



110PAX4/R110PAX4 Quick Reference Guide

This guide provides basic instructions to load and operate your print engine. For additional information, refer to the User Guide.

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Print Engine Exterior View

Print engines are available in a right-hand configuration (media moves from left to right, [Figure 1](#)) and a left-hand configuration (media moves from right to left, [Figure 2](#)).

Figure 1 • Right-Hand (RH) Print Engine

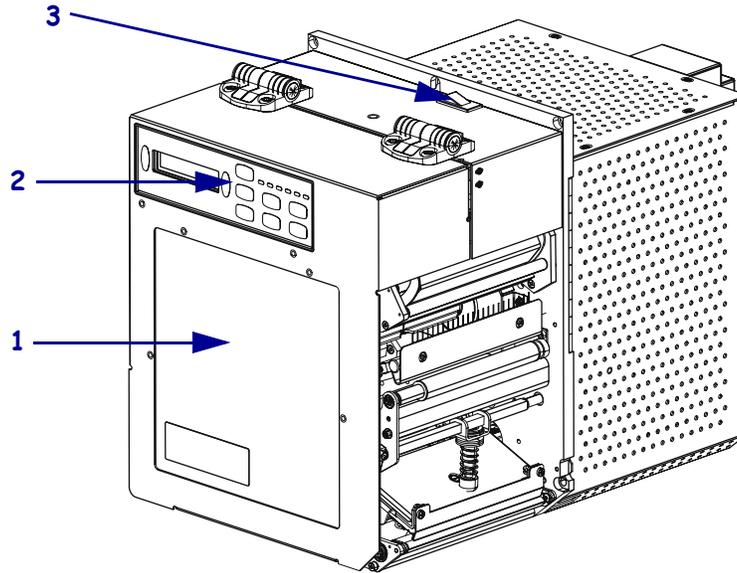
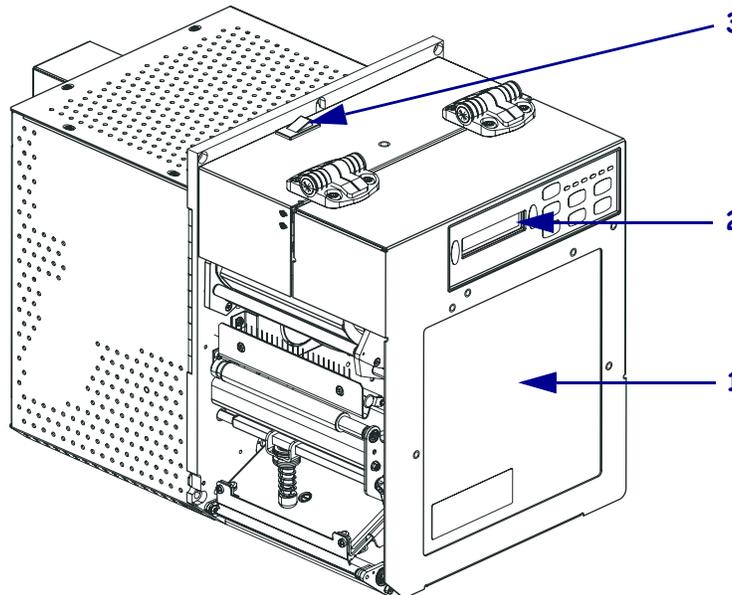


Figure 2 • Left-Hand (LH) Print Engine

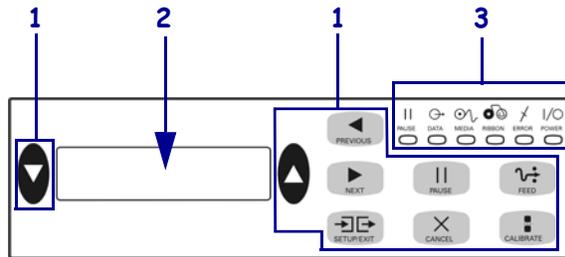


1	Media Door
2	Control Panel
3	Power Switch

Control Panel

All controls and indicators for the print engine are located on the control panel (Figure 3).

Figure 3 • Control Panel



1	Buttons
2	Liquid Crystal Display (LCD)
3	Lights/LEDs

Control Panel Buttons

The control panel buttons are shown in Table 1.

Table 1 • Control Panel Buttons

Button	Description/Function
FEED	Feeds a blank label. <ul style="list-style-type: none"> If the print engine is idle or paused, the label is fed immediately. If the print engine is printing, the label is fed after the current batch finishes printing.
PAUSE	Stops and restarts the printing process or removes error messages and clears the LCD. If a label is printing, it is completed before the printing process stops. When the print engine is paused, the PAUSE light is ON.
CANCEL	CANCEL functions only in Pause mode. Pressing CANCEL has these effects: <ul style="list-style-type: none"> Cancels the label format that is currently printing. If no label format is printing, the next one to be printed is canceled. If no label formats are waiting to be printed, CANCEL is ignored. To clear the print engine's entire label format memory, press and hold CANCEL until the DATA light turns off.
CALIBRATE	CALIBRATE functions only in Pause mode. Press CALIBRATE to recalibrate for proper media length, to set media type (continuous/non-continuous), and to set print method (direct thermal/thermal transfer).
BLACK OVALS	The two black ovals are used to change parameter values for a parameter being displayed on the LCD. Common uses include increasing or decreasing a value, answering yes or no, indicating ON or OFF, and scrolling through choices.
PREVIOUS	Scrolls the LCD to the previous parameter.

Table 1 • Control Panel Buttons (Continued)

Button	Description/Function
NEXT	Scrolls the LCD to the next parameter.
SETUP/EXIT	Enters and exits configuration mode.

Control Panel Indicator Lights (LEDs)

The control panel lights are described in [Table 2](#).

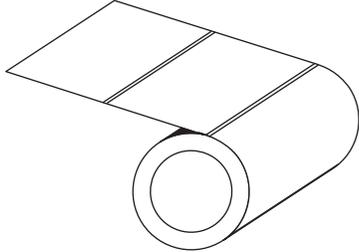
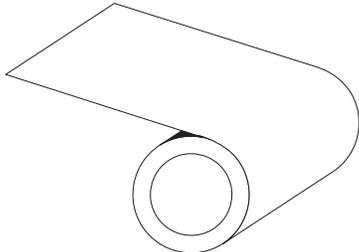
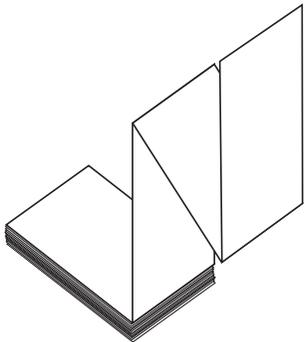
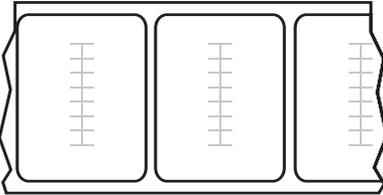
Table 2 • Control Panel Lights

LED	OFF Indicates	ON Indicates	FLASHING Indicates
POWER (Green)	Print engine is OFF, or no power to print engine.	Power switch is ON, and power is being supplied to print engine.	—
PAUSE (Yellow)	Normal operation.	One of the following: <ul style="list-style-type: none"> Print engine is paused because of an error condition (printhead, ribbon, or paper error). Usually occurs in conjunction with another LED. PAUSE was pressed. A pause was requested from the Applicator Port. A pause was received as part of the label format. 	—
DATA (Green)	No data being received or processed.	Data is processing or printing is taking place. No data is being received.	Print engine is receiving data from or sending status information to the host computer.
MEDIA (Yellow)	Normal operation. Media properly loaded.	Out of media. (Print engine is paused, LCD displays error message, and PAUSE light is ON).	—
RIBBON (Yellow)	Normal operation. Ribbon properly loaded.	Ribbon in while print engine is in direct thermal mode, or no ribbon loaded while print engine is in thermal transfer mode. Print engine is paused, LCD displays error message, and PAUSE light is ON.	—
ERROR (Orange)	No print engine errors.	—	Print engine error exists. Check the LCD for status.

