8mm PrecisionPro (Green) DL Spliceable Tape Feeder
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T49889206 Rev. B
02-08 hd

This document supports assembly
49889206 Rev. -

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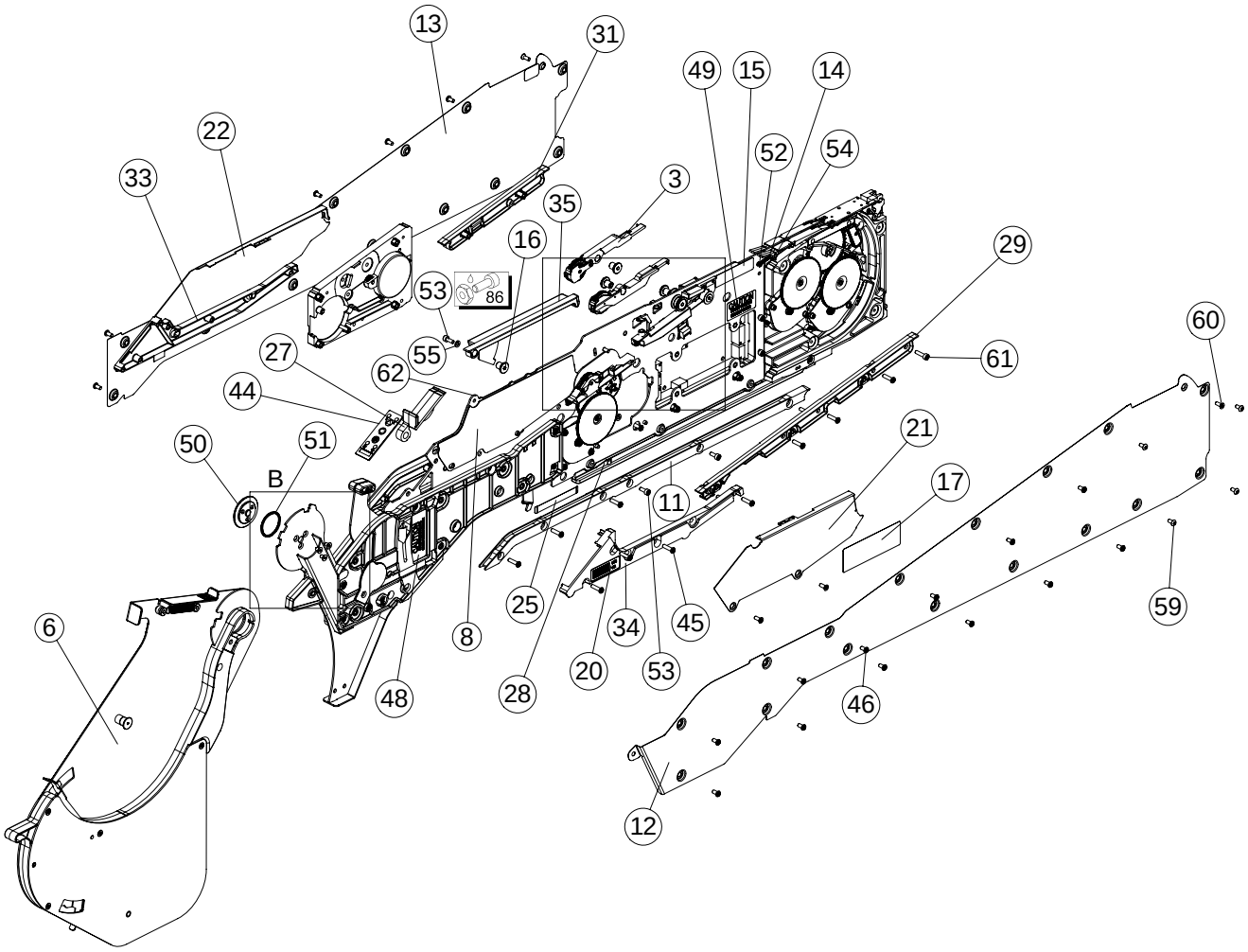
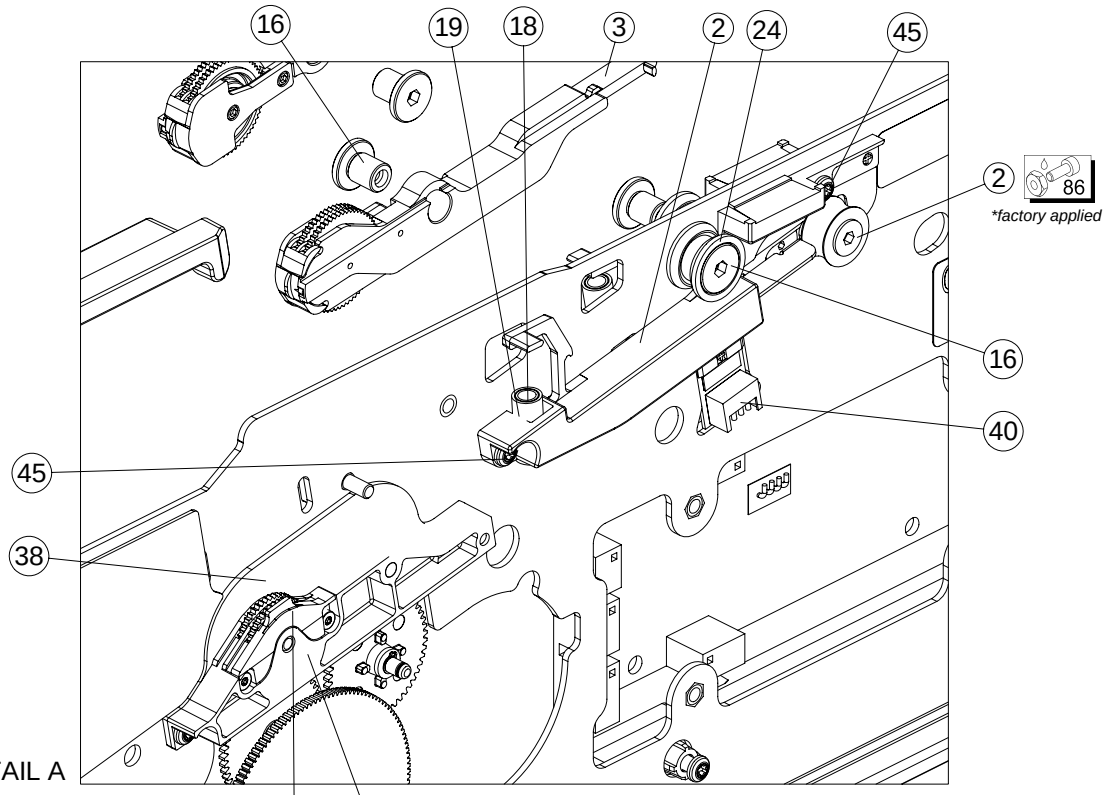
49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder



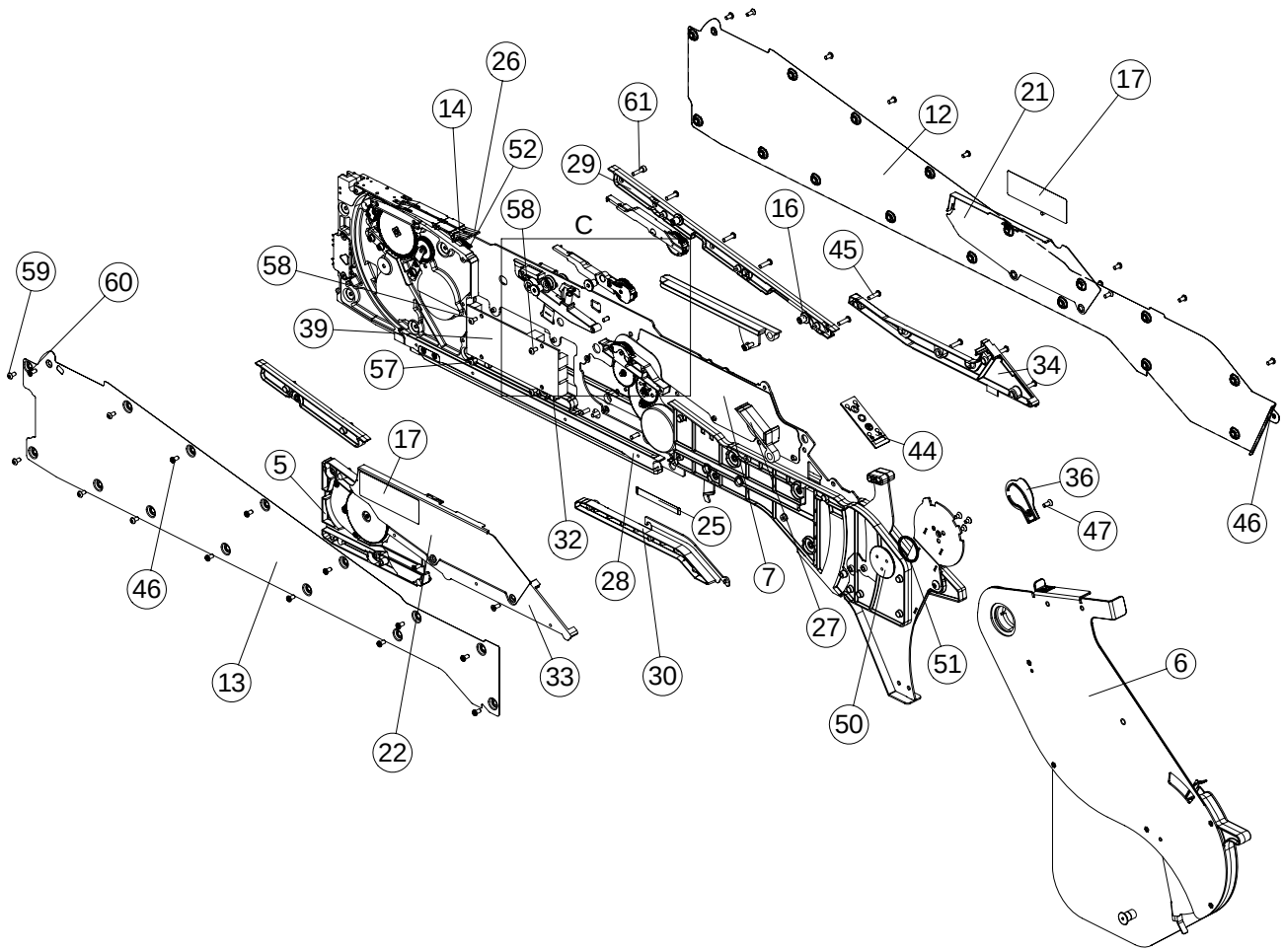
T49889206 Rev. B 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder



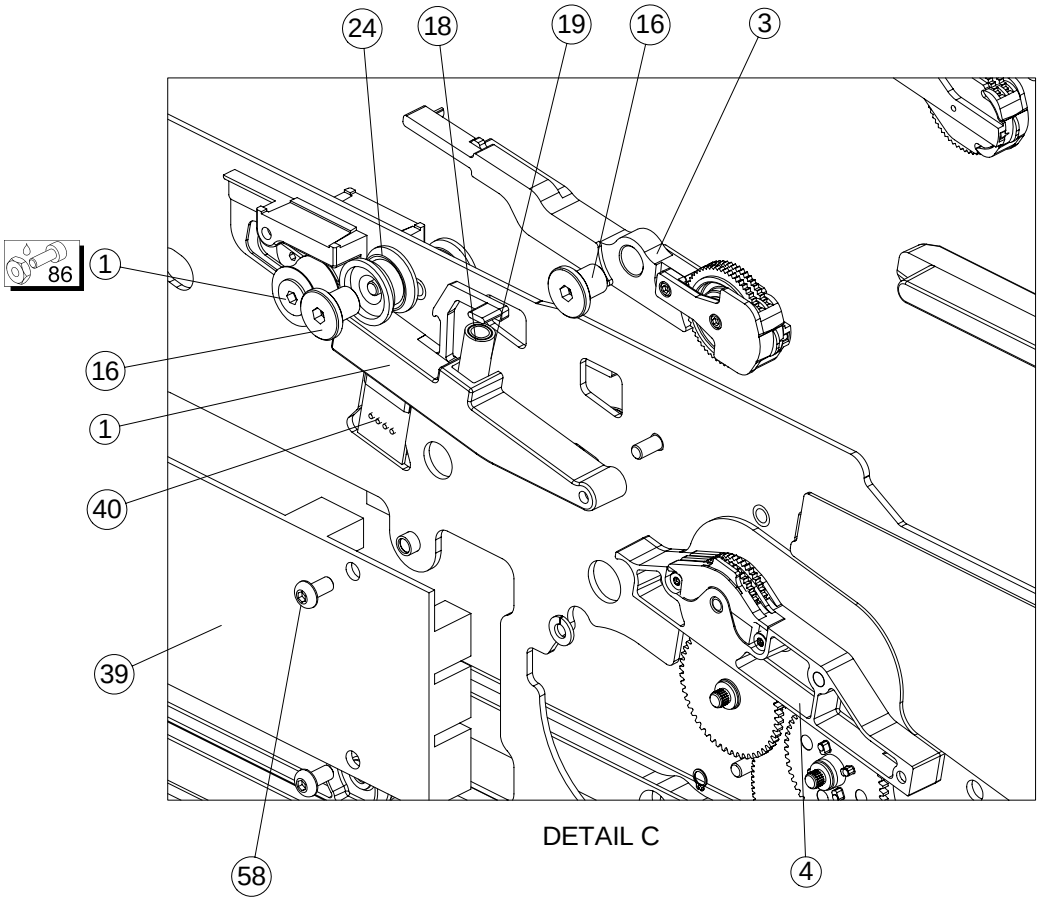
8mm PrecisionPro (Green) DL Spliceable Tape Feeder T49889206 Rev. B

49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder



T49889206 Rev. B 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder



DETAIL C

8mm PrecisionPro (Green) DL Spliceable Tape Feeder T49889206 Rev. B

Bill of Materials

49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	0730A-0007	LH TENSIONER ASSY
2	1	0730A-0008	RH TENSIONER ASSY
3	2	0730A-0010	RESERVOIR IDLER ASSY
4	2	0730A-0011	RESERVOIR DRIVE HOUSING ASSY
5	1	0730A-0012	RESERVOIR MOTOR MOUNT ASSY
6	1	0730A-0020	REEL HOLDER ASSY.
7	1	0730A-0030	LEFT RESERVOIR INSERT ASSY
8	1	0730A-0031	RIGHT RESERVOIR INSERT ASSY
9	1	0730C-0277	TAIL STOP BLOCK
10	1	0730C-0278	TAIL STOP RET SCREW
11	1	0730C-0390	STIFFENER RAIL
12	1	0730C-0116	RH COVER
13	1	0730A-0040	LH COVER WITH LABEL
14	2	0730C-0252	PEEL EDGE EXTENSION SPRING
15	1	0930C-0059	SERIAL & BOX LABEL (3-PIECE)
16	5	0730C-0083	RES IDLER ARM POST
17	2	0730C-0085	TAPE PATH LABEL BLANK
18	2	0730C-0092	SMALL RES IDLER SPRING
19	2	0730C-0093	LARGE RES IDLER SPRING
20	1	0730C-0101	BAR CODE LABEL BLANK
21	1	0730C-0105	RH RESERVOIR COVER
22	1	0730C-0106	LH RESERVOIR COVER
23	1	0730C-0108	GROUNDING SPRING
24	2	0730C-0122	FOLDING ROLLER
25	2	0730C-0138	EXIT PATH DEFLECTOR
26	2	0730C-0202	PEEL EDGE LATCH
27	1	0730C-0204	RESERVOIR DOOR
28	1	0730A-0041	T-RAIL HYBRID ASSEMBLY
29	1	0730C-0211	RH UPPER TAPE PATH
30	1	0730C-0214	LH EXIT CHUTE
31	1	0730C-0217	LH UPPER TAPE PATH
32	1	0730C-0218	LH LOWER TAPE PATH
33	1	0730C-0221	LH CTRL PANEL HOUSING
34	1	0730C-0222	RH CTRL PANEL HOUSING
35	1	0730C-0229	HANDLE
36	1	0730C-0232	TAPE RETAINER PLATE
37	2	0730C-0233	RESERVOIR DRIVE ROLLER
38	2	0731C-0069	RESERVOIR DRIVE GEAR
39	1	0738A-0033	CONTROLLER

T49889206 Rev. B 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

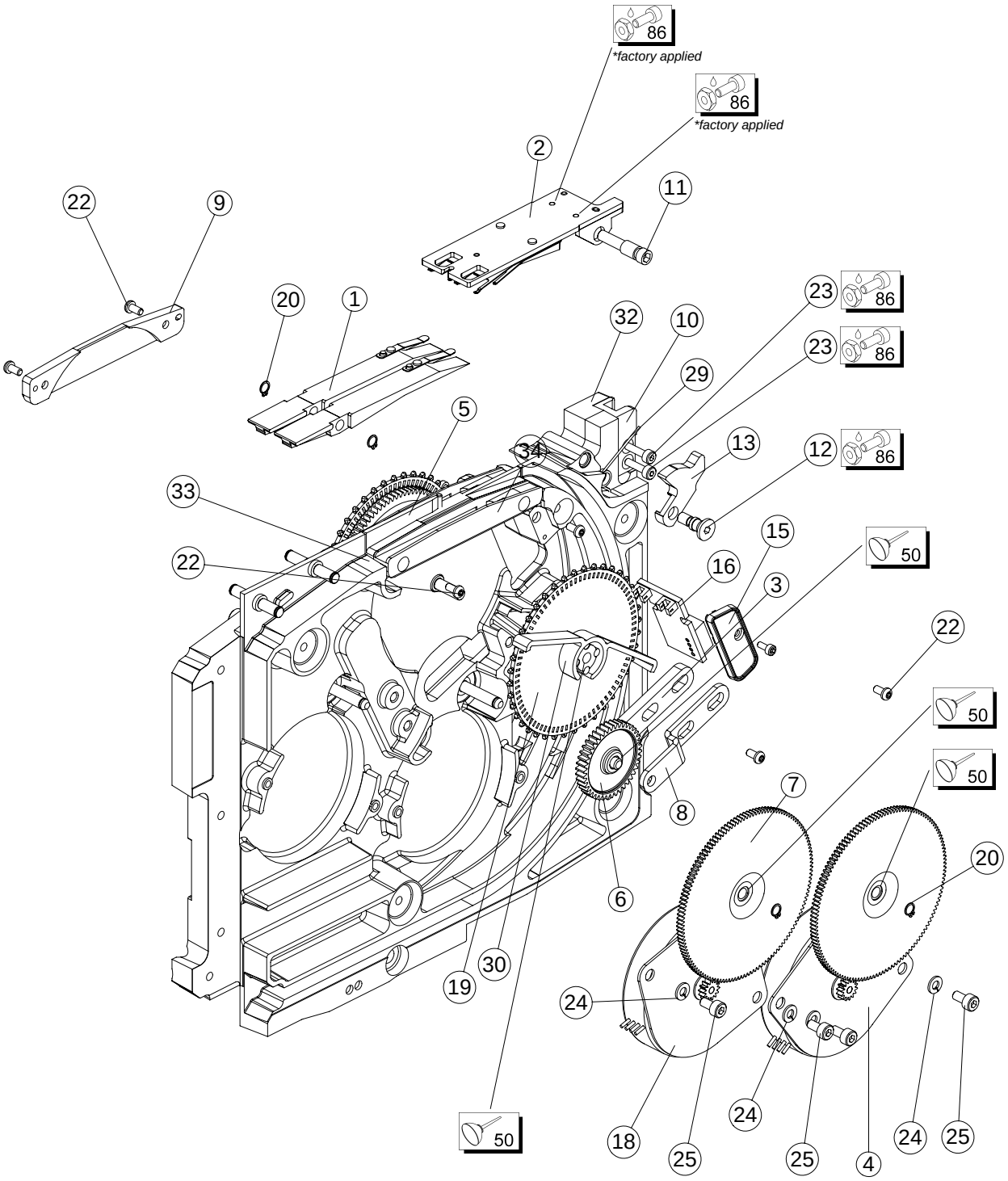
Bill of Materials (continued)

