ZT510

Industrial Printer

Maintenance Manual

ZEBRA

P1091971-001

©2017 ZIH Corp and/or its affiliates. All rights reserved. ZEBRA and the stylized Zebra head are trademarks of ZIH Corp., registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners.

Information in this document is subject to change without notice.

For further information regarding legal and proprietary statements, please go to:

COPYRIGHTS: www.zebra.com/copyright
WARRANTY: www.zebra.com/warranty
END USER LICENSE AGREEMENT: www.zebra.com/eula
SOFTWARE: www.zebra.com/linkoslegal

Terms of Use

Proprietary Statement This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies Corporation.

Product Improvements Continuous improvement of products is a policy of Zebra Technologies Corporation. All specifications and designs are subject to change without notice.

Liability Disclaimer Zebra Technologies Corporation takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies Corporation reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability In no event shall Zebra Technologies Corporation or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies Corporation has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Part Number: P1091971-001 Rev. A

Contents

Printer Configuration and Adjustment 7
- Calibrate the Ribbon and Media Sensors 8
- Adjust the Printhead Pressure and Toggle Position 15
- Adjust Printhead Parallelism 20
- Adjust the Wear Plate 22
- Adjust the Print Line Position 24
- Remove Used Ribbon 26

Preventive and Corrective Maintenance 29
- Cleaning Schedule and Procedures 30
- Replacing Printer Components 45
- Lubrication 45

Diagnostics and Troubleshooting 47
- QR Codes and QuickHelp Pages 48
- Judging Barcode Quality 49
- Printer Diagnostic Tests 51
- Indicator Lights 61
- Troubleshooting 63

Specifications 77
- General Specifications 78
- Power Specifications 81
- Wireless Specifications 83
- Printing Specifications 84
- Media Specifications 85
- Ribbon Specifications 86

Print Mechanism Components 87
Printhead Assembly Maintenance Kit 90
Printhead Cables Maintenance Kit 95
Pivot Bar Assembly Maintenance Kit 115
Toggle Assembly Maintenance Kit 125
Head Open Sensor Flag Maintenance Kit 130
Print Mechanism Hardware Maintenance Kit 139
Strip Plate and Static Brush Maintenance Kit 158

Drive System Components 165
Main Drive System Maintenance Kit 168
Drive Motor Maintenance Kit 181
Drive Belt Maintenance Kit 200

Media Path Components 213
Platen Roller Maintenance Kit 219
Media Hanger Maintenance Kit 239
Dancer Assembly Maintenance Kit 243
Media Guide Maintenance Kit 256
Upper Media Guide Maintenance Kit 266
Side Plates Maintenance Kit 269
Ribbon Supply Spindle Maintenance Kit 281
Ribbon Take-Up Spindle Assembly Maintenance Kit 292
Ribbon Rollers Maintenance Kit 304
Peel/Tear Bar Maintenance Kit 318
Cutter Upgrade Maintenance Kit 336
Cutter Cover and PCBA Maintenance Kit 346
Cutter Guard and Static Brush Maintenance Kit 354
Magnetic Cutter Tray Maintenance/Option Kit 357
Rewind Upgrade Kit 360
Rewind Platen Roller Adjustment Bracket Maintenance Kit 389
Rewind Drive System Maintenance Kit 394
Rewind Spindle Maintenance Kit 409
Rewind Plate Kit 423

Electronic Components 429
Control Panel Maintenance Kit 436
Main Logic Board Maintenance Kit 448
Connectivity Board Maintenance Kit 466
Power Supply Maintenance Kit 477
Electronics Cables Maintenance Kit 488
IPv4 Internal Print Server Option/Maintenance Kit 496
ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit 502
ZebraNet® Radio Print Server Antenna Maintenance Kit 511
USB Host Option/Maintenance Kit 513
Parallel Port Option/Maintenance Kit 518
Ribbon-Out Sensor Maintenance Kit 523
Media Sensor Maintenance Kit 538
Reflective Sensor Maintenance Kit 554
Head Open Sensor Assembly Maintenance Kit 565
Take-Label Sensors Maintenance Kit 577

Outer Casing Components 589
Electronics Cover Maintenance Kit 592
Media Door Maintenance Kit 600
Option Covers Maintenance Kit 603
Printer Feet Maintenance Kit 616
Trim Panel Maintenance Kit 618
Miscellaneous Hardware Maintenance Kit 621
ZT510 Repackaging Kit 628

Printer Configuration and Adjustment

This section provides routine cleaning and maintenance procedures.

Contents

Calibrate the Ribbon and Media Sensors 8
Adjust the Printhead Pressure and Toggle Position 15
Toggle Position Adjustment 16
Printhead Pressure Adjustment 17
Adjust Printhead Parallelism 20
Adjust the Wear Plate 22
Adjust the Print Line Position 24
Remove Used Ribbon 26

Calibrate the Ribbon and Media Sensors

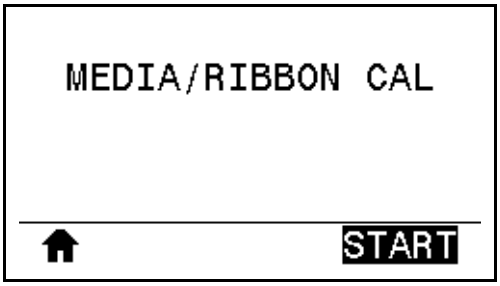
Use the procedure in this section to calibrate the printer, which adjusts the sensitivity of the media and ribbon sensors.

- For issues that may be resolved by sensor calibration, see *Printing Issues* on page 70.
- For a summary of the options for initiating calibration, refer to the *User Guide*.

Important • Follow the calibration procedure exactly as presented. All of the steps must be performed even if only one of the sensors requires adjustment. You may press and hold CANCEL at any step in this procedure to cancel the process.

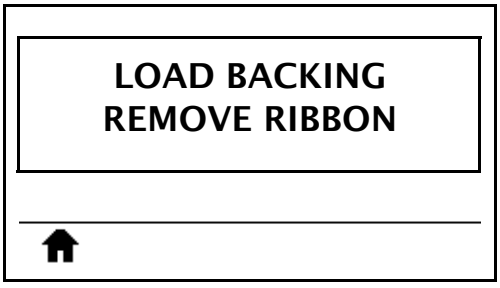
To perform sensor calibration, complete these steps:

1. With the printer in the Ready state, initiate media and ribbon calibration in one of these ways:
   - Press and hold PAUSE + CANCEL for 2 seconds.
   - Send the `ezpl.manual_calibration` SGD command to the printer. See the *Zebra Programming Guide* for more information about this command.
   - Navigate to the following menu item on the control panel display. This item is located under the TOOLS menu and the SENSORS menu. Press RIGHT SELECT to select START.



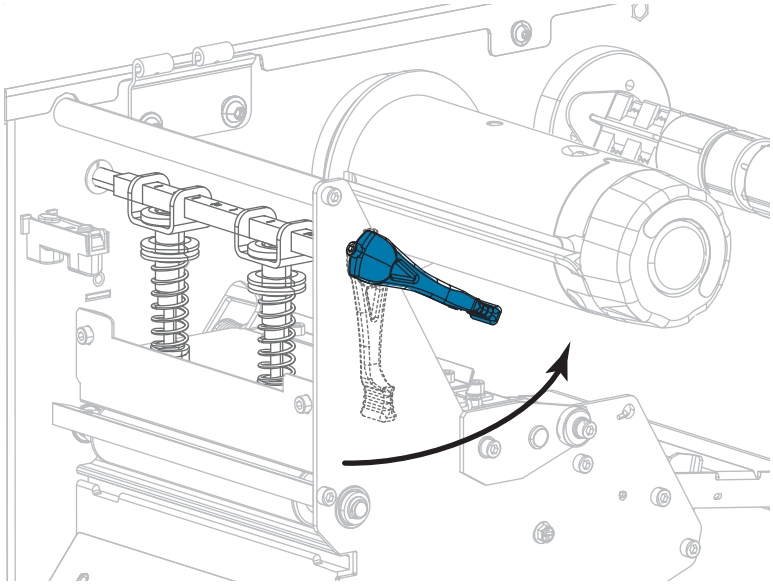
The printer does the following:

- The **STATUS light** and **SUPPLIES light** flash yellow once.
- The **PAUSE light** blinks yellow.
- The control panel displays:

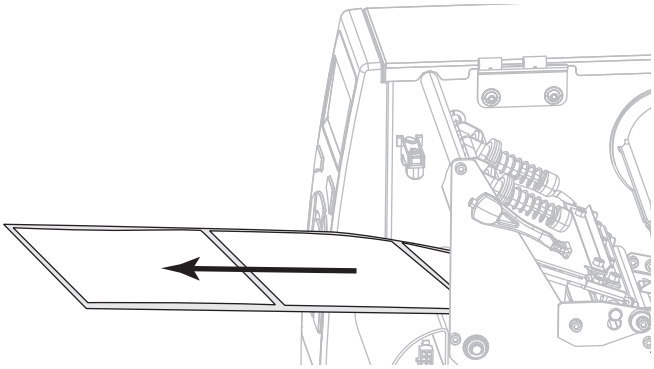


2. **Caution •** The printhead may be hot and could cause severe burns. Allow the printhead to cool.

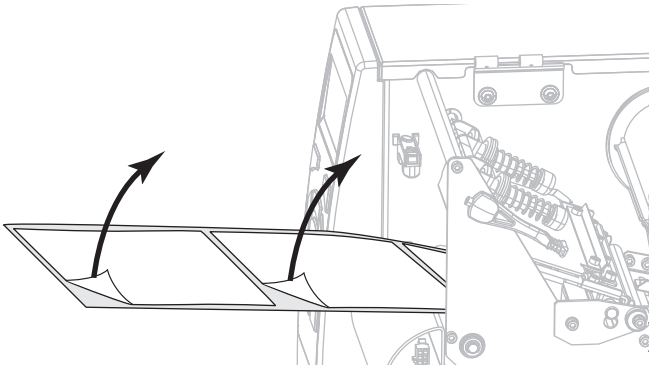
   Open the printhead assembly by rotating the printhead-open lever upward.



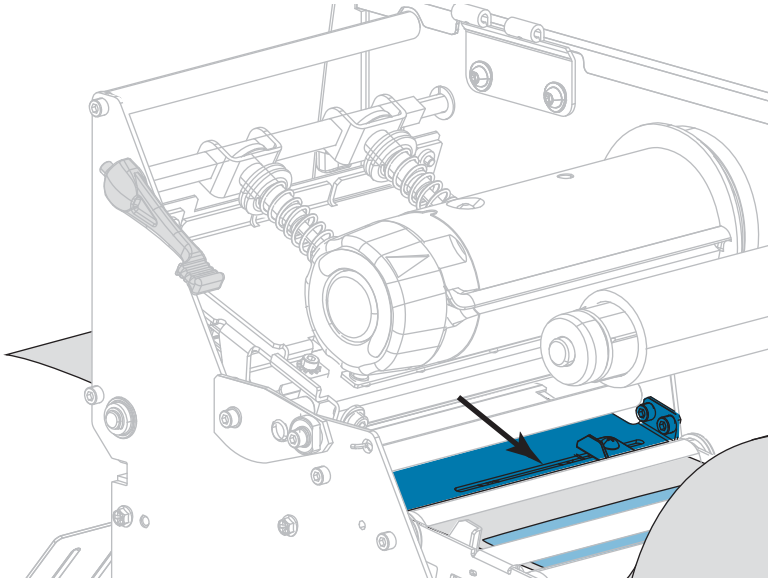
3. Extend the media approximately 8 in. (203 mm) out of the printer.



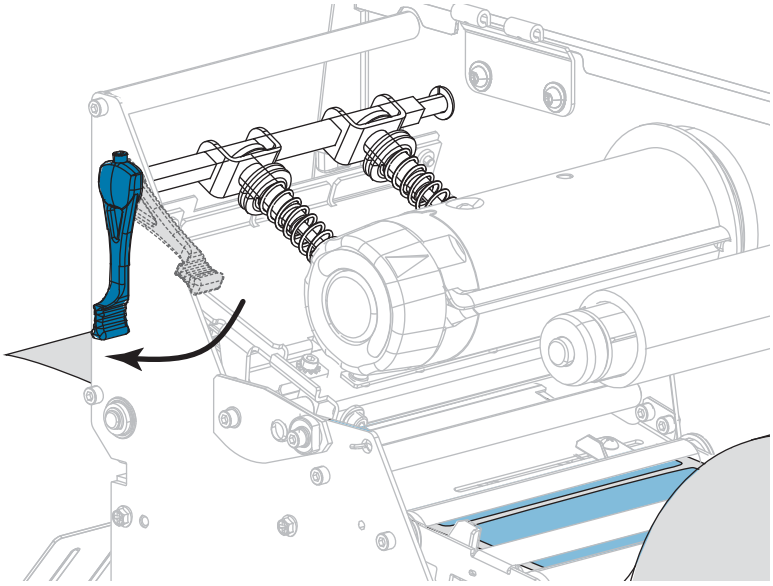
4. Remove the exposed labels so that only the liner remains.



5. Pull the media into the printer so that only the backing is in the sensor.

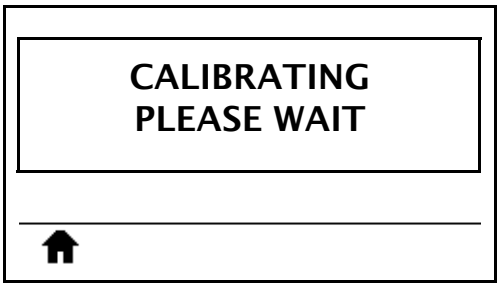


6. Remove the ribbon (if used).
7. Rotate the printhead-open lever downward until it locks the printhead in place.



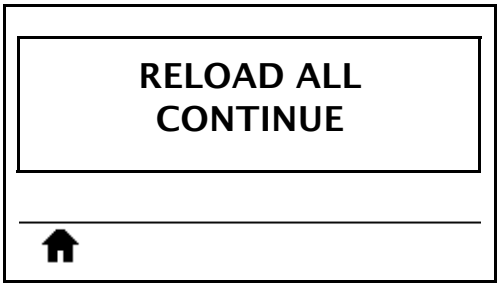
8. Press PAUSE to begin the media calibration process.
   - The **PAUSE light** turns off.
   - The **SUPPLIES light** flashes.

- The control panel displays:

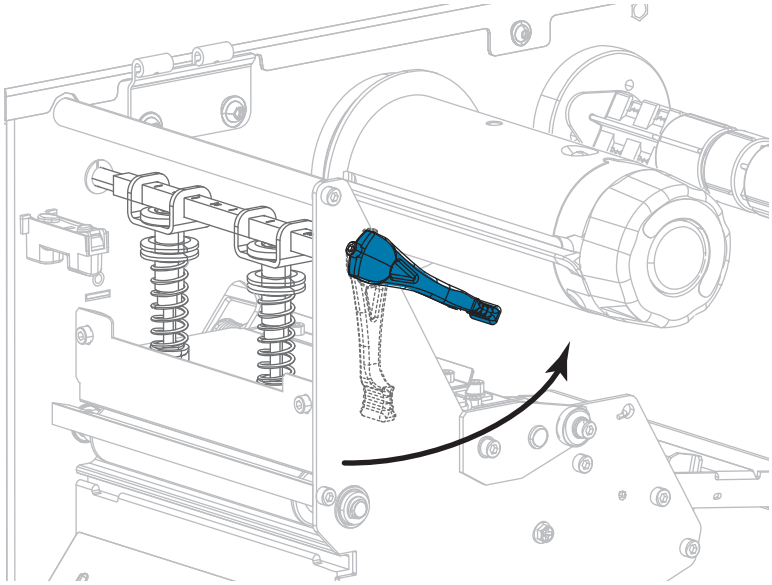


When the process is complete:

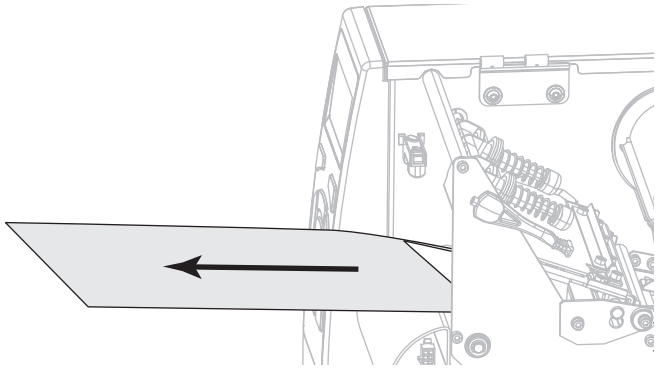
- The **SUPPLIES light** stops flashing.
- The **PAUSE light** flashes yellow.
- The control panel displays:



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

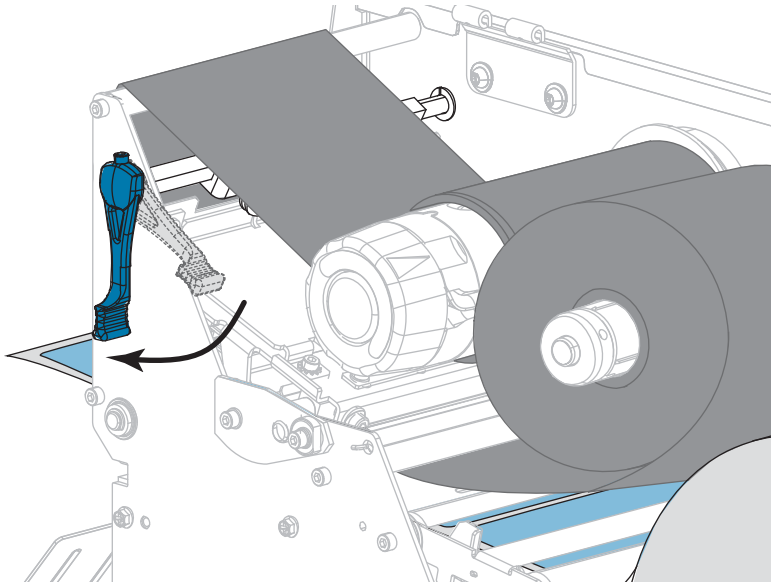


10. Pull the media forward until a label is positioned under the media sensors.

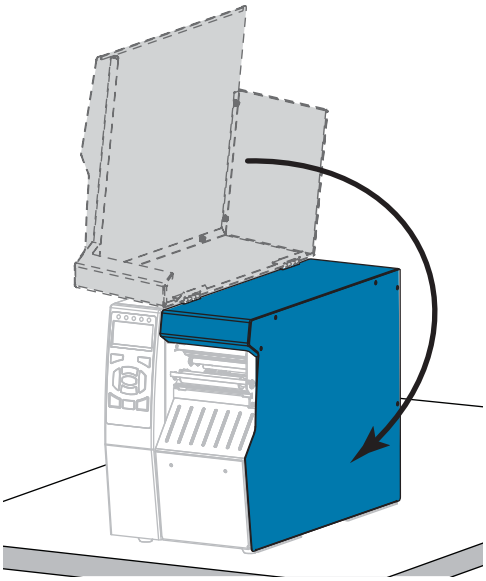


11. Reload the ribbon (if used).

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



13. Close the media door.



14. Press PAUSE to enable printing.

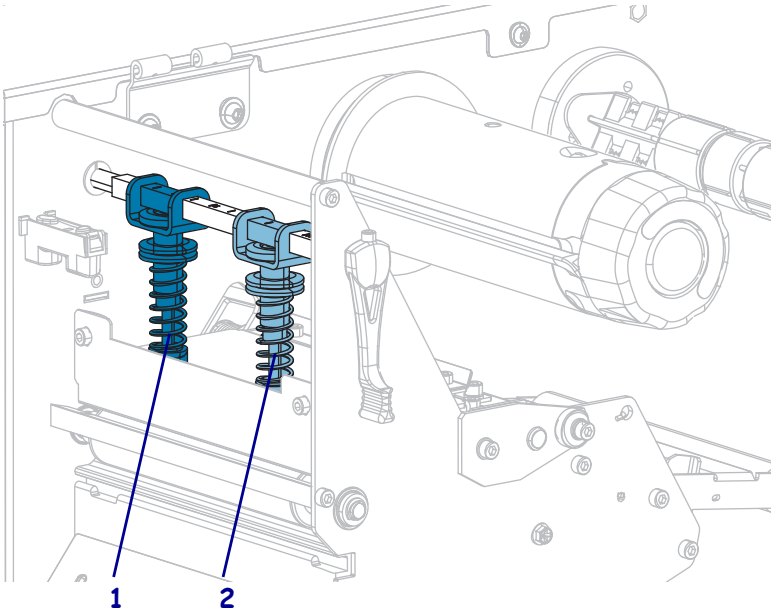
Adjust the Printhead Pressure and Toggle Position

The printhead pressure toggles (Figure 1) can be adjusted to create more or less pressure, as needed. They can also be moved from side to side to adjust the pressure in certain areas. Use the lowest printhead pressure necessary to produce good print quality. Higher pressures may cause premature wear on the printhead elements.

If the toggles are not positioned correctly or adjusted to apply the correct pressure, the following types of issues may result:

- media and ribbon may slip
- ribbon may wrinkle
- media may move from side to side during printing
- printing may be too light or too dark on one side of the media

Figure 1 • Printhead Pressure Toggles

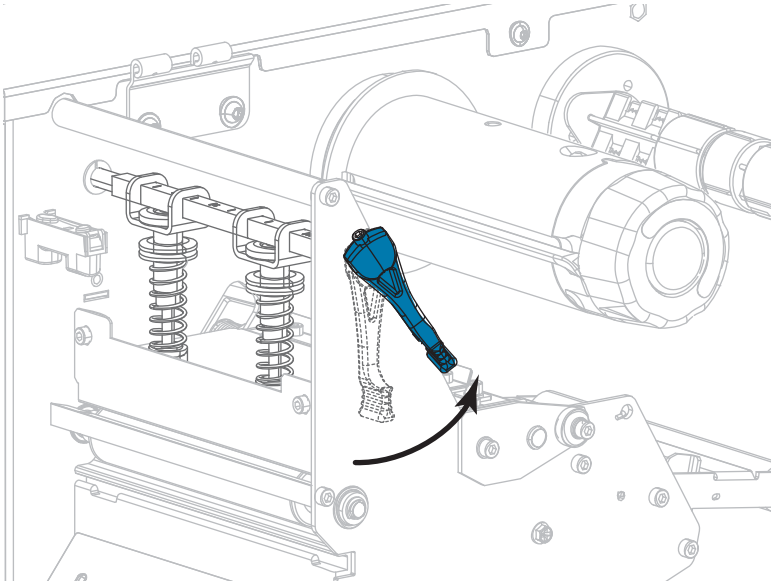


1	Inside toggle
2	Outside toggle

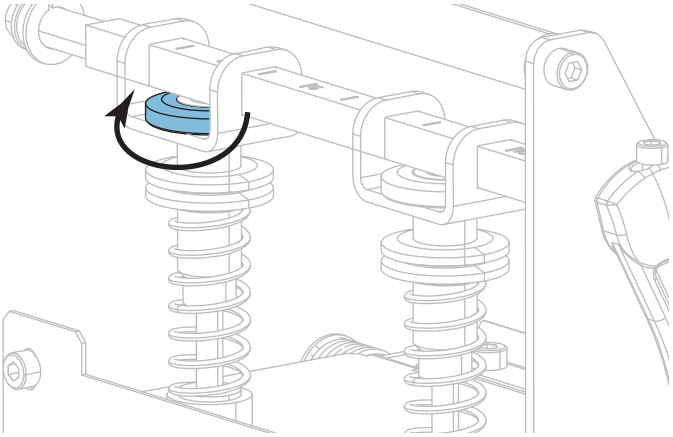
Toggle Position Adjustment

To adjust the printhead toggle positions, complete these steps:

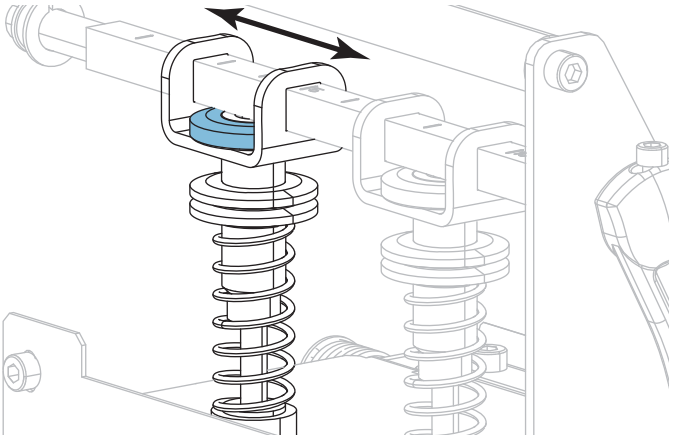
1. Rotate the printhead-open lever upward to lessen the pressure on the toggles.



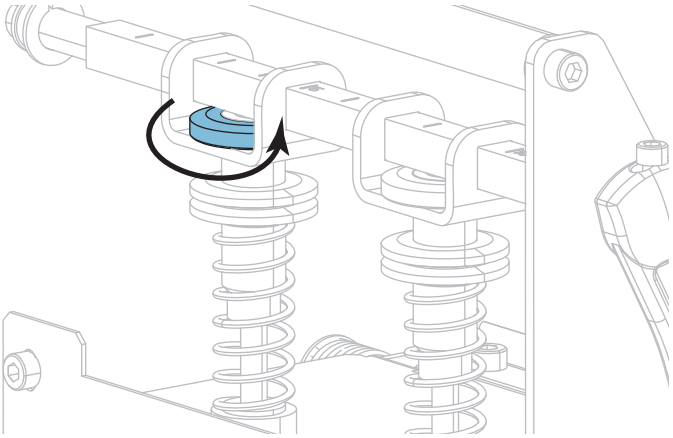
2. Loosen the locking nut at the top of the toggle to be moved.



3. Reposition the toggle as necessary to provide even pressure on the media. For extremely narrow media, position the inside toggle over the center of the media, and decrease the pressure on the outside toggle.



4. Tighten the locking nut.



Printhead Pressure Adjustment

If positioning the toggles properly does not solve a print quality or other issue, try adjusting the printhead pressure. Maximize printhead life by using the lowest pressure that produces the desired print quality.

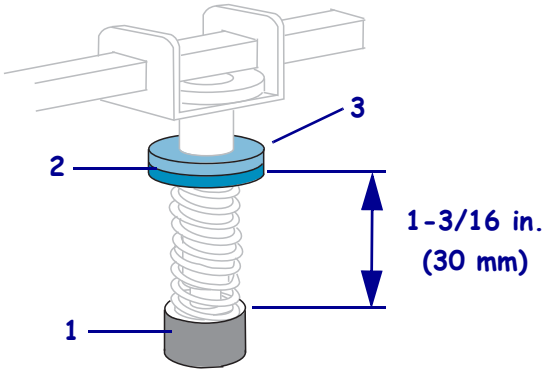
Perform this procedure if you are experiencing any of the following:

- The media requires higher pressure overall to print well
- The media requires lower pressure overall to print well
- The prints is too light on the left side of the label.
- The print is too light on the right side of the label.
- The media shifts left while printing
- The media shifts right while printing

If none of these issues exist, do not continue with this procedure.

To adjust printhead pressure, complete these steps:

1. Equally space the toggles across the width of the media.
2. Measure the distance from the top of the toggle foot (**1**) to the bottom of the lower knurled nut (**2**). If the measurement is not 1-3/16 in. (30 mm), loosen the upper knurled nut (**3**) and adjust the lower knurled nut until the distance is correct.



3. Initiate the PRINT LINE/Pause self test in one of the following ways:
   - Under the TOOLS menu, initiate the PRINT LINE option of the PRINT TEST FORMAT user menu.
   - Turn Off (**O**) the printer, and then press and hold PAUSE while turning the printer back on (**|**).

   Test labels print.
4. While the labels are printing, use the control panel to navigate to the DARNKESS option under the SETTINGS user menu.
5. Lower the darkness setting until the labels are printing gray instead of black.

6. Which of the following issues are you experiencing?

If the media...	Then...
Requires higher pressure overall to print well	Increase the pressure on both toggles.
Requires lower pressure overall to print well	Decrease the pressure on both toggles.
Prints too lightly on the left side of the label.	Increase the pressure on the inside toggle.
Prints too lightly on the right side of the label.	Increase the pressure on the outside toggle.
Shifts left while printing	Increase the pressure on the outside toggle. OR Decrease the pressure on the inside toggle.
Shifts right while printing	Increase the pressure on the inside toggle. OR Decrease the pressure on the outside toggle.

Note • To increase toggle pressure, loosen the upper knurled nut and adjust the lower knurled nut downward. To decrease printhead pressure, loosen the upper knurled nut and adjust the lower knurled nut upward.

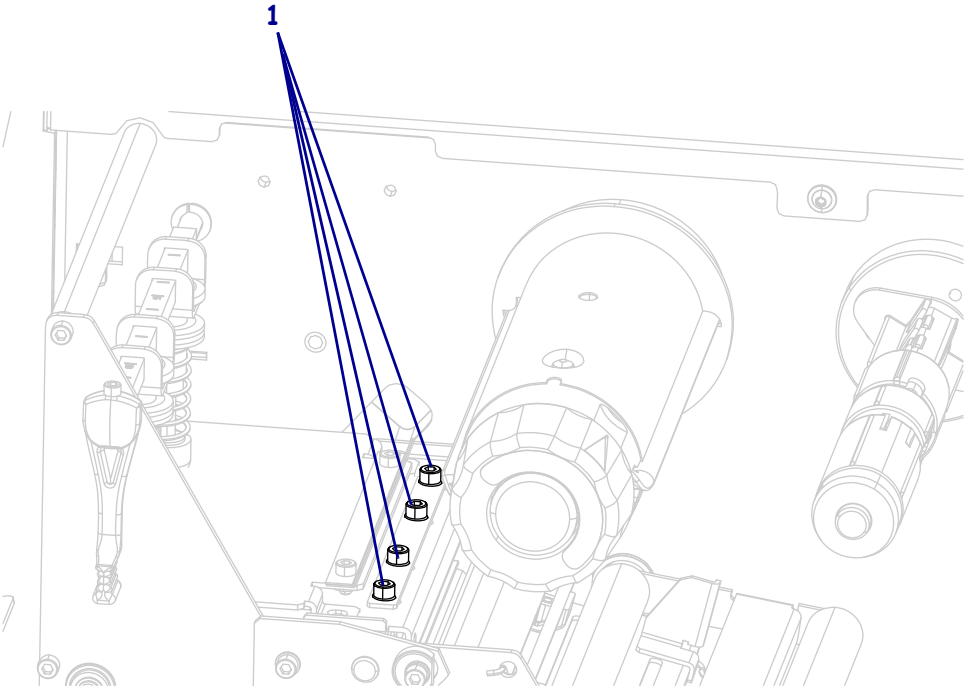
7. Lock the toggle pressure by tightening the upper knurled nut against the lower knurled nut.
8. Reposition the toggles for printing.
9. Press PAUSE to print additional test labels.
10. While the labels are printing, use the control panel to raise the darkness setting until the labels are again printing black instead of gray.
11. Check the print quality, and if necessary, repeat this procedure until the printhead pressure is adequate.
12. Press and hold CANCEL to exit the test sequence.

Adjust Printhead Parallelism

Caution • Printhead parallelism adjustment rarely needs to be performed. Do not perform this adjustment unless you have been trained to do so. If the procedure is not done correctly, print quality will be adversely affected.

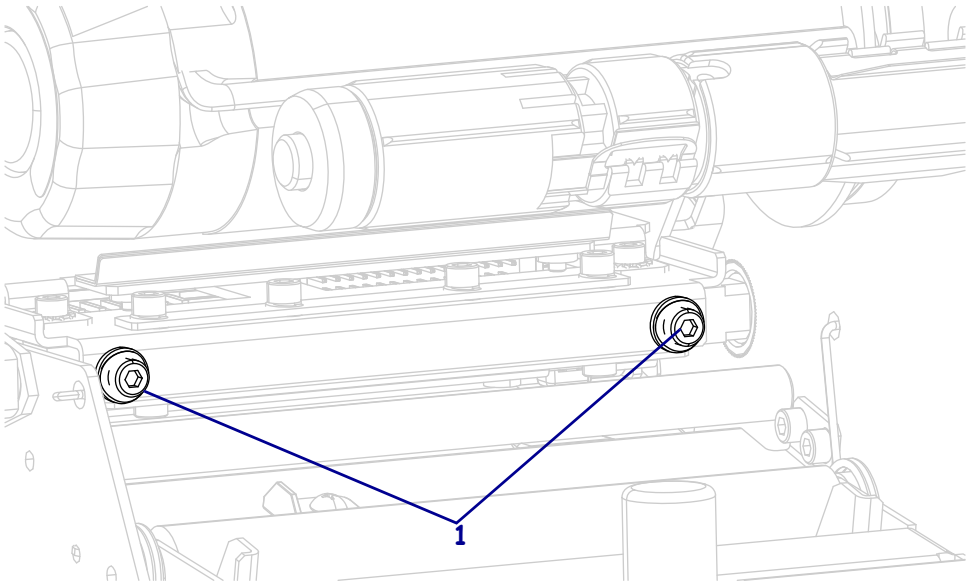
The printhead parallelism adjustment corrects for printing skew. If the lines at the top of the Pause self test labels (see *PRINT LINE* on page 53) are not parallel to the media, this adjustment should be performed.

1. Loosen the four screws (**1**) at the top rear of the print mechanism, just enough to allow movement when the adjustment screws are turned.



2. See Figure 2. Use a hex key to adjust the printhead position.
   a. Press and hold PAUSE while turning on the printer. Test labels start printing.
   b. Turn both adjustment screws (**1**) one-eighth of a turn clockwise or counterclockwise.
   c. Allow a few labels to print, and then press PAUSE to stop printing test labels.
   d. Observe the changes in the parallel lines for print quality.

Figure 2 • Adjust the Printhead Position



3. Press PAUSE to print additional test labels.
4. Turn both screws one-sixteenth of a turn counterclockwise and observe the changes in print quality.
5. Adjust the screws equally until the best print quality is obtained.
6. Press PAUSE to stop printing test labels.
7. Adjust one side as necessary to align the uppermost line of the test label parallel with the top edge of the label.

Note • Turning the adjustment screws clockwise moves the printhead toward the front of the printer, while turning the adjustment screws counterclockwise moves the printhead toward the back of the printer.

8. To check the results of your adjustments, run additional test labels and check for proper parallelism.
9. When parallelism is achieved, tighten the four screws at the top of the printhead.
10. Run additional test labels to verify proper positioning.
11. Press and hold CANCEL to exit the test sequence.

Adjust the Wear Plate

Note • Adjust the wear plate eccentric pin clockwise to increase pressure on the main frame side of the label or adjust it counterclockwise to increase pressure on the outboard side of the printer.

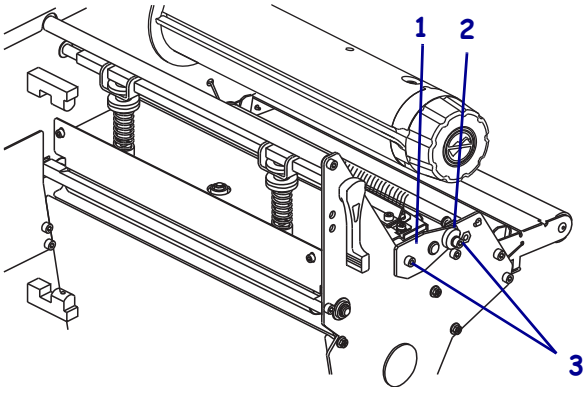
1. Equally space the toggles from center of media across the width of the media.
2. Initiate the PRINT LINE/Pause self test in one of the following ways:
   - Under the TOOLS menu, initiate the PRINT LINE option of the PRINT TEST FORMAT user menu.
   - Turn Off (**O**) the printer, and then press and hold PAUSE while turning the printer back on (**|**).

   Test labels print.
3. While the labels are printing, use the control panel to navigate to the DARNKESS option under the SETTINGS user menu.
4. Lower the darkness setting until the labels are printing gray instead of black.
5. Press PAUSE to stop printing test labels.
6. Print additional test labels while adjusting the wear plate eccentric pin and check for even printing.
   a. See Figure 3. If necessary, adjust the wear plate eccentric pin by turning it by hand or with an open-end wrench or pliers. Make very small adjustments and check the results.

Note • Wear plate adjustments can adversely affect all adjustments. Additional adjustments may be necessary.

   b. When even print quality is achieved, hold the wear plate eccentric pin in position and tighten the two wear plate screws.

Figure 3 • Adjust the Wear Plate



1	Wear plate
2	Eccentric pin
3	Wear plate screws (2)

7. Press PAUSE to print additional test labels.
8. Verify even printing and parallelism.
9. If parallelism is out of tolerance, go to *Adjust Printhead Parallelism* on page 20.
10. When no other adjustment is required, tighten the two adjustment plate mounting screws.
11. Press and hold CANCEL to exit the test sequence.

Adjust the Print Line Position

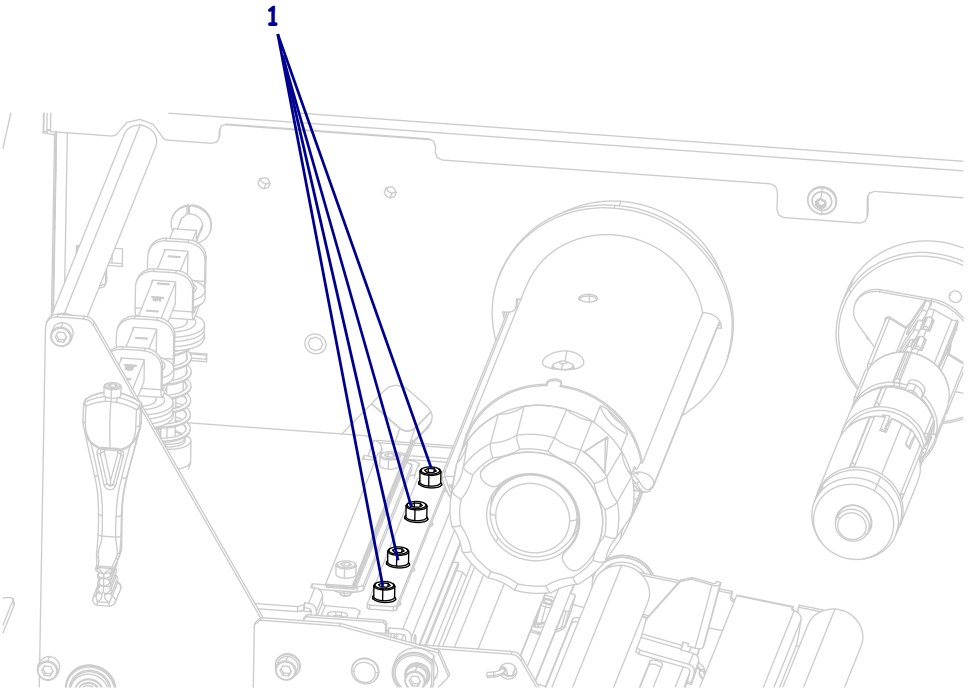
Caution • Other than toggle pressure, printhead adjustments rarely need to be performed, even after replacing the printhead. These adjustments should be performed only by a qualified technician who has been specifically trained. Do not perform these adjustments unless you have been trained to do so.

Adjusting the printhead position moves the printhead with respect to the platen for optimum print quality. If satisfactory print quality cannot be achieved or can be achieved only with higher than normal darkness settings or higher than normal printhead pressure, the printhead may not be in the proper position.

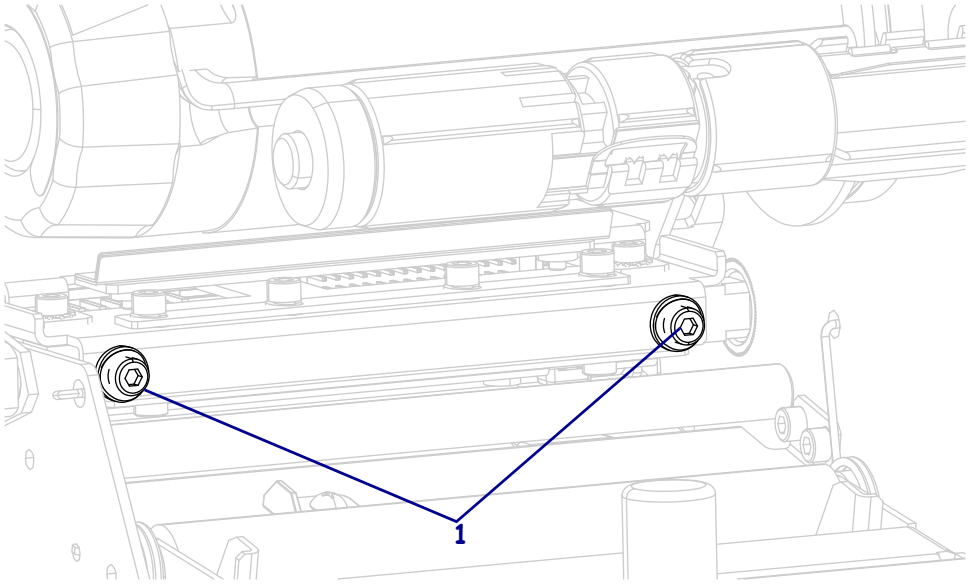
Note • The thermal elements of the printhead should be aligned just behind top dead center of the platen roller.

1. Initiate the PRINT LINE/Pause self test in one of the following ways:
   - Under the TOOLS menu, initiate the PRINT LINE option of the PRINT TEST FORMAT user menu.
   - Turn Off (**O**) the printer, and then press and hold PAUSE while turning the printer back on (**|**).

   Test labels print.
2. Loosen the four screws (**1**) at the top rear of the print mechanism, just enough to allow movement when the adjustment screws are turned.



3. Use a hex key to adjust the printhead position. Turn both adjustment screws (**1**) one-eighth of a turn clockwise or counterclockwise, and observe the changes in print quality.



4. Turn both screws one-sixteenth of a turn counterclockwise and observe the changes in print quality.

Note • Turning the adjustment screws clockwise moves the printhead toward the front of the printer, while turning the adjustment screws counterclockwise moves the printhead toward the back of the printer. Due to spring pressure, there may be a no movement spot in the actual printhead movement when changing adjustment direction. Both adjustment screws must be turning in the same direction when approaching the optimum print quality.

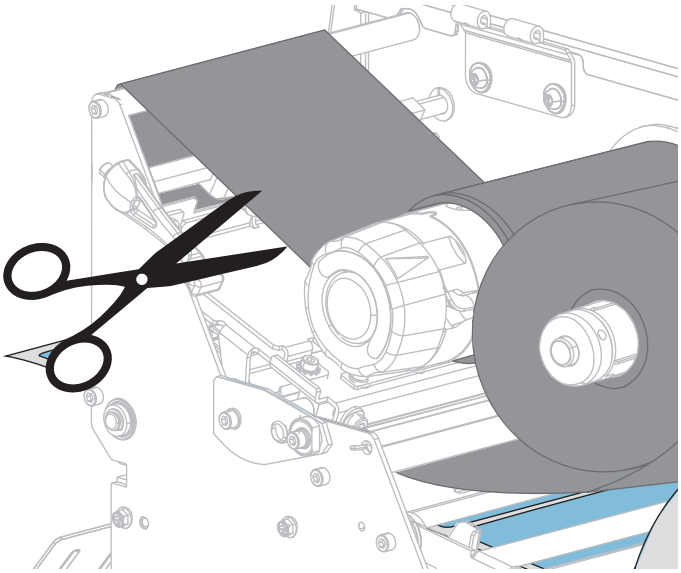
5. Continue to make small adjustments until the best quality is achieved.
6. Press PAUSE to stop printing test labels.
7. Use the control panel to navigate to the DARNKESS option under the SETTINGS user menu.
8. Press PAUSE to resume printing test labels.
9. Lower the darkness setting until the labels are printing gray instead of black.
10. Inspect the test labels for streaks and other print quality problems.
11. If required, adjust the printhead position until print quality problems are corrected.
12. Press PAUSE to print additional test labels.
13. While the labels are printing, use the control panel to raise the darkness setting until the labels are again printing black instead of gray.
14. When acceptable print quality is achieved, tighten the four screws at the top of the printhead.
15. Press PAUSE to resume printing test labels. Verify proper positioning and that all adjustments are correct.

Remove Used Ribbon

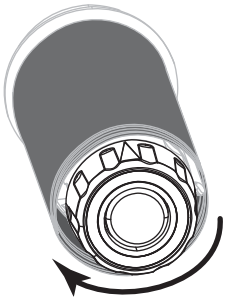
At minimum, remove used ribbon from the ribbon take-up spindle each time you change the roll of ribbon. With ribbon that is half or less the width of the printhead, remove used ribbon each time you load a new roll of media. This ensures that uneven pressure on the ribbon take-up spindle does not interfere with the ribbon release bars on the spindle.

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.  **Caution** • Do not cut the ribbon directly on the ribbon take-up spindle. Doing so may damage the spindle.

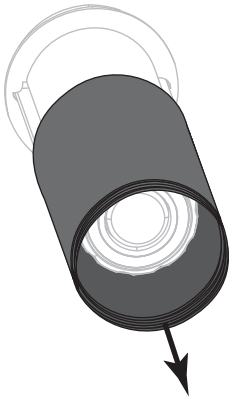
2. While holding the ribbon take-up spindle, turn the ribbon release knob to the left until it stops.



The ribbon release bars pivot down, easing the spindle's grip on the used ribbon.

3. After the ribbon release bars have pivoted down, if possible, turn the ribbon take-up spindle one full to the right to help loosen the ribbon on the spindle.

4. Slide the used ribbon off of the ribbon take-up spindle and discard.
5. Reload the ribbon. For instructions, refer to the *User Guide*.



Preventive and Corrective Maintenance

This section provides routine cleaning and maintenance procedures.

Contents

Cleaning Schedule and Procedures. 30
Clean the Exterior, the Media Compartment, and the Sensors 31
Clean the Printhead and Platen Roller. 32
Clean and Lubricate the Cutter Module 36
Replacing Printer Components 45
Ordering Replacement Parts 45
Recycling Printer Components 45
Lubrication 45

Cleaning Schedule and Procedures

Routine preventive maintenance is a crucial part of normal printer operation. By taking good care of your printer, you can minimize the potential problems that you might have with it and help to achieve and to maintain your standards for print quality.

Over time, the movement of media or ribbon across the printhead wears through the protective ceramic coating, exposing and eventually damaging the print elements (dots). To avoid abrasion:

- Clean the printhead frequently.
- Minimize printhead pressure and burn temperature (darkness) settings by optimizing the balance between the two.
- When using Thermal Transfer mode, ensure that the ribbon is as wide or wider than the media to prevent exposing the printhead elements to the more abrasive label material.

Note • Zebra is not responsible for damage caused by the use of cleaning fluids on this printer.

Specific cleaning procedures are provided on the following pages. Table 1 shows the recommended cleaning schedule. These intervals are intended as guidelines only. You may have to clean more often, depending upon your application and media.

Table 1 • Recommended Cleaning Schedule

Area		Method	Interval
Printhead		Solvent*	**Direct Thermal Mode:** After every roll of media (or 500 feet of fanfold media). **Thermal Transfer Mode:** After every roll of ribbon.
Platen roller		Solvent*	
Media sensors		Air blow	
Ribbon sensor		Air blow	
Media path		Solvent*	
Ribbon path		Solvent*	
Pinch roller (part of Peel-Off option)		Solvent*	
Cutter module	If cutting continuous, pressure-sensitive media	Solvent*	After every roll of media (or more often, depending upon your application and media).
	If cutting tag stock or label liner material	Solvent* and air blow	After every two or three rolls of media.
Tear-off/peel-off bar		Solvent*	Once a month.
Take-label sensor		Air blow	Once every six months.

* Zebra recommends using the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 - multipack). In place of this kit, you may use a clean swab dipped in 99.7% isopropyl alcohol.

Clean the Exterior, the Media Compartment, and the Sensors

Over time, dust, grime, and other debris may build up on the outside and inside of your printer, particularly in a harsh operating environment.

Printer Exterior

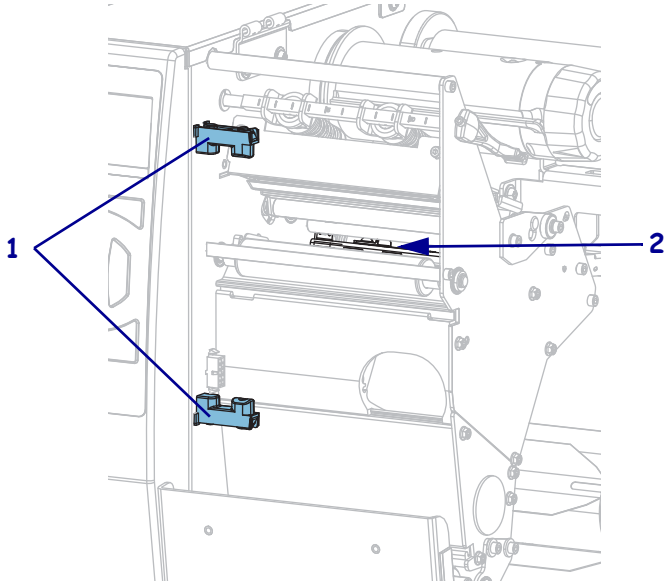
You may clean the exterior surfaces of the printer with a lint-free cloth and a small amount of a mild detergent, if necessary. Do not use harsh or abrasive cleaning agents or solvents.

Important • Zebra is not responsible for damage caused by the use of cleaning fluids on this printer.

Media Compartment and Sensors

To clean the sensors, complete these steps:

1. Brush, air blow, or vacuum any accumulated paper lint and dust away from the media and ribbon paths and the sensors.



1	Take-label sensor
2	Snap plate

Clean the Printhead and Platen Roller

Inconsistent print quality, such as voids in the barcode or graphics, may indicate a dirty printhead. For the recommended cleaning schedule, see Table 1 on page 30.

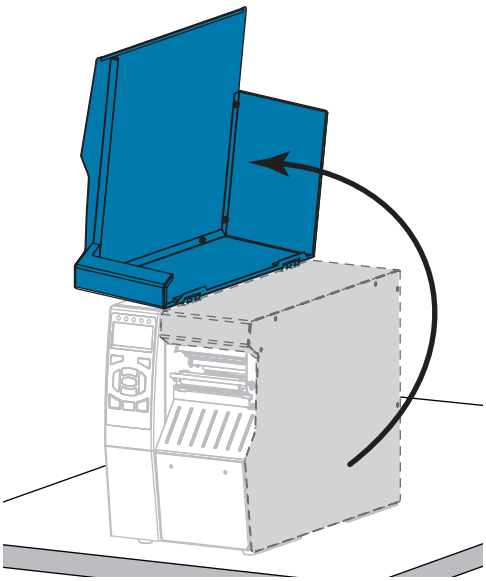
Caution • While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead. You are not required to turn off the printer power when working near an open printhead, but Zebra recommends it as 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.

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

Caution • Before touching the printhead assembly, discharge any built-up static electricity by touching the metal printer frame or by using an antistatic wriststrap and mat.

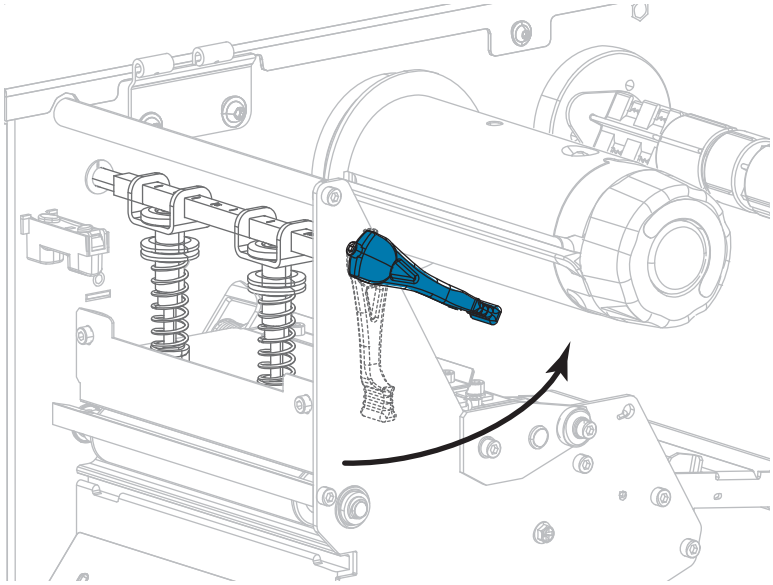
To clean the printhead and platen roller, complete these steps:

1. Raise the media door.



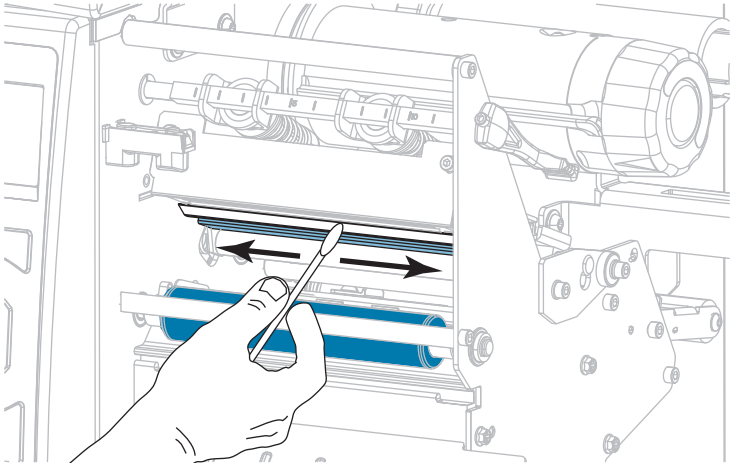
2. **Caution •** The printhead may be hot and could cause severe burns. Allow the printhead to cool.

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

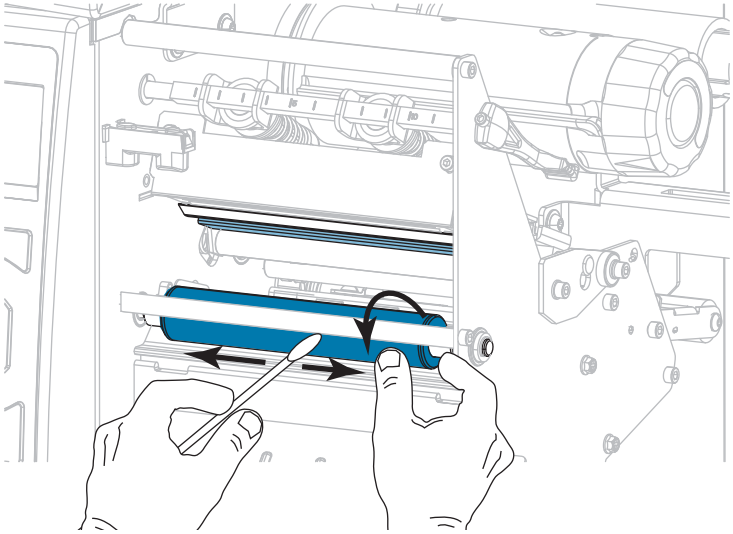


3. Remove the ribbon (if used) and the media.

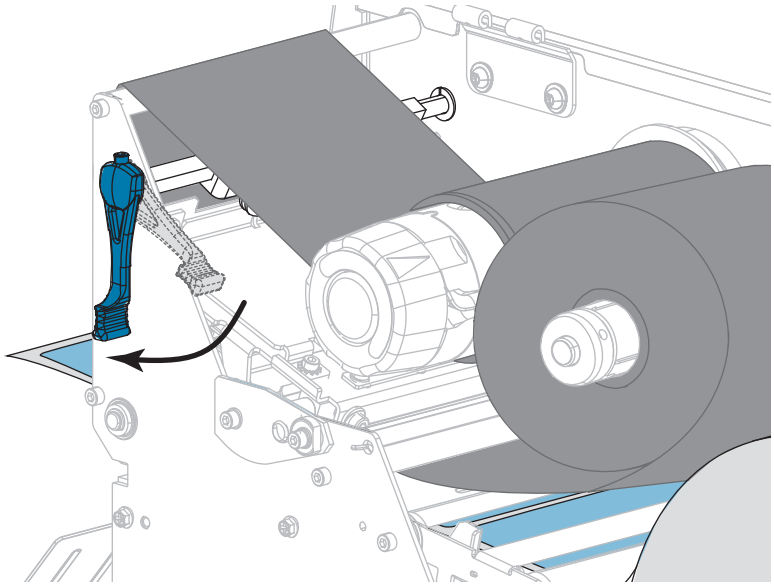
4. Using the swab from a Zebra Preventive Maintenance Kit, wipe along the brown strip on the printhead assembly from end to end. In place of the Preventive Maintenance Kit, you may use a clean swab dipped in 99.7% isopropyl alcohol. Allow the solvent to evaporate.



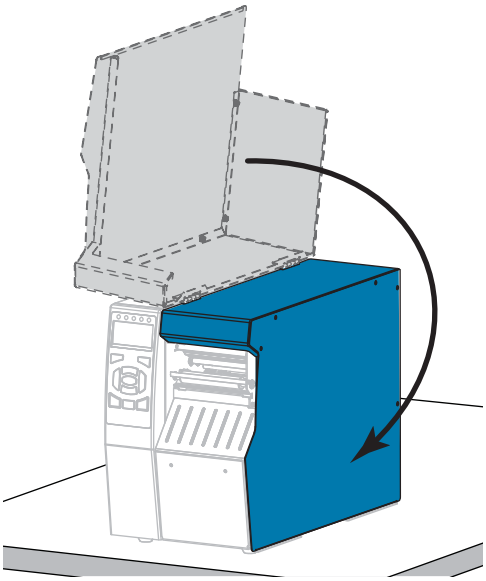
5. While manually rotating the platen roller, clean it thoroughly with the swab. Allow the solvent to evaporate.



6. Reload the ribbon (if used) and the media. Refer to the User Guide for instructions.
7. Rotate the printhead-open lever downward until it locks the printhead in place.



8. Close the media door.



The printer is ready to operate.

9. Press PAUSE to exit pause mode and enable printing.

   The printer may perform a label calibration or feed a label, depending on your settings.

Note • If performing this procedure does not improve print quality, try cleaning the printhead with *Save-A-Printhead* cleaning film. This specially coated material removes contamination buildup without damaging the printhead. Call your authorized Zebra reseller for more information.

Clean and Lubricate the Cutter Module

If the cutter is not cutting the labels cleanly or if it jams with labels, clean the cutter blades. After cleaning the blades, apply lubrication to them to help extend the life of your cutter module.

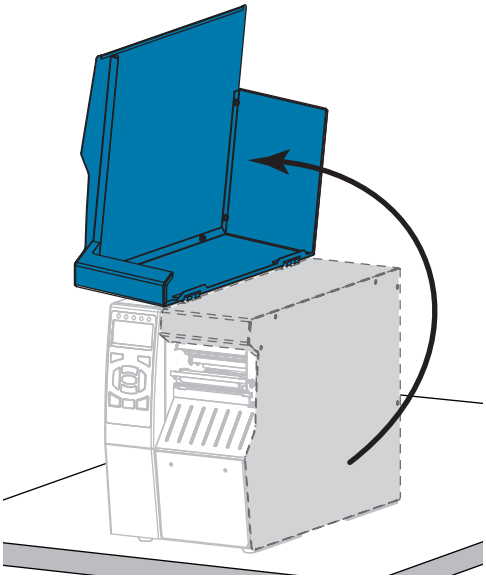
Caution • For personnel safety, always power off and unplug the printer before performing this procedure.

To clean the cutter module, complete these steps:

1. **Caution •** Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

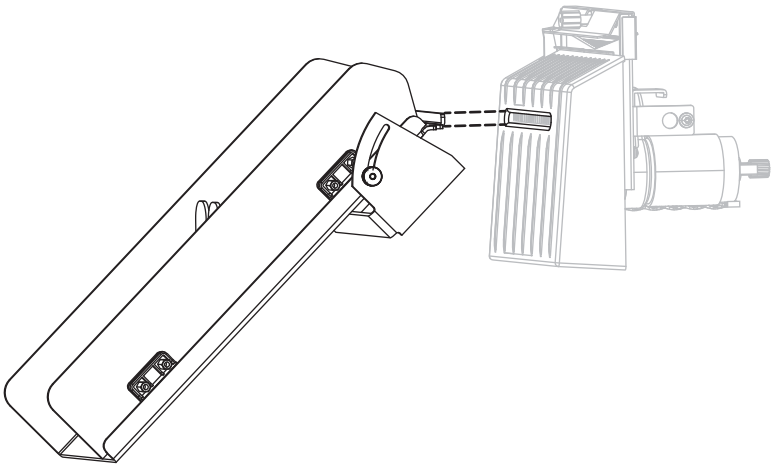
   Turn off (**O**) the printer and disconnect the AC power cord.

2. Raise the media door.

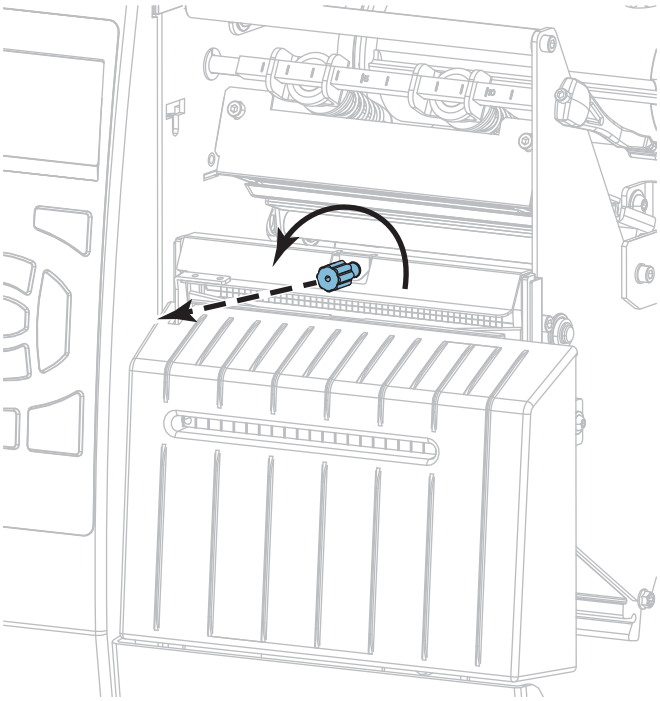


3. Remove the media from the cutter module.

4. Remove the cutter catch tray (if used).

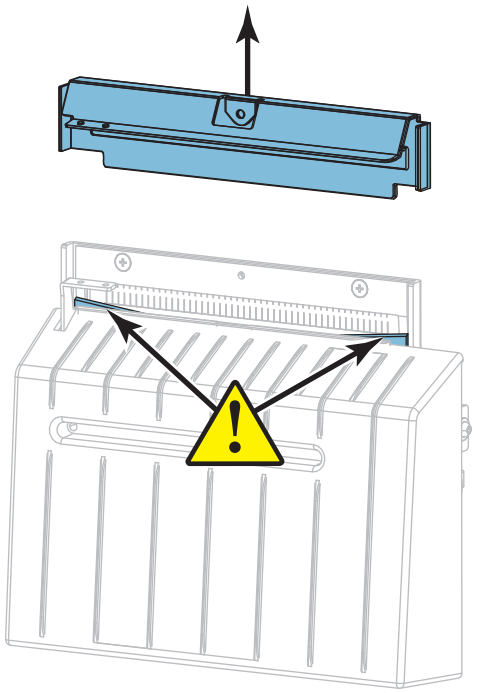


5. Loosen and remove the thumbscrew and lock washer on the cutter shield.



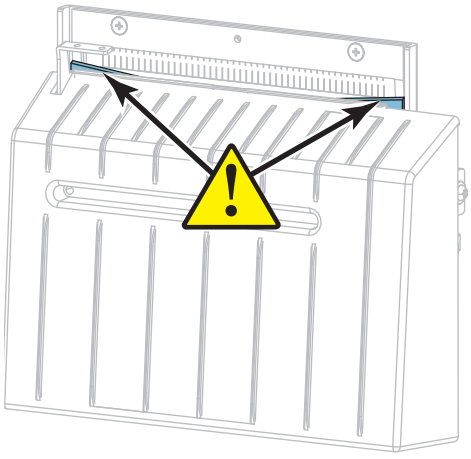
6. **Caution** • The cutter blade is sharp. Do not touch or rub the blade with your fingers.

   Remove the cutter shield.

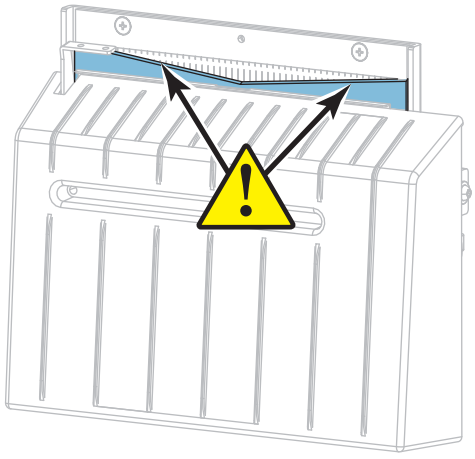


7. Is the cutter blade fully exposed?

Blade in lowered position



Blade fully exposed

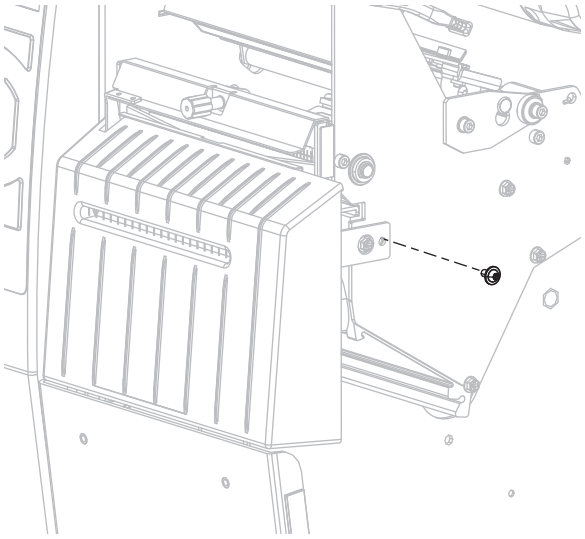


If the blade is…	Then…
Lowered	Continue with step 8 to remove the cutter module from the printer so that you can rotate the blade upward.
Fully exposed	Skip to step 9 on page 41.

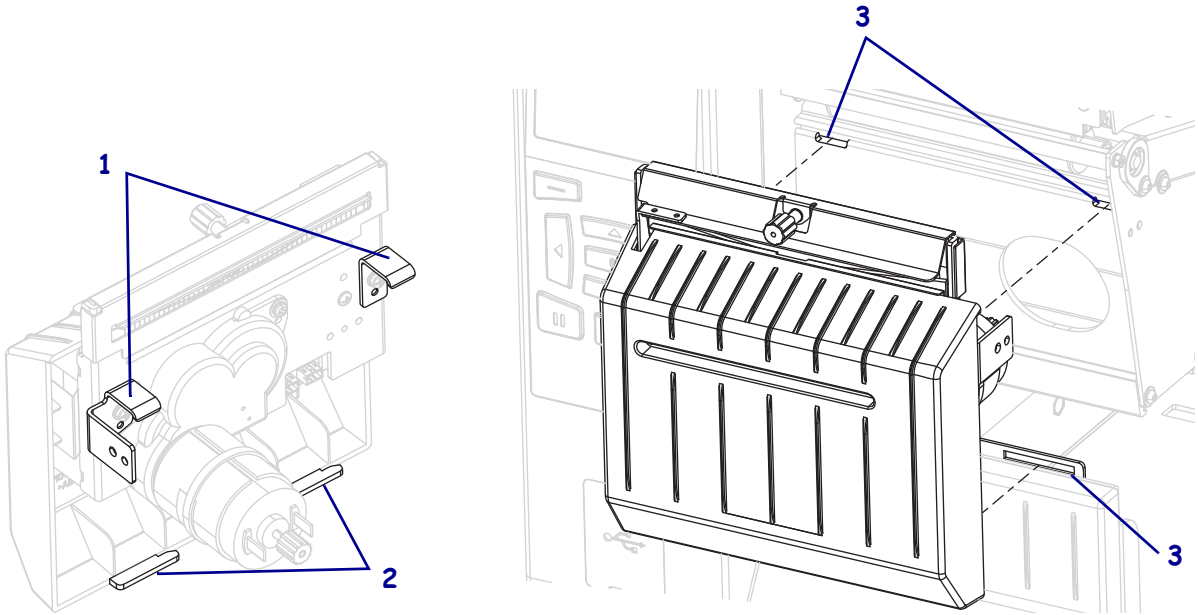
8.

Important • This part of the procedure should be performed only by experienced users and only when the cutter blade is not fully exposed for cleaning, as shown in the previous step.

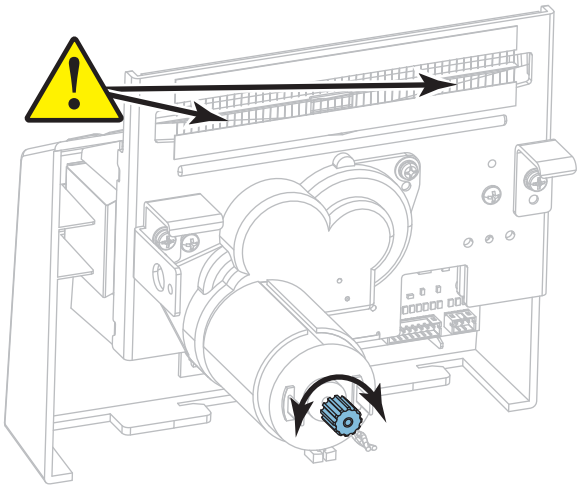
8-a. Remove the cutter mounting screw.



8-b. Slide the cutter module to the right to align the cutter assembly tabs (**1**) and cutter cover tabs (**2**) with the corresponding slots (**3**) in the printer, and then lift the cutter module out of the printer. Take care not to damage the wires that connect the cutter module to the printer. If desired, you may disconnect these wires.

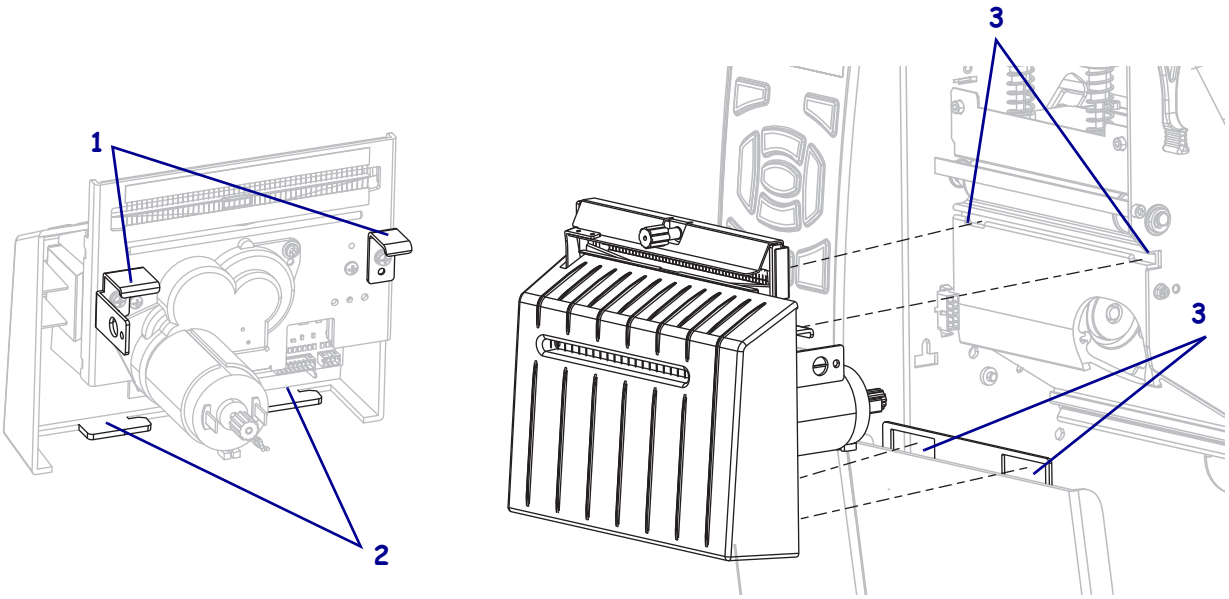


8-c. On the back of the cutter module, rotate the cutter motor thumbscrew to fully expose the cutter blade.

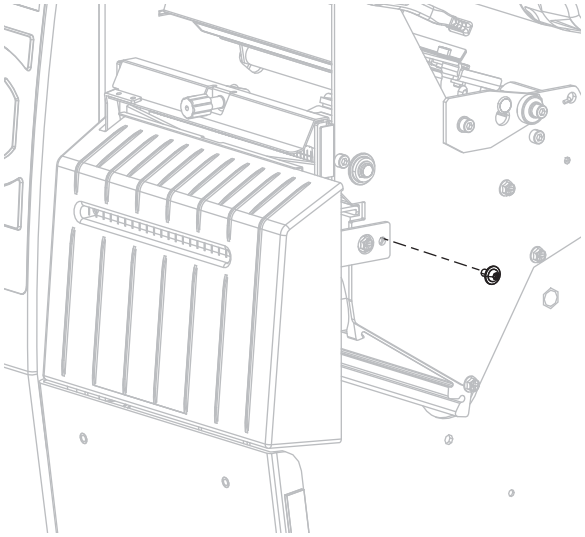


8-d. If you disconnected the wires that connect the cutter module to the printer, reconnect them.

8-e. Align the cutter assembly tabs (**1**) and cutter cover tabs (**2**) with the corresponding slots (**3**) in the printer, and then slide the cutter assembly back into the printer. Take care not to damage the wires that connect the cutter module to the printer.

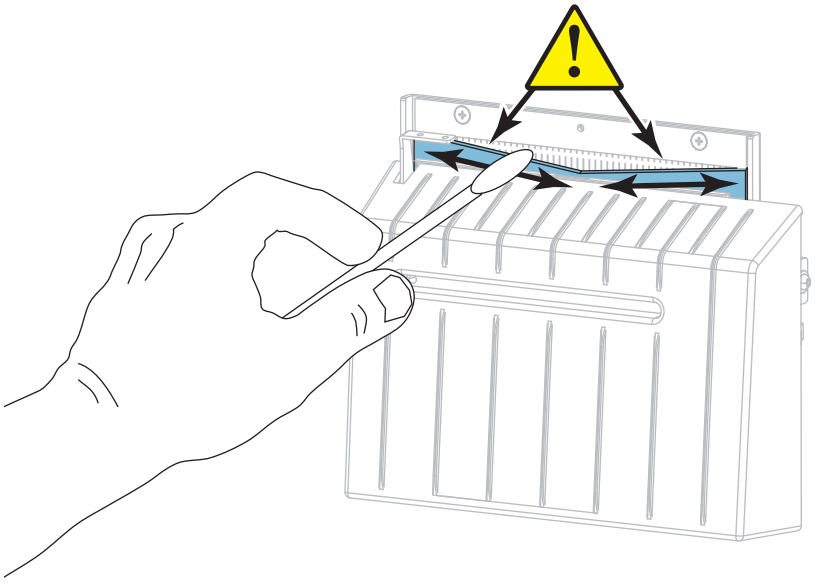


8-f. Slide the cutter module to the left, and then reinstall the cutter mounting screw.

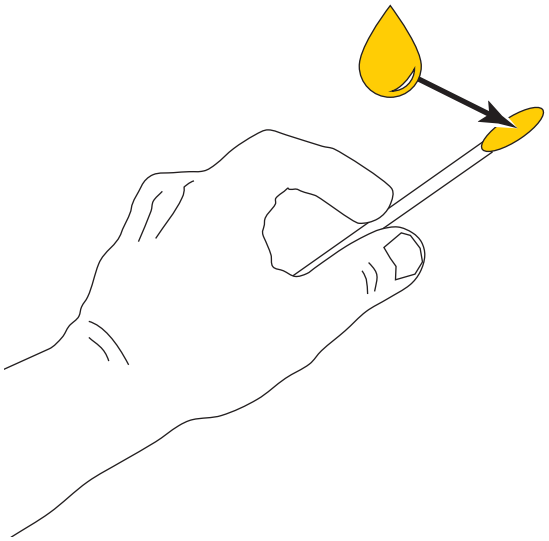


8-g. Continue with step 9.

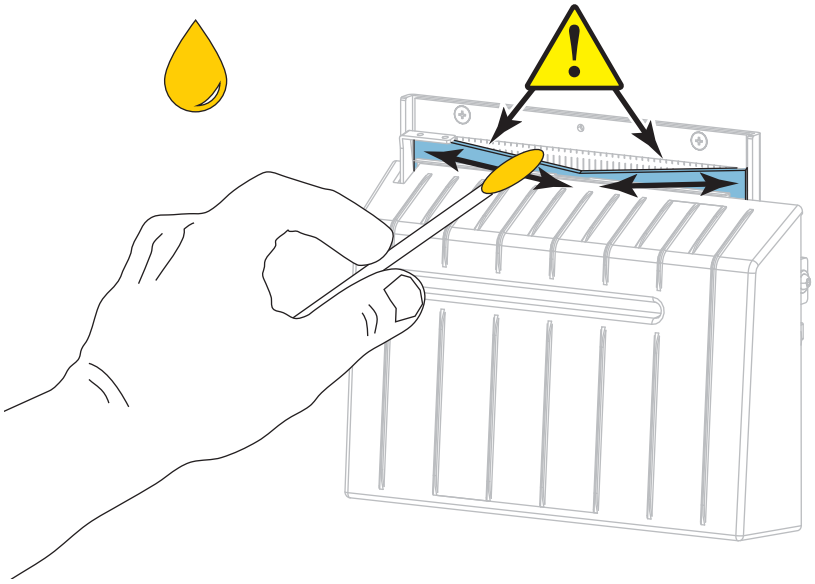
9. Using the swab from the Preventive Maintenance Kit (part number 47362), wipe along the upper cutting surface (**1**) and the cutter blade (**2**). In place of the Preventive Maintenance Kit, you may use a clean swab dipped in 99.7% isopropyl alcohol. Allow the solvent to evaporate.



10. When the solvent has evaporated, soak a clean swab in a general-purpose, higher-viscosity silicone or PTFE oil lubricant.

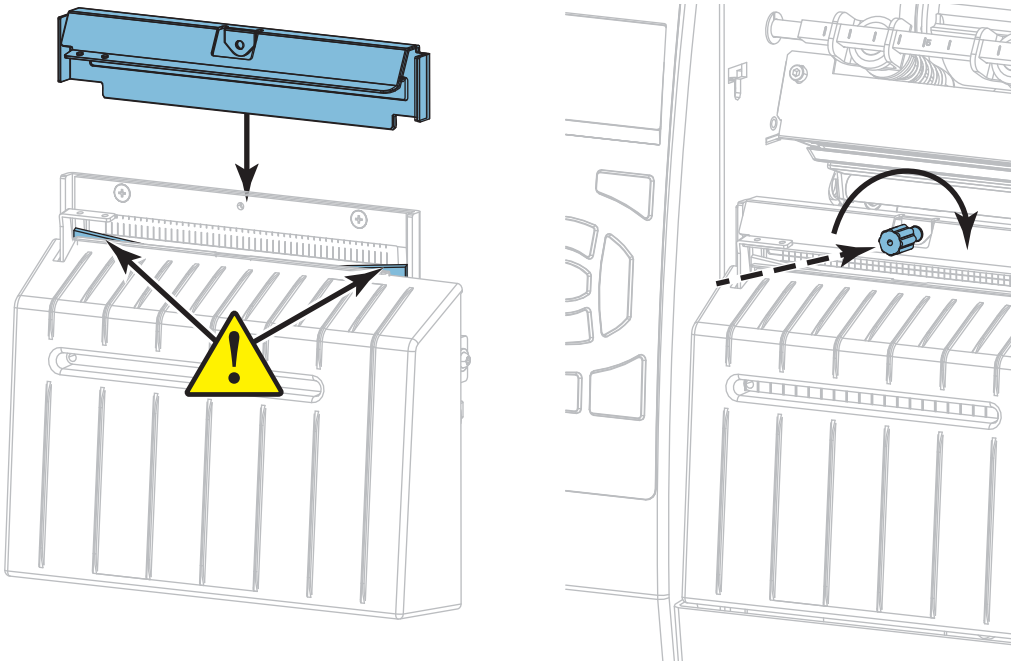


11. Apply an even layer along all exposed surfaces of both cutter blades. Remove any excess oil so that none of it comes in contact with the printhead or platen roller.



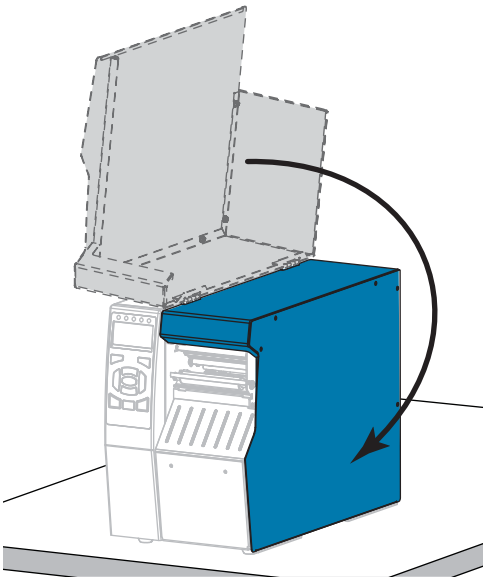
12. **Caution** • The cutter blade is sharp. For operator safety, replace the cutter shield.

    Replace the cutter shield and secure it with the thumbscrew and lock washer that you removed earlier.



13. Reinstall the media.

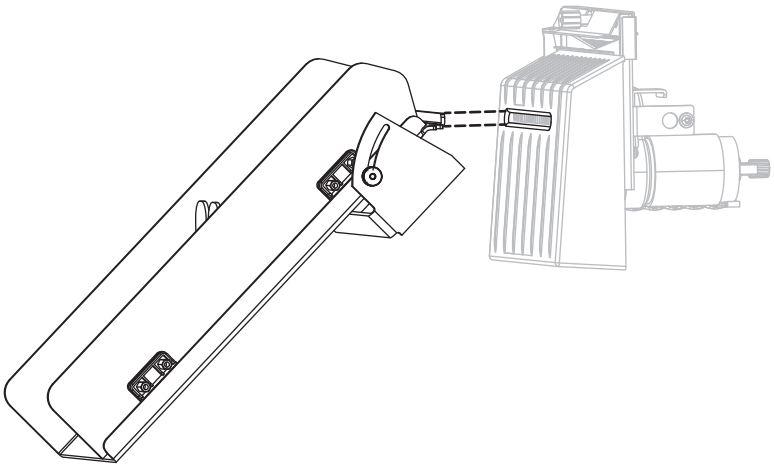
14. Close the media door.



15. Plug the printer into its power source, and then turn on (**I**) the printer.

    The cutter blade returns to its operating position.

16. Reinstall the cutter catch tray (if used).



17. If the cutter continues to perform unsatisfactorily, contact an authorized service technician.

Replacing Printer Components

Some printer components, such as the printhead and platen roller, may wear out over time and can be replaced easily. Regular cleaning may extend the life of some of these components. See Table 1 on page 30 for the recommended cleaning intervals.

Ordering Replacement Parts

For optimal printing quality and proper printer performance across our product line, Zebra strongly recommends the use of genuine Zebra™ supplies as part of the total solution. Specifically, the ZT500 Series printers are designed to work only with genuine Zebra™ printheads, thus maximizing safety and print quality.

Recycling Printer Components

The majority of this printer's components are recyclable. The printer's main logic board may include a battery that you should dispose of properly.

Do not dispose of any printer components in unsorted municipal waste. Please dispose of the battery according to your local regulations, and recycle the other printer components according to your local standards. For more information, see http://www.zebra.com/environment.

Lubrication

The only lubrication needed for this printer is for the cutter module. Follow the instructions in *Clean and Lubricate the Cutter Module* on page 36. Do not lubricate any other parts of the printer.

Caution • Some commercially available lubricants will damage the finish and the mechanical parts if used on this printer.

Diagnostics and Troubleshooting

This section provides diagnostic tests and other information that may help you to optimize printing or to troubleshoot issues with your printer.

For videos of some common procedures, go to http://www.zebra.com/zt500-info.

Contents

QR Codes and QuickHelp Pages 48
Judging Barcode Quality 49
Printer Diagnostic Tests 51
- Print Test Format Option 51
- Optimal Darkness and Speed Test 56
- Communication Diagnostics Test 58
- Sensor Profile 59

Troubleshooting 63
- Indicator Lights 61
- Alerts and Error Messages 63
- Printing Issues 70
- Ribbon Issues 72
- Communications Issues 74
- Miscellaneous Issues 75

QR Codes and QuickHelp Pages

With many alerts or error messages, the printer includes the option to view a QuickHelp page from a smartphone. When this option is available, the lower right-hand corner of the alert or error message displays **QR**.

To access a QuickHelp page from an error message, do the following:

1. While the message is on the screen, press RIGHT SELECT to select **QR**.

   The printer displays a QuickHelp page specific to that error message. This page includes a QR code, such as this.

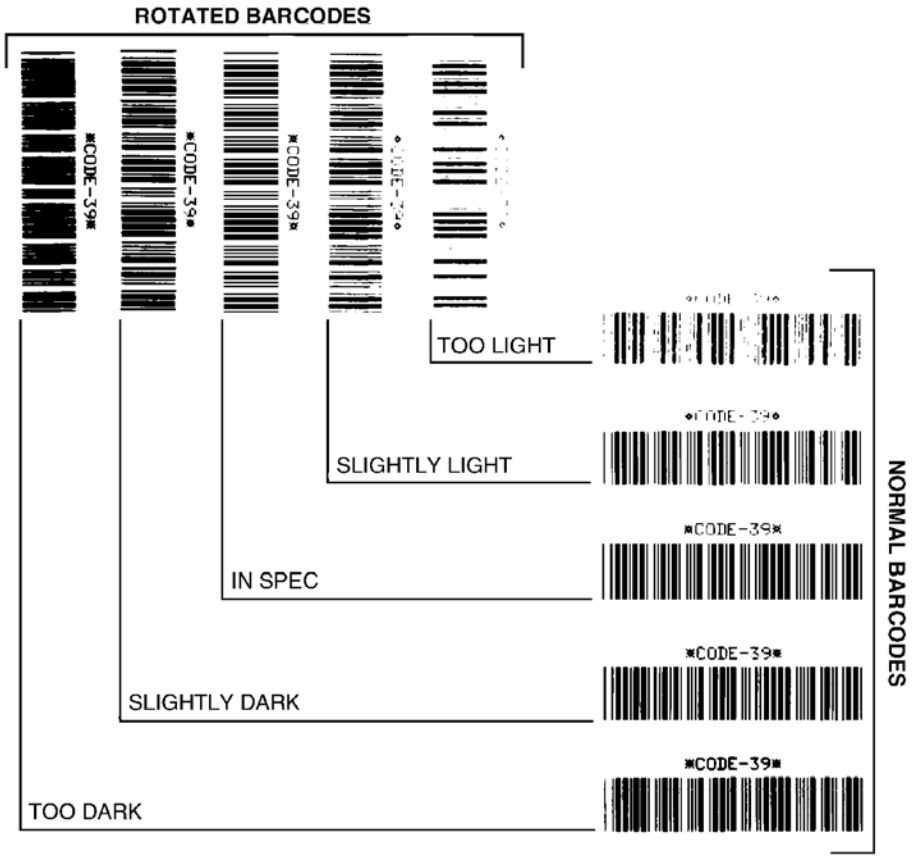
2. Scan the QR code with a smartphone.

   Your phone accesses either a video specific to that error message or the Zebra support page for your printer.

Judging Barcode Quality

Figure 4 shows how printer settings such as darkness and print speed can affect the quality of barcodes. Set the print darkness to the lowest setting that provides good print quality. Tests such as the *Print Test Format Option* on page 51 and the *Optimal Darkness and Speed Test* on page 56 can be used to help determine the optimal settings for your printer and media.

Figure 4 • Barcode Darkness Comparison



Too Dark Labels that are too dark are fairly obvious. They may be readable but not "in-spec."

- The normal barcode bars increase in size.
- The openings in small alphanumeric characters may fill in with ink.
- Rotated barcode bars and spaces run together.

Slightly Dark Slightly dark labels are not as obvious.

- The normal barcode will be "in-spec."
- Small character alpha numerics will be bold and could be slightly filled in.
- The rotated barcode spaces are small when compared to the "in-spec" code, possibly making the code unreadable.

“In-Spec” The “in-spec” barcode can only be confirmed by a verifier, but it should exhibit some visible characteristics.

- The normal barcode will have complete, even bars and clear, distinct spaces.
- The rotated barcode will have complete, even bars and clear, distinct spaces. Although it may not look as good as a slightly dark barcode, the barcode will be “in-spec.”
- In both normal and rotated styles, small alphanumeric characters look complete.

Slightly Light Slightly light labels are, in some cases, preferred to slightly dark ones for “in-spec” barcodes.

- Both normal and rotated barcodes will be in spec, but small alphanumeric characters may not be complete.

Too Light Labels that are too light are obvious.

- Both normal and rotated barcodes have incomplete bars and spaces.
- Small alphanumeric characters are unreadable.

Printer Diagnostic Tests

Diagnostic tests provide specific information about the condition of the printer and its components. The resulting printouts provide information that helps to determine the optimal operating conditions for the printer as well as to troubleshoot any issues.

Important • When performing the diagnostic tests in this section, do not send data to the printer from the host.

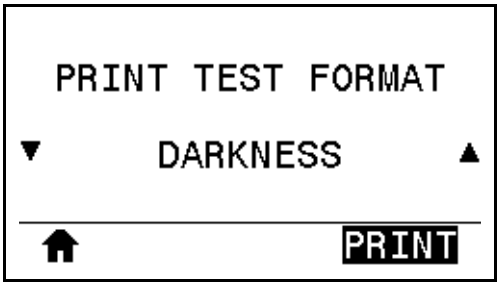
Note :

- For best results, use full-width media when performing these diagnostic tests.
- If your media is shorter than the image to be printed, the image extends onto multiple labels.

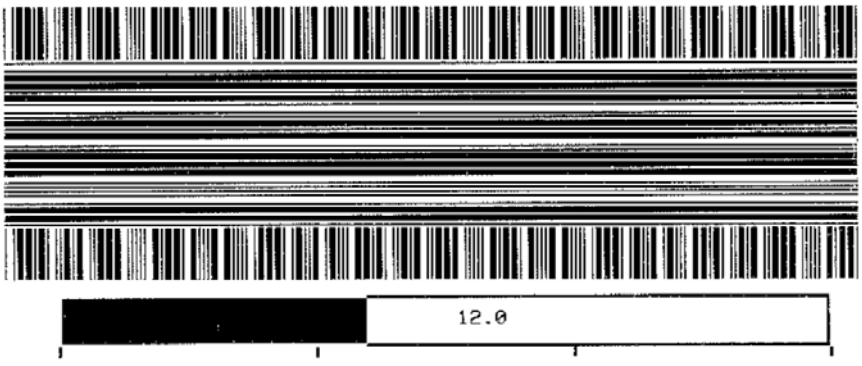
Print Test Format Option

The PRINT TEST FORMAT option can be used to print various labels that can assist you with troubleshooting or with making adjustments to your printer. This section describes the selections for this option.

DARKNESS

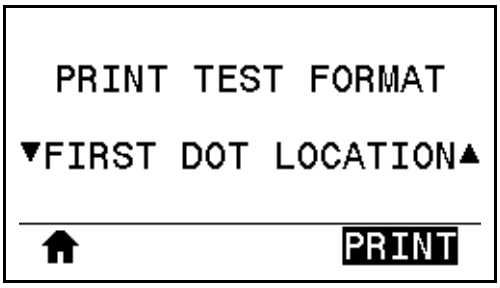


The printer repeats printing an image with incrementing darkness levels. Press CANCEL to stop the printing process at any time when the pattern is clear and legible.

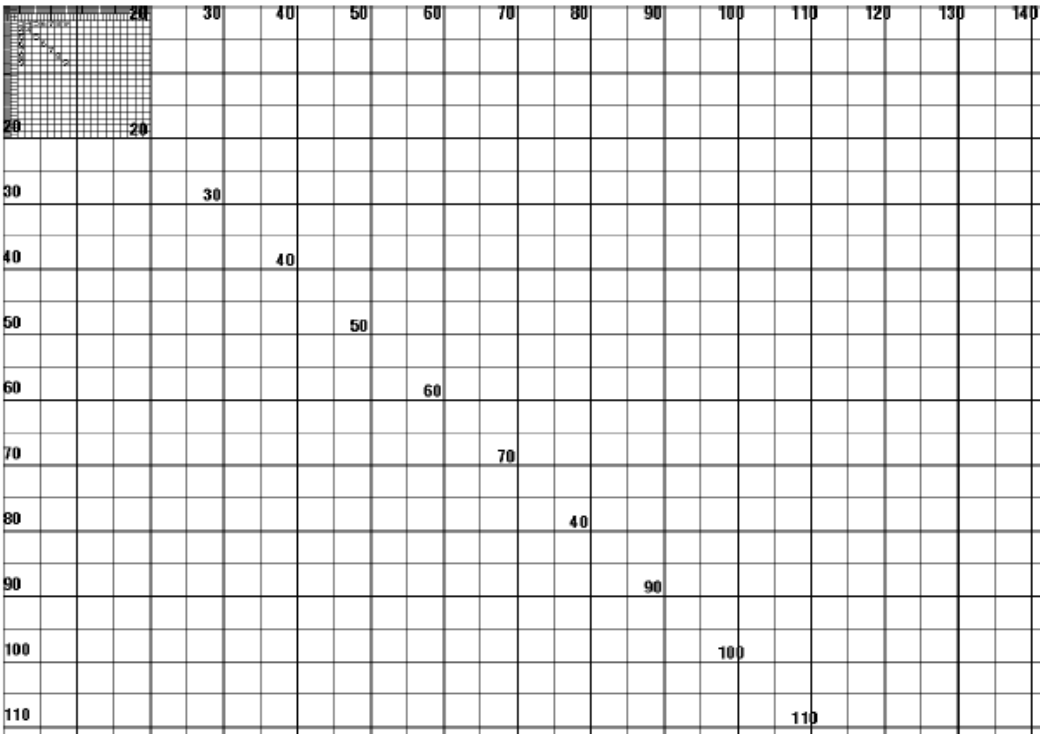


Use the numbers on the images to determine the best print darkness. If necessary, change your darkness setting to the one that gave you the best results on the above labels.

FIRST DOT LOCATION

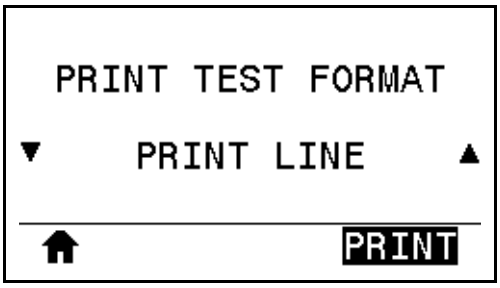


The printer prints an image to assist you with adjusting the position of the image on your labels, if necessary. The lines on the image print from the label top and left edge to identify what should be the top-left corner of the label.



If necessary, modify the TEAR OFF and LEFT POSITION user menu items to adjust the image location.

PRINT LINE



The printer initiates a test sequence that prints an ink/printhead test image multiple times and at varying speeds. These test labels can be used when making adjustments to the printer's mechanical assemblies or to determine if any printhead elements are not working.

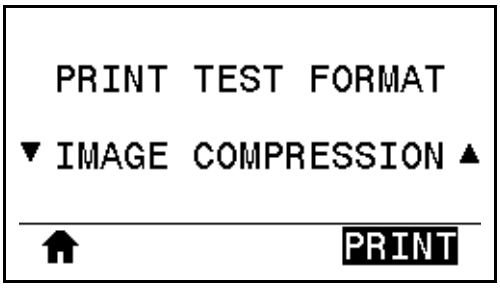
During each phase of the test sequence, the printer prints a number of labels at a particular speed and then pauses.

- Press PAUSE to print additional labels at the same speed.
- Press CANCEL to move to the next phase of the test sequence.
- Press and hold CANCEL to exit the test sequence.

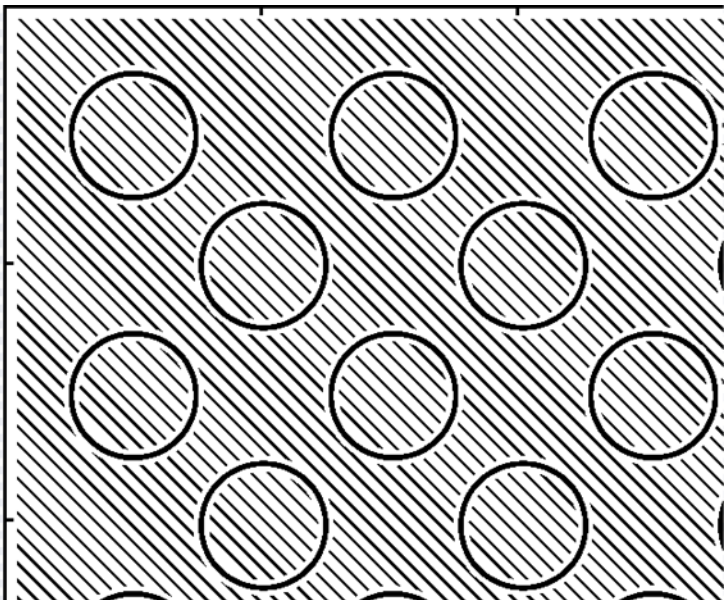
Phase	Number of Labels Printed Each Time	Print Speed
1	15 labels	the printer's slowest speed
2	15 labels	6 in. (152 mm) per second
3	50 labels	the printer's slowest speed
4	50 labels	6 in. (152 mm) per second
5	50 labels	the printer's maximum speed

As an alternate way to initiate the PRINT LINE test sequence, reboot the printer while holding PAUSE. Release PAUSE when the first control panel light turns off. (Formerly called a PAUSE self test.)

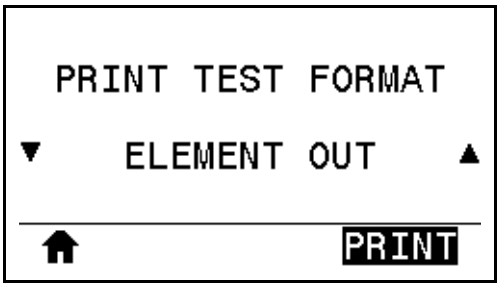
IMAGE COMPRESSION



The printer prints an image with diagonal lines, circles, and hash marks at regular intervals around the edges of the image to assist with issues regarding compression or stretching of an image. You can measure the distance between the hash marks or compare the circles and lines to verify if things are being distorted.



ELEMENT OUT



The printer prints a horizontal image designed to show if a printhead element is not functioning.

Optimal Darkness and Speed Test

(This test was formerly called the FEED self test.) Different types of media may require different darkness settings. This section contains a simple but effective method for determining the ideal darkness for printing barcodes that are within specifications.

During this test, labels are printed at different darkness settings and at different print speeds. The relative darkness and the print speed are printed on each label. The barcodes on these labels may be ANSI-graded to check print quality.

The darkness value starts at three settings lower than the printer's current darkness setting (relative darkness of –3) and increase until the darkness is three settings higher than the current darkness value (relative darkness of +3).

To perform the optimal darkness and speed test, complete these steps:

1. Print a configuration label to show the printer's current settings.
2. Turn off (**O**) the printer.
3. Press and hold FEED while turning on (**I**) the printer. Hold FEED until the first control panel light turns off.

   The printer prints a series of labels (Figure 5) at various speeds and at darkness settings higher and lower than the darkness value shown on the configuration label.

Figure 5 • Sample Darkness and Speed Test Label

4. See *Judging Barcode Quality* on page 49. Inspect the test labels and determine which one has the best print quality for your application. If you have a barcode verifier, use it to measure bars/spaces and calculate the print contrast. If you do not have a barcode verifier, use your eyes or the system scanner to choose the optimal darkness setting based on the labels printed in this self test.
5. Note the relative darkness value and the print speed printed on the best test label.

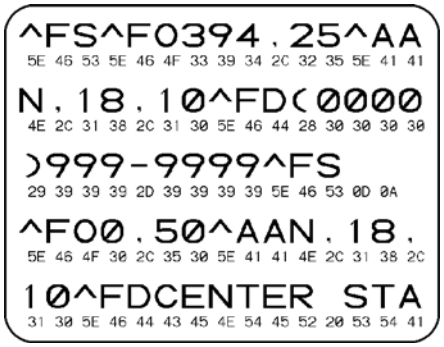
6. Add or subtract the relative darkness value from the darkness value specified on the configuration label. The resulting numeric value is the best darkness value for that specific label/ribbon combination and print speed.
7. If necessary, change the darkness value to the darkness value on the best test label.
8. If necessary, change the print speed to the same speed as on the best test label.

Communication Diagnostics Test

The communication diagnostics test is a troubleshooting tool for checking the interconnection between the printer and the host computer. When the printer is in diagnostics mode, it prints all data received from the host computer as straight ASCII characters with the hex values below the ASCII text. The printer prints all characters received, including control codes such as CR (carriage return). Figure 6 shows a typical test label from this test.

Note • The test label prints upside-down.

Figure 6 • Sample Communications Diagnostics Test Label



To use communications diagnostics mode, complete these steps:

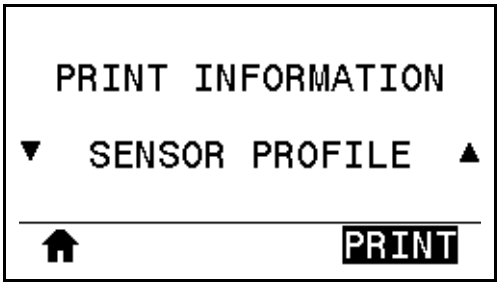
1. Set the print width equal to or less than the label width being used for the test.
2. Set the DIAGNOSTIC MODE option to ENABLED.
   The printer enters diagnostics mode and prints any data received from the host computer on a test label
3. Check the test label for error codes. For any errors, check that your communication parameters are correct.
   Errors show on the test label as follows:
   - FE indicates a framing error.
   - OE indicates an overrun error.
   - PE indicates a parity error.
   - NE indicates noise.
4. To exit this self test and return to normal operation, power cycle the printer or set the DIAGNOSTIC MODE option to DISABLED.

Sensor Profile

Use the sensor profile image (which will extend across several actual labels or tags) to troubleshoot the following situations:

- The printer experiences difficulty in determining gaps (web) between labels.
- The printer incorrectly identifies preprinted areas on a label as gaps (web).
- The printer cannot detect ribbon.

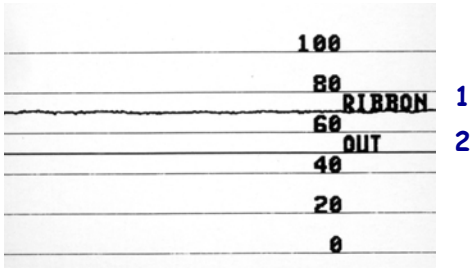
With the printer in the Ready state, print a sensor profile in one of these ways:

Using the buttons on the control panel	**a.** Turn off (**O**) the printer. **b.** Press and hold FEED + CANCEL while turning on (**I**) the printer. **c.** Hold FEED + CANCEL until the first control panel light turns off.
Using ZPL	**a.** Send the ~JG command to the printer. See the *Zebra Programming Guide* for more information about this command.
Using the control panel display	**a.** Navigate to the following item under the SENSORS menu.  **b.** Press RIGHT SELECT to select PRINT.

Compare your results to the examples shown in this section. If the sensitivity of the sensors must be adjusted, calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 8).

Ribbon Sensor Profile (Figure 7) The line labeled RIBBON (**1**) on the sensor profile indicates the ribbon sensor readings. The ribbon sensor threshold setting is indicated by OUT (**2**). If the ribbon readings are below the threshold value, the printer does not acknowledge that ribbon is loaded.

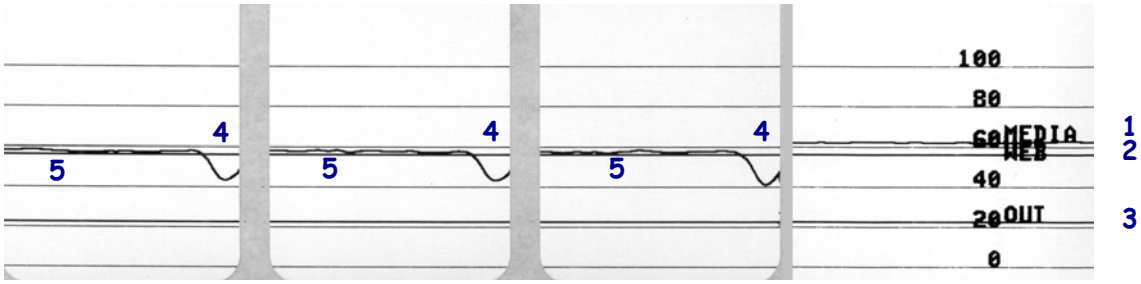
Figure 7 • Sensor Profile (Ribbon Section)



Media Sensor Profile (Figure 8) The line labeled MEDIA (**1**) on the sensor profile indicates the media sensor readings. The media sensor threshold settings is indicated by WEB (**2**). The media out threshold is indicated by OUT (**3**).The downward spikes (**4**) indicate gaps between labels (the web), and the lines between the spikes (**5**) indicate where labels are located.

If you compare the sensor profile printout to a length of your media, the spikes should be the same distance apart as the gaps on the media. If the distances are not the same, the printer may be having difficulty determining where the gaps are located.

Figure 8 • Sensor Profile (Media Section)

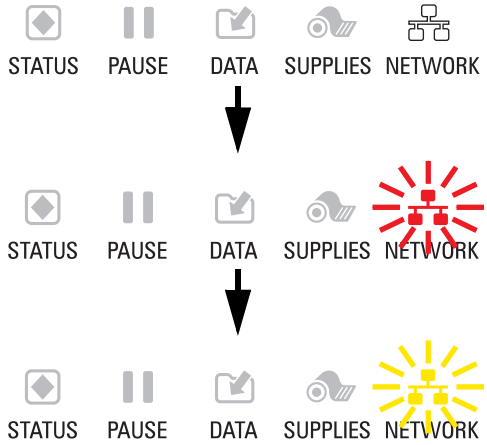


Indicator Lights

Table 2 • Status of Printer As Shown by Indicator Lights

	STATUS light steady green (other lights steady yellow for 2 seconds during printer power-up) The printer is ready.
	PAUSE light steady yellow. The printer is paused.
	STATUS light steady red *SUPPLIES light steady red* The media supply is out. The printer needs attention and cannot continue without user intervention.
	STATUS light steady red *SUPPLIES light flashing red* The ribbon supply is out. The printer needs attention and cannot continue without user intervention.
	STATUS light steady yellow *SUPPLIES light flashing yellow* The printer is in Direct Thermal mode, which does not require ribbon; however, ribbon is installed in the printer.
	STATUS light steady red *PAUSE light steady yellow* The printhead is open. The printer needs attention and cannot continue without user intervention.
	STATUS light steady yellow The printhead is over temperature. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.
	STATUS light flashing yellow This indicator light flashing indicates one of the following: • The printhead is under temperature. • The power supply is over temperature. • The main logic board (MLB) is over temperature.
	STATUS light steady red *PAUSE light steady red* *DATA light steady red* The printhead was replaced with one that is not a genuine Zebra™ printhead. Install a genuine Zebra™ printhead to continue.
	STATUS light flashing red The printer is unable to read the dpi setting of the printhead.

Table 2 • Status of Printer As Shown by Indicator Lights (Continued)

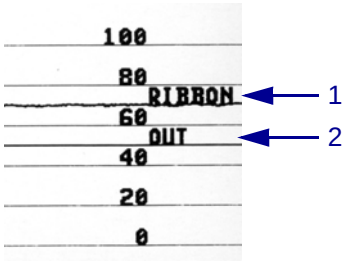
Printers with a ZebraNet wired Ethernet option	
	NETWORK light off No Ethernet link is available.
	NETWORK light steady green A 100 Base link was found.
	NETWORK light steady yellow A 10 Base link was found.
	NETWORK light steady red An Ethernet error condition exists. The printer is not connected to your network.
Printers with a ZebraNet wireless option	
	*NETWORK light off* A radio was found during power-up. The printer is attempting to associate with the network. The light flashes red while the printer associates with the network. The light then flashes yellow while the printer is authenticating with the network.
	NETWORK light steady green The radio is associated with your network and authenticated, and the WLAN signal is strong.
	NETWORK light flashing green WLAN—The radio is associated with your network and authenticated, but the WLAN signal is weak.
	NETWORK light steady red A WLAN error condition exists. The printer is not connected to your network.

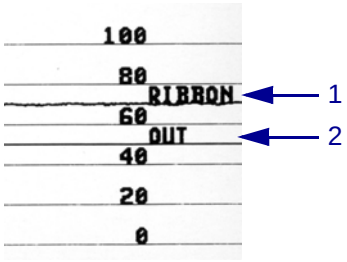
Troubleshooting

Alerts and Error Messages

Display/ Indicator Lights	Possible Causes	Recommended Solutions
HEAD OPEN CLOSE HEAD STATUS light steady red PAUSE light steady yellow	The printhead is not fully closed.	Close the printhead completely.
	The printhead open sensor is not working properly.	Call a service technician to replace the sensor.
MEDIA OUT LOAD MEDIA STATUS light steady red SUPPLIES light steady red	The media is not loaded or is loaded incorrectly.	Load media correctly.
	Misaligned media sensor.	Check the position of the media sensor.
	The printer is set for noncontinuous media, but continuous media is loaded.	**1.** Install the proper media type, or reset printer for the current media type. **2.** Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
MEDIA OUT LOAD MEDIA STATUS light steady red SUPPLIES light steady red	The media is not loaded or is loaded incorrectly.	Load media correctly. Refer to the *User Guide* for instructions.
	Misaligned media sensor.	Check the position of the media sensor.
	The printer is set for noncontinuous media, but continuous media is loaded.	**1.** Install the proper media type, or reset printer for the current media type. **2.** Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
WARNING RIBBON IN STATUS light steady yellow SUPPLIES light flashing yellow	Ribbon is loaded, but the printer is set for direct thermal mode.	Ribbon is not required with direct thermal media. If you are using direct thermal media, remove the ribbon. This error message will not affect printing.
		If you are using thermal transfer media, which requires ribbon, set the printer for Thermal Transfer mode.
		If you are using thermal transfer media, which requires ribbon, set the printer for Thermal Transfer mode. Refer to the *User Guide* for information about changing the print method.
PH NOT AUTHENTICATED REPLACE PRINTHEAD STATUS light steady red PAUSE light steady red DATA light steady red	The printhead was replaced with one that is not a genuine Zebra™ printhead.	Install a genuine Zebra™ printhead.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
ALERT RIBBON OUT STATUS light steady yellow SUPPLIES light flashing yellow	In thermal transfer mode: • ribbon is not loaded • ribbon is loaded incorrectly • the ribbon sensor is not detecting ribbon • media is blocking the ribbon sensor	1. Load ribbon correctly. Refer to the User Guide for more information. 2. Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
	In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.	1. Print a sensor profile. The ribbon out threshold (**2**) is likely too high, above the line that indicates where the ribbon is detected (**1**).  2. Calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 8) or load printer defaults (refer to the User Guide for more information.).
	If you are using direct thermal media, the printer is waiting for ribbon to be loaded because it is incorrectly set for thermal transfer mode.	Use the PRINT MTETHOD user menu item to set the printer for Direct Thermal mode.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
ALERT **RIBBON OUT** STATUS light steady yellow SUPPLIES light flashing yellow	In thermal transfer mode: • ribbon is not loaded • ribbon is loaded incorrectly • the ribbon sensor is not detecting ribbon • media is blocking the ribbon sensor	**1.** Load ribbon correctly. Refer to the *User Guide* for instructions for loading ribbon and media. **2.** Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
	In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.	**1.** Print a sensor profile (see the *User Guide* for instructions). The ribbon out threshold (**1**) is likely too high, above the line that indicates where the ribbon is detected (**2**).  Calibrate the printer or load printer defaults. See *Calibrate the Ribbon and Media Sensors* on page 8 or refer to the *User Guide* for information about loading printer defaults.
	If you are using direct thermal media, the printer is waiting for ribbon to be loaded because it is incorrectly set for thermal transfer mode.	Set the printer for Direct Thermal mode. Refer to the *User Guide* for information about changing the print method.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
PRINT HEAD OVERTEMP **PRINTING HALTED** STATUS light steady yellow	**Caution •** The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead is over temperature.	Allow the printer to cool. Printing automatically resumes when the printhead elements cool to an acceptable operating temperature. If this error persists, consider changing where the printer is located or using a slower print speed.
HEAD COLD **PRINTING HALTED** **THERMISTOR** **REPLACE PRINTHEAD** STATUS light steady yellow The printer shows one of these messages or cycles between them.	**Caution •** An improperly connected printhead data or power cable can cause these error messages. The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead data cable is not properly connected.	Call a service technician to hook up the printhead properly.
	The printhead has a faulty thermistor.	Call a service technician to replace the printhead.
HEAD COLD **PRINTING HALTED** **THERMISTOR** **REPLACE PRINTHEAD** STATUS light steady yellow The printer shows one of these messages or cycles between them.	**Caution •** An improperly connected printhead data or power cable can cause these error messages. The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead data cable is not properly connected.	Hook up the printhead properly. See Figure 16 on page 93.
	The printhead has a faulty thermistor.	Replace the printhead. See *Printhead Assembly Maintenance Kit* on page 90.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
HEAD COLD PRINTING HALTED STATUS light flashing yellow	**Caution** • An improperly connected printhead data or power cable can cause this error message. The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead temperature is approaching its lower operating limit.	Continue printing while the printhead reaches the correct operating temperature. If the error remains, the environment may be too cold for proper printing. Relocate the printer to a warmer area.
	The printhead data cable is not properly connected.	Call a service technician to hook up the printhead properly.
	The printhead has a faulty thermistor.	Call a service technician to replace the printhead.
	The printhead data cable is not properly connected.	Hook up the printhead properly. See Figure 16 on page 93.
	The printhead has a faulty thermistor.	Replace the printhead. See Figure 16 on page 93.
CUT ERROR STATUS light steady red PAUSE light steady yellow	**Caution** • The cutter blade is sharp. Do not touch or rub the blade with your fingers.	
	The cutter blade is in the media path.	Turn off the printer power and unplug the printer. Inspect the cutter module for debris and clean as needed following the cleaning instructions in *Clean and Lubricate the Cutter Module* on page 36.
USE USB MEMORY DEVICE? YES NO	The USB host port is disabled, and a USB device was plugged into the port.	To use the USB device, select **YES**, or send the following SGD command to the printer: `! U1 setvar "usb.host.lock_out" "on"`

Display/ Indicator Lights	Possible Causes	Recommended Solutions
OUT OF MEMORY STORING GRAPHIC OUT OF MEMORY STORING FORMAT OUT OF MEMORY STORING BITMAP OUT OF MEMORY STORING FONT	There is not enough memory to perform the function specified on the second line of the error message.	Free up some of the printer's memory by adjusting the label format or printer parameters. One way to free up memory is to adjust the print width to the actual width of the label instead of leaving the print width set to the default. Refer to the *User Guide* for the instructions for changing the print width. Ensure that the data is not directed to a device that is not installed or is unavailable. If the problem persists, call a service technician.

Printing Issues

Barcode Does Not Scan		
Issue	*Possible Cause*	*Recommended Solution*
The barcode printed on a label does not scan.	The barcode is not within specifications because the print is too light or too dark.	Perform the *Optimal Darkness and Speed Test* on page 56. Adjust the darkness or print speed settings as necessary.
	There is not enough blank space around the barcode.	Leave at least 1/8 in. (3.2 mm) between the barcode and other printed areas on the label and between the barcode and the edge of the label.
Print Consistently Too Light or Too Dark		
Issue	*Possible Cause*	*Recommended Solution*
Printing too light or too dark on one side of the label	Uneven printhead pressure.	Adjust the printhead pressure as needed for good print quality. See *Adjust the Printhead Pressure and Toggle Position* on page 15.
Poor Print Quality		
Issue	*Possible Cause*	*Recommended Solution*
Smudge marks on labels	The media or ribbon is not designed for high-speed operation.	Replace supplies with those recommended for high-speed operation. For more information, see http://www.zebra.com/supplies.
Poor results with thick labels	The print line is not at an optimal position for your media.	Refer to the *Maintenance Manual* for instructions on how to adjust the print line for thick media.
	The label format is scaling a font that is not scalable.	Check the label format for font issues.
Angled Gray Lines on Blank Labels		
Issue	*Possible Cause*	*Recommended Solution*
Fine, angular gray lines on blank labels	Wrinkled ribbon.	See wrinkled ribbon causes and solutions in *Ribbon Issues* on page 72.
Missing Print		
Issue	*Possible Cause*	*Recommended Solution*
Loss of Registration		
Issue	*Possible Cause*	*Recommended Solution*
Misregistration/skips labels	The printer is not calibrated.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
	Improper label format.	Check your label format and correct it as necessary.

Misregistration and misprint of one to three labels	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller on page 32*.
	Media does not meet specifications.	Use media that meets specifications. Refer to the *User Guide* for media specifications.
Vertical drift in top-of-form position	The printer is out of calibration.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller on page 32*.

Ribbon Issues

For videos of some common procedures, go to http://www.zebra.com/zt500-info.

Broken Ribbon		
Issue	*Possible Cause*	*Recommended Solution*
Broken or melted ribbon	Darkness setting too high.	**1.** Reduce the darkness setting. Refer to the *User Guide* for information about changing the darkness setting. **2.** Clean the printhead thoroughly. See *Clean the Printhead and Platen Roller* on page 32.
	The ribbon is coated on the wrong side and cannot be used in this printer.	Replace the ribbon with one coated on the correct side. Refer to the *User Guide* for information about determining the coated side of ribbon.
Wrinkled Ribbon		
Issue	*Possible Cause*	*Recommended Solution*
Wrinkled ribbon	Ribbon was loaded incorrectly.	Load the ribbon correctly. Refer to the *User Guide* for instructions for loading ribbon and media.
	Incorrect burn temperature.	For optimal print quality, set the darkness to the lowest possible setting for your application. You may want to perform the *Optimal Darkness and Speed Test* on page 56 to determine the ideal darkness setting. Refer to the *User Guide* for information about changing the darkness setting.
	Incorrect or uneven printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See *Adjust the Printhead Pressure and Toggle Position* on page 15.
	Media not feeding properly; “walking” from side to side.	Make sure that media is snug by adjusting the media guide. Check that the printhead and platen roller are installed correctly. See *Install the New Printhead Assembly* on page 94 and *Install the New Upper Platen Roller* on page 228.
	The printhead or platen roller may be installed incorrectly.	Check that the printhead and platen roller are installed correctly. See previous solution.

Ribbon Detection Issues		
Issue	*Possible Cause*	*Recommended Solution*
The printer does not detect when the ribbon runs out.	The printer may have been calibrated without ribbon or without the ribbon loaded properly.	**1.** Make sure that ribbon is loaded correctly so that it can be detected by the ribbon sensor. Under the printhead, the ribbon should track all the way back, near the printer's firewall. Refer to the *User Guide* for instructions for loading ribbon. **2.** Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.		
The printer indicates that ribbon is out, even though ribbon is loaded correctly.	The printer was not calibrated for the label and ribbon being used.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.

Communications Issues

Label Formats Not Recognized		
Issue	*Possible Cause*	*Recommended Solution*
A label format was sent to the printer but was not recognized. The DATA light does not flash.	The communication parameters are incorrect.	Check the printer driver or software communications settings (if applicable) for your connection. You may wish to reinstall the printer driver. Refer to the User Guide for instructions.
		If you are using serial communication, check the serial port settings.
		If you are using serial communication, make sure that you are using a null modem cable or a null modem adapter.
		Check the printer's handshake protocol setting. The setting used must match the one being used by the host computer.
A label format was sent to the printer but was not recognized. The DATA light flashes but no printing occurs.	The prefix and delimiter characters set in the printer do not match the ones in the label format.	Verify the prefix and delimiter characters.
	Incorrect data is being sent to the printer.	Check the communication settings on the computer. Ensure that they match the printer settings.
		If the problem continues, check the label format.

Labels Stop Printing Correctly		
Issue	*Possible Cause*	*Recommended Solution*
A label format was sent to the printer. Several labels print, then the printer skips, misplaces, misses, or distorts the image on the label.	The serial communication settings are incorrect.	Ensure that the flow control settings match.
		Check the communication cable length. See the *User Guide* for requirements.
		Check the printer driver or software communications settings (if applicable).

Miscellaneous Issues

Issues with the Display		
Issue	*Possible Cause*	*Recommended Solution*
The control panel display shows a language that I cannot read	The language parameter was changed through the control panel or a firmware command.	1. On the control panel display, scroll to LANGUAGE Menu. 2. Press OK to access the items in this menu. 3. Use the UP ARROW or DOWN ARROW to scroll through the language selections under the first menu option. The selections for this parameter are displayed in the actual languages to make it easier for you to find one that you are able to read. 4. Select the language that you want to display.
The display is missing characters or parts of characters	The display may need replacing.	Replace the display. See *Control Panel Maintenance Kit* on page 436.

The USB Host Port Is Not Acknowledging a USB Device		
Issue	*Possible Cause*	*Recommended Solution*
The printer is not acknowledging a USB device or is not reading the files on a USB device that is plugged into the USB host port.	The printer currently supports USB drives only up to 1 TB in size.	Use a USB drive that is 1 TB or smaller.
	The USB device may require its own external power.	If your USB device requires external power, make sure that it is plugged into a working power supply.

Printer Parameters Are Not Set As Expected		
Issue	*Possible Cause*	*Recommended Solution*
Changes in parameter settings did not take effect. OR Some parameters changed unexpectedly.	A firmware setting or command prevented the ability to change the parameter.	Check your label formats or the settings of the software that you use to send formats to the printer. If necessary, refer to the *Programming Guide for ZPL, ZBI, Set-Get-Do, Mirror, and WML* or call a service technician.
	A command in a label format changed the parameter back to the previous setting.	
	If the problem persists, there may be a problem with the main logic board.	Replace the main logic board. See *Main Logic Board Maintenance Kit* on page 448.

IP Address Changing		
Issue	*Possible Cause*	*Recommended Solution*
My printer reassigns a new IP address to the print server after the printer has been off for a while.	The settings for your network are causing the network to reassign a new IP address.	If the printer changing IP addresses causes issues for you, follow these steps to assign it a static IP address: **1.** Find out what values need to be assigned to the IP address, subnet mask, and gateway for your print server (wired, wireless, or both). **2.** Change the appropriate IP protocol value to PERMANENT. **3.** Change the values for the IP address, subnet mask, and gateway for the appropriate print server to what you want them to remain. Reset the network using the RESET NETWORK user menu item to save the changes.

Calibration Issues		
Issue	*Possible Cause*	*Recommended Solution*
Non-continuous labels are being treated as continuous labels.	The printer was not calibrated for the media being used.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 8.
	The printer is configured for continuous media.	Set the printer for the correct media type (gap/notch, continuous, or mark). Refer to the *User Guide* for information about changing the media type.

Printer Locks Up		
Issue	*Possible Cause*	*Recommended Solution*
All indicator lights are on, nothing is on the display, and the printer locks up.	Internal electronic or firmware failure.	Go to http://www.zebra.com/firmware to download firmware. or Replace the main logic board. See *Main Logic Board Maintenance Kit* on page 448.
The printer locks up while booting up.	Main logic board failure.	Replace the main logic board. See *Main Logic Board Maintenance Kit* on page 448.

Specifications

This section lists general printer specifications, printing specifications, ribbon specifications, and media specifications.

Contents

General Specifications 78
Power Specifications 81
Power Cord Specifications 82
Wireless Specifications 83
Printing Specifications 84
Media Specifications 85
Ribbon Specifications 86

General Specifications

Height		15.58 in. (395.68 mm)
Width		10.56 in. (268.2 mm)
Depth		20.17 in. (512.3 mm)
Weight		50 lb (22.7 kg)
Temperature	Operating	Thermal Transfer: 40° to 104°F (5° to 40°C) Direct Thermal: 32° to 104°F (0° to 40°C)
	Storage	–22° to 140°F (–30° to 60°C)
Relative Humidity	Operating	20% to 85%, non-condensing
	Storage	20% to 85%, non-condensing
Communication Interface Specifications	Standard	**Bluetooth® LE** Limitations and Requirements Many mobile devices can communicate with the printer within a 30-foot radius of the printer. Connections and Configuration Refer to the *Zebra Bluetooth User Guide* for specific instructions for configuring your printer to use a Bluetooth interface. A copy of this manual is available at http://www.zebra.com/manuals.
		Zebra PrintTouch/Near Field Communication (NFC) Refer to the User Guide for more information about this feature. Limitations and Requirements NFC communication must be initiated by touching your device to the appropriate location on the printer. Connections and Configuration Some devices may not support NFC communication with the printer until you alter their settings.
		USB 2.0 Data Interface Limitations and Requirements • Maximum cable length of 16.4 ft (5 m). Connections and Configuration No additional configuration is necessary.

<table>
<tr><td rowspan="3">Communication Interfaces (continued)</td><td rowspan="2">Standard (continued)</td><td>Wired Gigabit Internal Ethernet Print Server
Limitations and Requirements
• The printer must be configured to use your LAN.
• A second wired print server can be installed in the bottom option slot.
Connections and Configuration
Refer to the ZebraNet Wired and Wireless Print Servers User Guide for configuration instructions. A copy of this manual is available at http://www.zebra.com/manuals.</td></tr>
<tr><td>RS-232/C Serial Data Interface
• 2400 to 115000 baud
• parity, bits/character
• 7 or 8 data bit
• XON-XOFF, RTS/CTS, or DTR/DSR handshake protocol required
• 750mA at 5 V from pins 1 and 9
Limitations and Requirements
• You must use a null-modem cable to connect to the printer or a null-modem adapter if using a standard modem cable.
• Maximum cable length of 50 ft (15.24 m).
• You may need to change printer parameters to match the host computer.
Connections and Configuration
The baud rate, number of data and stop bits, the parity, and the XON/XOFF or DTR control must match those of the host computer.</td></tr>
<tr><td>Optional</td><td>Wireless Print Server
See Wireless Specifications on page 83 for more information.
Limitations and Requirements
• Can print to the printer from any computer on your Wireless Local Area Network (WLAN).
• Can communicate with the printer through the printer's web pages.
• The printer must be configured to use your WLAN.
• Can be installed only in the top option slot.
Configuration
Refer to the ZebraNet Wired and Wireless Print Servers User Guide for configuration instructions. A copy of this manual is available at http://www.zebra.com/manuals.</td></tr>
</table>

Communication Interfaces (continued)	Optional (continued)	**USB Host Port** Refer to the User Guide for more information about this feature. Limitations and Requirements You can only plug one device into the USB host port. You cannot use a third device by plugging it into a USB port on one of the devices, nor can you use an adapter to split the USB host port on the printer to accept more than one device at a time. Connections and Configuration No additional configuration is necessary.
		IEEE 1284 Bidirectional Parallel Data Interface Limitations and Requirements • Maximum cable length of 10 ft (3 m). • Recommended cable length of 6 ft (1.83 m). • No printer parameter changes required to match the host computer. • Can be installed in either the top or bottom option slot. Connections and Configuration No additional configuration is necessary.
		External ZebraNet 10/100 Print Server Requires the parallel data interface option
Memory		1GB DRAM (32 MB user available) 2GB Flash (512 MB user available on-board Flash)

Power Specifications

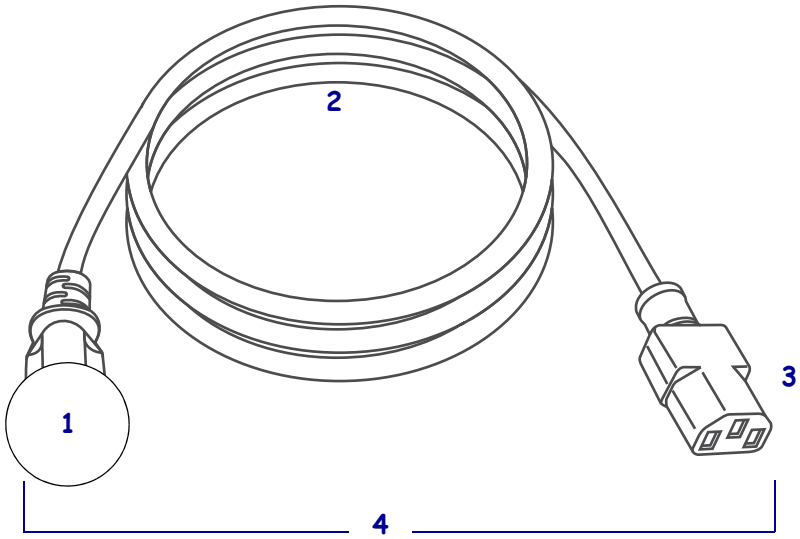
Electrical	90–265 VAC, 47-63 Hz
Power consumption	120 VAC, 60 Hz
Inrush Current (Irms)	37.0
Idle Power (Watts)	7.0
Idle Power (VA)	13.1
Sleep Power (Watts)	3.0
Sleep Power (VA)	10.4
Print Power (Watts)	123.0
Print Power (VA)	130.0

Power Cord Specifications

Caution • For personnel and equipment safety, always use an approved three-conductor power cord specific to the region or country intended for installation. This cord must use an IEC 320 female connector and the appropriate region-specific, three-conductor grounded plug configuration.

Depending on how your printer was ordered, a power cord may or may not be included. If one is not included or if the one included is not suitable for your requirements, see Figure 9 for specifications.

Figure 9 • Power Cord Specifications



1	AC power plug for your country—This should bear the certification mark of at least one of the known international safety organizations (Figure 10). The chassis ground (earth) **must** be connected to ensure safety and reduce electromagnetic interference.
2	3-conductor HAR cable or other cable approved for your country.
3	IEC 320 connector—This should bear the certification mark of at least one of the known international safety organizations (Figure 10).
4	Length ≤ 9.8 ft. (3 m). Rating 10 Amp, 250 VAC.

Figure 10 • International Safety Organization Certification Symbols

Wireless Specifications

Antenna Information	
• Type = Patch • Gain = 3.66dBi @ 2.4GHz • Gain = 3.19dBi @ 5GHz • Impedance = 50 ohms	
WLAN Specifications	
802.11 b • 2.4 GHz • DSSS (DBPSK, DQPSK and CCK) • RF power 17.77 dBm (EIRP) 802.11 g • 2.4 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 18.61 dBm (EIRP) 802.11 n • 2.4 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 18.62 dBm (EIRP) 802.11 a/n • 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 17.89 dBm (EIRP) 802.11 ac • 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 13.39 dBm (EIRP)	Bluetooth 4.1 + Low Energy (LE) • 2.4 GHz • FHSS(BDR/EDR), GFSK (Bluetooth Low Energy) • RF power 9.22 dBm (EIRP) Bluetooth Low Energy (LE) • 2.4 GHz • FHSS(BDR/EDR), DSSS (Bluetooth LE) • RF power –0.85 dBm (EIRP)

Printing Specifications

Print resolution		203 dpi (dots/in.)/8 dots/mm
		300 dpi/12 dots/mm
Maximum print width		4.09 in. (104 mm)
Programmable constant print speeds (inches per second/ips or millimeters per second)		2 to 12 in. (50.8 to 304.8 mm) per second in 1-in. (25.4 mm) increments
Dot size (nominal) (width x length)	203 dpi	0.0049 in. x 0.0049 in. (0.125 mm x 0.125 mm)
	300 dpi	0.0033 in. x 0.0039 in. (0.084 mm x 0.099 mm)
First dot location (measured from the inside edge of the media)	203 dpi	0.14 in. ±0.05 in. (3.5 mm ±1.25 mm)
	300 dpi	0.08 in. ±0.05 in. (2.1 mm ±1.25 mm)
Barcode modulus (X) dimension		
Picket fence (non-rotated) orientation	203 dpi	4.9 mil to 49 mil
	300 dpi	3.3 mil to 49 mil
Ladder (rotated) orientation	203 dpi	4.9 mil to 49 mil
	300 dpi	3.9 mil to 39 mil
Vertical registration	6 ips	±0.75 mm
	> 6 ips	±1.5 mm
Horizontal registration		±1.5 mm

Media Specifications

Label length MINIMUM	Tear-off	0.7 in. (18 mm)
	Rewind	0.25 in (6 mm)
	Peel-off	0.5 in (13 mm)
	Cutter	1.5 in. (38 mm)
Label length MAXIMUM (non-continuous media)		39 in. (991 mm)
Print length MAXIMUM (continuous media)	200 dpi	150 in. (3810 mm)
	300 dpi	100 in. (2540 mm)
Label width MINIMUM		0.79 in. (20 mm)
Label width MAXIMUM (label and liner)		4.5 in. (114 mm)
Total thickness MINIMUM (includes liner, if any)		0.003 in. (0.076 mm)
Total thickness MAXIMUM (includes liner, if any)	Cutter	0.009 in. (0.23 mm)
	Other	0.012 in. (0.30 mm)
Roll outside diameter MAXIMUM		8 in. (203 mm) on a 3-in. (76-mm) inside diameter core
Inter-label gap	Minimum	0.079 in. (2 mm)
	Preferred	0.118 in. (3 mm)
	Maximum	0.157 in. (4 mm)
Ticket/tag notch size (width x length)		0.25 in. x 0.12 in. (6 mm x 3 mm)
Sensing hole diameter		0.125 in. (3 mm)
Black mark density, in Optical Density Units (ODU)		> 1.0 ODU
Media density MAXIMUM (black mark)		0.5 ODU
Black mark length (parallel to inside media edge)		0.12 to 0.43 in. (3 to 11 mm)
Black mark width (perpendicular to inside media edge)		> 0.43 in. (> 11 mm)
Black mark location		within 0.040 in. (1 mm) of inside media edge

Ribbon Specifications

Standard printers use ribbon that is coated on the outside. An optional ribbon spindle is available to use ribbon that is coated on the inside. Contact your authorized Zebra reseller for ordering information.

Ribbon width MINIMUM*	2.0 in. (51 mm)**
Ribbon width MAXIMUM	4.33 in. (110 mm)
Ribbon length MAXIUMUM	1476 ft (450 m)
Ribbon core inside diameter	1 in. (25 mm)
Ribbon roll outside diameter MAXIMUM	3.2 in. (81.3 mm)

* Zebra recommends using ribbon that is at least as wide as the media to protect the printhead from wear.

** Depending on your application, you may be able to use ribbon narrower than 2 in. (51 mm), as long as the ribbon is wider than the media being used. To use a narrower ribbon, test the ribbon's performance with your media to assure that you get the desired results.

Print Mechanism Components

This section supplies you with the parts information and installation procedures for the print system.

Contents

Print System Parts and Drawings 88
Printhead Assembly Maintenance Kit 90
Printhead Cables Maintenance Kit. 95
Pivot Bar Assembly Maintenance Kit 115
Toggle Assembly Maintenance Kit 125
Head Open Sensor Flag Maintenance Kit 130
Print Mechanism Hardware Maintenance Kit. 139
Pivot Bar Assembly Maintenance Kit 115
Strip Plate and Static Brush Maintenance Kit 158

Print System Parts and Drawings

Figure 11 • Print Mechanism Components Overview

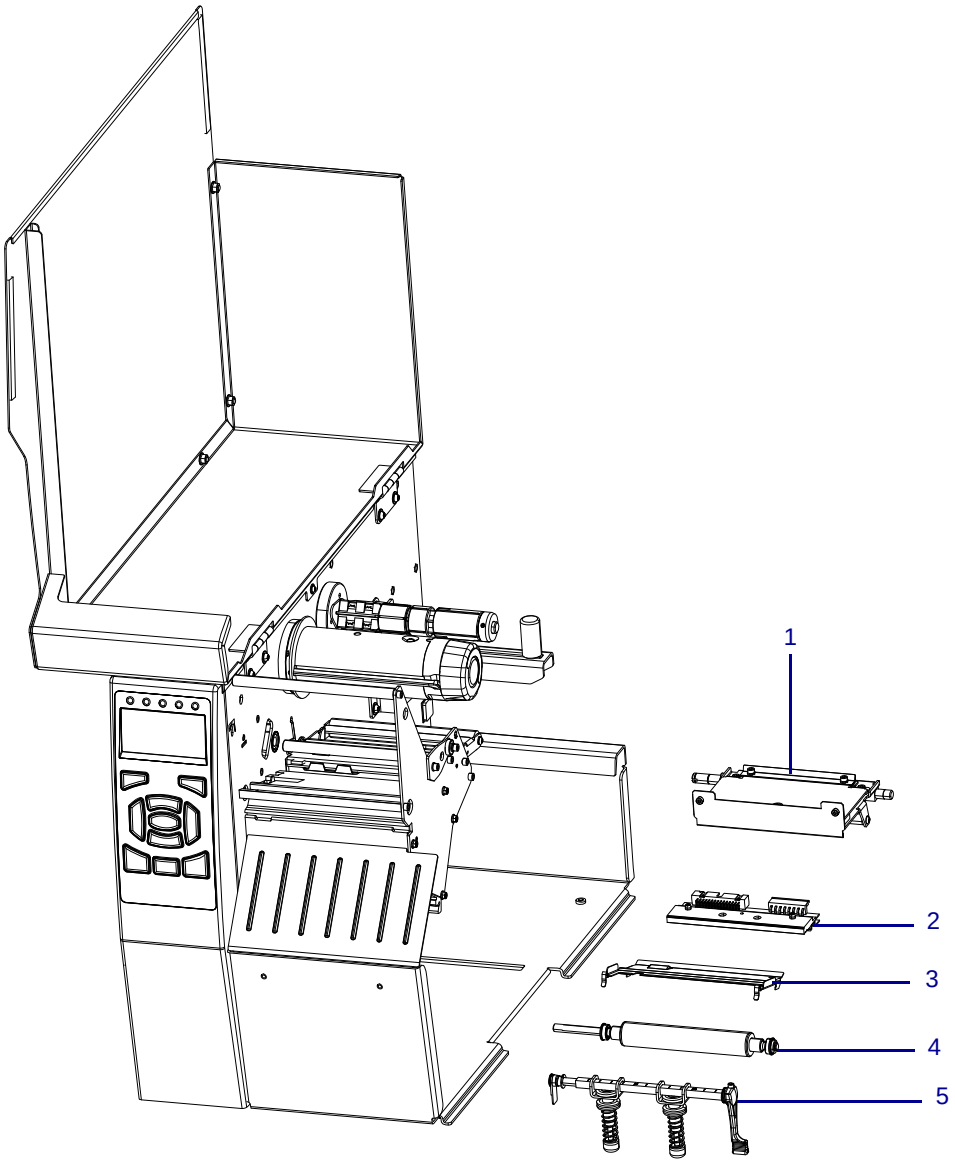


Table 3 • Print Mechanism Components Kit List

Item	Part Number	Description
1	**P1083347-011**	Print Mechanism Hardware Maintenance Kit
2	**P1083347-005**	203 dpi Printhead Assembly ZT510
	P1083347-006	300 dpi Printhead Assembly ZT510
	P1083347-007	203 dpi Extended Life Printhead Assembly ZT510
	P1083347-008	300 dpi Extended Life Printhead Assembly ZT510
3	**P1053360-015**	ZT510 Media Guide Plate Kit
4	**P1083347-012**	Platen Roller Maintenance Kit
5	**35099M**	ZT510 Toggle Assembly Kit

Figure 12 • Print Mechanism Components Kits

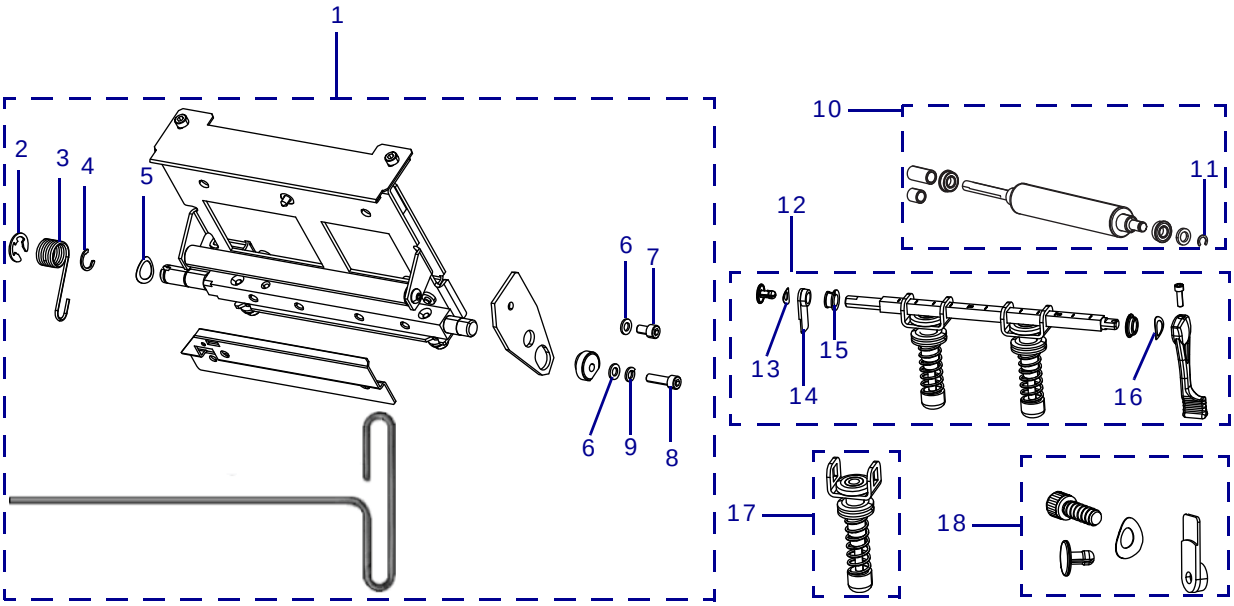


Table 4 • Print Mechanism Component Kits Parts List

Item	Part Number	Description
1	**P1083347-011**	Print Mechanism Hardware Maintenance Kit
2	**HW06250**	E-Ring, 0.312 (sold in quantities of 25)
3	**HW40027**	Torsion Spring, (sold in quantities of 25)
4	**HW32373**	C-Clip, 0.312 (sold in quantities of 25)
5	**HW30239**	Crescent Washer, 0.465 × 0.323 × 0.062 (sold in quantities of 25)
6	**HW30956**	Flat Washer, 0.207 × 0.146 × 0.030 (sold in quantities of 10)
7	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 50)
8	**HW30392-008**	Screw, 5-32 × 0.50 (sold in quantities of 25)
9	**HW06268**	Lock Washer, #6
10	**P1083347-012**	Platen Roller Maintenance Kit
11	**HW33810**	C-Clip, 0.25 (sold in quantities of 100)
12	**G41022M**	ZT510, 105SL*Plus*, and 110Xi4 Toggle Bar Assembly Kit
13	**HW40194**	Crescent Washer, 0.344 × 0.172 × 0.006 (sold in quantities of 25)
14	**HW46352**	Head Open Flag (sold in quantities of 50)
15	**HW46105**	Nylon Bearing, 0.251 × 0.312 (sold in quantities of 25)
16	**HW07229**	Curved Spring Washer, 0.312 (sold in quantities of 50)
17	**35099M**	Toggle Maintenance Kit
18	**G46352M**	Sensor Flag Maintenance Kit

Printhead Assembly Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Printhead Assembly Maintenance Kit on ZT510™ series printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 13 • Kit Contents

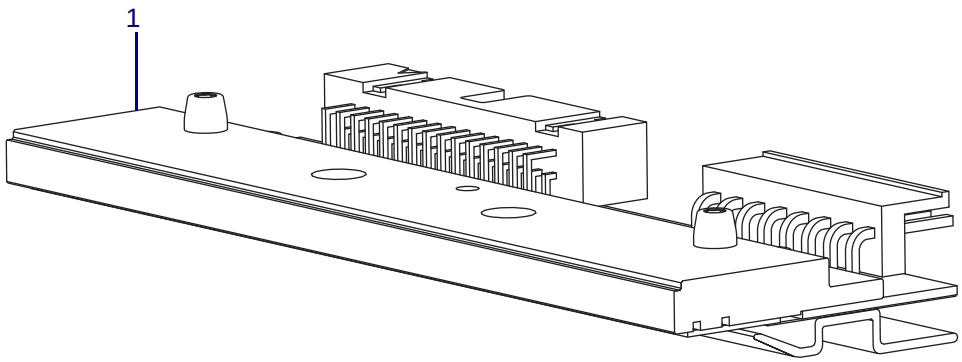


Table 5 • Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1083347-005**	203 dpi Printhead Assembly ZT510
		1	**P1083347-006**	300 dpi Printhead Assembly ZT510
		1	**P1083347-007**	203 dpi Extended Life Printhead Assembly ZT510
		1	**P1083347-008**	300 dpi Extended Life Printhead Assembly ZT510

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Flatblade Screwdriver Set
- ❑ Antistatic Mat and Wrist Strap
- ❑ 47362* Zebra Preventive Maintenance Kit

* In place of the Preventive Maintenance Kit, you may use a clean swab dipped in a solution of isopropyl alcohol (minimum 99.7%) and deionized water (maximum 0.3%).

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Old Printhead Assembly

1. **Caution •** Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

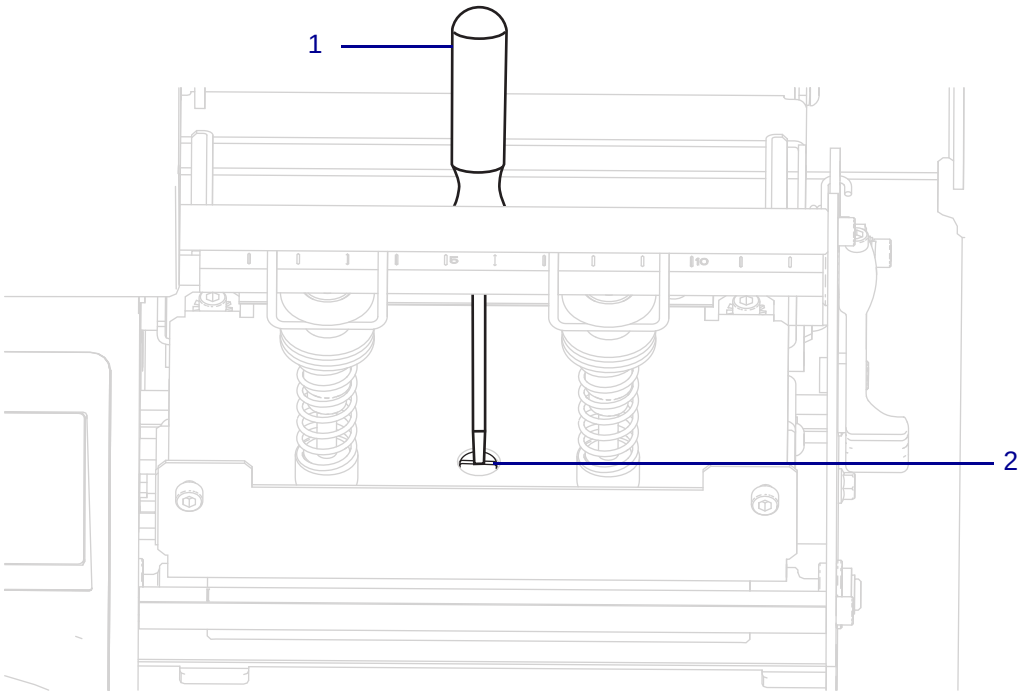
2. **Caution •** While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead.

   Remove the media and ribbon from the printer.

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

   See Figure 14. Loosen the printhead mounting screw.

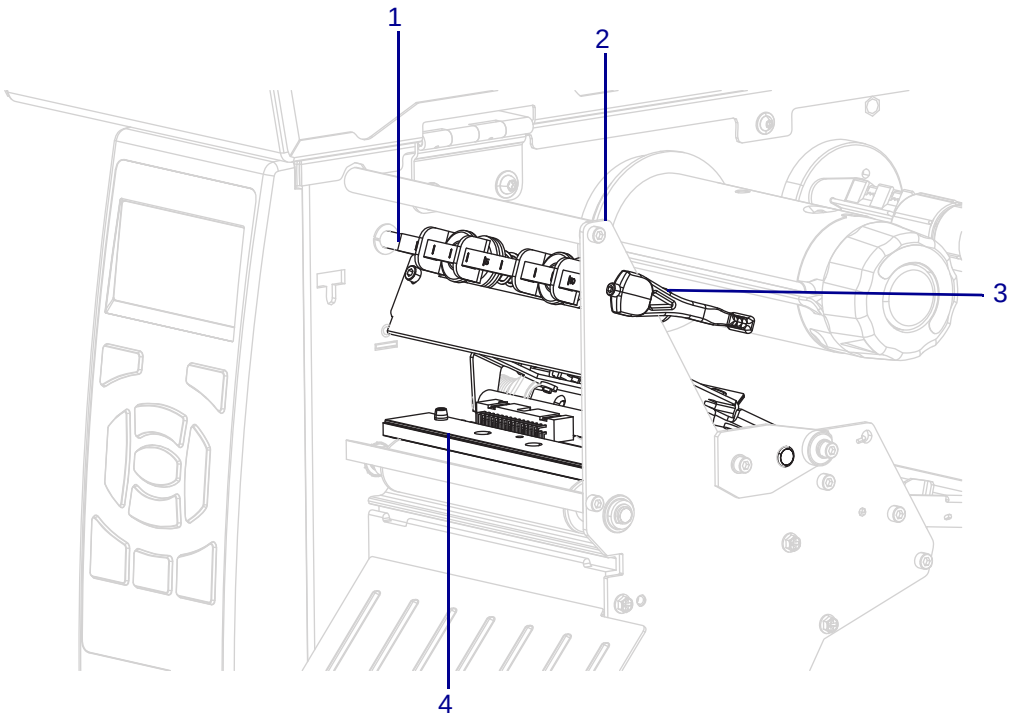
Figure 14 • Loosen the Printhead Mounting Screw



1	Flat-blade screwdriver
2	Printhead mounting screw

4. See Figure 15. Open the upper print mechanism. The printhead should be still down on the platen roller.

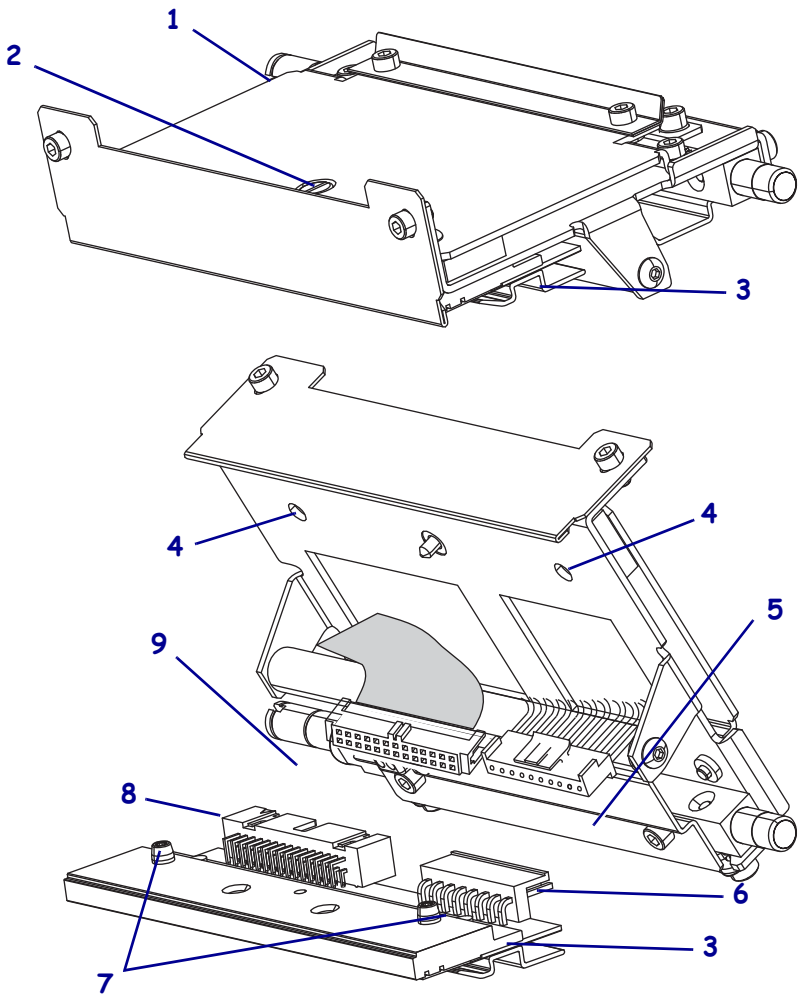
Figure 15 • Open the Upper Print Mechanism



1	Toggle assembly
2	Toggle assembly handle
3	Upper print mechanism
4	Printhead assembly

5. See Figure 16. Disconnect the printhead cables, and then remove the printhead from the printer.

Figure 16 • Remove the Printhead



1	Upper print mechanism
2	Printhead mounting screw
3	Printhead assembly
4	Printhead locating holes
5	Printhead power cable
6	Printhead power cable connector
7	Printhead locating pins
8	Printhead data cable connector
9	Printhead data cable

Install the New Printhead Assembly

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.

1. Remove the new printhead assembly from the maintenance kit.
2. See Figure 16 on page 93. Reconnect the power and data cables to the new printhead.
3. Insert the printhead locating pins into the printhead locating holes.
4. Ensure that the printhead is seated into the upper print mechanism and then close the printhead.
5. Tighten the printhead mounting screw.
6. Clean the new printhead elements using Zebra's Preventive Maintenance Kit part number 47362. In place of the Preventive Maintenance Kit, you may use a clean swab dipped in a solution of isopropyl alcohol (minimum 99.7%) and deionized water (maximum 0.3%).
7. Reinstall the media and ribbon.
8. Reconnect the AC power cord and data cables.
9. Press and hold PAUSE while turning on (**I**) the printer.
10. Press PAUSE to pause the printer and check the labels for proper print quality. If the print quality is not acceptable, refer to the User Guide.

The installation is complete.

Printhead Cables Maintenance Kit

Installation Instructions

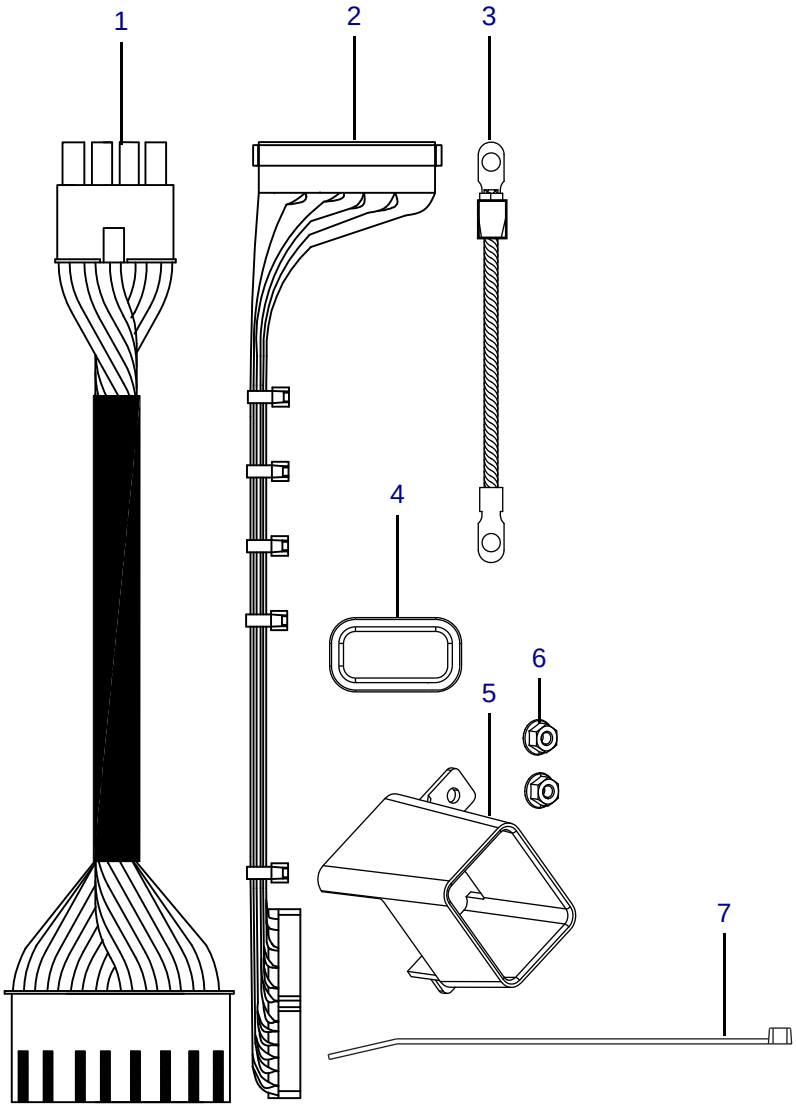
This kit includes the parts and documentation necessary to install the Printhead Cables Maintenance Kit for the ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 17 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 6 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-028**	Printhead Cables Maintenance Kit
	1	1	*N/A*	Printhead Power Cable
	2	1	*N/A*	Printhead Data Cable
	3	1	*N/A*	Printhead Ground
	4	1	**HW46091**	Grommet, 1.25 × 0.62 × 0.105 (sold in quantities of 10)
	5	1	*N/A*	Printhead Cable Guard
	6	2	*N/A*	Nut, M4
	7	1	**HWQ06020**	Cable Tie, 0.09 × 3.62 (sold in quantities of 20)

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Flatblade Screwdriver
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Wire Cutters

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

Note • Retain all parts removed during disassembly, unless otherwise directed.

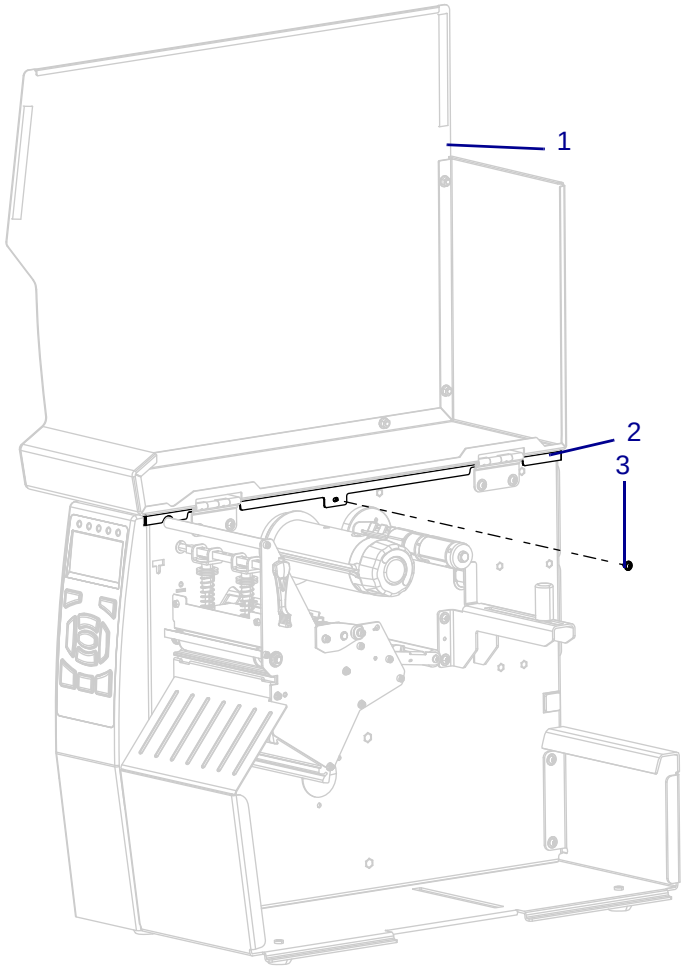
2. Remove the media and ribbon.

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

   Connect yourself to an antistatic device.

4. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 18 • Locate the Electronics Cover Mounting Screw

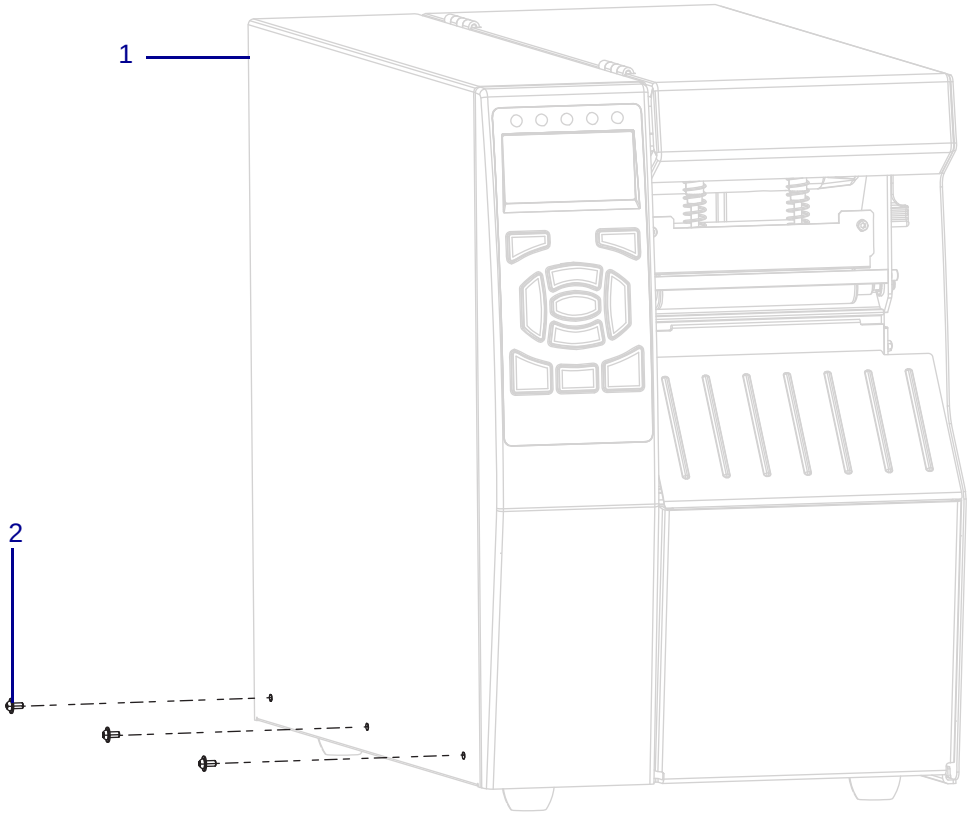


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

5. Close the media door.

6. See Figure 19. Remove the three mounting screws securing the electronics cover to the printer.

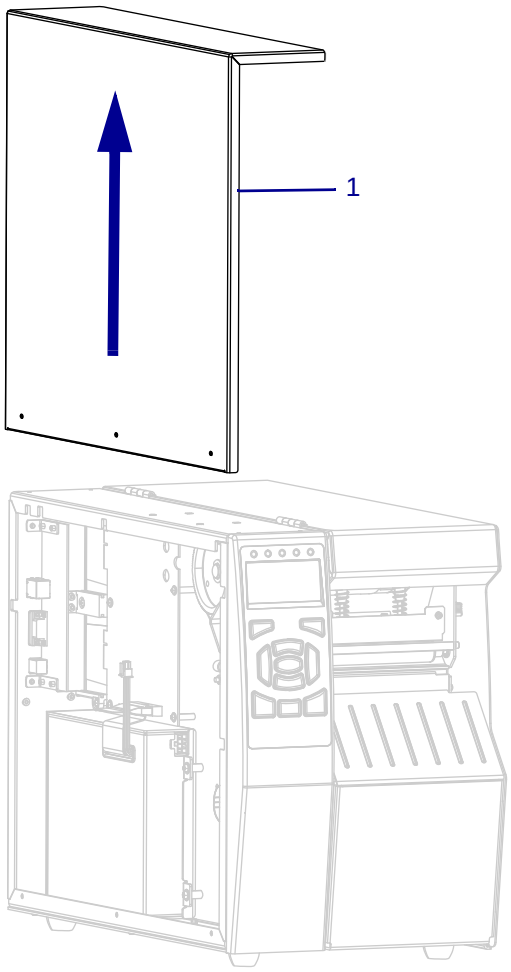
Figure 19 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

7. See Figure 20. Lift the electronics cover off of the printer.

Figure 20 • Remove the Electronics Cover

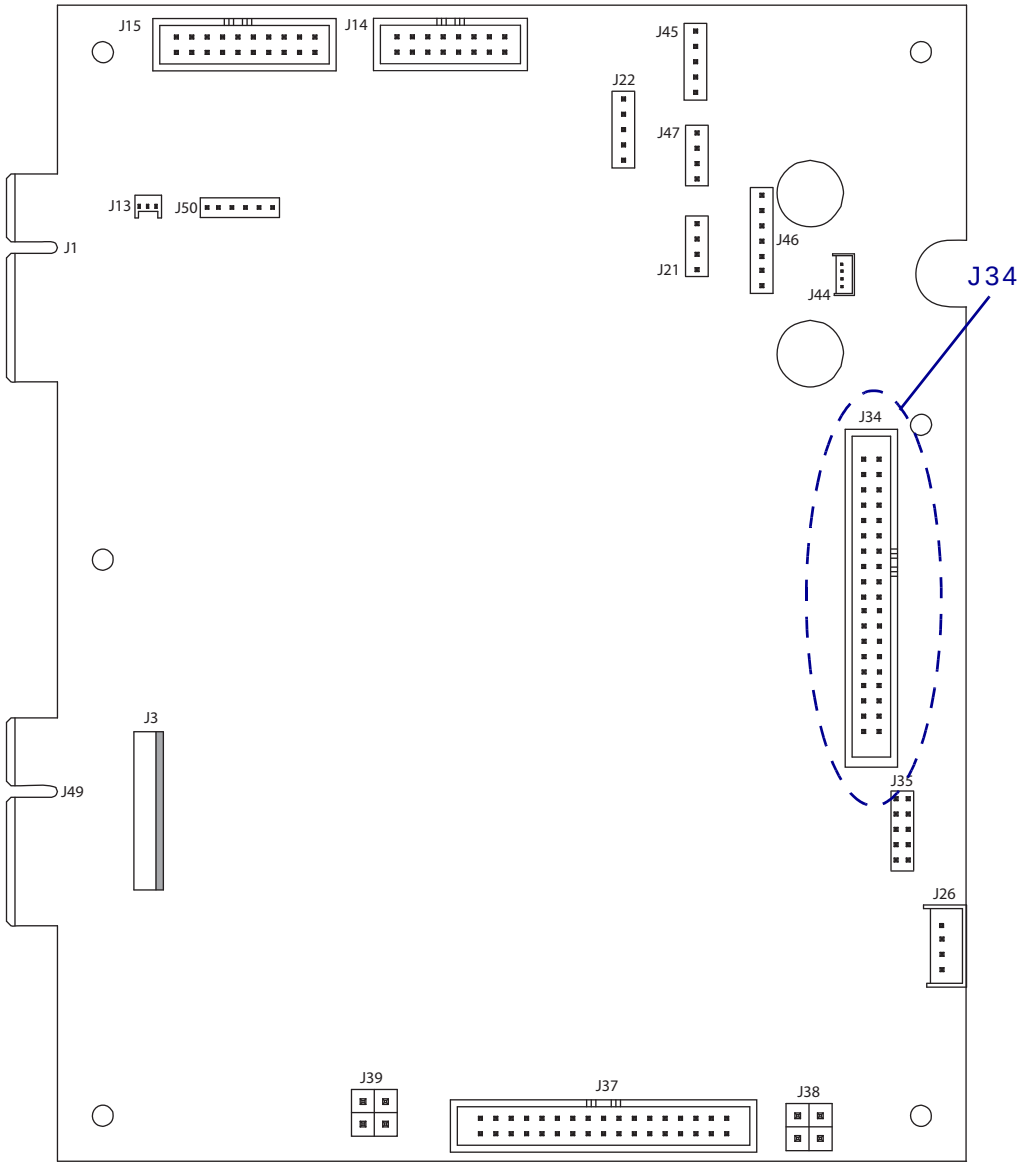


1	Electronics cover

Disconnect the Printhead Cables

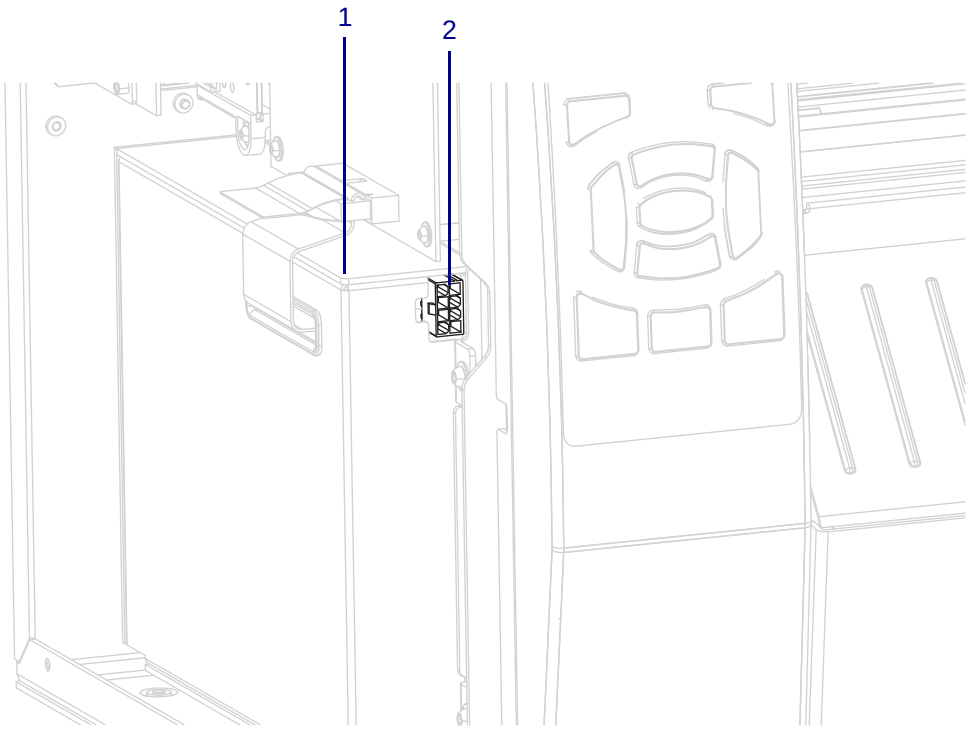
1. Disconnect the printhead data cable from J34 on the main logic board (MLB).

