

# ZE511/ZE521

## Industrial Print Engine



## Service Guide



**ZEBRA**

for parts & service call QLC (800) 837-1309

ZEBRA and the stylized Zebra head are trademarks of Zebra Technologies Corporation, registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners.  
© 2021 Zebra Technologies Corporation and/or its affiliates. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements.

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

SOFTWARE: [zebra.com/informationpolicy](https://zebra.com/informationpolicy)

COPYRIGHTS: [zebra.com/copyright](https://zebra.com/copyright)

WARRANTY: [zebra.com/warranty](https://zebra.com/warranty)

END USER LICENSE AGREEMENT: [zebra.com/eula](https://zebra.com/eula)

## 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.

### Product Improvements

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

### Liability Disclaimer

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

### Limitation of Liability

In no event shall Zebra Technologies 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 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.

## Publication Date

September 3, 2021

for parts & service call QLC (800) 837-1309

# Contents

<b>Diagnostics</b> .....	<b>19</b>
Running the Print Wizard and Printing a Test Label .....	20
Judging Barcode Quality .....	22
Configuration Labels .....	24
PAUSE Self-Test .....	25
Printing and Interpreting a Sensor Profile .....	26
Media Sensor Profile .....	26
Ribbon Sensor Profile .....	27
Using Communication Diagnostics Mode .....	28
Loading Defaults or Last Saved Values .....	29
Calibrating the Ribbon and Media Sensors .....	30
<b>Troubleshooting</b> .....	<b>31</b>
Alert and Error States .....	32
Alerts and Error Messages .....	33
Indicator Lights .....	37
Repair Flowcharts .....	40
Troubleshooting .....	49
Printing or Print Quality Issues .....	49
Ribbon Issues .....	51
RFID Issues .....	53
Communications Issues .....	56
Miscellaneous Issues .....	57
Servicing the Printer .....	60
Shipping the Printer .....	60

<b>Routine Maintenance</b> .....	<b>61</b>
Cleaning Schedule and Procedures .....	61
Cleaning the Exterior, the Media Compartment, and the Sensors .....	62
Cleaning the Printhead and Rollers .....	62
Replacing Print Engine Components .....	66
Ordering Replacement Parts .....	66
Recycling Print Engine Components .....	66
Storing the Print Engine .....	66
Lubrication .....	66
Toggle Positioning and Printhead Pressure Adjustment .....	67
Changing the Toggle Position .....	67
Adjusting the Printhead Pressure .....	70
Print Line, Balance, and Skew Adjustment .....	73
Adjust the Print Line .....	74
Adjust the Balance .....	74
Adjust the Skew .....	75
<b>Data Connectors</b> .....	<b>76</b>
Applicator Interface Board Overview .....	77
Energy Star Effect on the Applicator Interface Board .....	78
Change the Applicator Interface Board Jumper Configuration .....	79
Applicator Interface Pin Configuration .....	82
Applicator Signals .....	85
Parallel Data Port .....	87
Parallel Cabling Requirements .....	87
Parallel Port Interconnections .....	87
Serial Data Port .....	89
Hardware Control Signal Descriptions .....	89
Pin Configuration .....	89
RS-232 Interface Connections .....	90

<b>Media Path Components</b> .....	<b>93</b>
<b>Printhead Maintenance Kit</b> .....	<b>99</b>
Replace the Printhead .....	100
<b>Printhead DPI Conversion Maintenance Kit</b> .....	<b>105</b>
Prepare for Installation .....	106
Replace the Printhead .....	107
Open the Electronics Enclosure .....	112
Remove the Media System Drive Cover and Belts .....	114
Replace the Compound Pulley .....	117
Replace the Media System Drive Cover and Belts .....	119
Close the Electronics Enclosure .....	122
Resume Printer Operation .....	124
<b>Platen Roller, Peel Roller, Pinch Roller Maintenance Kit</b> .....	<b>125</b>
Prepare for Installation .....	126
Replace the Pinch Roller Assembly .....	128
Replace the Peel Roller Assembly .....	130
Replace the Platen Roller Assembly .....	133
Resume Printer Operation .....	135
<b>Ground Contact Maintenance Kit</b> .....	<b>136</b>
Prepare for Installation .....	137
Replace the Ground Contact on ZE511 and ZE500-4 .....	140
Replace the Ground Contact on ZE521 and ZE500-6 .....	142
Resume Printer Operation .....	143
<b>Print Mechanism Maintenance Kit</b> .....	<b>144</b>
Prepare for Installation .....	145
Open the Electronics Enclosure .....	146
Remove the Rollers .....	148
Remove the Media Drive System .....	151
Replace the Print Mechanism .....	152
Install the Drive System .....	161
Replace the Rollers .....	161
Close the Electronics Enclosure .....	164

Print Line, Balance, and Skew Adjustment .....	166
Adjust the Print Line .....	167
Adjust the Balance .....	168
Adjust the Skew .....	168
Place Print Engine to Operating State .....	169
<b>Print Mechanism Locking Lever Maintenance Kit .....</b>	<b>170</b>
Prepare for Installation .....	171
Replace the Print Mechanism Locking Lever .....	172
Resume Printer Operation .....	176
<b>Roller Plates Maintenance Kit .....</b>	<b>177</b>
Prepare for Installation .....	178
Replace the Platen Roller Support Plate .....	179
Replace the Pinch Roller Support Plate .....	189
Print Line, Balance, and Skew Adjustment .....	190
Adjust the Print Line .....	191
Adjust the Balance .....	192
Adjust the Skew .....	192
<b>Upper Segmented Pinch Roller Maintenance Kit .....</b>	<b>193</b>
Prepare for Installation .....	195
Remove the Rollers .....	197
Remove the Media Drive System .....	201
Replace the Upper Segmented Pinch Roller .....	202
Reinstall the Media Drive System .....	206
Reinstall the Rollers .....	207
Resume Printer Operation .....	210
<b>Peel Bracket Assembly Maintenance Kit .....</b>	<b>211</b>
Prepare for Installation .....	212
Replace the Peel Bracket .....	213
Resume Printer Operation .....	214
<b>Peel Deflector and Latch Maintenance Kit .....</b>	<b>215</b>
Prepare for Installation .....	216
Remove the Platen Roller Support Plate .....	218
Replace the Platen Roller Support Plate .....	223
Reinstall the Print Engine into the Applicator .....	228

Print Line, Balance, and Skew Adjustment .....	229
Adjust the Print Line .....	230
Adjust the Balance .....	231
Adjust the Skew .....	231
<b>Platen Support and Printhead Guard Maintenance Kit .....</b>	<b>232</b>
Prepare for Installation .....	234
Remove the Rollers .....	236
Remove the Platen Support Guard .....	240
Open the Electronics Enclosure .....	241
Remove the Media Drive System .....	243
Replace the Platen Support Bar Printhead Access Guard .....	244
Install the Drive System .....	248
Close the Electronics Enclosure .....	248
Install the Rollers .....	250
Install the Printhead Access Guard .....	253
Resume Printer Operation .....	253
<b>Media Guides Maintenance Kit .....</b>	<b>254</b>
Prepare for Installation .....	255
Replace the Inboard Media Guide .....	256
Replace the Outboard Media Guide .....	257
Resume Printer Operation .....	260
<b>Media Guideposts Maintenance Kit .....</b>	<b>261</b>
Prepare for Installation .....	262
Open the Electronics Enclosure .....	263
Replace the Media Guideposts .....	265
Close the Electronics Enclosure .....	265
Resume Printer Operation .....	267
<b>Standard Peel Bar Maintenance Kit .....</b>	<b>268</b>
Replace the Peel Bar .....	269
<b>Extended Peel Bar Maintenance Kit .....</b>	<b>272</b>
Replace the Peel Bar .....	273

<b>Pivot Bar and Toggle Assemblies Maintenance Kit</b> .....	<b>276</b>
Prepare for Installation .....	278
Open the Electronics Enclosure .....	279
Remove the Extrusion Cover Plate .....	281
Replace the Pivot Bar and Toggles .....	283
Replace the Extrusion Cover Plate .....	288
Resume Printer Operation .....	290
<b>Toggle Maintenance Kit</b> .....	<b>291</b>
Prepare for Installation .....	292
Open the Electronics Enclosure .....	293
Remove the Extrusion Cover Plate .....	295
Replace the Extrusion Cover Plate .....	298
Close the Electronics Enclosure .....	300
Resume Printer Operation .....	301
<b>Toggle Position Ruler Maintenance Kit</b> .....	<b>302</b>
Replace the Toggle Position Ruler .....	302
<b>Media Drive System Components</b> .....	<b>303</b>
<b>Media Drive System Maintenance Kit</b> .....	<b>306</b>
Prepare for Installation .....	307
Remove the Platen Roller .....	308
Remove the Peel Roller .....	309
Remove the Pinch Roller .....	311
Open the Electronics Enclosure .....	312
Remove the Media Drive System .....	314
Reinstall the Drive System .....	315
Reinstall the Pinch Roller .....	315
Reinstall the Peel Roller .....	316
Reinstall the Platen Roller .....	317
Close the Electronics Enclosure .....	318
Resume Printer Operation .....	320



<b>Stepper Motor for Media Drive System Maintenance Kit .....</b>	<b>321</b>
Prepare for Installation .....	322
Remove the Platen Roller .....	323
Remove the Peel Roller .....	324
Remove the Pinch Roller .....	326
Open the Electronics Enclosure .....	327
Remove the Drive System .....	329
Remove the Stepper Motor Belt .....	331
Remove the Stepper Motor .....	332
Replace the Stepper Motor .....	333
Replace the Stepper Motor Belt .....	334
Reinstall the Drive System .....	335
Reinstall the Pinch Roller .....	335
Reinstall the Peel Roller .....	336
Reinstall the Platen Roller .....	337
Close the Electronics Enclosure .....	338
Resume Printer Operation .....	340
<b>Media Roller Couplers Maintenance Kit .....</b>	<b>341</b>
Prepare for Installation .....	342
Open the Electronics Enclosure .....	343
Remove the Media Rollers .....	345
Remove the Media Drive System .....	349
Remove the Media Drive Belt .....	350
Replace the Media Drive Couplers .....	353
Install the Media Drive Belt .....	356
Install the Drive System .....	359
Replace the Media Rollers .....	359
Reinstall the Print Engine into the Applicator .....	362
Print Line, Balance, and Skew Adjustment .....	363
Adjust the Print Line .....	364
Adjust the Balance .....	365
Adjust the Skew .....	365

<b>Media Drive Belts Maintenance Kit .....</b>	<b>366</b>
Belt Handling Guidelines .....	366
Incorrect Belt Handling .....	366
Correct Belt Handling .....	367
Prepare for Installation .....	369
Open the Electronics Enclosure .....	370
Remove the Drive System Cover .....	372
Remove the Belts .....	373
Replace the Pulleys .....	375
Replace the Platen Roller and Stepper Motor Belts .....	376
Close the Electronics Enclosure .....	379
Resume Printer Operation .....	380
<b>Media Drive System Idler Pulleys Maintenance Kit .....</b>	<b>381</b>
Belt Handling Guidelines .....	381
Incorrect Belt Handling .....	381
Correct Belt Handling .....	382
Prepare for Installation .....	384
Open the Electronics Enclosure .....	385
Remove the Drive System Cover .....	387
Remove the Belts .....	388
Replace the Pulleys .....	390
Replace the Platen Roller and Stepper Motor Belts .....	391
Close the Electronics Enclosure .....	394
Resume Printer Operation .....	395
<b>Media Drive System Pulleys Maintenance Kit .....</b>	<b>396</b>
Belt Handling Guidelines .....	396
Incorrect Belt Handling .....	396
Correct Belt Handling .....	397
Prepare for Installation .....	399
Open the Electronics Enclosure .....	400
Remove the Rollers .....	402
Remove the Media Drive System .....	406
Remove the Drive System Cover .....	407
Remove the Belts .....	408
Remove the Pulleys .....	410
Replace the Platen Roller and Stepper Motor Belts .....	413
Close the Electronics Enclosure .....	416
Resume Printer Operation .....	417

<b>Media Drive System Hardware Maintenance Kit .....</b>	<b>418</b>
<b>Ribbon Drive System Components .....</b>	<b>422</b>
<b>Ribbon Drive System Maintenance Kit .....</b>	<b>425</b>
Prepare for Installation .....	426
Open the Electronics Enclosure .....	428
Remove the Ribbon Take-up Drive .....	431
Close the Electronics Enclosure .....	435
Resume Printer Operation .....	437
<b>Ribbon Spindles Maintenance Kit .....</b>	<b>438</b>
Prepare for Installation .....	440
Open the Electronics Enclosure .....	441
Remove the Ribbon Drive .....	444
Replace the Ribbon Spindles .....	445
Install the Ribbon Drive .....	446
Close the Electronics Enclosure .....	450
Resume Printer Operation .....	452
<b>Ribbon Drive System Gears Maintenance Kit .....</b>	<b>453</b>
Prepare for Installation .....	454
Open the Electronics Enclosure .....	455
Replace the Ribbon Drive System Gears .....	457
Close the Electronics Enclosure .....	462
Resume Printer Operation .....	463
<b>Ribbon Dancer and Ribbon Rollers Maintenance Kit .....</b>	<b>464</b>
Prepare for Installation .....	466
Open the Electronics Enclosure .....	467
Remove the Rollers .....	470
Remove the Media Drive System .....	474
Replace the Upper and Lower Ribbon Rollers .....	475
Install the Media Drive System .....	487
Replace the Dancer Roller .....	487
Install the Media Drive .....	488
Install the Drive System .....	488
Reinstall the Rollers .....	489
Close the Electronics Enclosure .....	492

Print Line, Balance, and Skew Adjustment .....	494
Adjust the Print Line .....	495
Adjust the Balance .....	495
Adjust the Skew .....	496
Resume Printer Operation .....	496
<b>Encoder Sensors Maintenance Kit .....</b>	<b>497</b>
Prepare for Installation .....	498
Open the Electronics Enclosure .....	499
Remove the Ribbon Drive System .....	501
Replace the Supply and Take-Up Encoder Sensors .....	503
Replace the Ribbon Drive System .....	506
Close the Electronics Enclosure .....	507
Resume Printer Operation .....	509
<b>Ribbon Strip Plate and Static Brush Maintenance Kit .....</b>	<b>510</b>
Prepare for Installation .....	511
Remove the Media Cover .....	513
Replace the Anti-Static Strip .....	514
Replace the Strip Plate .....	515
Install the Media Cover .....	516
Resume Printer Operation .....	517
Adjust the Strip Plate .....	518
<b>Ribbon Take-up Mounting Hardware Maintenance Kit .....</b>	<b>519</b>
Prepare for Installation .....	521
Open the Electronics Enclosure .....	522
Replace the Ribbon Take-up Bracket .....	525
Close the Electronics Enclosure .....	533
Resume Printer Operation .....	535
<b>Sensors .....</b>	<b>536</b>
<b>Media Sensor Maintenance Kit .....</b>	<b>538</b>
Prepare for Installation .....	540
Open the Electronics Enclosure .....	541
Remove the Rollers .....	543
Remove the Media Drive System .....	546
Remove the Upper Media Sensor .....	547
Replace the Lower Media Sensor .....	550

Install the Upper Media Sensor .....	556
Reinstall the Media System Drive .....	558
Reinstall the Rollers .....	559
Close the Electronics Enclosure .....	561
Resume Printer Operation .....	562
Adjust Media Tracking .....	563
Skew Adjustments .....	563
Pressure Balance Adjustment (between the Upper and Lower Pinch Rollers) .....	565
Media Tension Adjustment across the Peel Bar .....	566
 <b>Ribbon Sensor Maintenance Kit .....</b>	 <b>567</b>
Prepare for Installation .....	569
Open the Electronics Enclosure .....	570
Remove the Rollers .....	572
Remove the Media Drive System .....	576
Replace the Ribbon Sensor .....	577
Reinstall Media Drive .....	580
Close the Electronics Enclosure .....	581
Reinstall the Rollers .....	582
Resume Printer Operation .....	585
 <b>Printhead Open Sensor Maintenance Kit .....</b>	 <b>586</b>
Prepare for Installation .....	587
Open the Electronics Enclosure .....	588
Replace the Printhead Open Sensor .....	590
Close the Electronics Enclosure .....	593
Resume Printer Operation .....	594
 <b>Door-Open Sensor Maintenance Kit .....</b>	 <b>595</b>
Prepare for Installation .....	597
Open the Electronics Enclosure .....	598
Remove the Old Sensor .....	600
Install the New Sensor .....	602
Close the Electronics Enclosure .....	605
Resume Printer Operation .....	606

<b>Electronic Components .....</b>	<b>607</b>
<b>Main Logic Board Maintenance Kit .....</b>	<b>611</b>
Prepare for Installation .....	612
Open the Electronics Enclosure .....	613
Replace the Main Logic Board .....	616
Close the Electronics Enclosure .....	625
Resume Printer Operation .....	626
<b>Printhead Interface Adapter Maintenance Kit .....</b>	<b>627</b>
Prepare for Installation .....	628
Open the Electronics Enclosure .....	629
Remove the Printhead .....	631
Remove the Rollers .....	633
Remove the Media Drive System .....	637
Remove the Print Mechanism .....	638
Replace the Printhead Interface Adapter .....	642
Replace the Print Mechanism .....	647
Replace the Printhead .....	652
Install the Media Drive System .....	653
Replace the Rollers .....	653
Close the Electronics Enclosure .....	657
Clean the Printhead .....	659
Resume Printer Operation .....	659
Print Line, Balance, and Skew Adjustment .....	660
Adjust the Print Line .....	661
Adjust the Balance .....	662
Adjust the Skew .....	662
Place the Print Engine Back to Operating State .....	663
<b>Power Supply Maintenance Kit .....</b>	<b>664</b>
Prepare for Installation .....	665
Open the Electronics Enclosure .....	666
Replace the Power Supply .....	668
Close the Electronics Enclosure .....	671
Resume Printer Operation .....	673
<b>Ribbon Tension Control Board Maintenance Kit .....</b>	<b>674</b>
Prepare for Installation .....	675
Open the Electronics Enclosure .....	676
Replace the Ribbon Tension Control Board .....	678

for parts & service call QLC (800) 837-1309

Close the Electronics Enclosure .....	680
Resume Printer Operation .....	681
<b>RFID Module Maintenance Kit .....</b>	<b>682</b>
Prepare for Installation .....	684
Open the Electronics Enclosure .....	685
Install the RFID Module .....	687
Close the Electronics Enclosure .....	697
Verify the Operation of the RFID Assembly .....	698
Complete the Installation .....	699
Resume Printer Operation .....	700
<b>RFID Replacement Maintenance Kit .....</b>	<b>701</b>
Prepare for Installation .....	703
Open the Electronics Enclosure .....	704
Attach the RFID Cable to the Radome .....	706
Replace the RFID Module .....	707
Close the Electronics Enclosure .....	719
Complete the Installation .....	721
Resume Printer Operation .....	721
<b>Printhead Cables Maintenance Kit .....</b>	<b>722</b>
Prepare for Installation .....	724
Open the Electronics Enclosure .....	725
Remove the Rollers .....	727
Remove the Media Drive System .....	730
Replace the Printhead Cables .....	732
Install the Media Drive System .....	741
Replace the Rollers .....	742
Close the Electronics Enclosure .....	745
Clean the Printhead .....	747
Resume Printer Operation .....	747
Print Line, Balance, and Skew Adjustment .....	748
Adjust the Print Line .....	749
Adjust the Balance .....	750
Adjust the Skew .....	750
Place Print Engine to Operating State .....	751

<b>Electronics Cables Maintenance Kit .....</b>	<b>752</b>
<b>Option Boards .....</b>	<b>755</b>
<b>Applicator Interface Board Maintenance Kit .....</b>	<b>759</b>
Installation of Only the New Applicator Interface Board .....	760
Installation of Both the New Applicator Interface Board and Cable .....	762
Prepare for Installation .....	762
Replace the Applicator Interface Board and Cable .....	763
Applicator Interface Board Overview .....	767
Jumper Configuration .....	768
Applicator Interface Pin Configuration .....	769
Applicator Signals .....	772
Energy Star Effect on the Applicator Interface Board .....	773
<b>ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit .....</b>	<b>774</b>
Install the Wireless Card .....	775
Configure the Wireless Card .....	778
<b>ZebraNet Wireless Print Server Antenna Maintenance Kit .....</b>	<b>779</b>
Replace the ZebraNet Wireless Print Server Antenna .....	779
<b>ZebraNet Internal Wireless Print Server Magnetic Mount and Tethered Cable Kit .....</b>	<b>780</b>
Install the Magnetic Mount and Tethered Cable .....	781
<b>Parallel Port Option/Maintenance Kit .....</b>	<b>782</b>
Install the Parallel Port Card .....	782
Resume Printer Operation .....	783
<b>IPv4 Internal Print Server Maintenance Kit .....</b>	<b>784</b>
Getting Started .....	785
Remove the Old Option Card .....	786
Remove the Cover Plate .....	787
Install the IPv4 Internal Print Server .....	788
Resume Printer Operation .....	789



<b>Slot Covers for Options</b> .....	<b>790</b>
Prepare for Installation .....	791
Install the Option Card Cover .....	792
Insert the Ethernet Port Plug .....	793
Install the Rear HDMI Plug .....	794
Resume Printer Operation .....	796
 <b>Exterior Components</b> .....	 <b>797</b>
 <b>Control Panel Maintenance Kit</b> .....	 <b>802</b>
Prepare for Installation .....	804
Open the Electronics Enclosure .....	805
Replace the Control Panel .....	807
Close the Electronics Enclosure .....	812
Resume Printer Operation .....	813
 <b>Deported Control Panel Maintenance Kit</b> .....	 <b>814</b>
Prepare for Installation .....	816
Open the Electronics Enclosure .....	817
Install the New HDMI Rear Port .....	819
Close the Electronics Enclosure .....	821
Install the Deported Control Panel .....	822
Resume Printer Operation .....	825
 <b>Media Cover Maintenance Kit</b> .....	 <b>826</b>
Prepare for Installation .....	827
Open the Electronics Enclosure .....	828
Replace the Media Cover .....	830
Close the Electronics Enclosure .....	833
Resume Printer Operation .....	835
 <b>Media Window Maintenance Kit</b> .....	 <b>836</b>
Replace the Media Window .....	837
 <b>Media Cover Hinges Maintenance Kit</b> .....	 <b>839</b>
Replace the Hinges .....	840

<b>Electronics Cover Maintenance Kit .....</b>	<b>843</b>
Prepare for Installation .....	845
Remove the Electronics Enclosure .....	846
Install the Electronics Enclosure Cover .....	847
Resume Printer Operation .....	848
<b>Electronic Cover Long Screws Maintenance Kit .....</b>	<b>849</b>
Prepare for Installation .....	850
Open the Electronics Enclosure .....	851
Replace Spacer Tubes and Tube Clamps .....	853
Replace the Conductive Washers .....	855
Close the Electronics Enclosure .....	856
Resume Printer Operation .....	858
<b>Electronics Chassis Latch Maintenance Kit .....</b>	<b>859</b>
Prepare for Installation .....	860
Open the Electronics Enclosure .....	861
Replace the Chassis Latch .....	863
Close the Electronics Enclosure .....	864
Resume Printer Operation .....	866
<b>Assorted Hardware Maintenance Kit .....</b>	<b>867</b>
Right Side View .....	874
Left Side View .....	875
Rear of Mainframe .....	876
Media Drive Hardware .....	877
Media Drive Inboard Hardware .....	877
Media Drive Removed .....	878
Ribbon Drive Inboard .....	878
<b>Control Panel Cover .....</b>	<b>879</b>
Clean the Control Panel .....	880
Install the Control Panel Cover .....	880
<b>Repacking Instructions .....</b>	<b>882</b>
Remove the Print Engine from Applicator .....	883
Repack the Print Engine .....	884

# Diagnostics

This section provides assorted diagnostic tests.

for parts & service call QLC (800) 837-1309

## Running the Print Wizard and Printing a Test Label

The Print Wizard configures the printer, prints test labels, and adjusts print quality based on the results of the test labels.



**IMPORTANT:** When using the Wizards, do not send data to the printer from the host.

For best results, use full-width media running the **Print Wizard** or **Set All Wizard**. If the media is smaller than an image to be printed, the results may be truncated or print across multiple labels.

After you have completed the printer setup procedures and run the printer setup wizard, use this section to print a test label. Printing this label allows you to see if your connection is working and if you need to adjust any of the print settings.

1. On the Home screen, touch **Wizards > Print > Start Print**.
2. Follow the prompts to specify the following information:
  - print type (Thermal Transfer or Direct Thermal)
  - media type (Continuous, Gap/Notch, or Mark)
  - label width
  - media handling method (tear off, peel-off, rewind, cutter, delayed cut, linerless peel, linerless rewind, linerless tear, or applicator)

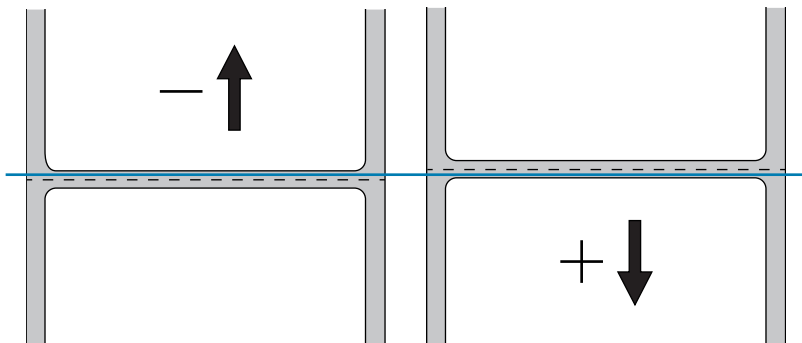
After you have specified these, the wizard instructs you to load media and then to place a label over the media sensor.

3. If you have not already done so, load media, and then touch the check mark.
4. At the prompt, close the printhead, and then touch the next check mark.  
The printer calibrates and then asks if you would like to print a test label.
5. Follow the prompts until the printer completes auto calibration.
6. When asked to print a test label, touch the check mark.

A test label similar to this one prints. If your labels are smaller than the image, only a portion of the test label prints.



7. Examine the position of the label over the tear bar. If necessary, shift the position of the media over the tear-off bar after printing.
  - If the space between labels falls on the tear bar, continue with the next step.
  - If the space between labels does not fall directly on the tear bar, shift the position of the media over the tear bar after printing. Lower numbers move the media into the printer by the specified number of dots (the tear line moves closer to the edge of the label just printed). Higher numbers move the media out of the printer (the tear line moves closer to the leading edge of the next label).



8. Examine the quality of the image on the test label. Is the quality of the barcode and text on the test label acceptable? See [Judging Barcode Quality on page 22](#) for assistance.
  - If yes, touch the check mark, and then continue with [step 13](#).
  - If no, adjust the print quality manually by changing darkness and speed settings through the printer's menu system, or continue with this procedure to run the Print Quality Assistance wizard.

#### Print Quality Assistance Wizard

9. Touch **Print Quality Assistance**.

The printer prompts for the number of test labels to print. The more labels you choose to print, the more choices that you will have available to decide on label quality. In general, if your test label from the previous wizard was acceptable, a lower number of test labels in this step will probably suffice.

10. Select a number of test labels to print.

The printer prints the specified number of test labels and prompts you for the best test label.

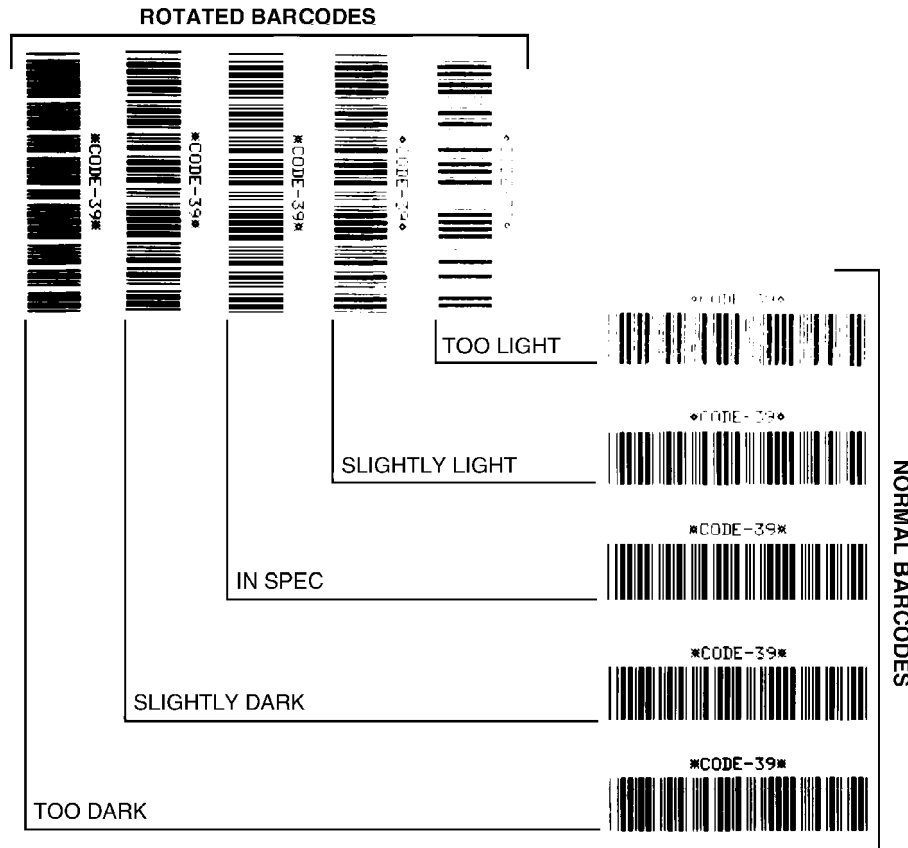
11. Decide which test label is the best quality. See [Judging Barcode Quality on page 22](#) for assistance. If none of the labels are acceptable, use the arrow to back up a screen in the wizard, and select a larger number of test labels.
12. In the list on the display, select the identifier for the test label with the best quality, and then touch the check mark.
 

The printer changes the darkness and speed to the levels used on the best test label.
13. If necessary, see [Printing or Print Quality Issues on page 49](#) to see what other issues may be affecting your print quality.

## Judging Barcode Quality

Figure 1 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. The Print Quality Assistant in [Running the Print Wizard and Printing a Test Label on page 20](#) can help you determine the best settings.

Figure 1 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

A barcode that is “in-spec” (within specifications) 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 is within specifications.
- 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 barcodes.

- Both normal and rotated barcodes will be in spec.
- 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.

# Configuration Labels

Some of the most commonly used diagnostic items are the printer configuration label and the network configuration label. Sample labels are shown in Figure 2. Analyzing the information on these labels can help you to troubleshoot potential issues.

To print a printer configuration label, touch **Menu > Settings > Print: System Settings**.

To print a network configuration label, touch **Menu > Connection > Networks > Print: Network Info**.

Figure 2 Sample Labels

Printer Configuration Label

PRINTER CONFIGURATION	
Zebra Technologies ZTC ZTXXX-XXXdpi ZPL XXXXXXXXXXXX	
+30.0.....	DARKNESS
6.0 IPS.....	PRINT SPEED
-007.....	TEAR OFF
TEAR OFF.....	PRINT MODE
CONTINUOUS.....	MEDIA TYPE
TRANSMISSIVE.....	SENSOR SELECT
DIRECT-THERMAL.....	PRINT METHOD
1344.....	PRINT WIDTH
2000.....	LABEL LENGTH
P1085892/00005 2.....	PRINT HEAD ID
15.0IN 380MM.....	MAXIMUM LENGTH
MAINT. OFF.....	EARLY WARNING
CONNECTED.....	USB COMM.
BIDIRECTIONAL.....	PARALLEL COMM.
RS232.....	SERIAL COMM.
9600.....	BAUD
8 BITS.....	DATA BITS
NONE.....	PARITY
XON/XOFF.....	HOST HANDSHAKE
NONE.....	PROTOCOL
NORMAL MODE.....	COMMUNICATIONS
<> 7EH.....	CONTROL PREFIX
<> 5EH.....	FORMAT PREFIX
<> 2CH.....	DELIMITER CHAR
ZPL 11.....	ZPL MODE
INACTIVE.....	COMMAND OVERRIDE
FEED.....	MEDIA POWER UP
LENGTH.....	HEAD CLOSE
DEFAULT.....	BACKFEED
+000.....	A-BEL OP
+0000.....	LEFT POSITION
OFF.....	APPLICATOR PORT
ENABLED.....	ERROR ON PAUSE
PULSE MODE.....	START PRINT SIG
DISABLED.....	REPRINT MODE
080.....	WEB SENSOR
080.....	MEDIA SENSOR
255.....	TAKE LABEL
027.....	MARK SENSOR
027.....	MARK RED SENSOR
000.....	TRANS GAIN
005.....	TRANS BASE
060.....	TRANS LED
002.....	MARK GAIN
100.....	MARK LED
DPCSIFXM.....	MODES ENABLED
1344 8/MM FULL.....	MODES DISABLED
4.0.....	RESOLUTION
V80.20.03 X.....	LINK-OS VERSION
1.3.....	FIRMWARE
6.6.0 22.89.....	XML SCHEMA
32768k.....	HARDWARE ID
524288k.....	R: RAM
NONE.....	E: ONBOARD FLASH
MM/DD/YYYY 24HR.....	FORMAT CONVERT
05/11/17.....	IDLE DISPLAY
06:40.....	RTC DATE
ENABLED.....	RTC TIME
2.1.....	ZBI VERSION
READY.....	ZBI STATUS
TH:MG6 MICRO.....	RFID READER
20.00.00.01.....	RFID HW VERSION
01.03.00.18.....	RFID FW VERSION
USA/CANADA.....	RFID REGION CODE
USA/CANADA.....	RFID COUNTRY CODE
RFID OK.....	RFID ERR STATUS
16.....	RFID READ PWR
16.....	RFID WRITE PWR
F0.....	PROG. POSITION
0.....	RFID VALID CTR
0.....	RFID VOID CTR
NONE.....	ADAPTIVE ANTENNA
A4.....	RFID ANTENNA
S70 LABELS.....	NONRESET CNTR
S70 LABELS.....	RESET CNTR1
S70 LABELS.....	RESET CNTR2
2,798 IN.....	NONRESET CNTR
2,798 IN.....	RESET CNTR1
2,798 IN.....	RESET CNTR2
7,107 CM.....	NONRESET CNTR
7,107 CM.....	RESET CNTR1
7,107 CM.....	RESET CNTR2
001 WIRELESS.....	SLOT 1
*** EMPTY.....	SLOT 2
0.....	MASS STORAGE COUNT
0.....	HID COUNT
OFF.....	USB HOST LOCK OUT
FIRMWARE IN THIS PRINTER IS COPYRIGHTED	

Network Configuration Label

Network Configuration	
Zebra Technologies ZTC ZTXXX-XXXdpi ZPL XXXXXXXXXXXX	
Wired.....	PRIMARY NETWORK
PrintServer.....	LOAD LAN FROM?
INTERNAL WIRED.....	ACTIVE PRINTSRVR
Wired*	
ALL.....	IP PROTOCOL
192.168.000.017.....	IP ADDRESS
255.255.255.000.....	SUBNET
192.168.000.254.....	GATEWAY
000.000.000.000.....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
300.....	TIMEOUT VALUE
000.....	ARP INTERVAL
9100.....	BASE RAW PORT
9200.....	JSON CONFIG PORT
Wireless	
ALL.....	IP PROTOCOL
000.000.000.000.....	IP ADDRESS
255.255.255.000.....	SUBNET
000.000.000.000.....	GATEWAY
000.000.000.000.....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
300.....	TIMEOUT VALUE
000.....	ARP INTERVAL
9100.....	BASE RAW PORT
9200.....	JSON CONFIG PORT
INSERTED.....	CARD INSERTED
02dfH.....	CARD MFG ID
9134H.....	CARD PRODUCT ID
ac:3f:a4:82:05:9c.....	MAC ADDRESS
YES.....	DRIVER INSTALLED
INFRASTRUCTURE.....	OPERATING MODE
125.....	ESSID
1.0.....	CURRENT TX RATE
OPEN.....	WEP TYPE
WPA PSK.....	WLAN SECURITY
1.....	WEP INDEX
000.....	POOR SIGNAL
LONG.....	PREAMBLE
NO.....	ASSOCIATED
ON.....	PULSE ENABLED
15.....	PULSE RATE
OFF.....	INTL MODE
USA/CANADA.....	REGION CODE
USA/CANADA.....	COUNTRY CODE
0x7FF.....	CHANNEL MASK
Bluetooth	
4.3.1p1.....	FIRMWARE
02/13/2015.....	DATE
on.....	DISCOVERABLE
3.0/4.0.....	RADIO VERSION
on.....	ENABLED
AC:3f:a4:82:05:9d.....	MAC ADDRESS
76J162700886.....	FRIENDLY NAME
no.....	CONNECTED
1.....	MIN SECURITY MODE
nc.....	CONN SECURITY MODE
supported.....	IOS
FIRMWARE IN THIS PRINTER IS COPYRIGHTED	



## PAUSE Self-Test

Use this self-test to provide the test labels required when making adjustments to the print engine's mechanical assemblies or to determine if any printhead elements are not working. [Figure 3](#) shows a sample printout.

**Figure 3** PAUSE Self-Test Label



1. Turn off (O) the print engine.
2. Press and hold **PAUSE** while turning on (I) the print engine. Hold **PAUSE** until the first control panel light turns off.
  - The initial self-test prints 15 labels at the print engine's slowest speed, and then automatically pauses the print engine. Each time **PAUSE** is pressed, an additional 15 labels print.
  - While the print engine is paused, pressing **CANCEL** alters the self-test. Each time **PAUSE** is pressed, 15 labels print at 152 mm (6 in.) per second.
  - While the print engine is paused, pressing **CANCEL** again alters the self-test a second time. Each time **PAUSE** is pressed, 50 labels print at the print engine's slowest speed
  - While the print engine is paused, pressing **CANCEL** again alters the self-test a third time. Each time **PAUSE** is pressed, 50 labels print at 152 mm (6 in.) per second.
  - While the print engine is paused, pressing **CANCEL** again alters the self-test a fourth time. Each time **PAUSE** is pressed, 15 labels print at the print engine's maximum speed.
3. To exit this self-test at any time, press and hold **CANCEL**.

## Printing and Interpreting a Sensor Profile

Touch **Menu > Print > Print Quality > Print: Sensor Profile** to print a sensor profile image (which extends across several actual labels or tags). Use the sensor profile image 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.

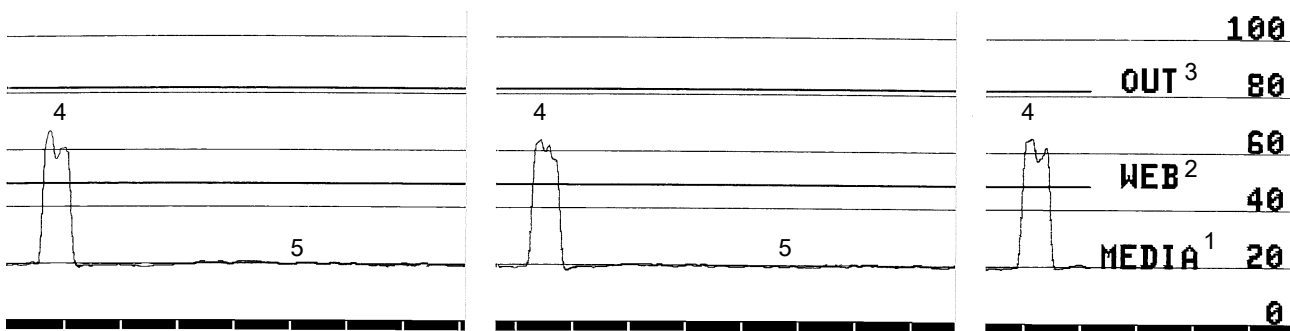
Compare your results to the examples shown in this section. If the sensitivity of the sensors must be adjusted, calibrate the printer (see [Calibrating the Ribbon and Media Sensors on page 30](#)).

### Media Sensor Profile

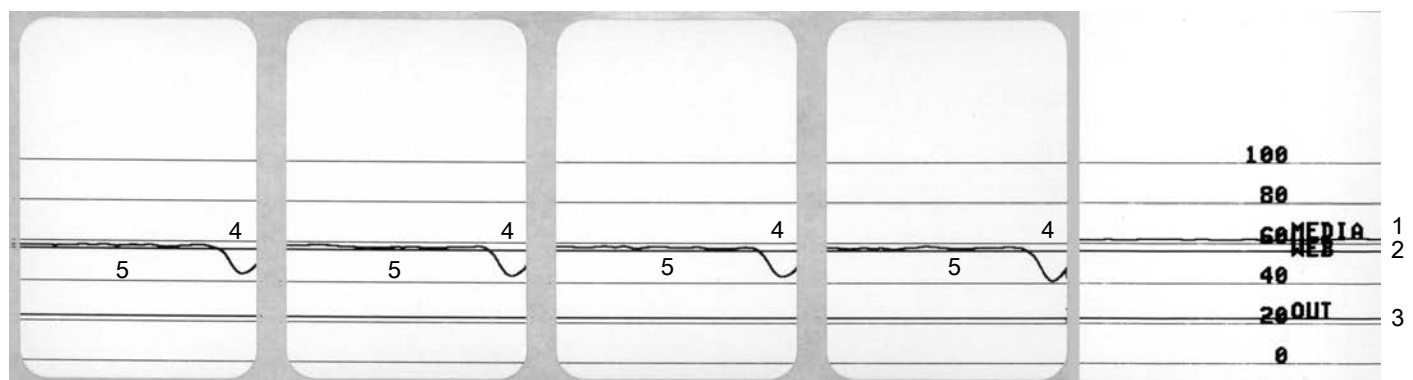
The line labeled **MEDIA** (1) on the sensor profile indicates the media sensor readings. The media sensor threshold settings is indicated by **WEB** (2). The media out threshold is indicated by **OUT** (3). The upward or downward spikes (4) indicate divisions between labels (the web, notch, or black mark), 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 print engine may be having difficulty determining where the gaps are located.

**Figure 4** Media Sensor Profile (Gap/Notch Media)

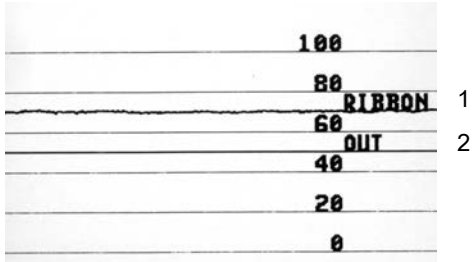


**Figure 5** Media Sensor Profile (Black Mark Media)



## Ribbon Sensor Profile

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 print engine does not acknowledge that ribbon is loaded.



## Using Communication Diagnostics Mode

The communication diagnostics test is a troubleshooting tool for checking the interconnection between the print engine 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 print engine prints all characters received, including control codes such as CR (carriage return). [Figure 6](#) shows a typical test label from this test.

**Figure 6** Sample Communications Diagnostics Mode Label



1. Set the label width equal to or less than the actual media width being used for the test. Touch **Settings > Media Settings** to access the label width setting.
2. Touch **Menu > System > Program Language > Diagnostic Mode**, and change the setting to **Print**.  
The printer enters diagnostics mode and prints any data received from the host computer on a test label



**NOTE:** Other options for this mode include **E:Drive** for saving the output to the print engine's hard drive and **USB Host** to save the output to a device that is connected to the USB host port.

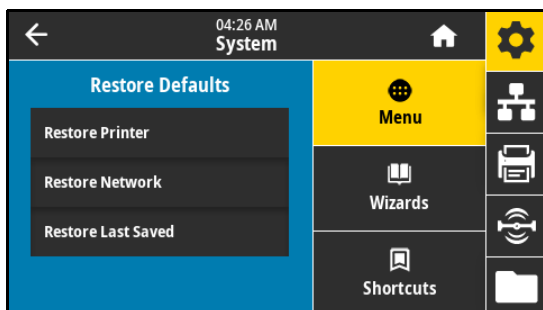
3. Check the output for error codes. For any errors, check that your communication parameters are correct.  
Errors show on the test label as follows:
  - **FE** indicates a framing error.
  - **OE** indicates an overrun error.
  - **PE** indicates a parity error.
  - **NE** indicates noise.
4. To exit this self-test and return to normal operation, power cycle the printer or set the **Diagnostic Mode** option to **Off**.

The `input.capture` SGD command also can be used to run diagnostics mode. Refer to the Zebra Programming Guide for more information.

## Loading Defaults or Last Saved Values

Restoring the printer to default values or to the last saved values can help if things are not working as expected. Use care when loading defaults because you will need to reload all settings that you changed manually.

Touch **Menu > System > Settings > Restore Defaults** to see the available options.



- **Restore Printer**—Restores all printer settings other than the network settings back to the factory defaults.
- **Restore Network**—Reinitializes the printer's wired or wireless print server. With a wireless print server, the printer also reassociates with your wireless network.
- **Restore Last Saved**—Loads settings from the last permanent save.

Related ZPL command(s):

- PRINTER— ^JUF
- NETWORK— ^JUN
- LAST SAVED— ^JUR

Control panel key(s):

- PRINTER—Hold **FEED + PAUSE** during printer power-up to reset the printer parameters to factory values.
- NETWORK—Hold **CANCEL + PAUSE** during printer power-up to reset the network parameters to factory values.
- LAST SAVED—N/A

Printer web page:

- PRINTER—View and Modify Printer Settings > Restore Default Configuration
- NETWORK—Print Server Settings > Reset Print Server
- LAST SAVED—View and Modify Printer Settings > Restore Saved Configuration

## Calibrating the Ribbon and Media Sensors

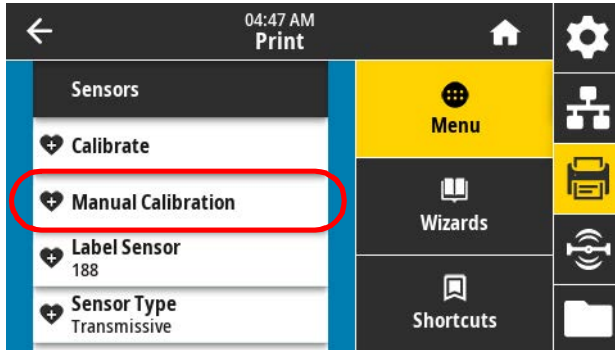
Use the procedure in this section to calibrate the printer, which adjusts the sensitivity of the media and ribbon sensors.



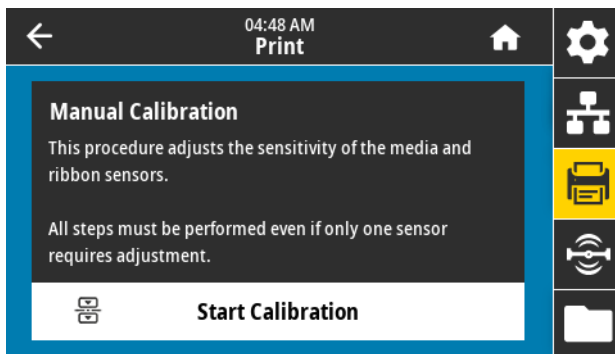
**IMPORTANT:** Follow the calibration procedure exactly as presented.

To cancel the calibration process, press and hold **CANCEL** at any step in the procedure.

1. Touch **Menu > Print > Sensors > Manual Calibration**.



The printer prompts you to start calibration.



2. Touch **Start Calibration**.
3. Follow the steps in the calibration procedure.
4. When calibration is complete, press **PAUSE** to exit pause mode and enable printing.

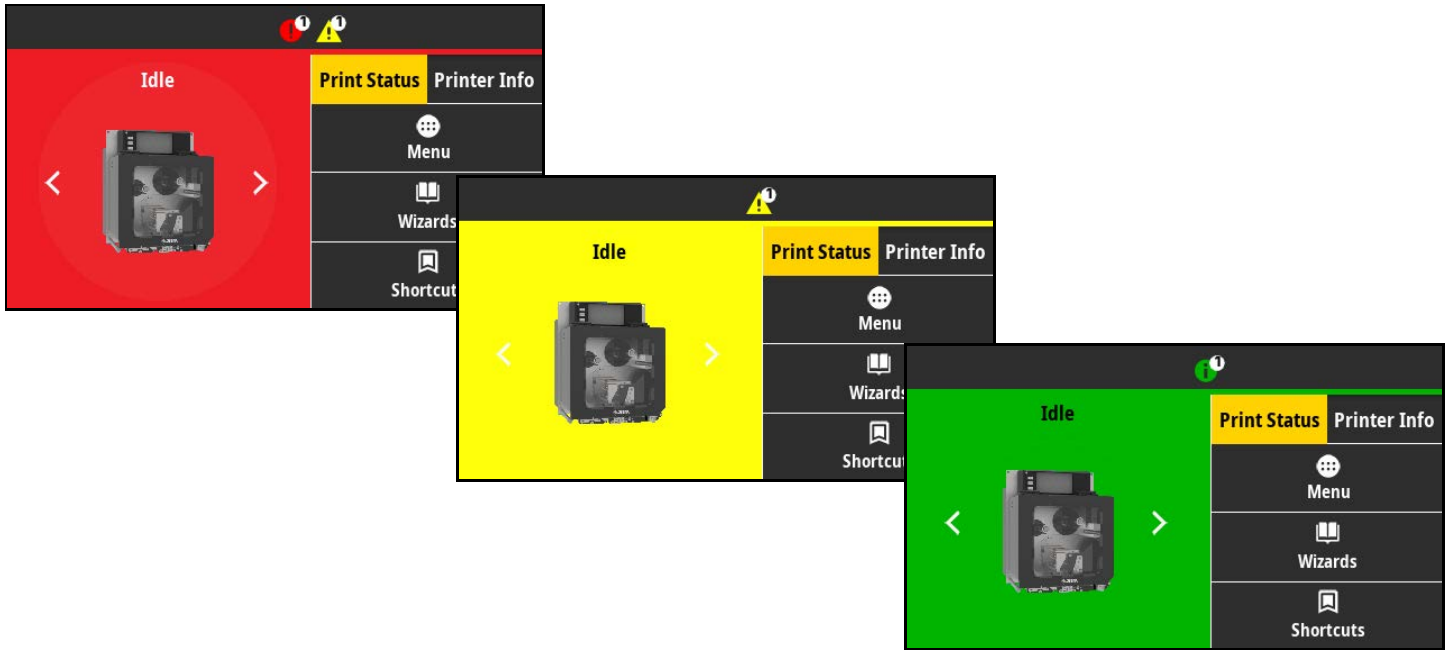
# Troubleshooting

This section provides ways to troubleshoot issues with the print engine. When applicable, you are instructed which parts to replace.

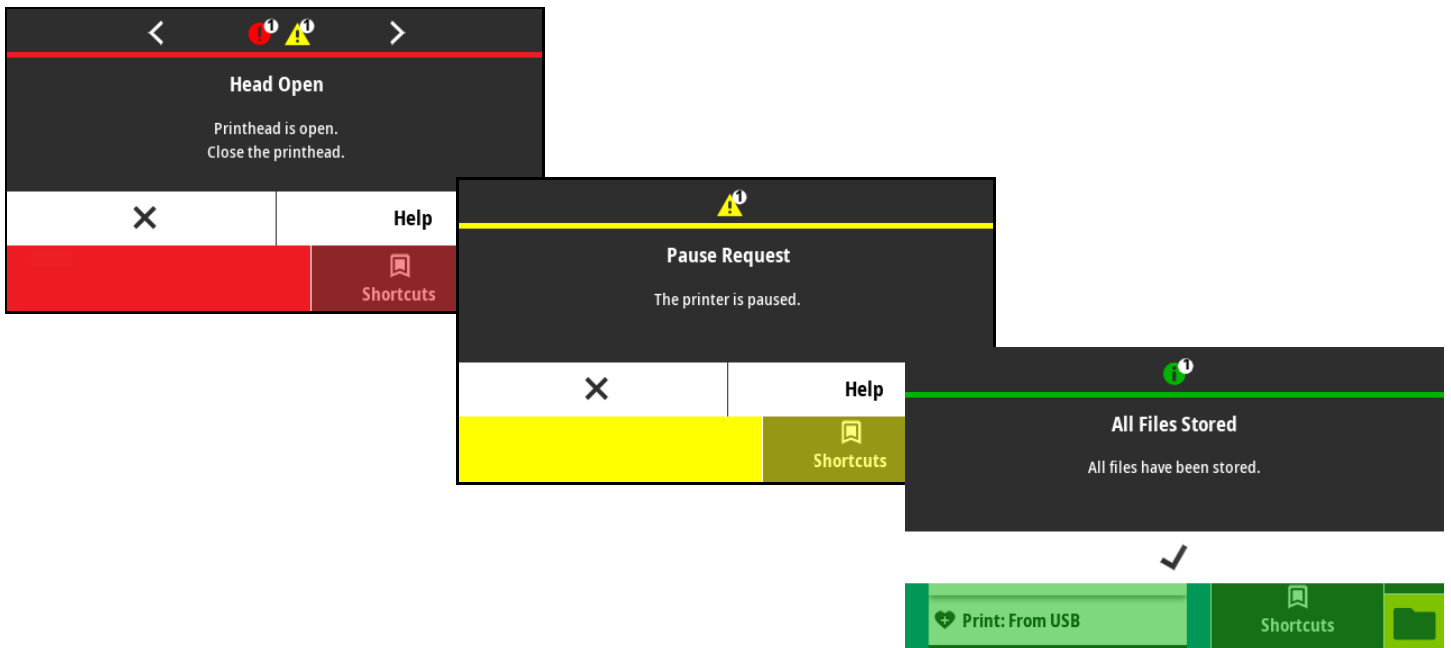
for parts & service call QLC (800) 837-1309

## Alert and Error States

If the background color of the Home screen changes, you may need to take an action to restore the printer to a Ready status. Red and yellow backgrounds typically halt printing until the issue is resolved. Informational messages with a green background usually disappear without user intervention, and printing continues as normal.



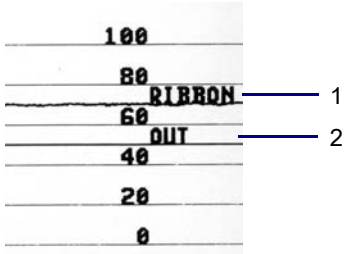
Touch the icons in the bar at the top of the Home screen to view the error, alert, or informational message. See [Alerts and Error Messages on page 33](#) for recommended actions.








## Alerts and Error Messages

Display/Indicator Lights	Possible Causes	Recommended Solutions
<p><b>Head Open</b></p> <p>Printhead is open. Close the printhead.</p>	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.
<p><b>Media Out</b></p> <p>Media is out. Load additional media.</p>	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.	<ol style="list-style-type: none"> <li>1. Install the proper media type, or reset printer for the current media type.</li> <li>2. Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</li> </ol>
<p><b>Paper Jam</b></p> <p>Media jammed. Check the media.</p>	There is an issue with the media in the media path.	<ol style="list-style-type: none"> <li>1. Check for media that is loaded incorrectly or stuck to components in the media path.</li> <li>2. Check if media is wrapped around the platen roller. Carefully remove any labels.</li> <li>3. If necessary, clean the platen roller to remove adhesive. See <a href="#">Cleaning the Printhead and Rollers on page 62</a>.</li> </ol>

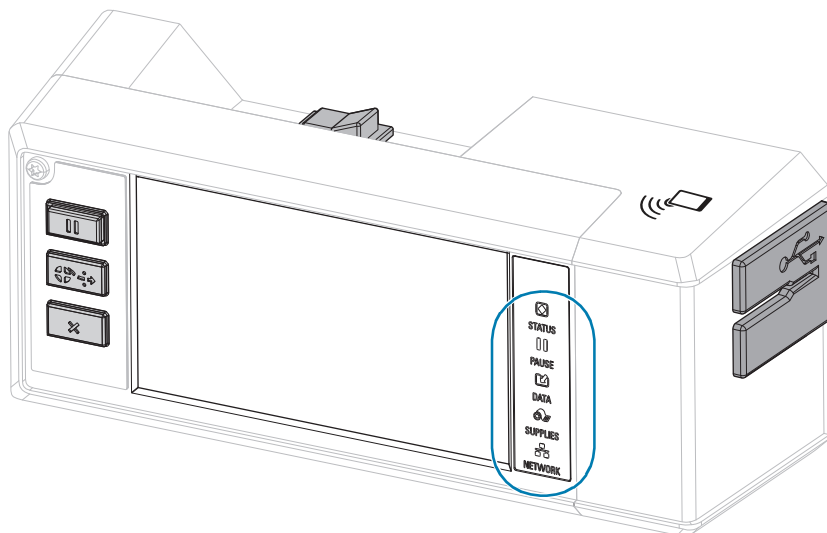
Display/Indicator Lights	Possible Causes	Recommended Solutions
<div style="background-color: black; color: white; padding: 10px; text-align: center;"> <p><b>Ribbon Out</b></p> <p>Ribbon is out. Replace the ribbon.</p> </div> <p>STATUS light steady yellow SUPPLIES light flashing yellow</p>	<p>In thermal transfer mode:</p> <ul style="list-style-type: none"> <li>• ribbon is not loaded</li> <li>• ribbon is loaded incorrectly</li> <li>• the ribbon sensor is not detecting ribbon</li> <li>• media is blocking the ribbon sensor</li> </ul>	<ol style="list-style-type: none"> <li>1. Load ribbon correctly. Refer to the User Guide for instructions for loading ribbon and media.</li> <li>2. Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</li> </ol>
	<p>In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.</p>	<ol style="list-style-type: none"> <li>1. Touch <b>Menu &gt; Print &gt; Print Quality &gt; Print: Sensor Profile</b> to print a sensor profile image (which will extend across several actual labels or tags). The ribbon out threshold (1) is likely too high, above the line that indicates where the ribbon is detected (2).</li> </ol>  <p>Calibrate the printer (see <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>) or load printer defaults by touching <b>Menu &gt; System &gt; Settings &gt; Restore Defaults &gt; Restore Printer</b>.</p>
	<p>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.</p>	<p>Set the printer for Direct Thermal mode. Refer to the User Guide for information about changing the Touch <b>Menu &gt; Print &gt; Print Quality &gt; Print: Sensor Profile</b> to print a sensor profile image (which will extend across several actual labels or tags).</p>

Display/Indicator Lights	Possible Causes	Recommended Solutions
<p><b>Ribbon In</b></p> <p>Ribbon was detected in Direct Thermal mode. Remove the ribbon.</p>	Ribbon is loaded, but the printer is set for direct thermal mode.	<p>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.</p> <p>If the message persists with no ribbon in the printer, Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</p> <p>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 type.</p>
<p><b>Head Identification Failed</b></p> <p>Printhead is not a Zebra Certified Product Replace the Printhead</p>	The printhead was replaced with one that is not a genuine Zebra printhead.	Install a genuine Zebra printhead.
<p><b>Head Element Out</b></p> <p>A printhead element failed. The printhead may need to be replaced.</p>	A printhead element is no longer working.	If the location of the failed element affects printing, replace the printhead.
<p><b>Replace Printhead</b></p> <p>Replace the printhead.</p>	The printhead is nearing the end of its life and should be replaced.	Replace the printhead.
<p><b>Head Maintenance Needed</b></p> <p>Clean the printhead.</p>	The printhead needs to be cleaned.	Follow the cleaning instructions in <a href="#">Cleaning the Printhead and Rollers on page 62</a> .

Display/Indicator Lights	Possible Causes	Recommended Solutions
<p><b>Head Over Temp</b></p> <p>Printhead is too hot. All printing is halted.</p>	 <p><b>CAUTION—HOT SURFACE:</b> The printhead may be hot enough to cause severe burns. Allow the printhead to cool.</p>	
	<p>The printhead is over temperature.</p>	<p>Allow the printer to cool. Printing automatically resumes when the printhead elements cool to an acceptable operating temperature.</p> <p>If this error persists, consider changing where the printer is located or using a slower print speed.</p>
<p><b>Head Under Temp</b></p> <p>Printhead is too cold. All printing is halted.</p> <p><b>Head Thermistor Fault</b></p> <p>Faulty thermistor detected. Replace the printhead.</p> <p>The printer shows one of these messages or cycles between them.</p>	 <p><b>CAUTION—HOT SURFACE:</b> 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.</p>	
	<p>The printhead is not properly connected.</p>	<p>Hook up the printhead properly. See <a href="#">Printhead Maintenance Kit on page 99</a>.</p>
	<p>The printhead has a faulty thermistor.</p>	<p>Replace the printhead. See <a href="#">Printhead Maintenance Kit on page 99</a>.</p>
<p><b>Head Under Temp</b></p> <p>Printhead is too cold. All printing is halted.</p>	 <p><b>CAUTION—HOT SURFACE:</b> 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.</p>	
	<p>The printhead temperature is approaching its lower operating limit.</p>	<p>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.</p>
	<p>The printhead is not properly connected.</p>	<p>Hook up the printhead properly. See <a href="#">Printhead Maintenance Kit on page 99</a>.</p>
	<p>The printhead has a faulty thermistor.</p>	<p>Replace the printhead. See <a href="#">Printhead Maintenance Kit on page 99</a>.</p>
<p><b>Out of Memory Storing XXX</b></p> <p>XXX not stored. Out of memory.</p>	<p>There is not enough memory to perform the function specified.</p>	<p>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.</p>
		<p>Ensure that the data is not directed to a device that is not installed or is unavailable.</p>

## Indicator Lights

The indicator lights communicate the printer's status.


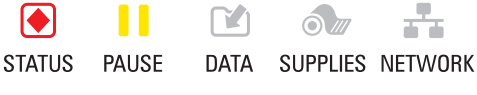
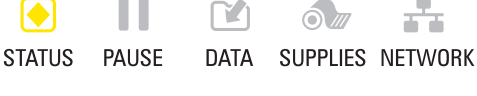










	STATUS light
	PAUSE light
	DATA light
	SUPPLIES light
	NETWORK light

**Table 1** Status of Printer As Shown by Indicator Lights

<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady green (other lights steady yellow for 2 seconds during printer power-up)</b></li> </ul> <p>The printer is ready.</p>
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>PAUSE light steady yellow.</b></li> </ul> <p>The printer is paused.</p>
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady red</b></li> <li>• <b>SUPPLIES light steady red</b></li> </ul> <p>The media supply is out. The printer needs attention and cannot continue without user intervention.</p>
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady red</b></li> <li>• <b>SUPPLIES light flashing red</b></li> </ul> <p>The ribbon supply is out. The printer needs attention and cannot continue without user intervention.</p>

**Table 1** Status of Printer As Shown by Indicator Lights (Continued)

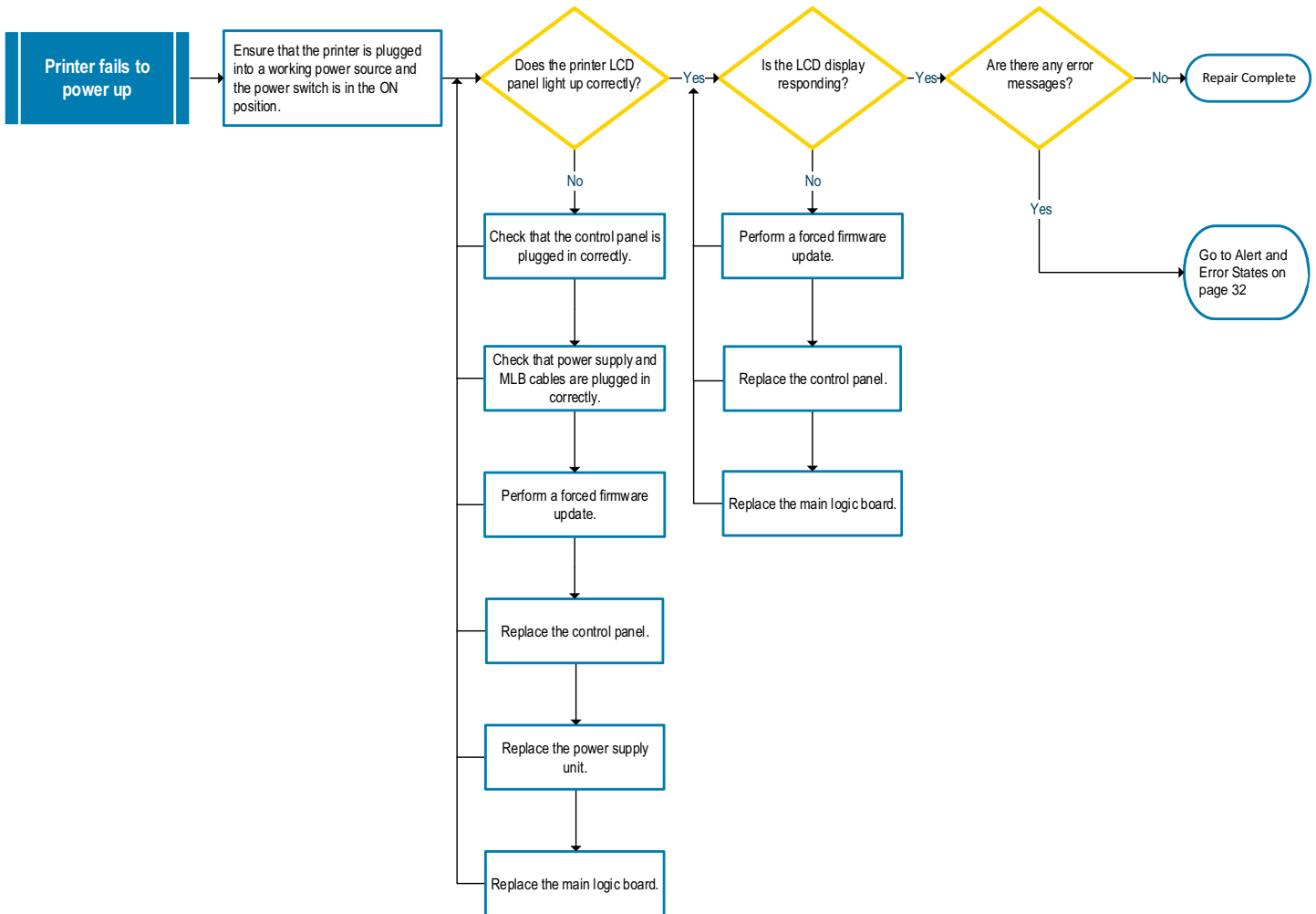
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady yellow</b></li> <li>• <b>SUPPLIES light flashing yellow</b></li> </ul> <p>The printer is in Direct Thermal mode, which does not require ribbon; however, ribbon is installed in the printer.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady red</b></li> <li>• <b>PAUSE light steady yellow</b></li> </ul> <p>The printhead is open. The printer needs attention and cannot continue without user intervention.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady yellow</b></li> </ul> <p>The printhead is over temperature.</p> <p> <b>CAUTION—HOT SURFACE:</b> The printhead may be hot and could cause severe burns. Allow the printhead to cool.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light flashing yellow</b></li> </ul> <p>One of the following:</p> <ul style="list-style-type: none"> <li>• The printhead is under temperature.</li> <li>• The power supply is over temperature.</li> <li>• The main logic board (MLB) is over temperature.</li> </ul>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light steady red</b></li> <li>• <b>PAUSE light steady red</b></li> <li>• <b>DATA light steady red</b></li> </ul> <p>The printhead was replaced with one that is not a genuine Zebra™ printhead. Install a genuine Zebra™ printhead to continue.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>STATUS light flashing red</b></li> </ul> <p>The printer is unable to read the dpi setting of the printhead.</p>
<b>Printers with a ZebraNet wired Ethernet option</b>	
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light off</b></li> </ul> <p>No Ethernet link is available.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light steady green</b></li> </ul> <p>A 100 Base-T link was found.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light steady yellow</b></li> </ul> <p>A 10 Base-T link was found.</p>
 <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light steady red</b></li> </ul> <p>An Ethernet error condition exists. The printer is not connected to your network.</p>

**Table 1** Status of Printer As Shown by Indicator Lights (Continued)

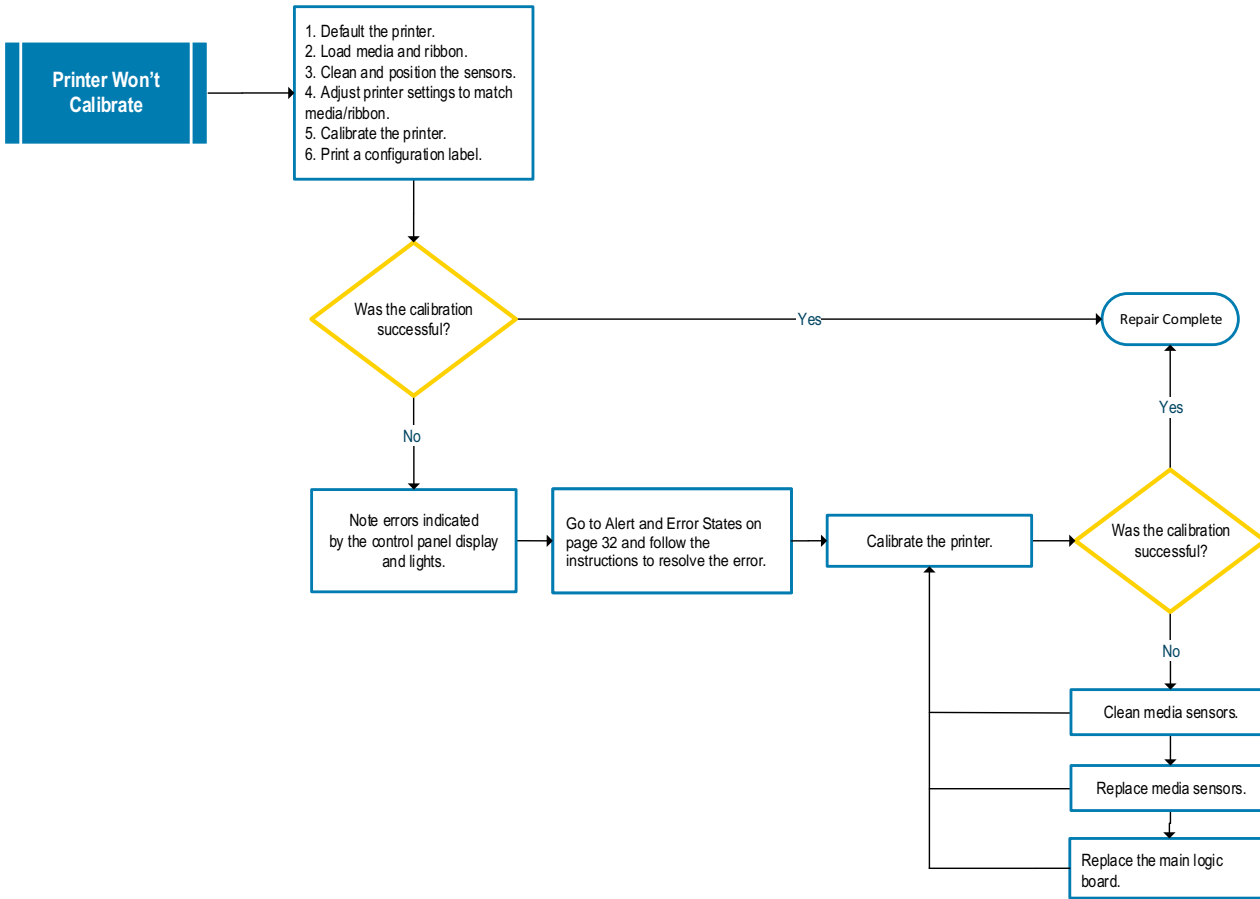
Printers with a ZebraNet wireless option				
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p> <p>↓</p> <p>STATUS PAUSE DATA SUPPLIES NETWORK</p> <p>↓</p> <p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light off</b></li> </ul> <p>A radio was found during power-up. 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.</p>			
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light steady green</b></li> </ul> <p>The radio is associated with your network and authenticated, and the WLAN signal is strong.</p>			
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light flashing green</b></li> </ul> <p>The radio is associated with your network and authenticated, but the WLAN signal is weak.</p>			
<p>STATUS PAUSE DATA SUPPLIES NETWORK</p>	<ul style="list-style-type: none"> <li>• <b>NETWORK light steady red</b></li> </ul> <p>A WLAN error condition exists. The printer is not connected to your network.</p>			

## Repair Flowcharts

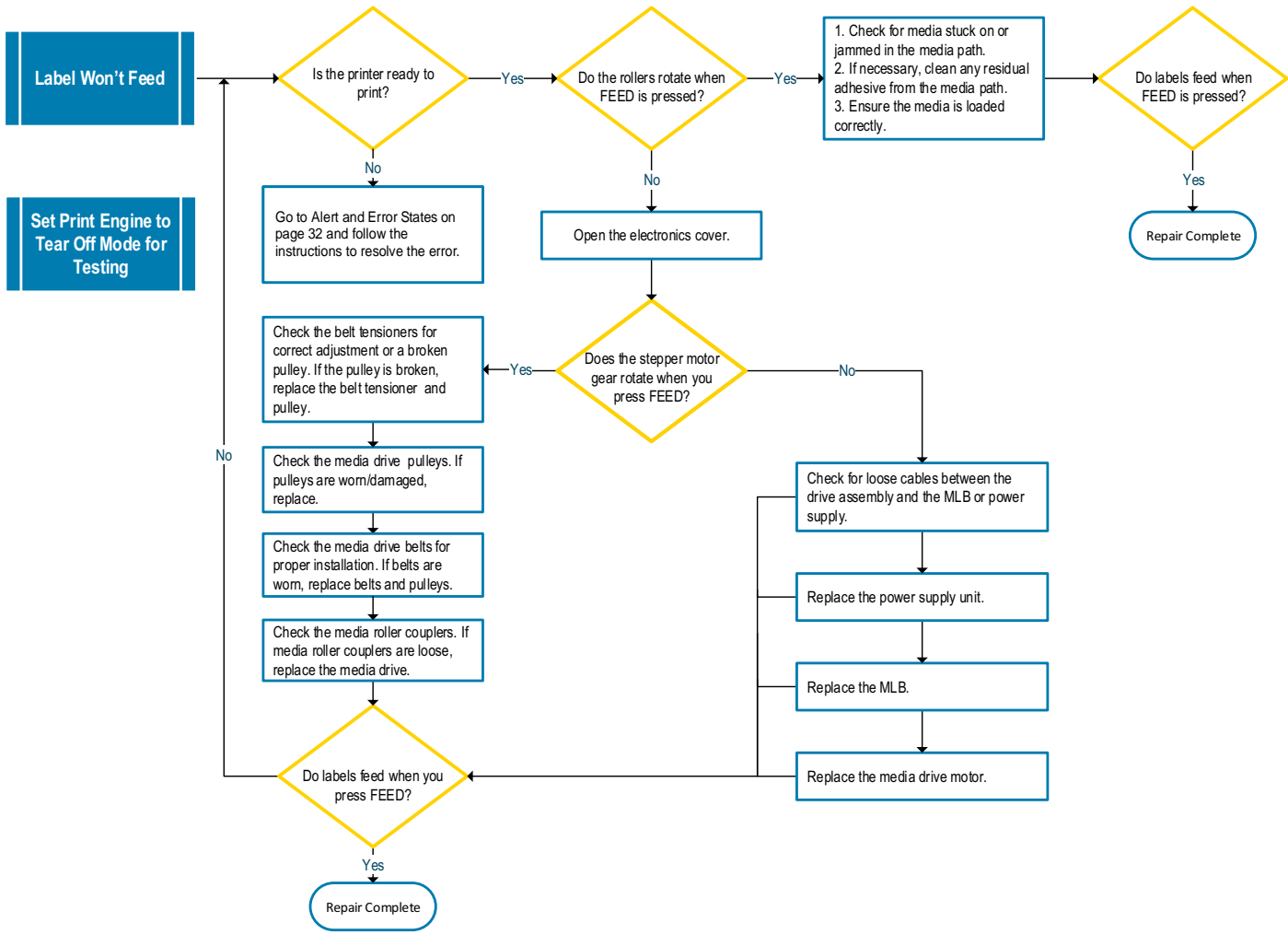
Use these flowcharts to troubleshoot certain issues with the printer.





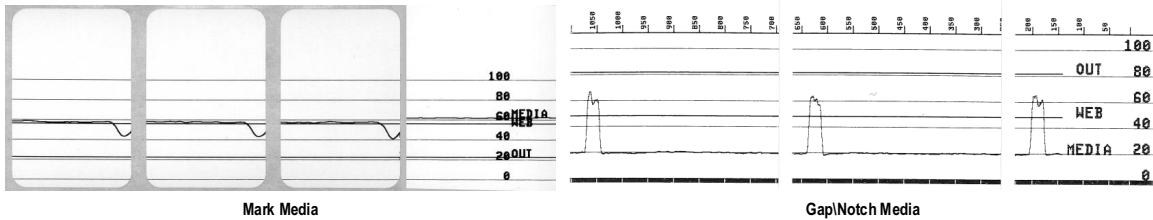
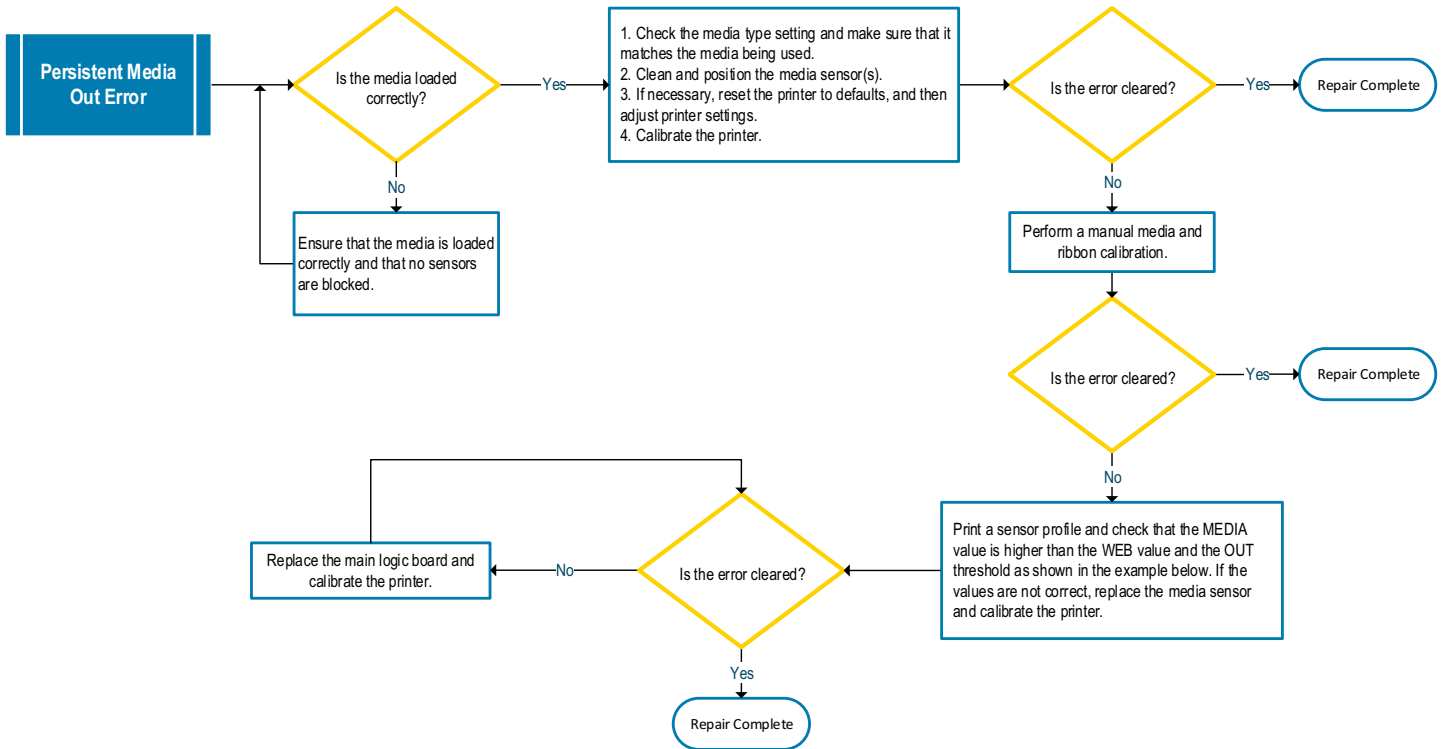


# Troubleshooting



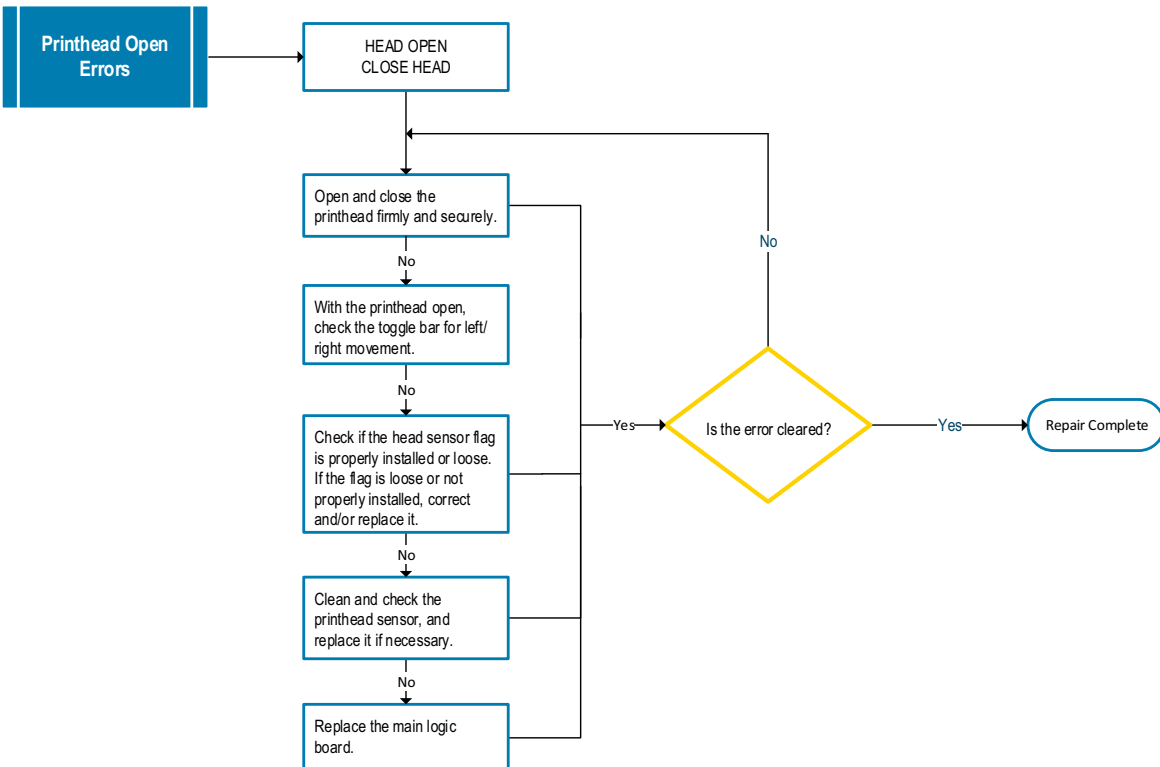
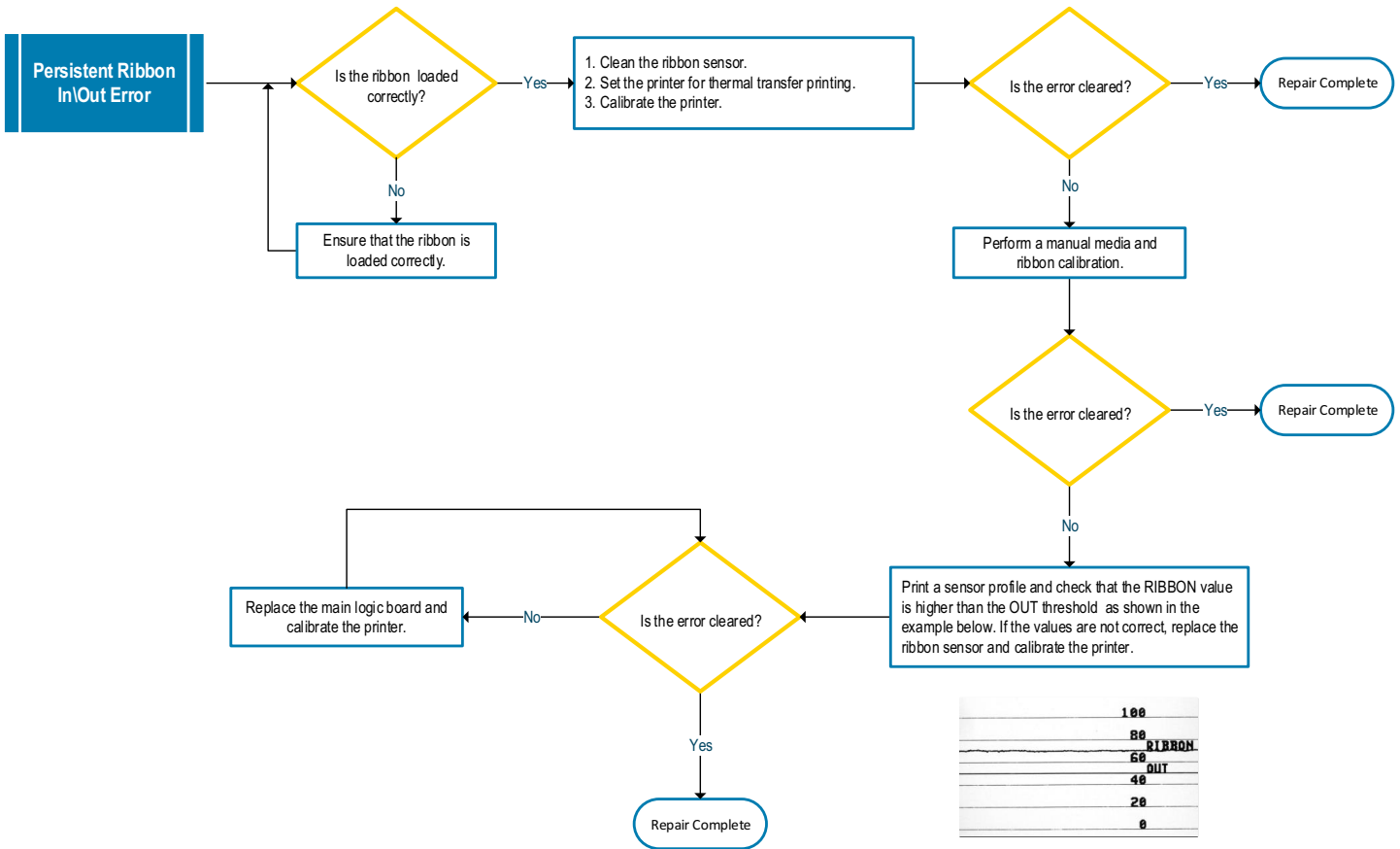
for parts & service call QLC (800) 837-1309

# Troubleshooting



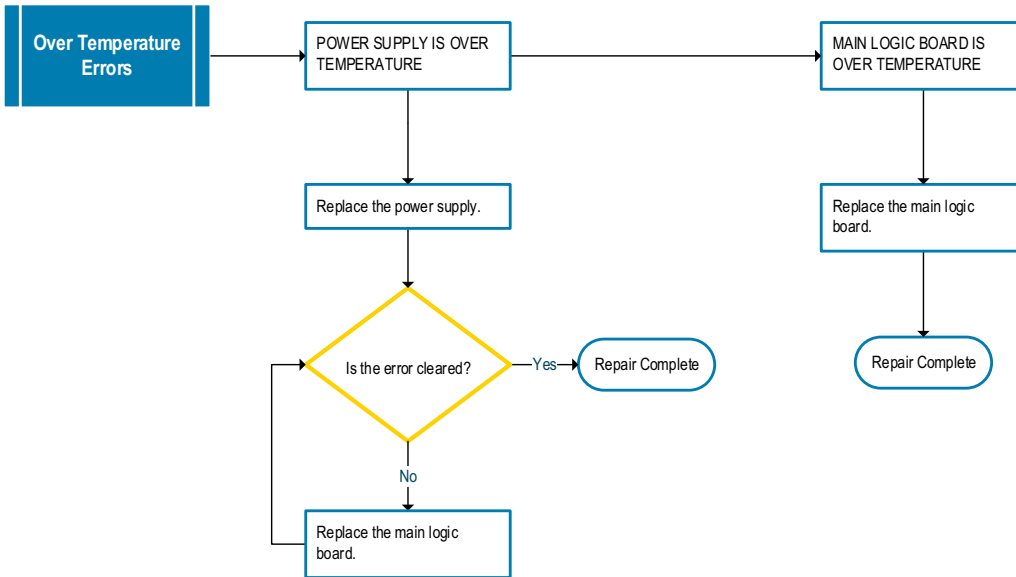
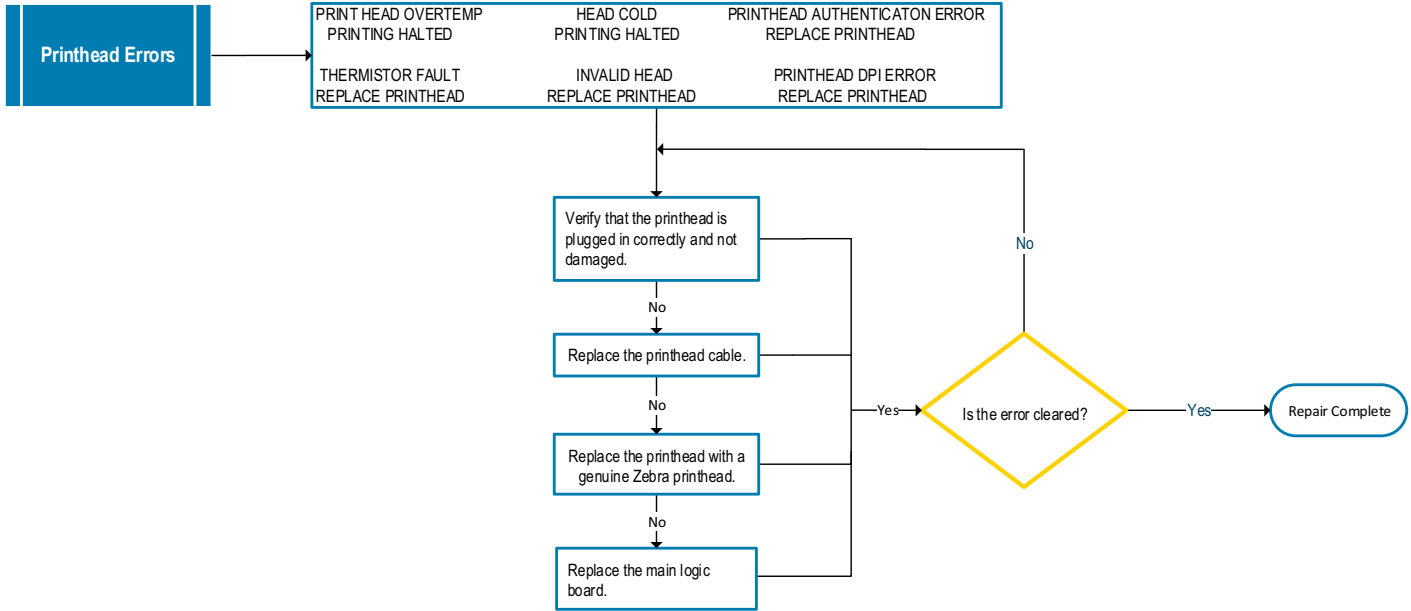
for parts & service call QLC (800) 837-1309

# Troubleshooting



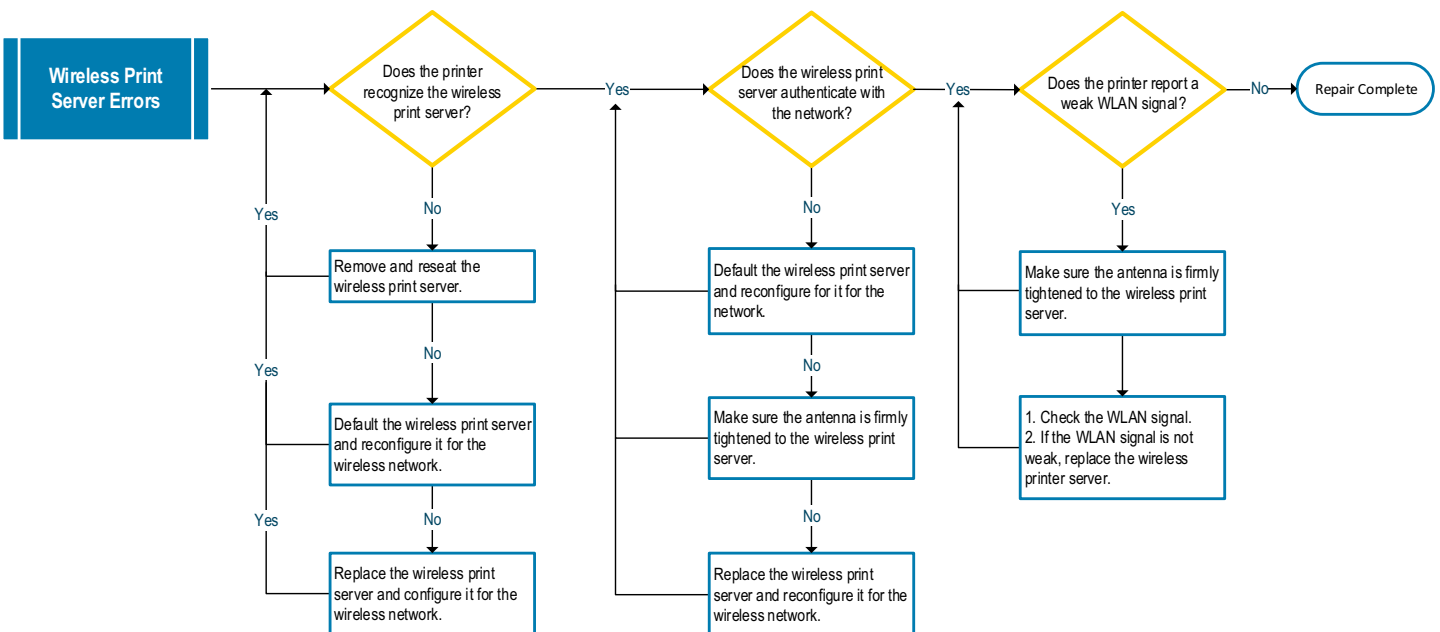
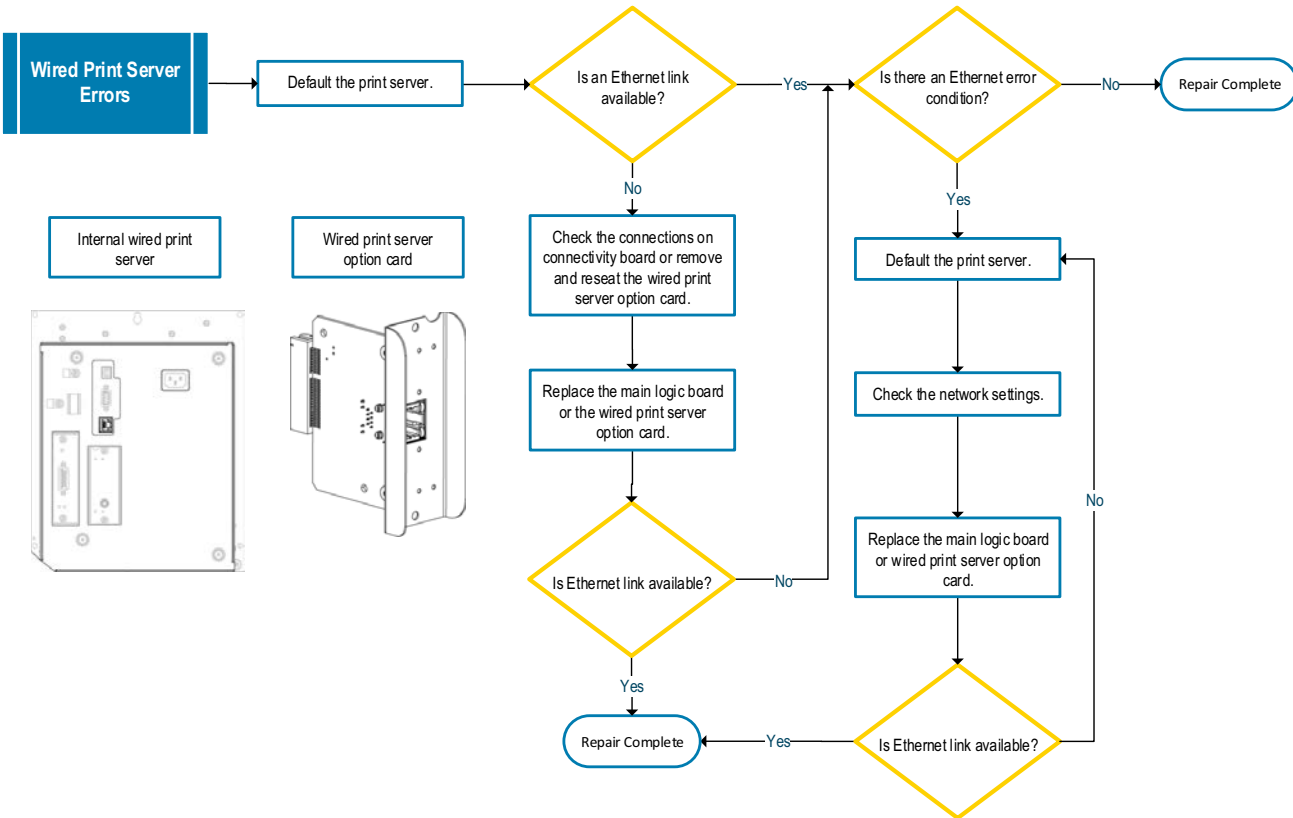
for parts & service call QLC (800) 837-1309

# Troubleshooting



for parts & service call QLC (800) 837-1309

# Troubleshooting



for parts & service call QLC (800) 837-1309



For videos of some common procedures, go to [zebra.com/ze511-info](https://zebra.com/ze511-info).

Broken Ribbon	Possible Cause	Recommended Solution
Broken or melted ribbon	Darkness setting too high.	<ol style="list-style-type: none"> <li>1. Reduce the darkness setting. Refer to the User Guide for information about changing the darkness setting.</li> <li>2. Clean the printhead thoroughly. See <a href="#">Cleaning the Printhead and Rollers on page 62</a>.</li> </ol>
	The ribbon is coated on the opposite side than what the printer is set for.	Replace the ribbon with one coated on the correct side or change the setting. Refer to the User Guide for information about determining the coated side of ribbon.
	The ribbon tension is too high.	Set the ribbon tension to a lower setting. Refer to the User Guide for information.
Wrinkled Ribbon	Possible Cause	Recommended Solution
Ribbon wrinkles as it comes in contact with the printhead	Ribbon was loaded incorrectly.	Load the ribbon correctly. Refer to the User Guide for instructions for loading ribbon and media.
	Incorrect burn temperature.	<ol style="list-style-type: none"> <li>1. Run the Print Wizard and print a test label.</li> <li>2. If necessary, manually adjust the darkness or print speed settings.                             <ul style="list-style-type: none"> <li>• Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely.</li> <li>• Slower print speeds typically yield better print quality.</li> </ul> </li> </ol> <p>Access the darkness and print speed settings from the Home screen by touching <b>Menu &gt; Print &gt; Print Quality</b>.</p>
	Incorrect or uneven printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See <a href="#">Toggle Positioning and Printhead Pressure Adjustment on page 67</a> .
	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.
	The printhead or platen roller may be installed incorrectly.	Check that the printhead and platen roller are installed correctly.

Ribbon Detection Issues	Possible Cause	Recommended Solution
<p>The printer does not detect when the ribbon runs out.</p> <p>In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.</p>	<p>The printer may have been calibrated without ribbon or without the ribbon loaded properly.</p>	<ol style="list-style-type: none"> <li>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.</li> <li>2. Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</li> </ol>
<p>The printer indicates that ribbon is out, even though ribbon is loaded correctly.</p>	<p>The printer was not calibrated for the label and ribbon being used.</p>	<p>Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</p>



## Troubleshooting

### Printing or Print Quality Issues

Barcode Does Not Scan	Possible Cause	Recommended Solution
The barcode printed on a label does not scan.	The barcode is not within specifications because the printer is set at an incorrect darkness level.	<ol style="list-style-type: none"> <li>1. Perform the steps in <a href="#">Running the Print Wizard and Printing a Test Label on page 20</a>.</li> <li>2. If necessary, manually adjust the darkness or print speed settings.                             <ul style="list-style-type: none"> <li>• Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely.</li> <li>• Slower print speeds typically yield better print quality.</li> </ul> <p>Access the darkness and print speed settings from the Home screen by touching <b>Menu &gt; Print &gt; Print Quality</b>.</p> </li> <li>3. If the issue is not resolved, check the printhead pressure and toggle position. See <a href="#">Toggle Positioning and Printhead Pressure Adjustment on page 67</a></li> </ol>
	There is not enough blank space around the barcode.	Leave at least 3.2 mm (1/8 in.) between the barcode and other printed areas on the label and between the barcode and the edge of the label.
Poor Print Quality	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 <a href="http://zebra.com/supplies">zebra.com/supplies</a> .
Poor results with thick labels	The print line is not at an optimal position for your media.	Refer to the Service Guide for instructions on how to adjust the print line for thick media.
Fine, angular gray lines on blank labels	Wrinkled ribbon.	See wrinkled ribbon causes and solutions in <a href="#">Ribbon Issues on page 51</a> .
Print Consistently Too Light or Too Dark	Possible Cause	Recommended Solution
Printing is 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 <a href="#">Toggle Positioning and Printhead Pressure Adjustment on page 67</a> .
General Print Quality Issues	Possible Cause	Recommended Solution
	The label format is scaling a font that is not scalable.	Check the label format for font issues.

## Troubleshooting

Loss of Registration	Possible Cause	Recommended Solution
Misregistration/skips labels	The printer is not calibrated.	Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> .
	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 <a href="#">Cleaning the Printhead and Rollers on page 62</a> .
	Media does not meet specifications.	Use media that meets specifications. Refer to the <i>User Guide</i> for media specifications.
Vertical drift in top-of-form position	The printer is out of calibration.	Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> .
	The platen roller is dirty.	Clean the printhead and platen roller. See <a href="#">Cleaning the Printhead and Rollers on page 62</a> .
Horizontal movement in placement of the label image.	The previous labels were torn off incorrectly.	Pull down and to the left when tearing off labels so that the tear-off bar assists in tearing through the label backing. Pulling up or down and to the right can shift the media sideways.

## Ribbon Issues



For videos of some common procedures, go to [zebra.com/ze511-info](http://zebra.com/ze511-info).

Broken Ribbon	Possible Cause	Recommended Solution
Broken or melted ribbon	Darkness setting too high.	<ol style="list-style-type: none"> <li>If necessary, manually adjust the darkness or print speed settings.                             <ul style="list-style-type: none"> <li>Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely.</li> <li>Slower print speeds typically yield better print quality.</li> </ul> <p>Access the darkness and print speed settings from the Home screen by touching <b>Menu &gt; Print &gt; Print Quality</b>.</p> </li> <li>Clean the printhead thoroughly. See <a href="#">Cleaning the Printhead and Rollers on page 62</a>.</li> </ol>
	The ribbon is coated on the opposite side than what the printer is set for.	Replace the ribbon with one coated on the correct side or change the setting. Refer to the User Guide for information about determining the coated side of ribbon.
	The ribbon tension is too high.	Set the ribbon tension to a lower setting. Refer to the User Guide for information.

## Troubleshooting

Wrinkled Ribbon	Possible Cause	Recommended Solution
Ribbon wrinkles as it comes in contact with the printhead	Ribbon was loaded incorrectly.	Load the ribbon correctly. Refer to the User Guide for instructions for loading ribbon and media.
	Incorrect burn temperature.	<ol style="list-style-type: none"> <li>1. Run the Print Wizard and print a test label.</li> <li>2. If necessary, manually adjust the darkness or print speed settings. <ul style="list-style-type: none"> <li>• Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely.</li> <li>• Slower print speeds typically yield better print quality.</li> </ul> </li> </ol> <p>Access the darkness and print speed settings from the Home screen by touching <b>Menu &gt; Print &gt; Print Quality</b>.</p>
	Incorrect or uneven printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See <a href="#">Toggle Positioning and Printhead Pressure Adjustment on page 67</a> .
	Media not feeding properly; “walking” from side to side.	Make sure that media is snug by adjusting the media guide. Verify that the printhead and platen roller are installed correctly.
	The printhead or platen roller may be installed incorrectly.	Verify that the printhead and platen roller are installed correctly.
Ribbon Detection Issues	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.	<ol style="list-style-type: none"> <li>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.</li> <li>2. Calibrate the printer. See <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>.</li> </ol>
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 <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> .

## RFID Issues

Printer Stops at RFID Inlay		
Issue	Possible Cause	Recommended Solution
The printer stops at the RFID inlay.	The printer calibrated the label length only to the RFID inlay instead of to the interlabel gap.	<ol style="list-style-type: none"> <li>1. Select FEED for the Power Up and Head Close actions. Touch <b>Menu &gt; System &gt; Settings</b> to access these parameters.</li> <li>2. Manually calibrate the printer (see <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a>).</li> </ol>
Wrong RFID Tag Encoded		
Issue	Possible Cause	Recommended Solution
The wrong RFID tag was encoded.	The printer is not calibrated for the media being used.	Manually calibrate the printer (see <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> ).
Voided Labels		
Issue	Possible Cause	Recommended Solution
The printer voids every label.	The printer is not calibrated for the media being used.	Manually calibrate the printer (see <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> ).
	You are using an RFID label with a tag type that is not supported by your printer.	These printers support only Gen 2 RFID labels. For more information, refer to the RFID Programming Guide 3, or contact an authorized Zebra RFID reseller.
	The printer is unable to communicate with the RFID reader.	<ol style="list-style-type: none"> <li>1. Turn off (O) the printer.</li> <li>2. Wait 10 seconds.</li> <li>3. Turn on (I) the printer.</li> <li>4. If the problem persists, you may have a bad RFID reader or a loose connection between the RFID reader and the printer. Contact Technical Support or an authorized Zebra RFID service technician for assistance.</li> </ol>
	Radio frequency (RF) interference from another RF source.	Do one or more of the following as necessary: <ul style="list-style-type: none"> <li>• Move the printer away from fixed RFID readers or other RF sources.</li> <li>• Make sure that the media cover is closed at all times during RFID programming.</li> </ul>
	The settings are incorrect in your label designer software.	The software settings override the printer settings. Make sure that the software and printer settings match.
	You are sending RFID ZPL or SGD commands that are incorrect.	Check your label formats. For more information, refer to the RFID Programming Guide 3.

Voided Labels (Continued)		
Issue	Possible Cause	Recommended Solution
Low yields. Too many RFID tags per roll are voided.	You are using an incorrect programming position, particularly if the tags being used are within printer specifications.	<p>Do one or more of the following as necessary:</p> <ul style="list-style-type: none"> <li>• Check the RFID programming position or the program position setting in your label designer software. If the position is incorrect, change the setting.</li> <li>• Restore the RFID programming position back to the default value.</li> </ul> <p>For more information, refer to the RFID Programming Guide 3. For transponder placement details, go to <a href="http://zebra.com/transponders">zebra.com/transponders</a>.</p>
	The RFID labels are not within specifications for the printer, which means that the transponder is not in an area that can be programmed consistently.	<p>Make sure that the labels meet transponder placement specifications for your printer. See <a href="http://zebra.com/transponders">zebra.com/transponders</a> for transponder placement information.</p> <p>For more information, refer to the RFID Programming Guide 3, or contact an authorized Zebra RFID reseller.</p>
	Incorrect read and write power levels.	Change the RFID read and write power levels. For instructions, refer to the RFID Programming Guide 3.
	Radio frequency (RF) interference from another RF source.	<p>Do one or more of the following as necessary:</p> <ul style="list-style-type: none"> <li>• Move the printer away from fixed RFID readers.</li> <li>• Make sure that the media cover is closed at all times during RFID programming.</li> </ul>
	The printer is using outdated firmware.	Go to <a href="http://zebra.com/firmware">zebra.com/firmware</a> for updated firmware.

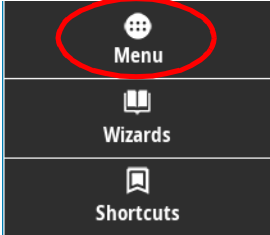
Other RFID Issues		
Issue	Possible Cause	Recommended Solution
<p>RFID parameters do not appear, and RFID information does not appear on the printer configuration label.</p> <p>The printer does not void RFID labels that are not programmed correctly.</p>	<p>The printer was powered off (O) and then back on (I) too quickly for the RFID reader to initialize properly.</p>	<p>Wait at least 10 seconds after turning the printer power off before turning it back on.</p> <ol style="list-style-type: none"> <li>1. Turn off (O) the printer.</li> <li>2. Wait 10 seconds.</li> <li>3. Turn on (I) the printer.</li> <li>4. Check for the RFID parameters in Setup mode or for RFID information on a new configuration label.</li> </ol>
	<p>An incorrect version of printer or reader firmware was loaded on the printer.</p>	<ol style="list-style-type: none"> <li>1. Verify that the correct firmware version is loaded on your printer. For more information, refer to the RFID Programming Guide 3.</li> <li>2. Download the correct printer or reader firmware if necessary.</li> <li>3. If the problem persists, contact Technical Support.</li> </ol>
	<p>The printer is unable to communicate with the RFID subsystem.</p>	<ol style="list-style-type: none"> <li>1. Turn off (O) the printer.</li> <li>2. Wait 10 seconds.</li> <li>3. Turn on (I) the printer.</li> <li>4. If the problem persists, you may have a bad RFID reader or a loose connection between the RFID reader and the printer. Contact Technical Support or an authorized service technician for assistance.</li> </ol>
<p>The DATA light flashes indefinitely after you attempt to download printer or reader firmware.</p>	<p>The download was not successful. For best results, cycle power on the printer before downloading any firmware.</p>	<ol style="list-style-type: none"> <li>1. Turn off (O) the printer.</li> <li>2. Wait 10 seconds.</li> <li>3. Turn on (I) the printer.</li> <li>4. Attempt to download the firmware again.</li> <li>5. If the problem persists, contact Technical Support.</li> </ol>

## Communications Issues

Label Formats Not Recognized	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. See the User Guide for instructions.
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.	Change the prefix and delimiter settings. See the Zebra Programming Guide for ZPL, ZBI, Set-Get-Do, Mirror, and WML at <a href="http://zebra.com/manuals">zebra.com/manuals</a> for more information.
	Incorrect data is being sent to the printer.	Check the communication settings on the computer. Ensure that they match the printer settings.
		Enable diagnostics mode to check what may be happening. See <a href="#">Using Communication Diagnostics Mode on page 28</a> .
		If the problem continues, check the label format.
Labels Stop Printing Correctly	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	Possible Cause	Recommended Solution
<p>The control panel display shows a language that I cannot read.</p>	<p>The language parameter was changed through the control panel or a firmware command.</p>	<ol style="list-style-type: none"> <li>On the Home screen, touch <b>Menu</b>.</li> </ol>  <ol style="list-style-type: none"> <li>Touch the top selection on the screen.</li> <li>Scroll through the language selections under this 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.</li> <li>Touch the language that you want to display to select it.</li> <li>Touch the Home icon to return to the Home screen.</li> </ol>
<p>The display is missing characters or parts of characters</p>	<p>The display may need replacing.</p>	<p>Replace the display. See <a href="#">Control Panel Maintenance Kit on page 803</a>.</p>
USB Device Not Acknowledged	Possible Cause	Recommended Solution
<p>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.</p>	<p>The printer currently supports USB drives only up to 1 TB in size.</p>	<p>Use a USB drive that is 1 TB or smaller.</p>
	<p>The USB device may require its own external power.</p>	<p>If your USB device requires external power, make sure that it is plugged into a working power supply.</p>
Printer Parameters Are Not Set As Expected	Possible Cause	Recommended Solution
<p>Changes in parameter settings did not take effect.</p> <p>OR</p> <p>Some parameters changed unexpectedly.</p>	<p>A firmware setting or command prevented the ability to change the parameter.</p>	<p>Check your label formats, the driver settings, or the settings of the software that you use to send formats to the printer.</p>
	<p>A command in a label format changed the parameter back to the previous setting.</p>	<p>If necessary, See the Zebra Programming Guide for ZPL, ZBI, Set-Get-Do, Mirror, and WML at <a href="http://zebra.com/manuals">zebra.com/manuals</a> for more information or call a service technician.</p>
	<p>If the problem persists, there may be a problem with the main logic board.</p>	<p>Replace the main logic board. See <a href="#">Main Logic Board Maintenance Kit on page 609</a>.</p>

IP Address Changing	Possible Cause	Recommended Solution
<p>My printer reassigns a new IP address to the print server after the printer has been off for a while.</p>	<p>The settings for your network are causing the network to reassign a new IP address.</p>	<p>If the printer changing IP addresses causes issues for you, follow these steps to assign it a static IP address:</p> <ol style="list-style-type: none"> <li>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).</li> <li>2. Change the appropriate IP protocol value to PERMANENT.</li> <li>3. Change the values for the IP address, subnet mask, and gateway for the appropriate print server to what you want them to remain.</li> <li>4. Reset the network by touching <b>Menu &gt; Connections &gt; Networks &gt; Reset Network</b> and then touching the check mark to save the changes.</li> </ol>
Cannot Connect through Wired or Wireless Connections	Possible Cause	Recommended Solution
<p>I manually entered a wireless IP address, subnet, and gateway on my printer, but it won't connect to my wired or wireless network.</p>	<p>The printer's network must be reset after values are changed.</p>	<p>Reset the network by touching <b>Menu &gt; Connections &gt; Networks &gt; Reset Network</b> and then touching the check mark to save the changes.</p>
	<p>An ESSID value has not been specified.</p>	<ol style="list-style-type: none"> <li>1. For a wireless connection, specify the ESSID value that matches the value used by your wireless router using the following Set/Get/Do command:   <pre>! U1 setvar "wlan.essid" "value"</pre>                     where "value" is the ESSID (sometimes called a network SSID) for your router. You can look on the back of your router for a sticker with the router's default information. Note that the ESSID value is case-sensitive. If the information has been changed from the default, check with your network administrator for the ESSID value to use.                 </li> <li>2. If the printer still does not connect, reset the network by touching <b>Menu &gt; Connections &gt; Networks &gt; Reset Network</b> and then touching the check mark to save the changes, and then power cycle the printer.</li> </ol>
	<p>The ESSID or other value was not specified correctly.</p>	<ol style="list-style-type: none"> <li>1. Print a network configuration label and verify that your values are correct. Note that the ESSID value is case-sensitive.</li> <li>2. Make corrections as necessary.</li> <li>3. Reset the network by touching <b>Menu &gt; Connections &gt; Networks &gt; Reset Network</b> and then touching the check mark to save the changes.</li> </ol>

## Troubleshooting

Calibration Issues	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 <a href="#">Calibrating the Ribbon and Media Sensors on page 30</a> .
	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	Possible Cause	Recommended Solution
All indicator lights are on, nothing is on the display, and the printer locks up.	Internal electronic or firmware failure.	See <a href="#">Repair Flowcharts on page 40</a> .
The printer locks up while booting up.	Main logic board failure.	See <a href="#">Repair Flowcharts on page 40</a> . If necessary, replace the main logic board. See <a href="#">Main Logic Board Maintenance Kit on page 609</a> .

### Servicing the Printer

If you cannot repair the printer and need assistance, contact the Zebra Global Customer Support Center at: [zebra.com/support](https://zebra.com/support). Have the following information available:

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

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

### Shipping the Printer

If you must ship the printer:

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

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

# Routine Maintenance

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.



**IMPORTANT:** Zebra is not responsible for damage caused by the use of cleaning fluids on this print engine.

## Cleaning Schedule and Procedures

Specific cleaning procedures are provided in this section. [Table 2](#) 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 2** Recommended Cleaning Schedule

Area	Method	Interval
Printhead	Solvent*	<b>Direct Thermal Mode:</b> After every roll of media (or 500 feet of fanfold media). <b>Thermal Transfer Mode:</b> After every roll of ribbon.
Platen roller	Solvent*	
Pinch roller	Solvent*	
Peel roller	Solvent*	
Media sensors	Air blow	
Ribbon sensor	Air blow	
Media path	Solvent*	
Ribbon path	Solvent*	
Tear-off/peel-off bar	Solvent*	

\*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.

for parts & service call QLC (800) 837-1309

## Cleaning 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 print engine 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 print engine.

### Media Compartment and Sensors

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

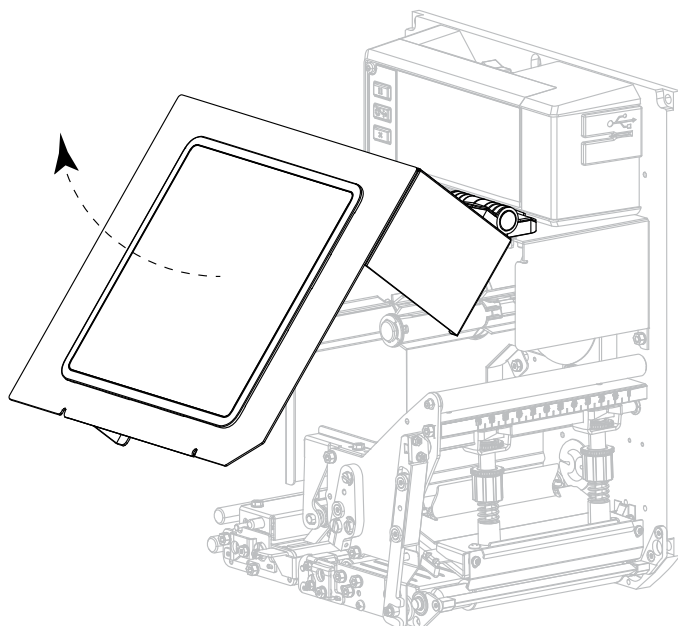
## Cleaning the Printhead and Rollers

Inconsistent print quality, such as voids in the barcode or graphics, may indicate a dirty printhead. For the recommended cleaning schedule, see [Cleaning Schedule and Procedures on page 61](#).



**CAUTION—ESD:** Before touching the printhead assembly, discharge any built-up static electricity by touching the metal printer frame or by using an anti-static wriststrap and mat.

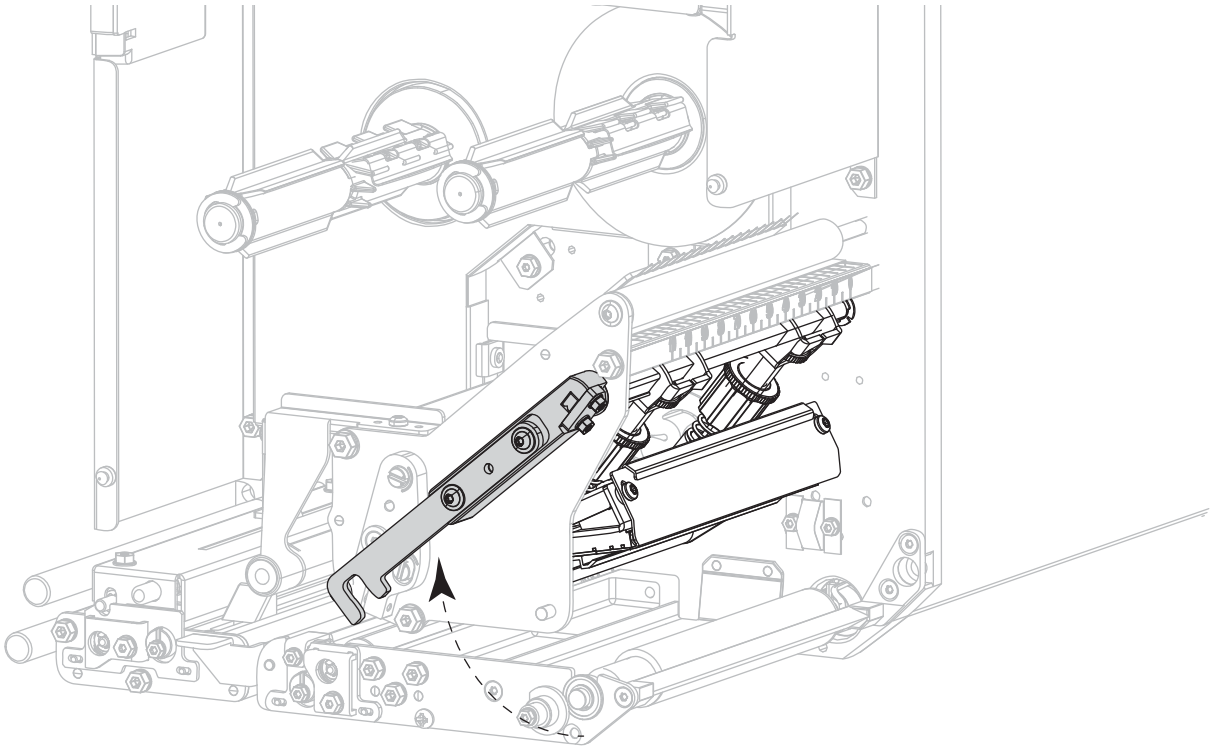
1. Turn Off (O) the print engine.
2. Open the media cover.



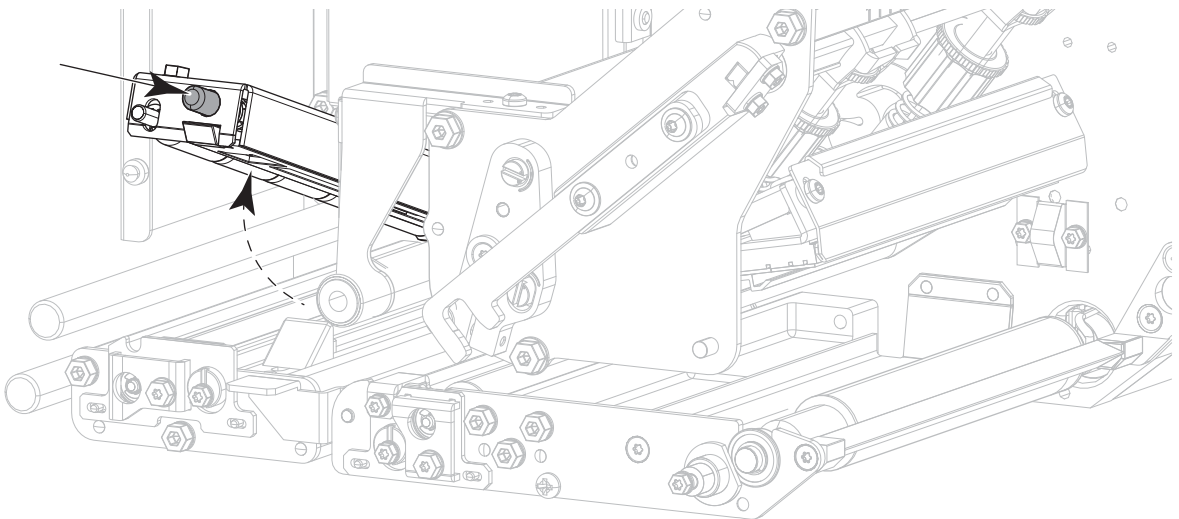
3. Remove the media and ribbon.

for parts & service call QLC (800) 837-1309

4. Release the printhead assembly.



5. Press the release button on the upper pinch roller assembly, and allow the assembly to pivot upward.

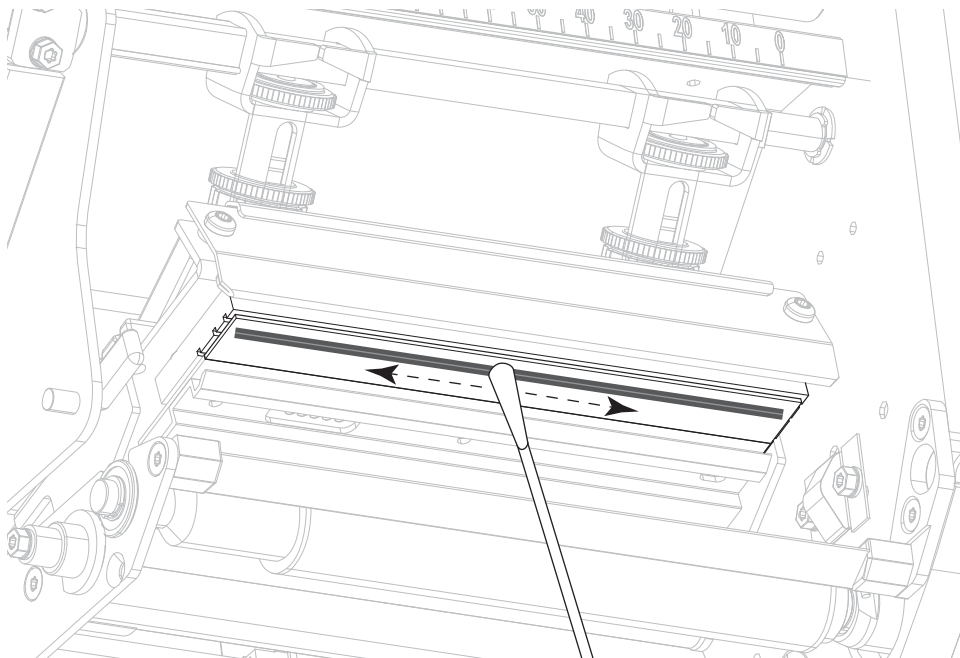




**CAUTION—HOT SURFACE:** The printhead may be hot and could cause severe burns. Allow the printhead to cool.

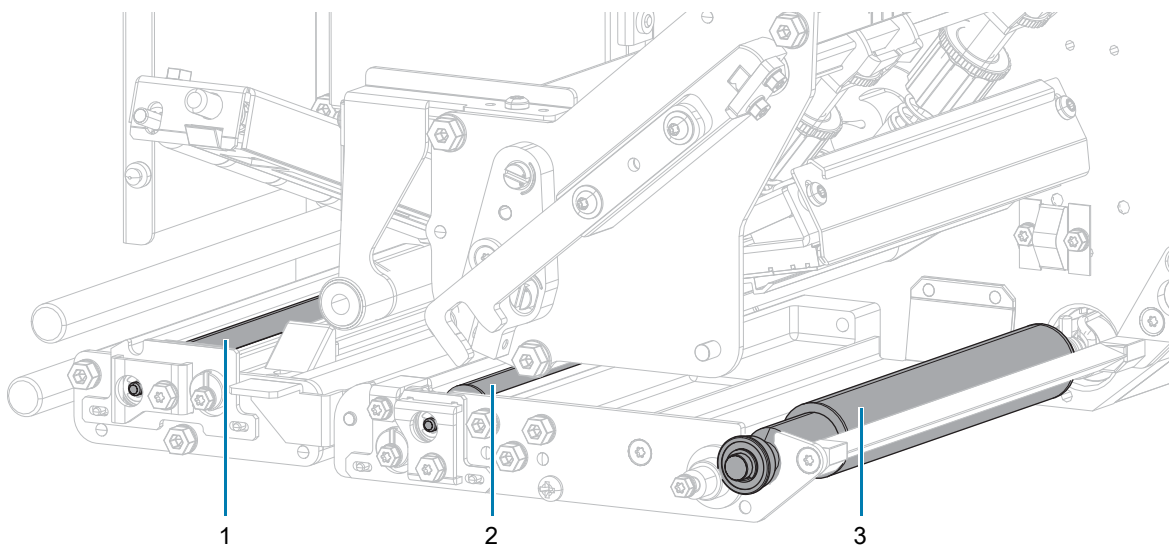
**6. Clean the printhead.**

- a. Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.
- b. Allow the solvent to evaporate.



**7. Clean the rollers.**

- a. Use the swab or the lint-free cloth to clean the pinch roller (1), peel roller (2), and platen roller (3). Rotate the rollers while cleaning them.
- b. Allow the solvent to evaporate.

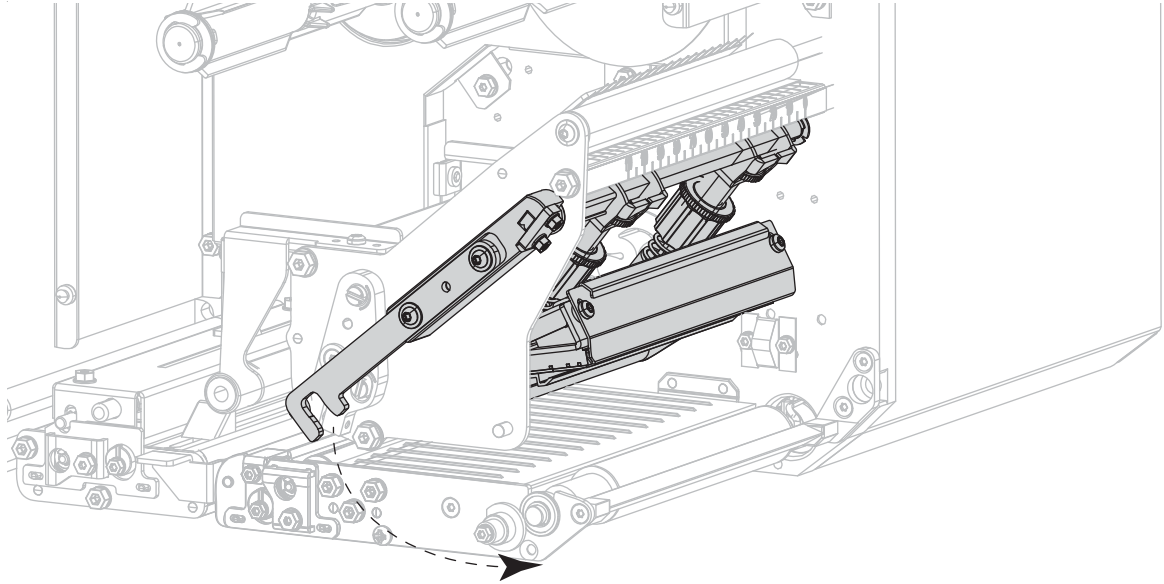


**NOTE:** If print quality does not improve after you perform this procedure, clean the printhead with Zebra's Save-a-Printhead cleaning film. Call your authorized Zebra distributor for more information.

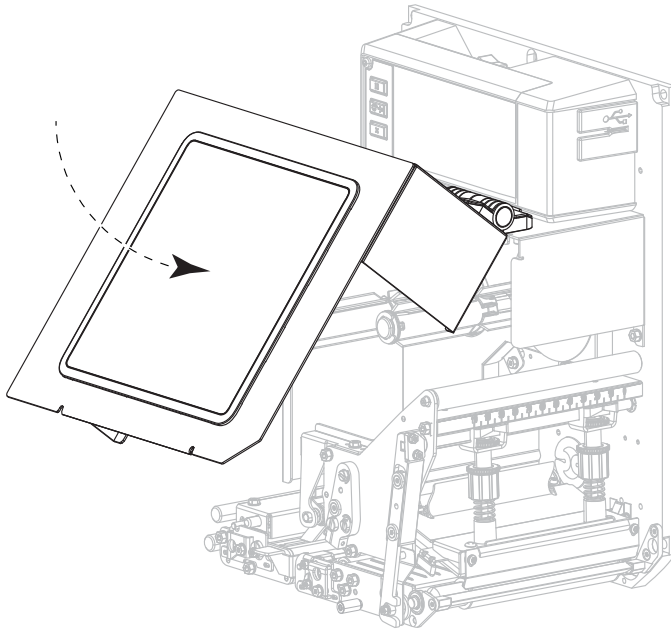
for parts & service call QLC (800) 837-1309



8. Reload the ribbon and media (if used).
9. Close the upper pinch roller assembly.
10. Lock the printhead assembly.



11. Close the media cover.



## Replacing Print Engine Components

Some print engine 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 2 on page 61](#) for the recommended cleaning intervals.

## Ordering Replacement Parts

Zebra™ printers are designed to work only with genuine Zebra printheads, thus maximizing safety and print quality. Contact your authorized Zebra reseller for part ordering information.

## Recycling Print Engine Components



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

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

## Storing the Print Engine

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

- Temperature:  $-40^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $-40^{\circ}$  to  $140^{\circ}\text{F}$ )
- Relative humidity: 5% to 85% non-condensing

## Lubrication

No lubrication is needed for this print engine.



**CAUTION—PRODUCT DAMAGE:** Some commercially available lubricants will damage the finish and the mechanical parts if used on this print engine.

## Toggle Positioning and Printhead Pressure Adjustment

The printhead pressure toggles 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.

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

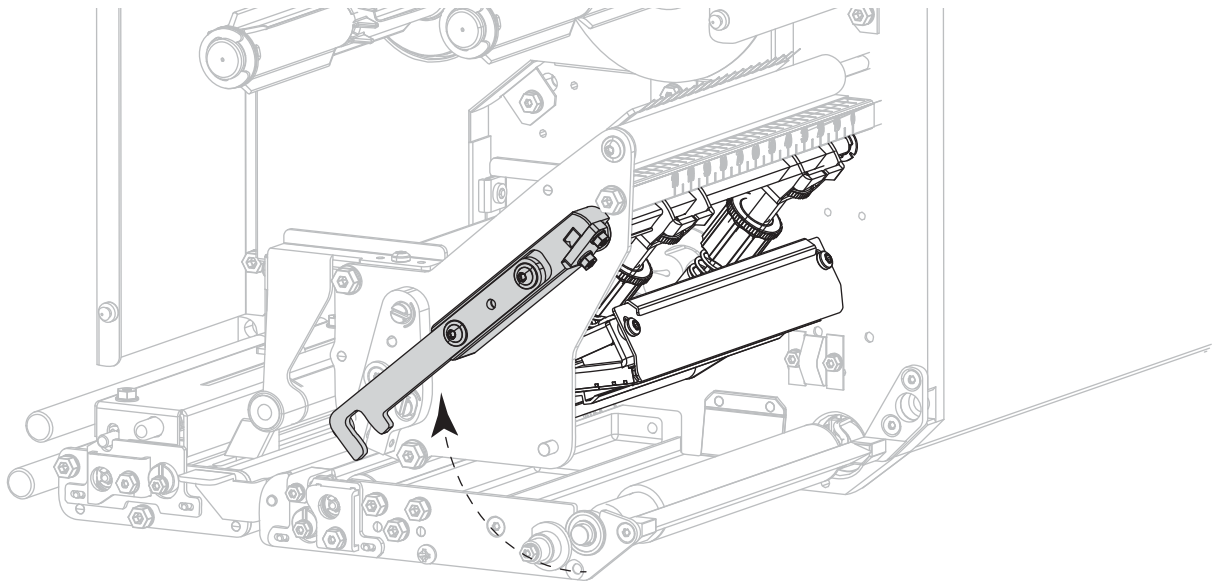
Use the lowest printhead pressure necessary to produce good print quality. Higher pressures may cause premature wear on the printhead elements.

### Changing the Toggle Position

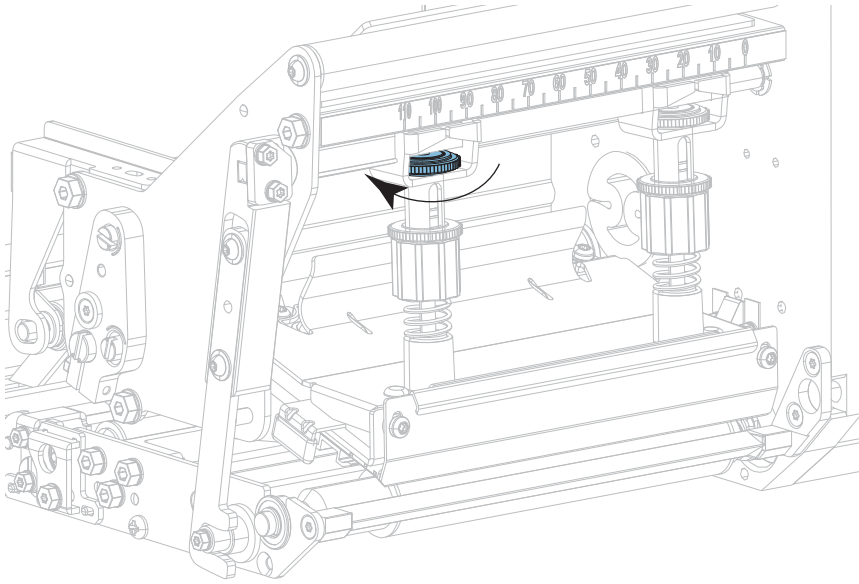


**NOTE:** The graphics shown in this section depict a right-hand (RH) model. The graphics for a left-hand (LH) model would be a mirror image.

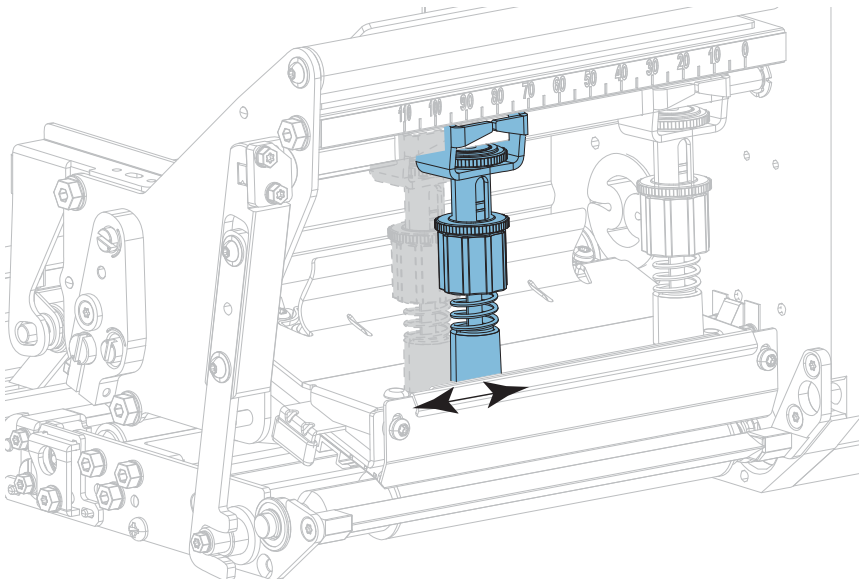
1. Release the printhead assembly to lessen the pressure on the toggles.



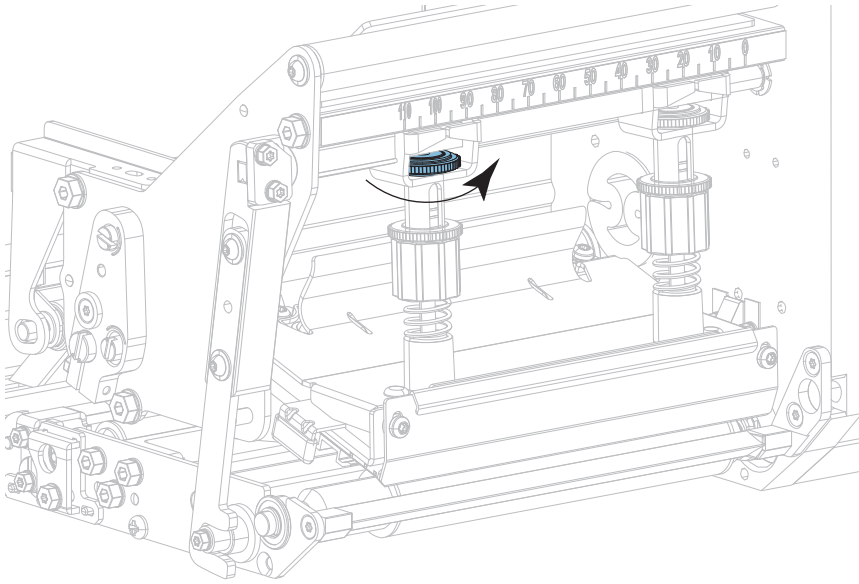
2. Loosen the locking nut at the top of the toggle to be moved.



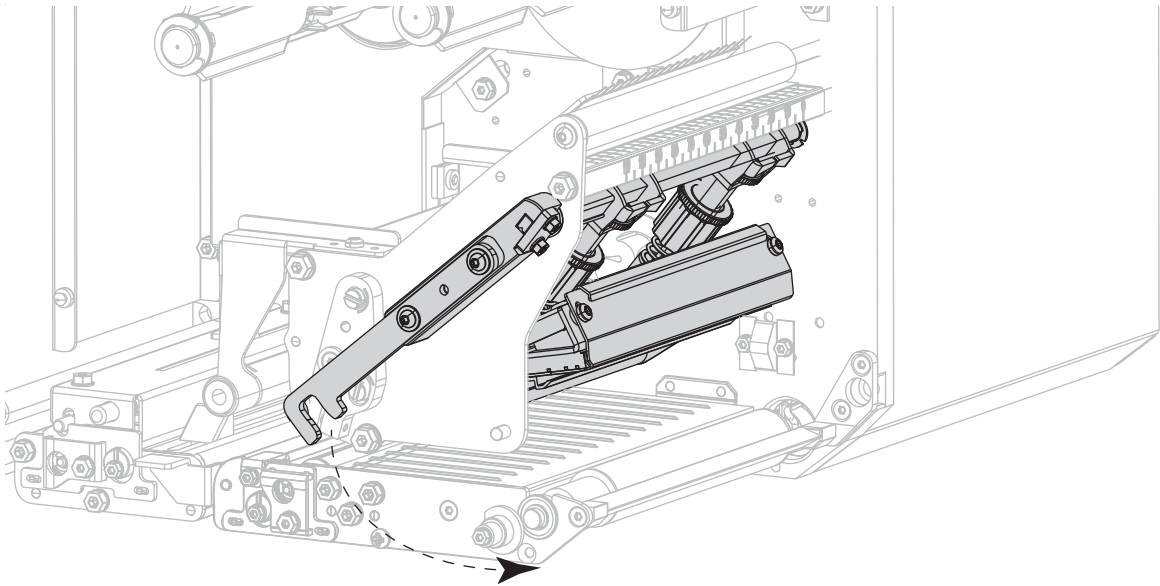
3. Reposition the toggle as necessary to provide even pressure on the media. For extremely narrow media, position the inner toggle over the center of the media, and decrease the pressure on the outer toggle.



4. Tighten the locking nut.



5. Lock the printhead assembly.



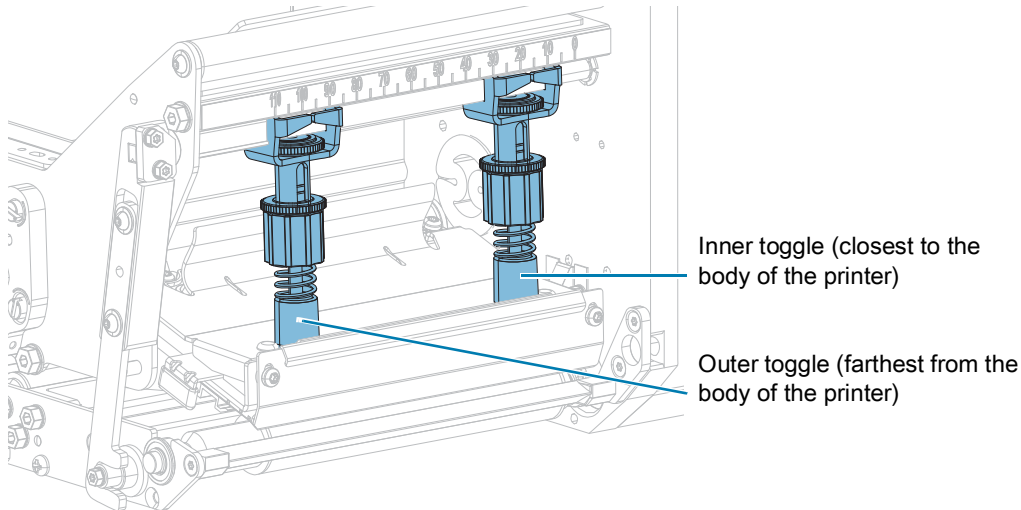
for parts & service call QLC (800) 837-1309

## Adjusting the Printhead Pressure

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.



**NOTE:** The graphics shown in this section depict a right-hand (RH) model. The graphics for a left-hand (LH) model would be a mirror image.



1. Are you experiencing either of the following issues?

If the media...	Then...
Requires higher pressure overall to print well	Increase the pressure on both toggles. Continue with <a href="#">step 5 on page 71</a> .
Requires lower pressure overall to print well	Decrease the pressure on both toggles. Continue with <a href="#">step 5 on page 71</a> .

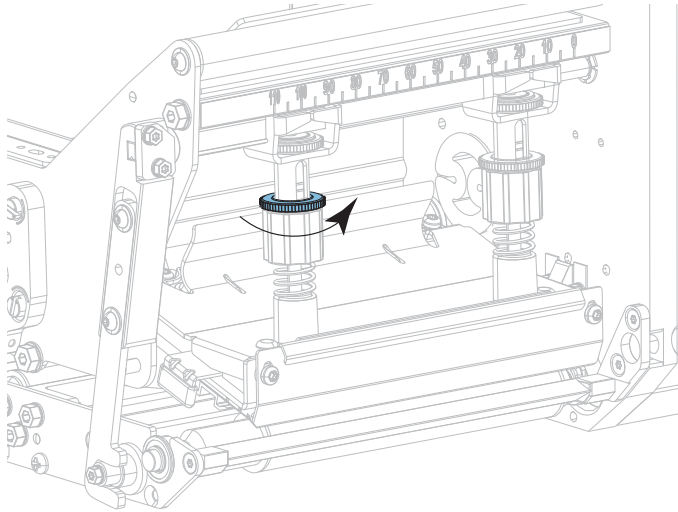
- If overall pressure is not an issue, initiate a [PAUSE Self-Test on page 25](#).
- While printing labels, use the control panel to lower the darkness setting until the labels are printing gray instead of black.

4. Are you experiencing any of the following issues?

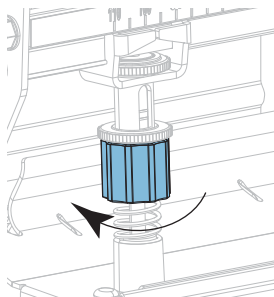
If the media...	Then for right-hand (RH) print engines...	Then for right-hand (RH) print engines...
Prints too lightly on the left side of the label.	Increase the pressure on the <b>inner</b> toggle.	Increase the pressure on the <b>outer</b> toggle.
Prints too lightly on the right side of the label.	Increase the pressure on the <b>outer</b> toggle.	Increase the pressure on the <b>inner</b> toggle.
Shifts left while printing	Increase the pressure on the <b>outer</b> toggle. OR Decrease the pressure on the <b>inner</b> toggle.	Increase the pressure on the <b>inner</b> toggle. OR Decrease the pressure on the <b>outer</b> toggle.
Shifts right while printing	Increase the pressure on the <b>inner</b> toggle. OR Decrease the pressure on the <b>outer</b> toggle.	Increase the pressure on the <b>outer</b> toggle. OR Decrease the pressure on the <b>inner</b> toggle.

5. To make adjustments to the printhead pressure:

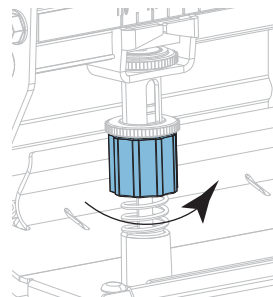
- a. Loosen the upper knurled nut on the toggle to be adjusted.



- b. Increase or decrease the pressure by rotating the lower nut.



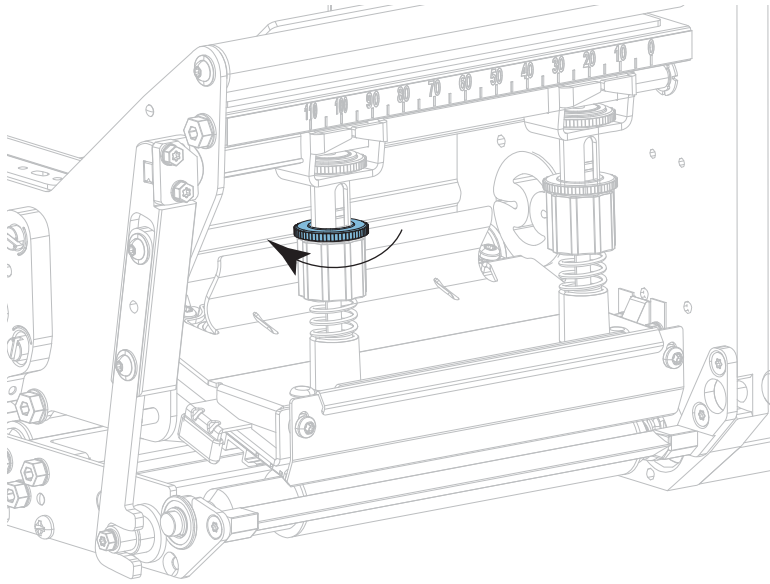
Increase pressure



Decrease pressure

for parts & service call QLC (800) 837-1309

- c. Hold the lower nut in place and tighten the upper knurled nut.



6. If necessary, reinitiate a [PAUSE Self-Test on page 25](#).
7. While printing labels, use the control panel to raise the darkness setting until the labels are again printing black instead of gray.
8. Check the print quality, and if necessary, repeat this procedure until the printhead pressure is adequate.



## Print Line, Balance, and Skew Adjustment



**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label. As the labels print, you can adjust the following:

- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

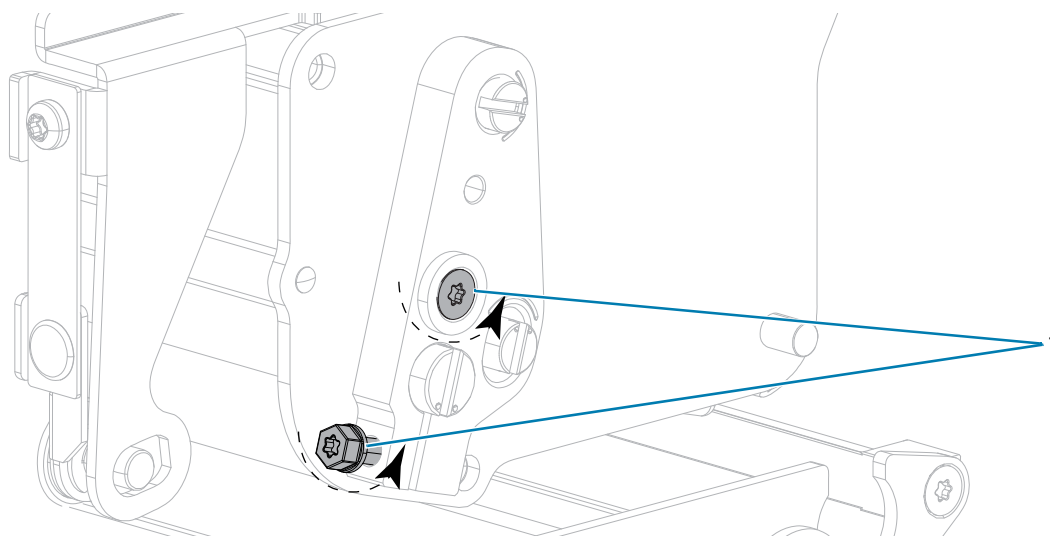
If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

To make print line, balance, and skew adjustments, complete these steps:

1. Loosen the two ● 3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two ● 3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold PAUSE while turning on the print engine.
  - c. Hold PAUSE until the first control panel light turns off.

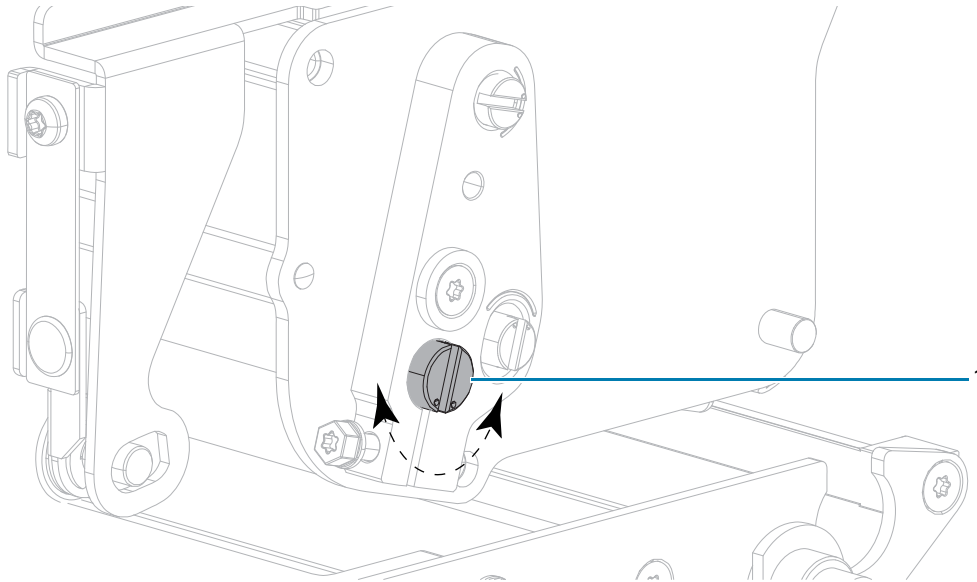


**NOTE:** At any time during the PAUSE self-test:

- Press PAUSE to print 15 additional labels.
- Press CANCEL to change the print speed.
- Press and hold CANCEL to exit the self-test.

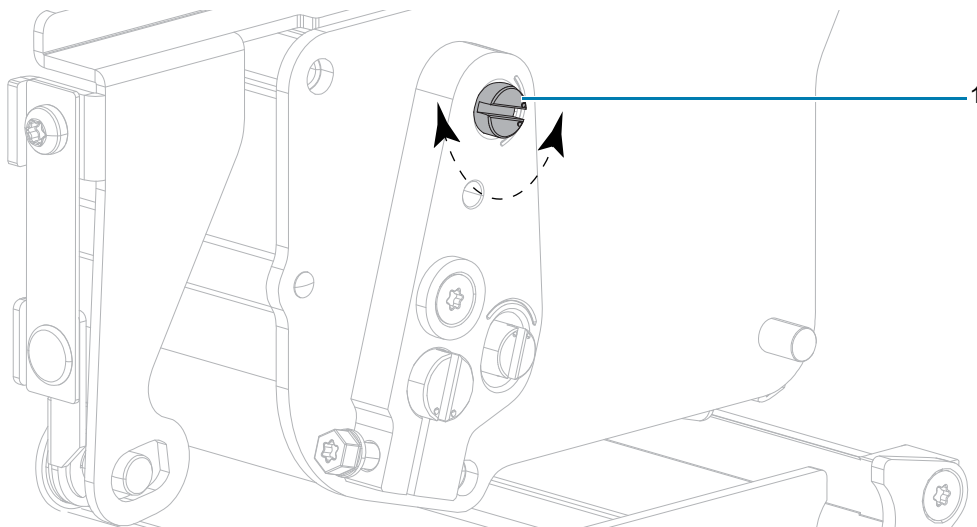
## Adjust the Print Line

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward or backward to find the best appearance of the printed image.



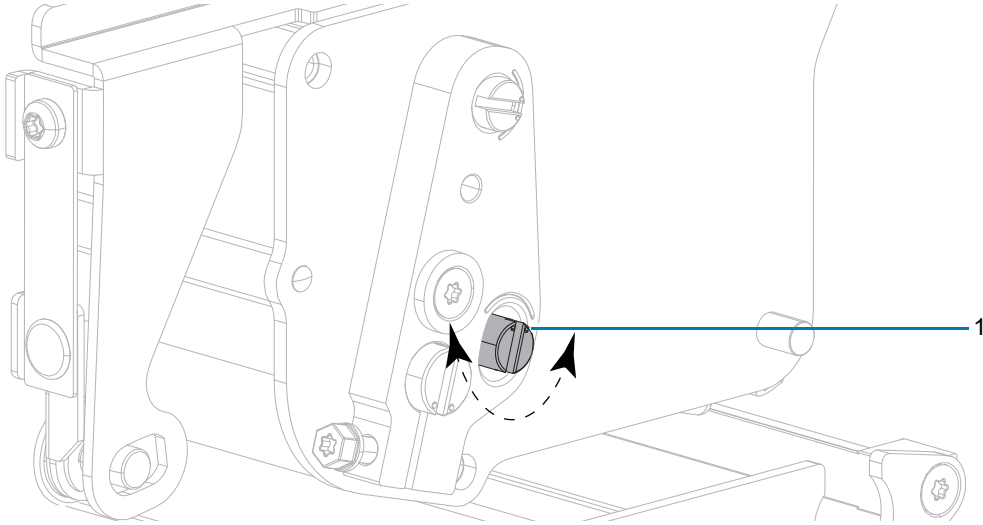
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the printhead.



## Adjust the Skew

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster. Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label (not at a diagonal).



# Data Connectors

This section describes the details of some of the data communication ports available to connect the printer to your computer or network.

## Applicator Interface Board Overview

The applicator interface board provides a robust electrical signal interface between the printer and the outside world via a standard DB15 connector. The applicator **input** signals allow an external device to control when the printer prints. The applicator **output** signals provide handshaking and status information to the external host.


The applicator output voltage can be set to three levels (0V, 5V, 24V) through the Set-Get-Do (SGD) command shown in [Table 3](#). The applicator provides 5V or 24V power to run the I/O interface and to power small external loads. All output signals are open collector with a light pull-up resistor built in. All signals and power are galvanically isolated from the host printer. The applicator provides a jumper to connect printer and applicator grounds, if required, but the default setting is isolation (see [Change the Applicator Interface Board Jumper Configuration on page 79](#)).



### IMPORTANT:

- The 0V setting must be used when an external voltage is provided.
- The applicator output power supply can sustain momentary short circuits but may be damaged with long-term shorts. There are no user-replaceable fuses on the applicator interface board.

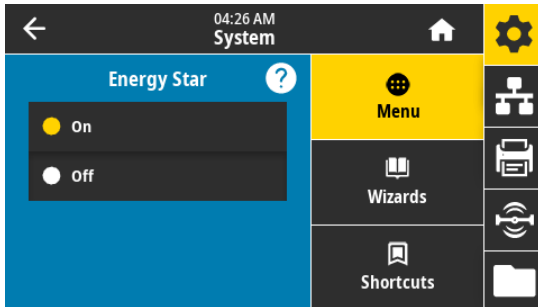
**Table 3** Applicator Interface Board Specifications

Output voltage selections	<ul style="list-style-type: none"> <li>• 0V (required setting when voltage is supplied externally)</li> <li>• 5VDC (<math>\pm 10\%</math>) <math>\leq 1.0</math> A</li> <li>• 24VDC (<math>\pm 10\%</math>) <math>\leq 0.5</math> A</li> </ul> <p>Set by the following SGD command:</p> <pre>! U1 setvar "device.applicator.voltage" "X"</pre> <p>where X is 0, 5, or 24 to indicate the desired voltage. The printer must be power cycled before the setting takes effect.</p> <p> <b>NOTE:</b> A high-voltage lockout jumper installed on the applicator interface PCBA prevents the output from going above 5V, even if the SGD is sent for 24V output. This precaution prevents accidental damage to external equipment. The jumper must be repositioned to allow for 24V operation. The default setting is for 5V operation.</p>
Pull-up resistor on output	10K +/- 5%
Pull-up resistor on input	4.7K +/- 5%
Output signal current sink	$\leq 7$ mA
User-supplied voltage range when output voltage set to 0V	0–24 Volts

## Energy Star Effect on the Applicator Interface Board

If the Energy Star feature is enabled and the printer goes to sleep, the applicator interface board shuts down. If the applicator interface board needs to remain on at all times, disable the Energy Star feature in one of the following ways:

- Set the Energy Star user menu item to OFF (on the Home screen, touch **Menu > System > Energy Saving > Energy Star**):



- Send the SGD command for disabling Energy Star:  
 ! U1 setvar "power.energy\_star.enable" "off"  
 To reenable Energy Star, send the SGD command with the value "on".

## Change the Applicator Interface Board Jumper Configuration

The applicator provides a jumper to connect printer and applicator grounds, if required, but the default setting is isolation. Follow the instructions in this section if you need to change the default settings.



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

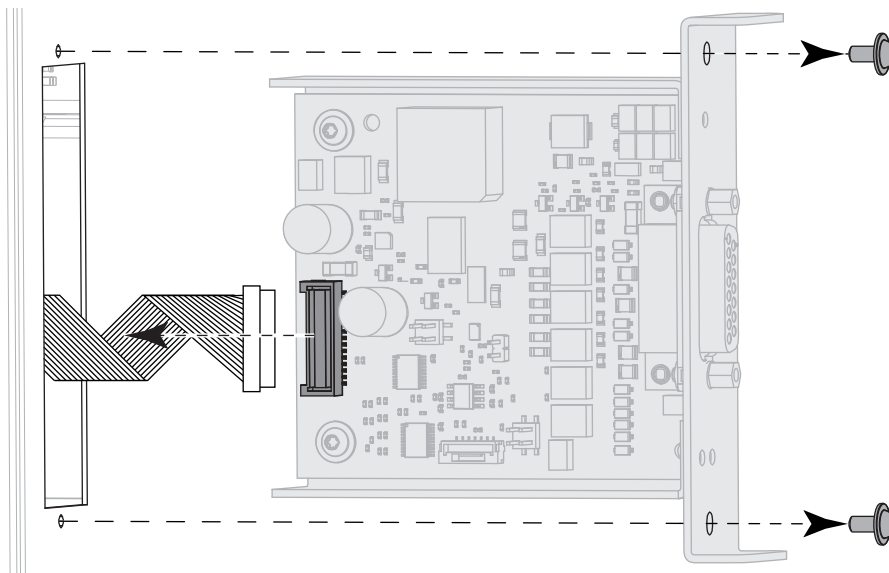


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

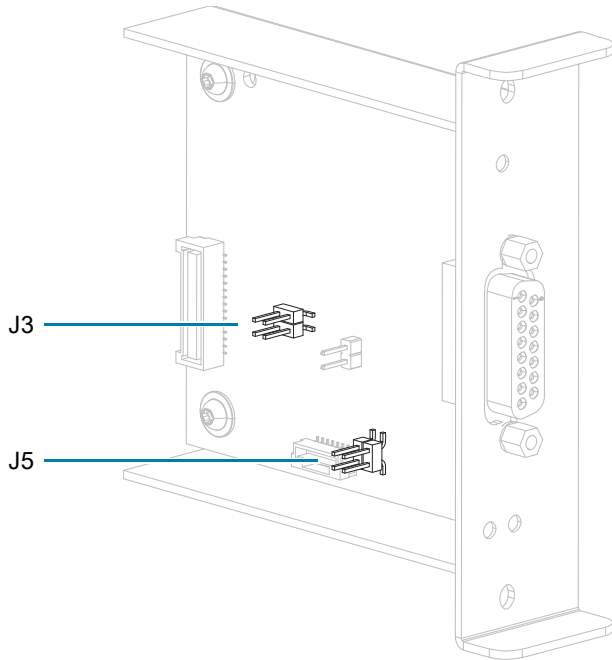


**IMPORTANT:** A qualified service technician must perform this installation. If the print engine is installed improperly, it could fall out of the applicator and cause injury. The keyhole and the center mounting bolt are designed to support the print engine and assist in installing and removing the four mounting screws.

1. To access the applicator interface board:
  - a. Remove the two mounting screws securing the applicator interface board.
  - b. Slide out the applicator interface board.
  - c. Disconnect the applicator cable from the applicator interface board, making sure to keep the end of the cable from falling inside the printer.



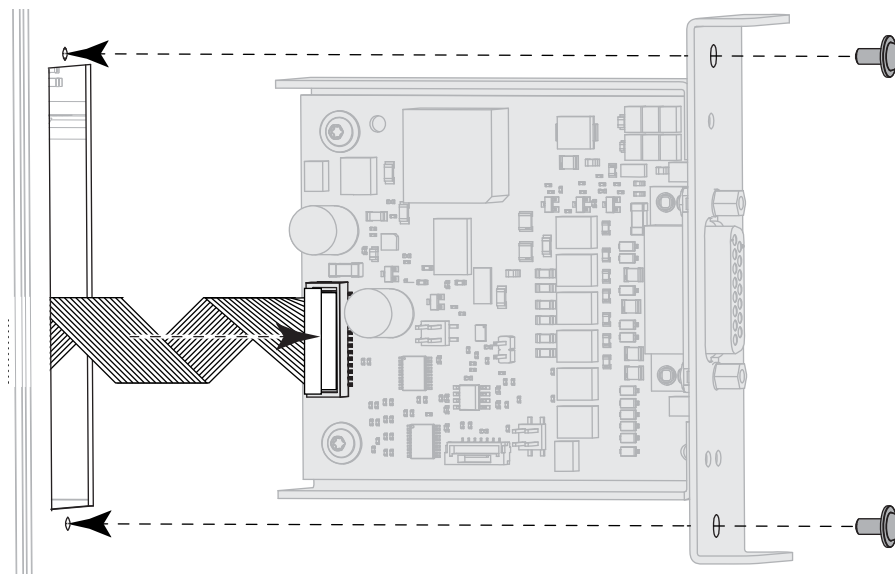
2. Configure the jumpers on the applicator board, as appropriate for your system.



Jumper J3 — High-Voltage Lockout		Jumper J5 — Ground Isolation Jumper	
	<b>J3 Pins 1 and 2 connected</b> V out = 5V max (default)		<b>J5 Pins 1 and 2 connected</b> isolated (default)
	<b>J3 Pins 3 and 4 connected</b> V out = 0V, 5V, 24V		<b>J5 Pins 3 and 4 connected</b> not isolated



3. To reinstall the applicator interface board:
  - a. Connect the applicator cable to the new applicator interface board.
  - b. Insert the new applicator interface board, and secure it using the two new screws.



4. Reconnect the AC power cord and interface cables, and then turn on the printer power.
5. If necessary, change your Energy Star setting (see [Energy Star Effect on the Applicator Interface Board on page 78](#)).
6. If necessary, change the voltage using the `device.applicator.voltage` SGD command (see [Table 3 on page 77](#)). Then power cycle the printer.

# Applicator Interface Pin Configuration

Figure 7 DB15 Connector

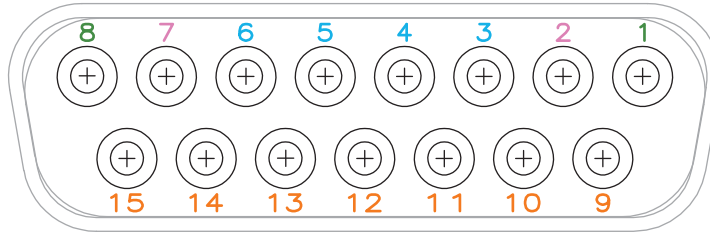
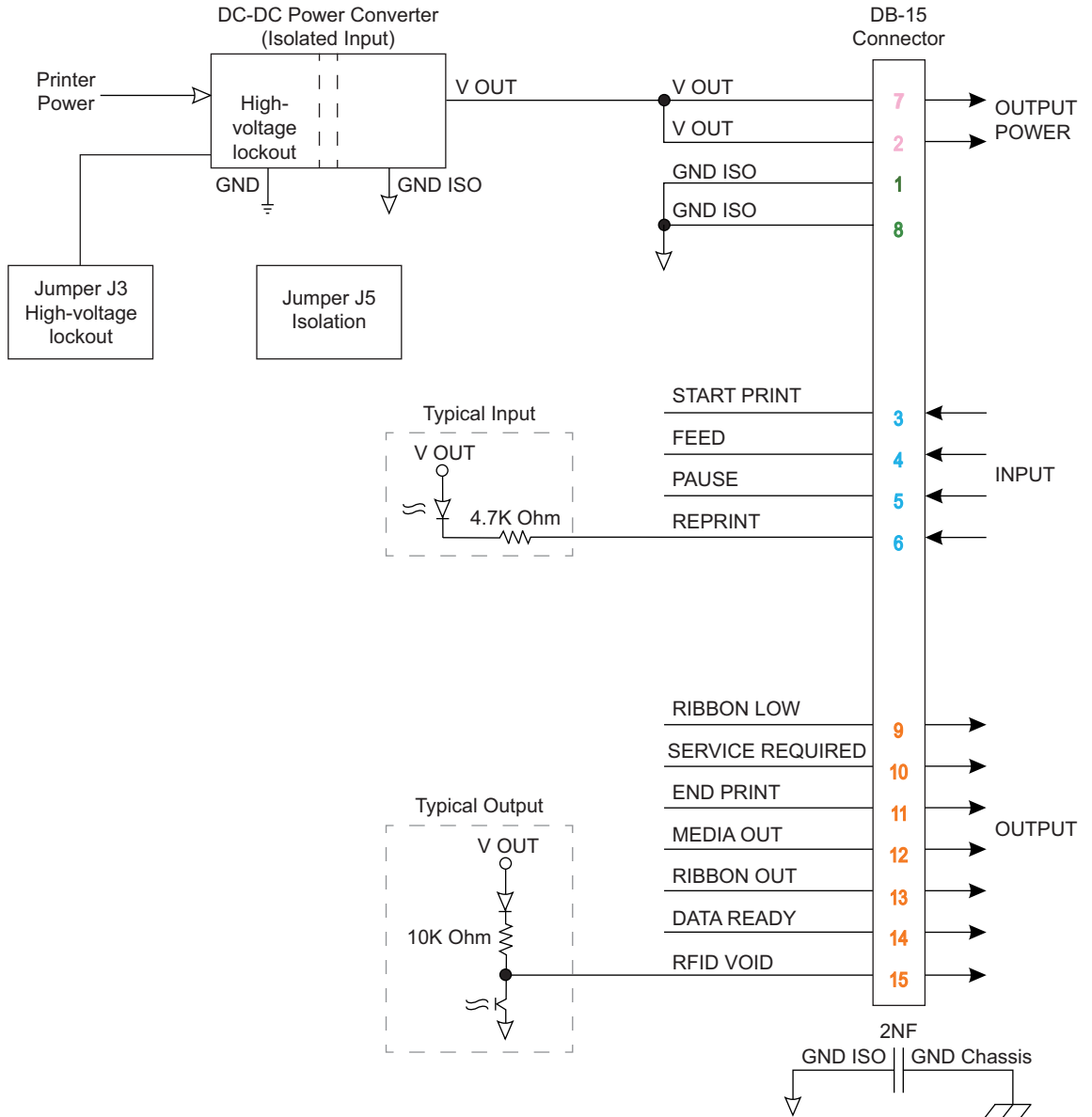


Figure 8 External Pinouts




for parts & service call QLC (800) 837-1309

**Table 4** Applicator Interface Connector Pin Configuration

Pin No.	Signal Name	Signal Type	Description
1	GROUND ISOLATED	Ground	Using jumper J5, this pin can be configured as isolated or non-isolated from the printer circuit ground (see <a href="#">Change the Applicator Interface Board Jumper Configuration on page 79</a> ). Default position is set to isolation.
2	VOUT	Power	Programmable output voltage of 0V, 5VDC, 24VDC. Voltage selection done by SGD command. Depending on configuration, jumper J3 will lock out 24V operation (see <a href="#">Change the Applicator Interface Board Jumper Configuration on page 79</a> ). If set in 5V position, only 0V and 5V will be available. If set to 24V position, 0V, 5V and 24V will be available, depending on the SGD command. Default is 5V configuration.
3	START PRINT	Input	See <a href="#">Applicator Signals on page 85</a> for more information about the start and end print signals. <ul style="list-style-type: none"> <li>• <b>Pulse Mode</b>—The label printing process begins on the HIGH to LOW transition of this signal if a format is ready. Deassert this signal HIGH to inhibit printing of a new label.</li> <li>• <b>Level Mode</b>—Assert LOW to enable the printer to print if a label format is ready. When deasserted HIGH, the printer completes the label that is printing then stops and waits for this input to be reasserted LOW.</li> </ul>
4	FEED	Input	When the printer is idle or has been paused, assert this input LOW to trigger repeated feeding of blank labels. Deassert HIGH to stop feeding blank labels and register to the top of the next label.
5	PAUSE	Input	To toggle the current Pause state, this input must be asserted LOW for 200 milliseconds, or until the SERVICE REQUIRED output (pin 10) changes state.
6	REPRINT	Input	<ul style="list-style-type: none"> <li>• If the Reprint feature is enabled, this input must be asserted LOW to cause the printer to reprint the last label.</li> <li>• If the Reprint feature is disabled, this input is ignored.</li> </ul>
7	VOUT	Power	Programmable output voltage of 0V, 5VDC, 24VDC. Voltage selection done by SGD command. Depending on configuration, jumper J3 will lock out 24V operation (see <a href="#">Change the Applicator Interface Board Jumper Configuration on page 79</a> ). If set in 5V position, only 0V and 5V will be available. If set to 24V position, 0V, 5V and 24V will be available, depending on the SGD command. Default is 5V configuration.
8	GROUND ISOLATED	Ground	Using jumper J5, this pin can be configured as isolated or non-isolated from the printer circuit ground (see <a href="#">Change the Applicator Interface Board Jumper Configuration on page 79</a> ). Default position is set to isolation.
9	RIBBON LOW	Output	Asserted LOW if the Supplies Warning feature is enabled and the amount of ribbon remaining on the supply spindle is below the threshold level.

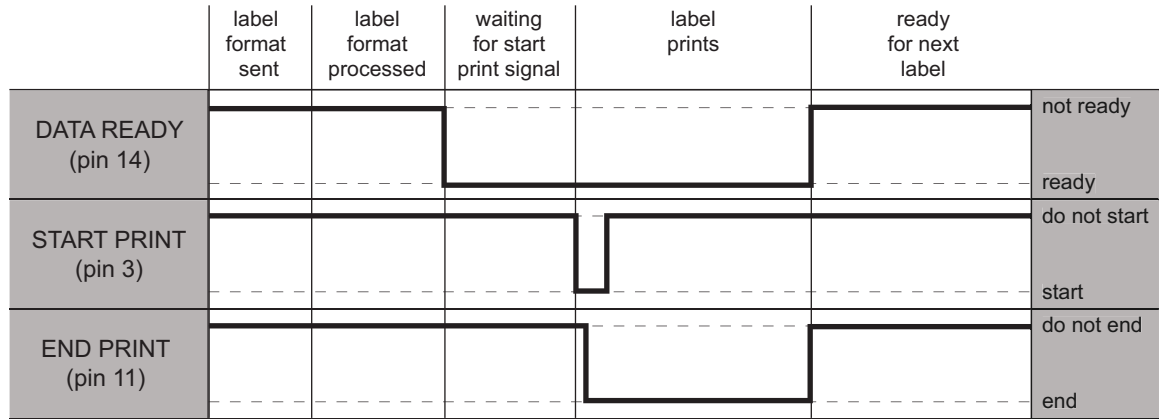
**Table 4** Applicator Interface Connector Pin Configuration (Continued)

Pin No.	Signal Name	Signal Type	Description
10	SERVICE REQUIRED	Output	<p>Asserted LOW in the following circumstances:</p> <ul style="list-style-type: none"> <li>the printhead is open</li> <li>the ribbon or media is out</li> <li>the printer is paused</li> <li>an operational fault occurs</li> <li>a Resynch error occurs while the applicator Resynch mode is set to Error mode</li> </ul>
11	END PRINT	Output	<p>See <a href="#">Applicator Signals on page 85</a> for more information about the start and end print signals.</p> <p> <b>NOTE:</b> A format (^XA ... ^XZ) that does not print will signal that it is being processed. However, it will not trigger an End Print signal because no motion/printing is required.</p> <ul style="list-style-type: none"> <li><b>MODE 0</b>—The applicator port is OFF.</li> <li><b>MODE 1</b>—Asserted LOW only while the printer is moving the label forward; otherwise deasserted HIGH.</li> <li><b>MODE 2</b>—Asserted HIGH only while the printer is moving the label forward; otherwise deasserted LOW.</li> <li><b>MODE 3</b>—(Default) Asserted LOW for 20 milliseconds when a label is completed and positioned. Not asserted during continuous printing.</li> <li><b>MODE 4</b>—Asserted HIGH for 20 milliseconds when a label is completed and positioned. Not asserted during continuous printing.</li> </ul>
12	MEDIA OUT	Output	Asserted LOW when there is no media in the printer.
13	RIBBON OUT	Output	Asserted LOW when there is no ribbon in the printer.
14	DATA READY	Output	<p>See <a href="#">Applicator Signals on page 85</a> for more information about this signal.</p> <ul style="list-style-type: none"> <li>Asserted LOW when sufficient data has been received to begin processing the next label format.</li> <li>Deasserted HIGH when printing/processing stops after the current label format, either due to a pause condition or the absence of a label format.</li> </ul>
15	RFID VOID	Output	<ul style="list-style-type: none"> <li>Asserted LOW when the RFID transponder over the antenna is “voided.”</li> <li>Deasserted HIGH when the end print signal is asserted.</li> </ul>

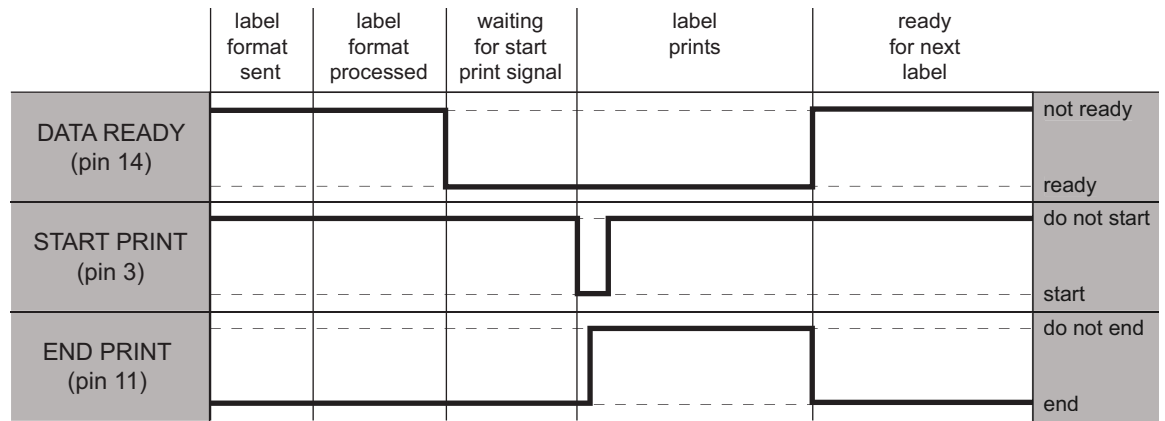
## Applicator Signals

The following timing diagrams show how applicator signals function in each applicator mode during the stages of printing a non-RFID label. For more information about applicator signals during RFID operation, see the RFID Programming Guide 3.

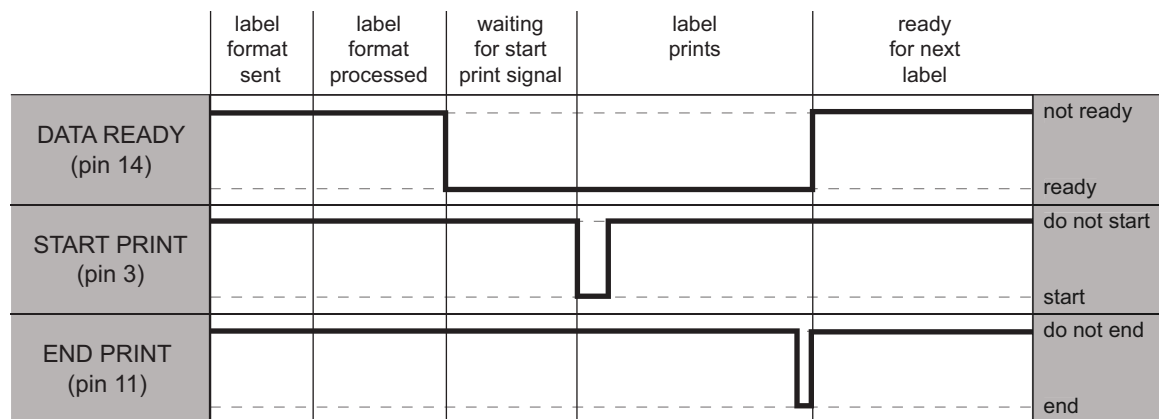
**Figure 9** Applicator Signals (Mode 1)



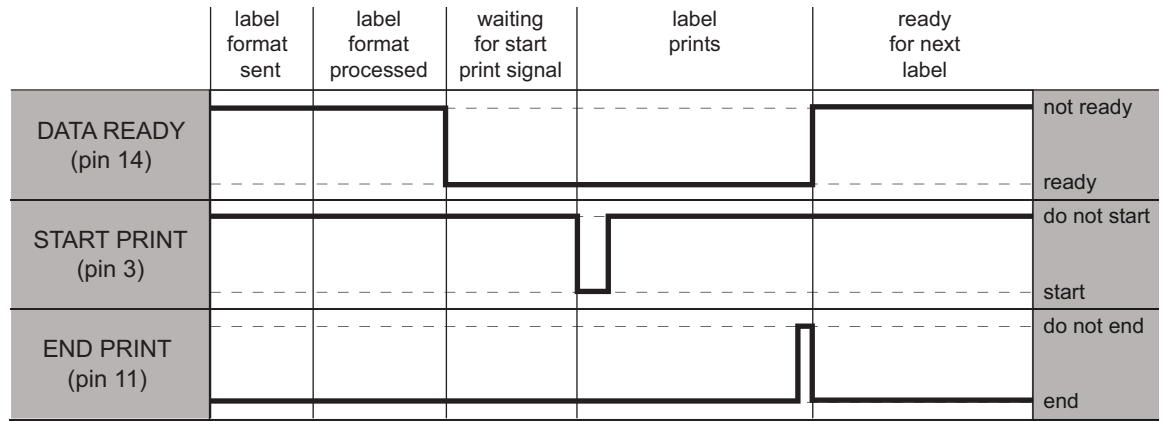
**Figure 10** Applicator Signals (Mode 2)



**Figure 11** Applicator Signals (Mode 3)



**Figure 12** Applicator Signals (Mode 4)



## Parallel Data Port

The parallel data interface supports IEEE 1284 bidirectional parallel communications in nibble mode. The parallel interface provides a means of communication that typically is faster than the serial interface methods. In this method, the bits of data that make up a character are sent all at one time over several wires in the cable, one bit per wire.

When communicating via the parallel port, the values selected on the printer must be the same as those used by the host equipment connected to the printer. Port selection for status information is determined by the channel sending the request. The parallel port can be set for bidirectional or unidirectional communication. The default setting is bidirectional.


## Parallel Cabling Requirements

A standard 36-pin parallel connector is available on the back of the printer for connection to the data source. An IEEE-1284 compatible bidirectional parallel data cable is required when this communication method is used. The required cable must have a standard 36-pin parallel connector on one end that is plugged into the mating connector located at the rear of the printer. The other end of the cable connects to the printer connector at the host computer. Port selection for status information is determined each time the printer is turned on.

## Parallel Port Interconnections

Table 5 shows the pin configuration and function of a standard computer-to-printer parallel cable.

**Table 5** Parallel Cable Pin Configuration

36-Pin Connectors	Description
1	nStrobe/HostClk
2–9	Data Bits 1–8
10	nACK/PtrClk
11	Busy/PtrBusy
12	PError/ACKDataReq
13	Select/Xflag
14	nAutoFd/HostBusy
15	Not used
16, 17	Ground
18	+5 V at 750 mA The maximum current draw may be limited by option configuration.  <b>IMPORTANT:</b> To enable this capability, a qualified service technician must install a jumper on the printer's main logic board on JP1, pins 2 and 3.
19–30	Ground

**Table 5** Parallel Cable Pin Configuration (Continued)

36-Pin Connectors	Description
31	nInit
32	nFault/NDataAvail
33, 34	Not used
35	+5 V through a 1.8 K $\Omega$ Resistor
36	NSelectin/1284 active



## Serial Data Port

To communicate using the serial data port of the printer, you must choose the number of data bits, parity, and handshaking. Parity applies only to data transmitted by the printer because the parity of received data is ignored.

The values selected must be the same as those used by the host equipment connected to the printer. Default printer settings are 9600 baud, 8 data bits, no parity, and XON/XOFF. The printer will accept any host setting for stop bits.

## Hardware Control Signal Descriptions

For all RS-232 input and output signals, the printer follows both the Electronics Industries Association (EIA) RS-232 and the Consultative Committee for International Telegraph and Telephone (CCITT) V.24 standard signal level specifications.

When DTR/DSR handshaking is selected, the Data Terminal Ready (DTR) control signal output from the printer controls when the host computer may send data. DTR ACTIVE (positive voltage) permits the host to send data. When the printer places DTR in the INACTIVE (negative voltage) state, the host must not send data.



**NOTE:** When XON/XOFF handshaking is selected, data flow is controlled by the ASCII Control Codes DC1 (XON) and DC3 (XOFF). The DTR Control lead has no effect.

Request To Send (RTS) is a control signal from the printer that is connected to the Clear To Send (CTS) input at the host computer.

## Pin Configuration

Connect the serial data cable to the female DB-9 connector on the back of the printer. For all RS-232 connections through a DB-25 cable, use a DB-9 to DB-25 interface module (see [DB-9 to DB-25 Connections on page 91](#)).

[Table 6](#) shows the pin configuration of the serial data connector.

**Table 6** Serial Connector Pin Configuration

Pin No.	Name	Description
1	–	Unused and unterminated
2	RXD	Receive data—data input to printer
3	TXD	Transmit data—data output from printer
4	DTR	Data terminal ready—output from printer
5	SG	Signal ground
6	DSR	Data set ready—input to printer

**Table 6** Serial Connector Pin Configuration (Continued)

Pin No.	Name	Description
7	RTS	Request to send—output from printer
8	CTS	Clear to send—input to printer
9	+5 VDC	+5 VDC at 750 mA The maximum current draw may be limited by option configuration.  <div style="display: flex; align-items: center;"> <p><b>IMPORTANT:</b> To enable this capability, a qualified service technician must install a jumper on the printer's main logic board on JP2, pins 2 and 3.</p> </div>

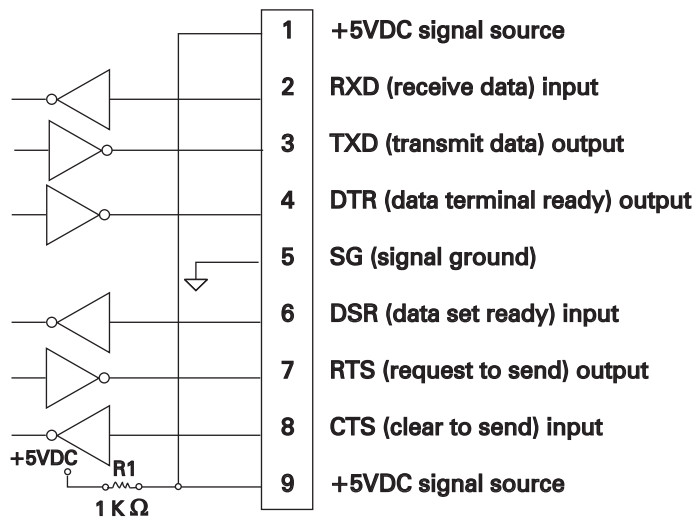
## RS-232 Interface Connections

The printer is configured as Data Terminal Equipment (DTE). [Figure 13](#) shows the internal connections of the printer's RS-232 connector.



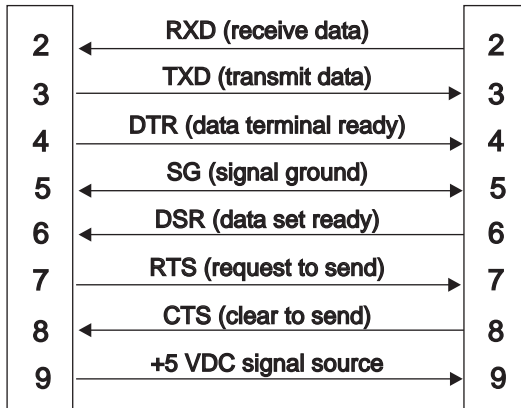
**NOTE:** Use a null modem (crossover) cable to connect the printer to a computer or any other DTE device.

**Figure 13** RS-232 DB9 MLB Connections



When the printer is connected via its RS-232 interface to Data Communication Equipment (DCE) such as a modem, use a standard RS-232 (straight-through) interface cable. [Figure 14](#) illustrates the connections required for this cable.

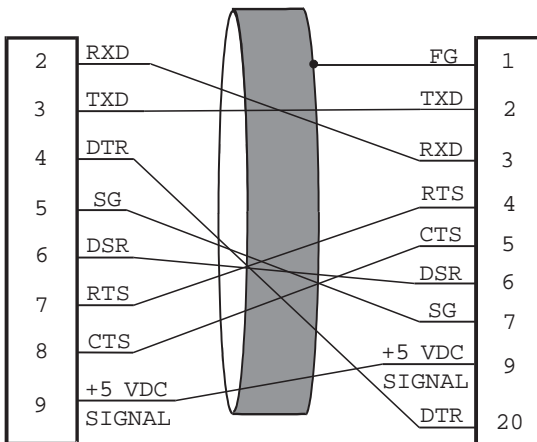
**Figure 14** RS-232 to DCE Cable Connectors



### DB-9 to DB-25 Connections

To connect the printer's RS-232 DB-9 interface to a DB-25 connector, an interface adapter is required. A generic DB-25 adapter can be used, although the +5 VDC signal source would not be passed through the adapter. [Figure 15](#) shows the connections required for the DB-9 to DB-25 interface.

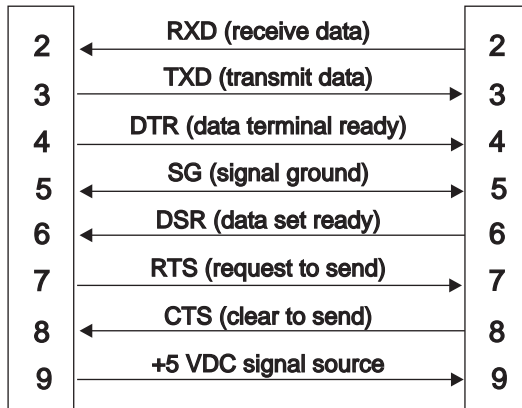
**Figure 15** DB-9 to DB-25 Cable Connections



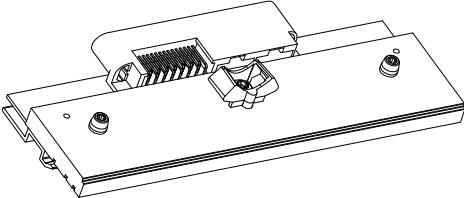
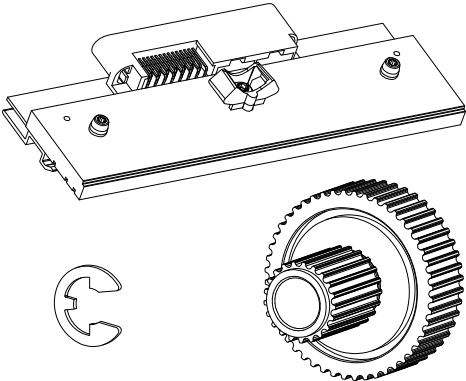
## Modem Connection

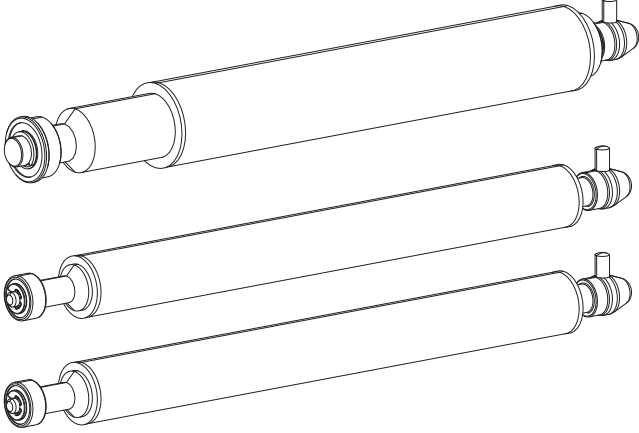
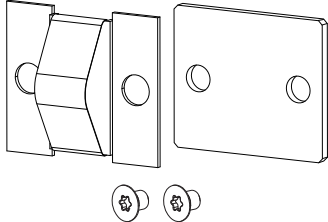
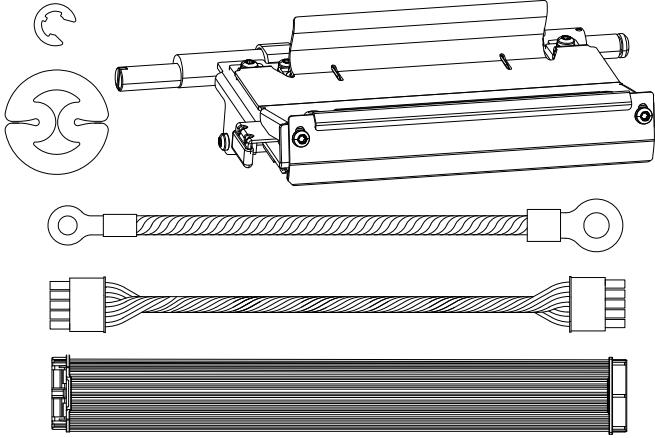
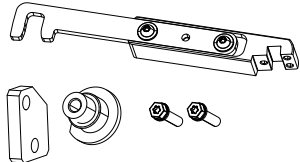
When the printer is connected via its RS-232 interface to Data Communication Equipment (DCE) such as a modem, use a standard RS-232 (straight-through) interface cable. [Figure 16](#) shows the connections required for this cable.

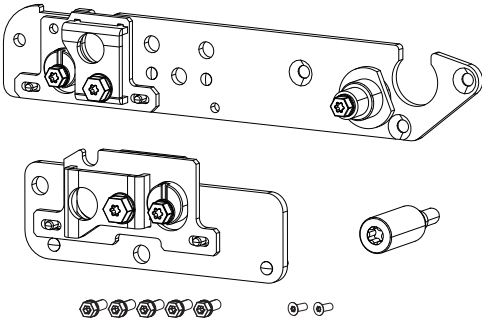
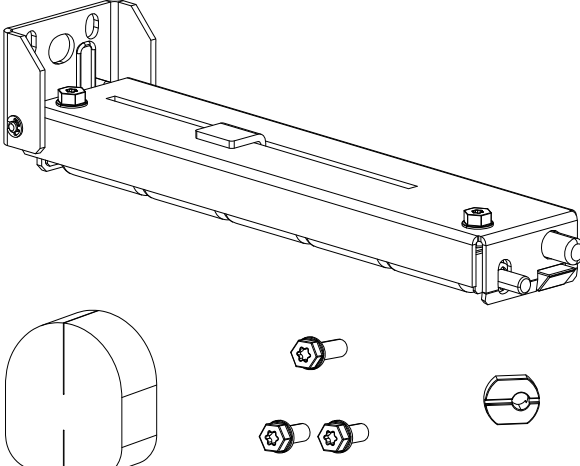
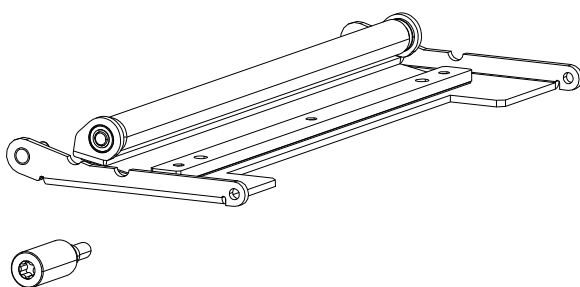
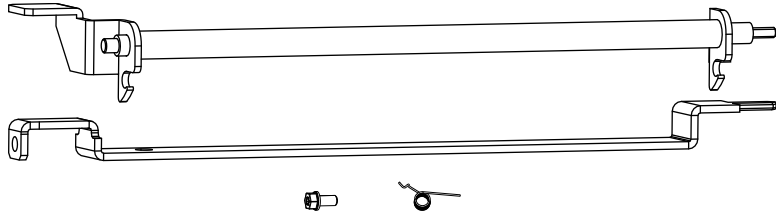
**Figure 16** RS-232 Cable Connections



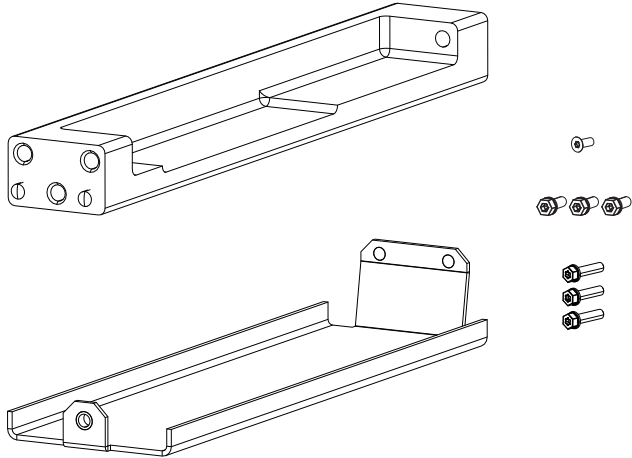
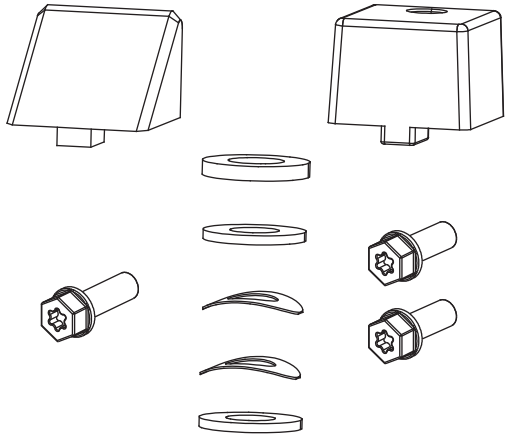
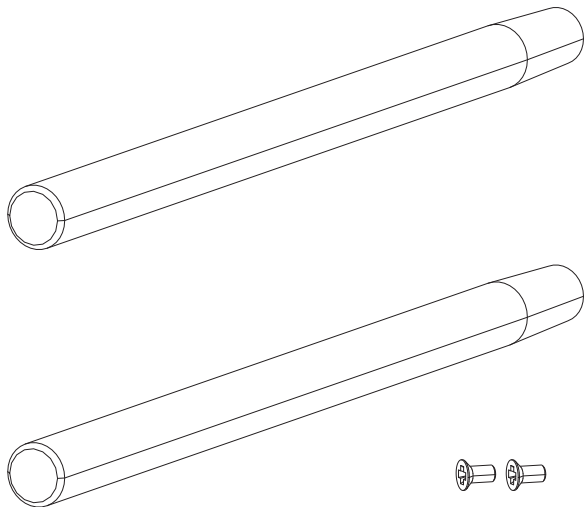
# Media Path Components

Description	Kit Number	Kit Name
<p>Printhead Maintenance Kit on page 99</p> 	P1112750-009	Kit, Printhead 203 dpi, ZE511 RH & LH
	P1112750-010	Kit, Printhead 300 dpi, ZE511 RH & LH
	P1112750-011	Kit, Printhead 600 dpi, ZE511 RH & LH
	P1112750-012	Kit, Printhead 203 dpi, ZE521 RH & LH
	P1112750-013	Kit, Printhead 300 dpi, ZE521 RH & LH
<p>Printhead DPI Conversion Maintenance Kit on page 105</p> 	P1112750-014	Kit, Convert 203dpi to 300dpi, ZE511 RH & LH
	P1112750-015	Kit, Convert 300dpi to 203dpi, ZE511 RH & LH
	P1112750-017	Kit, Convert 203dpi to 300dpi, ZE521 RH & LH
	P1112750-018	Kit, Convert 300dpi to 203dpi, ZE521 RH & LH

Description	Kit Number	Kit Name
<p>Platen Roller, Peel Roller, Pinch Roller Maintenance Kit on page 125</p> 	P1112750-039	Kit, Platen, Pinch and Peel Rollers, ZE511 RH & LH
	P1112750-040	Kit, Platen, Pinch and Peel Rollers, ZE521 RH & LH
<p>Ground Contact Maintenance Kit on page 136</p> 	P1046696-107	Kit, Ground Contact for Print Mechanism, ZE511, ZE521 RH & LH
<p>Print Mechanism Maintenance Kit on page 144</p> 	P1112750-030	Kit, Print Mechanism, ZE511 RH
	P1112750-031	Kit, Print Mechanism, ZE511 LH
	P1112750-032	Kit, Print Mechanism, ZE521 RH
	P1112750-033	Kit, Print Mechanism, ZE521 LH
<p>Print Mechanism Locking Lever Maintenance Kit on page 170</p> 	P1046696-008	Kit, Latch for Print Mechanism, ZE500-4, ZE500-6, ZE511, ZE521, RH & LH

Description	Kit Number	Kit Name
<p><a href="#">Roller Plates Maintenance Kit on page 177</a></p> 	P1112750-079	Kit, Roller Plates, ZE511, ZE521, RH
	P1112750-080	Kit, Roller Plates, ZE511, ZE521, LH
<p><a href="#">Upper Segmented Pinch Roller Maintenance Kit on page 193</a></p> 	P1046696-055	Kit, Upper Segmented Pinch Roller, ZE500-4, ZE511 RH
	P1046696-056	Kit, Upper Segmented Pinch Roller, ZE500-4, ZE511 RH
	P1046696-057	Kit, Upper Segmented Pinch Roller, ZE500-4, ZE511 RH
	P1046696-058	Kit, Upper Segmented Pinch Roller, ZE500-4, ZE511 RH
<p><a href="#">Peel Bracket Assembly Maintenance Kit on page 211</a></p> 	P1112750-077	Kit, Peel Bracket Assembly, ZE511, RH & LH
	P1112750-078	Kit, Peel Bracket Assembly, ZE521, RH & LH
<p><a href="#">Peel Deflector and Latch Maintenance Kit on page 215</a></p> 	P1046696-111	Kit, Latch & Deflector, ZE500-4, ZE511 RH
	P1046696-112	Kit, Latch & Deflector, ZE500-4, ZE511 LH
	P1046696-113	Kit, Latch & Deflector, ZE500-6, ZE521 RH
	P1046696-114	Kit, Latch & Deflector, ZE500-6, ZE521 LH

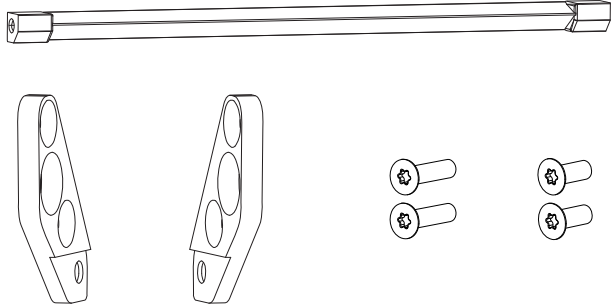
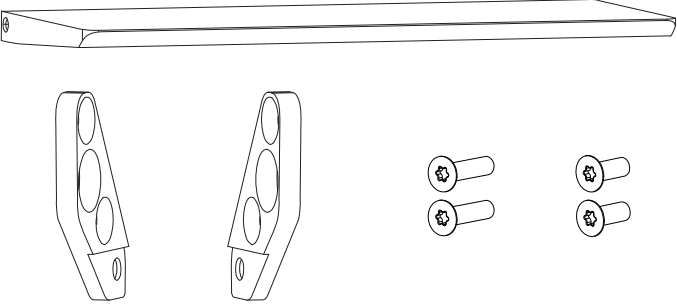
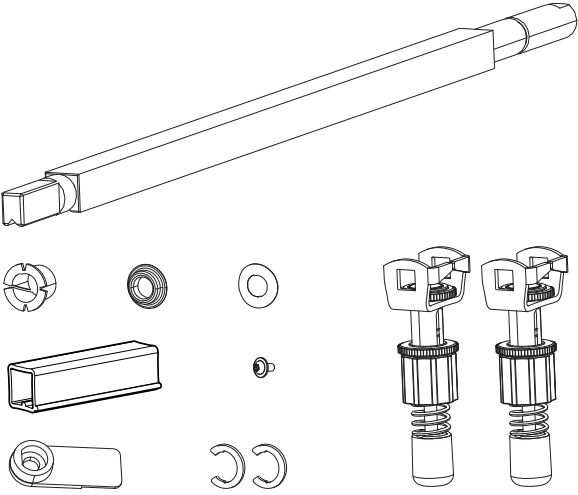
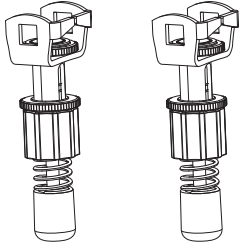
# Media Path Components

Description	Kit Number	Kit Name
<p><a href="#">Platen Support and Printhead Guard Maintenance Kit on page 232</a></p> 	P1112750-065	Kit, Platen Support and Guard for Printhead, ZE511 RH & LH
	P1112750-066	Kit, Platen Support and Guard for Printhead, ZE521 RH & LH
<p><a href="#">Media Guides Maintenance Kit on page 254</a></p> 	P1046696-061	Kit, Media Guides, ZE500-4, ZE500-6, ZE511, ZE521 RH & LH
<p><a href="#">Media Guideposts Maintenance Kit on page 261</a></p> 	P1046696-053	Kit, Media Guide Posts, ZE500-4, ZE511 RH & LH
	P1046696-054	Kit, Media Guide Posts, ZE500-6, ZE521 RH & LH

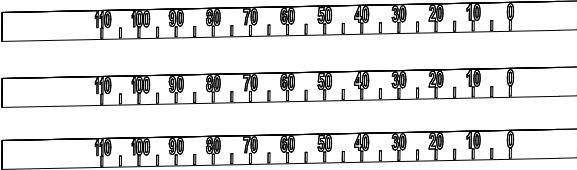
for parts & service call QLC (800) 837-1309



# Media Path Components

Description	Kit Number	Kit Name
<p><a href="#">Standard Peel Bar Maintenance Kit on page 268</a></p> 	P1112750-074	Kit, Standard Peel Bar, ZE511 RH & LH
	P1112750-075	Kit, Standard Peel Bar, ZE521 RH & LH
<p><a href="#">Extended Peel Bar Maintenance Kit on page 272</a></p> 	P1112750-067	Kit, Extended Length Peel Bar, ZE511 RH & LH
	P1112750-068	Kit, Extended Length Peel Bar, ZE521 RH & LH
<p><a href="#">Pivot Bar and Toggle Assemblies Maintenance Kit on page 276</a></p> 	P1112750-023	Kit, Pivot Bar and Toggle Assemblies, ZE511 RH & LH
	P1112750-024	Kit, Pivot Bar and Toggle Assemblies, ZE521 RH & LH
<p><a href="#">Toggle Maintenance Kit on page 291</a></p> 	P1112750-025	Kit, Toggle Assemblies, ZE511, ZE521, RH & LH

for parts & service call QLC (800) 837-1309

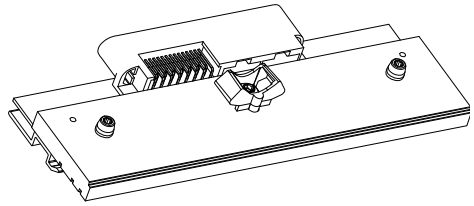
Description	Kit Number	Kit Name
<p><a href="#">Toggle Position Ruler Maintenance Kit on page 302</a></p> 	P1112750-026	Kit, Ruler for Toggle Position, Qty of 3, ZE511 RH
	P1112750-027	Kit, Ruler for Toggle Position, Qty of 3, ZE511 LH
	P1112750-028	Kit, Ruler for Toggle Position, Qty of 3, ZE521 RH
	P1112750-029	Kit, Ruler for Toggle Position, Qty of 3, ZE521 LH

## Installation Instructions

Read these instructions thoroughly before installing this kit.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZE511 printhead, 200/300/600 dpi ZE521 printhead, 200/300 dpi Qty: 1
---	--



**NOTE:** You can convert from 300 dpi to 600 dpi or from 600 dpi to 300 dpi by installing the appropriate printhead. No pulley or belt changes are required. To convert from 203 dpi to 600 dpi, you must first install the 203 dpi to 300 dpi option kit.

## Tools Required

- Zebra preventative maintenance kit (p/n 47362) or a clean swab dipped in 99.7% isopropyl alcohol

## Replace the Printhead



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



**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

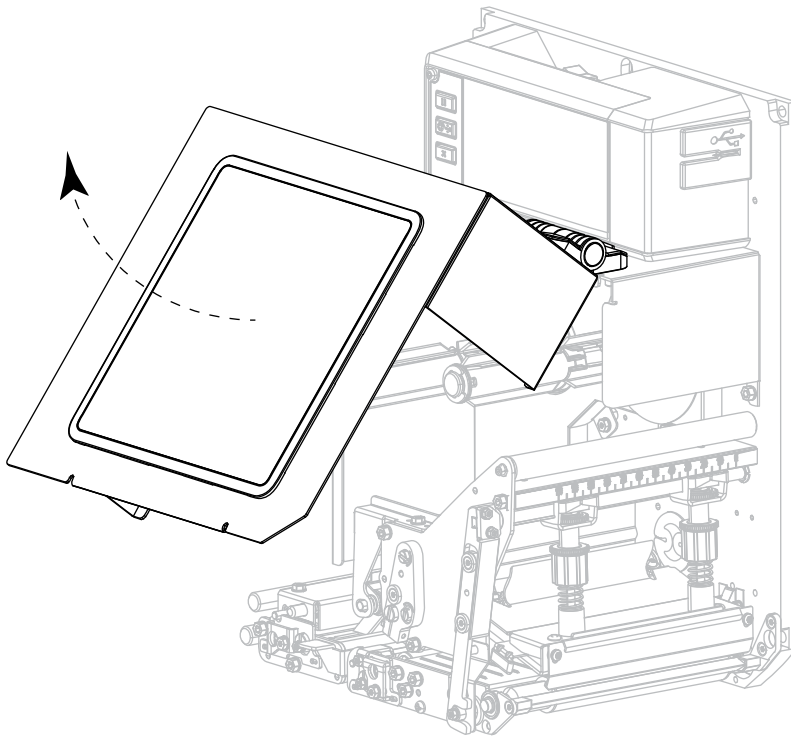


**CAUTION—HOT SURFACE:** The printhead may be hot and could cause severe burns. Allow the printhead to cool.



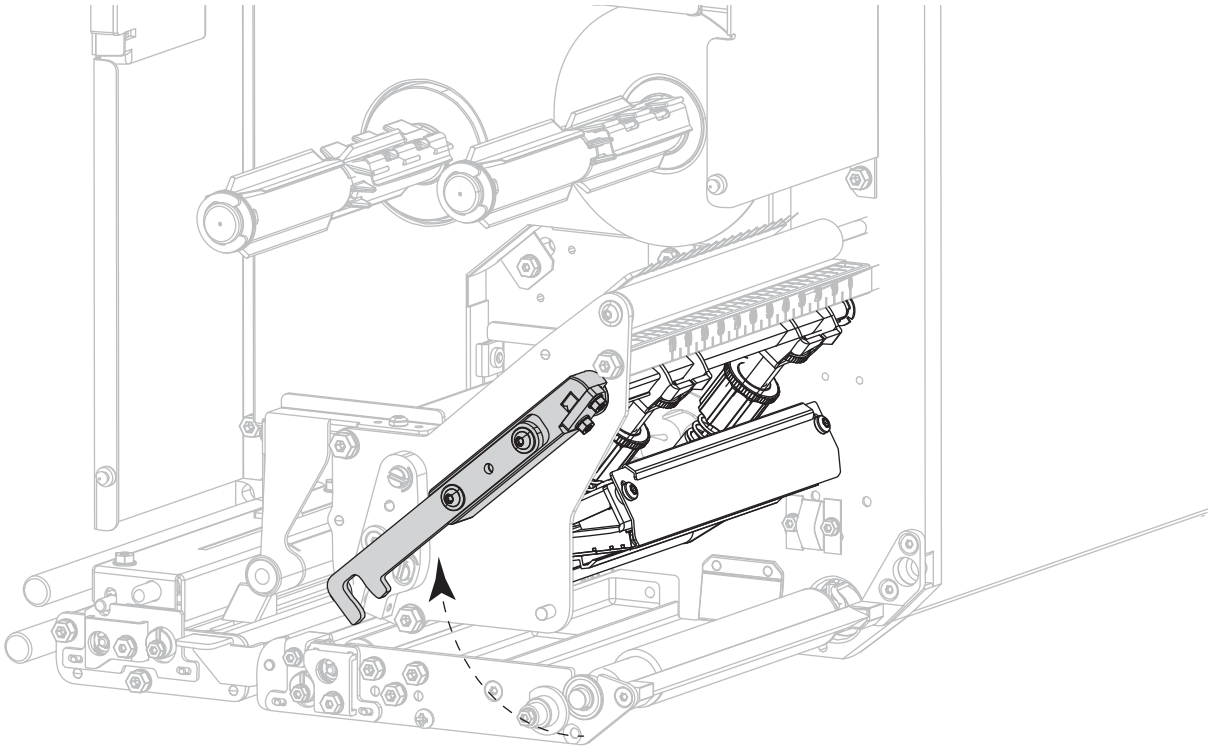
**CAUTION—PRODUCT DAMAGE:** Be careful not to touch the printhead with any tools. This could damage the printhead.

