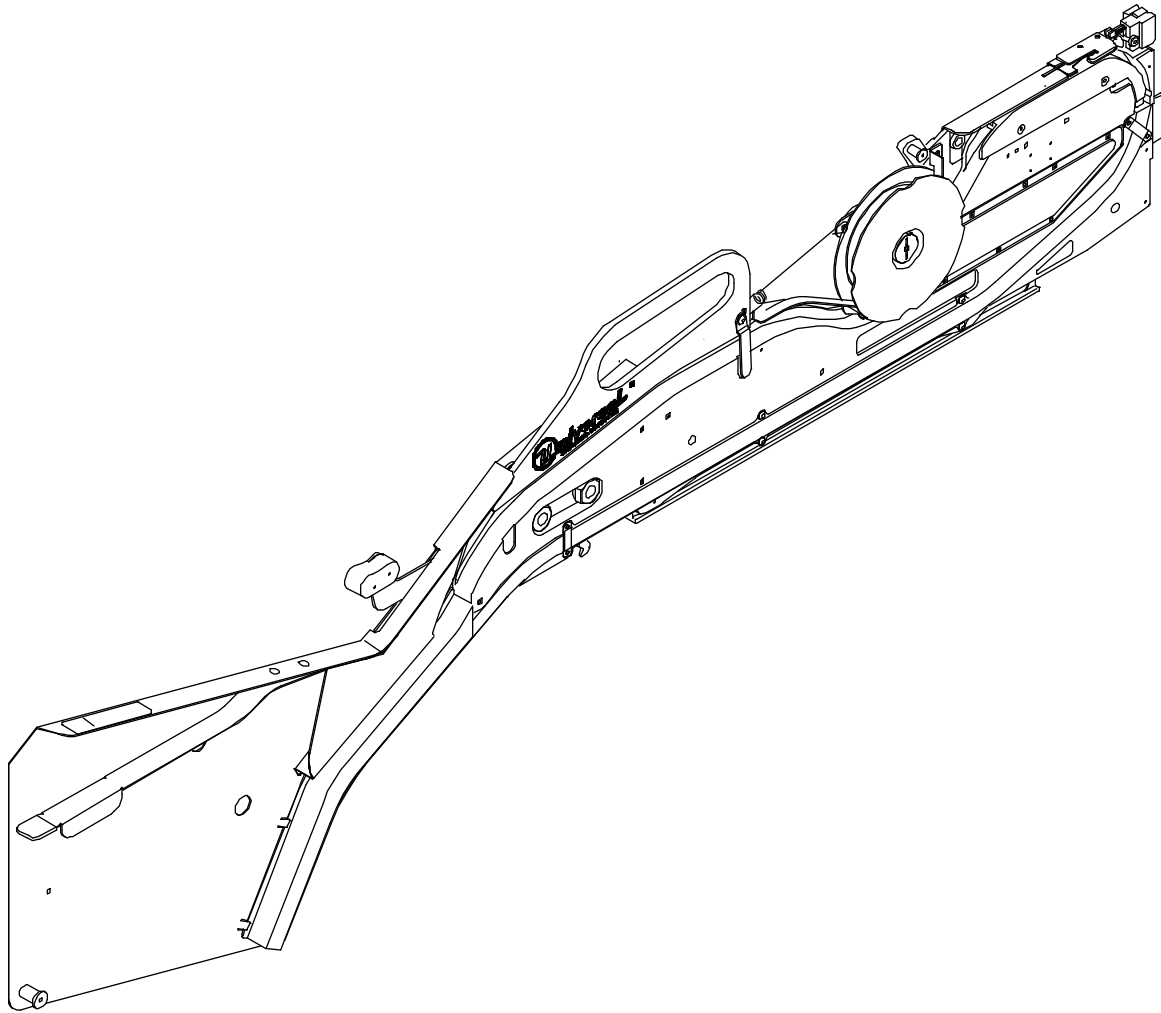


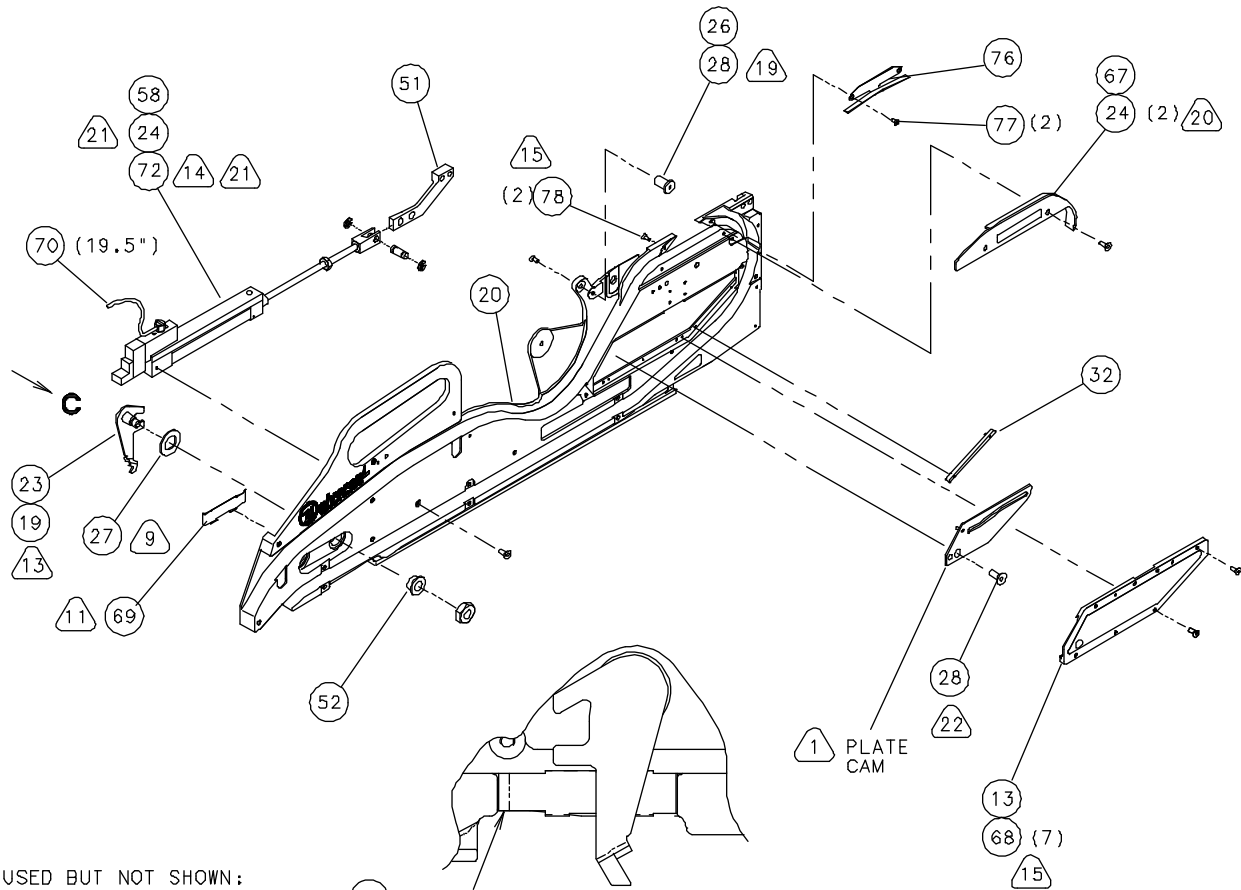
**4695A 12mm Tape Feeder**

**T44431123 