Figure 21 • MLB Connections



2. See Figure 22. Disconnect the printhead power cable from the power supply.

Figure 22 • Locate the Printhead Power Connector



1	Power supply
2	Printhead power connector

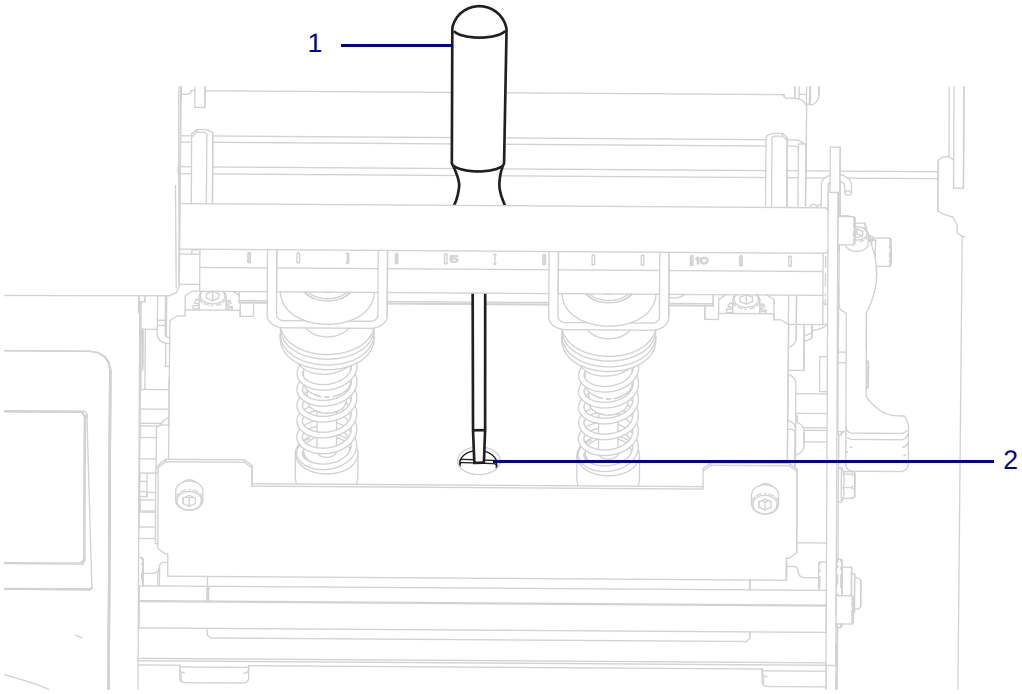
Remove the Printhead

1. Remove the media and ribbon from the printer.

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

   See Figure 23. Loosen the printhead mounting screw.

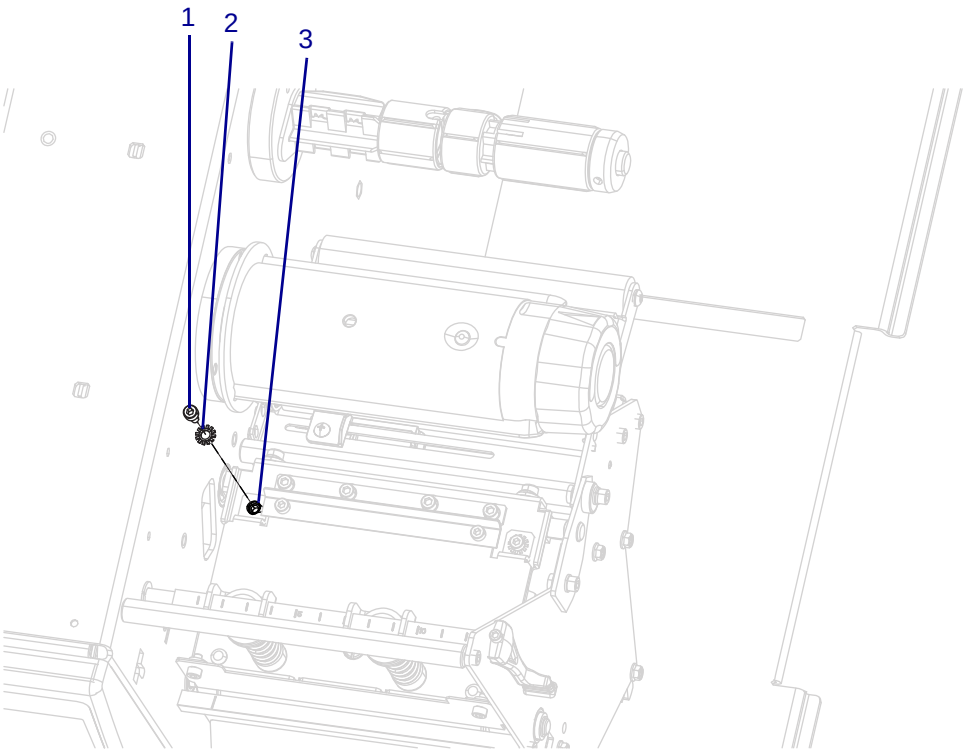
Figure 23 • Loosen the Printhead Mounting Screw



1	Flat-blade screwdriver
2	Printhead mounting screw

3. See Figure 24. From the media side, remove the upper print mechanism ground cable.

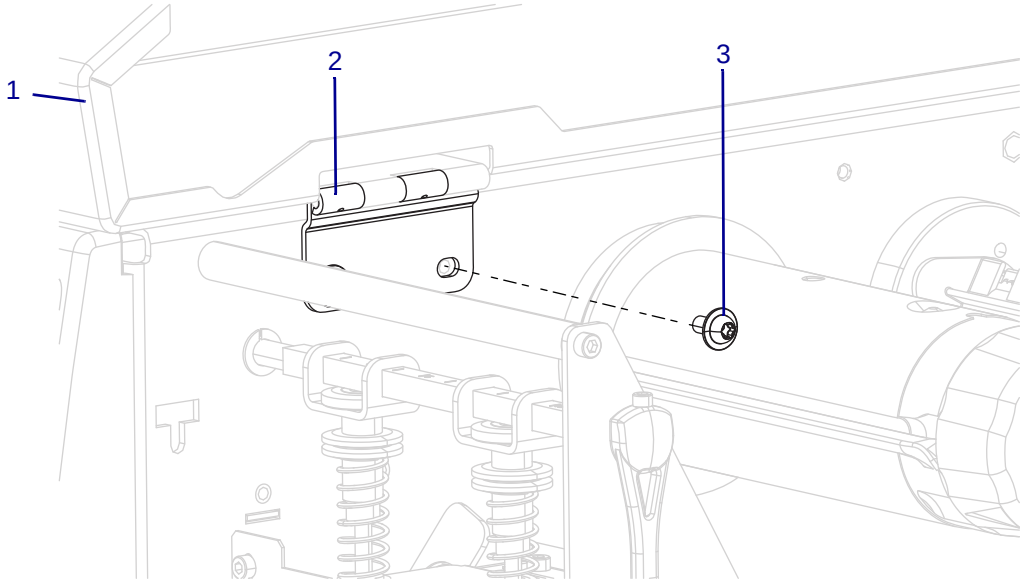
Figure 24 • Remove the Print Mechanism Ground Cable



1	Ground cable mounting screw
2	Lock washer
3	Ground cable

4. See Figure 25. Remove the media door mounting screw from the rear of the front hinge.

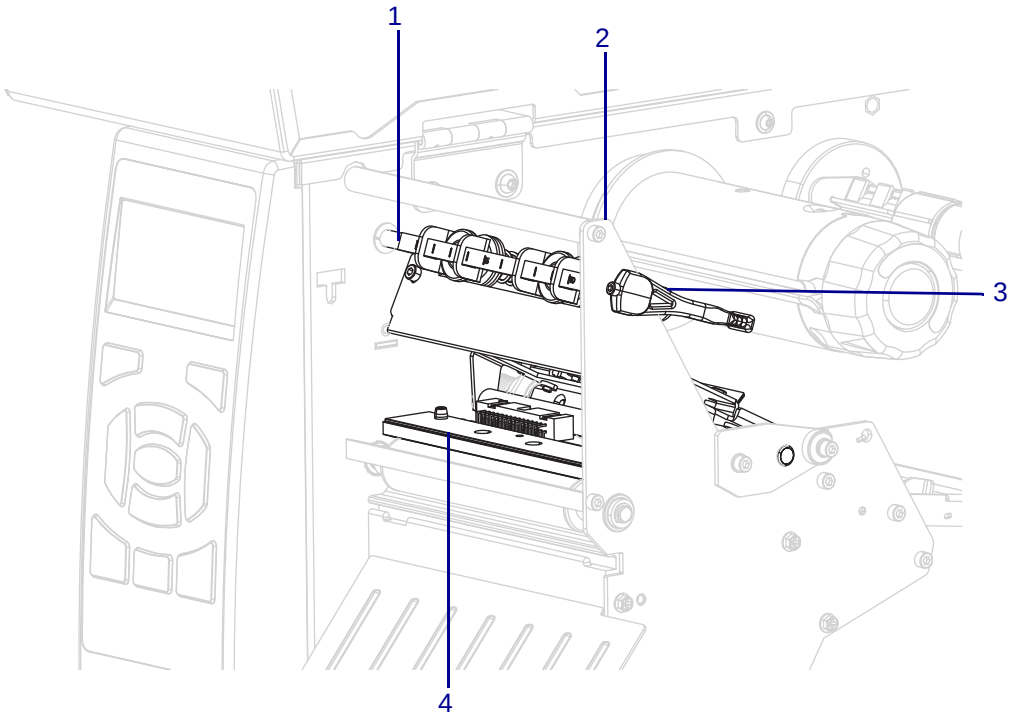
Figure 25 • Remove the Media Door Mounting Screw



1	Media door
2	Front hinge
3	Mounting screw

5. See Figure 26. Open the upper print mechanism. The printhead should be still be down on the platen roller. (If not, pull the printhead down to separate it from the upper print mechanism.)

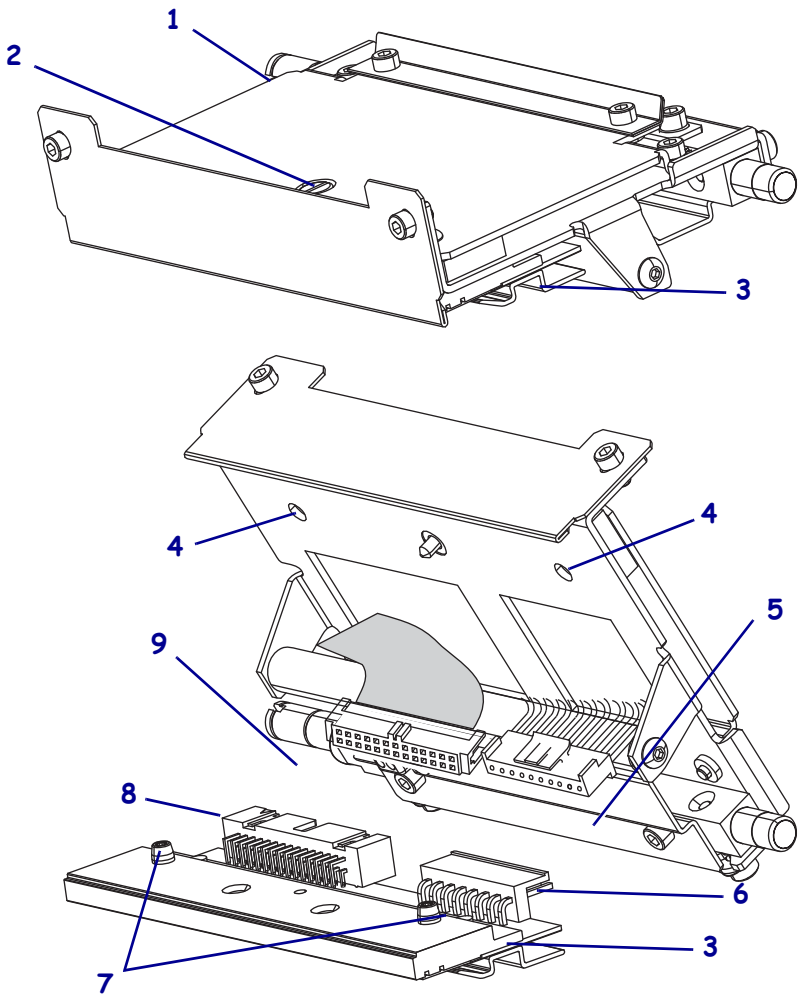
Figure 26 • Open the Upper Print Mechanism



1	Toggle assembly
2	Toggle assembly handle
3	Upper print mechanism
4	Printhead assembly

6. See Figure 27. Disconnect the printhead cables, and then remove the printhead from the printer.

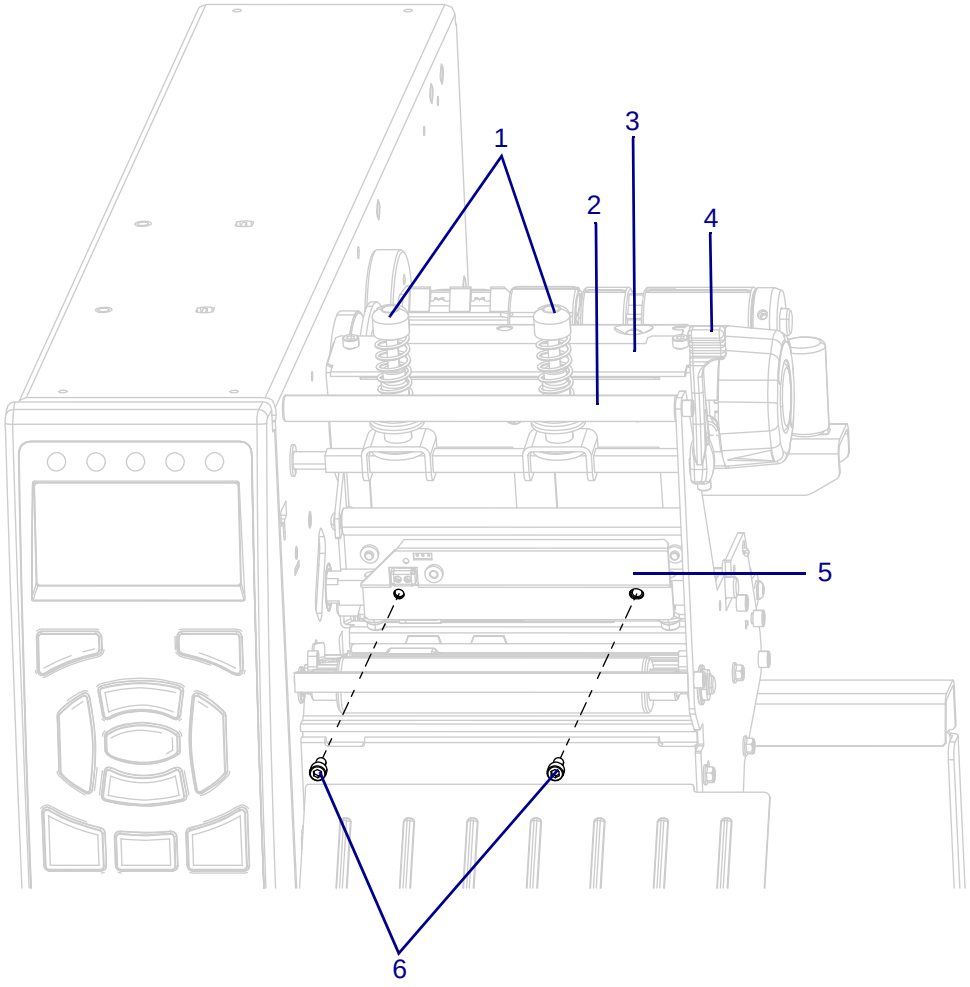
Figure 27 • Remove the Printhead



1	Upper print mechanism
2	Printhead mounting screw
3	Printhead assembly
4	Printhead locating holes
5	Printhead power cable
6	Printhead power cable connector
7	Printhead locating pins
8	Printhead data cable connector
9	Printhead data cable

7. See Figure 28. Turn the head open handle counterclockwise until the toggles contact the upper ribbon guide.

Figure 28 • Open the Printhead



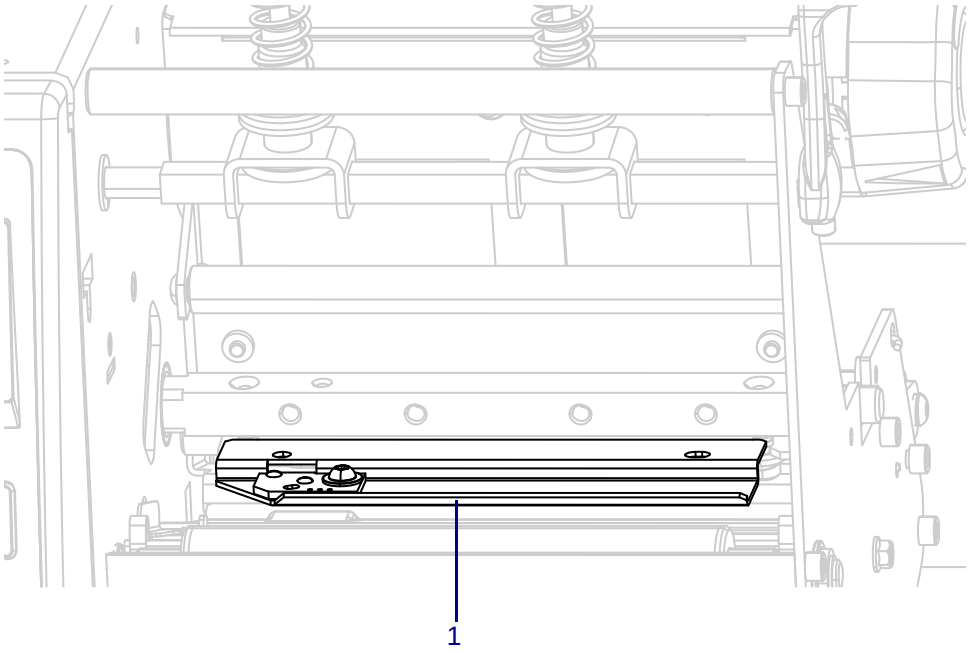
1	Toggles (2)
2	Upper ribbon guide
3	Print mechanism
4	Head open handle
5	Guard plate
6	Guard plate mounting screws (2)

8. Lift the print mechanism as far as it will go.

9. Remove the two guard plate mounting screws.

10. Lay the guard plate down as shown.

Figure 29 • Location of the Guard Plate

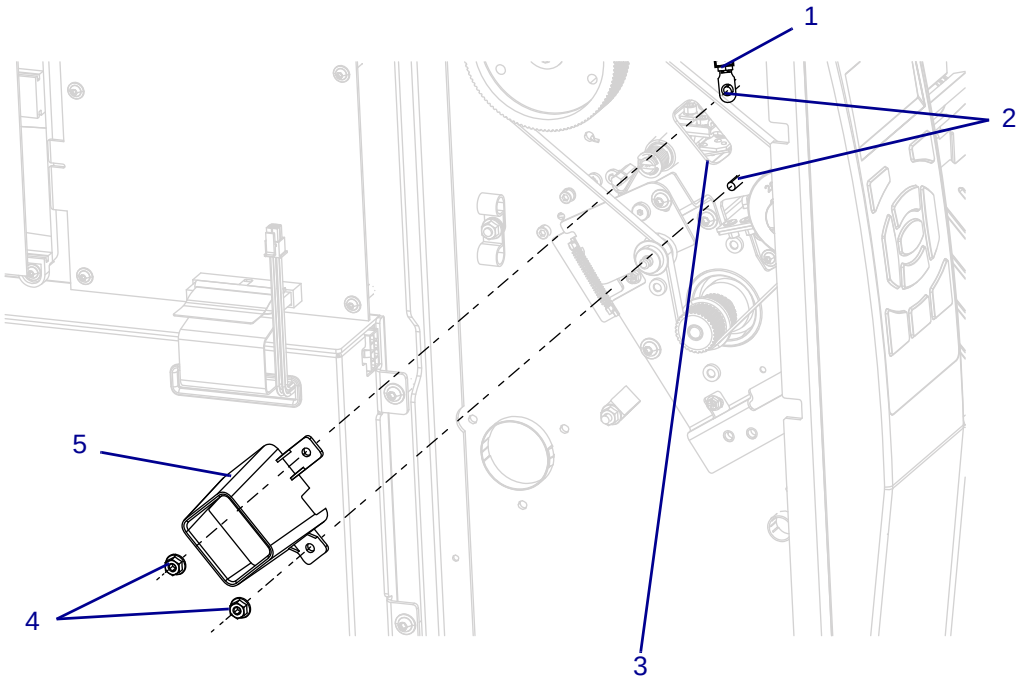


1	Guard plate

Remove the Printhead Cables

1. See Figure 30. From the electronics side, remove the two nuts securing the printhead cable guard.

Figure 30 • Remove the Printhead Cable Guard



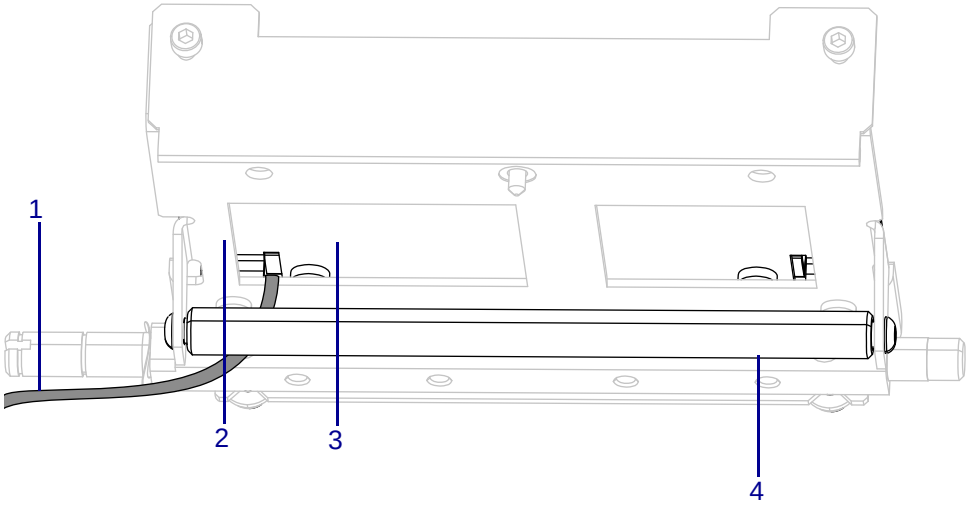
1	Printhead ground cable
2	Cable guard mounting studs (2)
3	Printhead cable access hole
4	Cable guard mounting nuts (2)
5	Cable guard

2. Remove the cable guard completely from the printer.
3. Remove and discard the printhead ground cable from the printer.
4. Guide the printhead cables through the access hole, and then discard them.

Install the New Printhead Cables

1. See Figure 30 on page 109. Slide the new ground cable onto the top cable guard mounting stud.
2. Insert the ground cable through the access hole.
3. Route the ground cable behind the upper print mechanism ribbon roller, and then between the printhead mounting bracket and upper print mechanism pressure plate.

Figure 31 • Ground Cable Routing

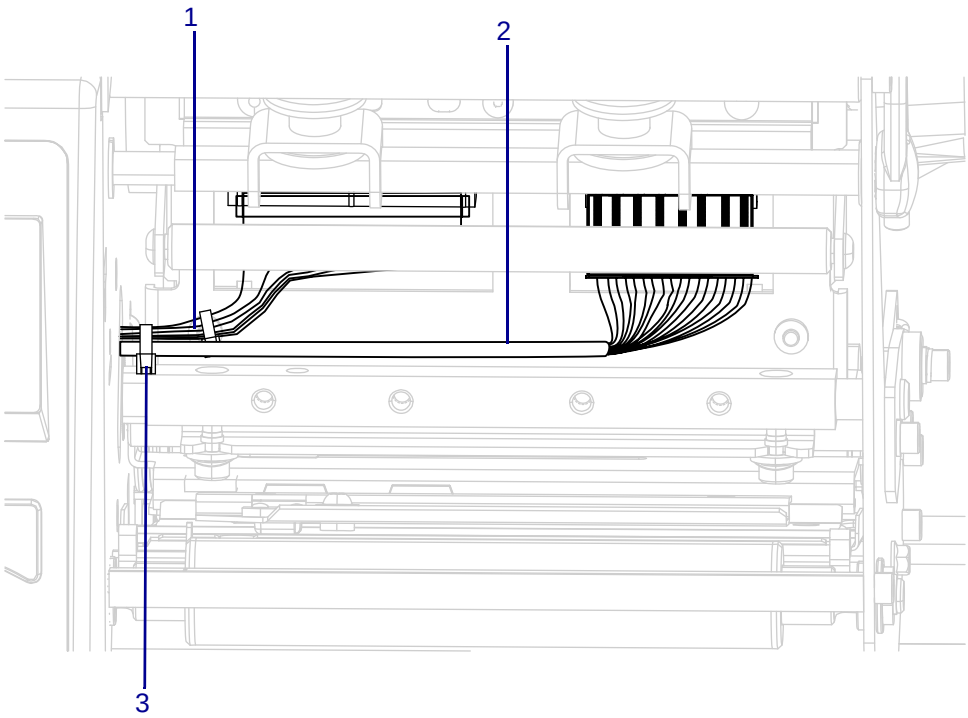


1	Printhead ground cable
2	Printhead mounting bracket
3	Upper print mechanism pressure plate
4	Upper print mechanism ribbon roller

4. See Figure 24 on page 103. Connect the ground cable to the upper print mechanism.
5. See Figure 30 on page 109. Install the new cable guard using the two new mounting nuts.
6. Insert the printhead data and the printhead power cable through the cable guard and the access hole.
7. See Figure 27 on page 106. Connect the printhead power and data cables to the printhead.

8. See Figure 32. Install a cable tie around the printhead data and power cables.

Figure 32 • Location of the New Printhead Cables



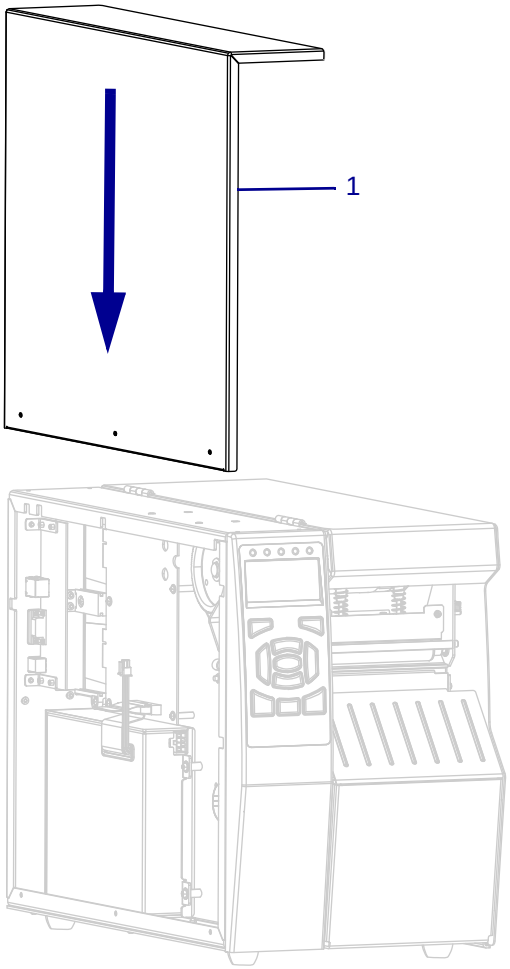
1	Printhead data cable
2	Printhead power cable
3	Cable tie

9. See Figure 28 on page 107. Reinstall the guard plate.
10. See Figure 26 on page 105. Reinstall the printhead.
11. Close the upper print mechanism.
12. See Figure 25 on page 104. Reinstall the media door mounting screw.
13. See Figure 21 on page 100. Connect the printhead data cable to J34 on the MLB.
14. See Figure 22 on page 101. Connect the printhead power cable to the power supply connector.

Reinstall the Electronics Cover

1. See Figure 33. Slide the electronics cover onto the printer.

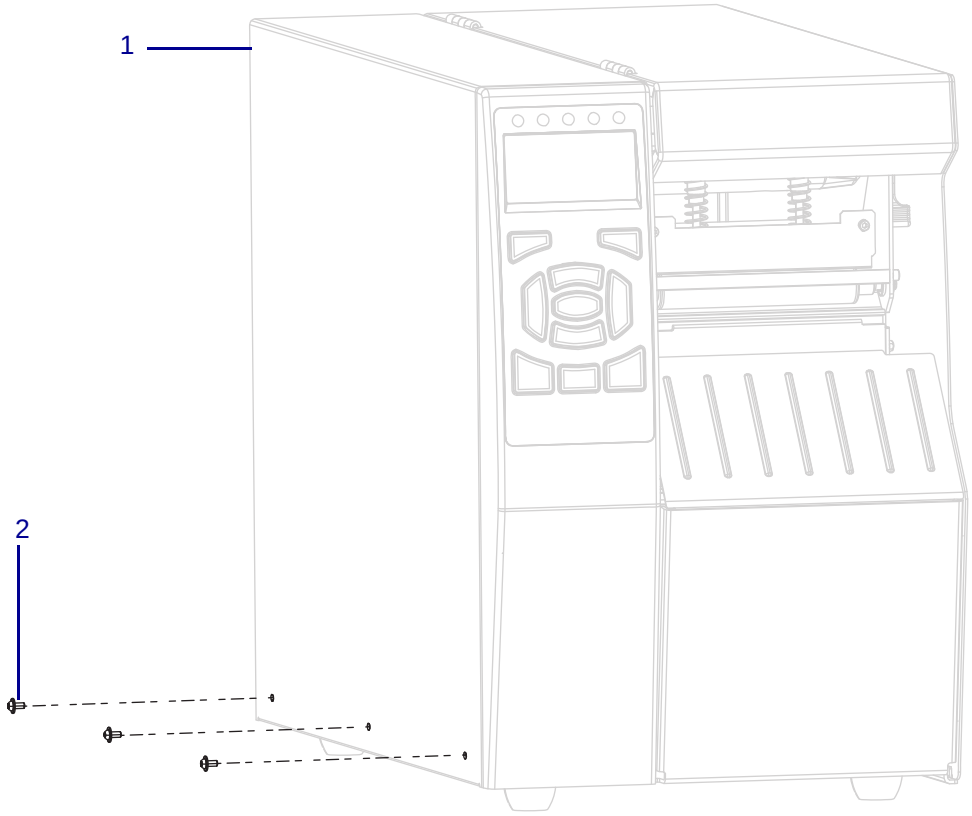
Figure 33 • Install the Electronics Cover



1	Electronics cover

2. See Figure 34. Install the three mounting screws.

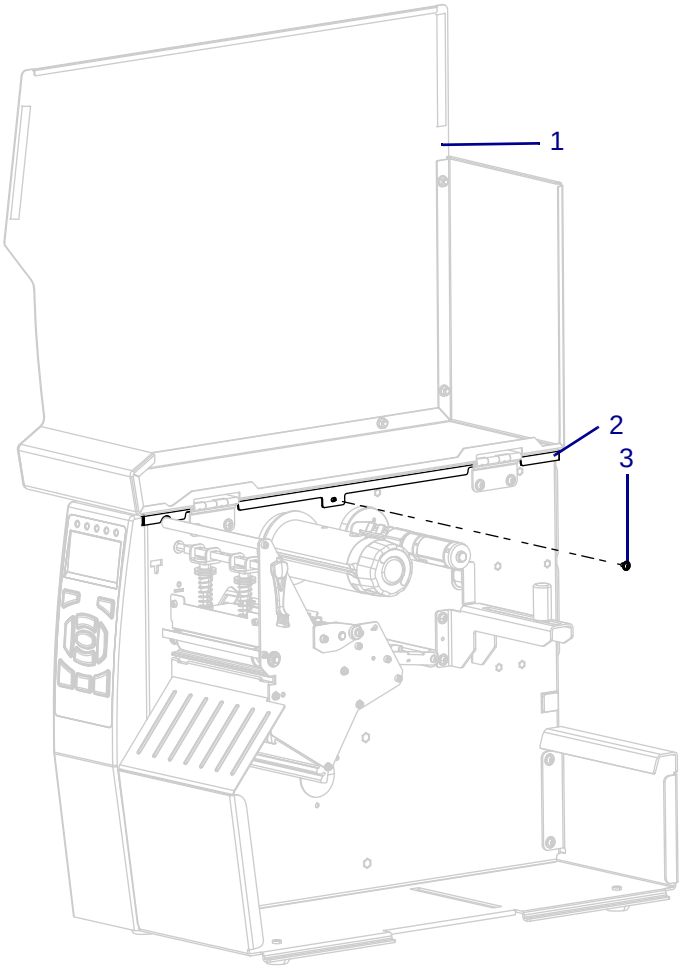
Figure 34 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 35. Open the media door and install the media side electronics cover mounting screw.

Figure 35 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Pivot Bar Assembly Maintenance Kit

Installation Instructions

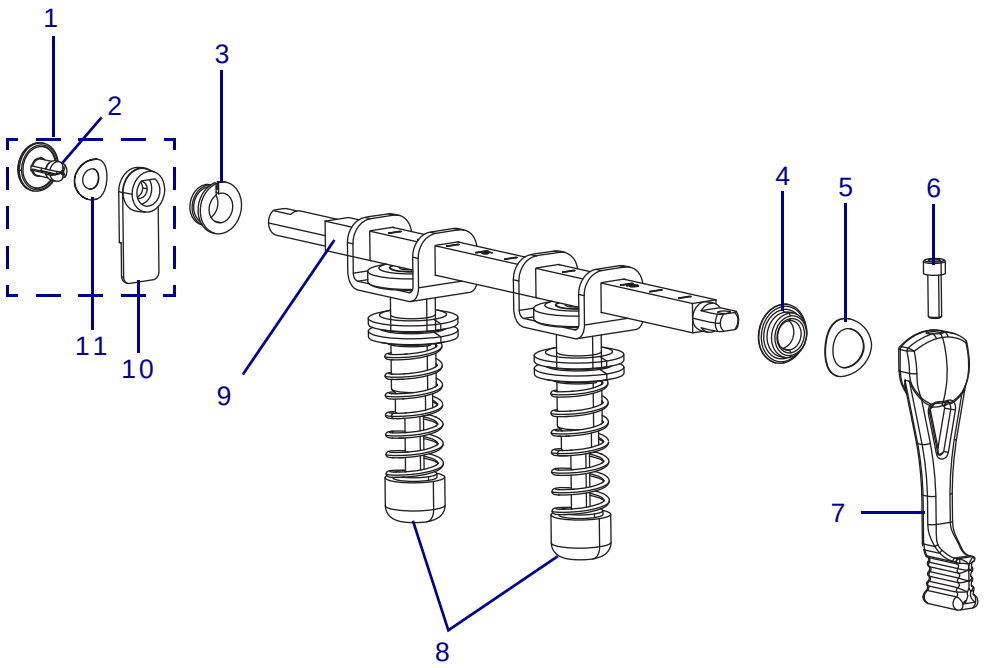
This kit includes the parts and documentation necessary to install the Pivot Bar Assembly Maintenance Kit in the ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 36 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 7 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**G41022M**	Pivot Bar Maintenance Kit
	1	1	**G46352M**	ZT510 Head Open Sensor Flag Maintenance Kit
	2	1	*N/A*	Tri-Mount Shoulder
	3	1	**HW46105**	Nylon Bearing, 9.251 × 0.3125 × 0.438 (sold in quantities of 25)
	4	1	*N/A*	Bronze Flanged Bearing 0.252 × 0.500 × 0.500
	5	1	**HW07229**	Washer, Curved 0.344 × 0.172 × 0.006 (sold in quantities of 25)
	6	1	**HW30391-006**	Screw, 4-40 × 0.37 in. (sold in quantities of 25)
	7	1	*N/A*	Head Handle
	8	2	**35099M**	Toggle Assembly Maintenance Kit (one toggle per kit)
	9	1	*N/A*	Flag
	10	1	**HW40194**	Washer, 0.344 × 0.172 × 0.006 (sold in quantities of 25)
	11	1	*N/A*	Toggle Pivot Bar

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Torx-Head Wrench Set
- ❑ SAE Hex Key (Allen Wrench) Set
- ❑ Antistatic Wrist Strap and Mat

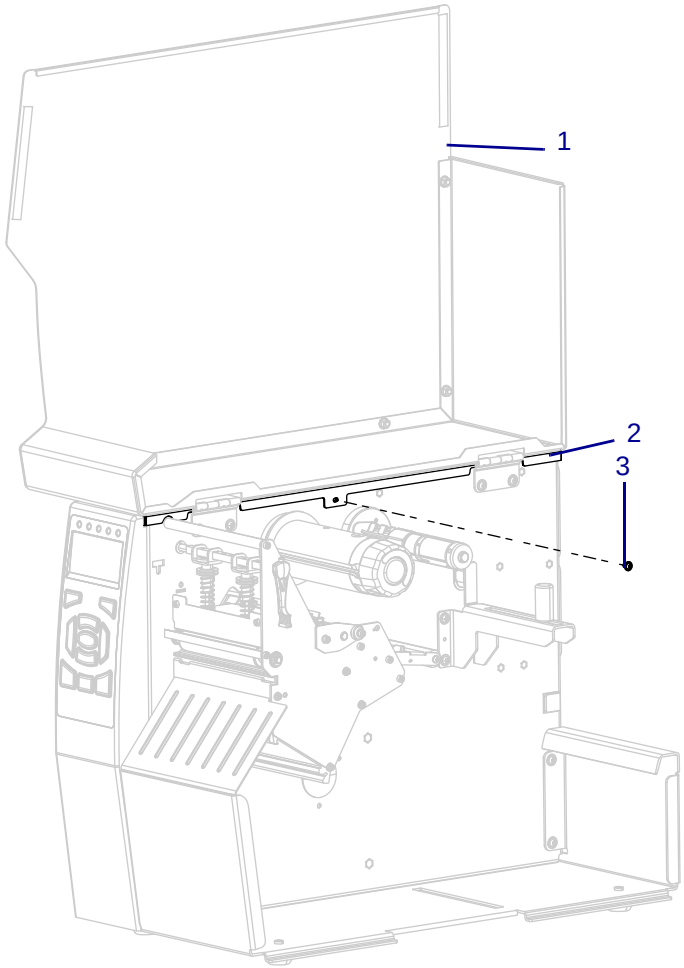
Remove the Electronics Cover

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 37 • Locate the Electronics Cover Mounting Screw

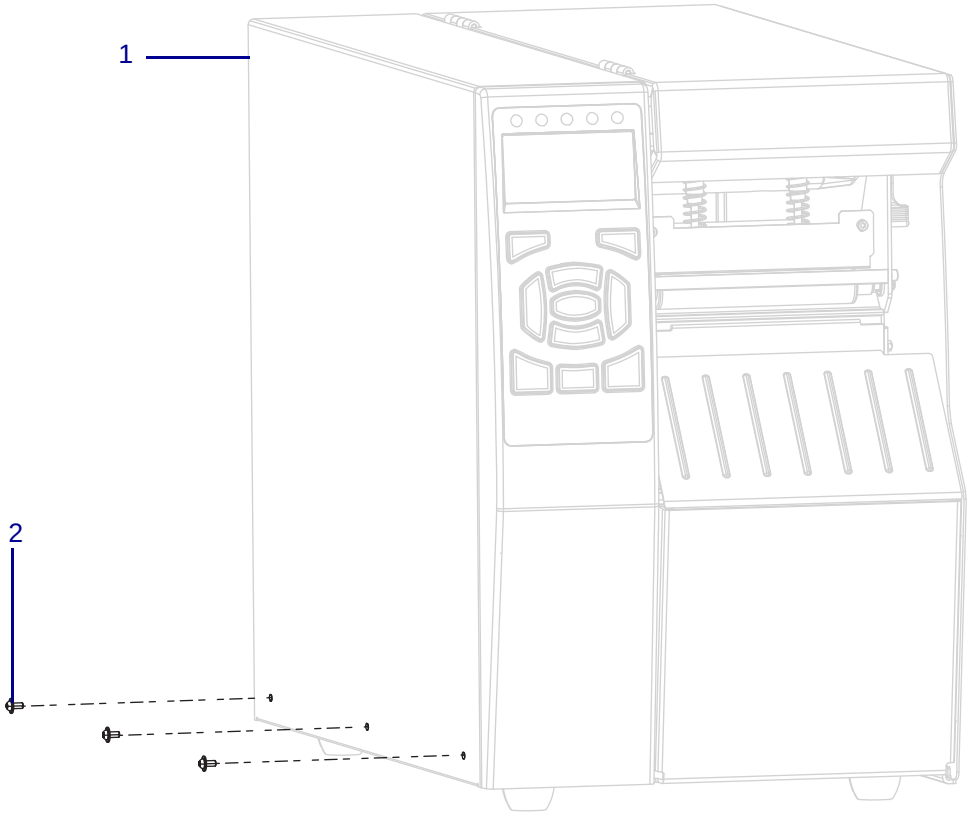


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 38. Remove the three mounting screws securing the electronics cover to the printer.

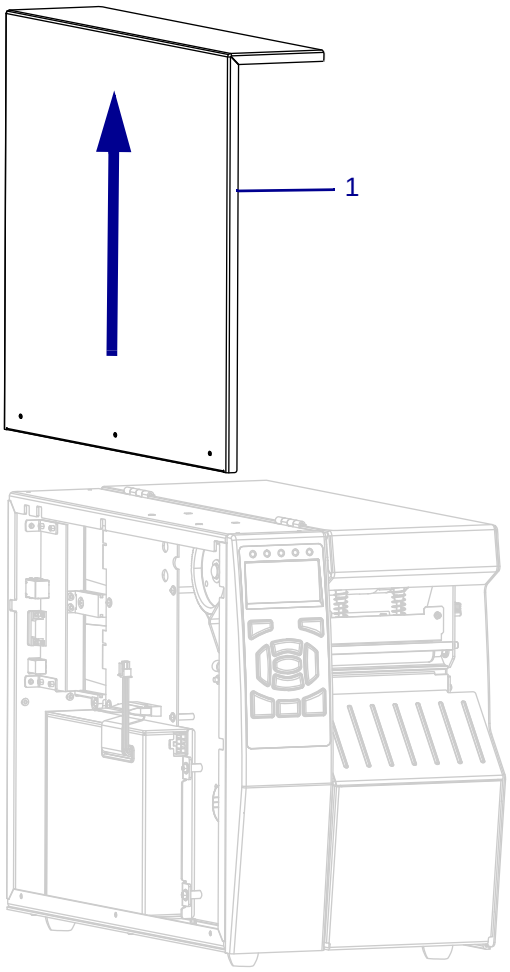
Figure 38 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 39. Lift the electronics cover off of the printer.

Figure 39 • Remove the Electronics Cover

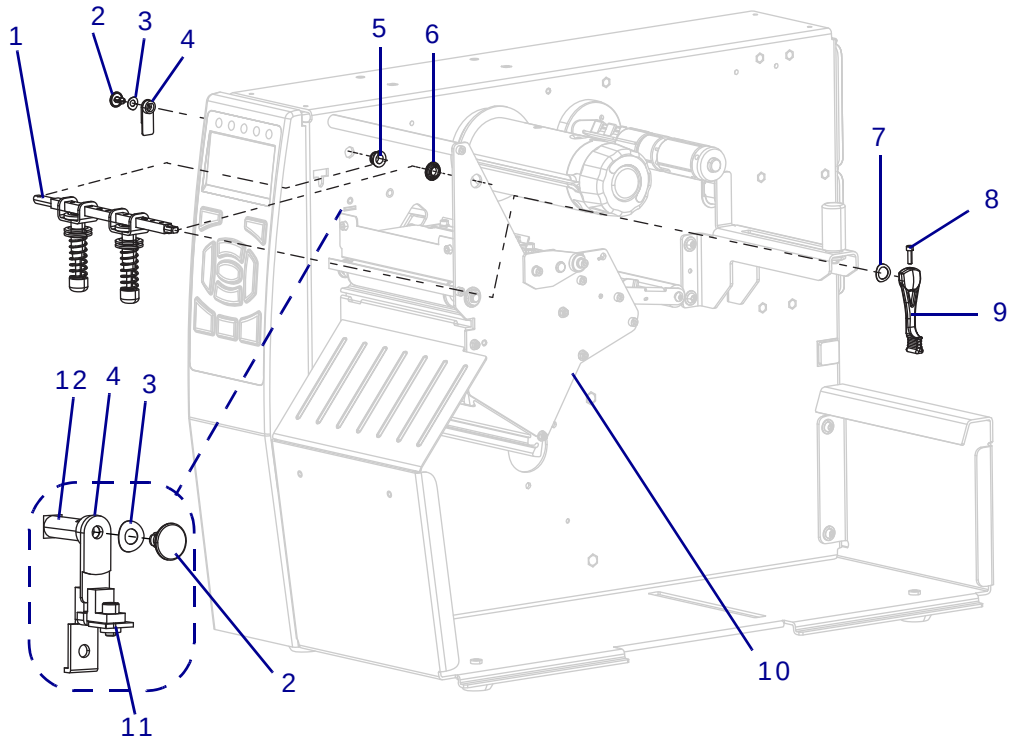


1	Electronics cover

Remove the Old Pivot Bar Assembly

1. Remove the media and ribbon.
2. See Figure 40. Locate the sensor flag in the upper right corner of the electronics cabinet. Remove and discard the tri-mount and flag.
3. Remove the toggle pivot bar handle by removing and discarding the mounting screw, and then sliding and discarding the handle and wave washer.
4. Slide the toggle pivot bar further into the main frame until the other end comes out of the side plate, and then remove and discard the toggle pivot bar assembly.

Figure 40 • Replace Head Handle

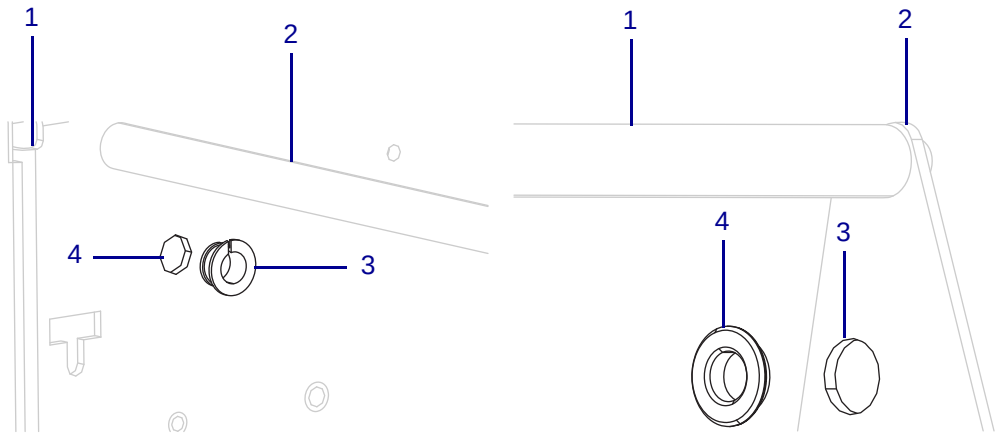


1	Toggle pivot bar assembly	7	Curved large hole washer
2	Tri-mount	8	Set screw
3	Curved small hole washer	9	Head handle
4	Sensor flag	10	Side plate
5	Nylon bearing	11	Head open sensor
6	Bronze bearing	12	Electronics side pivot bar

Install the New Pivot Bar

1. See Figure 41. Install the nylon bearing as shown.
2. Install the bronze bearing as shown.

Figure 41 • Install the Bearings



1	Printer main frame
2	Upper ribbon roller
3	Nylon bearing
4	Main frame mounting hole

1	Upper ribbon roller
2	Side plate
3	Side plate mounting hole
4	Bronze bearing

3. See Figure 40 on page 120. Install the toggle pivot bar by sliding the long round end into the main frame, and then the short round end into the side plate.

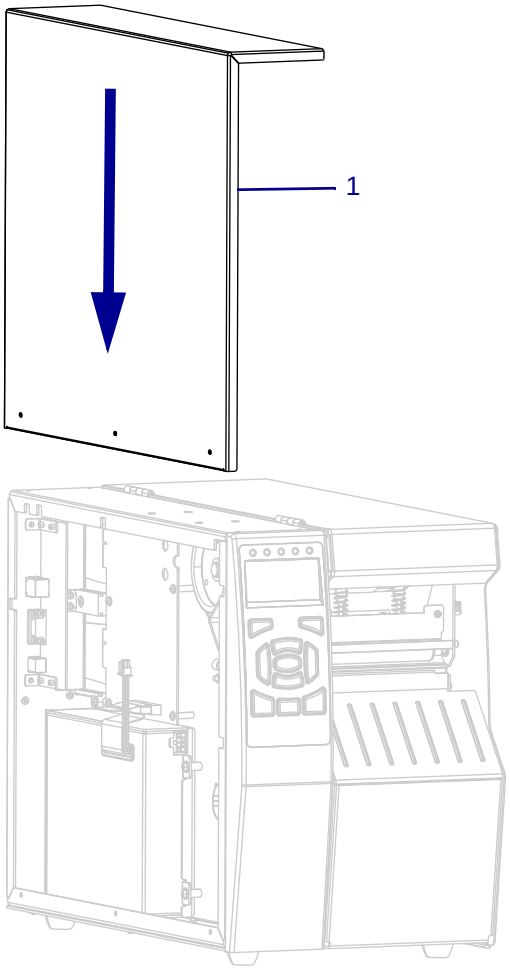
Note • The toggle assembly(s) are attached to the toggle pivot bar at the factory.

4. Install the flat washer, curved washer, and handle onto the short end of the toggle pivot bar, and then tighten the set screw.
5. Install the sensor flag by aligning the flat in the sensor flag hole with the flat on the toggle pivot bar.
6. Close the printhead assembly. The sensor flag must be centered in the slot of the head open sensor assembly.
7. Push the tri-mount into the hole of the sensor flag and toggle pivot bar.

Reinstall the Electronics Cover

1. See Figure 42. Slide the electronics cover onto the printer.

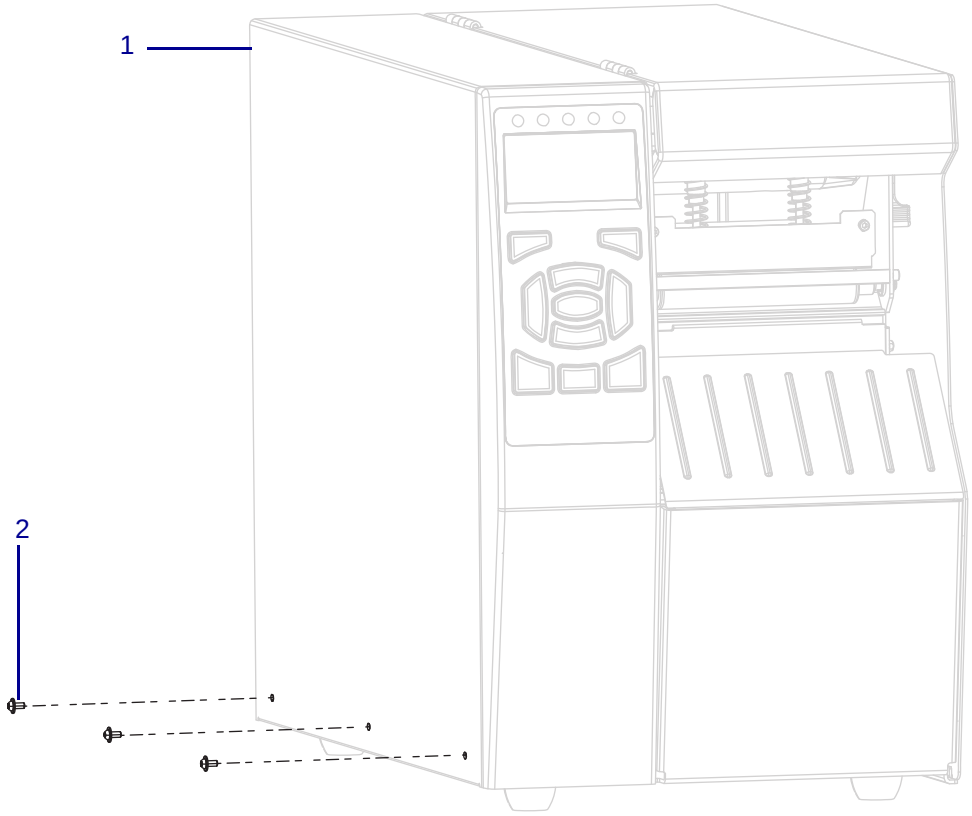
Figure 42 • Install the Electronics Cover



1	Electronics cover

2. See Figure 43. Install the three mounting screws.

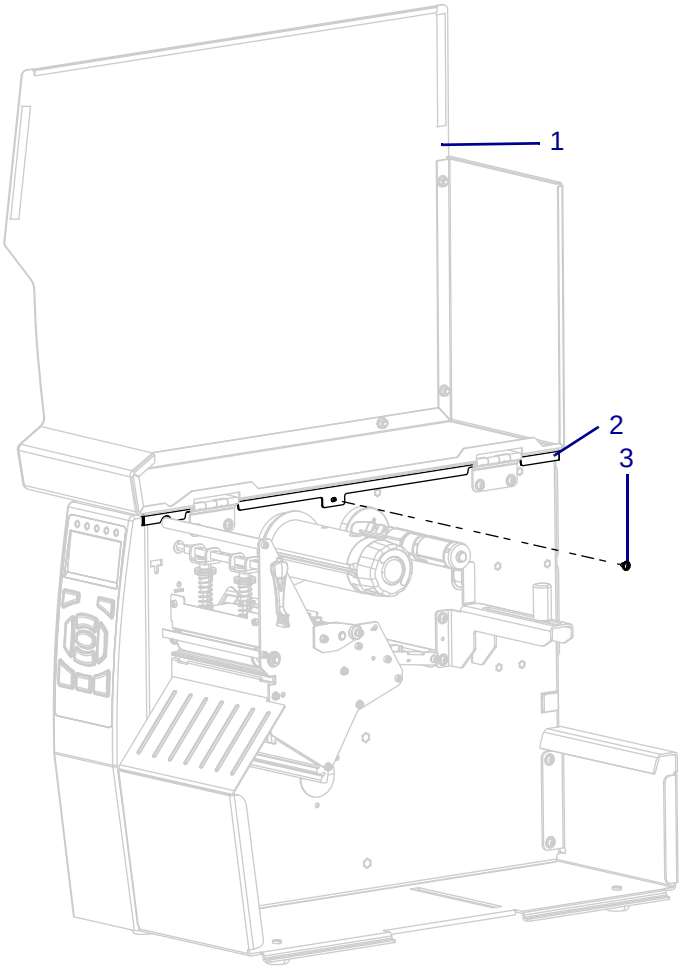
Figure 43 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 44. Open the media door and install the media side electronics cover mounting screw.

Figure 44 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Open the media door and reinstall media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Toggle Assembly Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Toggle Assembly in the ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 45 • Kit Contents

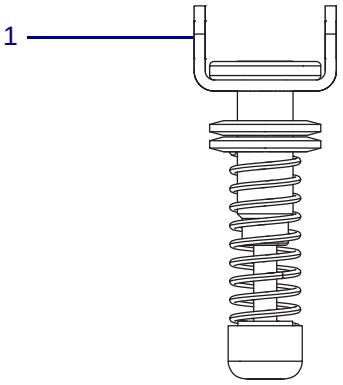


Table 8 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**35099M**	ZT510 Toggle Assembly Maintenance Kit

Bold = Part available for purchase.
Italic = Part not available for purchase; listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

❑ SAE Hex Key (Allen wrench) Set Torx-Head Wrench Set

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Old Toggle Assembly

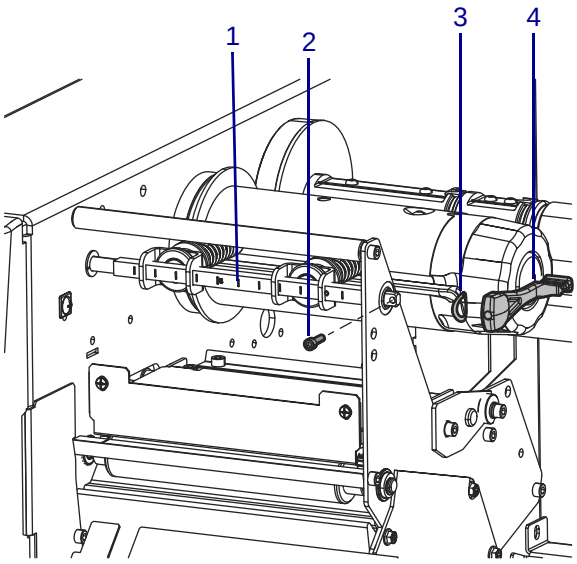
1. **Caution •** Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2. Open the media door and remove the ribbon and media.

3. See Figure 46. Take note of the location of the toggle(s). With the head open, remove the head handle mounting screw, and then slide the handle and washer(s) off the pivot bar.

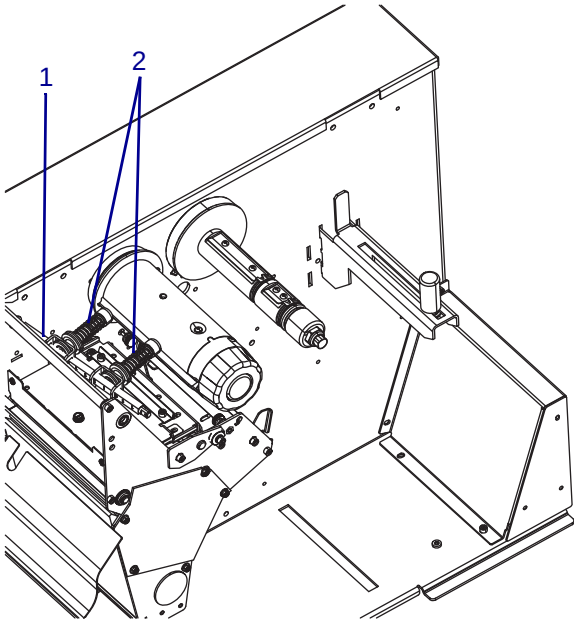
Figure 46 • Remove the Head Open Handle (Xi4 shown)



1	Pivot bar
2	Handle mounting screw
3	Wave washer (may have flat washer also)
4	Head handle

4. See Figure 47. Slide the pivot bar toward the main frame.

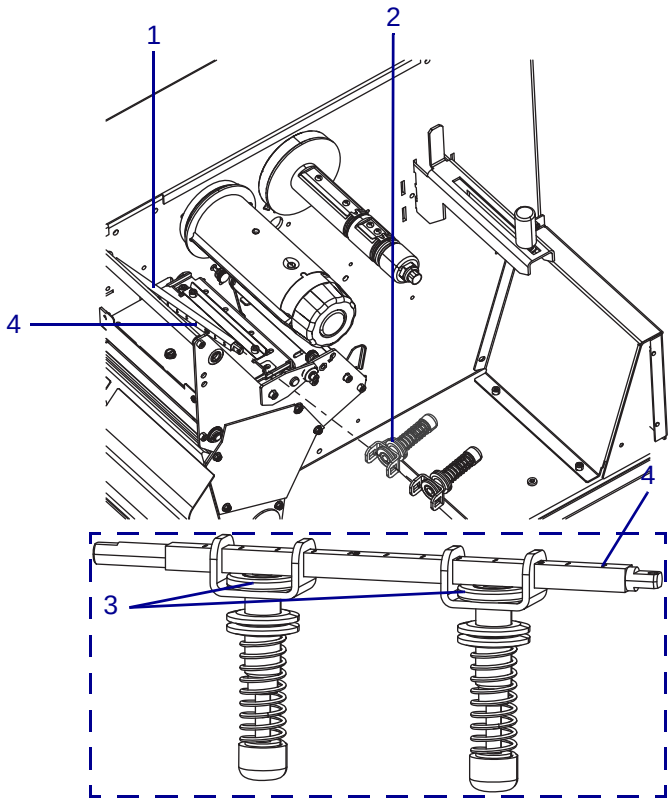
Figure 47 • Remove the Toggle Assembly (Xi4 shown)



1	Pivot bar
2	Toggles (2)

5. See Figure 48. Loosen the top knurled locking nut on the toggles, and then slide them off the pivot bar.

Figure 48 • Slide the Toggles Off the Pivot Bar (Xi4 shown)



1	Pivot bar
2	Toggle(s)
3	Top knurled locking nut
4	Locating marks

Install the New Toggle Assembly

1. Remove the new toggle(s) from the kit(s).
2. See Figure 48. Loosen the top knurled locking nut, and then slide the toggle(s) onto the pivot bar ensuring that the locating marks can be seen.
3. See Figure 47 on page 127 and Figure 46 on page 126. Align the pivot bar with the mounting hole in the side plate and slide the pivot bar through it.
4. Holding the pivot bar, slide the washer(s) onto it, and then slide the handle onto the pivot bar as shown in Figure 46 on page 126.
5. Insert the handle mounting screw into the handle, and then tighten the mounting screw.
6. Reinstall the media and ribbon.
7. Set the toggles in the proper location on the pivot bar.
8. Reconnect the AC power cord and data cables.
9. Turn on (**I**) the printer.
10. See *Adjust the Printhead Pressure and Toggle Position* on page 15 for toggle pressure adjustment procedure.

The installation is complete.

Head Open Sensor Flag Maintenance Kit

Installation Instructions

This kit includes the parts and documentation for installing the sensor flag in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Caution • A qualified service technician must perform this installation.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 49 • Kit Contents

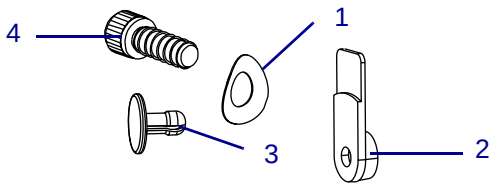


Table 9 • Kit Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**G46352M**	Sensor Flag Maintenance Kit
	1	1	**HW40194**	Curved Washer, 0.344 × 0.172 × 0.006 (sold in quantities of 25)
	2	1	**HW46352**	Sensor Flag (sold in quantities of 50)
	3	1	*N/A*	Trimount Clip
	4	1	**HW48411**	Thumbscrew, 6-62 x 0.312 (sold in quantities of 10)

Bold = Part available for purchase.
Italic = Non-available part. Only for reference.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Flat-Blade Screwdriver Set
- ❑ Torx-Head Wrench Set
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Safety Goggles
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

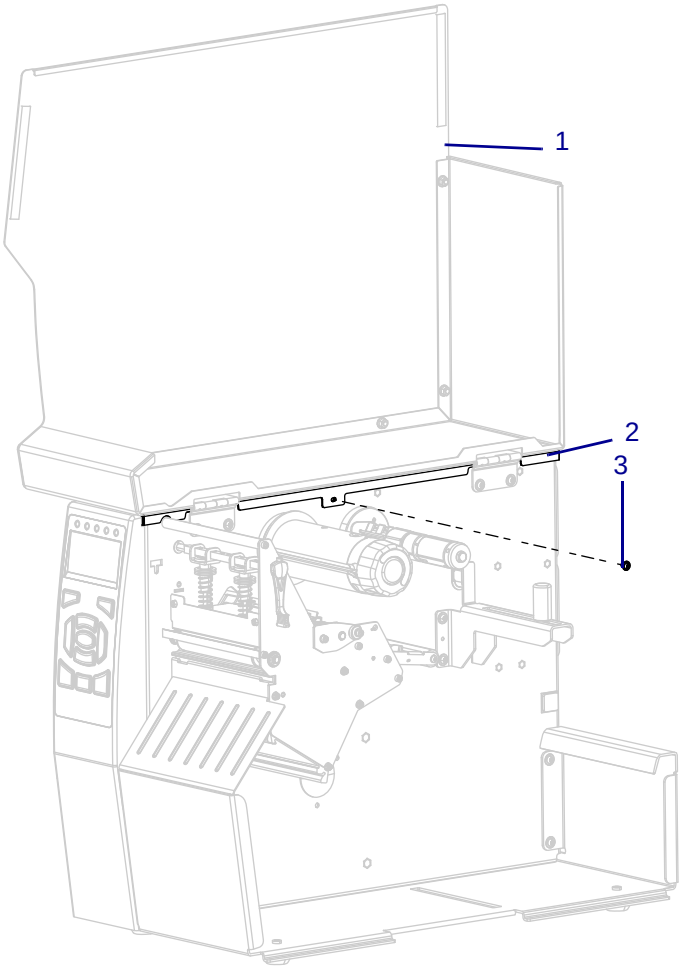
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 50 • Locate the Electronics Cover Mounting Screw

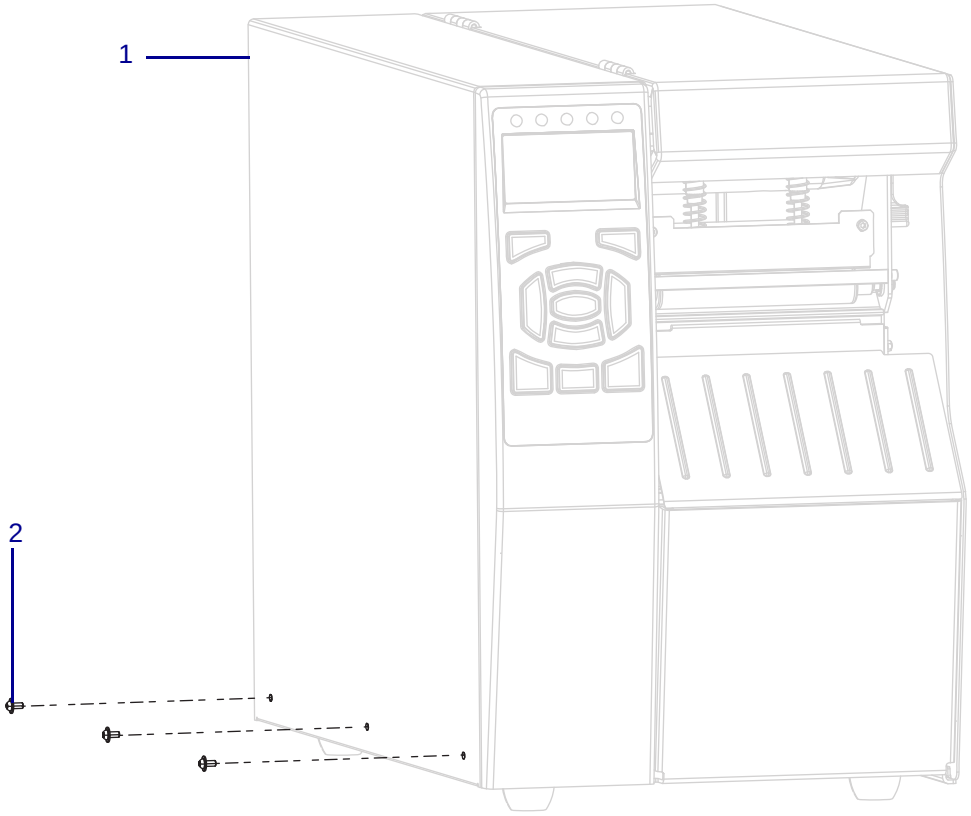


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 51. Remove the three mounting screws securing the electronics cover to the printer.

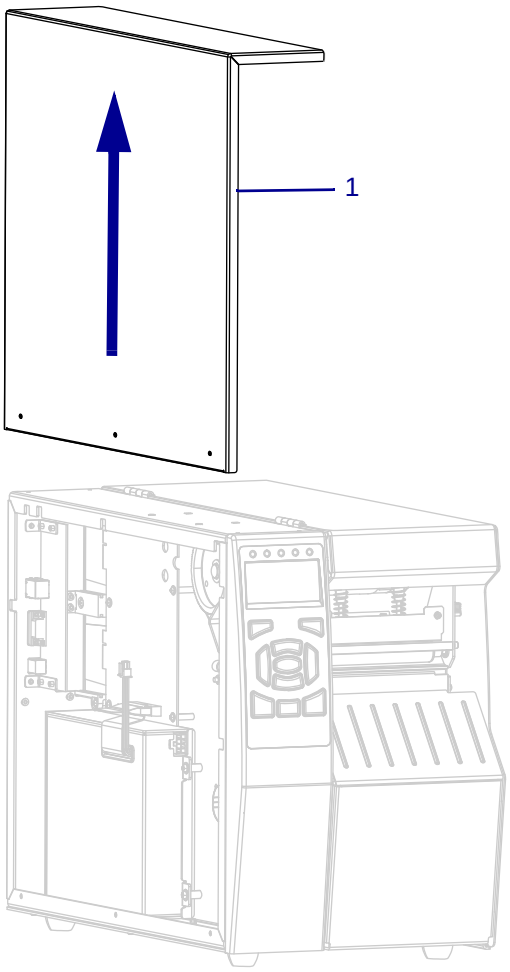
Figure 51 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 52. Lift the electronics cover off of the printer.

Figure 52 • Remove the Electronics Cover



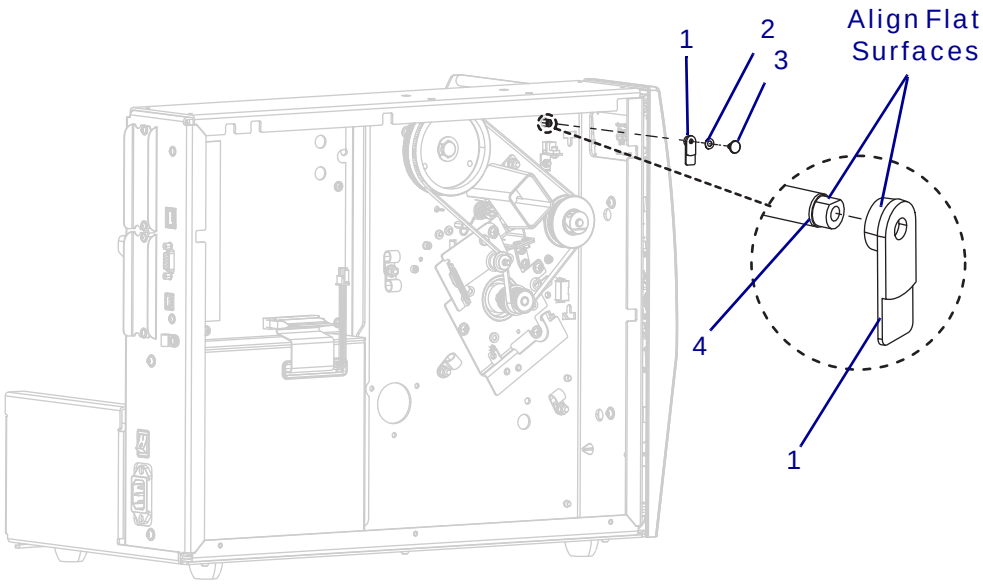
1	Electronics cover

Replace the Sensor Flag

1. **Caution •** Wear protective eye wear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 53. Pry out and discard the trimount clip and the old sensor flag.

Figure 53 • Remove and Install the Sensor Flag (ZT510 shown)



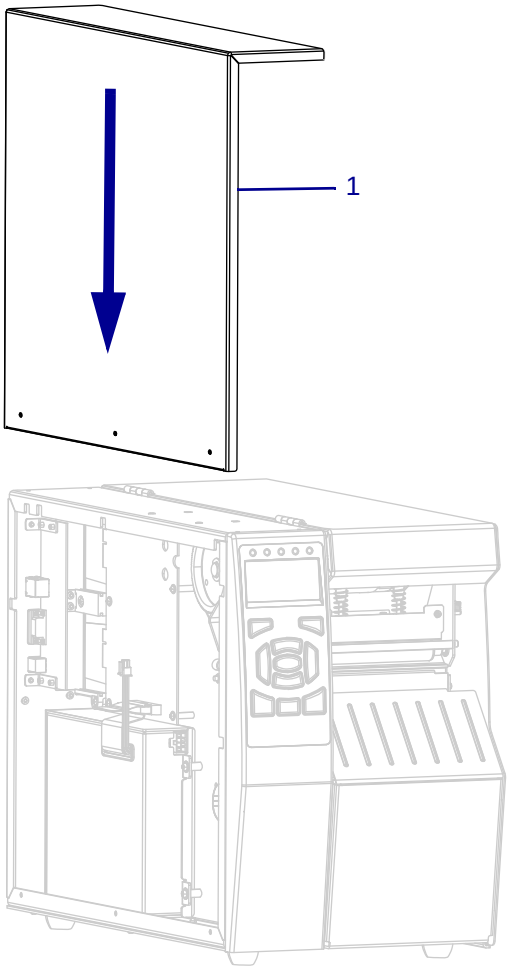
1	Sensor flag
2	Curved washer
3	Trimount clip
4	Toggle pivot bar

2. See Figure 53. Push in the new sensor flag, curved washer, and trimount clip onto the toggle pivot bar.

Reinstall the Electronics Cover

1. See Figure 54. Slide the electronics cover onto the printer.

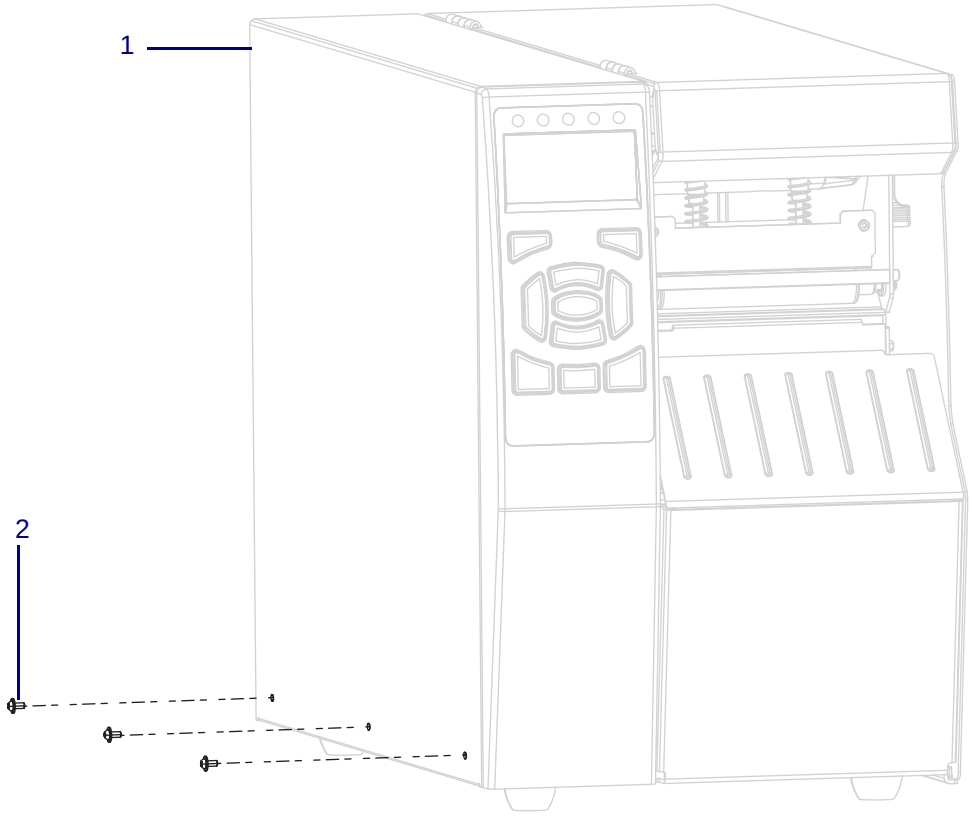
Figure 54 • Install the Electronics Cover



1	Electronics cover

2. See Figure 55. Install the three mounting screws.

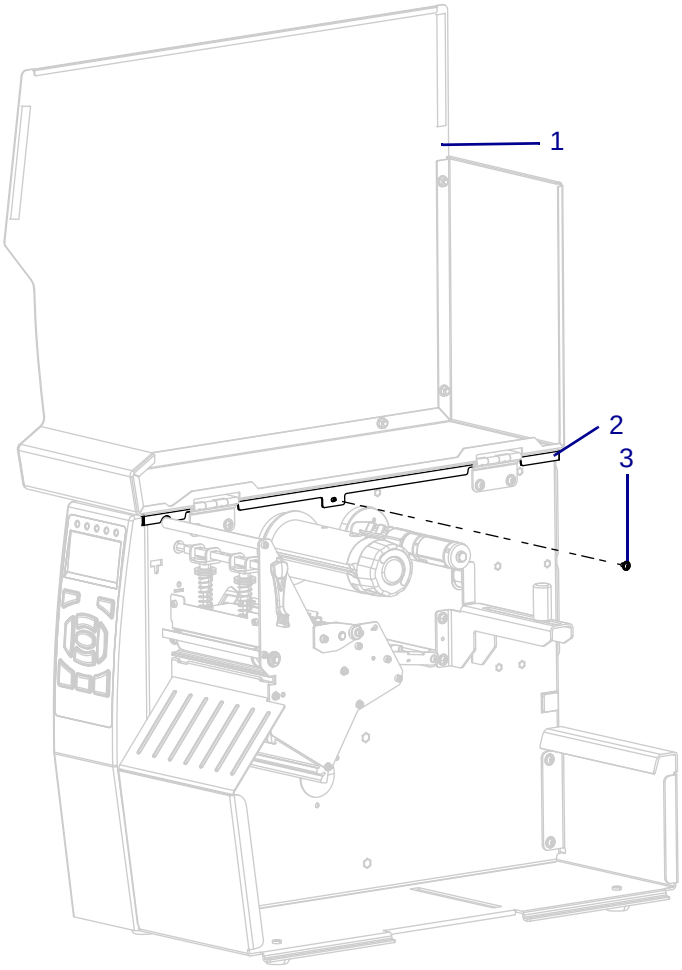
Figure 55 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 56. Open the media door and install the media side electronics cover mounting screw.

Figure 56 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Print Mechanism Hardware Maintenance Kit

Installation Instructions

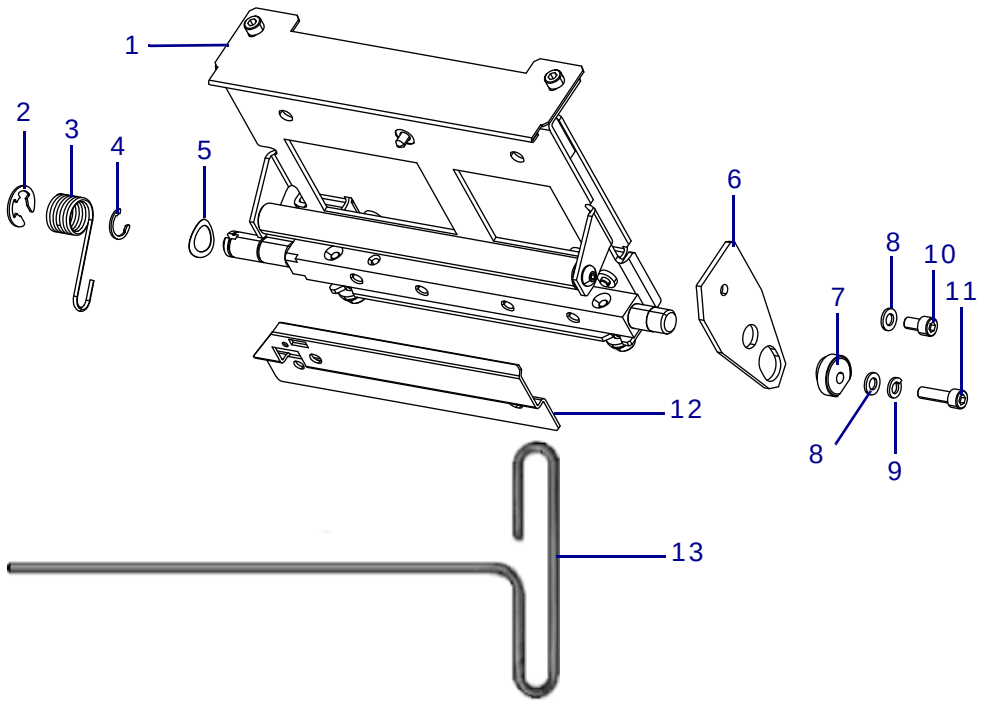
This kit includes the parts and documentation necessary to install the Print Mechanism Hardware Maintenance Kit on the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 57 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 10 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-011**	Print Mechanism Hardware Maintenance Kit
	1	1	*N/A*	Print Mechanism Assembly
	2	1	**HW06250**	E-Ring Ext 0.312 (sold in quantities of 25)
	3	1	**HW40027**	Torsion Spring (sold in quantities of 25)
	4	1	**HW32373**	C-Ring Ext 0.312 (sold in quantities of 25)
	5	1	**HW30239**	Crescent Washer, 0.465 × 0.323 × 0.062 × 0.005 (sold in quantities of 25)
	6	1	*N/A*	Wear Plate
	7	1	*N/A*	Eccentric Pin
	8	2	**HW30956**	Flat Washer, 0.207 × 0.146 × 0.030 (sold in quantities of 10)
	9	1	**HW06268**	Lock Washer (sold in quantities of 25)
	10	1	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 25)
	11	1	**HW30392-008**	Screw, 6-32 × 0.50 (sold in quantities of 25)
	12	1	*N/A*	Guard Plate (use only if old guard plate is damaged)
	13	1	*N/A*	Hex Key Long, 7/64

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat
- ❑ C-Ring Removal Tool
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Needle-Nose Pliers
- ❑ E-Ring Removal Tool

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2.

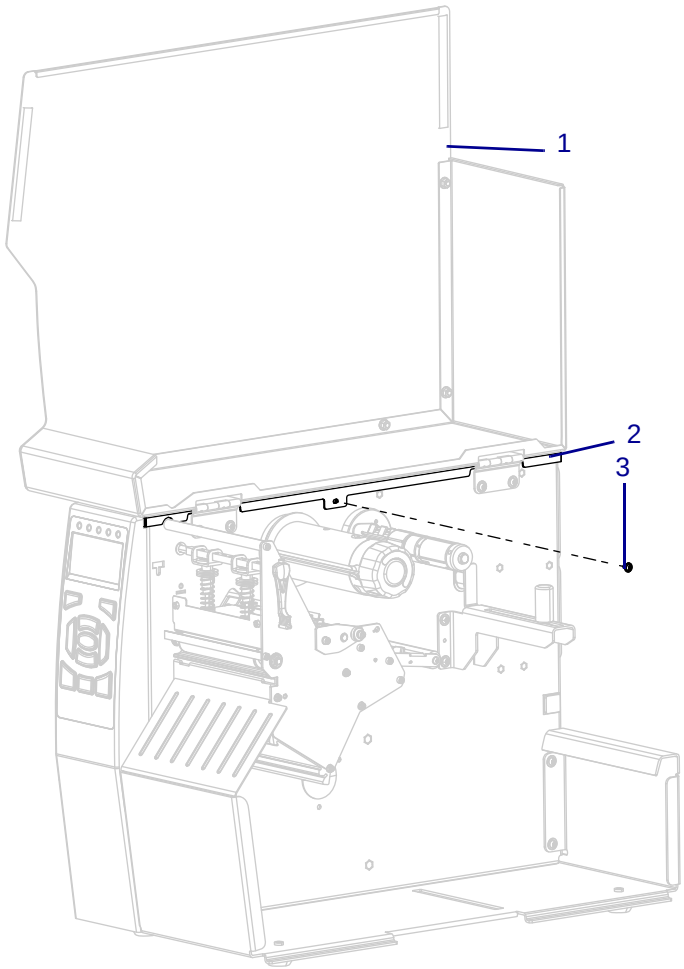
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 58 • Locate the Electronics Cover Mounting Screw

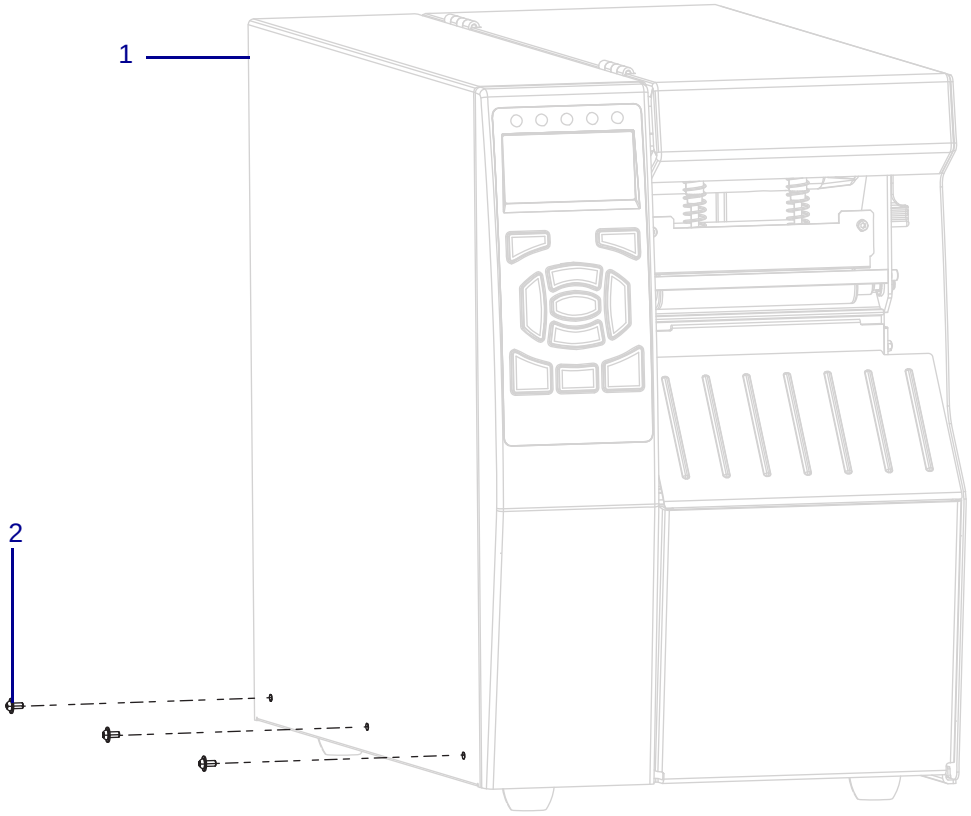


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 59. Remove the three mounting screws securing the electronics cover to the printer.

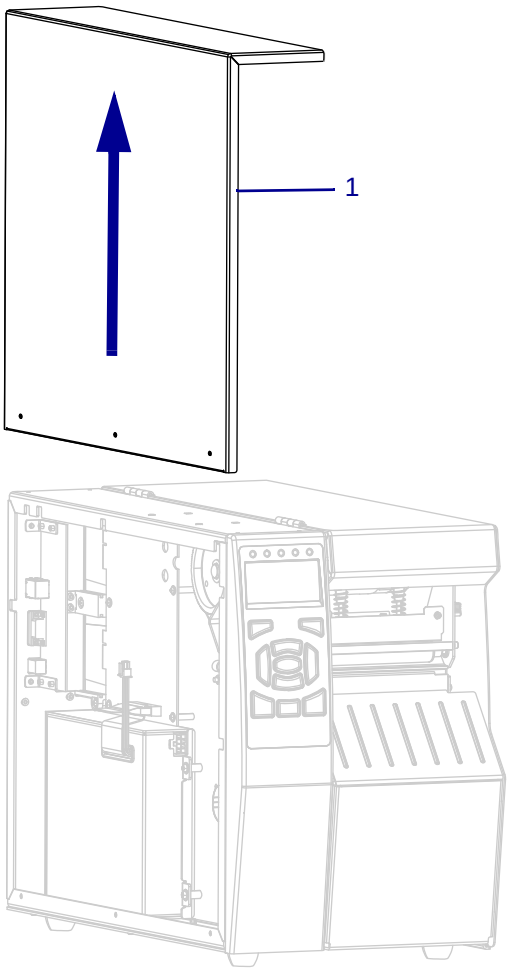
Figure 59 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 60. Lift the electronics cover off of the printer.

Figure 60 • Remove the Electronics Cover



1	Electronics cover

7. Remove the Old Print Mechanism

8.

Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

9.

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.

Remove the media and ribbon from the printer.

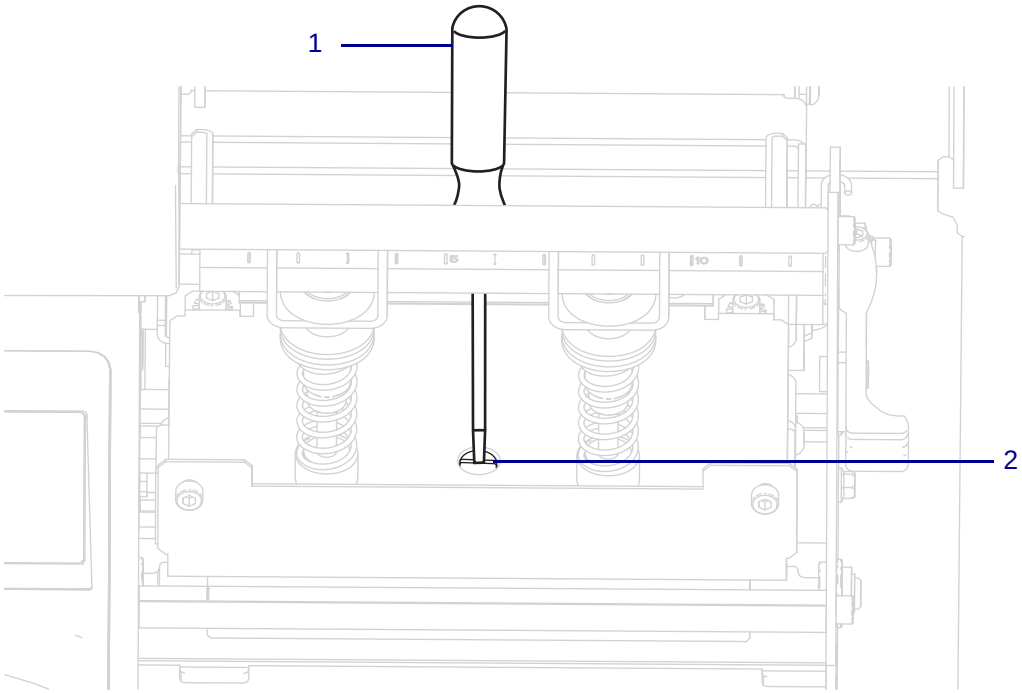
10. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

See Figure 61. Loosen the printhead mounting screw.

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

Connect yourself to an antistatic device.

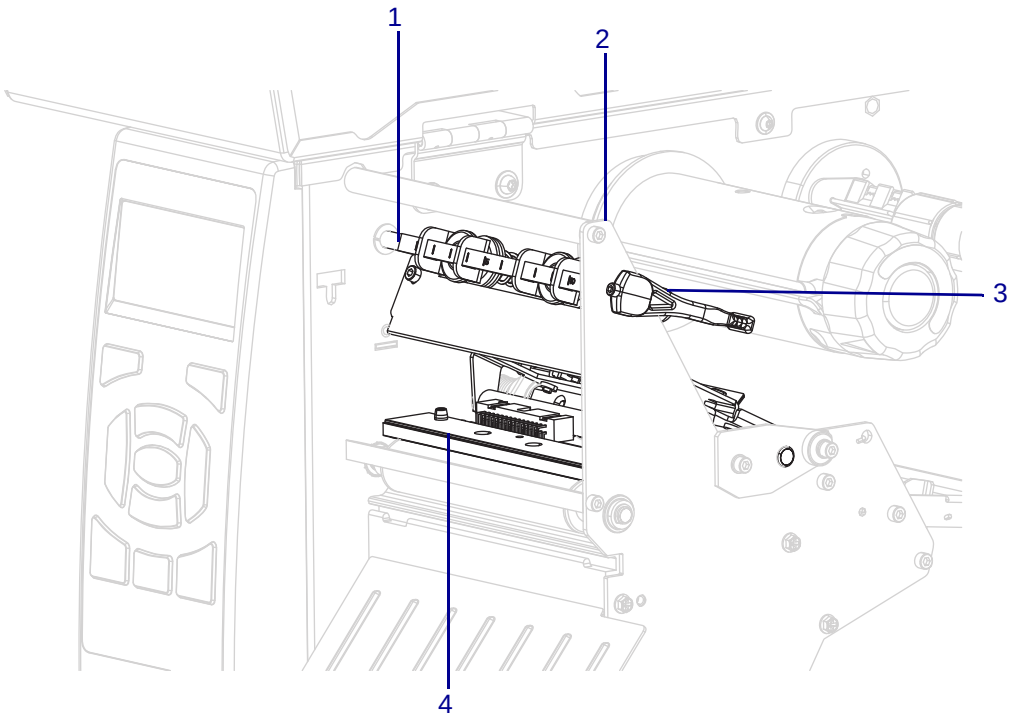
Figure 61 • Loosen the Printhead Mounting Screw



1	Flat-blade screwdriver
2	Printhead mounting screw

12. See Figure 62. Open the upper print mechanism. The printhead should be still down on the platen roller.

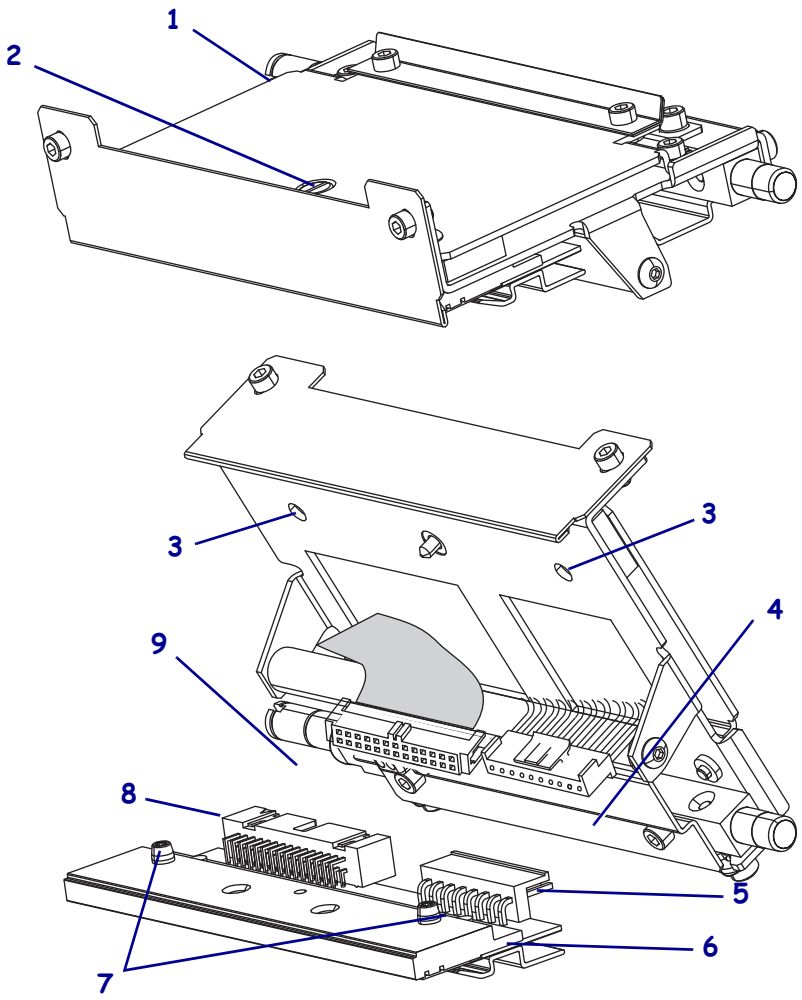
Figure 62 • Open the Upper Print Mechanism



1	Toggle assembly
2	Toggle assembly handle
3	Upper print mechanism
4	Printhead assembly

13. See Figure 63. Disconnect the printhead cables, and then remove the printhead from the printer.

Figure 63 • Remove the Printhead

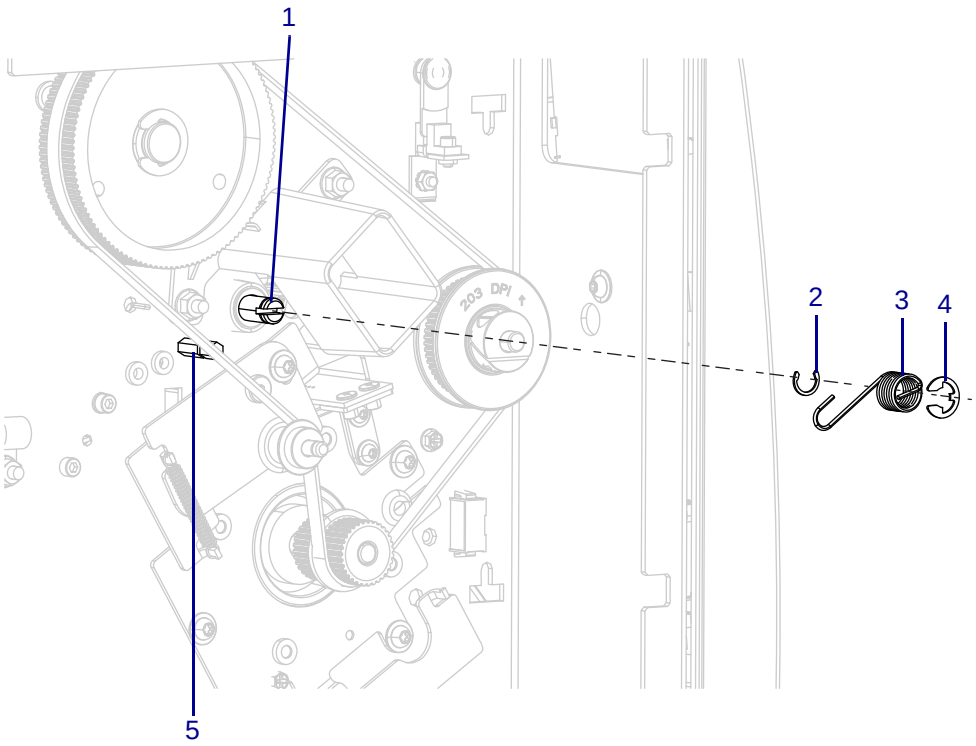


1	Upper print mechanism
2	Printhead mounting screw
3	Printhead locating holes
4	Printhead power cable
5	Printhead power cable connector
6	Printhead assembly
7	Printhead locating pins
8	Printhead data cable connector
9	Printhead data cable

14. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

See Figure 64. Relieve the tension on the print mechanism tension spring by moving the spring hook off of the tension post.

Figure 64 • Remove the Print Mechanism Tension Spring



1	Print mechanism shaft
2	C-ring
3	Torsion spring
4	E-ring
5	Tension post

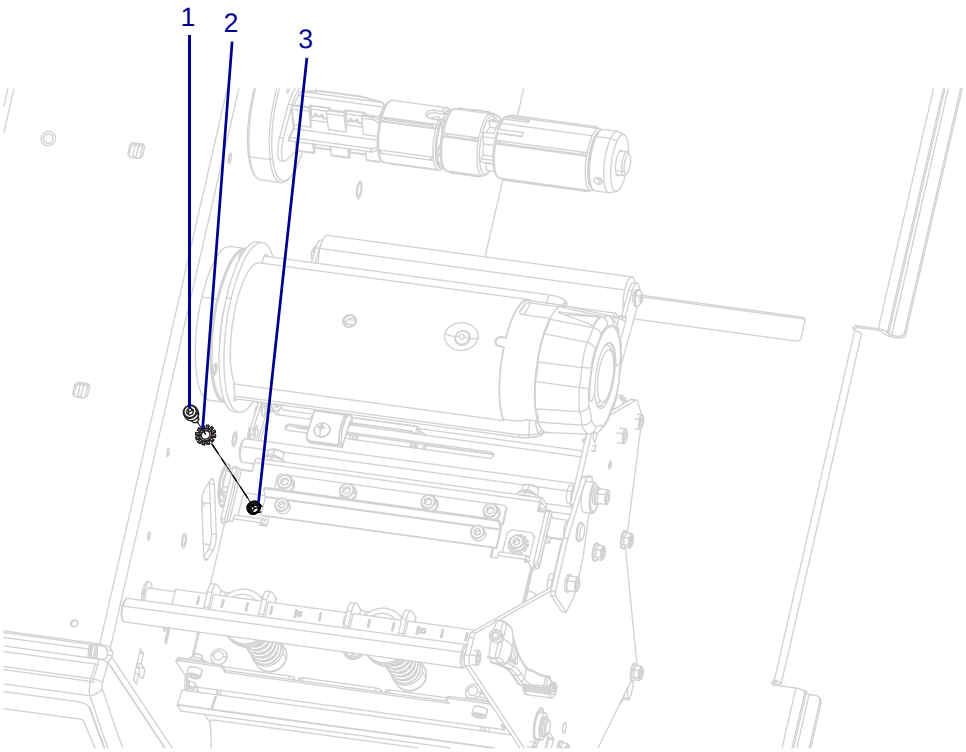
15. Remove the E-ring.

16. Slide the spring off of the print mechanism shaft.

17. Remove the C-ring.

18. See Figure 65. From the media side, remove the print mechanism ground cable.

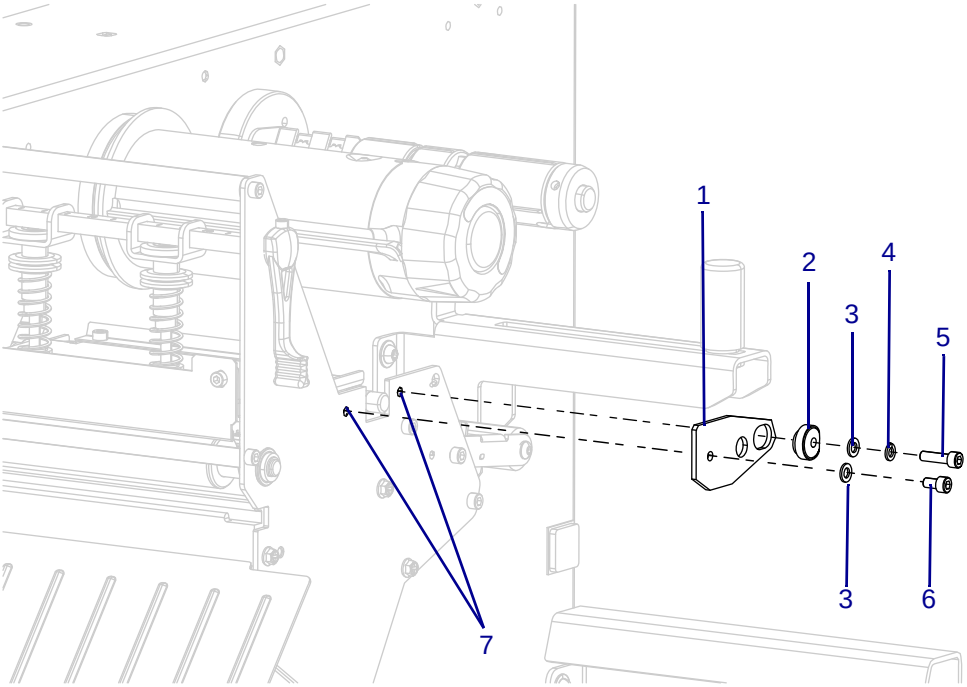
Figure 65 • Remove the Print Mechanism Ground Cable



1	Ground cable mounting screw
2	Lock washer
3	Ground cable

19. See Figure 66. Remove and discard the adjustment/wear plate by removing the two mounting screws, lock washer, two flat washers, and the eccentric pin.

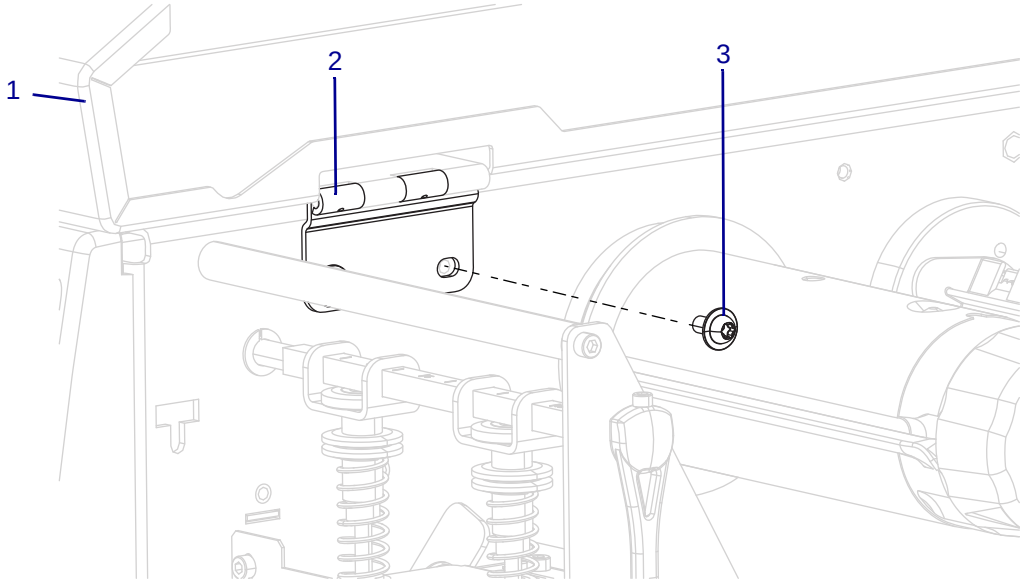
Figure 66 • Remove the Adjustment/Wear Plate



1	Adjustment/wear plate
2	Eccentric pin
3	Flat washers (2)
4	Lock washer
5	Long mounting screw
6	Short mounting screw
7	Mounting holes (2)

20. See Figure 67.Remove the media door mounting screw from the rear of the front hinge.

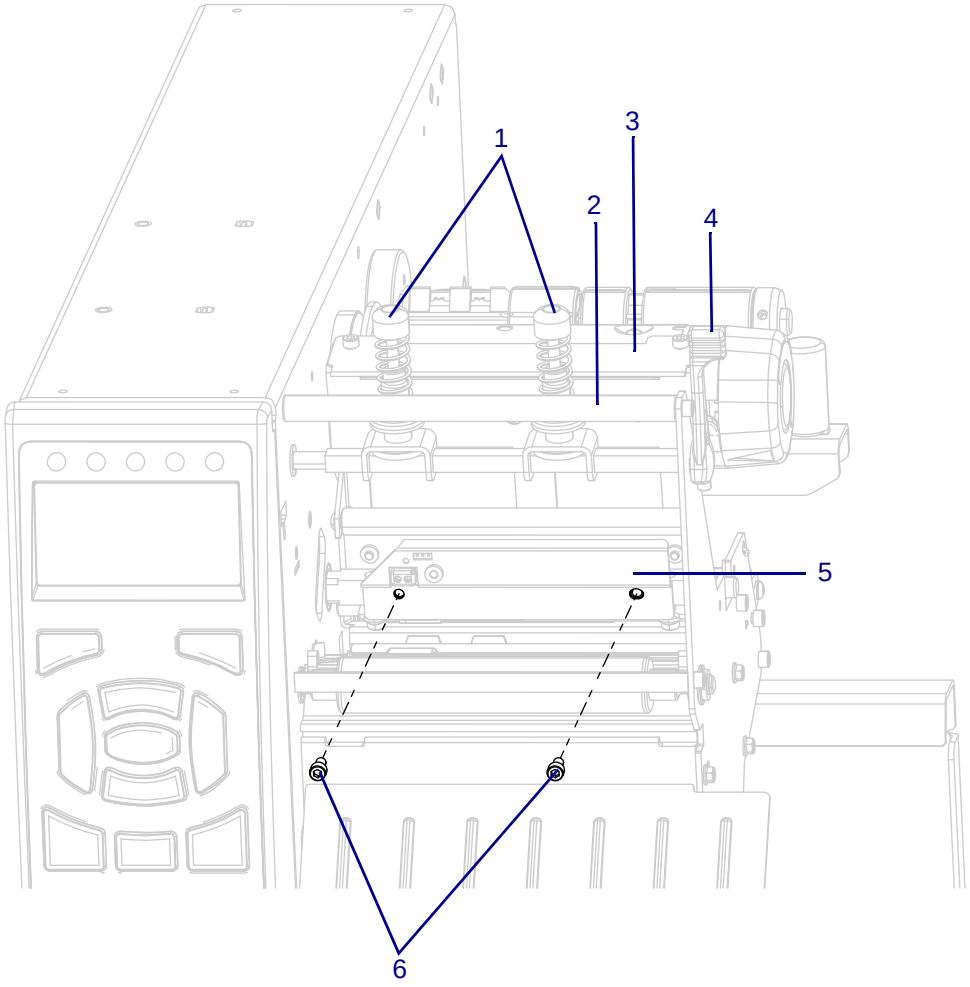
Figure 67 • Remove the Media Door Mounting Screw



1	Media door
2	Front hinge
3	Mounting screw

21. See Figure 68. Turn the head open handle counterclockwise until the toggles contact the upper ribbon guide.

Figure 68 • Open the Printhead



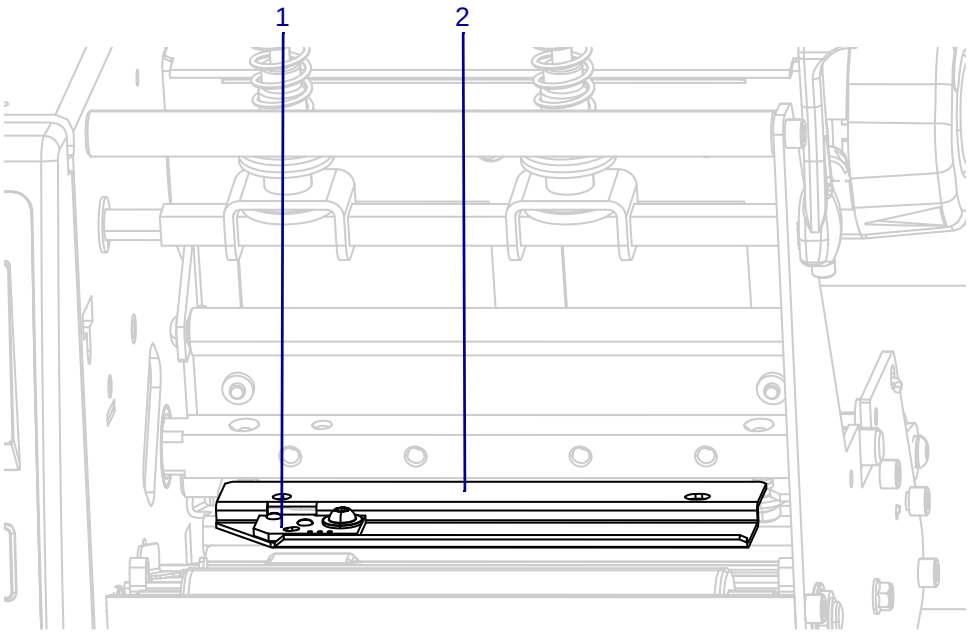
1	Toggles (2)
2	Upper ribbon guide
3	Print mechanism
4	Head open handle
5	Guard plate
6	Guard plate mounting screws (2)

22. Lift the print mechanism as far as it will go.

23. Remove the two ribbon sensor mounting plate mounting screws.

24. Lay the guard plate down as shown in Figure 69.

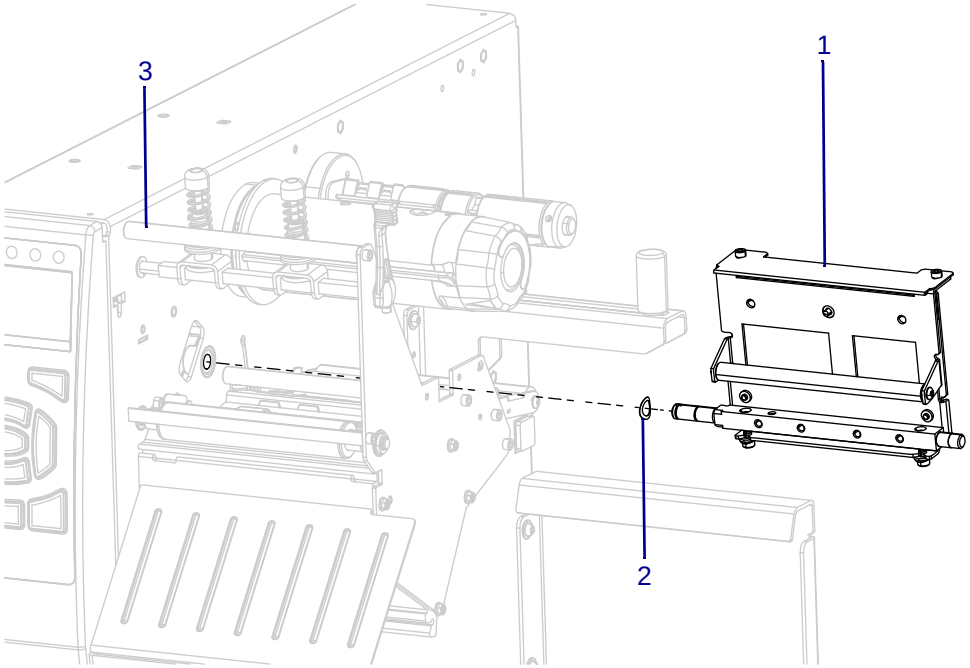
Figure 69 • Move the Ribbon Sensor Mounting Plate



1	Ribbon sensor
2	Guard plate

25. See Figure 70. Remove the printhead and ground cables out of the print mechanism while sliding the print mechanism and crescent washer out of the printer.

Figure 70 • Remove the Print Mechanism



1	Print mechanism
2	Crescent washer
3	Upper ribbon guide

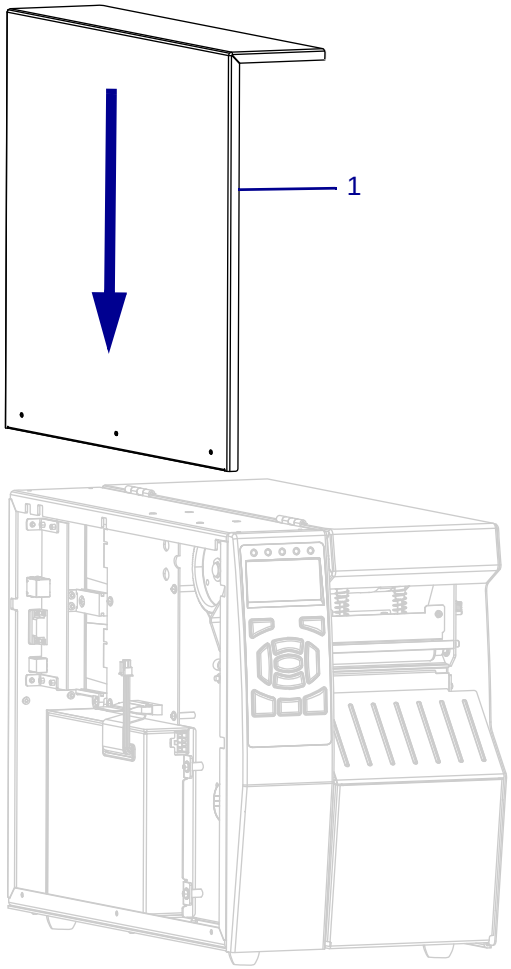
Install the New Print Mechanism

1. See Figure 70 on page 153. Slide the new print mechanism and crescent washer into the printer.
2. See Figure 66 on page 149. Install the new wear plate and eccentric pin onto the side plate.
3. See Figure 68 on page 151. Reinstall the ribbon sensor mounting plate.
4. See Figure 65 on page 148. Reinstall the print mechanism ground cable.
5. See Figure 64 on page 147. From the electronics side, install the C-clip, spring, and E-ring onto the print mechanism shaft.
6. Apply tension by hooking the spring onto the tension post.
7. See Figure 63 on page 146. Connect the printhead cables to the printhead.
8. Insert the printhead guide pins into the print mechanism locating holes.
9. Close the print mechanism and turn the printhead open handle clockwise to lock the print mechanism in place.
10. See Figure 61 on page 144. Tighten the print head mounting screw.
11. See Figure 67 on page 150. Reinstall media cover front hinge mounting screw.

Reinstall the Electronics Cover

1. See Figure 71. Slide the electronics cover onto the printer.

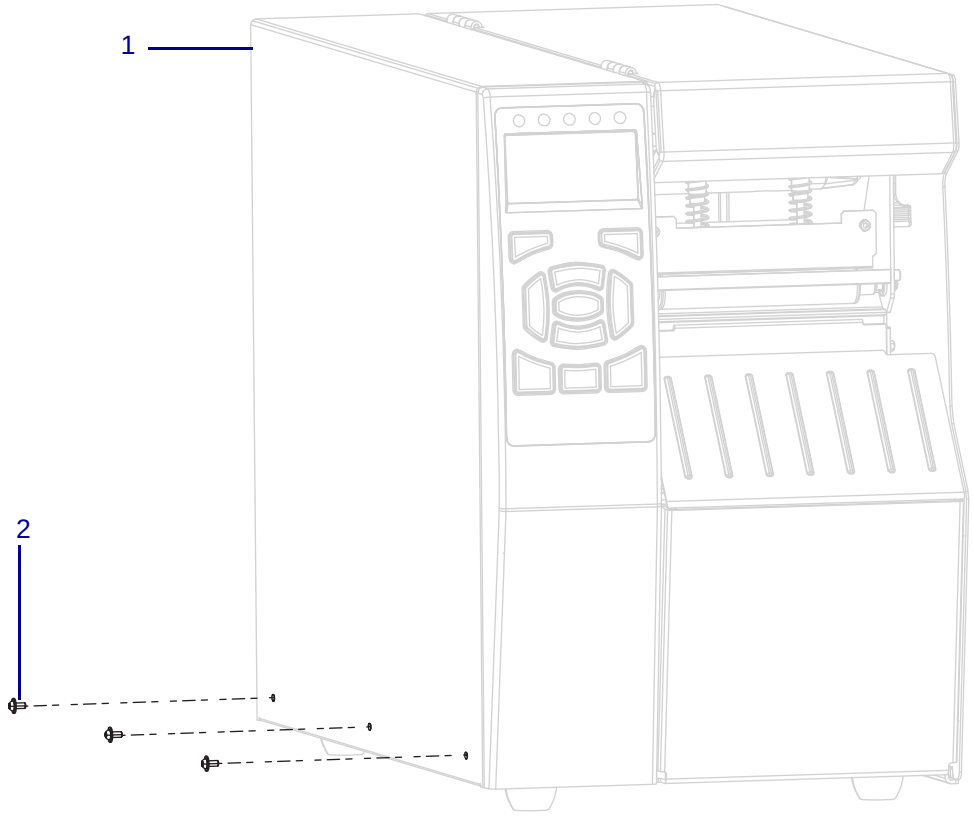
Figure 71 • Install the Electronics Cover



1	Electronics cover

2. See Figure 72. Install the three mounting screws.

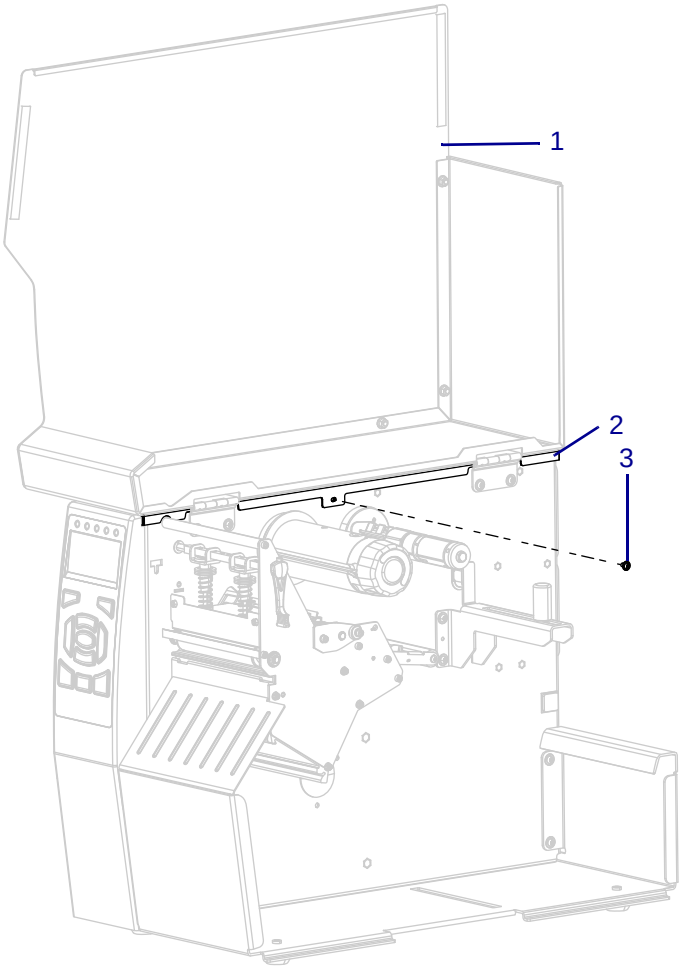
Figure 72 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 73. Open the media door and install the media side electronics cover mounting screw.

Figure 73 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Go to *Adjust the Printhead Pressure and Toggle Position* on page 15.

The installation is complete.

Strip Plate and Static Brush Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Ribbon Strip Plate and Static Brush in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 74 • Kit Contents

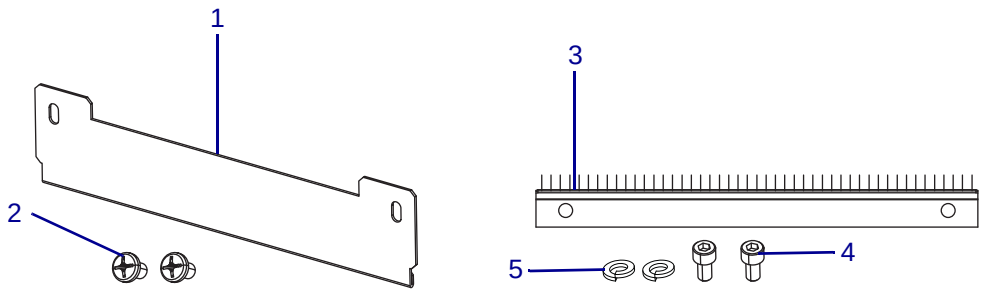


Table 11 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1006095**	ZT510 Ribbon Strip Plate and Static Brush Maintenance Kit
	1	1	*N/A*	Ribbon Strip Plate
	2	2	**HW46882-003**	Screw, 4-40 × 0.1875 inch (sold in quantities of 100)
	3	1	*N/A*	Static Brush
	4	2	**HW30392-004**	Screw, 6-32 × 0.2500 inch (sold in quantities of 50)
	5	2	**HW06268**	Lock Washer, #6 (sold in quantities of 25)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Torx-Head Wrench Set

Remove the Old Static Brush

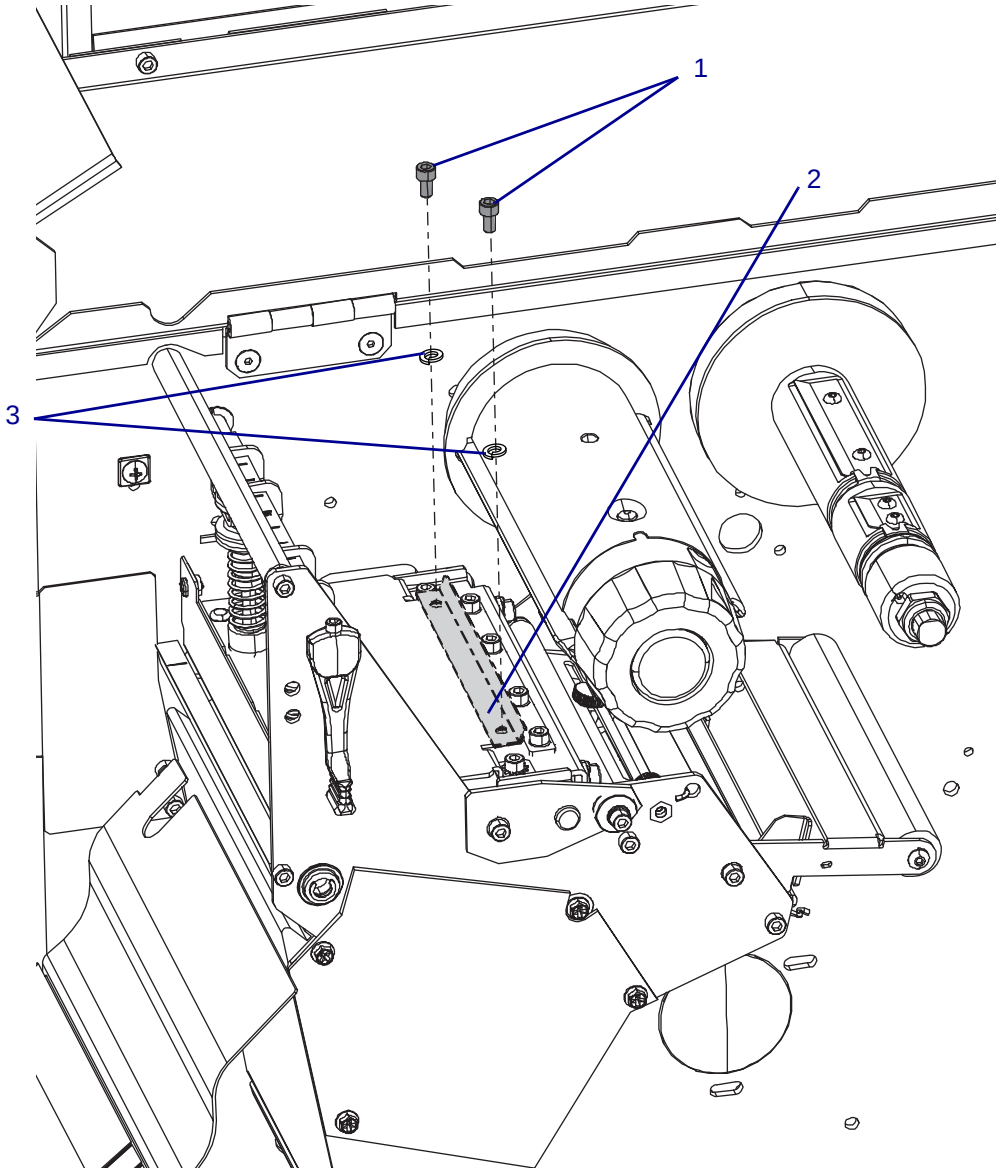
1. **Caution** • Turn Off (**O**) the printer and disconnect it from the power source before performing the following procedure.

2. **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.

   Open the media door and remove the media and ribbon.

3. See Figure 75. Remove and discard the two static brush mounting screws and lock washers.

Figure 75 • Remove the Static Brush



1	Mounting screws (2)
2	Static brush
3	Lock washers (2)

4. Remove and discard the old static brush.

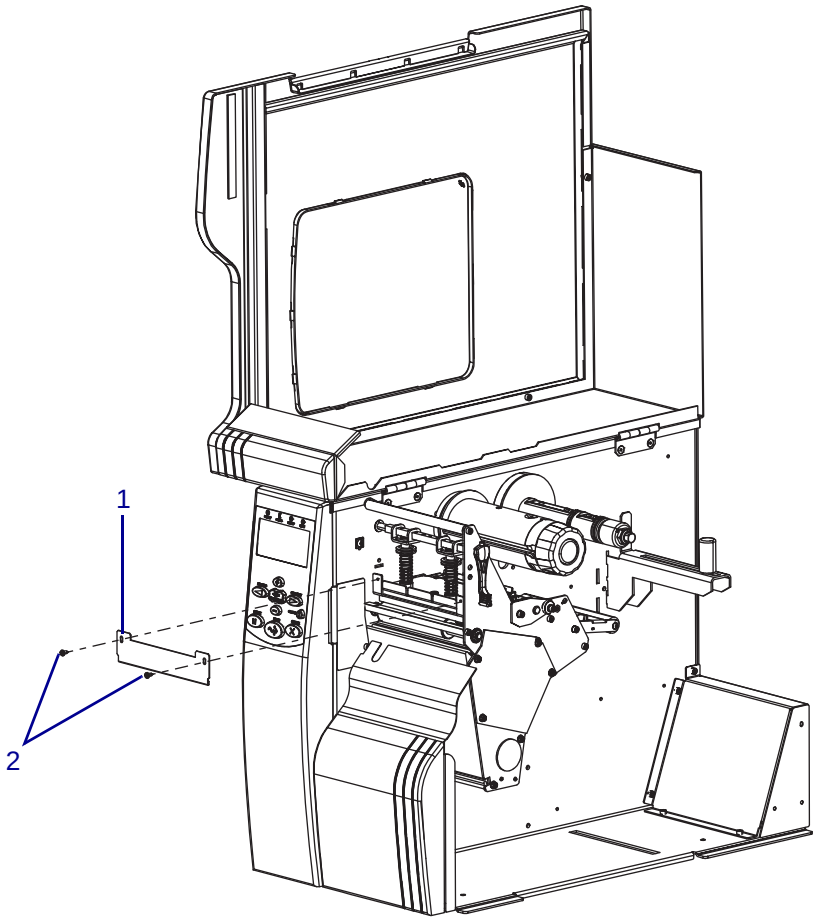
Install the New Static Brush

1. Remove the new static brush from the kit.
2. See Figure 75 on page 160. Align the new static brush with the mounting holes, brush angled toward the rear of the printer, and then install the new mounting screws and lock washers.

Remove the Old Ribbon Strip Plate

1. See Figure 76. Remove and discard the two ribbon strip plate mounting screws.

Figure 76 • Remove the Old Ribbon Strip Plate (110Xi4 shown)



1	Ribbon strip plate
2	Mounting screws (2)

2. Remove and discard the old ribbon strip plate.

Install the New Ribbon Strip Plate

1. See Figure 76 on page 161. Align the new ribbon strip plate with the print mechanism and install the two mounting screws supplied in the kit.
2. Slightly tighten the mounting screws.
3. Align the strip plate with the screw heads in the center of the slots in the ribbon strip plate.
4. **Caution •** When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media and ribbon.
5. Reinstall the AC power cord and data cables.
6. Press and hold PAUSE, and then turn on (**I**) the printer.
7. After the Power On Self Test (POST), the printer will start to print the Pause test labels.
8. Press PAUSE. After the printer pauses, observe the ribbon for possible problems such as wrinkling or improper tracking.
9. Does the ribbon wrinkle or track incorrectly?

If…	Then…
No	Tighten the mounting screws. **The installation is complete.**
Yes	Continue with *Adjust the Strip Plate*.

Adjust the Strip Plate

1. The strip plate can be adjusted for proper tracking and separation of the ribbon from the media after printing.
2. Press PAUSE to restart the printing.
3. While the printer is running, adjust the strip plate so that the ribbon is flat and smooth and tracks properly when fed to the ribbon take-up spindle.
4. Tighten the strip plate mounting screws, and print a minimum of 25 labels while checking for ribbon wrinkle, tracking issues, and media/ribbon separation problems.
5. If the problem persists, repeat step 2, step 3, and step 4 until the desired results are reached.

The installation is complete.

Notes •

Drive System Components

This section supplies you with the parts information and installation procedures for the drive system.

Contents

Drive System Parts and Drawings 166
Main Drive System Maintenance Kit 168
Drive Motor Maintenance Kit 181
Drive Belt Maintenance Kit. 200

Drive System Parts and Drawings

Figure 77 • Drive System Overview

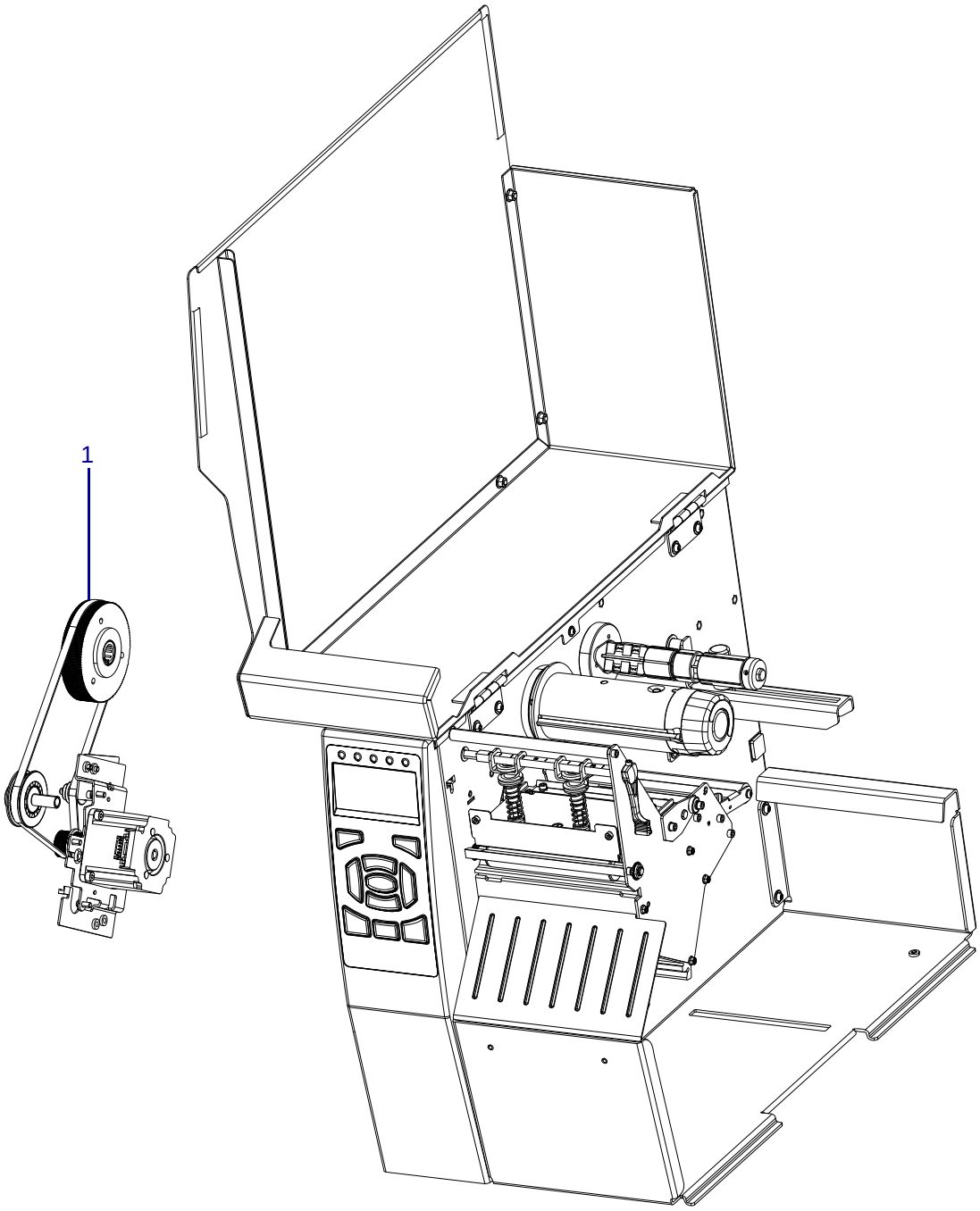


Table 12 • Kit Parts List

Item	Part Number	Description
1	**P1083347-016**	Main Drive System Maintenance Kit

Figure 78 • Drive System Kits

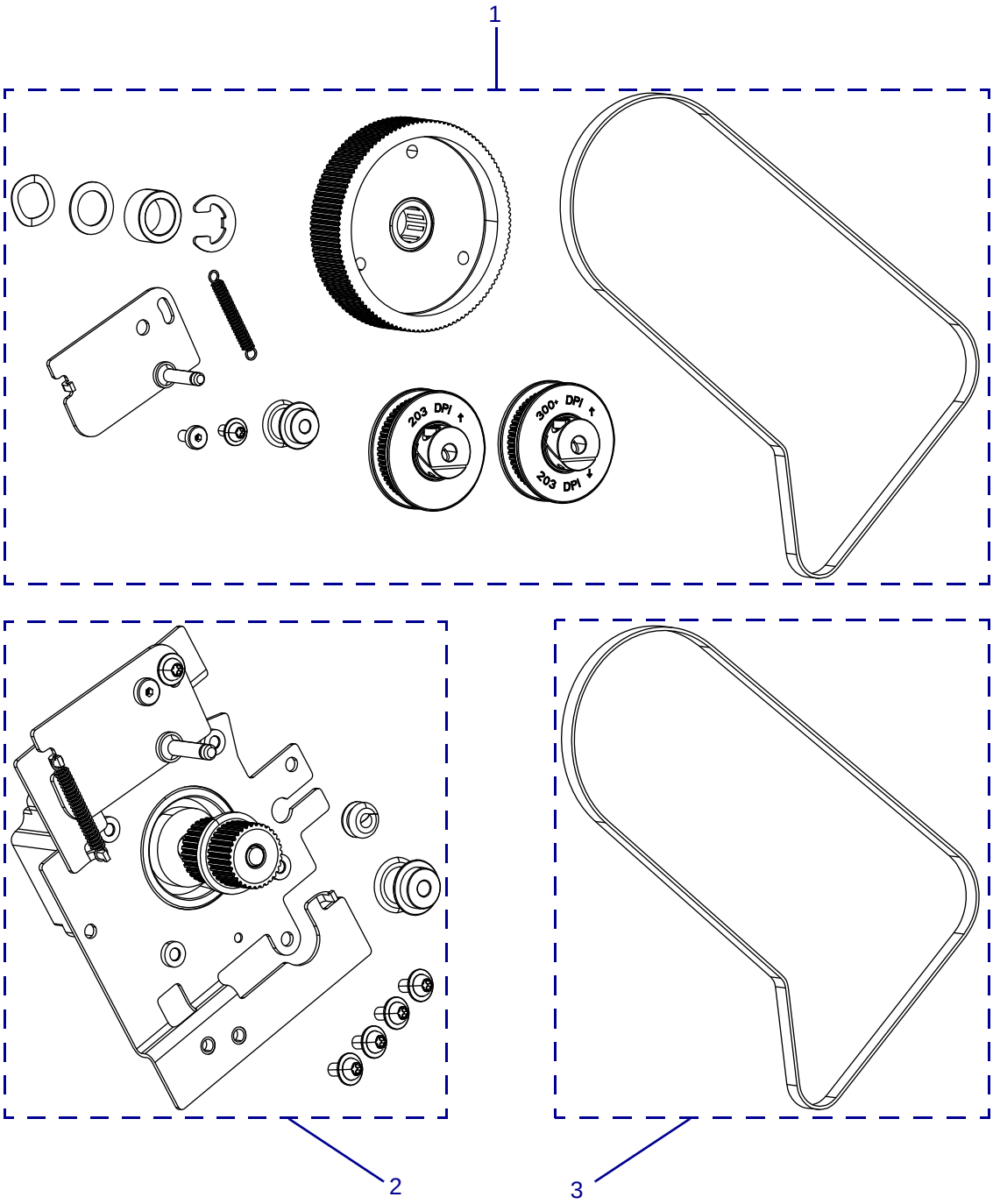


Table 13 • Kit Parts List

Item	Part Number	Description
1	**P1083347-016**	Main Drive System Maintenance Kit
2	**P1083347-018**	Drive Motor Assembly Maintenance Kit
3	**P1083347-017**	Drive Belt Maintenance Kit

Main Drive System Maintenance Kit

Installation Instructions

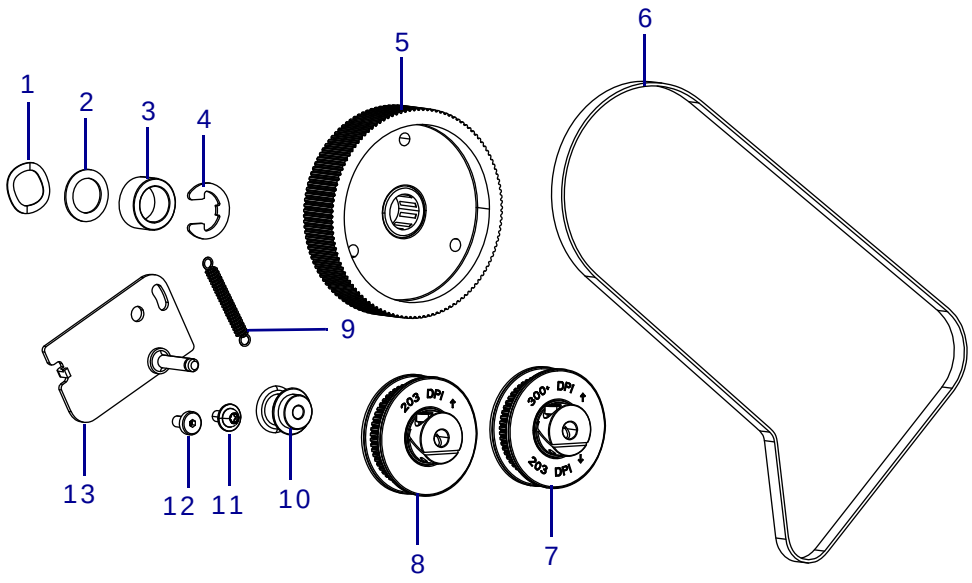
This kit includes the parts and documentation necessary to install the Main Drive System Maintenance Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 79 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 14 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-016**	Main Drive System Maintenance Kit
	1	1	**HW30115**	Wave Washer, 0.74 × 0.52 × 0.08 (sold in quantities of 25)
	2	1	**HW33804**	Flat Washer, 0.76 × 0.51 × 0.03 (sold in quantities of 25)
	3	1	*N/A*	Spacer 0.75 × 0.520 ×
	4	1	**HW33811**	E-Ring, 0.500 × 0.042 (sold in quantities of 25)
	5	1	*N/A*	Ribbon Take-Up Pulley
	6	1	**P1083347-017**	Main Drive Belt Kit
	7	1	*N/A*	300/600 dpi Platen Pulley
	8	1	*N/A*	203 dpi Platen Pulley
	9	1	*N/A*	Idler Pulley
	10	1	*N/A*	Locking Screw, included in miscellaneous hardware kit, **P1083320-096**
	11	1	*N/A*	Shoulder Screw
	12	1	**P1083320-055**	Idler Pulley and Spring Maintenance Kit
	13	1	*N/A*	Tensioner Bracket

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

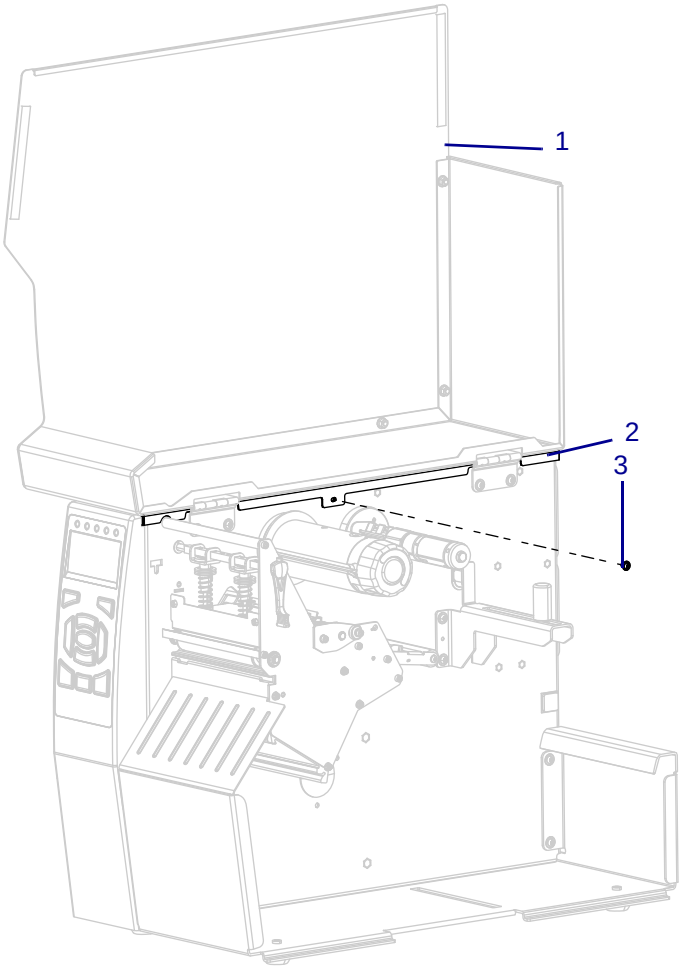
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 80 • Locate the Electronics Cover Mounting Screw

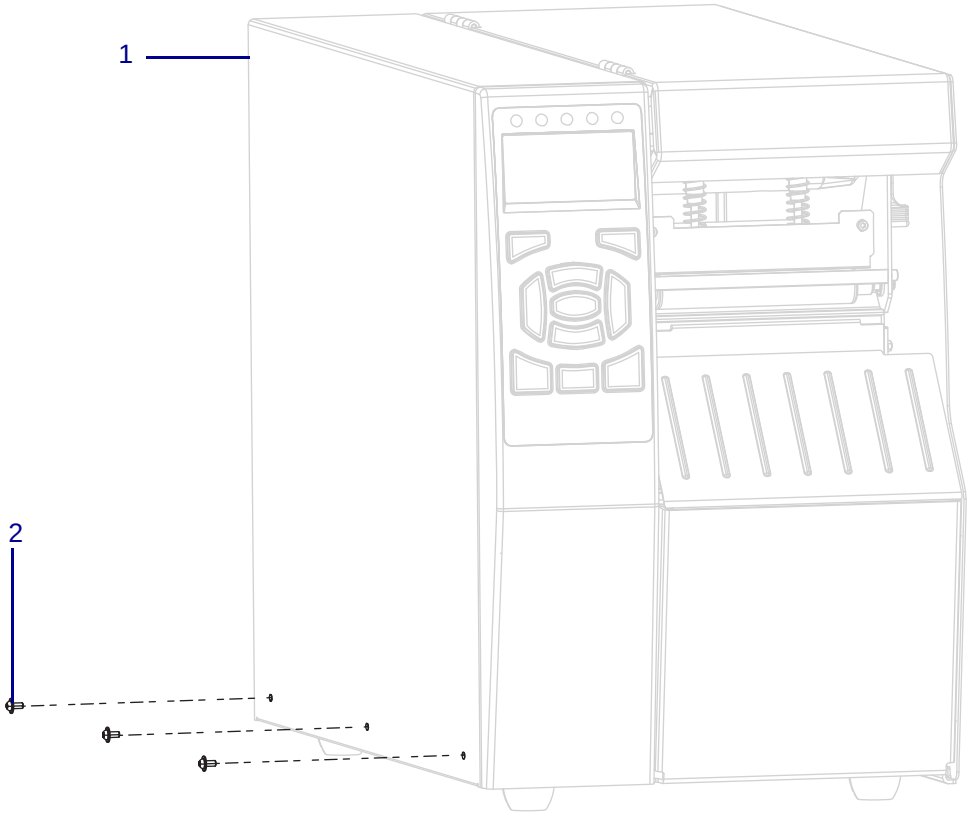


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 81. Remove the three mounting screws securing the electronics cover to the printer.

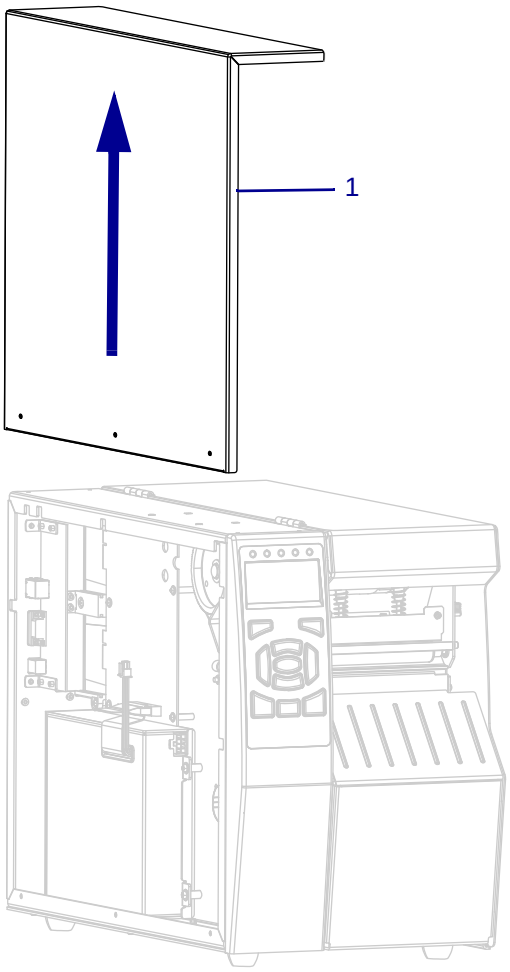
Figure 81 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 82. Lift the electronics cover off of the printer.

Figure 82 • Remove the Electronics Cover



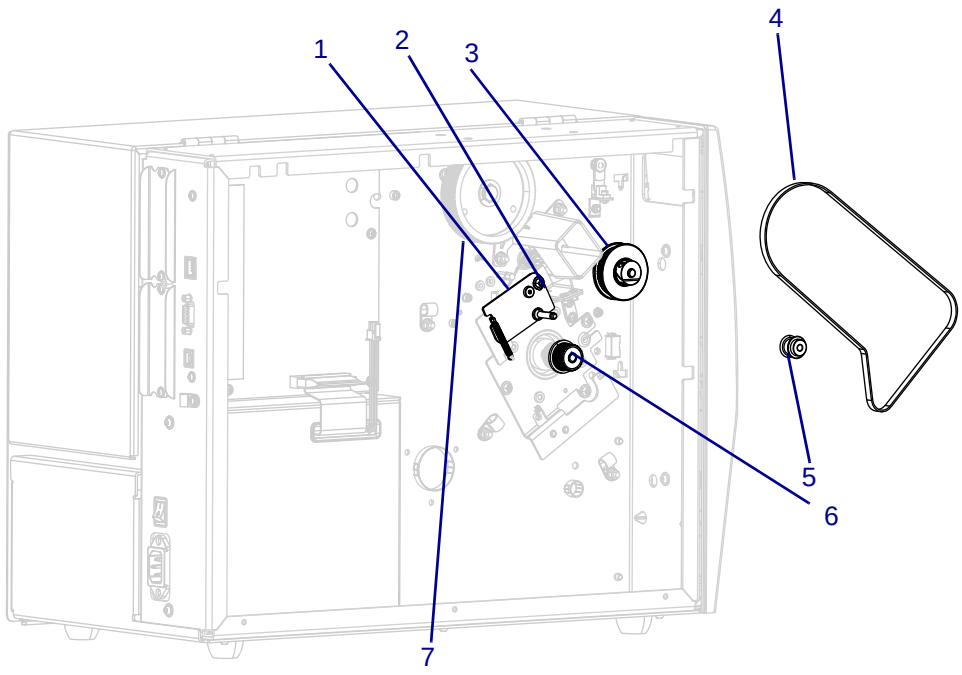
1	Electronics cover

Remove the Old Main Drive System

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 83. Loosen the main drive belt tensioner locking screw.

Figure 83 • Loosen the Main Drive Belt Tensioner



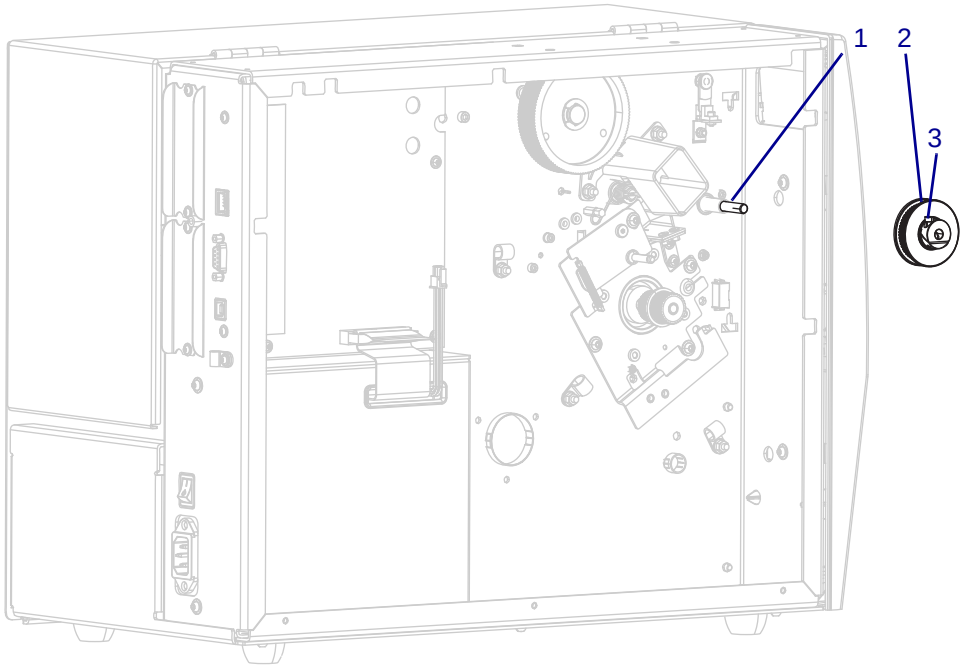
1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Drive motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Remove and discard the main drive belt and idler pulley.

4. See Figure 84. Loosen the upper platen pulley clamping screw, and then slide the pulley out of the printer.

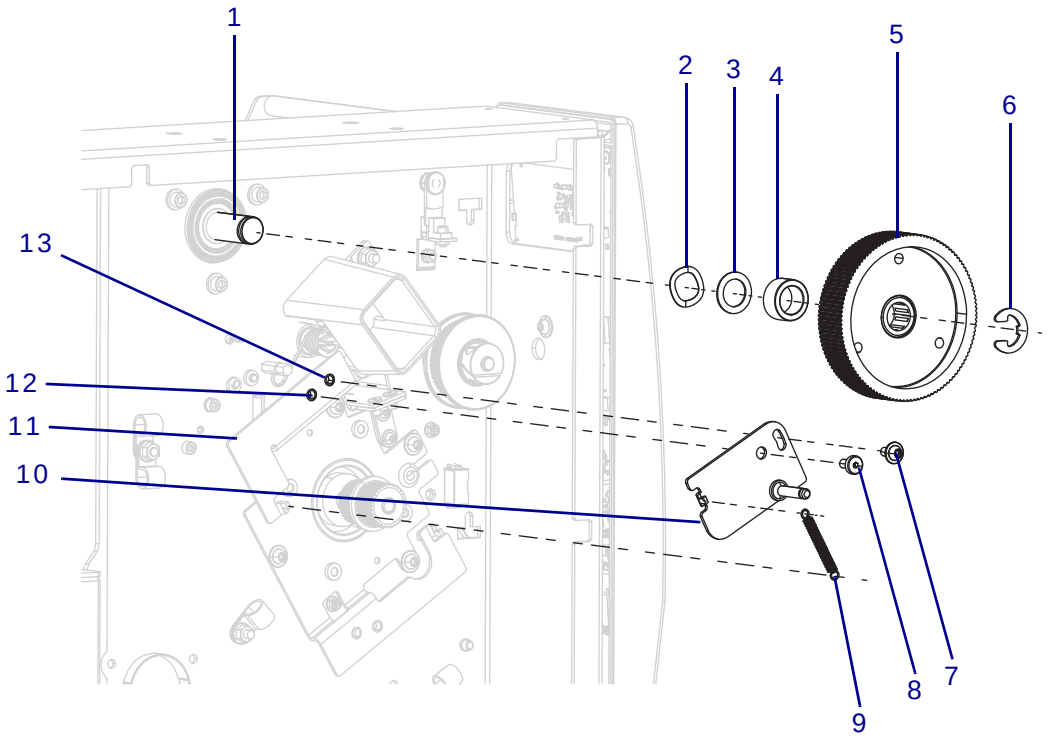
Figure 84 • Remove the Upper Platen Pulley



1	Upper platen roller shaft
2	Upper platen pulley
3	Upper platen pulley mounting screw

5. See Figure 85. Remove and discard the main drive belt tensioner locking screw.

Figure 85 • Remove the Drive System Hardware



1	Ribbon take-up spindle shaft
2	Wave washer
3	Flat washer
4	Spacer
5	Ribbon take-up spindle pulley
6	E-ring
7	Locking screw

8	Pivot screw
9	Tension spring
10	Tensioner bracket
11	Drive motor mounting bracket
12	Pivot screw mounting hole
13	Locking screw mounting hole

6. Remove and discard the tension spring.

7. Remove and discard the pivot screw.

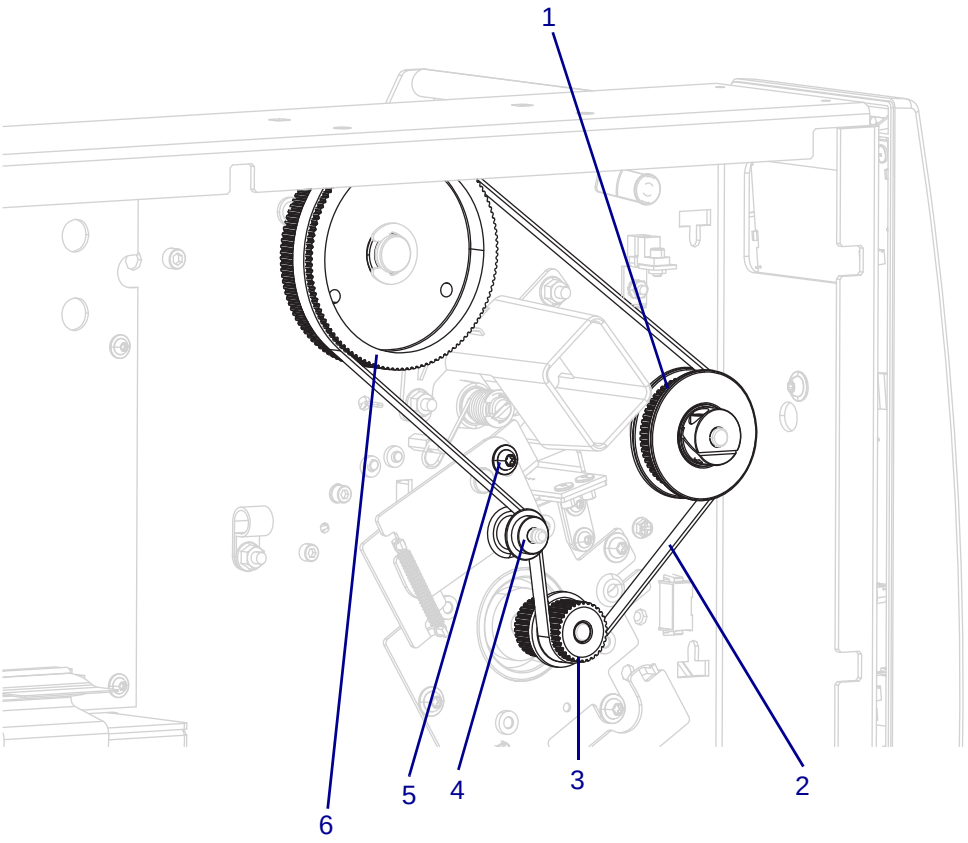
8. Remove and discard the E-ring, ribbon take-up pulley, flat washer, and wave washer.

Install the New Main Drive System

1. See Figure 85 on page 175. Slide the new wave washer, flat washer, spacer, and ribbon take-up pulley onto the ribbon take-up spindle shaft.
2. Install the E-ring to secure the ribbon take-up pulley to the ribbon take-up spindle shaft.
3. Align the new tensioner bracket mounting holes with the two mounting holes in the drive motor mounting bracket.
4. Install the new pivot screw.
5. Loosely install the locking screw.
6. Attach the new tension spring to the tensioner bracket and the drive motor mounting bracket.
7. Choose the proper pulley from the maintenance kit.
8. Slide the pulley onto the upper platen roller shaft and tighten the upper platen pulley clamping screw.

9. See Figure 86. Install the new main drive belt around the outside of the drive motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.

Figure 86 • Install the Main Drive Belt



1	Upper platen pulley
2	Main drive belt
3	Drive motor outside pulley
4	Main drive belt idler pulley
5	Main drive belt tensioner locking screw
6	Ribbon take-up spindle pulley

10. Ensure that the belt is on the inside part of the idler pulley.

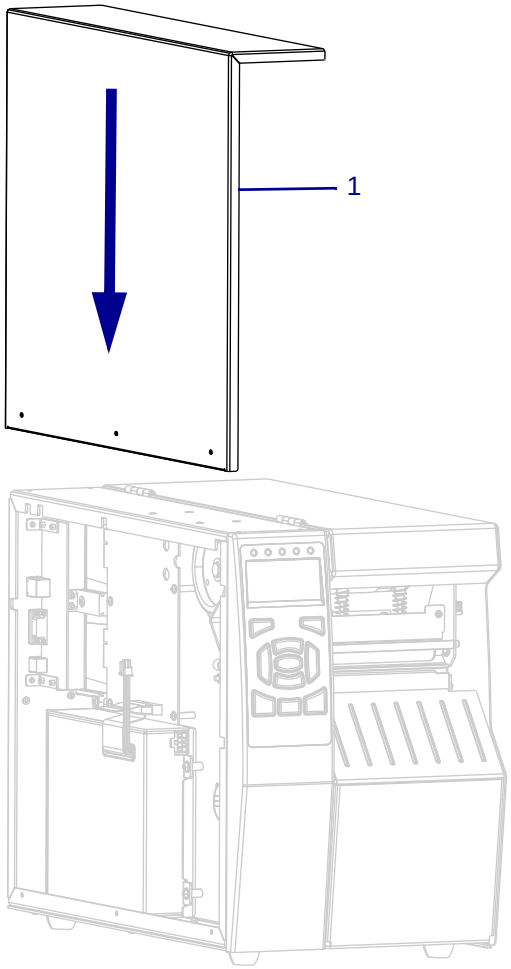
11. Loosen the locking screw on the main drive belt tensioner.

12. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 87. Slide the electronics cover onto the printer.

