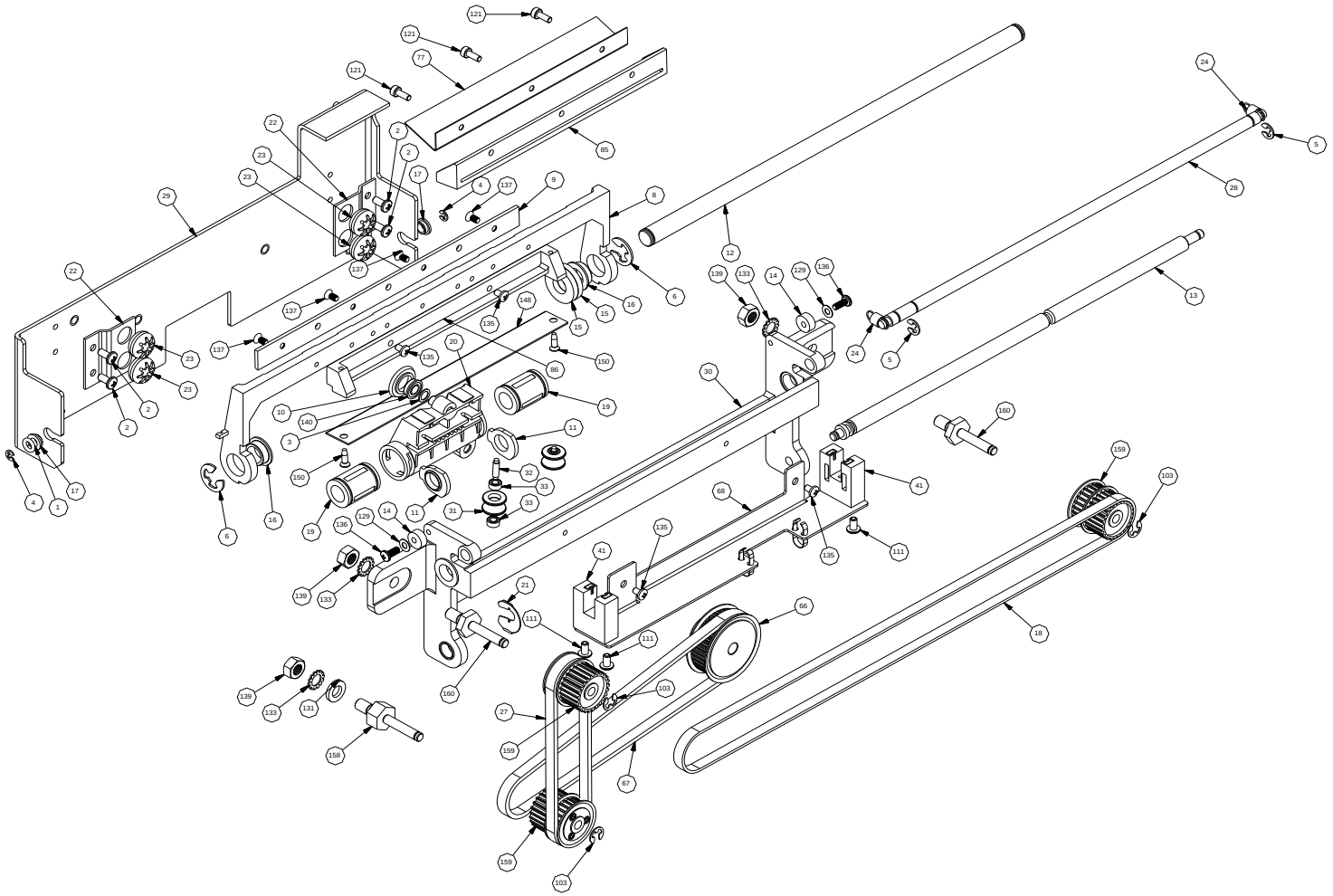
The stacker that was removed from the printer will be used on the accessory knife.

1.	Remove the stacker mount on the back of the stacker and replace it with the Stacker Mount Block supplied with the Linear Knife (P/N: 05627843).	
2.	Slide the stacker onto the two shafts of the knife assembly. The back of the stacker must be in back of the nip assembly stripper plate. This allows the cut tags to fall into the stacker and not catch on the stacker frame.	
3.	Move the stacker's back until the stacker upright is approx 1/8" past the back edge of the web.	

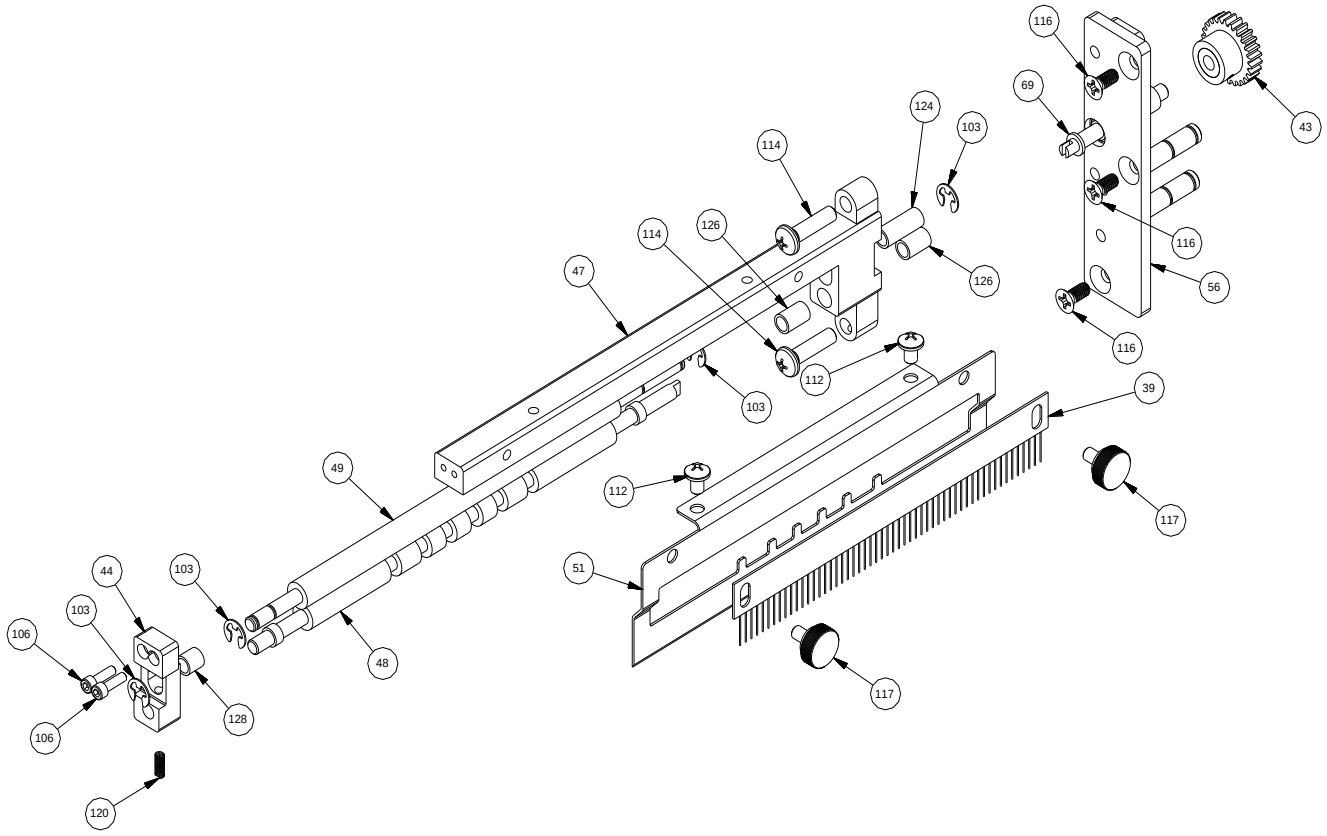
4.	Set the stacker platform angle with the right end set as high as possible to begin with. Once the stacker starts to fill with tags a more desirable angle can be found to provide a stack that can be handled to unload. The stacker may not be able to hold a full stack of tags based on the tag being stacked. RFID tags have a chip imbedded in them so the tag is not uniform in thickness. This will cause the tags to tip or rock around. The number of tags cut and stacked can be controlled by PCMate in the format with a stop between batch configurations.	
5.	Plug the Stacker connector into the side of the printer. Plug power cord into wall and turn on Printer. Note: The stacker will not work if the Stacker Harness is not connected to the Printer prior to turning on the printer.	