Media

The print engine can use various types of media (Table 3).

Table 3 • Types of Media

Media Type	How It Looks	Description
Non-Continuous Roll Media		<p>The media is wound on a core. Individual labels are separated by a gap, notch, hole, or black mark, which enables you to see where one label ends and the next one begins. When using media that has holes or notches, position the media sensor directly over a hole or notch.</p>
Continuous Roll Media		<p>The media is wound on a core and is without gaps, holes, notches, or black marks. This allows the image to be printed anywhere on the label.</p>
Fanfold Media		<p>The media is folded in a zigzag pattern.</p>
RFID “Smart” Media (for use with RFID-capable print engines only)		<p>Each label has a radio frequency identification (RFID) chip and antenna inlay embedded between the label and the liner. The media is made from the same materials and adhesives as non-RFID labels. The outline of the transponder (which varies by manufacturer) can be seen through the label.</p>

Ribbon

Ribbon is a thin film that is coated on one side with wax or wax resin, which is transferred to the media during the thermal transfer process.

When To Use Ribbon

Thermal transfer media requires ribbon for printing while direct thermal media does not. To determine if ribbon must be used with a particular media, perform a media scratch test.

To perform a media scratch test, complete these steps:

1. Scratch the print surface of the media with your fingernail.
2. Did a black mark appear on the media?

If a black mark...	Then the media is...
Does not appear on the media	Thermal transfer. A ribbon is required.
Appears on the media	Direct thermal. No ribbon is required, though ribbon may be used to help protect the printhead from abrasion with the media.

Coated Side of Ribbon

Ribbon can be wound with the coated side on the inside or outside (Figure 4). This print engine can only use ribbon that is coated on the outside.

Figure 4 • Ribbon Coated on Outside or Inside



To determine which side of a ribbon is coated, complete these steps:

1. Peel a label from its liner.
2. Press a corner of the sticky side of the label to the outer surface of the roll of ribbon.
3. Peel the label off of the ribbon.

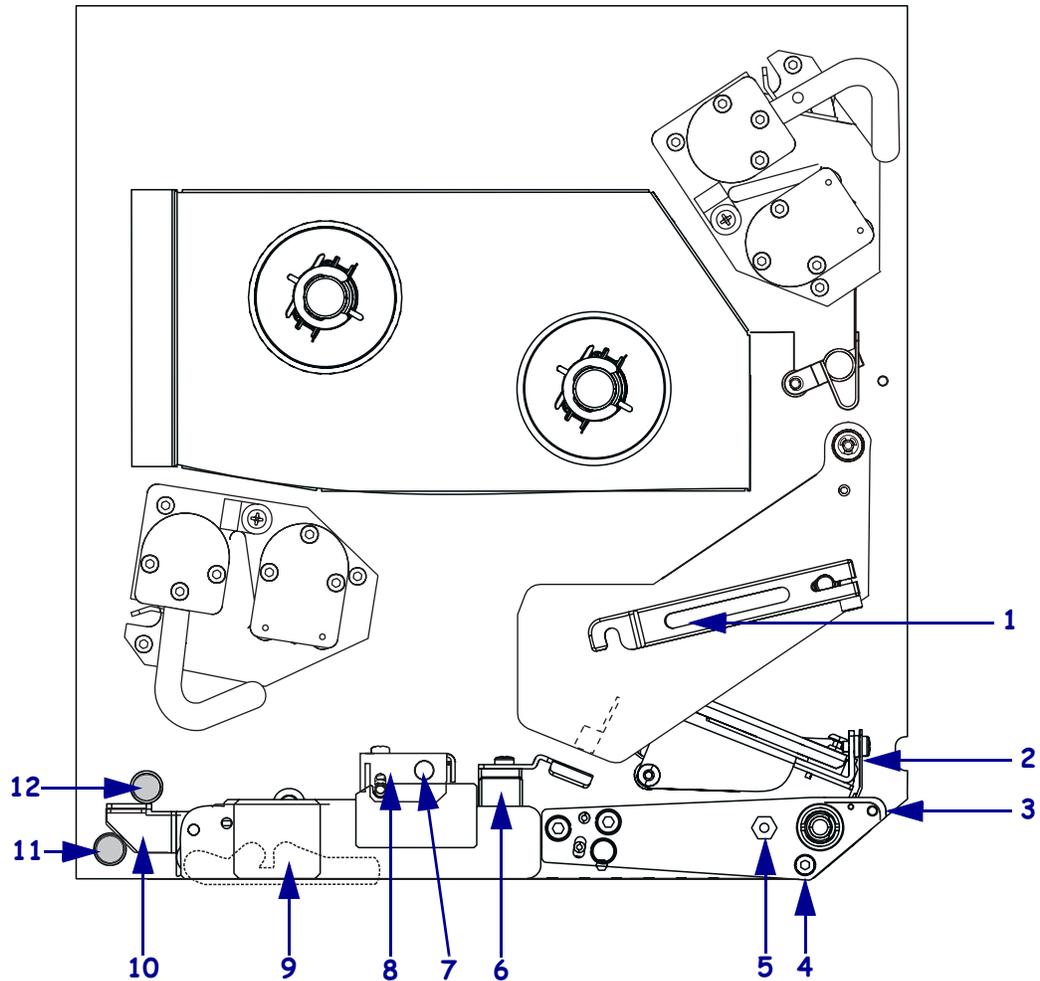
4. Observe the results. Did flakes or particles of ink from the ribbon adhere to the label?

If ink from the ribbon...	Then...
Adhered to the label	The ribbon is coated on the outer surface.
Did not adhere to the label	The ribbon is coated on the inner surface. To verify this, repeat the test on the inner surface of the roll of ribbon.

Load Media

Figure 5 identifies the media-handling components of a right-hand print engine. A left-hand unit contains a mirror image of these components. Figure 6 on page 9 shows both print engines with media loaded.