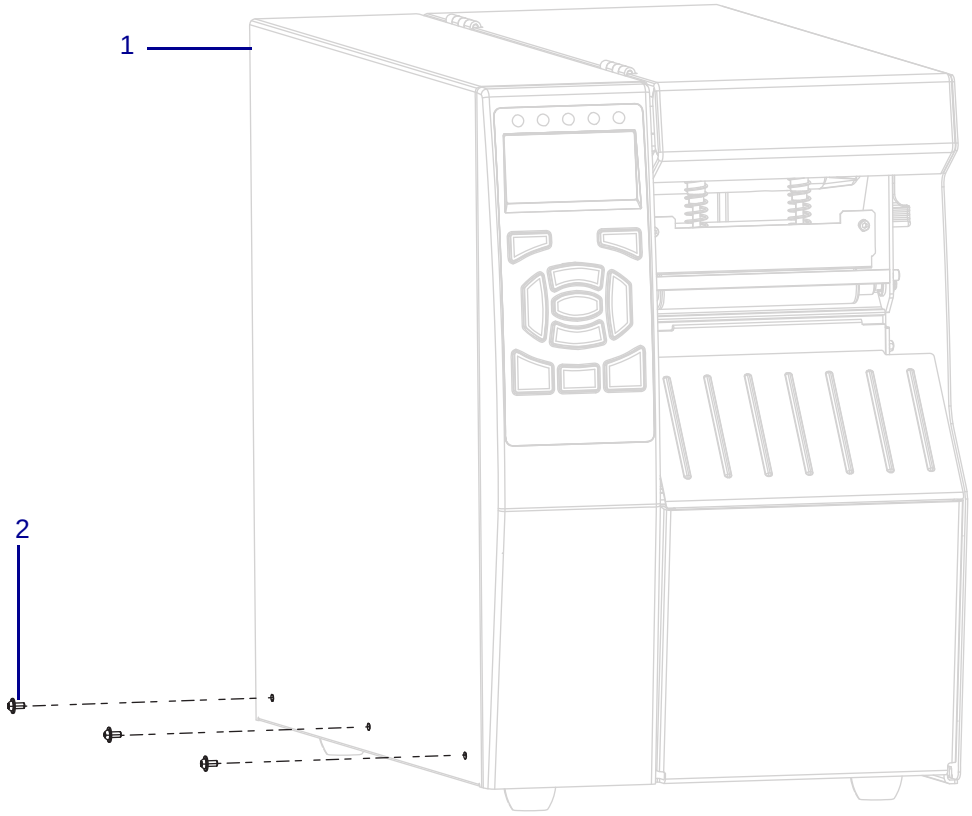
Figure 87 • Install the Electronics Cover



1	Electronics cover

2. See Figure 88. Install the three mounting screws.

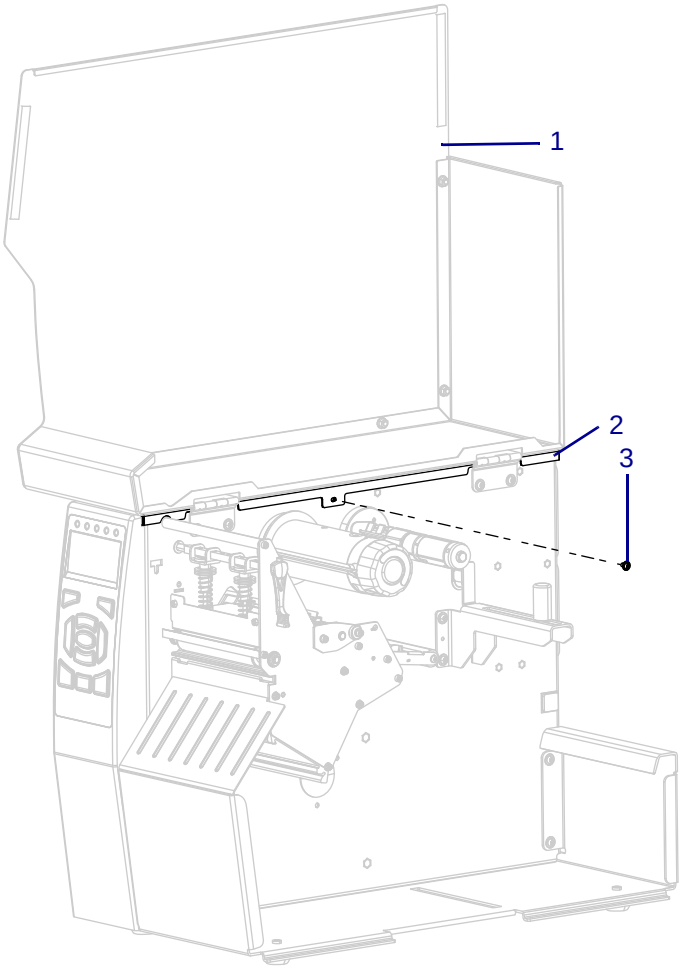
Figure 88 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 89. Open the media door and install the media side electronics cover mounting screw.

Figure 89 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Drive Motor Maintenance Kit

Installation Instructions

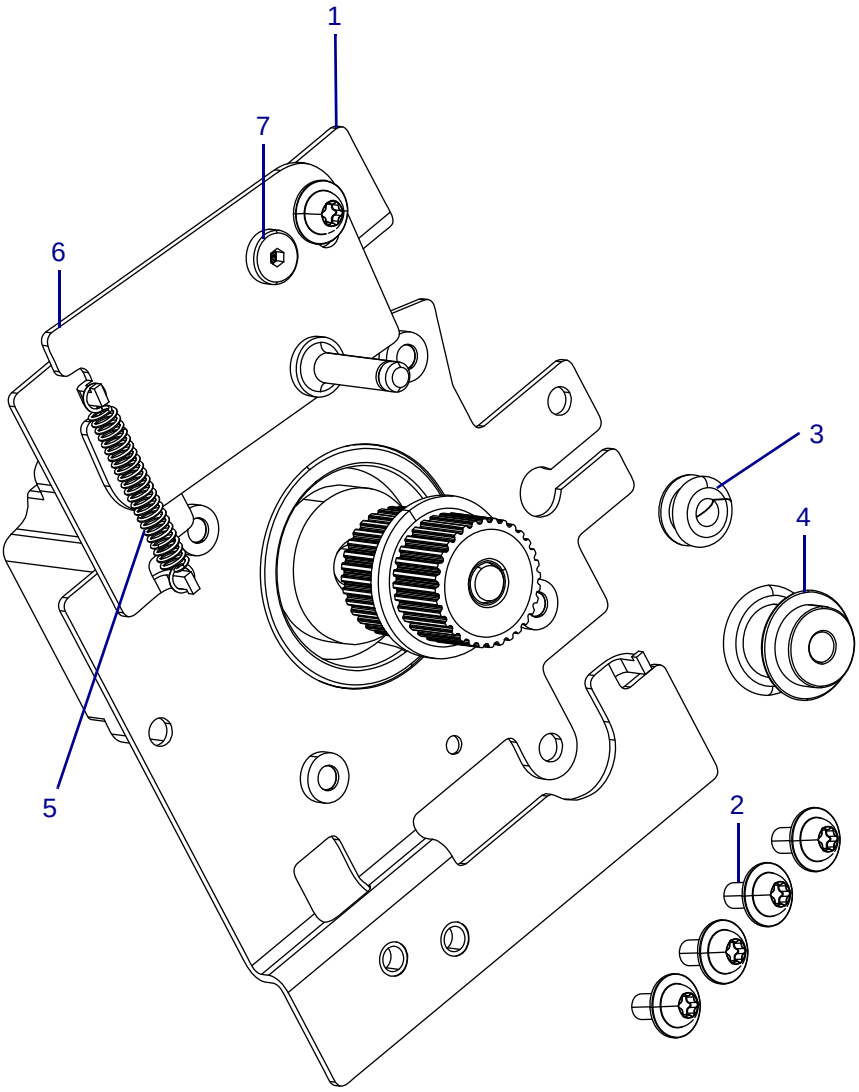
This kit includes the parts and documentation necessary to install the Drive Motor Assembly Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 90 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 15 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-018**	ZT510 Drive Motor Assembly Maintenance Kit
	1	1	*N/A*	Drive motor Plate
	2	4	*N/A*	Torx-Head Screw, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**
	3	1	**P1083320-055**	Idler Pulley
	4	1	**HW46224**	Grommet (sold in quantities of 10)
	5	1	**P1083320-055**	Tensioner Expansion Spring
	6	1	*N/A*	Tensioner Bracket Assembly
	7	1	*N/A*	Shoulder Screw, M4 × 5.5 × 2, part of miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Needle-Nose Pliers
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

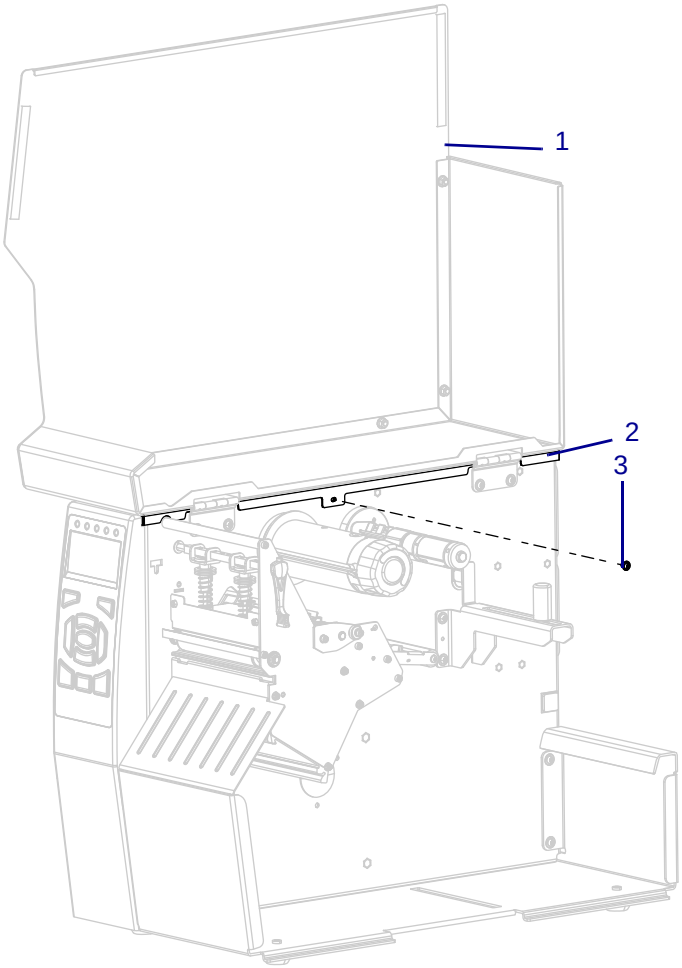
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 91 • Locate the Electronics Cover Mounting Screw

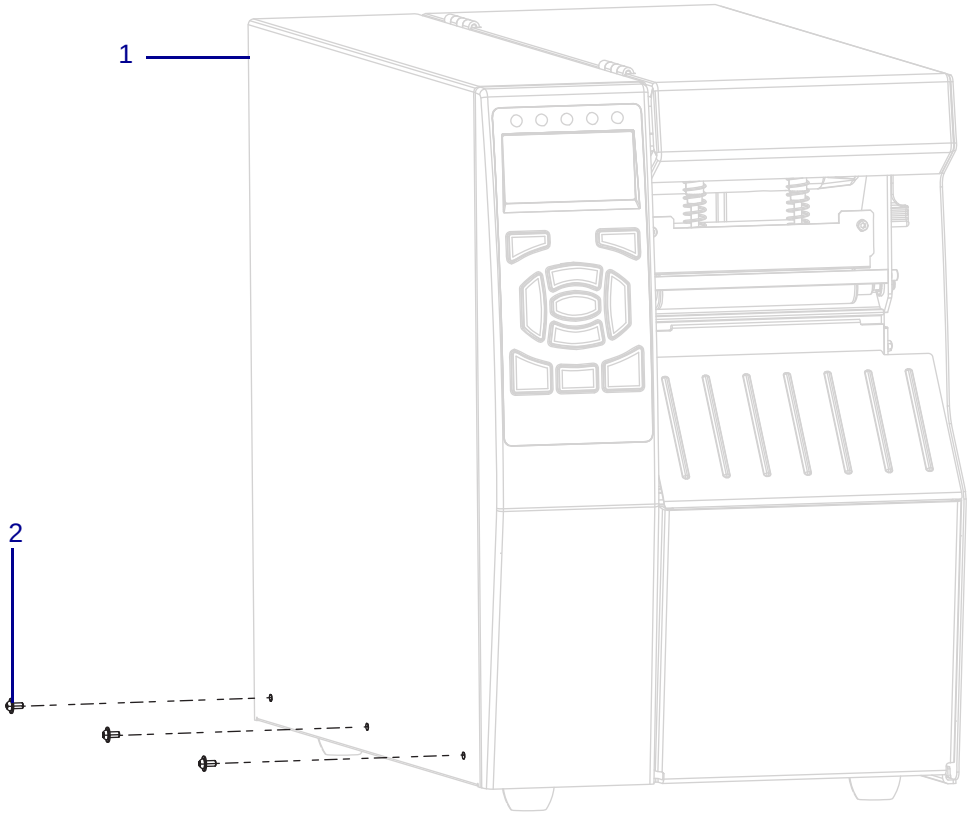


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 92. Remove the three mounting screws securing the electronics cover to the printer.

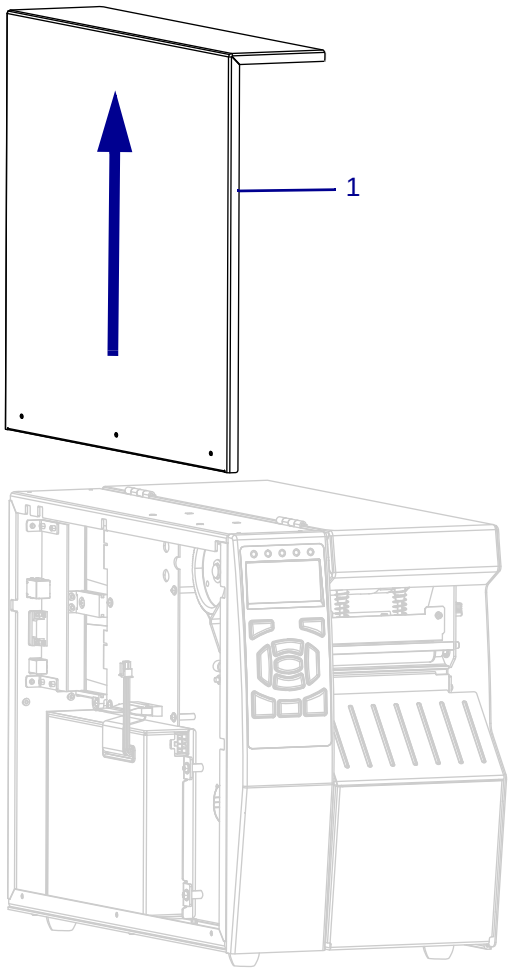
Figure 92 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 93. Lift the electronics cover off of the printer.

Figure 93 • Remove the Electronics Cover



1	Electronics cover

7. Open the media door and remove the media and ribbon.

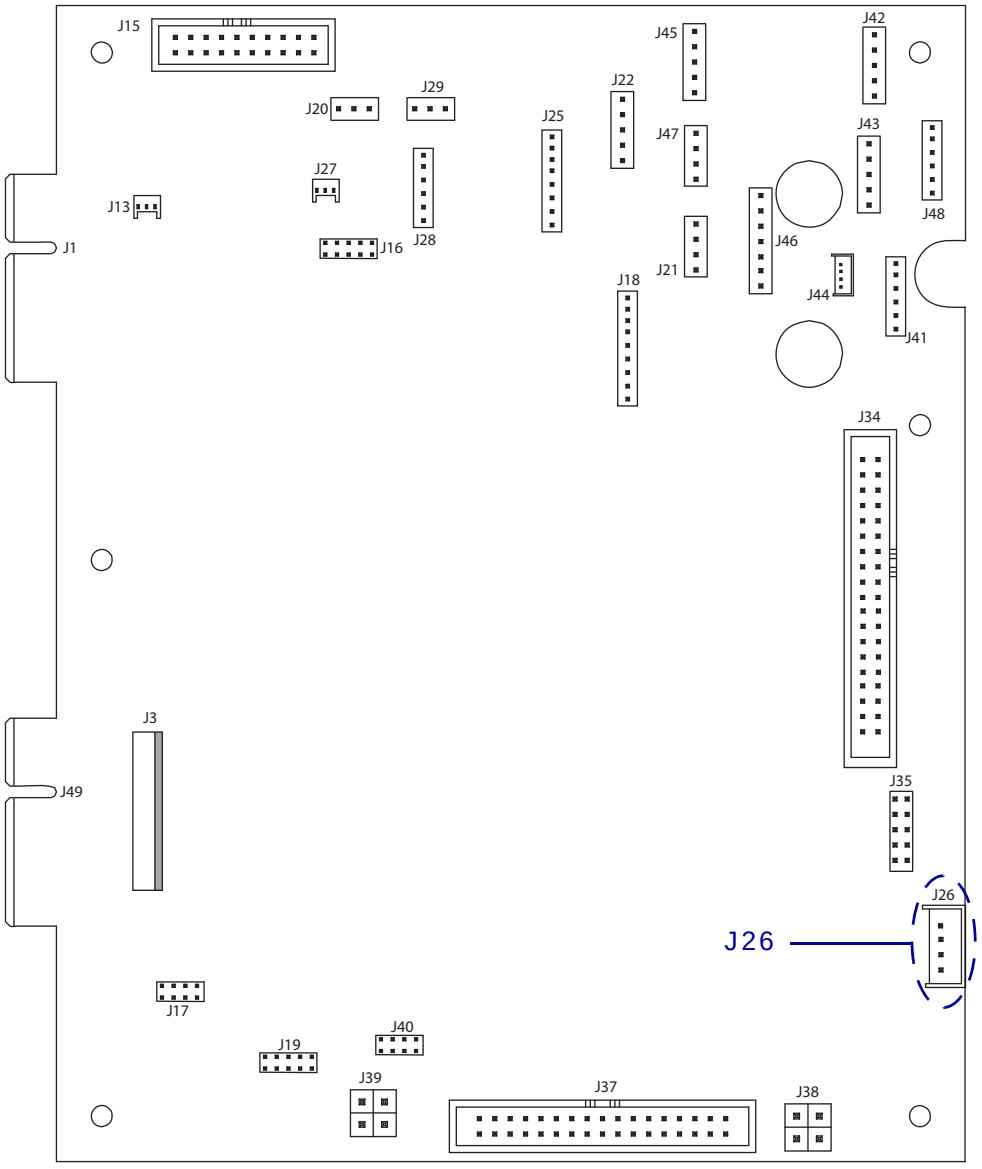
Disconnect the Old Drive Motor Cable

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

   Connect yourself to an antistatic device.

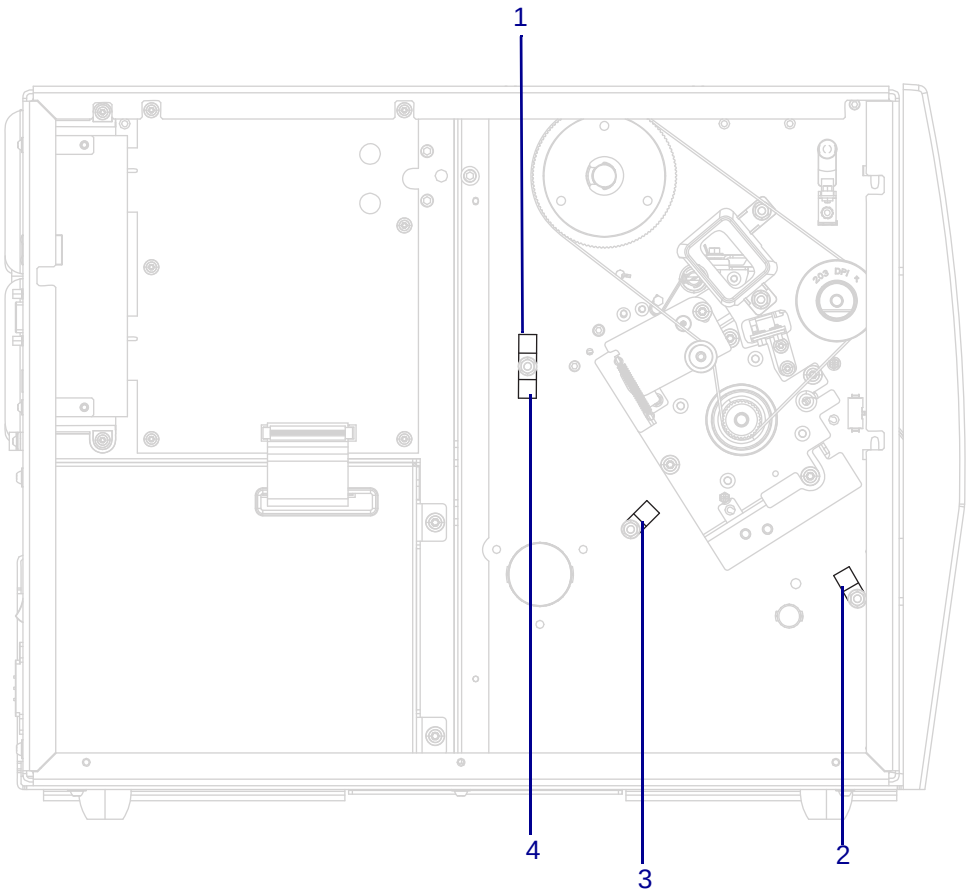
2. See Figure 94. Disconnect the drive motor cable from J26 on the main logic board (MLB).

Figure 94 • Main Logic Board Connection



3. See Figure 95. Remove the drive motor cable from the cable clamps 2 and 3 by removing the mounting nuts, and then opening the cable clamps.

Figure 95 • Locate the Cable Clamps

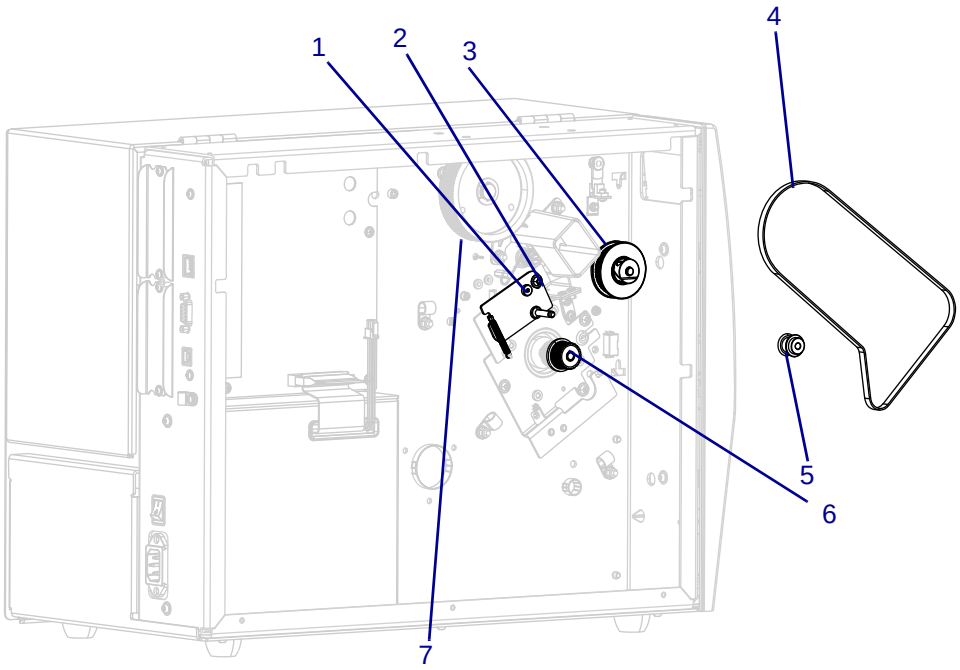


Clamp Number	Cables
1	Head open sensor cable, Black Mark sensor cable, Ribbon out cable
2	Drive motor cable, cutter interface cable
3	Drive motor cable, cutter interface cable
4	Drive motor cable, cutter interface cable

Remove the Main Drive Belt

1. See Figure 96. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

Figure 96 • Loosen the Tensioner Locking Screw



1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Stepper motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.
3. Slide the main drive belt and idler pulley out of the printer.
4. Is there a rewind option installed?

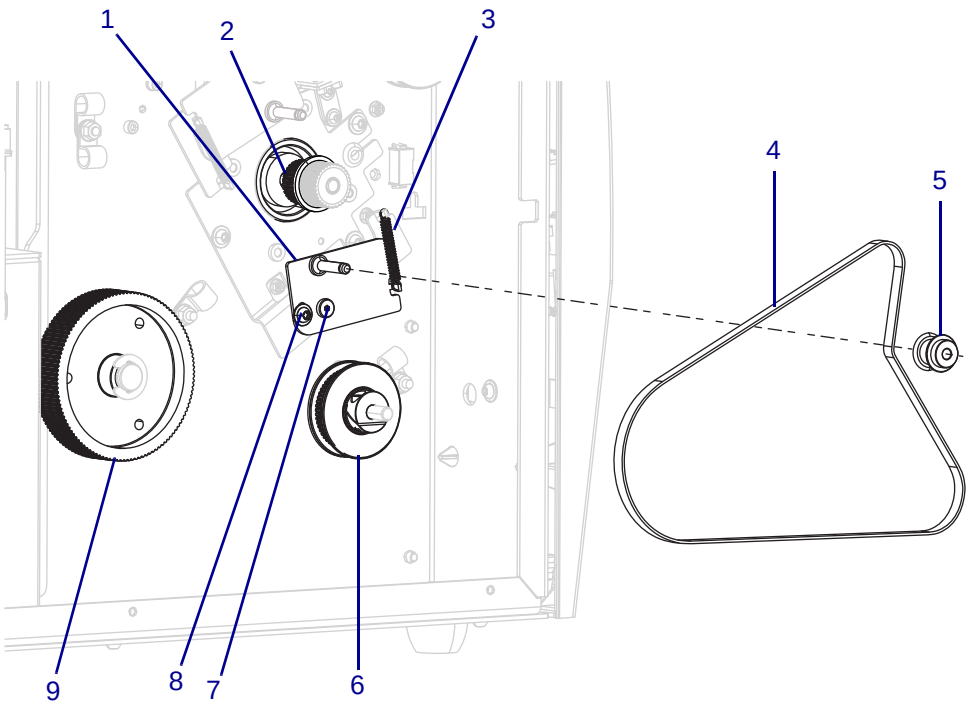
If…	Then…
Yes	Go to *Remove the Rewind Drive Belt* *on page 189*.
No	Go to *Remove the Old Drive Motor Assembly* *on page 191*.

Remove the Rewind Drive Belt

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 97. Loosen the rewind drive belt tensioner locking screw.

Figure 97 • Remove the Rewind Drive Belt



1	Rewind drive belt tensioner
2	Drive motor pulley
3	Tension spring
4	Rewind drive belt
5	Rewind drive belt idler pulley
6	Lower platen pulley
7	Rewind drive belt tensioner pivot screw
8	Rewind drive belt tensioner locking screw
9	Media take-up pulley

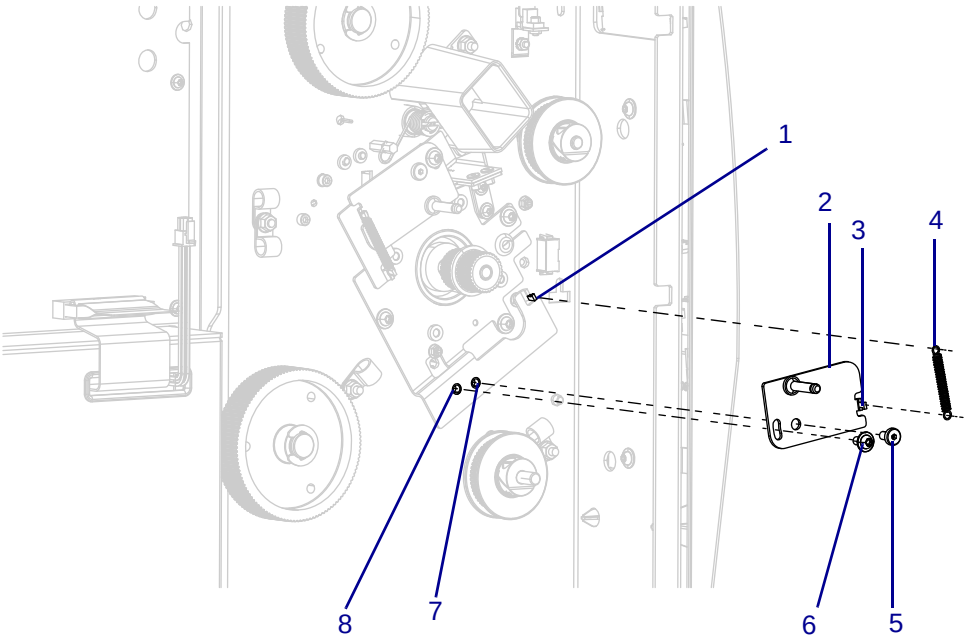
2. Rotate the rewind drive belt tensioner to extend the spring, and then tighten the locking screw.
3. Remove the rewind drive belt and idler pulley.
4. Go to *Remove the Rewind Tensioner Assembly* *on page 190*.

Remove the Rewind Tensioner Assembly

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 98. Remove the rewind tensioner locking screw.

Figure 98 • Remove the Rewind Tensioner Assembly



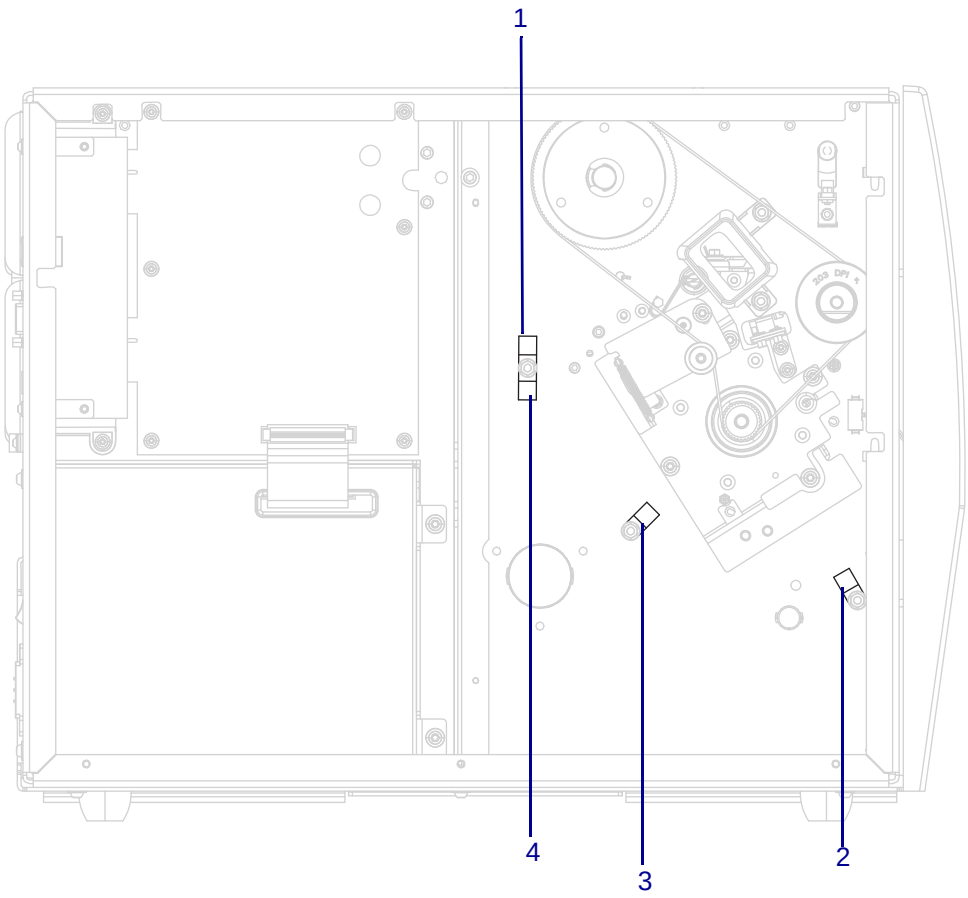
1	Drive motor bracket spring hook
2	Rewind drive belt tensioner
3	Rewind drive belt tensioner spring hook
4	Tension spring
5	Rewind drive belt tensioner pivot screw
6	Rewind drive belt tensioner locking screw
7	Rewind drive belt tensioner pivot screw mounting hole
8	Rewind drive belt tensioner locking screw mounting hole

2. Remove the rewind tensioner tension spring.
3. Remove the rewind tensioner pivot screw.
4. Set the rewind tensioner assembly parts aside.

Remove the Old Drive Motor Assembly

1. Open cable clamps 2 and 3 by removing the two mounting nuts.

Figure 99 • Locate the Cable Clamps

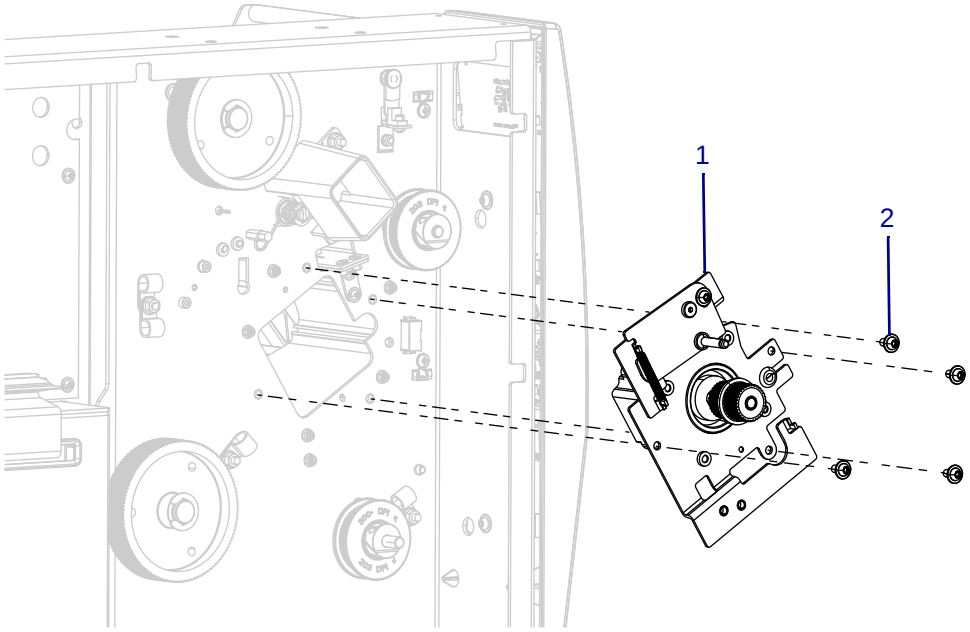


Clamp Number	Cables
1	Head open sensor cable, Black Mark sensor cable, Ribbon out cable
2	Drive motor cable, cutter interface cable
3	Drive motor cable, cutter interface cable
4	Drive motor cable, cutter interface cable

2. Remove the drive motor cable from the clamps.

3. See Figure 100. Remove the four mounting screws securing the drive motor assembly to the printer.

Figure 100 • Remove the Drive Motor Assembly



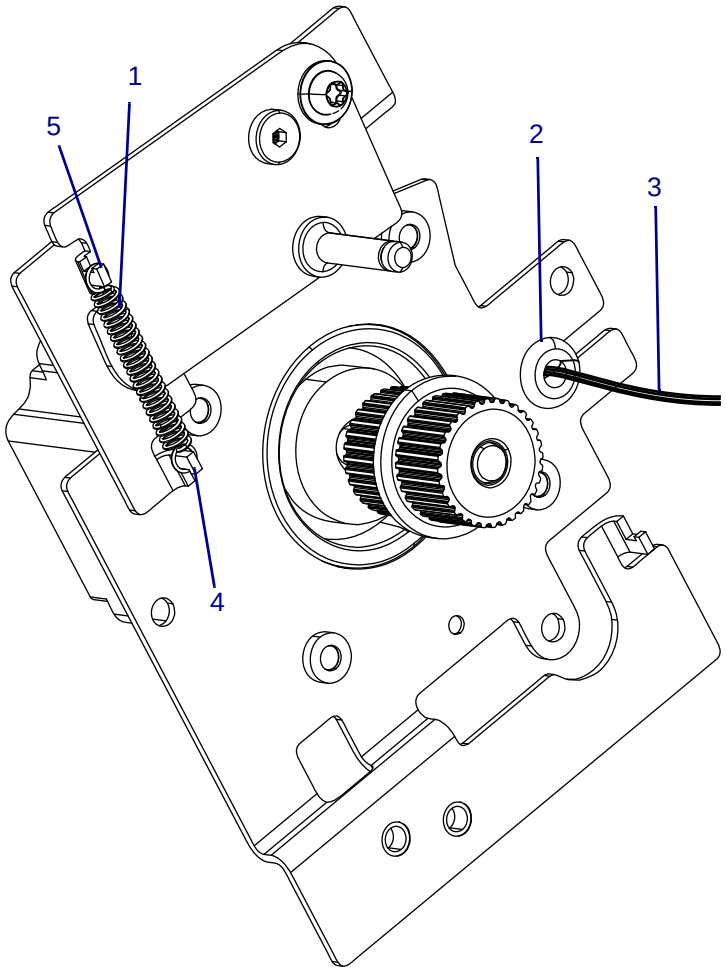
1	Drive motor assembly
2	Mounting screws (4)

4. Remove the drive motor assembly from the printer.

Install the New Drive Motor Assembly

1. See Figure 101. Ensure that the main drive belt tension spring is attached to the two spring hooks.

Figure 101 • Drive Motor Assembly

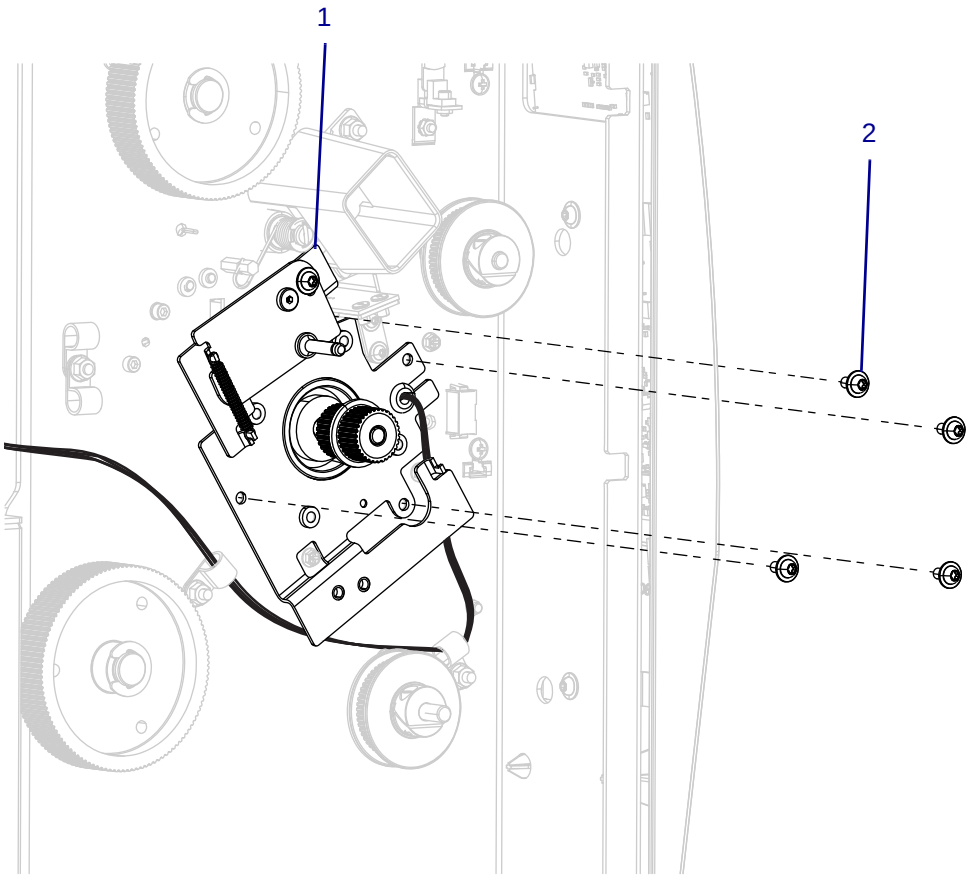


1	Tension spring
2	Rubber grommet
3	Drive motor cable (4 wires)
4	Drive motor bracket tension spring hook
5	Rewind tensioner bracket tension spring hook

2. Ensure that the drive motor cable grommet is installed and that the drive motor cable is in the grommet.

3. See Figure 102. Insert the drive motor assembly into the printer mounting hole.

Figure 102 • Install the Drive Motor Assembly



1	Drive motor assembly
2	Mounting screws (4)

4. See Figure 95 on page 187. Insert the drive motor cable into clamps 2 and 3.
5. Slide the cable clamps onto their respective mounting studs, and the install the two mounting nuts.
6. Is there a rewind option installed?

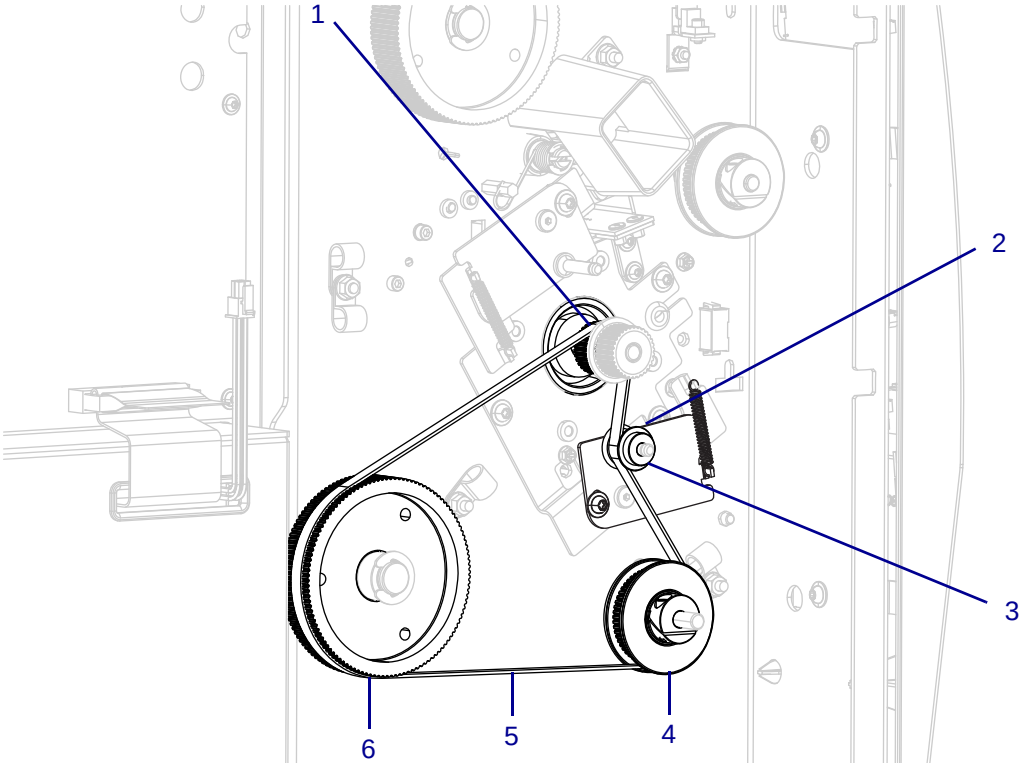
If…	Then…
Yes	Go to *Reinstall the Rewind Tensioner and Drive Belt on page 195*.
No	Go to *Reinstall the Main Drive Belt on page 196*.

Reinstall the Rewind Tensioner and Drive Belt

1. See Figure 98 on page 190. Align the rewind tensioner plate with the drive motor assembly mounting holes.
2. Install the pivot screw and tighten.
3. Loosely install the locking screw.
4. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   Install the tensioner spring onto the hook on the tensioner and the hook on the drive motor bracket.
5. See Figure 103. Rotate the rewind tensioner to extend the spring, and then tighten the locking screw.

Figure 103 • Install the Rewind Drive Belt



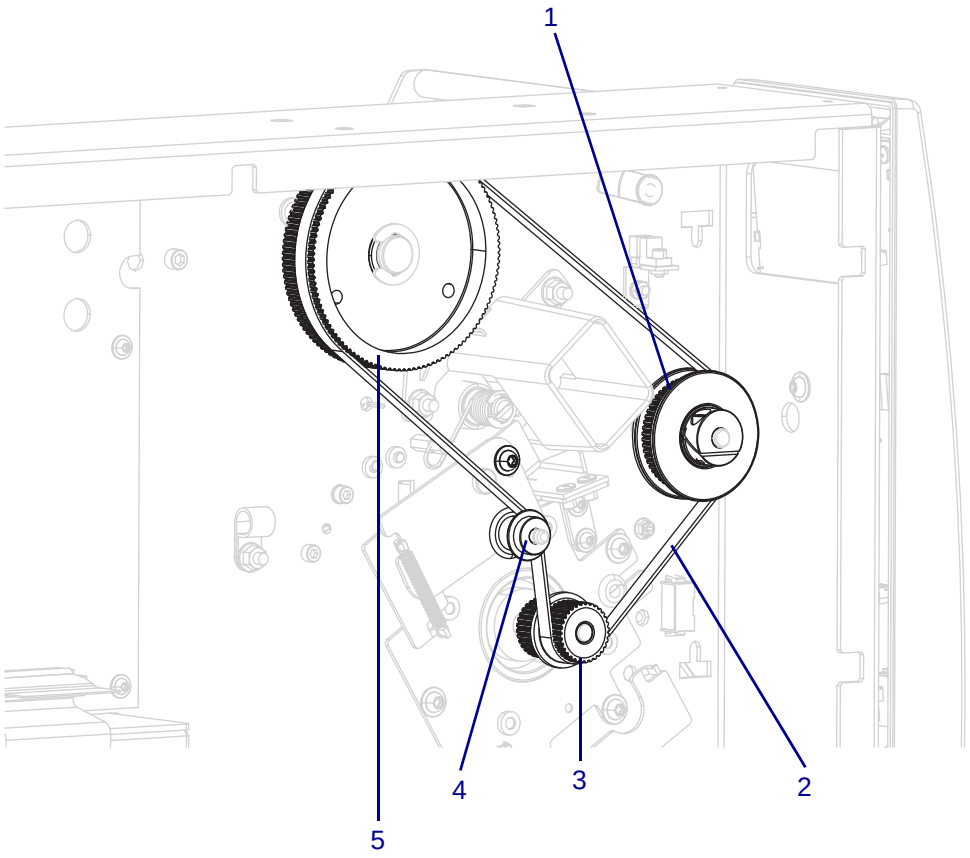
1	Inside drive motor pulley
2	Rewind idler pulley
3	Hub facing out
4	Rewind platen pulley
5	Rewind drive belt
6	Rewind spindle pulley

6. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.
7. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt.
8. Loosen the locking screw on the rewind belt tensioner.
9. Rotate the belt several times to seat the belt on all the pulleys.
10. Tighten the locking screw on the rewind tensioner.

Reinstall the Main Drive Belt

1. See Figure 104. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.

Figure 104 • Reinstall the Main Drive Belt



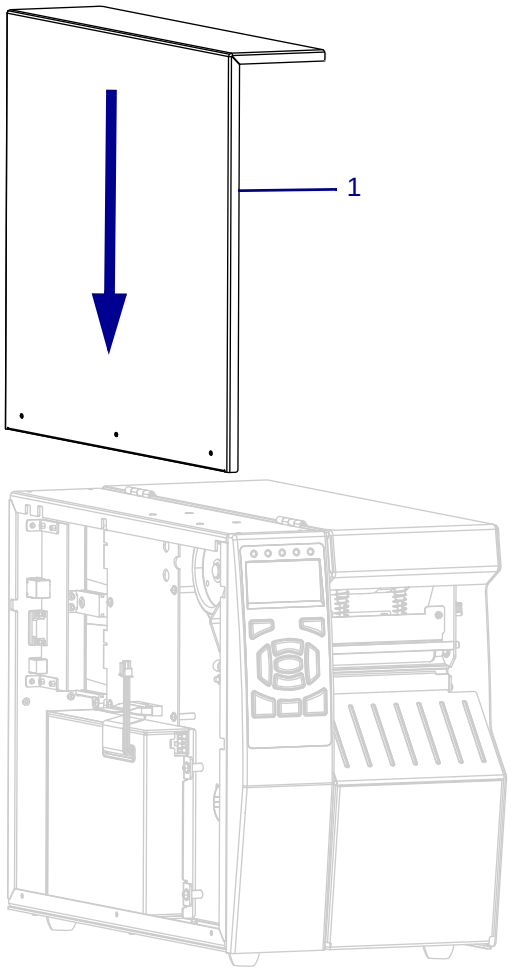
1	Upper platen pulley
2	Main drive belt
3	Drive motor outside pulley
4	Main drive belt idler pulley
5	Ribbon take-up spindle pulley

2. Ensure that the belt is on the inside part of the idler pulley.
3. Loosen the locking screw on the main drive belt tensioner.
4. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 105. Slide the electronics cover onto the printer.

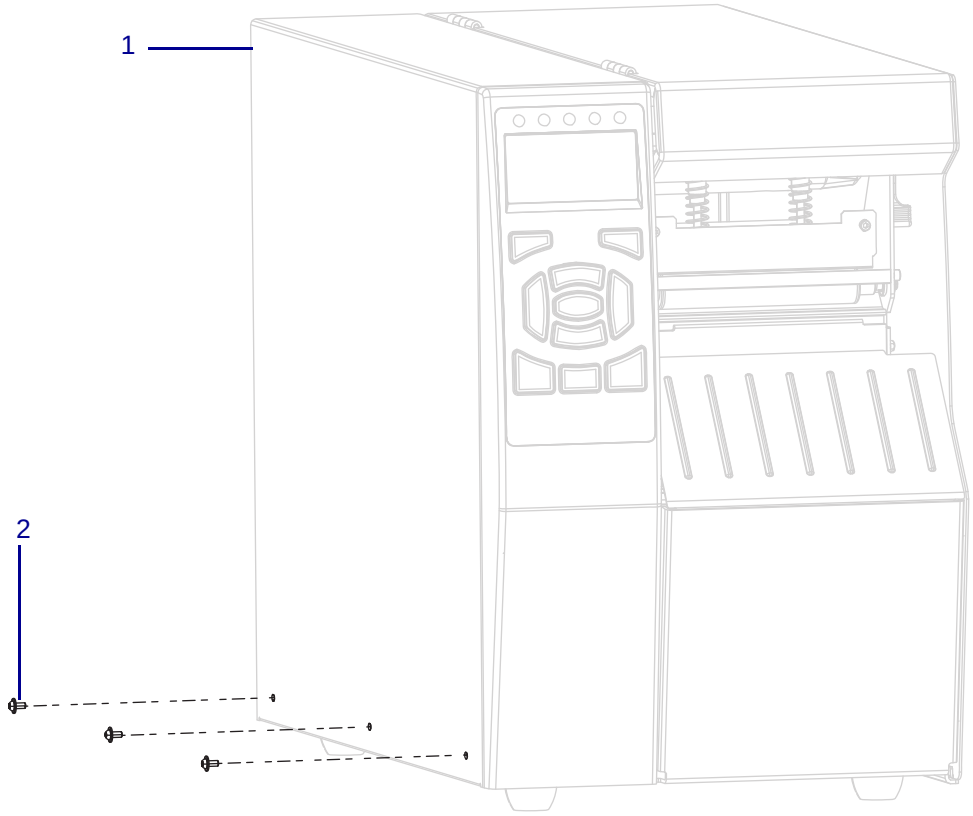
Figure 105 • Install the Electronics Cover



1	Electronics cover

2. See Figure 106. Install the three mounting screws.

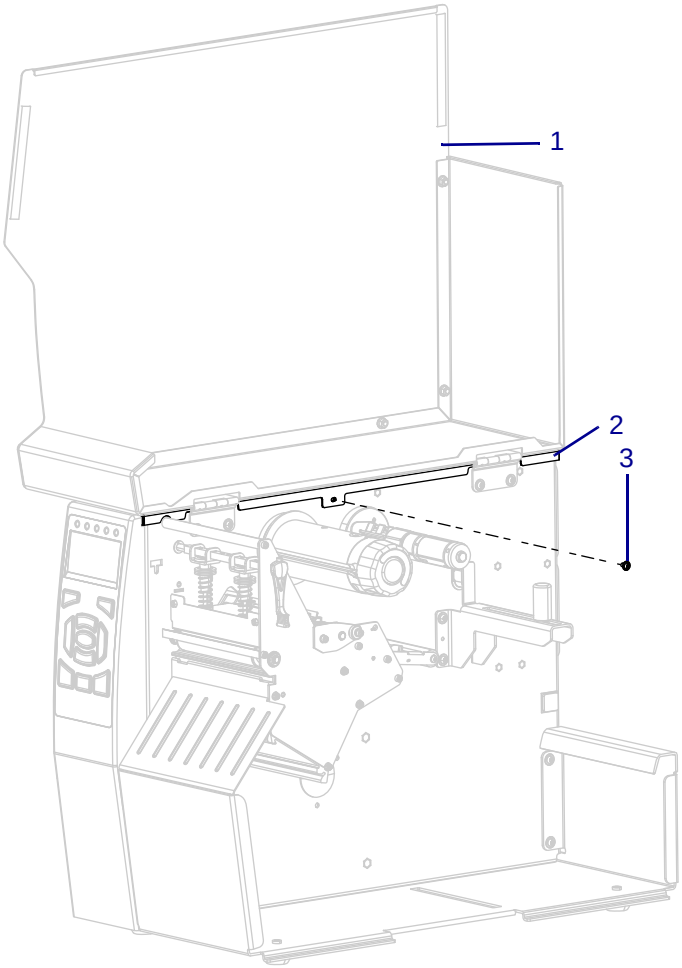
Figure 106 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 107. Open the media door and install the media side electronics cover mounting screw.

Figure 107 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Drive Belt Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Drive Belt Maintenance Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 108 • Kit Contents

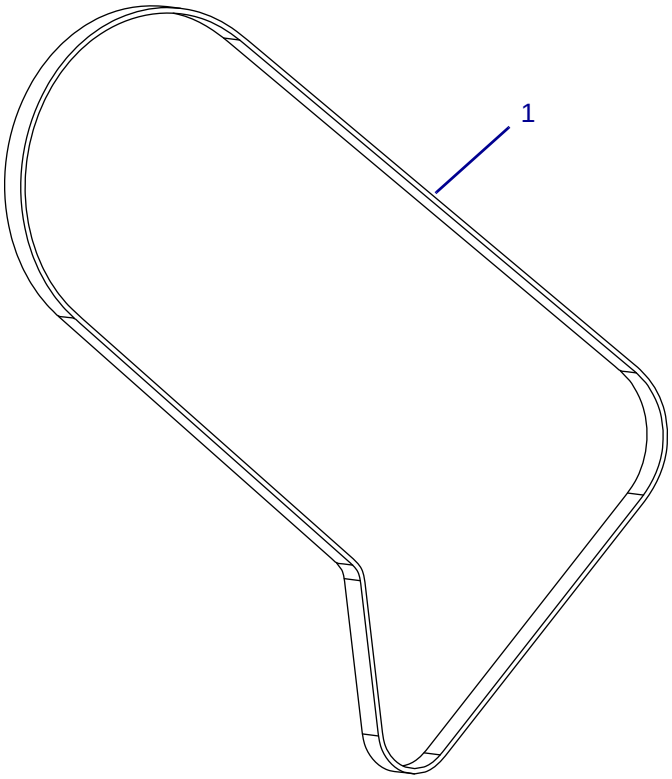


Table 16 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-017**	Drive Belt Maintenance Kit
	1	1	*N/A*	Drive Belt

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1.

Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

Note • Retain all parts removed during disassembly, unless otherwise directed.

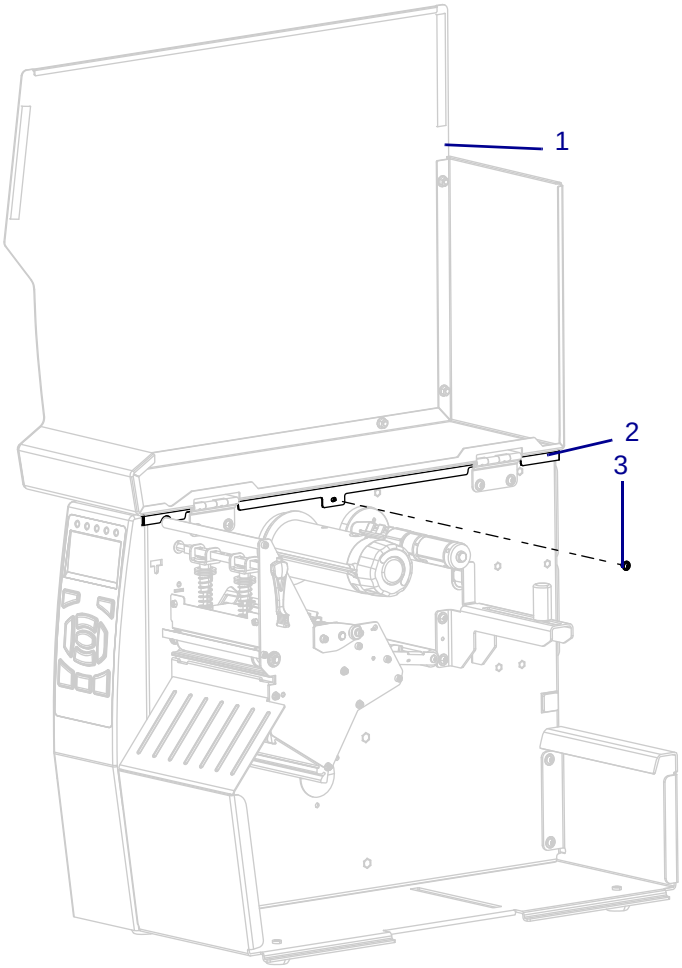
2.

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

Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 109 • Locate the Electronics Cover Mounting Screw

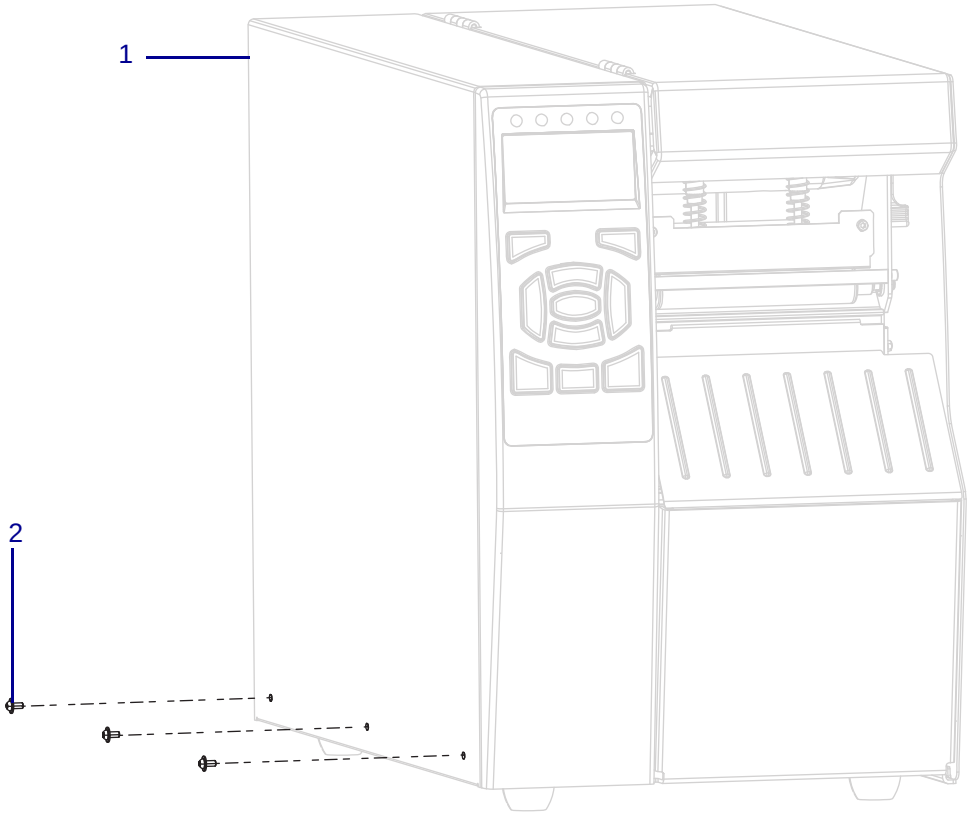


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 110. Remove the three mounting screws securing the electronics cover to the printer.

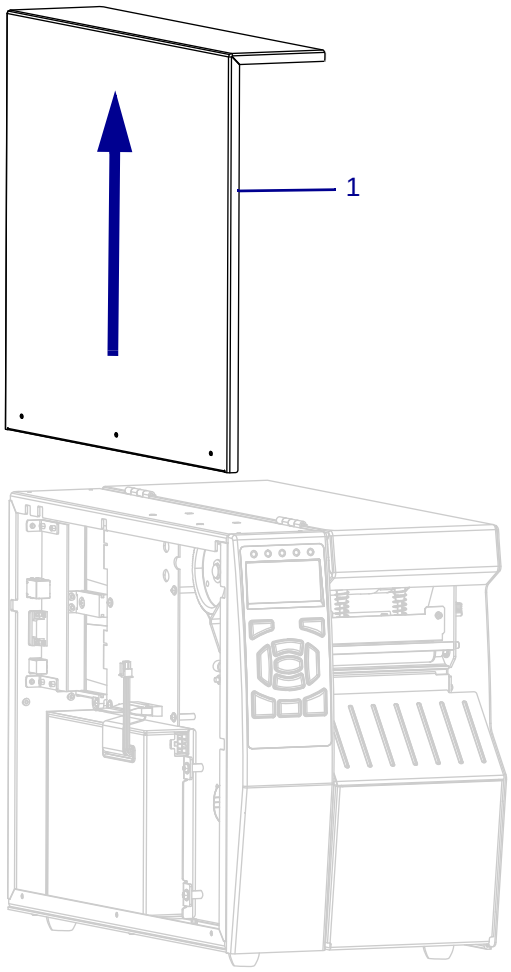
Figure 110 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 111. Lift the electronics cover off of the printer.

Figure 111 • Remove the Electronics Cover



1	Electronics cover

7. Which belt are you replacing?

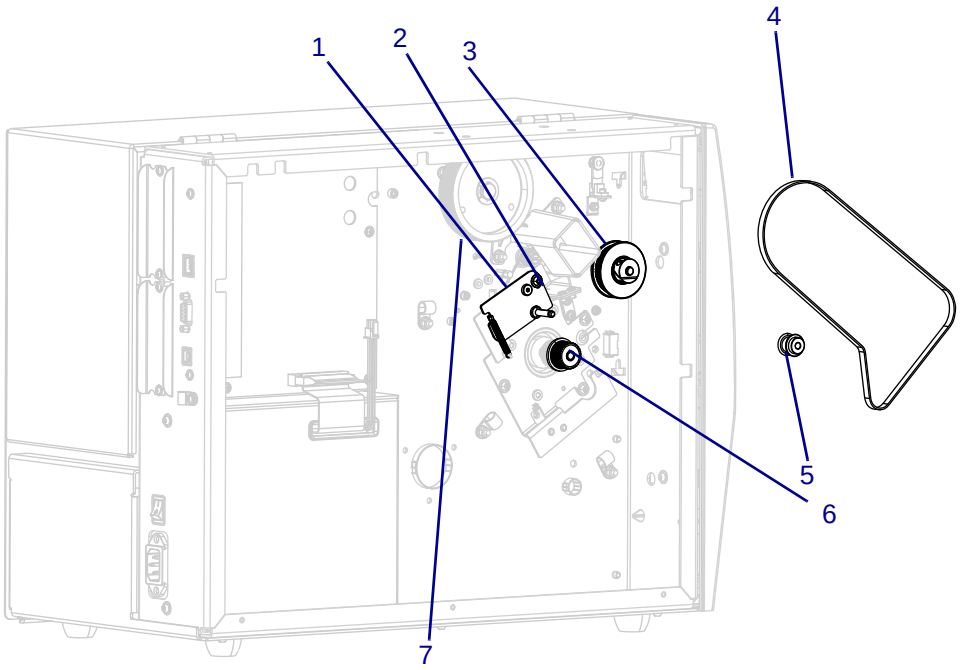
If…	Then…
Main drive belt	Go to *Remove the Main Drive Belt on page 205*
Rewind drive belt	**a.** Go to *Remove the Main Drive Belt on page 205* and then **b.** Go to *Remove the Rewind Drive Belt on page 206*
Both	**a.** Go to *Remove the Main Drive Belt on page 205* and then **b.** Go to *Remove the Rewind Drive Belt on page 206*

Remove the Main Drive Belt

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 112. Loosen the main drive belt tensioner locking screw.

Figure 112 • Loosen the Main Drive Belt Tensioner



1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Drive motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Are you replacing the rewind drive belt?

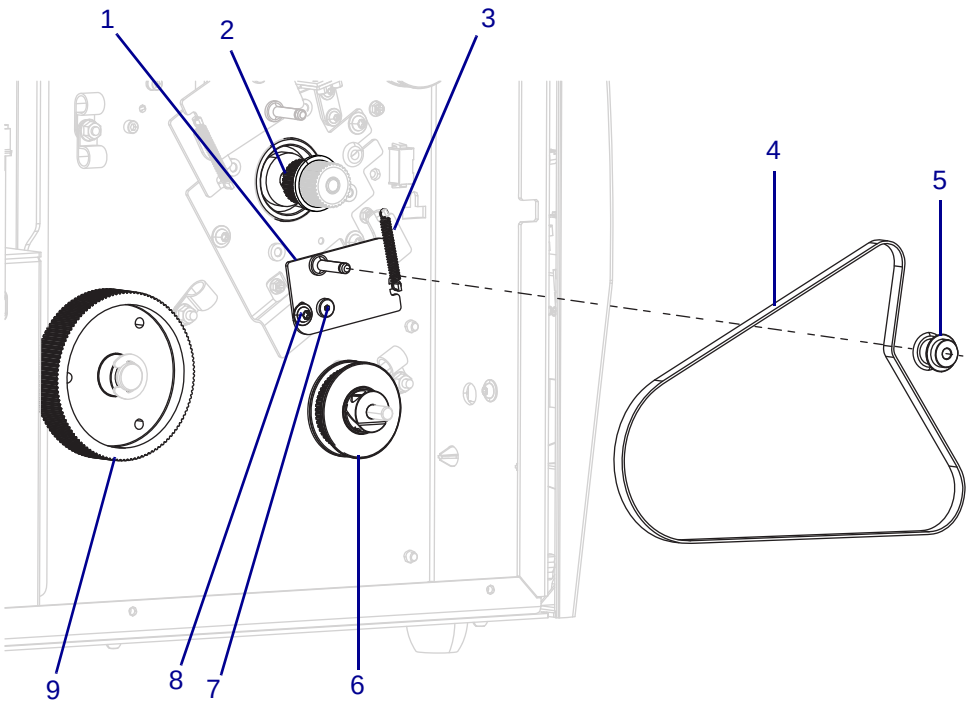
If…	Then…
Yes	**a.** Remove the main drive belt. **b.** Go to *Remove the Rewind Drive Belt* *on page 206*.
No	Continue with step 4.

4. Remove and discard the main drive belt, and then remove idler pulley.

Remove the Rewind Drive Belt

1. See Figure 113. Loosen the rewind drive belt tensioner locking screw.

Figure 113 • Remove the Rewind Drive Belt



1	Rewind drive belt tensioner
2	Drive motor pulley
3	Tension spring
4	Rewind drive belt
5	Rewind drive belt idler pulley
6	Lower platen pulley
7	Rewind drive belt tensioner pivot screw
8	Rewind drive belt tensioner locking screw
9	Media take-up pulley

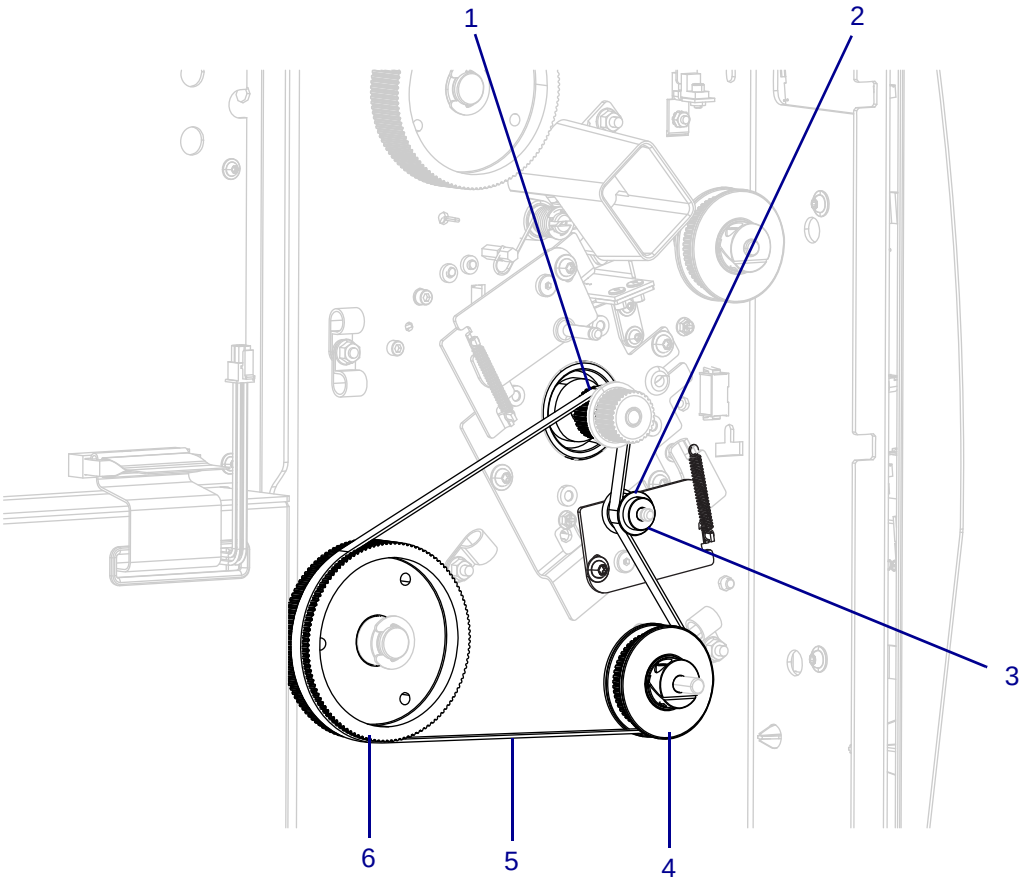
2. Rotate the rewind drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Remove the rewind drive belt and idler pulley.

Install the Rewind Drive Belt

1. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.

Figure 114 • Install the Rewind Drive Belt



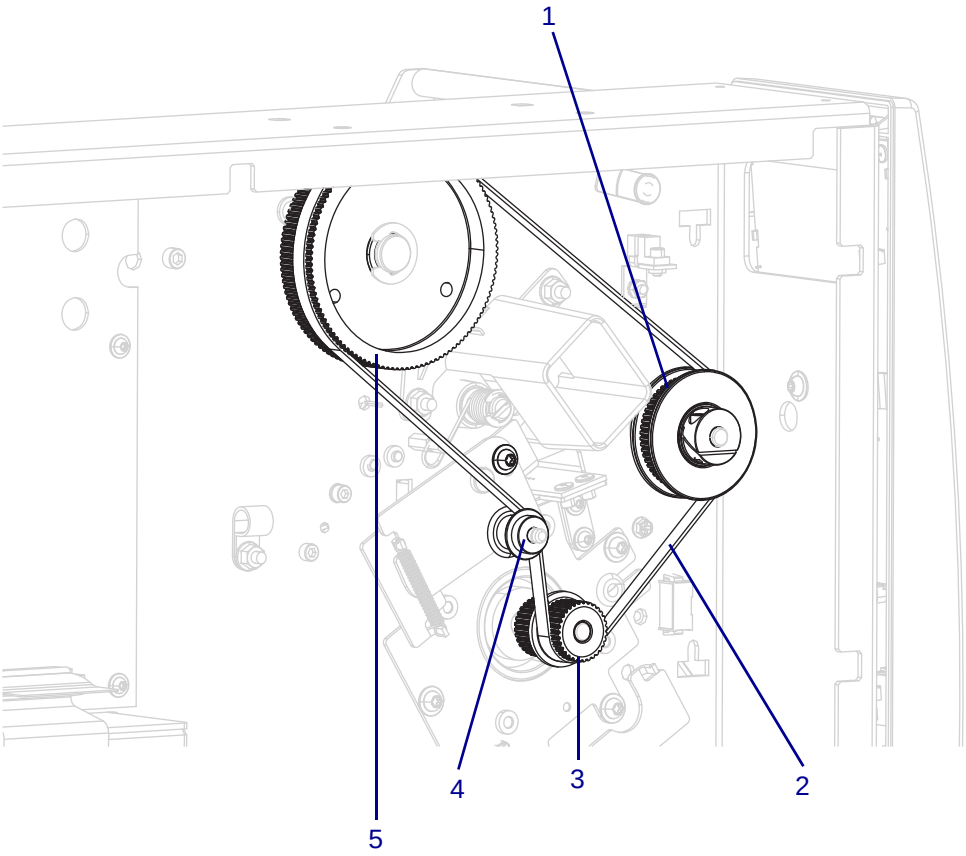
1	Inside drive motor pulley
2	Rewind idler pulley
3	Hub facing out
4	Rewind platen pulley
5	Rewind drive belt
6	Rewind spindle pulley

2. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt.
3. Loosen the locking screw on the rewind belt tensioner.
4. Rotate the belt several times to seat the belt on all the pulleys.
5. Tighten the locking screw on the rewind tensioner.
6. Continue with *Install the Main Drive Belt* *on page 208*.

Install the Main Drive Belt

1. See Figure 115. Install the new main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.

Figure 115 • Install the Main Drive Belt



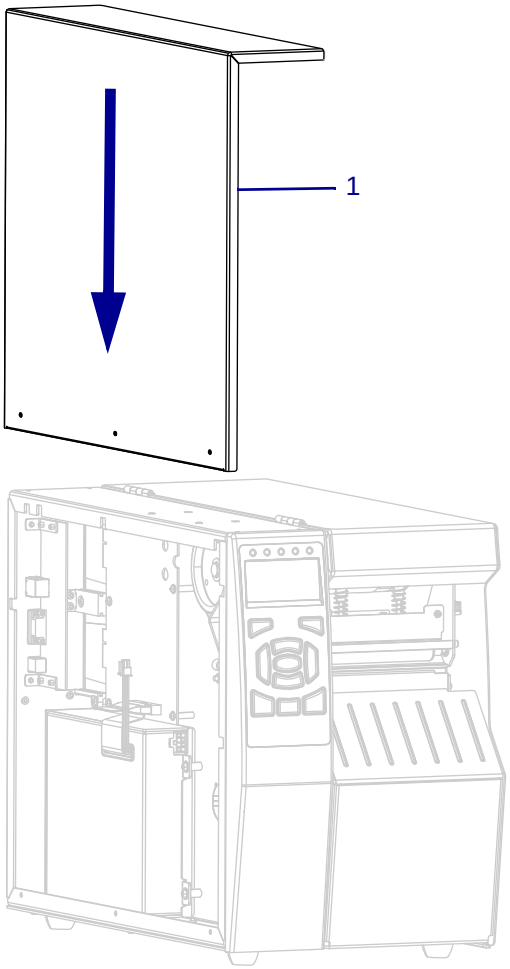
1	Upper platen pulley
2	Main drive belt
3	Drive motor outside pulley
4	Main drive belt idler pulley
5	Ribbon take-up spindle pulley

2. Slide the main drive belt idler pulley onto the main drive belt tensioner.
3. Ensure that the belt is on the inside part of the idler pulley.
4. Loosen the locking screw on the main drive belt tensioner.
5. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 116. Slide the electronics cover onto the printer.

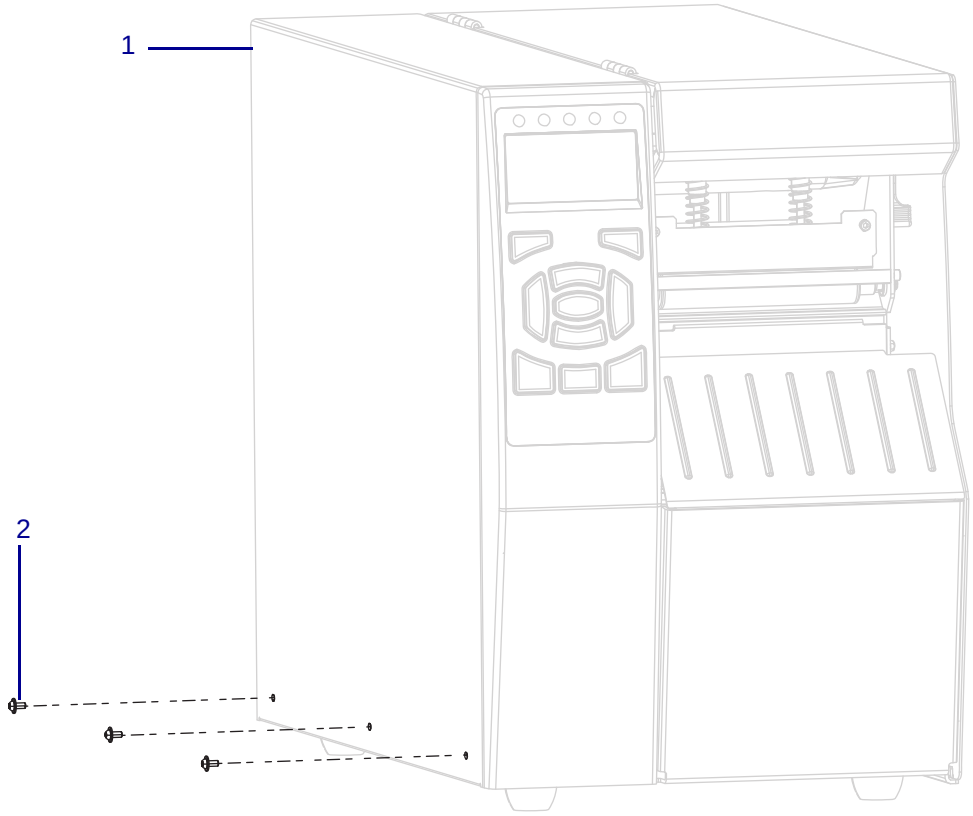
Figure 116 • Install the Electronics Cover



1	Electronics cover

2. See Figure 117. Install the three mounting screws.

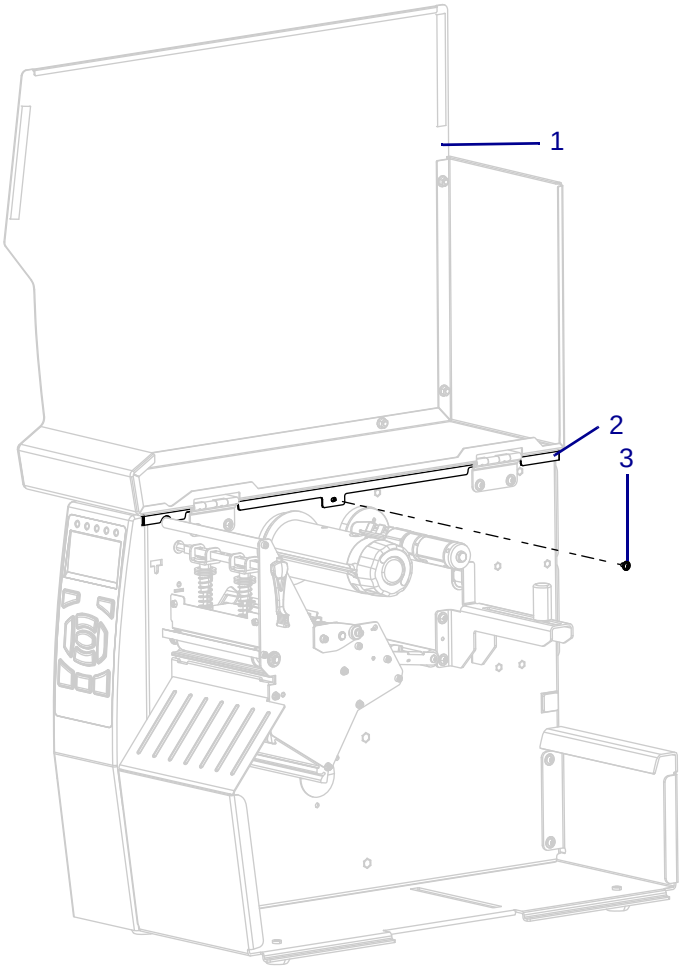
Figure 117 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 118. Open the media door and install the media side electronics cover mounting screw.

Figure 118 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Media Path Components

This section supplies you with the parts information and installation procedures for the roller system.

Contents

Media Path Components Parts and Drawings 214
Platen Roller Maintenance Kit 219
Media Hanger Maintenance Kit 239
Dancer Assembly Maintenance Kit 243
Media Guide Maintenance Kit 256
Upper Media Guide Maintenance Kit 266
Side Plates Maintenance Kit 275
Ribbon Supply Spindle Maintenance Kit 281
Ribbon Take-Up Spindle Assembly Maintenance Kit 292
Peel/Tear Bar Maintenance Kit. 318
Media Handling Option Parts and Drawings 333
Cutter Upgrade Maintenance Kit 336
Cutter Cover and PCBA Maintenance Kit 346
Cutter Guard and Static Brush Maintenance Kit 354
Magnetic Cutter Tray Maintenance/Option Kit 357
Rewind Upgrade Kit 360
Rewind Platen Roller Adjustment Bracket Maintenance Kit. 389
Rewind Drive System Maintenance Kit 394
Rewind Spindle Maintenance Kit 409
Rewind Plate Kit. 423

Media Path Components Parts and Drawings

Figure 119 • Media Path Components Overview

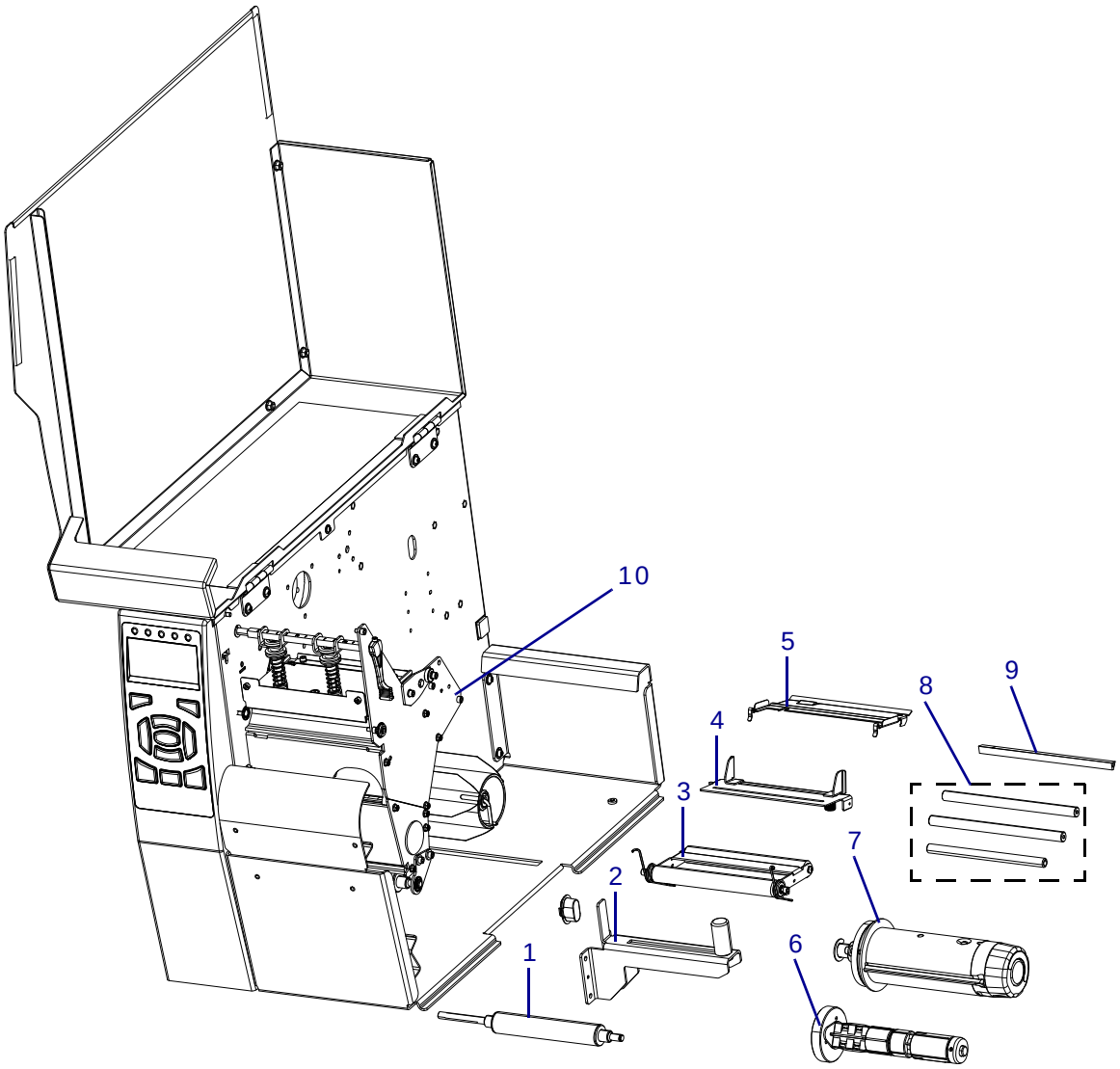


Table 17 • Media Path Overview Kit List

Item	Part Number	Description
1	**P1083347-012**	Platen Roller Maintenance Kit
2	**P1083347-029**	Media Hanger Maintenance Kit
3	**41691M**	Dancer Assembly Maintenance Kit
4	**P1006106**	Media Guide Maintenance Kit
5	**P1053360-015**	Media Guide Plate Kit
6	**P1053360-007**	Ribbon Supply Spindle Maintenance Kit
7	**G41150M**	Ribbon Take-Up Spindle Maintenance Kit
8	**P1053360-009**	Ribbon Rollers Maintenance Kit
9	**P1006115**	Peel/Tear Bar Maintenance Kit
10	**P1083347-023**	Side Plate Maintenance Kit

Figure 120 • Media Handling System Kits 1

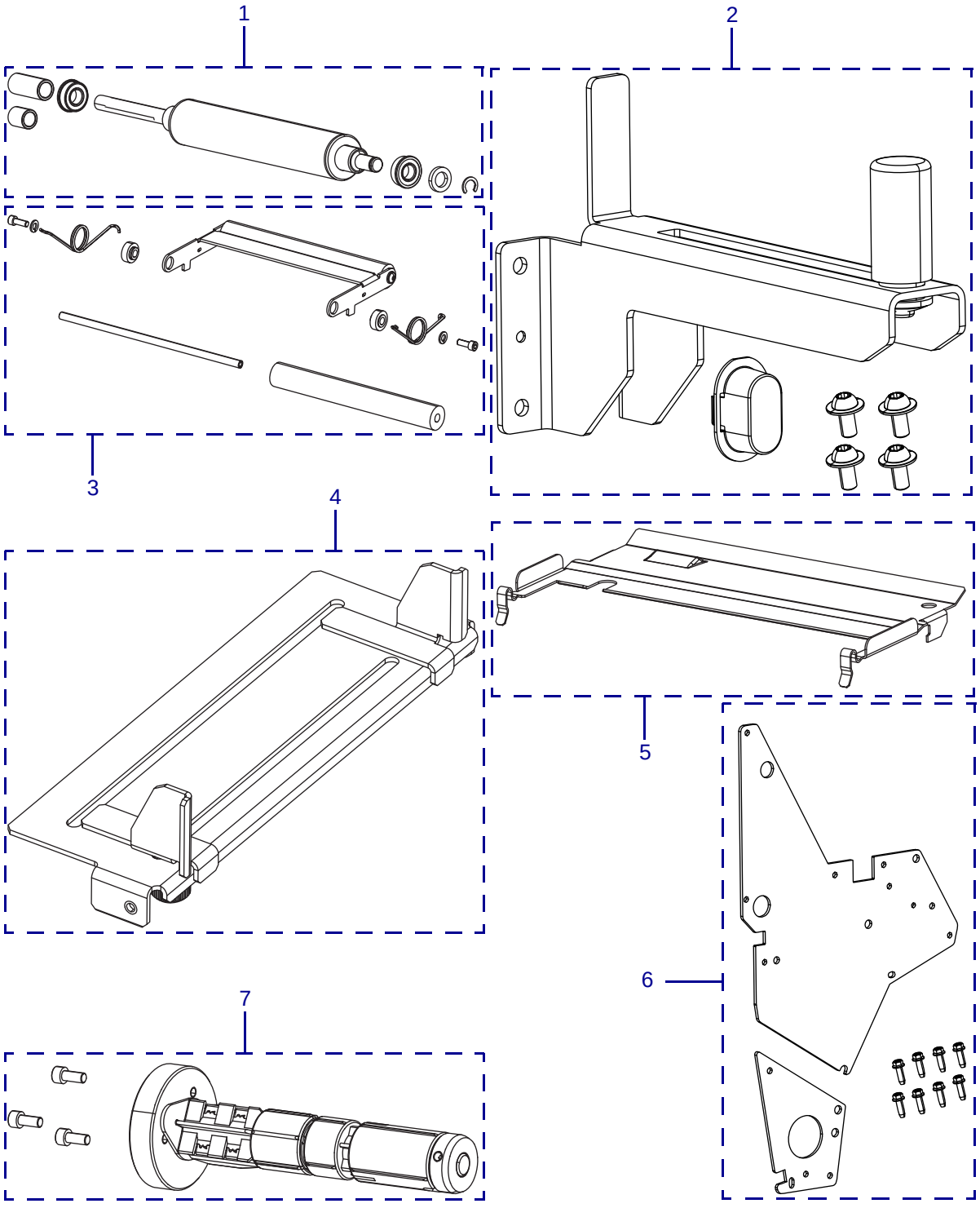


Table 18 • Media Handling System Kits 1

Item	Part Number	Description
1	**P1083347-012**	Platen Roller Maintenance Kit
2	**P1083347-029**	Media Hanger Maintenance Kit
3	**41691M**	Dancer Assembly Maintenance Kit
4	**P1006106**	Media Guide Maintenance Kit
5	**P1053360-015**	Media Guide Plate Kit
6	**P1083347-023**	Side Plate Maintenance Kit
7	**P1053360-007**	Ribbon Supply Spindle Maintenance Kit

Figure 121 • Media Handling System Kits 2

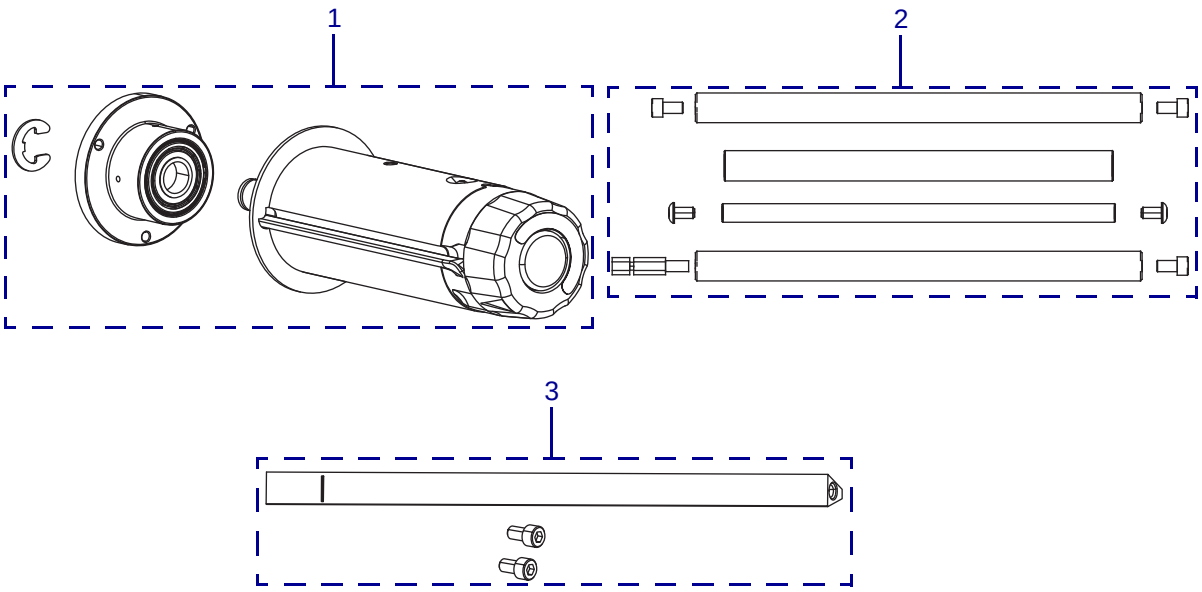


Table 19 • Media Handling System Kits 1

Item	Part Number	Description
2	**P1053360-009**	Ribbon Rollers Maintenance Kit
3	**P1006115**	Peel/Tear Bar Maintenance Kit

Platen Roller Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Platen Roller Maintenance Kit on the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 122 • Kit Contents

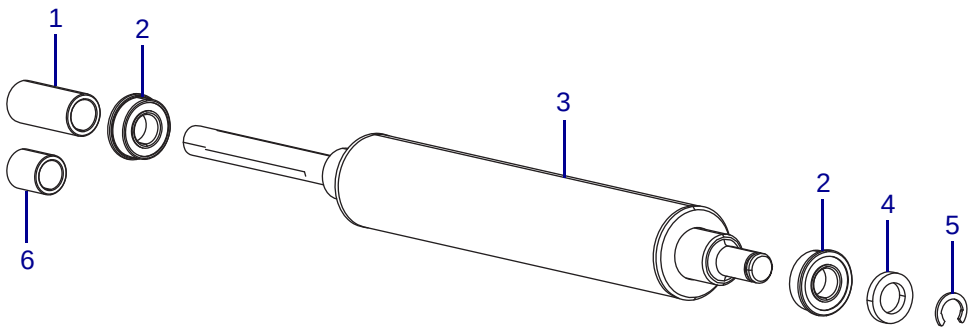


Table 20 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-012**	Platen Roller Maintenance Kit
	1	1	*N/A*	Upper Platen Roller Spacer
	2	2	*N/A*	Flanged Ball Bearing
	3	1	*N/A*	Platen Roller
	4	1	**HW30247**	Flat Washer, 0.420 × 0.260 × 0.075 (sold in quantities of 25)
	5	1	**HW33810**	C-Clip, External 0.25 (sold in quantities of 100)
	6	1	*N/A*	Rewind Platen Roller Spacer

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ C-Clip Removal Tool
- ❑ Antistatic Wrist Strap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2. **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.

   Remove the media and ribbon.

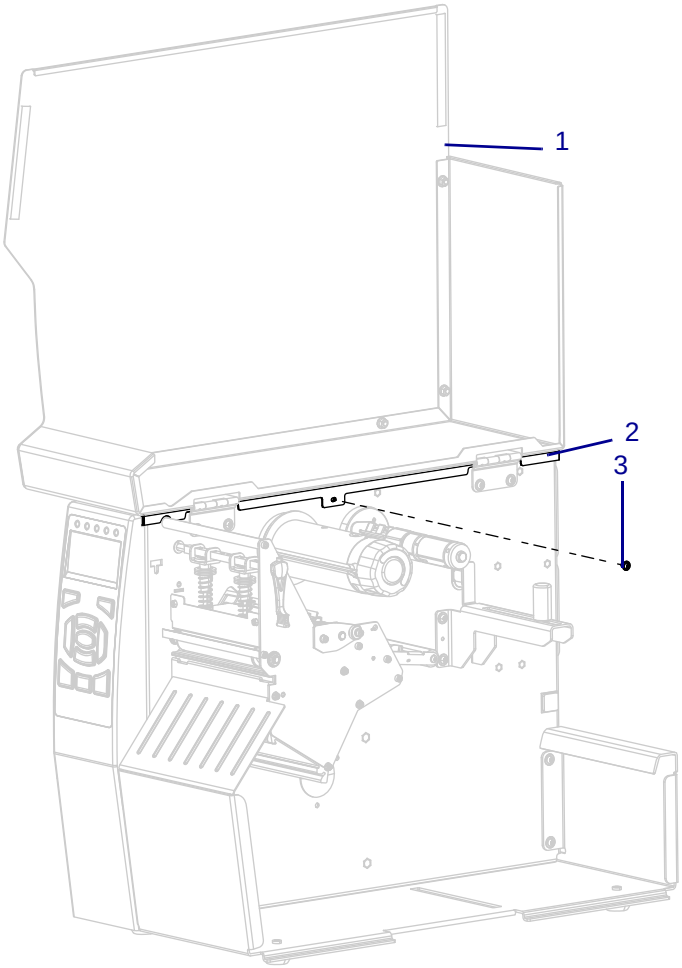
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

4. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 123 • Locate the Electronics Cover Mounting Screw

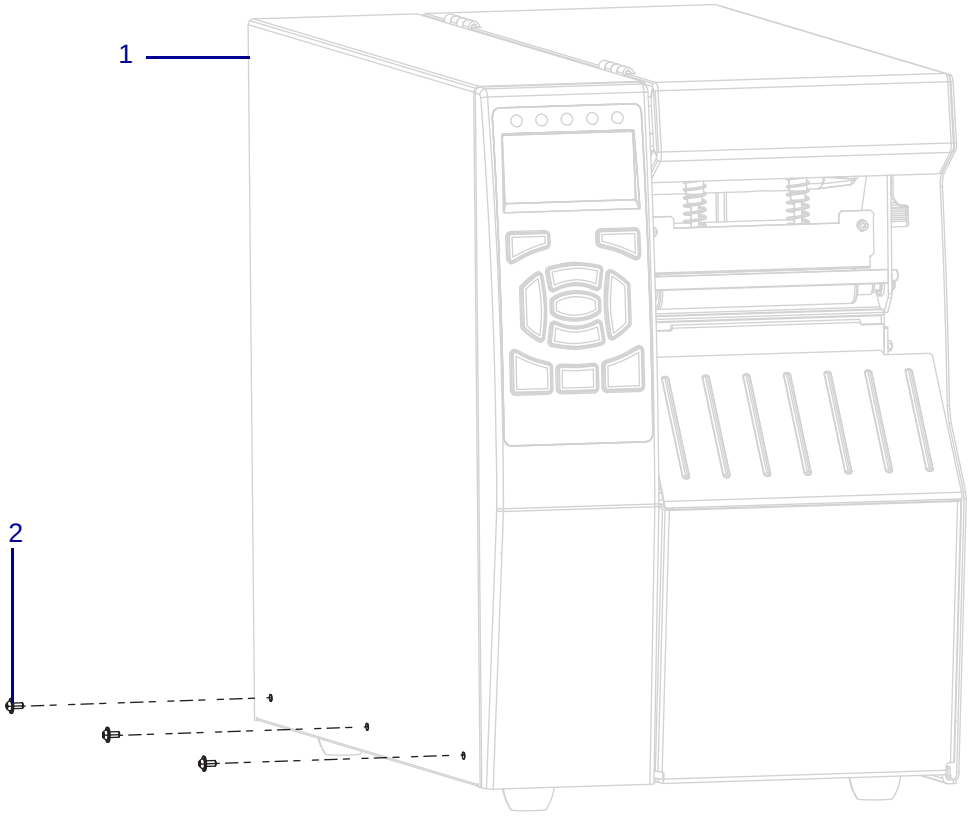


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

5. Close the media door.

6. See Figure 124. Remove the three mounting screws securing the electronics cover to the printer.

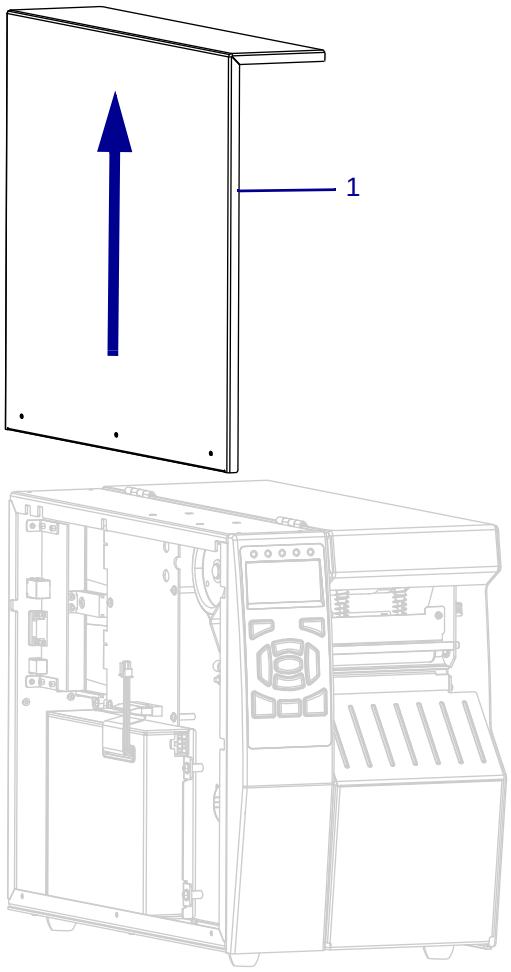
Figure 124 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

7. See Figure 125. Lift the electronics cover off of the printer.

Figure 125 • Remove the Electronics Cover



1	Electronics cover

8. Which Platen Roller are you installing?

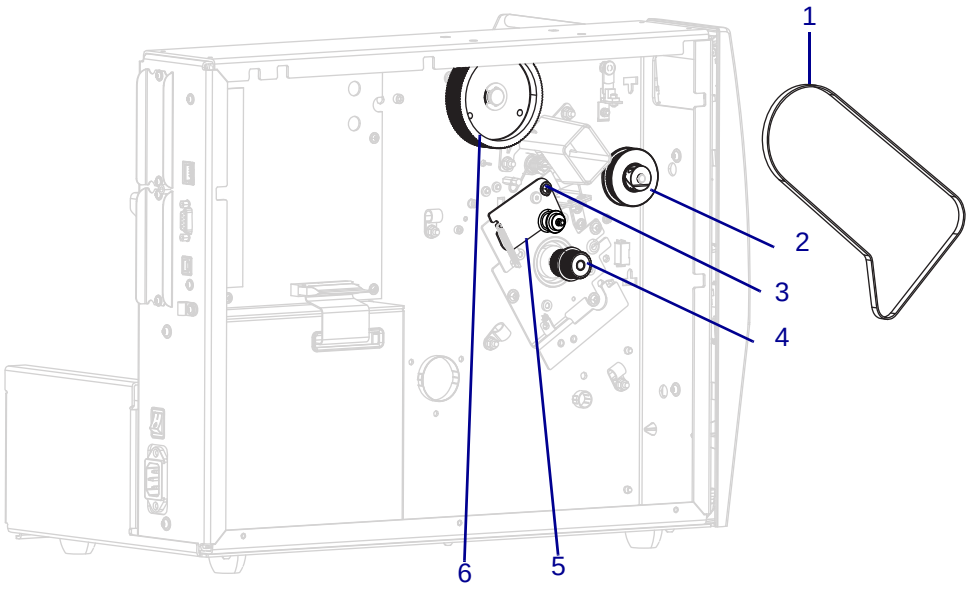
If the…	Then…
Upper Platen Roller	Continue with *Replace the Upper Platen Roller*.
Rewind Platen Roller	Go to *Replace the Rewind Platen Roller* *on page 230*.

Replace the Upper Platen Roller

Remove the Old Upper Platen Roller

1. See Figure 126. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

Figure 126 • Remove the Main Drive Belt

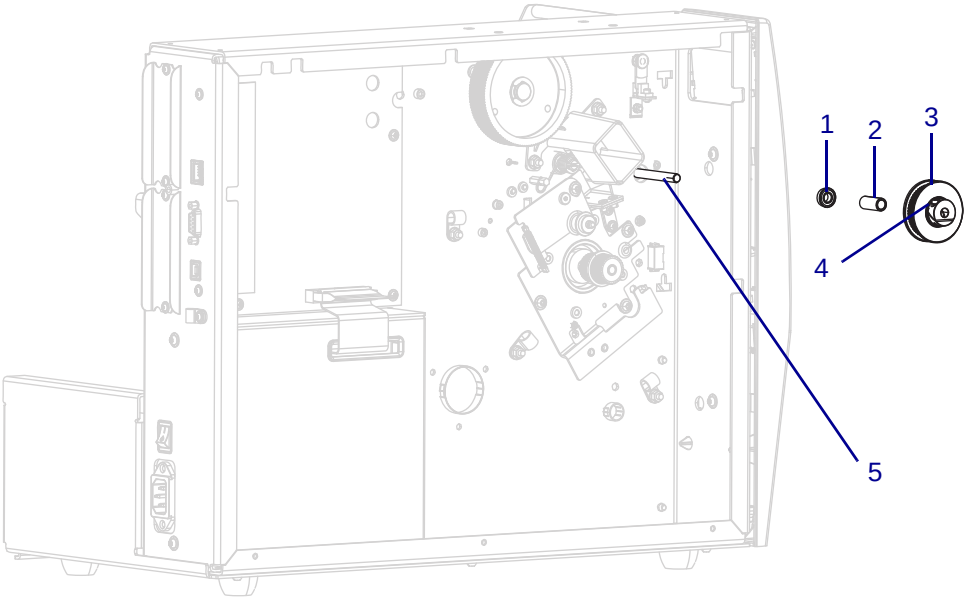


1	Main drive belt
2	Upper platen roller pulley
3	Tensioner locking screw
4	Drive motor pulley
5	Tensioner plate
6	Ribbon take-up pulley

2. Move the main drive belt tensioner to extend the spring, and then tighten the locking screw.
3. Slide the main drive belt out of the printer.

4. See Figure 127. Loosen the upper platen pulley mounting screw, and then slide the pulley off of the upper platen roller shaft.

Figure 127 • Remove the Upper Platen Pulley

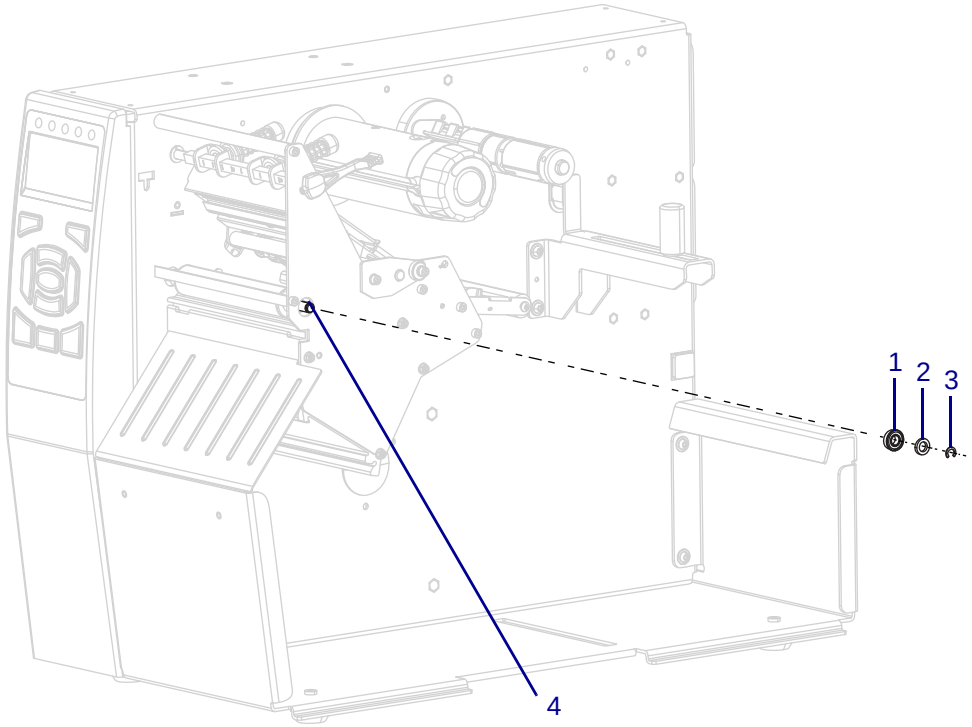


1	Bearing
2	Spacer
3	Upper platen pulley
4	Upper platen pulley mounting screw
5	Upper platen roller shaft

5. Remove and discard the spacer and bearing.
6. Turn the printer to the media side.

7. See Figure 128. Remove and discard the C-clip securing the upper platen roller to the printer.

Figure 128 • Remove the Media Side C-Clip, Washer, and Bearing

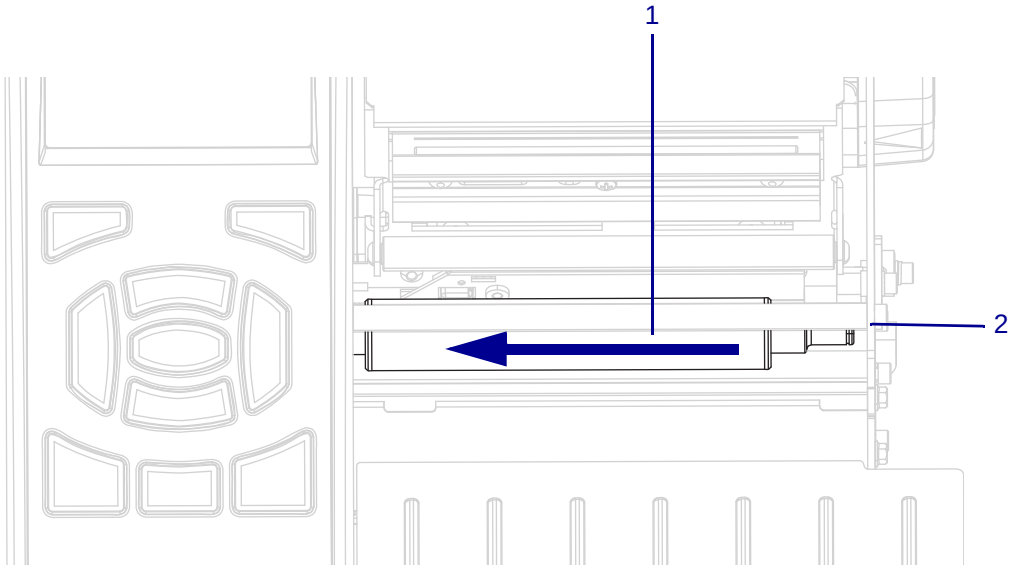


1	Bearing
2	Flat washer
3	C-clip
4	Upper platen roller shaft

8. Remove and discard the flat washer and bearing.

9. See Figure 129. Slide the upper platen roller to the left until the shaft clears the side plate.

Figure 129 • Remove the Upper Platen Roller



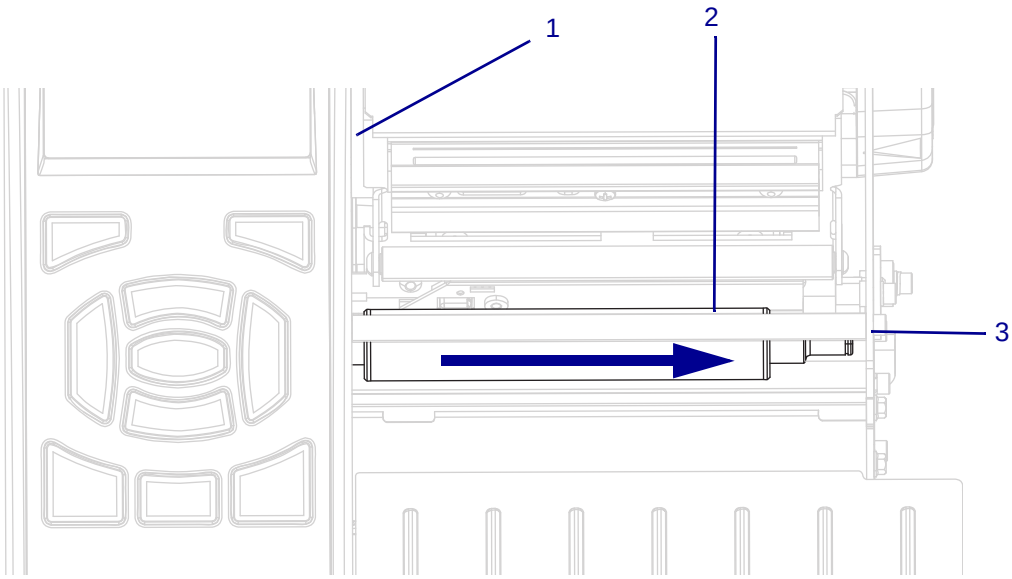
1	Upper platen roller
2	Side plate

10. Remove and discard the upper platen roller by lifting it out of the printer.

Install the New Upper Platen Roller

1. See Figure 130. Insert the long part of the new upper platen roller shaft through the hole in the main frame.

Figure 130 • Install the Upper Platen Roller

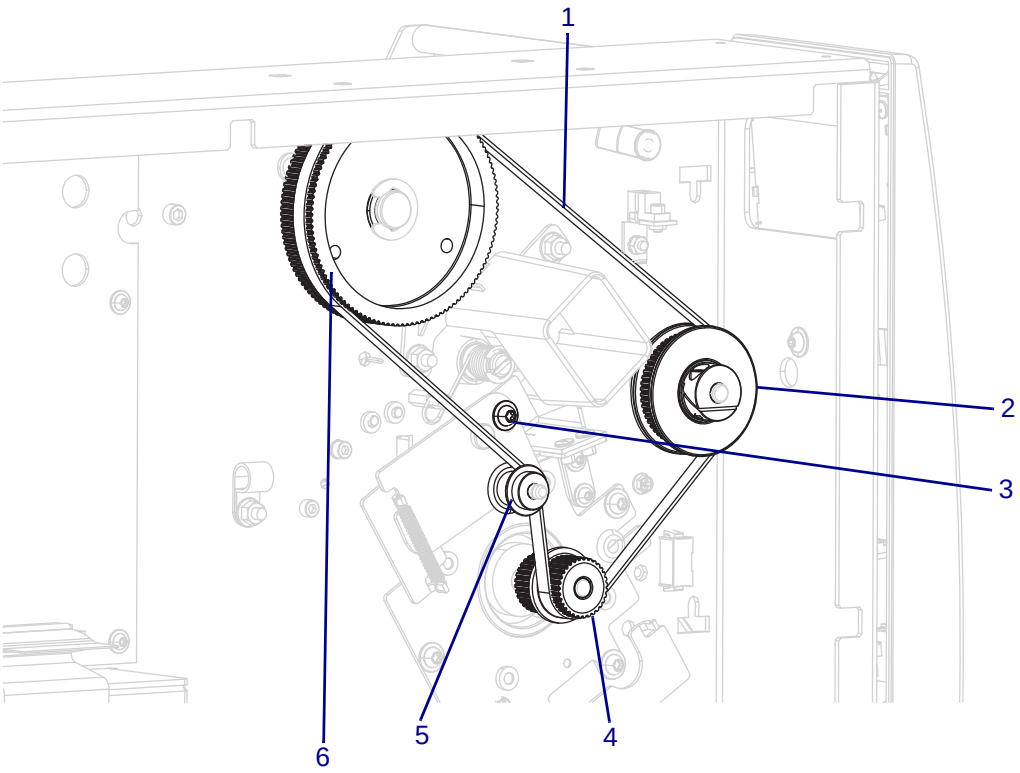


1	Mainframe
2	Upper platen roller
3	Side plate

2. Set the upper platen roller in the lower print mechanism, and then slide it to the right through the mounting hole in the side plate.
3. See Figure 128 on page 226. Slide the new bearing onto the shaft with the flange facing out.
4. Insert the bearing into the side plate mounting hole.
5. Slide the new washer onto the shaft, and then install the C-clip.
6. See Figure 127 on page 225. Go to the electronics side and slide the new bearing onto the upper platen roller shaft and into the main frame mounting hole.
7. Slide the spacer onto the shaft.
8. Reinstall the upper platen roller pulley, and then tighten the mounting screw.

9. See Figure 131. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and then around the ribbon take-up pulley.

Figure 131 • Reinstall the Main Drive Belt



1	Main drive belt
2	Upper platen roller pulley
3	Main drive belt tensioner locking screw
4	Outer stepper motor pulley
5	Main drive belt tensioner idler pulley
6	Ribbon take-up spindle pulley

10. Ensure that the belt is on the inside part of the idler pulley (as shown).

11. Loosen the main drive belt tensioner locking screw.

12. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

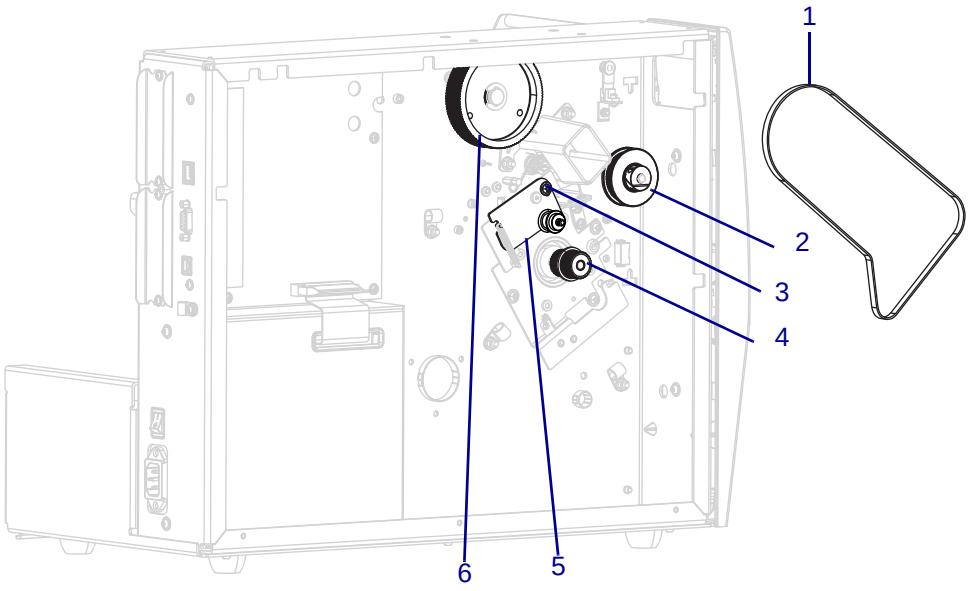
13. Go to *Reinstall the Electronics Cover* *on page 236*.

Replace the Rewind Platen Roller

Remove the Old Rewind Platen Roller

1. See Figure 132. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

Figure 132 • Remove the Main Drive Belt

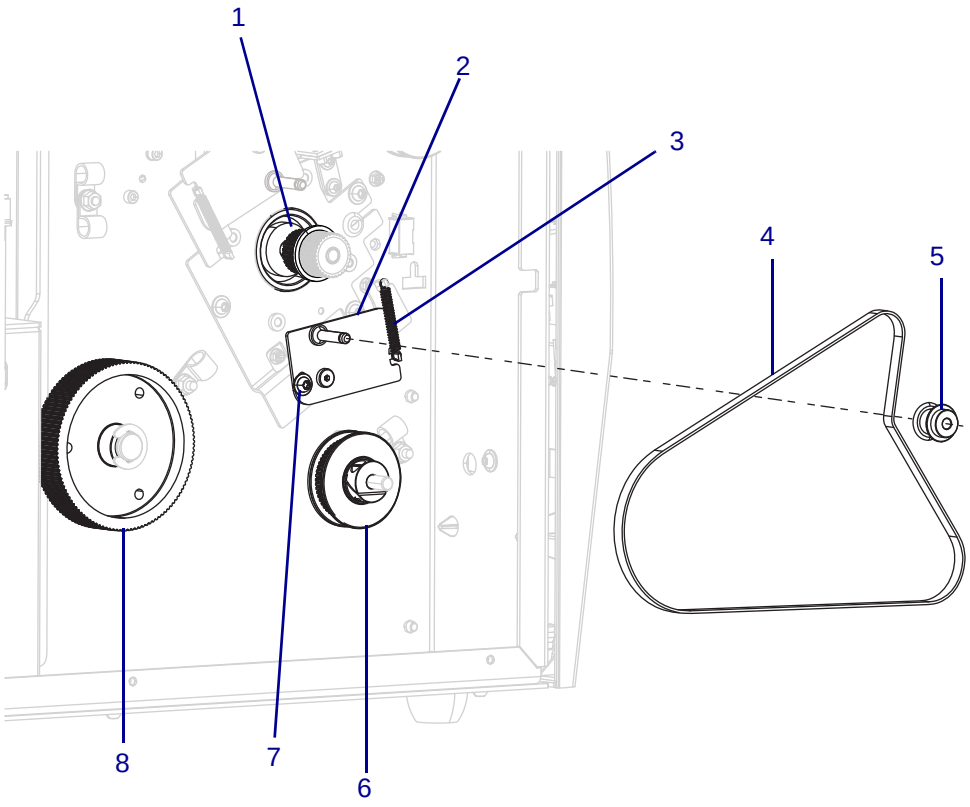


1	Main drive belt
2	Upper platen roller pulley
3	Tensioner locking screw
4	Drive motor pulley
5	Main drive belt tensioner plate
6	Ribbon take-up pulley

2. Move the main drive belt tensioner to extend the spring, and then tighten the locking screw.
3. Slide the main drive belt out of the printer.

4. See Figure 133. Rotate the rewind tensioner to extend the spring, and then tighten the locking screw.

Figure 133 • Remove the Rewind Drive Belt

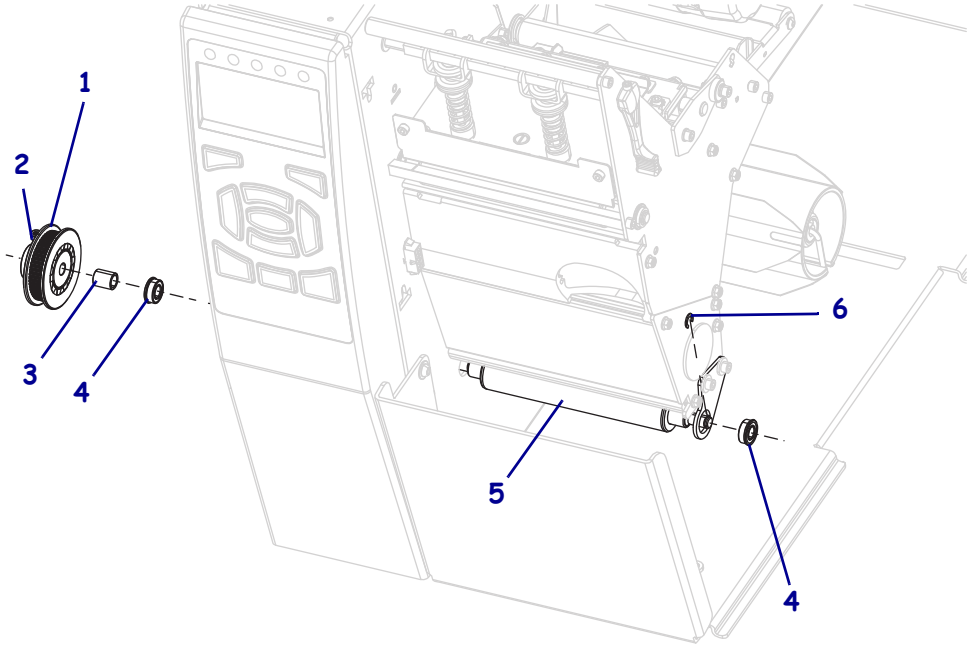


1	Rewind drive motor inside pulley
2	Rewind tensioner plate
3	Spring
4	Rewind drive belt
5	Idler pulley
6	Rewind platen pulley
7	Rewind tensioner locking screw
8	Rewind spindle pulley

5. Remove the rewind drive belt from the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.

6. See Figure 134. Loosen the rewind platen pulley clamping screw, and then remove the rewind platen pulley from the rewind platen roller shaft.

Figure 134 • Rewind Platen Roller Removal and Installation



1	Rewind platen roller pulley
2	Rewind platen roller pulley clamping screw
3	Rewind platen roller spacer
4	Flanged bearing
5	Rewind platen roller
6	C-clip

7. Remove the rewind platen roller spacer.
8. Remove and discard the old bearing from the printer main frame.
9. **Caution •** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   Remove the C-clip from the end of the old platen roller.
10. Remove and discard the other old bearing.

    Note • Do not re-use the old bearings.
11. Remove the old rewind platen roller from the printer.

Install the New Rewind Platen Roller

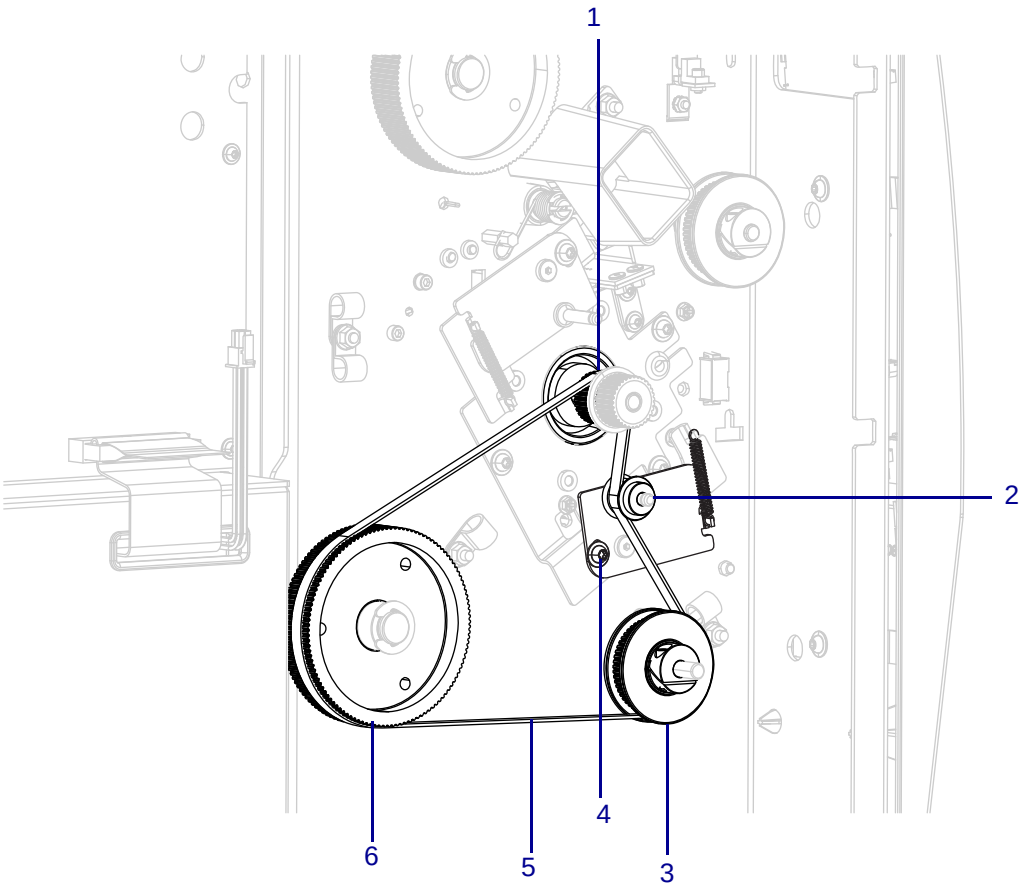
1. See Figure 134 on page 232. Install a new flanged bearing on the roller adjust plate with the flange facing out.
2. Install a new flanged bearing into the main frame from the media side.
3. Insert the long end of the shaft new platen roller through the bearing in the main frame.

Note • For rewind platen roller replacement (Peel/Rewind Option only), the washer is not used and should be discarded.

4. Slide the C-clip into the groove on the right end of the platen roller shaft.
5. On the electronics side, slide the spacer onto the shaft.
6. Slide the rewind platen pulley onto the platen roller and align the two set screws with the flat surfaces of the platen roller.
7. Leave approximately 0.5 mm (0.020 in.) gap between the C-clip and roller adjust plate on the media side of the platen roller shaft.

8. See Figure 135. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.

Figure 135 • Install the Rewind Drive Belt



1	Drive motor inside pulley
2	Rewind idler pulley
3	Rewind platen roller pulley
4	Rewind belt tensioner locking screw
5	Rewind drive belt
6	Rewind spindle pulley

9. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt (as shown).
10. Loosen the locking screw on the rewind belt tensioner.
11. Rotate the belt several times to seat the belt on all the pulleys.
12. Tighten the locking screw on the rewind belt tensioner.

Adjust the Rewind Platen Roller

1. See Figure 134 on page 232. Loosen the two screws securing the roller adjust plate to the print mechanism.
2. Move the roller adjust plate in the appropriate direction to compensate for the tracking and tighten the screws.

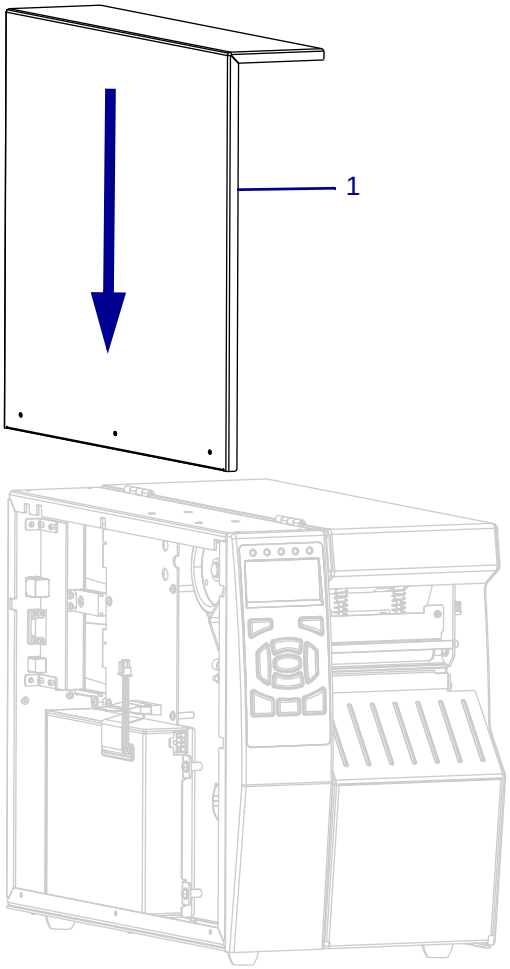
Note • Moving the roller adjust plate toward the front of the printer moves the liner material away from the roller adjust plate. Moving the roller adjust plate toward the rear of the printer moves the liner material toward the roller adjust plate.

3. Repeat step 1 and step 2 until the required results are achieved.

Reinstall the Electronics Cover

1. See Figure 136. Slide the electronics cover onto the printer.

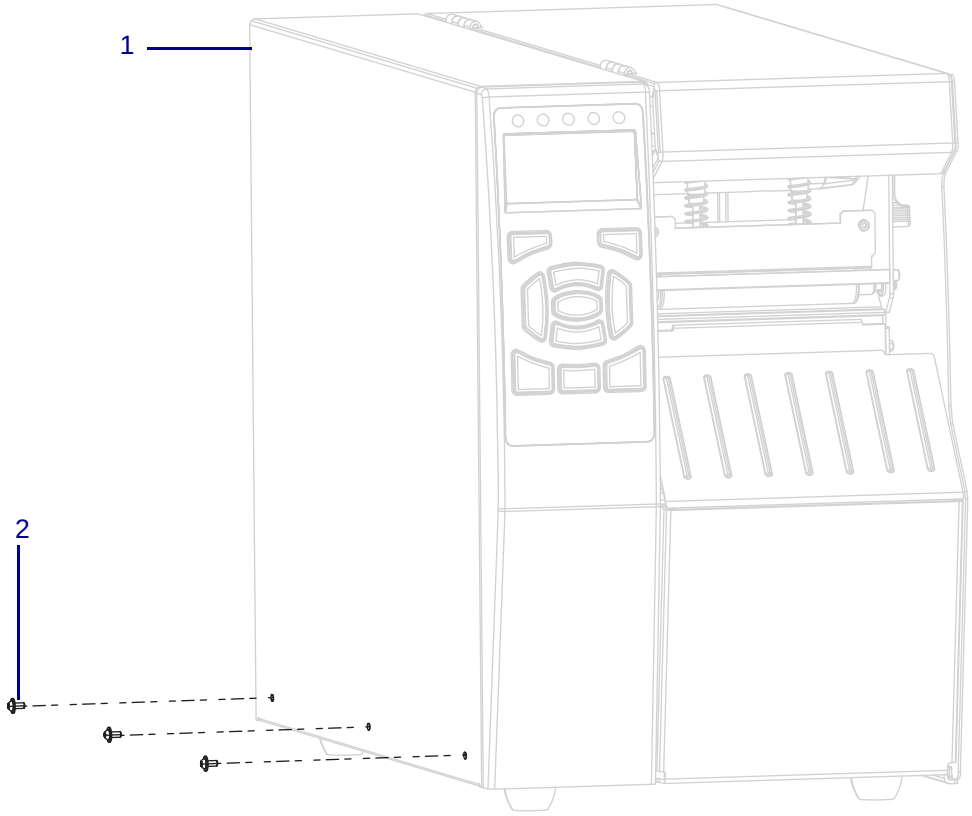
Figure 136 • Install the Electronics Cover



1	Electronics cover

2. See Figure 137. Install the three mounting screws.

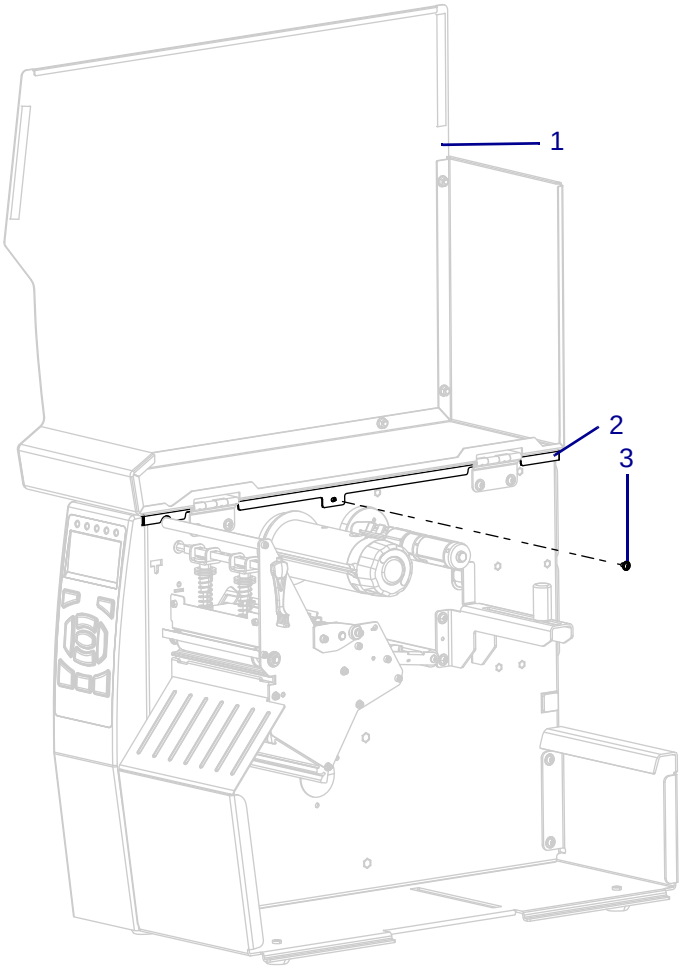
Figure 137 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 138. Open the media door and install the media side electronics cover mounting screw.

Figure 138 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Media Hanger Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Media Hanger Maintenance Kit for the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 139 • Kit Contents

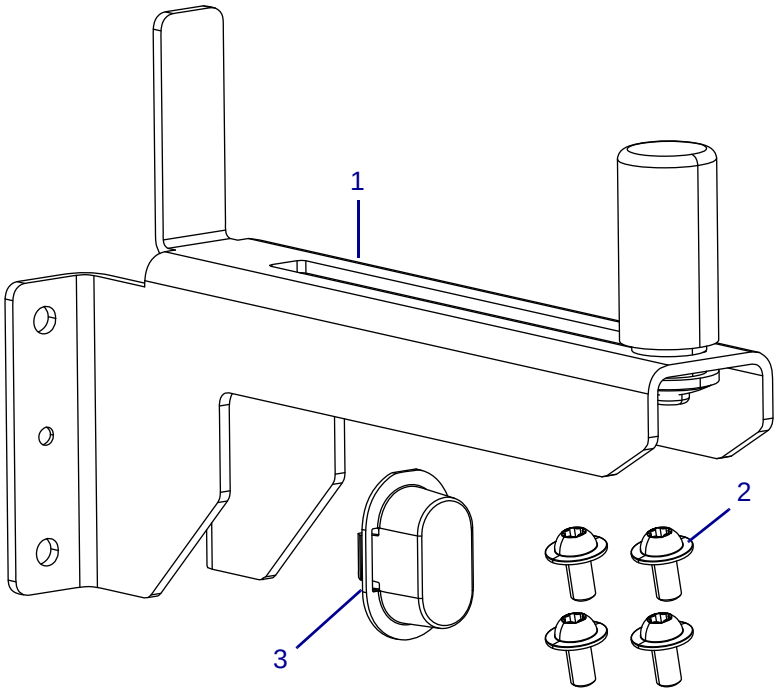


Table 21 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-029**	ZT510 Media Hanger Maintenance Kit
	1	1	*N/A*	Media Hanger
	2	4	*N/A*	Torx-Head Screw, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**
	3	1	*N/A*	Spacer

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set

Remove the Old Media Hanger

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

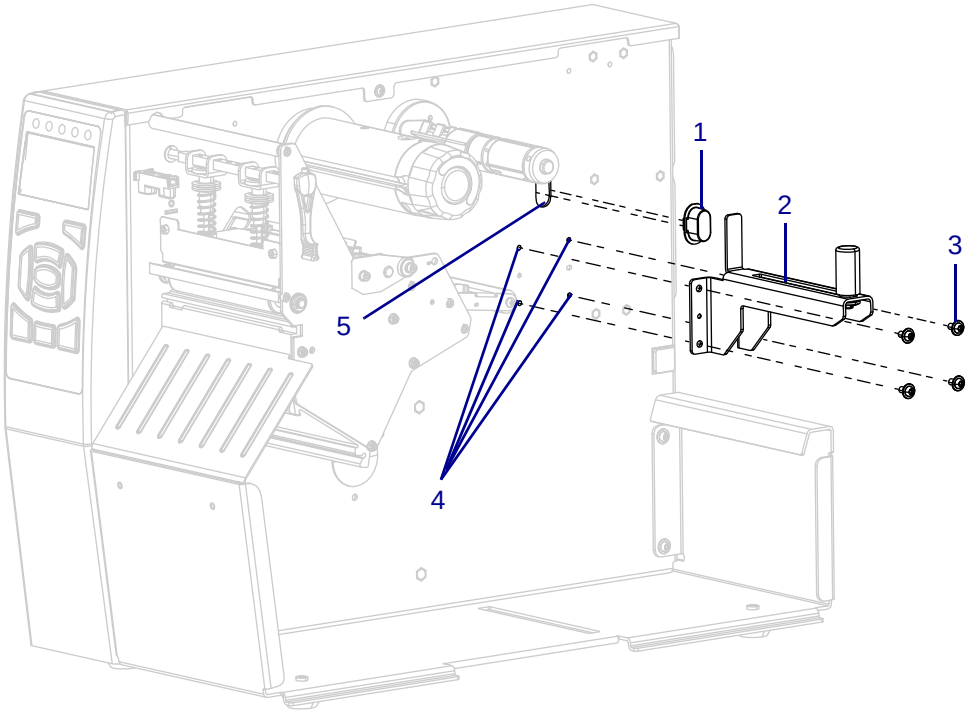
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2. **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.

   Remove the media and ribbon.

3. See Figure 140. Remove and discard the four screws securing the old media hanger to the printer.

Figure 140 • Remove the Old Media Hanger



1	Media hanger spacer
2	Media hanger
3	Mounting screws (4)
4	Media spacer mounting hole

4. Squeeze the sides of the media hanger spacer together, and then remove and discard it.

Install the New Media Hanger

1. See Figure 140 on page 241. Squeeze the sides of the new media hanger spacer together, and then insert it into the media spacer mounting hole.
2. Ensure that the media hanger spacer is seated tightly in the mounting hole.
3. Align the new media hanger with the four mounting holes.
4. Install the four mounting screws.
5. **Caution** • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media and ribbon.
6. Reconnect the AC power cord and all data cables.
7. Turn on (**I**) the printer.

The installation is complete.

Dancer Assembly Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Dancer Assembly Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 141 • Kit Contents

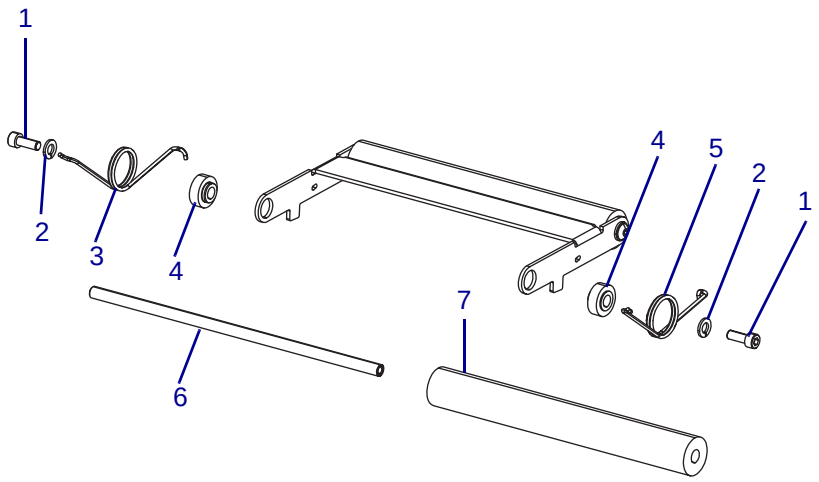


Table 22 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**41691M**	ZT510 Dancer Assembly Maintenance Kit
	1	2	**HW30392-006**	Screw, 6-32 × 0.37 (sold in quantities of 25)
	2	2	**HW06268**	Lock Washer, #6 (sold in quantities of 25)
	3	1	*N/A*	Inboard Torsion Spring
	4	2	*N/A*	Pivot Bearing
	5	1	*N/A*	Outboard Torsion Spring
	6	1	*N/A*	Shaft
	7	1	*N/A*	Roller

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ SAE Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Safety Glasses

Remove the Electronics Cover

Note • Retain all parts removed during disassembly, unless otherwise directed.

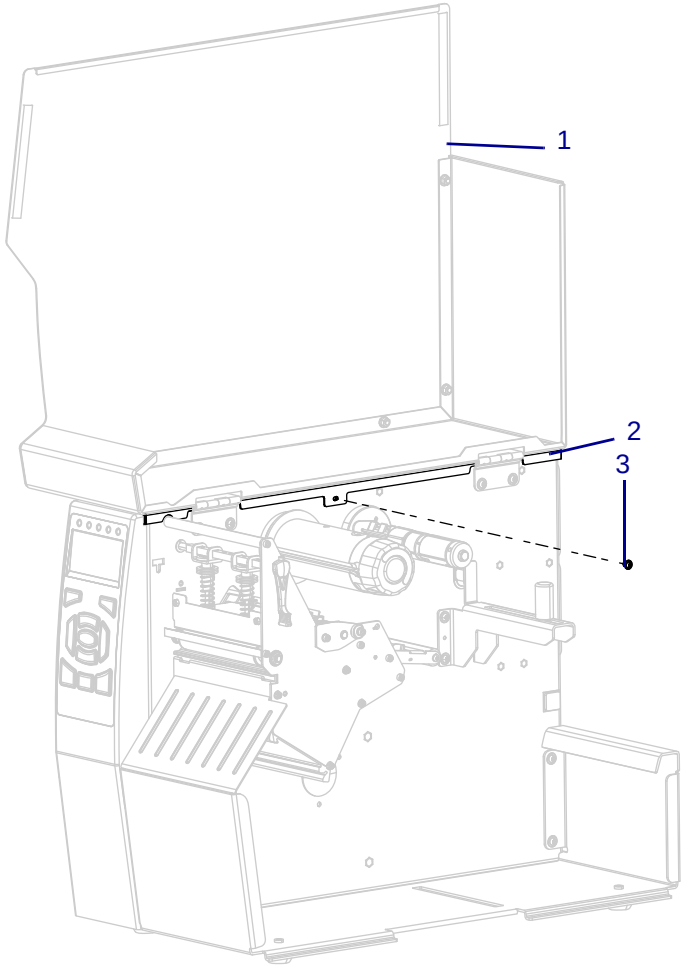
1. Open the media cover and remove the media and ribbon.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

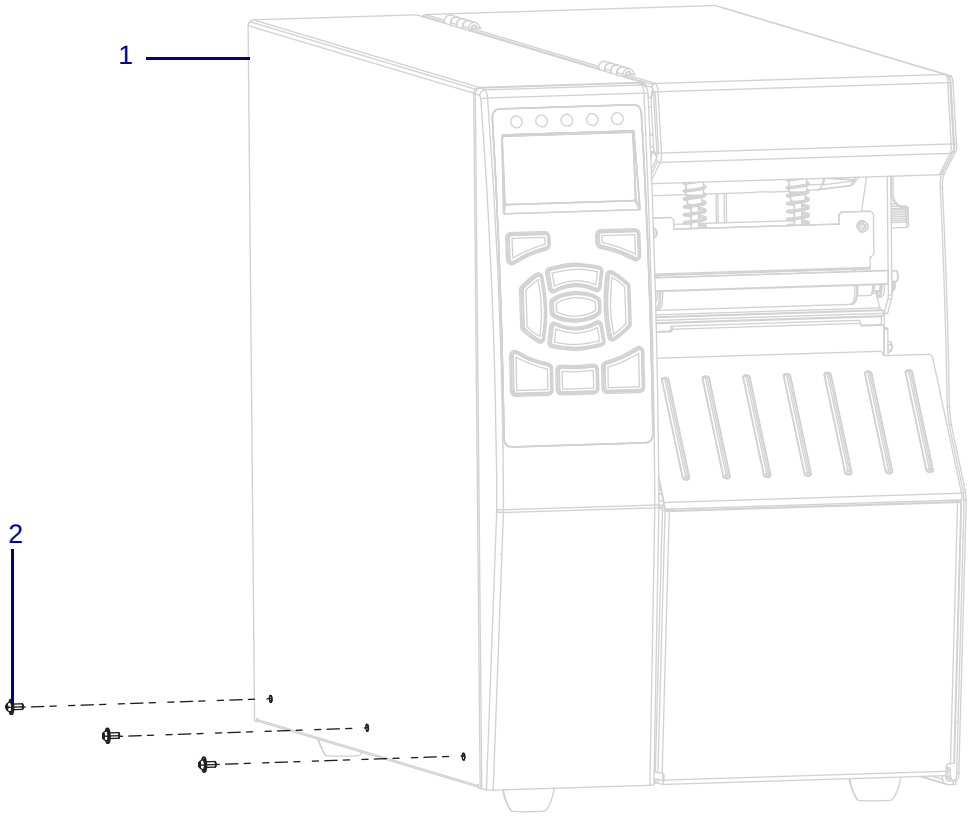
Figure 142 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.
5. See Figure 143. Remove the three mounting screws securing the electronics cover to the printer.

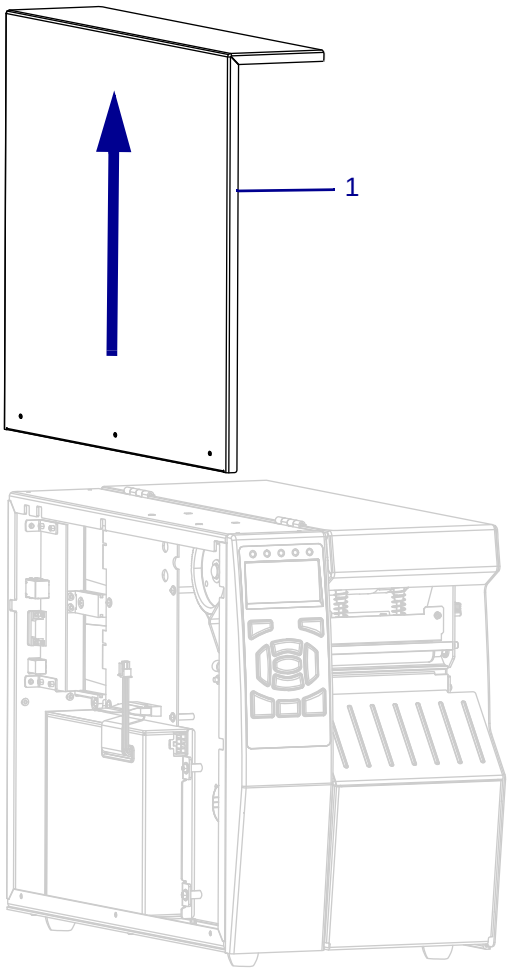
Figure 143 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 144. Lift the electronics cover off of the printer.

Figure 144 • Remove the Electronics Cover



1	Electronics cover

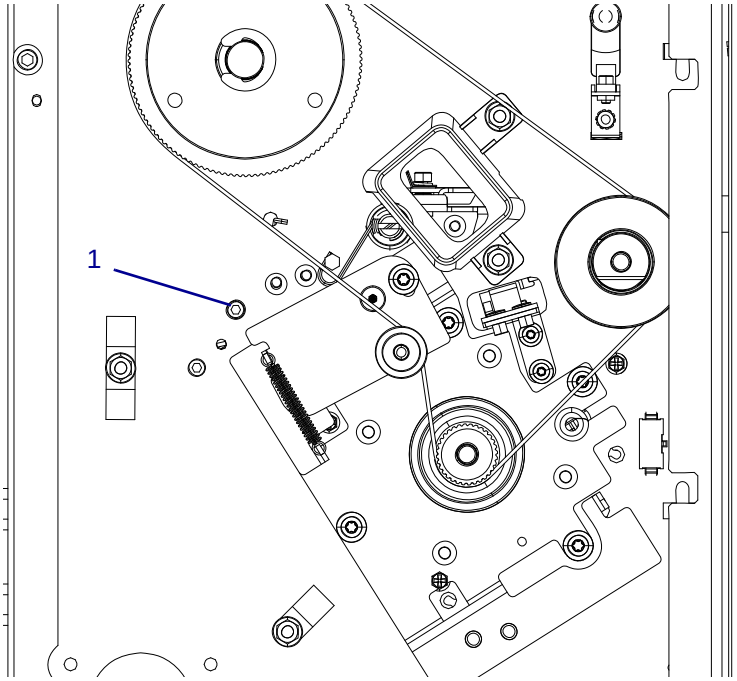
Remove the Old Dancer Assembly

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

   Connect yourself to an antistatic device.

2. See Figure 145. Locate the mounting screw on the electronics side between the two cable clamps.

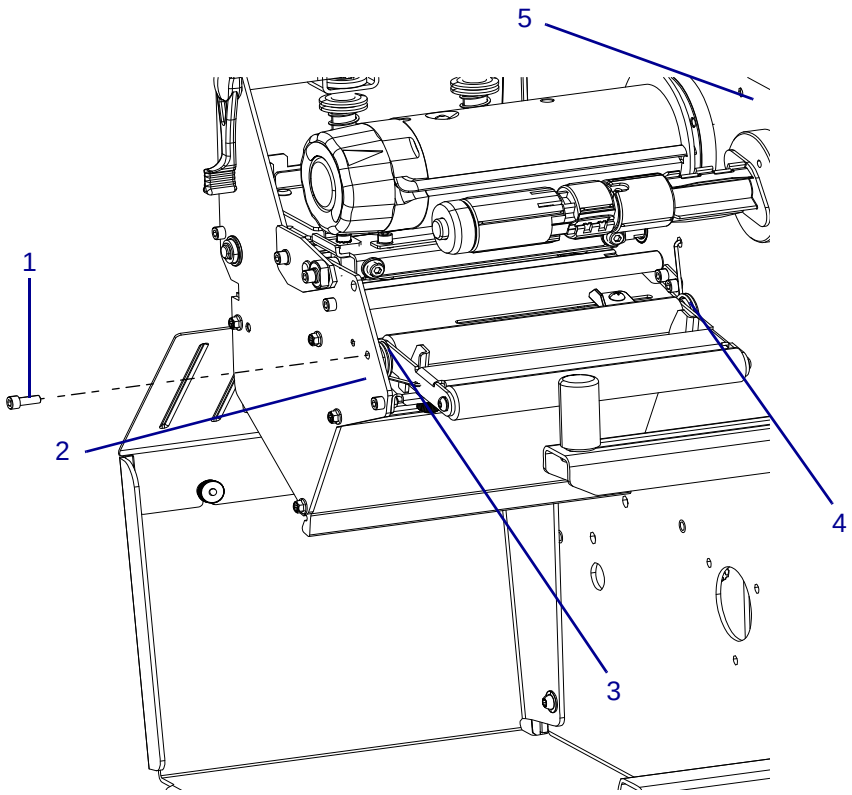
Figure 145 • Remove the Mounting Screw



1	Mounting screw

Caution • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

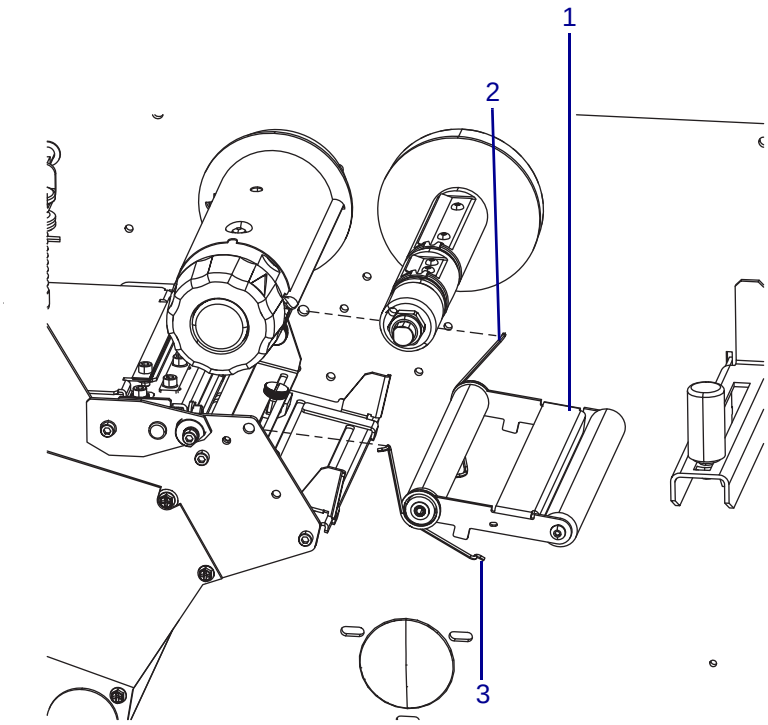
Figure 146 • Remove the Media Side Dancer Mounting Screw



1	Mounting screw
2	Side plate
3	Outer torsion spring
4	Inner torsion spring
5	Main frame

3. See Figure 147. Slip the outer torsion springs through the hole in the side plate.
4. Slip the inner torsion spring out of the main frame.
5. Slide the dancer assembly out of the printer.

Figure 147 • Remove the Dancer Assembly

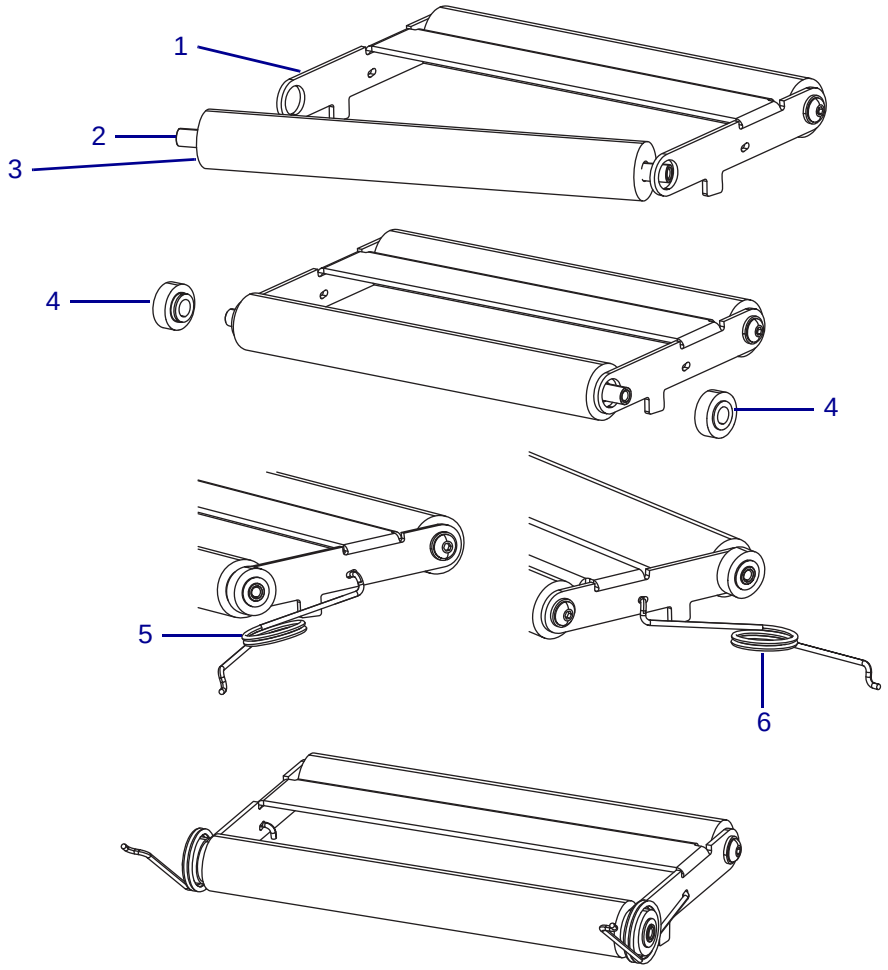


1	Dancer assembly
2	Inner torsion spring
3	Outer torsion spring

Install the New Dancer Assembly

1. Remove the dancer assembly from the kit.
2. See Figure 148. Prepare the dancer assembly for installation.

Figure 148 • Prepare the Dancer Assembly



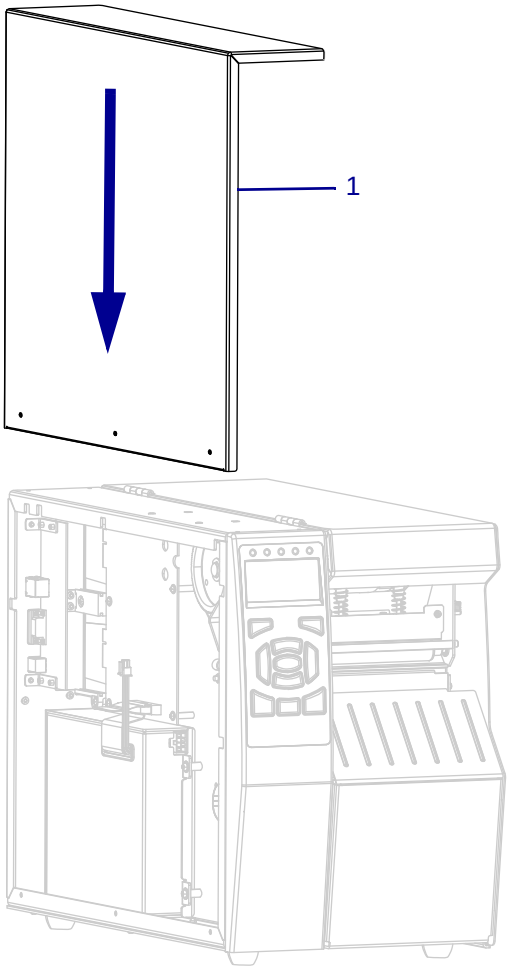
1	Dancer housing
2	Roller shaft
3	Roller
4	Bearings (2)
5	Outer torsion spring
6	Inner torsion spring

3. Ensure that all components of the dancer assembly are in place.
4. See Figure 147 on page 250. Slide the dancer assembly into the printer.
5. Insert the inner torsion spring into the main frame hole, and then insert the outer torsion spring into the hole in the side plate.
6. See Figure 145 on page 248. Install the new screw and lock washer through the side plate mounting hole, into the dancer assembly, and then tighten the mounting screw.

Reinstall the Electronics Cover

1. See Figure 149. Slide the electronics cover onto the printer.

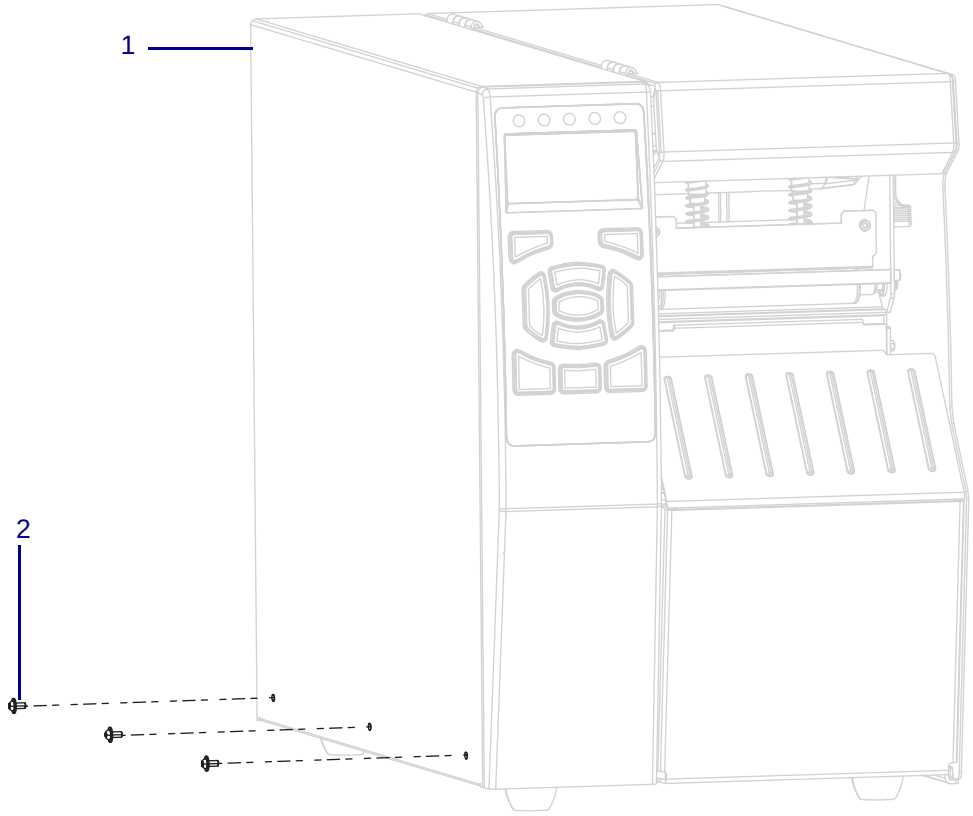
Figure 149 • Install the Electronics Cover



1	Electronics cover

2. See Figure 150. Install the three mounting screws.

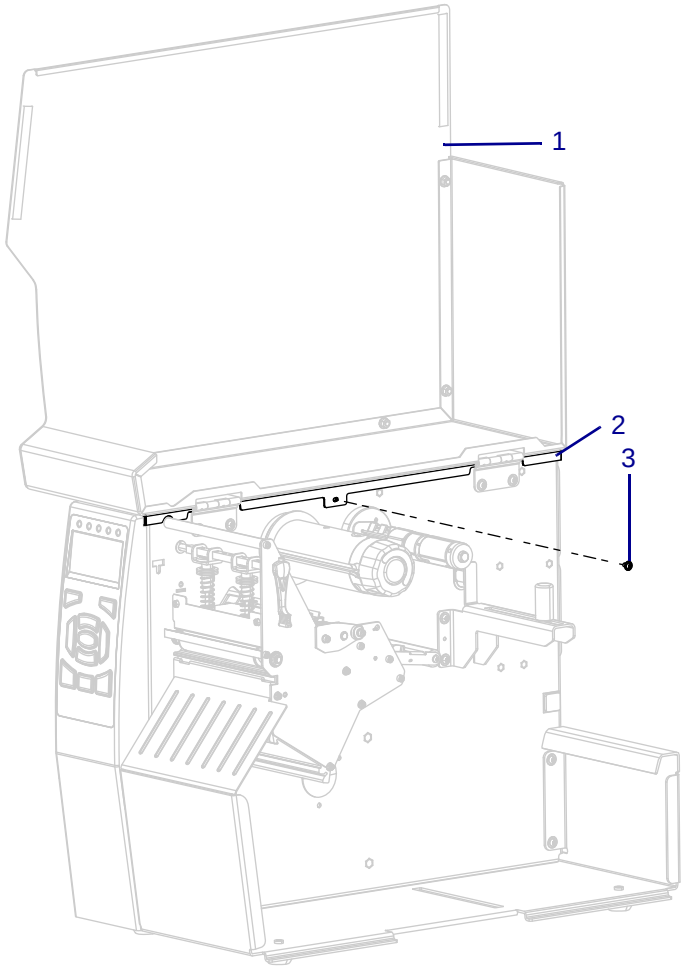
Figure 150 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 151. Open the media door and install the media side electronics cover mounting screw.