49889206 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

ITEM NO.	QTY.	PART NO.	DESCRIPTION
39	1	0738A-0033	CONTROLLER
40	1	0738A-0005	TENSIONER SENSOR
41	1	0738A-0007	PSV SENSOR CABLE (NOT SHOWN)
42	1	0738A-0008	CONTROL PANEL CABLE (NOT SHOWN)
43	1	0738A-0011	TENSION SENSOR CABLE (NOT SHOWN)
44	1	0730A-0030	CONTROL PANEL, MPDL
45	27	0730C-0162	PLASTITE PAN HEAD M031 X 12
46	22	0730C-0161	PLASTITE PAN HEAD M031 X 06
47	1	0730C-0163	PLASTITE FLAT HEAD M031 X 08
48	1	0730C-0019	SPRING WARNING LABEL
49	1	700C-185	SAFETY LABEL
50	1	0740C-0109	TAIL PIVOT
51	1	0740C-0110	TAIL PIVOT BEARING
52	2	0062-ECLIP-E	ECLIP, .0625"
53	7	80026803	SOCKET HEAD CAP, 3 X 8
54	2	0125-ERRING-E	RETAINING RING, EXTERNAL
55	1	80055605	LOCK WASHER, 3
56	3	80028907	SOCKET FLAT HEAD, 3 X 5
57	1	M03X06-SBHS-SS	SOCKET BUTTON HEAD, SS, 3 X 6
58	3	M03X06-SBHS	SOCKET BUTTON HEAD, 3 X 6
59	9	M03X06-SBHS	TORX BUTTON HEAD, BZ
60	6	M03X08-TFHS-BZ	TORX FLAT HEAD, BZ
61	1	80026805	SOCKET HEAD CAP, 3 X 12

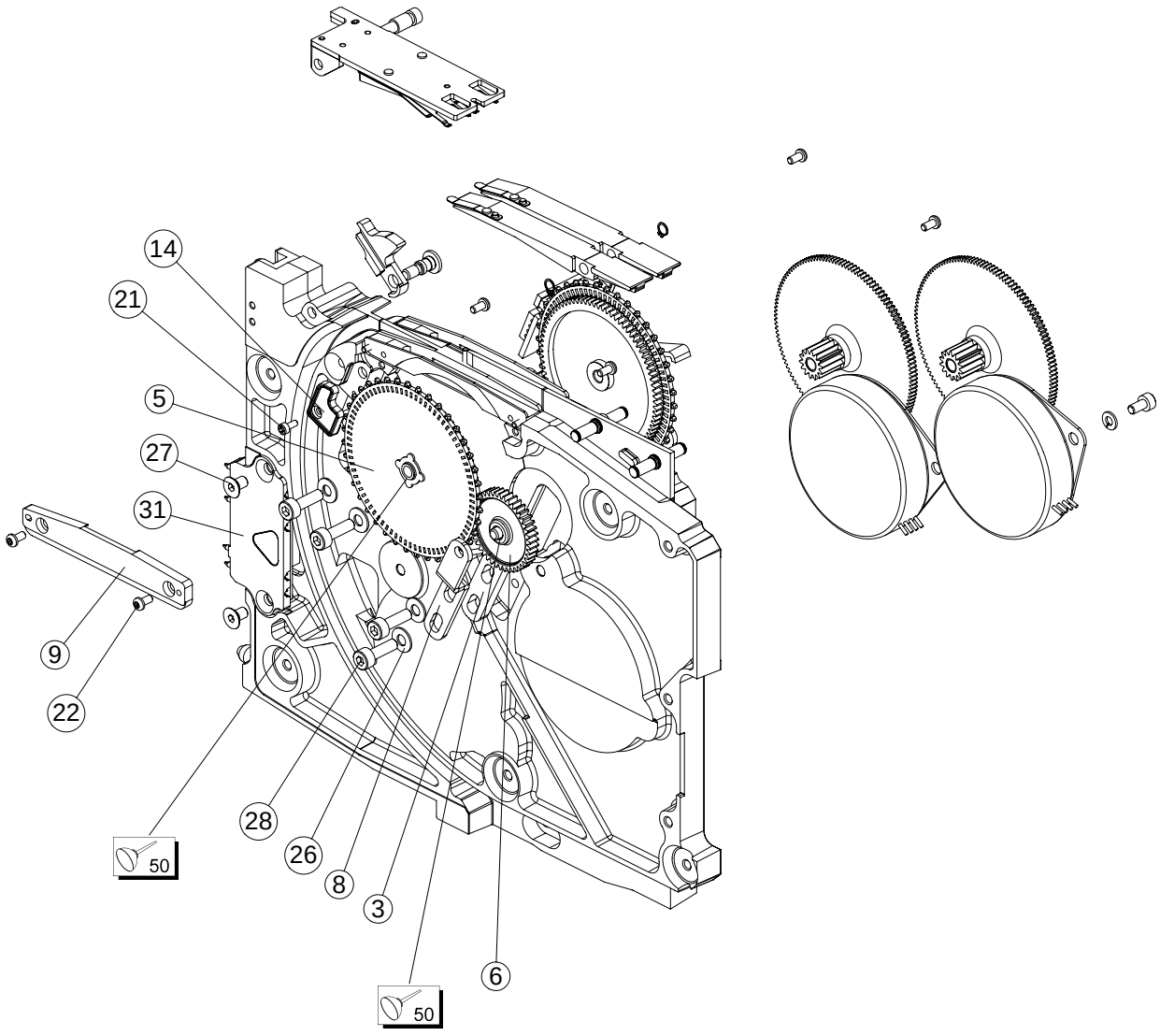
8mm PrecisionPro (Green) DL Spliceable Tape Feeder T49889206 Rev. B

0730A-0053 Precision Block Assembly



T49889206 Rev. B 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

0730A-0002 Precision Block Assembly



8mm PrecisionPro (Green) DL Spliceable Tape Feeder T49889206 Rev. B

Bill of Materials

0730A-0002 Precision Block Assembly

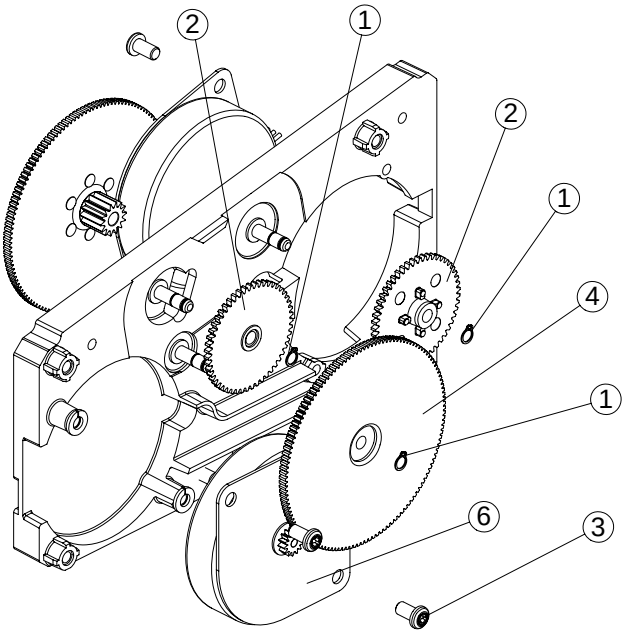
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	0730A-0021	PEEL EDGE ASSY
2	1	0730A-0048	TAPE WINDOW ASSY
3	2	0730A-0026	BACKLASH SLIDE W/PIN ASSY
4	1	0730C-0020	44MM DRIVE MOTOR
5	1	0730C-0267	TOOTHPLATE LEFT, RCFL
6	2	0730C-0025	INTERMEDIATE GEAR
7	2	0730C-0026	JACKSHAFT
8	2	0730C-0031	BACKLASH RETAINER
9	1	0730C-0033	LEFT TAPE DECK
10	1	0730C-0044	LOCATING BLOCK
11	1	0730C-0052	TAPE WINDOW SHAFT
12	1	0730C-0054	WINDOW LATCH SHAFT
13	1	0730C-0269	WINDOW LATCH
14	1	0730C-0200	SLOT SENSOR RETAINER LEFT
15	1	0730C-0201	SLOT SENSOR RETAINER RIGHT
16	1	0738A-0012	SLOT SENSOR PCB
17	1	0738A-0013	IO CABLE (NOT SHOWN)
18	1	381C-023	44MM DRIVE MOTOR
19	1	0730C-0266	RCFL TOOTHPLATE
20	4	0125-ERRING-E	RETAINING RING, EXTERNAL
21	2	M016X04-SHCS	SOCKET HEAD CAP, 1.6 X 4
22	6	80035101	SOCKET BUTTON HEAD, 2 X 4
23	2	80031305	SOCKET HEAD CAP, 2 X 8
24	4	80055603	LOCK WASHER, 2.5
25	4	80052202	SOCKET HEAD CAP, 2.5 X 5
26	4	80031704	FLAT WASHER, 3
27	2	80028907	SOCKET FLAT HEAD, 3 X 5
28	4	M03X10-SHCS	SOCKET HEAD CAP, 3 X 10
29	1	103C-114	LATCH LEVER SPRING
30	1	0730C-0238	COMPONENT DIVERTER
31	1	0738A-0029	POGO BLOCK
32	1	0730A-0001	PRECISION BLOCK W/PINS ASSY
33	1	0730A-0042	MAIN TAPE DECK V3
34	1	0730A-0043	RIGHT TAPE DECK V3

T49889206 Rev. B 8mm PrecisionPro (Green) DL Spliceable Tape Feeder

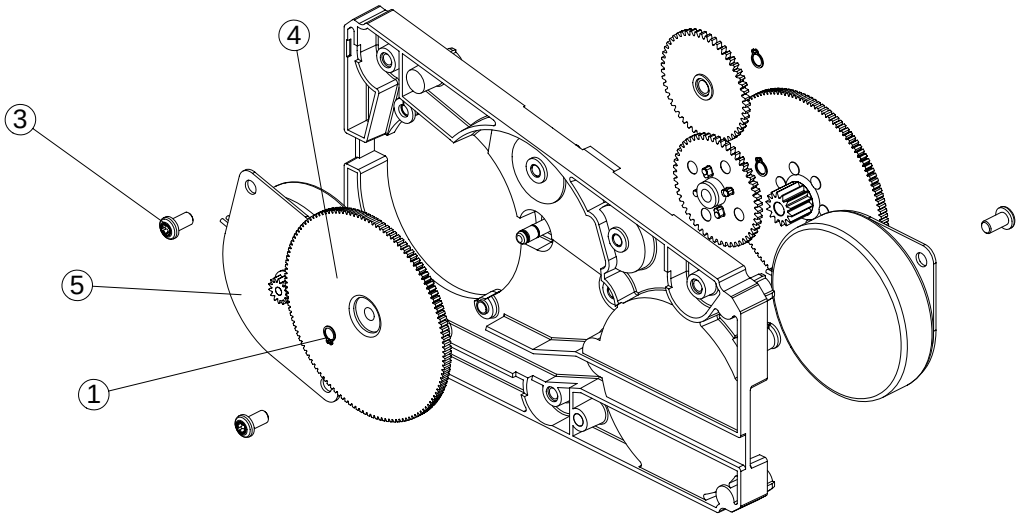
0730A-0012 Reservoir Motor Mount Assembly

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	4	0125-ERRING-E	RETAINING RING, EXTERNAL
2	2	0730C-0069	RESERVOIR INT GEAR
3	4	0730C-0161	PLASTITE PAN HEAD M031 X 06
4	2	380C-041	JACKSHAFT
5	1	381C-023	44MM DRIVE MOTOR
6	1	0730C-0020	44MM DRIVE MOTOR
8	4	M03-LW	LOCK WASHER, 3

Front View



Rear View



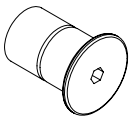
8mm PrecisionPro (Green) DL Spliceable Tape Feeder T49889206 Rev. B

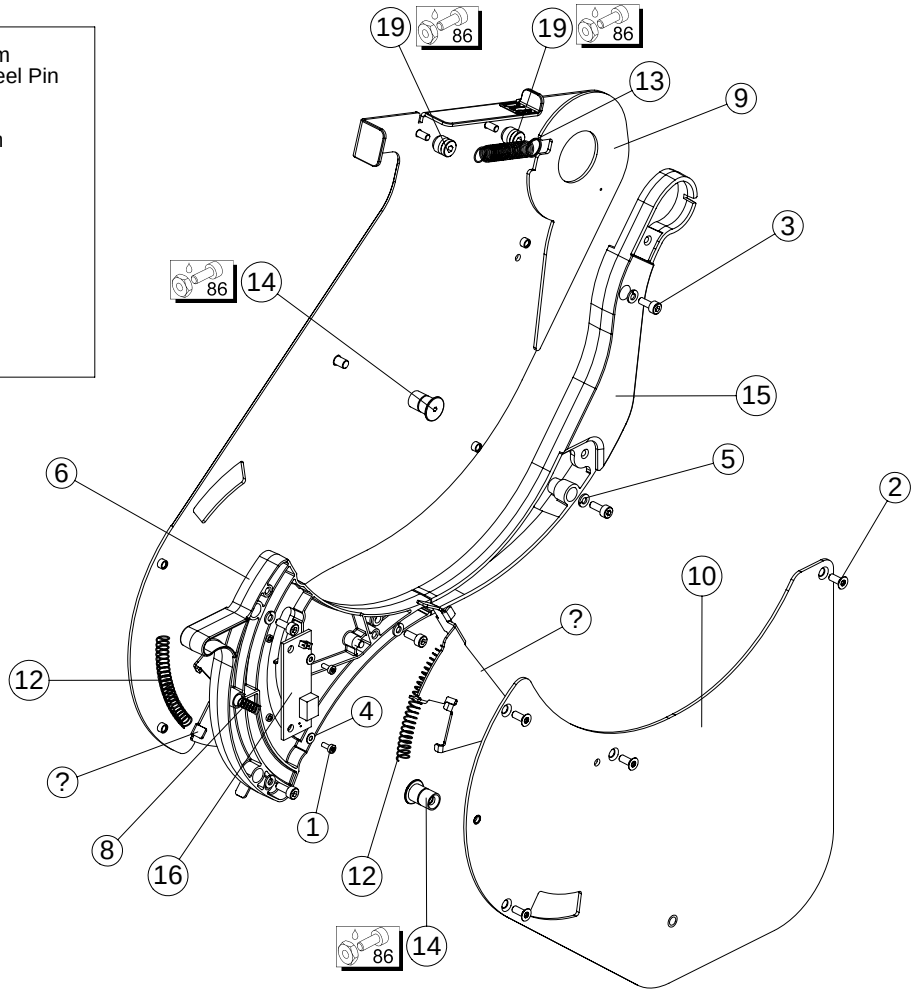
0730A-0020 Reel Holder Assembly

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	410C-100	PAN HEAD PLASTITE SCREW
2	4	0730C-0163	PLASTITE FLAT HEAD M031 X 08
3	5	80026803	SOCKET HEAD CAP, 3 X 8
4	2	M02-FW	FLAT WASHER, 2
5	5	80055605	LOCK WASHER, 3
6	1	0730A-0028	PSV HOUSING W/PIN ASSY
7	1	0730C-0280	DL8 ID LABEL GOLD
8	1	0730C-0108	GROUNDING SPRING
9	1	0730C-0150	UPPER TAIL PLATE
10	1	0730C-0152	LOWER TAIL PLATE
11	2	0730A-0049	REEL TENSIONER ASSEMBLY
12	2	0730C-0244	PSV FLAG SPRING
13	1	0730C-0159	TAIL LOCK SPRING
14	2	0730C-0164	REEL PIN
15	1	0730C-0231	TAIL WIRE GUIDE REAR
16	1	0738A-0020	PSV SENSOR
17	1	0738A-0016	TAIL PSV SENSOR CABLE
18	1	0740C-0106	TAIL LOCK
19	2	0740C-0107	TAIL LOCK RETAINER

* For reel widths ranging from 12.5mm to 14.5mm, use Reel Pin part number 0740C-0111.

Optional part available from Universal Instruments.





Functional Description

The PrecisionPro (Green) Spliceable 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 pickup by the machine.

Procedures and Adjustments

The following subsections contain the procedures that are required for proper feeder operation.

Definitions of Adhesives and Lubricants

The following lubricants and adhesives may be required during maintenance procedures and may be referenced with icons on the Assembly Drawings within this documentation package. A Material Safety Data Sheet (MSDS) is supplied with each lubricant, adhesive or cleanser. The MSDS contains information on Personal Protective Equipment (PPE) as well as proper handling and disposal of these chemicals. Refer to the MSDS for additional safety information.

Lubricants List

The following table defines the current listing of lubricants for this machine.

