

ZT600 Series

Industrial Printer



User Guide



ZEBRA

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We have determined that the Zebra printers identified as the

ZT610™ and ZT620™

manufactured by:

Zebra Technologies Corporation

3 Overlook Point

Lincolnshire, Illinois 60069 U.S.A.

Have been shown to comply with the applicable technical standards of the FCC

For Home, Office, Commercial, and Industrial use

If no unauthorized change is made in the equipment,
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FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.



Note • This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement (for printers with RFID encoders)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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Notes • _____

About This Document

This section provides you with contact information, document structure and organization, and additional reference documents.

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Who Should Use This Document

This User Guide is intended for use by any person who needs to perform routine maintenance, upgrade, or troubleshoot problems with the printer.

How This Document Is Organized

The User Guide is set up as follows:

Section	Description
<i>Introduction on page 13</i>	This section provides a high-level overview of the printer and its components.
<i>Printer Setup and Operation on page 27</i>	This section assists the technician with initial setup and operation of the printer.
<i>Printer Configuration and Adjustment on page 101</i>	This section assists you with configuration of and adjustments to the printer.
<i>Routine Maintenance on page 211</i>	This section provides routine cleaning and maintenance procedures.
<i>Diagnostics and Troubleshooting on page 227</i>	This section provides diagnostic tests and other information that may help you to optimize printing or to troubleshoot issues with your printer.
<i>Using the USB Host Ports and the NFC Capabilities on page 261</i>	This section will help you to learn how to use the USB host ports on your Zebra printer and how to use the printer's Near Field Communication (NFC) capability. The information is presented in the form of exercises with some SGD commands listed for advanced users.
<i>Specifications on page 275</i>	This section lists general printer specifications, printing specifications, ribbon specifications, and media specifications.
<i>Glossary on page 287</i>	The glossary provides a list of common terms.

Introduction

This section provides a high-level overview of the printer and its components.

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Printer Components

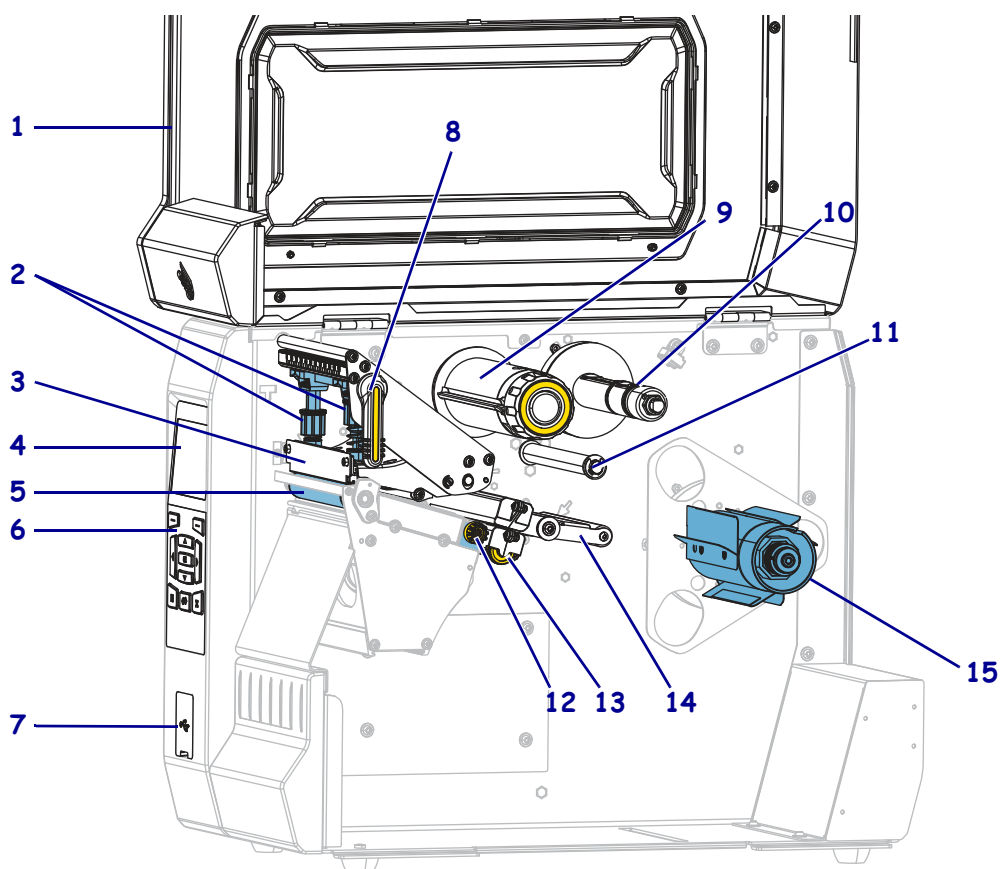


Note • The components inside your printer are color-coded.

- The touch points that you will need to handle are colored **gold** inside the printers and are highlighted in **gold** in the illustrations in this manual.
- Some components are highlighted in **light blue** in the illustrations in this manual for emphasis or clarity.

Figure 1 shows the components inside the media compartment of a standard printer. Depending on the printer model and the installed options, your printer may look slightly different. The components that are labeled are mentioned in procedures throughout this manual.

Figure 1 • Printer Components



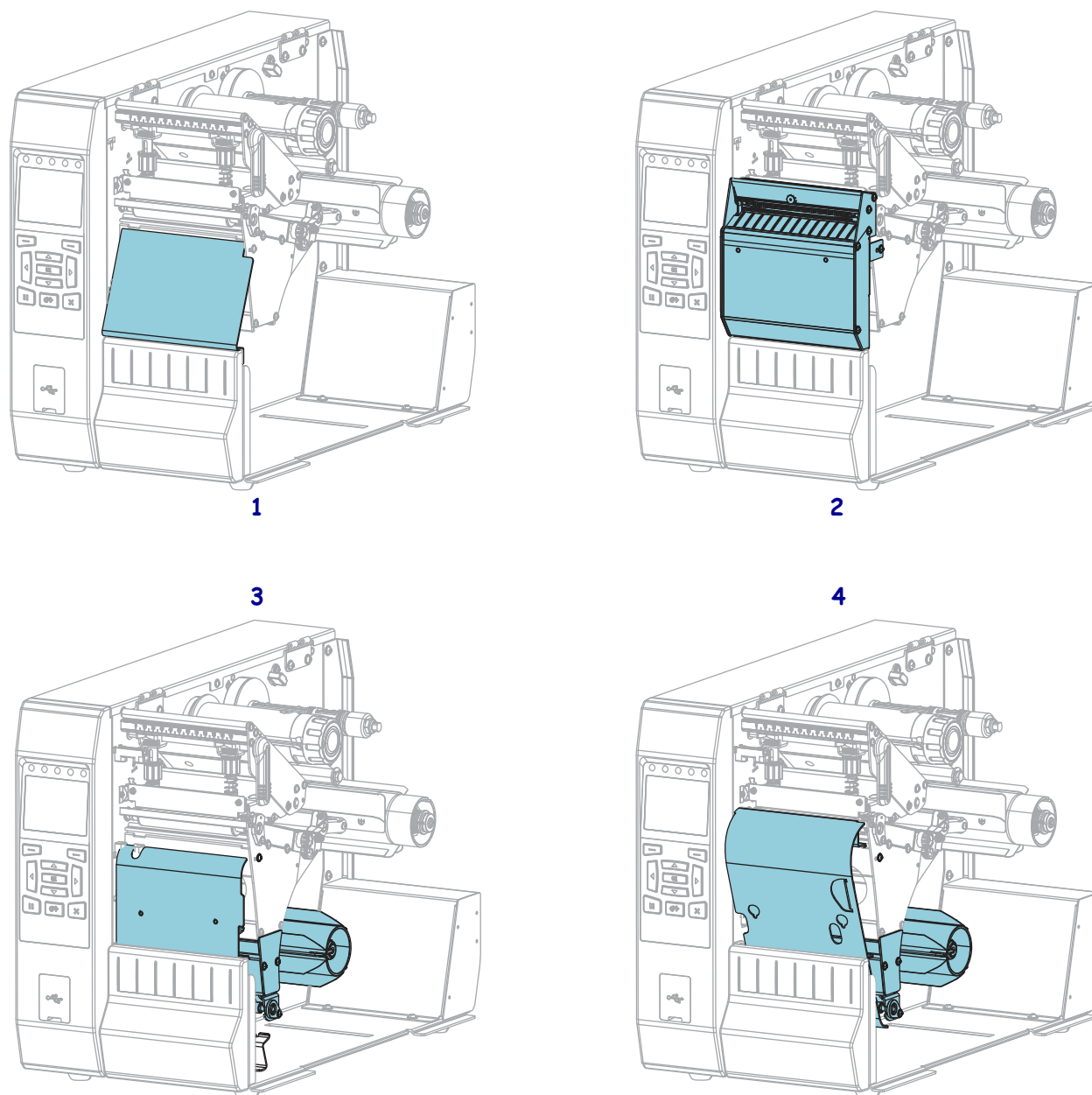
1	Media door
2	Printhead pressure toggles
3	Printhead assembly
4	Control panel display
5	Platen roller
6	Control panel
7	USB host port
8	Printhead-open lever

9	Ribbon take-up spindle
10	Ribbon supply spindle
11	Ribbon guide roller
12	Media guide adjustment knob
13	Transmissive media sensor adjustment wheel
14	Media dancer assembly
15	Media supply spindle

Printer Options

The available printer options are shown in [Figure 2](#). For information about the print modes that can be used with the printer options, see [Select a Print Mode on page 31](#).

Figure 2 • Printer Options



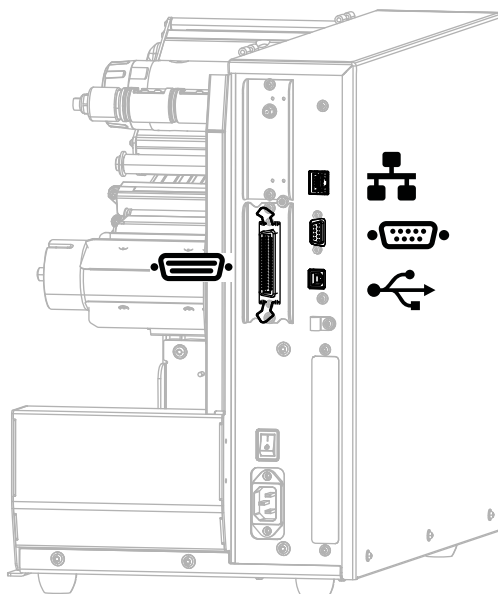
1	Tear-Off (standard)
2	Cutter option
3	Rewind option set for Peel mode
4	Rewind option set for Rewind mode

Communication Interfaces

The available communication interface connectors are shown in [Figure 3](#). Your printer may not have all of the connections shown here, and a ZebraNet wireless print server option may also be present on your printer. You may send label formats to the printer through any communication interface that is available on your printer.

- For detailed information about the types of connections available, see [Communication Interface Specifications](#) on page 276.
- For instructions on when and how to connect your computer to one ore more of these communication interfaces, see [Install the Printer Driver and Connect the Printer to the Computer](#) on page 62.

Figure 3 • Location of Communication Interfaces



	Parallel port
	Internal wired Ethernet print server
	Serial port
	USB port

Data Cables

You must supply all data cables for your application. The use of cable strain relief clamps is recommended.

Ethernet cables do not require shielding, but all other data cables must be fully shielded and fitted with metal or metalized connector shells. Unshielded data cables may increase radiated emissions above the regulated limits.

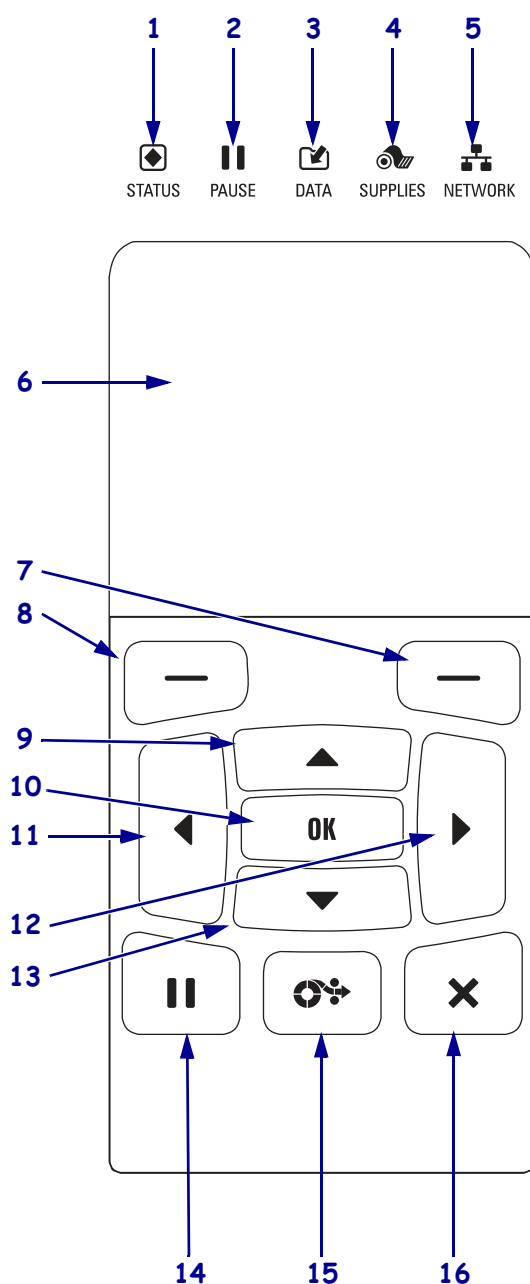
To minimize electrical noise pickup in the cable:

- Keep data cables as short as possible.
- Do not bundle the data cables tightly with the power cords.
- Do not tie the data cables to power wire conduits.