Assembly Drawings

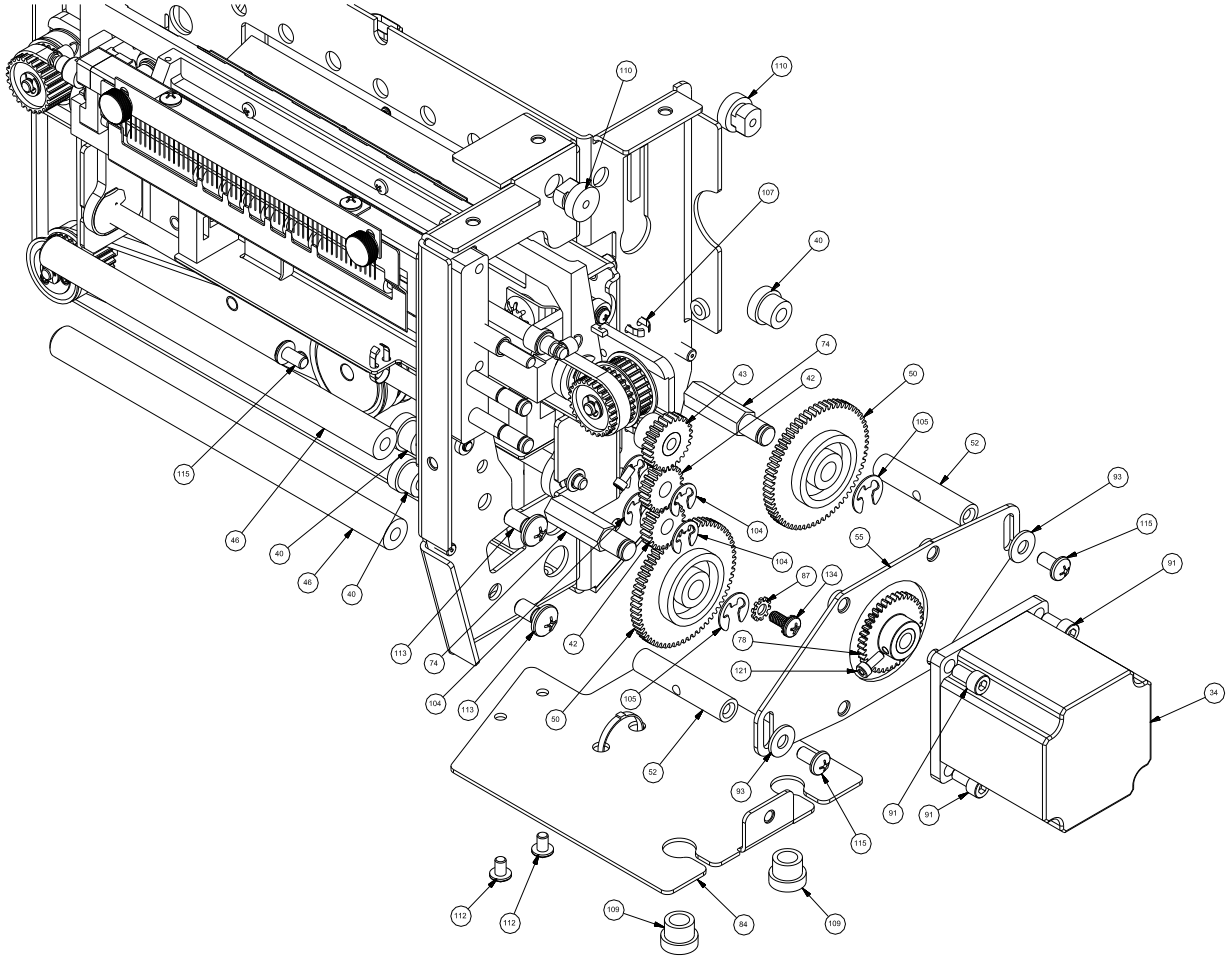
Linear Knife Assembly Drawing



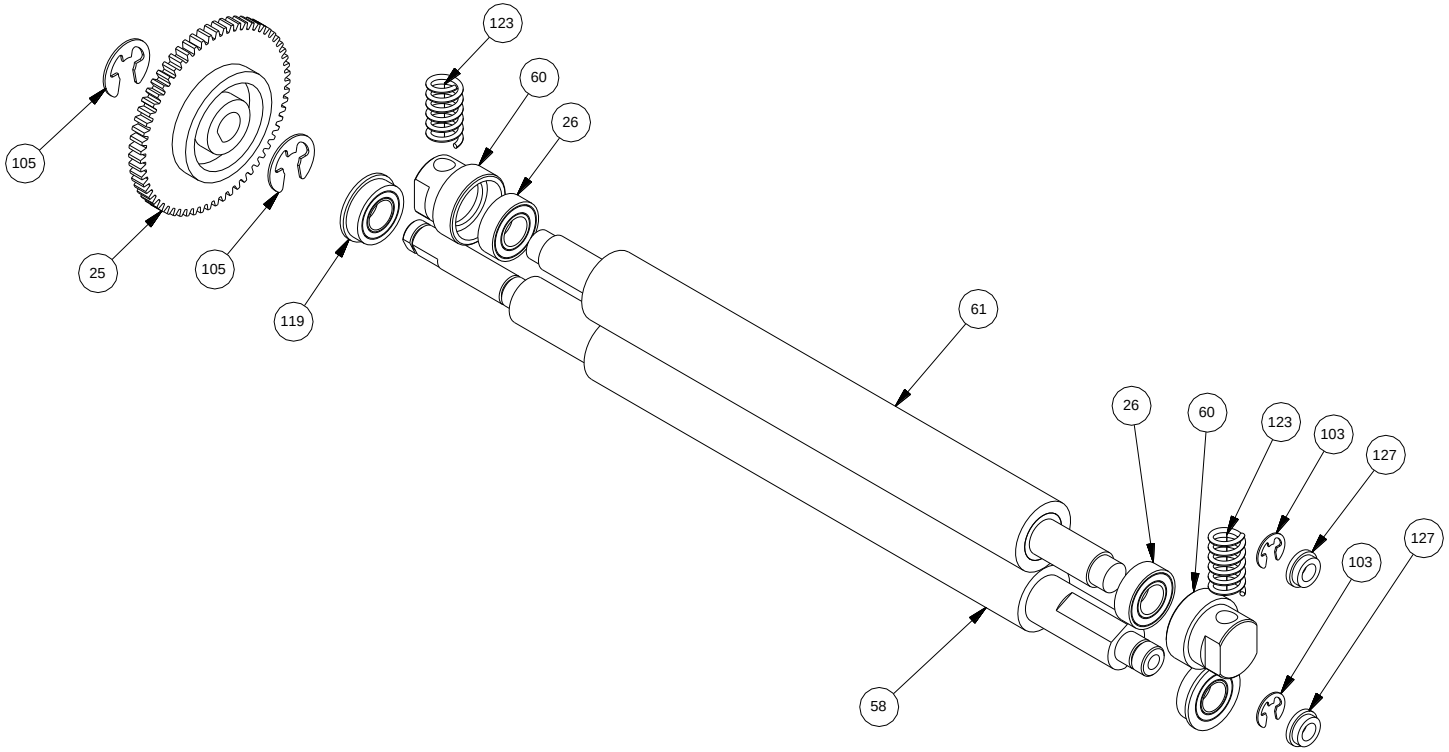
Nip Roller Assembly Drawing



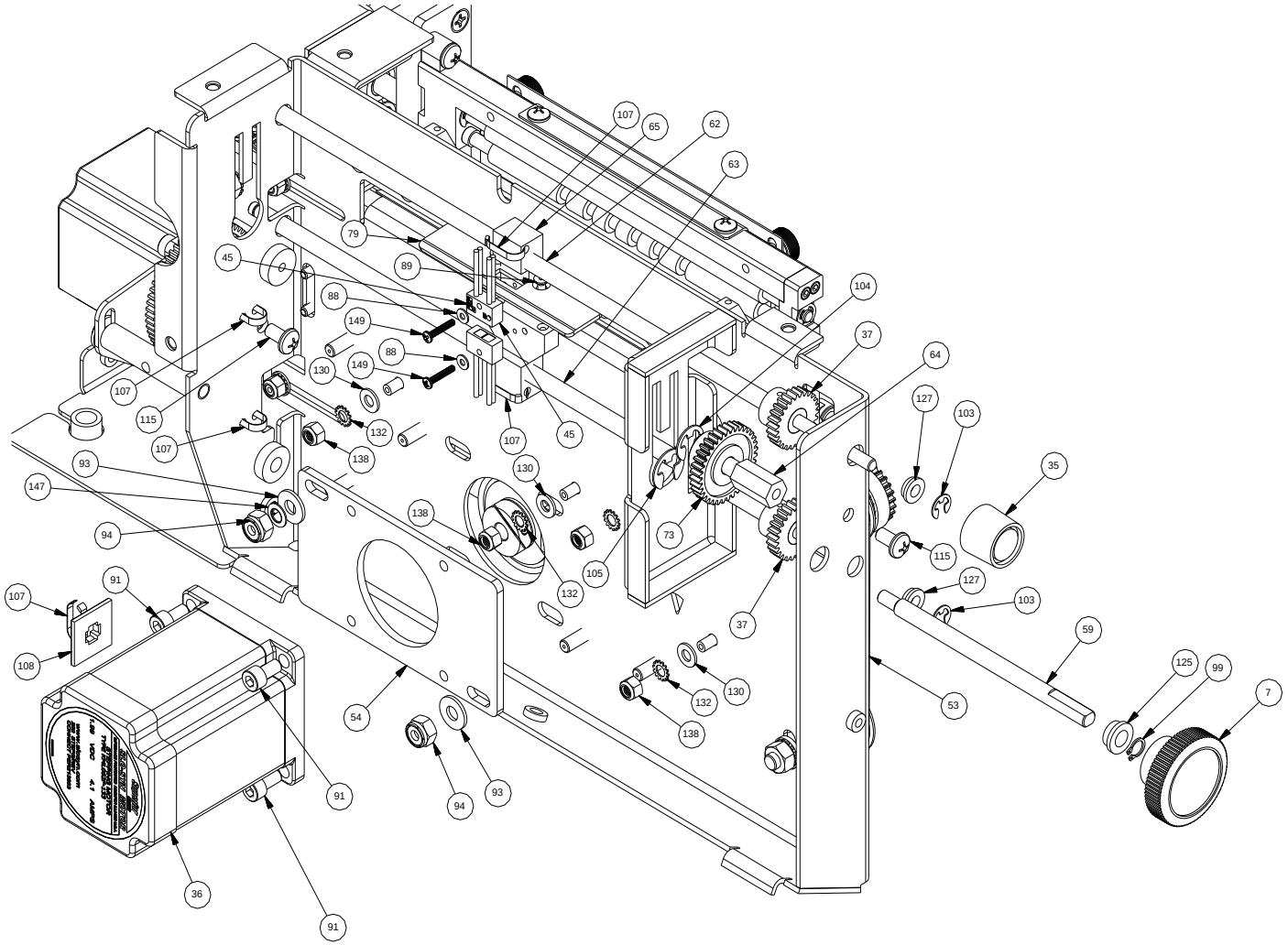
Drive Train Assembly Drawing



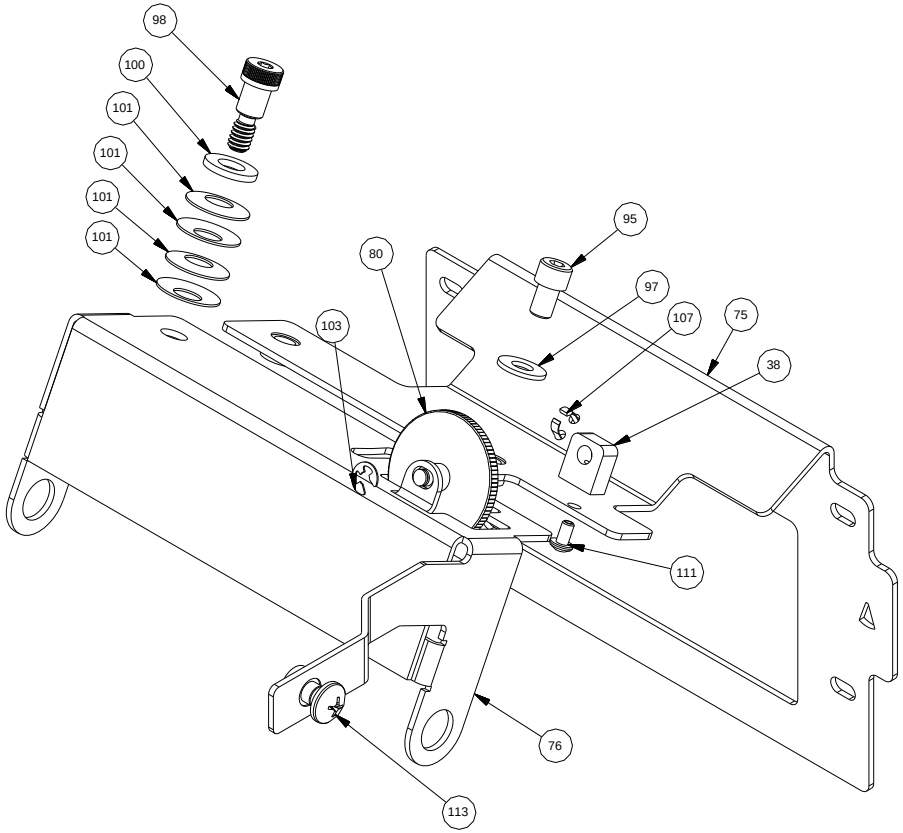
Feed Roller Assembly Drawing



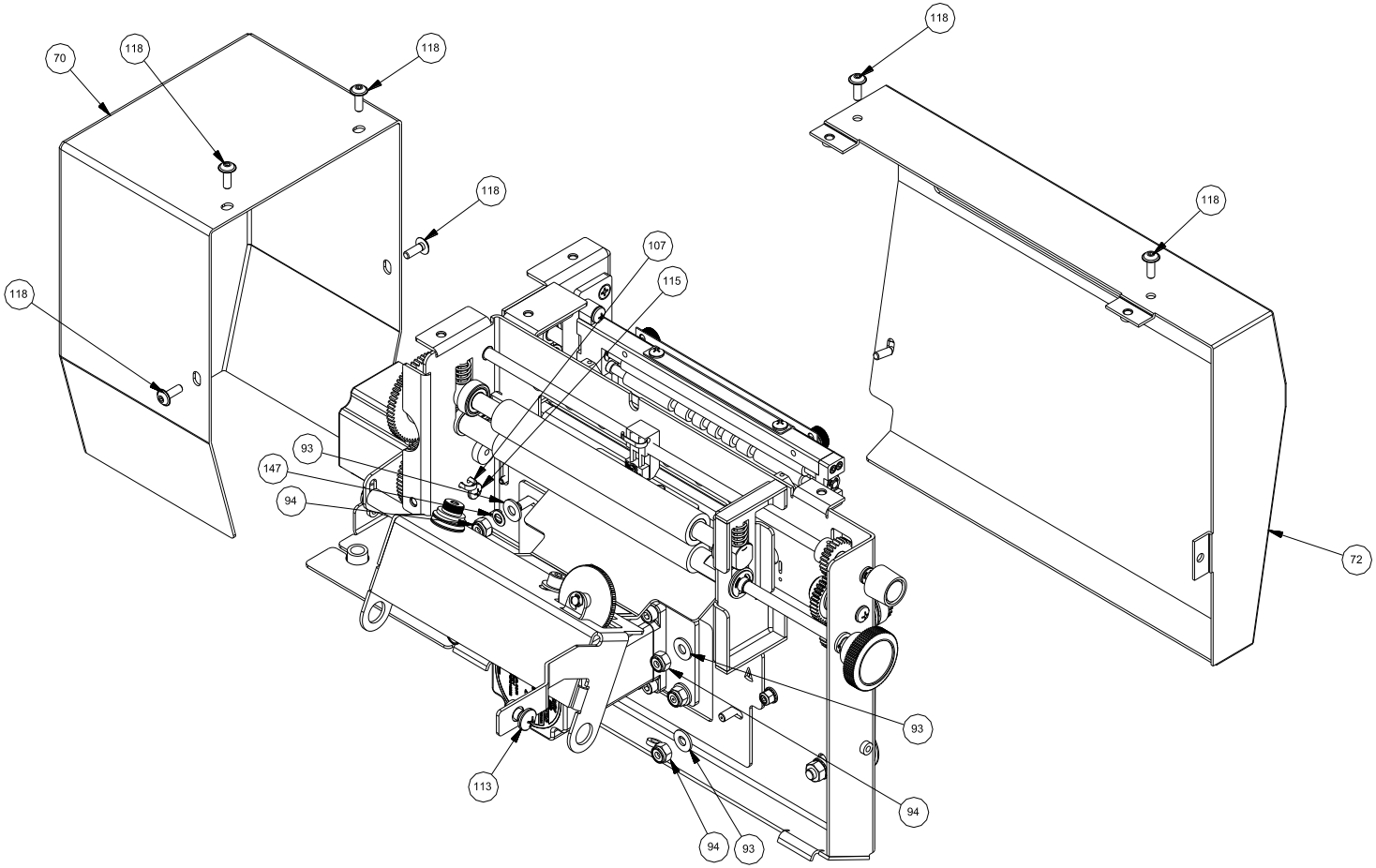
Sensor Assembly Drawing



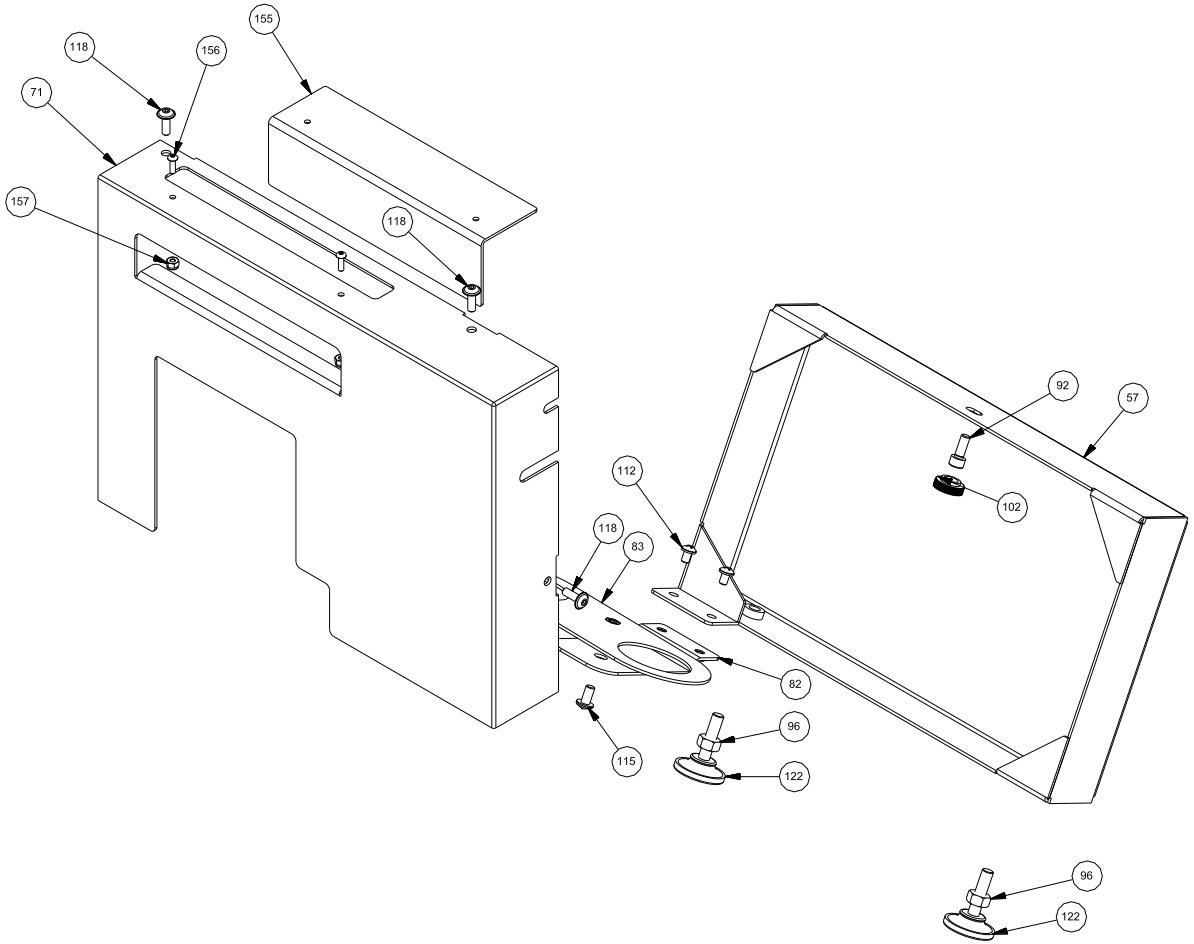
Mounting Assembly Drawing



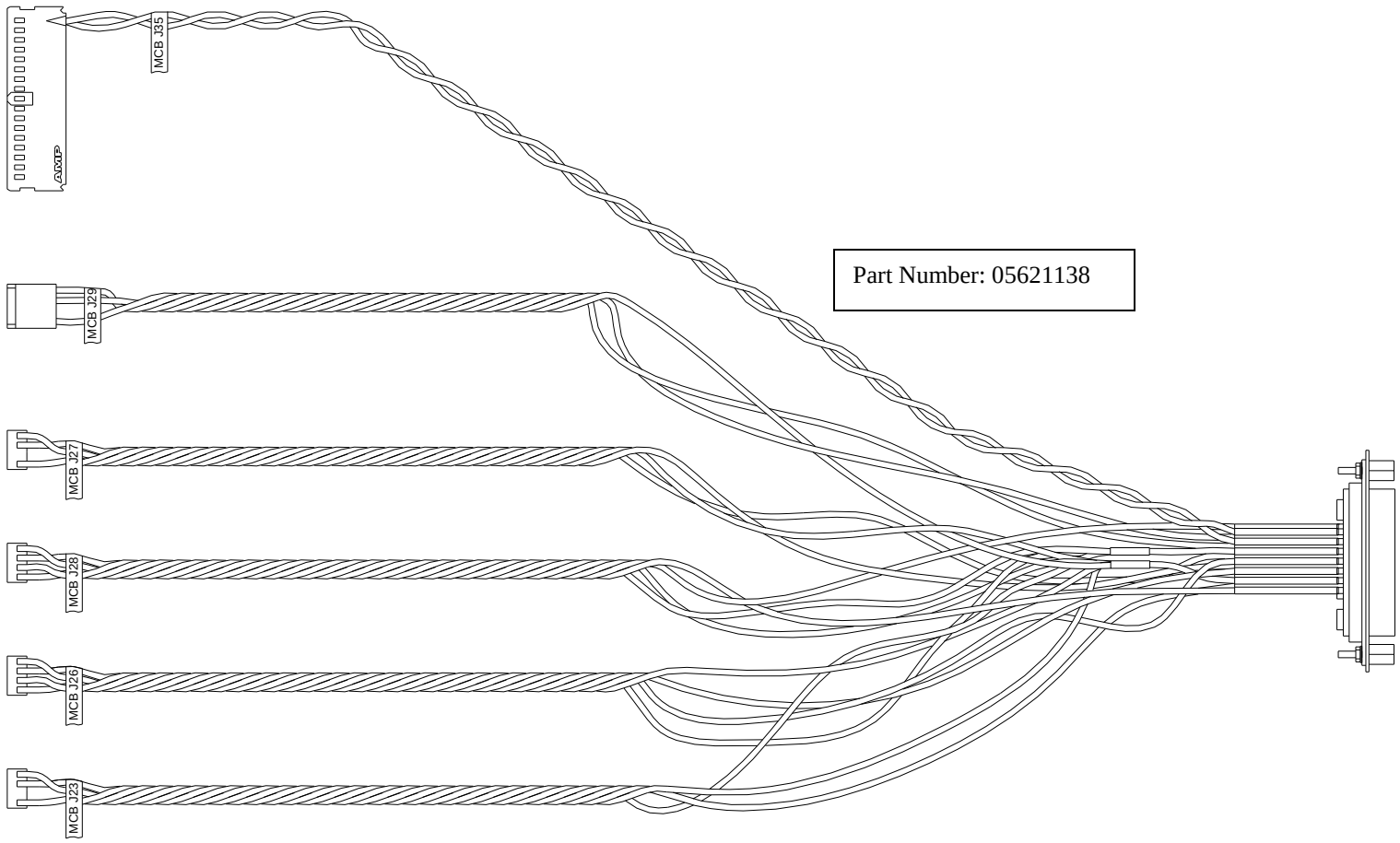
Cover Assembly Drawing

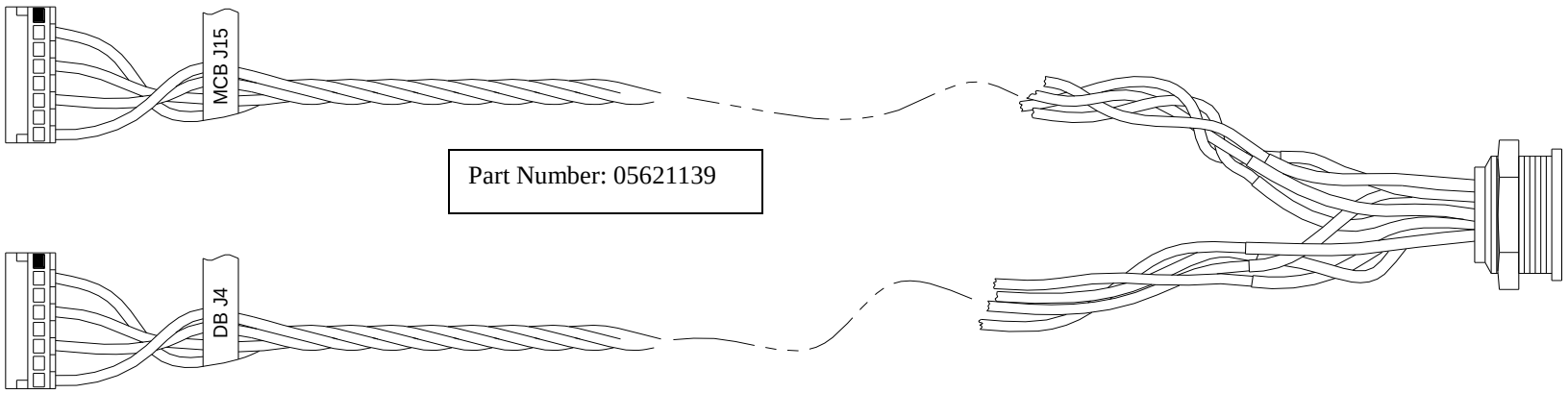


Cover Assembly Drawing