Lubricants			
Icon Number	***UIC Part Number***	***Description***	***Quantity***
 50	*51239501*	*Loctite® ViperLube™ Synthetic Grease*	*.42 oz.*

Adhesives List

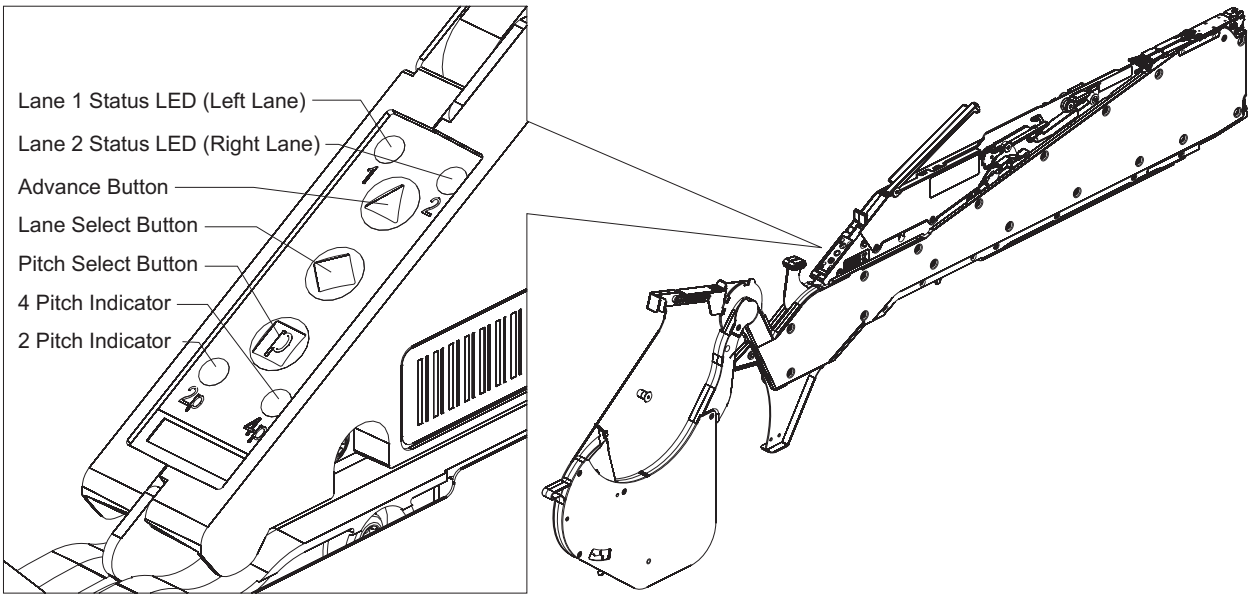
The following table defines the current listing of required adhesives for this machine.

Adhesives			
Icon Number	***UIC Part Number***	***Description***	***Quantity***
 86	*40830764*	*Loctite® 222 Global Use*	*10 ml.*

NOTE

Use a Hover-Davis set up cart for your feeder. Using a non Hover Davis set up cart may void the warranty and/or damage the feeder.

Control Panel Detail



Lane 1 & 2 Status LED	-	Each bi-color LED will indicate the status of their respective lane. If the feeder has a error and a lane Status LED is blinking red, pressing the Lane Select Button will clear the error.
Advance Button	-	The advance button is used to advance the currently active lane, as indicated by the Lane Status LED that is illuminated at the time.
Lane Select Button	-	Used to toggle select the active lane. After 30 seconds of no control panel activity, both Status LED's will light showing the status of their respective lanes. Lane selection is necessary to advance the feeder using the control panel, or for calibration. This button is also used to restart the Reservoir Motors to apply tension to the cover tape.
Pitch Select Button	-	Used to toggle select between either 2 or 4 pitch carrier tape.
2 & 4 Pitch Indicator LED	-	Indicates the current pitch selection of the feeder, both lanes always have the same pitch setting.

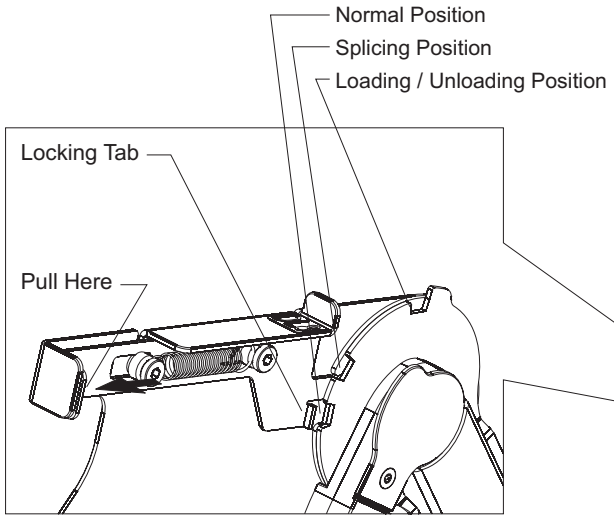
Status LED Color Summary

Led Color	Mode		
Orange	Normal Mode	-	Feeder has just been powered up and has not been used yet.
	Calibration Mode	-	Calibration setting is zero.
Blinking Red	Normal Mode	-	Feeder carrier drive jammed.
Blinking Orange	Normal Mode	-	Feeder reservoir error.
Red	Calibration Mode	-	Calibration setting is behind from factory setting.
Green	Normal Mode	-	Feeder is in normal operation.
	Calibration Mode	-	Calibration setting is ahead from factory setting.
Off	Normal Mode	-	Other lane is active.

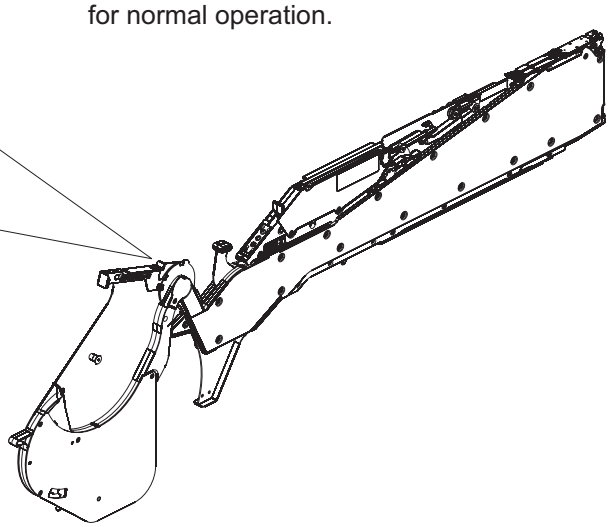
Operating the Tail Section / Splicing

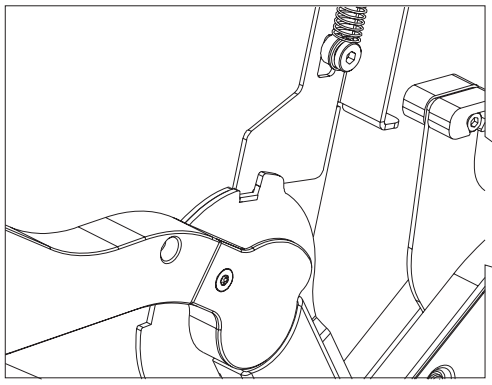
It is possible to change tape reels without removing the feeder from the pick and place machine. To do this, pull out on the tail release lock to disengage the locking mechanism. With the tail latch disengaged, rotate the tail section up into the splicing or loading and unloading position. Release the tail latch to lock the tail section into this position.

NOTE Make sure not to pinch carrier tape when lowering tail section.

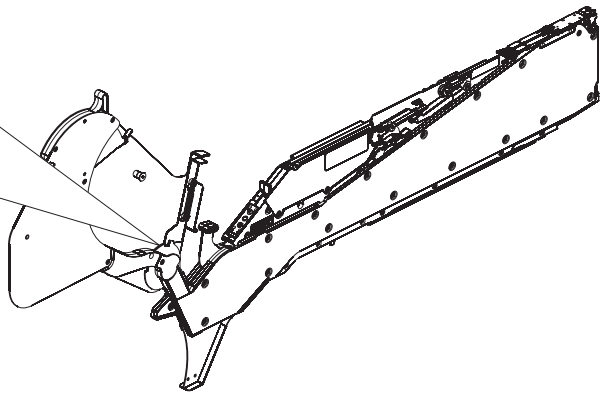


Tail Section in position for normal operation.





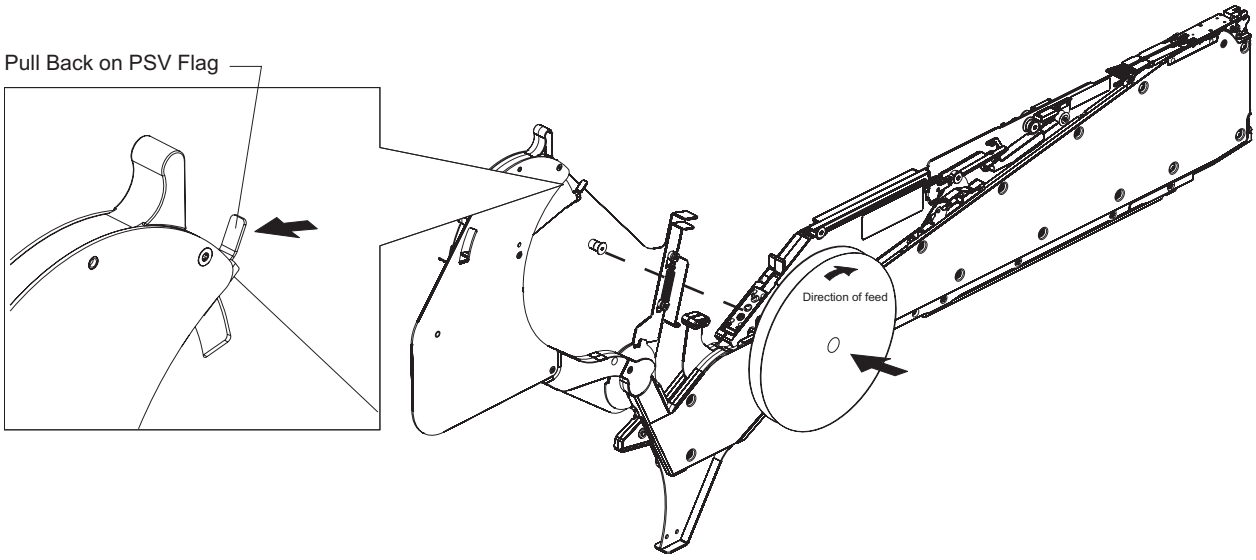
Tail Section locked in the loading and unloading position.

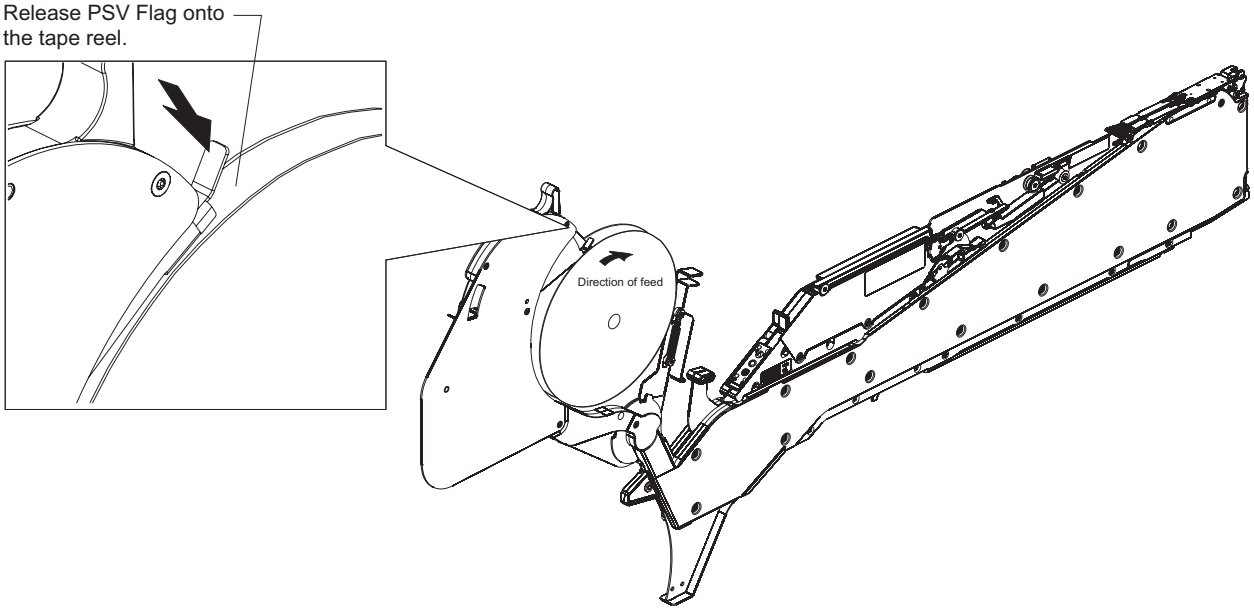


Loading the Tape Reel (Lane 2)

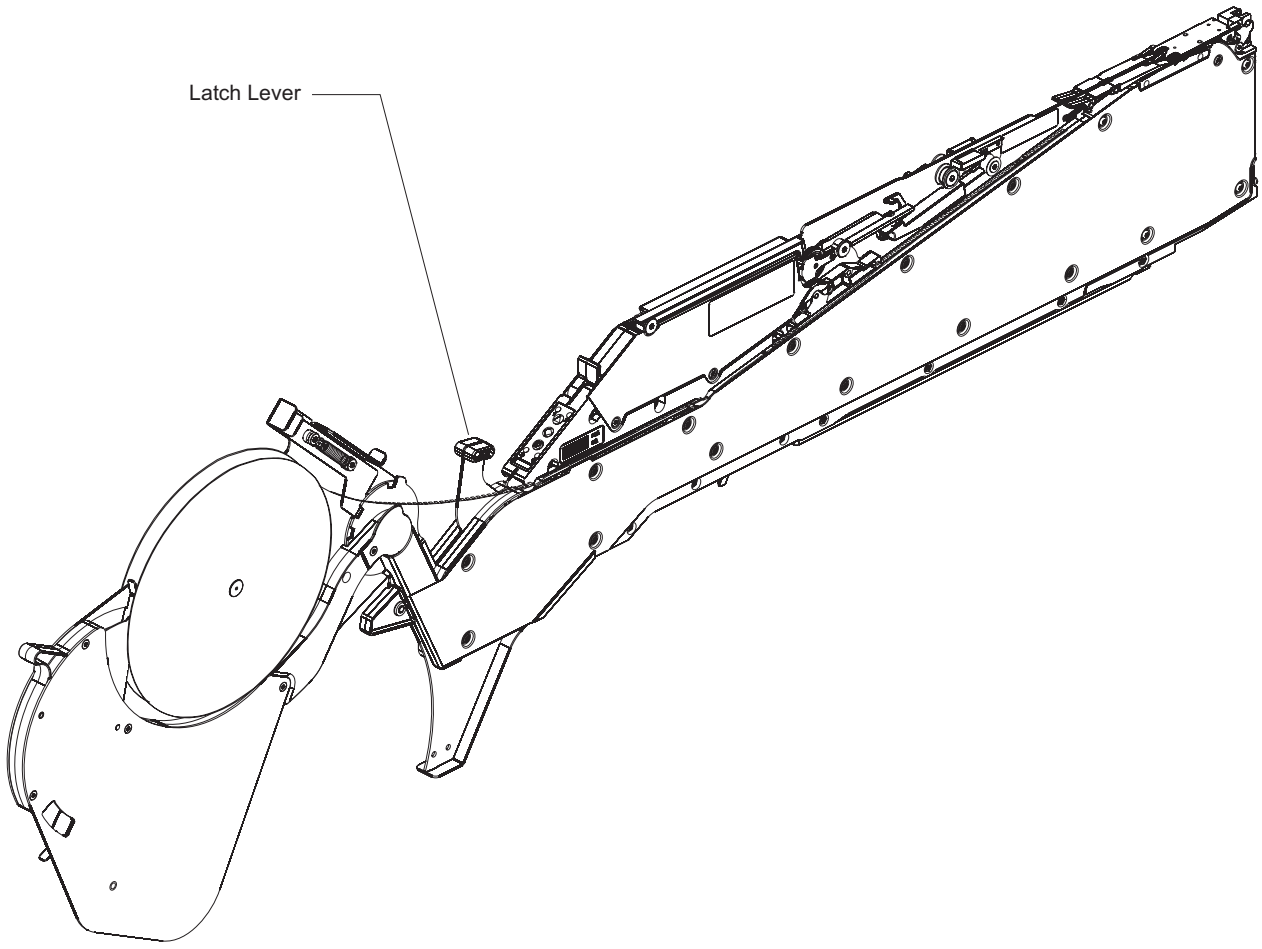
With the tail section locked in the loading position, pull back on the PSV Flag and place the tape reel over the reel pin so that the carrier tape feeds over the top of the reel towards the front of the feeder. Release the PSV Flag onto the tape reel.

NOTE Feeders come standard with reel pins that can accommodate reel widths up to 12.5mm For reels wider than 12.5 mm (12.5mm to 14.5mm) use optional Reel Pins # 0740C-0111 available from Universal Instruments.