Standard Control Panel

The standard control panel indicates the printer's current status and allows the user to control basic printer operation. An optional color touch control panel is available for purchase. Because it functions differently, it is documented in a separate User Guide.

Figure 4 • Control Panel



1	 STATUS light	These indicator lights show the current status of the printer. For more information, see <i>Indicator Lights</i> on page 242.
2	 PAUSE light	
3	 DATA light	
4	 SUPPLIES light	
5	 NETWORK light	
6	The display shows the printer's current status and allows the user to navigate the menu system.	
7	RIGHT SELECT button	These buttons execute the commands shown directly above them in the display.
8	LEFT SELECT button	
9	The UP ARROW button changes the parameter values. Common uses are to increase a value or to scroll through choices.	
10	The OK button selects or confirms what is shown on the display.	
11	The LEFT ARROW button , which is active only in the menu system, navigates to the left.	
12	The RIGHT ARROW button , which is active only in the menu system, navigates to the right.	
13	The DOWN ARROW button changes the parameter values. Common uses are to decrease a value or to scroll through choices.	
14	The PAUSE button starts or stops printer operation when pressed.	
15	The FEED button forces the printer to feed one blank label each time the button is pressed.	
16	The CANCEL button cancels label formats when the printer is paused. • Press once to cancel the next label format. • Press and hold for 2 seconds to cancel all label formats.	

Navigating through Screens in the Standard Display

- Table 1 shows the following:
- the options available for navigating through the screens in the control panel display
 - how to select or modify things shown on the display

Table 1 • Navigation

Idle Display		
		
At the Idle Display (Figure 5 on page 21), press LEFT SELECT to go to the printer's Home menu (Figure 6 on page 21).		
Home Menu		
 To move from icon to icon in the Home menu, press any of the ARROW buttons. When an icon is selected, its colors are reversed to highlight it.  SETTINGS menu icon  SETTINGS menu icon highlighted	 To select the highlighted menu icon and enter the menu, press OK.	 Press LEFT SELECT to exit the Home menu and return to the Idle Display. The printer automatically returns to the Idle Display after 15 seconds of inactivity in the Home menu.

Table 1 • Navigation (Continued)

User Menus



Press LEFT SELECT to return to the Home menu. The printer automatically returns to the Home menu after 15 seconds of inactivity in a user menu.



▲ and ▼ indicate that a value can be changed. Any changes that you make are saved immediately. Press the UP ARROW or DOWN ARROW to scroll through accepted values.

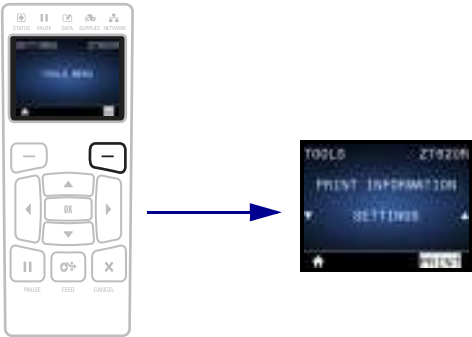


To scroll through the items in a user menu, press the LEFT ARROW or RIGHT ARROW.

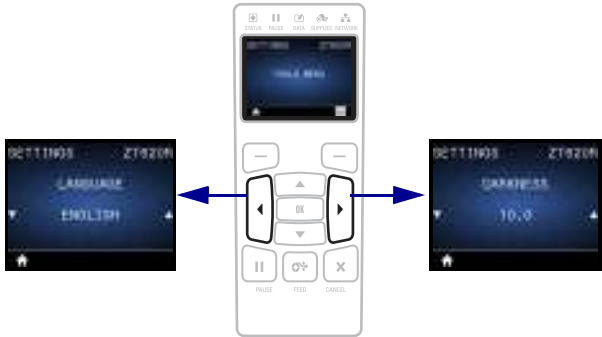


A word in the bottom-right corner of the display indicates an available action. Press OK or press RIGHT SELECT to perform the action shown.

Menu Shortcuts



To go to the next user menu from a menu shortcut, press OK or press RIGHT SELECT to select GO.



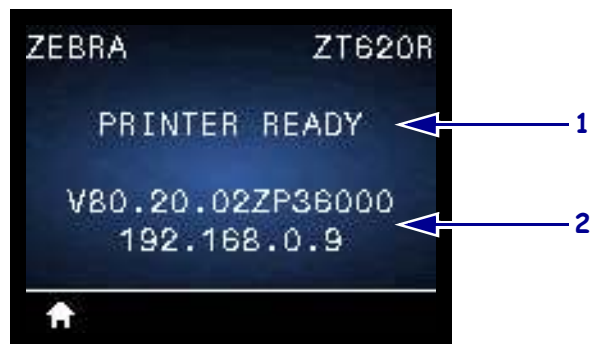
To continue to navigate in the same user menu, press the LEFT ARROW or RIGHT ARROW.

Idle Display, Home Menu, and User Menus in the Standard Display

The printer's control panel includes a display, where you can view the printer's status or change its operating parameters. In this section, you will learn how to navigate through the printer's menu system and change values for menu items.

Idle Display After the printer completes the power-up sequence, it moves to the Idle Display (Figure 5). The printer displays the current firmware version and its IP address.

Figure 5 • Idle Display



1	The printer's current status
2	The printer's firmware version (top line) and its IP address (bottom line)
	Home menu shortcut

Home Menu Use the Home menu (Figure 6) to access the printer's operating parameters through the eight user menus (see [Adjust Printer Settings on page 102](#)). Click any of the icons in Figure 6 to go to the descriptions of the menu items for that user menu.

Figure 6 • Home Menu



	Exit and return to the Idle Display (Figure 5).
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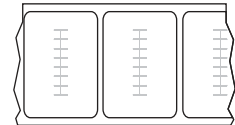
Types of Media



Important • Zebra strongly recommends the use of Zebra-brand supplies for continuous high-quality printing. A wide range of paper, polypropylene, polyester, and vinyl stock has been specifically engineered to enhance the printing capabilities of the printer and to prevent premature printhead wear. To purchase supplies, go to <http://www.zebra.com/supplies>.

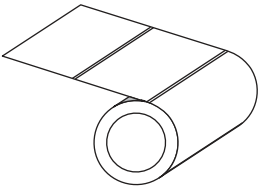
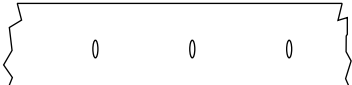
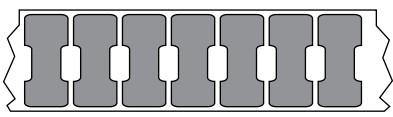
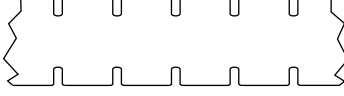
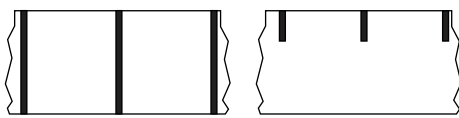
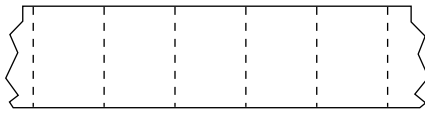
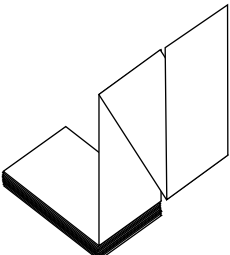
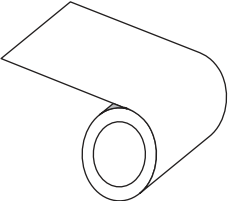
Your printer can use various types of media:

- *Standard media*—Most standard media uses an adhesive backing that sticks individual labels or a continuous length of labels to a liner. Standard media can come on rolls or in a fanfold stack (Table 2).
- *Tag stock*—Tags are usually made from a heavy paper. Tag stock does not have adhesive or a liner, and it is typically perforated between tags. Tag stock can come on rolls or in a fanfold stack (Table 2).
- *Radio frequency identification (RFID) “smart” media*—RFID media can be used in a printer that is equipped with an RFID reader/encoder. RFID labels are made from the same materials and adhesives as non-RFID labels. Each label has an RFID transponder (sometimes called an “inlay”), made of a chip and an antenna, embedded between the label and the liner. The shape of the transponder varies by manufacturer and is visible through the label. All “smart” labels have memory that can be read, and many have memory that can be encoded.



Important • Transponder placement within a label depends on the transponder type and the printer model. Make sure that you are using the correct “smart” media for your printer. For more information, refer to the *RFID Programming Guide 3*. A copy of the manual is available at <http://www.zebra.com/manuals> or on the user CD that came with your printer. For transponder placement details, go to <http://www.zebra.com/transponders>.

Table 2 • Roll and Fanfold Media

Media Type	How It Looks	Description
Non-Continuous Roll Media		Roll media is wound on a core that can be 1 in. to 3 in. (25 to 76 mm) in diameter. Individual labels or tags are separated by one or more of the following methods: <i>Web media</i> separates labels by gaps, holes, or notches.     <i>Black mark media</i> uses pre-printed black marks on the back side of the media to indicate label separations.  <i>Perforated media</i> has perforations that allow the labels or tags to be separated from each other easily. The media may also have black marks or other separations between labels or tags. 
Non-Continuous Fanfold Media		Fanfold media is folded in a zigzag pattern. Fanfold media can have the same label separations as non-continuous roll media. The separations would fall on or near the folds.
Continuous Roll Media		Roll media is wound on a core that can be 1 in. to 3 in. (25 to 76 mm) in diameter. Continuous roll media does not have gaps, holes, notches, or black marks to indicate label separations. This allows the image to be printed anywhere on the label. Sometimes a cutter is used to cut apart individual labels.

Ribbon Overview

Ribbon is a thin film that is coated on one side with wax, resin, or wax resin, which is transferred to the media during the thermal transfer process. The media determines whether you need to use ribbon and how wide the ribbon must be.

When ribbon is used, it must be as wide as or wider than the media being used. If the ribbon is narrower than the media, areas of the printhead are unprotected and subject to premature wear.

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 rapidly 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.

Coated Side of Ribbon

Ribbon can be wound with the coated side on the inside or outside (Figure 7). This printer can only use ribbon that is coated on the outside unless you purchase and install the optional spindle that allows ribbon that is coated on the inside. Contact your authorized Zebra reseller for ordering information.

If you are unsure which side of a particular roll of ribbon is coated, perform an adhesive test or a ribbon scratch test to determine which side is coated.

Figure 7 • Ribbon Coated on Outside or Inside



Adhesive Test

If you have labels available, perform the adhesive test to determine which side of a ribbon is coated. This method works well for ribbon that is already installed.

To perform an adhesive test, 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 outside and can be used in this printer. 
Did not adhere to the label	The ribbon is coated on the inside and cannot be used in the standard printer. An optional ribbon spindle is available to use ribbon that is coated on the inside. Contact your authorized Zebra reseller for ordering information.  To verify this result, repeat the test on the other surface of the roll of ribbon.

Ribbon Scratch Test

Perform the ribbon scratch test when labels are unavailable.

To perform a ribbon scratch test, complete these steps:

1. Unroll a short length of ribbon.
2. Place the unrolled section of ribbon on a piece of paper with the outer surface of the ribbon in contact with the paper.
3. Scratch the inner surface of the unrolled ribbon with your fingernail.
4. Lift the ribbon from the paper.

5. Observe the results. Did the ribbon leave a mark on the paper?

If the ribbon...	Then...
Left a mark on the paper	The ribbon is coated on the outside and can be used in this printer. 
Did not leave a mark on the paper	The ribbon is coated on the inside and cannot be used in the standard printer. An optional ribbon spindle is available to use ribbon that is coated on the inside. Contact your authorized Zebra reseller for ordering information. To verify this result, repeat the test on the other surface of the roll of ribbon. 

Printer Setup and Operation

This section assists the technician with initial setup and operation of the printer.

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Handling the Printer

This section describes how to handle your printer.

Unpack and Inspect the Printer

When you receive the printer, immediately unpack it and inspect for shipping damage.

- Save all packing materials.
- Check all exterior surfaces for damage.
- Raise the media door, and inspect the media compartment for damage to components.

If you discover shipping damage upon inspection:

- Immediately notify the shipping company and file a damage report.
- Keep all packaging material for shipping company inspection.
- Notify your authorized Zebra reseller



Important • Zebra Technologies is not responsible for any damage incurred during the shipment of the equipment and will not repair this damage under warranty.

