Load the Ribbon

Use the instructions in this section to load ribbon (if used) in your printer. 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 49*.

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.
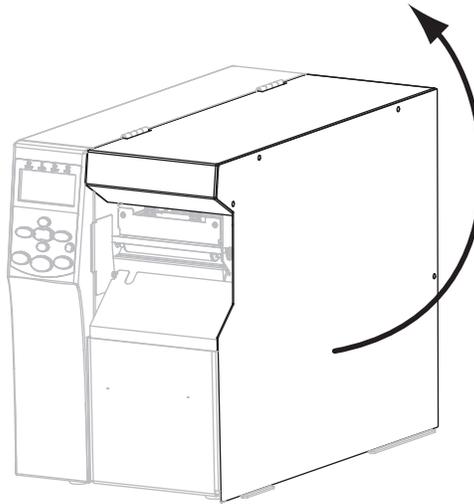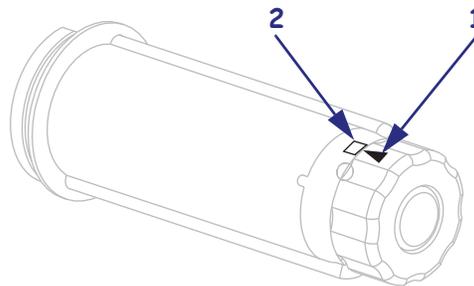

Important • Use ribbon that is wider than the media to protect the printhead from wear. Ribbon must be coated on the outside. See *Coated Side of Ribbon on page 49* for more information.

To load ribbon, complete these steps:

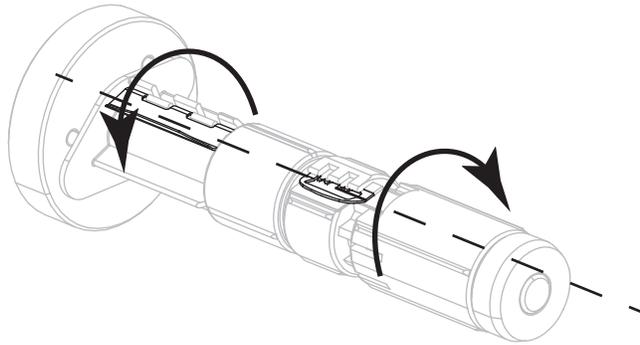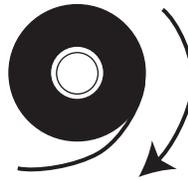**1.** Raise the media door.

2. Align the arrow (**1**) on the ribbon take-up spindle knob with the notch (**2**) in the ribbon take-up spindle.
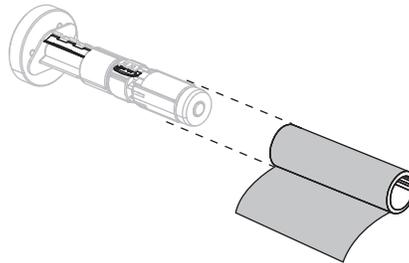
3. Align the segments of the ribbon supply spindle.

4. Position the ribbon with the loose end unrolling clockwise.

**5.** Place the roll of ribbon on the ribbon supply spindle. Push the roll back as far as it will go.

6. A ribbon leader makes ribbon loading and unloading easier. Does your roll of ribbon have paper or something else attached to the end to serve as a ribbon leader?

| If…	Then…
Yes	Continue with the next step.
No	**a.** Tear off a strip of media (labels and liner) about 6–12 in. (150–305 mm) long from the roll. **b.** Peel a label from the media strip. **c.** Use this label (**1**) to attach the end of the ribbon (**2**) to the media strip (**3**). The media strip acts as a leader.

7.

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

Rotate the printhead-open lever (**1**) to the open position.