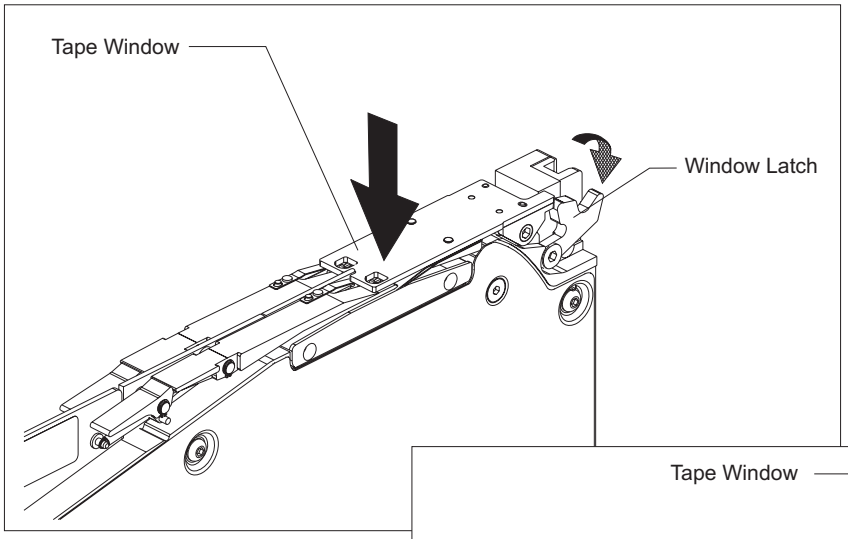


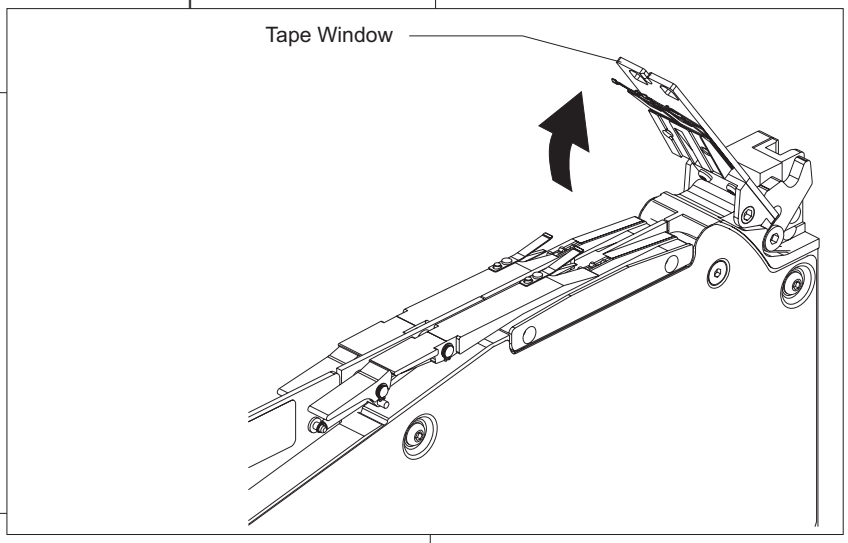
Move the tail section, with loaded reel to the splicing position (See page 14 for details on how to move the Tail Section). Pull the tape from the reel and thread the component tape under the Latch Lever and into the channel under the Control Panel. Continue feeding the tape until it reaches the Tape Window.

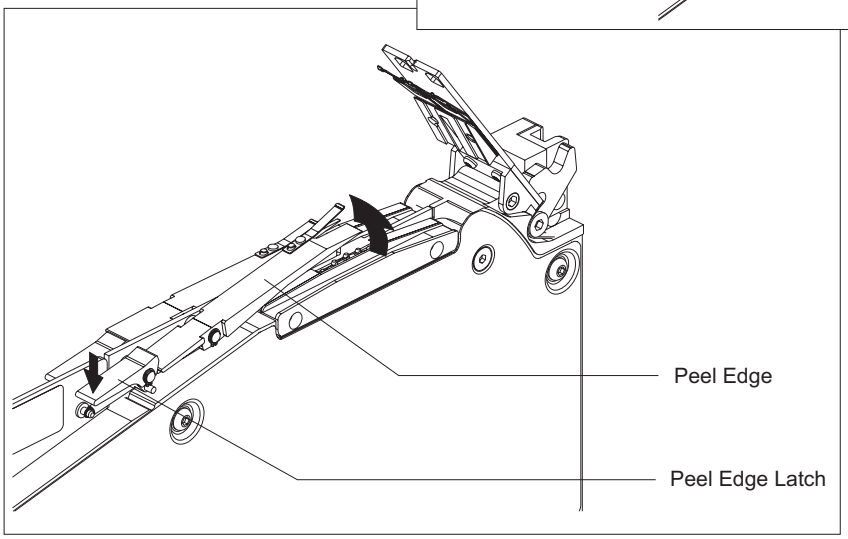


Opening the Tape Window and Peel Edge (Lane 2)

To open the Peel Edge, push down slightly on the Tape Window, then slide the spring loaded Window Latch forward, this will allow the Tape Window to be opened. Lift the Tape Window. The spring loaded Window Latch will latch over the edge of the Tape Window to hold it open . Both Peel Edges can now be opened and closed. Push down on the Peel Edge Latch and lift the Peel Edge. The end of the Peel Edge will latch under the Peel Edge Latch.





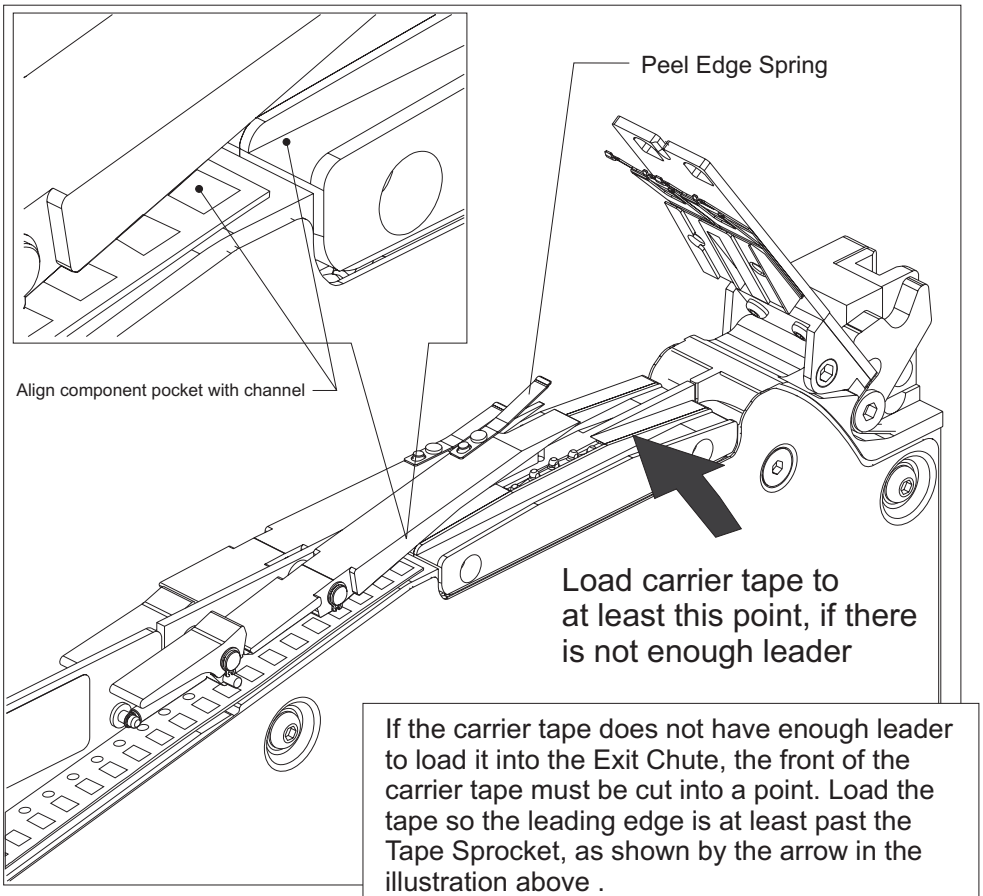


Loading Tape into the Tape Window (Lane 2)

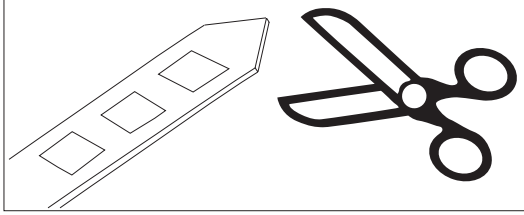
CAUTION **When loading component tape, especially 0402 and 0603 devices, extreme care must be taken to assure that loose components do not drop into the feeder drive mechanism. These small devices can lodge in the gear teeth causing drive failure.**

To load tape into the Tape Window area, open the tape window and feed the component tape into the Tape Window channel. Make sure the component pockets fit in the channel.

CAUTION **When loading and unloading component tape, extreme care must be taken to assure that the Peel Edge Spring does not get damaged.**



If the carrier tape does not have enough leader to load it into the Exit Chute, the front of the carrier tape must be cut into a point. Load the tape so the leading edge is at least past the Tape Sprocket, as shown by the arrow in the illustration above .

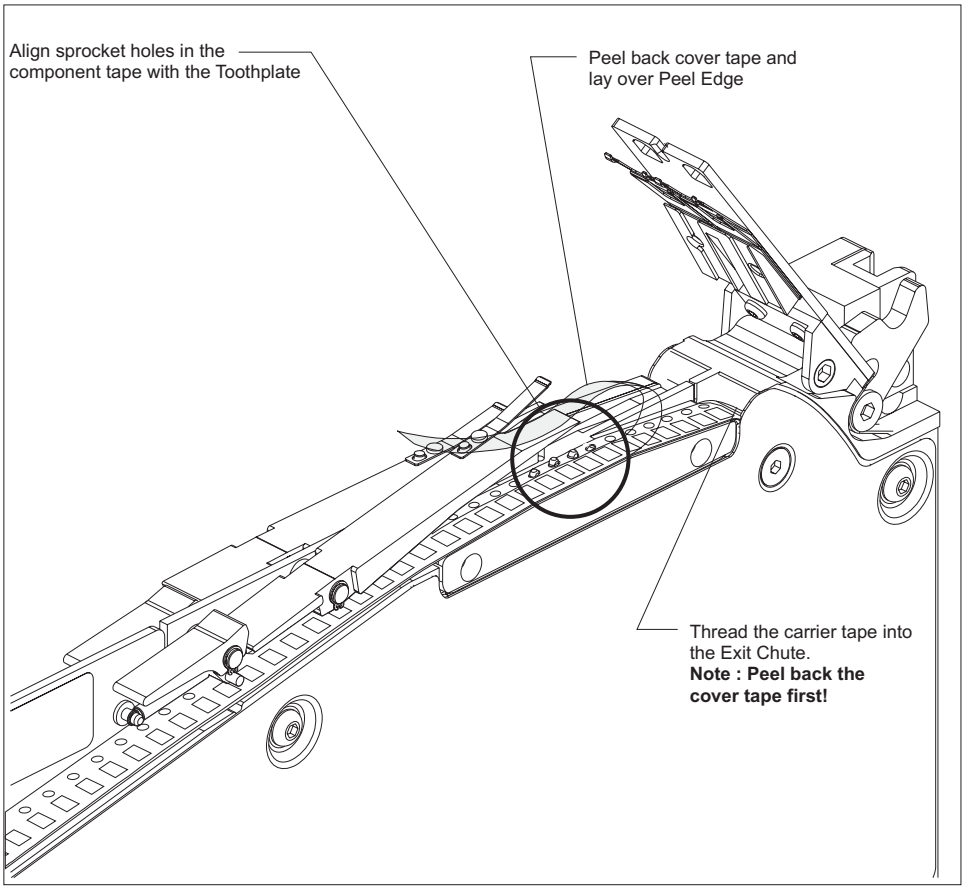


For ease of tape loading, it is recommended that the carrier tape be cut as shown, every time tape is loaded, regardless of whether there is enough leader tape or not.

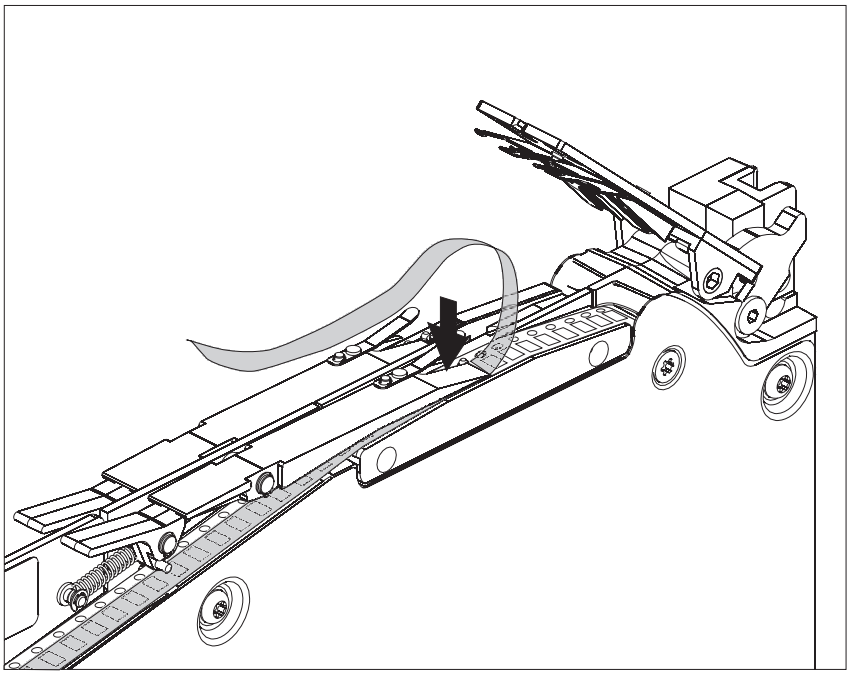
CAUTION **When loading component tape, especially 0402 and 0603 devices, extreme care must be taken to assure that loose components do not drop into the feeder drive mechanism. These small devices can lodge in the gear teeth causing drive failure.**

Continue feeding the component tape into the exit chute at the front end of the feeder, peeling back the cover tape as you do. Lay the cover tape over the Peel Edge. Align the sprocket holes of the component tape with the Toothplate.

CAUTION **When loading and unloading component tape, extreme care must be taken to assure that the Peel Edge Spring does not get damaged.**



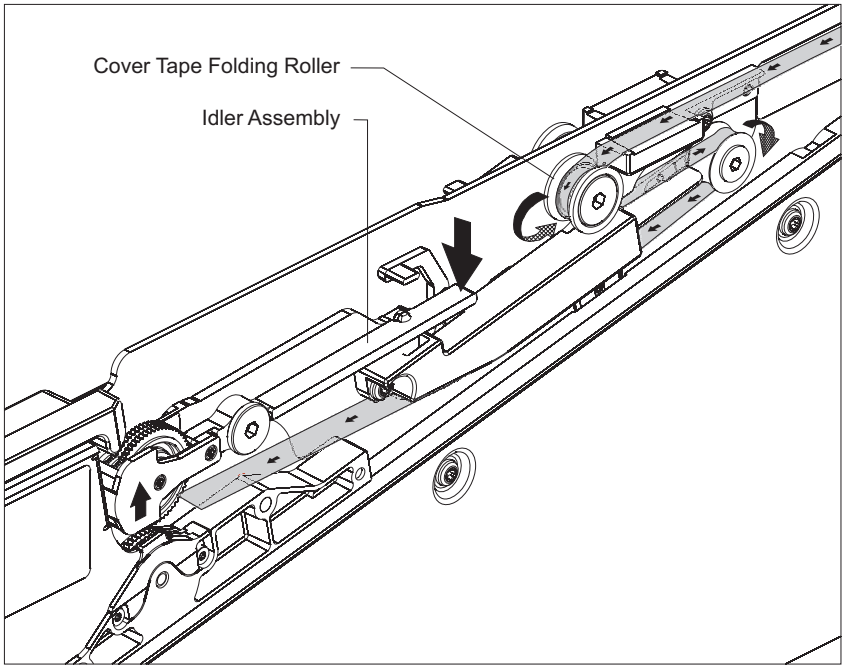
Press down on the Peel Edge to lower it against the carrier tape. Pull the cover tape back towards the Cover Tape Folding Roller.



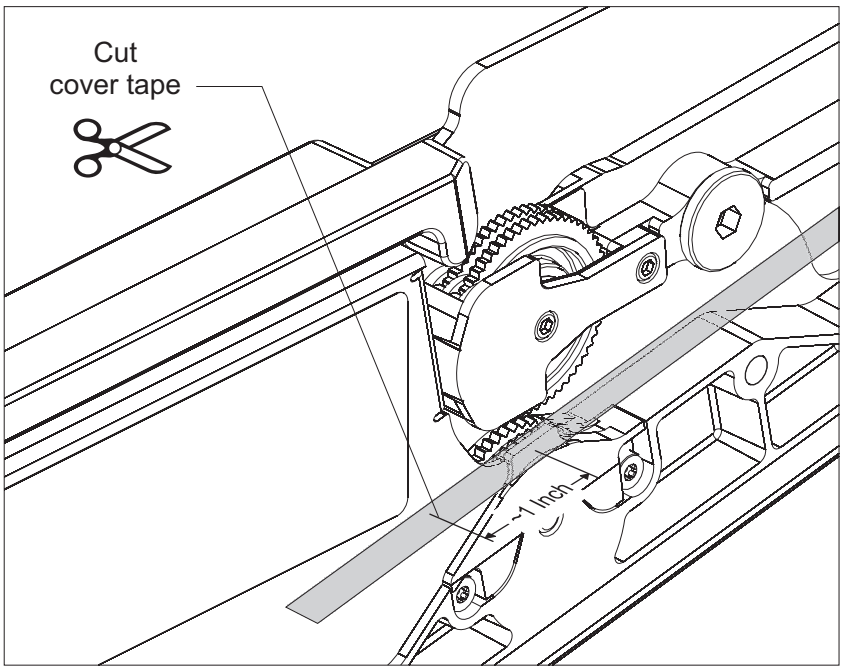
Threading Cover Tape into the Reservoir (Lane 2)

Loop the cover tape around the Cover Tape Folding Roller, then around the Tensioner Roller. Press down on the Idler Assembly arm to lock open the reservoir drive mechanism.

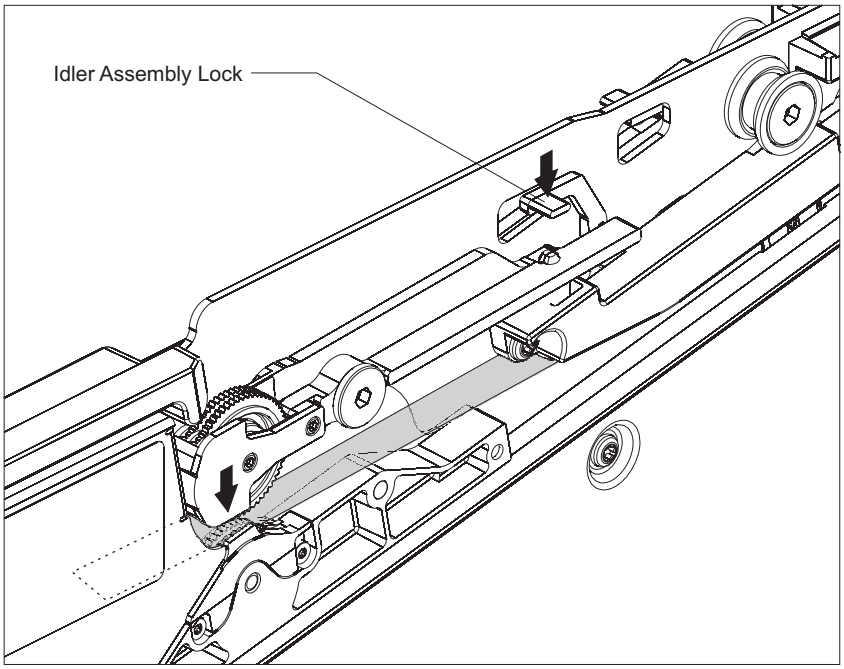
NOTE Make sure there are no twists in the cover tape. When splicing, do not knot the ends of the cover tape together.