Store the Printer

If you are not placing the printer into immediate operation, repackage it using the original packing materials. You may store the printer under the following conditions:

- Temperature: –40°F to 140°F (–40° to 60°C)
- Relative humidity: 5% to 85% non-condensing

Service the Printer

If you have a problem using the printer, contact your facility's technical or systems support. If there is a problem with the printer, they will contact the Zebra Global Customer Support Center at: <http://www.zebra.com/support>.

When contacting Zebra Global Customer Support, have the following information available:

- Serial number of the unit
- Model number or product name
- Firmware version number

Zebra responds to calls by e-mail, telephone, or fax within the time limits set forth in service agreements. If your problem cannot be solved by Zebra Global Customer Support, you may need to return your equipment for servicing and will be given specific directions.

If you purchased your product from a Zebra business partner, please contact that business partner for support.

Ship the Printer

Zebra is not responsible for any damages incurred during shipment if an approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you must ship the printer:

- Turn off (●) the printer, and disconnect all cables.
- Remove any media, ribbon, or loose objects from the printer interior.
- Close the printhead.
- Carefully pack the printer into the original container or a suitable alternate container to avoid damage during transit. A shipping container can be purchased from Zebra if the original packaging has been lost or destroyed.

Select a Location for the Printer

Select a location for the printer that meets these conditions:

- **Surface:** The surface where the printer will be located must be solid, level, and of sufficient size and strength to hold the printer.
- **Space:** The area where the printer will be located must include enough space for ventilation and for accessing the printer components and connectors. To allow for proper ventilation and cooling, leave open space on all sides of the printer.



Caution • Do not place any padding or cushioning material behind or under the printer because this restricts air flow and could cause the printer to overheat.

- **Power:** The printer should be within a short distance of an appropriate power outlet that is easily accessible.
- **Data communication interfaces:** The printer must be within range of your WLAN radio (if applicable) or within an acceptable range for other connectors to reach your data source (usually a computer). For more information on maximum cable lengths and configuration, see [General Specifications on page 276](#).
- **Operating conditions:** Your printer is designed to function in a wide range of environmental and electrical conditions, including a warehouse or factory floor. [Table 3](#) shows the temperature and relative humidity requirements for the printer when it is operating.

Table 3 • Operating Temperature and Humidity

Mode	Temperature	Relative Humidity
Thermal Transfer	40° to 104°F (5° to 40°C)	20 to 85% non-condensing
Direct Thermal	32° to 104°F (0° to 40°C)	

Select a Print Mode

Use a print mode that matches the media being used and the printer options available. The media path is the same for roll and fanfold media. To set the printer to use an available print mode, see [PRINT MODE on page 111](#).

Table 4 • Print Modes and Printer Options

Print Mode	Description
TEAR OFF	<i>This mode (default) can be used with any printer options and most media types.</i> The printer prints label formats as it receives them. The printer operator can tear off the printed labels any time after they print.
PEEL-OFF	<i>This mode can be used if the printer has a rewind option.</i> The printer peels the label from the liner during printing and then pauses until the label is removed. The backing is wound on the rewind spindle without using the rewind plate.
REWIND	<i>This mode can be used only if the printer has a rewind option.</i> The printer prints without pausing between labels. The media is wound onto a core after printing. The rewind plate is used to keep the labels from separating from the backing.
CUTTER	<i>This mode can be used only if the printer has a cutter option.</i> The printer cuts between labels after each one is printed.
DELAYED CUT	<i>This mode can be used only if the printer has a cutter option.</i> The printer waits for a delayed cut ZPL command (~JK) before it cuts the last printed label.
LINERLESS PEEL*	* Reserved for future use.
LINERLESS REWIND*	
LINERLESS TEAR*	
APPLICATOR	<i>This mode is for use with a machine that applies labels.</i> The printer prints when it receives a signal from the applicator. Refer to the Advanced User Information section of the Maintenance Manual for additional information about the applicator interface.

Load the Media

Use the instructions in this section for loading roll or fanfold media in the appropriate print mode for your needs.

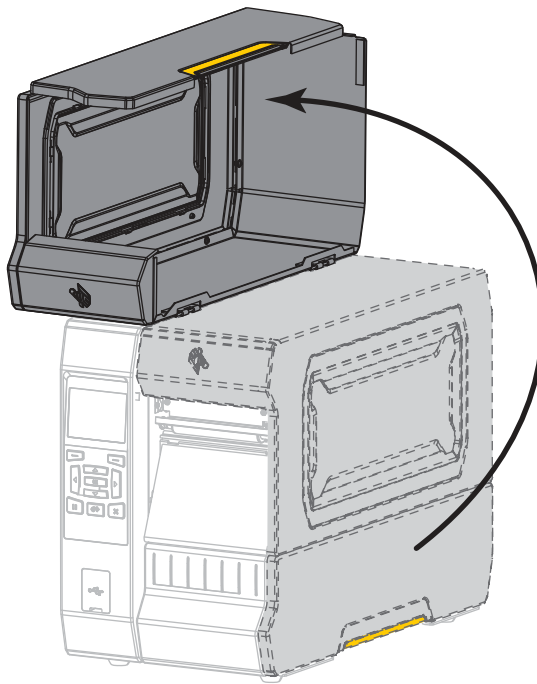
Caution • While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead. You are not required to turn off the printer power when working near an open printhead, but Zebra recommends it as a precaution. If you turn off the power, you will lose all temporary settings, such as label formats, and you must reload them before you resume printing.

Insert the Media into the Printer

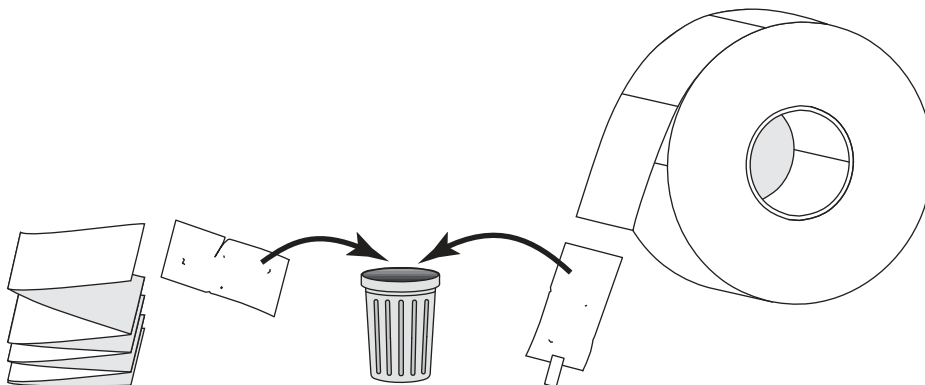
The majority of the illustrations in this section show roll media because the media loading path is the same for both roll and fanfold media.

To load media, complete these steps:

1. Raise the media door.



2. Remove and discard any tags or labels that are torn or dirty or that are held by adhesives or tape.

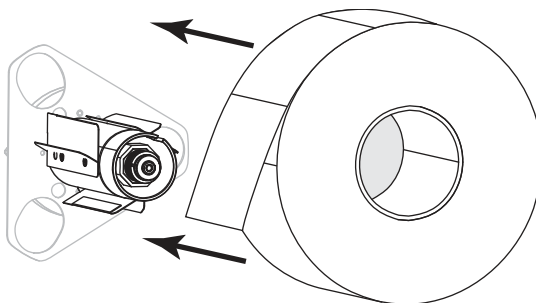


3. Insert roll or fanfold media into the printer.



Roll Media

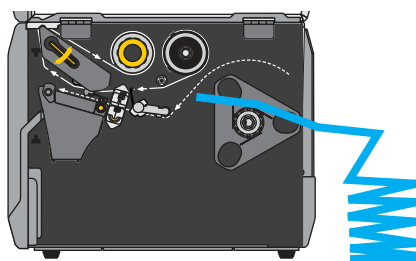
Place the roll of media on the media supply spindle. Push the roll as far back as it will go.



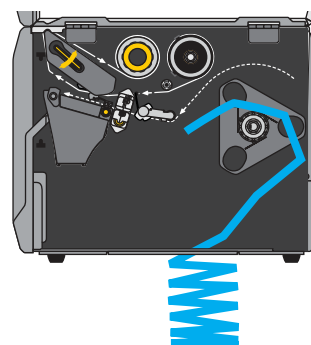
Fanfold Media

Fanfold media can be stored behind or under the printer. Depending on where the media is stored, feed the media from behind or through the bottom access slot.

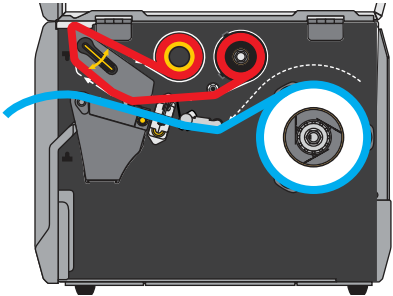
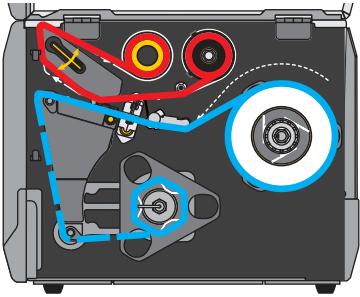
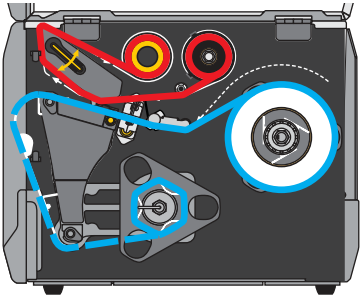
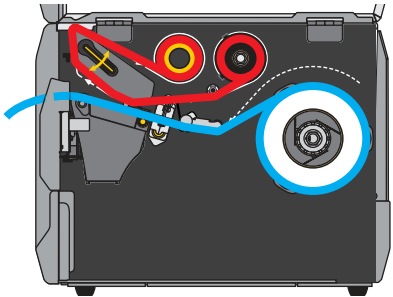
Rear Feed



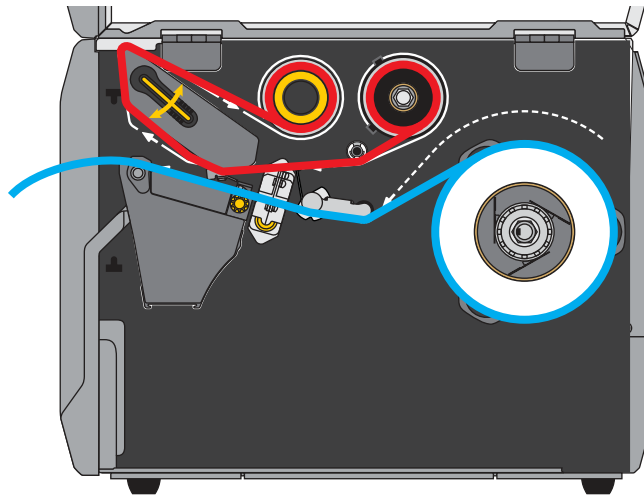
Bottom Feed



4. In which print mode will your printer be operating? (For more information on print modes, see [Select a Print Mode on page 31.](#))

If using...	Then...
TEAR OFF 	Continue with <i>Tear-Off Mode</i> on page 35.
PEEL-OFF or APPLICATOR 	Continue with <i>Peel-Off Mode or Applicator Mode</i> on page 39.
REWIND 	Continue with <i>Rewind Mode</i> on page 46.
CUTTER or DELAYED CUT 	Continue with <i>Cutter Mode or Delayed Cut Mode</i> on page 53.

Tear-Off Mode

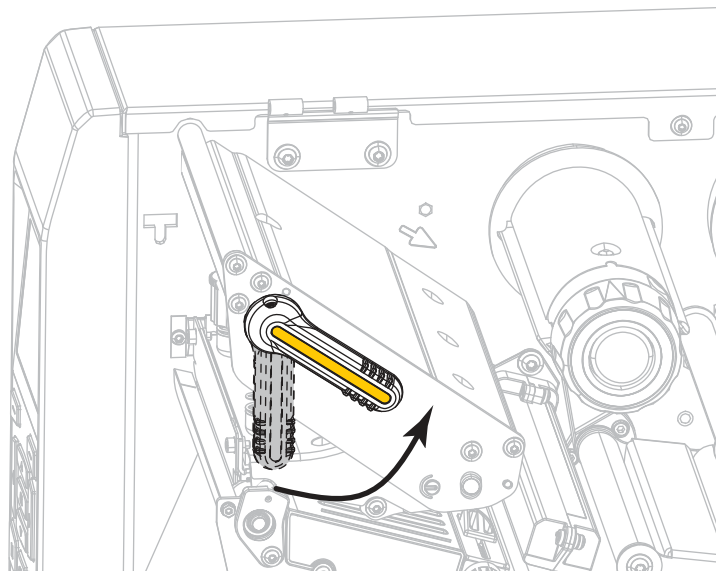


1. If you have not already done so, follow the instructions in the section [Insert the Media into the Printer](#) on page 32.