Figure 151 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Media Guide Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Media Guide Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 152 • Kit Contents

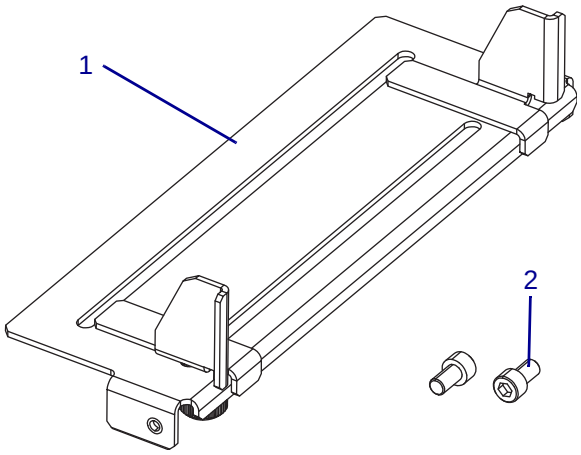


Table 23 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1006106**	Media Guide Maintenance Kit
	1	1	*N/A*	Media Guide
	2	2	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 50)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ SAE Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Electronics Cover

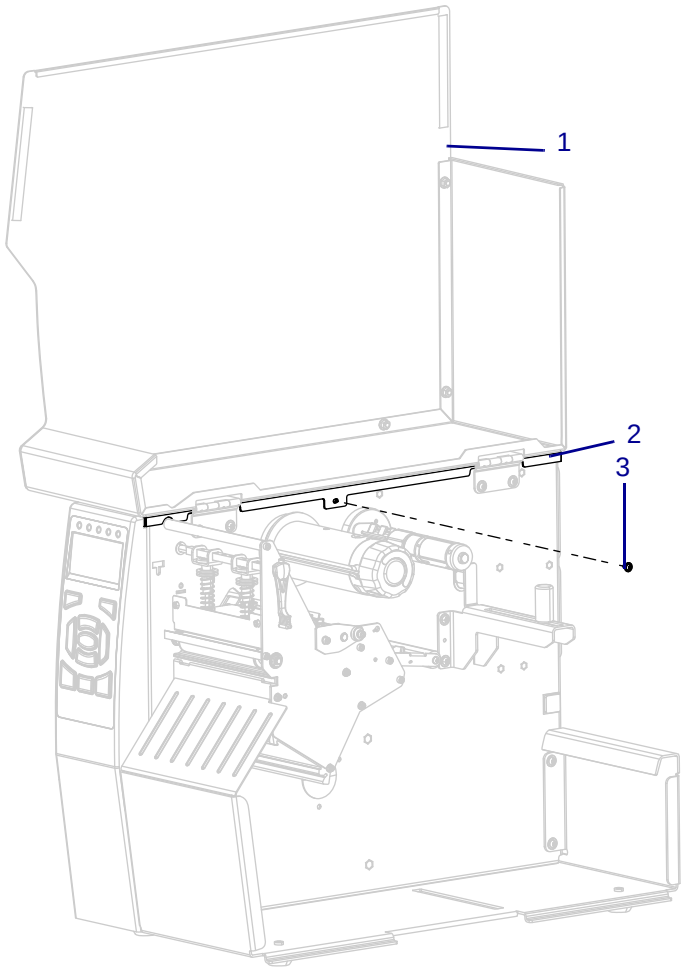
1. Remove the media and ribbon.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 153 • Locate the Electronics Cover Mounting Screw

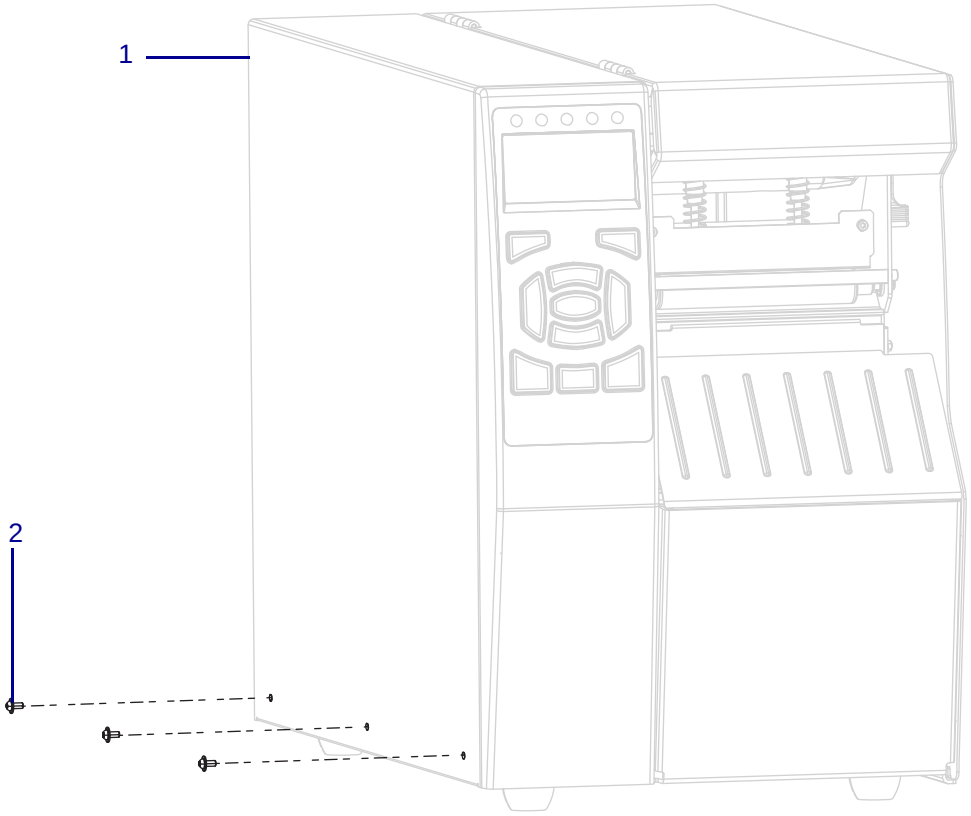


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 154. Remove the three mounting screws securing the electronics cover to the printer.

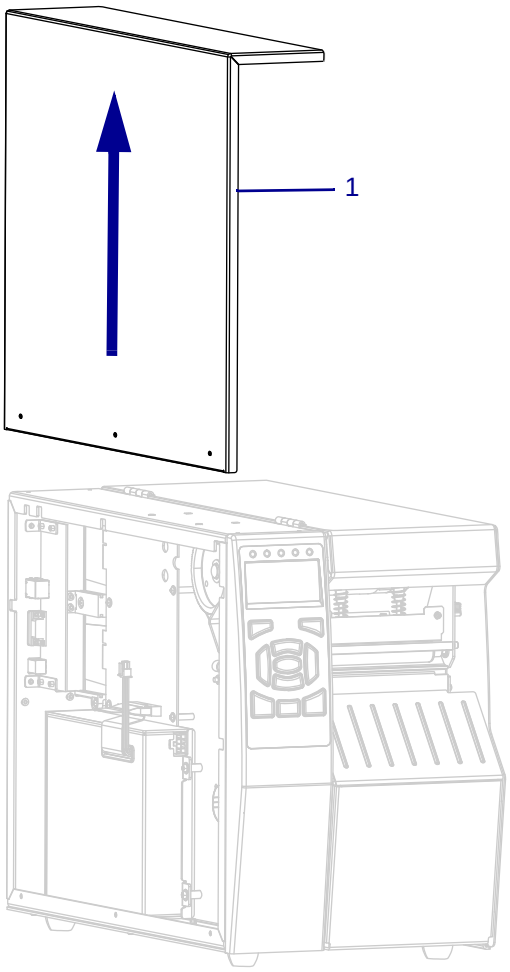
Figure 154 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 155. Lift the electronics cover off of the printer.

Figure 155 • Remove the Electronics Cover



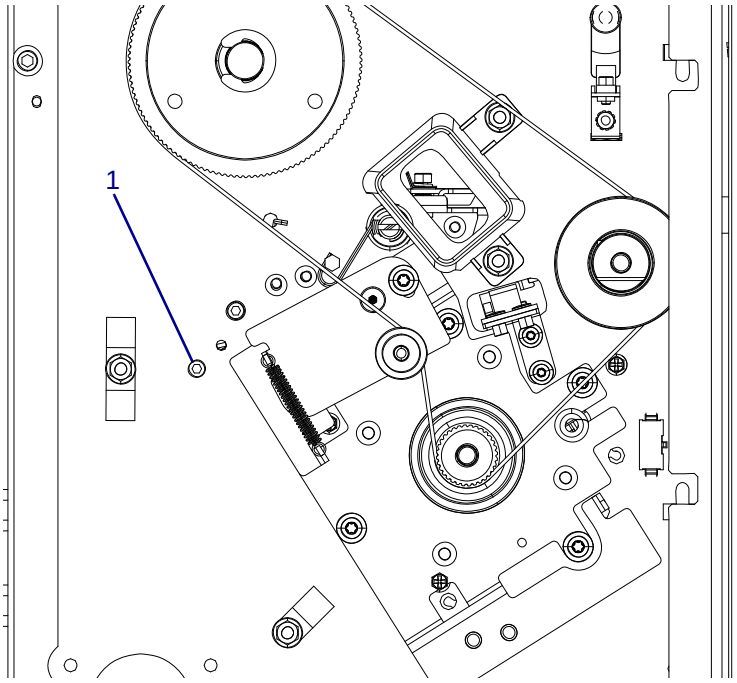
1	Electronics cover

Remove the Old Media Guide

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

   Connect yourself to an antistatic device.

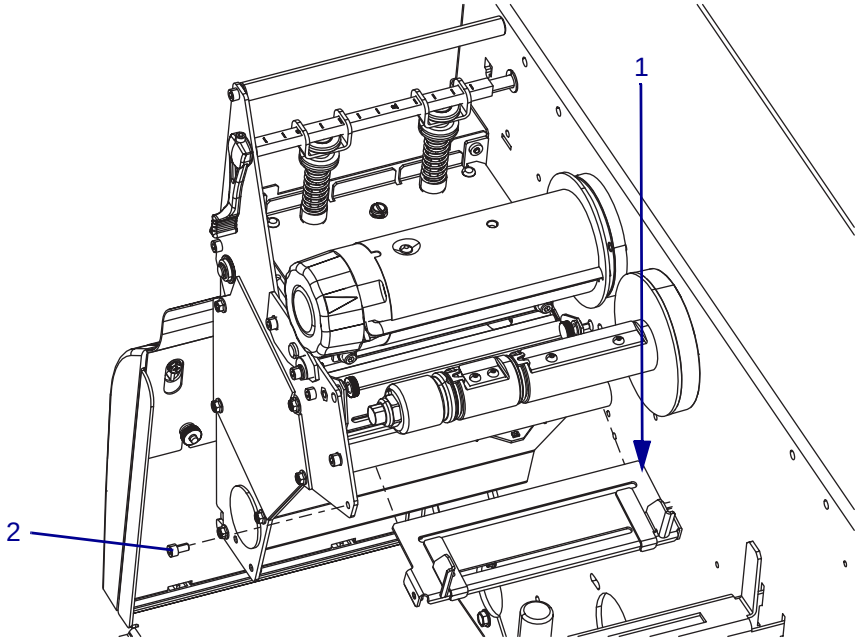
Figure 156 • Locate the Media Guide Mounting Screw (ZT510)



1	Mounting screw

2. See Figure 157. On the media side, remove the mounting screw.

Figure 157 • Remove the Media Guide (110Xi4 shown)



1	Media guide
2	Mounting screw

3. Slide the old media guide out of the printer.

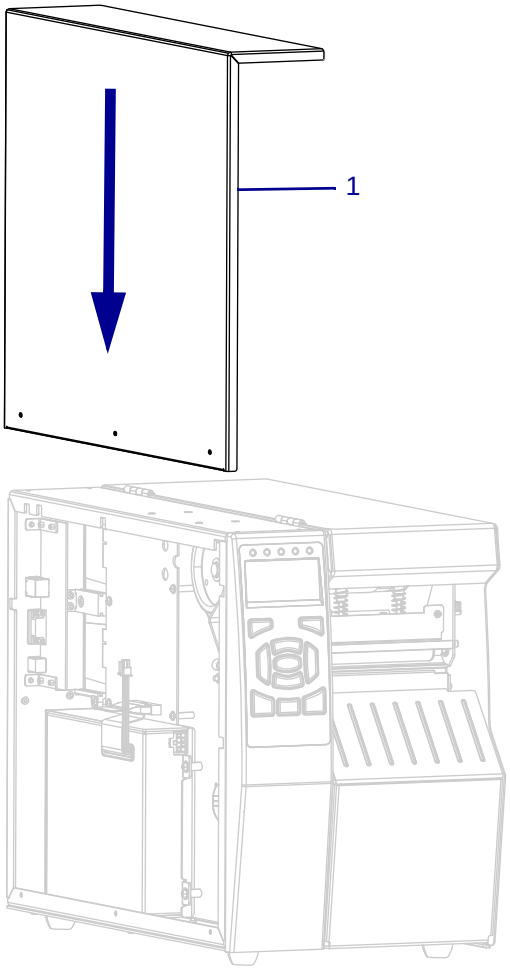
Install the New Media Guide

1. See Figure 157. Slide the new media guide into the printer.
2. Align the mounting holes, and then install the new mounting screw.
3. See Figure 156 on page 260. On the electronics side, install the mounting screw.

Reinstall the Electronics Cover

1. See Figure 158. Slide the electronics cover onto the printer.

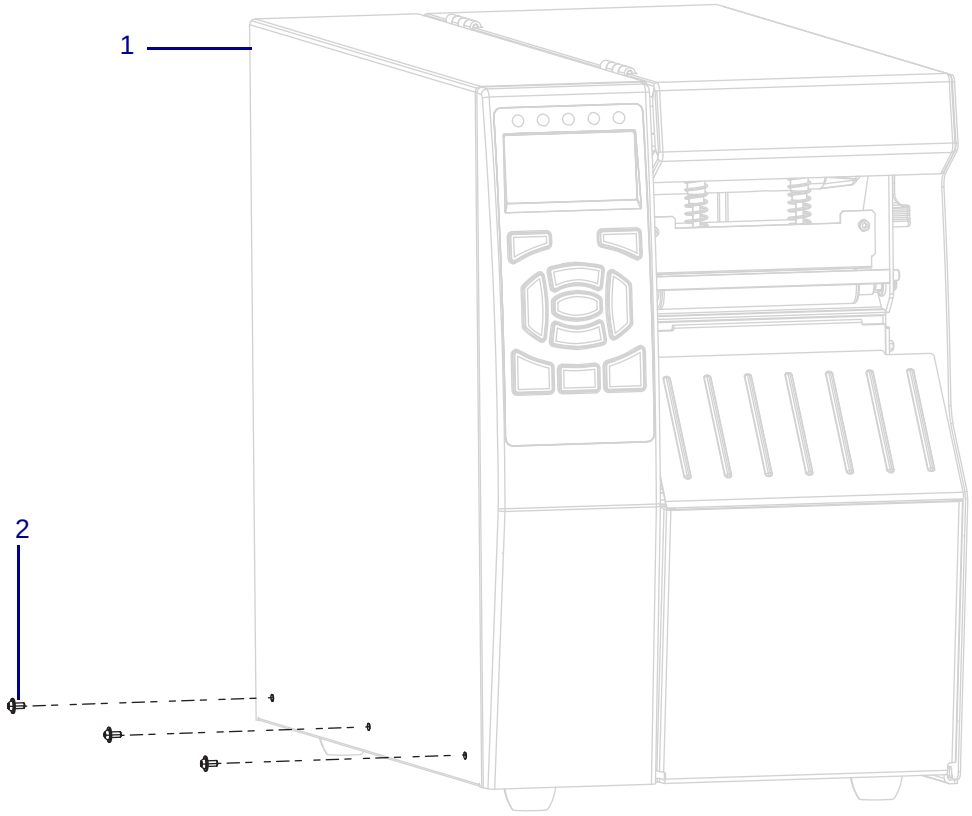
Figure 158 • Install the Electronics Cover



1	Electronics cover

2. See Figure 159. Install the three mounting screws.

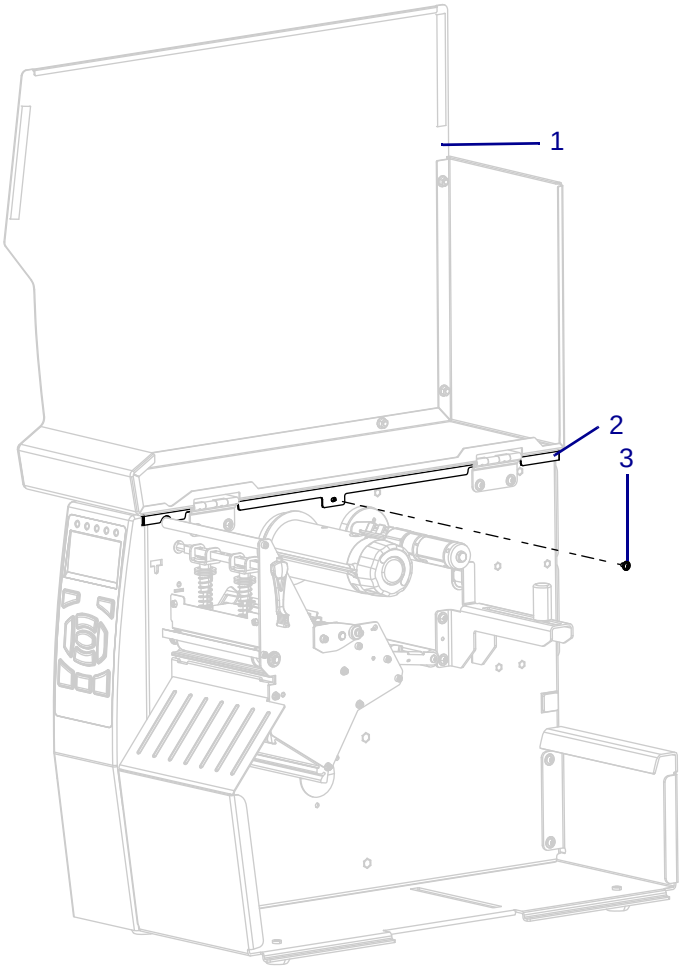
Figure 159 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 160. Open the media door and install the media side electronics cover mounting screw.

Figure 160 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Go to *Complete the Installation* *on page 265*.

Complete the Installation

1. Reconnect the AC power cord and all data cables.
2. Reinstall the media and ribbon.
3. Reinstall the AC power cord and all data cables.
4. Turn on (**I**) the printer.

The installation is complete.

Upper Media Guide Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Upper Media Guide Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 161 • Kit Contents

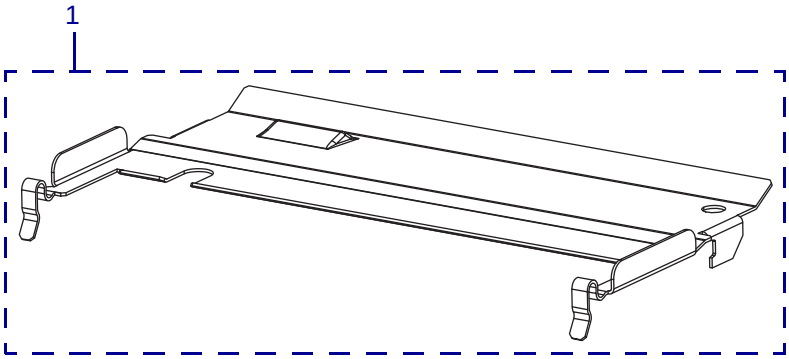


Table 24 • Kit Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1053360-015**	Media Guide Plate Kit

Bold = Part available for purchase.
Italic = Part not available for purchase, listed and shown for reference only.
N/A = Not available as a separate part for purchase (listed for identification purposes only).

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Flat-blade Screwdriver Set

Remove Upper Media Guide

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

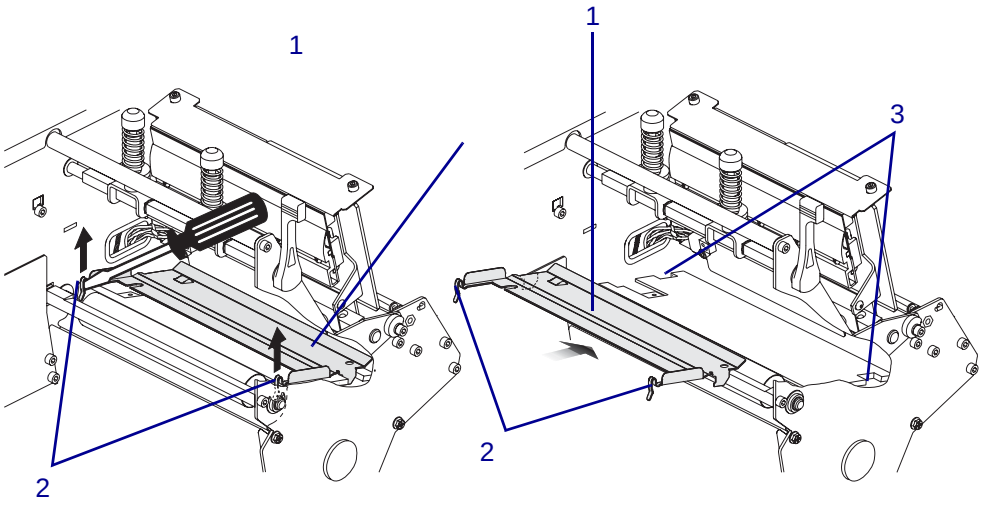
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2. Remove the media and ribbon.

3. **Caution** • Use care not to bend, twist, or otherwise deform the loops.

   See Figure 162. Insert a small flat-blade screwdriver or similar tool into the loop on the left side of the upper media guide plate. Lift the upper media guide up a short distance.

Figure 162 • Remove and Install the Media Guide Plate



1	Media guide plate
2	Loops
3	Slots

4. Lift the loop on the right side of the upper media guide plate.

5. Remove the upper media guide from the printer.

Install the Upper Media Guide

1. See Figure 162 on page 267. To install the new upper media guide plate, insert the two tabs on the bottom of the upper media guide plate into the two slots of the media pathway.
2. Slide the upper media guide toward you.
3. Press down on the loops to lock the upper media guide plate.
4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Side Plates Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Side Plates Maintenance Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Caution • A qualified service technician must perform this installation.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 163 • Kit Contents

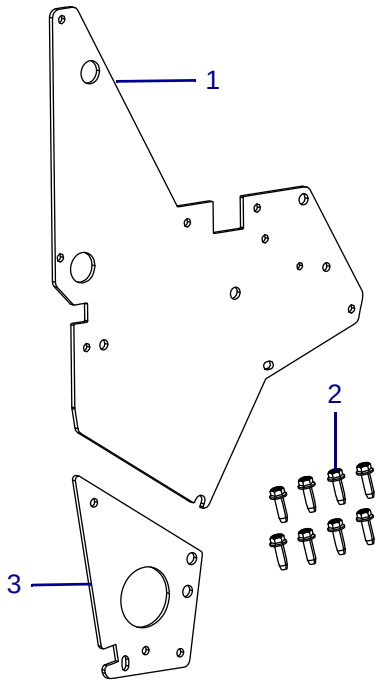


Table 25 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-023**	ZT510 Side Plate Maintenance Kit
	1	1	*N/A*	Upper Side Plate
	2	8	**HW44001**	Tread Forming Screw, M3.5 × 0.6
	3	1	*N/A*	Rewind Side Plate

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Metric Nut Driver Set
- ❑ Safety Glasses

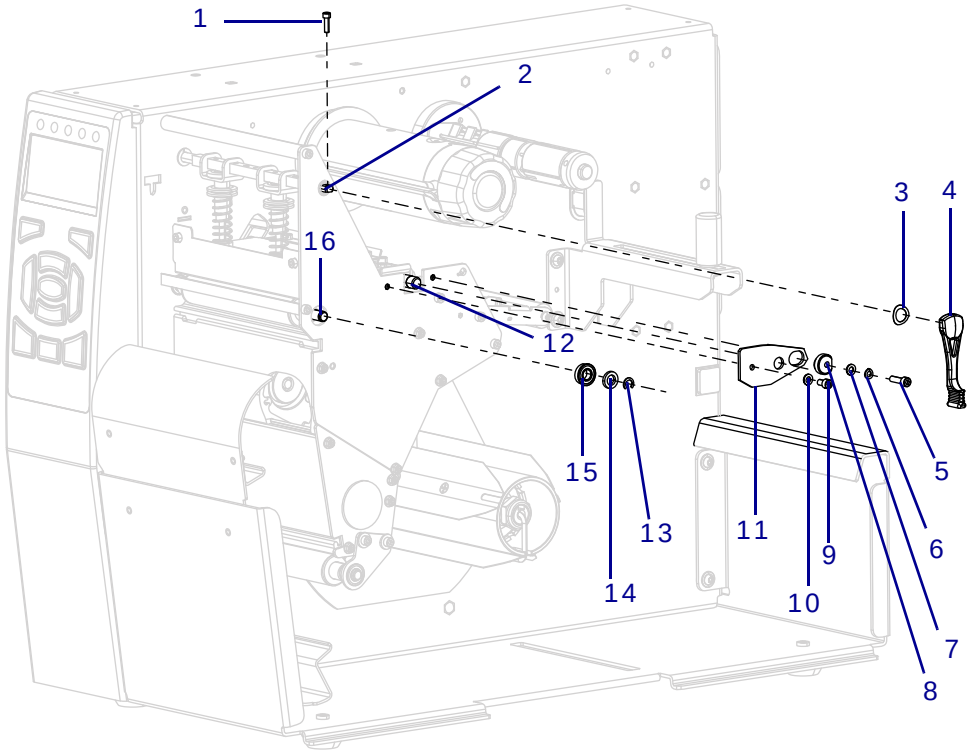
Remove the Old Upper Side Plate

Note • Retain all parts removed during disassembly, unless otherwise directed.

Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

1. Remove the media and ribbon.
2. See Figure 164. Remove the printhead open handle mounting screw (1).

Figure 164 • Locate All Parts to be Removed



1	Printhead open handle mounting screw	9	Wear plate mounting screw
2	Toggle assembly shaft	10	Wear plate flat washer
3	Wave washer	11	Print mechanism wear plate
4	Printhead open handle	12	Print mechanism shaft
5	Eccentric mounting screw	13	C-clip
6	Eccentric lock washer	**14**	Flat washer
7	Eccentric flat washer	**15**	Platen bearing
8	Eccentric	**16**	Upper platen roller shaft

3. Remove the printhead open handle (4) and wave washer (3) off of the toggle assembly shaft (2).

4. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

Remove the C-clip (13) from the upper platen roller shaft.

5. Remove the flat washer (14) and bearing (13) from the upper platen roller shaft (16).

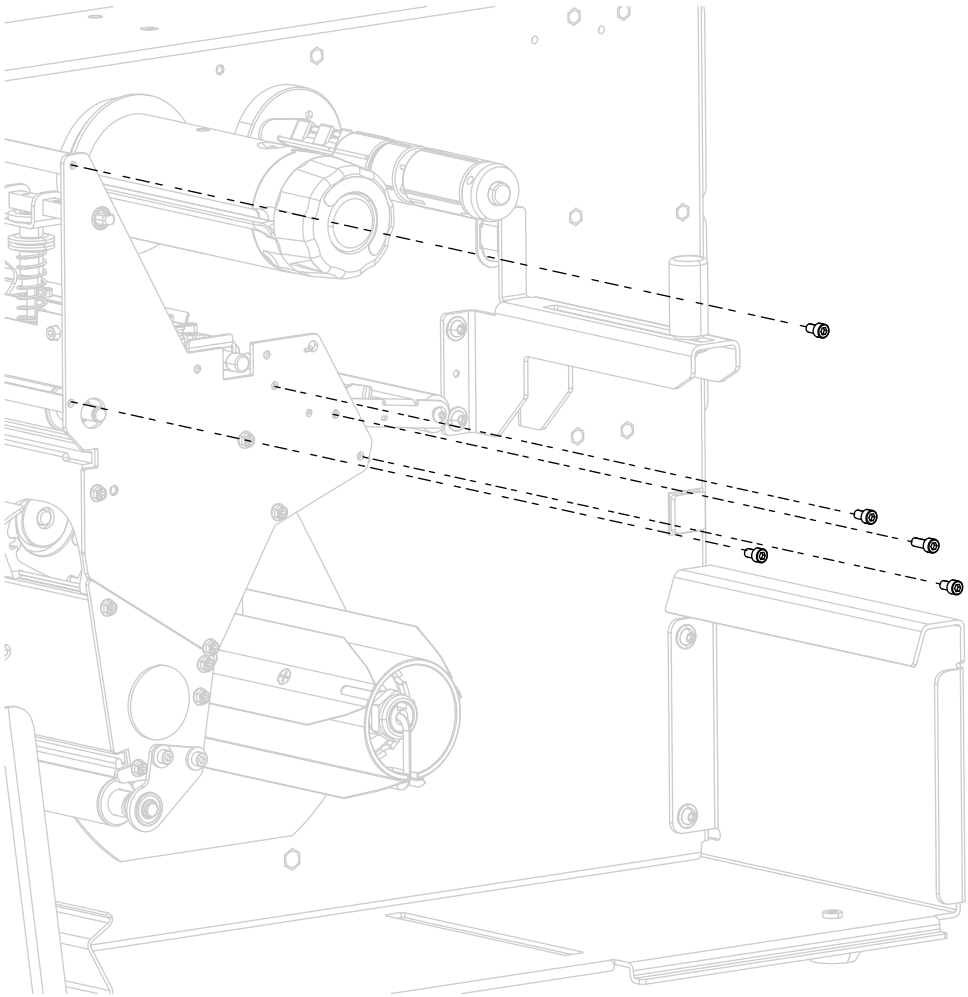
6. Remove and discard the wear plate eccentric mounting screw (5), lock washer (6), flat washer (7), and eccentric (8).

7. Remove and discard the wear plate mounting screw (9) and washer (10).

8. Remove the wear plate from the print mechanism shaft.

9. See Figure 165. Remove and retain the five hex-head (Allen-head) mounting screws.

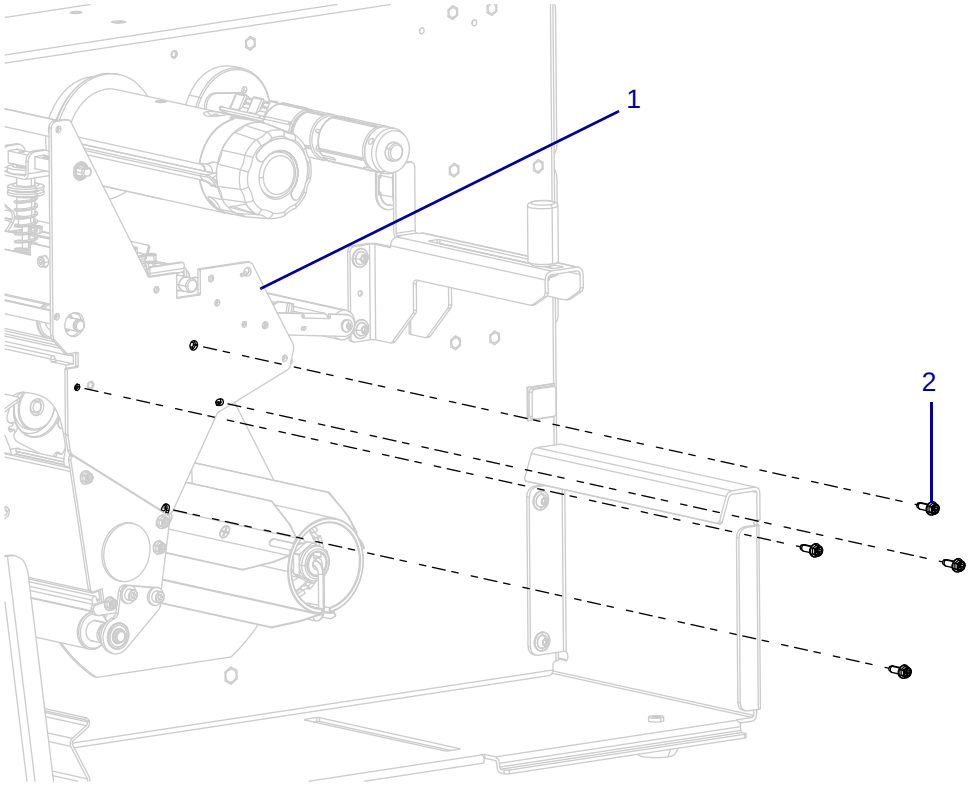
Figure 165 • Locate Hex-Head Mounting Screws



1	Hex-head (Allen-head) screws (5)

10. Remove and discard the four Phillips-head mounting screws.

Figure 166 • Locate the Phillips-Head Mounting Screws



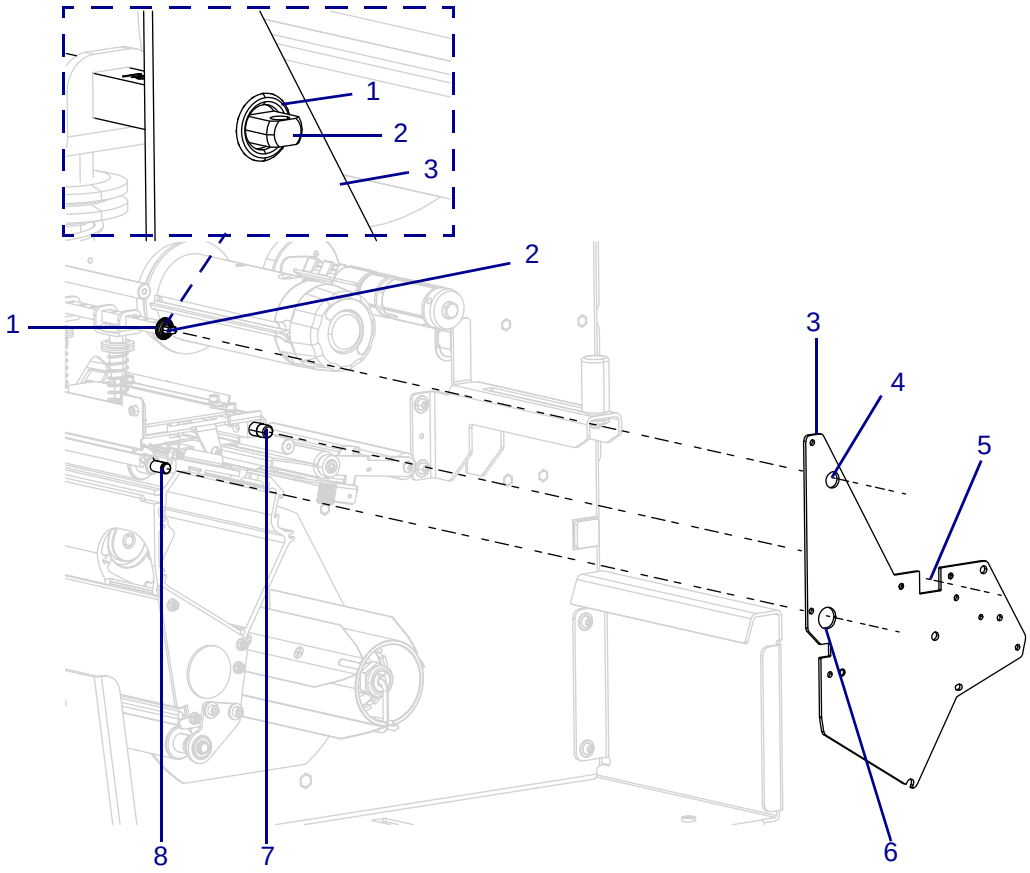
1	Upper side plate
2	Phillips-head screws (4)

11. Remove and discard the upper side plate.

Install the New Upper Side Plate

1. See Figure 167. Align the new upper side plate with the toggle assembly, platen roller, and print mechanism shafts.

Figure 167 • Align the Upper Side Plate



1	Bearing
2	Toggle assembly shaft
3	Upper side plate
4	Toggle assembly mounting hole
5	Print mechanism mounting slot
6	Platen roller mounting hole
7	Print mechanism shaft
8	Platen roller

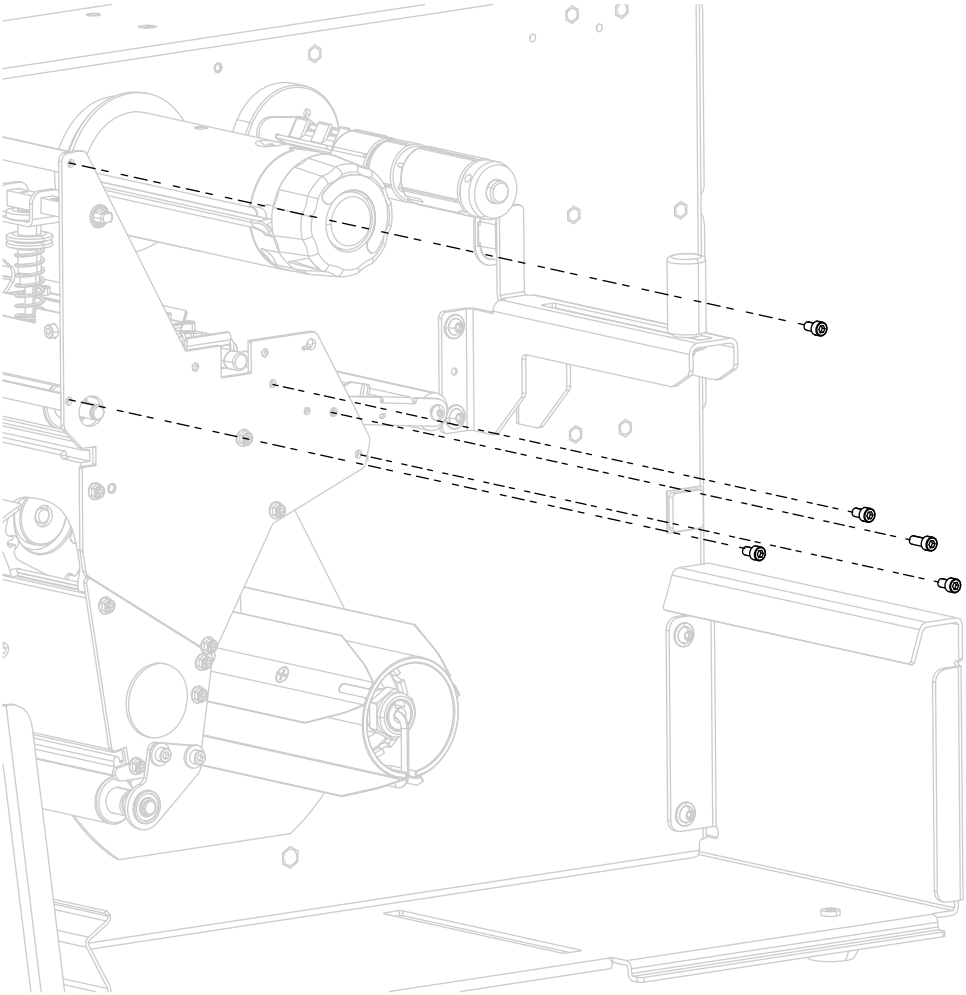
2. Slide the upper side plate onto the toggle assembly shaft and seat the bearing into the upper side plate mounting hole.

3. Ensure that the platen shaft and the print mechanism shafts are through their proper mounting holes.

4. See Figure 166 on page 273. Install four of the Phillips-head screws from the kit in the four mounting holes shown in the side plate.

5. See Figure 168. Reinstall the five hex-head (Allen-head) screws through the five holes shown.

Figure 168 • Locate the Mounting Holes



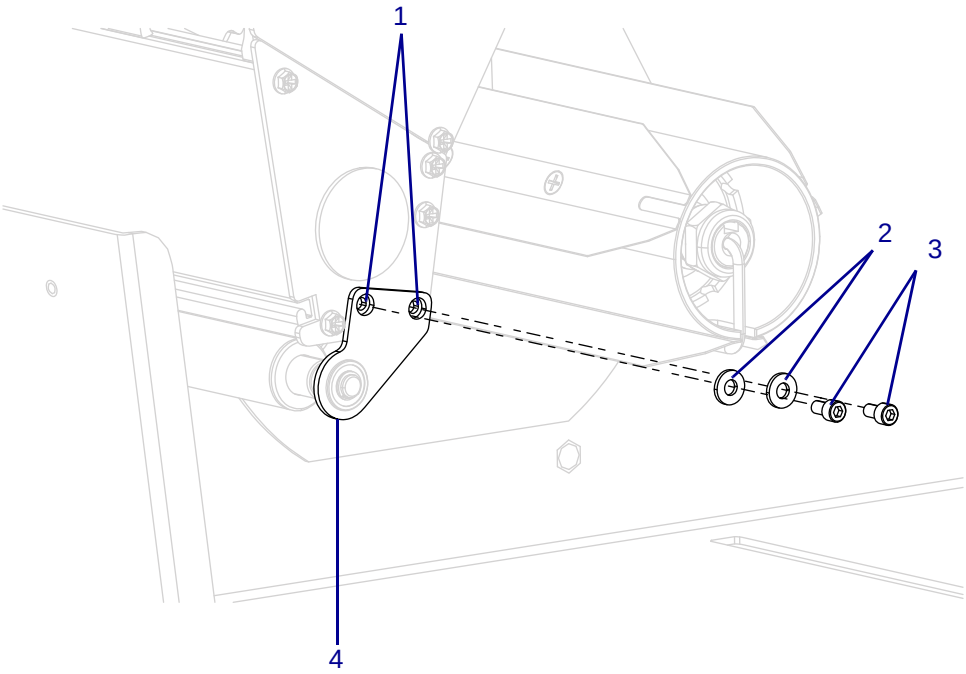
1	Hex-head (Allen-head) screws (5)

6. Reinstall the platen bearing, flat washer and C-clip on to the platen roller shaft.
7. Slide the new wear plate onto the print mechanism shaft.
8. Loosely install the new flat washer and wear plate mounting screw.
9. Loosely install the eccentric, flat washer, lock washer, and mounting screw.
10. Reinstall the wave washer and printhead open handle onto the toggle assembly shaft.
11. Go to *Adjust the Printhead Pressure and Toggle Position* on page 15.

Remove the Old Rewind Side Plate

1. See Figure 169. Remove the two rewind platen mounting bracket screws and washers from the printer.

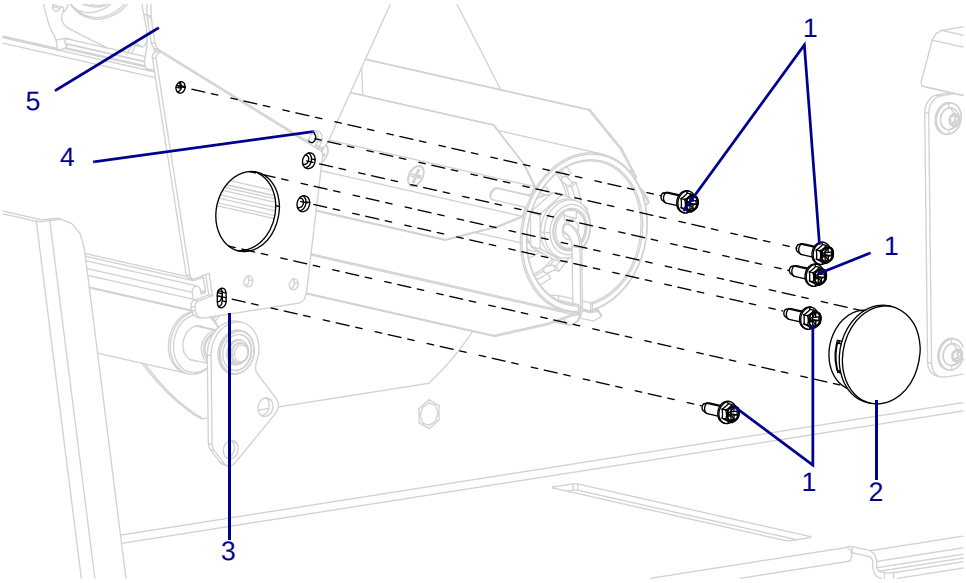
Figure 169 • Locate the Rewind Platen Bracket



1	Rewind platen bracket mounting holes (2)
2	Flat washers (2)
3	Mounting screws (2)
4	Rewind platen bracket

2. See Figure 170. Remove the hole plug, and then remove and discard the five Phillps-head screws shown below.

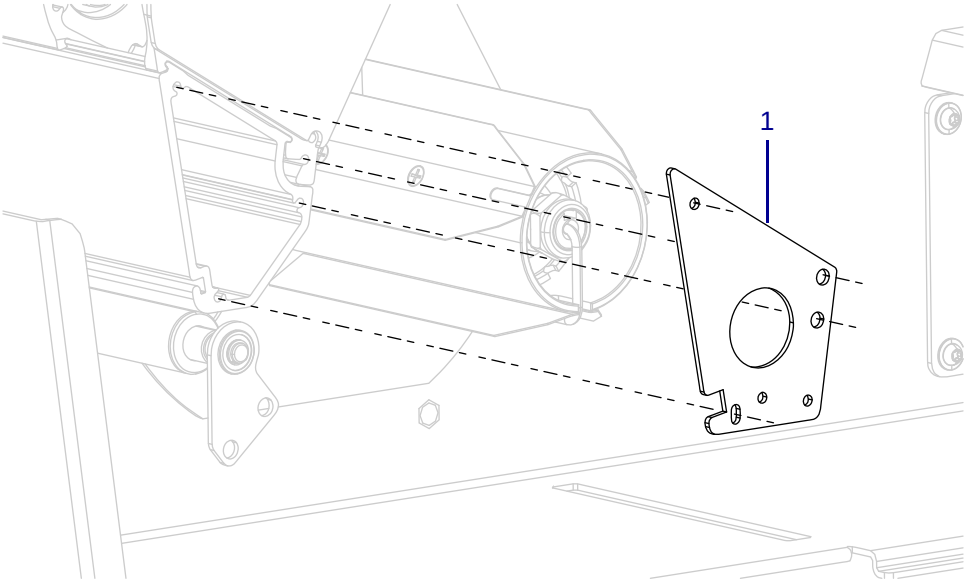
Figure 170 • Locate the Rewind Side Plate



1	Phillips-head mounting screws (5)
2	Rewind side plate plug
3	Rewind side plate
4	Lower right mounting hole in upper side plate
5	Upper side plate

3. See Figure 171. Remove and discard the rewind side plate.

Figure 171 • Remove the Rewind Side Plate



1	Rewind side plate

Install the New Rewind Side Plate

1. Align the rewind side plate with the four mounting holes.
2. See Figure 170 on page 277. Reinstall one of the Phillips-head screws in the lower right mounting hole in upper side plate.
3. Install the other four new Phillips-head screws from the kit.
4. Reinstall the hole plug.
5. See Figure 169 on page 276. Align the two holes in the rewind platen mounting bracket with the mounting holes in the new rewind side plate.
6. Loosely reinstall the two flat washers and mounting screws.
7. **Caution •** When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media and ribbon.
8. Turn on (**I**) the printer.
9. Go to *Adjust the Rewind Platen Roller Adjustment Bracket* on page 279.

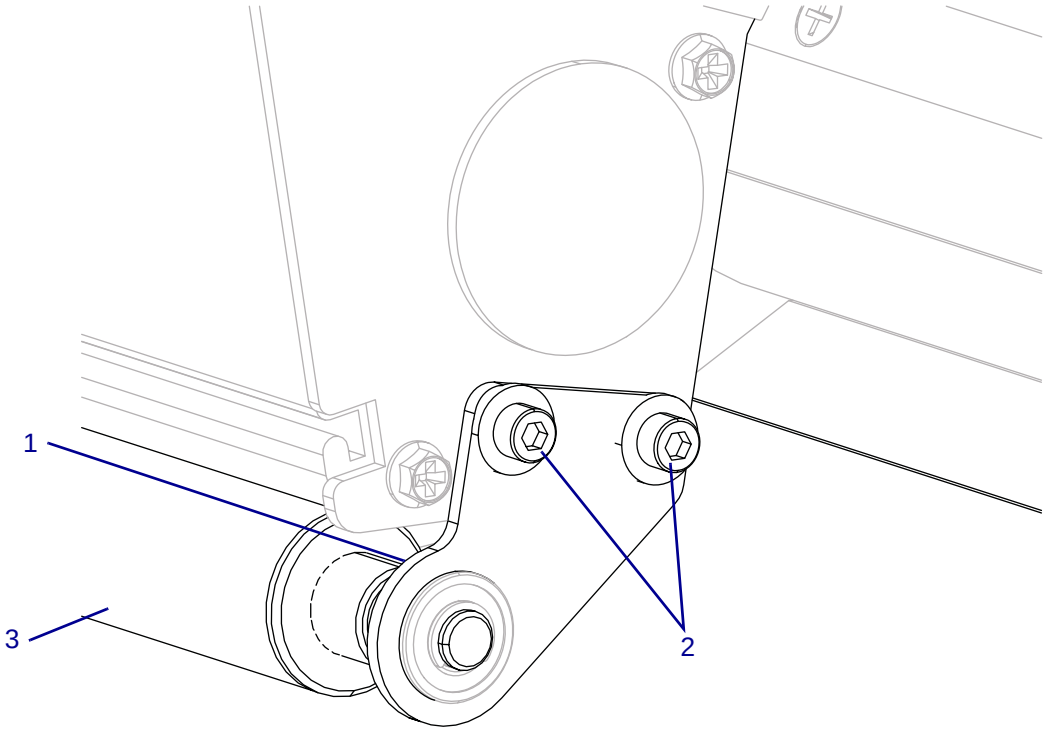
Adjust the Rewind Platen Roller Adjustment Bracket

1. Press and hold the PAUSE while turning on (**I**) the printer. The Pause self test labels will print.
2. Are the labels tracking properly onto the rewind spindle?

If…	Then…
No	Continue with step 3 on page 279.
Yes	Press PAUSE to stop the printer and then CANCEL to exit the Pause test. **The installation is complete.**

3. See Figure 172. Loosen the two hex-head screws securing the rewind adjustment bracket to the print mechanism.

Figure 172 • Adjust the Rewind Platen Roller Adjustment Bracket



1	Rewind platen roller adjustment bracket
2	Mounting screws (2)
3	Rewind platen roller

4. Adjust the bracket as required and tighten the mounting screws.
   - Moving the bracket toward the rear of the printer forces the media to wind closer to the large backing plate on the rewind spindle.
   - Moving the bracket toward the front of the machine moves the media away from the backing plate.
5. Perform this adjustment until the labels or liner track properly onto the rewind spindle.
6. Tighten the mounting screws.

The installation is complete.

Ribbon Supply Spindle Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Ribbon Supply Spindle maintenance kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 173 • Kit Contents

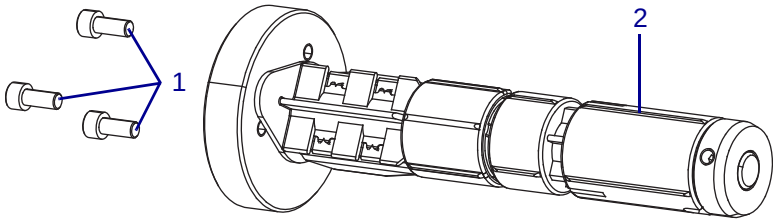


Table 26 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1053360-007**	Ribbon Supply Spindle Maintenance Kit
	1	3	**HW30393-006**	Screw, 8-32 × 0.38 (sold in quantities of 25)
	2	1	*N/A*	Ribbon Supply Spindle

N/A = Not available as a separate part (listed for identification purposes only).

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wrist Strap and Mat
- ❑ Metric Hex (Allen) Wrench
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

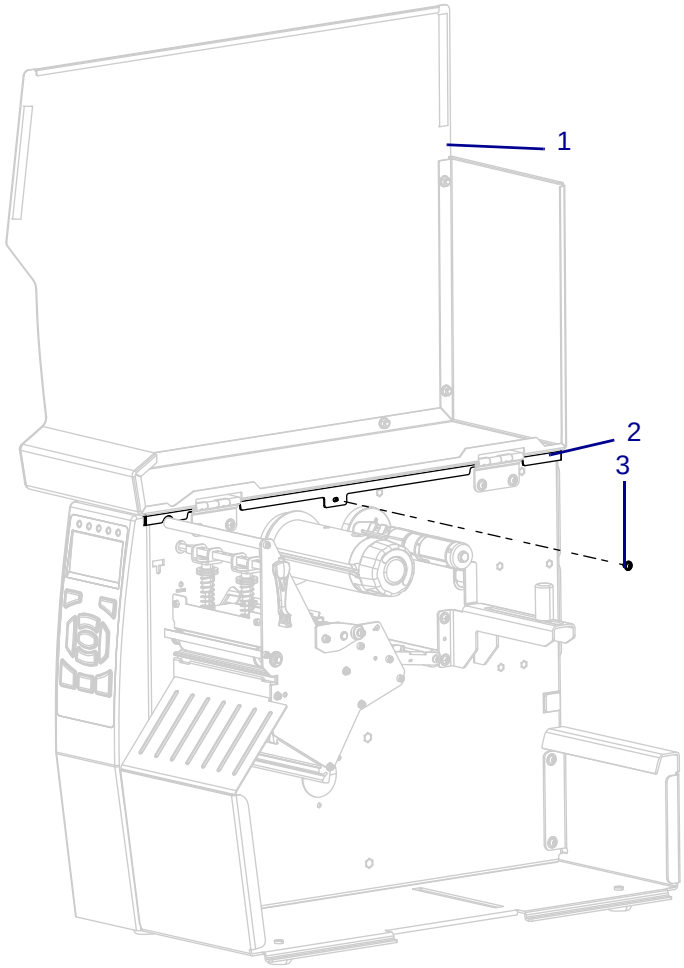
Caution • This installation must be performed by a qualified service technician.

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 174 • Locate the Electronics Cover Mounting Screw

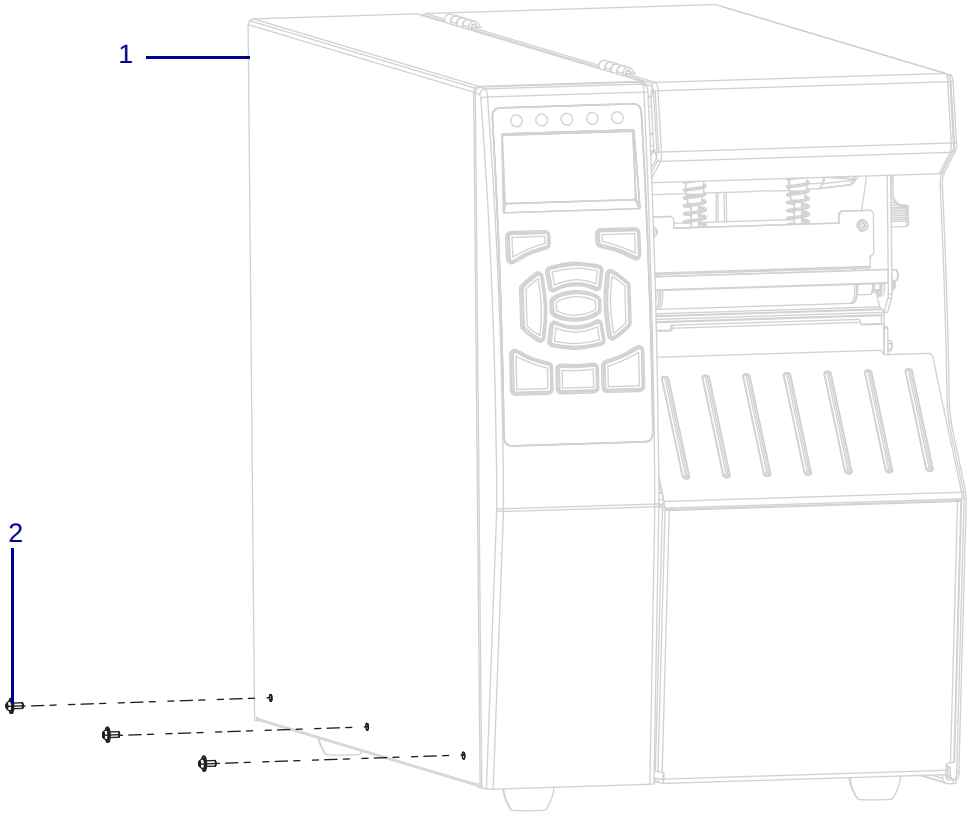


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 175. Remove the three mounting screws securing the electronics cover to the printer.

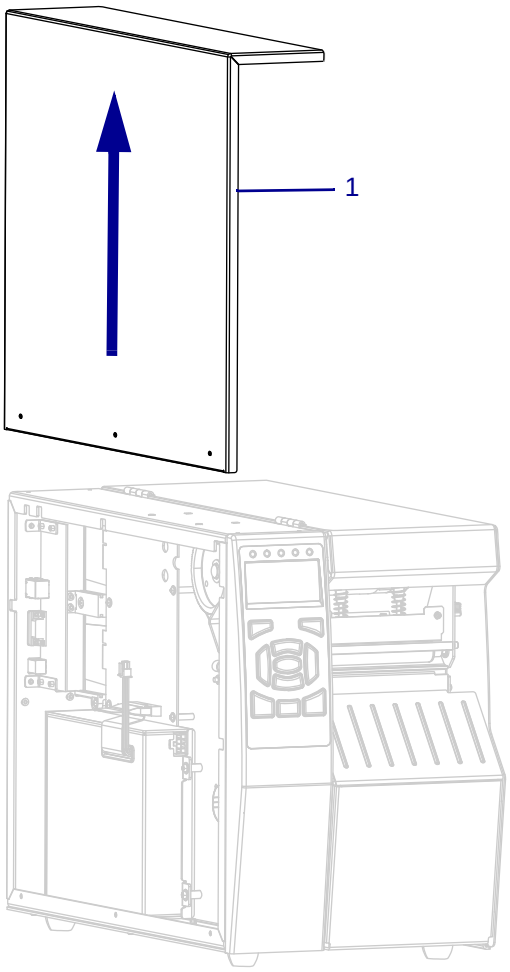
Figure 175 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 176. Lift the electronics cover off of the printer.

Figure 176 • Remove the Electronics Cover

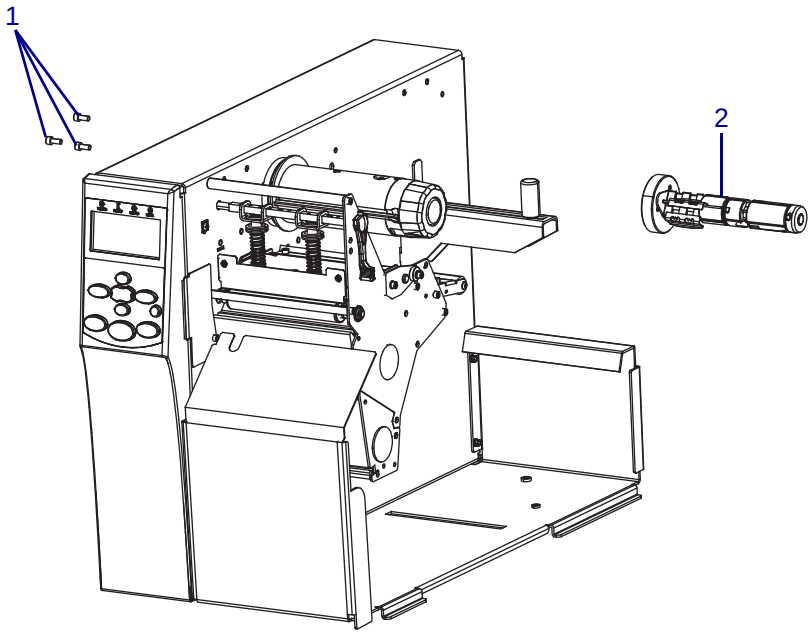


1	Electronics cover

Remove the Old Spindle

1. See Figure 177. Remove the three mounting screws securing the ribbon supply spindle to the printer.

Figure 177 • Remove the Spindle (105SL*Plus* shown)



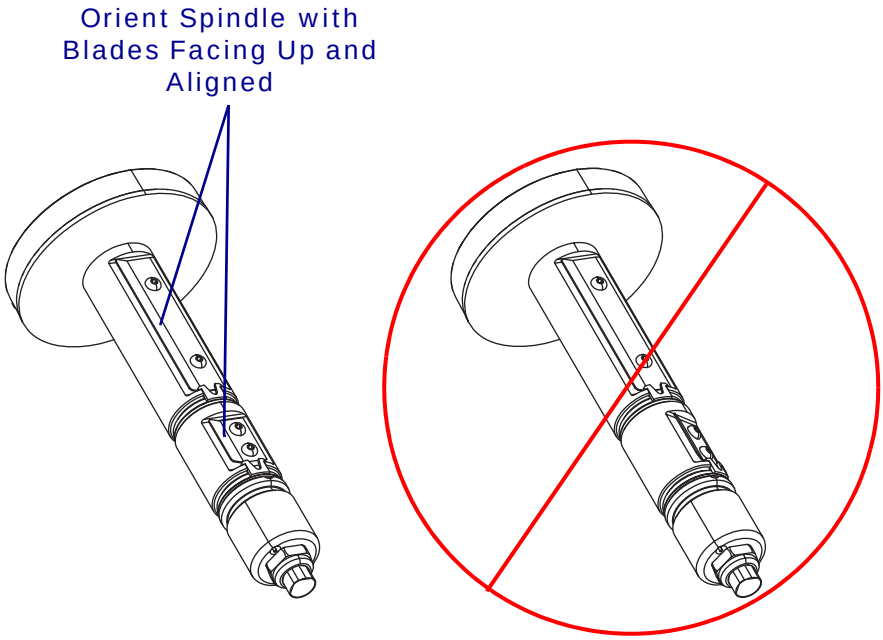
1	Mounting screws (3)
2	Ribbon supply spindle

2. Remove the ribbon supply spindle from the printer.

Install the New Ribbon Supply Spindle

1. See Figure 178. Orient the new spindle so that the blades face up.

Figure 178 • Install the Ribbon Supply Spindle

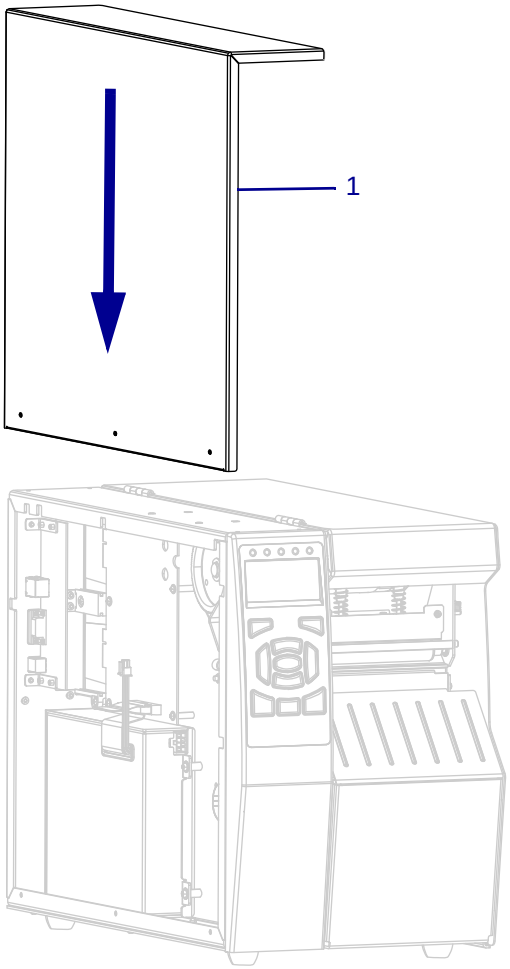


2. See Figure 177 on page 286. Align the three mounting holes in the spindle mount with the three holes in the printer, and then install the three mounting screws.

Reinstall the Electronics Cover

1. See Figure 179. Slide the electronics cover onto the printer.

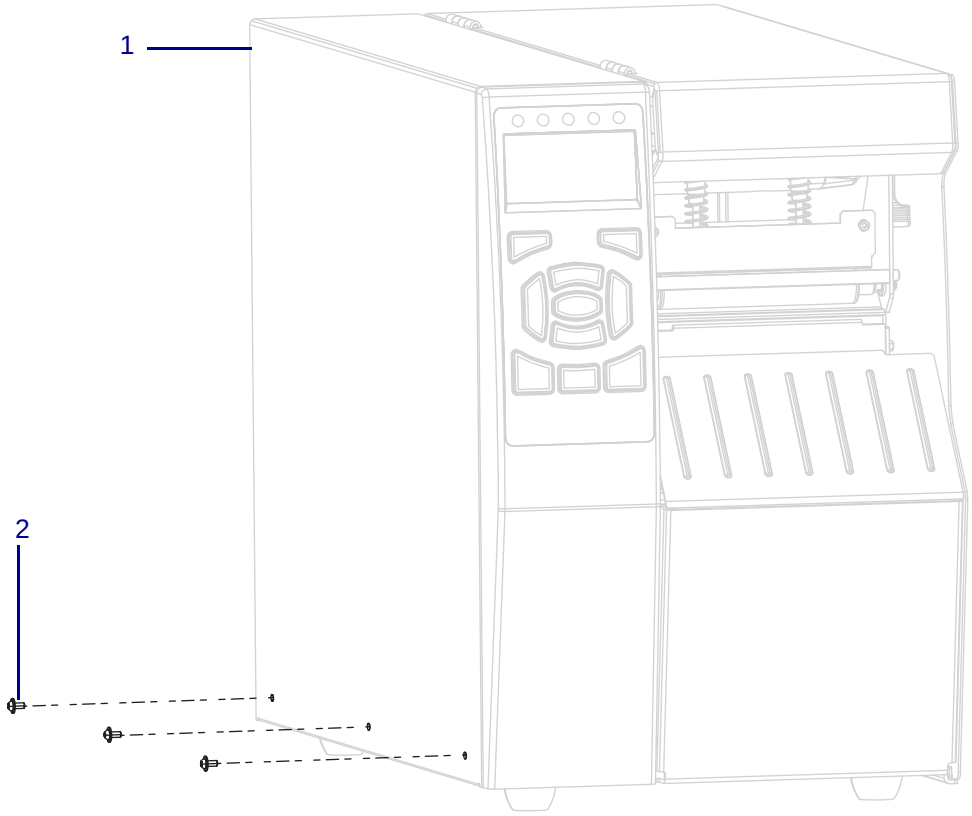
Figure 179 • Install the Electronics Cover



1	Electronics cover

2. See Figure 180. Install the three mounting screws.

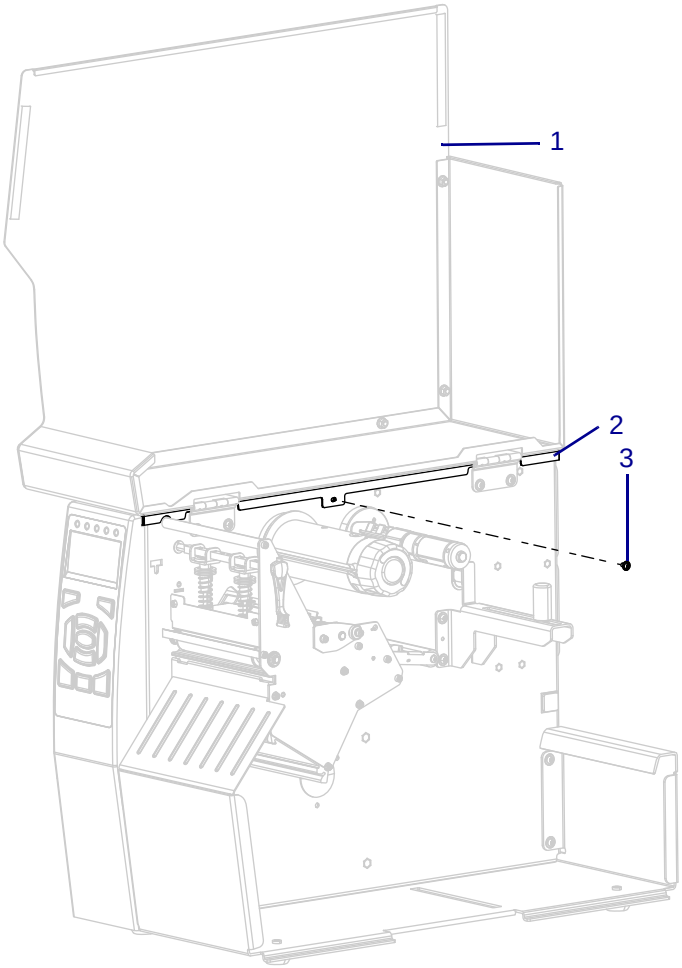
Figure 180 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 181. Open the media door and install the media side electronics cover mounting screw.

Figure 181 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reinstall the media and ribbon
2. Reconnect the data cables and AC power cord.
3. Turn on (**I**) the printer.

The installation is complete.

Ribbon Take-Up Spindle Assembly Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Ribbon Take-Up Spindle Assembly Maintenance Kit in the ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 182 • Kit Contents

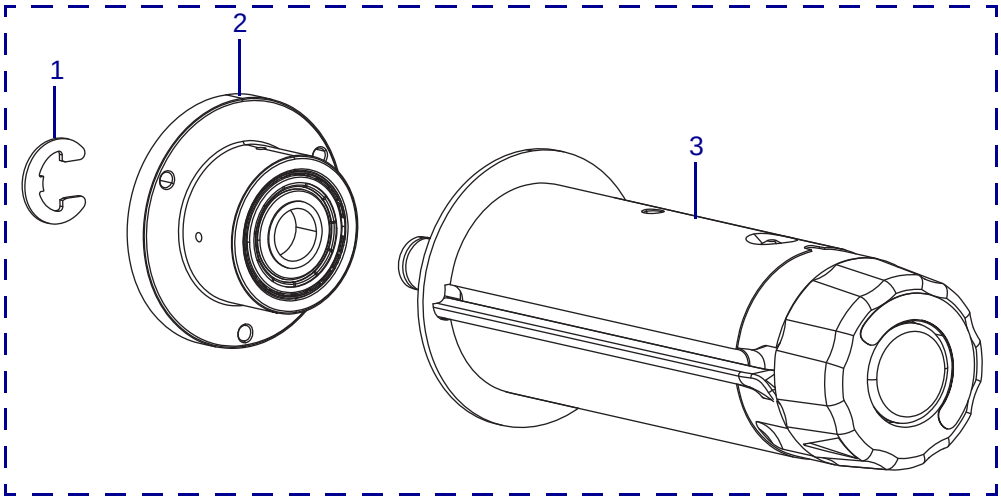


Table 27 • Kit Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**G41150M**	Ribbon Take-Up Spindle Maintenance Kit
	1	1	**HW33811**	E-ring, 0.500 × 0.042 (sold in quantities of 25)
	2	1	*N/A*	Ribbon Take-Up Spindle Bearing Housing
	3	1	*N/A*	Ribbon Take-up Spindle

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Flat-blade Screwdriver Set
- ❑ Metric Allen Key Set
- ❑ Metric Open-End Wrench Set
- ❑ Torx-Head Wrench Set
- ❑ Adhesive Tape
- ❑ 47362* Zebra Preventive Maintenance Kit
- ❑ 11303 Spring Scale, 2200-Gram
- ❑ Safety Glasses
- ❑ Antistatic Wrist Strap and Mat

* In place of the Preventive Maintenance Kit, you may use a clean swab dipped in a solution of isopropyl alcohol (minimum of 99.7%) and deionized water (maximum of 0.3%).

Caution • A qualified service technician must perform this installation.

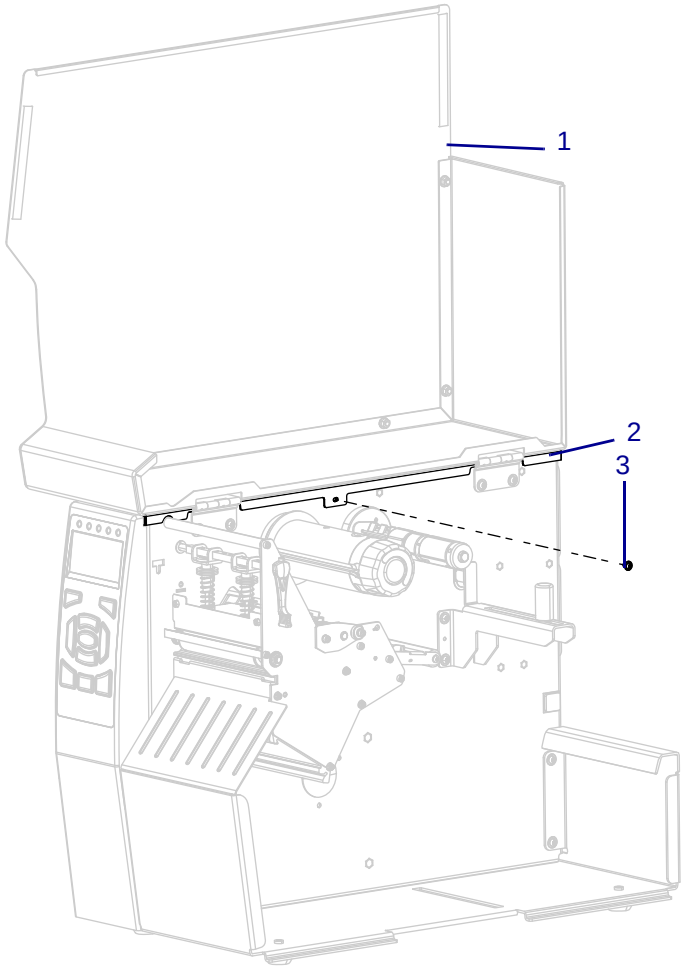
Remove the Electronics Cover

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 183 • Locate the Electronics Cover Mounting Screw

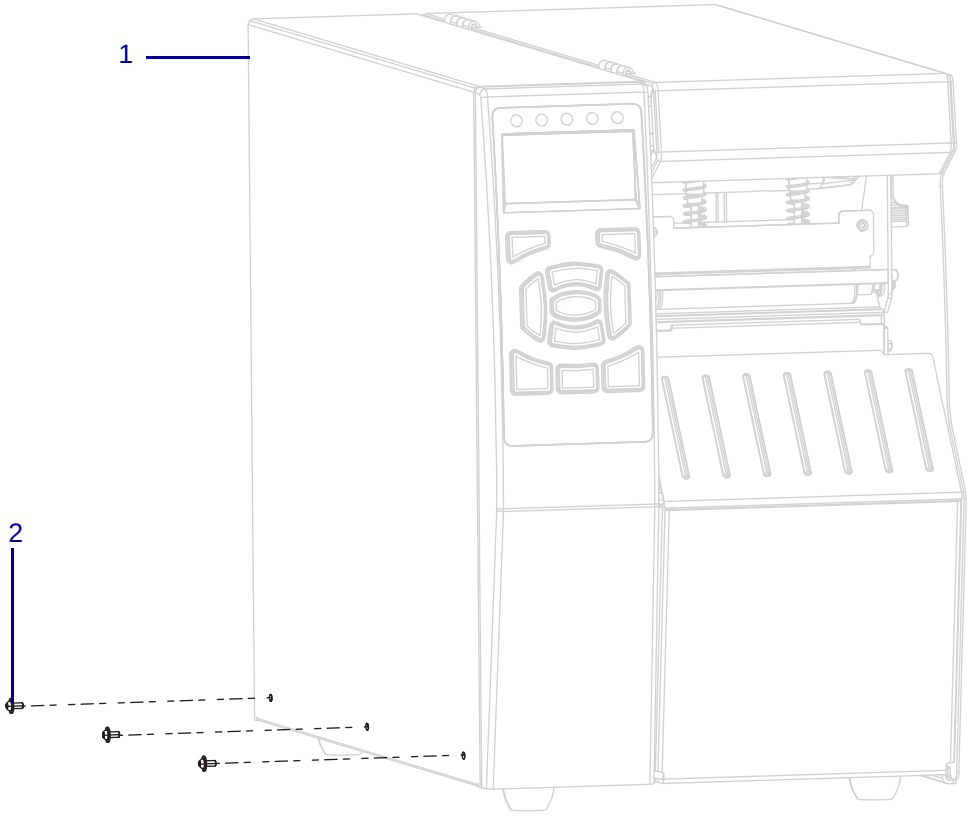


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 184. Remove the three mounting screws securing the electronics cover to the printer.

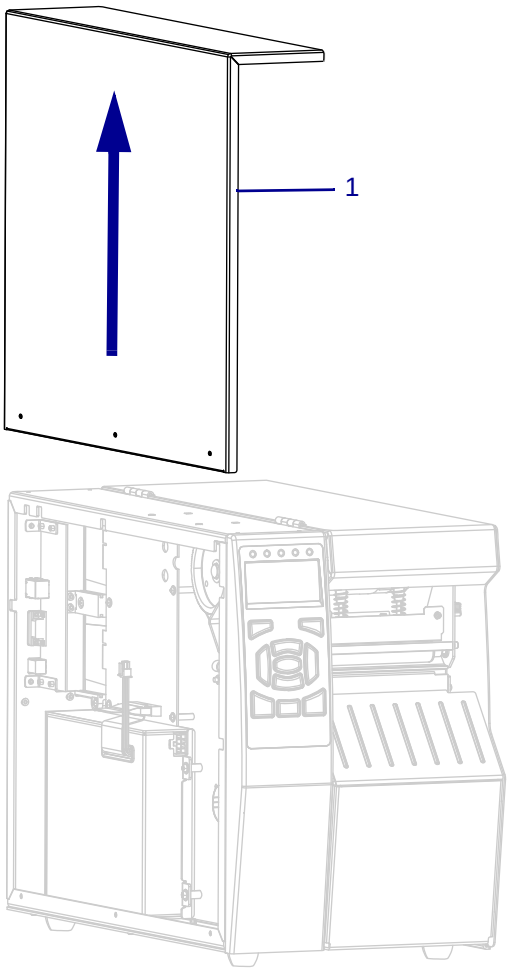
Figure 184 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 185. Lift the electronics cover off of the printer.

Figure 185 • Remove the Electronics Cover



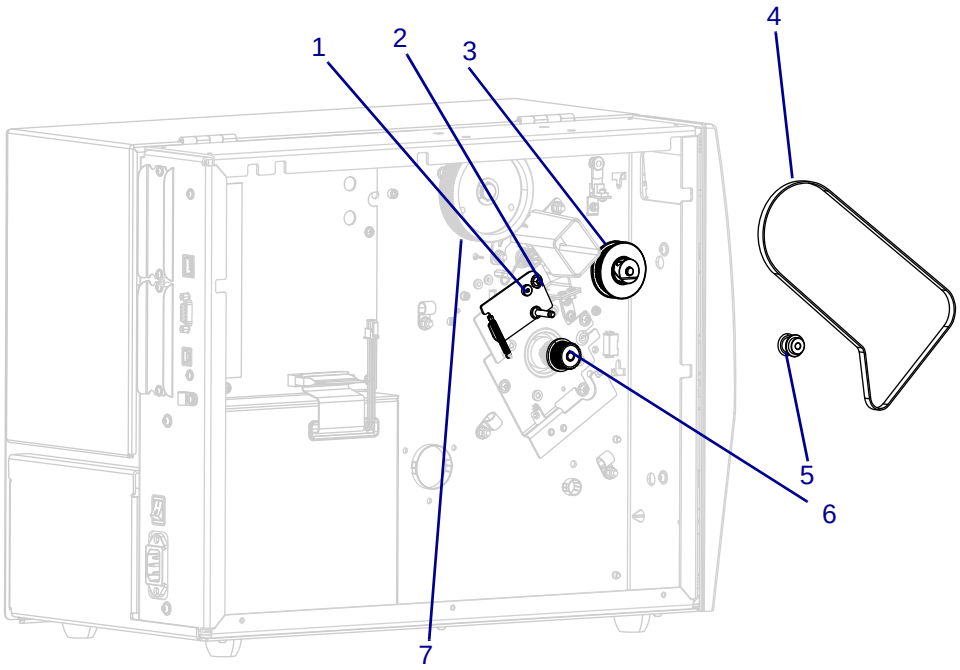
1	Electronics cover

6. Continue with *Remove the Main Drive Belt* *on page 297*.

Remove the Main Drive Belt

1. See Figure 186. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

Figure 186 • Loosen the ZT510 Main Belt Tensioner



1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Stepper motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.

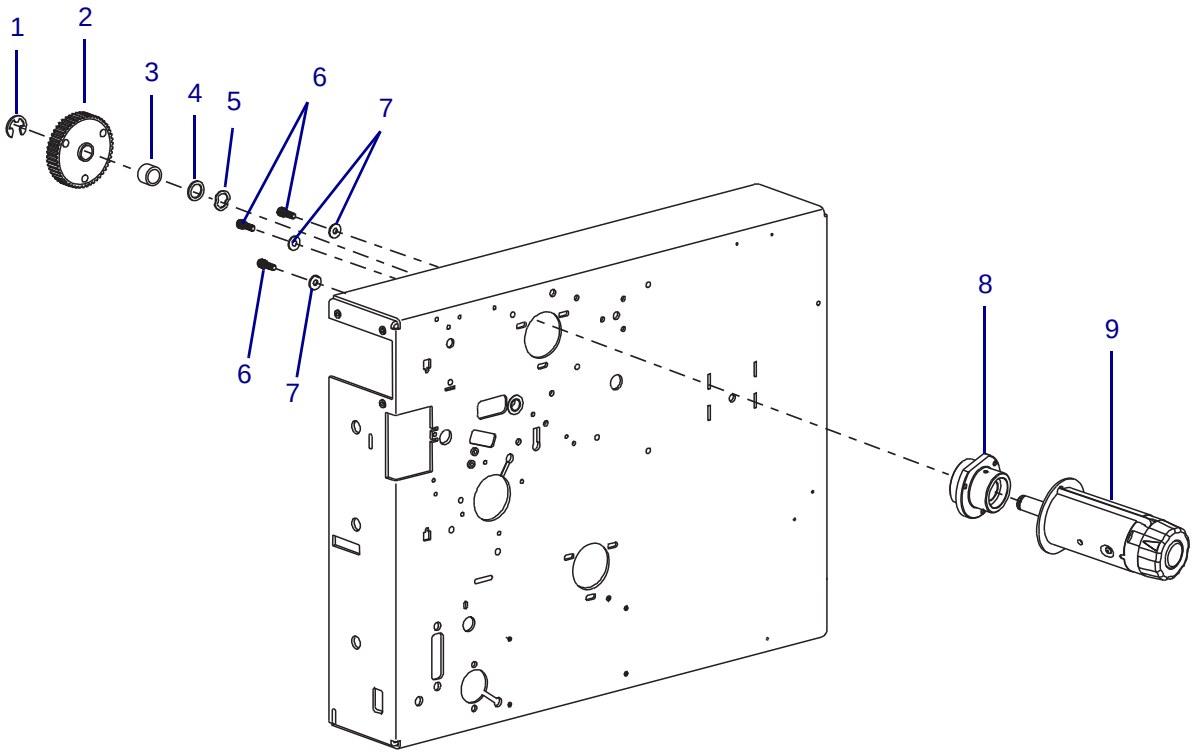
3. Remove the main drive belt and idler pulley out of the printer.

Remove the Old Ribbon Take-Up Spindle

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 187. Using a flat-blade screwdriver, remove the E-ring securing the ribbon take-up pulley on the shaft, and then remove the pulley.

Figure 187 • Remove the Ribbon Take-up Spindle



1	E-ring
2	Ribbon take-up pulley
3	Spacer
4	Flat washer
5	Wave washer
6	Mounting screws (3)
7	Mounting washers (3)
8	Bearing assembly
9	Spindle/Clutch assembly

2. Remove the spacer, flat washer, and wave washer.

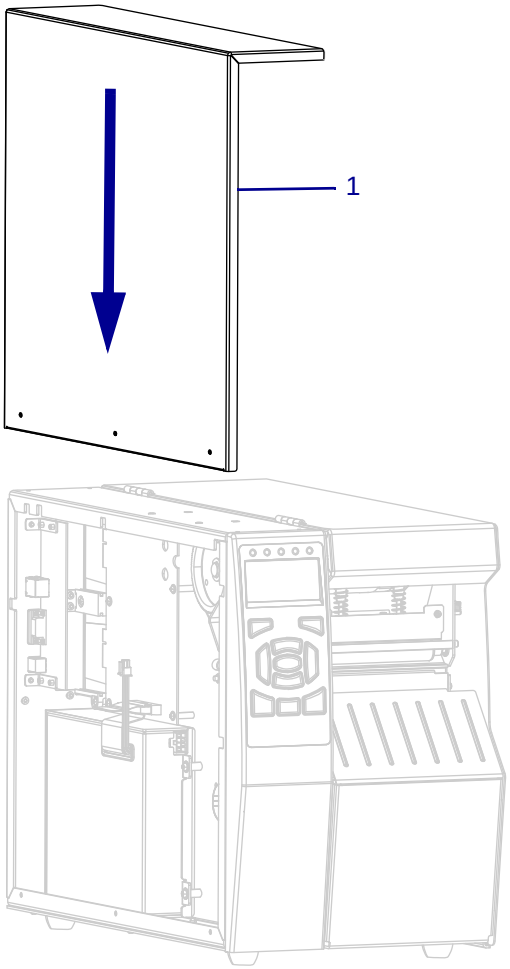
Install the New Ribbon Take-up Assembly

1. Clean the main frame on both sides with isopropyl alcohol.
2. See Figure 187 on page 298. Mount the new bearing housing on the media side of main frame by using the mounting screws previously removed. Lightly tighten each screw.
3. Install the new ribbon take-up spindle assembly by sliding its shaft through the bearing assembly.
4. Reinstall the wave washer, flat washer, spacer, and pulley. Secure the assembly with the new E-ring.
5. See Figure 186 on page 297. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.
6. Ensure that the belt is on the inside part of the idler pulley.
7. Loosen the locking screw on the main drive belt tensioner.
8. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 188. Slide the electronics cover onto the printer.

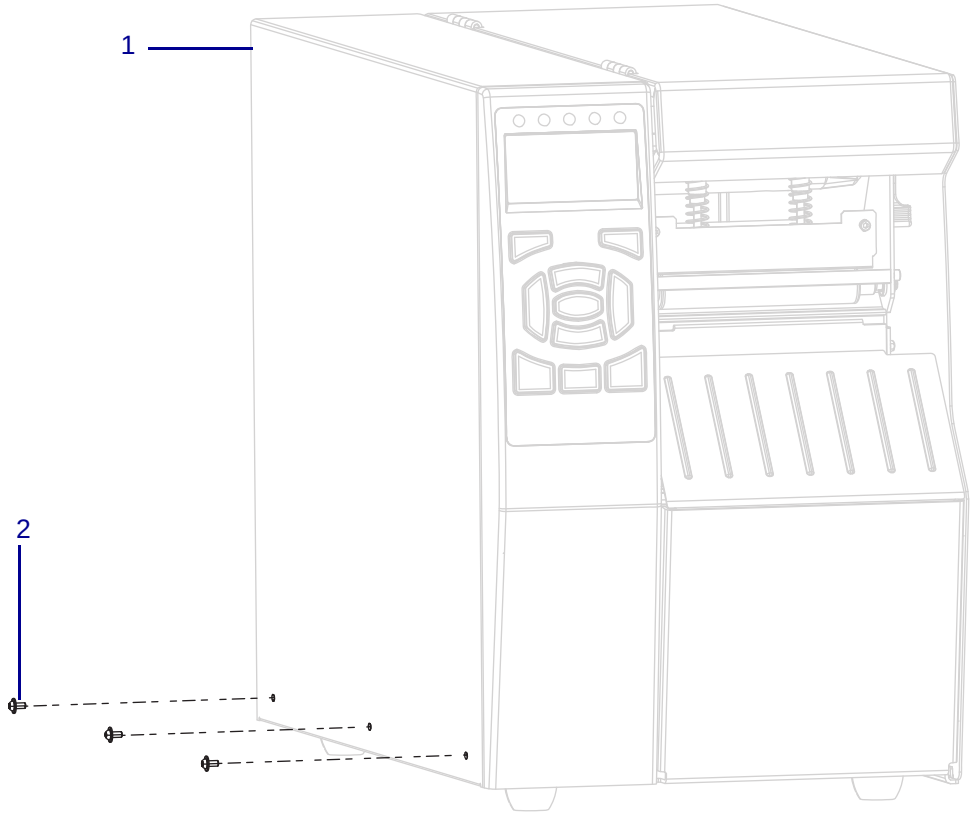
Figure 188 • Install the Electronics Cover



1	Electronics cover

2. See Figure 189. Install the three mounting screws.

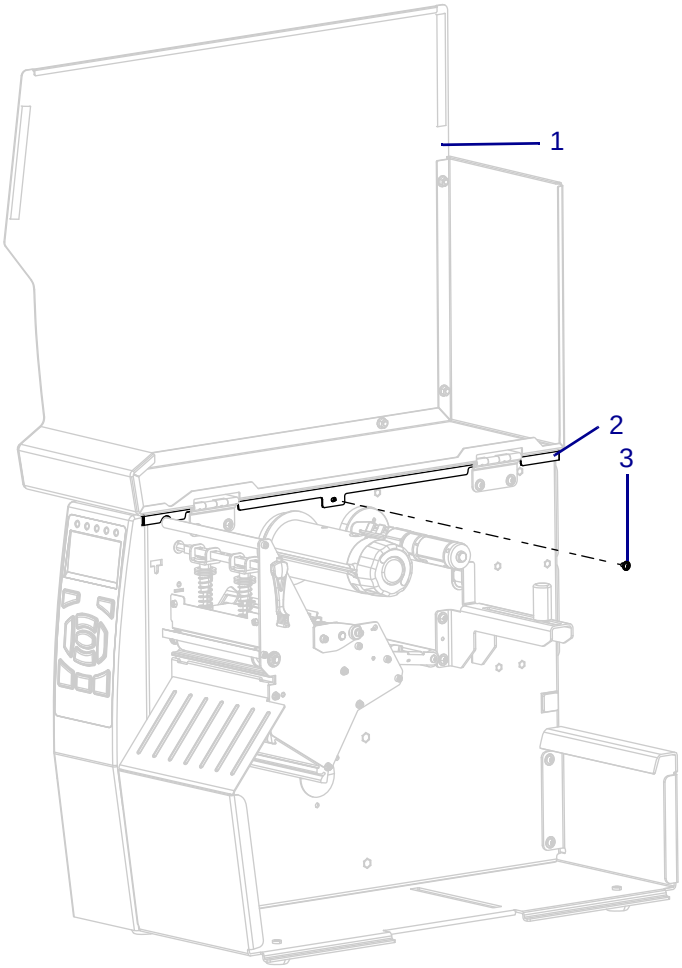
Figure 189 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 190. Open the media door and install the media side electronics cover mounting screw.

Figure 190 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reinstall the media and ribbon.
2. Close the media door.
3. Reconnect the AC power cord and data cables.
4. Turn on (**I**) the printer.

The installation is complete.

Ribbon Rollers Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Ribbon Rollers maintenance kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 191 • Kit Contents

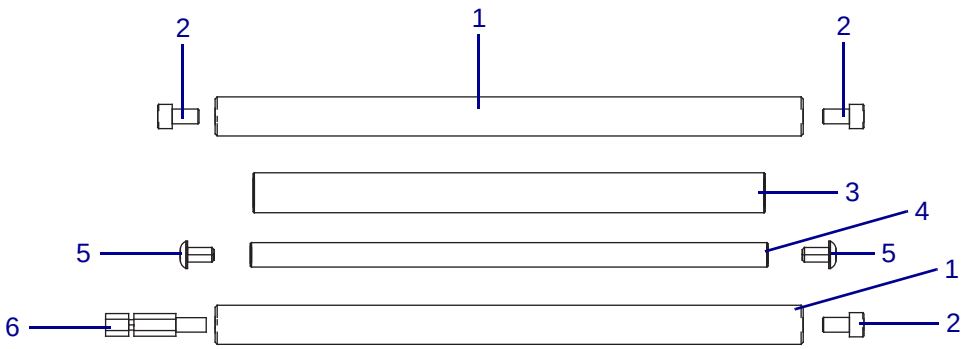


Table 28 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1053360-009**	Ribbon Rollers Maintenance Kit
	1	2	*N/A*	Upper and Lower Ribbon Guide Rollers
	2	3	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 50)
	3	1	*N/A*	Magic Roller
	4	1	*N/A*	Magic Roller Shaft
	5	2	*N/A*	Screw, 6-32 × 0.25
	6	1	**HW30266**	Printhead Lift Spring Stop, 0.187 × 4.878 (sold in quantities of 10)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Safety Glasses
- ❑ Needle Nose Pliers
- ❑ Torx-Head Wrench Set
- ❑ Metric Nut Driver Set
- ❑ Standard Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

Caution • This installation must be performed by a qualified service technician.

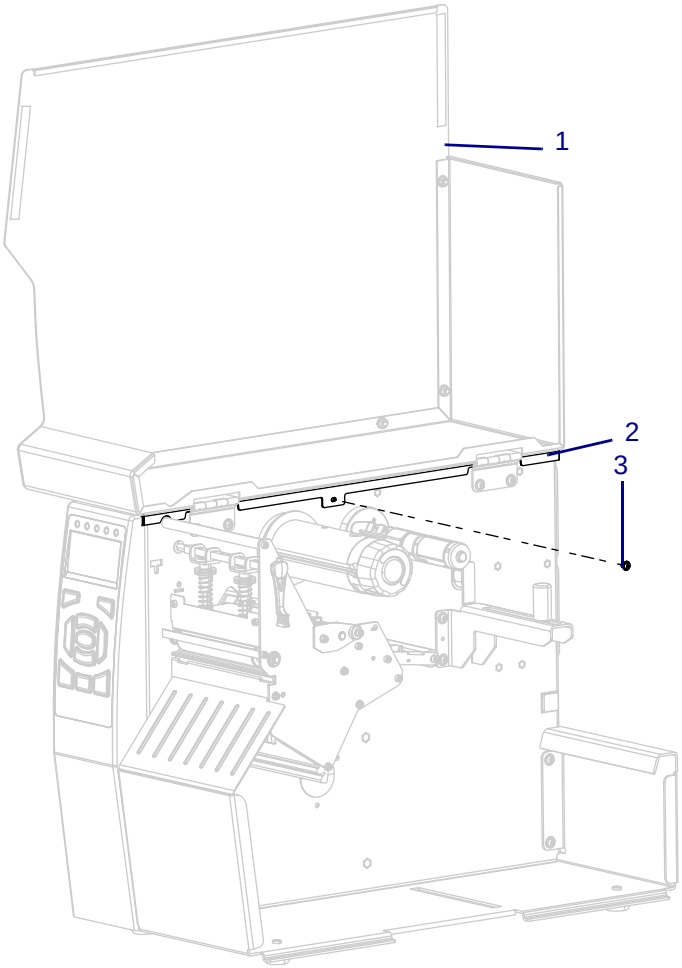
Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

1. Remove the media and ribbon.
2. **Caution** • Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 192 • Locate the Electronics Cover Mounting Screw

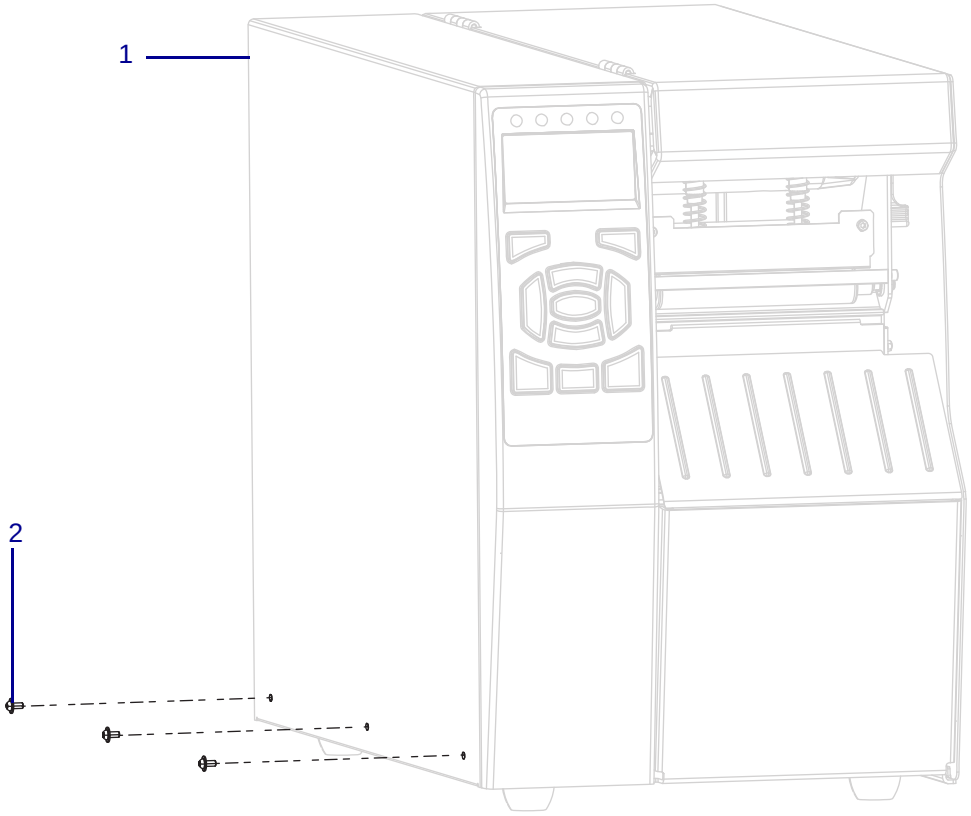


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 193. Remove the three mounting screws securing the electronics cover to the printer.

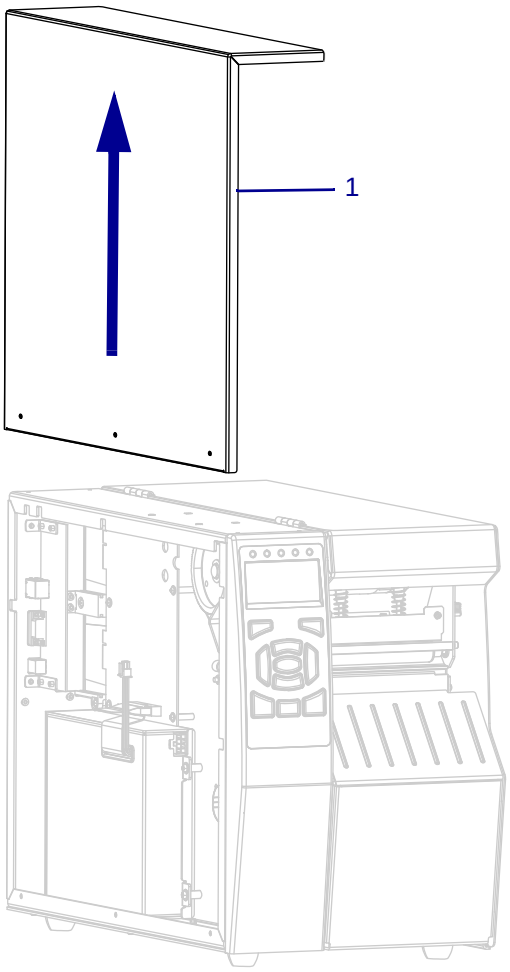
Figure 193 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 194. Lift the electronics cover off of the printer.

Figure 194 • Remove the Electronics Cover



1	Electronics cover

Remove the Upper and Lower Ribbon Guide Rollers

Which roller are you replacing?

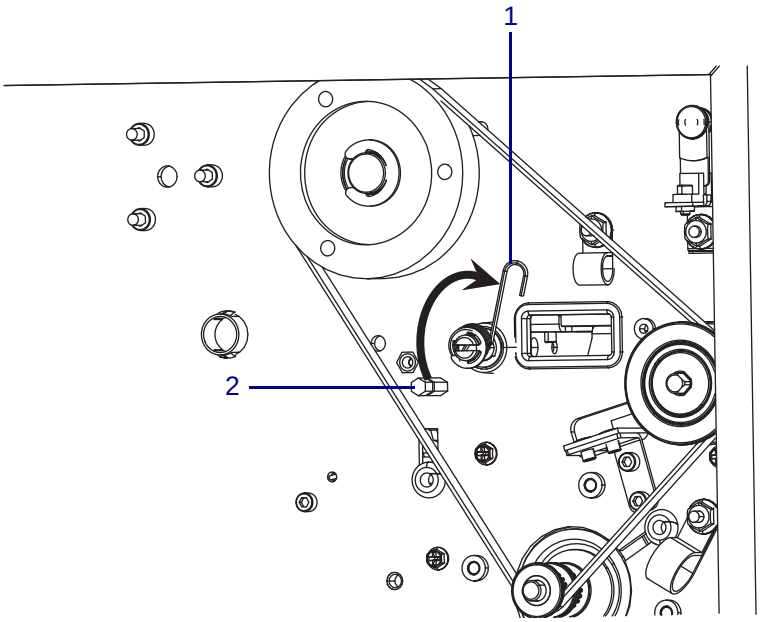
If you are replacing the…	Then…
Lower Roller	Continue with *Remove Lower Ribbon Guide Roller*.
Upper Roller	Go to *Remove the Upper Ribbon Guide Roller* on page 311.

Remove Lower Ribbon Guide Roller

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 195. Remove the printhead lift spring from the printhead lift spring stop, and then let the spring relax.

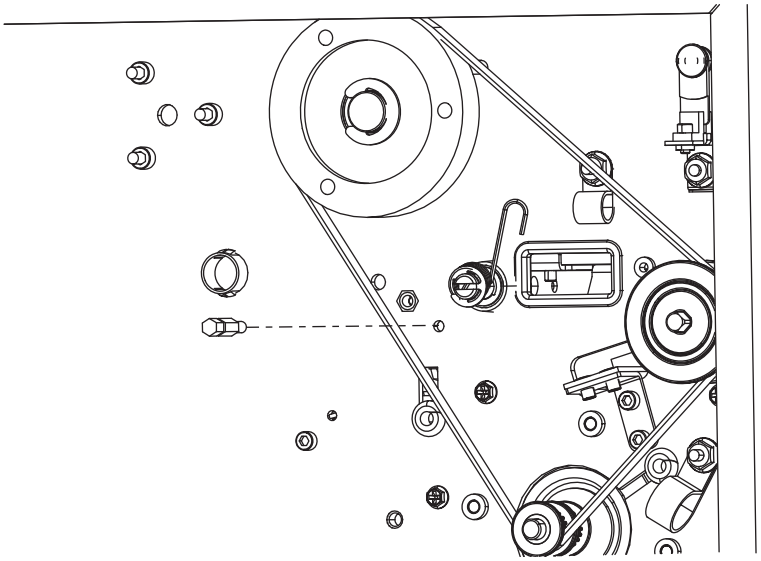
Figure 195 • Relieve the Printhead Lift Spring Tension



1	Printhead lift spring
2	Printhead lift spring stop

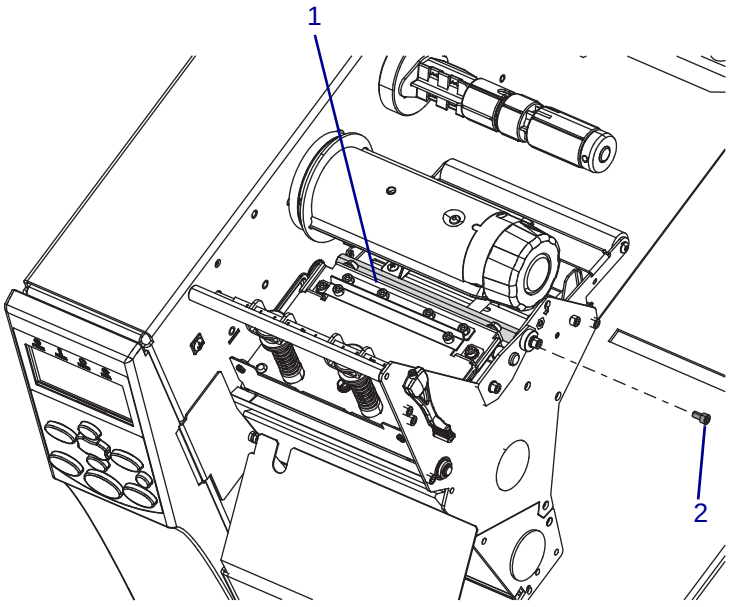
2. See Figure 196. Remove the printhead lift spring stop.

Figure 196 • Remove the Printhead Lift Spring Stop



3. See Figure 197. Remove the mounting screw.

Figure 197 • Remove the Lower Ribbon Guide Roller



1	Lower ribbon guide roller
2	Lower ribbon guide roller mounting screw

4. Slide the lower ribbon guide roller out of the printer.

Install the New Lower Ribbon Guide Roller

1. See Figure 197 on page 310. Slide the new roller into the printer and align the mounting holes.
2. From media side, install the new mounting screw into the roller.

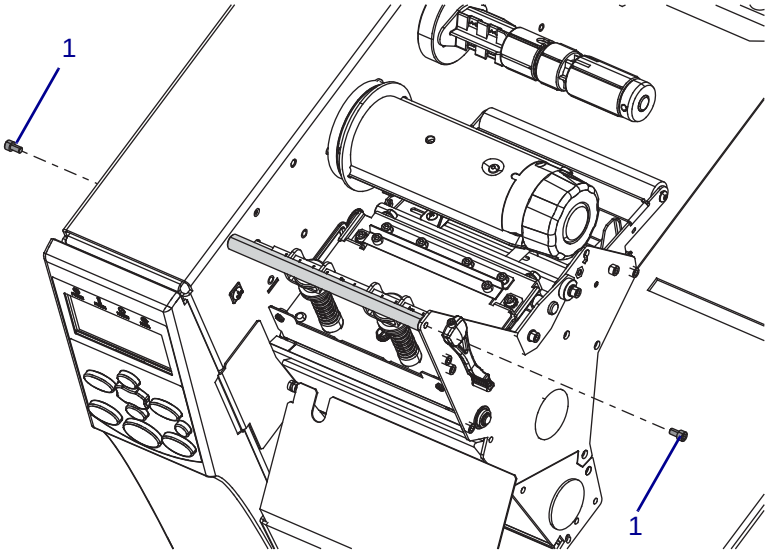
Caution • Damage will occur to printhead lift spring stop if over tightened.

3. From the electronic side, install the printhead lift spring stop into the lower ribbon guide roller.
4. See Figure 195 on page 309. Return the printhead lift spring to the stop.

Remove the Upper Ribbon Guide Roller

1. See Figure 198. Remove the two mounting screws from the upper ribbon guide roller.

Figure 198 • Remove the Upper Ribbon Guide Roller



1	Upper media guide roller mounting screws (2)

2. Slide the upper ribbon guide roller out of the printer.

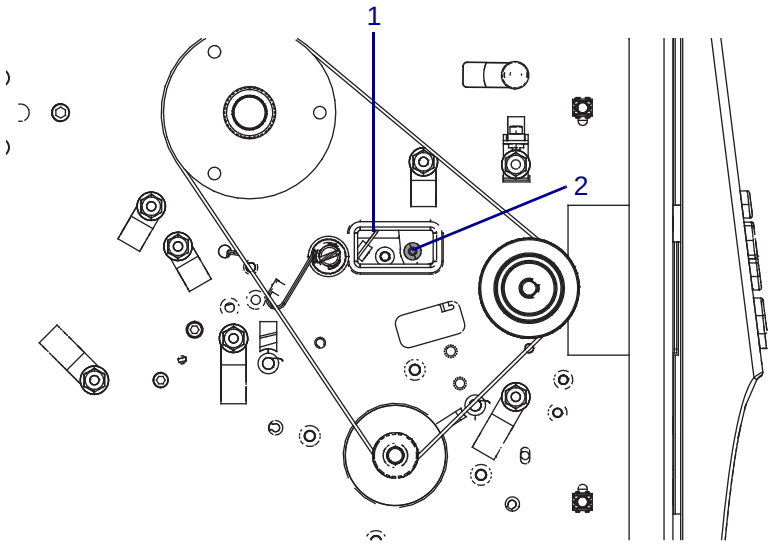
Install the New Upper Ribbon Guide Roller

1. Slide the new ribbon guide roller into the printer.
2. Align the two mounting holes, and then install the two new mounting screws.

Remove the Magic Roller

1. See Figure 199. On the media side, raise the print mechanism until the magic roller mounting screw is aligned with the printhead cable access hole on the electronics side.

Figure 199 • Magic Roller from the Electronics Side

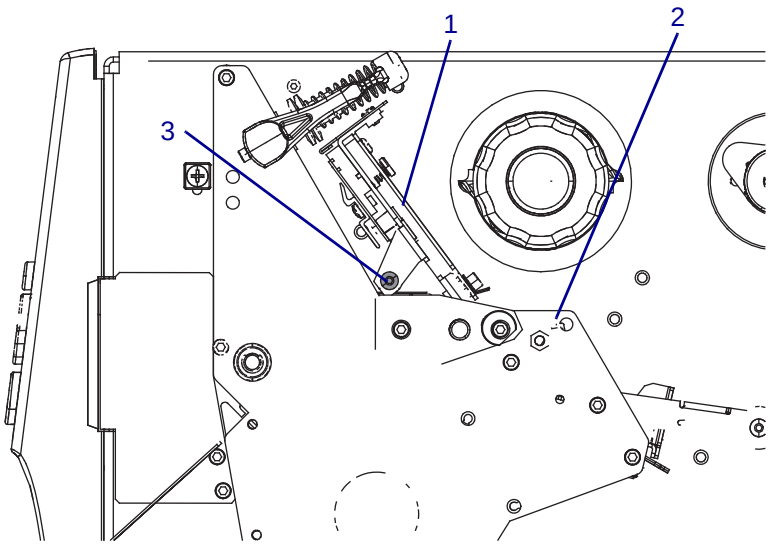


1	Printhead cable access hole
2	Magic roller mounting screw

2. Remove the magic roller mounting screw.

3. See Figure 200. On the media side, raise the print mechanism until the magic roller mounting screw clears the side plate.

Figure 200 • Magic Roller Media Side



1	Print mechanism
2	Side plate
3	Magic roller mounting screw

4. Remove the mounting screw.
5. Remove the magic roller and shaft.

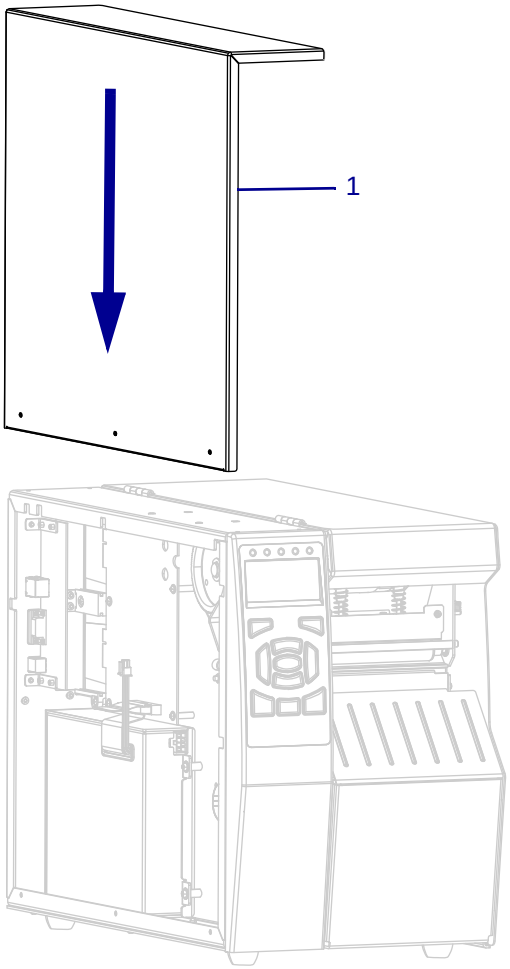
Install the New Magic Roller and Shaft

1. Slide the magic roller shaft into the magic roller, and then slide the new magic roller assembly into the print mechanism.
2. Align the mounting hole on the print mechanism with the mounting hole in the magic roller.
3. See Figure 200. Install the new mounting screw.
4. See Figure 199 on page 312. On the electronics side, lower the print mechanism until the magic roller mounting hole is visible within the printhead cable access hole.
5. Align the magic roller shaft with the mounting hole and the print mechanism.
6. Install the new mounting screw.

Reinstall the Electronics Cover

1. See Figure 201. Slide the electronics cover onto the printer.

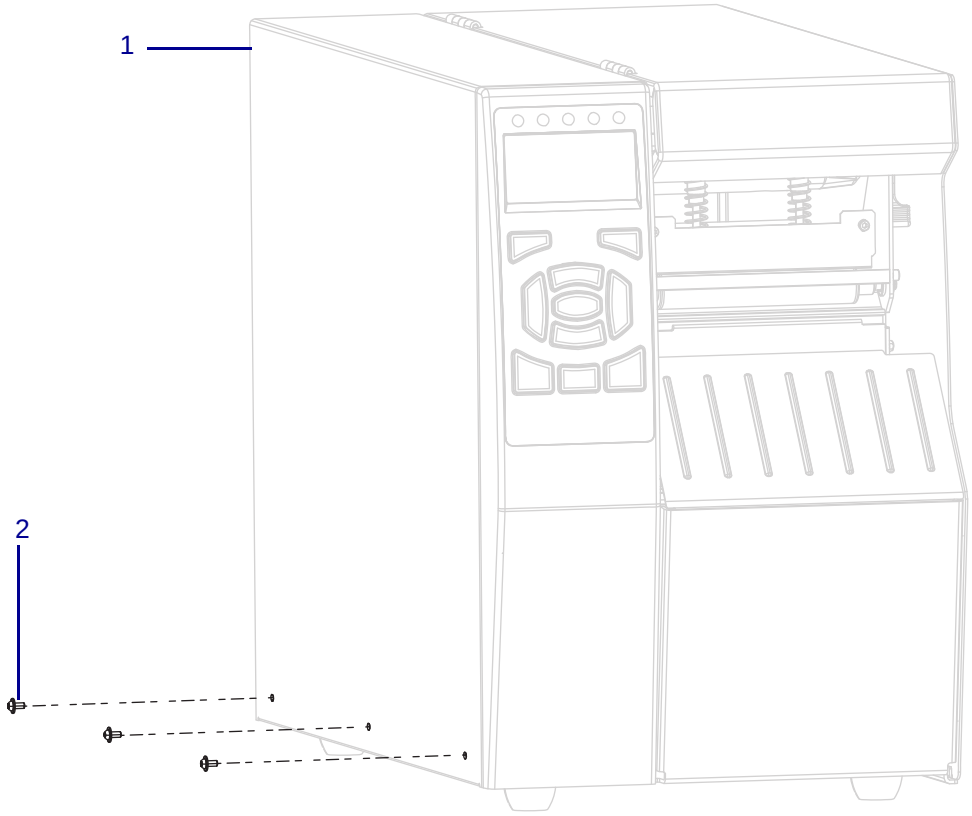
Figure 201 • Install the Electronics Cover



1	Electronics cover

2. See Figure 202. Install the three mounting screws.

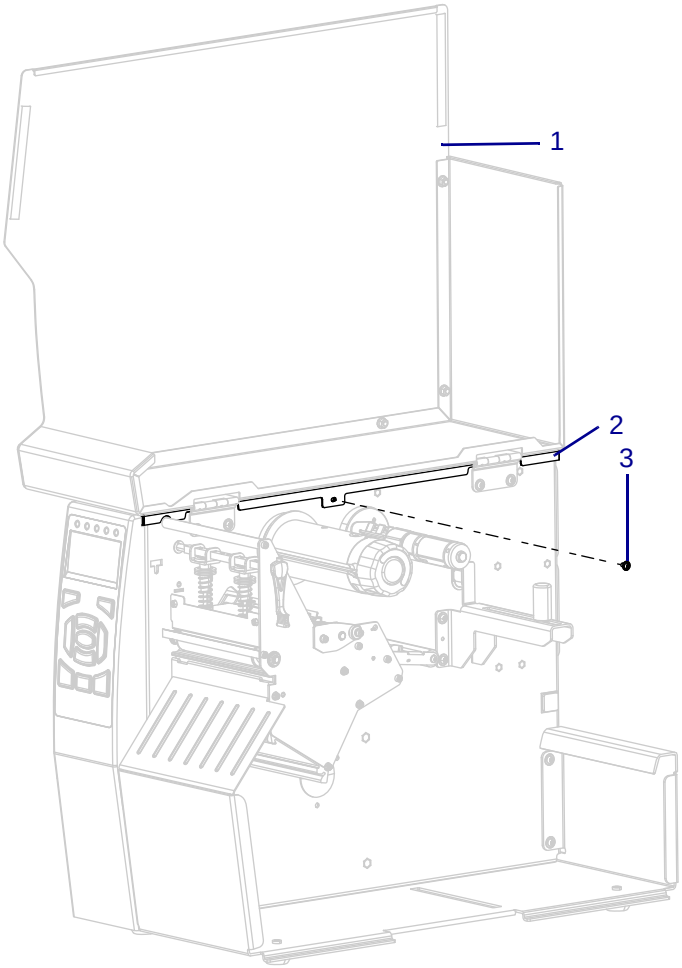
Figure 202 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 203. Open the media door and install the media side electronics cover mounting screw.

Figure 203 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reinstall the media and ribbon.
2. Reconnect the AC power cord and all data cables.
3. Turn On (**I**) the printer.

The installation is complete.

Peel/Tear Bar Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Peel/Tear Bar Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 204 • Kit Contents

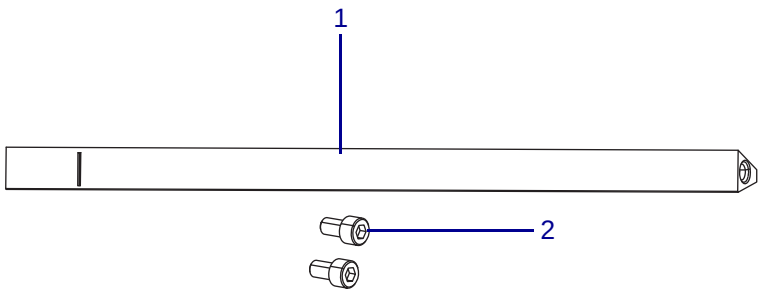


Table 29 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1006115**	Peel/Tear Bar Maintenance Kit
	1	1	*N/A*	Peel/Tear Bar
	2	2	**HW30392-004**	Screw, 6-32 × 0.25 inch (sold in quantities of 50)

N/A = Not Available as a separate part for purchase (listed for identification purposes only).
Bold = Part available for purchase.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Feeler Gauge with 0.003 inch (0.075 mm)
- ❑ SAE Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Torx-Head Wrench Set

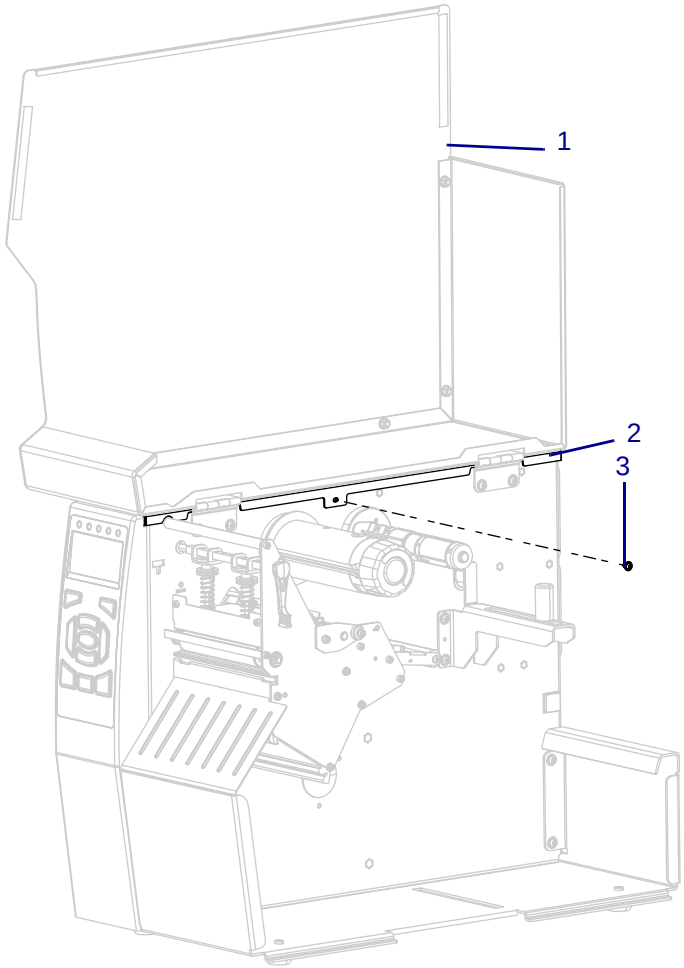
Remove the Electronics Cover

1. Remove the media and ribbon.
2. **Caution** • Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 205 • Locate the Electronics Cover Mounting Screw

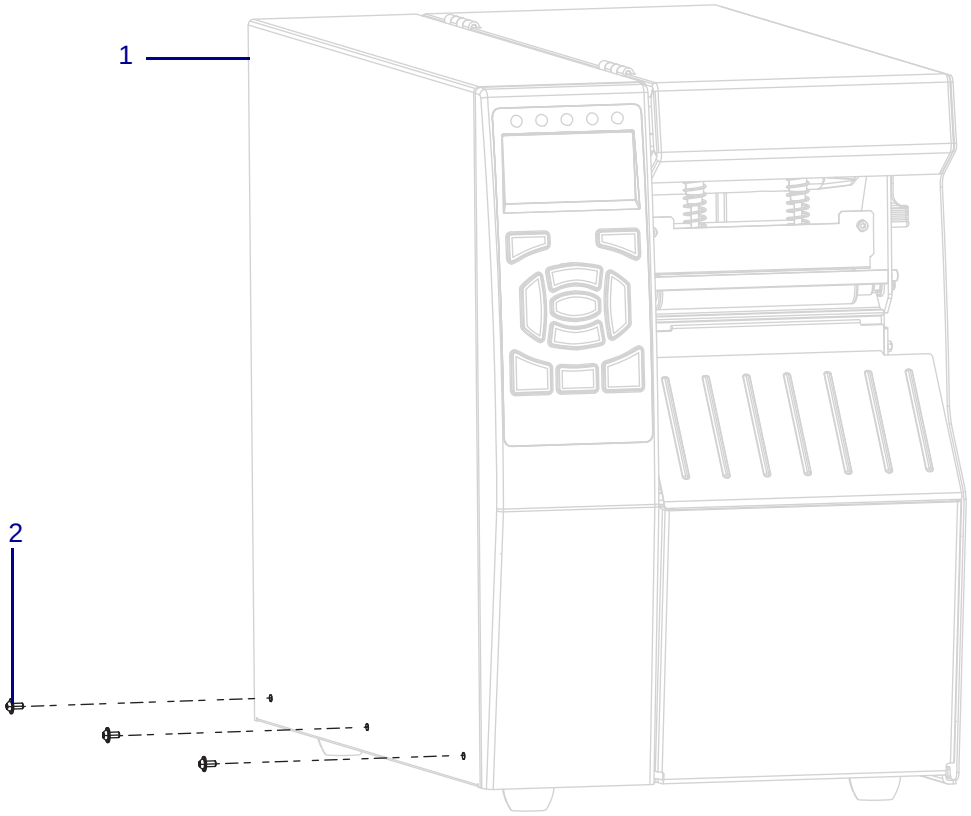


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 206. Remove the three mounting screws securing the electronics cover to the printer.

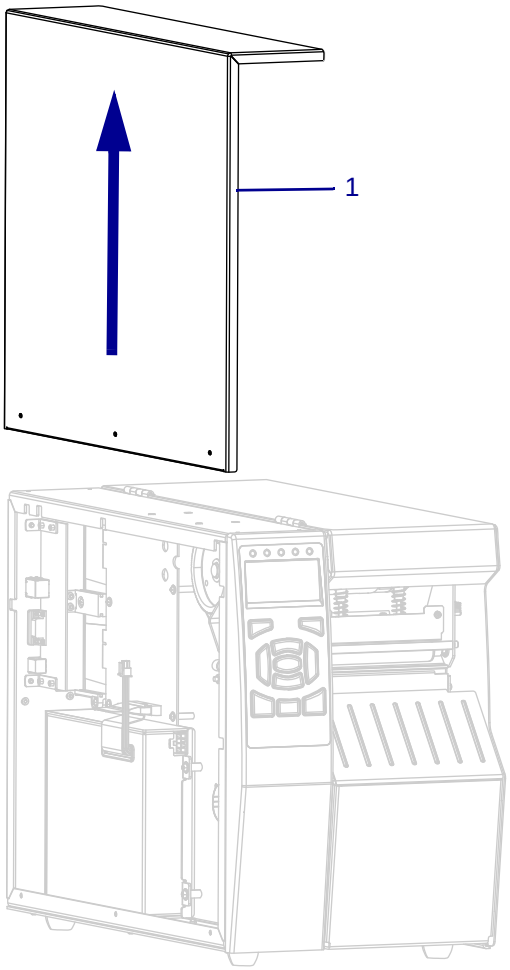
Figure 206 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 207. Lift the electronics cover off of the printer.

Figure 207 • Remove the Electronics Cover

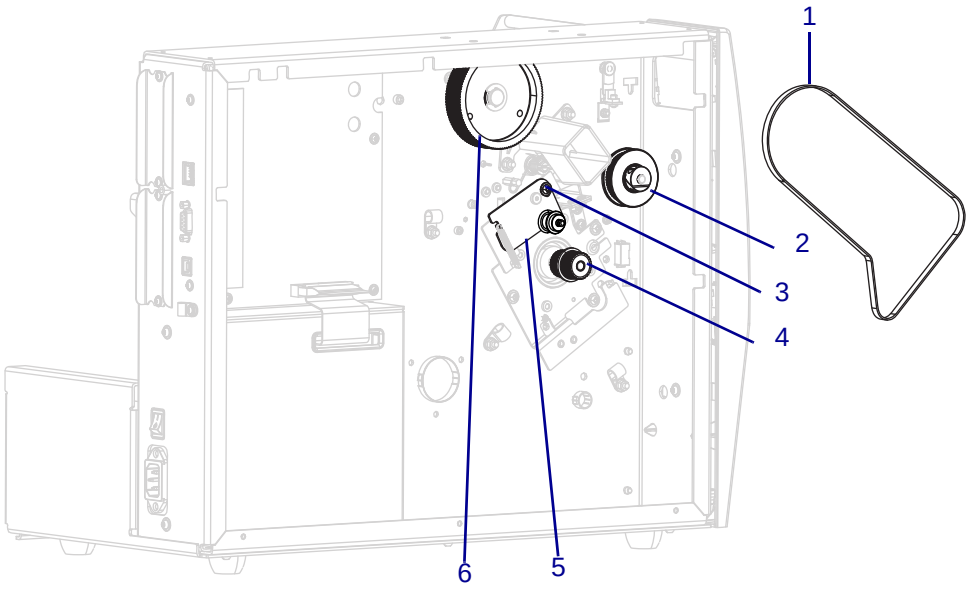


1	Electronics cover

Remove the Old Peel/Tear Bar

1. See Figure 208. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

Figure 208 • Remove the Main Drive Belt



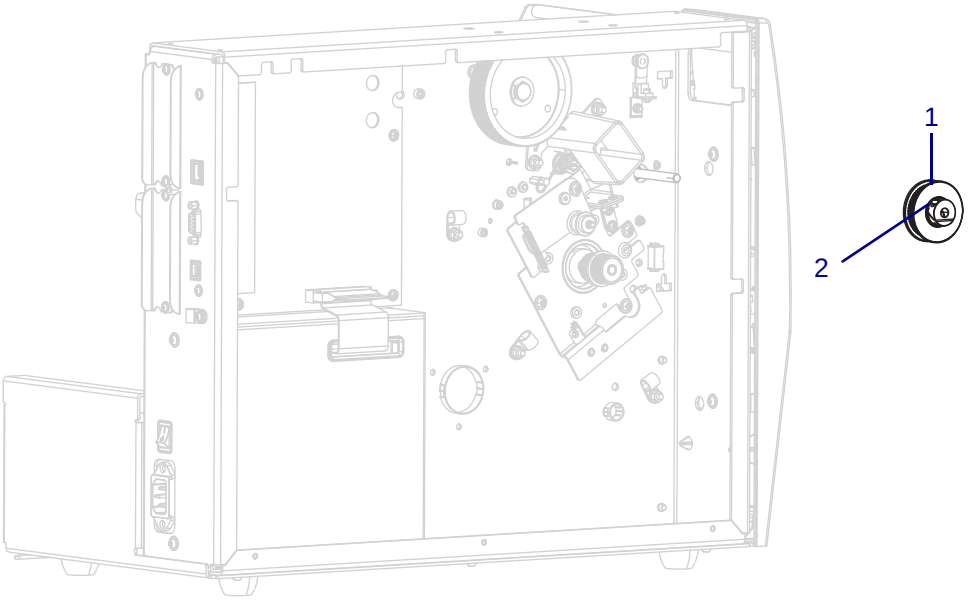
1	Main drive belt
2	Upper platen roller pulley
3	Tensioner locking screw
4	Drive motor pulley
5	Tensioner plate
6	Ribbon take-up pulley

2. Move the main drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Slide the main drive belt out of the printer.

4. See Figure 209. Loosen the upper platen pulley mounting screw, and then slide the pulley off the upper platen shaft.

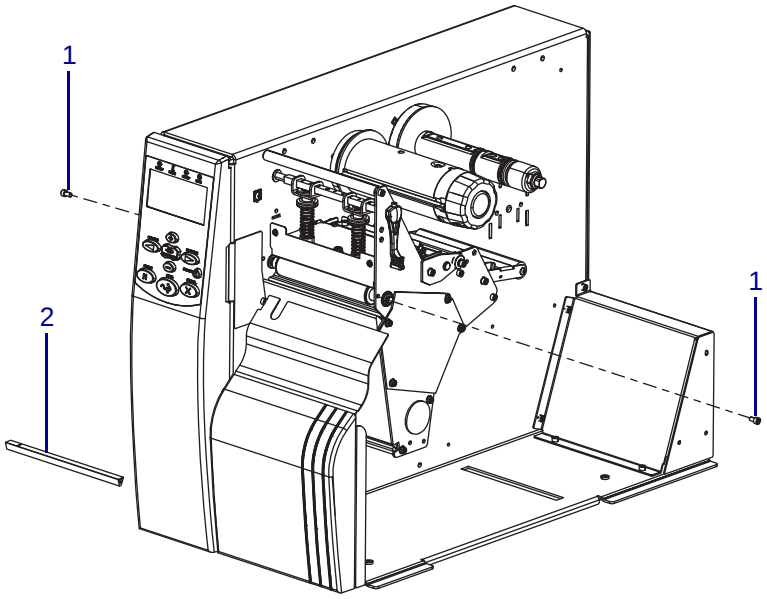
Figure 209 • Remove the Upper Platen Pulley



1	Upper platen pulley
2	Upper platen pulley mounting screw

5. See Figure 210. Remove the two peel/tear bar mounting screws.

Figure 210 • Remove the Peel/Tear Bar Mounting Screws (110Xi4 shown)



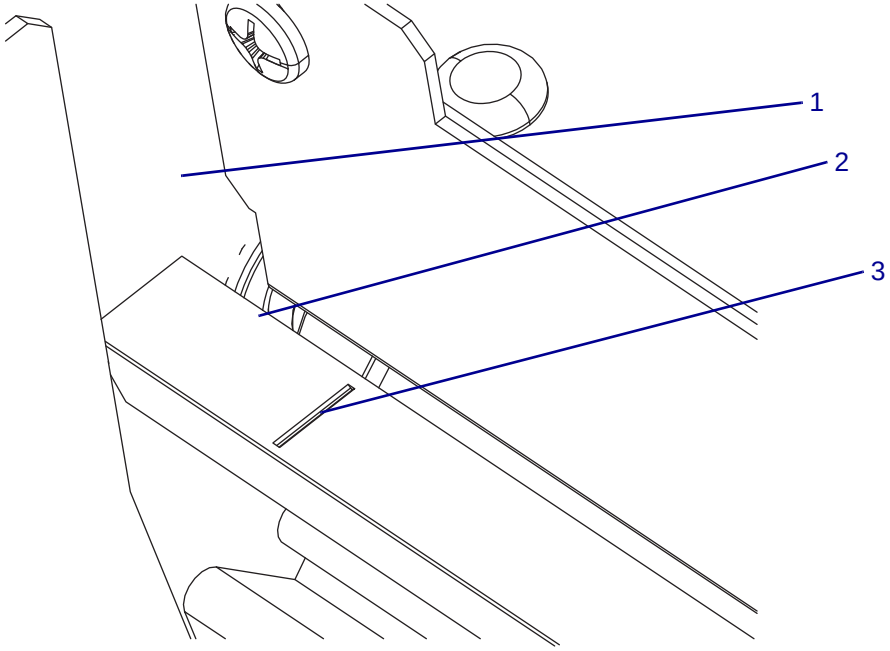
1	Mounting screws (2)
2	Peel/Tear bar
3	Orientation line

6. Slide the peel/tear bar out of the printer.

Install the New Peel/Tear Bar

1. See Figure 211. Ensure that the orientation line is facing up and is nearest the printer main frame.

Figure 211 • Orientation of the Peel/Tear Bar



1	Printer main frame
2	Peel/Tear bar
3	Orientation line

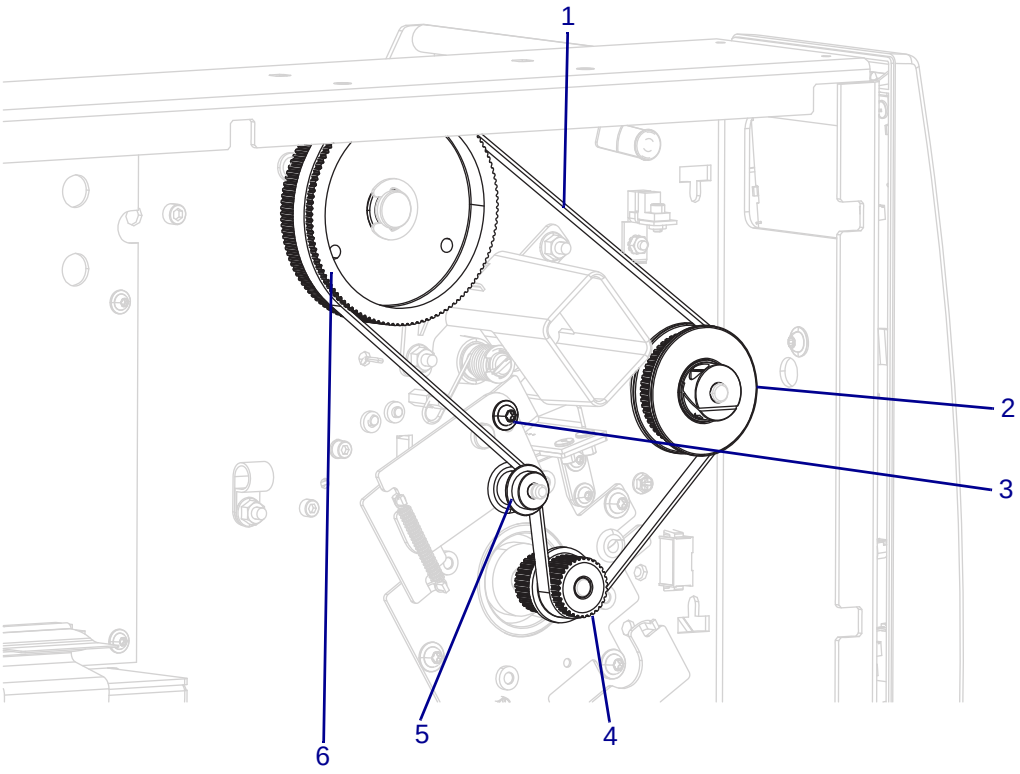
2. Align the peel /tear bar with the mounting holes and install one of the new mounting screws. Do not tighten at this time.
3. Install the other mounting screw.
4. Insert the 0.003 inch (0.075 mm) feeler gauge between the peel/tear bar and the platen roller.

   Ensure that the clearance is equal along the length of the platen roller.
5. Tighten the mounting screws.

Reinstall the Platen Pulley and Main Drive Belt

1. See Figure 212. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and then around the ribbon take-up pulley.

Figure 212 • Reinstall the Main Drive Belt



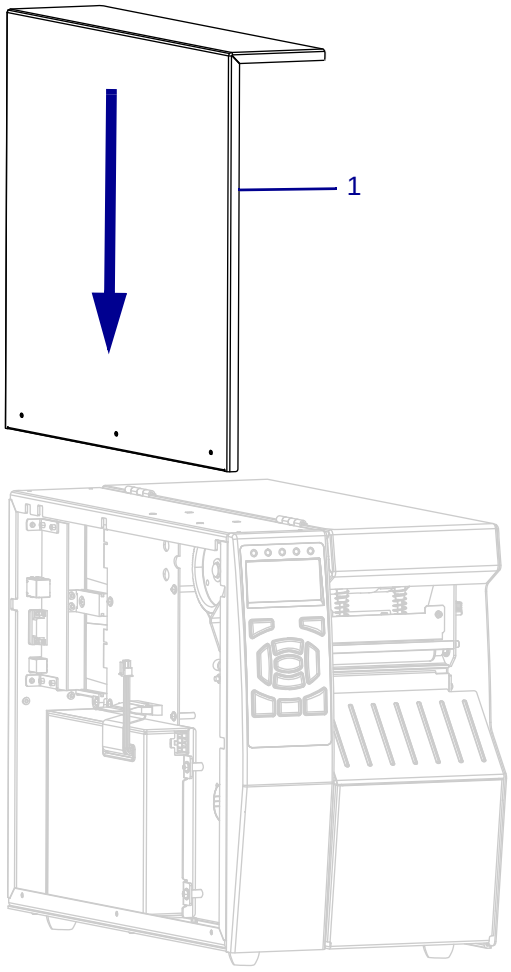
1	Main drive belt
2	Upper platen roller pulley
3	Main drive belt tensioner locking screw
4	Stepper motor pulley
5	Main drive belt tensioner idler pulley
6	Ribbon take-up spindle pulley

2. Ensure that the belt is on the inside part of the idler pulley.
3. Loosen the main drive belt tensioner locking screw.
4. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 213. Slide the electronics cover onto the printer.

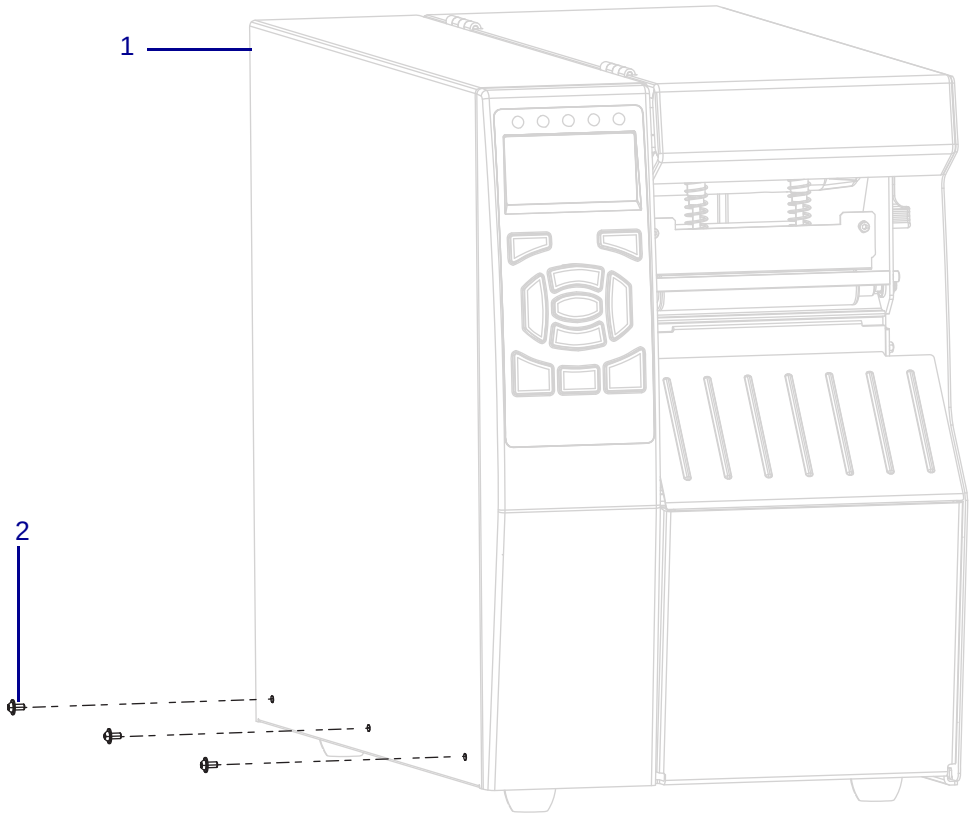
Figure 213 • Install the Electronics Cover



1	Electronics cover

2. See Figure 214. Install the three mounting screws.

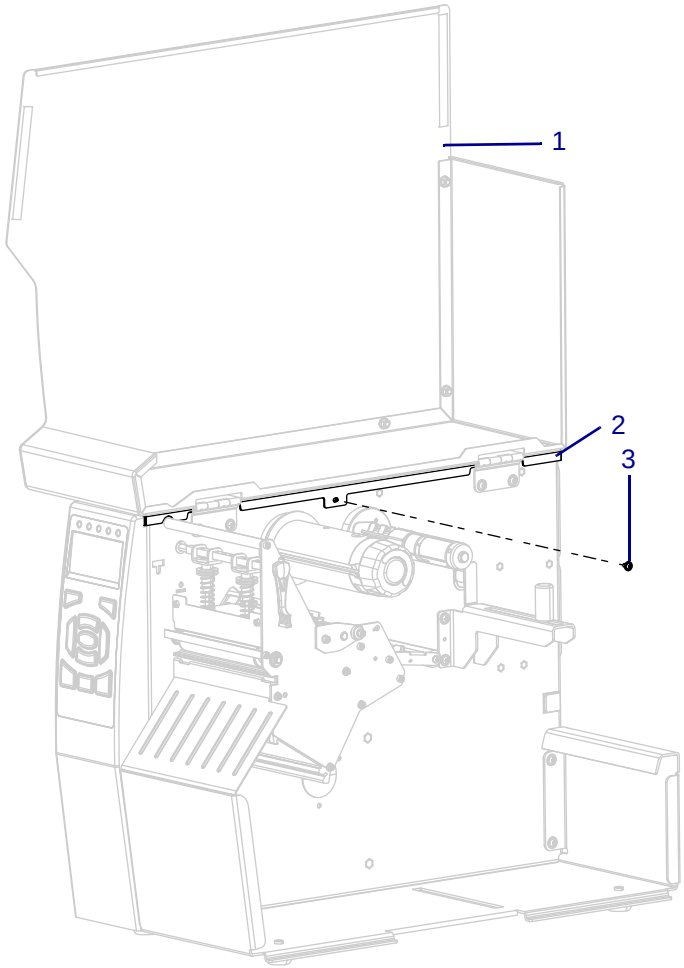
Figure 214 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 215. Open the media door and install the media side electronics cover mounting screw.

Figure 215 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reinstall the media and ribbon.
2. Reconnect the AC power cord and all data cables.
3. Turn on (**I**) the printer.

The installation is complete.

Media Handling Option Parts and Drawings

Figure 216 • Media Handling Options Kits Overview

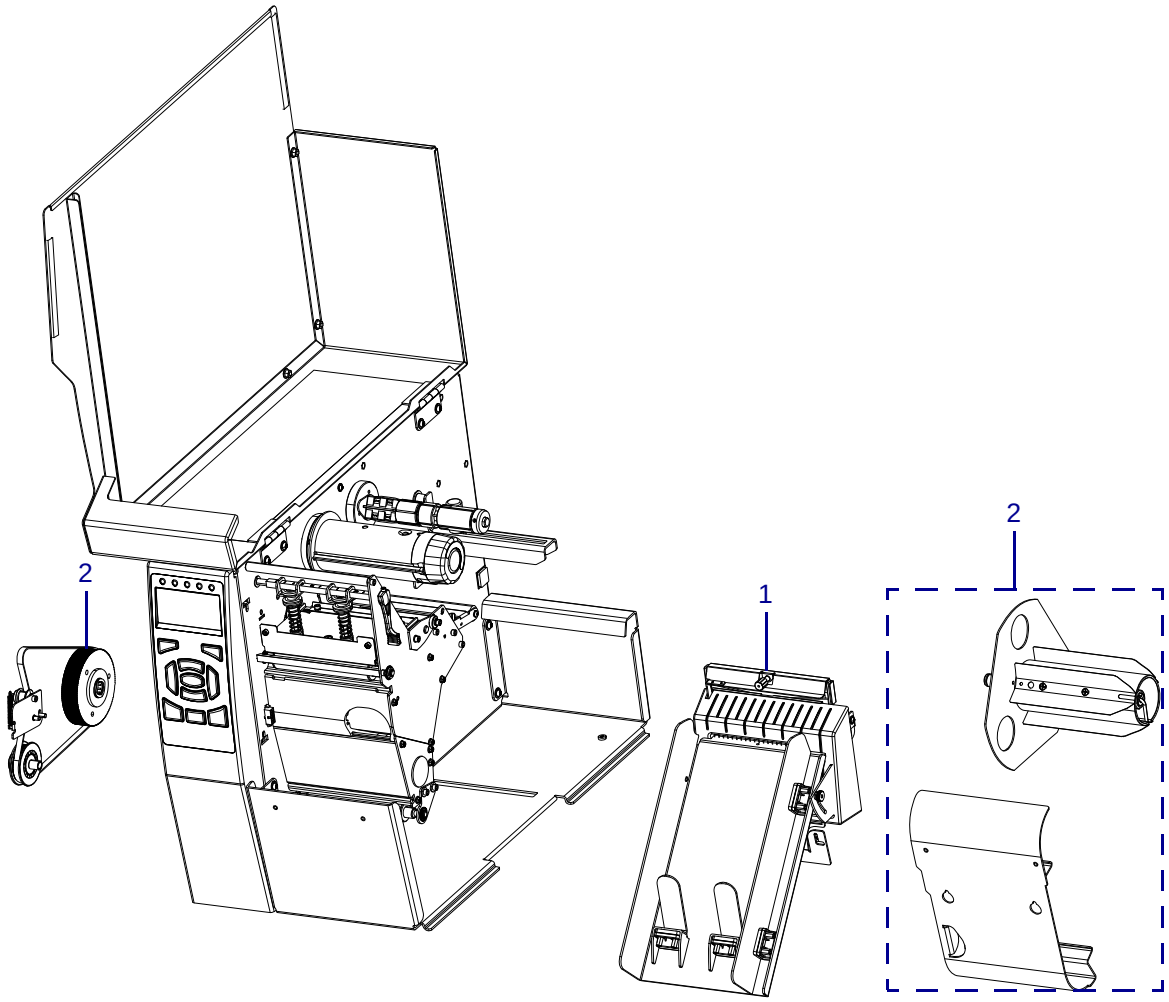


Table 30 • Kit Parts List

Item	Part Number	Description
1	**P1083347-020**	ZT510 Cutter Upgrade Kit
2	**P1083347-021**	ZT510 Rewind Option Kit

Figure 217 • Media Handling Option Kits 1

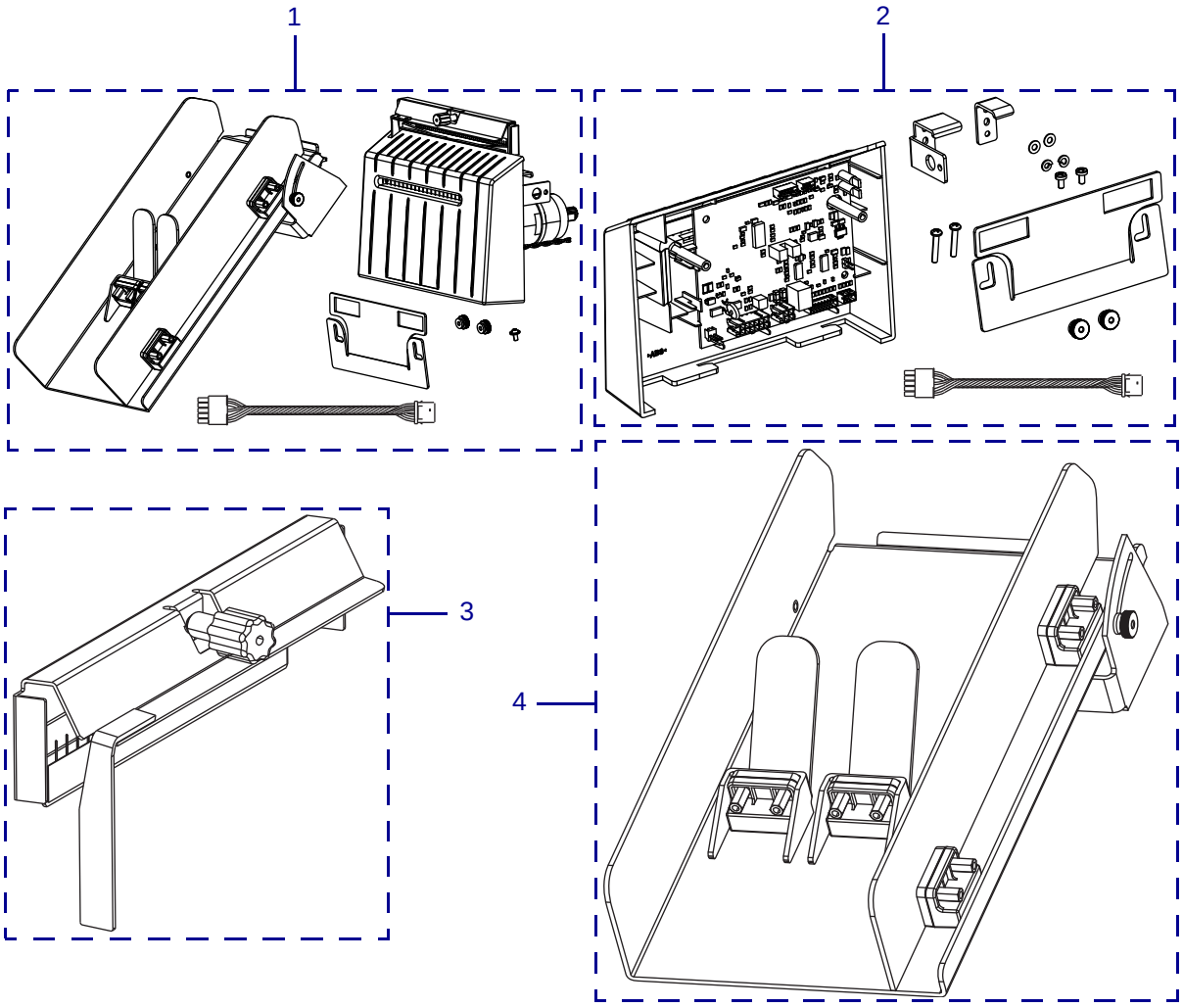


Table 31 • Media Handling Option Kits 1

Item	Part Number	Description
1	**P1083347-020**	ZT510 Cutter Upgrade Kit
2	**P1083347-022**	ZT510 Cutter Cover and PCBA Maintenance Kit
3	**P1066612**	Cutter Guard and Static Brush Maintenance Kit
4	**P1083347-033**	ZT510 Magnetic Cutter Catch Tray

Figure 218 • Media Handling Option Kits 2

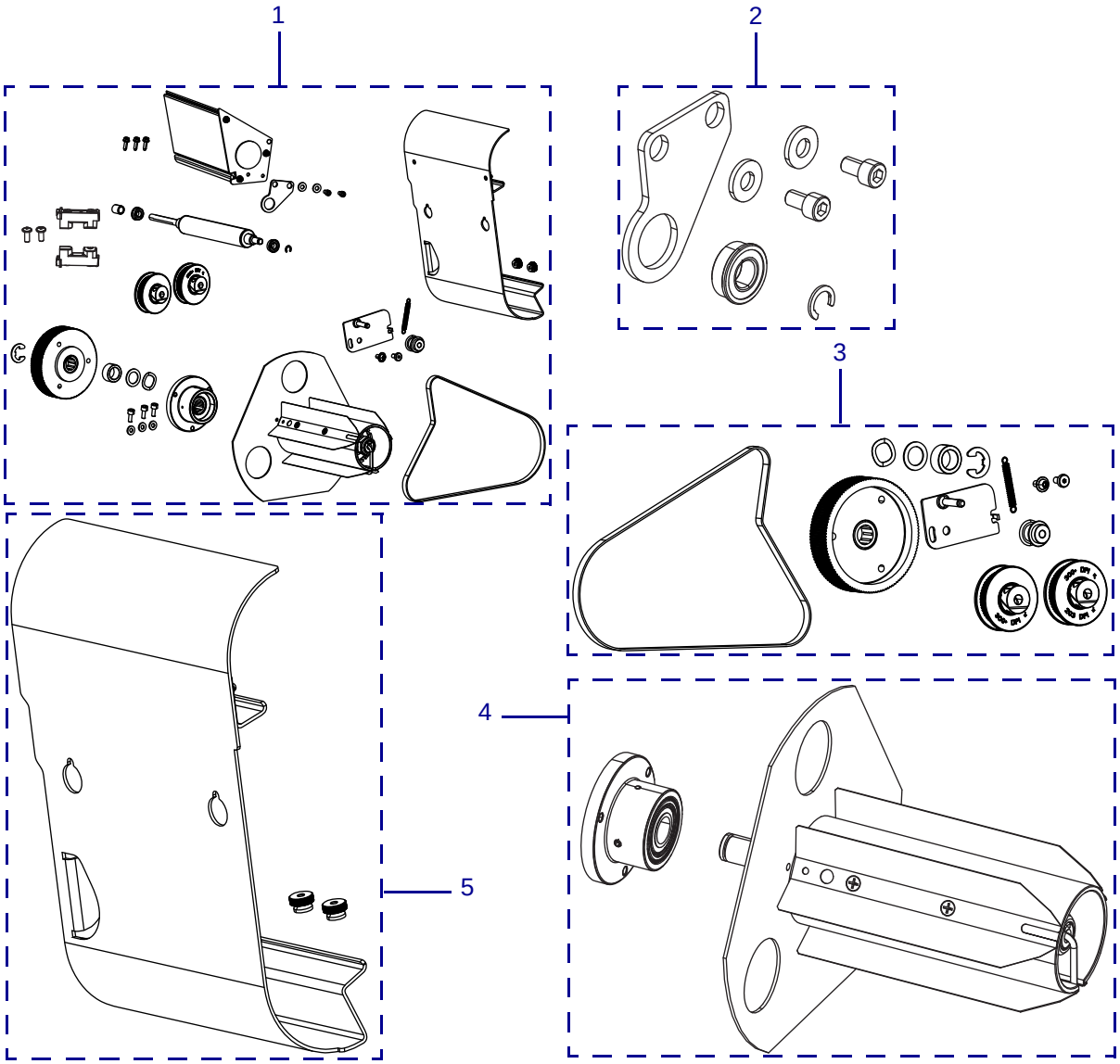


Table 32 • Media Handling Option Kits 2

Item	Part Number	Description
1	**P1083347-021**	Rewind Option Kit
2	**P1006105**	Rewind Platen Adjustment Bracket Maintenance Kit
3	**P1083347-019**	Rewind Drive System Maintenance Kit
4	**G41155M**	Rewind Spindle Maintenance Kit
5	**P1083347-032**	Rewind Plate Maintenance Kit

Cutter Upgrade Maintenance Kit

Installation Instructions

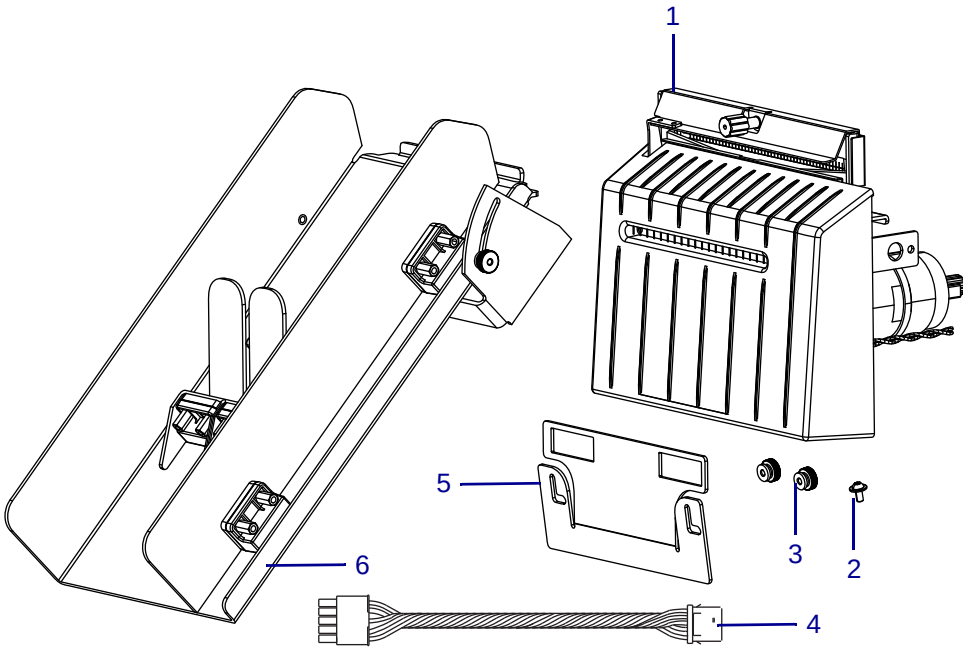
This kit includes the parts and documentation necessary to install the Cutter Upgrade in the ZT510 printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 219 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 33 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-020**	ZT510 Cutter Upgrade Kit
	1	1	*N/A*	Cutter Module
	2	1	*N/A*	Torx-Head Screw, M3 × 8, part of the miscellaneous hardware kit, **P1083347-026**
	3	2	*N/A*	Knurled Nut, M3, part of the miscellaneous hardware kit, **P1083347-026**
	4	1	*N/A*	Cutter Cable, Part of Electronics Cable Kit, **P1083347-014**
	5	1	*N/A*	Lower Cutter Bracket
	6	1	**P1083320-086**	Cutter Catch Tray

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Hex Key (Allen wrench) Set

Remove the Tear Trim Panel

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

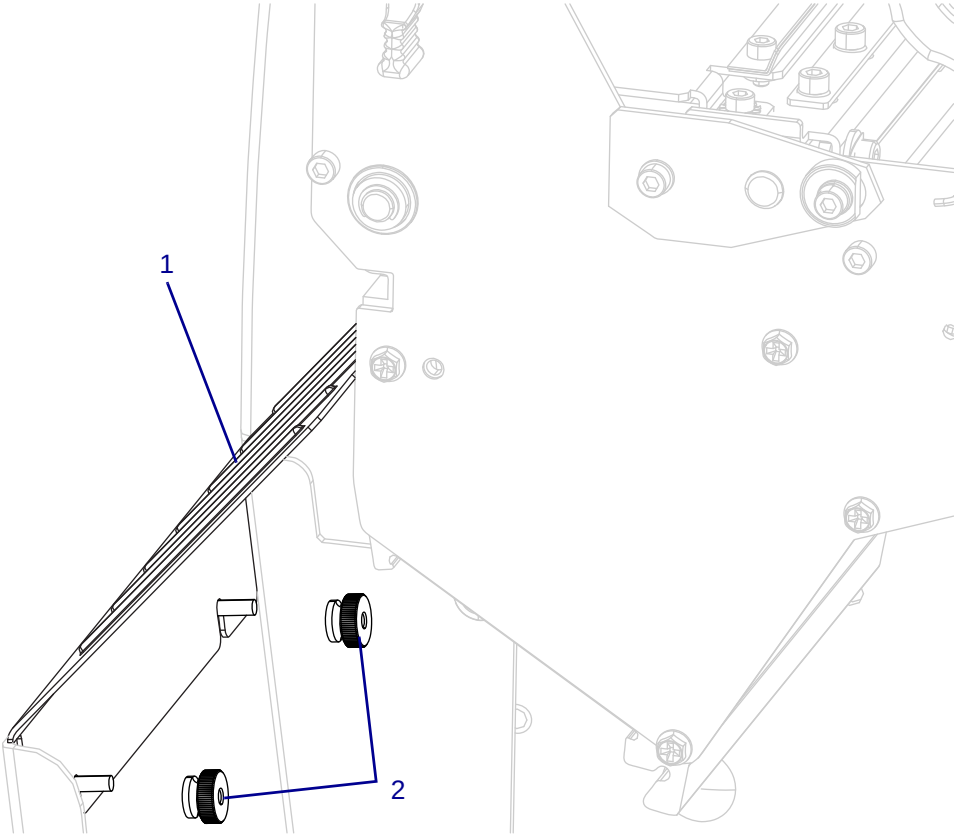
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

2. **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.

   Remove the media and ribbon.

3. Remove the two knurled nuts securing the tear trim panel.

Figure 220 • Remove the Tear Trim Panel



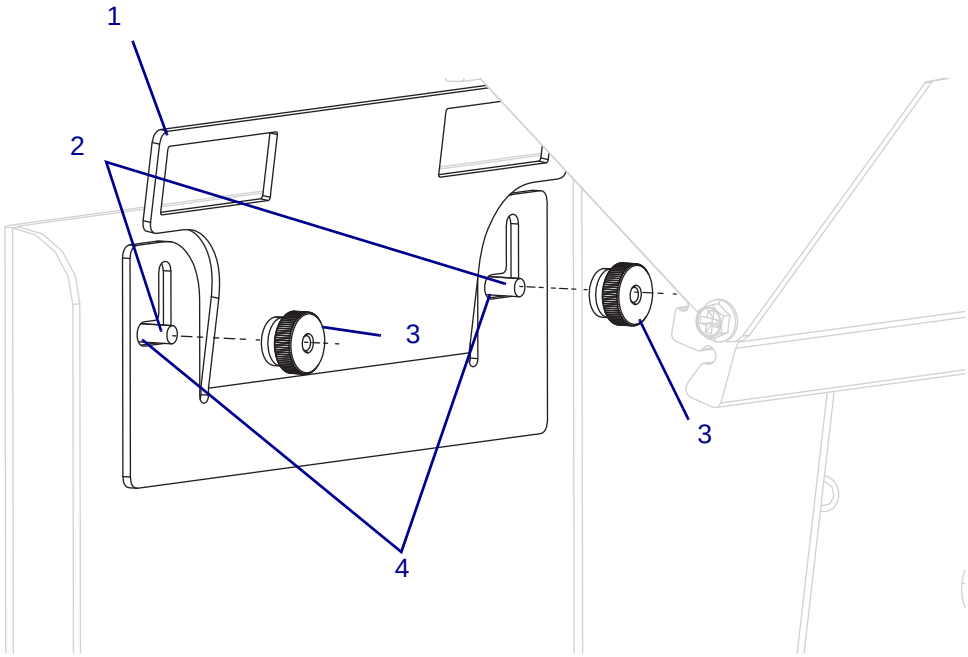
1	Trim panel
2	Knurled nuts (2)

4. Lift the trim panel out of the printer.

Install the Cutter Upgrade

1. Slide the cutter mounting bracket onto the two mounting studs on the printer base with the studs in the horizontal slots.

Figure 221 • Install the Cutter Mounting Bracket

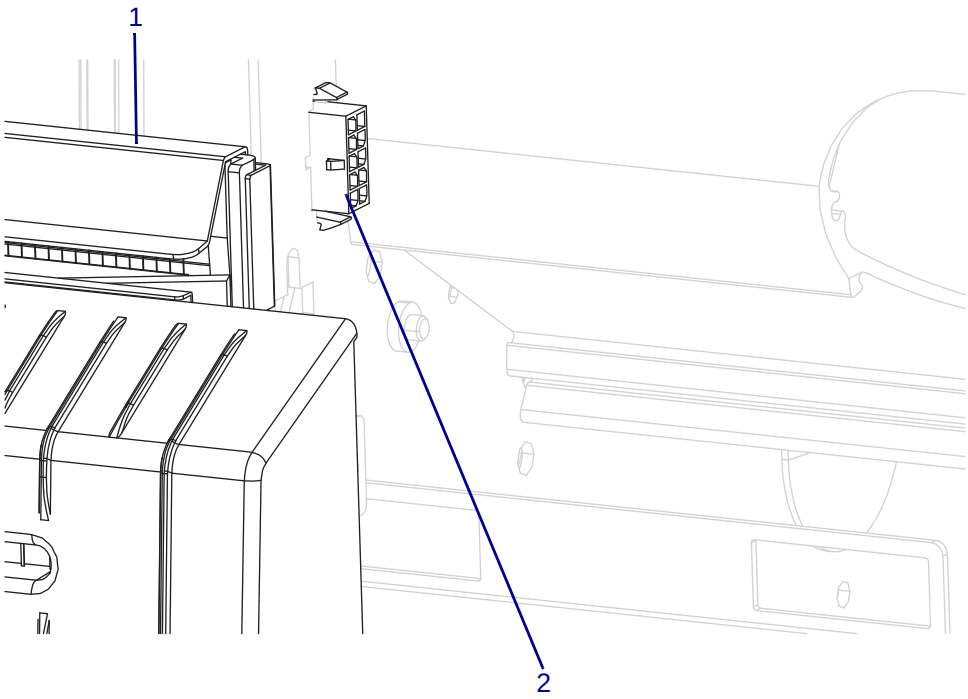


1	Lower cutter bracket
2	Mounting studs (2)
2	Knurled nuts (2)
4	Horizontal slots (2)

2. Install the two knurled nuts.

3. See Figure 222. While holding the cutter assembly, connect the cutter cable to the connector on the printer main frame.