1. Open the media cover.

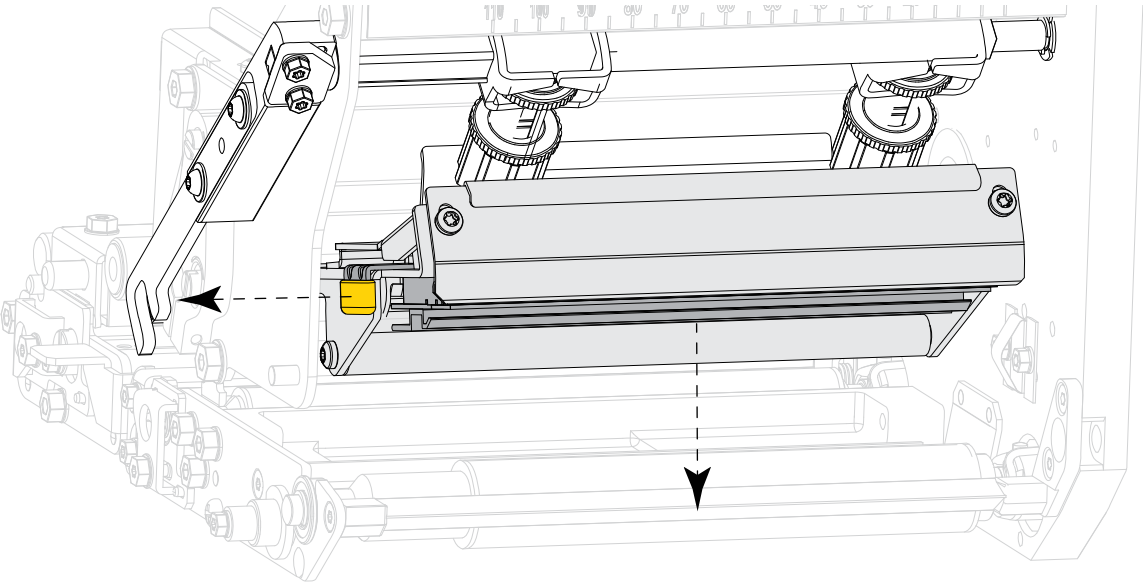


2. Remove the media and ribbon.

3. Release the printhead assembly.

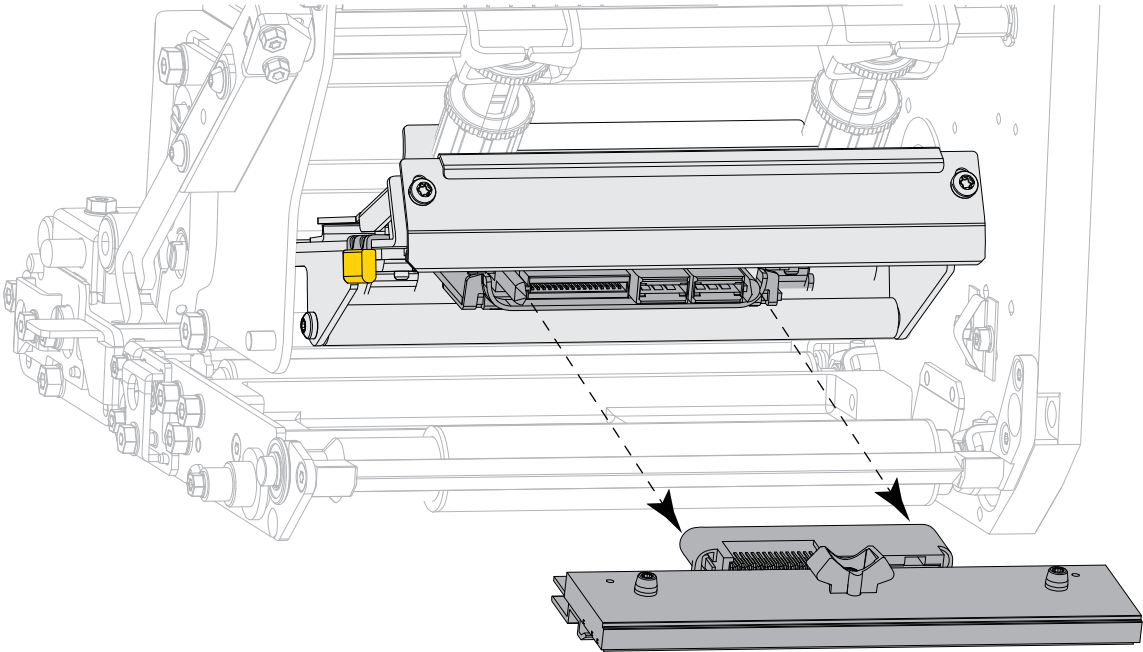


4. Slide the printhead release latch out to release and lower the old printhead.

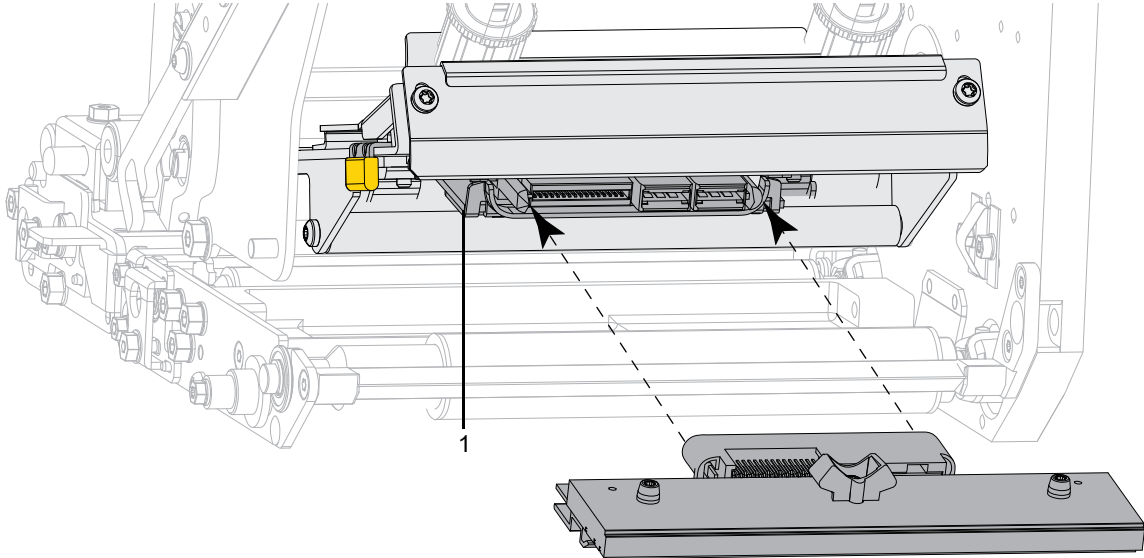


for parts & service call QLC (800) 837-1309

5. Remove the printhead.

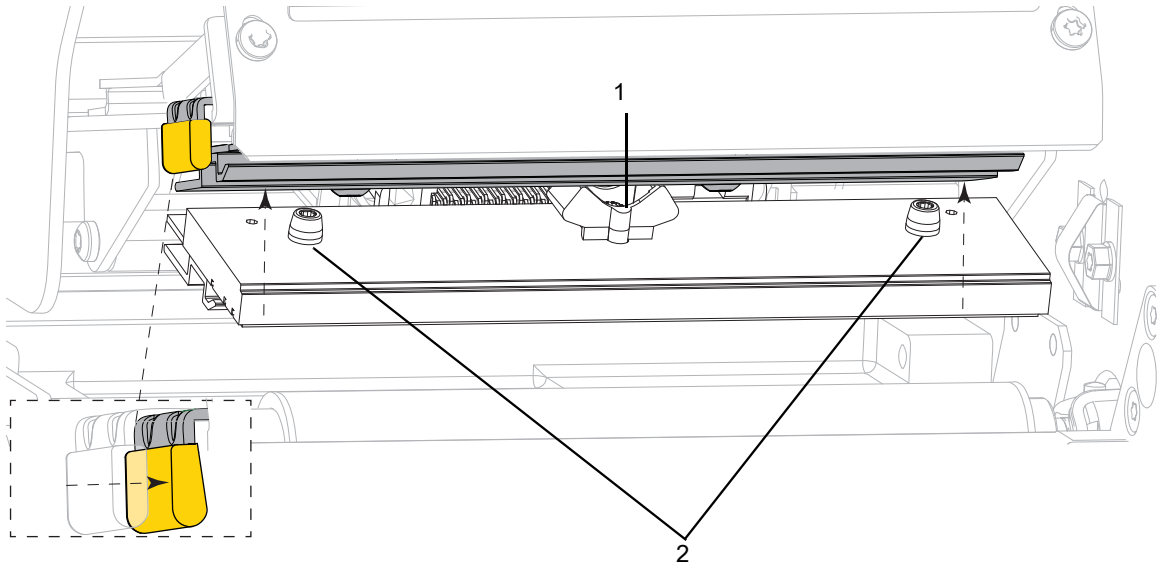


6. Push the new printhead into the printhead socket (1).

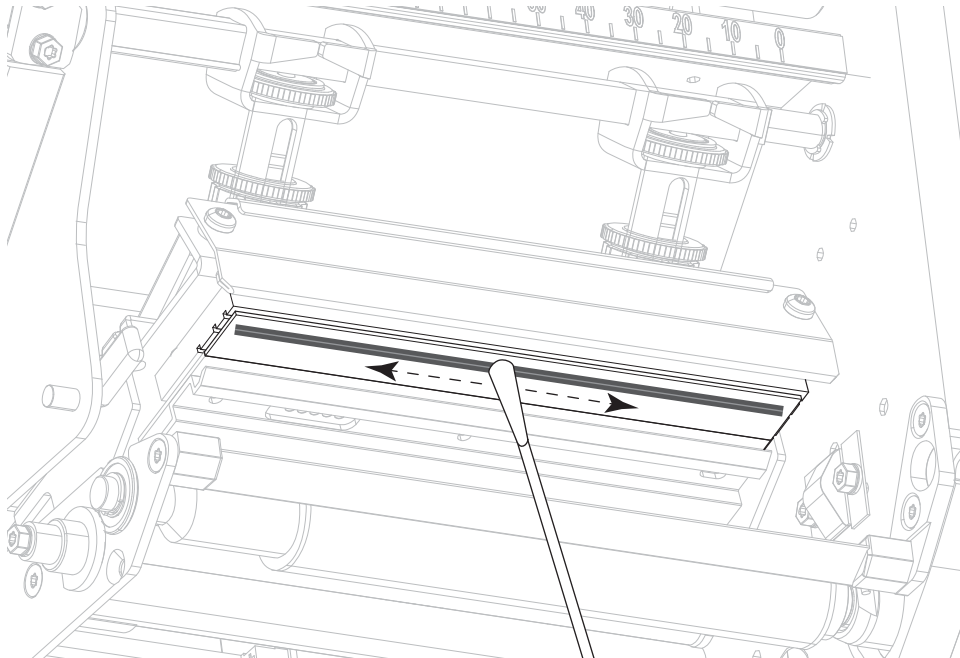


## Printhead Maintenance Kit

7. Push up gently on the printhead until the printhead securing protrusion (1) and printhead alignment posts line (2) up with the holes in the underside of the printhead assembly.



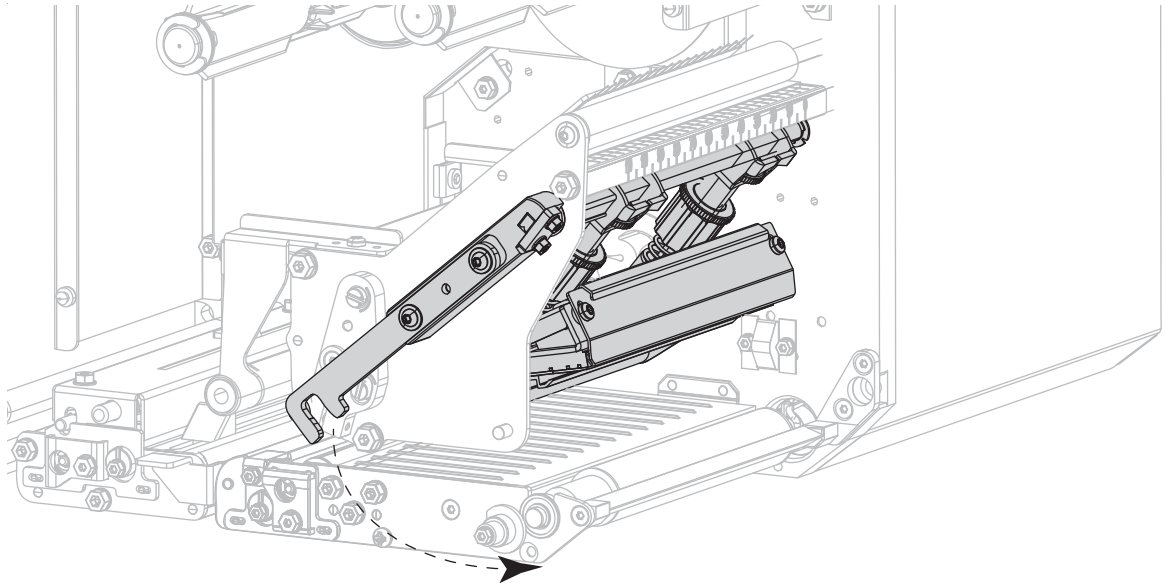
8. Push the printhead release latch in to lock the new printhead in place.
9. Clean the printhead.
  - a. Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.
  - b. Allow the solvent to evaporate.



10. Reinstall the media and ribbon (if used).

for parts & service call QLC (800) 837-1309

11. Lock the printhead assembly.



12. Close the media cover.

**The installation is complete.**



## Installation Instructions

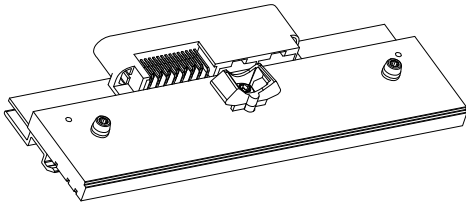
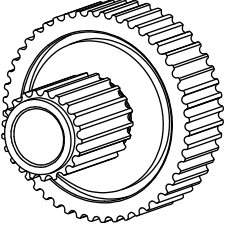

Read these instructions thoroughly before installing this kit.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZE511 printhead, 200/300/600 dpi ZE521 printhead, 200/300 dpi Qty: 1
	Compound pulley Qty: 1
	E-Ring 6mm Qty: 1

## Tools Required

- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat
- Zebra preventative maintenance kit (p/n 47362) or a clean swab dipped in 99.7% isopropyl alcohol

## Prepare for Installation



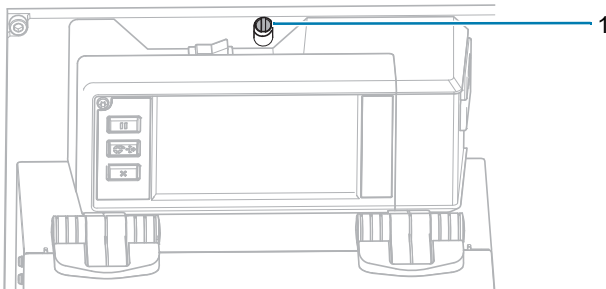
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



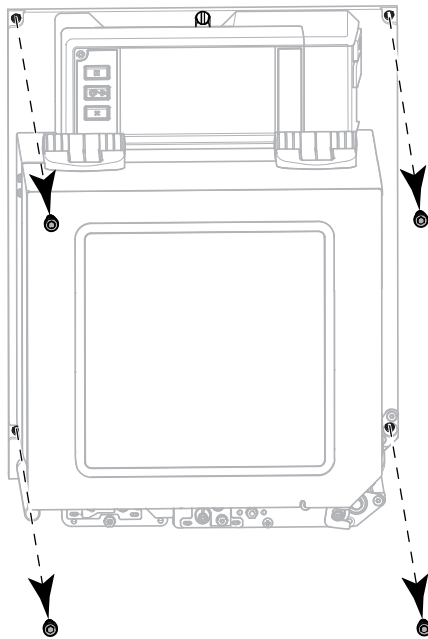
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.



3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Replace the Printhead



**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

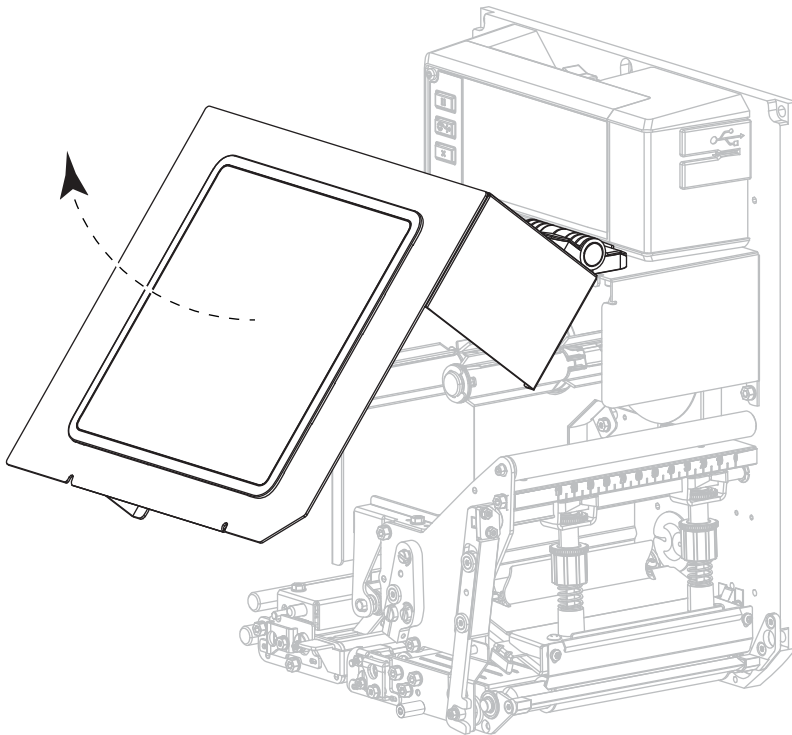


**CAUTION—HOT SURFACE:** The printhead may be hot and could cause severe burns. Allow the printhead to cool.



**CAUTION—PRODUCT DAMAGE:** Be careful not to touch the printhead with any tools. This could damage the printhead.

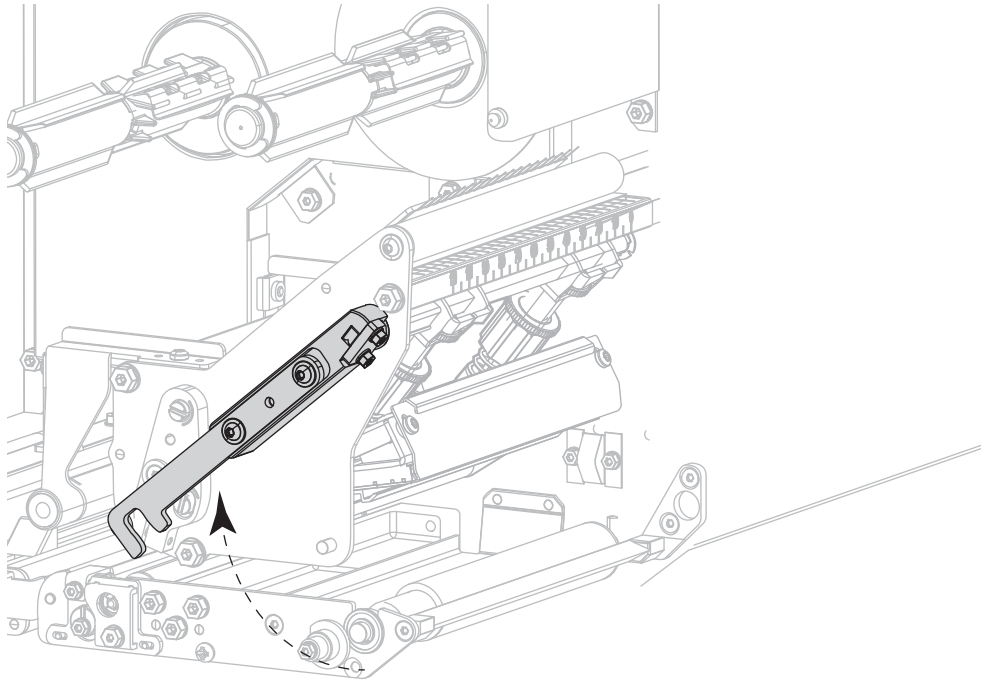
1. Open the media cover.



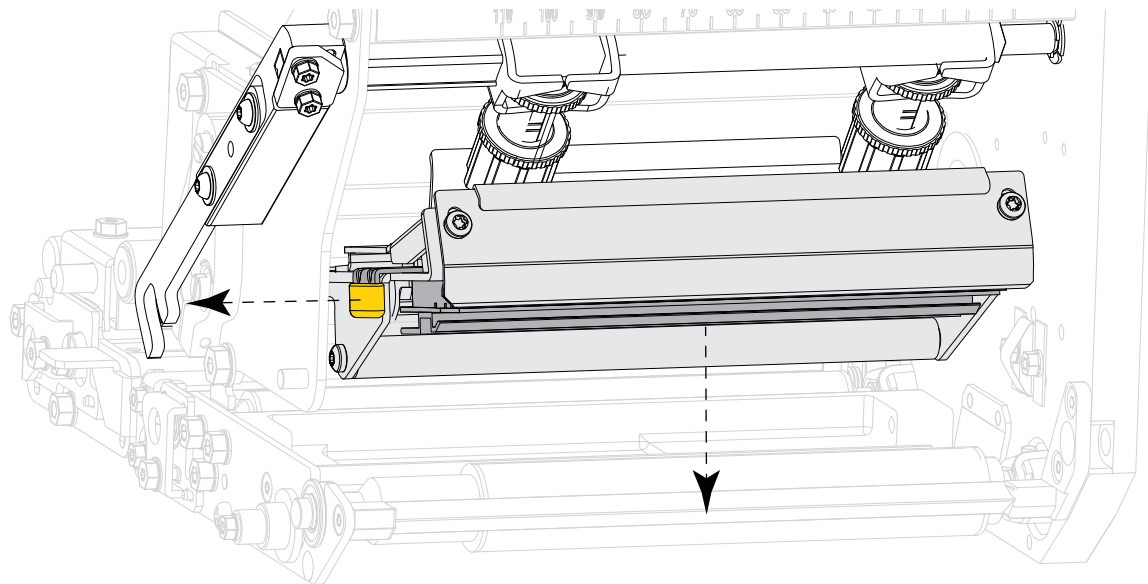
2. Remove the media and ribbon.

3. Release the printhead assembly.

a. Open the printhead.

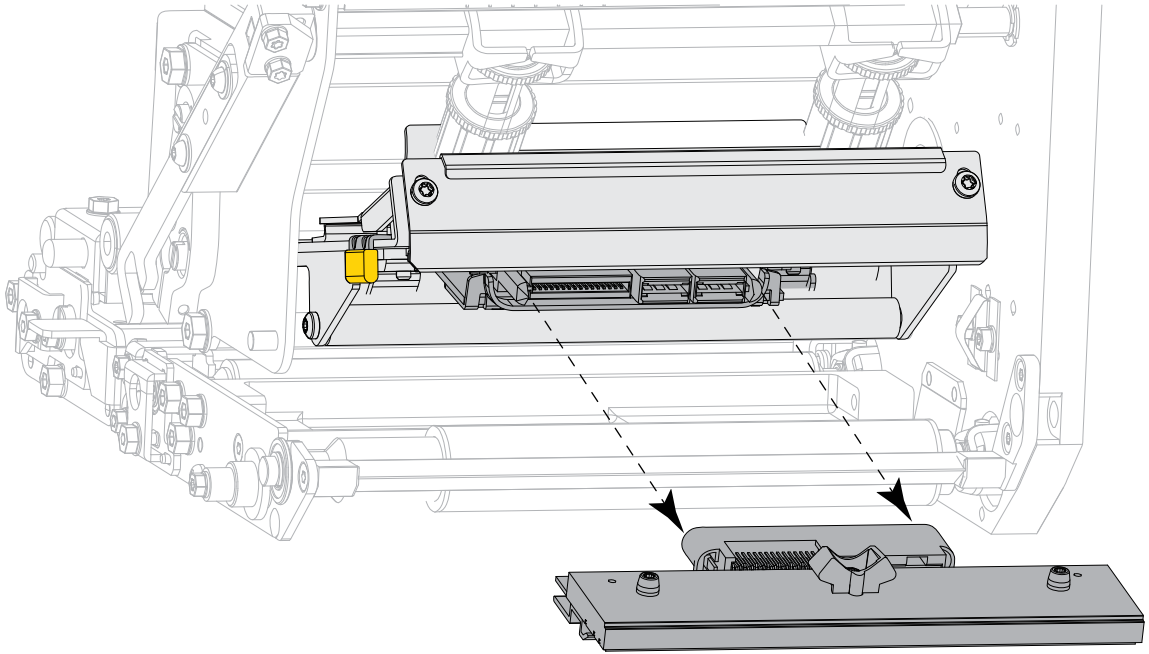


b. Slide the printhead release latch out to lower the printhead.

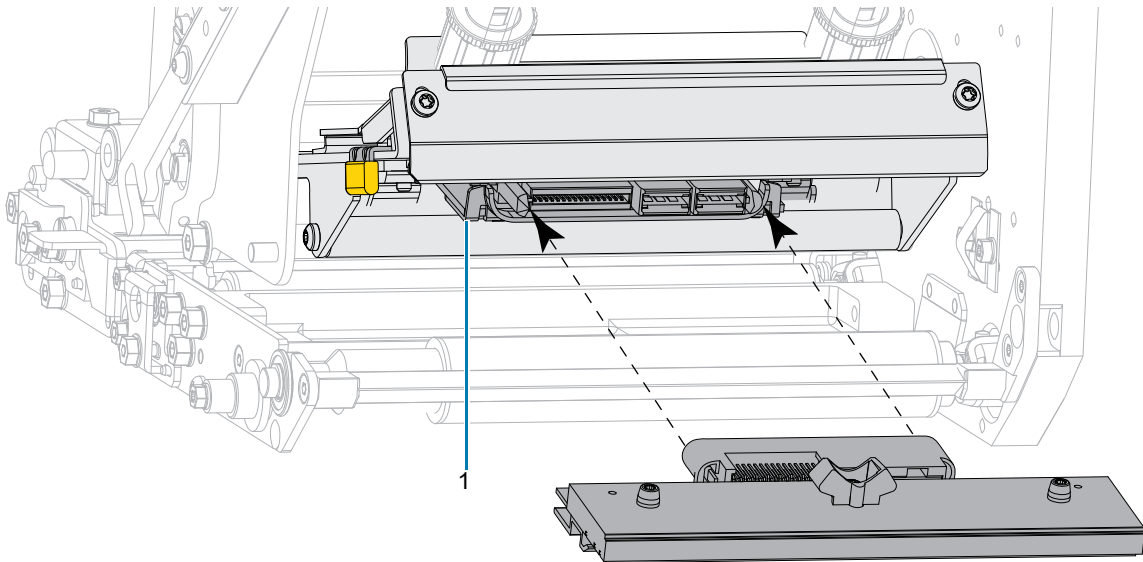


for parts & service call QLC (800) 837-1309

c. Remove the printhead.

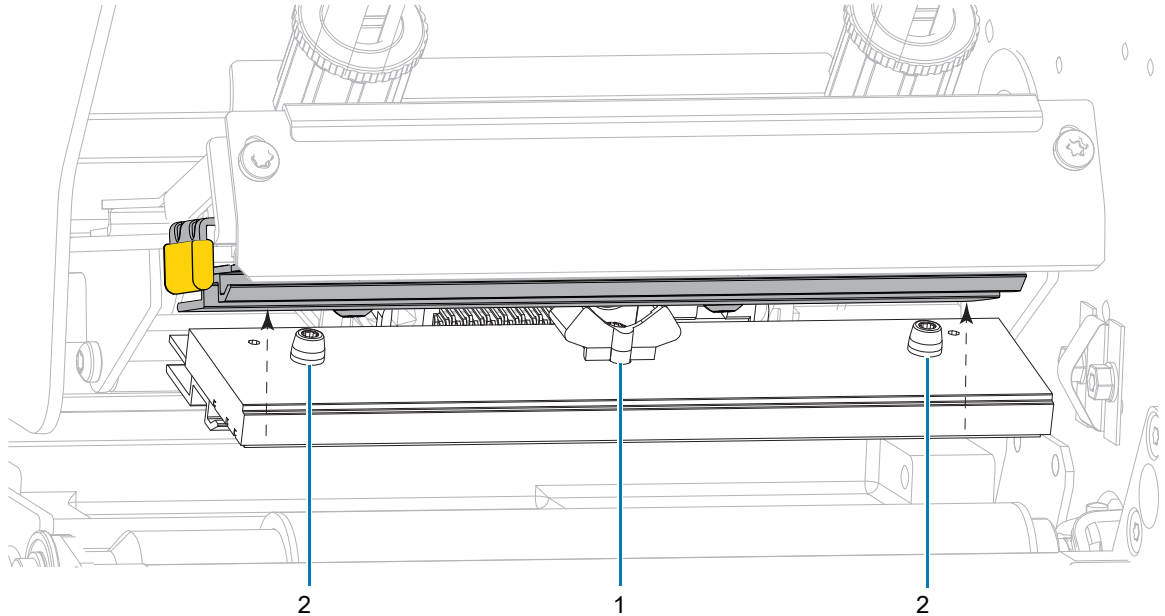


4. Insert the new printhead into the printhead adaptor connectors (1).



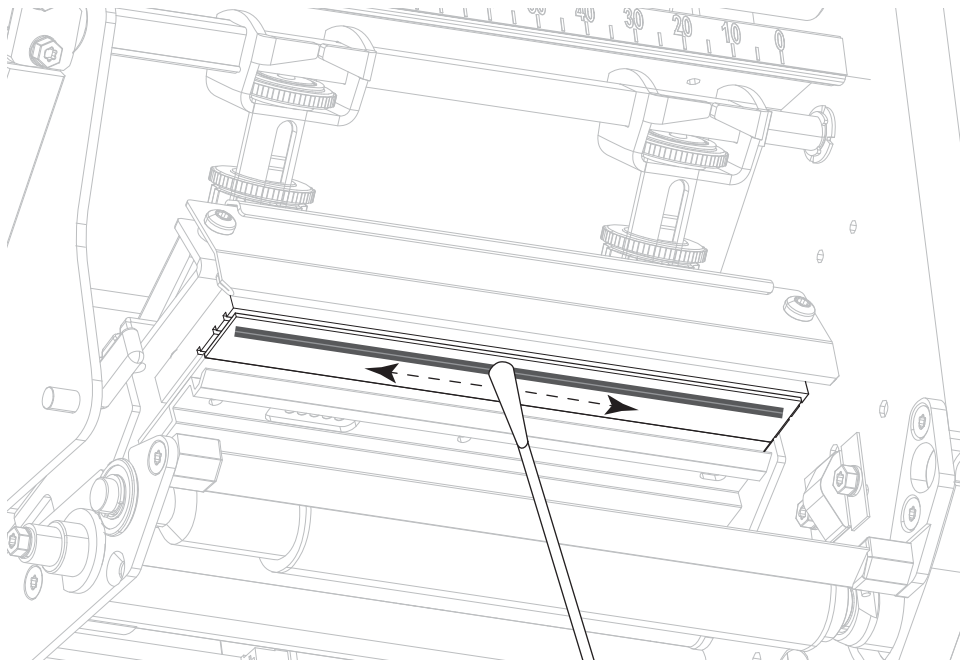
### 5. Seat the printhead.

- Gently push up on the printhead until the printhead catch (1) and printhead alignment posts (2) line up with the holes in the underside of the print mechanism.



### 6. Clean the printhead.

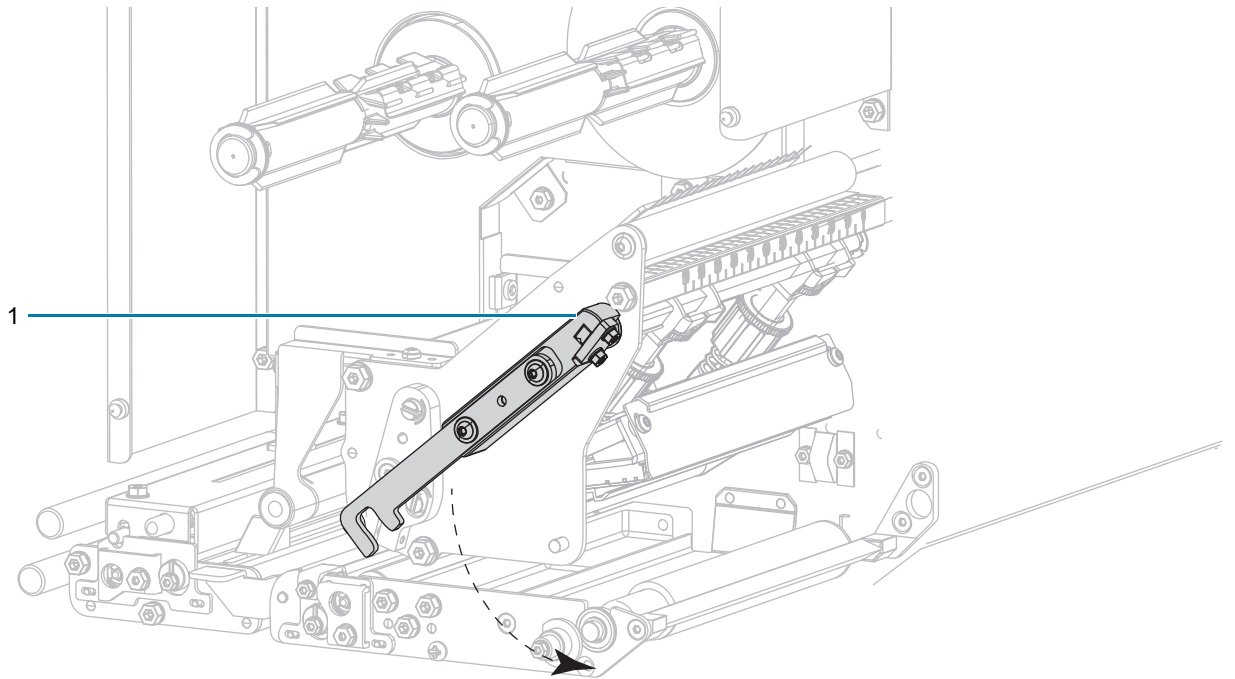
- a. Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.
- b. Allow the solvent to evaporate.



### 7. Reinstall the media and ribbon if required.

for parts & service call QLC (800) 837-1309

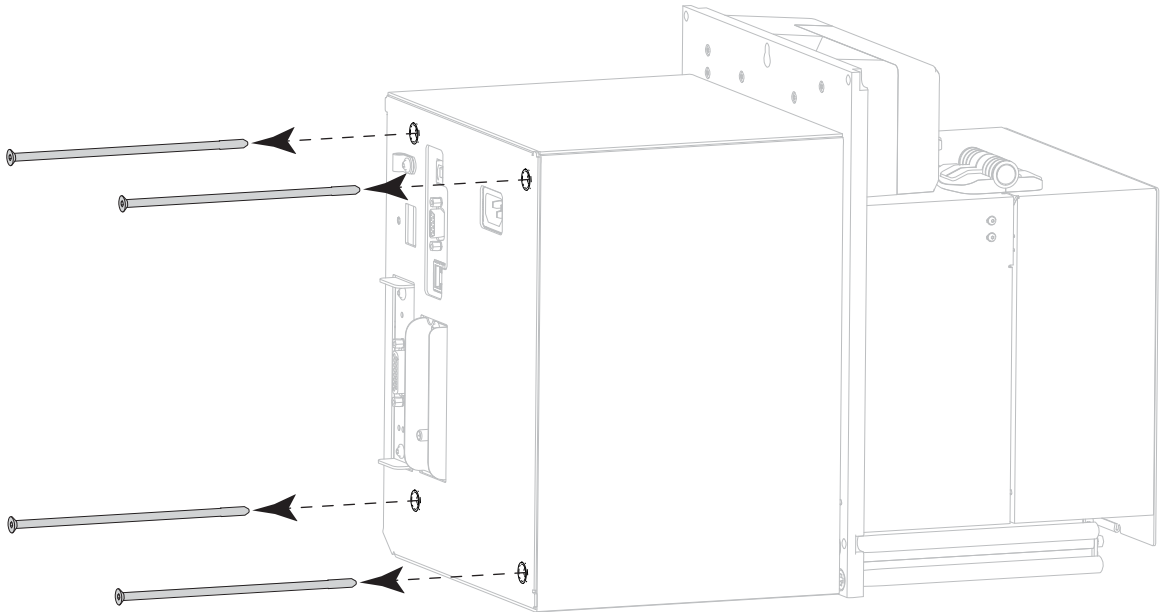
8. Close the printhead latch (1).



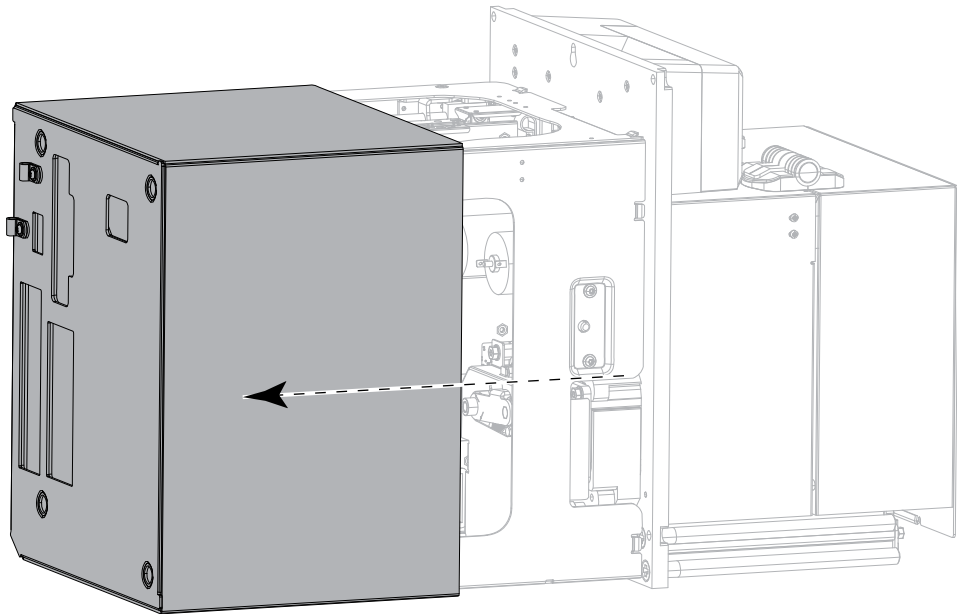
9. Close the media door.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

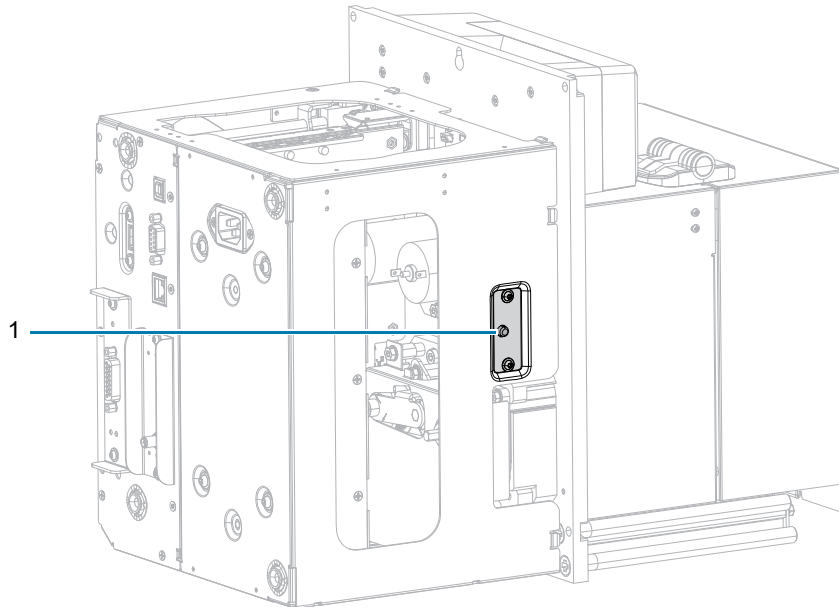




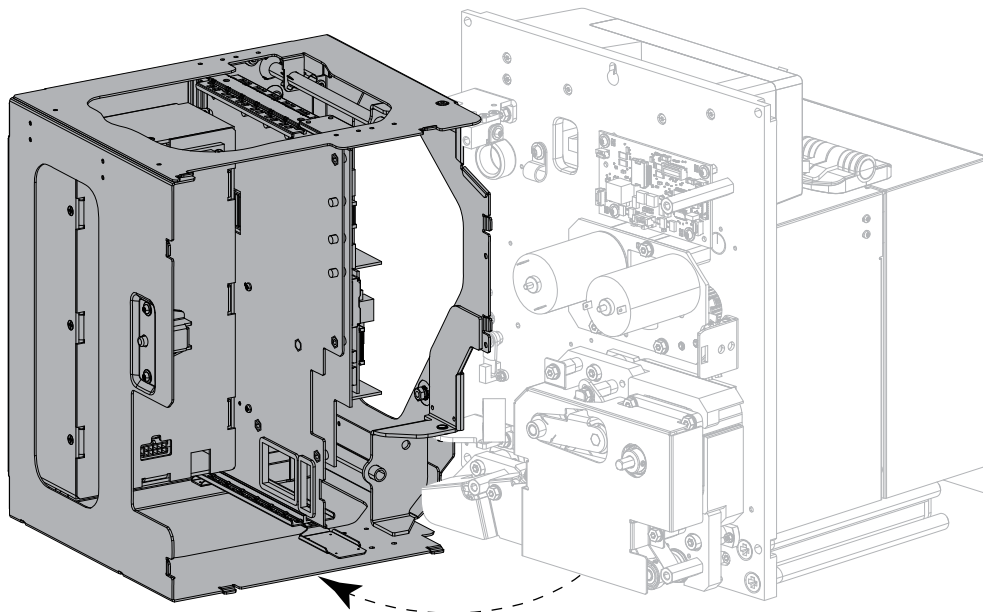
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

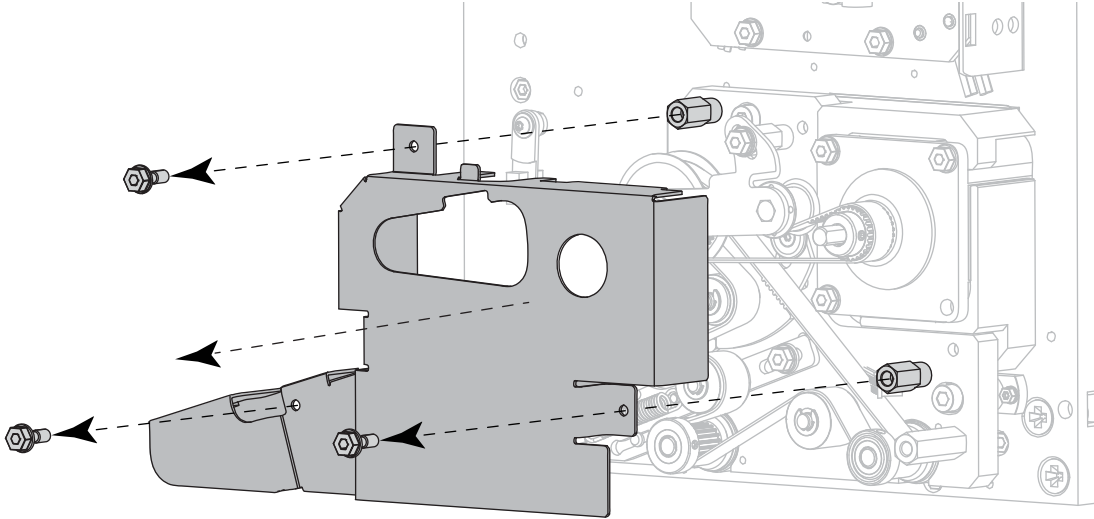


4. Open the rear of the print engine.

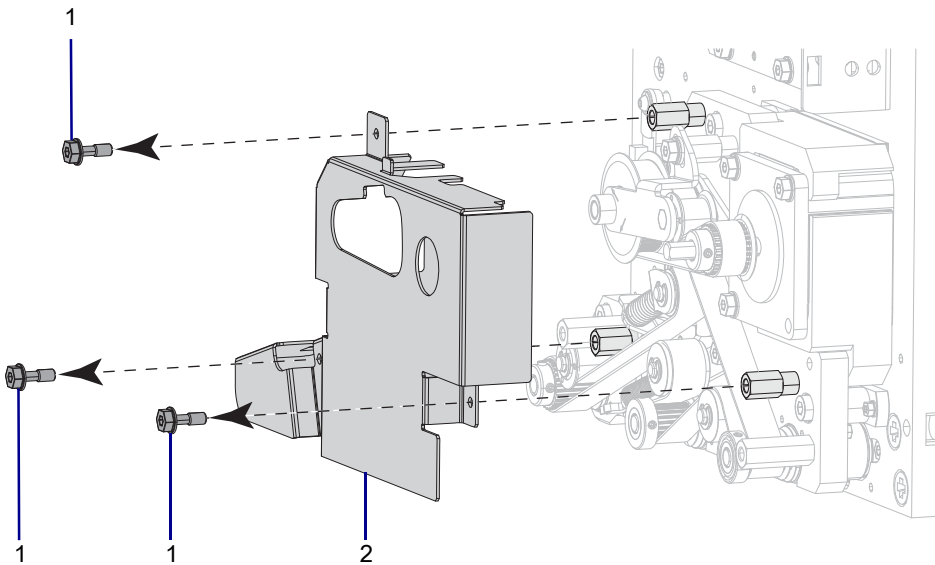


## Remove the Media System Drive Cover and Belts

1. Remove the media system drive cover.
  - a. Remove the three ● 3mm hexagon screws securing the media system drive cover.
  - b. Remove the drive cover.



2. Loosen three ● 3mm hexagon screws (1) and lift off the drive system cover (2).



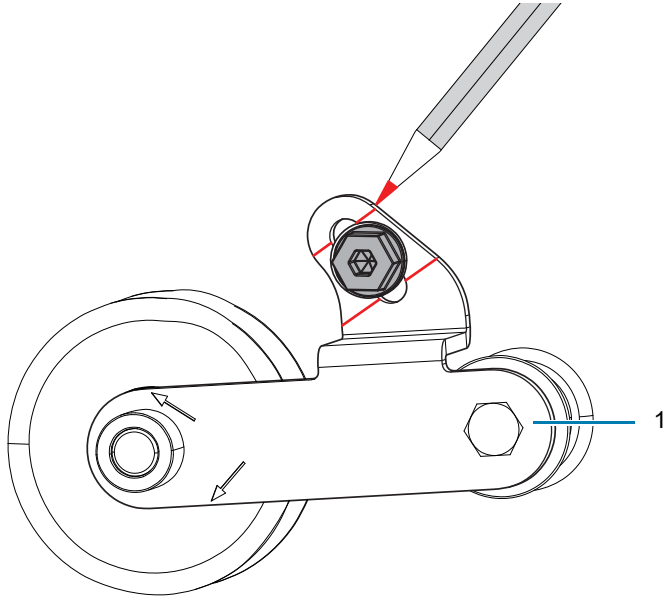


**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress, or twist the belts.

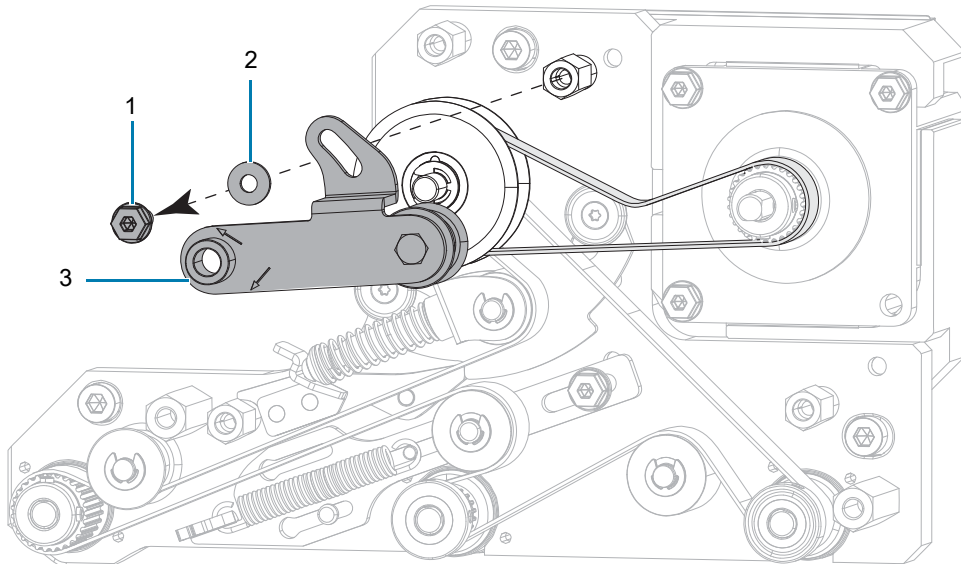
3. Remove the stepper motor belt.

- a. Before removing the stepper motor belt tensioner bracket (1), mark both sides of the screw and washer.

These marks will assist in re-tensioning the stepper motor belt.



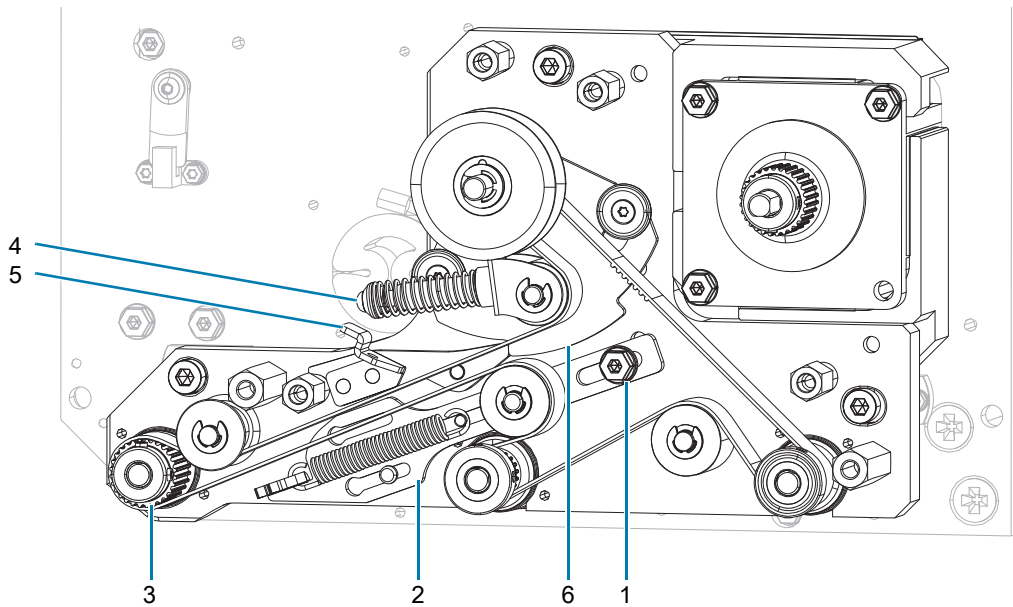
- b. Remove the 3mm mounting screw (1) and washer (2) securing the stepper motor belt tensioner bracket (3).



- c. Slide the bracket assembly off of the compound pulley shaft.

for parts & service call QLC (800) 837-1309

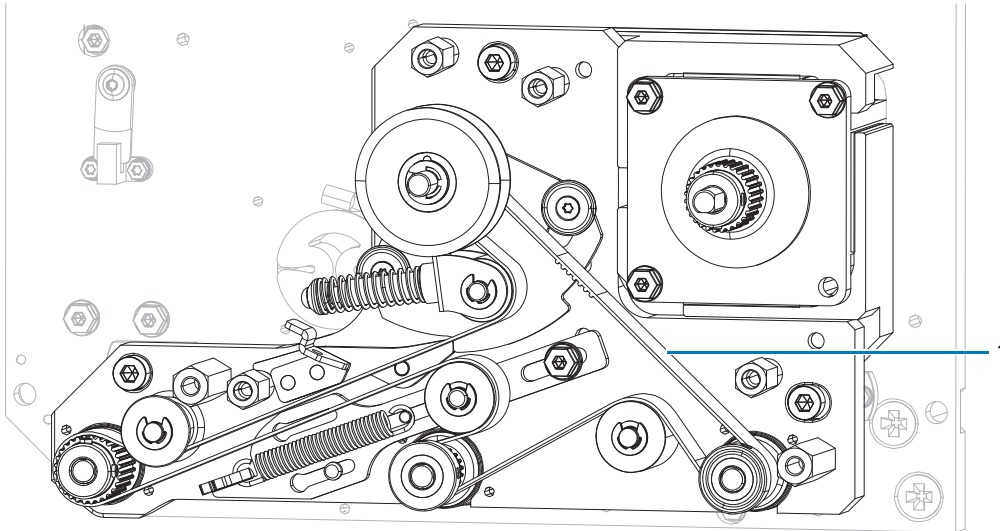
4. Release tension on the platen belt.
  - a. Loosen the ● 3mm mounting screw (1) on the locking tensioner mounting plate (2).
  - b. Push the locking tensioner mounting plate (2) toward the platen roller pulley (3) and against the spring until it stops. Tighten the ● 3mm mounting screw (1) on the locking tensioner mounting plate.
  - c. Compress and swing the dynamic tensioner (4) up slightly and out of its home position.
  - d. Push up on the dynamic tensioner latch (5) to disengage the dynamic tensioner mounting plate (6). Swing the dynamic tensioner mounting plate to release the platen belt.





**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress or twist the belts.

5. Remove the platen belt (1) from all drive and idler pulleys.



## Replace the Compound Pulley

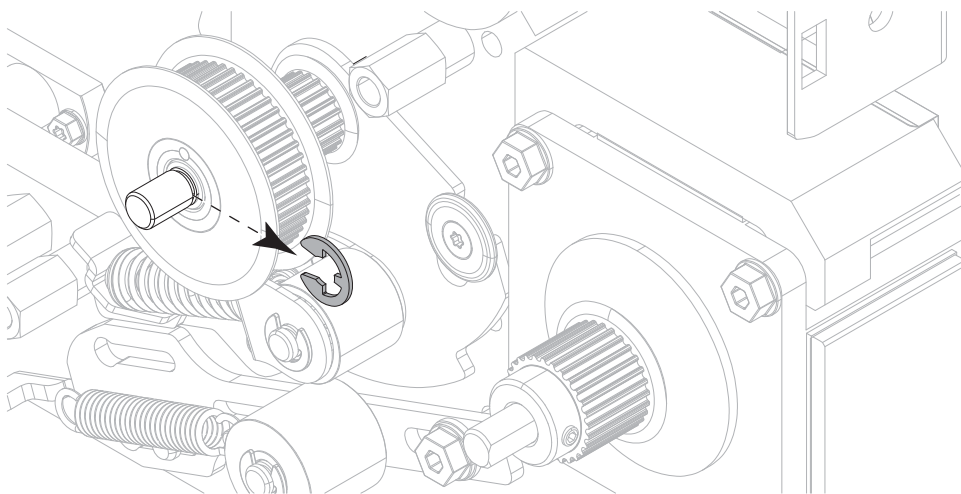


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

1. Remove the compound pulley.
  - a. Remove the E-ring from the compound pulley shaft.
  - b. Slide the compound pulley off of the shaft.



**NOTE:** Save the old printhead and compound pulley for reverse conversion.

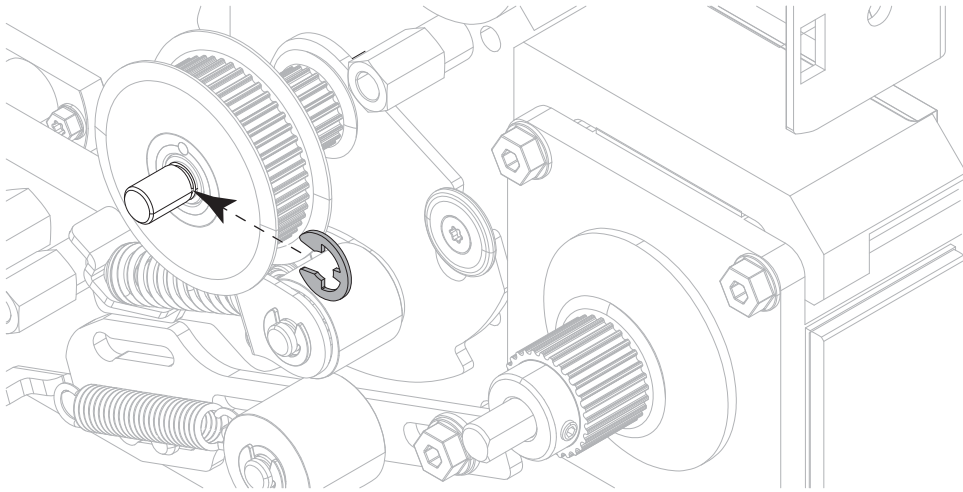


2. Install the new compound pulley.
  - a. Slide the compound pulley onto the shaft.



**CAUTION—EYE INJURY:** 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.

- b. Replace the E-ring on the compound pulley shaft to secure the compound pulley.



## Replace the Media System Drive Cover and Belts

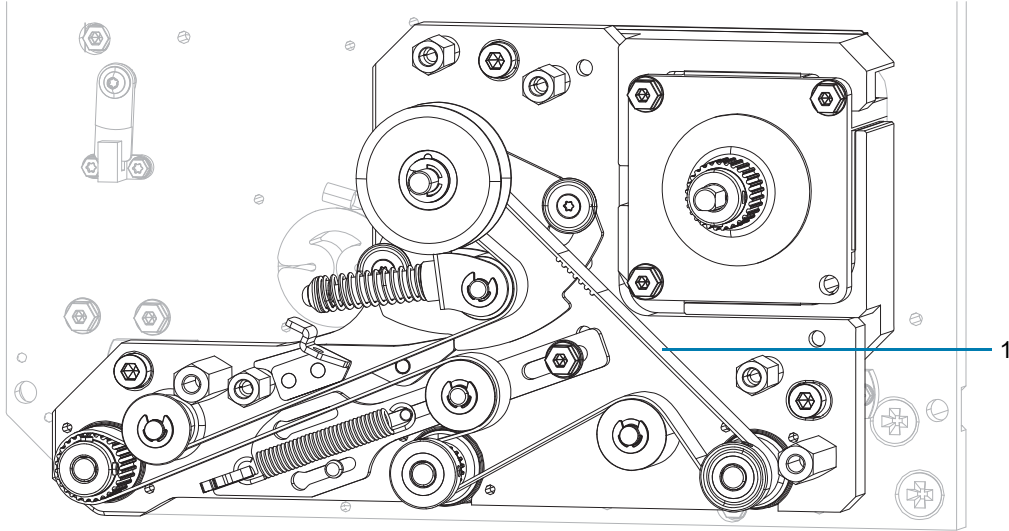


**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress, twist the belts.

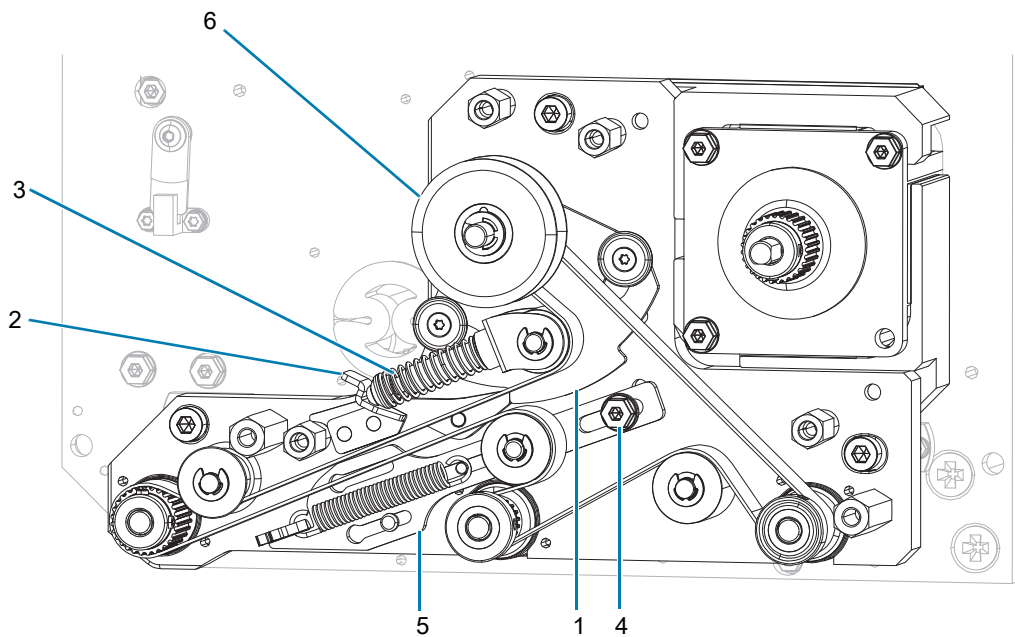
1. Replace the platen belt (1) on the compound pulley (2).
  - Thread the platen belt around all of the pulleys and idlers.



**NOTE:** The platen belt (1) rests on the smaller pulley; the stepper motor belt rests on the larger pulley.



2. Tension the platen belt.
  - a. Rotate the dynamic tensioner mounting plate (1) while pushing down on the dynamic tensioner latch (2) to ensure that the latch is locked in place.
  - b. Swing the dynamic tensioner (3) down as you compress the spring until the end is resting on the latch (2) (home position).
  - c. Loosen the ● 3mm mounting screw on the locking tensioner mounting plate (4). The locking tensioner (5) is self-adjusting and will return to its normal tension.
  - d. Rotate the compound pulley (6) two revolutions to equalize the belt tension.
  - e. Tighten the ● 3mm mounting screw on the locking tensioner mounting plate (4).

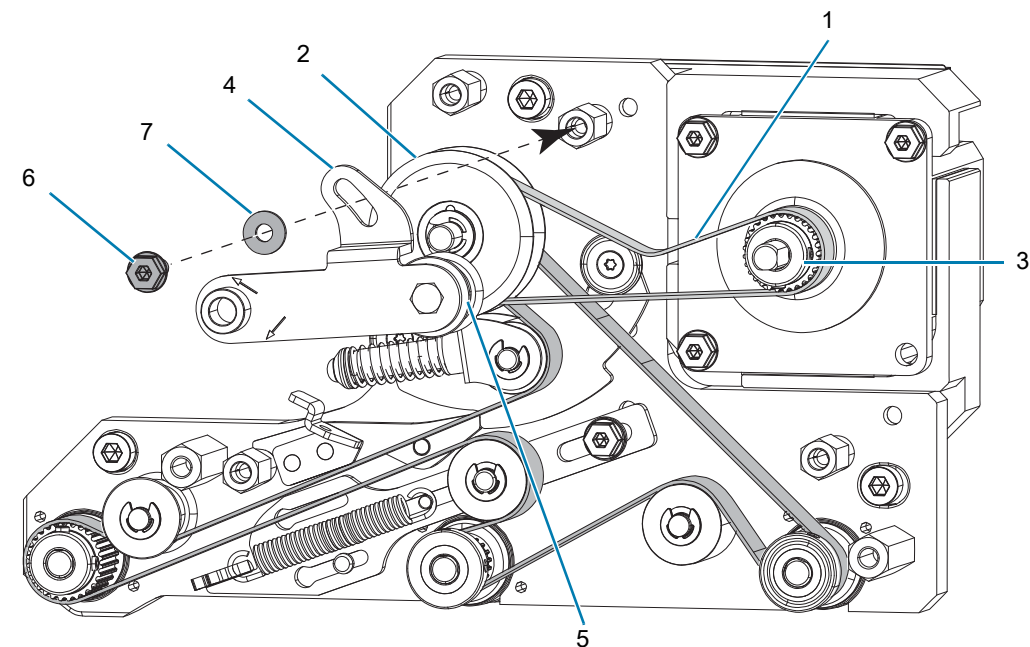




3. Replace the stepper motor belt.
  - a. Seat the stepper motor belt (1) on the compound pulley (2) and the stepper motor pulley (3).  
On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.
4. Align the stepper motor belt tensioner bracket assembly (4) on the compound pulley shaft.
 

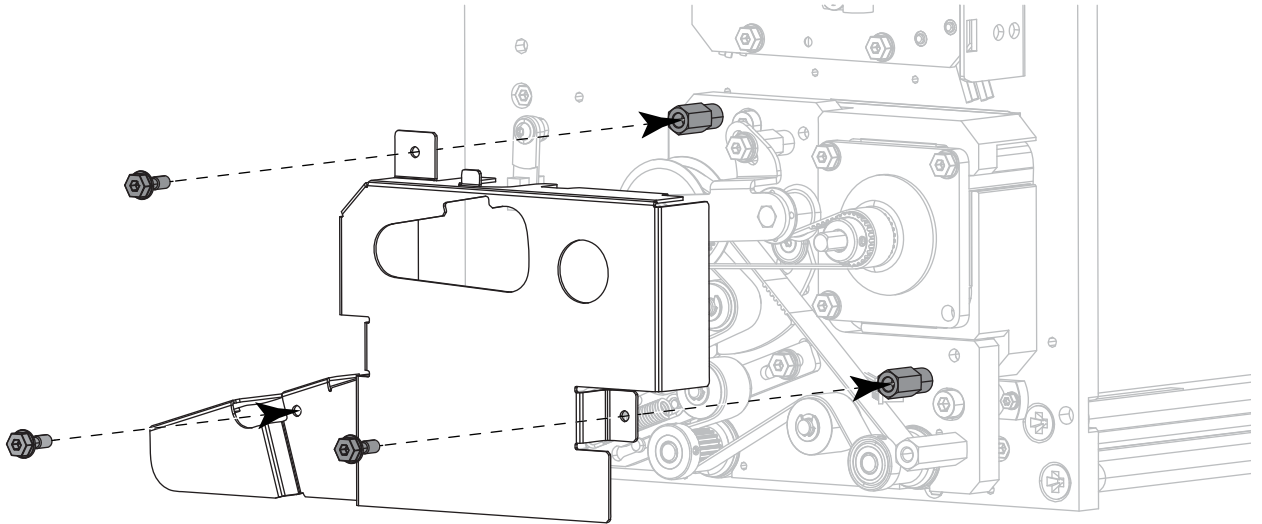
Ensure that the idler (5) rides on top of the stepper motor belt (1) and that the belt is seated evenly on the stepper motor pulley (3).

  - a. Replace the ● 3mm mounting screw (6) and washer (7) for the stepper motor belt tensioner bracket (4) keeping the screw and washer between the marks on the bracket.
  - b. Reset the stepper motor belt tensioner bracket (4) to its original location and tighten the ● 3mm screw (6).  
Ensure that the washer and screw are secured between the marks on the bracket.



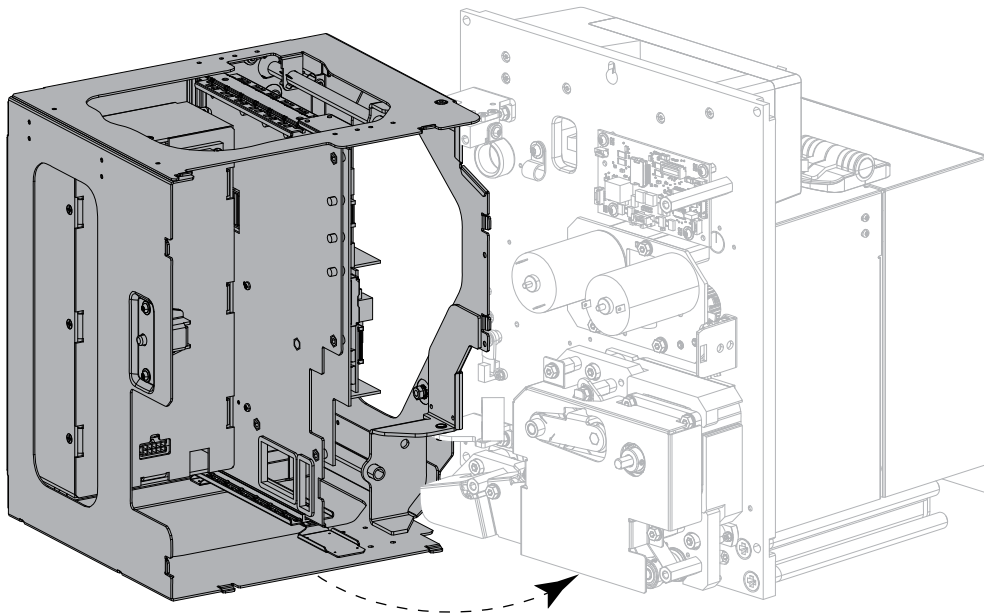
5. Reinstall the drive system cover.
  - a. Align the drive system cover over the three mounting holes.
  - b. Reinstall the three ● 3mm hexagon screws mounting screws to secure the drive system cover.

6. Replace the media system drive cover.
  - a. Align the drive cover with the three standoffs.
  - b. Replace the three ● 3mm hexagon screws to secure the media system drive cover.

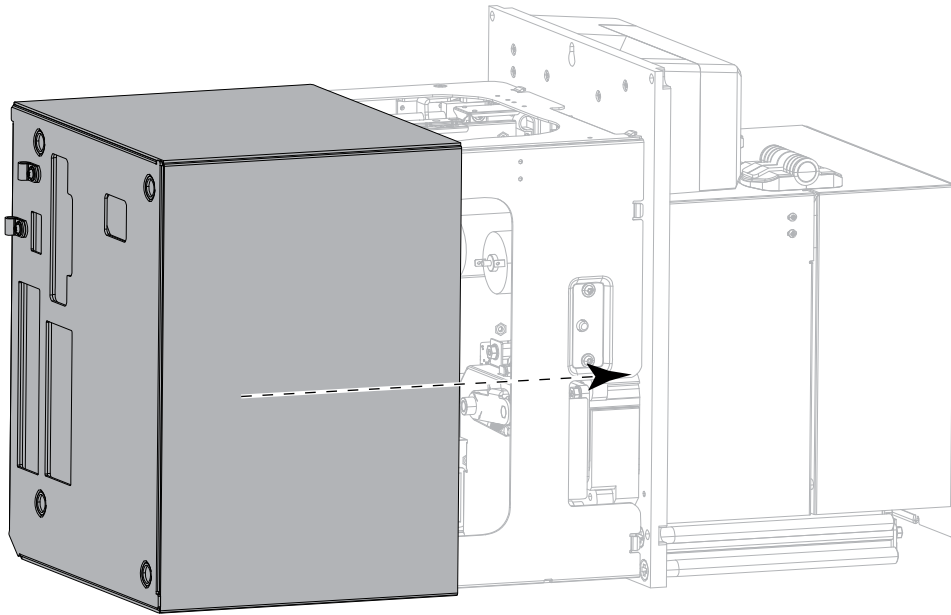


## Close the Electronics Enclosure

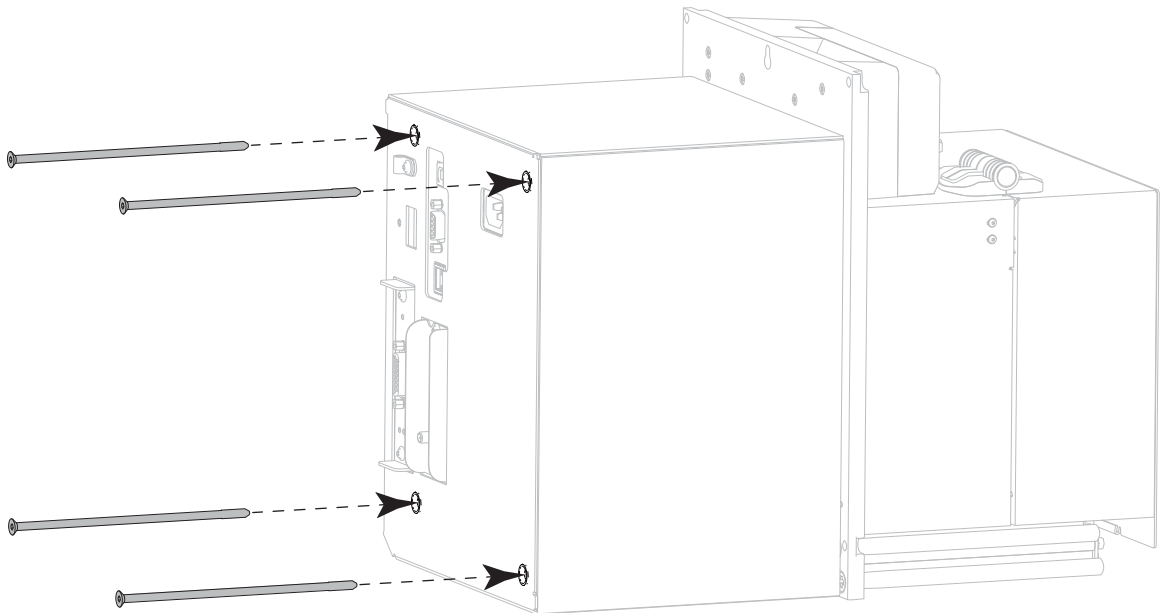
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

# Platen Roller, Peel Roller, Pinch Roller Maintenance Kit



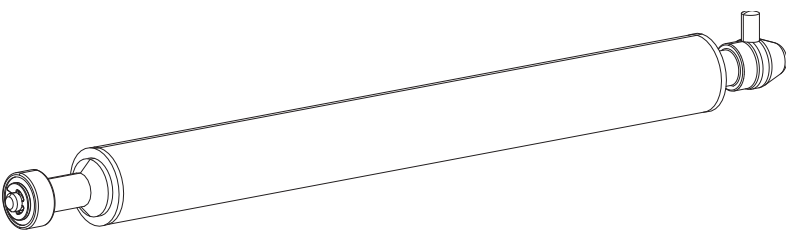
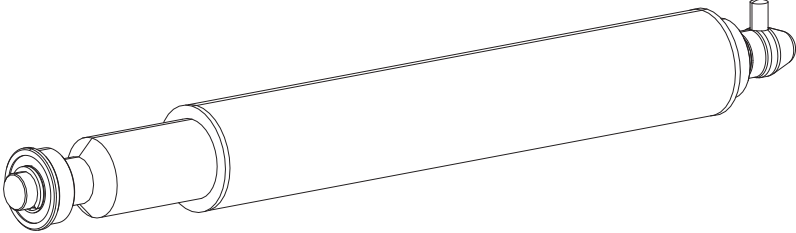
## Installation Instructions

Read these instructions thoroughly before installing this kit.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZE500 peel/pinch roller assembly Qty: 2
	ZE500 platen roller assembly Qty: 1

## Tools Required

- ⊛ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
- Antistatic wriststrap and mat

## Prepare for Installation

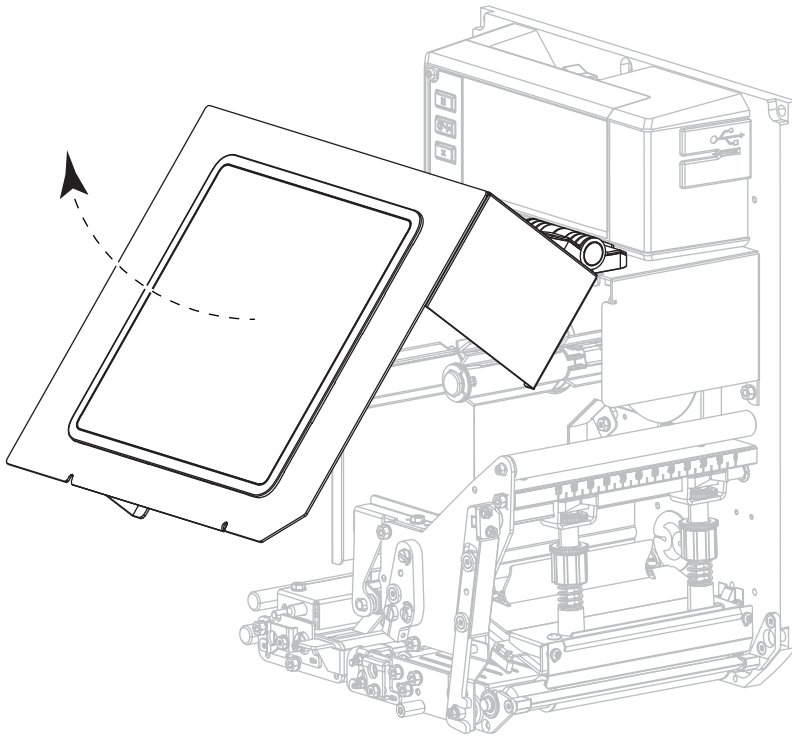


**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.

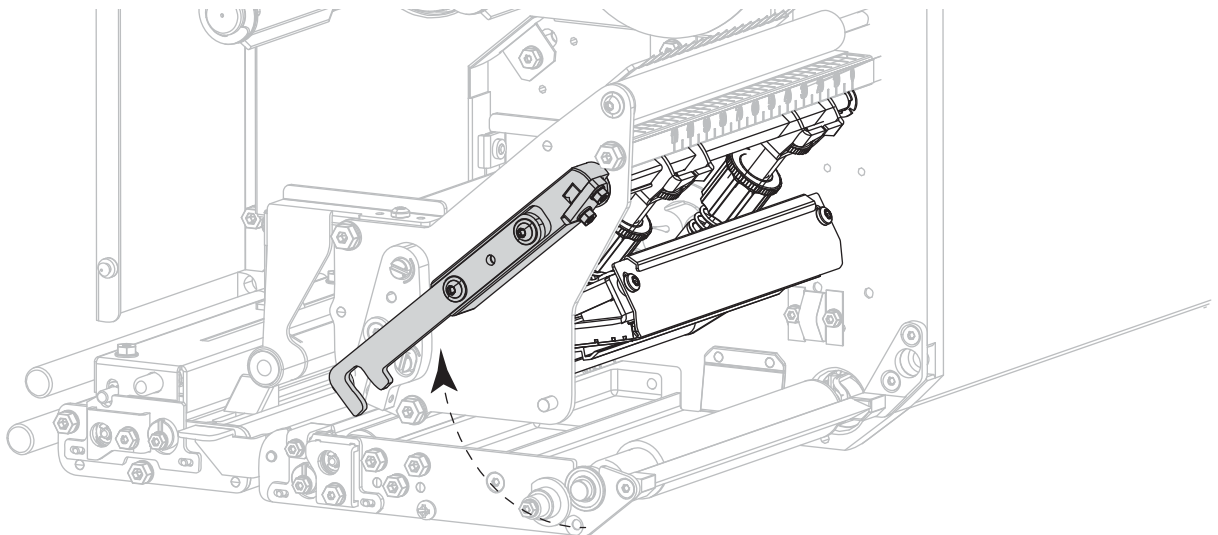


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

1. Open the media cover.

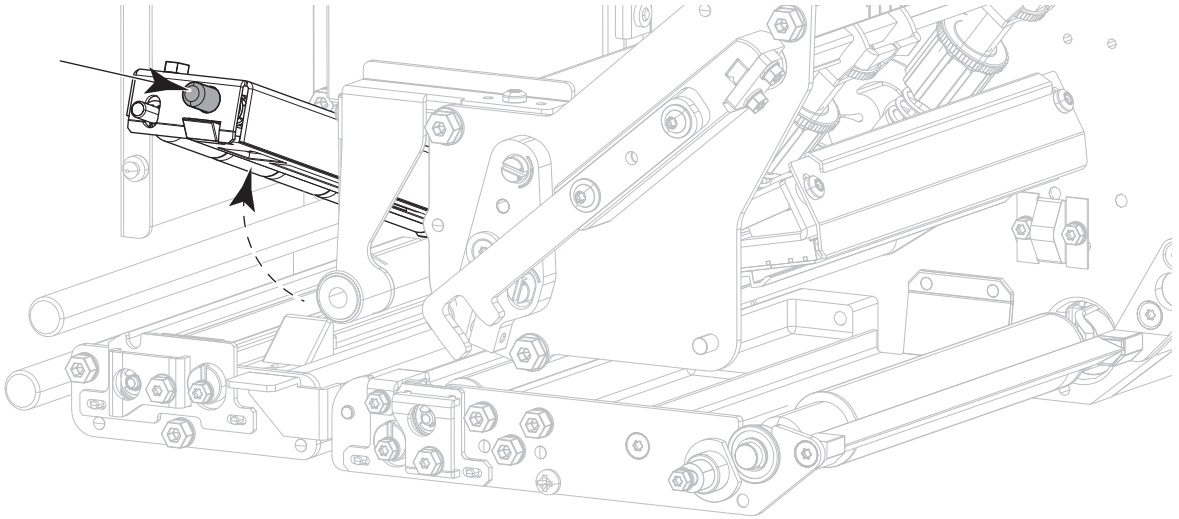


2. Remove the media and ribbon.
3. Release the printhead assembly.

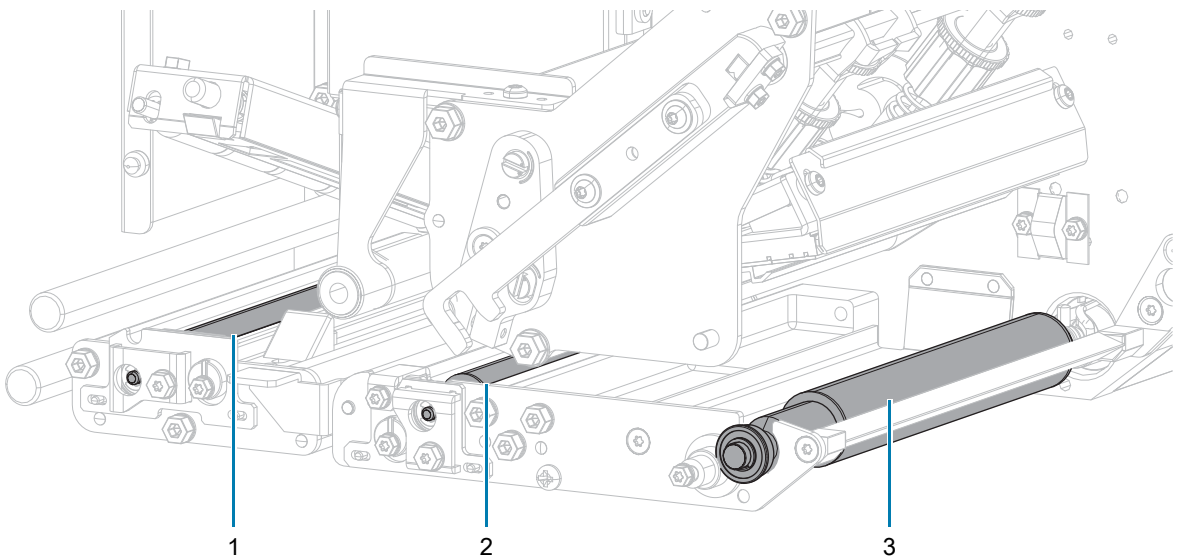


for parts & service call QLC (800) 837-1309

4. Press the release button on the upper pinch roller assembly, and allow the assembly to pivot upward.




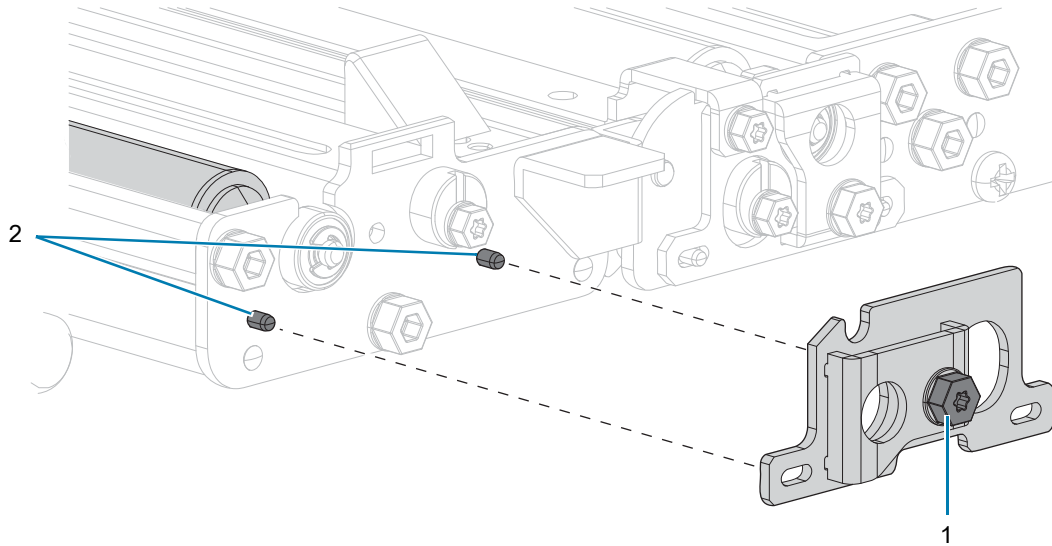
5. Identify the location of the rollers (RH model shown) and continue with the instructions for the appropriate roller assembly.



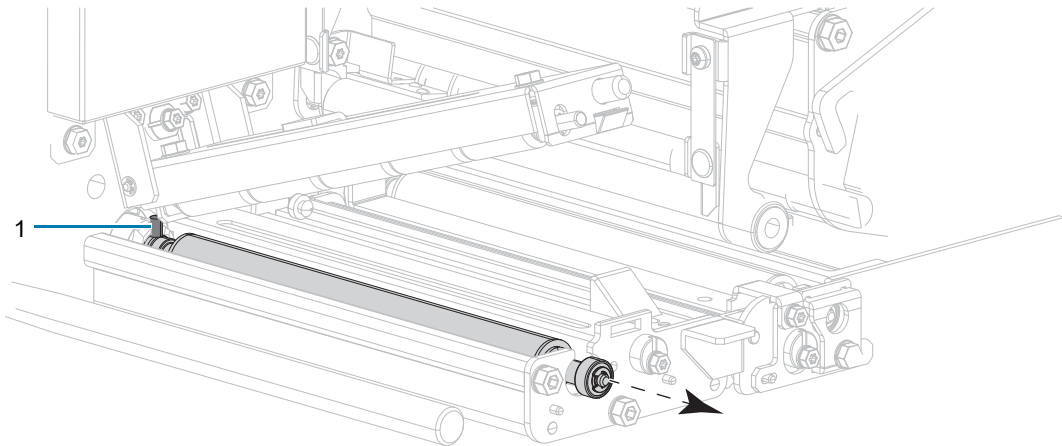
1	Go to <a href="#">Replace the Pinch Roller Assembly on page 128.</a>
2	Go to <a href="#">Discard the old pinch roller assembly. on page 128.</a>
3	Go to <a href="#">Replace the Platen Roller Assembly on page 133.</a>

## Replace the Pinch Roller Assembly

1. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).



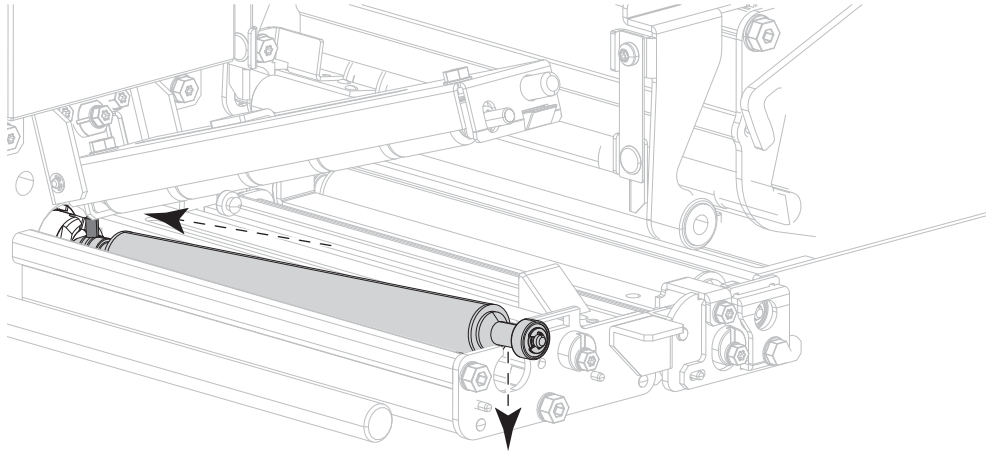
2. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.




3. Remove the pinch roller assembly from the print engine.
4. Discard the old pinch roller assembly.

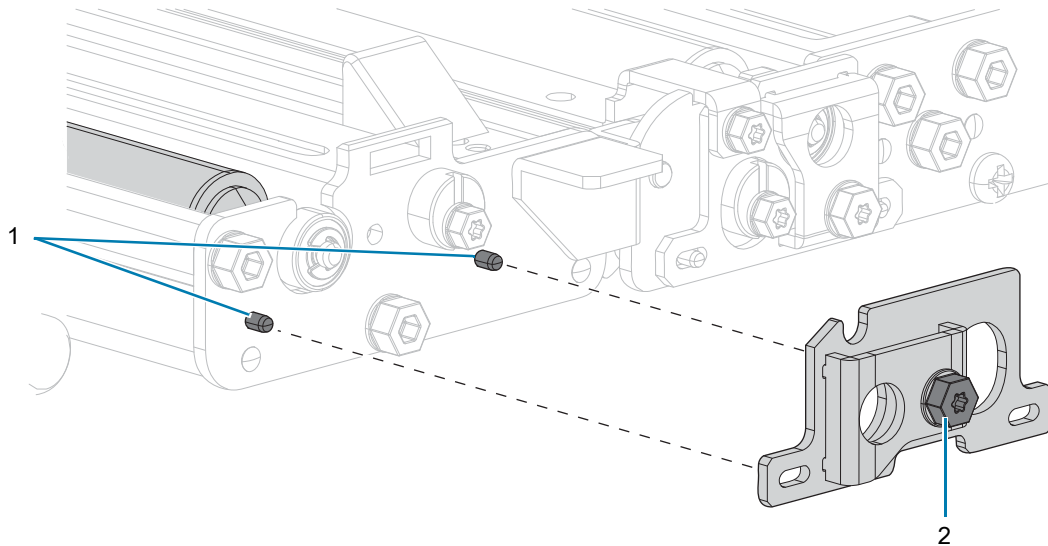


5. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



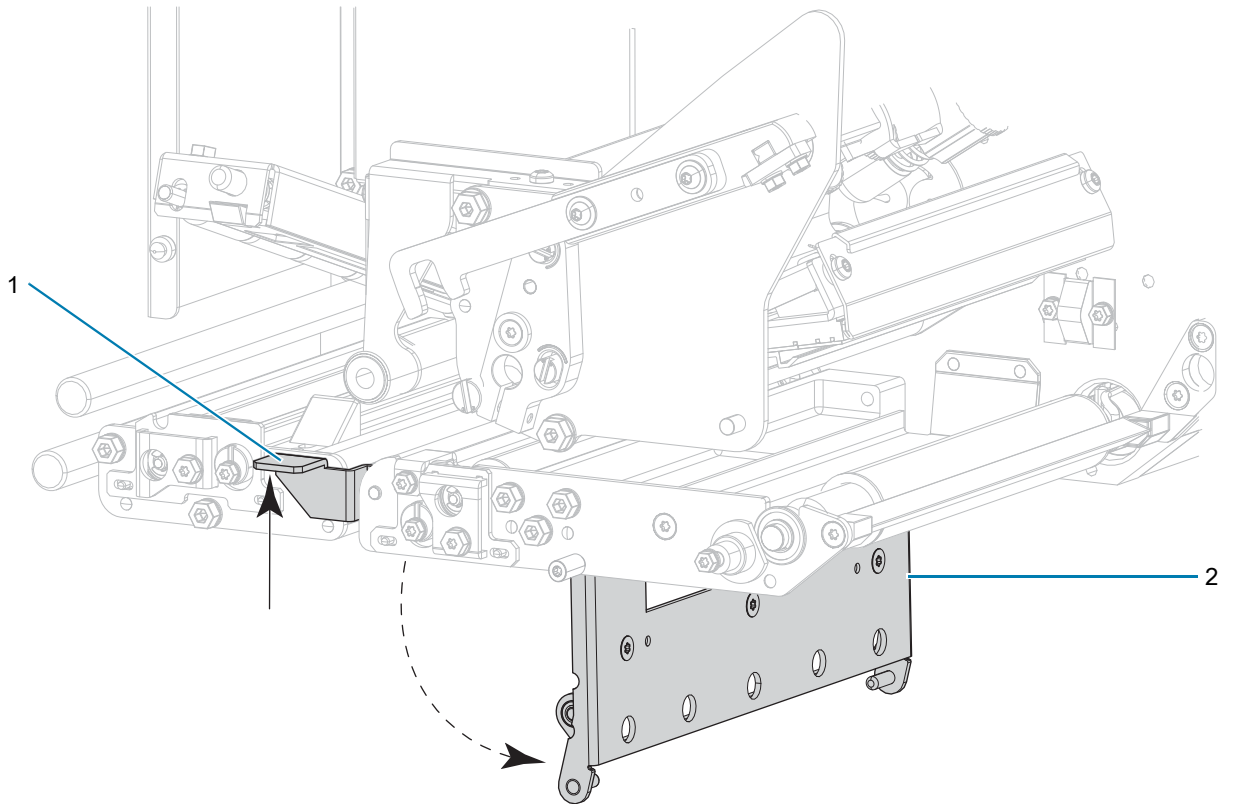
6. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
7. Reinstall the pinch roller cam plate.


- a. Slide the pinch roller cam plate onto the two support pins (1).
- b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

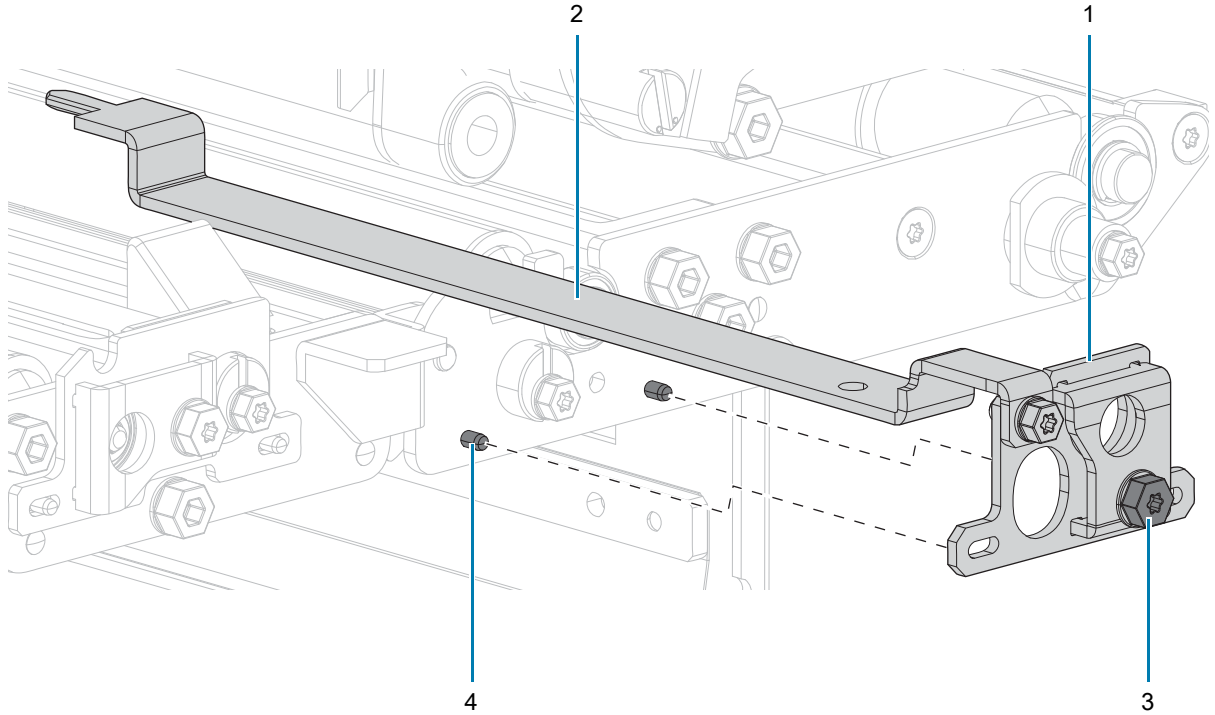


## Replace the Peel Roller Assembly

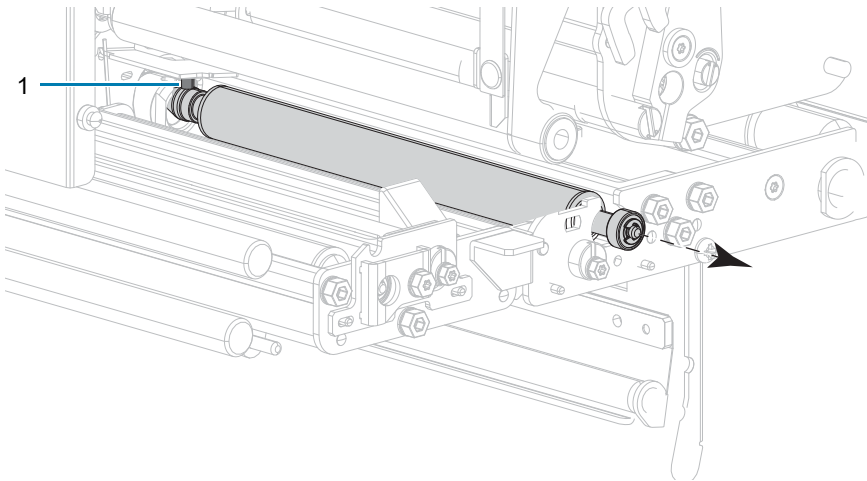
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.



2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

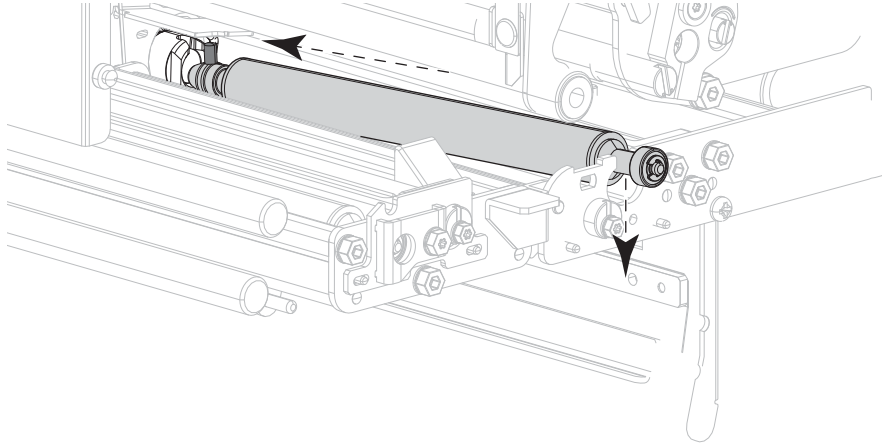



3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

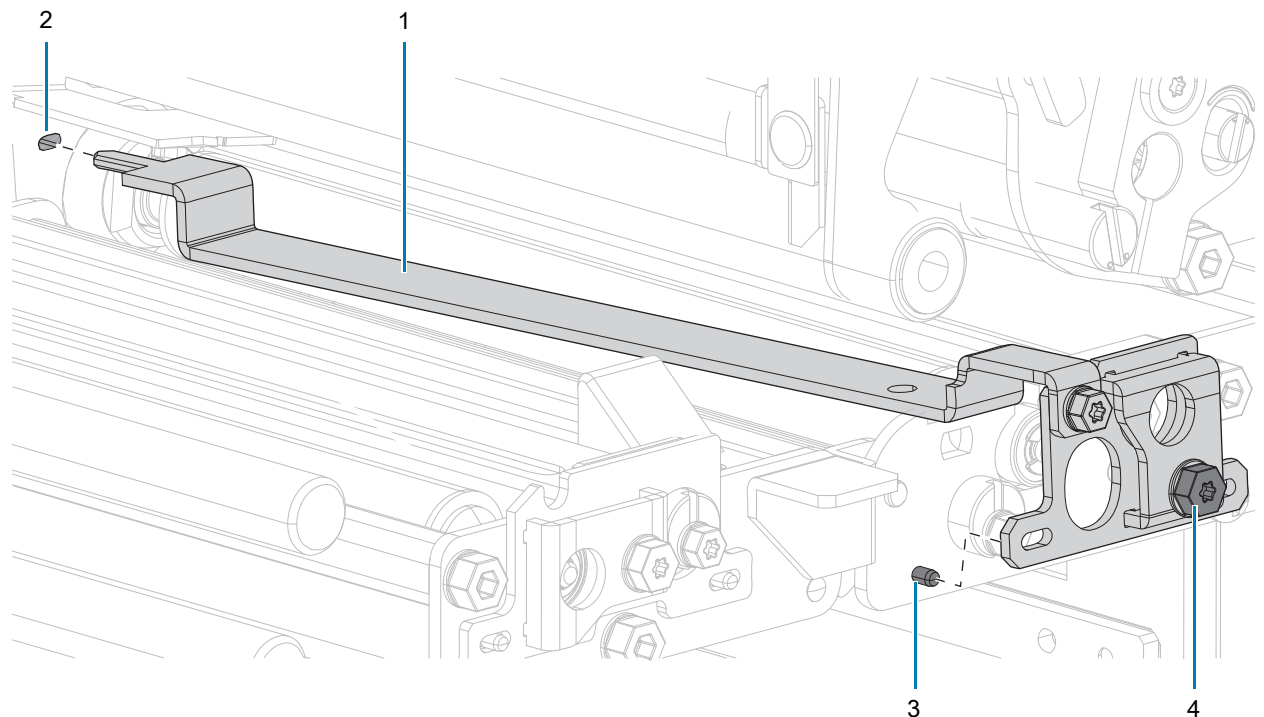


4. Remove the peel roller assembly from the print engine.
5. Discard the old peel roller assembly.

6. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.




7. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
8. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.

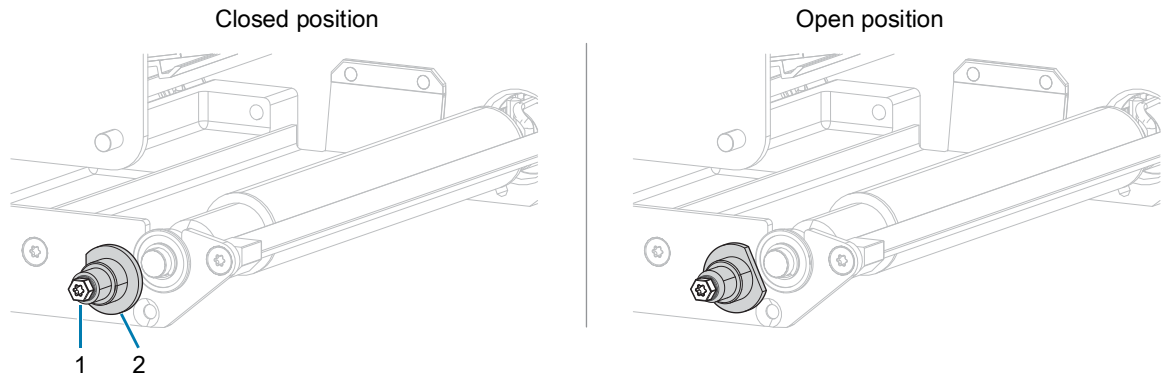


## Replace the Platen Roller Assembly

1. Secure the platen support plate latch pin in the open position.

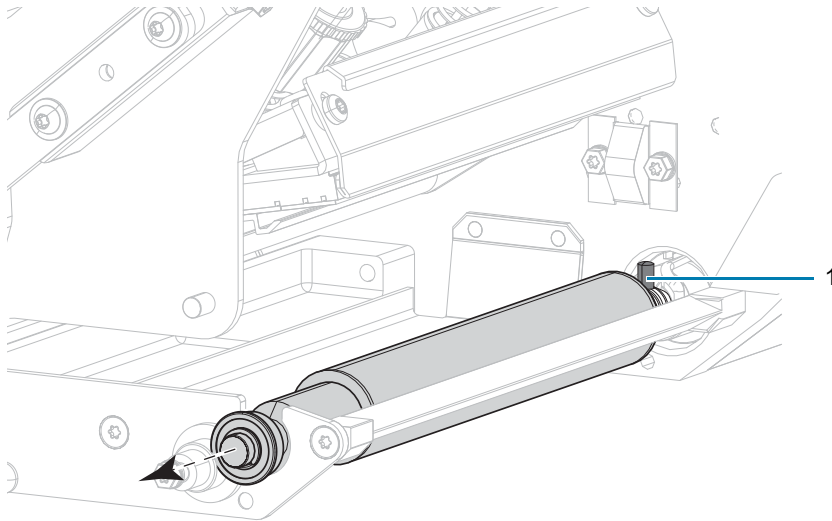
a. Loosen the  T9 captive screw (1) securing the latch pin (2).

b. Rotate the latch pin to the open position.



c. Tighten the  T9 captive screw.

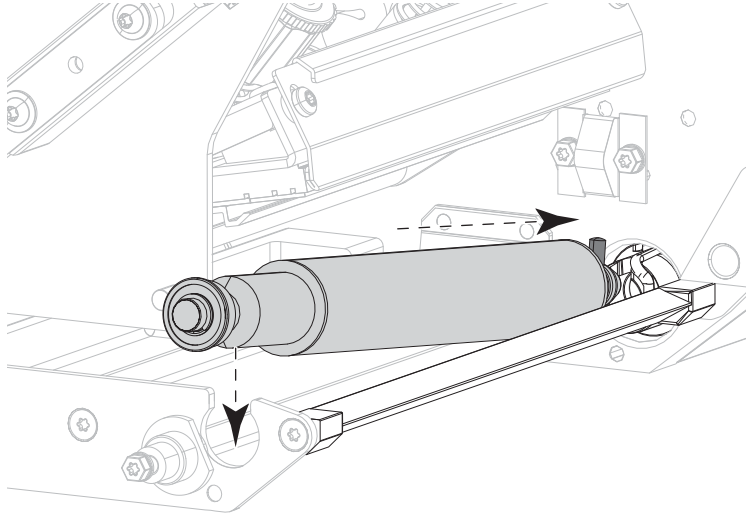
2. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.




3. Remove the platen roller assembly from the print engine.

4. Discard the old platen roller assembly.

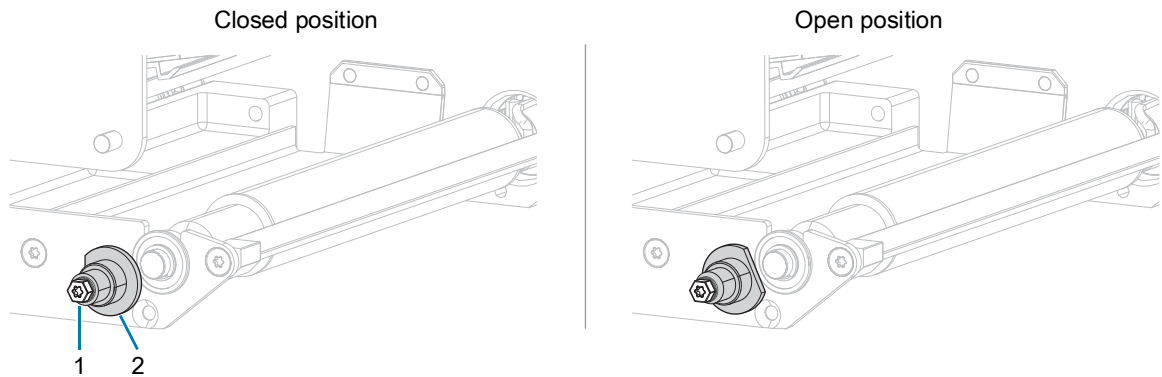
5. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



6. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.
7. Secure the platen support plate latch pin in the closed position.

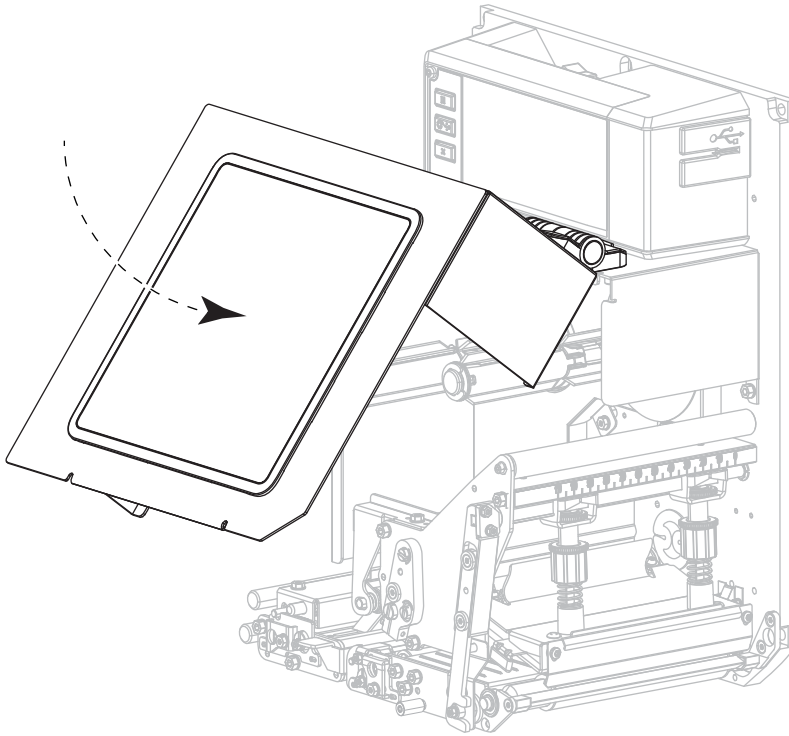
- a. Loosen the  T9 captive screw (1) securing the latch pin (2).

- b. Rotate the latch pin to the closed position.



- c. Tighten the  T9 captive screw.

8. Close the media cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the upper pinch roller assembly.
3. Close the peel roller assembly.
4. Lock the printhead assembly.
5. Close the media door.
6. Reconnect AC power cord and interface cables.
7. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

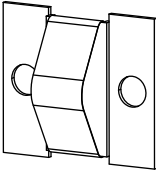
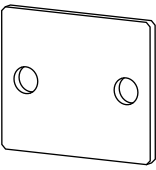


Read these instructions thoroughly before installing this kit.




**IMPORTANT:** Retain all parts removed during disassembly, unless otherwise directed.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts) and select your printer model.

	Ground contact Qty: 1	
	Printhead grounding plate Qty: 1	
	Screw (hex M3x4) Qty: 2	 T8

## Tools Required

 Metric hexalobular (6lobe, star) keys Size: T8 and T15
<ul style="list-style-type: none"><li>• Adhesive cleaner</li></ul>
<ul style="list-style-type: none"><li>• Sorting bin for screws and small parts (optional)</li></ul>



## Prepare for Installation



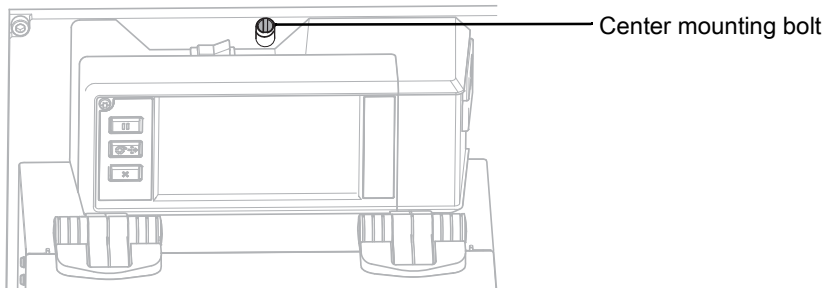
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



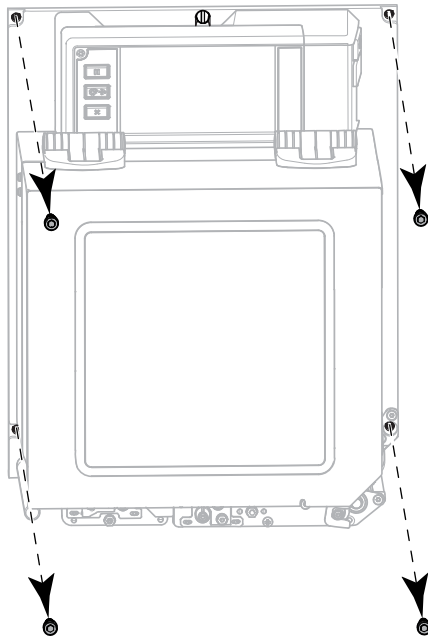
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access to the print engine. Follow these steps if necessary.

1. Loosen the center mounting bolt, but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.



3. Lift the print engine off of the center mounting bolt and place it on a workbench.

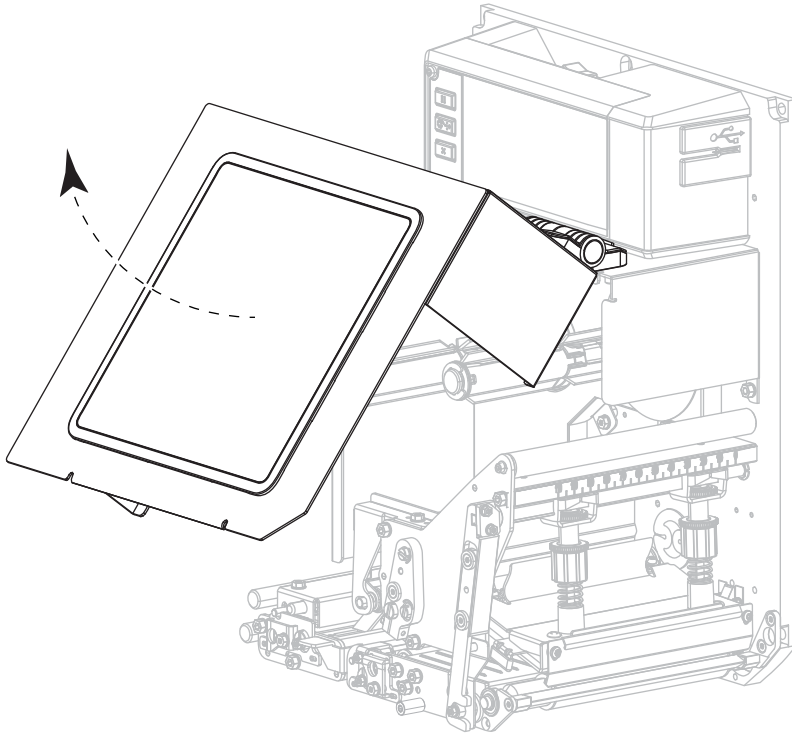


**CAUTION—HOT SURFACE:** The printhead may be hot and could cause severe burns. Allow the printhead to cool.

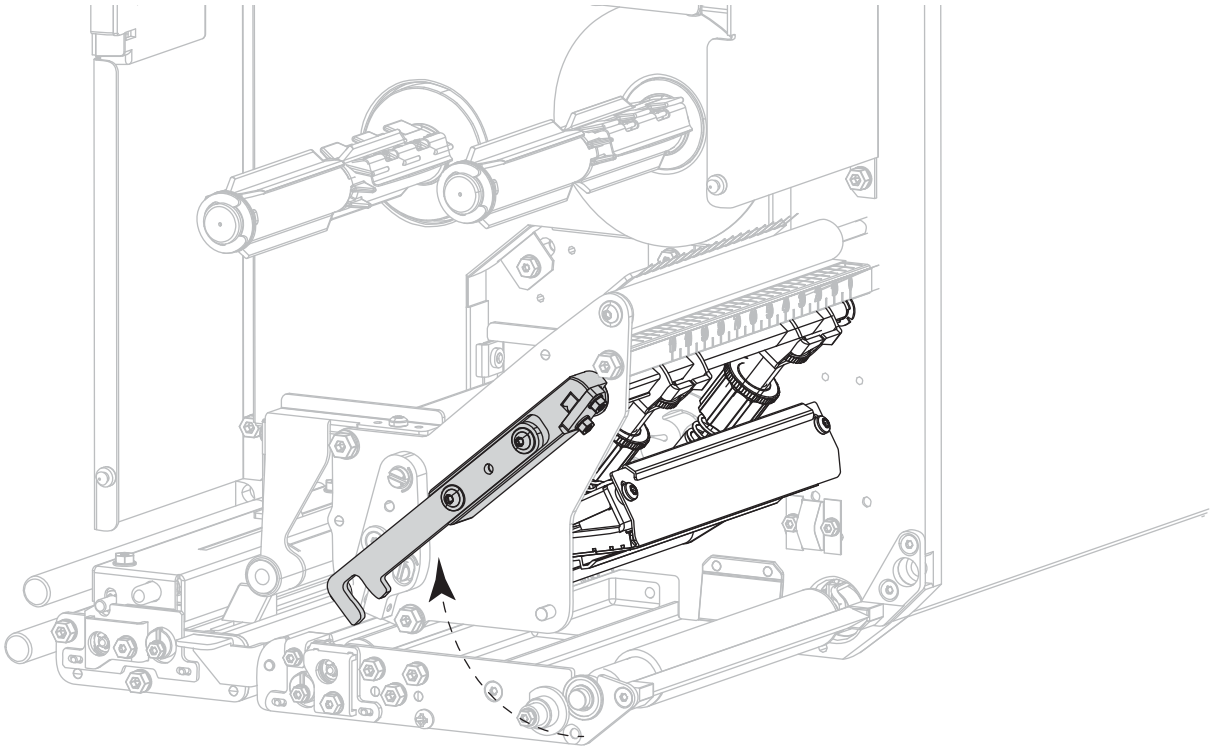


**CAUTION—PRODUCT DAMAGE:** Be careful not to touch the printhead with any tools. This could damage the printhead.

4. Open the media cover.



5. Release the printhead assembly.




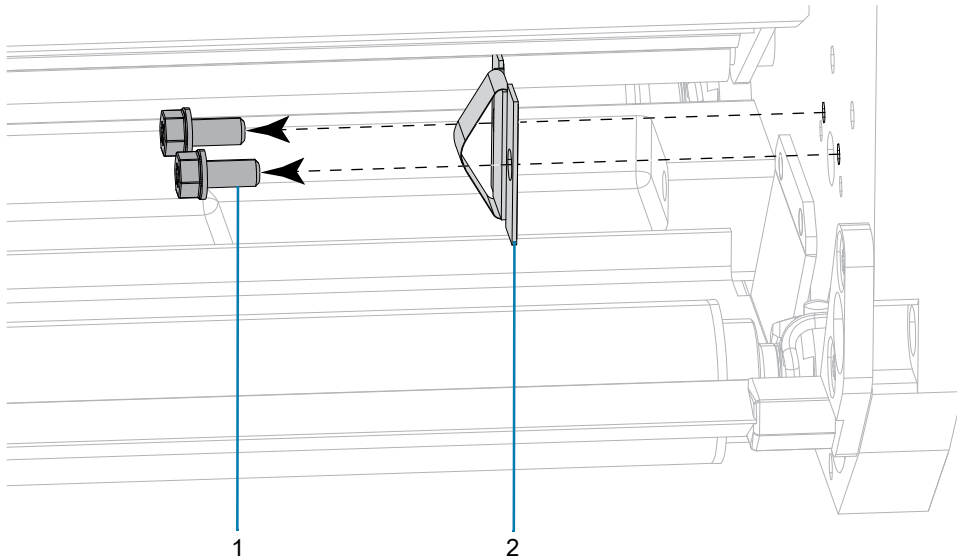
6. Remove the media and ribbon.

7. Replace the ground contact.

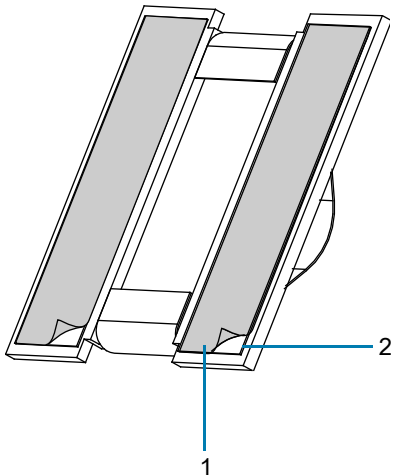
- For a 4-inch printer, go to [Replace the Ground Contact on ZE511 and ZE500-4](#).
- For a 6-inch printer, go to [Replace the Ground Contact on ZE521 and ZE500-6 on page 142](#).


## Replace the Ground Contact on ZE511 and ZE500-4

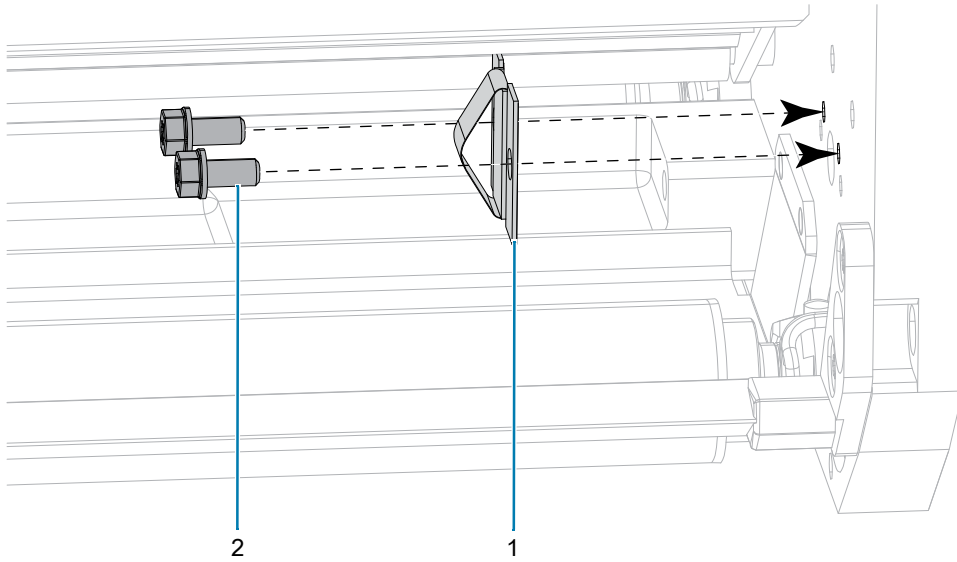
1. Remove the  T8 screws (1) securing the ground contact (2).



2. Peel the old ground contact from the mainframe.
3. Clean off all remaining residue from the mainframe with the adhesive cleaner.
4. Remove the protective covering (1) from the adhesive (2) on the back of the new ground contact.




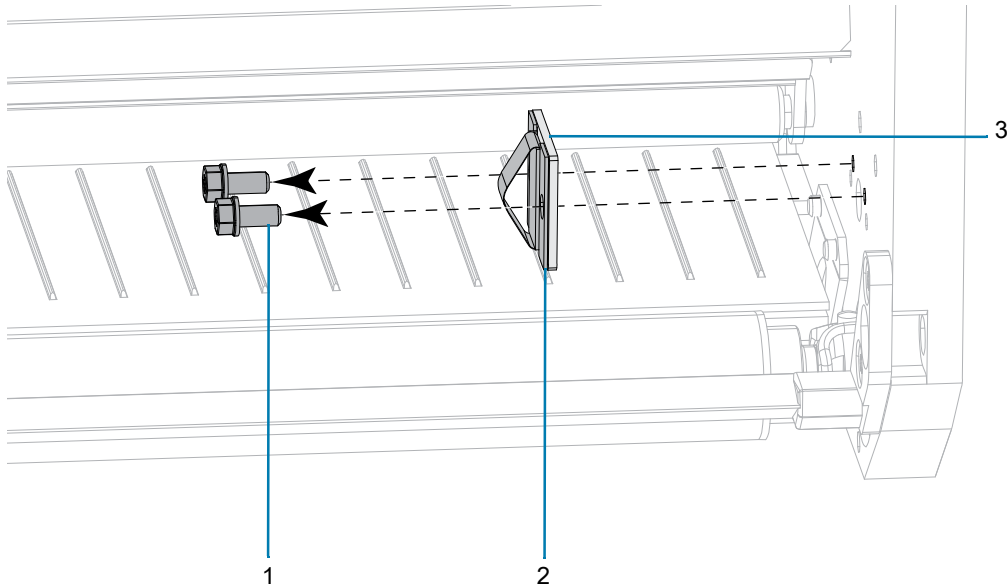
5. Install the new ground contact (1) with the new  T8 screws (2).



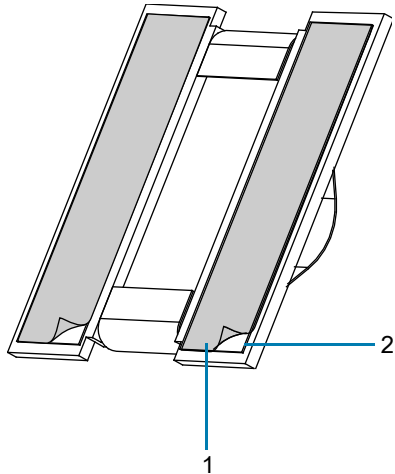
6. Go to [Resume Printer Operation on page 143](#).

## Replace the Ground Contact on ZE521 and ZE500-6

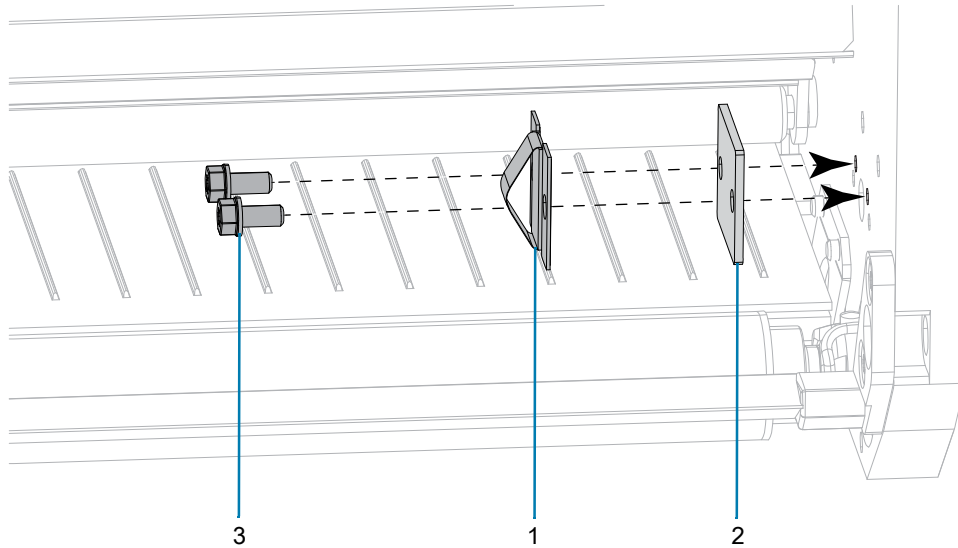
1. Remove the  T8 screws (1) securing the ground contact.
2. Remove the old ground contact (2) and the printhead grounding plate (3) from the mainframe.  
The ground contact and printhead grounding plate are bonded together.



3. Remove the protective covering from the adhesive on the back of the new ground contact.



4. Install the new ground contact (1) and the printhead grounding plate (2) to the mainframe and secure with the new T8 screws (3).



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect AC power cord and interface cables.
6. Turn on the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

Supported print engines:

- ZE511
- ZE521



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

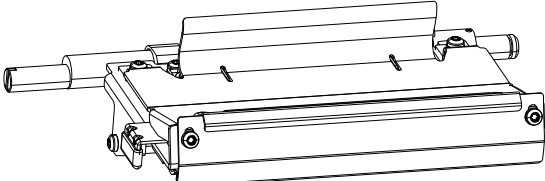


The graphics shown in this document depict a right-hand (RH) 4-inch model. Graphics for a left-hand (LH) model are a mirror image, in most cases. Differences are noted when applicable.







**NOTE:** Before disconnecting any cables take note of the cable routing. If the cables are routed incorrectly they may be pinched, damaged, or broken after the installation.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your print engine model.

	Print Mechanism Qty: 1
	Print Mechanism Sealing Plug Qty: 1
	E-ring Qty: 1

## Tools Required

	Metric hexagon keys or bits Size: 2mm, 3 mm, 4 mm
	Hexalobular (6-lobe, star) keys, drivers, or bits Size: T8, T10, T15
	Antistatic wriststrap and mat
	Sorting bin for screws and small parts (optional)



## Prepare for Installation



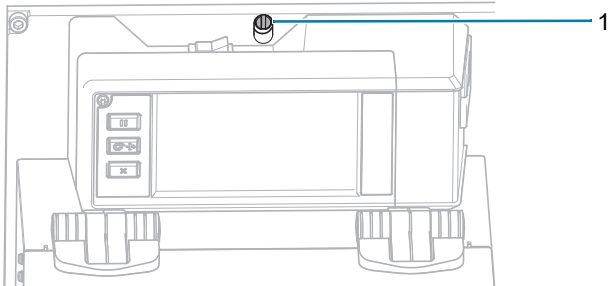
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



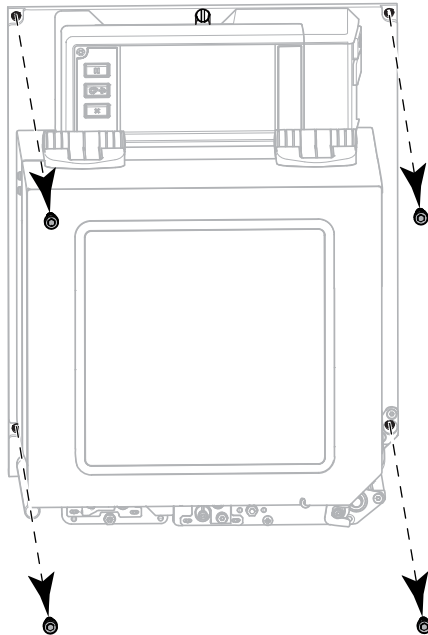
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



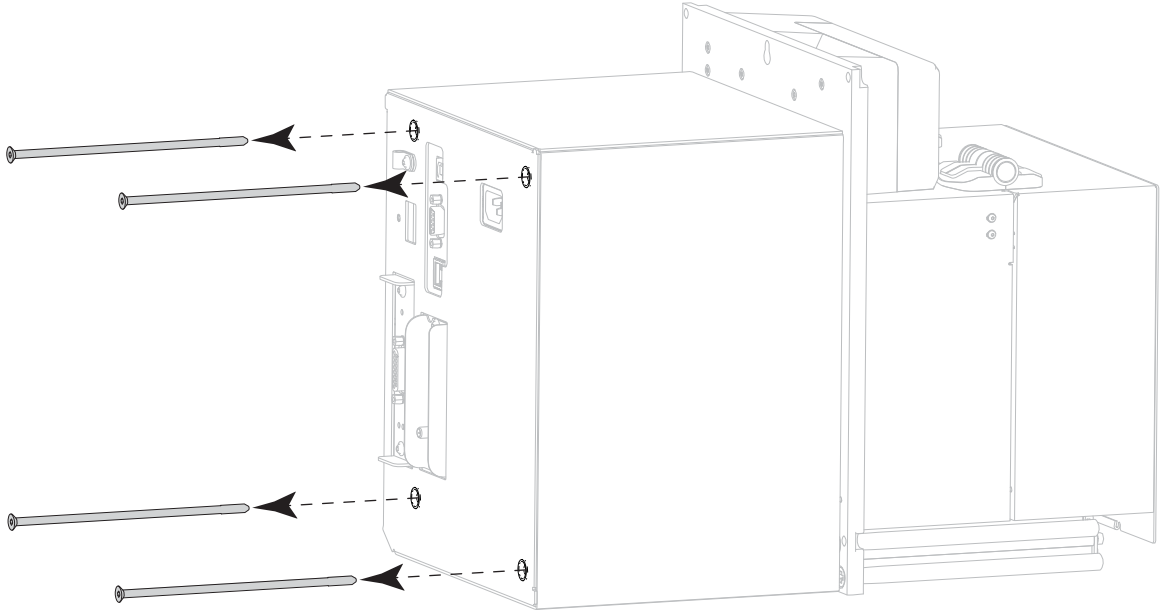
2. Remove the four screws securing the print engine to the applicator.



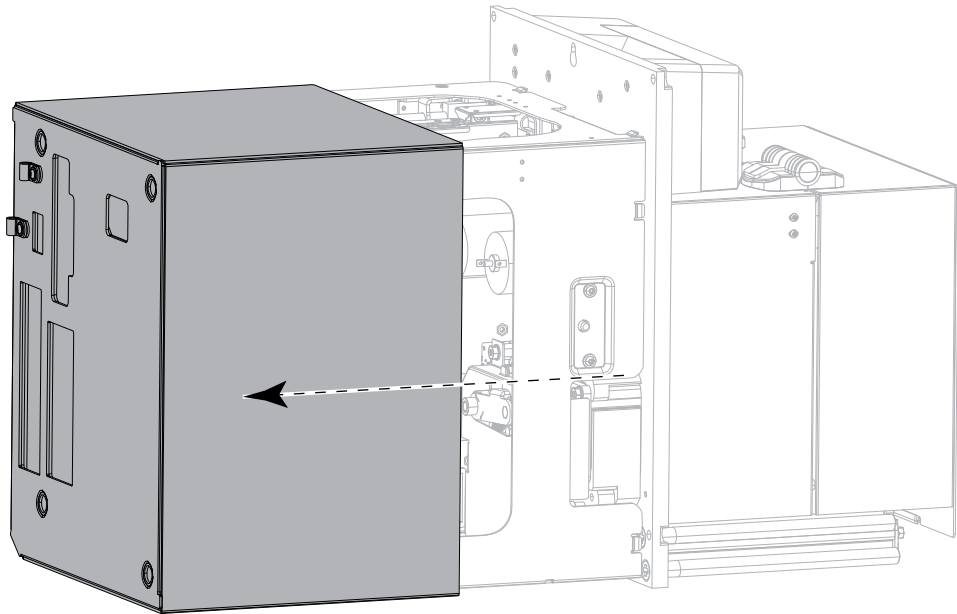
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



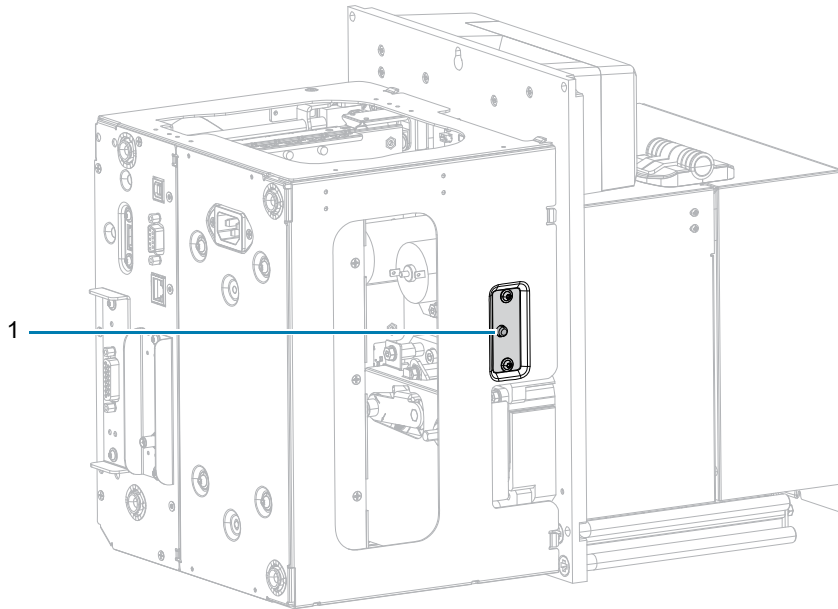
2. Remove the electronics enclosure cover from the print engine.



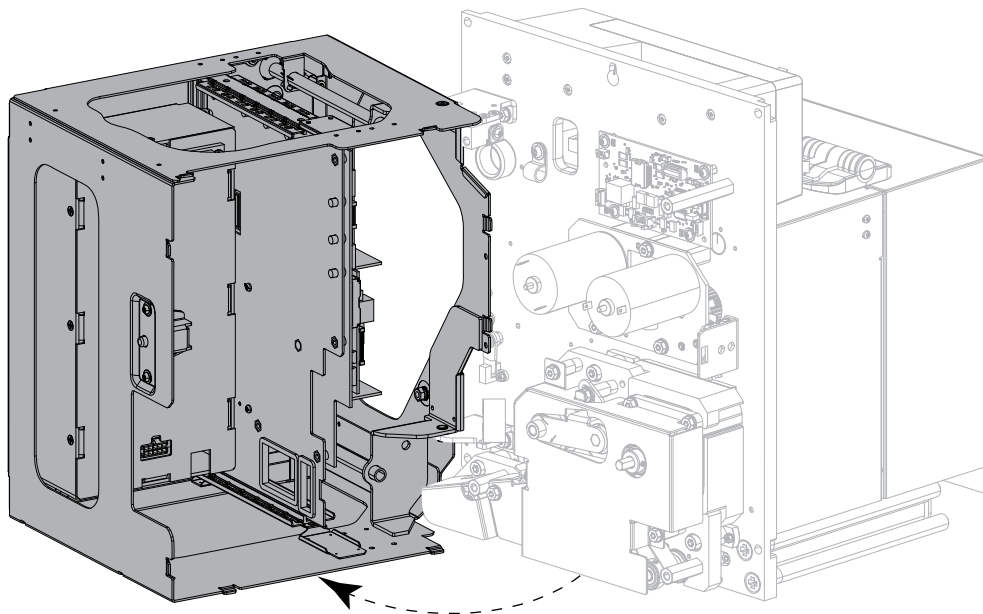
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

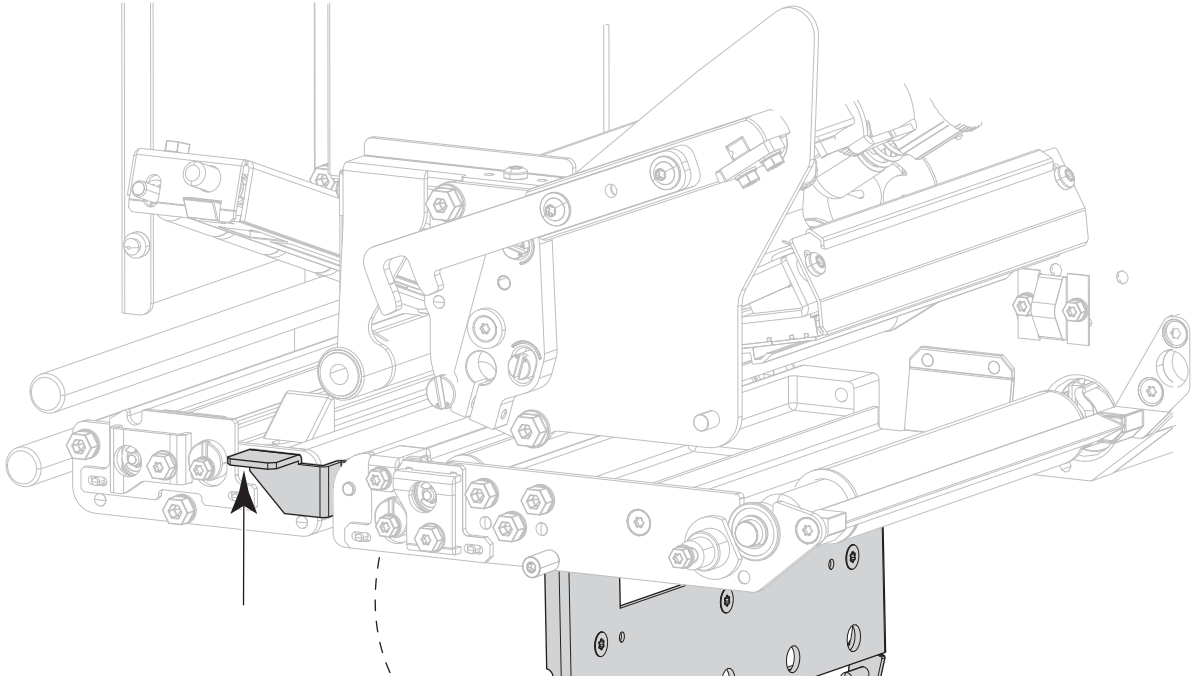



4. Open the rear of the print engine.

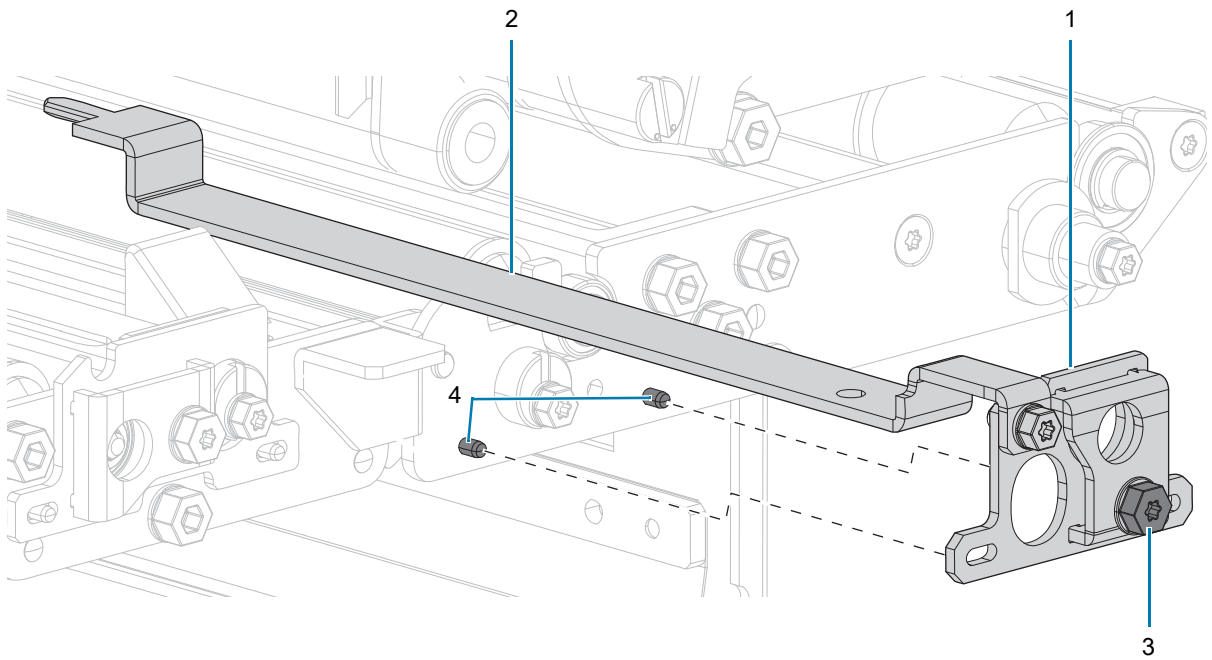


## Remove the Rollers

1. Raise the peel roller latch so that the peel roller assembly pivots downward.

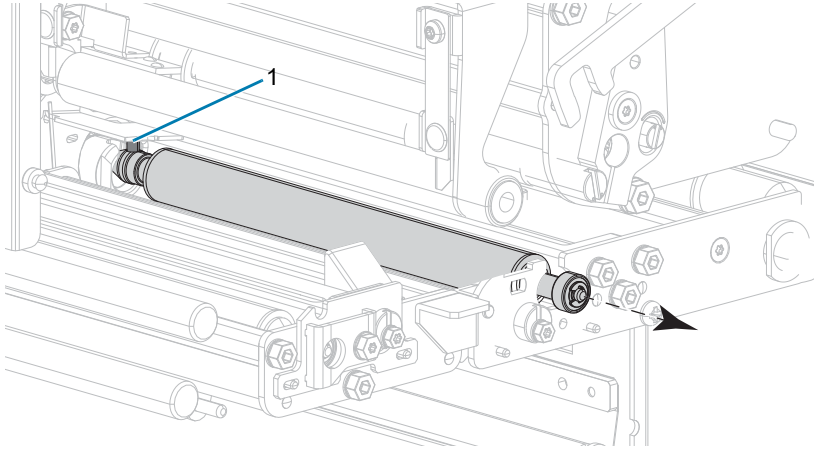



2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

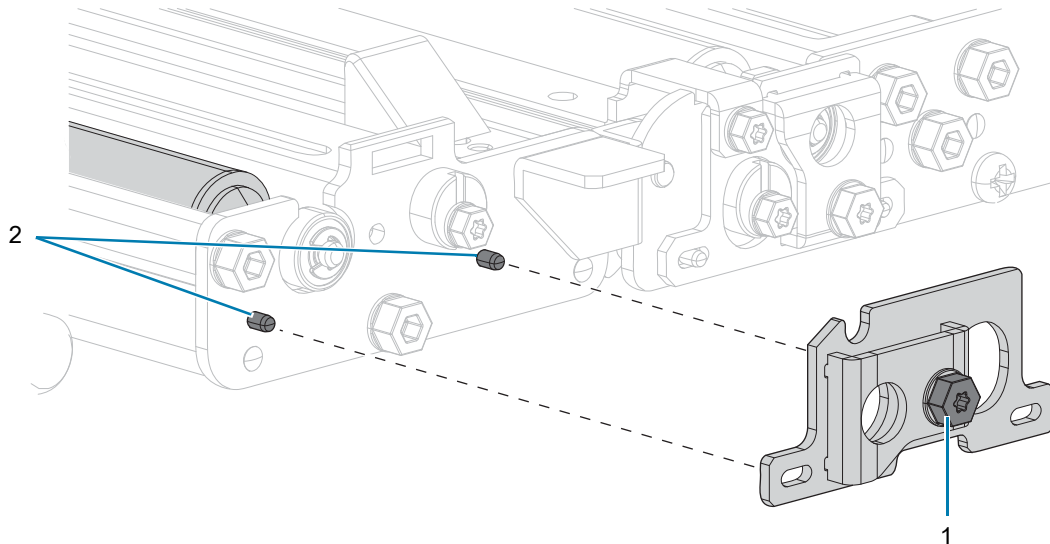


for parts & service call QLC (800) 837-1309

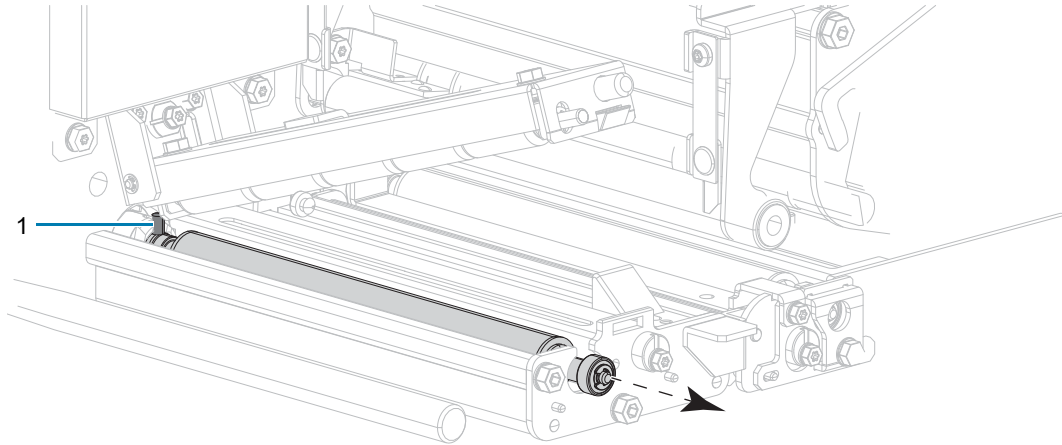
3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.




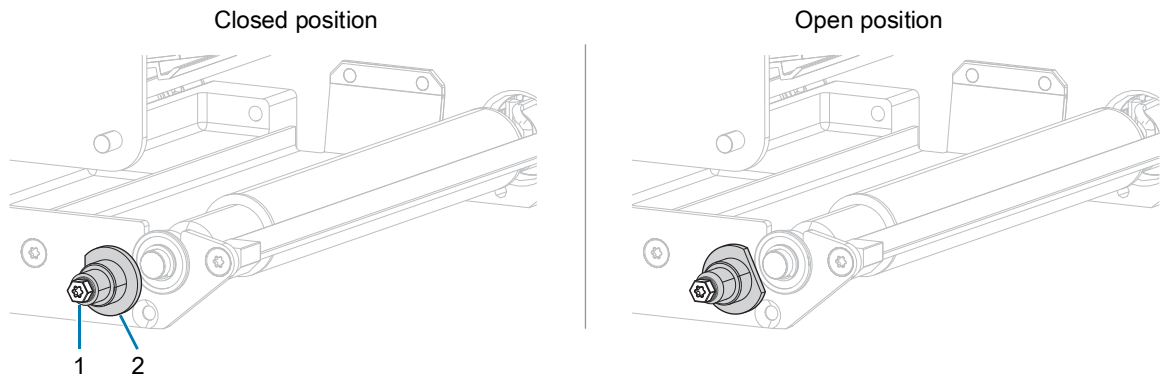
4. Remove the peel roller assembly from the print engine.
5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).



6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.

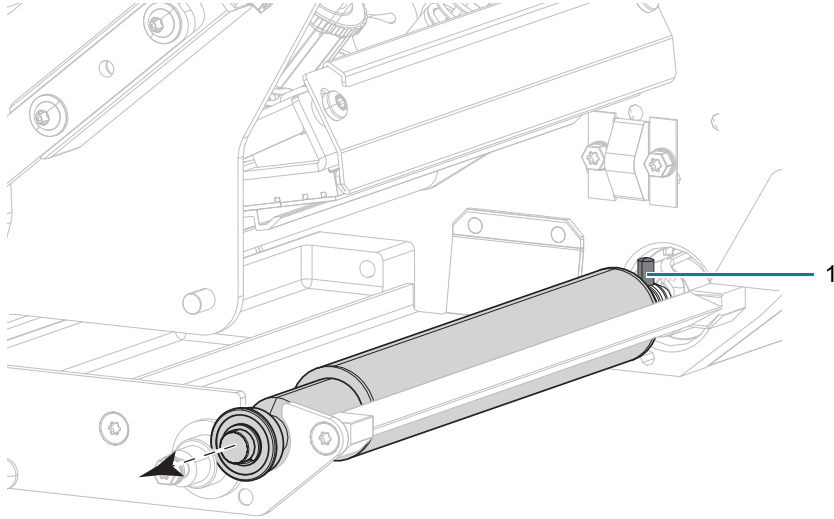


7. Remove the pinch roller assembly from the print engine.
8. Secure the platen support plate latch pin in the open position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

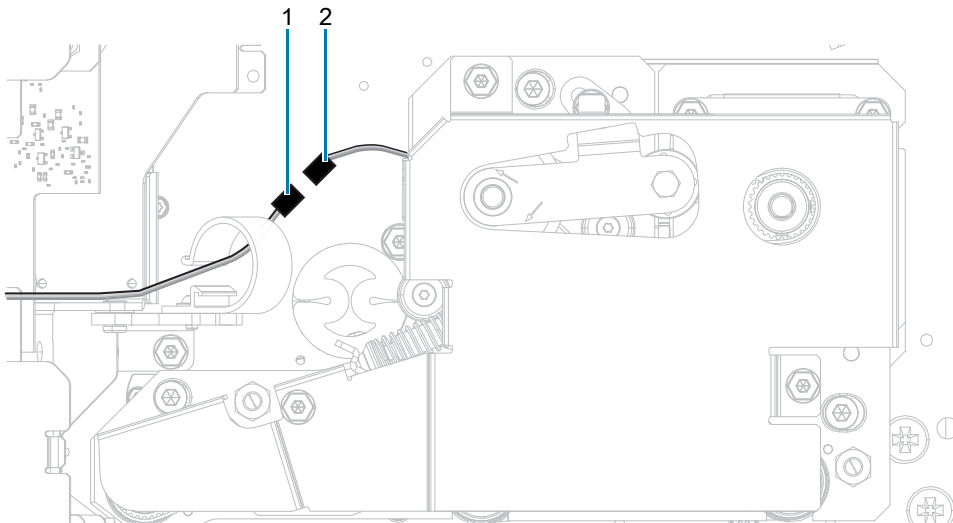


10. Remove the platen roller assembly from the print engine.

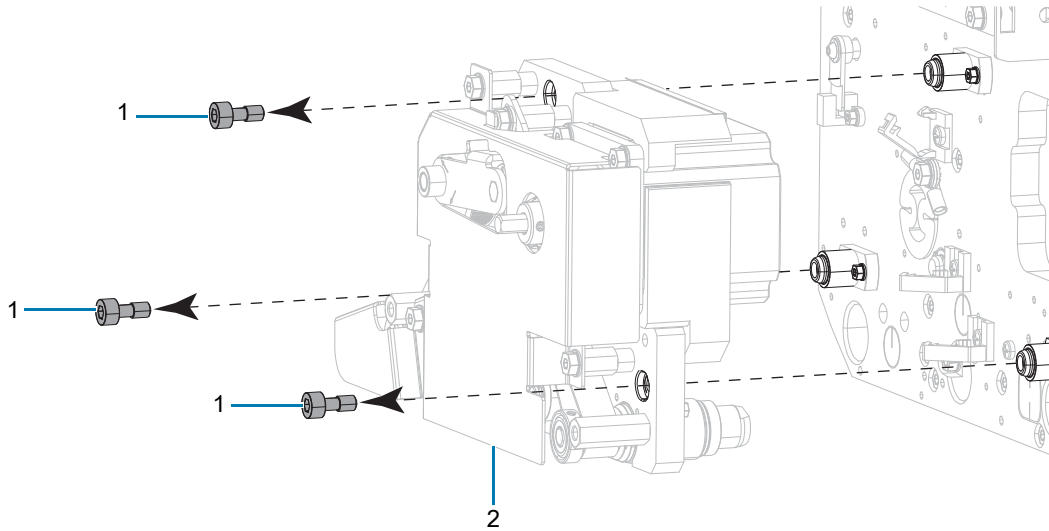
## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

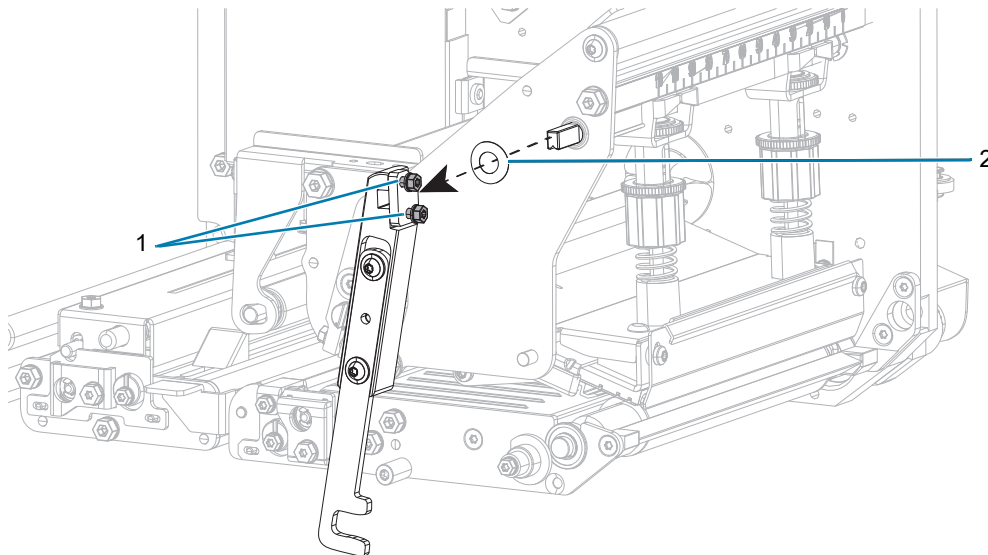


2. Loosen the three 4mm captive screws (1) to release the drive system (2) from the main frame.
3. Remove the drive system from the main frame.




## Replace the Print Mechanism

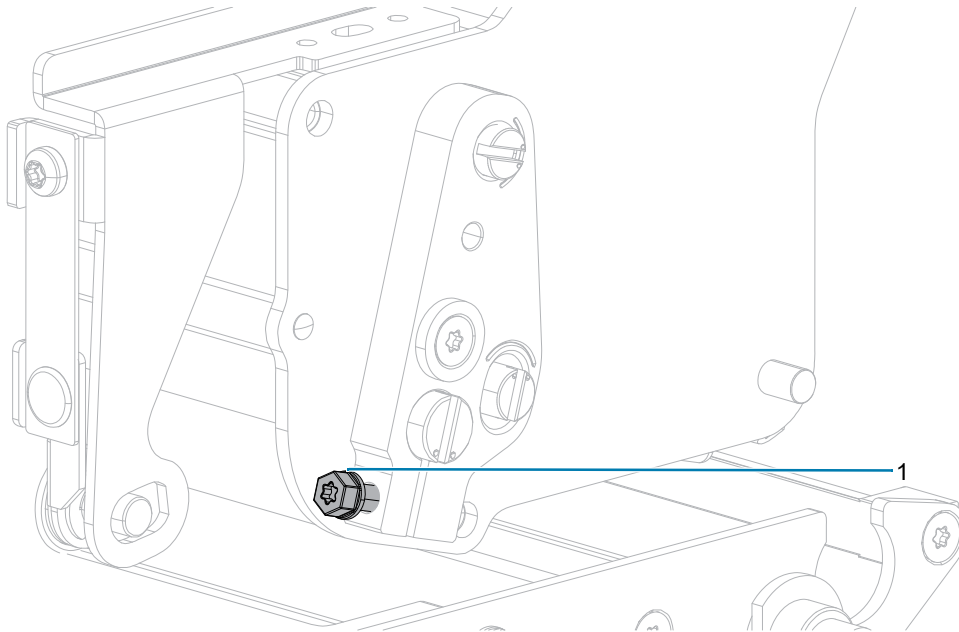
1. Loosen the two T8 screws (1) securing the locking lever.



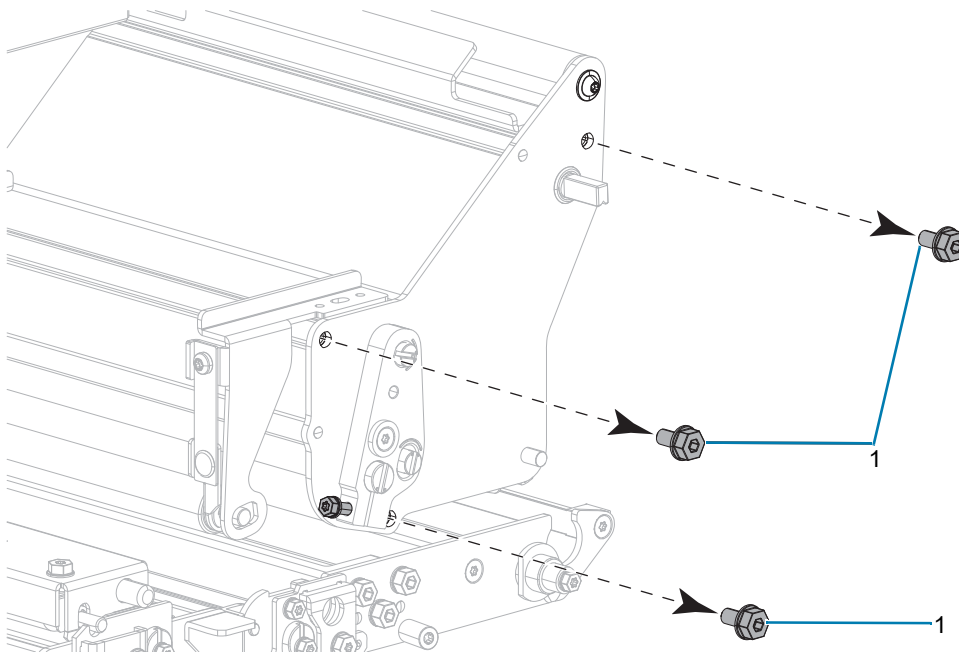
2. Remove the locking lever and the spring washer (2).



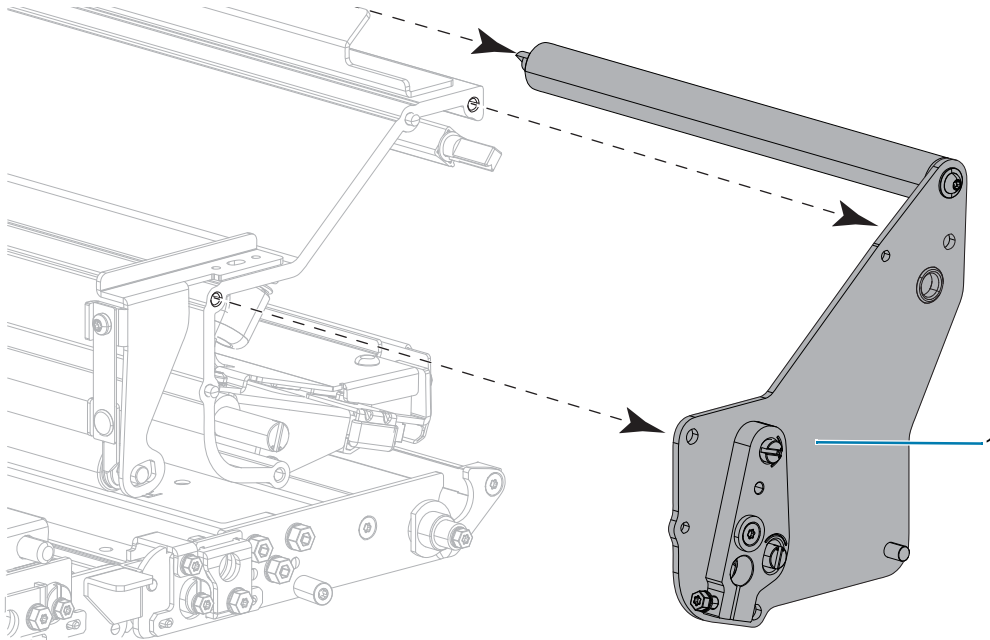
3. Loosen the pivot bar retaining  T8 screw (1).



4. Remove the three  3mm screws (1).



5. Remove the extrusion end plate (1) from the print engine.



6. Go to the electronics side of the print engine.

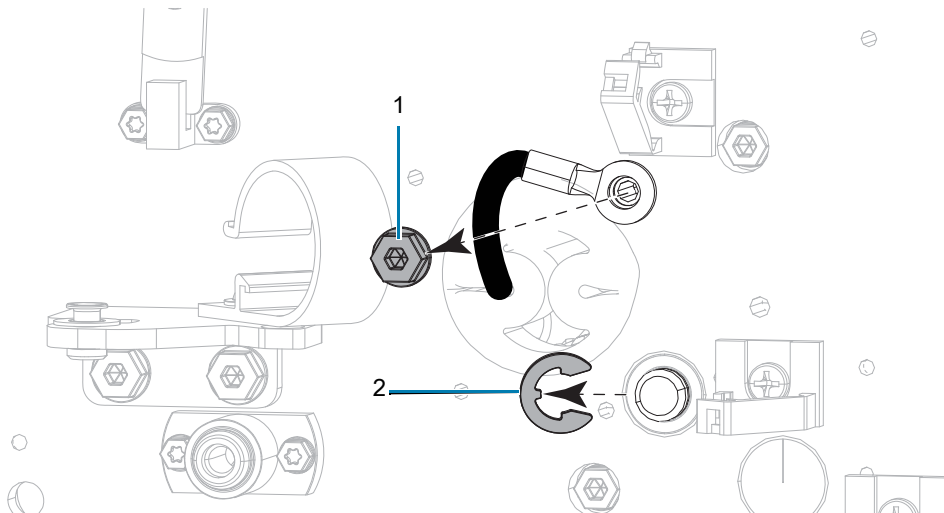
7. Release the print mechanism.

- a. Remove the 3mm screw (1).

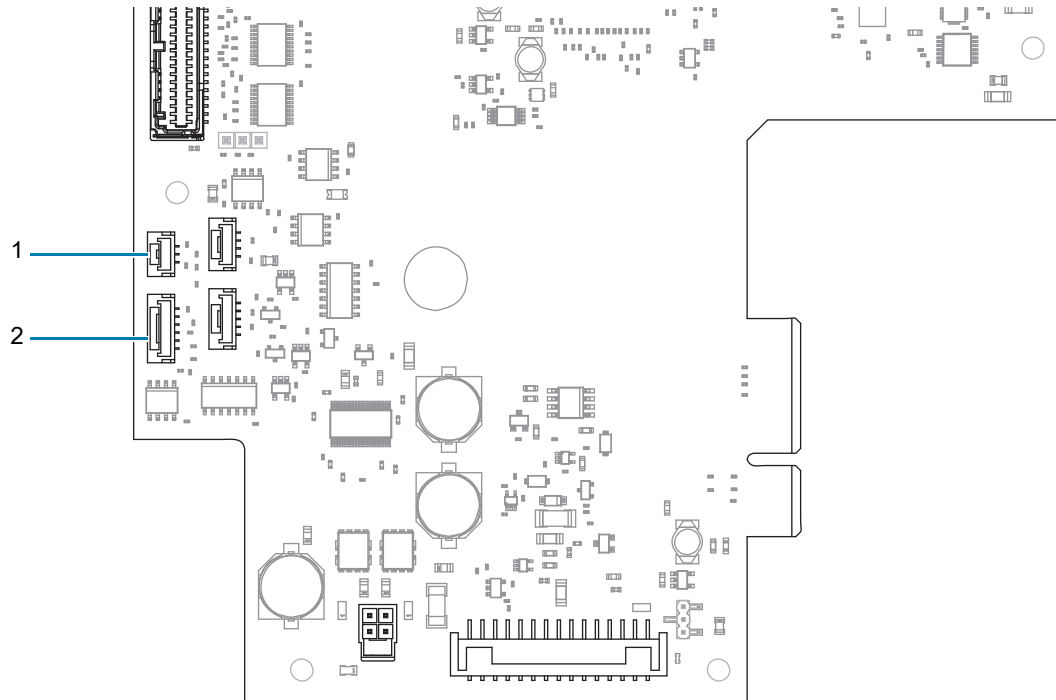


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

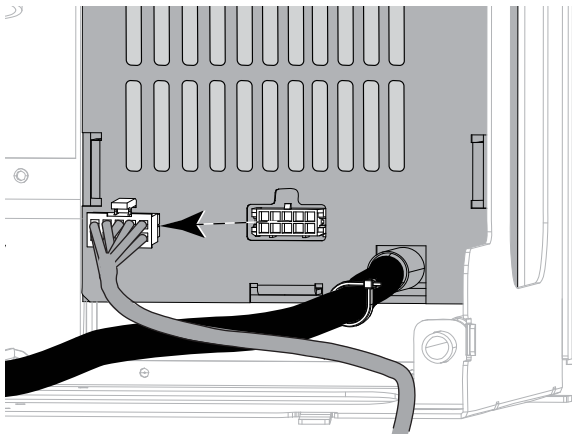
- b. Remove the E-ring (2) retaining the print mechanism.



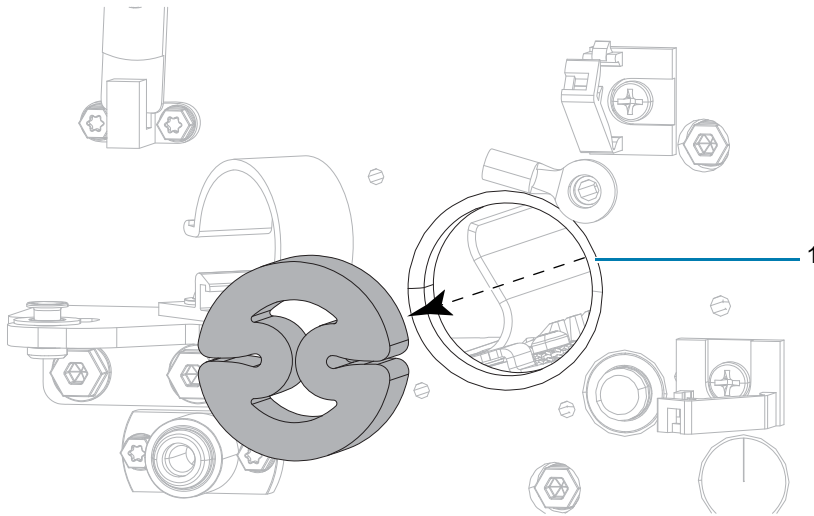
8. Disconnect the print mechanism cables from plugs J36 (1) and J37 (2) on the main logic board (MLB).



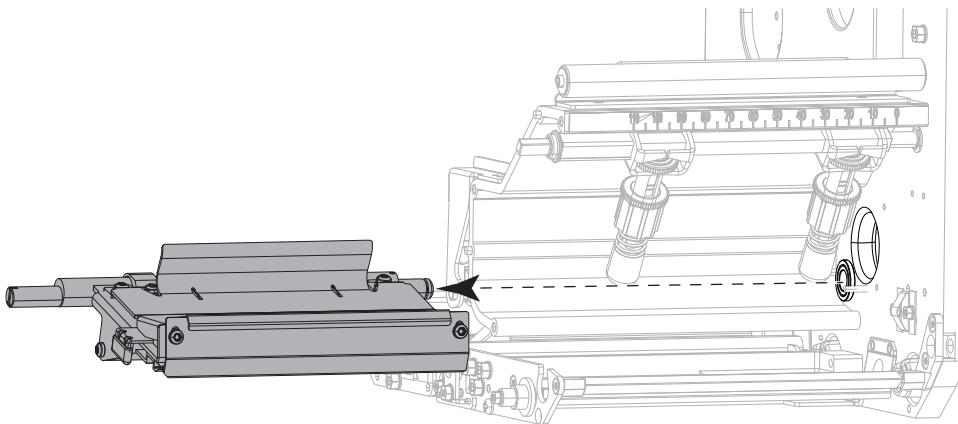
9. Disconnect the printhead power cable (1) from the power supply.



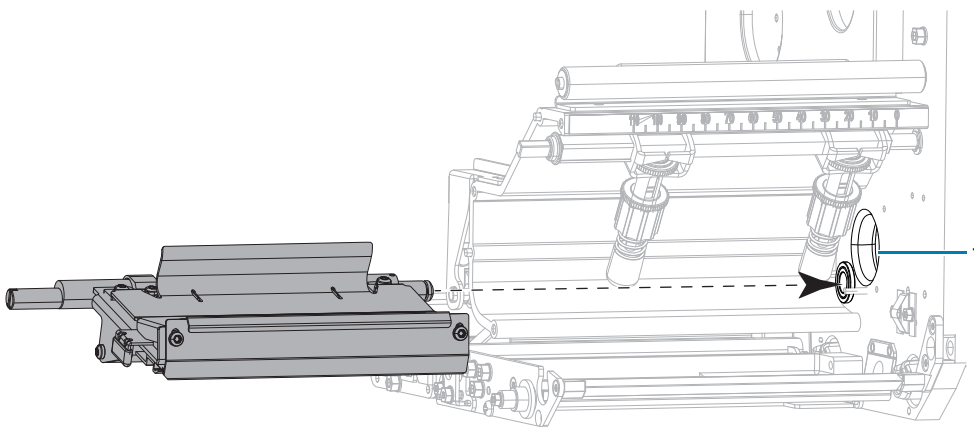
10. Remove the plug from the access hole (1).



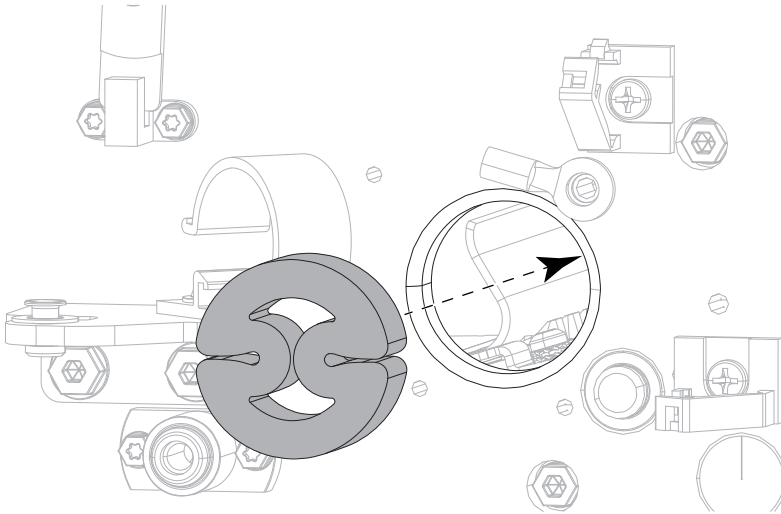
11. Thread the cables from the print mechanism through the access hole, and remove the print mechanism from the print engine.



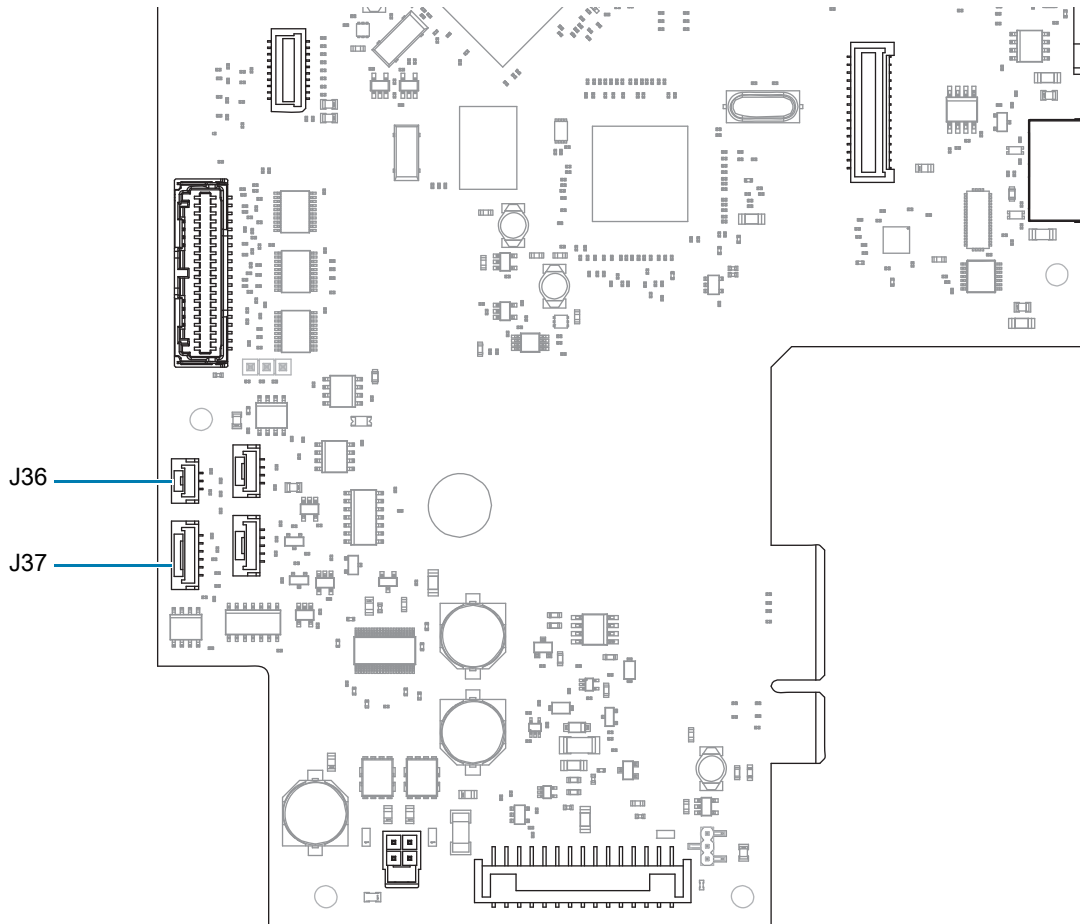
12. Install the cables for the print mechanism through the access hole (1), and then the print mechanism.



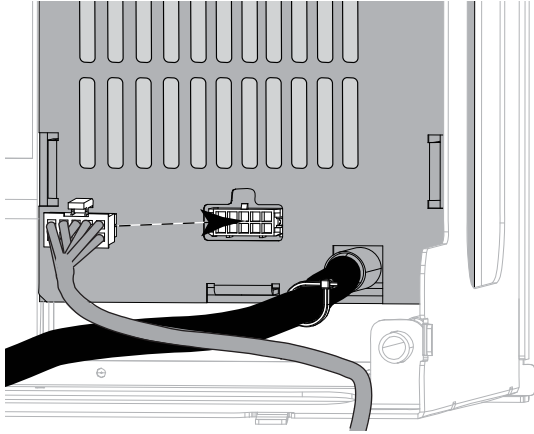
13. Install the new plug into the access hole.



14. Reconnect the print mechanism cables to plugs J36 and J37 on the MLB.

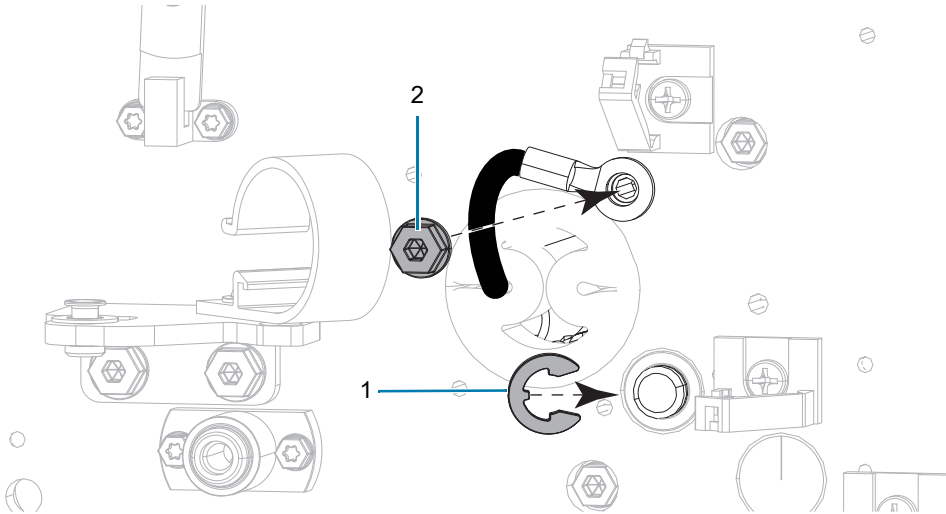


15. Connect the new printhead power cable from the power supply.

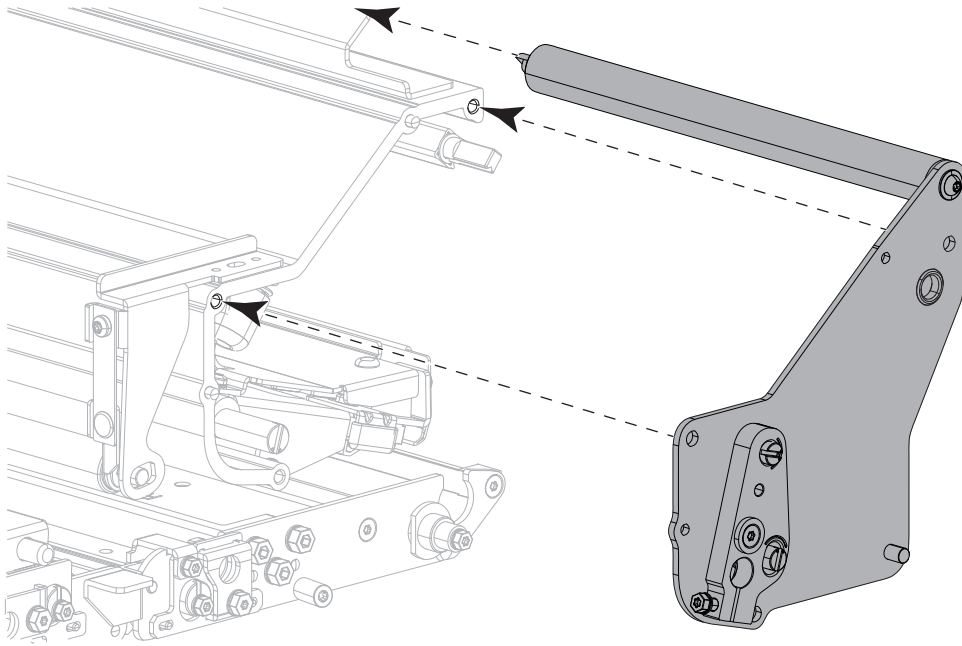


16. Secure the print mechanism.

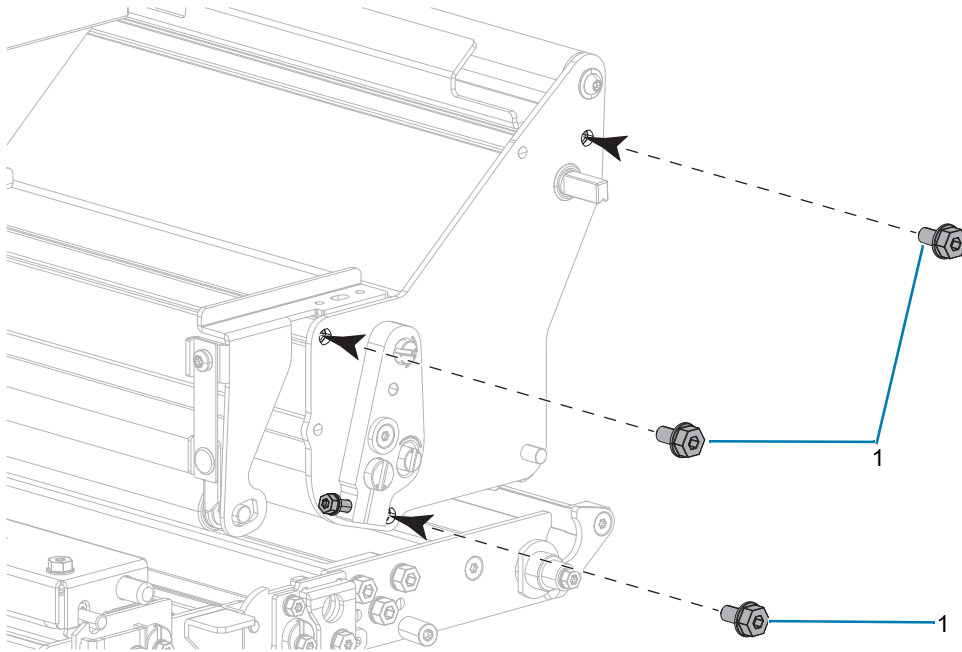
- a. Install the new E-ring (1) onto the print mechanism shaft.
- b. Secure the print mechanism ground cable with the 3mm screw (2).




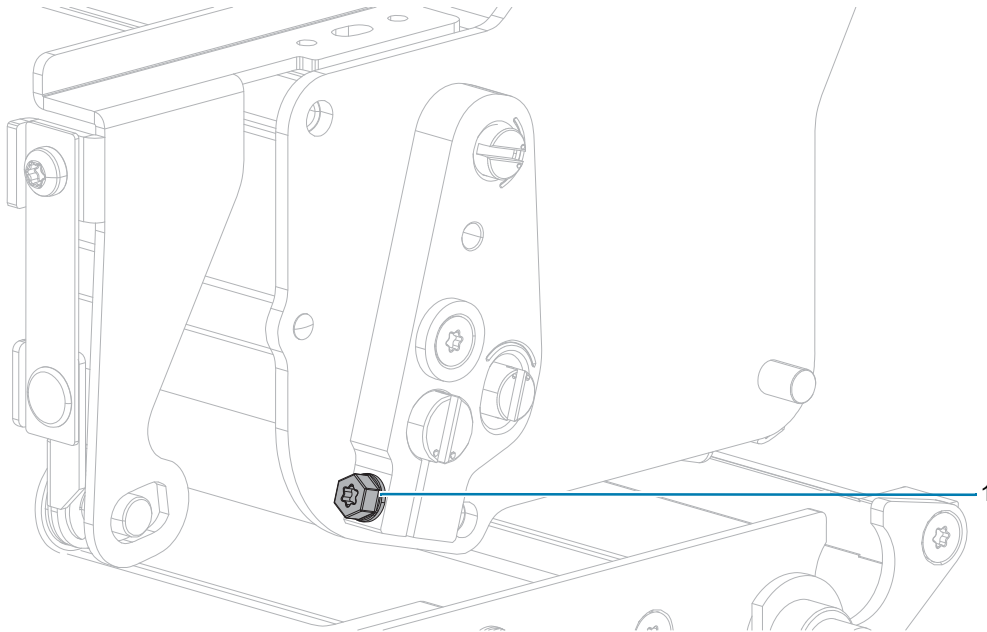
17. Reinstall the side extrusion end plate.




18. Install the three ● 3mm screws (1).

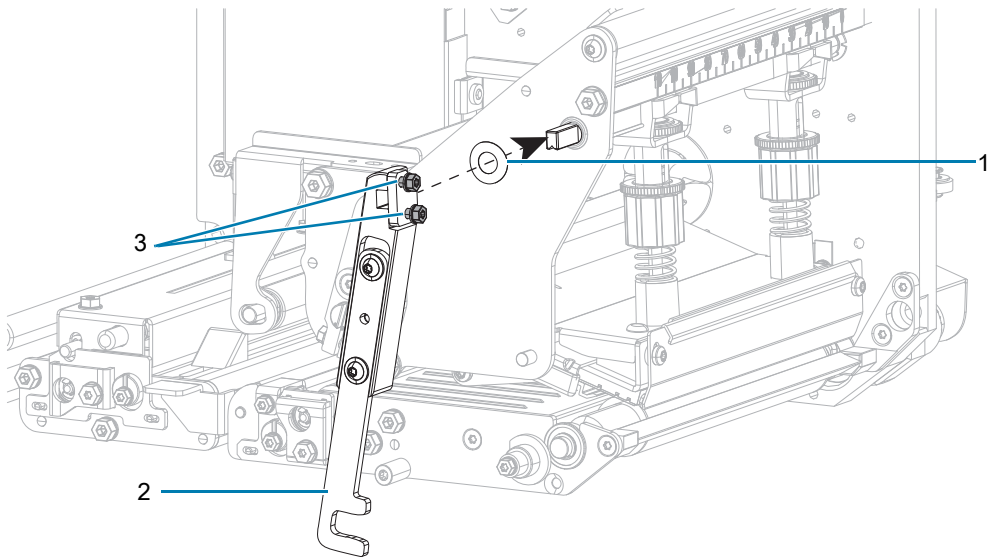


19. Tighten the pivot bar retaining screw  T8 (1).



20. Attach the printhead locking lever.

- a. Replace the spring washer (1) and locking lever (2).
- b. Tighten the locking lever  T8 retaining screws (3).

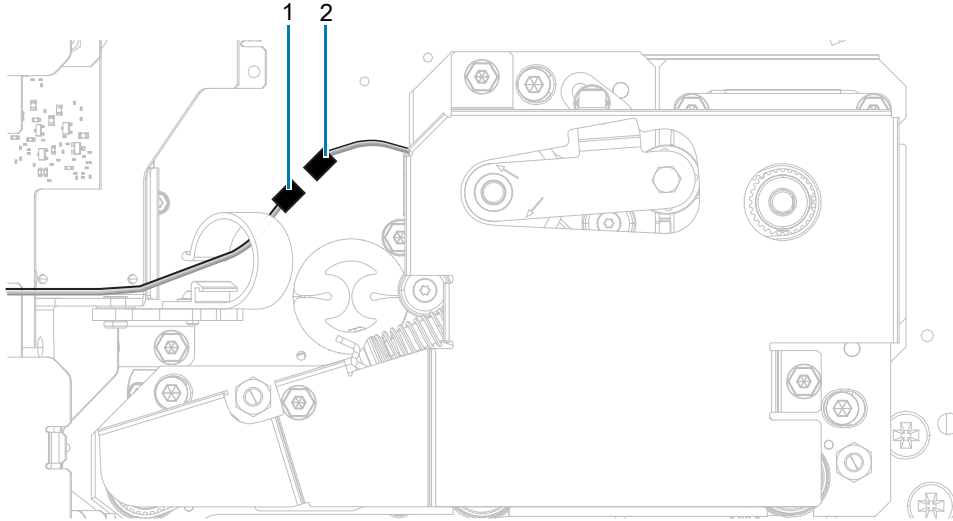




## Install the Drive System

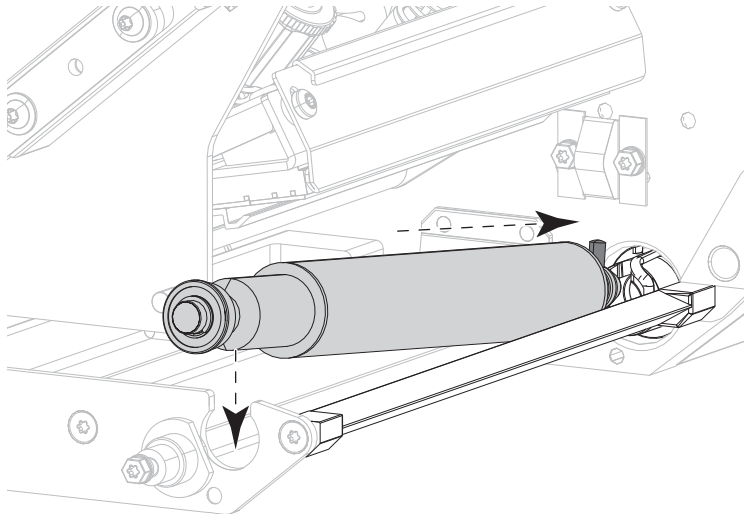
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.




## Replace the Rollers

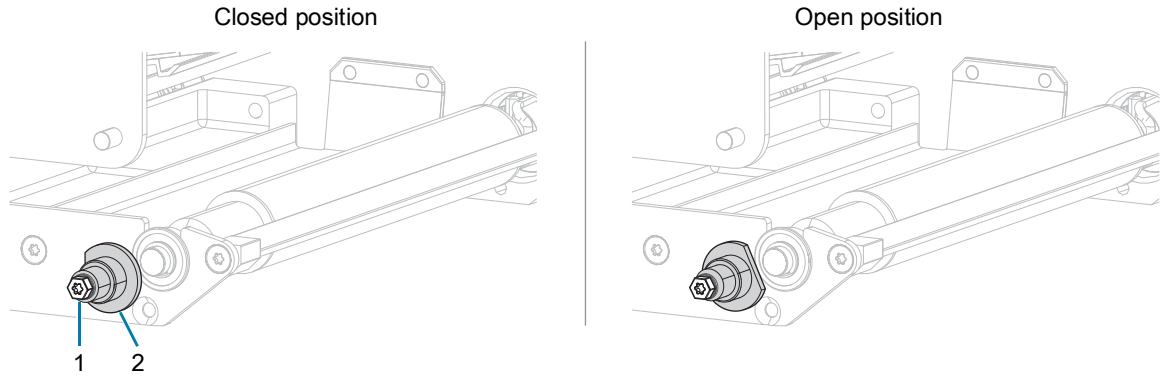
1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

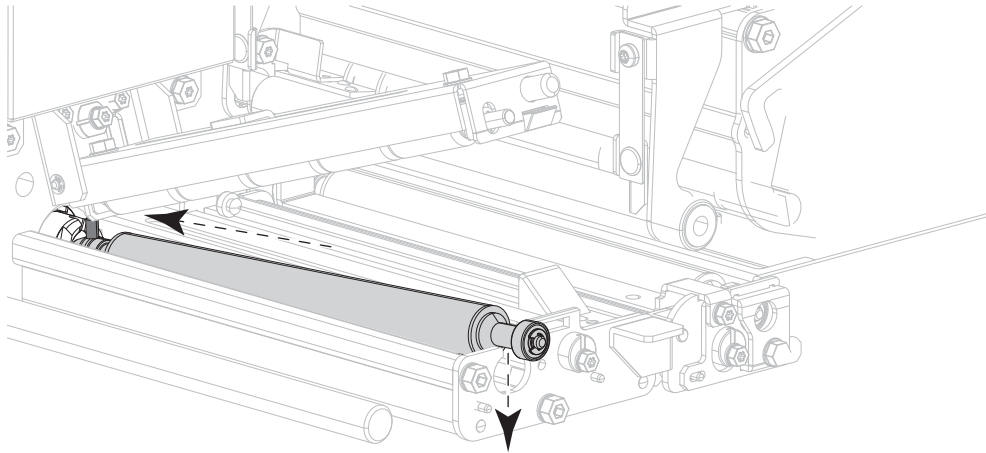
3. Secure the platen support plate latch pin in the closed position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the closed position.




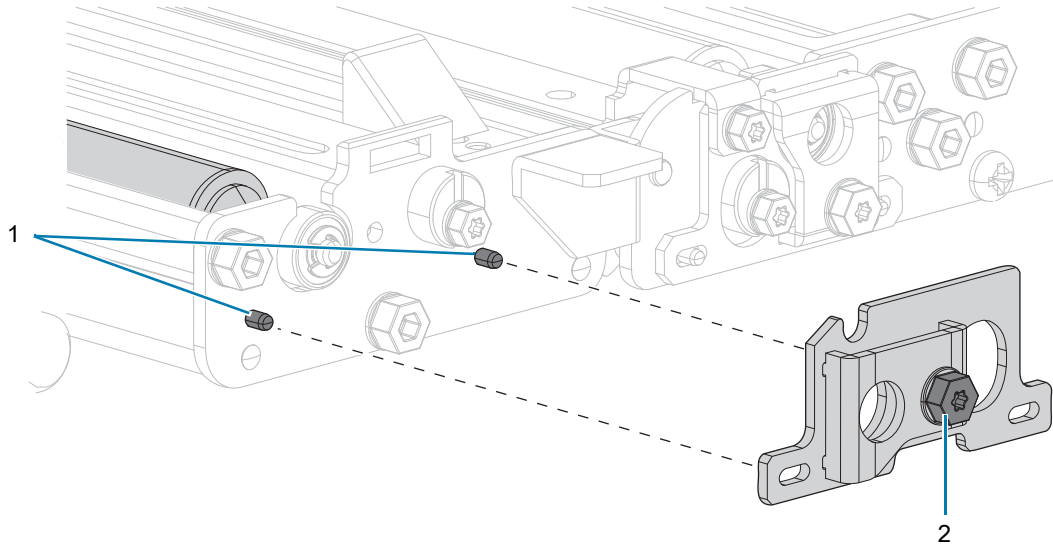
- c. Tighten the  T9 captive screw.

4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.

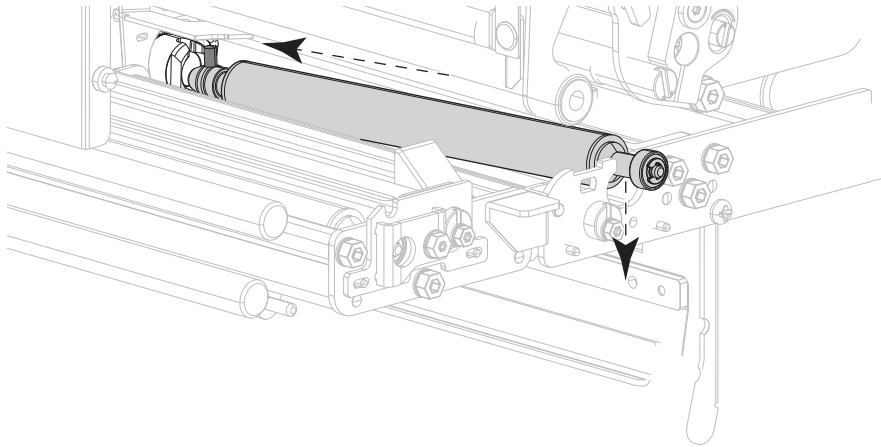


5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.


6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

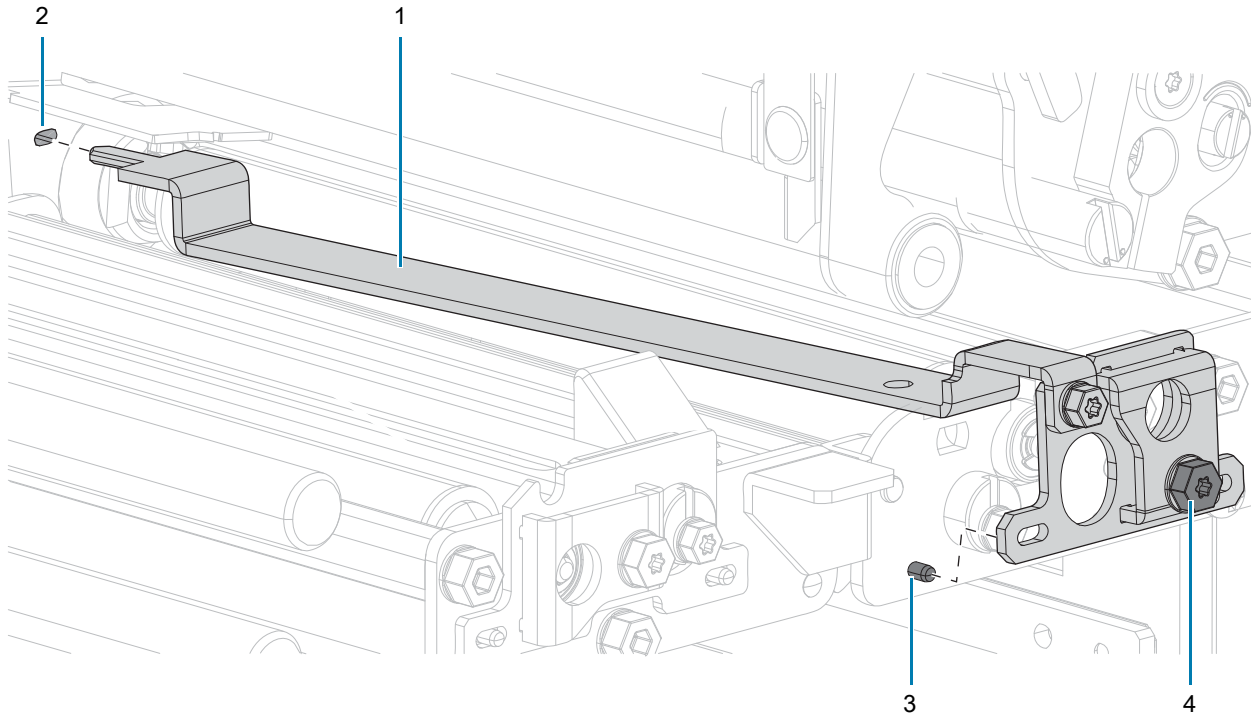


7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



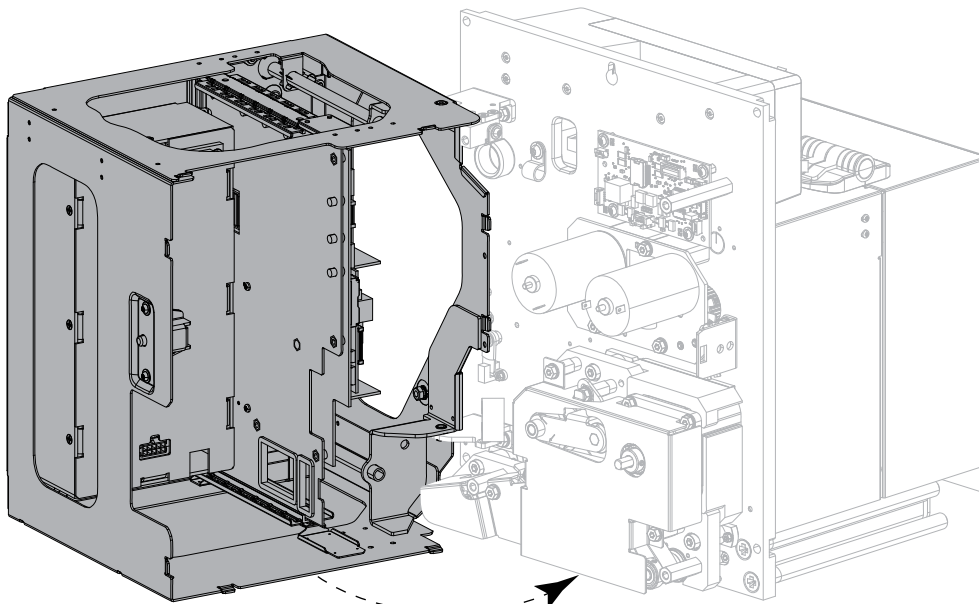
8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



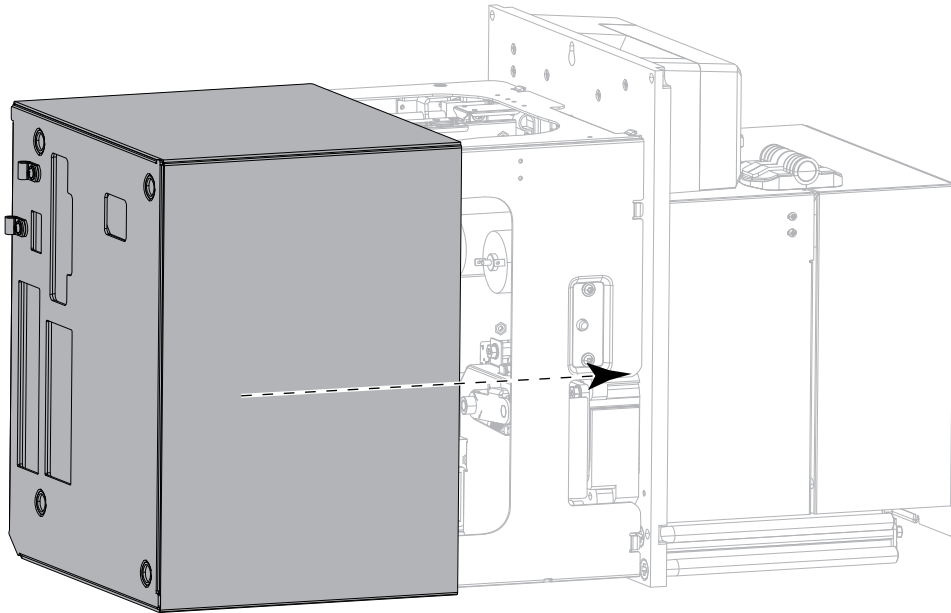
## Close the Electronics Enclosure

1. Close the rear of the print engine.

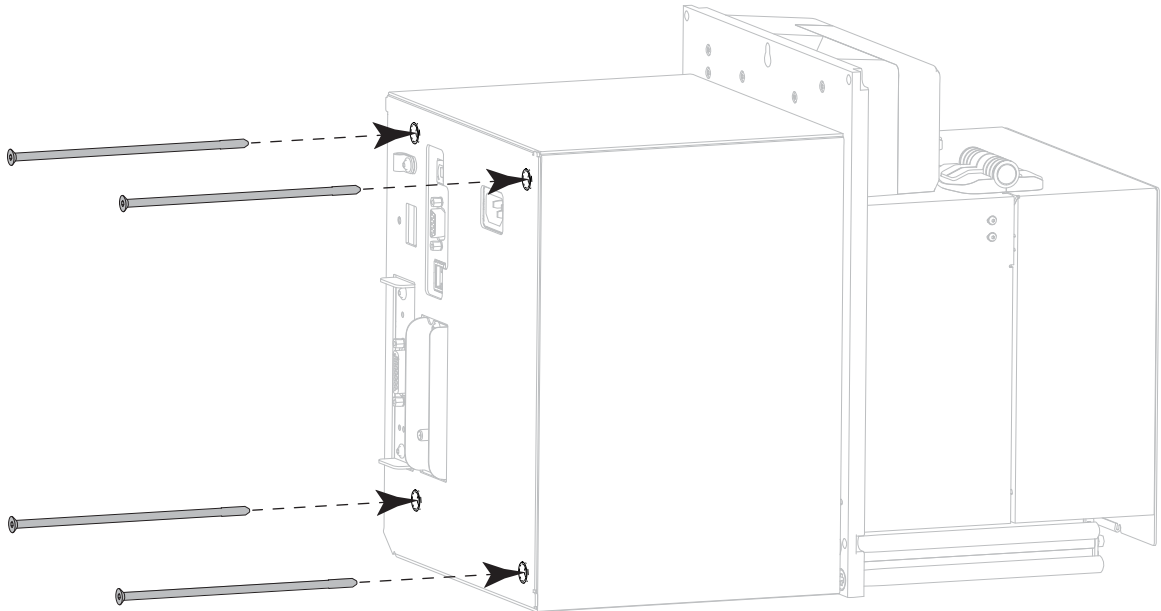


for parts & service call QLC (800) 837-1309

2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reinstall media and ribbon (if used).
6. Reconnect AC power cord and interface cables.
7. Turn on (I) the printer power.

for parts & service call QLC (800) 837-1309

## Print Line, Balance, and Skew Adjustment



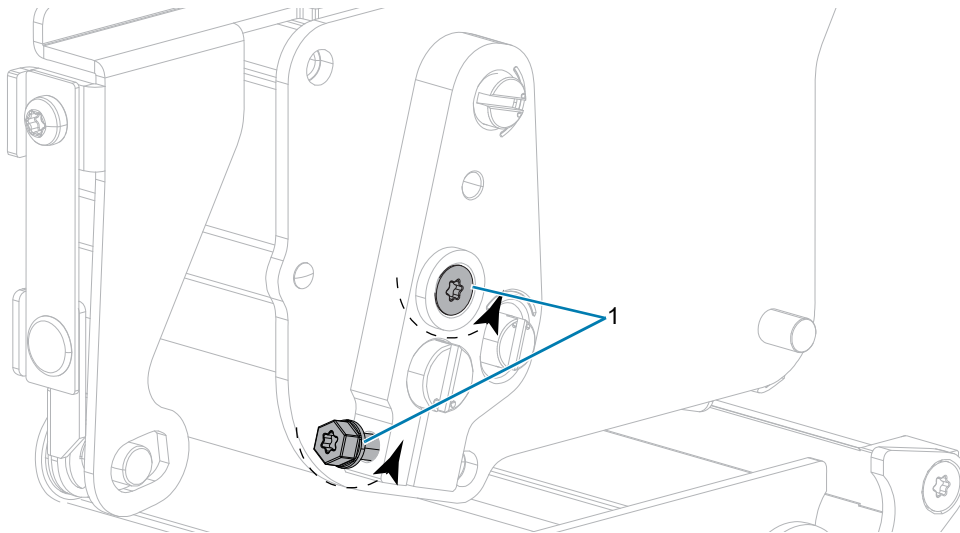
**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label as the labels print, you can adjust the following:

- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

1. Loosen the two 3mm adjustment retaining screws (1).



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold **PAUSE** while turning on the print engine.
  - c. Hold **PAUSE** until the first control panel light turns off.

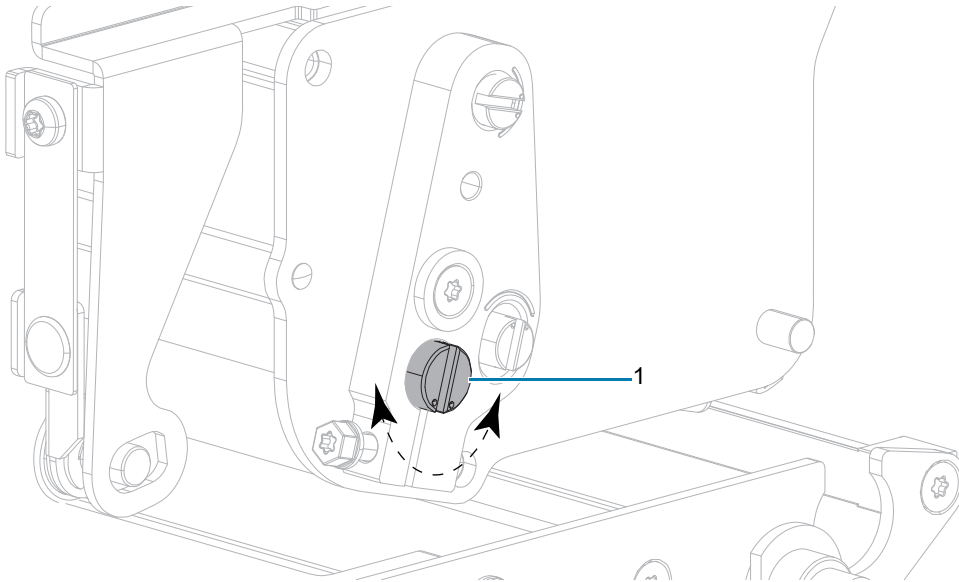


**NOTE:** At any time during the PAUSE self-test,

- Press **PAUSE** to print 15 additional labels.
- Press **CANCEL** to change the print speed.
- Press and hold **CANCEL** to exit the self-test.

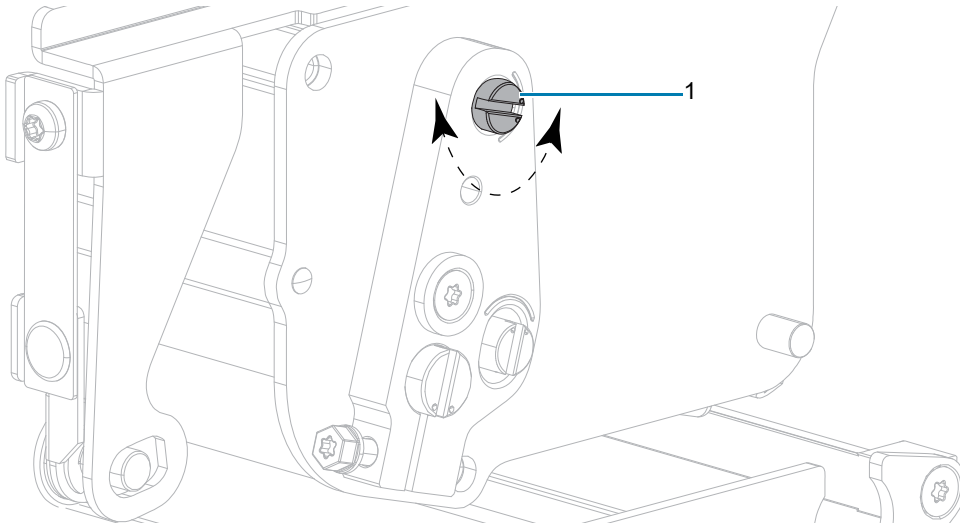
### Adjust the Print Line

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward/backward to find the best appearance of the printed image.



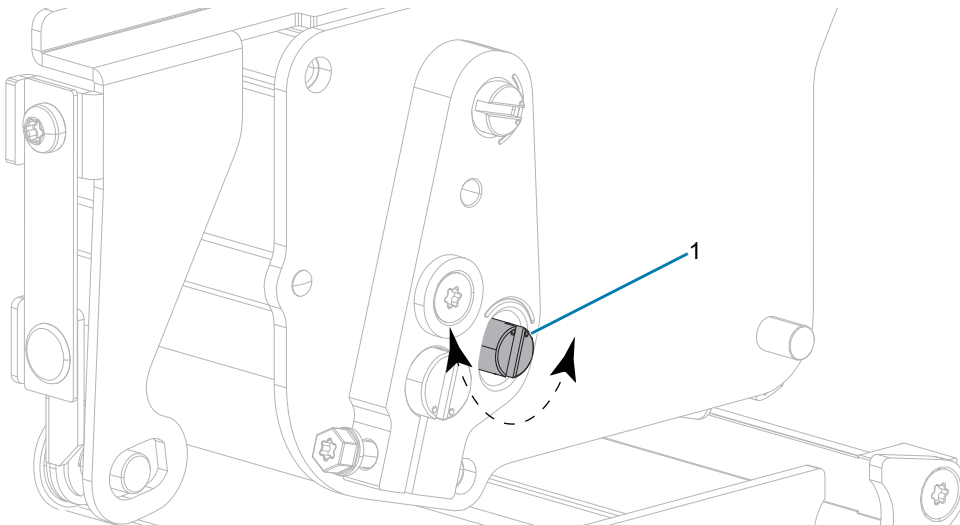
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the printhead.



## Adjust the Skew

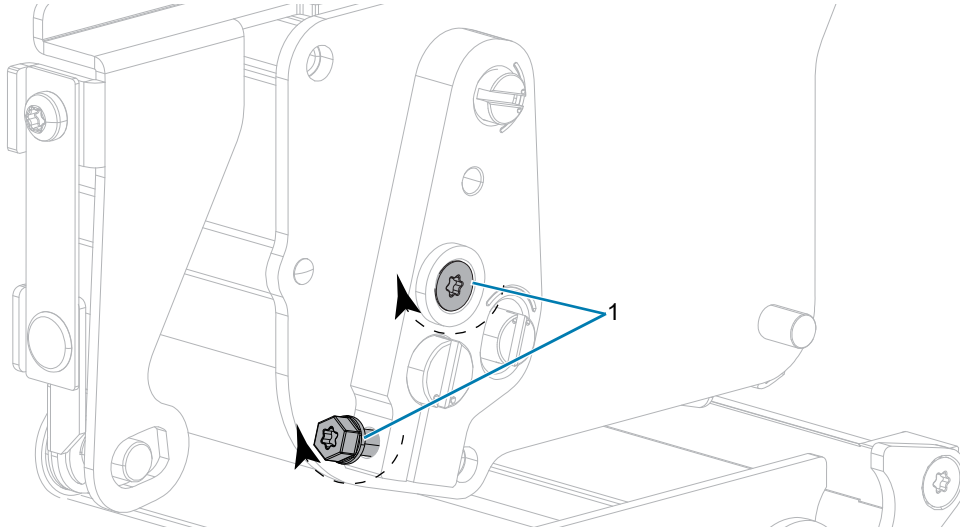
While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster (1). Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label the label (not at a diagonal).