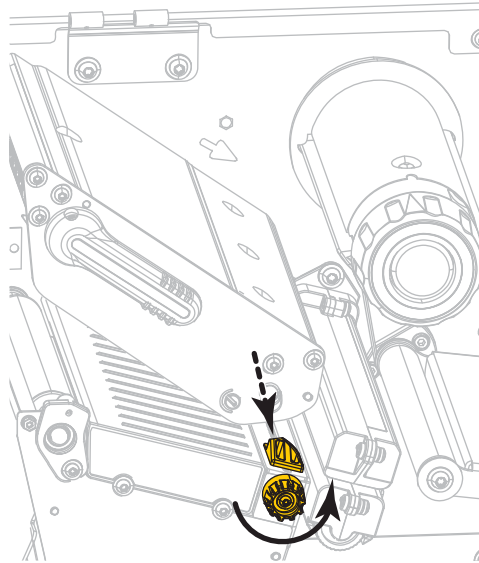


2. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

Open the printhead assembly by rotating the printhead-open lever upward.

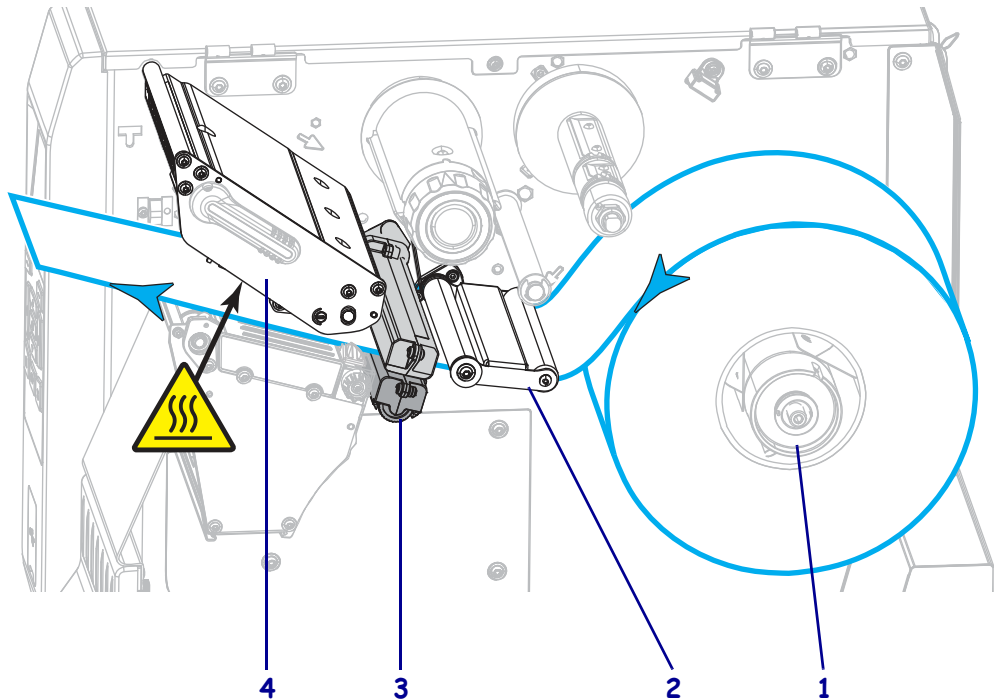


3. Rotate the media guide adjustment knob as shown until the media guide slides all the way out.

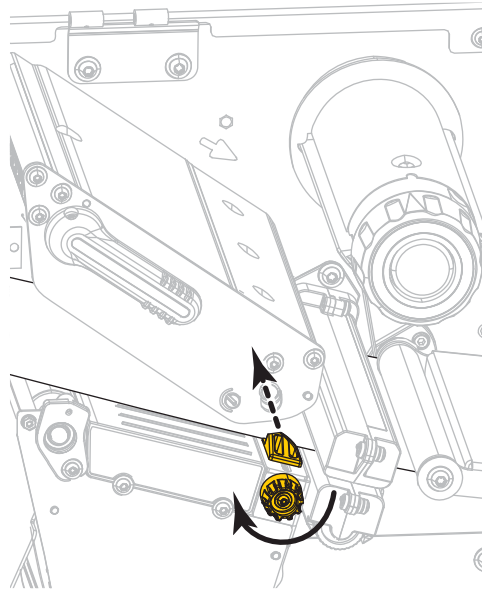


4. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

From the media spindle (1), feed the media under the dancer assembly (2), through the media sensor (3), and under the printhead assembly (4). Slide the media back until it touches the inside back wall of the media sensor.



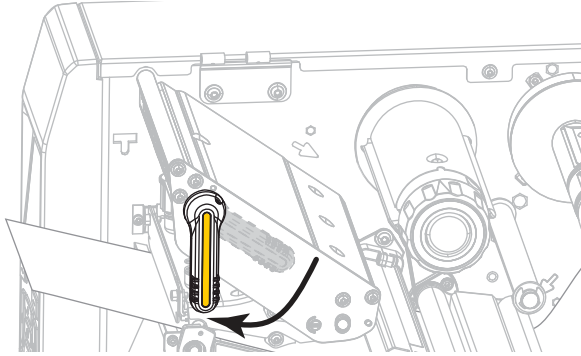
5. Rotate the media guide adjustment knob as shown until the media guide just touches the edge of the media.



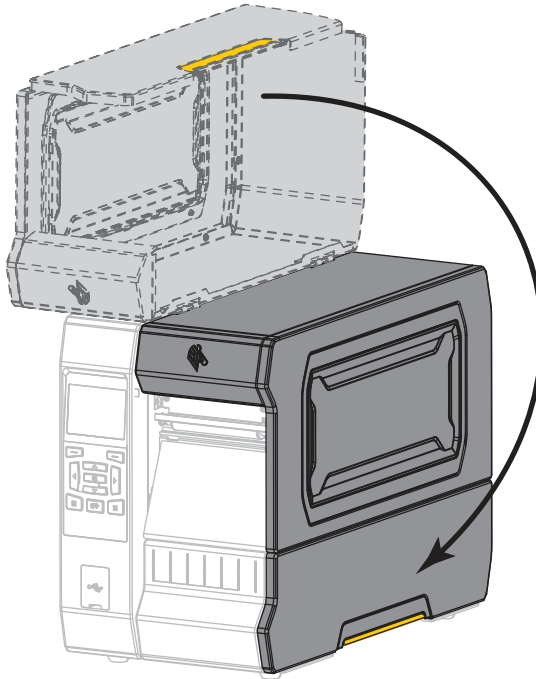
6. Does the media that you are using require ribbon for printing? If you are not sure, see [When to Use Ribbon on page 24](#).

If using...	Then...
Direct Thermal media (no ribbon needed)	Continue with step 7 .
Thermal Transfer media (ribbon needed)	a. If you have not already done so, load ribbon in the printer. See Load the Ribbon on page 58. b. Continue with step 7.

7. Rotate the printhead-open lever downward until it locks the printhead in place.



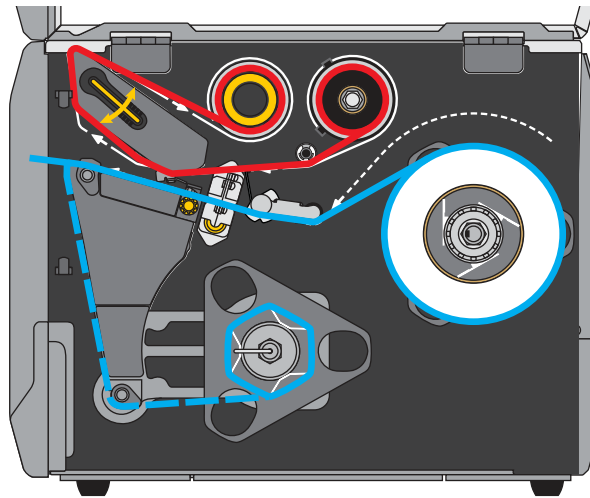
8. Close the media door.



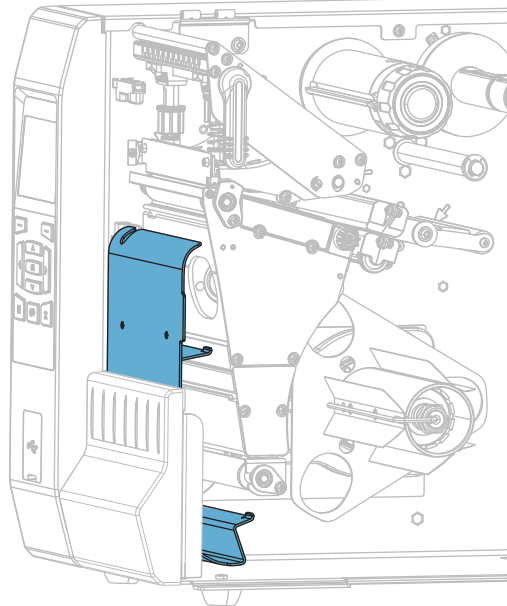
9. Set the printer to the appropriate print mode (see [PRINT MODE on page 111](#)).
10. Press PAUSE to exit pause mode and enable printing.
The printer may perform a label calibration or feed a label, depending on your settings.
11. For best results, calibrate the printer. See [Calibrate the Ribbon and Media Sensors on page 192](#).
12. If desired, print a configuration or other label to verify that your printer is able to print.
(See [PRINT INFORMATION on page 120](#).)

Media loading in Tear-Off mode is complete.

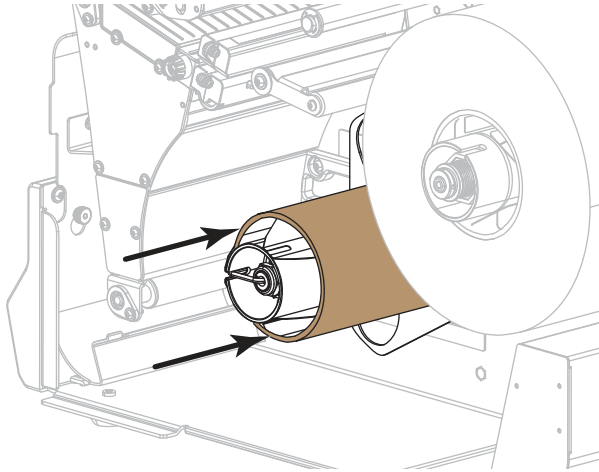
Peel-Off Mode or Applicator Mode



1. If you have not already done so, follow the instructions in the section [Insert the Media into the Printer](#) on page 32.
2. If necessary, install the rewind/liner take-up plate in the peel-off position as shown. See [Install the Rewind/Liner Take-Up Plate](#) on page 207 for instructions.

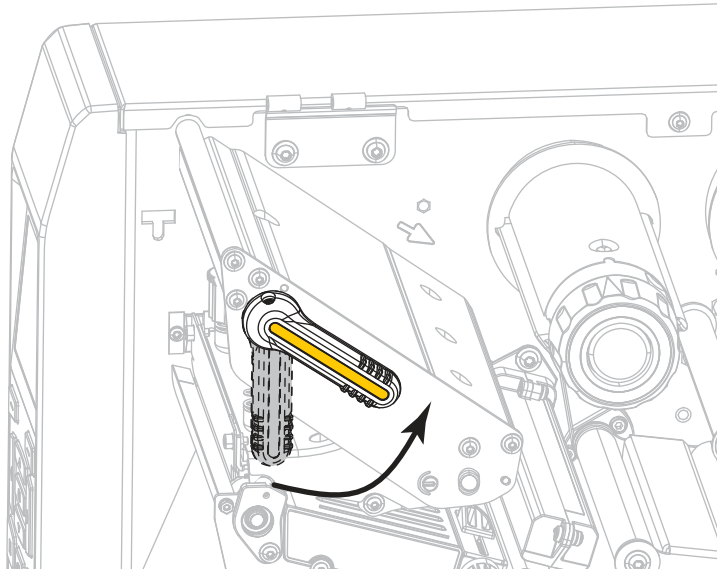


3. If desired, slide a core onto the rewind spindle until it is flush against the guide plate. A core is not necessary for liner take-up.

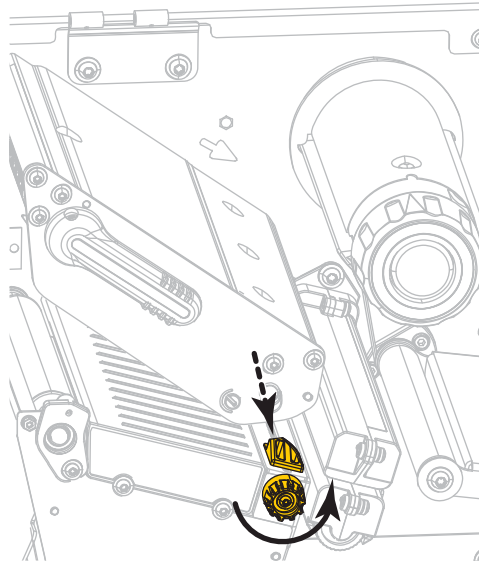


4. **Caution •** The printhead may be hot and could cause severe burns. Allow the printhead to cool.

Open the printhead assembly by rotating the printhead-open lever upward.