Rev. F**



T44431123 Rev. F

4695A 12mm Tape Feeder



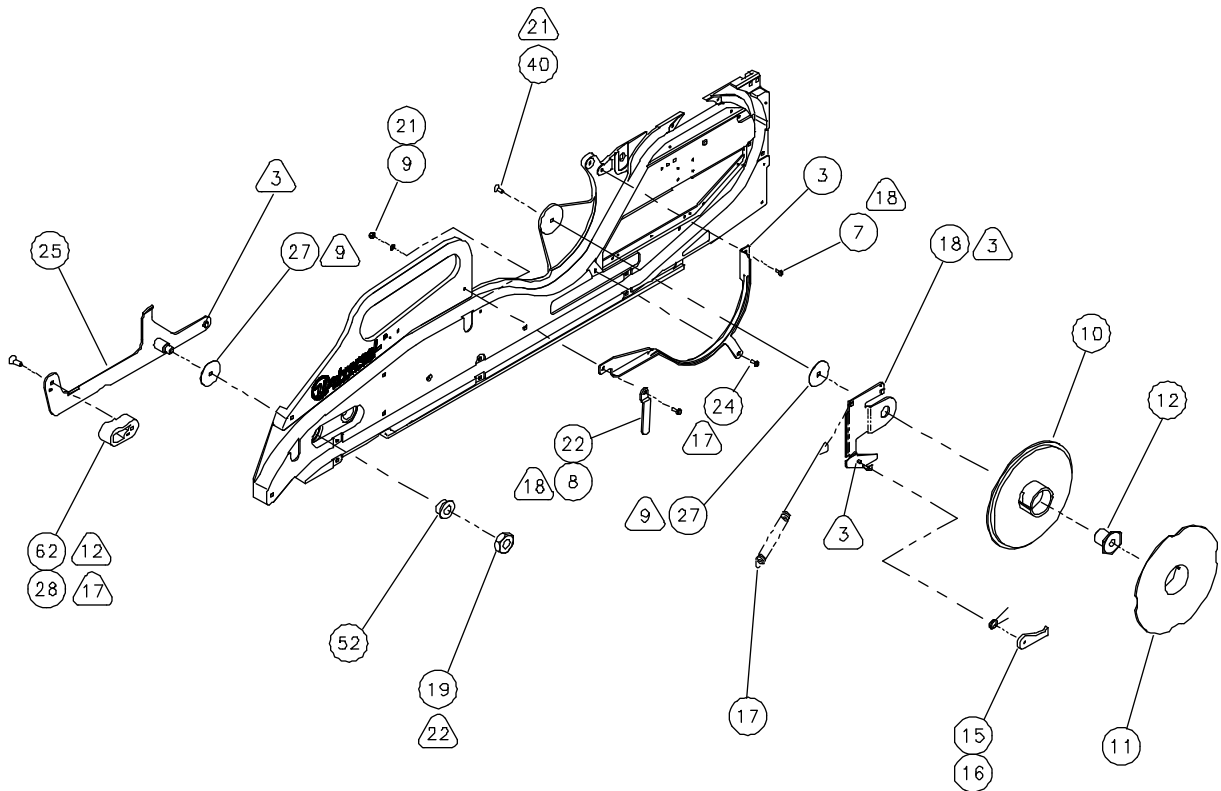
USED BUT NOT SHOWN:

- 56 8
- 55 16

69 REF RADIUS  
**DETAIL C**  
SCALE NONE

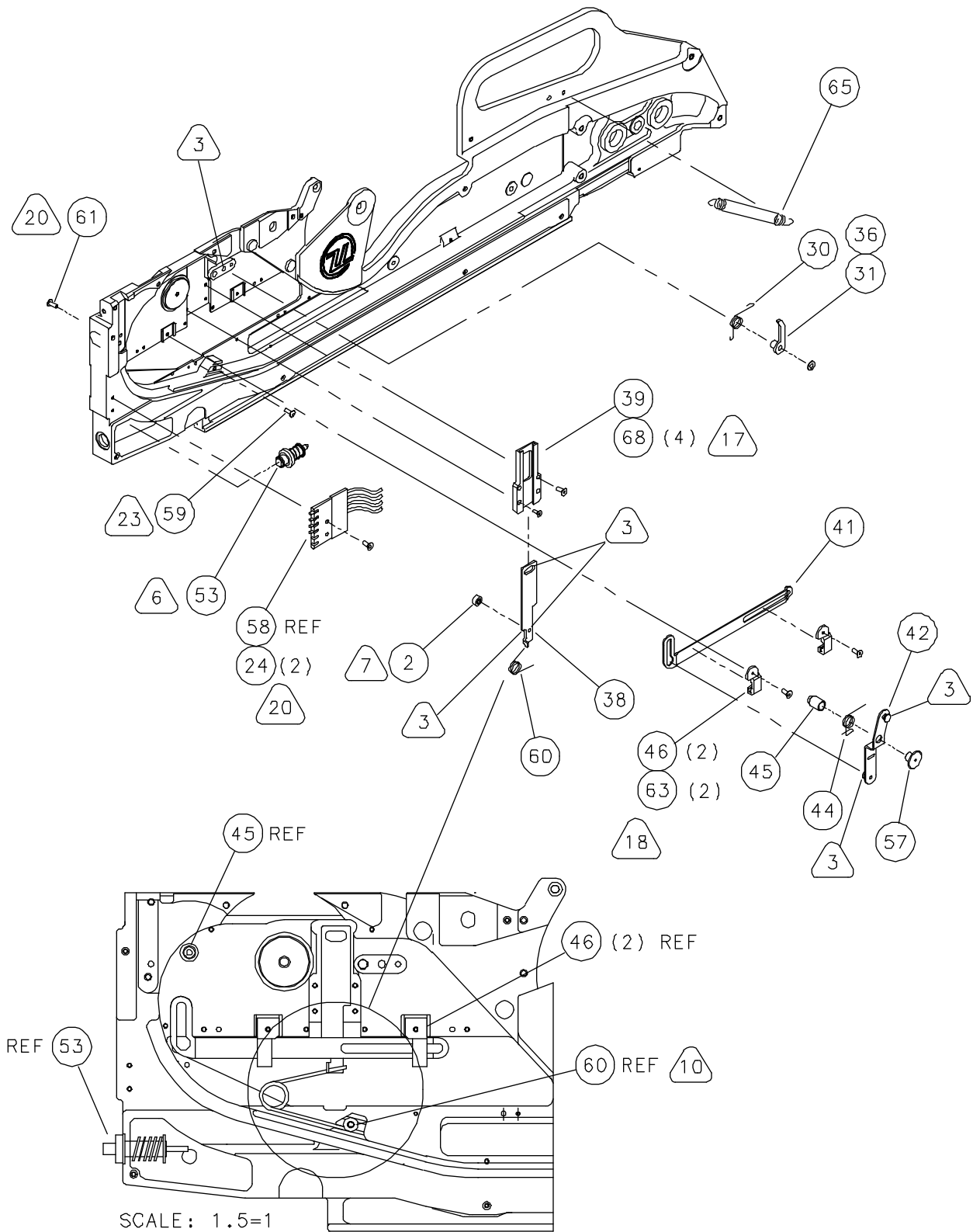
# 4695A 12mm Tape Feeder

T44431123 Rev. F



T44431123 Rev. F

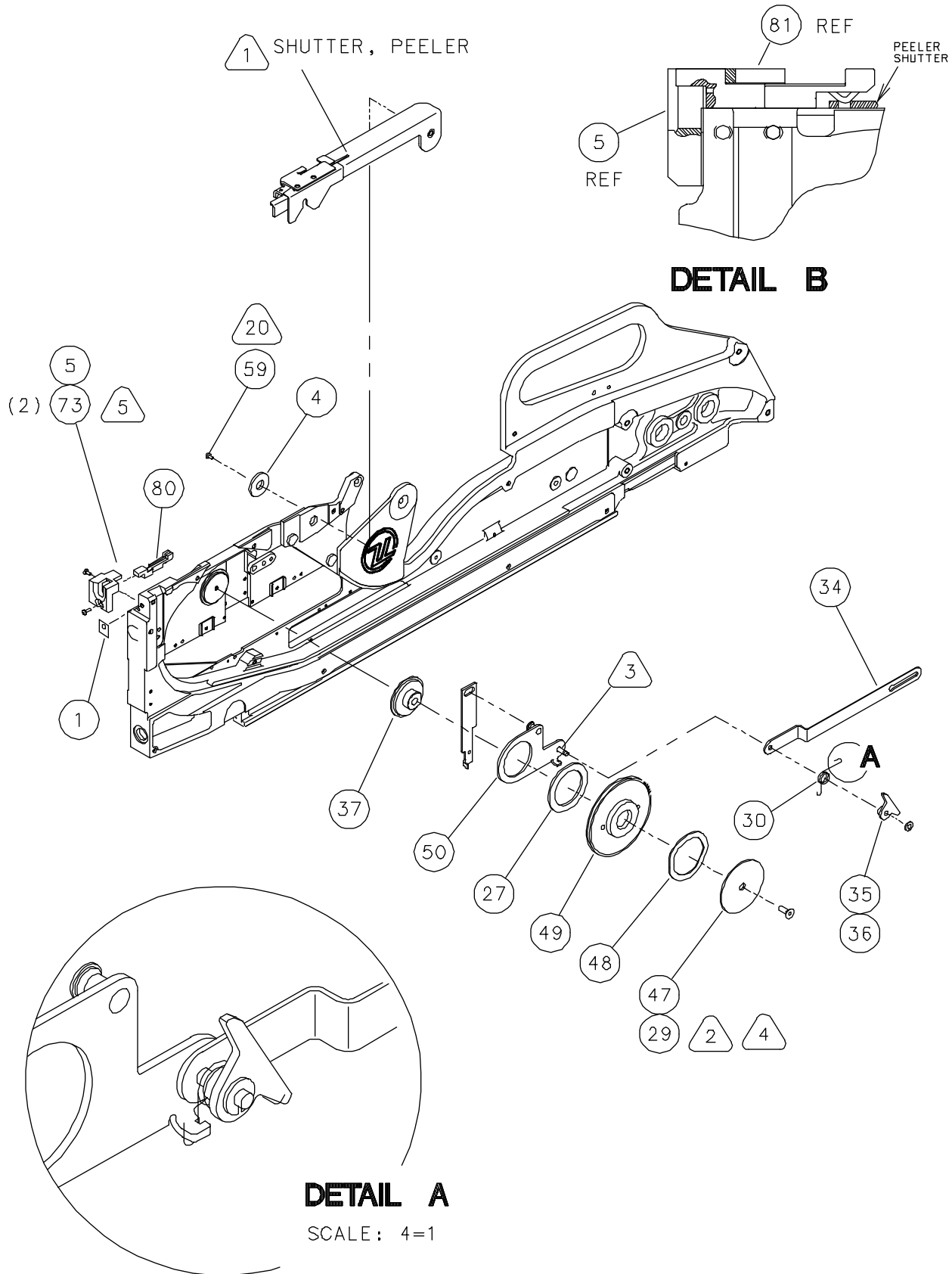
4695A 12mm Tape Feeder



SCALE : 1.5=1

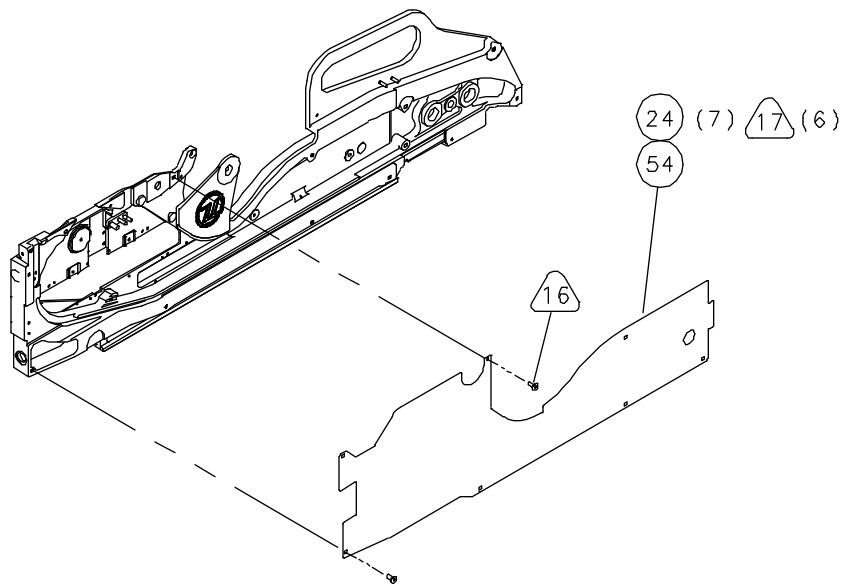
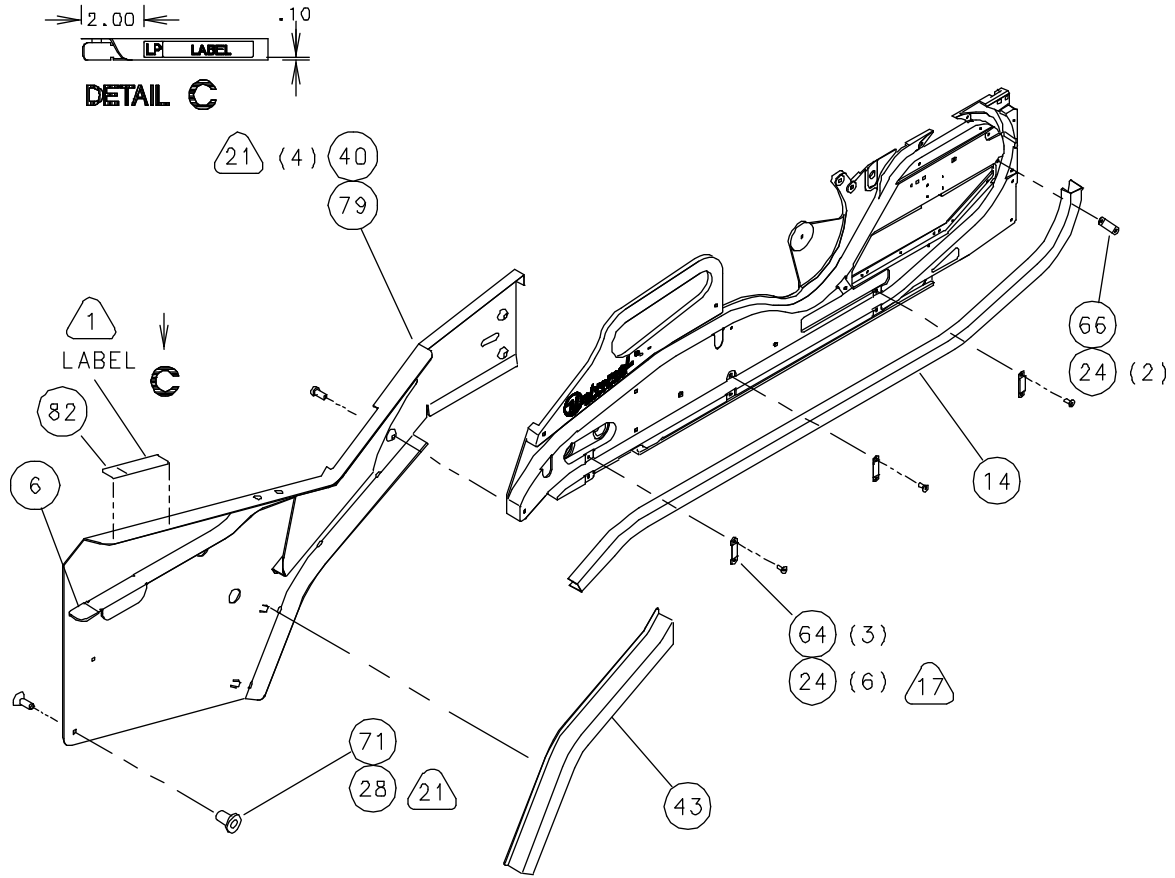
# 4695A 12mm Tape Feeder

T44431123 Rev. F



T44431123 Rev. F

4695A 12mm Tape Feeder



**4695A 12mm Tape Feeder****T44431123 Rev. F****NOTES**

- 1 SEE APPLICABLE INDEX KIT
- 2 ASSEMBLE USING BLKM07389 (LOCTITE 222)
- 3 LUBRICATE USING BLKM07680 (KENDALL BLUE GREASE)
- 4 TORQUE TO 12-14 IN/LBS
- 5 TORQUE TO 7-9 IN/LBS
- 6 LUBRICATE USING BLKM07387 (PARKER O-LUBE), MINIMUM AMOUNT
- 7 TAKE CARE IN ASSEMBLING, DET. 3 IS LOOSE PART