## Place Print Engine to Operating State

1. Exit the PAUSE self-test by pressing and holding **CANCEL**.
2. Tighten the two ● 3mm adjustment screws (1).



The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.

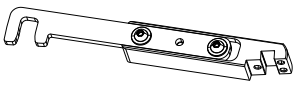








**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Lever, locking Qty: 1	
	Plate, clamping Qty: 1	
	Plate, pin, latch Qty: 1	
	Screw (M3x12 FL TX Ni) Qty: 1	 T9
	Screw (M3x8 HX TX Ni) Qty: 2	 T9

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
- Sorting bin for screws and small parts (optional)

for parts & service call OLC (800) 837-1309

## Prepare for Installation



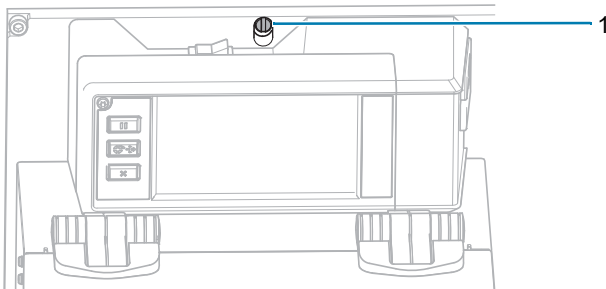
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



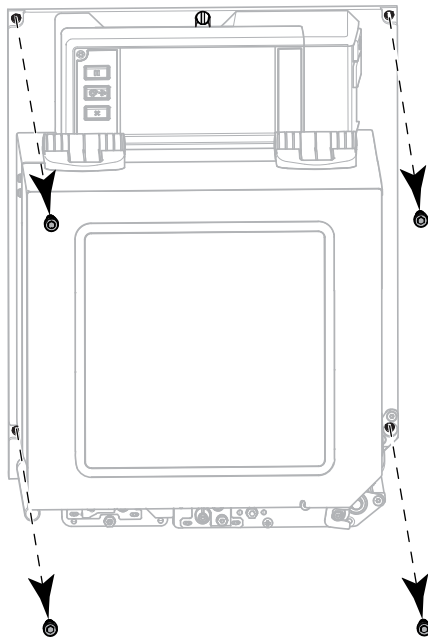
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

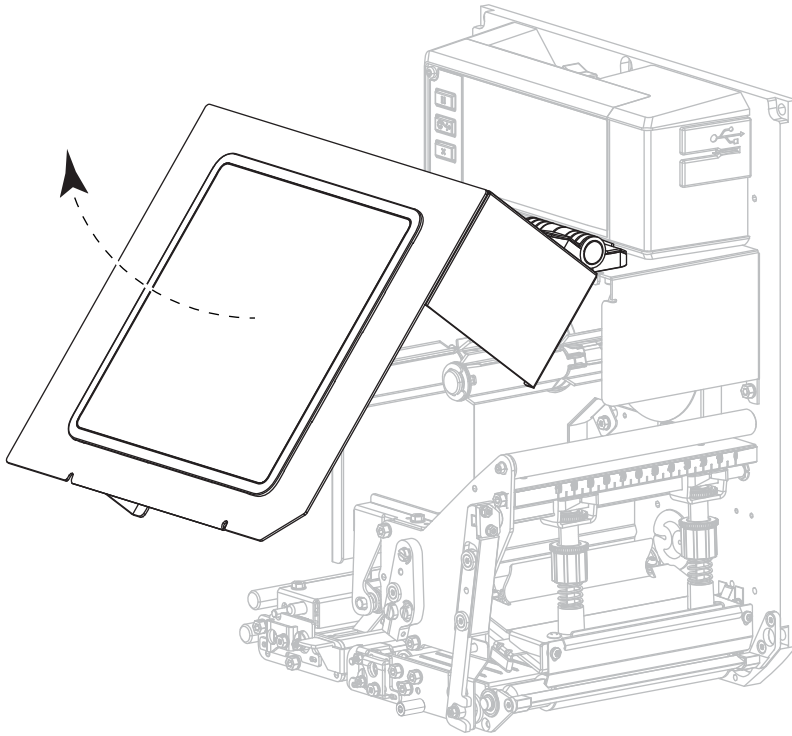


2. Remove the four screws securing the print engine to the applicator.



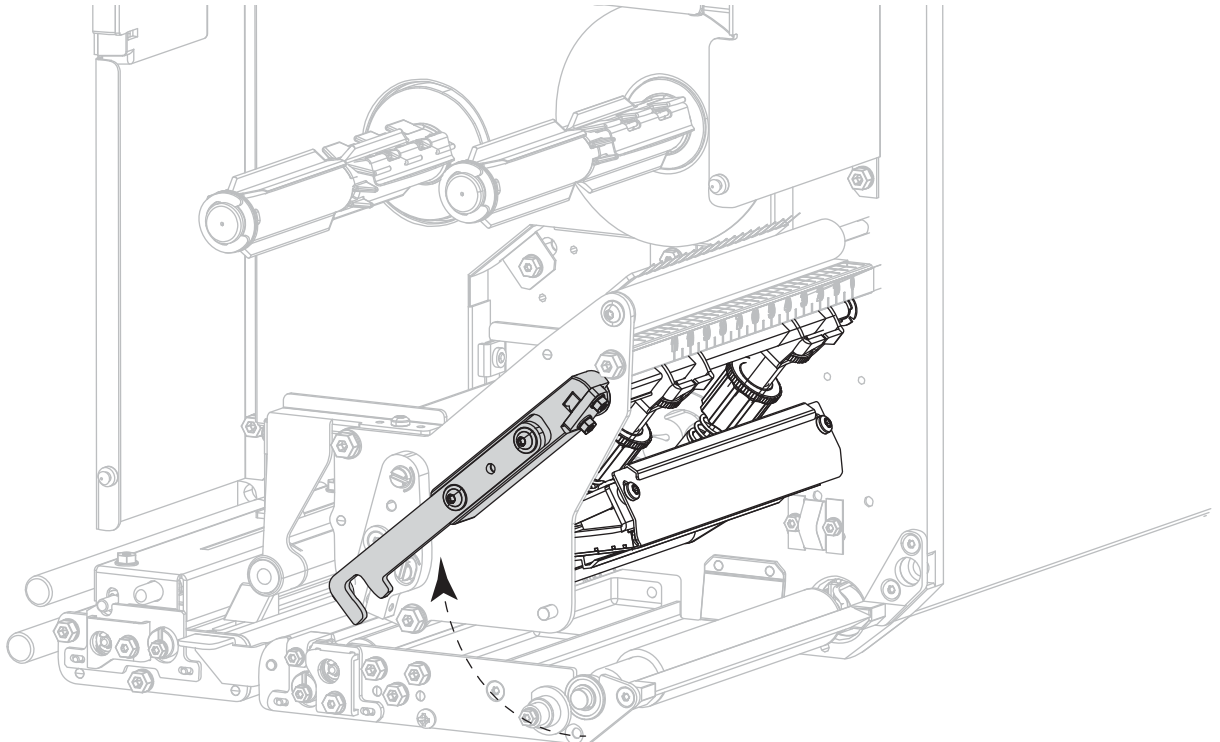
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

4. Open the media cover.




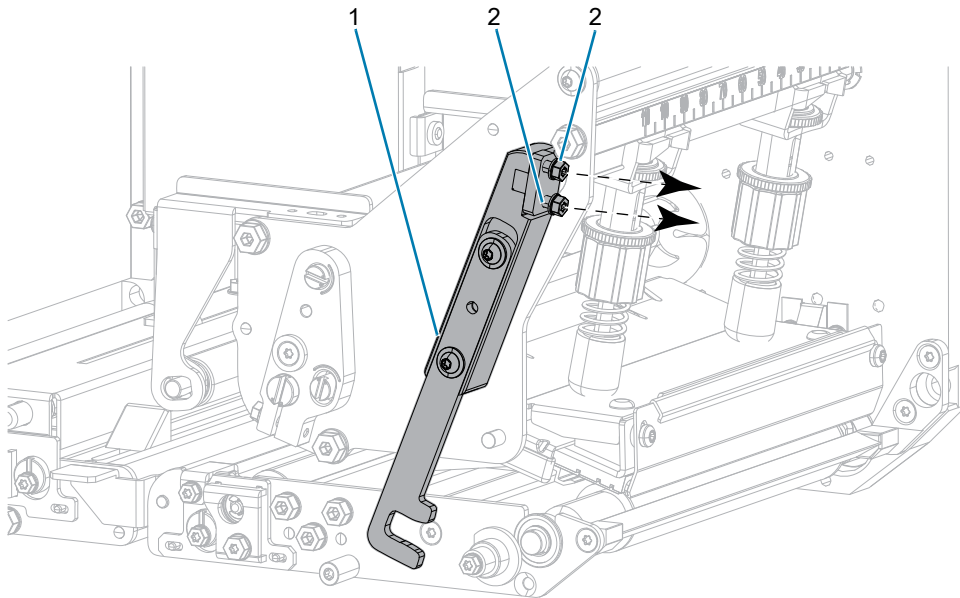
## Replace the Print Mechanism Locking Lever

1. Open the printhead.

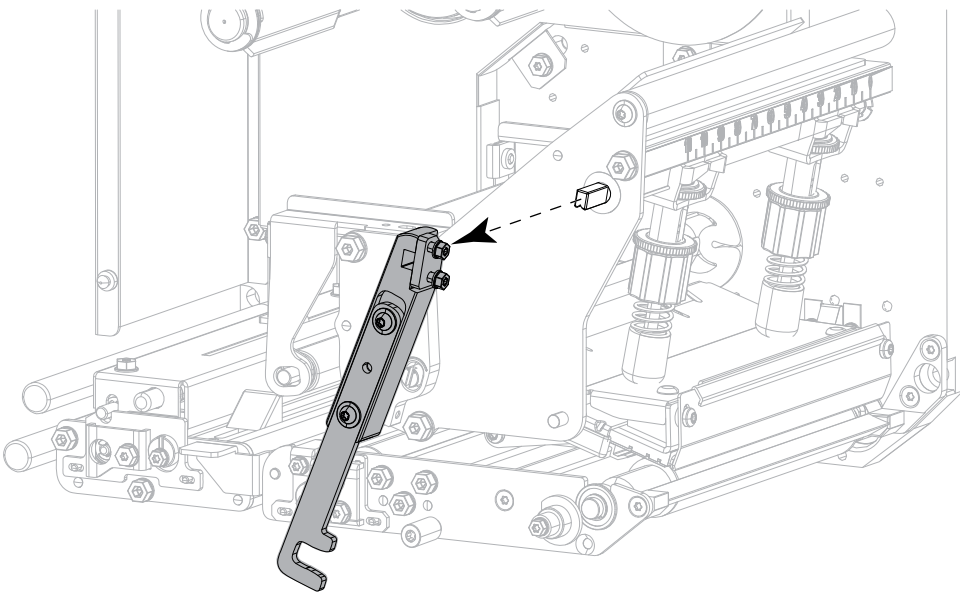



for parts & service call QLC (800) 837-1309

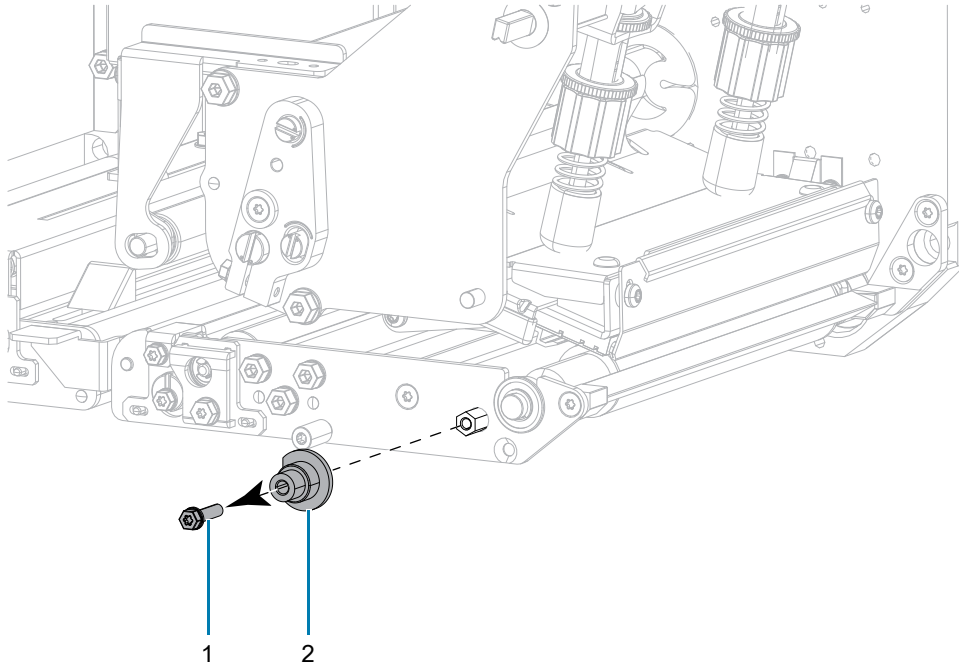
2. Loosen the two  T9 screws (2) securing the locking lever (1).




3. Remove locking lever from the print engine.

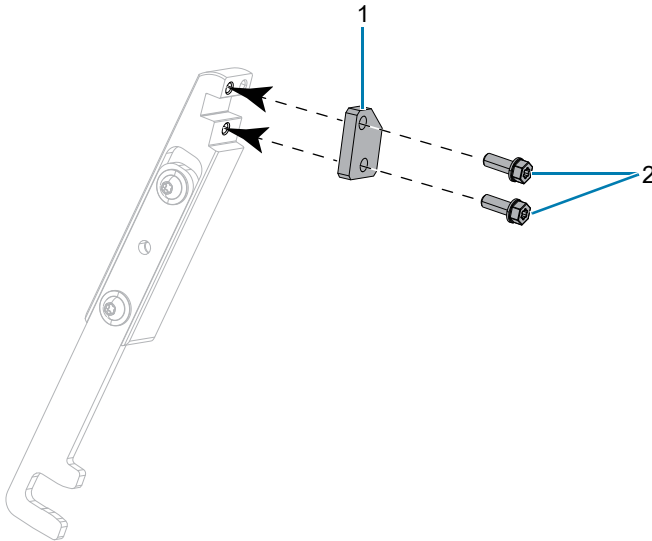



4. Remove the  T9 screw (1) and the latch pin plate (2).

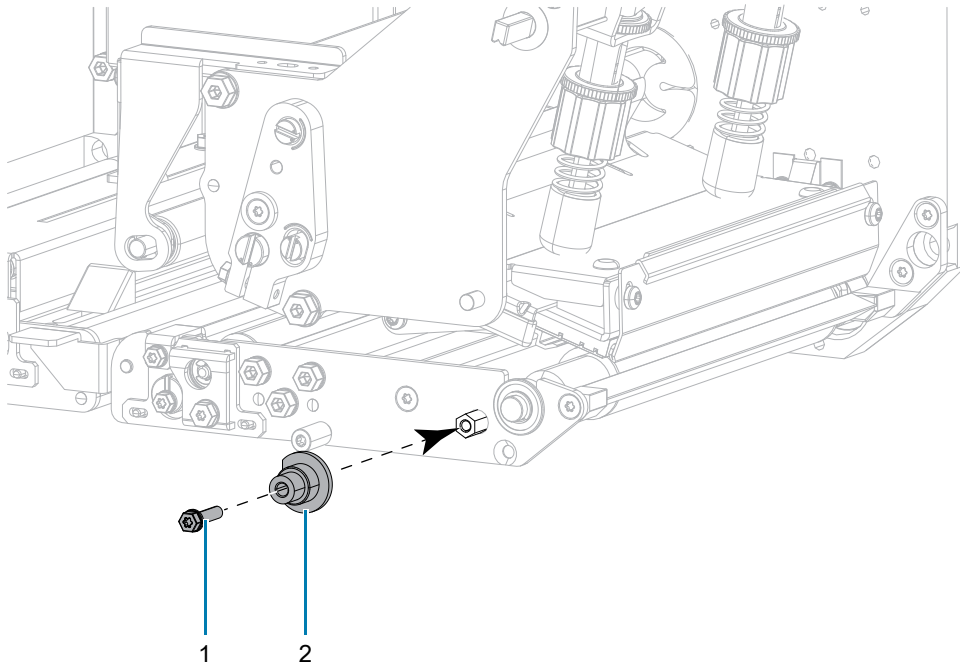


5. Assemble the print mechanism locking lever.

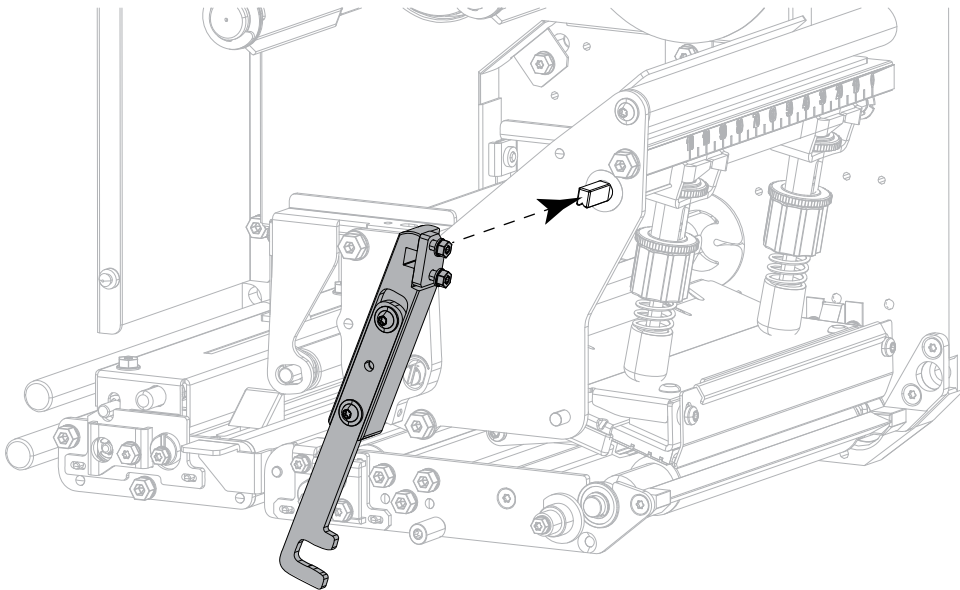
Attach the new clamping plate (1) to the new print mechanism locking lever with the two new  T9 screws (2).



6. Install the latch pin plate (2) and secure with the  T9 screw (1).

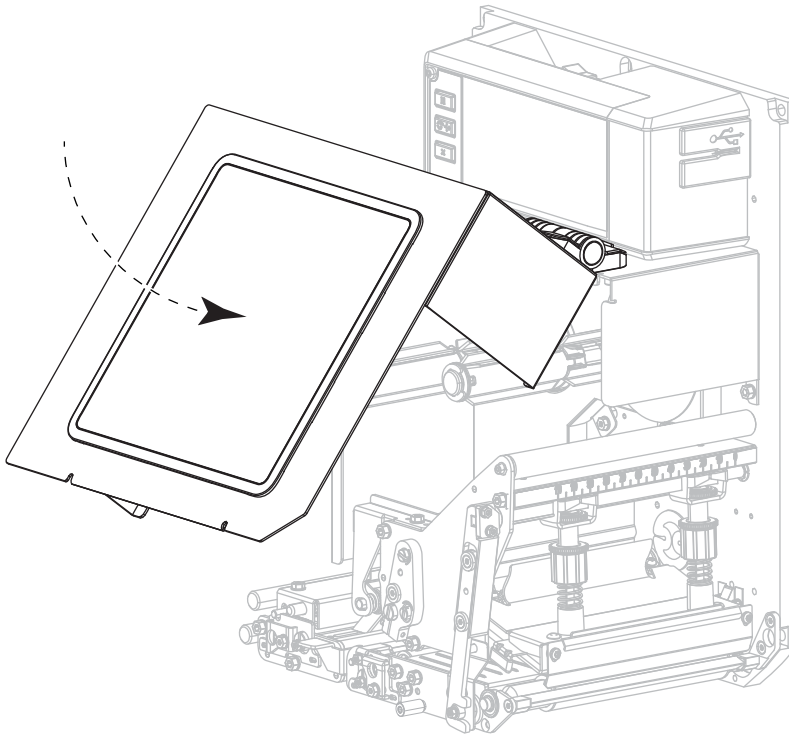


7. Install the locking lever.



8. Tighten the two  T9 screw to secure the locking lever.

9. Close the media cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Plate (platen roller support) Qty: 1	
	Plate (pinch roller support) Qty: 1	
	Screw (M3x8 TX NI) Qty: 2	T9
	Screw (M3 thumb) Qty: 1	T10
	Screw (M4x10 SO NI) Qty: 5	3mm

## Tools Required

- Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10
- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



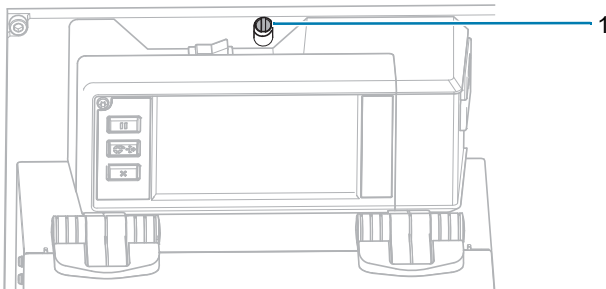
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



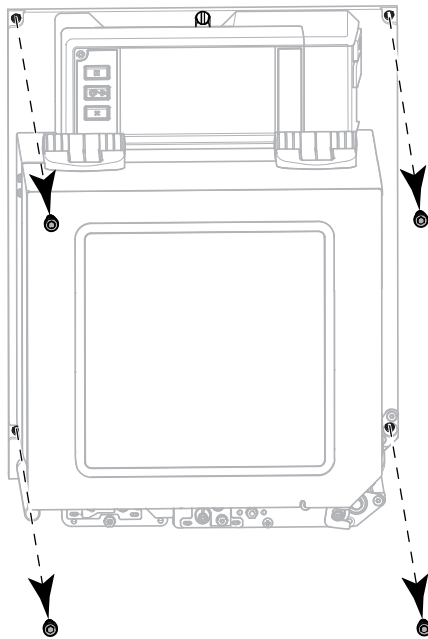
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

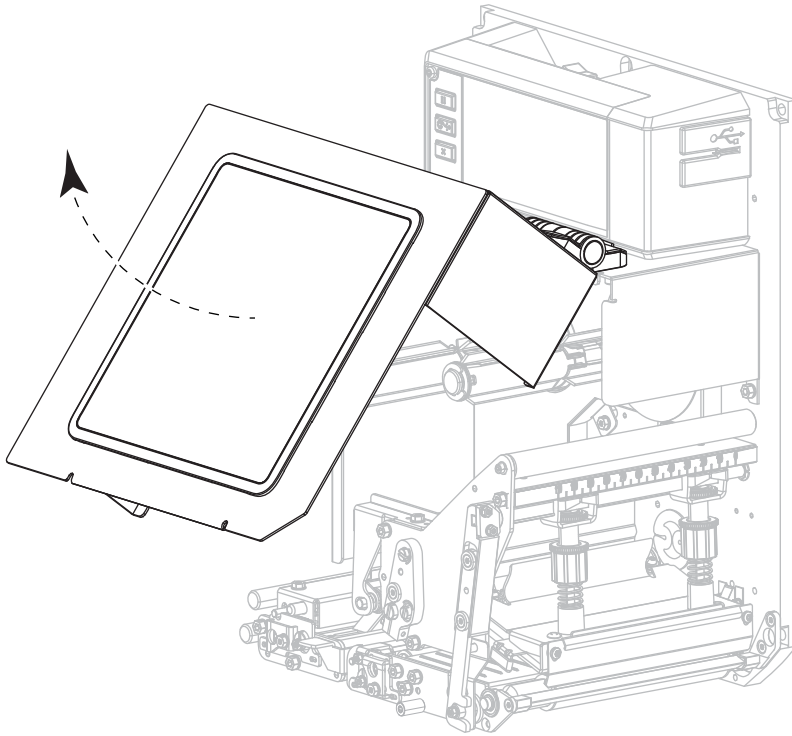


2. Remove the four screws securing the print engine to the applicator.



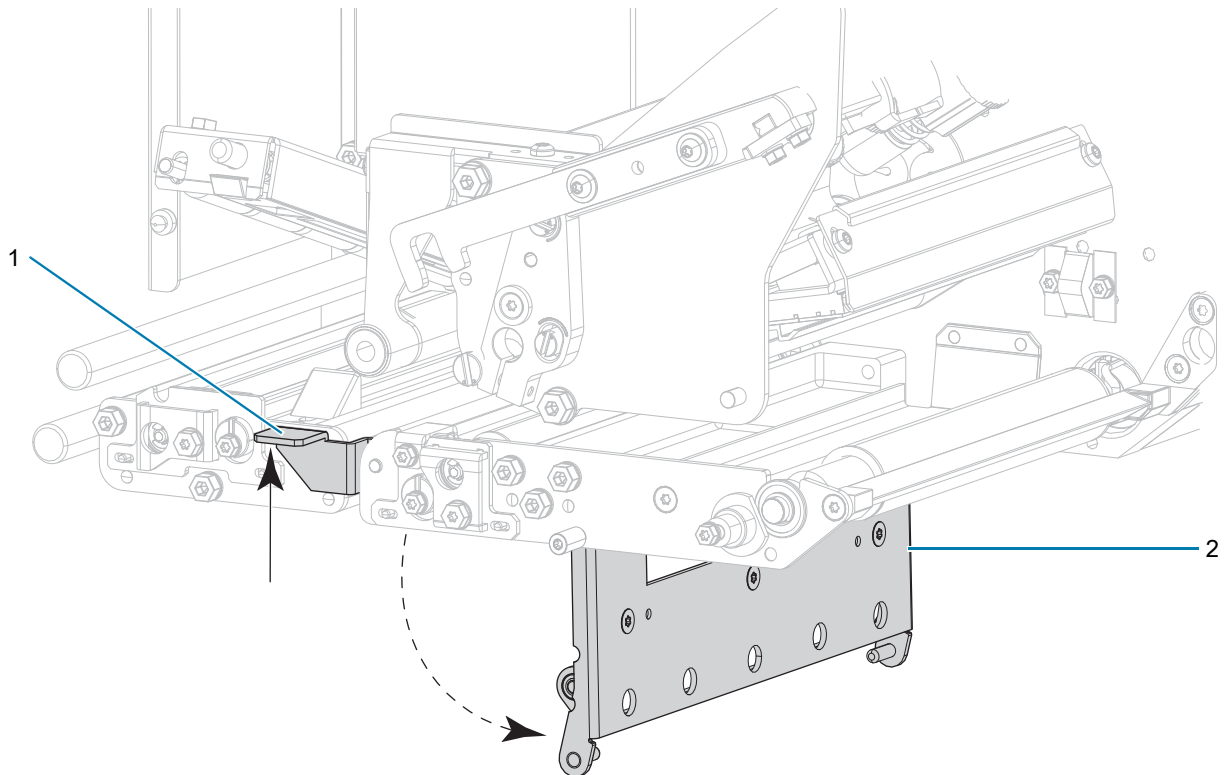
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

4. Open the media cover.




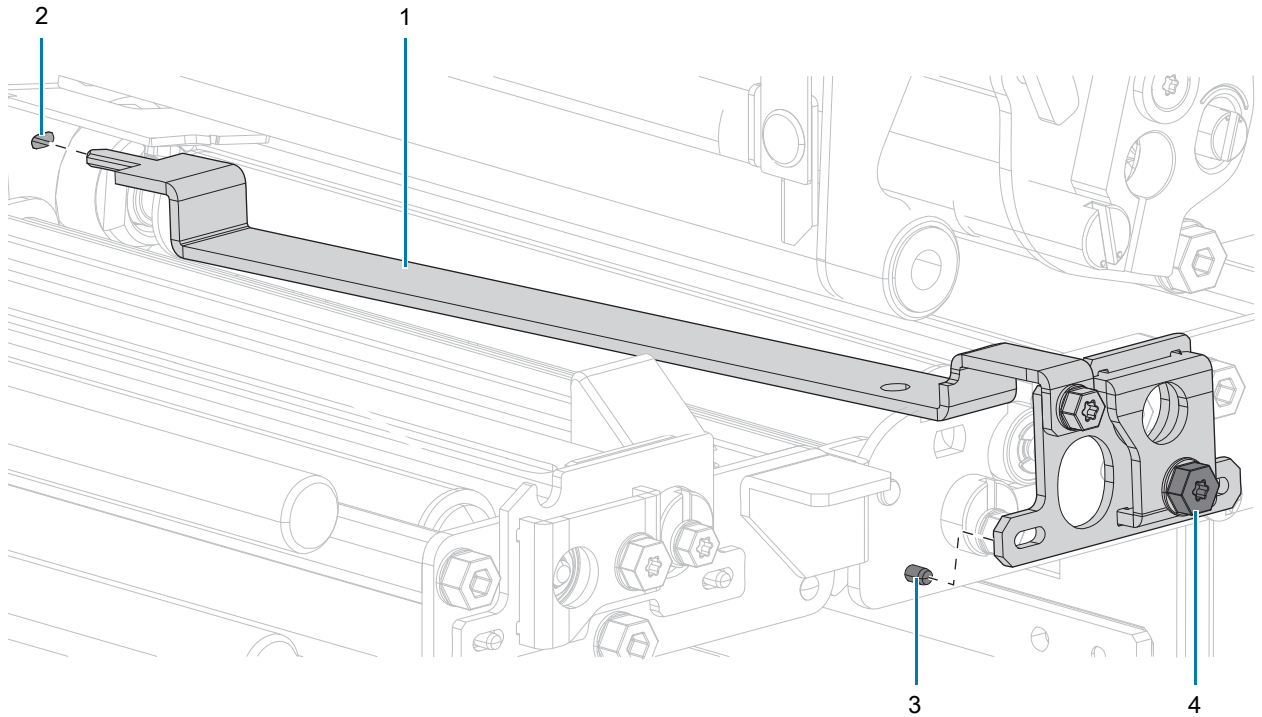
## Replace the Platen Roller Support Plate


1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.

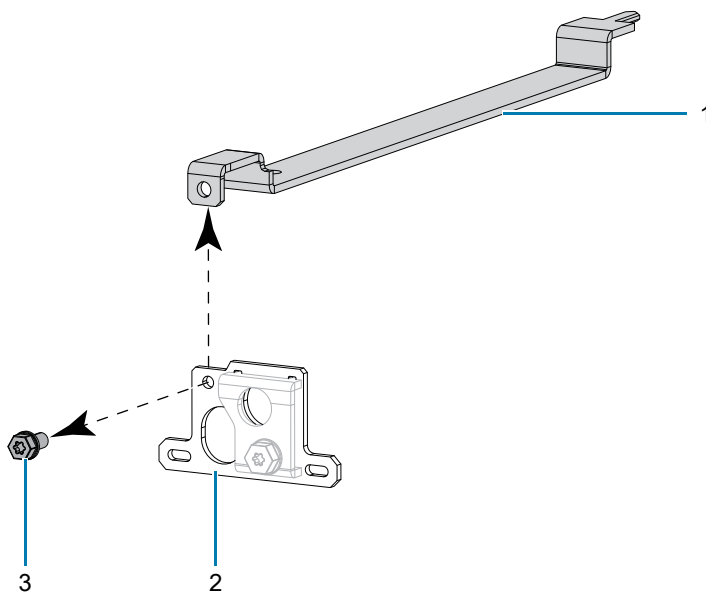


for parts & service call QLC (800) 837-1309

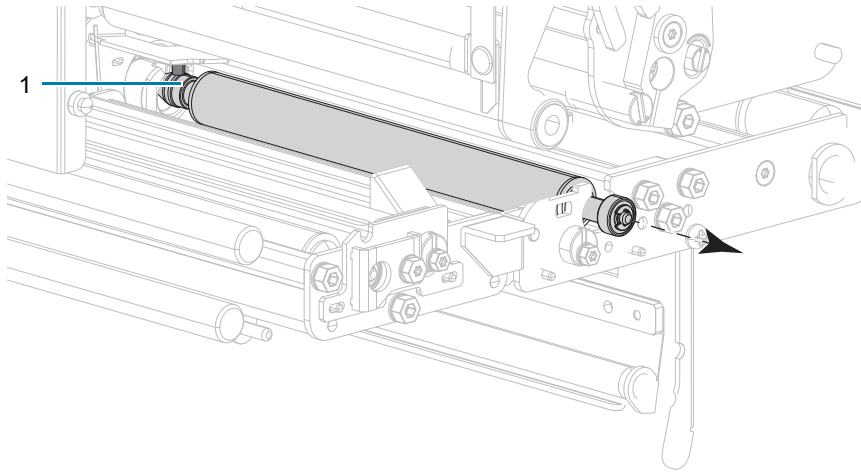
2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (4) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (3).




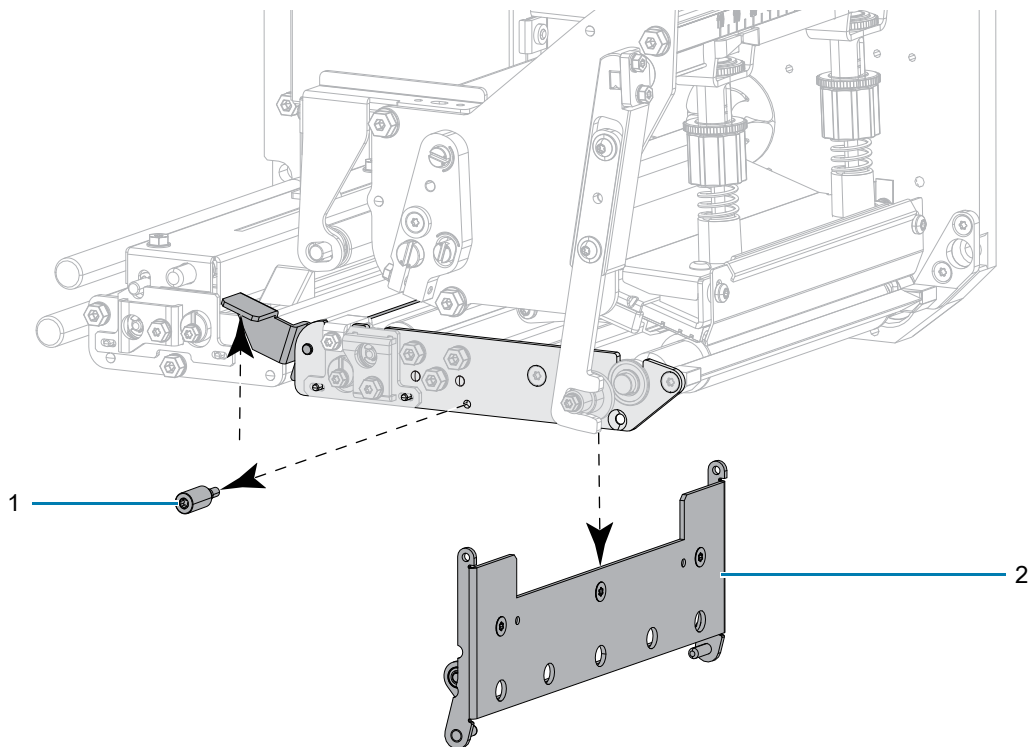
3. Remove peel roller cam plate from the peel roller cam plate.
  - a. Remove the  T9 screw (3) securing the deflector plate to the peel roller cam plate.
  - b. Remove the deflector plate (1) from the peel roller cam plate (2).




4. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

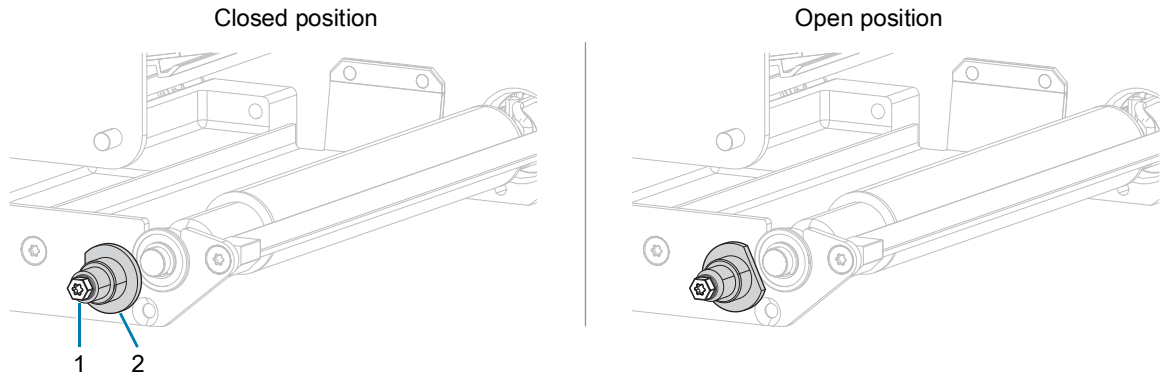


5. Remove the peel roller assembly from the print engine.
6. Remove the  T10 thumb screw (1) securing the peel bracket.
7. Tilt the outboard end of the peel bracket (2) down and lift the inboard end up and off of the pivot pin.



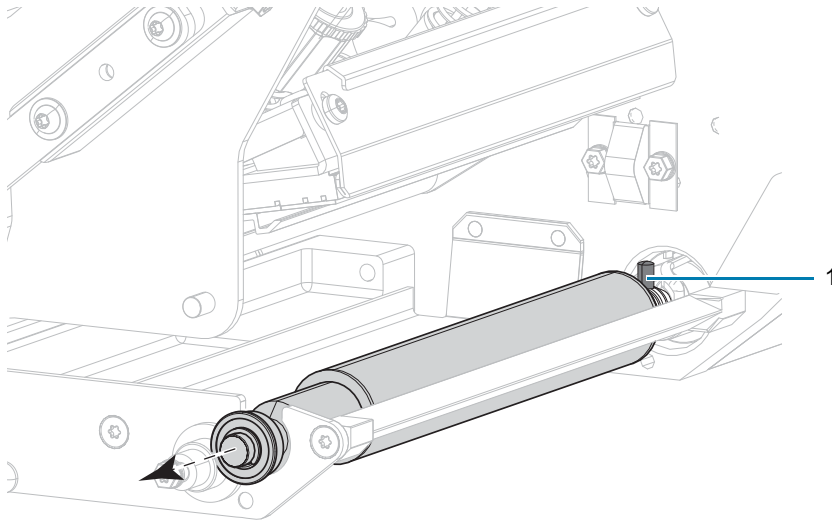
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.




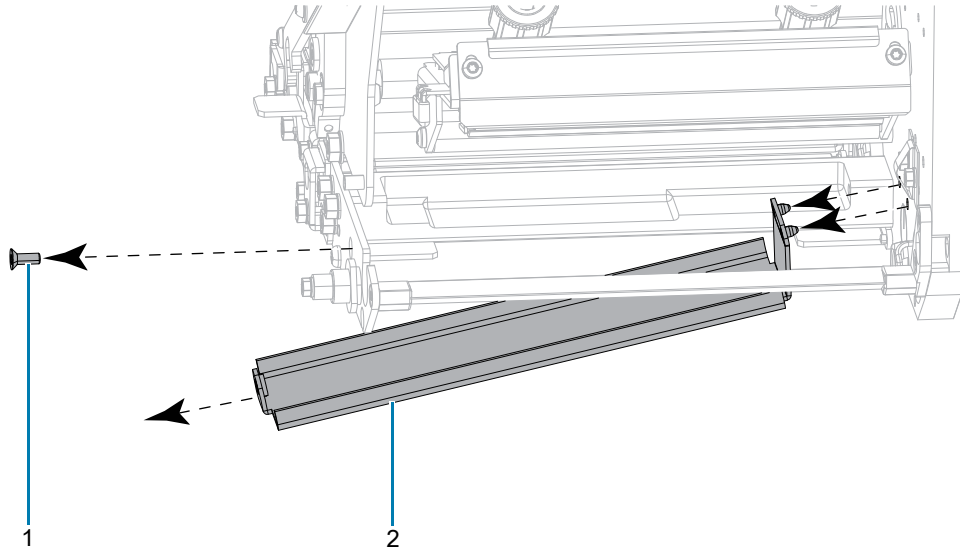
- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.





10. Remove the platen roller assembly from the print engine.

11. Remove the  T9 screw (1) and remove the platen support guard (2). Lower the printhead guard away from the print engine.



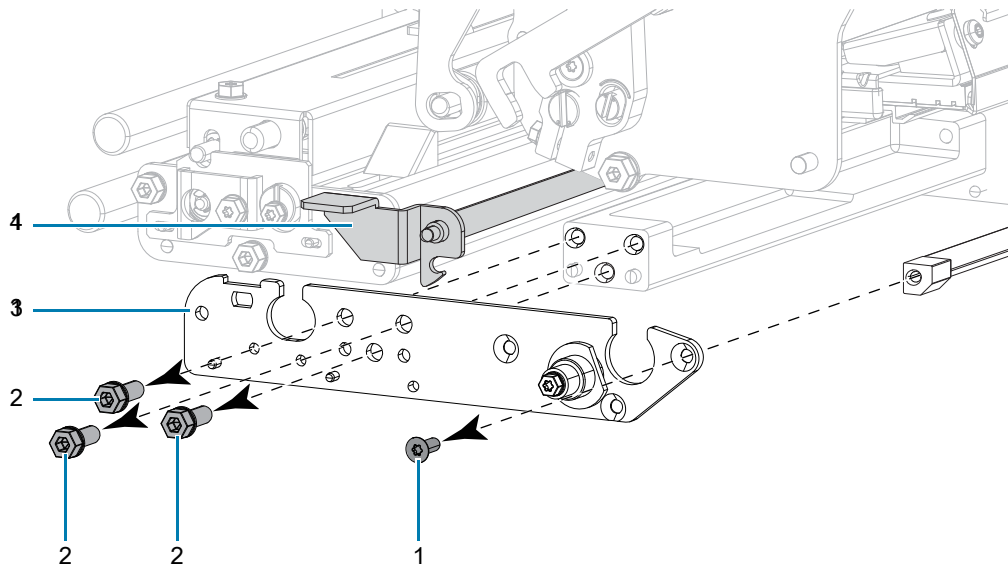
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

12. Remove the platen roller support plate.

- a. Remove the  T9 screw (1).
- b. Remove the three  T9 screws (2) and the platen support plate (3).



**NOTE:** The peel roller latch (4) will fall when the platen roller support plate is removed.





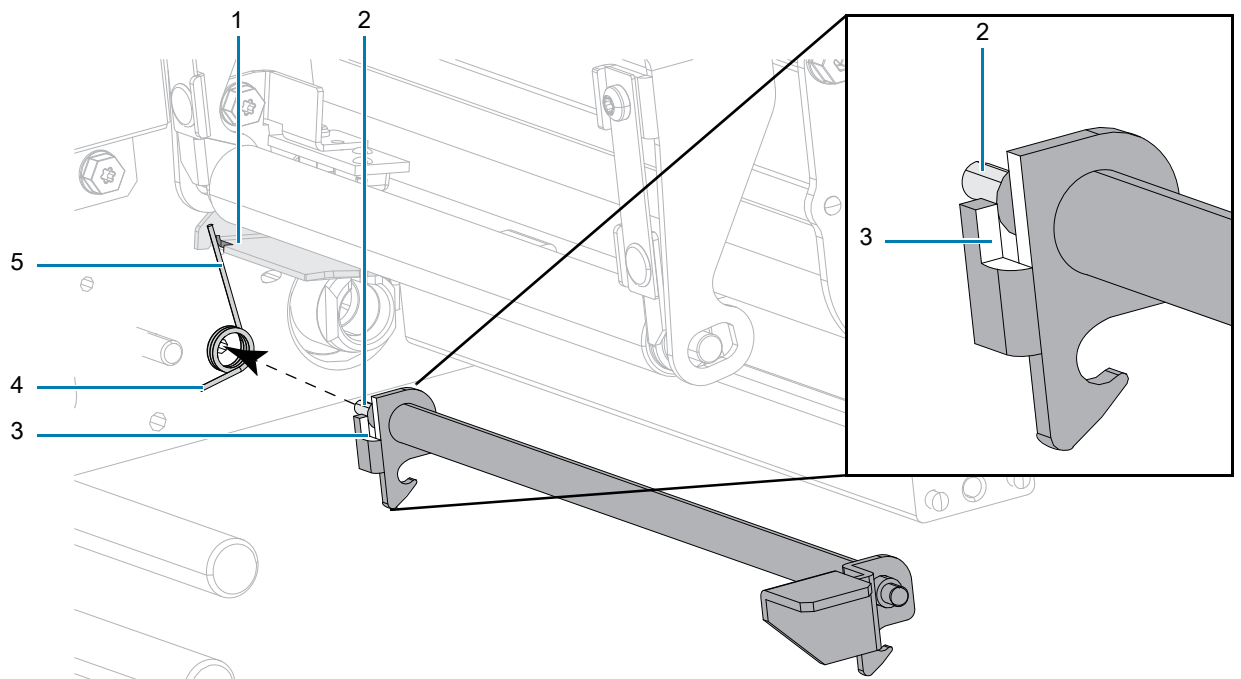
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

13. Reinstall the peel roller latch.

- a. Leading with the short leg of the spring (4), slide the spring onto the inboard end of peel roller shaft (2).
- b. Insert the short leg of the spring (4) into the catch tab on the inboard end of the peel roller latch (3).
- c. Holding the spring in place, insert the inboard end of the latch (2) into the mounting hole on the main frame wall.
- d. Place the long leg of the spring (5) into the upper catch tab in the ribbon sensor bracket (1).

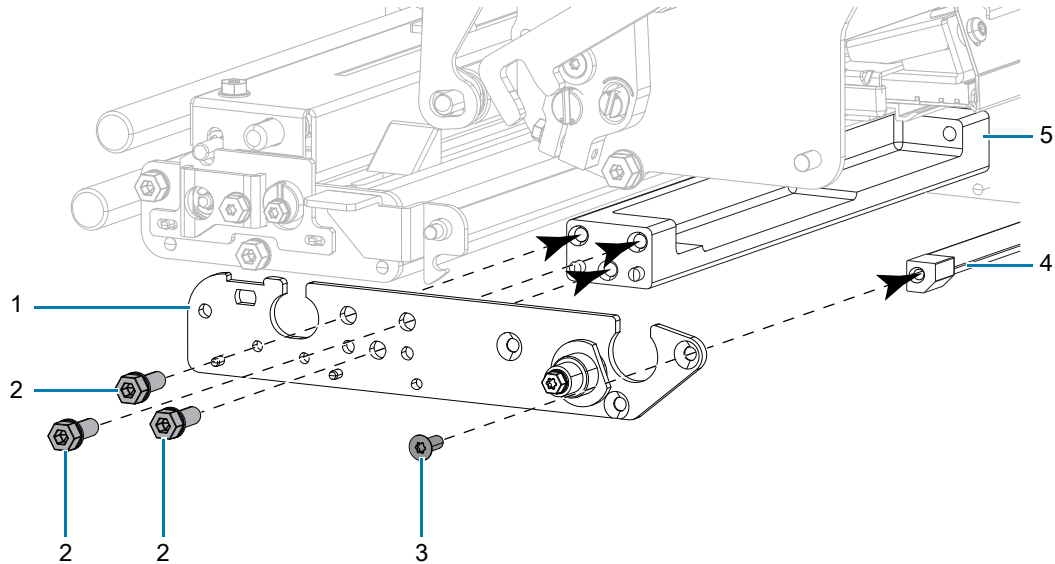


**NOTE:** Ensure the long leg of the spring (5) is resting against the ribbon sensor bracket on the main frame wall.






14. Install the new platen roller support plate.
- Align the holes in the platen roller support plate (1) with the holes in the platen support bar assembly (5) and the peel bar (4).
  - Secure the platen roller support plate with the three T9 screws (2).
  - Install the T9 screw (3) securing the platen roller support plate to the peel bar (4).

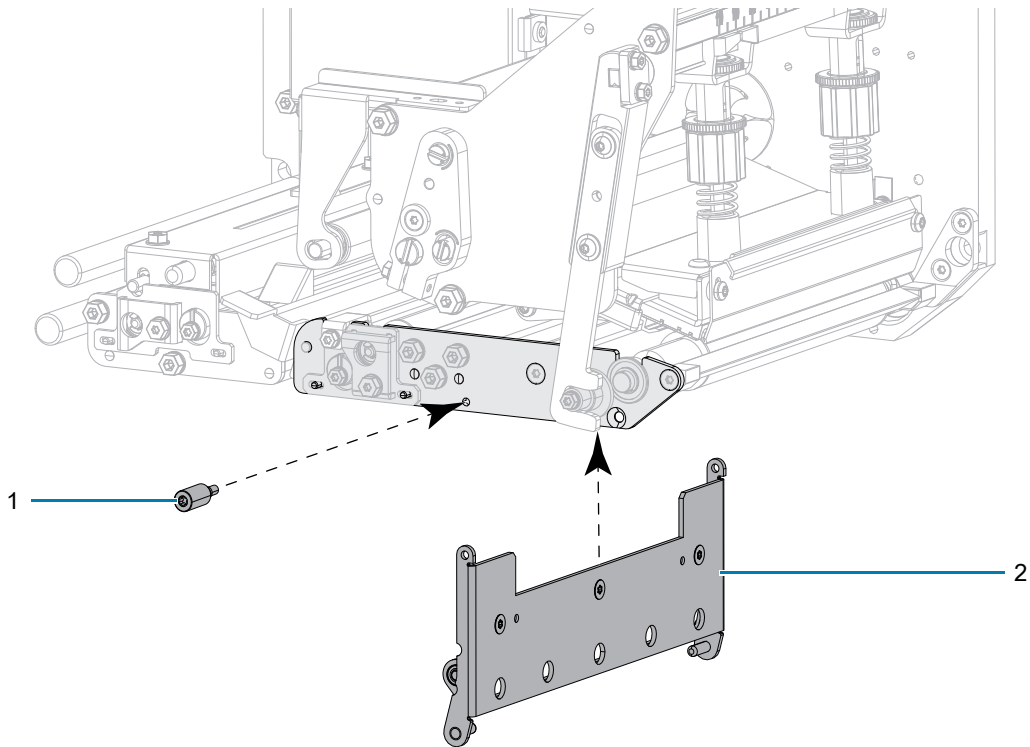



15. Reinstall the peel bracket.

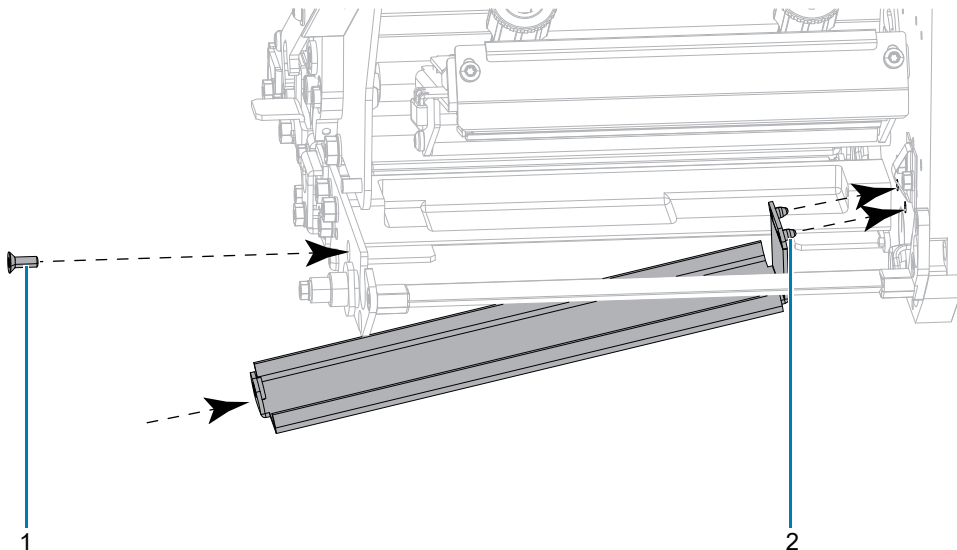


**NOTE:** Install the new peel bracket with the knurled roller facing the bottom of the print engine.

- a. Place the inboard end of the peel roller bracket (2) on the pivot pin.
- b. Install the new  T10 thumb screw (1) to secure the peel bracket.
- c. Push the peel bracket up and against the peel latch to close.

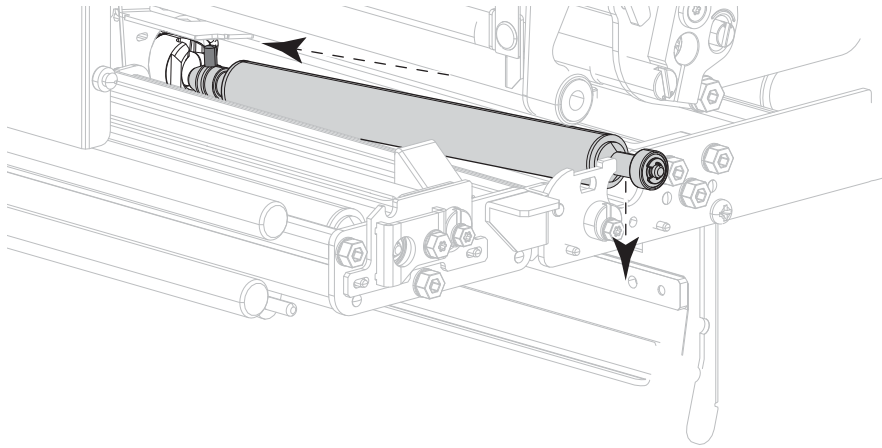


16. Align the printhead access guard (2) guide pins with the mounting holes on the print engine and secure with the  T9 screw (1).




for parts & service call QLC (800) 837-1309

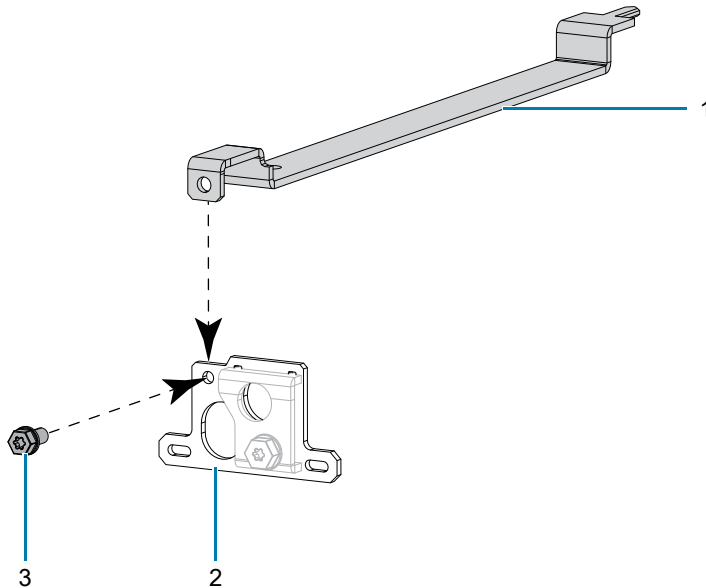
17. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.




18. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

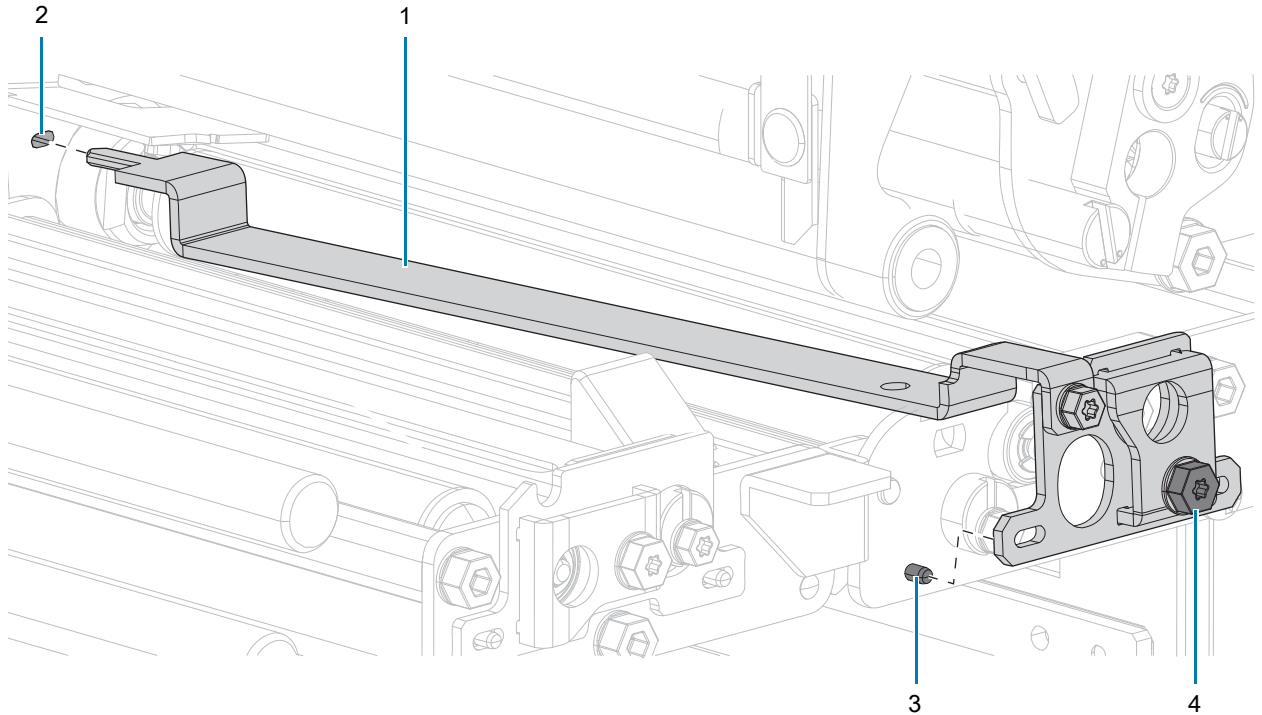
19. Attach the deflector plate to the new peel roller cam plate.

- a. Lower the deflector plate (1) onto the peel roller cam plate (2).
- b. Tighten the  T9 screw (3) securing the deflector plate to the peel roller cam plate.

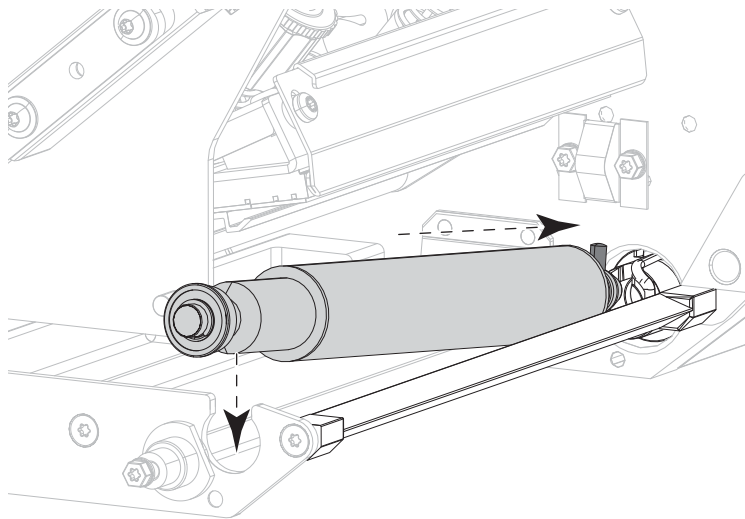


20. Install the peel roller cam plate and deflector plate assembly.

- a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
- b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
- c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.




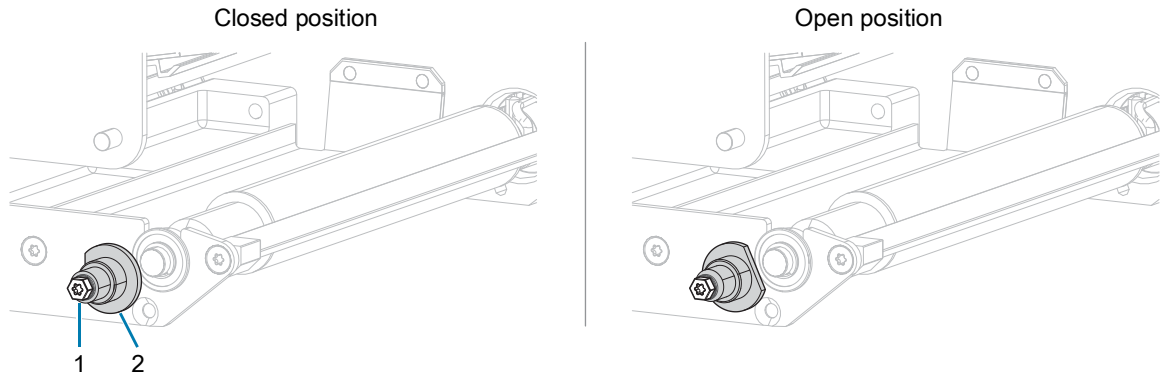
21. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



22. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

23. Secure the platen support plate latch pin in the closed position.


- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the closed position.

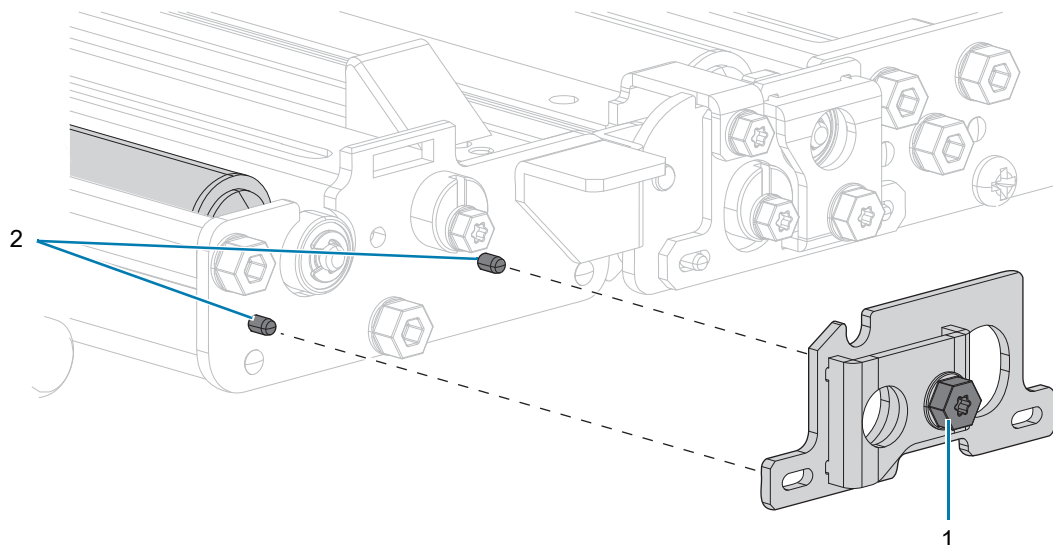


- c. Tighten the  T9 captive screw.


## Replace the Pinch Roller Support Plate

1. Remove the pinch roller cam plate.

- a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
- b. Remove the pinch roller cam plate from the two support pins (2).



2. Install the new pinch roller cam plate.

- a. Slide the pinch roller cam plate onto the two support pins (1).
- b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

## Print Line, Balance, and Skew Adjustment




**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label. As the labels print, you can adjust the following:


- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

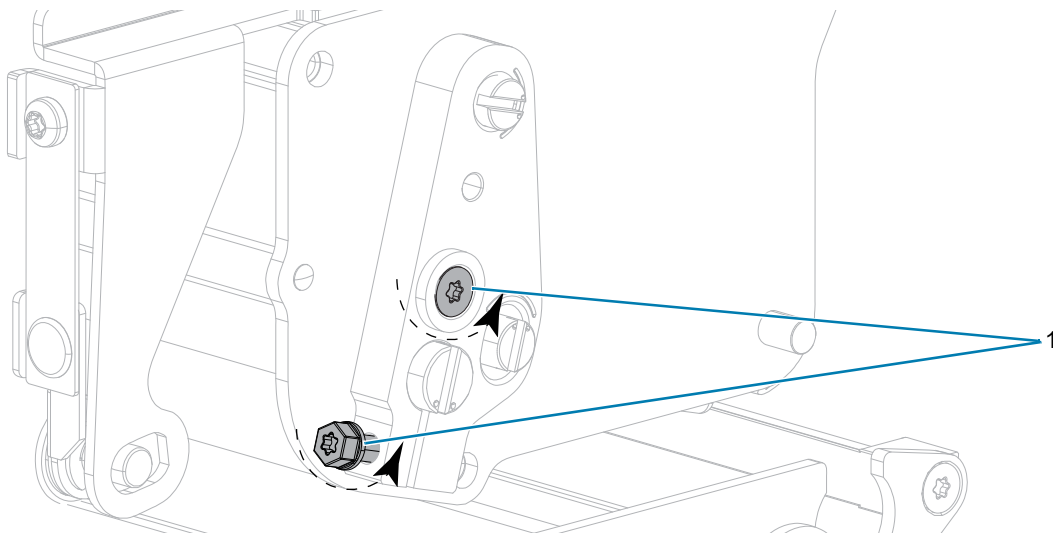
If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

To make print line, balance, and skew adjustments, complete these steps:

1. Loosen the two  3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two  3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold PAUSE while turning on the print engine.
  - c. Hold PAUSE until the first control panel light turns off.

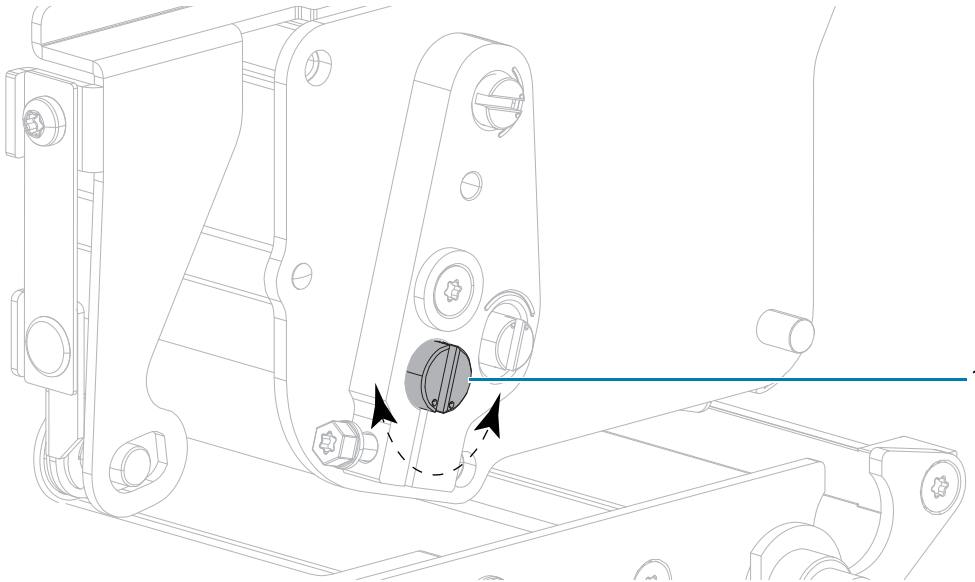


**NOTE:** At any time during the PAUSE self-test:

- Press PAUSE to print 15 additional labels.
- Press CANCEL to change the print speed.
- Press and hold CANCEL to exit the self-test.

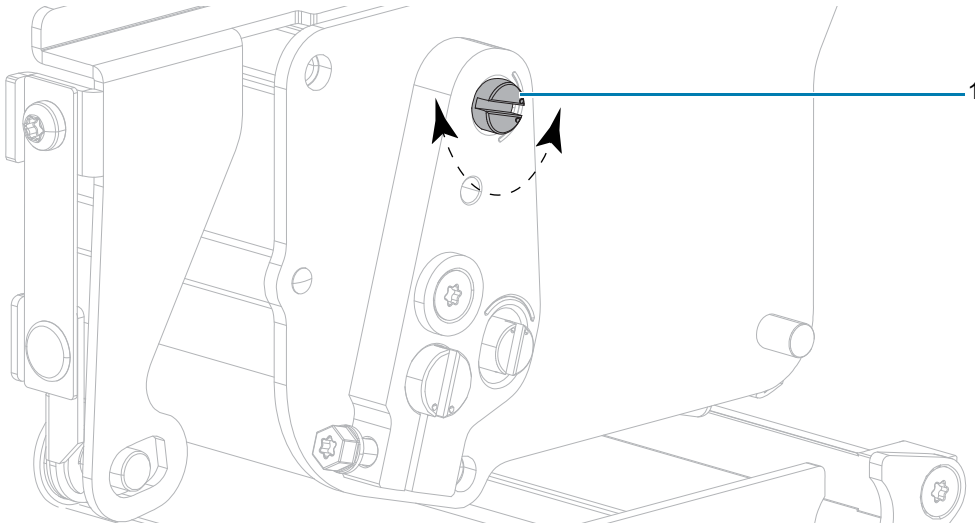
### Adjust the Print Line

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward or backward to find the best appearance of the printed image.



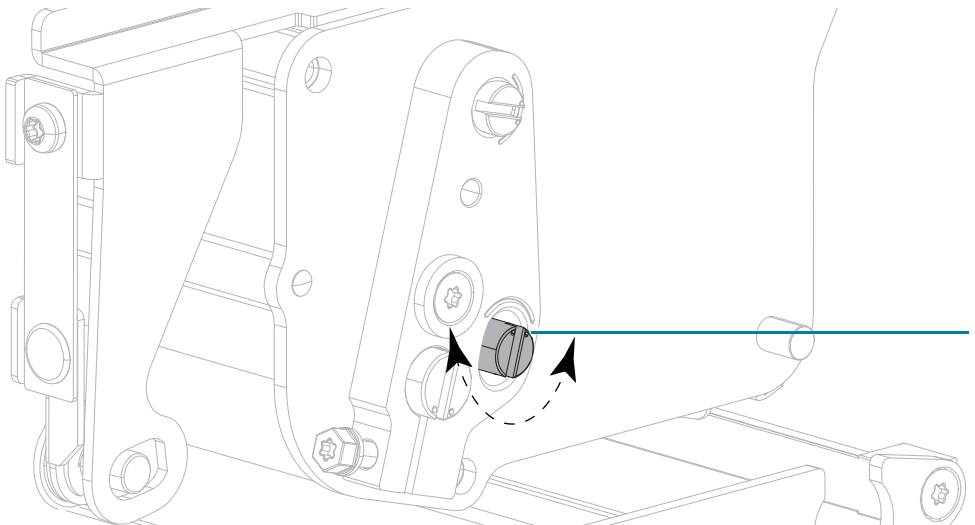
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the printhead.



## Adjust the Skew

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster. Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label (not at a diagonal).



The installation is complete.



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

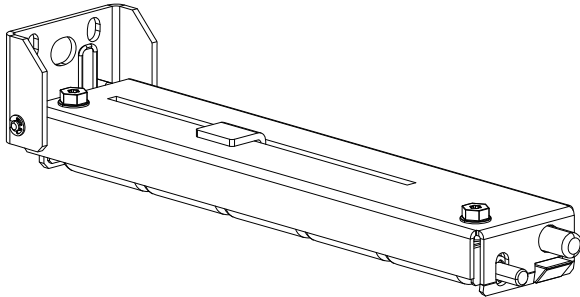
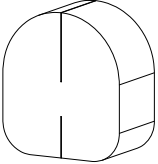







**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Upper segmented pinch roller assembly (includes the upper transmissive media sensor) Qty: 1
	Sealing plug Qty: 1
	Cam Qty: 1
	Screw (M3x8 HX TX NI) Qty: 2  3mm
	Screw (M3x12 HX TX NI) Qty: 1  3mm

## Tools Required

- ✪ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
- Metric hexagon keys or bits  
Size: 3mm
- ⊖ Flat-blade screwdrivers or bits
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



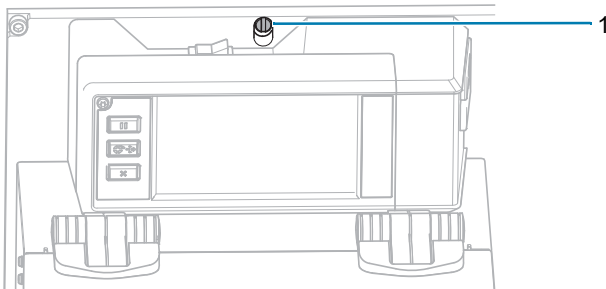
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



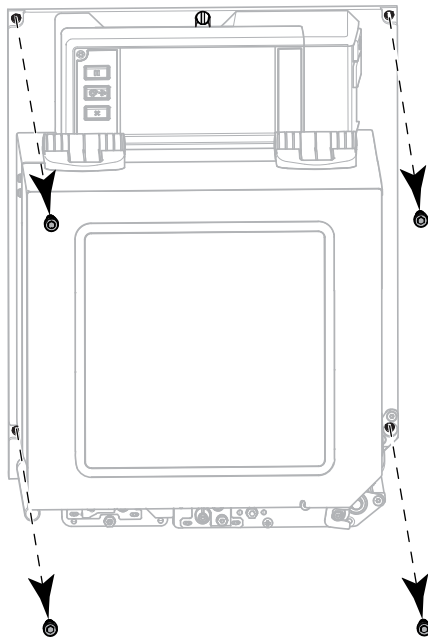
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

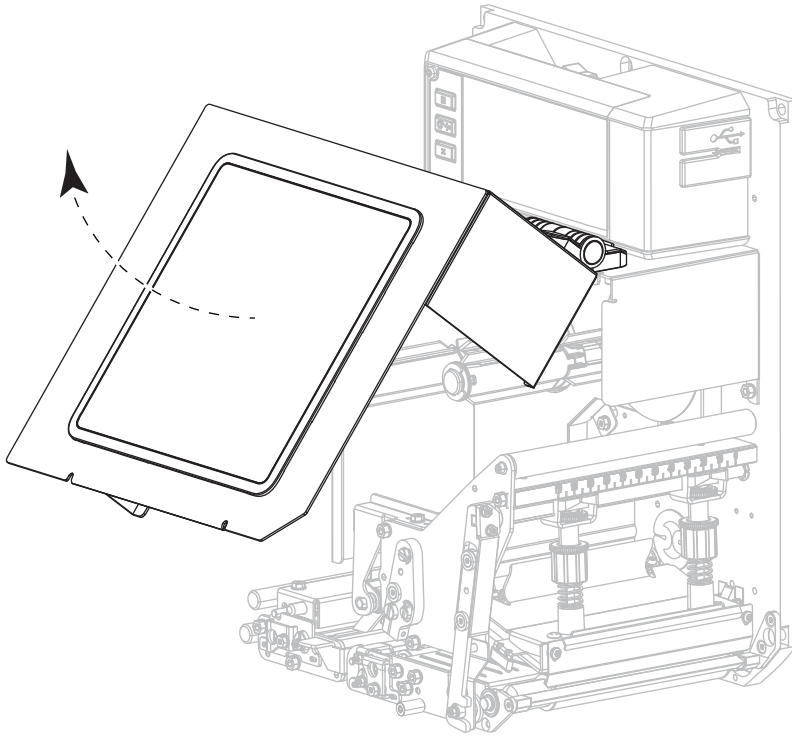


2. Remove the four screws securing the print engine to the applicator.



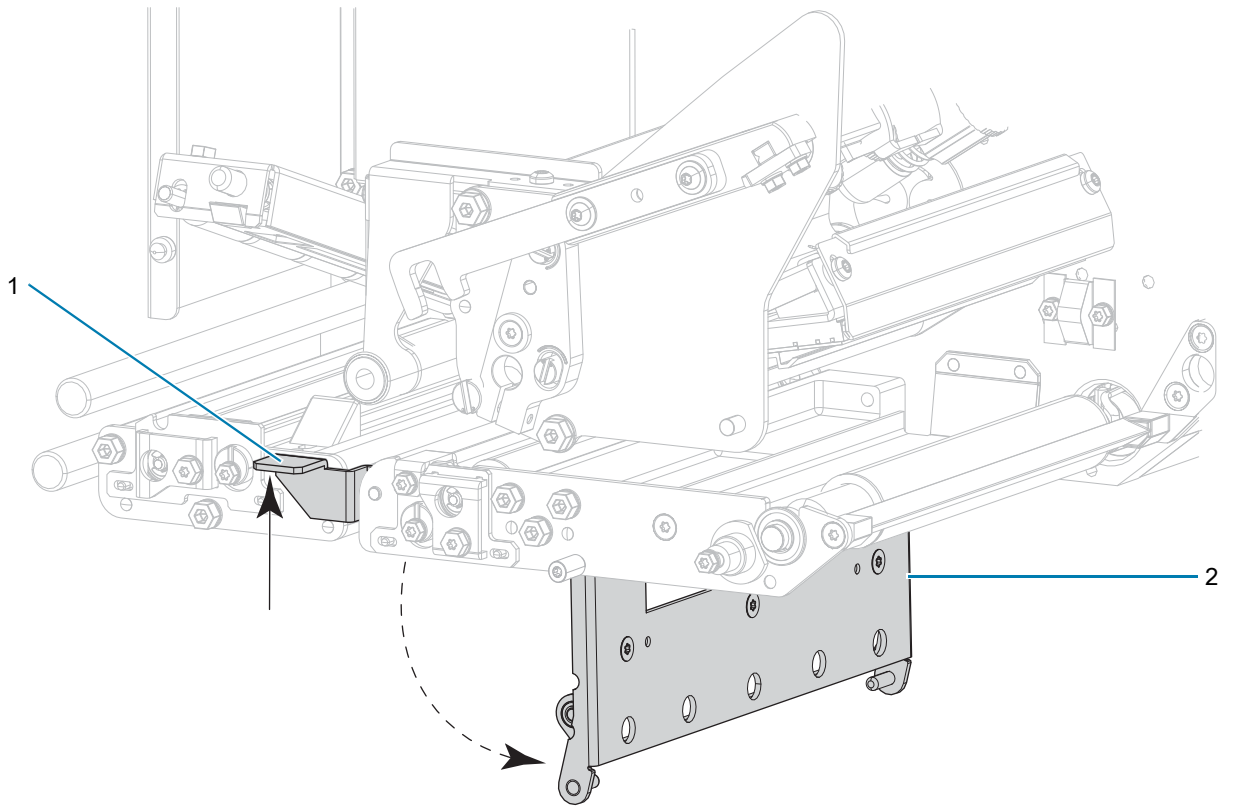
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

4. Open the media cover.




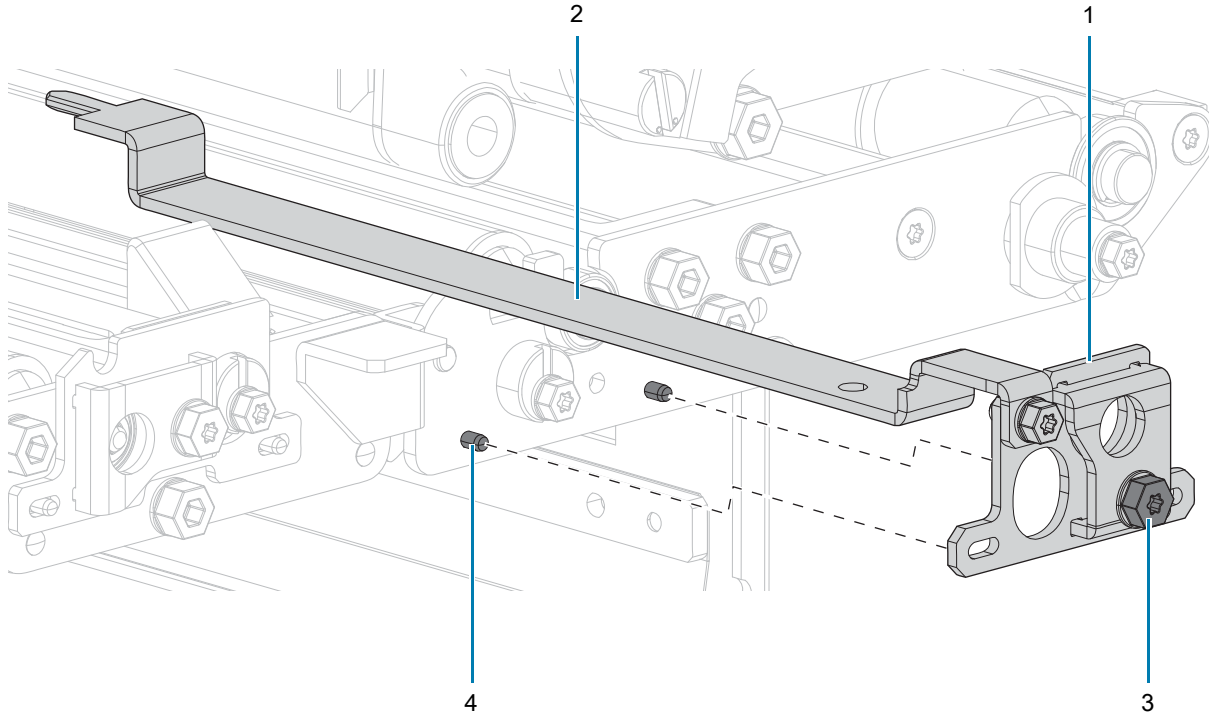
## Remove the Rollers

1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.

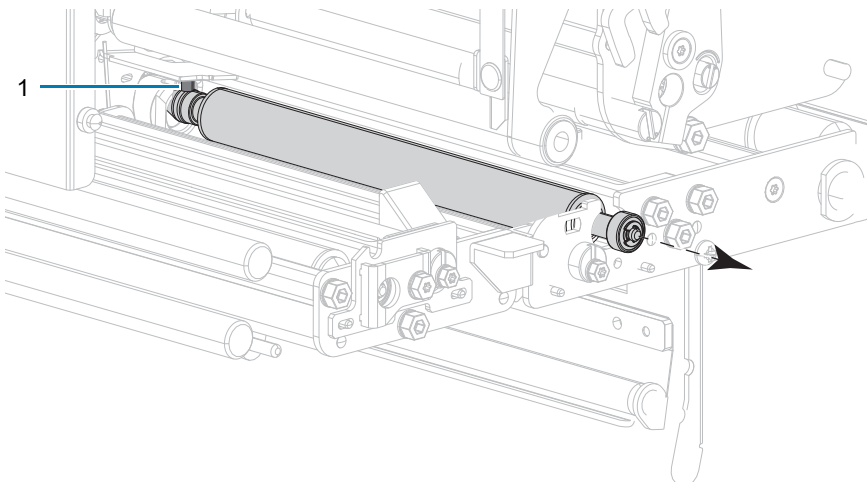


## Upper Segmented Pinch Roller Maintenance Kit

2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

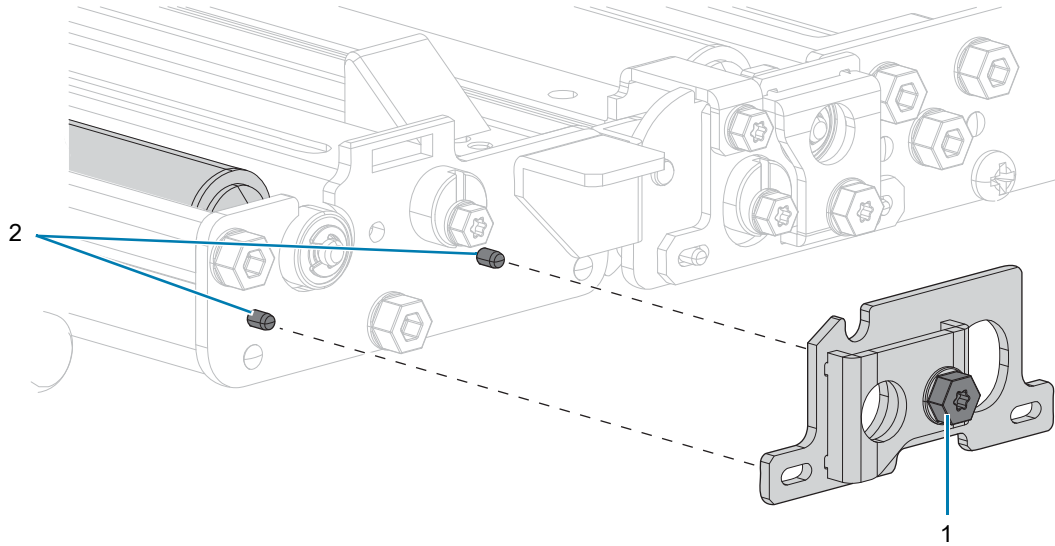


4. Remove the peel roller assembly from the print engine.

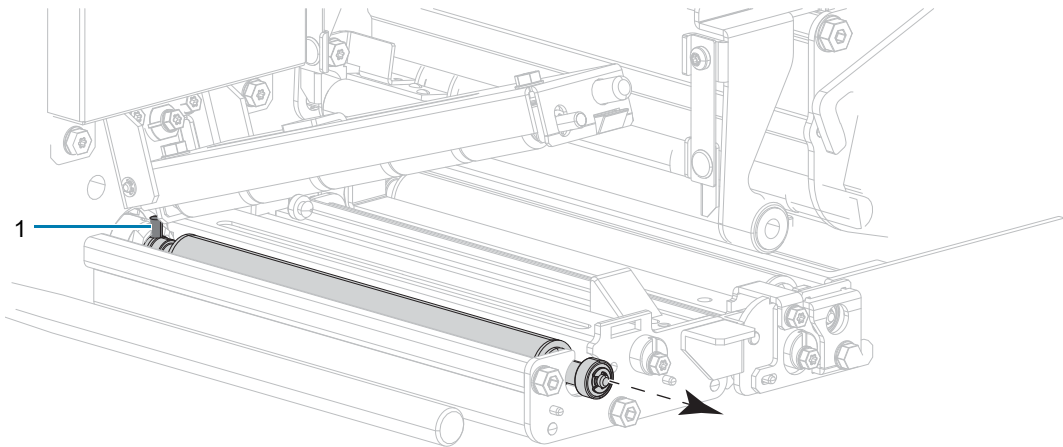
for parts & service call QLC (800) 837-1309

## Upper Segmented Pinch Roller Maintenance Kit

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).



6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.




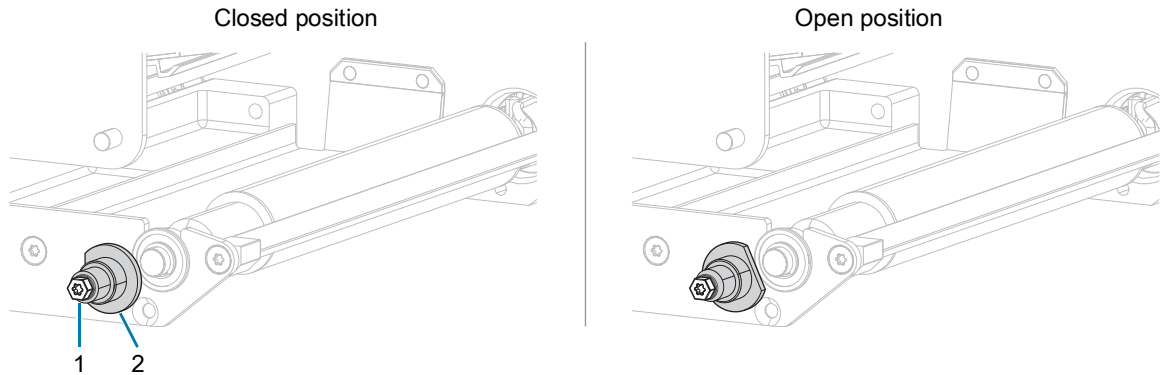
7. Remove the pinch roller assembly from the print engine.

for parts & service call QLC (800) 837-1309

## Upper Segmented Pinch Roller Maintenance Kit

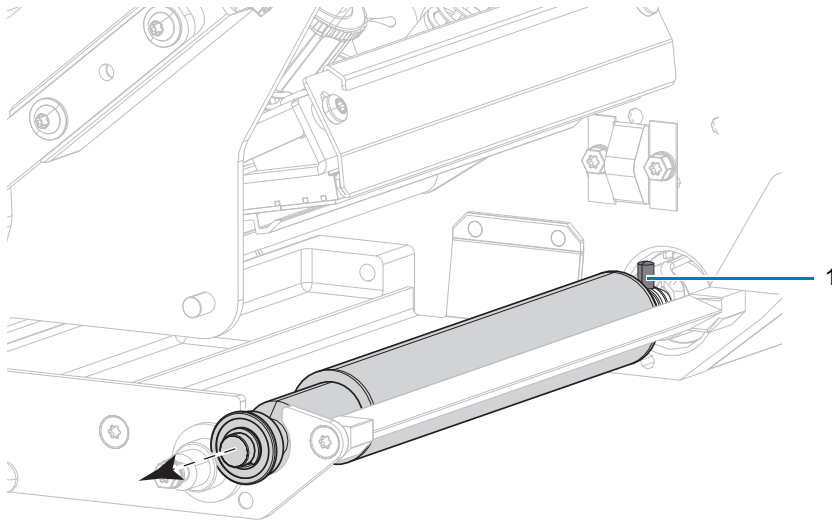
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.



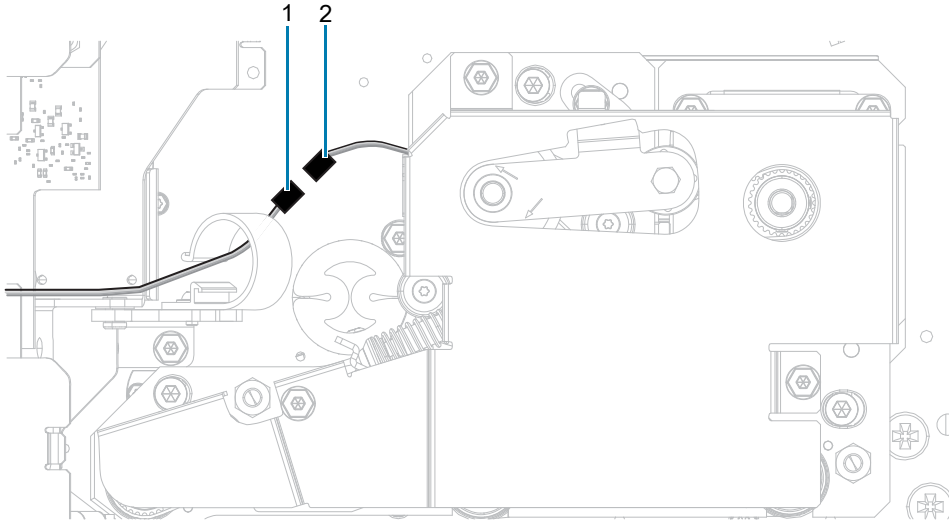
10. Remove the platen roller assembly from the print engine.



## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

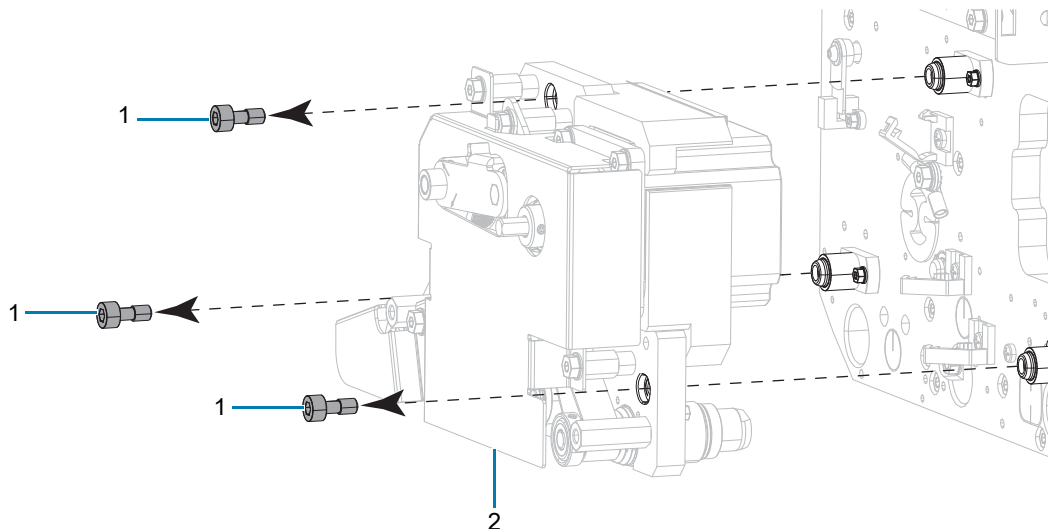


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

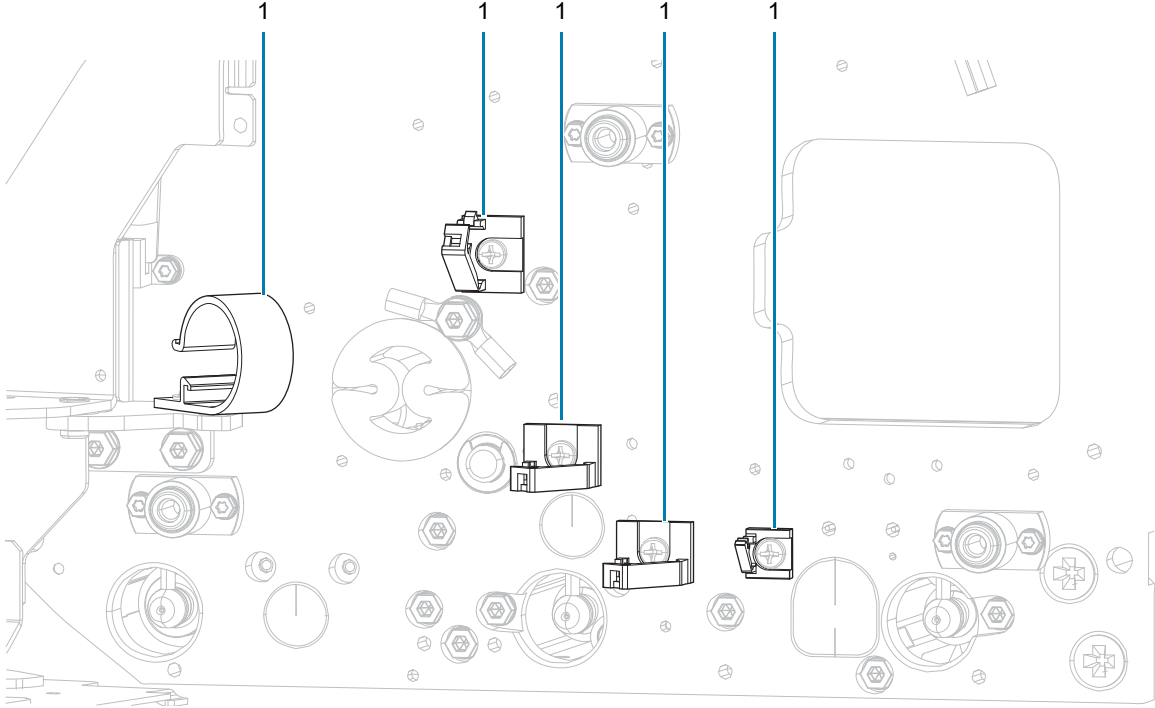
3. Remove the drive system (2) from the main frame.



## Replace the Upper Segmented Pinch Roller

1. From the electronics side, free the media sensor cables.

a. Open the five cable clamps (1) to release the media sensor cable.

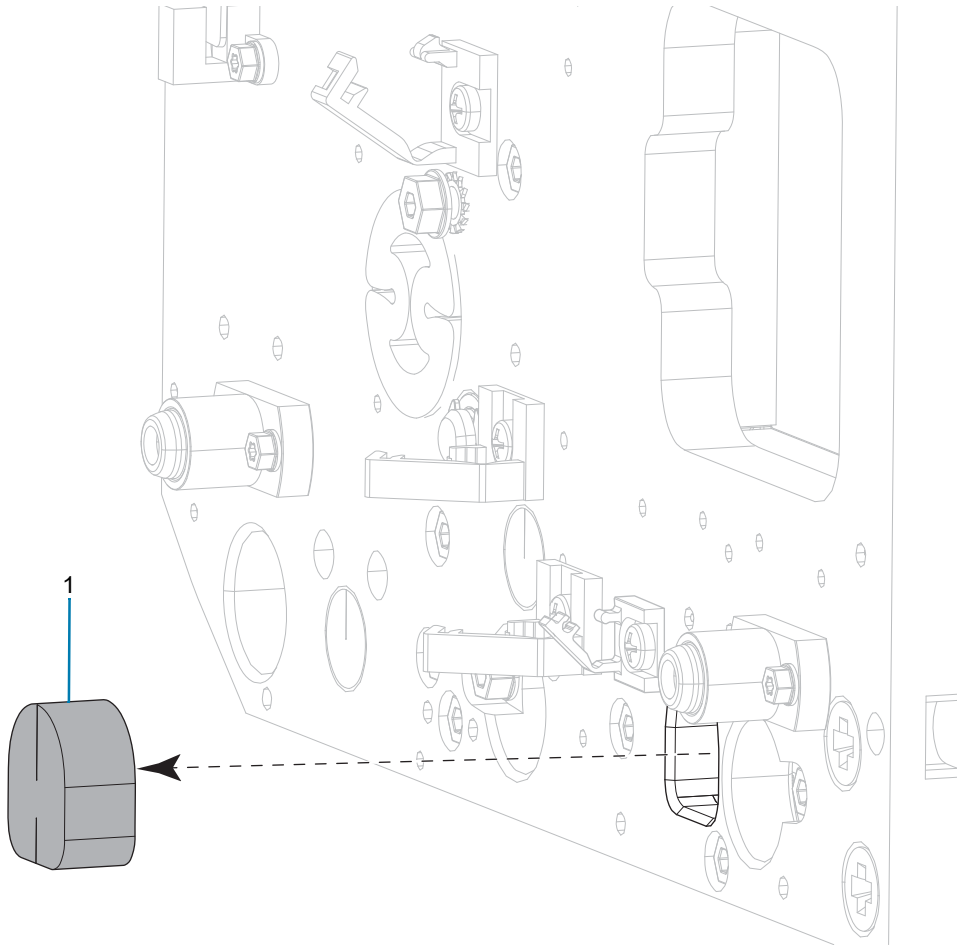




b. Disconnect the upper sensor cable from plug J36 on the main logic board (MLB).

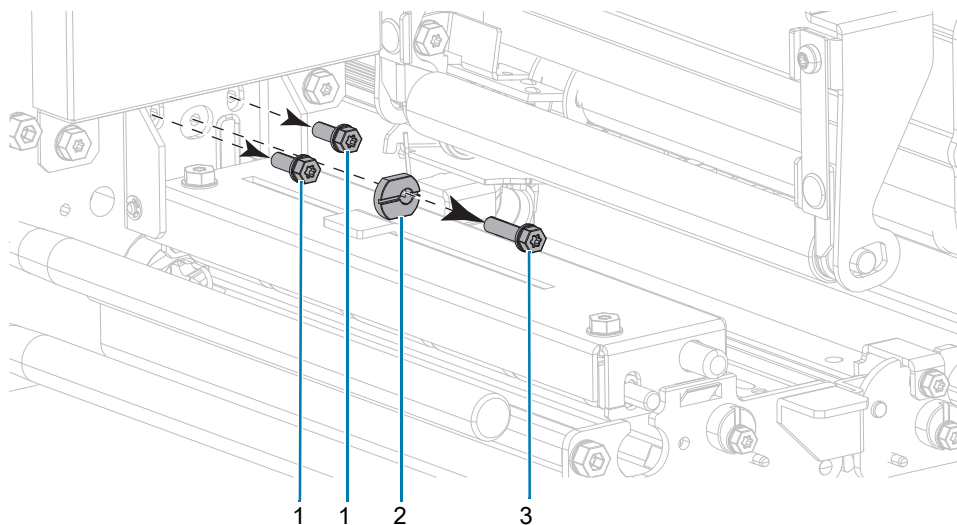
c. Remove the cables from the flexible conduit.

## Upper Segmented Pinch Roller Maintenance Kit

2. Remove the sealing plug (1) from the access hole where the media sensor cables enter the other side of the printer.



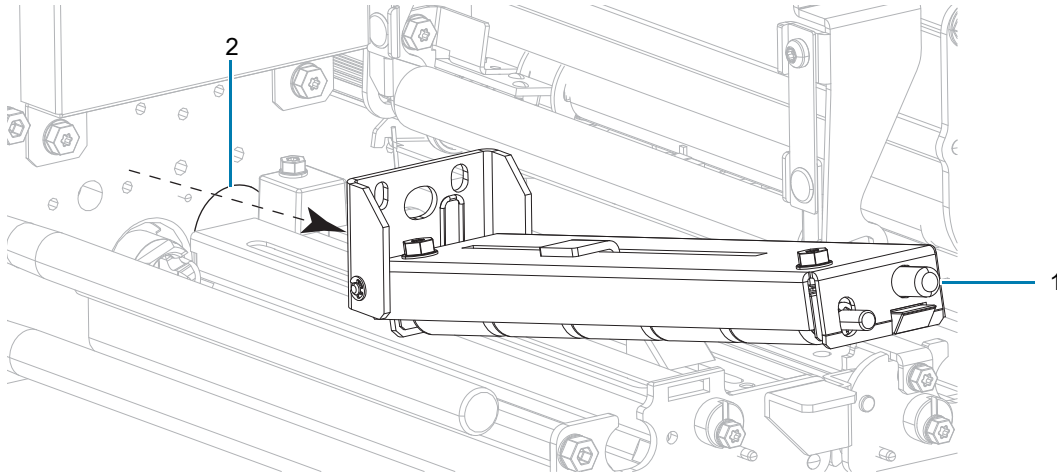
3. From the media side, remove the two  T9 screws (1), the upper pinch cam (2), and the  T9 upper pinch cam locking screw (3), securing the upper segmented pinch roller assembly to the mainframe.



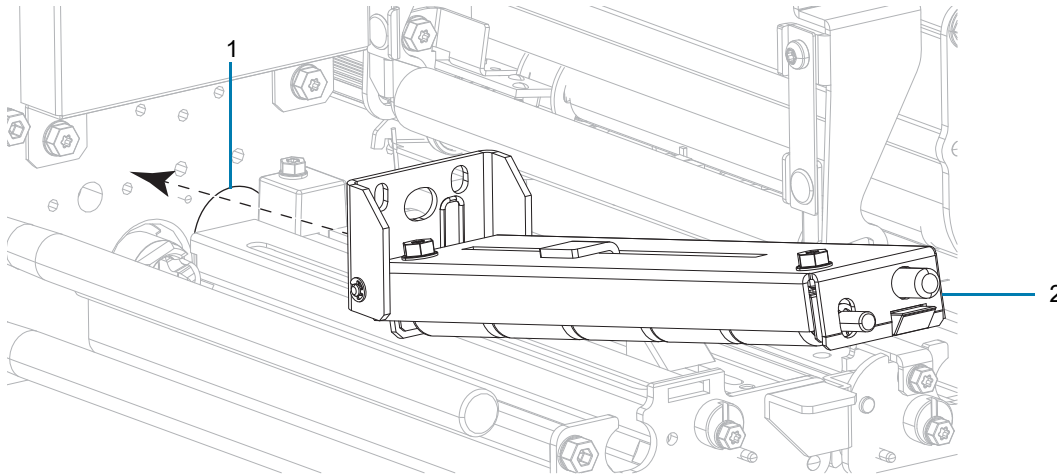
for parts & service call QLC (800) 837-1309



## Upper Segmented Pinch Roller Maintenance Kit

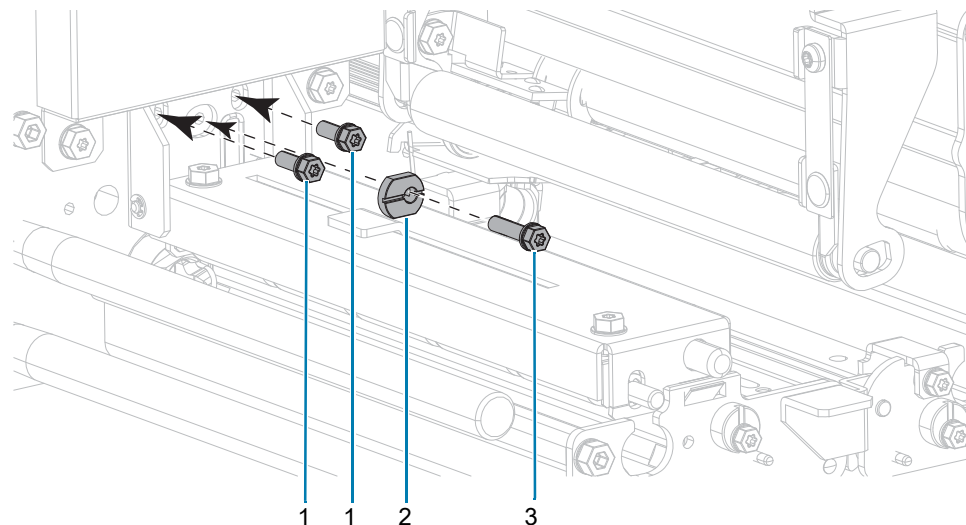
4. Press the release button (1) to open the pinch roller assembly, and remove the assembly from the print engine. Guide the cables through the access hole (2).



5. Guide the cables through the access hole (1) and position the new upper segmented pinch roller assembly (2) on the main frame.

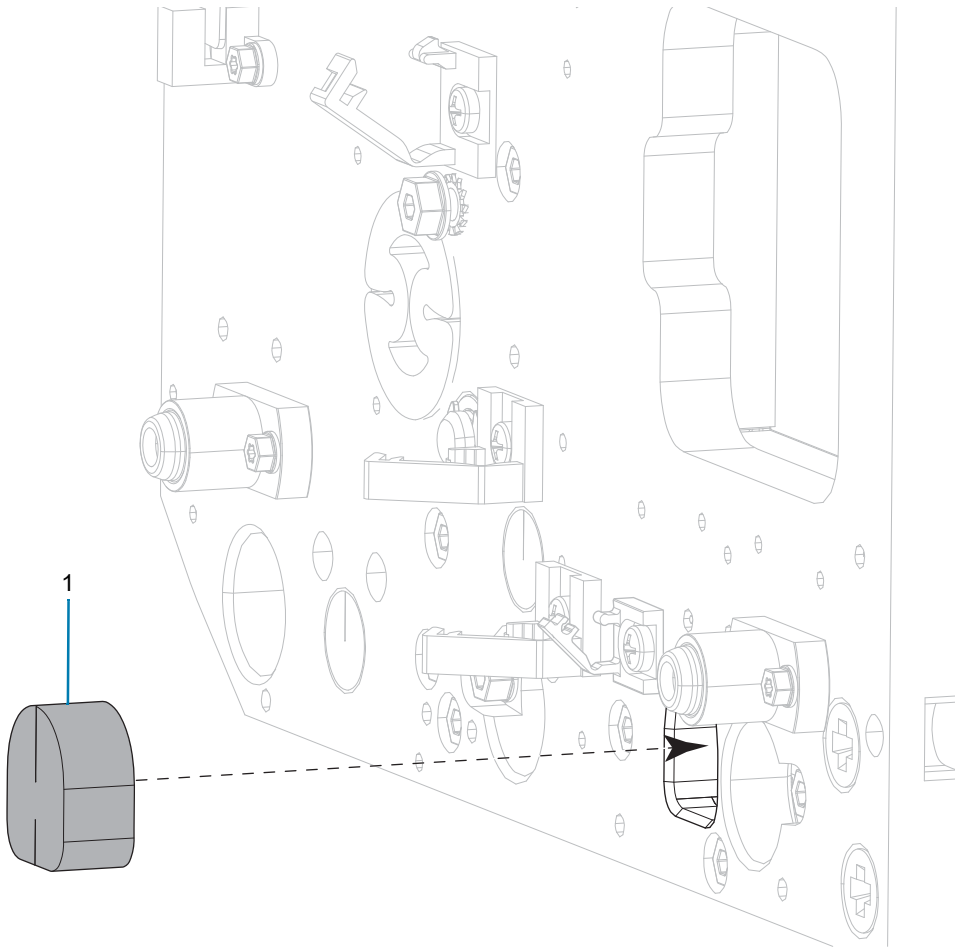


6. Install the two new  T9 screws (1), the new upper pinch cam (2), and the new  T9 upper pinch cam locking screw (3) to secure the upper segmented pinch roller assembly to the main frame.



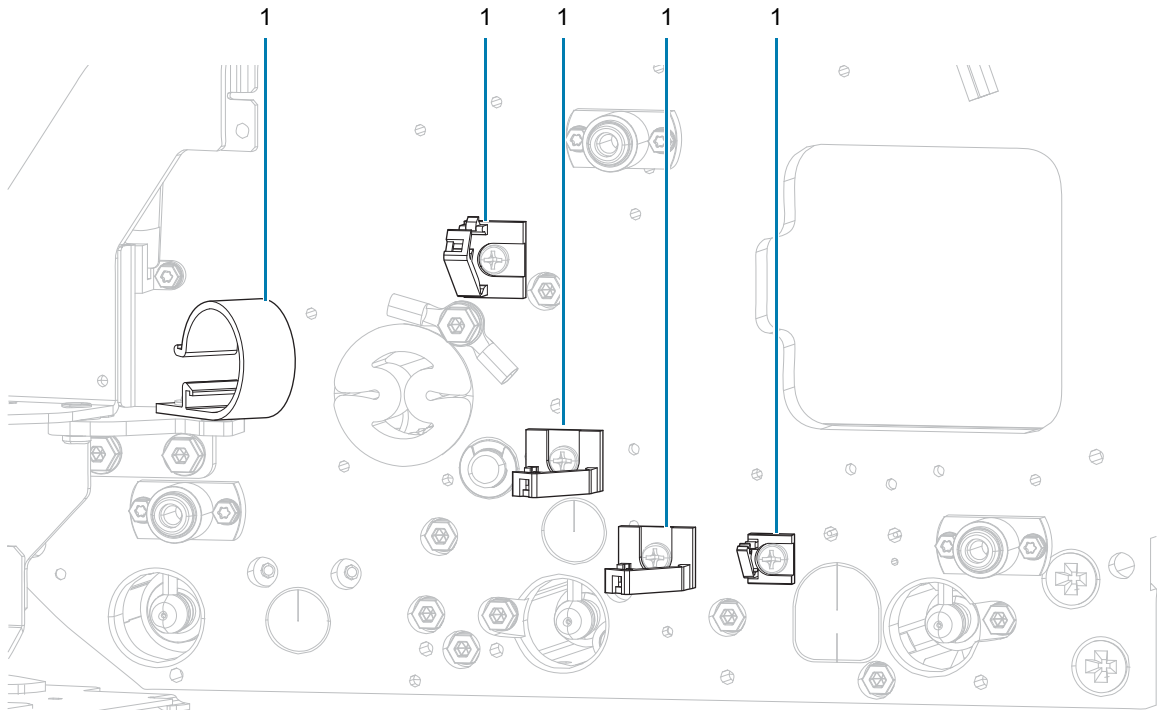
for parts & service call QLC (800) 837-1309

7. Install the new sealing plug (1) into the access hole with the media sensor cables.



8. Insert the cables back into the flexible conduit.
9. Reconnect the lower media sensor cable to plug J36 on the MLB.

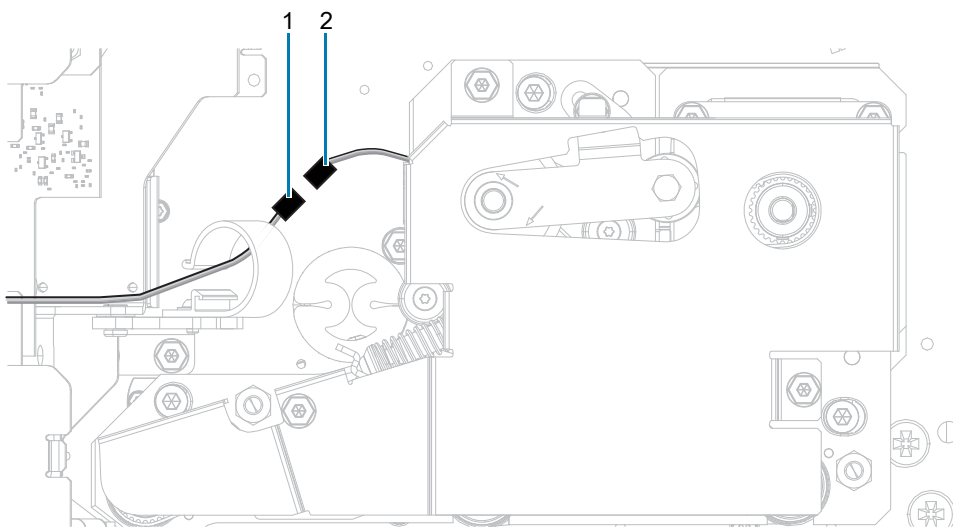
10. Reroute the media sensor cables through the five cable clamps (1), and then close the clamps.



## Reinstall the Media Drive System

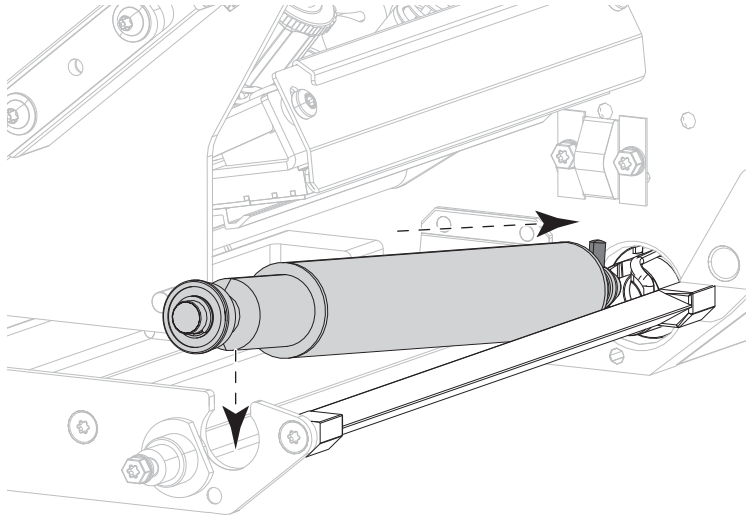
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.


The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

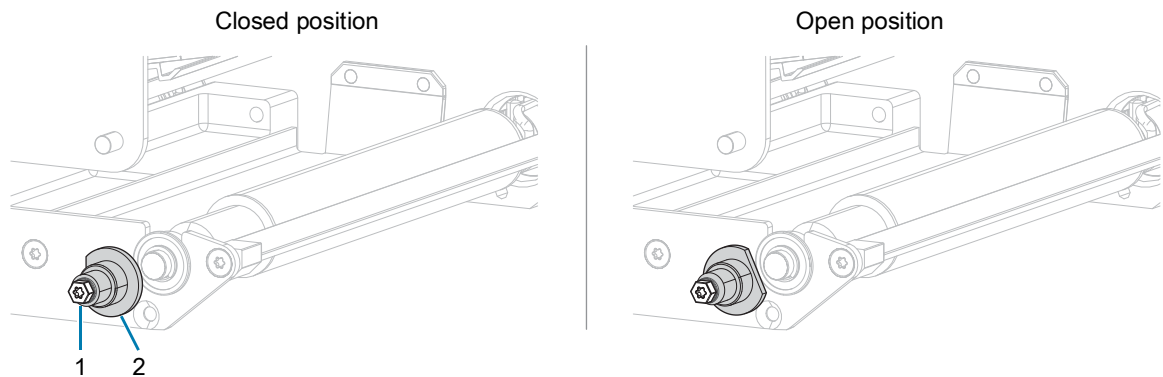


## Reinstall the Rollers

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



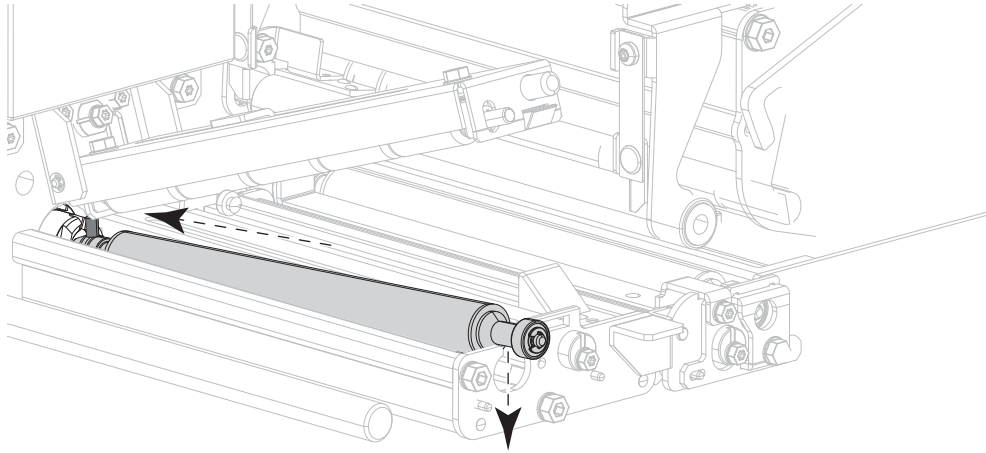
2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.




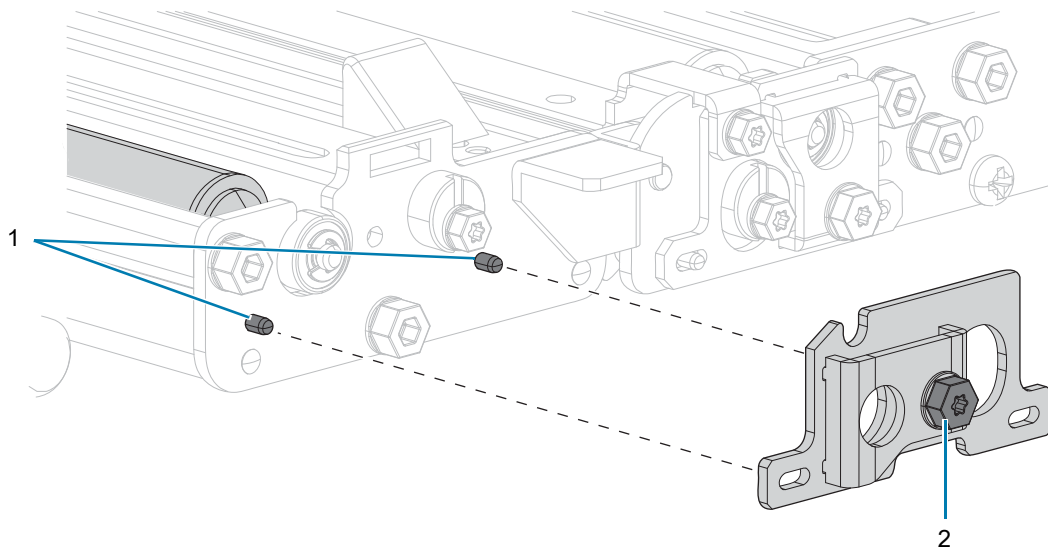
- c. Tighten the  T9 captive screw.

## Upper Segmented Pinch Roller Maintenance Kit

4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

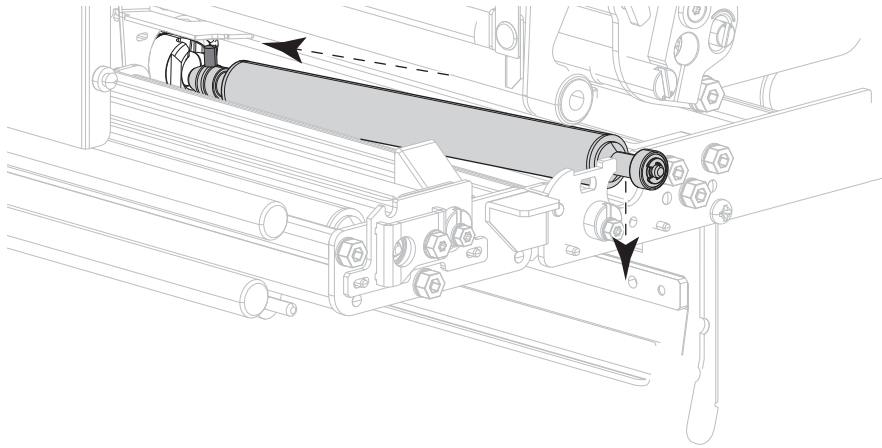



for parts & service call QLC (800) 837-1309

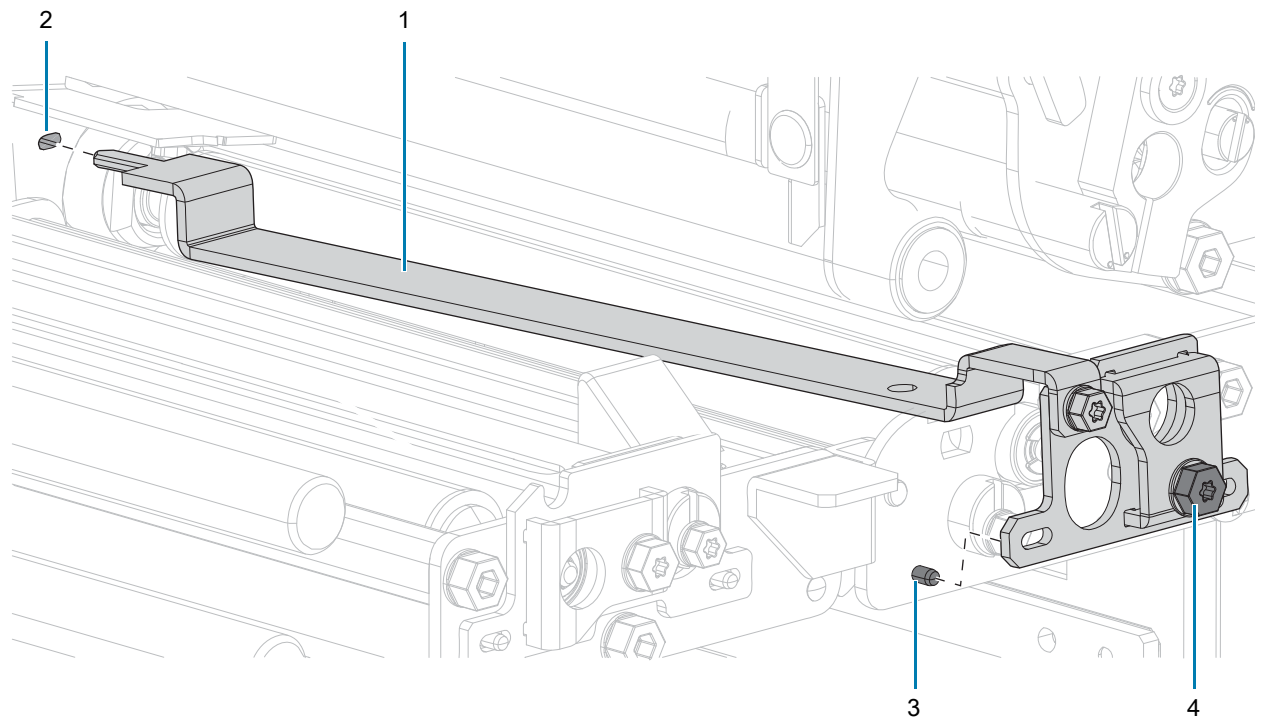


## Upper Segmented Pinch Roller Maintenance Kit

7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



for parts & service call QLC (800) 837-1309

## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

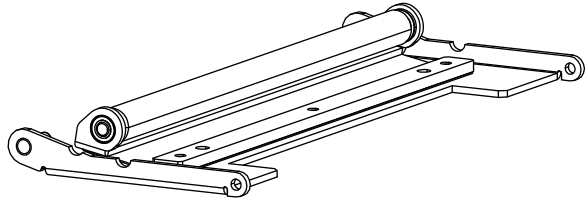




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Peel Bracket Qty: 1
	Screw (M3 thumb)  Qty: 1 T10

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



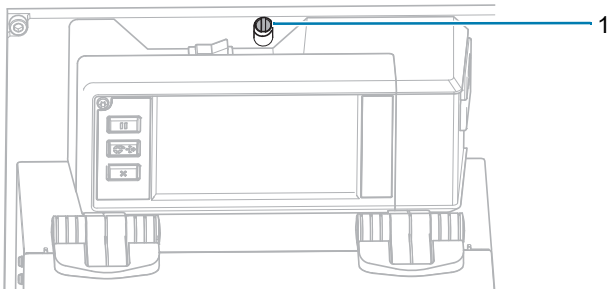
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



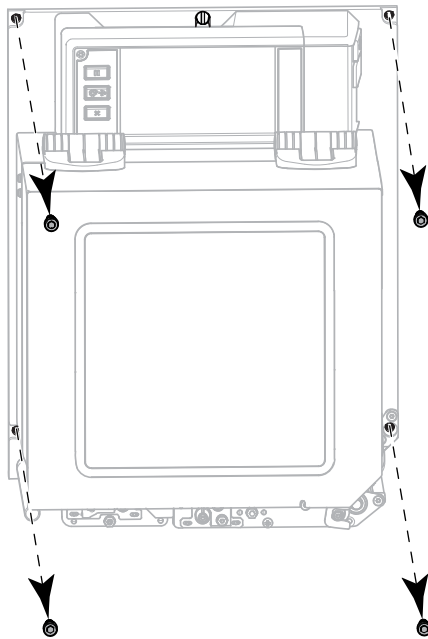
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.




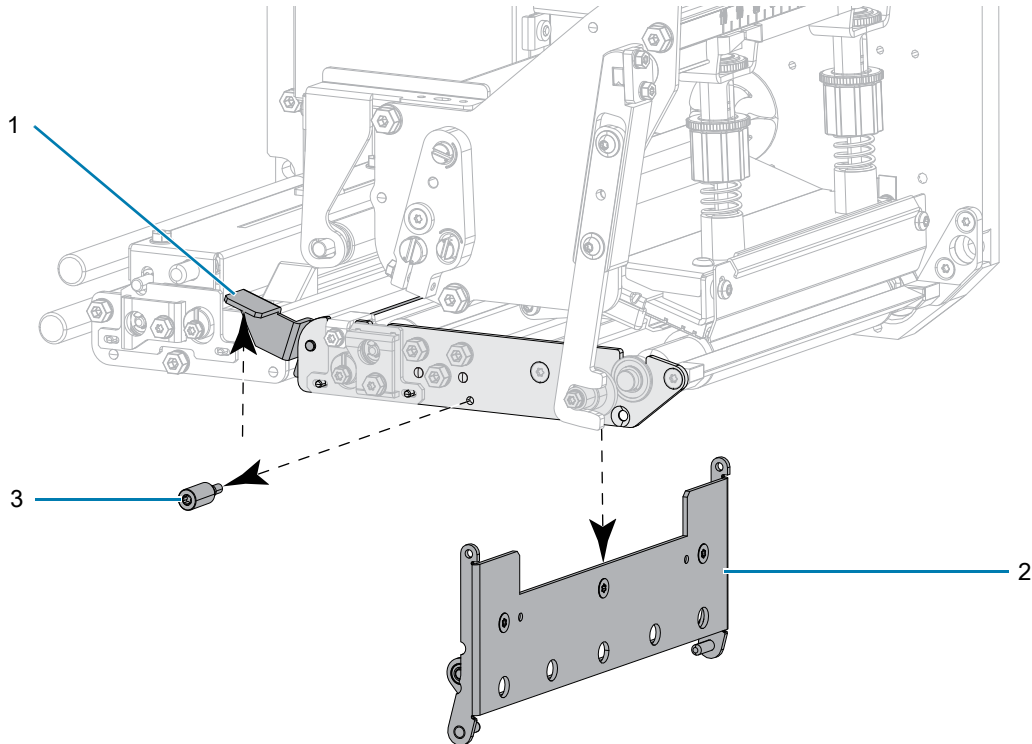
2. Remove the four screws securing the print engine to the applicator.




3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Replace the Peel Bracket

1. Lift up on the peel bracket latch (1) and release the peel bracket (2).
2. Remove the  T10 thumb screw (3) securing the peel bracket.
3. Tilt the outboard end of the peel bracket down and lift the inboard end up and off of the pivot pin.



**NOTE:** Install the new peel bracket with the knurled roller facing the bottom of the print engine.

4. Place the inboard end of the peel roller bracket on the pivot pin.
5. Install the new  T10 thumb screw to secure the peel bracket.
6. Push the peel bracket up and against the peel latch to close.

## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

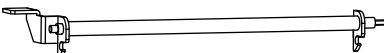

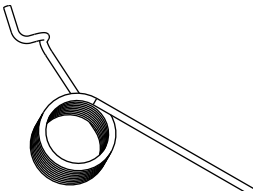



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Peel roller latch Qty: 1
	Deflector plate Qty: 1
	Torsion spring Qty: 2
	Screw (M3x6 TX NI) Qty: 1



## Tools Required

- ✪ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10
- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

for parts & service call OLC (800) 837-1309

## Prepare for Installation



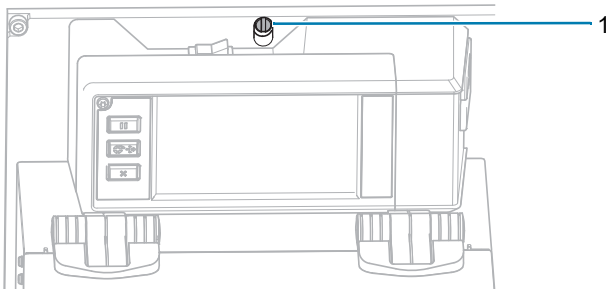
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



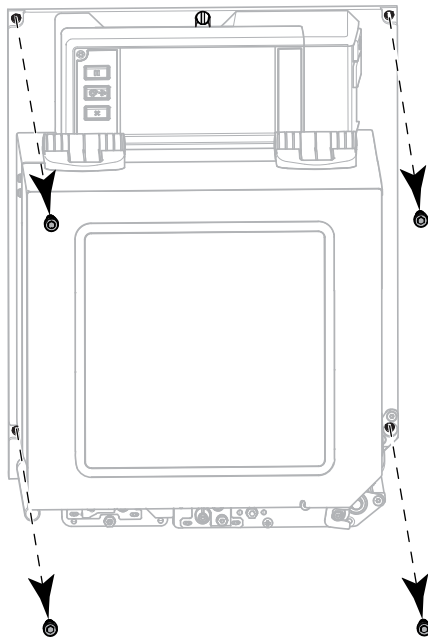
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



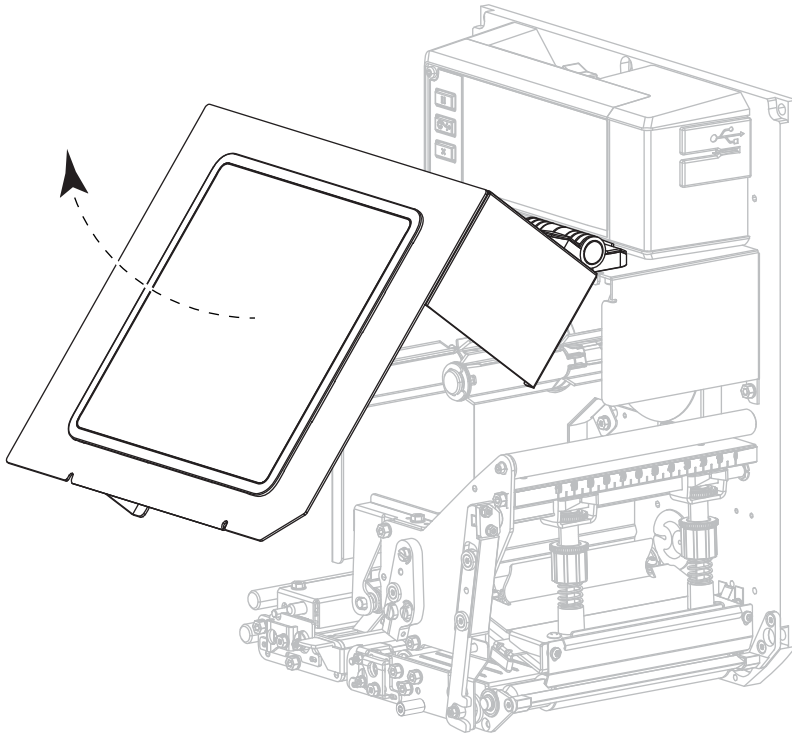
2. Remove the four screws securing the print engine to the applicator.




3. Lift the print engine off of the center mounting bolt and place it on a workbench.

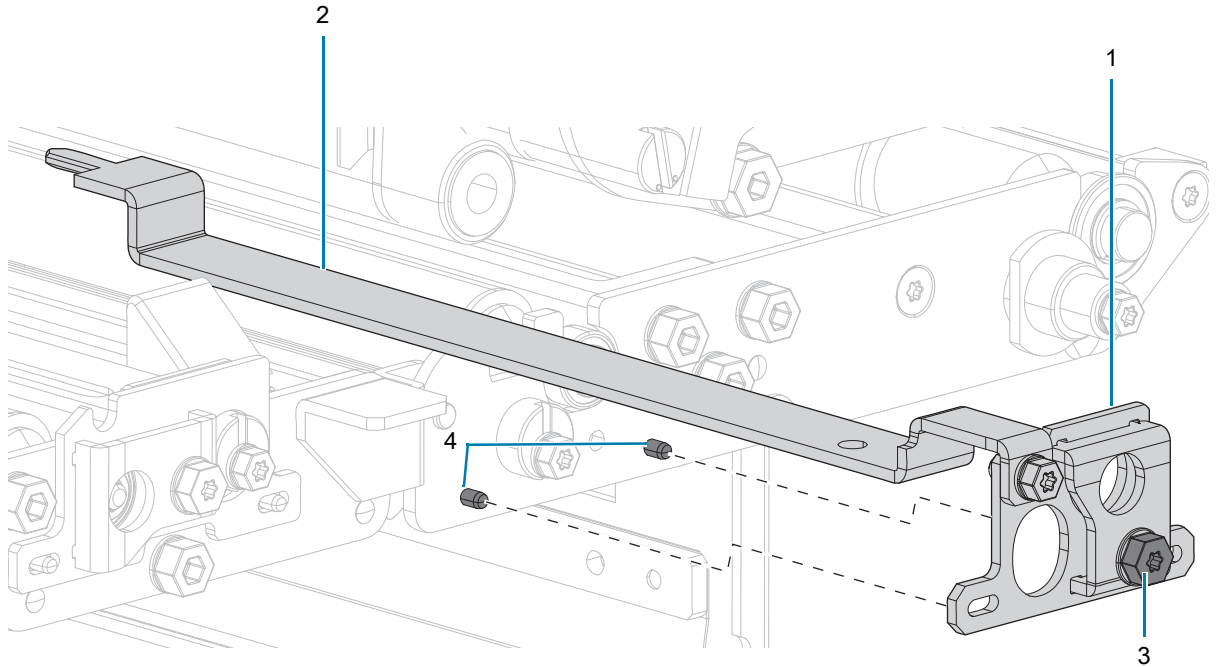



4. Open the media cover.

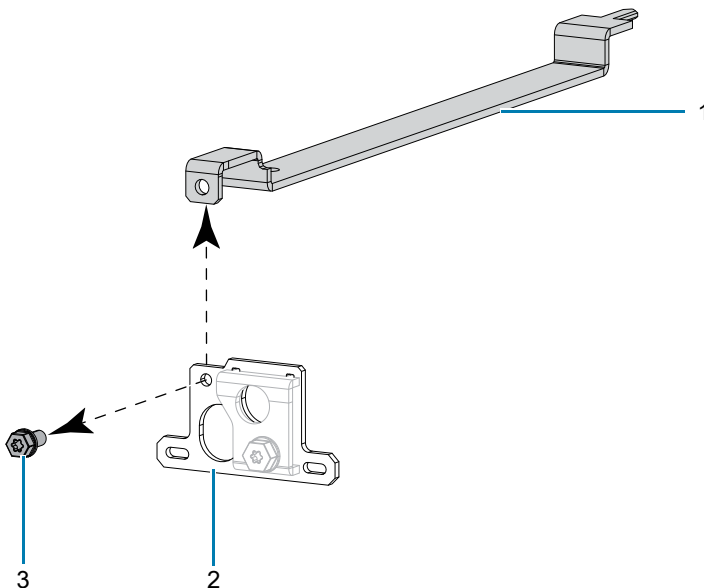


## Remove the Platen Roller Support Plate


1. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

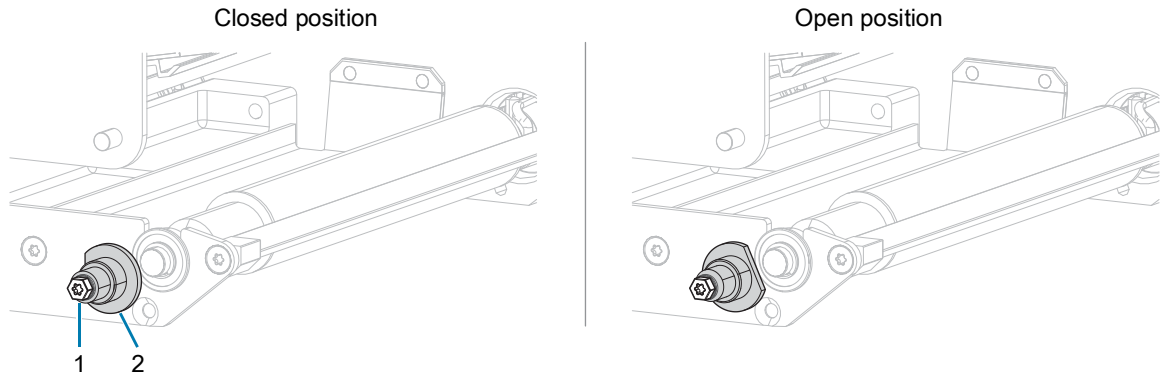


2. Remove peel roller cam plate from the peel roller cam plate.
  - a. Remove the  T9 screw (3) securing the deflector plate to the peel roller cam plate.
  - b. Remove the deflector plate (1) from the peel roller cam plate (2).



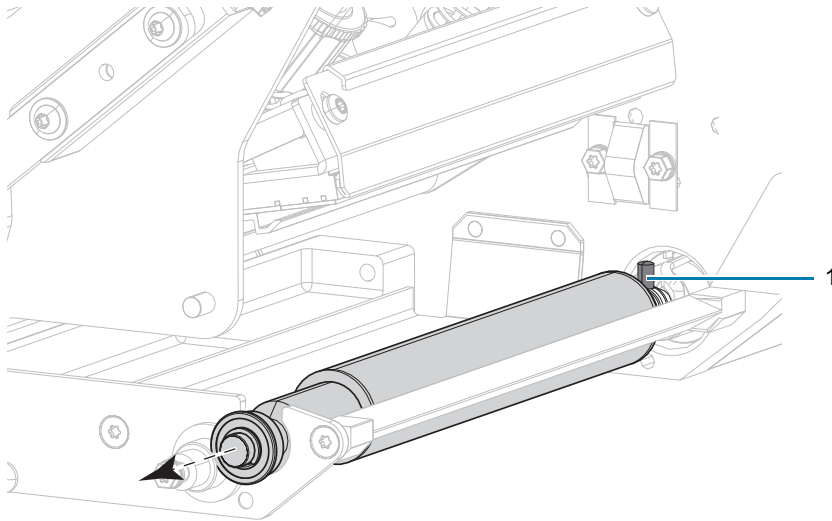
3. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



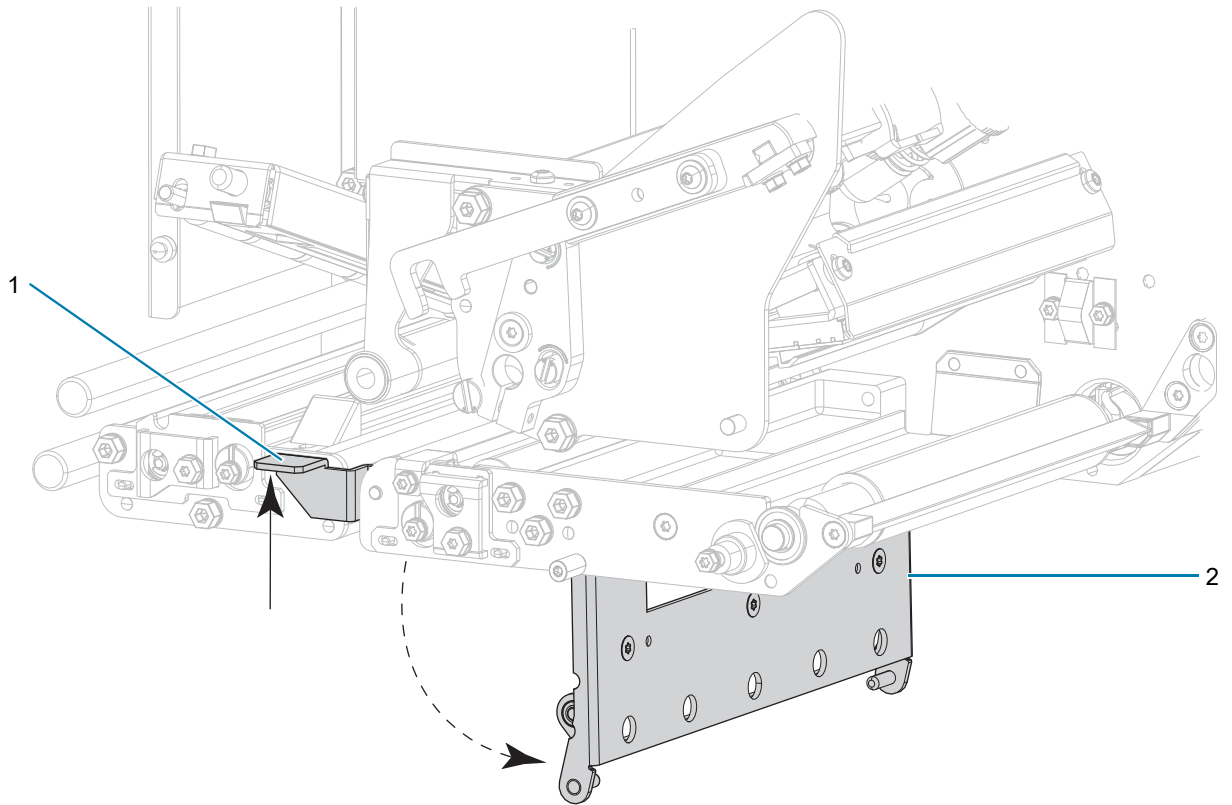
c. Tighten the  T9 captive screw.

4. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

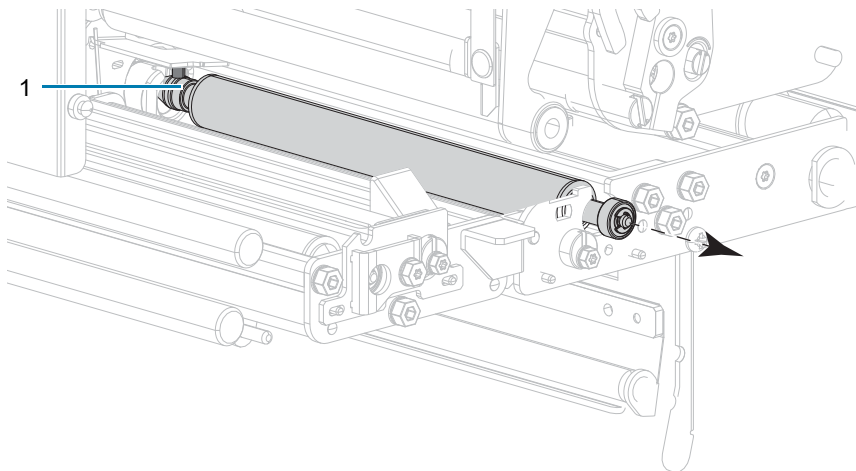


5. Remove the platen roller assembly from the print engine.

6. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.




7. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

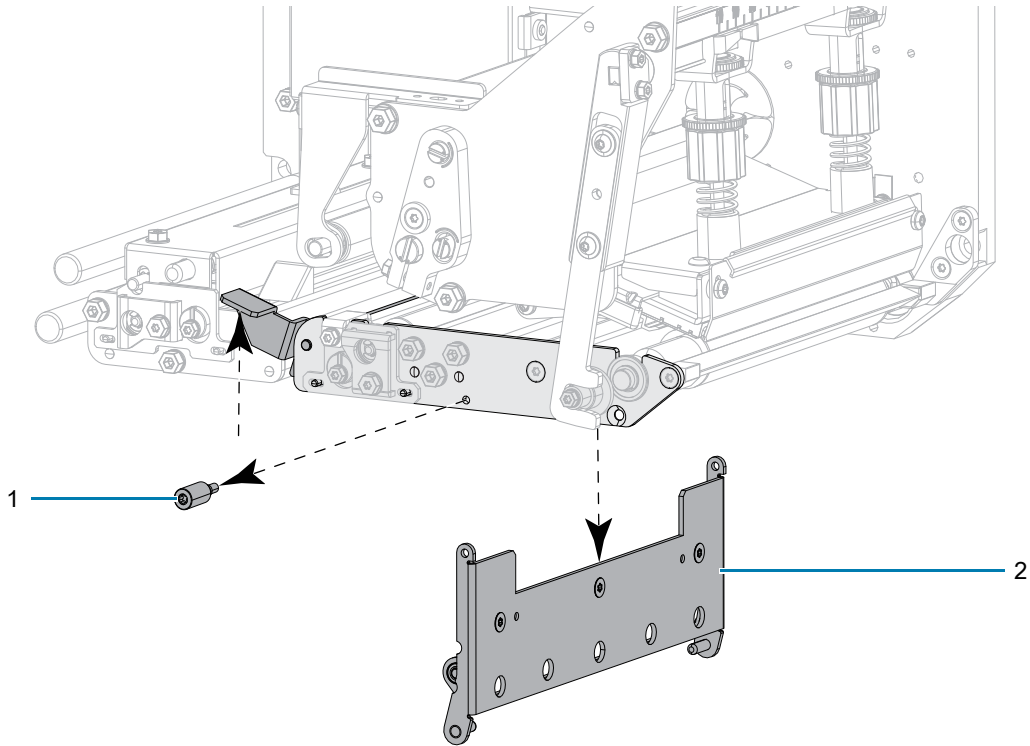


8. Remove the peel roller assembly from the print engine.


## Peel Deflector and Latch Maintenance Kit

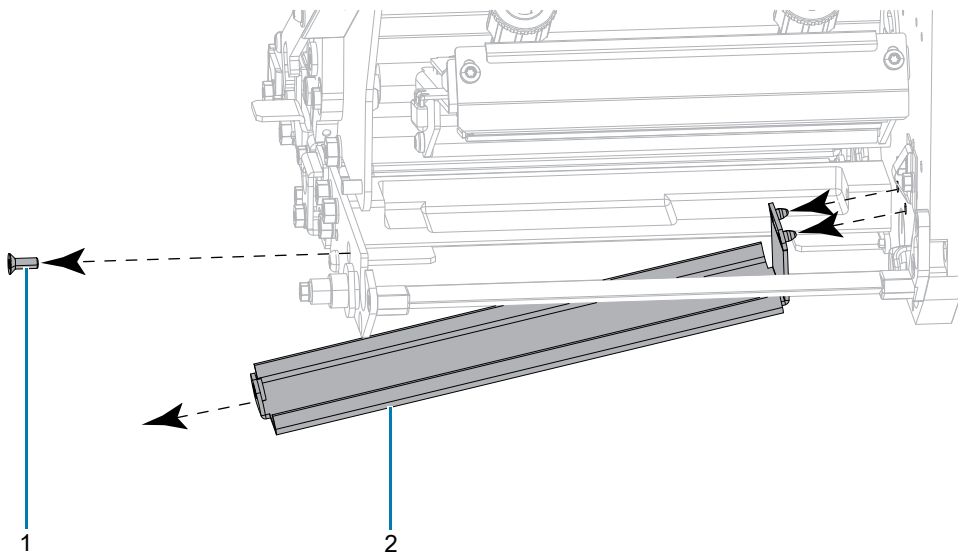
9. Remove the  T10 thumb screw (1) securing the peel bracket.

10. Tilt the outboard end of the peel bracket (2) down and lift the inboard end up and off of the pivot pin.



11. Remove the platen support guard.

Remove the  T9 screw (1) and remove the platen support guard (2). Lower the printhead guard away from the print engine.




for parts & service call QLC (800) 837-1309

## Peel Deflector and Latch Maintenance Kit



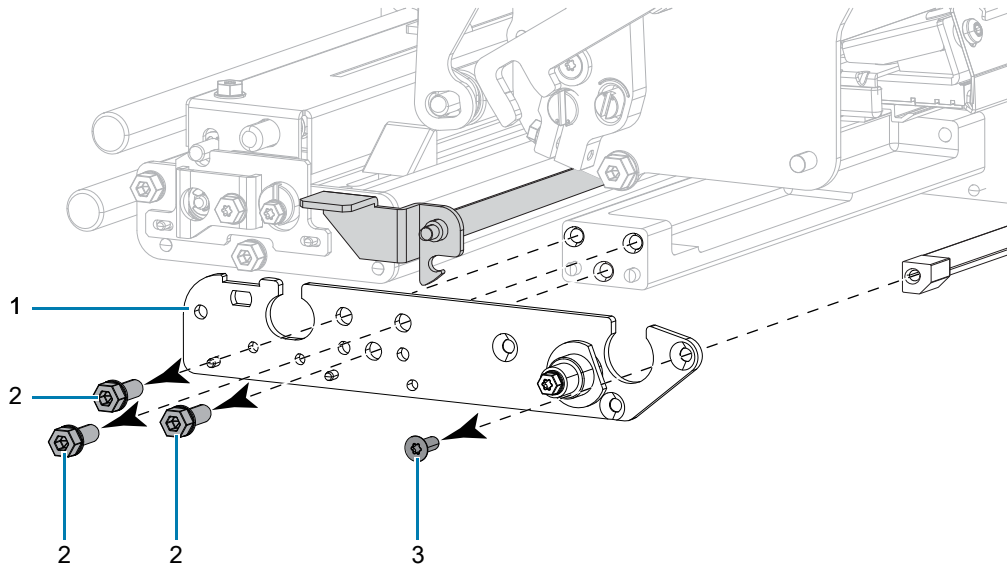
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

12. Remove the  T9 screw (3), from the platen roller support plate (1).

13. Remove the three  T9 screws (2) and the platen roller support plate.



**NOTE:** The peel roller latch will fall when the platen roller support plate is removed.



## Replace the Platen Roller Support Plate

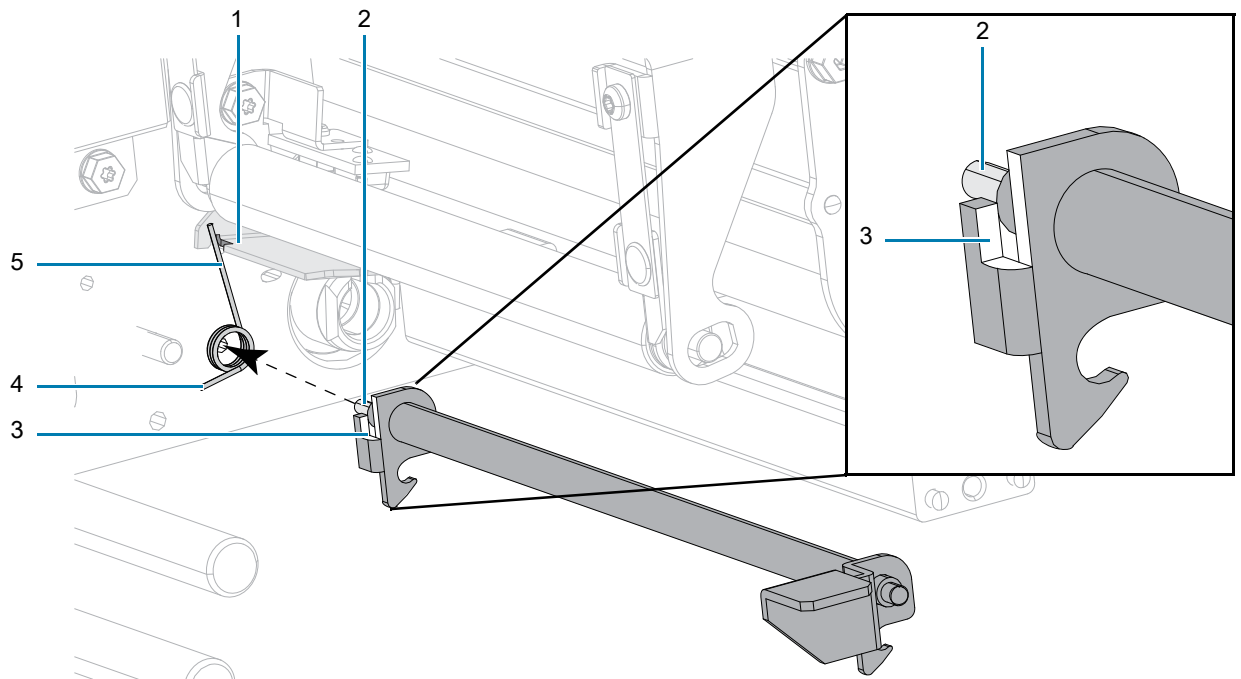




**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

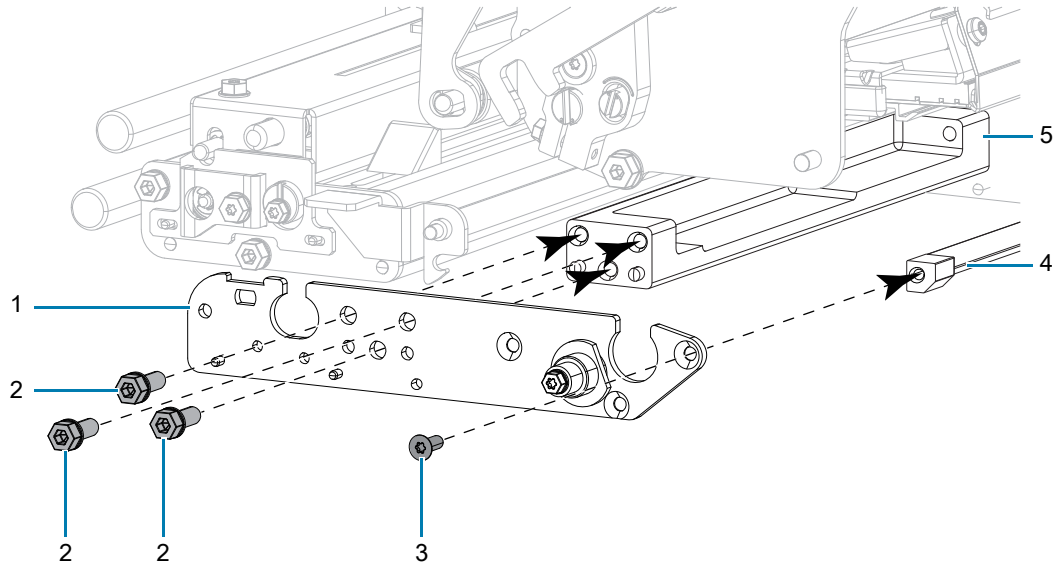
1. Reinstall the peel roller latch.
  - a. Leading with the short leg of the spring (4), slide the spring onto the inboard end of peel roller shaft (2).
  - b. Insert the short leg of the spring (4) into the catch tab on the inboard end of the peel roller latch (3).
  - c. Holding the spring in place, insert the inboard end of the latch (2) into the mounting hole on the main frame wall.
  - d. Place the long leg of the spring (5) into the upper catch tab in the ribbon sensor bracket (1).



**NOTE:** Ensure the long leg of the spring (5) is resting against the ribbon sensor bracket on the main frame wall.



2. Install the platen roller support plate.
  - a. Align the holes in the platen roller support plate (1) with the holes in the platen support bar assembly (5) and the peel bar (4).
  - b. Secure the platen roller support plate with the three  T9 screws (2).
  - c. Install the  T9 screw (3) securing the platen roller support plate to the peel bar (4).




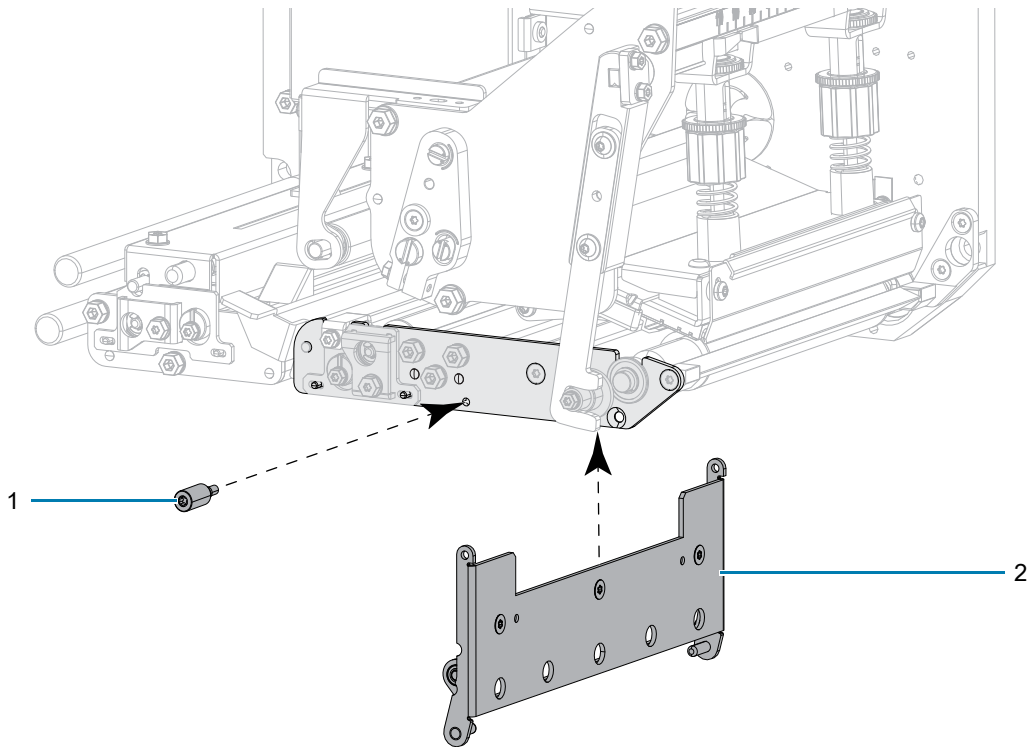


### 3. Reinstall the peel bracket.

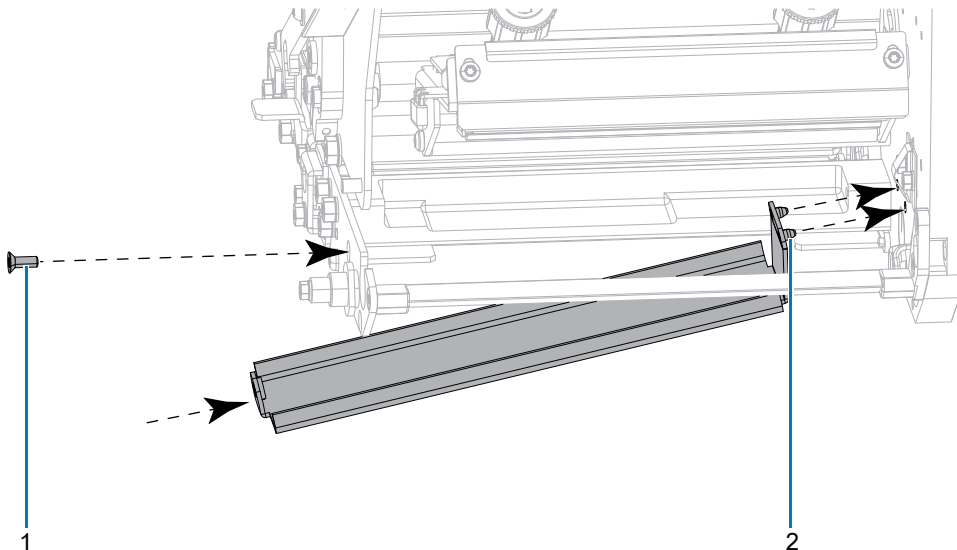


**NOTE:** Install the new peel bracket with the knurled roller facing the bottom of the print engine.

- a. Place the inboard end of the peel roller bracket (2) on the pivot pin.
- b. Install the new  T10 thumb screw (1) to secure the peel bracket.
- c. Push the peel bracket up and against the peel latch to close.



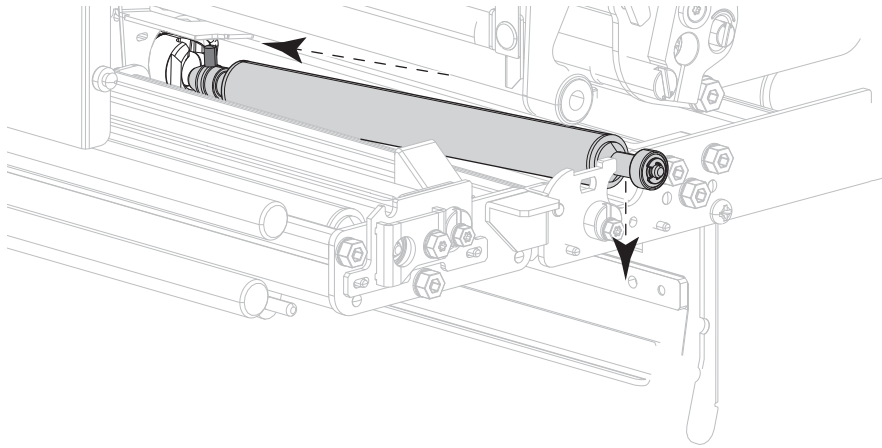
### 4. Align the printhead access guard (2) guide pins with the mounting holes on the print engine and secure with the T9 screw (1).




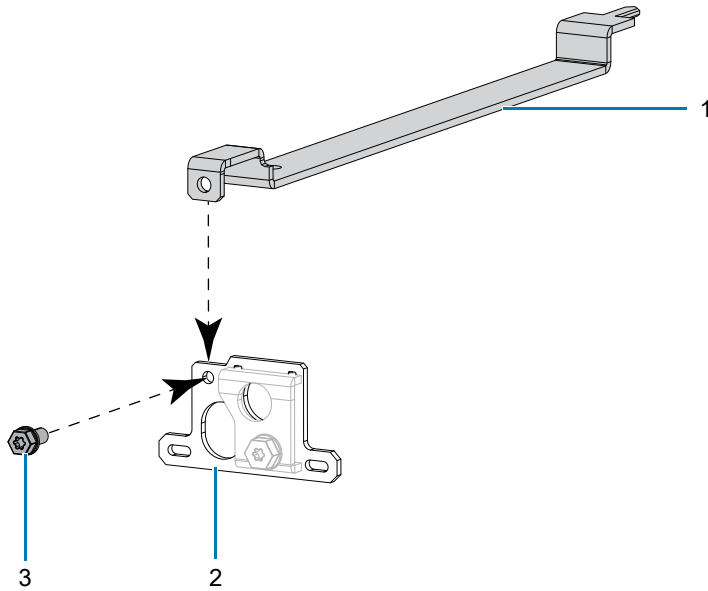
for parts & service call QLC (800) 837-1309

## Peel Deflector and Latch Maintenance Kit


5. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.

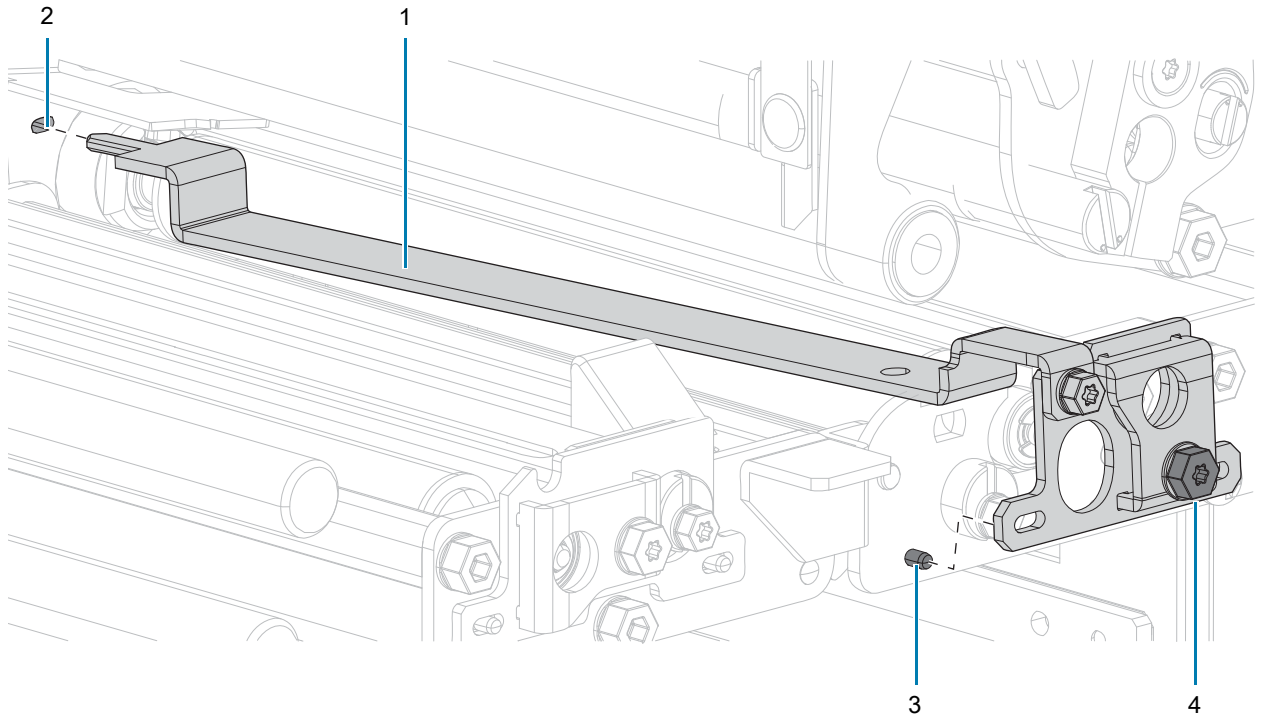


6. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
7. Attach the new deflector plate to peel roller cam plate.
  - a. Lower the deflector plate (1) onto the peel roller cam plate (2).
  - b. Tighten the  T9 screw (3) securing the deflector plate to the peel roller cam plate.

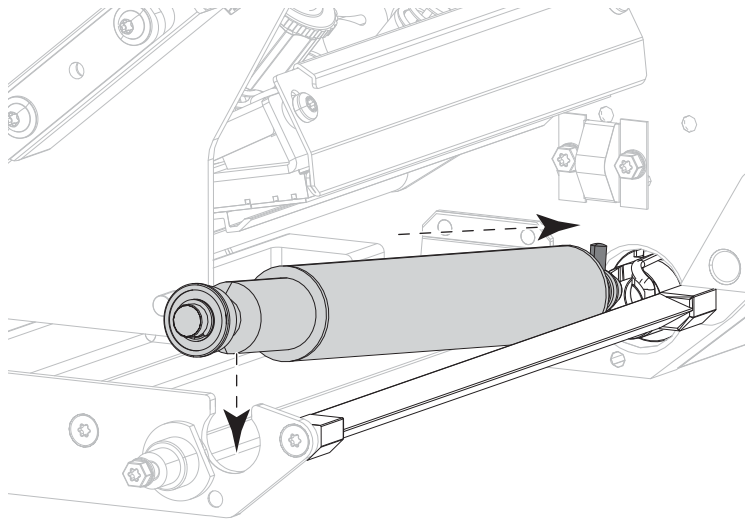


for parts & service call QLC (800) 837-1309

8. Install the peel roller cam plate and deflector plate assembly.
  - a. Align the end of the deflector plate (1) with the hole in the main frame (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.




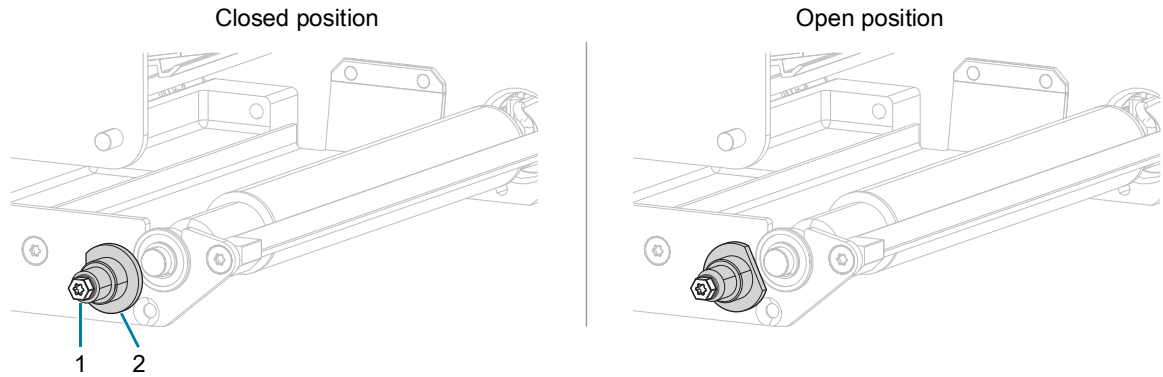
9. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



10. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

11. Secure the platen support plate latch pin in the closed position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the closed position.



- c. Tighten the  T9 captive screw.

## Reinstall the Print Engine into the Applicator

1. Lift the print engine and support it on the center mounting bolt.
2. Reinstall the screws securing the print engine.
3. Tighten the center mounting bolt.
4. Reinstall media and ribbon (if used).

## Print Line, Balance, and Skew Adjustment




**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label. As the labels print, you can adjust the following:


- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

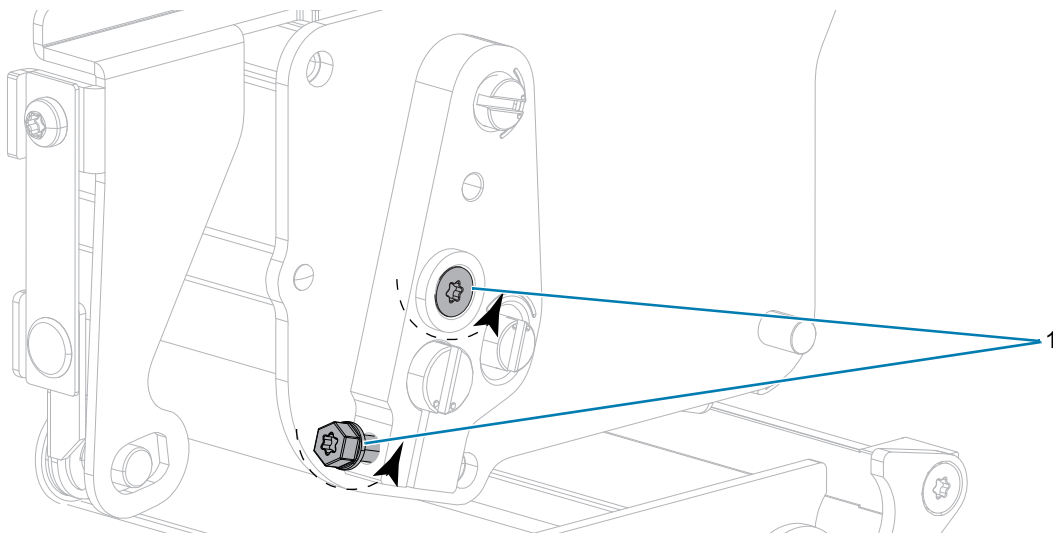
If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

To make print line, balance, and skew adjustments, complete these steps:

1. Loosen the two  3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two  3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold PAUSE while turning on the print engine.
  - c. Hold PAUSE until the first control panel light turns off.

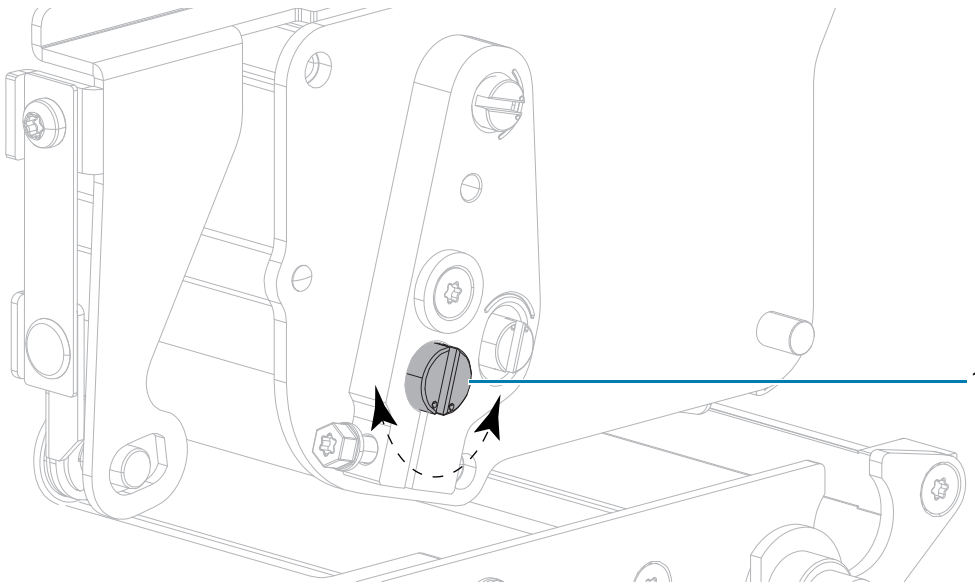


**NOTE:** At any time during the PAUSE self-test:

- Press PAUSE to print 15 additional labels.
- Press CANCEL to change the print speed.
- Press and hold CANCEL to exit the self-test.

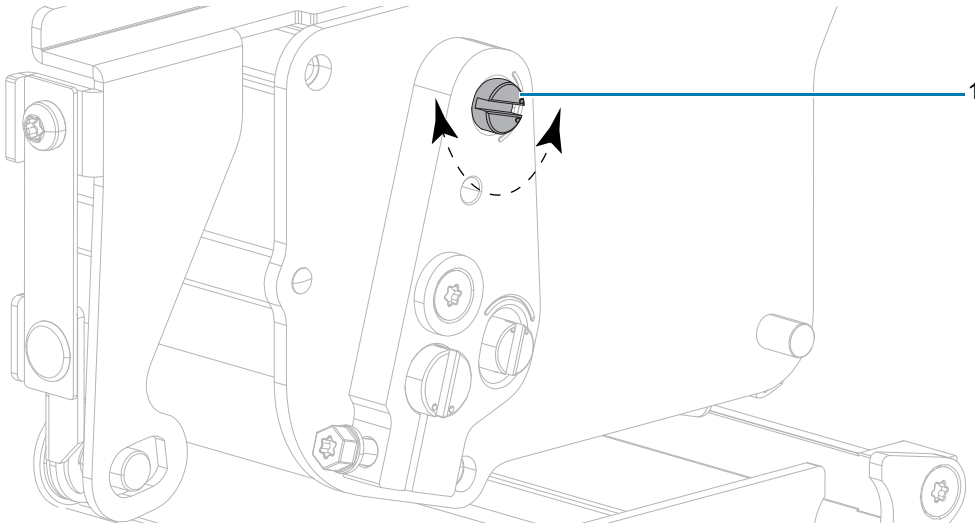
### Adjust the Print Line

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward/backward to find the best appearance of the printed image.



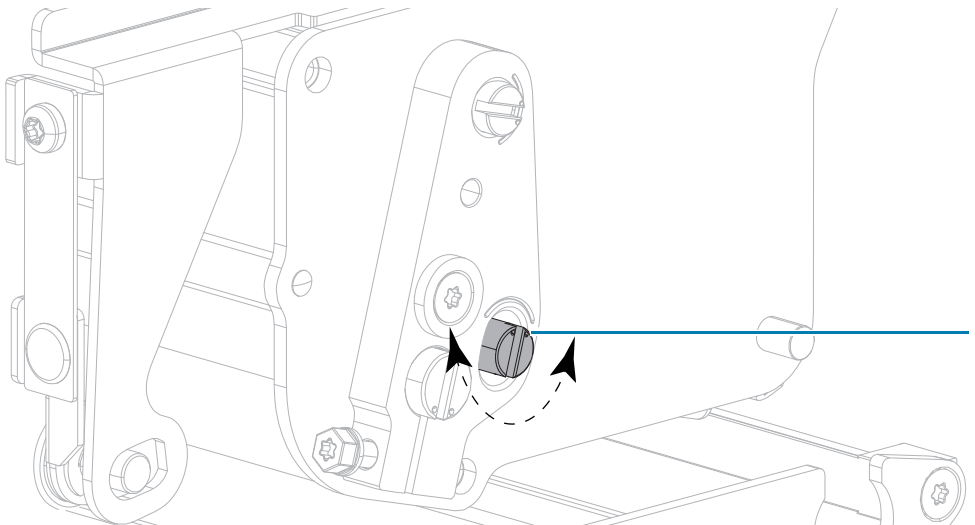
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster. Adjust the balance until the print is even across the width of the printhead.



## Adjust the Skew

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster. Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label (not at a diagonal).



The installation is complete.

# Platen Support and Printhead Guard Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

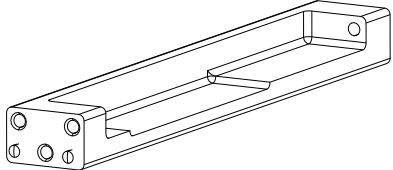
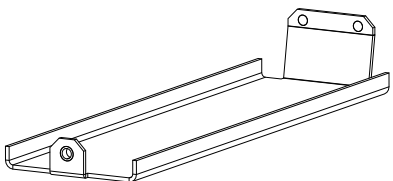








**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Platen support bar Qty: 1	
	Printhead access guard Qty: 1	
	Screw (M3x8 SO Ni) Qty: 1	 T9
	Screw (M4x10 SO Ni) Qty: 3	 T9
	Screw (M4x12 SO Ni) Qty: 3	 T9



## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
- Metric hexagon keys or bits  
Size: 3mm, 5mm
- ⊕ Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



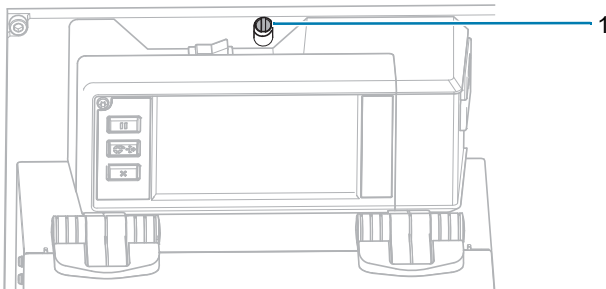
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



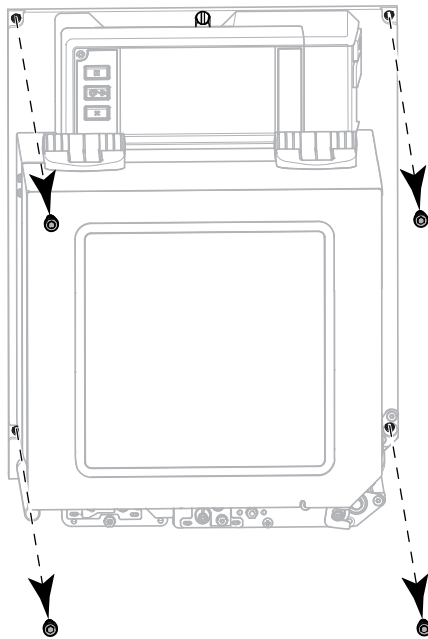
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

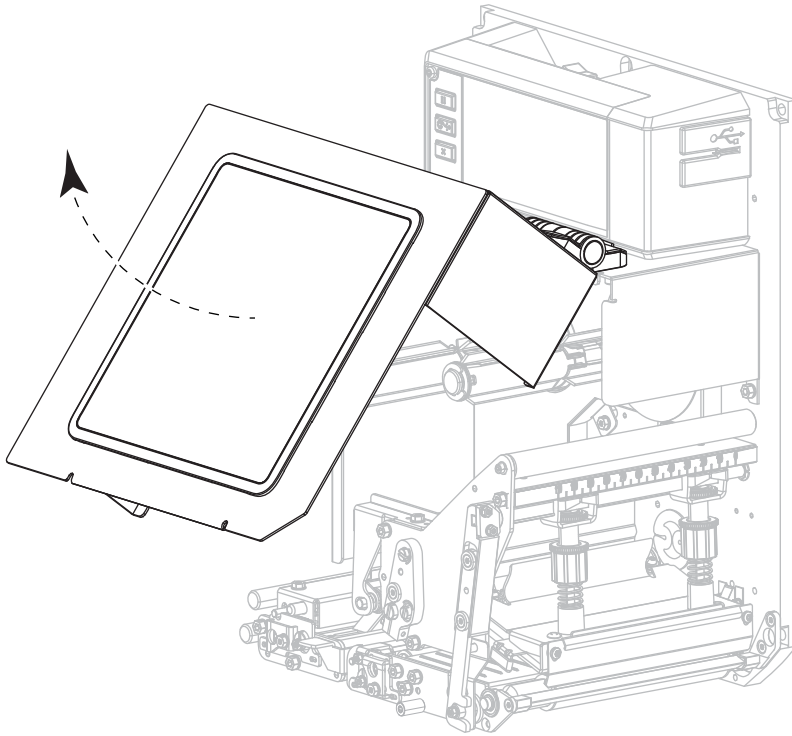


2. Remove the four screws securing the print engine to the applicator.

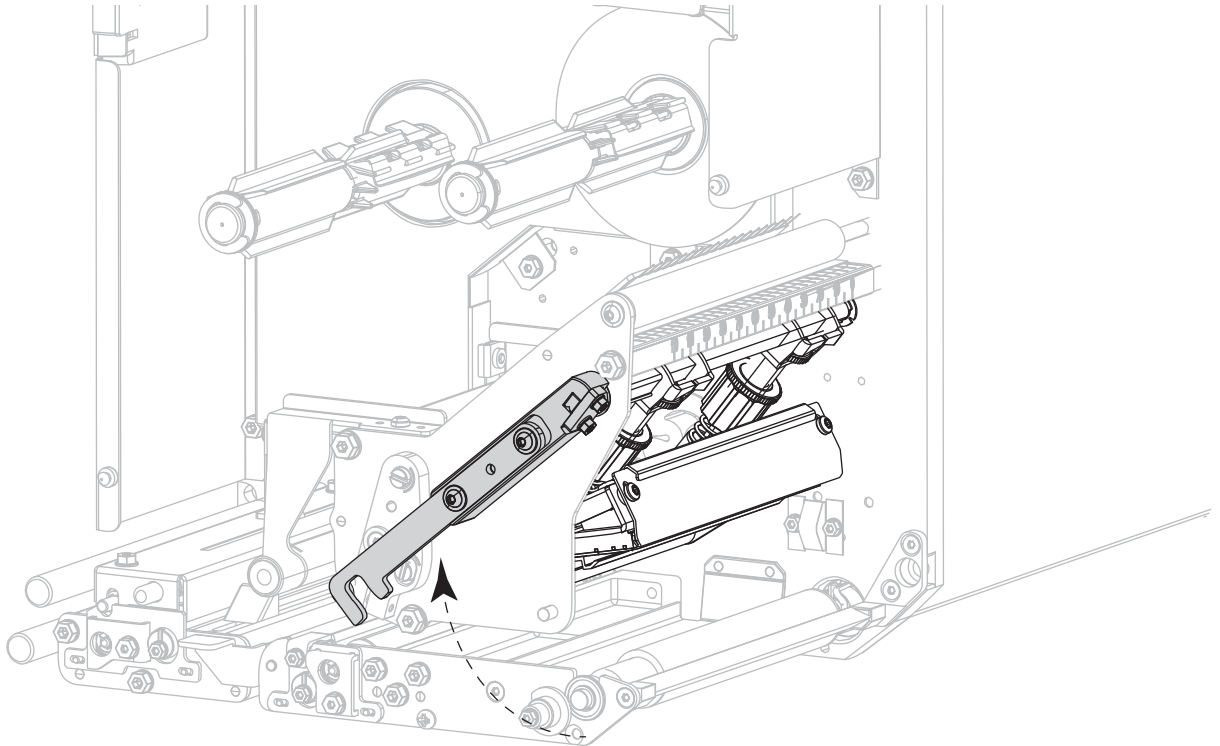


3. Lift the print engine off of the center mounting bolt and place it on a workbench.

4. Open the media cover.



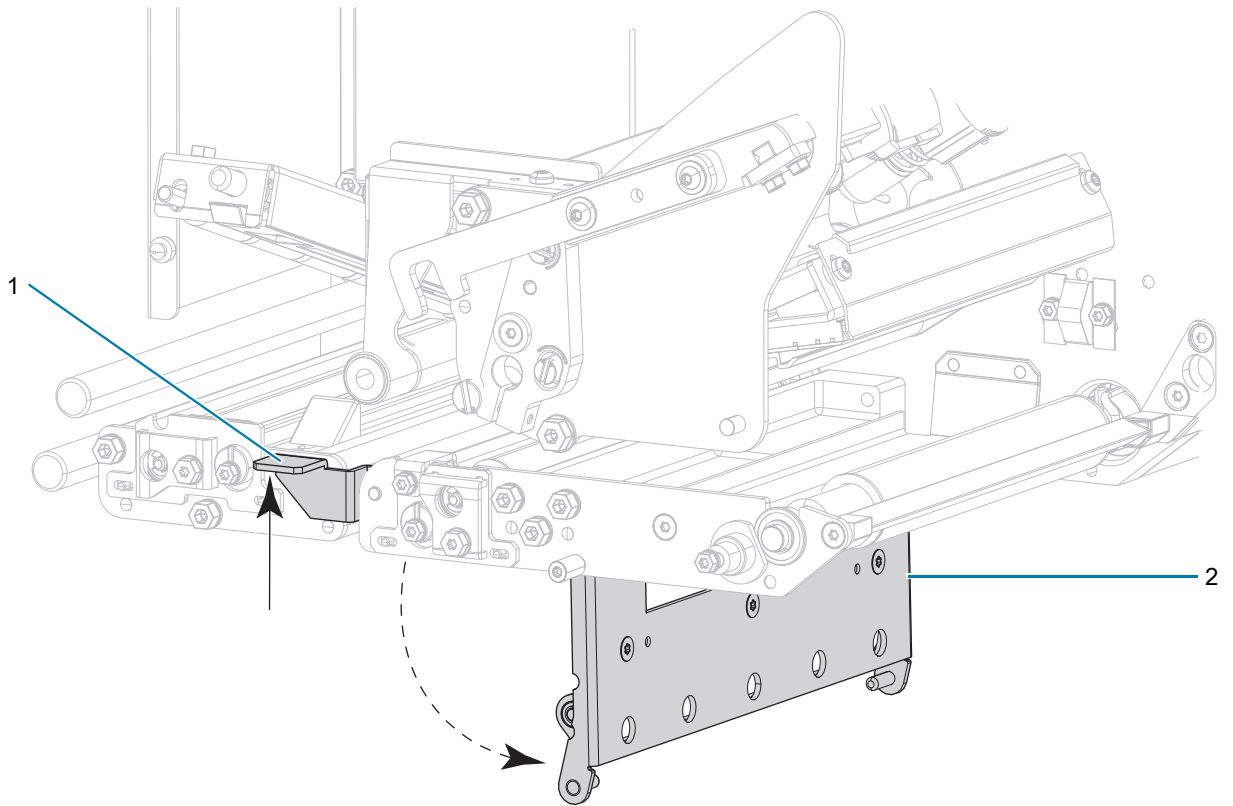
5. Open the printhead.




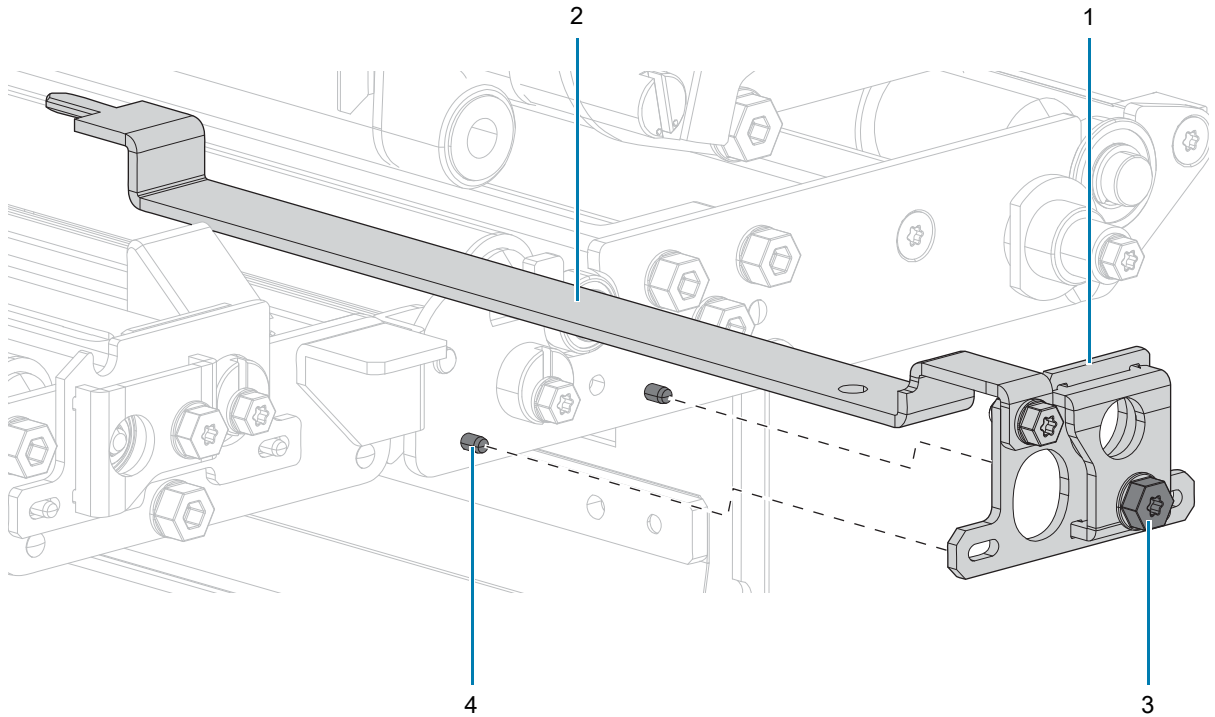
for parts & service call QLC (800) 837-1309

## Remove the Rollers

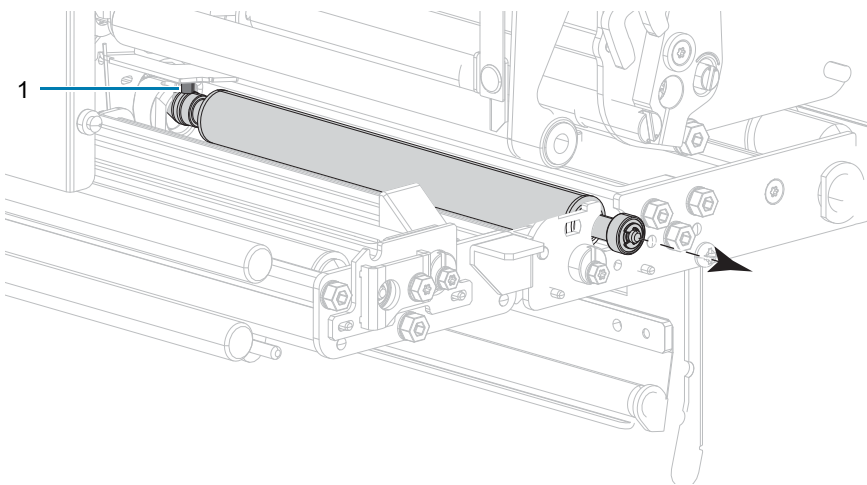
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.




2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

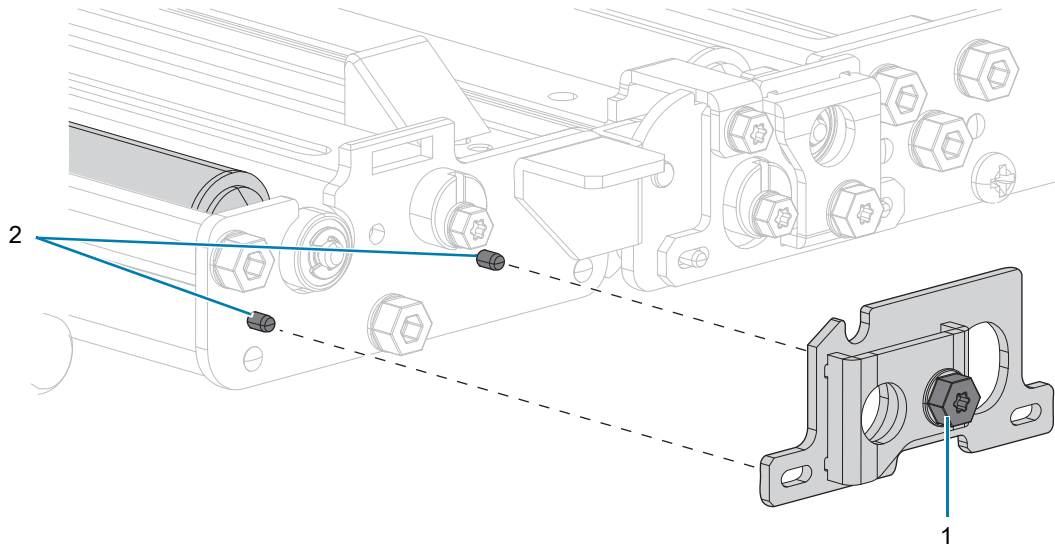


3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

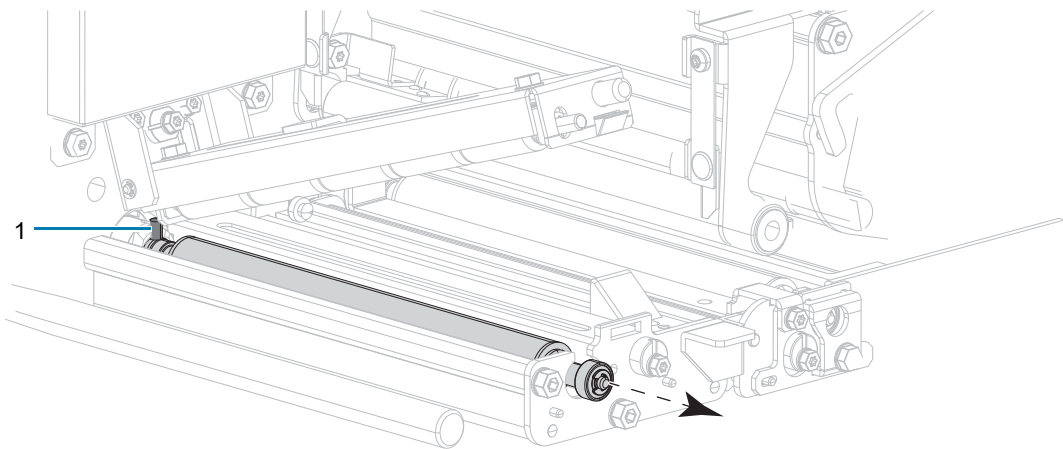


4. Remove the peel roller assembly from the print engine.

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




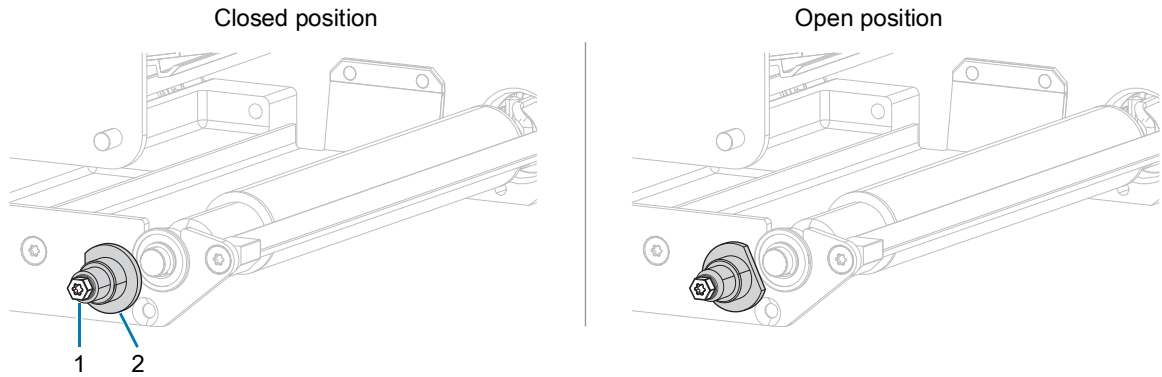
6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



7. Remove the pinch roller assembly from the print engine.

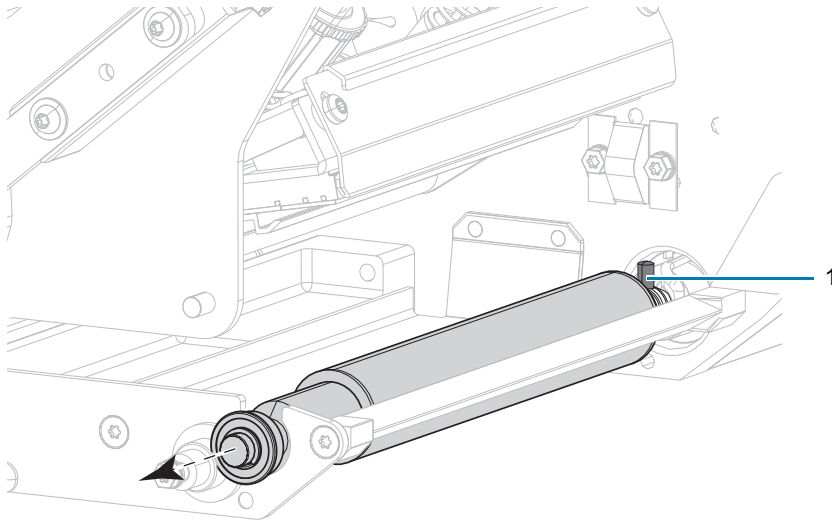
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.




c. Tighten the  T9 captive screw.

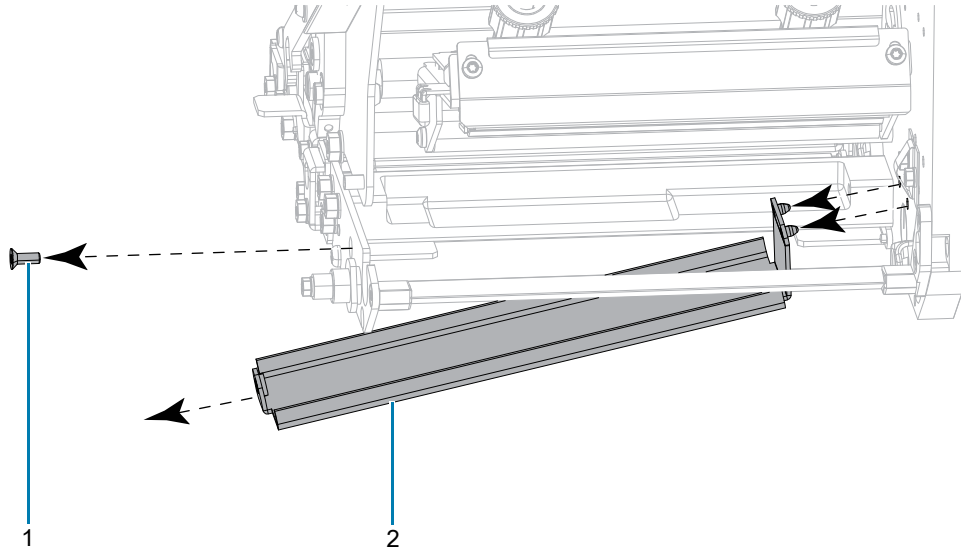
9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.



10. Remove the platen roller assembly from the print engine.

## Remove the Platen Support Guard

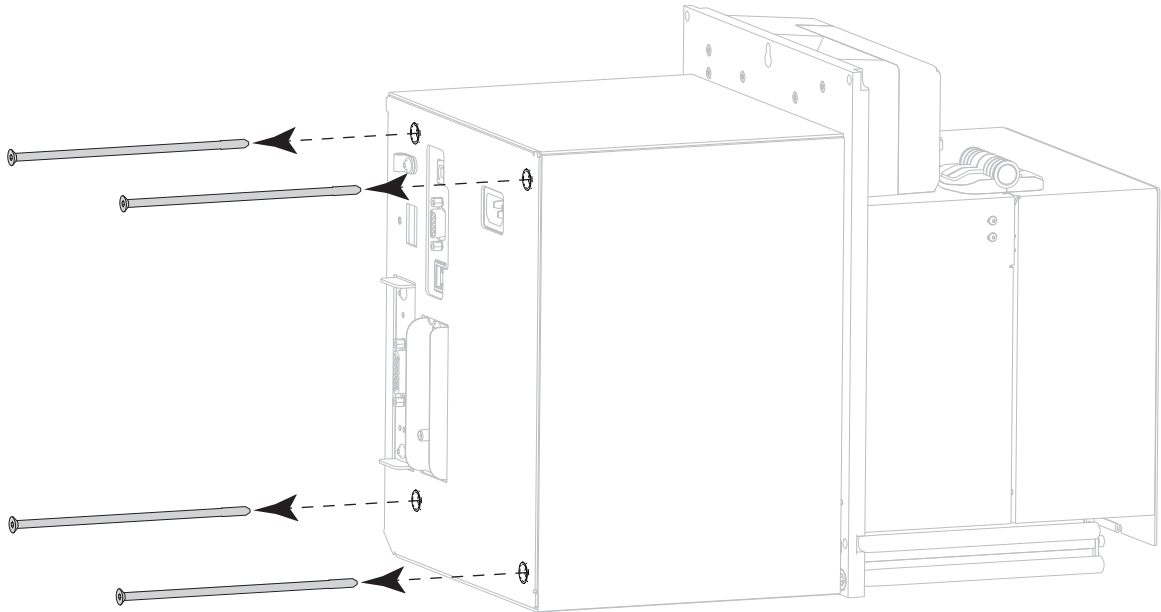
1. Remove the  T9 screw (1) and remove the platen support guard (2). Lower the printhead guard away from the print engine.



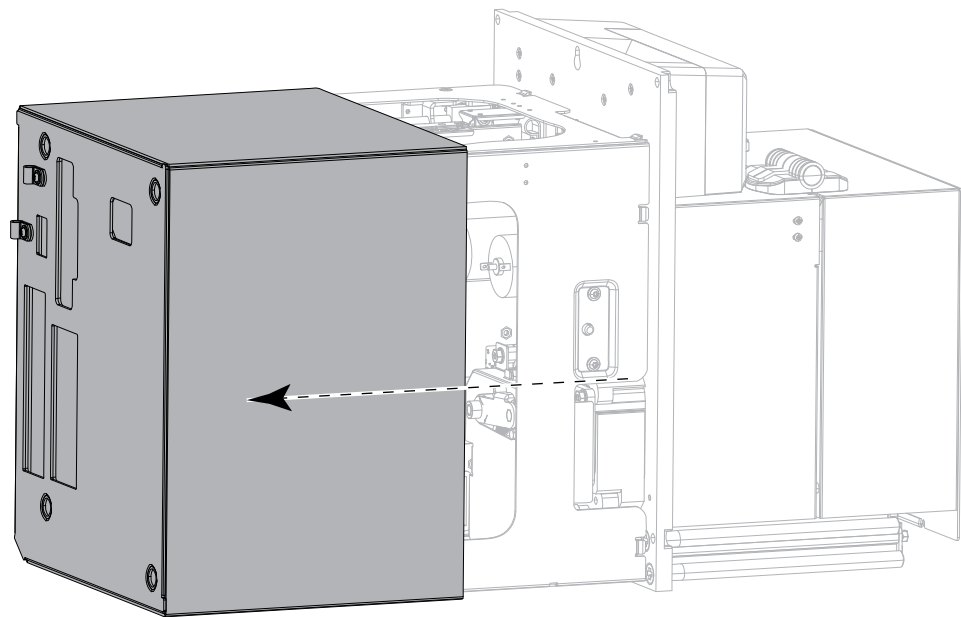


## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



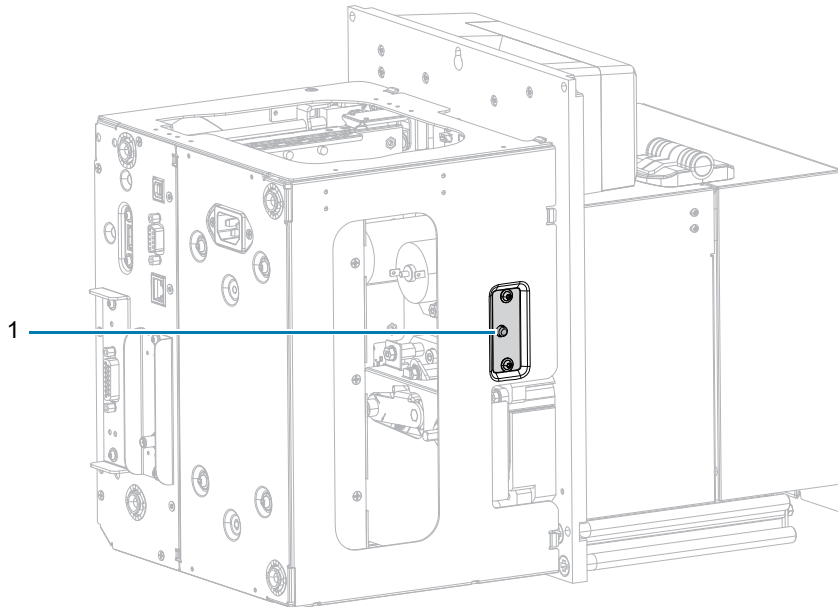
2. Remove the electronics enclosure cover from the print engine.



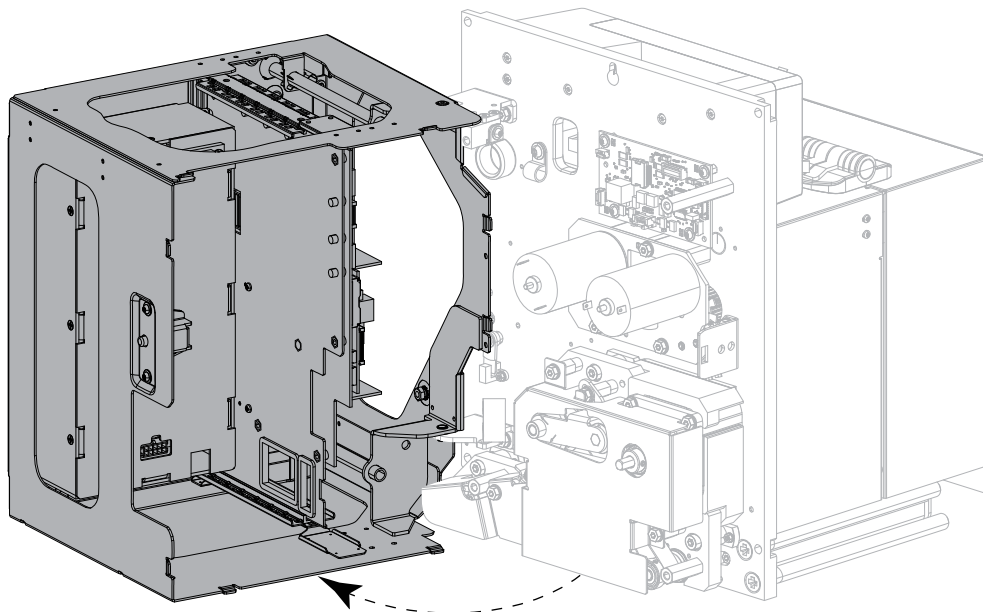
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



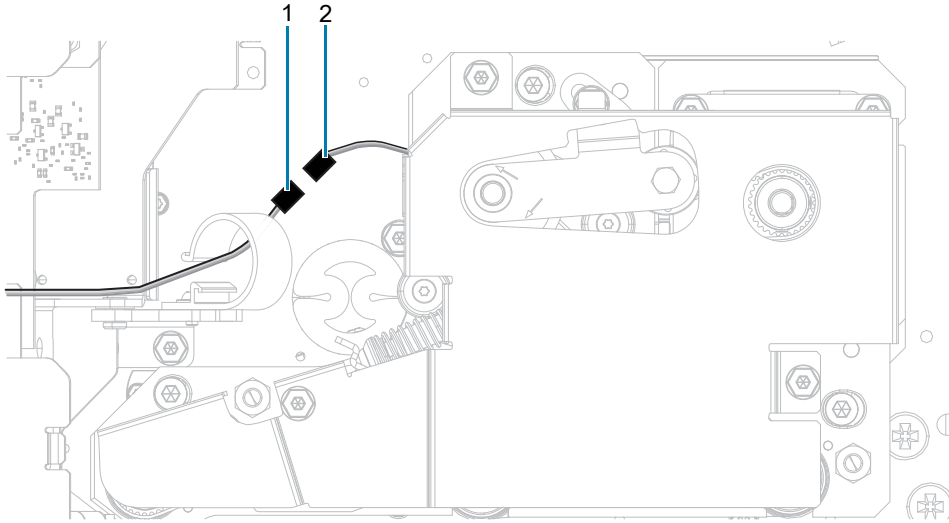
4. Open the rear of the print engine.



## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

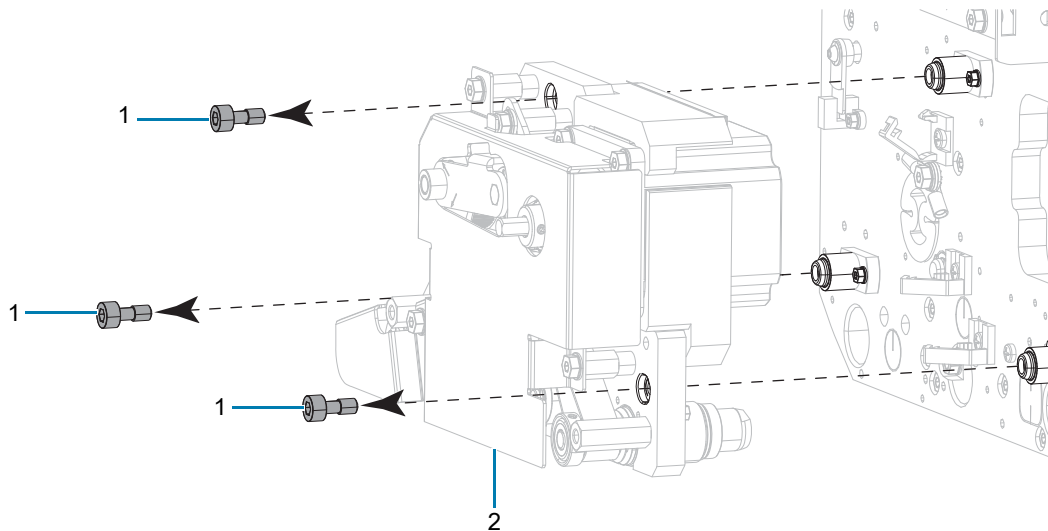


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.