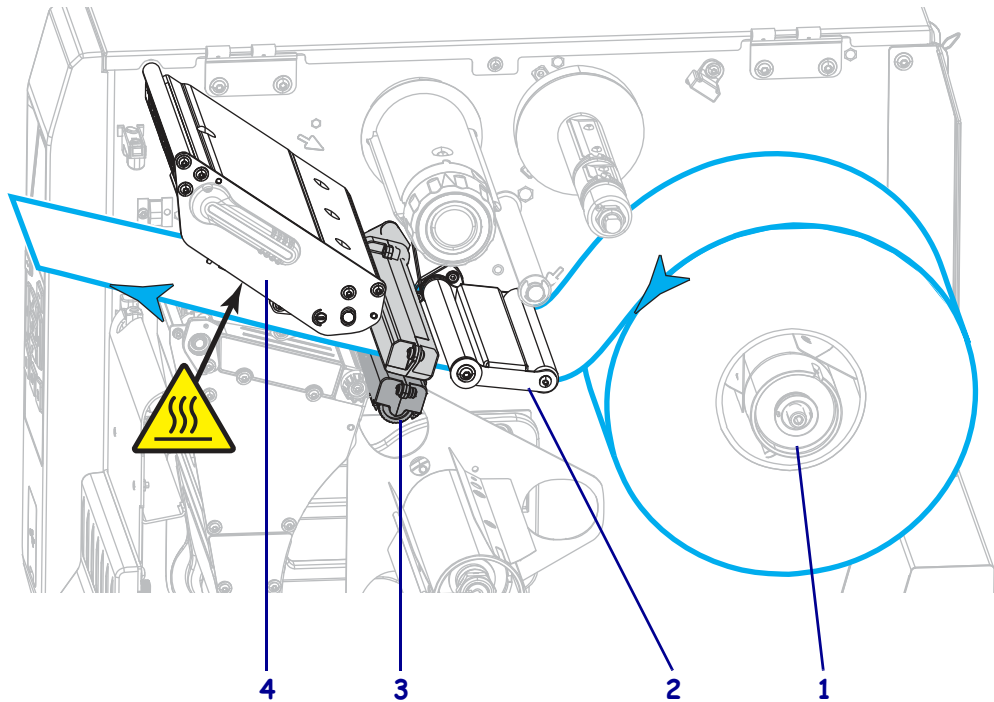


5. Rotate the media guide adjustment knob as shown until the media guide slides all the way out.

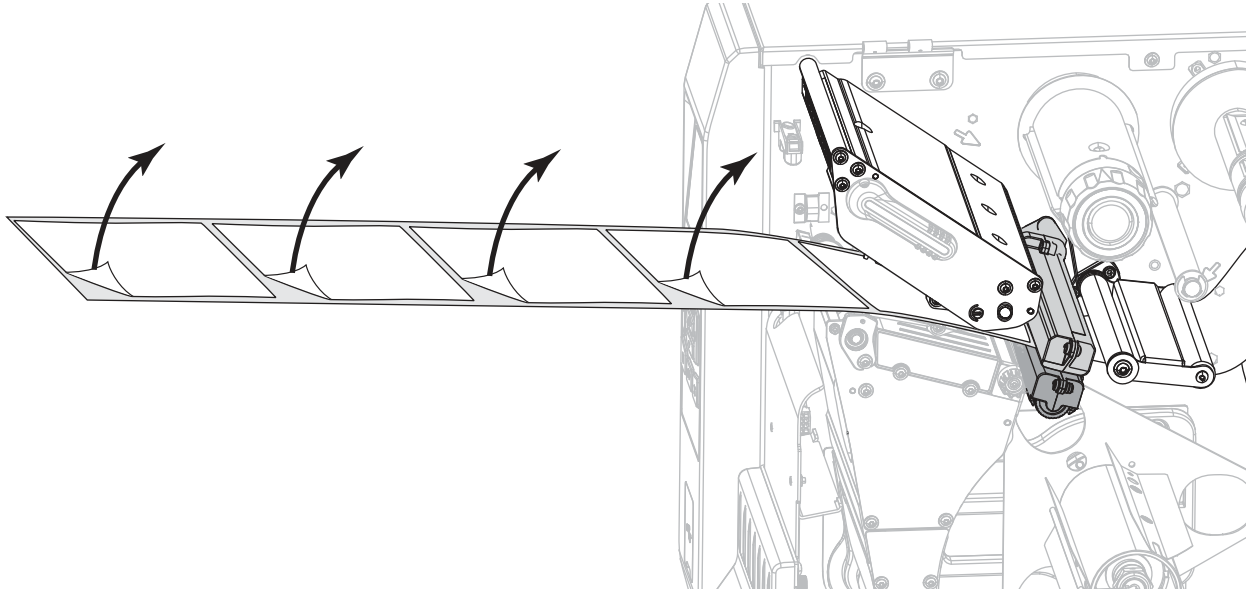


6. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

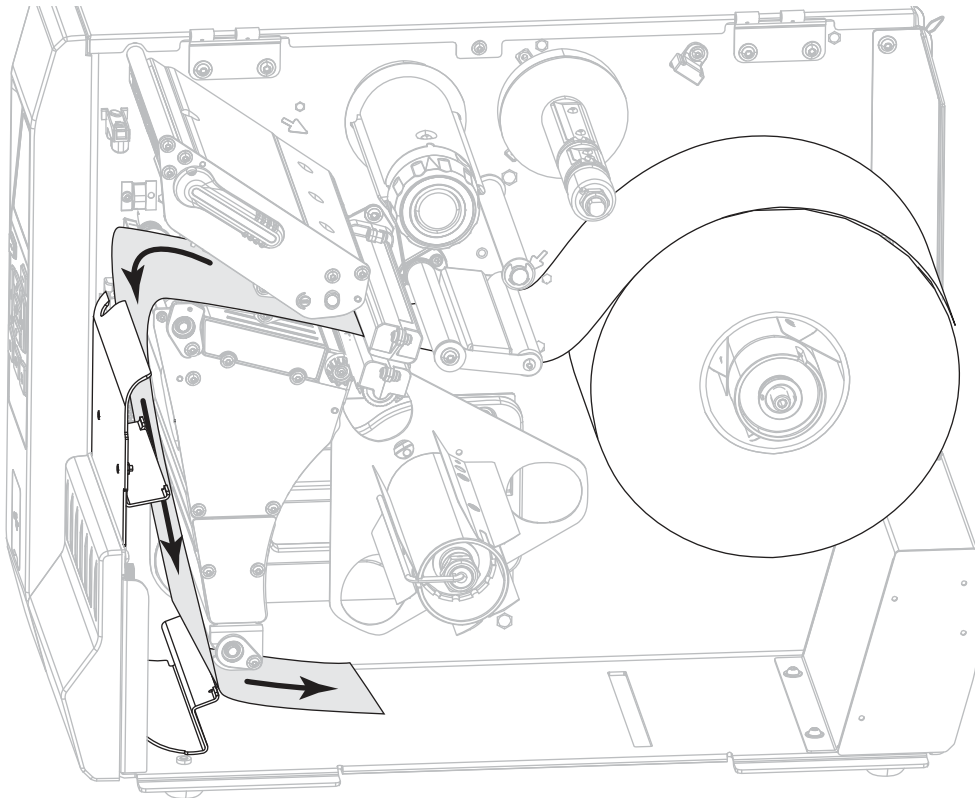
From the media spindle (1), feed the media under the dancer assembly (2), through the media sensor (3), and under the printhead assembly (4). Slide the media back until it touches the inside back wall of the media sensor.



7. Extend approximately 18 in. (500 mm) of media out of the printer. Remove and discard the labels from this exposed media, leaving just the liner.

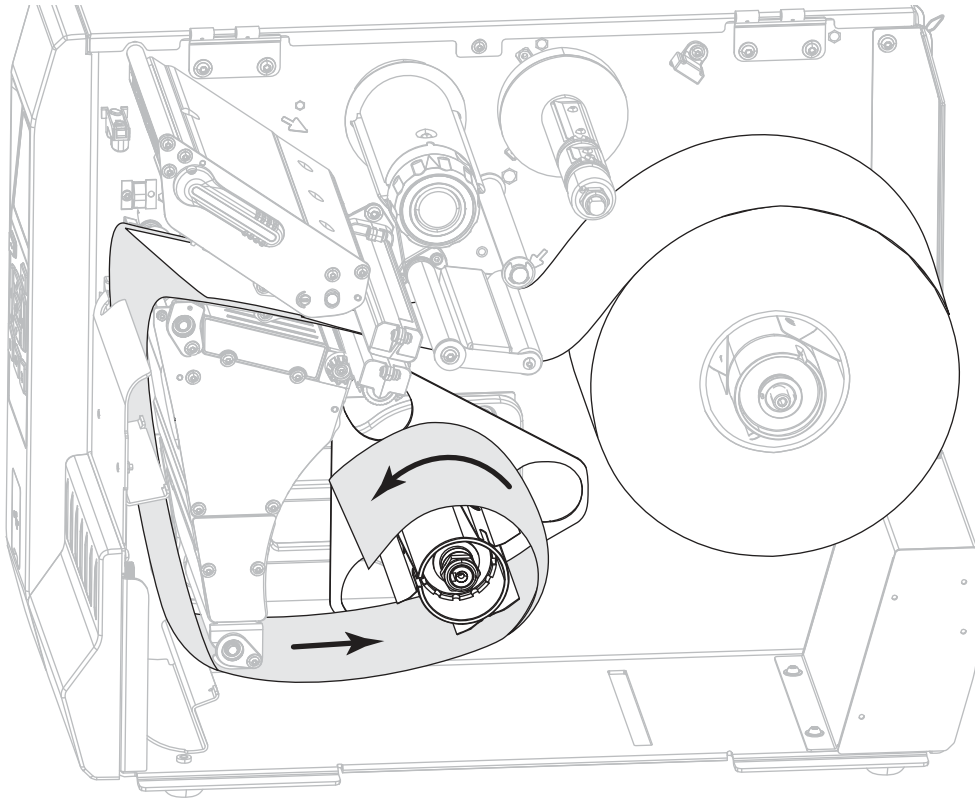


8. Feed the liner behind the rewind/liner take-up plate.

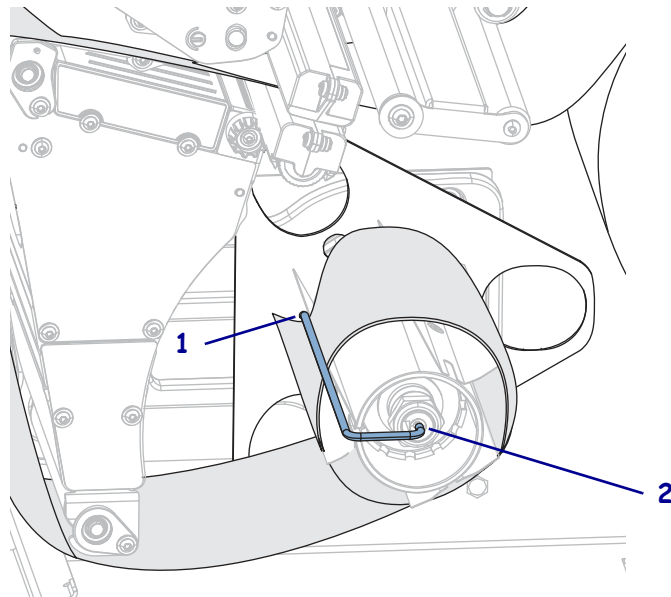


9. Remove the hook from the rewind spindle.

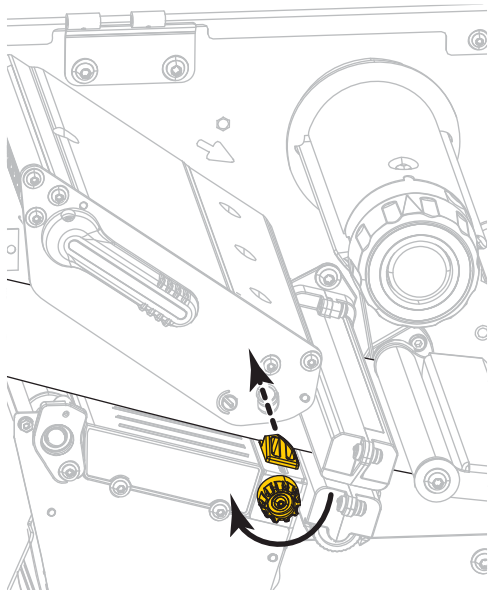
10. Wind the liner around the rewind spindle as shown. Rotate the rewind spindle several turns to tighten the liner and remove any slack.



11. Reinstall the spindle hook over the liner. Insert the long end of the hook into the small hole on the guide plate (1). Insert the short end of the hook into the hole in the center of the adjusting nut (2).



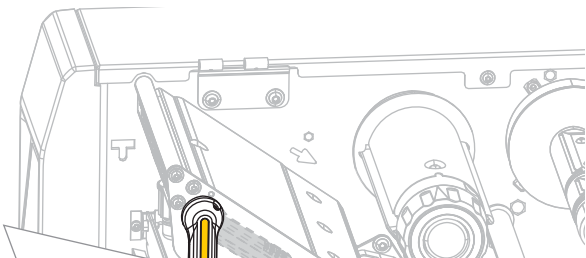
12. Rotate the media guide adjustment knob as shown until the media guide just touches the edge of the media.