- 8 BAG AND ATTACH TO ASSEMBLY.
- 9 ATTACH TO HOUSING
- 10 MAKE SURE TORSION SPRING (DET 60) DOES NOT RUB ON HANGER (DET 46) OR CAM PLATE
- 11 INSTALL DET. NO. 69 BETWEEN HOUSING & LATCH AS SHOWN.
- 12 ASSEMBLE AFTER ASSEMBLING COVER, REEL HOLDER TO HOUSING
- 13 TORQUE TO 54 IN/LBS
- 14 SEE ITEM ASSEMBLY DRAWING FOR FACTORY STROKE LENGTH SET UP DIMENSION
- 15 TORQUE TO 16-20 IN/OZS
- 16 OPTIONAL 12MM DEEP POCKET TAPE SUPPORT BAG AND ATTACH AT ASSEMBLY.
- 17 TORQUE TO 20 IN/OZS
- 18 TORQUE TO 30 IN/OZS
- 19 TORQUE TO 1 IN/LBS
- 20 TORQUE TO 3 IN/LBS
- 21 TORQUE TO 6 IN/LBS
- 22 TORQUE TO 8 IN/LBS
- 23 TORQUE TO 9 IN/LBS
- 24 TORQUE TO 17 IN/LBS
- 25 HARDWARE INSPECTION MAY BE ACCOMPLISHED BY APPLICATION OF 80% OF THE SPECIFIED TORQUE IN REVERSE ROTATION: NO MOVEMENT IS ALLOWED.