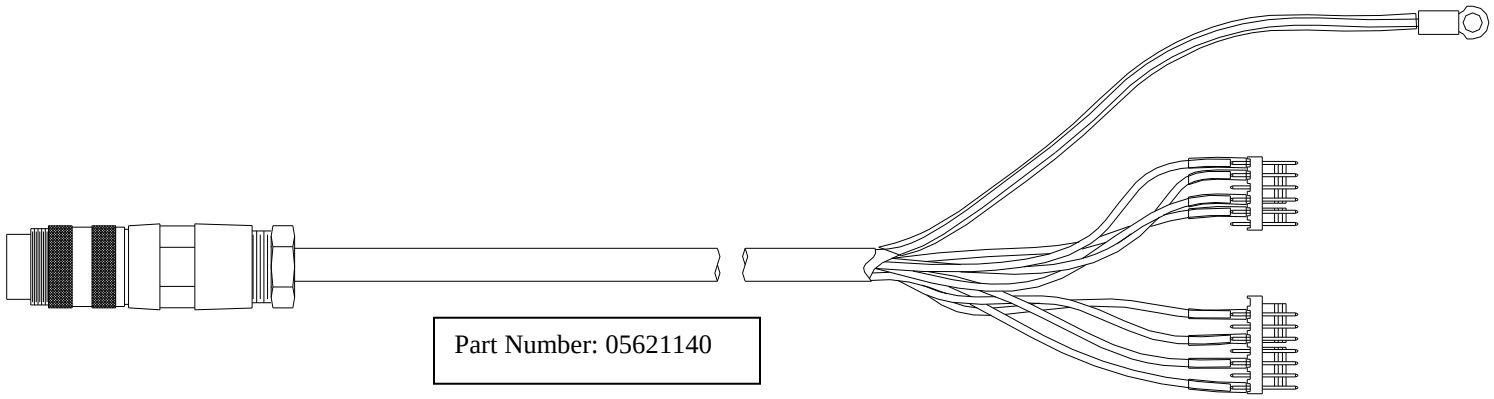


Harnesses

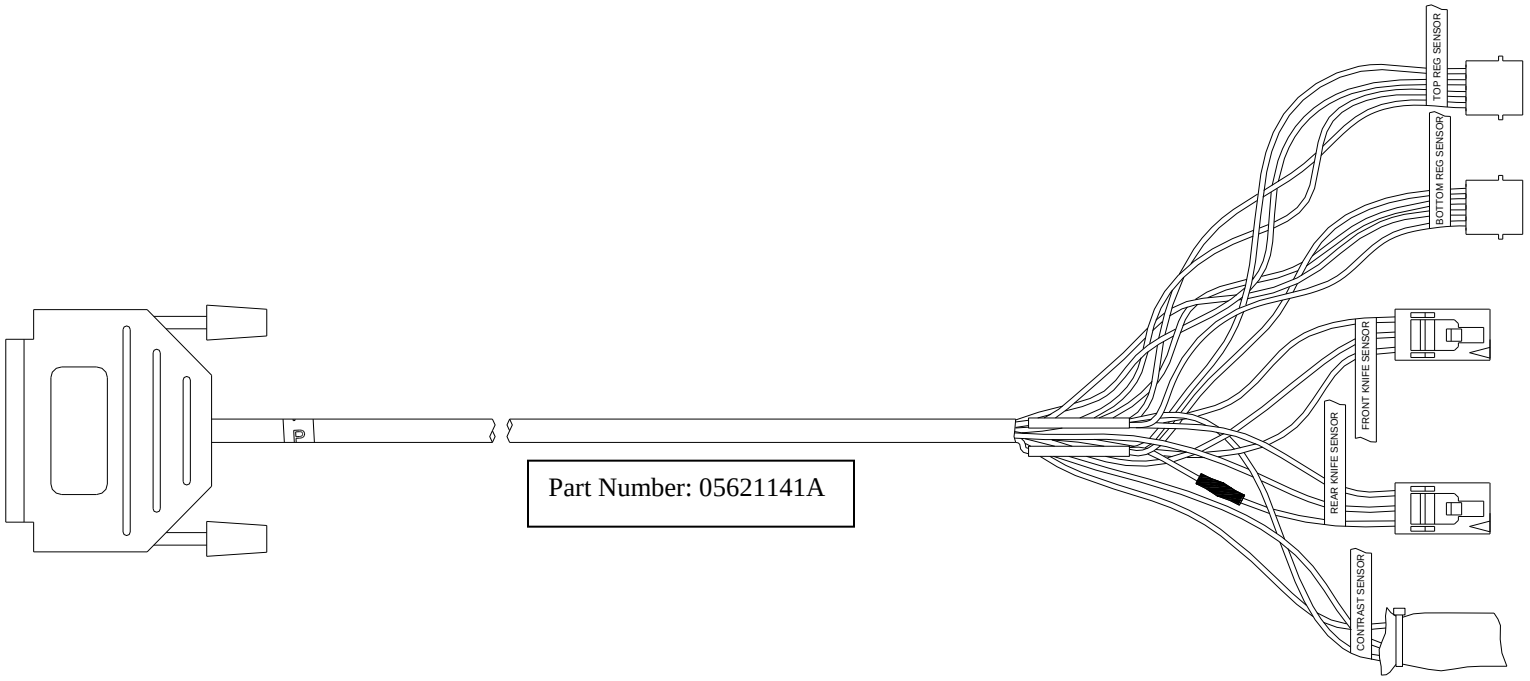

MCB J35
MCB J29
MCB J27
MCB J28
MCB J26
MCB J23
Part Number: 05621138



Part Number: 05621139

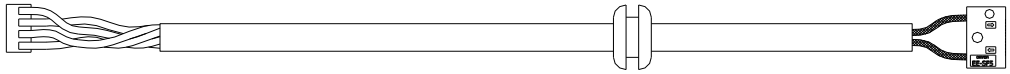


Part Number: 05621140

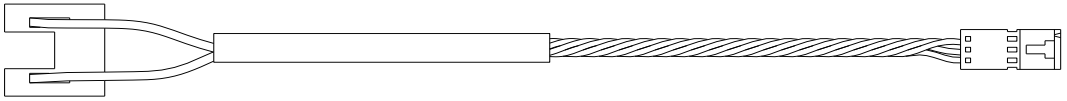


Part Number: 05621141A

Part Number: 05621142



Part Number: 05621146



Linear Knife Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	010107	O-RING	1
2	093986	SCREW - TAPTITE	4
3	099875	WASHER -CUTTER	1
4	099944	E-RING (E3)	2
5	099945	E-RING (E5)	2
6	100256	E-RING (E8)	2
7	105023	IMPRESSION ADJ. KNOB	1