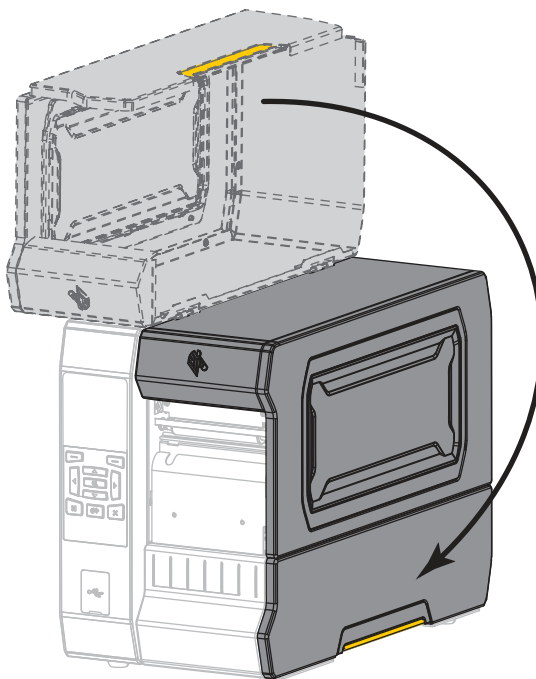
13. Does the media that you are using require ribbon for printing? If you are not sure, see [When to Use Ribbon on page 24](#).

If using...	Then...
Direct Thermal media (no ribbon needed)	Continue with step 14 .
Thermal Transfer media (ribbon needed)	a. If you have not already done so, load ribbon in the printer. See Load the Ribbon on page 58. b. Continue with step 14.

14. Rotate the printhead-open lever downward until it locks the printhead in place.



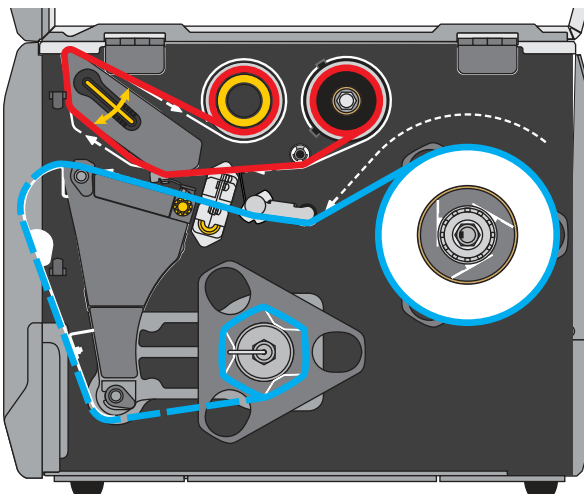
15. Close the media door.



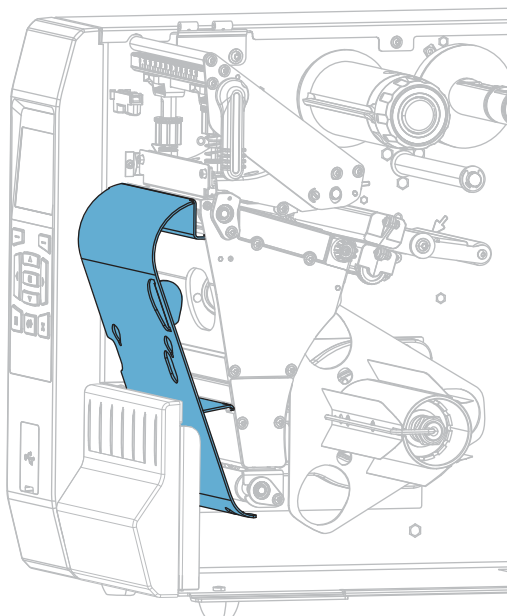
16. Set the printer to the appropriate print mode (for more information, see [PRINT MODE on page 111](#)).
17. Press PAUSE to exit pause mode and enable printing.
The printer may perform a label calibration or feed a label, depending on your settings.
18. For best results, calibrate the printer. See [Calibrate the Ribbon and Media Sensors on page 192](#).
19. If desired, print a configuration or other label to verify that your printer is able to print.
(See [PRINT INFORMATION on page 120](#).)

Media loading in Peel-Off mode is complete.

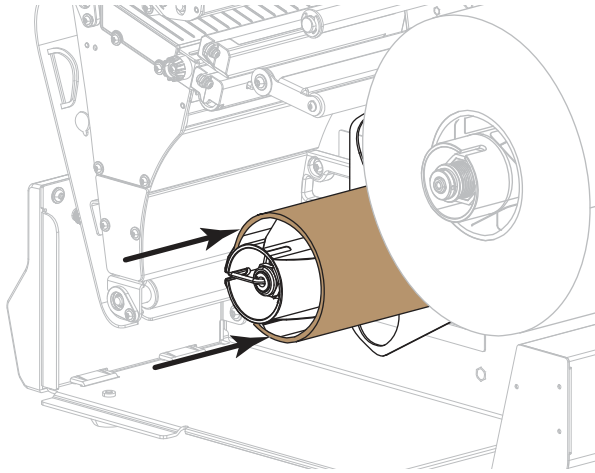
Rewind Mode



1. If you have not already done so, follow the instructions in the section [Insert the Media into the Printer on page 32](#).
2. If necessary, install the rewind/liner take-up plate in the rewind position as shown. See [Install the Rewind/Liner Take-Up Plate on page 207](#) for instructions.

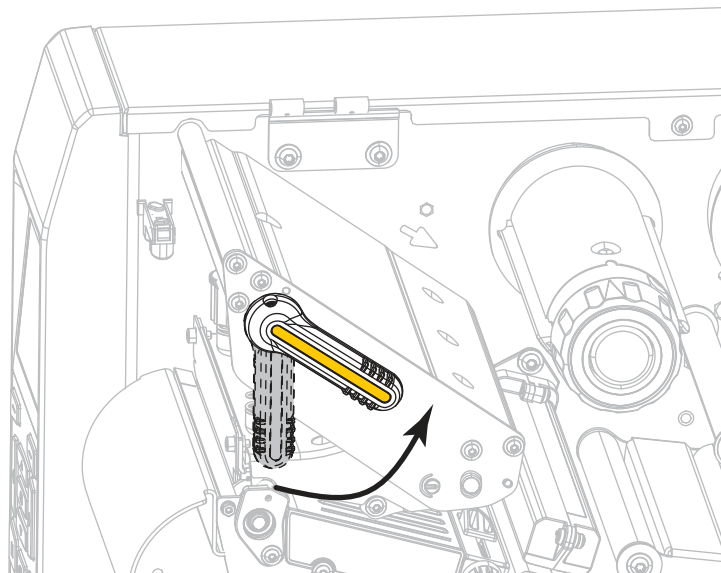


3. Slide a core onto the rewind spindle until it is flush against the guide plate.

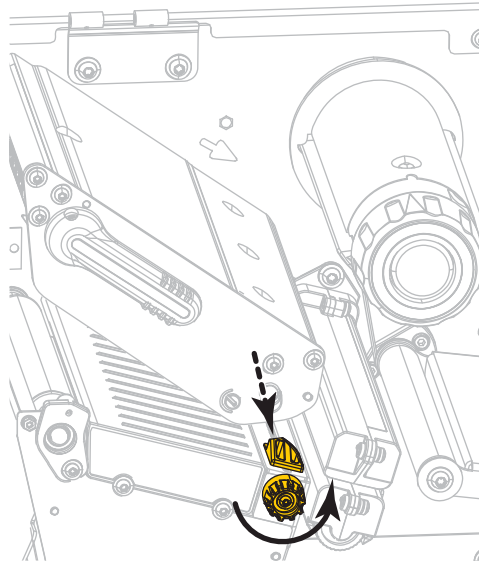


4. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

Open the printhead assembly by rotating the printhead-open lever upward.