**T44431123 Rev. F****4695A 12mm Tape Feeder**

DET NO.	ITEM NO.	DESCRIPTION	QTY	U/M
0001	45123501	SHIM KIT	1.000	EA
0002	45005401	ROLLER, CAM	1.000	EA
0003	45015303	TAPE GUIDE (8/12MM)	1.000	EA
0004	45961601	WASHER,RETAINER	1.000	EA
0005	44397603	LOCATOR	1.000	EA
0006	44800802	CAP,VINYL	1.000	EA
0007	80060201	PPH/ITLW M3 X 6MM	1.000	EA
0008	80060206	PPH/ITLW M3 X 12MM	1.000	EA
0009	40839212	ACORN NUT M3 X 0.5	1.000	EA
0010	46904301	HUB, DRIVE	1.000	EA
0011	46904402	SPOOL, TAKE-UP 12MM	1.000	EA
0012	44837001	SHAFT,RETAINER	1.000	EA
0013	45037203	GUIDE,CAM	1.000	EA
0014	45635603	SCRAP GUIDE	1.000	EA
0015	44353201	PAWL,TAKE-UP	1.000	EA
0016	44424101	SPRING,TORSION	1.000	EA
0017	44417201	SPRING	1.000	EA
0018	46576401	DRIVE,TAKE UP	1.000	EA
0019	80032205	HEX NUT-METRIC M6 X 1.0	2.000	EA
0020	44902105	HOUSING,ASSY	1.000	EA
0021	80031704	MFW M3	1.000	EA
0022	44419001	GUIDE,TAPE	1.000	EA
0023	44256201	LATCH,FDR	1.000	EA
0024	80061302	MPFHMS M2 X 6MM	21.000	EA
0025	44256301	LATCH	1.000	EA
0026	41283906	POST REEL	1.000	EA
0027	44664301	STRIP,ADHESIVE	1.000	EA
0028	80061303	MPFHMS M3 X 10MM	4.000	EA
0029	80061307	MPFHMS M5 X 16MM	1.000	EA
0030	44418301	SPRING,TORSION	2.000	EA
0031	44418101	STOP,BACKUP	1.000	EA
0032	45105801	BUMPER	1.000	EA
0033	80029805	MSBHS M3X4MM	1.000	EA
0034	44353101	LINK,TAKE-UP	1.000	EA
0035	44412301	PAWL	1.000	EA
0036	BLKM06319	RET RING 5133-12	2.000	EA
0037	44405201	HUB	1.000	EA
0038	44408803	ACTUATOR, INDEX WHEEL	1.000	EA
0039	45024601	GUIDE,VERT	1.000	EA
0040	80061305	MPFHMS M4 X 8MM	5.000	EA
0041	44411801	LINK,CAM	1.000	EA
0042	44411701	LINK,SHUTTER	1.000	EA
0043	45702502	COVER	1.000	EA
0044	44421201	SPRING,TORSION	1.000	EA
0045	44574901	BOSS	1.000	EA





T44431123 Rev. F

4695A 12mm Tape Feeder

<b>UIC Part Number</b>	<b>Description</b>	<b>Quantity</b>
<b>UIC #44711504: 12mm x 4mm Tape Feeder Index Kit</b>		
44219514	4mm Cam Plate	1
45847604	8 1/2mm x 4mm Peeler Shutter	1
45891003	Label	1
<b>UIC #44711505: 12mm x 8mm Tape Feeder Index Kit</b>		
44219503	8mm Cam Plate	1
45847605	12mm x 8mm Peeler Shutter	1
45891004	Label	1
<b>UIC #44711506: 12mm x 12mm Tape Feeder Index Kit</b>		
44219516	12mm x 12mm Cam Plate	1
45847605	12mm x 8mm Peeler Shutter	1
45891005	Label	1

**4695A 12mm Tape Feeder****T44431123 Rev. F*****Functional Description***

The Model 4695A 12mm Tape Feeder advances a component from the reel holder to the peeler blade, where the mylar (cover) tape is removed. The component is then advanced to the feeder pick-up position, where it waits for pick-up by the machine.

Change the configuration of your 12mm tape feeder by using an index kit. UIC offers a different index kit for each allowable tape configuration. Reference the table that lists these index kits and their respective contents.

The 12mm tape feeder, as supplied, uses tape with a maximum pocket depth of 0.156" (3.9 mm). Replacing the standard embossed tape support with the other tape support increases the maximum allowable tape pocket depth to 0.250" (6.4 mm).

***Maintenance Concept***

The following table defines the recommended Maintenance Concept for the 4695A 12mm Tape Feeder. For a more detailed explanation of the Maintenance Concept and its structure, refer to the *Prerequisite Information and Introduction* module.

Note that cycle count data are available through the Universal Platform Software (UPS) system's Management Information application. Refer to the *User's Guide* for details on how to access this application.