8	627845	FRAME, KNIFE UPPER	1
9	110894	KNIFE-BLADE	1
10	110895	WHEEL-KNIFE	1
11	110902	WIPER	2
12	110904	SHAFT, LOWER	1
13	110905	SHAFT, PIVOT	1
14	110911	ECCENTRIC	2
15	110916	WASHER - DAMPENING	2
16	110917	BEARING, UPPER PIVOT	4
17	627844	BEARING, LOWER PIVOT	2
18	110923	BELT-TIMING SLIDER	1
19	110924	BEARING - LINEAR	2
20	110925	SLIDER ASSEMBLY	1
21	111386	RING-PRONG LOCK EXTERNAL	1
22	111418	BRACKET - DAMPENING	2
23	111419	GROMMET - DAMPENING	4
24	111884	SPRING-EXTENSION	2
25	117902	GEAR, PLATEN	1
26	117903	BALL BEARING	2

ITEM	PART NO.	DESCRIPTION	QTY
27	124387	BELT - PULLEY/BLADES	1
28	124391	SHAFT-UPPER	1
29	124392	BRACKET-KNIFE MOUNTING	1
30	124393	FRAME-KNIFE LOWER	1
31	125038	ROLLER - SLIDER	2
32	125039	SHAFT - ROLLER, SLIDER	2
33	125040	BEARING - SLIDER ROLLER	4
34	126578	PLATEN DRIVE MOTOR ASSY	1
35	196028	KNOB, BLACK (GLOSS) .187 SHAFT HOLE BUSHING SOCKET SET SCREW	1
36	245026	STEPPER MOTOR, HARNESSED	1
37	354009	GEAR, DRIVEN	2
38	375021	BLOCK, HEAD ADJUST	1
39	448010	STATIC BRUSH	1
40	541110	GROMMET, PLASTIC CLAMP	3
41	621146	HARNESS, KNIFE SENSOR	2
42	584027	GEAR, IDLER 22T, 32P	2
43	584028	GEAR, NIP, 26T 32P	1
44	584033	BRACKET, NIP ROLLER, OUTER	1