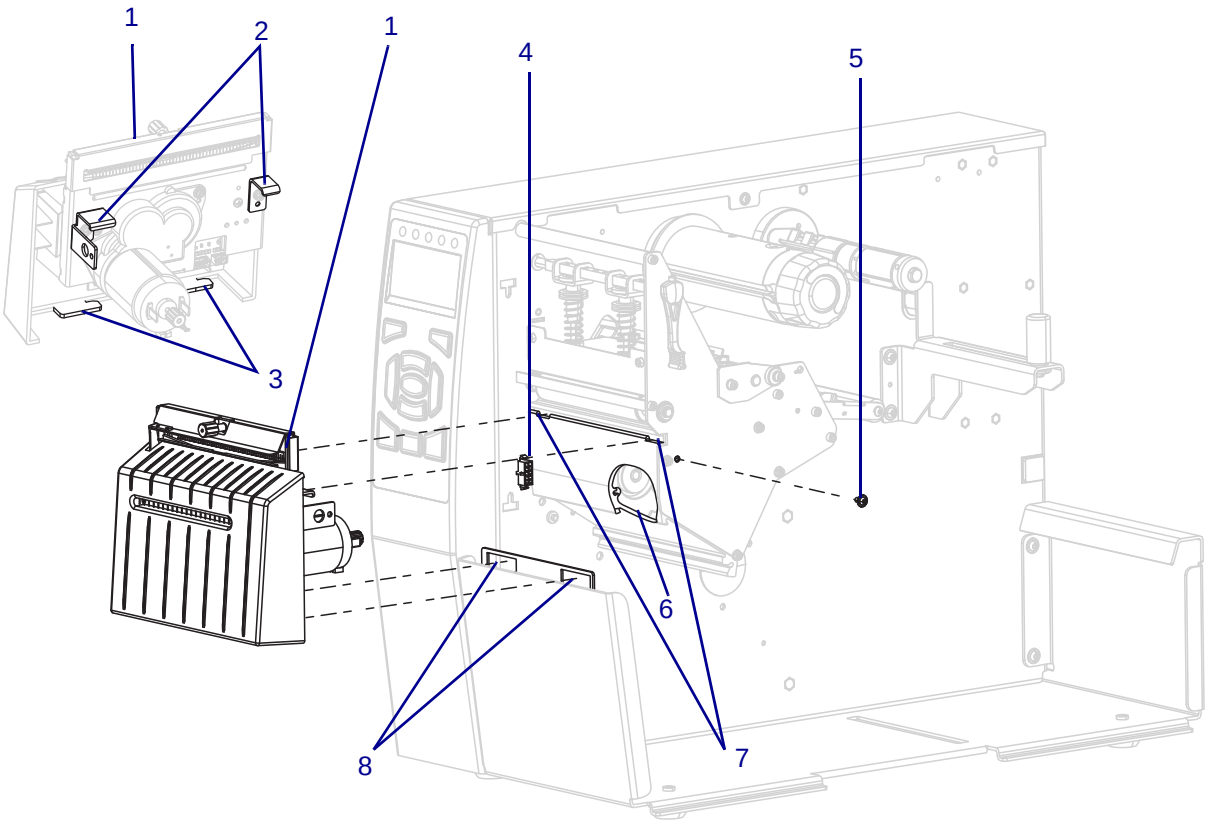
Figure 222 • Connect the Cutter Cable



1	Cutter assembly
2	Cutter cable connector

4. See Figure 223. Connect the cutter cable to the cutter cable connector.

Figure 223 • Install the Cutter Assembly

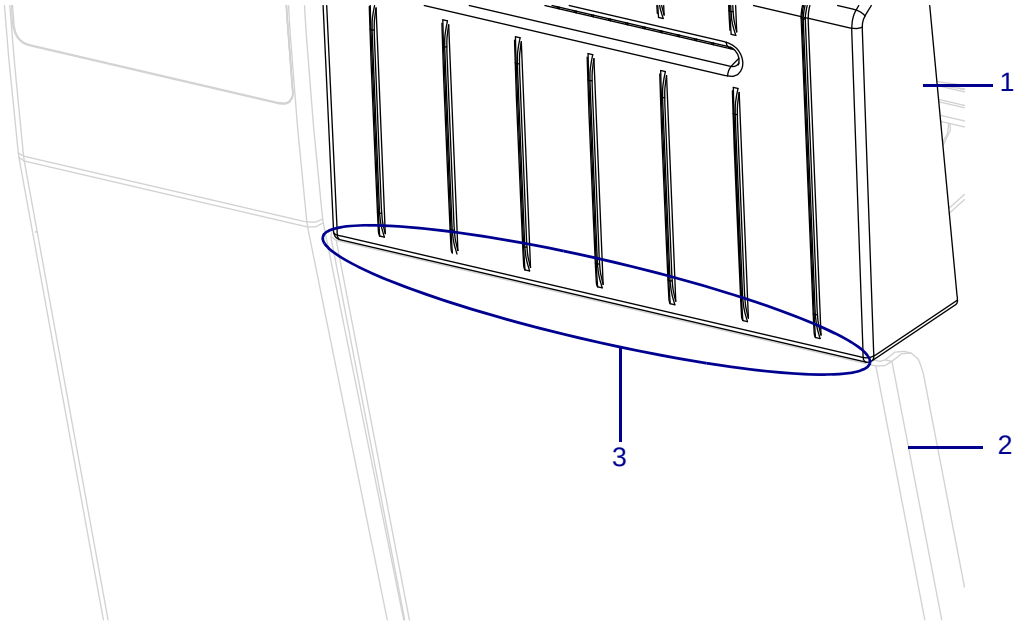


1	Cutter module
2	Cutter assembly tabs (2)
3	Cutter cover tabs (2)
4	Cutter cable connector
5	Cutter mounting screw
6	Cutter motor hole
7	Cutter assembly mounting slots (2)
8	Cutter cover mounting slots (2)

5. Align the cutter assembly and cutter cover tabs with the slots in the printer, and then slide the cutter assembly into the printer.
6. Slide the cutter module to the left.
7. Install the cutter mounting screw.
8. Loosen the two knurled nuts securing the cutter mounting bracket.
9. Slide the cutter mounting bracket toward the outside of the printer until the studs align with the vertical slots.

10. See Figure 224. Press downward on the cutter mounting bracket until the bottom of the cutter cover is aligned with the printer base, and then re-tighten the two knurled nuts.

Figure 224 • Align cutter with Base

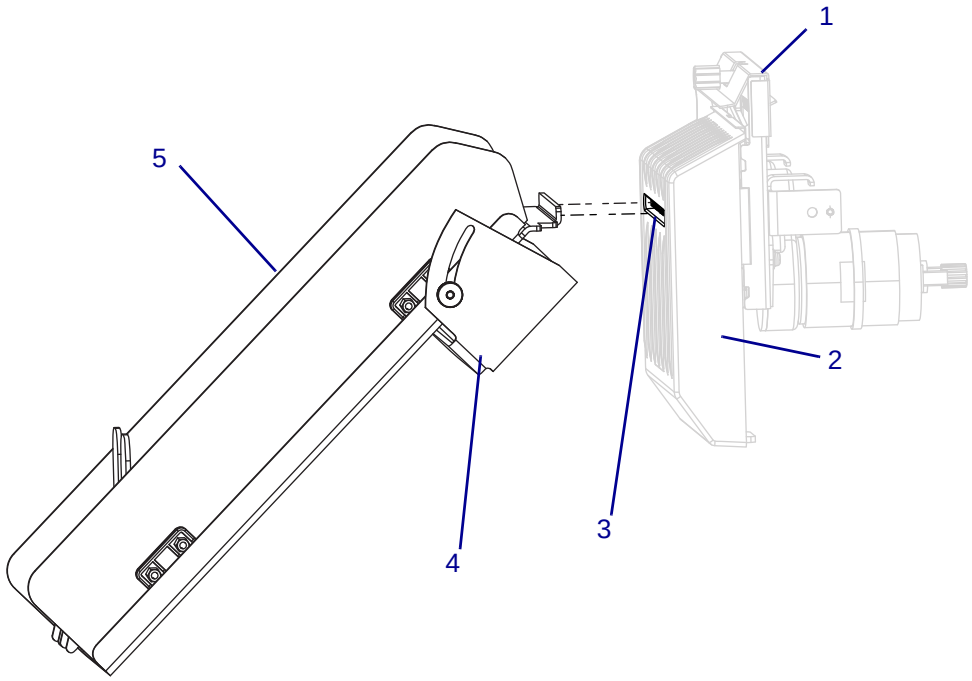


1	Cutter cover
2	Printer
3	Alignment area

Install the Cutter Catch Tray

1. See Figure 225. Place the catch tray in the cutter catch tray mounting slot of the cutter cover assembly. Let the pivot bracket rest against the cutter cover.

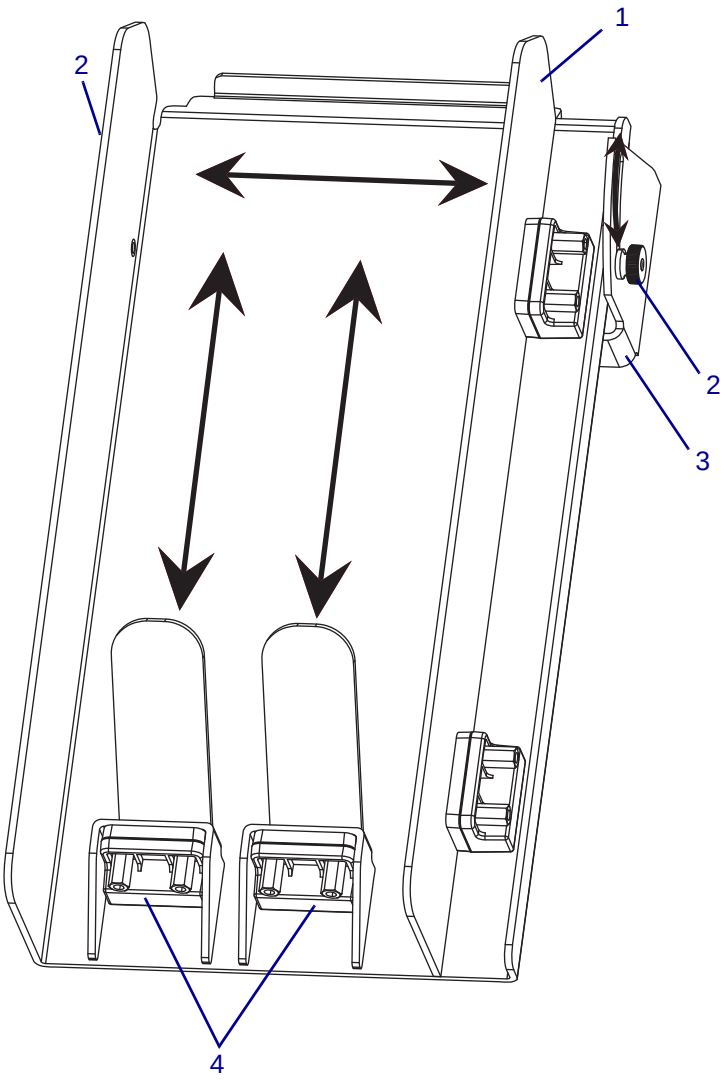
Figure 225 • Cutter Catch Tray



1	Cutter assembly
2	Cutter cover assembly
3	Cutter catch tray mounting slot
4	Cutter catch tray pivot bracket
5	Cutter catch tray

2. See Figure 226. Adjust the cutter tray rail and stops for your media width and length.

Figure 226 • Adjust the Cutter Tray



1	Movable rail
2	Pivot bracket lock nuts (2)
3	Pivot bracket
4	Movable stops (2)

3. Loosen the two pivot bracket lock nuts and adjust the angle of the cutter tray.

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

   Reinstall the media and ribbon.

5. Reconnect the AC power cord and all data cables.

6. Turn on (**I**) the printer.

The installation is complete.

Cutter Cover and PCBA Maintenance Kit

Installation Instructions

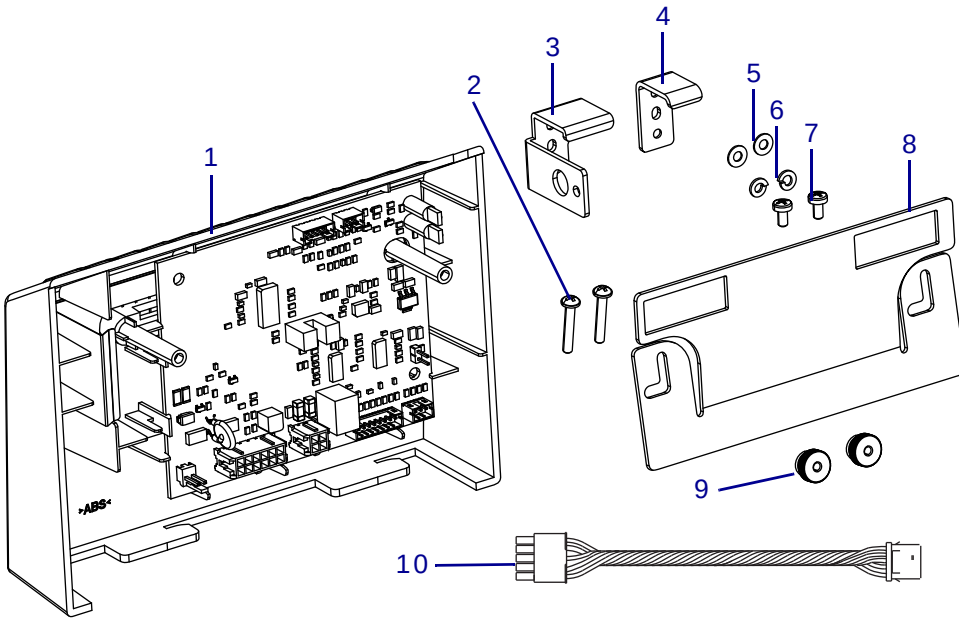
This kit includes the parts and documentation necessary to install the Cutter Cover and PCBA Maintenance Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 227 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 34 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-022**	ZT510 Cutter Cover and PCBA Maintenance Kit
	1	1	*N/A*	Cover and PCBA Assembly
	2	2	*N/A*	Thread Forming Screw, M3 × 18
To be used only if damaged				
	3	1	*N/A*	Outer Mounting Bracket
	4	1	*N/A*	Inner Mounting Bracket
	5	2	**HW10470**	Flat Washer, M3 (sold in quantities of 50)
	6	2	**HW10471**	Split Washer, M3 (sold in quantities of 50
	7	2	**HW78804**	Screw, M3 × 0.5 × 6 (sold in quantities of 50
	8	1	*N/A*	Lower Cutter Bracket
	9	2	*N/A*	Knurled Nut, part of miscellaneous hardware kit, **P1083347-026**
	10	1	*N/A*	Cutter Interface Cable

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat

Remove the Cutter Assembly

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

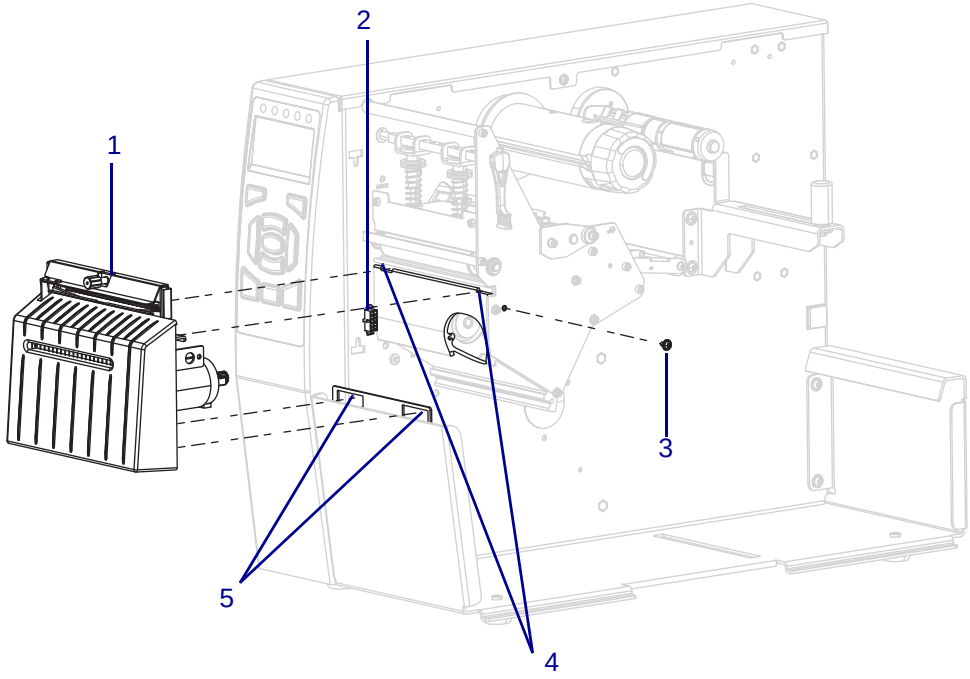
2. **Caution** • While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead.

   Remove the media and ribbon.

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

   See Figure 228. Remove the cutter assembly by removing the mounting screw.

Figure 228 • Remove the Cutter Module



1	Cutter module
2	Cutter interface cable connector
3	Cutter mounting screw
4	Cutter assembly mounting slots (2)
5	Cutter cover mounting slots (2)

4. Slide the cutter module to the right, and then pull the module out of the printer.
5. Disconnect the cutter interface cable from the cutter connector.

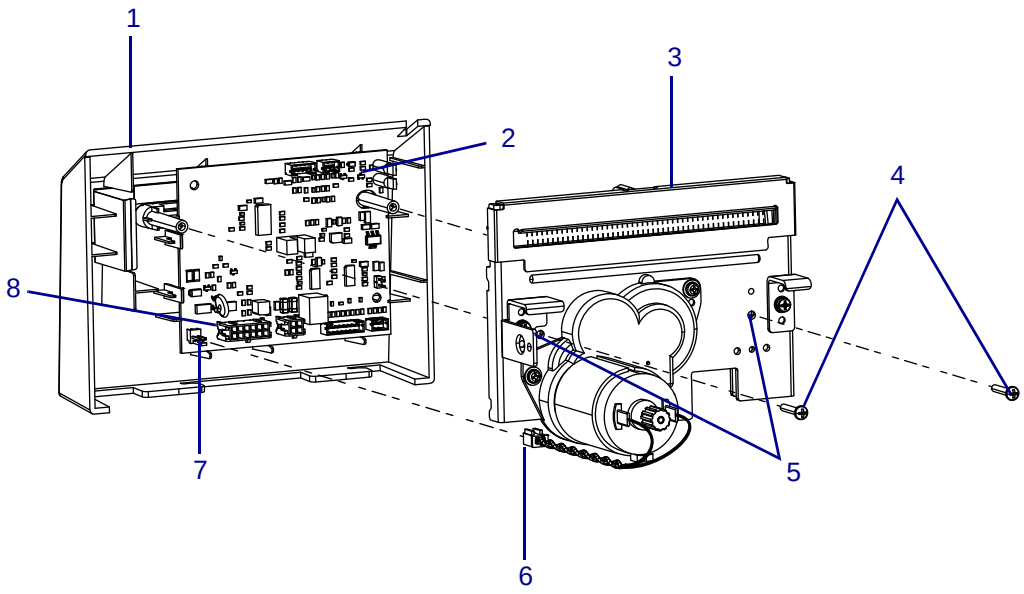
Remove the Cutter Cover and PCBA

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

   Connect yourself to an antistatic device.

2. Disconnect the cutter motor cable from J5 on the cutter PCB.

Figure 229 • Remove the Cutter Cover



1	Cutter cover
2	Cutter PCBA
3	Cutter assembly
4	Cutter cover mounting screws (2)
5	Cutter cover mounting holes (2)
6	Cutter motor cable
7	Cutter motor cable connector, J5
8	Cutter interface cable connector, J1

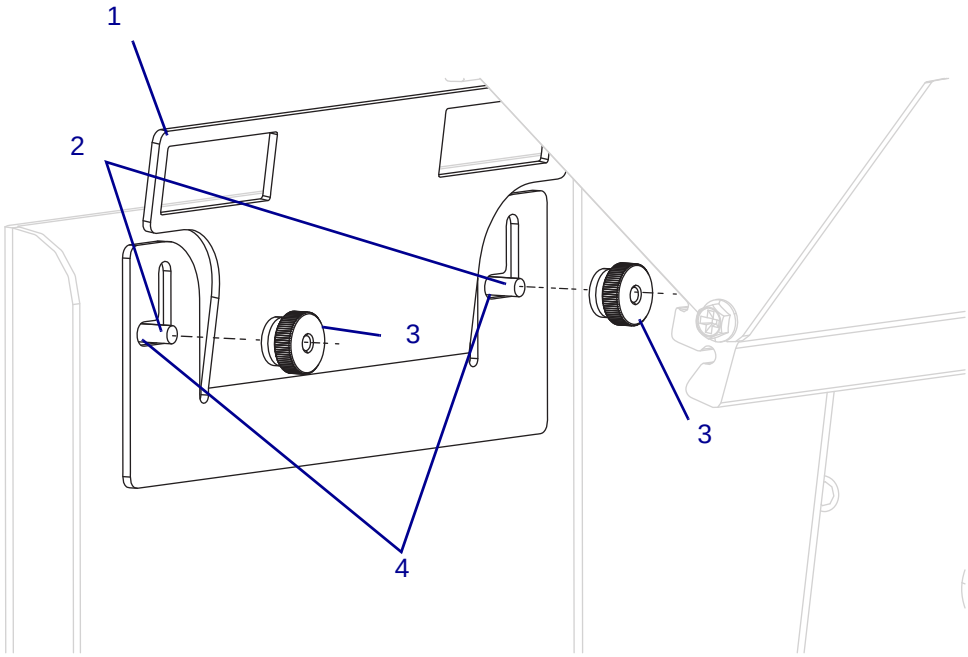
3. Remove and discard the cutter interface cable from J1 on the cutter PCB.
4. Remove and discard the two cutter cover mounting screws and PCBA from the cutter assembly.
5. Is the lower cutter mounting bracket damaged?

If…	Then…
Yes	Continue with *Remove the Lower Cutter Mounting Bracket*.
No	Go to *Install the Cutter Cover and PCBA* on page 351.

Remove the Lower Cutter Mounting Bracket

1. If lower cutter mounting bracket is damaged, remove and discard the two knurled nuts and the lower cutter mounting bracket.

Figure 230 • Install the Cutter Mounting Bracket



1	Lower cutter bracket
2	Mounting studs (2)
3	Knurled nuts (2)
4	Horizontal slots (2)

Install the New Lower Cutter Mounting Bracket

1. Slide the cutter mounting bracket onto the two mounting studs on the printer base with the studs in the horizontal slots.
2. Install the two knurled nuts.

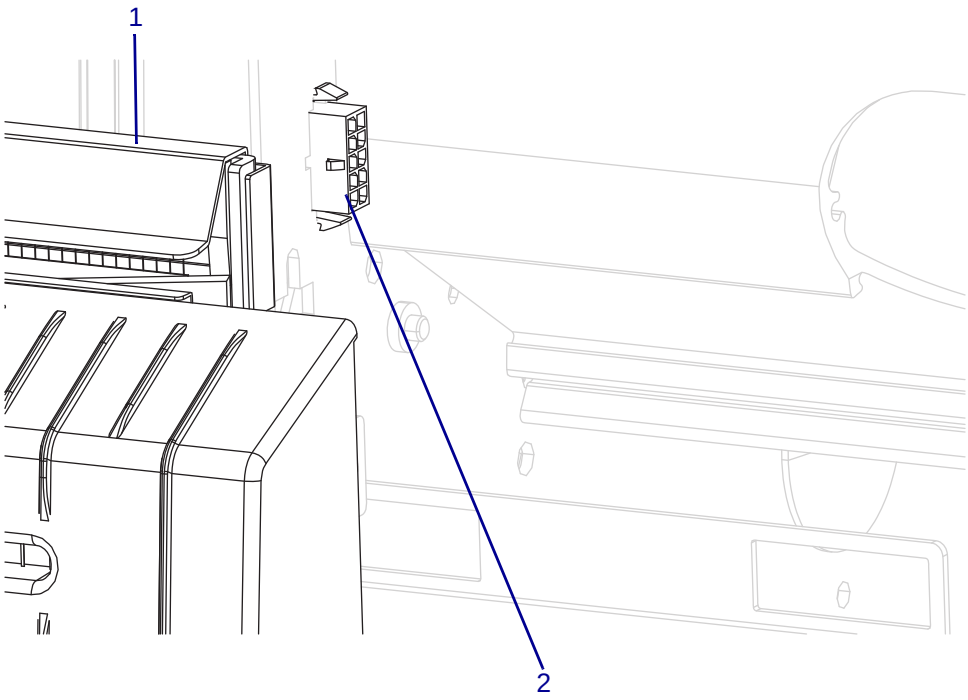
Install the Cutter Cover and PCBA

1. See Figure 229 on page 349. Align the cutter cover with the cutter assembly mounting holes.
2. Install the two mounting screws.
3. Connect the cutter motor cable to J5 on the cutter PCBA.
4. Connect the new cutter interface cable to J1 on the cutter PCBA.

Reinstall the Cutter Module

1. See Figure 231. While holding the cutter assembly, connect the other end of the cutter interface cable to the connector on the printer main frame.

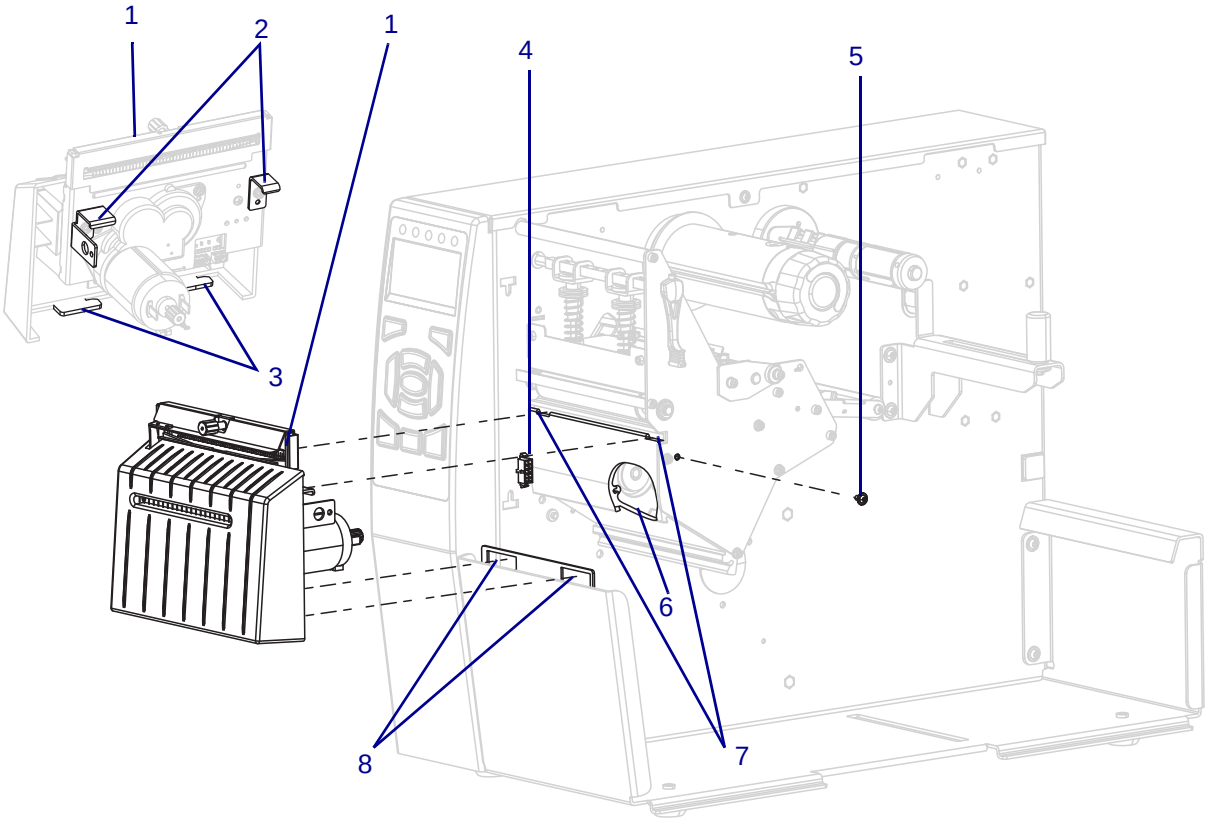
Figure 231 • Connect the Cutter Cable



1	Cutter assembly
2	Cutter cable connector

2. See Figure 232. Align the cutter assembly and cutter cover tabs with the slots in the printer, and then slide the cutter assembly into the printer.

Figure 232 • Install the Cutter Assembly

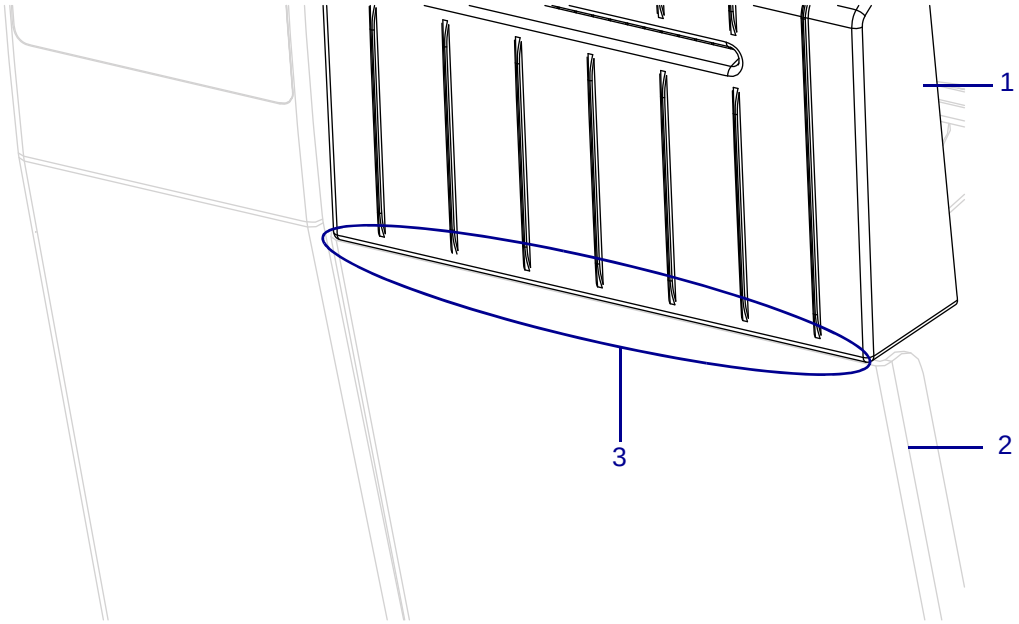


1	Cutter module
2	Cutter assembly tabs (2)
3	Cutter cover tabs (2)
4	Cutter cable connector
5	Cutter mounting screw
6	Cutter motor hole
7	Cutter assembly mounting slots (2)
8	Cutter cover mounting slots (2)

3. Slide the cutter module to the left.
4. Install the cutter mounting screw.
5. Loosen the two knurled nuts securing the cutter mounting bracket.
6. Slide the cutter lower mounting bracket toward the outside of the printer until the studs align with the vertical slots.

7. See Figure 233. Press downward on the cutter mounting bracket until the bottom of the cutter cover is aligned with the printer base, and then re-tighten the two knurled nuts.

Figure 233 • Align cutter with Base



1	Cutter cover
2	Printer
3	Alignment area

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

   Reinstall the media and ribbon.

9. Reconnect the AC power cord and all data cables.

10. Turn on (**I**) the printer.

The installation is complete.

Cutter Guard and Static Brush Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Cutter Guard and Static Brush Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 234 • Kit Contents

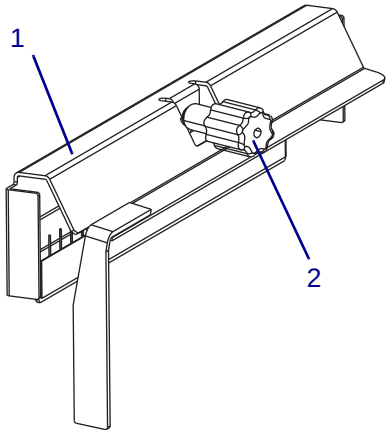


Table 35 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1066612**	Cutter Guard and Static Brush Maintenance Kit
	1	1	*N/A*	Cutter Guard and Static Brush
	2	1	*N/A*	Thumbscrew

N/A = Not available as a separate part (listed for identification purposes only).

Remove the Old Cutter Guard and Static Brush

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

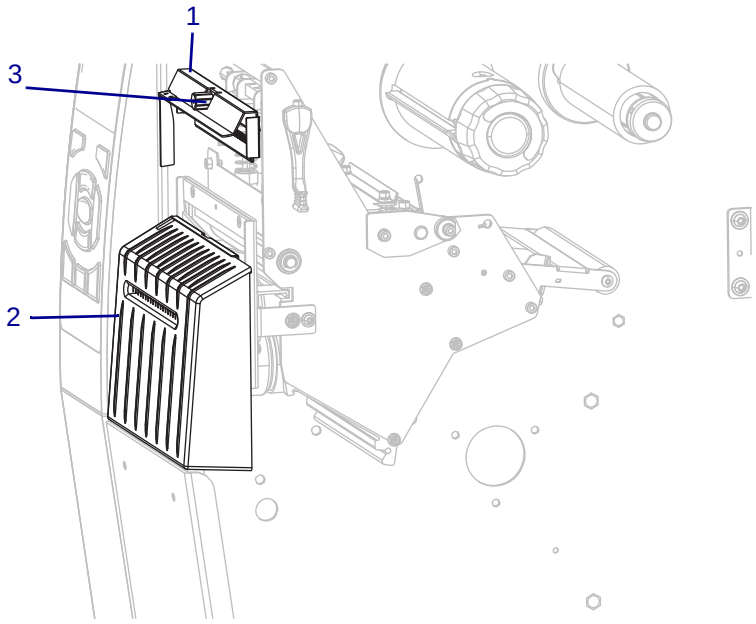
P1091971-001
6/30/17

2. **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.

   Remove the media from the printer.

3. See Figure 235. Loosen the thumbscrew securing the cutter guard and static brush assembly.

Figure 235 • Remove the Cutter Guard and Static Brush Assembly



1	Cutter guard and static brush assembly
2	Cutter assembly
3	Thumbscrew

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

   Lift the cutter guard and static brush assembly up off of the cutter assembly and discard it.

Install the New Cutter Guard and Static Brush

1. Remove the new thumbscrew and cutter guard and static brush assembly from the maintenance kit.
2. See Figure 235 on page 355. Slide the cutter guard and static brush assembly onto the cutter assembly.
3. Tighten thumbscrew to secure the cutter guard and static brush assembly.
4. **Caution** • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media.
5. Reconnect the AC power cord and data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Magnetic Cutter Tray Maintenance/Option Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Magnetic Cutter Catch Tray Kit into the ZT510 printers.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 236 • Kit Contents

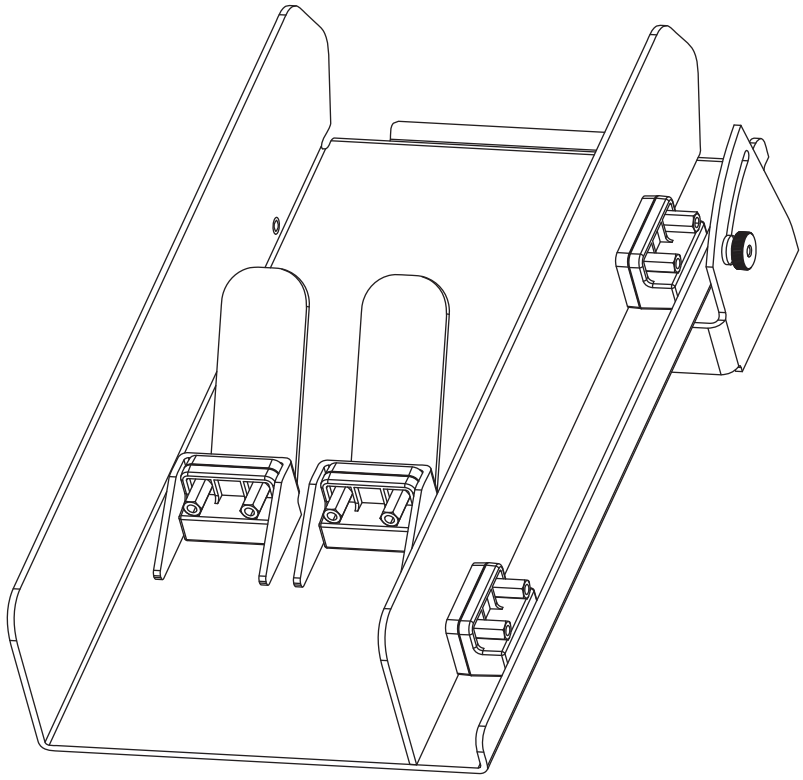


Table 36 • Parts List

✓	Item	Qty	Part Number	Description
		1	**P1083347-033**	ZT510 Magnetic Cutter Catch Tray
Bold = Part available for purchase.				

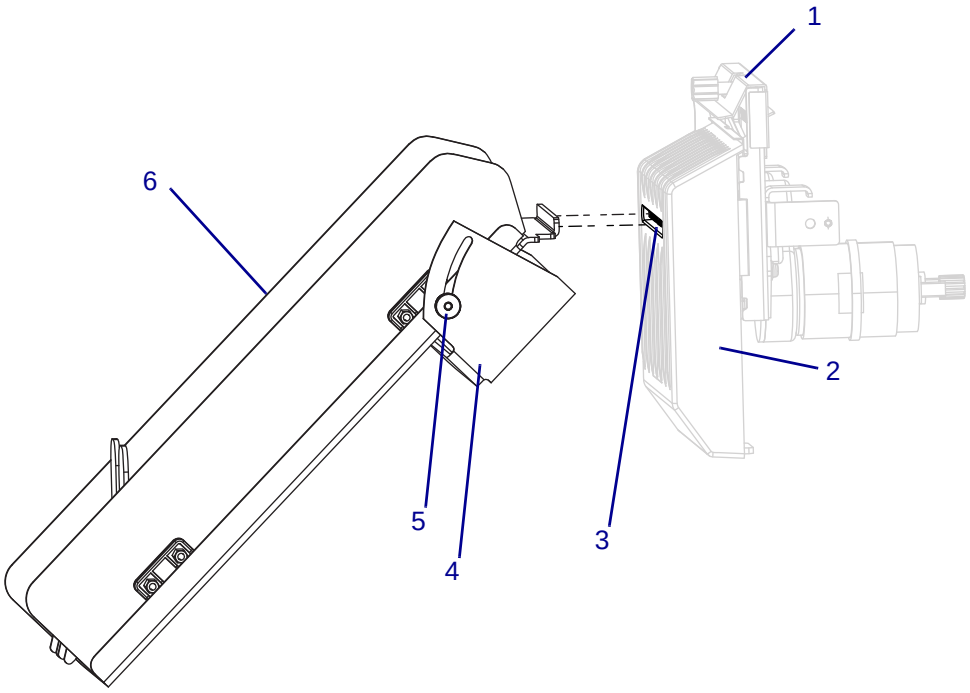
©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Install the Cutter Catch Tray

1. See Figure 237. Place the catch tray in the cutter catch tray mounting slot of the cutter cover assembly. Let the pivot bracket rest against the cutter cover.

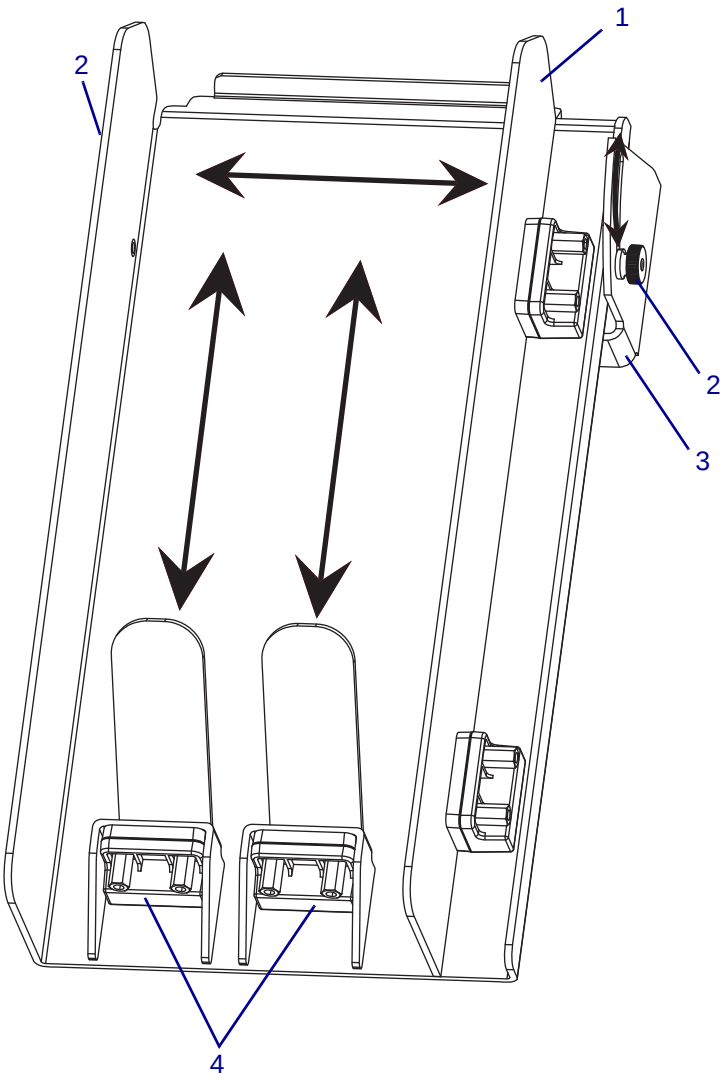
Figure 237 • Cutter Catch Tray



1	Cutter assembly
2	Cutter cover assembly
3	Cutter catch tray mounting slot
4	Cutter catch tray pivot bracket
5	Cutter catch tray angle knurled nuts (2)
6	Cutter catch tray

2. See Figure 238. Adjust the cutter tray rail and stops for your media width and length.

Figure 238 • Adjust the Cutter Catch Tray



1	Movable rail
2	Pivot bracket lock nuts (2)
3	Pivot bracket
4	Movable stops (2)

3. Loosen the two pivot bracket lock nuts and adjust the angle of the cutter tray.

The installation is complete.

Rewind Upgrade Kit

Installation Instructions

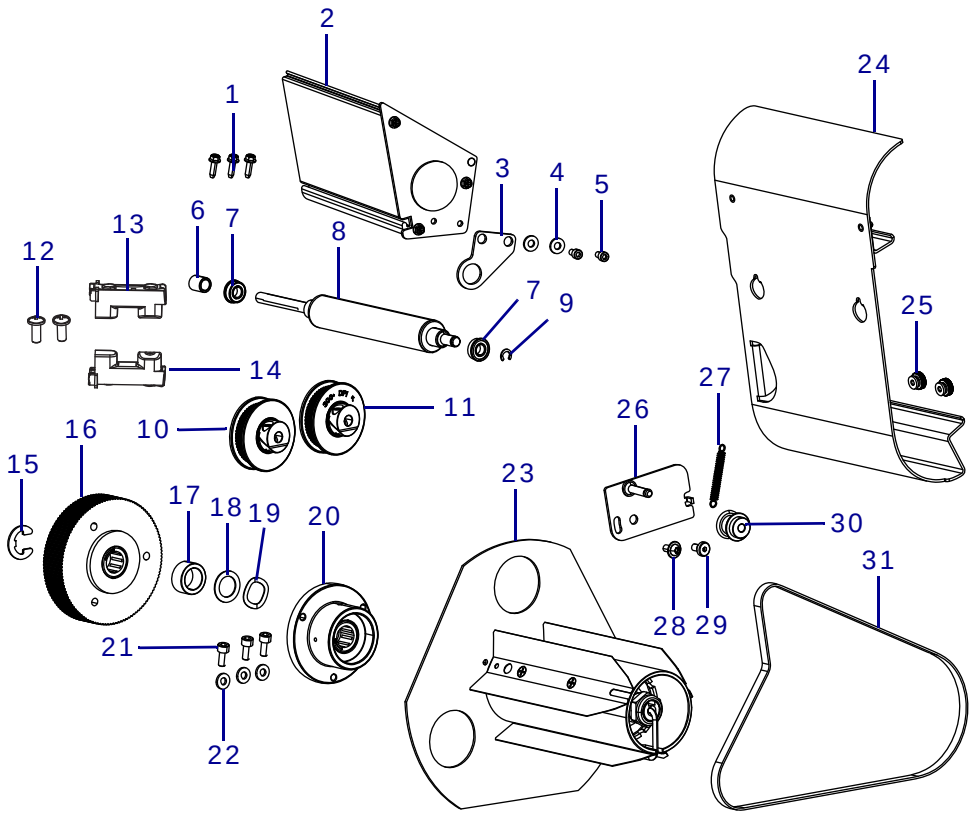
This kit includes the parts and documentation necessary to install the Rewind Upgrade Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 239 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 37 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-021**	ZT510 Rewind Option Kit
	1	3	**HW44001**	Screw, M3 × 0.5 × 11 Thread Forming (sold in quantities of 25)
	2	1	*N/A*	Extrusion
	3	1	*N/A*	Adjustment Roller Plate
	4	2	**HW40193**	Flat Washer, 0.406 × 0.172 (sold in quantities of 25)
	5	2	**HW30392-004**	Screw, 6-32 × 0.25
	6	1	*N/A*	Spacer
	7	2	*N/A*	Roller Bearing
	8	1	**P1083347-012**	Platen Roller Maintenance Kit
	9	1	**HW33810**	C-clip (sold in quantities of 100)
	10	1	*N/A*	300 dpi Rewind Platen Pulley
	11	1	*N/A*	203 dpi Rewind Platen Pulley
	12	2	**HW45937**	Screw, M4 × 10 (sold in quantities of 10)
	13	1	**P1083347-021**	Take-Label Sensor Maintenance Kit
	14	1	**P1083347-021**	Take-Label Sensor Maintenance Kit
	15	1	**HW33811**	E-ring (sold in quantities of 25)
	16	1	*N/A*	Media Take-up Spindle Pulley
	17	1	*N/A*	Spacer, 0.75 × 0.52 × 0.36
	18	1	**HW33804**	Flat Washer, 0.76 × 0.51 × 0.03 (sold in quantities of 25)
	19	1	**HW30115**	Wave Washer, 0.74 × 0.52 × 0.08 (sold in quantities of 25)
	20	1	*N/A*	Bearing Housing
	21	3	**HW30393-006**	Screw, 8-32 × 0.28 (sold in quantities of 25)
	22	3	**HW40193**	Flat Washer, 0.375 × 0.172 × 0.048 (sold in quantities of 25)
	23	1	*N/A*	Media Rewind Spindle
	24	1	**P1083347-032**	Media Rewind Plate Kit
	25	2	*N/A*	Knurled Nut, part of the miscellaneous hardware kit, **P1083347-026**
	26	1	*N/A*	Tensioner Bracket
	27	1	*N/A*	Tension Spring
	28	1	*N/A*	Torx-Head Screw, M4 × 8, part of miscellaneous parts kit, **P1083347-026**
	29	1	*N/A*	Shoulder Screw, 5.5mm Diameter 2mm, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**
	30	1	*N/A*	Idler Pulley
	31	1	**P1083347-017**	Drive Belt Maintenance Kit

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

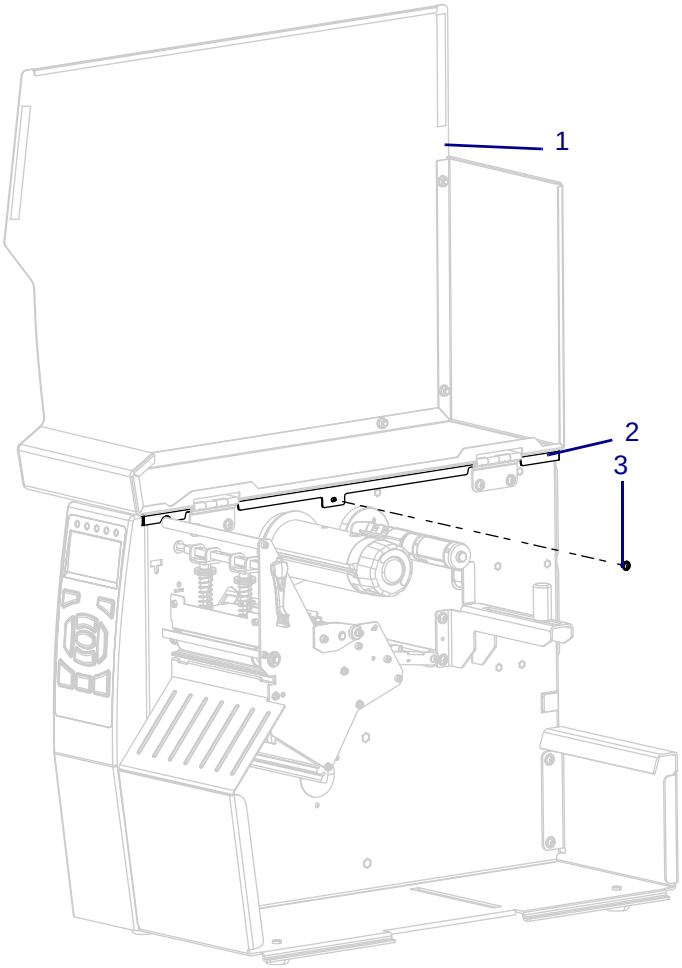
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 240 • Locate the Electronics Cover Mounting Screw

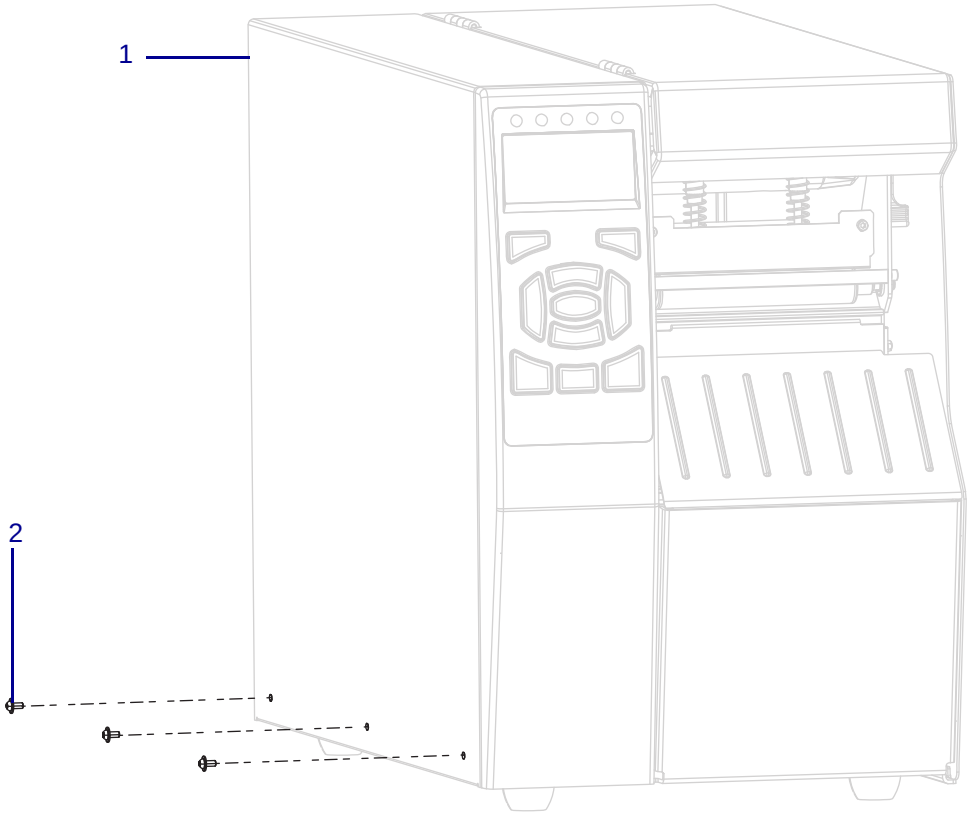


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 241. Remove the three mounting screws securing the electronics cover to the printer.

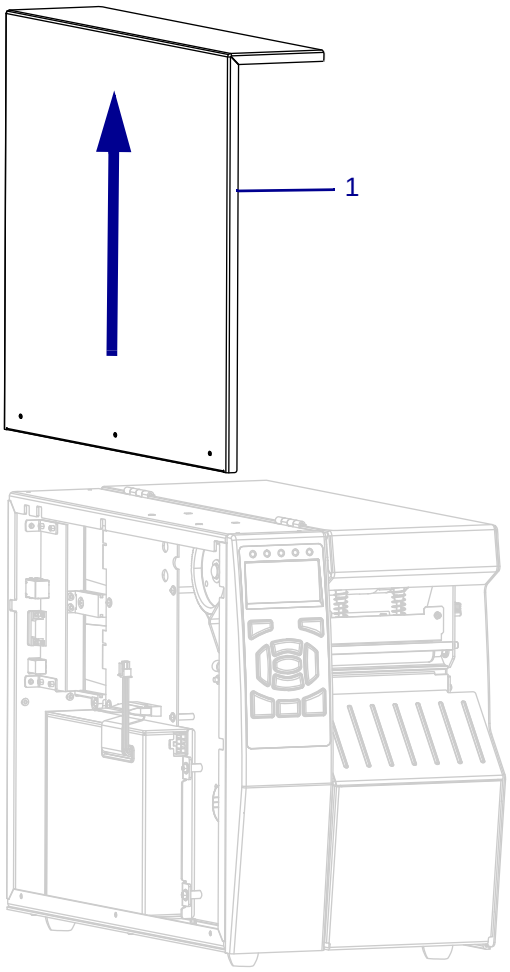
Figure 241 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 242. Lift the electronics cover off of the printer.

Figure 242 • Remove the Electronics Cover

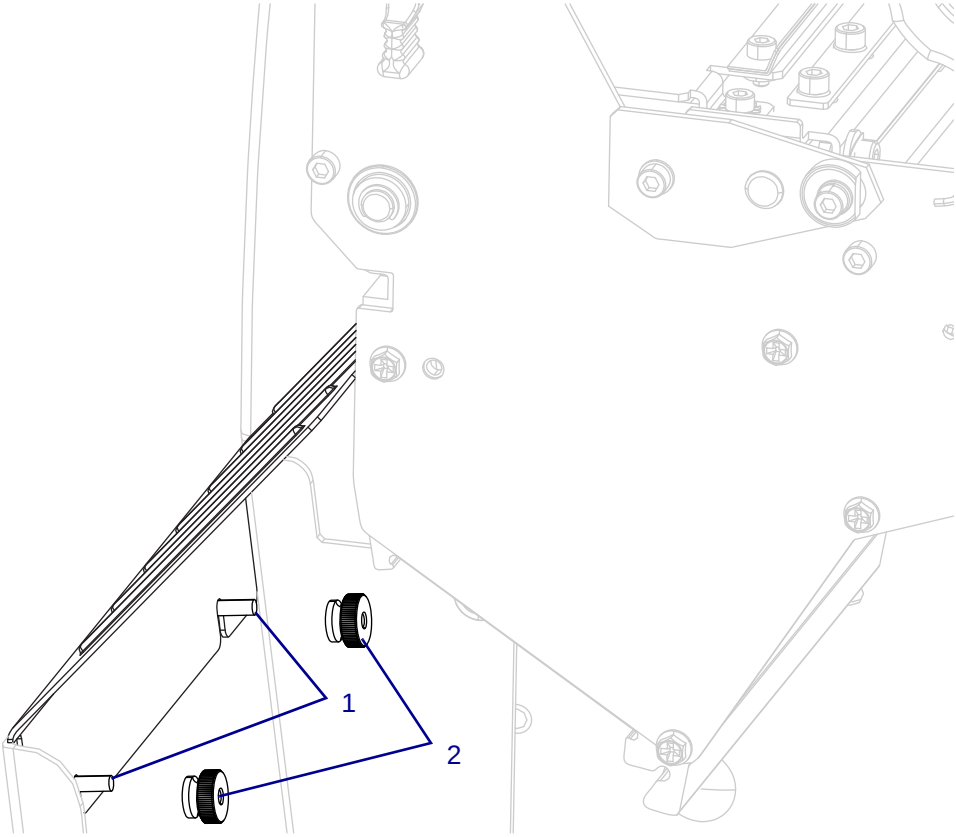


1	Electronics cover

Install the Rewind Option

1. See Figure 243. Remove the tear trim panel by loosening the two knurled nuts securing it.

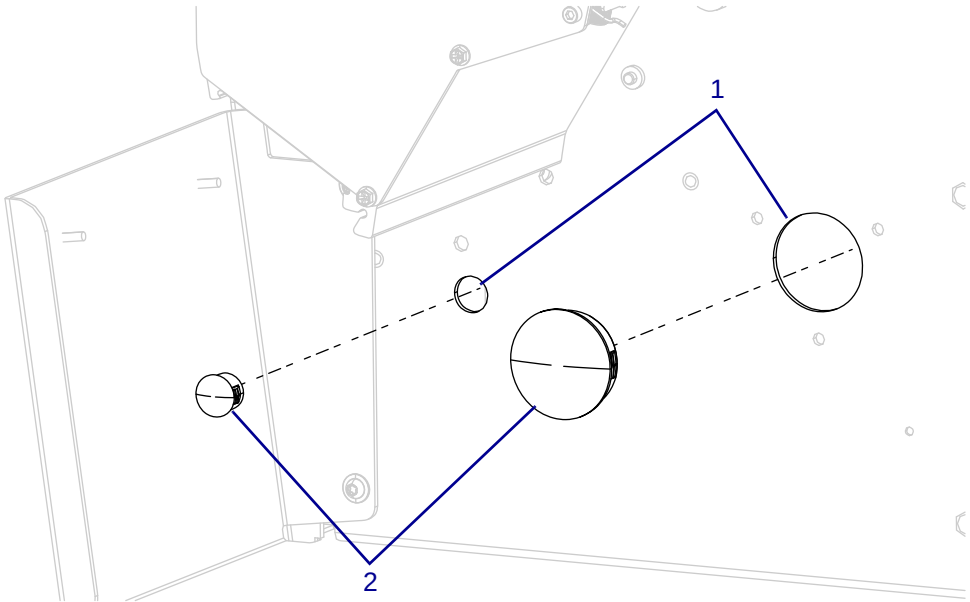
Figure 243 • Remove the Tear Trim Panel



1	Mounting studs (2)
2	Knurled nuts (2)

2. See Figure 244. Remove the two rewind mounting hole plugs.

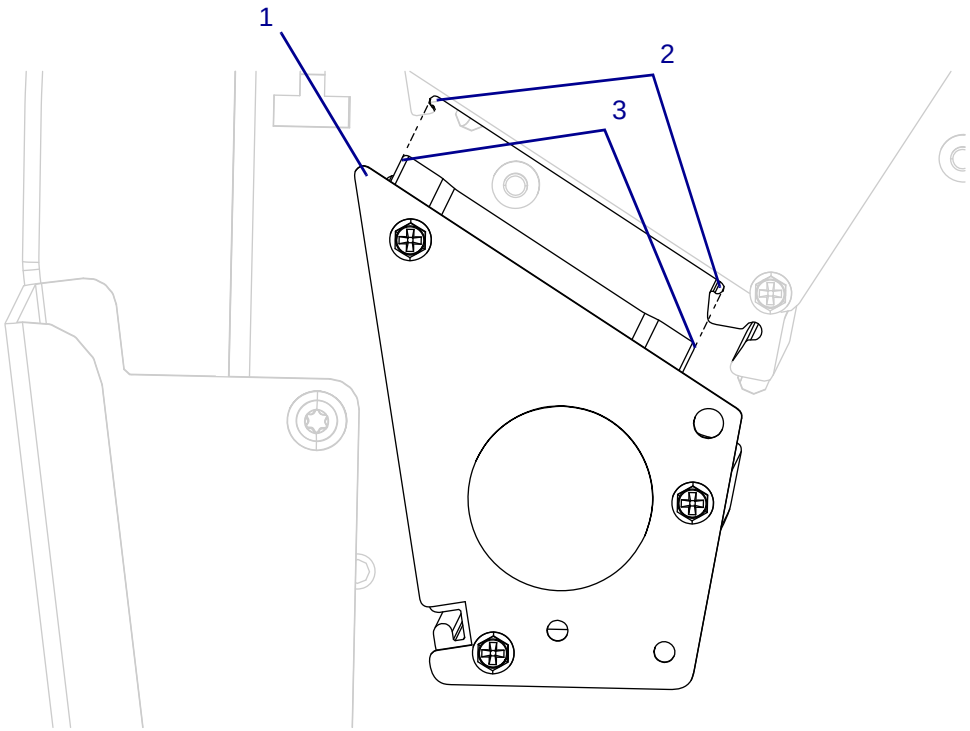
Figure 244 • Remove the Rewind Mounting Hole Plugs



1	Rewind mounting holes (2)
2	Rewind mounting hole plugs (2)

3. See Figure 245. Slide the rewind extrusion into the printer.

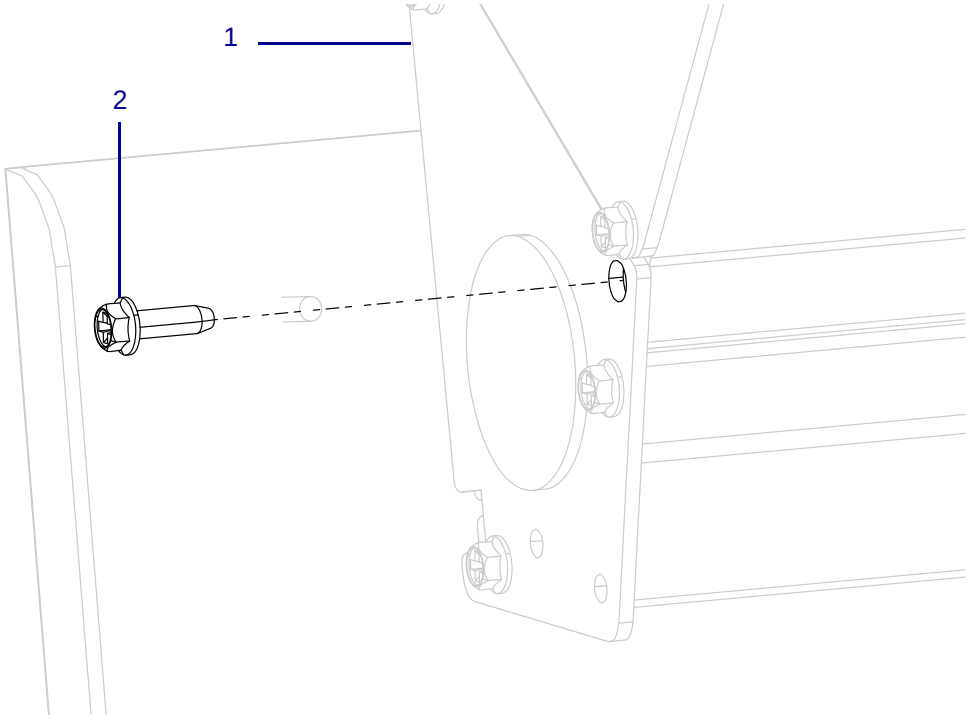
Figure 245 • Install the Rewind Extrusion



1	Rewind extrusion
2	Rewind extrusion guides (2)
3	Rewind extrusion slides (2)

4. See Figure 246. Install the rewind extrusion mounting screw.

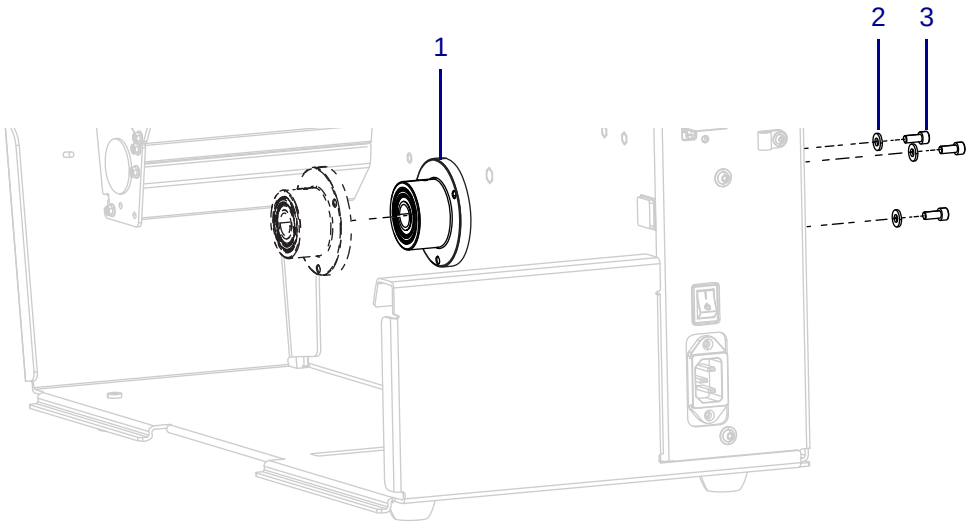
Figure 246 • Install the Mounting Screw



1	Rewind extrusion
2	Rewind mounting screw

5. See Figure 247. Align the rewind spindle bearing housing with the mounting hole in the printer main frame.

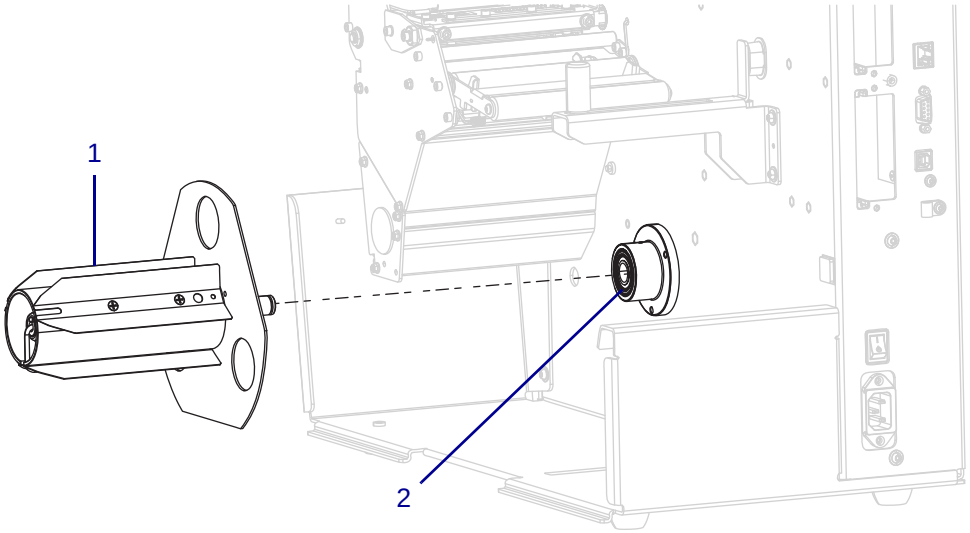
Figure 247 • Install the Bearing Housing



1	Rewind bearing housing
2	Flat washers (3)
3	Mounting screws (3)

6. From the electronics side, install the three flat washers and mounting screws.
7. See Figure 248. Slide the rewind spindle into the rewind bearing housing.

Figure 248 • Slide the Rewind Spindle into the Bearing Housing



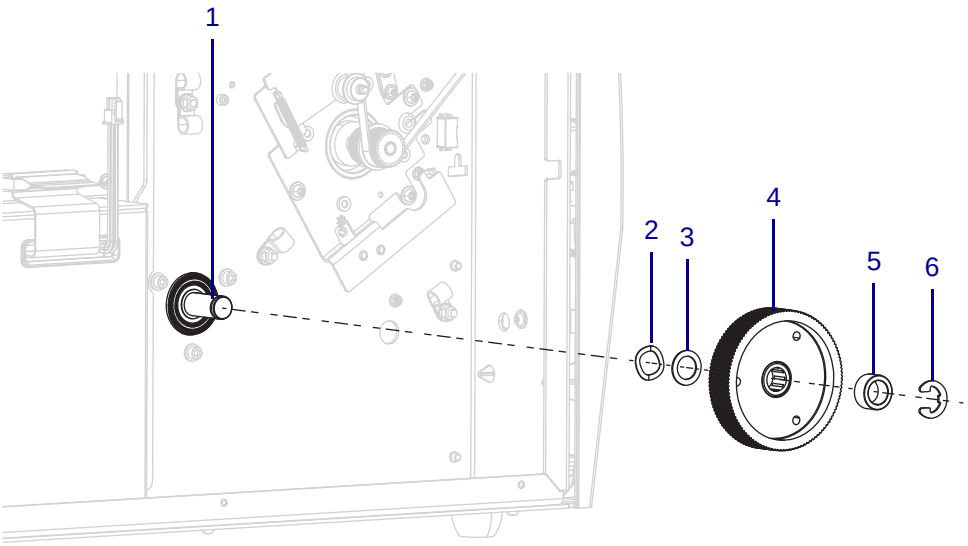
1	Rewind spindle
2	Rewind bearing housing

8.

Caution • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

See Figure 249. From the electronics side, install the wave washer, flat washer, rewind pulley, spacer, and E-ring.

Figure 249 • Install the Rewind Spindle Pulley

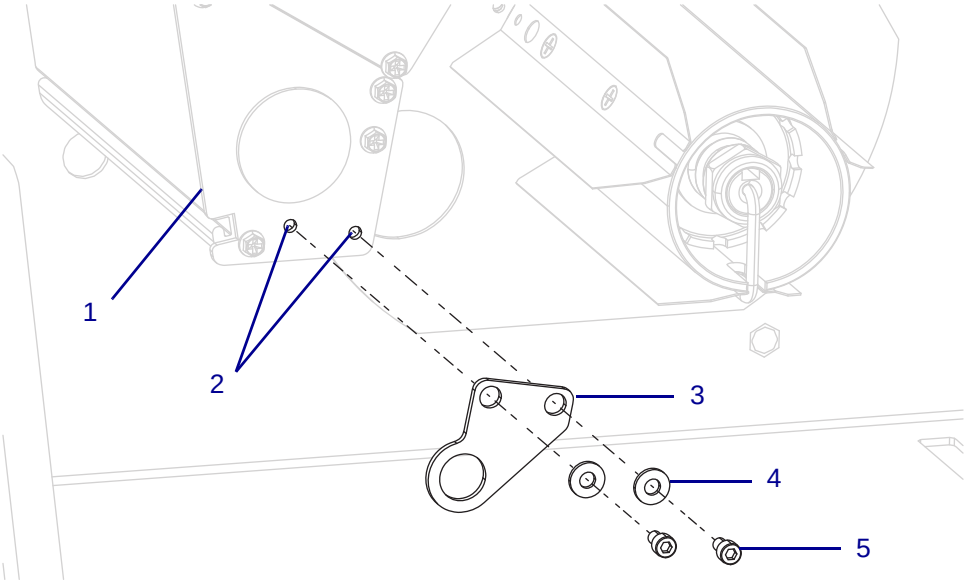


1	Rewind spindle shaft
2	Wave washer
3	Flat washer
4	Rewind spindle pulley
5	Spacer
6	E-ring

Install the Rewind Platen Roller

1. See Figure 250. From the media side, align the rewind platen roller bracket with the two mounting holes in the rewind extrusion.

Figure 250 • Install the Rewind Platen Roller Bracket

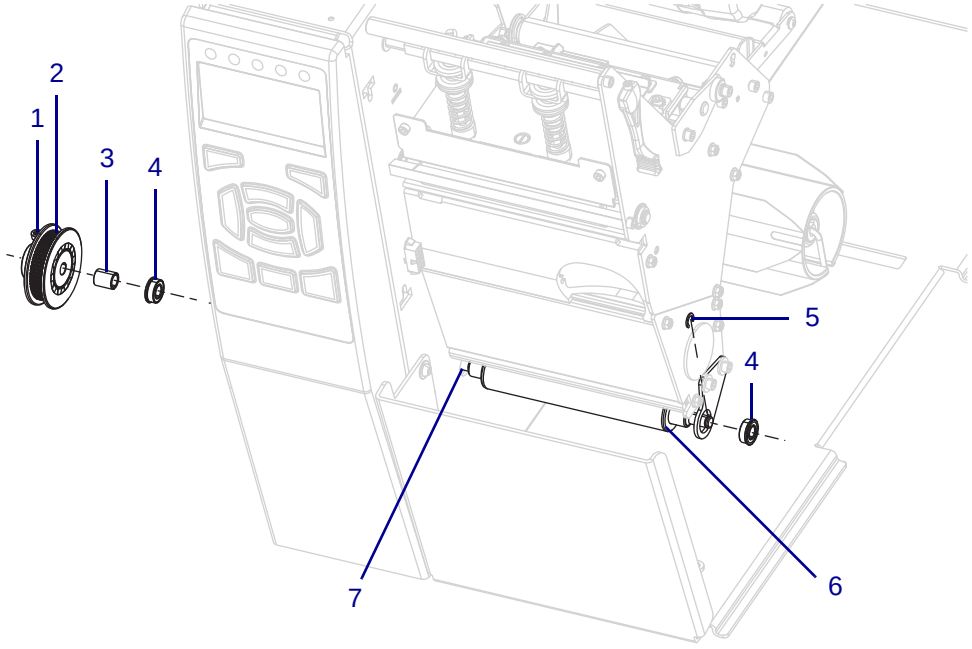


1	Rewind extrusion
2	Mounting holes (2)
3	Rewind platen roller bracket
4	Flat washers (2)
5	Mounting screws (2)

2. Install the two flat washers and mounting screws.

3. See Figure 251. Insert the long shaft of the rewind platen roller into the mounting hole in the main frame.

Figure 251 • Install the Rewind Platen Roller

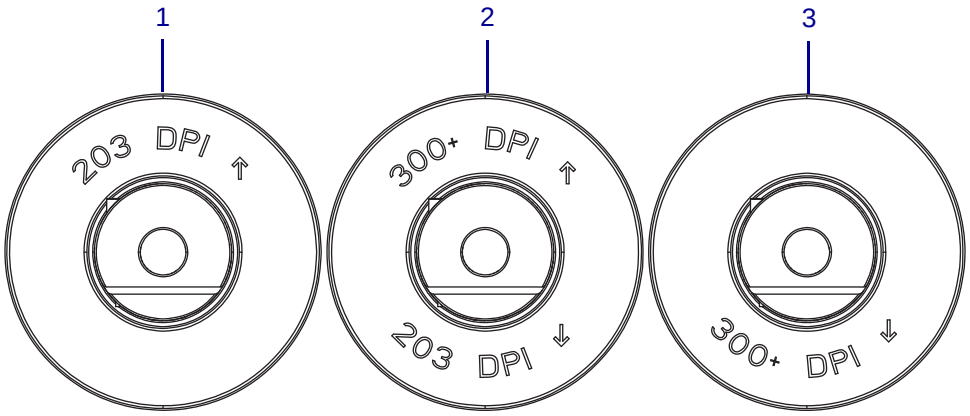


1	Rewind platen roller pulley mounting screw
2	Rewind platen roller pulley
3	Spacer
4	Bearing (2)
5	C-ring
6	Rewind platen roller
7	Main frame mounting hole

4. Insert the bearing into the bracket from the outside.
5. Slide the platen roller short shaft into the bearing.
6. Install the c-ring.
7. Slide the other bearing onto the long shaft of the rewind platen roller and into the main frame.
8. Slide the spacer onto the shaft.

9. See Figure 252. Choose the proper pulley from the maintenance kit (203 dpi or 300 dpi).

Figure 252 • Pulley Identification



1	203 dpi for upper platen roller
2	300 dpi for upper platen roller 203 dpi for rewind platen roller
3	300 dpi for rewind platen roller

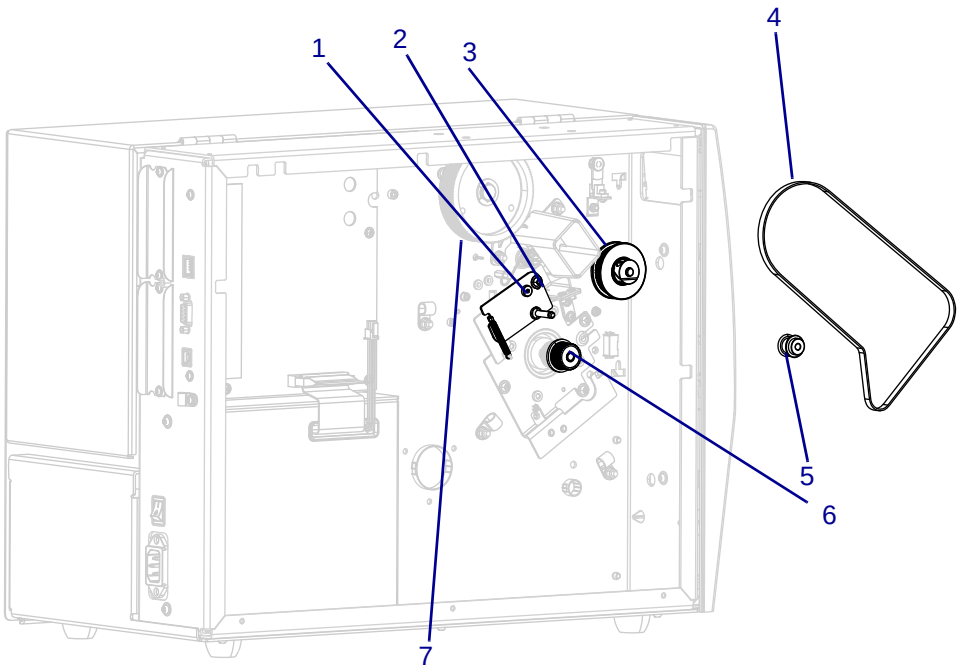
10. See Figure 251 on page 373. Slide the rewind platen roller pulley onto the shaft.

11. Tighten the rewind platen pulley mounting screw.

Install the Rewind Belt Tensioner

1. See Figure 253. Remove the main drive belt by loosening the locking screw on the main drive belt tensioner.

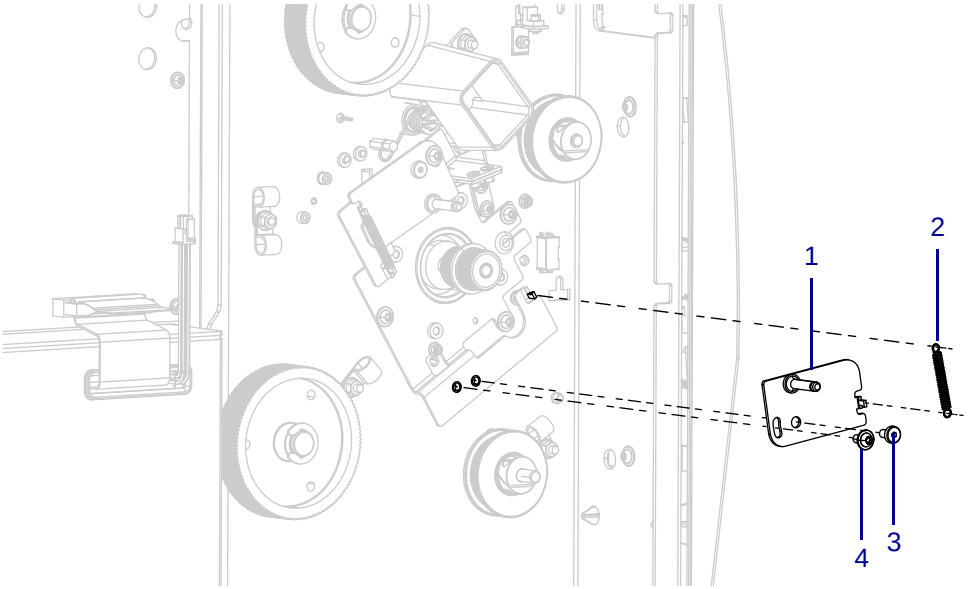
Figure 253 • Loosen the Tensioner



1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Stepper motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.
3. Remove the main drive belt and idler pulley out of the printer.
4. See Figure 254. Install the tensioner plate and shoulder screw.

Figure 254 • Install the Rewind Drive Belt Tensioner



1	Rewind tensioner plate
2	Tension spring
3	Shoulder screw
4	Locking screw

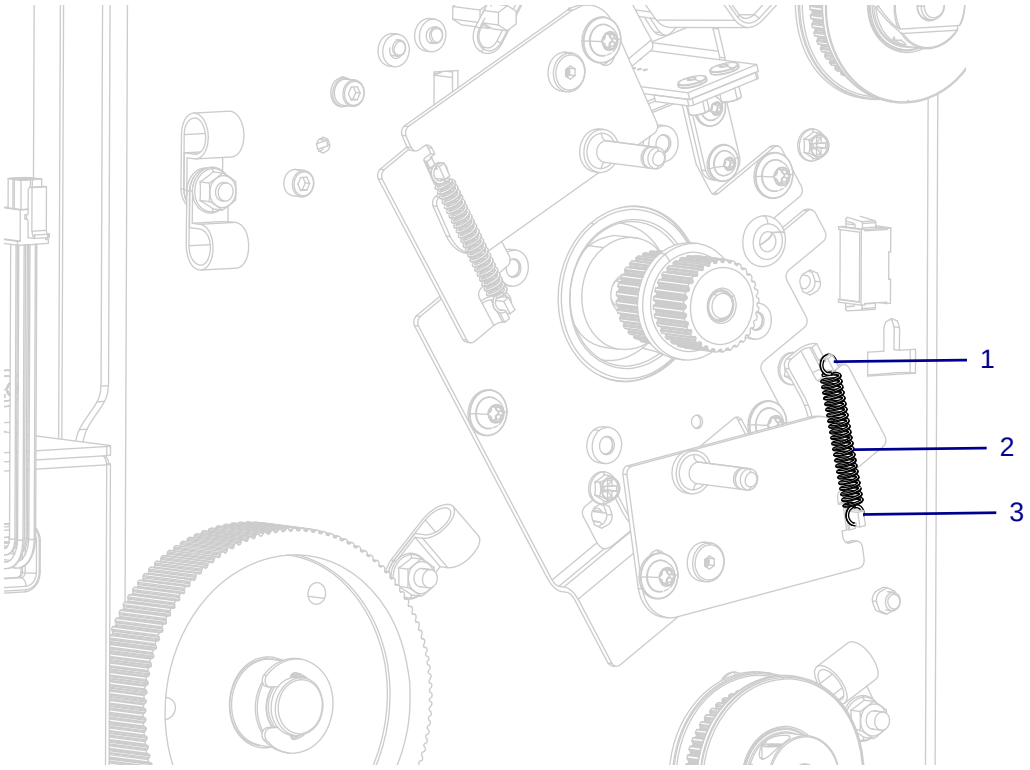
5. Install, but do not tighten the locking screw.

6.

Caution • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

Install the tensioner spring onto the tabs on the tensioner plate and the drive motor bracket.

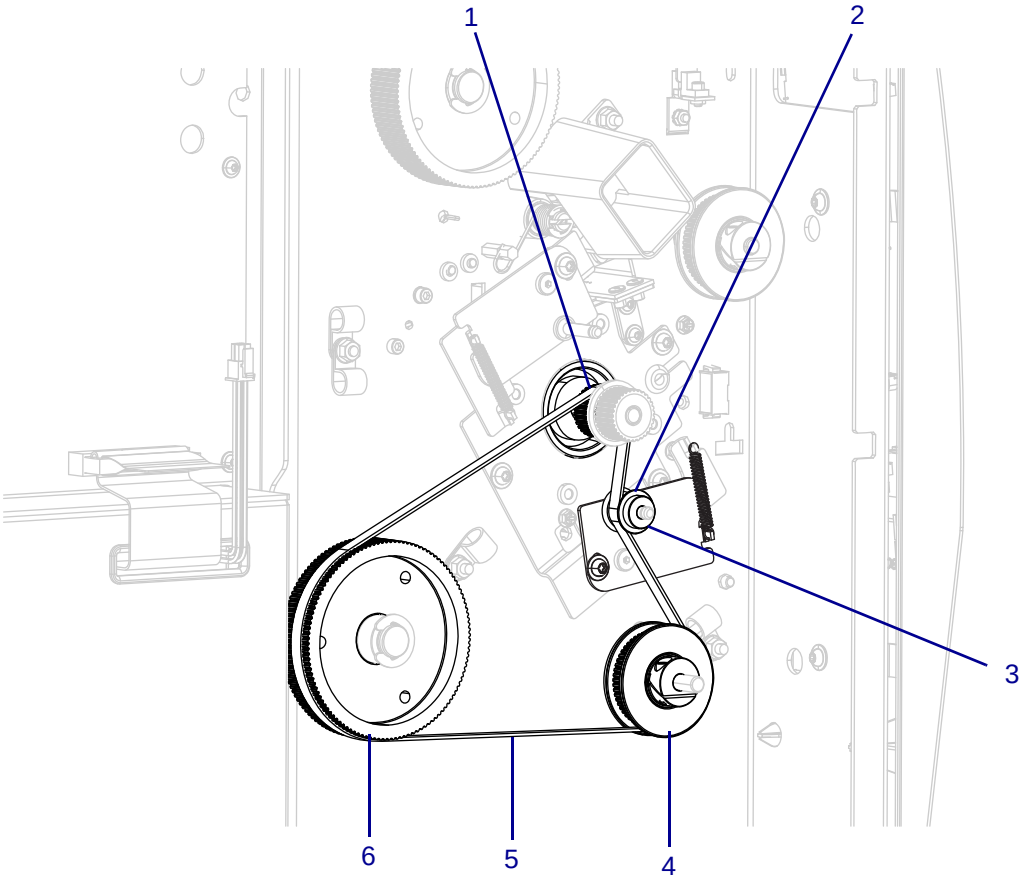
Figure 255 • Install the Tension Spring



1	Drive motor bracket tab
2	Tension spring
3	Tensioner plate tab

7. See Figure 256. Rotate the rewind tensioner to extend the spring, and then tighten the locking screw.

Figure 256 • Install the Rewind Drive Belt

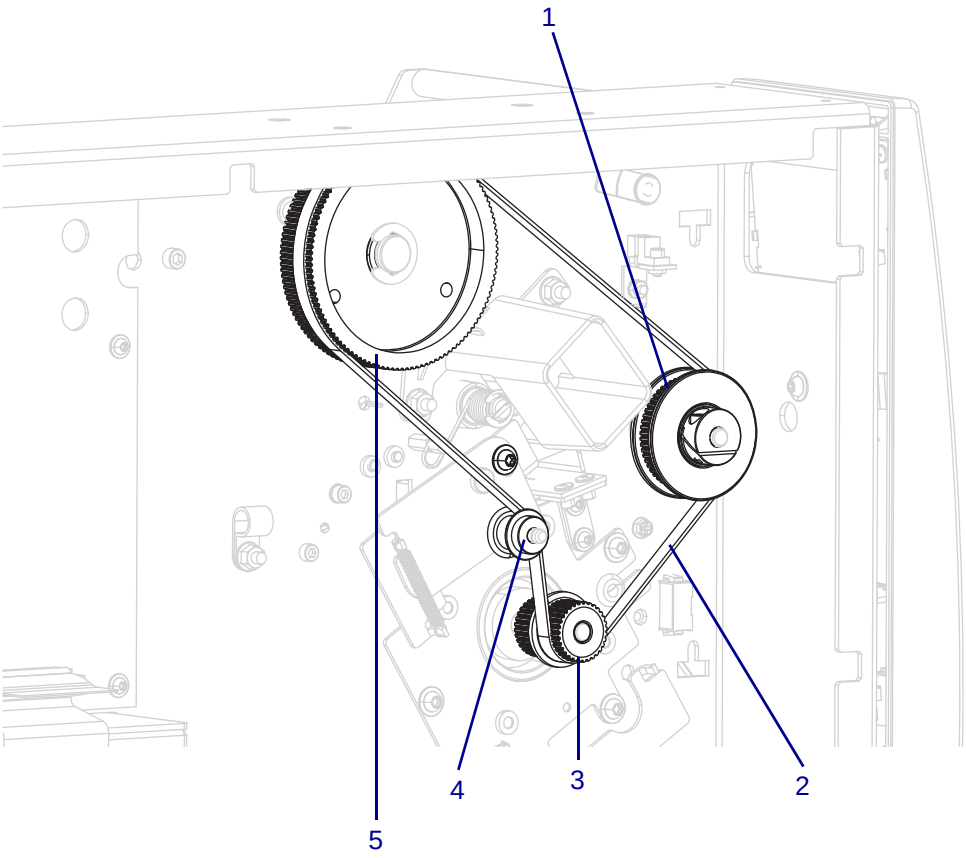


1	Inside drive motor pulley
2	Rewind idler pulley
3	Hub facing out
4	Rewind platen pulley
5	Rewind drive belt
6	Rewind spindle pulley

8. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.
9. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt.
10. Loosen the locking screw on the rewind belt tensioner.
11. Rotate the belt several times to seat the belt on all the pulleys.
12. Tighten the locking screw on the rewind tensioner.

13. See Figure 257. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.

Figure 257 • Reinstall the Main Drive Belt



1	Upper platen pulley
2	Main drive belt
3	Drive motor outside pulley
4	Main drive belt idler pulley
5	Ribbon take-up spindle pulley

14. Ensure that the belt is on the inside part of the idler pulley.

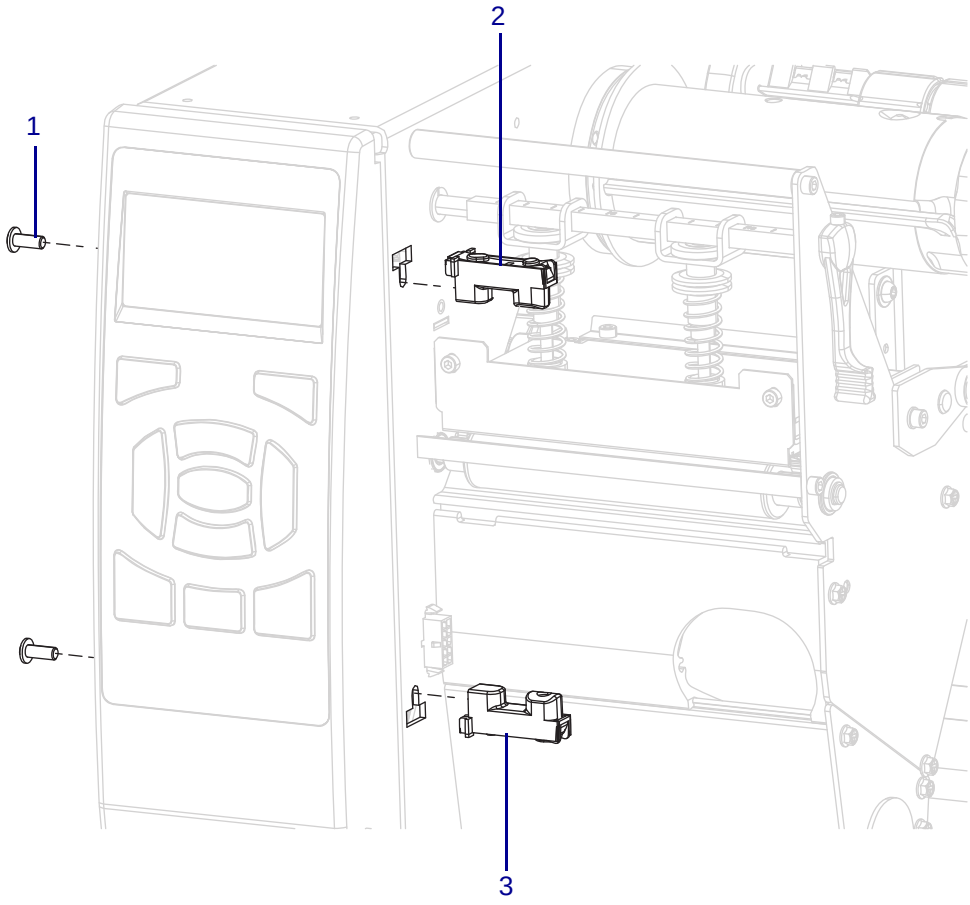
15. Loosen the locking screw on the main drive belt tensioner.

16. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Install the Take-Label Sensors

1. See Figure 258. Install the take-label sensor with the shortest cable in the top mounting hole.
2. Install the mounting screw.

Figure 258 • Install the Take-Label Sensor



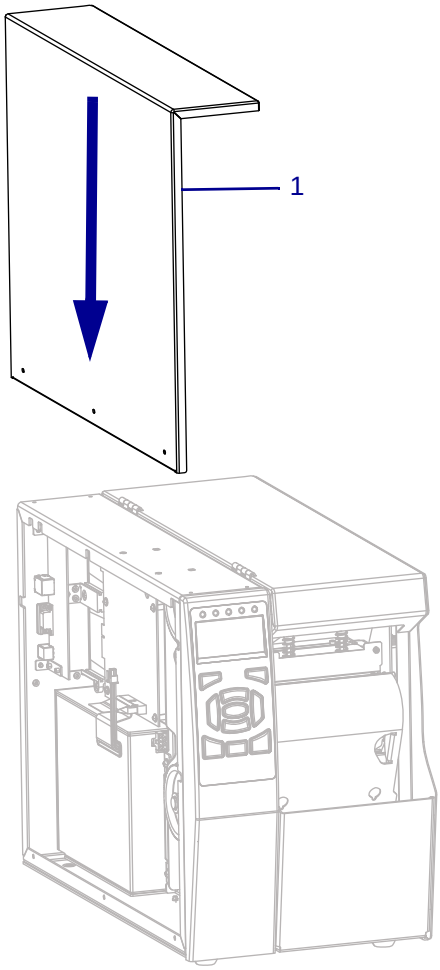
1	Mounting screw (2)
2	Upper take-label sensor
3	Lower take-label sensor

3. Install the take-label sensor with the longest cable into the bottom mounting hole.
4. Install the mounting screw.
5. Connect the take-label cables to J7 and J8 on the control panel.

Reinstall the Electronics Cover

1. See Figure 259. Slide the electronics cover onto the printer.

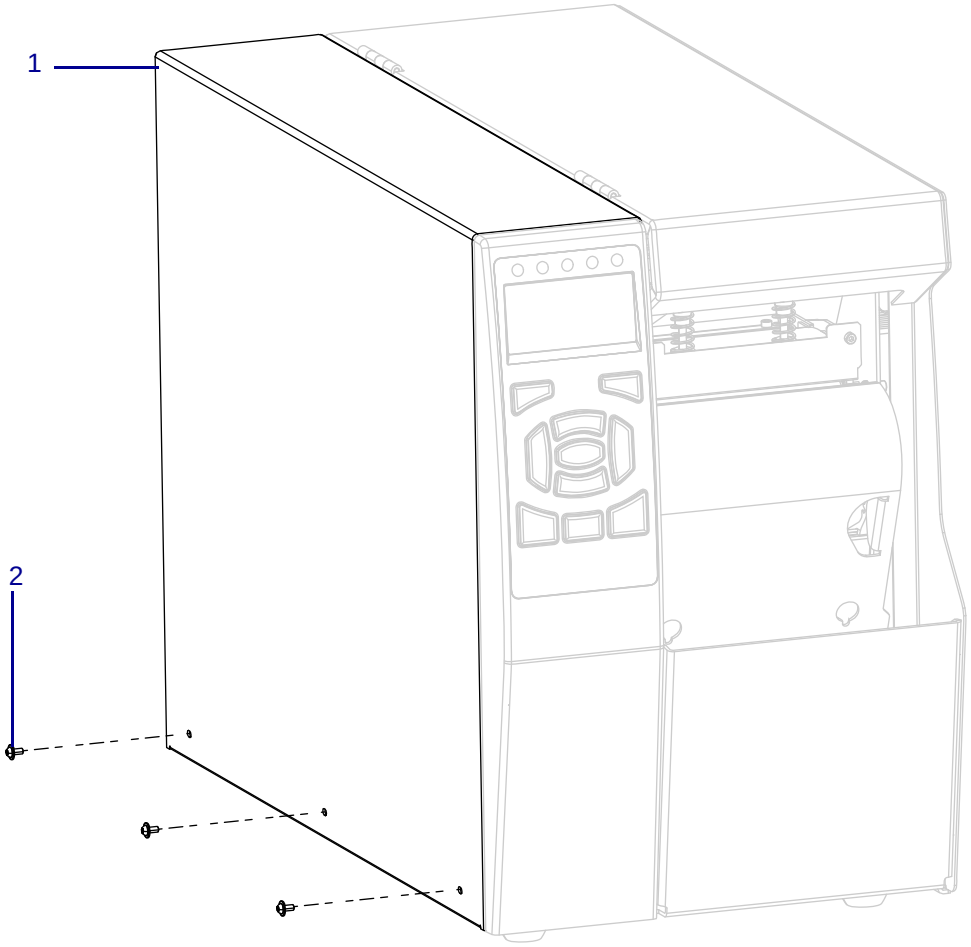
Figure 259 • Slide the Electronics Cover onto the Printer



1	Electronics cover

2. See Figure 260. Install the three mounting screws.

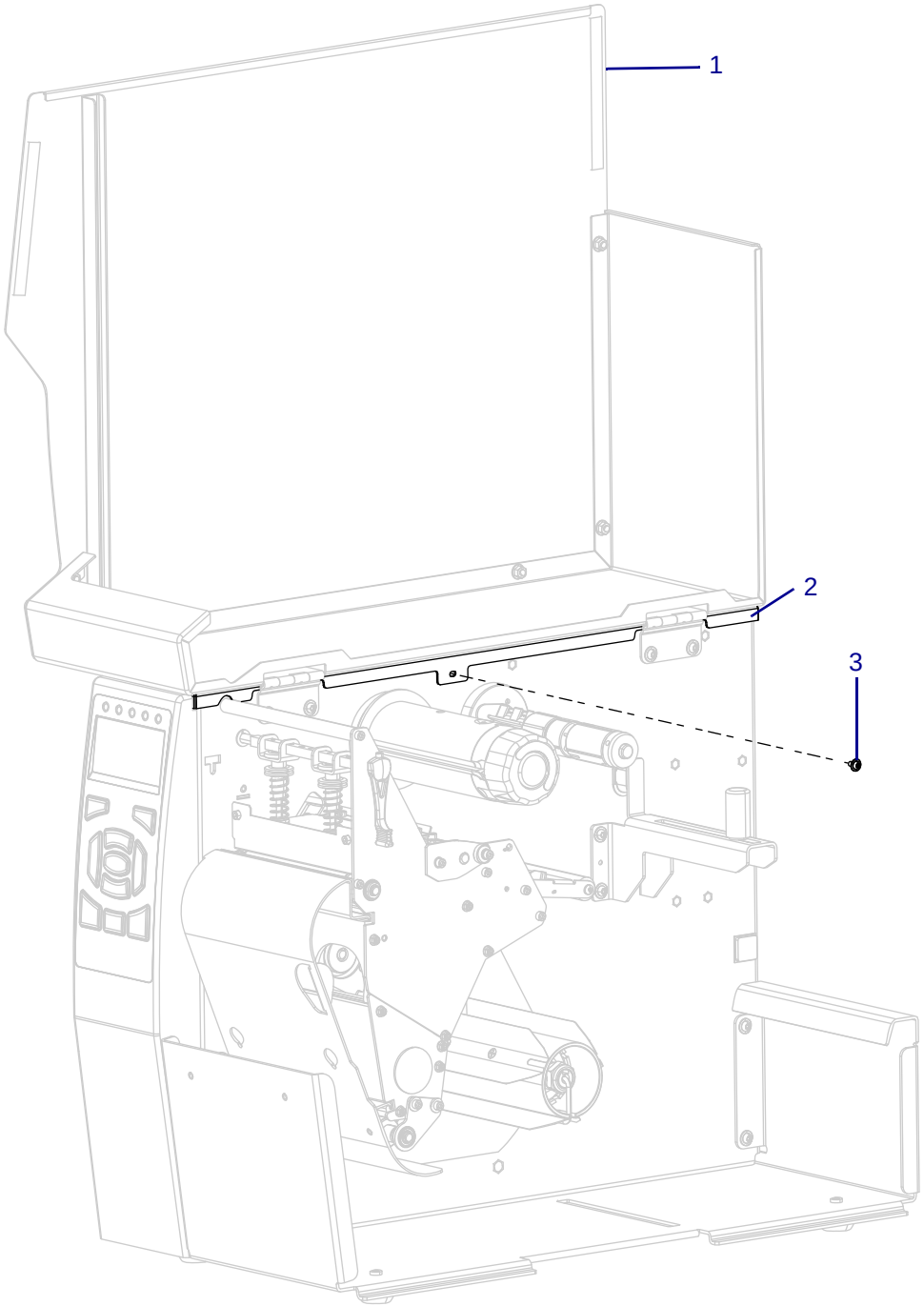
Figure 260 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 261. Install the media side electronics cover mounting screw.

Figure 261 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Install the Rewind/Peel Plate

The rewind/peel plate can be used in two ways.

Rewind Mode: Rewinds a printed roll of continuous media or a printed roll with liner and labels.

Peel Mode: Dispenses individual labels and rewinds the media liner only.

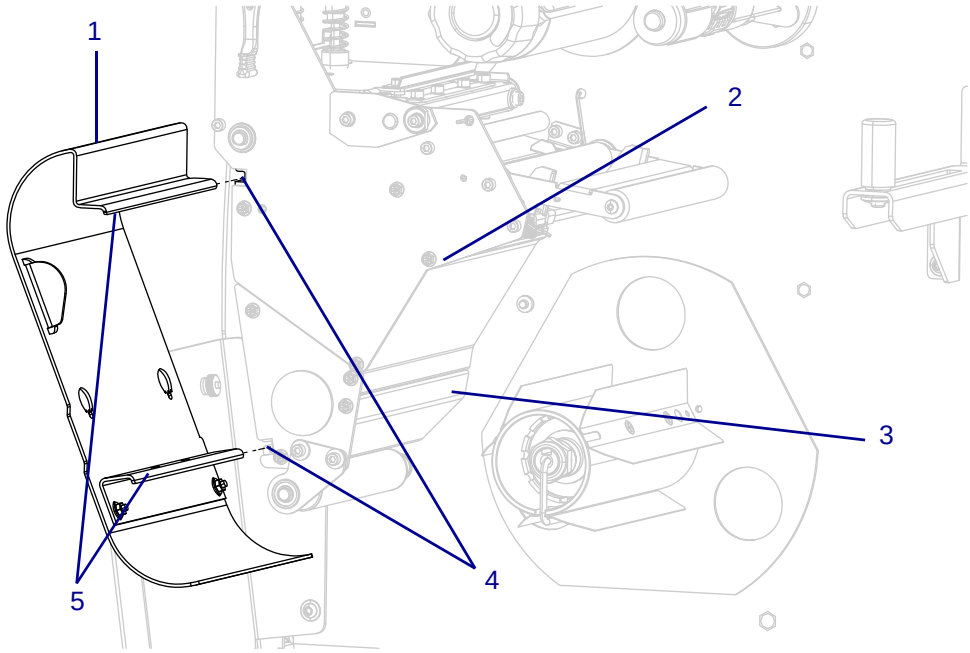
1. Which mode do you want to use?

Mode…	Then…
Rewind Mode	Continue with *Install Rewind Plate*.
Peel Mode	Go to *Install the Peel Plate* on page 386.

Install Rewind Plate

1. See Figure 262. Align the upper lip of the rewind plate with the top slot in the print mechanism.

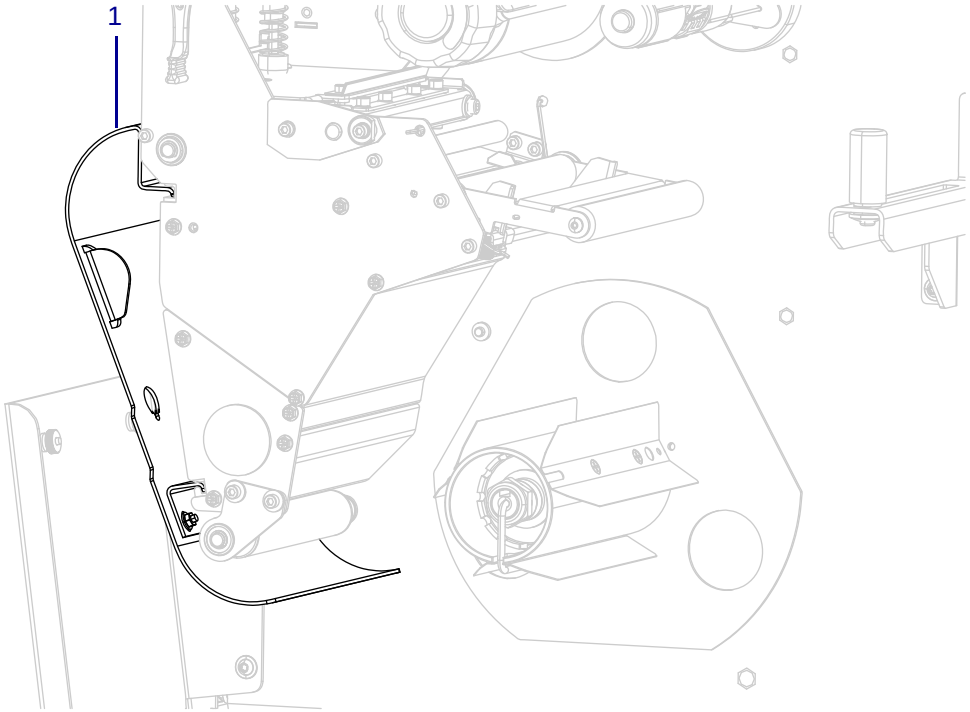
Figure 262 • Install the Rewind Plate



1	Rewind plate
2	Print mechanism
3	Rewind extrusion
4	Mounting slots (2)
5	Mounting lips (2)

2. Align the lower lip with the bottom slot of the rewind extrusion.
3. See Figure 263. Slide the plate into the slots until it stops.

Figure 263 • Installed Rewind Plate



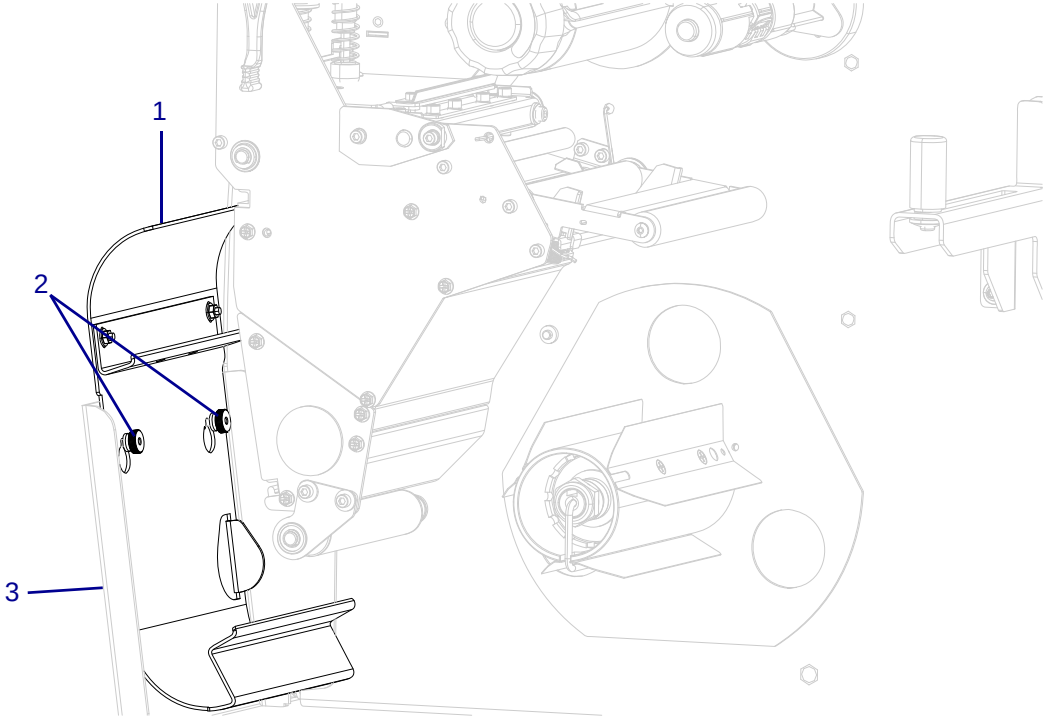
1	Rewind plate

4. Go to *Adjust the Rewind Platen Roller Adjustment Bracket* on page 387.

Install the Peel Plate

1. See Figure 264. Start the two knurled nuts onto the two studs on the printer's base.

Figure 264 • Install the Peel/Tear Plate



1	Rewind plate
2	Knurled nuts (2)
3	Printer base

2. Align the large hole of the keyhole in the rewind plate over the two knurled nuts, and then slide the plate down until it hits the studs.
3. Tighten the knurled nuts.
4. **Caution •** When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media and ribbon.
5. Reinstall the AC power cable and all data cables.
6. Turn on (**I**) the printer.

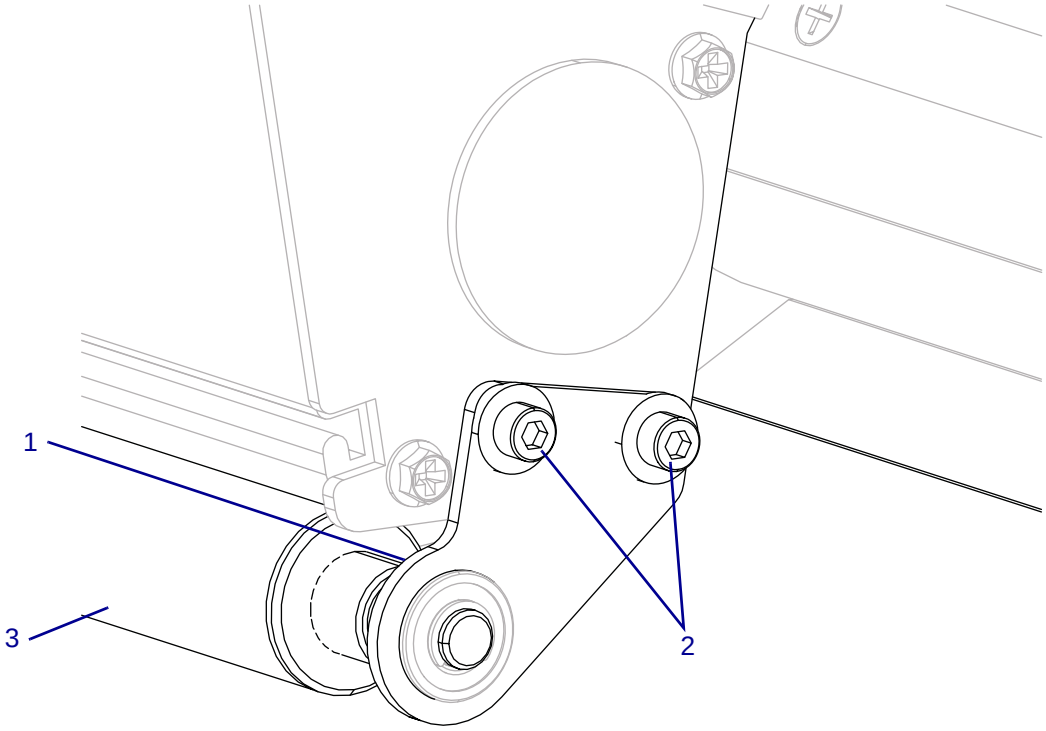
Adjust the Rewind Platen Roller Adjustment Bracket

1. Press and hold the Pause Key while turning on (**I**) the printer.
2. The Pause Key Self-test labels will print.
3. Are the labels tracking properly onto the rewind spindle?

If…	Then…
No	Continue with step 4.
Yes	Go to *Complete the Installation* on page 388.

4. See Figure 265. Loosen the two screws securing the rewind adjustment bracket to the print mechanism.

Figure 265 • Adjust the Rewind Platen Roller Adjustment Bracket



1	Rewind platen roller adjustment bracket
2	Mounting screws (2)
3	Rewind platen roller

5. Adjust the bracket as required and tighten the mounting screws.
   - Moving the bracket toward the rear of the printer forces the media to wind closer to the large backing plate on the rewind spindle.
   - Moving the bracket toward the front of the machine moves the media away from the backing plate.
6. Perform this adjustment until the labels or liner track properly onto the rewind spindle.

Complete the Installation

1. Turn off (**O**) the printer and reconnect all data cables.
2. Reinstall the media and ribbon.
3. Turn on (**I**) the printer.

The installation is complete.

Rewind Platen Roller Adjustment Bracket Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Rewind Platen Adjustment Bracket Maintenance Kit in the 105SL*Plus*™, Xi4™, and ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 266 • Kit Contents

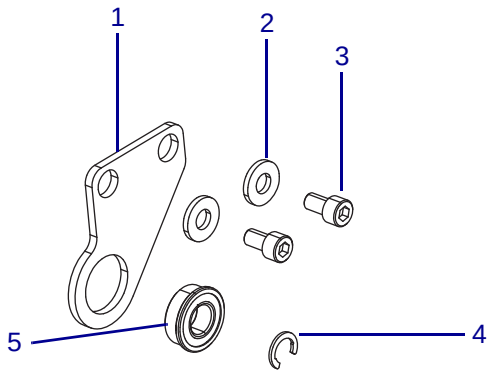


Table 38 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1006105**	Rewind Platen Adjustment Bracket Maintenance Kit
	1	1	*N/A*	Rewind Platen Roller Adjustment Bracket
	2	2	**HW40193**	Flat Washer, 0.375 × 0.173 × 0.048 (sold in quantities of 25)
	3	2	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 50)
	4	1	**HW33810**	C-Clip (sold in quantities of 100)
	5	1	**49688**	Flange Bearing

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Italic = Part not available for purchase; listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ SAE Hex Key (Allen wrench)
- ❑ Safety Glasses
- ❑ 47362* Zebra Preventive Maintenance Kit
- ❑ Torx-Head Wrench Set

Remove the Rewind Platen Roller Adjustment Bracket

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

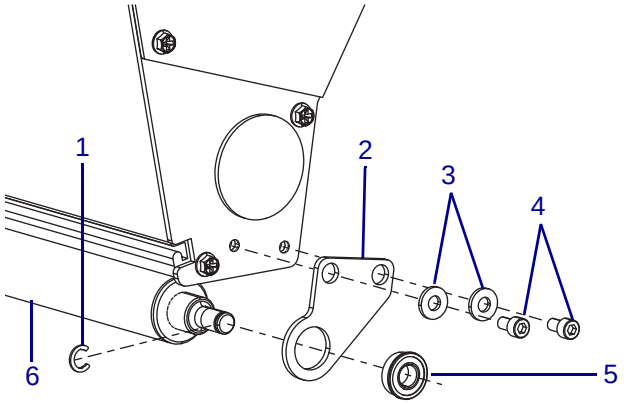
   Turn off (**O**) the printer, and disconnect the AC power cord and all data cables.

2. Remove the media and ribbon.

3. **Caution** • Wear protective eye wear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 267. Remove and discard the C-clip from the platen roller.

Figure 267 • Remove and Install the Rewind Platen Roller Adjustment Bracket



1	C-clip
2	Rewind adjustment bracket
3	Flat washers (2)
4	Mounting screws (2)
5	Flange bearing
6	Rewind platen roller

4. Remove and discard the flange bearing from the rewind adjustment bracket.
5. Remove and discard the two mounting screws and washers, and then discard the old rewind adjustment bracket.

Install the Rewind Platen Roller Adjustment Bracket

1. See Figure 267 on page 391. Remove the two mounting screws and flat washers from the kit. Slide a washer onto each of the screws.
2. Align the new rewind platen adjustment bracket with the two mounting holes on the printer.
3. Install the two mounting screws and washers.
4. While holding the rewind platen, slide the new flange bearing, flange facing out, onto the platen shaft and into the new rewind platen adjustment bracket.
5.

   Caution • Wear protective eye wear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

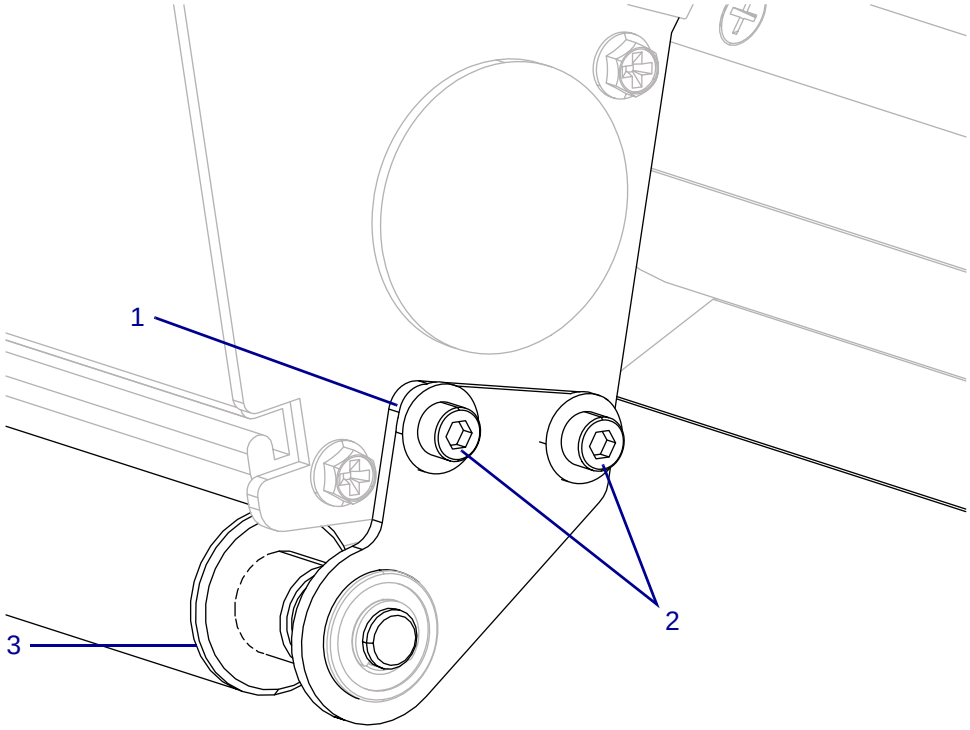
   While still holding the rewind platen, install the new C-clip.
6. Reinstall the media and ribbon.
7. Reconnect the AC power cord and all data cables.
8. Press and hold PAUSE while turning on (**I**) the printer, and check for proper tracking of the media onto the rewind spindle.
9. Press PAUSE to stop the printer.
10. Is the media tracking properly?

If…	Then…
Yes	**The installation is complete.**
No	Continue with *Adjust the Rewind Platen Roller Adjustment Bracket*.

Adjust the Rewind Platen Roller Adjustment Bracket

1. See Figure 268. Loosen the two screws securing the rewind adjustment bracket to the print mechanism.

Figure 268 • Adjust the Rewind Platen Roller Adjustment Bracket



1	Rewind platen roller adjustment bracket
2	Mounting screws (2)
3	Rewind platen roller

2. Move the rewind platen roller adjust bracket in the appropriate direction to compensate for the tracking and tighten the screws.

Note • Moving the rewind platen roller adjustment bracket toward the front of the printer moves the liner material away from the rewind platen roller adjustment bracket. Moving the rewind platen roller adjustment bracket toward the rear of the printer moves the liner material toward the rewind platen roller adjustment bracket.

3. Repeat step 1 and step 2 until the required results are achieved.
4. Turn off (**O**) the printer and reconnect all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Rewind Drive System Maintenance Kit

Installation Instructions

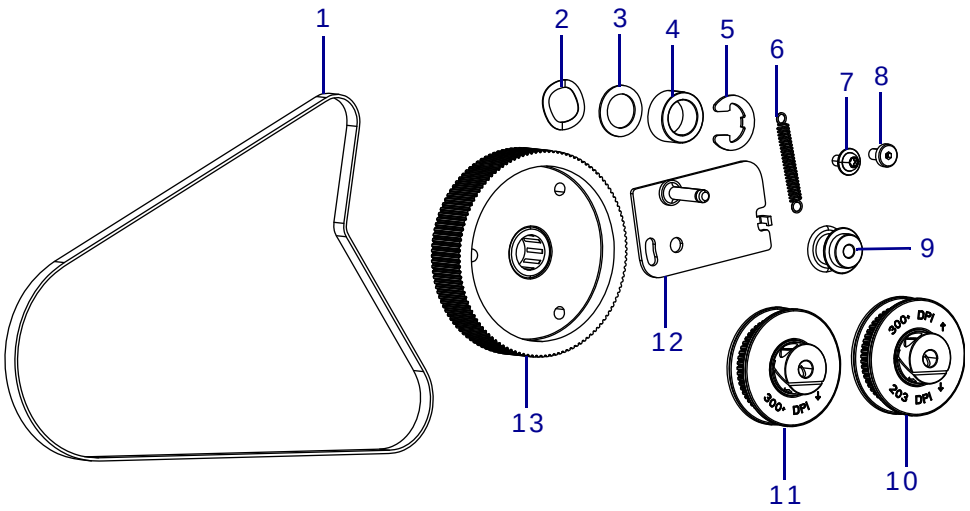
This kit includes the parts and documentation necessary to install the Rewind Drive Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 269 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 39 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-019**	Rewind Drive System Maintenance Kit
	1	1	**P183347-017**	Rewind Drive Belt Maintenance Kit
	2	1	**HW30115**	Wave Washer, 0.74 × 0.52 × 0.08 (sold in quantities of 25)
	3	1	**HW33804**	Flat Washer, 0.76 × 0.51 × 0.03 (sold in quantities of 25)
	4	1	*N/A*	Spacer, 0.75 × 0.52 × 0.36, part of miscellaneous hardware kit, **P1083347-026**
	5	1	**HW33811**	E-ring, 0.500 × 0.042 (sold in quantities of 25)
	6	1	*N/A*	Expansion Spring, part of miscellaneous hardware kit, **P1083347-026**
	7	1	*N/A*	Torx-Head Screw, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**
	8	1	*N/A*	Shoulder Screw, M4 × 5.5 × 2 mm
	9	1	**P1083320-055**	Idler Pulley and Spring Maintenance Kit
	10	1	*N/A*	203 dpi Rewind Pulley
	11	1	*N/A*	300 dpi Rewind Pulley
	12	1	*N/A*	Tensioner Plate Assembly
	13	1	*N/A*	Rewind Spindle Pulley

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Antistatic Wrist Strap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

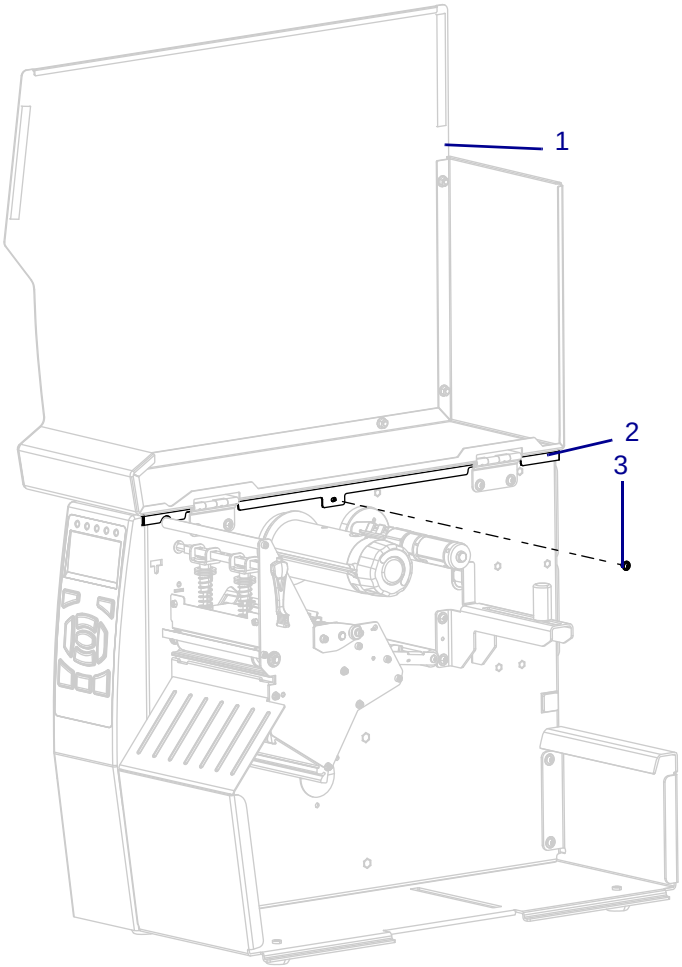
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 270 • Locate the Electronics Cover Mounting Screw

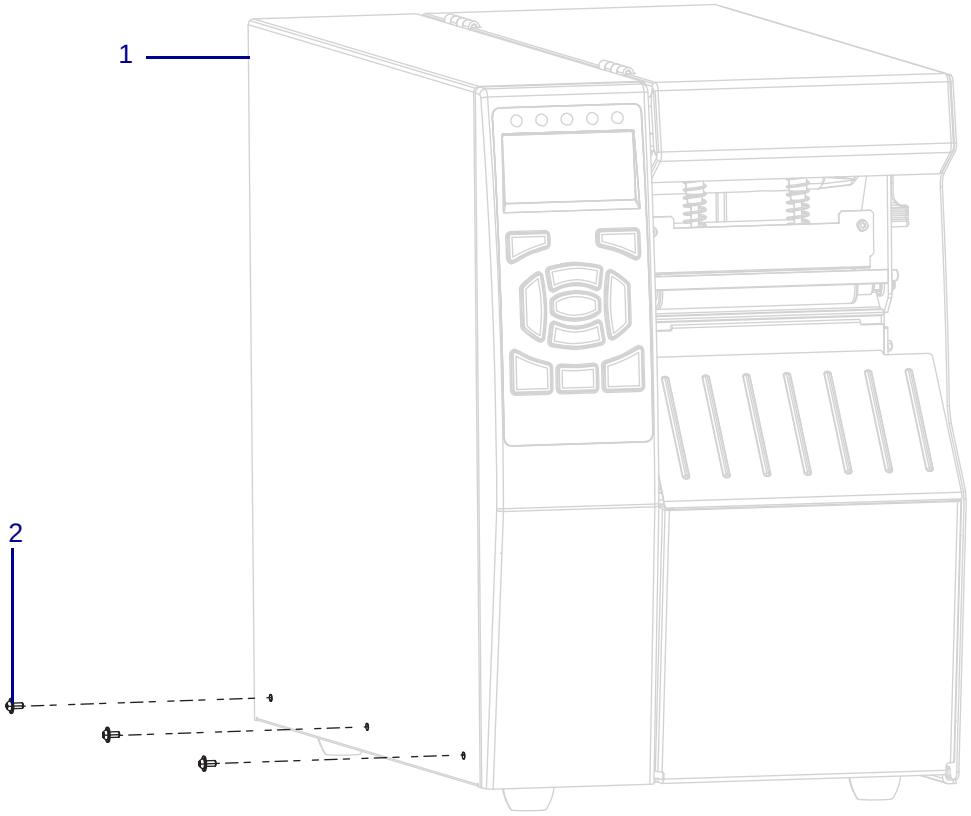


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 271. Remove the three mounting screws securing the electronics cover to the printer.

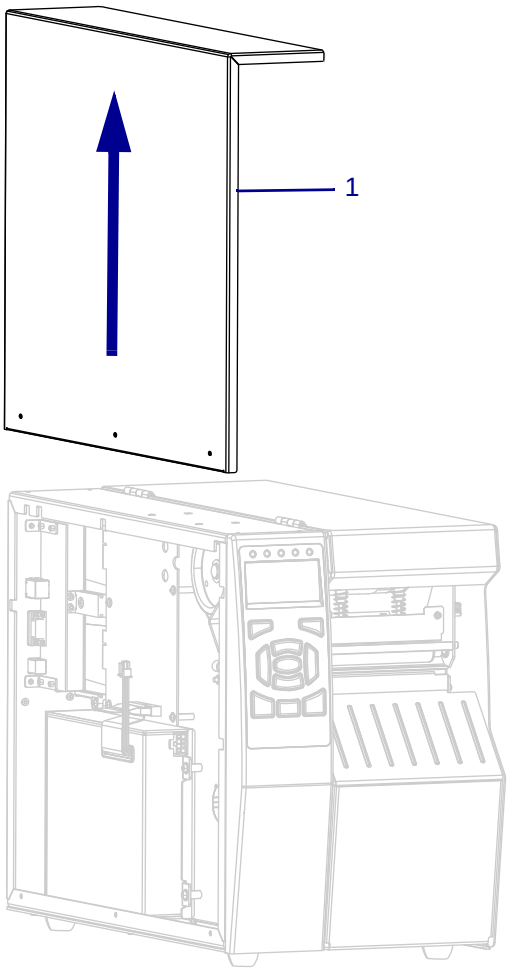
Figure 271 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 272. Lift the electronics cover off of the printer.

Figure 272 • Remove the Electronics Cover



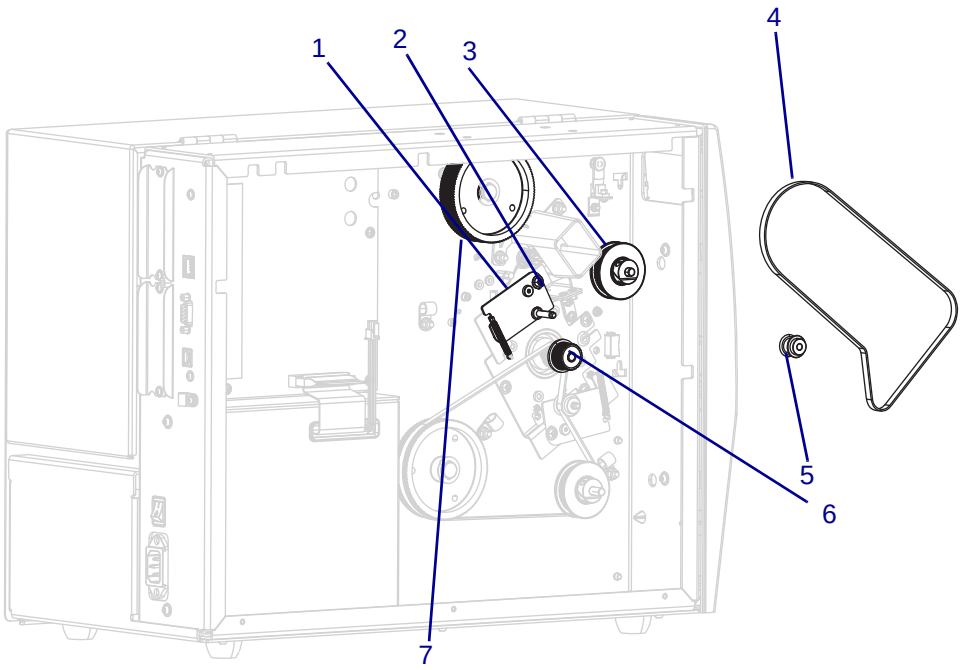
1	Electronics cover

Remove the Old Rewind Drive System

1. **Caution** • Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 273. Loosen the main drive belt tensioner locking screw.

Figure 273 • Loosen the Main Drive Belt Tensioner



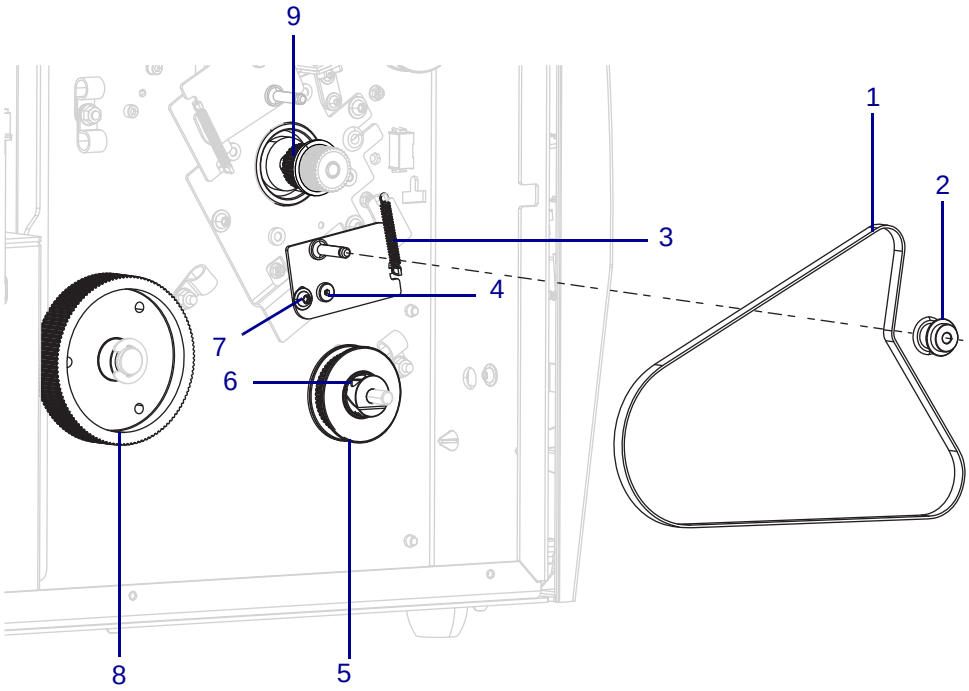
1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Main drive belt motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Remove the main drive belt and idler pulley.

4. See Figure 274. Loosen the rewind drive belt tensioner locking screw.

Figure 274 • Remove the Rewind Drive Belt



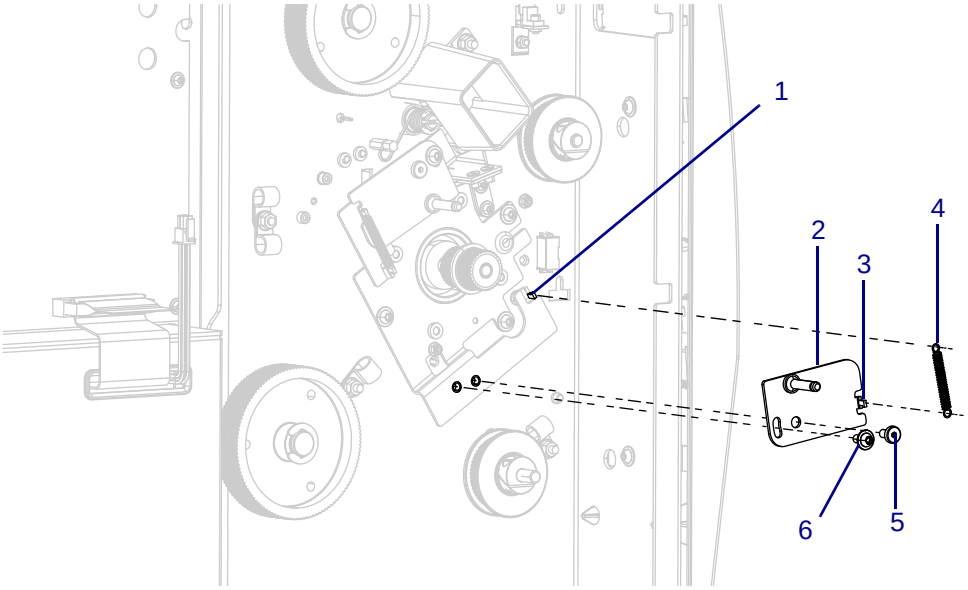
1	Rewind drive belt
2	Rewind drive belt idler pulley
3	Rewind belt tensioner spring
4	Pivot screw
5	Rewind platen pulley
6	Clamp screw
7	Locking screw
8	Media take-up spindle pulley
9	Rewind belt drive motor pulley

5. Rotate the rewind drive belt tensioner to extend the spring, and then tighten the locking screw.

6. Remove and discard the rewind drive belt and idler pulley.

7. See Figure 275. Remove the and discard the rewind locking screw and the tensioner spring.

Figure 275 • Locate and Remove the Rewind Tensioner



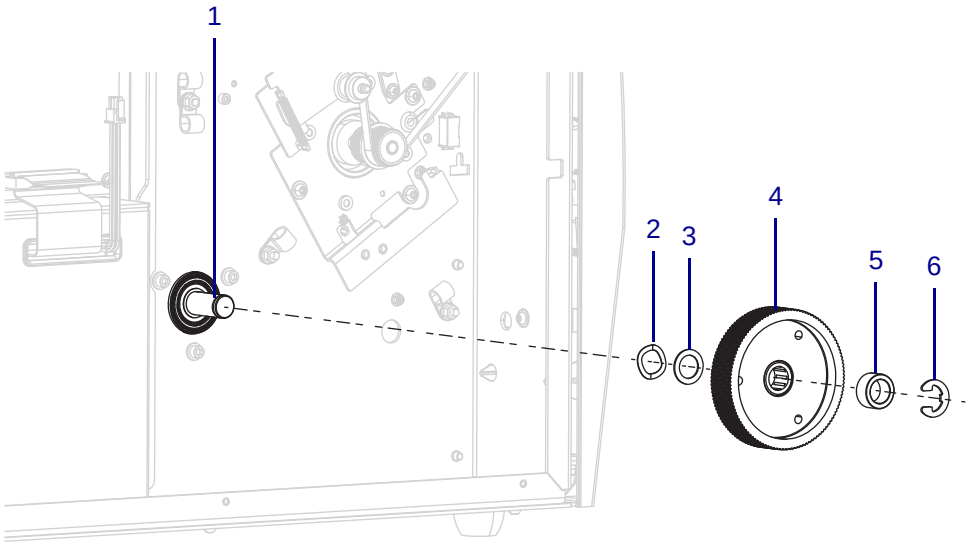
1	Drive motor bracket hook
2	Rewind tensioner plate
3	Rewind tensioner plate hook
4	Tensioner spring
5	Pivot screw
6	Locking screw

8. Remove and discard the rewind pivot screw and tensioner plate.

Remove the Rewind Pulleys

1. See Figure 276. Remove and discard the E-ring, spacer, rewind spindle pulley, flat washer, and wave washer.

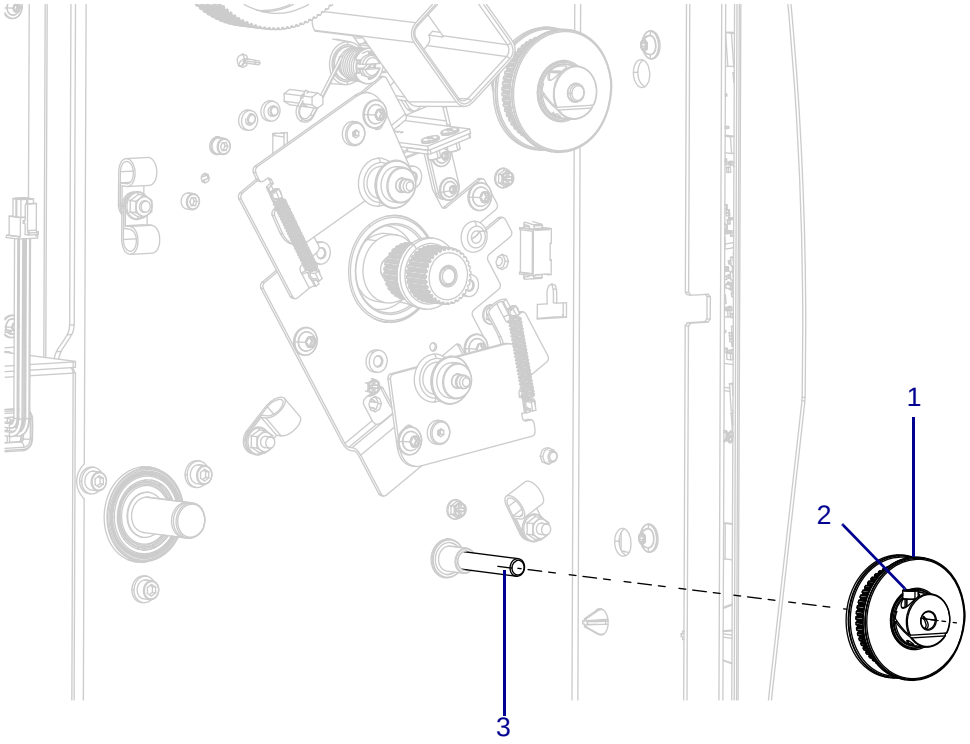
Figure 276 • Remove the Rewind Spindle Pulley



1	Rewind spindle shaft
2	Wave washer
3	Flat washer
4	Rewind spindle pulley
5	Spacer
6	E-ring

2. See Figure 277. Loosen the rewind platen pulley clamping screw, and then slide the pulley off of the rewind platen shaft.

Figure 277 • Remove the Rewind Platen Pulley



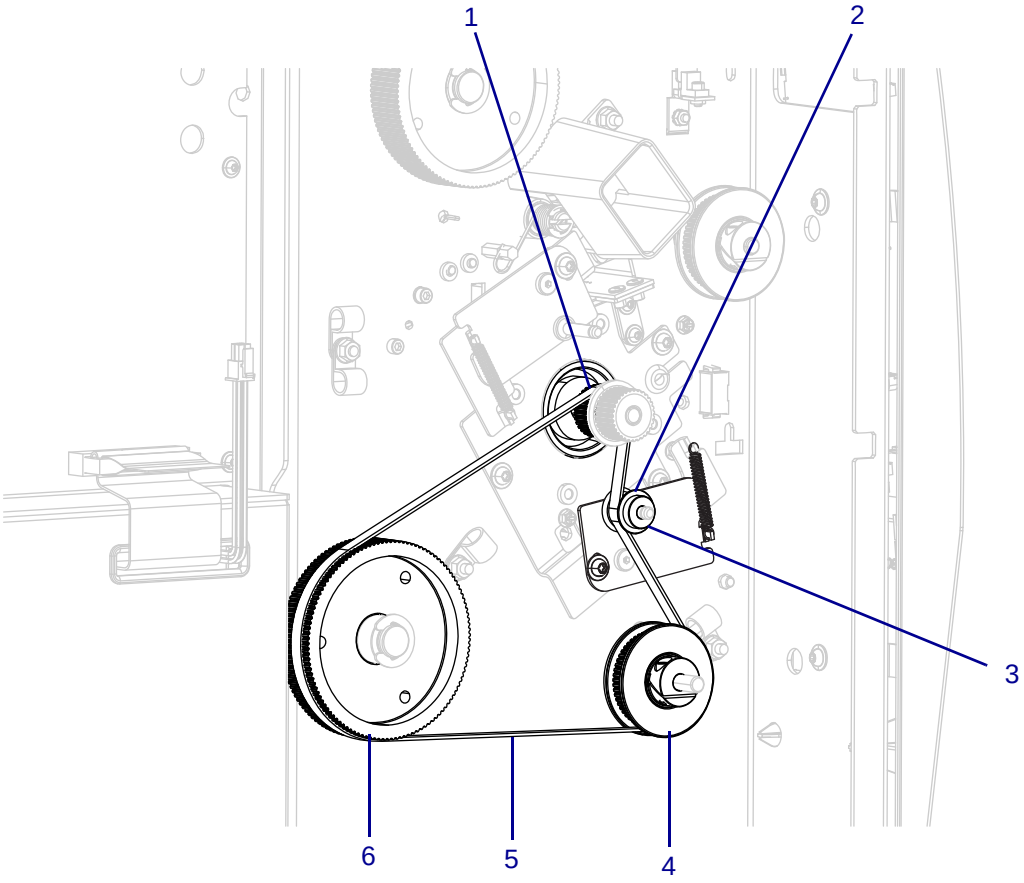
1	Rewind platen pulley
2	Clamping screw
3	Rewind platen shaft

Install the Rewind Drive System

1. See Figure 276 on page 402. Install the wave washer, flat washer, rewind spindle pulley, spacer, and E-ring onto the rewind spindle shaft.
2. See Figure 277. Slide the pulley onto the rewind platen shaft, and then tighten the clamping screw.
3. See Figure 275 on page 401. Align the new tensioner plate with the mounting holes in the drive motor bracket.
4. Install the new pivot screw.
5. Loosely install the new locking screw.
6. Install the new tensioner spring.
7. Rotate the rewind drive belt tensioner to extend the spring, and then tighten the locking screw.

8. See Figure 278. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.

Figure 278 • Install the Rewind Drive Belt

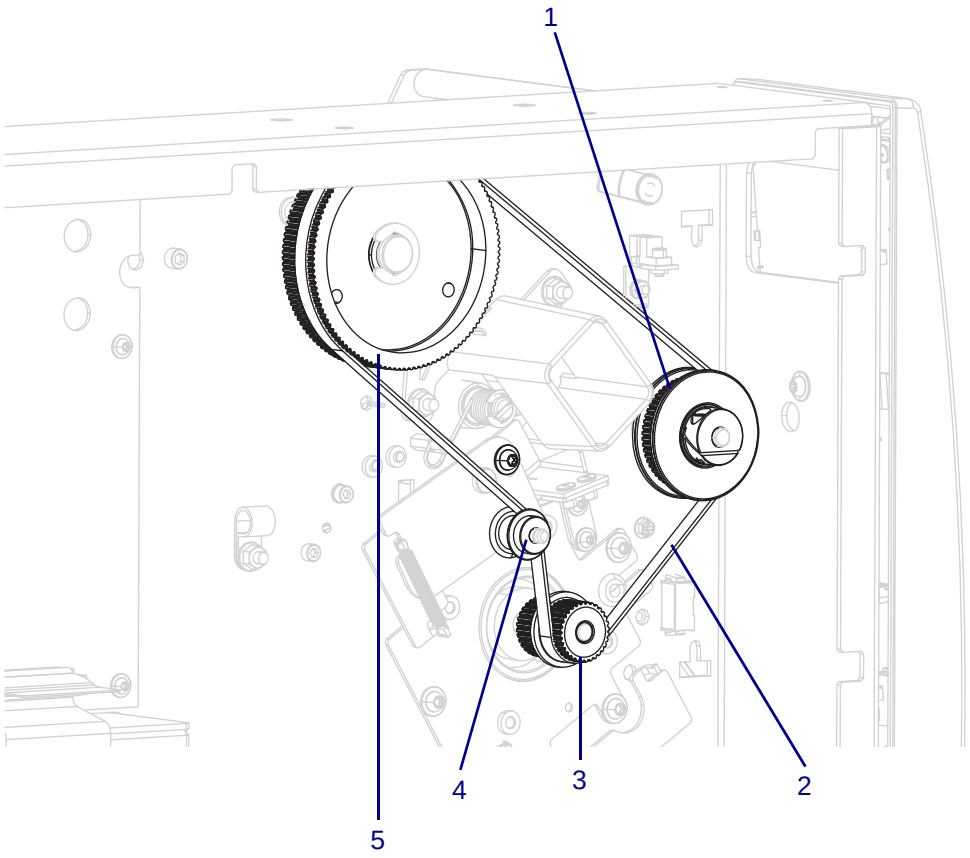


1	Inside drive motor pulley
2	Rewind idler pulley
3	Hub facing out
4	Rewind platen pulley
5	Rewind drive belt
6	Rewind spindle pulley

9. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt.
10. Loosen the locking screw on the rewind belt tensioner.
11. Rotate the belt several times to seat the belt on all the pulleys.
12. Tighten the locking screw on the rewind tensioner.

13. See Figure 279. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and around the ribbon take-up spindle pulley.

Figure 279 • Reinstall the Main Drive Belt



1	Upper platen pulley
2	Main drive belt
3	Drive motor outside pulley
4	Main drive belt idler pulley
5	Ribbon take-up spindle pulley

14. Ensure that the belt is on the inside part of the idler pulley.

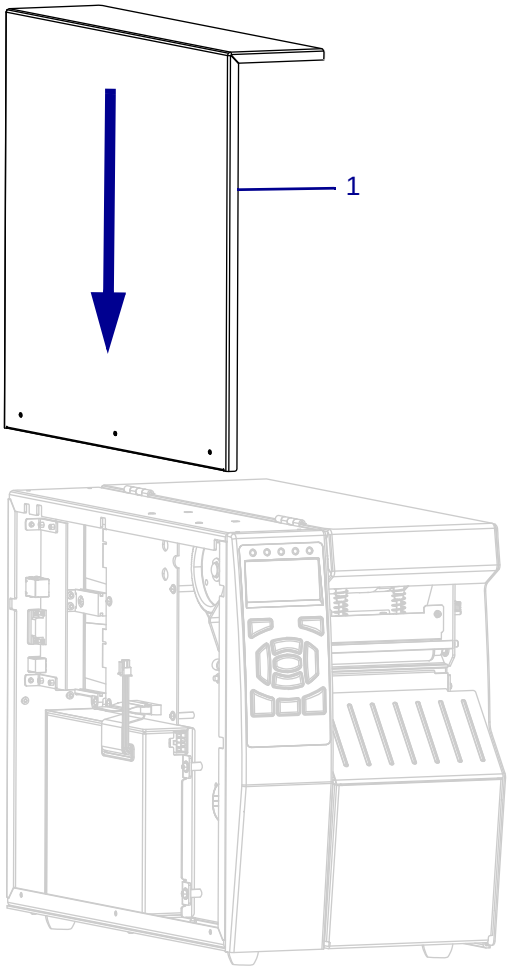
15. Loosen the locking screw on the main drive belt tensioner.

16. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 280. Slide the electronics cover onto the printer.

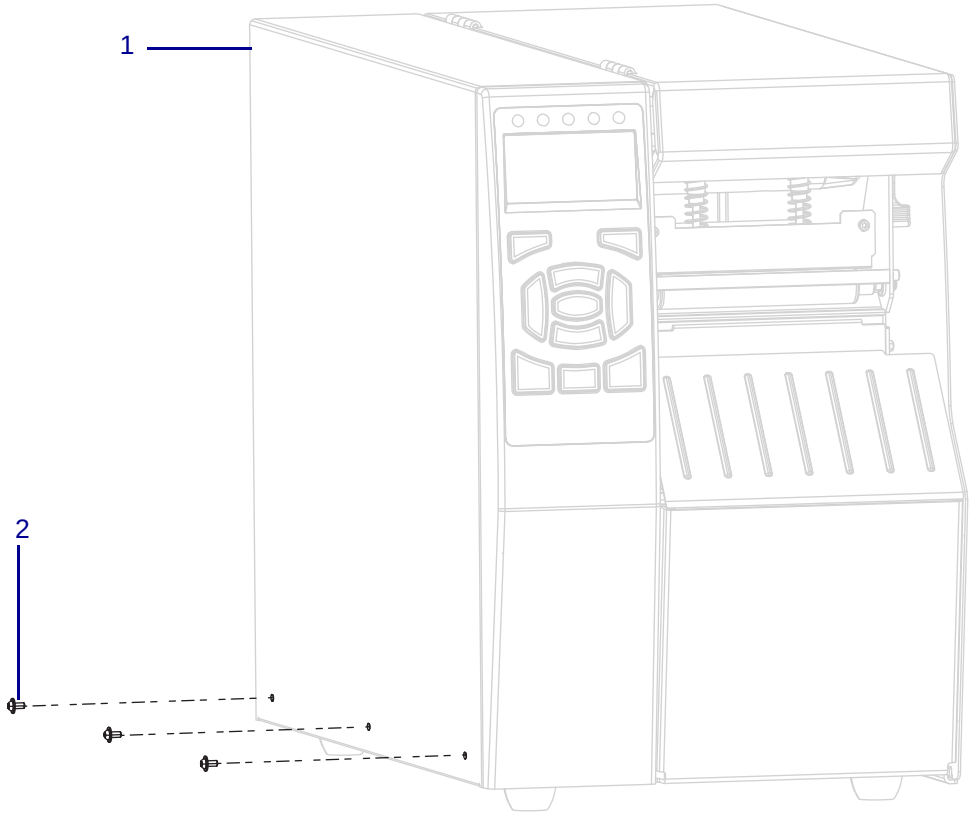
Figure 280 • Install the Electronics Cover



1	Electronics cover

2. See Figure 281. Install the three mounting screws.

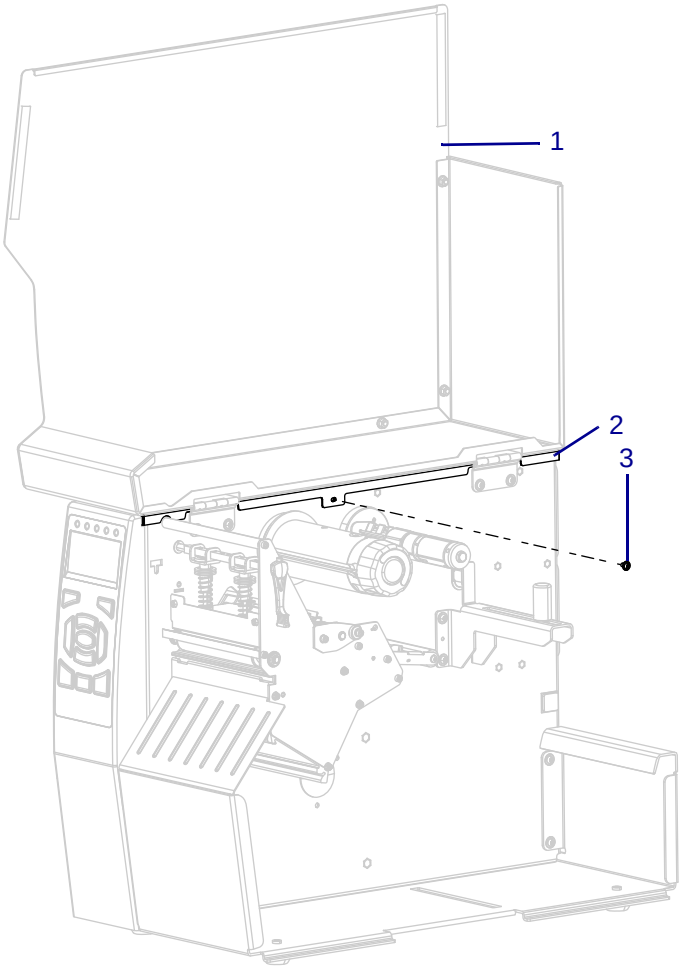
Figure 281 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 282. Open the media door and install the media side electronics cover mounting screw.

Figure 282 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Rewind Spindle Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Rewind Spindle Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 283 • Kit Contents

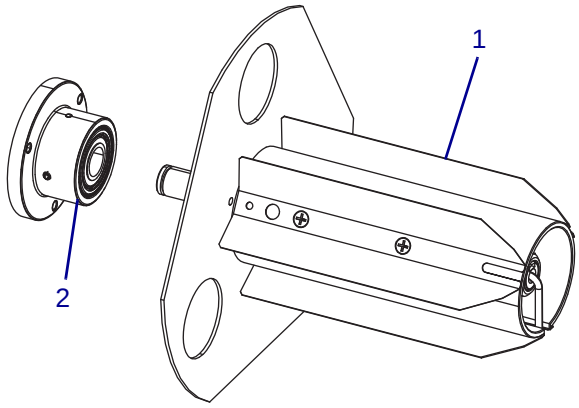


Table 40 • Kit Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**G41155M**	Rewind Spindle Maintenance Kit
	1	1	*N/A*	Spindle Assembly
	2	1	*N/A*	Bearing Housing Assembly

N/A = Not available as a separate item.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Flat-blade Screwdriver Set
- ❑ N•m (Inch/pound) Torque Wrench
- ❑ 11303 Spring Gauge 2200g
- ❑ SAE Hex Key (Allen wrench) Minimum 30 cm (12 in.) Long
- ❑ Antistatic Wriststrap and Mat
- ❑ Safety Glasses
- ❑ Torx-Head Wrench Set

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Electronics Cover

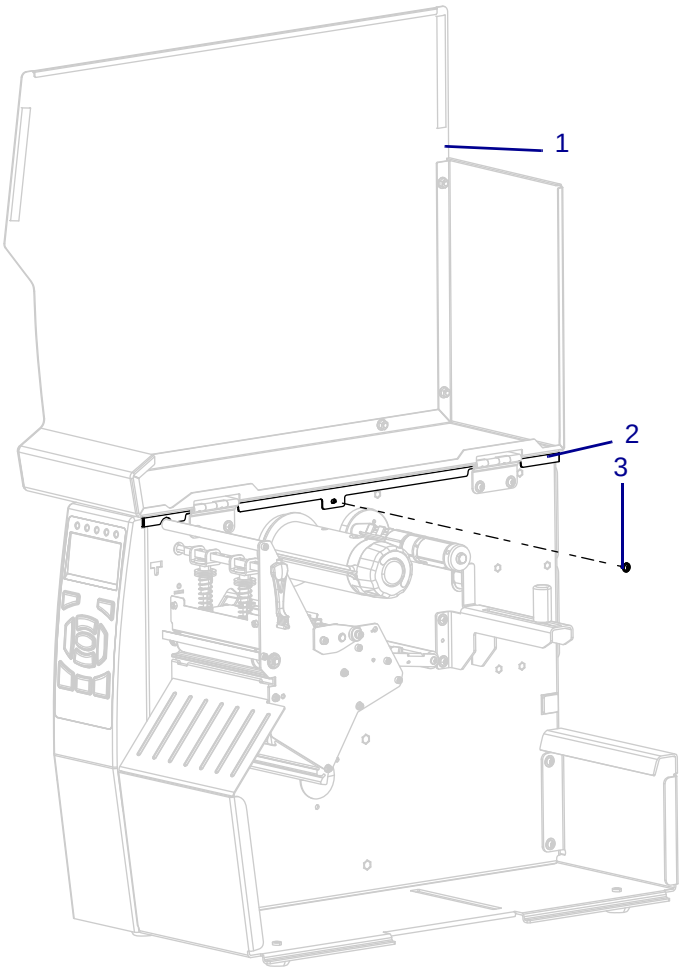
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 284 • Locate the Electronics Cover Mounting Screw

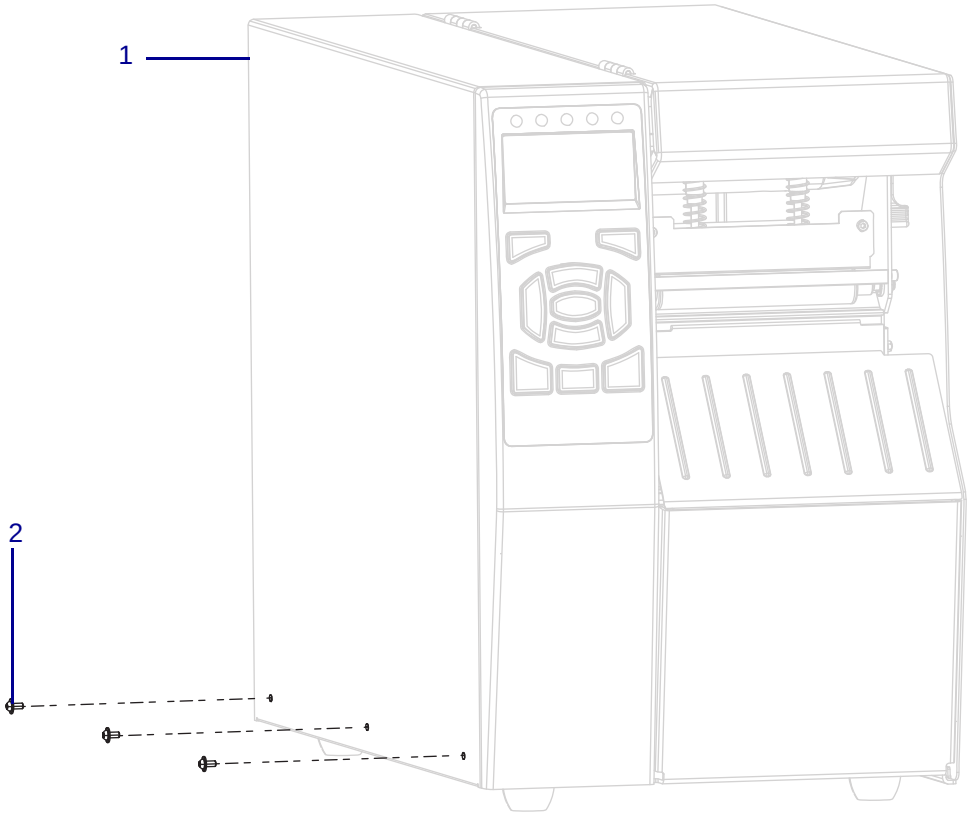


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 285. Remove the three mounting screws securing the electronics cover to the printer.

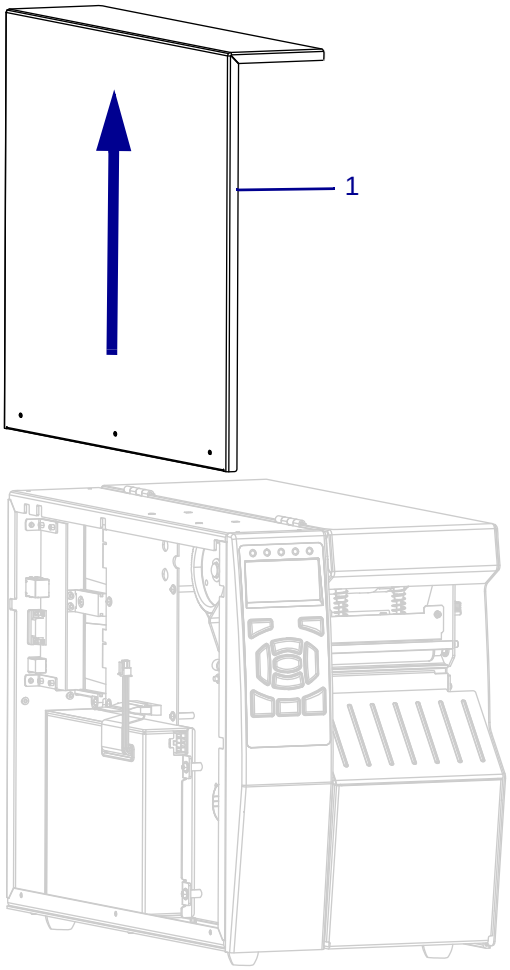
Figure 285 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 286. Lift the electronics cover off of the printer.

Figure 286 • Remove the Electronics Cover



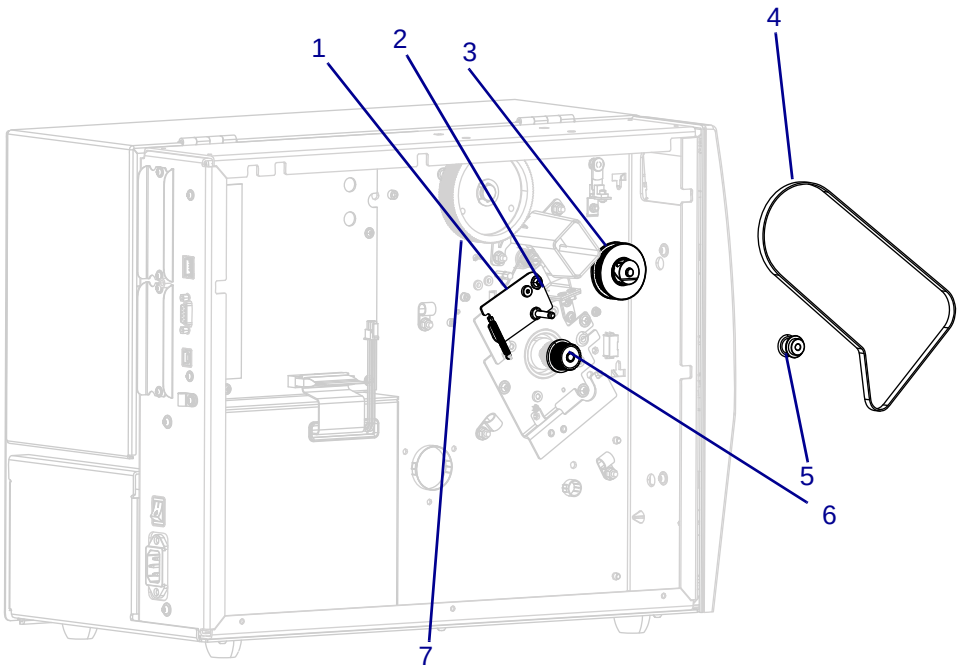
1	Electronics cover

Remove the Old Rewind Spindle Assembly

1. **Caution •** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

   See Figure 287. Loosen the main drive belt tensioner locking screw.

Figure 287 • Loosen the Main Drive Belt Tensioner



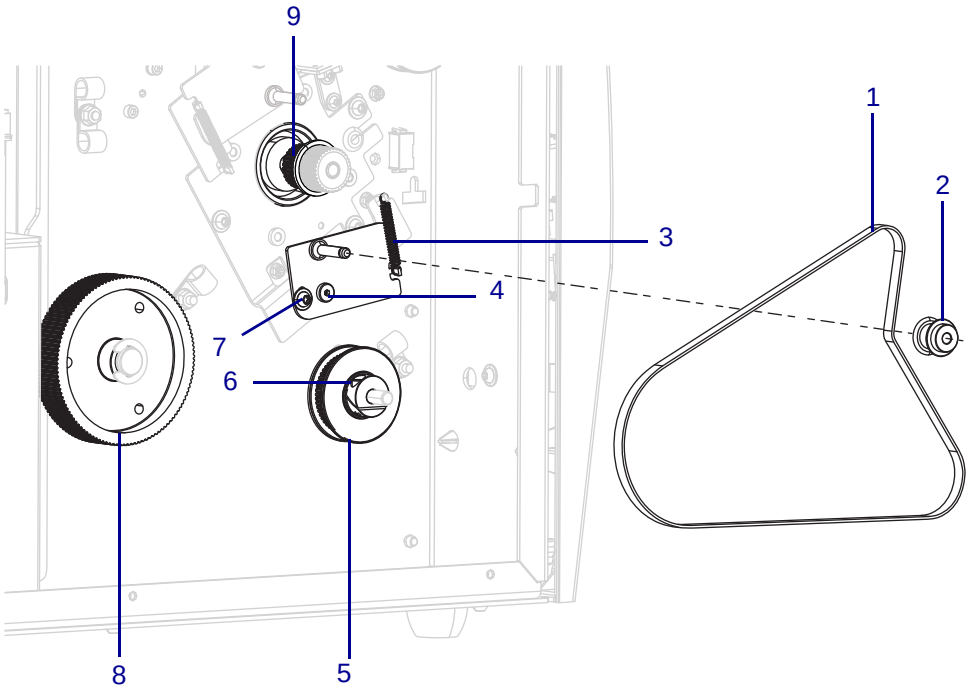
1	Main drive belt tensioner
2	Main drive belt tensioner locking screw
3	Upper platen pulley
4	Main drive belt
5	Main drive belt idler pulley
6	Drive motor pulley
7	Ribbon take-up pulley

2. Rotate the main drive belt tensioner to extend the spring, and then tighten the locking screw.

3. Remove the main drive belt.

4. See Figure 288. Loosen the rewind drive belt tensioner locking screw.

Figure 288 • Remove the Rewind Drive Belt



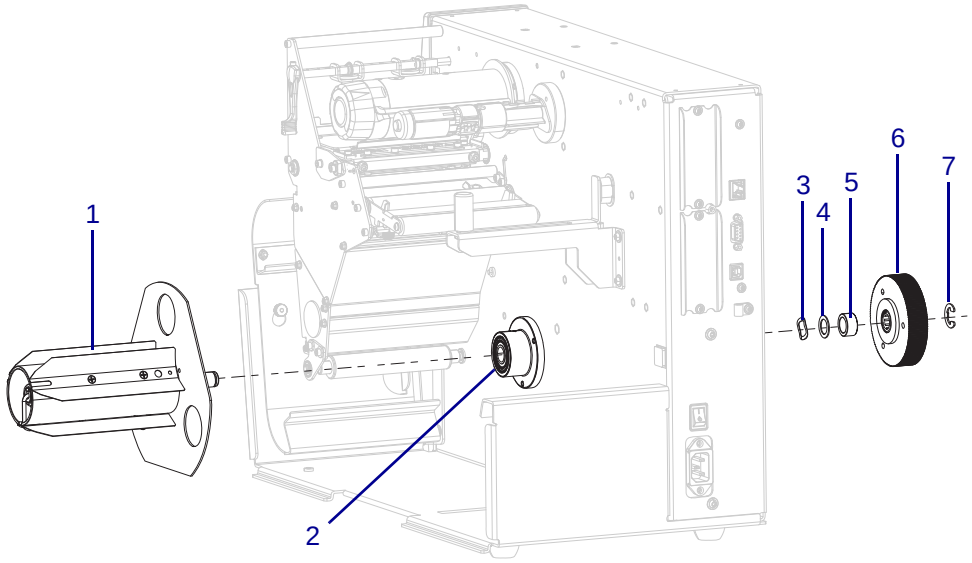
1	Rewind drive belt
2	Rewind drive belt idler pulley
3	Rewind belt tensioner spring
4	Pivot screw
5	Rewind platen pulley
6	Clamp screw
7	Locking screw
8	Media take-up spindle pulley
9	Rewind belt drive motor pulley

5. Rotate the rewind drive belt tensioner to extend the spring, and then tighten the locking screw.

6. Remove the rewind drive belt.

7. See Figure 289. Remove the E-ring, and then slide the rewind spindle pulley, spacer, flat washer, and wave washer off of the rewind spindle shaft.