<b><i>Maintenance Procedure</i></b>	<b><i>Recommended Frequency</i></b>	<b><i>Minimum Skill Requirement</i></b>	<b><i>Spares Kit Req'd</i></b>	<b><i>Tool Kit Req'd</i></b>
<i>Loading the Tape Feeder</i>	<i>As Needed</i>	<i>Machine Operator</i>	<i>No</i>	<i>No</i>
<i>Installing the Tape Feeder</i>	<i>As Needed</i>	<i>Machine Operator</i>	<i>No</i>	<i>No</i>
<i>Unloading the Tape Feeder</i>	<i>As Needed</i>	<i>Machine Operator</i>	<i>No</i>	<i>No</i>
<i>Checking the Overall Condition of the Tape Feeder</i>	<i>Every six months or 1,200,000 cycles</i>	<i>Machine Operator</i>	<i>No</i>	<i>No</i>
<i>Cleaning and Lubricating the Tape Feeder</i>	<i>Once a year or 2,500,000 cycles</i>	<i>Maintenance Technician</i>	<i>No</i>	<i>No</i>
<i>Replacing Feeder Connectors or Pins</i>	<i>As Required</i>	<i>Maintenance Technician</i>	<i>Yes</i>	<i>No</i>

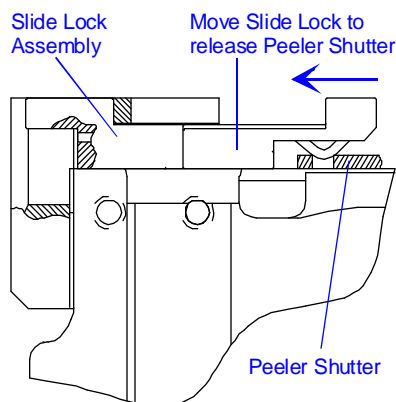
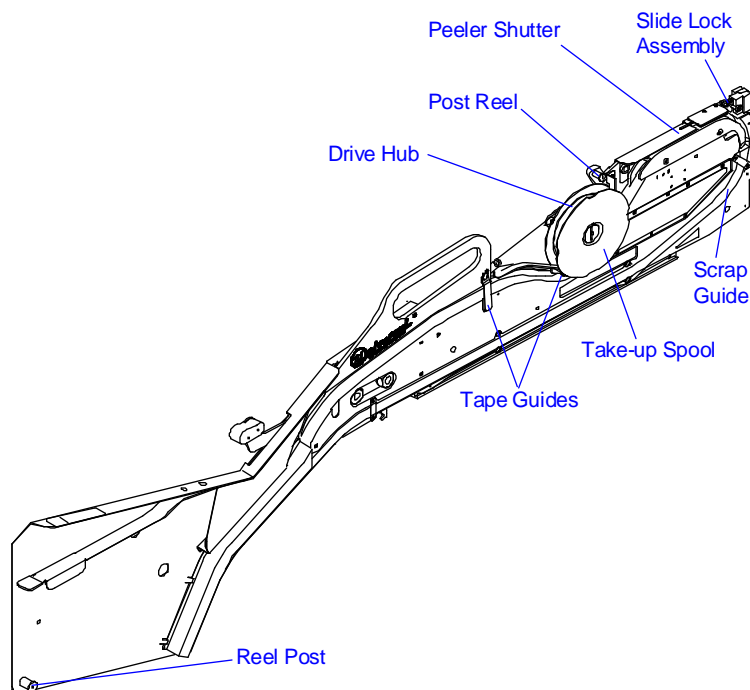
## Procedures and Adjustments

Adjustments and corrective maintenance procedures required of the customer are presented in the following subsections.

### Loading the Tape Feeder

Load the tape feeder using the following procedure. Note that the component size and index are stamped on the top of the peeler shutter.

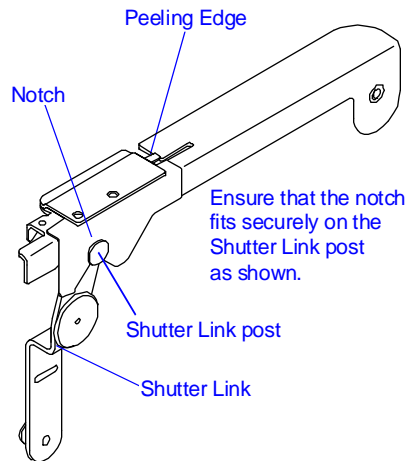
1. Slide the component reel under the dereeler and push while aligning the component reel center hole to the reel post.



2. Grasp the drive hub and rotate the take-up spool about one quarter-turn counterclockwise, until it loosens. Remove it from the drive hub.
3. Release the slide lock by pushing away from the peeler.
4. Raise the peeler shutter.
5. Pull the component tape along the tape track, keeping the tape to the inside of the vertical tape guide. Pull the tape under the curved tape guide, and over the tape support.
6. Separate about ten inches of cover tape from the component tape. Peel the cover tape back from the component tape, but avoid detaching it completely. Direct the peeled portion of the component tape down into the scrap guide.
7. Tie the end of the cover tape into a knot. Press the knotted end into the slot in the center of the take-up spool to anchor the cover tape.

## 4695A 12mm Tape Feeder

T44431123 Rev. F



8. Pull the cover tape back over the peeling edge and the post reel. Don't confuse the post reel with the reel post; the reel post is where the component reel is mounted.
9. Place the take-up spool onto the drive hub, aligning the pegs on the take-up spool with the corresponding notches on the drive hub. Gently press down the take-up spool. Grasp the drive hub and rotate the spool one quarter-turn clockwise to tighten it.  
  
Rotate the drive hub counterclockwise to eliminate any slack in the cover tape.
10. Align the holes in the component tape with the index wheel teeth that are visible. Maintain the wheel tooth/tape hole alignment and gently lower the peeler shutter into place.

### NOTE

Ensure that the notch on the side of the peeler shutter fits properly over the shutter link.

11. Secure the peeler shutter by resetting the slide lock.
12. Slide the cam link back and forth so that the feeder advances the component tape. Do this until a part is visible in the peeler shutter opening.

While doing this, be sure that the component tape is advancing through the peeler shutter, and that the take-up spool is accepting the cover tape smoothly.