45	621142	SENSOR, REFLECTIVE HARNESSED	2
46	624009	SHAFT, WEB TURN, STACKER MOUNT	2
47	624023	BRACKET, NIP ROLLER MOUNT	1
48	624024	ROLLER, NIP DRIVE, MOLDED	1
49	624025	ROLLER, NIP IDLER	1
50	624037	GEAR, NIP IDLER, ALTERED	2
51	624038	BRACKET, STRIPPER	1
52	627029	STANDOFF, KNIFE MOTOR	2

Linear Knife Parts List

ITEM	PART NO.	DESCRIPTION	QTY
53	627801	FRAME, LINEAR KNIFE	1
54	627802	BRACKET, KNIFE MOTOR MOUNT	1
55	627804	BRACKET, FEED MOTOR MOUNT	1
56	627805	ASSY, BRACKET, NIP MOUNT	1
57	627806	BRACKET, LOWER SUPPORT FRAME	1
58	627807	SHAFT, FEED	1
59	627808	SHAFT, FEED EXTENSION	1
60	627809	HOLDER, BEARING CUP	2
61	627810	SHAFT, UPPER FEED, MOLDED	1
62	627812	SHAFT, SENSOR ADJUST UPPER	1
63	627813	SHAFT, SENSOR ADJUST LOWER	1
64	627814	SHAFT, SENSOR ADJUST IDLER POST	1
65	627815	BLOCK, SENSOR ADJUST	1
66	627816	PULLEY, KNIFE MOTOR	1
67	627817	BELT, KNIFE MOTOR	1
68	627818	BRACKET, SLIDE SENSOR MOUNT	1
69	627820	SHAFT, NIP ROLLER DRIVE	1
70	627821	COVER, REAR	1
71	627822	COVER, LEFT	1
72	627823	COVER, RIGHT	1
73	627824	GEAR, IDLER, 36T	1
74	627825	STANDOFF, IDLER GEAR	2
75	627826	BRACKET, KNIFE PIVOT	1
76	627827	BRACKET, KNIFE MOUNT	1
77	627829	BRACKET, DEFLECTOR	1
78	627831	GEAR, FEED DRIVE	1