Figure 289 • Remove the Rewind Spindle

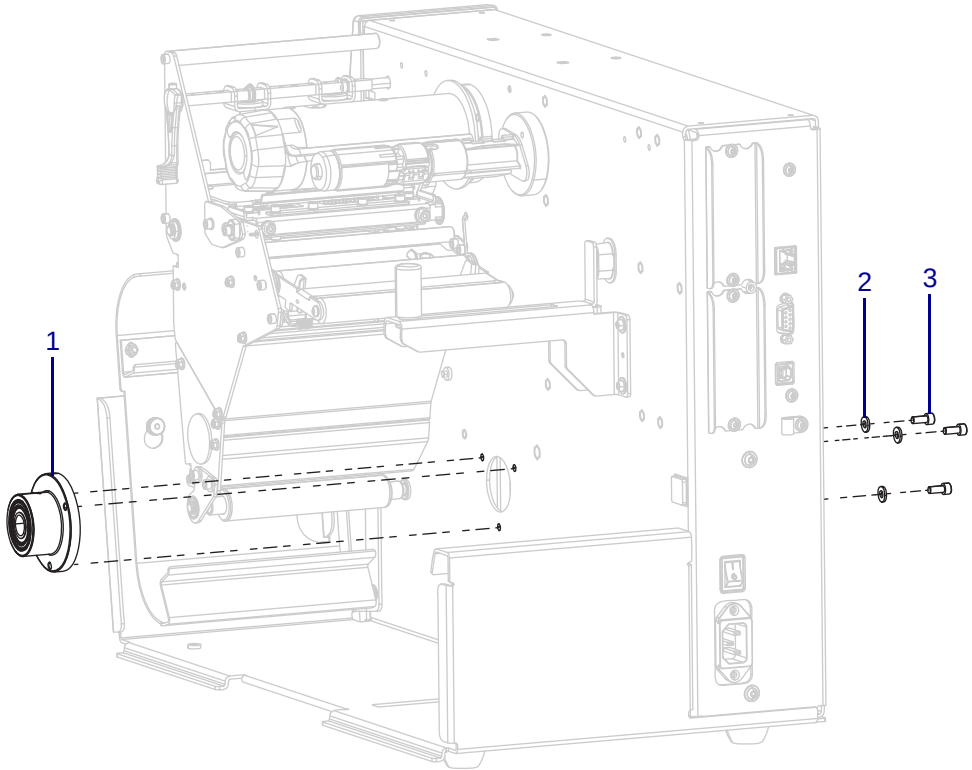


1	Rewind spindle
2	Rewind spindle bearing housing
3	Wave washer
4	Flat washer
5	Spacer
6	Rewind spindle pulley
7	E-ring

8. Pull the rewind spindle out of the rewind spindle bearing housing.

9. See Figure 290. From the electronics side, remove the three rewind spindle bearing housing mounting screws and washers.

Figure 290 • Remove the Rewind Spindle Bearing Housing



1	Rewind spindle bearing housing
2	Flat washers (3)
3	Mounting screws (3)

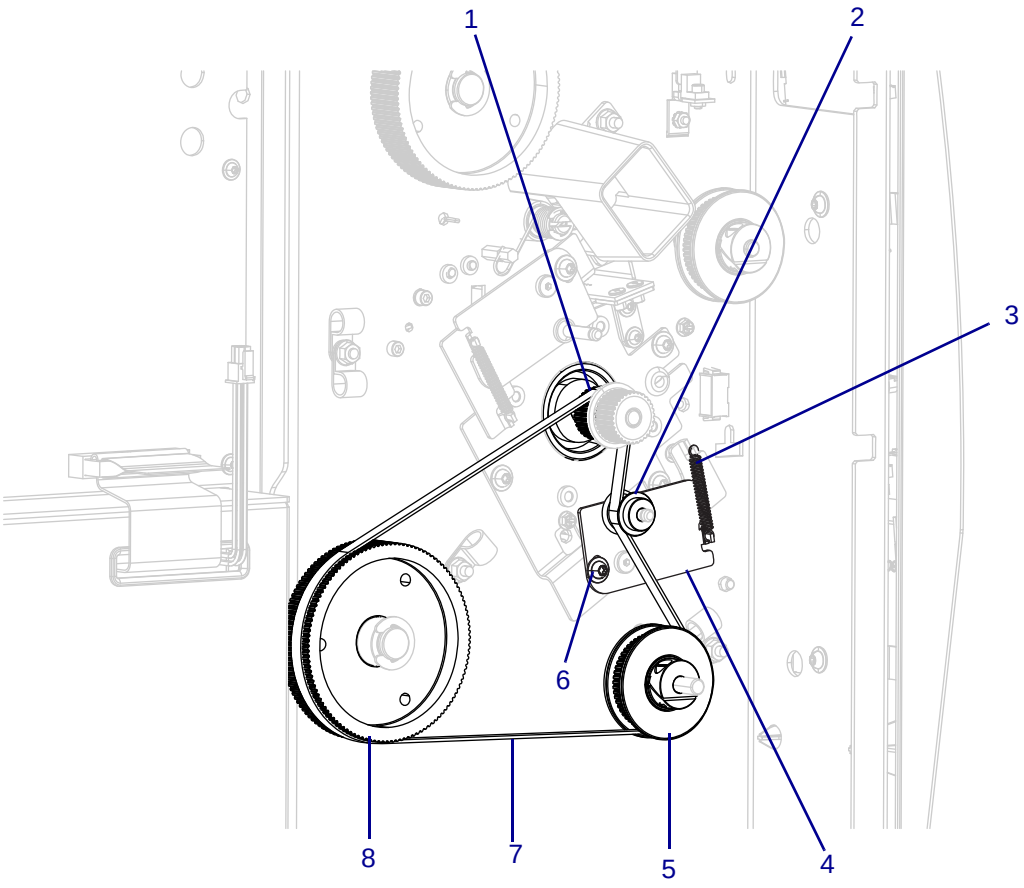
10. Remove the rewind spindle bearing housing.

Install the New Rewind Spindle Assembly

1. See Figure 289 on page 415. Slide the rewind spindle assembly through the bearing housing.
2. Reinstall the wave washer, flat washer, rewind pulley, spacer, and pulley onto the rewind spindle shaft.
3. Reinstall the E-ring.
4. Which model are you working on?

5. See Figure 291 on page 418. Rotate the rewind tensioner to extend the spring, and then tighten the locking screw.

Figure 291 • Install the Rewind Drive Belt

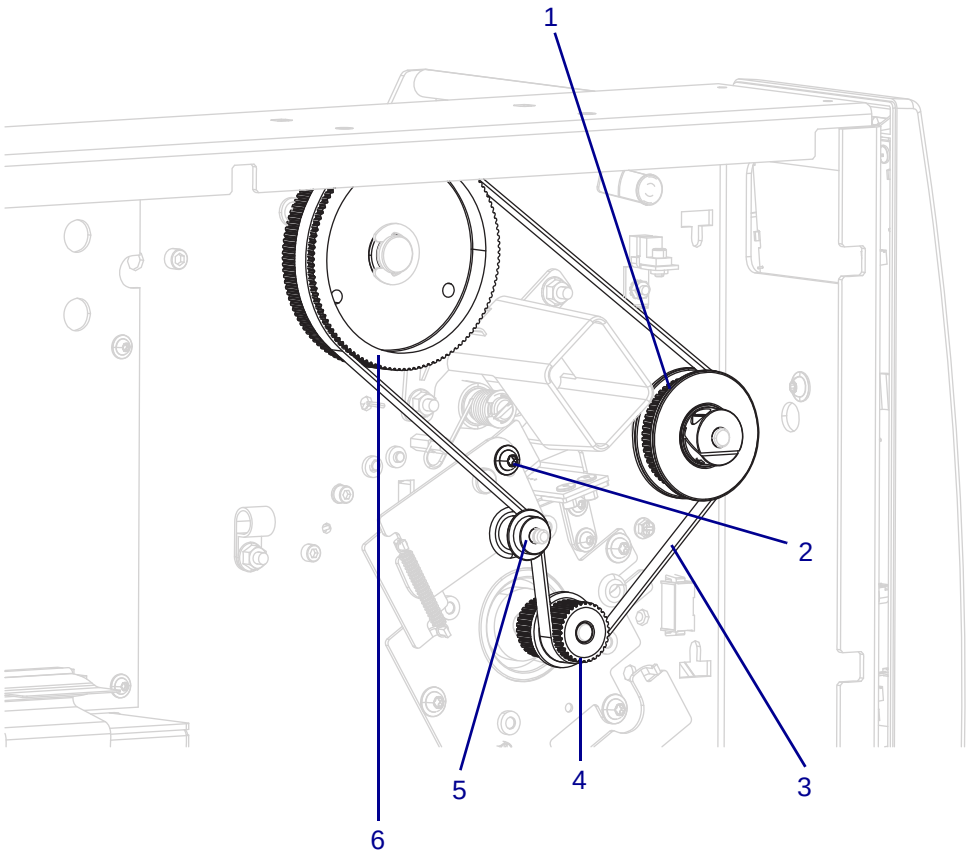


1	Inside drive motor pulley
2	Rewind idler pulley (hub facing out)
3	Tensioner spring
4	Tensioner
5	Rewind platen pulley
6	Locking screw
7	Rewind drive belt
8	Rewind spindle pulley

6. Install the rewind drive belt around the inside pulley on the drive motor, the rewind platen pulley, and the rewind spindle pulley.
7. Slide the rewind idler pulley onto the tensioner shaft and on the outside of the rewind drive belt.
8. Loosen the locking screw on the rewind belt tensioner.
9. Rotate the belt several times to seat the belt on all the pulleys.
10. Tighten the locking screw on the rewind tensioner.

11. See Figure 292. Reinstall the main drive belt around the outside stepper motor pulley, the upper platen roller pulley, and the ribbon take-up spindle pulley.

Figure 292 • Reinstall the Main Drive Belt



1	Upper platen pulley
2	Locking screw
3	Main drive belt
4	Drive motor outside pulley
5	Main drive belt idler pulley
6	Ribbon take-up spindle pulley

12. Ensure that the belt is on the inside part of the idler pulley.

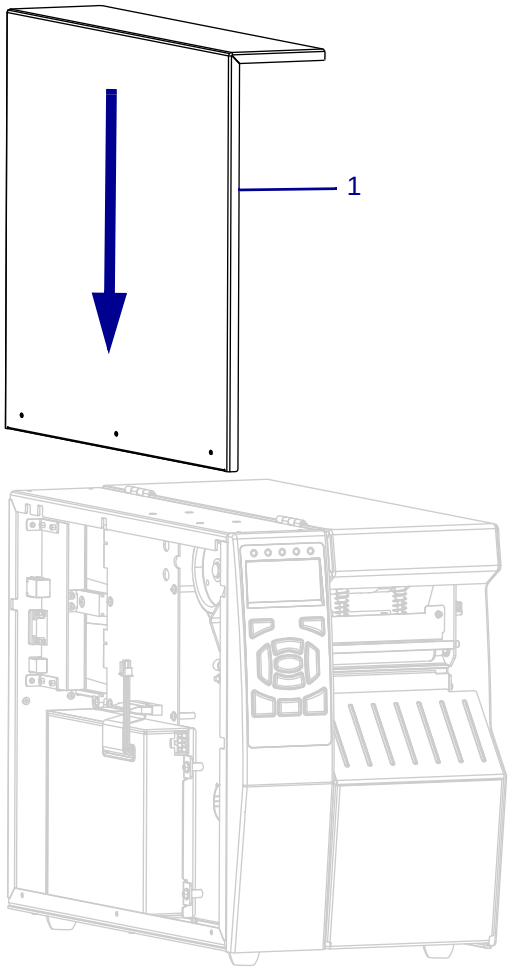
13. Loosen the locking screw on the main drive belt tensioner.

14. Rotate the belt several times to seat the belt on all the pulleys, and then tighten the locking screw on the main drive belt tensioner.

Reinstall the Electronics Cover

1. See Figure 293. Slide the electronics cover onto the printer.

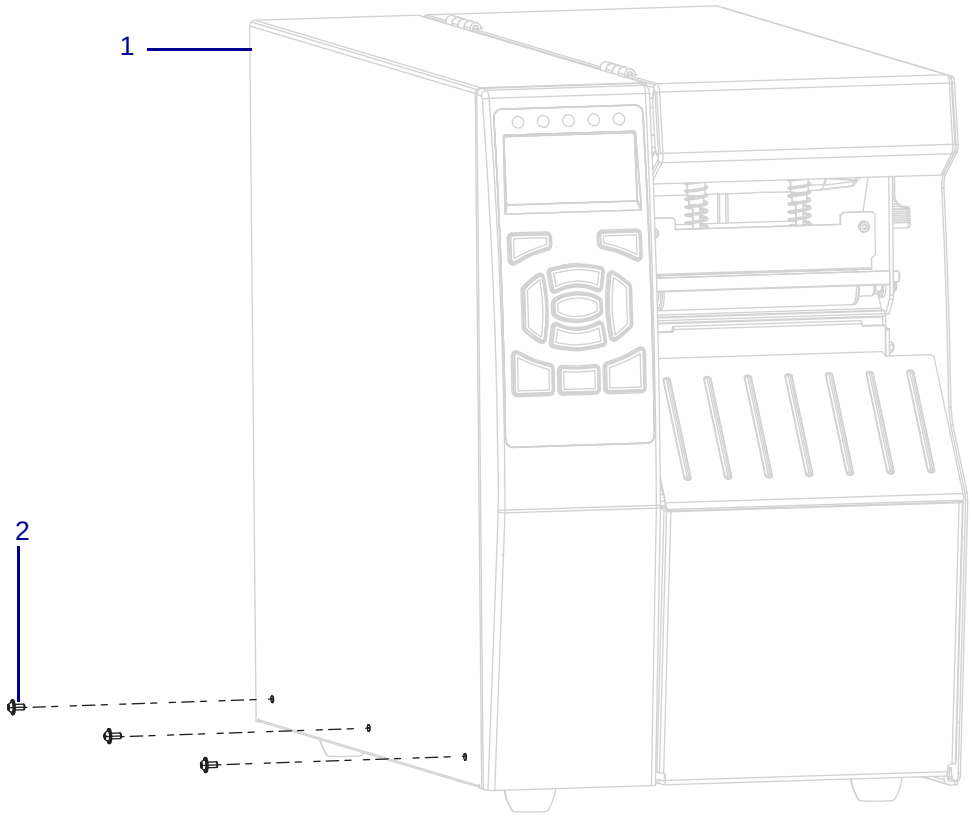
Figure 293 • Install the Electronics Cover



1	Electronics cover

2. See Figure 294. Install the three mounting screws.

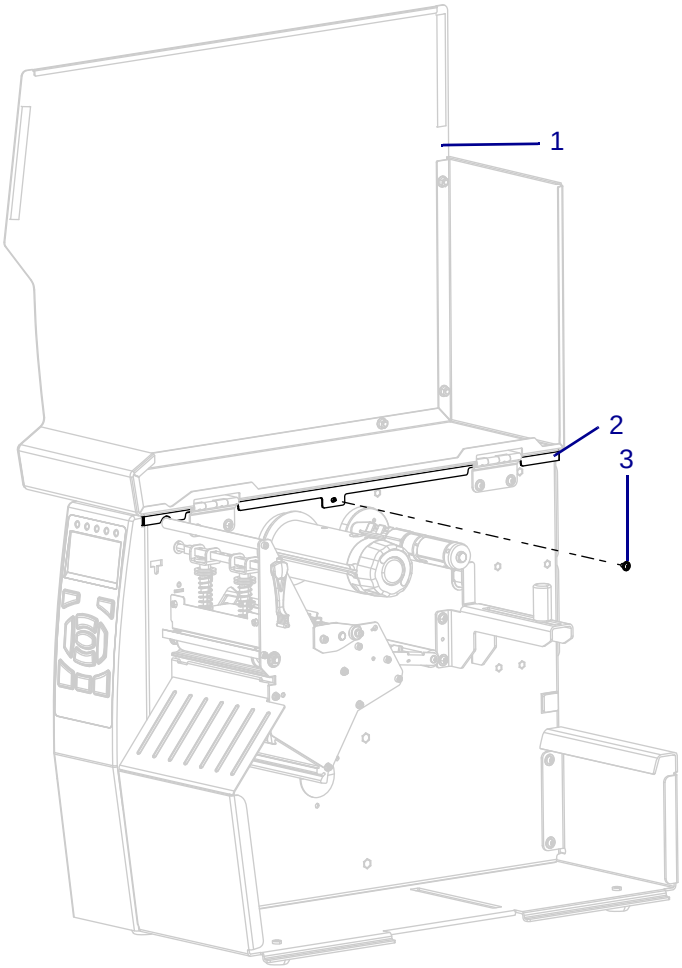
Figure 294 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 295. Open the media door and install the media side electronics cover mounting screw.

Figure 295 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Rewind Plate Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Rewind Plate Kit for the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 296 • Kit Contents

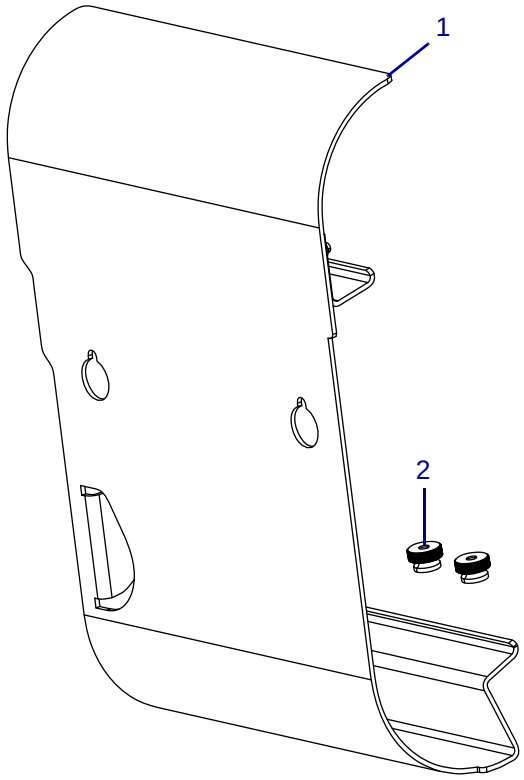


Table 41 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-032**	ZT510 Rewind Plate Maintenance Kit
	1	1	*N/A*	Rewind Plate
	2	2	*N/A*	Knurled Nut, M3, part of miscellaneous hardware kit, **P1083347-026**

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

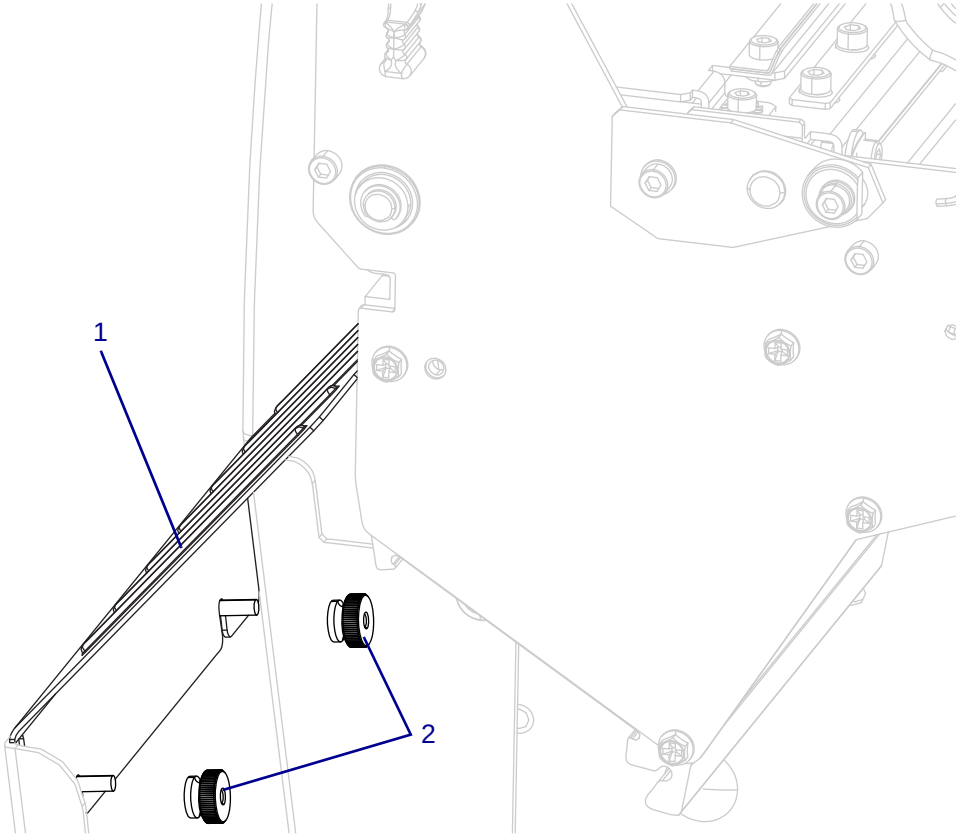
Prepare for Installation

1. Is there a tear mode trim plate still installed?

If…	Then…
Yes	Continue with step 2.
No	Go to step 4 on page 425.

2. Open the media door, and then remove the two knurled nuts securing the trim plate.

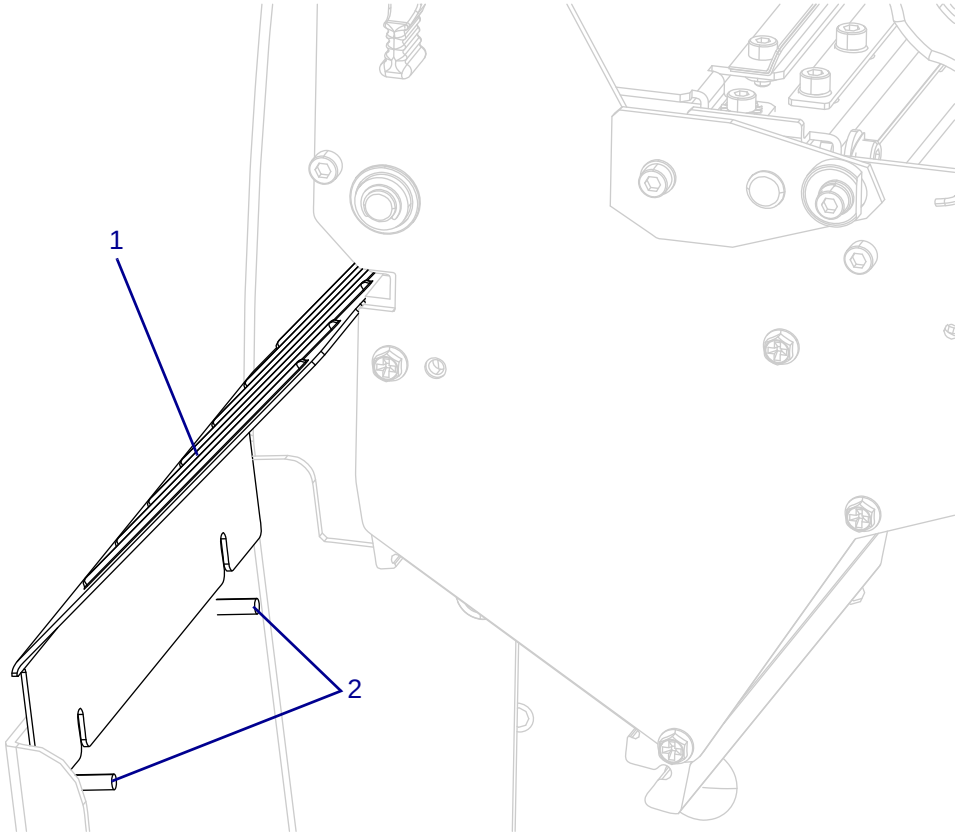
Figure 297 • Remove the Knurled Nuts



1	Trim plate
2	Knurled nuts (2)

3. See Figure 298. Lift the trim plate out of the printer.

Figure 298 • Lift the Trim Plate Out



1	Trim plate
2	Mounting studs

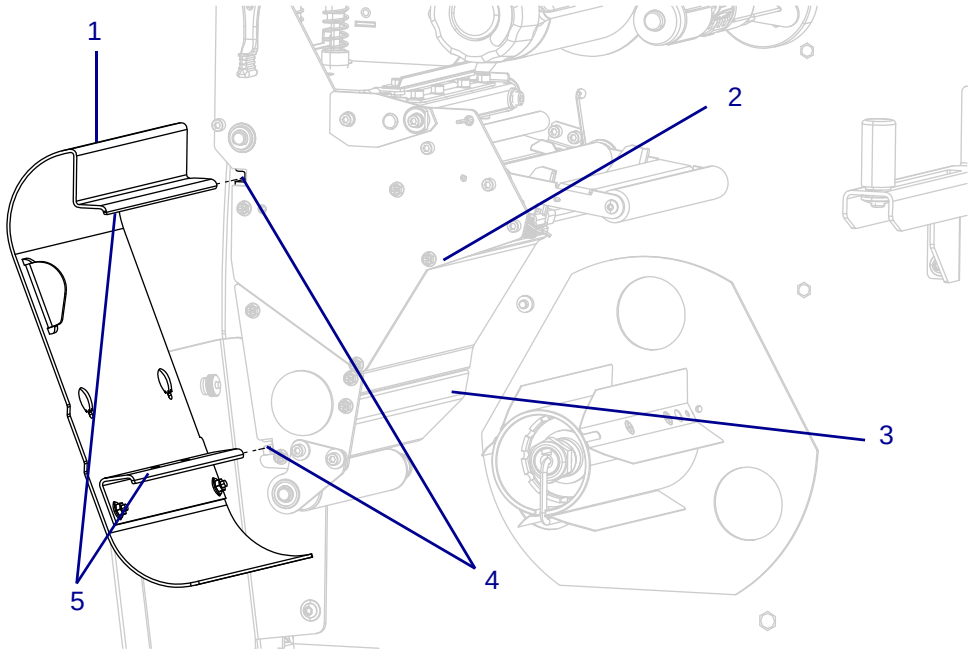
4. Select the mode to installed.

If want to install for the…	Then…
Rewind Mode	Continue with *Install the Rewind Plate for Rewind Mode*.
Peel/Tear Mode	Go to *Install the Rewind Plate for Peel/Tear Mode on page 428*.

Install the Rewind Plate for Rewind Mode

1. See Figure 299. Align the upper lip of the rewind plate with the top slot in the print mechanism.

Figure 299 • Install the Rewind Plate

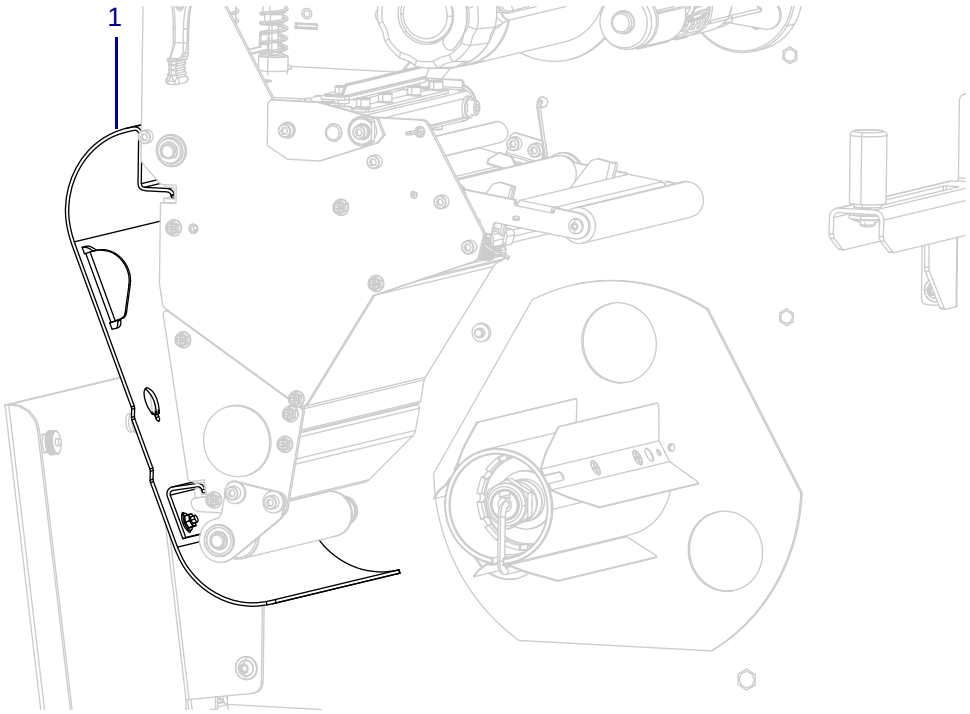


1	Rewind plate
2	Print mechanism
3	Rewind extrusion
4	Mounting slots (2)
5	Mounting lips (2)

2. Align the lower lip with the bottom slot of the rewind extrusion.

3. See Figure 300. Slide the plate into the slots until it stops.

Figure 300 • Installed Rewind Plate



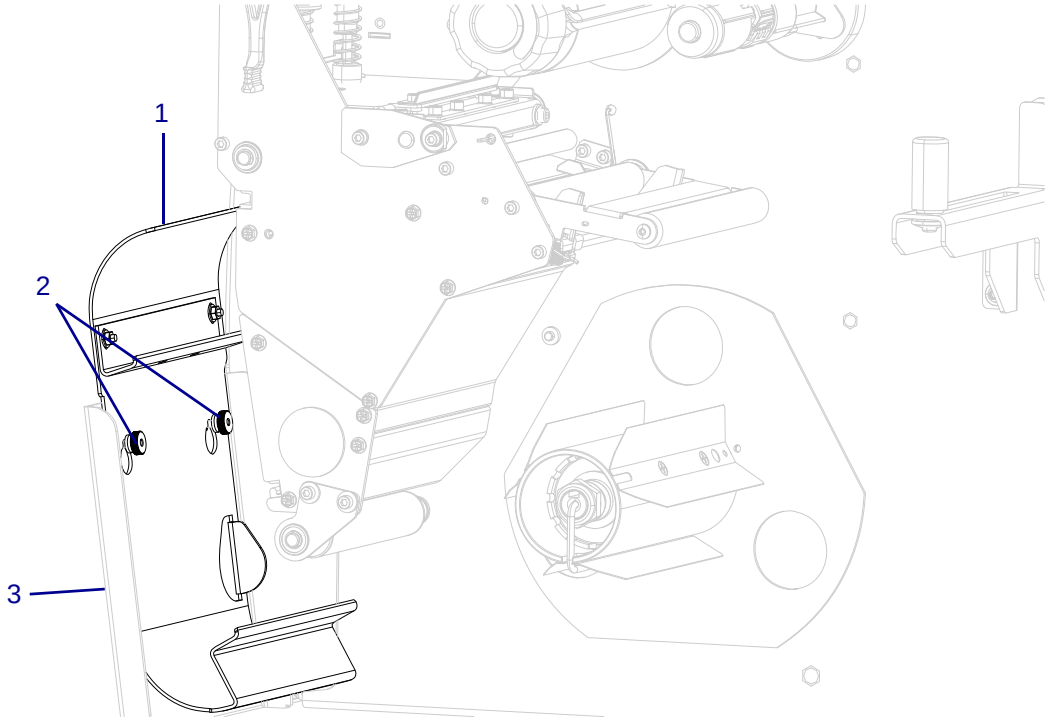
1	Rewind plate

The installation is complete.

Install the Rewind Plate for Peel/Tear Mode

1. See Figure 301. Start the two knurled nuts onto the two studs on the printer's base.

Figure 301 • Install the Peel/Tear Plate



1	Rewind plate
2	Knurled nuts (2)
3	Printer base

2. Align the large hole of the keyhole in the rewind plate over the two knurled nuts, and then slide the plate down until it hits the studs.
3. Tighten the two knurled nuts.

The installation is complete.

Electronic Components

This section supplies you with the parts information and installation procedures for the circuit boards.

Contents

Circuit Boards Parts and Drawings 430
Control Panel Maintenance Kit. 436
Main Logic Board Maintenance Kit 448
Connectivity Board Maintenance Kit 466
Power Supply Maintenance Kit 477
Electronics Cables Maintenance Kit. 488
IPv4 Internal Print Server Option/Maintenance Kit. 496
ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit 502
ZebraNet® Radio Print Server Antenna Maintenance Kit 511
USB Host Option/Maintenance Kit. 513
Parallel Port Option/Maintenance Kit. 518
Media Sensor Maintenance Kit 538
Reflective Sensor Maintenance Kit 554
Head Open Sensor Assembly Maintenance Kit. 565
Take-Label Sensors Maintenance Kit. 577

Circuit Boards Parts and Drawings

Figure 302 • Circuit Boards Overview

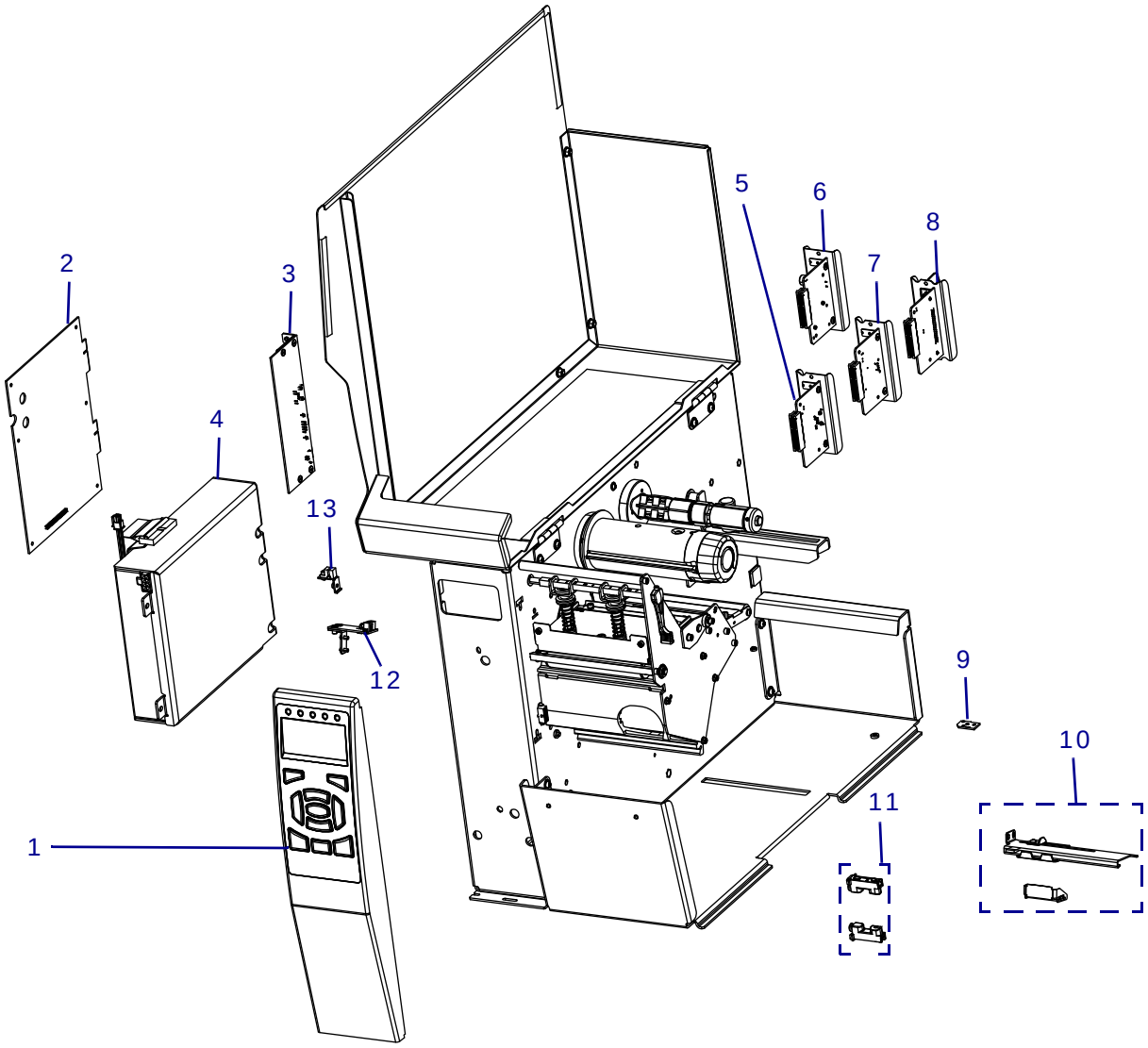


Table 42 • List of Kits

Item	Part Number	Description
1	**P1083347-001**	Control Panel Maintenance Kit
2	**P1083347-013**	Main Logic Board (MLB) Maintenance Kit
3	**P1083320-036**	Connectivity Board Maintenance Kit
4	**P1083320-043**	Power Supply Maintenance Kit
5	**P1083320-039**	IPv4 Internal Print Server Option/Maintenance Kit
6	**P1083320-037A**	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region A (USA and Canada)
	P1083320-037B	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region B (Japan)
	P1083320-037C	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region C (All other countries other than regions, A and B)
7	**P1083320-094**	USB Host Option/Maintenance Kit
8	**P1083320-040**	Parallel Port Option/Maintenance Kit
9	**P1083347-015**	Ribbon-Out Sensor Maintenance Kit
10	**P1083347-030**	Media Sensor Maintenance Kit
11	**P1083320-052**	Take-Label Sensors Maintenance Kit
12	**P1083347-031**	Reflective Sensor Maintenance Kit
13	**P1083320-053**	Head-Open Sensor Assembly Maintenance Kit

Figure 303 • Circuit Board Kits (1)

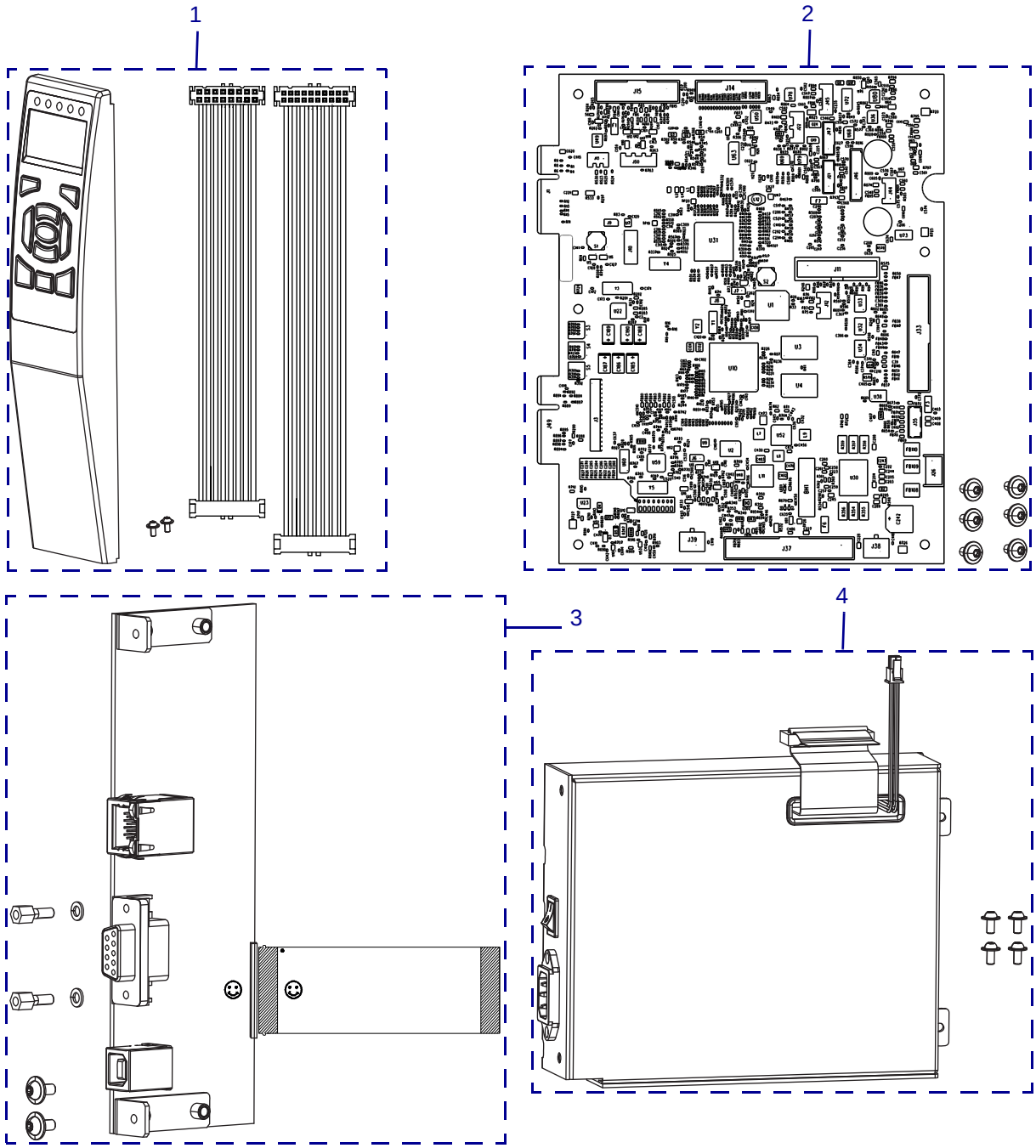


Table 43 • Kits List of Parts (1)

Item	Part Number	Description
1	**P1083347-001**	Control Panel Maintenance Kit
2	**P1083347-013**	Main Logic Board (MLB) Maintenance Kit
3	**P1083320-036**	Connectivity Board Maintenance Kit
4	**P1083320-043**	Power Supply Maintenance Kit

Figure 304 • Electronics Cables Kit

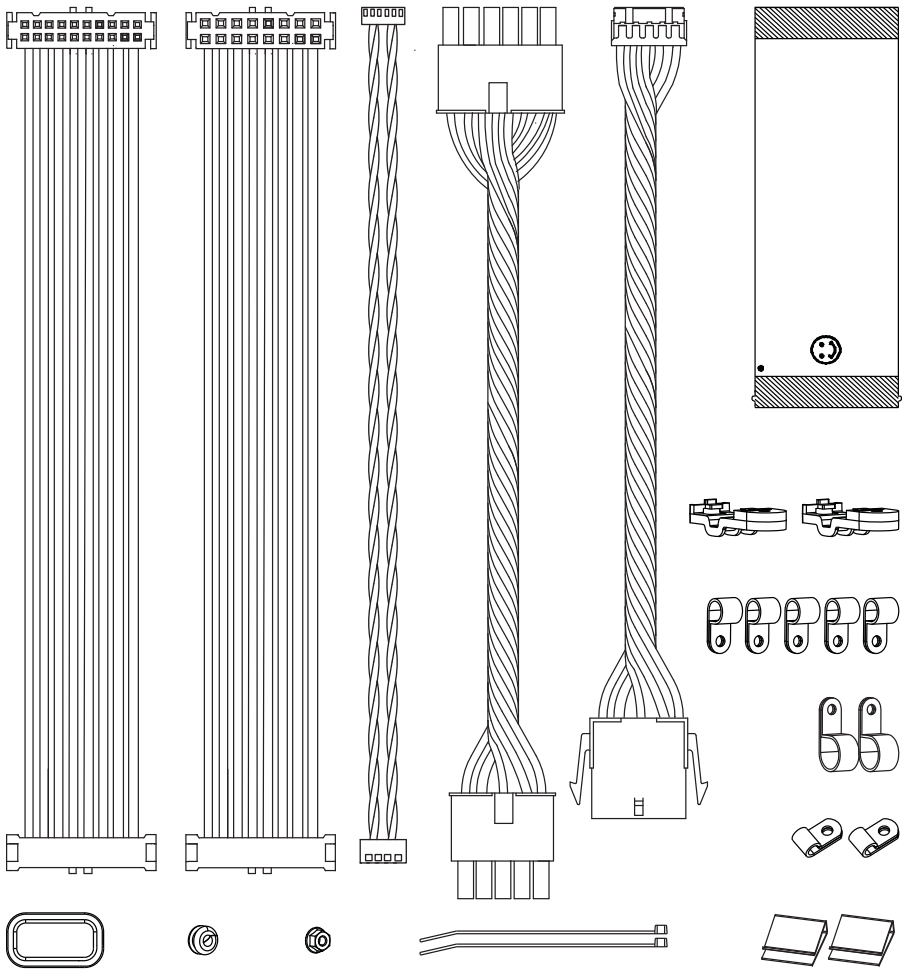


Table 44 • Kits List of Parts (1)

Item	Part Number	Description
1	**P1083347-014**	Electronics Cables Maintenance Kit

Figure 305 • Circuit Board Kits (2)

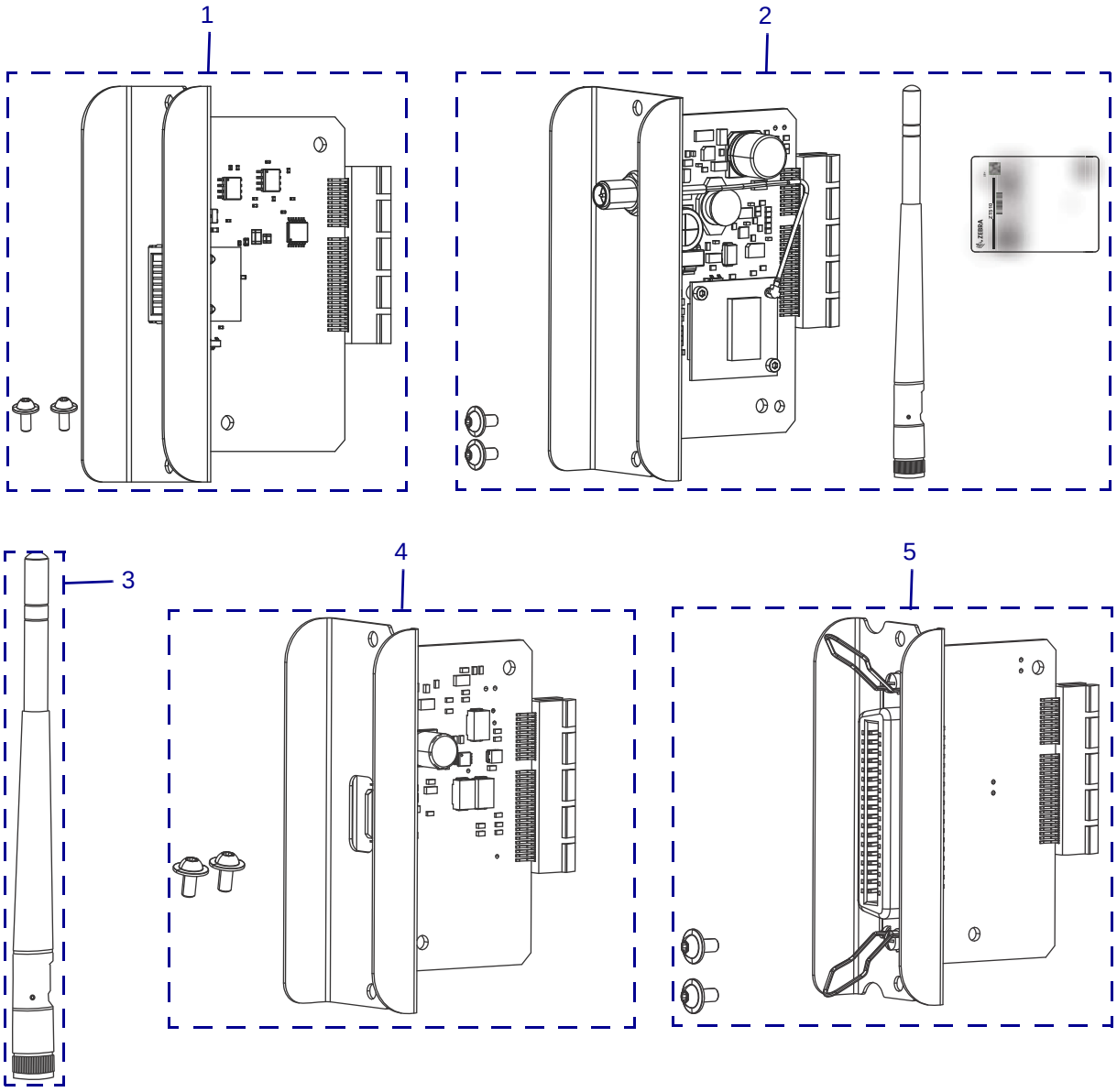


Table 45 • Kits List of Parts (2)

Item	Part Number	Description
1	**P1083320-039**	IPv4 Internal Print Server Option/Maintenance Kit
2	**P1083320-037A**	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region A (USA and Canada)
	P1083320-037B	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region B (Japan)
	P1083320-037C	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region C (All other countries other than regions, A and B)
3	**P1037974-053**	ZebraNet Radio Print Server Antenna
4	**P1083320-094**	USB Host Option/Maintenance Kit
5	**P1083320-040**	Parallel Port Option/Maintenance Kit

Sensors

Figure 306 • Sensors

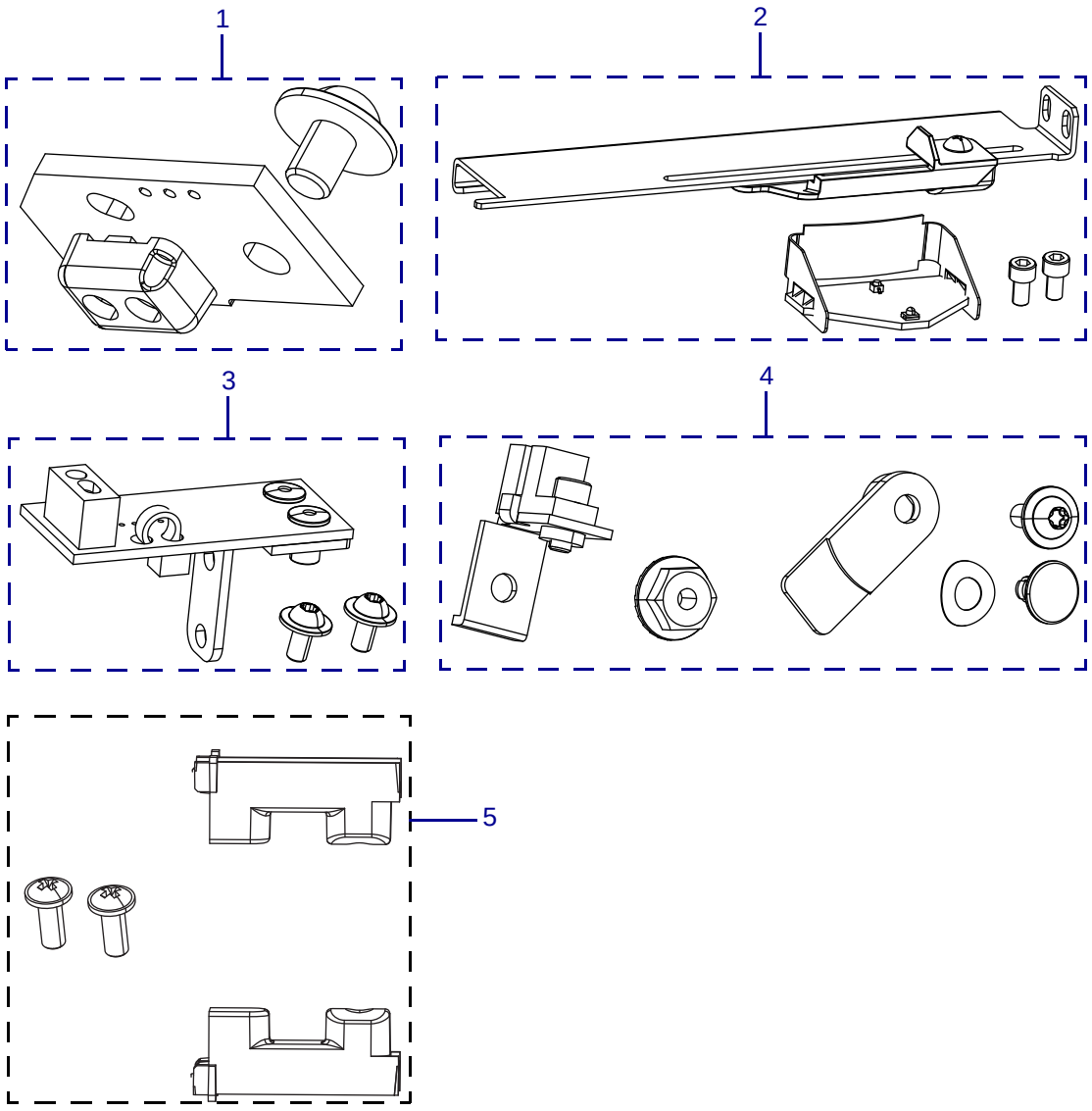


Table 46 • List of Kits

Item	Part Number	Description
1	**P1083347-015**	Ribbon-Out Sensor Maintenance Kit
2	**P1083347-030**	Media Sensor Maintenance Kit
3	**P1083347-031**	Reflective (Black Mark) Sensor Maintenance Kit
4	**P1083320-053**	Head-Open Sensor Assembly Maintenance Kit
5	**P1083320-052**	Take-Label Sensors Maintenance Kit

Control Panel Maintenance Kit

Installation Instructions

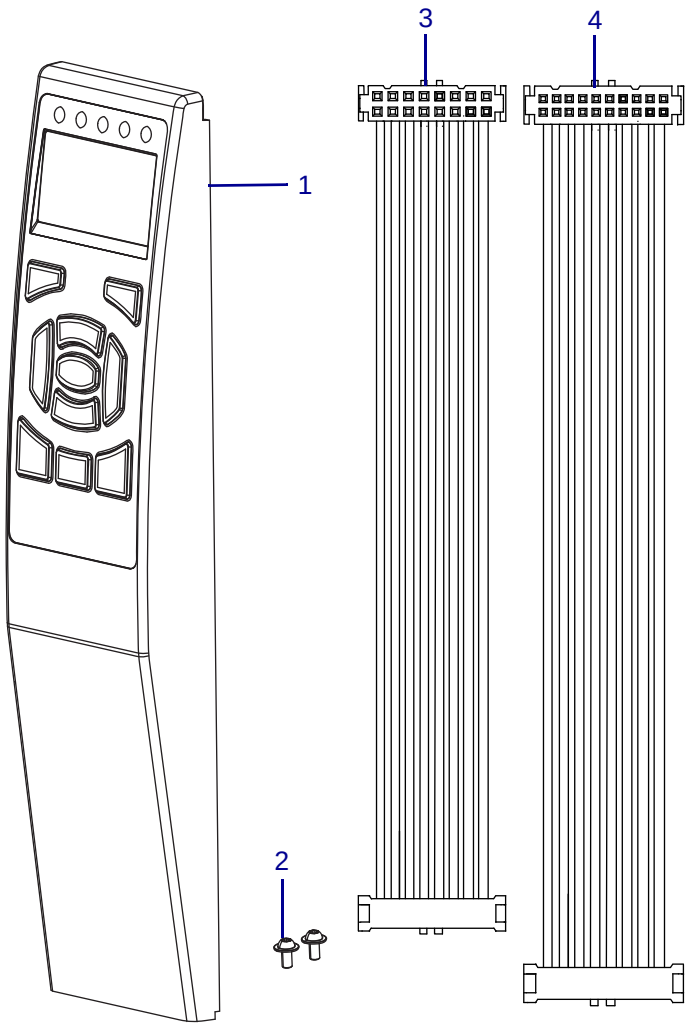
This kit includes the parts and documentation necessary to install the control panel maintenance kit on ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 307 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 47 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-001**	ZT510™ Control Panel Maintenance Kit
	1	1	*N/A*	Control Panel
	2	2	*N/A*	Screw, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**
	3	1	*N/A*	16 Pin Ribbon Cable, part of Electronics Cable Kit **P1083347-014**
	4	1	*N/A*	20 Pin Ribbon Cable, part of Electronics Cable Kit **P1083347-014**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

Important • This repair may alter the NFC functionality experience. If full NFC functionality is required for your situation, please contact Zebra Technical Support at the end of the installation.

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

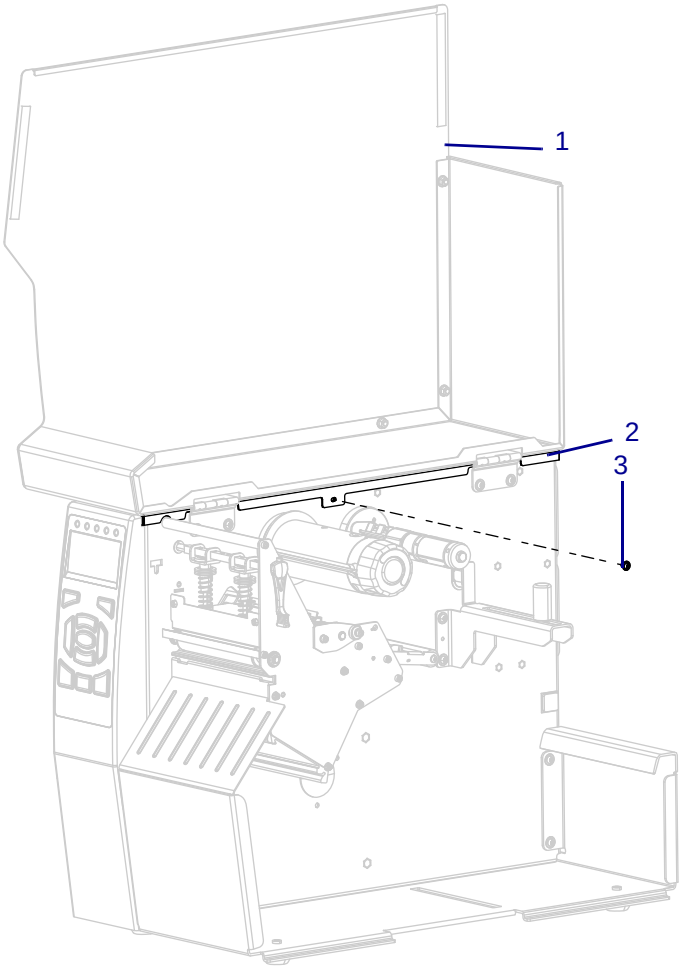
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 308 • Locate the Electronics Cover Mounting Screw

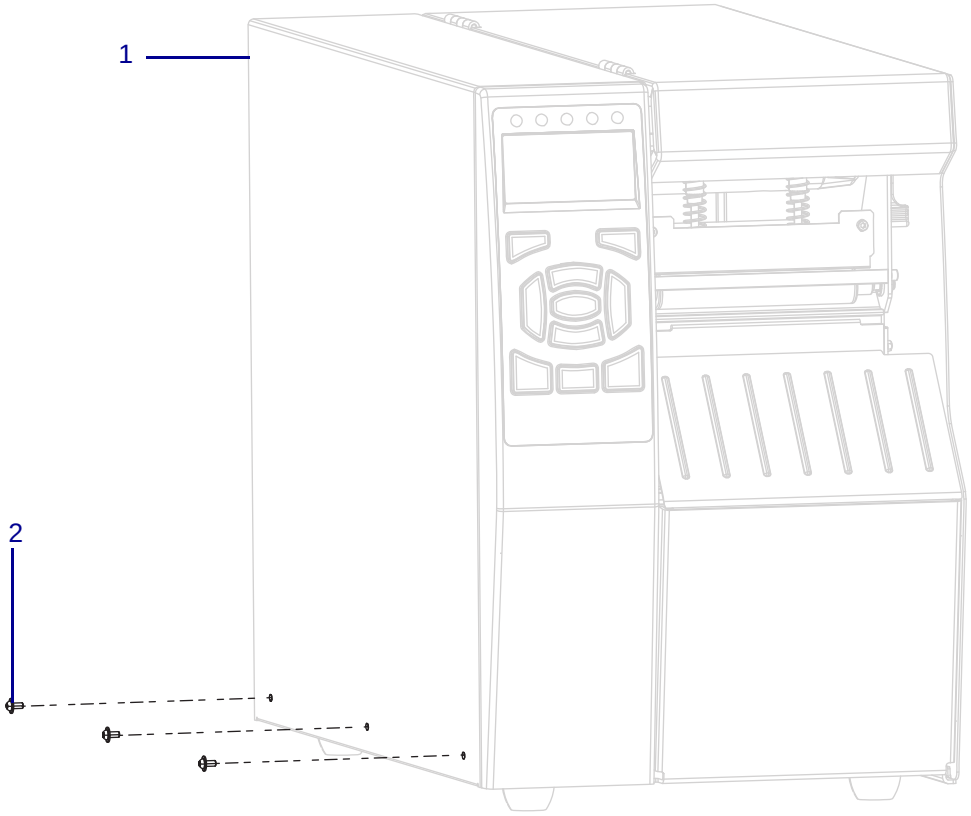


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 309. Remove the three mounting screws securing the electronics cover to the printer.

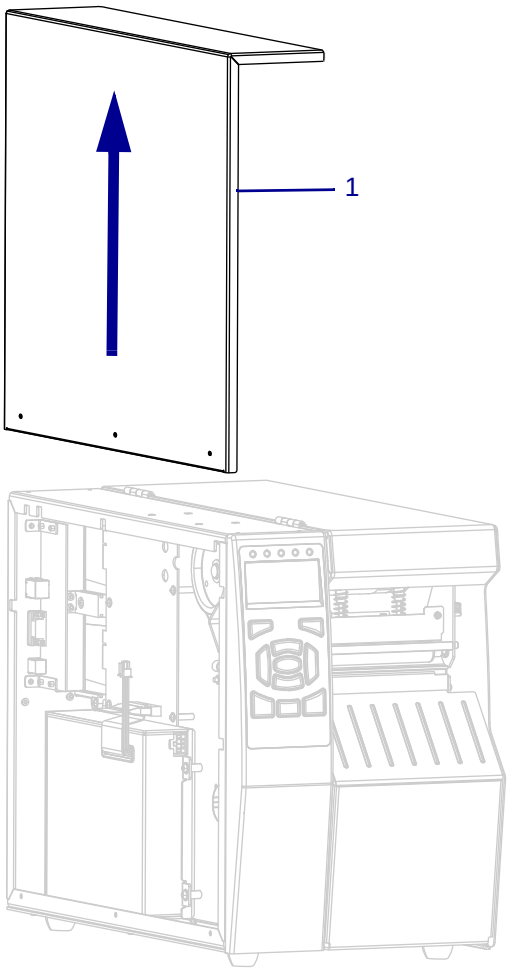
Figure 309 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 310. Lift the electronics cover off of the printer.

Figure 310 • Remove the Electronics Cover



1	Electronics cover

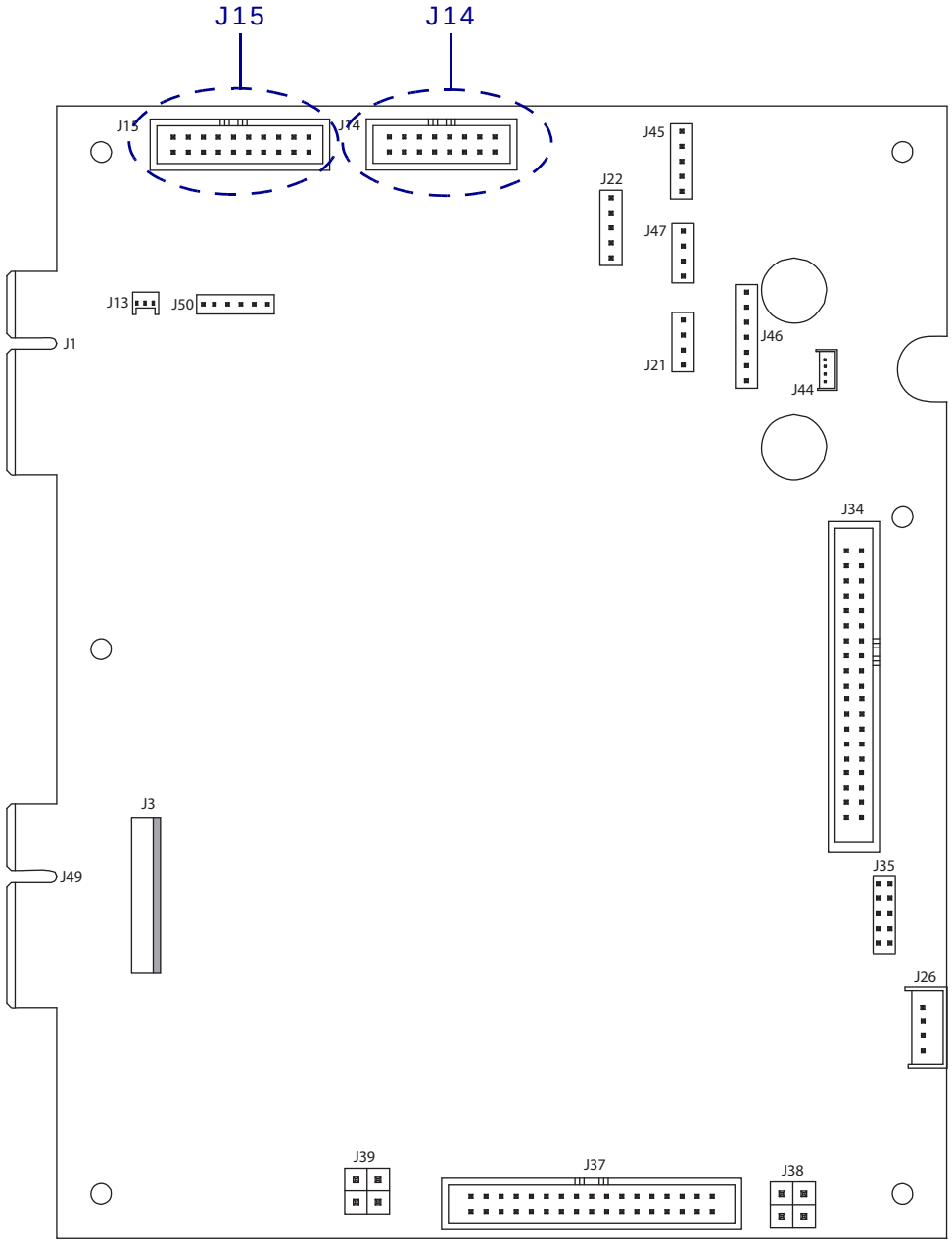
Remove the Control Panel

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

   Connect yourself to an antistatic device.

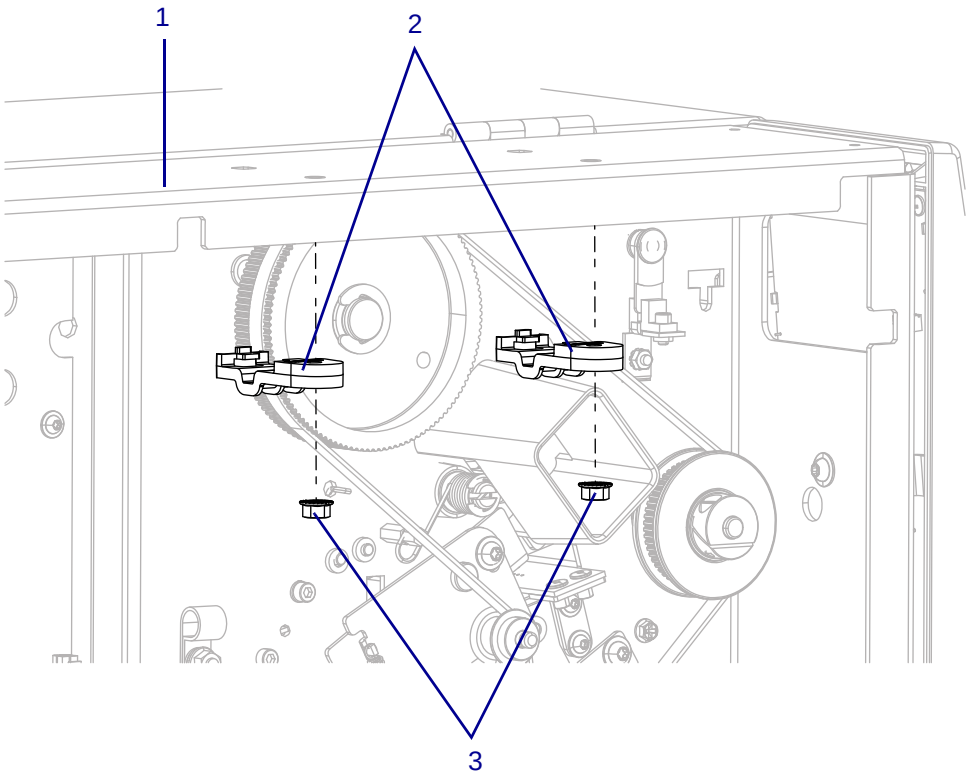
2. See Figure 311. Disconnect the control panel cables from J14 and J15 on the main logic board.

Figure 311 • Disconnect Cables



3. See Figure 312. Remove the nuts securing the control panel cables to the top of the printers main frame.

Figure 312 • Remove the Control Panel Cable Clamps

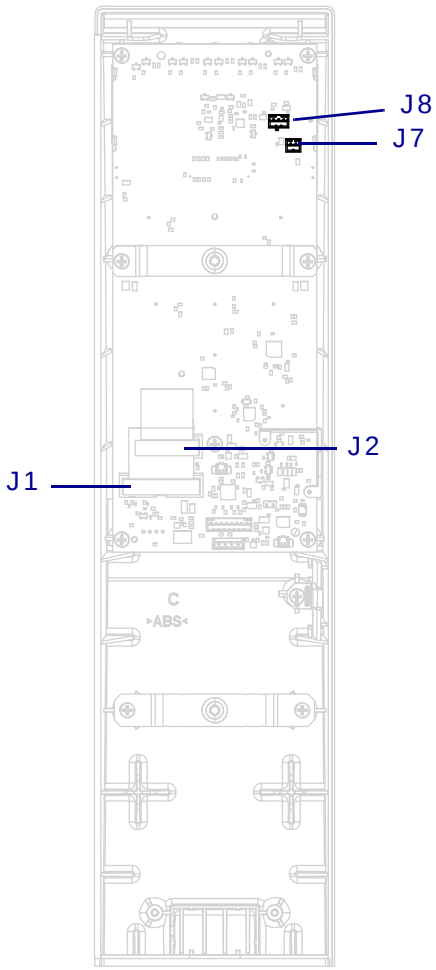


1	Main frame
2	Control panel cable clamps (2)
3	Control panel cable clamp mounting nuts (2)

4. Is there is a rewind option installed?

If…	Then…
Yes	**a.** See Figure 313. Remove the take-label sensors cables from J7 and J8 on the control panel printed circuit board assembly (PCBA). **b.** Continue to step 5 on page 444.
No	Continue to step 5 on page 444.

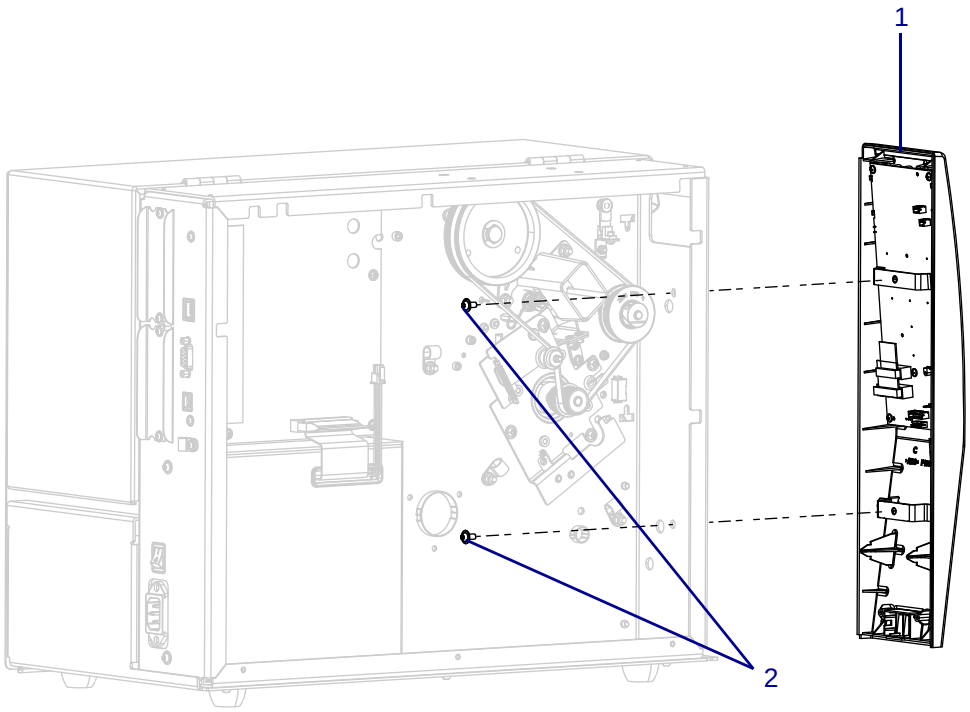
Figure 313 • Control Panel Connectors



J1	To J15 on the main logic board
J2	To J14 on the main logic board
J7	To take-label sensor 3 pin connector
J8	To take-label sensor 5 pin connector

5. See Figure 314. Remove the two control panel mounting screws.

Figure 314 • Remove the Control Panel



1	Control panel
2	Control panel mounting screws (2)

6. Pull the control panel out of the printer while guiding the cables through the main frame pass-through hole.

Install the New Control Panel

1. See Figure 313 on page 443. If the ribbon cables are not connected connect them to J1 and J2, on the control panel PCBA.
2. See Figure 314 on page 444. Guide the cables through the access hole in the main frame.
3. Align the two control panel mounting holes.
4. Install the two new mounting screws.
5. See Figure 311 on page 441. Connect the cables to J14 and J15 on the main logic board.

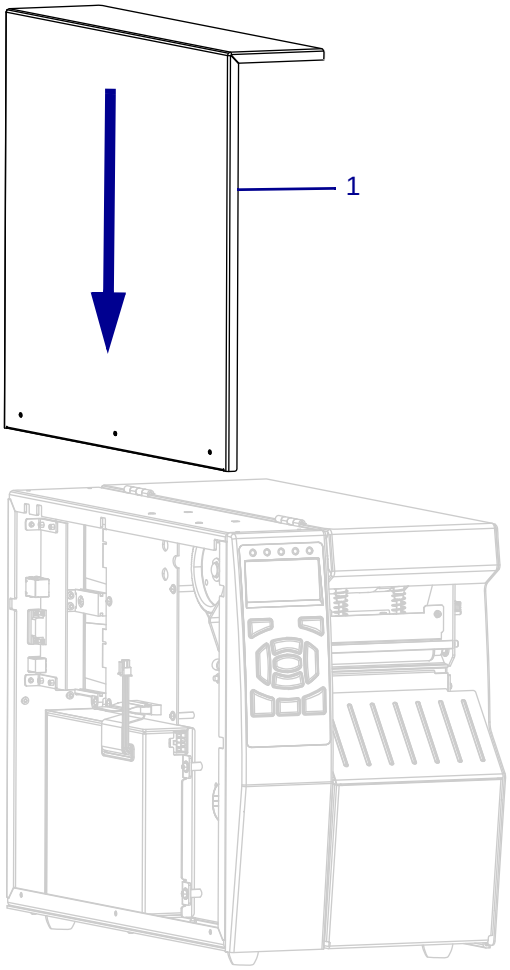
Caution • Fold the ribbon cables to fit flat and neatly in the electronics side.

6. See Figure 312 on page 442. Install the two control panel cable clamps, with the control panel cables, and then install the two mounting nuts.
7. See Figure 313 on page 443. If you disconnected the two take-label cables, connect the cables to J7 and J8 on the control panel.

Reinstall the Electronics Cover

1. See Figure 315. Slide the electronics cover onto the printer.

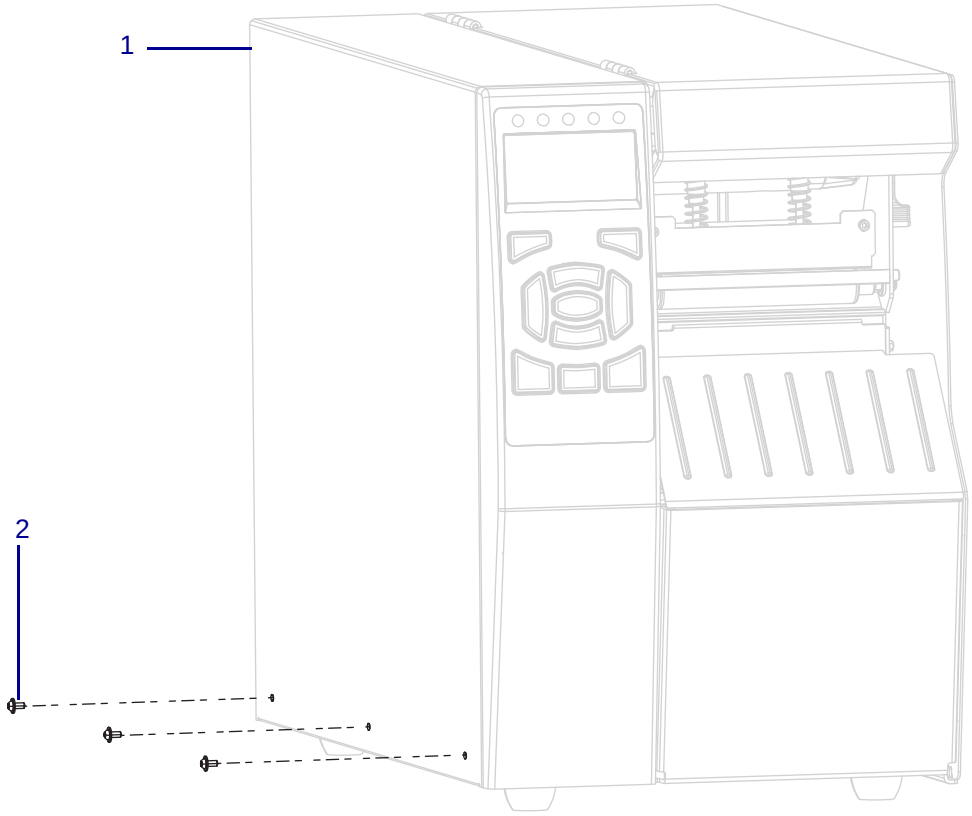
Figure 315 • Install the Electronics Cover



1	Electronics cover

2. See Figure 316. Install the three mounting screws.

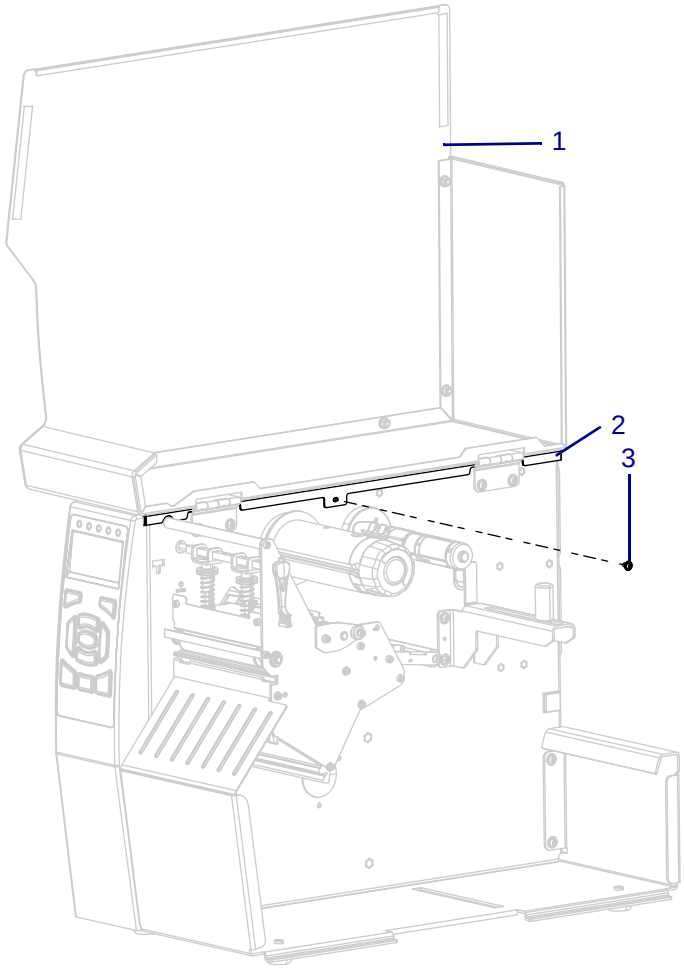
Figure 316 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 317. Open the media door and install the media side electronics cover mounting screw.

Figure 317 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Main Logic Board Maintenance Kit

Installation Instructions

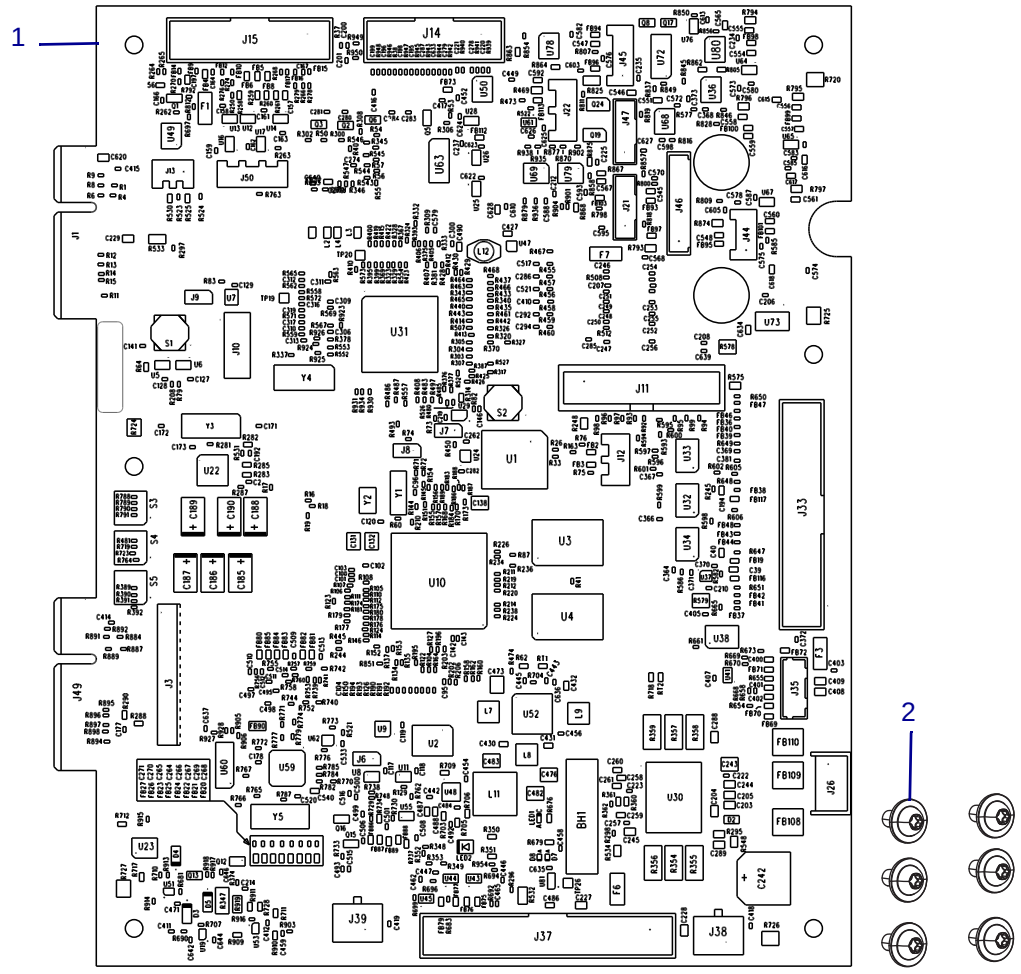
This kit includes the parts and documentation necessary to install the Main Logic Board (MLB) Maintenance Kit on ZT510™ series printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 318 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

Table 48 • Kit Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-013**	Main Logic Board (MLB) Maintenance Kit
	1	1	*N/A*	MLB
	2	6	*N/A*	Torx-Head Screws, M3 × 6, included in the miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

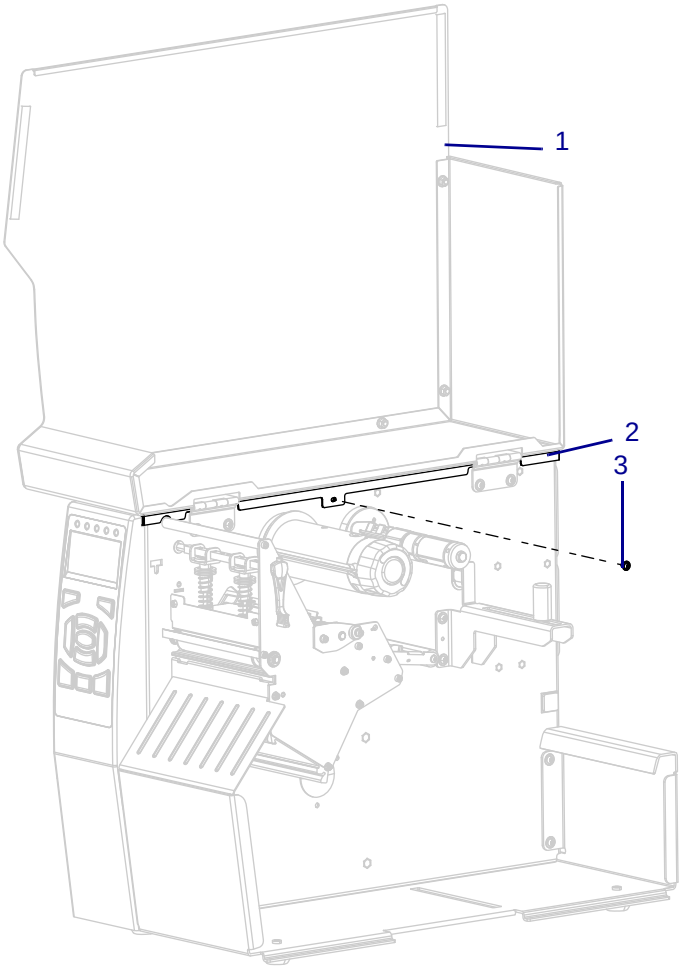
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 319 • Locate the Electronics Cover Mounting Screw

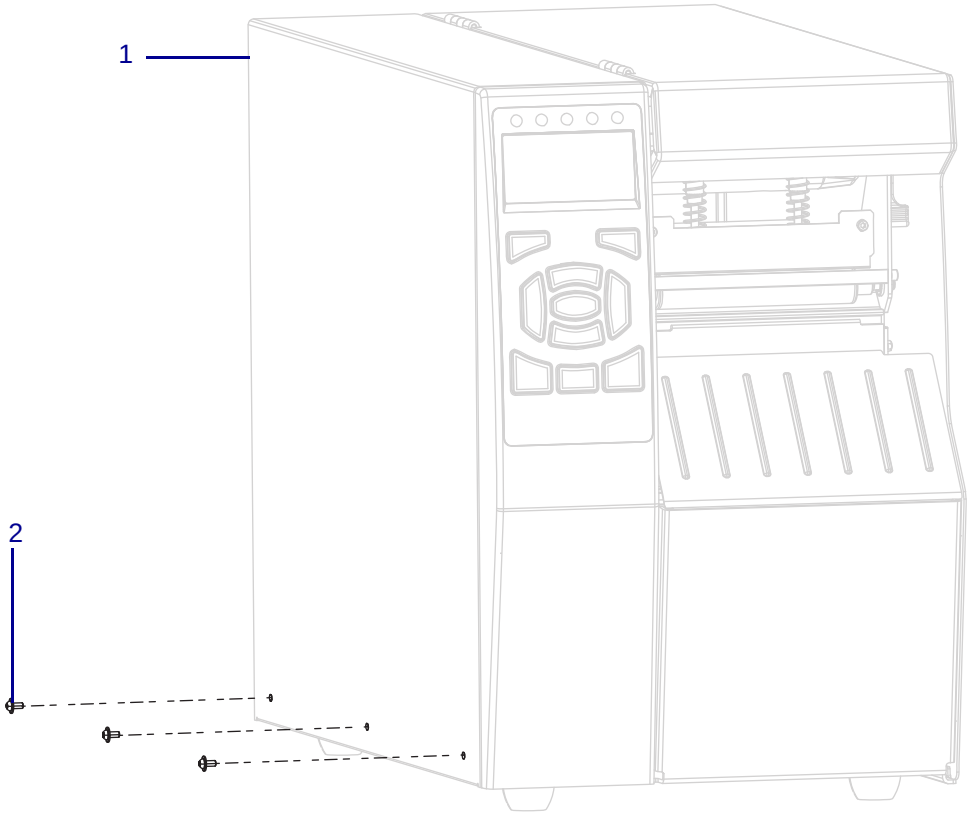


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 320. Remove the three mounting screws securing the electronics cover to the printer.

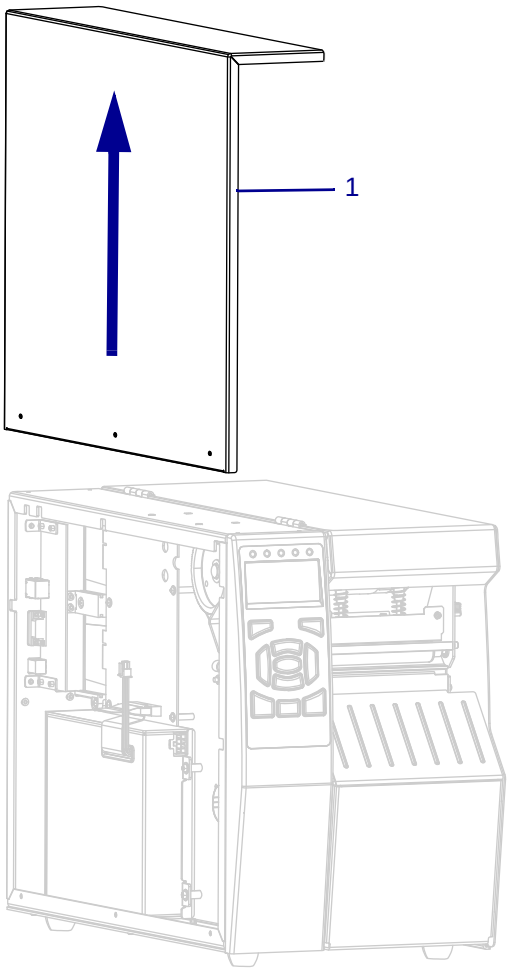
Figure 320 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 321. Lift the electronics cover off of the printer.

Figure 321 • Remove the Electronics Cover



1	Electronics cover

7. Which option/options do you have installed?

If you have an…	Then…
Applicator interface board	Go to *Remove the Applicator Interface Board* on page 454.
Internal print server IPv4	Go to *Remove the Internal Print Server IPv4* on page 455.
Wireless board w/external Antenna	Go to *Remove the Wireless Print Server* on page 456.
USB port host board	Go to *Remove the USB Host Board* on page 458.
Parallel port board	Go to *Remove the Parallel Port Board* on page 459.
None	Go to *Remove the Main Logic Board (MLB)* on page 460.

Remove the Applicator Interface Board

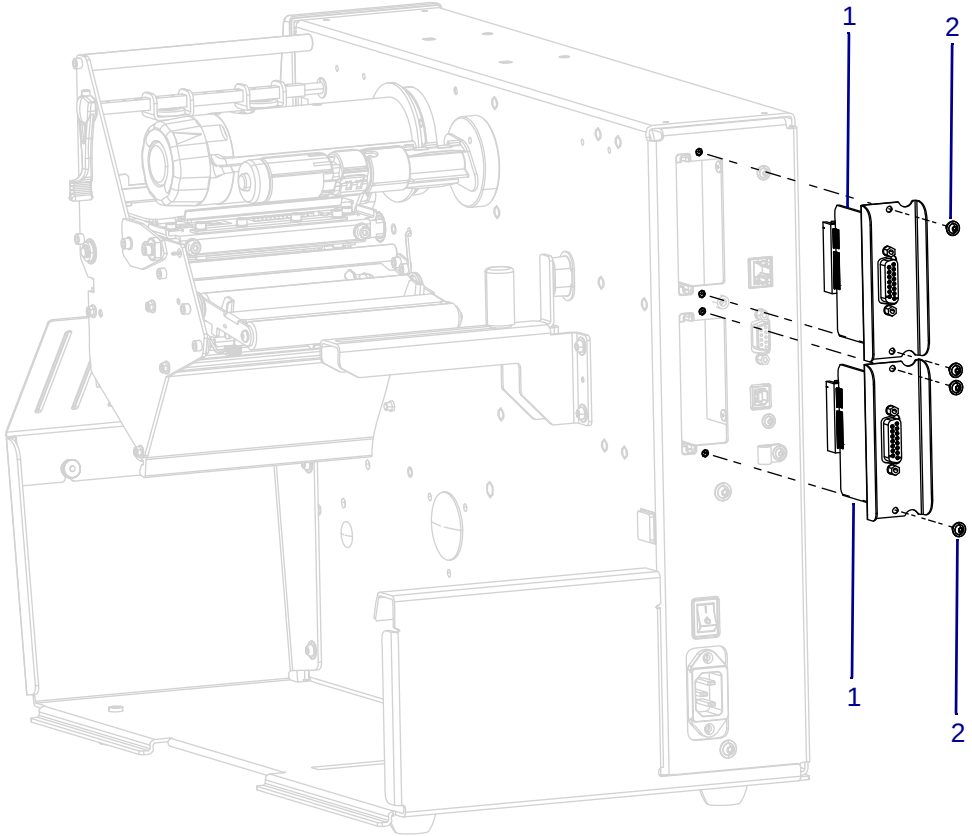
Note • The applicator interface board can be used in the upper and lower option slots.

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

   Connect yourself to an antistatic device.

2. Remove the applicator interface board by removing the two screws securing it to the printer, and then pulling it out of the printer.

Figure 322 • Remove the Applicator Interface Board



1	Applicator interface board
2	Mounting screws (2)

3. Go to *Remove the Main Logic Board (MLB)* on page 460.

Remove the Internal Print Server IPv4

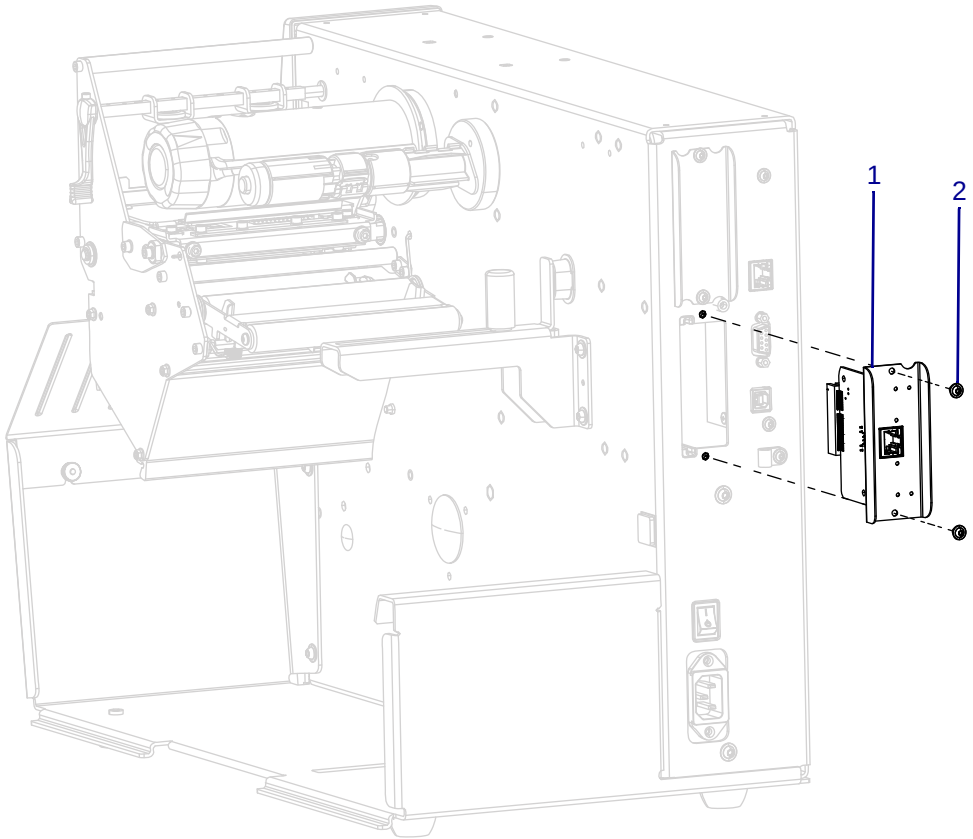
Note • The internal print server board can only be used in the lower option slot.

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

   Connect yourself to an antistatic device.

2. See Figure 323. Remove the internal print server board by removing the two screws securing it to the printer, and then pulling it out of the printer.

Figure 323 • Remove the Internal Print Server Board



1	Internal print server board
2	Mounting screws (2)

3. Go to *Remove the Main Logic Board (MLB)* on page 460.

Remove the Wireless Print Server

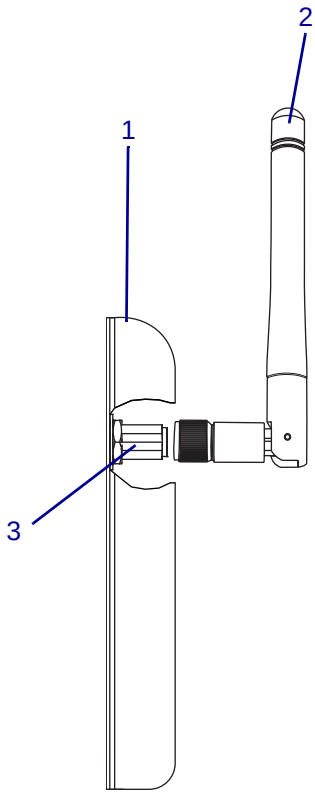
Note • The wireless print server board can only be used in the upper option slot.

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

   Connect yourself to an antistatic device.

2. See Figure 324. Remove the wireless print server antenna.

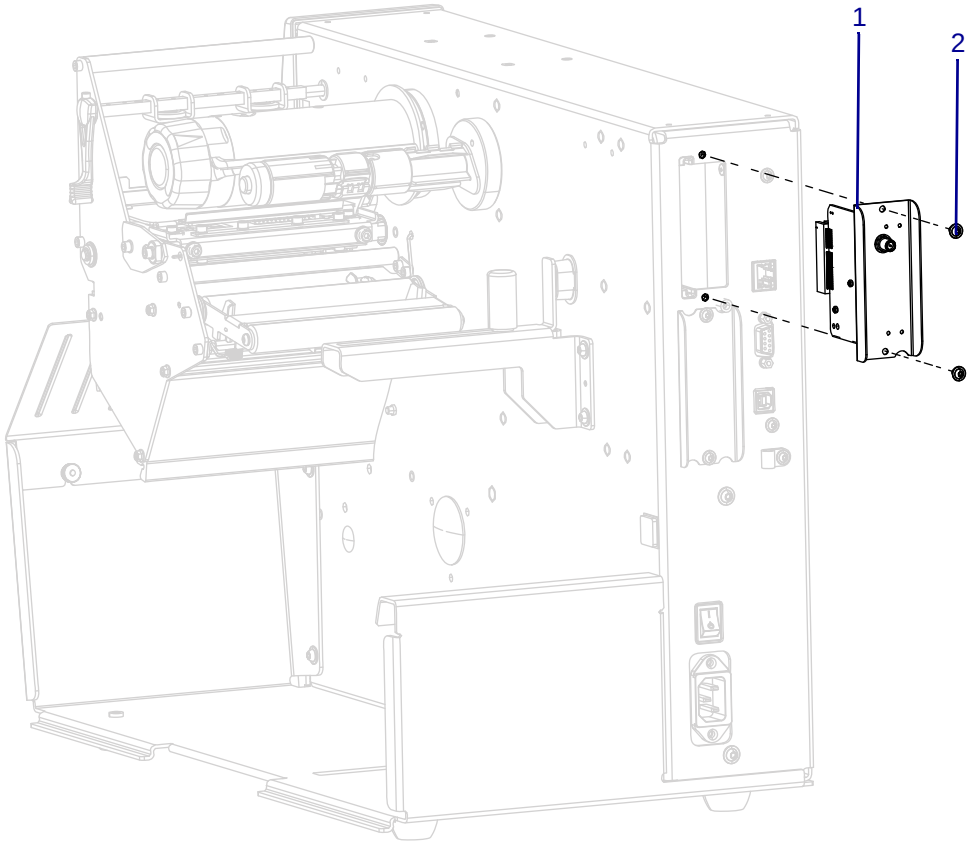
Figure 324 • Remove the Antenna



1	Back plate
2	RF antenna
3	RF connector

3. See Figure 323. Remove the internal print server board by removing the two screws securing it to the printer, and then pulling it out of the printer.

Figure 325 • Remove the Wireless Print Server Board



1	Wireless print server board
2	Mounting screws (2)

4. Go to *Remove the Main Logic Board (MLB)* on page 460.

Remove the USB Host Board

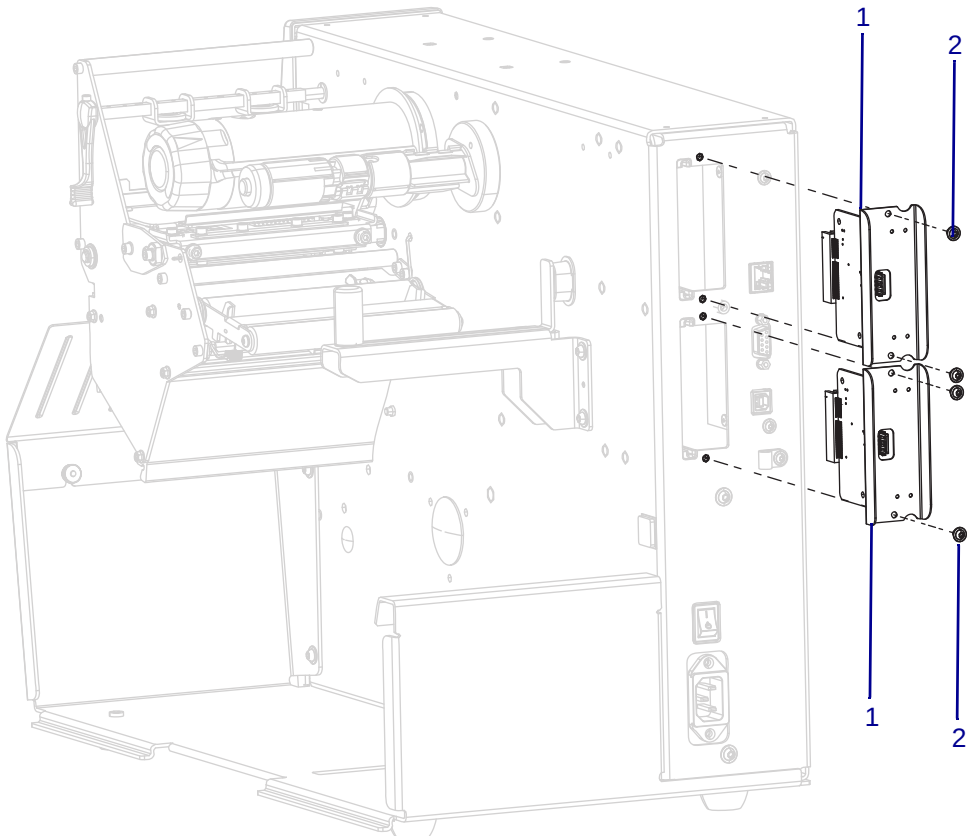
Note • The USB host board can be used in the upper and lower option slots.

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

   Connect yourself to an antistatic device.

2. See Figure 326. Remove the USB host board by removing the two screws securing it to the printer, and then pulling it out of the printer.

Figure 326 • Remove the USB Host Board



1	USB host board
2	Mounting screws (2)

3. Go to *Remove the Main Logic Board (MLB)* on page 460.

Remove the Parallel Port Board

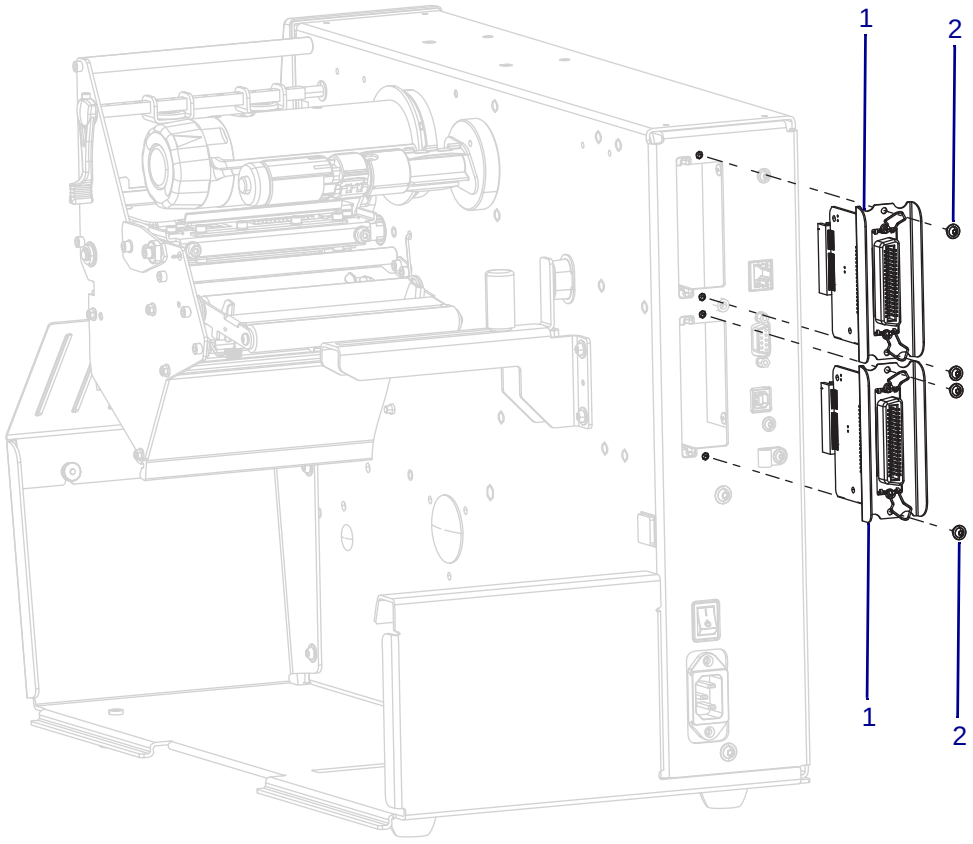
Note • The parallel port board can be used in the upper and lower option slots.

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

   Connect yourself to an antistatic device.

2. See Figure 327. Remove the two screws securing the parallel port board to the printer, and then pull it out of the printer.

Figure 327 • Remove the Parallel Port Board



1	Parallel port board
2	Mounting screws (2)

3. Go to *Remove the Main Logic Board (MLB)* on page 460.

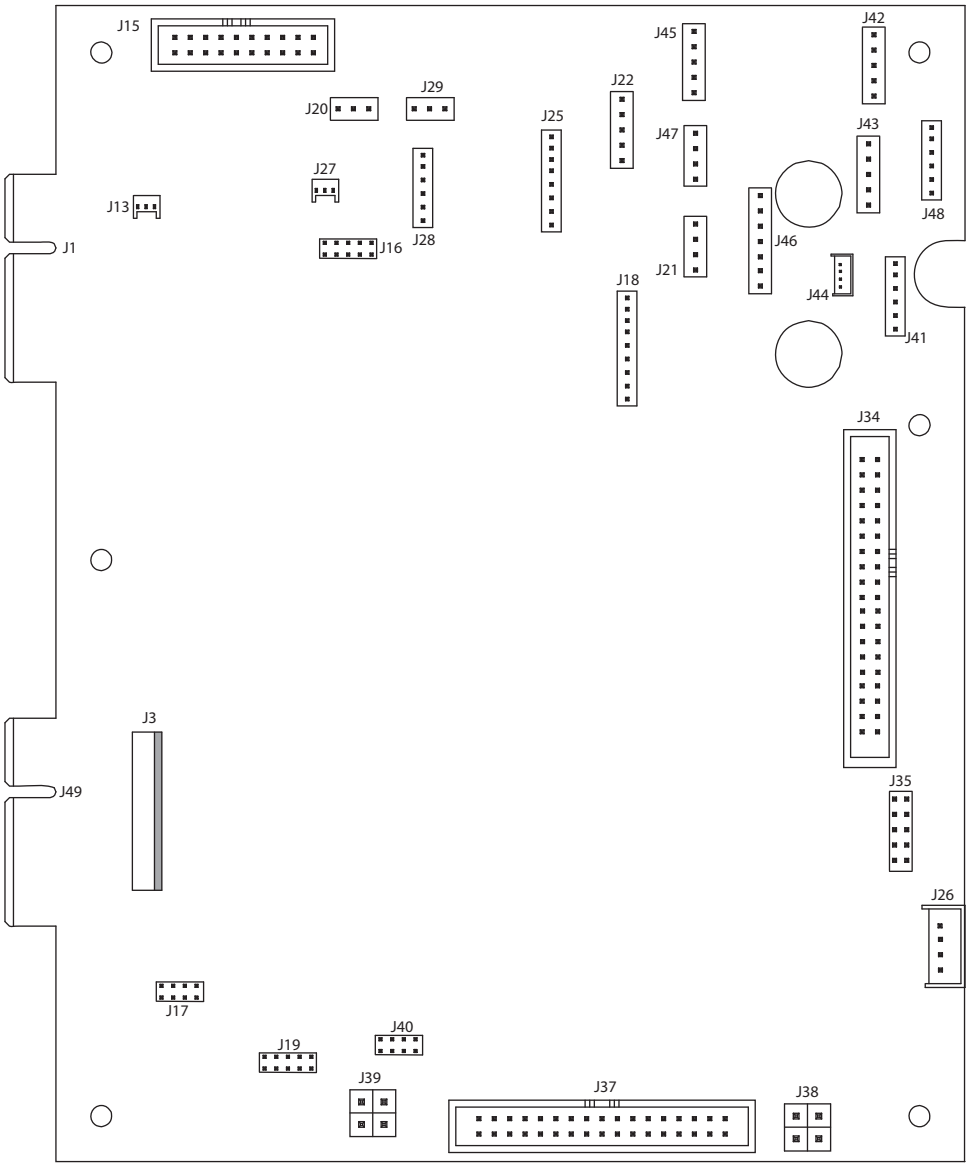
Remove the Main Logic Board (MLB)

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

   Connect yourself to an antistatic device.

2. See Figure 328. Disconnect all cables from the MLB.

Figure 328 • Disconnect all Cables

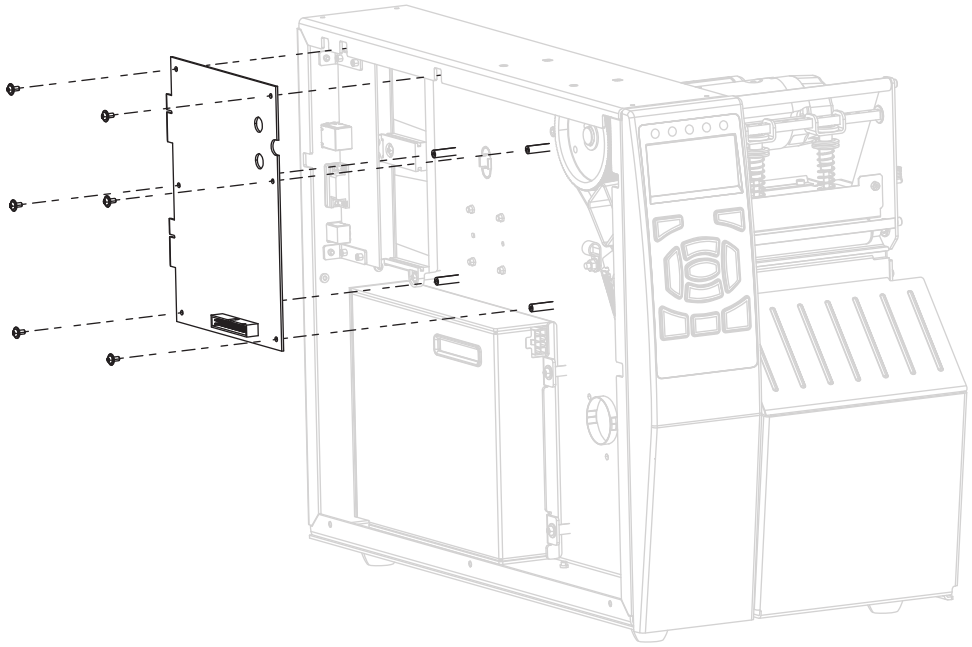


J1	Upper Option Board
J13	Internal Use Only
J14	Control Panel LVDS Display
J15	Control Panel Serial and Control
J21	Transmissive Sensor Detector
J22	Rewind Detect Sensor
J25	Future Use
J26	Drive Motor
J34	Printhead

J35	Cutter/Rewind/Liner Take-Up
J37	Power Supply Input
J38	Auxiliary Power Output
J39	Auxiliary Power Output
J44	Black Mark Sensor
J45	Ribbon Sensor
J46	Head Open Sensor
J47	Transmissive Sensor LED Control
J49	Lower Option Board

3. Remove the MLB by removing and discarding the six screws securing it.

Figure 329 • Remove the MLB



Install the New Main Logic Board (MLB)

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

   Connect yourself to an antistatic device.

2. See Figure 329 on page 461. Align the new MLB with the mounting studs and then install the six new mounting screws.

3. See Figure 328 on page 460. Reconnect all cables to the MLB.

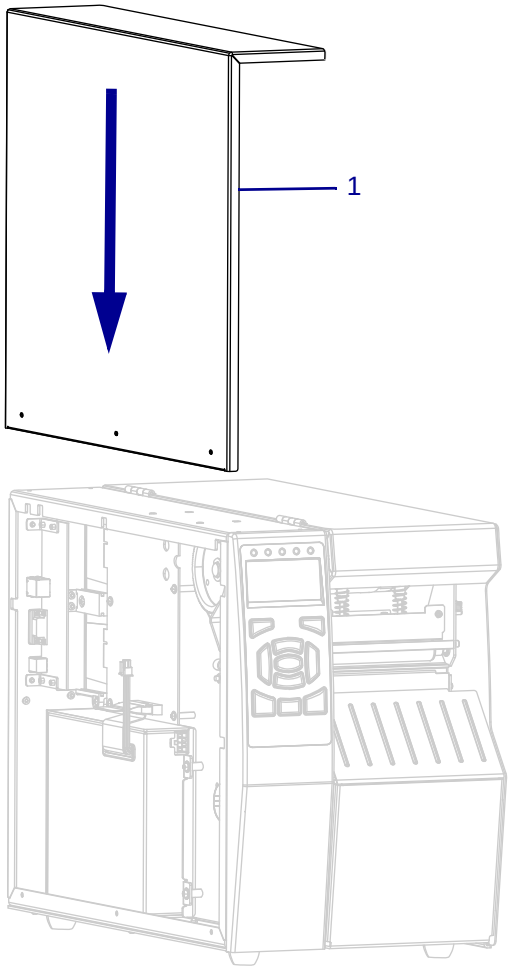
4. Which option/options did you remove?

If you have an…	Then…
Applicator interface board	**a.** See Figure 322 on page 454. Insert the applicator board into the slot that you remove, and then push it onto the MLB until it hits the printer. **b.** Install the two mounting screws remove previously. **c.** Go to *Reinstall the Electronics Cover* on page 463.
Internal print server IPv4	**a.** See Figure 323 on page 455. Insert the internal print server into the lower option slot, and then push it onto the MLB until it hits the printer. **b.** Install the two mounting screws remove previously. **c.** Go to *Reinstall the Electronics Cover* on page 463.
Wireless board w/external Antenna	**a.** See Figure 325 on page 457. Insert the wireless print server into the upper option slot, and then push it onto the MLB until it hits the printer. **b.** Install the two mounting screws remove previously. **c.** See Figure 324 on page 456. Reinstall the antenna. **d.** Go to *Reinstall the Electronics Cover* on page 463.
USB host board	**a.** See Figure 326 on page 458. Insert the USB host board into the slot that you removed, and then push it onto the MLB until it hits the printer. **b.** Install the two mounting screws remove previously. **c.** Go to *Reinstall the Electronics Cover* on page 463.
Parallel Port	**a.** See Figure 327 on page 459. Insert the parallel port board into the slot that you remove, and then push it onto the MLB until it hits the printer. **b.** Install the two mounting screws remove previously. **c.** Go to *Reinstall the Electronics Cover* on page 463.
None	Go to *Reinstall the Electronics Cover* on page 463.

Reinstall the Electronics Cover

1. See Figure 330. Slide the electronics cover onto the printer.

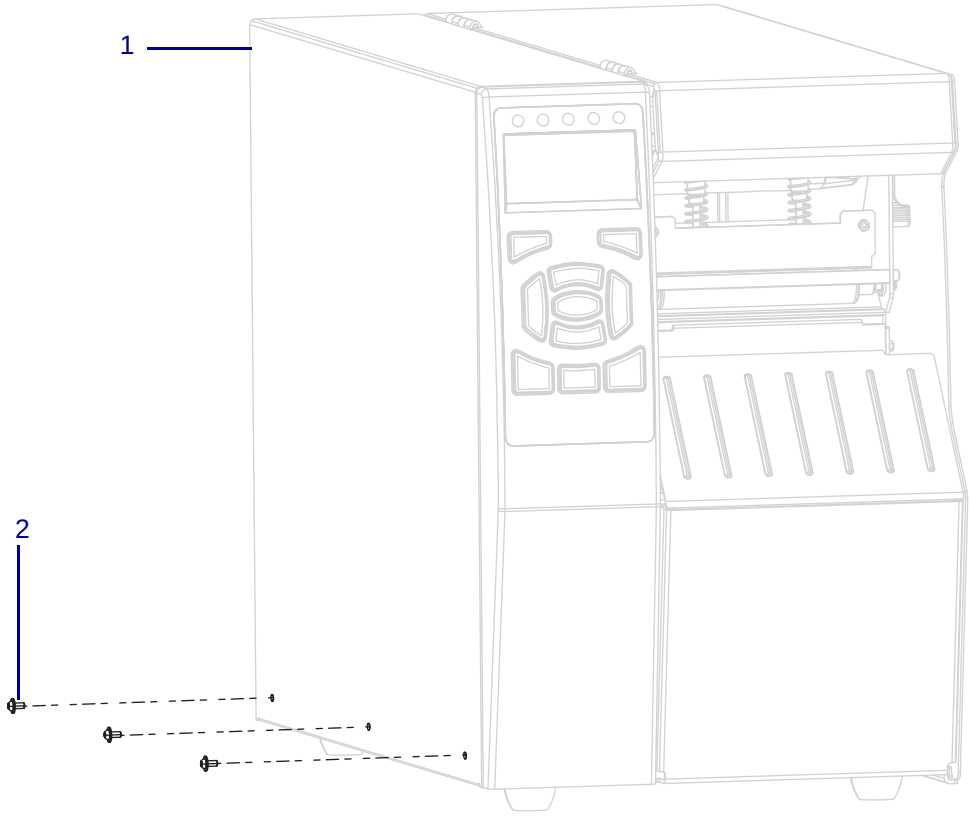
Figure 330 • Install the Electronics Cover



1	Electronics cover

2. See Figure 331. Install the three mounting screws.

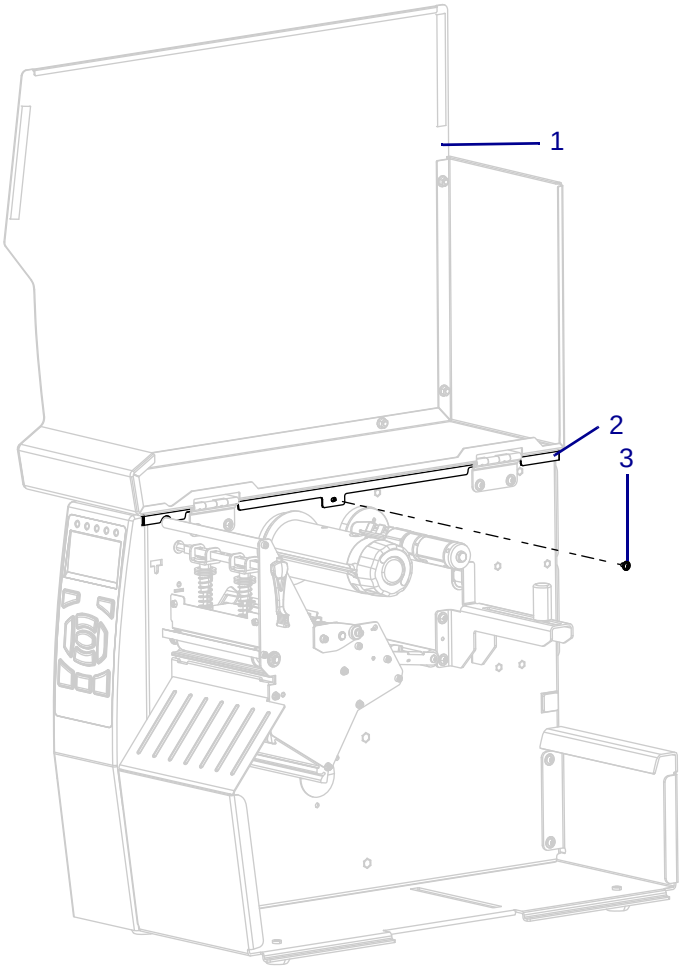
Figure 331 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 332. Open the media door and install the media side electronics cover mounting screw.

Figure 332 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Connectivity Board Maintenance Kit

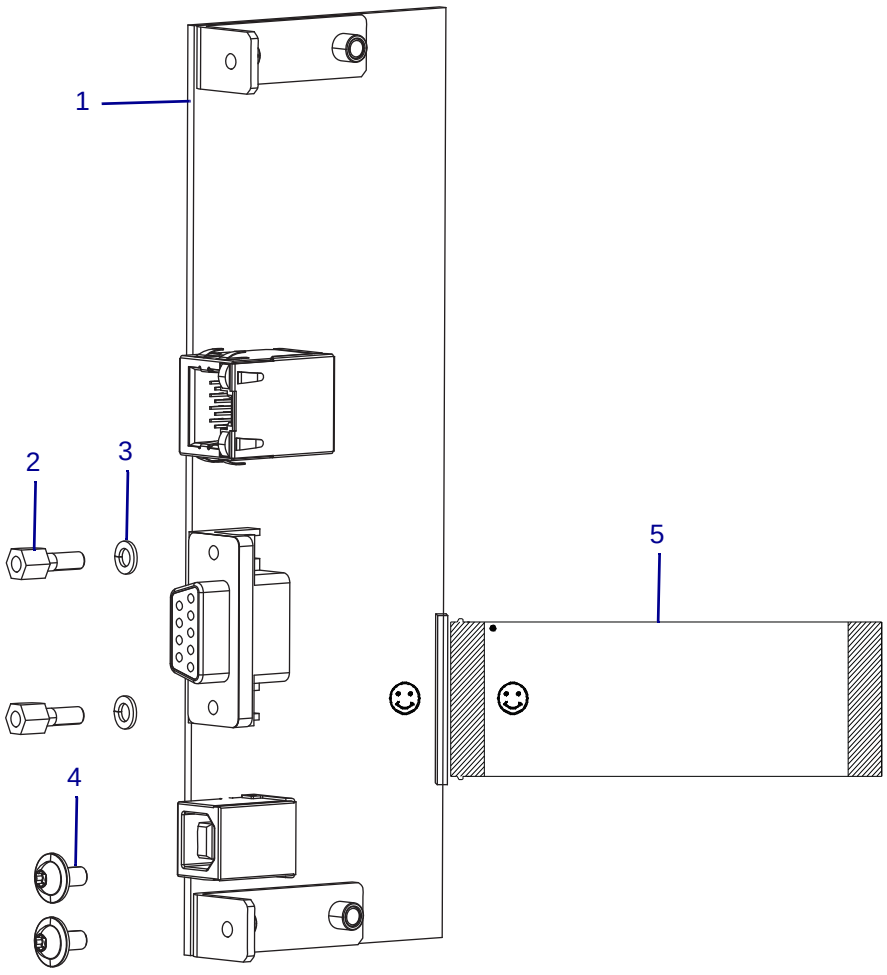
This kit includes the parts and documentation necessary to install the Connectivity Board Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 333 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 49 • Kit Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-036**	Connectivity Board Maintenance Kit
	1	1	*N/A*	Connectivity Board
	2	2	**HW32406**	Standoff, 4-40 (sold in quantities of 25)
	3	2	**HW45945**	#4 Lock Washer (sold in quantities of 100)
	4	2	*N/A*	Torx-Head Screws, M3 × 6, included in the Miscellaneous Hardware Kit, **P1083320-096**
	5	1	*N/A*	Flex Cable

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Mat and Wrist Strap

Remove the Electronics Cover

1.

Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

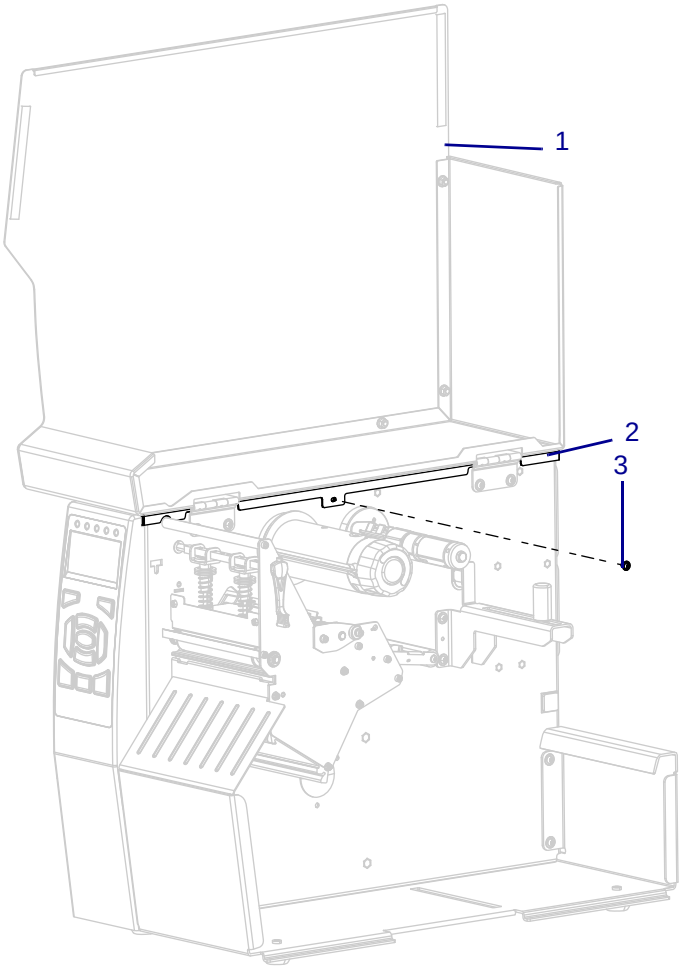
Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

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

Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 334 • Locate the Electronics Cover Mounting Screw

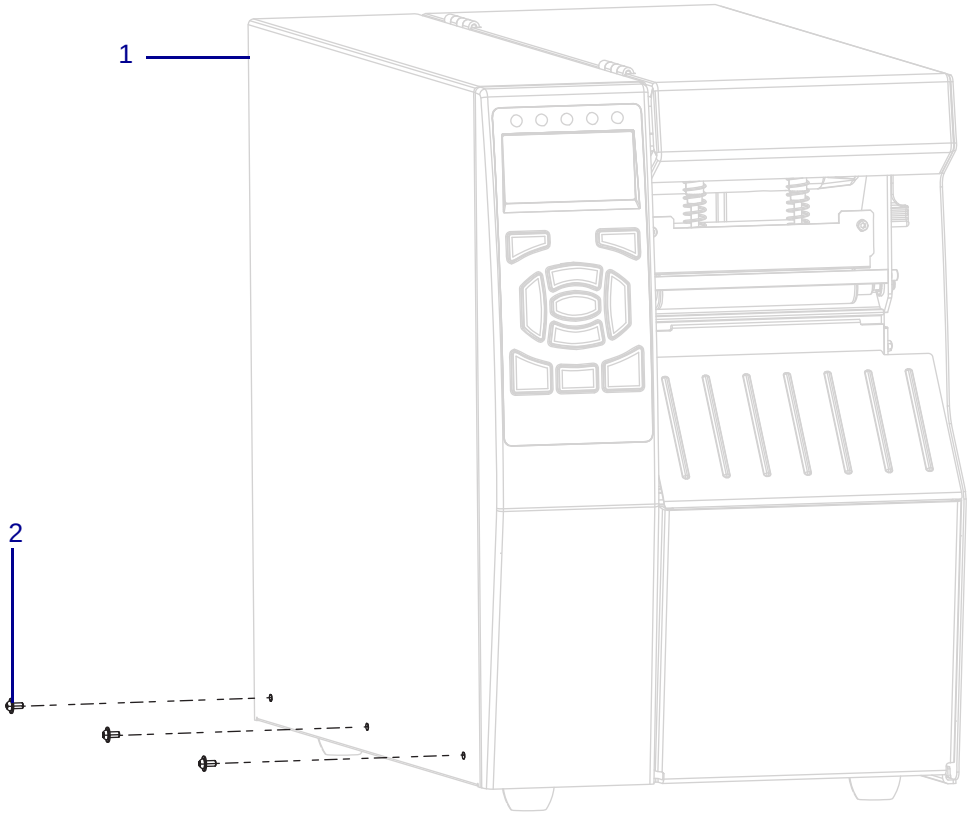


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 335. Remove the three mounting screws securing the electronics cover to the printer.

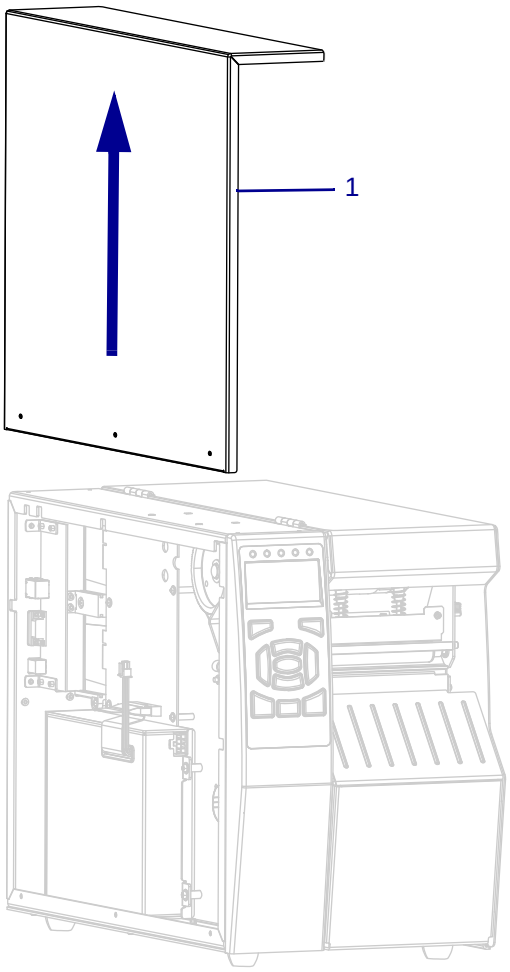
Figure 335 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 336. Lift the electronics cover off of the printer.

Figure 336 • Remove the Electronics Cover



1	Electronics cover

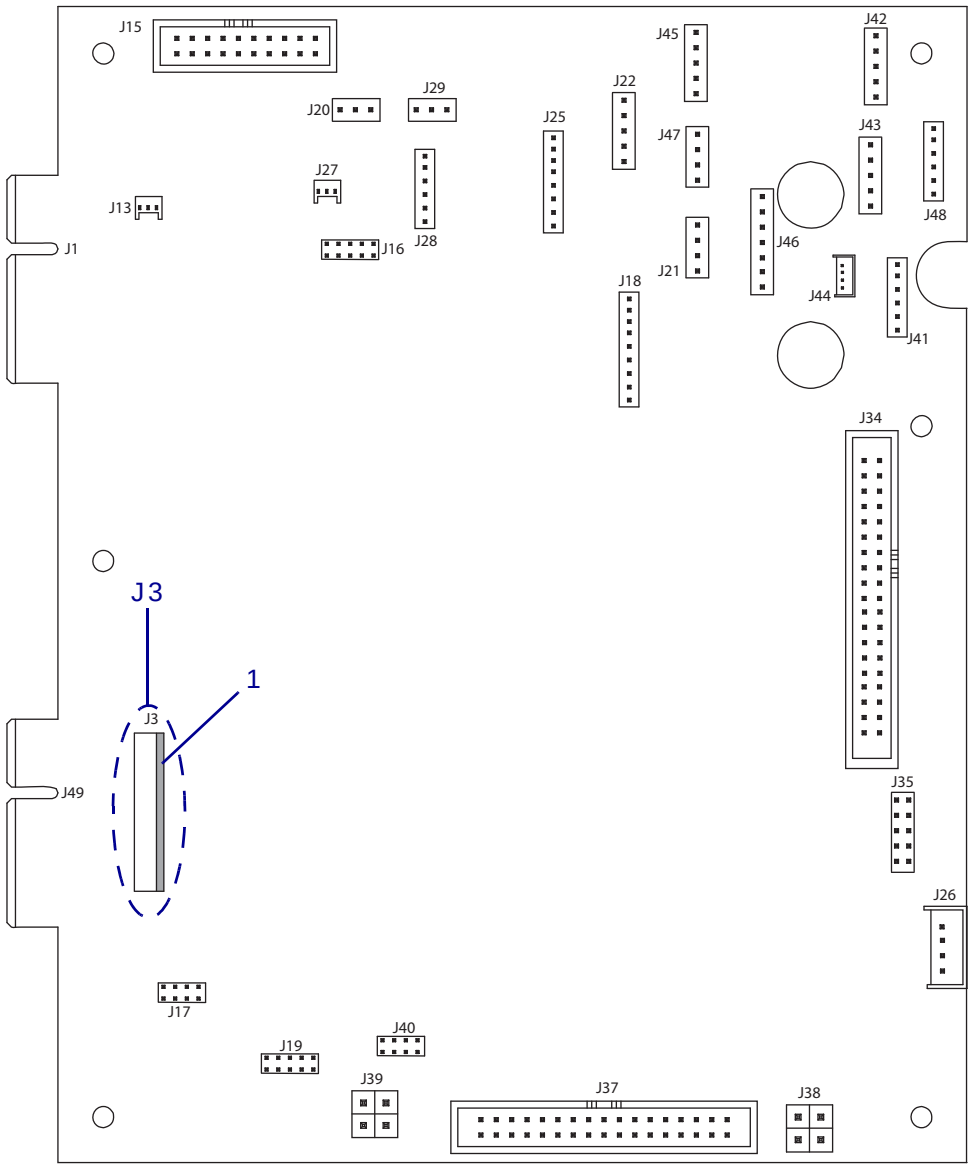
Remove the Old Connectivity Board

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

Connect yourself to an antistatic device.

7. See Figure 337. Disconnect the cable from J3 on the main logic board.

Figure 337 • Disconnect the Cable from the Main Logic Board

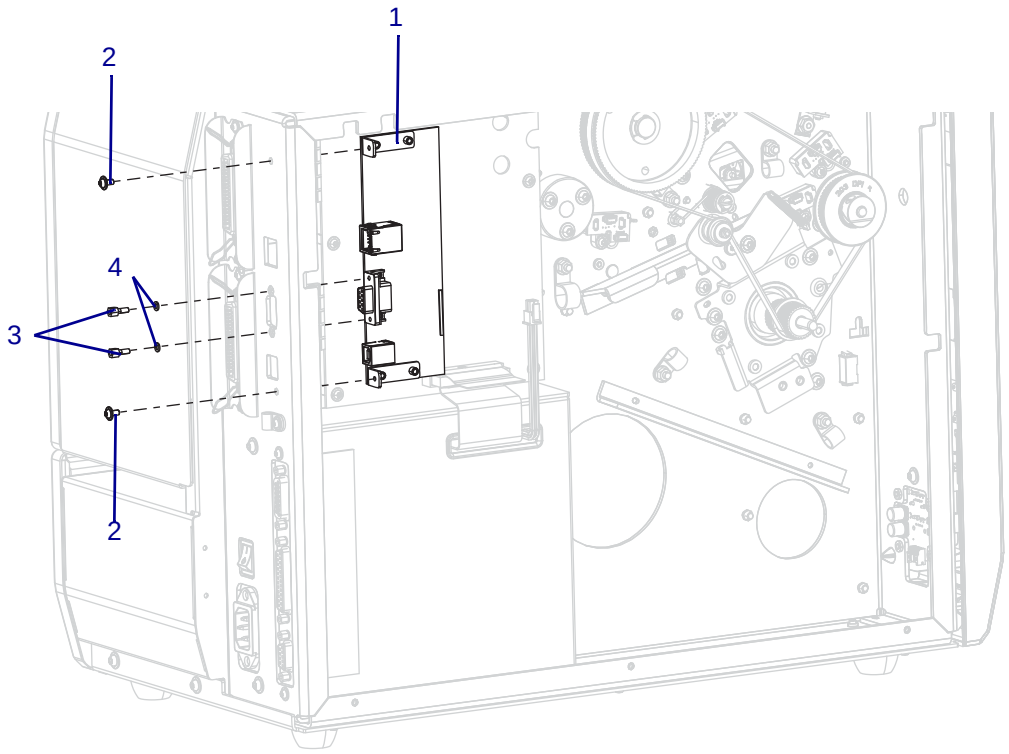


1	J3, Connector latch

8. Lift this to release the cable.

9. See Figure 338. Remove the mounting screws, standoffs, and washers securing the connectivity board to the printer.

Figure 338 • Remove the Mounting Hardware (ZT600 shown)



1	Connectivity board
2	Mounting screw (2)
3	Standoff (2)
4	Lock washer (2)

10. Remove the old connectivity board from the printer.

Install the New Connectivity Board

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

   Connect yourself to an antistatic device.

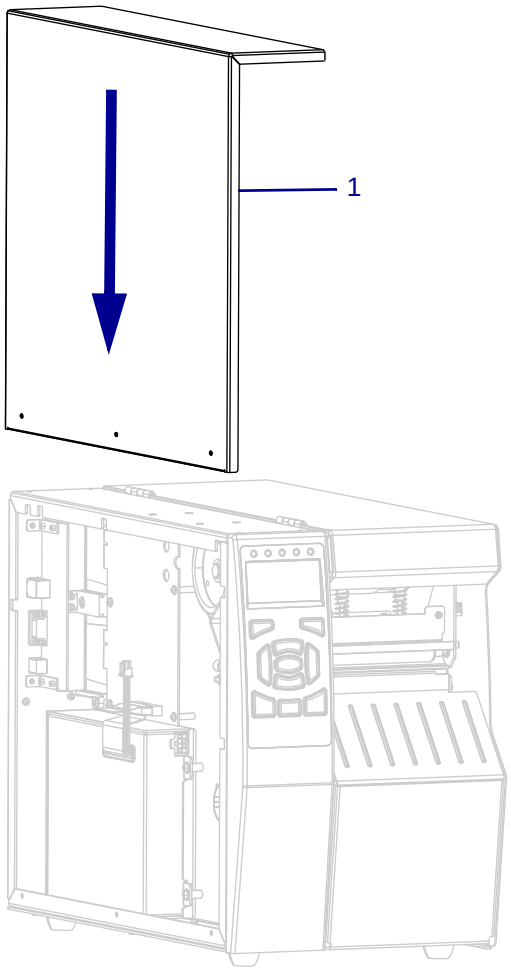
2. See Figure 338. Slide the new connectivity board into the printer and align the mounting holes.
3. Install, but do not tighten the two mounting screws.
4. Align and install the two serial port standoffs and washers.

5. Tighten the standoffs and mounting screws.
6. See Figure 337 on page 471 and Figure on page 466. Align the happy face on the flex cable with the happy face on the connectivity board, and then connect the flex cable to J3 on the connectivity board and J3 on the MLB.
7. Lock the cable in place by pushing down on the connector latches.

Reinstall the Electronics Cover

1. See Figure 10. Slide the electronics cover onto the printer.

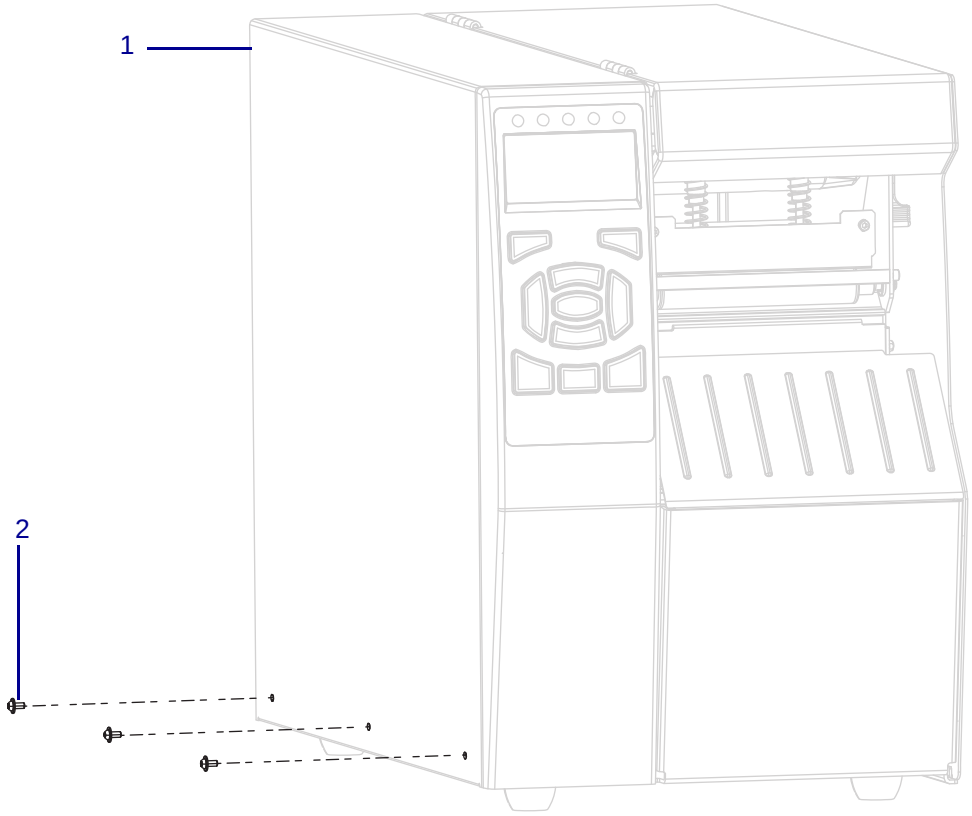
Figure 339 • Install the Electronics Cover



1	Electronics cover

2. See Figure 11. Install the three mounting screws.

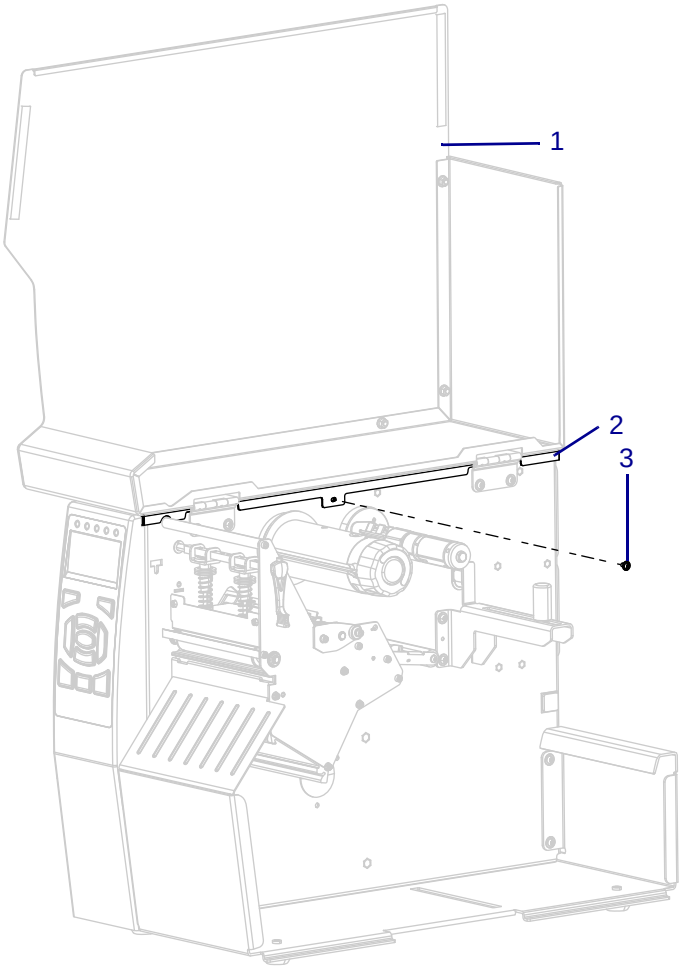
Figure 340 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 12. Open the media door and install the media side electronics cover mounting screw.

Figure 341 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reinstall the media and ribbon.
2. Reconnect the AC power cord and data cables.
3. Turn on (**I**) the printer.

The installation is complete.

Power Supply Maintenance Kit

Installation Instructions

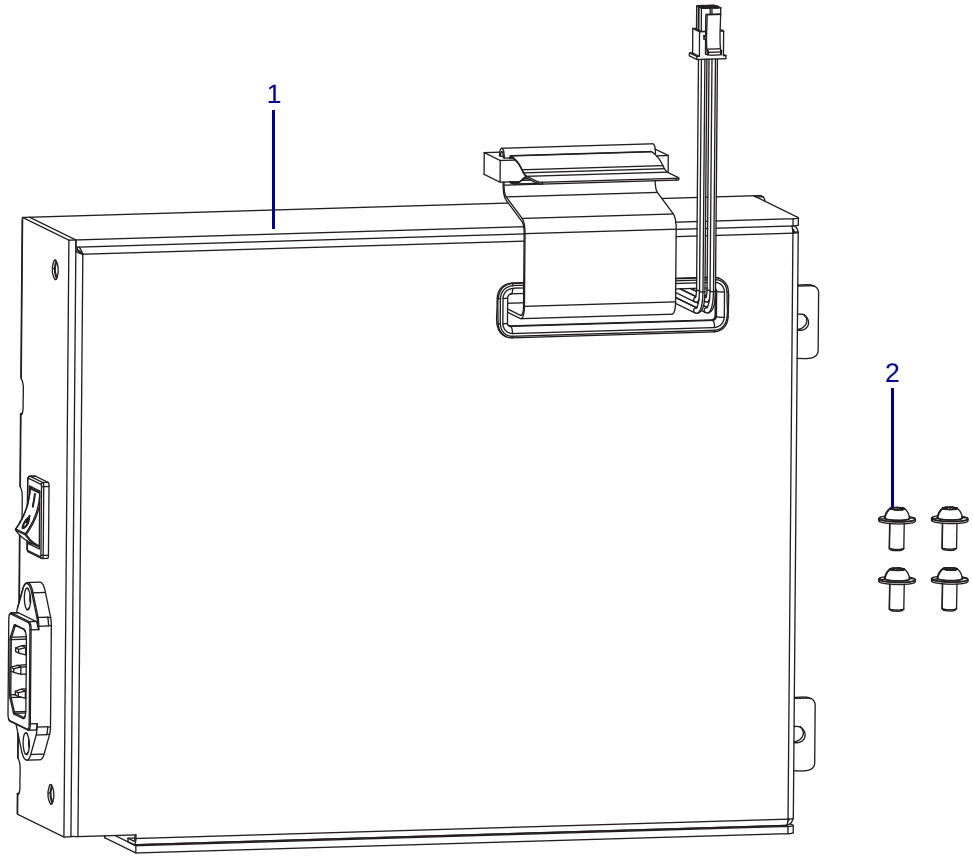
This kit includes the parts and documentation necessary to install the Power Supply Assembly Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 342 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 50 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-043**	Power Supply Maintenance Kit
	1	1	*N/A*	Power Supply
	2	4	*N/A*	Torx-Head Screw, M3 × 6, included in the Miscellaneous Hardware Kit, **P1083320-096**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Antistatic Wriststrap and Pad
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

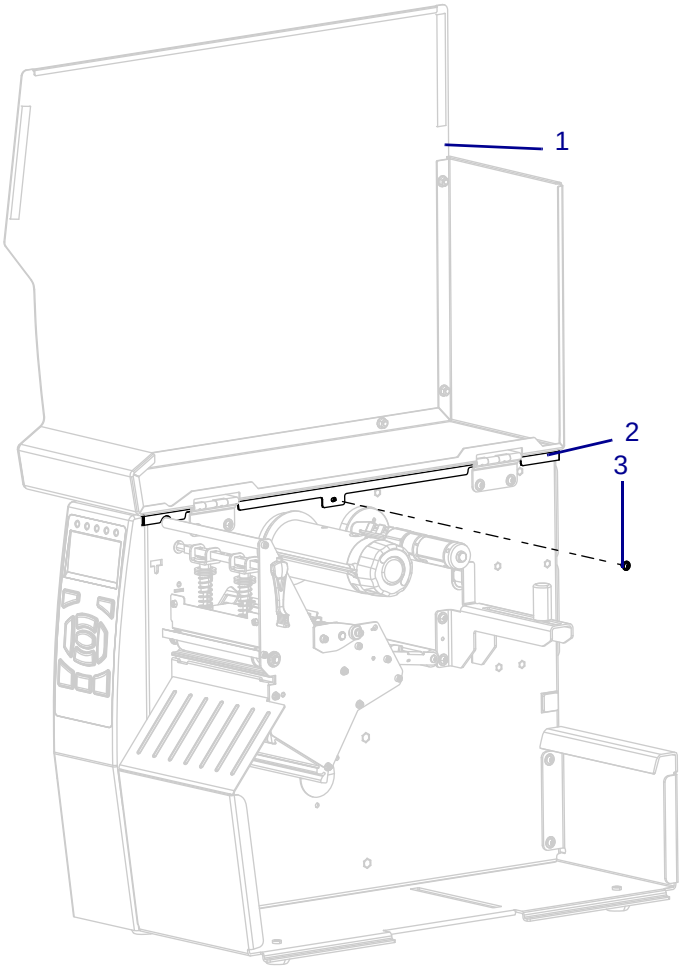
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

2. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 343 • Locate the Electronics Cover Mounting Screw

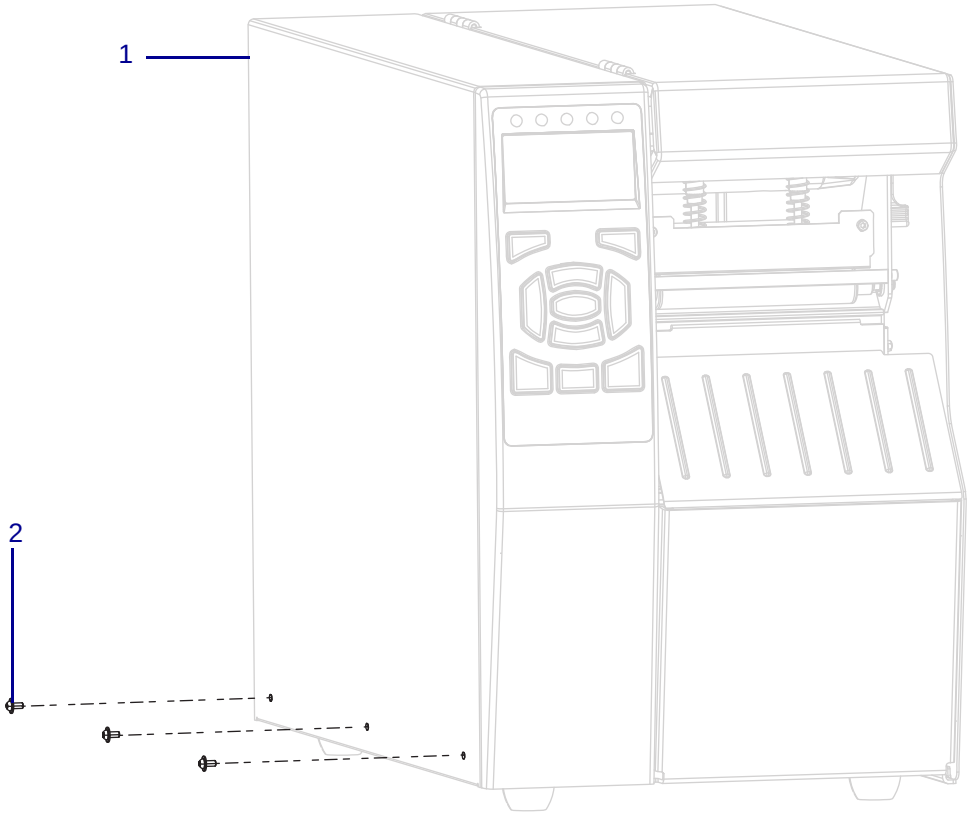


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 344. Remove the three mounting screws securing the electronics cover to the printer.

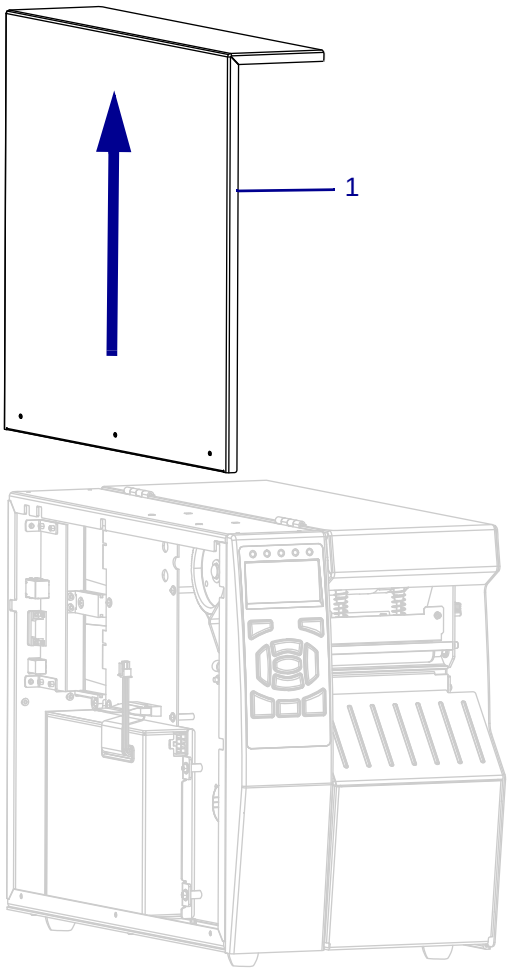
Figure 344 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 345. Lift the electronics cover off of the printer.

Figure 345 • Remove the Electronics Cover



1	Electronics cover

Remove the Old Power Supply

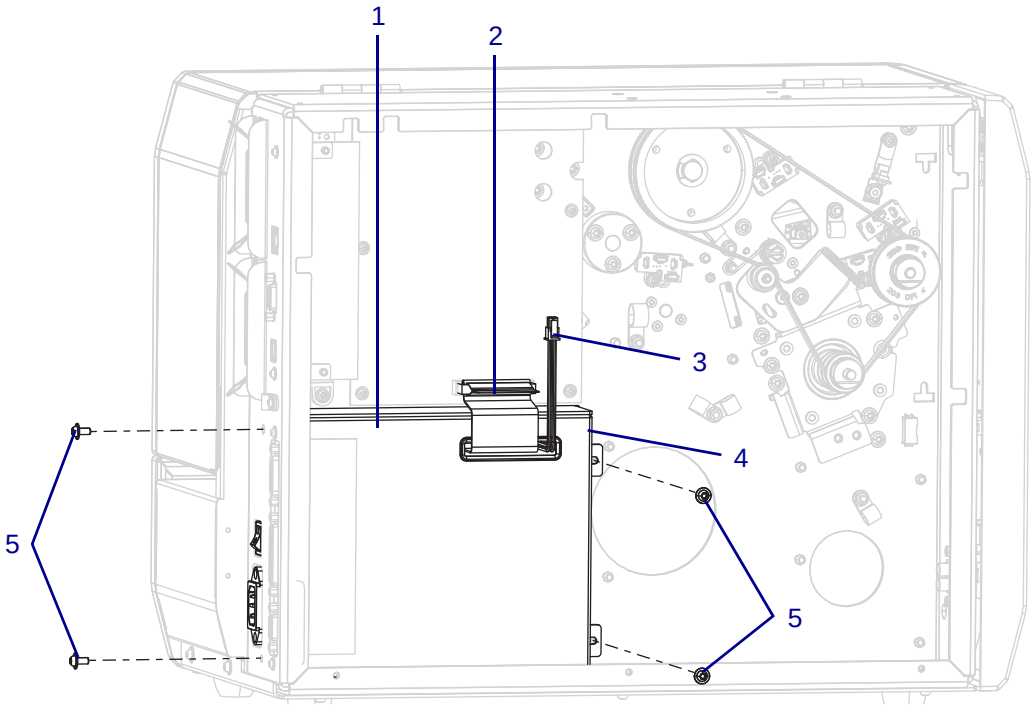
Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

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

   Connect yourself to an antistatic device.

2. See Figure 346. Remove all cables to and from the power supply.

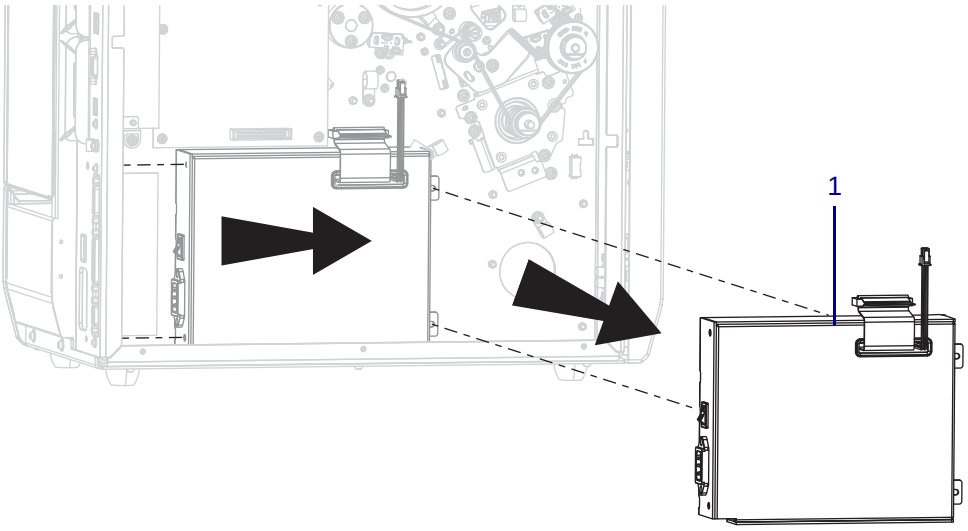
Figure 346 • Disconnect all Cables (ZT610 shown)



1	Power supply
2	Printhead control cable
3	Main logic board power cable (J38)
4	Printhead power cable (J17)
5	Power supply mounting screws (4)

3. Remove the four mounting screws.
4. Slide the power supply toward the front of the printer, and then lift it out of the printer.

Figure 347 • Remove the Power Supply (ZT610 shown)

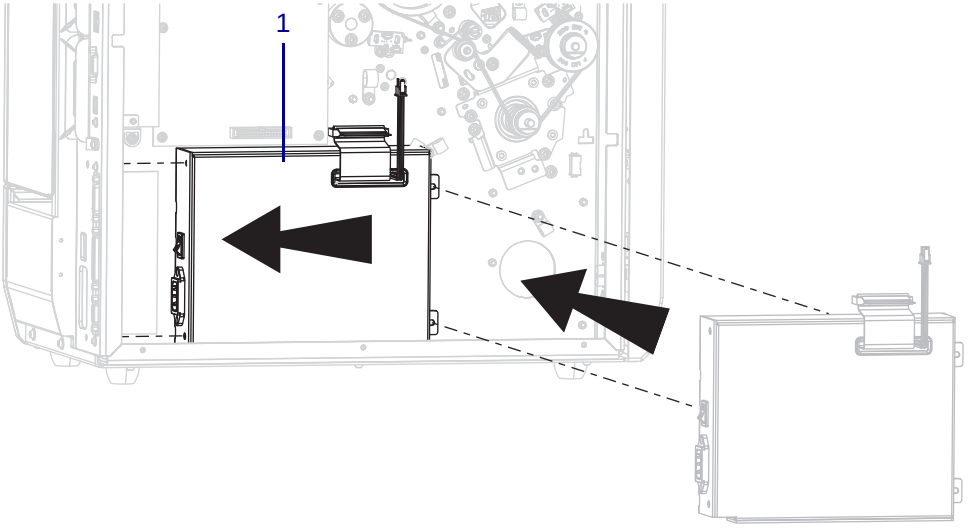


1	Power supply

Install the New Power Supply

1. See Figure 348. Set the new power supply into the printer, and then slide it to rear of the printer.

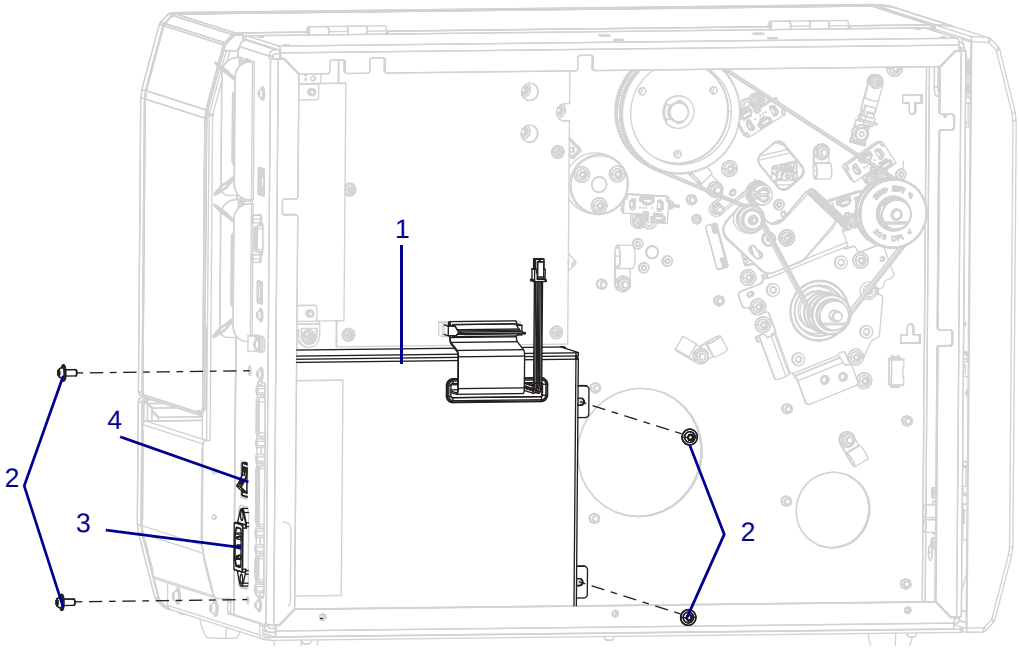
Figure 348 • Install the New Power Supply (ZT610 shown)



1	Power supply

2. See Figure 349. Insert the power supply switch and AC receptacle into the access holes in the rear panel.

Figure 349 • Secure the New Power Supply (ZT610 shown)



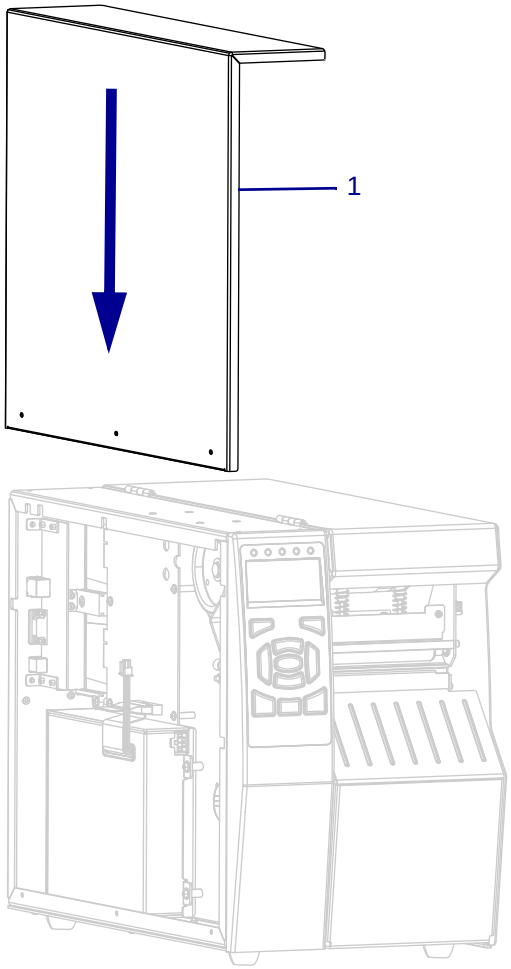
1	Power supply
2	Power supply mounting screws (4)
3	AC receptacle
4	On/Off switch

3. Install the two rear outside power supply mounting screws.
4. Install the two inside power supply mounting screws.
5. Connect all power supply cables.