Pull the cover tape straight back and trim away excess, leaving approximately 1 inch extra past the drive mechanism.



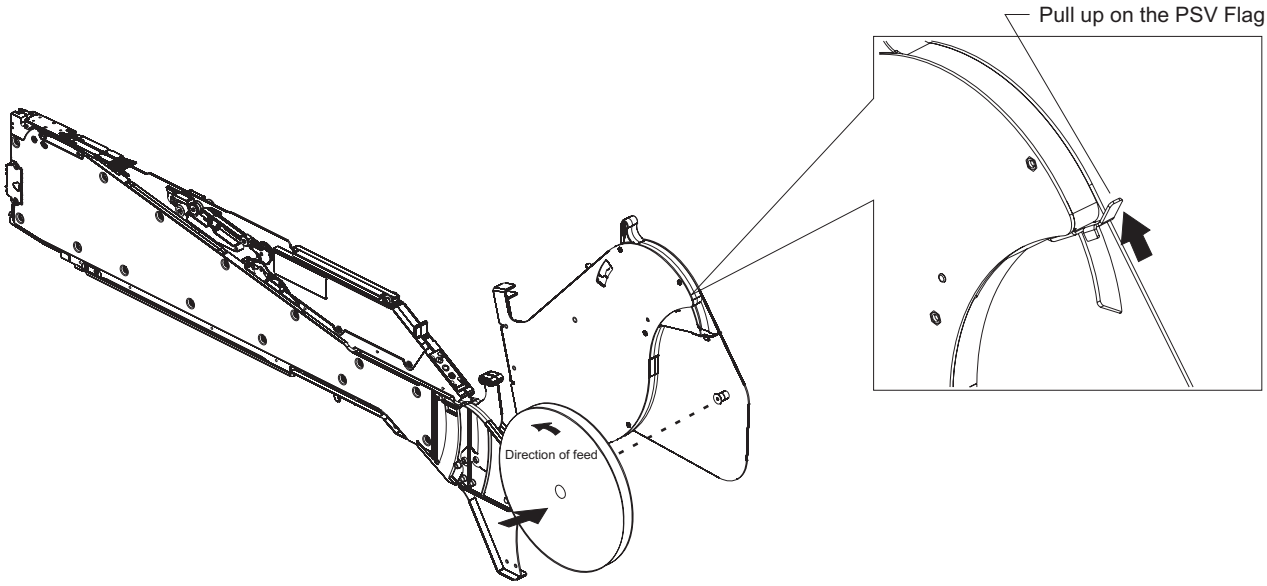
Tuck the end of the cover tape between the idler and drive rollers into the cover tape reservoir. Press down on the Idler Assembly Lock mechanism to release the Idler Assembly closing the rollers onto the cover tape.

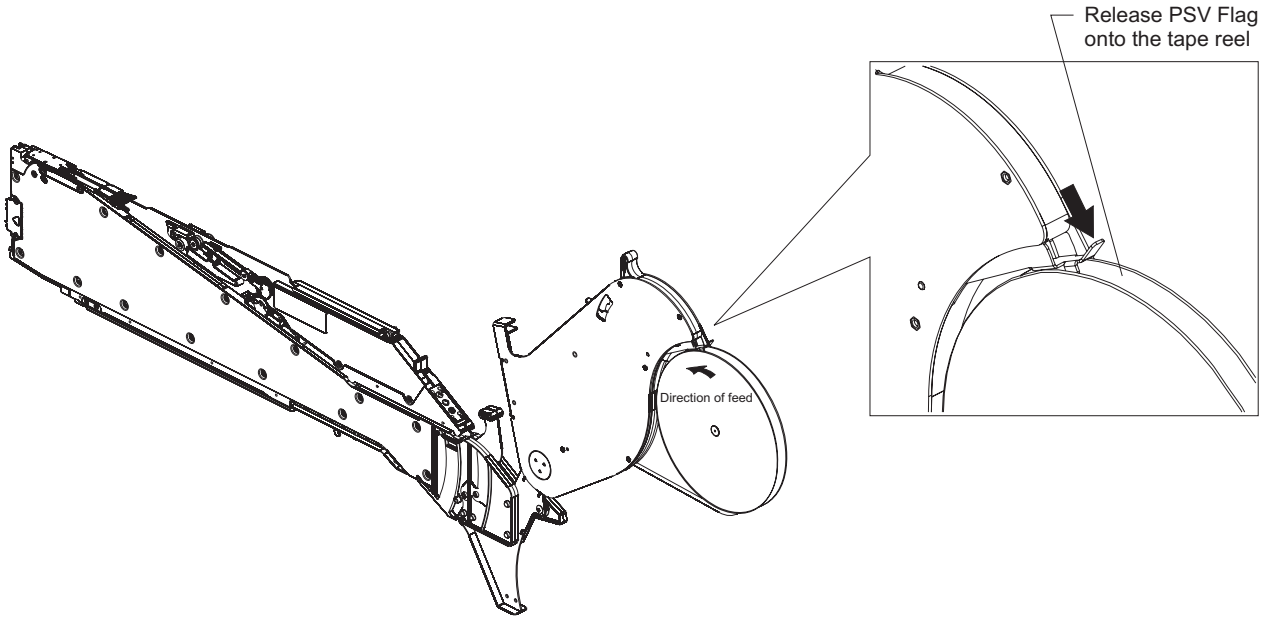


Loading the Tape Reel (Lane 1)

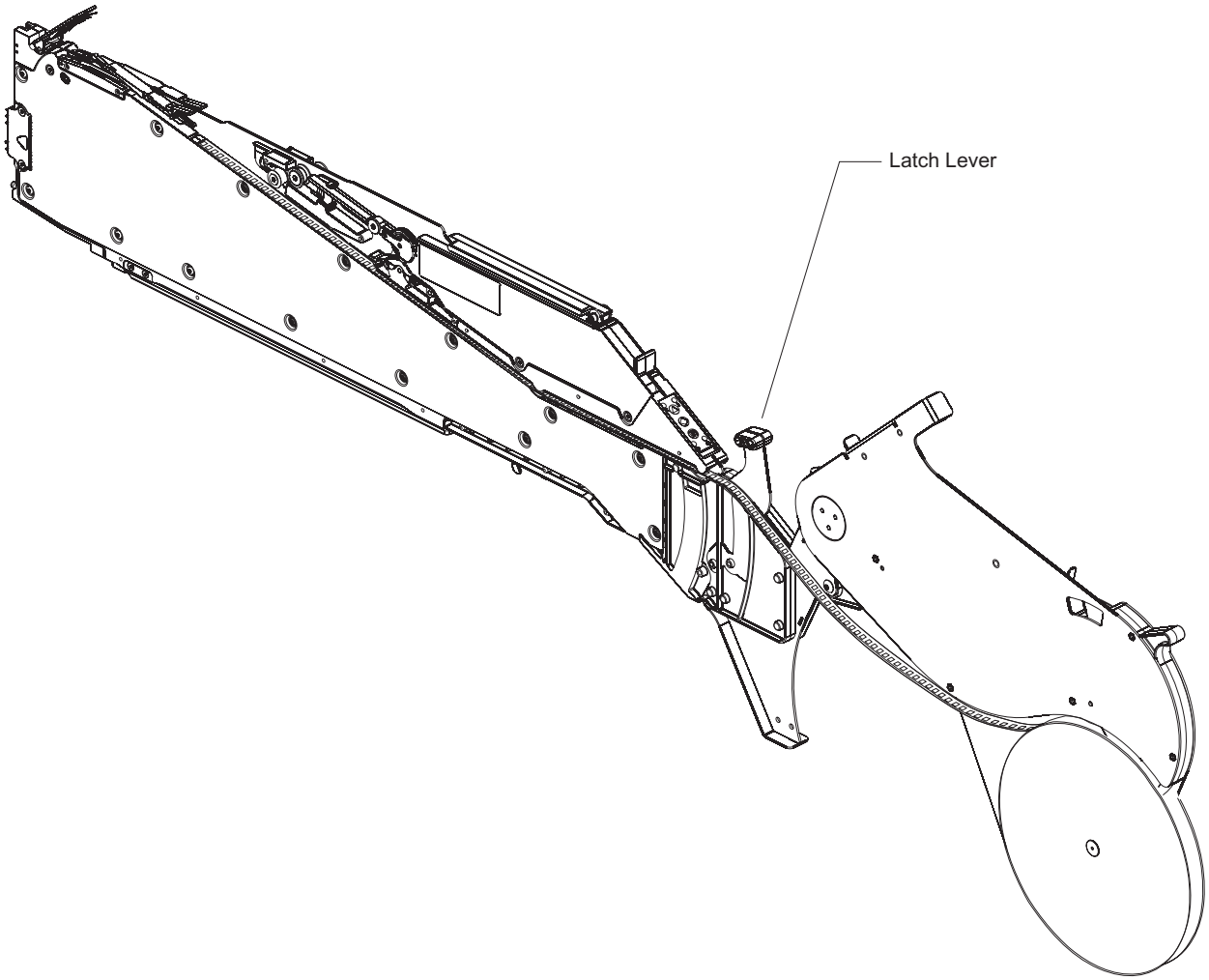
With the tail section locked in the loading position, pull up on the PSV Flag and place the tape reel over the reel pin so that the carrier tape feeds over the top of the reel towards the front of the feeder. Release the PSV Flag onto the tape reel.

NOTE Feeders come standard with reel pins that can accommodate reel widths up to 12.5mm For reels wider than 12.5 mm (12.5mm to 14.5mm) use optional Reel Pins # 0740C-0111 available from Universal Instruments.



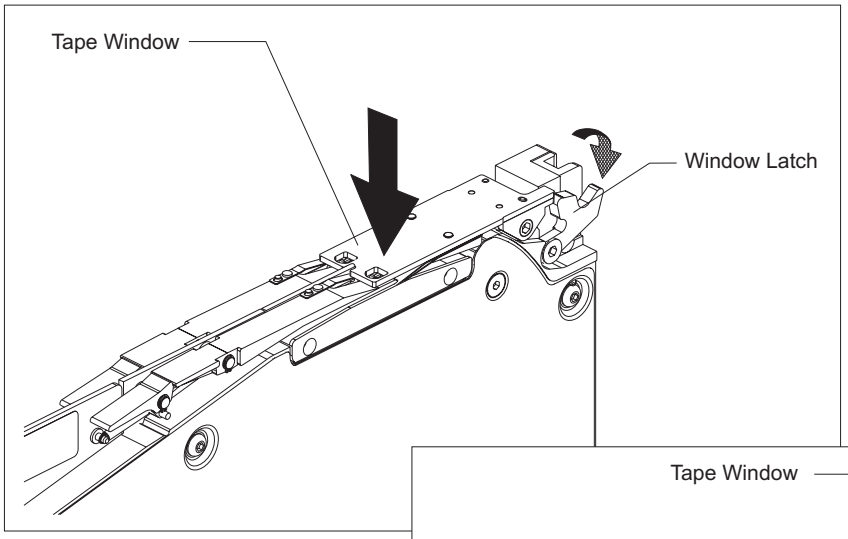


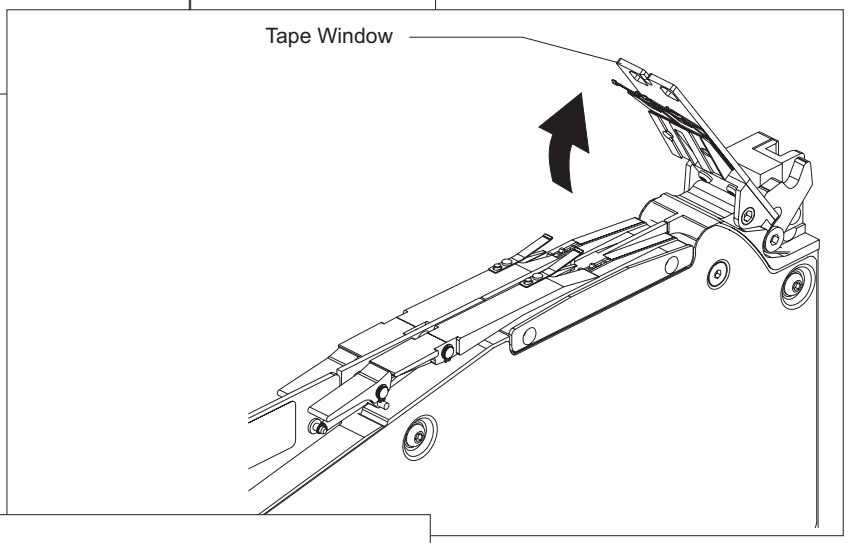
Move the tail section, with loaded reel to the splicing position (See page 13 for details on how to move the Tail Section). Pull the tape from the reel and thread the component tape under the Latch Lever and into the channel under the Control Panel. Continue feeding the tape until it reaches the Tape Window.

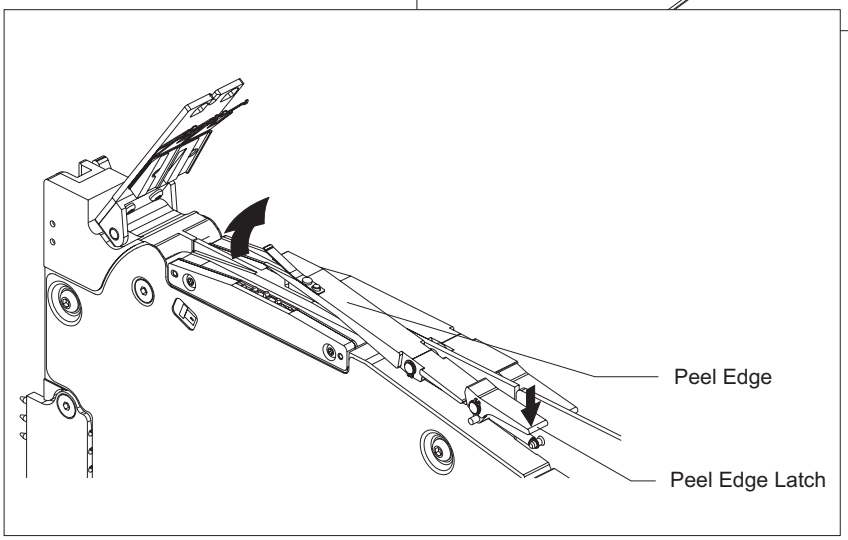


Opening the Tape Window and Peel Edge (Lane 1)

To open the Peel Edge, push down slightly on the Tape Window, then slide the spring loaded Window Latch forward, this will allow the Tape Window to be opened. Lift the Tape Window. The spring loaded Window Latch will latch over the edge of the Tape Window to hold it open . Both Peel Edges can now be opened and closed. Push down on the Peel Edge Latch and lift the Peel Edge. The end of the Peel Edge will latch under the Peel Edge Latch.





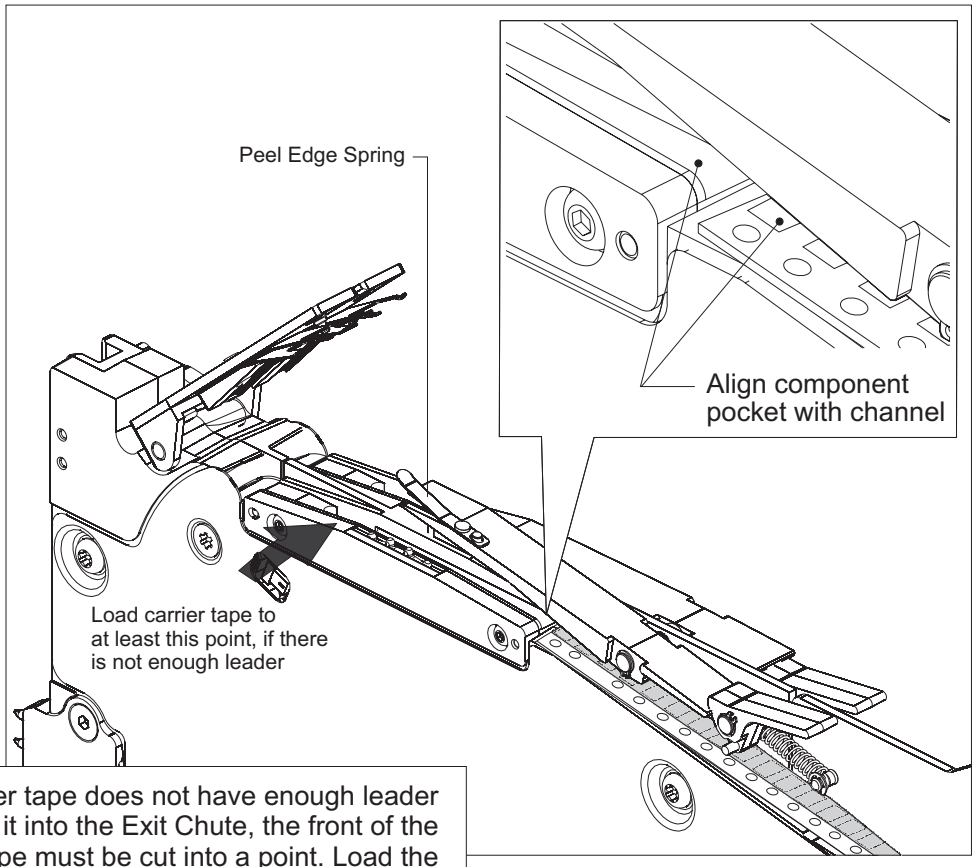


Loading Tape into the Tape Window (Lane 1)

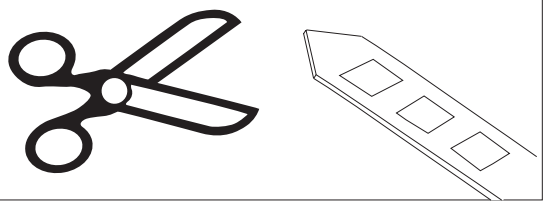
CAUTION **When loading component tape, especially 0402 and 0603 devices, extreme care must be taken to assure that loose components do not drop into the feeder drive mechanism. These small devices can lodge in the gear teeth causing drive failure.**

To load tape into the Tape Window area, open the tape window and feed the component tape into the Tape Window channel. Make sure the component pockets fit in the channel.