ITEM	PART NO.	DESCRIPTION	QTY
79	627835	BRIDGE BLADE, LOWER SENSOR	1
80	627836	KNOB, HEAD ADJUST	1
81	627837	BLOCK, SENSOR ADJUST, BOTTOM	1
82	627838	BRACKET, KNIFE PIVOT LOWER	1
83	627839	BRACKET, 700 FOOT	1
84	627840	BRACKET, LOWER REAR	1
85	627841	GUIDE, ENTRY	1
86	627842	GUIDE, EXIT	1
87	989978	#8 STAR WASHER	1
88	989985	WASHER, #2 SAE	2
89	990003	4-40 X 1/4 FHCS	2
90	990006	4-40 X 1/4" SOCKET HD CAP SCR	1
91	990080	10-32 X 3/8 CAP SCREW	8
92	990081	10-32 X 1/2 CAP SCREW	1
93	990102	WASHER, #10 SAE	8
94	990104	10-32 E-S NUT	6
95	990119	1/4-20 x 3/8 SHCS	1
96	990146	1/4:20 HEX NUT	2
97	990167	1/4 SAE WASHER	1
98	990232	5/16 X 3/8 SLDR SCREW	1
99	990262	SNAP RING, 1/4	1
100	990275	WASHER, 5/16 HARDENED	1
101	990277	WASHER, BELLEVILLE .750 x .330 x .025	4
102	990313	KNOB, SZ 10 THUMB SCREW	1
103	990325	SNAP RING, 3/16 "E" RING	12
104	990326	SNAP RING, 1/4" E-RING	5

Linear Knife Parts List

ITEM	PART NO.	DESCRIPTION	QTY
105	990327	E-RING, 5/16	5
106	990424	4-40 X 3/8 SHCS	2
107	990513	TIE WRAP, TY523M SMALL	8
108	990533	MOUNT, ABMM-A	1
109	990821	.300" ROUND CABLE STRAIN RELIEF	2
110	990920	STRAIN RELIEF BUSHING	2
111	991372	6 SCREW, 6-32 X 1/4 PAN PHILLIPS	5
112	991373	8 SCREW, 8-32 X 1/4 PAN PHILLIPS	6
113	991374	1/4 SCREW, 1/4-20 X 1/2 PAN PHILLIPS	3
114	991377	10-32 X 3/4 PHILLIPS PAN HEAD SCREW	2
115	991379	10-32 X 3/8 PHILLIPS PAN HEAD SCREW	6
116	991442	SCREW, 8-32 X 3/8 PHILLIPS FLAT HEAD	3
117	991454	8-32 X 1/4" THUMB SCREW	2
118	991508	8-32 X 1/2 FLANGED BUTTON HEAD SCREW	10
119	991510	BALL BEARING , 16mm O.D. x 8mm I.D. FLG	2
120	991523	SPRING, COMP 500/600 NIP ASSEMBLY	2
121	991646	M3 X 8 SHCS	4
122	991648	LEVELING MOUNT, 1/4-20 X 1	2
123	991649	COMPRESSION SPRING	2
124	999076	BUSHING, 3/16 X 1/4 X 5/8	1
125	999097	BUSHING, FL 1/4 X 3/8 X 3/16	1
126	999098	BUSHING, 3/16 X 1/4 X 3/8	2
127	999100	BUSHING, FL 3/16X5/16X1/8	4
128	999165	BUSHING, 3/16ID X 1/4OD X 1/4L	1
129	PB00500554	WASHER-PLAIN	2

ITEM	PART NO.	DESCRIPTION	QTY
130	PB00500555	WASHER-PLAIN M01460	6
131	PB00500557	WASHER-PLAIN (6mm)	1
132	PB00520505	WASHER-EXT. LOCK	6
133	PB00520508	WASHER-EXT. LOCK M01460	3
134	PB00720611	SCREW/LOCKWASHER (8-32 X 3/8)	1
135	PB00735148	SCREW-M3-0.5X5 PHIL PAN HD	4
136	PB00735150	SCREW-M3-0.5X8 PHIL PAN HD	2
137	PB00745149	SCREW-PHILLIPS FLAT HEAD (M3 X 6)	4
138	PB00800525	NUT-HEX M01460	6
139	PB00800527	NUT-HEX M01460	3
140	PB05910666	BEARING, BALL, SHIELDED (ROHS COMPLIANT)	1
141	621138	HARNESS, SNAP SIGNAL OUTPUT ROLLER KNIFE	1
142	621139	HARNESS, SNAP POWER OUTPUT, ROLLER KNIFE	1
143	621140	HARNESS, SNAP / ROLLER KNIFE POWER	1
144	621141A	HARNESS, SNAP / ROLLER KNIFE SIGNAL PROGRAMMED	1
145	627834	ASSEMBLY, BRACKET, MOTHER BOARD ENTRY	1
146	627843	BLOCK, STACKER MOUNT	1
147	990273	WASHER, #10 BELLEVILLE	4
148	627847	PLATE, EXIT GUIDE	1
149	PB00730008	SCREW-PHILLIPS PAN HEAD (2-56 X 1/2)	2
150	991515	4-40 X 3/8 PHILLIPS HEAD SELF-TAPPING SCREW	2
151	70030	CARTON, SHIPPING	1
152	70031	CARTON	1
153	00054401	POLY BAG	1
154	50038	BAG POLY 11 X 4 X 17 S	4

ITEM	PART NO.	DESCRIPTION	QTY
155	627848	GUARD, COVER	1
156	989984	4-40 X 3/8 BHCS	2
157	989986	4-40 ES NUT	2
158	627850	SHAFT, IDLER, LOWER	1
159	627851	PULLEY, OUTBOARD	3
160	627849	SHAFT, IDLER, UPPER	2
161	990994	WIRE TIE, 8"	1
162	627853	LABEL, SERIAL NUMBER, LINEAR KNIFE	1

ITEM	PART NO.	DESCRIPTION	QTY

Revision	Date	Description
2.1	11/18/2013	Initial release for part number 05621395 under ECN 3009741
2.2	02/07/2014	Add pictures of wire harnesses, ECN 3009839