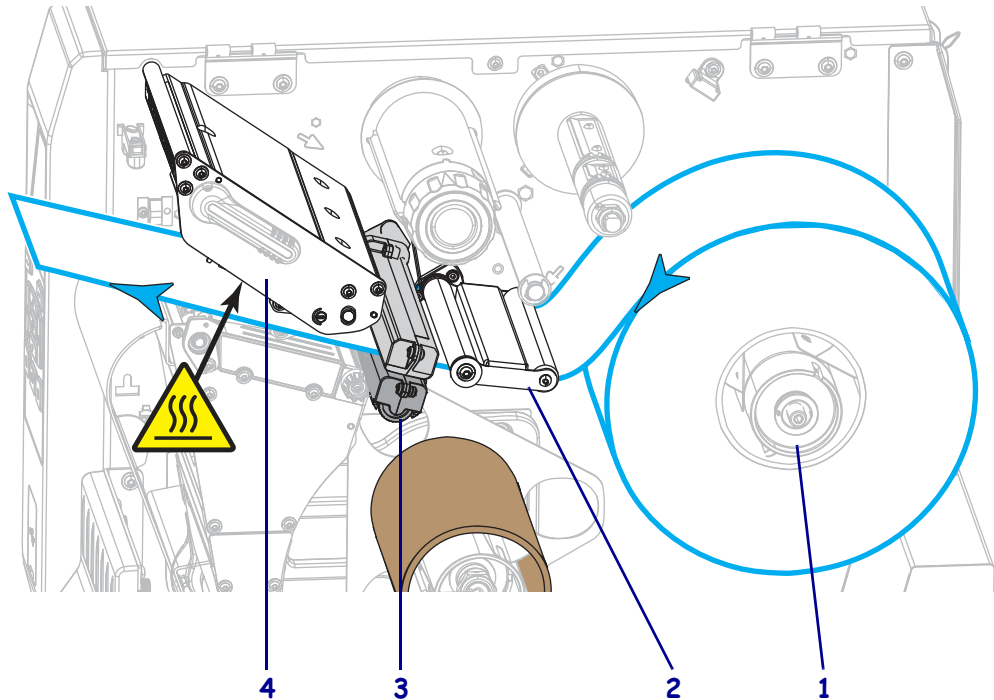


5. Rotate the media guide adjustment knob as shown until the media guide slides all the way out.

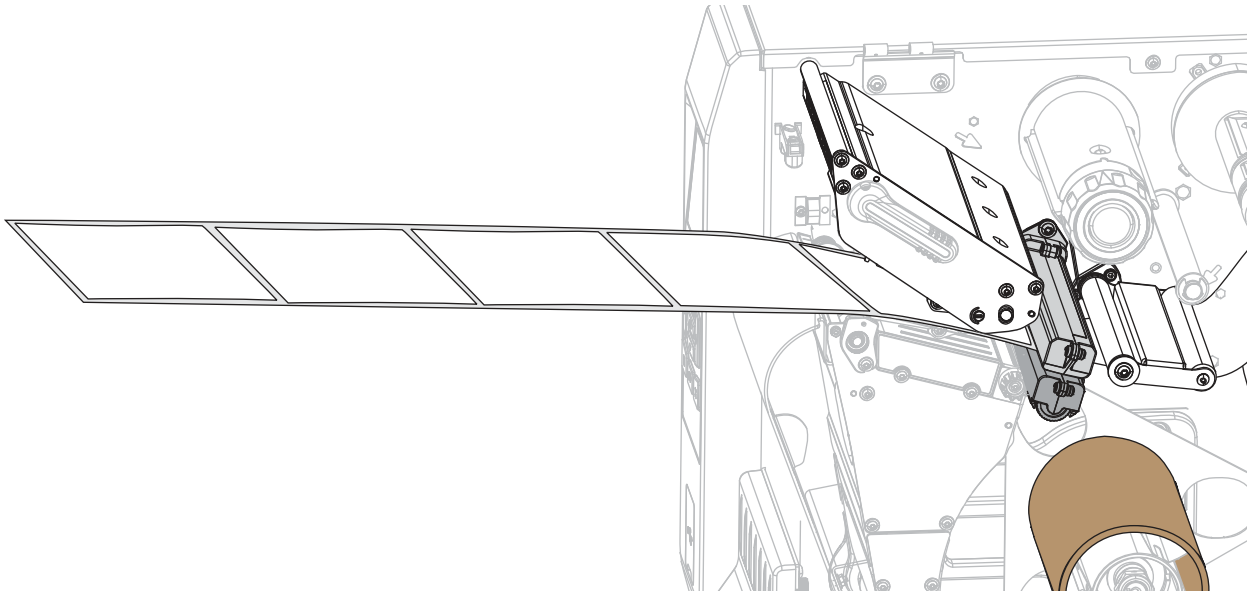


6. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

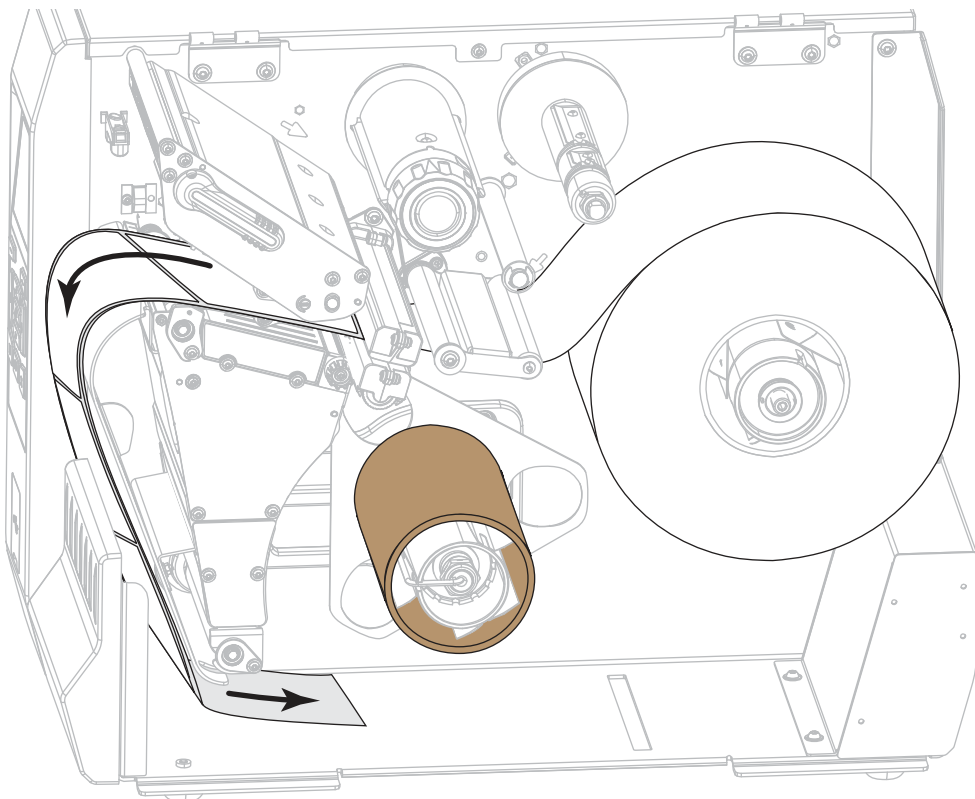
From the media spindle (1), feed the media under the dancer assembly (2), through the media sensor (3), and under the printhead assembly (4). Slide the media back until it touches the inside back wall of the media sensor.



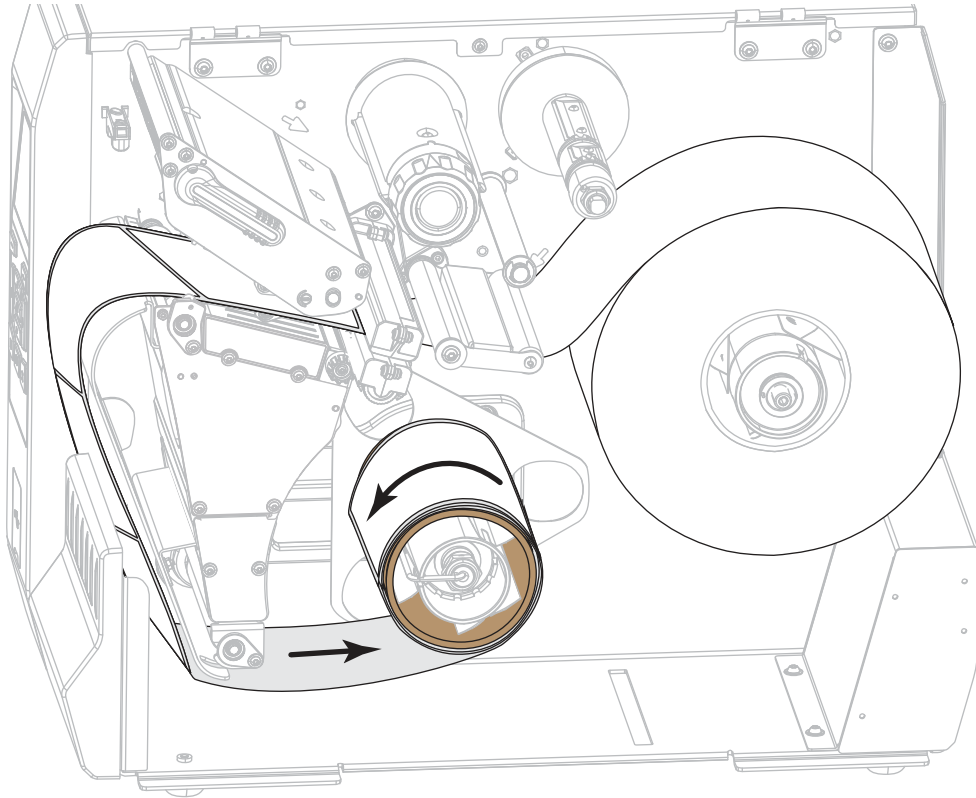
7. Extend approximately 18 in. (500 mm) of media out of the printer.



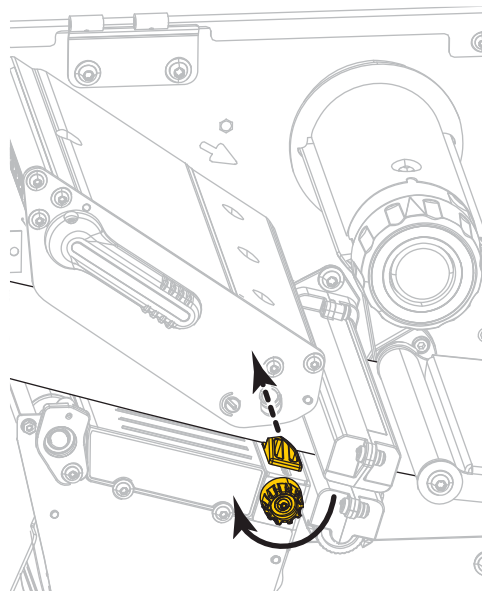
8. Feed the media over the rewind/liner take-up plate.



9. Wind the media around the rewind spindle as shown. Rotate the rewind spindle several turns to tighten the media and remove any slack.



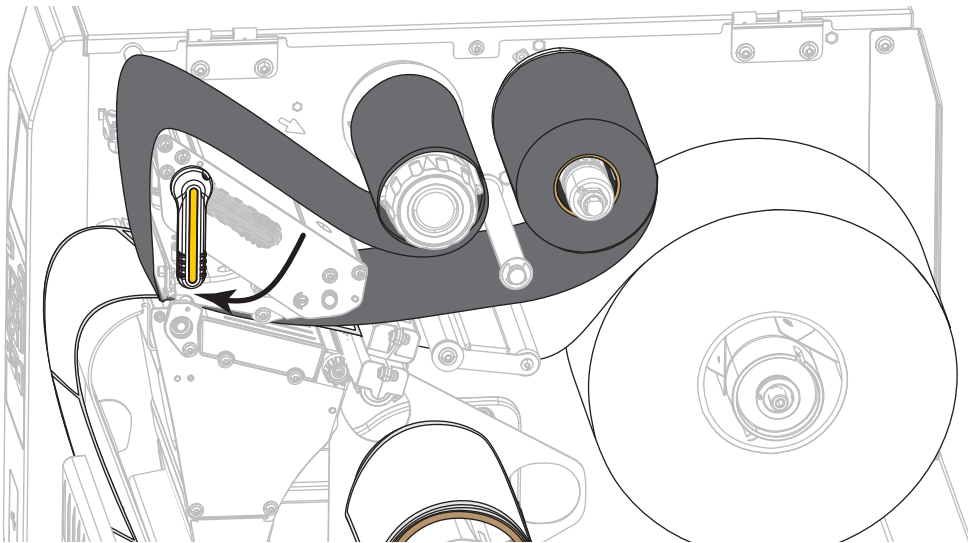
10. Rotate the media guide adjustment knob as shown until the media guide just touches the edge of the media.



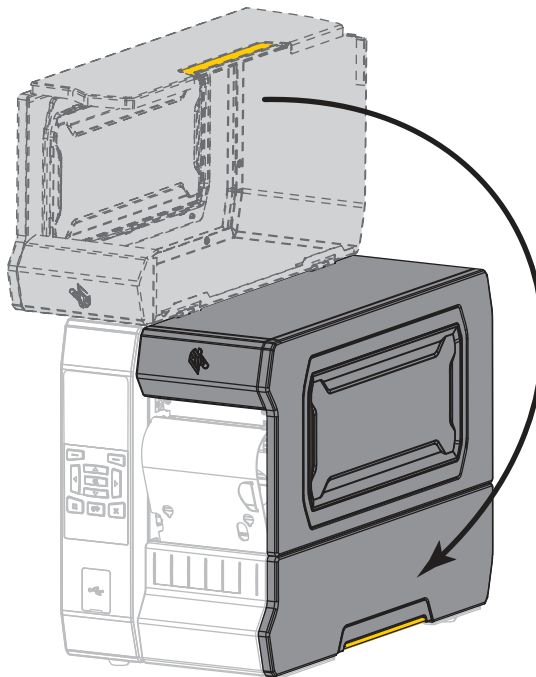
11. Does the media that you are using require ribbon for printing? If you are not sure, see [When to Use Ribbon on page 24](#).

If using...	Then...
Direct Thermal media (no ribbon needed)	Continue with step 12 .
Thermal Transfer media (ribbon needed)	a. If you have not already done so, load ribbon in the printer. See Load the Ribbon on page 58. b. Continue with step 12.

12. Rotate the printhead-open lever downward until it locks the printhead in place.



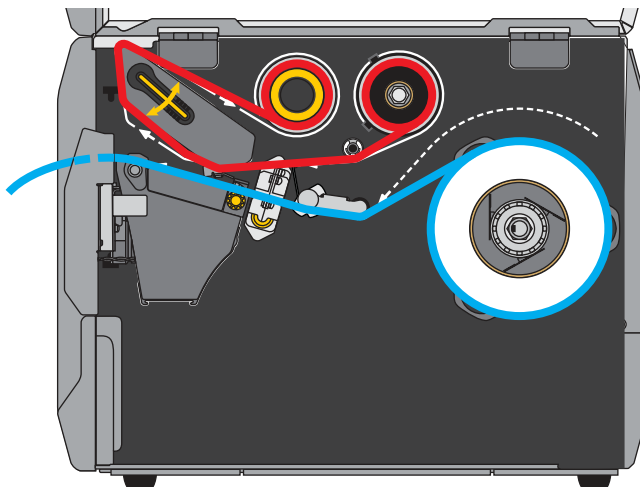
13. Close the media door.



14. Set the printer to Rewind mode (for more information, see [PRINT MODE on page 111](#)).
15. Press PAUSE to exit pause mode and enable printing.
The printer may perform a label calibration or feed a label, depending on your settings.
16. For best results, calibrate the printer. See [Calibrate the Ribbon and Media Sensors on page 192](#).
17. If desired, print a configuration or other label to verify that your printer is able to print.
(See [PRINT INFORMATION on page 120](#).)

Media loading in Rewind mode is complete.

Cutter Mode or Delayed Cut Mode

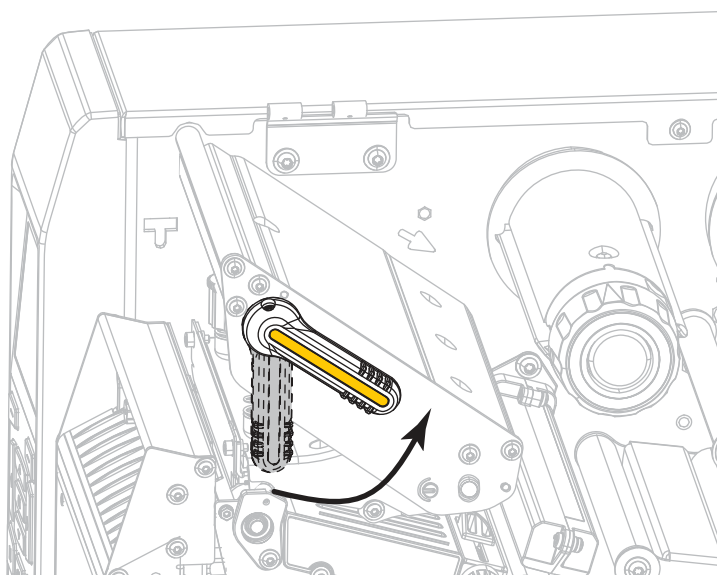


1. If you have not already done so, follow the instructions in the section *Insert the Media into the Printer* on page 32.

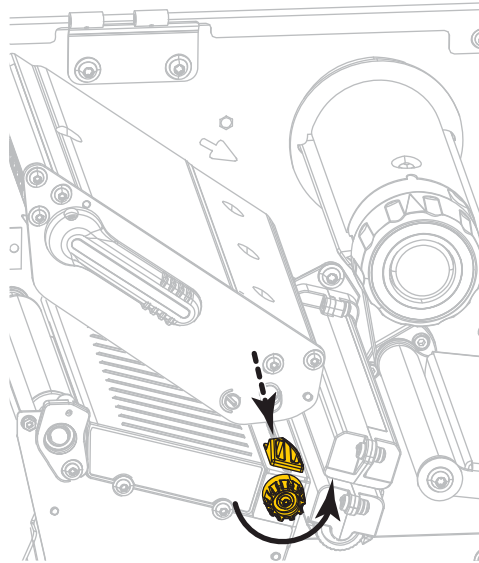


2. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

Open the printhead assembly by rotating the printhead-open lever upward.