Reinstall the Electronics Cover

1. See Figure 12. Slide the electronics cover onto the printer.

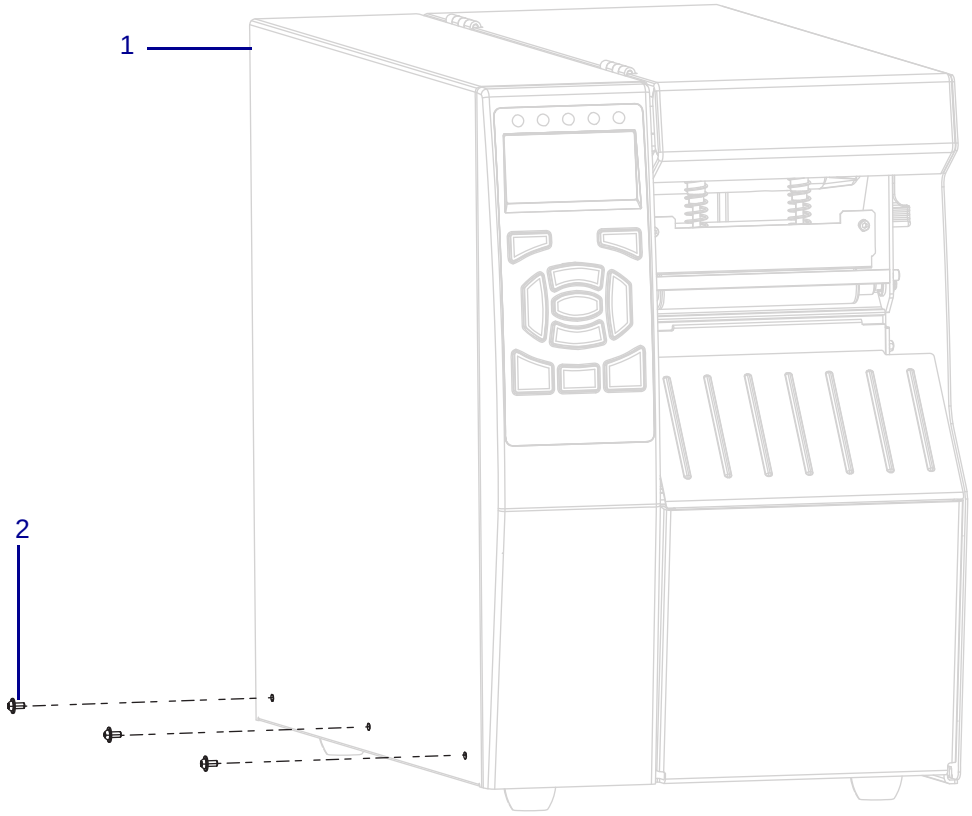
Figure 350 • Install the Electronics Cover



1	Electronics cover

2. See Figure 13. Install the three mounting screws.

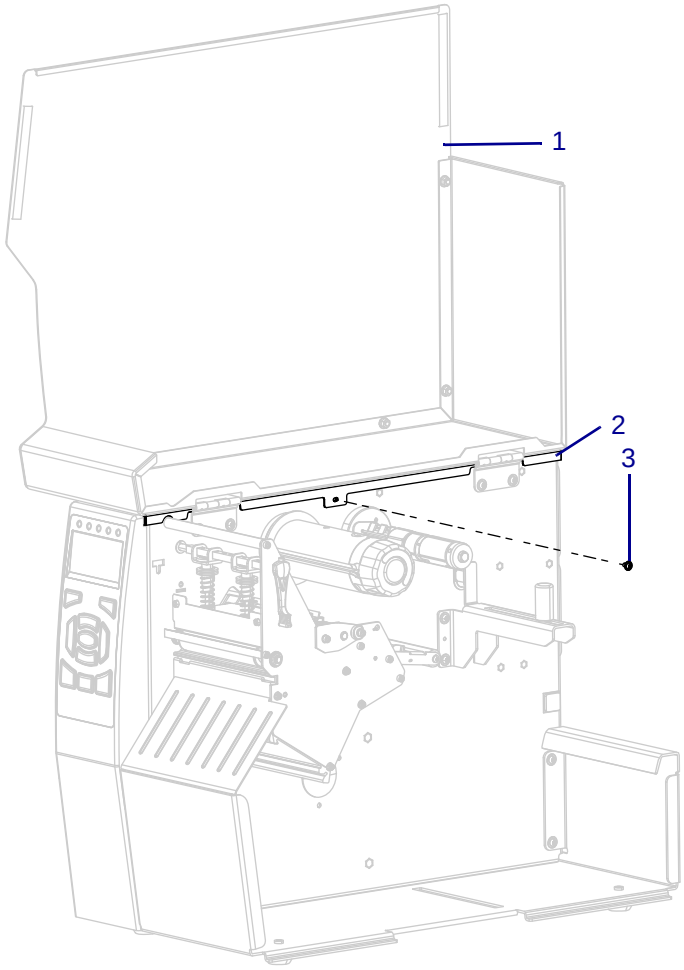
Figure 351 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 14. Open the media door and install the media side electronics cover mounting screw.

Figure 352 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Complete the Installation
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Electronics Cables Maintenance Kit

Installation Instructions

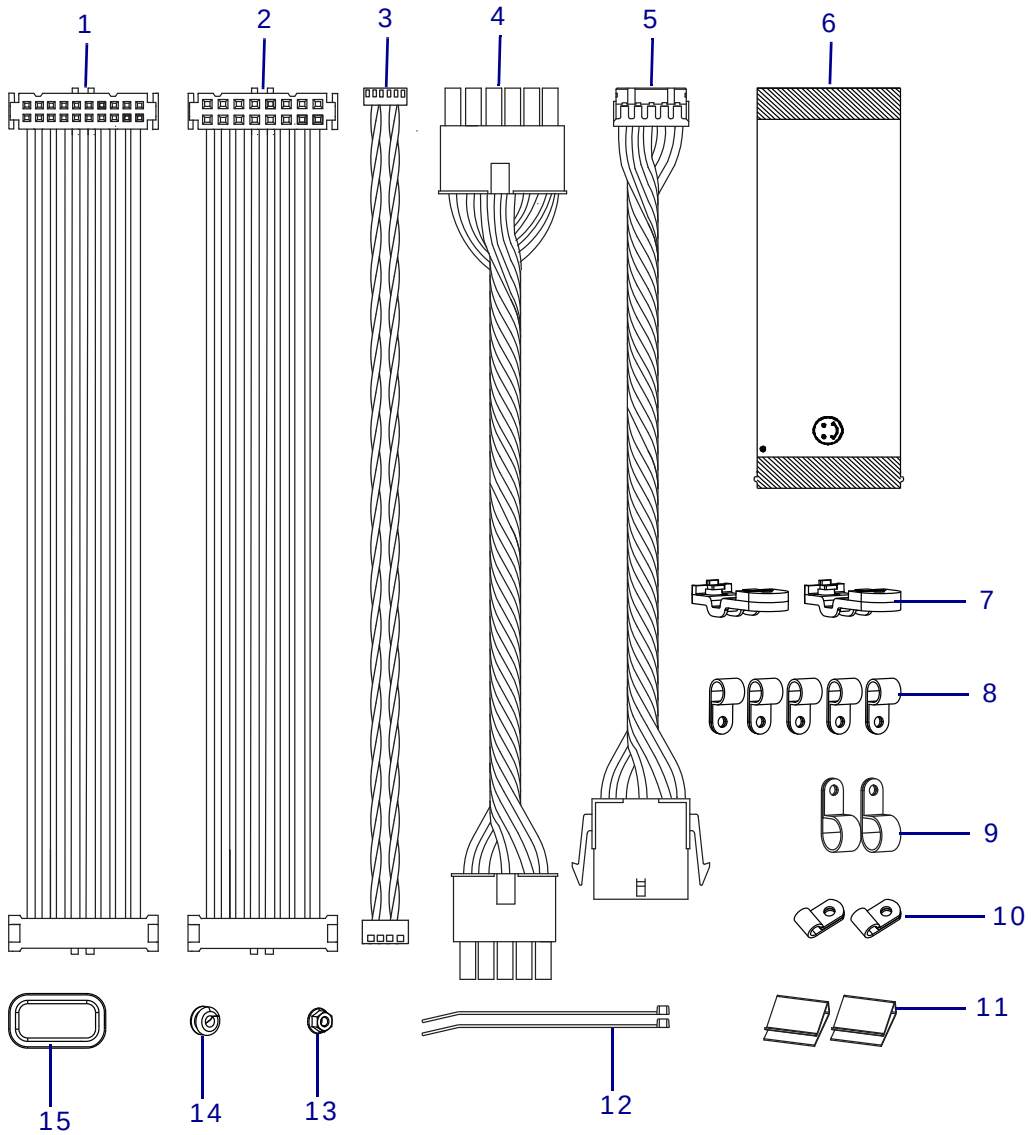
This kit includes the parts and documentation necessary to install the Electronics Cables Maintenance Kit on ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 353 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 51 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-014**	Electronics Cables Maintenance Kit
	1	1	*N/A*	Control Panel Cable, 20 pin
	2	1	*N/A*	Control Panel Cable, 16 pin
	3		*N/A*	Drive Motor Cable
	4	1	*N/A*	Cutter Cable
	5	1	*N/A*	Cutter/MLB Interface Cable
	6	1	*N/A*	Connectivity Flex Cable
	7	2	*N/A*	Cable Clamp
	8	5	**HW01117**	Cable Clamp, 0.312 (sold in quantities of 25)
	9	2	**HW06222**	Cable Clamp, 0.50 (sold in quantities of 25)
	10	2	*N/A*	Cable Clamp
	11	2	**HW07808**	Flat Cable Clamp, 1 × 1 (sold in quantities of 25)
	12	2	**HWQ6020**	Cable Tie, 0.09 × 3.62 (sold in quantities of 20)
	13	1	*N/A*	Nut, M4
	14	1	**HW46222**	Grommet, 0.437 × 0172 × 0.25 (sold in quantities of 10)
	15	1	**HW46091**	Grommet, 1.25 × 0.62 × 0.105 (sold in quantities of 10)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

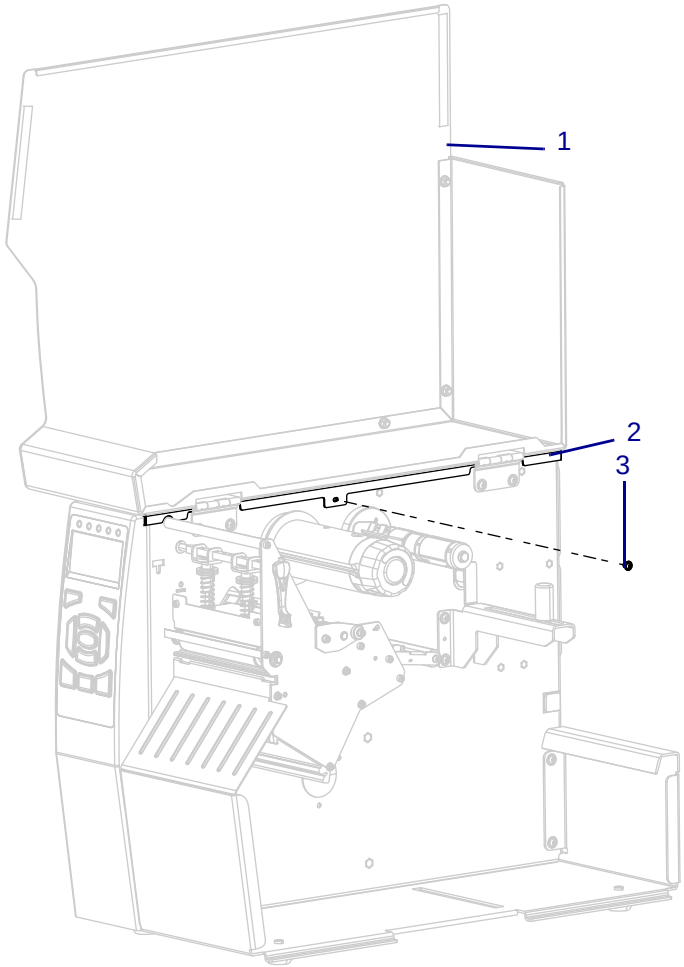
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 354 • Locate the Electronics Cover Mounting Screw

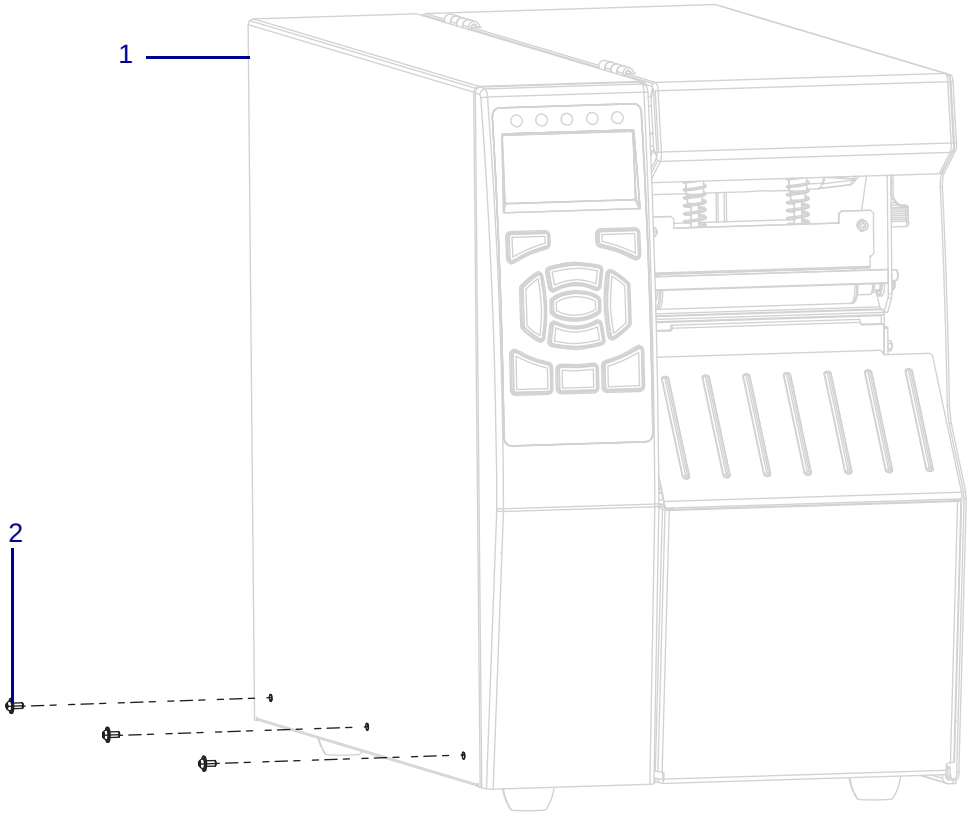


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 355. Remove the three mounting screws securing the electronics cover to the printer.

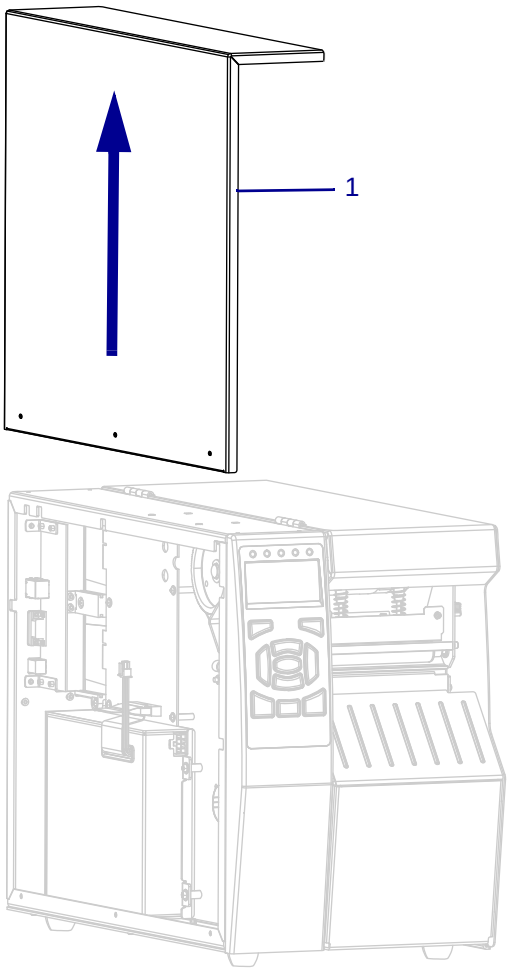
Figure 355 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 356. Lift the electronics cover off of the printer.

Figure 356 • Remove the Electronics Cover



1	Electronics cover

Remove and Install the Electronics Cables

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

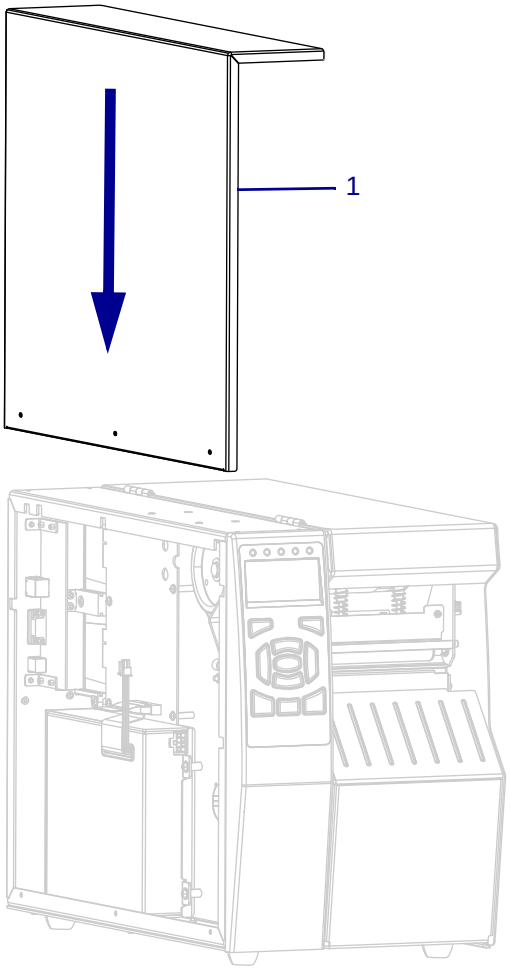
   Connect yourself to an antistatic device.

2. Note the location of any cable clamps and cable ties
3. Remove the defective cable from the printer.
4. Choose the proper replacement cable from the kit.
5. Install the new cable.
6. Install any cable ties previously removed.

Reinstall the Electronics Cover

1. See Figure 357. Slide the electronics cover onto the printer.

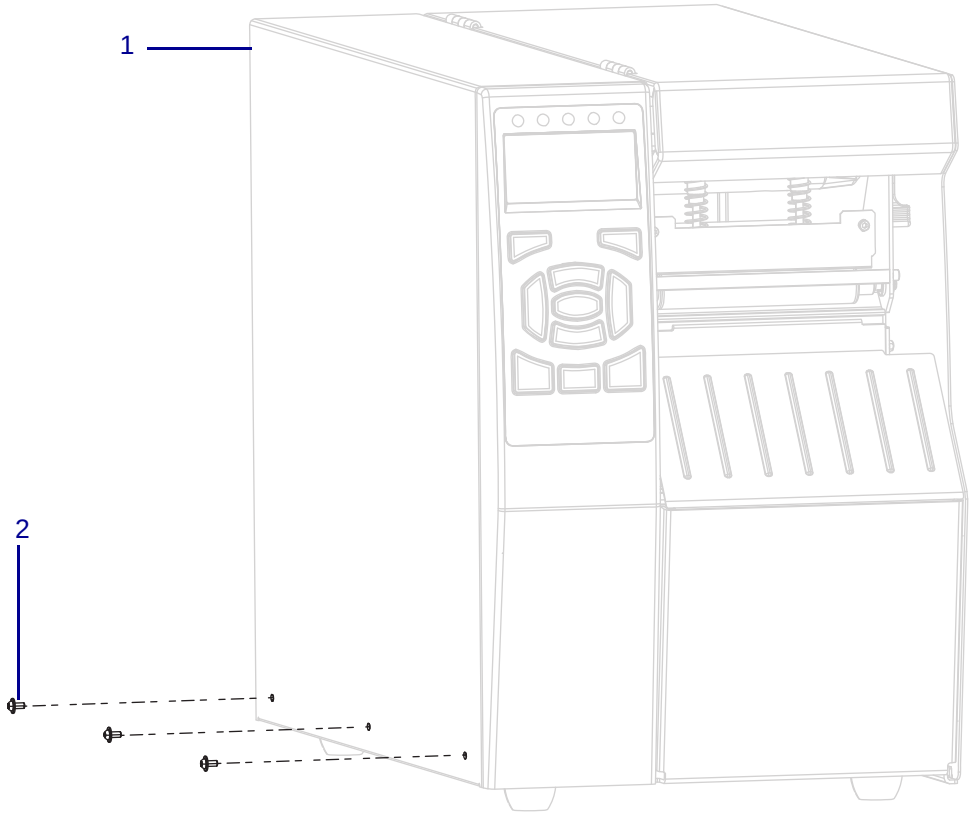
Figure 357 • Install the Electronics Cover



1	Electronics cover

2. See Figure 358. Install the three mounting screws.

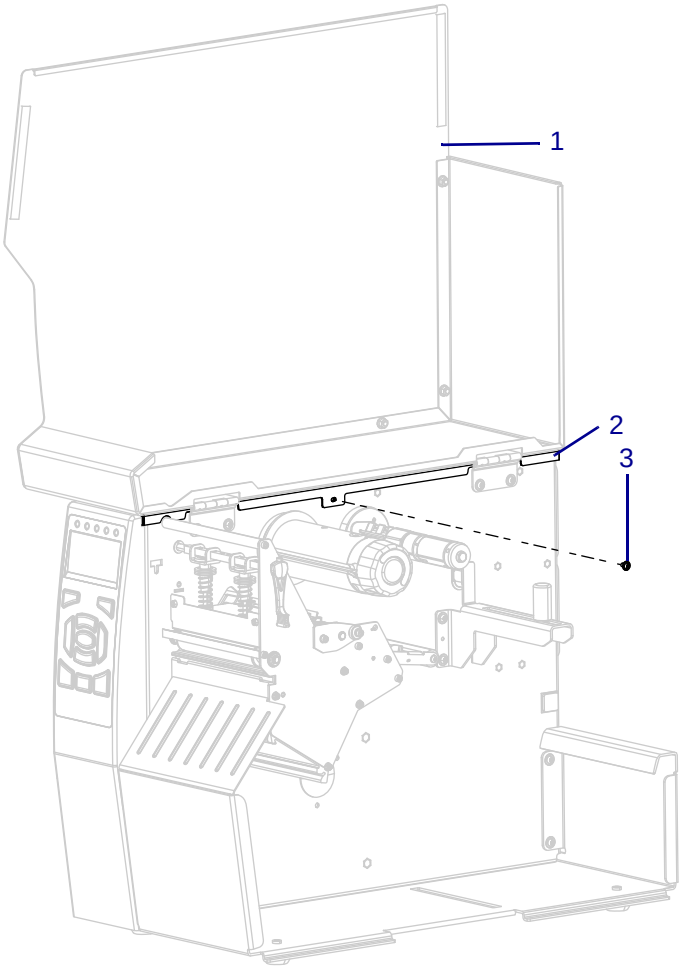
Figure 358 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 359. Open the media door and install the media side electronics cover mounting screw.

Figure 359 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

IPv4 Internal Print Server Option/Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the IPv4 Internal Print Server Option/Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 360 • Kit Contents

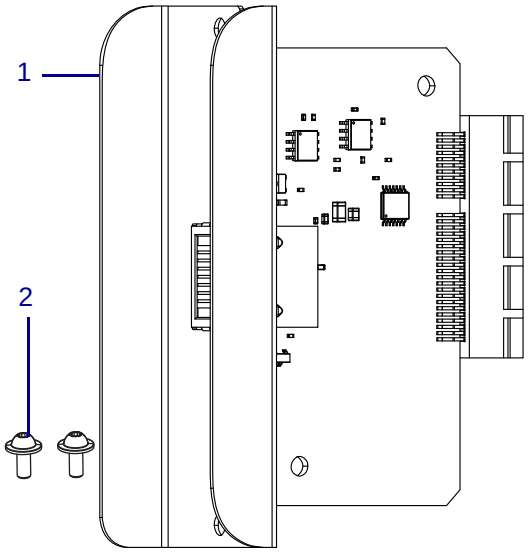


Table 52 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-039**	IPv4 Internal Print Server Option/Maintenance Kit
	1	1	*N/A*	IPv4 Internal Print Server
	2	2	*N/A*	Torx-Head Screws, M3 × 0.5 × 6, included in the Miscellaneous Hardware Kit, **P1083320-096**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

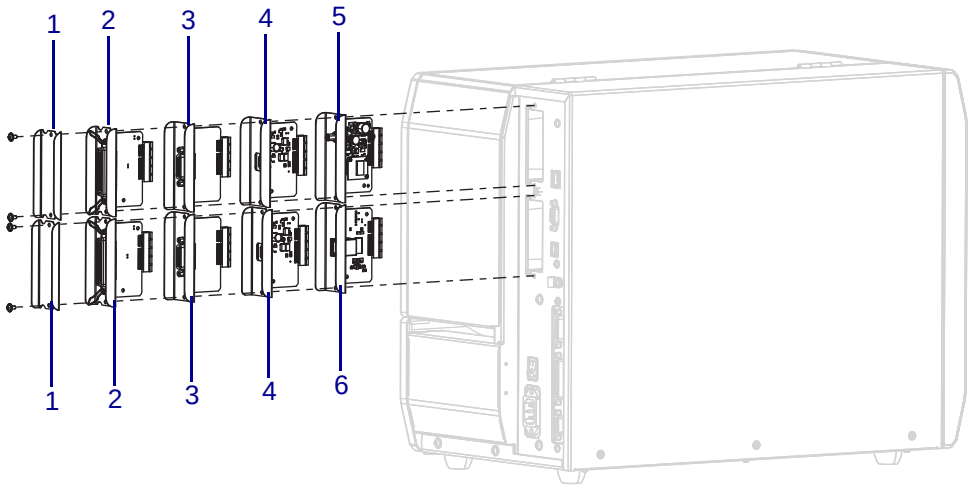
Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Driver Set
- ❑ Antistatic Wriststrap and Mat

Getting Started

1. See Figure 361 to verify the slots that can be used for the various option cards.

Figure 361 • Option Card Locations (ZT610 shown)



1	Blank cover
2	Parallel port
3	Applicator interface
4	Ethernet
5	Wireless (only in this location)
6	Internal print server IPV4 (only in this location)

Are you replacing an existing option card?

If…	Then…
Yes	Continue with *Remove the Old Option Card*.
No	Go to *Remove the Cover Plate* on page 499.

Remove the Old Option Card

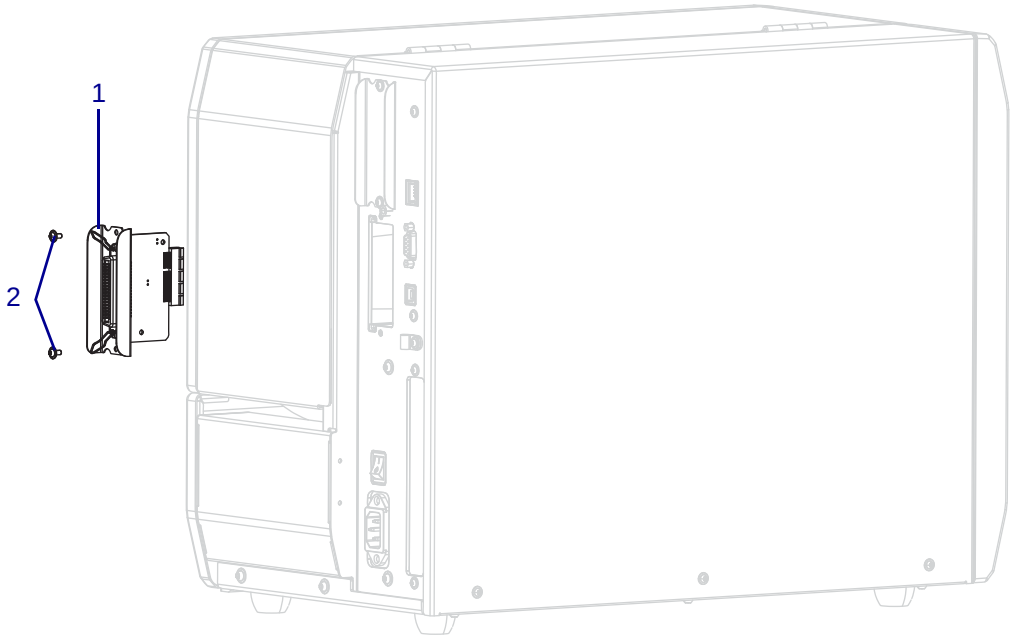
1. **Caution •** Turn Off (**O**) the printer and disconnect it from the power source before performing the following procedure.

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

   Connect yourself to an antistatic device.

3. See Figure 362. Remove the two option board mounting screws.

Figure 362 • Remove the Option Card (ZT610 shown)



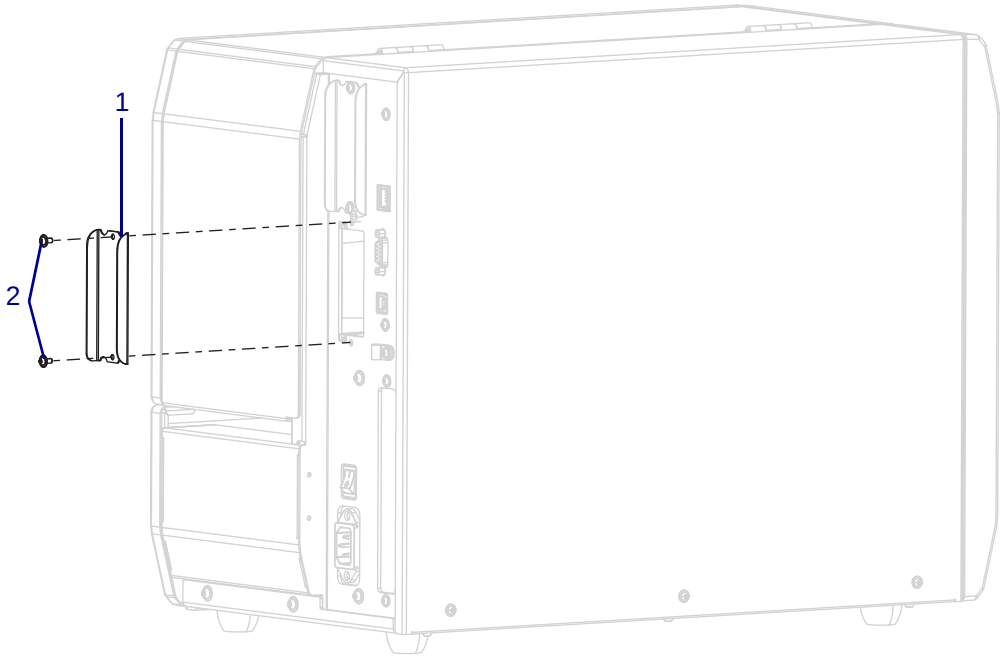
1	Option card
2	Mounting screws (2)

4. Slide the option card out of the printer.
5. Go to *Install the IPv4 Internal Print Server* on page 500.

Remove the Cover Plate

1. See Figure 363. Remove the blank cover by removing the two mounting screws.

Figure 363 • Remove the Blank Cover (ZT610 shown)



1	Blank cover
2	Mounting screws (2)

2. Continue with *Install the IPv4 Internal Print Server* on page 500.

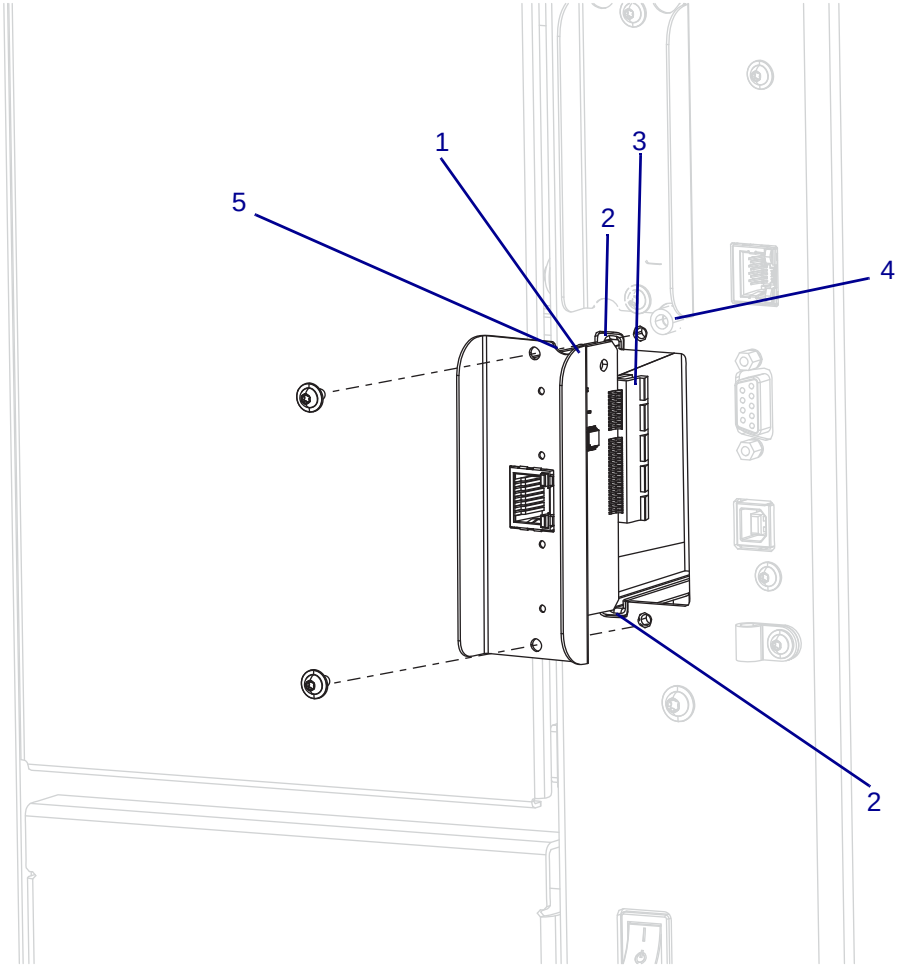
Install the IPv4 Internal Print Server

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

   Connect yourself to an antistatic device.

2. See Figure 364. Align the IPv4 internal print server card with the option card guide slots.

Figure 364 • Install the New IPv4 Internal Print Server Card



1	IPv4 internal print server card
2	Option card guide slots (2)
3	IPv4 internal print server connector
4	Locating post
5	Locating notch

3. Slowly slide the IPv4 internal print server into the printer until it stops.
4. Ensure that the option card connector is aligned with the main logic board connector, and then push it in on the top and bottom until it is against the printer.
5. Install the two mounting screws.
6. Reconnect the AC power cord and all data cables, and then turn on (**I**) the printer.

The installation is complete.

ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit

Installation Instructions

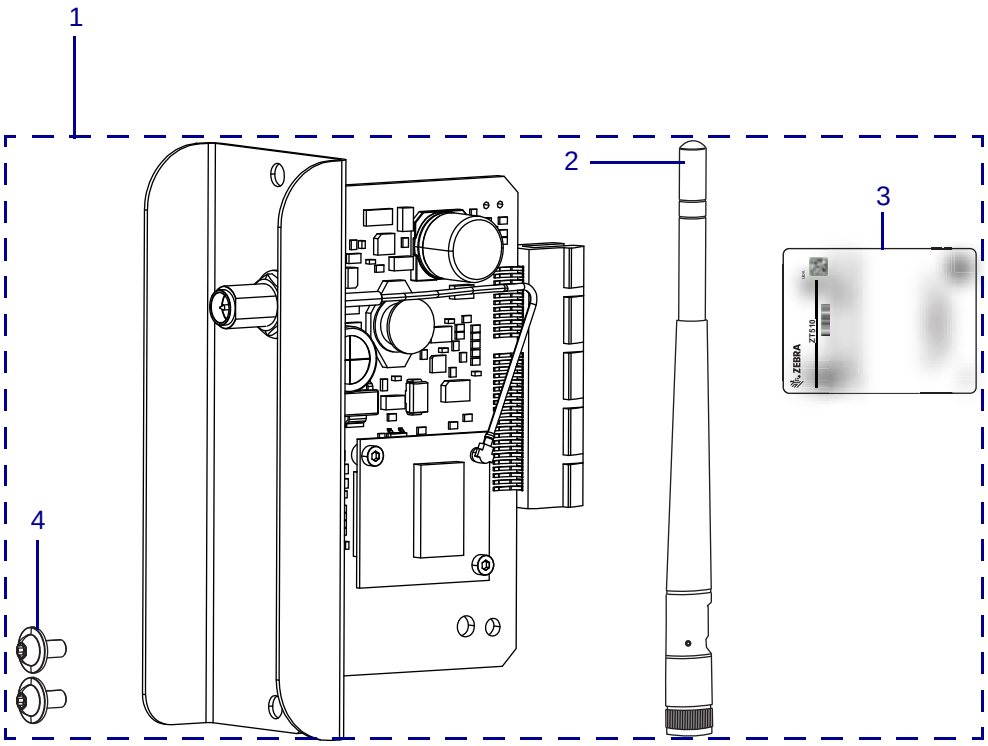
This kit includes the parts and documentation necessary to install the ZebraNet 802.11ac Radio Wireless Print Server Option/Maintenance Kit in the ZT510 printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 365 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 53 • Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1083320-037A**	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region A (USA and Canada)
			P1083320-037B	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region B (Japan)
			P1083320-037C	Wireless Print Server 802.11ac Radio Option/Maintenance Kit, Region C (All other countries other than regions, A and B)
	2	1	**P1037974-053**	ZebraNet Print Server 802.11ac Antenna Maintenance Kit

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Programming Guide for ZPL II, ZBI 2, Set-Get-Do, Mirror, and WML (P1012728-005 or later) or Internet access to download the guide from zebra.com.

Prepare for Installation

Are you replacing an existing option card?

If…	Then…
Yes	Continue with *Remove the Old Option Card*.
No	Go to *Remove the Cover Plate* on page 506.

Remove the Old Option Card

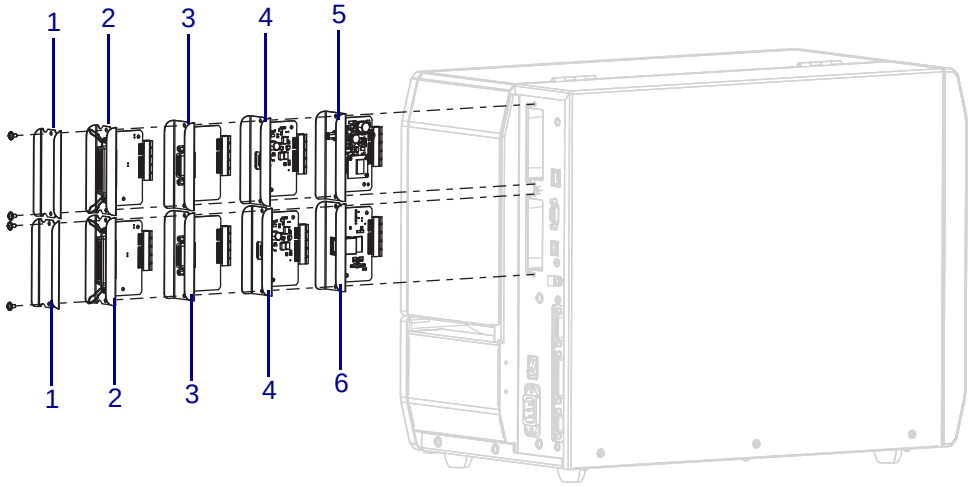
1. **Caution** • Turn Off (**O**) the printer and disconnect it from the power source before performing the following procedure.

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

   Connect yourself to an antistatic device.

3. See Figure 366 to verify the slots that can be used for the various option cards.

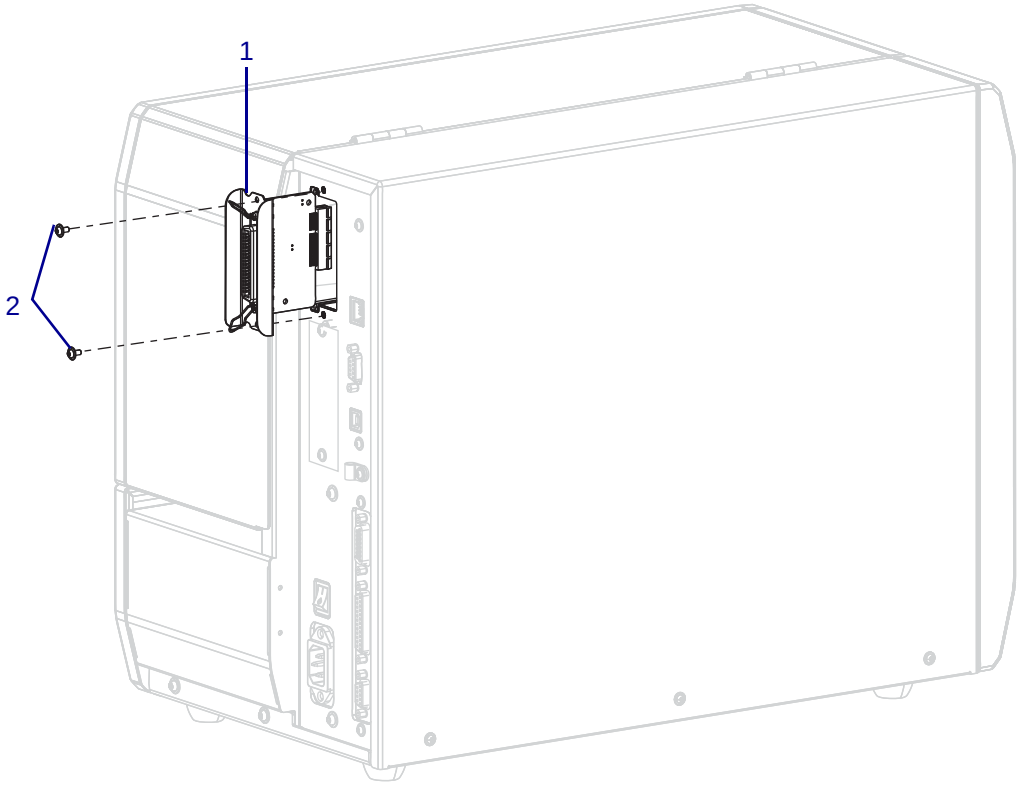
Figure 366 • Option Card Locations (ZT610 shown)



1	Blank cover
2	Parallel port
3	Applicator interface
4	USB Host
5	Wireless (only in this location)
6	Internal print server IPV4 (only in this location)

4. See Figure 367. Remove the two option card mounting screws that secure it to the top slot.

Figure 367 • Remove the Option Card (ZT610 shown)



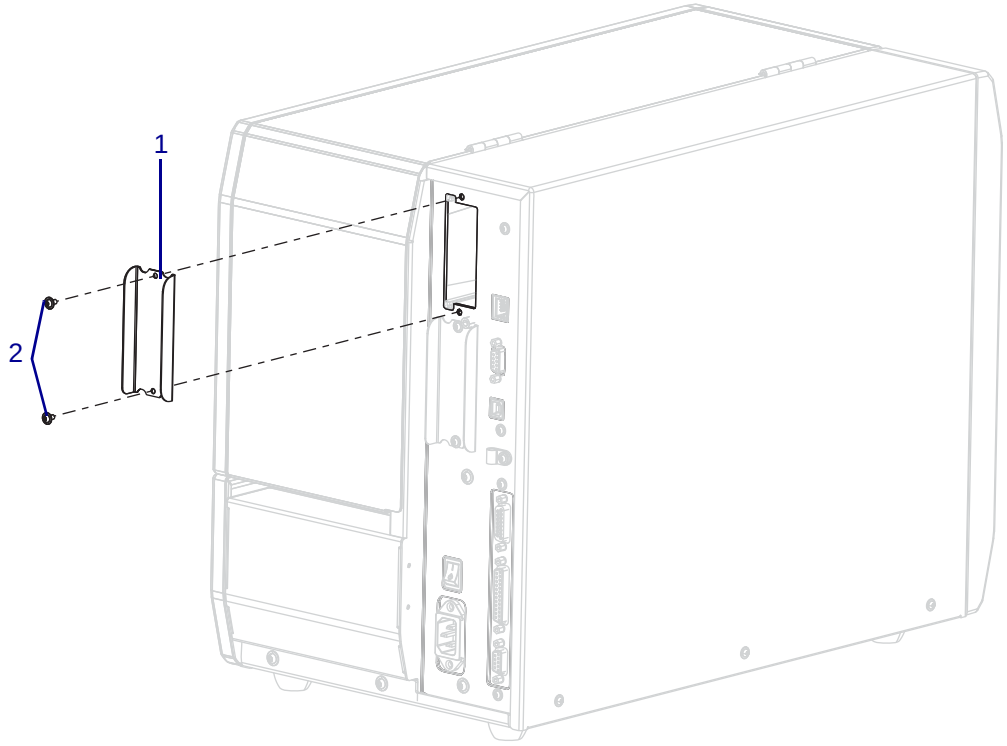
1	Option card
2	Mounting screws (2)

5. Slide the option card out of the printer.
6. Go to *Install the ZebraNet 802.11ac Radio Print Server* on page 507.

Remove the Cover Plate

1. See Figure 368. Remove the blank cover covering the top slot by removing the two mounting screws.

Figure 368 • Remove the Blank Cover (ZT610 shown)



1	Blank cover
2	Mounting screws (2)

2. Continue with *Install the ZebraNet 802.11ac Radio Print Server*.

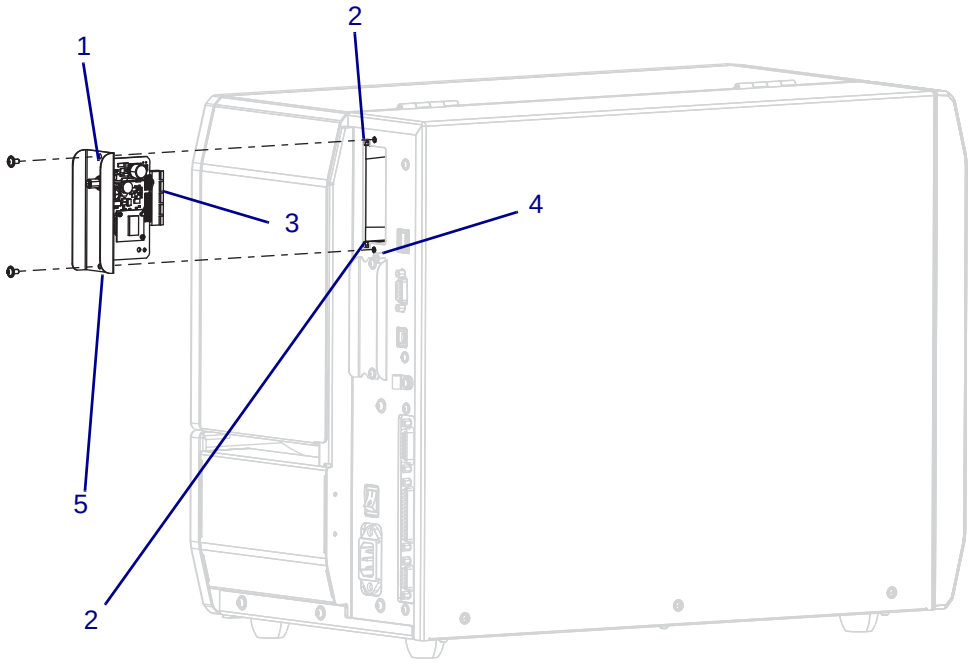
Install the ZebraNet 802.11ac Radio Print Server

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

   Connect yourself to an antistatic device.

2. See Figure 369. Align the ZebraNet print server card with the option card guide slots in the top slot of the printer.

Figure 369 • Install the New ZebraNet Print Server Card (ZT610 shown)

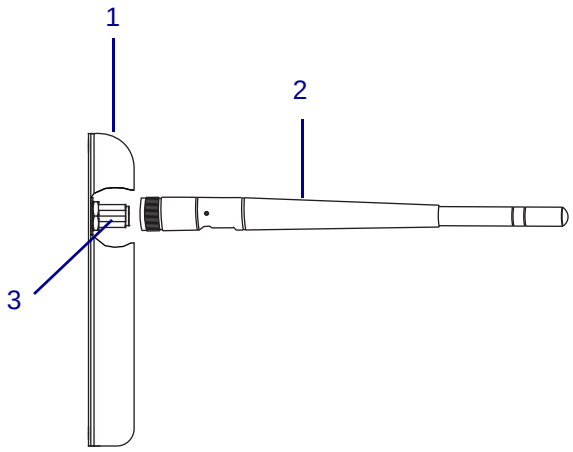


1	Wireless print server card
2	Option card guide slots (2)
3	Wireless print server card connector
4	Locating post
5	Locating notch

3. Slowly slide the wireless option card into the printer until it stops.
4. Ensure that the option card connector is aligned with the main logic board connector, and then push in the card on the top and bottom until it is against the printer.
5. Install the two mounting screws.

6. See Figure 370. To install the external antenna, screw the antenna onto the RF connector extending out of the option card.

Figure 370 • Close-up of Antenna Installation



1	Option card mounting plate
2	RF antenna
3	RF connector

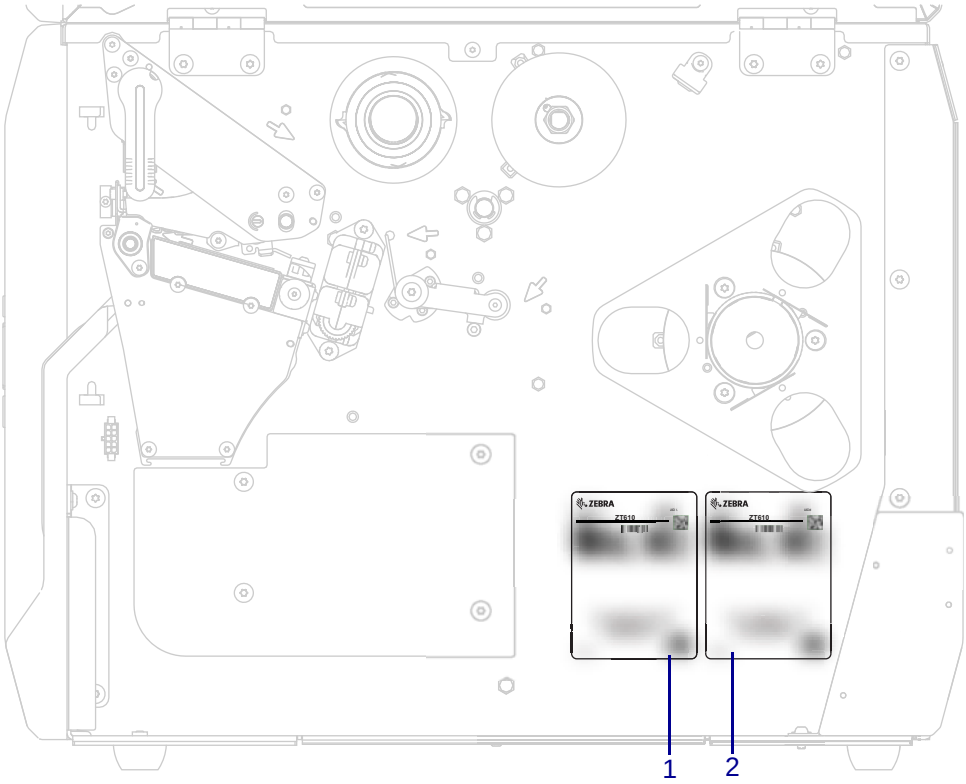
Apply the Compliance Label

1. **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.

   Open the media door and remove the media.

2. See Figure 371. Locate the Product Label, already in place.

Figure 371 • Locate the Product Label



1	Product label
2	Compliance label

3. Select the proper compliance label for your printer.

4. Peel the backing off of the label, (ZT610, ZT620, or ZT510 printer), and then install the label beside the product label as shown in Figure 371.

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

   Reinstall the media.

6. Reconnect the AC power cord and all data cables, and then turn on (**I**) the printer.

Programming the ZebraNet ac Print Server

You may need to set your country code to enable the 5 Ghz band for the ZebraNet ac Print Server.

1. Is the printer to be used in the United States, Canada, or Japan?

If…	Then…
Yes	The country codes have been preset at the factory and cannot be changed.

No	Send the following Set/Get/Do to set the country code for which the radio is to be configured.
	`! U1 setvar "wlan.country_code" "value"`
	
	Note • Once this code as been set, it can not be changed.
	
	Important • The list of country codes is specific to each printer and depends on the printer model and its wireless radio configuration. The list is subject to change, addition, or deletion with any firmware update, at any time, without notice.
	To determine the country codes available on your printer, you can issue the following command to return all commands related to WLAN settings. Locate the `wlan.country.code` command in the results and view the country codes available for your printer.
	`! U1 getvar "wlan"`

The installation is complete.

ZebraNet® Radio Print Server Antenna Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the ZebraNet Radio Print Server Antenna on the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 372 • Kit Contents

Table 54 • Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1037974-053**	ZebraNet Radio Print Server Antenna

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Old Antenna

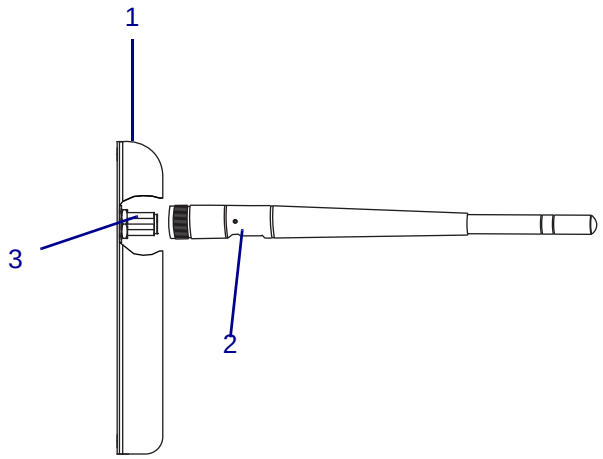
1. **Caution** • Turn Off (**O**) the printer and disconnect it from the power source before performing the following procedure.

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

   Connect yourself to an antistatic device.

3. See Figure 373. Remove the external antenna by unscrewing the antenna from the RF connector extending out from the back plate of the printer.

Figure 373 • Close-up of Antenna Installation



1	Cover
2	RF antenna
3	RF connector

Install the New Antenna

1. See Figure 373. Install the external antenna by screwing the antenna onto the RF connector extending out from the back plate of the printer.
2. Reconnect the AC power cord and all data cables.
3. Turn on (**I**) the printer.

The installation is complete.

USB Host Option/Maintenance Kit

Installation Instructions

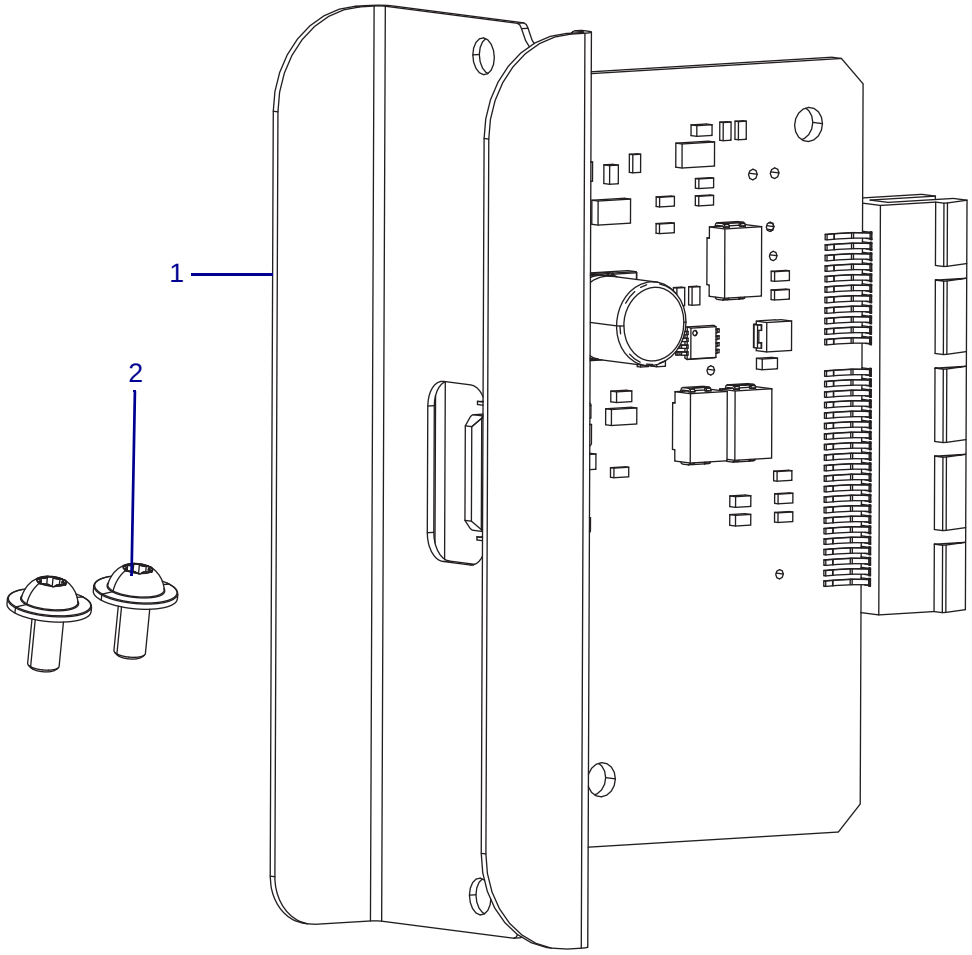
This kit includes the parts and documentation necessary to install the USB Host Option/Maintenance Kit in the ZT510™ printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 374 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 55 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-094**	USB Host Option/Maintenance Kit
	1	1	*N/A*	USB Host Card
	2	2	*N/A*	Torx-Head Screws, M3 × 0.5 × 6, included in the Miscellaneous Hardware Kit, **P1083320-096**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

❑ Torx-Head Wrench Set
❑ Antistatic Wriststrap and Mat

Important • The USB Host Option can be installed in either the top or bottom slot.

Are you replacing an existing option card?

If…	Then…
Yes	Continue with *Remove the Old Option Card*.
No	Go to *Remove the Cover Plate* on page 516.

Remove the Old Option Card

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

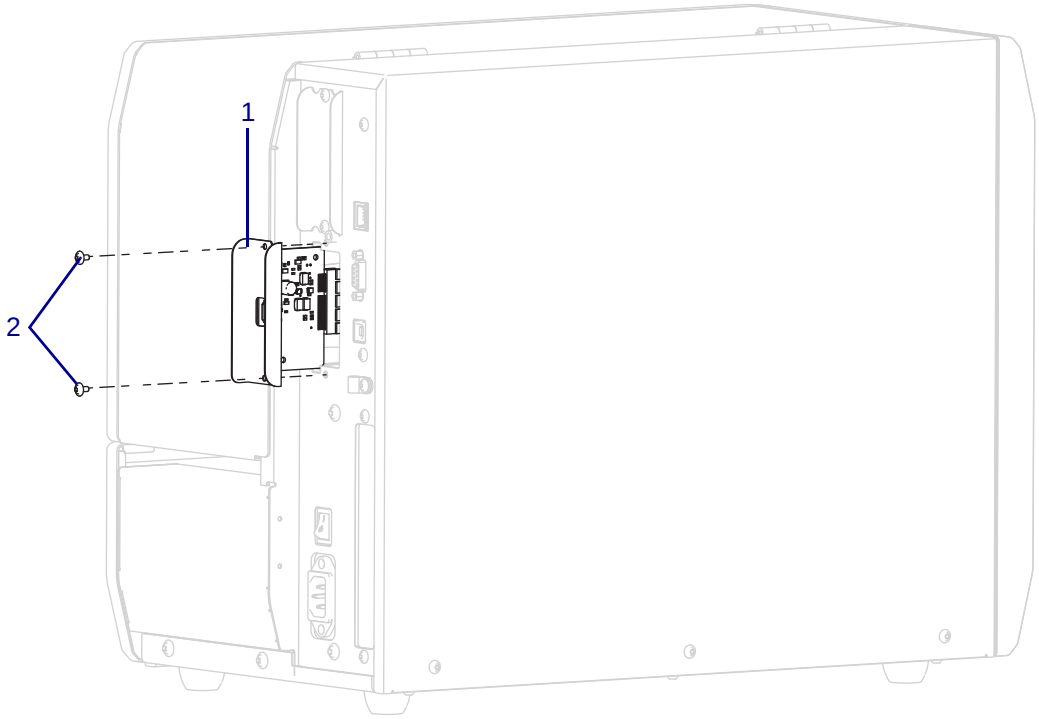
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

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

   Connect yourself to an antistatic device.

3. See Figure 375. Remove the two option card mounting screws.

Figure 375 • Remove the Option Card (ZT610 shown)



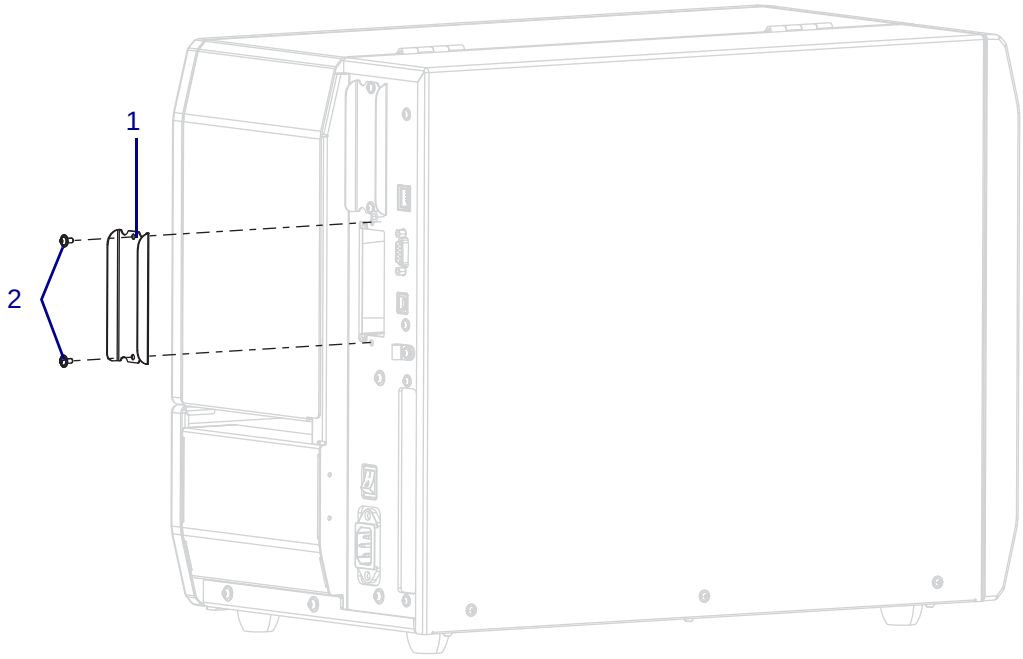
1	Option card
2	Mounting screws (2)

4. Go to *Install the New USB Host Card* on page 517.

Remove the Cover Plate

1. See Figure 376. Remove the blank cover by removing the two mounting screws.

Figure 376 • Remove the Blank Cover (ZT610 shown)



1	Blank cover
2	Mounting screws (2)

2. Continue with *Install the New USB Host Card*.

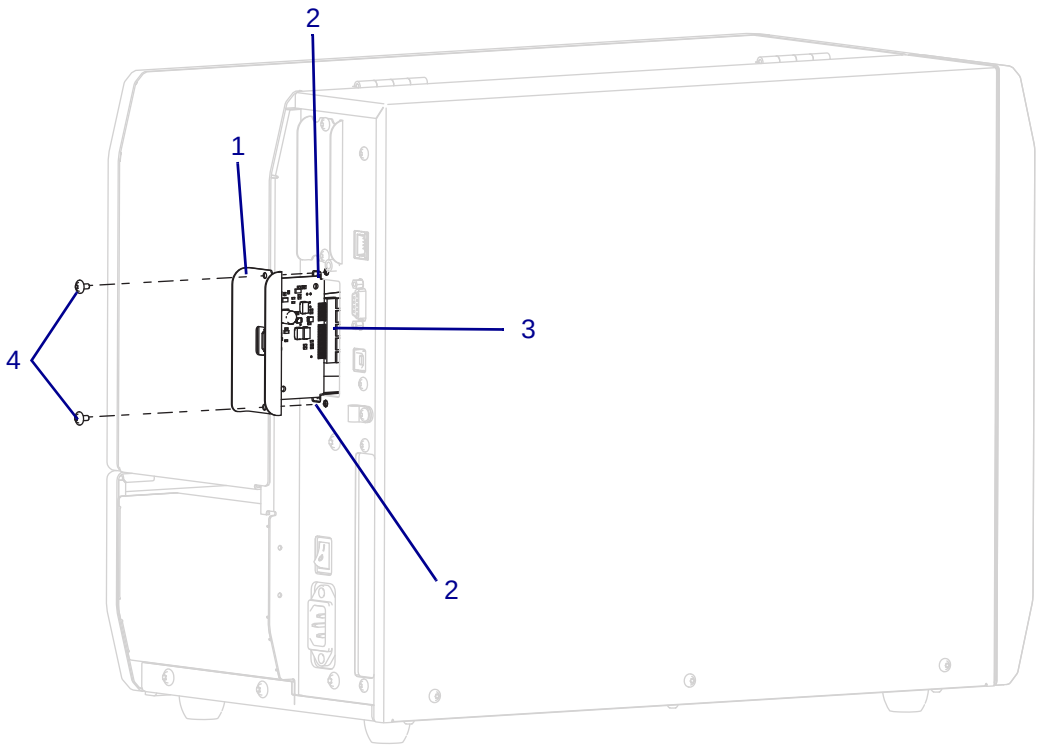
Install the New USB Host Card

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

   Connect yourself to an antistatic device.

2. See Figure 377. Align the USB Host card with the option card guides.

Figure 377 • Install the New USB Host Option Card (ZT610 shown)



1	USB Host option card
2	Option card guide (2)
3	Option card to main logic board connector
4	Mounting screws (2)

3. Slowly slide the USB host option card into the printer until it stops.
4. Ensure that the option card is aligned with the main logic board connector, and then push it in on the top and bottom until it is against the printer.
5. Install the two mounting screws.
6. Reconnect the AC power cord and all data cables.
7. Turn on (**I**) the printer.

The installation is complete.

Parallel Port Option/Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Parallel Port Option/Maintenance Kit in the ZT510 printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 378 • Kit Contents

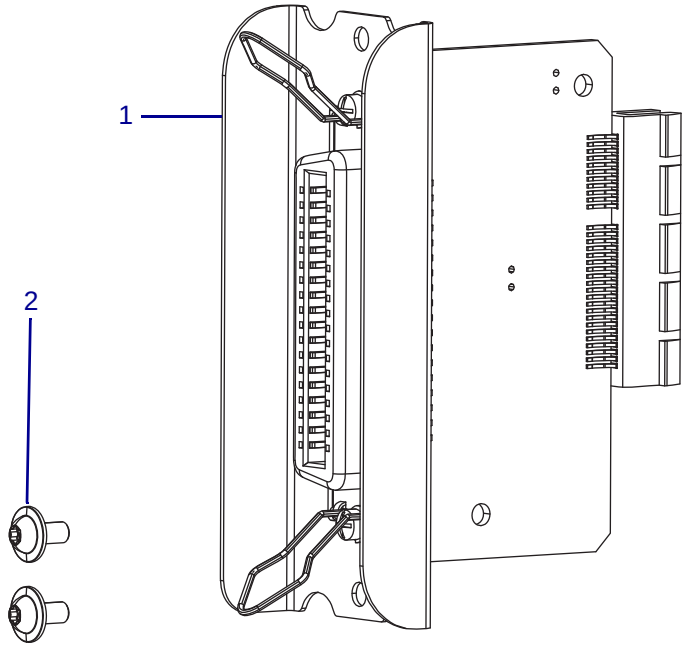


Table 56 • Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1083320-040**	Parallel Port Option/Maintenance Kit
	2	2	*N/A*	Torx-Head Screws, M3 × 0.5 × 6, included in the Miscellaneous Hardware Kit, **P1083320-096**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

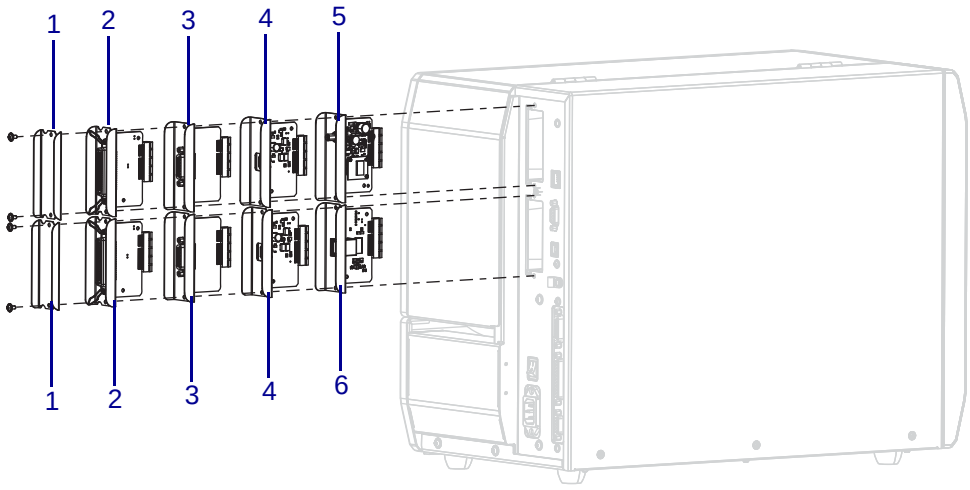
Tools • You need these tools to complete this procedure:

- ❑ Tors-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat

Getting Started

1. See Figure 379 to verify the slots that can be used for the various option cards.

Figure 379 • Option Card Locations (ZT610 shown)



1	Blank cover
2	Parallel port
3	Applicator interface
4	Ethernet
5	Wireless (only in this location)
6	Internal print server IPV4 (only in this location)

Are you replacing an existing option card?

If…	Then…
Yes	Continue with *Remove the Old Option Card*.
No	Go to *Remove the Cover Plate* on page 521.

Remove the Old Option Card

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

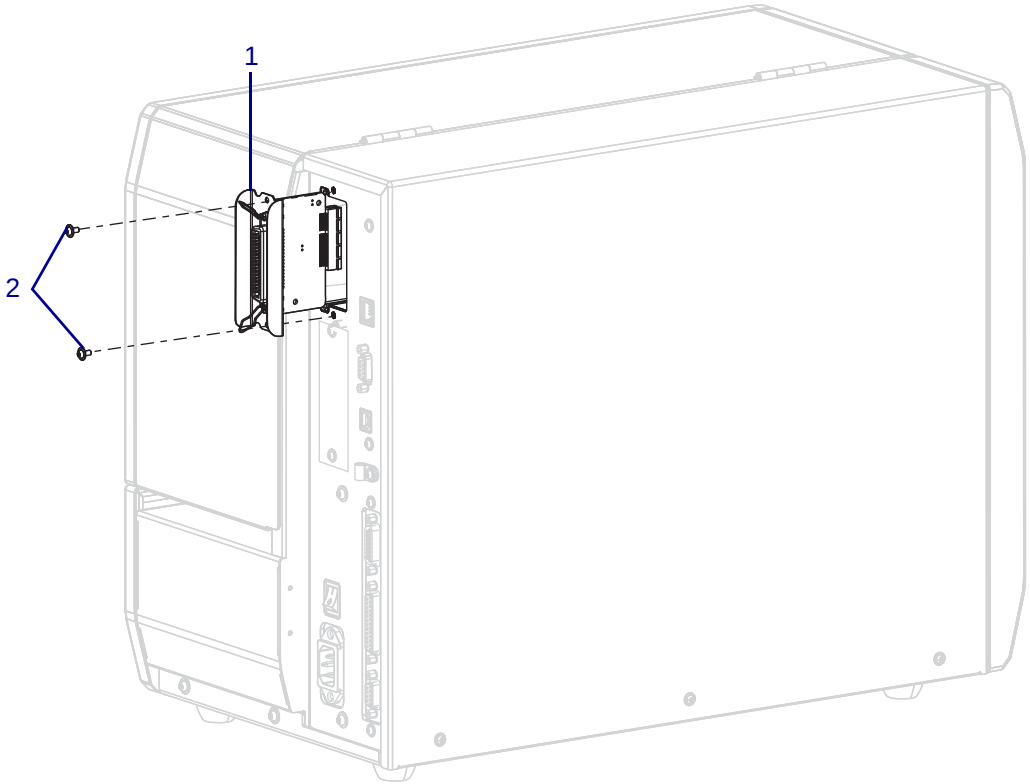
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

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

   Connect yourself to an antistatic device.

3. See Figure 380. Remove the two option card mounting screws.

Figure 380 • Remove the Option Card (ZT610 shown)



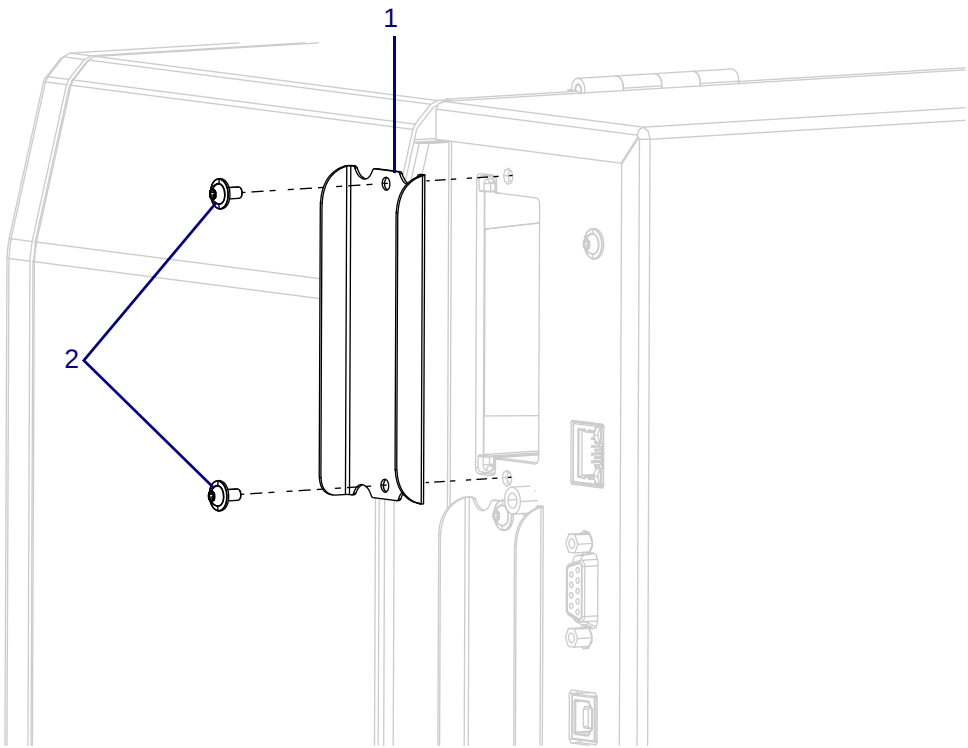
1	Option card
2	Mounting screws (2)

4. Go to *Install the New Parallel Port Card* on page 522.

Remove the Cover Plate

1. See Figure 381. Remove the blank cover by removing the two mounting screws.

Figure 381 • Remove the Blank Cover (ZT610 shown)



1	Blank cover
2	Mounting screws (2)

2. Continue with *Install the New Parallel Port Card*.

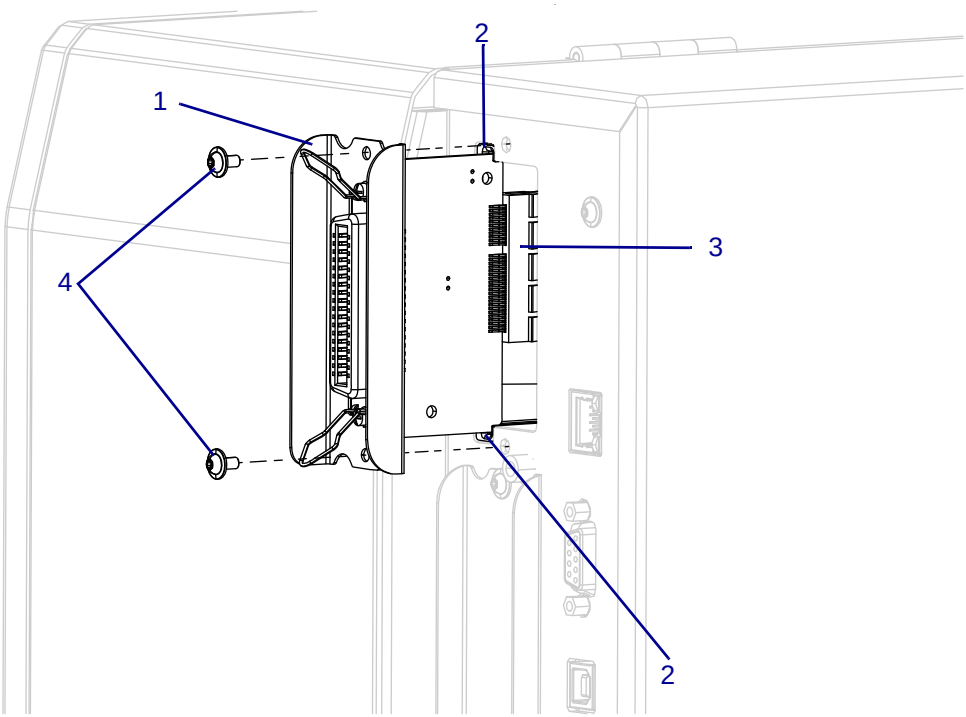
Install the New Parallel Port Card

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

   Connect yourself to an antistatic device.

2. See Figure 382. Align the parallel port option card with the main logic card guides.

Figure 382 • Install the New Parallel Port Option Card (ZT610 shown)



1	Parallel port option card
2	Option card guide slots (2)
3	Parallel option card to main logic board connector
4	Mounting screws (2)

3. Slowly slide the parallel port option card into the printer until it stops.
4. Ensure that the option card is aligned with the main logic board connector, and then push it in on the top and bottom until it is against the printer.
5. Install the two mounting screws.
6. Reconnect the AC power cord and all data cables.
7. Turn on (**I**) the printer.

The installation is complete.

Ribbon-Out Sensor Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Ribbon-Out Sensor Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 383 • Kit Contents

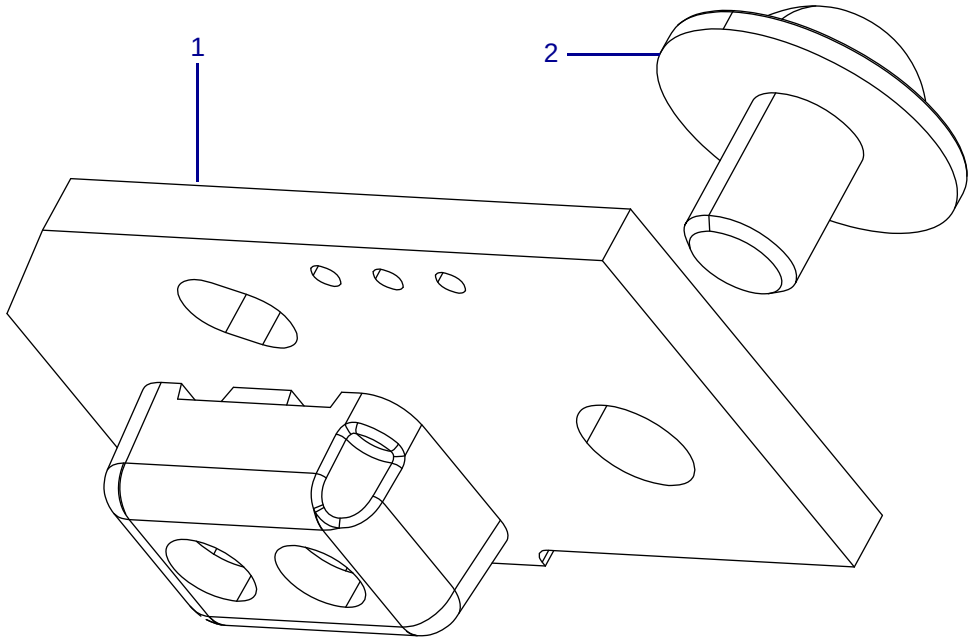


Table 57 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-015**	Ribbon-Out Sensor Maintenance Kit
	1	1	*N/A*	Ribbon-Out Sensor
	2	1	*N/A*	Torx-Head Screw, M3 × 4, included in the miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

Note • Retain all parts removed during disassembly, unless otherwise directed.

2. **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.

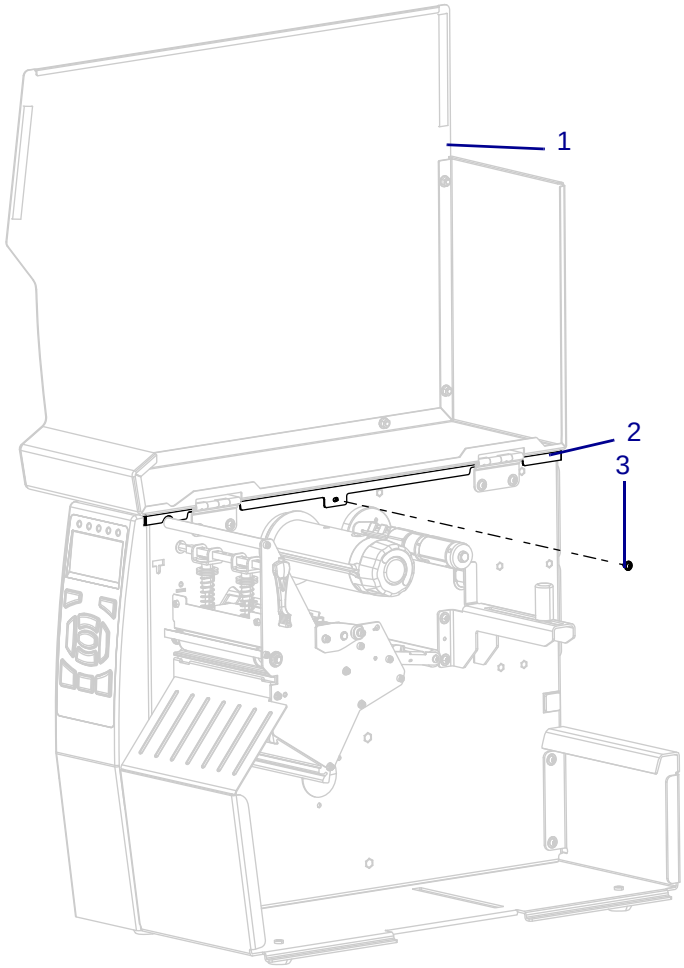
   Remove the Media and Ribbon.

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

   Connect yourself to an antistatic device.

4. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 384 • Locate the Electronics Cover Mounting Screw

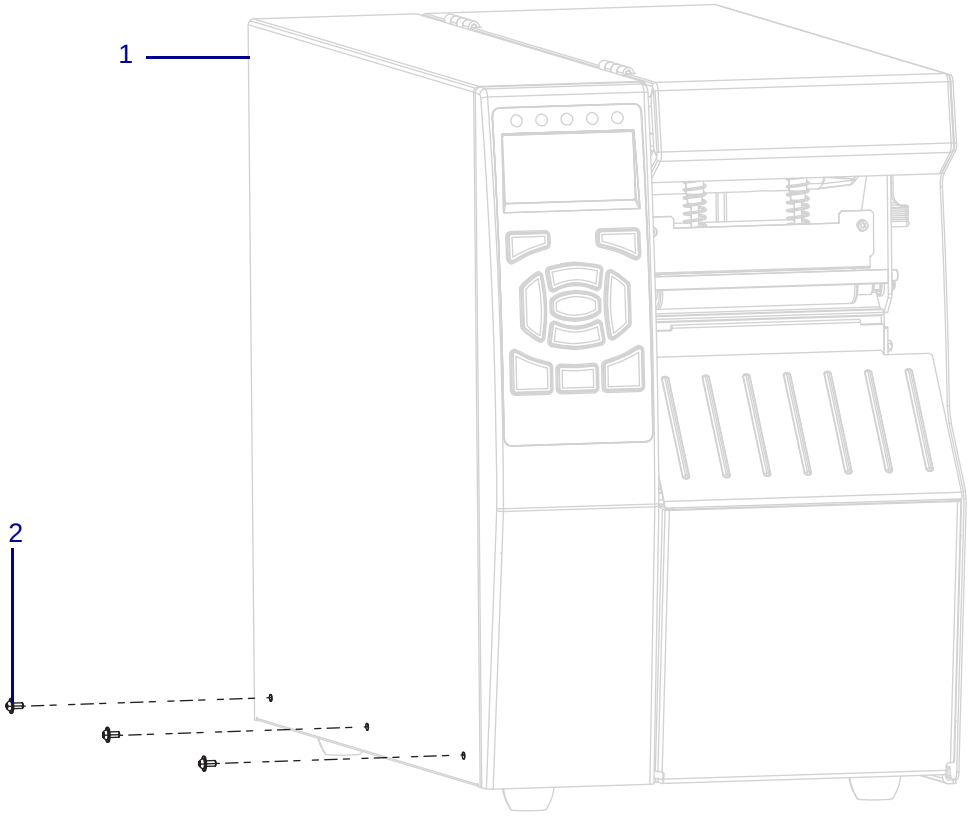


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

5. Close the media door.

6. See Figure 385. Remove the three mounting screws securing the electronics cover to the printer.

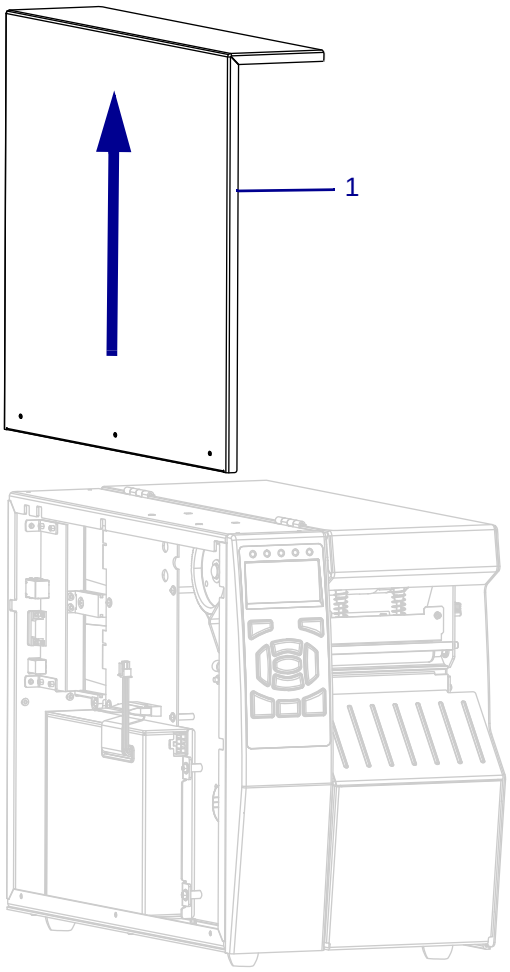
Figure 385 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

7. See Figure 386. Lift the electronics cover off of the printer.

Figure 386 • Remove the Electronics Cover

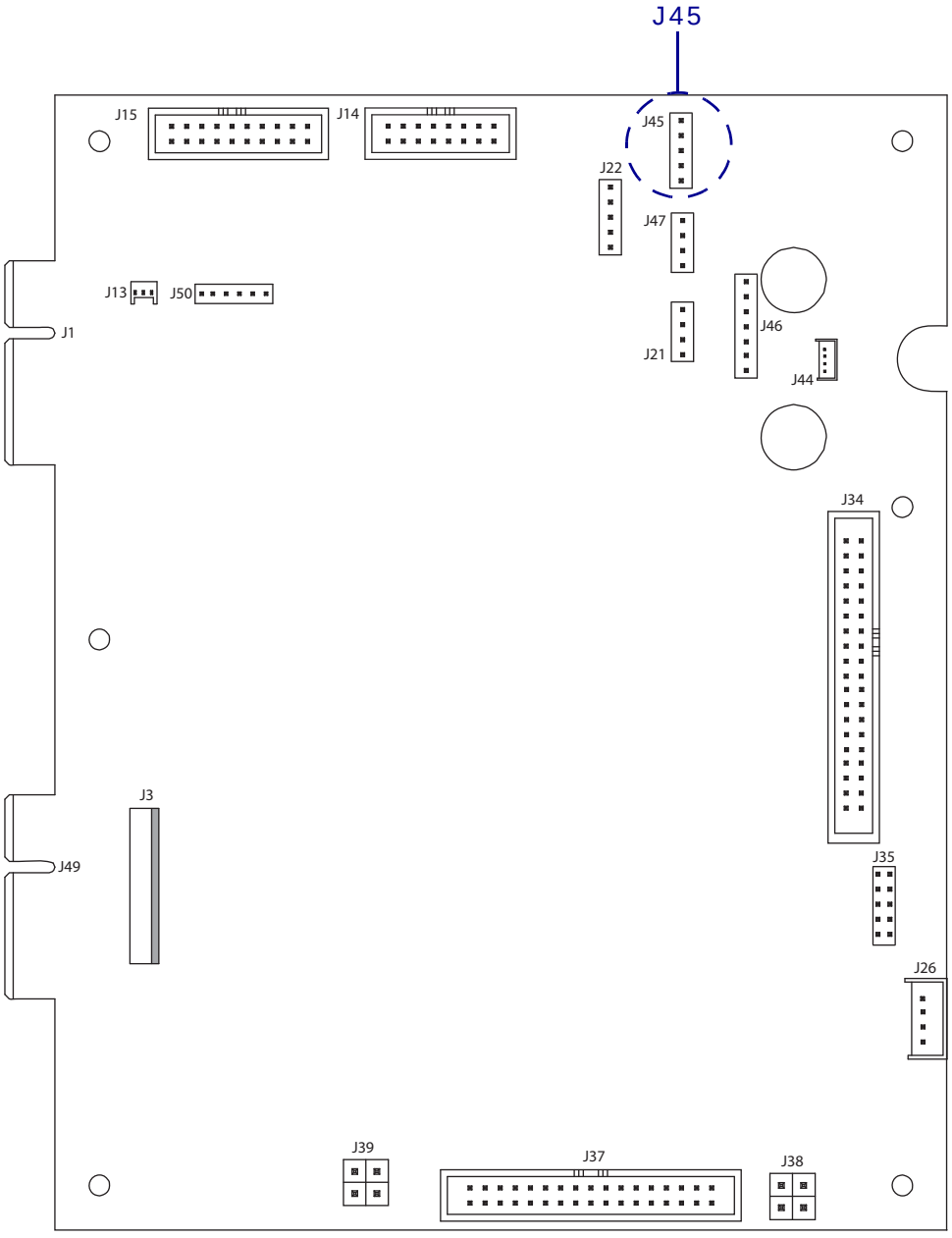


1	Electronics cover

Remove the Ribbon-Out Sensor

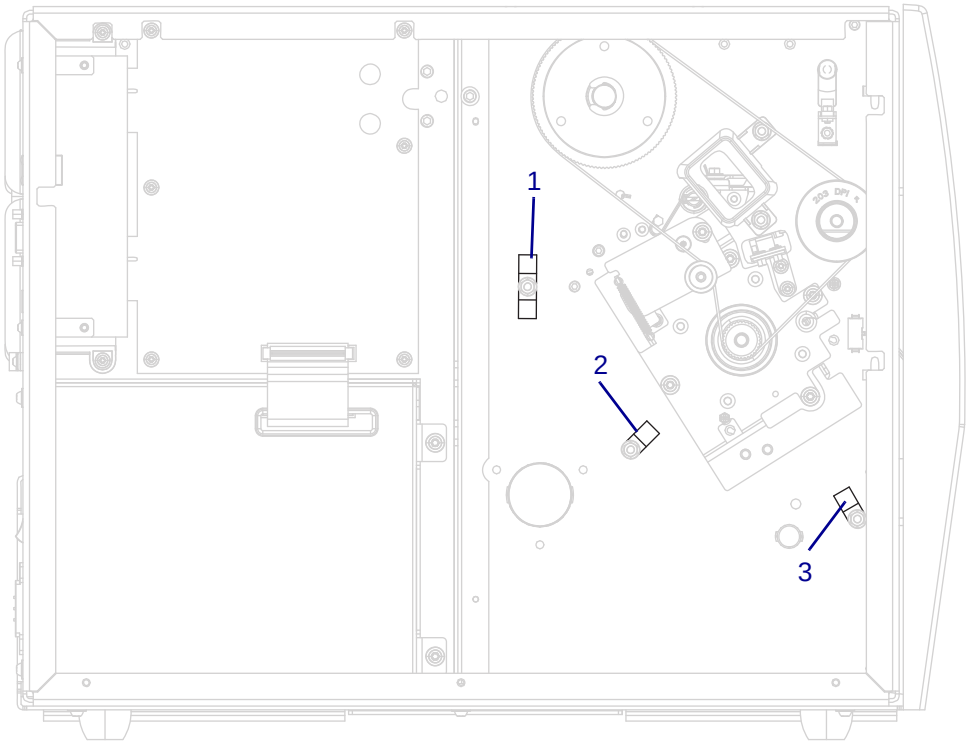
1. See Figure 387. From the electronics side, disconnect the ribbon-out sensor cable from J45 on the main logic board (MLB).

Figure 387 • Remove Ribbon-Out Cable from the MLB



2. See Figure 388. Remove the cable connector mounting nut (1), and then remove the ribbon-out sensor cable from the cable clamp.

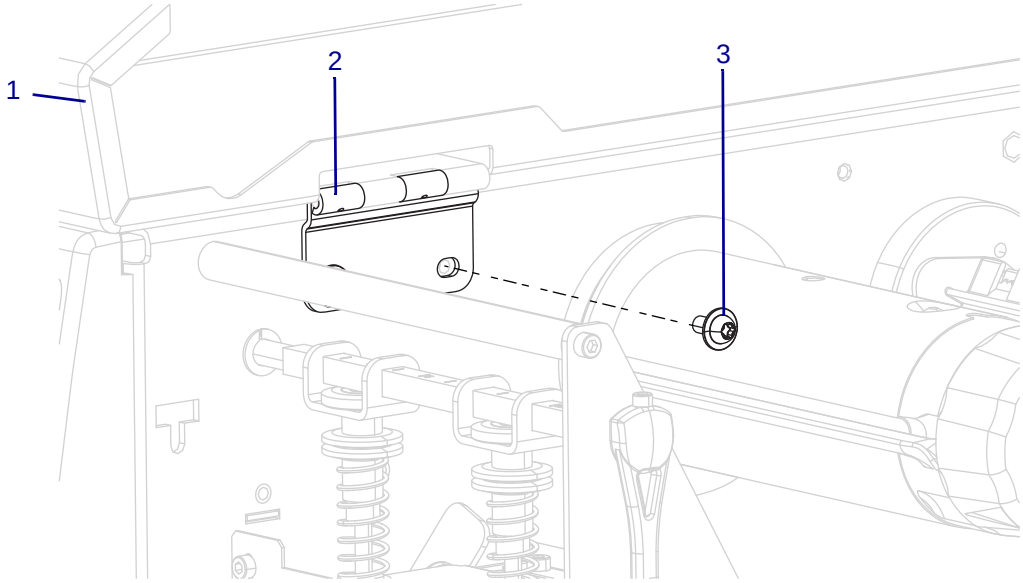
Figure 388 • Cable Routing and Clamps



Clamp	Clamp Contents
1	Ribbon-out sensor, Black mark sensor, Head open Sensor, Media sensor cables
2	Cutter interface and Drive motor cables
3	Cutter interface and Drive motor cables

3. See Figure 389. From the media side, remove the media door mounting screw from the rear screw of the front hinge.

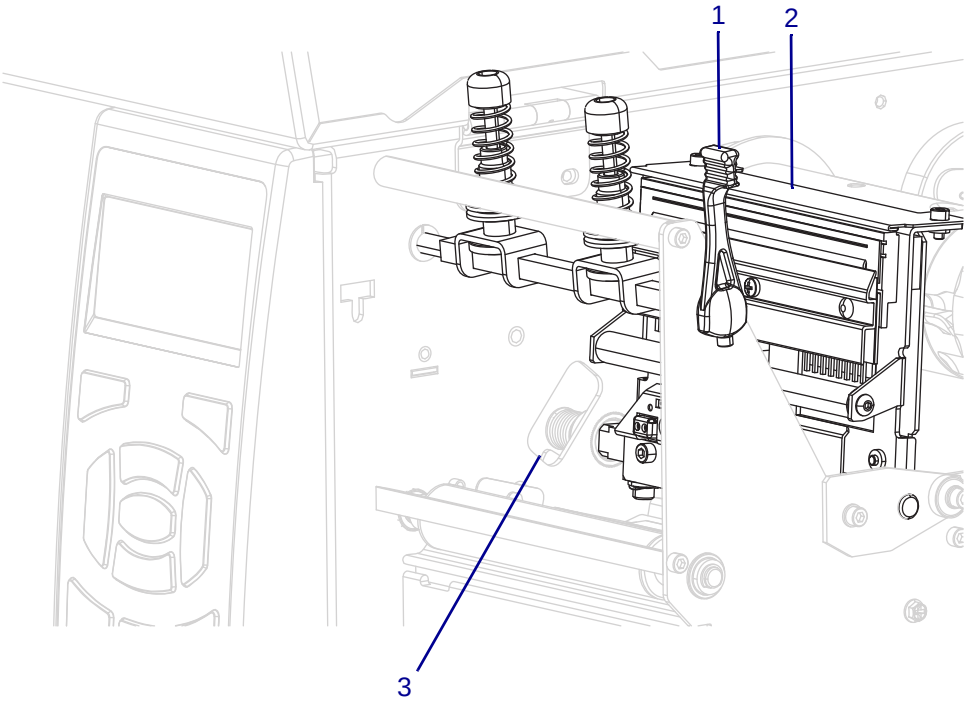
Figure 389 • Remove the Media Door Mounting Screw



1	Media door
2	Front hinge
3	Mounting screw

4. See Figure 390. Open the printhead by rotating the toggle bar assembly handle completely counter clockwise.

Figure 390 • Open the Printhead

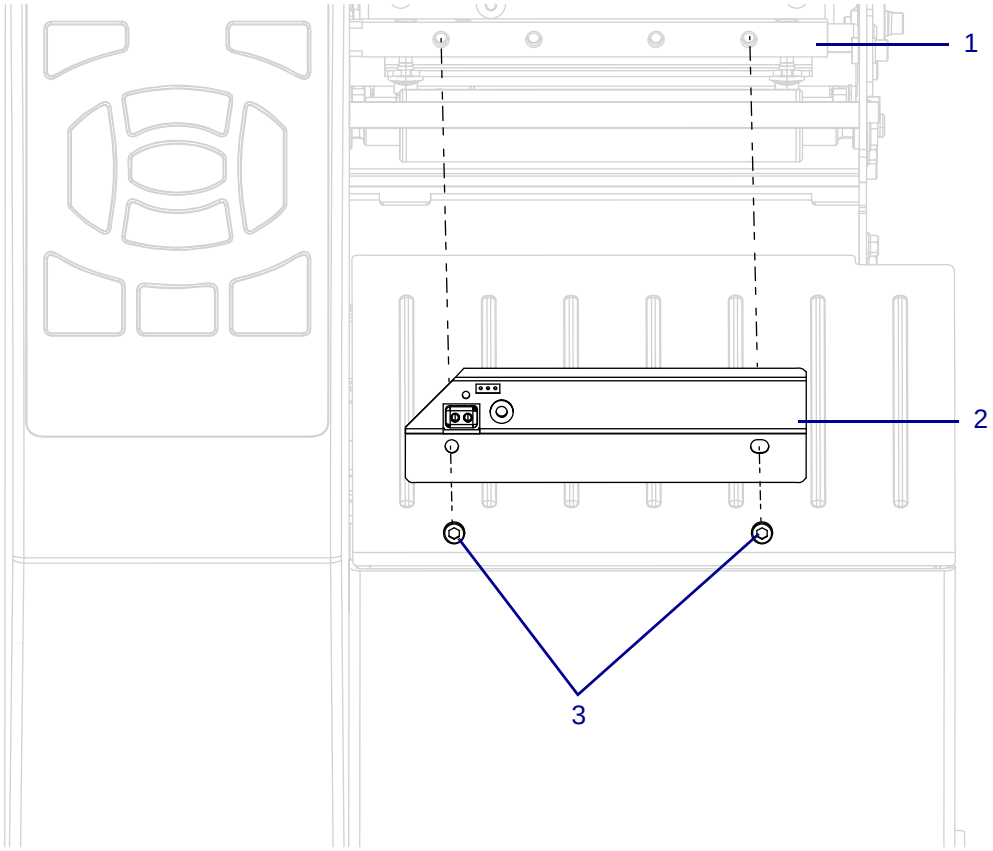


1	Toggle bar assembly handle
2	Print mechanism
3	Access hole

5. Rotate the print mechanism all the way clockwise.

6. See Figure 391. Remove the two mounting screws securing the ribbon-out sensor and bracket to the print mechanism.

Figure 391 • Remove the Ribbon-Out Sensor and Bracket

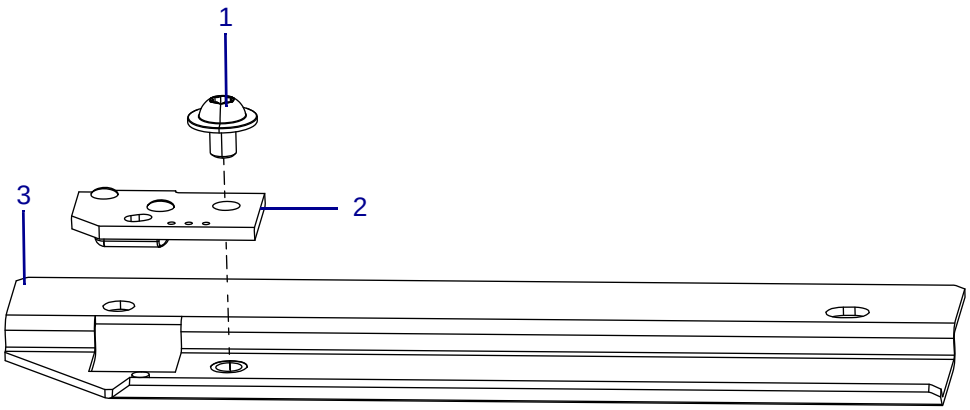


1	Print mechanism
2	Ribbon-out sensor and bracket
3	Mounting screws (2)

7. Guide the ribbon-out cable through the access hole while removing the ribbon sensor and bracket from the printer.

8. See Figure 392. Set the ribbon-out sensor and bracket on a antistatic mat, and then remove the ribbon-out sensor assembly.

Figure 392 • Remove the Ribbon-Out Sensor Assembly



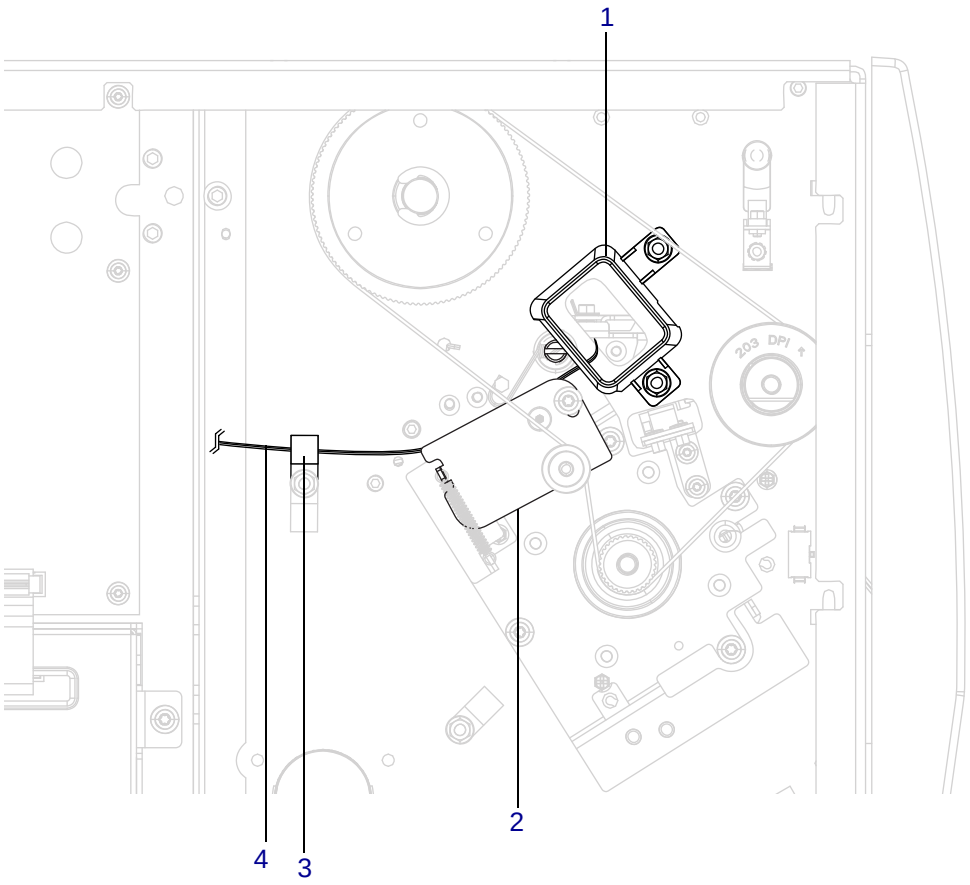
1	Mounting screw
2	Ribbon-out sensor assembly
3	Ribbon-out sensor assembly bracket

Install the Ribbon-Out Sensor

1. See Figure 392. Install the new ribbon-out sensor assembly onto the ribbon-out sensor bracket.
2. See Figure 391 on page 532. Install the ribbon-out sensor and bracket onto the print mechanism.
3. See Figure 390 on page 531. Guide the new ribbon-out sensor cable through the access hole.
4. See Figure 389 on page 530. Close the printhead, and then reinstall the front hinge mounting screw.

5. See Figure 393. Route the cable through the lower part of the printhead cable guide and under the print mechanism shaft.

Figure 393 • Ribbon-Out Sensor Cable Routing



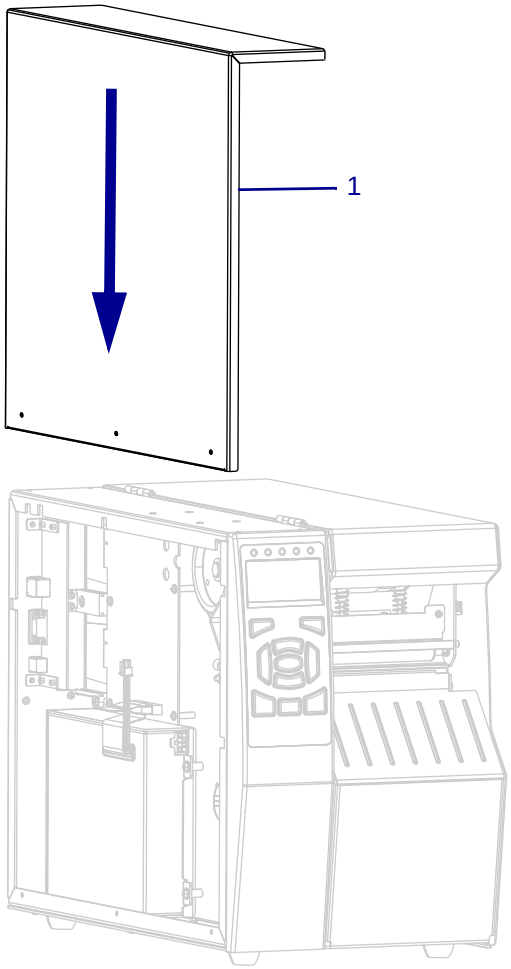
1	Printhead cable guide
2	Main drive belt tensioner
3	Cable clamp
4	Ribbon-out cable

6. Insert the ribbon-out cable into cable clamp and then slide the cable clamp onto the mounting stud.
7. See Figure 387 on page 528. Connect it to J45 on the MLB.
8. Reinstall the cable clamp mounting nut.

Reinstall the Electronics Cover

1. See Figure 394. Slide the electronics cover onto the printer.

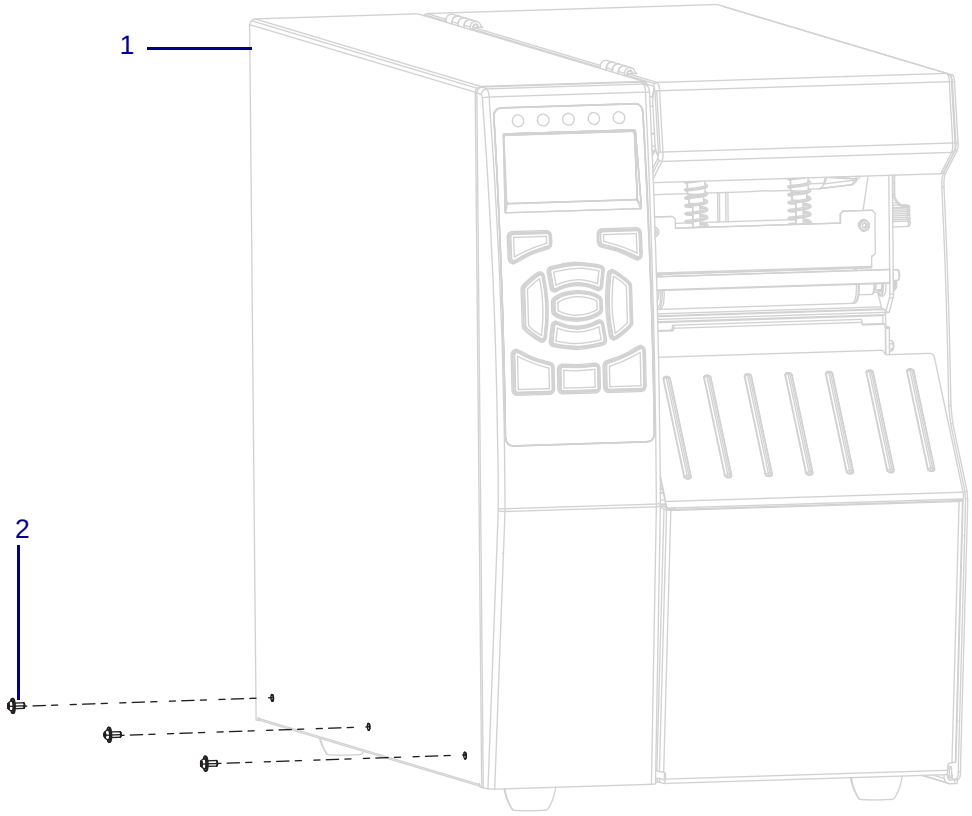
Figure 394 • Install the Electronics Cover



1	Electronics cover

2. See Figure 395. Install the three mounting screws.

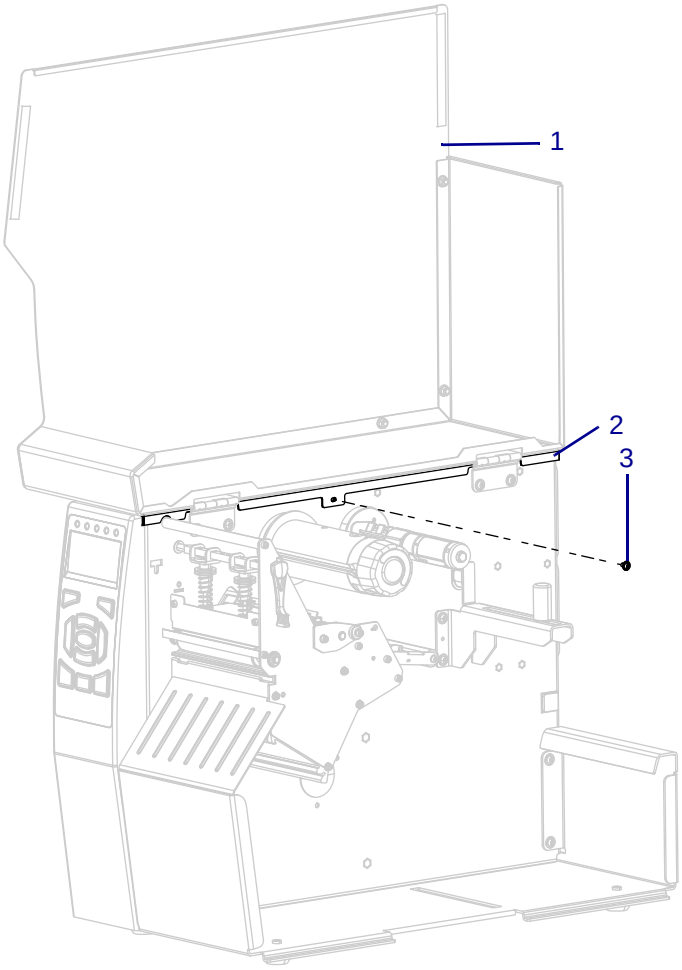
Figure 395 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 396. Open the media door and install the media side electronics cover mounting screw.

Figure 396 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

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

   Reinstall the media and ribbon.

5. Reconnect the AC power cord and all data cables.

6. Turn on (**I**) the printer.

The installation is complete.

Media Sensor Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Media Sensor Maintenance Kit for the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 397 • Kit Contents

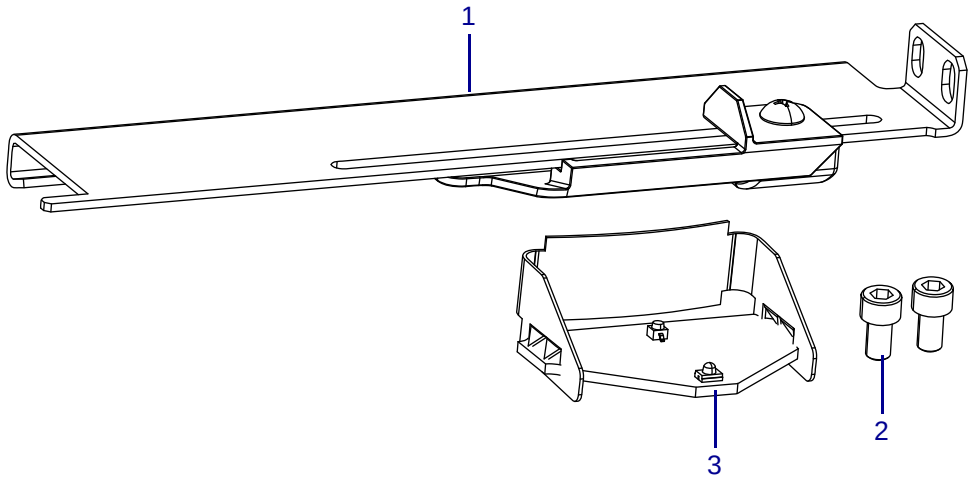


Table 58 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-030**	ZT510 Media Sensor Maintenance Kit
	1	1	*N/A*	Upper Media Sensor Assembly
	2	2	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 25)
	3	1	*N/A*	Lower Media Sensor Assembly

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Metric Hex Key (Allen wrench) Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

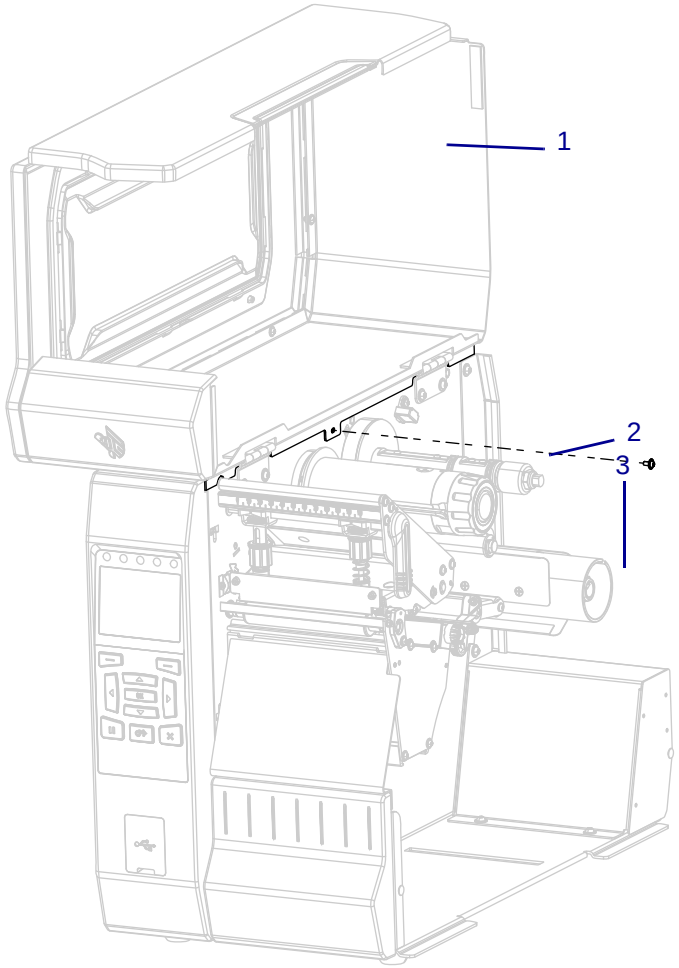
2. Open the media door and remove the media and ribbon.

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

   Connect yourself to an antistatic device.

4. See Figure 398. Remove the screw securing the electronics cover.

Figure 398 • Locate the Electronics Cover Mounting Screw

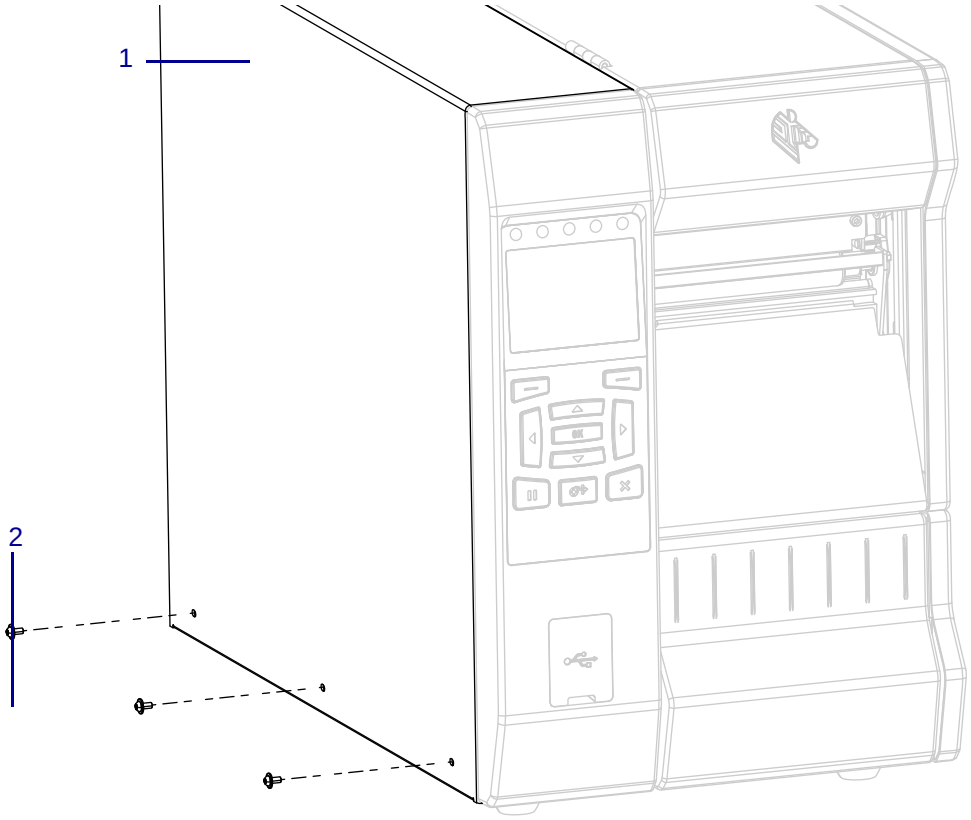


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

5. Close the media door.

6. See Figure 399. Remove the three mounting screws securing the electronics cover to the printer.

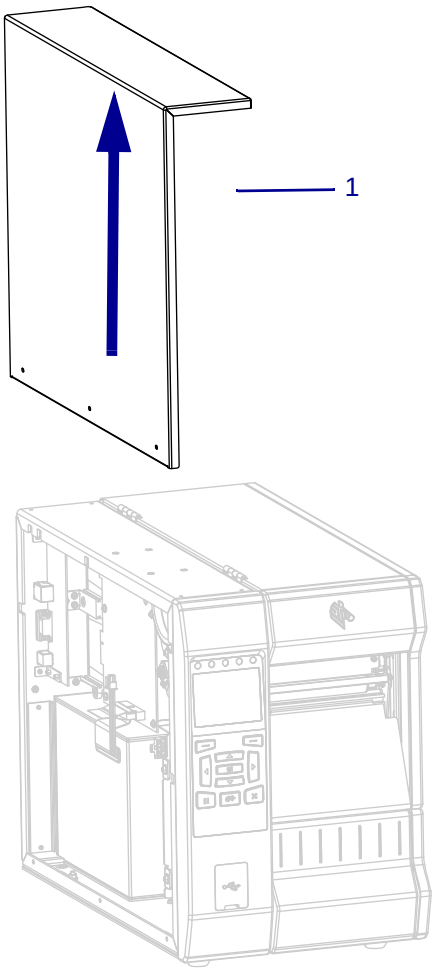
Figure 399 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

7. See Figure 400. Lift the electronics cover off of the printer.

Figure 400 • Remove the Electronics Cover

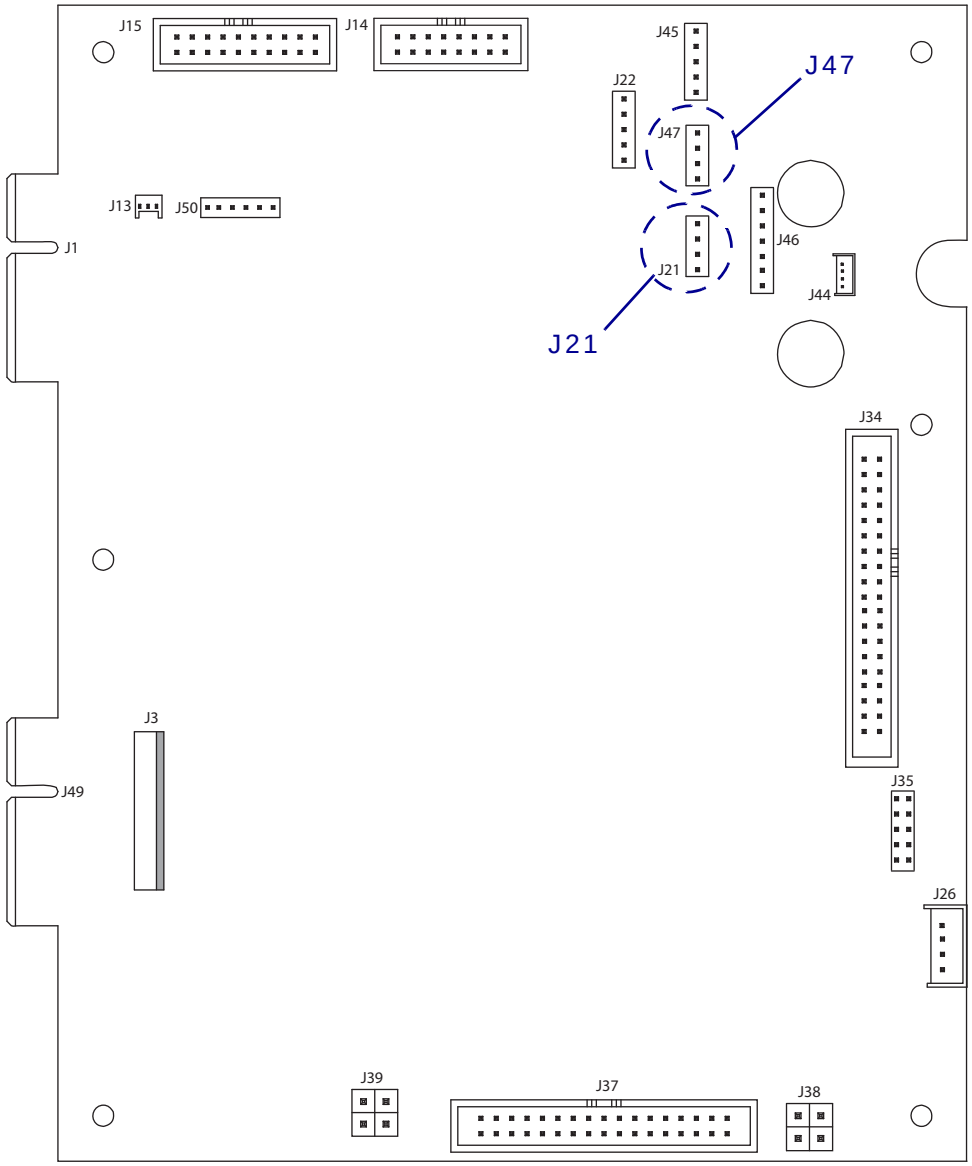


1	Electronics cover

Remove the Old Media Sensor Assemblies

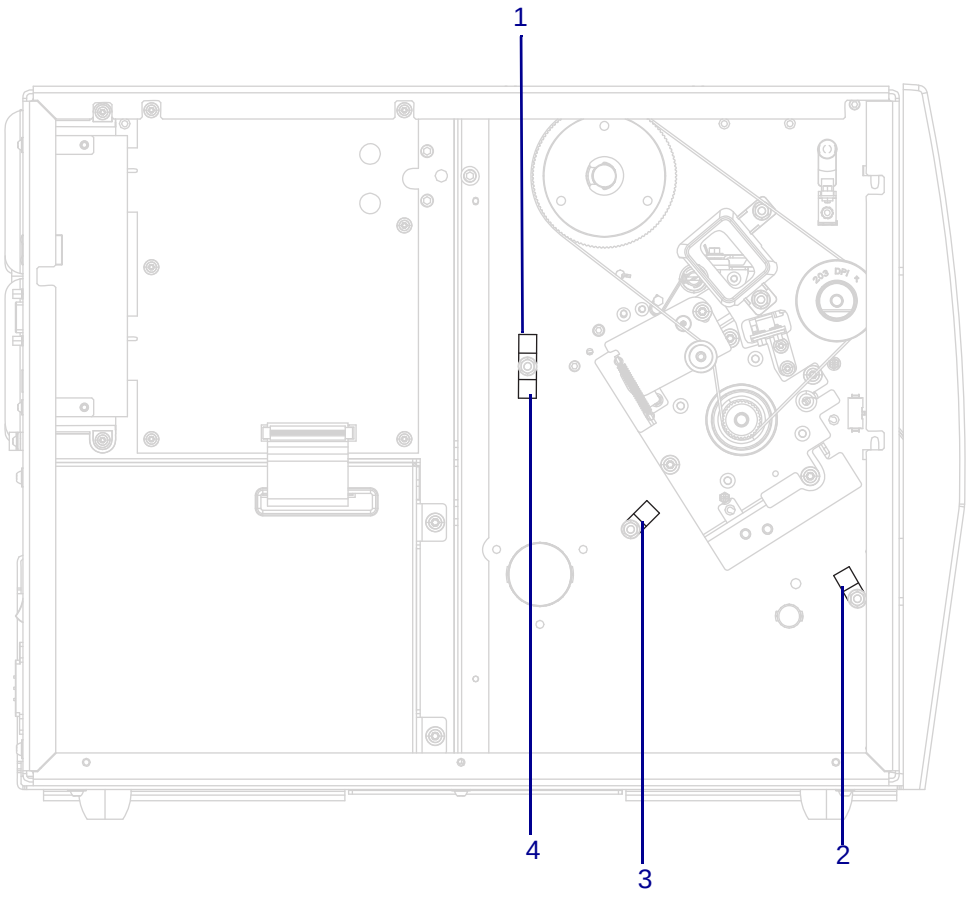
1. Disconnect the sensor cables from J21 and J45 on the main logic board (MLB).

Figure 401 • MLB Connections



2. Open clamp 1 and remove the upper and lower media sensor cables.

Figure 402 • Locate the Cable Clamps

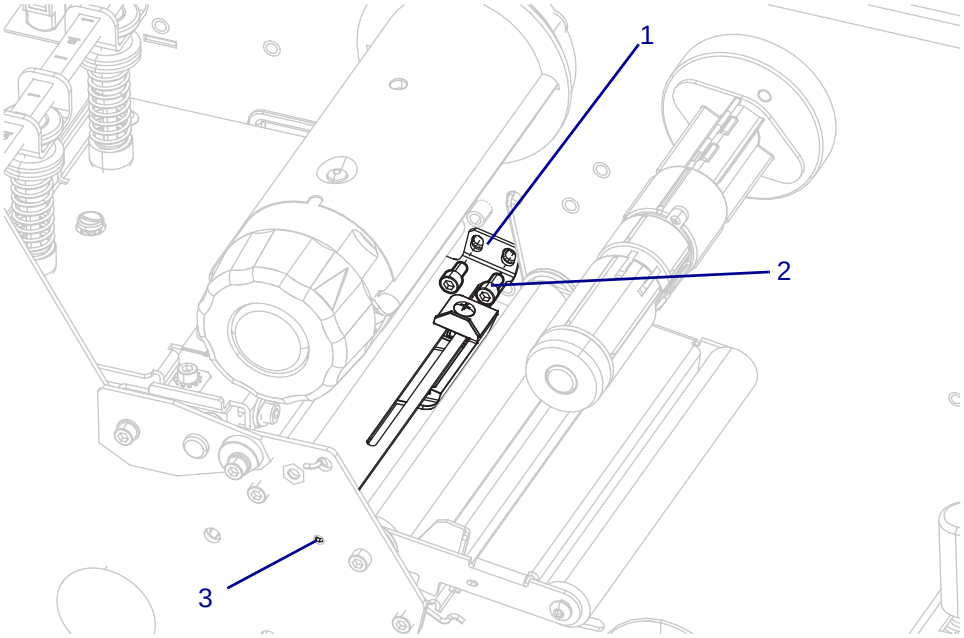


Clamp Number	Cables
1	Head open sensor cable, Black Mark sensor cable, Ribbon out cable
2	Drive motor cable, cutter interface cable
3	Drive motor cable, cutter interface cable
4	Drive motor cable, cutter interface cable

Remove the Old Upper Media Sensor

1. See Figure 403. Note the position, and then remove the two mounting screws attaching the upper media sensor assembly.

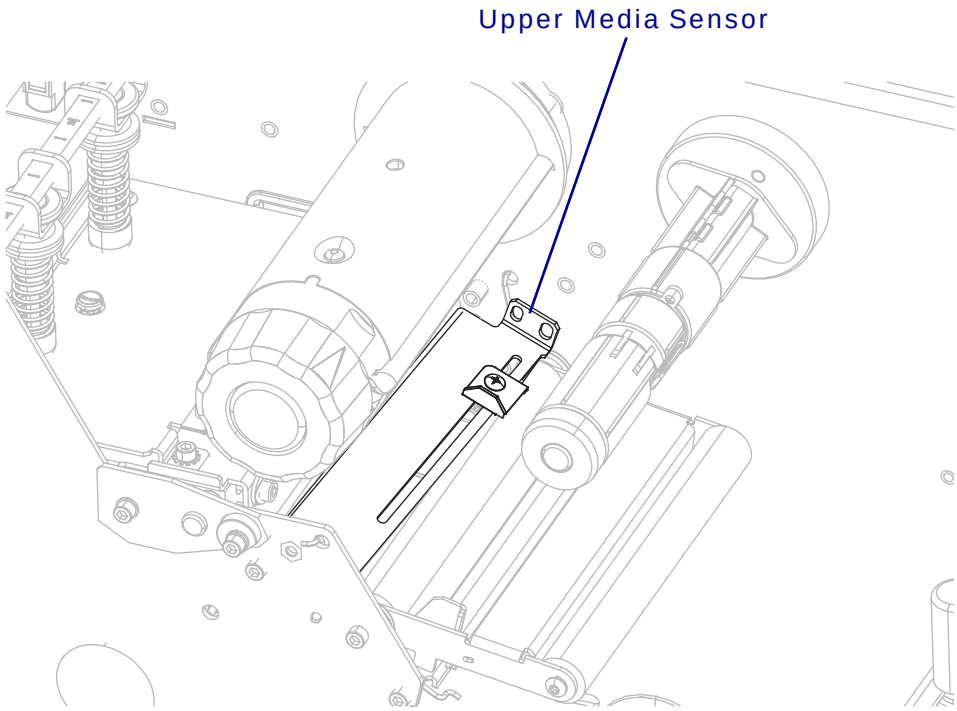
Figure 403 • Upper Media Sensor Screw Removal



1	Upper media sensor
2	Mounting screw (2)
3	Upper media sensor tab

2. To remove the upper media sensor, lift it up and to the rear of the printer. Pull up slightly to put slack in the cable, and then set the sensor down.

Figure 404 • Removal and Installation of the Upper Media Sensor

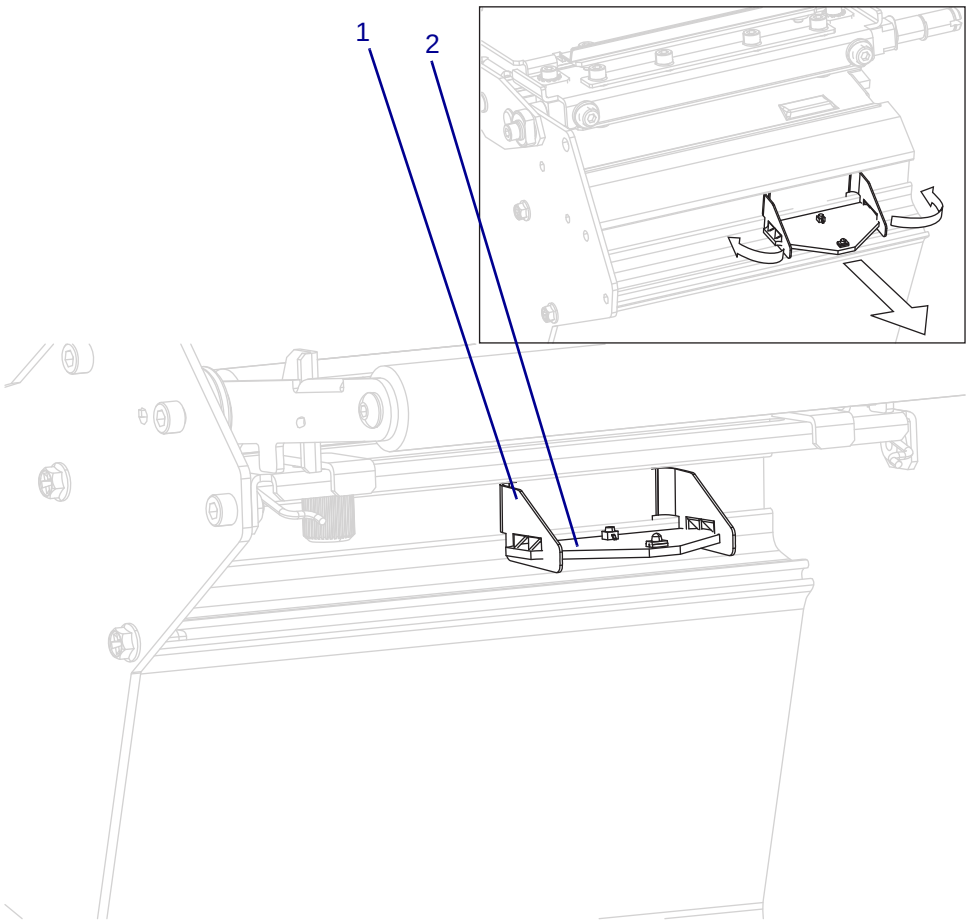


3. While guiding the sensor cable through the access hole, remove the upper media sensor from the printer.

Remove the Old Lower Media Sensor

1. See Figure 405. Slide the lower media sensor away from the printer main frame so that you access it.

Figure 405 • Lower Media Sensor and Bracket



1	Lower media sensor bracket
2	Lower media sensor board

2. Carefully pry apart the sides of the bracket holding the lower media sensor board.

   You might need a screwdriver to take the pressure off the little locking tabs that grip the board. The sensor board should fall free and dangle from its sensor cables.

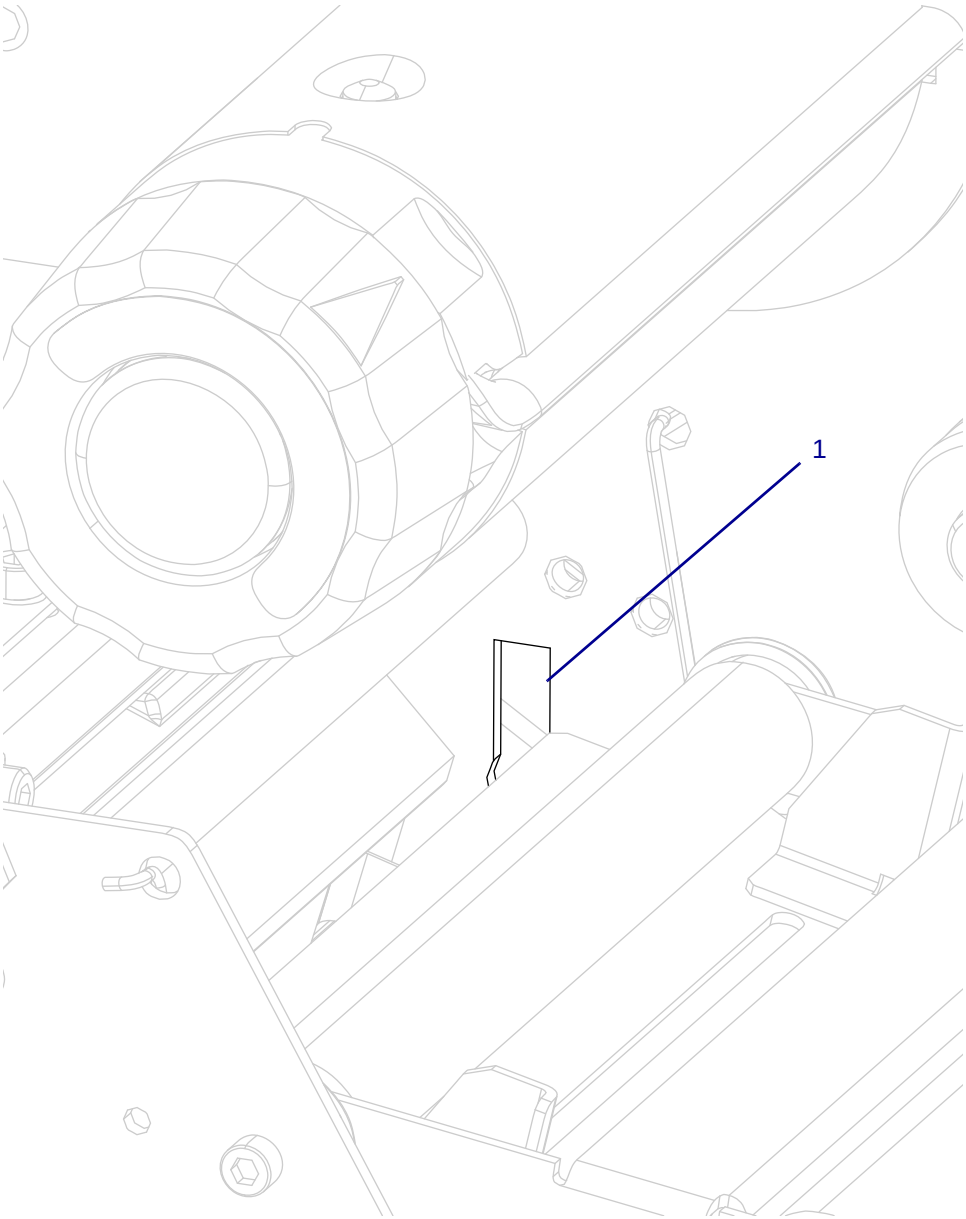
3. Remove the grommet from the access hole in the printer.

4. Gently pull on the upper and lower media sensors while guiding the cables through the access hole of the printer.

Install the New Lower Media Sensor

1. Guide the cable through the access hole.

Figure 406 • Locate the Media Sensor Access Hole



1	Media sensor access hole

2. See Figure 405 on page 547. Insert the new lower sensor board into the mounting bracket.

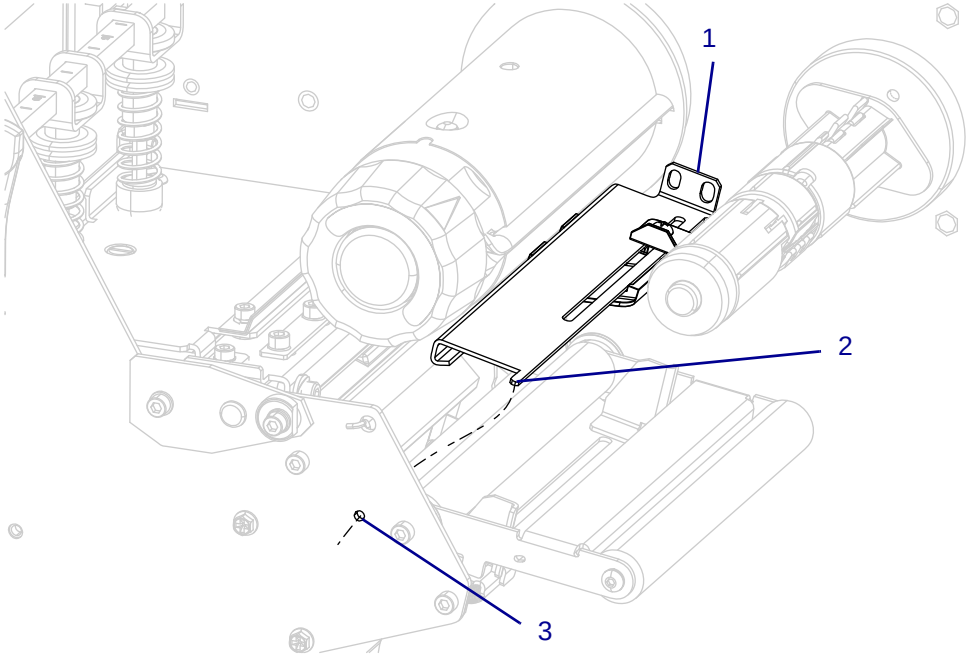
   Ensure that the sensor board is seated properly in the mounting bracket.

3. See Figure 408 on page 550. Insert the cable into the grommet.

Install the New Upper Media Sensor

1. Guide the upper media sensor cable through the media sensor access hole.
2. See Figure 407. Install the upper media sensor assembly by inserting the upper media sensor assembly tab into the upper side plate tab mounting hole from the inside of the plate.

Figure 407 • Insert the Media Sensor Tab

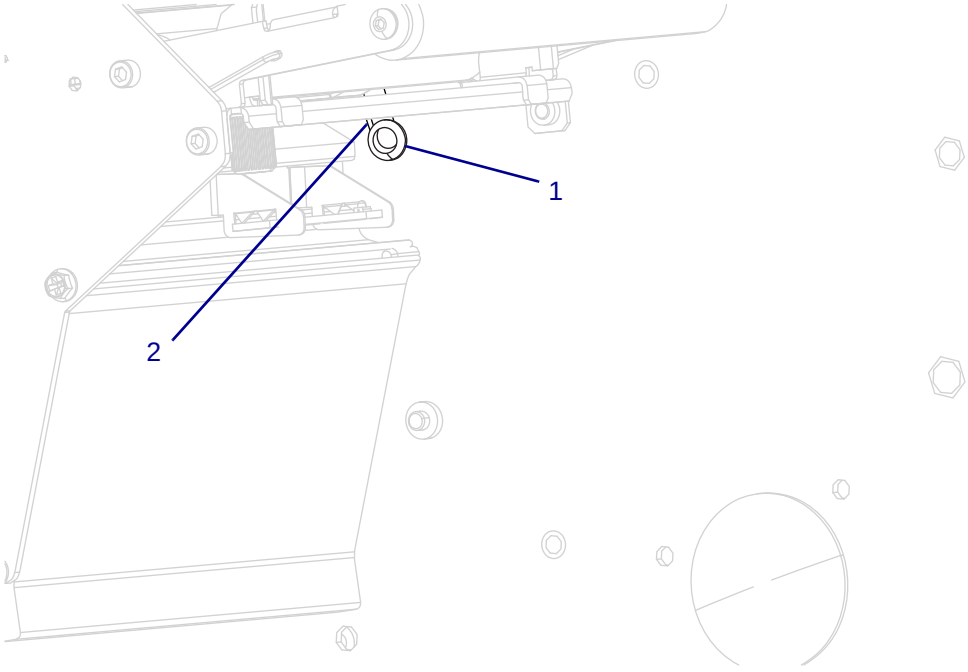


1	Upper media sensor assembly
2	Upper media sensor assembly tab
3	Upper side plate tab mounting hole

3. See Figure 403 on page 545. Slide the rest of the upper media sensor assembly into the print mechanism until the two mounting align with the holes in the printer.
4. Install the new mounting screws.

5. See Figure 408. Insert the upper and lower cables into the rubber grommet, and reinstall the grommet into the access hole from the lower media sensor side.

Figure 408 • Reinstall Grommet



1	Rubber grommet
2	Access hole

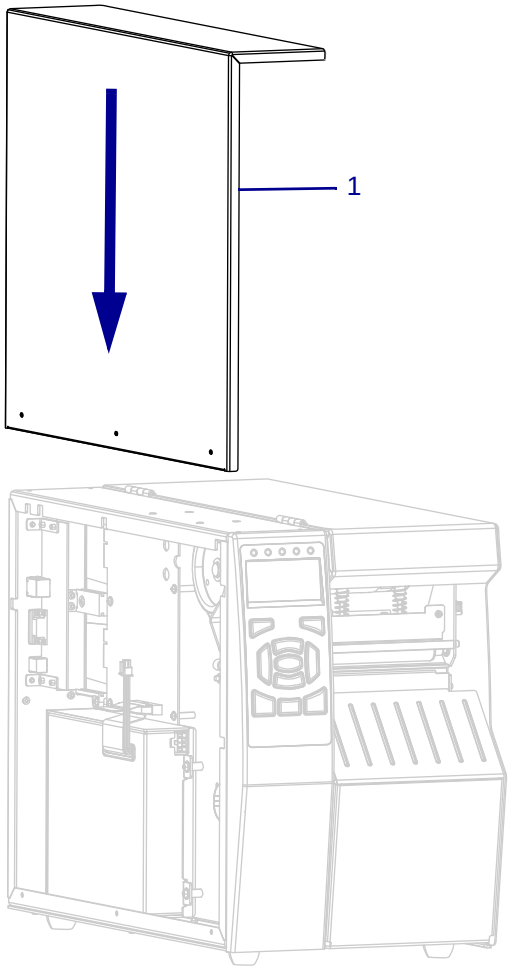
6. See Figure 401 on page 543. Route the sensor cables behind the drive motor assembly over to the MLB and connect them to J21 and J45.

7. See Figure 402 on page 544. Insert the cables into the cable clamp 1 and then reinstall the mounting nut.

Reinstall the Electronics Cover

1. See Figure 409. Slide the electronics cover onto the printer.

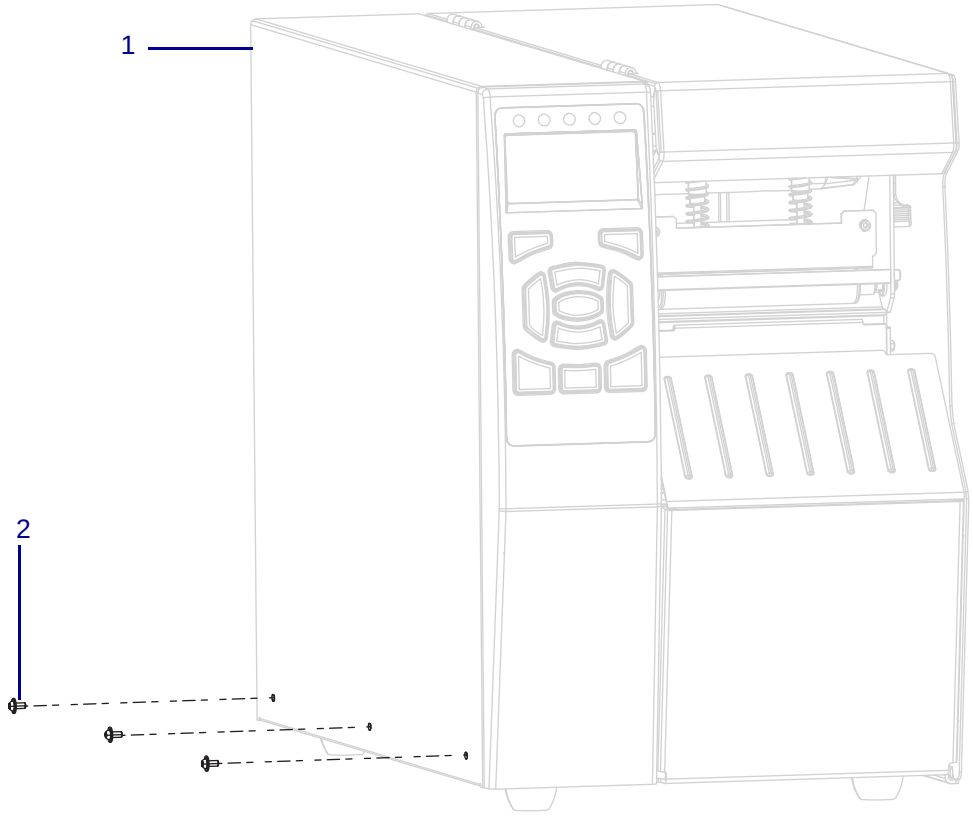
Figure 409 • Install the Electronics Cover



1	Electronics cover

2. See Figure 410. Install the three mounting screws.

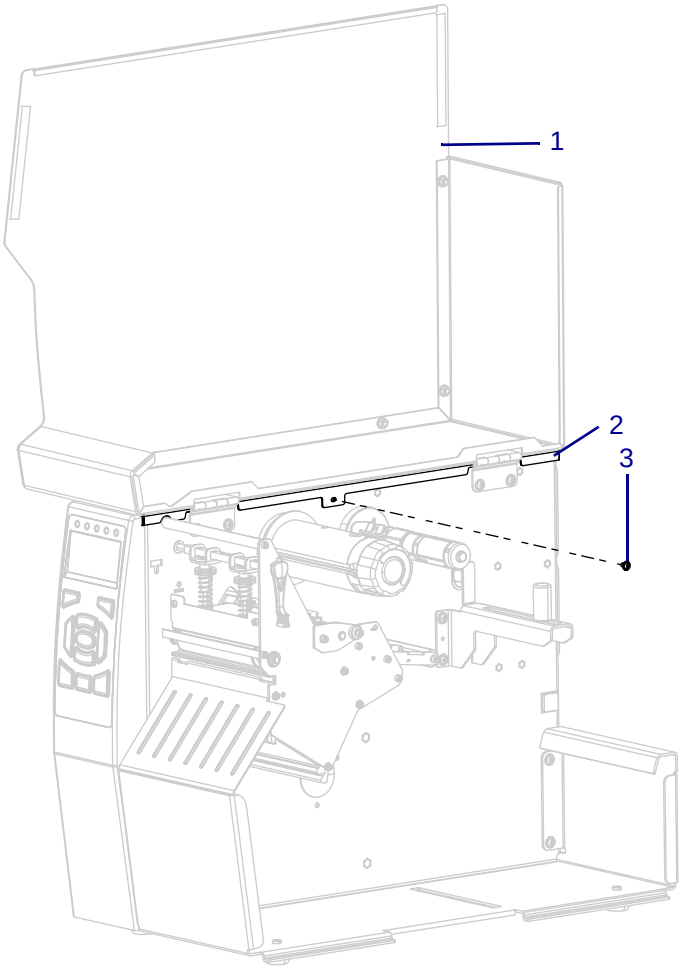
Figure 410 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 411. Open the media door and install the media side electronics cover mounting screw.

Figure 411 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reinstall the media and ribbon.
5. Reconnect the AC power cord and all data cables.
6. Turn on (**I**) the printer.

The installation is complete.

Reflective Sensor Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Reflective Sensor Maintenance Kit for the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 412 • Kit Contents

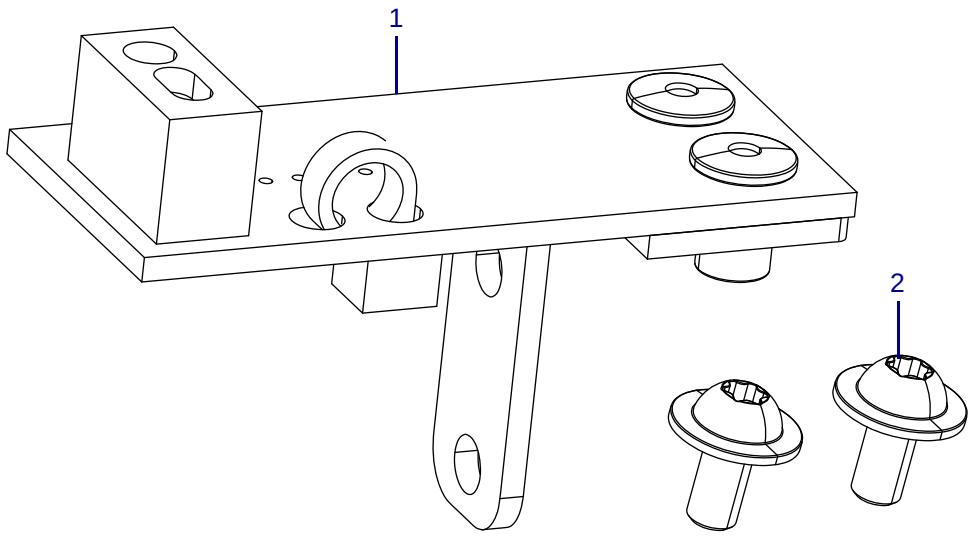


Table 59 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-031**	ZT510 Reflective Sensor Maintenance Kit
	1	1	*N/A*	Reflective Sensor Assembly
	2	2	*N/A*	Torx-Head Screw, M3 × 6, part of miscellaneous hardware kit, **P1083347-026**

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

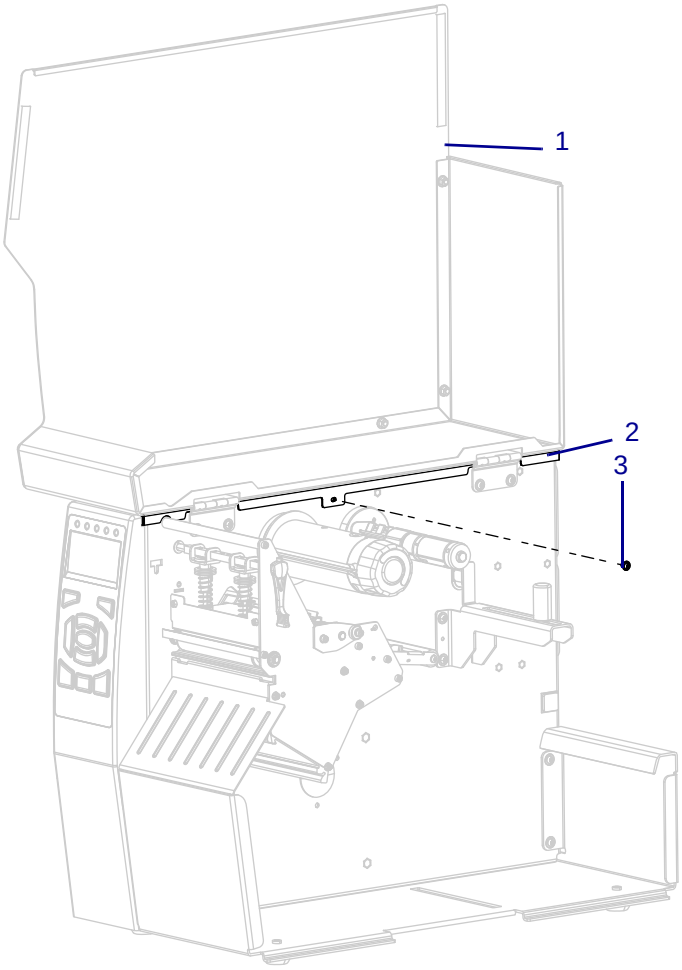
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 413 • Locate the Electronics Cover Mounting Screw

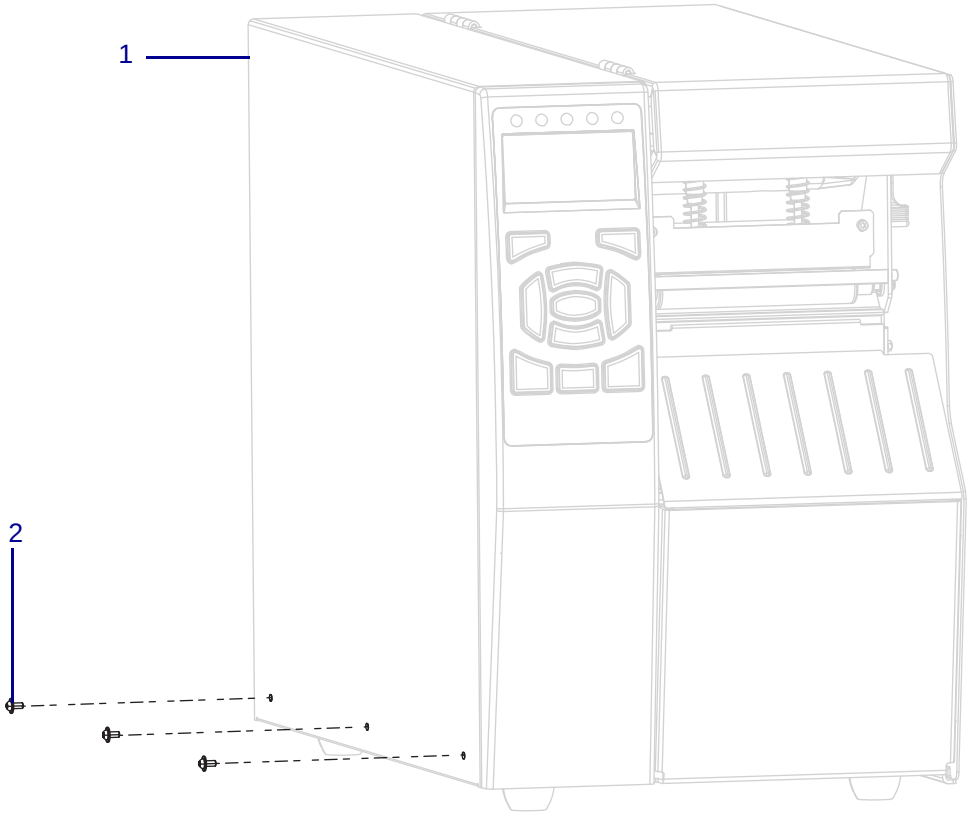


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 414. Remove the three mounting screws securing the electronics cover to the printer.

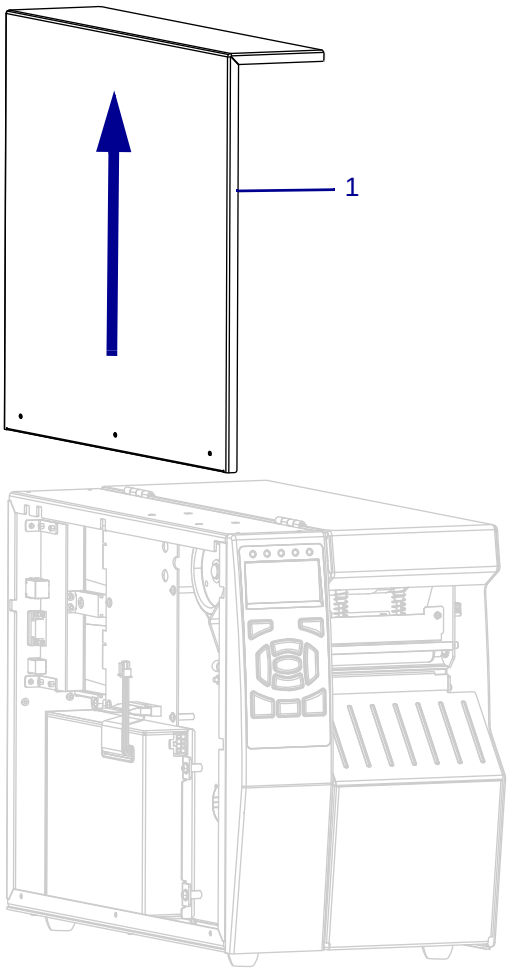
Figure 414 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 415. Lift the electronics cover off of the printer.

Figure 415 • Remove the Electronics Cover



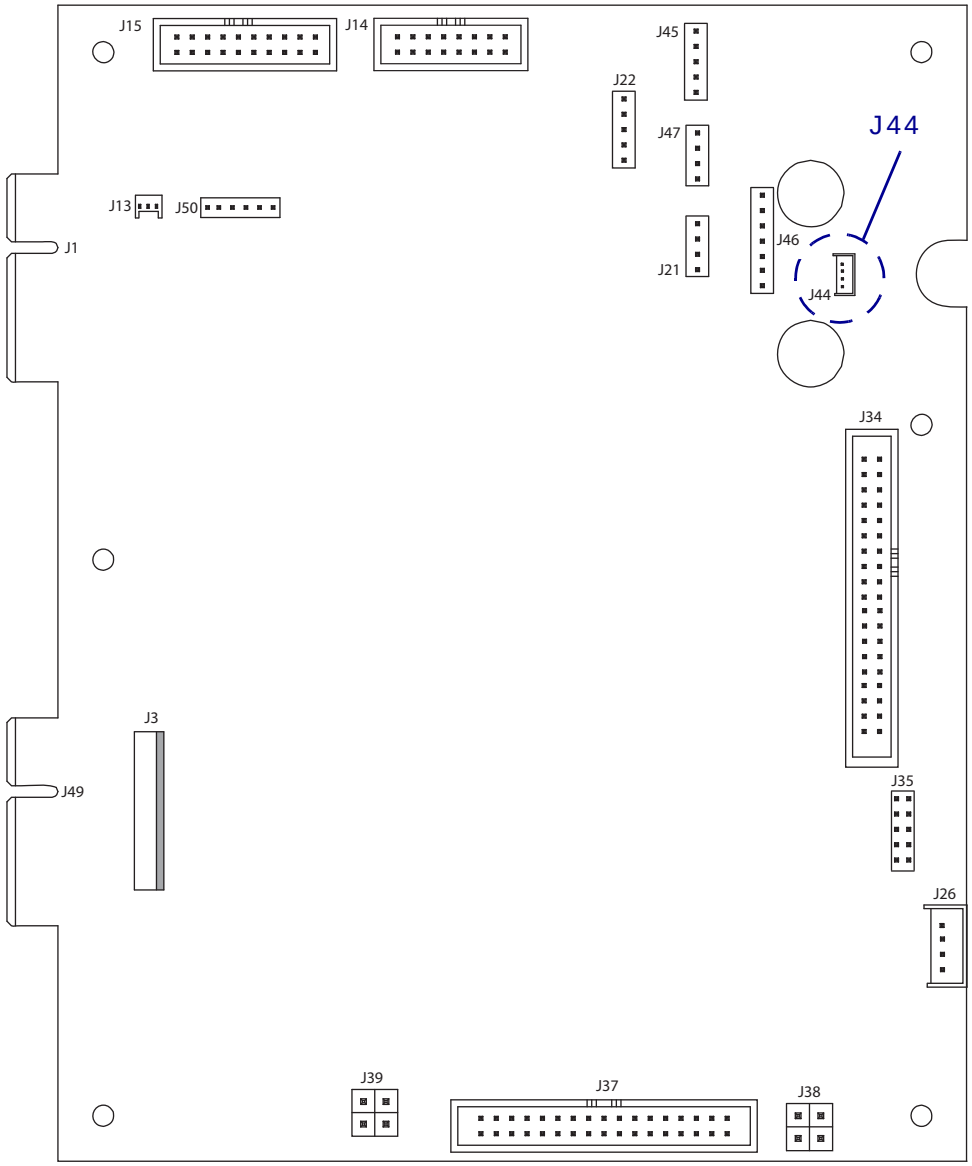
1	Electronics cover

7. Open the media door and remove the media and ribbon.

Remove the Old Reflective Sensor

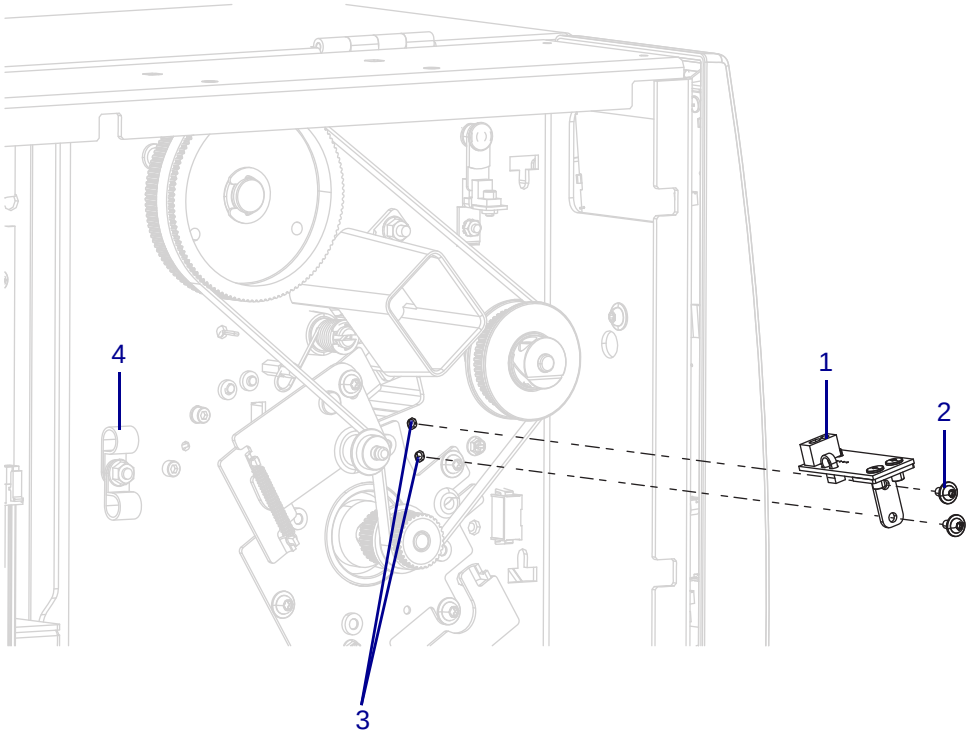
1. Disconnect the reflective (black mark) sensor cable from J44 on the MLB.

Figure 416 • MLB Connections



2. See Figure 417. Remove the reflective sensor cable from the cable clamp by removing the mounting nut, and then opening the cable clamp.