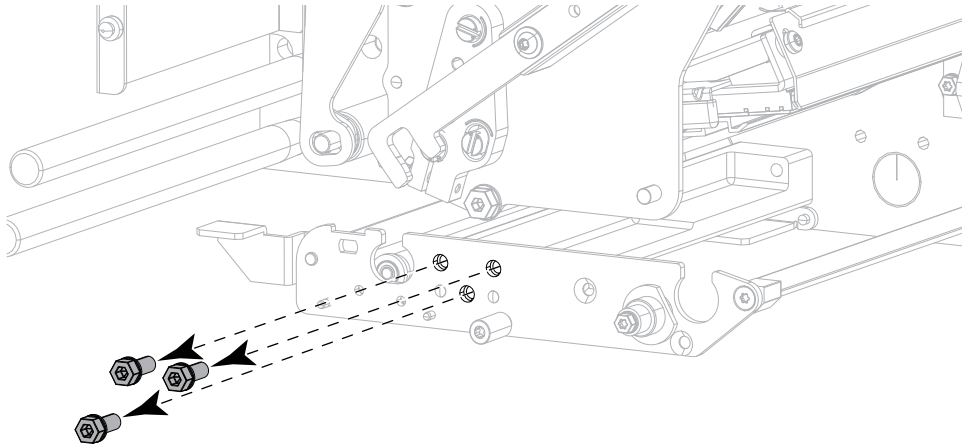
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

3. Remove the drive system (2) from the main frame.





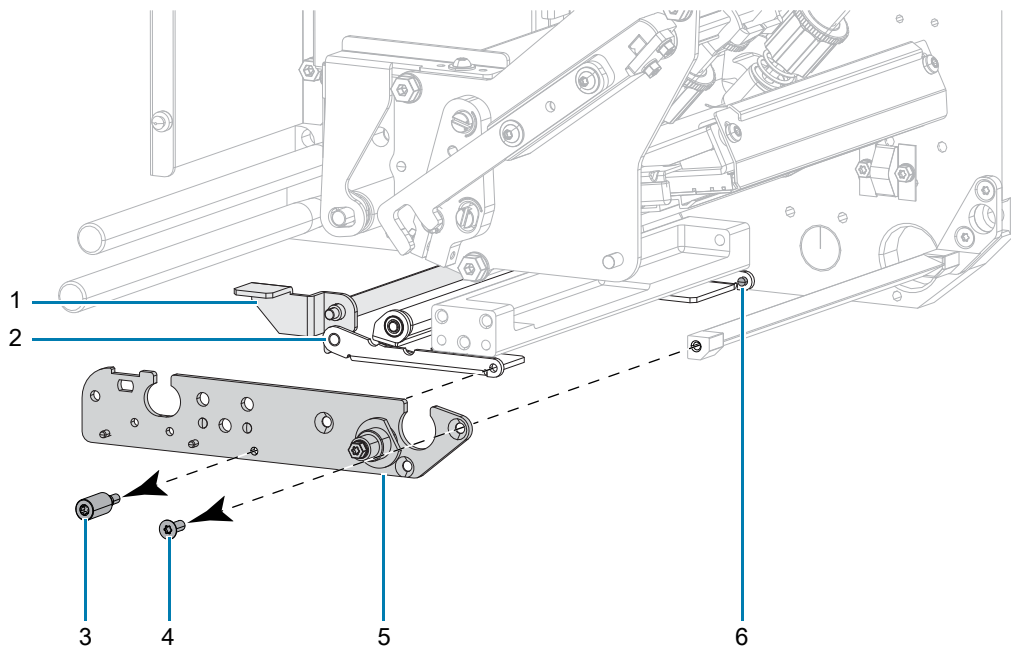
## Replace the Platen Support Bar Printhead Access Guard

1. Remove the three  T9 screws from the platen support bar.




**CAUTION—EYE INJURY:** 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.

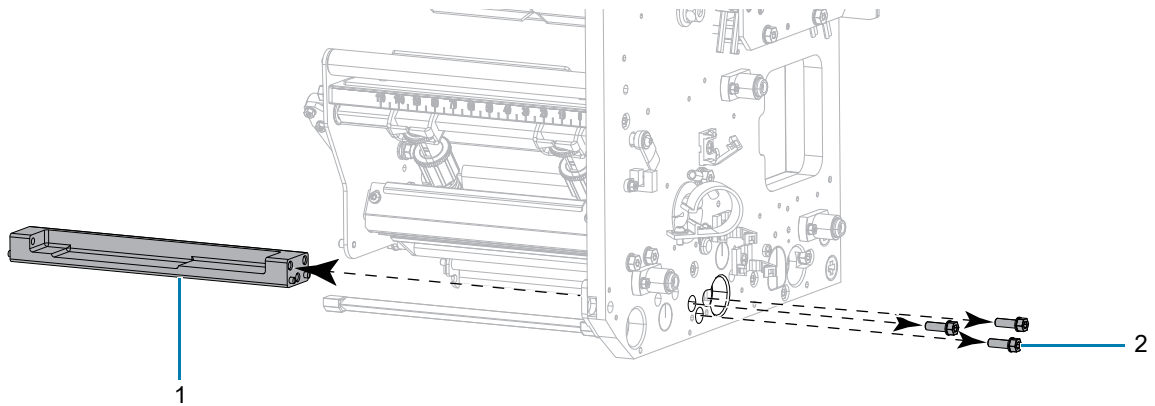
2. Remove the  T10 screw (3) securing the pressure roller frame (2).
  - a. Remove peel roller latch (1) and spring.
  - b. The pressure roller frame (2) may drop out.
  - c. If the pressure roller frame (2) did not drop out on its own, tilt the front down and lift the back off of the pivot pin (6).
3. Remove the  T9 screw (4), and the platen roller support plate (5).




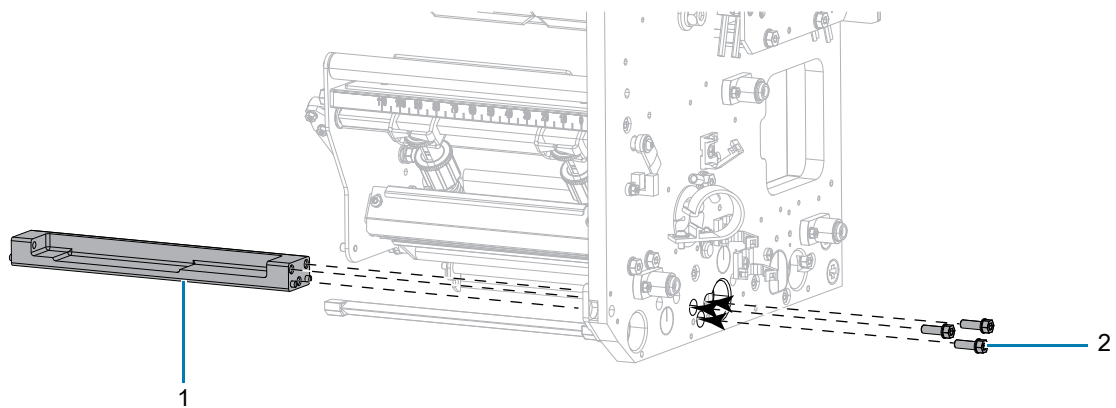
for parts & service call QLC (800) 837-1309

## Platen Support and Printhead Guard Maintenance Kit

4. From the electronics side remove the three  T9 screws (2) and remove the platen support bar (1).



5. Install the new platen roller support plate (1) and secure it with three  T9 screws (2).



for parts & service call QLC (800) 837-1309



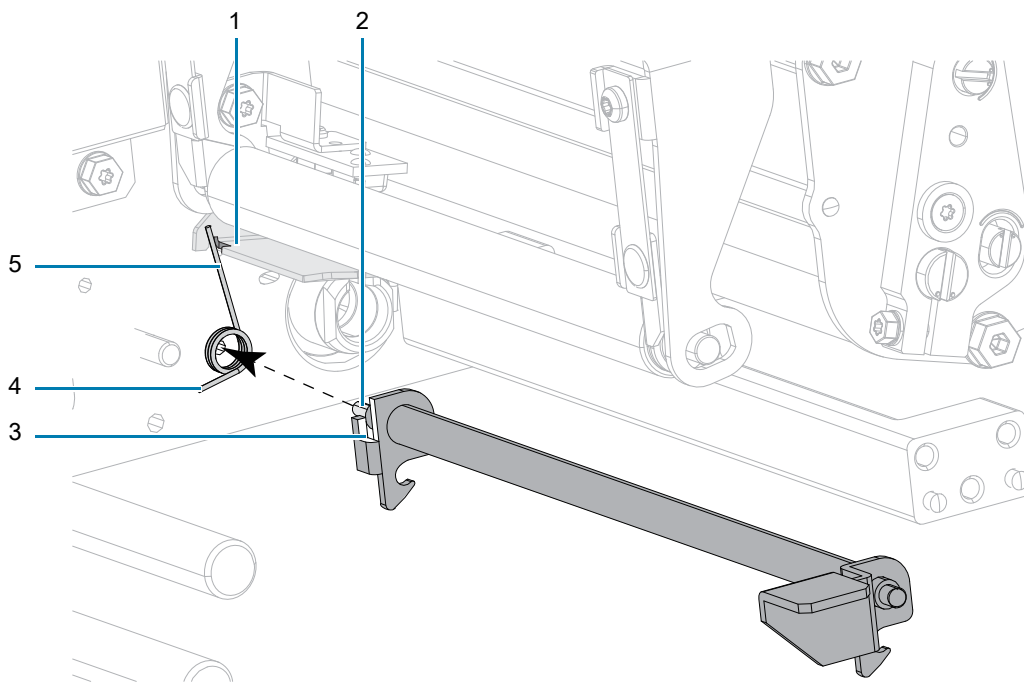
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

6. Reinstall the peel roller latch.




- a. Leading with the short leg of the spring (4), slide the spring onto the inboard end of peel roller shaft (2).
- b. Insert the short leg of the spring (4) into the catch tab on the inboard end of the peel roller latch (3).
- c. Holding the spring in place, insert the inboard end of the latch into the upper catch tab in the ribbon sensor bracket (1).

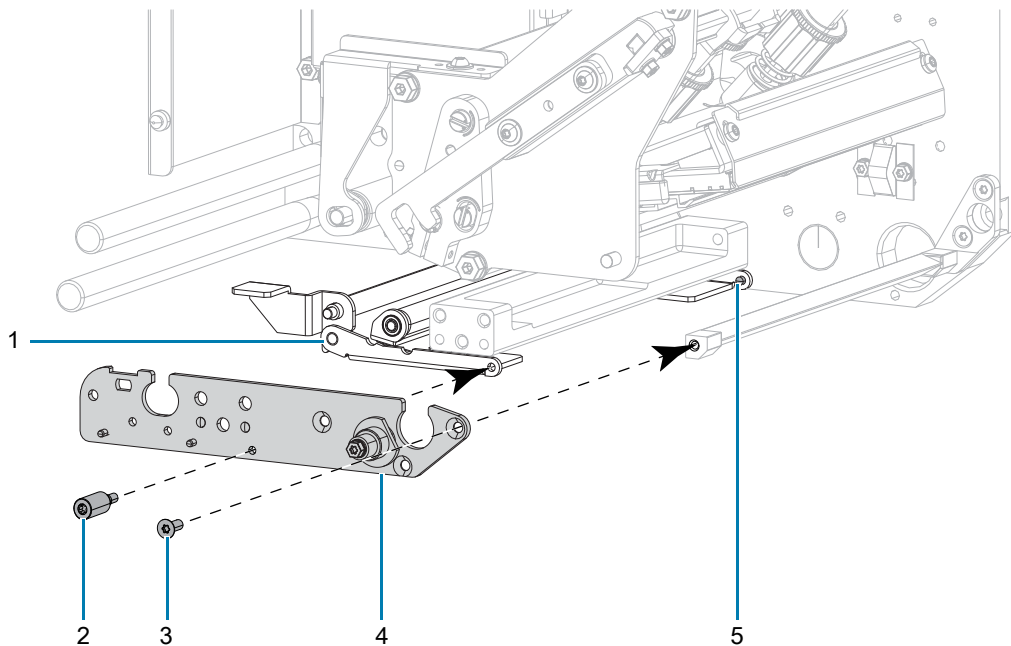



**NOTE:** Ensure the long leg of the spring (5) is resting against the ribbon sensor bracket on the main frame wall.

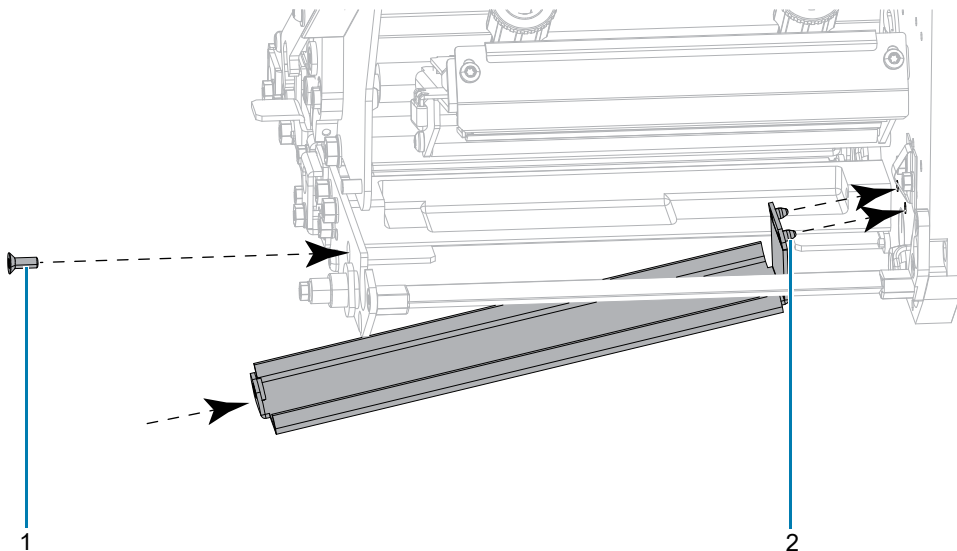


## 7. Install the platen roller support plate.

- a. Align the holes in the platen roller support plate (4) with the holes in the pressure roller frame and the peel bar.
- b. Secure the platen roller support plate with the  T9 screw (3)
- c. Align the pressure roller frame (1) with the pivot pin (5).
- d. Install the pressure roller frame (1) and the platen roller support plate (4).
- e. Secure pressure roller frame (1) and the platen roller support plate (4) with the  PH1 (2) and the  T9 (3) screws.



8. Align the printhead access guard (2) guide pins with the mounting holes on the print engine and secure with the  T9 screw (1).

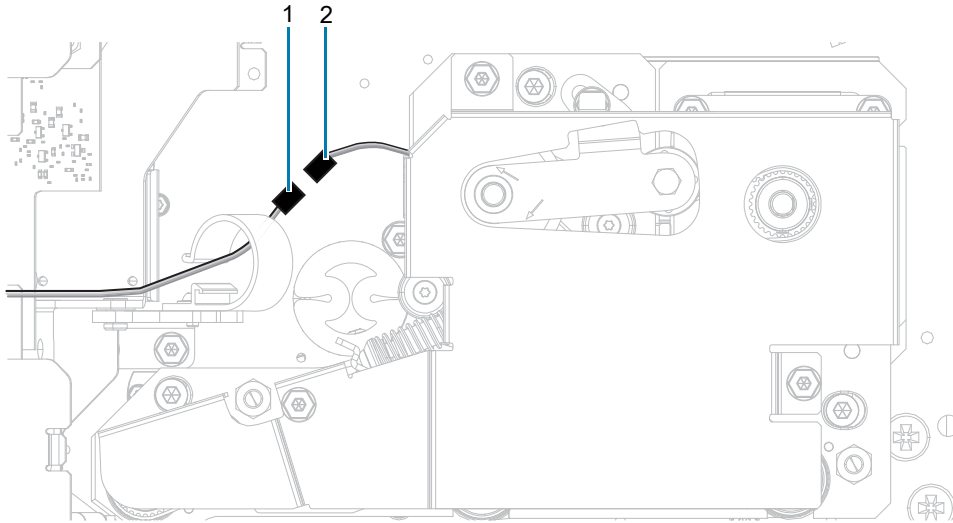


for parts & service call QLC (800) 837-1309

## Install the Drive System

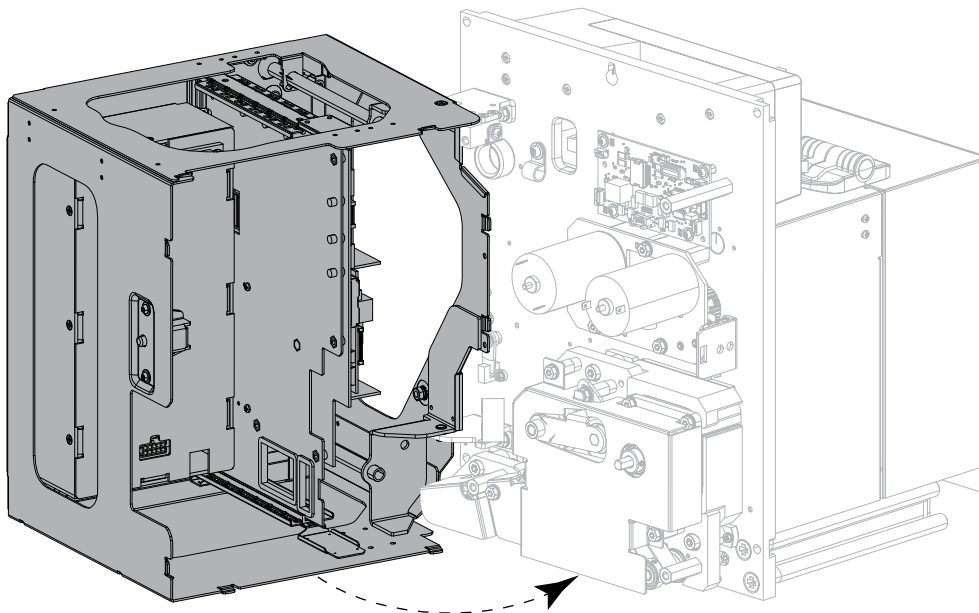
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.



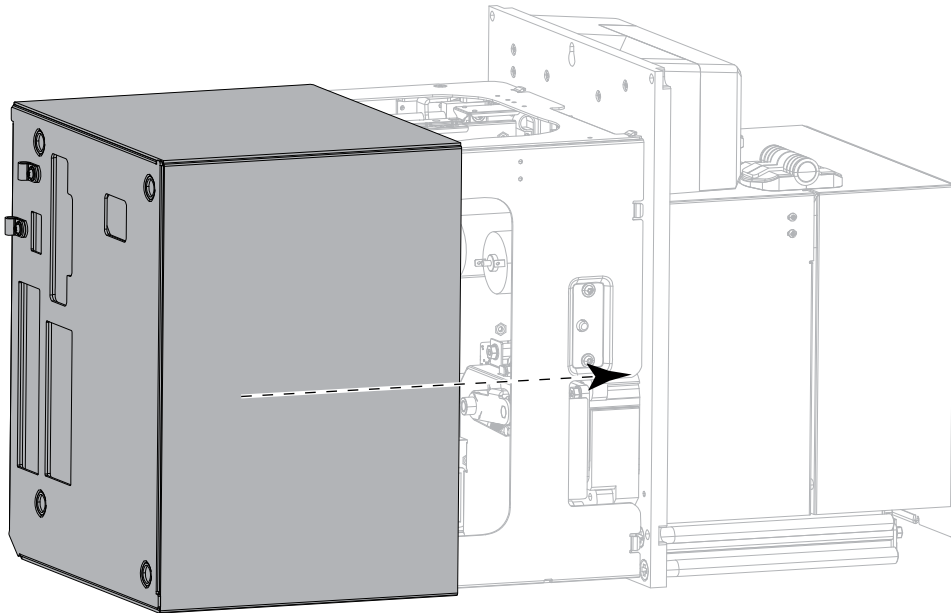
## Close the Electronics Enclosure

1. Close the rear of the print engine.

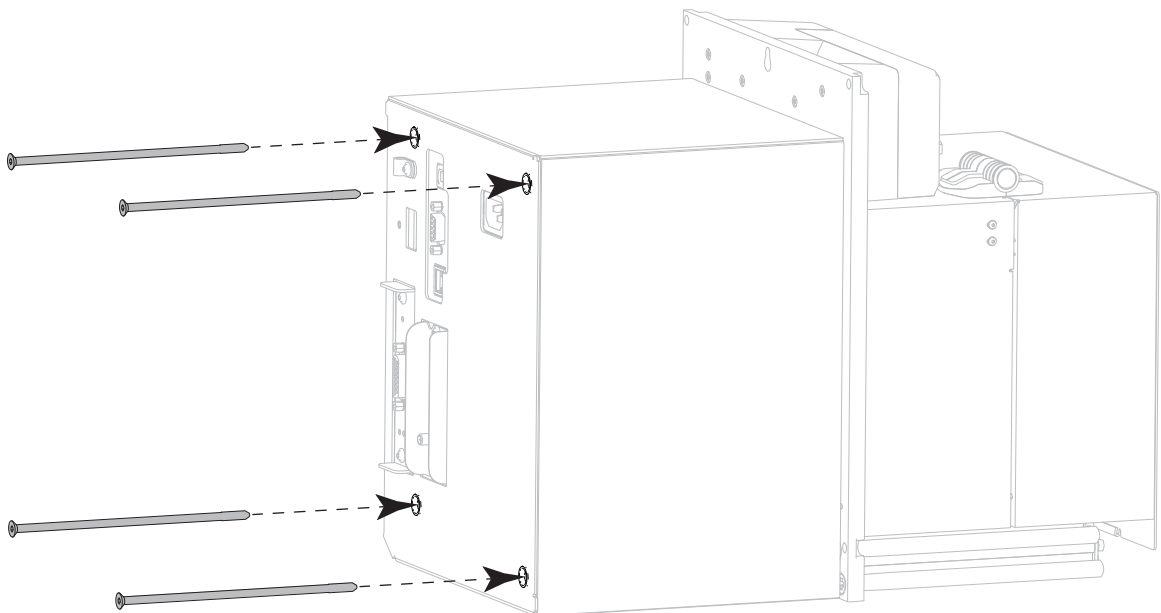




2. Reinstall the electronics enclosure cover on the print engine.

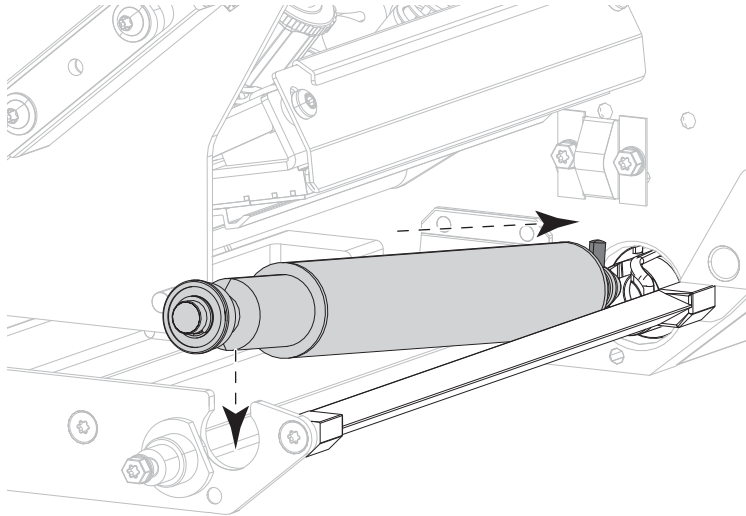



3. Install the four 3mm screws securing the electronics enclosure cover.

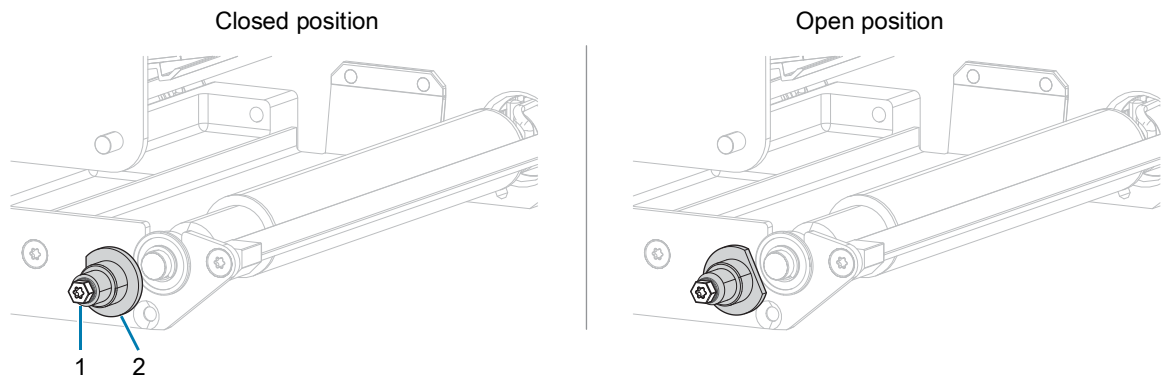


## Install the Rollers

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.

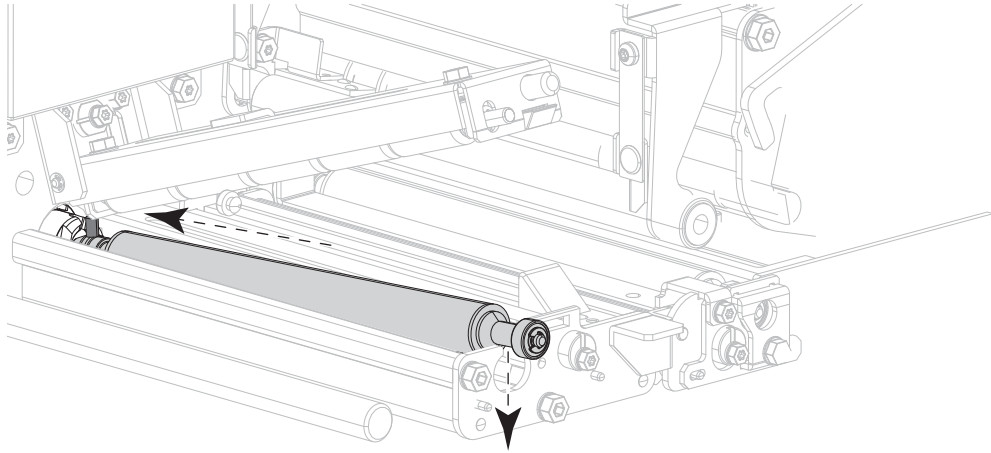



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.

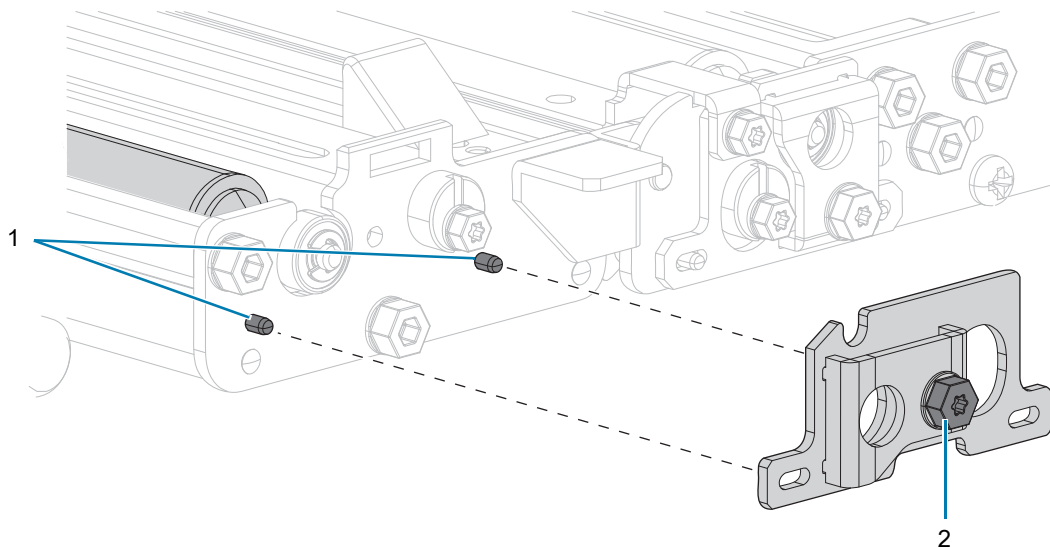


- c. Tighten the  T9 captive screw.

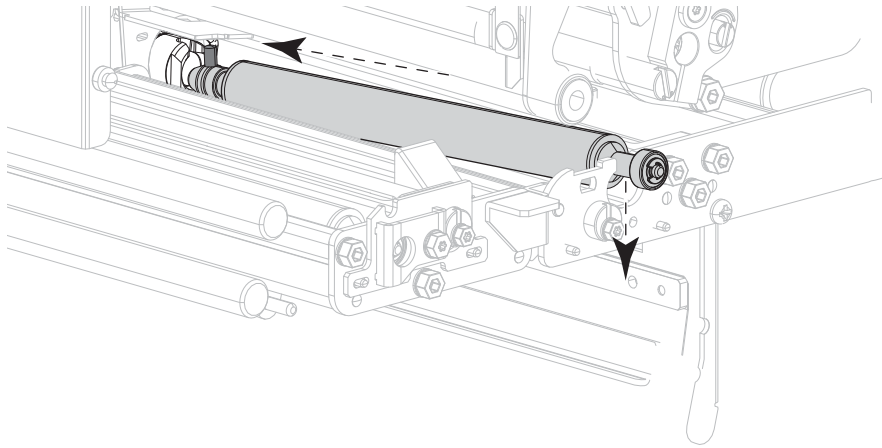
4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.




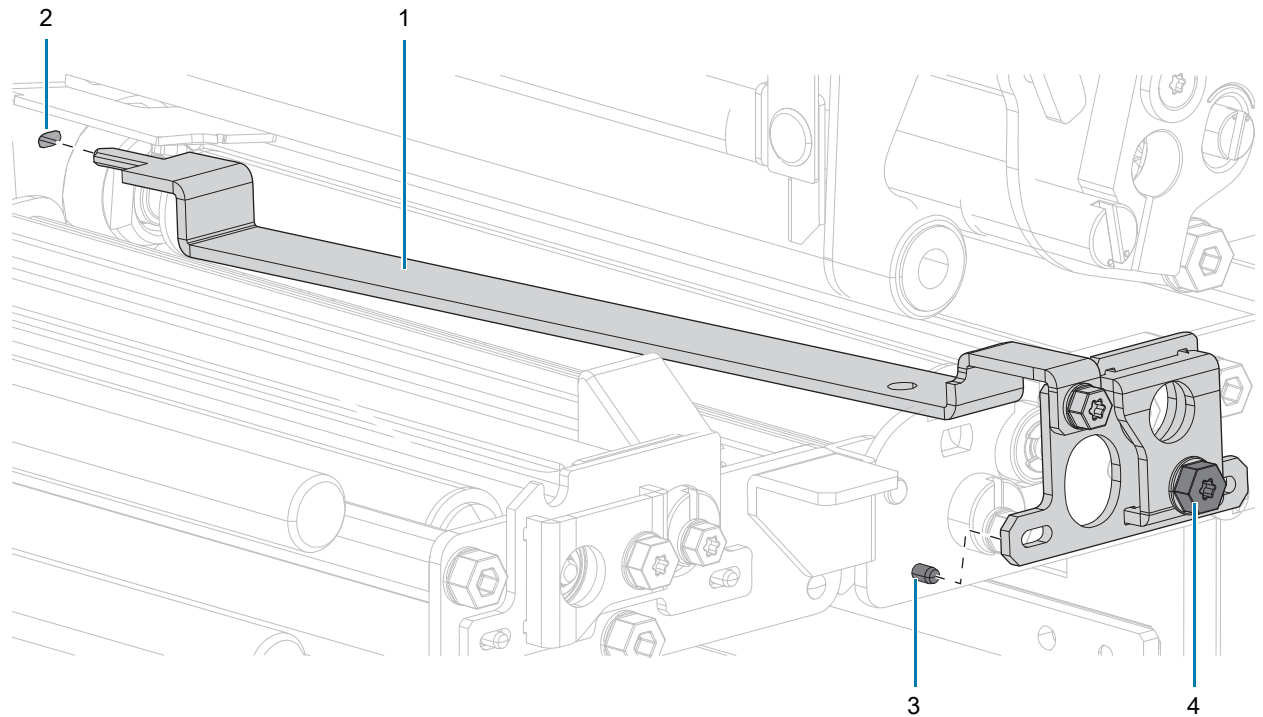
5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.




7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.

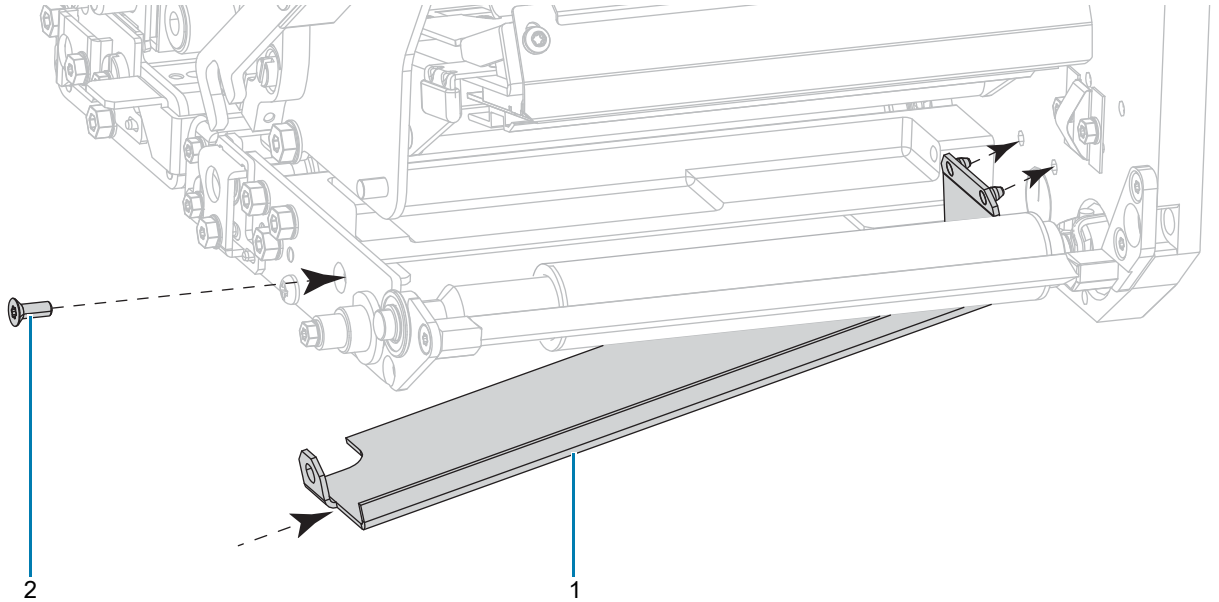


8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



## Install the Printhead Access Guard

1. Align the new printhead access guard guide pins with the mounting holes on the print engine.
2. Rotate the printhead access guard (1) into place and secure it with the  T9 screw (2).



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.












**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Guide media outboard Qty: 1	
	Guide media inboard Qty: 1	
	Screw (M3x12 TX NI) Qty: 1	 T9
	Screw (M3x8 FL TX NI) Qty: 2	 T9
	Washer (flat nylon) Qty: 1	
	Washer (flat M4) Qty: 2	
	Washer (curved 0.344 x 0.172 x 0.006) Qty: 2	

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



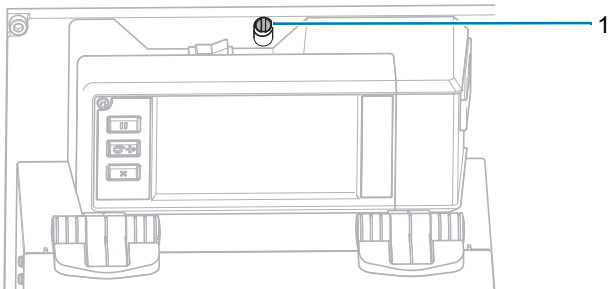
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



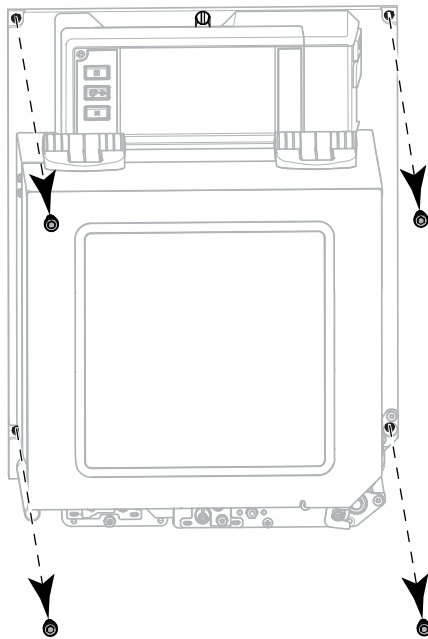
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

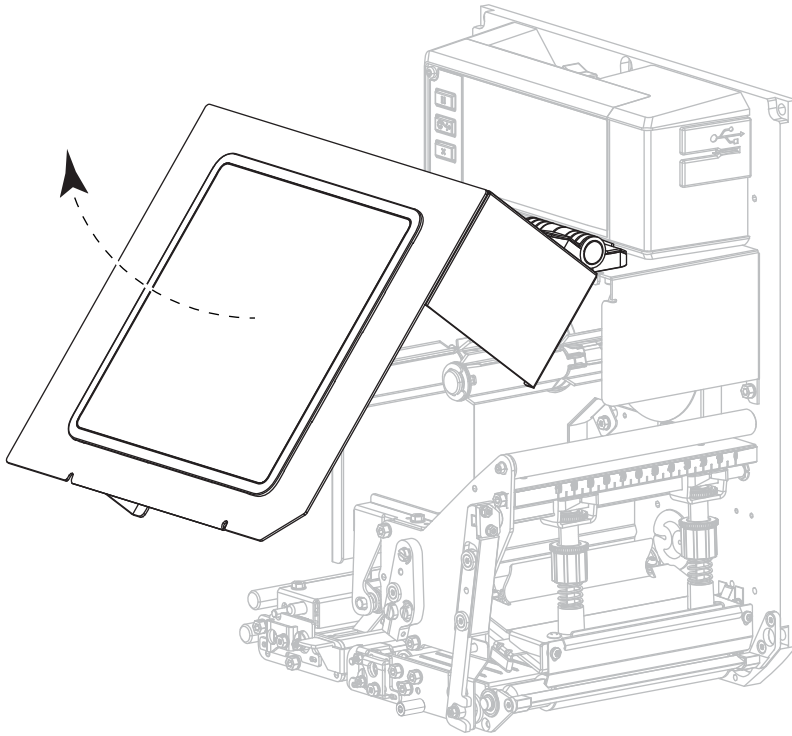


2. Remove the four screws securing the print engine to the applicator.




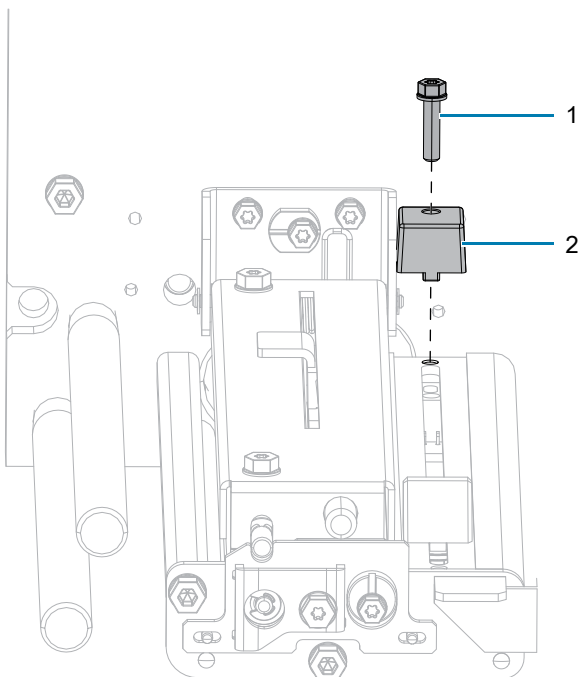
3. Lift the print engine off of the center mounting bolt and place it on a workbench.


4. Open the media cover.



## Replace the Inboard Media Guide

1. Remove the  T9 screw (1) and the inboard media guide (2).



2. Install the new inboard media guide and secure with the  T9 screw.

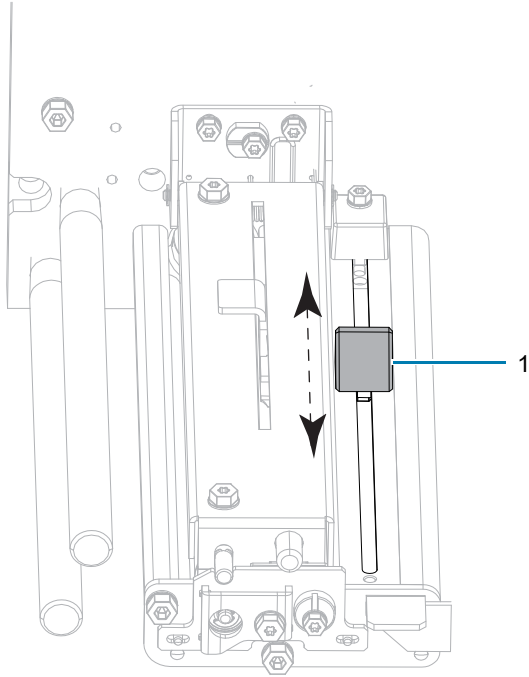
for parts & service call QLC (800) 837-1309



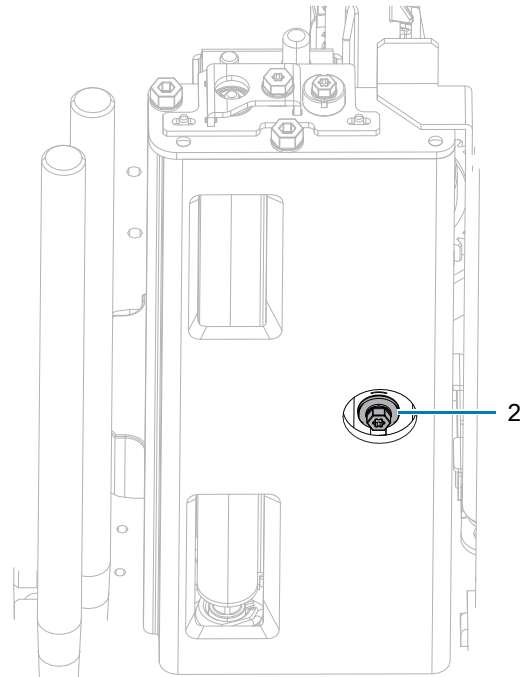
## Replace the Outboard Media Guide


1. Move the inboard media guide (1) until the lower mounting screw (2) is accessible from the access hole in the lower media guide shelf.

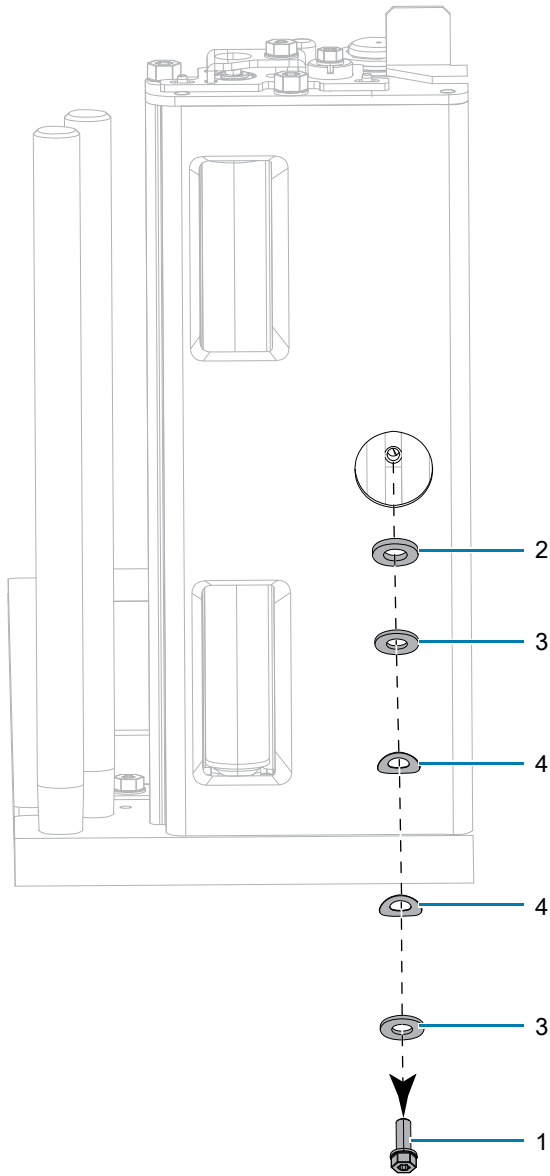
Top View



Bottom View



2. Remove the  T9 screw (1), nylon washer (2), 2 flat washers (3), and the 2 curved washers (4).





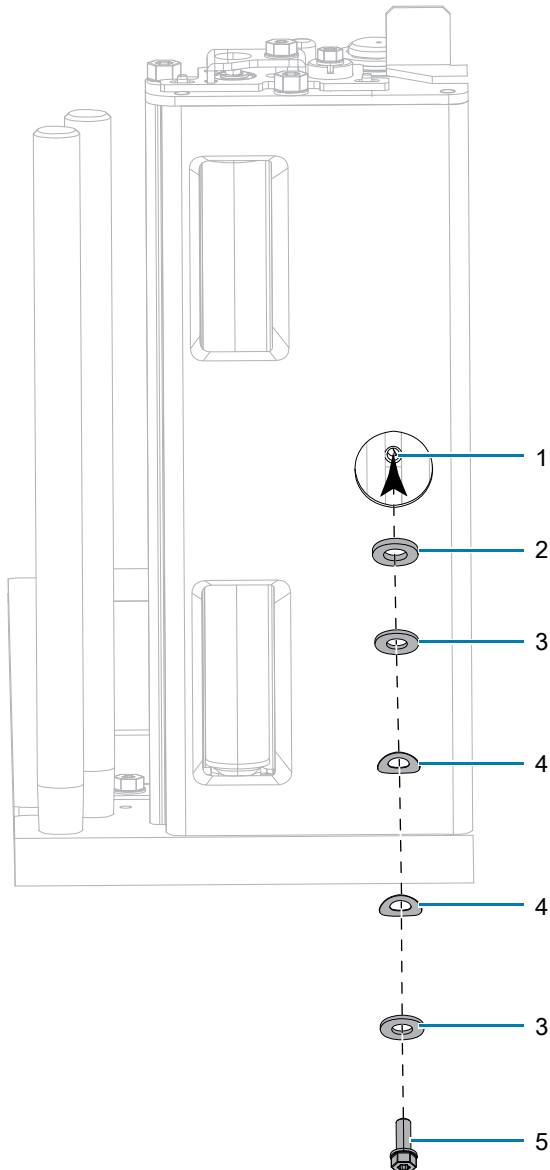
### 3. Install the new outboard media guide.

- a. Insert the new outboard media guide (1) through the top of the lower media shelf so it is visible in the access hole on the bottom.



**NOTE:** The perpendicular end of the outboard media guide must face the main frame of the print engine.

- b. Load the washers in the following order onto the  T9 screw (5).
  - One nylon washer (2)
  - One flat washer (3)
  - Two curved washers (4)
  - One flat washer (3)
- c. Secure the outboard media guide with the  T9 screw (5) and washers.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

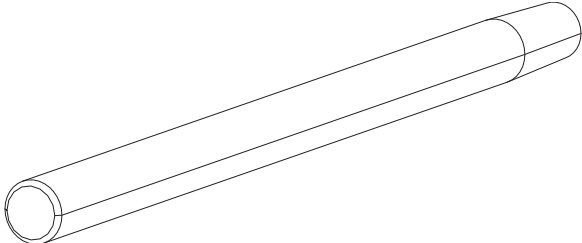




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Media guidepost Qty: 2
	Screw (M6x1x12 FL PH Ni) Qty: 2 

## Tools Required

-  Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



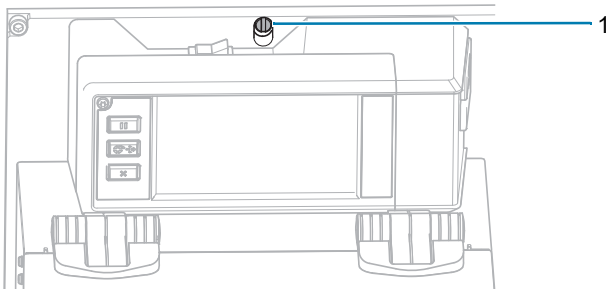
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



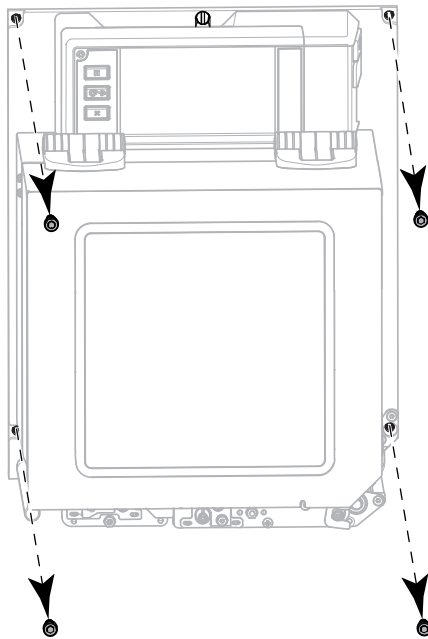
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



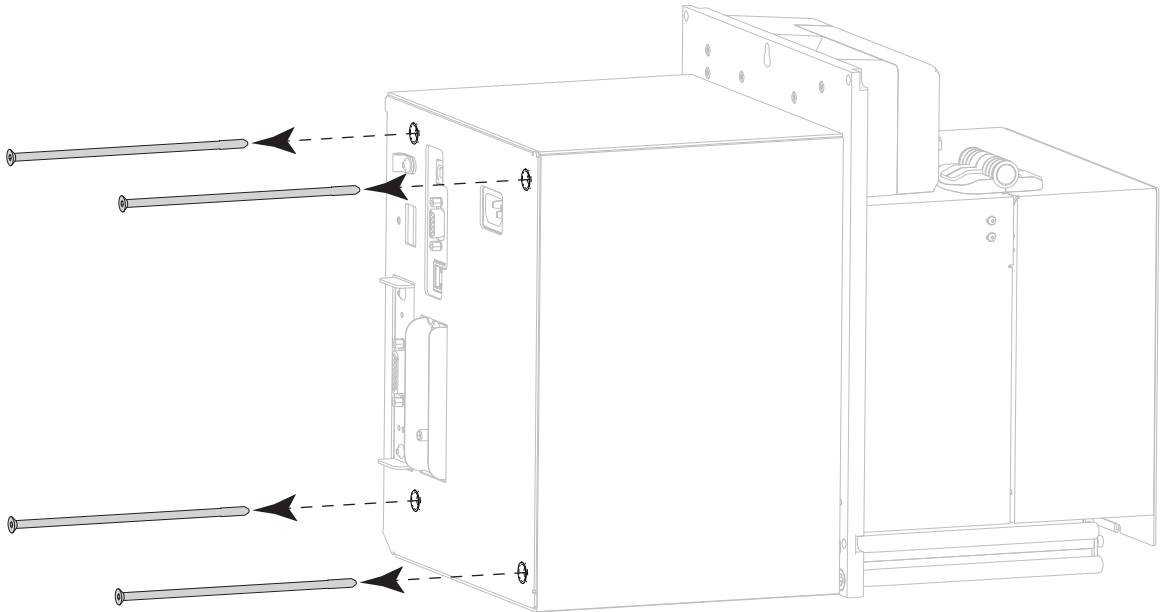
2. Remove the four screws securing the print engine to the applicator.



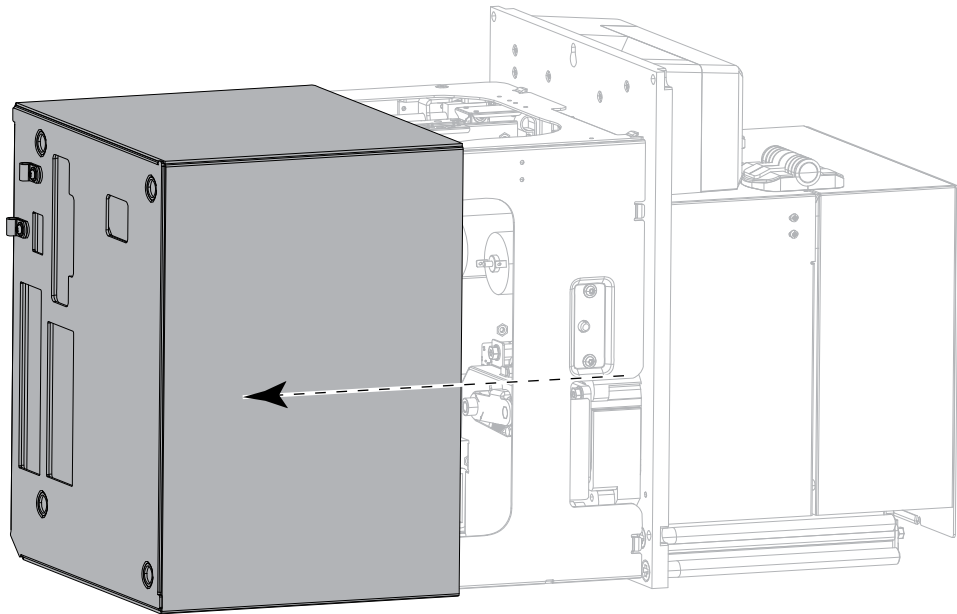
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



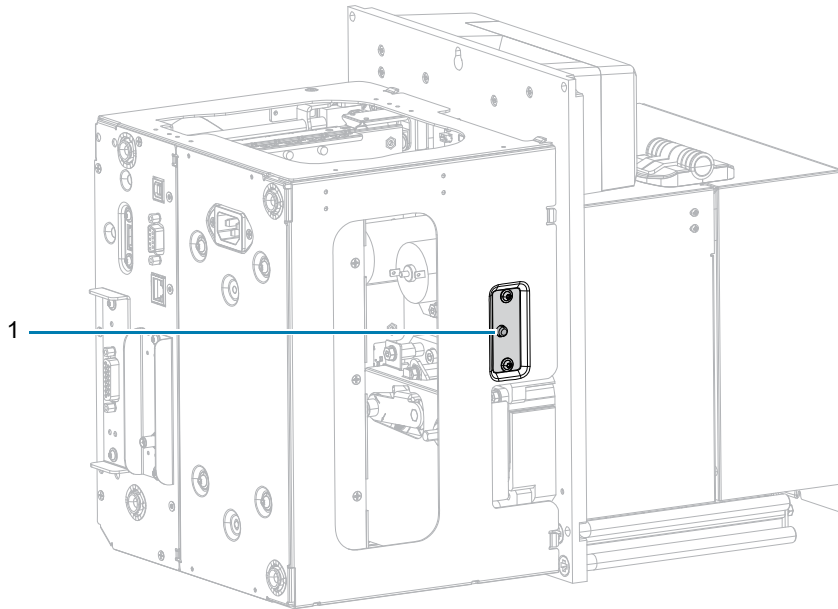
2. Remove the electronics enclosure cover from the print engine.



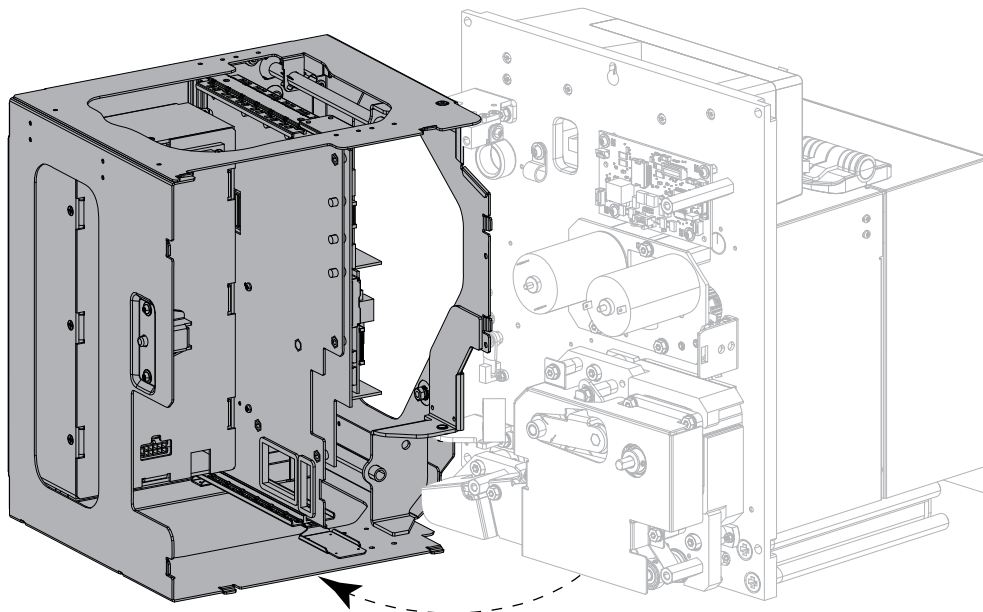
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



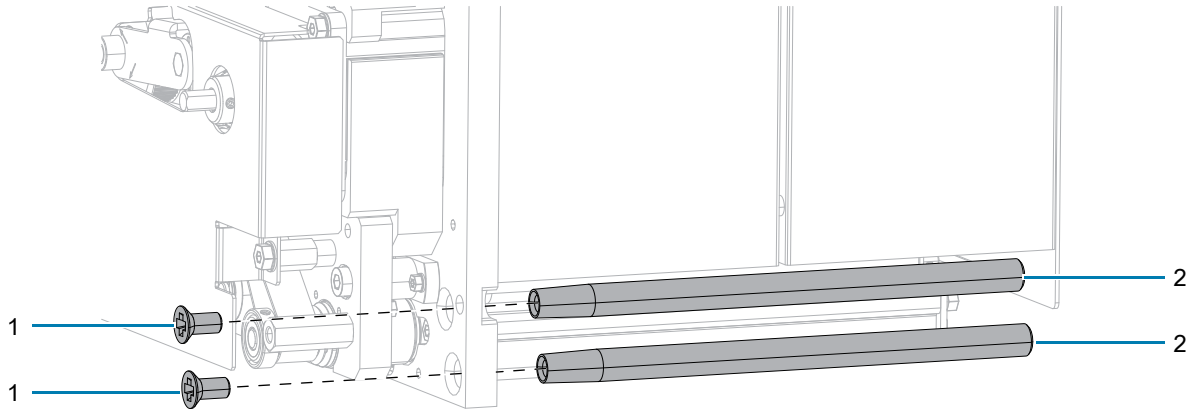
4. Open the rear of the print engine.






## Replace the Media Guideposts

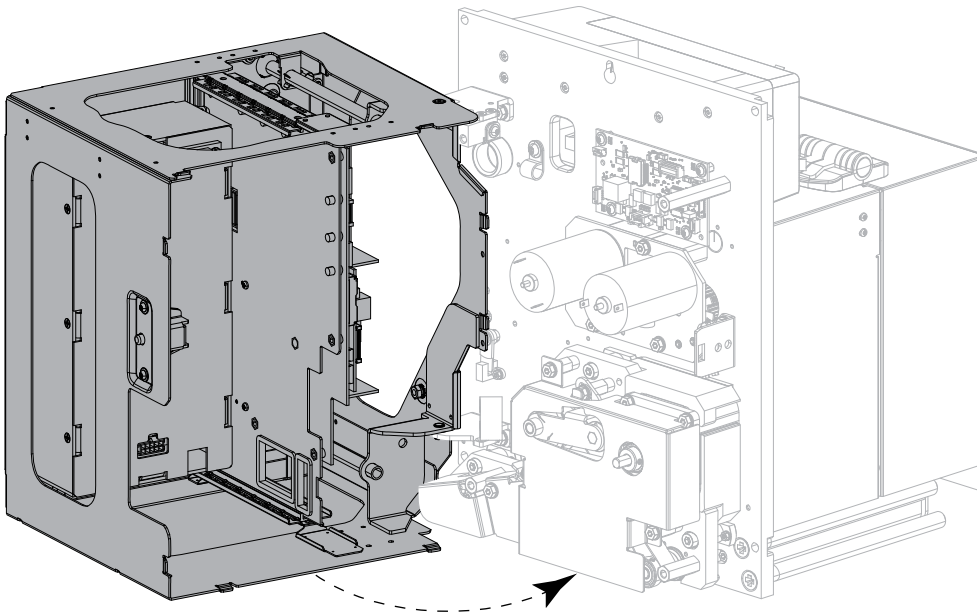
1. Remove the two  PH1 screws (1) and the media guideposts (2).



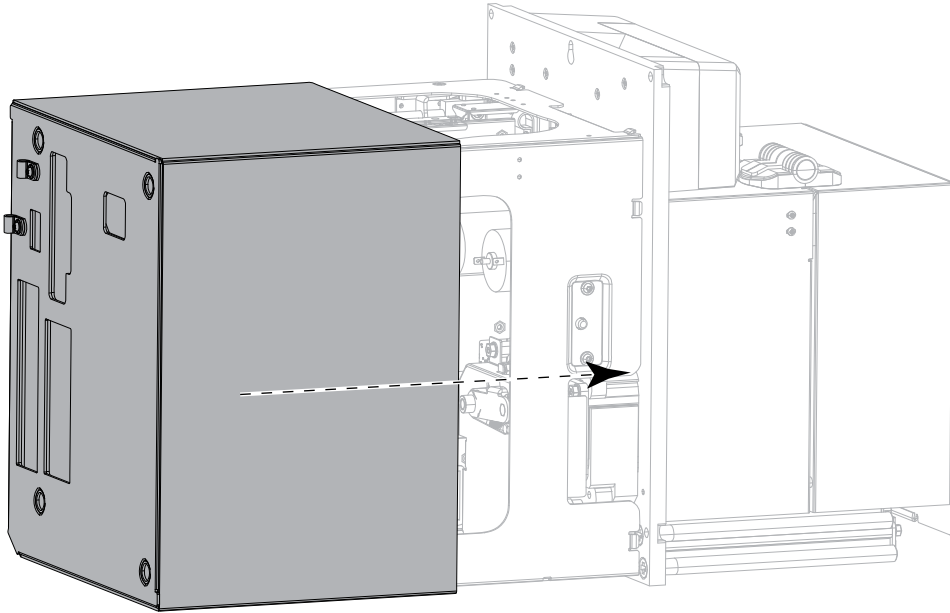
2. Install the new media guideposts (2) and secure with the two  PH1 screws (1).

## Close the Electronics Enclosure

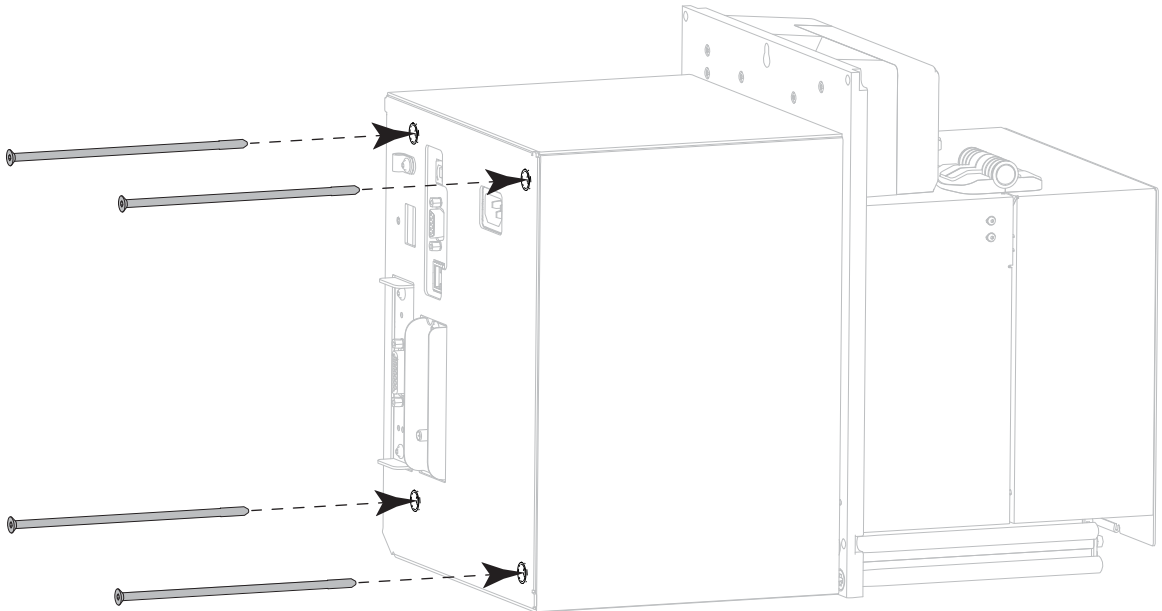
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

Printers supported:

- ZE511
- ZE521










**IMPORTANT:** A qualified service technician must perform this installation.


The graphics shown in this document depict a right-hand (RH) 4-inch model. The graphics for a left-hand (LH) model would be a mirror image.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

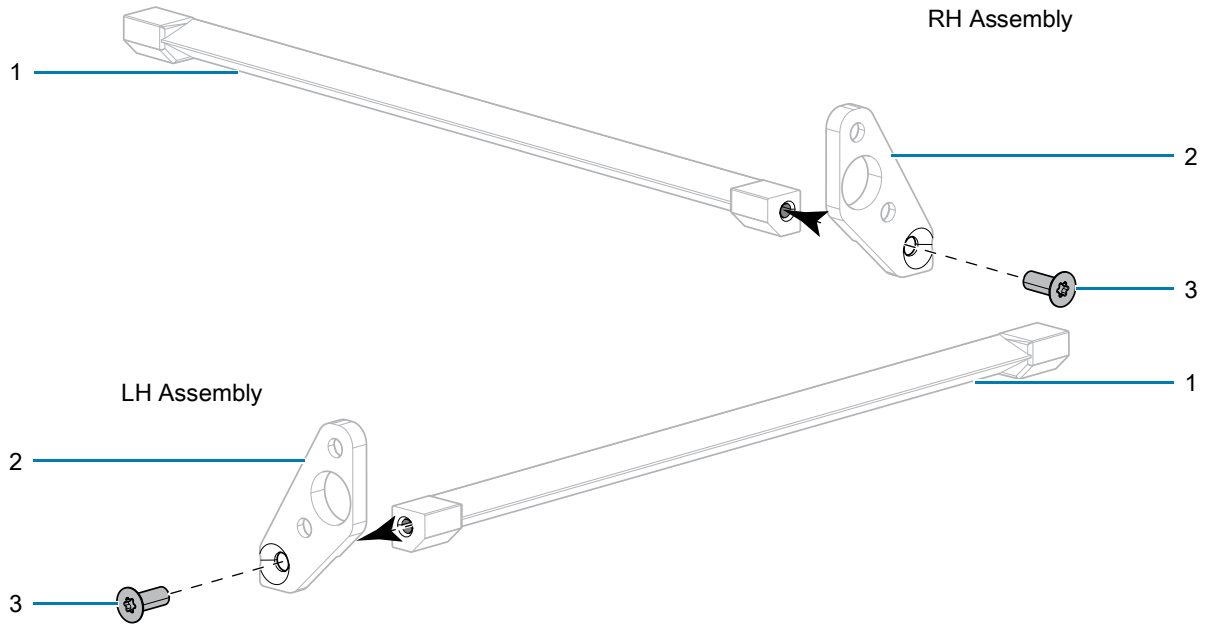
	Standard peel bar (qty 1)	
	Peel bar mounting plate RH (qty 1)	
	Peel bar mounting plate LH (qty 1)	
	Screw (M3x8 FL TX NI) Qty: 2	 T10
	Screw (M3x12 FL TX NI) Qty: 2	 T10

## Tools Required

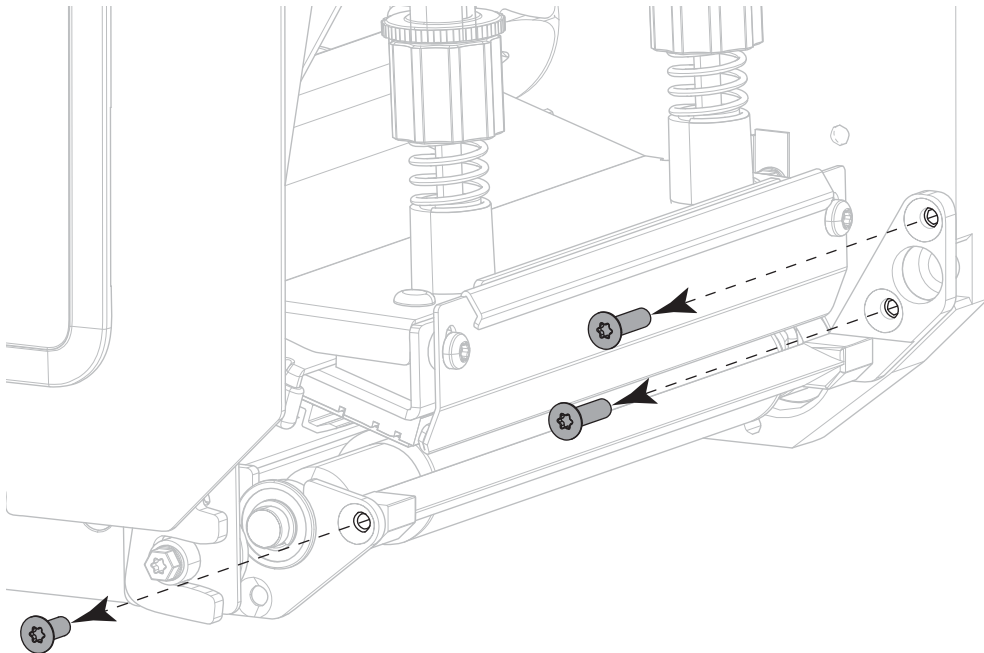
-  Metric hexalobular (6lobe, star) keys  
Size: T10
- Sorting bin for screws and small parts (optional)

## Replace the Peel Bar

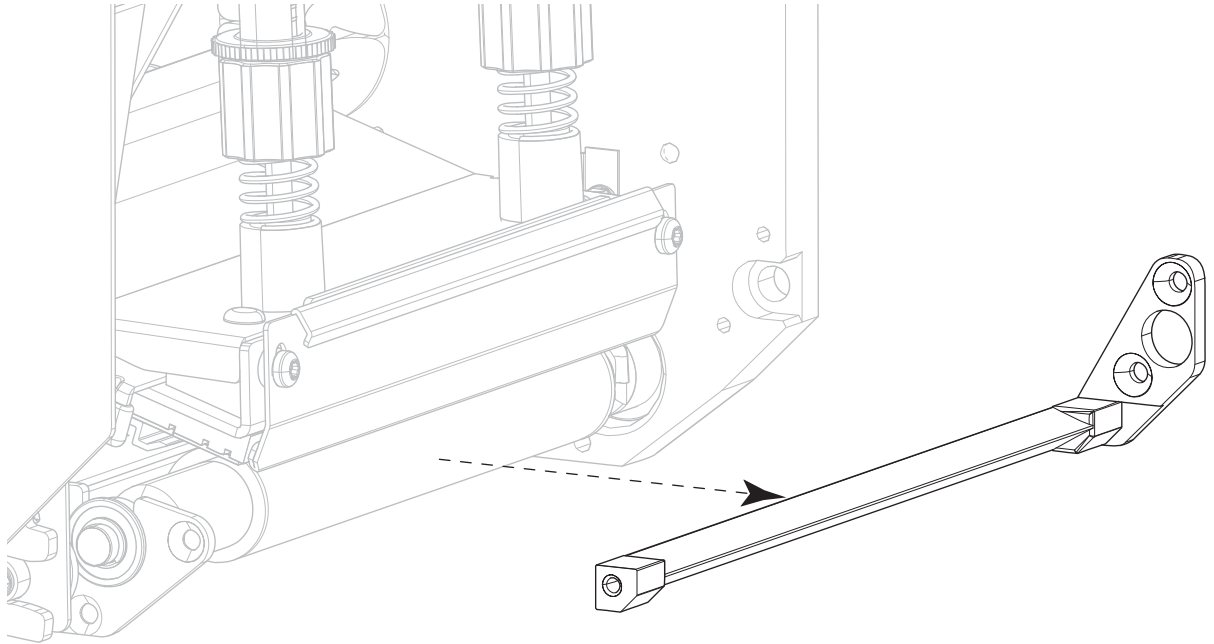
1. Align the appropriate replacement mounting plate (RH or LH) (2) with the side of the replacement peel bar (1) as shown, and secure with one of the shorter T10 screws (3).




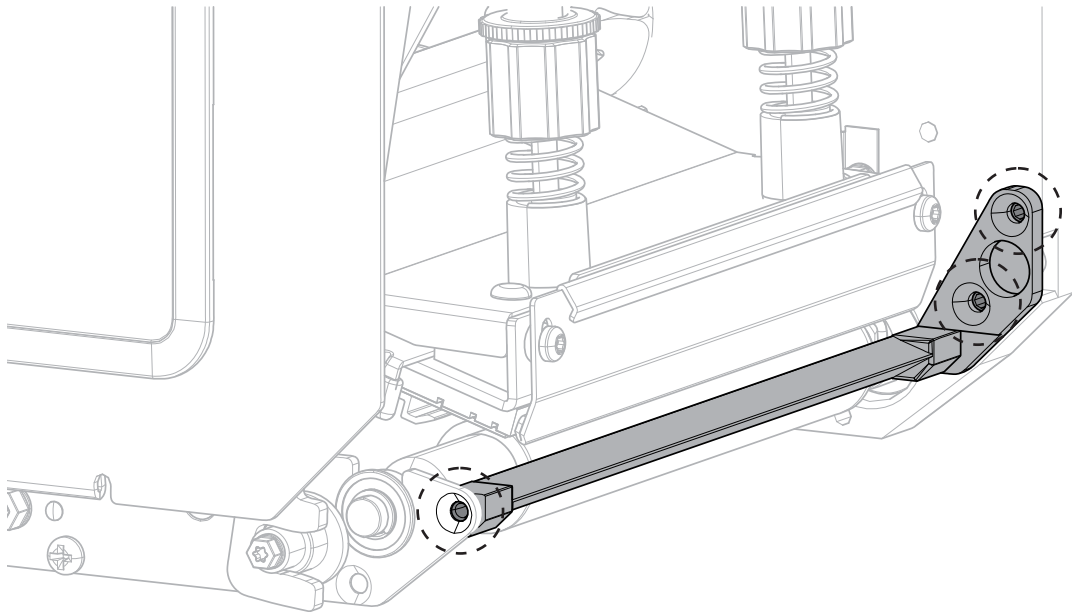
2. Remove the screws securing the peel bar.



3. Remove the peel bar and mounting plate.

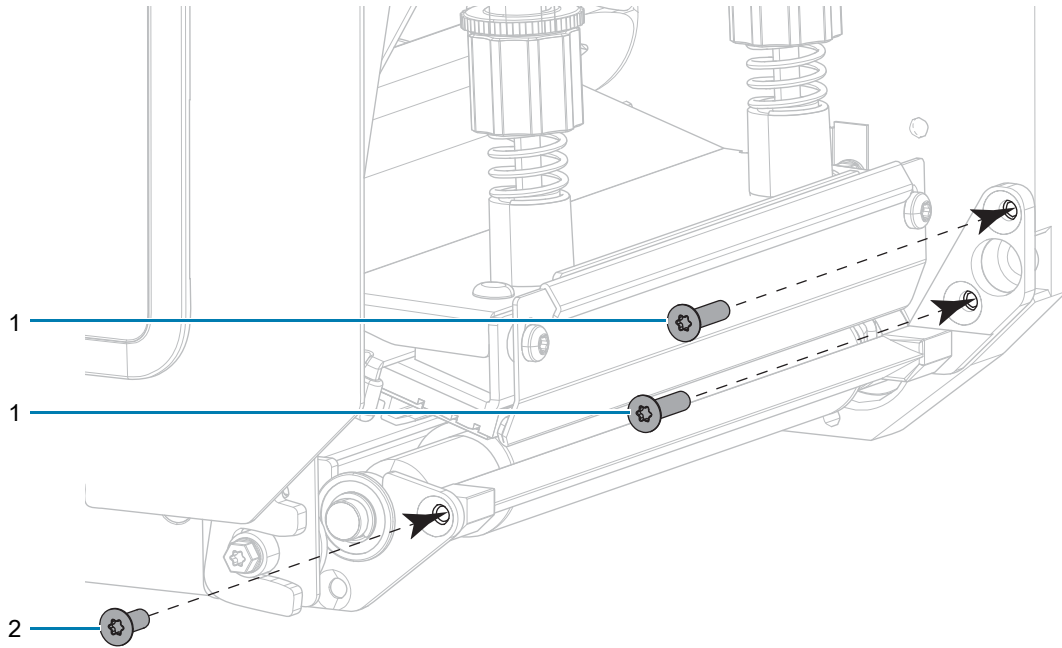


4. Align the mounting holes in the peel bar assembly with the holes from which the  T10 screws were removed.



## Standard Peel Bar Maintenance Kit

5. Install the mounting screws as shown, with the two longer T10 screws (1) used to secure the mounting plate to the mainframe and the remaining shorter T10 screw (2) used to secure the peel bar to the print engine. Tighten the screws firmly.



The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.

Printers supported:

- ZE511
- ZE521

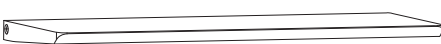








**IMPORTANT:** A qualified service technician must perform this installation.


The graphics shown in this document depict a right-hand (RH) 4-inch model. The graphics for a left-hand (LH) model would be a mirror image.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Extended peel bar (qty 1)	
	RH peel bar mounting plate (qty 1)	
	LH peel bar mounting plate (qty 1)	
	Screw (M3x8 FL TX NI) Qty: 2	 T10
	Screw (M3x12 FL TX NI) Qty: 2	 T10

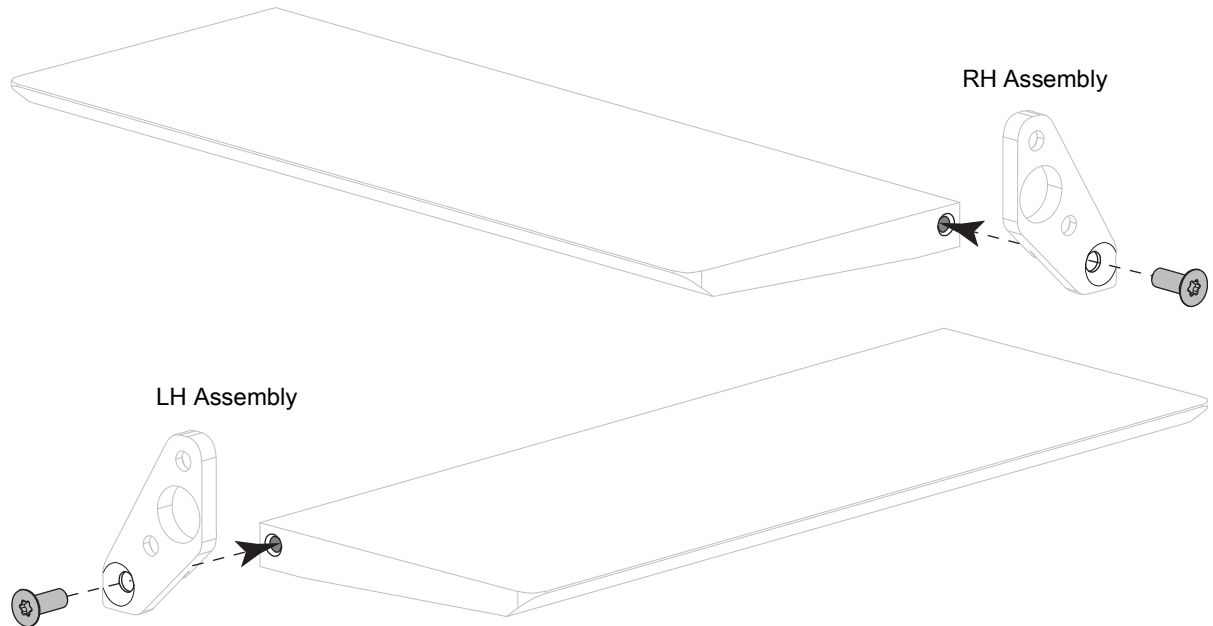
## Tools Required

 Metric hexalobular (6lobe, star) keys Size: T10
Sorting bin for screws and small parts (optional)

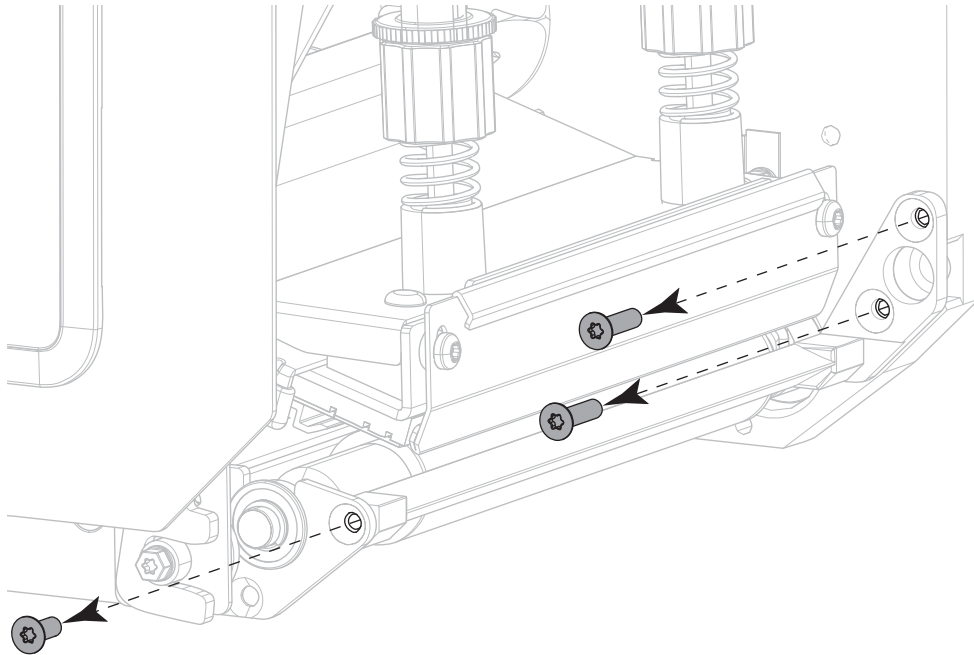


## Replace the Peel Bar

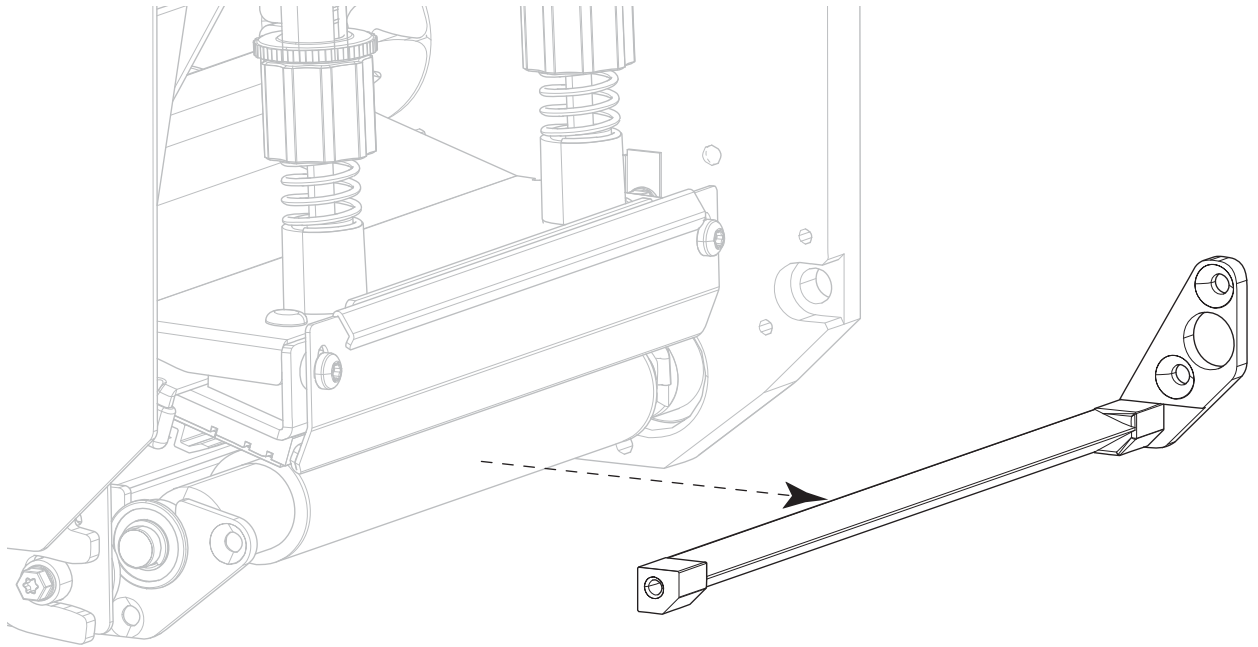
1. Align the appropriate mounting plate (RH or LH) with the side of the extended peel bar as shown, and secure with one of the shorter (M3×8) screws.



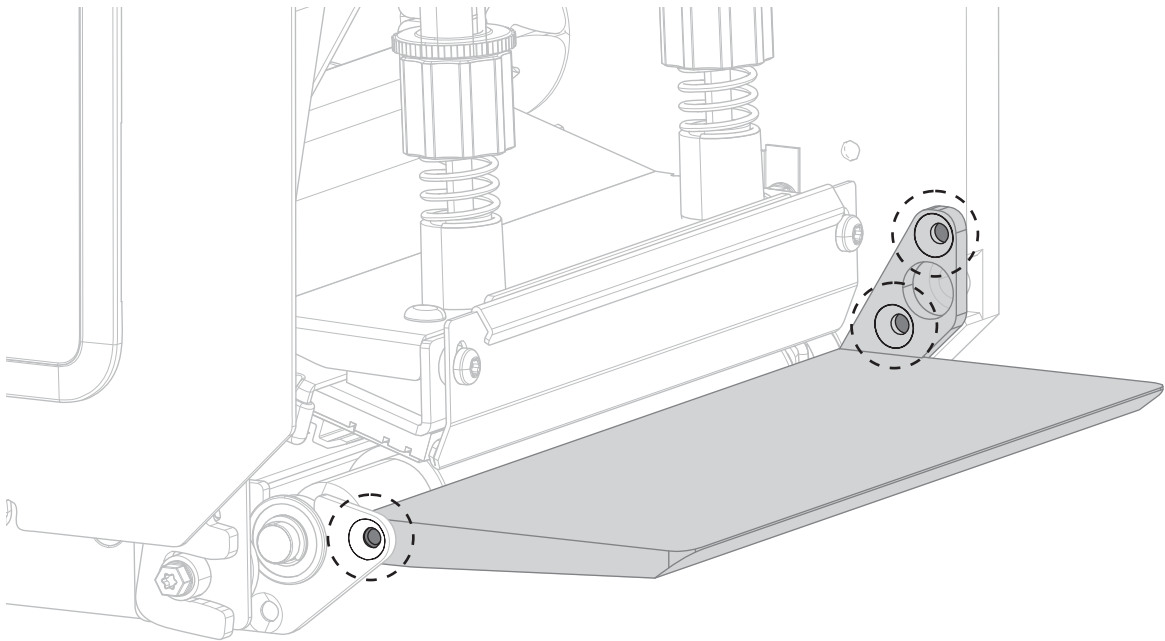
2. Remove the screws securing the standard peel bar.



3. Remove the standard peel bar and mounting plate.

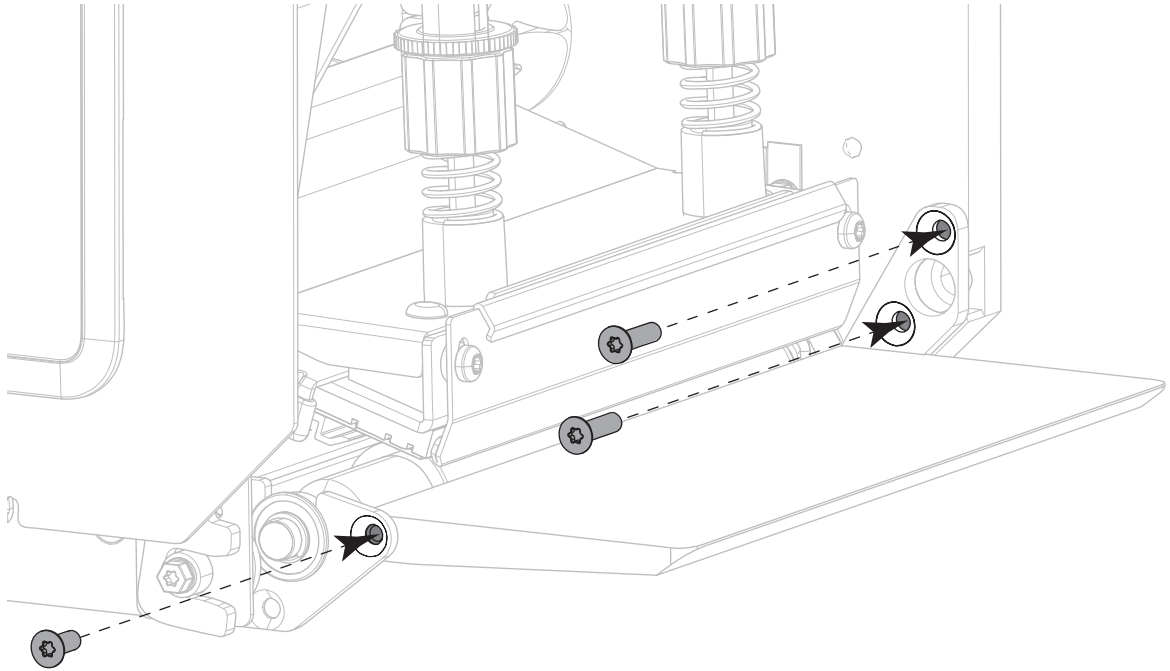


4. Align the mounting holes in the extended peel bar assembly with the holes from which the screws were removed.



## Extended Peel Bar Maintenance Kit

5. Install the mounting screws as shown, with the two longer (M3×12) screws used to secure the mounting plate to the mainframe and the remaining shorter (M3x8) screw used to secure the extended peel bar to the chassis. Tighten the screws firmly.



The installation is complete.

# Pivot Bar and Toggle Assemblies Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

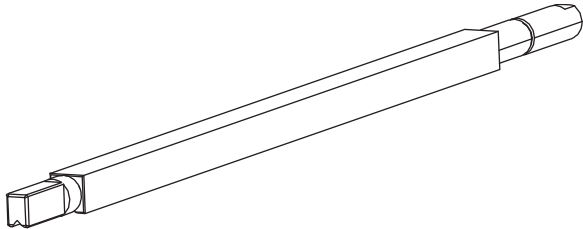
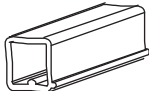
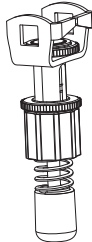





**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.




The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Pivot Toggle Bar Qty: 1
	Toggle stop spacer Qty: 1
	Toggle assembly Qty: 2
	Crescent ring Qty: 2
	Bearing, oilite flanged sintered bronze Qty: 1
	Washer, curved Qty: 1

## Pivot Bar and Toggle Assemblies Maintenance Kit

	Bearing, sleeve flanged nyloner Qty: 1
	Flag sensor Qty: 1
	Screw (hexalobular pan washer mach M3 x 6) Qty: 1

### Tools Required

- ⬠ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T10
- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



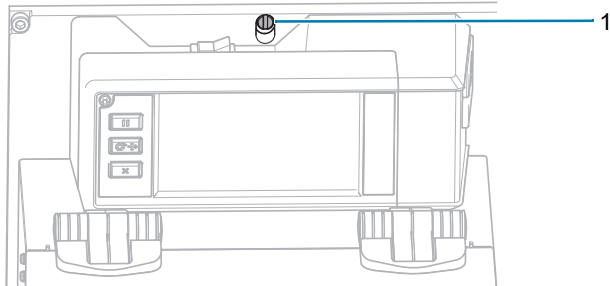
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



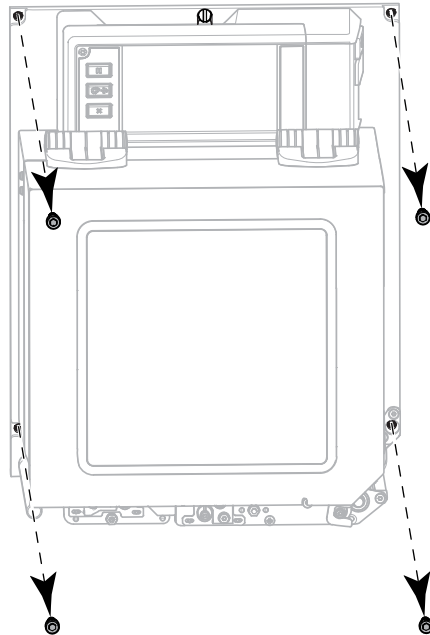
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



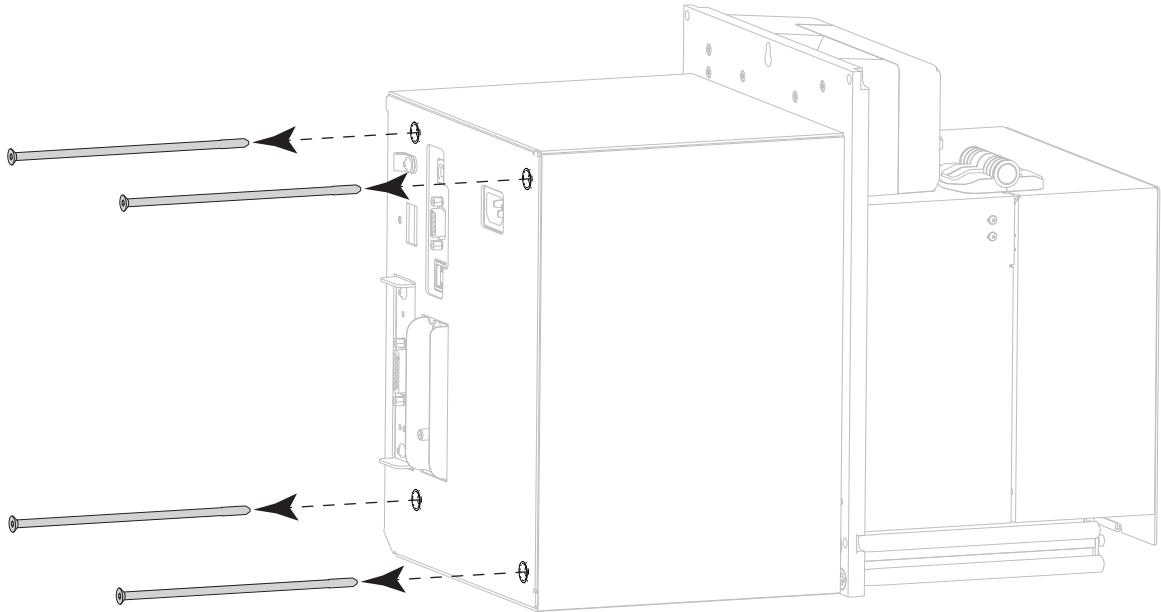
2. Remove the four screws securing the print engine to the applicator.



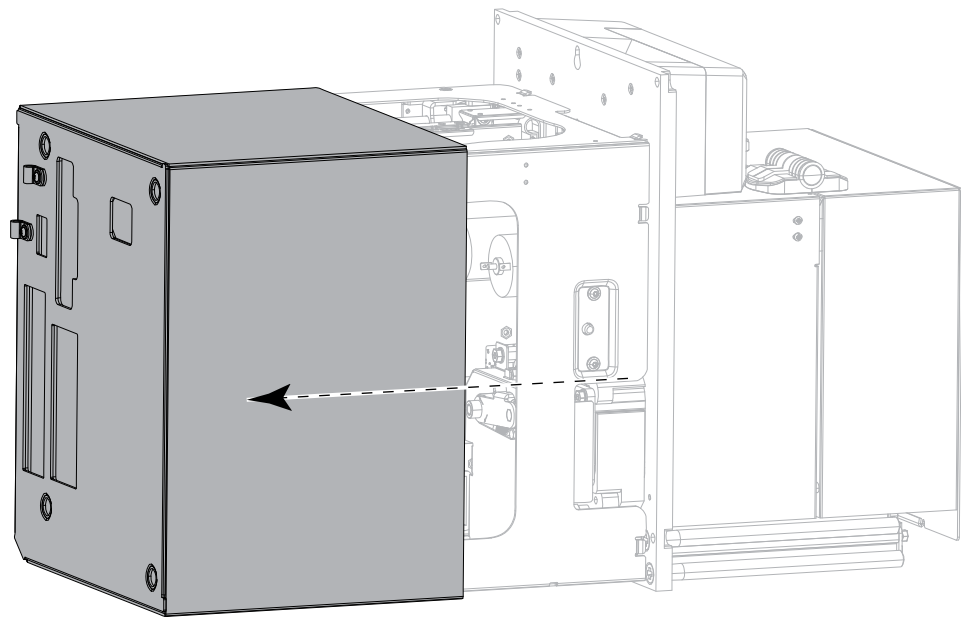
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

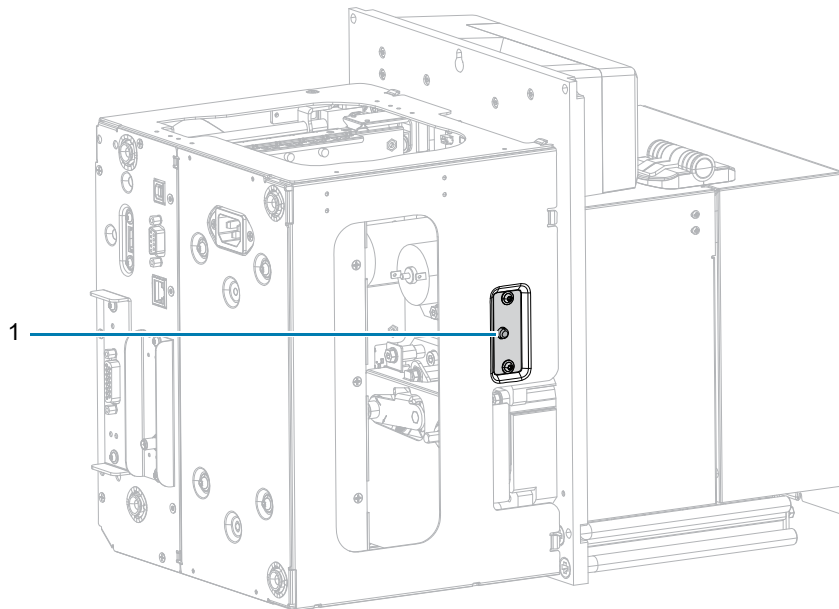


## Pivot Bar and Toggle Assemblies Maintenance Kit

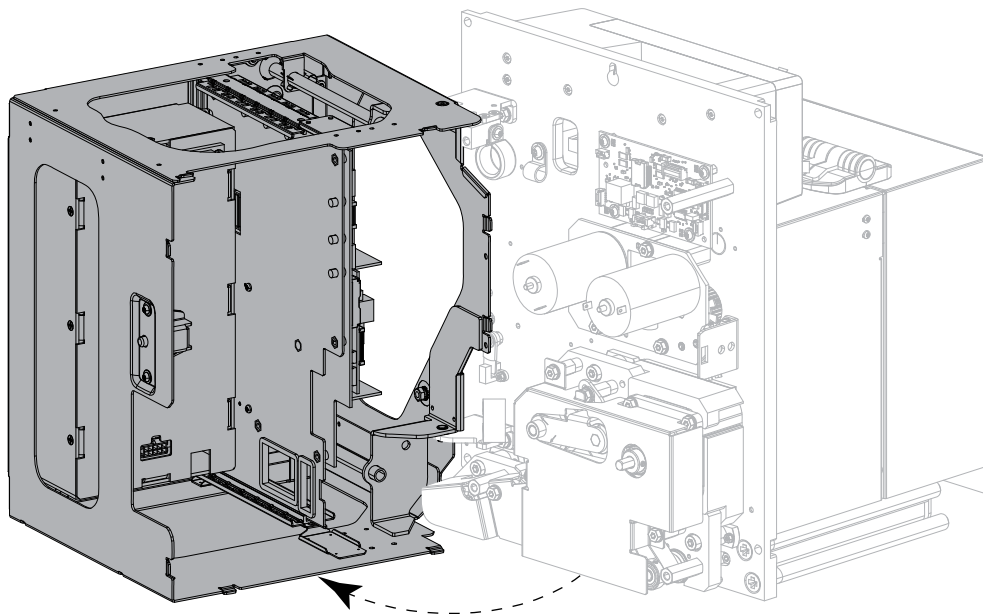
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.




4. Open the rear of the print engine.

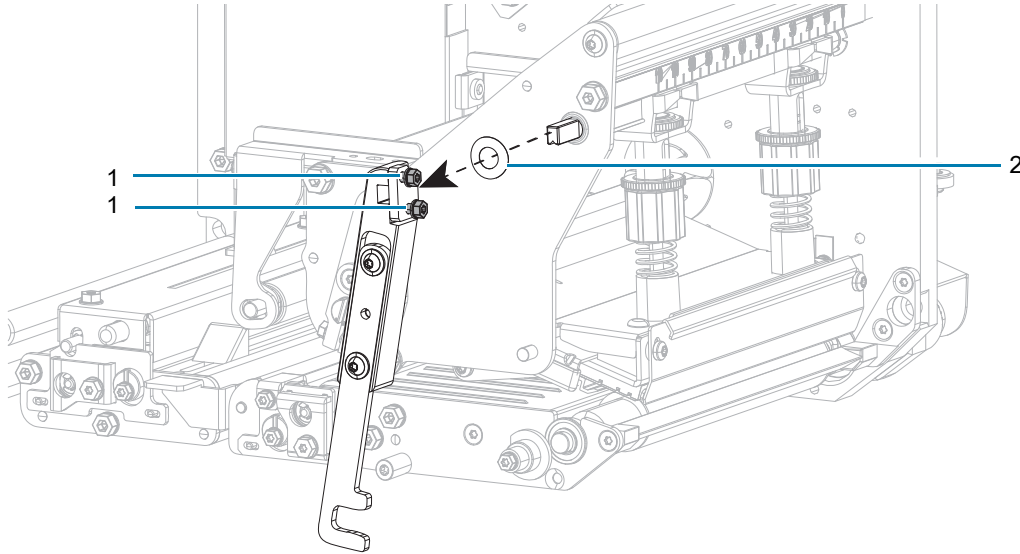


for parts & service call QLC (800) 837-1309



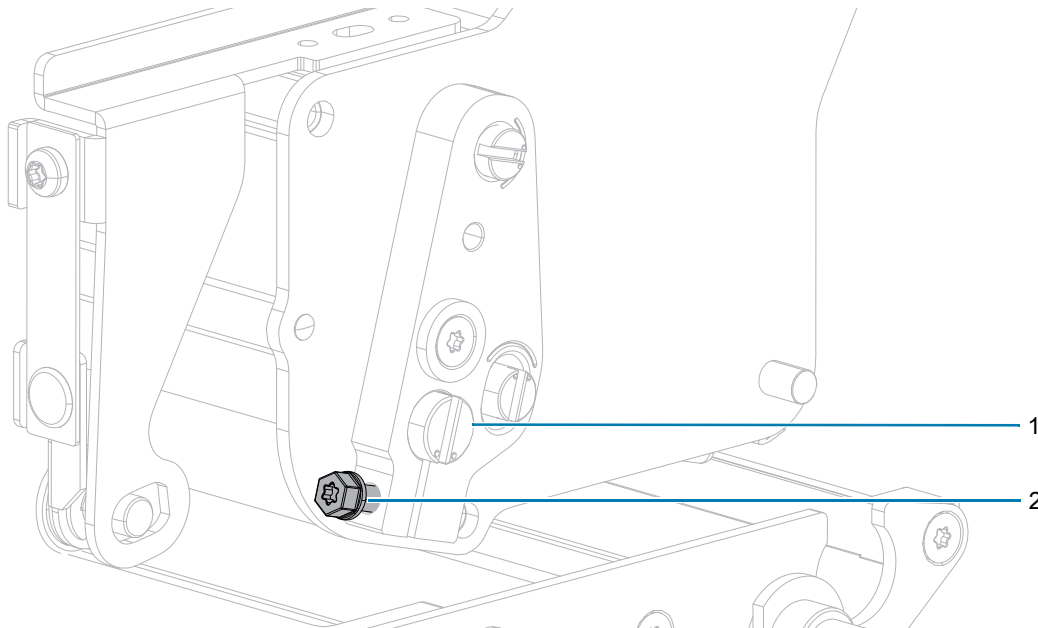
## Remove the Extrusion Cover Plate

1. Loosen the two  T8 screws (1) securing the printhead latch clamping plate.
2. Remove the printhead latch and the wave washer (2).

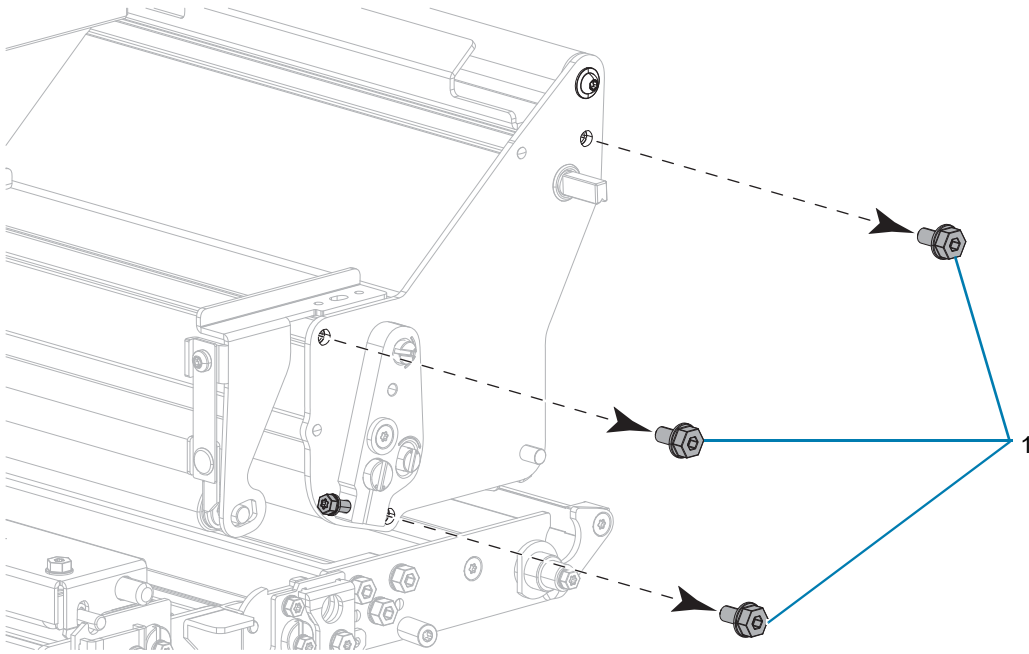


**NOTE:** Use a pencil to mark the position of the pivot bar adjustment screw (1).

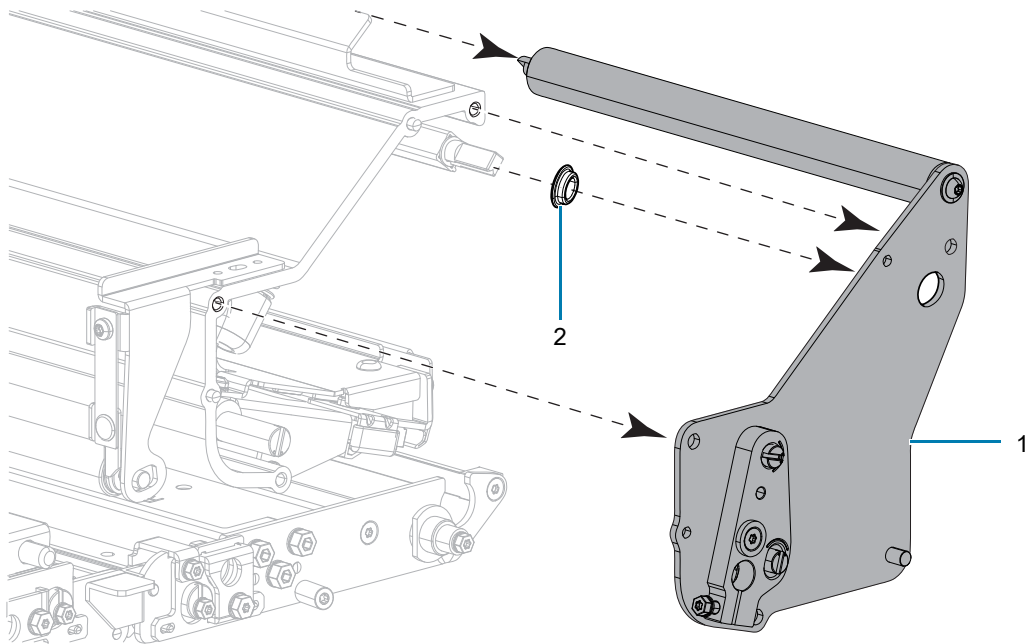
3. Loosen the  T8 pivot bar retaining screw (2).



4. Remove the three 3mm screws (1) securing the extrusion cover plate.



5. Remove the extrusion cover plate (1) and the bronze bearing (2) from the print engine.

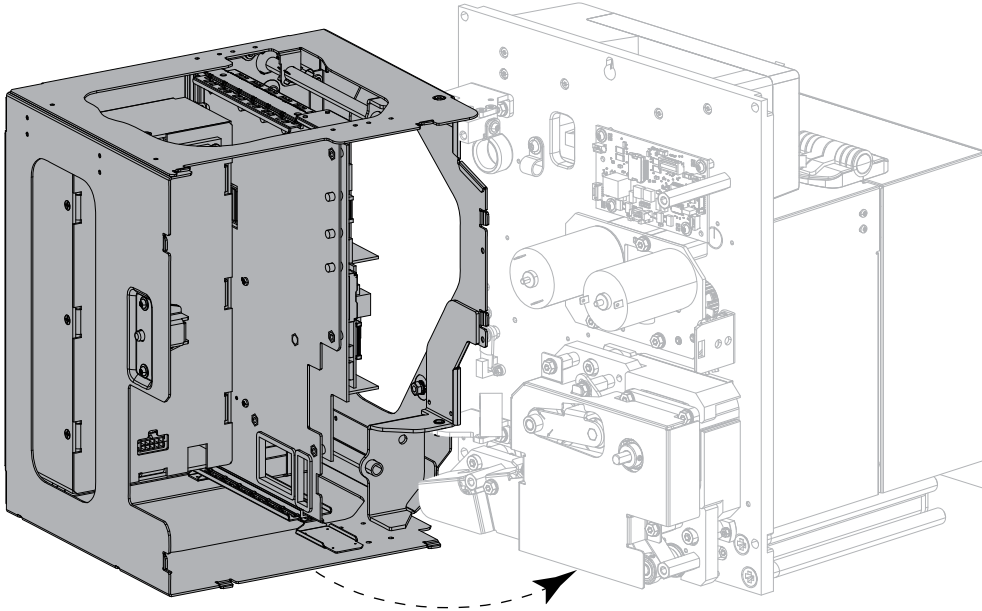


## Replace the Pivot Bar and Toggles



**CAUTION—EYE INJURY:** 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.

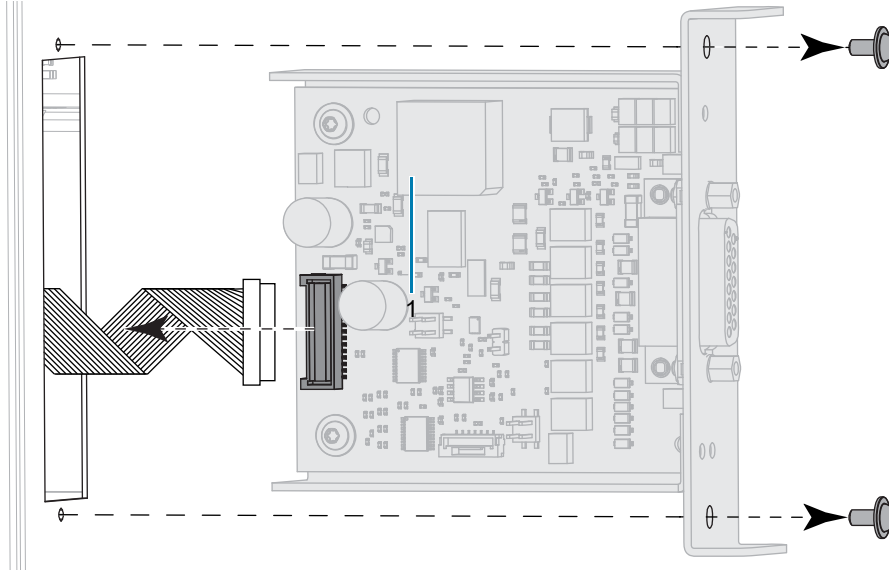
1. Close the rear of the print engine.



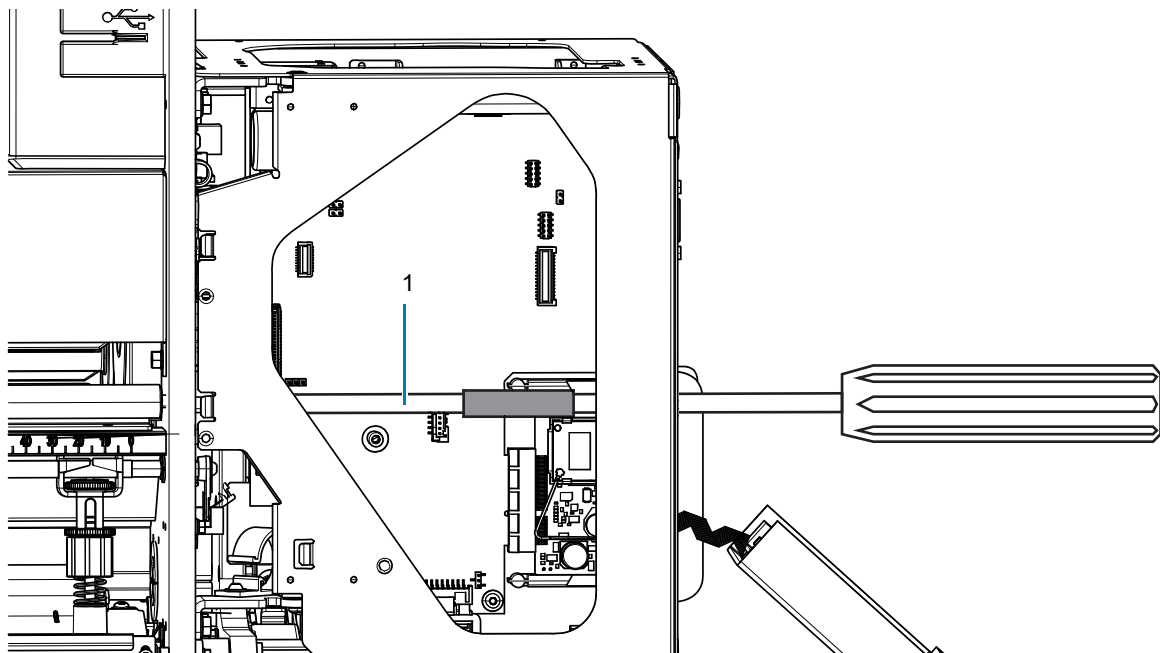


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

2. Remove the applicator interface board.
  - a. Remove the two mounting screws securing the applicator interface board.
  - b. Slide out the applicator interface board.
  - c. Disconnect the applicator cable from the applicator interface board, making sure to keep the end of the cable from falling inside the printer.




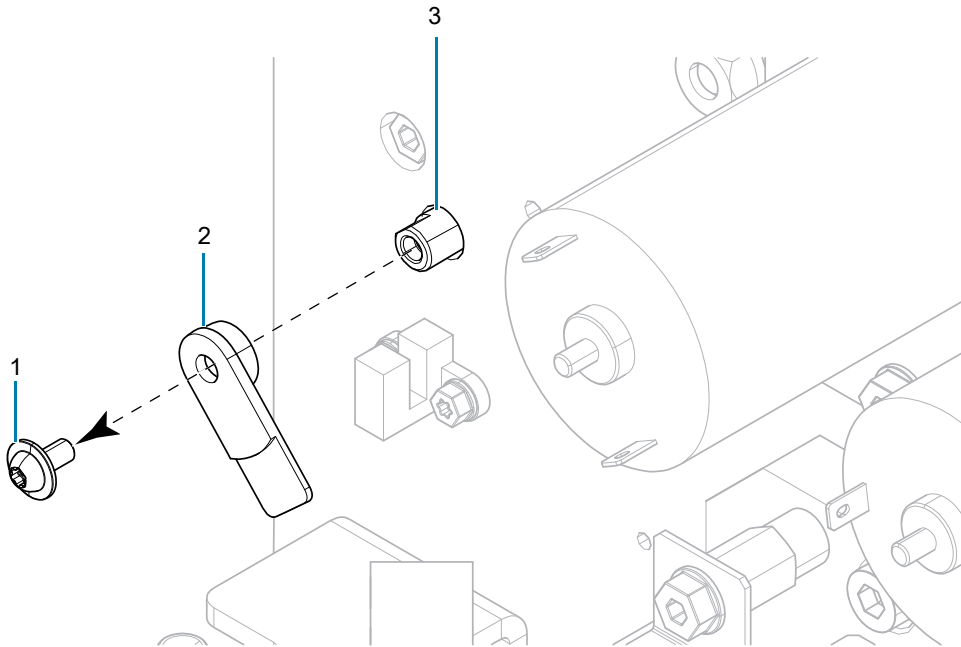
3. Remove the pivot bar.
  - a. Add a 7 in. extension (1) to your screwdriver and insert it through the applicator interface opening straight back to the mainframe wall.



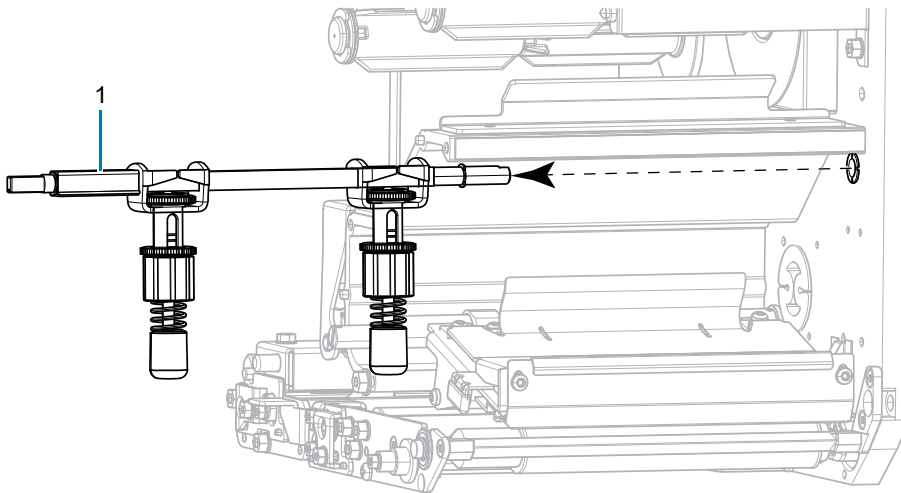
for parts & service call QLC (800) 837-1309

## Pivot Bar and Toggle Assemblies Maintenance Kit

- b. Remove the  T10 screw (1) securing the flag (2) and the end of the pivot bar (3).



- c. From the media side, pull the pivot bar (1) out of the printer.



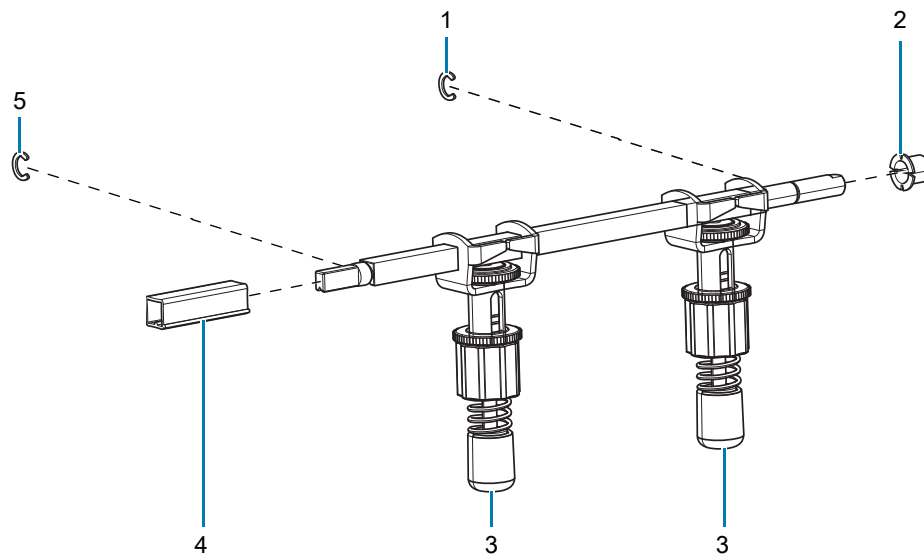
for parts & service call QLC (800) 837-1309

### 4. Assemble the new pivot bar and toggles.

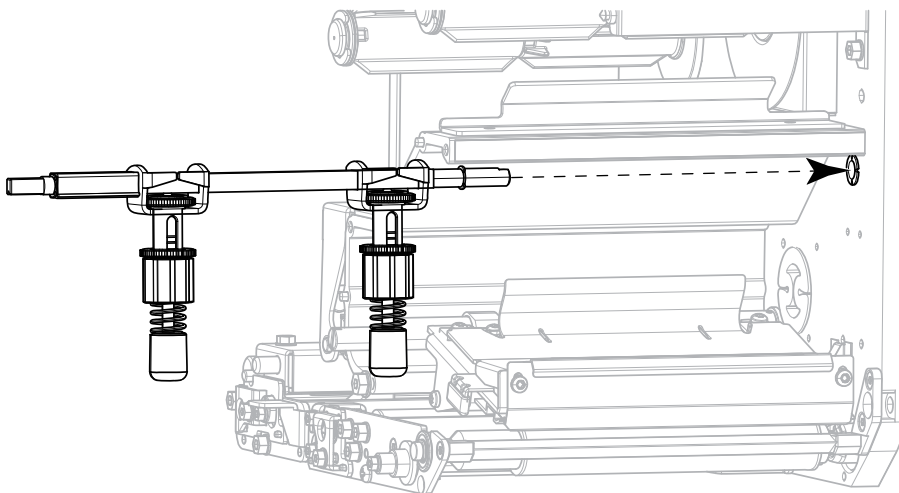


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

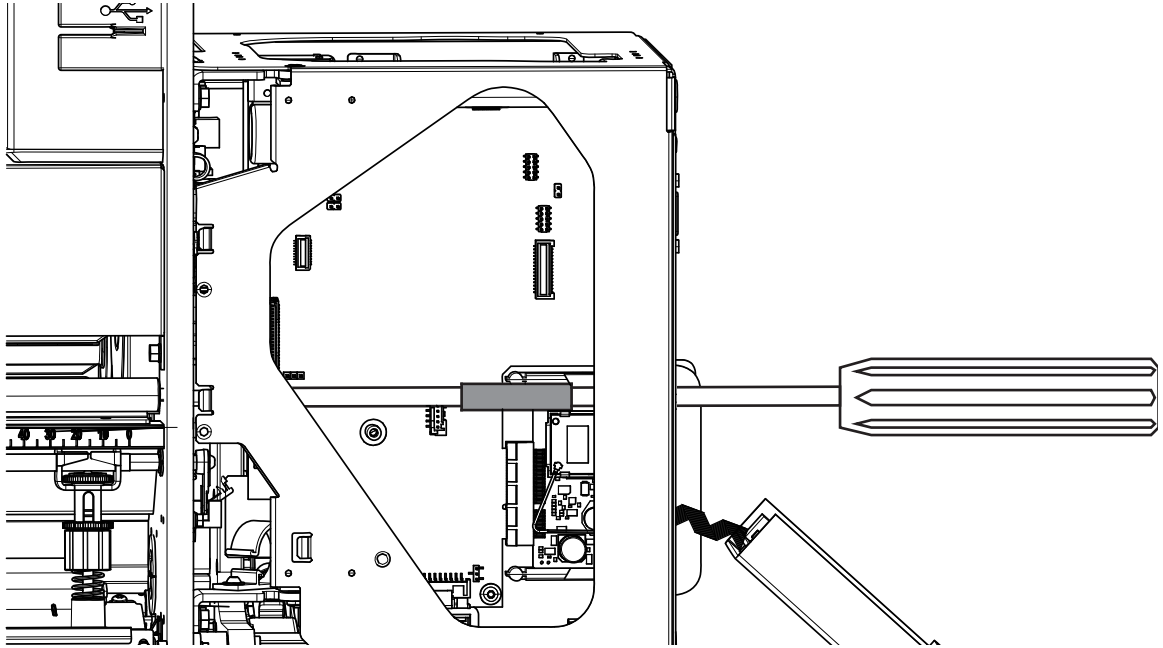
- a. Starting at the inboard end of the pivot bar, install a C-clip (1) in the groove at the rounded end of the pivot bar.
- b. Slide on the nylon flanged bearing (2).
- c. From the outboard end of the pivot bar, slide on the two toggles (3).
- d. Slide on the toggle stop spacer (4) to secure the toggles on the pivot bar.
- e. Install the C-clip (5) in the groove at the outboard (or squared end) of the pivot bar.




### 5. From the media side of the print engine, slide the inboard end of the pivot bar into the main frame.

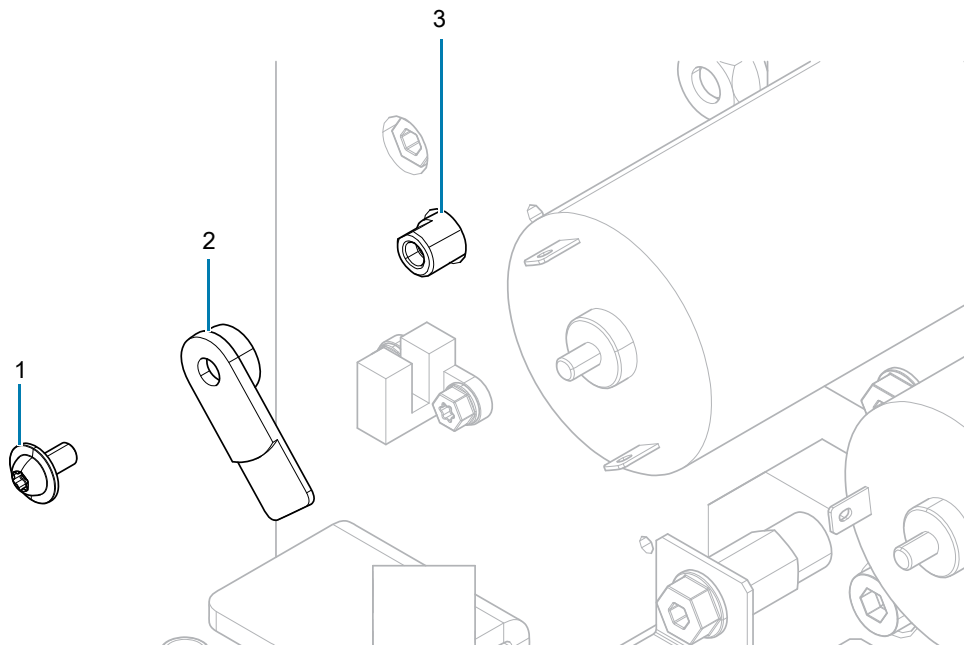


6. Replace the pivot bar and flag.
  - a. From the electronics side, slide the sensor flag (2) on to the end of the pivot bar (3).
  - b. Close the electronics enclosure.
  - c. Using the extended screwdriver, insert it through the applicator interface opening straight back to the mainframe wall.



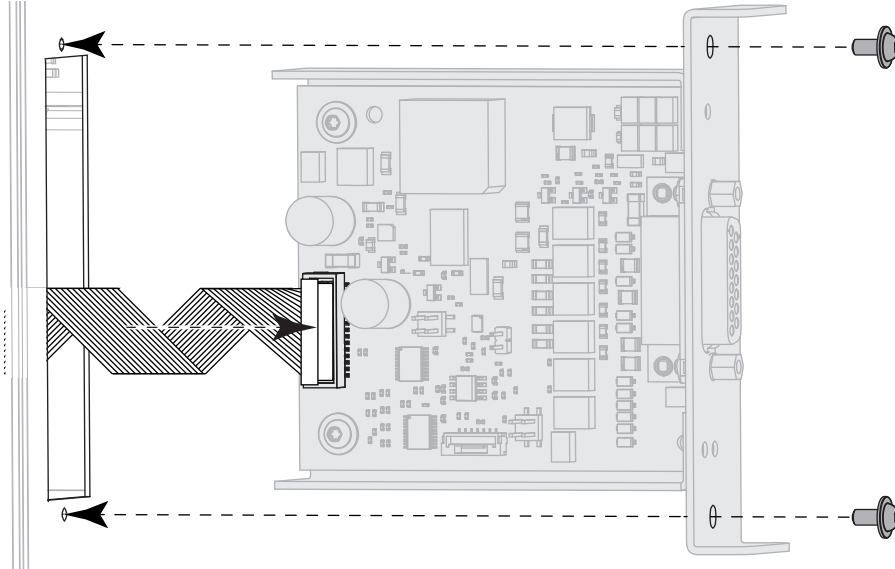
**NOTE:** Position the sensor flag at a 45 degree angle to avoid the head-open sensor.

- d. Replace the  T10 screw (1) securing the flag (2) and the end of the pivot bar (3).



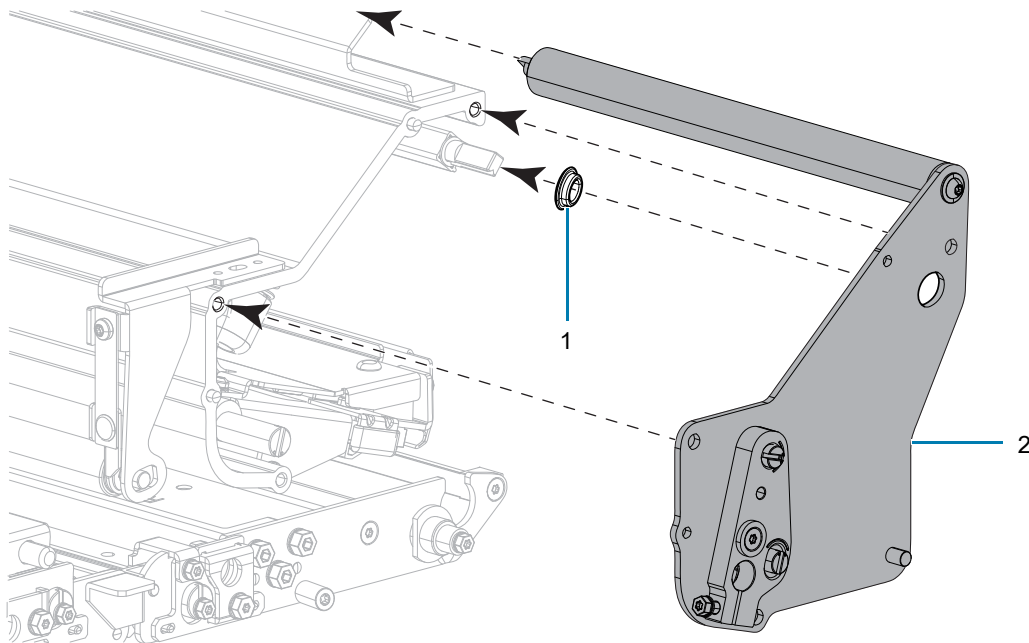
for parts & service call QLC (800) 837-1309

7. Reinstall the applicator interface board:
  - a. Connect the applicator cable to the new applicator interface board.
  - b. Insert the new applicator interface board, and secure it using the two new screws.



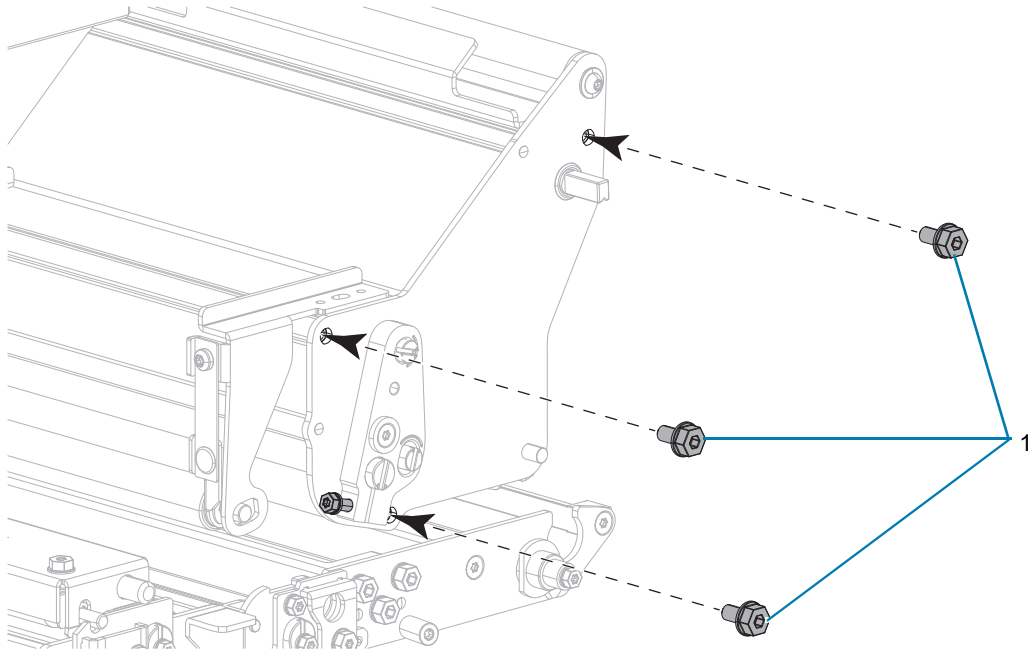
## Replace the Extrusion Cover Plate

1. From the media side, slide the bronze bearing (1) on the outboard (or squared end) of the pivot bar.
2. Replace the extrusion cover plate (2) from the print engine.



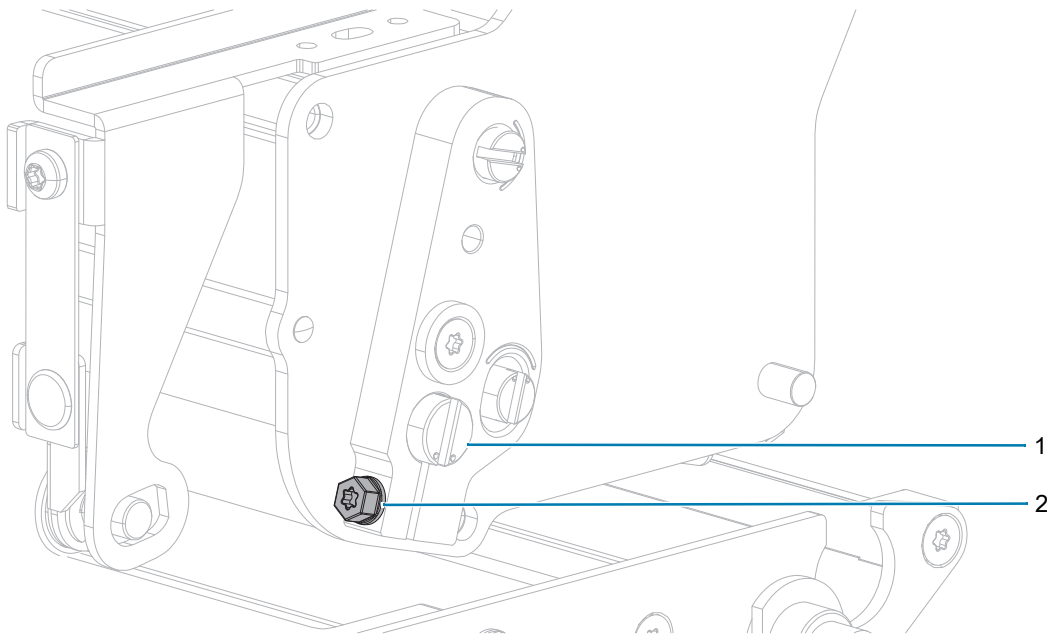


3. Replace the three ● 3mm screws (1) securing the extrusion cover plate.




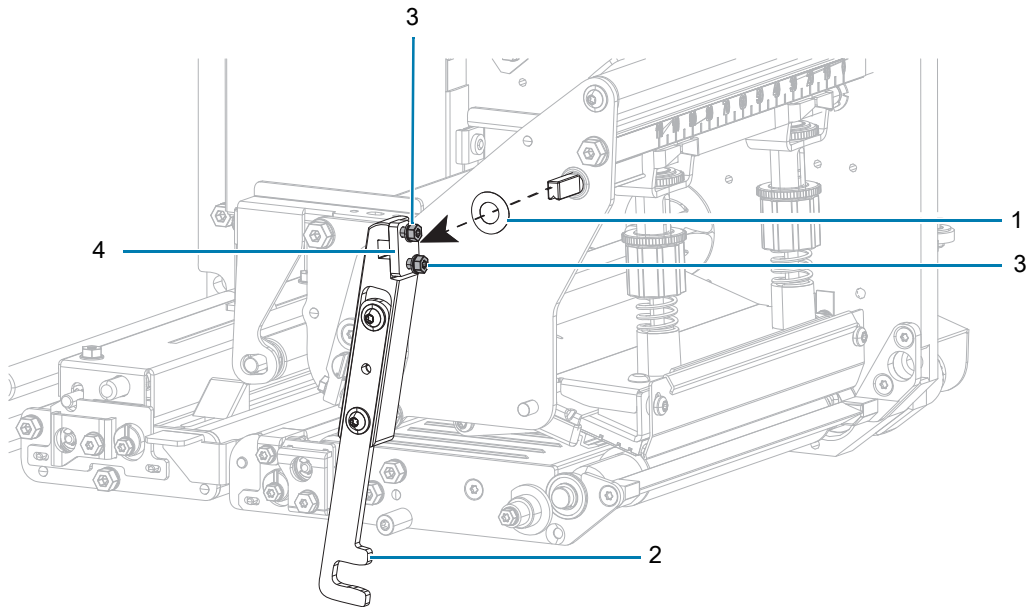
**NOTE:** Align the pivot bar adjustment screw (1) with the previous made marks.

4. Tighten the ⚙ T8 pivot bar retaining screw (2).



5. Replace the wave washer (1) and the printhead latch (2).

6. Tighten the two  T8 screws (3) securing the printhead latch clamping plate.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

	Toggle assembly Qty: 2
---	---------------------------

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T10
- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



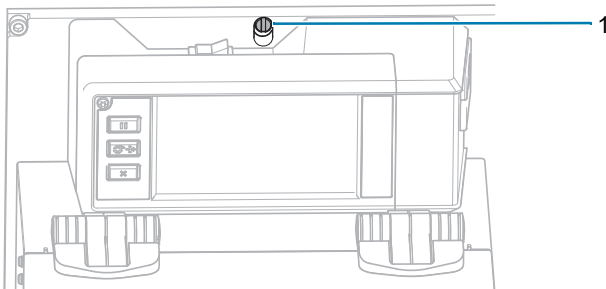
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



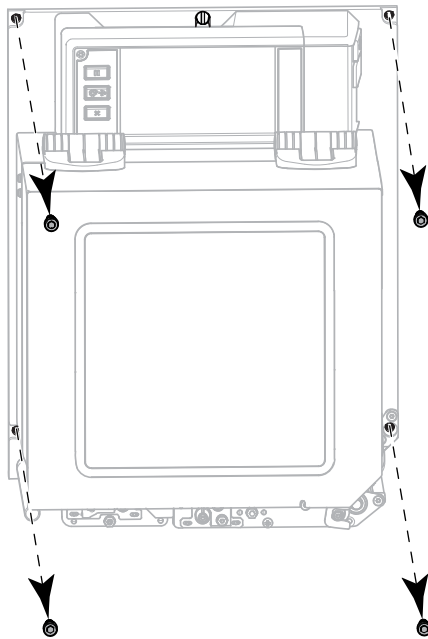
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



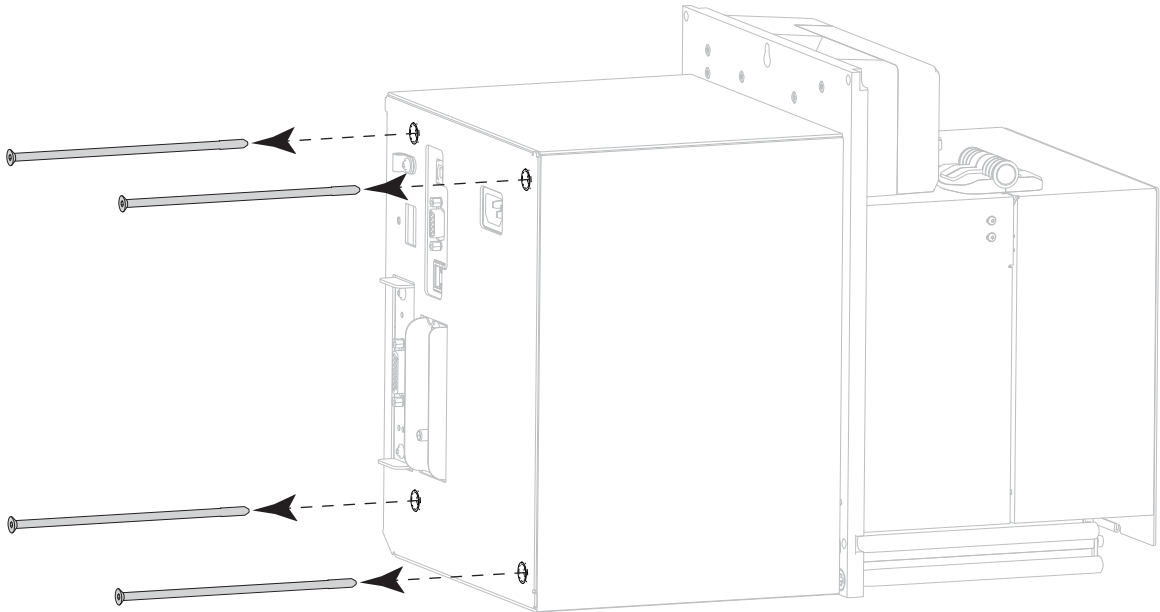
2. Remove the four screws securing the print engine to the applicator.



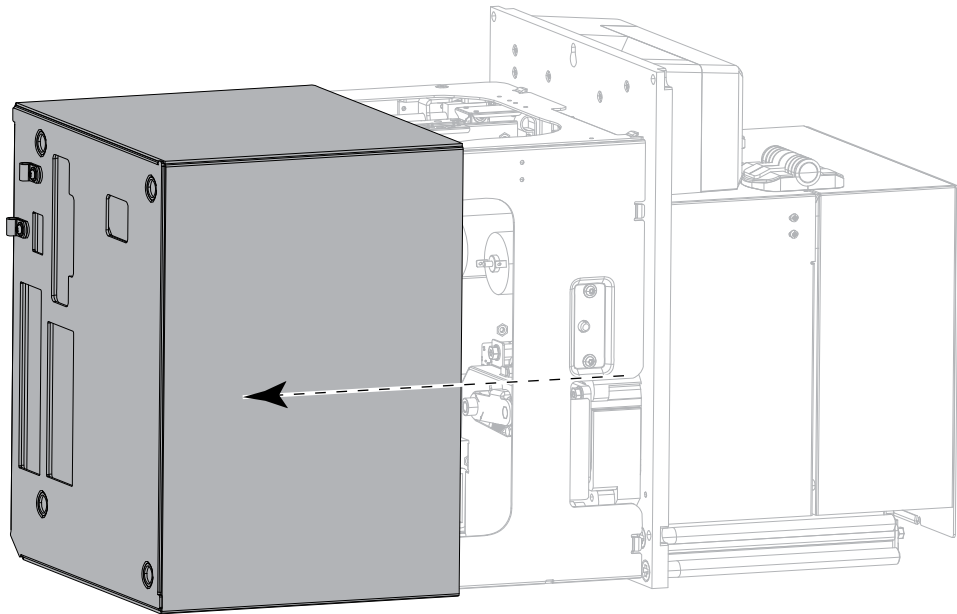
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



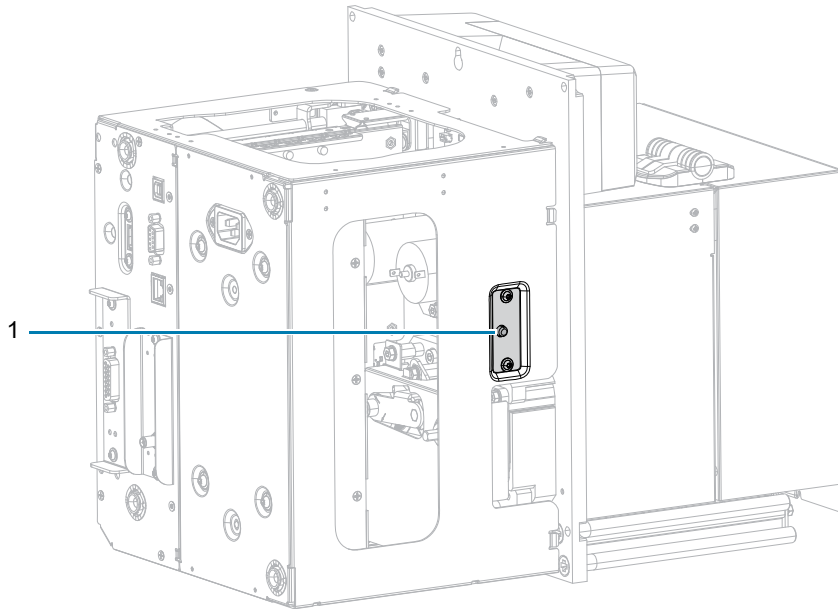
2. Remove the electronics enclosure cover from the print engine.



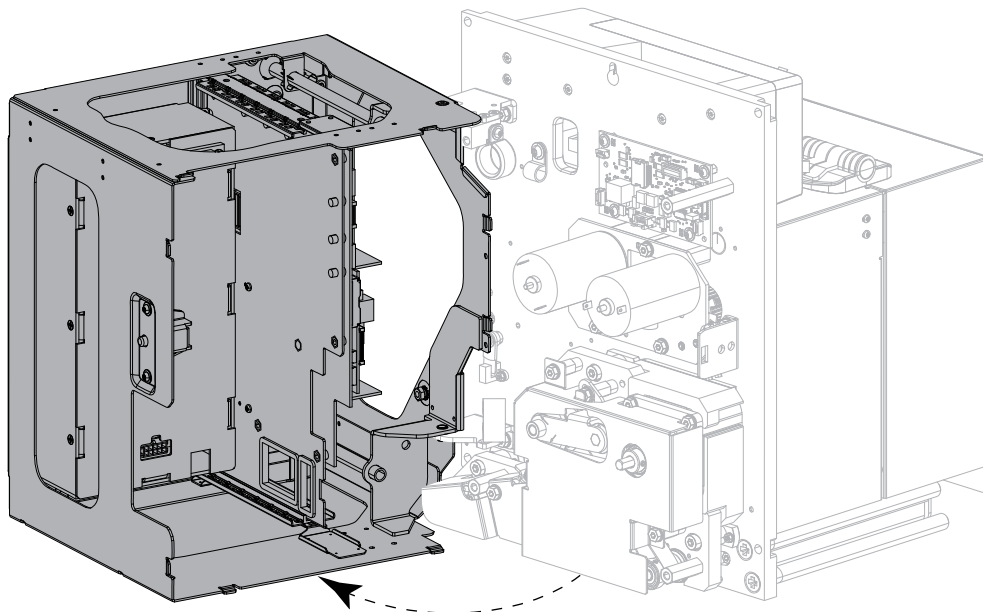
3. Press the electronics enclosure latch (1).




**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

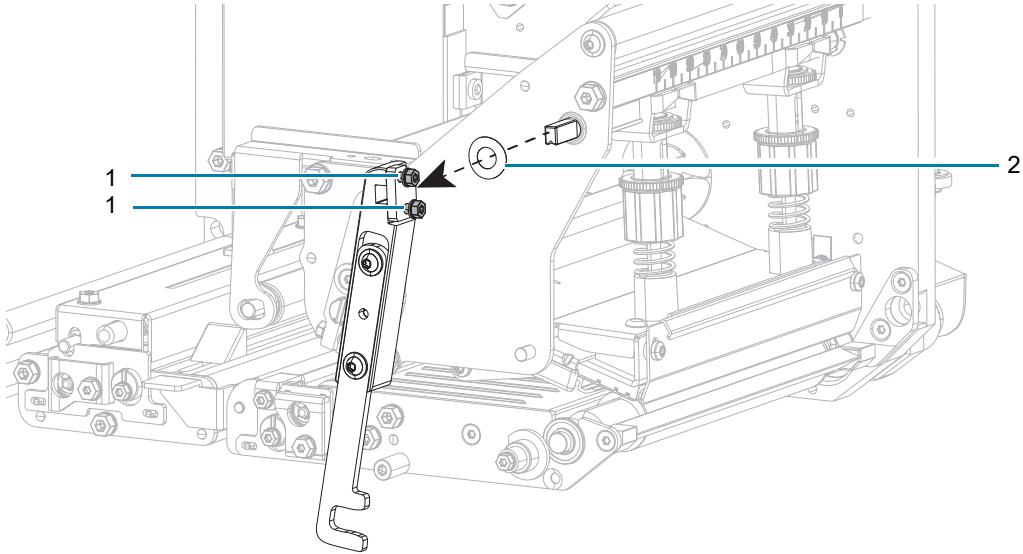


4. Open the rear of the print engine.



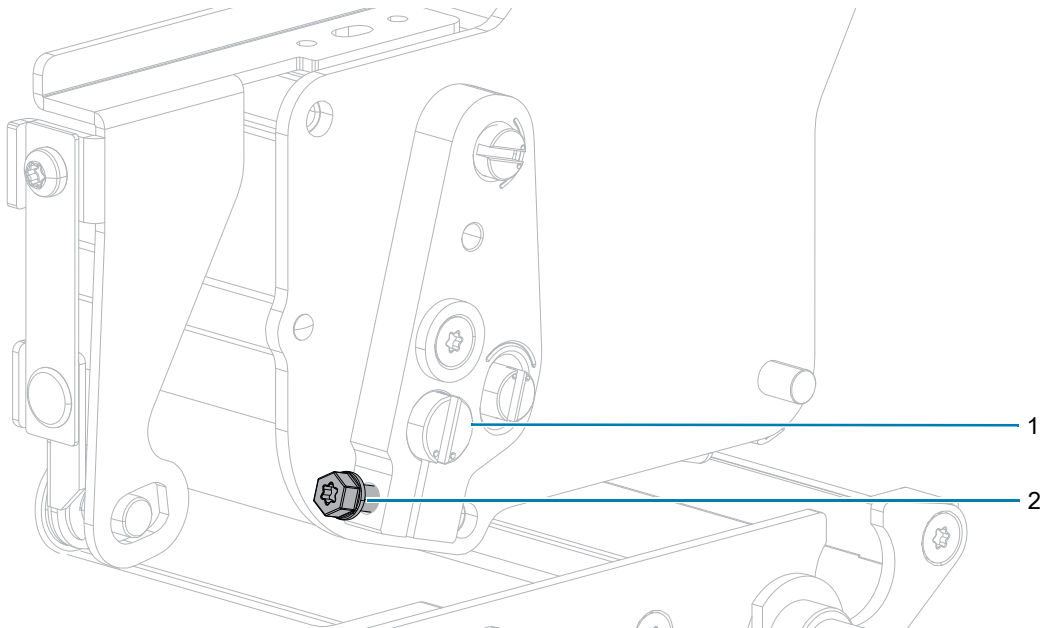
## Remove the Extrusion Cover Plate

1. Loosen the two  T8 screws (1) securing the printhead latch clamping plate.
2. Remove the printhead latch and the wave washer (2).

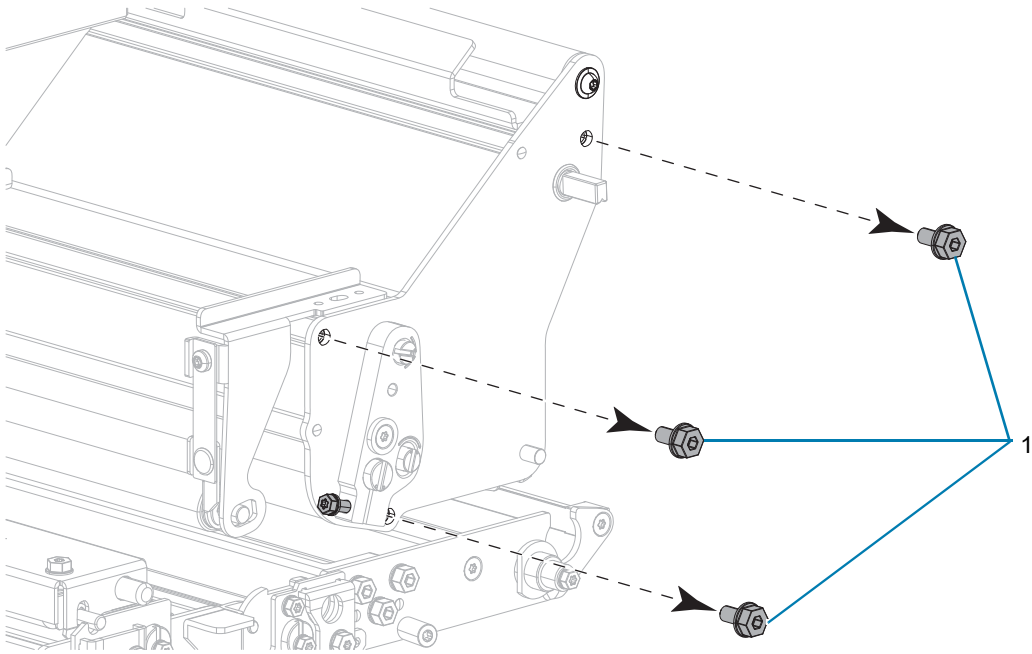


**NOTE:** Use a pencil to mark the position of the pivot bar adjustment screw (1).

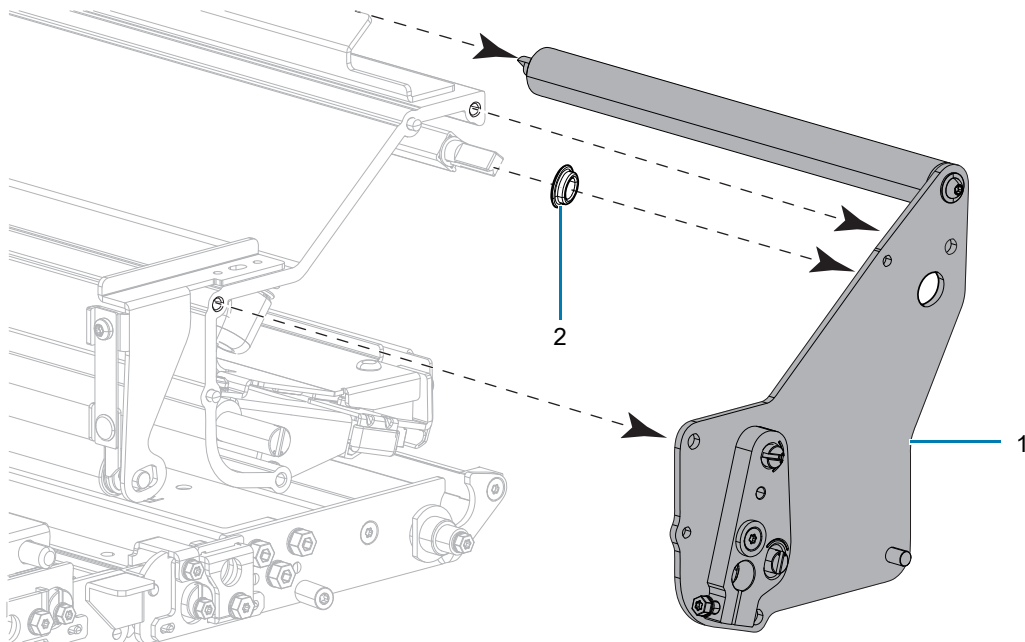
3. Loosen the  T8 pivot bar retaining screw (2).



4. Remove the three ● 3mm screws (1) securing the extrusion cover plate.



5. Remove the extrusion cover plate (1) and the bronze bearing (2) from the print engine.



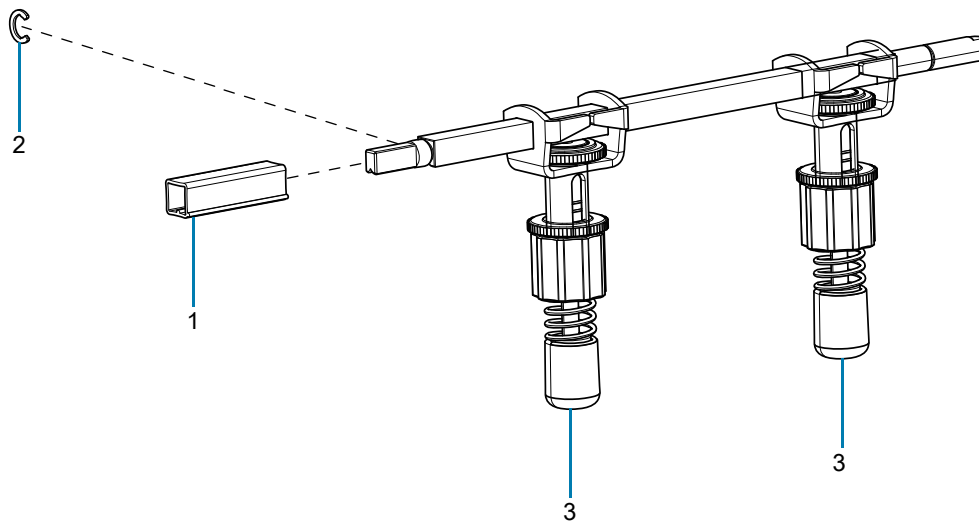


## Replace the Toggles



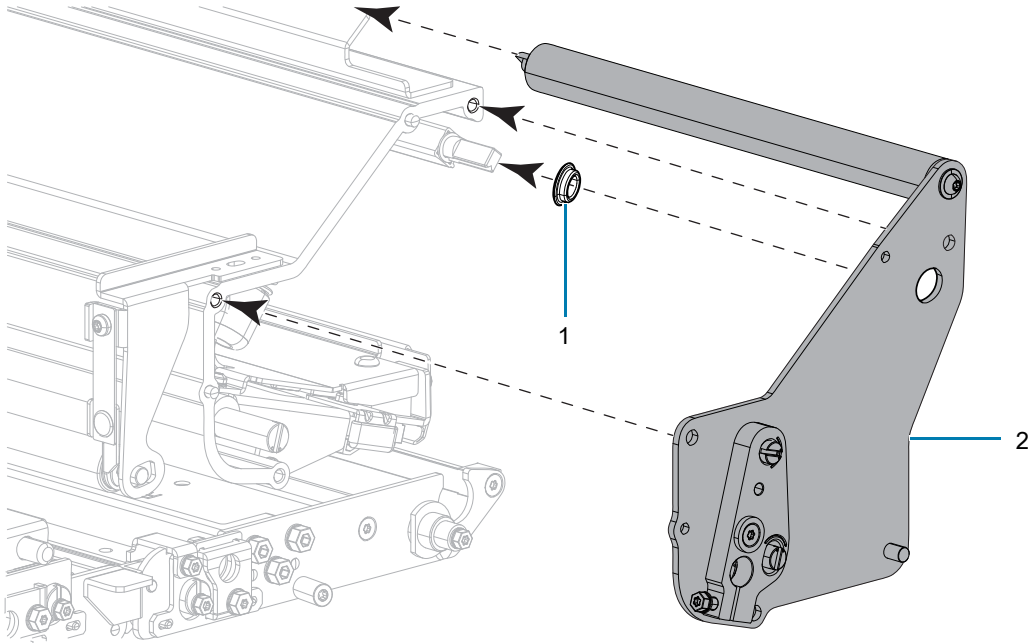
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

1. Remove the toggle stop spacer (1).
2. Remove the C-clip (2) from the groove at the outboard (or squared end) of the pivot bar.
3. Remove and replace the two toggles (3).
4. Install the C-clip (1) in the groove at the outboard (or squared end) of the pivot bar.
5. Install the toggle stop spacer (1).

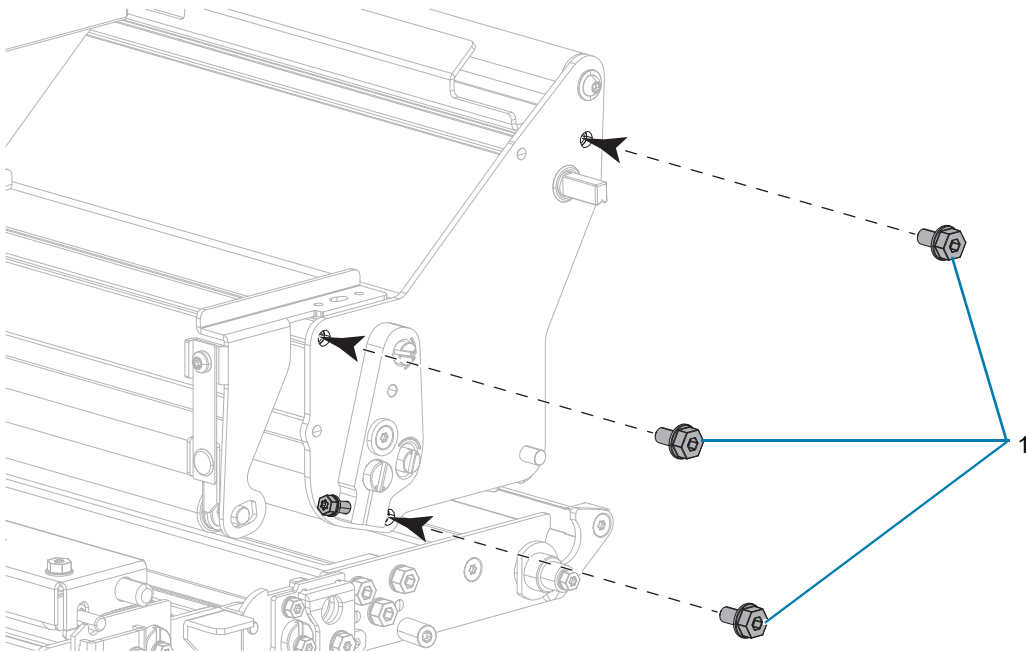


## Replace the Extrusion Cover Plate

1. From the media side, slide the bronze bearing (1) on the outboard (or squared end) of the pivot bar.
2. Replace the extrusion cover plate (2) onto the print engine.



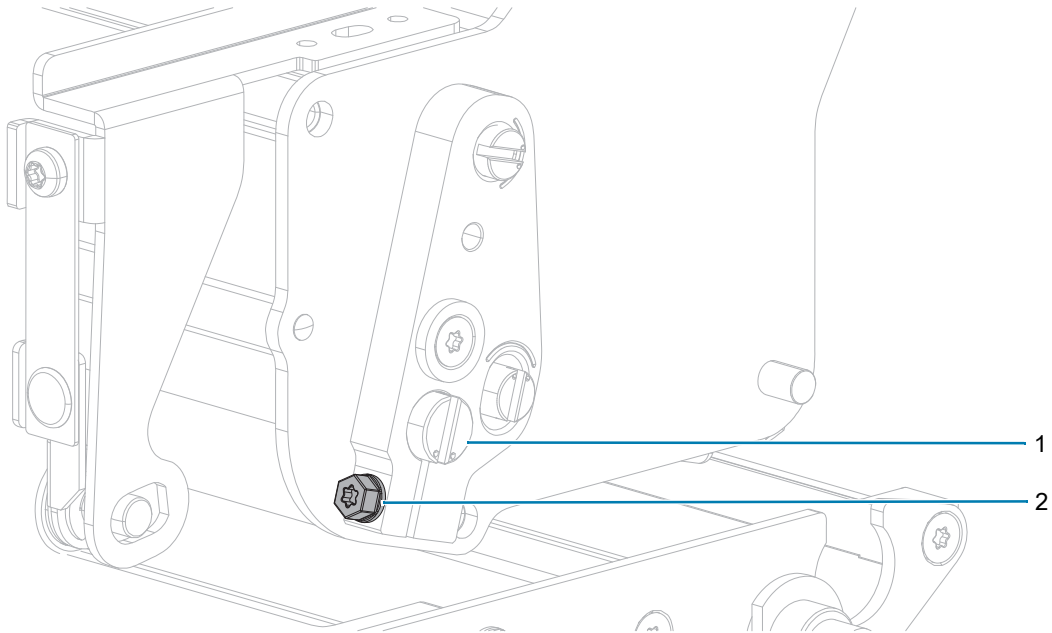
3. Replace the three 3mm screws (1) securing the extrusion cover plate.




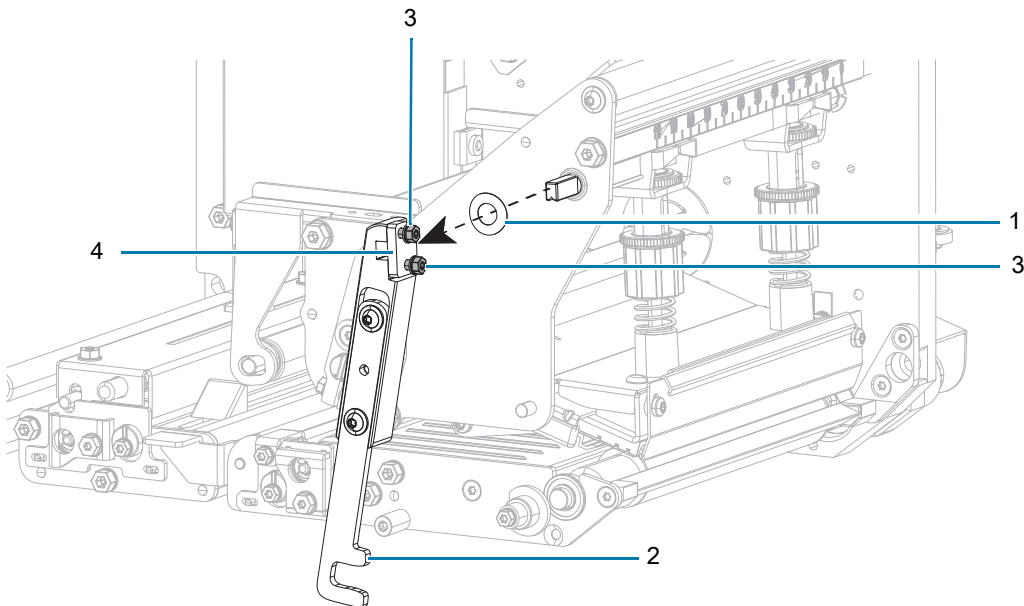


**NOTE:** Align the pivot bar adjustment screw (1) with the previous made marks.

4. Tighten the  T8 pivot bar retaining screw (2).

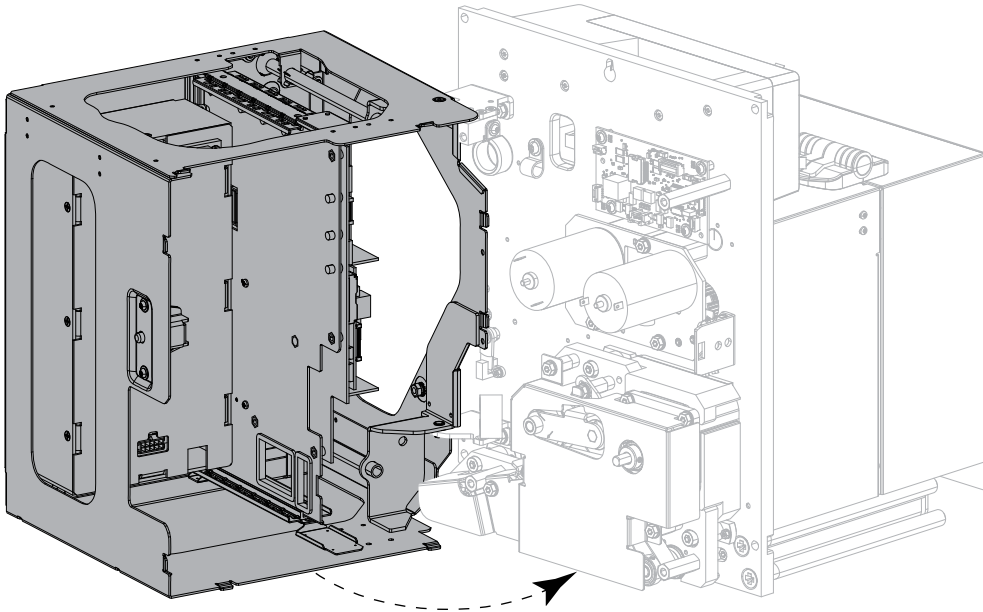


5. Replace the wave washer (1) and the printhead latch (2).
6. Tighten the two  T8 screws (3) securing the printhead latch clamping plate.

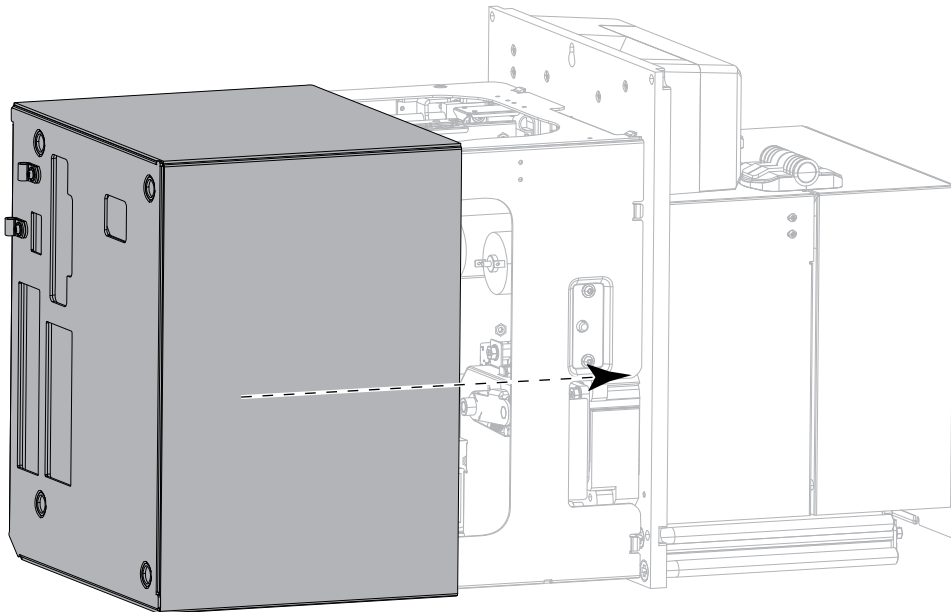


## Close the Electronics Enclosure

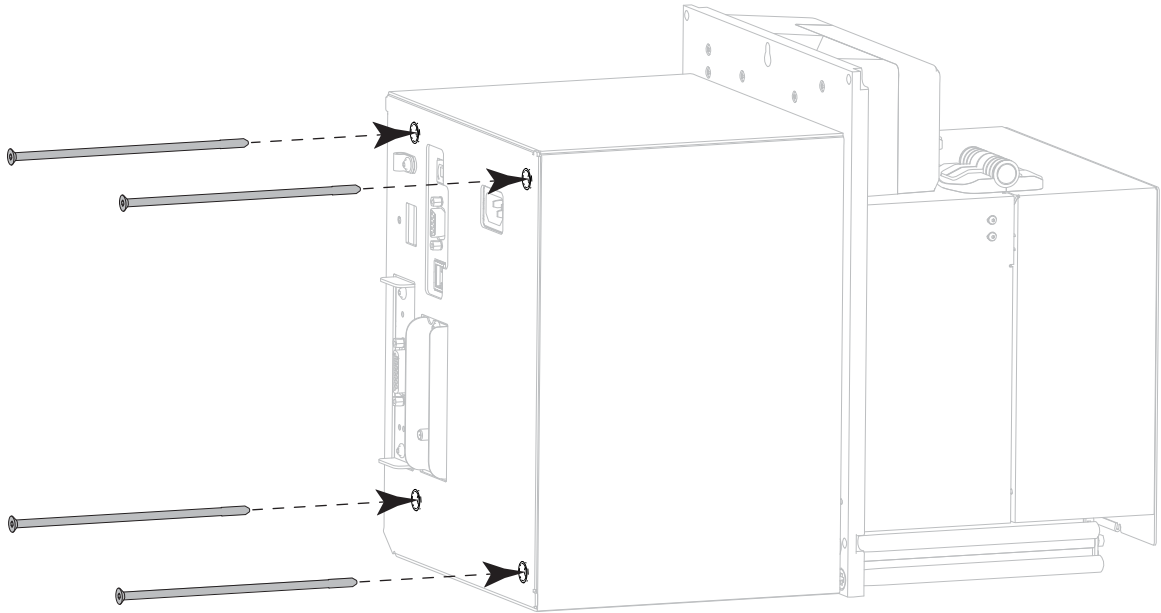
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

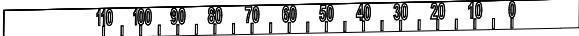
## Installation Instructions

Read these instructions thoroughly before installing this kit.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

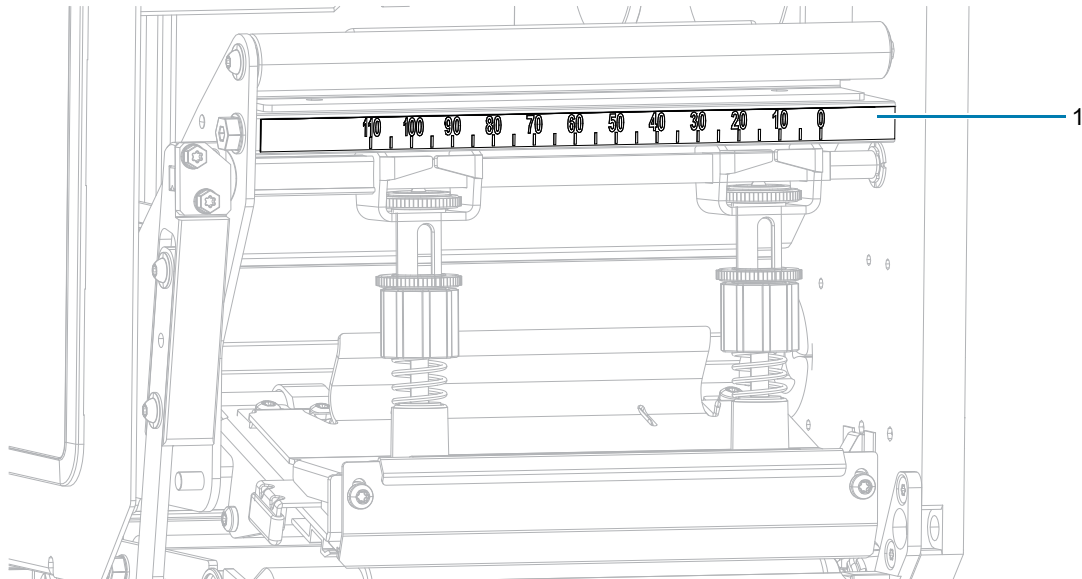
## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

	Toggle position ruler Qty: 3
---	---------------------------------

## Replace the Toggle Position Ruler

1. Remove the old toggle position ruler.

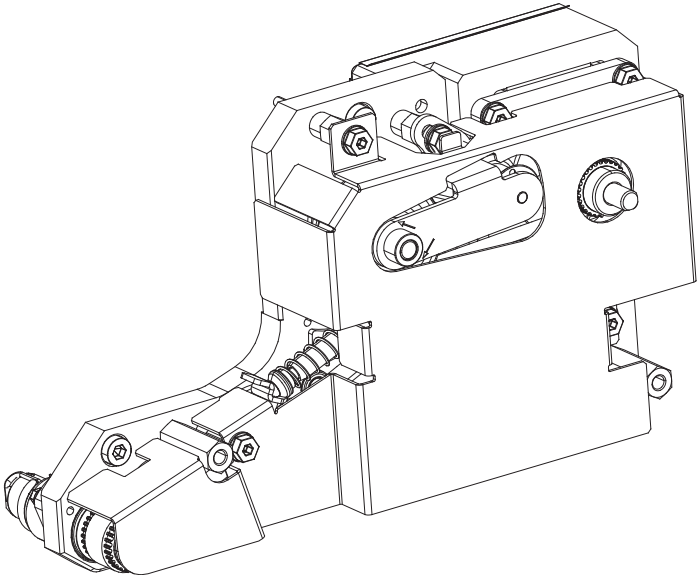
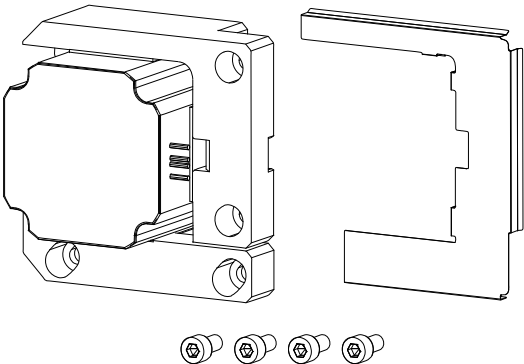


2. Use a lint-free cloth dipped in 99.7% isopropyl alcohol to clean off any left over adhesive.
3. Align the new toggle position ruler (1), and press it into place.

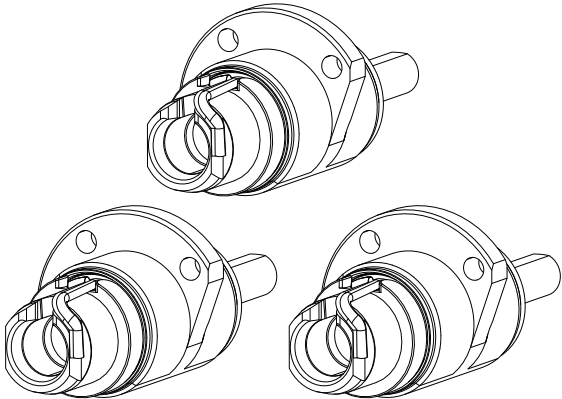
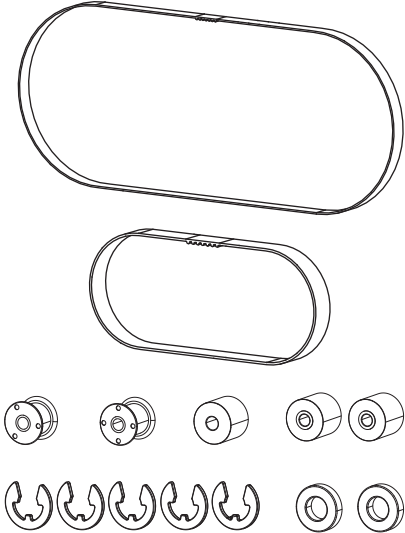
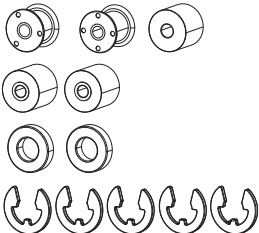
**The installation is complete.**

# Media Drive System Components

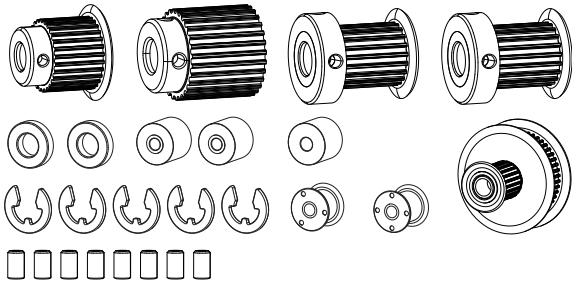
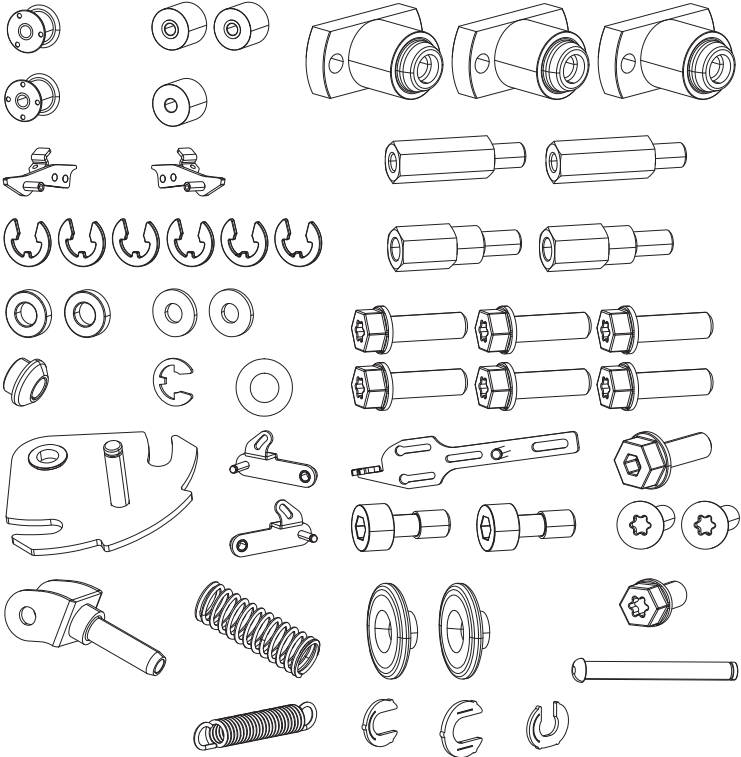
This section supplies you with the parts information and links to installation procedures for the media drive system.

Description	Kit Number	Kit Name
<p><a href="#">Media Drive System Maintenance Kit on page 306</a></p> 	P1112750-059	Kit, Media Drive System 203dpi, ZE511, ZE521, RH
	P1112750-060	Kit, Media Drive System 300dpi & 600dpi, ZE511, ZE521, RH
	P1112750-061	Kit, Media Drive System 203dpi, ZE511, ZE521, LH
	P1112750-062	Kit, Media Drive System 300dpi & 600dpi, ZE511, ZE521, LH
<p><a href="#">Stepper Motor for Media Drive System Maintenance Kit on page 321</a></p> 	P1112750-063	Kit, Motor for the Media Drive System ZE511, ZE521, RH
	P1112750-064	Kit, Motor for the Media Drive System, ZE511, ZE521, LH

for parts & service call QLC (800) 837-1309

Description	Kit Number	Kit Name
<p>Media Roller Couplers Maintenance Kit on page 341</p> 	P1046696-102	Kit, Couplers for Media Rollers, ZE500-4, ZE500-6, ZE511, ZE521 RH
	P1046696-103	Kit, Couplers for Media Rollers, ZE500-4, ZE500-6, ZE511, ZE521 LH
<p>Media Drive Belts Maintenance Kit on page 366</p> 	P1046696-146	Kit, Belts for the Media Drive System, ZE511, ZE521, RH & LH
<p>Media Drive System Idler Pulleys Maintenance Kit on page 381</p> 	P1046696-130	Kit, Idler Pulleys for the Media Drive System, ZE511, ZE521, RH & LH



Description	Kit Number	Kit Name
<p>Media Drive System Pulleys Maintenance Kit on page 396</p> 	<p>P1046696-127</p> <p>P1046696-128</p>	<p>Kit, Drive Pulleys 203dpi ZE500</p> <p>Kit, Drive Pulleys 300dpi ZE500</p>
<p>Media Drive System Hardware Maintenance Kit on page 418</p> 	<p>P1046696-129</p>	<p>Kit, Hardware, Media Drive System, ZE511, ZE521, RH &amp; LH</p>

## Installation Instructions

Read these instructions thoroughly before installing this kit.

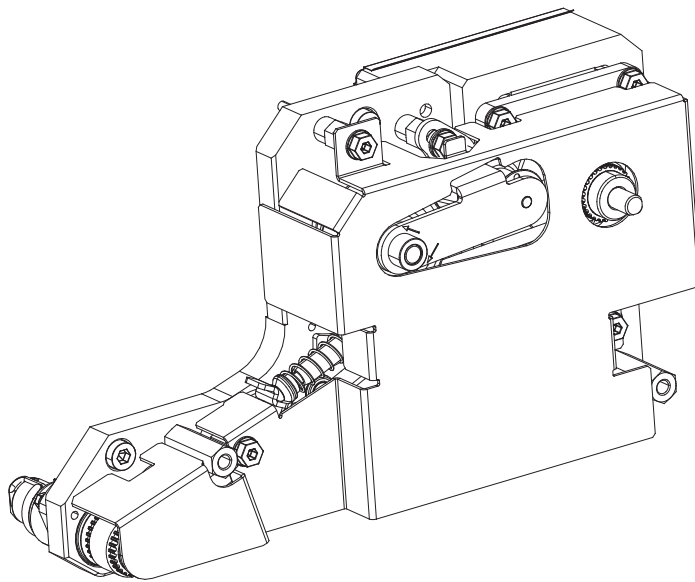


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Media Drive System Qty: 1</p>
---	--------------------------------------

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T9
- Metric hexagon keys or bits  
Size: 3mm, 4mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

for parts & service call OLC (800) 837-1309

## Prepare for Installation



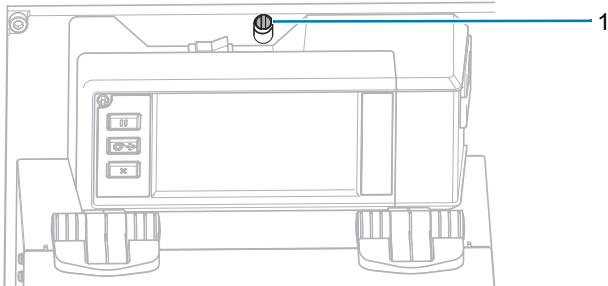
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



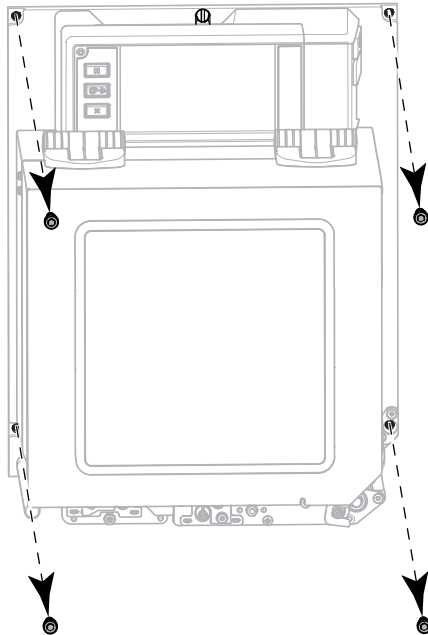
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



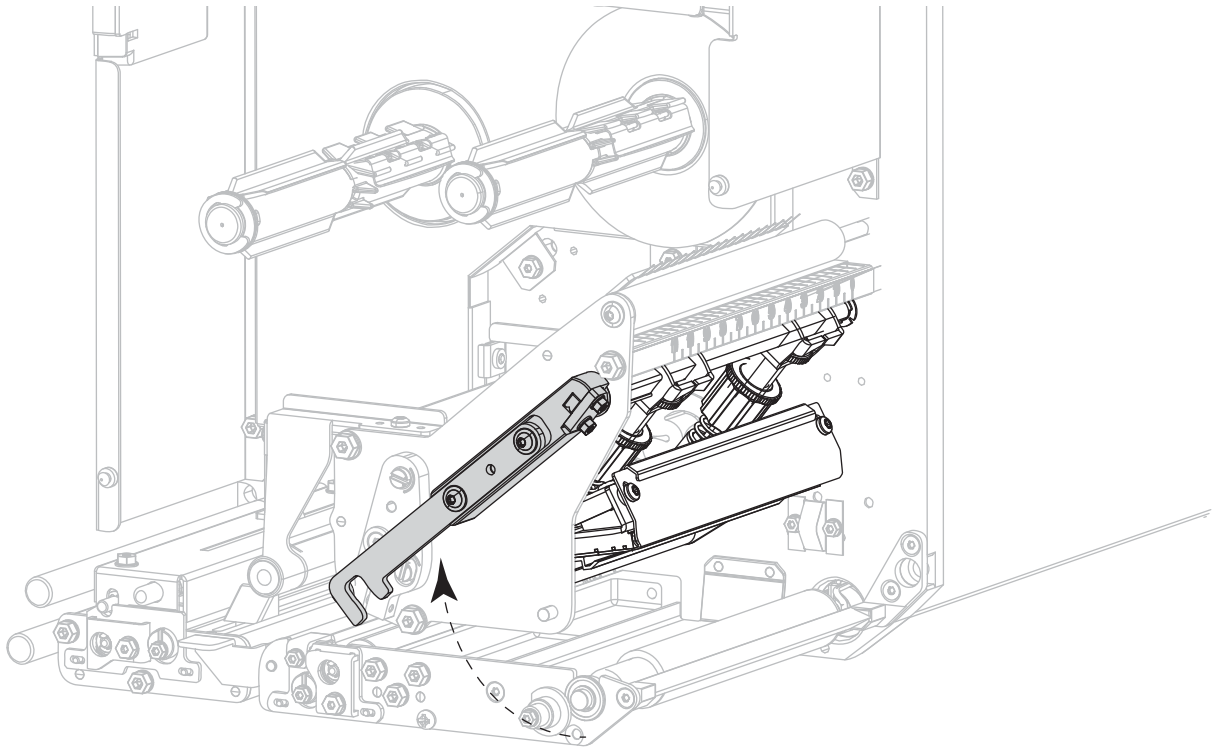
2. Remove the four screws securing the print engine to the applicator.




3. Lift the print engine off of the center mounting bolt and place it on a workbench.

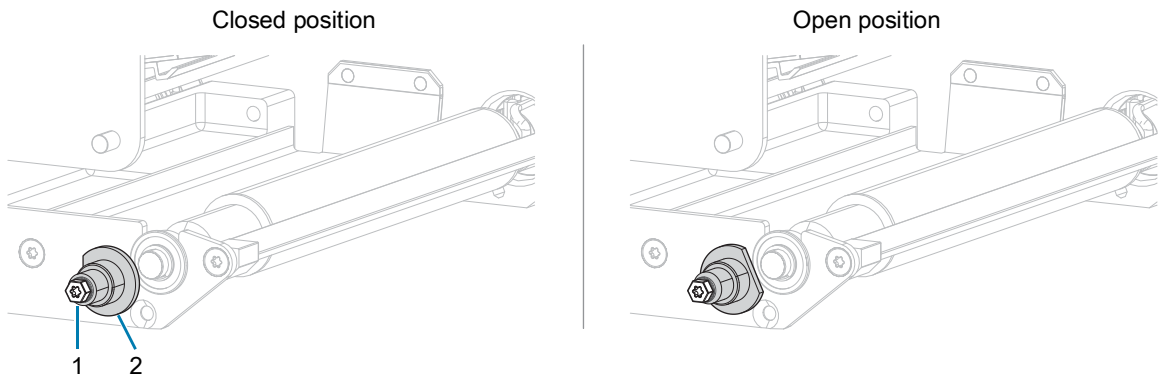
## Remove the Platen Roller

1. Open the printhead.



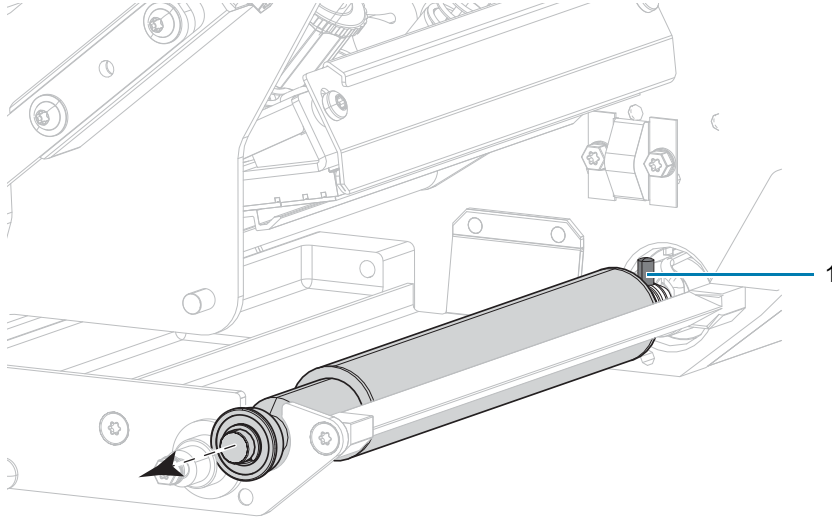
2. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

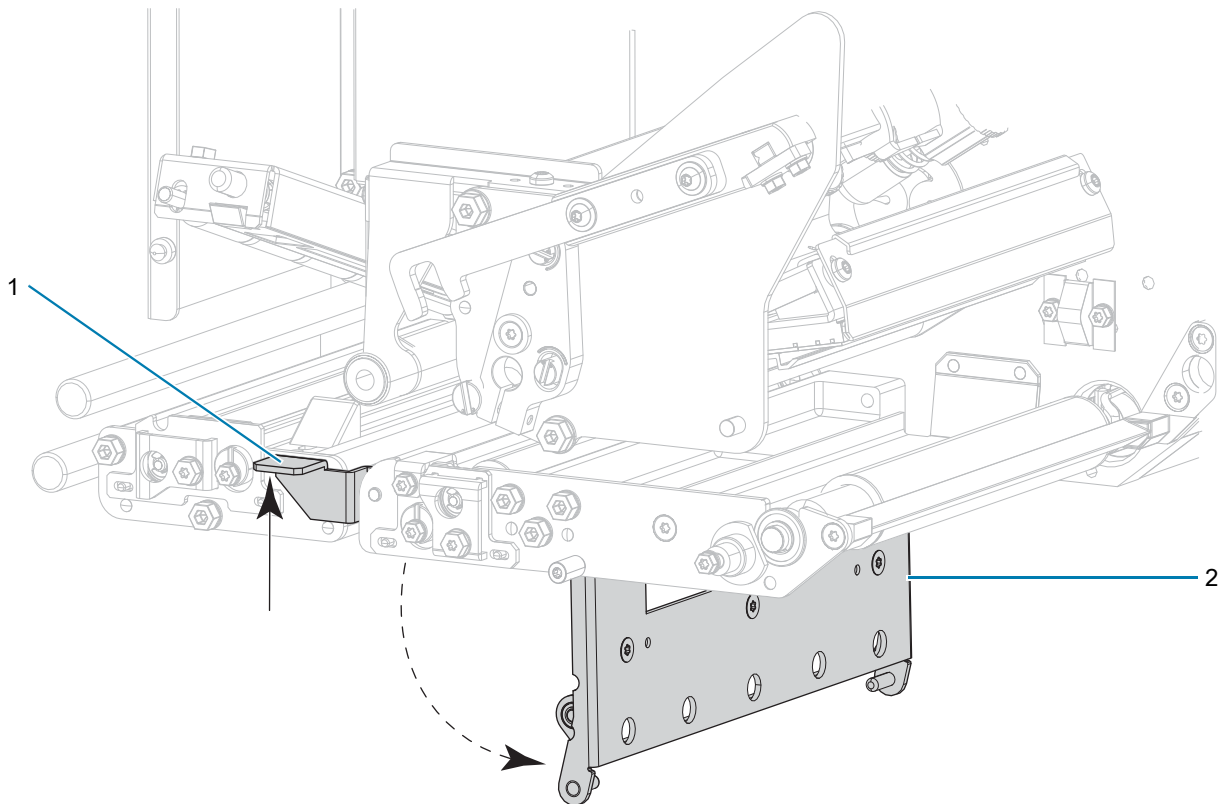
3. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.




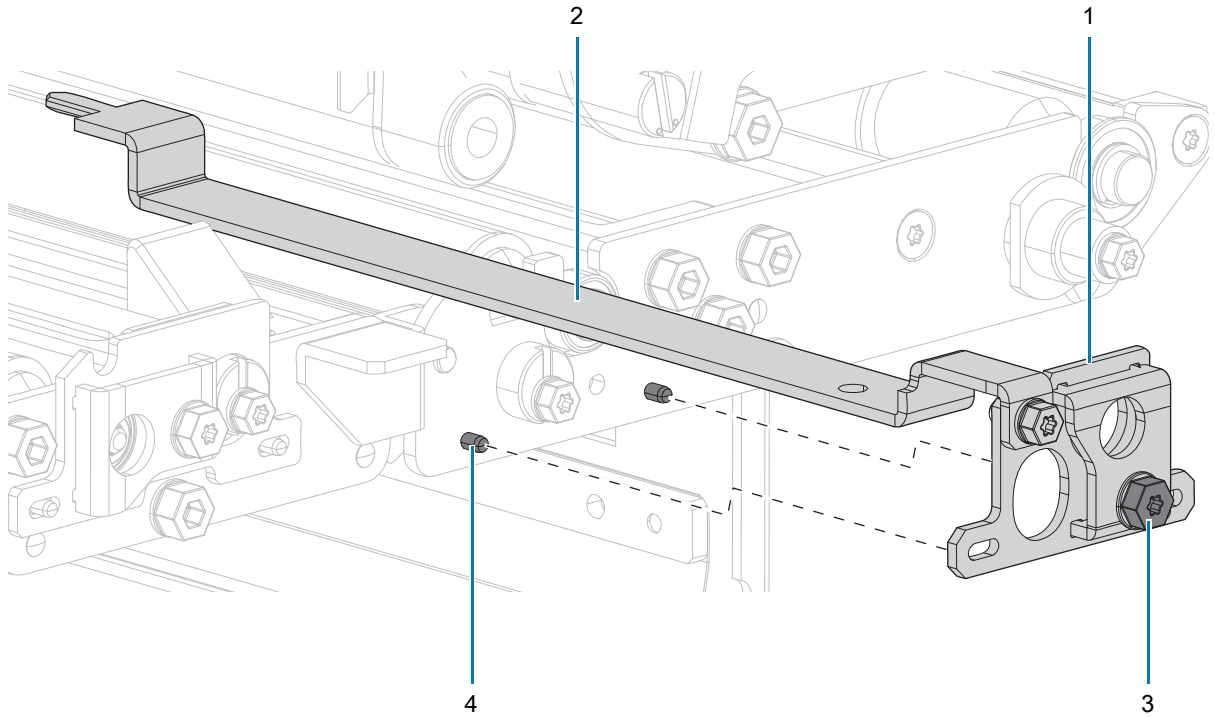
4. Remove the platen roller assembly from the print engine.

## Remove the Peel Roller

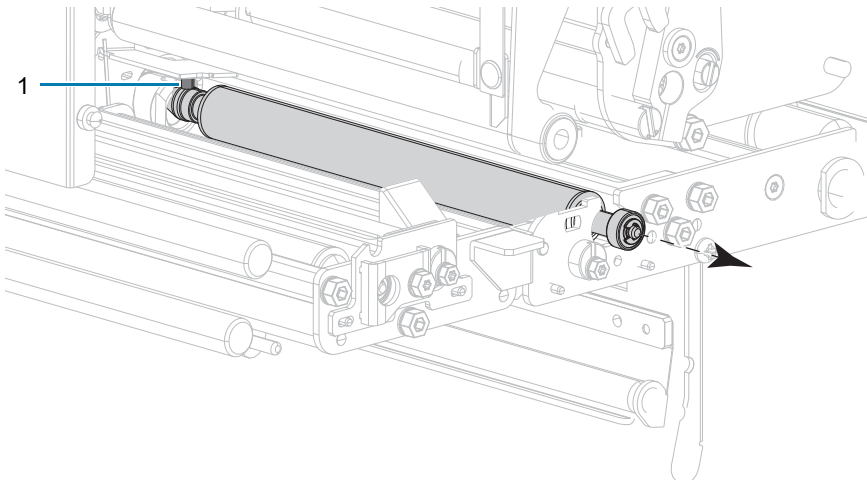
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.



2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




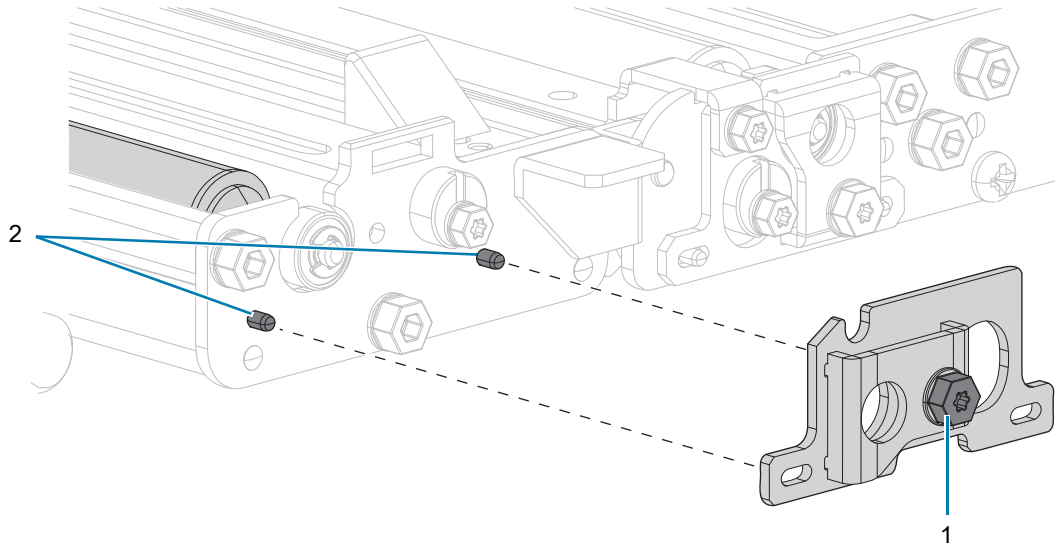
3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.



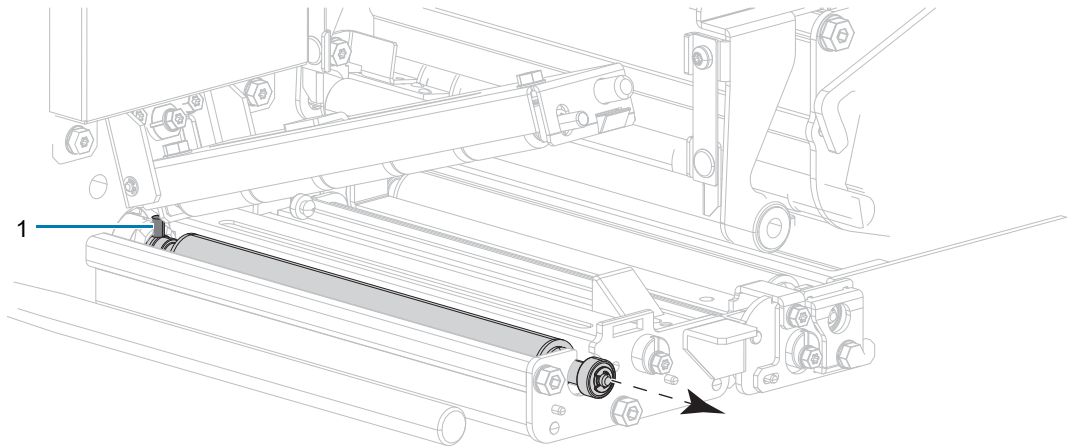
4. Remove the peel roller assembly from the print engine.

## Remove the Pinch Roller

1. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).



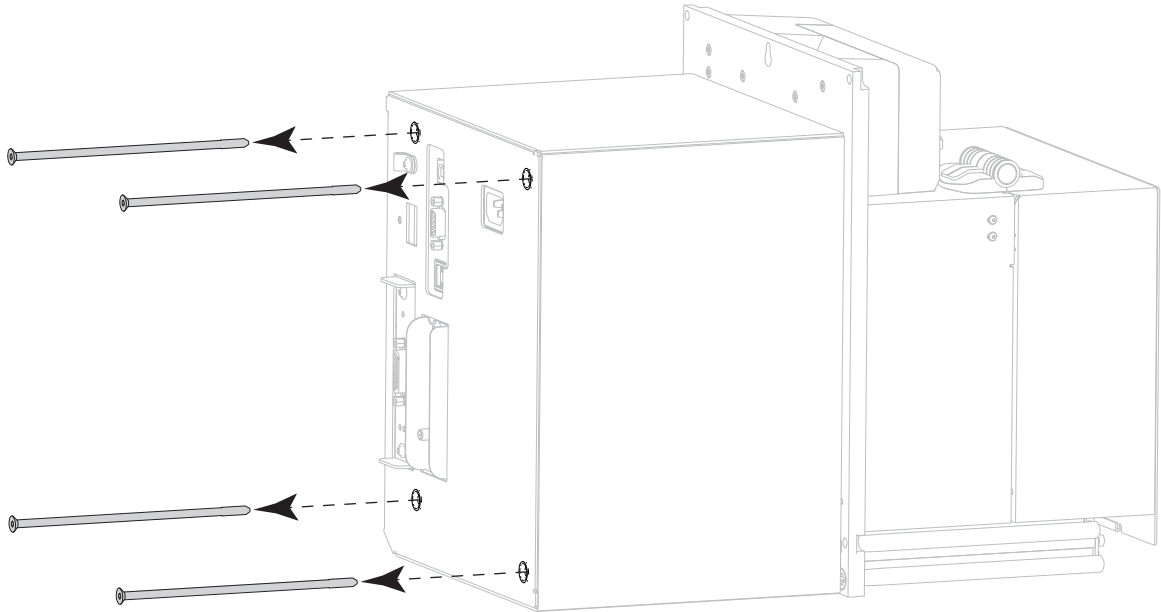
2. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



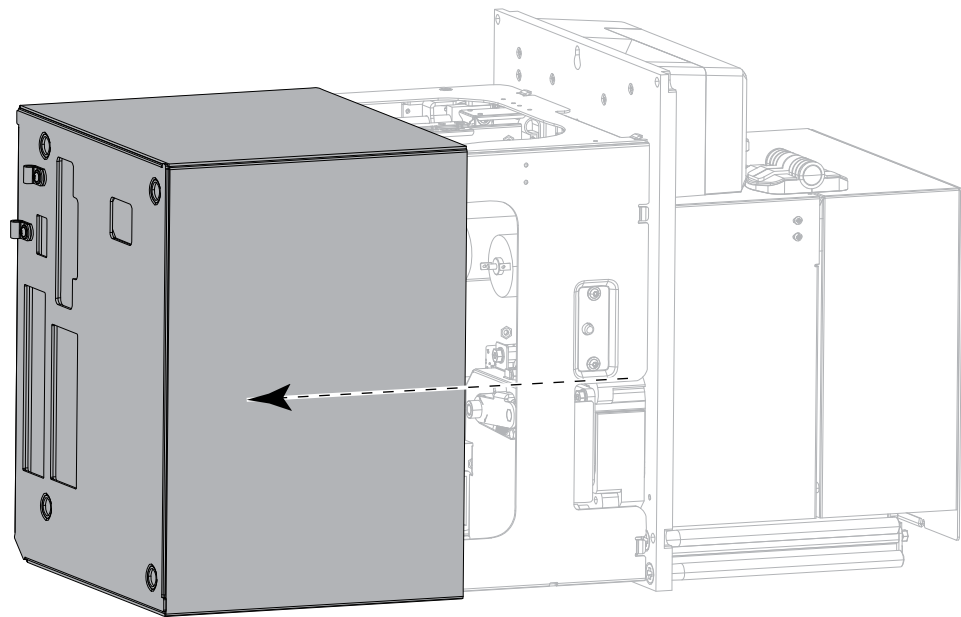
3. Remove the pinch roller assembly from the print engine.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

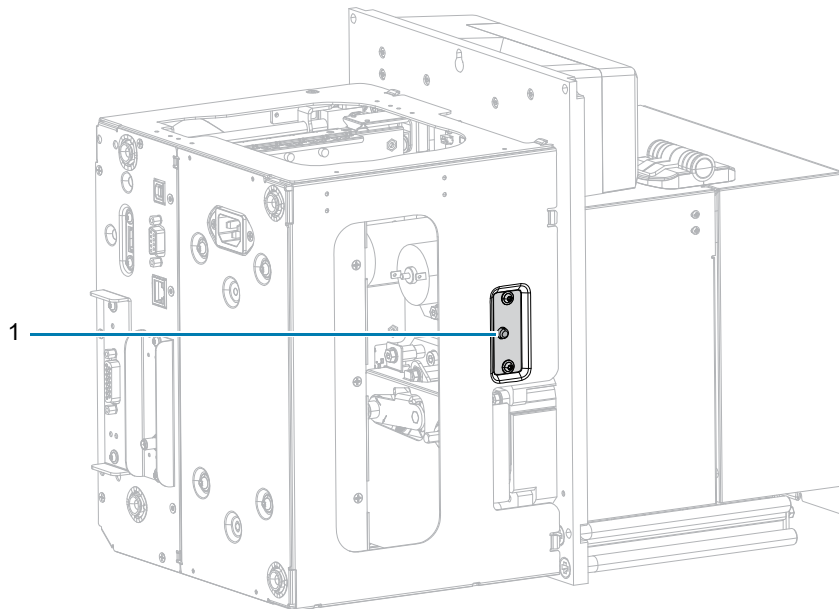




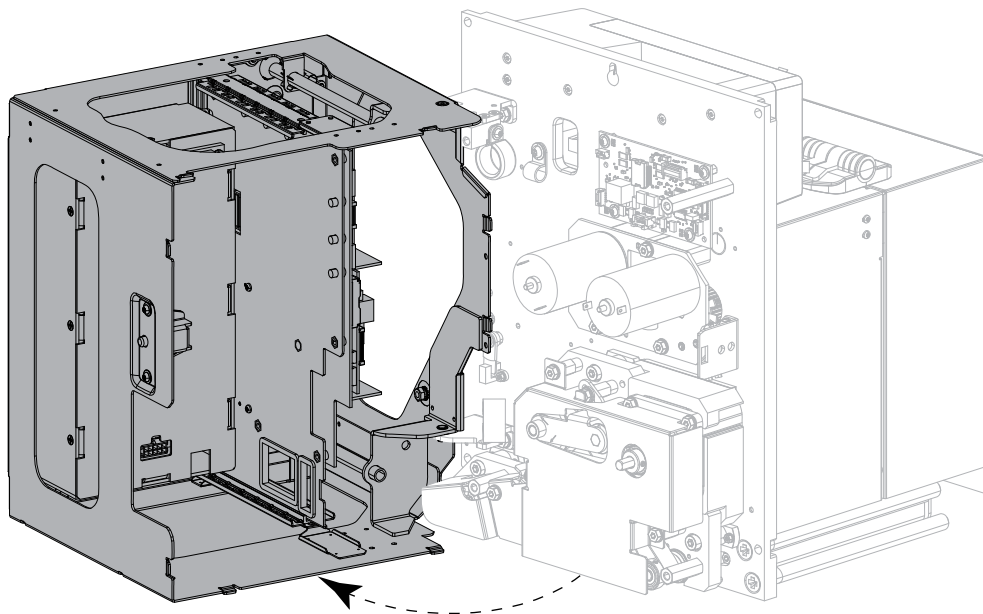
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



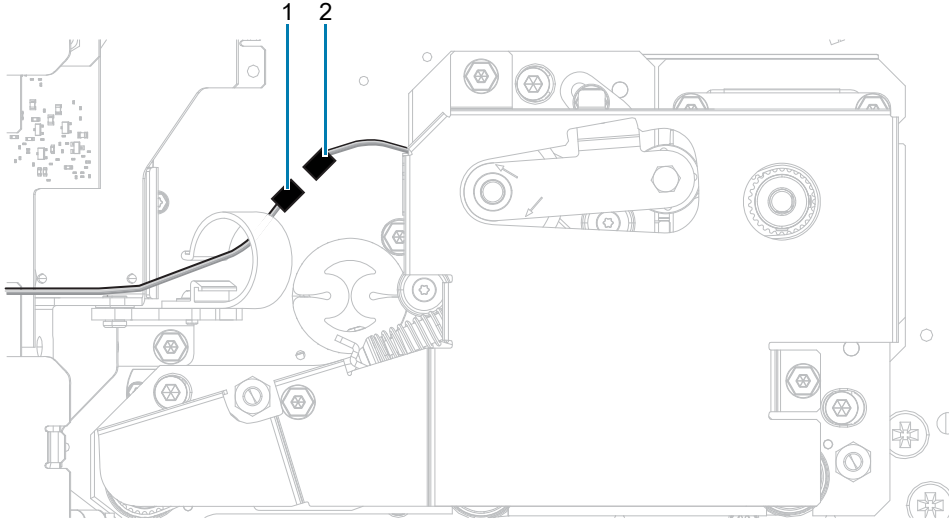
4. Open the rear of the print engine.