1 →
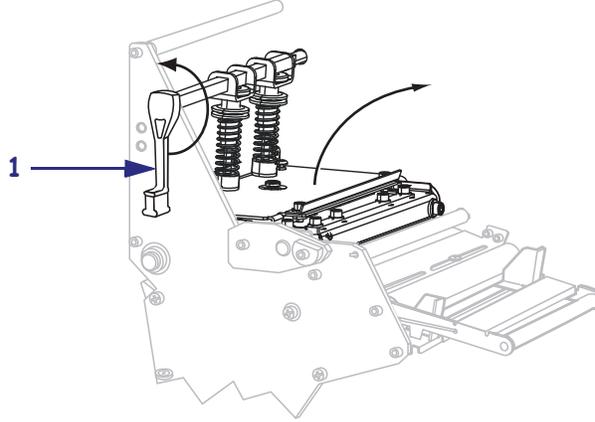
8. Thread the ribbon over the media dancer assembly (**1**) and under the ribbon guide roller (**2**).
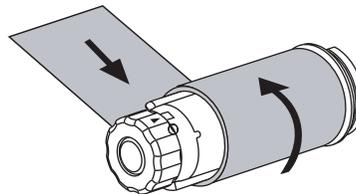
2   **1**
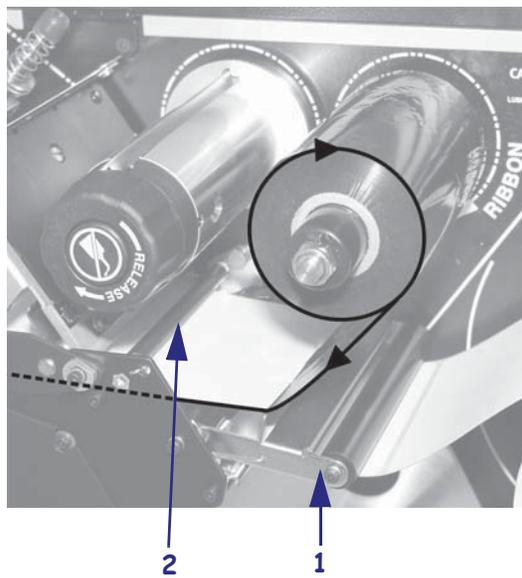
9. Push the ribbon leader forward until it passes under the printhead assembly (1), over the snap plate (2), and then over the platen roller (3).
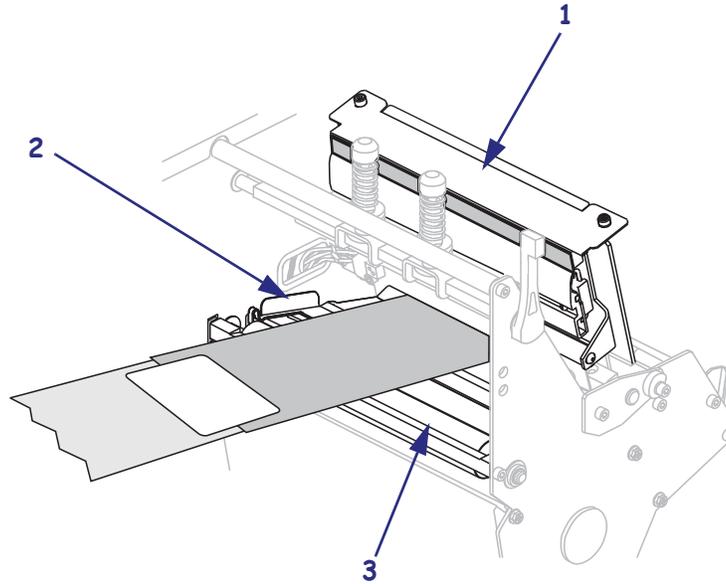
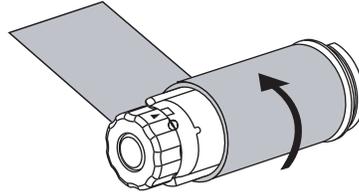10. Bring the ribbon leader over the upper ribbon roller (**1**) and then toward the ribbon take-up spindle (**2**).
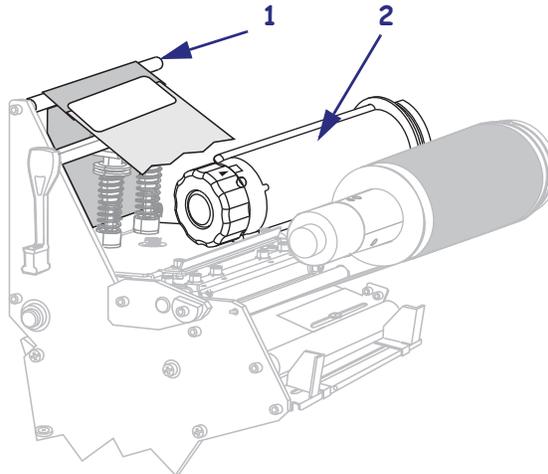
11. Wind the ribbon leader and attached ribbon counterclockwise around the ribbon take-up spindle.