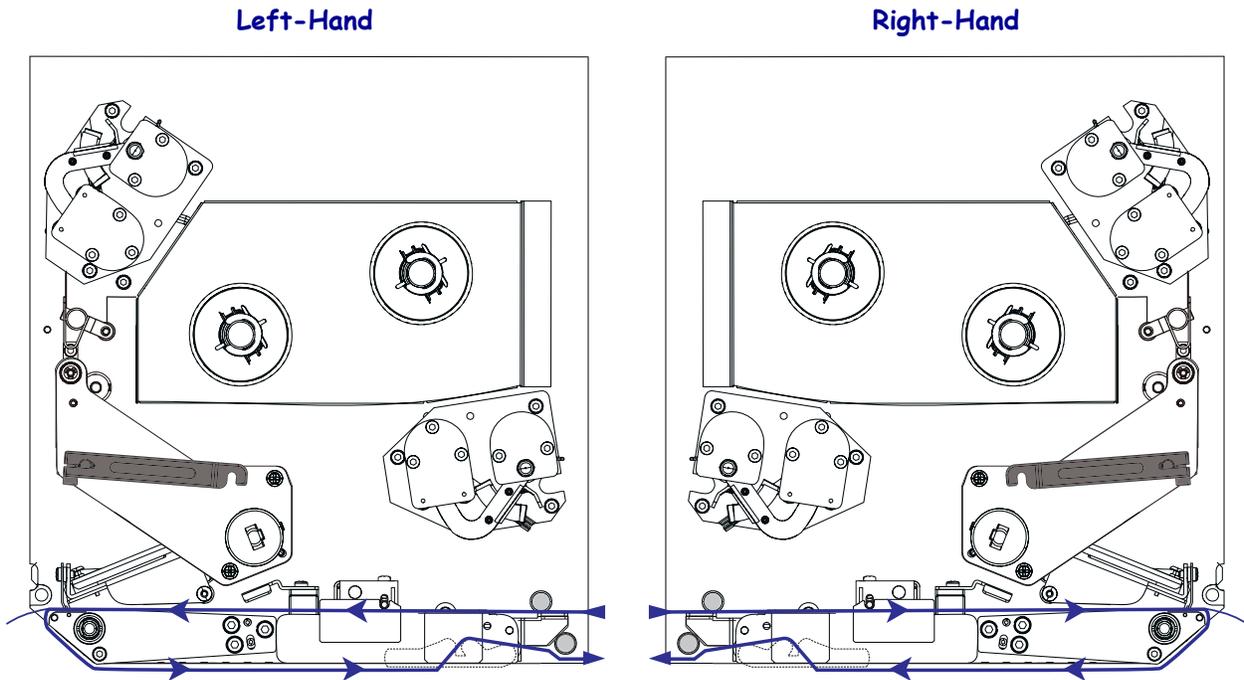
Figure 5 • Components for Media Loading (Right-Hand)



1	Printhead latch
2	Printhead assembly
3	Peel bar
4	Media liner roller
5	Printhead locking pin
6	Media guide

7	Pinch roller assembly
8	Pinch roller release button
9	Peel roller assembly
10	Peel roller latch
11	Lower guide post
12	Upper guide post

Figure 6 • Loaded Media

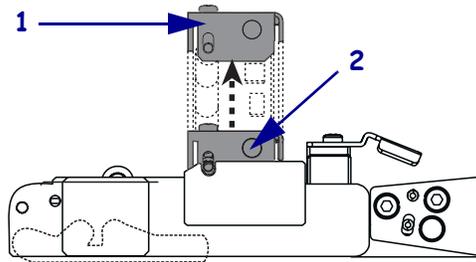


Caution • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

To load media, complete these steps:

1. Load media on the media supply reel of the applicator (refer to the applicator's user guide).
2. Open the media door.
3. See [Figure 7](#). Press the release button on the pinch roller assembly, and allow the assembly to pivot up.

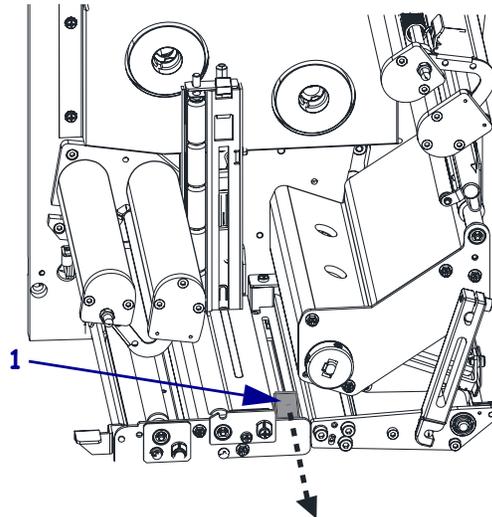
Figure 7 • Opening the Pinch Roller



1	Pinch roller assembly
2	Pinch roller release button

4. See [Figure 8](#). Slide the outer media guide all the way out.

Figure 8 • Sliding the Outer Media Guide



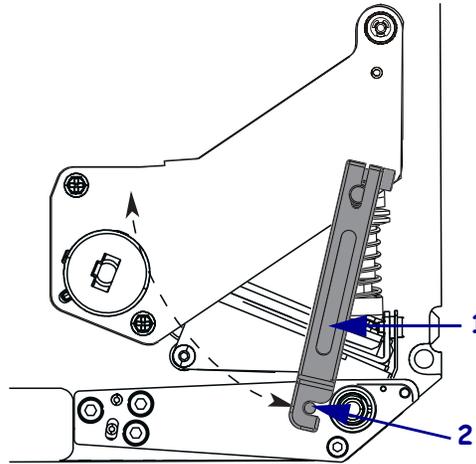
1	Outer media guide
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5. See [Figure 9](#). Open the printhead assembly by unlatching the printhead latch from the locking pin.



Caution • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

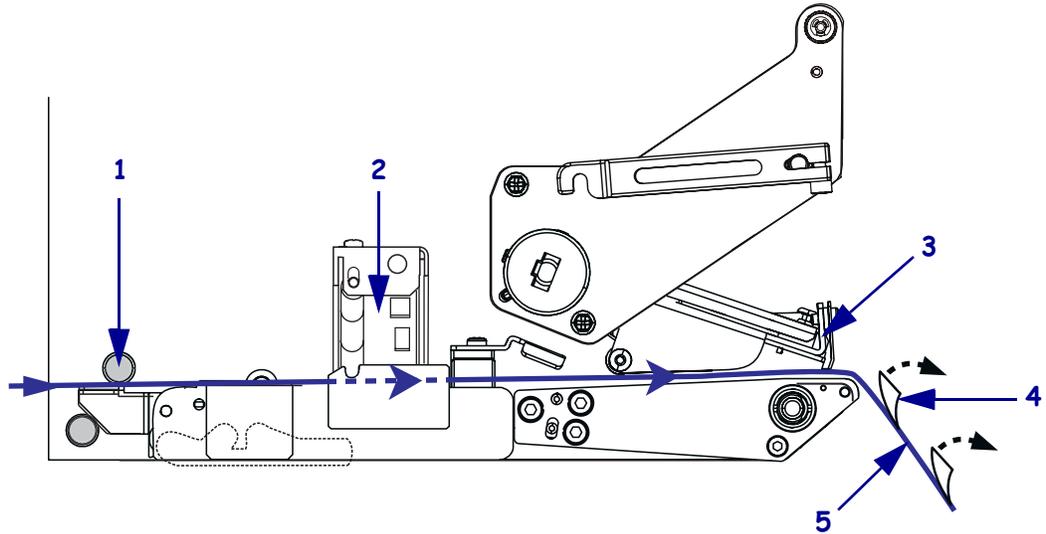
Figure 9 • Opening the Printhead Assembly



1	Printhead latch
2	Locking pin

6. See [Figure 10](#). Thread the media under the upper guide post, below the pinch roller assembly, and under the printhead assembly.
7. See [Figure 10](#). Extend approximately 30 in. (75 cm) of media past the peel bar. Remove and discard the labels from this exposed media.