Figure 417 • Remove the Reflective Sensor



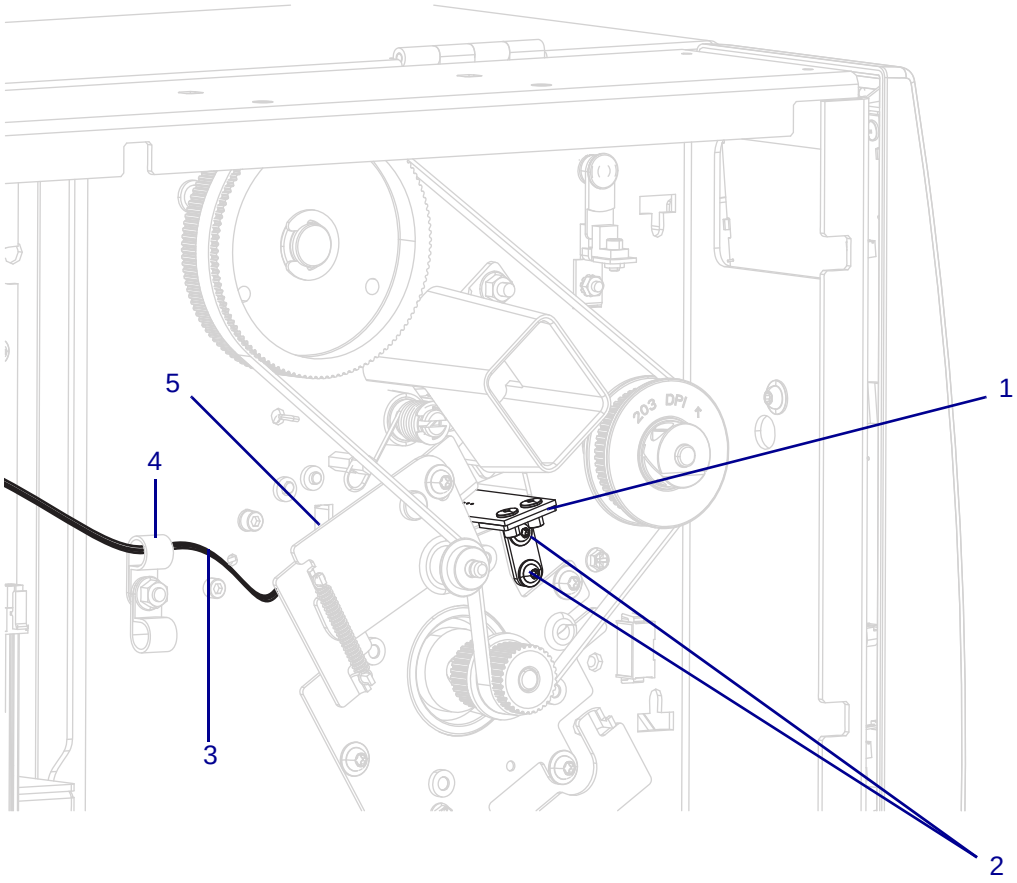
1	Reflective (black mark) sensor
2	Mounting screws (2)
3	Mounting holes (2)
4	Cable clamp

3. Remove the two screws securing the reflective sensor to the printer.
4. Remove and discard the reflective sensor and cable.

Install the New Reflective Sensor

1. Install the reflective sensor assembly through the access hole.

Figure 418 • Reflective Sensor Location and Cable Routing



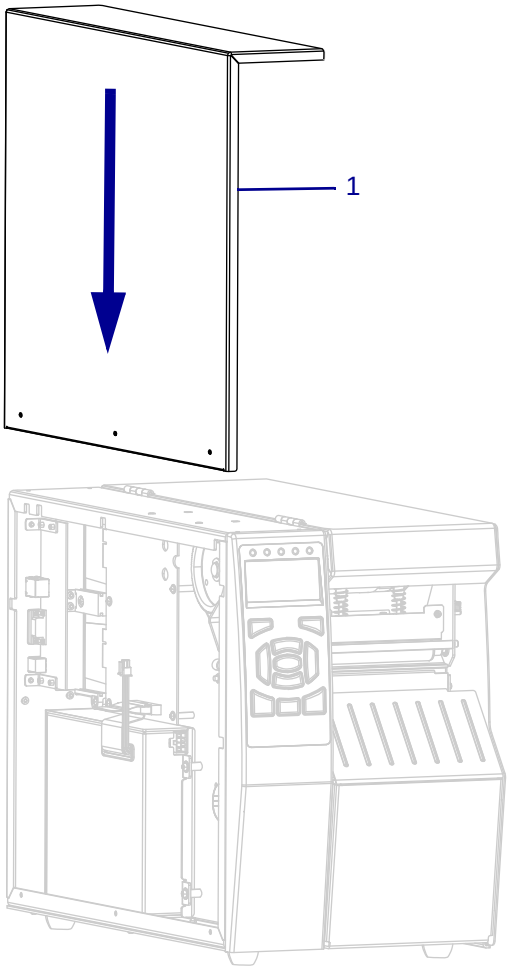
1	Reflective (black mark) sensor
2	Mounting screws (2)
3	Reflective sensor cable
4	Cable clamp
5	Drive motor bracket

2. Align the mounting hole in the reflective sensor assembly and the printer.
3. Install the two new mounting screws.
4. Route the reflective sensor cable behind the drive motor bracket.
5. Insert the reflective cable into the cable clamp.
6. See Figure 416 on page 559. Connect the reflective sensor cable to J44 on the main logic board.

Reinstall the Electronics Cover

1. See Figure 419. Slide the electronics cover onto the printer.

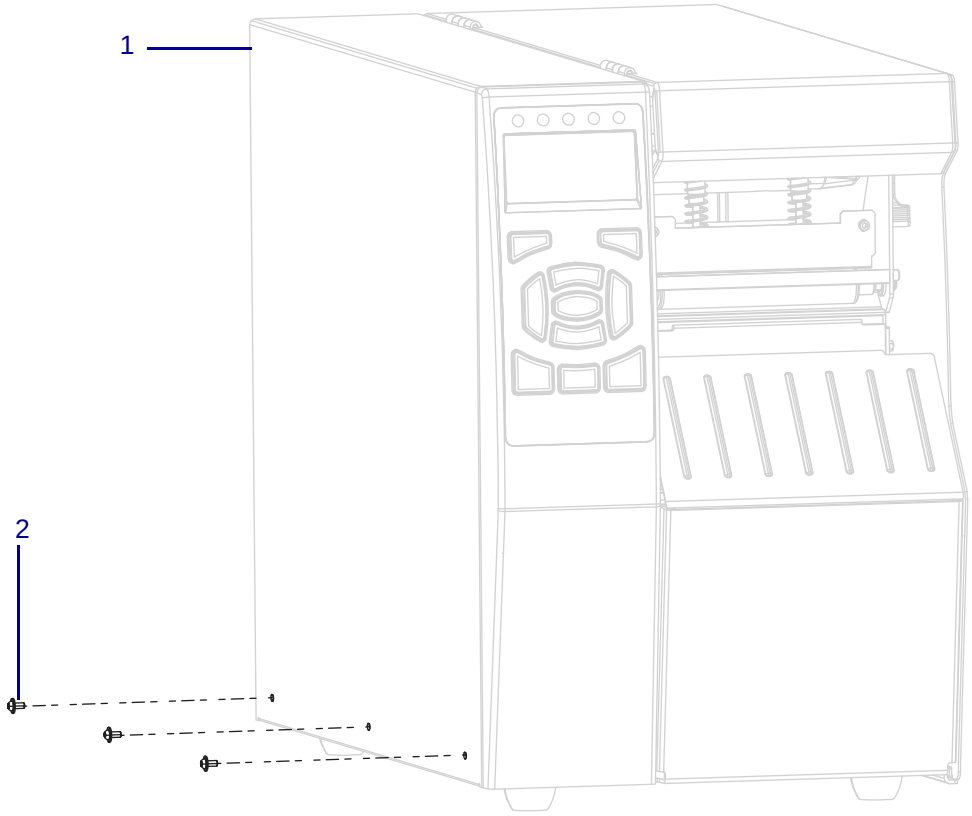
Figure 419 • Install the Electronics Cover



1	Electronics cover

2. See Figure 420. Install the three mounting screws.

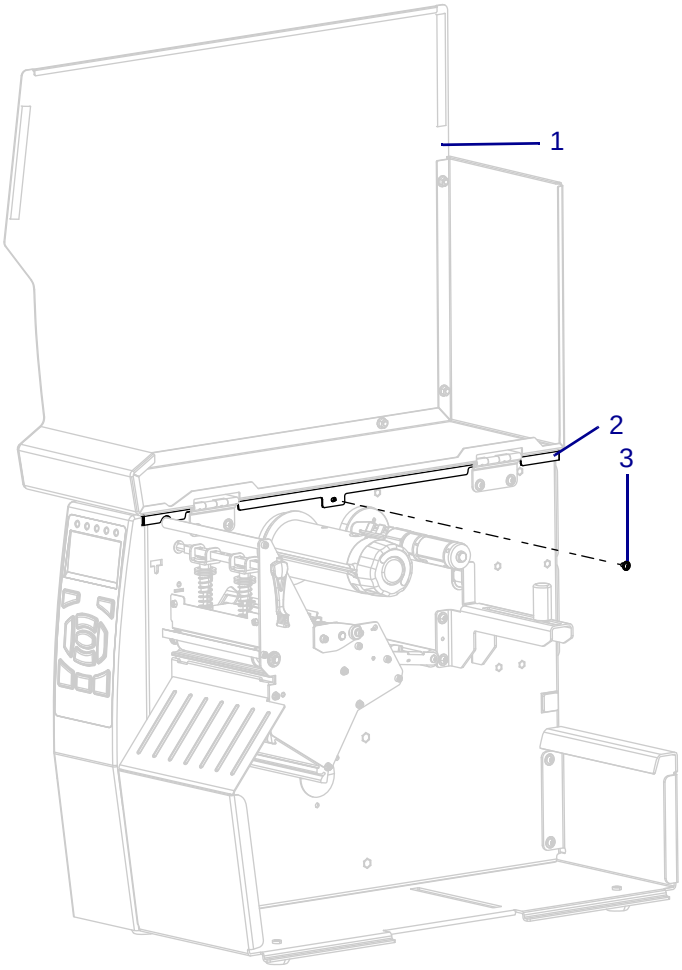
Figure 420 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 421. Open the media door and install the media side electronics cover mounting screw.

Figure 421 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

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

   Reinstall the media and ribbon.

5. Reconnect the AC power cord and all data cables.

6. Turn on (**I**) the printer.

The installation is complete.

Head Open Sensor Assembly Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Head Open Sensor Assembly Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before attempting to install this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 422 • Kit Contents

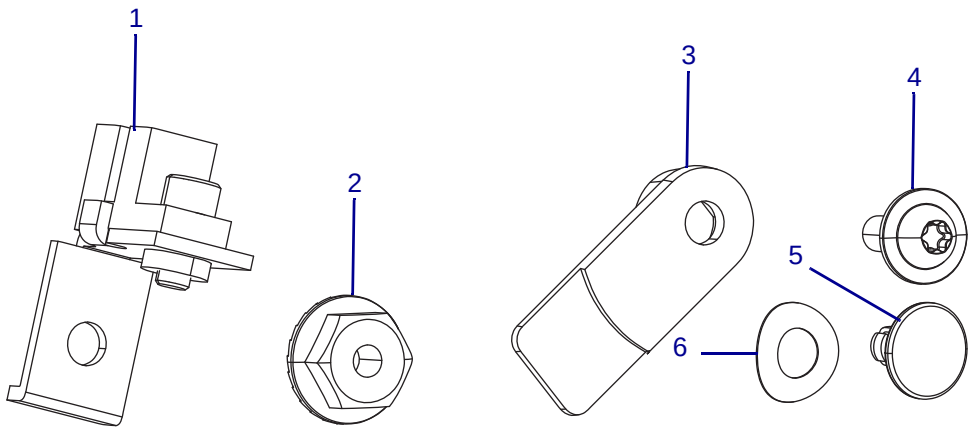


Table 60 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-053**	Head-Open Sensor Assembly Maintenance Kit
	1	1	*N/A*	Head-Open Sensor Assembly
	2	1	**HW33809**	Nut, 6-32, (sold in quantities of 25)
	3	1	*N/A*	Head-Open Flag
	4	1	*N/A*	Torx-Head Screw, M3 × 8, included in Miscellaneous Hardware Kit, **P1083320-096**
	5	1	*N/A*	Trimount Clip
	6	1	**HW40194**	Curved Washer, 0.344 × 0.172 × 0.006 (sold in quantities of 25)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Antistatic Wriststrap and Pad
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

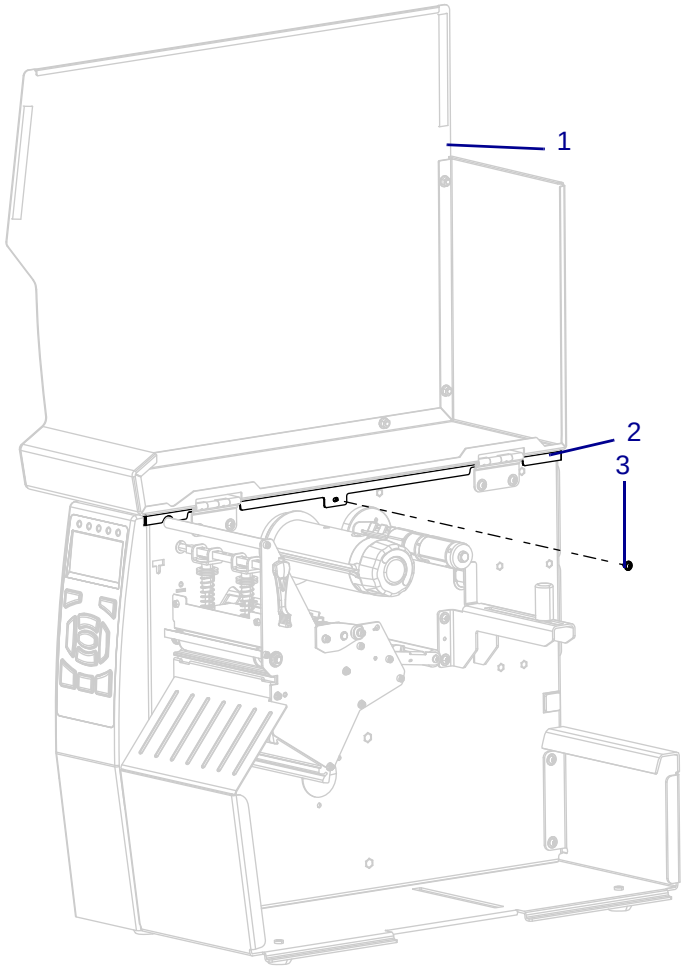
   Turn off (**O**) the printer, and then disconnect the AC power cord and all data cables.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 423 • Locate the Electronics Cover Mounting Screw

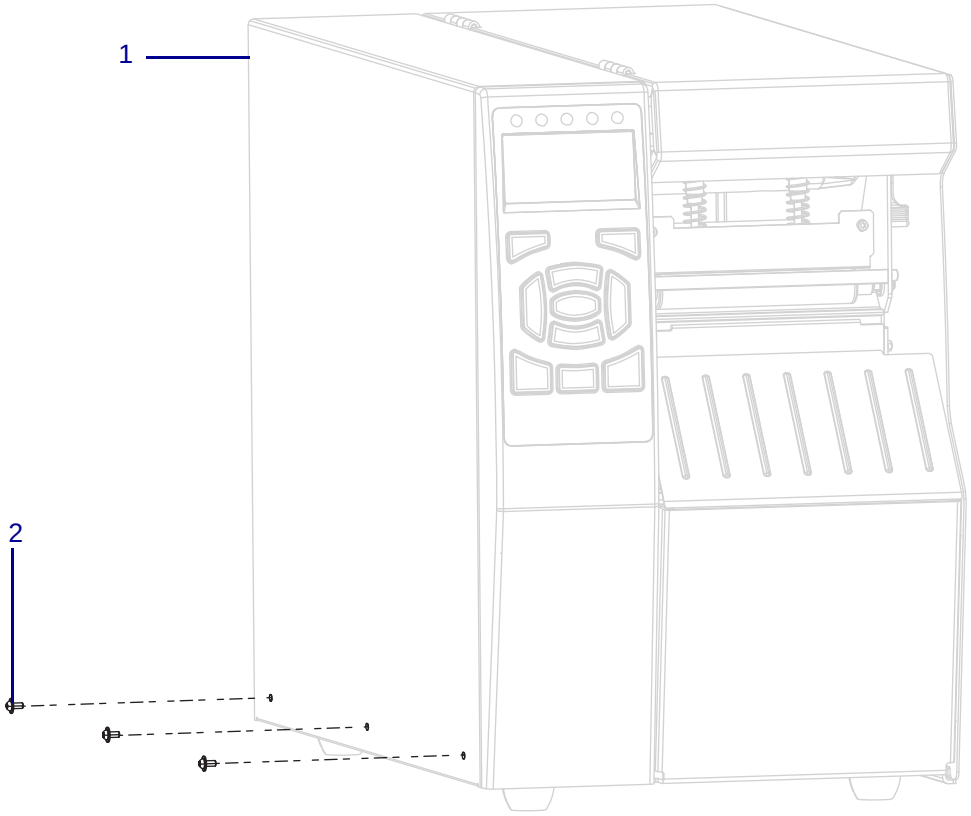


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 424. Remove the three mounting screws securing the electronics cover to the printer.

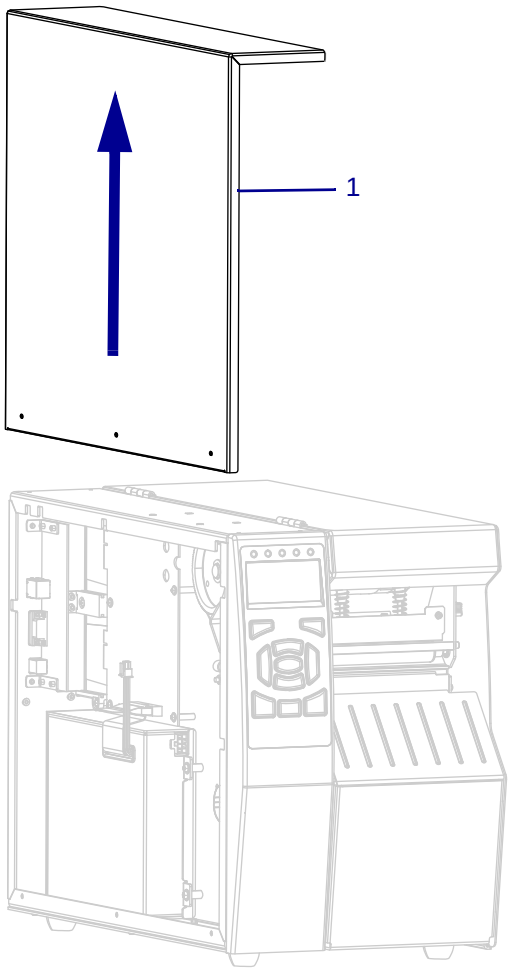
Figure 424 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 425. Lift the electronics cover off of the printer.

Figure 425 • Remove the Electronics Cover



1	Electronics cover

7. Continue with *Remove the Old Head Open Sensor*.

Remove the Old Head Open Sensor

Caution • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

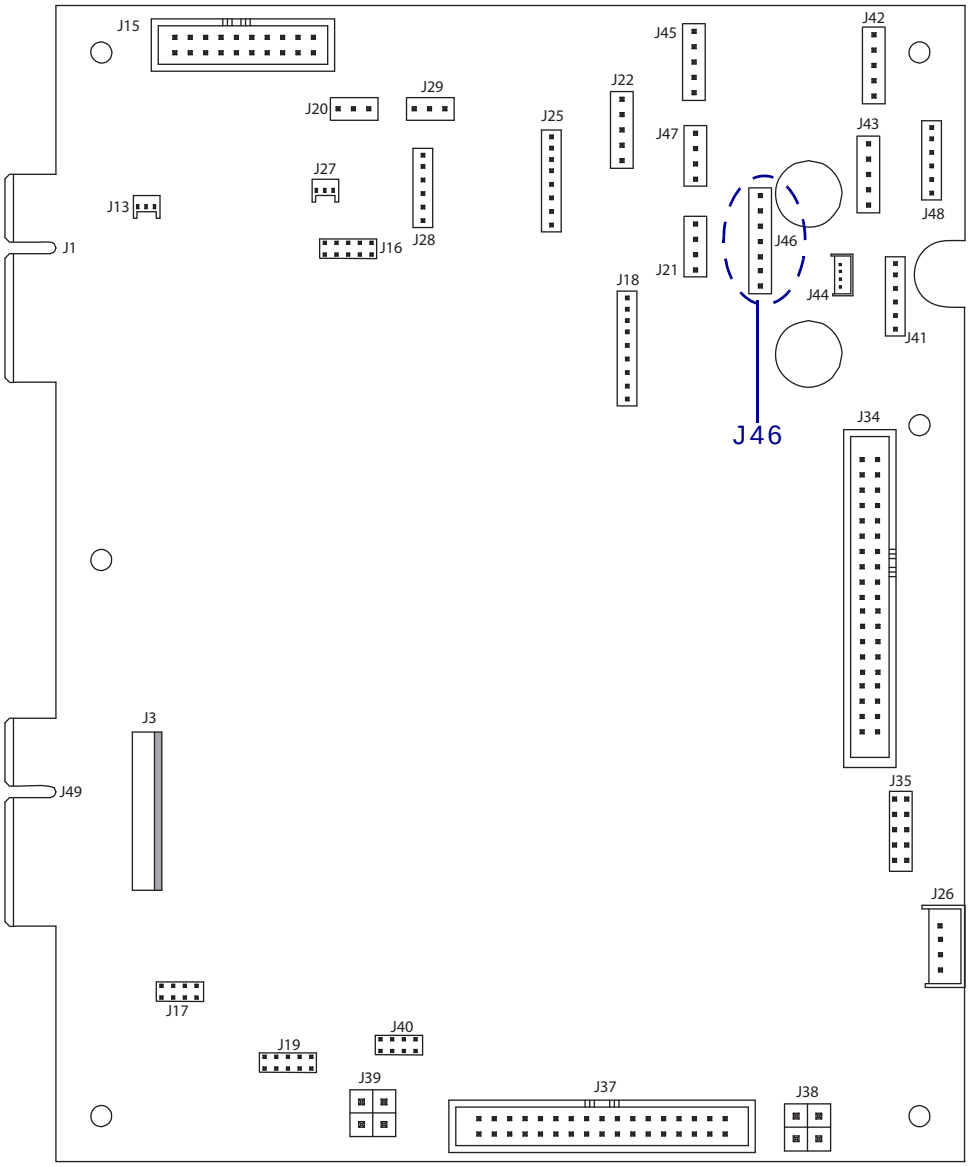
1. **Caution** • Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

   Connect yourself to an antistatic device.

2. Open the upper print mechanism.

3. See Figure 426. Disconnect the head open sensor from J46 on the main logic board (MLB).

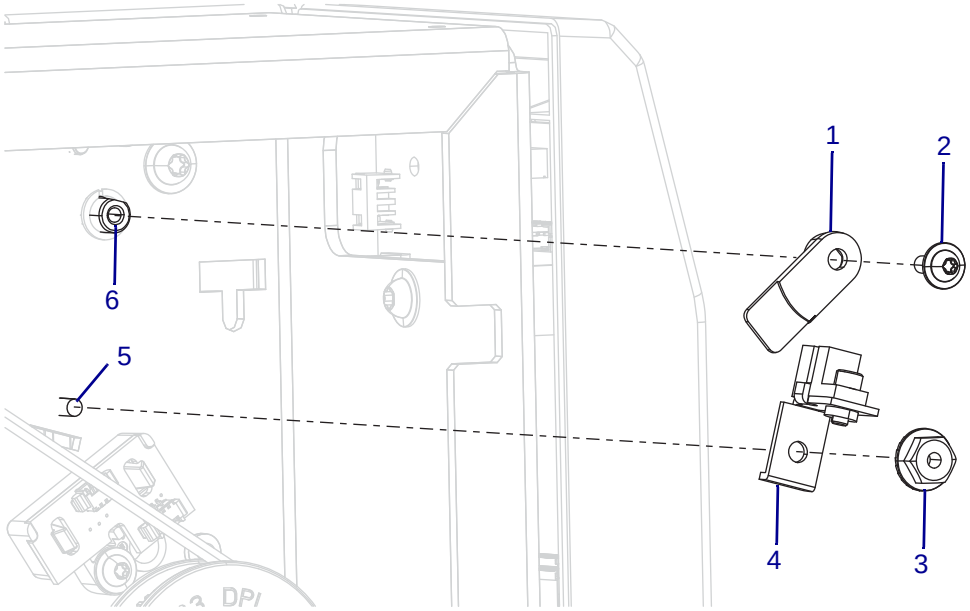
Figure 426 • Disconnect the Head Open Sensor from the MLB



4. Remove the head open sensor cable from all cable clamps.

5. See Figure 427. Remove the screw securing the head open flag to the printer.

Figure 427 • Remove the Mounting Screws (ZT610 shown)



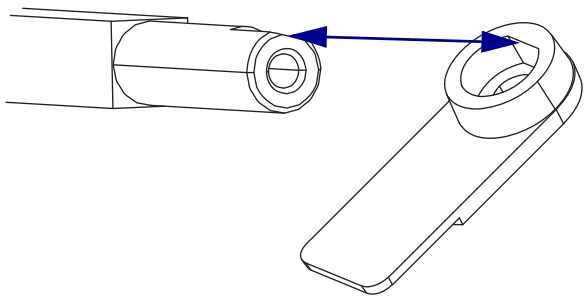
1	Head open flag
2	Flag mounting screw
3	Head open sensor assembly nut
4	Head open sensor assembly
5	Head open sensor assembly mounting stud
6	Head open flag mounting shaft

6. Remove the mounting nut securing the head open sensor, and then remove it.

Install the New Head Open Sensor Assembly

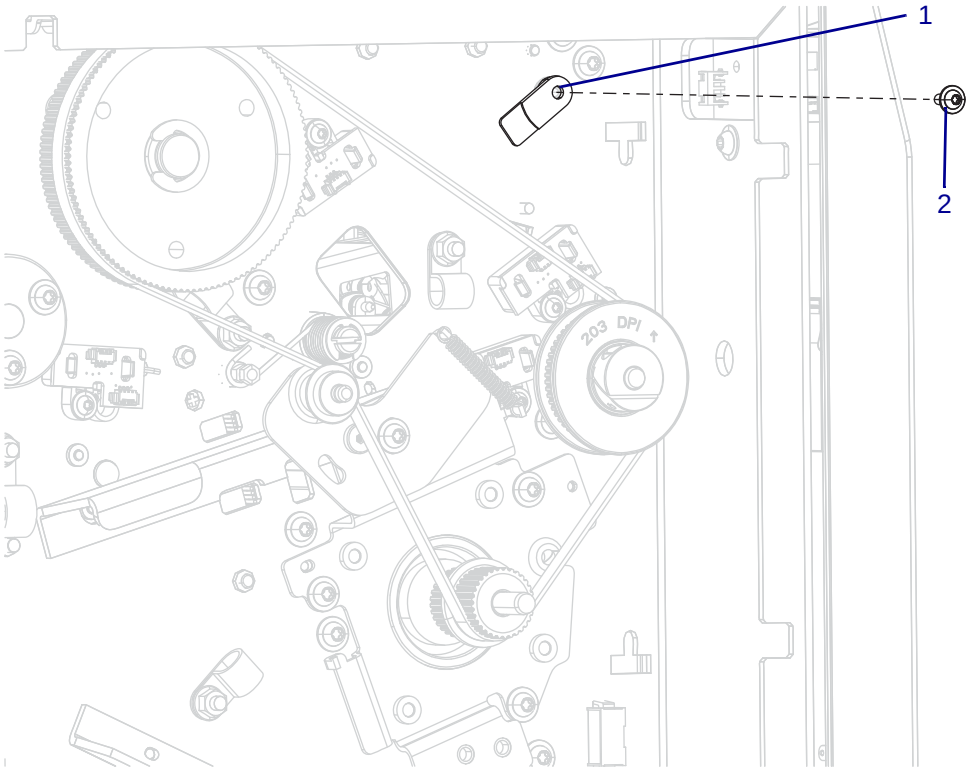
1. See Figure 428. Align the flat in the flag with the flat on the shaft, and then slide the flag onto the shaft.

Figure 428 • Align the Flats



2. See Figure 429. Install the mounting screw.

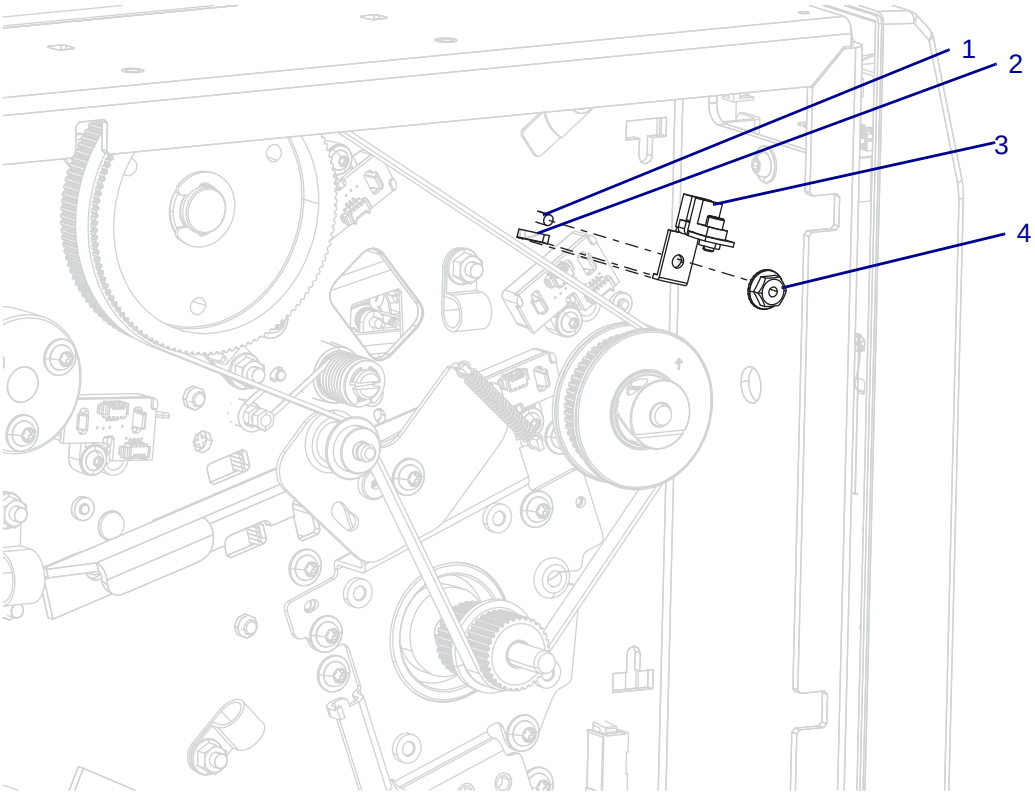
Figure 429 • Install the Mounting Screw (ZT610 shown)



1	Head open flag
2	Flag mounting screw

3. See Figure 430. Slide the head open sensor assembly onto the mounting stud and into the mounting slot.
4. Install the mounting nut.

Figure 430 • Install the Head Open Sensor Assembly (ZT610 shown)



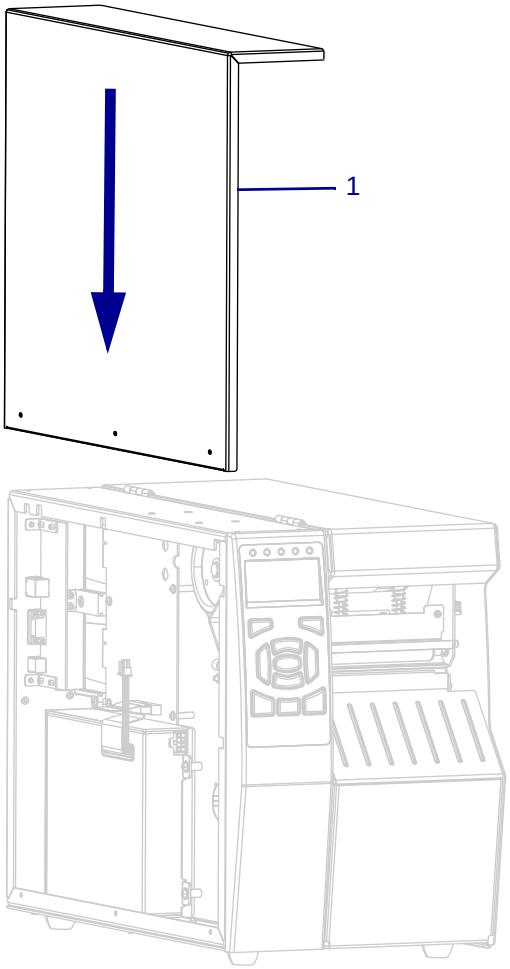
1	Head open sensor assembly mounting stud
2	Head open sensor assembly positioning slot
3	Head open sensor assembly
4	Head open sensor assembly mounting nut

5. Run the head open sensor cable through the same cable clamps as the old cable.
6. See Figure 426 on page 570. Connect the head open sensor cable to J46 on the MLB.

Reinstall the Electronics Cover

1. See Figure 13. Slide the electronics cover onto the printer.

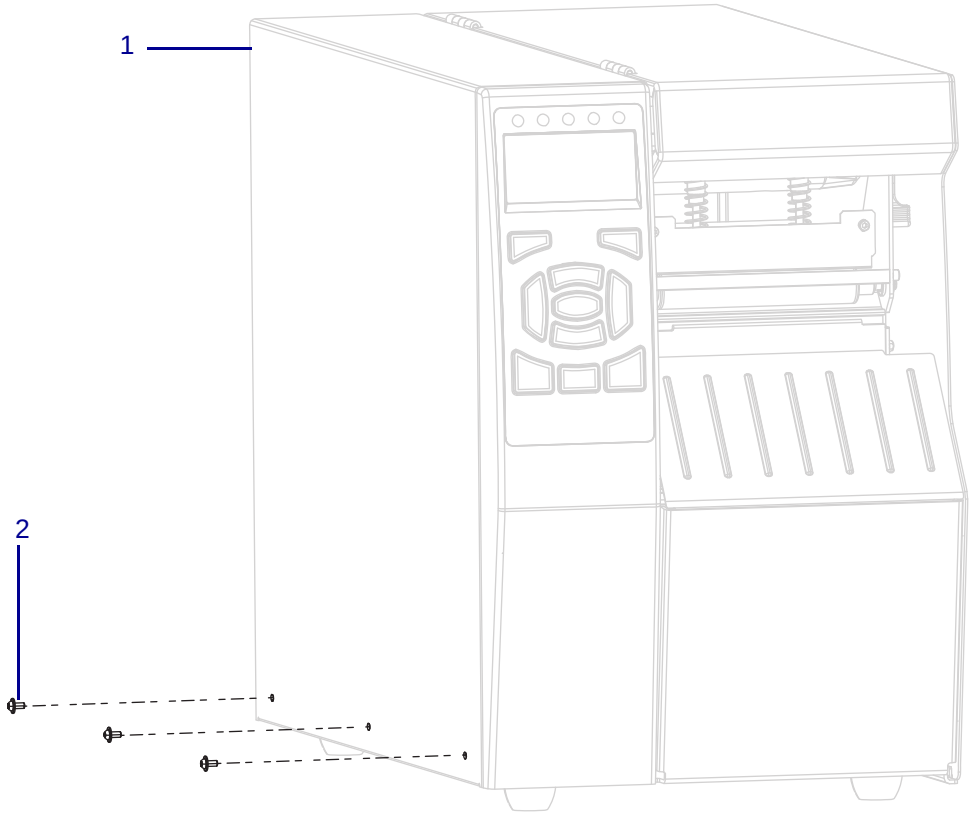
Figure 431 • Install the Electronics Cover



1	Electronics cover

2. See Figure 14. Install the three mounting screws.

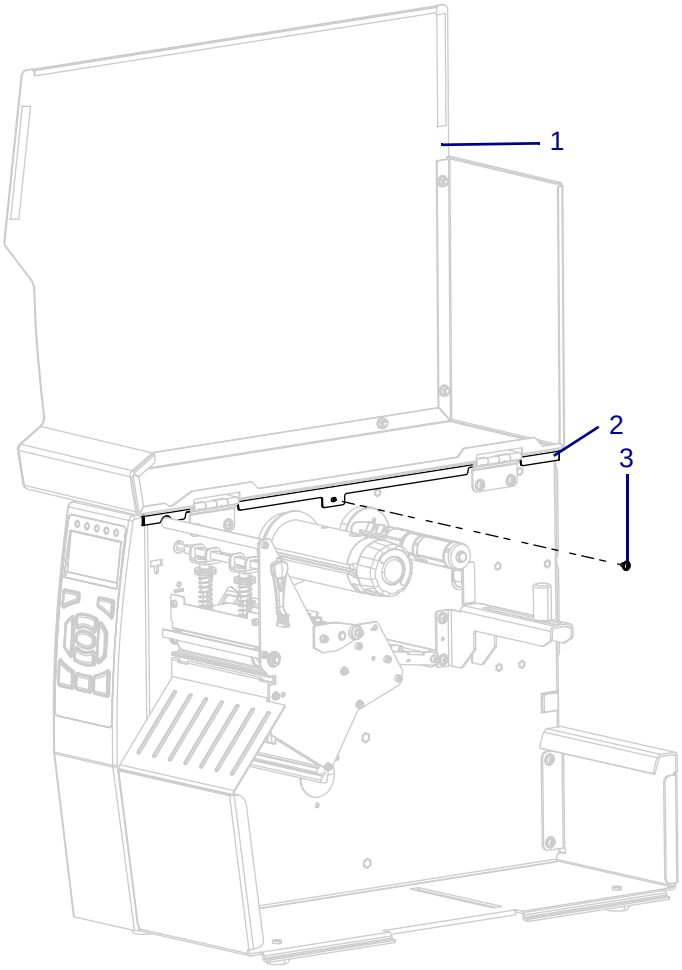
Figure 432 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 15. Open the media door and install the media side electronics cover mounting screw.

Figure 433 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

Complete the Installation

1. Reconnect the AC power cord and all data cables.
2. Turn on (**I**) printer.

The installation is complete.

Take-Label Sensors Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Take-Label Sensors Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains one or the other of the kits for your printer listed below.

Figure 434 • Kit Contents

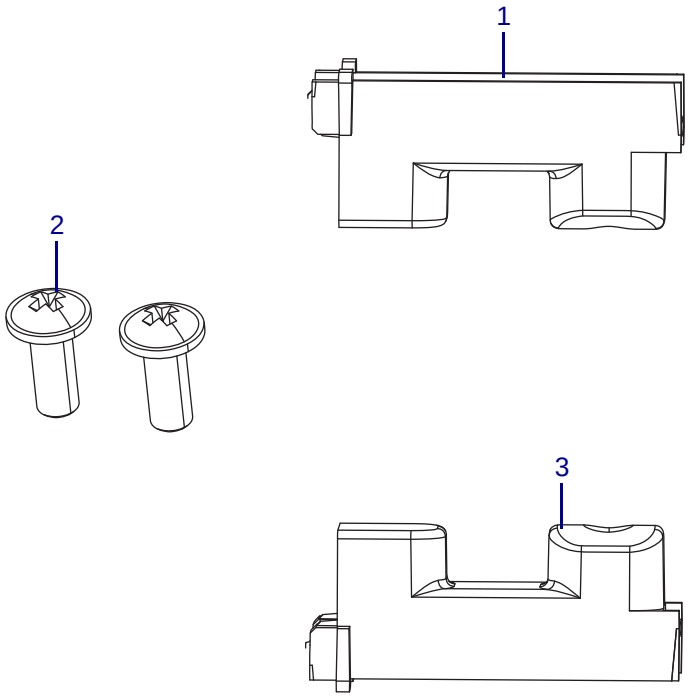


Table 61 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-052**	Take-Label Sensors Maintenance Kit
	1	1	*N/A*	Upper Take-Label Sensor (short cable assembly)
	2	2	**HW45937**	Screw, M4 × 10 (sold in quantities of 10)
	3	1	*N/A*	Lower Take-Label Sensor (long cable assembly)

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat

Remove the Electronics Cover

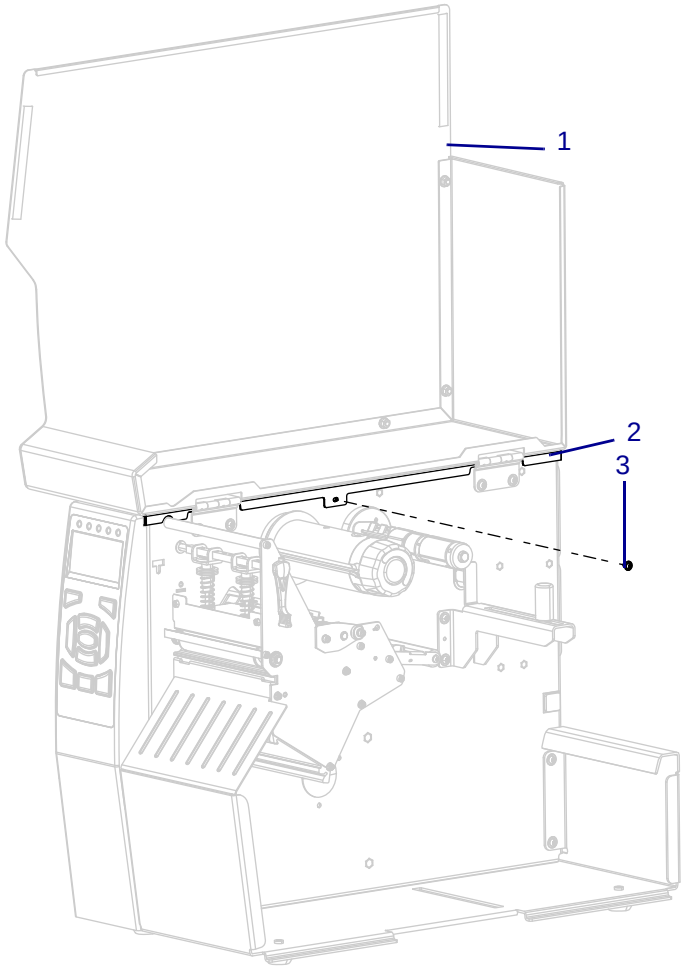
Note • Retain all parts removed during disassembly, unless otherwise directed.

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

   Connect yourself to an antistatic device.

2. See Figure 435. Open the media door and remove the screw securing the electronics cover.

Figure 435 • Locate the Electronics Cover Mounting Screw

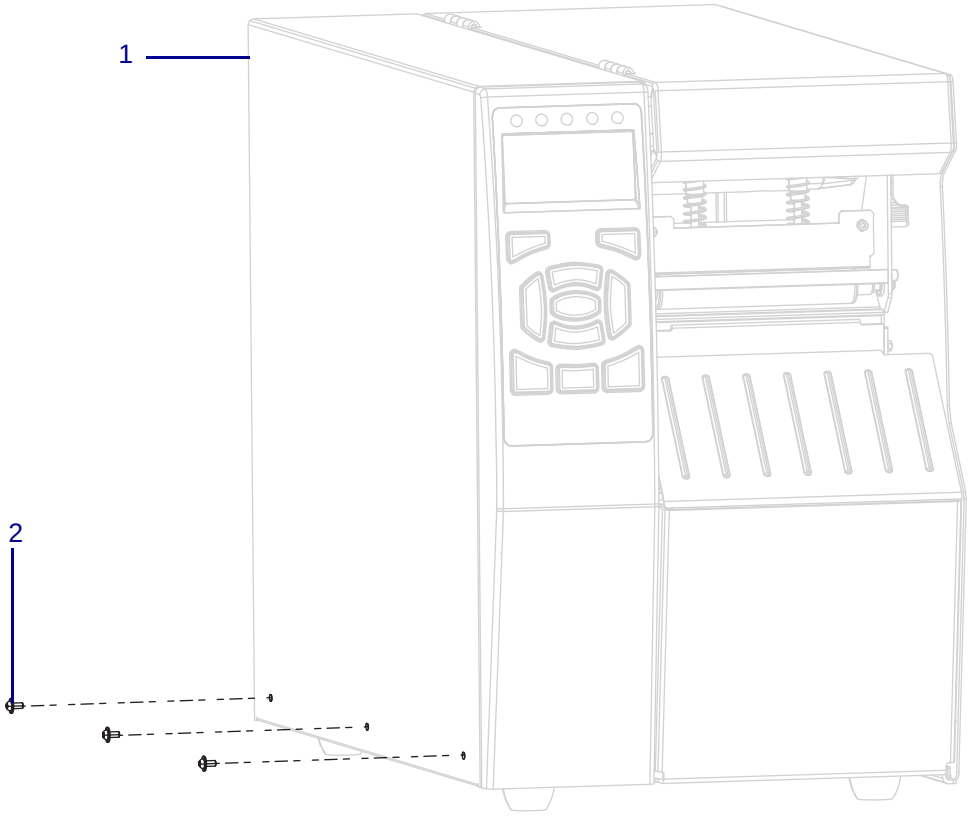


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

3. Close the media door.

4. See Figure 436. Remove the three mounting screws securing the electronics cover to the printer.

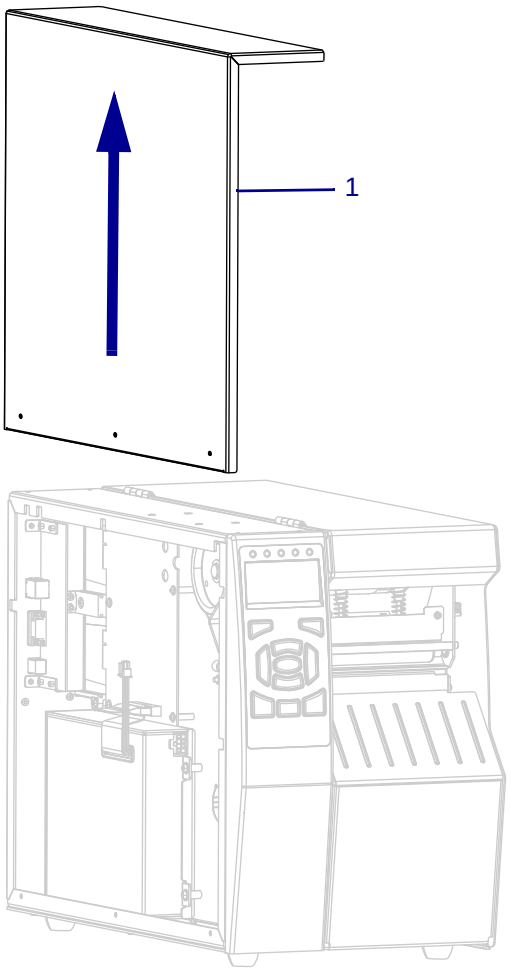
Figure 436 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

5. See Figure 437. Lift the electronics cover off of the printer.

Figure 437 • Remove the Electronics Cover

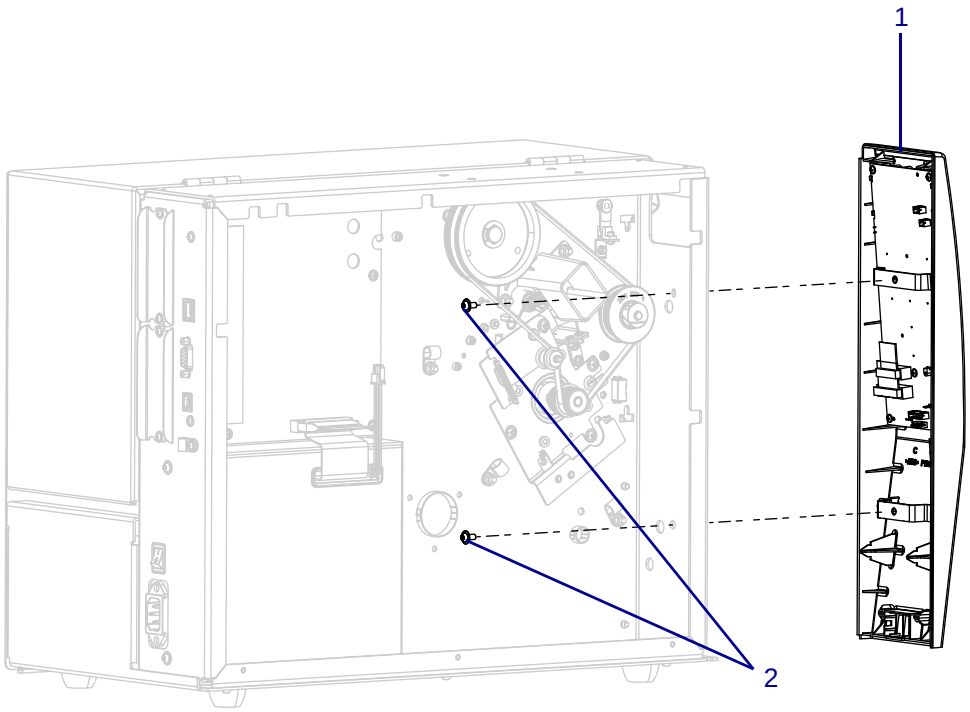


1	Electronics cover

Remove the Old Take-Label Sensors

1. See Figure 438. Remove the two control panel mounting screws.

Figure 438 • Remove the Control Panel

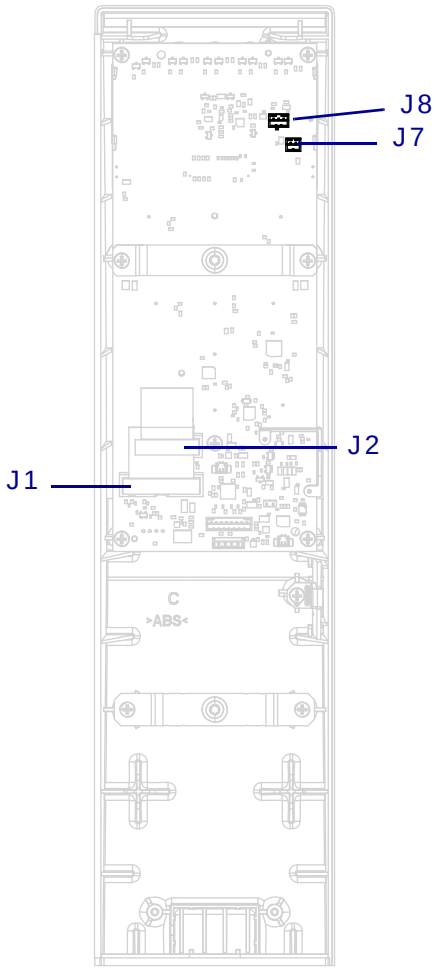


1	Control panel
2	Control panel mounting screws (2)

2. Pull the control panel out of the printer while guiding the cables through the main frame access hole.

3. See Figure 439. Slide the control panel out of the printer, enough to access J7 and J8.
4. Disconnect the take-label sensors from J7 and J8 on the control board.

Figure 439 • Control Panel Connectors

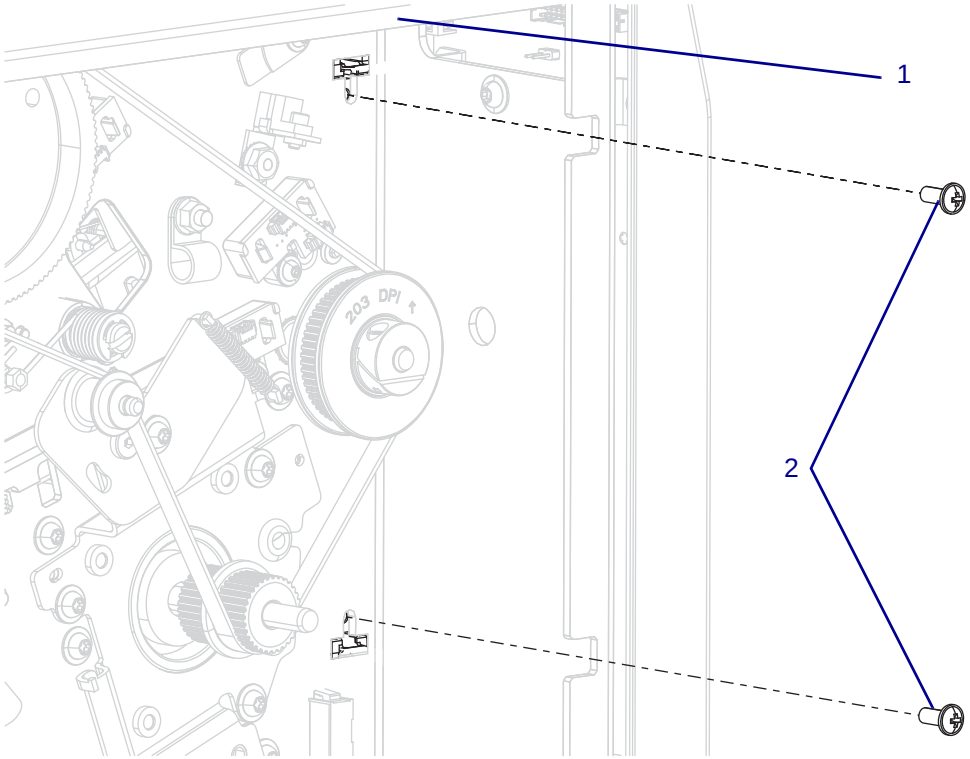


J1	To J15 on the main logic board
J2	To J14 on the main logic board
J7	To take-label sensor 3 pin connector
J8	To take-label sensor 5 pin connector

Remove the Take-Label Sensors from the Main Frame

1. See Figure 440. Remove the two screws securing the take-label sensors to the main frame.

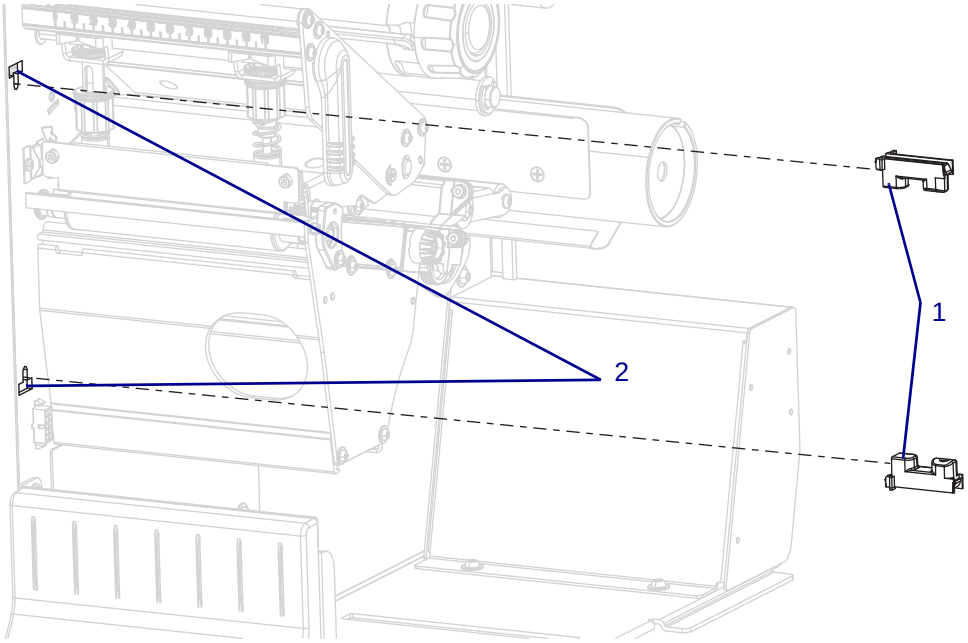
Figure 440 • Remove the Take-Label Sensor Mounting Screws (ZT610 shown)



1	Main frame
2	Mounting screws (2)

2. See Figure 441. Remove the two take-label sensors from the printer.

Figure 441 • Remove the Take-Label Sensors



1	Take-label sensor (2)
2	Mounting holes (2)

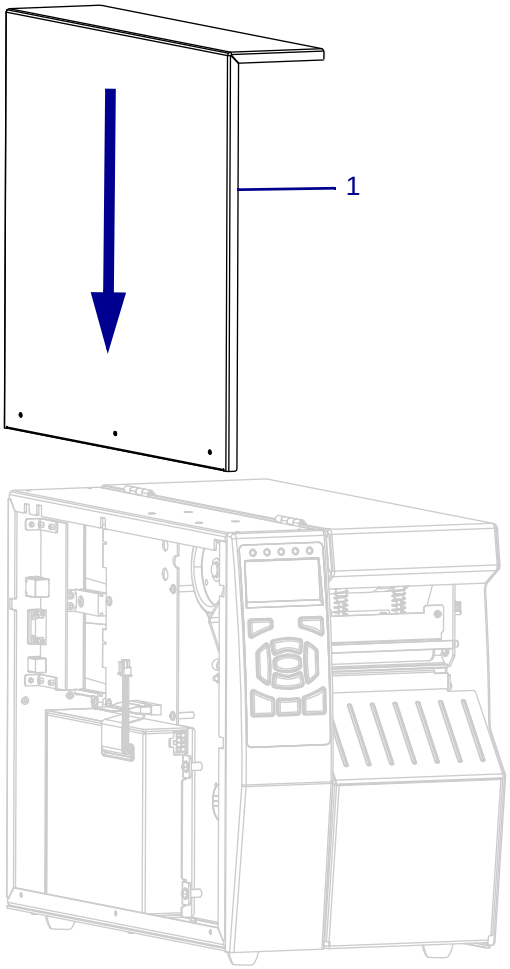
Install the New Take-Label Sensors

1. See Figure 441. Slide the new upper take-label sensor, 3-pin connector, into the mounting hole as shown.
2. See Figure 440 on page 584. Install a new mounting screw.
3. See Figure 441. Slide the lower new take-label sensor, 4-pin connector into the mounting hole as shown.
4. See Figure 440 on page 584. Install a new mounting screw.
5. See Figure 439 on page 583. Connect the take-label sensors to J7 and J8 on the control panel.
6. Install the control panel.
7. See Figure 438 on page 582. Align the control panel with the two mounting holes.
8. Reinstall the two control panel mounting screws.

Reinstall the Electronics Cover

1. See Figure 442. Slide the electronics cover onto the printer.

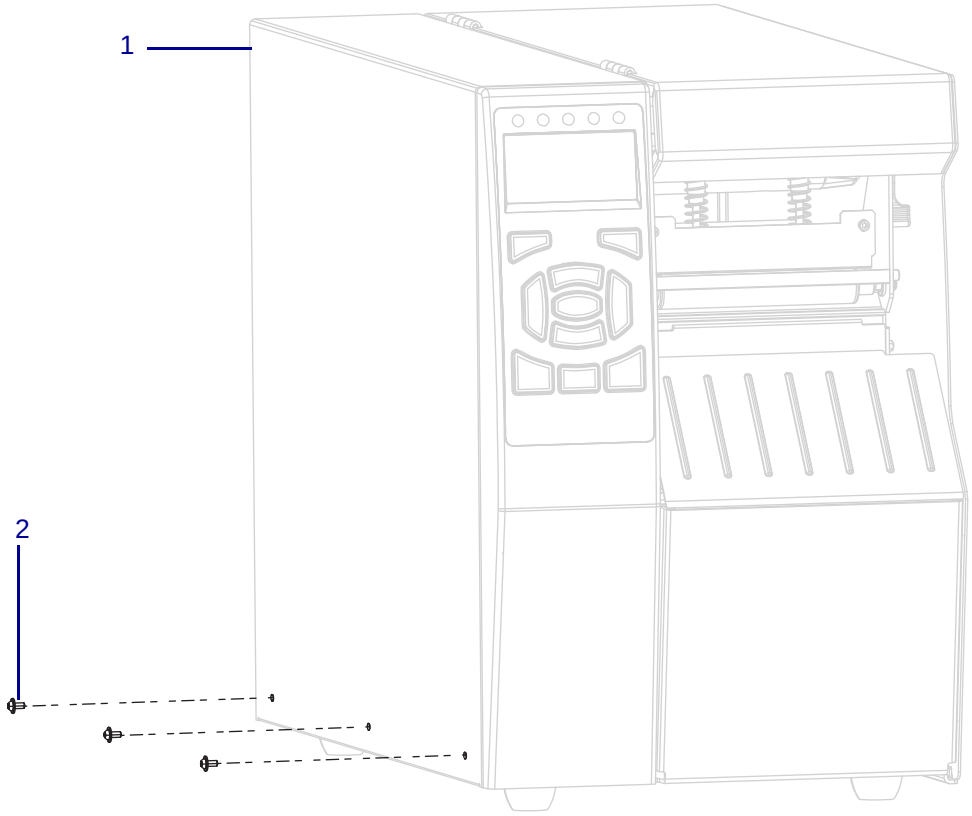
Figure 442 • Install the Electronics Cover



1	Electronics cover

2. See Figure 443. Install the three mounting screws.

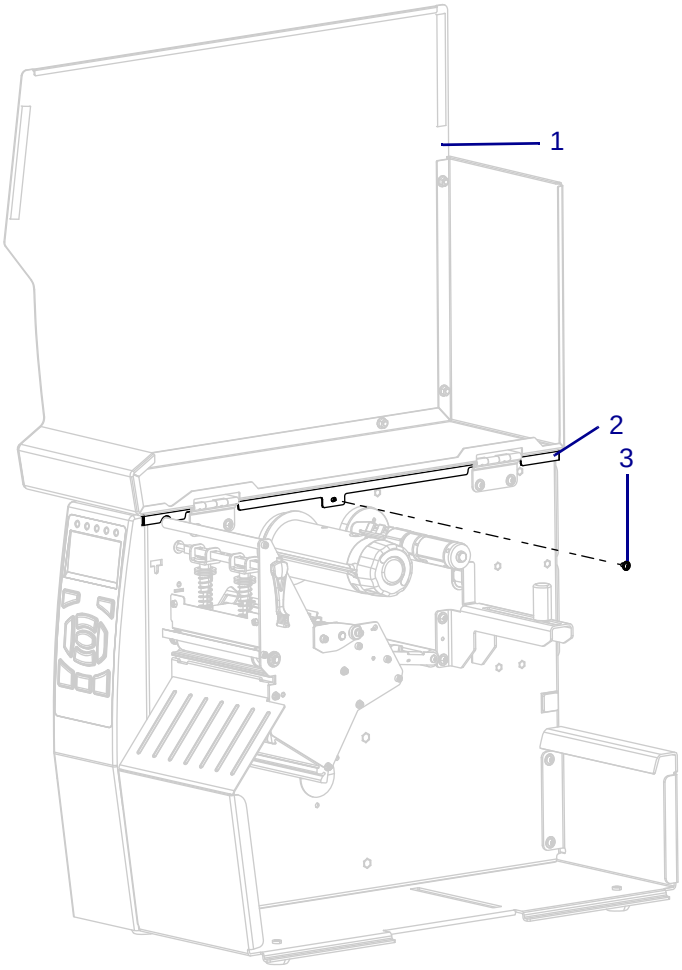
Figure 443 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 444. Open the media door and install the media side electronics cover mounting screw.

Figure 444 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Reconnect the AC power cord and all data cables.
5. Turn on (**I**) the printer.

The installation is complete.

Outer Casing Components

This section supplies you with the parts information and installation procedures for the exterior parts.

Contents

Exterior Parts and Drawings 590
Electronics Cover Maintenance Kit 592
Media Door Maintenance Kit 600
Option Covers Maintenance Kit 603
Printer Feet Maintenance Kit 616
Trim Panel Maintenance Kit 618
Miscellaneous Hardware Maintenance Kit 621
ZT510 Repackaging Kit 628

Exterior Parts and Drawings

Figure 445 • Exterior Overview

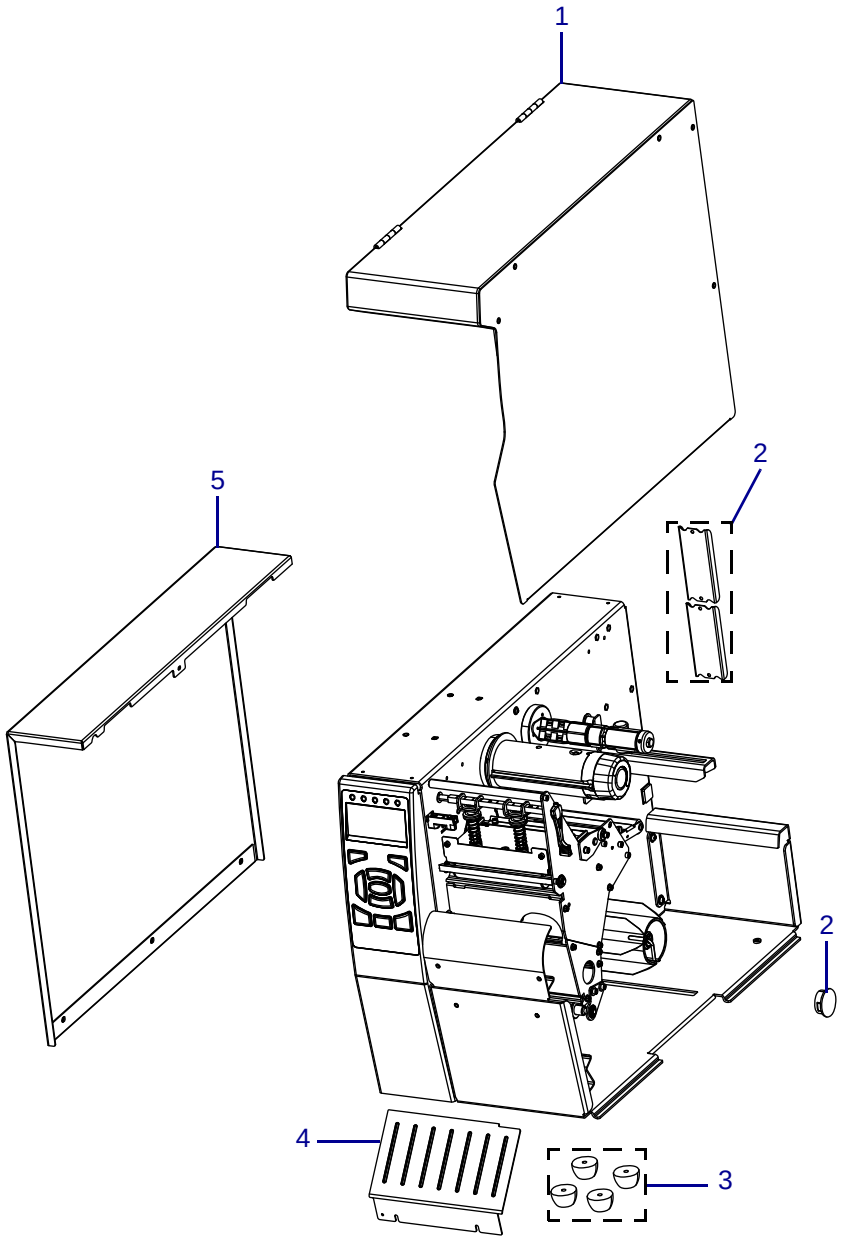


Table 62 • Kit Parts List

Item	Part Number	Description
1	**P1083347-003**	Media Door Maintenance Kit
2	**P1083320-092**	Option Covers Maintenance Kit
3	**P1083320-095**	Printer Feet Maintenance Kit
4	**P1083347-004**	Trim Panel Maintenance Kit
5	**P1083347-002**	Electronics Cover Maintenance Kit

Figure 446 • Exterior Kits

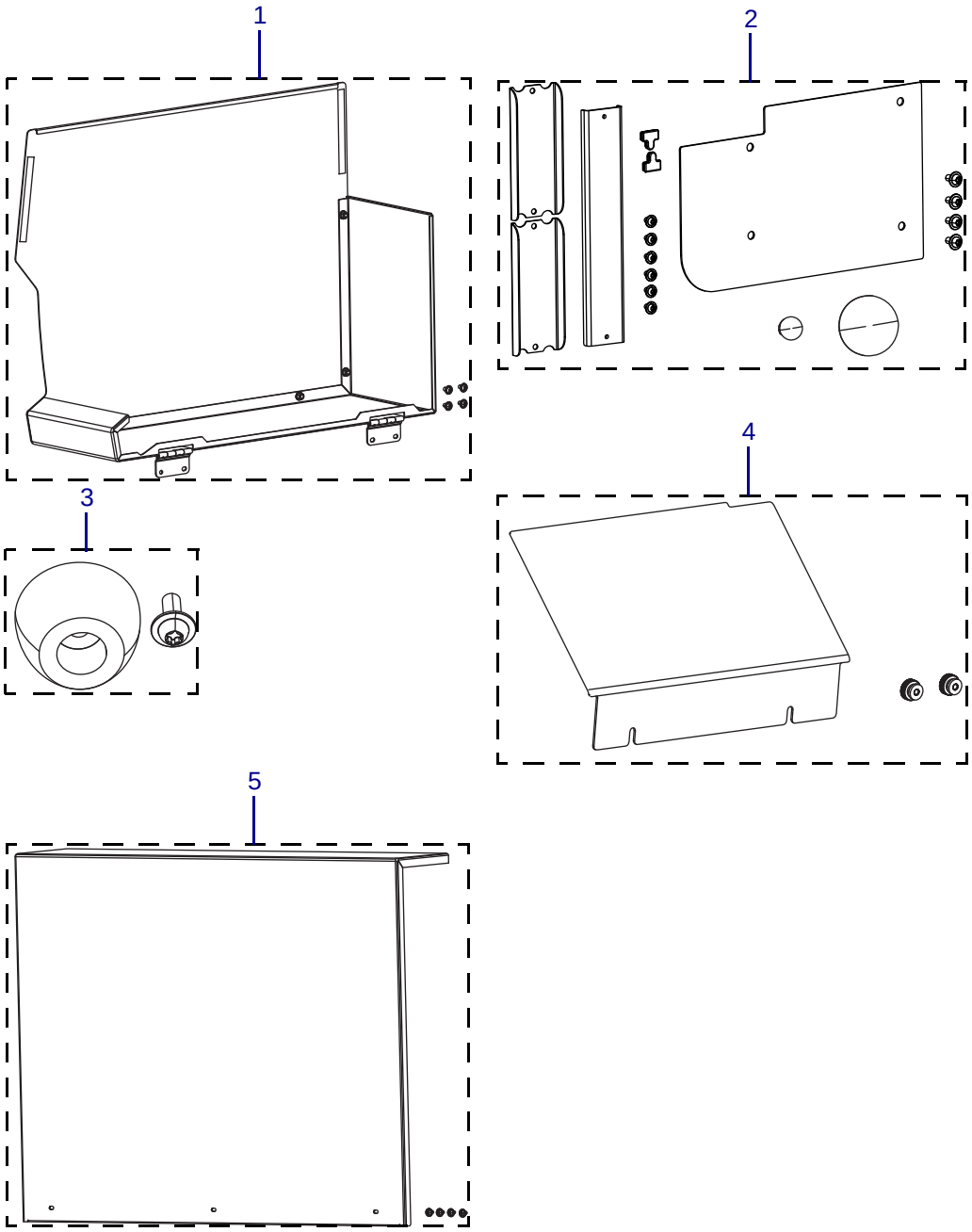


Table 63 • Kit Parts List

Item	Part Number	Description
1	**P1083347-003**	Media Door Maintenance Kit
2	**P1083320-092**	Option Covers Maintenance Kit
3	**P1083320-095**	Printer Feet Maintenance Kit
4	**P1083347-004**	Trim Panel Maintenance Kit
5	**P1083347-002**	Electronics Cover Maintenance Kit

Electronics Cover Maintenance Kit

Installation Instructions

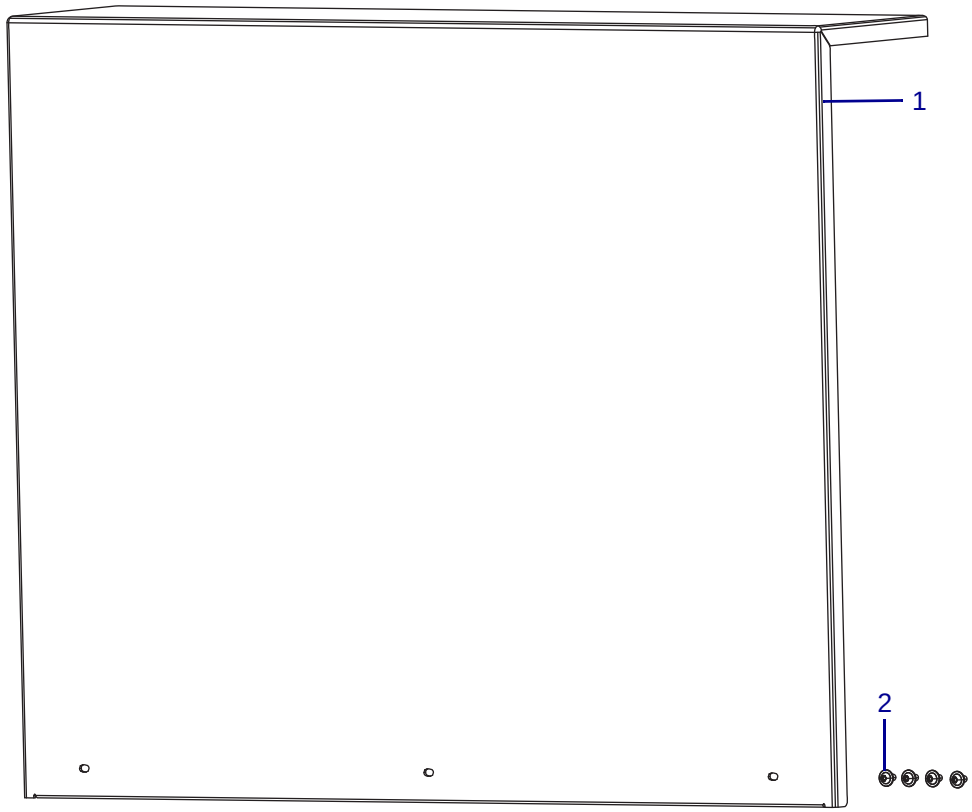
This kit includes the parts and documentation necessary to install the Electronic Cover Maintenance Kit on ZT510™ series printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 447 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 64 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-002**	Electronics Cover Maintenance Kit
	1	1	*N/A*	Electronics Cover
	2	4	*N/A*	Torx-Head Screw, M3 × 6, part of miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Antistatic Wriststrap and Mat
- ❑ Torx-Head Wrench Set

Remove the Electronics Cover

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

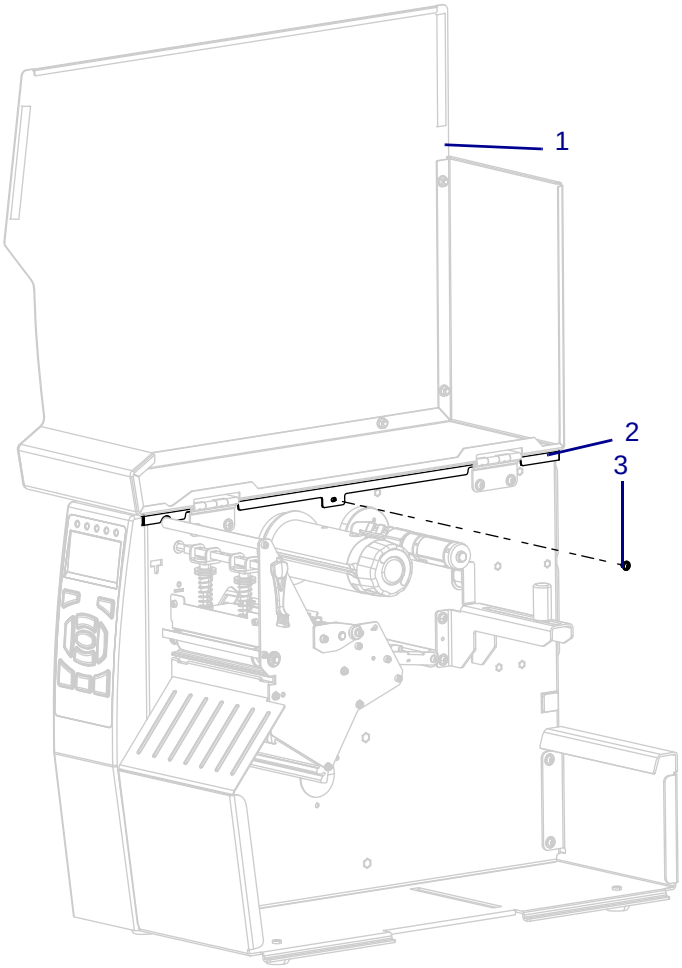
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

Figure 448 • Locate the Electronics Cover Mounting Screw

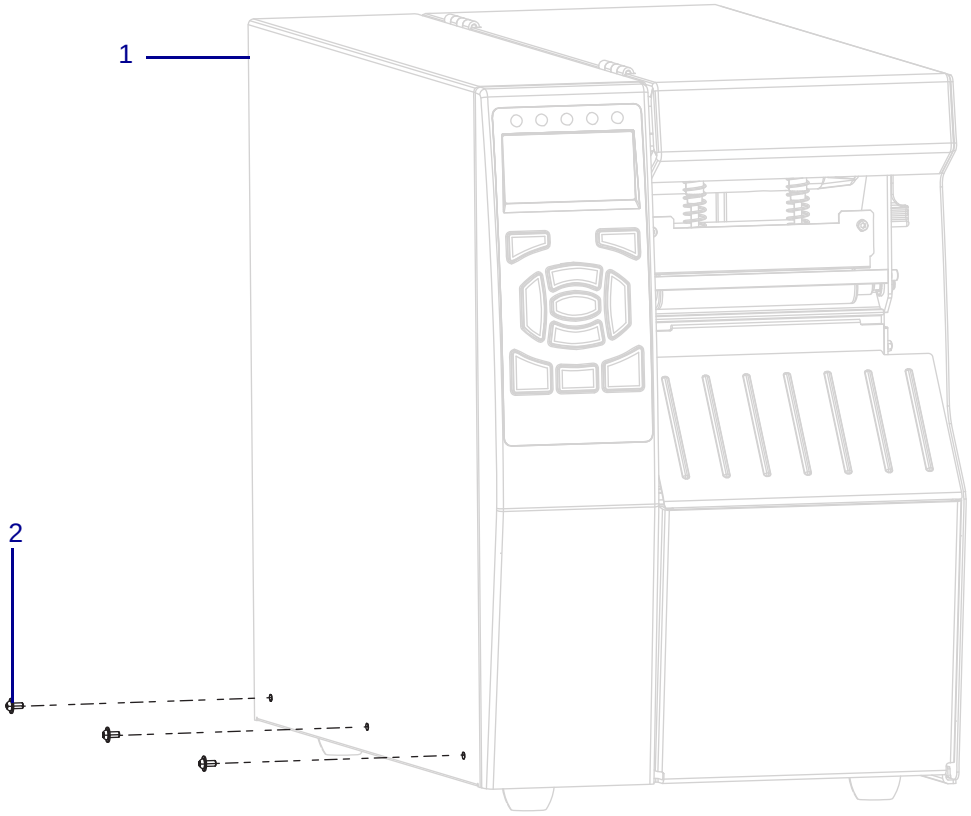


1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.

5. See Figure 449. Remove the three mounting screws securing the electronics cover to the printer.

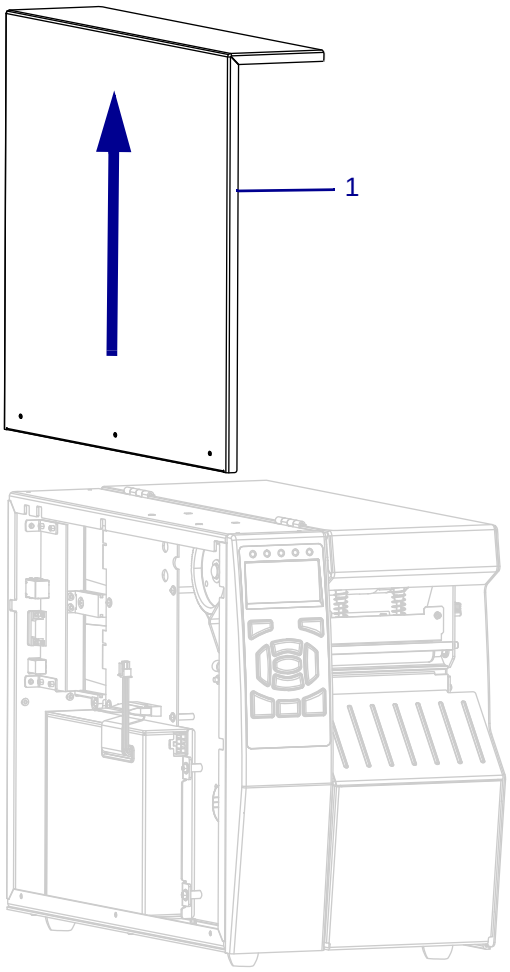
Figure 449 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 450. Lift the electronics cover off of the printer.

Figure 450 • Remove the Electronics Cover

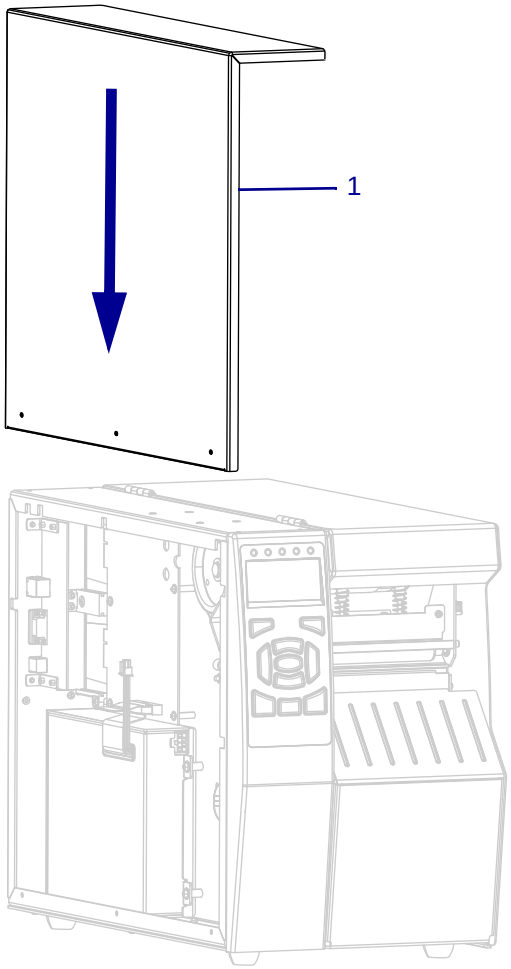


1	Electronics cover

Install the Electronics Cover

1. See Figure 451. Slide the electronics cover onto the printer.

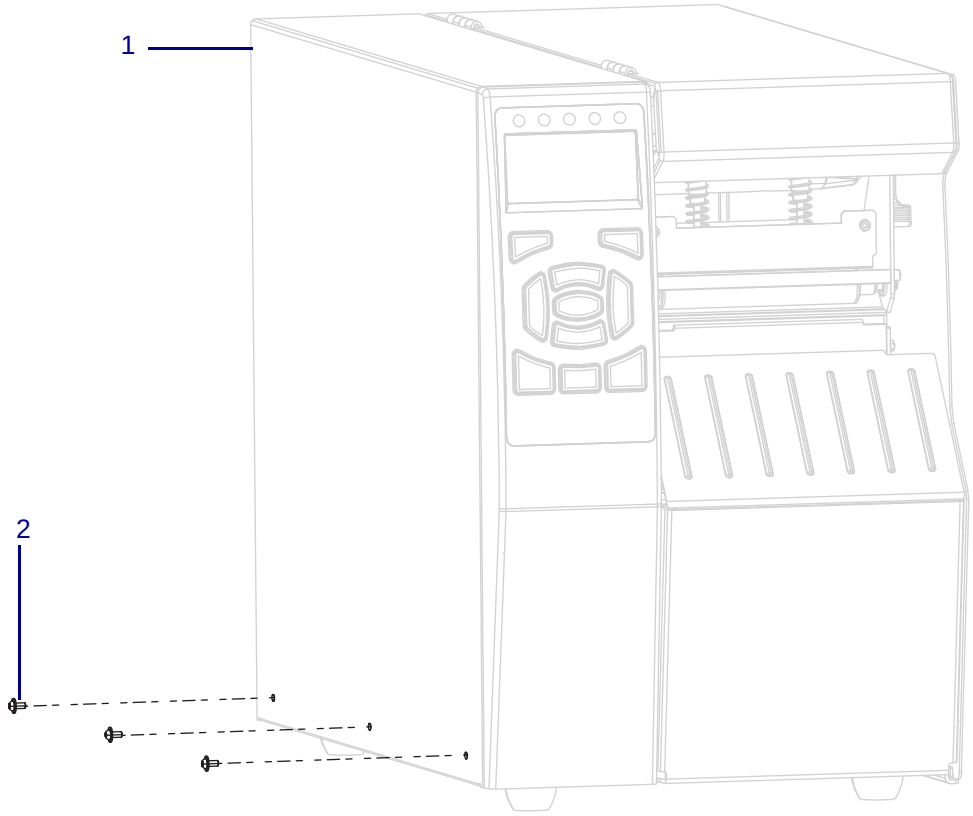
Figure 451 • Install the Electronics Cover



1	Electronics cover

2. See Figure 452. Install the three mounting screws.

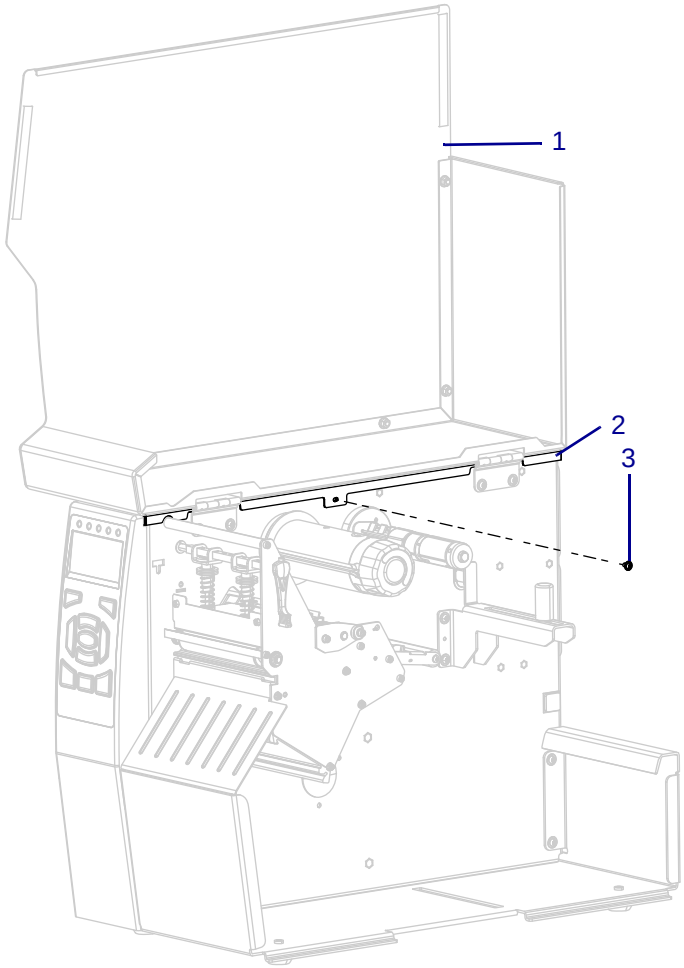
Figure 452 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

3. See Figure 453. Open the media door and install the media side electronics cover mounting screw.

Figure 453 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4.

Media Door Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Media Door Maintenance Kit on ZT510™ series printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 454 • Kit Contents

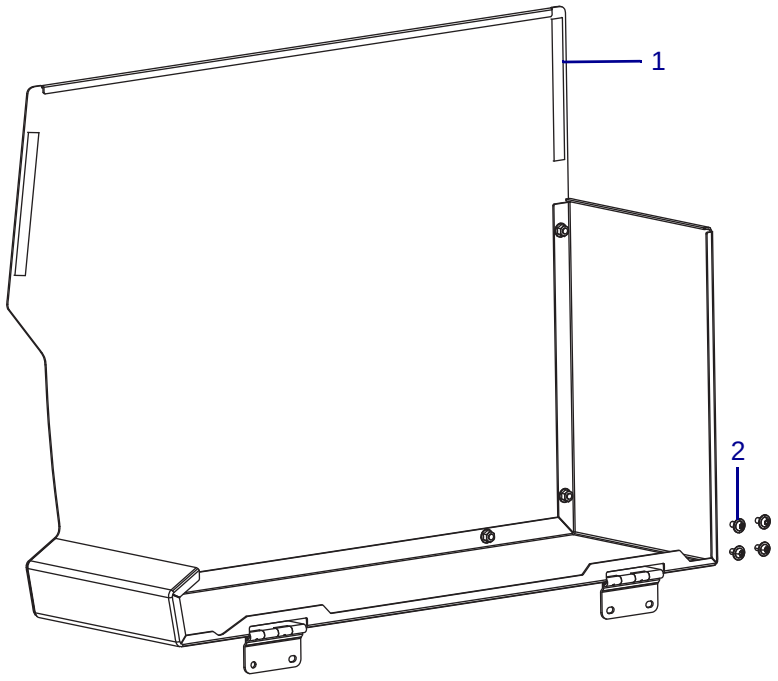


Table 65 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-003**	Media Door Maintenance Kit
	1	1	*N/A*	Media Door
	2	4	*N/A*	Torx-Head Screw, M4 × 8, part of miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

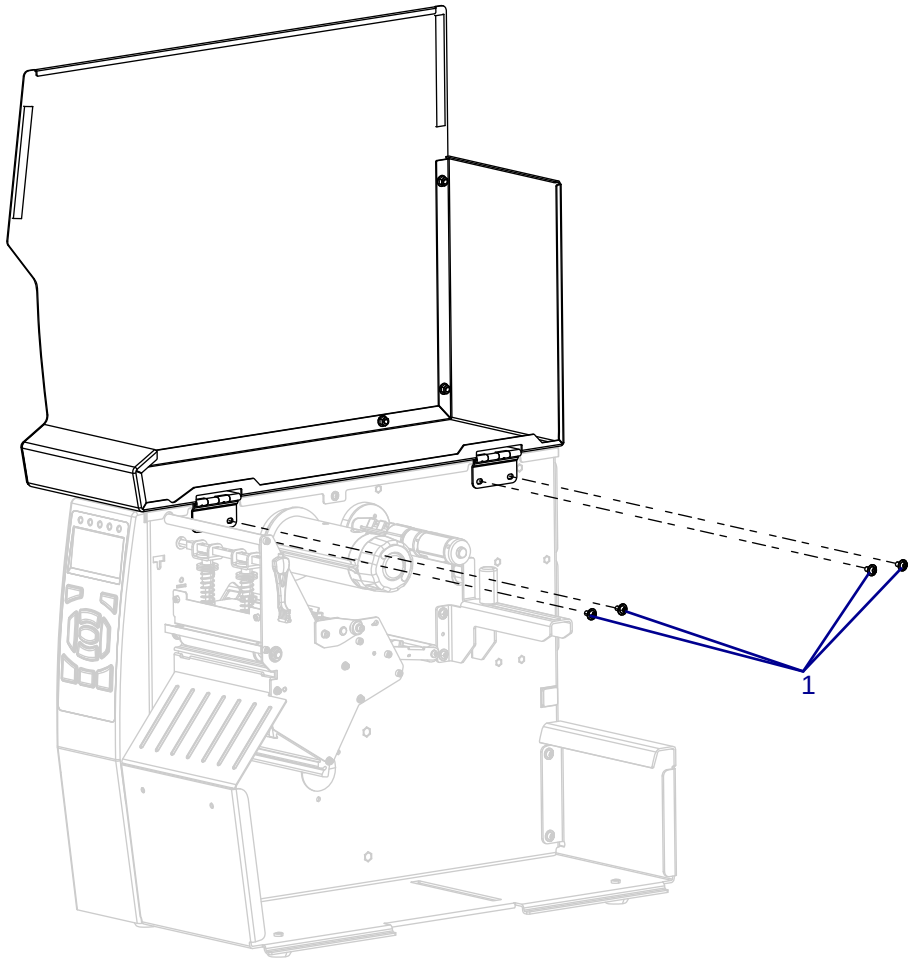
Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set

Remove the Old Media Door

1. See Figure 455. Open the media door and remove the four media door mounting screws.

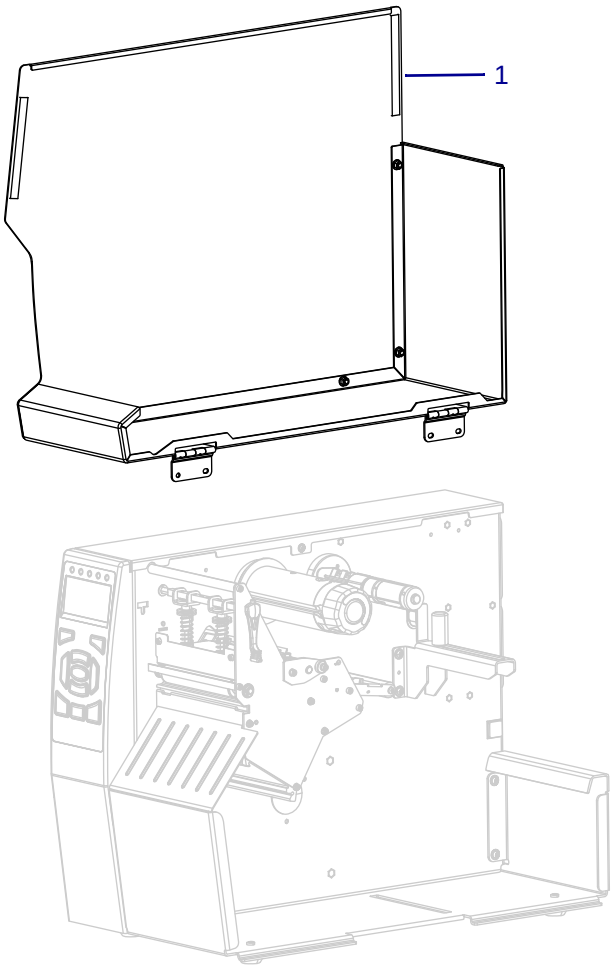
Figure 455 • Remove the Media Door Mounting Screws



1	Mounting screws (4)

2. See Figure 456. Lift the media door from the printer.

Figure 456 • Remove the Media Door



1	Media door

Install the Media Door

1. See Figure 455 on page 601. Align the new media door hinges with the mounting holes in the main frame.
2. Install the four new mounting screws.

The installation is complete.

Option Covers Maintenance Kit

Installation Instructions

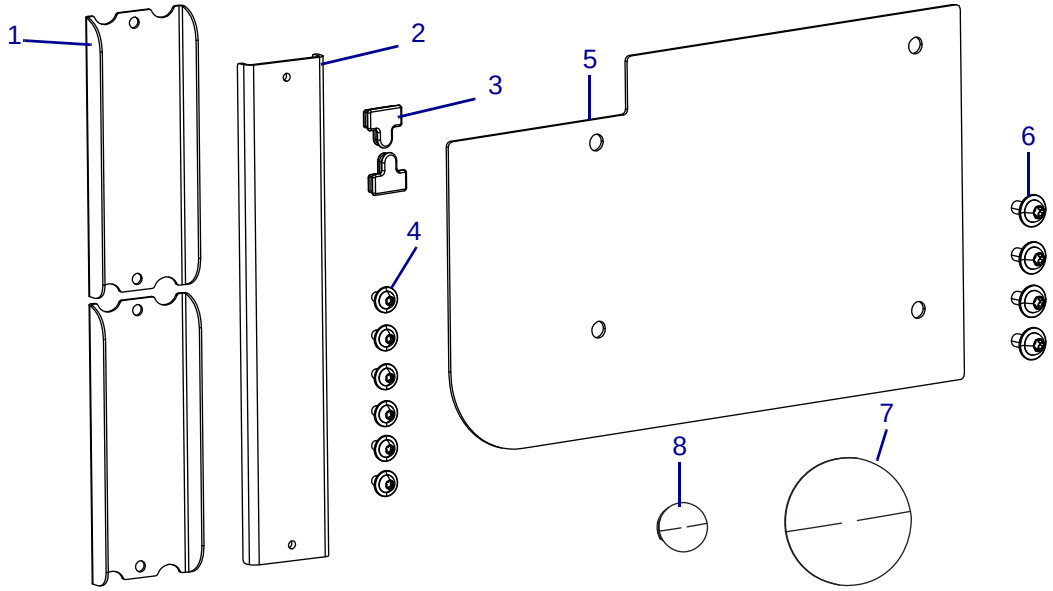
This kit includes the parts and documentation necessary to install the Option Covers Maintenance Kit in the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the parts listed below.

Figure 457 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 66 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-092**	ZT610, ZT620, and ZT510 Option Covers Maintenance Kit
	1	2	*N/A*	Option Board Blank Cover
	2	1	*N/A*	ZT610 and ZT620 Long Option Blank Cover
	3	2	*N/A*	ZT610, ZT620, and ZT510 Take-Label Sensor Plug
	4	6	*N/A*	ZT610, ZT620, and ZT510 Torx-Head Screw, M3 × 6, included in Miscellaneous Hardware Kit, **P1083320-096**
	5	1	*N/A*	ZT610 and ZT620 Rewind cover plate
	6	4	*N/A*	ZT610 and ZT620 Torx-Head Screw, M4 × 8, included in Miscellaneous Hardware Kit, **P1083320-096**
	7	1	*N/A*	ZT510 Large Rewind Access Hole Plug
	8	1	**HW46267**	ZT510 Small Rewind Access Hole Plug

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

Tools Required

Tools • You need these tools to complete this procedure:

❑ Torx-Head Wrench Set

Prepare for Installation

Which cover are you installing?

If…	Then…
Long option cover	Continue with *Install the Long Option Cover in the ZT610 and ZT620* on page 605.
Option board cover	Go to *Install the Option Board Covers in the ZT610, ZT620, and ZT510* on page 612.
ZT610 and ZT620 rewind cover	Go to *Install the Rewind Cover in the ZT610 and ZT620* on page 613.
ZT510 rewind access hole plugs	Go to *Install the Rewind Access Holes Plugs, ZT510* on page 614.
Take-Label sensor plugs	Go to *Install the Take-Label Plugs* on page 615.

Install the Long Option Cover in the ZT610 and ZT620

1. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

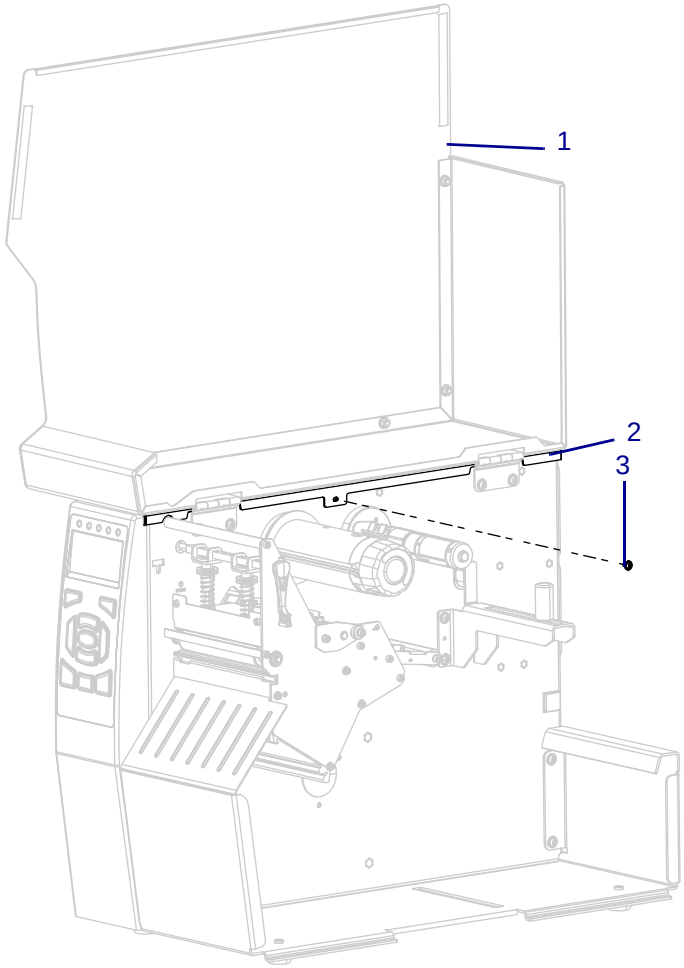
   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

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

   Connect yourself to an antistatic device.

3. See Figure 1. Open the media door and remove the screw securing the electronics cover.

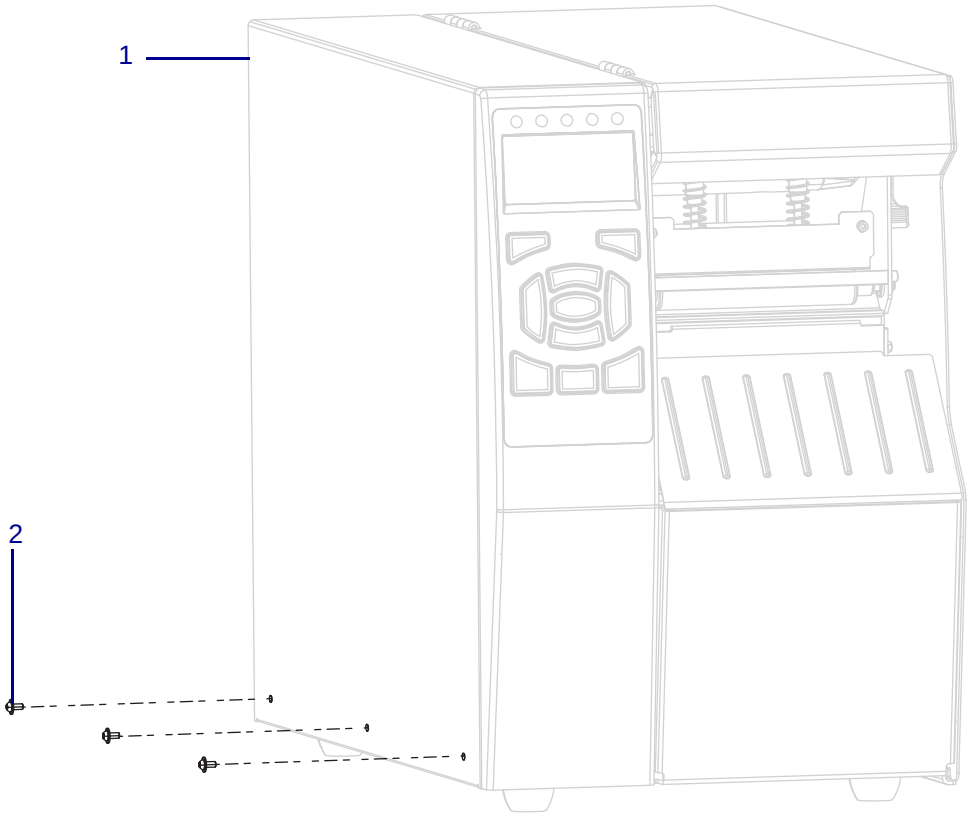
Figure 458 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

4. Close the media door.
5. See Figure 459. Remove the three mounting screws securing the electronics cover to the printer.

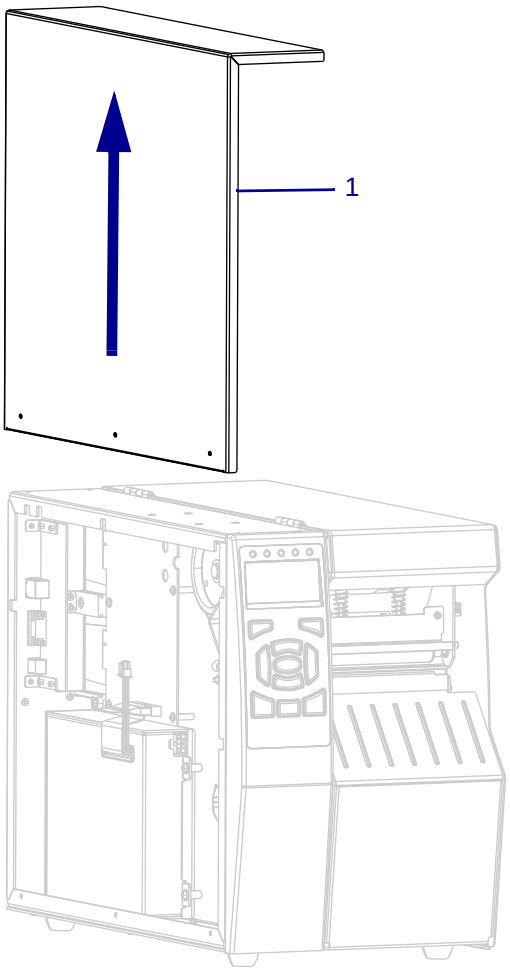
Figure 459 • Remove the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

6. See Figure 460. Lift the electronics cover off of the printer.

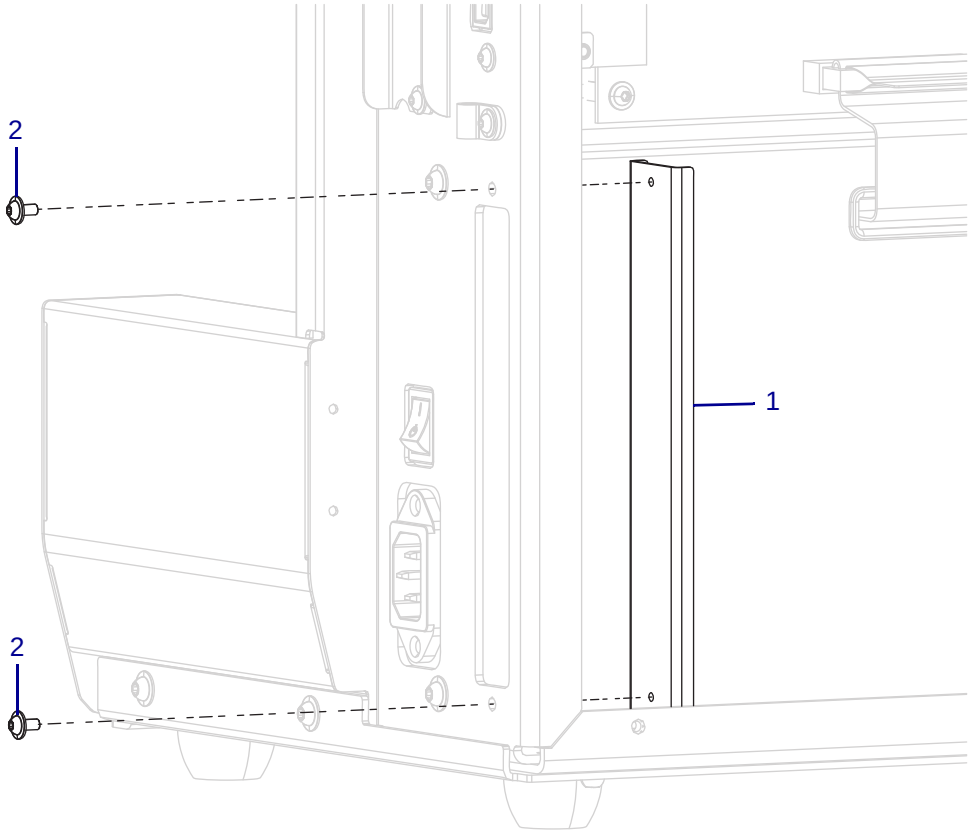
Figure 460 • Remove the Electronics Cover



1	Electronics cover

7. See Figure 461. Slide the long option cover into the printer as shown.

Figure 461 • Install the Long Option Cover

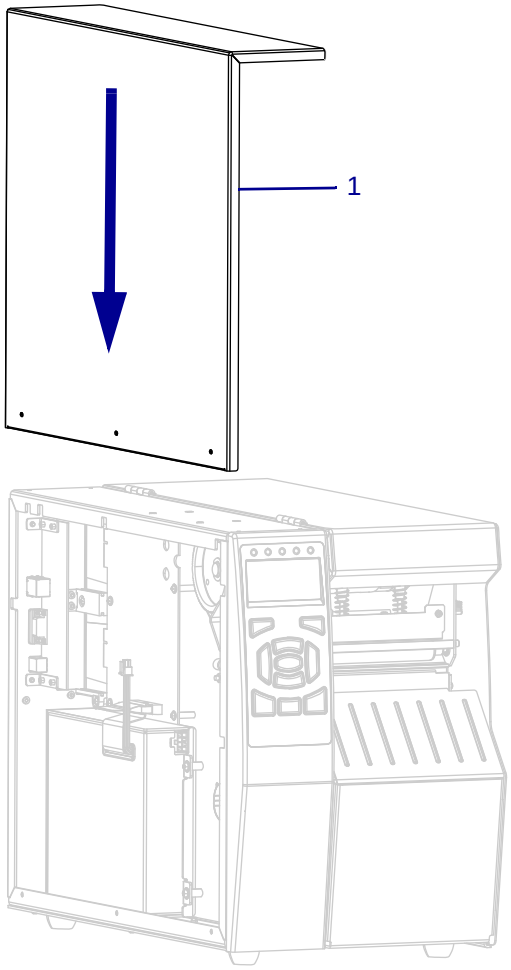


1	Long option cover
2	Mounting screws (2)

8. Align the mounting holes in the cover with the holes in the printer, and then install the two mounting screws.

9. See Figure 462. Slide the electronics cover onto the printer.

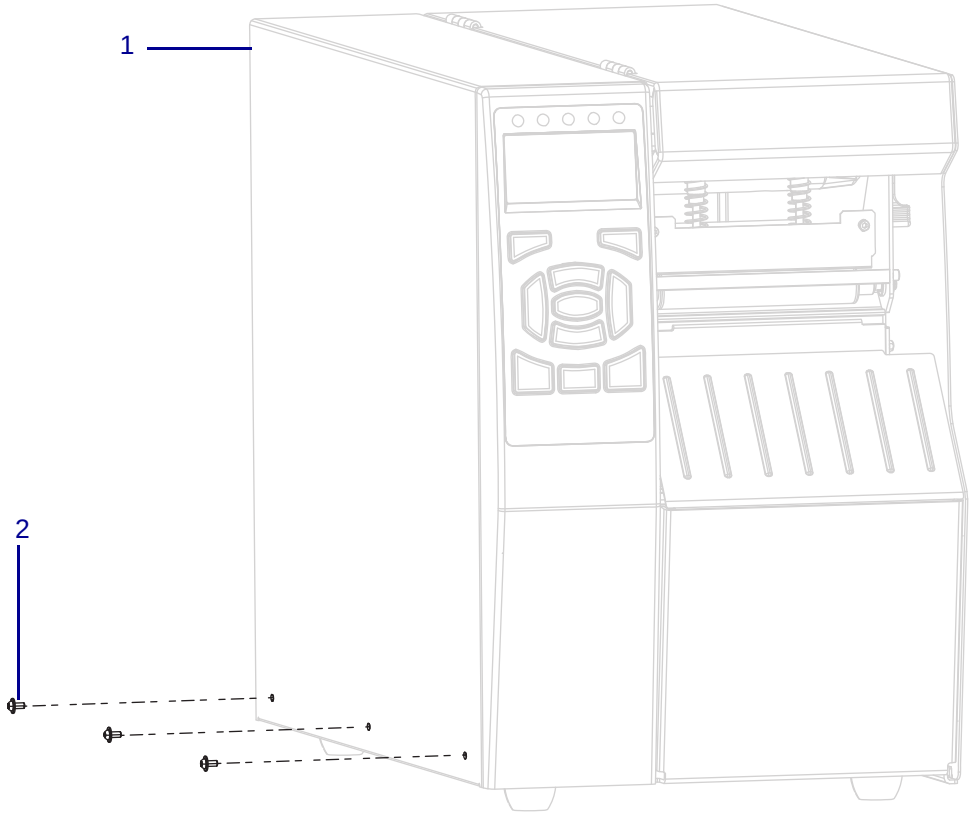
Figure 462 • Install the Electronics Cover



1	Electronics cover

10. See Figure 463. Install the three mounting screws.

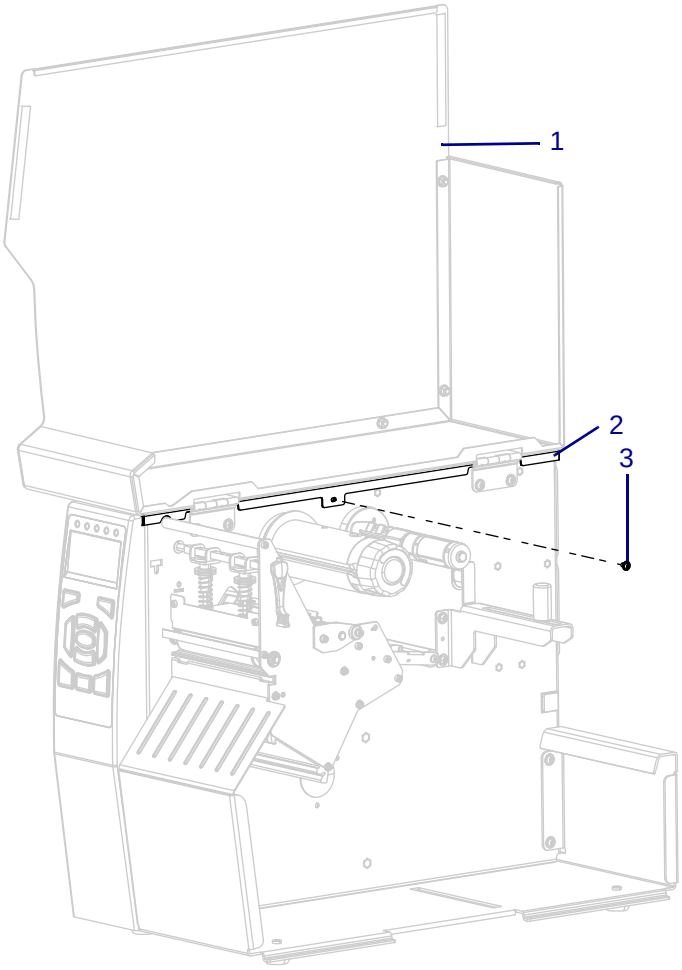
Figure 463 • Install the Electronics Cover Mounting Screws



1	Electronics cover
2	Mounting screws (3)

11. See Figure 464. Open the media door and install the media side electronics cover mounting screw.

Figure 464 • Locate the Electronics Cover Mounting Screw



1	Media door
2	Electronics cover
3	Electronics cover mounting screw

12. Reconnect the power cable and all data cables.

13. Turn on (**I**) the printer.

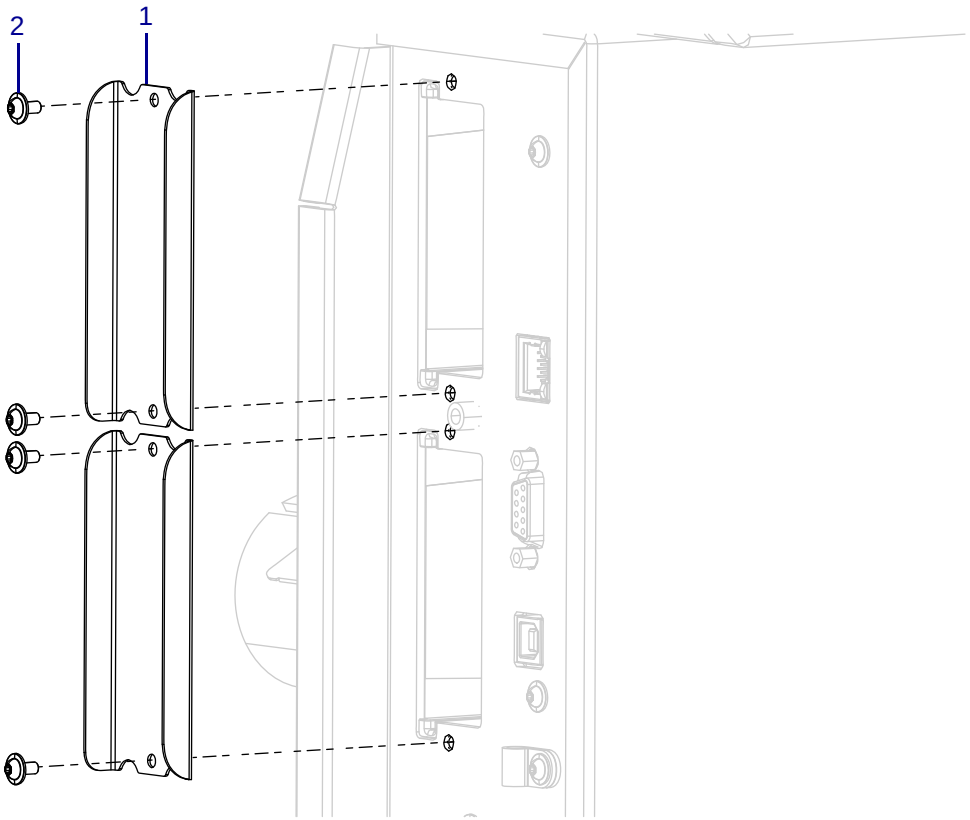
14. Are you installing other covers?

If…	Then…
Yes	Go to *Prepare for Installation* on page 604 to locate additional installation instructions.
No	**The installation is complete.**

Install the Option Board Covers in the ZT610, ZT620, and ZT510

1. See Figure 465. Align the mounting holes in the covers with the mounting holes in the printer.
2. Install the mounting screws.

Figure 465 • Install the Option Board Covers



1	Option board covers (2)
2	Mounting screws (4)

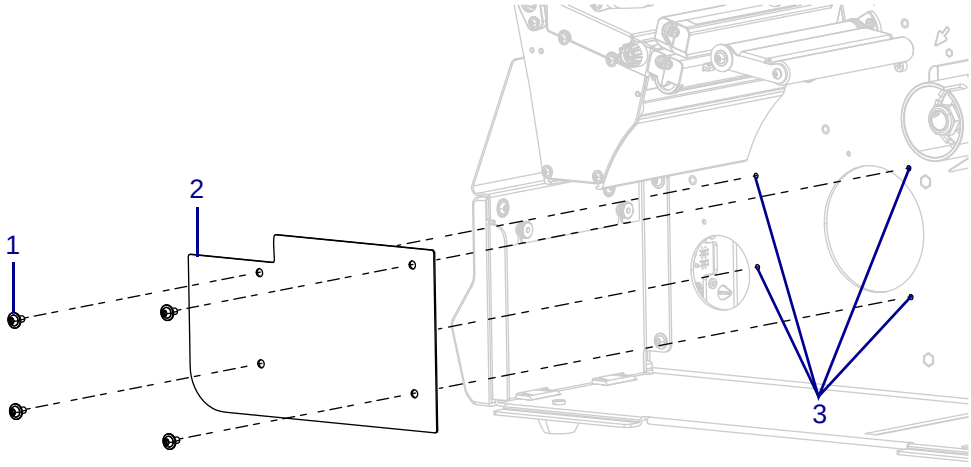
3. Are you installing other covers?

If…	Then…
Yes	Go to *Prepare for Installation* on page 604 to locate additional installation instructions.
No	**The installation is complete.**

Install the Rewind Cover in the ZT610 and ZT620

1. Align the rewind cover plate with the four mounting holes in the main frame.

Figure 466 •



1	Mounting screws (4)
2	Rewind cover plate
3	Mounting holes (4)

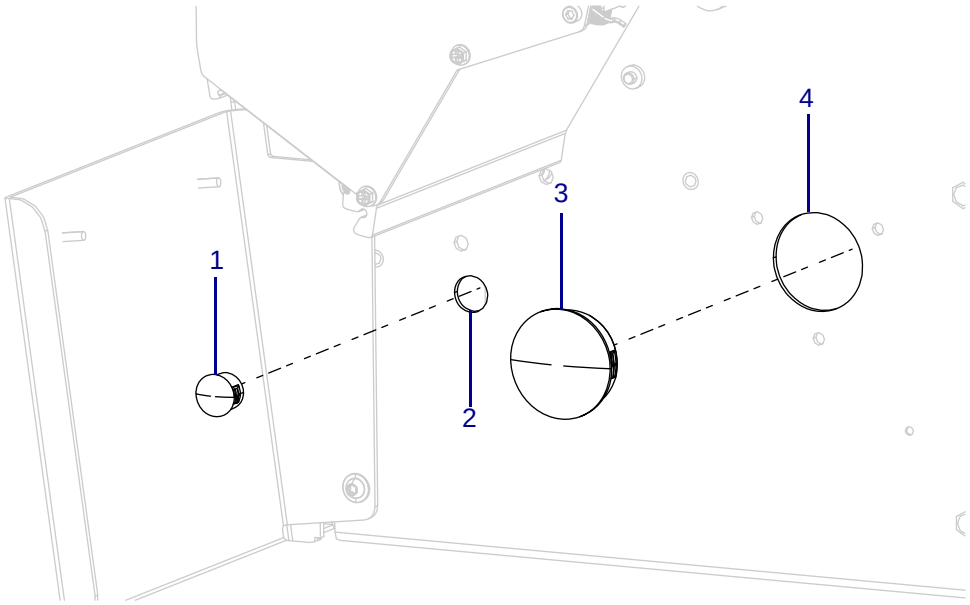
2. Install the four mounting screws.
3. Are you installing other covers?

If…	Then…
Yes	Go to *Prepare for Installation* on page 604 to locate additional installation instructions.
No	**The installation is complete.**

Install the Rewind Access Holes Plugs, ZT510

1. Install the small rewind access hole plug by pushing it into the small rewind access hole.

Figure 467 • Locate the Rewind Access Holes



1	Small rewind access hole plug
2	Small rewind access hole
3	Large rewind access hole plug
4	Large rewind access hole

2. Install the large rewind access hole plug by pushing it into the large rewind access hole.

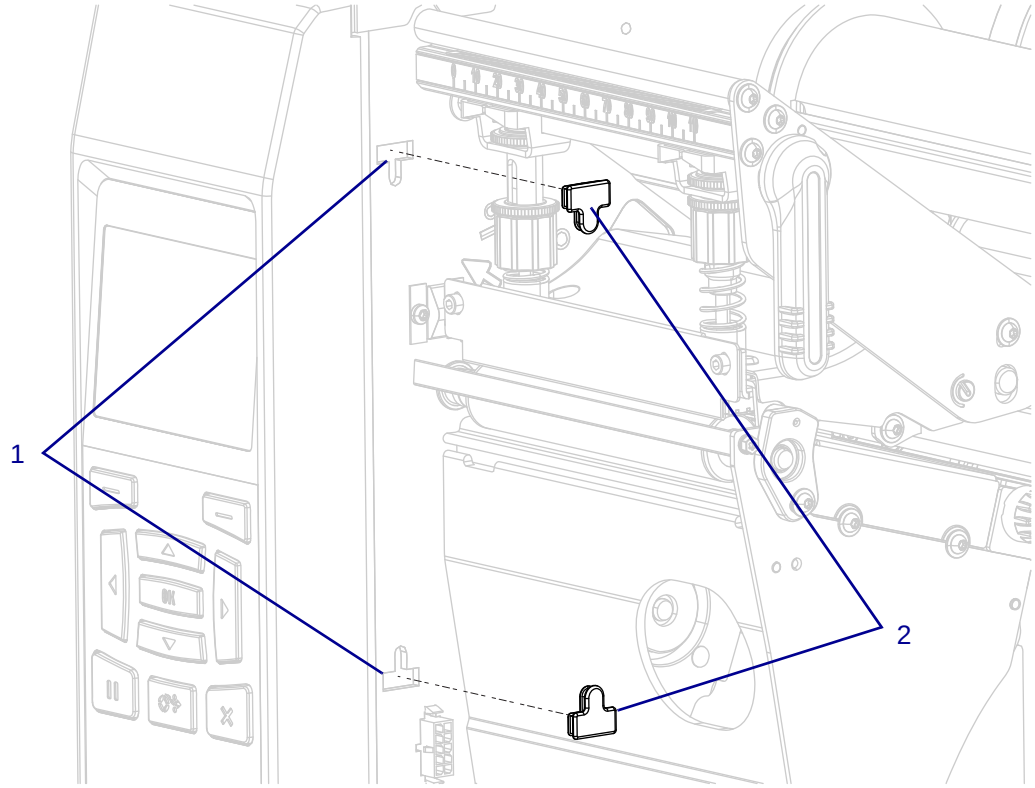
3. Are you installing other covers?

If…	Then…
Yes	Go to *Prepare for Installation* on page 604 to locate installation instructions.
No	**The installation is complete.**

Install the Take-Label Plugs

1. Align the take-label plugs as shown.

Figure 468 • Install the Take-Label Plugs



1	Take-label sensor mounting holes (2)
2	Take-label sensor mounting hole plugs (2)

2. Press the plugs into the two take-label sensor mounting holes.
3. Are you installing other covers?

If…	Then…
Yes	Go to *Prepare for Installation* on page 604 to locate installation instructions.
No	**The installation is complete.**

Printer Feet Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Printer Feet Maintenance Kit into the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 469 • Kit Contents

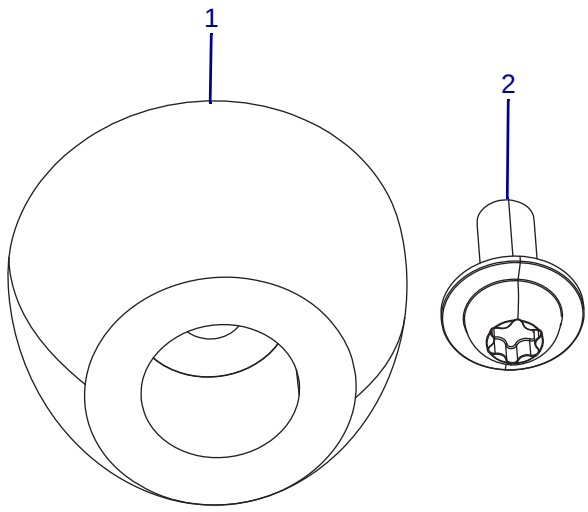


Table 67 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083320-095**	Printer Feet
	1	12	*N/A*	Foot
	2	12	*N/A*	Torx-Head Screw, M4 × 10, included in Miscellaneous Hardware Kit, **P1083320-096**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Tools Required

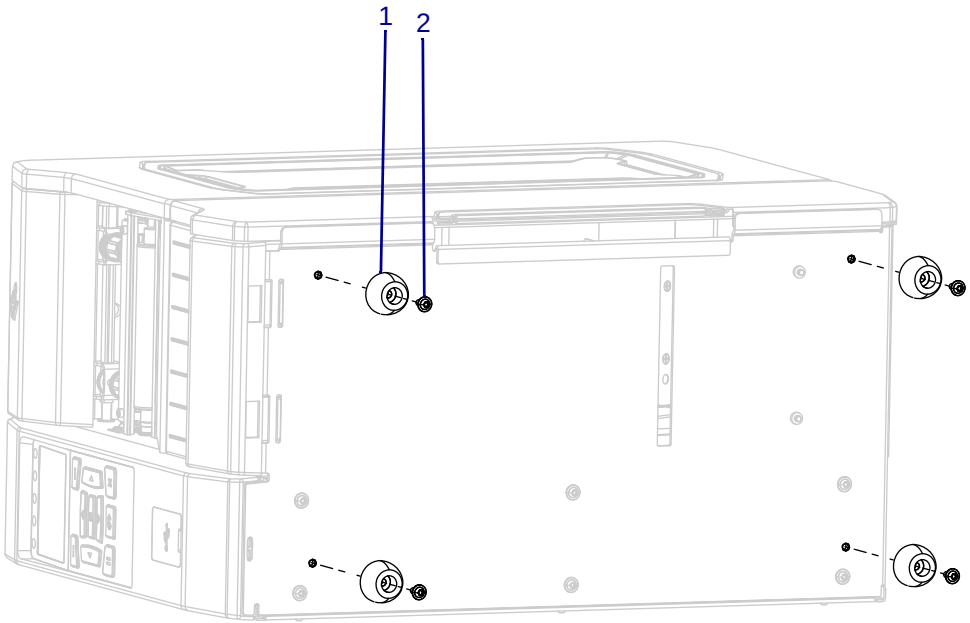
Tools • You need these tools to complete this procedure:

- ❑ Torx-Head Wrench Set
- ❑ Mat

Replace the Feet

1. See Figure 470. Lay the printer on a mat on the electronics side.

Figure 470 • Replace the Feet (ZT600 shown)



1	Foot (4)
2	Foot mounting screw (4)

2. Remove and discard the mounting screw and foot.
3. Install the new mounting screw and foot.
4. Repeat step 2 and step 3 for the other feet.
5. Set the printer back up on its feet.

The installation is complete.

Trim Panel Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Trim Panel Maintenance Kit on ZT510™ series printers.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 471 • Kit Contents

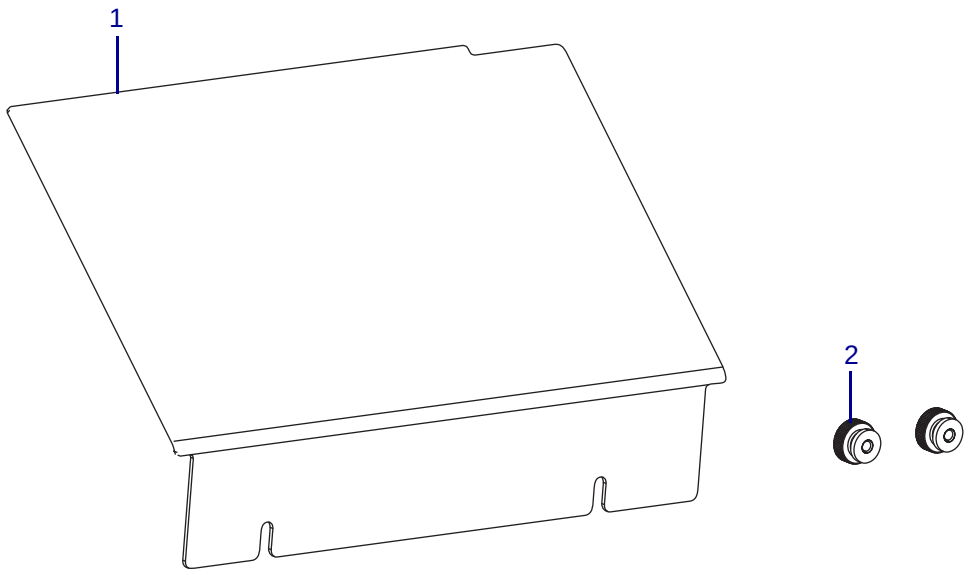


Table 68 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-004**	Trim Panel Maintenance Kit
	1	1	*N/A*	Trim Panel
	2	2	*N/A*	Knurled Nut, part of miscellaneous hardware kit, **P1083347-026**

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

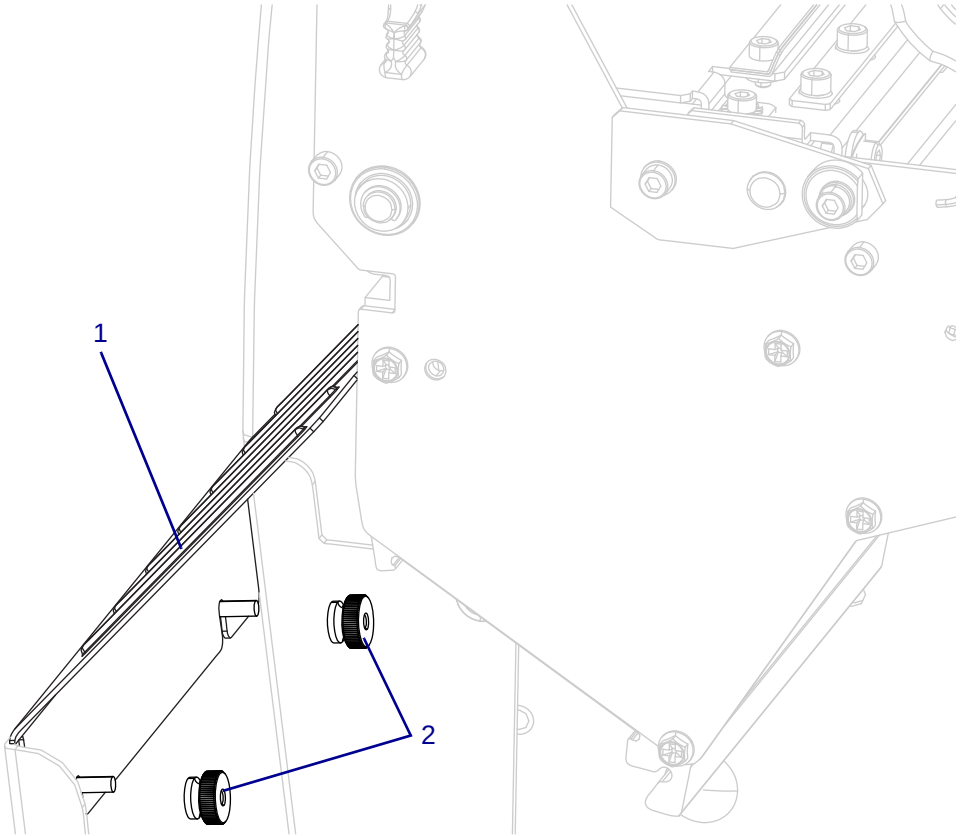
©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Remove the Old Trim Panel

1. Open the media door, and then remove the two knurled nuts securing the trim panel.

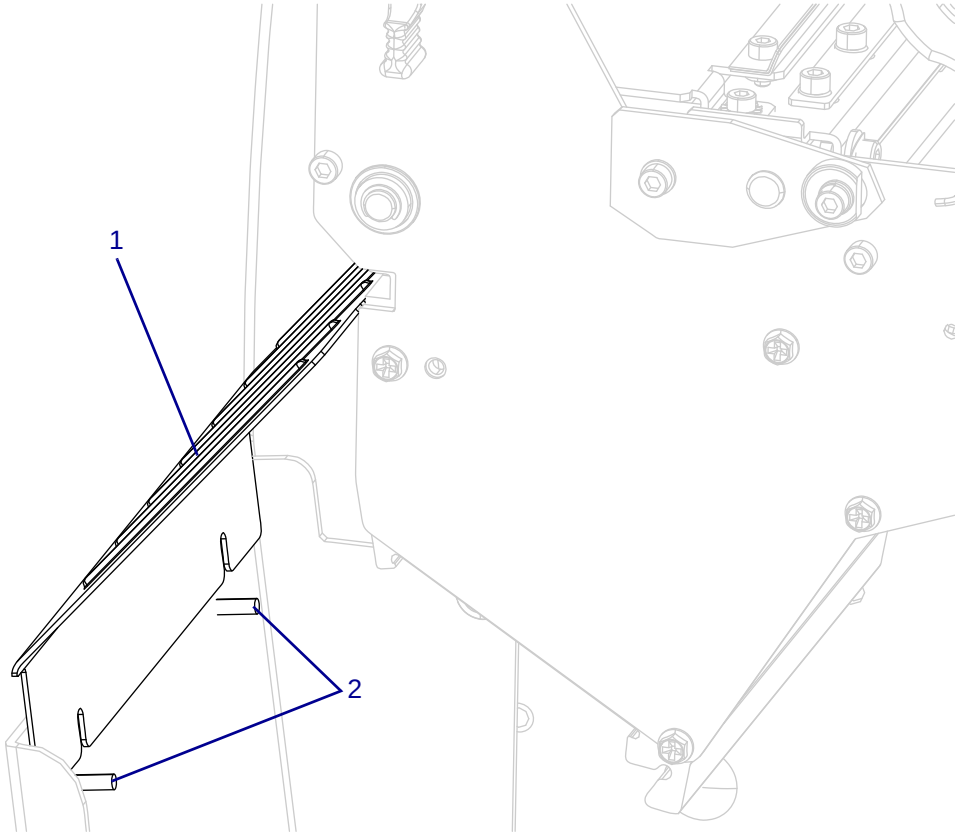
Figure 472 • Remove the Knurled Nuts



1	Trim panel
2	Knurled nuts (2)

2. See Figure 473. Lift the trim panel out of the printer.

Figure 473 • Lift the Trim Panel Out



1	Trim panel
2	Mounting studs

Install the New Trim Panel

1. See Figure 473. Slide the new trim panel into the printer and onto the mounting studs.
2. See Figure 472 on page 619. Install the two new knurled nuts.

The installation is complete.

Miscellaneous Hardware Maintenance Kit

Installation Instructions

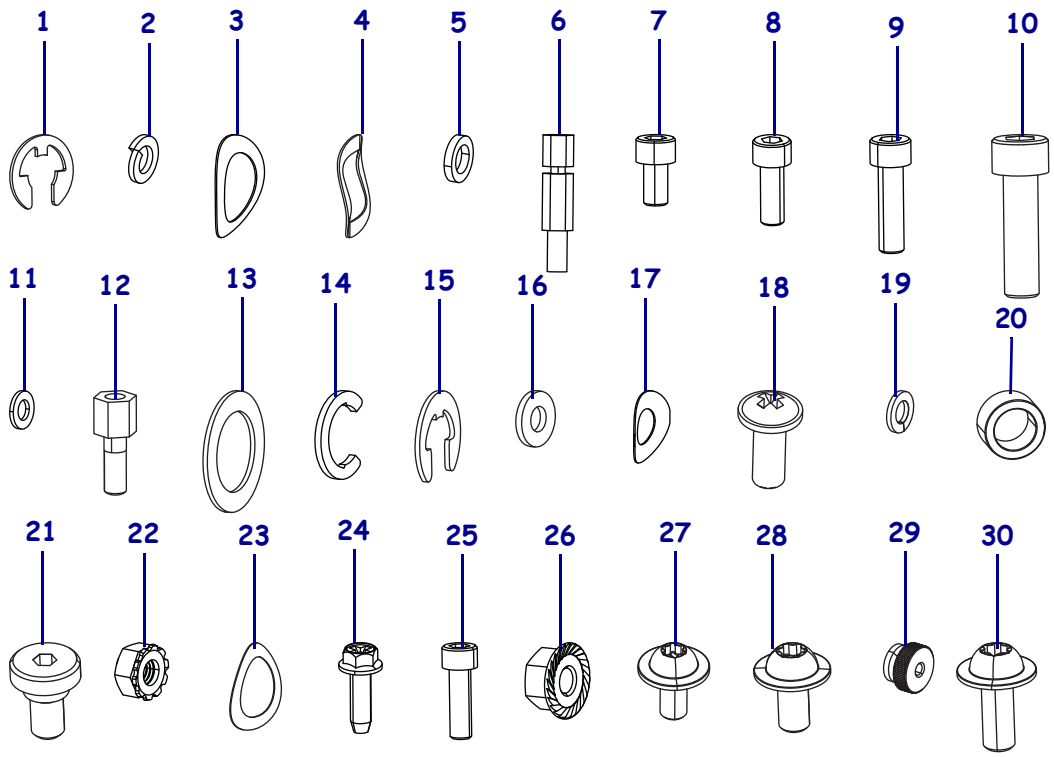
This kit includes the parts and documentation necessary to install the Miscellaneous Hardware Kit for the ZT510™ printer.

Read these instructions thoroughly before installing this kit.

Parts List

Before proceeding, verify that your kit contains the items for your printer listed below.

Figure 474 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 69 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-026**	Miscellaneous Hardware Kit
	1	2	**HW06250**	E-Ring, 0.312 (sold in quantities of 25)
	2	10	**HW06268**	#6 Lock Washer (sold in quantities of 25)
	3	2	**HW07229**	Curved Washer,0.49 × 0.33 (sold in quantities of 50)
	4	2	**HW30115**	Wave Washer, 0.74 × 0.52 × 0.08 (sold in quantities of 25)
	5	2	**HW30247**	Washer, 0.420 × 0.260 × 0.075 (sold in quantities of 25)
	6	2	**HW30266**	Stop, Head Lift Spring (sold in quantities of 10)
	7	20	**HW30392-004**	Screw, 6-32 × 0.25 (sold in quantities of 50)
	8	10	**HW30392-006**	Screw 6-32 × 0.37 (sold in quantities of 25)
	9	2	**HW30392-008**	Screw, 6-32 × 0.5 0 (sold in quantities of 25)
	10	2	**HW30393-006**	Screw, 8-32 × 0.38 (sold in quantities of 25)
	11	2	**HW30956**	Flat Washer, 0.207 × 0.146 × 0.030 (sold in quantities of 10)
	12	2	**HW32406**	Hex Standoff, 4-40 M-F (sold in quantities of 25)
	13	2	**HW33804**	Flat Washer, 0.76 × 0.51 × 0.03 (sold in quantities of 25)
	14	2	**HW33810**	Retaining Ring, 0.250 (sold in quantities of 100)
	15	2	**HW33811**	Retaining Ring, 0.500 × 0.042 (sold in quantities of 25)
	16	2	**HW40193**	Flat Washer, 0.375 × 0.172 × 0.048 (sold in quantities of 25)
	17	2	**HW40194**	Washer, 0.344 × 0.172 × 0.006 (sold in quantities of 25)
	18	2	**HW45937**	Thread Forming Screw, M4 × 10 (sold in quantities of 10)
	19	2	**HW45945**	#4 Lock Washer (sold in quantities of 100)
	20	2	*N/A*	Spacer, 0.75 × 0.52 × 0.36
	21	2	*N/A*	Shoulder Screw, M4 × 5.5 mm × 2 mm
	22	2	*N/A*	Keps Nut, M3
	23	2	**HW30239**	Crescent Washer, 0.465 × 0.323 × 0.062 × 0.005 (sold in quantities of 25)
	24	10	**HW44001**	Thread Forming Screw, M3.5 × 0.6 × 11 (sold in quantities of 25)
	25	2	**HW30391-006**	Screw, 4-40 × 0.37 (sold in quantities of 25)
	26	10	*N/A*	Nut, Flanged, M4
	27	10	*N/A*	Hexalobular Pan Washer Mach Screw, M3 × 6
	28	20	*N/A*	Hexalobular Pan Washer Mach Screw, M4 × 8
	29	5	*N/A*	Knurled Nut, M3
	30	5	*N/A*	Hexalobular Pan Washer Mach Screw, M4 × 10

Figure 475 • Media side

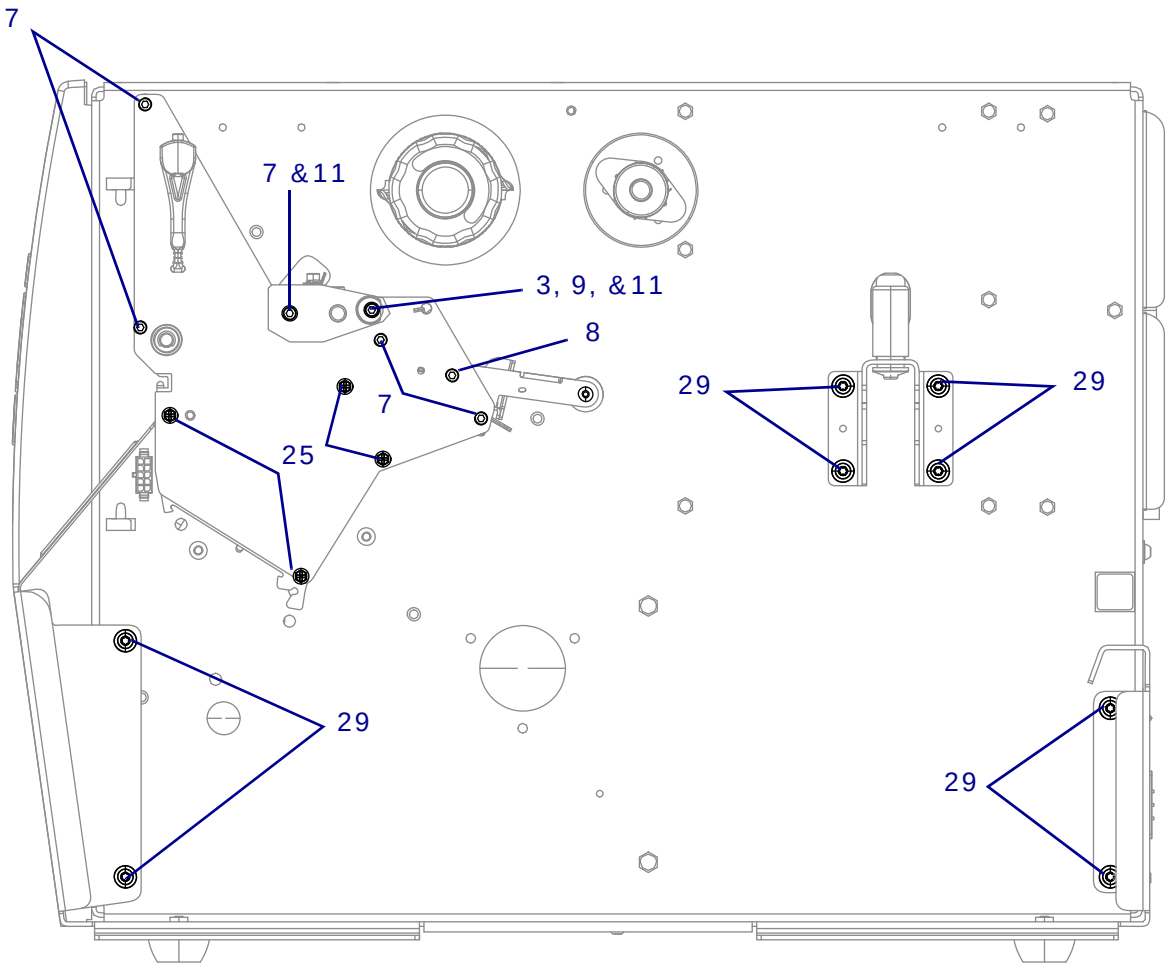


Figure 476 • Rear View

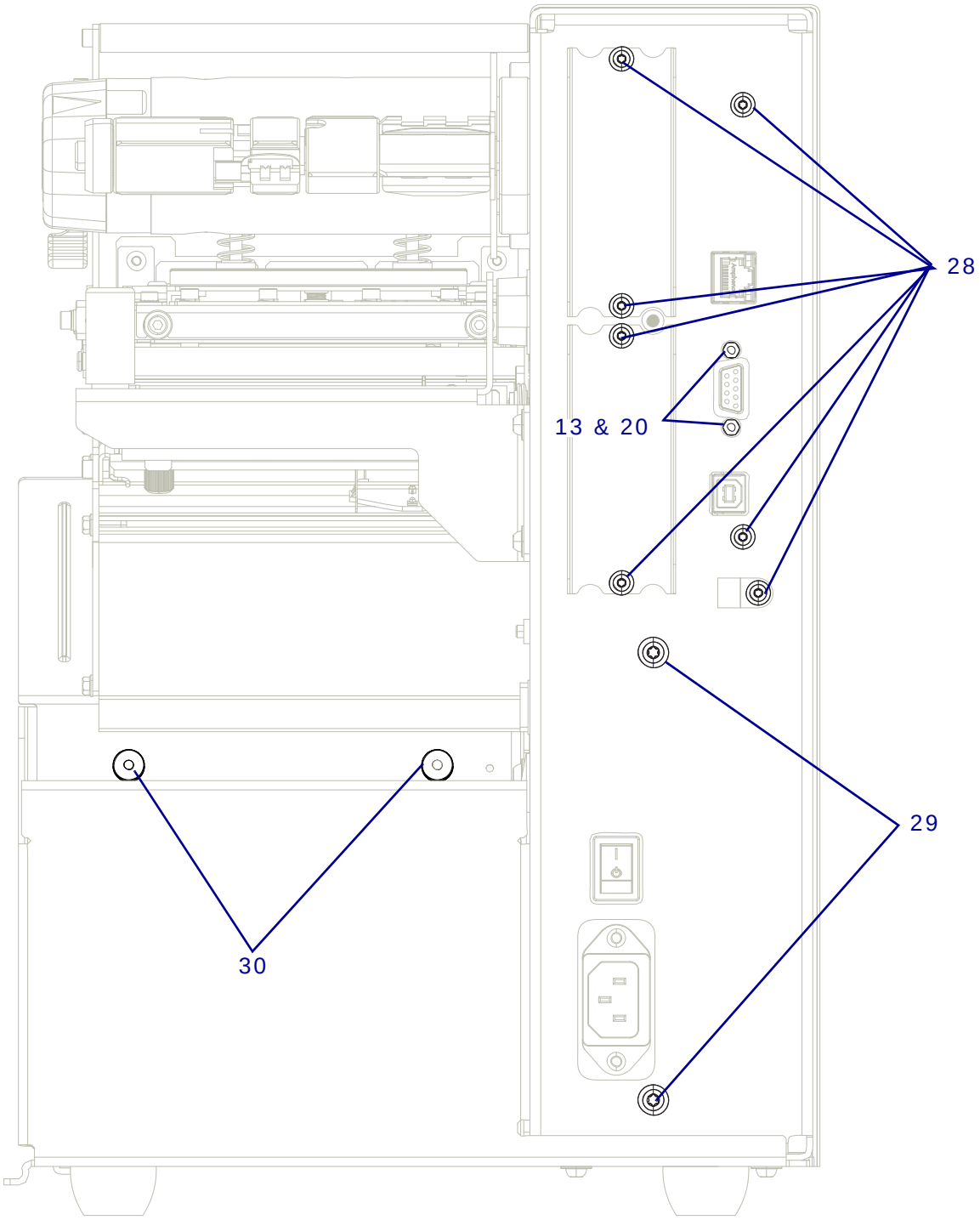


Figure 477 • View 3

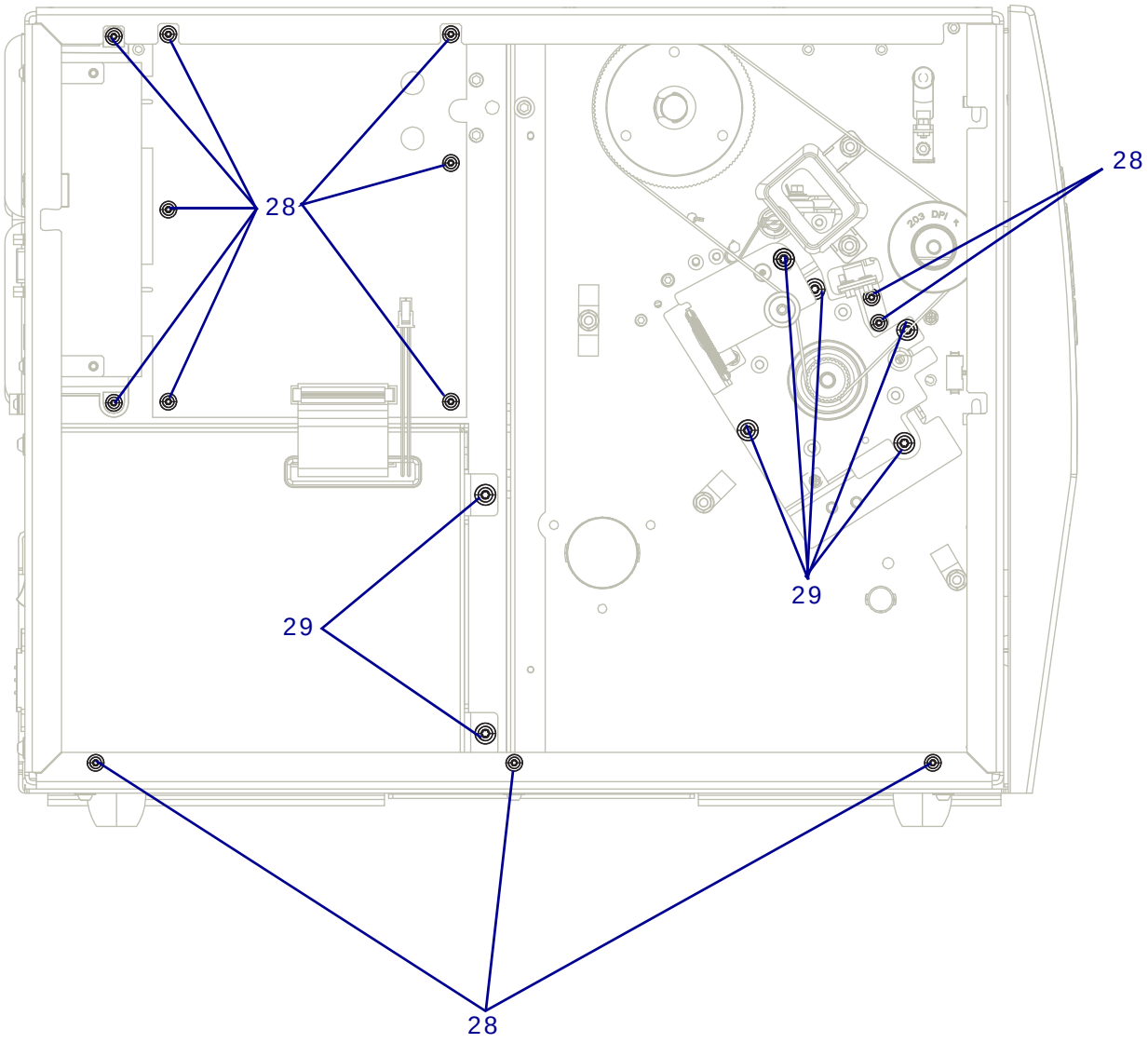


Figure 478 • View 4

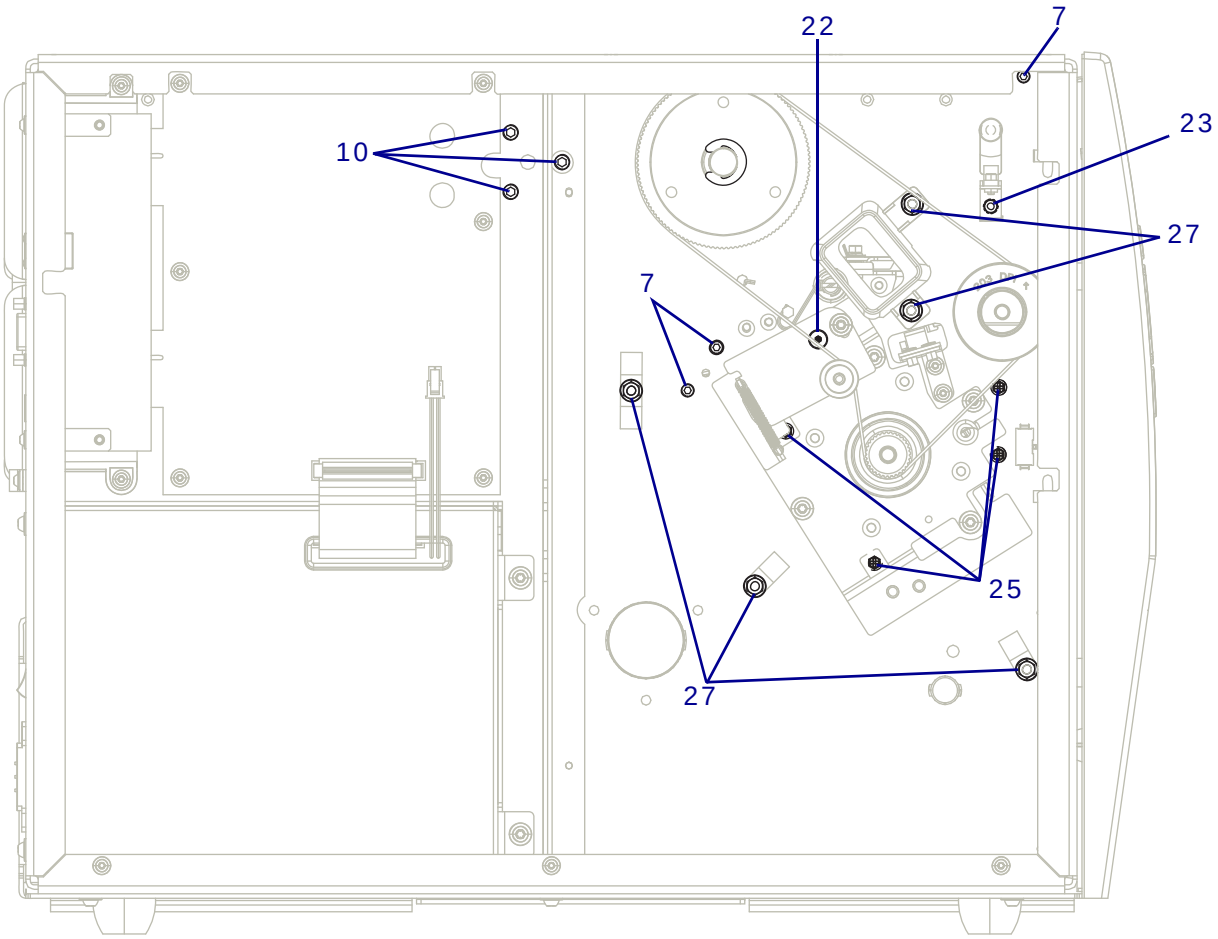
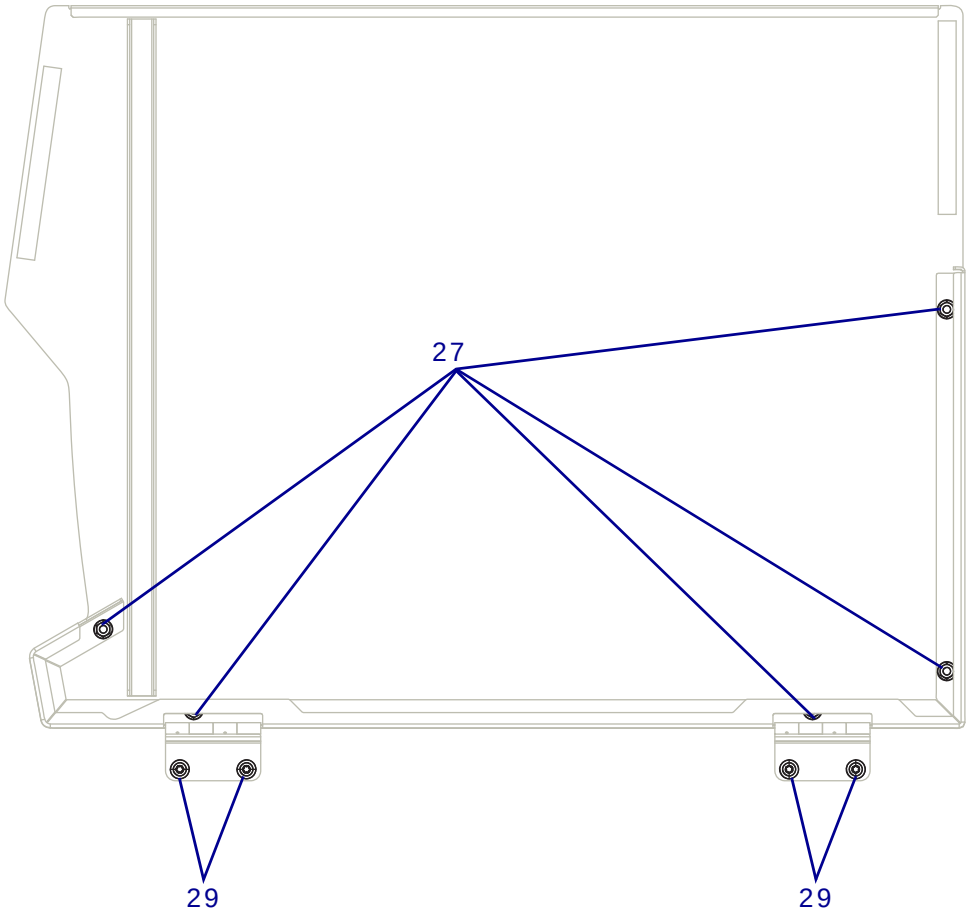


Figure 479 • Media Cover



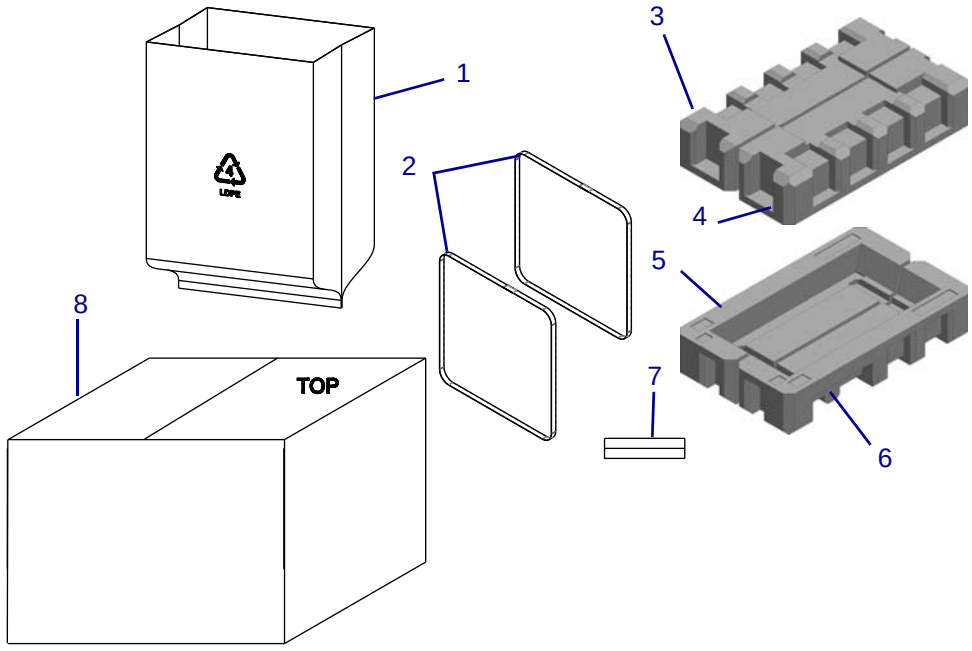
ZT510 Repackaging Kit

Important • Before repacking, call 1.877.ASK.ZEBRA (1.877.275.9327) for a Repair Order number (RO) or refer to www.zebra.com/repair.

This repackaging kit includes all of the material needed to repack the printer to transport it safely. Before packaging the printer, remove media and ribbon, and make sure that the printhead is closed.

Parts List

Figure 480 • Kit Contents



©2017 ZIH Corp and/or its affiliates. All product names and numbers are Zebra trademarks, and Zebra and the Zebra logo are registered trademarks of ZIH Corp. All rights reserved.

P1091971-001
6/30/17

Table 70 • Parts List

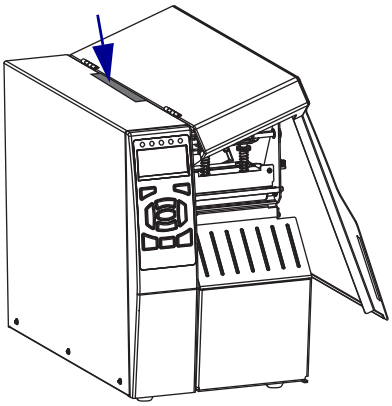
✓	Item	Qty	Part Number	Description
	Ref	1	**P1083347-024**	ZT510 Single-Box Packaging Kit
	1	1	*N/A*	Bag
	2	2	*N/A*	Lift-Out Straps
	3	1	*N/A*	Top Left Insert
	4	1	*N/A*	Top Right Insert
	5	1	*N/A*	Bottom Left Insert
	6	1	*N/A*	Bottom Right Insert
	7	1	*N/A*	Door Shim
	8	1	*N/A*	Box
	Ref	8	**P1083347-025**	ZT510 Multi-Box Packaging Kit
	1	8	*N/A*	Bag
	2	16	*N/A*	Lift-Out Straps
	3	8	*N/A*	Top Left Insert
	4	8	*N/A*	Top Right Insert
	5	8	*N/A*	Bottom Left Insert
	6	8	*N/A*	Bottom Right Insert
	7	8	*N/A*	Door Shim
	8	8	*N/A*	Box

N/A = Not available as a separate part (listed for identification purposes only).
Bold = Part available for purchase.
Light italic = Part not available for purchase, listed and shown for reference only.

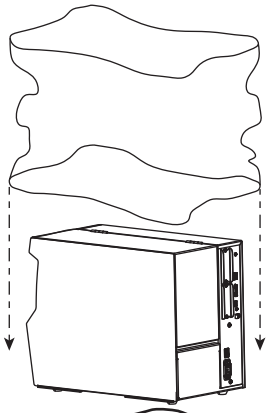
Important • Repack the complete unit as shown.

Repacking the ZT510

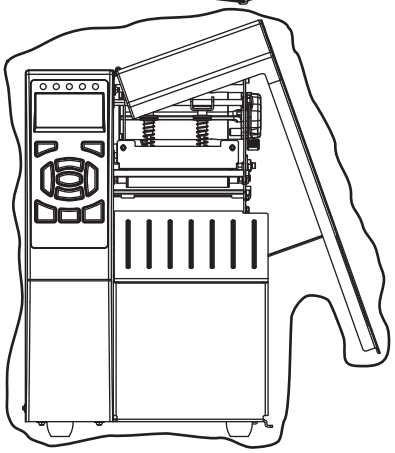
1. Lift the media door slightly.
2. Insert the door shim into the space between the hinges until the fold is at the edge of the door.
3. Close the media door, and then fold the shim until it is flat against the printer.



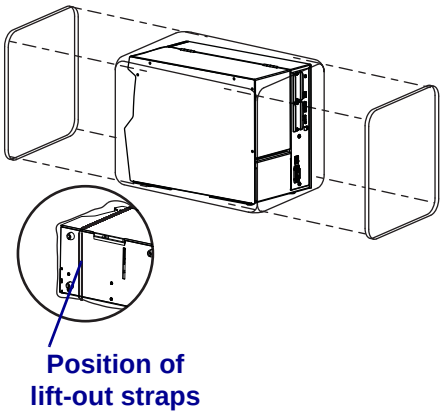
4. Slide the bag over the printer.



5. Slide the bag under the printer.
6. Gather the bag and tape it shut.
7. Open the media door slightly, and then stuff the bag inside the printer.
8. Close the media door.



9. Install the lift-out straps over bag and around the printer
10. Slide the lift-out straps toward the center of the printer until they are just past the printer feet.



11. Turn the printer on its side as shown.

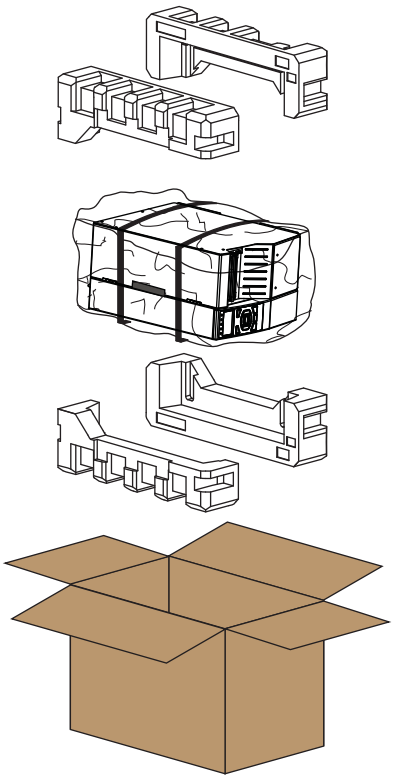
12. Lift the printer, and then fit the top left insert under the printer.

13. Lift the printer, and then fit the bottom left insert under the printer.

14. Lay the window insert on the printer.

15. Install the top and bottom right inserts.

16. Using the lift-out straps, lift the printer, and then insert it into the box.



Corporate Headquarters

Zebra Technologies Corporation
3 Overlook Point
Lincolnshire, IL 60069 USA
T: +1 847 634 6700
Toll-free +1 866 230 9494
F: +1 847 913 8766

http://www.zebra.com

P1091971-001