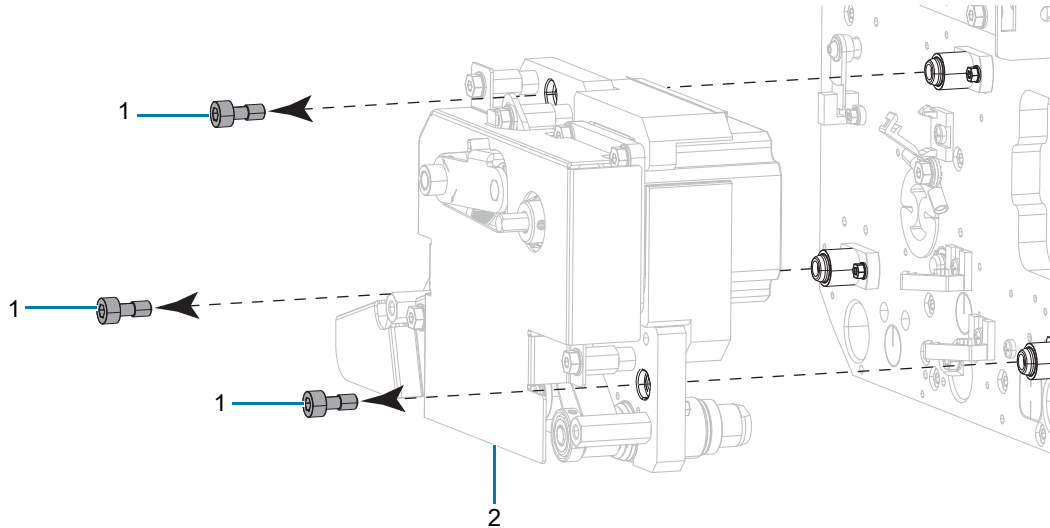
## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

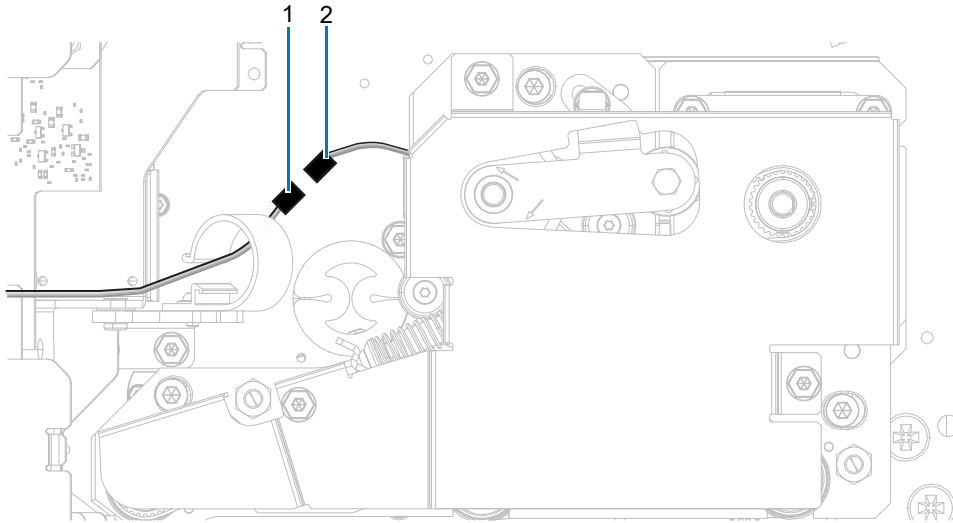


2. Loosen the three 4mm captive hexagon screws to release the drive system from the main frame.
3. Remove the drive system from the main frame.



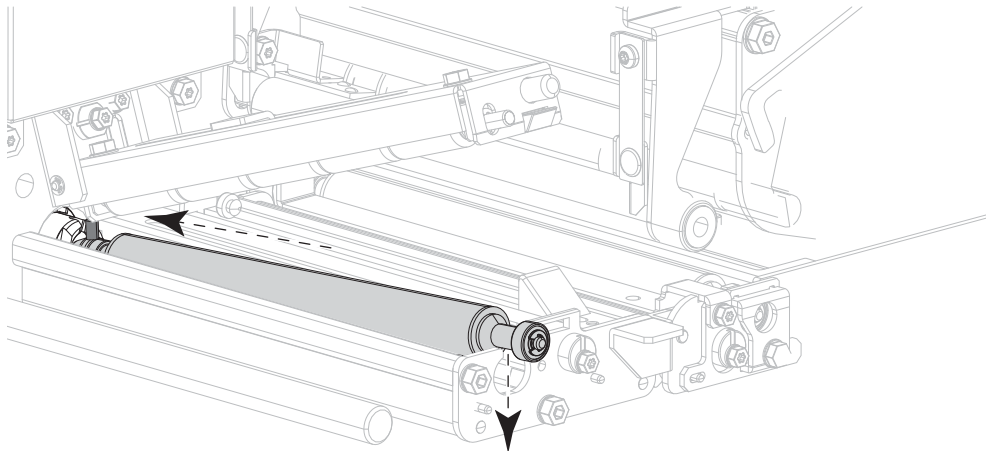
## Reinstall the Drive System

1. Align the drive system with the drive system mounts on the main frame, and reinstall the three 4mm mounting screws.
2. Reconnect the stepper motor cable connectors. The short cable (2) is wired to the drive motor. The long cable (1) plugs into J15 on the MLB.




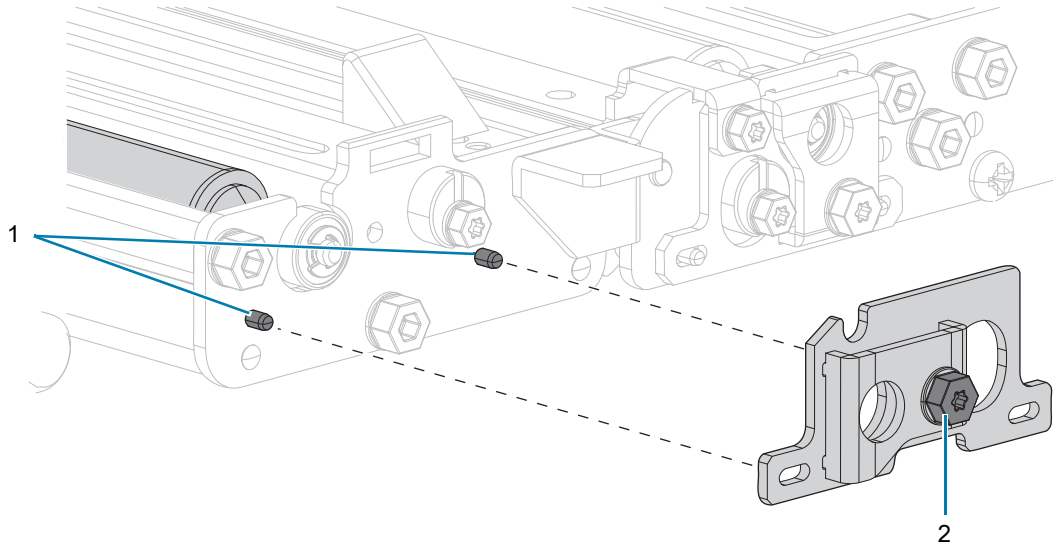
## Reinstall the Pinch Roller

1. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



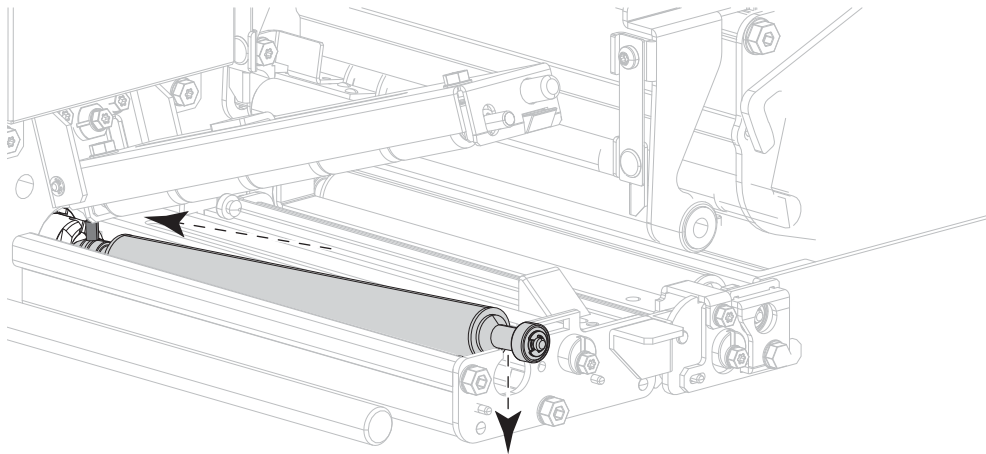
2. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

3. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.




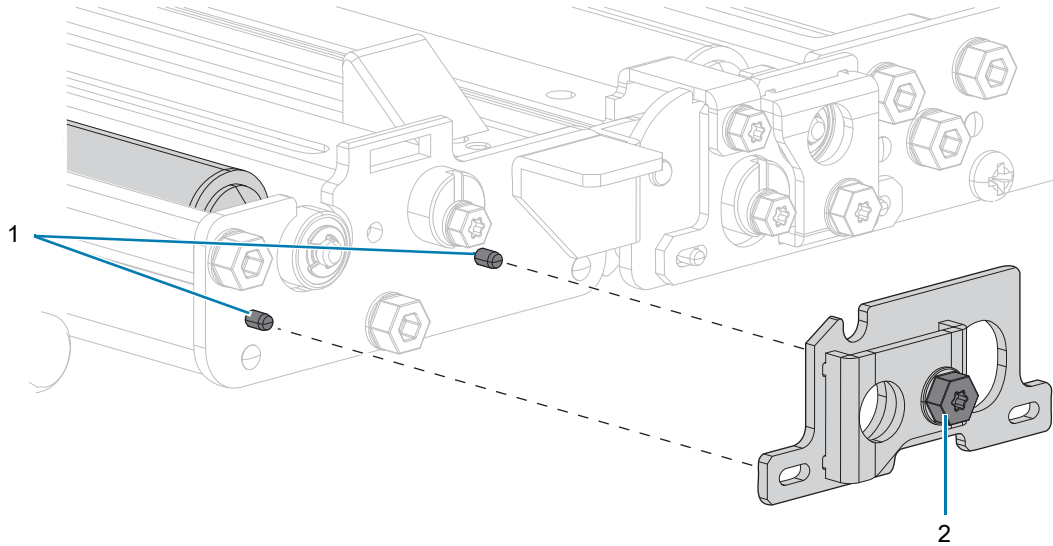
## Reinstall the Peel Roller

1. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



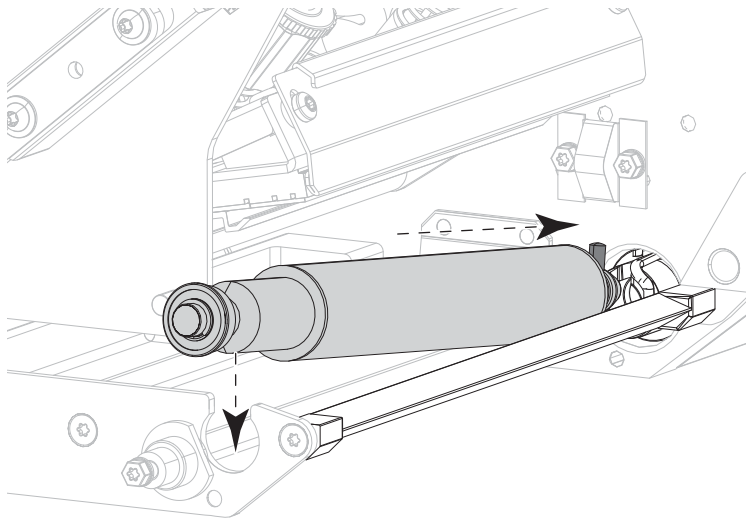
2. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

3. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.




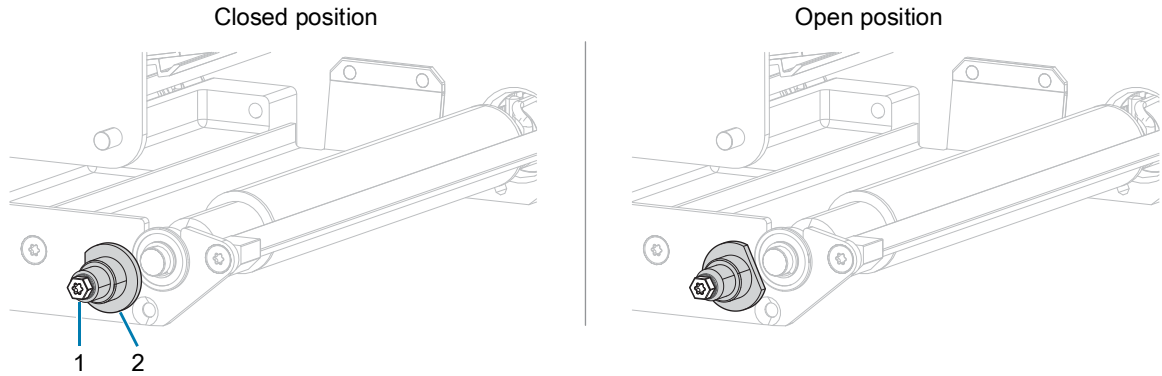
## Reinstall the Platen Roller

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

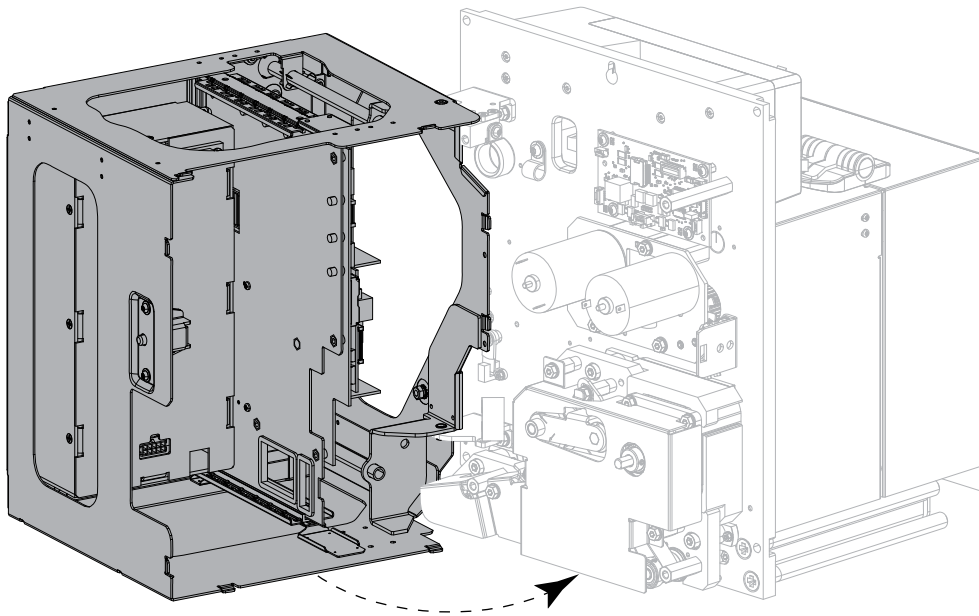
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.



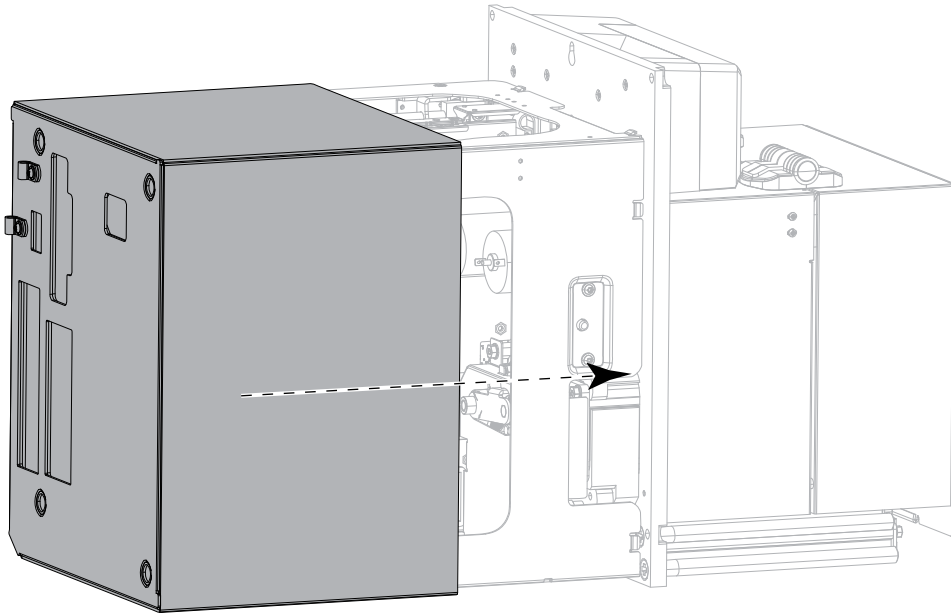
- c. Tighten the  T9 captive screw.

## Close the Electronics Enclosure

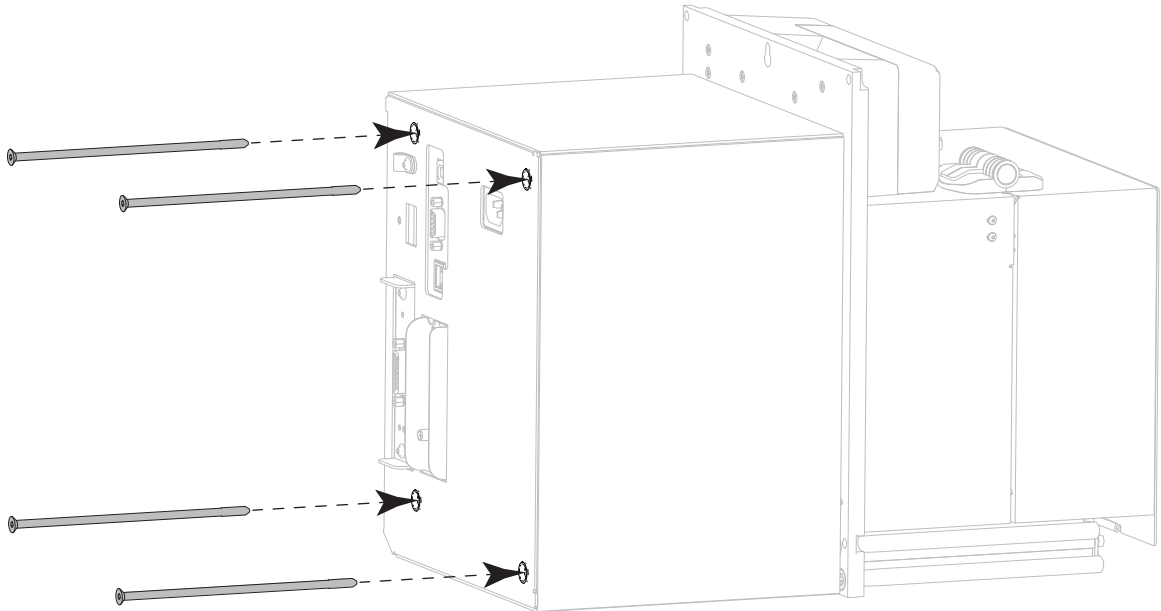
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**



# Stepper Motor for Media Drive System Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.

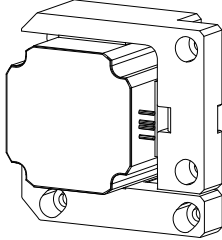
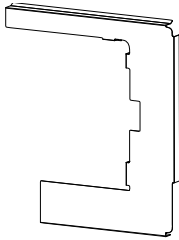




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Stepper Motor for Media Drive System Qty: 1
	Stepper Motor Frame Cover Qty: 1
	Screw (M5x10) Qty: 4  3mm

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T9
-  Metric hexagon keys or bits  
Size: 3mm, 4mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

for parts & service call OLC (800) 837-1309

## Prepare for Installation



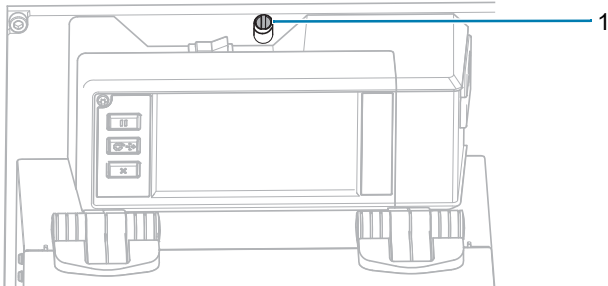
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



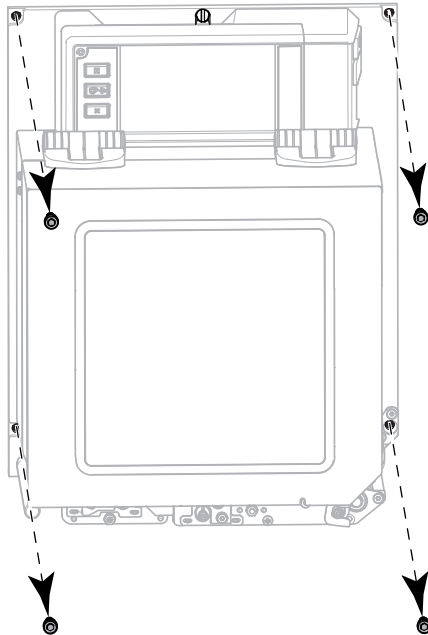
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



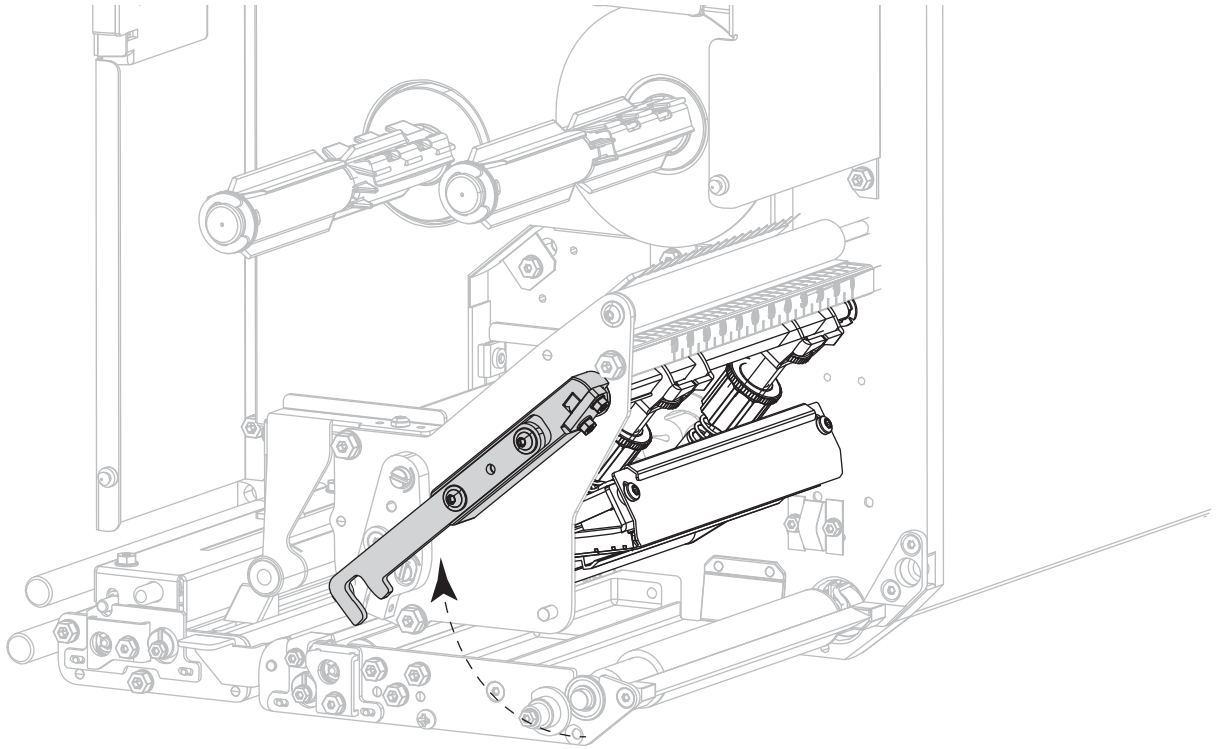
2. Remove the four screws securing the print engine to the applicator.




3. Lift the print engine off of the center mounting bolt and place it on a workbench.

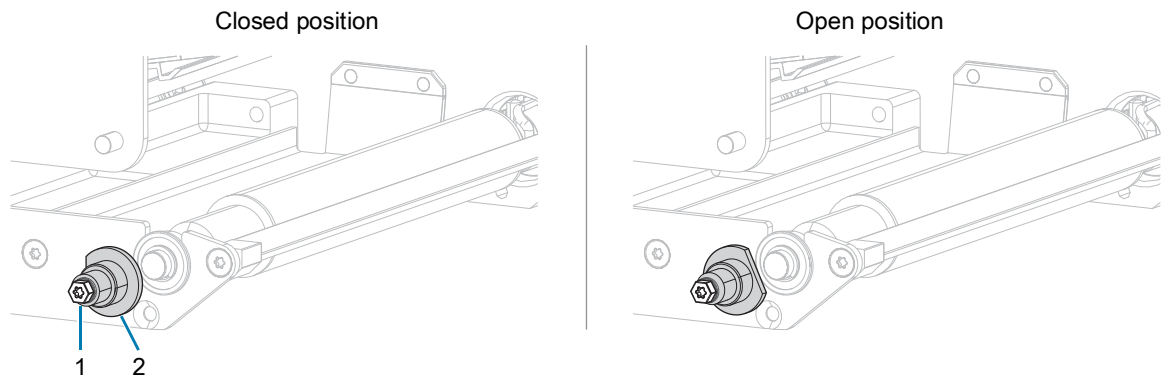
## Remove the Platen Roller

1. Open the printhead.



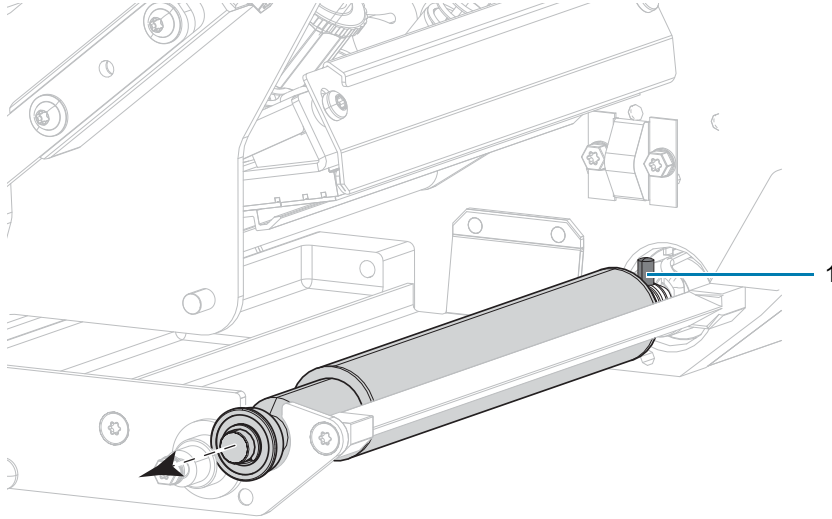
2. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

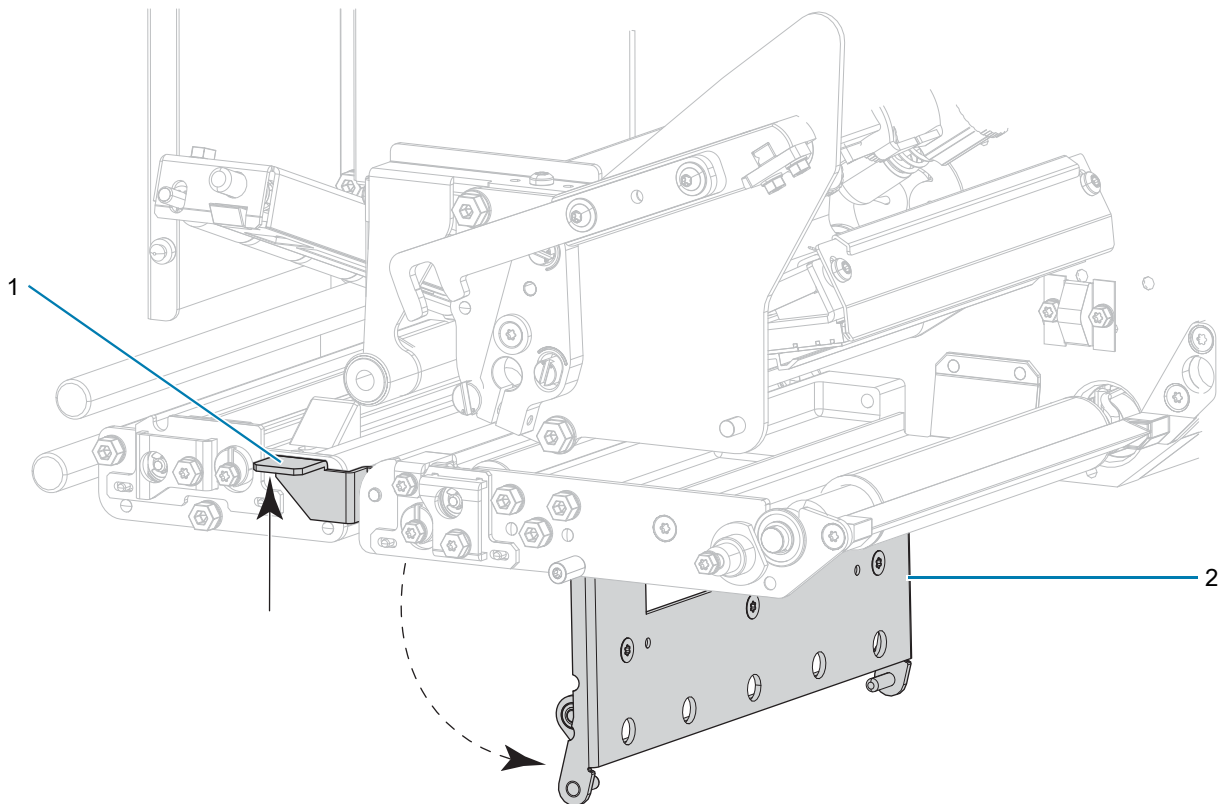
3. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.




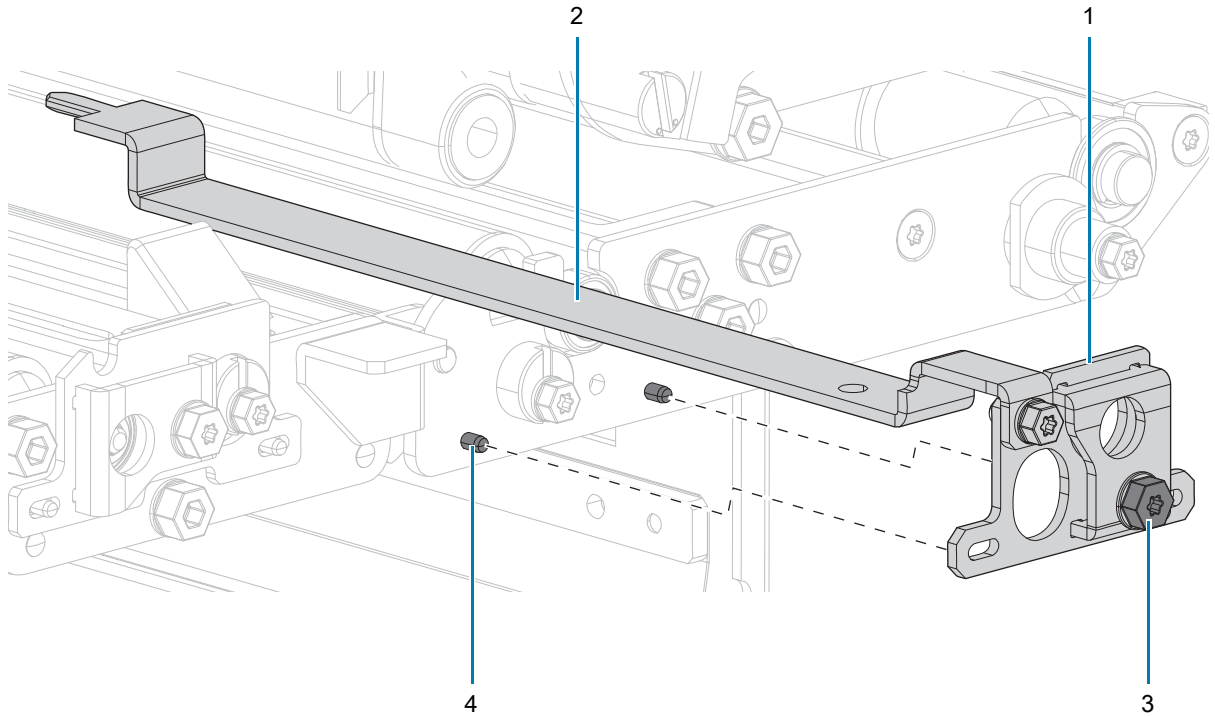
4. Remove the platen roller assembly from the print engine.

## Remove the Peel Roller

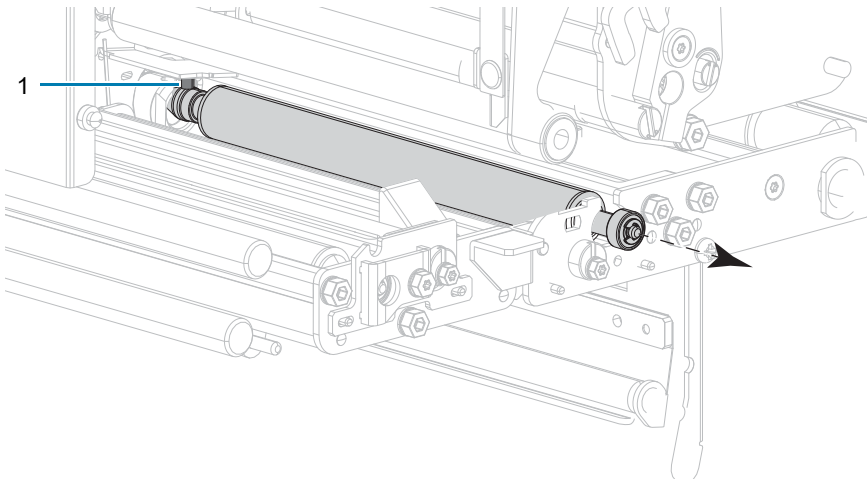
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.



2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




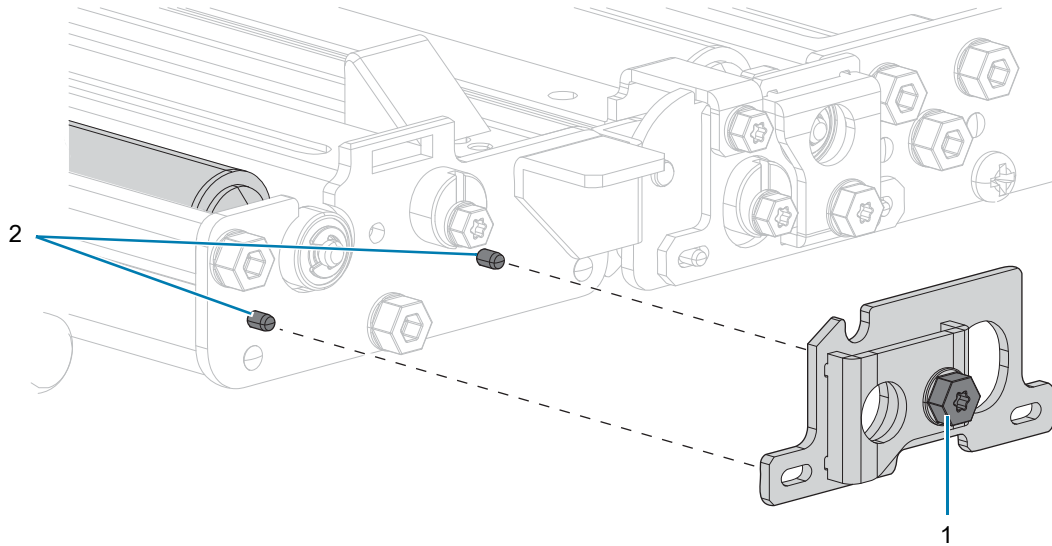
3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.



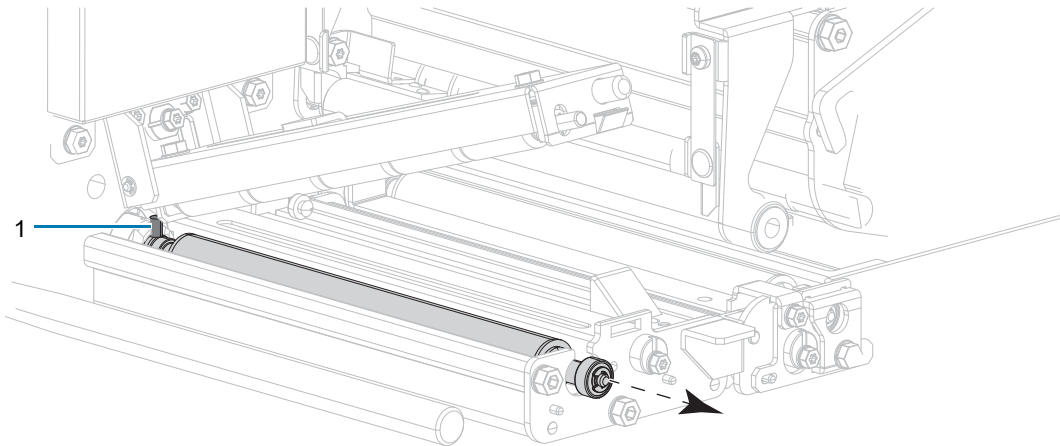
4. Remove the peel roller assembly from the print engine.

## Remove the Pinch Roller

1. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).



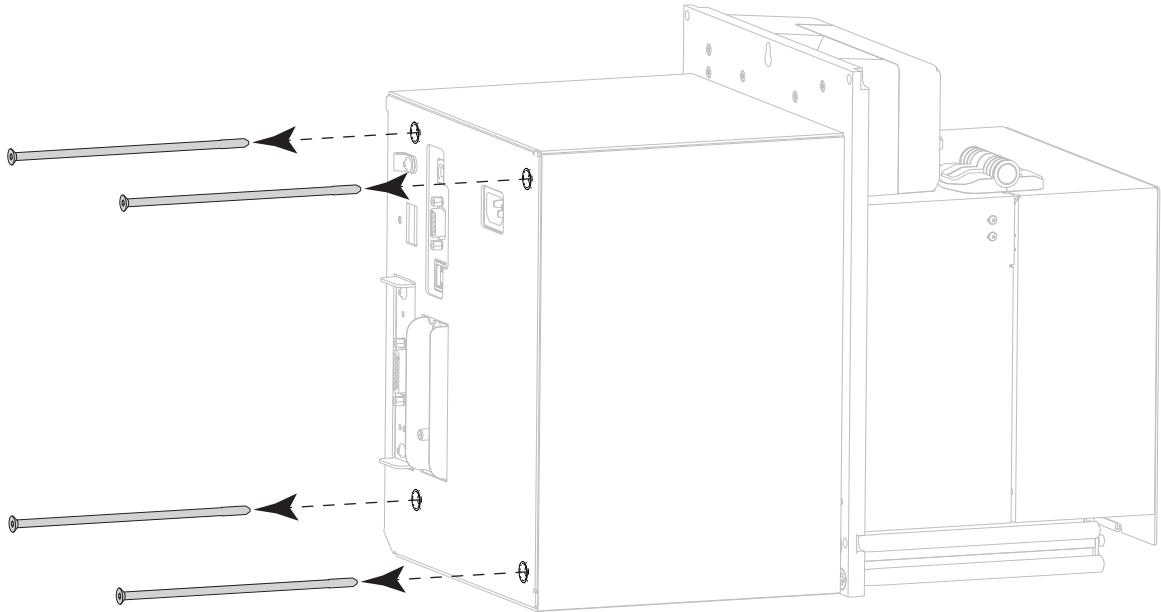
2. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



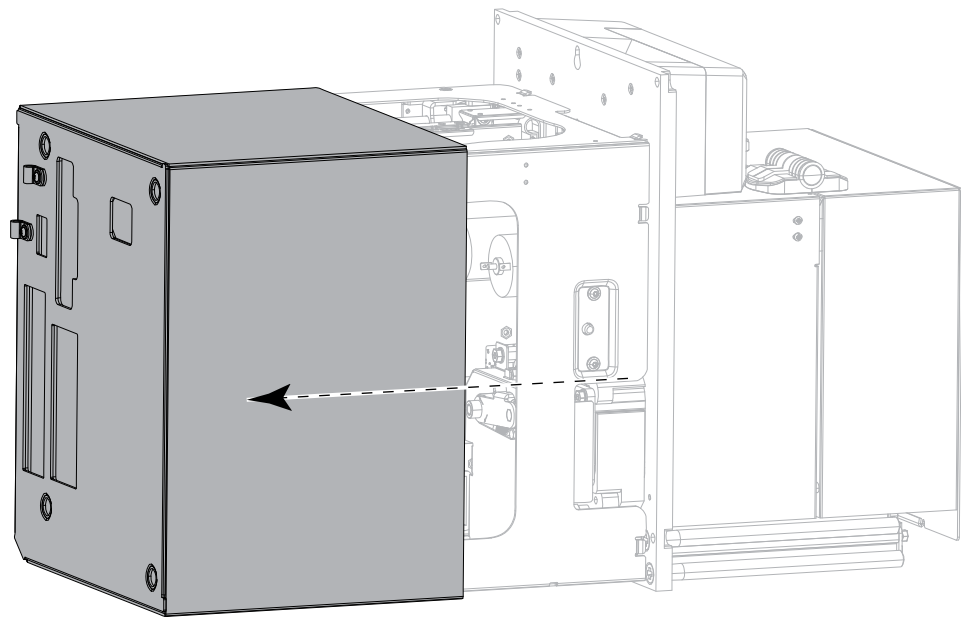
3. Remove the pinch roller assembly from the print engine.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



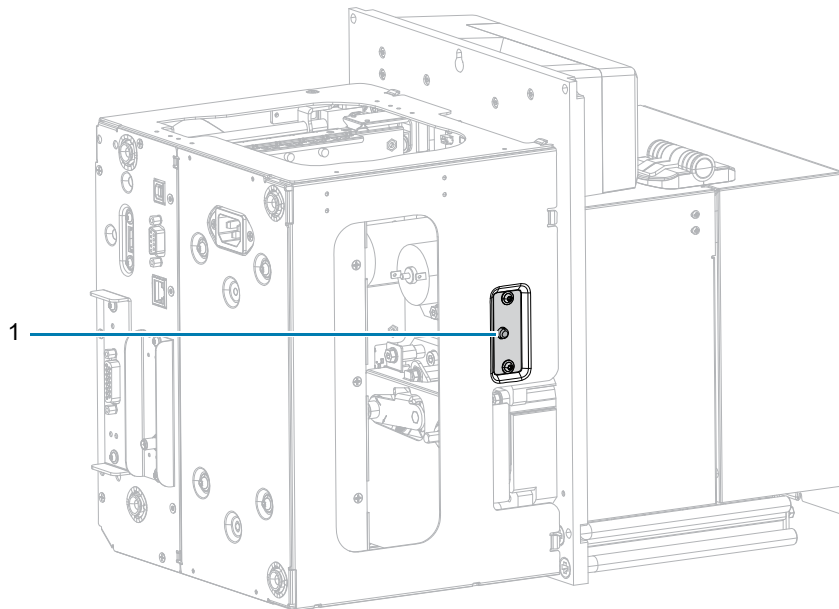
2. Remove the electronics enclosure cover from the print engine.



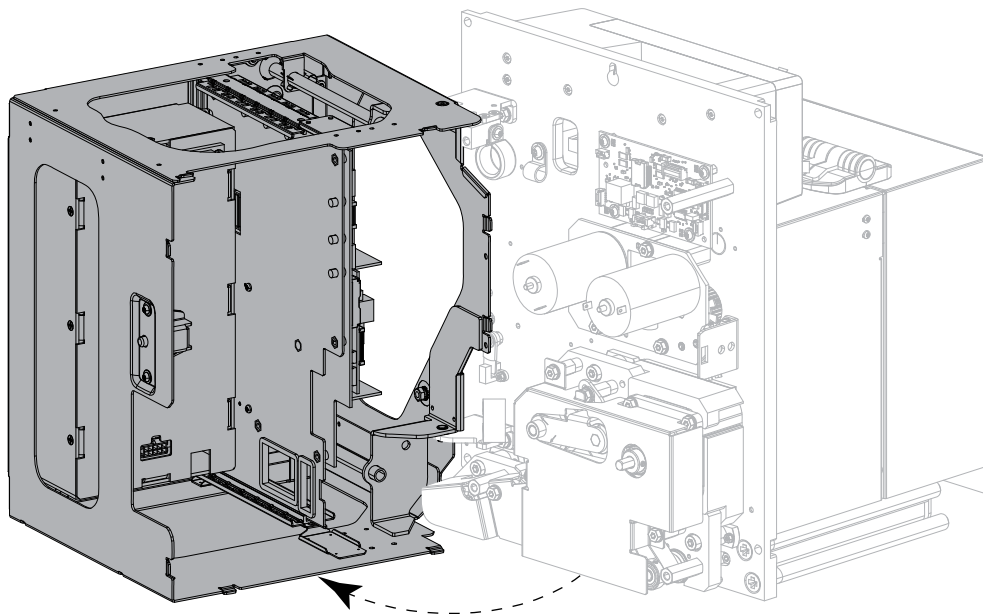
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.

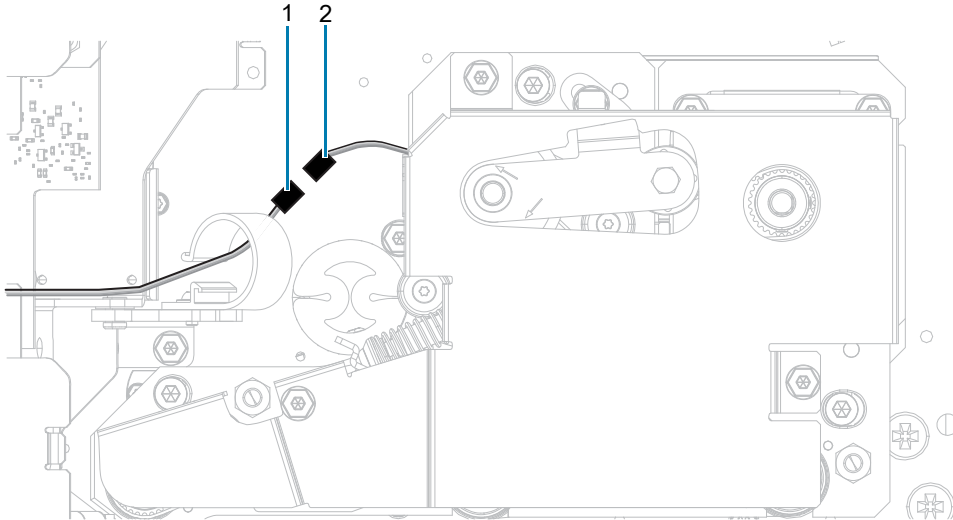




## Remove the Drive System

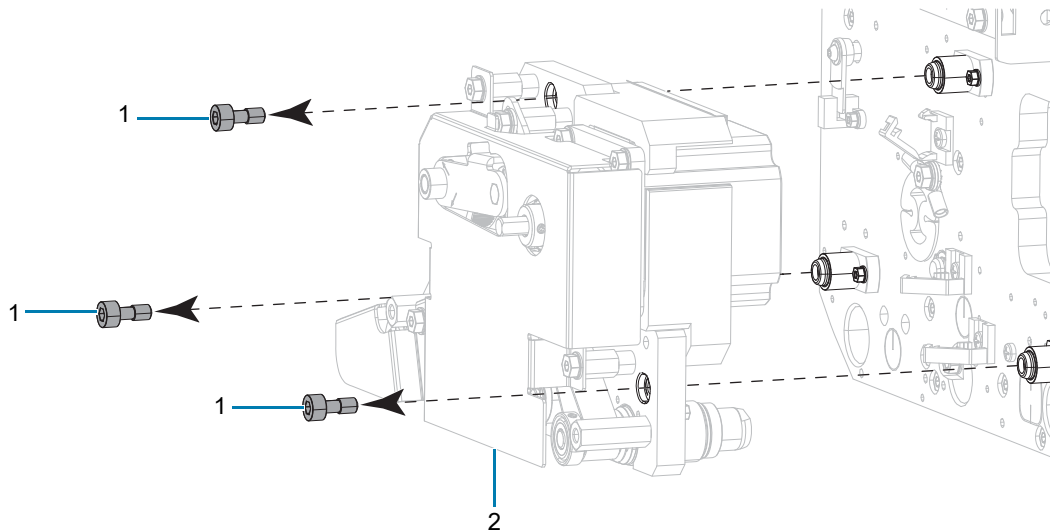
1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.



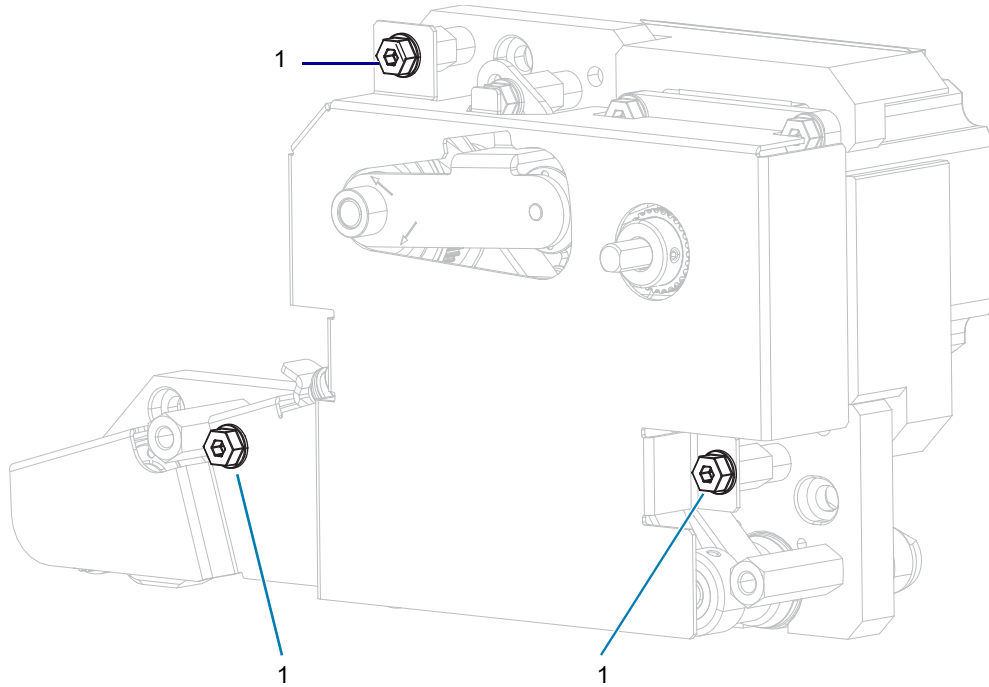
2. Remove the drive system.

- a. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.
- b. Remove the drive system (2) from the main frame.

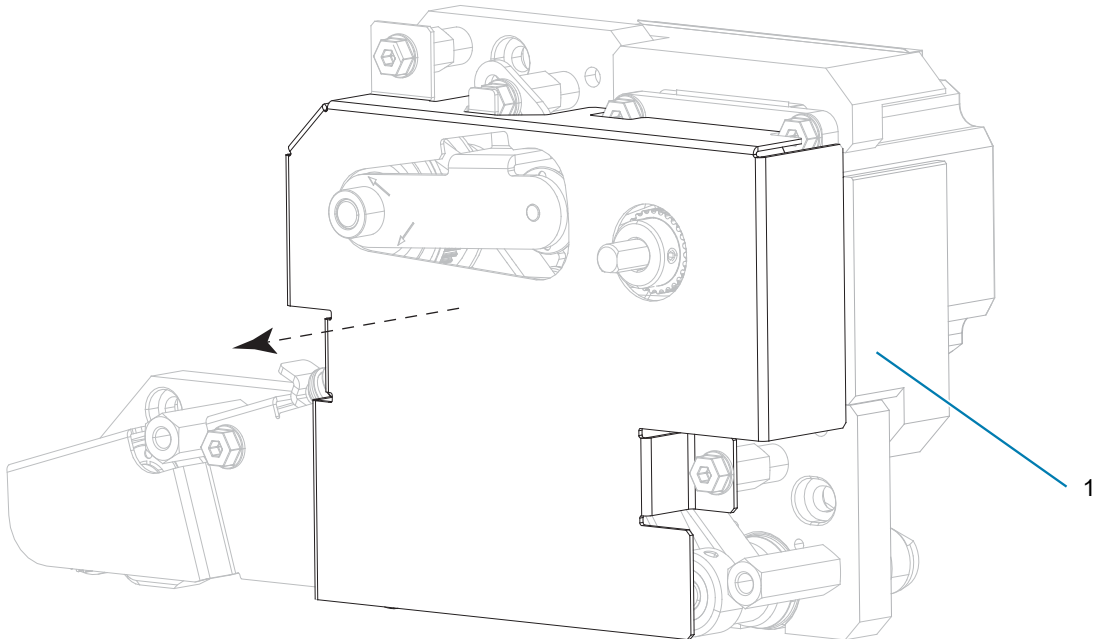


3. Remove the drive system cover.

a. Loosen three 3mm hexagon screws (1).

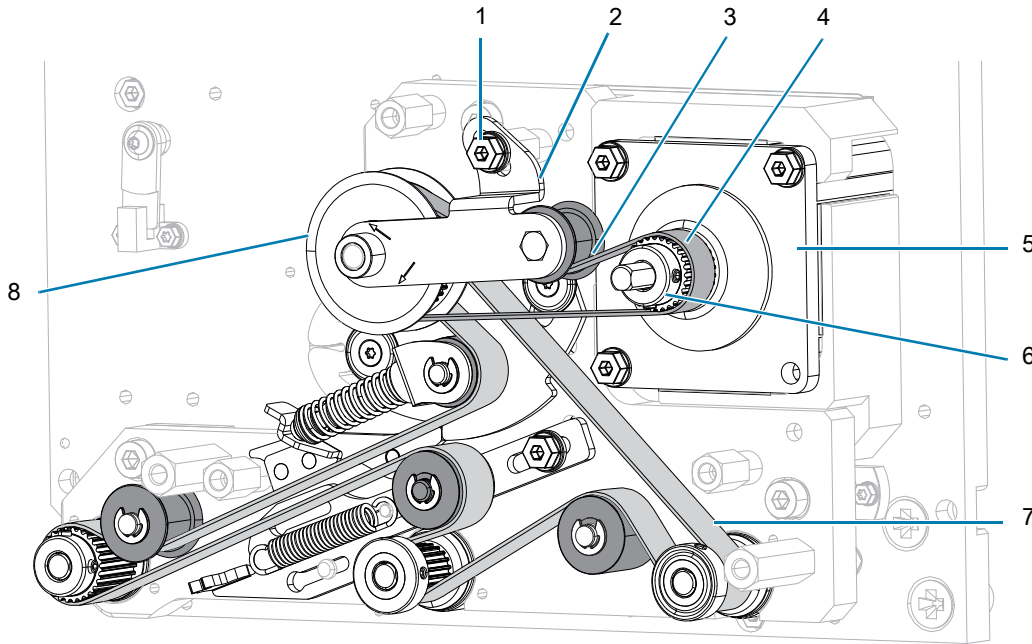


b. Lift off the drive system cover (1).



## Remove the Stepper Motor Belt

1. Note the location of the screw and washer in the stepper motor belt tensioner bracket.
2. Remove the mounting screw and washer securing the stepper motor belt tensioner bracket and slide the bracket assembly off of the compound pulley shaft.



1	Mounting screw and washer for stepper motor belt tensioner bracket
2	Stepper motor belt tensioner bracket (shaded)
3	Stepper motor idler pulley (shaded)
4	Stepper motor belt (shaded)
5	Stepper motor
6	Stepper motor pulley
7	Platen roller drive belt
8	Compound pulley

3. Remove the stepper motor belt.

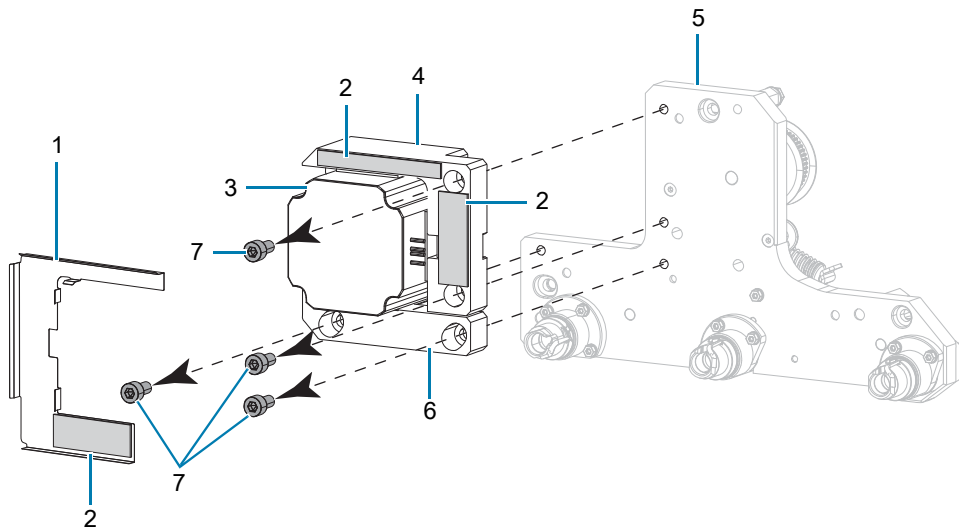
## Remove the Stepper Motor

1. Lift off the stepper motor cover.



**CAUTION:** The thermal insulation pads contain substances which may irritate your eyes. Wear gloves when working with these pads and wash your hands after touching the pads or liners.

2. Lift up the end of the thermal insulation pads on the stepper motor frame, if necessary, to access the stepper motor frame mounting screws.
3. To remove the stepper motor, remove the four 4mm hexagon stepper motor frame mounting screws.
4. Lift the stepper motor and attached frame sections off the back of the drive system mounting plate.



1	Stepper motor cover (cover is flipped over to show the thermal insulation pads)
2	Thermal insulation pad (shaded)
3	Stepper motor
4	Upper section of stepper motor frame
5	Drive system mounting plate
6	Lower section of stepper motor frame
7	Stepper motor mounting screws (4)

## Replace the Stepper Motor

1. Working from the back of the drive system, align the stepper motor/frame assembly with the four mounting holes.
2. Reinstall the four 4mm hexagon mounting screws to secure the stepper motor/frame assembly to the drive system.

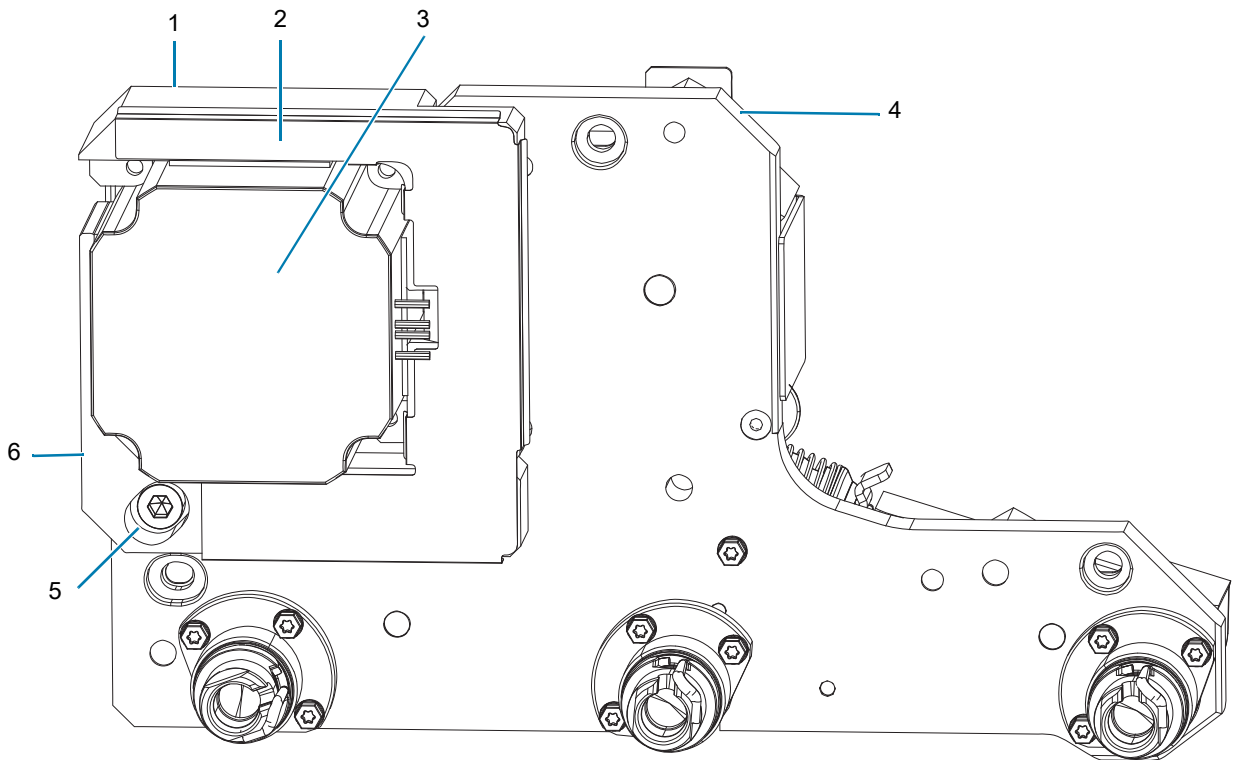


**CAUTION:** The thermal insulation pads contain substances that may irritate your eyes. Wear gloves when working with these pads, and wash your hands after touching the pads or liners.

3. Gently remove the liners on all of the thermal insulation pads on the motor, frame, and inside of the cover.
4. Gently press the thin metal stepper motor cover onto the back of the stepper motor frame. Ensure that the cover adheres to the stepper motor frame.



**NOTE:** The cover has been provided to protect you and the thermal insulation pads.



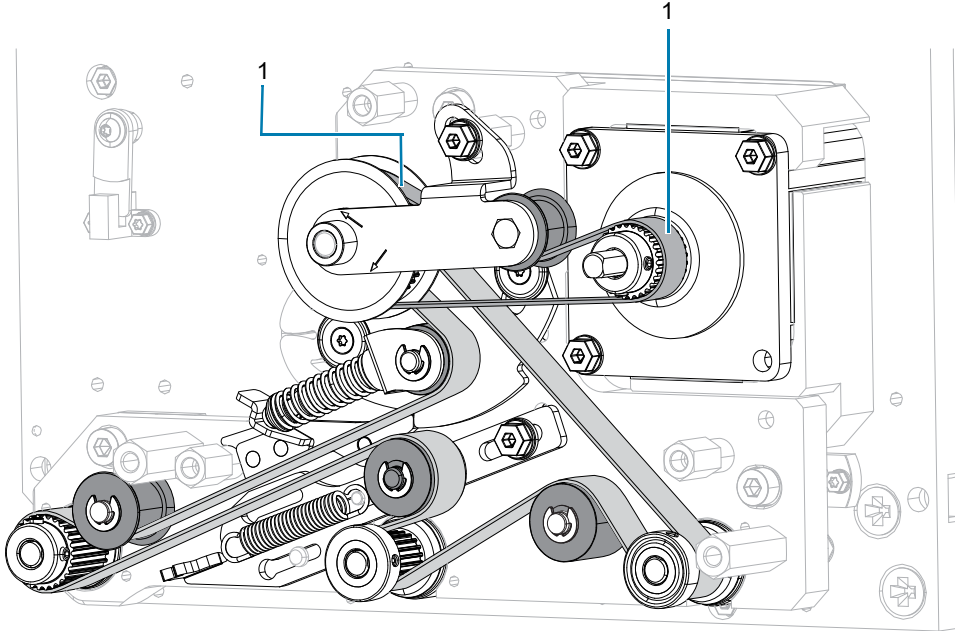
1	Upper section of stepper motor frame
2	Stepper motor cover
3	Stepper motor
4	Drive system mounting plate
5	Stepper motor mounting screws (4)
6	Lower section of stepper motor frame

5. Turn the drive system so that the stepper motor shaft is facing up.


for parts & service call QLC (800) 837-1309

## Replace the Stepper Motor Belt

1. Replace the stepper motor belt (1) on the compound pulley and the stepper motor pulley.
  - On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.

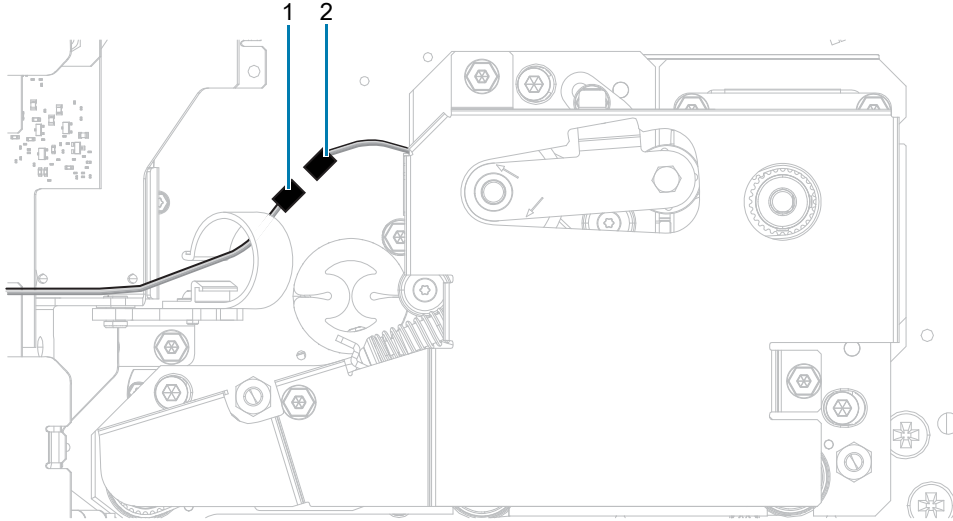


2. Align the stepper motor belt tensioner bracket assembly on the compound pulley shaft.
 

Ensure that the idler rides on top of the stepper motor belt and that the belt is seated evenly on the stepper motor pulley.
  3. Replace the mounting screw and washer for the stepper motor belt tensioner bracket.
  4. Reset the stepper motor belt tensioner bracket to its original location and tighten the screw.
- !** **IMPORTANT:** The lower section of the stepper motor belt should be slightly taut. The middle of the belt should deflect upward approximately halfway to the bracket pulley under moderate finger pressure.
5. Reinstall the drive system cover.
    - a. Align the drive system cover over the three mounting holes.
    - b. Reinstall the three  3mm hexagon screws mounting screws to secure the drive system cover.

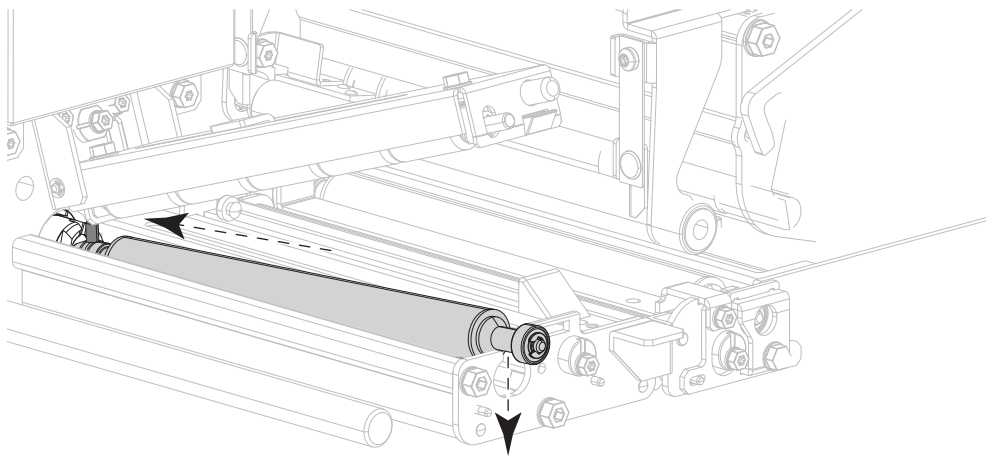
## Reinstall the Drive System

1. Align the drive system with the drive system mounts on the main frame, and reinstall the three 4mm captive hexagon screws.
2. Reconnect the stepper motor cable connectors. The short cable is wired to the drive motor. The long cable plugs into J15 on the MLB.




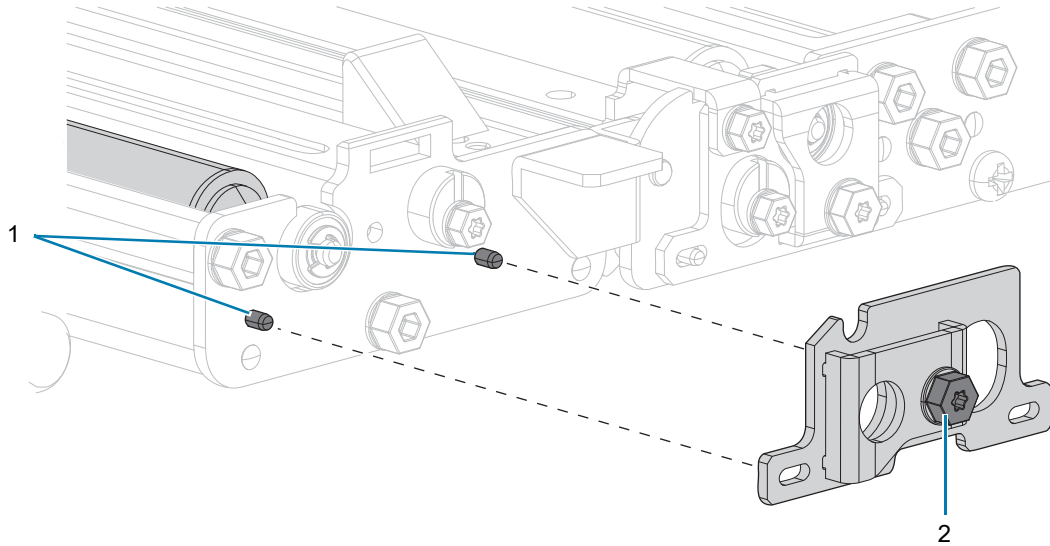
## Reinstall the Pinch Roller

1. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



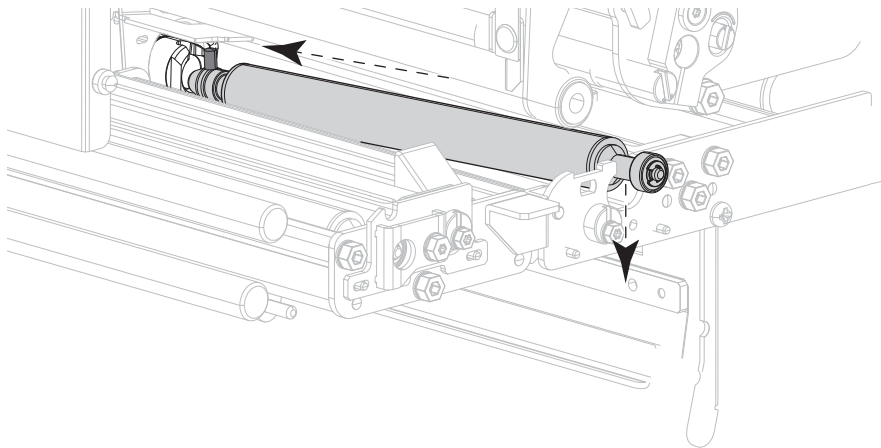
2. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

3. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.




## Reinstall the Peel Roller

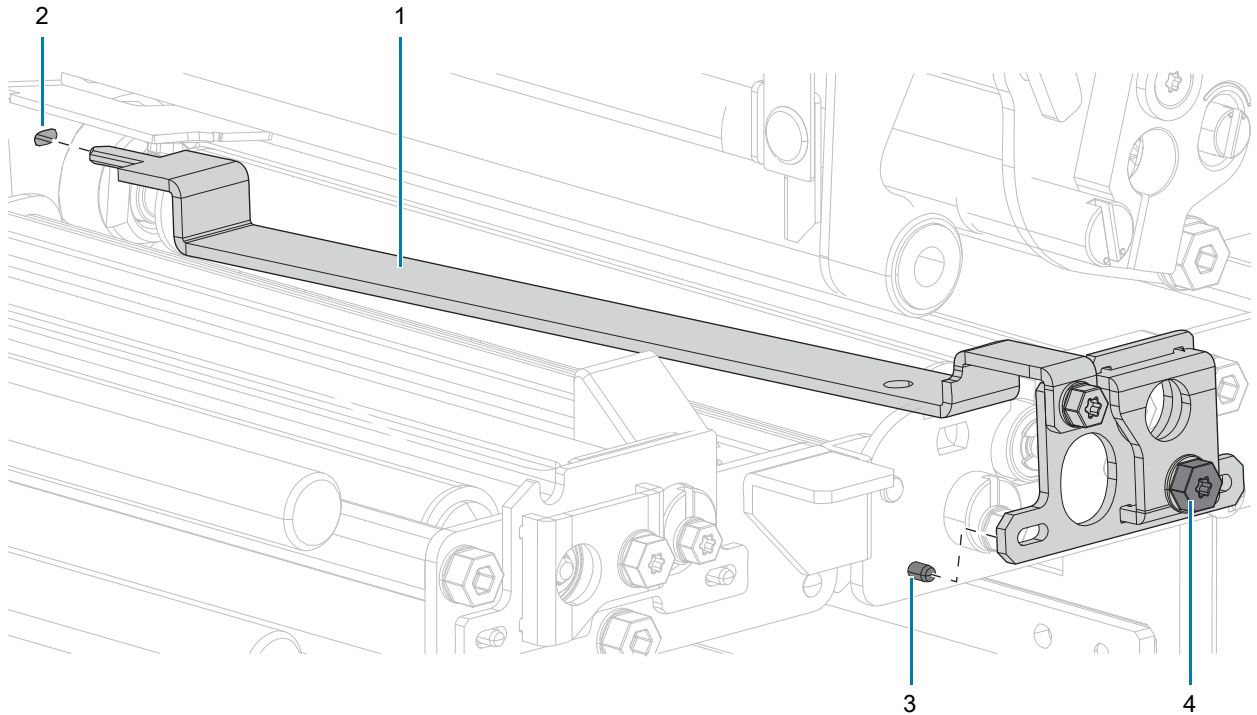
1. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



2. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

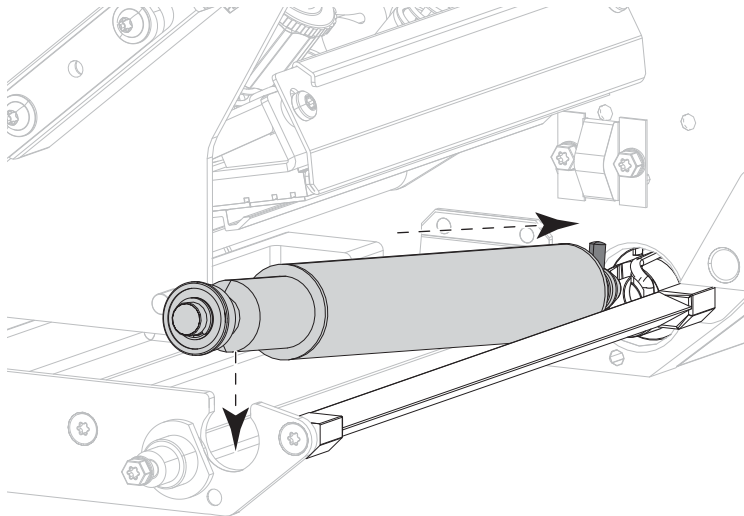


3. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.




## Reinstall the Platen Roller

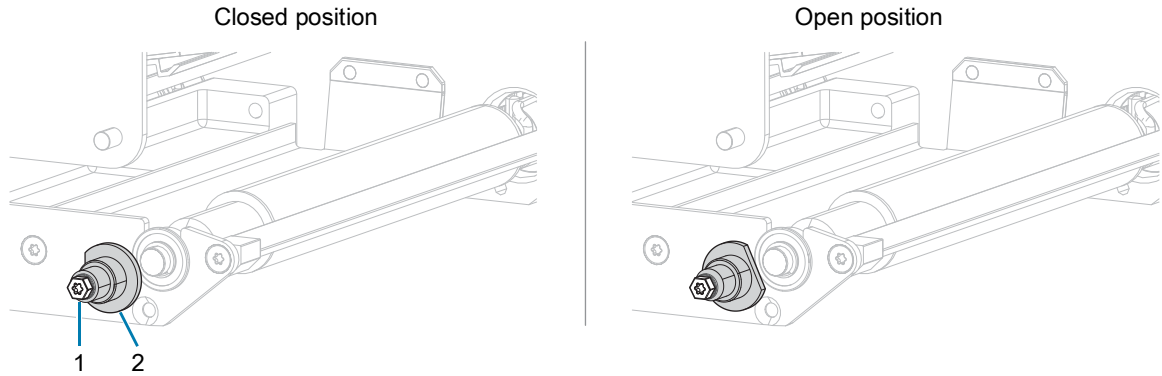
1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

for parts & service call QLC (800) 837-1309

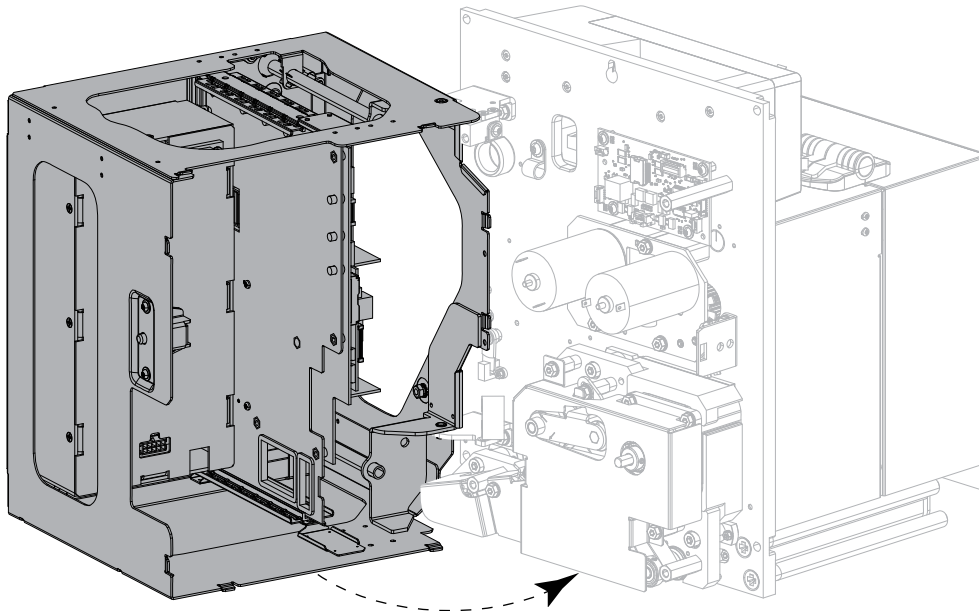
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.



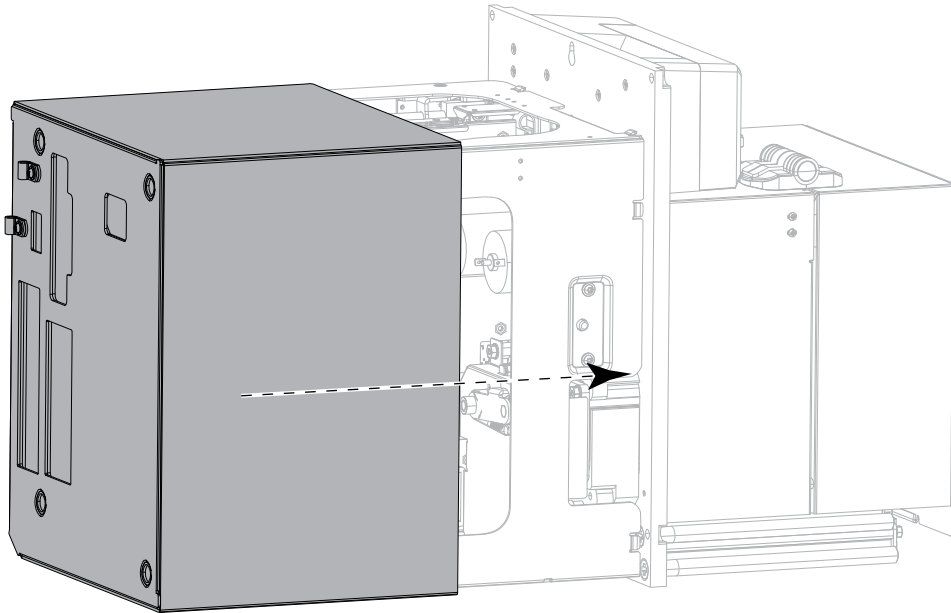
- c. Tighten the  T9 captive screw.

## Close the Electronics Enclosure

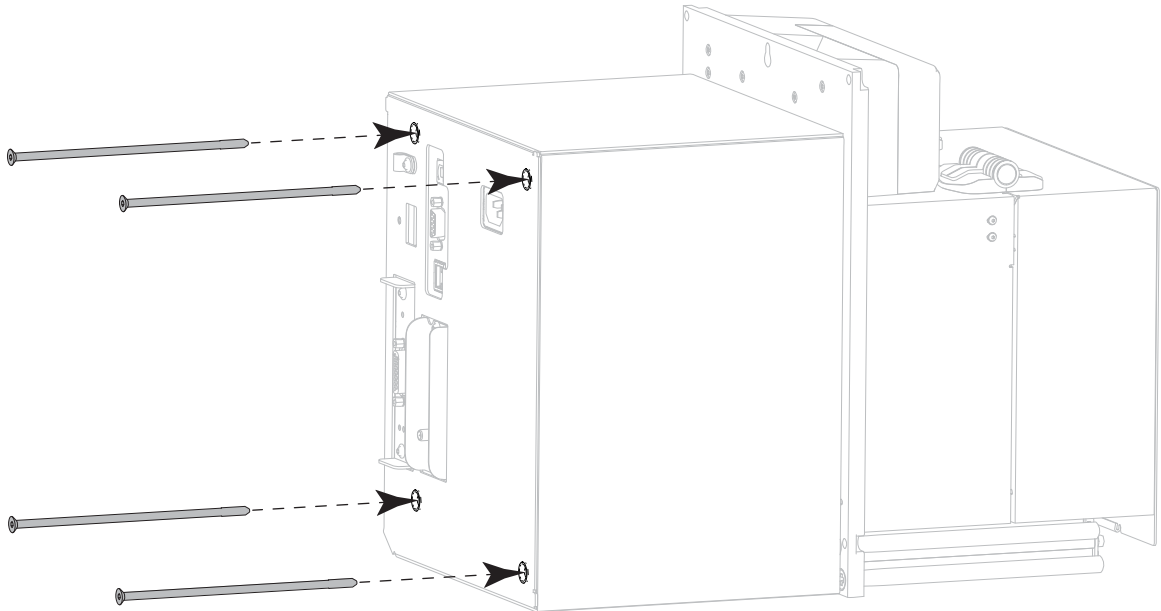
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

Supported printers:

- ZE511
- ZE521



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

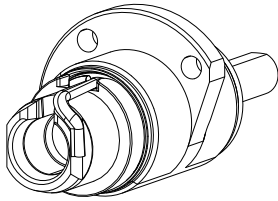
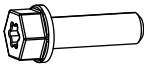



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that the kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Media roller coupler Qty: 3
	Screw (M3x10 TX NI) Qty: 9  T8

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T9
-  Metric hexagon keys or bits  
Size: 1.5mm, 3mm, 4mm
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



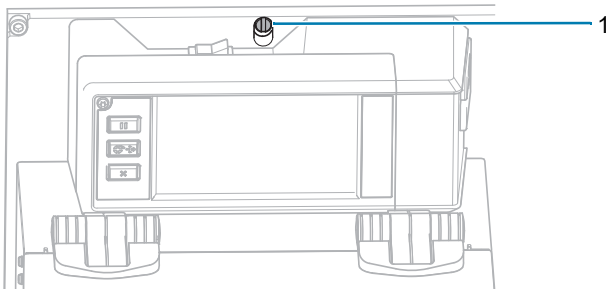
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



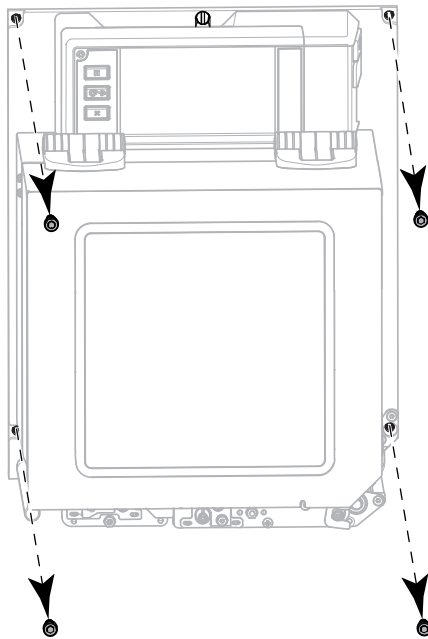
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



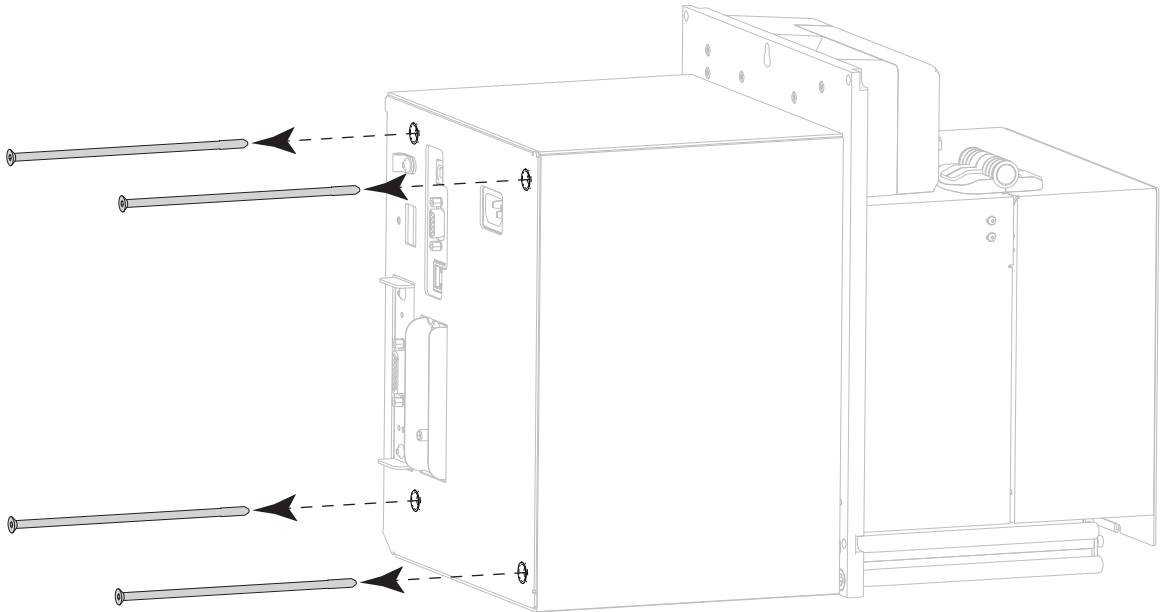
2. Remove the four screws securing the print engine to the applicator.



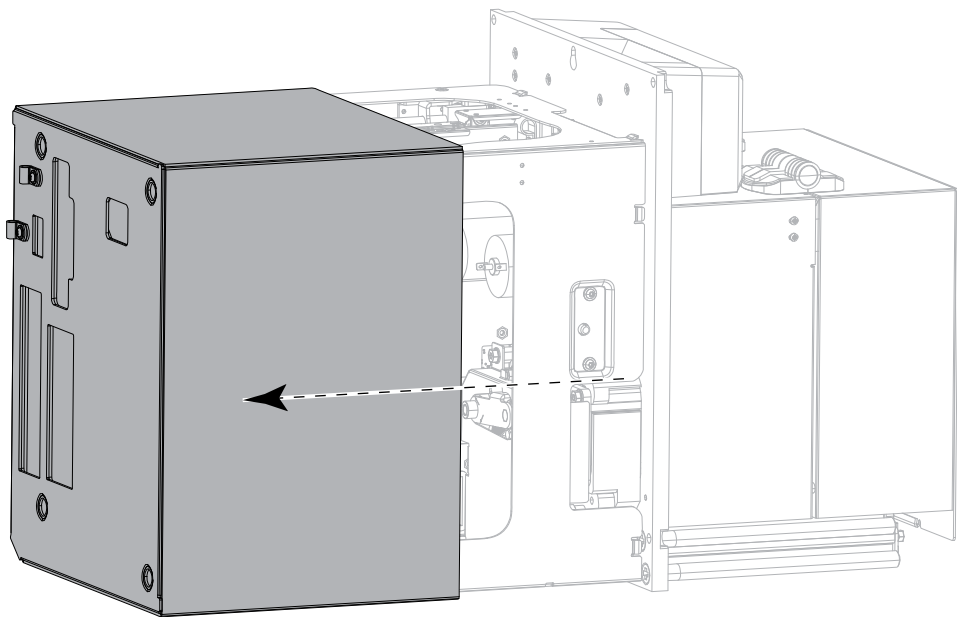
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



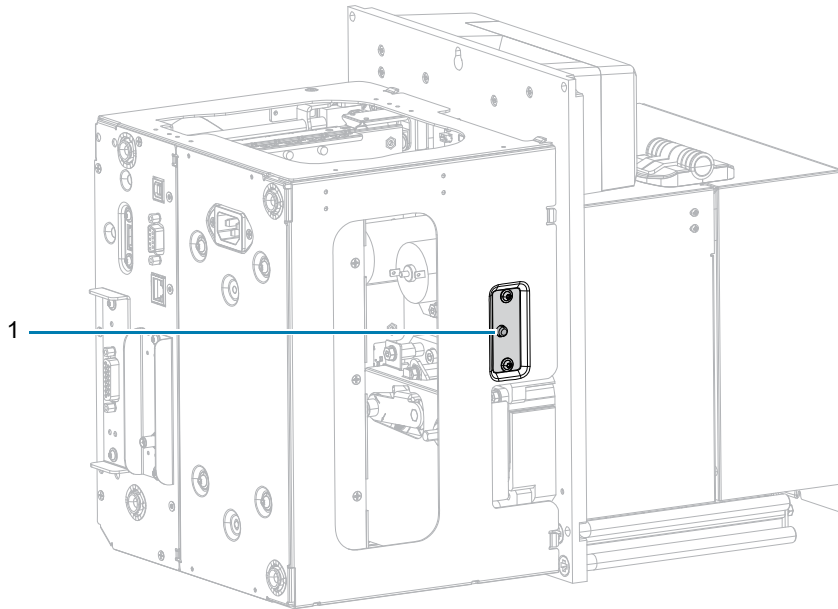
2. Remove the electronics enclosure cover from the print engine.



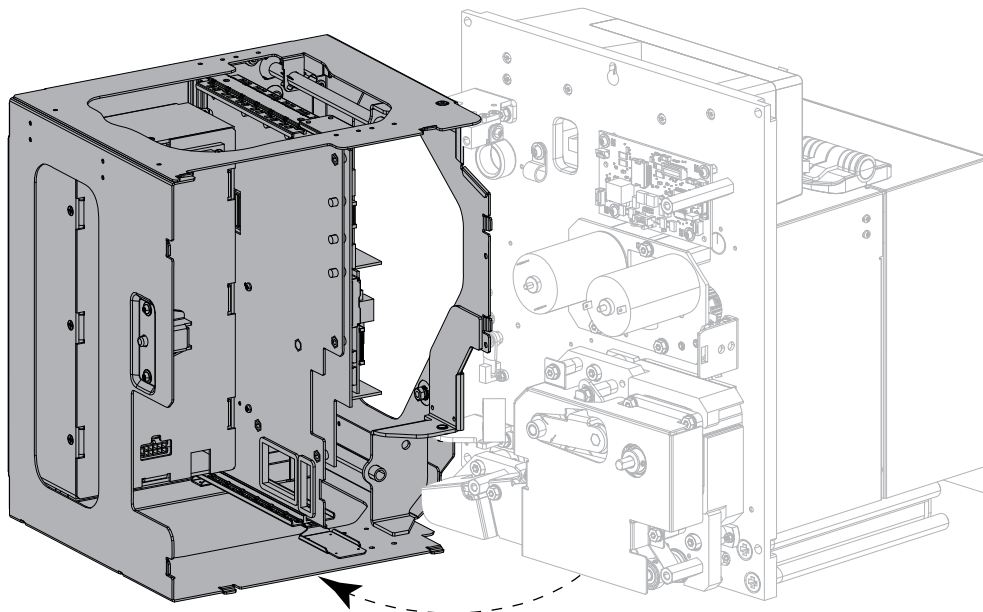
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

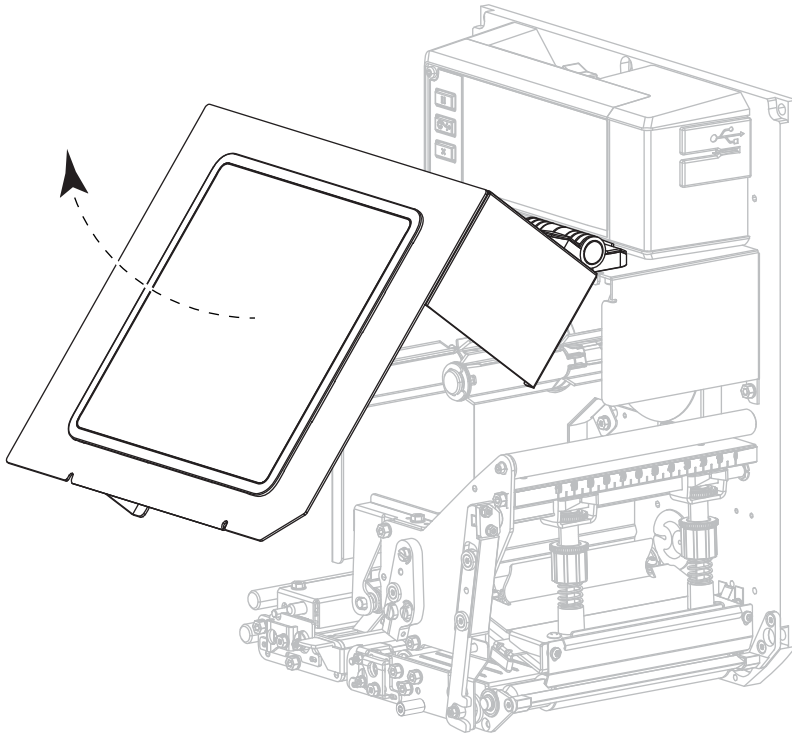


4. Open the rear of the print engine.



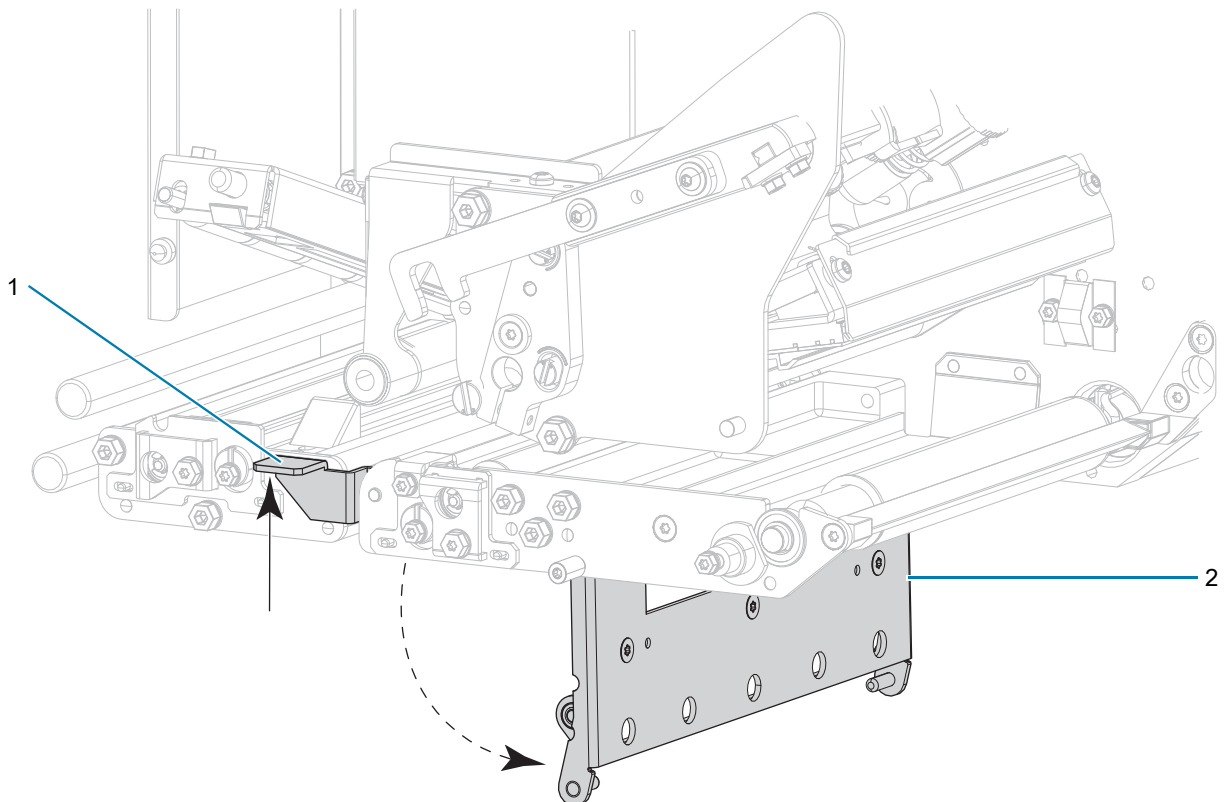


5. Open the media cover.




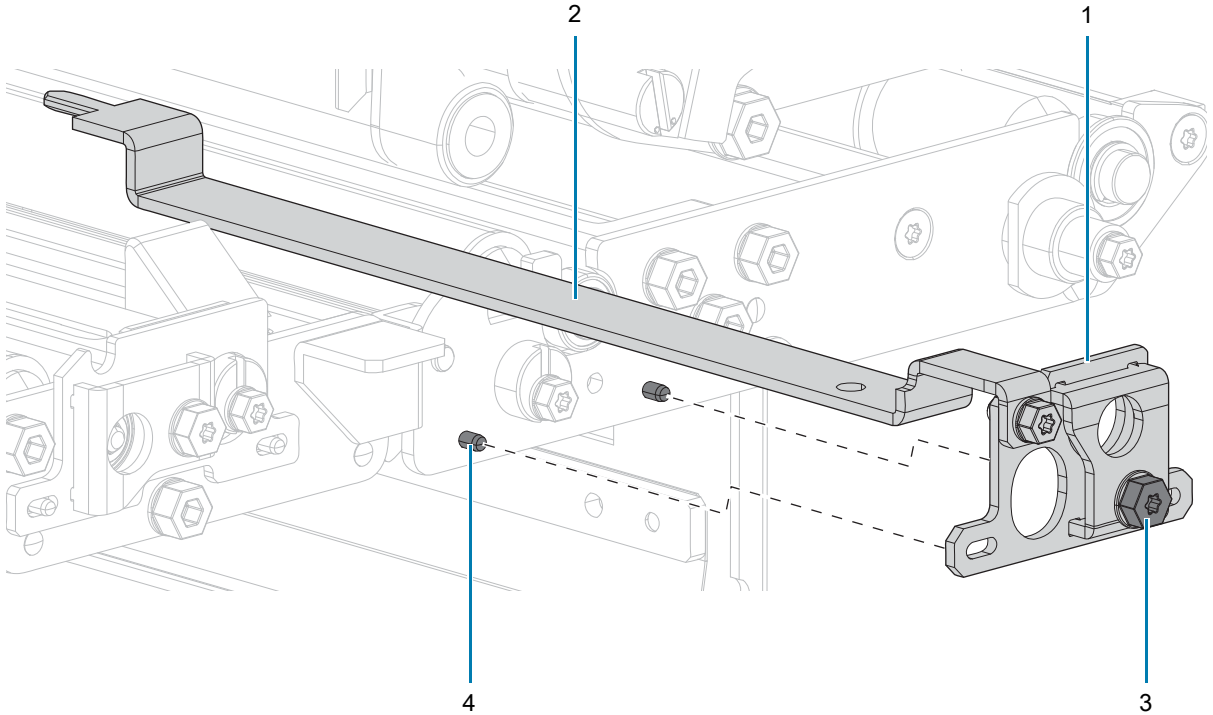
## Remove the Media Rollers

1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.

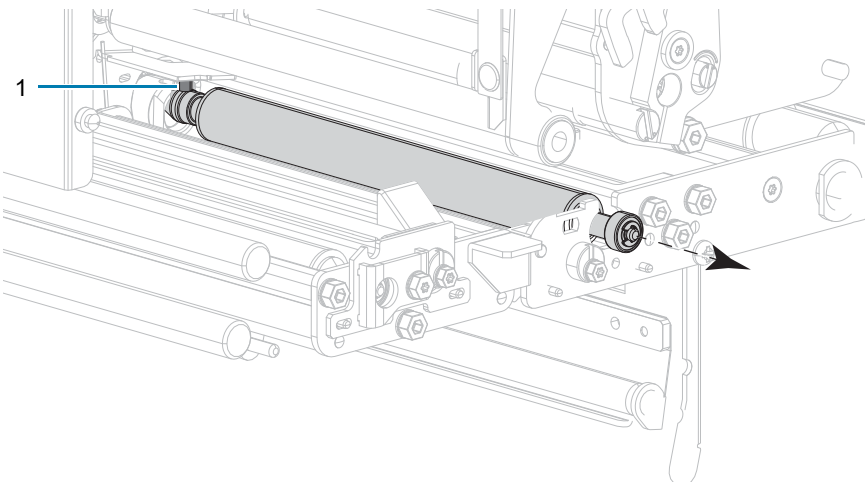


for parts & service call QLC (800) 837-1309


2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

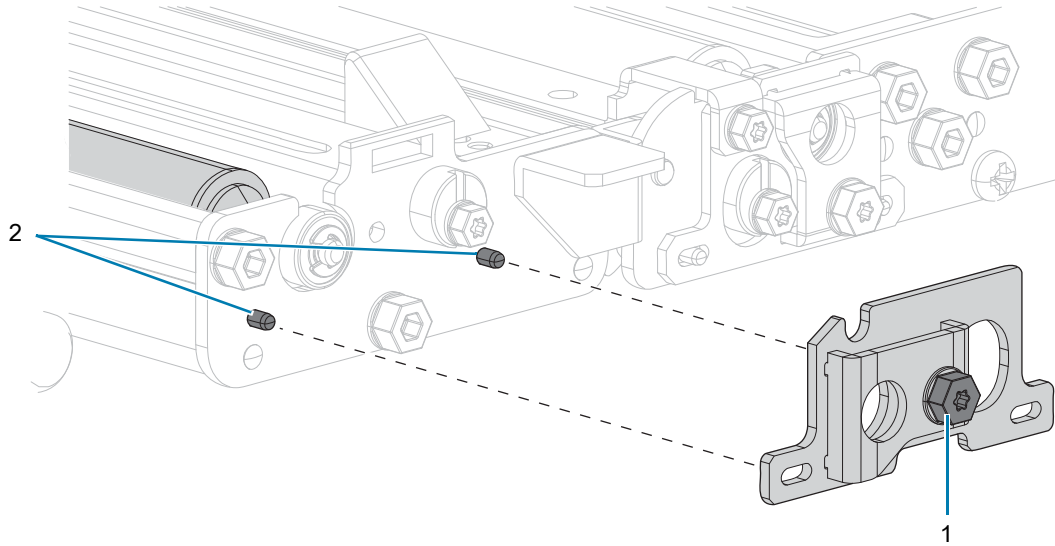


3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

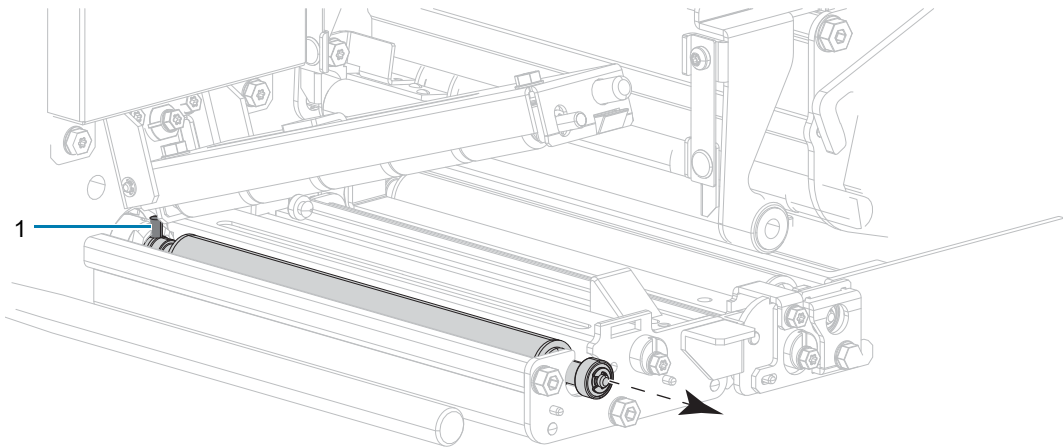


4. Remove the peel roller assembly from the print engine.

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




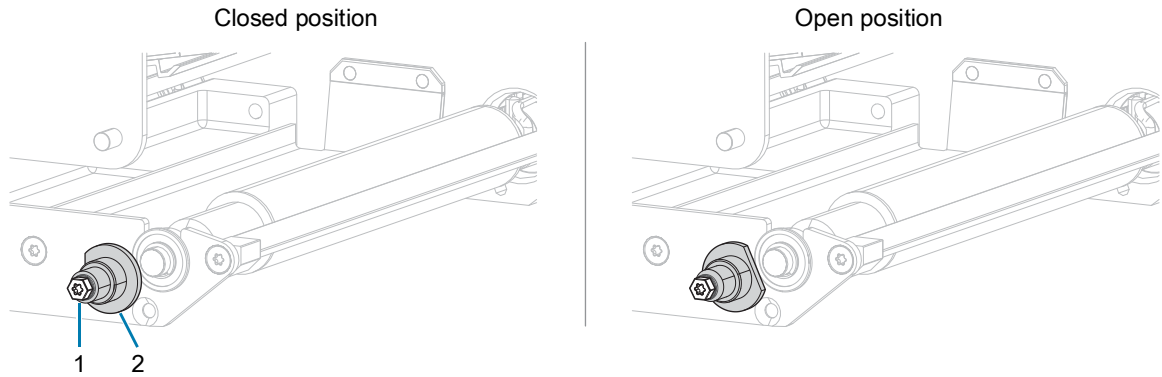
6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



7. Remove the pinch roller assembly from the print engine.

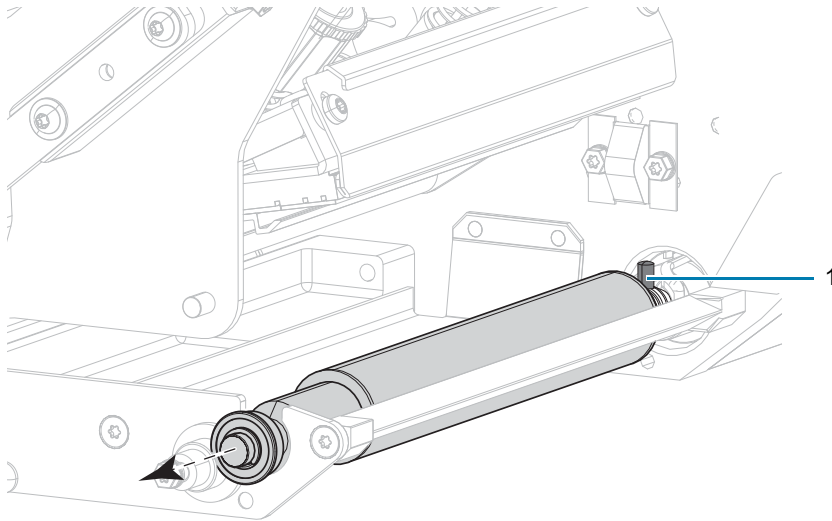
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

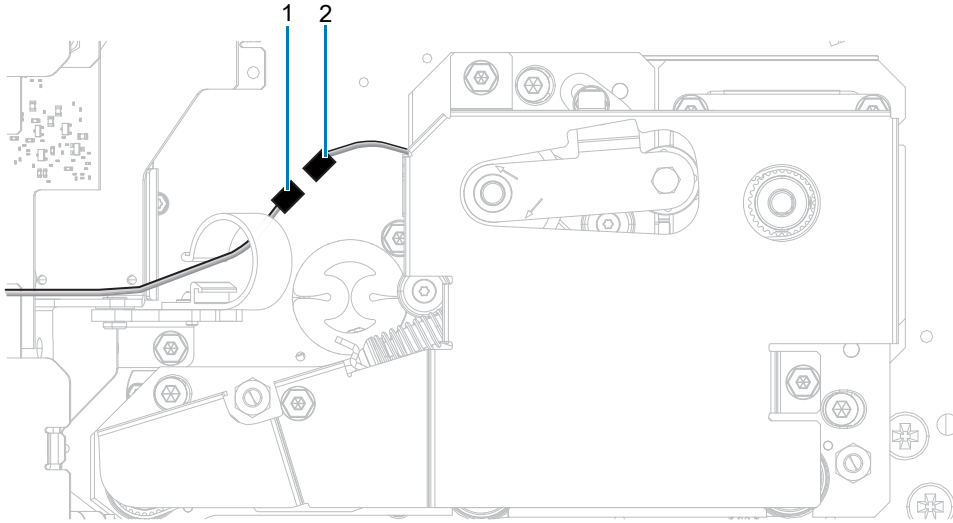


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

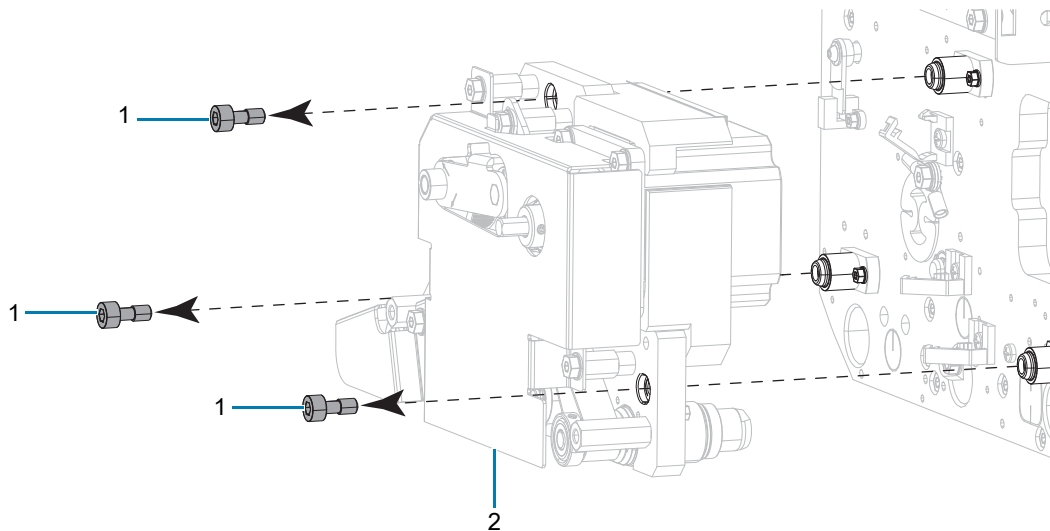


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



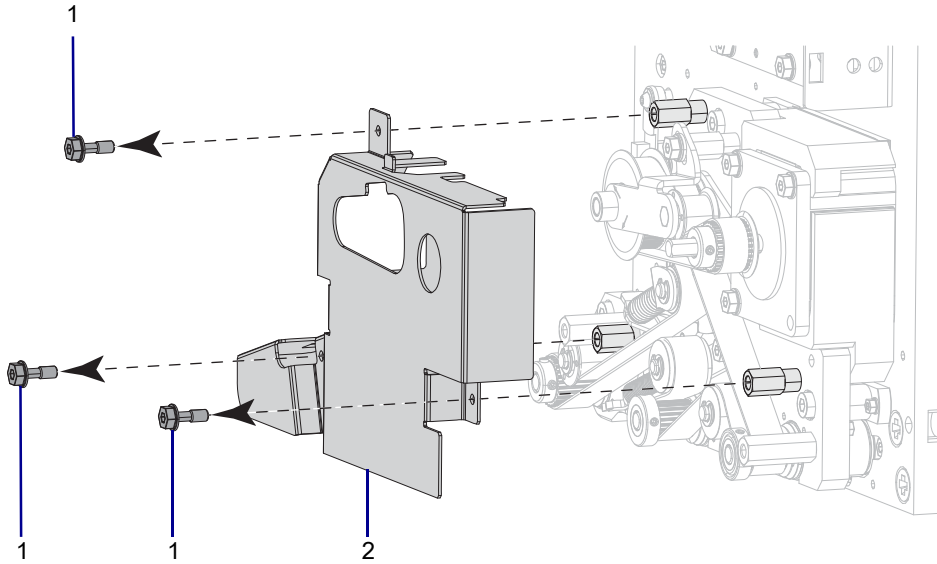
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

3. Remove the drive system (2) from the main frame.



## Remove the Media Drive Belt

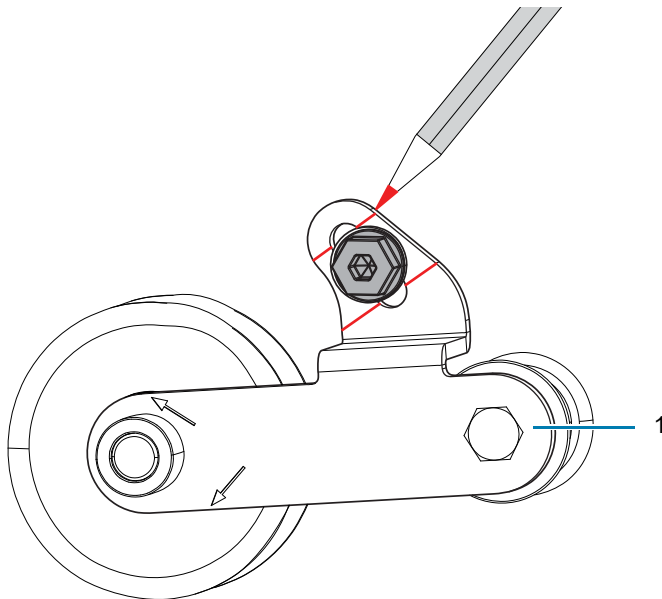
1. Loosen three 3mm hexagon screws (1) and lift off the drive system cover (2).



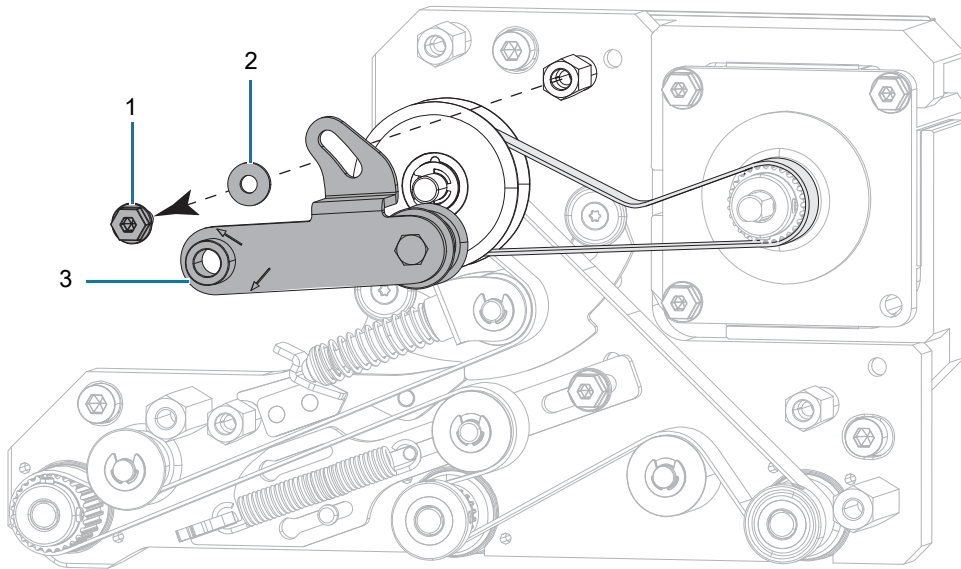
**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress, or twist the belts.

2. Remove the stepper motor belt.
  - a. Before removing the stepper motor belt tensioner bracket (1), mark both sides of the screw and washer.
 

These marks will assist in re-tensioning the stepper motor belt.

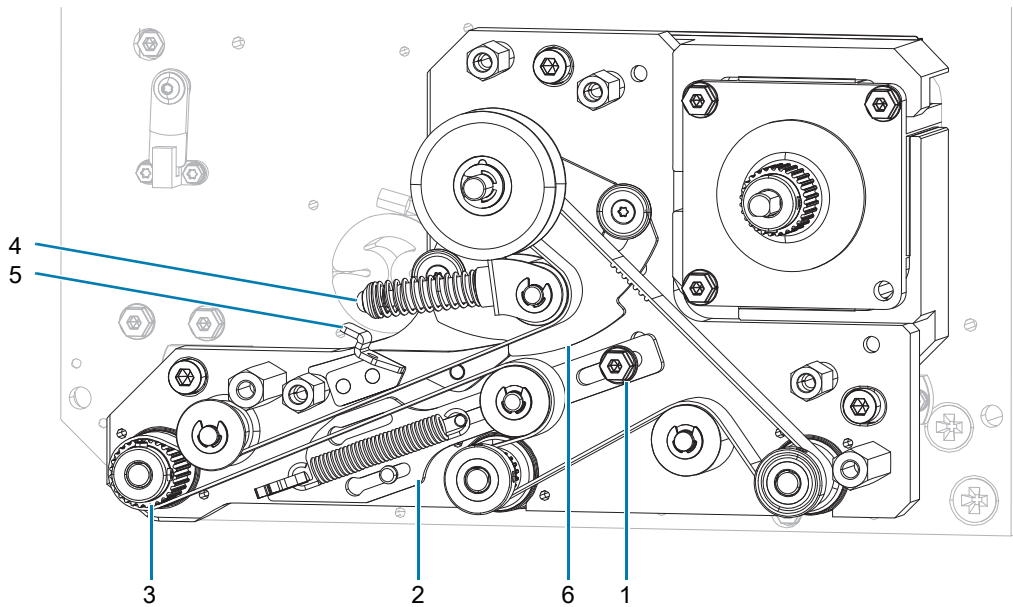


- b. Remove the 3mm mounting screw (1) and washer (2) securing the stepper motor belt tensioner bracket (3).



- c. Slide the bracket assembly off of the compound pulley shaft.

3. Release tension on the platen belt.
  - a. Loosen the ● 3mm mounting screw (1) on the locking tensioner mounting plate (2).
  - b. Push the locking tensioner mounting plate (2) toward the platen roller pulley (3) and against the spring until it stops. Tighten the ● 3mm mounting screw (1) on the locking tensioner mounting plate.
  - c. Compress and swing the dynamic tensioner (4) up slightly and out of its home position.
  - d. Push up on the dynamic tensioner latch (5) to disengage the dynamic tensioner mounting plate (6). Swing the dynamic tensioner mounting plate to release the platen belt.

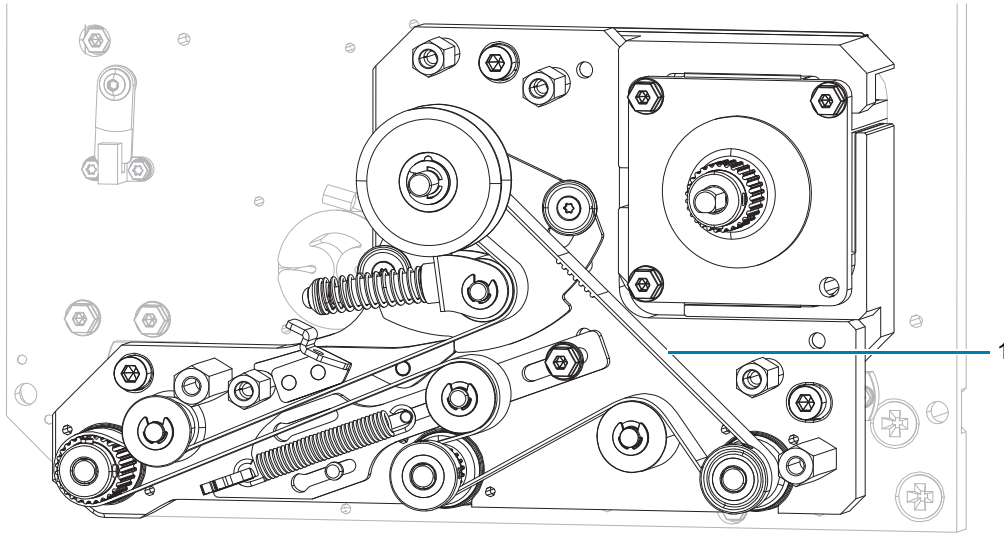






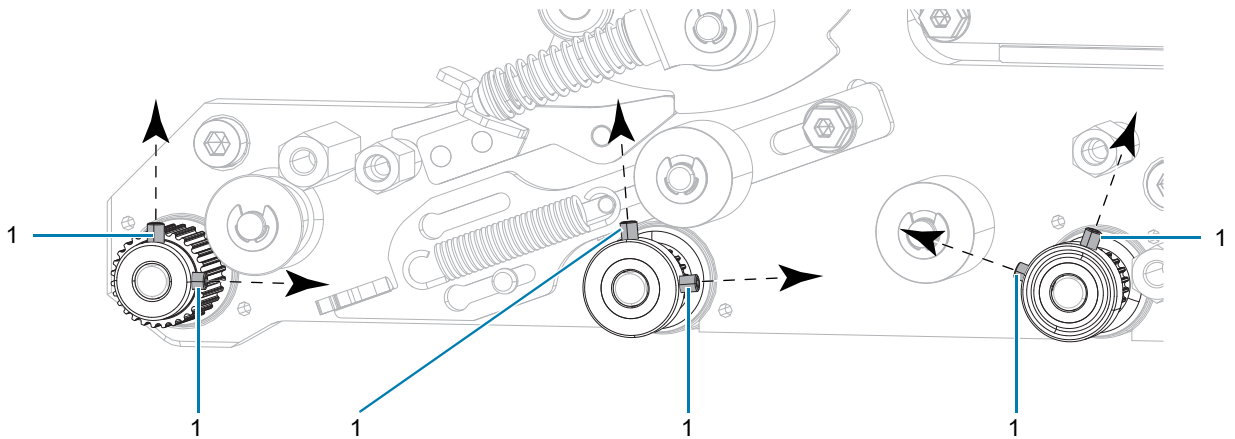
**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress or twist the belts.

4. Remove the platen belt (1) from all drive and idler pulleys.



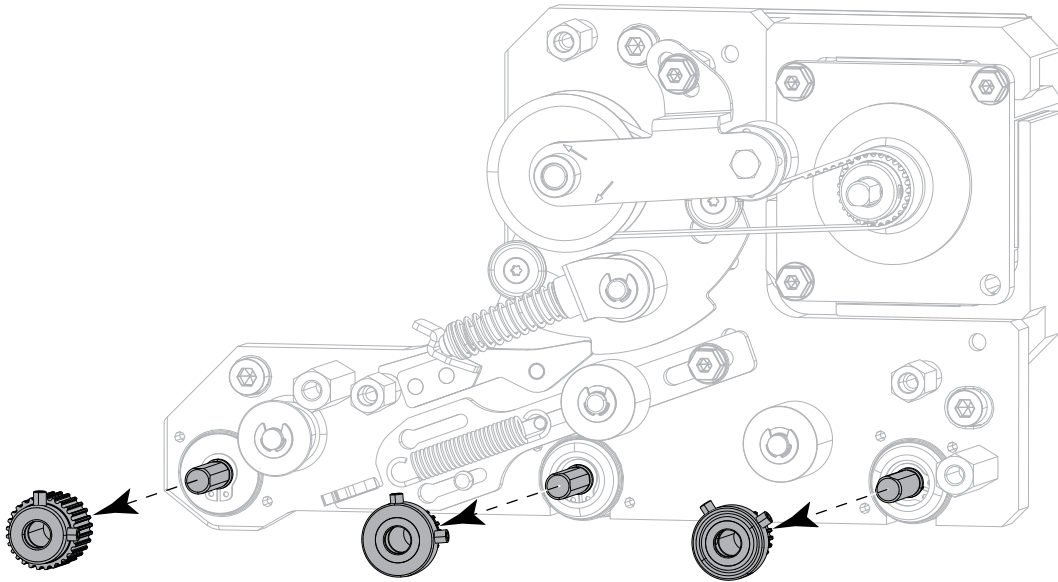
## Replace the Media Drive Couplers

1. Loosen the six ● 1.5mm set screws (1) in the roller pulleys. Do not remove the set screws.

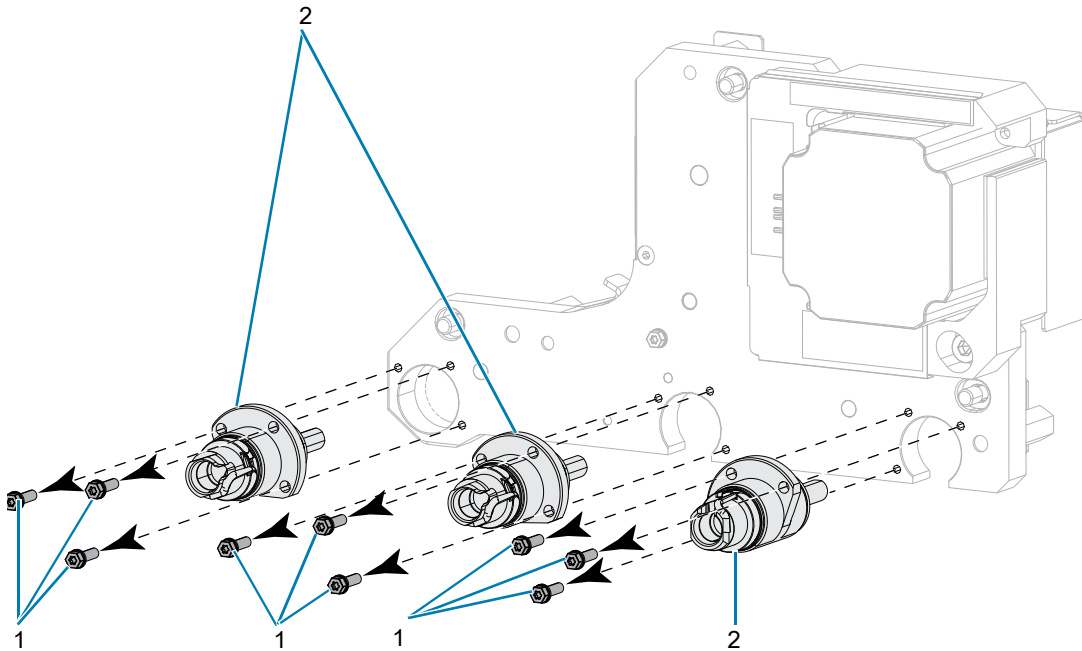


## Media Roller Couplers Maintenance Kit

2. Remove the three roller pulleys.



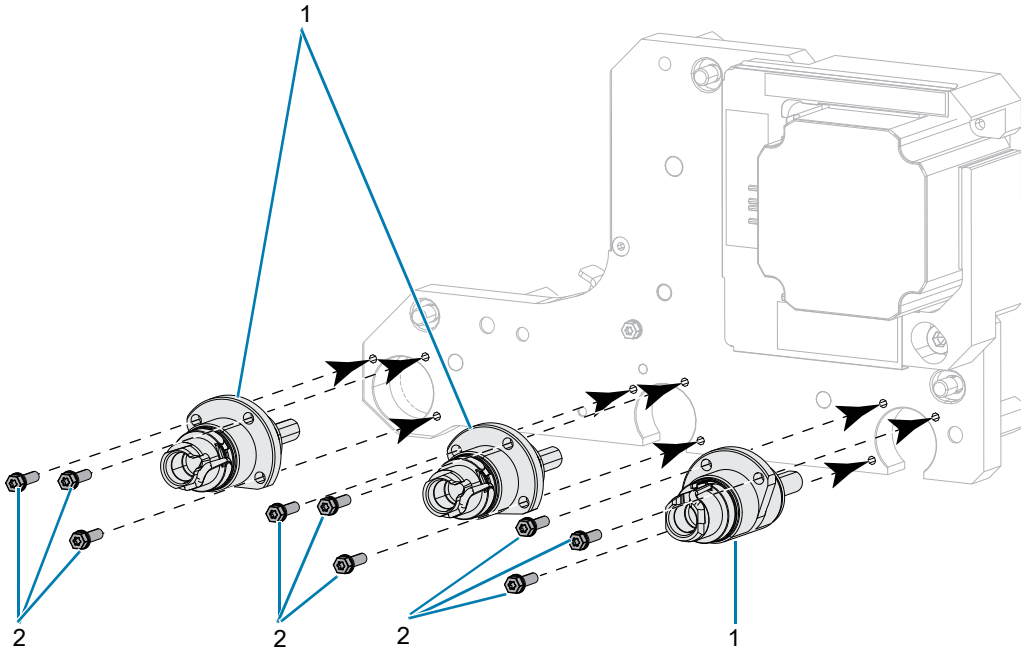
3. Remove the nine  T8 screws (1) from the media drive and remove the media drive couplers (2).



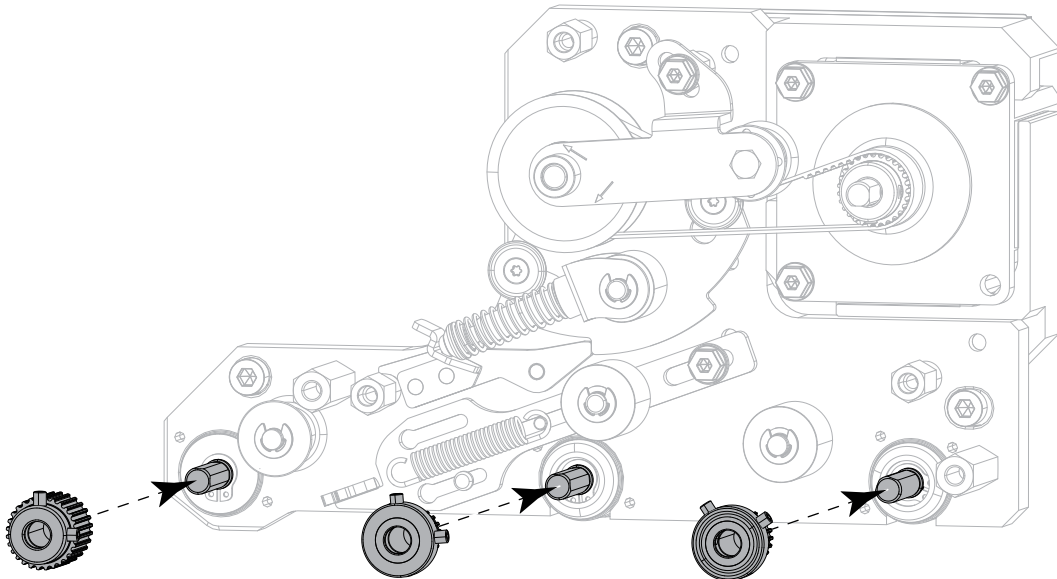
for parts & service call QLC (800) 837-1309

## Media Roller Couplers Maintenance Kit


4. Install the new media drive couplers (1) and secure with the nine T8 screws (2).

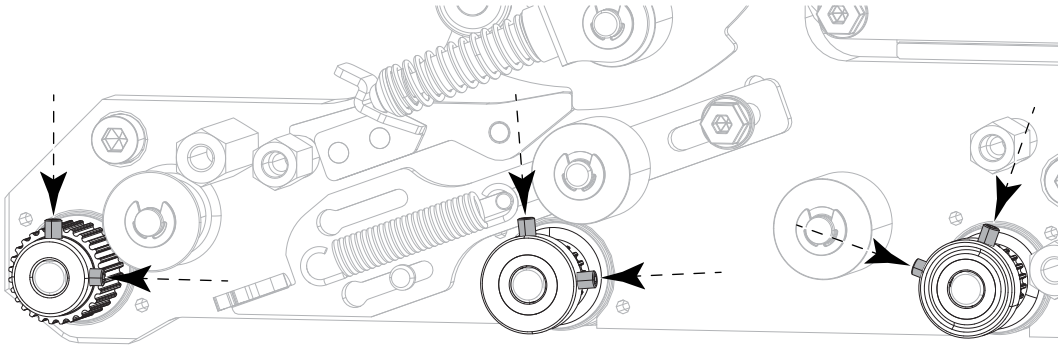


5. Reinstall the roller pulleys.



for parts & service call QLC (800) 837-1309

6. Tighten the six  1.5mm set screws securing the roller pulleys.



## Install the Media Drive Belt

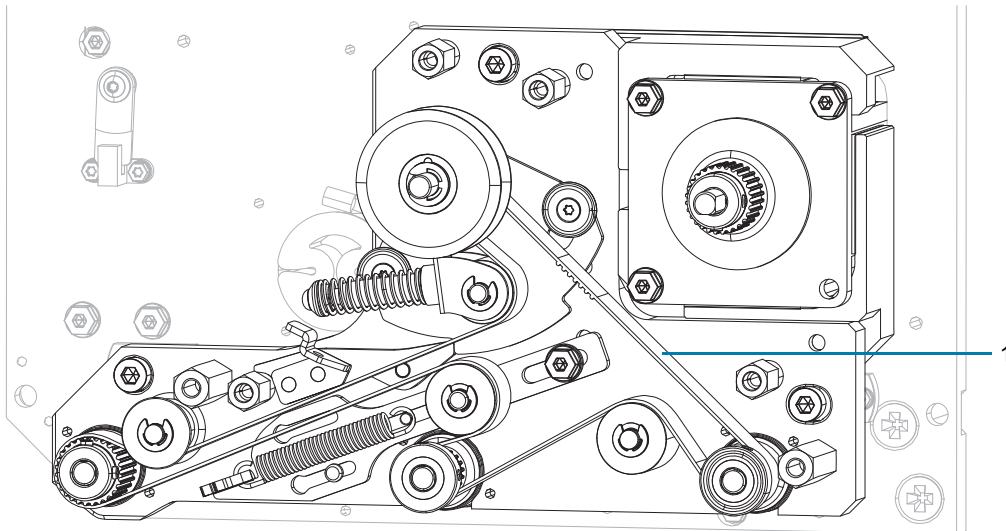


**CAUTION—PRODUCT DAMAGE:** Handle the belts with **extreme caution**. Do not sharply bend, pinch, stress, twist the belts.

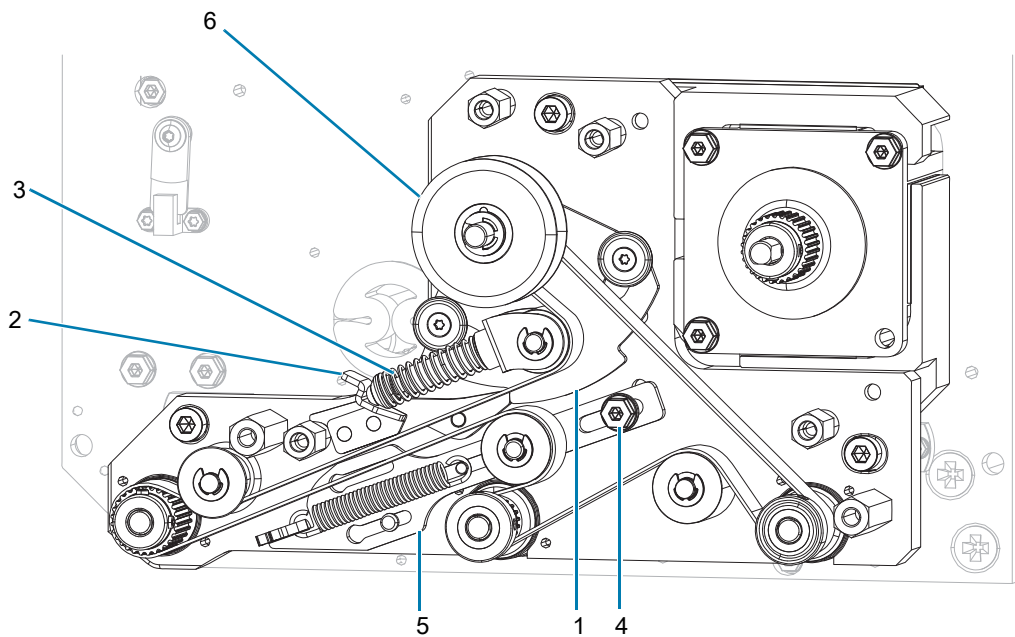
1. Replace the platen belt (1) on the compound pulley (2).
  - Thread the platen belt around all of the pulleys and idlers.



**NOTE:** The platen belt (1) rests on the smaller pulley; the stepper motor belt rests on the larger pulley.



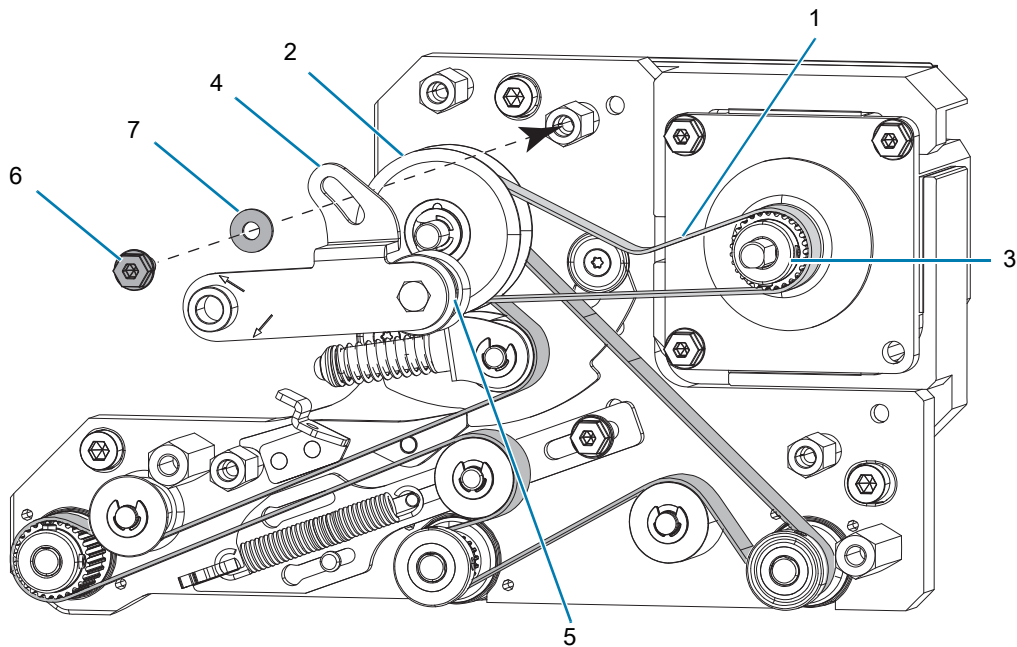
2. Tension the platen belt.
  - a. Rotate the dynamic tensioner mounting plate (1) while pushing down on the dynamic tensioner latch (2) to ensure that the latch is locked in place.
  - b. Swing the dynamic tensioner (3) down as you compress the spring until the end is resting on the latch (2) (home position).
  - c. Loosen the ● 3mm mounting screw on the locking tensioner mounting plate (4). The locking tensioner (5) is self-adjusting and will return to its normal tension.
  - d. Rotate the compound pulley (6) two revolutions to equalize the belt tension.
  - e. Tighten the ● 3mm mounting screw on the locking tensioner mounting plate (4).



3. Replace the stepper motor belt.
  - a. Seat the stepper motor belt (1) on the compound pulley (2) and the stepper motor pulley (3).  
On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.
4. Align the stepper motor belt tensioner bracket assembly (4) on the compound pulley shaft.  
Ensure that the idler (5) rides on top of the stepper motor belt (1) and that the belt is seated evenly on the stepper motor pulley (3).
  - a. Replace the ● 3mm mounting screw (6) and washer (7) for the stepper motor belt tensioner bracket (4) keeping the screw and washer between the marks on the bracket.
  - b. Reset the stepper motor belt tensioner bracket (4) to its original location and tighten the ● 3mm screw (6).  
Ensure that the washer and screw are secured between the marks on the bracket.



**IMPORTANT:** The lower section of the stepper motor belt should be slightly taut. The middle of the belt should deflect upward approximately halfway to the bracket pulley under moderate finger pressure.

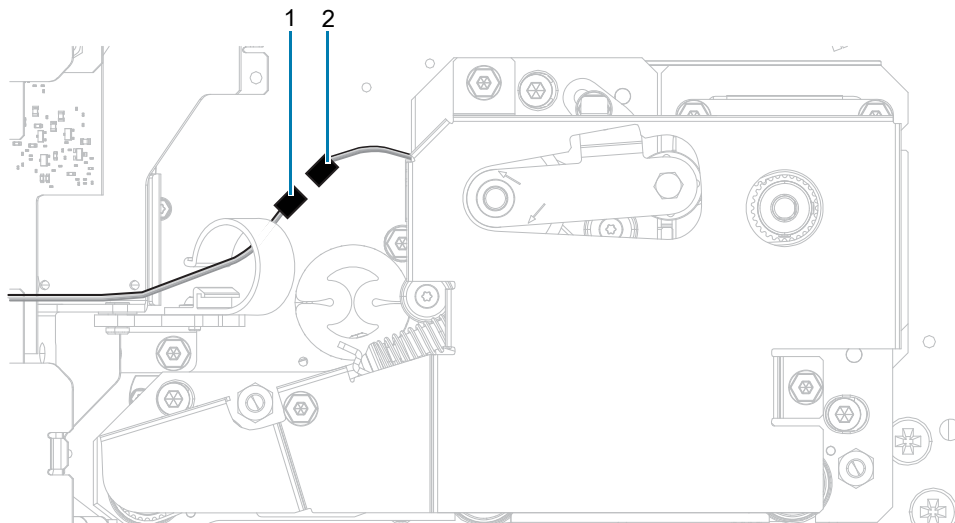


5. Reinstall the drive system cover.
  - a. Align the drive system cover over the three mounting holes.
  - b. Reinstall the three ● 3mm hexagon screws mounting screws to secure the drive system cover.

## Install the Drive System

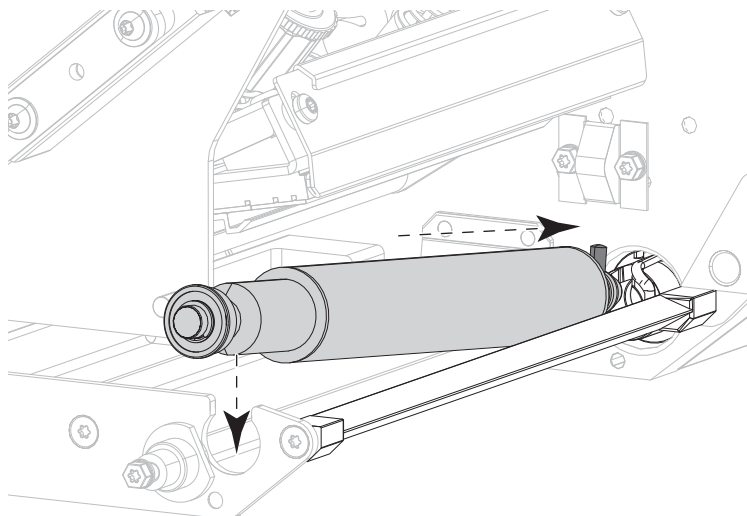
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.




## Replace the Media Rollers

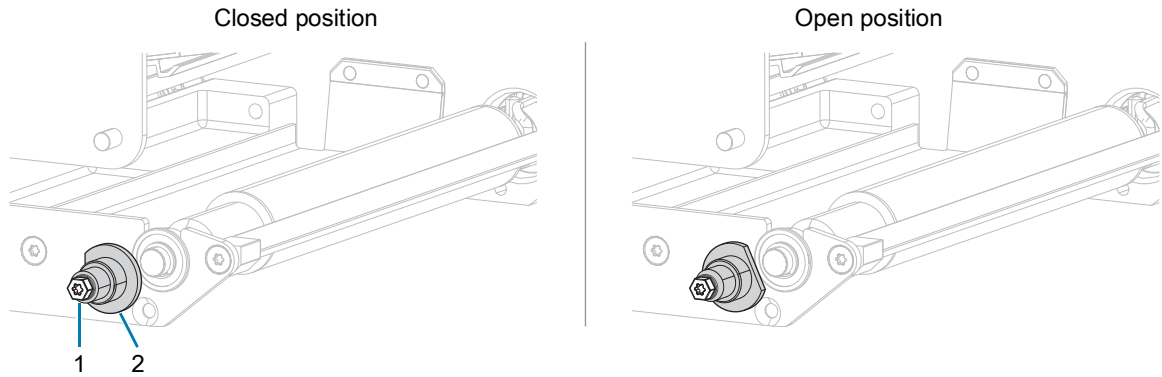
1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.




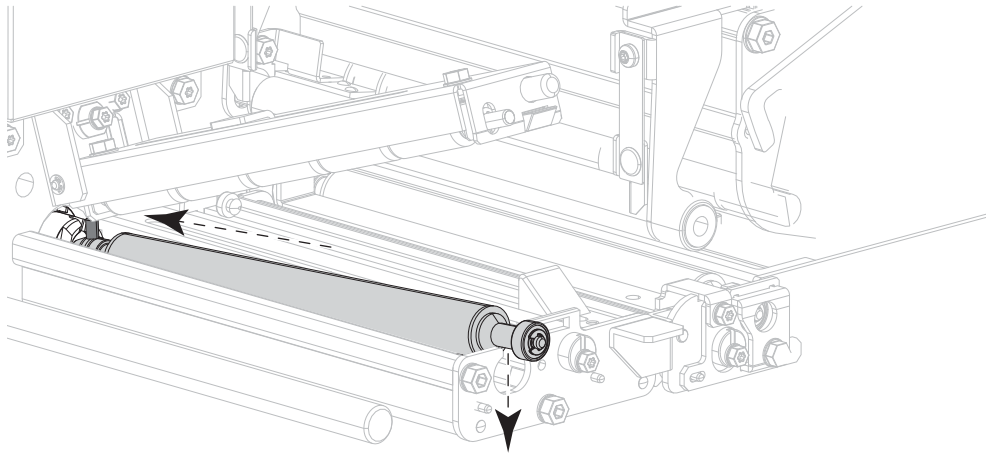
2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.


for parts & service call QLC (800) 837-1309

3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.




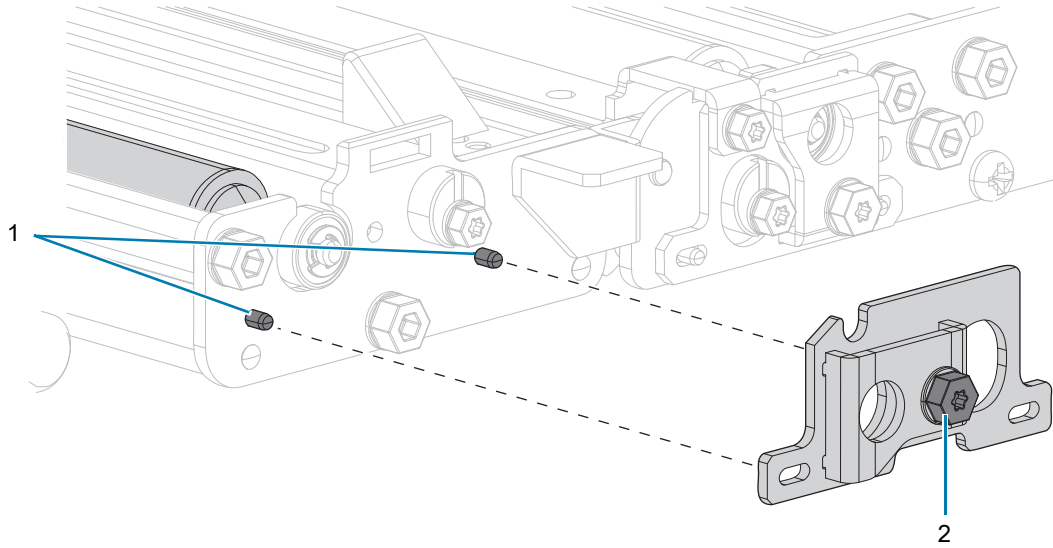
- c. Tighten the  T9 captive screw.
4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.



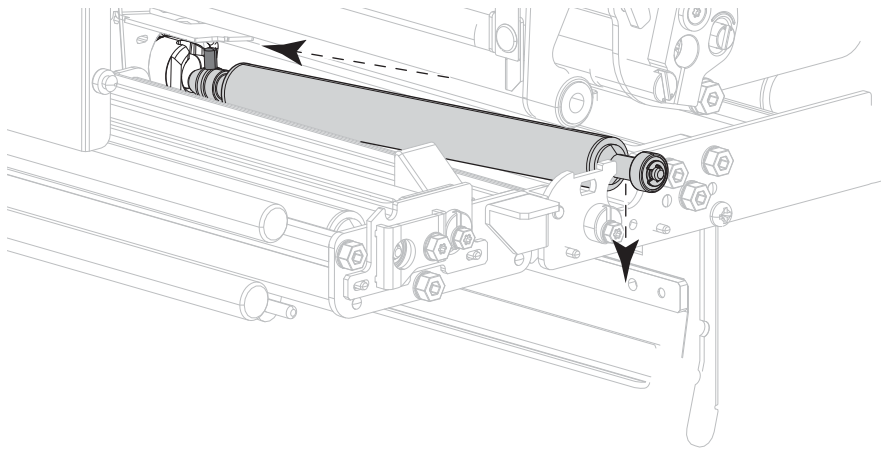
- c. Tighten the  T9 captive screw.
5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.




6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

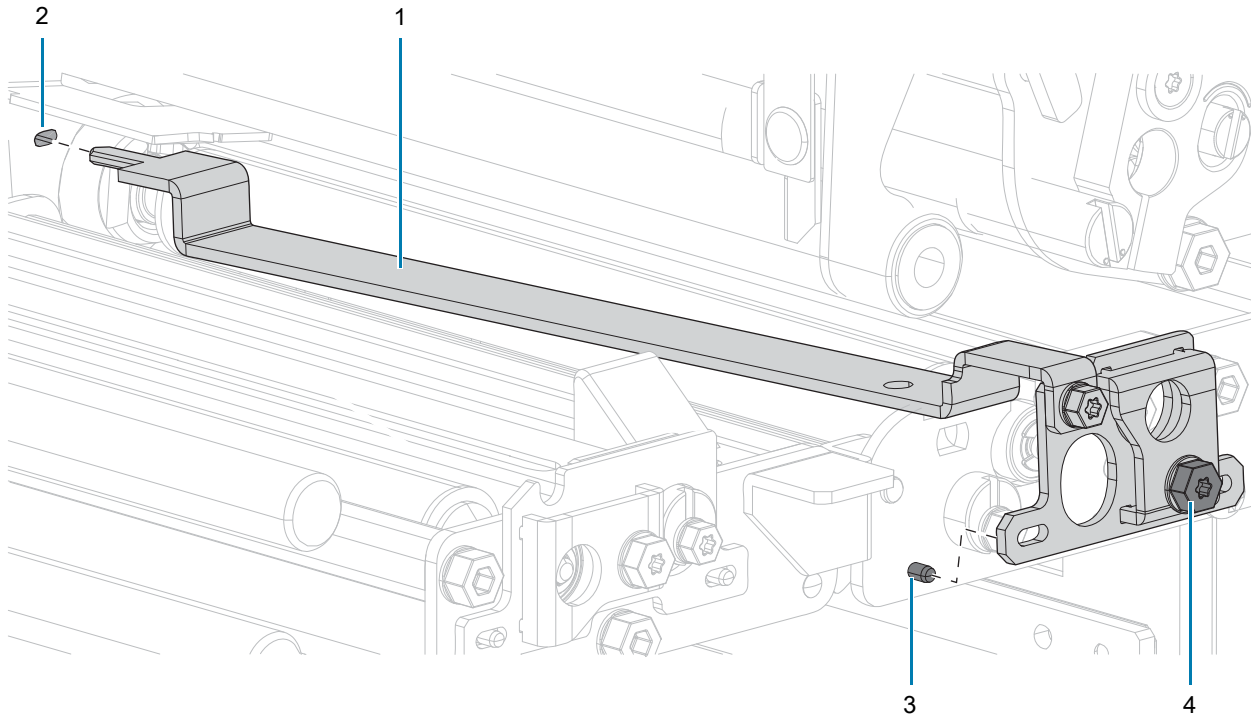


7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



### Reinstall the Print Engine into the Applicator

1. Lift the print engine and support it on the center mounting bolt.
2. Reinstall the screws securing the print engine.
3. Tighten the center mounting bolt.
4. Reinstall media and ribbon (if used).
5. Close the printhead assembly.
6. Close the media door.

## Print Line, Balance, and Skew Adjustment




**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label. As the labels print, you can adjust the following:

- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

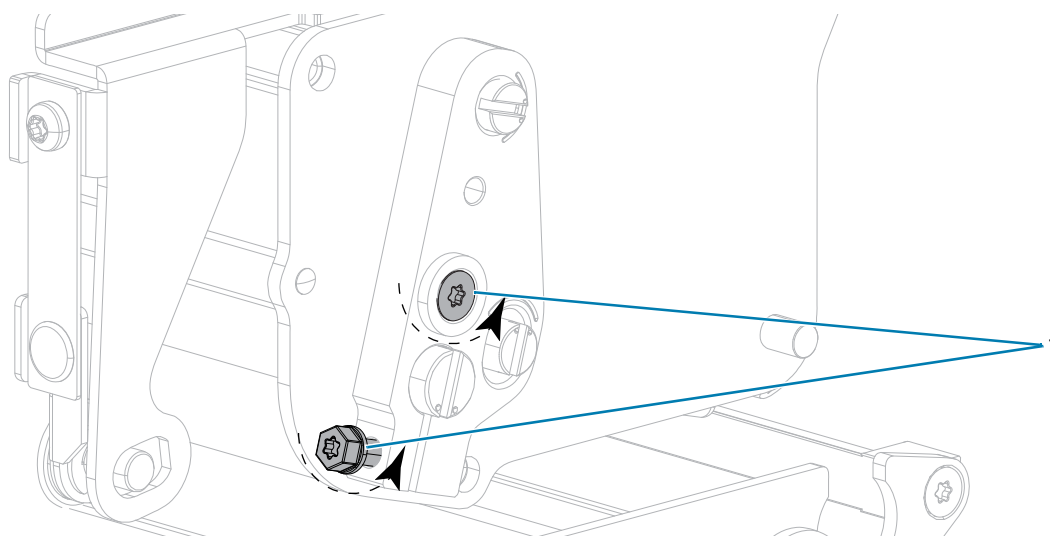
If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

To make print line, balance, and skew adjustments, complete these steps:

1. Loosen the two  3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two  3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold PAUSE while turning on the print engine.
  - c. Hold PAUSE until the first control panel light turns off.

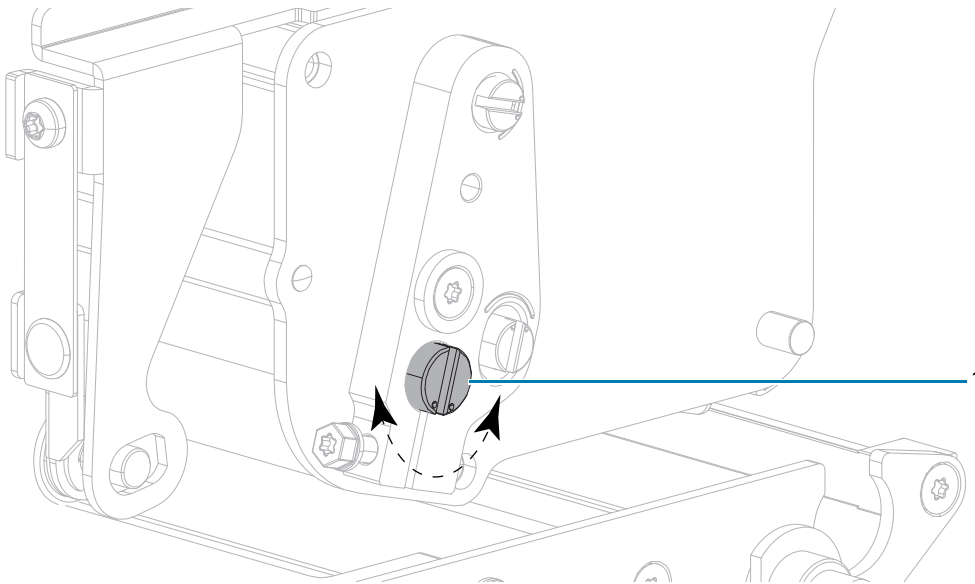


**NOTE:** At any time during the PAUSE self-test:

- Press PAUSE to print 15 additional labels.
- Press CANCEL to change the print speed.
- Press and hold CANCEL to exit the self-test.

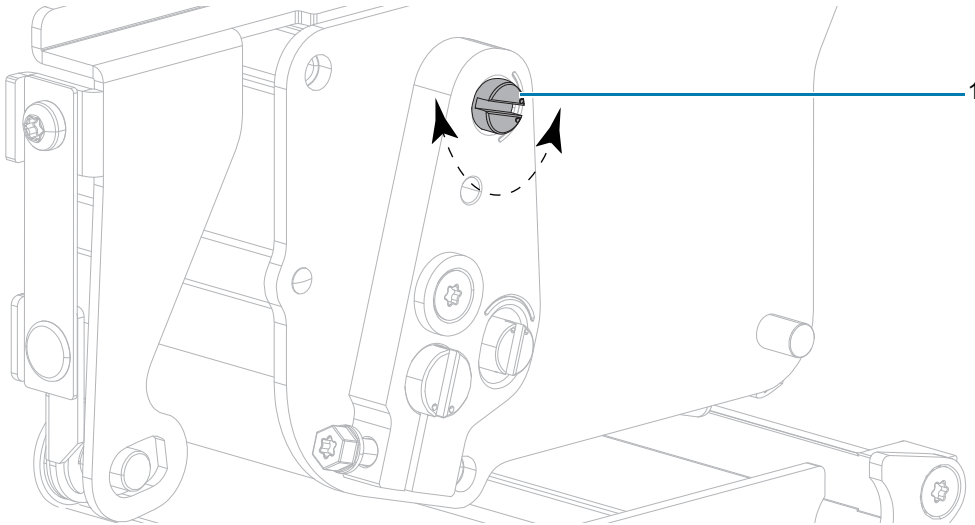
### Adjust the Print Line

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward or backward to find the best appearance of the printed image.



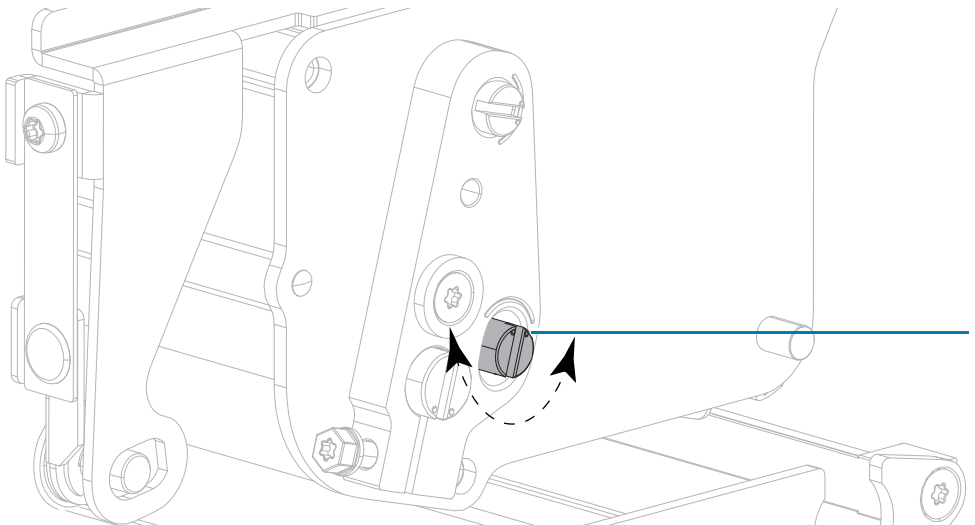
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the printhead.



## Adjust the Skew

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster. Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label (not at a diagonal).



The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Belt Handling Guidelines



**CAUTION—PRODUCT DAMAGE:** Handle the belts, in this kit, with *extreme care*.

The belts may not appear to be fragile, but they contain fiberglass, which is strong, yet brittle. Because of these properties, the belts require careful storage and handling for prolonged life.

## Incorrect Belt Handling

- Do not sharply bend, pinch, stress, or twist the belts.









## Correct Belt Handling

- Use both hands to gently grasp the belt between your thumb and index fingers approximately six inches apart.
- Move hands holding belts until an inch apart.
- Wrap the belt around the pulley.
- Ensure the belt is not touching a pulley flange.



## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Idler pulley Qty: 1
	Idler pulley 16mm (width) Qty: 1
	Idler pulley 13mm (width) Qty: 1
	Idler pulley (18mm x 15mm) Qty: 2
	E-ring (RS-4) Qty: 5
	Idler roller spacer Qty: 2

## Tools Required

- Metric hexagon keys or bits  
Size: 3mm, 4mm
- Sorting bin for screws and small parts (optional)



## Prepare for Installation



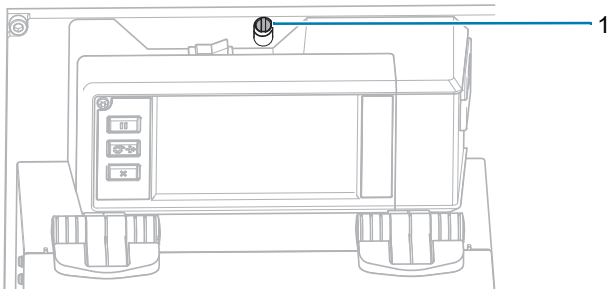
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



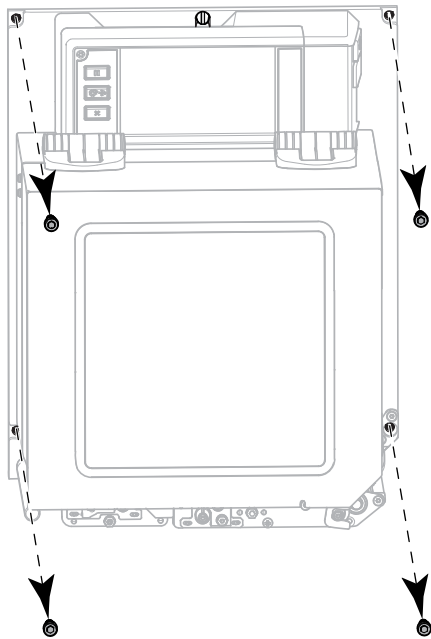
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



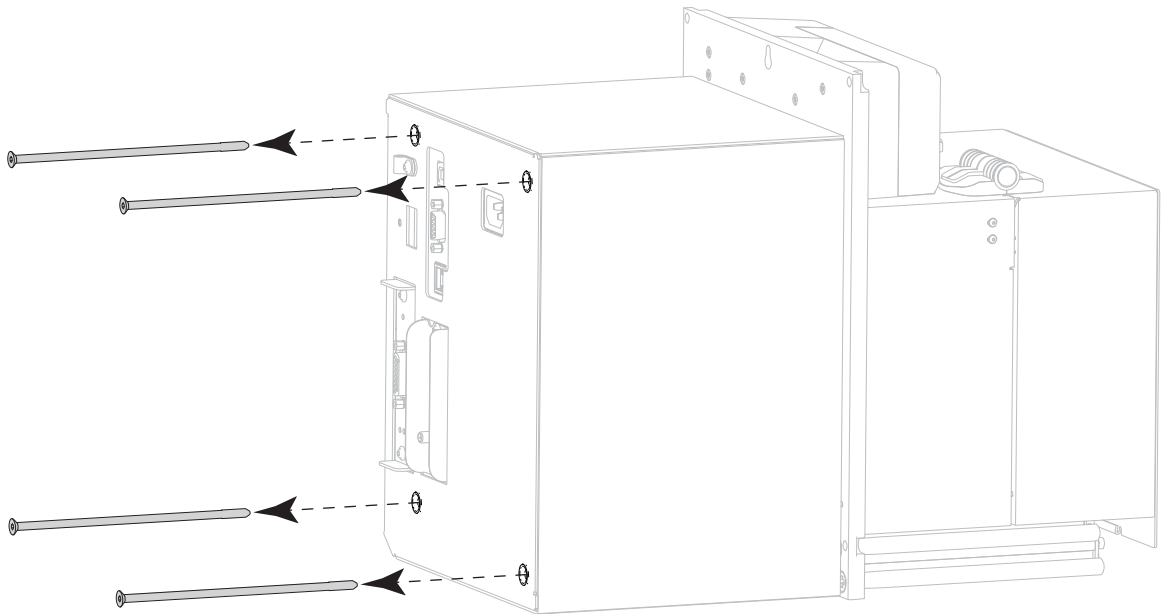
2. Remove the four screws securing the print engine to the applicator.



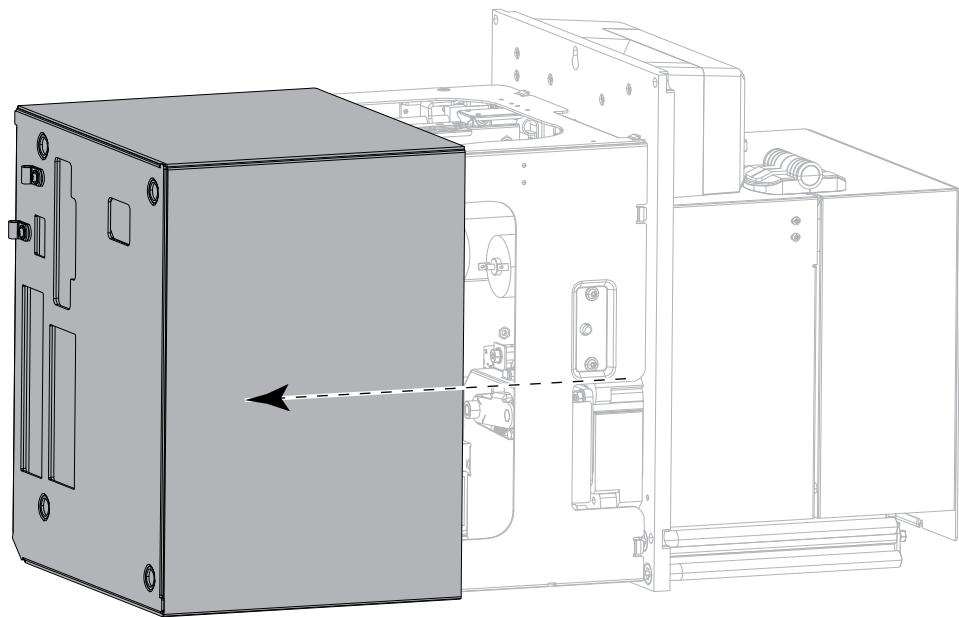
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



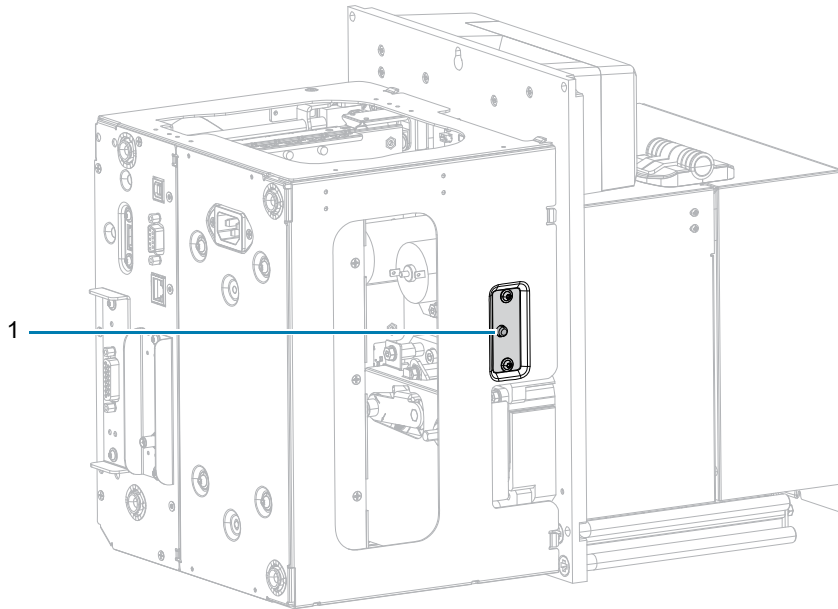
2. Remove the electronics enclosure cover from the print engine.



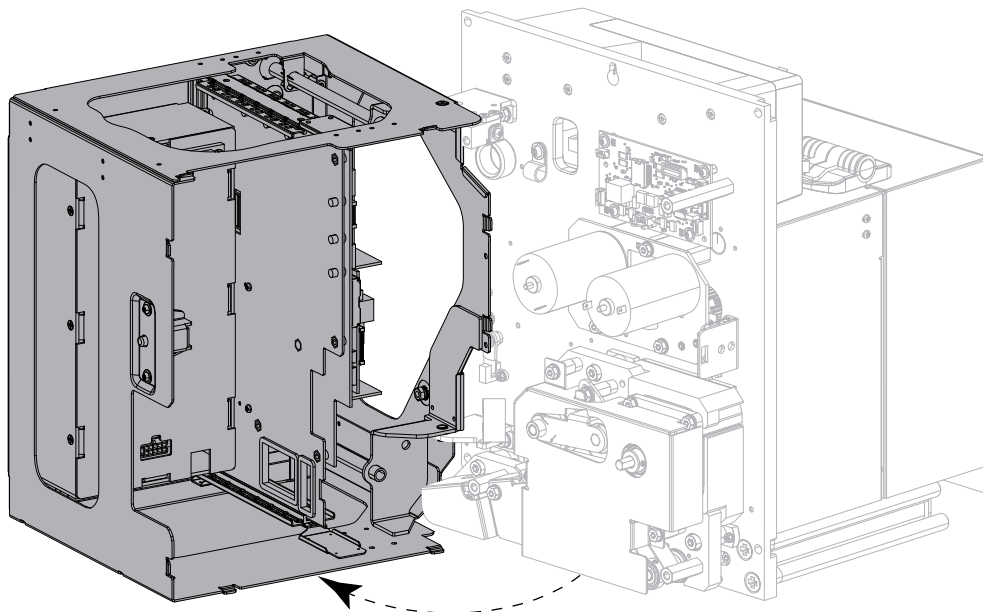
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

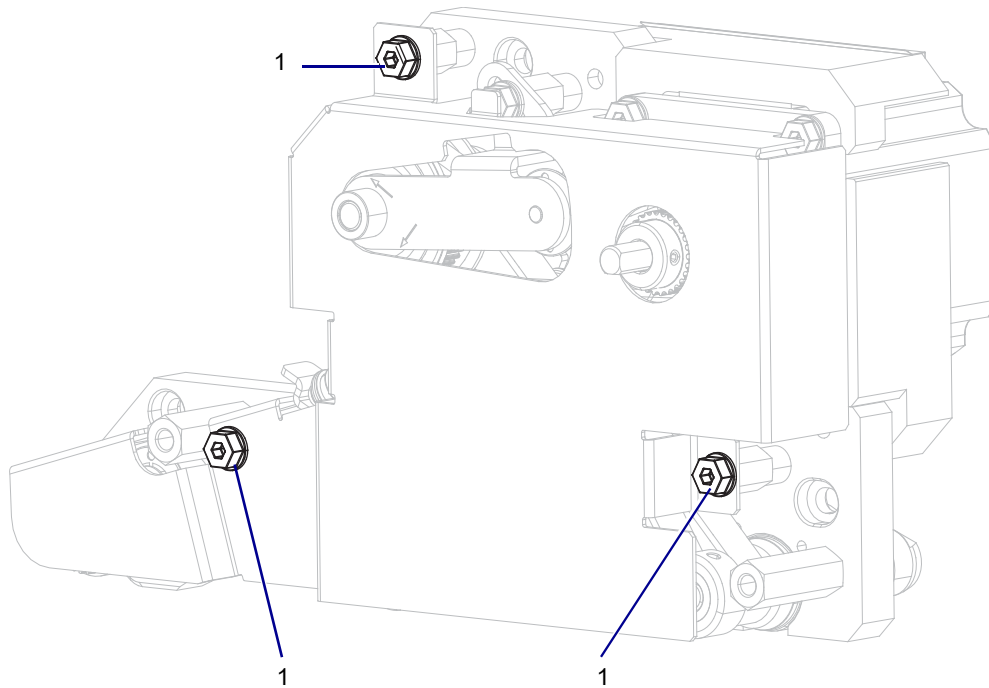


4. Open the rear of the print engine.

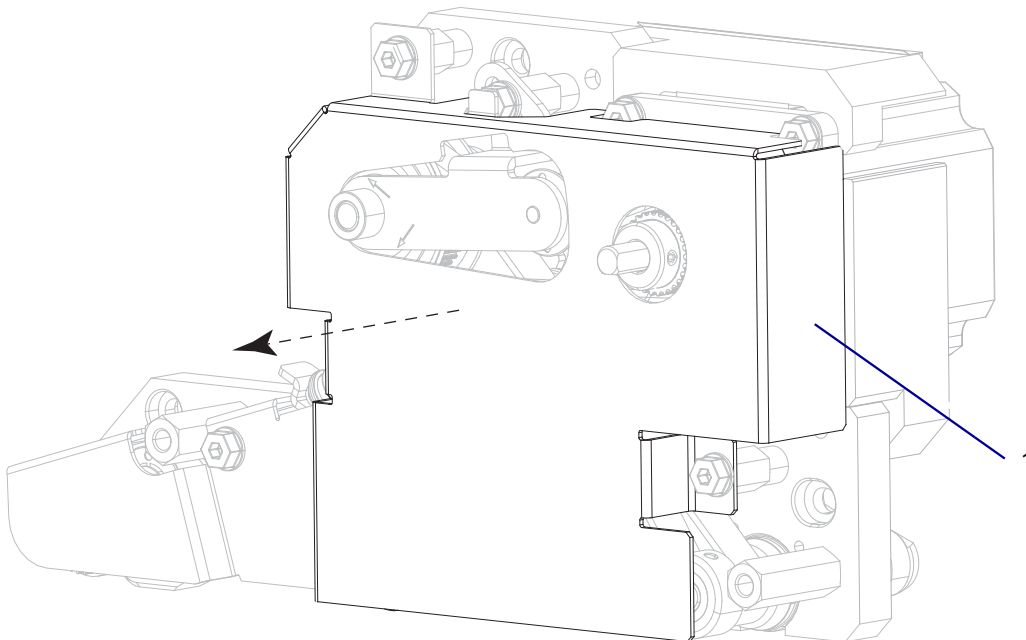


## Remove the Drive System Cover

1. Loosen three  3mm screws (1).



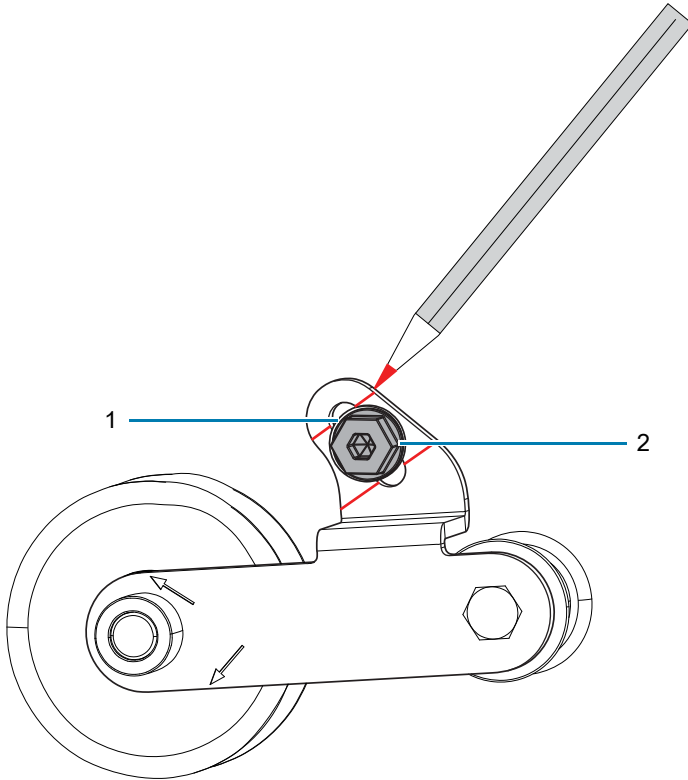
2. Lift off the drive system cover (1).



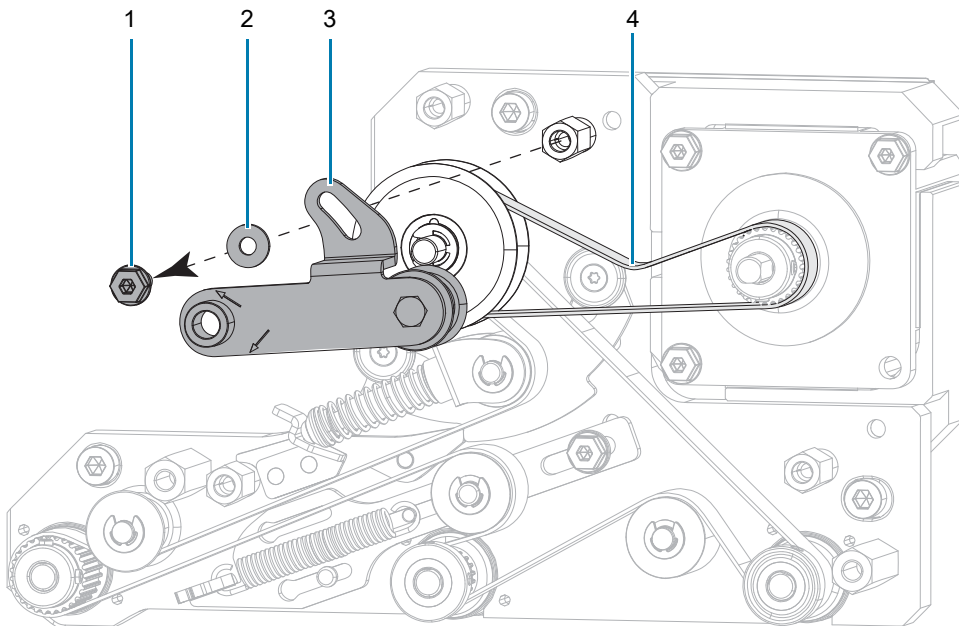
for parts & service call QLC (800) 837-1309

## Remove the Belts

1. Note the location of the screw (2) and washer (1) in the stepper motor belt tensioner bracket and mark with a pen or pencil.

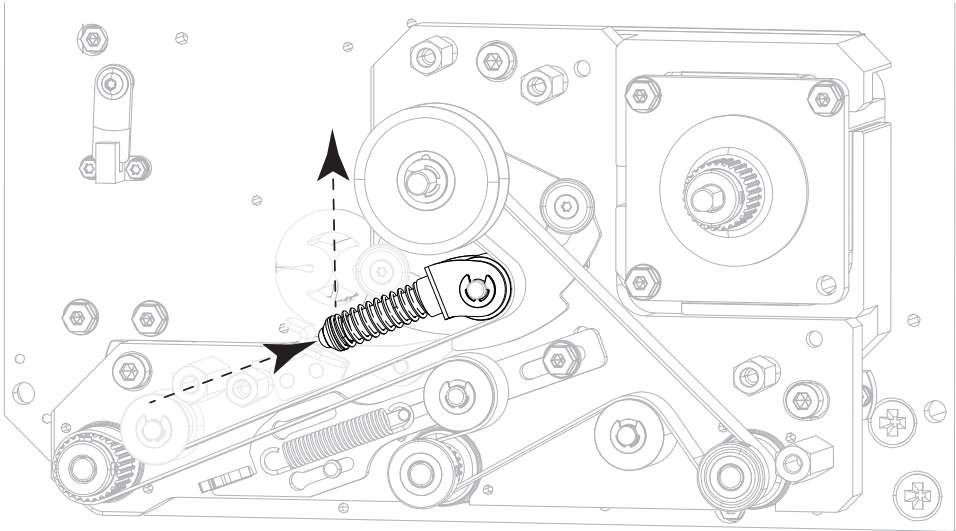


2. Remove the 3mm mounting screw (1) and washer securing (2) the stepper motor belt tensioner bracket and slide the bracket assembly (3) off of the compound pulley shaft.
3. Remove the stepper motor belt (4).

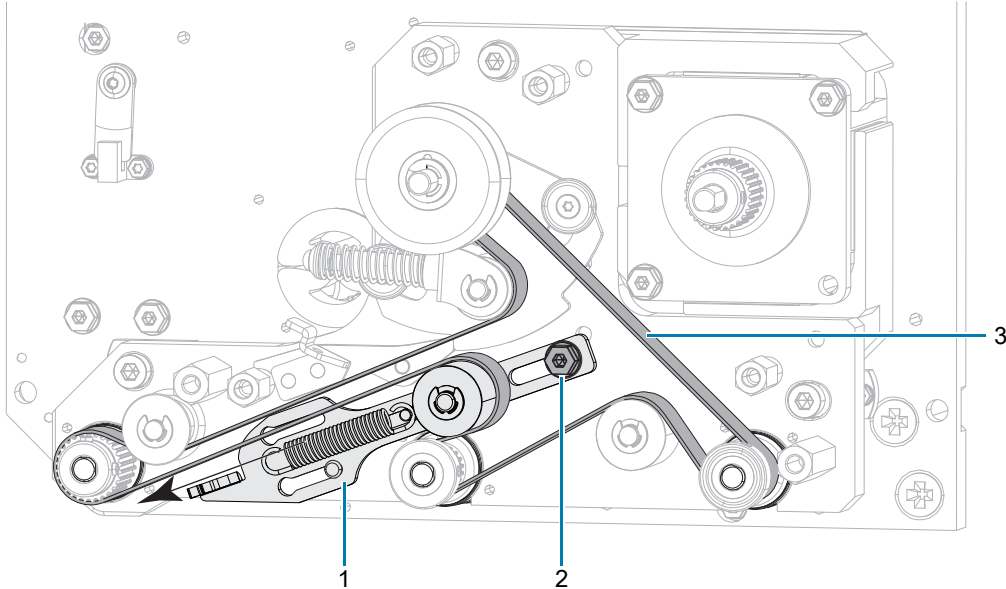


for parts & service call QLC (800) 837-1309

4. Compress and swing the dynamic tensioner up and out of its home position.



5. Loosen the ● 3mm mounting screw (2) on the locking tensioner mounting plate.
6. Push the locking tensioner mounting plate (1) toward the platen roller pulley until it stops.
7. Tighten the ● 3mm mounting screw (2) on the locking tensioner mounting plate (1).
8. Remove the platen belt (3).

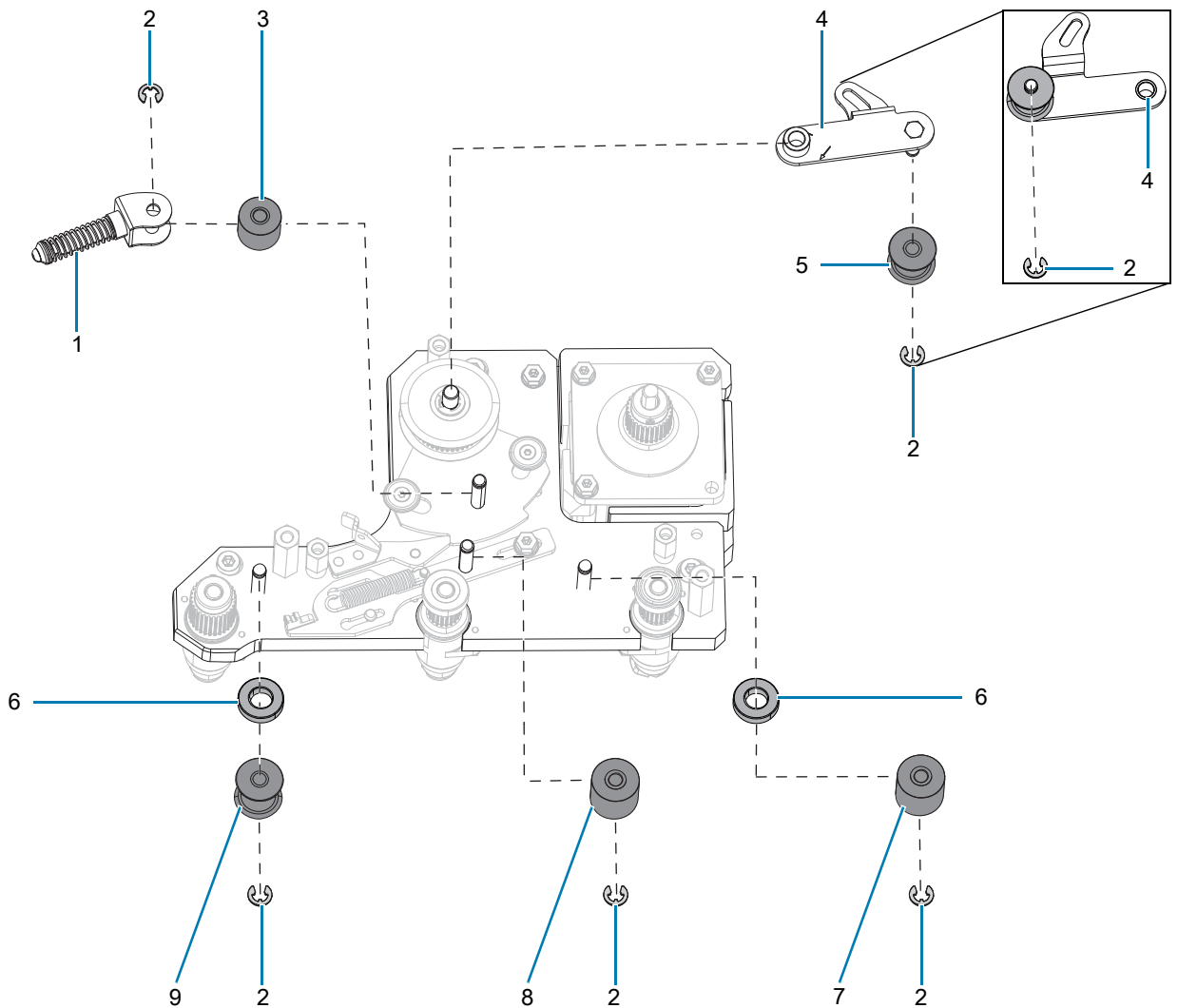


## Replace the Pulleys



**CAUTION—EYE INJURY:** 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.

1. Remove the E-clip (2) from the dynamic tensioner (1), and lift the dynamic tensioner off the shaft.
2. Flip the tensioner bracket (4) over, remove the E-clip (2), and lift the idler pulley (5) off the shaft.
3. Remove the five E-clips (2) from the platen roller idler pulley (8), dynamic tensioner idler pulley (3), stepper motor pulley (5), the two idler pulley spacers (6), pinch roller idler pulley (7), peel roller idler pulley (8), the platen roller idler pulley (9), and remove the pulleys.



4. Install the new pulleys and secure with the new E-clips.

for parts & service call QLC (800) 837-1309

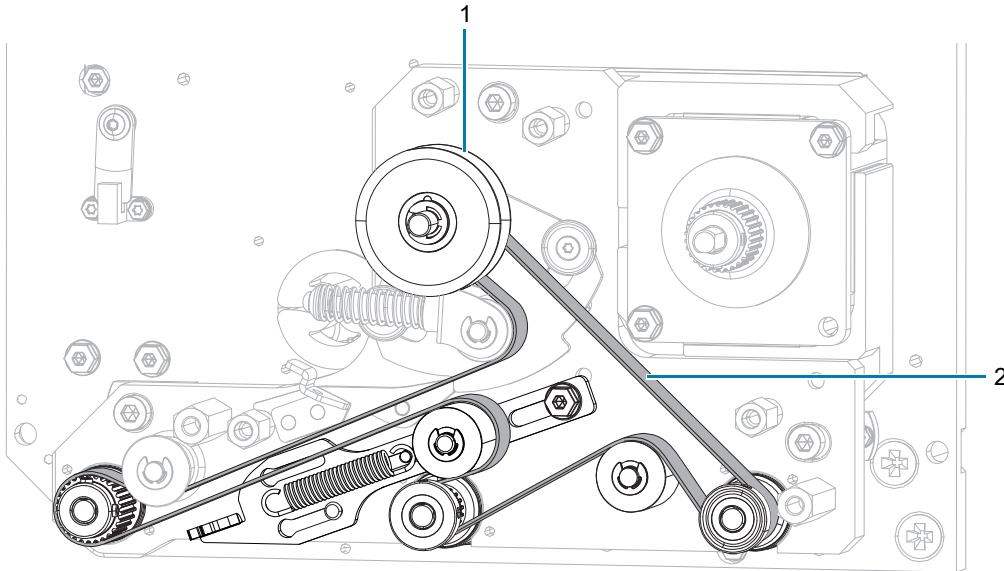
## Replace the Platen Roller and Stepper Motor Belts

1. Install the platen roller belt (2) on the compound pulley (1).

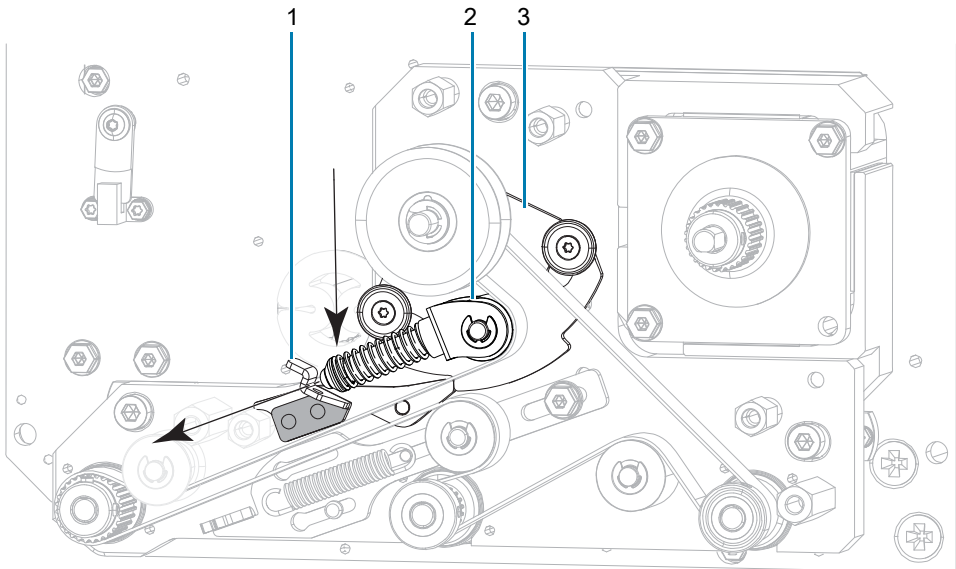


**NOTE:** The platen roller belt sits on the smaller pulley that is closer to the main frame wall.

2. Thread the platen roller belt around all the pulleys and idler pulleys.



3. Rotate the dynamic tensioner mounting plate (3) while pushing down on the dynamic tensioner latch (2).
4. Swing the dynamic tensioner (2) down while compressing the spring so that end is resting on the latch (1).



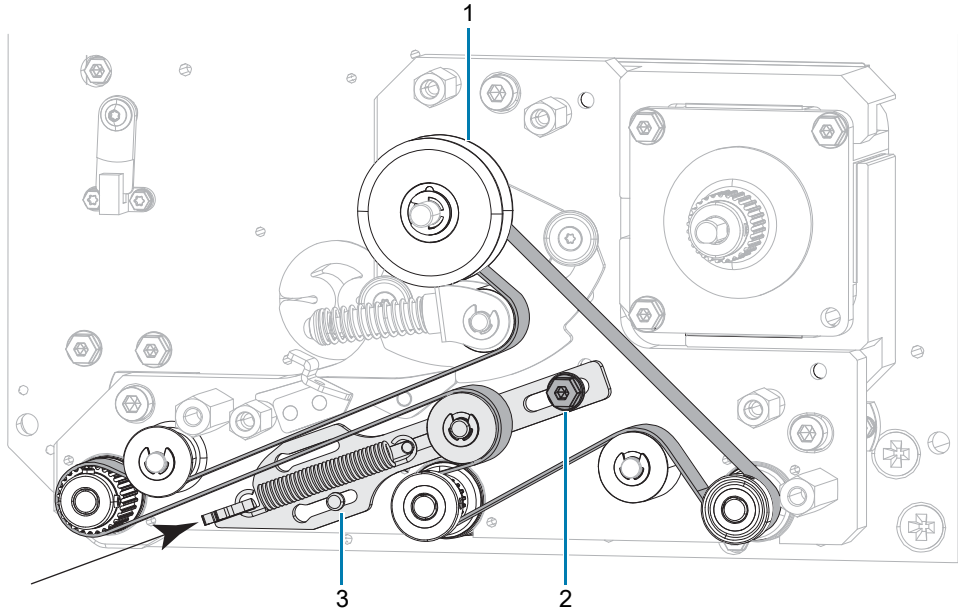


5. Loosen ● 3mm mounting screw (2) on the locking tensioner mounting plate (3).



**NOTE:** The locking tensioner is self-adjusting and will return to normal tension.

6. Rotate the compound pulley (1) two revolutions to equalize the belt tension and tighten the ● 3mm mounting screw (2).



7. Install the new stepper motor belt (5) on the compound pulley (4) and the stepper motor pulley (6).



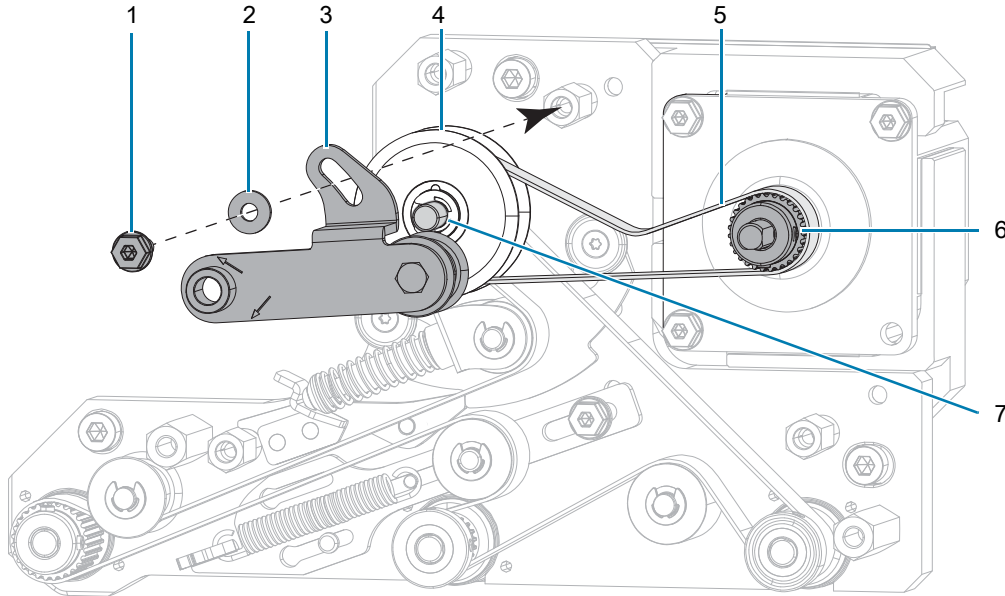
**NOTE:** On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.

8. Align the stepper motor belt tensioner bracket assembly on the compound pulley shaft (7).



**NOTE:** Ensure that the idler rides on top of the stepper motor belt and that the belt is seated evenly on the stepper motor pulley.

9. Install the mounting screw (1) and washer (2) for the stepper motor belt tensioner bracket (3).




10. Reset the stepper motor belt tensioner bracket to its original location and tighten the screw.



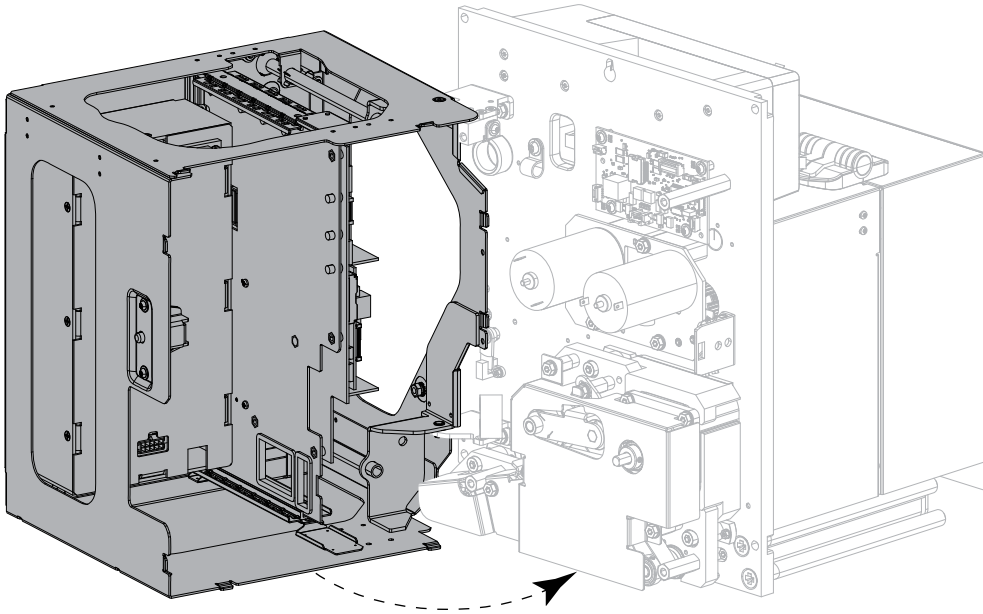
**IMPORTANT:** The lower section of the stepper motor belt should be slightly taut. The middle of the belt should deflect upward approximately halfway to the bracket pulley under moderate finger pressure.

11. Reinstall the drive system cover.

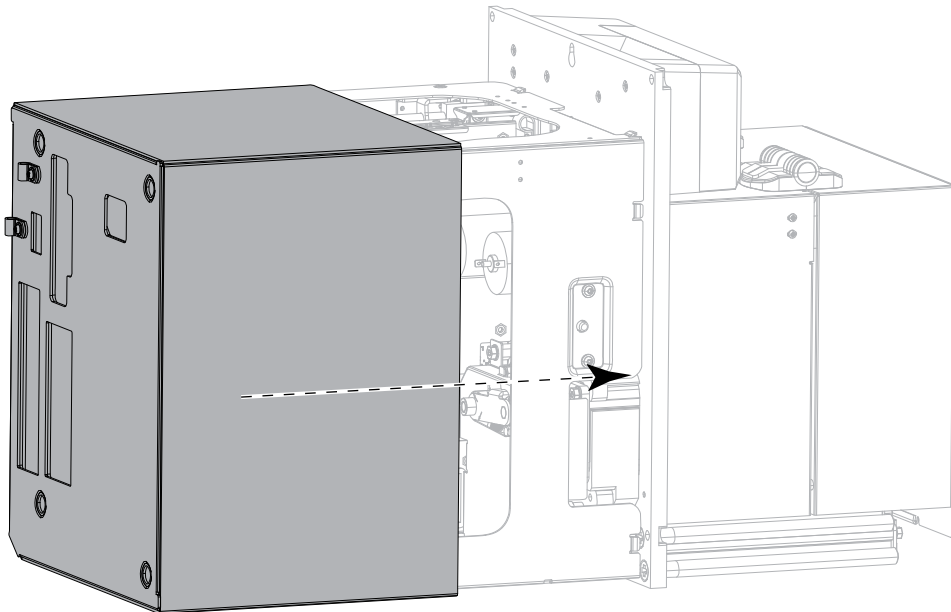
- a. Align the drive system cover over the three mounting holes.
- b. Reinstall the three  3mm hexagon screws mounting screws to secure the drive system cover.

## Close the Electronics Enclosure

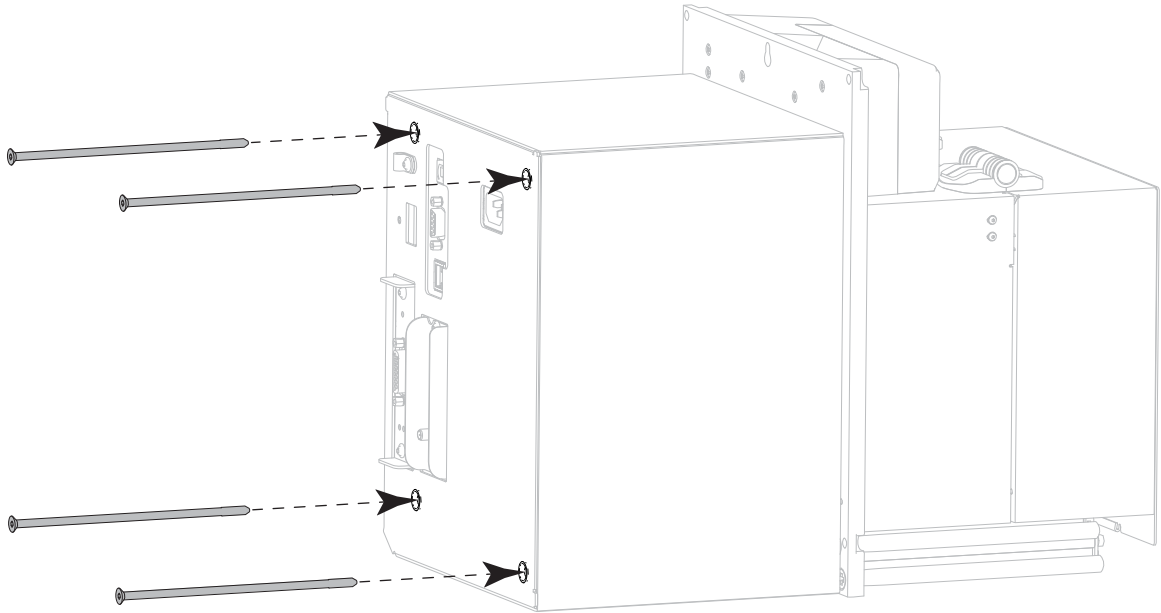
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Belt Handling Guidelines



**CAUTION—PRODUCT DAMAGE:** Handle the belts, in this kit, with *extreme care*.

The belts may not appear to be fragile, but they contain fiberglass, which is strong, yet brittle. Because of these properties, the belts require careful storage and handling for prolonged life.

## Incorrect Belt Handling

- Do not sharply bend, pinch, stress, or twist the belts.



## Correct Belt Handling

- Use both hands to gently grasp the belt between your thumb and index fingers approximately six inches apart.
- Move hands holding belts until an inch apart.
- Wrap the belt around the pulley.
- Ensure the belt is not touching a pulley flange.



## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Idler pulley Qty: 1
	Idler pulley 16mm (width) Qty: 1
	Idler pulley 13mm (width) Qty: 1
	Idler pulley (18mm x 15mm) Qty: 2
	E-ring (RS-4) Qty: 5
	Spacer (idler pulley) Qty: 2

## Tools Required

- Metric hexagon keys or bits  
Size: 3mm
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



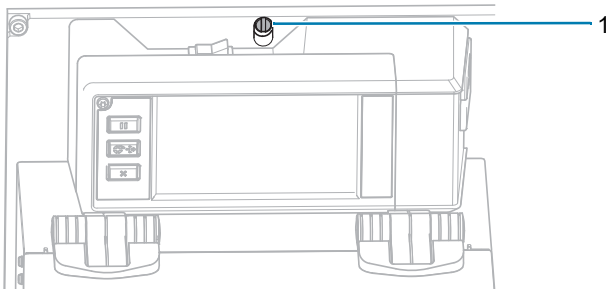
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



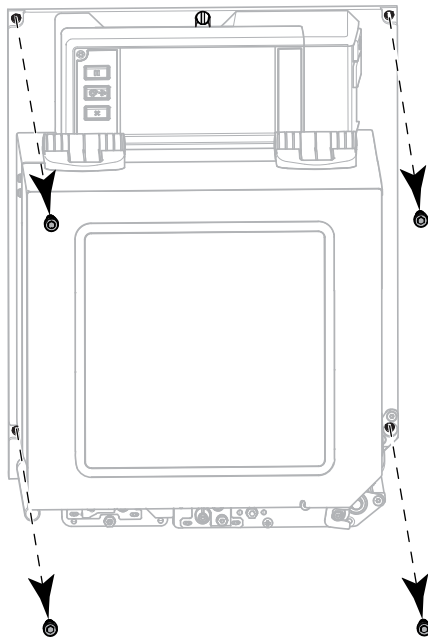
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.

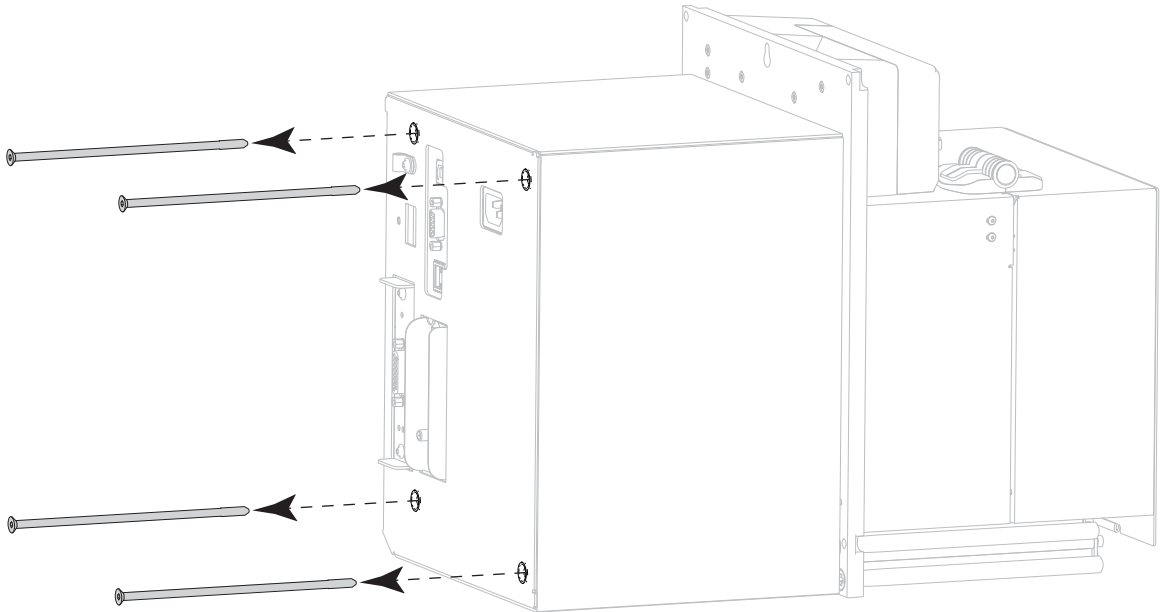


3. Lift the print engine off of the center mounting bolt and place it on a workbench.

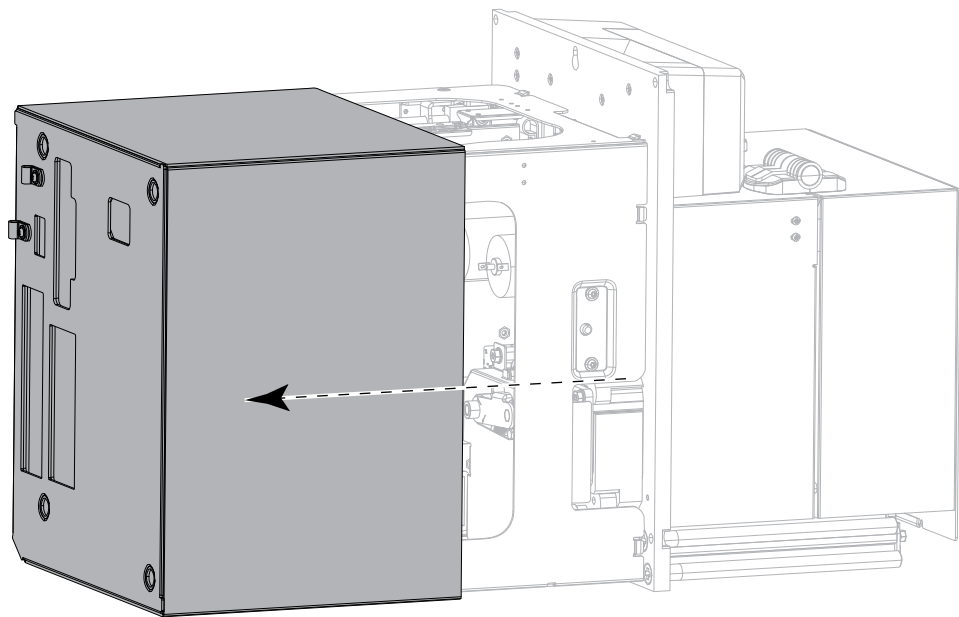


## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



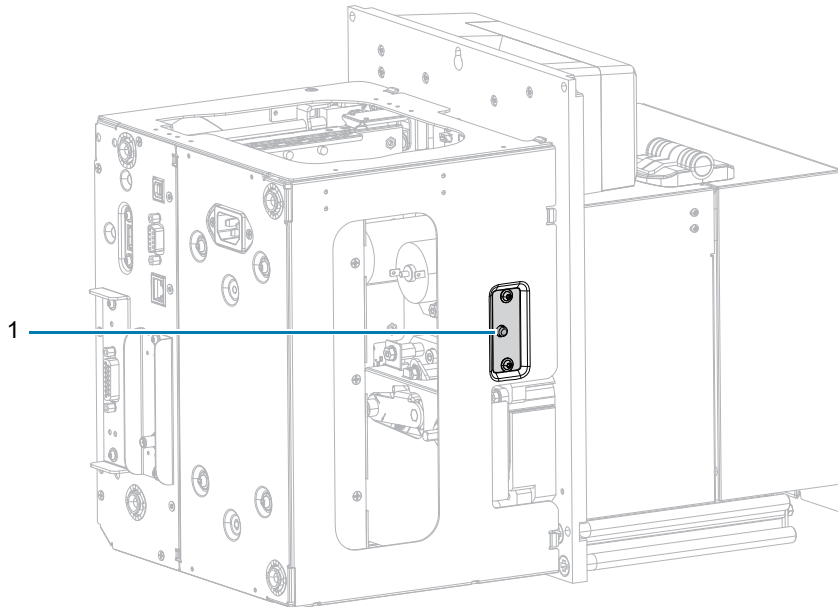
2. Remove the electronics enclosure cover from the print engine.