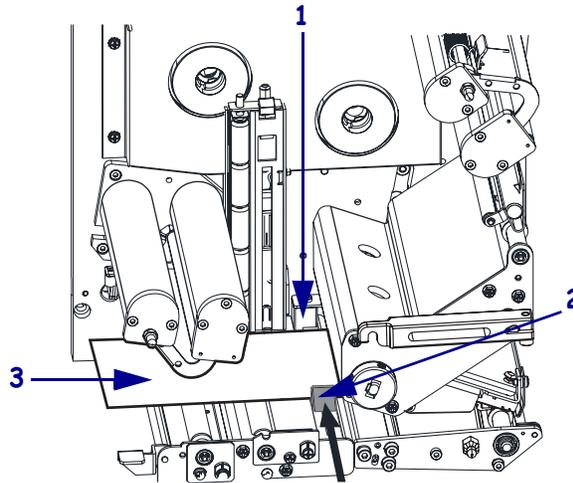
Figure 10 • Threading the Media



1	Upper guide post
2	Pinch roller assembly
3	Printhead assembly
4	Label
5	Liner

8. See [Figure 11](#). Position the media so that it is aligned with and just touching the inner media guide.
9. See [Figure 11](#). Position the outer media guide so that it just touches the outer edge of the media.

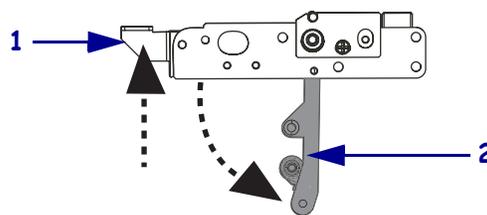
Figure 11 • Adjusting the Outer Media Guide



1	Inner media guide
2	Outer media guide
3	Media

10. See [Figure 7](#) on page 10. Press down on the pinch roller assembly until it locks closed.
11. See [Figure 9](#) on page 11. Close the printhead assembly by rotating the printhead latch until it latches onto the locking pin.
12. See [Figure 12](#). Raise the peel roller latch so that the peel roller assembly pivots downward.

Figure 12 • Releasing the Peel Roller Assembly



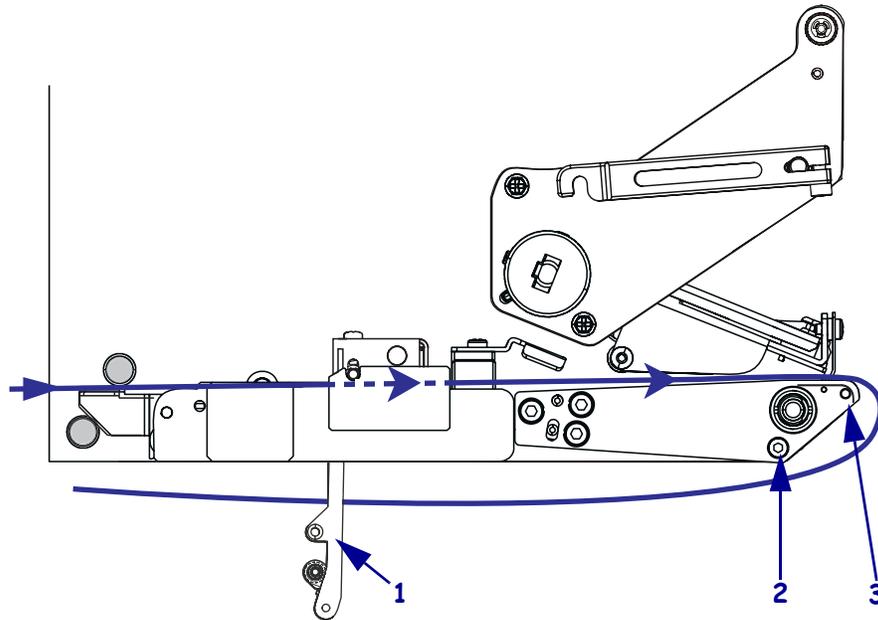
1	Peel roller latch
2	Peel roller assembly

- See [Figure 13](#). Thread the media liner around the peel bar, under the media liner roller, and through the peel roller assembly.



Note • If the applicator has an air tube, route the media liner between the air tube and the peel bar. Do not thread the media liner over the air tube.

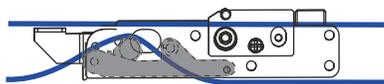
Figure 13 • Threading the Liner



1	Peel bar
2	Media liner roller
3	Peel roller assembly

- See [Figure 14](#). Rotate the peel roller assembly up until it locks into the closed position.

Figure 14 • Closed Peel Roller Assembly



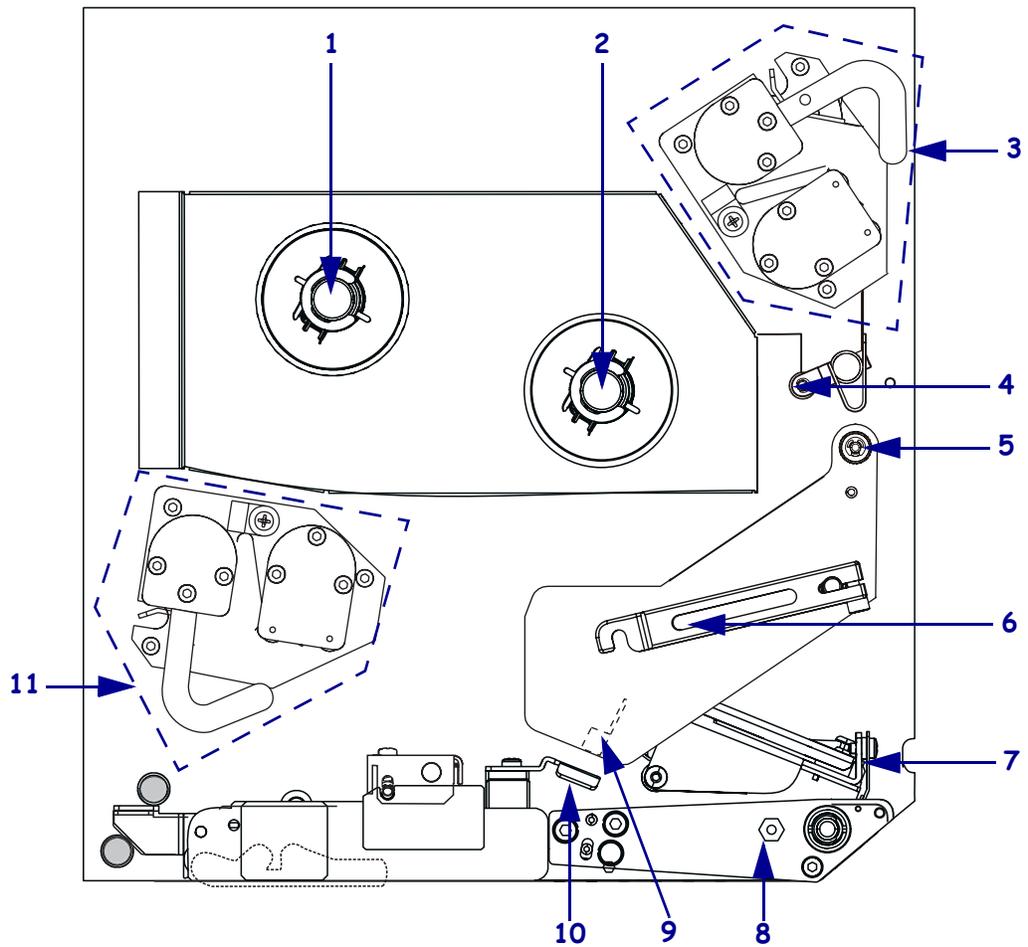
- See [Figure 13](#). Thread the media liner under the lower guide post and around the take-up spindle of the applicator (refer to the applicator's user guide).
- Close the media door.

Load Ribbon

Use ribbon with thermal transfer media (see [Ribbon on page 6](#)). The ribbon must be coated on the outside and wider than the media. If the ribbon is narrower than the media, areas of the printhead are unprotected and subject to premature wear.