CAUTION **When loading and unloading component tape, extreme care must be taken to assure that the Peel Edge Spring does not get damaged.**



If the carrier tape does not have enough leader to load it into the Exit Chute, the front of the carrier tape must be cut into a point. Load the tape so the leading edge is at least past the Tape Sprocket, as shown by the arrow in the illustration above .

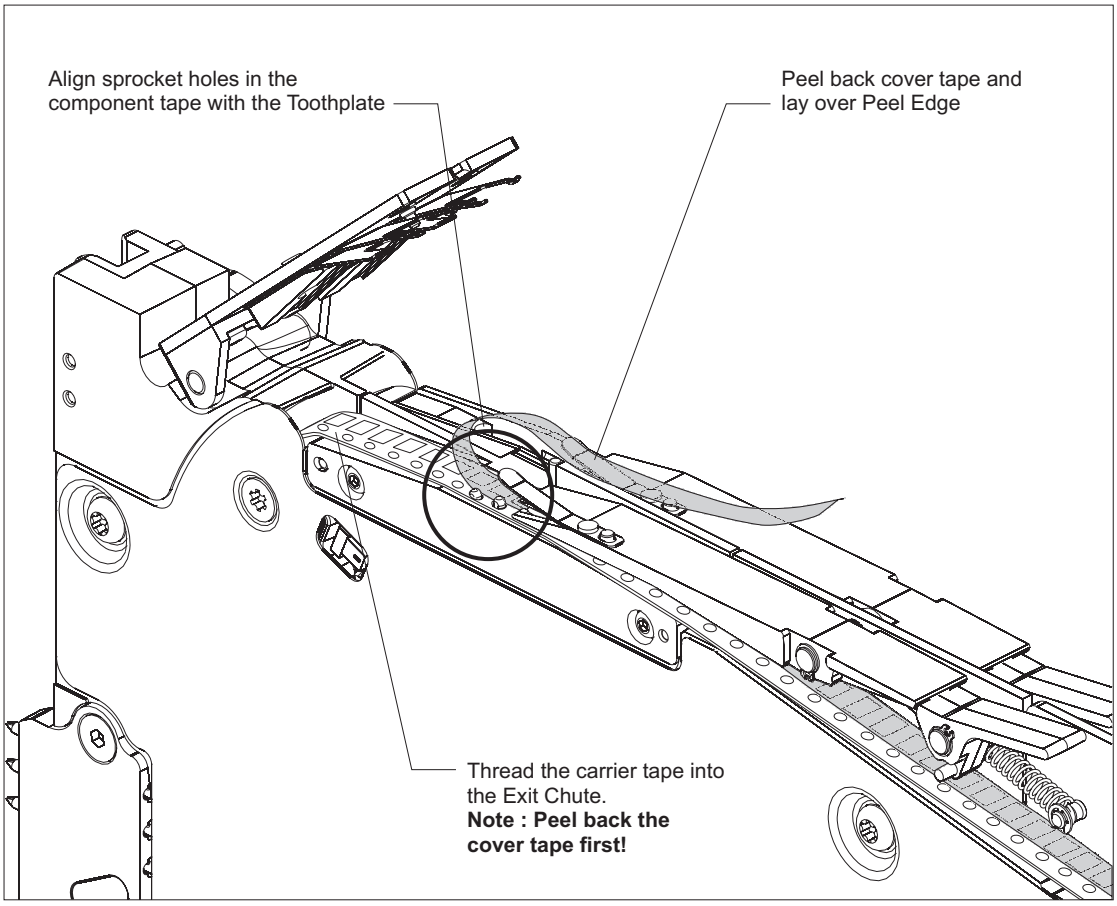


For ease of tape loading, it is recommended that the carrier tape be cut as shown, every time tape is loaded, regardless of whether there is enough leader tape or not.

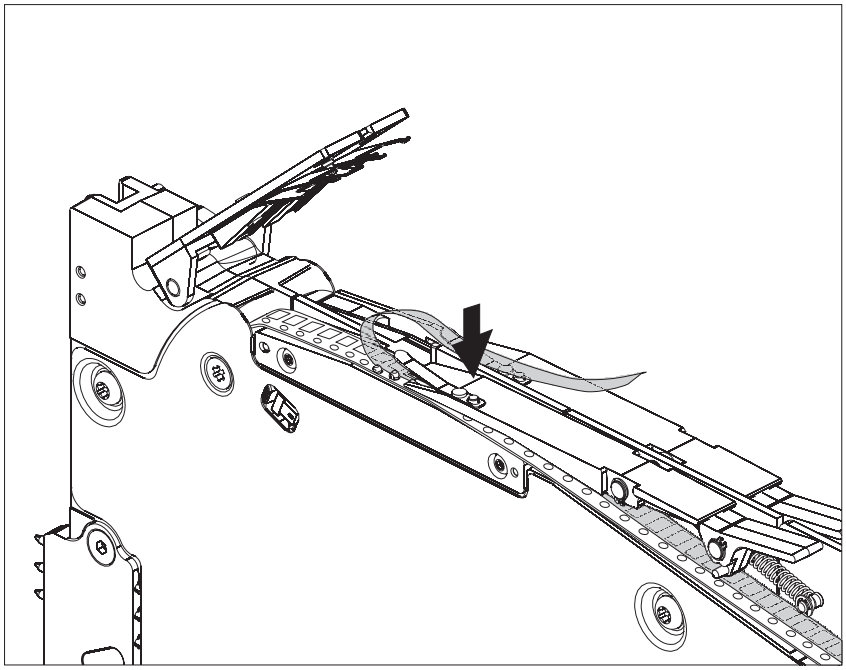
CAUTION **When loading component tape, especially 0402 and 0603 devices, extreme care must be taken to assure that loose components do not drop into the feeder drive mechanism. These small devices can lodge in the gear teeth causing drive failure.**

Continue feeding the component tape into the exit chute at the front end of the feeder, peeling back the cover tape as you do. Lay the cover tape over the Peel Edge. Align the sprocket holes of the component tape with the Toothplate.

CAUTION **When loading and unloading component tape, extreme care must be taken to assure that the Peel Edge Spring does not get damaged.**



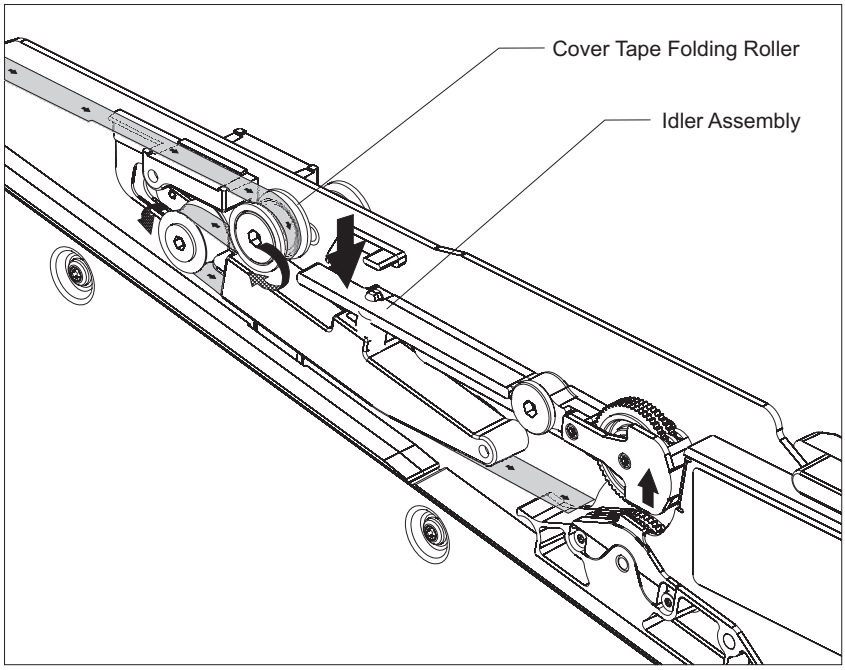
Press down on the Peel Edge to lower it against the carrier tape. Pull the cover tape back towards the Cover Tape Folding Roller.



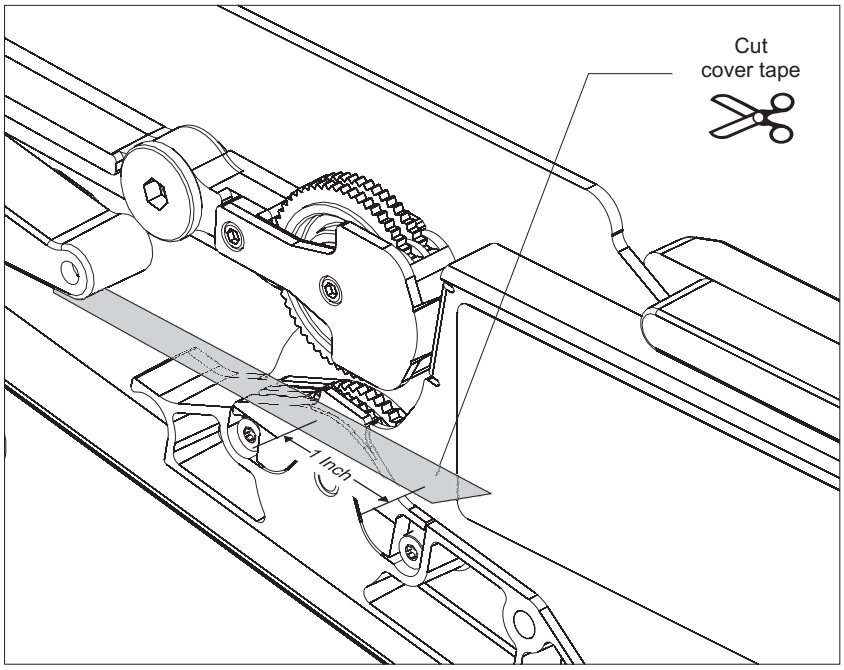
Threading Cover Tape into the Reservoir (Lane 1)

Loop the cover tape around the Cover Tape Folding Roller, then around the Tensioner Roller. Press down on the Idler Assembly arm to lock open the reservoir drive mechanism.

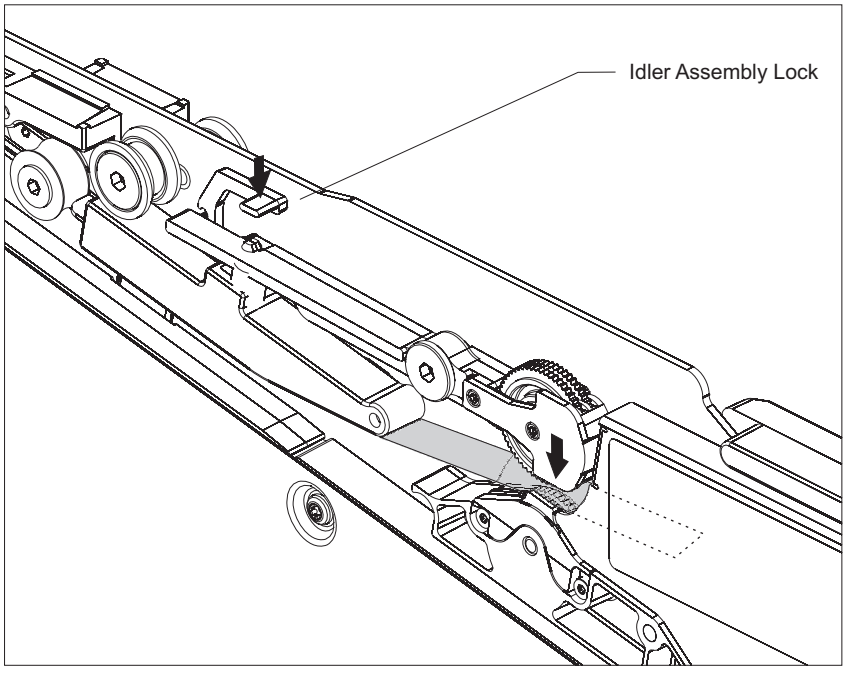
NOTE Make sure there are no twists in the cover tape. When splicing, do not knot the ends of the cover tape together.



Pull the cover tape straight back and trim away excess, leaving approximately 1 inch extra past the drive mechanism.

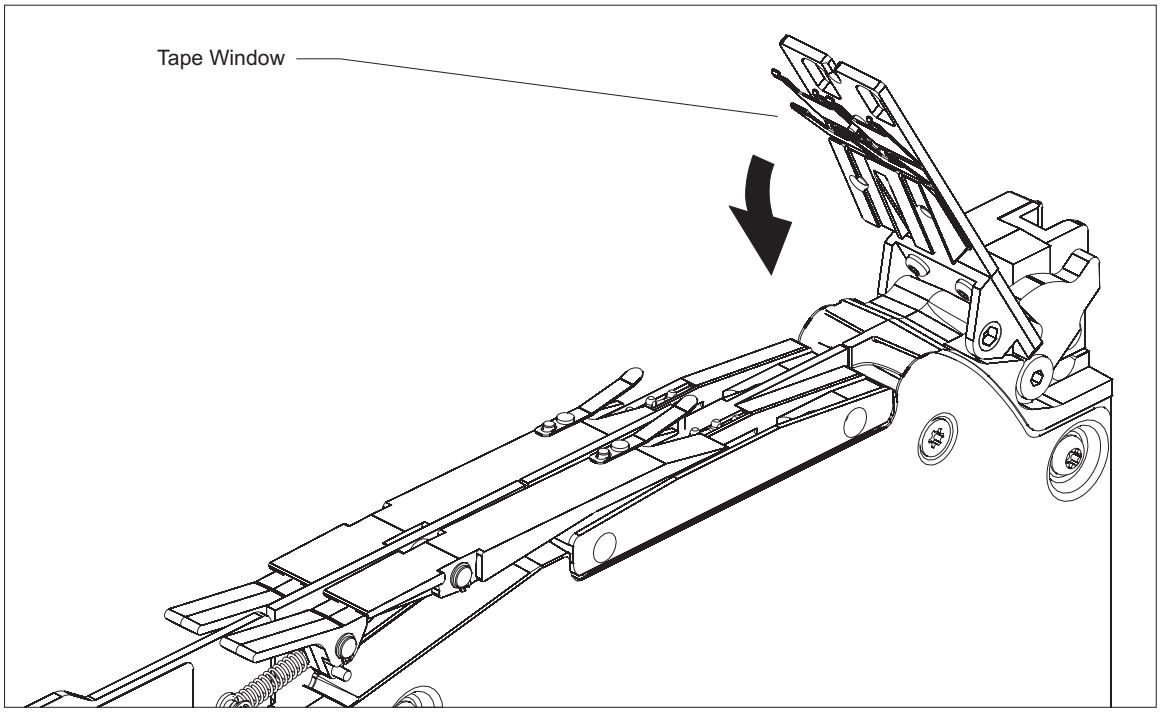


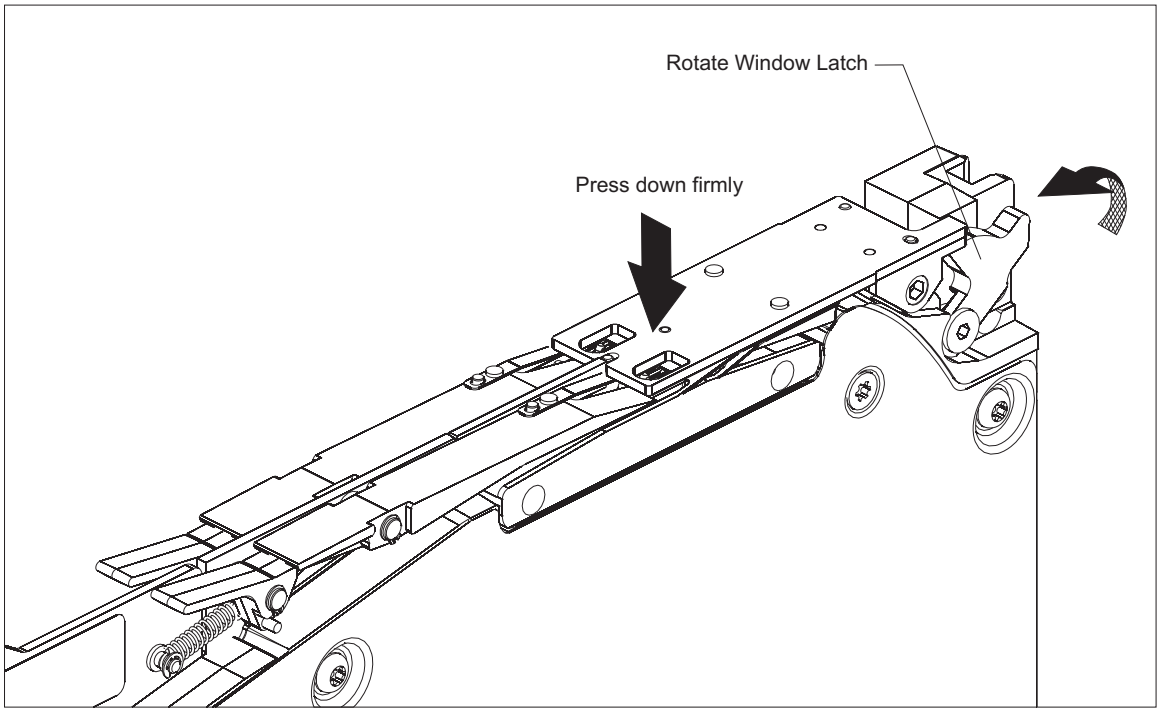
Tuck the end of the cover tape between the idler and drive rollers into the cover tape reservoir. Press down on the Idler Assembly Lock mechanism to release the Idler Assembly closing the rollers onto the cover tape.