12. Rotate the spindle counterclockwise several turns to wind the ribbon and remove any slack.

13. Is media already loaded?

If…	Then…
No	**a.** Continue with *Load the Media* on page 59.
Yes	**a.** Push down the printhead assembly (**1**), and then rotate the printhead-open lever (**2**) until it locks into place. **b.** Close the media door.
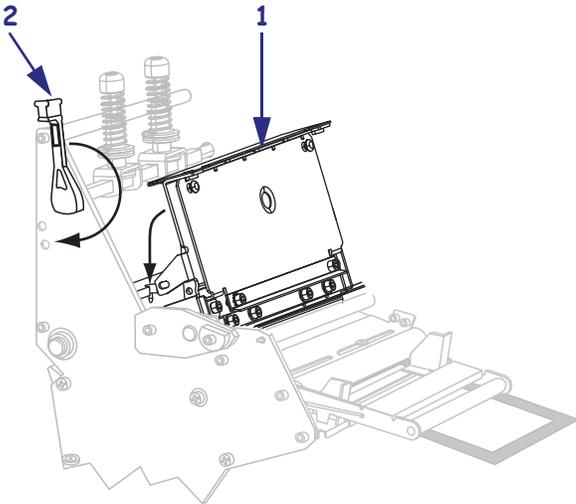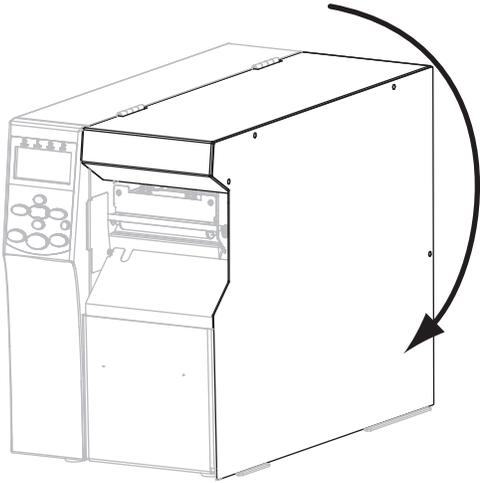
Remove Used Ribbon

Remove used ribbon from the ribbon take-up spindle each time you change the roll of ribbon.

To remove used ribbon, complete these steps:

1. Has the ribbon run out?

If the ribbon...	Then
Ran out	Continue with the next step.
Did not run out	Cut or break the ribbon before the ribbon take-up spindle.
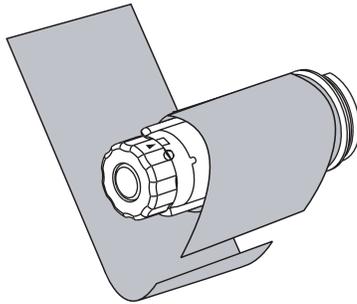
2. While holding the ribbon take-up spindle, turn the ribbon release knob clockwise until it stops.

The ribbon release bars pivot down, easing the spindle's grip on the used ribbon.
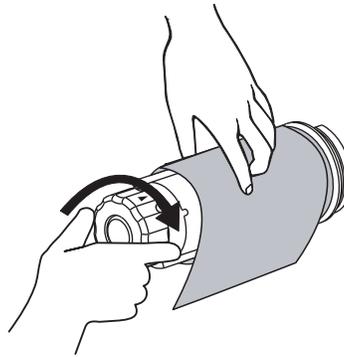
3. Slide the used ribbon off of the ribbon take-up spindle and discard.

Ribbon Overview

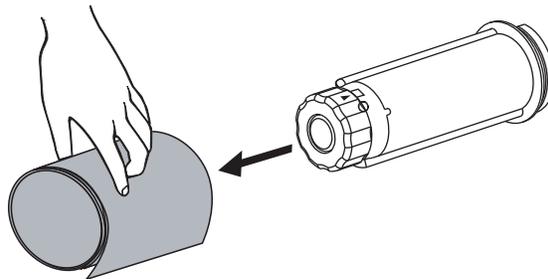Ribbon is a thin film that is coated on one side with wax, resin, or wax resin, which is transferred to the media during the thermal transfer process. The media determines whether you need to use ribbon and how wide the ribbon must be.

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 8). This printer can only use ribbon that is coated on the outside. 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 8 • 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 this printer. To verify this, 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 this printer. To verify this, repeat the test on the other surface of the roll of ribbon.	