[Figure 15](#) identifies the ribbon system components inside the media compartment of a right-hand print engine. A left-hand unit contains a mirror image of these components. [Figure 16 on page 16](#) shows the print engine with ribbon loaded.

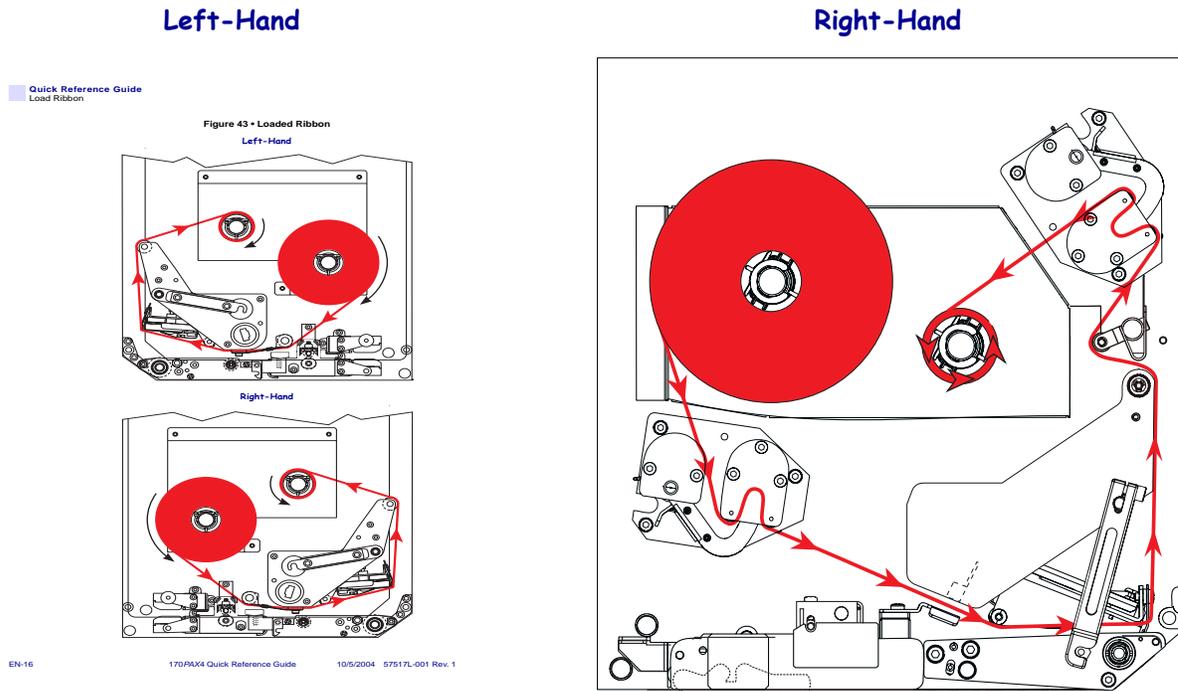
Figure 15 • Components for Ribbon Loading



1	Ribbon supply spindle
2	Ribbon take-up spindle
3	Upper dancer assembly
4	Idler roller
5	Auxiliary roller
6	Printhead latch

7	Printhead assembly
8	Locking pin
9	Ribbon sensor
10	Ribbon sensor reflector
11	Lower dancer assembly

Figure 16 • Loaded Ribbon

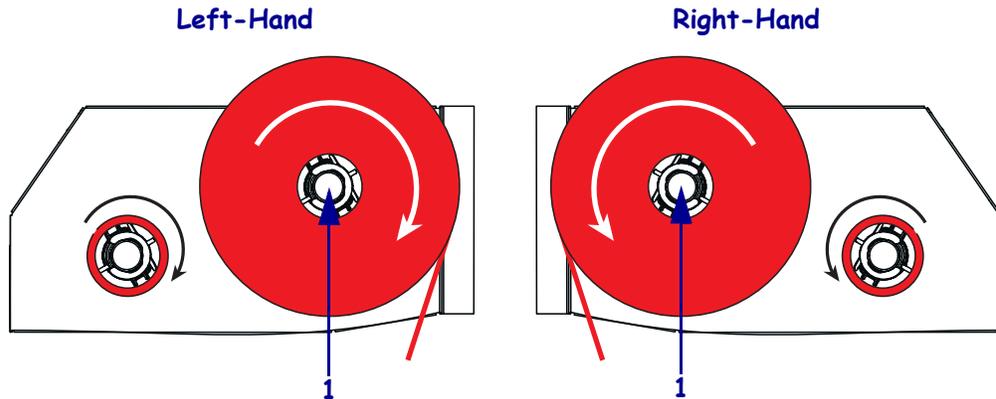


Caution • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

To load ribbon, complete these steps:

1. See [Figure 17](#). Place a full ribbon roll onto the ribbon supply spindle so the ribbon rotates as shown, and then push the roll toward the print engine frame until it is fully seated.

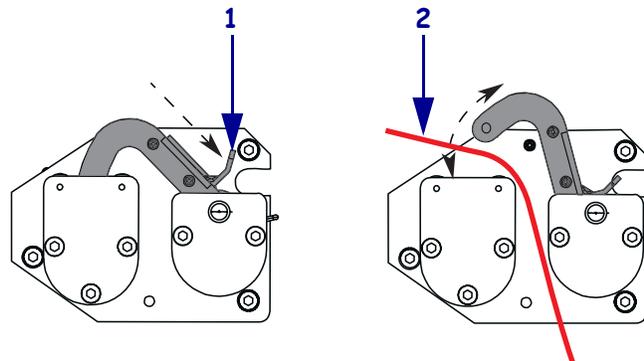
Figure 17 • Placing Ribbon on the Ribbon Supply Spindle



1	Ribbon supply spindle with media
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2. See Figure 18. On the lower dancer assembly, squeeze the opening tabs to pivot open the dancer arm.
3. See Figure 18. Carefully thread the ribbon through the lower dancer assembly, and then slowly release the dancer arm.