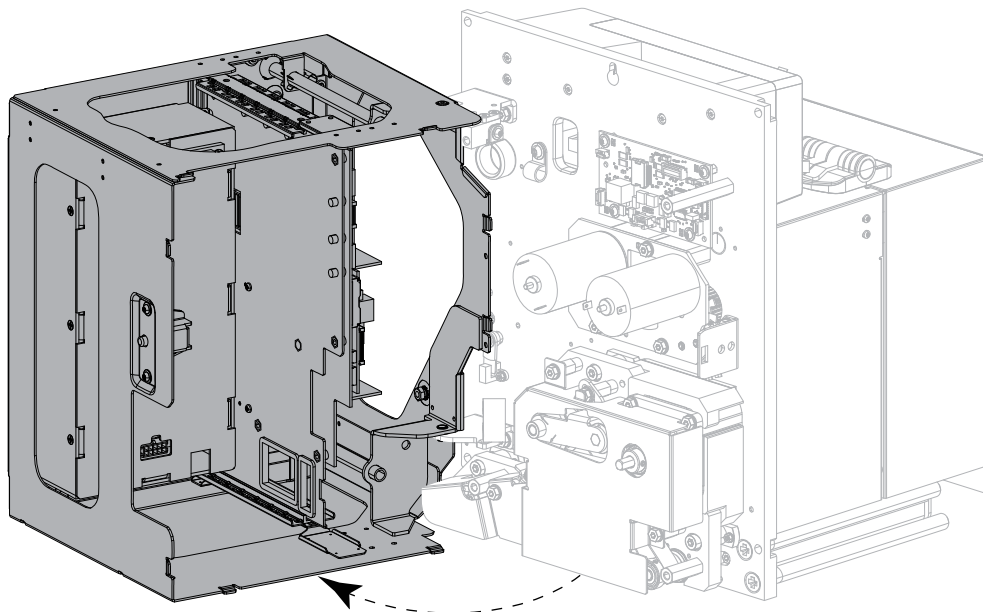
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

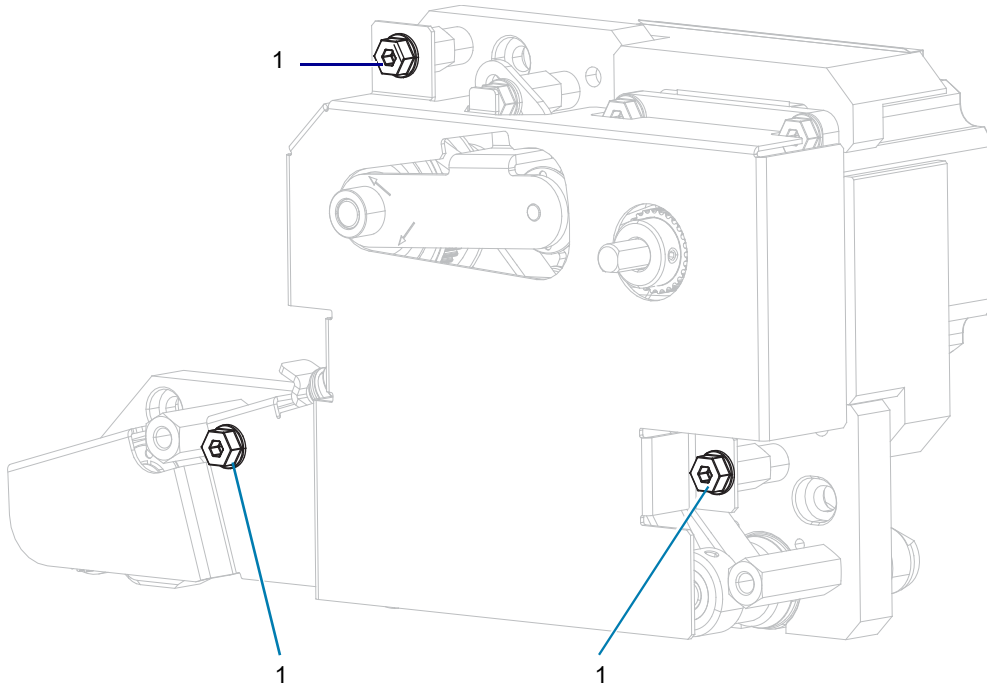


4. Open the rear of the print engine.

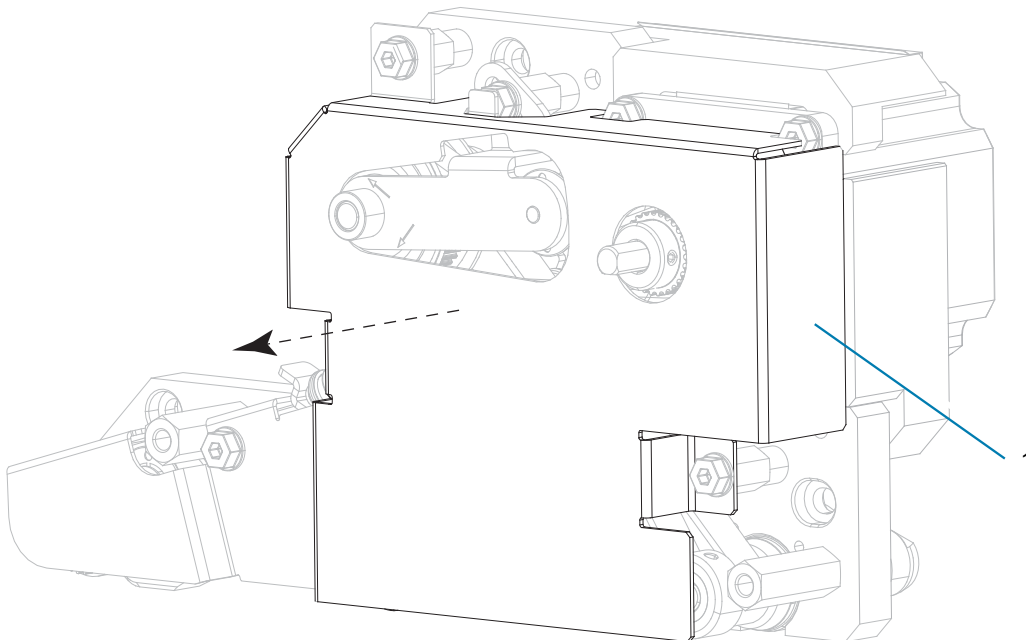


## Remove the Drive System Cover

1. Loosen three ● 3mm screws (1).

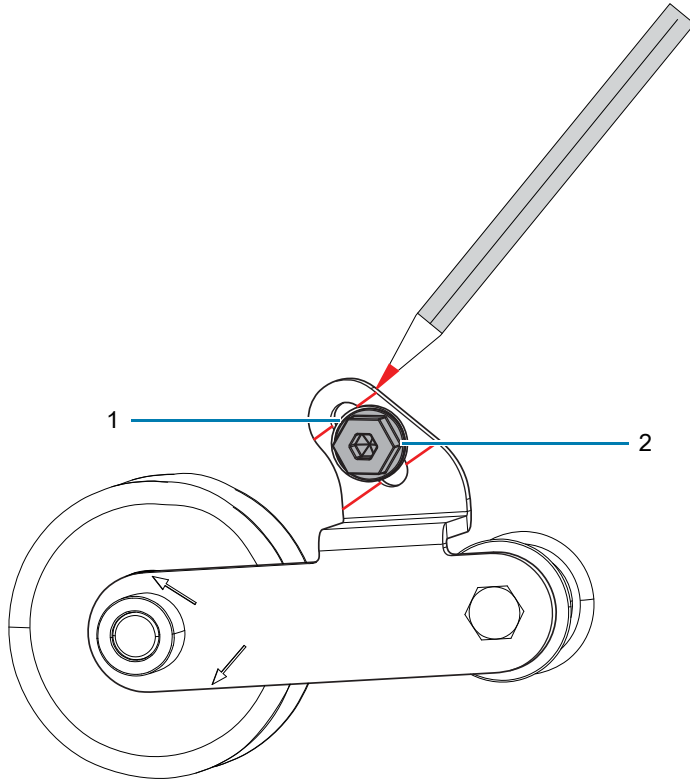


2. Lift off the drive system cover (1).

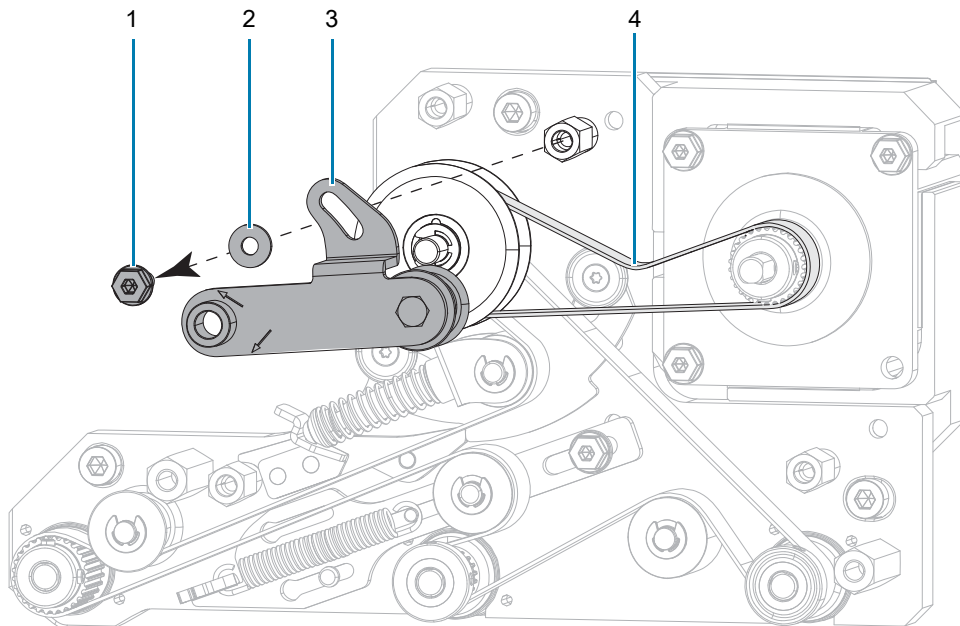


## Remove the Belts

1. Note the location of the screw (2) and washer (1) in the stepper motor belt tensioner bracket and mark with a pen or pencil.

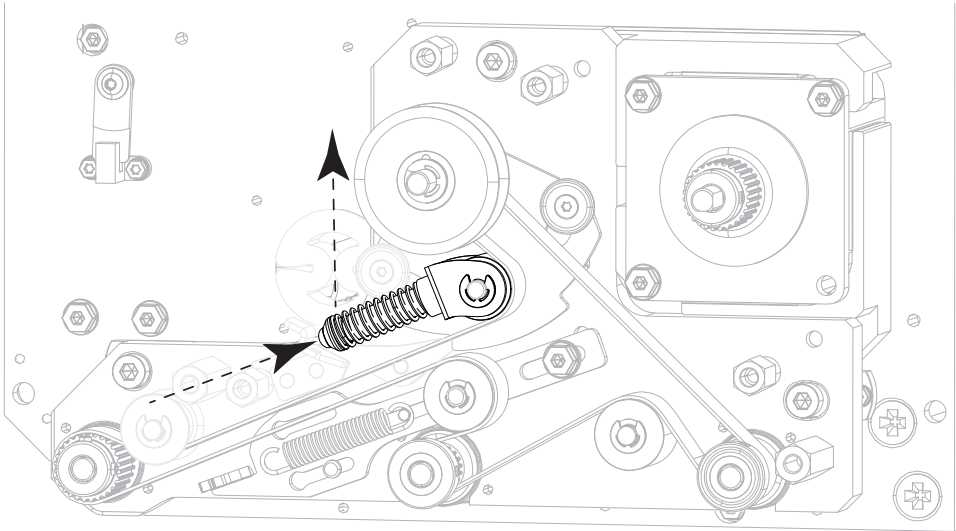


2. Remove the 3mm mounting screw (1) and washer securing (2) the stepper motor belt tensioner bracket and slide the bracket assembly (3) off of the compound pulley shaft.
3. Remove the stepper motor belt (4).

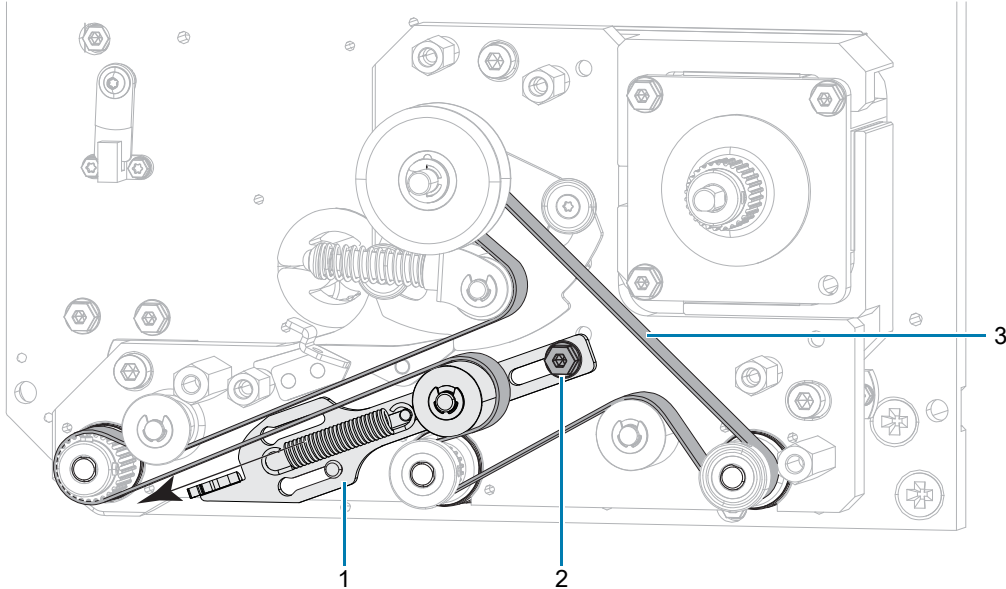


for parts & service call QLC (800) 837-1309

4. Compress and swing the dynamic tensioner up and out of its home position.



5. Loosen the ● 3mm mounting screw (2) on the locking tensioner mounting plate.
6. Push the locking tensioner mounting plate (1) toward the platen roller pulley until it stops.
7. Tighten the ● 3mm mounting screw (2) on the locking tensioner mounting plate (1).
8. Remove the platen belt (3).

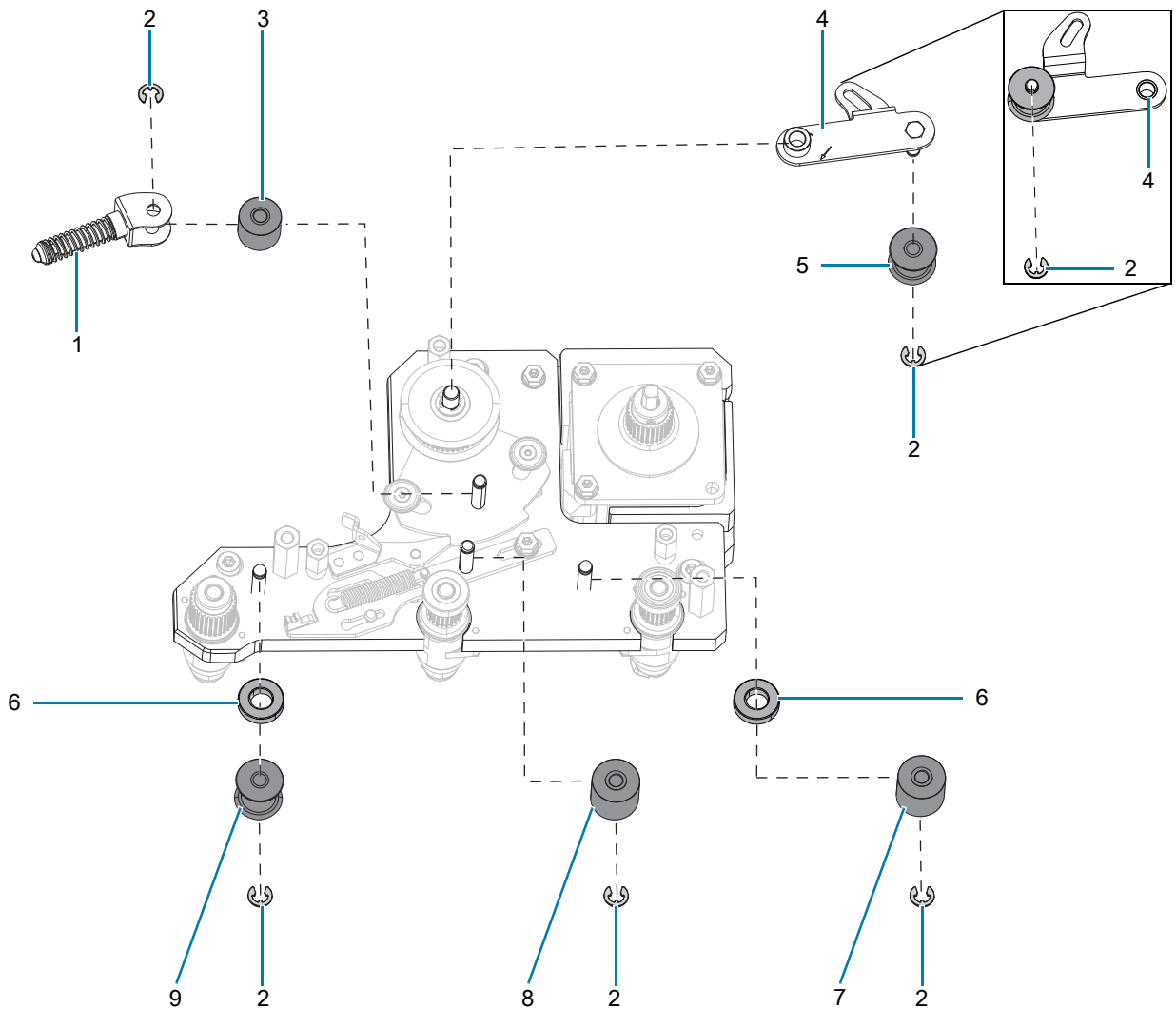


## Replace the Pulleys



**CAUTION—EYE INJURY:** 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.

1. Remove the E-clip (2) from the dynamic tensioner (1), and lift the dynamic tensioner off the shaft.
2. Flip the tensioner bracket (4) over, remove the E-clip (2), and lift the idler pulley (5) off the shaft.
3. Remove the five E-clips (2) from the platen roller idler pulley (9), dynamic tensioner idler pulley (3), stepper motor pulley (5), the two idler pulley spacers (6), pinch roller idler pulley (7), peel roller idler pulley (8), the platen roller idler pulley (9), and remove the pulleys.



4. Install the new pulleys and secure with the new E-clips.

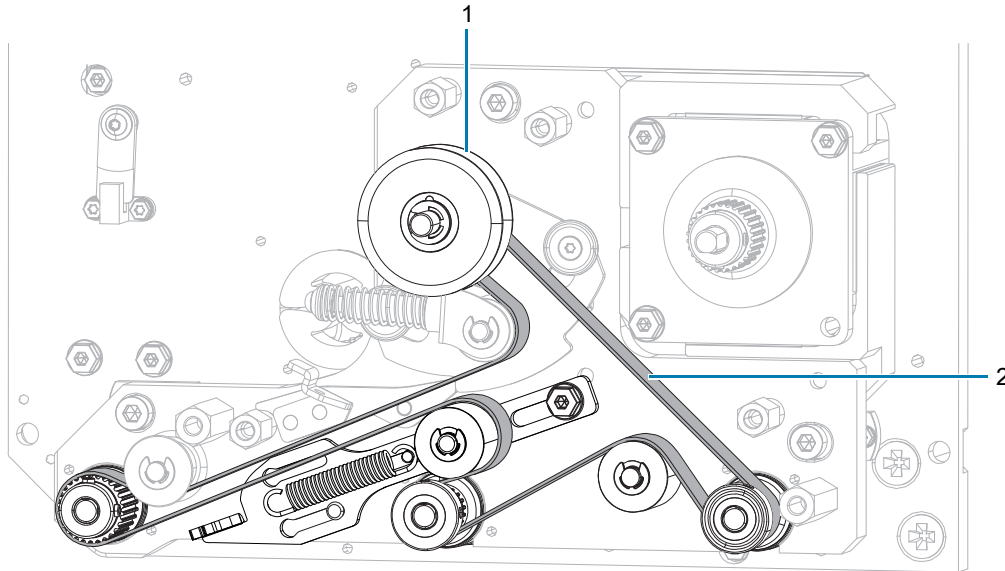
## Replace the Platen Roller and Stepper Motor Belts

1. Install the platen roller belt (2) on the compound pulley (1).



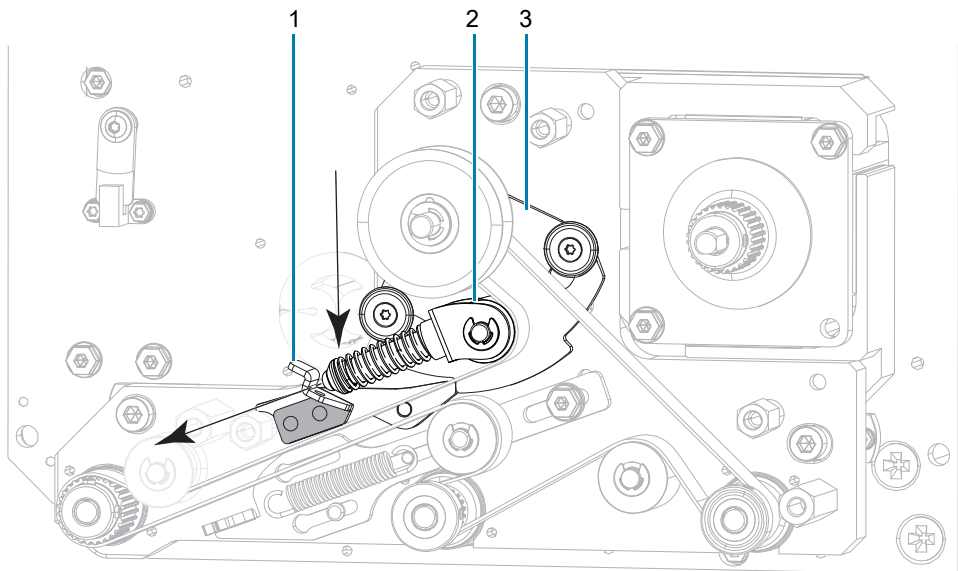
**NOTE:** The platen roller belt sits on the smaller pulley that is closer to the main frame wall.

2. Thread the platen roller belt around all the pulleys and idler pulleys.



3. Rotate the dynamic tensioner mounting plate (3) while pushing down on the dynamic tensioner latch (2).

4. Swing the dynamic tensioner (2) down while compressing the spring so that end is resting on the latch (1).



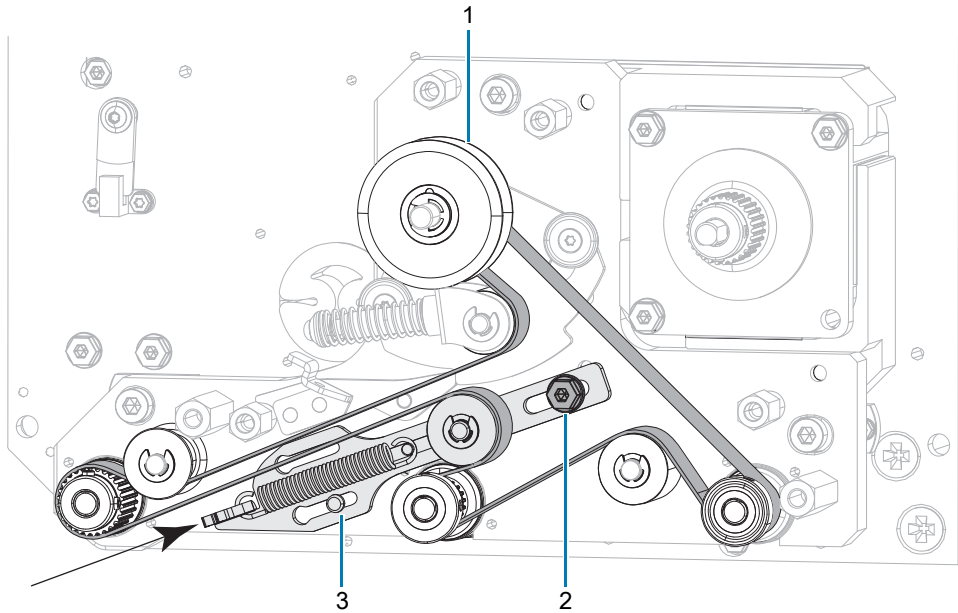
for parts & service call QLC (800) 837-1309

5. Loosen ● 3mm mounting screw (2) on the locking tensioner mounting plate (3).



**NOTE:** The locking tensioner is self-adjusting and will return to normal tension.

6. Rotate the compound pulley (1) two revolutions to equalize the belt tension and tighten the ● 3mm mounting screw (2).





7. Install the stepper motor belt (5) on the compound pulley (4) and the stepper motor pulley (6).



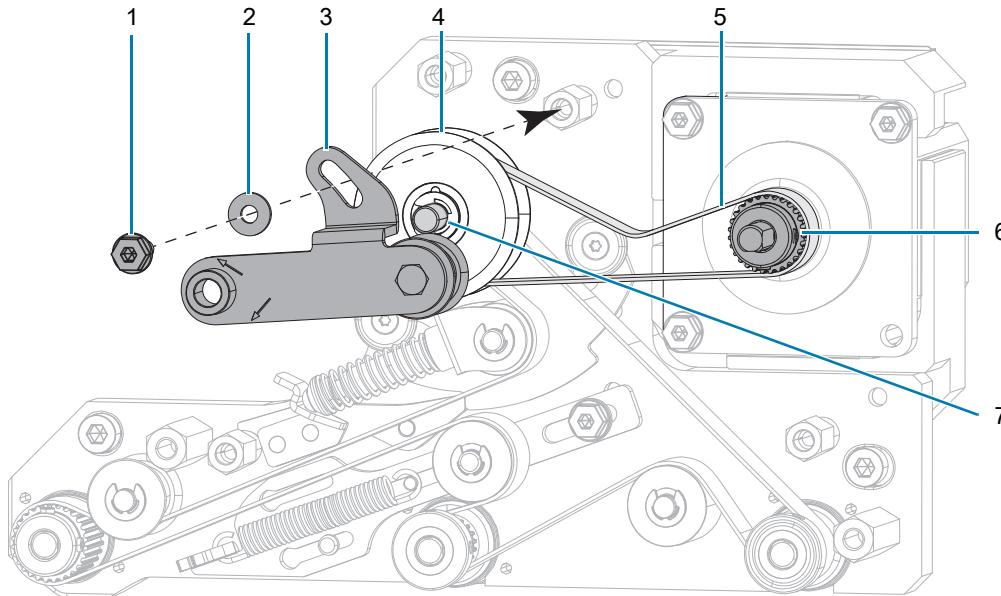
**NOTE:** On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.

8. Align the stepper motor belt tensioner bracket assembly on the compound pulley shaft (7).



**NOTE:** Ensure that the idler rides on top of the stepper motor belt and that the belt is seated evenly on the stepper motor pulley.

9. Install the mounting screw (1) and washer (2) for the stepper motor belt tensioner bracket (3).




10. Reset the stepper motor belt tensioner bracket to its original location and tighten the screw.



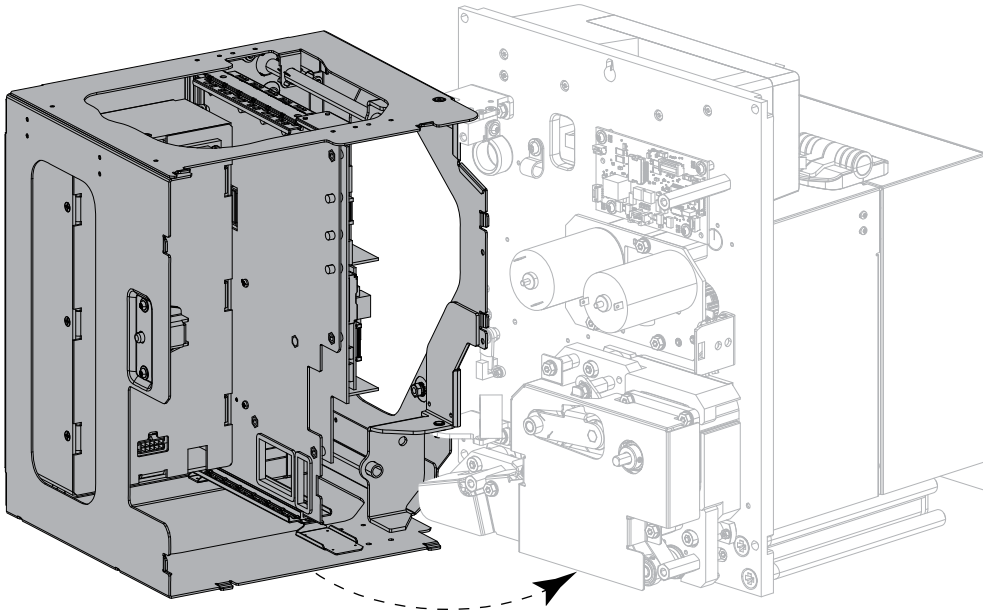
**IMPORTANT:** The lower section of the stepper motor belt should be slightly taut. The middle of the belt should deflect upward approximately halfway to the bracket pulley under moderate finger pressure.

11. Reinstall the drive system cover.

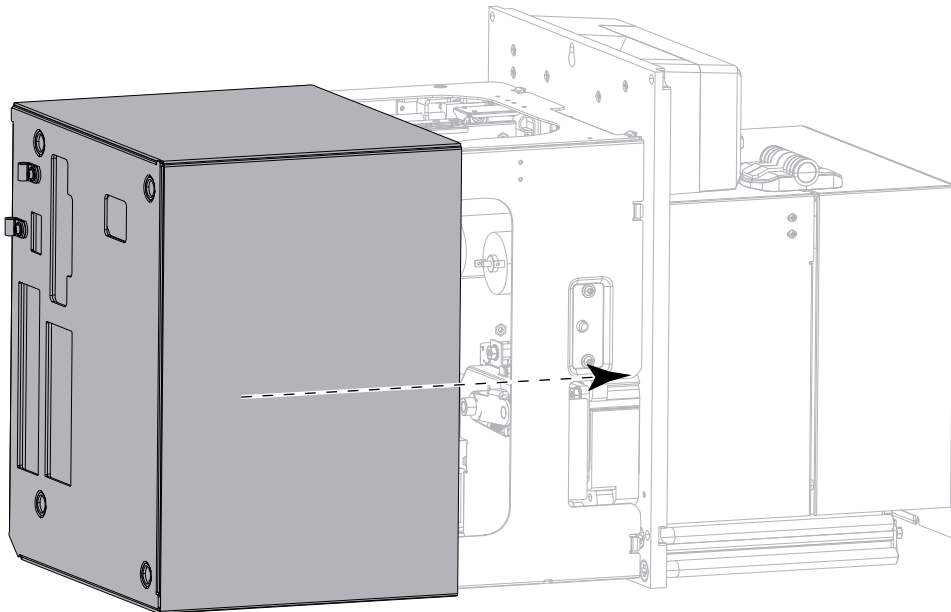
- a. Align the drive system cover over the three mounting holes.
- b. Reinstall the three  3mm hexagon screws mounting screws to secure the drive system cover.

## Close the Electronics Enclosure

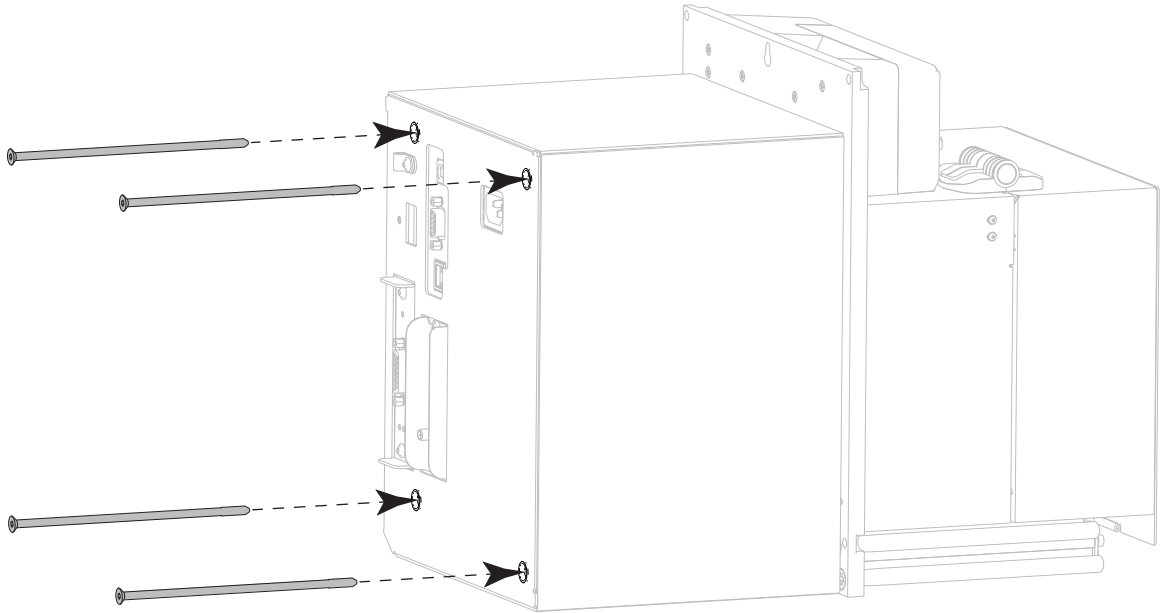
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Belt Handling Guidelines



**CAUTION—PRODUCT DAMAGE:** Handle the belts, in this kit, with *extreme care*.

The belts may not appear to be fragile, but they contain fiberglass, which is strong, yet brittle. Because of these properties, the belts require careful storage and handling for prolonged life.

## Incorrect Belt Handling

- Do not sharply bend, pinch, stress, or twist the belts.



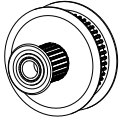
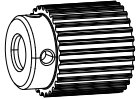
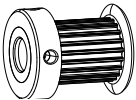
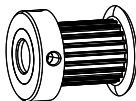

## Correct Belt Handling

- Use both hands to gently grasp the belt between your thumb and index fingers approximately six inches apart.
- Move hands holding belts until an inch apart.
- Wrap the belt around the pulley.
- Ensure the belt is not touching a pulley flange.











## Parts List




Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Compound pulley Qty: 1</p>
	<p>Platen pulley (28g 12mm) Qty: 1</p>
	<p>Peel pulley (20g) Qty: 1</p>
	<p>Pinch pulley (21g) Qty: 1</p>
	<p>Stepper motor pulley (28g) Qty: 1</p>

for parts & service call QLC (800) 837-1309

	Idler pulley Qty: 1
	Idler pulley 16mm (width) Qty: 1
	Idler pulley 13mm (width) Qty: 1
	Idler pulley (18mm x 15mm) Qty: 2
	E-ring (RS-4) Qty: 5
	E-ring (6mm) Qty: 1
	Spacer (idler pulley) Qty: 2
	Set screw (M3x5) Qty: 8

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9
-  Metric hexagon keys or bits  
Size: 1.5mm, 3mm
-  Sorting bin for screws and small parts (optional)

## Prepare for Installation



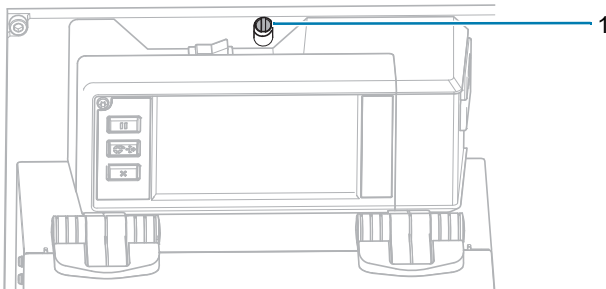
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



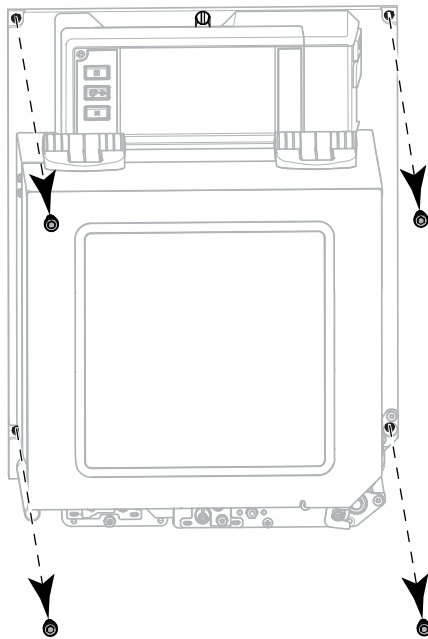
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



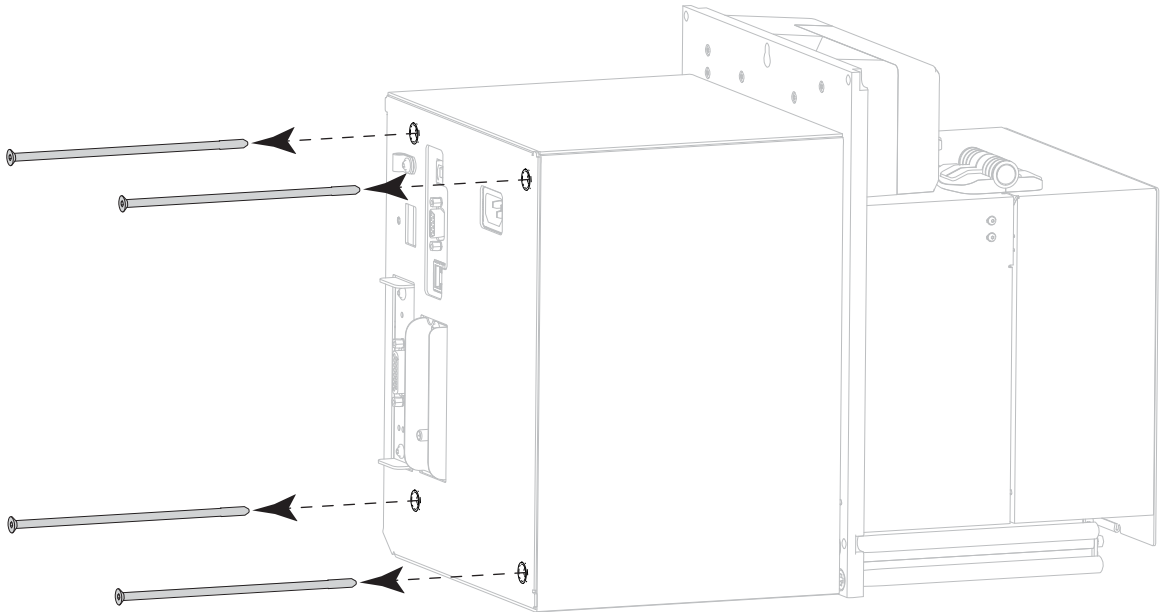
2. Remove the four screws securing the print engine to the applicator.



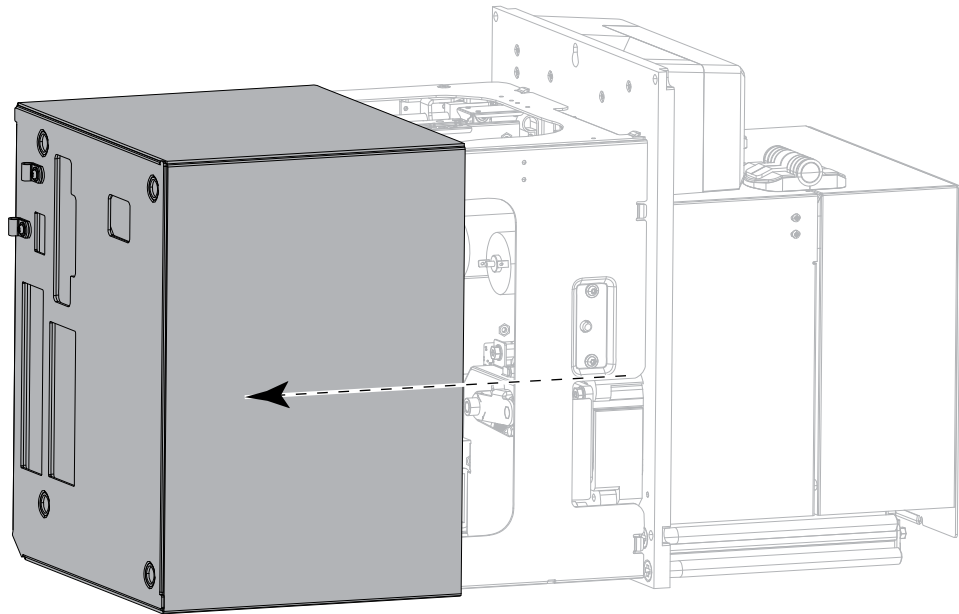
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

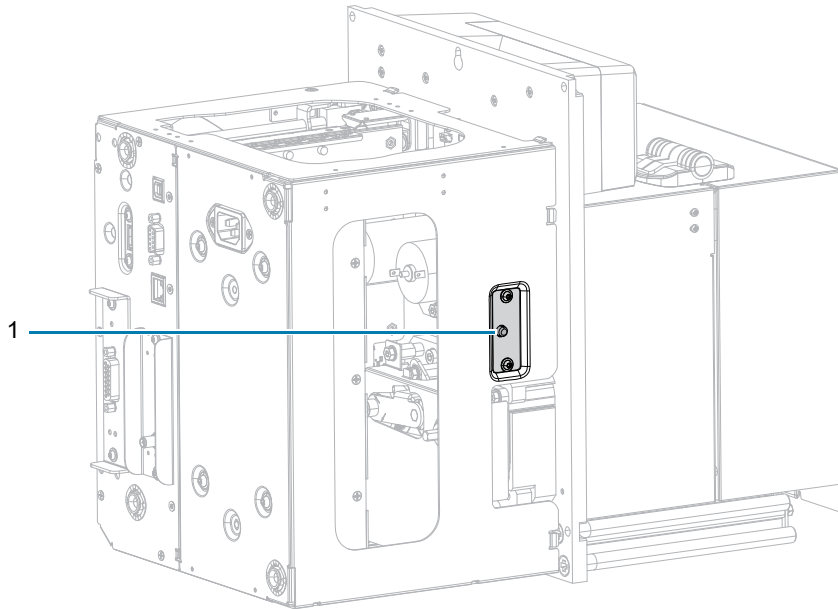




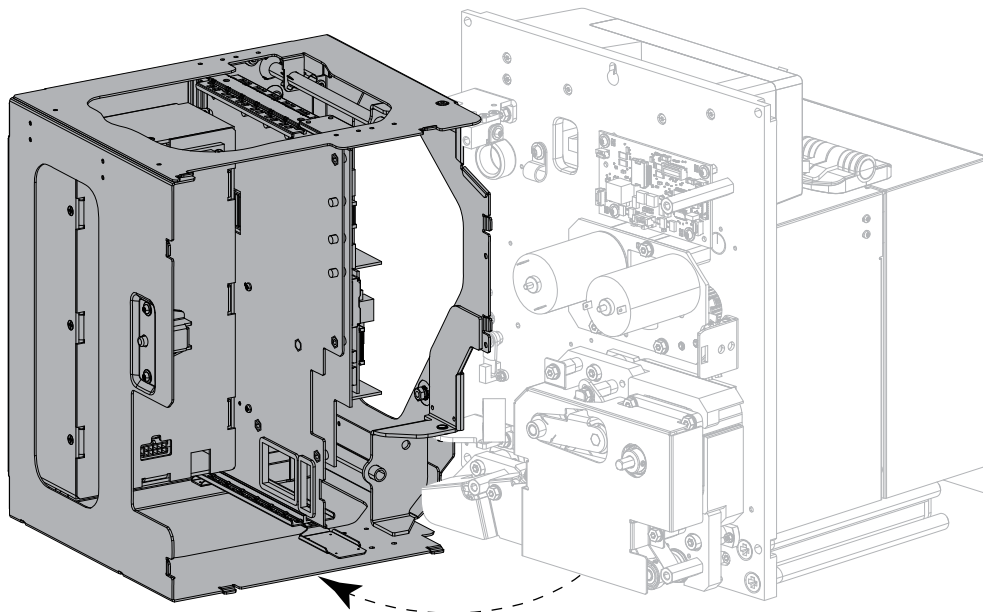
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

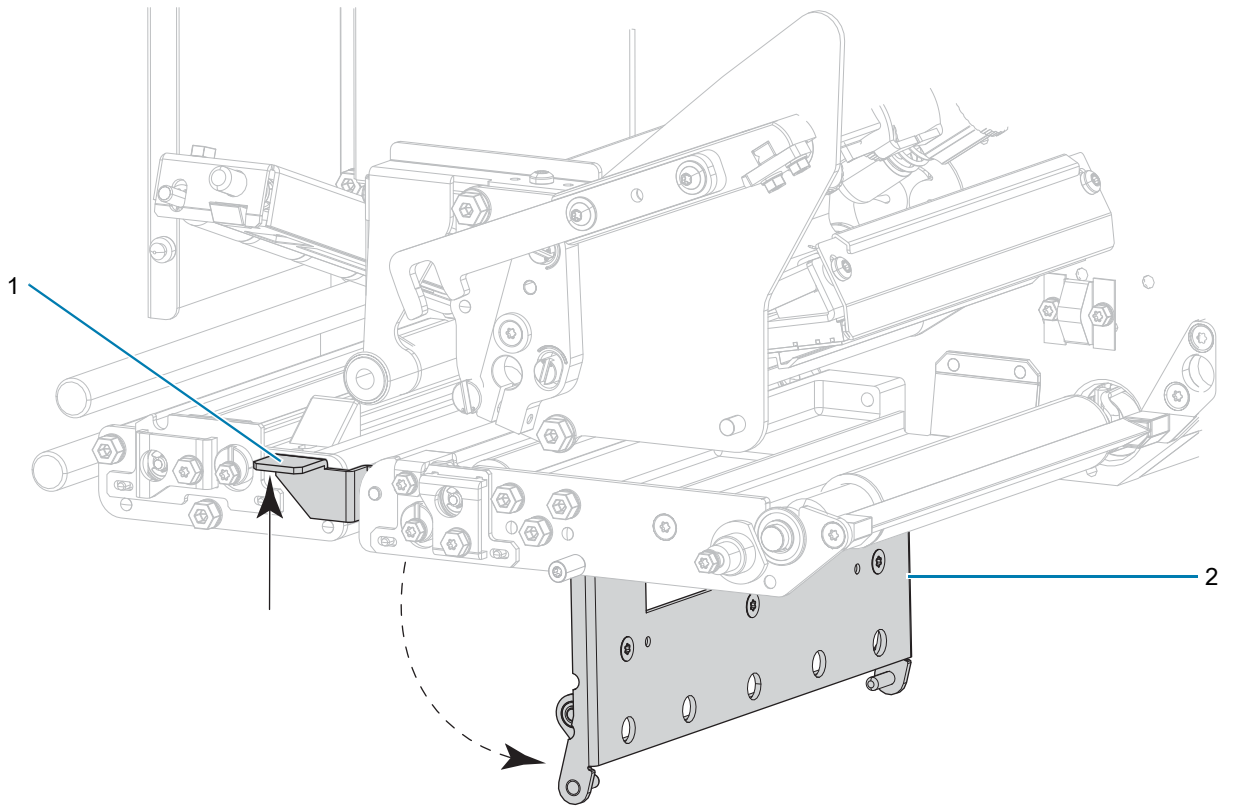



4. Open the rear of the print engine.

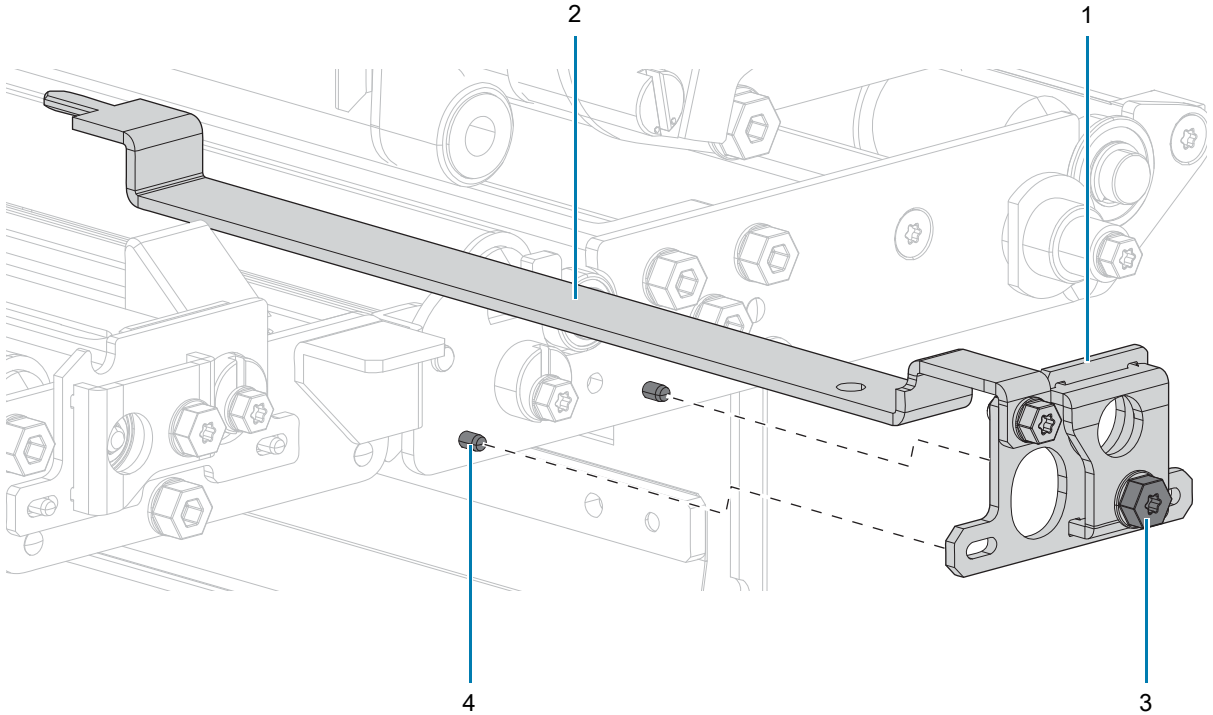


## Remove the Rollers

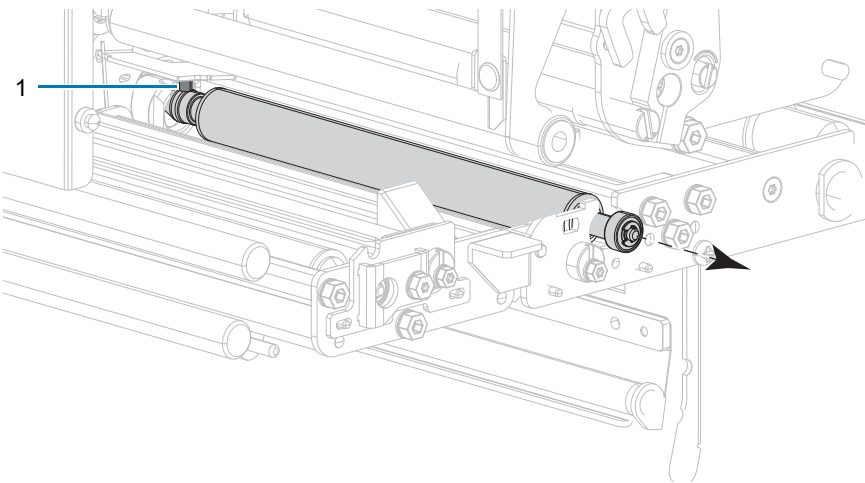
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.




2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

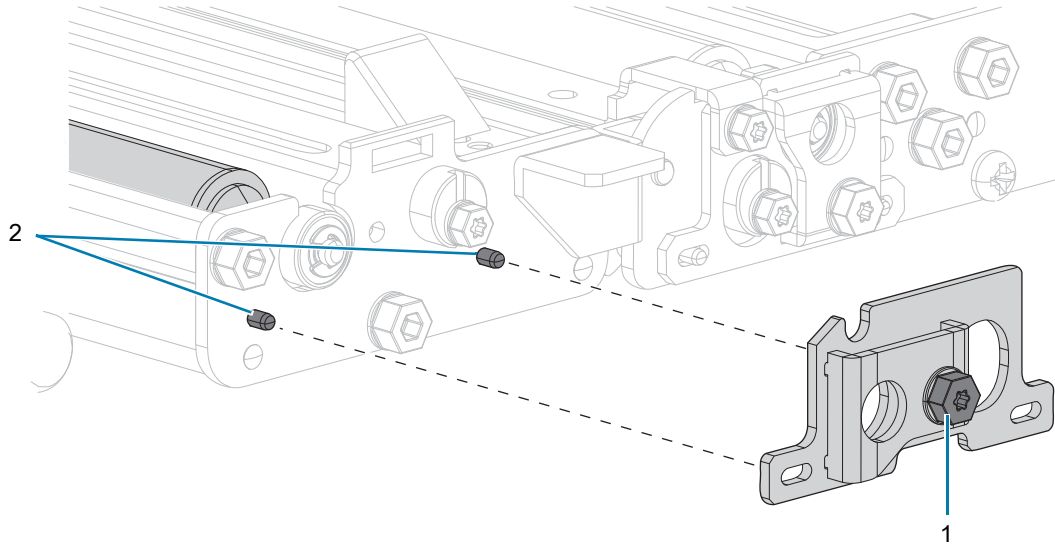


3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

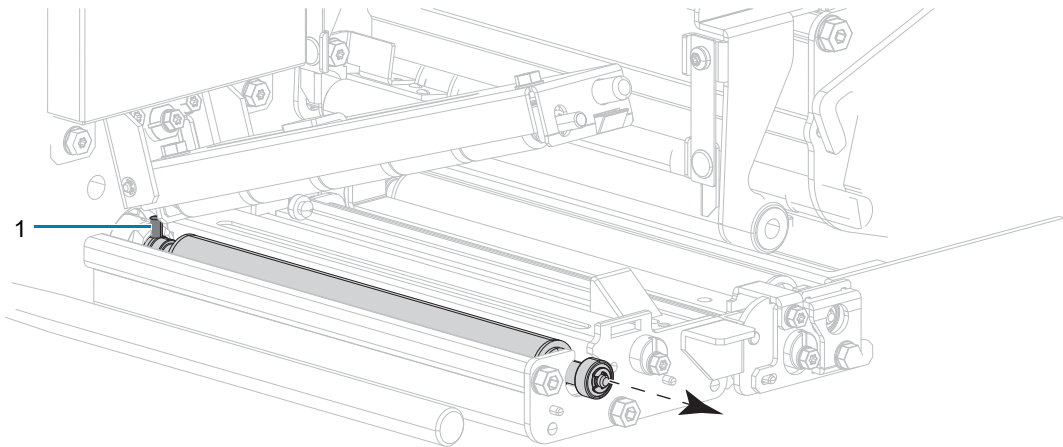


4. Remove the peel roller assembly from the print engine.

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




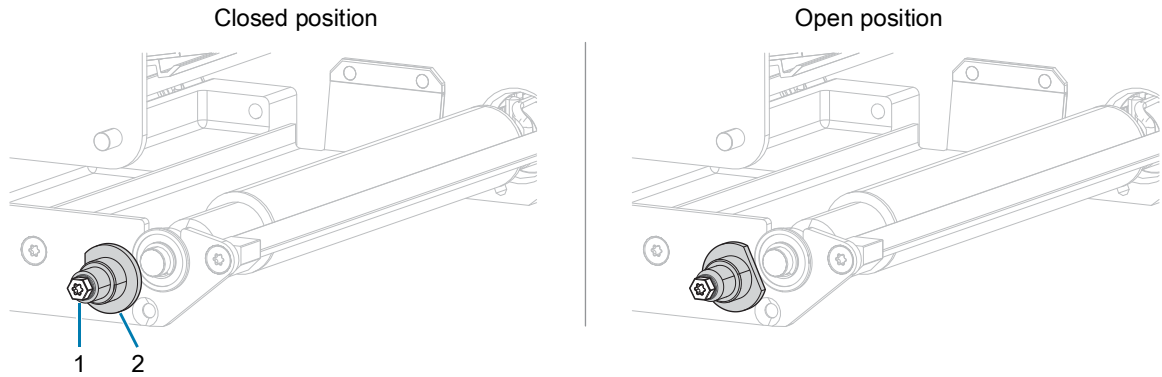
6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



7. Remove the pinch roller assembly from the print engine.

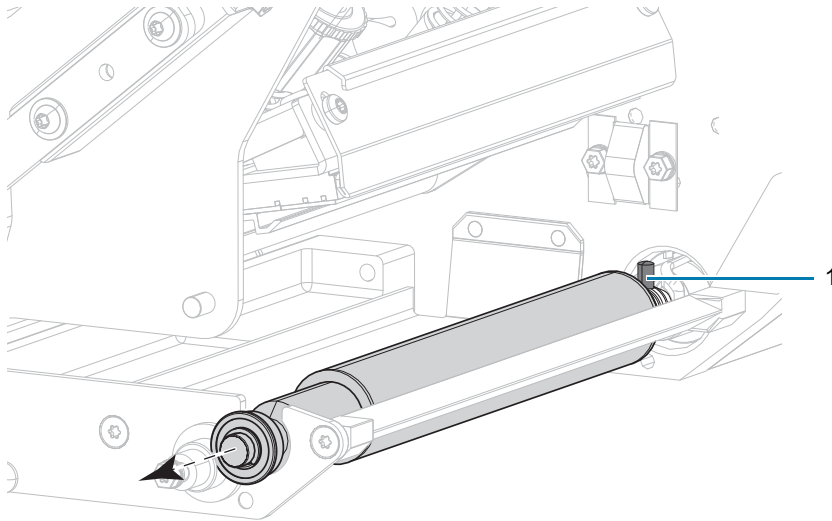
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

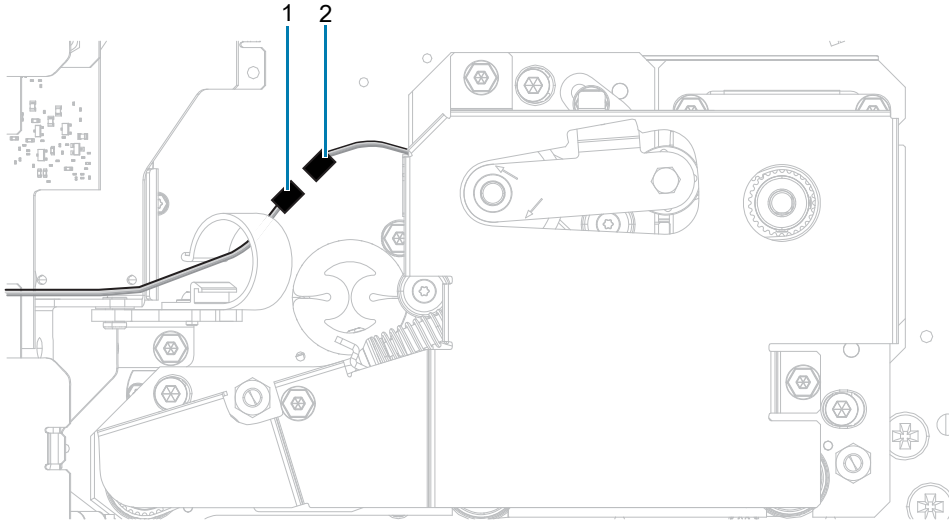


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

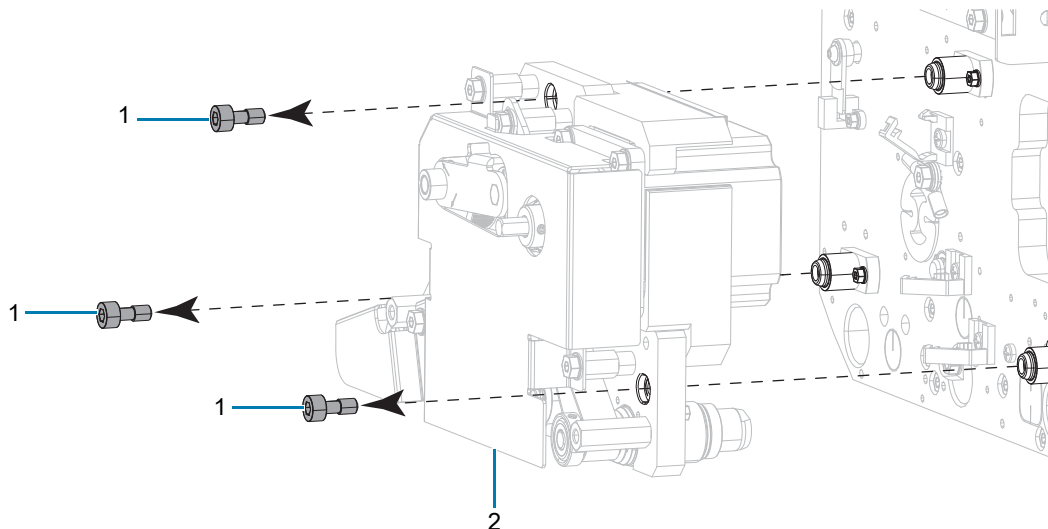


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



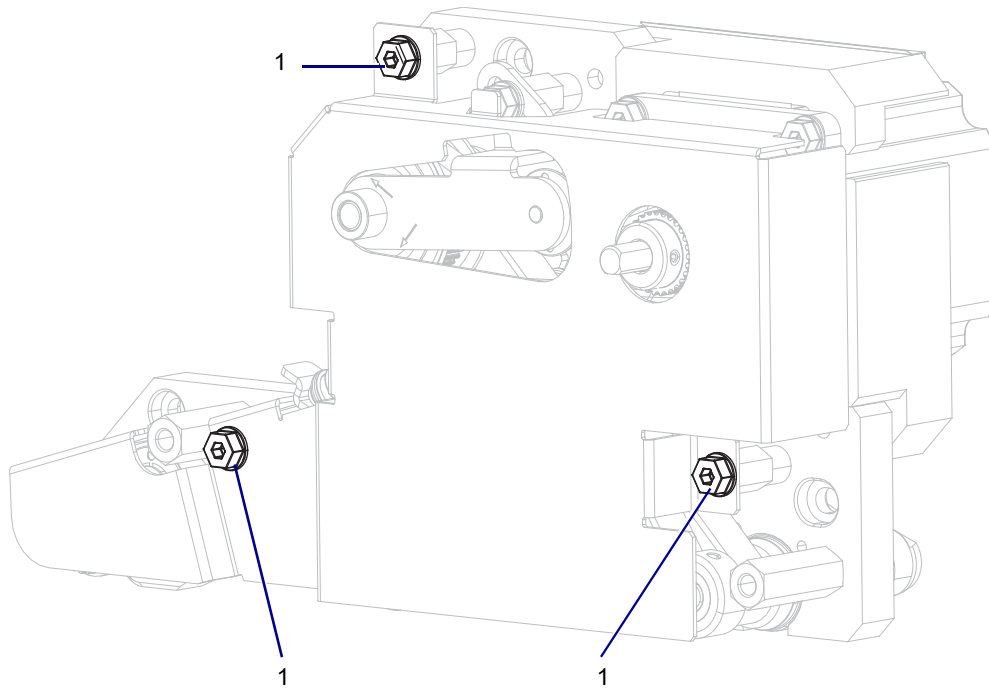
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

3. Remove the drive system (2) from the main frame.

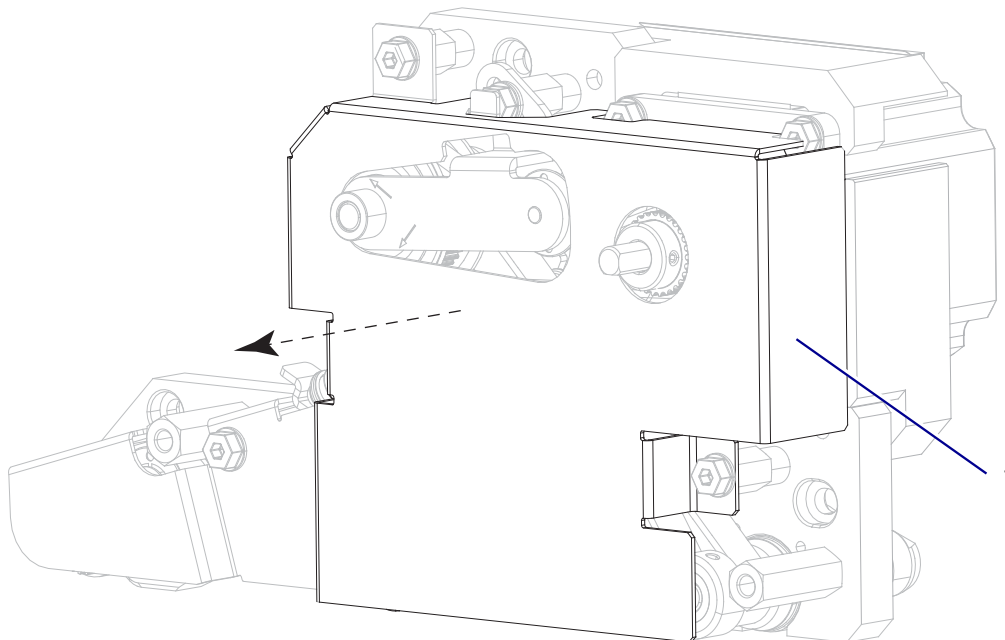


## Remove the Drive System Cover

1. Loosen three ● 3mm screws (1).



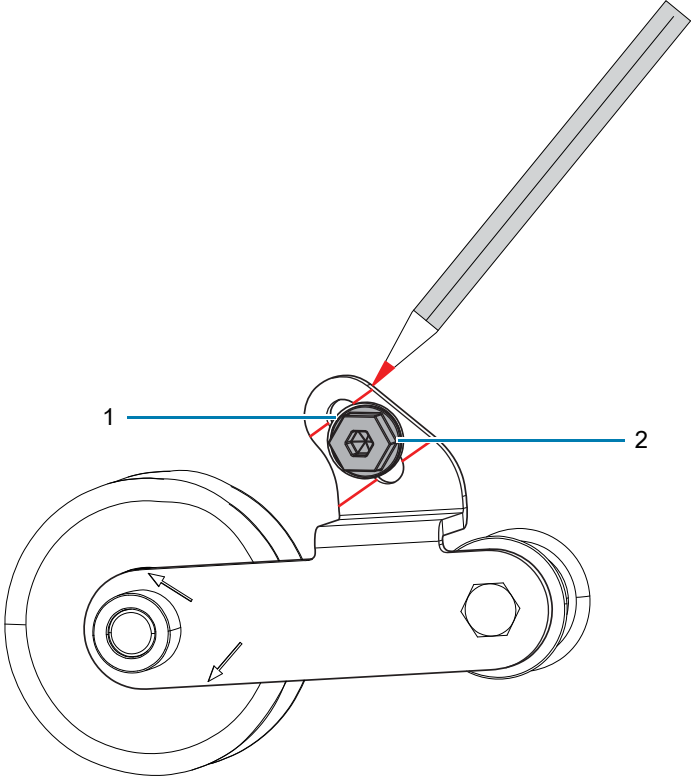
2. Lift off the drive system cover (1).



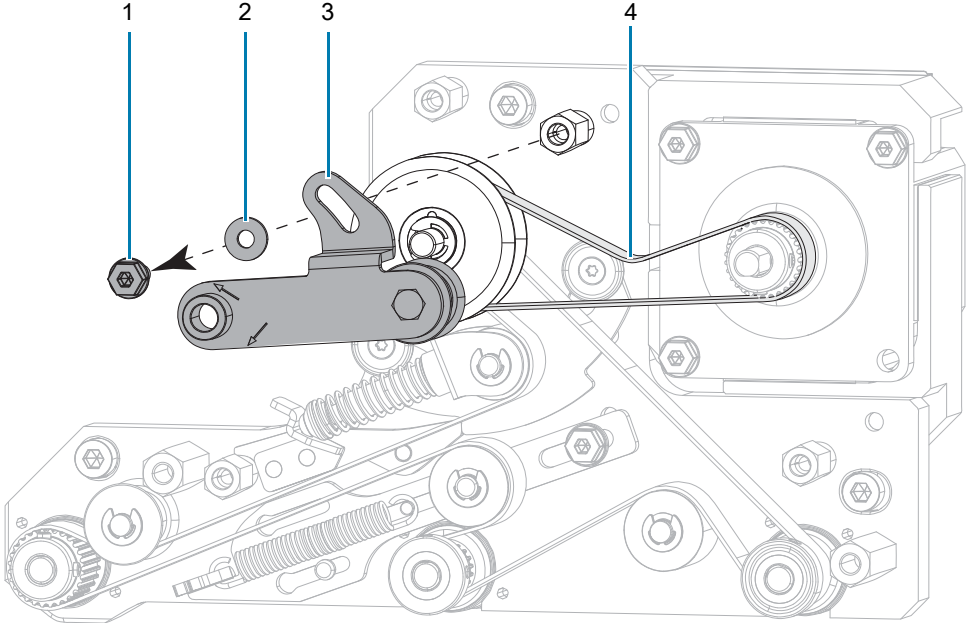
for parts & service call QLC (800) 837-1309

## Remove the Belts

1. Note the location of the screw (2) and washer (1) in the stepper motor belt tensioner bracket and mark with a pen or pencil.



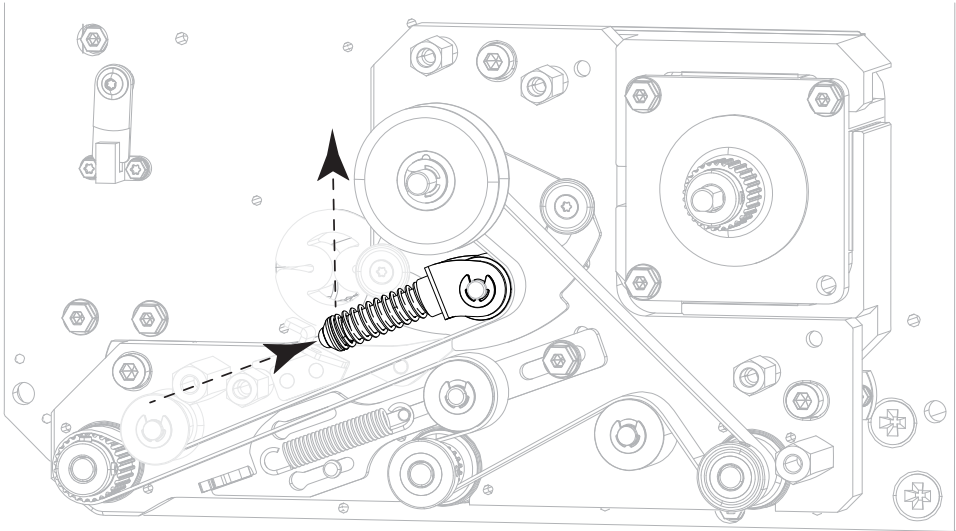
2. Remove the 3mm mounting screw (1) and washer securing (2) the stepper motor belt tensioner bracket and slide the bracket assembly (3) off of the compound pulley shaft.
3. Remove the stepper motor belt (4).



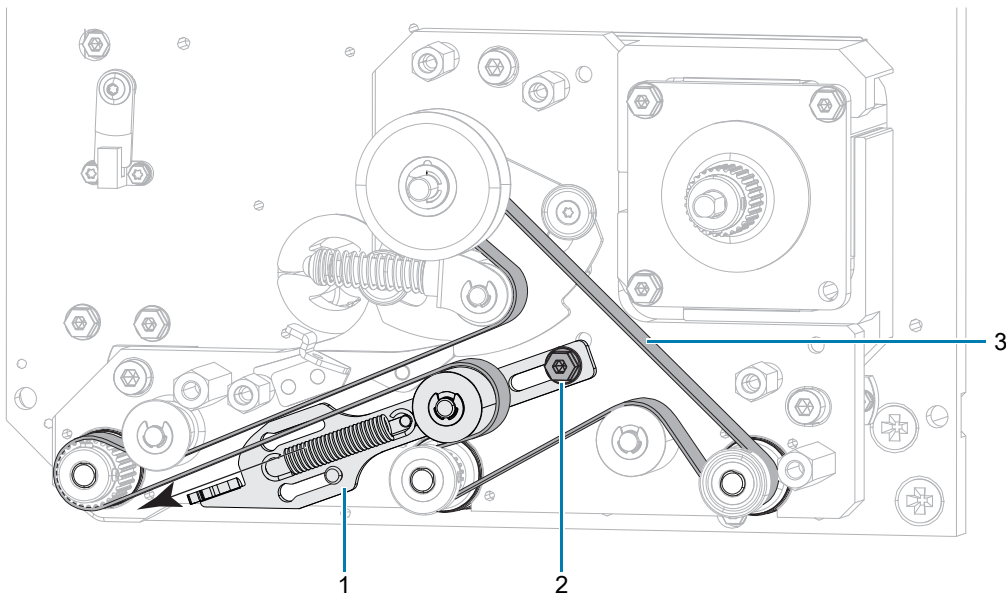
for parts & service call QLC (800) 837-1309



4. Compress and swing the dynamic tensioner up and out of its home position.



5. Loosen the ● 3mm mounting screw (2) on the locking tensioner mounting plate.
6. Push the locking tensioner mounting plate (1) toward the platen roller pulley until it stops.
7. Tighten the ● 3mm mounting screw (2) on the locking tensioner mounting plate (1).
8. Remove the platen belt (3).

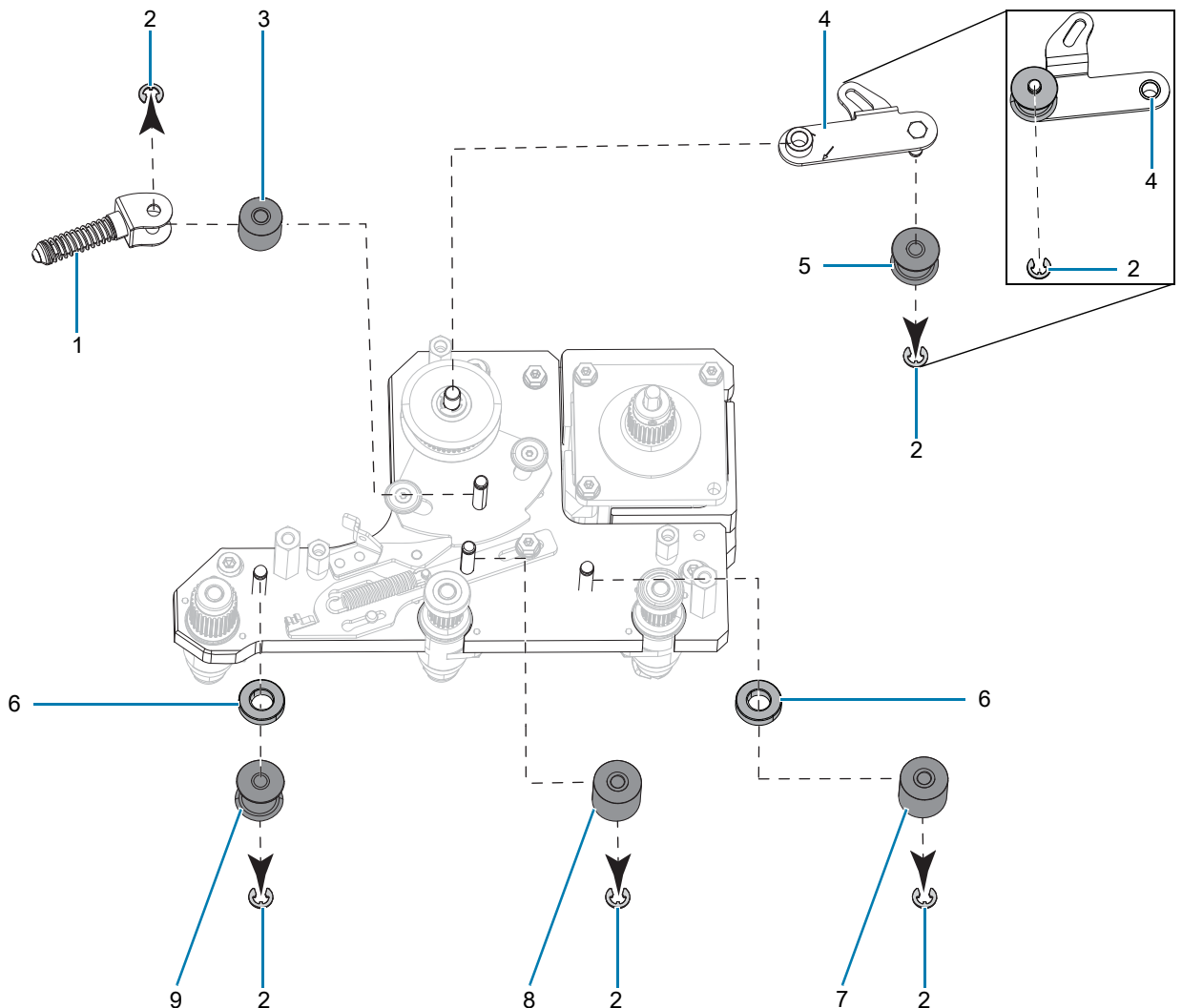


## Remove the Pulleys



**CAUTION—EYE INJURY:** 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.

1. Remove the E-clip (2) from the dynamic tensioner (1), and lift the dynamic tensioner off the shaft.
2. Flip the tensioner bracket (4) over, remove the E-clip (2), and lift the idler pulley (5) off the shaft.
3. Remove the five E-clips (2) from the platen roller idler pulley (9), dynamic tensioner idler pulley (3), stepper motor pulley (5), the two idler pulley spacers (6), pinch roller idler pulley (7), peel roller idler pulley (8), the platen roller idler pulley (9), and remove the pulleys.

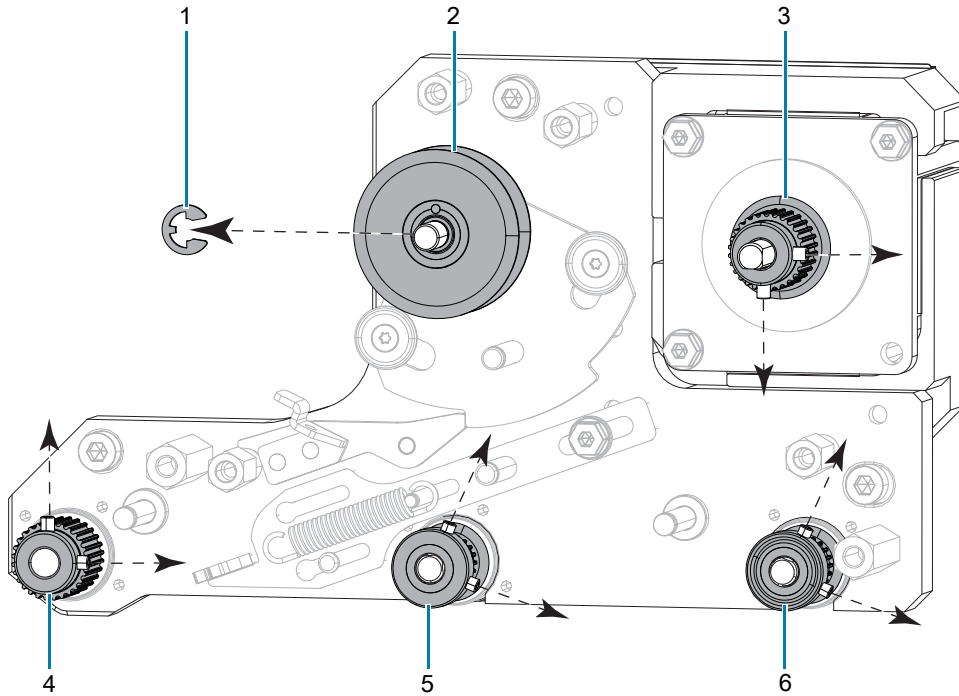


for parts & service call QLC (800) 837-1309



**CAUTION—EYE INJURY:** 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.

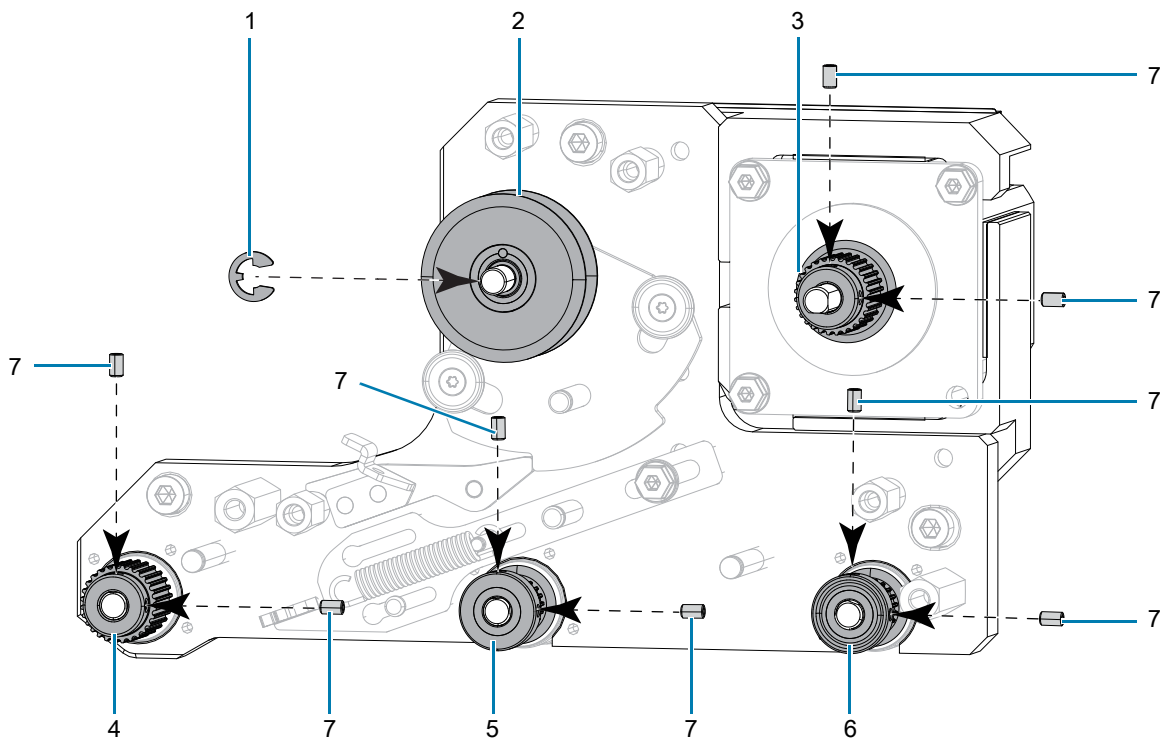
4. Remove the E-clip (1) from the compound pulley (2).
5. Loosen the two 1.5mm set screws on the stepper motor pulley (3), the platen pulley (4), the peel pulley (5), and the pinch pulley (6).



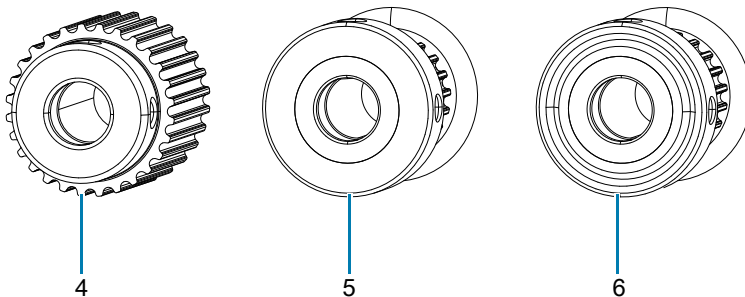


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

6. Install the new pulleys.
  - a. Install the new compound pulley (2) and secure with the new E-clip (1).
  - b. Install the new stepper motor pulley (3).
  - c. Install the new platen pulley (4), peel pulley (5), and pinch pulley (6). Push the pulleys down the shaft and firmly against the pulley stop.
  - d. Secure the stepper motor pulley (3), the platen pulley (4), the peel pulley (5), and the pinch pulley (6) with the new 1.5mm set screws (7).



**NOTE:** There are differences between the three lower pulleys. Each pulley must be installed on the correct shaft.



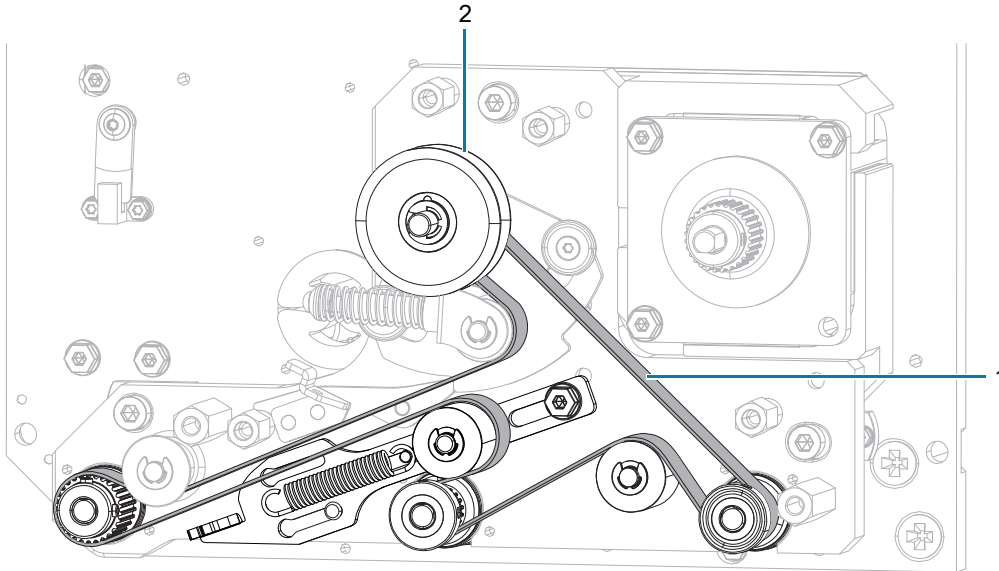
## Replace the Platen Roller and Stepper Motor Belts

1. Install the platen roller belt (1) on the compound pulley (2).

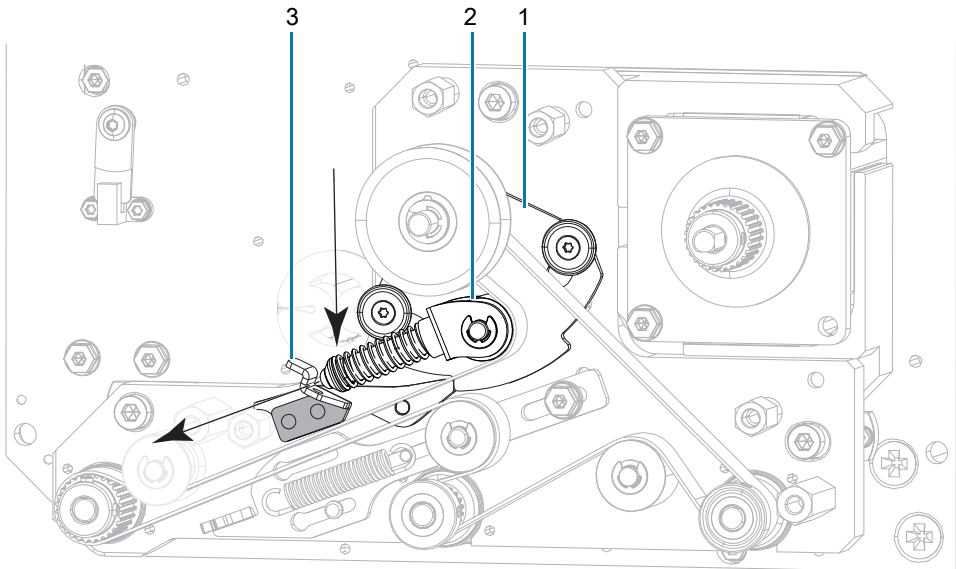


**NOTE:** The platen roller belt sits on the smaller pulley that is closer to the main frame wall.

2. Thread the platen roller belt around all the pulleys and idler pulleys.



3. Rotate the dynamic tensioner mounting plate (1) while pushing down on the dynamic tensioner latch (2).
4. Swing the dynamic tensioner (2) down while compressing the spring so that end is resting on the latch (1).



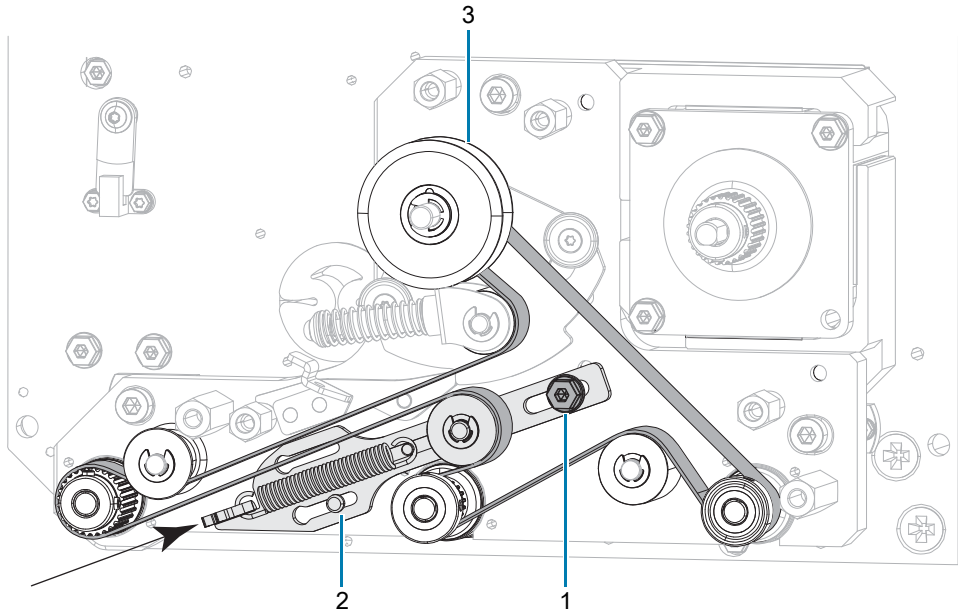
for parts & service call QLC (800) 837-1309

5. Loosen the ● 3mm mounting screw (1) on the locking tensioner mounting plate (2).



**NOTE:** The locking tensioner is self-adjusting and will return to normal tension.

6. Rotate the compound pulley (3) two revolutions to equalize the belt tension, and then tighten the ● 3mm mounting screw (1).



7. Install the stepper motor belt (5) on the compound pulley (4) and the stepper motor pulley (6).



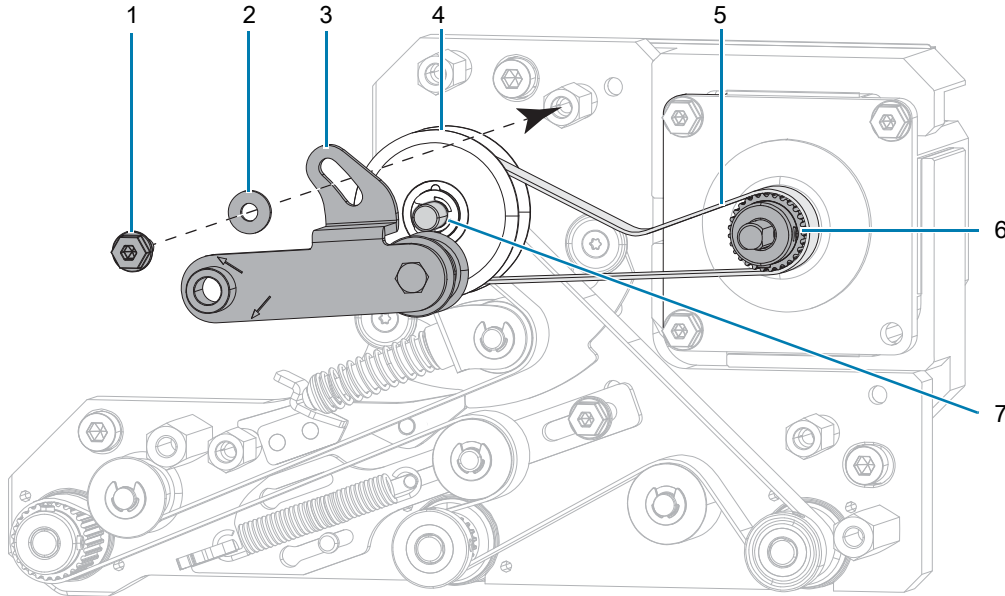
**NOTE:** On the compound pulley, the stepper motor belt rests on the larger 48 groove pulley.

8. Align the stepper motor belt tensioner bracket assembly on the compound pulley shaft (7).



**NOTE:** Ensure that the idler rides on top of the stepper motor belt and that the belt is seated evenly on the stepper motor pulley.

9. Install the mounting screw (1) and washer (2) for the stepper motor belt tensioner bracket (3).




10. Reset the stepper motor belt tensioner bracket to its original location and tighten the screw.



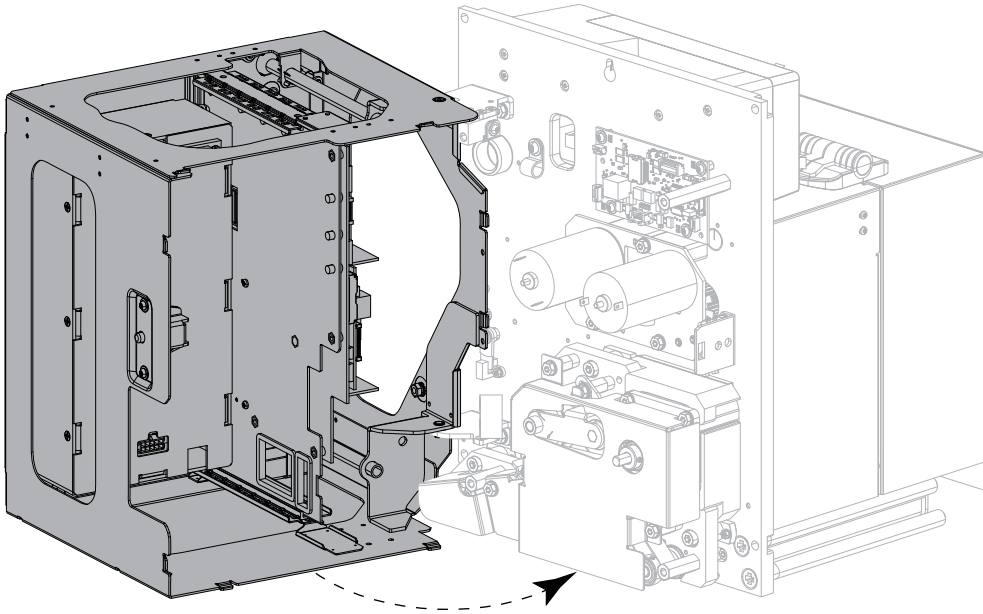
**IMPORTANT:** The lower section of the stepper motor belt should be slightly taut. The middle of the belt should deflect upward approximately halfway to the bracket pulley under moderate finger pressure.

11. Reinstall the drive system cover.

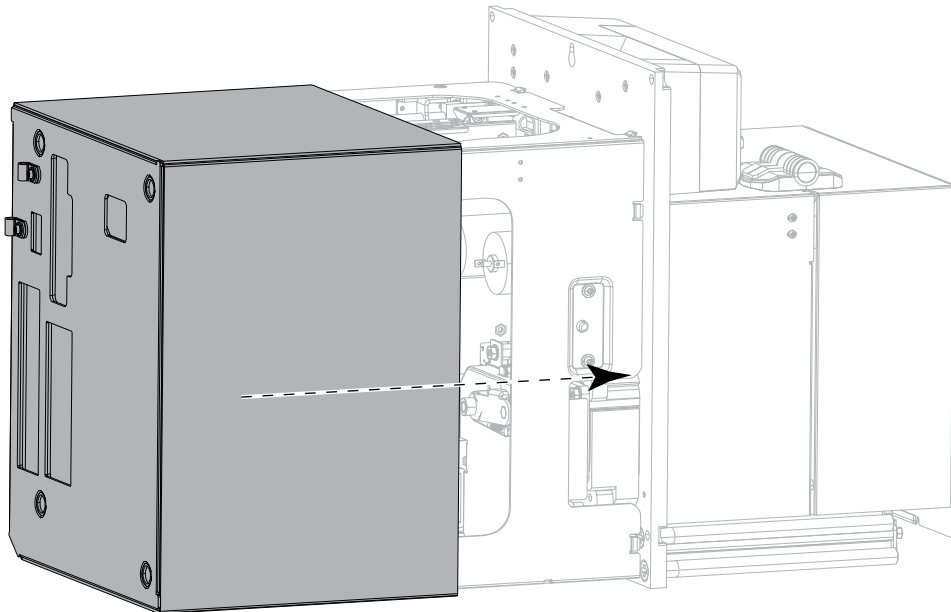
- a. Align the drive system cover over the three mounting holes.
- b. Reinstall the three  3mm hexagon screws mounting screws to secure the drive system cover.

## Close the Electronics Enclosure

1. Close the rear of the print engine.

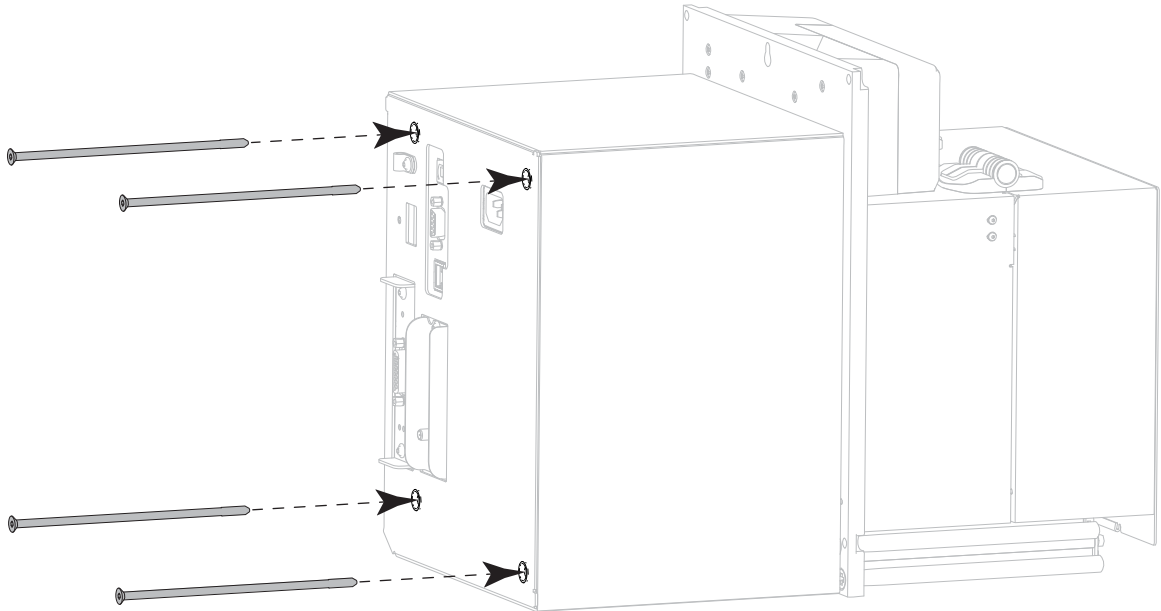


2. Reinstall the electronics enclosure cover on the print engine.





3. Install the four 3mm screws securing the electronics enclosure cover.






### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

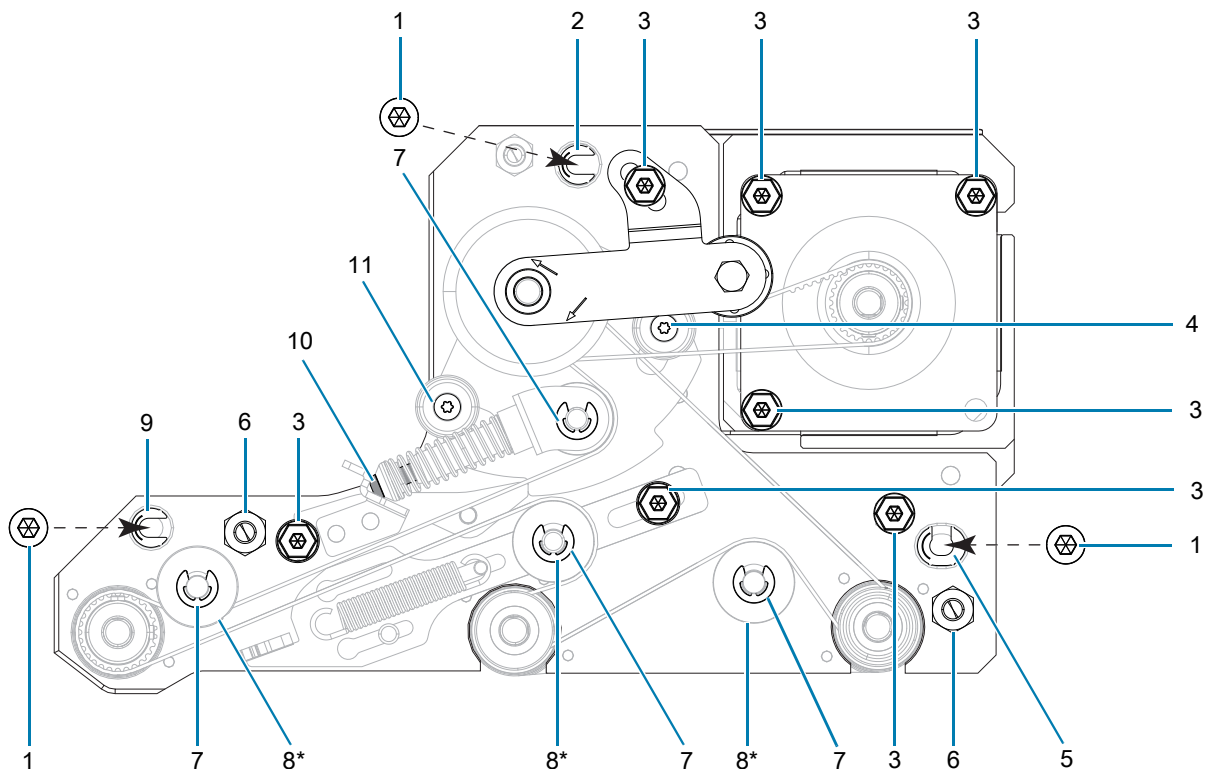
The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Tools Required

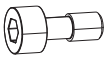


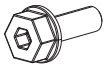









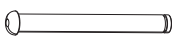
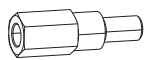






-  Hexalobular (6-lobe, star) keys, drivers, or bits  
 Size: T9
-  Metric hexagon keys or bits  
 Size: 4mm, 5mm
-  Metric nut drivers  
 Size: 8 mm, 9 mm
- Sorting bin for screws and small parts (optional)

## Parts List

Verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.



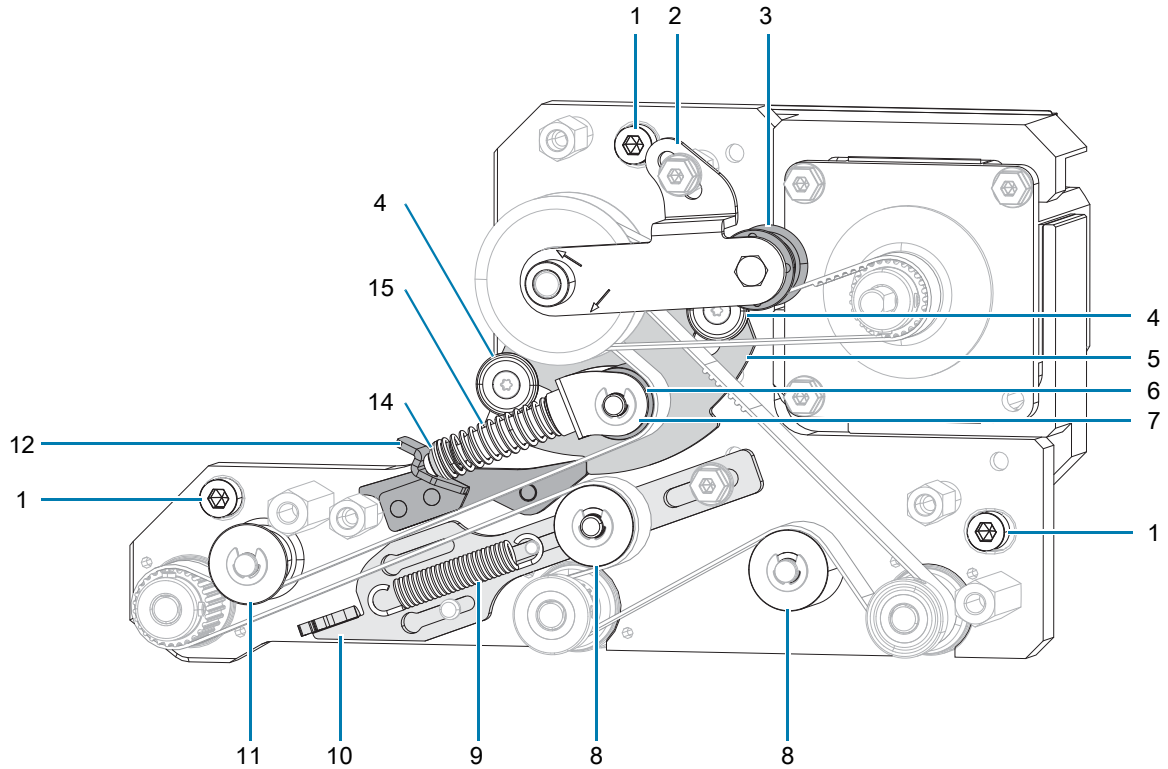
## Media Drive System Hardware Maintenance Kit

	1	Screw (M5x12 SO Ni captive) Qty: 3	 5mm
	2	Washer (9.5) Qty: 1	
	3	Screw (M4x12 SO Ni Fling) Qty: 1	 4mm
	4	Screw (M3x12 FL TX Ni) Qty: 2	 T9
	5	Washer (9x11) Qty: 1	
	6	Spacer (HX9x25) Qty: 2	 9mm
	7	Circlip (RS-4) Qty: 2	
	8*	Idle pulley spacer Qty: 2	
	9	Washer (9) Qty: 1	
	10	Shaft (belt stretcher) Qty: 1	
	N/A*	Spacer (HX8x18) Qty: 2	 8mm
	N/A*	E-ring (shaft 6mm) Qty: 1	
	N/A*	Washer (flat 0.375x0.156x0.042) Qty: 2	
	N/A*	Screw (M3x6 TX Ni) Qty: 2	 T9
	N/A*	Washer (flat 0.20x0.437x0.048) Qty: 1	

\*Part not visible

for parts & service call QLC (800) 837-1309

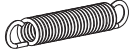





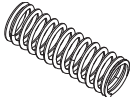
# Media Drive System Hardware Maintenance Kit

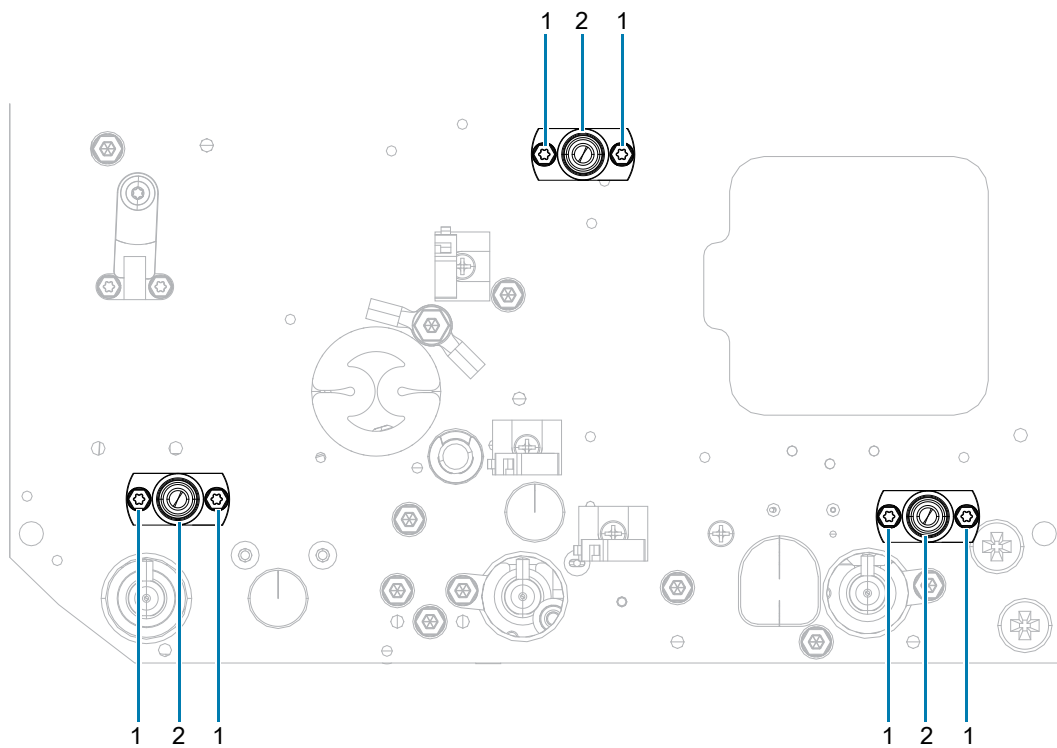





	1	Screw (M5x12 SO Ni captive) Qty: 3	
	2	Tension lever (belt motor RH) Qty: 1	
		Tension lever (belt motor LH) Qty: 1	
	3	Idler pulley Qty: 1	
	4	Bushing stretch roller Qty: 2	
	5	Dynamic tensioner pivot plate Qty: 1	
	6	Idler pulley (D16) Qty: 1	
	7	Lever (belt stretcher) Qty: 1	
	8	Idler pulley (18 x 15) Qty: 2	

for parts & service call QLC (800) 837-1309

# Media Drive System Hardware Maintenance Kit

	9	Spring (tension slider) Qty: 1
	10	Sliding tensioner plate Qty: 1
	11	Idler pulley (fling) Qty: 1
	12	Dynamic tensioner lever RH Qty: 1
	13	Dynamic tensioner lever LH Qty: 1
	14	Washer (belt stretcher) Qty: 1
	15	Spring belt stretcher Qty: 1

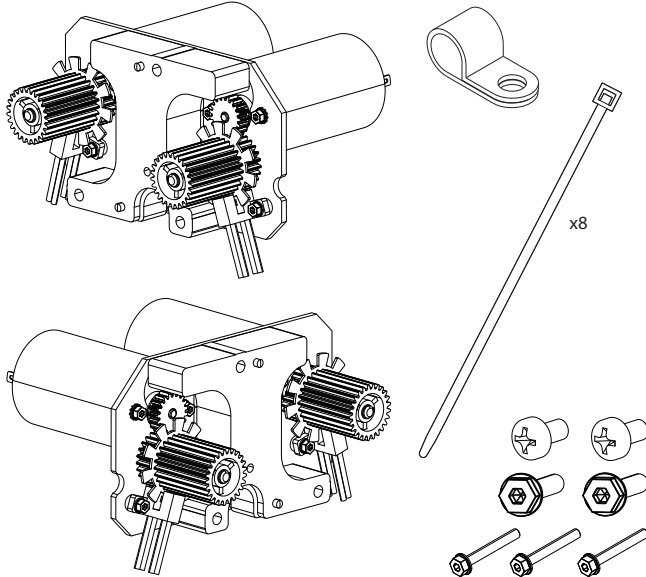


	1	Screw (M3×10 TX Ni) Qty: 6	 T9
	2	Drive unit spacer Qty: 3	

for parts & service call QLC (800) 837-1309

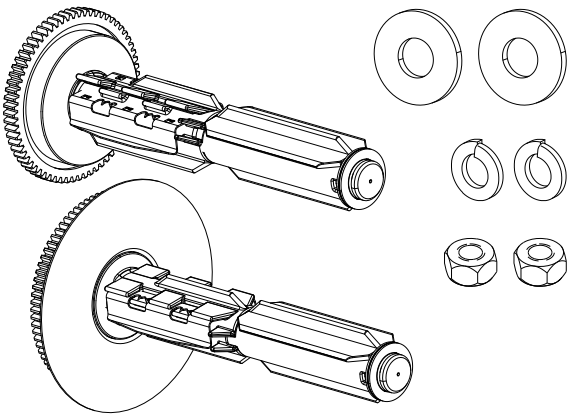
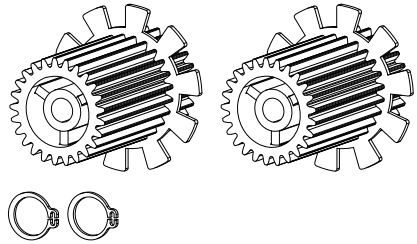
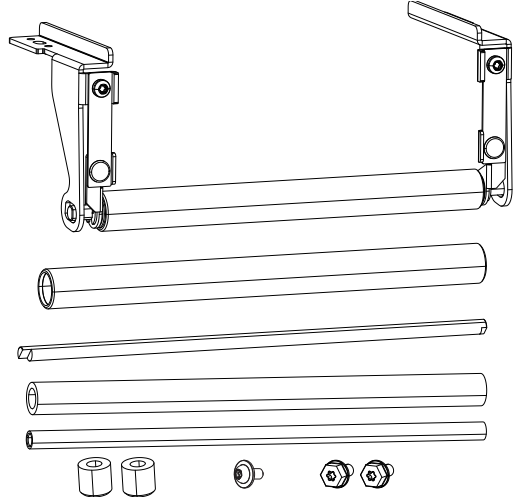
# Ribbon Drive System

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

Description	Kit Number	Kit Name
<p><a href="#">Ribbon Drive System Maintenance Kit on page 425</a></p> 	P1112750-082	Kit, Ribbon Drive System, ZE511, ZE521, RH
	P1112750-083	Kit, Ribbon Drive System, ZE511, ZE521, LH

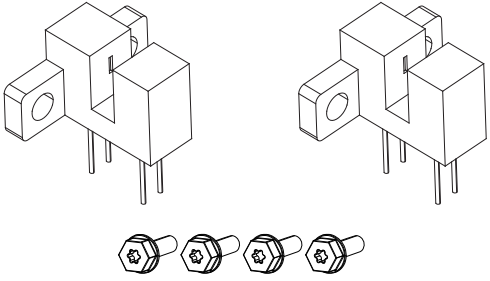
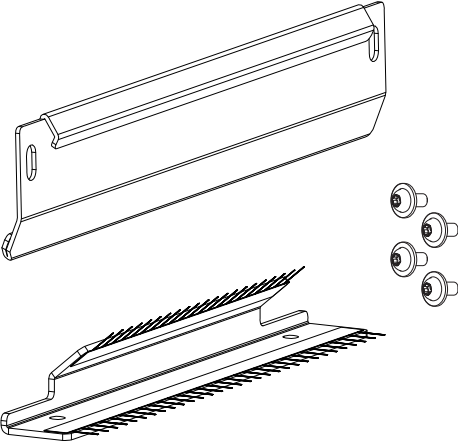
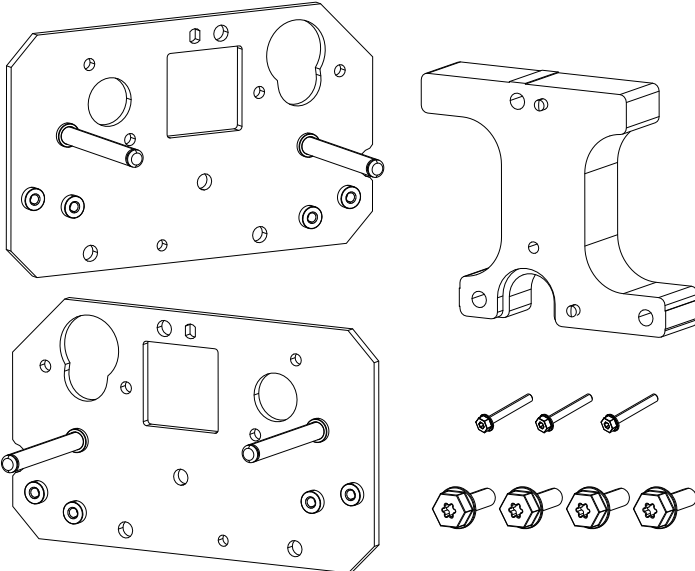
for parts & service call QLC (800) 837-1309

# Ribbon Drive System Components

Description	Kit Number	Kit Name
<p>Ribbon Spindles Maintenance Kit on page 438</p>  <p>The diagram shows two ribbon spindles, each with a gear on one end. To the right of the spindles are several components: two circular washers, two O-rings, and two hex nuts.</p>	P1046696-037	Kit, Ribbon Spindles, ZE500-4, ZE511 RH & LH
	P1046696-038	Kit, Ribbon Spindles, ZE500-6, ZE521 RH & LH
<p>Ribbon Drive System Gears Maintenance Kit on page 453</p>  <p>The diagram shows two drive gears with many teeth. Below the gears are two O-rings.</p>	P1046696-040	Kit, Drive Gears for Ribbon Spindles, ZE511, ZE521
<p>Ribbon Dancer and Ribbon Rollers Maintenance Kit on page 464</p>  <p>The diagram shows a ribbon dancer assembly consisting of two metal brackets connected by a long horizontal shaft. Below this are four rollers of varying lengths and diameters. At the bottom are two small rollers, one O-ring, and two hex nuts.</p>	P1112750-019	Kit, Ribbon Dancer and Ribbon Rollers, ZE511, RH & LH
	P1112750-020	Kit, Ribbon Dancer and Ribbon Rollers, ZE521, RH & LH

for parts & service call QLC (800) 837-1309

# Ribbon Drive System Components

Description	Kit Number	Kit Name
<p>Encoder Sensors Maintenance Kit on page 497</p> 	P1112750-056	Kit, Encoder Sensors for Ribbon Drive System, ZE511, ZE521, RH & LH
<p>Ribbon Strip Plate and Static Brush Maintenance Kit on page 510</p> 	P1112750-034	Kit, Ribbon Strip Plate & Ribbon Static Brush, ZE511 RH & LH
	P1112750-035	Kit, Ribbon Strip Plate & Ribbon Static Brush, ZE521 RH & LH
<p>Ribbon Take-up Mounting Hardware Maintenance Kit on page 519</p> 	P1112750-084	Kit, Mounting Hardware for the Ribbon Drive System, ZE511, ZE521, RH & LH

for parts & service call QLC (800) 837-1309



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.





**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

<p>RH</p>	<p>LH</p>	<p>Ribbon take-up drive Qty: 1 (LH or RH)</p>
		<p>Cable clamp nylon Qty: 1</p>
		<p>Screw (pan washer mach M4x8)  Qty: 1</p>
		<p>Screw (M4×30 FL TX NI)  Qty: 3</p>
		<p>Cable tie Qty: 8</p>

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10
- Metric hexagon keys or bits  
Size: 3mm, 5mm
- ⊕ Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



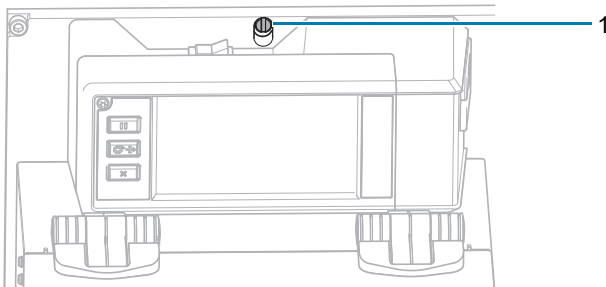
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



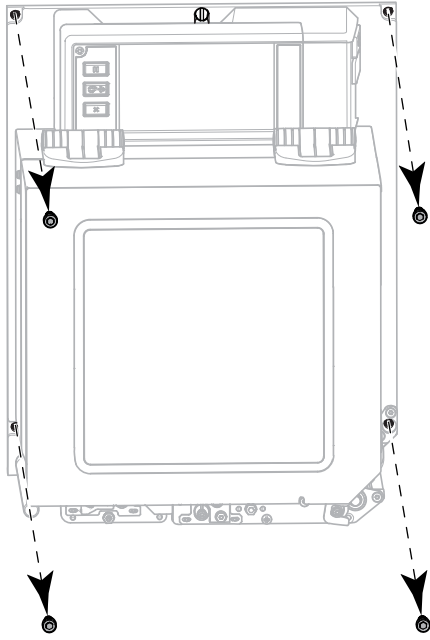
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



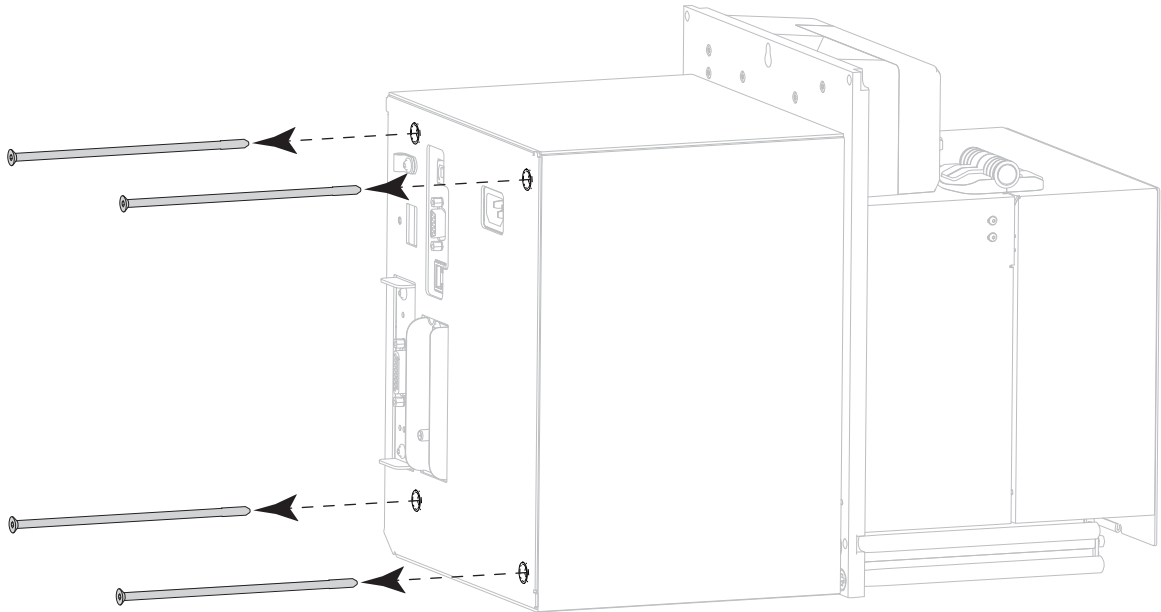
2. Remove the four screws securing the print engine to the applicator.



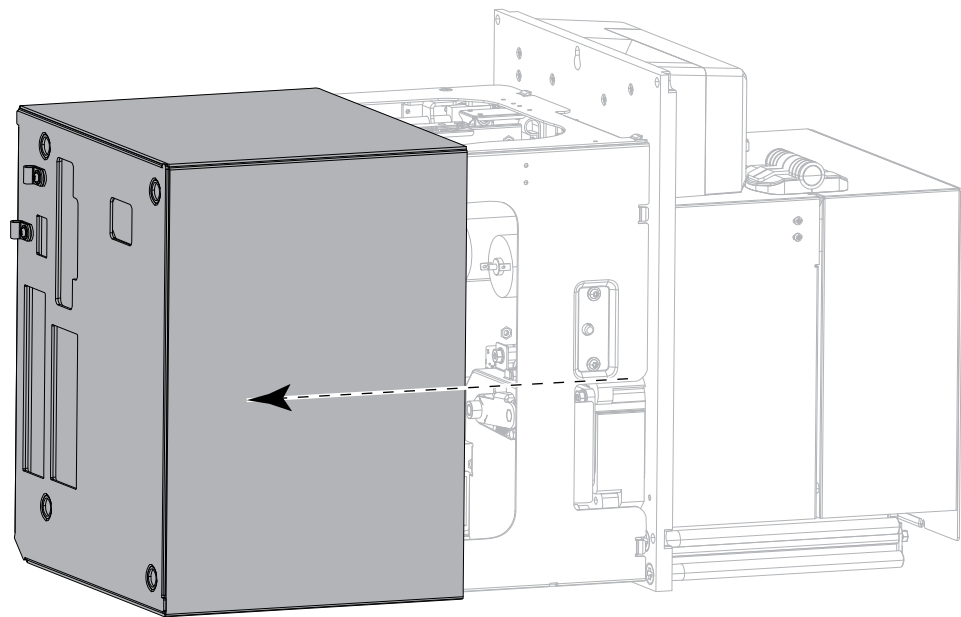
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



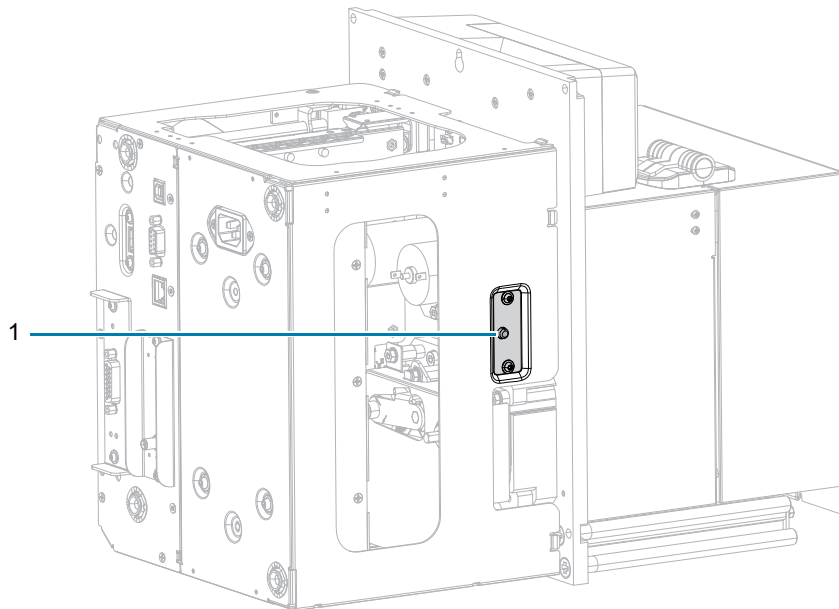
2. Remove the electronics enclosure cover from the print engine.



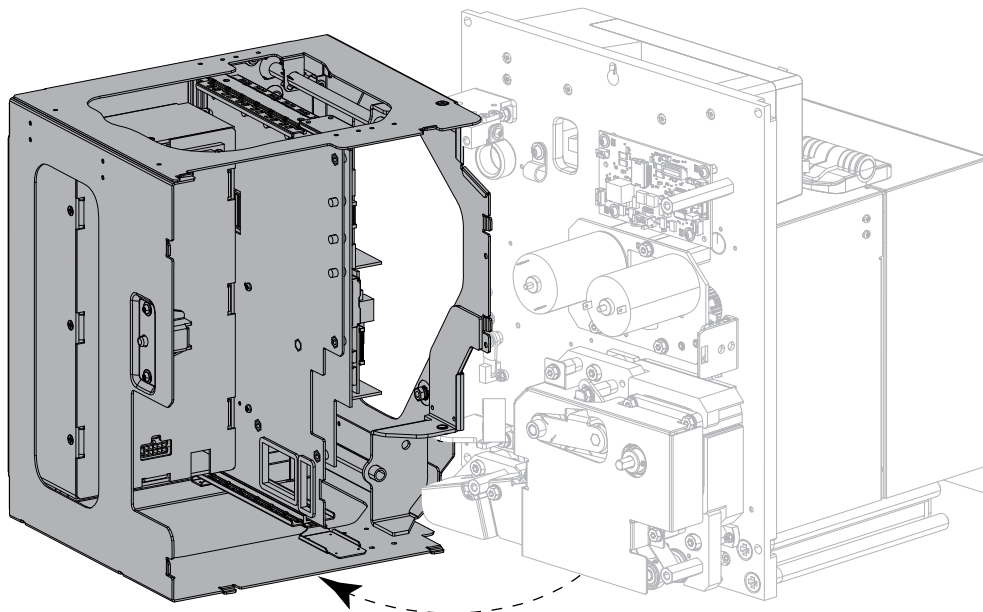
3. Press the electronics enclosure latch (1).



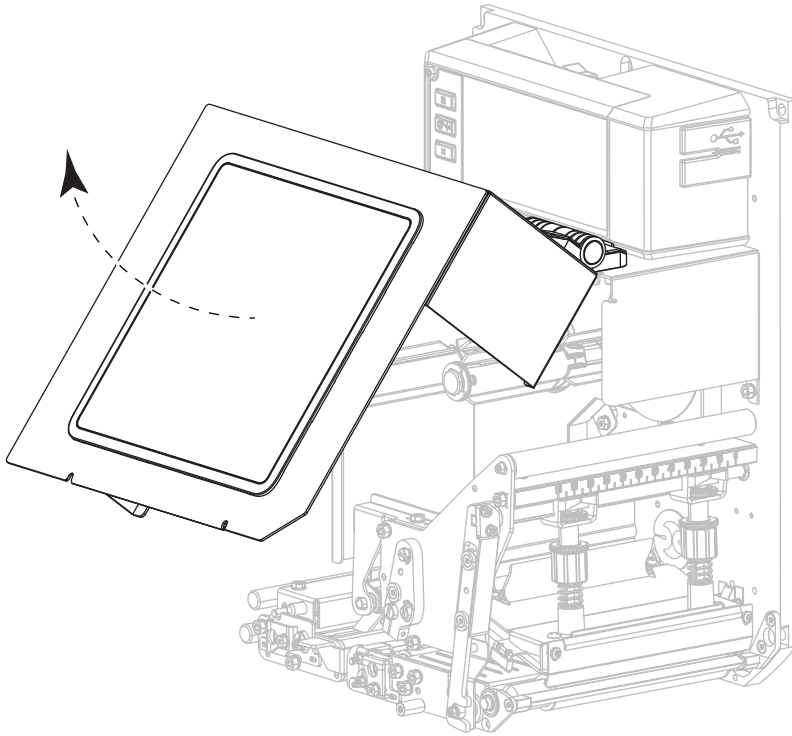
**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.





5. Open the media cover.

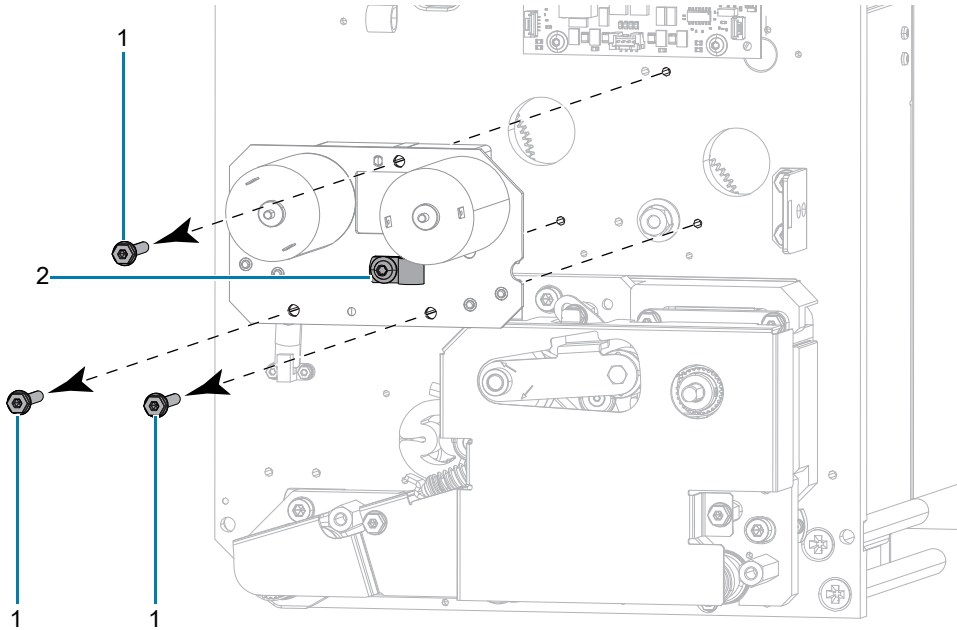



## Remove the Ribbon Take-up Drive

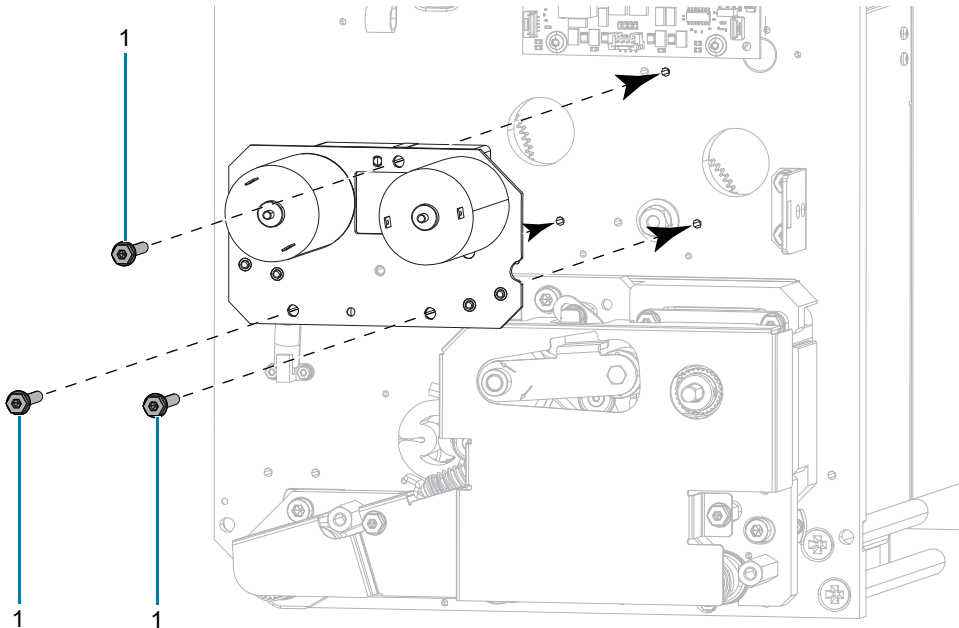


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

1. Disconnect the cables from the ribbon motor control board and the ribbon take-up drive (RTU).
2. Remove the  T10 screw and cable clamp (1).
3. Remove the three  T10 screws (1) and the old ribbon take-up drive (2).

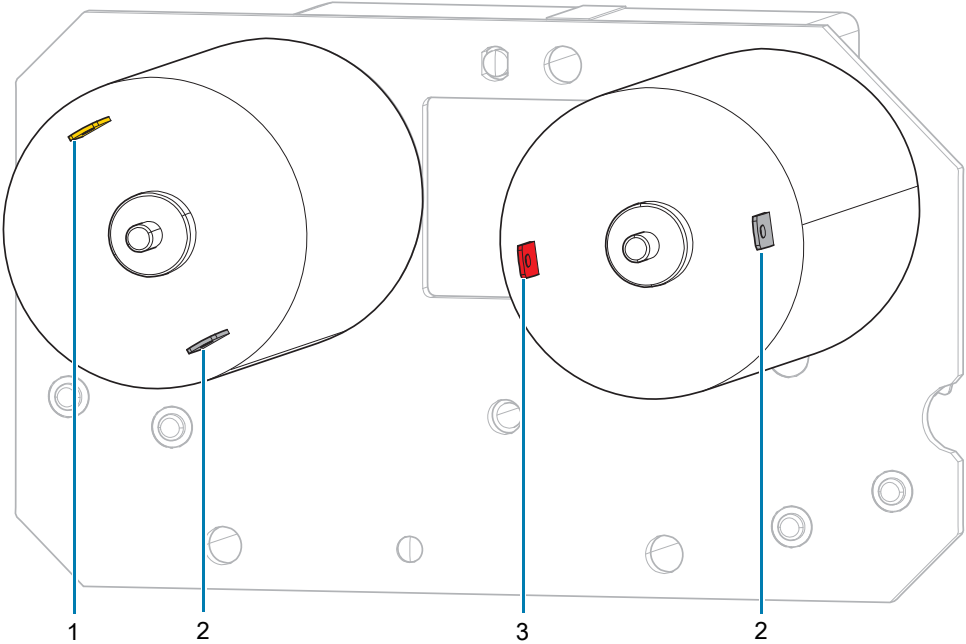


4. Install the new ribbon drive with three  T10 screws (1).

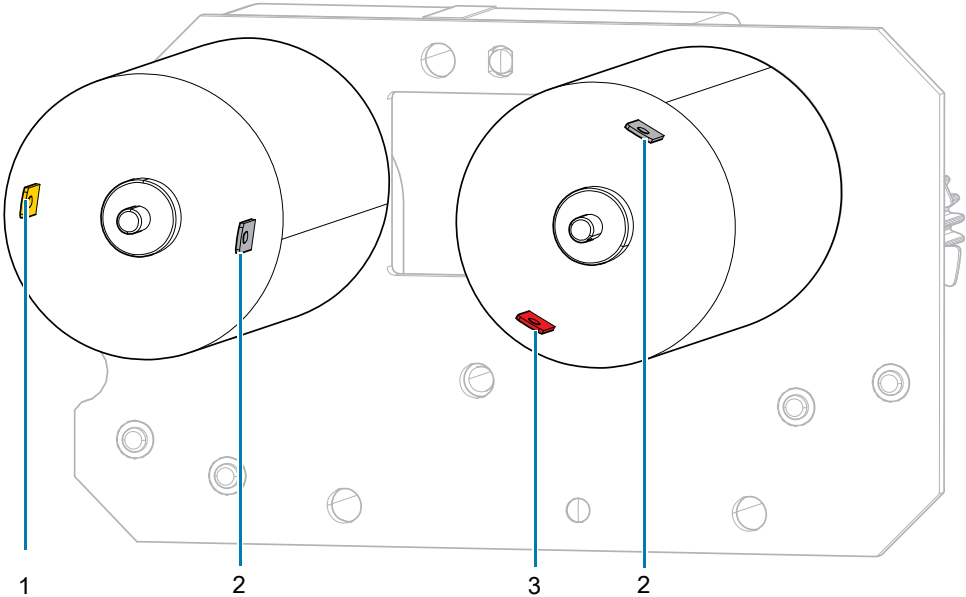


5. Connect the RTU motor cables.

RH Model




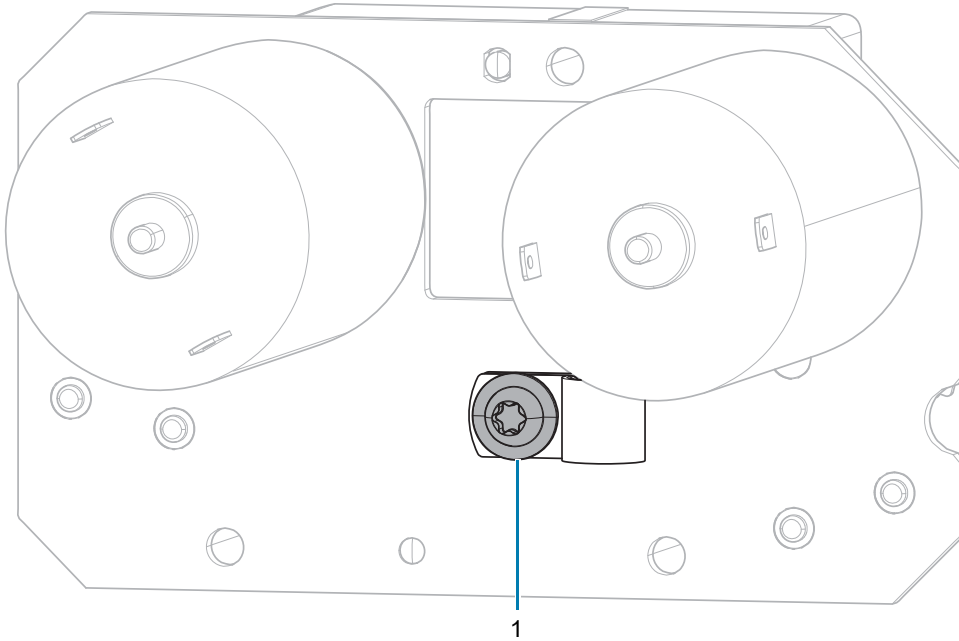
LH Model



1	RTU yellow cable (positive)
2	RTU black cable (ground)
3	RTU red cable (positive)



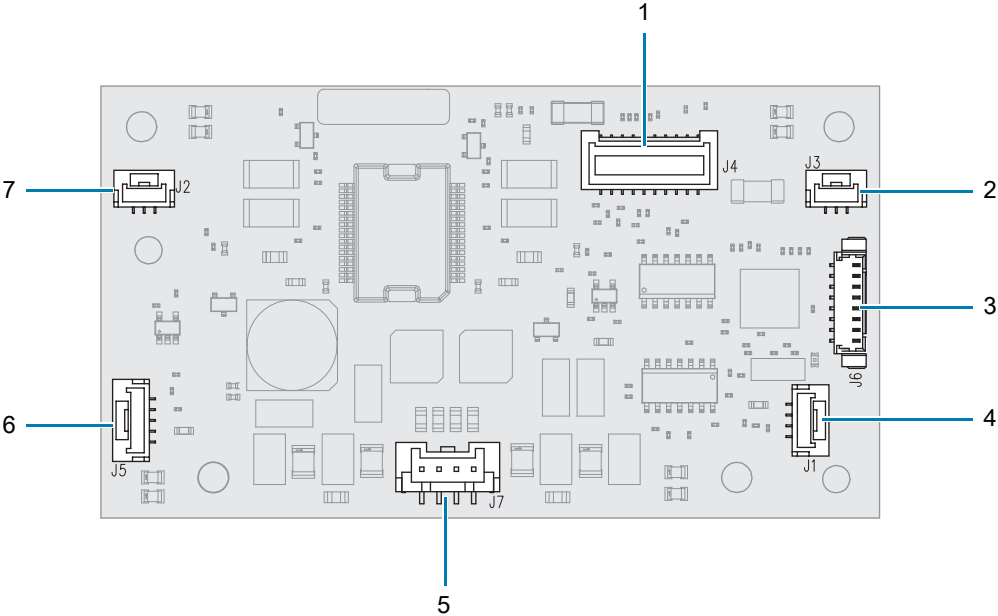
6. Route the RTU cables and encoder sensor cables through the cable clamp and install the cable clamp onto the RTU with the  T10 screw.



7. Connect the cables to the new ribbon tension control board.



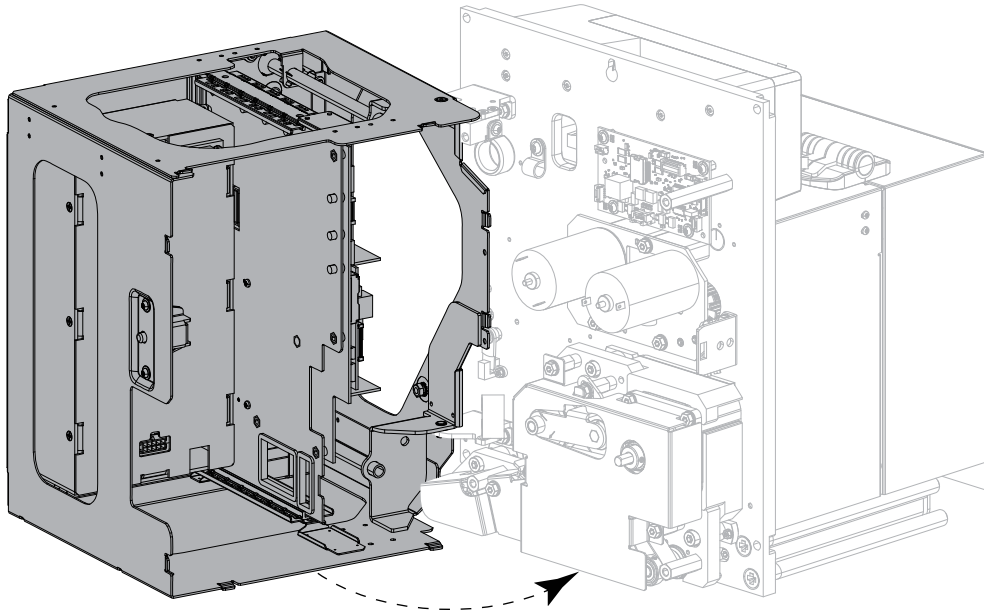
**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



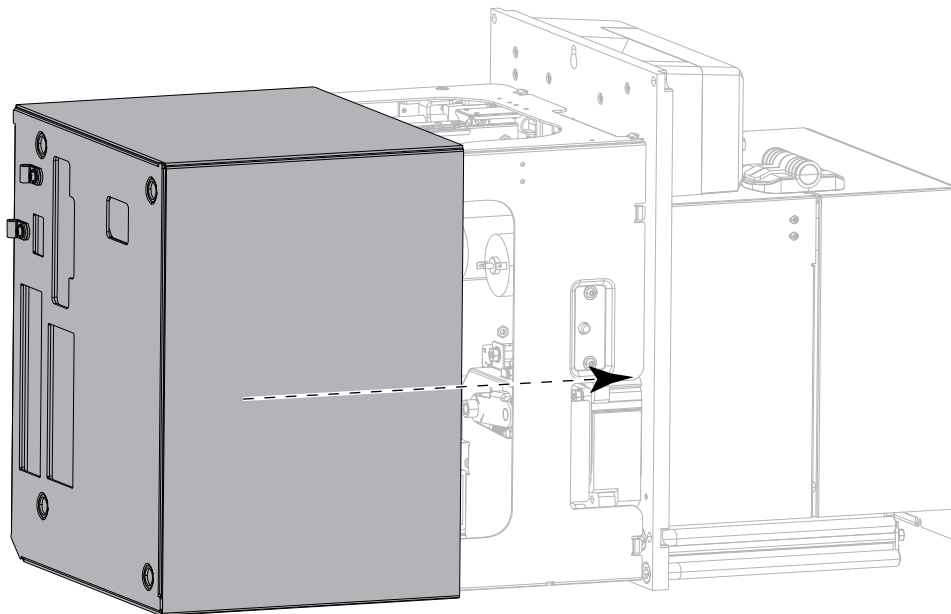
1	Ribbon system connection to the main logic board (MLB)	J4
2	Door-open sensor (RH)	J3
3	Debugging/programming connector (not used)	J6
4	Ribbon supply encoder sensor (red/white/black cable)	J1
5	Ribbon system DC motor	J7
6	Ribbon take-up encoder sensor (red/yellow/black cable)	J5
7	Door-open sensor (LH)	J2

## Close the Electronics Enclosure

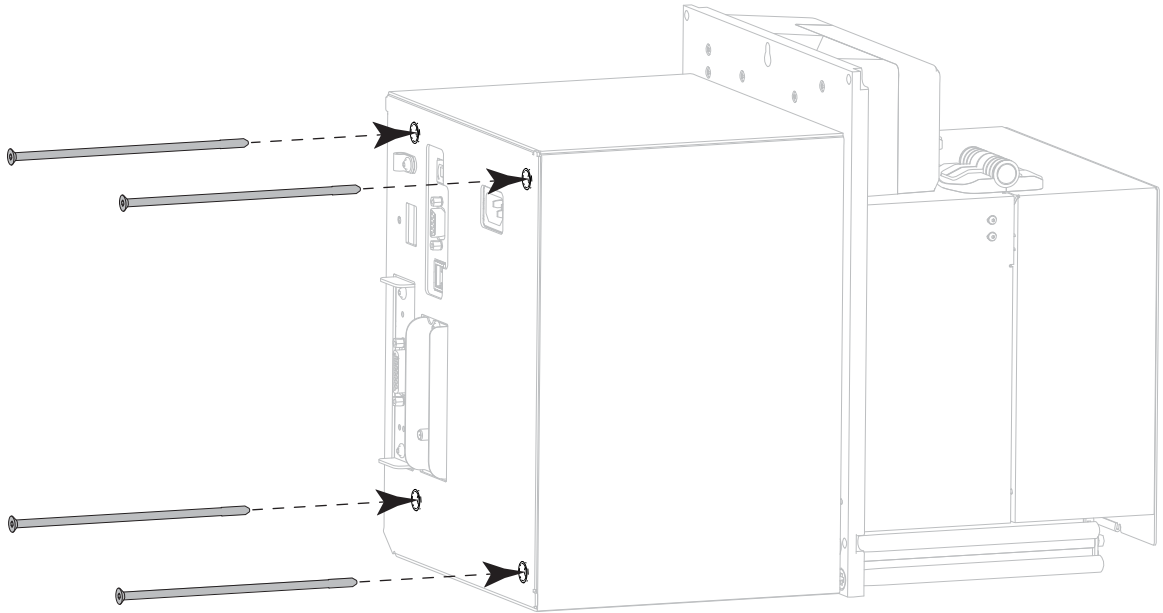
1. Close the rear of the print engine.



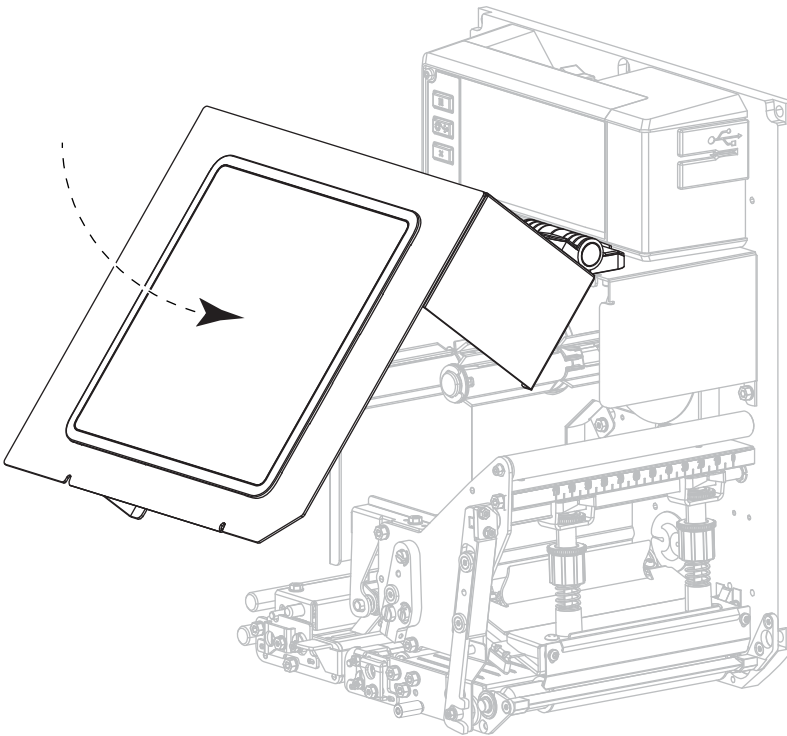
2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Close the media cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

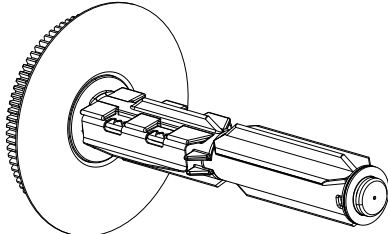
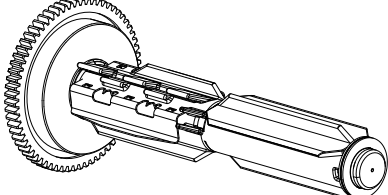





**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Take-up spindle/gear assembly Qty: 1
	Supply spindle/gear assembly Qty: 1
	Nut (M6 ZN) Qty: 2
	Washer, split (M6) Qty: 2
	Washer, flat (0.625x0.265x0.06) Qty: 2

## Tools Required

- ✪ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10
- Metric hexagon keys or bits  
Size: 3mm
- ⬡ Metric nut drivers  
Size: 10 mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



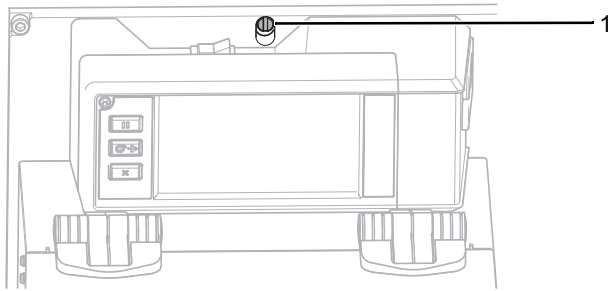
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



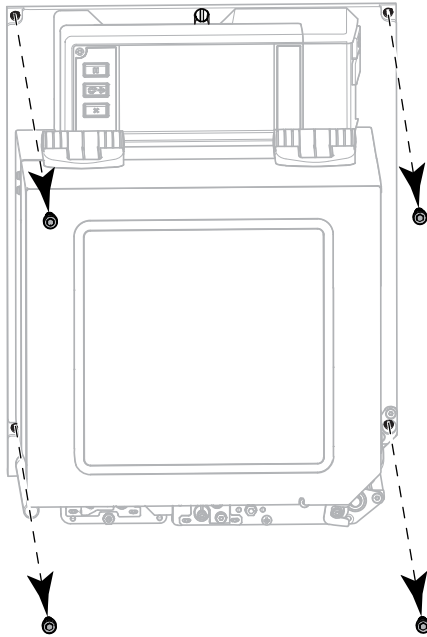
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.

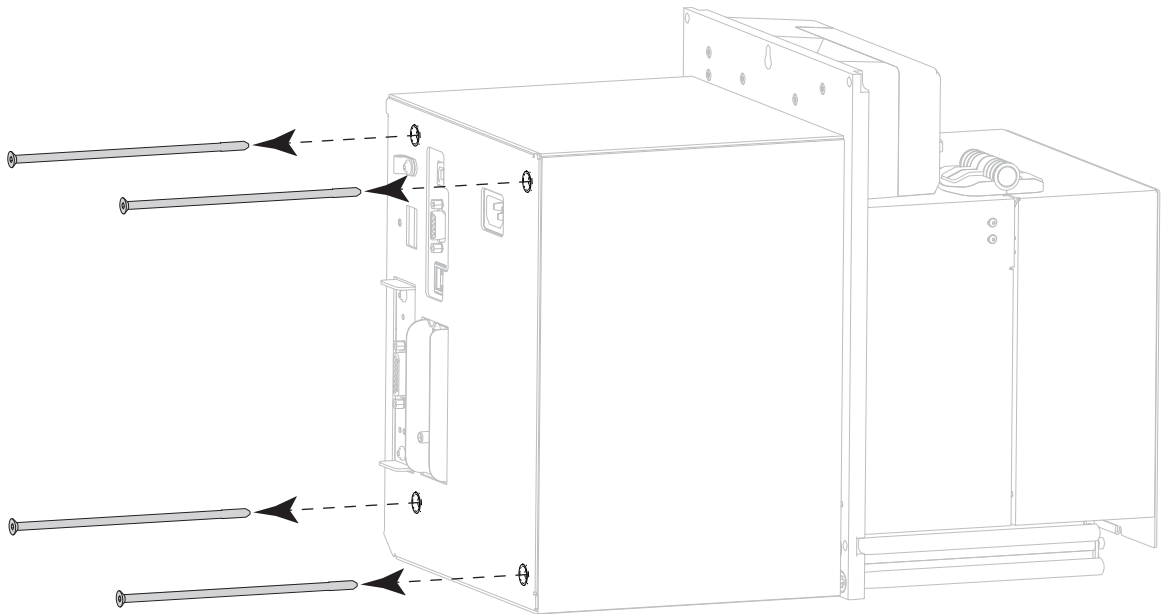


3. Lift the print engine off of the center mounting bolt and place it on a workbench.

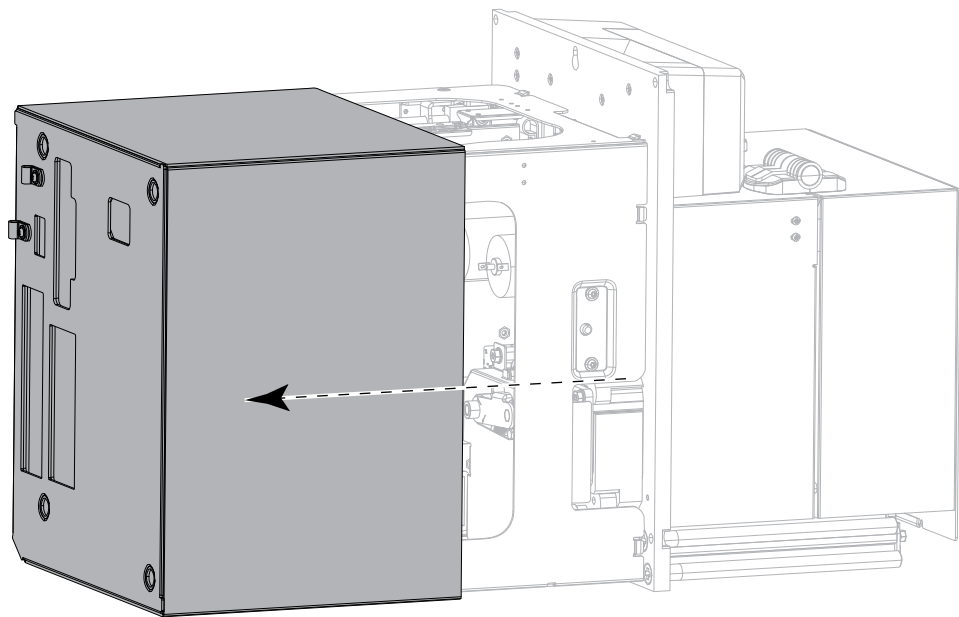


## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



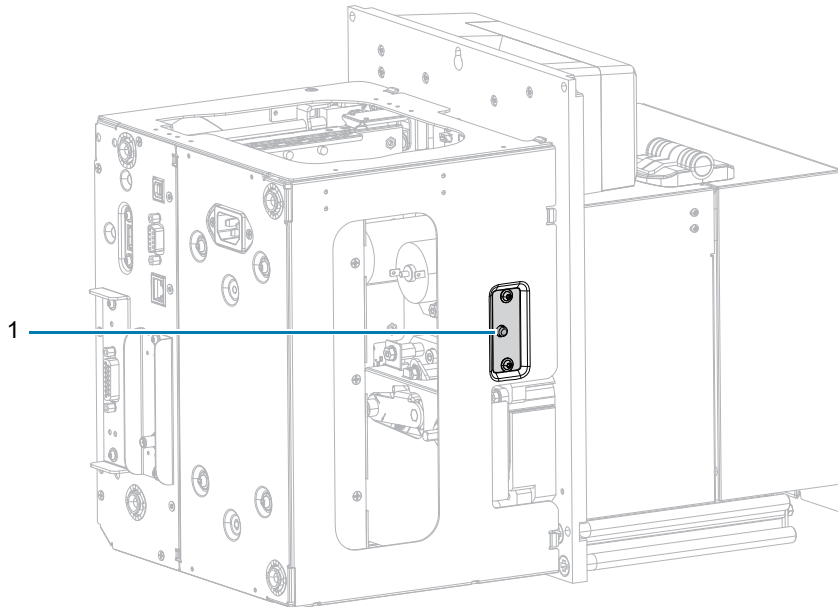
2. Remove the electronics enclosure cover from the print engine.



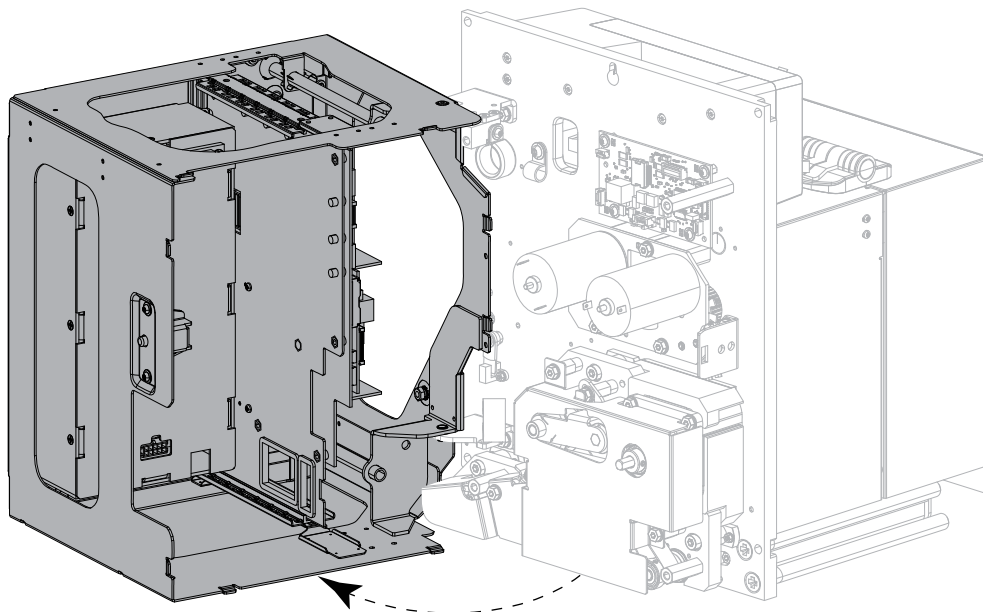
3. Press the electronics enclosure latch (1).



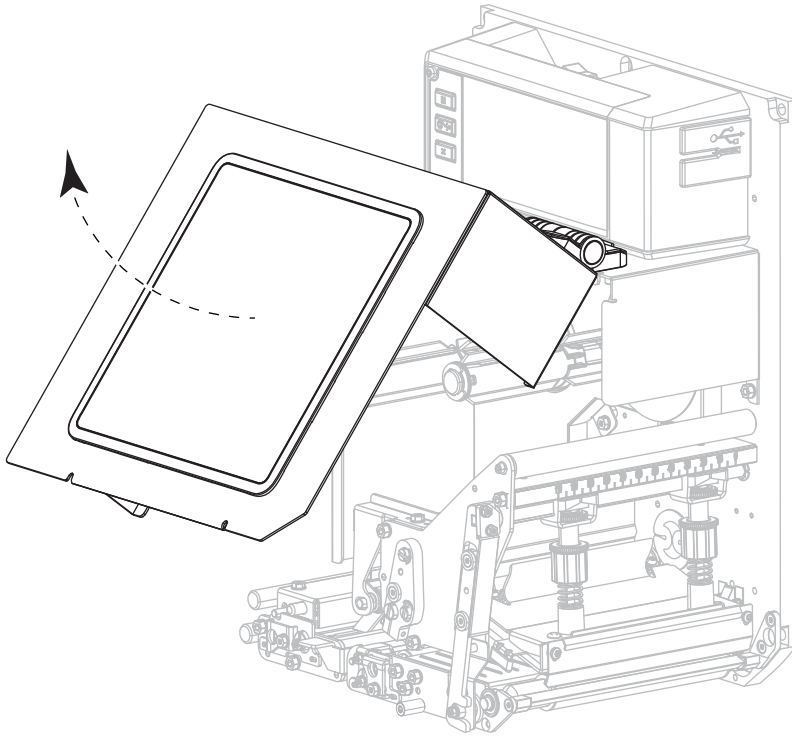
**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.





5. Open the media cover.

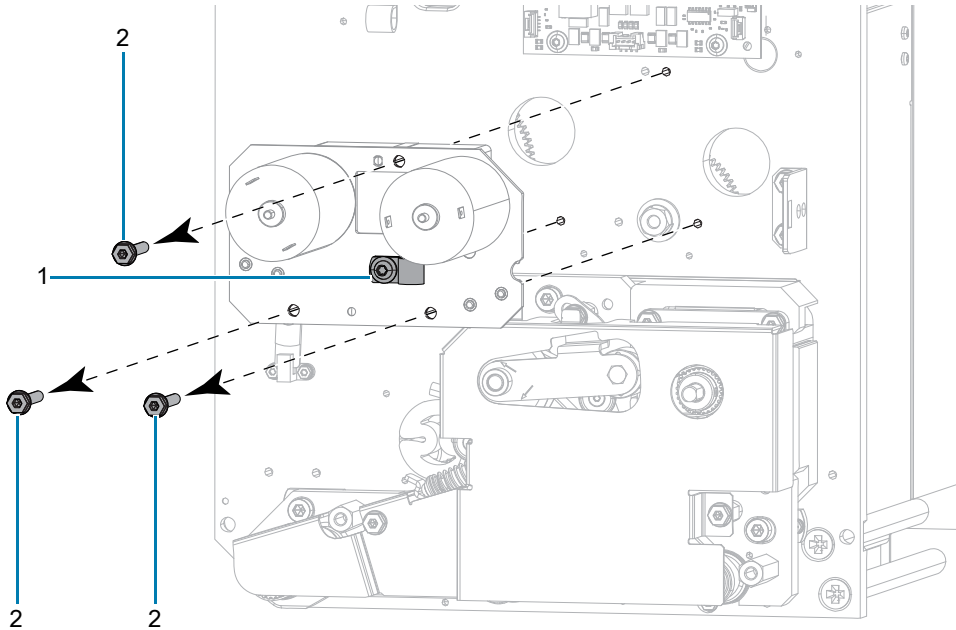


## Remove the Ribbon Drive




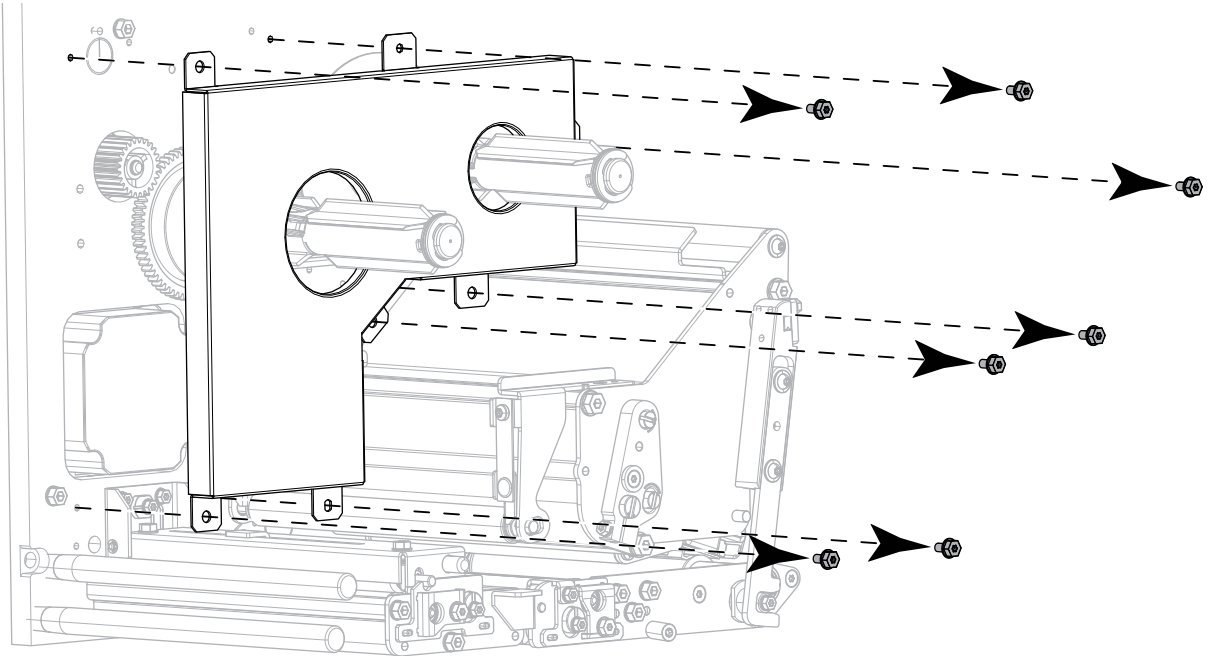
**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.


1. Disconnect the cables from the ribbon motor control board and the ribbon drive.
2. Remove the  T10 screw and cable clamp (1).
3. Remove the three  T10 screws (2), securing the ribbon drive.

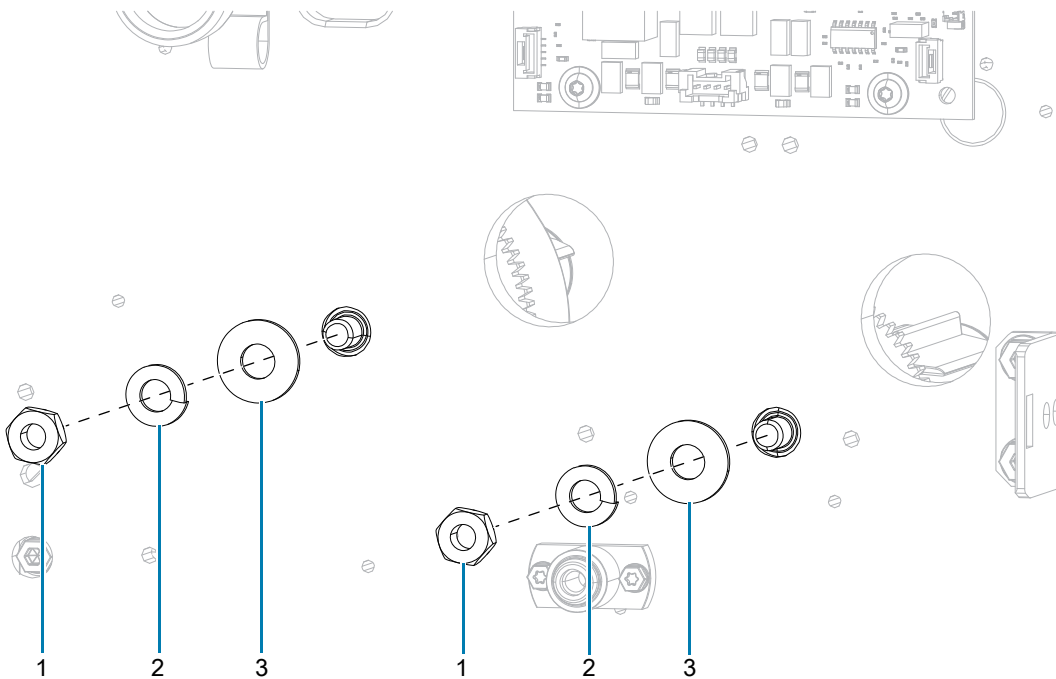


## Replace the Ribbon Spindles



1. Remove the seven  T9 screws and the ribbon drive cover from the print engine.

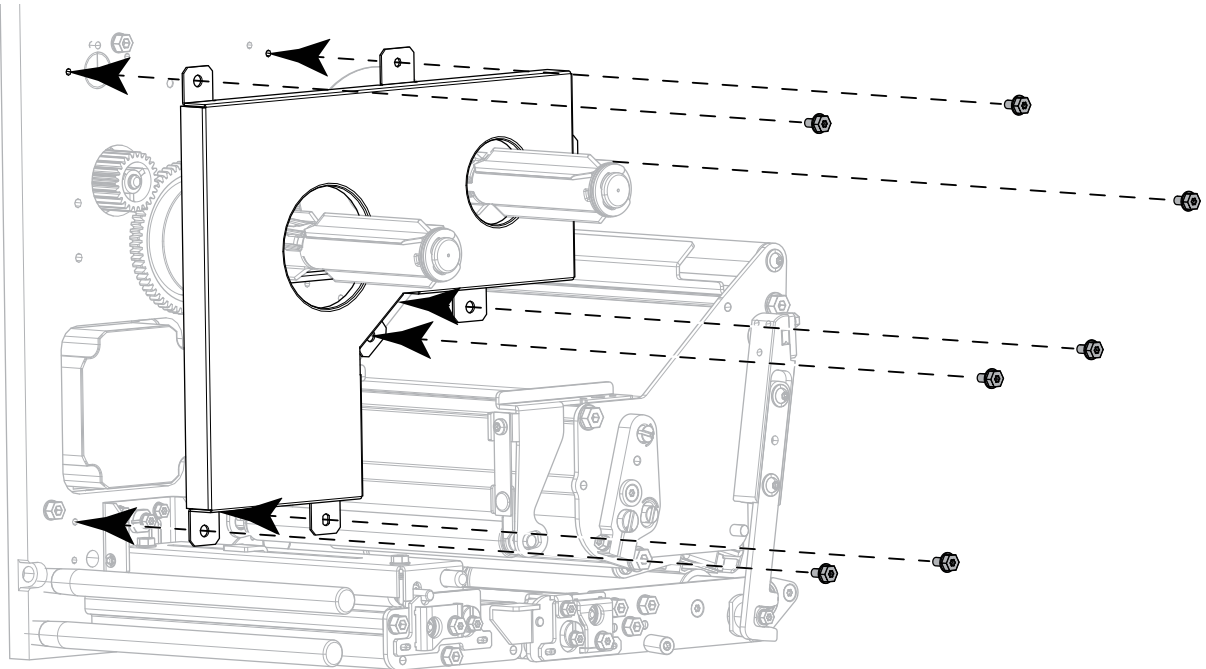


2. Remove the two  10mm nuts and two split washers (2) and the two flat washers (3) securing the spindle shafts.



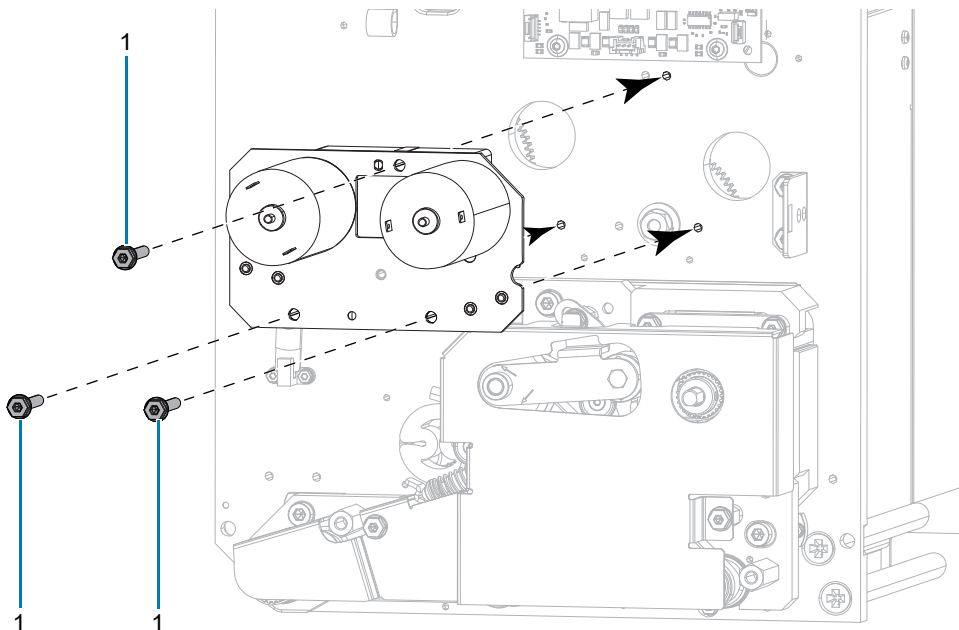
for parts & service call QLC (800) 837-1309

3. Remove the complete spindle assemblies from the media side.
4. Install the new spindle assemblies and secure with the two  10mm nuts and two split washers (2) and the two flat washers (3).
5. Install the ribbon drive cover and secure with the seven  T9 screws.



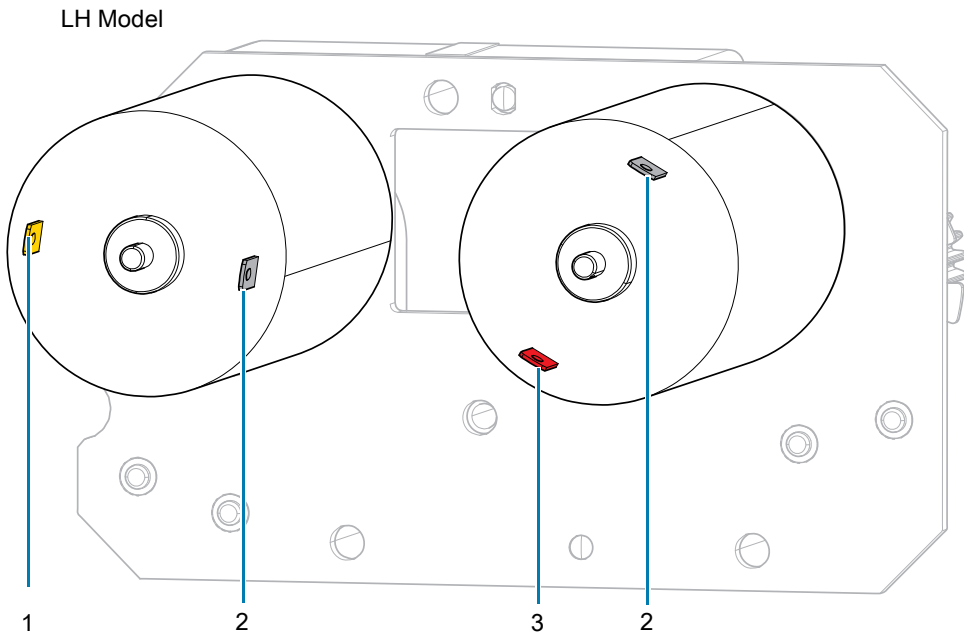
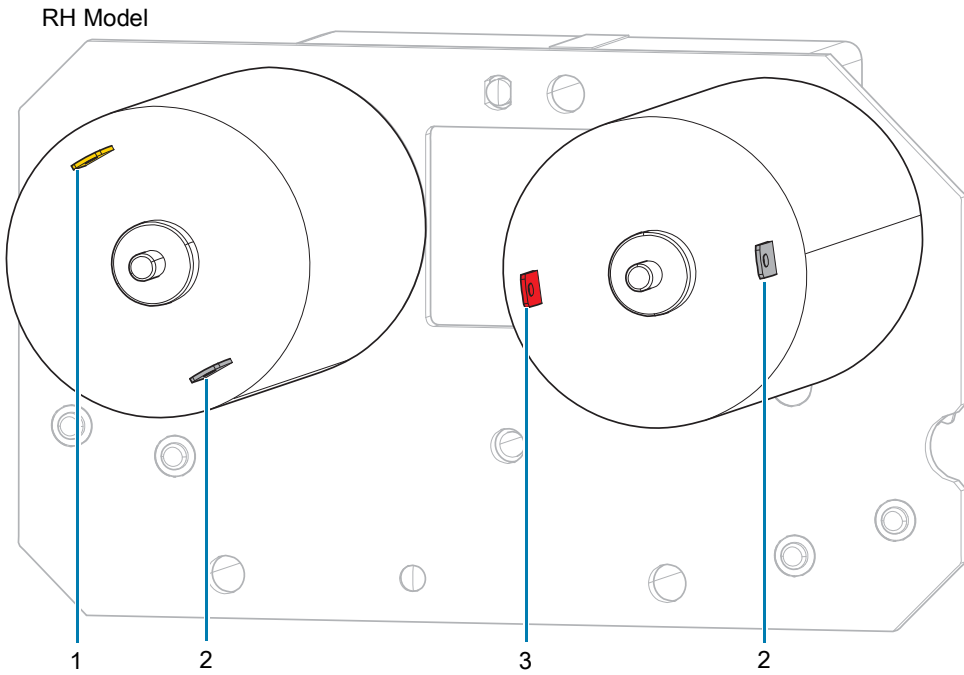
## Install the Ribbon Drive

1. Install the ribbon drive with the three  T10 screws (1), securing the ribbon drive.




for parts & service call QLC (800) 837-1309

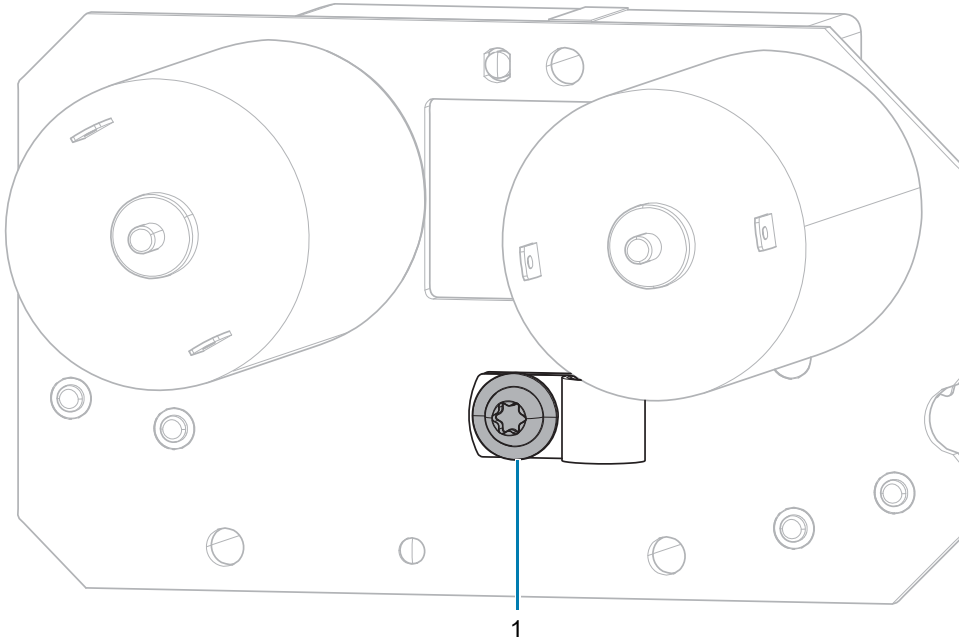
## 2. Connect the DC motor cables.



1	DC motor yellow cable (positive)
2	DC motor black cable (ground)
3	DC motor red cable (positive)

## Ribbon Spindles Maintenance Kit

3. Route the DC motor cables and encoder sensor cables through the cable clamp and install the cable clamp onto the ribbon drive with the  T10 screw.



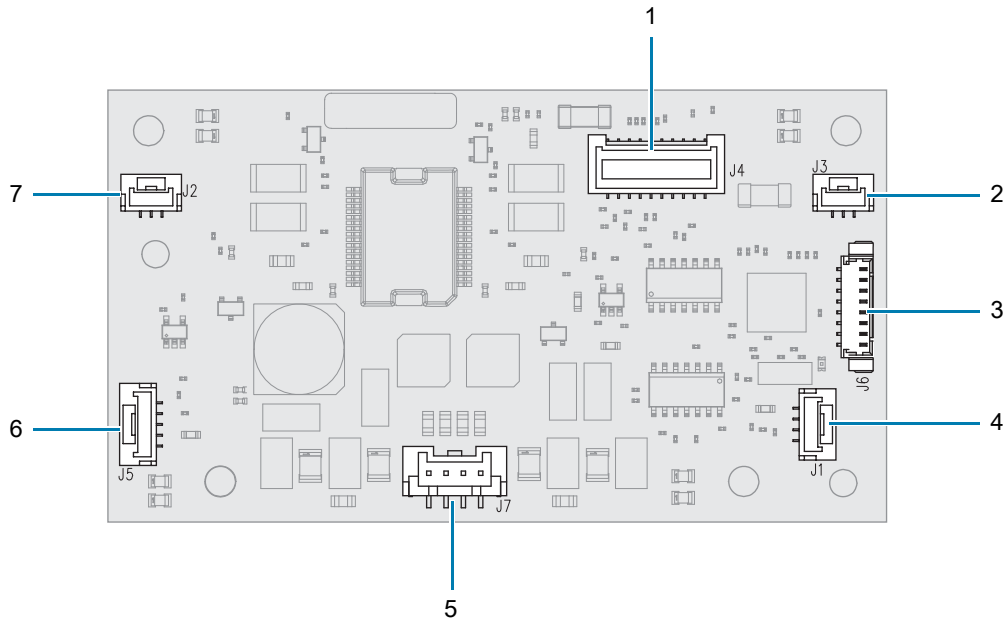
for parts & service call QLC (800) 837-1309



4. Connect the cables to the new ribbon tension control board.



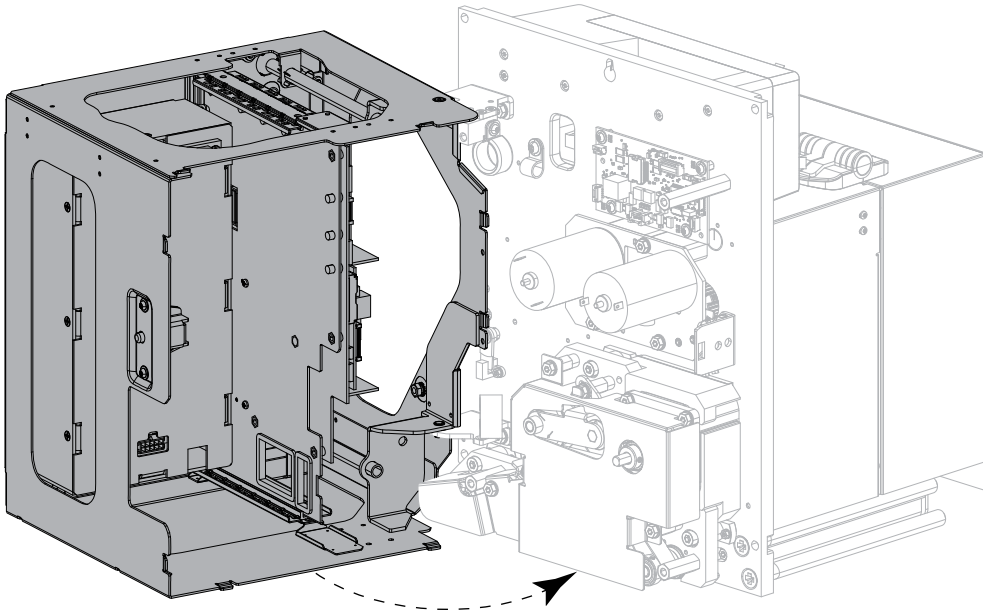
**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



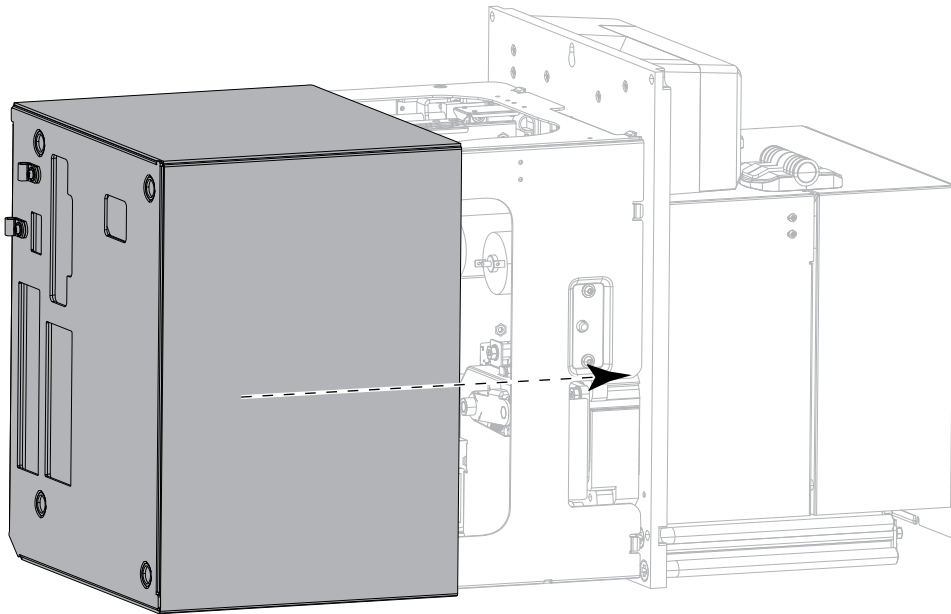
1	Ribbon system connection to the main logic board (MLB)	J4
2	Door-open sensor (RH)	J3
3	Debugging/programming connector (not used)	J6
4	Ribbon supply encoder sensor (red/white/black cable)	J1
5	Ribbon system DC motor	J7
6	Ribbon take-up encoder sensor (red/yellow/black cable)	J5
7	Door-open sensor (LH)	J2

## Close the Electronics Enclosure

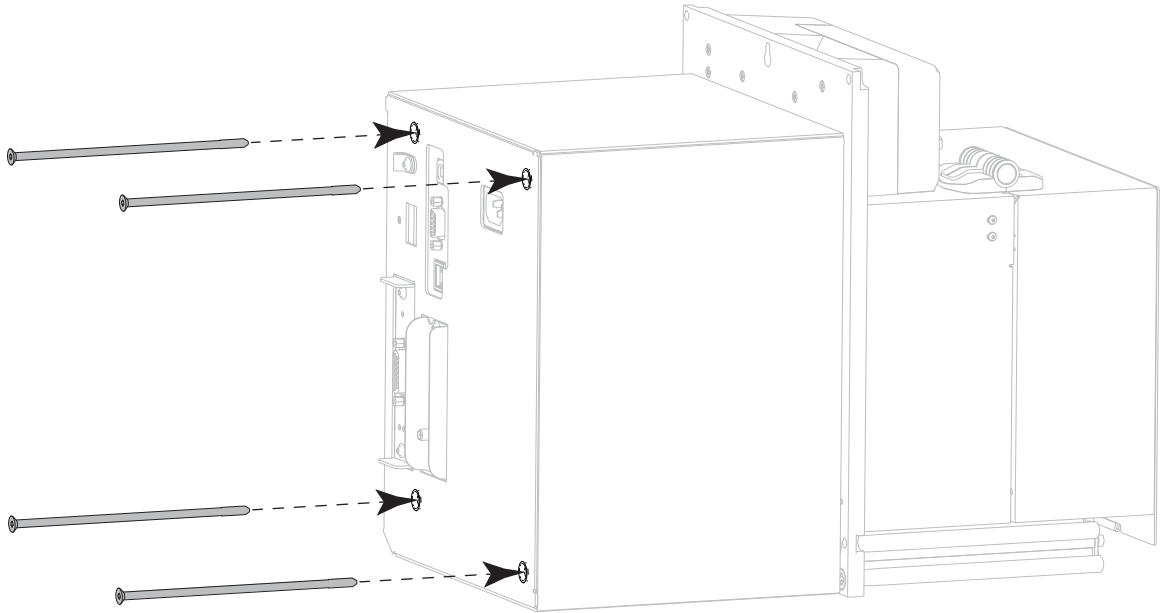
1. Close the rear of the print engine.



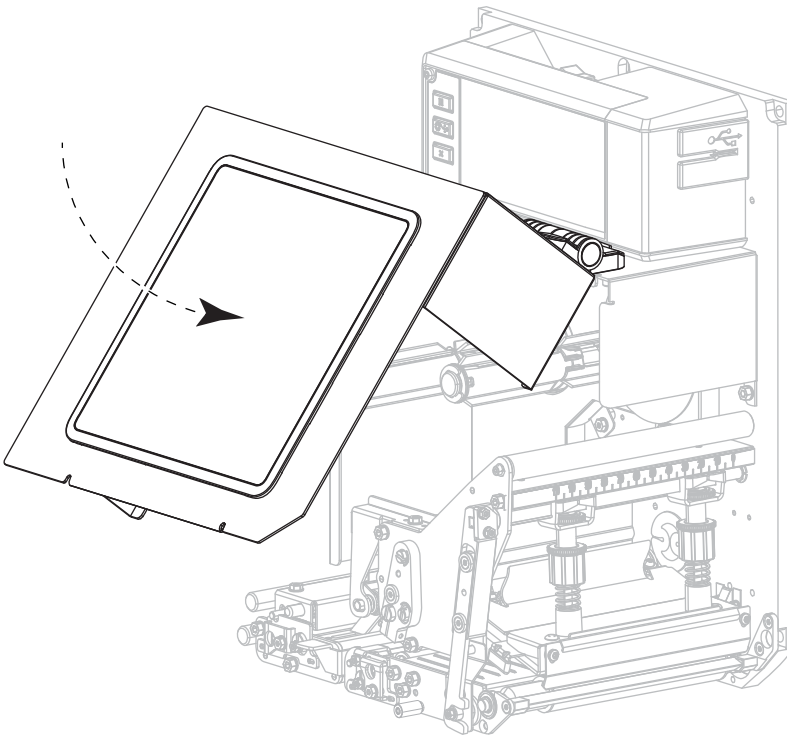
2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Close the media cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Gear 25T 32P 20Deg Qty: 2
	Retainer ring Qty: 2

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10
- Metric hexagon keys or bits  
Size: 3mm
- Snap ring pliers
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



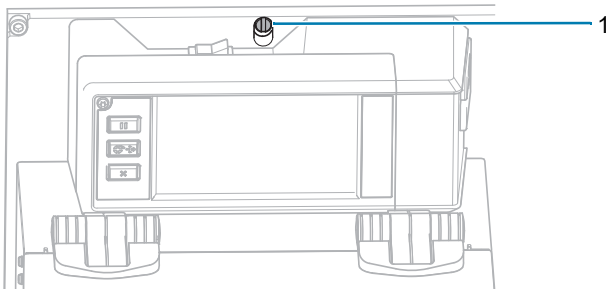
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



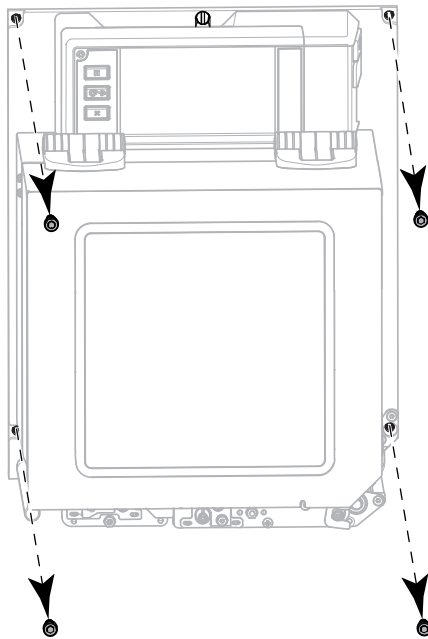
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



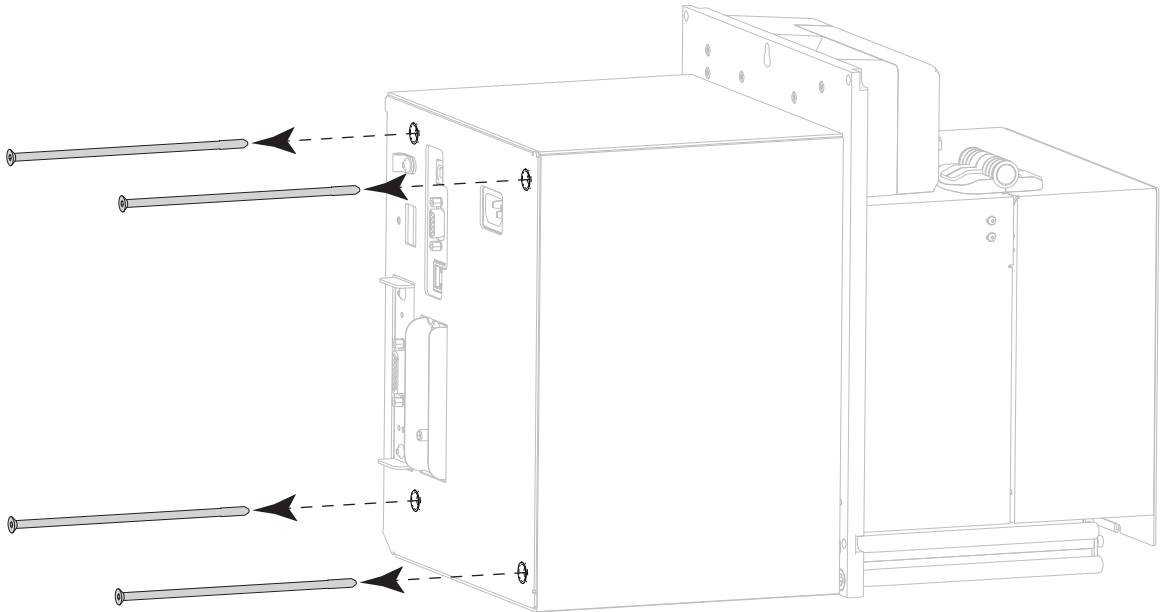
2. Remove the four screws securing the print engine to the applicator.



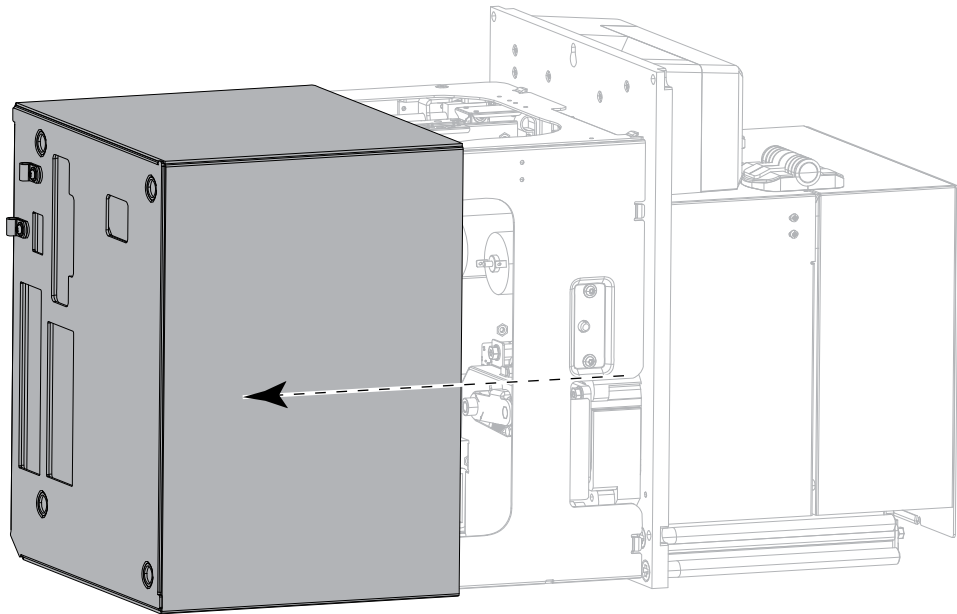
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

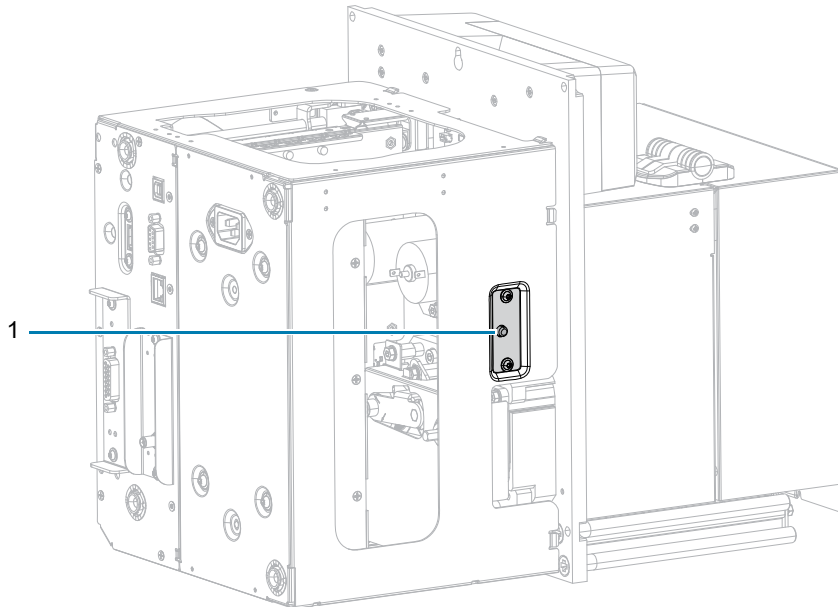


## Ribbon Drive System Gears Maintenance Kit

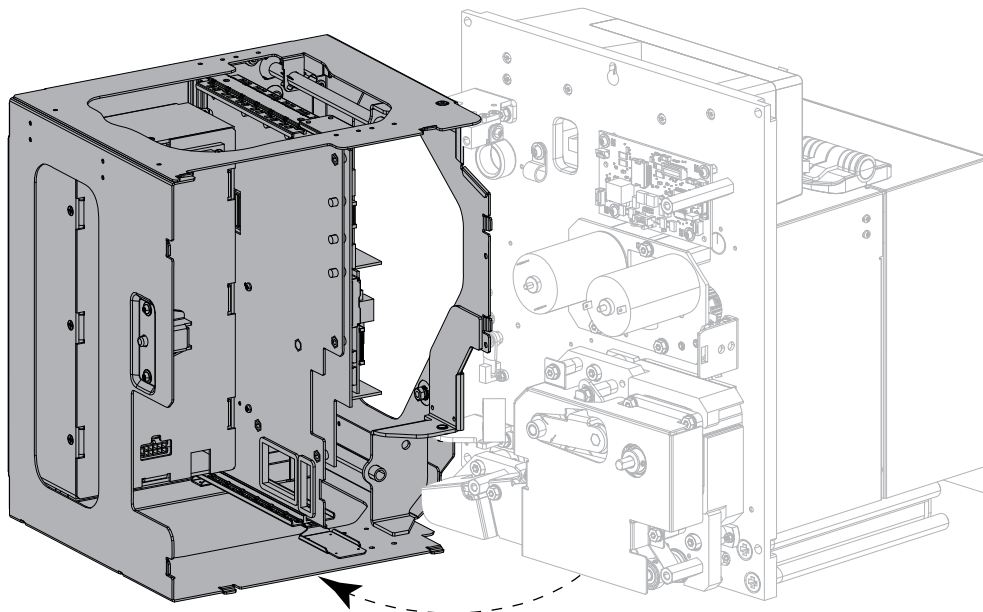
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.




for parts & service call QLC (800) 837-1309

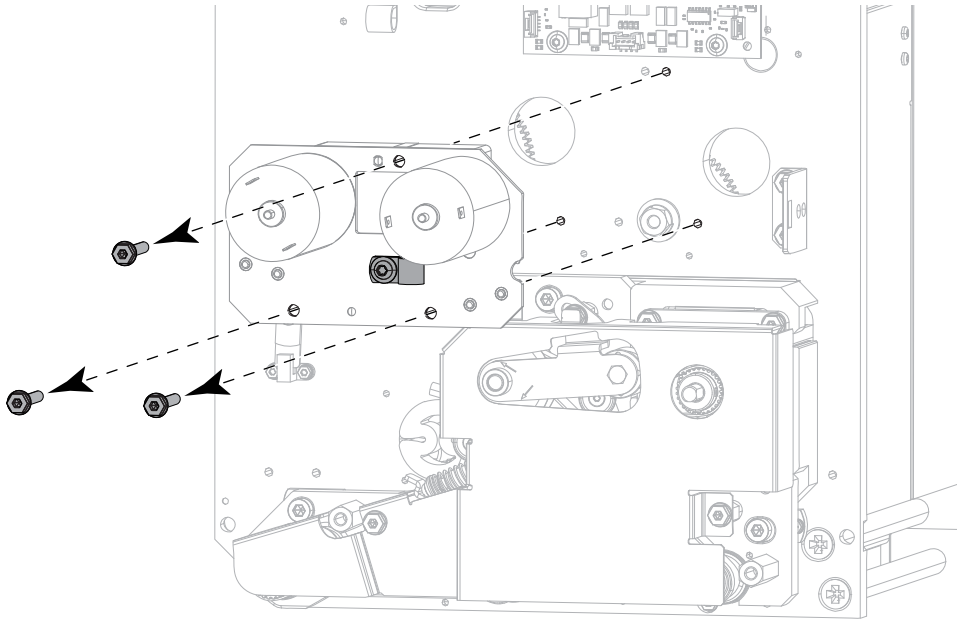



## Replace the Ribbon Drive System Gears

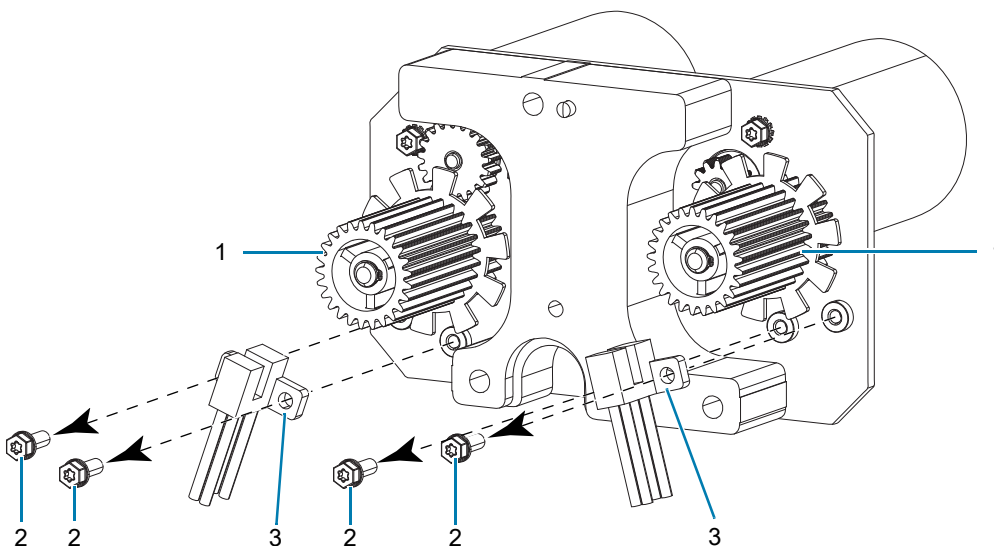


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

1. Disconnect the cables from the ribbon motor control board.
2. Remove the three  T10 screws, securing the ribbon take-up drive.



3. Remove the ribbon encoder sensors.
  - a. Flip the ribbon drive system so the black ribbon drive gears (1) are facing you.
  - b. Remove the two  T9 mounting screws (2) securing each encoder sensor.
  - c. Remove both encoder sensors (3).

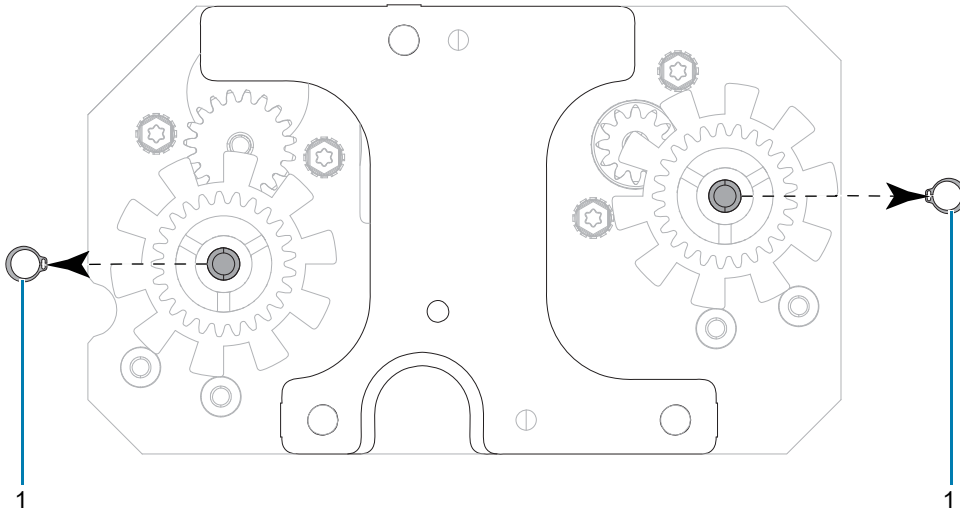


for parts & service call QLC (800) 837-1309

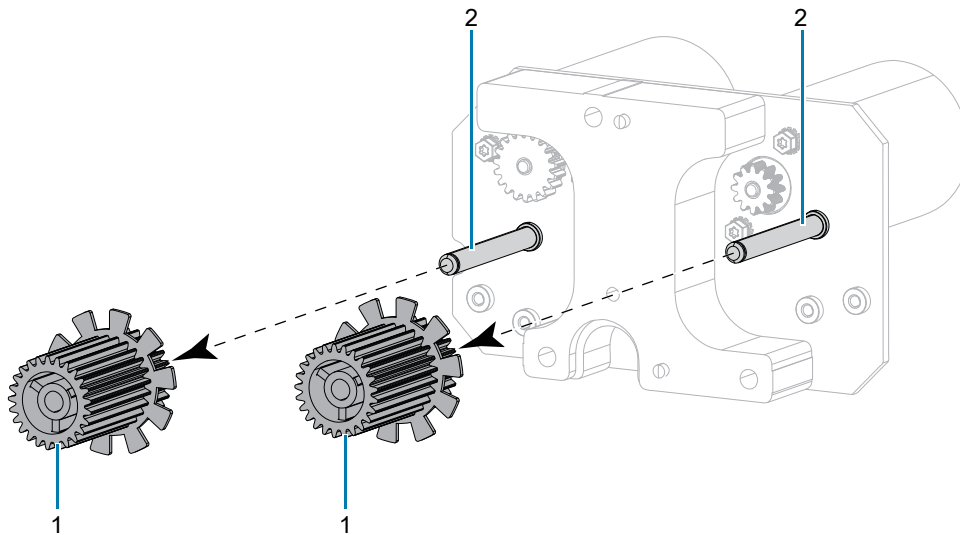
4. Remove the 2 retaining ring (1) with snap ring pliers.



**CAUTION—EYE INJURY:** 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.



5. Slide the gears (1) off of the gear shafts (2).

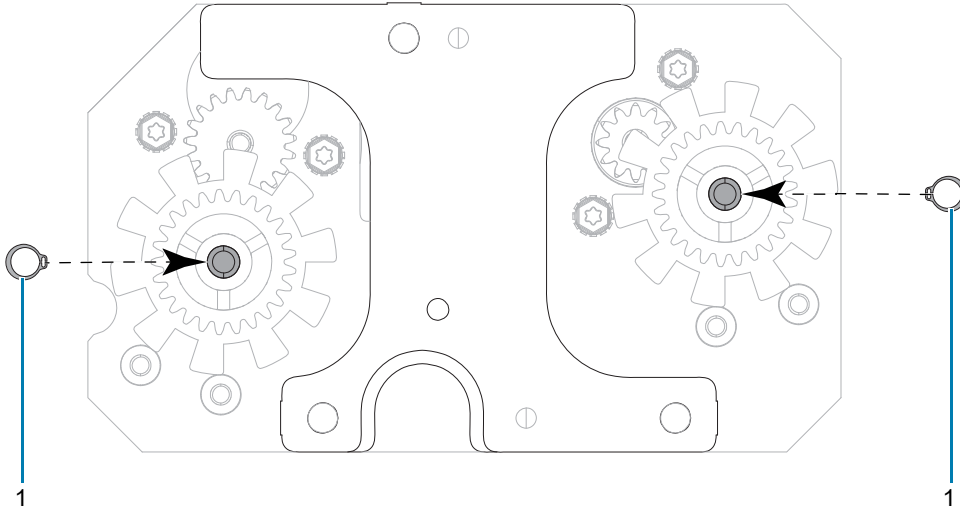


6. Slide the ribbon drive gears onto the gear shafts.  
Ensure that the gears mesh correctly.

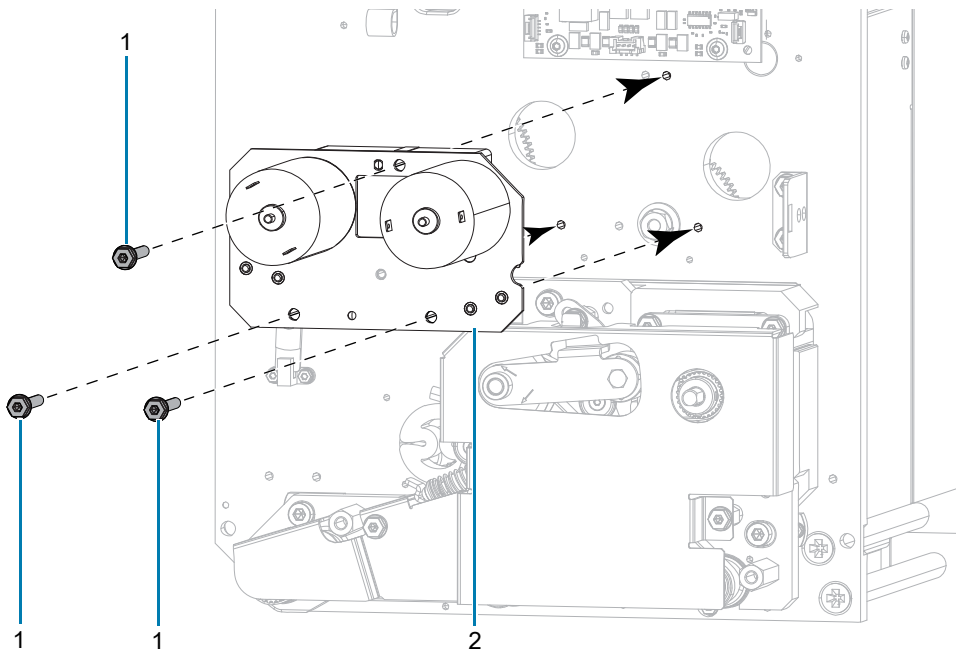
7. Use snap ring pliers to reinstall the retaining rings on the end of each gear.



**CAUTION—EYE INJURY:** 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.



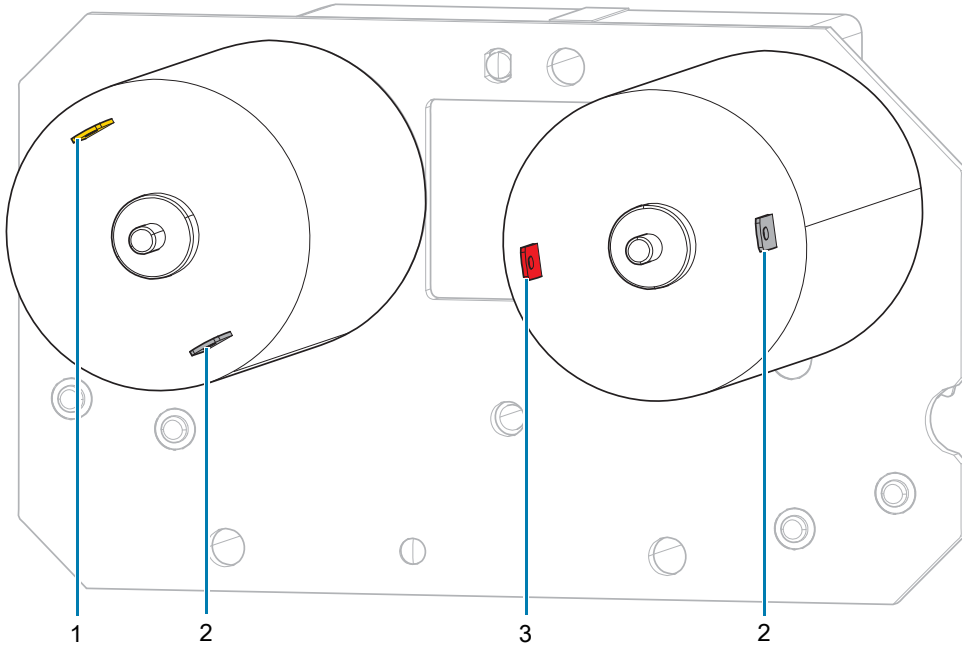
8. Install the ribbon drive (2) with the three T10 screws (1).