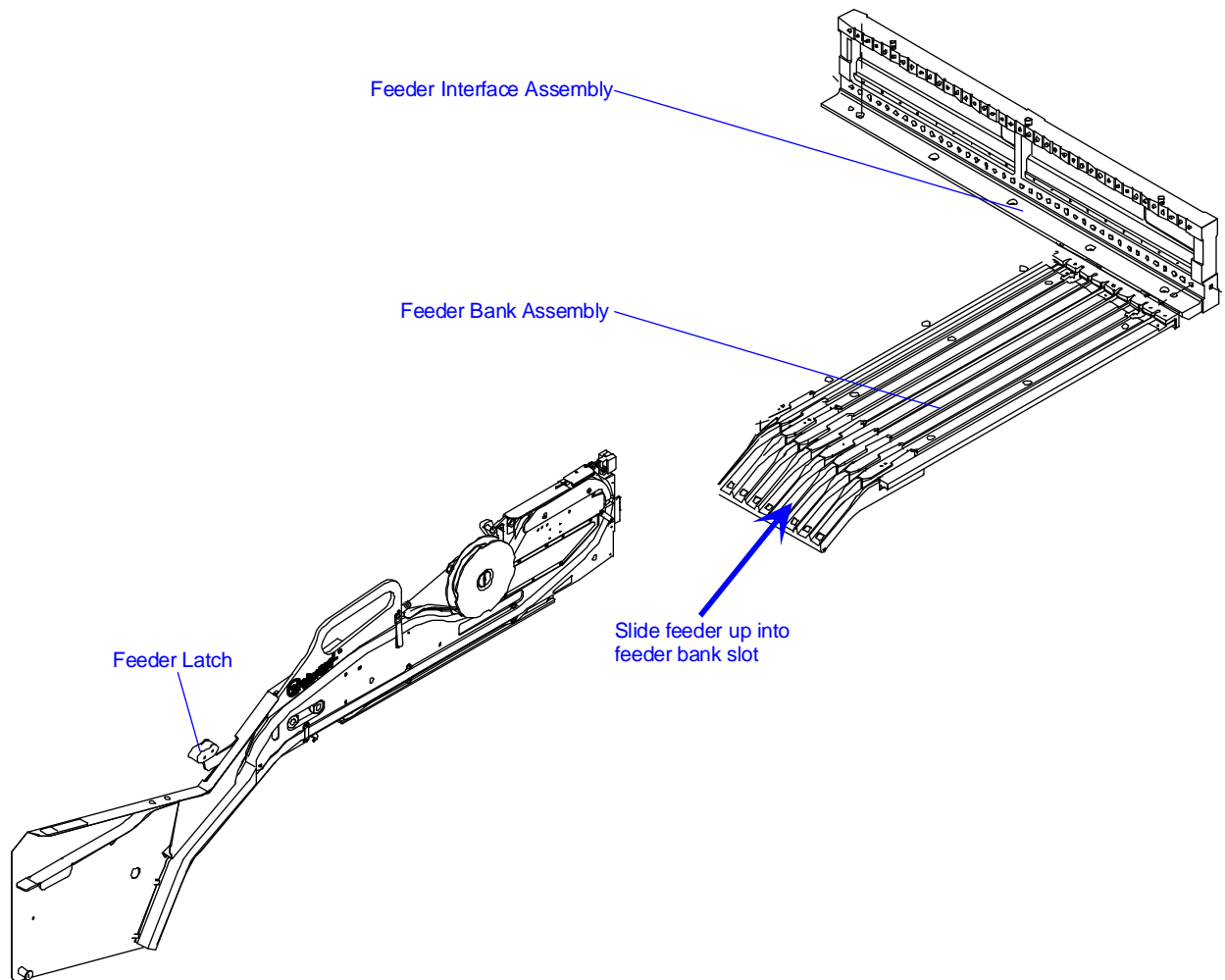
### ***Installing the Tape Feeder***

Install the tape feeder using the following procedure.

1. Push the tape feeder latch down so that it locks down. Slide the feeder onto the feeder bank assembly as shown in the following illustration.

T44431123 Rev. F

4695A 12mm Tape Feeder



2. Slide the feeder until it reaches the interface assembly.
3. When the feeder makes a firm connection with the feeder interface assembly, release the latch and pull it up. This locks the feeder into its operational position.

### ***Unloading the Tape Feeder***

Unload the tape feeder using the following procedure.

1. Remove the feeder from the Feeder Bank Assembly. Follow, in reverse order, the steps in the *Installing the Tape Feeder* procedure.
2. Place the feeder on its side with the tape reel facing upwards.
3. Release the slide lock by pushing away from the peeler.
4. Raise the peeler shutter.

**4695A 12mm Tape Feeder****T44431123 Rev. F**

5. Grasp the drive hub and rotate the take-up spool about one quarter-turn counterclockwise, until it loosens. Remove the spool from the drive hub.
6. The next step depends on whether or not there is component tape remaining on the component tape reel.  
  
If the component tape reel is empty, unwind the cover tape from the take-up reel and discard it.  
  
If the component tape reel is not empty, pull about ten inches of the remaining component tape out and cut it cleanly. This will help when reloading the tape feeder.
7. Rotate the component tape reel counterclockwise to rewind the remaining component tape.
8. Remove the component tape reel from the reel post.
9. Reattach the take-up reel to the drive hub.
10. Clear any loose components from the peeler shutter and scrap guide areas.

***Checking the Overall Condition of the Tape Feeder***

Tape feeders require periodic inspection as prescribed in the Maintenance Concept table. Replace worn or defective parts as necessary. Inspect the overall condition of the tape feeder using the following procedure.

1. Clean any contamination from the peeler.
2. Check the index wheel for chipped or broken pins.
3. Check the valve/cylinder connector for cracks or breaks.
4. Check the valve/cylinder connector for broken or damaged electrical pins. For more information, refer to the *Replacing the Feeder Connector Assembly* procedure in this module.
5. Check the drive hub for worn or broken teeth.
6. Check the Coupling M O-rings for cracks.

***Cleaning and Lubricating the Tape Feeder***

Before beginning this procedure, ensure that the following supplies are available.

- Alcohol
- Clean, lint-free cloths
- BLKM07680 Kendall Blue grease

- BLKM07387 lubricant
- Loctite 222

Clean and lubricate the tape feeder using the following procedure.