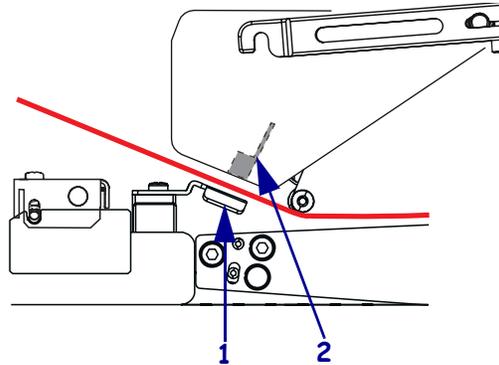
Figure 18 • Opening a Dancer Assembly



1	Opening tabs
2	Ribbon

4. See [Figure 19](#). Thread the ribbon between the ribbon sensor and the ribbon sensor reflector.

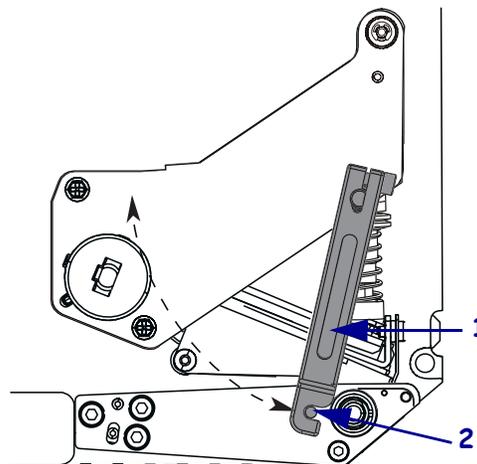
Figure 19 • Ribbon Sensor



1	Ribbon sensor reflector
2	Ribbon sensor

5. See [Figure 20](#). Open the printhead assembly by unlatching the printhead latch from the locking pin.

Figure 20 • Opening the Printhead Assembly



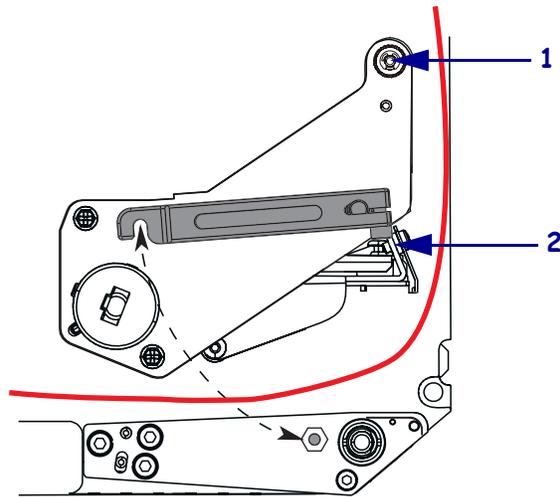
1	Printhead latch
2	Locking pin

- See [Figure 21](#). Thread the ribbon under the printhead assembly and then up toward the auxiliary roller.



Caution • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

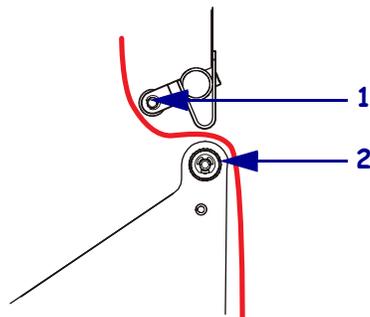
Figure 21 • Threading Ribbon under the Printhead Assembly



1	Auxiliary roller
2	Printhead assembly

- See [Figure 22](#). Thread the ribbon over the auxiliary roller, around the idler roller, and then up toward the upper dancer assembly.

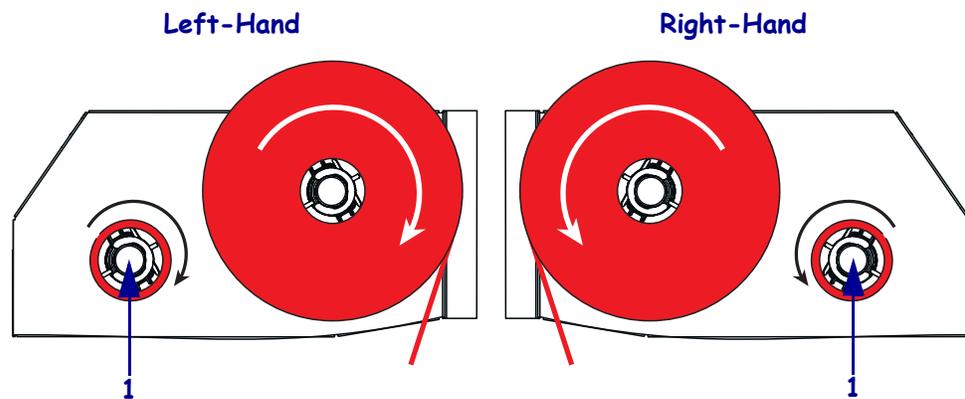
Figure 22 • Threading Ribbon around Rollers



1	Idler roller
2	Auxiliary roller

8. See [Figure 18 on page 17](#). On the upper dancer assembly, squeeze the opening tabs to pivot open the dancer arm.
9. See [Figure 18 on page 17](#). Carefully thread the ribbon through the upper dancer assembly, and then slowly release the dancer arm.
10. See [Figure 23](#). Install an empty ribbon core onto the ribbon take-up spindle, and push the core toward the print engine frame until it is fully seated.
11. See [Figure 23](#). Attach the end of the ribbon to the empty ribbon core with adhesive tape or a label, and wind for several turns in the direction shown. Ensure that the ribbon winds evenly on the spindle.

Figure 23 • Loading Ribbon on the Ribbon Take-Up Spindle



1	Ribbon take-up spindle with empty ribbon core
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12. See [Figure 20 on page 18](#). Close the printhead assembly by pivoting the printhead latch onto the locking pin.
13. Close the media door.

Remove Used Ribbon

To remove used ribbon, complete these steps:

1. Open the media door.

2. Did the ribbon run out?

If...	Then...
Yes	<ul style="list-style-type: none">a. Remove the empty core from the ribbon supply spindle. Save the core to use on the ribbon take-up spindle when you load ribbon.b. Remove the used ribbon and core from the ribbon take-up spindle.c. Install new ribbon following the instructions in Load Ribbon on page 15.
No	<ul style="list-style-type: none">a. Cut the ribbon near the ribbon take-up spindle.b. Remove the used ribbon and core from the ribbon take-up spindle.c. Locate an empty ribbon core. If necessary, remove and discard the used ribbon from the core removed in the previous step.d. See Figure 23 on page 20. Install the empty ribbon core onto the ribbon take-up spindle, and push the core toward the print engine frame until it is fully seated.e. Thread the remaining ribbon on the ribbon supply spindle following the instructions in Load Ribbon on page 15.f. See Figure 23 on page 20. Attach the end of the ribbon to the empty ribbon core with adhesive tape or a label, and wind for several turns in the direction shown. Ensure that the ribbon winds evenly on the spindle.

Print a Configuration Label

When you have loaded the media and ribbon (if necessary), print a configuration label as a record of your print engine’s current settings. Keep the label to use when troubleshooting printing problems.

To print a configuration label, complete these steps:

1. On the control panel, press SETUP/EXIT.
2. Press NEXT or PREVIOUS to scroll through the parameters until you reach **LIST SETUP**.
3. Press the right oval to confirm printing.
 A configuration label prints (Figure 24).

Figure 24 • Configuration Label



Print a Network Configuration Label

If you are using a print server, you can print a network configuration label after the printer is connected to the network.

To print a network configuration label, complete these steps:

1. On the control panel, press SETUP/EXIT.
2. Press NEXT or PREVIOUS to scroll through the parameters until you reach **LIST NETWORK**.
3. Press the right oval to confirm printing.

A network configuration label prints (Figure 25). If no wireless print server is installed, the wireless portion of the label does not print.

Figure 25 • Network Configuration Label

Network Configuration	
Zebra Technologies PRINTER TYPE XXXdpi USER TEXT	
NO.....	WIRED PS CHECK?
Printer.....	LOAD LAN FROM?
Wired	
ALL.....	IP PROTOCOL
000.000.000.000.....	IP ADDRESS
000.000.000.000.....	SUBNET MASK
000.000.000.000.....	DEFAULT GATEWAY
000.000.000.000.....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
0300.....	TIMEOUT VALUE
0000.....	ARP INTERVAL
9100.....	BASE RAW PORT
Wireless*	
ALL.....	IP PROTOCOL
192.168.001.051.....	IP ADDRESS
255.255.255.000.....	SUBNET MASK
192.168.001.001.....	DEFAULT GATEWAY
192.168.001.003.....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
0300.....	TIMEOUT VALUE
0000.....	ARP INTERVAL
9100.....	BASE RAW PORT
YES.....	CARD INSERTED
015FH.....	CARD MFG ID
000AH.....	CARD PRODUCT ID
XXXXXXXXXXXXX.....	MAC ADDRESS
YES.....	DRIVER INSTALLED
INFRASTRUCTURE.....	OPERATING MODE
125.....	ESSID
100.....	TX POWER
ON.....	1 Mb/s
ON.....	2 Mb/s
ON.....	5.5 Mb/s
ON.....	11 Mb/s
11 Mb/s.....	CURRENT TX RATE
DIVERSITY.....	RECEIVE ANTENNA
DIVERSITY.....	XMIT ANTENNA
OPEN.....	AUTH. TYPE
OFF.....	LEAP MODE
OFF.....	ENCRYPTION MODE
1.....	ENCRYPT. INDEX
020.....	POOR SIGNAL
LONG.....	PREAMBLE
YES.....	ASSOCIATED
2004-06-15 08:48:48	TIME STAMP

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Configure the Print Engine

After you have installed the media and ribbon, you may set print engine parameters for your application using the control panel.