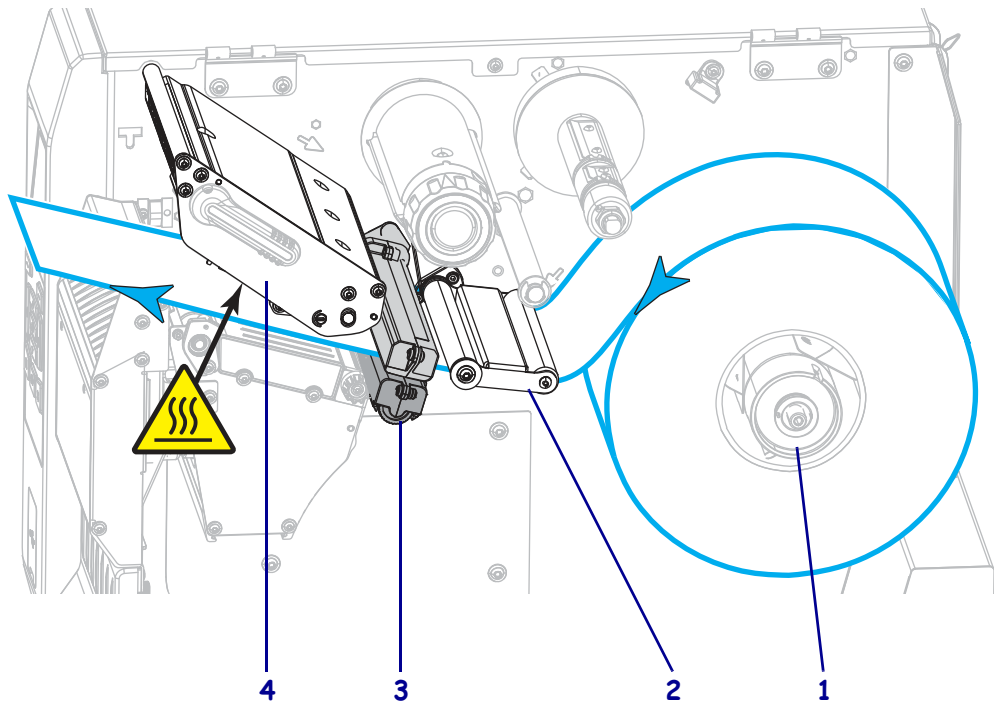


3. Rotate the media guide adjustment knob as shown until the media guide slides all the way out.



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

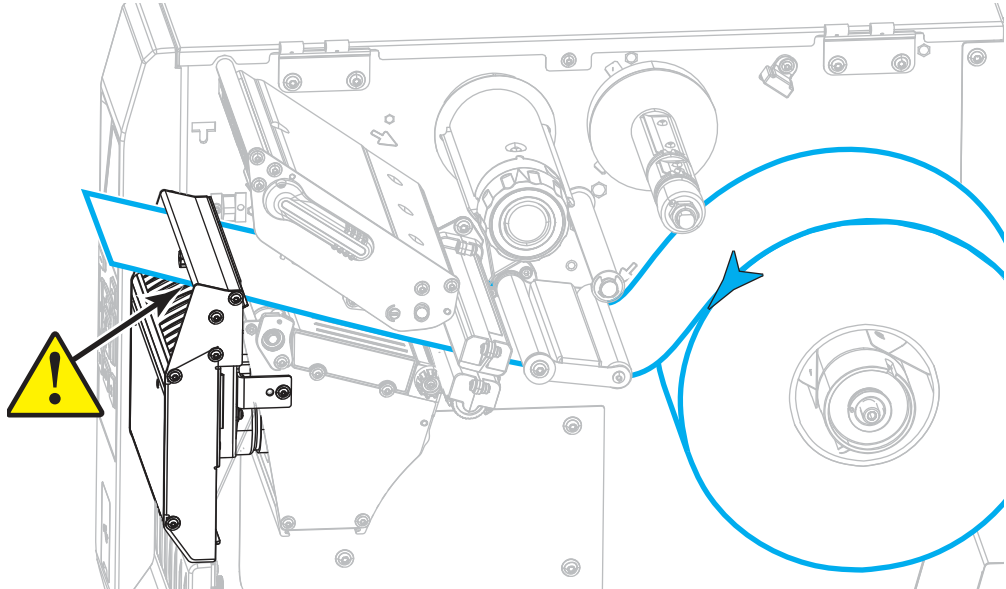
From the media spindle (1), feed the media under the dancer assembly (2), through the media sensor (3), and under the printhead assembly (4). Slide the media back until it touches the inside back wall of the media sensor.



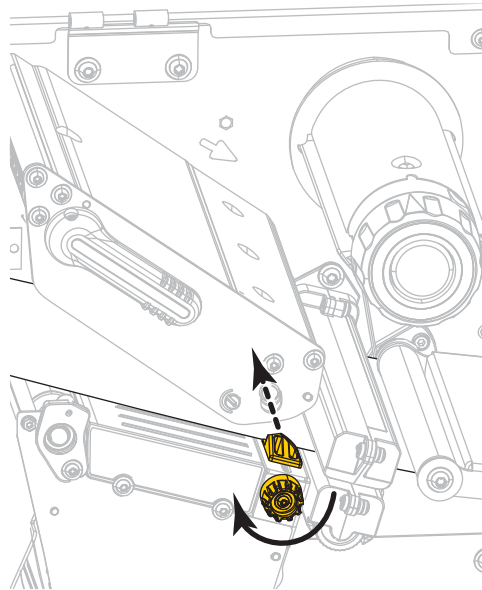


5. **Caution** • The cutter blade is sharp. Do not touch or rub the blade with your fingers.

Feed the media through the cutter.



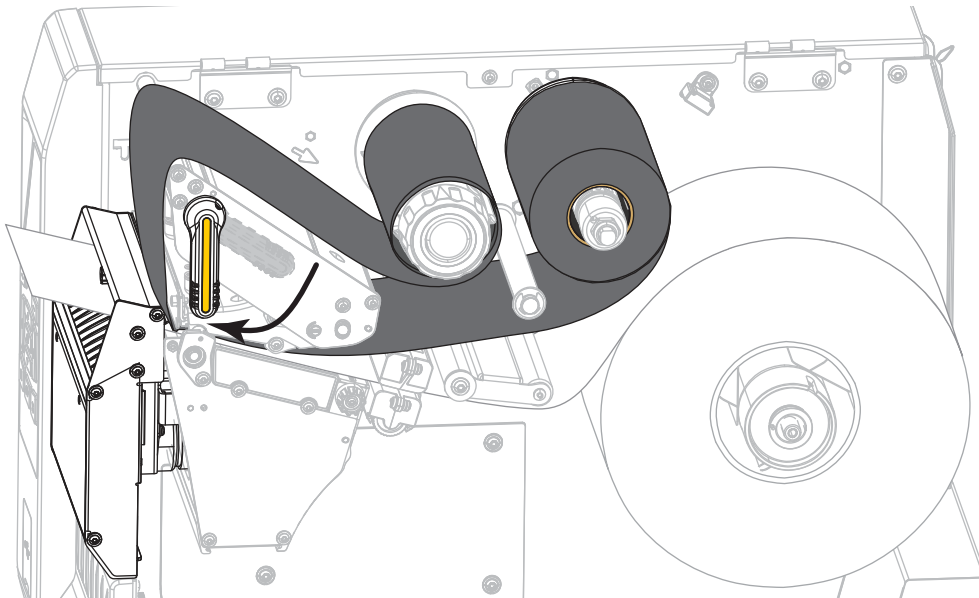
6. Rotate the media guide adjustment knob as shown until the media guide just touches the edge of the media.



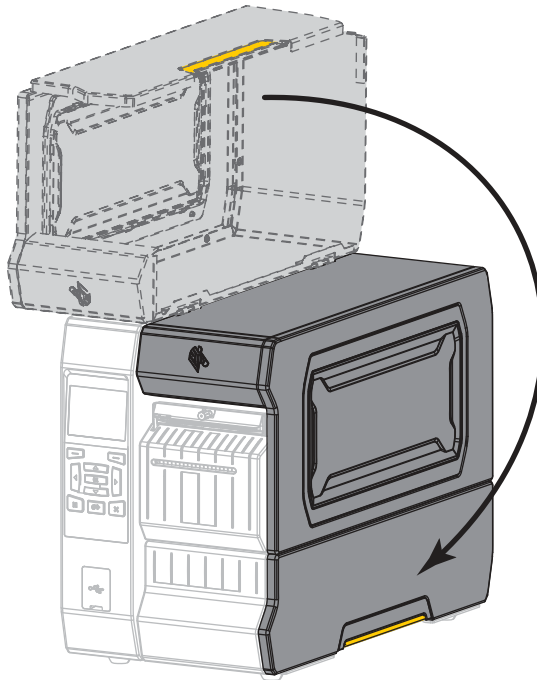
7. Does the media that you are using require ribbon for printing? If you are not sure, see [When to Use Ribbon on page 24](#).

If using...	Then...
Direct Thermal media (no ribbon needed)	Continue with step 8 .
Thermal Transfer media (ribbon needed)	a. If you have not already done so, load ribbon in the printer. See Load the Ribbon on page 58. b. Continue with step 8.

8. Rotate the printhead-open lever downward until it locks the printhead in place.



9. Close the media door.



10. Set the printer to the appropriate print mode (for more information, see [PRINT MODE on page 111](#)).
11. Press PAUSE to exit pause mode and enable printing.
The printer may perform a label calibration or feed a label, depending on your settings.
12. For best results, calibrate the printer. See [Calibrate the Ribbon and Media Sensors on page 192](#).
13. If desired, print a configuration or other label to verify that your printer is able to print.
(See [PRINT INFORMATION on page 120](#).)

Media loading in Cutter mode is complete.

Load the Ribbon



Note • This section applies only to printers that have the Thermal Transfer option installed.

Ribbon is used only with thermal transfer labels. For direct thermal labels, do not load ribbon in the printer. To determine if ribbon must be used with a particular media, see [When to Use Ribbon on page 24](#).

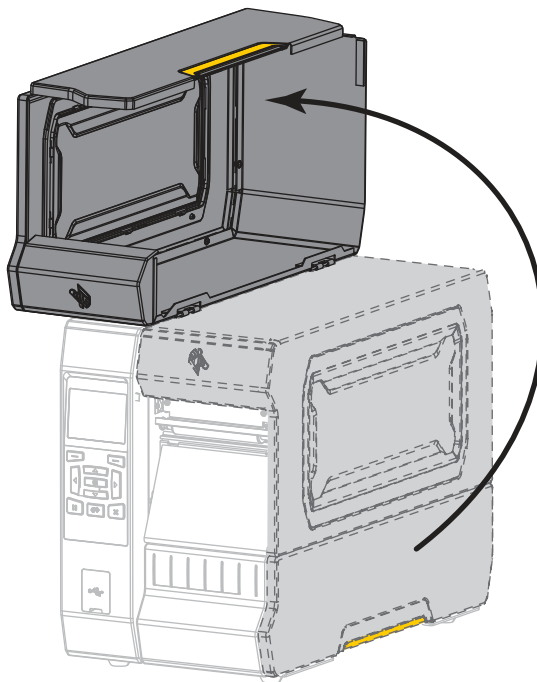
Caution • While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead. You are not required to turn off the printer power when working near an open printhead, but Zebra recommends it as a precaution. If you turn off the power, you will lose all temporary settings, such as label formats, and you must reload them before you resume printing.



Important • Use ribbon that is wider than the media to protect the printhead from wear. Ribbon must be coated on the outside.

To load ribbon, complete these steps:

1. Raise the media door.



Install the Printer Driver and Connect the Printer to the Computer

In this section, you are shown how to use the Zebra Setup Utilities program to prepare a computer running Microsoft Windows® for the printer driver before connecting the printer to any of the computer's data communication interfaces. Use this section for directions to install this program if you have not already done so. You may connect your printer to your computer using any of the connections that you have available.



Important • You must use the Zebra Setup Utilities program or the Zebra Printer Setup Utility app for Android devices (available for free from Google Play™ at <https://play.google.com/store/apps/details?id=com.zebra.printersetup>) before connecting the printer to your computer. Your computer will not install the correct printer drivers if you connect the printer to it without the Zebra Setup Utilities program or the Zebra Printer Setup Utility app.

Install Zebra Setup Utilities

Follow the directions in this section if you do not have Zebra Setup Utilities installed on your computer or if you want to update an existing version of the program. You do not need to uninstall any older versions or any Zebra printer drivers to do so.

To install the Zebra Setup Utilities program, complete these steps:

Download the Zebra Setup Utilities Installer

1. Go to <http://www.zebra.com/setup>.

The Zebra Setup Utilities page displays.



2. On the DOWNLOADS tab, click Download under the ZEBRA SETUP UTILITIES option.