1. Unload the tape feeder. Refer to the *Unloading the Tape Feeder* procedure.
2. Loosen all screws securing the feeder cover, and remove the cover.
3. Detach the extension spring from the take-up drive.
4. Release the slide lock by pushing away from the peeler.
5. Using alcohol on a clean lint-free cloth, thoroughly clean all surfaces of the peeler, and the area between the peeler and feeder housing.
6. Gently lower the peeler and secure the peeler by resetting the slide lock.
7. Remove the torsion spring from the bottom of the index wheel actuator.
8. Slide the valve/cylinder assembly cam link toward the front of the feeder.
9. Remove the pawl and its retaining ring and torsion spring.
10. Remove the backup stop and its retaining ring and torsion spring.
11. Remove the index wheel screw and the parts that it secures: the retainer, the wave spring washer, and the pawl plate with its adhesive strip remaining attached.
12. Move the pawl plate up and away from the index wheel actuator, and remove the hub.
13. Remove the screws from the left and right cam link hangers that hold the cam link.
14. Slide the cam link down toward the bottom of the feeder housing assembly to allow the necessary clearance for removing the index wheel actuator.
15. Remove the four screws from the vertical guide. Remove the vertical guide, the index wheel actuator, and the cam roller.
16. Use alcohol on a clean lint-free cloth to clean the surfaces of the pawl plate, the index wheel actuator, and all parts that were removed. Also, clean the slot in the cam plate.
17. Apply a thin film of BLKM07680 Kendall Blue Grease to the following parts/areas:



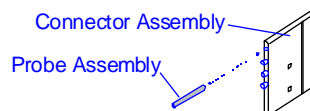
**4695A 12mm Tape Feeder****T44431123 Rev. F**

- the slot in the cam plate
  - the slot in the top of the index wheel actuator
  - the pin on the index wheel actuator
  - the two positioning pins on the pawl plate
  - the pawl pin on the feeder housing
18. Install the vertical guide and the index wheel actuator.
  19. Return the hub to its location against the feeder housing.
  20. Place the pawl plate over the hub. Ensure that the upper pin on the pawl plate fits through the slot in the top of the index wheel actuator.
  21. Continue reassembling the feeder, proceeding in the opposite order of disassembly.
  22. Apply Loctite 222 and install the index wheel screw. Torque the screw to 12-15 inch pounds.
  23. Manually operate the valve/cylinder assembly rod and cam link several times to ensure that both the index wheel and the take-up drive are advancing.
  24. Install the feeder cover.
  25. Apply BLKM07387 lubricant to the O-ring on coupling M.

***Replacing the Feeder Connector Assembly***

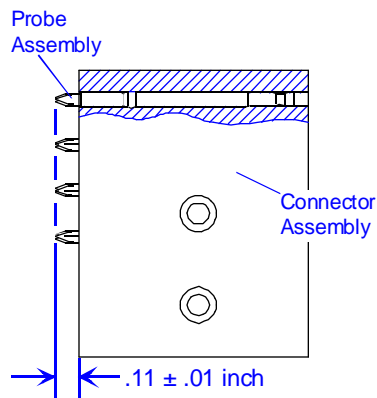
The Feeder Connector Assembly, Connector Plug Assembly, or Probe Assemblies (pogo pins) require periodic replacement as prescribed in the Maintenance Concept. Replace these parts using the procedure below.

1. Remove the tape feeder. Follow in reverse order, the steps in the *Installing the Tape Feeder* procedure.
2. To replace the Connector Assembly or Connector Plug Assembly, continue with step 6. To replace only the Probe Assembly (pogo pin), continue with the next step.
3. Using needle-nose pliers, carefully pull the bad Probe Assembly from the connector assembly.



## T44431123 Rev. F

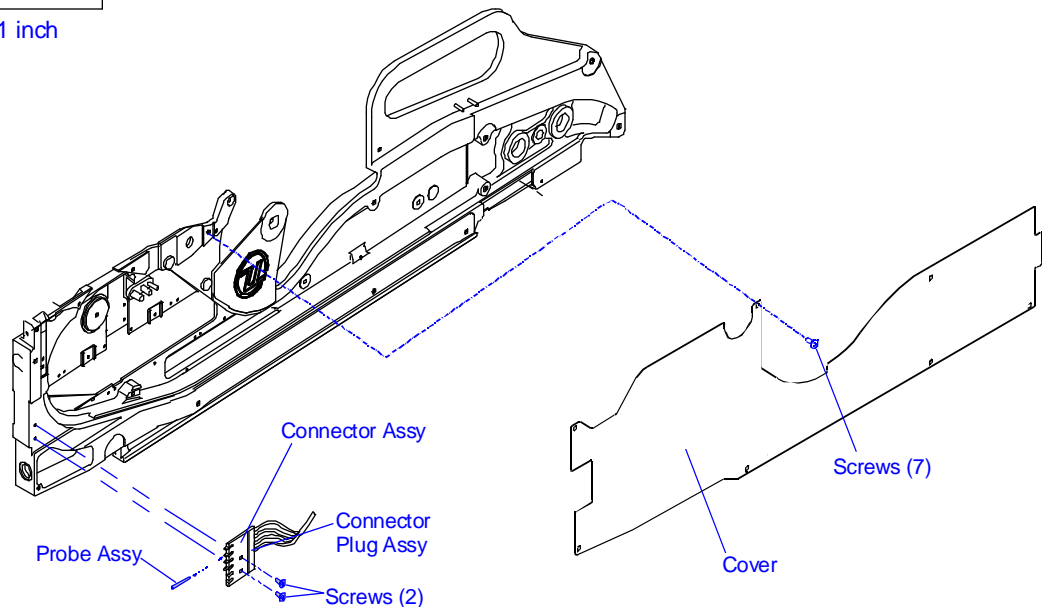
## 4695A 12mm Tape Feeder



4. Carefully insert the new Probe Assembly, UIC part number 46223001, into the Connector Assembly. Push the probe assembly in until the outside cylinder is flush with the edge of the connector assembly.

Ensure that the probe assembly is properly seated in the connector assembly. When properly seated, the spring-loaded probe tip extends  $.11 \pm .01$  inch from the edge of the connector assembly as shown.

5. Install the feeder. Refer to the *Installing the Tape Feeder* procedure in this document.



6. Replace the Connector Assembly or Connector Plug Assembly using the following steps.
7. Remove the seven screws and cover from the left side of the feeder.
8. Remove the two connector assembly mounting screws.
9. Replace as needed the Connector Assembly, UIC part number 44423606, by pulling from the Connector Plug Assembly.

- or -

Replace as needed the Connector Plug Assembly, UIC part number 46223501 by disconnecting from the valve assembly.

10. Install the Connector Assembly or Connector Plug Assembly using the two screws.
11. Install the seven screws and cover.
12. Install the feeder in the machine. Refer to the *Installing the Tape Feeder* procedure.



**4695A 12mm Tape Feeder**

**T44431123 Rev. F**

***Changes To This Revision***

- New procedure: Replacing the Feeder Connector Assembly.