Important • Certain printing conditions may require you to adjust printing parameters, such as print speed, darkness, or print mode. These conditions include (but are not limited to):

- printing at high speeds
- peeling the media
- the use of extremely thin, small, synthetic, or coated labels

Because print quality is affected by these and other factors, run tests to determine the best combination of printer settings and media for your application. A poor match may limit print quality or print rate, or the print engine may not function properly in the desired print mode.

To enter Setup Mode, complete these steps:

1. On the control panel, press SETUP/EXIT.
2. Press either NEXT or PREVIOUS to scroll through the parameters.

To leave Setup Mode, complete these steps:

1. Press SETUP/EXIT.
The LCD displays **SAVE CHANGES**.
2. Press the left or right oval to display the save options (Table 4).

Table 4 • Save Options When Leaving Setup Mode

LCD	Description
PERMANENT	Stores values in the print engine even when power is turned off.
TEMPORARY	Saves the changes until power is turned off.
CANCEL	Cancels all changes from the time you pressed SETUP/EXIT except for any made to the darkness and tear-off settings.
LOAD DEFAULTS	Restores all parameters other than the network settings back to the factory defaults. Note • Loading factory defaults causes the print engine to auto-calibrate.
LOAD LAST SAVE	Loads values from the last permanent save.
DEFAULT NET	Restores the wired and wireless network settings back to factory defaults.

3. Press NEXT to select the displayed choice.
When the configuration and calibration sequence is done, **PRINTER READY** displays.

View or Change Parameters

Table 5 shows a subset of the print engine parameters in the order in which they are displayed when you press NEXT after entering setup mode. Throughout this process, press NEXT to continue to the next parameter, or press PREVIOUS to return to the previous parameter in the cycle. When a parameter is changed, an asterisk (*) is shown in the upper left corner of the display to indicate that the value is different from the one currently active in the print engine.

Table 5 • Print Engine Parameters

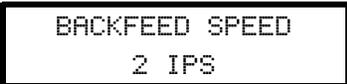
Parameter	Action/Explanation
	<p>Adjusting Print Darkness</p> <p>If printing is too light or if there are voids in printed areas, increase the darkness. If printing is too dark or if there is spreading or bleeding of printed areas, decrease the darkness. Darkness settings also may be changed by the driver or software settings.</p> <p>Important • Set the darkness to the lowest setting that provides good print quality. If the darkness is set too high, the ink may smear, the ribbon may burn through, or the printhead may wear prematurely.</p> <ul style="list-style-type: none"> • Press the right oval to increase darkness. • Press the left oval to decrease darkness. <p>Default: +4.0 Range: 00.0 to +30.0</p>
	<p>Adjusting Print Speed</p> <ul style="list-style-type: none"> • Press the right oval to increase value. • Press the left oval to decrease value. <p>Default: 2 IPS Range: 2 to 12 IPS for 203 dpi, 2 to 8 IPS for 300 dpi</p>
	<p>Adjusting Slew Speed</p> <ul style="list-style-type: none"> • Press the right oval to increase value. • Press the left oval to decrease value. <p>Default: 6 IPS Range: 1 to 12 IPS</p>
	<p>Adjusting Backfeed Speed</p> <ul style="list-style-type: none"> • Press the right oval to increase value. • Press the left oval to decrease value. <p>Default: 2 IPS Range: 1 to 12 IPS</p>

Table 5 • Print Engine Parameters (Continued)

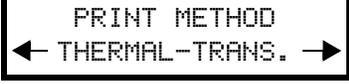
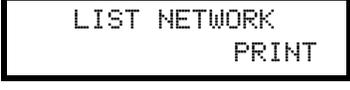
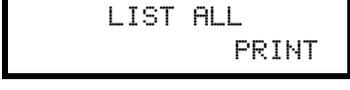
Parameter	Action/Explanation
	<p>Adjusting the Tear-Off Position</p> <p>Establishes the position of the media over the tear-off/peel-off bar after printing. Positive numbers move the media out and negative numbers move the media in.</p> <p>Each press of an oval adjusts the tear-off position by four dot rows.</p> <ul style="list-style-type: none"> • Press the right oval to increase value. • Press the left oval to decrease value. <p>Default: +0 Range: -120 to +120</p>
	<p>Selecting Print Mode</p> <p>Print mode settings tell the print engine the method of media delivery that you wish to use.</p> <ul style="list-style-type: none"> • Press either oval to display choices. <p>Default: TEAR-OFF Selections: TEAR-OFF, REWIND, APPLICATOR</p>
	<p>Setting Media Type</p> <p>Tells the print engine the type of media that you are using. When you select non-continuous media, the print engine feeds media to calculate label length (the distance between two recognized registration points of the interlabel gap or alignment notch or hole). When you select continuous media, you must include a label length instruction in your label format (^LLxxxx if you are using ZPL or ZPL II).</p> <ul style="list-style-type: none"> • Press either oval to display choices. <p>Default: NON-CONTINUOUS Selections: CONTINUOUS, NON-CONTINUOUS</p>
	<p>Setting the Sensor Type</p> <p>Tells the print engine whether you are using media web media (label separations indicated by a gap, notch, or hole) or media with black registration marks printed on the back.</p> <ul style="list-style-type: none"> • Press either oval to display other choices. <p>Default: WEB Selections: WEB, MARK</p>
	<p>Selecting Print Method</p> <p>Tells the print engine the method of printing to use: thermal transfer (ribbon required) or direct thermal (no ribbon).</p> <ul style="list-style-type: none"> • Press either oval to display choices. <p>Default: Thermal transfer Selections: Thermal transfer, direct thermal</p> <p>Note • Selecting direct thermal when using ribbon creates a print engine error condition, but printing continues.</p>

Table 5 • Print Engine Parameters (Continued)