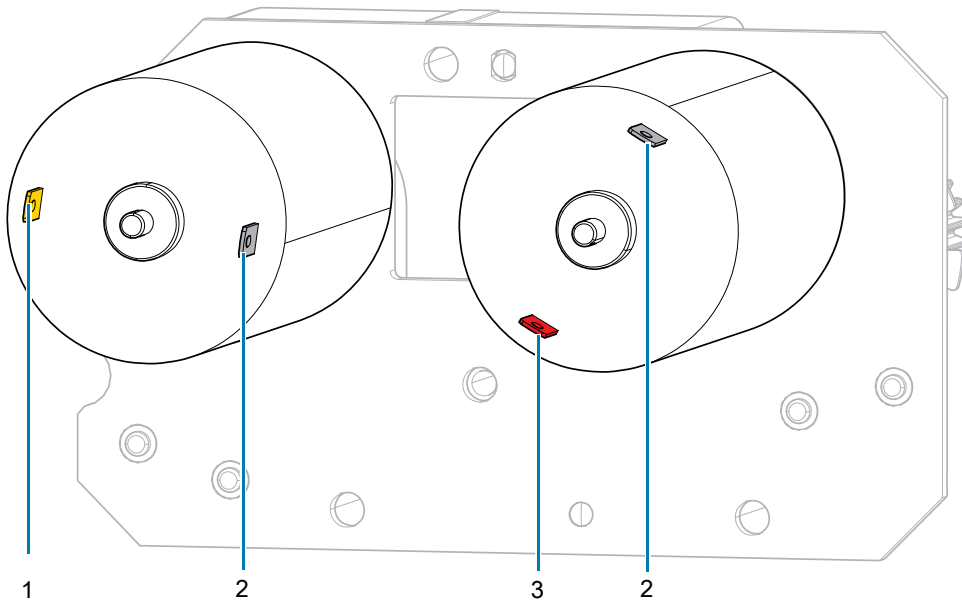
# Ribbon Drive System Gears Maintenance Kit

9. Connect the ribbon drive system motor cables.

RH Model



LH Model



1	Ribbon drive system yellow cable (positive)
2	Ribbon drive system black cable (ground)
3	Ribbon drive system red cable (positive)

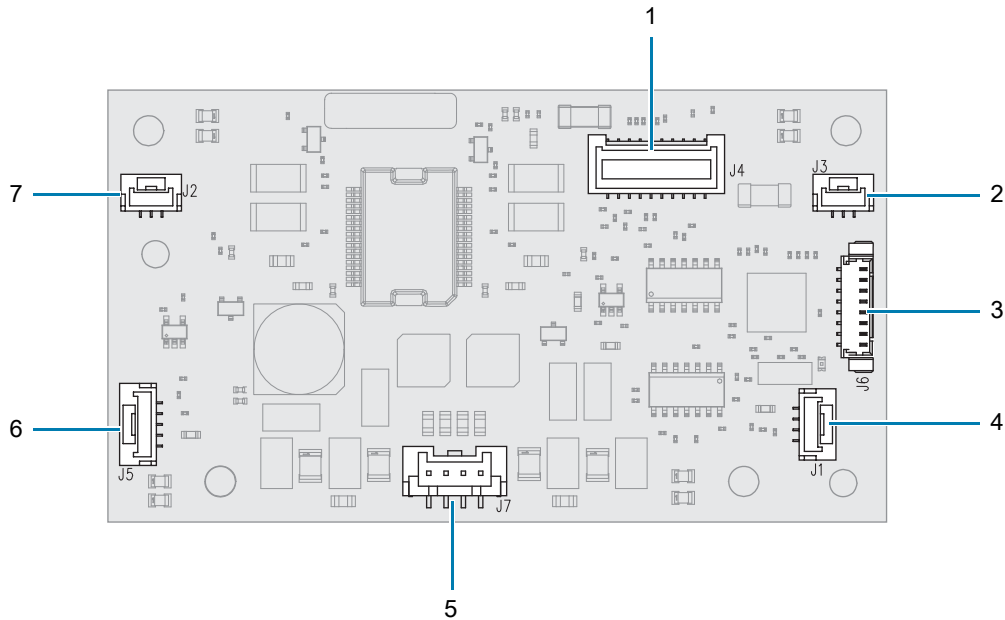
for parts & service call QLC (800) 837-1309

## Ribbon Drive System Gears Maintenance Kit

10. Connect the cables to the new ribbon tension control board.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

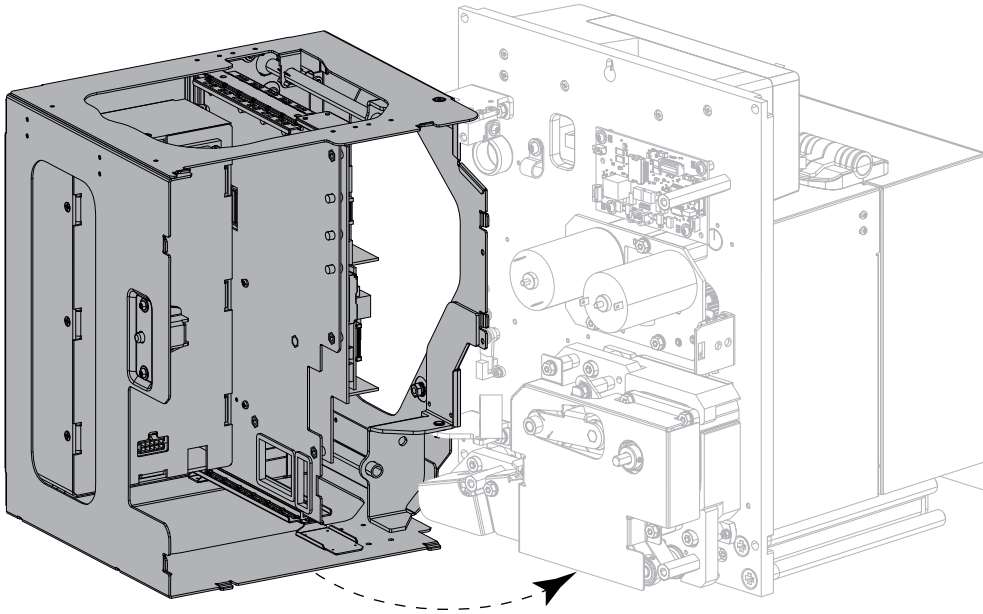


1	Ribbon system connection to the main logic board (MLB)	J4
2	Door-open sensor (RH)	J3
3	Debugging/programming connector (not used)	J6
4	Ribbon supply encoder sensor (red/white/black cable)	J1
5	Ribbon system DC motor	J7
6	Ribbon take-up encoder sensor (red/yellow/black cable)	J5
7	Door-open sensor (LH)	J2

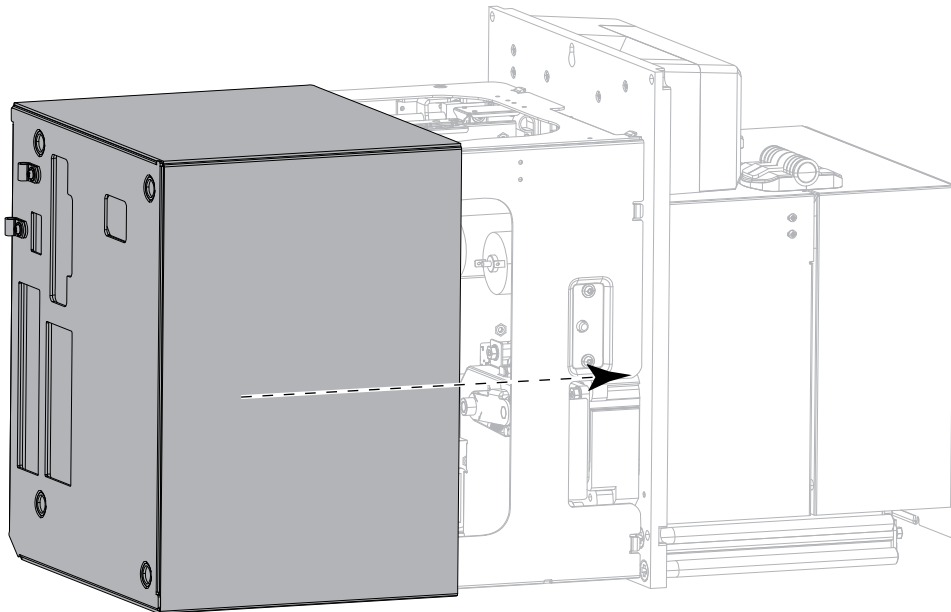
for parts & service call QLC (800) 837-1309

## Close the Electronics Enclosure

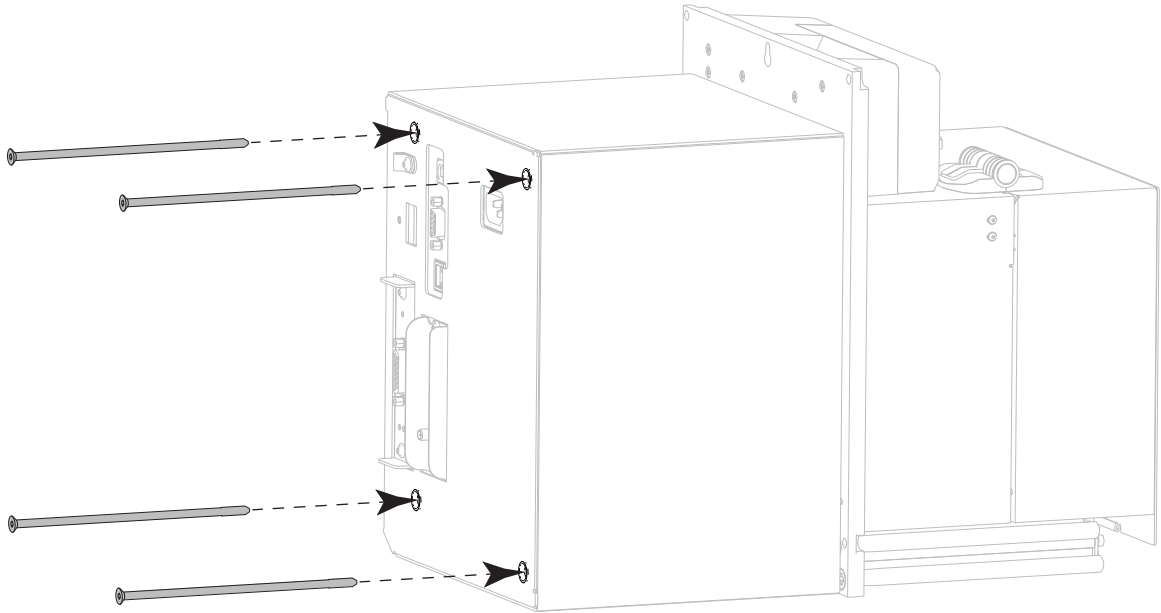
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

# Ribbon Dancer and Ribbon Rollers Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

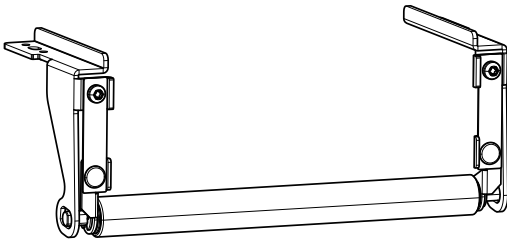



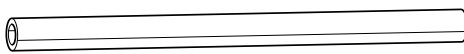







**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Ribbon dancer assembly Qty: 1	
	Bearing, ribbon guide roller Qty: 2	
	Roller, upper ribbon guide Qty: 1	
	Shaft, upper ribbon guide roller Qty: 1	
	Roller, lower ribbon guide Qty: 1	
	Shaft, lower ribbon guide roller Qty: 1	
	Screw (pan washer mach M3x6) Qty: 1	 T10
	Screw (M4x6 hx tx ni fling) Qty: 2	 3mm



## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T9, T10
- Metric hexagon keys or bits  
Size: 3mm, 4mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



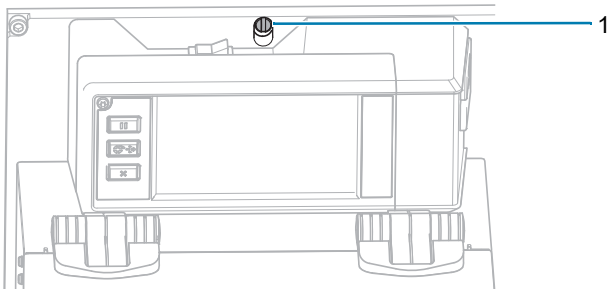
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



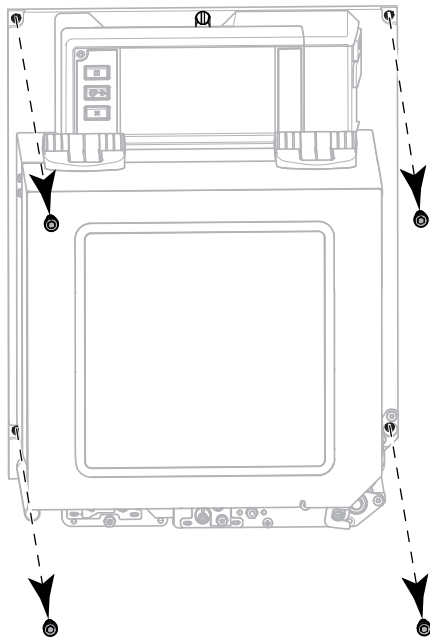
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



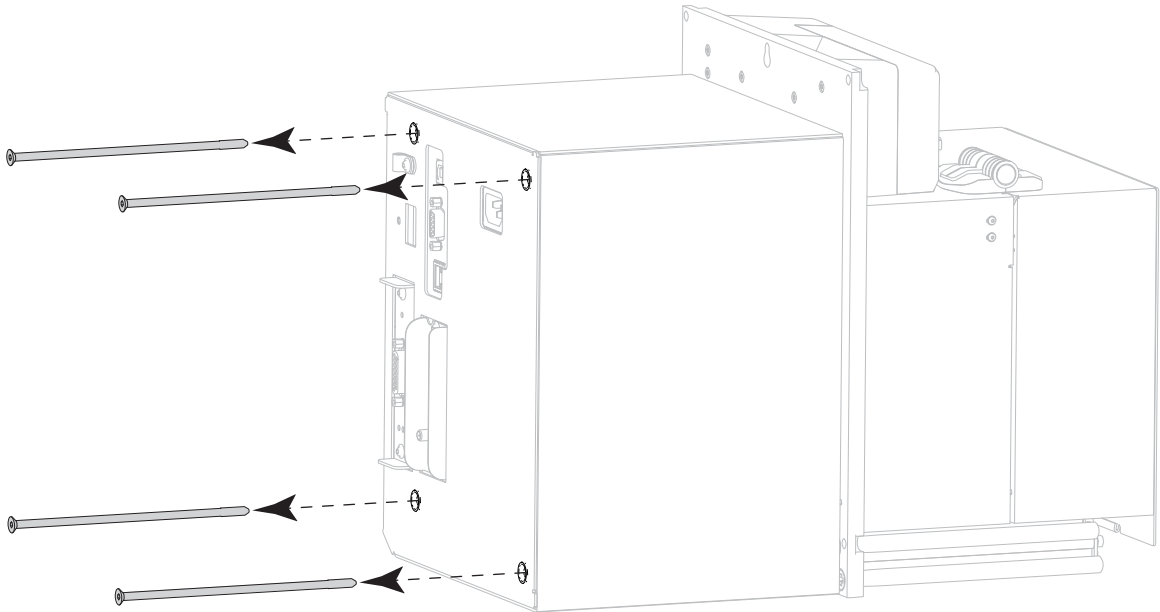
2. Remove the four screws securing the print engine to the applicator.



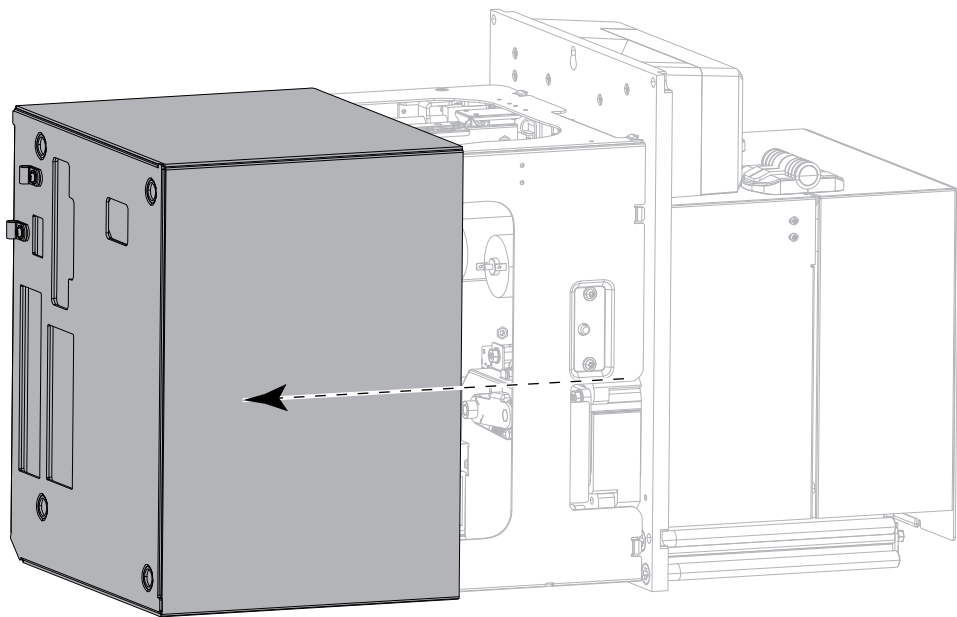
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



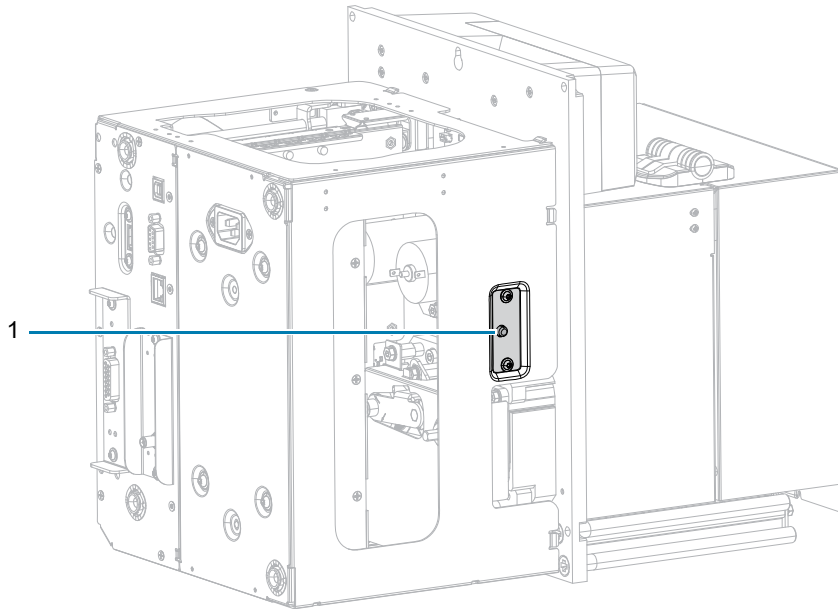
2. Remove the electronics enclosure cover from the print engine.



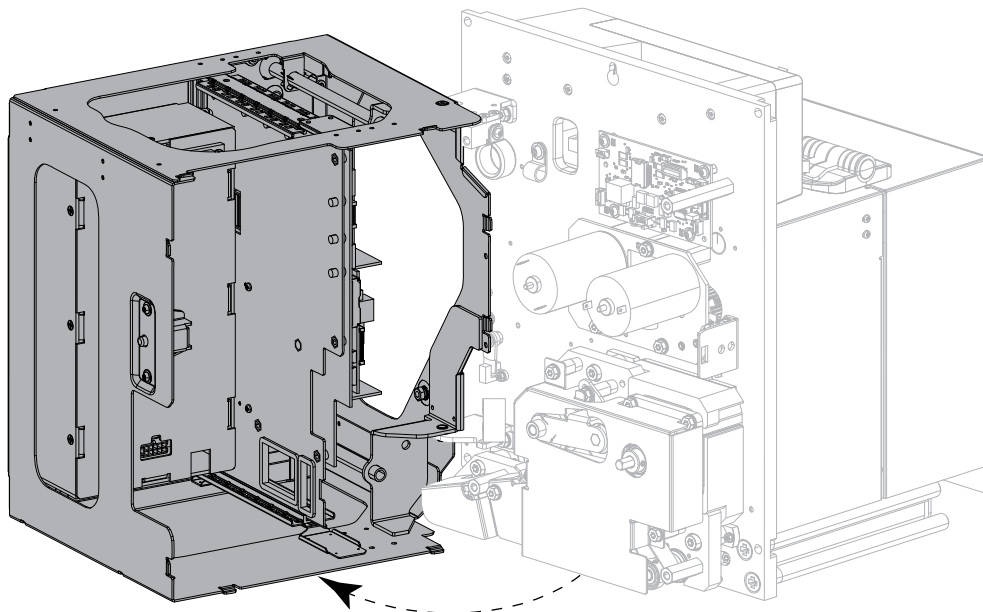
3. Press the electronics enclosure latch (1).



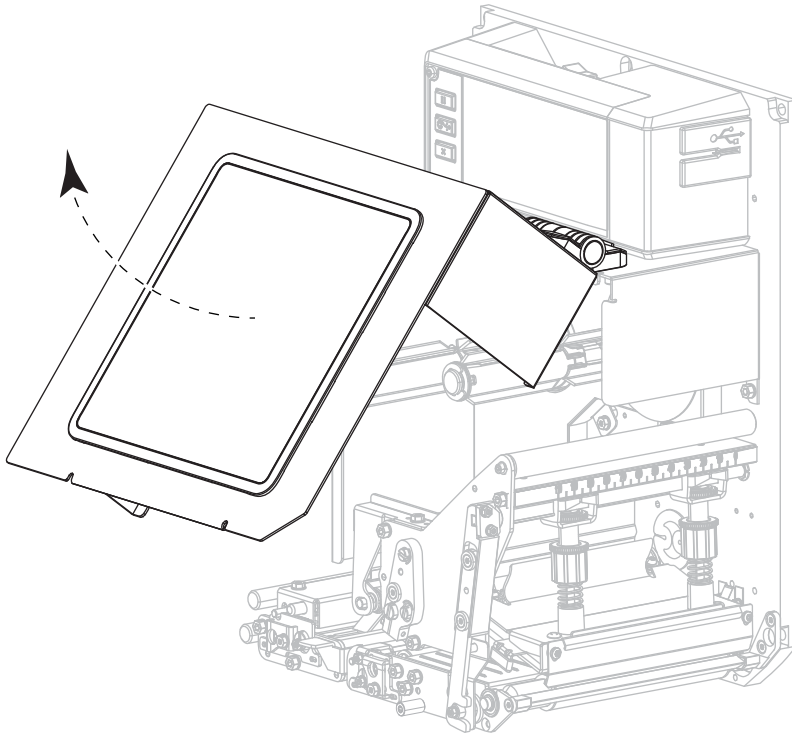
**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.

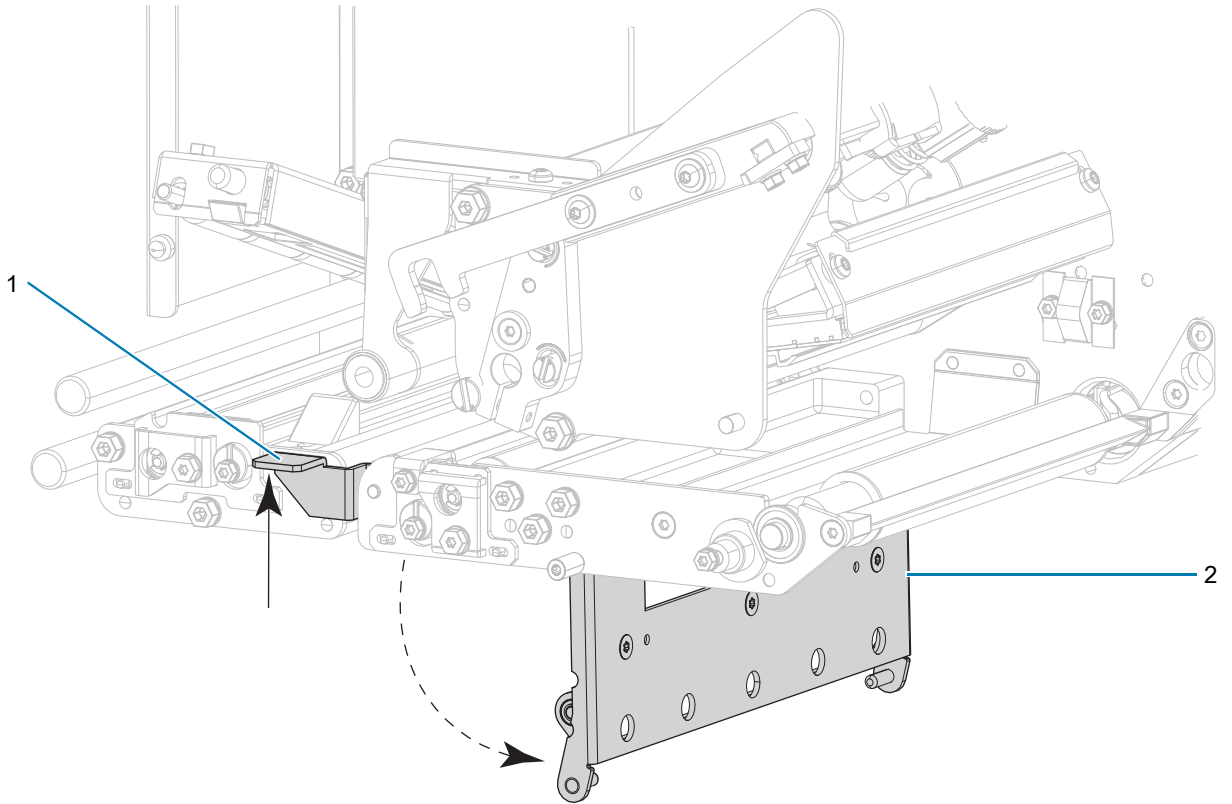



5. Open the media cover.

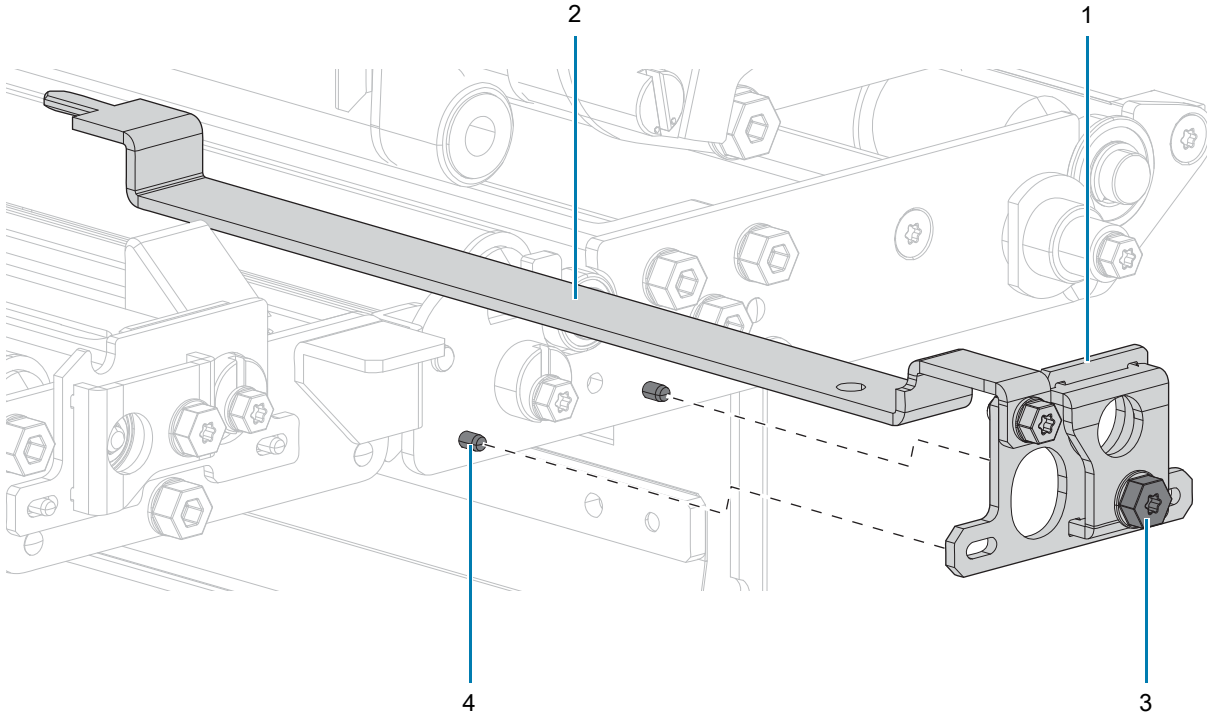


## Remove the Rollers

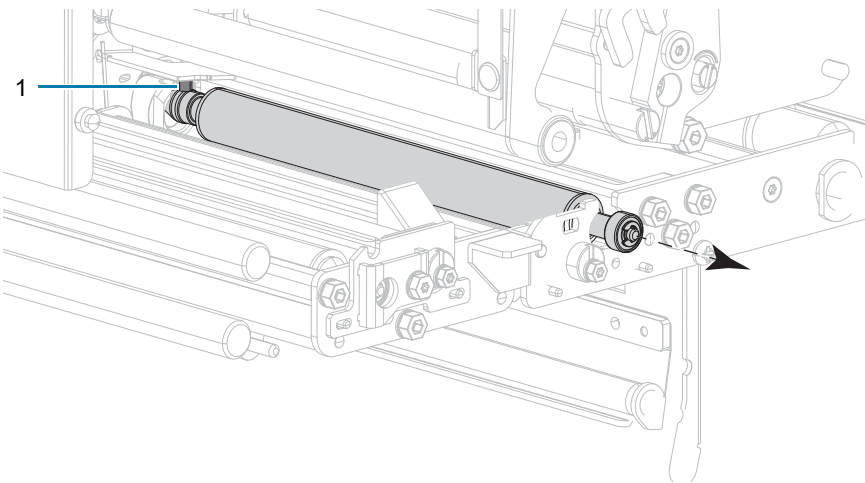
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.




2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

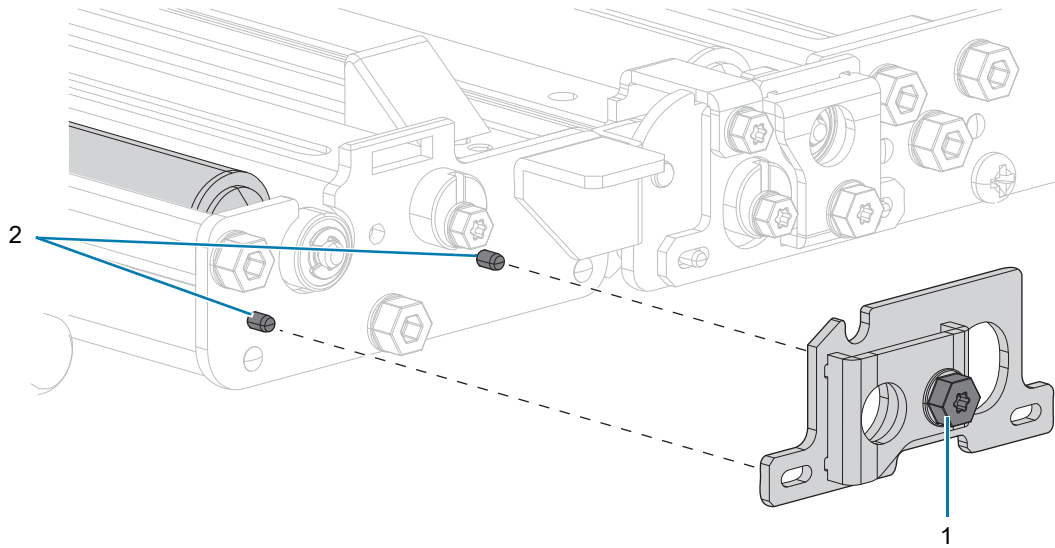


3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

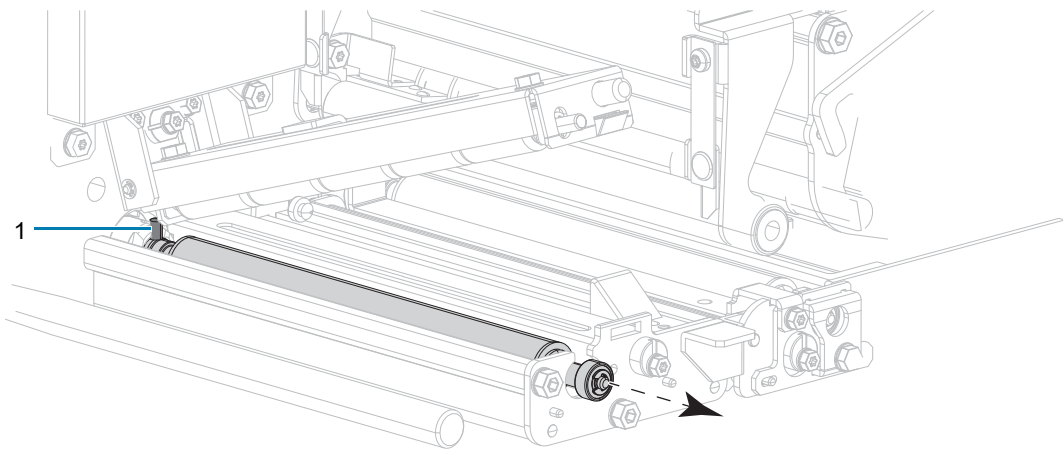


4. Remove the peel roller assembly from the print engine.

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.

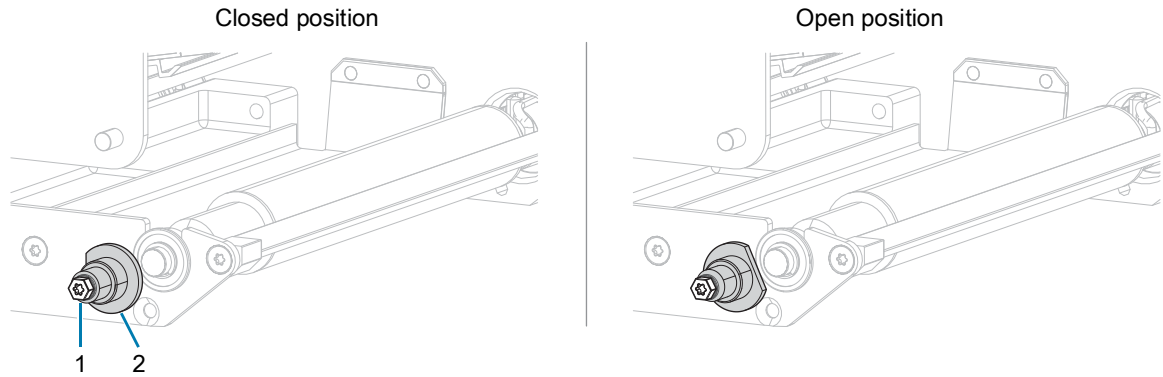


7. Remove the pinch roller assembly from the print engine.



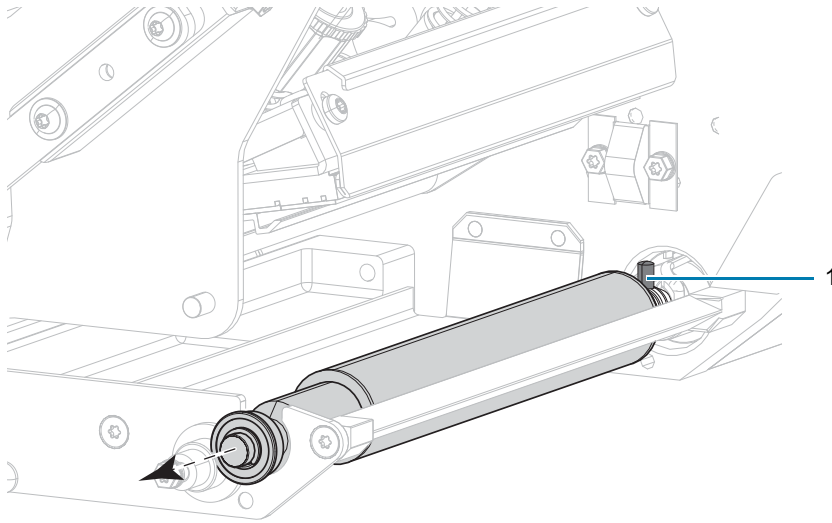
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

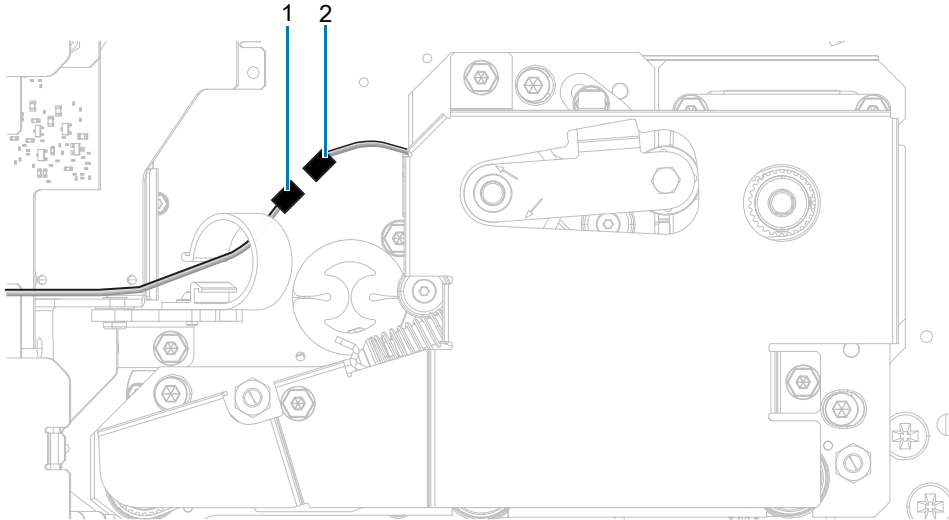


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

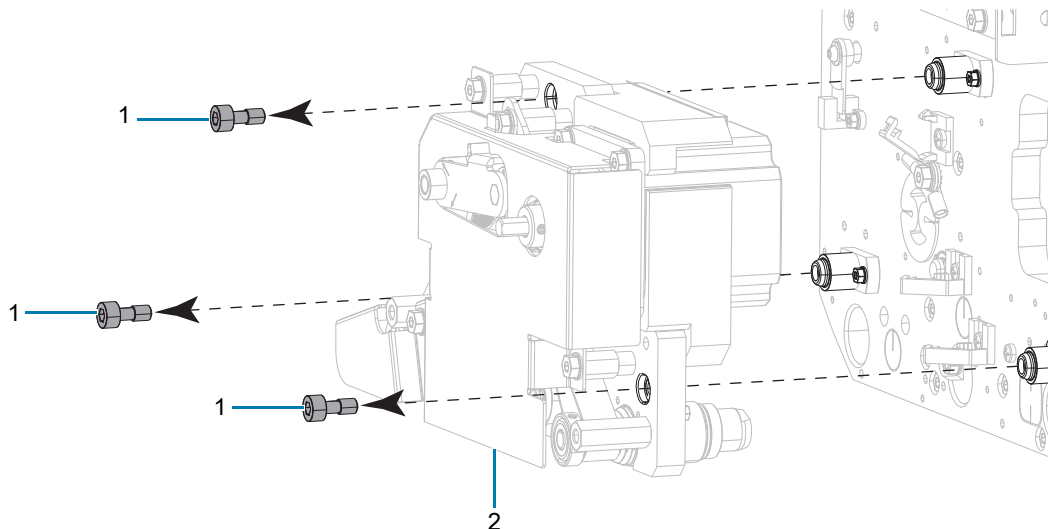


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



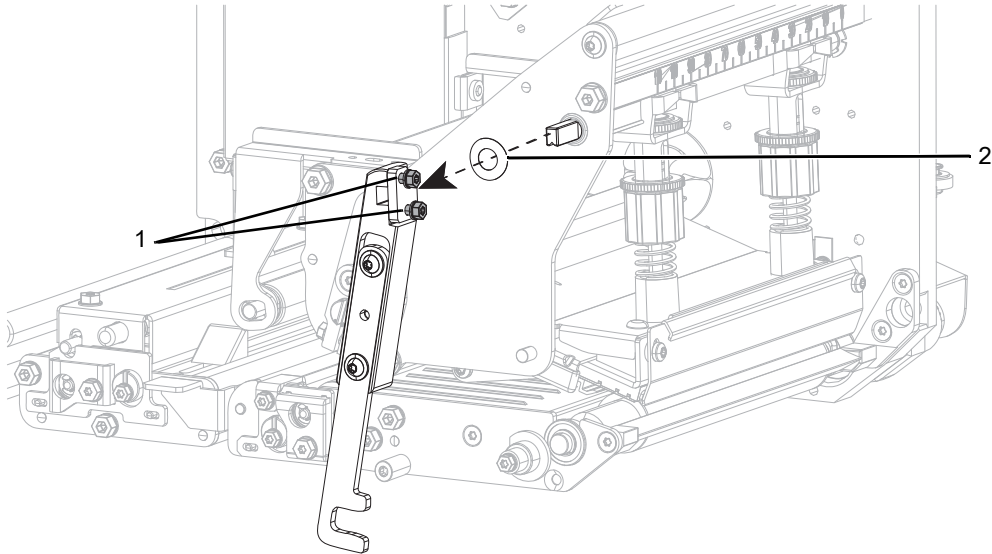
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.


3. Remove the drive system (2) from the main frame.

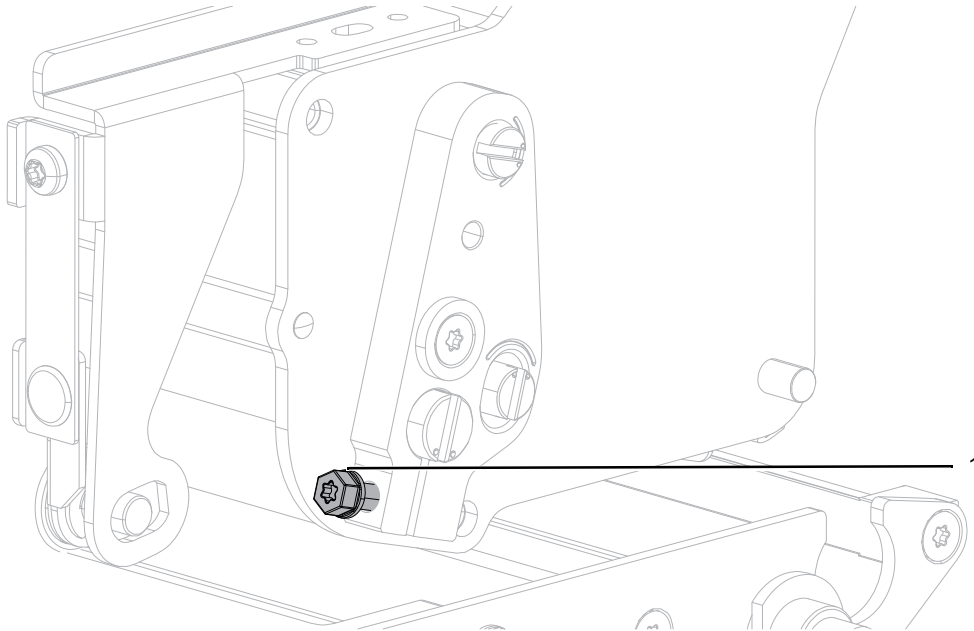


## Replace the Upper and Lower Ribbon Rollers

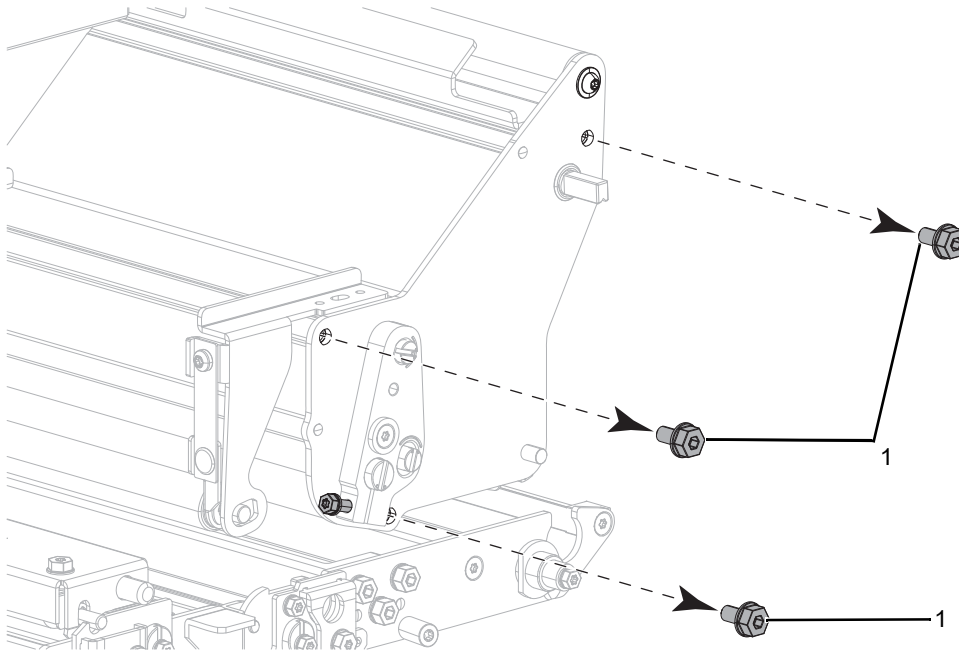
1. Loosen the two  T8 screws (1) securing the locking lever.



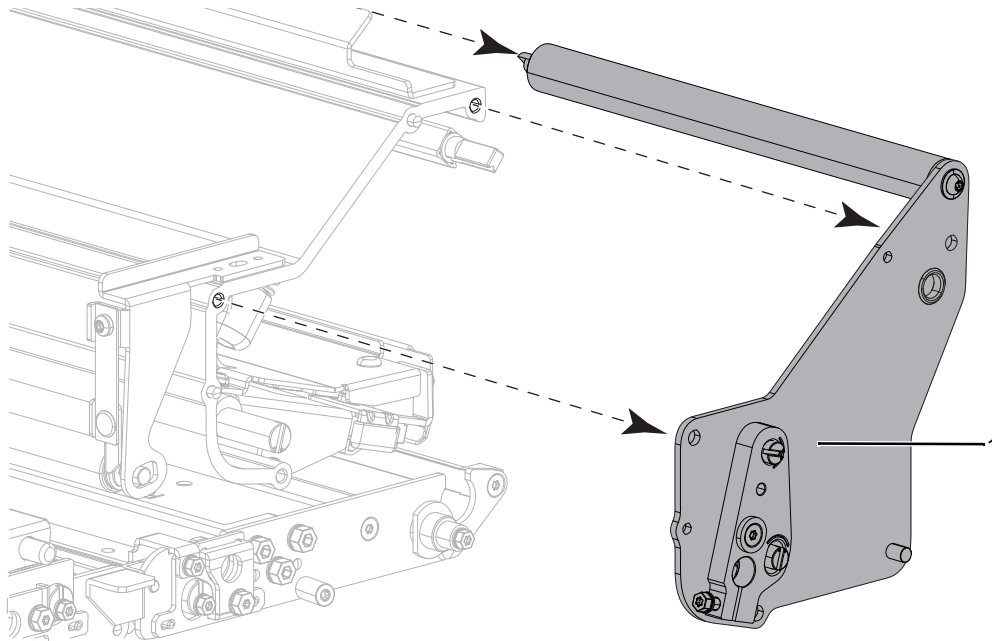
2. Remove the locking lever and the spring washer (2).
3. Loosen the pivot bar retaining screw  T8 (1).




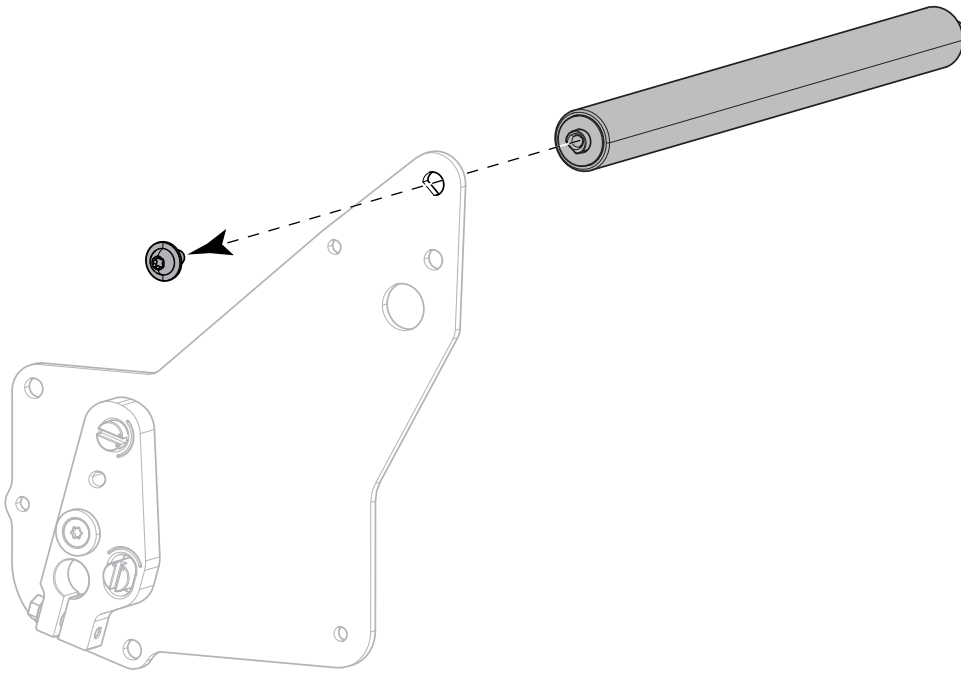
4. Remove the three 3mm screws (1).



5. Remove the extrusion end plate (1) from the print engine.

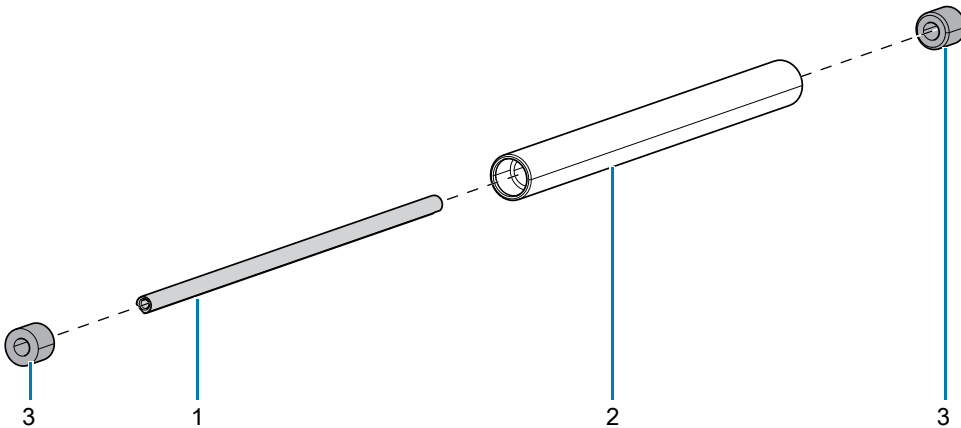



6. Remove the  T10 screw securing the upper ribbon roller.

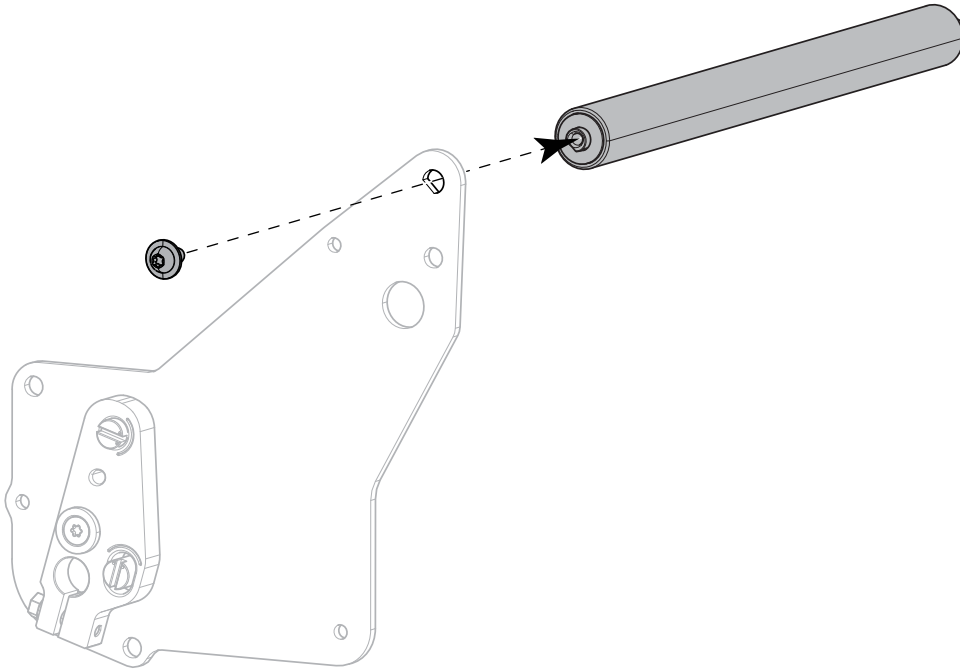



7. Assemble the upper ribbon roller.

- a. Insert the upper ribbon guide roller shaft (1) into the upper ribbon guide roller (2).
- b. Insert the two upper ribbon guide bearings (3) over the guide roller shaft (1), and into the upper ribbon guide roller (2).



8. Install the new upper ribbon roller onto the side plate with the  T10 screw.

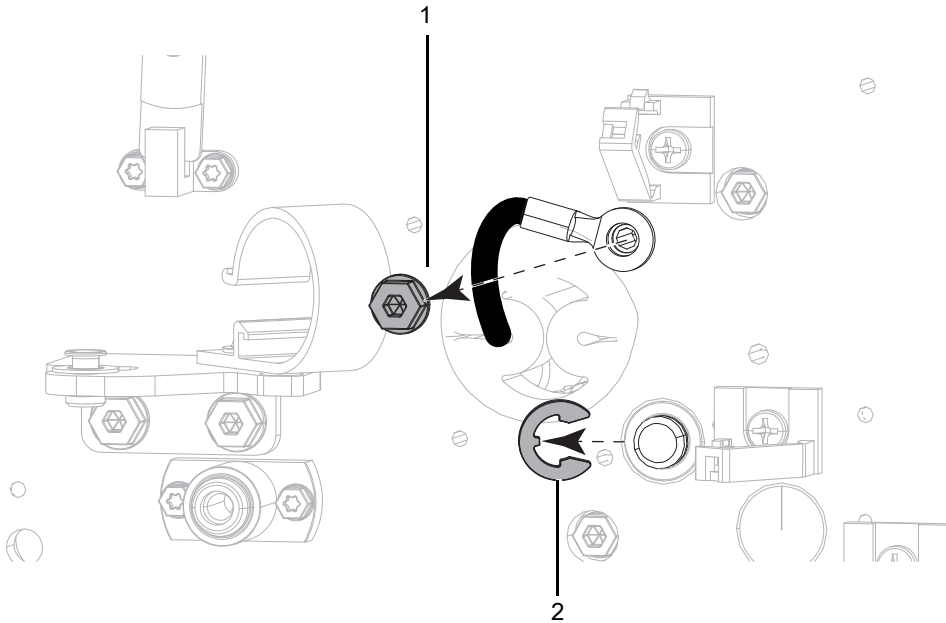


9. Go to the electronics side of the print engine.
10. Release the print mechanism.
  - a. Remove the  3mm screw (1) securing the ground cable.

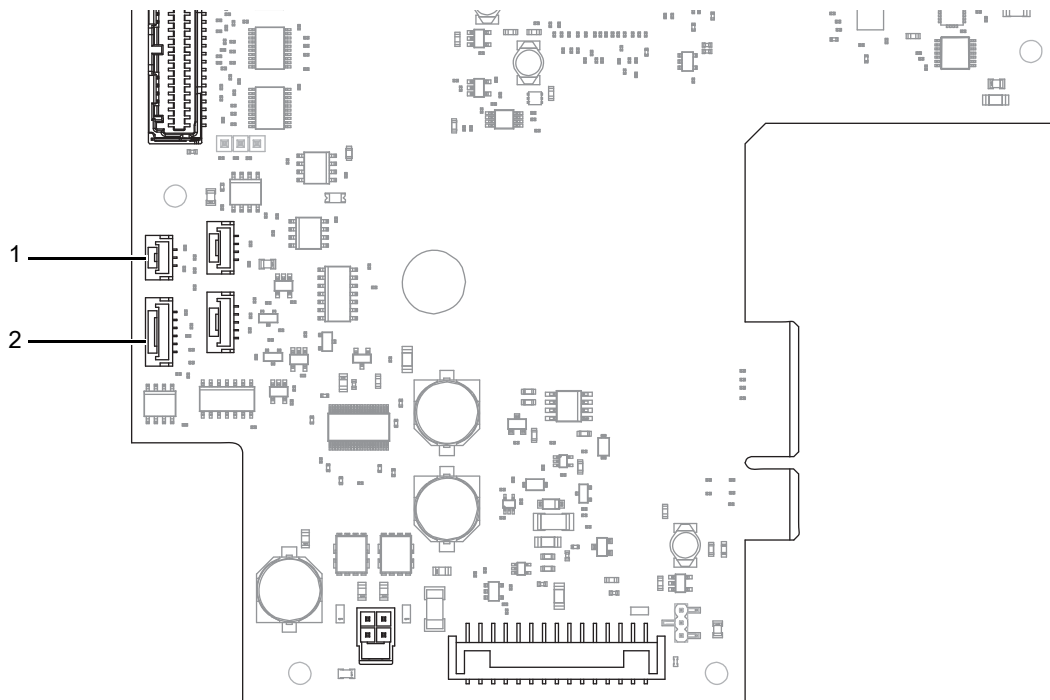


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

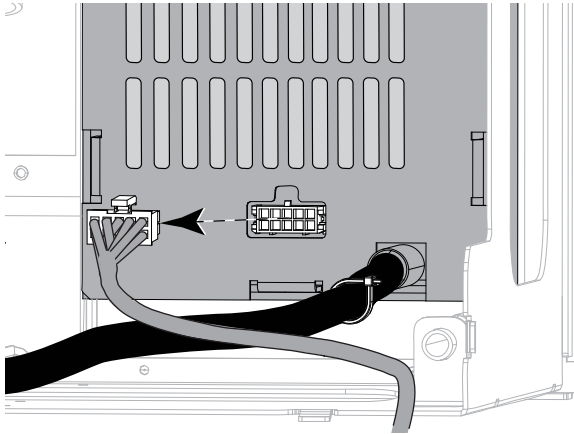
- b. Remove the E-ring (2) retaining the print mechanism.



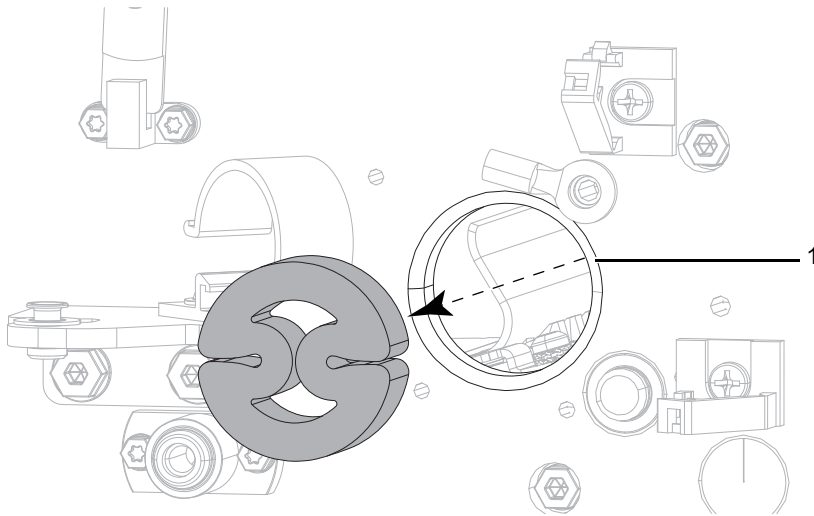
- 11. Disconnect the print mechanism cables from J36 (1) and J37 (2) on the main logic board (MLB).



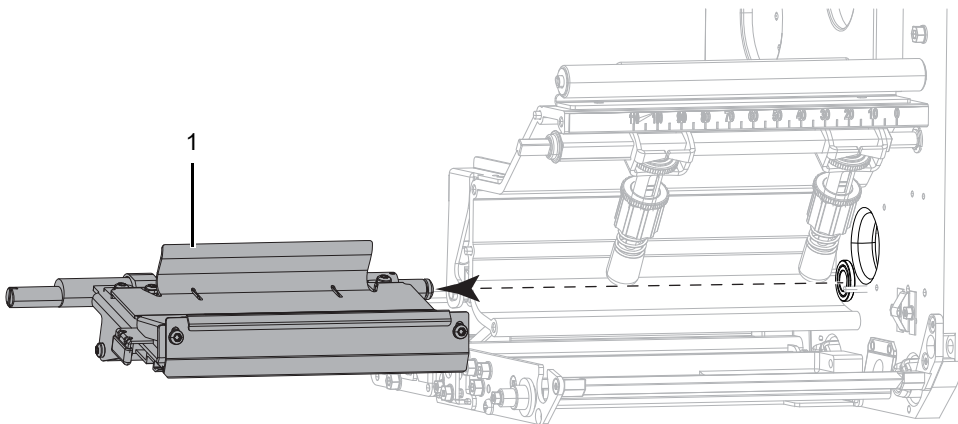
12. Disconnect the printhead power cable from the power supply.




13. Remove the plug from the access hole (1).



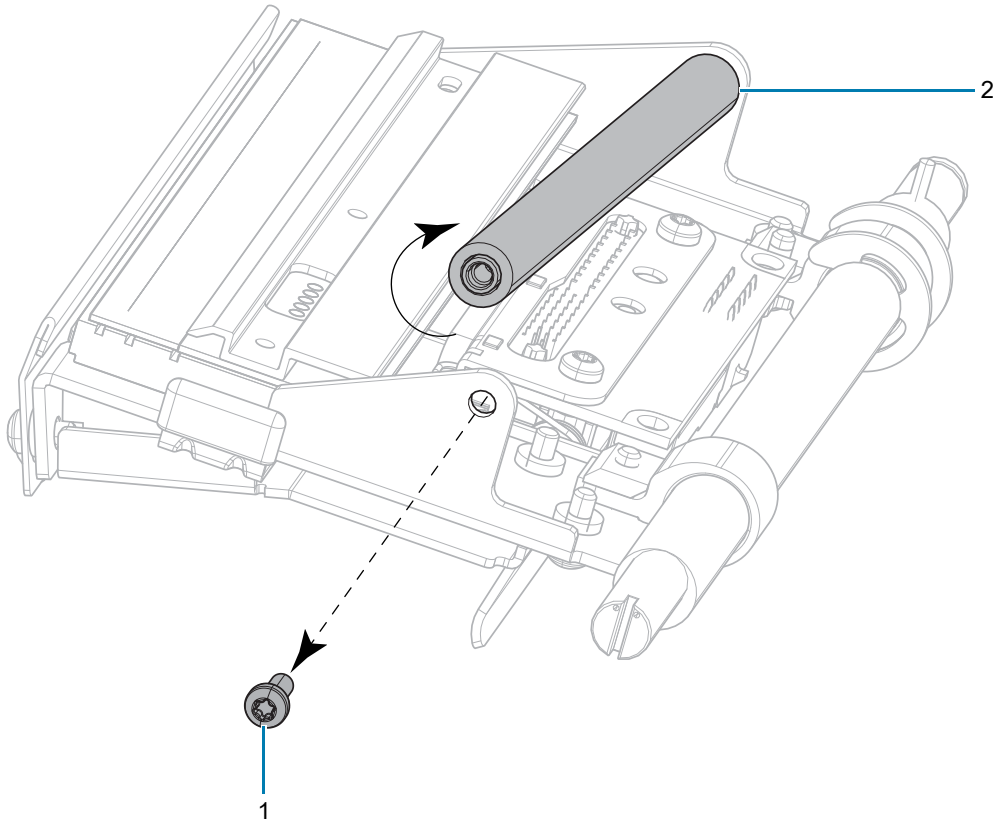
14. Thread the cables from the print mechanism through the access hole, and remove the print mechanism (1) from the print engine.





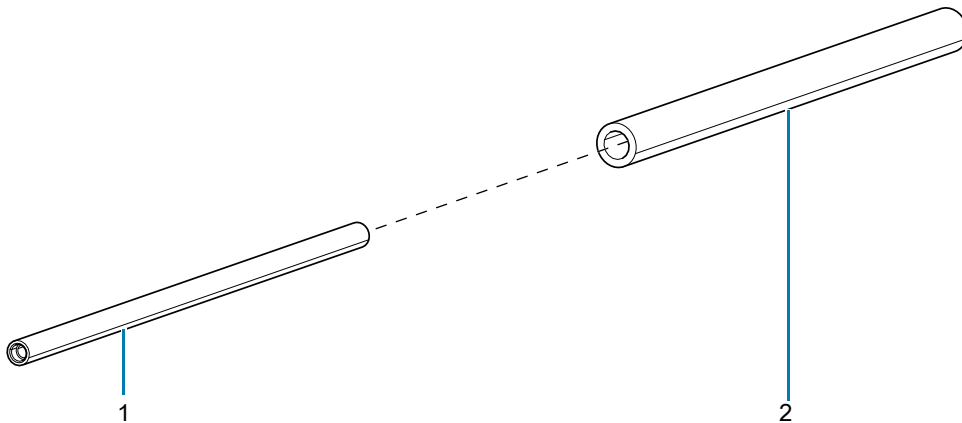
15. Remove the  T10 screw (1) securing the lower ribbon roller (2).

16. Lift the outboard end of the lower ribbon roller (2) and remove it from the print engine.



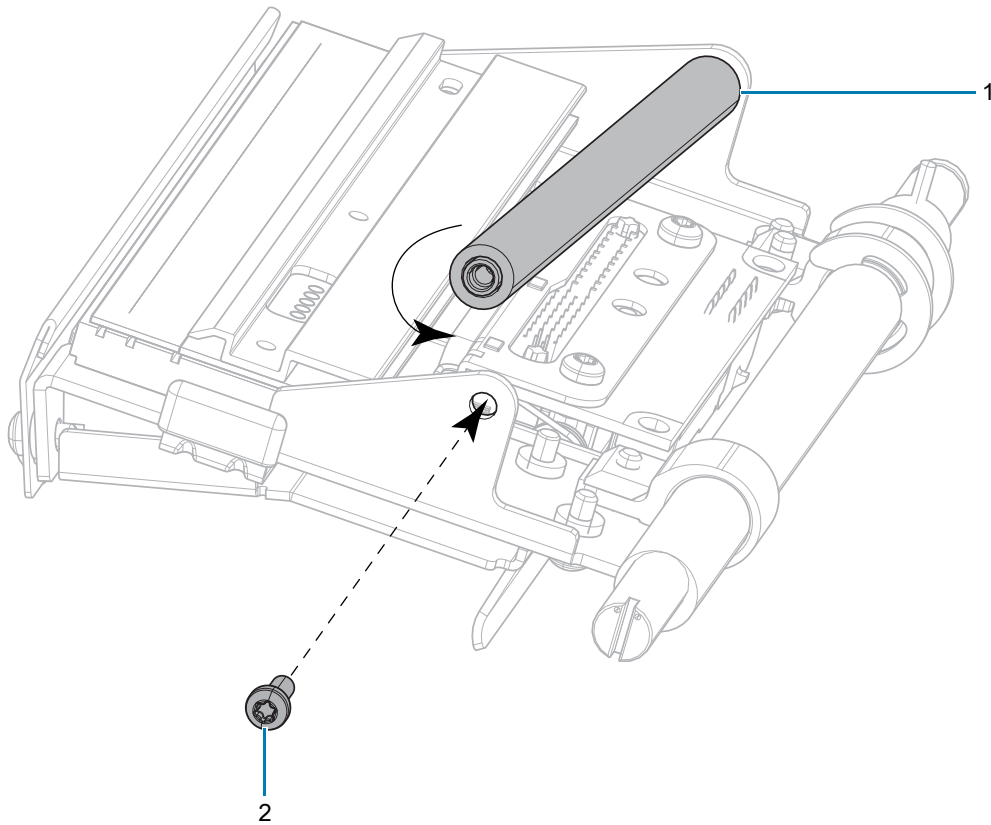
17. Assemble the lower ribbon roller.

- Insert the lower ribbon roller shaft (1) into the lower ribbon roller (2).

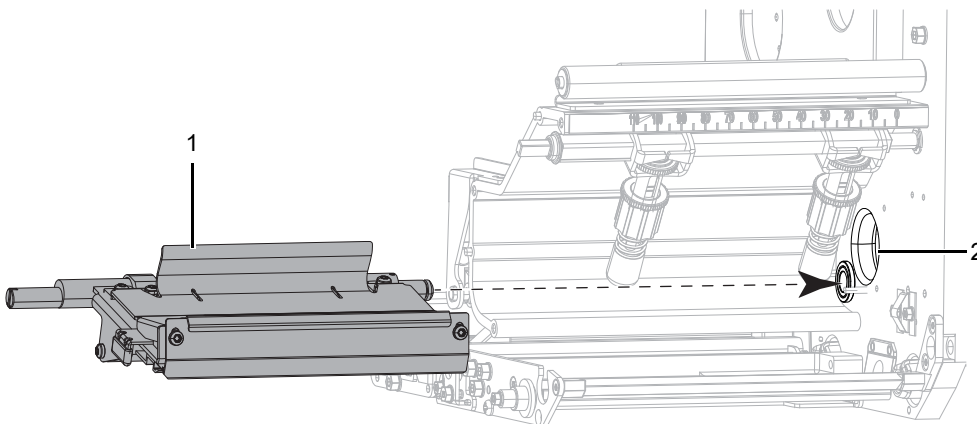


18. Install the new lower ribbon roller (1) inboard end first.

19. Secure the ribbon roller (1) with the T10 screw (2).

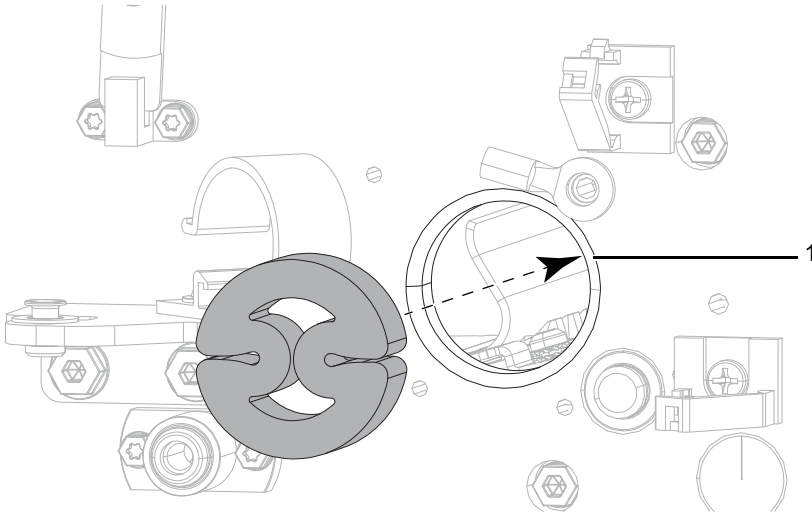


20. Insert the print mechanism cables (1) through the access hole (2).

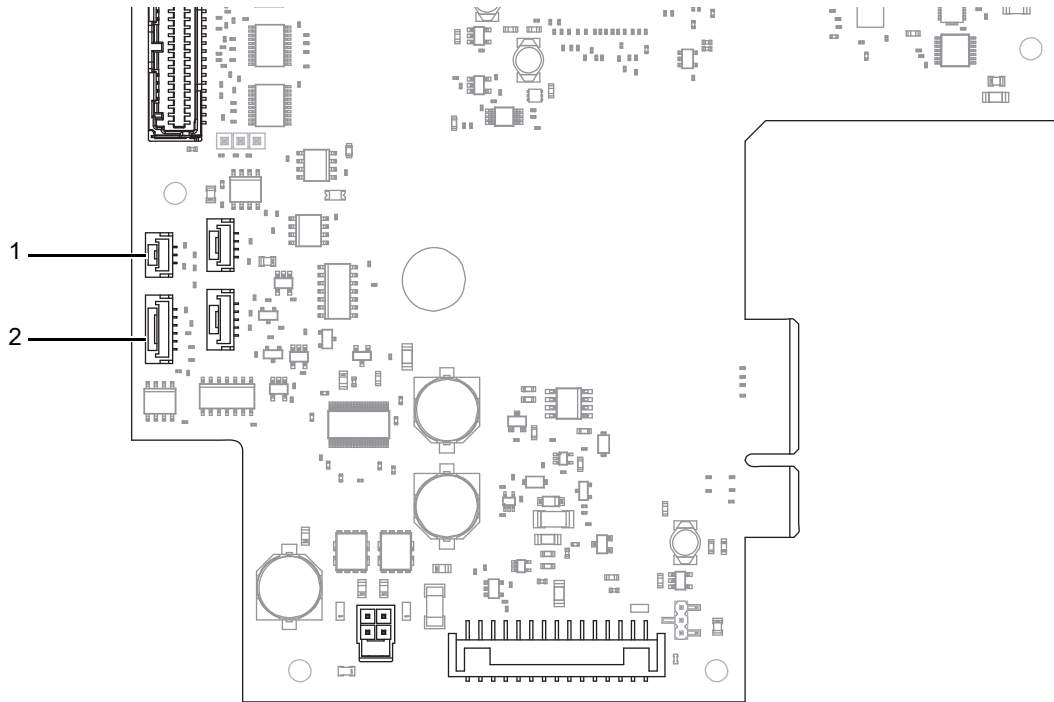


21. Install the print mechanism into the print engine.

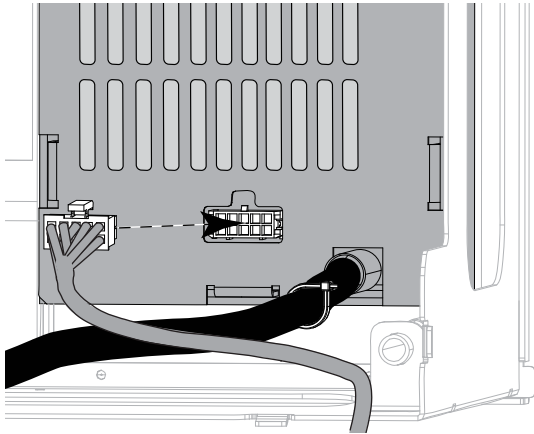
22. Install the plug into the access hole (1).



23. Reconnect the print mechanism cables to J36 (1) and J37 (2) on the MLB.



24. Connect the printhead power cable to the power supply.

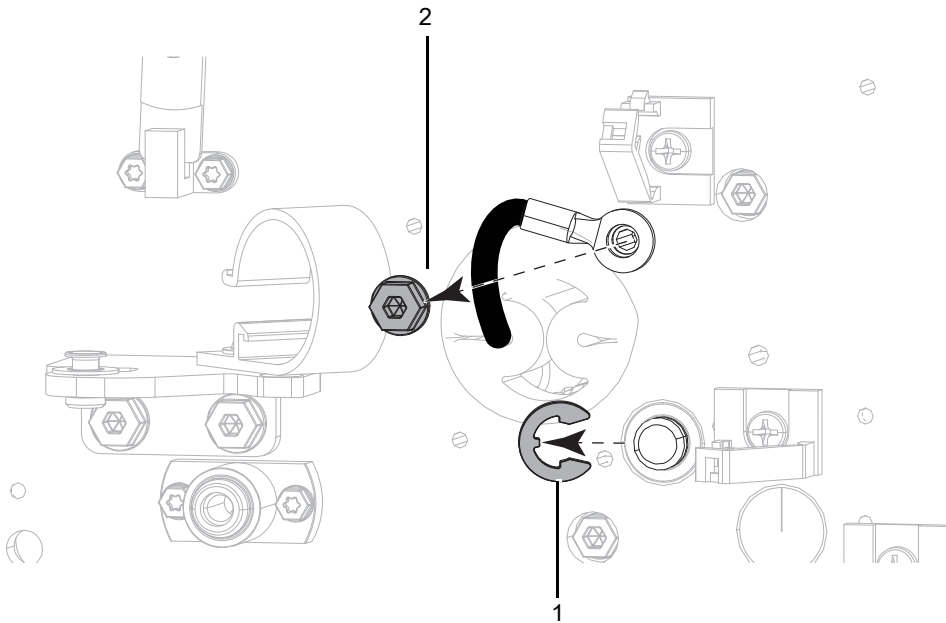


25. Secure the print mechanism.

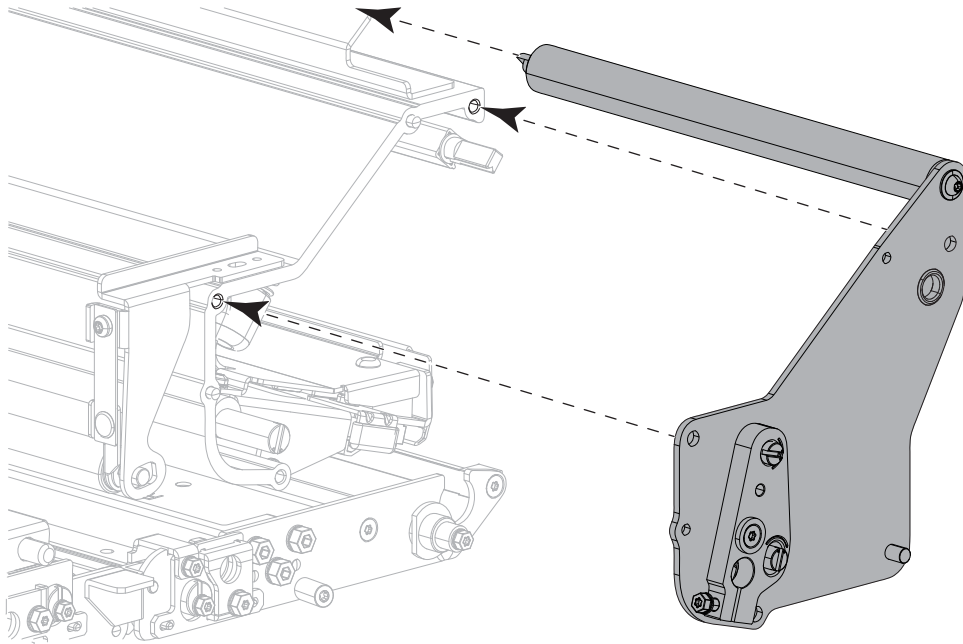


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

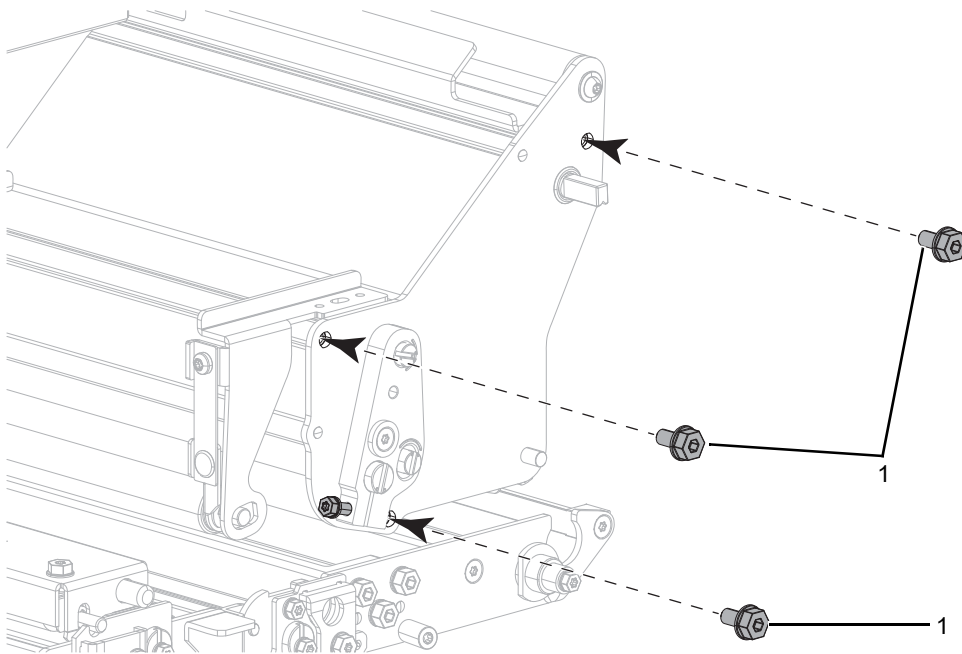
- a. Install the E-ring (1) onto the print mechanism shaft.
- b. Secure the print mechanism ground cable with the 3mm screw (2).



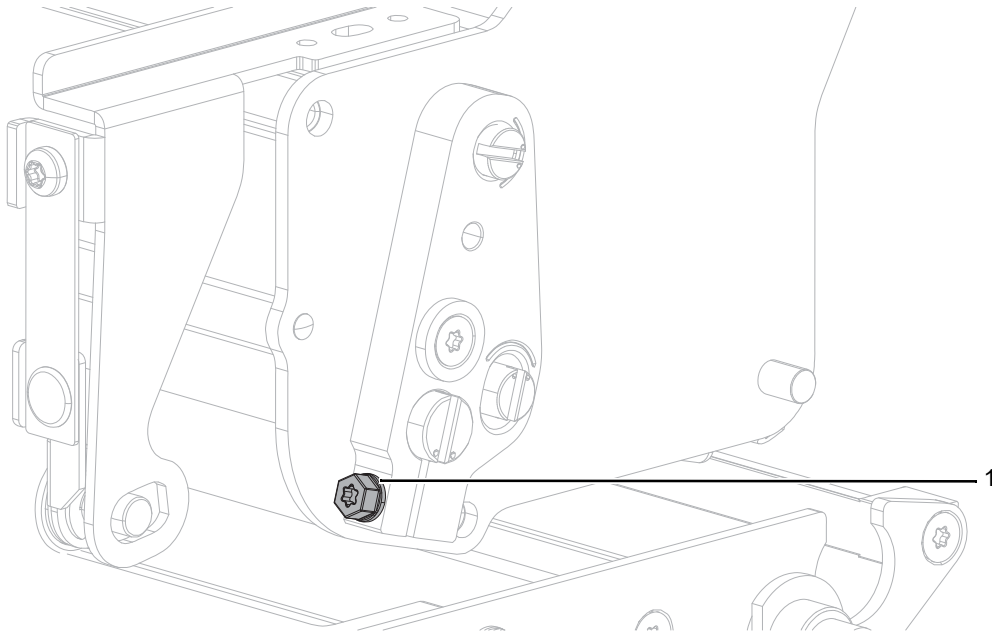
26. Reinstall the extrusion end plate.



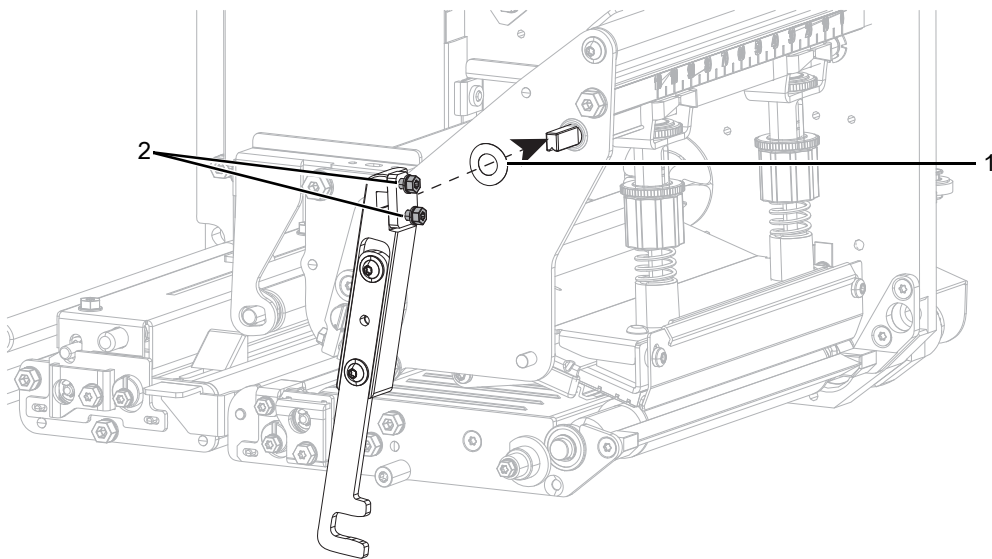
27. Install the three ● 3mm screws (1).




28. Tighten the  T8 pivot bar retaining screw (1).



29. Replace the spring washer (1) and locking lever (2).

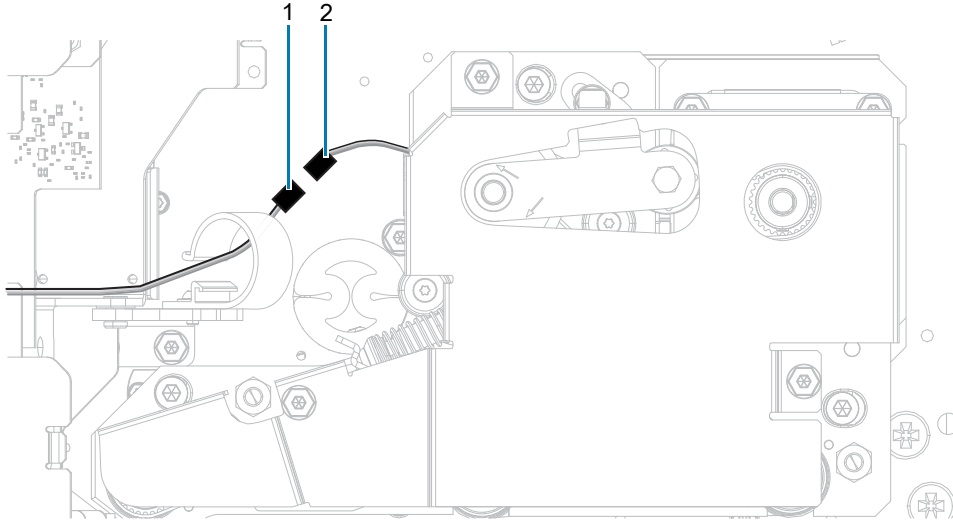


30. Tighten the  T8 locking lever retaining screws (2).

## Install the Media Drive System

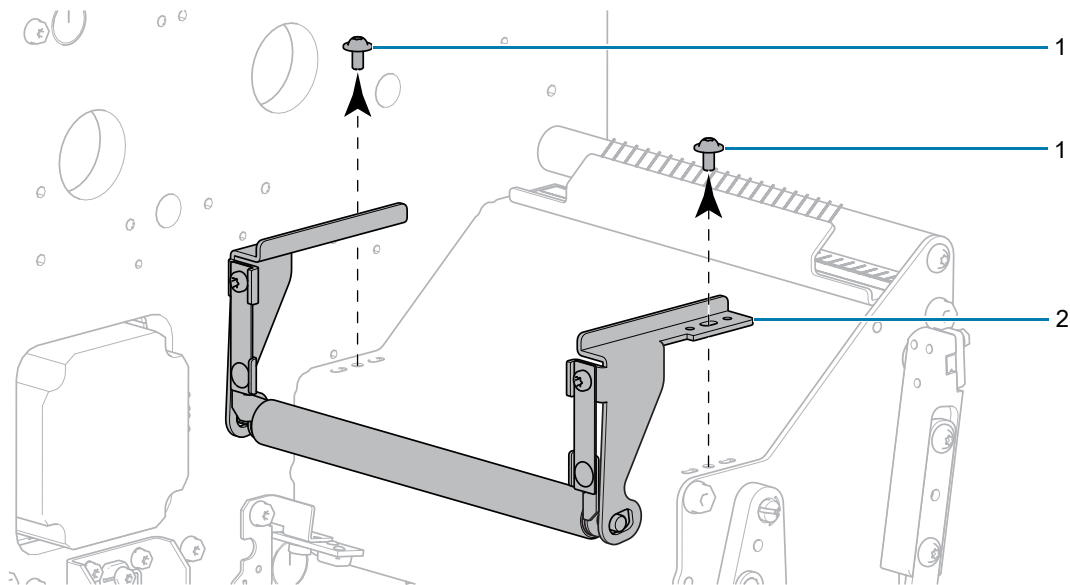
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.



## Replace the Dancer Roller

1. Remove the two ⚙ T8 screws (1) and remove the dancer roller (2) from the print engine.



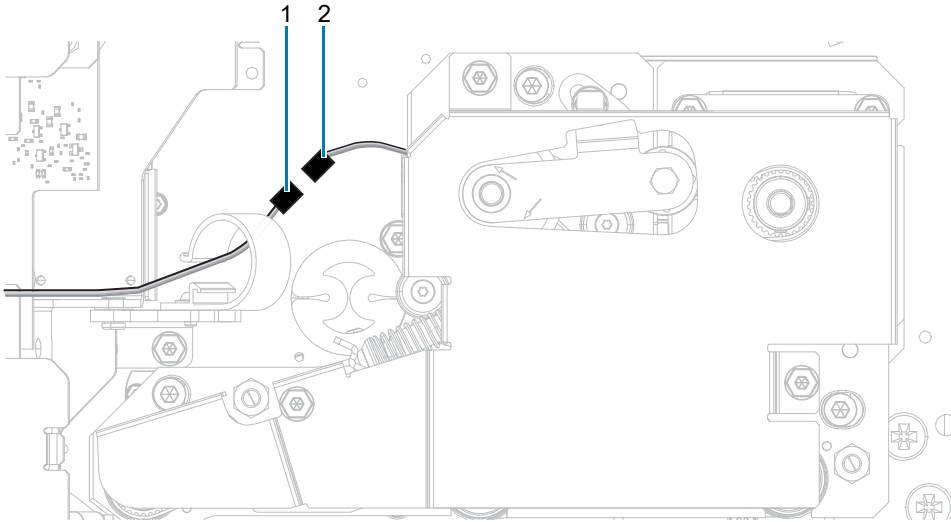
2. Install the new dancer roller and the two ⚙ T8 screws.

## Install the Media Drive

## Install the Drive System

1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

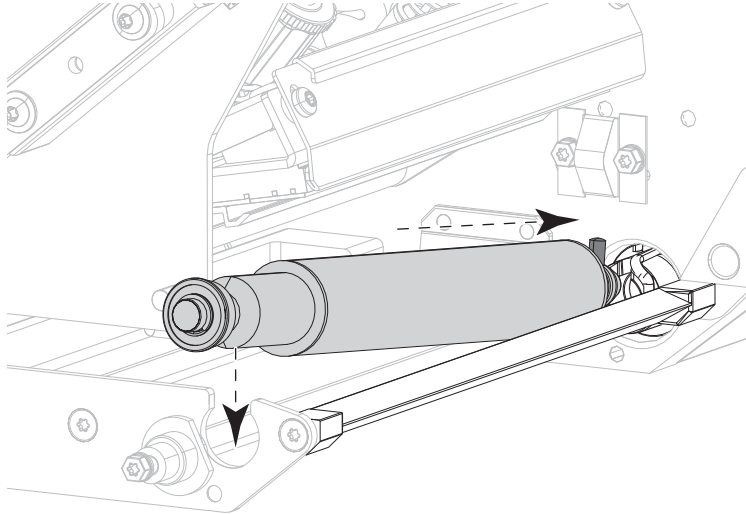
The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.




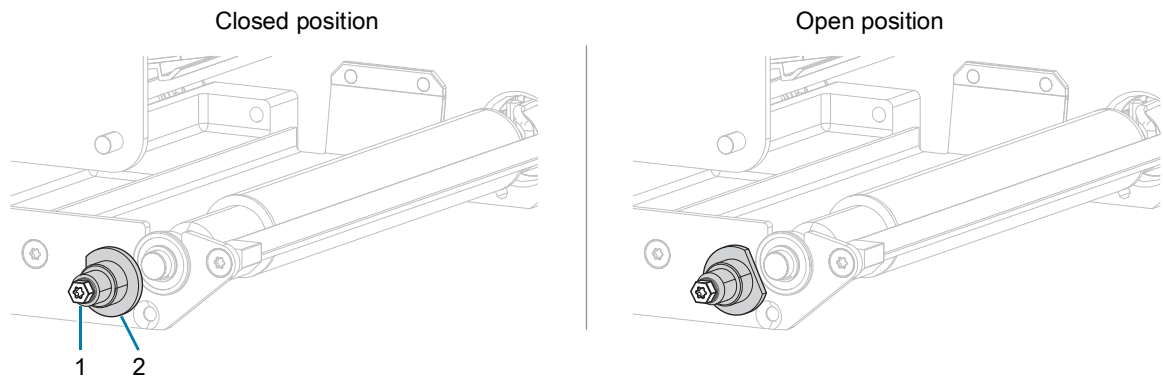


## Reinstall the Rollers

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.

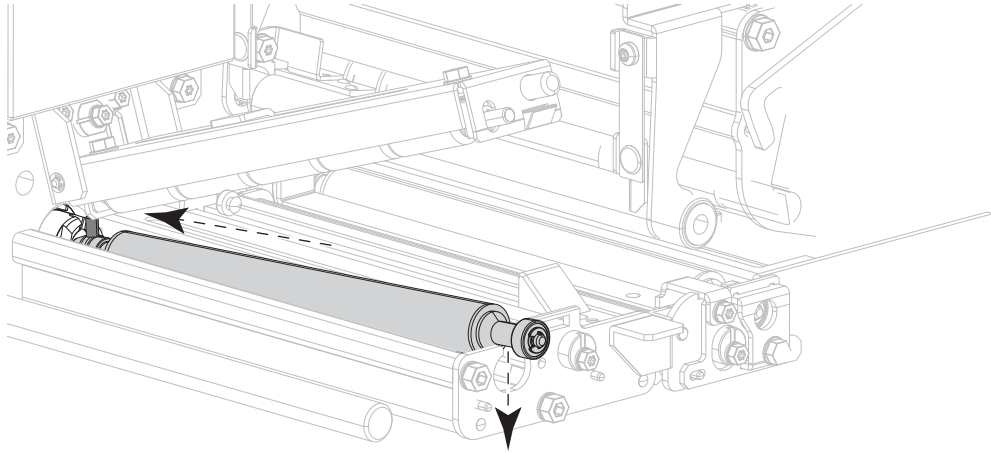



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.

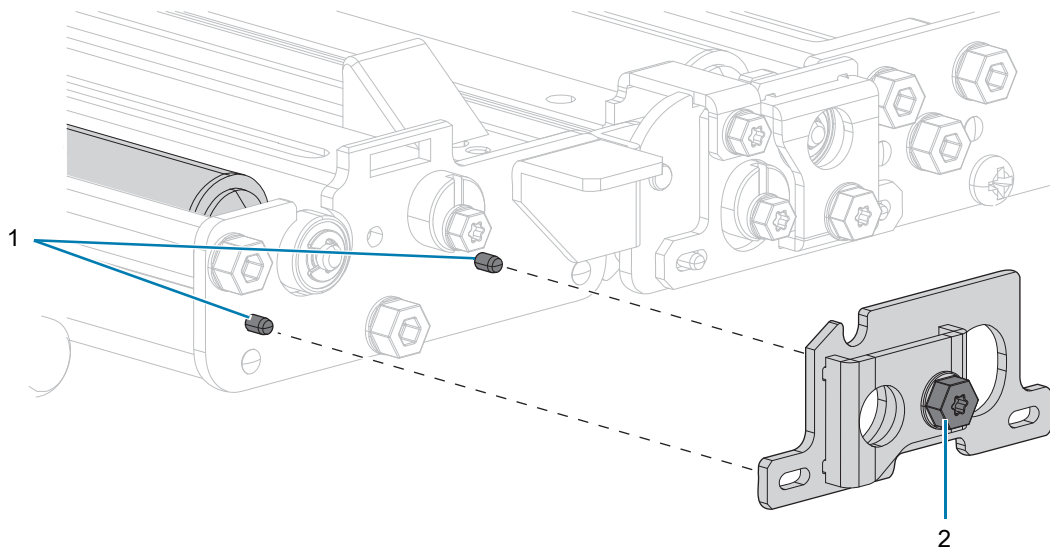


- c. Tighten the  T9 captive screw.

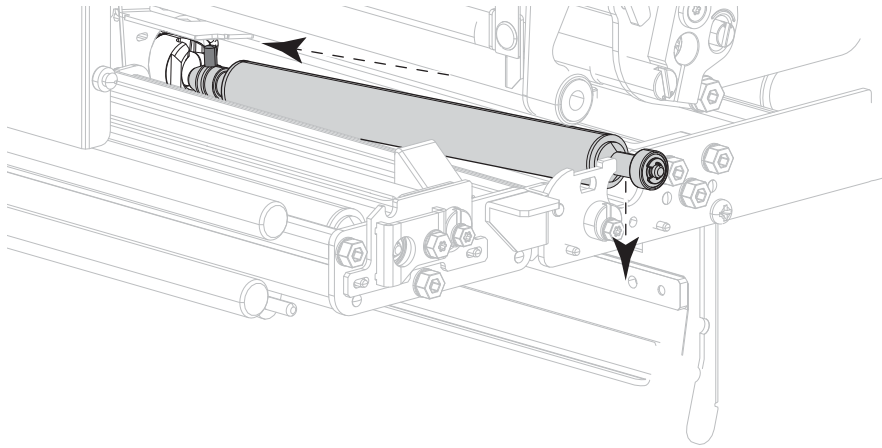
4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.




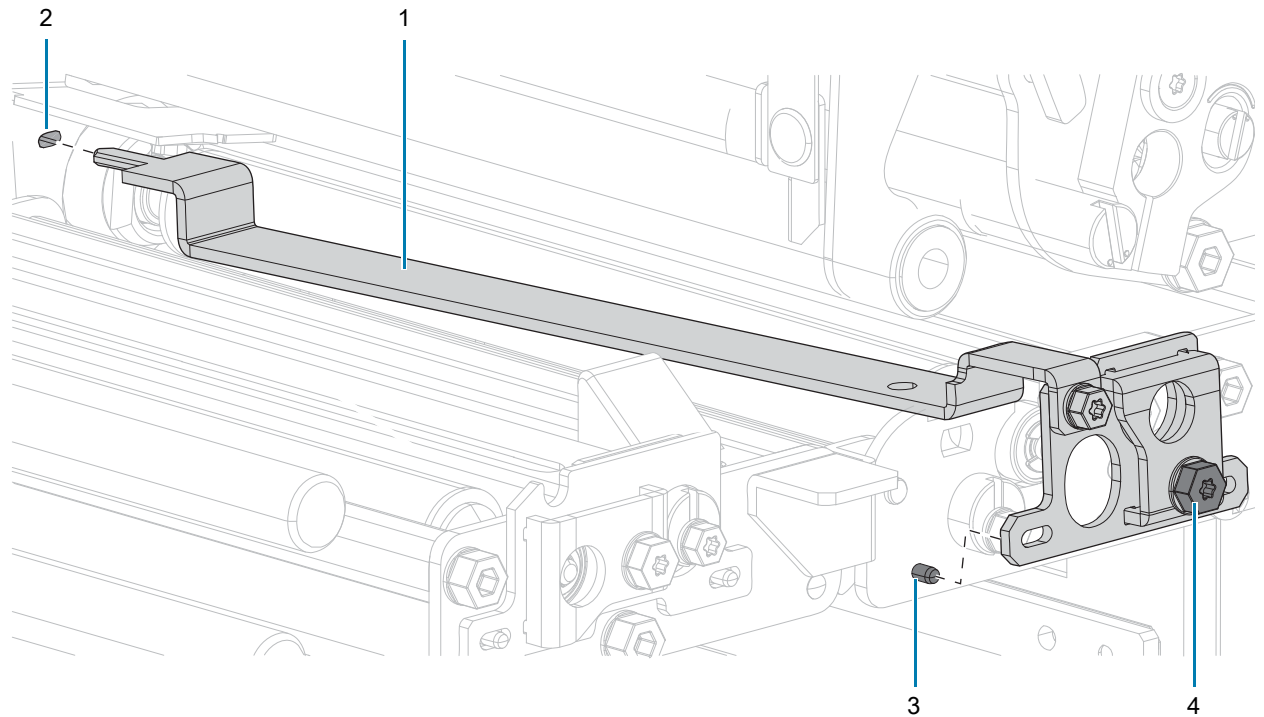
5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.



7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.

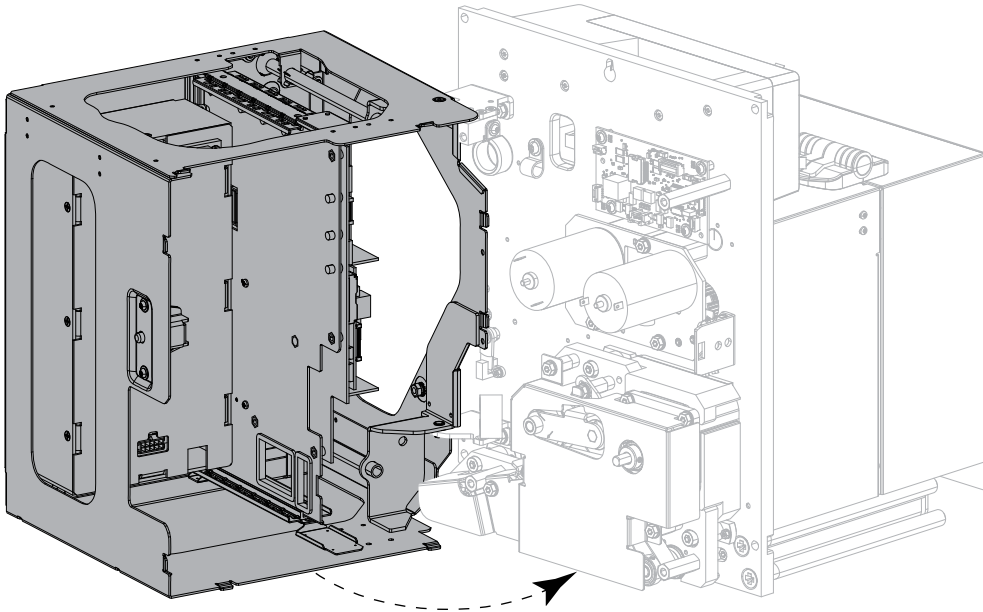


8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.

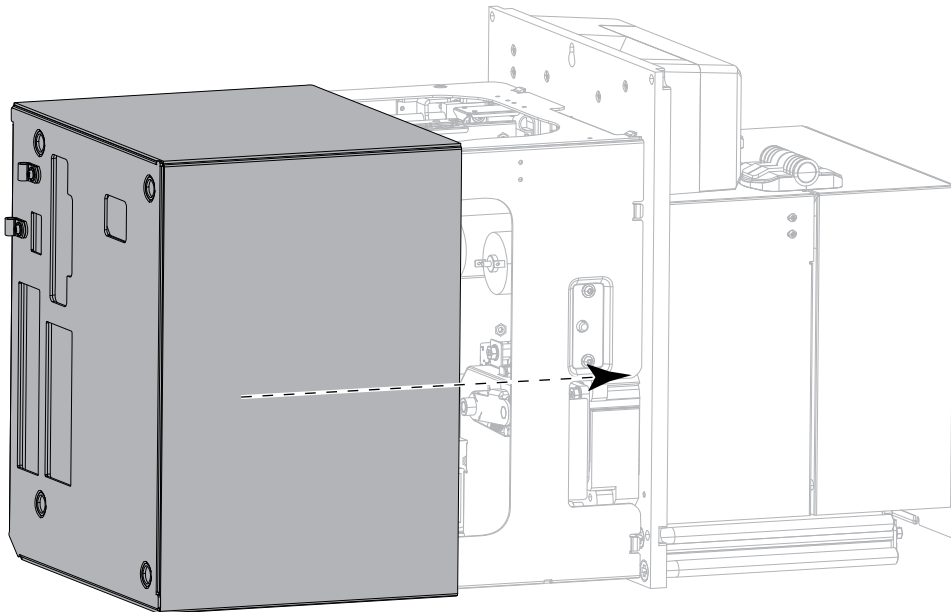


## Close the Electronics Enclosure

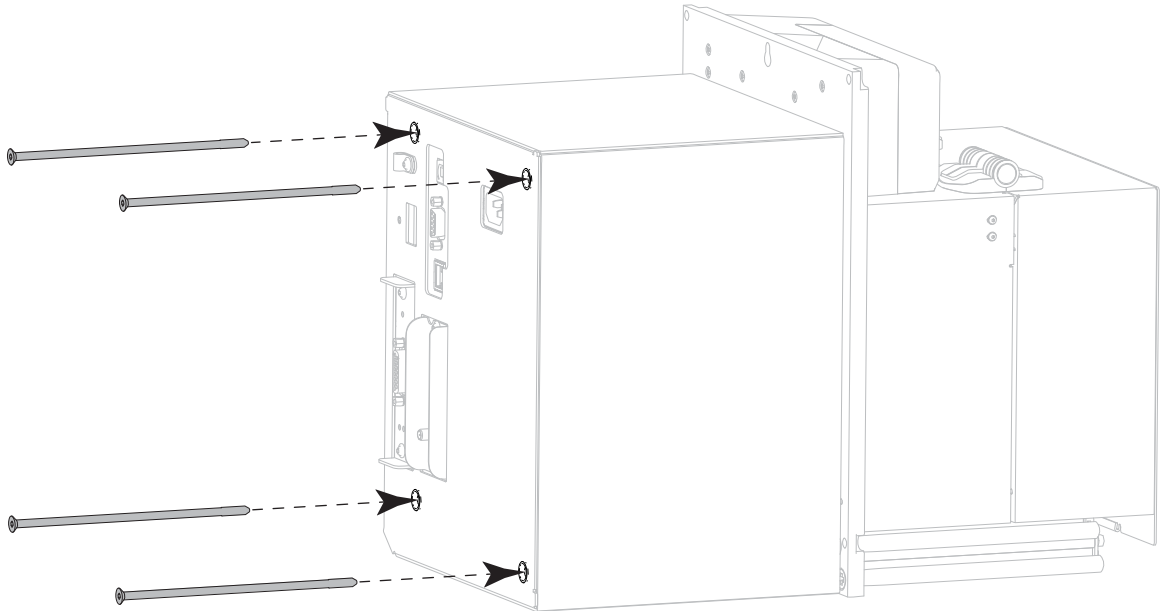
1. Close the rear of the print engine.



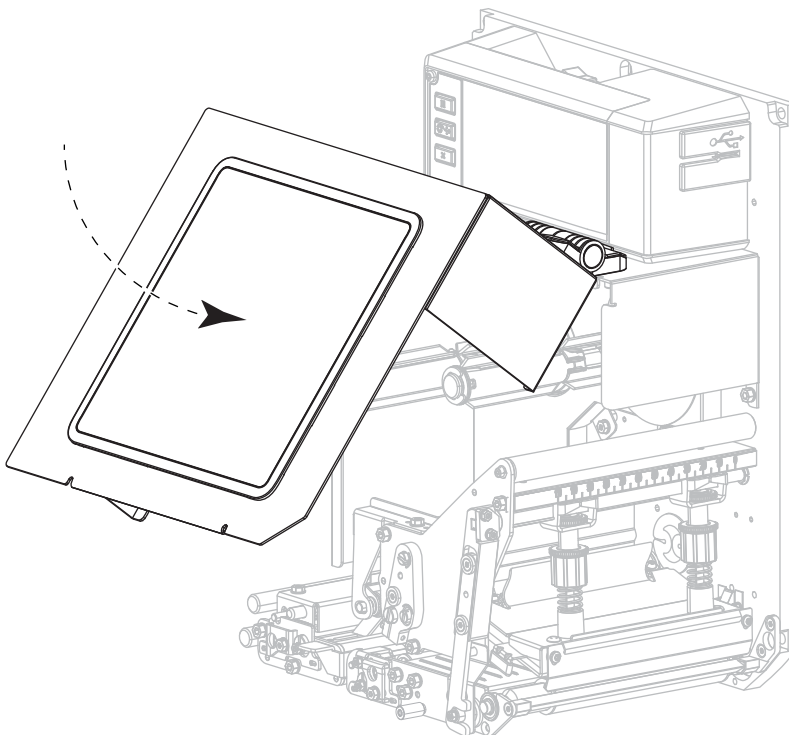
2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reinstall media and ribbon (if used).
6. Close the media cover.



for parts & service call QLC (800) 837-1309

## Print Line, Balance, and Skew Adjustment



**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label. As the labels print, you can adjust the following:

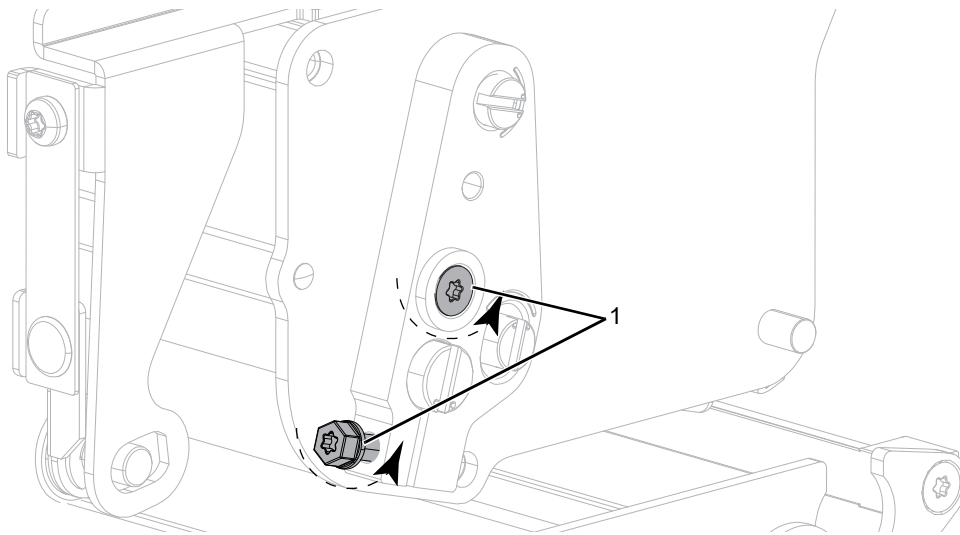
- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

1. Loosen the two ● 3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two ● 3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold **PAUSE** while turning on the print engine.
  - c. Hold **PAUSE** until the first control panel light turns off.

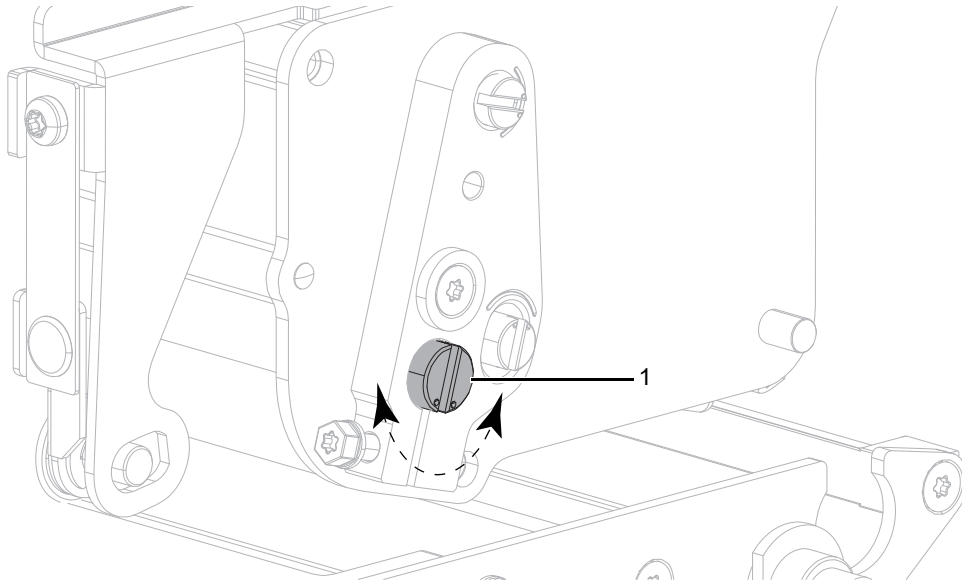


**NOTE:** At any time during the PAUSE self-test,

- Press **PAUSE** to print 15 additional labels.
- Press **CANCEL** to change the print speed.
- Press and hold **CANCEL** to exit the self-test.

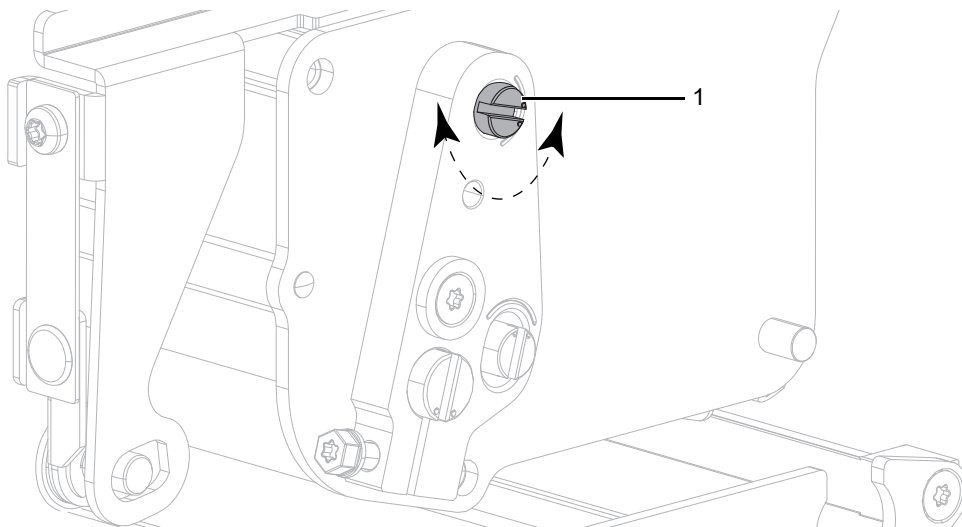
## Adjust the Print Line

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward/backward to find the best appearance of the printed image.



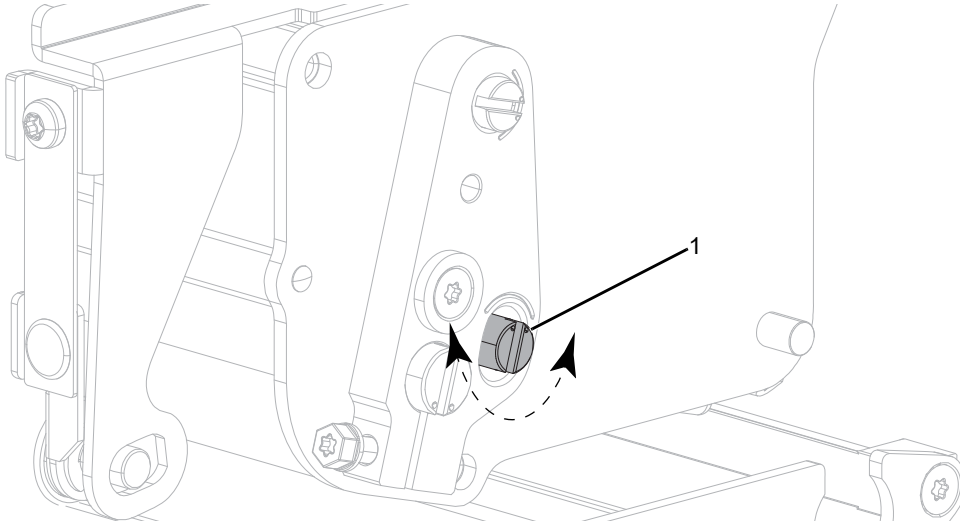
## Adjust the Balance

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the label.



## Adjust the Skew

While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster (1). Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label the label (not at a diagonal).



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.

**The installation is complete.**



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

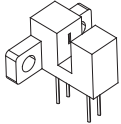
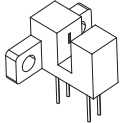
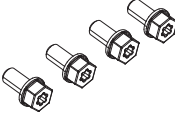



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Supply encoder cable assembly (attached cable has red, black, and white wires) Qty: 1
	Take-up encoder cable assembly (attached cable has red, black, and yellow wires) Qty: 1
	Screw (M3x8 HEX TX NI) Qty: 4 <div style="text-align: right;">  T9                 </div>

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
 Size: T9, T20
-  Metric hexagon keys or bits  
 Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



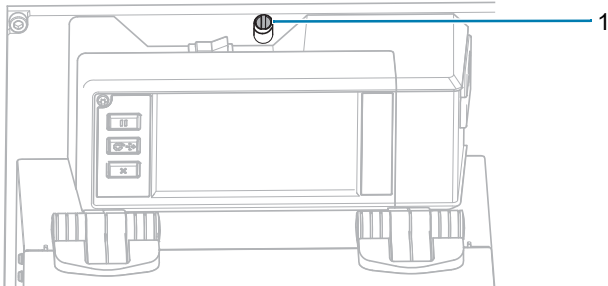
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



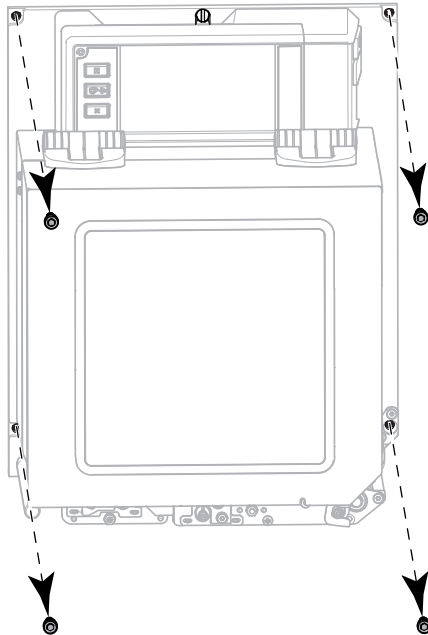
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



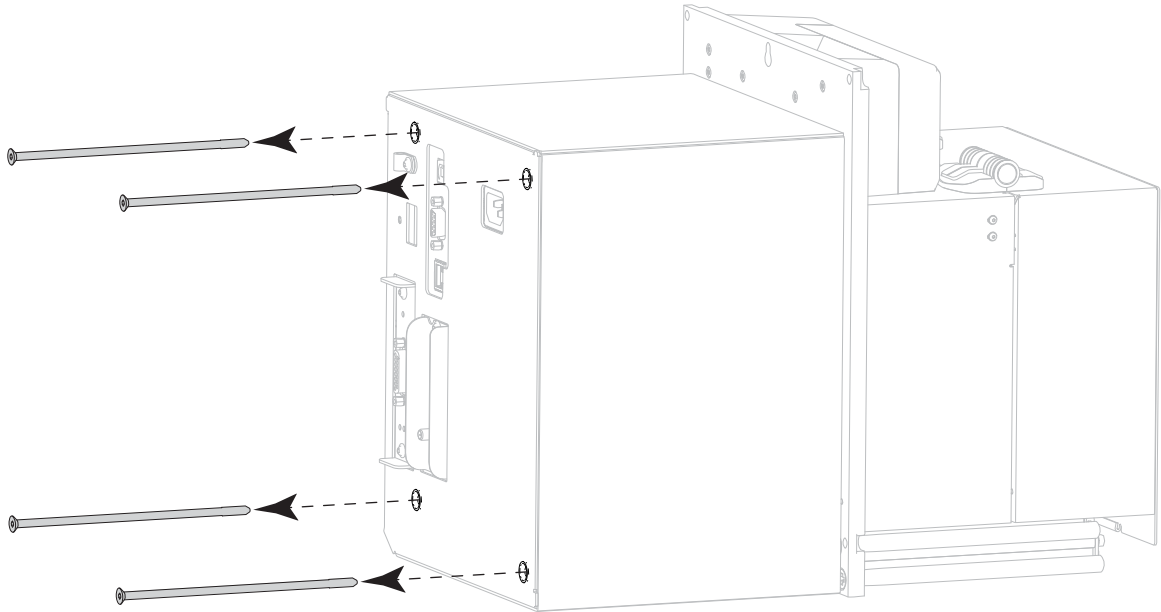
2. Remove the four screws securing the print engine to the applicator.



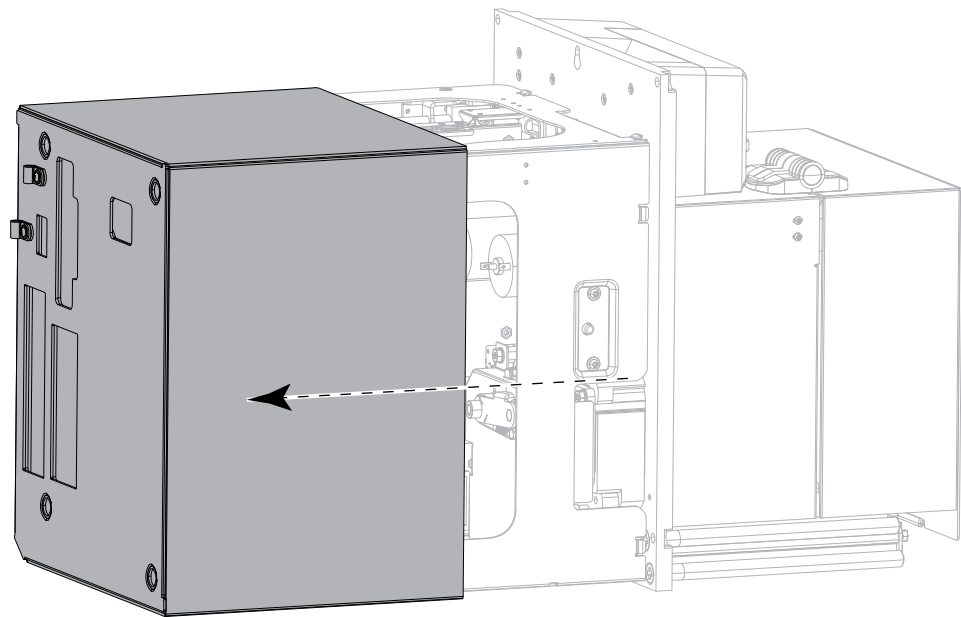
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



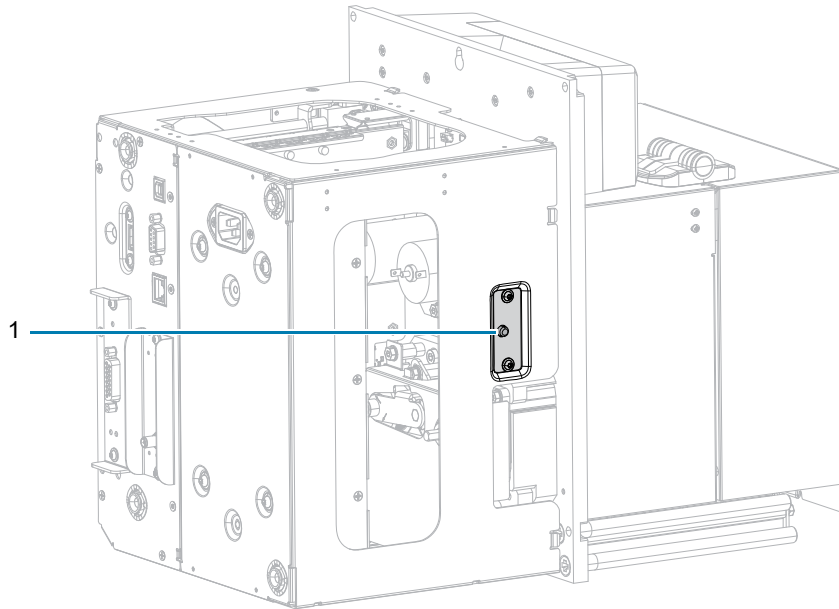
2. Remove the electronics enclosure cover from the print engine.



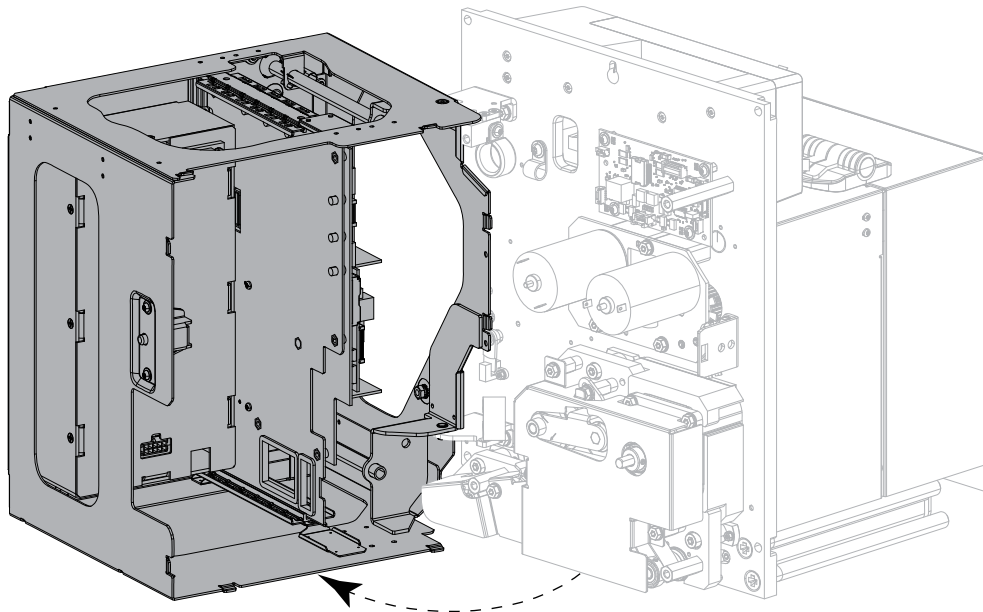
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.

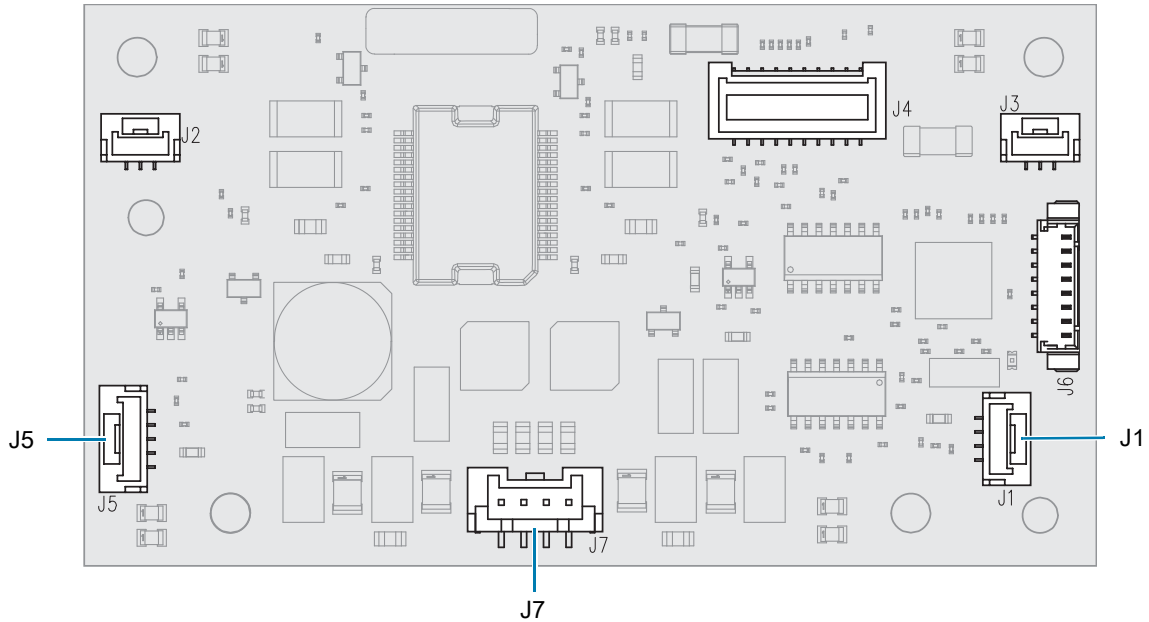


## Remove the Ribbon Drive System

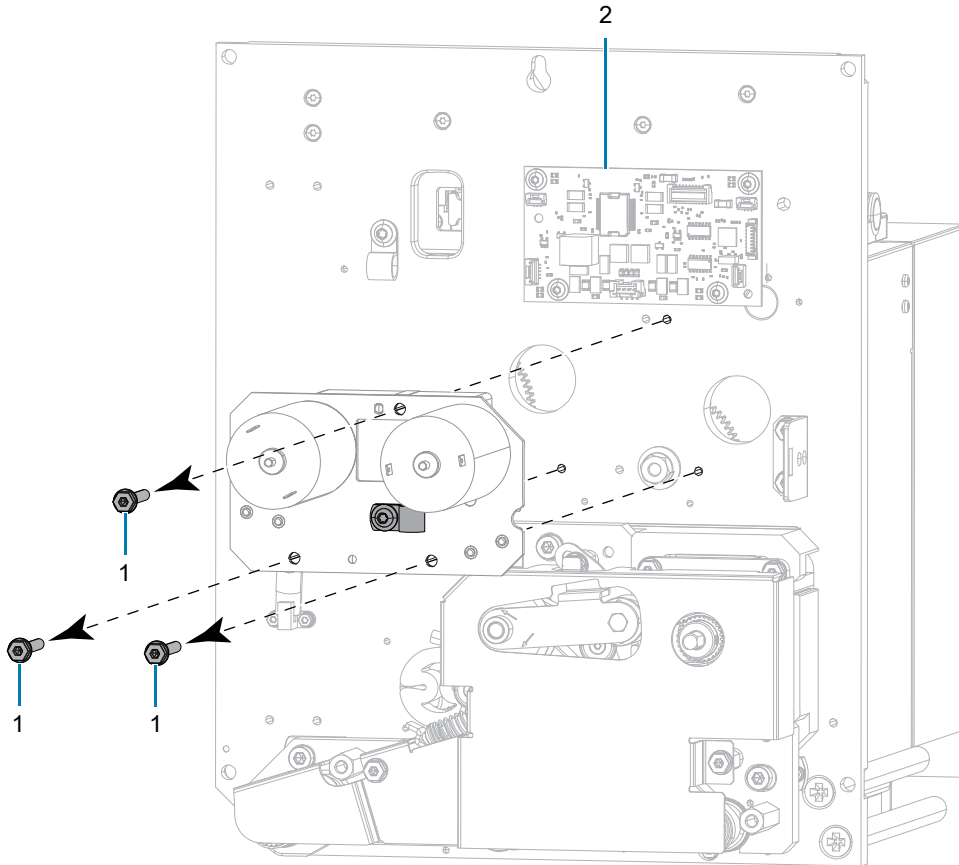


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

1. Remove the ribbon drive system and cables.
  - a. Disconnect the DC motor cable from J7 on the ribbon tension control board.
  - b. Disconnect the encoder sensor cables from J1 and J5 on the ribbon tension control board.




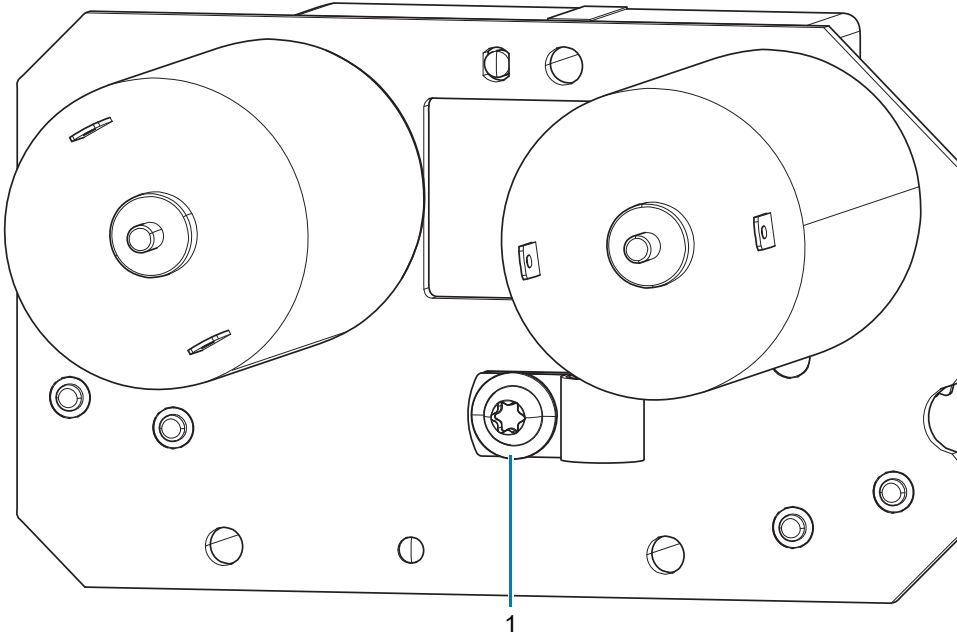
- c. Remove the three ● 3mm hexagon ribbon drive system mounting screws (1).




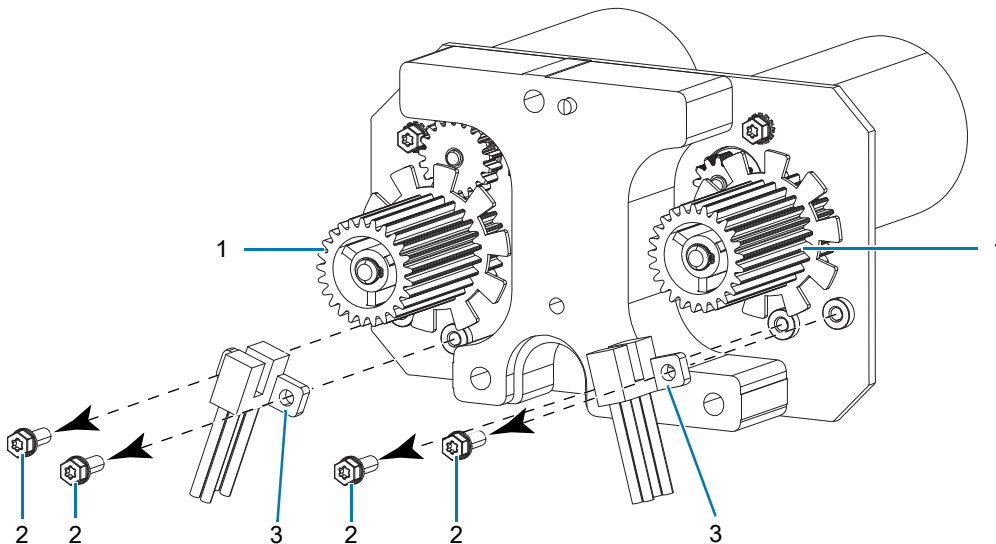
2. Remove the ribbon drive system from the main frame.

## Replace the Supply and Take-Up Encoder Sensors

1. Remove the encoder sensors.
  - a. Open the cable clamp by removing the  T20 screw (1).




- b. Flip the ribbon drive system so the black ribbon drive gears (1) are facing you.
  - c. Remove the two  T9 mounting screws (2) securing each encoder sensor.
  - d. Remove both encoder sensors (3).




for parts & service call QLC (800) 837-1309

## 2. Replace the encoder sensors.

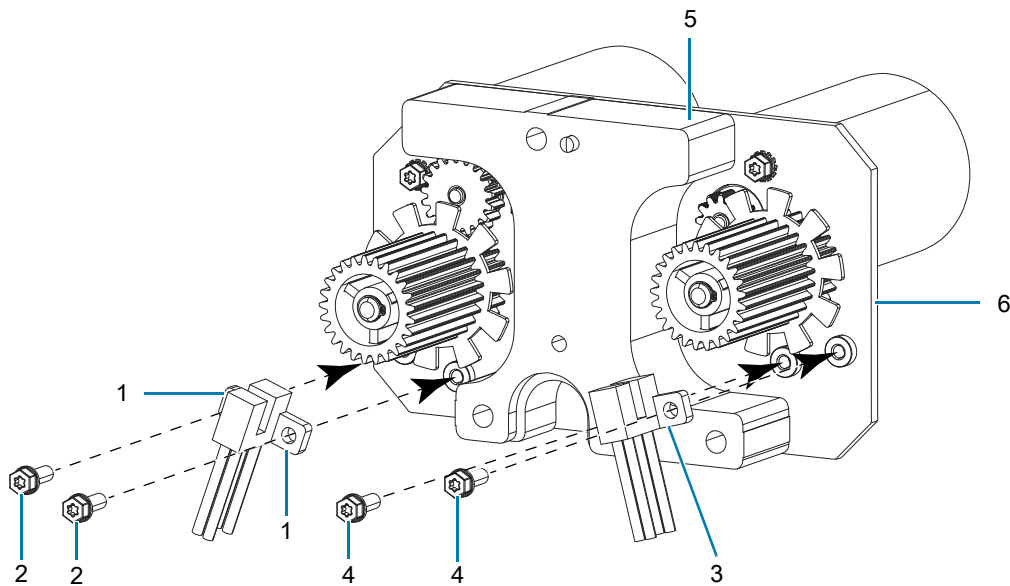
- a. Align the new supply encoder sensor holes (1) with the two inserts and secure with the two  T9 mounting screws (2).

The supply encoder sensor (1) is located directly above the stepper motor (when viewed from the electronics enclosure).

- b. Align the new take-up encoder sensor holes (3) with the two inserts and secure with the two  T9 mounting screws (4).


The take-up encoder sensor (3) is located to the side of the supply spindle.

- c. Thread the sensor cables under the heatsink (5) and the ribbon drive bracket (6), and up through the cable clamp on the front of the ribbon drive system.



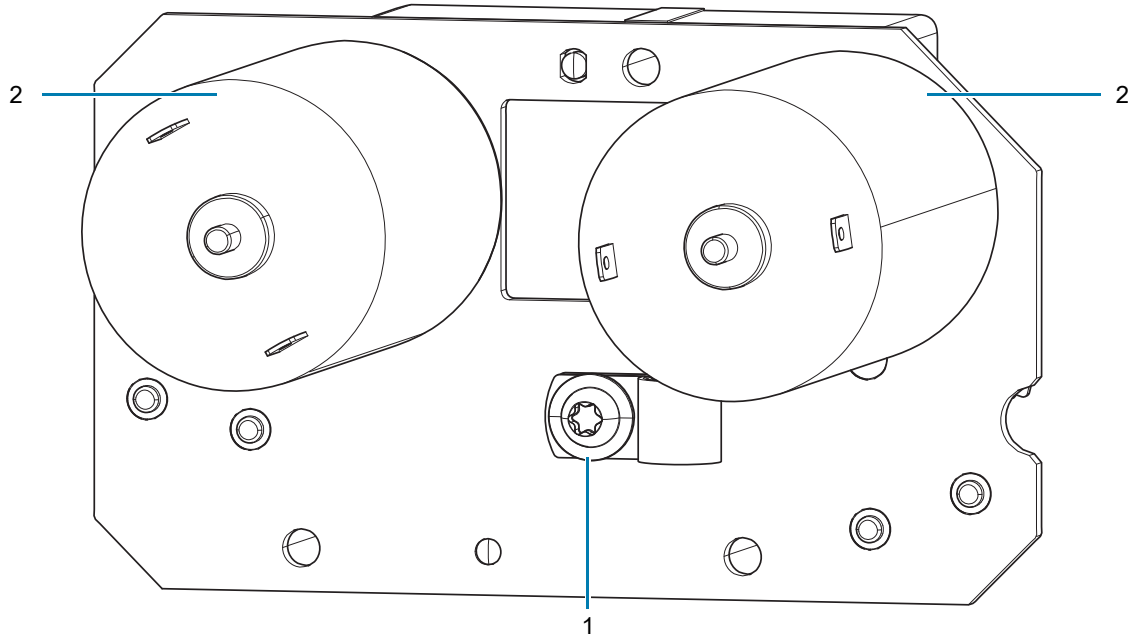
1	Supply encoder sensor (for RH printer)	4	Take-Up encoder sensor mounting screws
2	Supply encoder sensor mounting screws	5	Heatsink
3	Take-Up encoder sensor (for RH printer)	6	Ribbon drive bracket



- d. Replace the  T20 screw to close the cable clamp (1) and secure the cables.

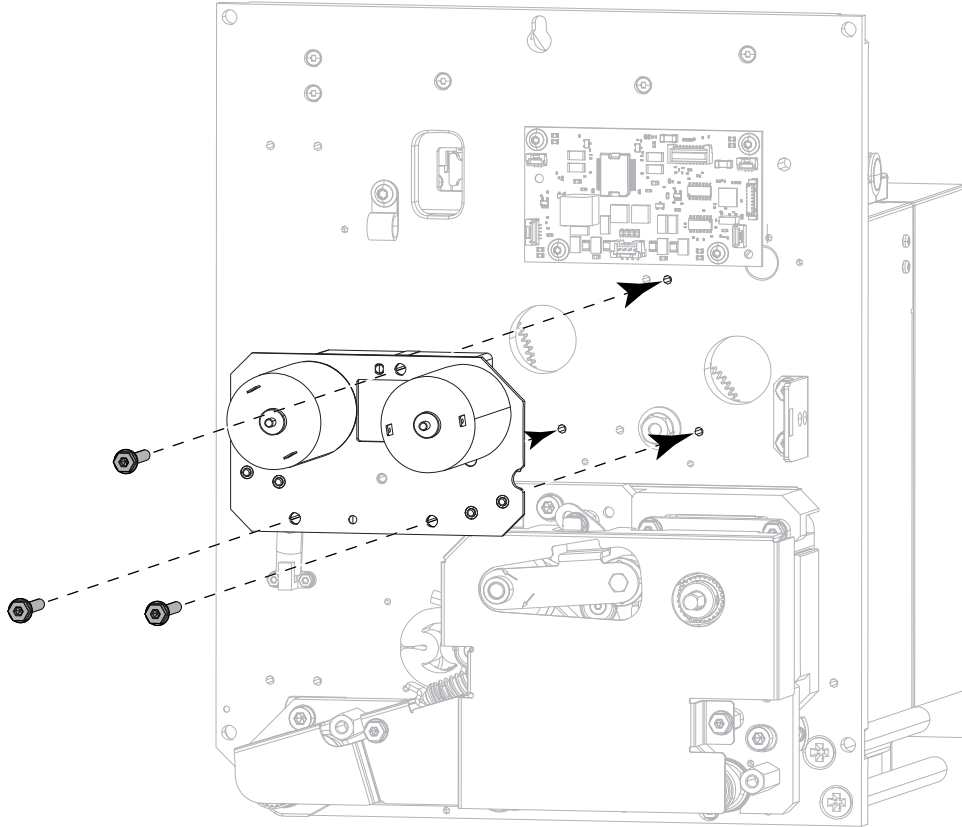


Note: While the cables are not shown, there are two encoder sensor cables and two DC motor (2) cables secured inside the cable clamp. Ensure that the cables are not pinched by the cable clamp.



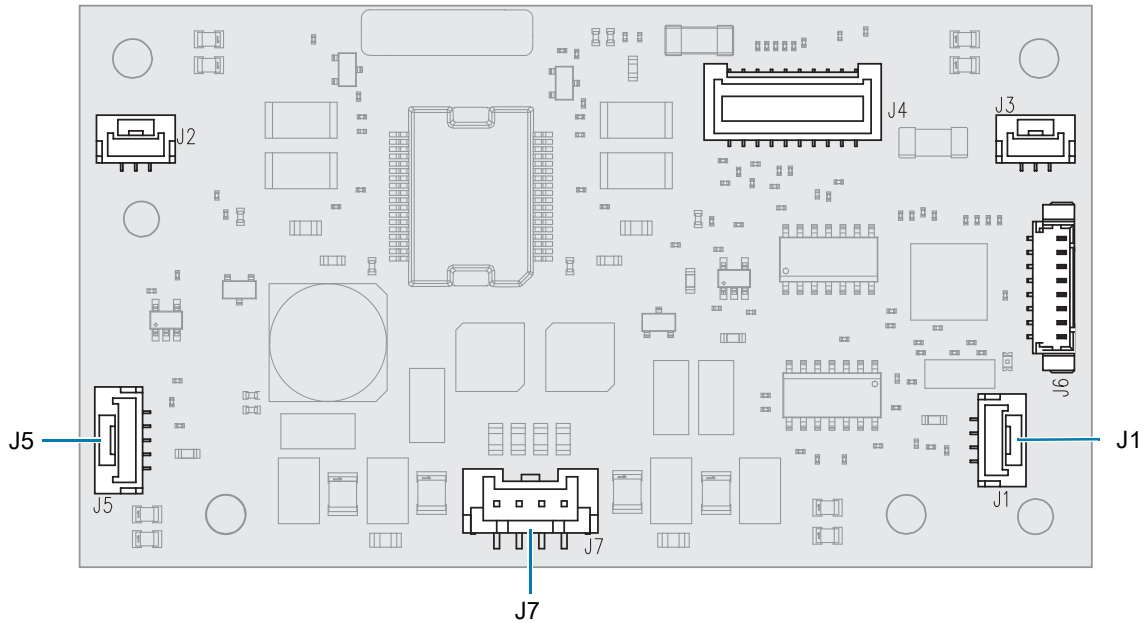
## Replace the Ribbon Drive System

1. Replace the ribbon drive system.
  - a. Align the heatsink pin, supply and take-up gears, and the bracket with their respective holes.
  - b. Reinstall the three 3mm hexagon mounting screws to secure the ribbon drive system.



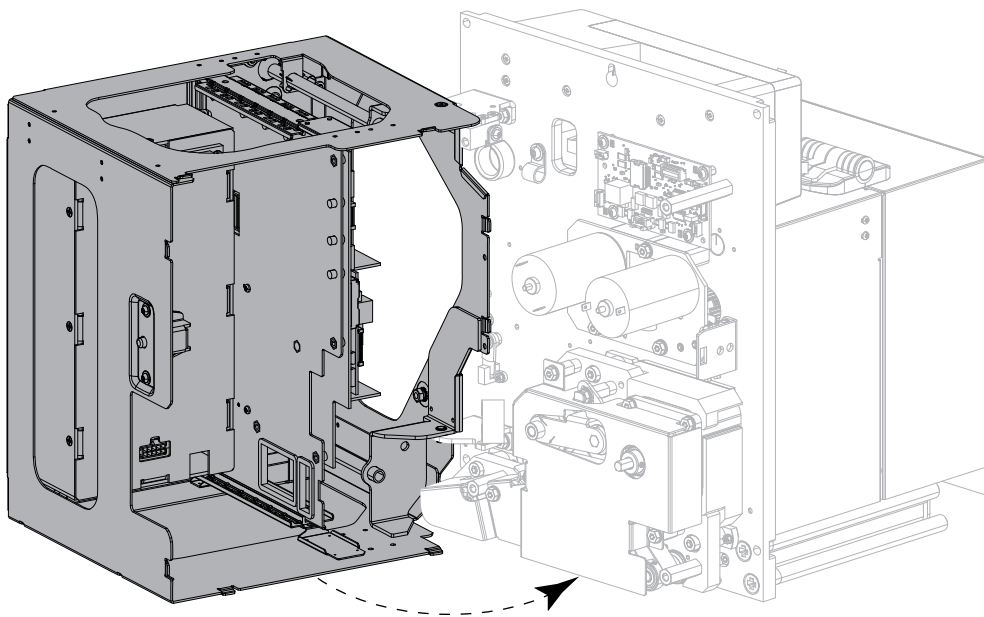
2. Reconnect the supply encoder sensor cable to J1 (1) on the ribbon tension control board.
  - a. Reconnect the take-up encoder sensor cable to J5 (2) on the ribbon tension control board.

- b. Reconnect the DC motor cable to J7 (3) on the ribbon tension control board.

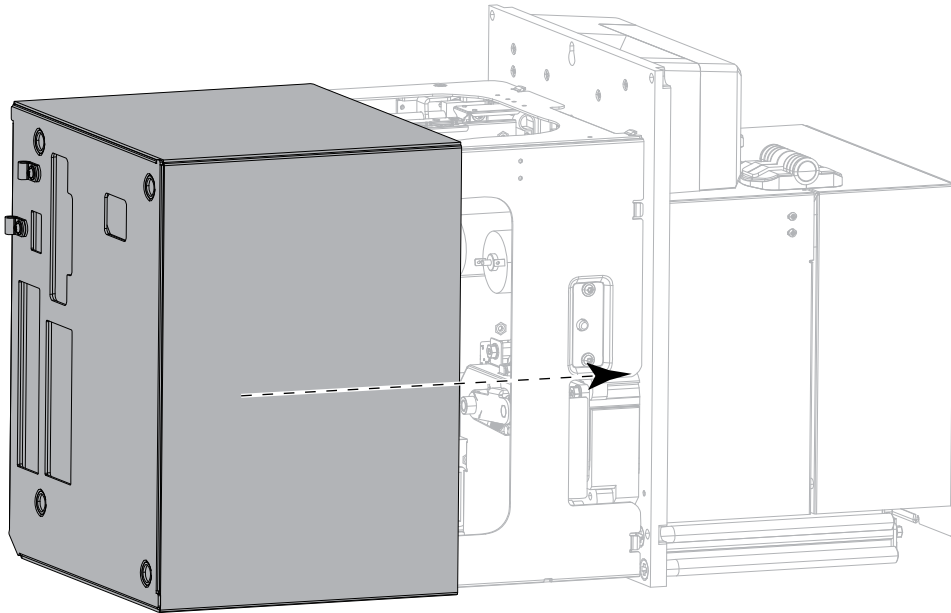


## Close the Electronics Enclosure

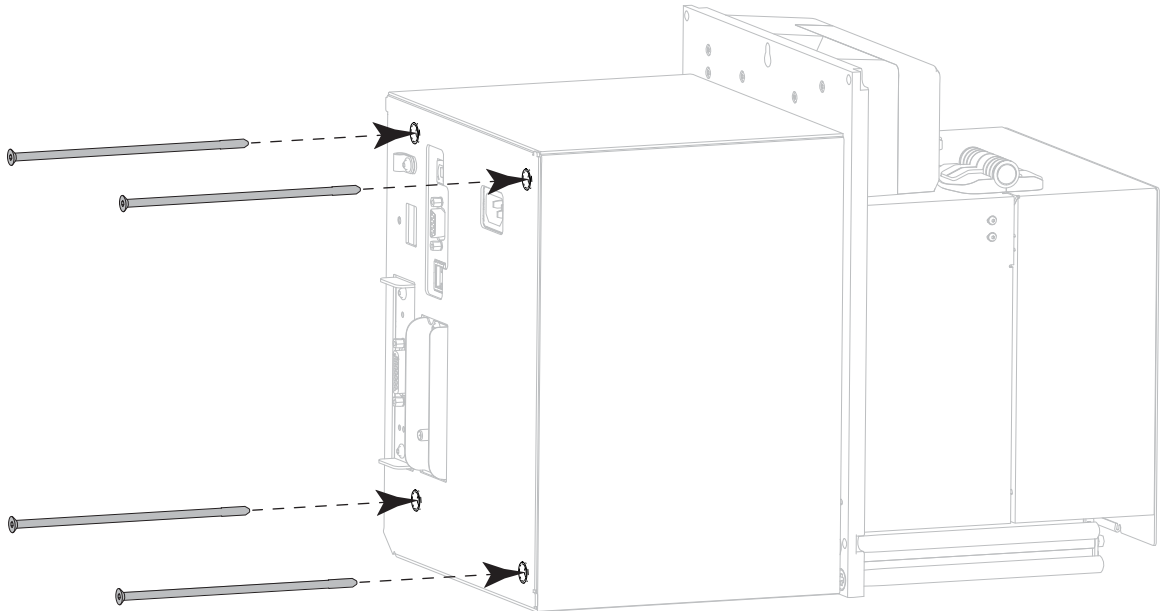
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

# Ribbon Strip Plate and Static Brush Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

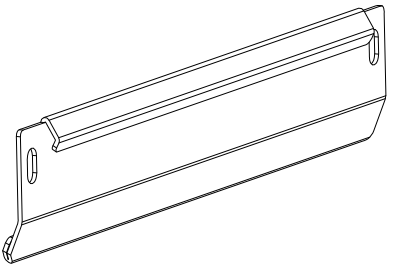
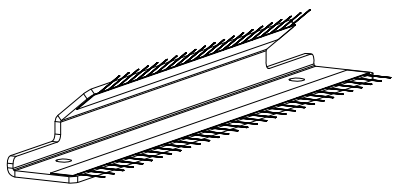




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Strip plate Qty: 1
	Anti-static brush Qty: 1
	Screw (pan washer mach M3x6) Qty: 4
	 3mm

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10
- Metric hexagon keys or bits  
Size: 3mm, 4mm
- ⊕ Phillips screwdrivers or bits  
Size: PH2
- Sorting bin for screws and small parts (optional)
- Packing or masking tape.

for parts & service call OLC (800) 837-1309

## Prepare for Installation



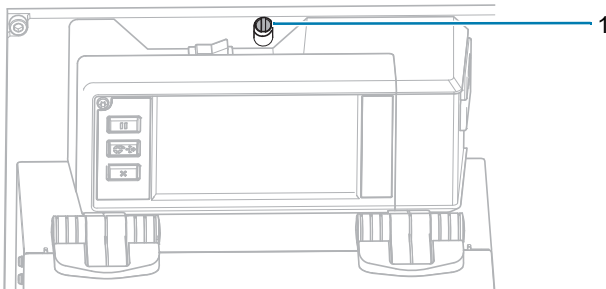
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



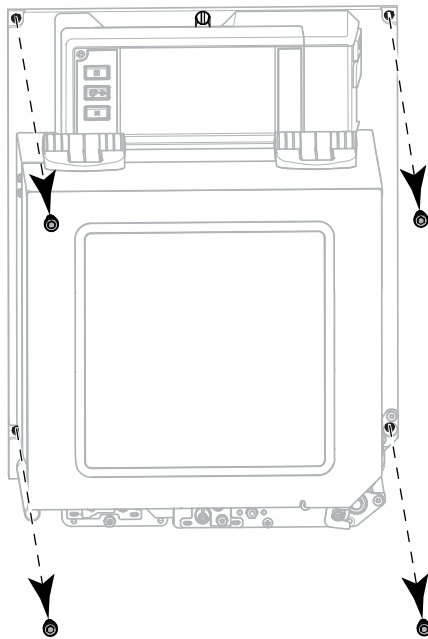
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.

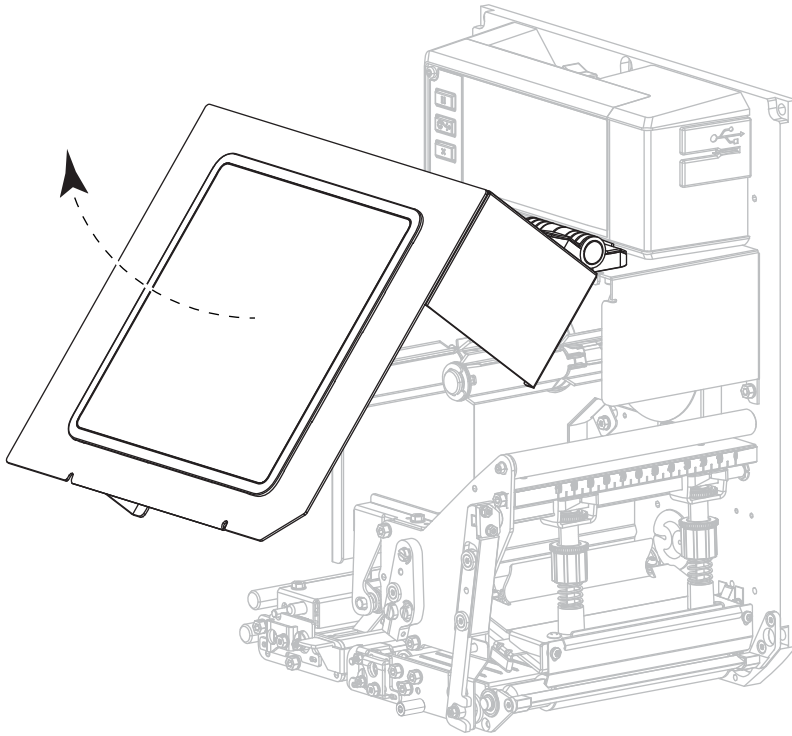


2. Remove the four screws securing the print engine to the applicator.



3. Lift the print engine off of the center mounting bolt and place it on a workbench.

4. Open the media cover.




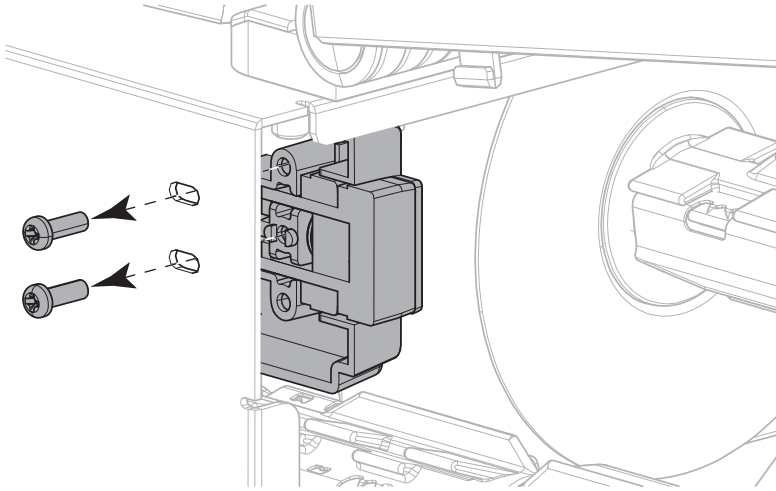



## Remove the Media Cover

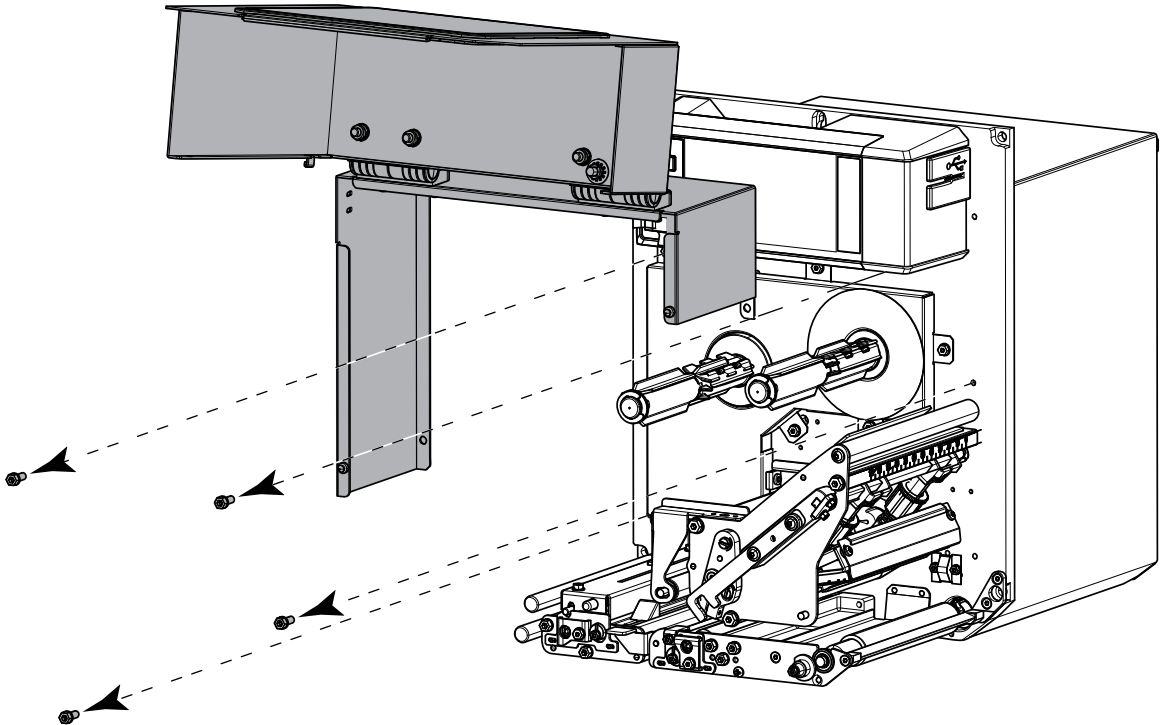


**NOTE:** After removing the media door open switch, use packing or masking tape to secure the components inside the switch.


1. Remove the two  PH2 screws securing the media door open switch.

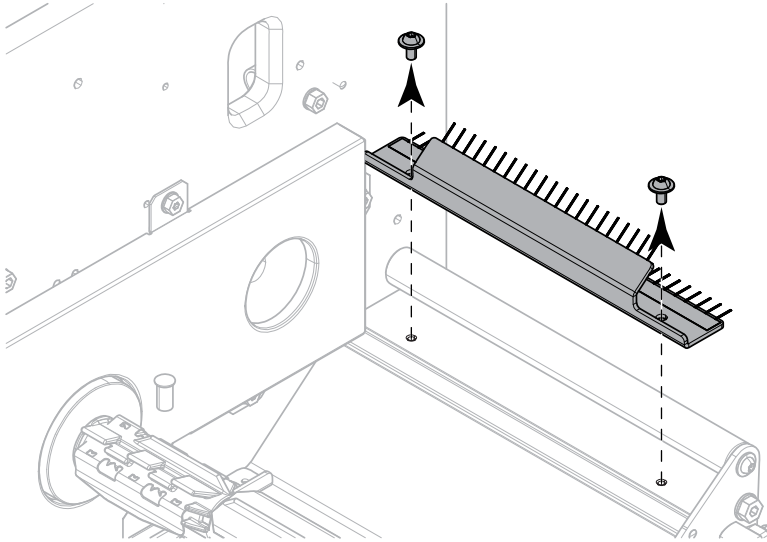



2. Remove the four  4mm screws securing the media door and remove the media door.

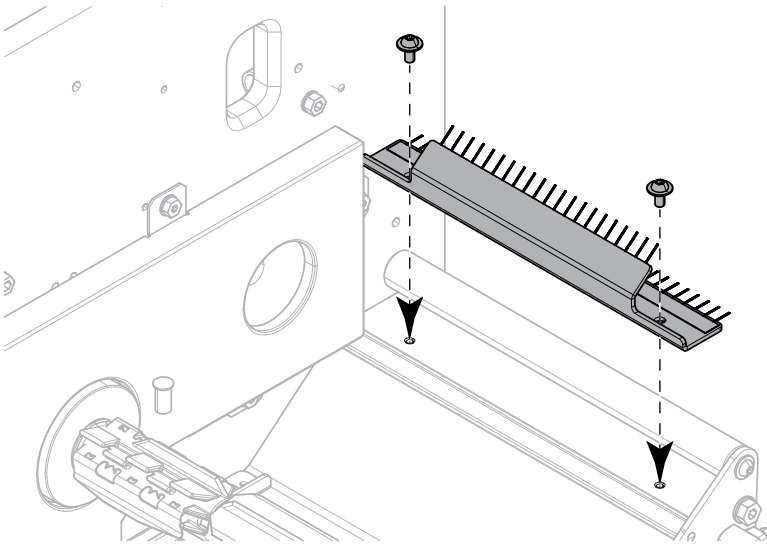


## Replace the Anti-Static Strip


1. Remove the two  T10 screws securing the anti-static strip and lift out the old anti-static strip.

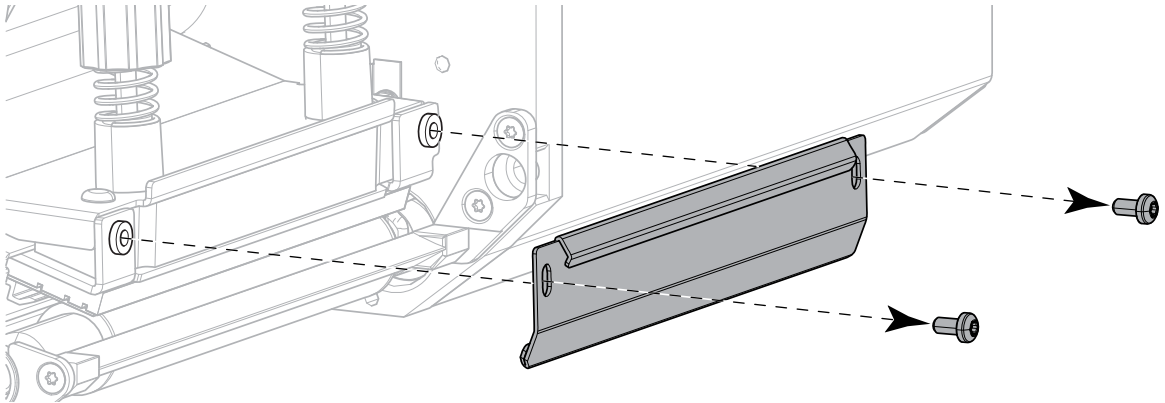



2. Install the new anti-static strip and secure with the two new  T10 screws.

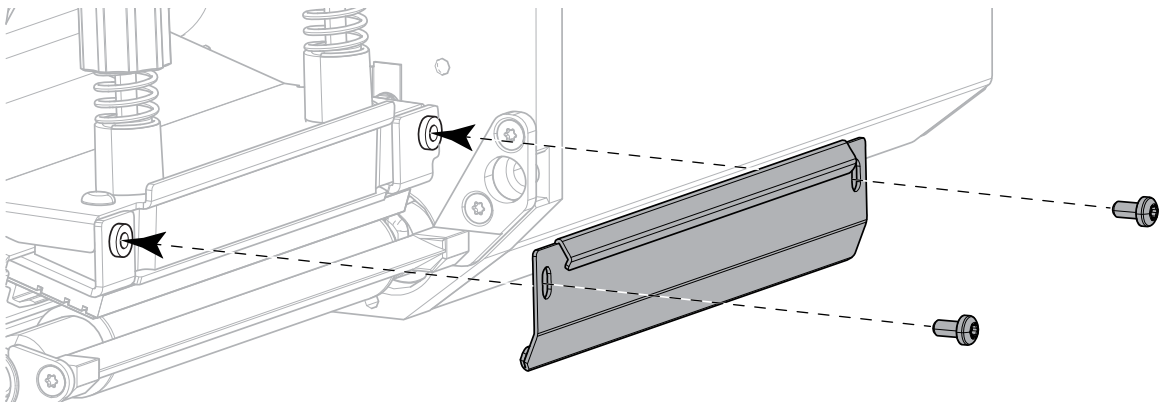


## Replace the Strip Plate

1. Remove the two  T10 screws and strip plate from the print engine.

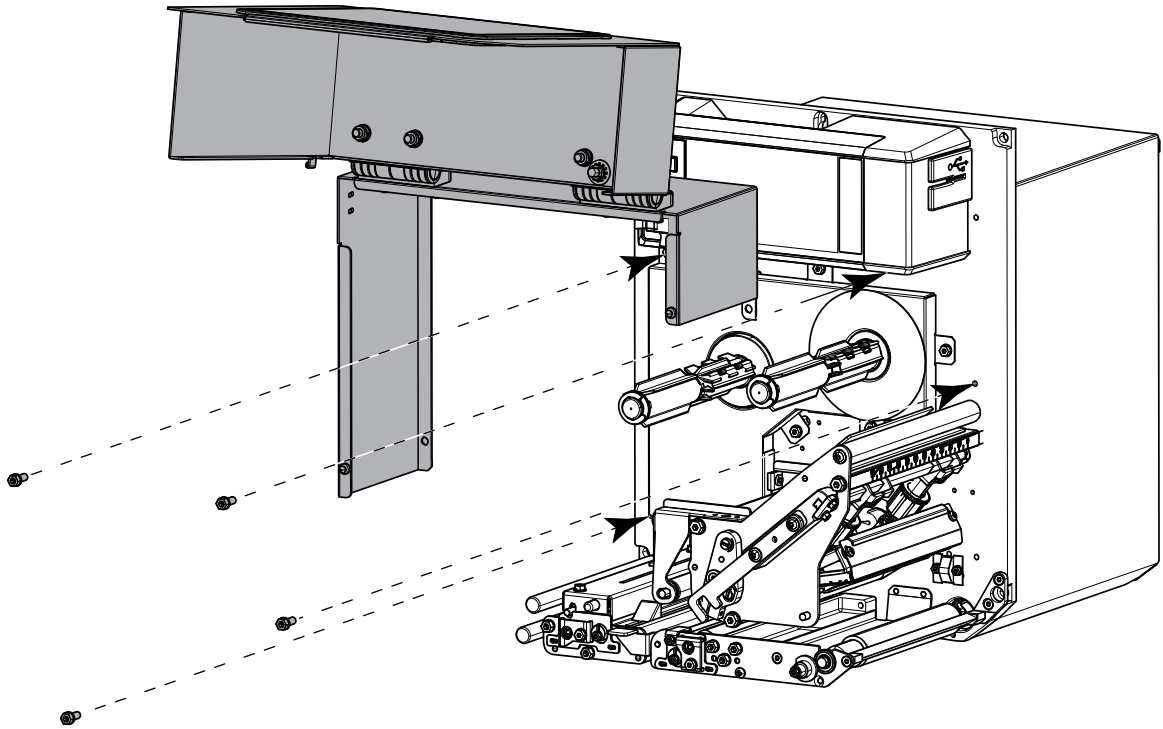


2. Install the new strip plate with the two  T10 screws.

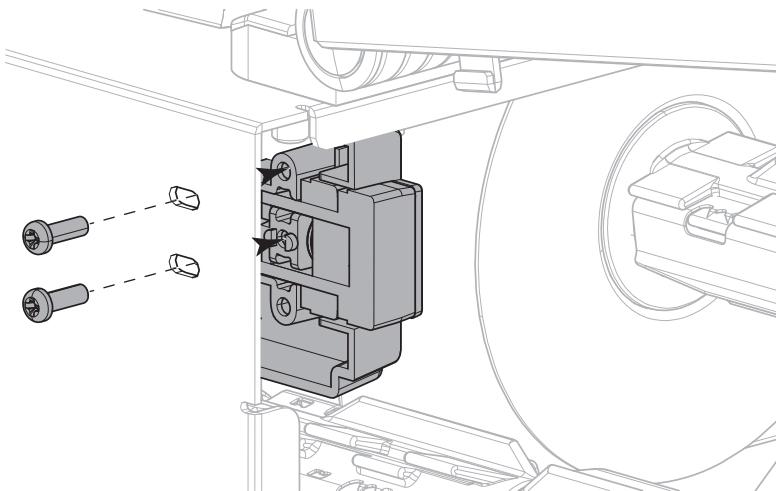


## Install the Media Cover

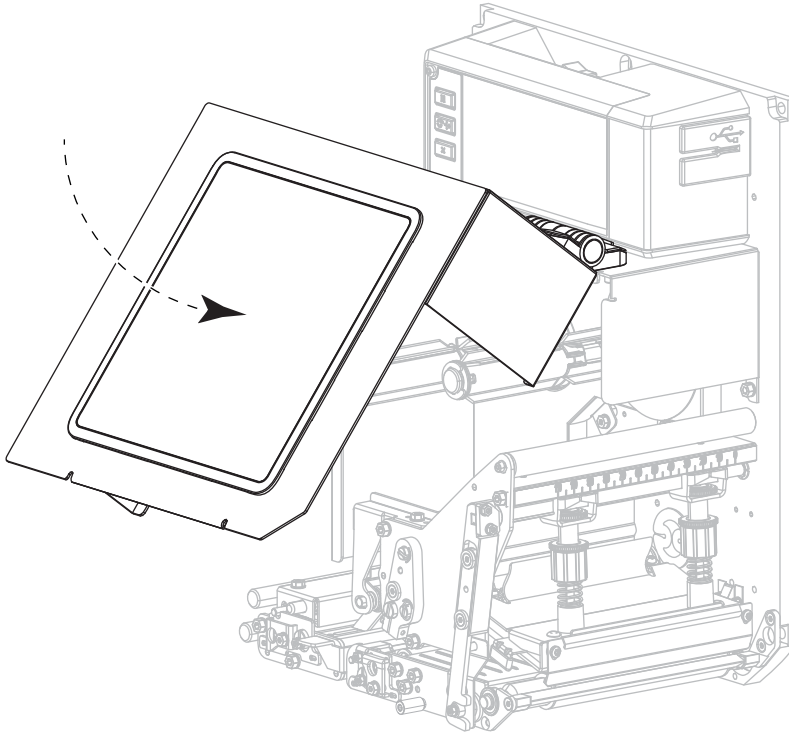
1. Install the media cover onto the printer and secure with the four ● 4mm screws.



2. Remove any tape, if use, from the media door switch
3. Install the media door switch and secure it with the two ⊕ PH2 screws.



4. Close the media cover.



### Resume Printer Operation

1. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
2. Reconnect AC power cord and interface cables.
3. Reinstall media and ribbon (if used).
4. Turn on (I) the printer power.
5. Close the printhead assembly.
6. 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

## Adjust the Strip Plate

The strip plate will need adjustment for proper tracking and separation of the ribbon from the media after printing.

1. Initiate a PAUSE self-test.
2. Press PAUSE to restart the printing.
3. 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.
  - If the problem persists, repeat [step 1](#), [step 2](#), and [step 3](#) until the desired results are reached.
4. Resume Printer Operation

**The installation is complete.**

# Ribbon Take-up Mounting Hardware Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.








## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.




	Bracket ribbon take-up RH Qty: 1
	Bracket ribbon take-up LH Qty: 1
	Heat sink motor spacer Qty: 1
	Cable clamp nylon Qty: 1
	Cable clamp .25 Qty: 1
	Screw (M4×30 FL TX NI) Qty: 3



## Ribbon Take-up Mounting Hardware Maintenance Kit

	Screw (pan washer mach M4x8) Qty: 1	 T10
	Screw (M3x8 FL TX NI) Qty: 8	 T10
	Screw (M3x.5x6 PN PH BO) Qty: 2	 PH1
	Retaining ring Qty: 2	

### Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10, T15
-  Metric hexagon keys or bits  
Size: 3mm, 5mm
-  Phillips screwdrivers or bits  
Size: PH1
- Retaining ring pliers
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

for parts & service call QLC (800) 837-1309



## Prepare for Installation



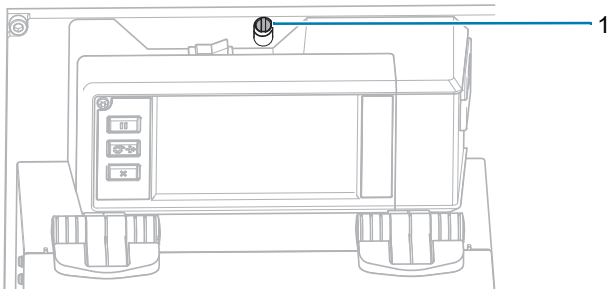
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



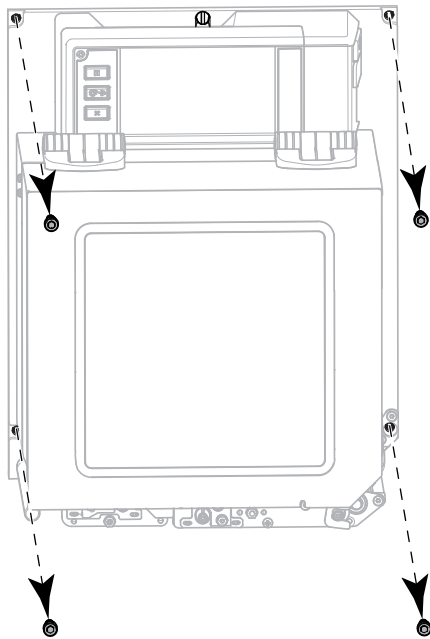
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



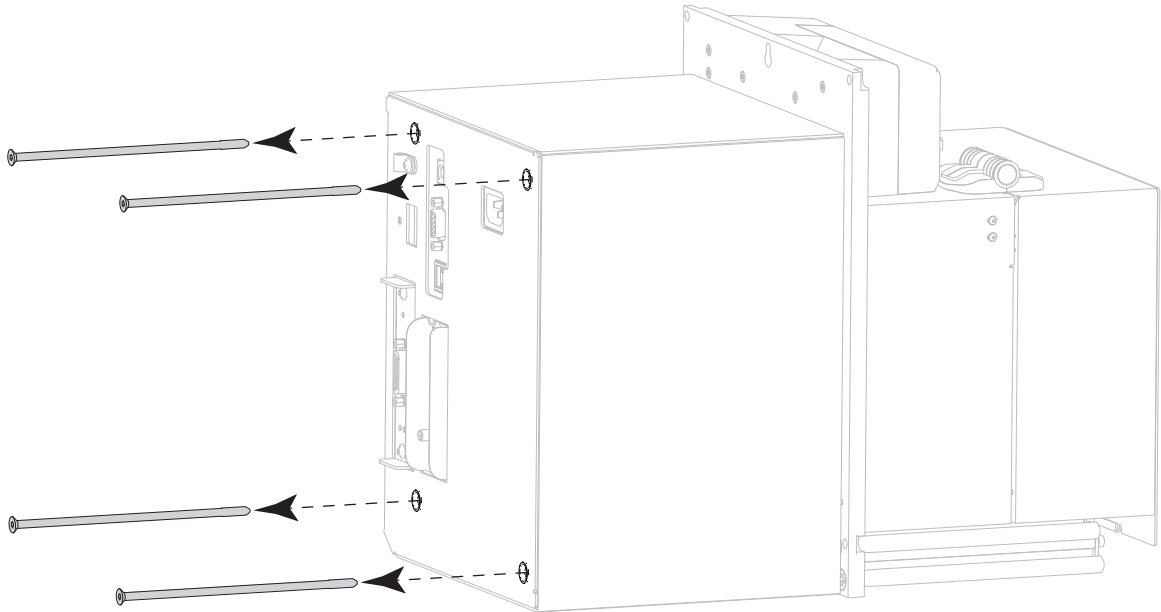
2. Remove the four screws securing the print engine to the applicator.



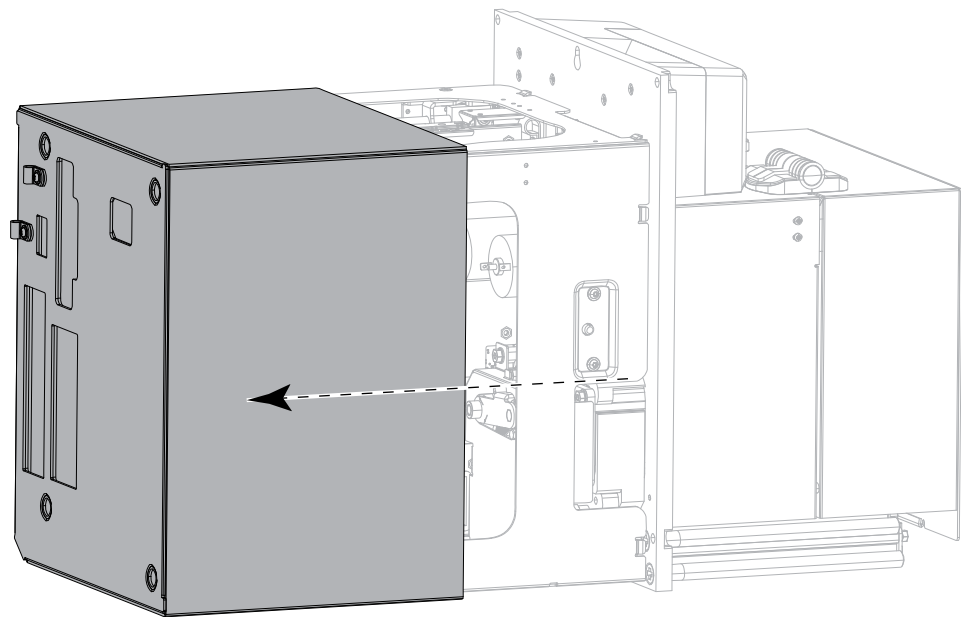
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



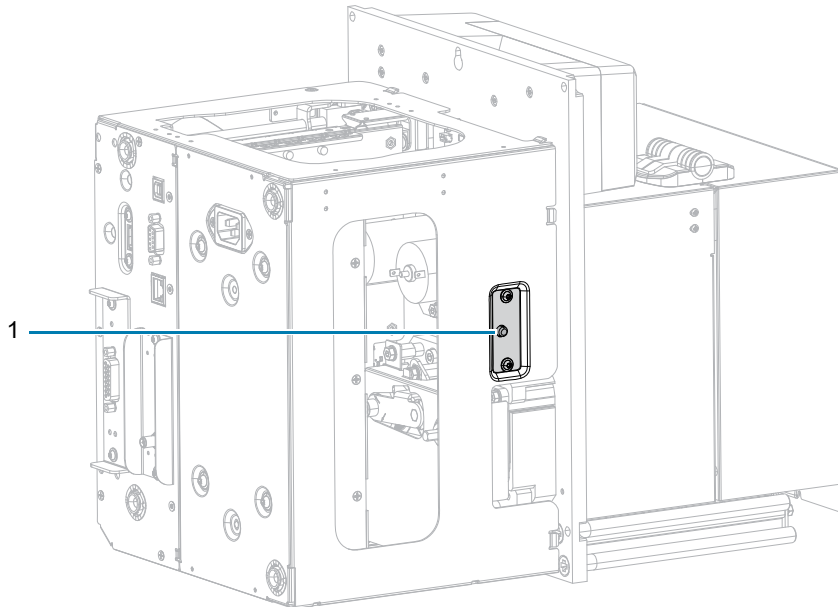
2. Remove the electronics enclosure cover from the print engine.



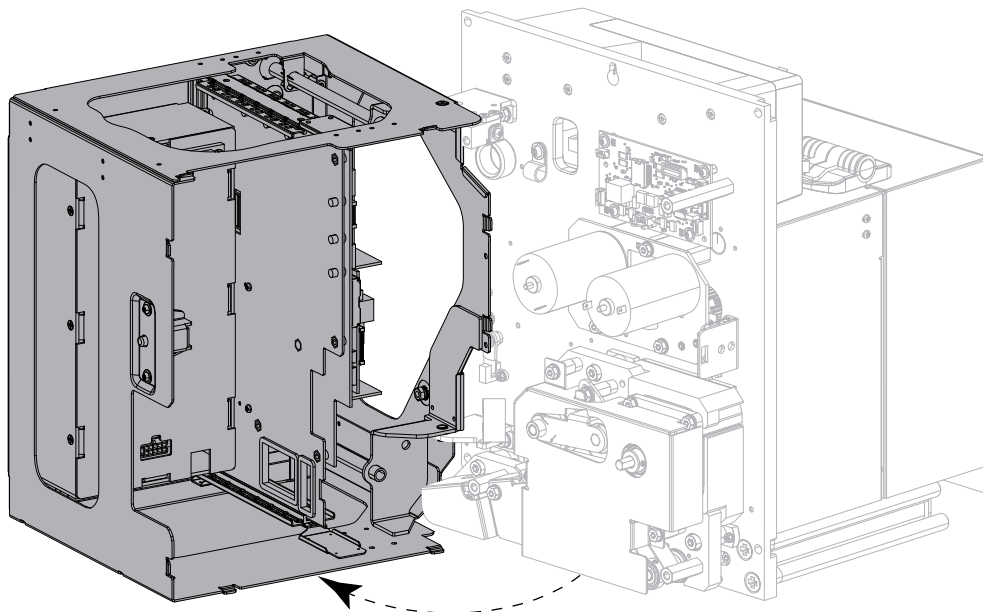
3. Press the electronics enclosure latch (1).



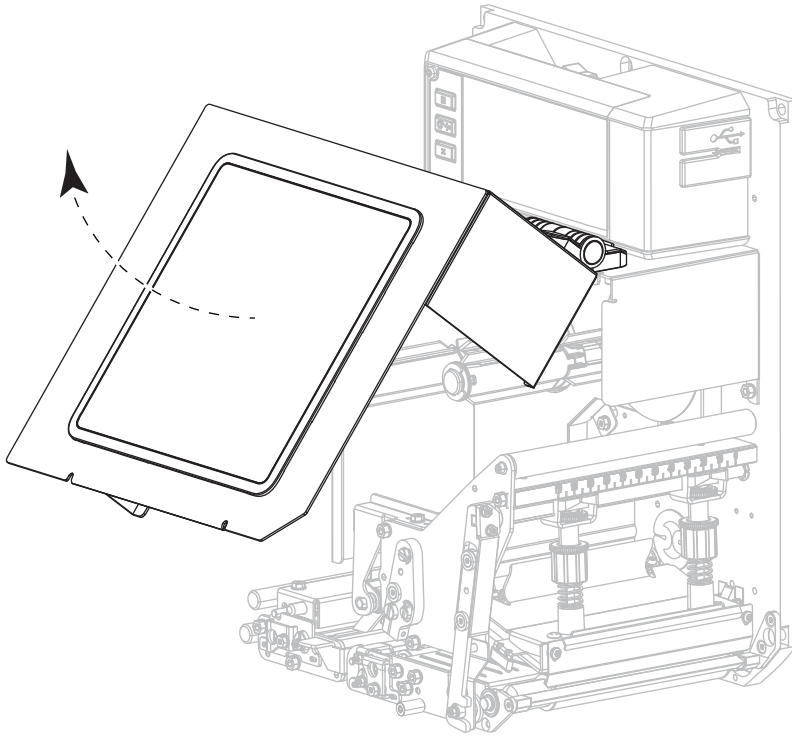
**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.





5. Open the media cover.

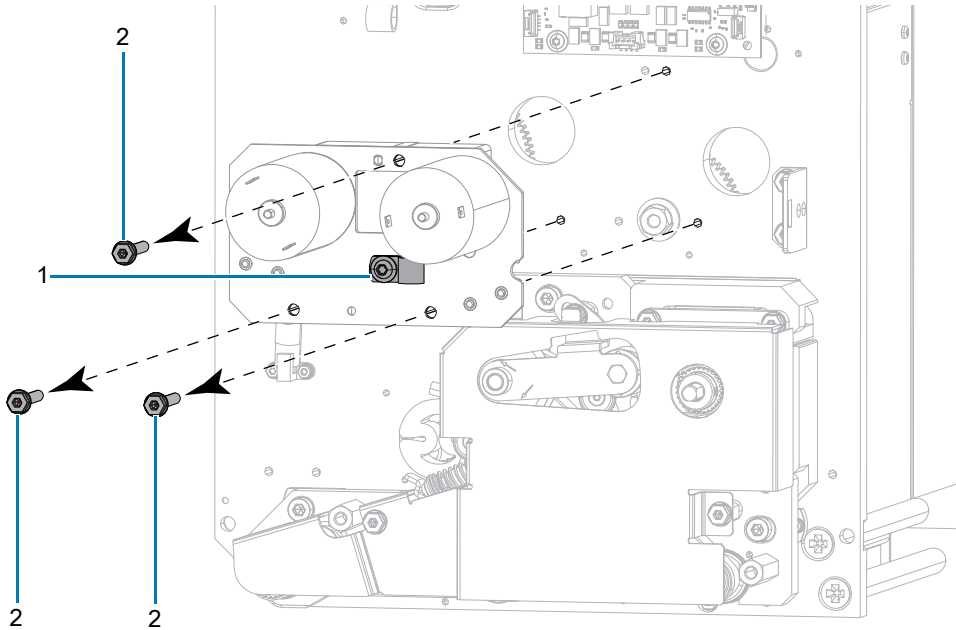


## Replace the Ribbon Take-up Bracket

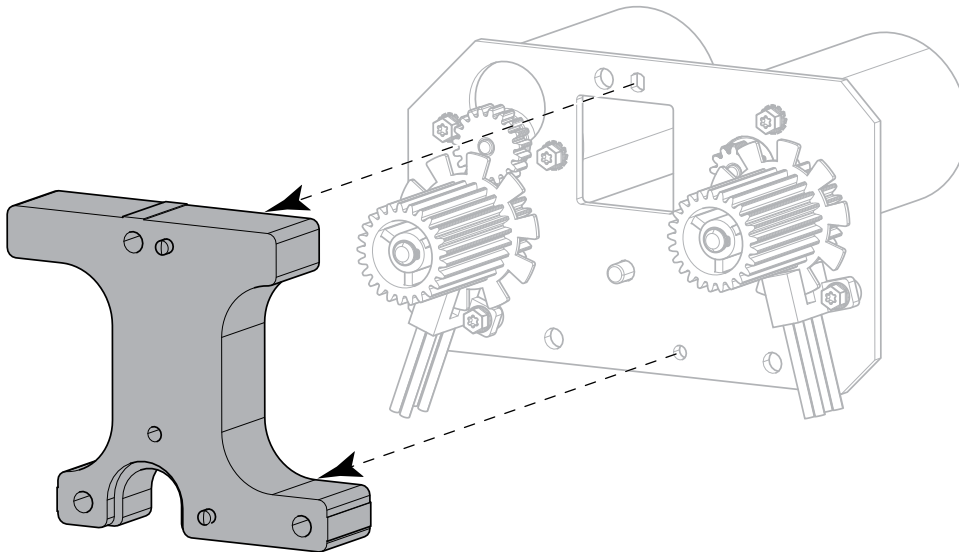


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

1. Disconnect the cables from the ribbon motor control board and the ribbon take-up drive (RTU).
2. Remove the  T10 screw and cable clamp (1).
3. Remove the three  T10 screws (2), securing the ribbon take-up drive.




4. Remove the heatsink bracket from the ribbon take-up drive.

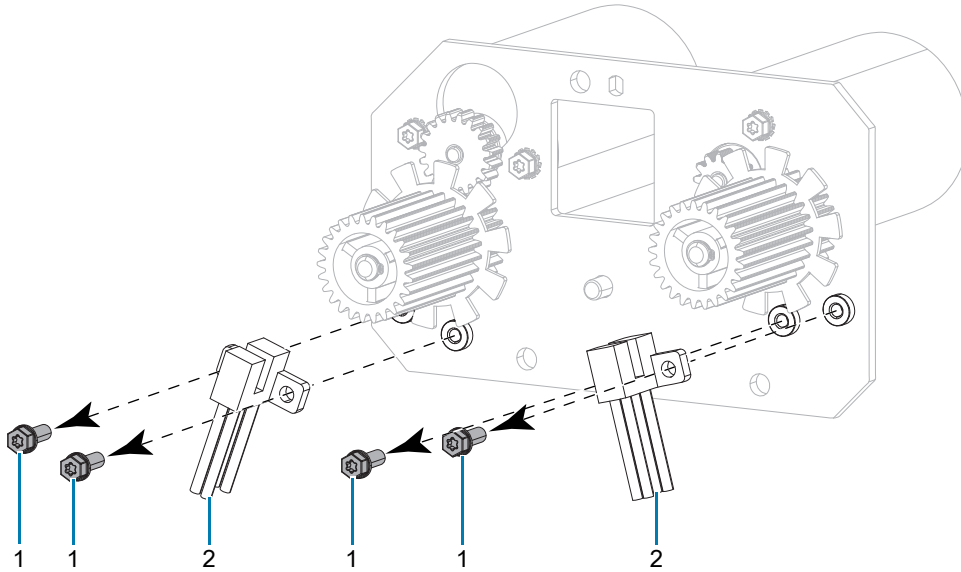


## Ribbon Take-up Mounting Hardware Maintenance Kit

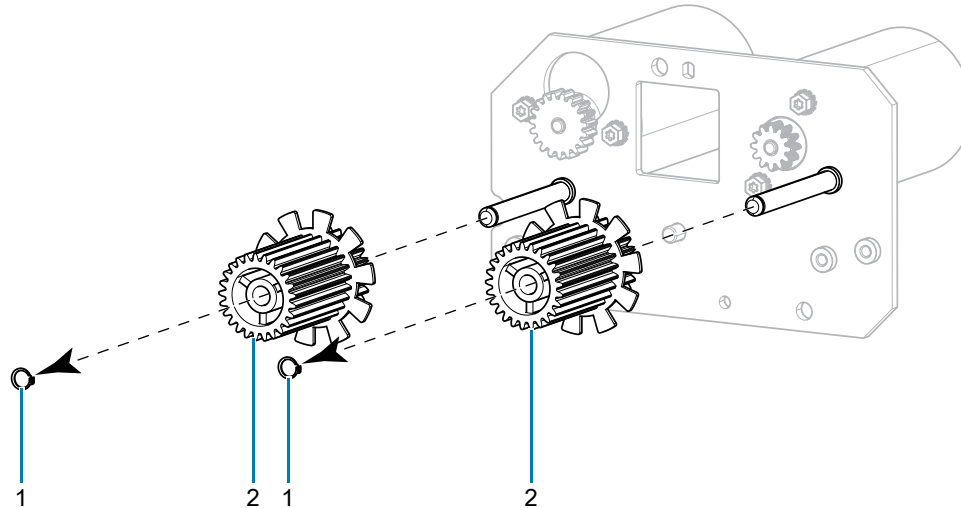


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

1. Remove the four  T10 screws (1) and the ribbon encoder sensors (2).




2. Remove the retention clips (1) and pull the gears (2) from the shafts.

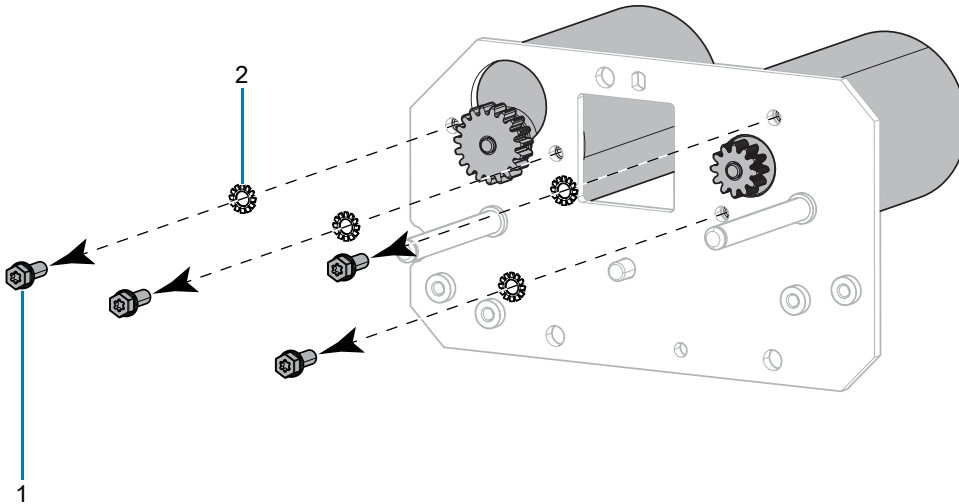



for parts & service call QLC (800) 837-1309

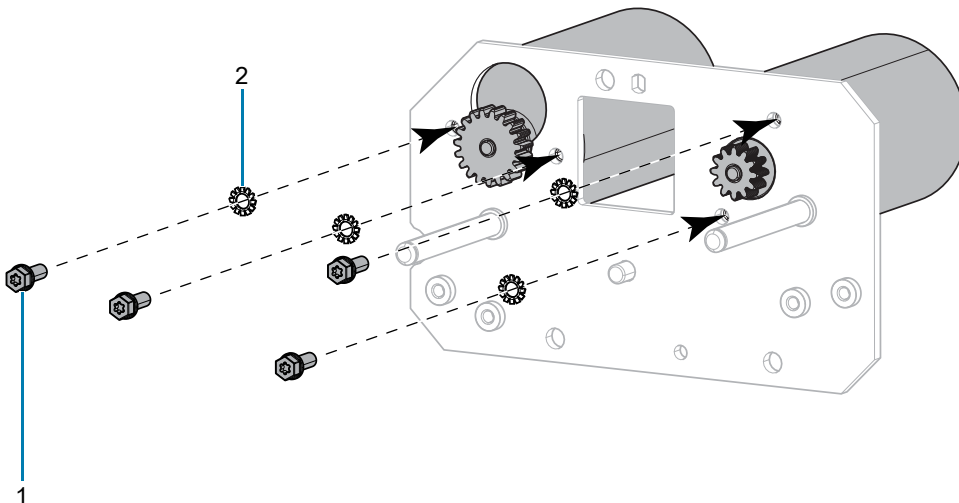


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

1. Remove the four  T10 screws (1), and lock washers (2), securing the ribbon drive motors.



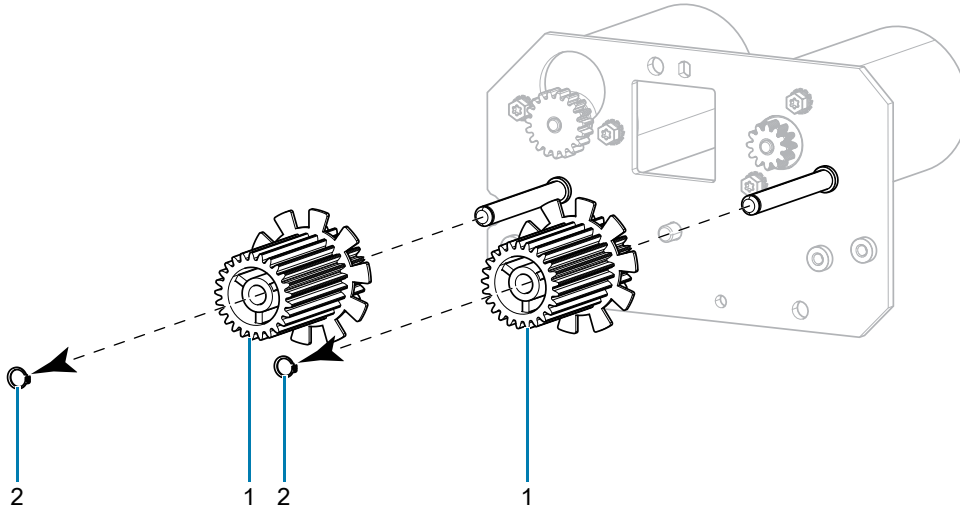
2. Remove each ribbon drive motor from the bracket.
3. Install the drive motors in the new bracket and secure with the four  T10 screws (1) and lock washers (2).




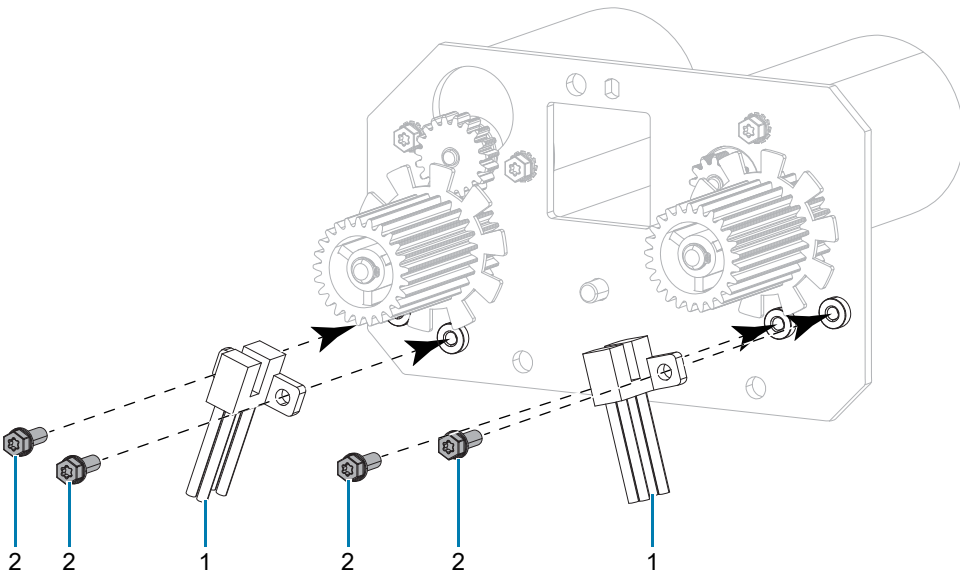
4. Install the gears (1) onto the shafts and install the retaining clips (2).



**CAUTION—EYE INJURY:** 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.



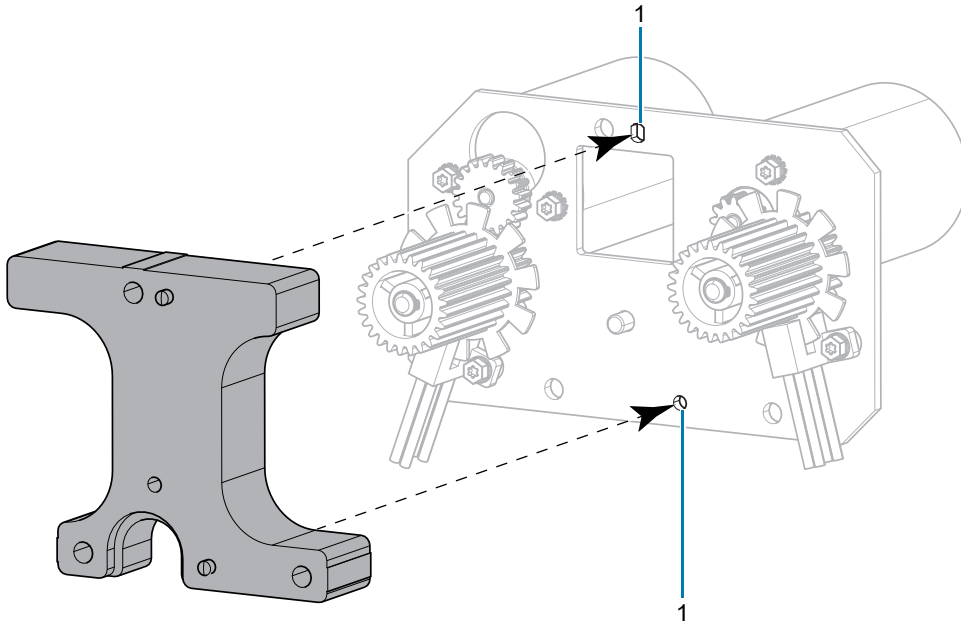
5. Install the ribbon encoder sensors (1) and secure in place with the four  T10 screws (2).




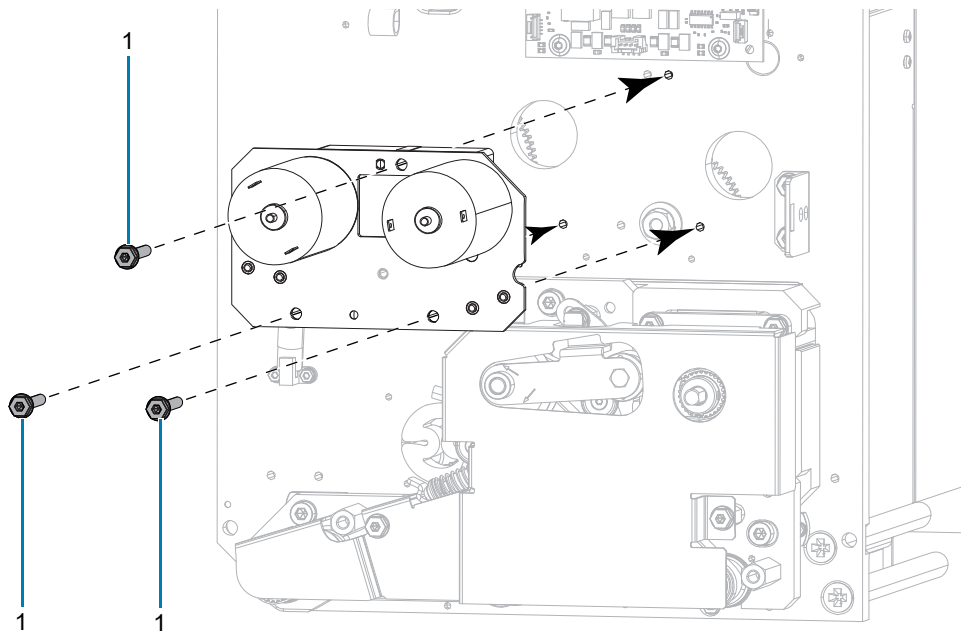


## Ribbon Take-up Mounting Hardware Maintenance Kit

6. Install the new heatsink bracket. Use the guide pins (1) to align the heatsink bracket with the motor drive bracket.



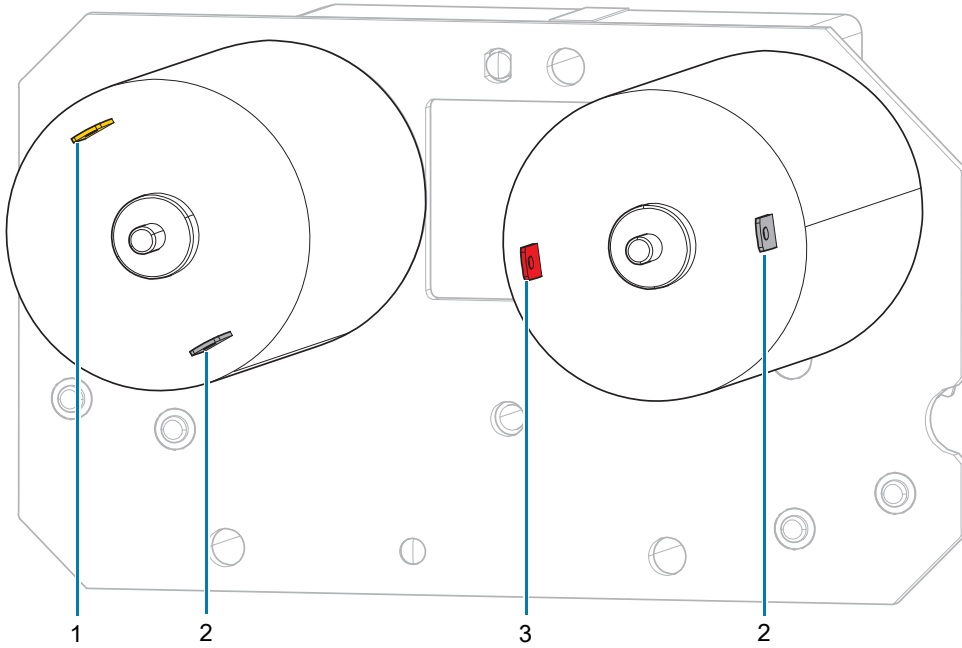
7. Install the ribbon drive with the three  T10 screws (1) securing the ribbon take-up drive.



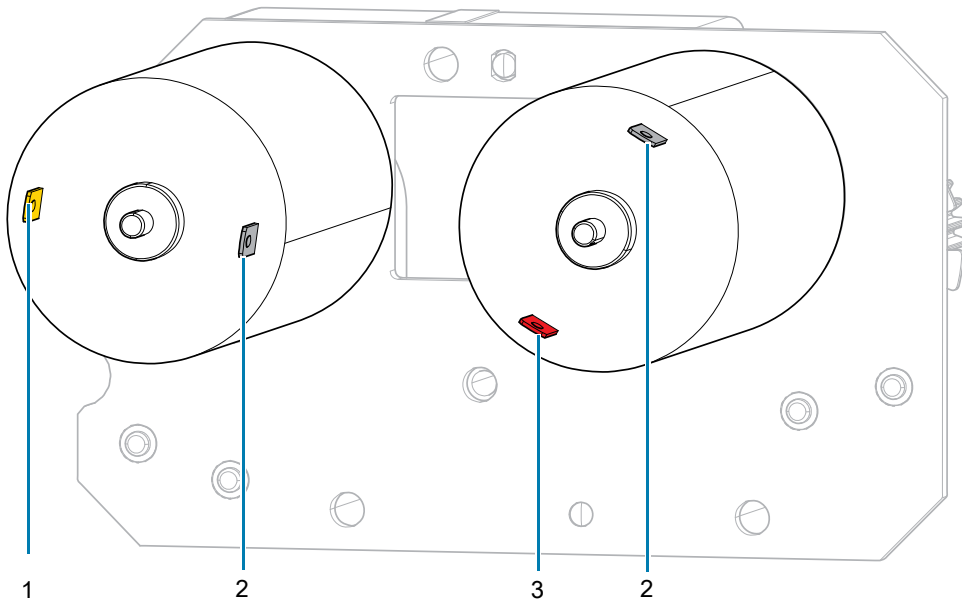
for parts & service call QLC (800) 837-1309

## 8. Connect the RTU motor cables.

RH Model




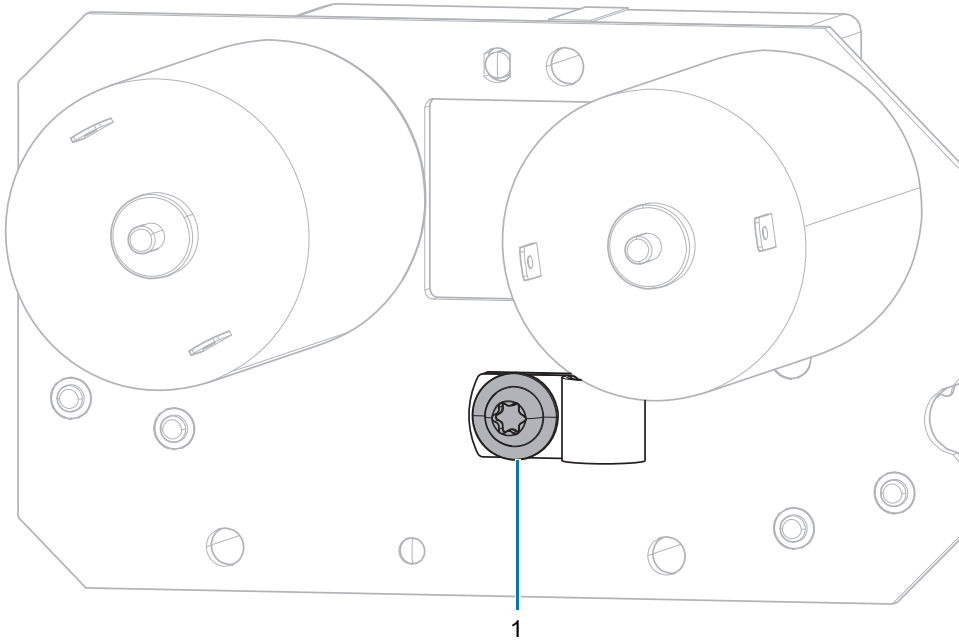
LH Model



1	RTU yellow cable (positive)
2	RTU black cable (ground)
3	RTU red cable (positive)

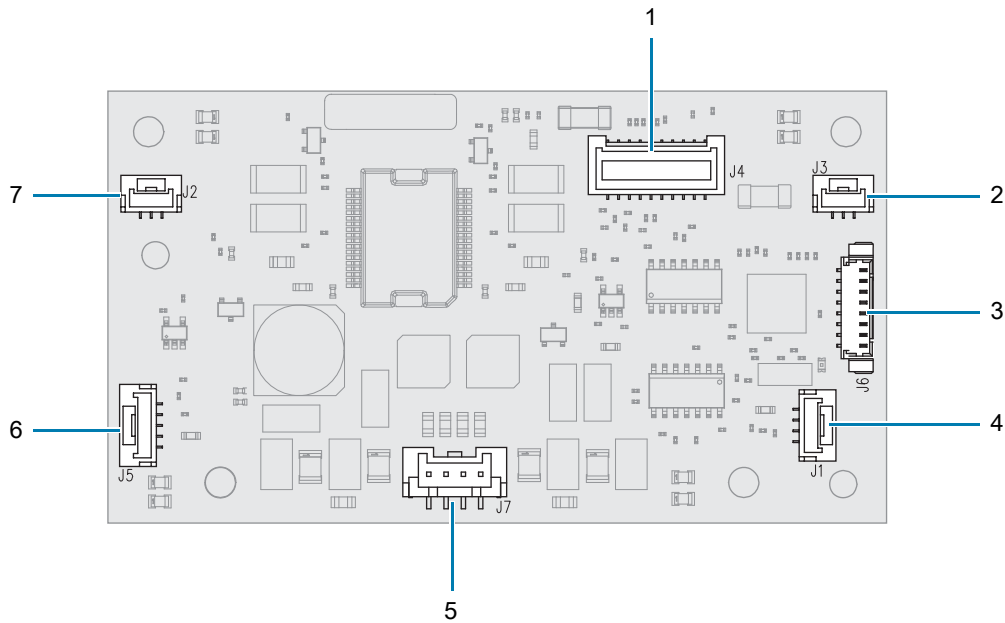
## Ribbon Take-up Mounting Hardware Maintenance Kit

9. Route the RTU cables and encoder sensor cables through the cable clamp and install the cable clamp onto the RTU with the  T10 screw.



for parts & service call QLC (800) 837-1309

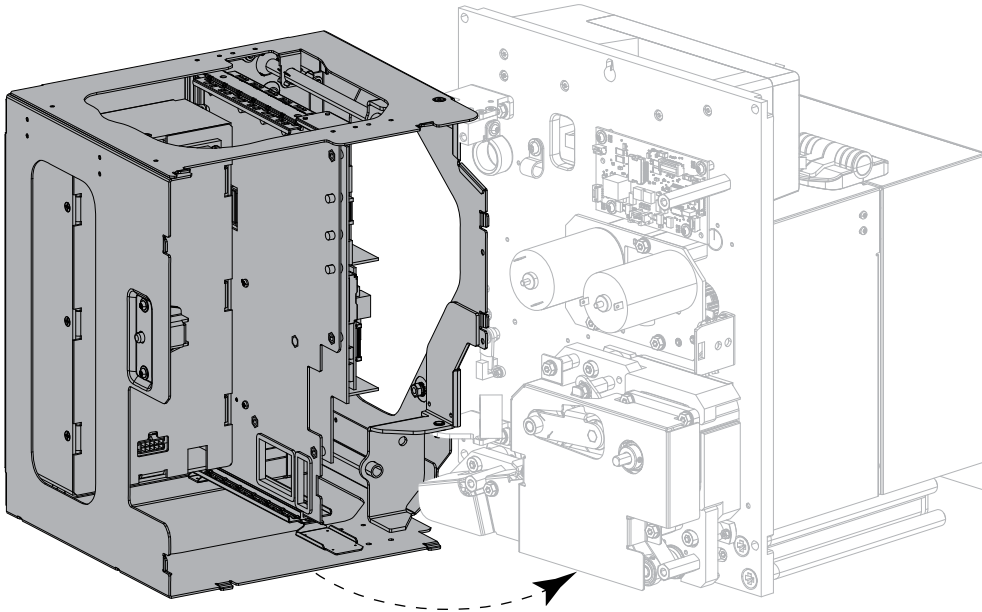
10. Connect the cables to the new ribbon tension control board.