Closing the Tape Window

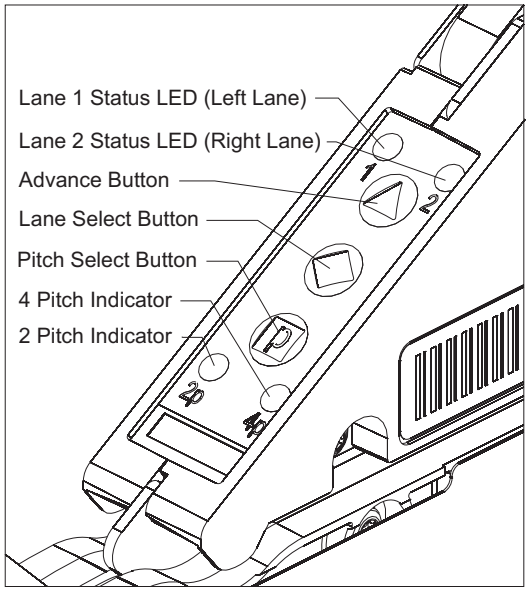
To close the tape window, first make sure that both carrier tapes are installed properly and that both peel edges are closed. Press the Tape Window down firmly. Rotate the Window Latch to the closed position.





Removing Cover Tape Slack

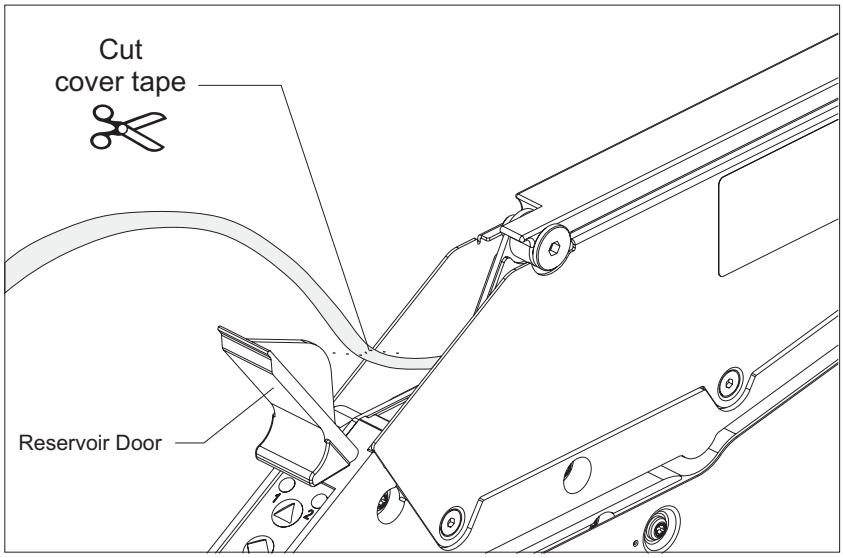
Power up the feeder using either the GSM or the setup stand. Both Lane Status Indicator LED's will illuminate orange. Next, press the Lane Select Button (center button), this will advance the Cover Tape Drive Mechanism and remove all cover tape slack from both lanes. You may need to press the Lane Select Button (center button) a second time depending on how much slack needs to be taken up.

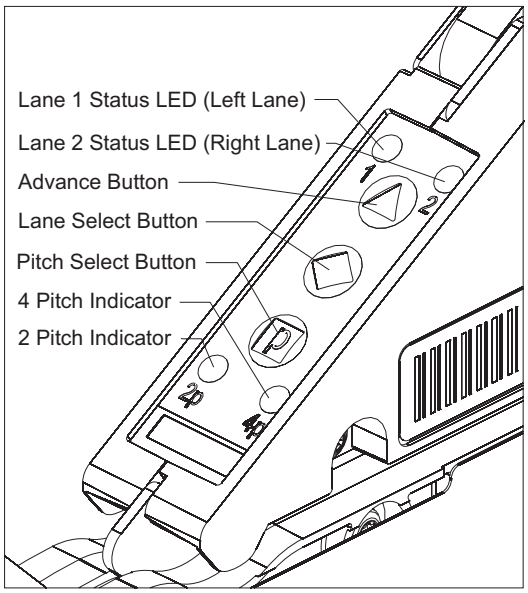


Emptying the Reservoir

To assure optimum performance, the Cover Tape Reservoir should periodically be emptied. When the reservoir becomes full, the cover tape will start to push the Reservoir Door open. When this occurs, the reservoir should be emptied as soon as possible. To empty the Cover Tape Reservoir, swing the Reservoir Door open, pull the excess cover tape from the Reservoir, then trim away the excess with scissors. Push the trimmed end of the cover tape back into the Reservoir and close the Reservoir Door.

NOTE The actual properties of the cover tape, such as thickness, will determine when the Reservoir Door will start to push open.





Powering Up

On power up, the feeder will light the appropriate Pitch Indicator LED, and both Status LED's will flash green for 3 seconds, then both Status LED's will turn solid orange. The Status LED's will turn from orange to their appropriate status once the feeder has run its motors for the first time (press of Lane Select Button, reset command from host, or advance command from host).

The first advance the feeder performs will begin by attempting to take up any slack in the cover tape (up to approximately 12mm). The advance will be delayed until tension is sensed in the cover tape for that respective lane or when the reservoir motor time-out occurs. All future advances will be executed immediately independent of the cover tape tension sensor position as long as the status is ready (green light).

WARNING To avoid possible injury, never power up the feeder with the Board Cover removed.

Basic Operation

The two bi-color Status LED's will normally indicate the status of their respective lane. If the feeder has an error and a Status LED is blinking red, pressing the Lane Select button will clear the error (for both lanes).

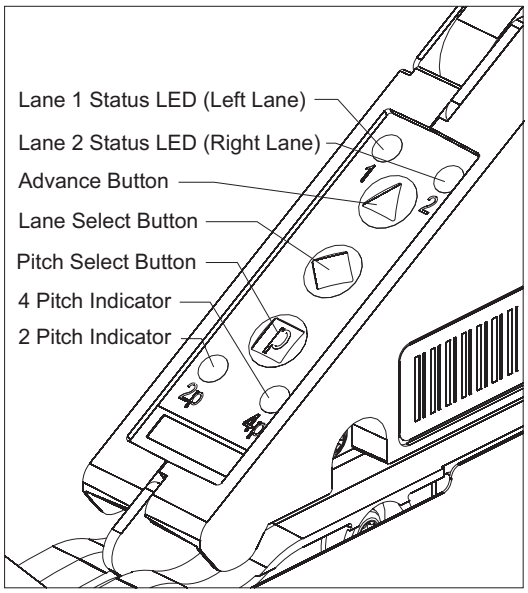
There are two sources of feeder errors that are detected.

If the reservoir tension mechanism fails to properly tension the cover tape before it stops running, the status will change to blinking orange.

If the carrier tape drive sprocket sensor fails to see two consecutive sprocket teeth, the feeder will stop advancing and the status will change to blinking red.

NOTE When the feeder status is error, the feeder will not advance when commanded. The only exception is if the error cause is lack of reservoir tension, the feeder will advance from the feeder control panel while displaying an error status.

When the Lane Select Button is pressed one of the Status LED's will turn off. The LED that is illuminated will indicate which lane is selected. Pressing the Lane Select Button additional times will toggle switch between the two lanes and the appropriate Status LED will illuminate. After 30 seconds of no control panel activity, both of the Status LED's will illuminate and will resume their normal function of showing the status of their respective lane. Lane selection is necessary before advancing a feeder using the control panel Advance Button or when calibrating a feeder. Pressing the Advance Button will make the selected lane move the distance shown. Pressing the Advance Button when no lane is selected will have no effect.



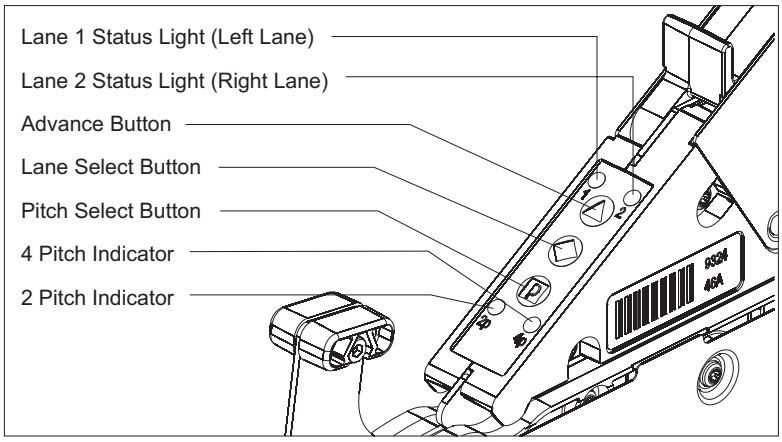
Pitch Selection

The pitch setting is indicated by the Pitch Indicator LED's (2p or 4p).To change the pitch setting, the feeder must be powered up. Then press and hold the Pitch Select Button down until the Pitch Indicator LED changes. Repeating this process will toggle the pitch setting between 2 and 4 pitch. This setting will be stored in NV ram on the feeder and remain while power is off.

NOTE Changing the pitch setting changes the setting for both lanes. You can not run 2 and 4 pitch parts at the same time on different lanes.

Offset Setting Mode

1. Make sure the feeder is latched and powered up.
2. Press and release the lane select button to select the lane to be adjusted.
3. Press and hold the lane select button for 10 seconds or until the status Light turns off to enter Offset setting Mode.
4. After releasing the lane select button, the Status Light will either be:
   A. Illuminated ORANGE, indicating that the feeder is at the factory calibrated pick point.
   B. Flashing RED, where the number of flashes will indicate the number negative offsets currently subtracted from the factory calibrated pick point.
   C. Flashing GREEN, where the number of flashes will indicate the number of positive offsets currently added to the factory calibrated pick point.
5. Pressing and releasing the advance button will increment the calibration setting forward .001”. Pressing and releasing the pitch select button will increment the calibration setting backward 001". The carrier tape will not move when making this adjustment until you have exited the calibration mode and advanced the feeder. Repeat the process as necessary until you are at the desired pick location.
6. Pressing both the advance and pitch select buttons at the same time will reset the feeder to the factory calibrated pick point.
7. Press and release the lane select button to save changes and exit Offset Setting Mode



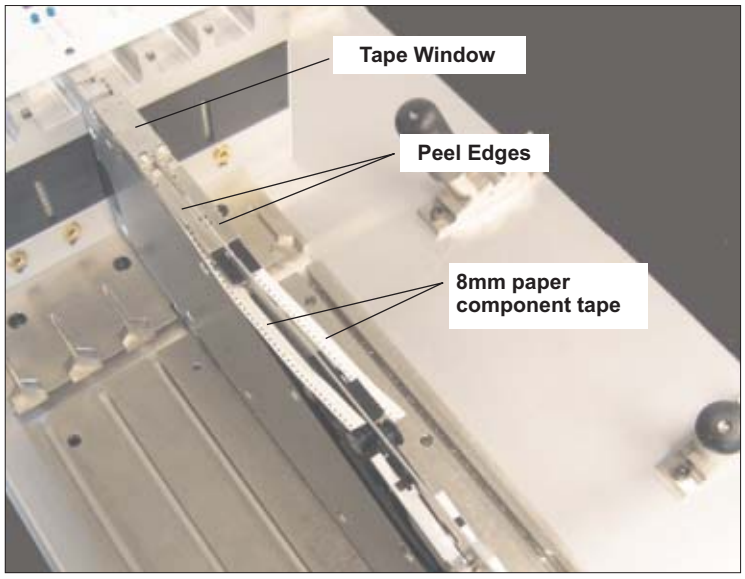
Toothplate Slot Sensor Diagnostic

The Toothplate Slot Sensor Diagnostic is used to verify the accurate advancement of component tape.

1. Press and hold the Pitch Selection Button down while powering up the feeder. The Status Lights for lanes 1 and 2 will flash GREEN repeatedly and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Pitch Selection Button. The Status Light for lane 1 will be illuminated GREEN. The feeder is now ready for a Toothplate Slot Sensor Diagnostic on lane 1.

NOTE **If the Pitch Selection Button is accidently pressed, the Status Light for lane 1 will be illuminated RED. Press and release the Pitch Selection Button and return to Toothplate Slot Sensor Diagnostic Mode. The Status Light for lane 1 will be illuminated GREEN.**

3. Open the Tape Window and both Peel Edges for lanes 1 and 2.
4. Load two (2) pieces of 8mm paper component tape, approximately 10” (254mm) long, inside both tape paths as shown below.



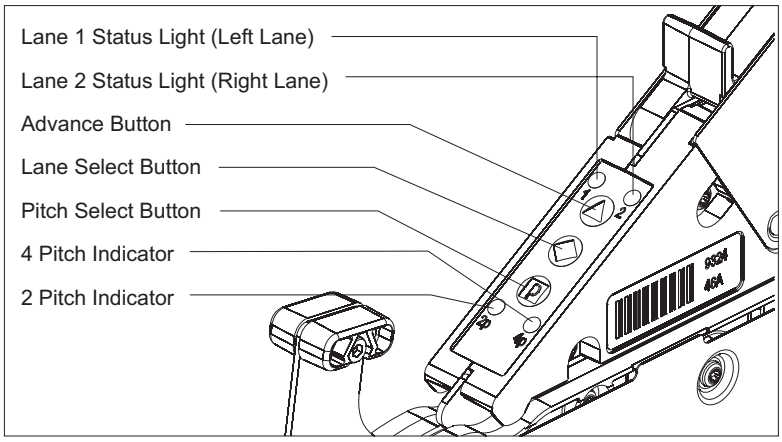
5. Make sure the 8mm paper component tape engages both Toothplates while closing the Tape Windows and Peel Edges for lanes 1 and 2.
6. Pull the paper component tape, loaded in lane 1 backwards until the 2P LED Status Light illuminates GREEN. Continue pulling the component tape backwards until the 2P LED Status Light turns OFF. This will verify that the Slot Sensor is functioning properly for lane 1.
7. While the feeder is in Toothplate Slot Sensor Diagnostic, press and release the Lane Select Button. The lane 2 Status Light will be illuminated GREEN.
8. Pull the paper component tape, loaded in lane 2 backwards until the 4P LED Status Light illuminates GREEN. Continue pulling the component tape backwards until the 4P LED Status Light turns OFF. This will verify that the Slot Sensor is functioning properly for lane 2.
9. To exit Toothplate Slot Sensor Diagnostic, unlock and power down the feeder.

PSV Sensor Diagnostic

The PSV Diagnostic is used to verify that the feeder will detect a component reel has been loaded onto the Tail Assembly.

1. Press and hold the Pitch Selection Button down while powering up the feeder.
   The Status Lights for lanes 1 and 2 will flash GREEN repeatedly and turn off.
2. Press the feeder latch lever downward, to lock the feeder into place and release the Pitch Selection Button. The Status Light for lane 1 will be illuminated GREEN.
3. Press and release the Pitch Select Button.
   The lane 1 Status Light will be illuminated RED.
   The 2P Status Light will be off (blank).

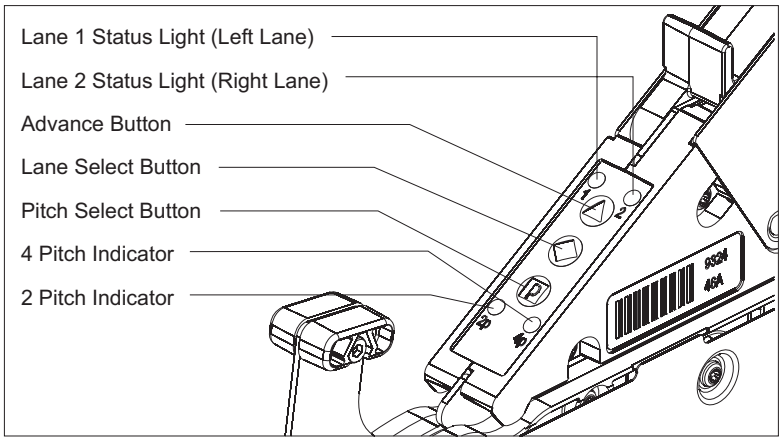
   The feeder is now ready for a PSV Diagnostic on lane 1.
5. Move the Reel Tensioner for lane 1 on the Tail Assembly backward.
   The 2P Status Light will be illuminated GREEN.
4. Move the Reel Tensioner for lane 1 on the Tail Assembly forward.
   The 2P Status Light will turn off.
   This will verify that the PSV Diagnostic has been performed correctly for lane 1.
6. While the feeder is in PSV Diagnostic, press and release the Lane Select Button.
   The lane 2 Status Light will be illuminated RED.
   The 4P Status Light will be off (blank).
7. Move the Reel Tensioner for lane 2 on the Tail Assembly backward.
   The 4P Status Light will be illuminated GREEN.
8. Move the Reel Tensioner for lane 2 on the Tail Assembly forward.
   The 4P Status Light will turn off.
   This will verify that the PSV Diagnostic has been performed correctly for lane 2.
9. To exit PSV Diagnostic, unlock and power down the feeder.



Carrier Tape Drive Motor Diagnostic

The Carrier Tape Drive Motor Diagnostic is used to verify that both Toothplates are turning properly without fault or obstruction.

1. Press and hold the Lane Select Button and the Pitch Select Button down while powering up the feeder until the Status Lights stop flashing and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Lane Select Button and the Pitch Select Button. The lane 1 and 2P Status Lights will be illuminated GREEN.
3. Open the Tape Window and both Peel Edges for lanes 1 and 2.
4. While the lane 1 Status Light is illuminated GREEN, press and hold the Advance Button down and inspect the Toothplate in lane 1 for continuous movement.
5. While the feeder is in Carrier Tape Drive Motor Diagnostic, press and release the Lane Select Button. The lane 2 Status Light and the 2P Status Light will be illuminated GREEN.
6. While the lane 2 Status Light is illuminated GREEN, press and hold the Advance Button down and inspect the Toothplate in lane 2 for continuous movement.
7. Close the Tape Window and both Peel Edges for lanes 1 and 2.
8. To exit Carrier Tape Drive Motor Diagnostic, unlock and power down the feeder.



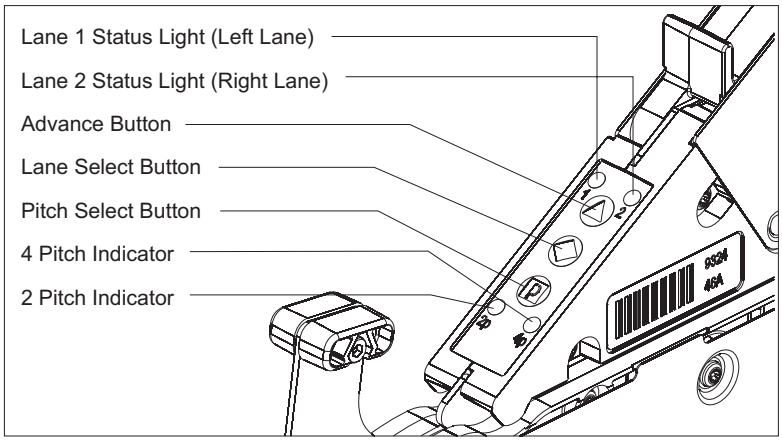
Reservoir Drive Motor Diagnostic

The Reservoir Tape Drive Motor Diagnostic is used to verify that the Reservoir Drive Motor and Drive Gears mesh and move properly without fault or obstruction.