Parameter	Action/Explanation
<pre>PRINT WIDTH → 104 0/8 MM +</pre>	<p>Setting Print Width</p> <p>Determines the printable area across the width of the label given the resolution of the print engine.</p> <p>To change value shown:</p> <ol style="list-style-type: none"> 1. Press the left oval to move the cursor. 2. Press the right oval to increase the value of the digit. <p>To change the unit of measurement:</p> <ol style="list-style-type: none"> 1. Press the left oval until the unit of measurement is active. 2. Press the right oval to toggle to a different unit of measure (mm, inches, or dots). <p>Default: 104 mm for 203 dpi print engines; 105 8/12 mm for 300 dpi print engines</p> <p>NOTE: Setting the width too narrow can result in portions of the label not being printed on the media. Setting the width too wide wastes formatting memory and can cause printing off the label and on the platen roller. This setting can affect the horizontal position of the label format if the image was inverted using the ^POI ZPL II command.</p>
<pre>MAXIMUM LENGTH -39.0 IN 988 MM</pre>	<p>Setting Maximum Label Length</p> <p>The maximum label length is used during the calibration process. Interlabel gap is considered part of the label length.</p> <p>Always set a value that is at least 1 in. (25.4 mm) longer than the length of the label you are using. For example, if the label length is 5 in. (126 mm) including the interlabel gap, set the parameter for 6.0 in. (152 mm). If the value is set to a smaller value than the label length, the print engine assumes that continuous media is loaded, and the print engine cannot calibrate.</p> <ul style="list-style-type: none"> • To increase the value, press the right oval. • To decrease the value, press the left oval. <p>Default: 39.0 in. (988 mm).</p> <p>Range: Values are adjustable in 1 in. (25.4 mm) increments.</p>
<pre>LIST FONTS PRINT</pre>	<p>List Fonts</p> <ul style="list-style-type: none"> • Press the right oval to print a label that lists the standard fonts and any optional fonts in stored in the print engine's RAM, Flash memory, or optional PCMCIA font cards.
<pre>LIST BAR CODES PRINT</pre>	<p>List Bar Codes</p> <ul style="list-style-type: none"> • Press the right oval to print a label that lists the available bar codes in the print engine. Bar codes may be stored in RAM, Flash memory, or optional PCMCIA cards.
<pre>LIST IMAGES PRINT</pre>	<p>List Images</p> <ul style="list-style-type: none"> • Press the right oval to print a label that lists the available images stored in the print engine's RAM, Flash memory, or optional memory card.

Table 5 • Print Engine Parameters (Continued)

Parameter	Action/Explanation
	<p>List Formats</p> <ul style="list-style-type: none"> Press the right oval to print a label that lists the available formats stored in the print engine's RAM, Flash memory, or optional memory card.
	<p>List Setup</p> <ul style="list-style-type: none"> Press the right oval to print a configuration label, which lists the current print engine configuration.
	<p>List Network Settings</p> <ul style="list-style-type: none"> Press the right oval to print a network configuration label, which lists the settings for the wired ZebraNet PrintServer II (PSII), the ZebraNet 10/100 Print Server, and the ZebraNet Wireless Print Server (if installed).
	<p>List All</p> <ul style="list-style-type: none"> Press the right oval to print labels that list the available fonts, bar codes, images, formats, and the current print engine and network configurations.
	<p>Selecting the Display Language</p> <p>This parameter allows you to change the language displayed on the control panel LCD.</p> <ul style="list-style-type: none"> Press the right or left oval to display other choices. <p>Default: ENGLISH</p> <p>Selections: ENGLISH, SPANISH, FRENCH, GERMAN, ITALIAN, NORWEGIAN, PORTUGUESE, SWEDISH, DANISH, SPANISH 2, DUTCH, FINNISH, CUSTOM</p>

Cleaning Schedule

The recommended cleaning schedule is shown in [Table 6](#). See the following pages for specific procedures.

Caution • Use only the cleaning agents indicated. Zebra is not responsible for damage caused by any other fluids being used on this printer.

Table 6 • Recommended Printer Cleaning Schedule

Area	Method	Interval
Printhead	Solvent*	Perform these procedures at the following times: <ul style="list-style-type: none"> • When CLEAN HEAD NOW appears. • Direct Thermal Print Mode: After every roll of labels or 500 ft (150 m) of fanfold labels. • Thermal Transfer Print Mode: After every roll (1500 ft or 450 m) of ribbon.
Platen roller	Solvent*	
Transmissive media sensor	Air blow	
Reflective media sensor	Air blow	
Media path	Solvent*	
Ribbon sensor	Air blow	
Door-open sensors	Air blow	
Tear-off/peel-off bar	Solvent*	

* Use Zebra Preventative Maintenance kit, part number 47362, or a solution of 90% isopropyl alcohol and 10% deionized water.

Clean the Printhead and Platen Roller

Clean the printhead and platen roller according to the schedule in [Table 6 on page 29](#). Clean the printhead more often if you see inconsistent print quality, such as voids or light print. Clean the platen roller if you see media movement problems.

To clean the printhead and platen roller, complete these steps:



Caution • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

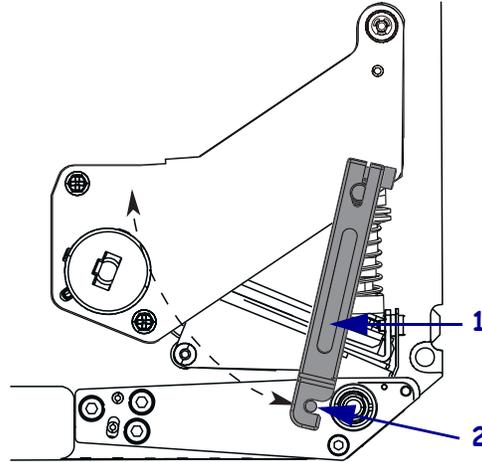


Electrostatic Discharge Caution • Observe proper electrostatic safety precautions when handling any static-sensitive components such as circuit boards and printheads.

1. Turn Off (O) the print engine.

2. See [Figure 26](#). Open the printhead assembly by unlatching the printhead latch from the locking pin.

Figure 26 • Opening the Printhead Assembly

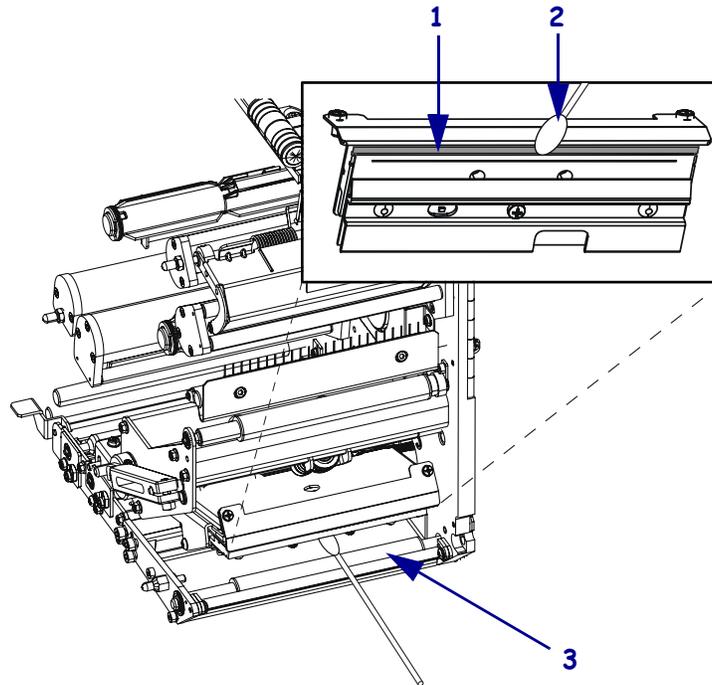


1	Printhead latch
2	Locking pin

3. Remove the media and ribbon from the print engine.

- See [Figure 27](#). Using Zebra Preventative Maintenance kit (part number 47362) or a solution of 90% isopropyl alcohol and 10% deionized water on a cotton swab, wipe the print elements from end to end. Allow the solvent to evaporate.

Figure 27 • Printhead and Platen Roller Cleaning (Right-Hand Unit Shown)



1	Printhead elements (gray strip)
2	Cotton swab
3	Platen Roller

- Use a lint-free cloth moistened with alcohol to clean the platen roller and other rollers. Rotate the rollers while cleaning.
- Reload the ribbon and media (if used).
- Turn On (I) the print engine.

Note • If print quality does not improve after you perform this procedure, clean the printhead with *Save-a-Printhead* cleaning film. Call your authorized Zebra distributor for more information.



Notes • _____