1. Press and hold the Lane Select Button and the Pitch Select Button down while powering up the feeder until the Status Lights stop flashing and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Lane Select Button and the Pitch Select Button. The lane 1 and 2P Status Lights will be illuminated GREEN.
3. Press and release the Pitch Select Button. The 4P Status Light will be illuminated GREEN.
4. Make sure the Reservoir Idler Assembly for lane 1 is lowered into the operating position.
5. Press and release the Advance Button repeatedly while observing the Reservoir Idler Assembly for lane 1. The Reservoir Drive Motor should be moving the Reservoir Drive Gears a fixed, 4mm distance and stop with each press of the Advance Button.
6. While the feeder is in Reservoir Tape Drive Motor Diagnostic, press and release the Lane Select Button. The lane 2 Status Light and the 4P Status Light will be illuminated GREEN.
7. Make sure the Reservoir Idler Assembly for lane 2 is lowered into the operating position.
8. Press and release the Advance Button repeatedly while observing the Reservoir Idler Assembly for lane 2. The Reservoir Drive Motor should be moving the Reservoir Drive Gears a fixed, 4mm distance and stop with each press of the Advance Button.
9. To exit Reservoir Tape Drive Motor Diagnostic, unlock and power down the feeder.

NOTE

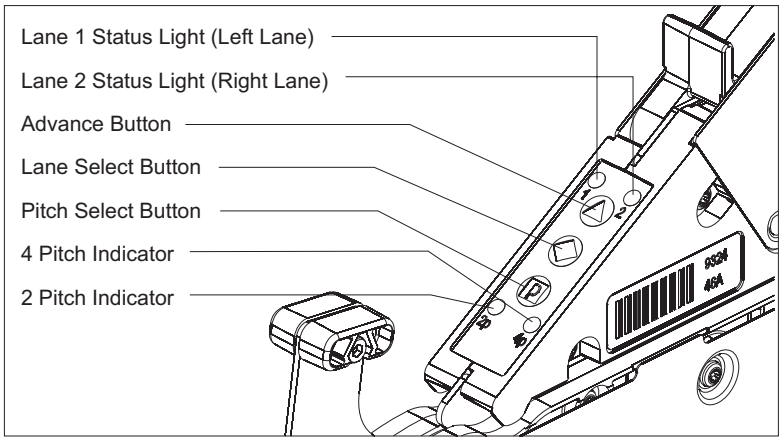
The Reservoir Motor will not run if the Tension Sensor is in the fully tensioned position. There is no direct method of checking the Reservoir Cover Tape Tension Sensors. However, it can be indirectly checked using the Reservoir Drive Motor Diagnostic by checking that the reservoir drive motor will not run if the tension sensor is in the fully tensioned position.



Auto Feed Carrier Drive Diagnostic

The Auto Feed Carrier Drive Diagnostic is used to verify that the Carrier Drive Motor will continuously advance the Toothplate in 4mm increments.

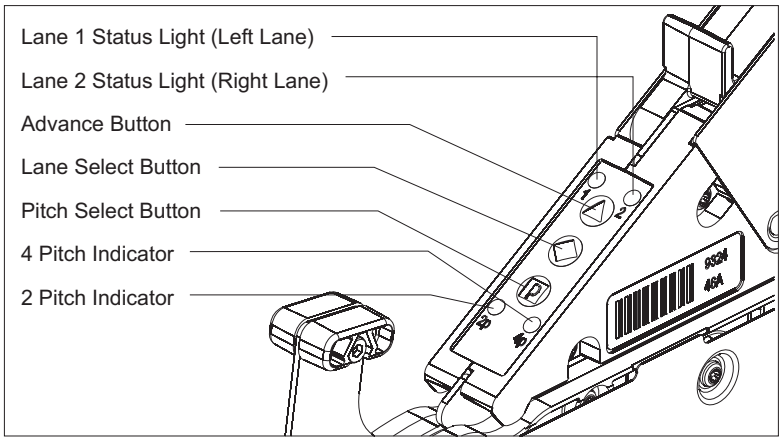
1. Press and hold the Advance Button and the Lane Select Button down while powering up the feeder until the Status Lights stop flashing and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Advance Button and the Lane Select Button. The lane 1 and 2P Status Lights will be illuminated GREEN.
3. Open the Tape Window and both Peel Edges for lanes 1 and 2.
4. Press and release the Advance Button to activate the feeder's Auto Feed Carrier Drive functionality for lane 1. The Carrier Drive Motor will continuously advance the Toothplate on lane 1 in 4mm increments.
5. Press and release the Advance Button to stop the feeder's Auto Feed Carrier Drive functionality.
6. While the feeder is in Auto Feed Carrier Drive Diagnostic, press and release the Lane Select Button. The lane 2 Status Light will be illuminated GREEN. Make sure the 2P Status Light is illuminated GREEN.
7. Press and release the Advance Button to activate the feeder's Auto Feed Carrier Drive functionality for lane 2. The Carrier Drive Motor will continuously advance the Toothplate on lane 2 in 4mm increments.
8. Press and release the Advance Button to stop the feeder's Auto Feed Carrier Drive functionality.
9. Close the Tape Window and both Peel Edges for lanes 1 and 2.
10. To exit Auto Feed Carrier Drive Diagnostic, unlock and power down the feeder.



Auto Feed Reservoir Drive Diagnostic

The Auto Feed Reservoir Drive Diagnostic is used to verify that the Reservoir Drive Motor will continuously advance the Reservoir Drive Gears in 4mm increments.

1. Press and hold the Advance Button and the Lane Select Button down while powering up the feeder until the Status Lights stop flashing and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Advance Button and the Lane Select Button. The lane 1 and 2P Status Lights will be illuminated GREEN.
3. Press and release the Pitch Select Button. The 4P Status Light will be illuminated GREEN.
4. Make sure the Reservoir Idler Assemblies for lanes 1 and 2 are lowered in the operational position.
5. Press and release the Advance Button to activate the feeder's Auto Feed Reservoir Drive functionality for lane 1. The Reservoir Drive Motor should be moving the Reservoir Drive Gears a fixed, 4mm distance continuously.
6. Press and release the Advance Button to stop the feeder's Auto Feed Reservoir Drive functionality.
7. While the feeder is in Auto Feed Reservoir Drive Diagnostic, press and release the Lane Select Button. The lane 2 Status Light will be illuminated GREEN. make sure the 4P Status Light is illuminated GREEN.
8. Press and release the Advance Button to activate the feeder's Auto Feed Reservoir Drive functionality for lane 2. The Reservoir Drive Motor should be moving the Reservoir Drive Gears a fixed, 4mm distance continuously.
9. Press and release the Advance Button to stop the feeder's Auto Feed Reservoir Drive functionality.
10. To exit Auto Feed Reservoir Drive Diagnostic, unlock and power down the feeder.



PSV Enable/Disable Setting

The PSV Diagnostic is used to verify the feeder's present state of PSV functionality.

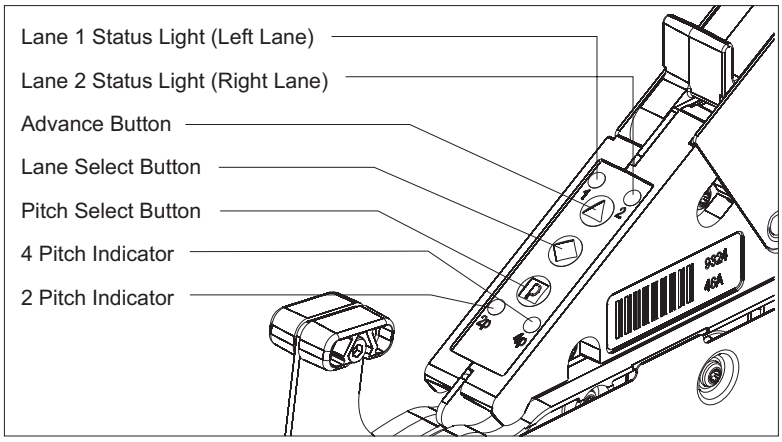
1. Press and hold the Advance Button and the Pitch Select Button down while powering up the feeder until the Status Lights stop flashing and turn OFF.
2. Press the feeder latch lever downward to lock the feeder into place and release the Advance Button and the Pitch Select Button.
3. When the feeder is in PSV Enable/Disable diagnostic and the Status Lights for lanes 1 and 2 are illuminated GREEN, PSV is Enabled.

   To Disable PSV, press and release the Pitch Select Button.
   The Status Lights for lanes 1 and 2 will be illuminated RED.
4. When the feeder is in PSV Enable/Disable diagnostic and the Status Lights for lanes 1 and 2 are illuminated RED, PSV is Disabled.

   To Enable PSV, press and release the Advance Button.
   The Status Lights for lanes 1 and 2 will be illuminated GREEN.
5. To save the current PSV setting and exit PSV Enable/Disable Diagnostic, unlock and power down the feeder.

NOTE **The PSV on/off setting has no effect on the PSV Sensor check function. However, if the feeder doesn't have PSV Sensors hooked up the status indicated by that diagnostic setting will be random.**

NOTE **PSV Enabled is the factory default.**



Feeder Database

To input Feeder Database information refer to the Tape and Coverless Tape Feeders section of the New Feeder Manual.

Feeder Database Chart

The following charts include the values needed to input Feeder Database information for the 8mm Dual-Lane Tape Feeders. Enter the feeder definitions for all variations defined to the respective feeder database.

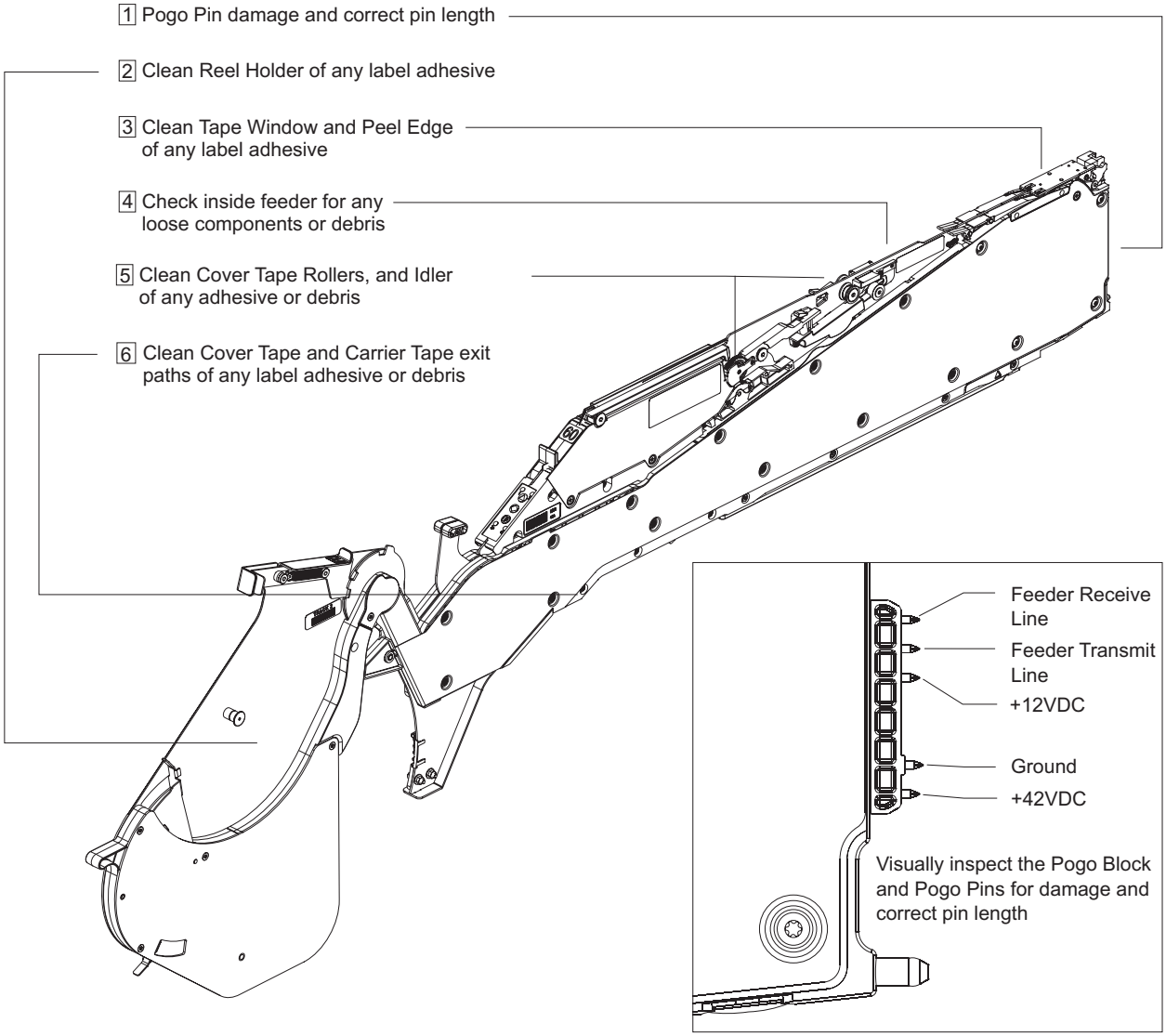
8mm PrecisionPro (Green) DL Spliceable Tape Feeder

	8/2	8/4
Feeder Name	Green DL 8mm / 2mm	Green DL 8mm / 4mm
Feeder Type	Tape-Spliceable	Tape-Spliceable
Pick Up X	-118.00	-118.00
Pick Up Y	-2905.00	-2865.00
Pick Up Tolerance X	0	0
Pick Up Tolerance Y	0	0
Theta Pick Tolerance	0	0
Pick Attempts	0	0
Number Of Slots	1	1
Width	0	0
Reference Slot	0	0
Cycle Time	0.050	0.071
Number Of Tracks (Tape)	2	2
Track Width (Tape)	408.00	408.00

Preventive Maintenance

For optimum performance, before loading a feeder, review the following preventive maintenance list.

1. Check the Pogo Pins for damage and correct pin length.
2. Keep the Reel Holder (Tail Section) clean from any labels or adhesive that could interfere with the component reel.
3. Keep the Tape Window and Peel Edge clean from adhesive buildup.
4. Before loading, check the feeder for any loose components or debris.
5. Keep the Cover Tape Rollers, Clutch and Idler clean from adhesive or debris.
6. Keep the cover tape and exit paths clean from any adhesive or debris.
7. Empty any loose components from the Precision Block.
8. Clean the feeder at least once a month or every 1 million cycles.



Troubleshooting

To inspect and repair the feeder, follow the instructions listed in the troubleshooting chart below.

- When replacing parts and securing Covers, make sure all Cables are securely routed to avoid pinching and feeder damage.
- When moving the feeder, always use the feeder handle to avoid feeder and Pogo Block damage.
- When the feeder is loaded into the placement machine, the Latch Lever MUST BE latched up in the locked position.

TROUBLESHOOTING		
Feeder Condition	**Feeder Inspection**	**Feeder Repair / Part Replacement**
No Power	Check the Pogo Block fo damaged or missing pins.	Replace the Pogo Block.
	Check the I/O Cable for damage.	Replace the I/O Cable.
	Faulty Cable connection(s).	Verify all Cables are connected properly.
	Damaged Controller.	Replace the Controller.
	I/O Cable disconnected from the Controller.	Connect the I/O Cable to the Controller.
Flashing RED Status Light (Indicates carrier tape jam condition)	Incorrect pocket depth.	Make sure component tape is within feeder specification.
	Damaged Toothplate.	Replace the Toothplate.
	Loose component(s) in drive system.	Remove loose component(s) from the drive system.
	Tape path obstruction(s).	Clear the tape path or Slot Sensor of any obstruction(s).
		Empty any loose components from the Precision Block.
	Slot Sensor damaged or misaligned.	Replace or reset the Slot Sensor.
	Slot Sensor Cable pinched.	Replace the Slot Sensor Cable.
	Loose Toothplate.	Reset the backlash gear.
	No carrier tape leader.	When loading the feeder, carrier tape must enter the scrap channel.
Flashing ORANGE Status Light (Indicates Reservoir error or cover tape creep)	Feeder not loaded properly.	Review tape loading instructions.
	Insufficeint cover tape drive.	Peel force out of EIA specification.
	Reservoir has reached cover tape holding capacity	Empty the Reservoir.
	Reservoir motor not functioning.	Replace the Reservoir Motor.
	Adhesive build up on the Peel Edge.	Clean the Peel Edge.

(continued on next page)

Troubleshooting (continued)

To inspect and repair the feeder, follow the instructions listed in the troubleshooting chart below.

- Do not operate the feeder with the Covers removed.
- Do not modify the feeder in any way.

TROUBLESHOOTING		
Feeder Condition	**Feeder Inspection**	**Feeder Repair / Part Replacement**
Feeder runs off pitch	Verify feeder set-up.	Verify pitch setting.
	Damaged Slot Sensor.	Replace the Slot Sensor.
	Damaged Slot Sensor Cable.	Replace the Slot Sensor.
Feeder will not advance	Check the Pogo Block for damaged or missing pins.	Replace the Pogo Block.
	Pinched or damaged I/O Cable.	Replace the I/O Cable.
	Damaged Controller.	Replace the Controller.
	Controller and cable connections.	Make sure all cables are connected properly to the Controller.
Component pick failure	Verify feeder set-up.	Verify pitch setting and feeder calibration.
	Feeder not loaded into the placement machine properly.	Make sure the feeder is fully inserted into the placement machine and the Lever Latch is in the locked position.
	Factory default pick point has been changed.	Verify feeder pick point location.
	Component tape pitch is different for both lanes.	Both lanes of the feeder must have the same pitch settings.
Flashing GREEN Status Light (5 seconds)	Verify Toothplate for damaged or missing teeth.	Replace the Toothplate.

Changes To This Revision

- ❑ Revised and added to diagnostics and troubleshooting information.