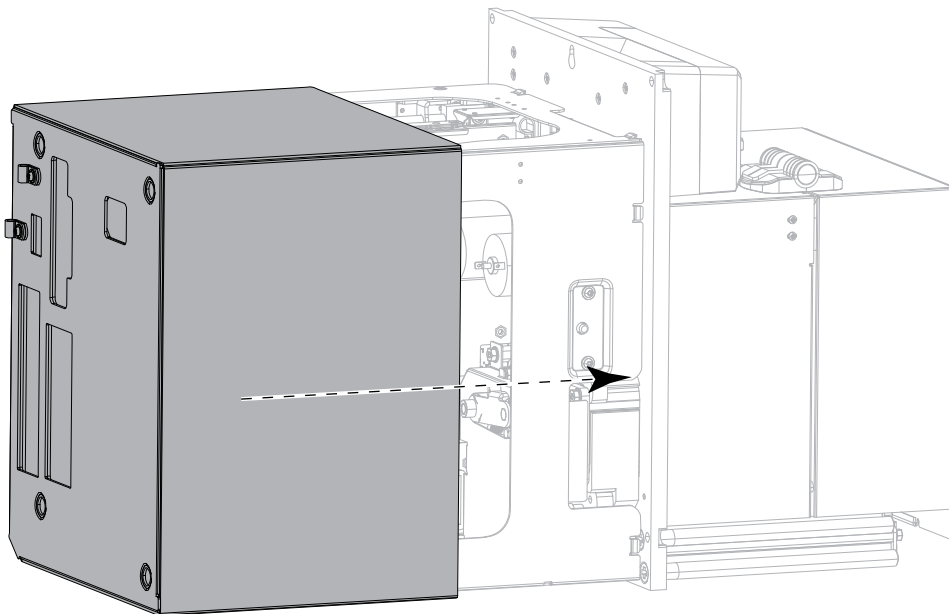
1	Ribbon system connection to the main logic board (MLB)	J4
2	Door-open sensor (RH)	J3
3	Debugging/programming connector (not used)	J6
4	Ribbon supply encoder sensor (red/white/black cable)	J1
5	Ribbon system DC motor	J7
6	Ribbon take-up encoder sensor (red/yellow/black cable)	J5
7	Door-open sensor (LH)	J2

## Close the Electronics Enclosure

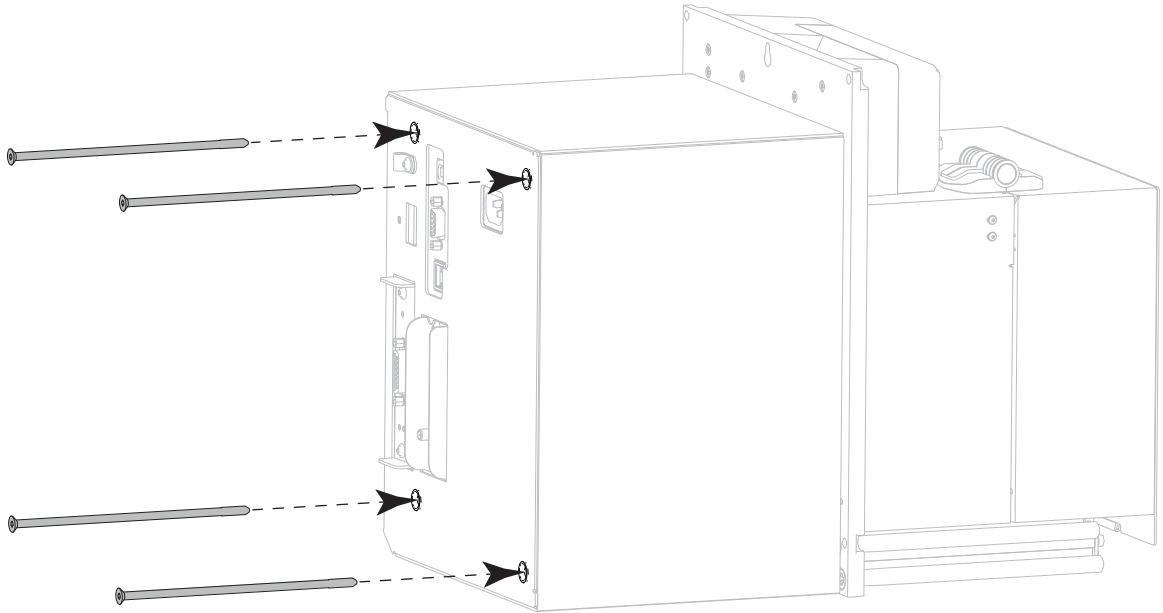
1. Close the rear of the print engine.



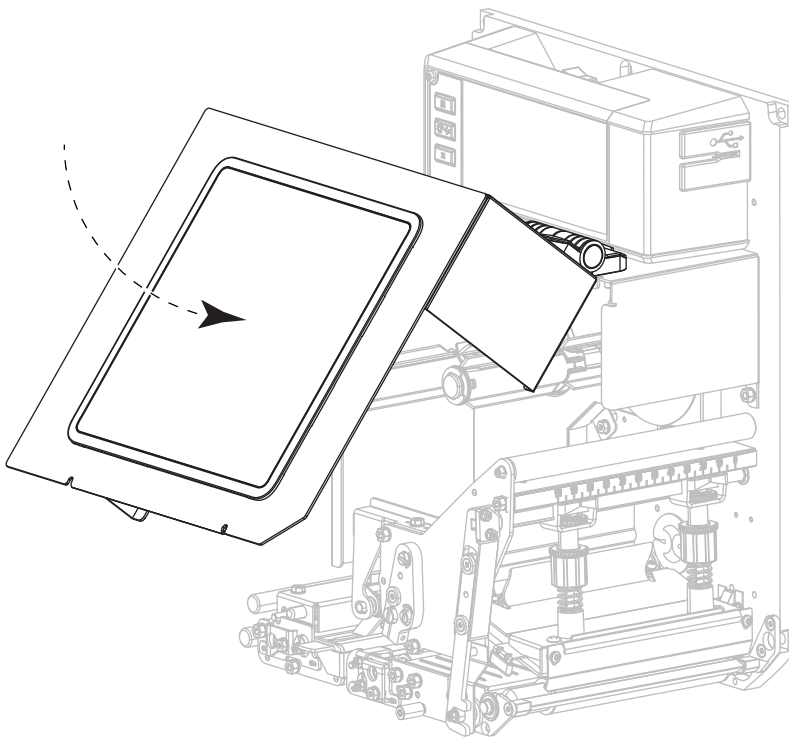
2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Close the media cover.



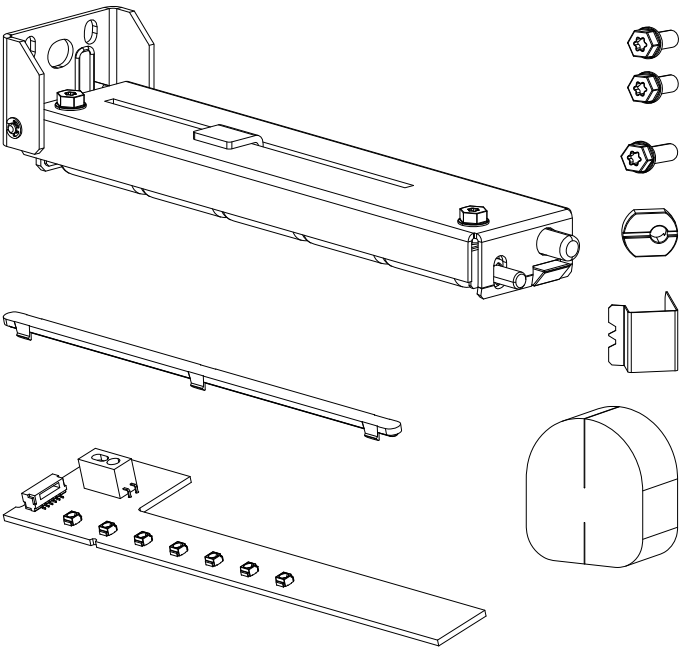
## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

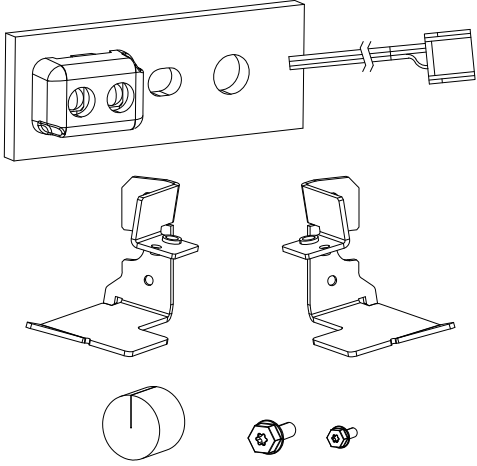
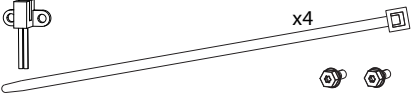
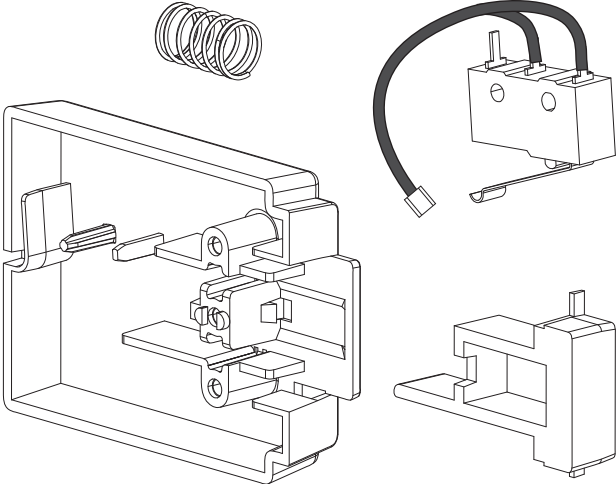
# Sensors

This section supplies you with the parts information and links to installation procedures for the sensors.

Description	Kit Number	Kit Name
<p><a href="#">Media Sensor Maintenance Kit on page 538</a></p> 	P1112750-051	Kit, Media Sensor, ZE511 RH
	P1112750-052	Kit, Media Sensor, ZE511 LH
	P1112750-053	Kit, Media Sensor, ZE521 RH
	P1112750-054	Kit, Media Sensor, ZE521 LH

for parts & service call QLC (800) 837-1309



Description	Kit Number	Kit Name
<p>Ribbon Sensor Maintenance Kit on page 567</p> 	<p>P1112750-058</p>	<p>Kit, Ribbon Sensor, ZE511, ZE521, RH &amp; LH</p>
<p>Printhead Open Sensor Maintenance Kit on page 586</p> 	<p>P1112750-057</p>	<p>Kit, Printhead Open Sensor, ZE511, ZE521, RH &amp; LH</p>
<p>Door-Open Sensor Maintenance Kit on page 595</p> 	<p>P1112750-055</p>	<p>Kit, Media Door Open Sensor, ZE511, ZE521, RH &amp; LH</p>

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

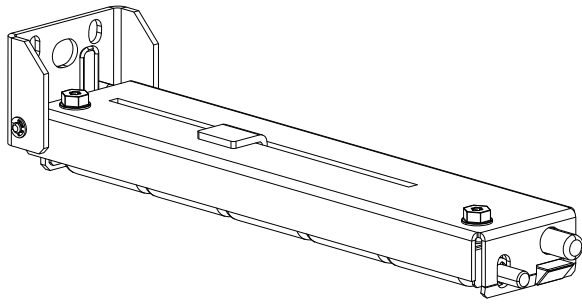
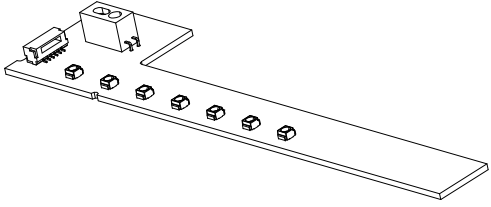
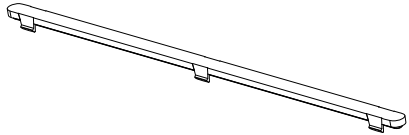

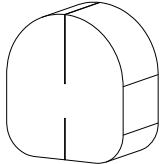


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.






The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List




Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Upper segmented pinch roller assembly (includes the upper transmissive media sensor) Qty: 1</p>
	<p>Lower media sensor PCB Qty: 1</p>
	<p>Lower media sensor lens Qty: 1</p>
	<p>Spring clip Qty: 1</p>
	<p>Sealing plug Qty: 1</p>

## Media Sensor Maintenance Kit

	Cam Qty: 1	
	Screw (M3x8 HX TX NI) Qty: 2	 3mm
	Screw (M3x12 HX TX NI) Qty: 1	 3mm

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T3, T9
-  Metric hexagon keys or bits  
Size: 3mm, 4mm
-  Flat-blade screwdrivers or bits
- Sorting bin for screws and small parts (optional)

for parts & service call QLC (800) 837-1309

## Prepare for Installation



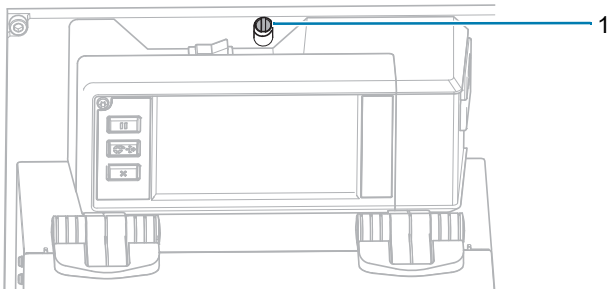
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



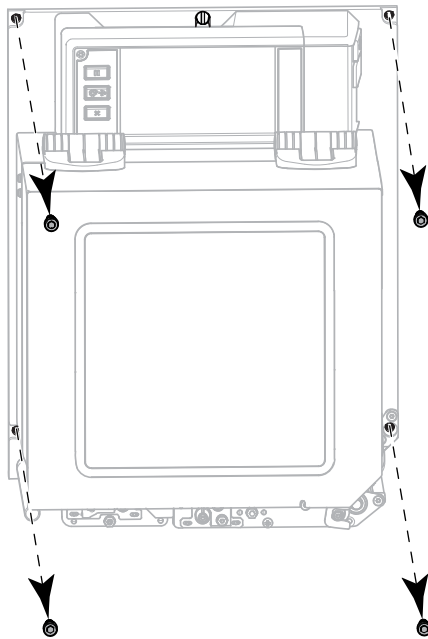
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



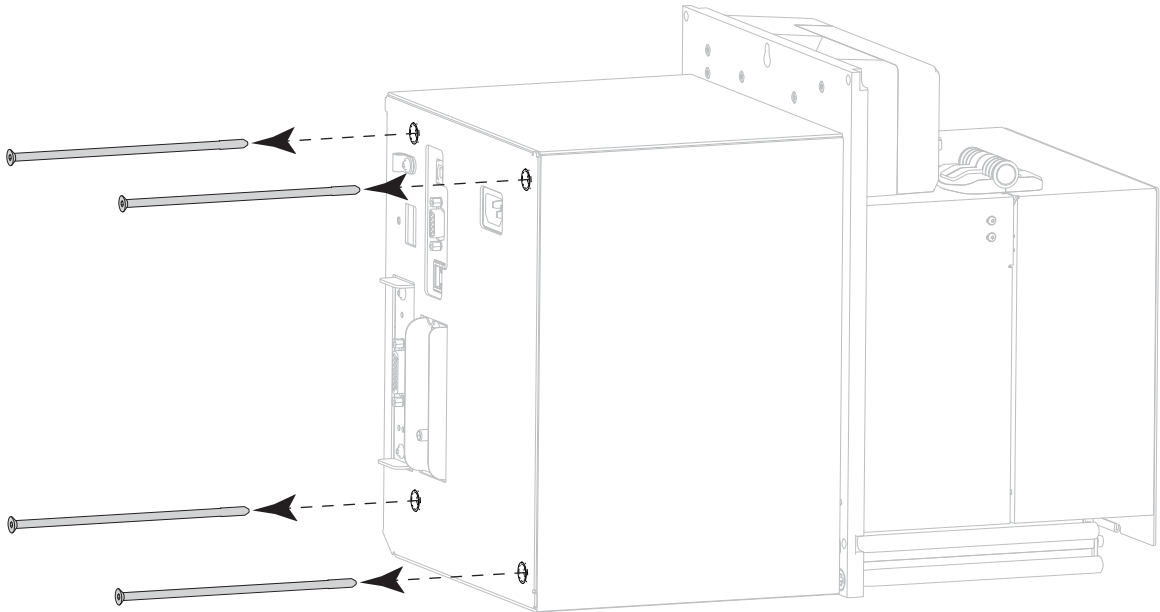
2. Remove the four screws securing the print engine to the applicator.



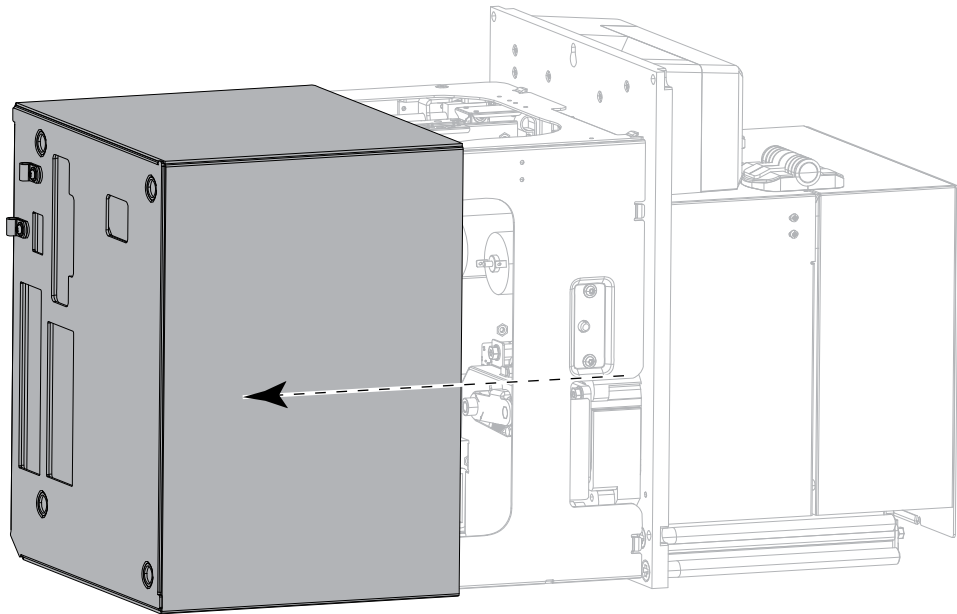
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



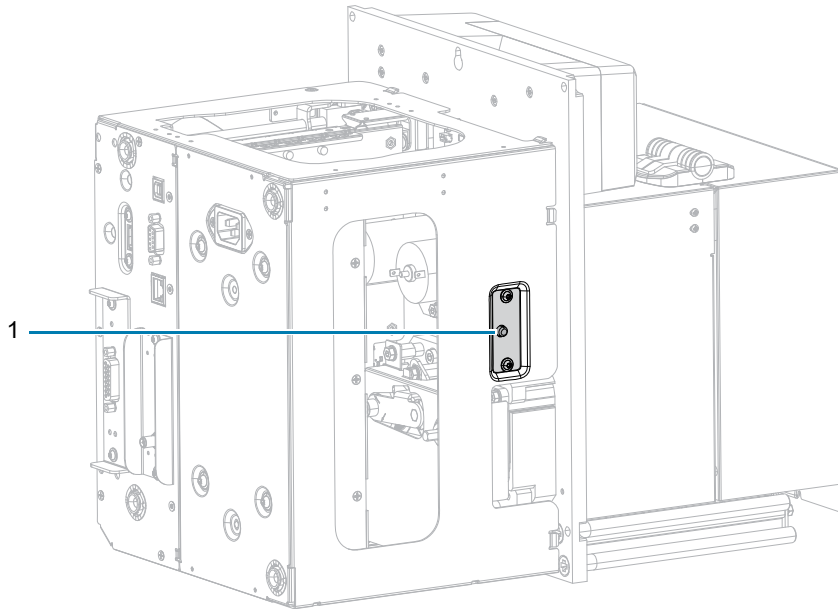
2. Remove the electronics enclosure cover from the print engine.



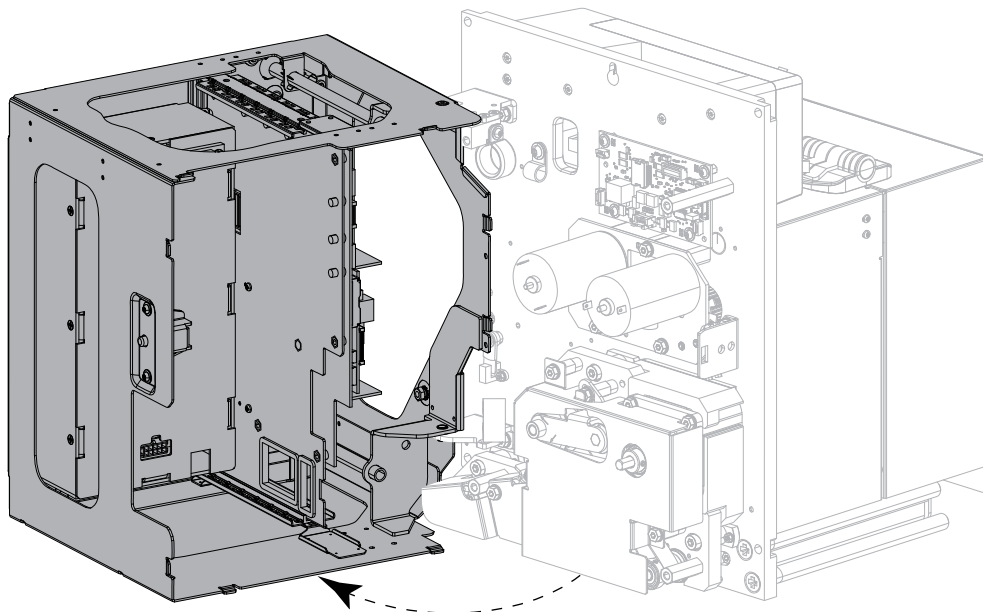
3. Press the electronics enclosure latch (1).




**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

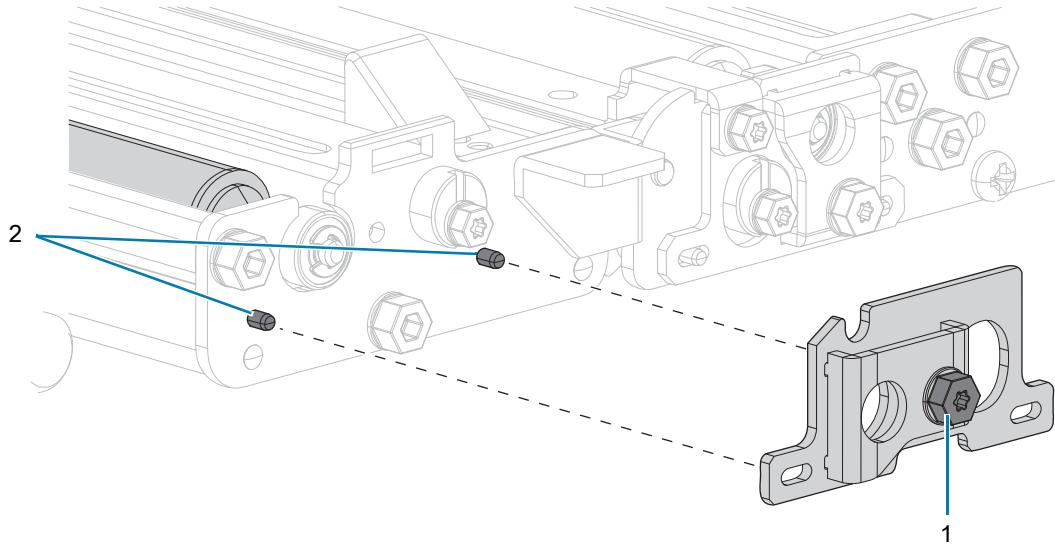


4. Open the rear of the print engine.

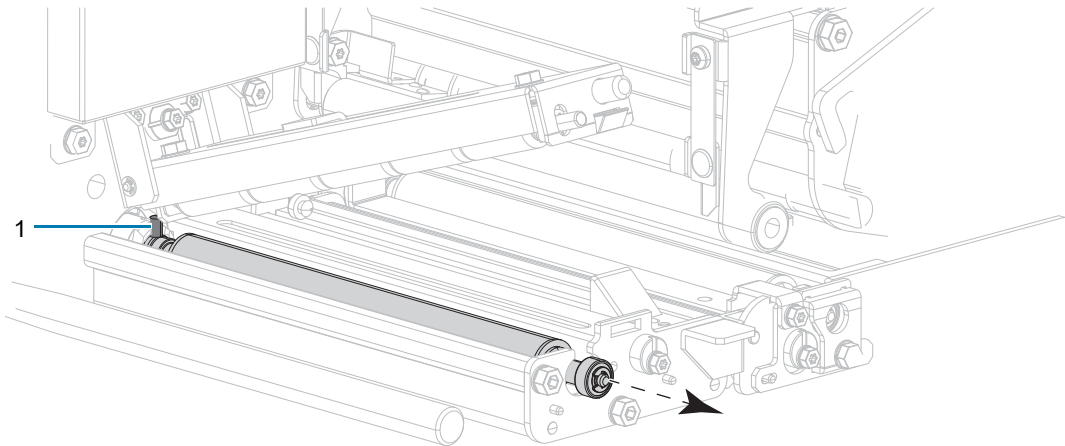


## Remove the Rollers

1. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).

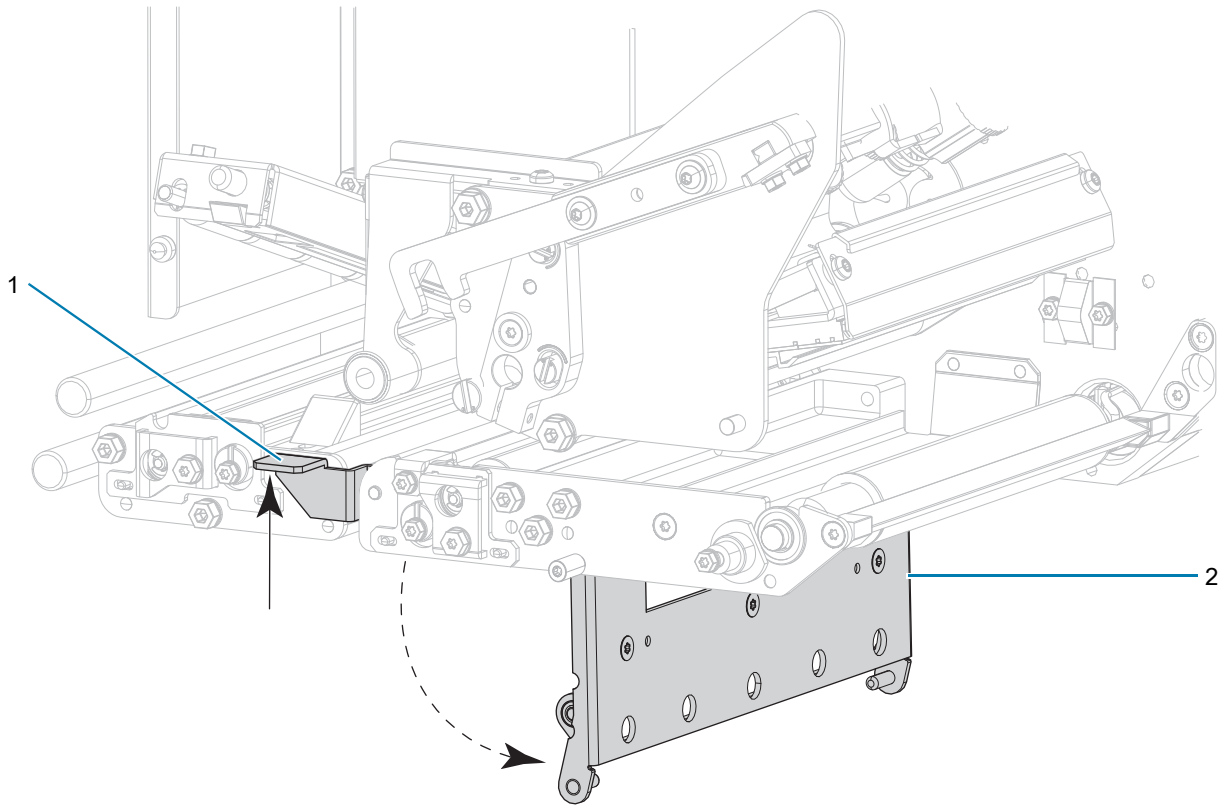



2. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.

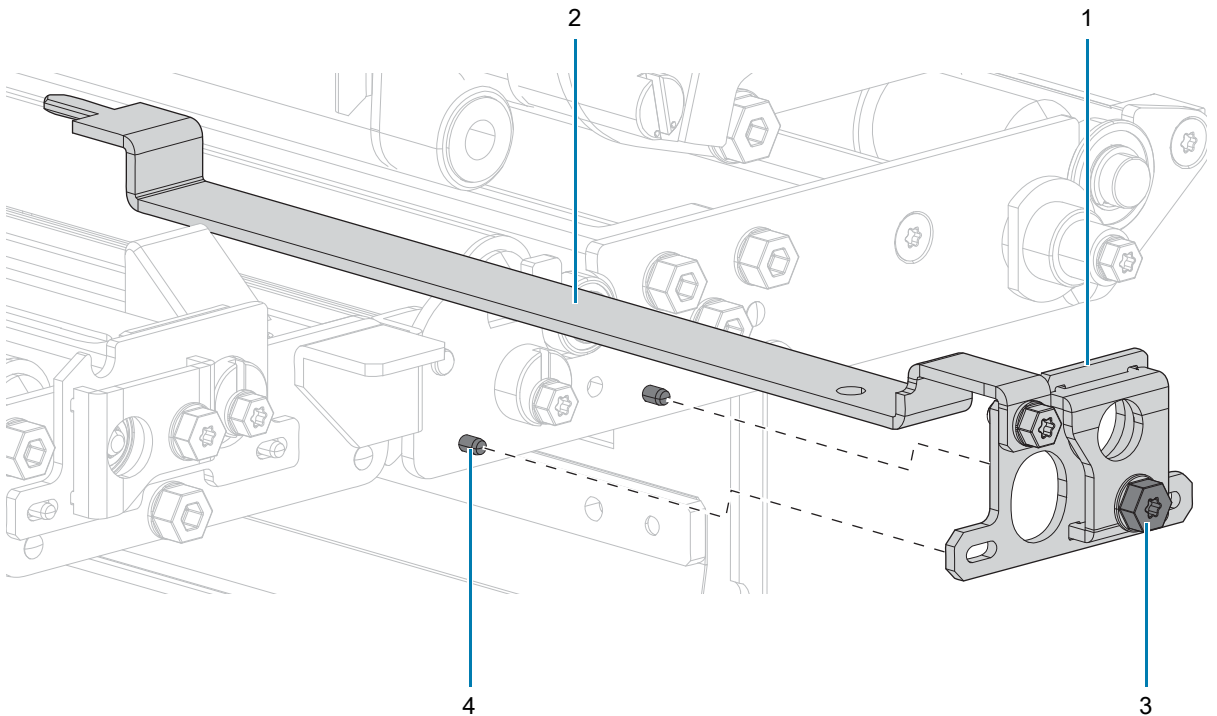


3. Remove the pinch roller assembly from the print engine.

4. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.



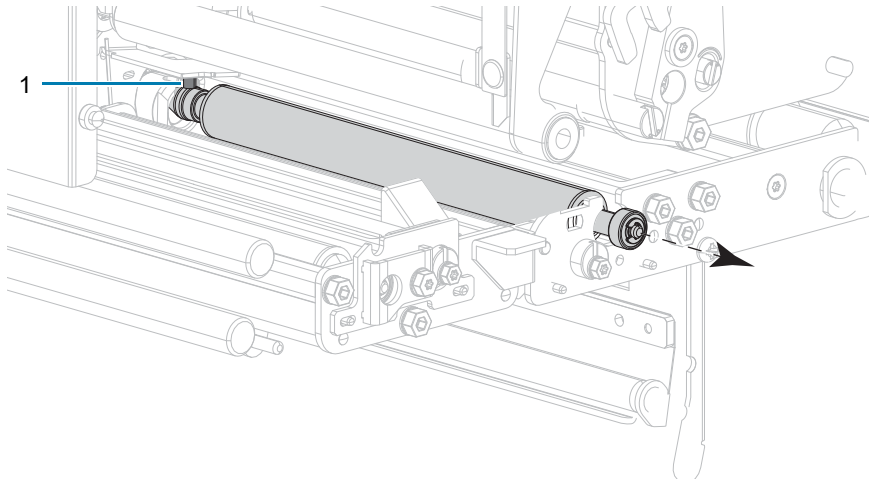
5. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




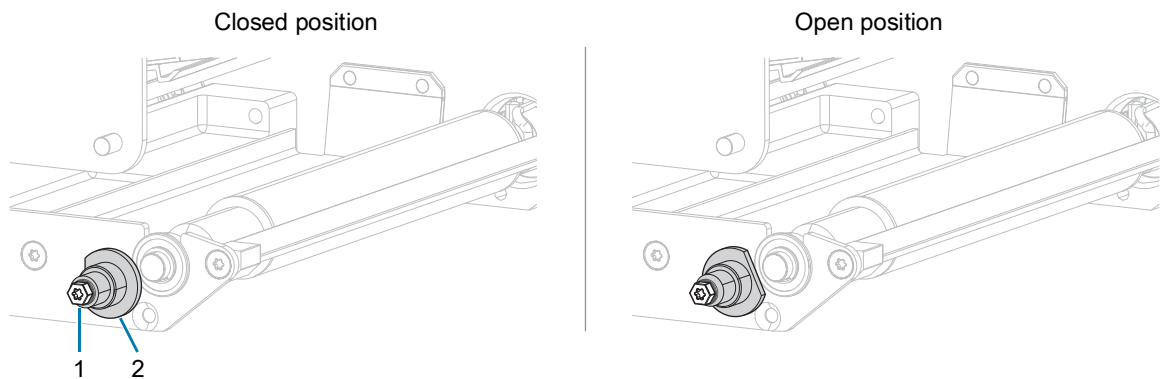
for parts & service call QLC (800) 837-1309



6. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

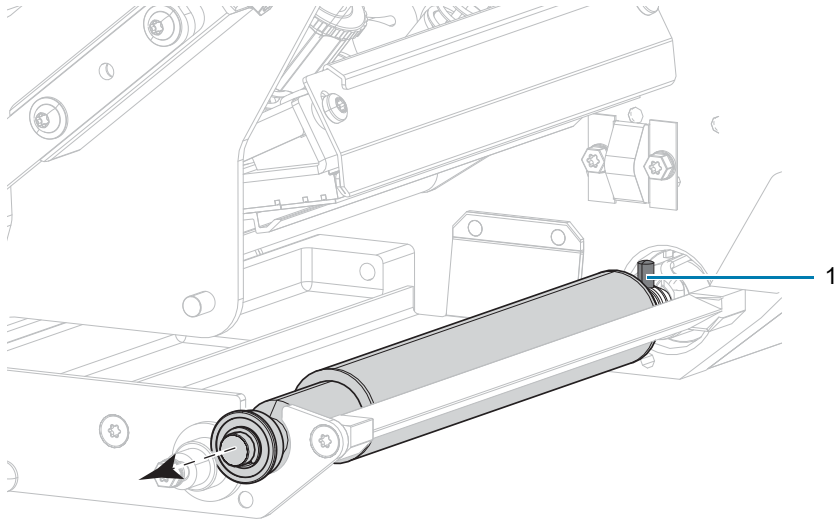


7. Remove the peel roller assembly from the print engine.
8. Secure the platen support plate latch pin in the open position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

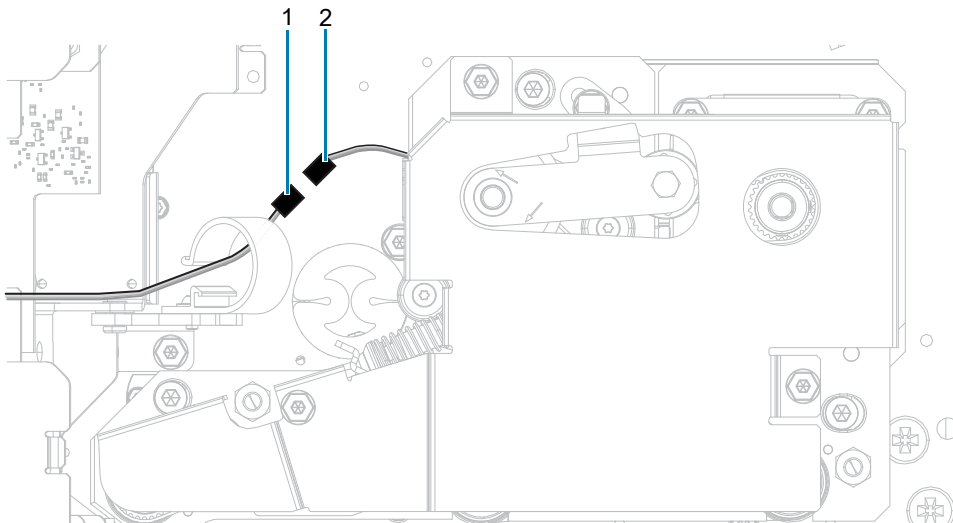


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

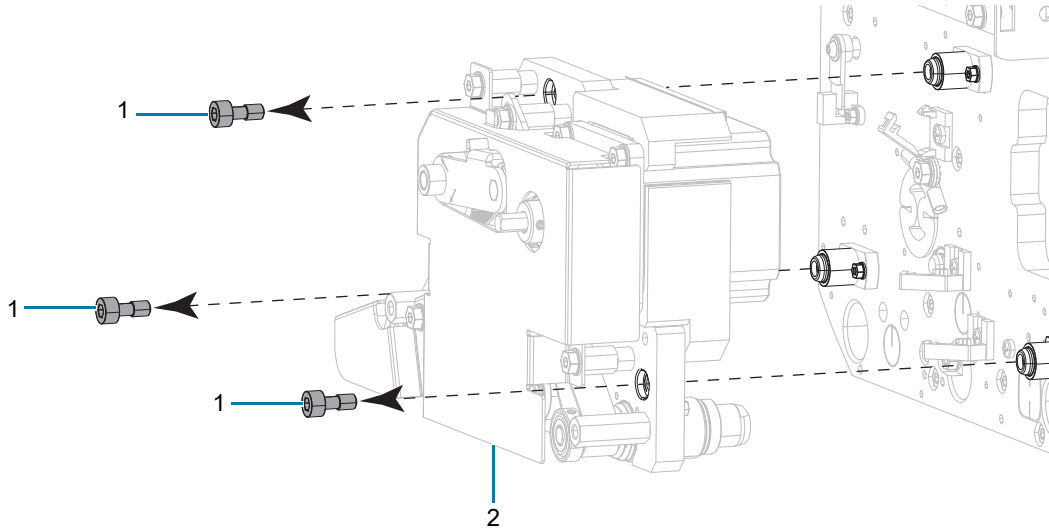


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



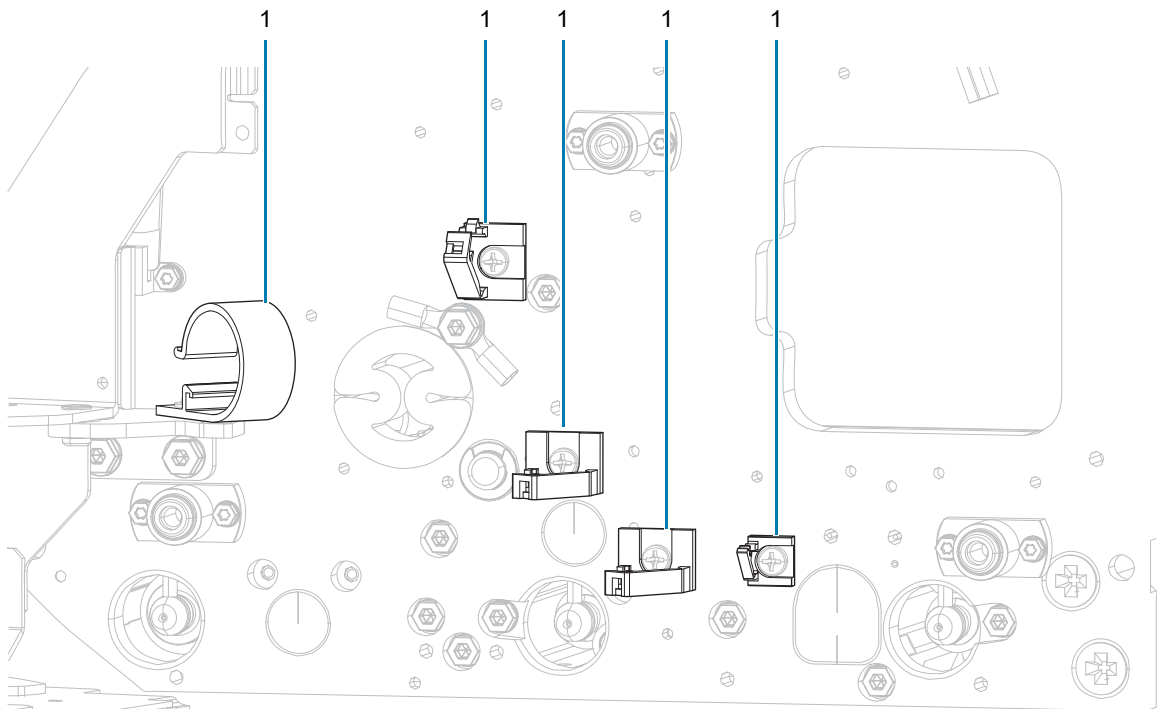
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

3. Remove the drive system (2) from the main frame.



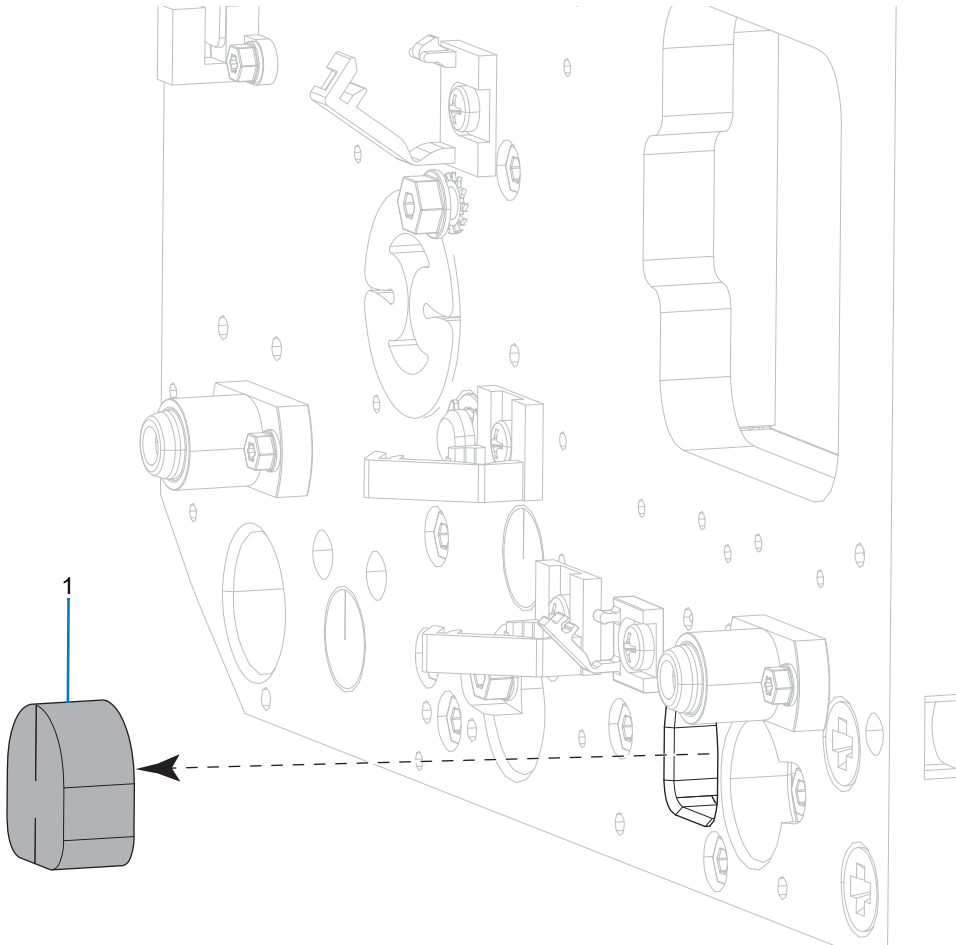
## Remove the Upper Media Sensor

1. From the electronics side, free the media sensor cables.
  - a. Open the five cable clamps (1) to release the media sensor cables.





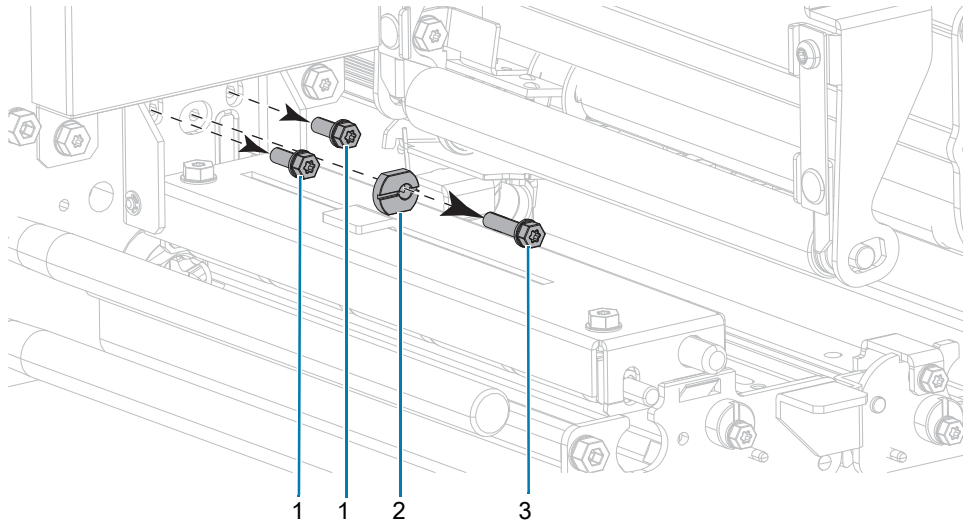
## Media Sensor Maintenance Kit

- b. Disconnect the upper and lower media sensor cables from plugs J36 and J37 on the main logic board (MLB).
  - c. Remove the cables from the flexible conduit.
2. Remove the sealing plug (1) from the access hole where the media sensor cables enter the other side of the printer.

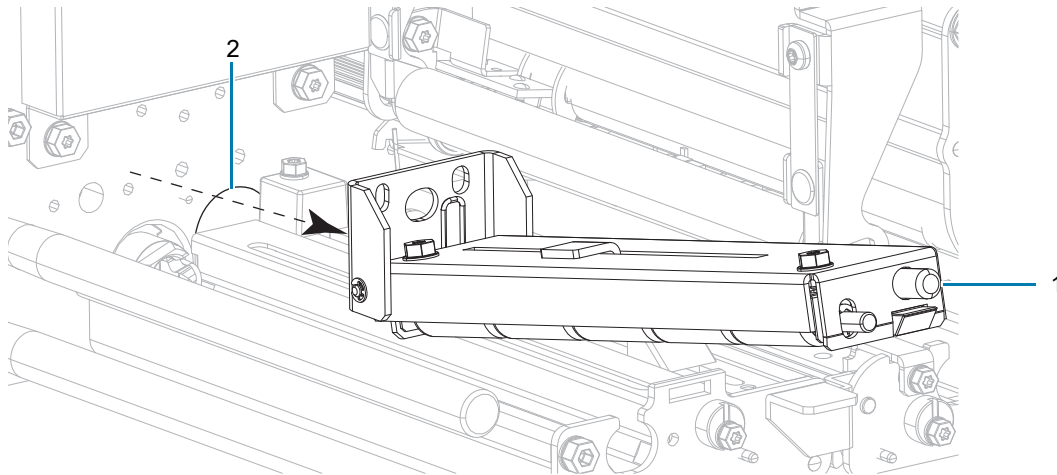


for parts & service call QLC (800) 837-1309

3. From the media side, remove the two  T9 screws (1), the upper pinch cam (2), and the  T9 upper pinch cam locking screw (3), securing the upper segmented pinch roller assembly to the mainframe.

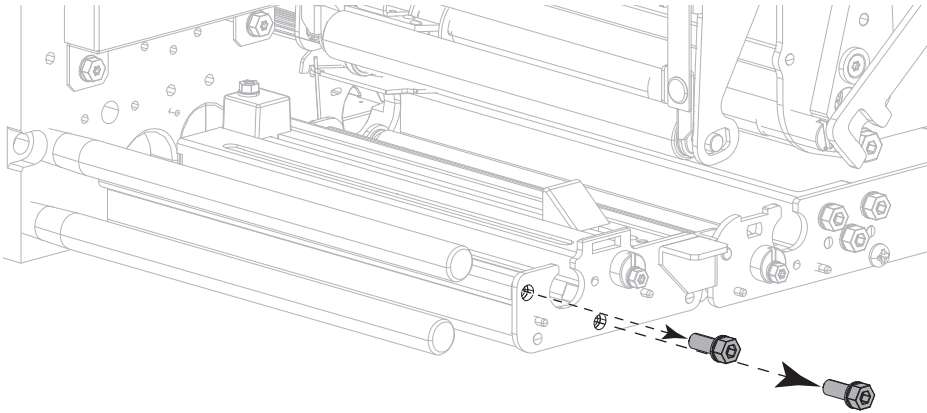


4. Press the release button (1) to open the pinch roller assembly, and remove the assembly from the print engine. Guide the cables through the access hole (2).

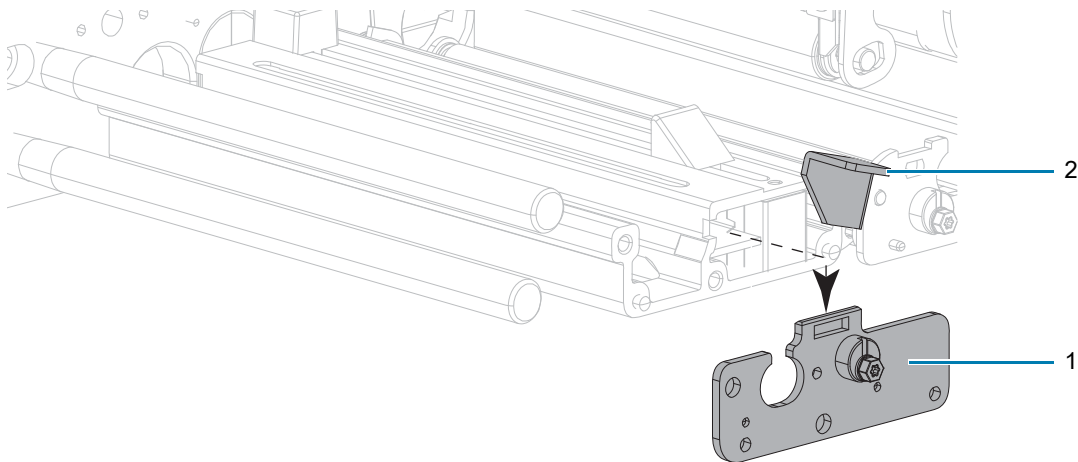


## Replace the Lower Media Sensor

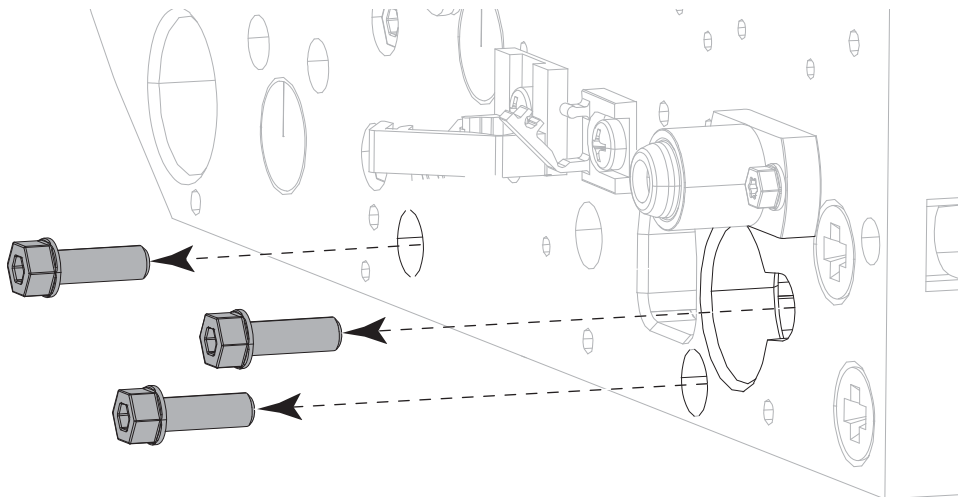
1. Remove the two ● 3mm screws from the label guide shelf.



2. Remove the pinch roller plate (1) from the label guide shelf. If necessary, rotate the peel roller latch (2) upward.

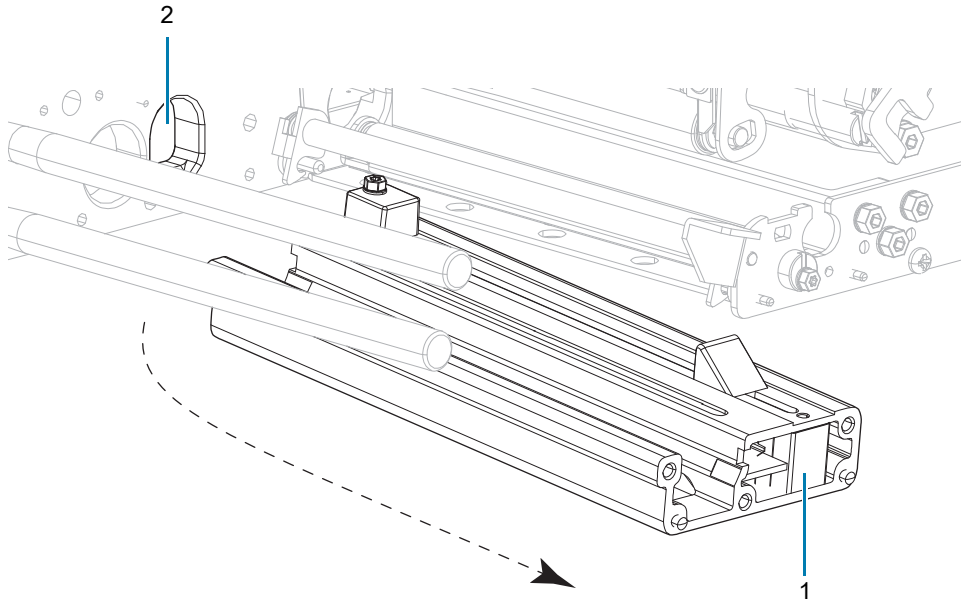


3. From the electronics side, remove the three ● 4mm screws securing the label guide shelf.

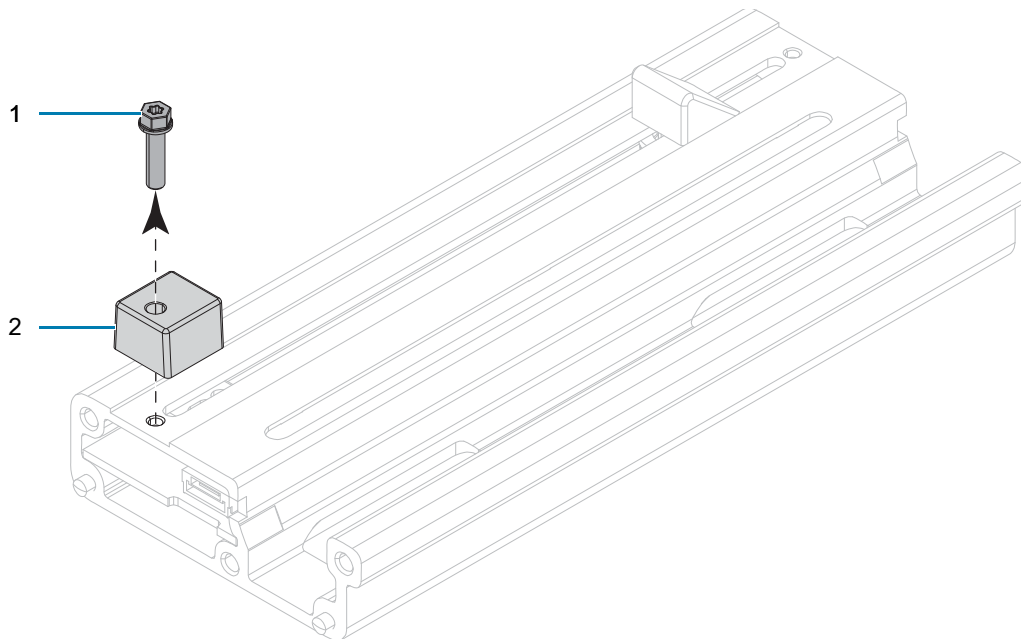


for parts & service call QLC (800) 837-1309

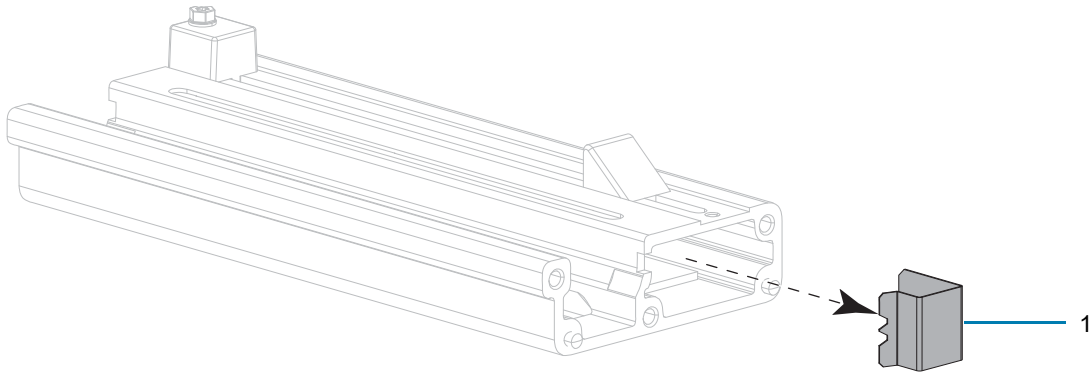
4. From the media side, tip the label guide shelf (1) down and move it out of the print engine. Guide the sensor cables out through the access hole (2).



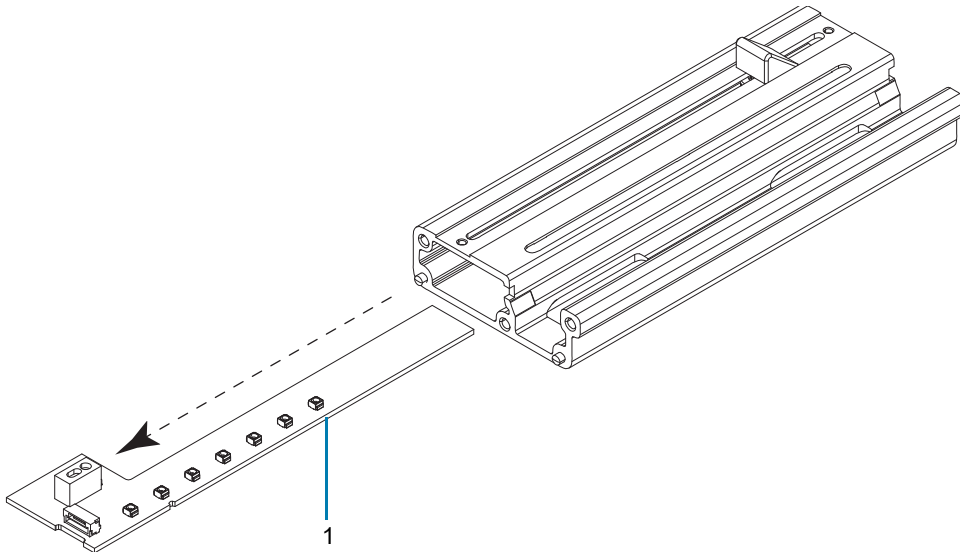
5. Remove the  T9 screw (1) and the inboard media guide (2) from the label guide shelf.



6. Remove the spring clip (1) from the outside end of the label guide shelf to release tension on the lower media sensor board.

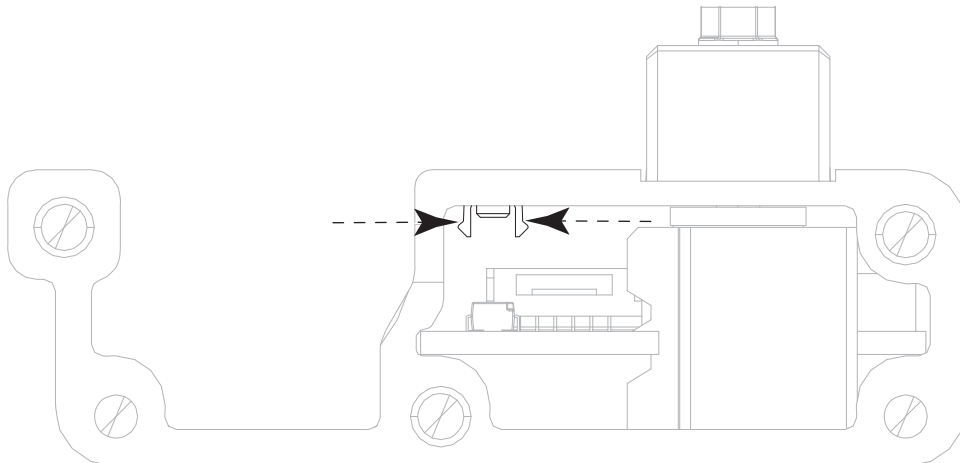


7. Remove the lower media sensor board (1) from the label guide shelf.



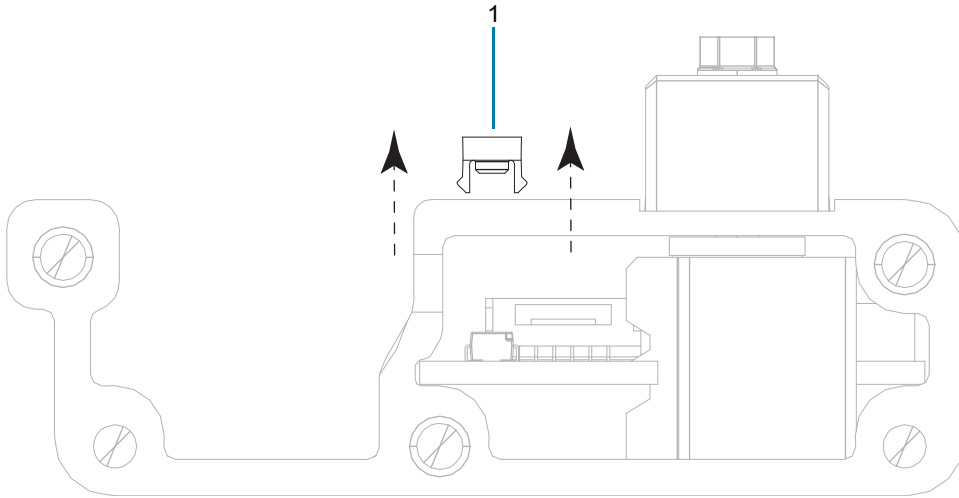
8. Replace the media sensor lens.

- a. Squeeze the tabs on the lens inwards to release it from the label guide shelf.



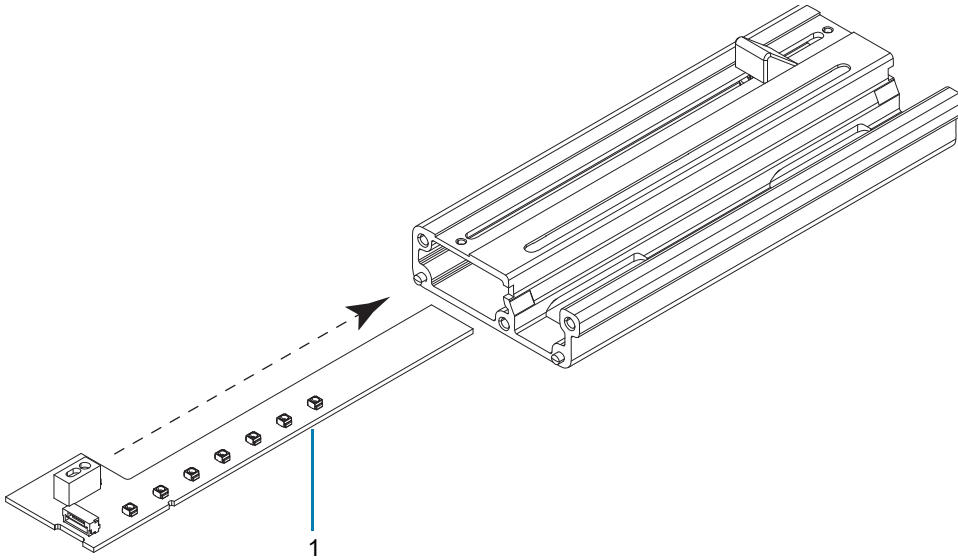


b. Remove the lens (1) from the label guide shelf.

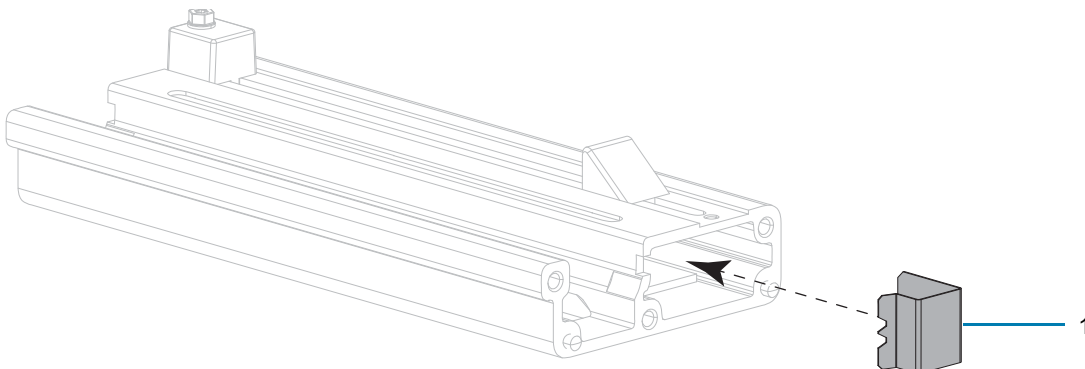


c. Install the new media sensor lens into the label guide shelf.


9. Insert the new lower media sensor board (1) into the label guide shelf.

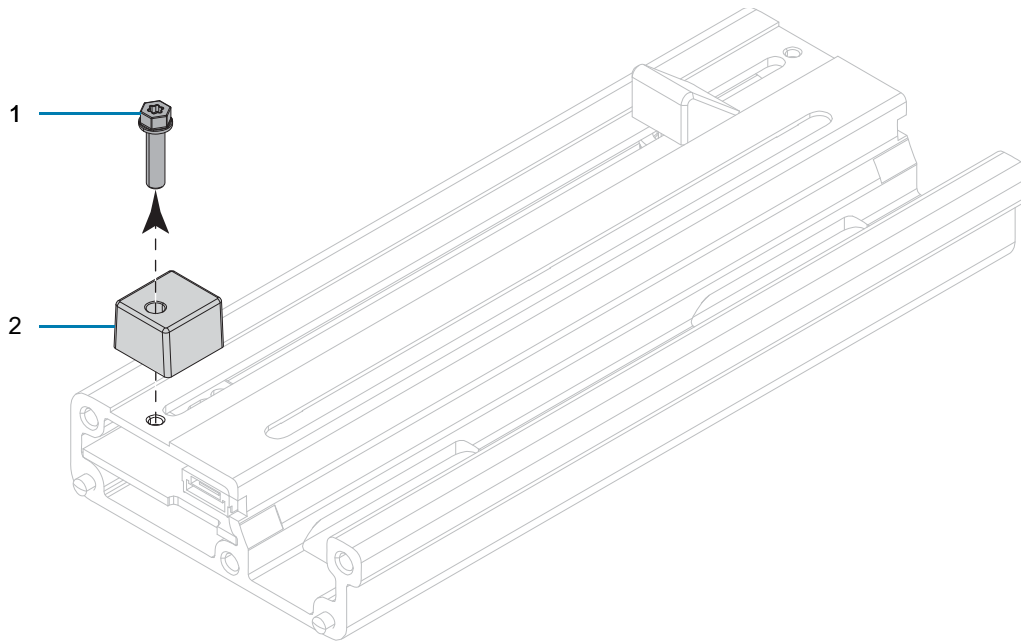


10. Reinstall the spring clip (1) into the outside end of the label guide shelf to secure the end of the lower media sensor board.

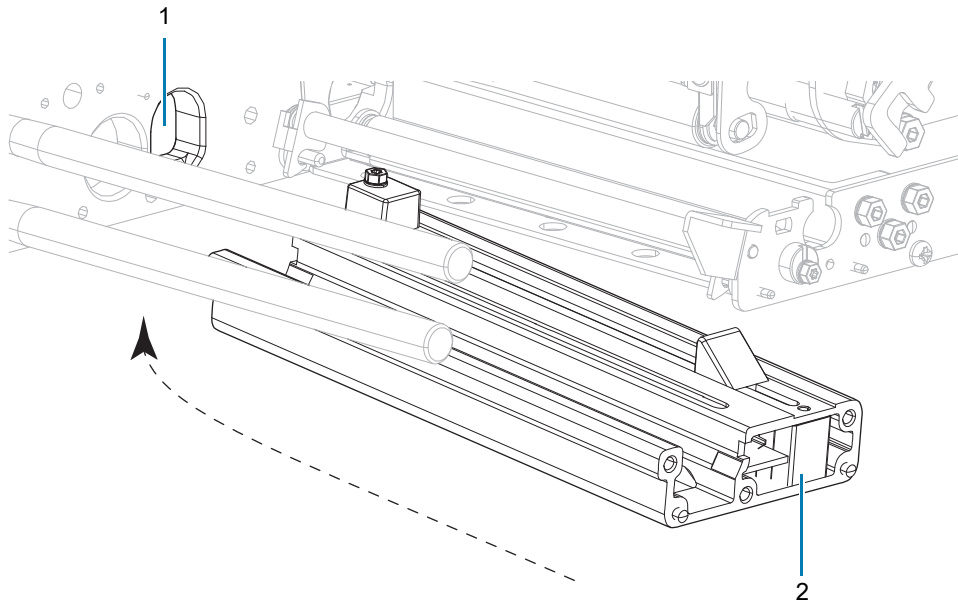


for parts & service call QLC (800) 837-1309

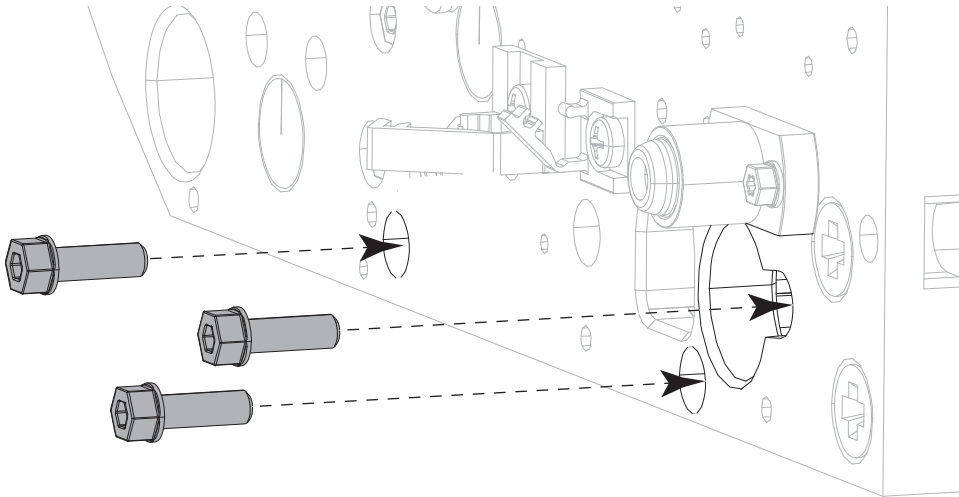
11. Reinstall the  T9 screw (1) and the inboard media guide (2) into the label guide shelf.



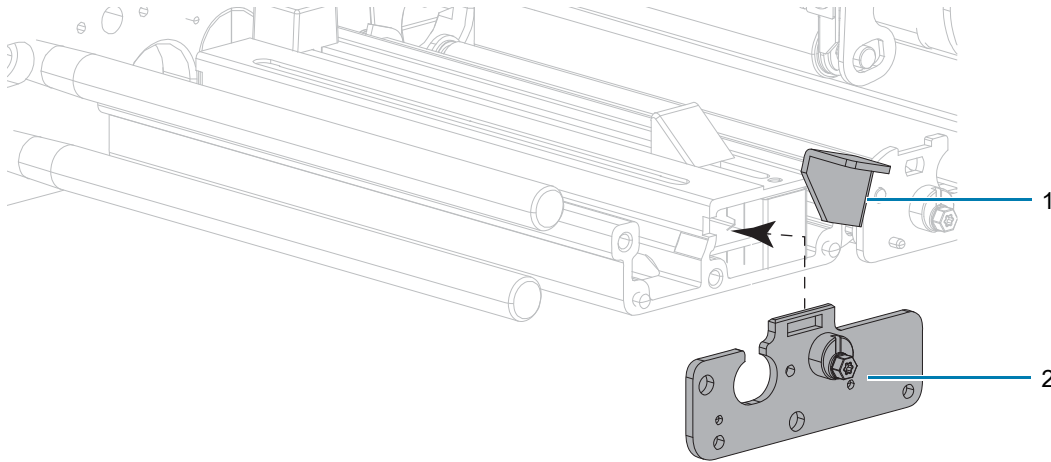
12. From the media side, guide the cables through the access hole (1) and reposition the label guide shelf (2).



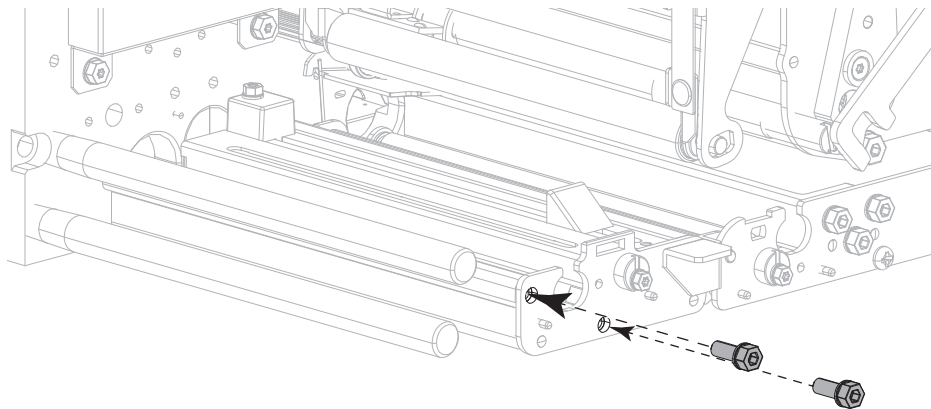
13. From the electronics side, secure the label guide shelf by reinstalling the three 4mm screws.



14. Raise the lower pinch roller release (1) and position the pinch roller plate (2) on the label guide shelf.

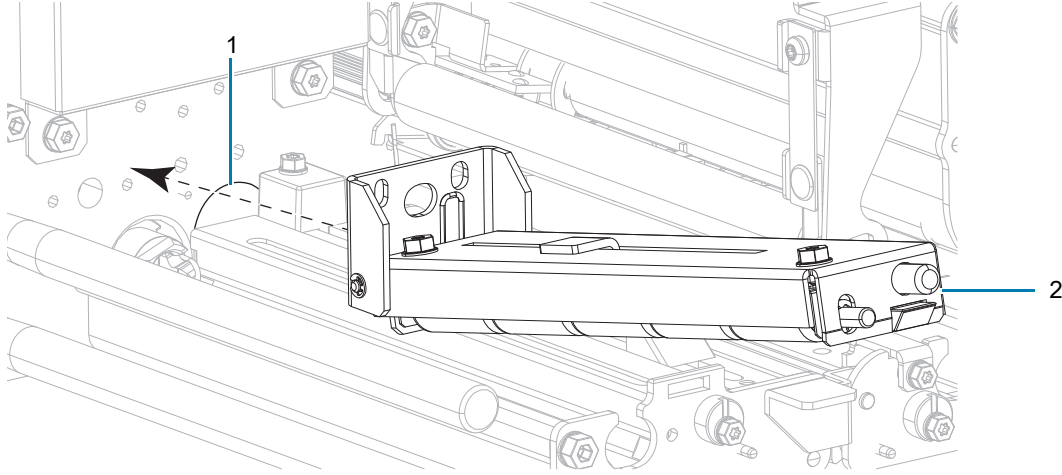




15. Install the two 3mm screws to secure the pinch roller plate.

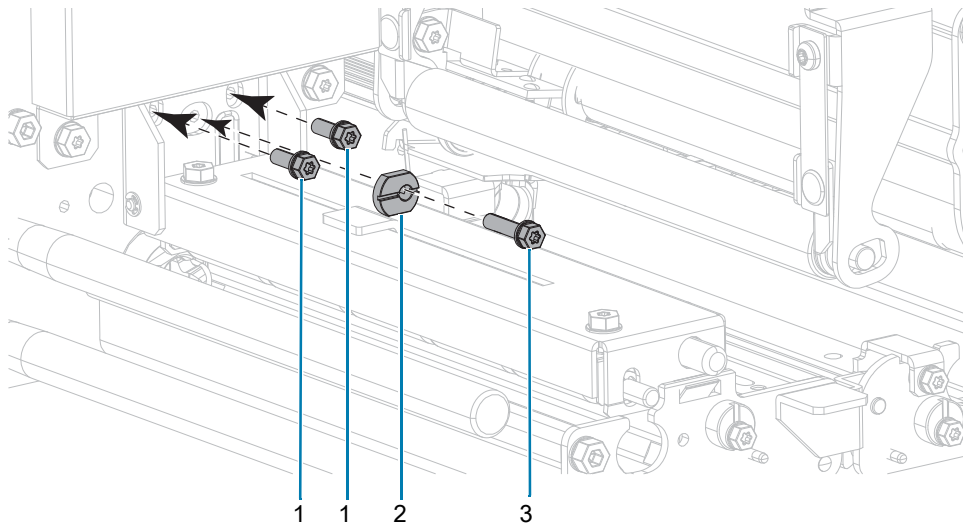


## Install the Upper Media Sensor

1. Guide the cables through the access hole (1) and position the new upper segmented pinch roller assembly (2) on the main frame.

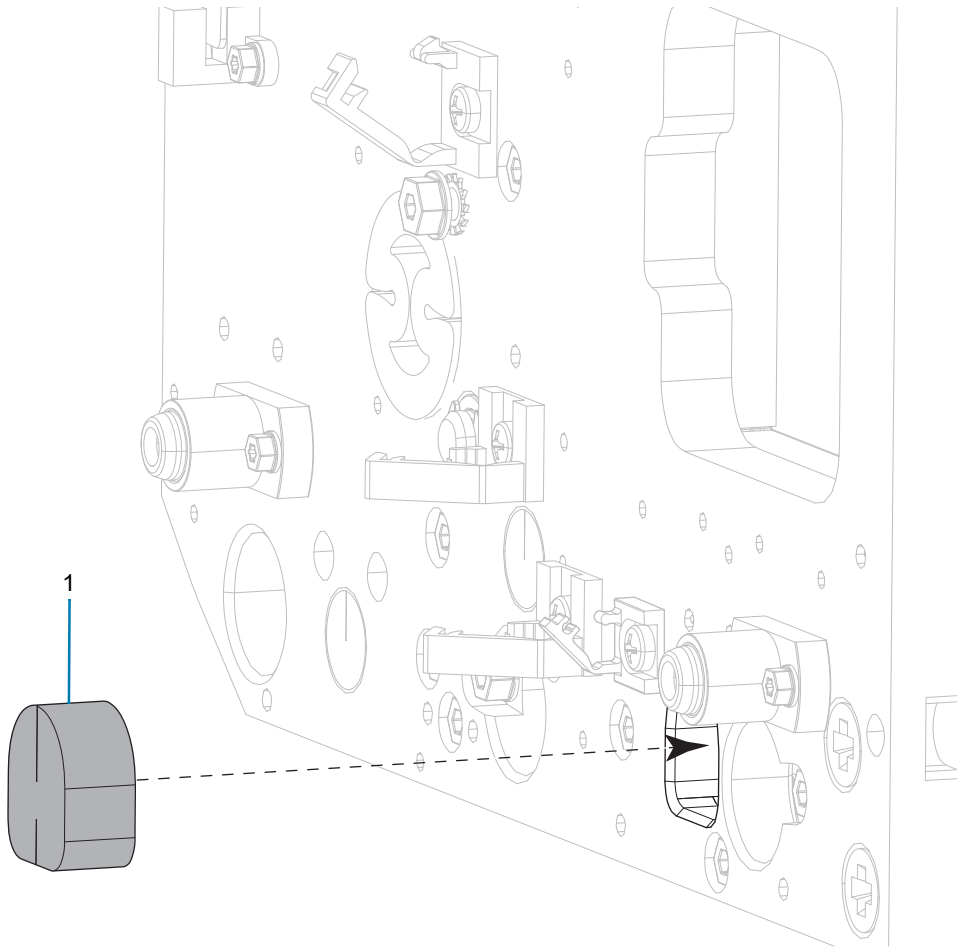


2. Install the two new  T9 screws (1), the new upper pinch cam (2), and the new  T9 upper pinch cam locking screw (3) to secure the upper segmented pinch roller assembly to the main frame.



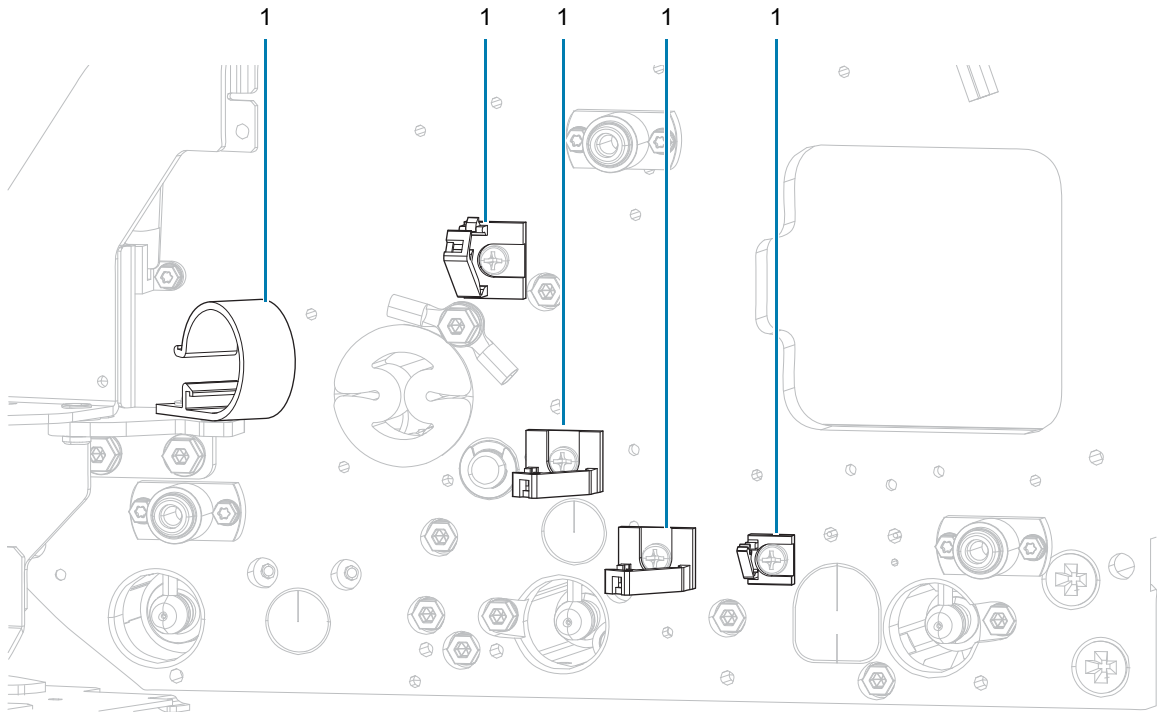
for parts & service call QLC (800) 837-1309

3. Install the new sealing plug (1) into the access hole with the media sensor cables.



4. Insert the cables back into the flexible conduit.
5. Reconnect the upper and lower media sensor cables from plugs J36 and J37 on the MLB.

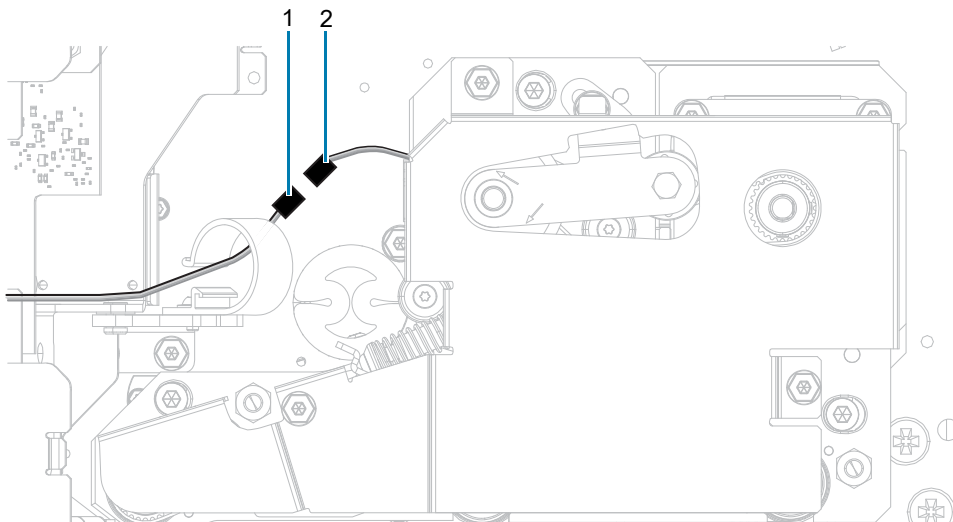
6. Reroute the media sensor cables through the five cable clamps (1), and then close the clamps.



## Reinstall the Media System Drive

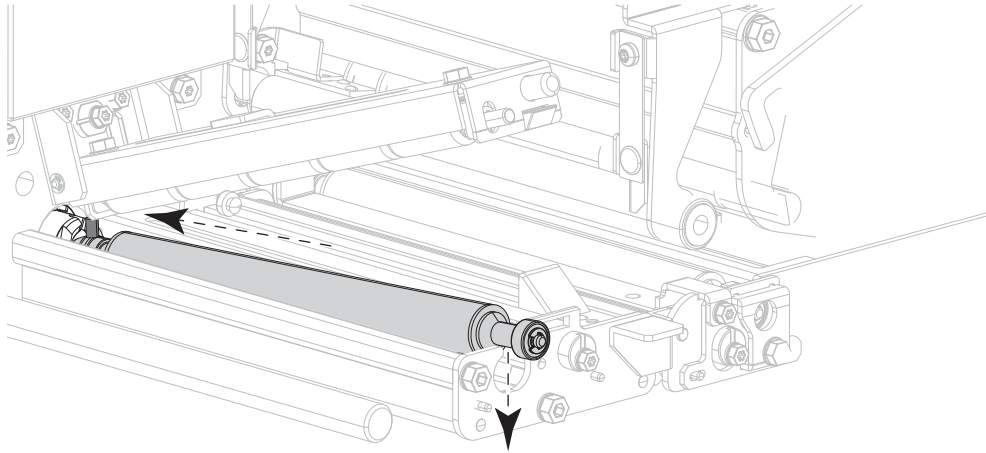
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three 4mm captive screws.
2. Reconnect the stepper motor cable connectors.


The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

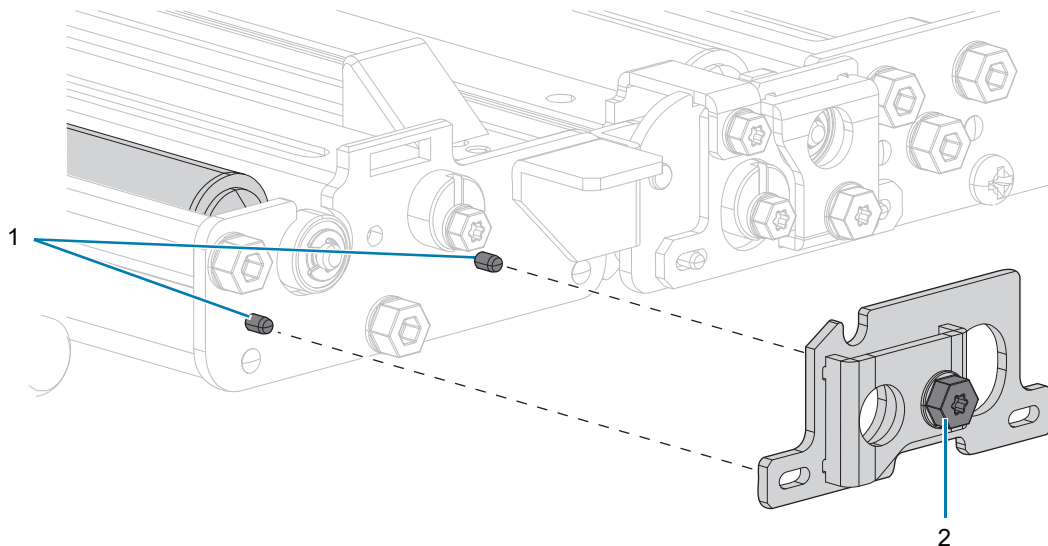


## Reinstall the Rollers

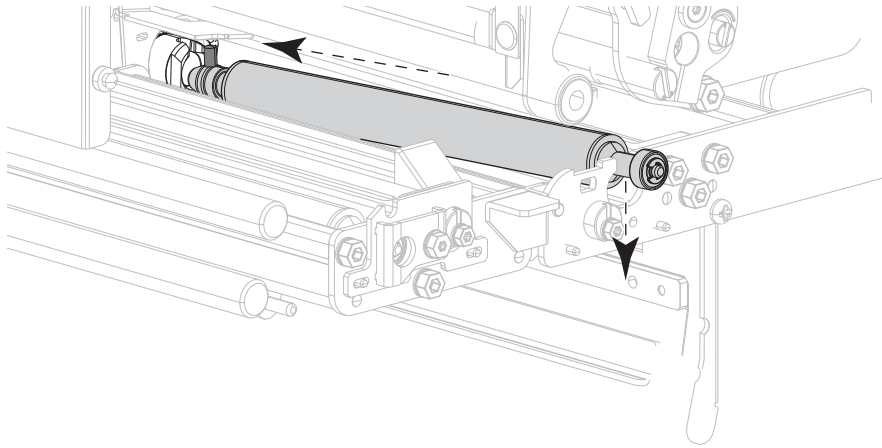
1. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.




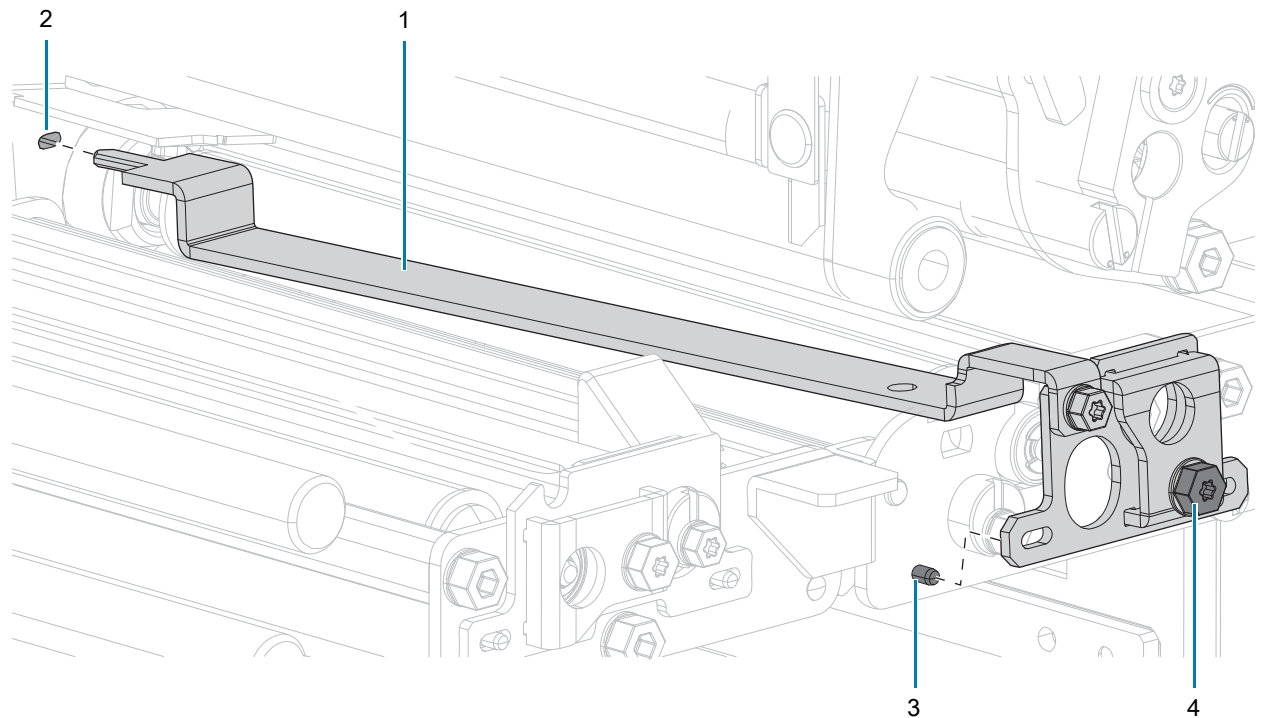
2. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
3. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.



4. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



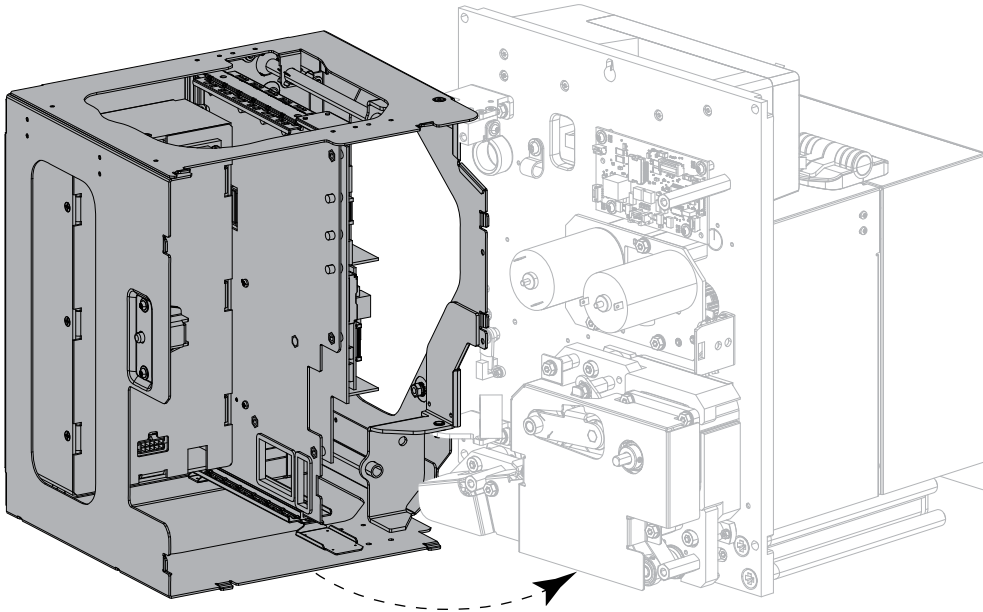
5. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
6. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



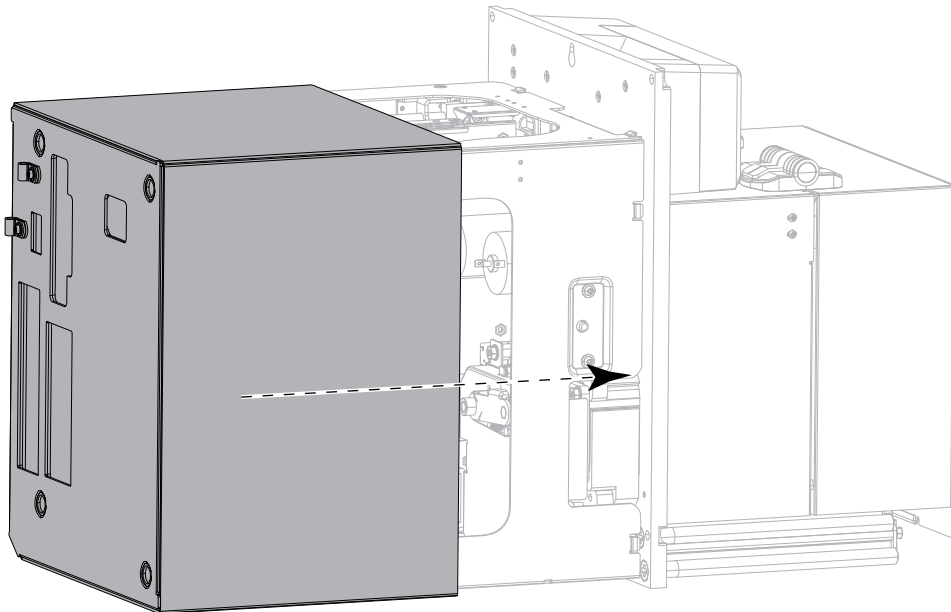


## Close the Electronics Enclosure

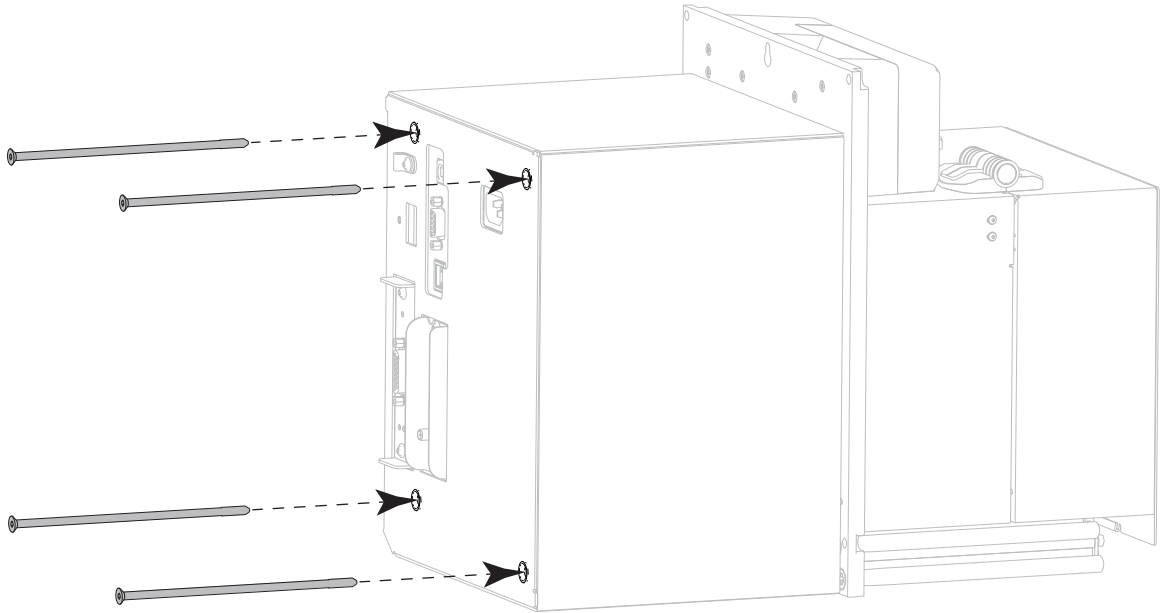
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.

### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reconnect AC power cord and interface cables.
5. Turn on (I) the printer power.

## Adjust Media Tracking

Media tracking adjustments affect how the media moves through the printer and where on the media you print. The pinch and peel cams control the media movement.

1. Check the media tracking by performing a PAUSE Self-Test.
2. Adjust the media tracking as follows:

If you...	Then perform the following adjustments...
Removed or replaced both of the <b>roller plates</b>	<ul style="list-style-type: none"> <li>• <a href="#">Skew Adjustments on page 563</a></li> <li>• <a href="#">Media Tension Adjustment across the Peel Bar on page 566</a></li> </ul>
Replaced the <b>upper pinch roller</b>	<ul style="list-style-type: none"> <li>• <a href="#">Skew Adjustments on page 563</a></li> <li>• <a href="#">Pressure Balance Adjustment (between the Upper and Lower Pinch Rollers) on page 565</a></li> </ul>
Replaced the <b>media guide shelf</b> or the <b>media sensor</b>	<ul style="list-style-type: none"> <li>• <a href="#">Skew Adjustments on page 563</a></li> <li>• <a href="#">Pressure Balance Adjustment (between the Upper and Lower Pinch Rollers) on page 565</a></li> </ul>
Removed or replaced the <b>pinch roller plate</b>	<ul style="list-style-type: none"> <li>• <a href="#">Skew Adjustments on page 563</a></li> <li>• <a href="#">Pressure Balance Adjustment (between the Upper and Lower Pinch Rollers) on page 565</a></li> </ul>







**NOTE:** The steps in these procedures are for the right-hand (RH) print engine. Steps for a left-hand (LH) print engine may be slightly different.

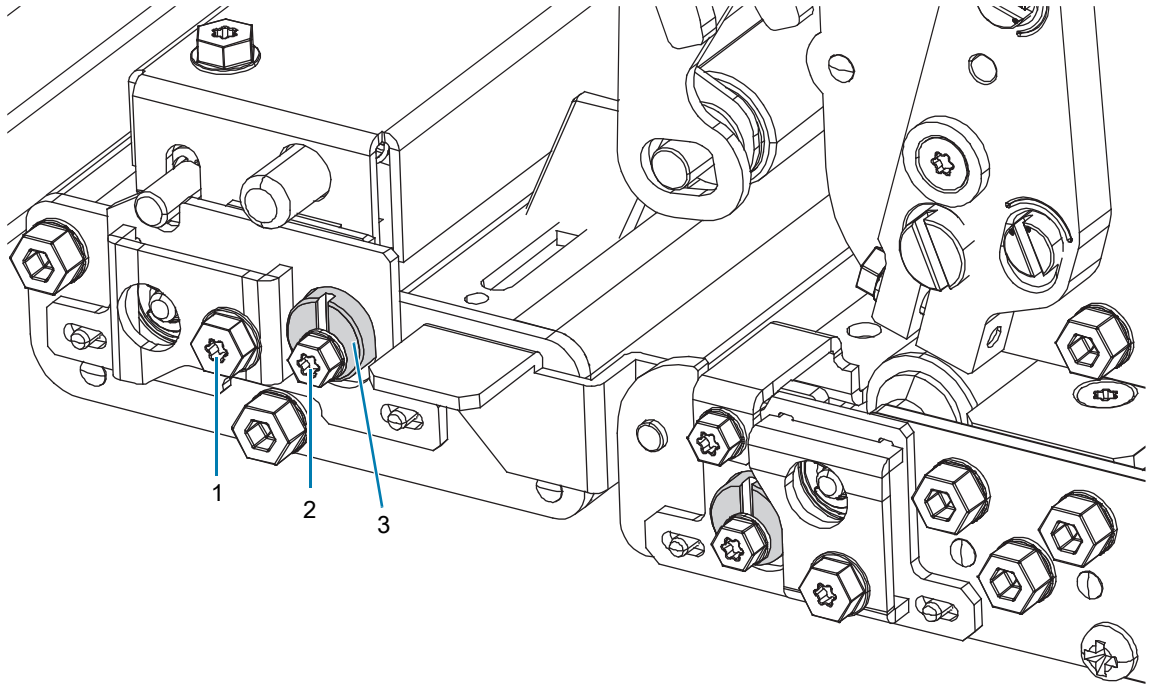
## Skew Adjustments



**NOTE:** The pinch cams are in the neutral position when the slot is vertical.

1. Adjust the pinch cam.
  - a. Loosen the  T9 pinch cam plate center mounting screw (1) and the  T9 pinch cam locking screw (2).
  - b. Using a flat-blade screwdriver, insert the screwdriver into the slot in the pinch cam (3).
  - c. Rotate the pinch cam (3) to move the media.
    - Rotate the pinch cam to the right to move the media closer to the inboard (main frame) side of the print engine.
    - Rotate the pinch cam to the left to move the media closer to the outboard (media door) side of the print engine.

2. Tighten the  T9 pinch cam plate center mounting screw (1) and the  T9 pinch cam locking screw (2).






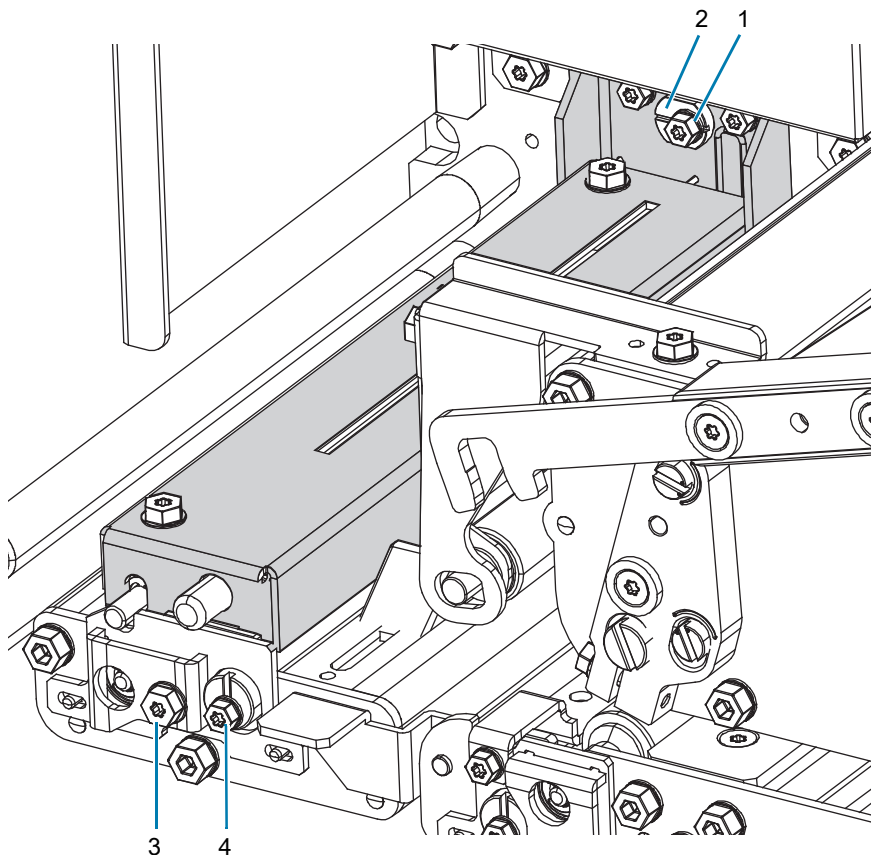
The adjustment is complete.

## Pressure Balance Adjustment (between the Upper and Lower Pinch Rollers)



**NOTE:** The upper pinch cam is in the neutral position when the slot is horizontal.

1. Adjust the upper pinch cam.
  - a. Loosen the  T9 upper pinch cam locking screw (1).
  - b. Using a flat-blade screwdriver, insert the screwdriver into the slot in the upper pinch cam (2).
  - c. Rotate the upper pinch cam (2) to move the media.
    - Rotate the upper pinch cam upward to move the media closer to the outboard (media door) side of the print engine.
    - Rotate the upper pinch cam downward to move the media closer to the inboard (main frame) side of the print engine.
2. Tighten the  T9 pinch cam plate center mounting screw (3) and the  T9 pinch cam locking screw (4).







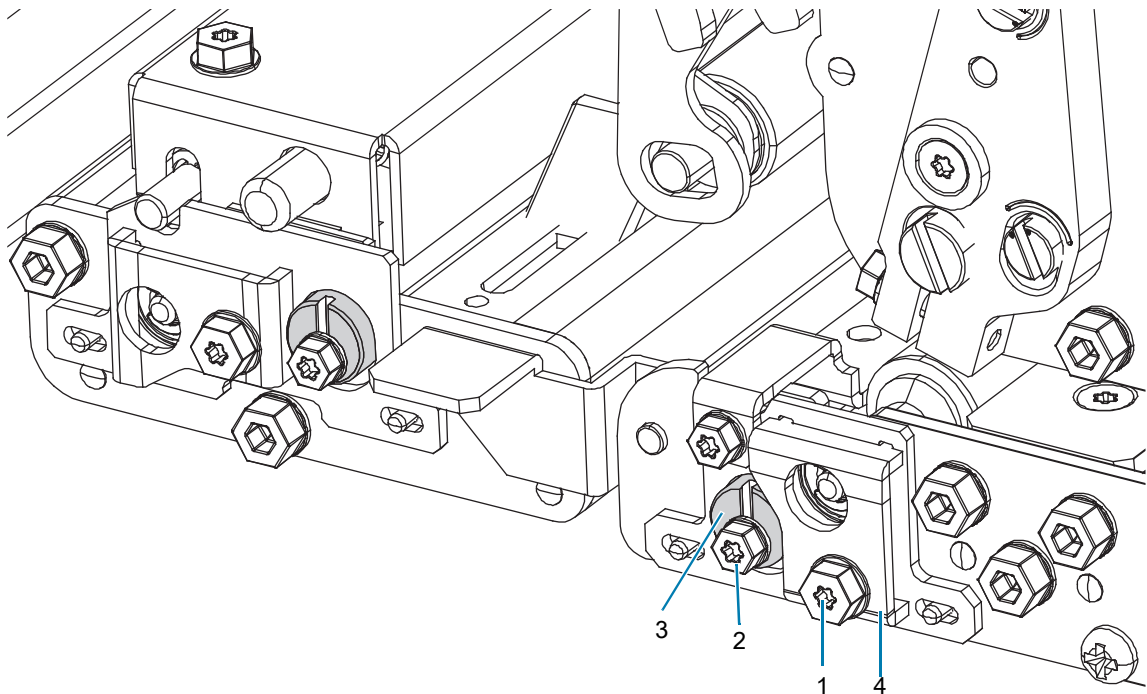
The adjustment is complete.

## Media Tension Adjustment across the Peel Bar



**NOTE:** The peel cam is in the neutral position when the slot is vertical.

1. Adjust the peel cam.
  - a. Loosen the  T9 peel cam plate center mounting screw (1) and the  T9 peel cam locking screw (2).
  - b. Using a flat-blade screwdriver, insert the screwdriver into the slot in the peel cam (3).
  - c. Rotate the peel cam (3) to tension the edge of the media.
    - Rotate **clockwise** to tension the inboard edge of the media (closer to the main frame side of the print engine).
    - Rotate **counterclockwise** to tension the outboard edge of the media (closer to the media door side of the print engine).
2. Hold the peel cam plate (4) in place while tightening the  T9 peel cam plate center mounting screw (1) and the  T9 peel cam locking screw (2).



The adjustment is complete.

The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

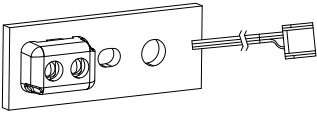
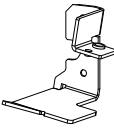
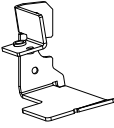







**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Ribbon sensor PCBA Qty: 1	
	Ribbon sensor bracket RH Qty: 1	
	Ribbon sensor bracket LH Qty: 1	
	Sealing Plug Qty: 1	
	Screw (M3x4 HX TX NI FLNG) Qty: 1	 T9
	Screw (M3x8 HX TX NI FLNG) Qty: 1	 T9

## Tools Required

- ✪ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T9, T10, T15
- Metric hexagon keys or bits  
Size: 3mm, 5mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat



## Prepare for Installation



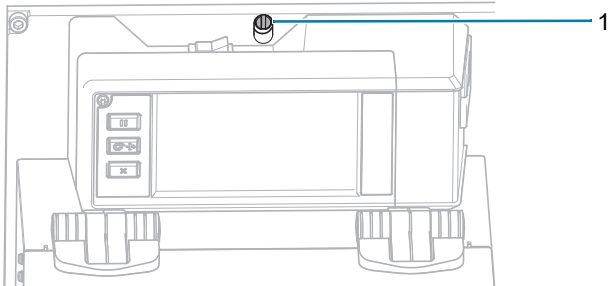
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



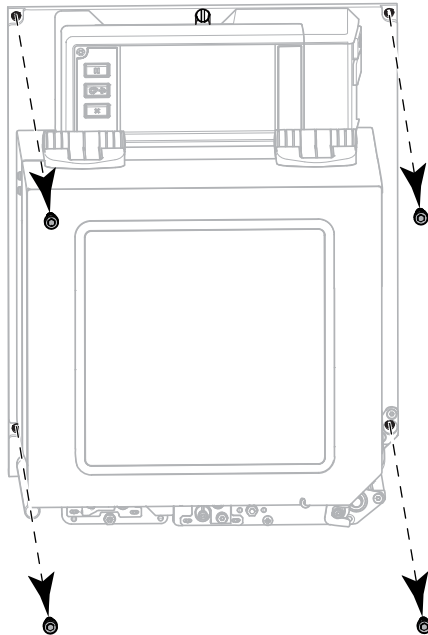
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



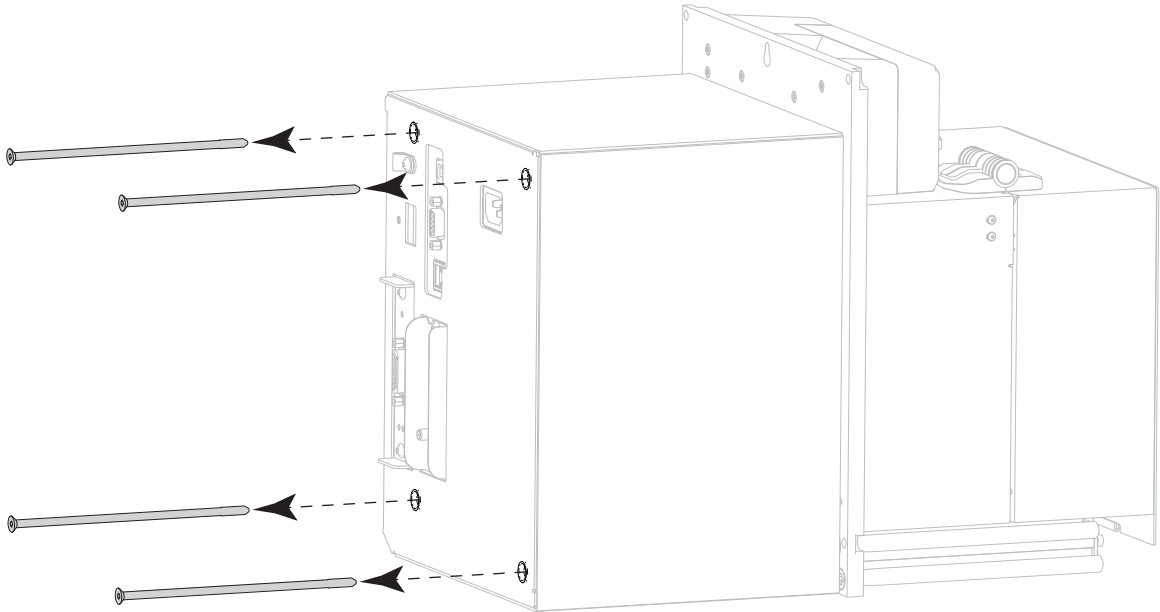
2. Remove the four screws securing the print engine to the applicator.



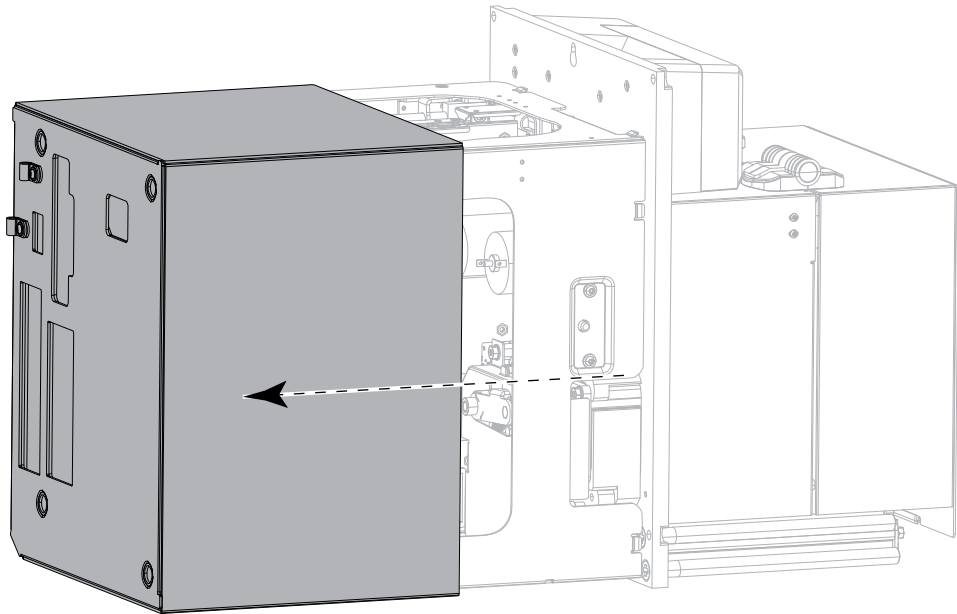
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



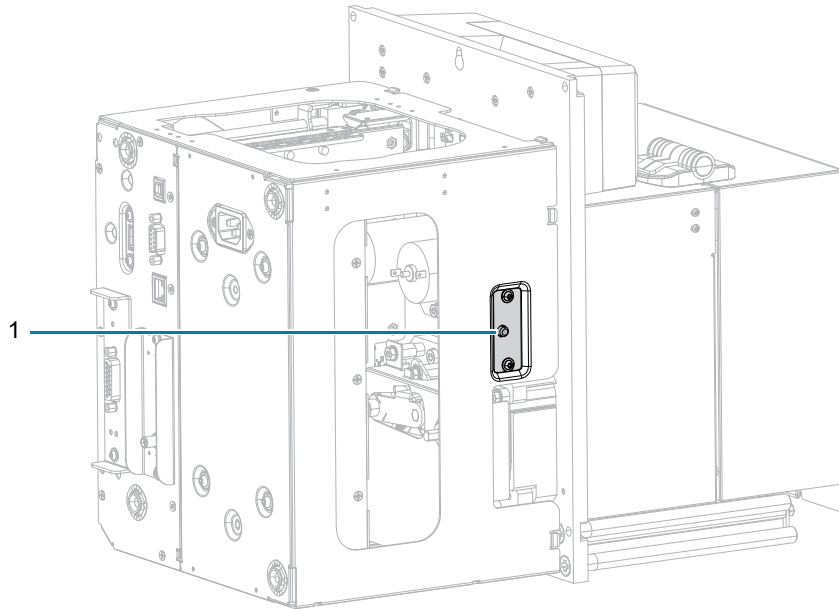
2. Remove the electronics enclosure cover from the print engine.



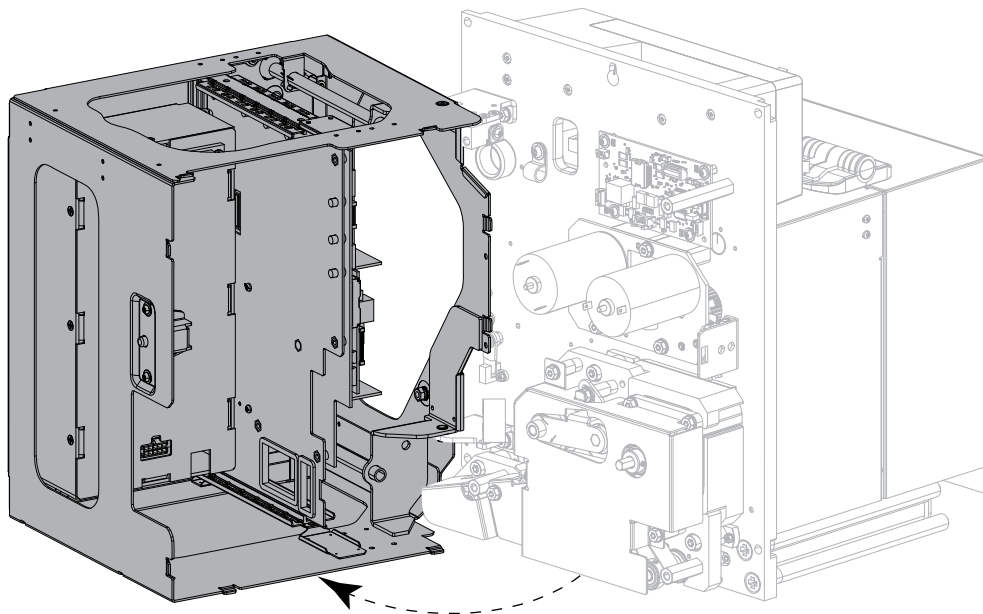
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

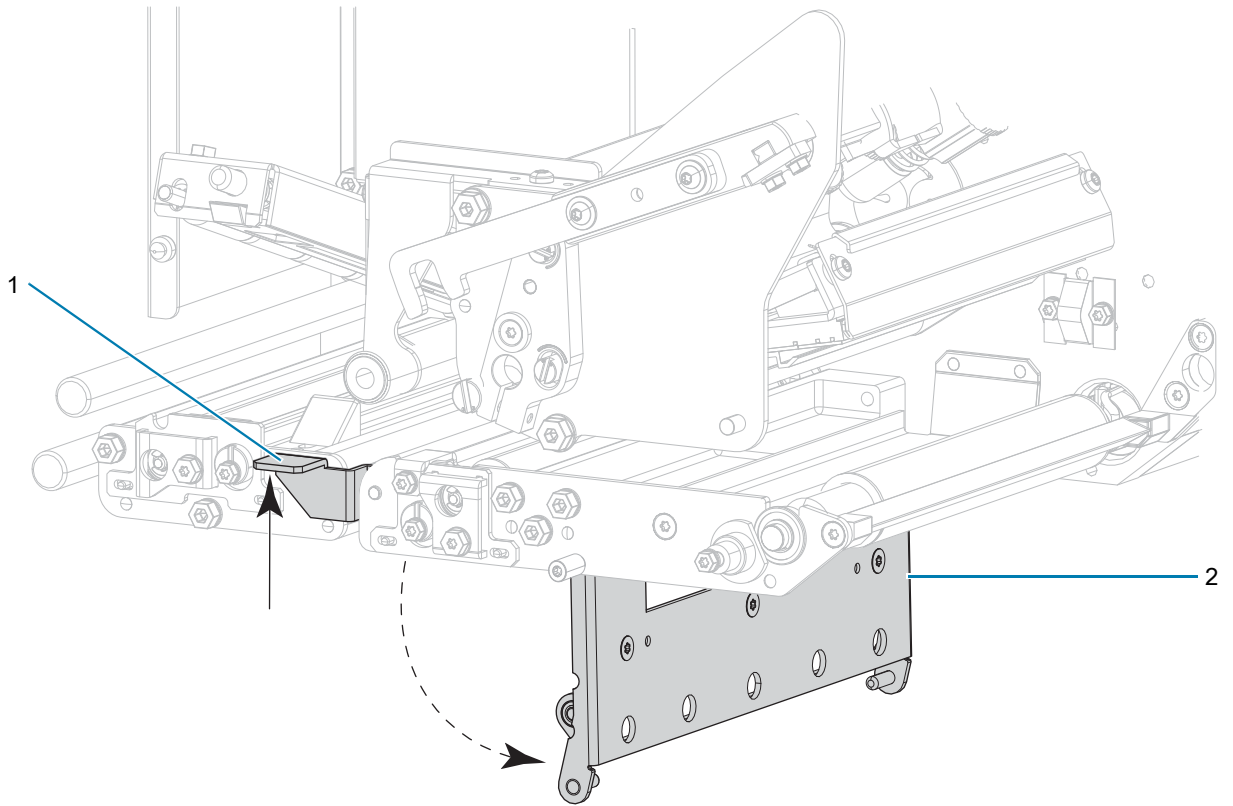


4. Open the rear of the print engine.




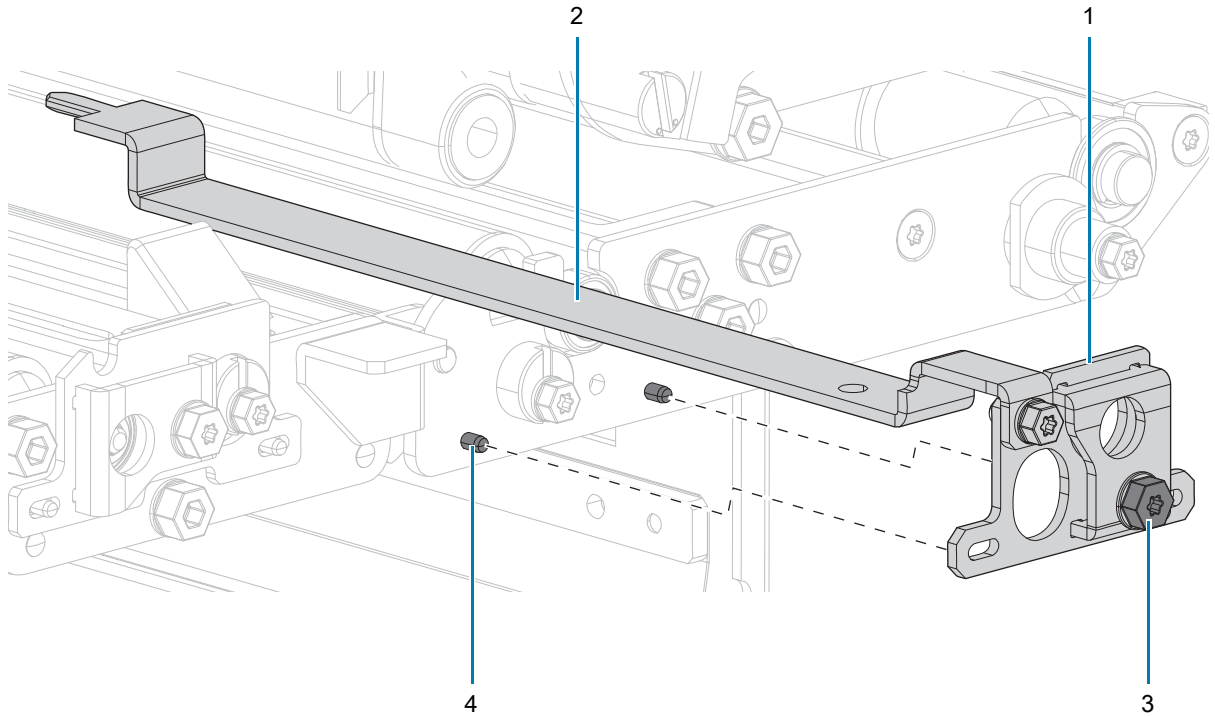
## Remove the Rollers

1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.

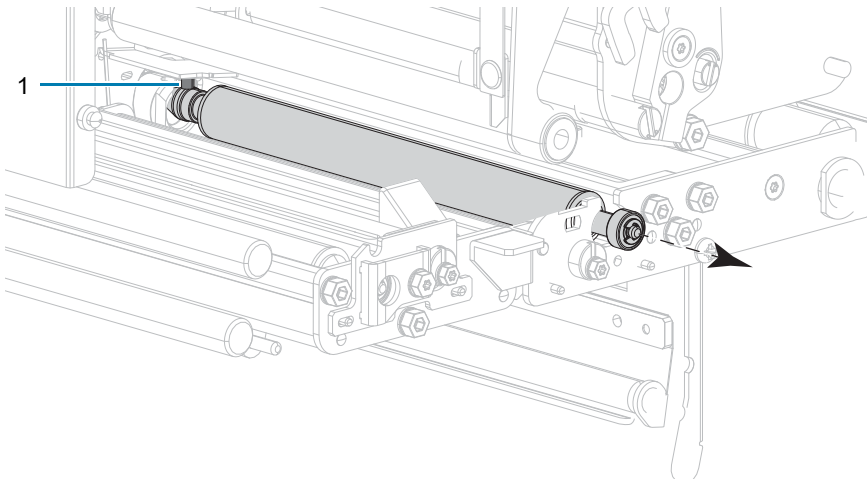


## Ribbon Sensor Maintenance Kit

2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




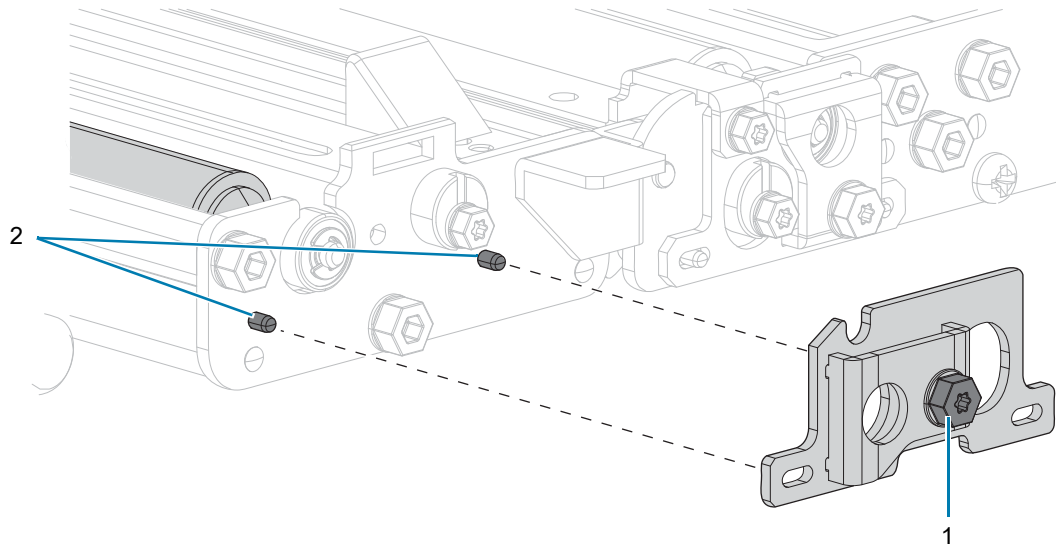
3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.



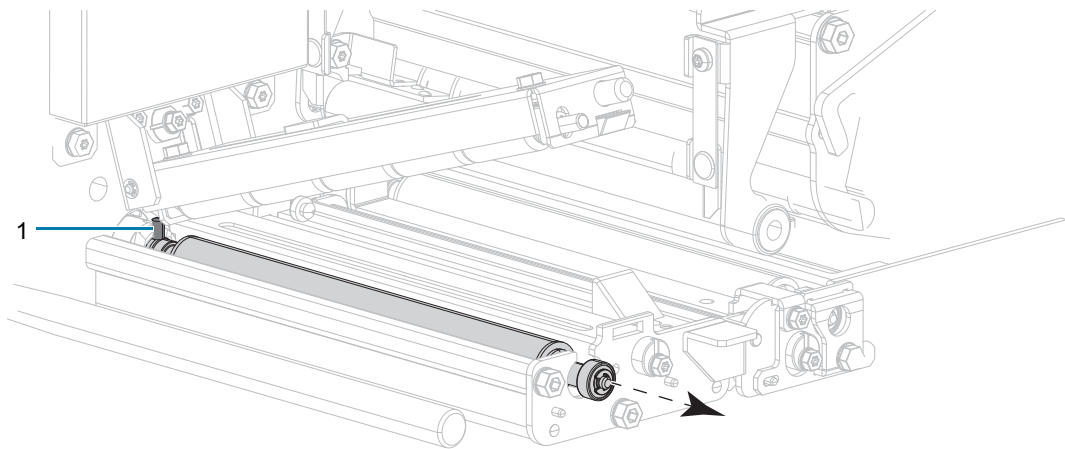
4. Remove the peel roller assembly from the print engine.

for parts & service call QLC (800) 837-1309

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




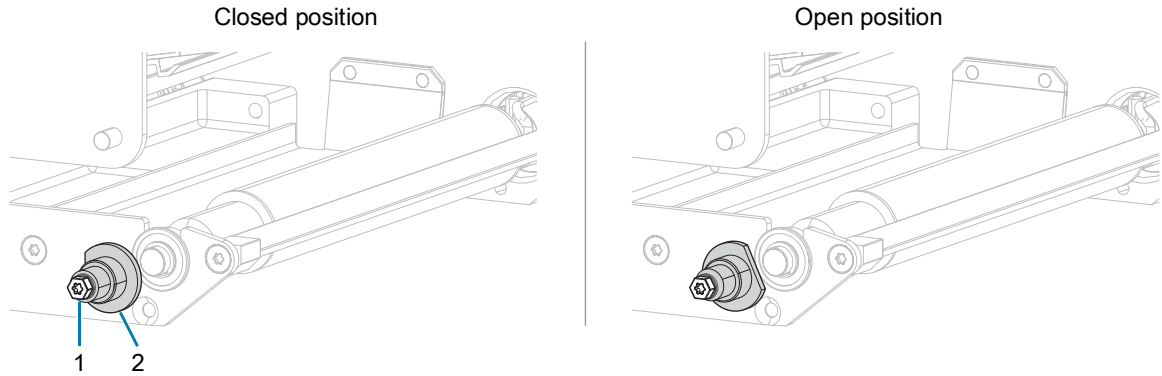
6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



7. Remove the pinch roller assembly from the print engine.

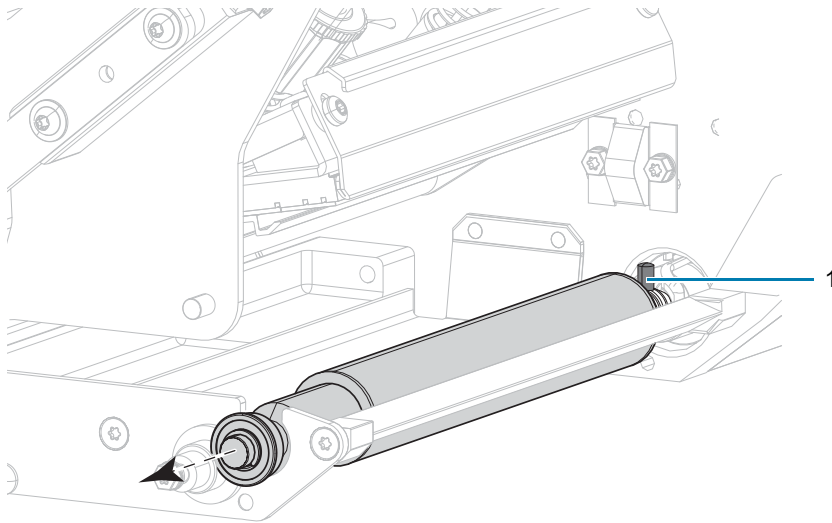
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

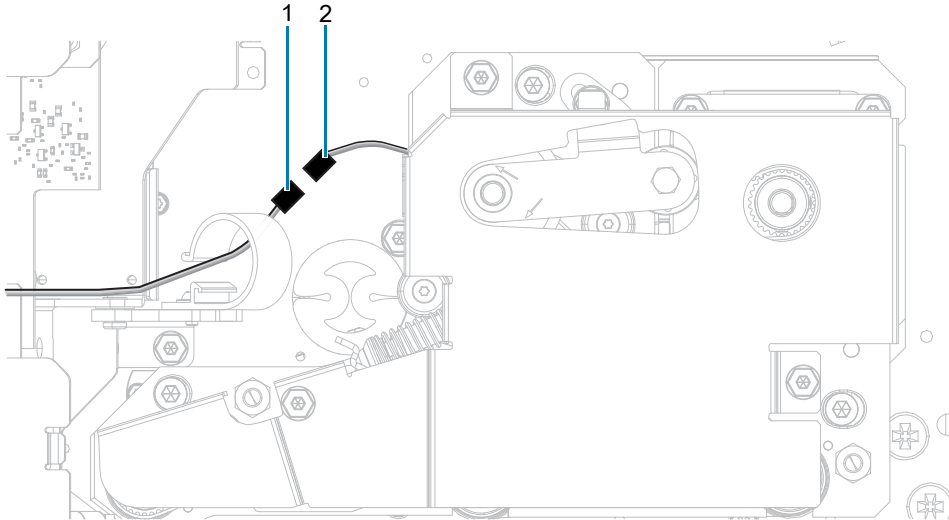


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

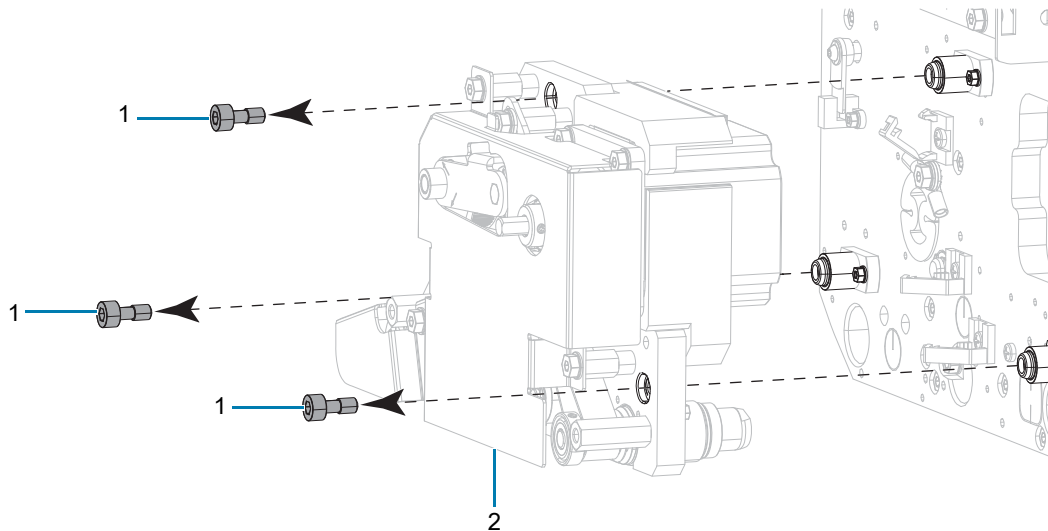


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

3. Remove the drive system (2) from the main frame.



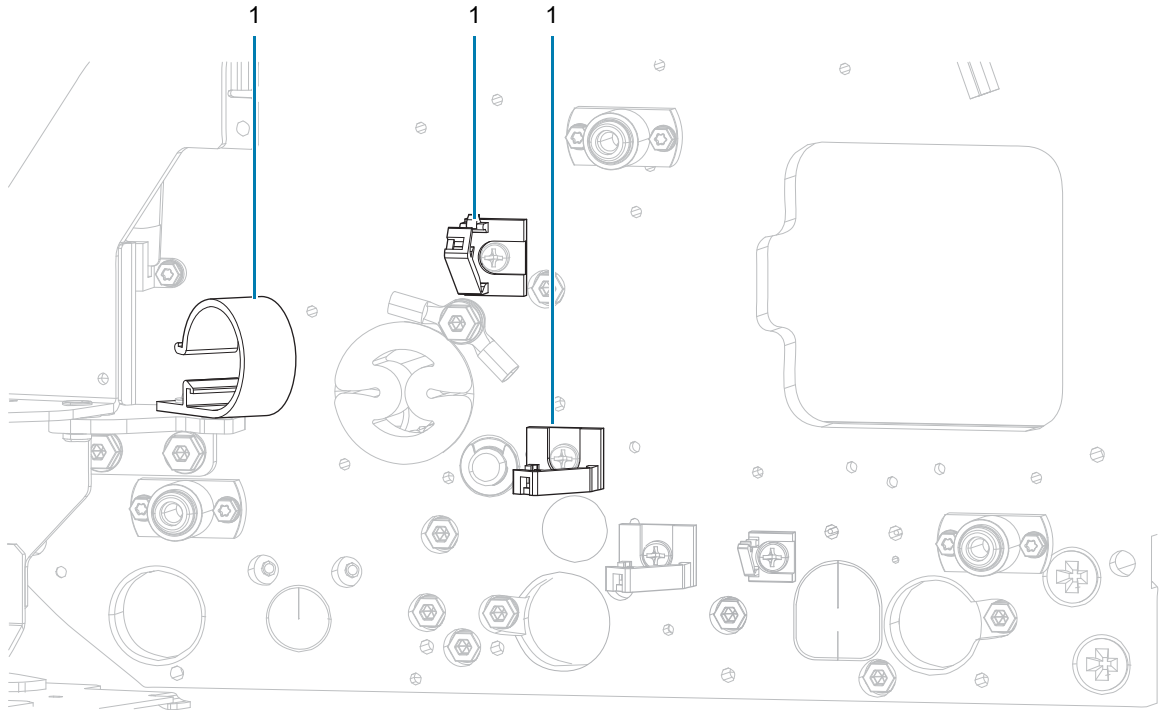


## Replace the Ribbon Sensor

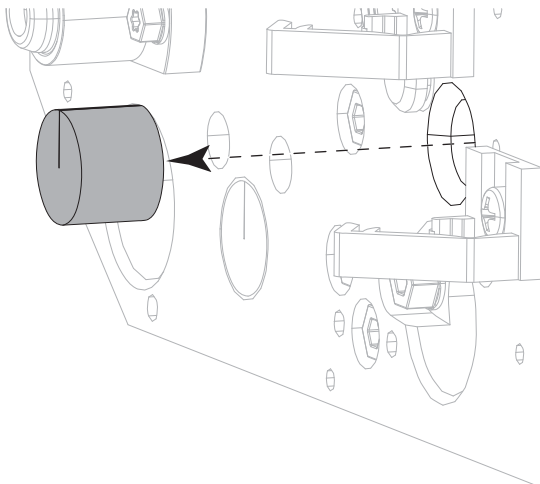


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.


1. From the electronics side, free the ribbon sensor cable.
  - a. Open the three cable clamps (1) to release the media sensor cables.

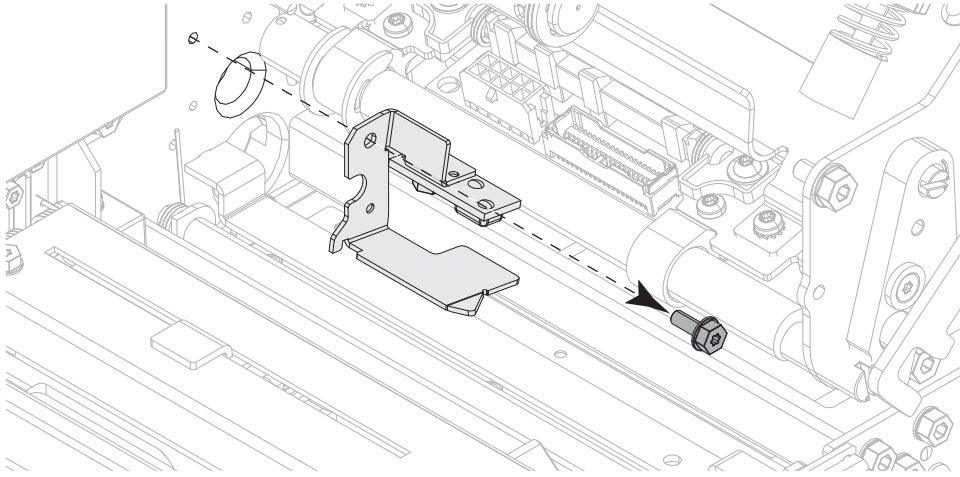


- b. Disconnect the upper and lower media sensor cables from plugs J33 on the main logic board (MLB).
  - c. Remove the cable from the flexible conduit.
2. Remove the cable sealing plug.

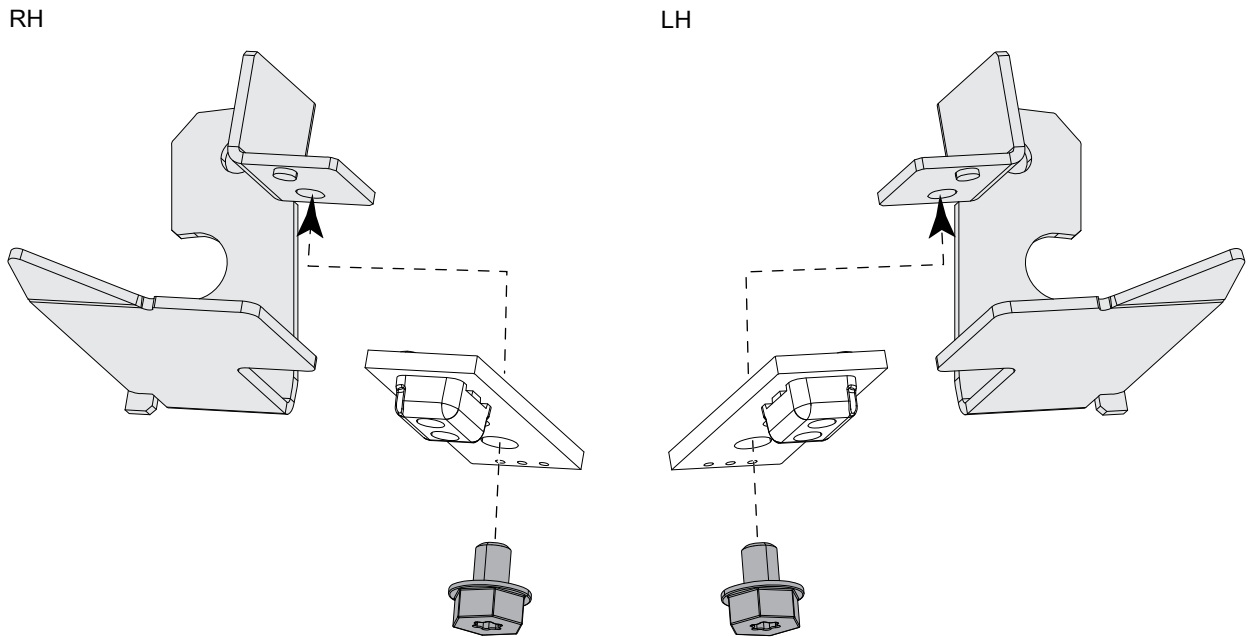


## Ribbon Sensor Maintenance Kit

3. Remove the  T9 screw securing the ribbon sensor bracket, and remove ribbon sensor assembly from the print engine and guide the cables through the access hole.

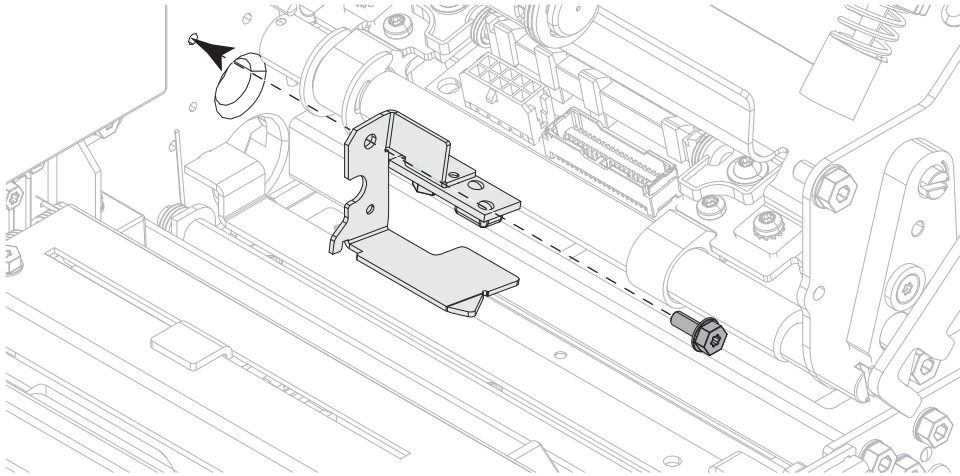



4. Install the new ribbon sensor PCB to the new mounting bracket with the new  T9 screw.

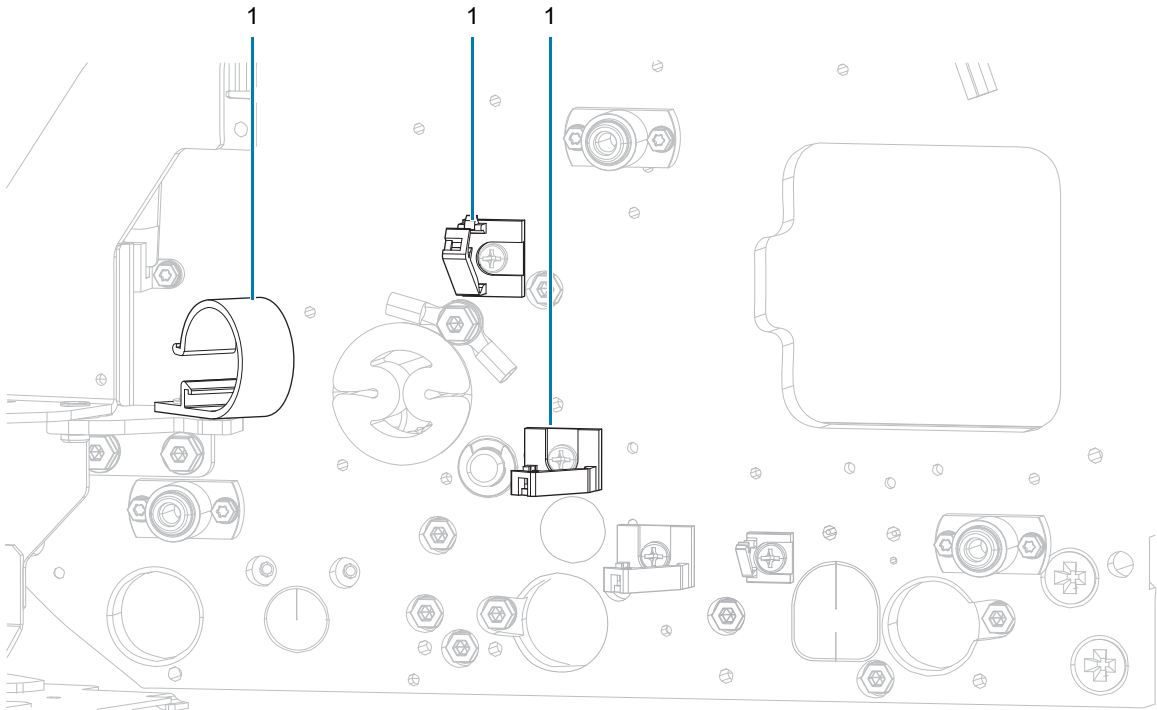


for parts & service call QLC (800) 837-1309

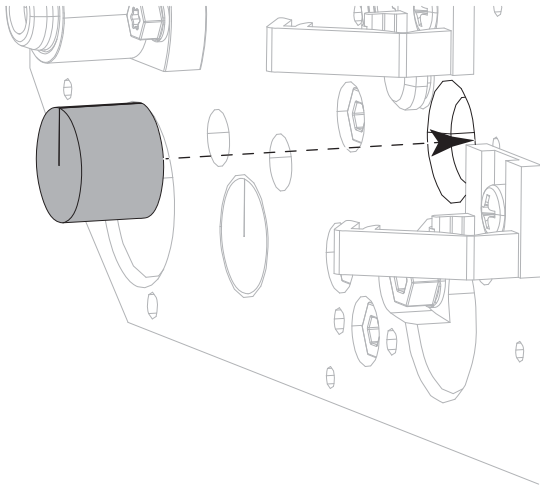
5. Guide the ribbon sensor cables through the access hole and install the new ribbon sensor assembly.



6. Secure the new ribbon sensor bracket with the  T9 screw.
7. Insert the cable back into the flexible conduit.
8. Connect the ribbon sensor cable to plug J33 on the MLB.
9. Reroute the ribbon sensor cable through the three cable clamps (1), and then close the clamps.

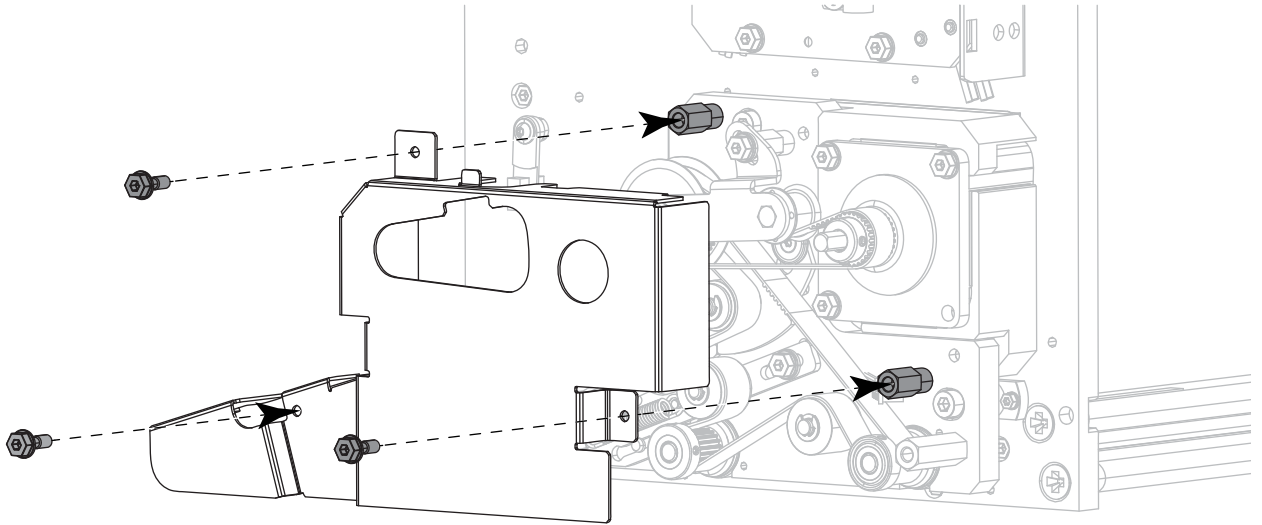


10. Install the new cable sealing plug.



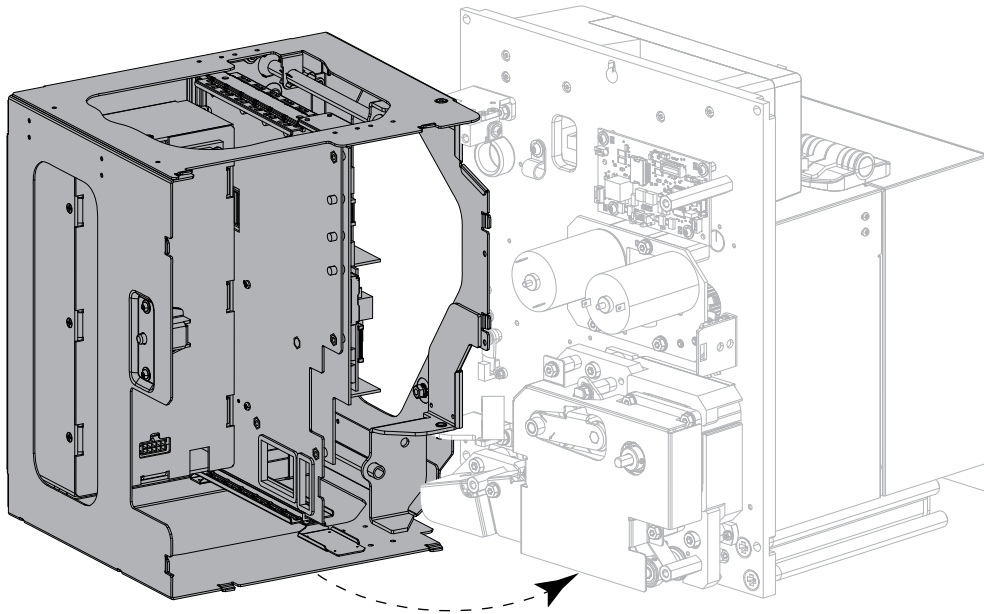
## Reinstall Media Drive

1. Replace the media system drive cover.
  - a. Align the drive cover with the three standoffs.
  - b. Replace the three ● 3mm hexagon screws to secure the media system drive cover.

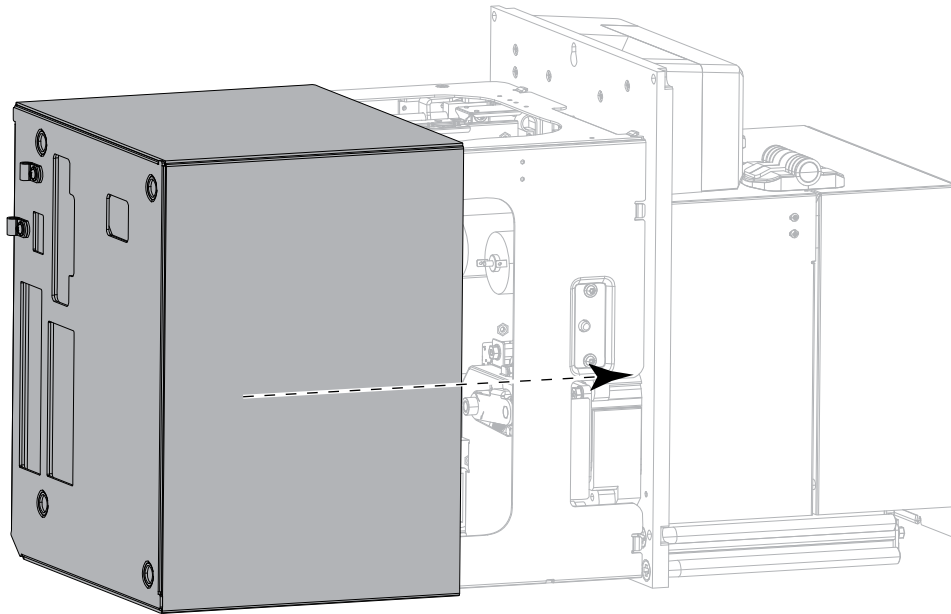


## Close the Electronics Enclosure

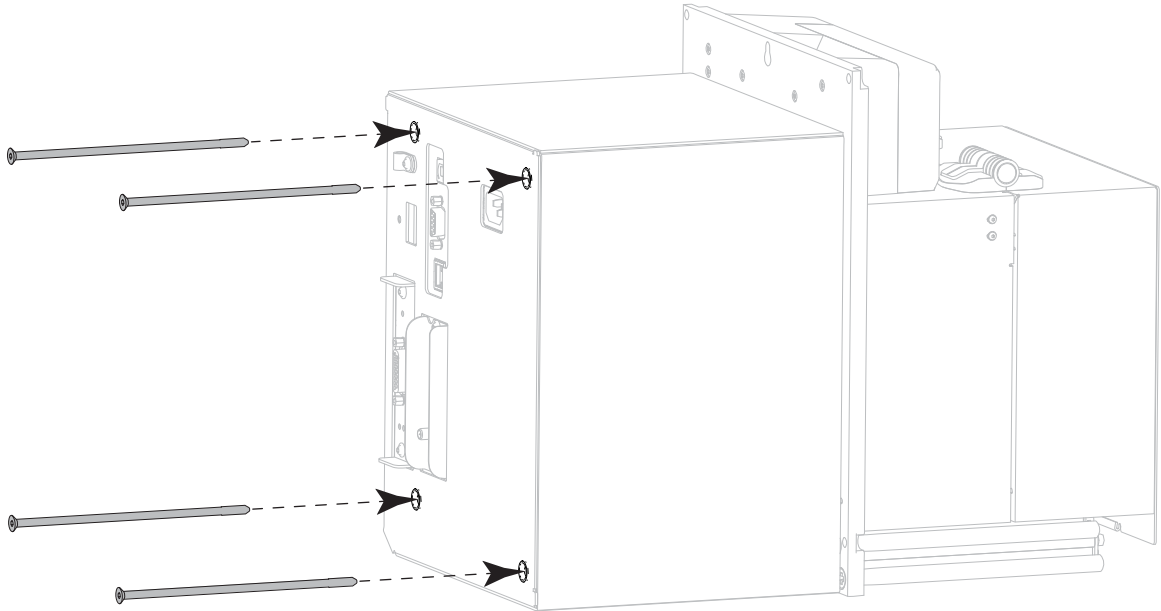
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.

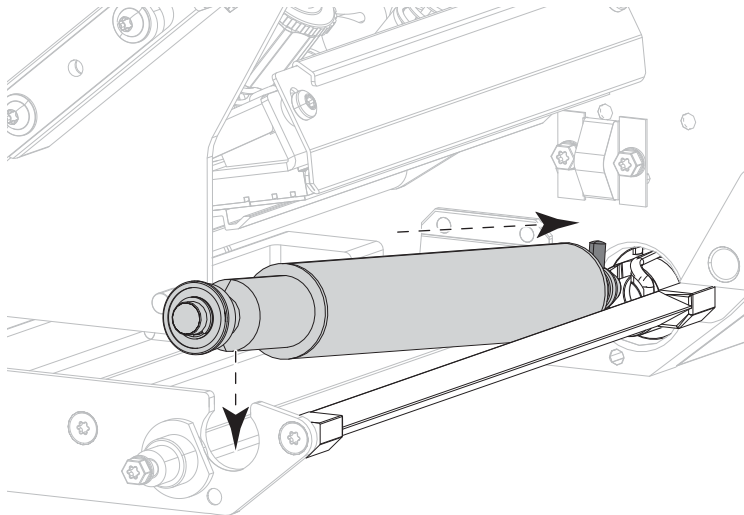


3. Install the four 3mm screws securing the electronics enclosure cover.




## Reinstall the Rollers

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.

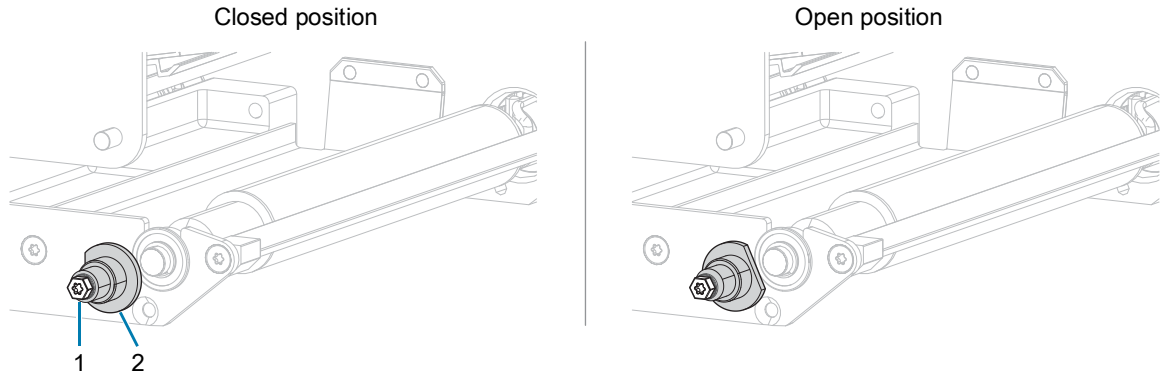


2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.

3. Secure the platen support plate latch pin in the closed position.

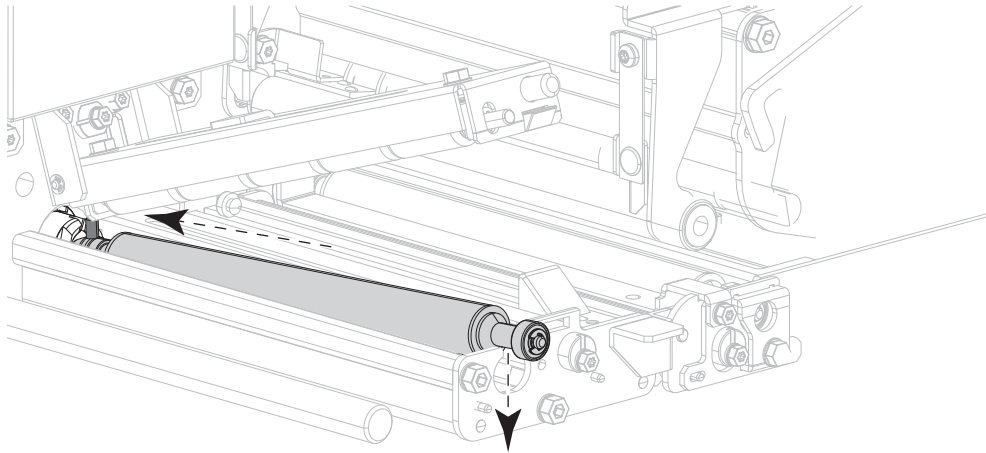
a. Loosen the  T9 captive screw (1) securing the latch pin (2).

b. Rotate the latch pin to the closed position.




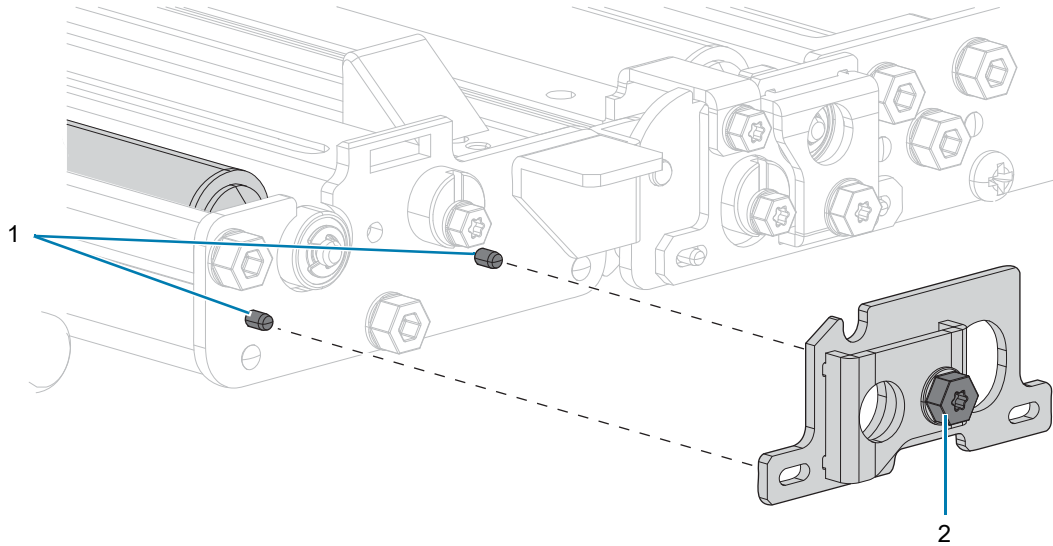
c. Tighten the  T9 captive screw.

4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.

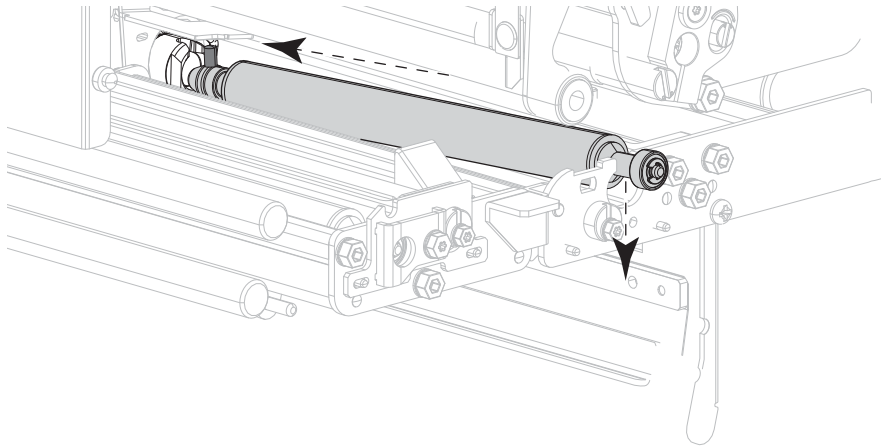


5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.




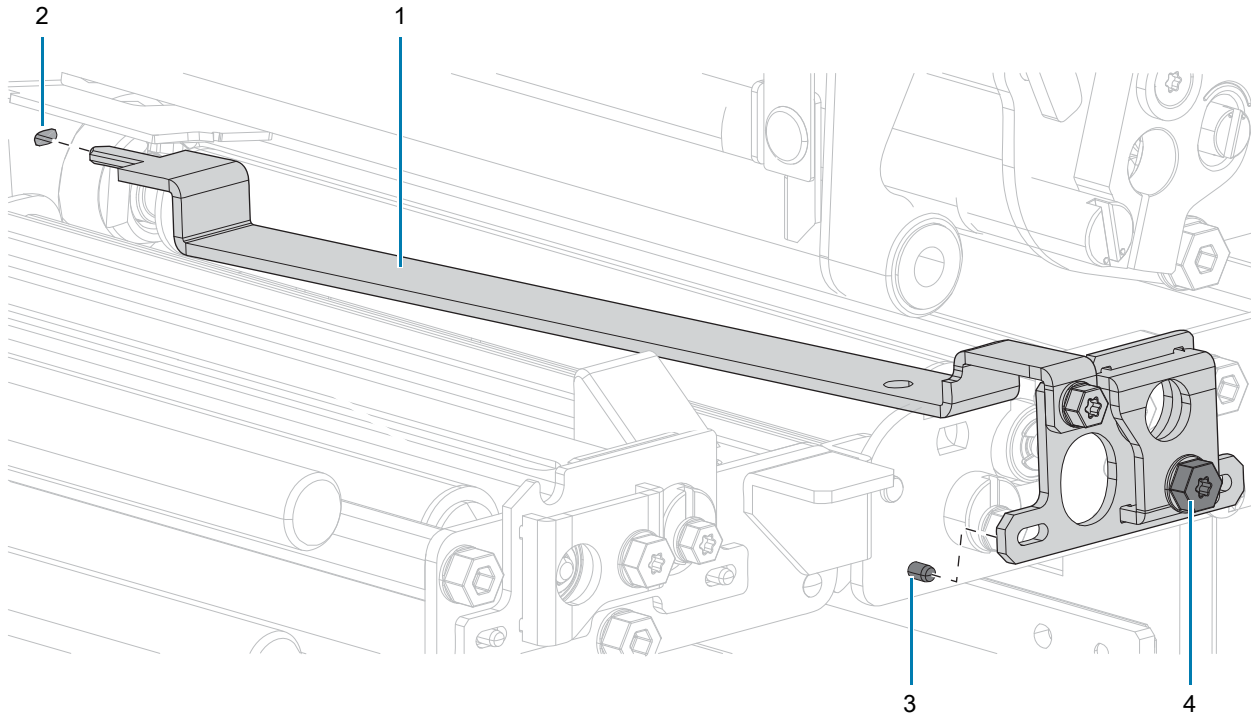
7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.



9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.




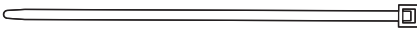


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

	Printhead open sensor Qty: 1	
	Screw (M3×8 HX TX NI) Qty: 2	 T10
	Cable tie Qty: 4	

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



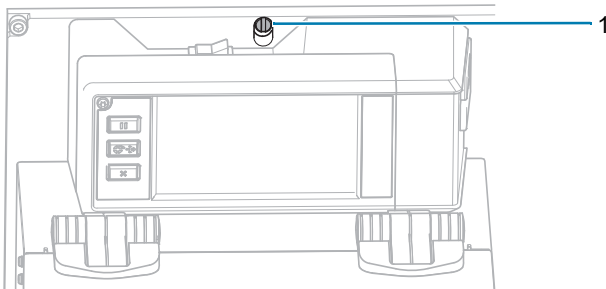
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



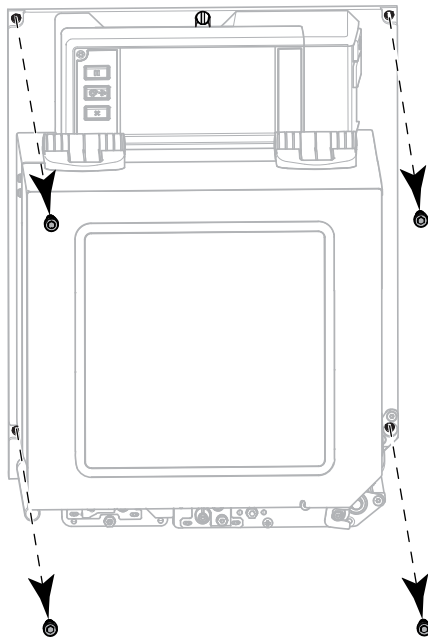
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



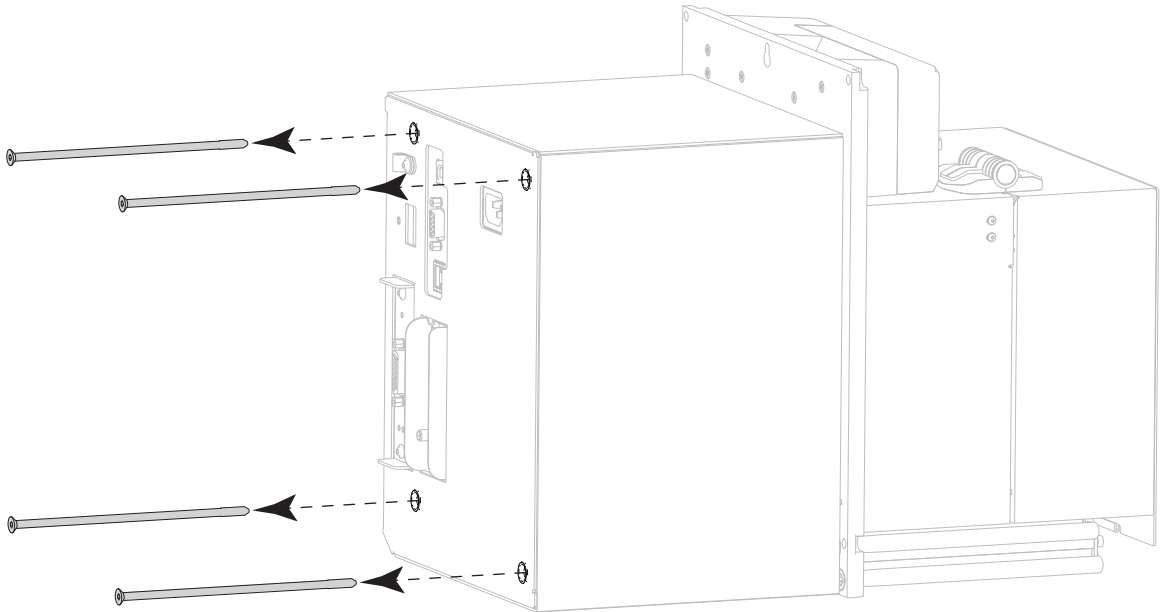
2. Remove the four screws securing the print engine to the applicator.



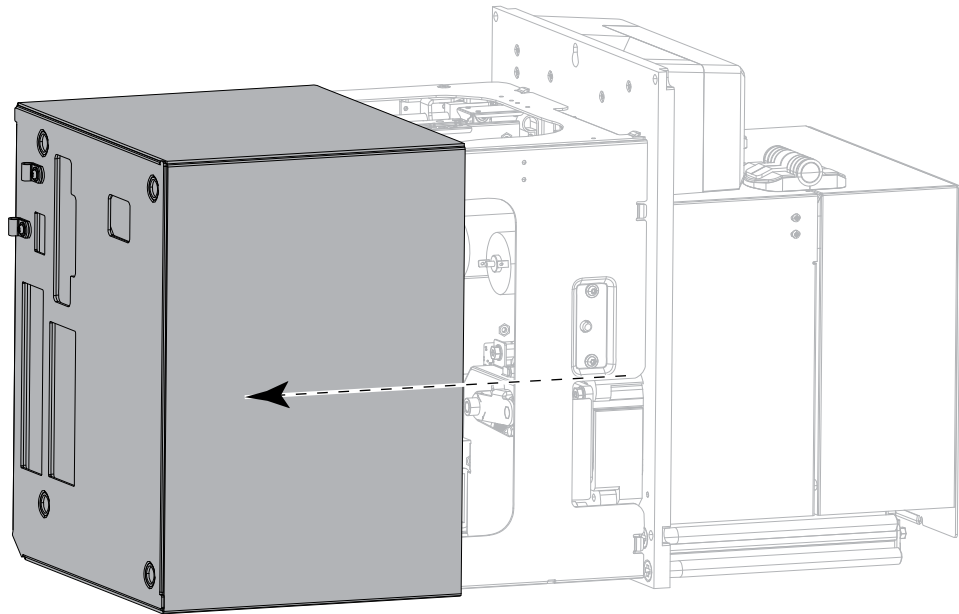
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



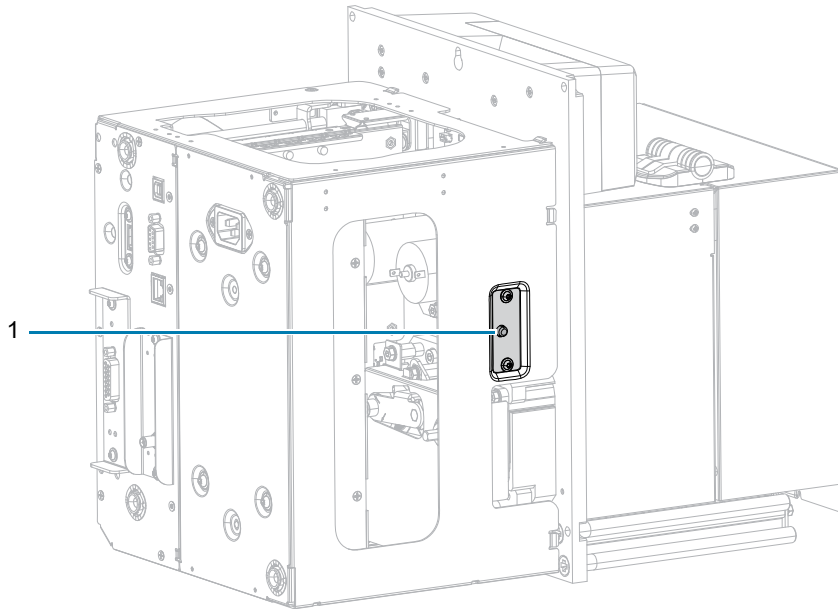
2. Remove the electronics enclosure cover from the print engine.



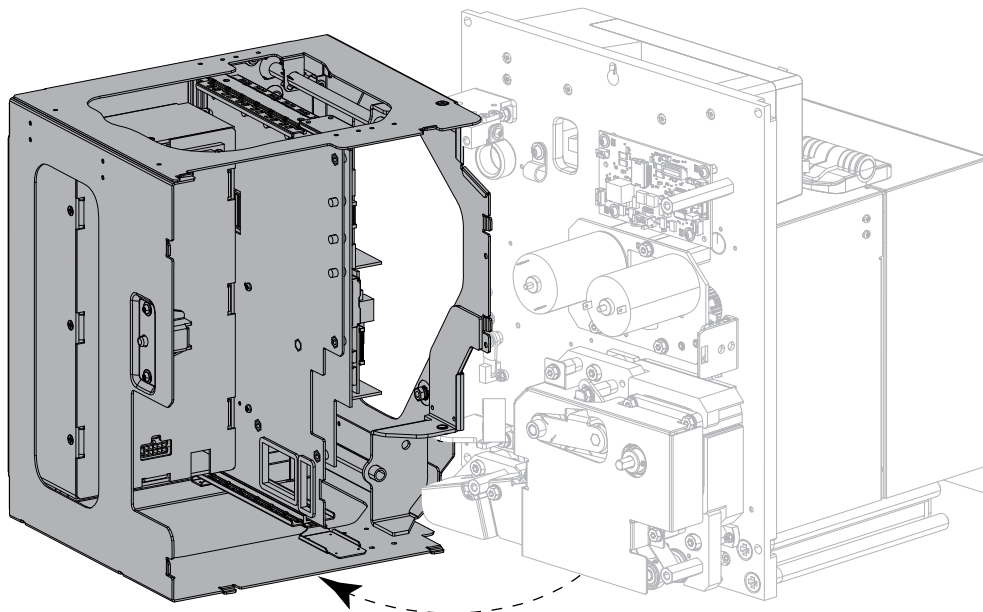
3. Press the electronics enclosure latch (1).




**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

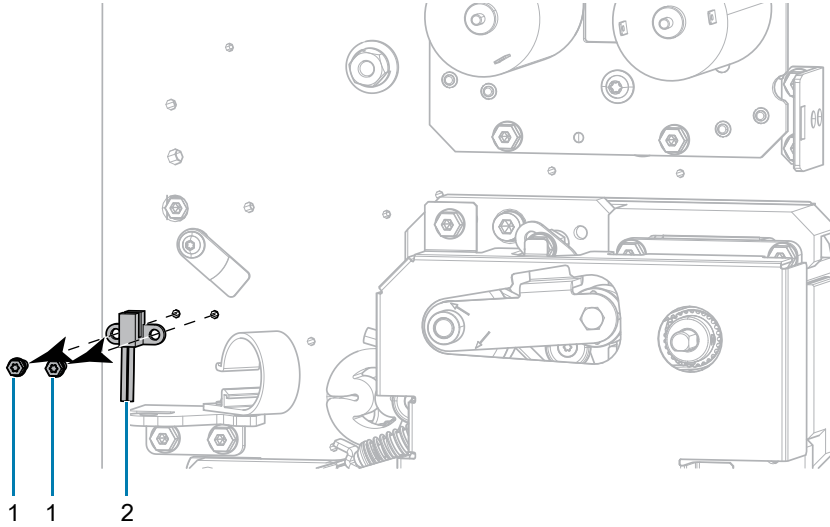


4. Open the rear of the print engine.



## Replace the Printhead Open Sensor

1. Open the printhead latch to rotate the flag out from between the sensor.
2. Remove the two  T10 screws (1) securing the printhead open sensor (2).

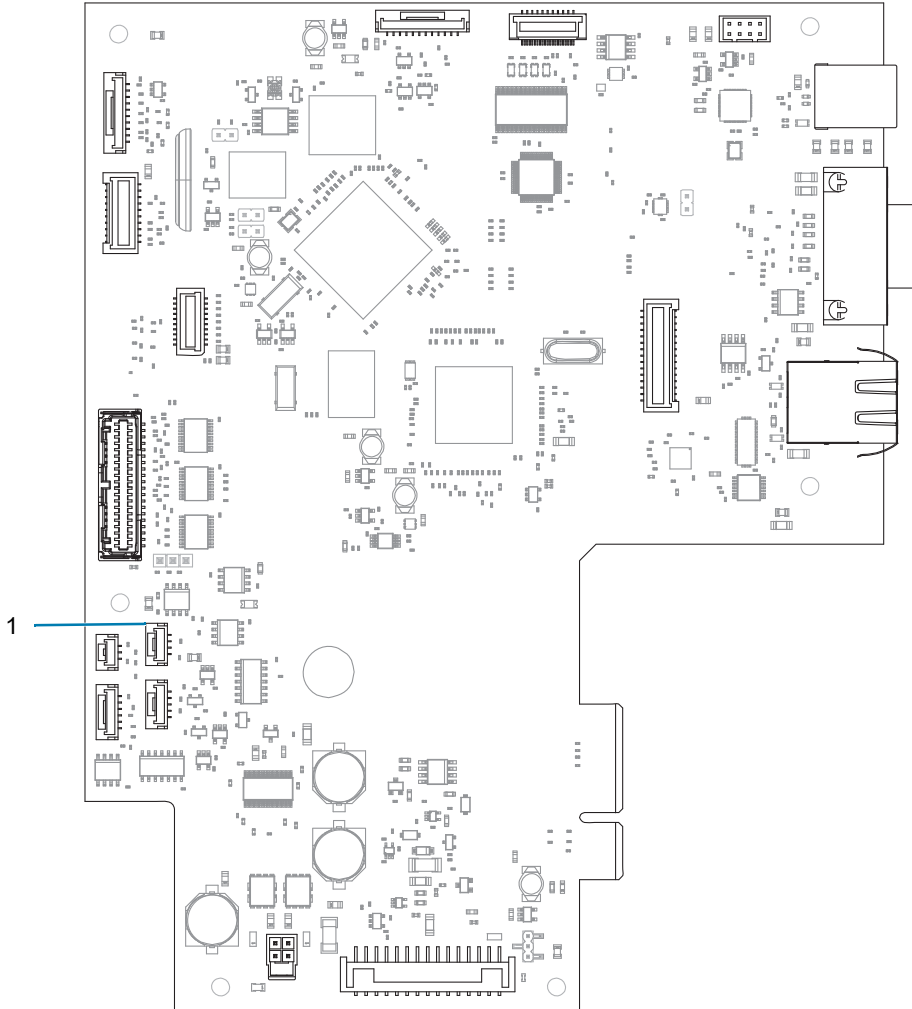


3. Trace the printhead open sensor cable (red, yellow, and two black wires) from the sensor.



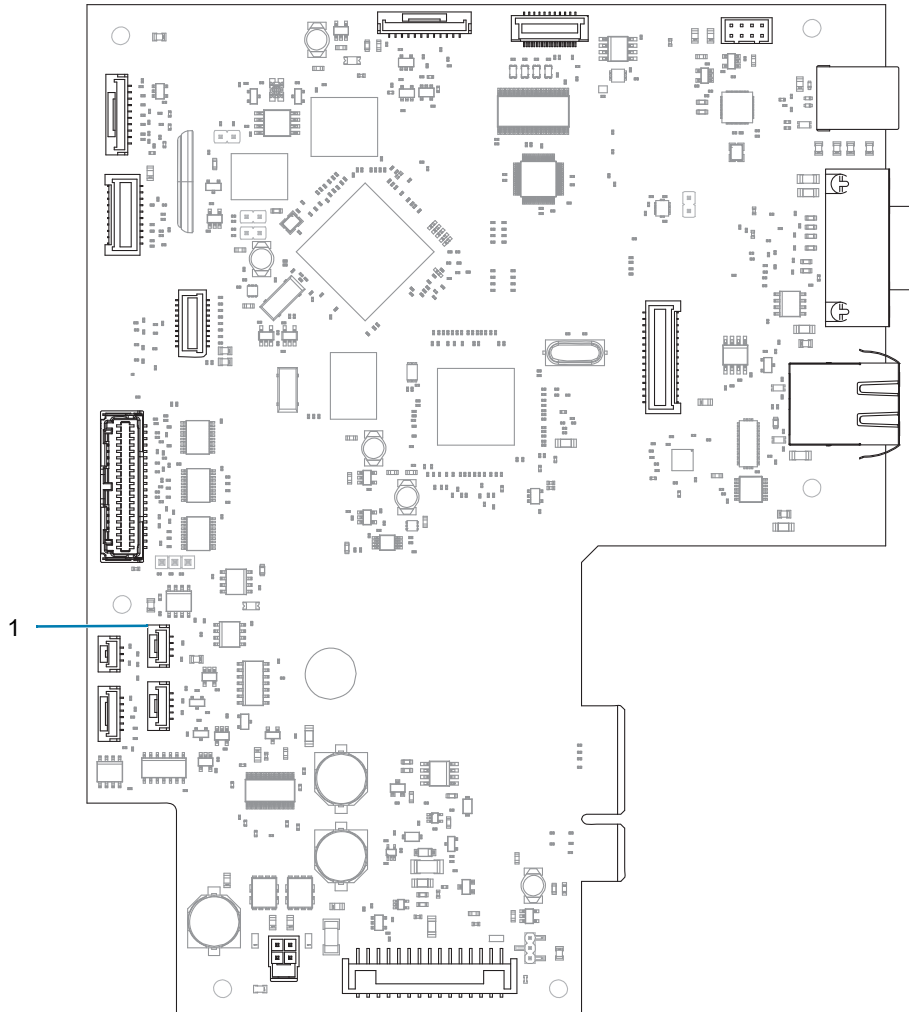
**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

4. Disconnect the printhead open sensor from J34 (1) on the main logic board (MLB).

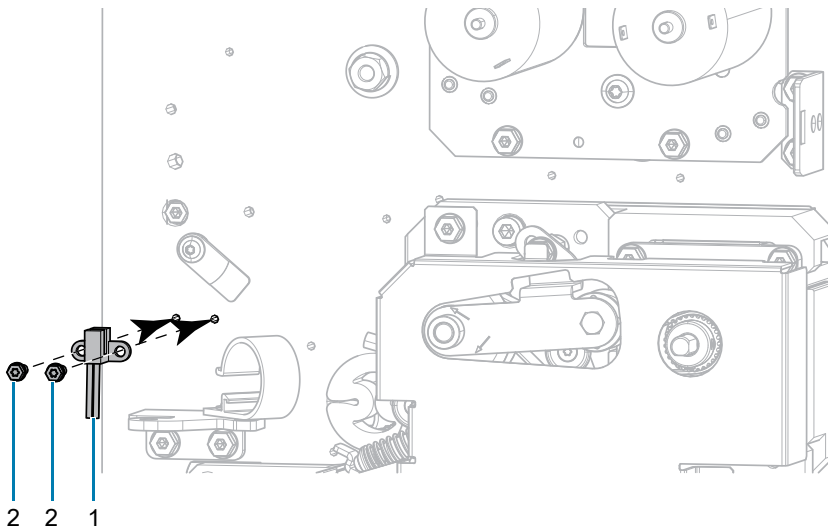


5. Remove the printhead open sensor cable from the flexible conduit securing the cable. Cut any cable ties, as necessary.
6. Route the new printhead open sensor cable through the flexible conduit and secure with cable ties.

7. Connect the new printhead close sensor to J34 (1) on the MLB.



8. Secure the new printhead open sensor (1) with the two T10 screws (2).



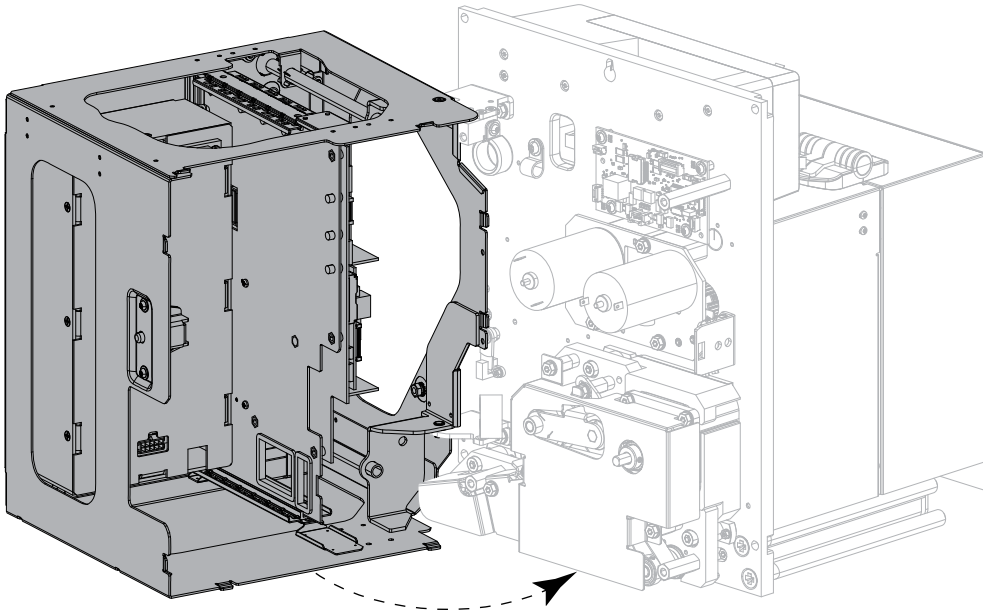
9. Close the printhead latch.

for parts & service call QLC (800) 837-1309

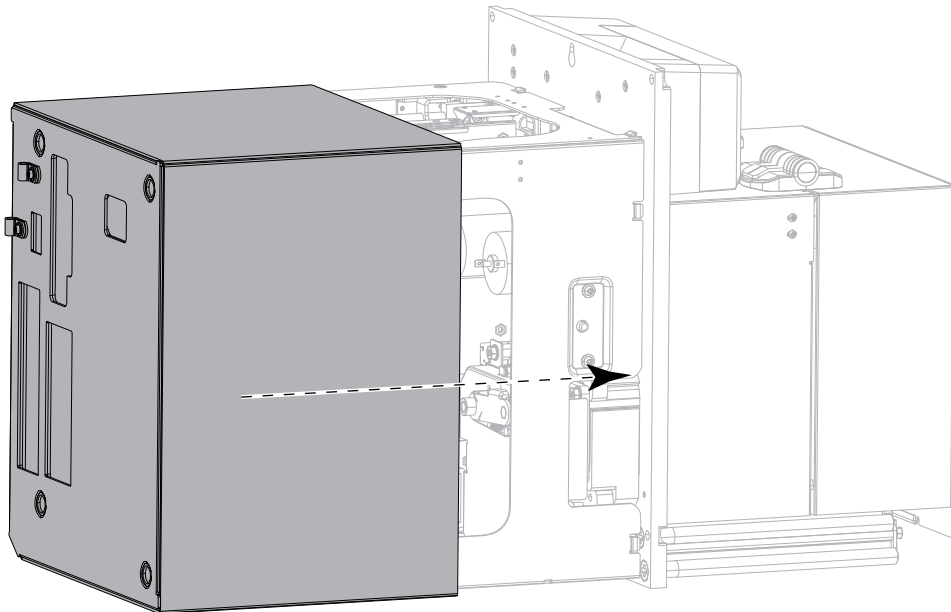


## Close the Electronics Enclosure

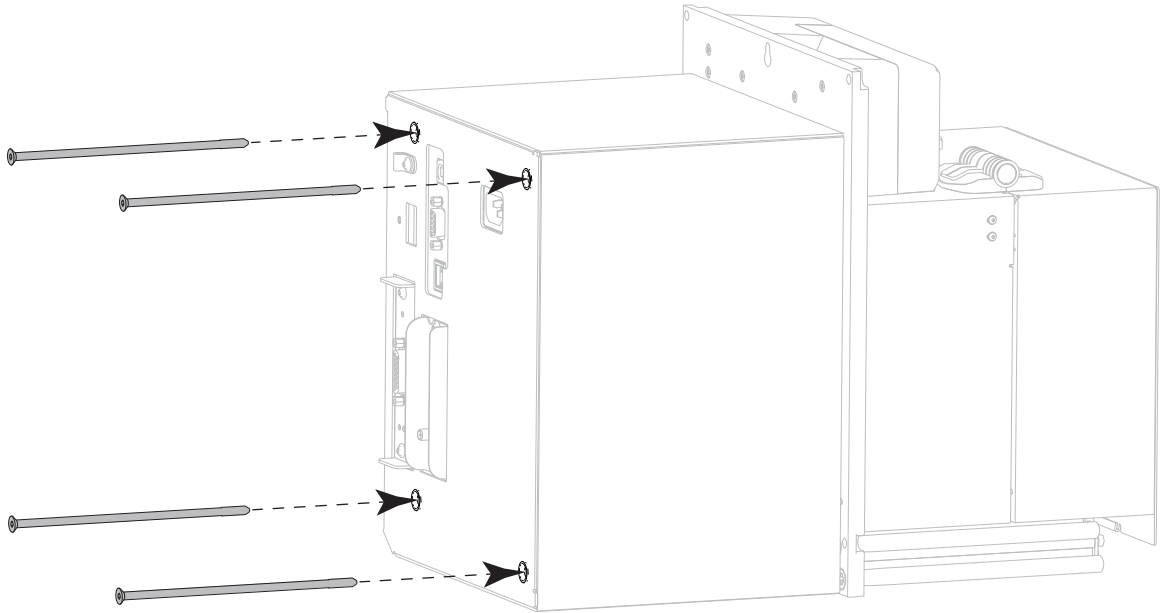
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four ● 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

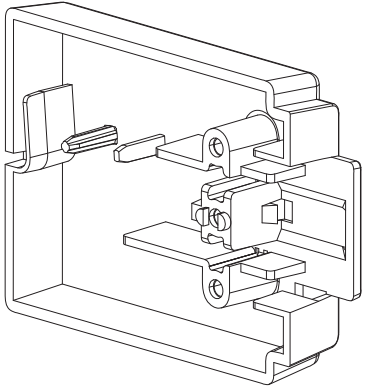
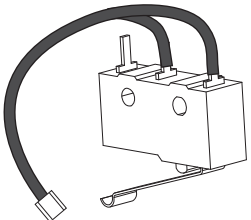
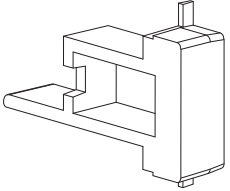
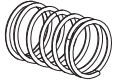




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Door-open switch housing Qty: 1
	Switch assembly Qty: 1
	Door-open switch actuator Qty: 1
	Door-open switch spring Qty: 1
	Sealing plug Qty: 1
	Screw (M2.5X8 PN PH ZN TRFMNG) Qty: 2



## Tools Required

- Metric hexagon keys or bits  
Size: 3mm
- ⊕ Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



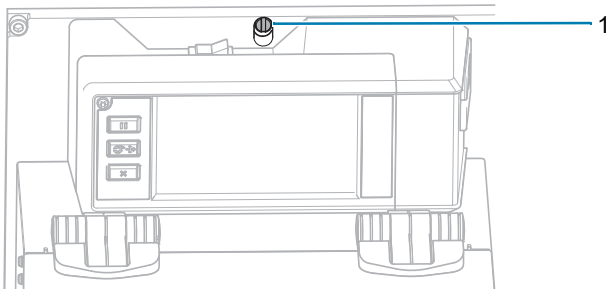
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



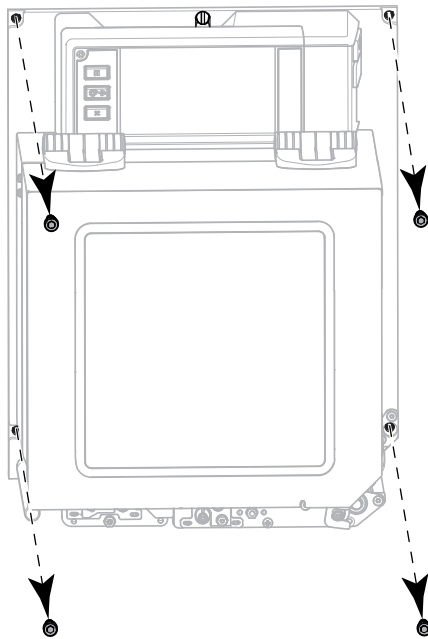
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



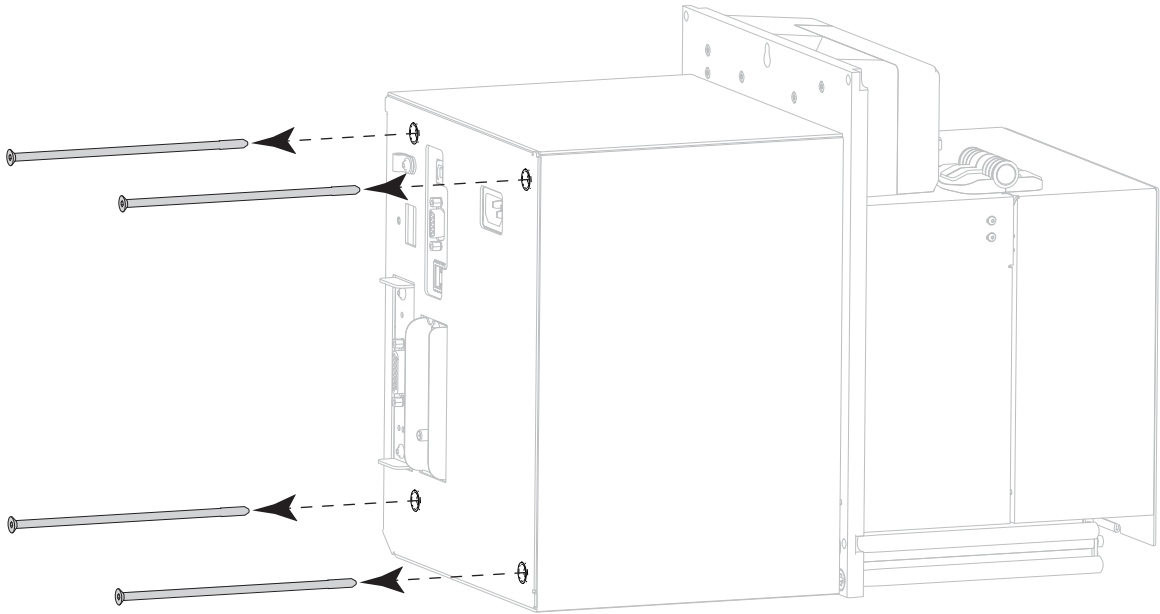
2. Remove the four screws securing the print engine to the applicator.



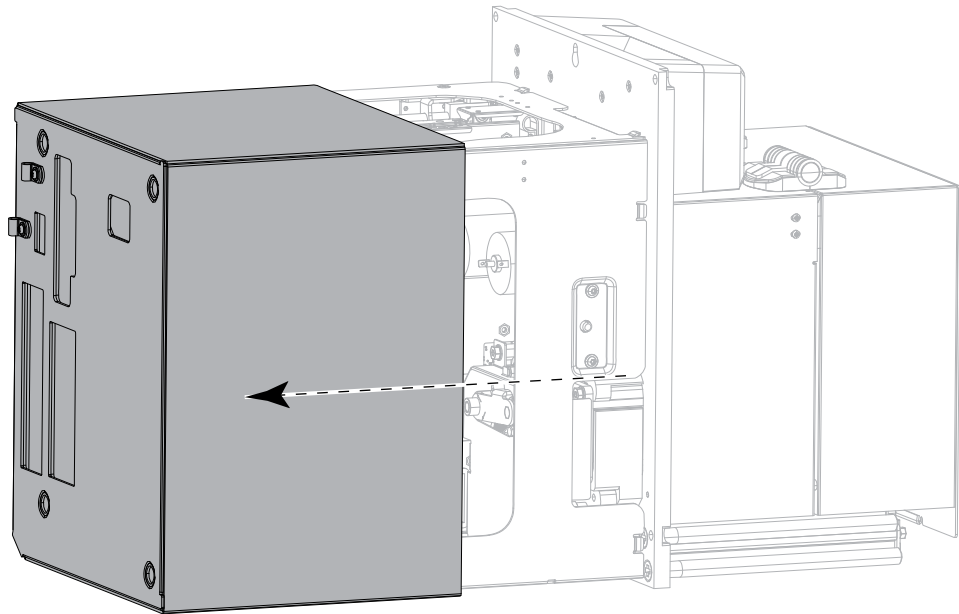
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

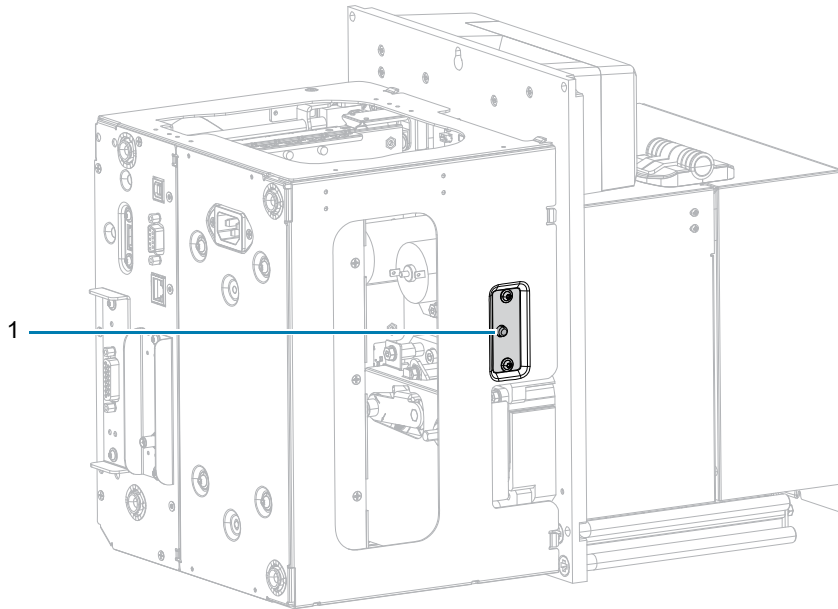


## Door-Open Sensor Maintenance Kit

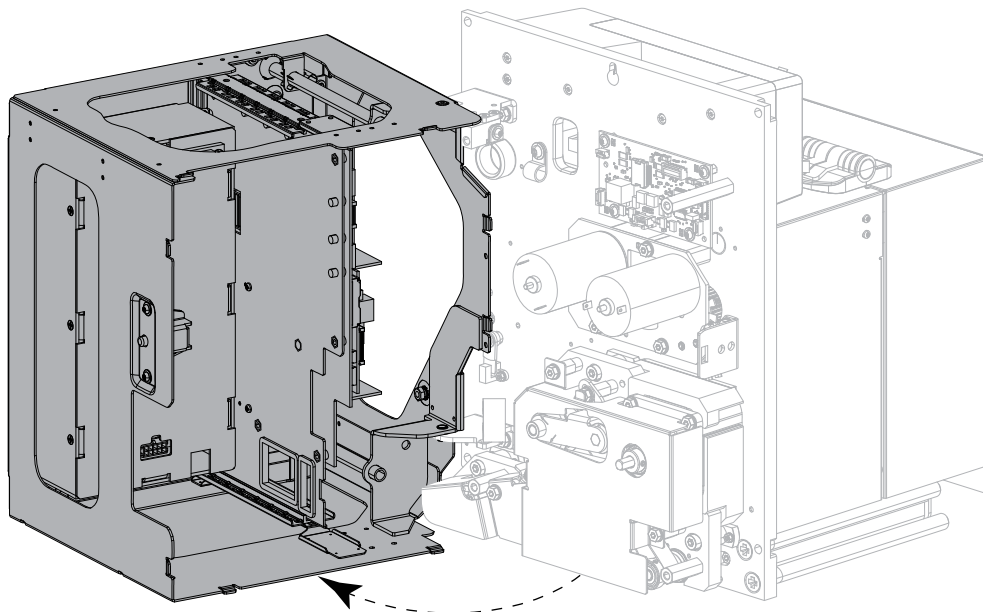
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



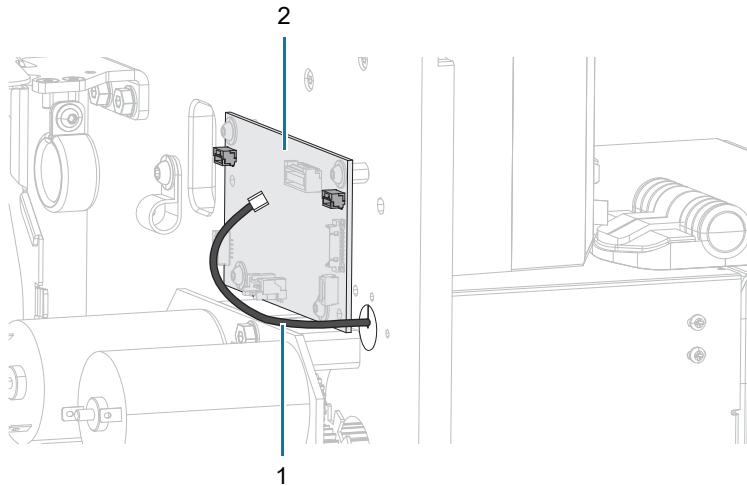
4. Open the rear of the print engine.



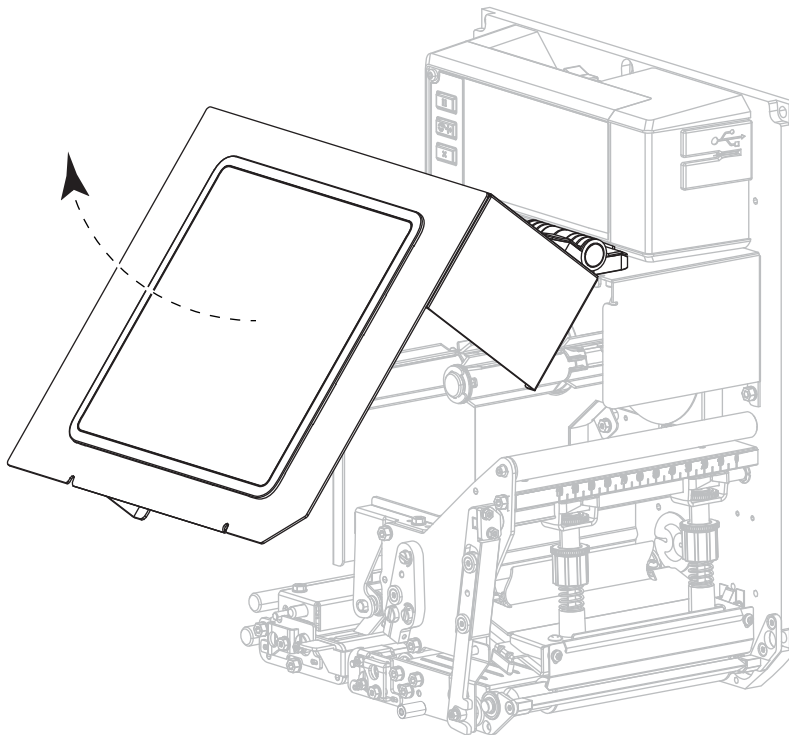
for parts & service call QLC (800) 837-1309

## Remove the Old Sensor


1. Inside the electronics enclosure, disconnect the door-open sensor cable (1) from the ribbon tension control board (2).

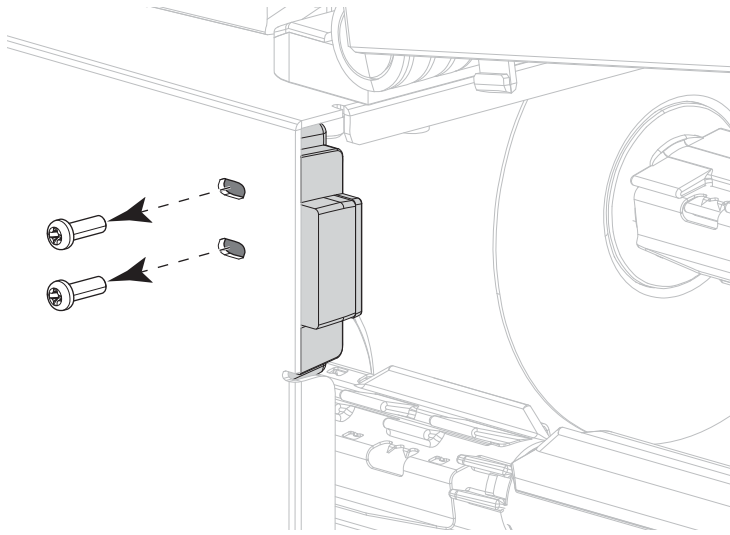


2. Open the media cover.





3. Remove the two  PH1 screws that secure the sensor to the media cover.

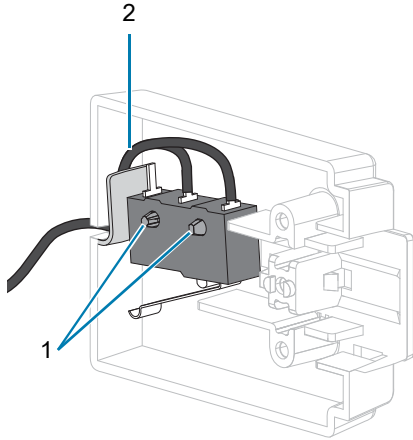


4. While removing the door-open sensor from the print engine, remove the sealing plug from the hole in the mainframe, and pull the end of the sensor cable through the hole.

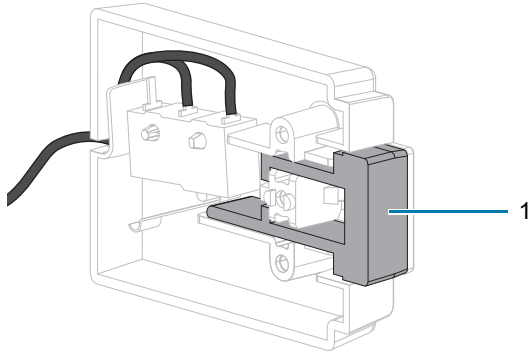
## Install the New Sensor

1. Assemble the door-open sensor.

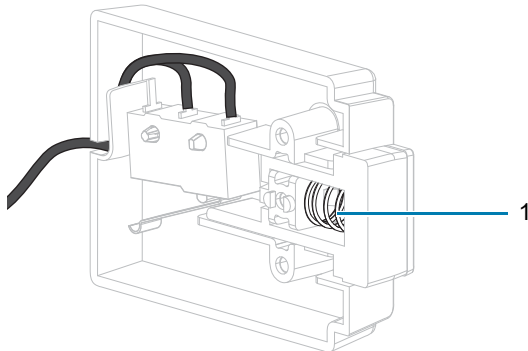
a. Snap the sensor assembly onto the tabs (1) in the housing, and route the cable wires (2) as shown.



b. Position the door-switch actuator (1).

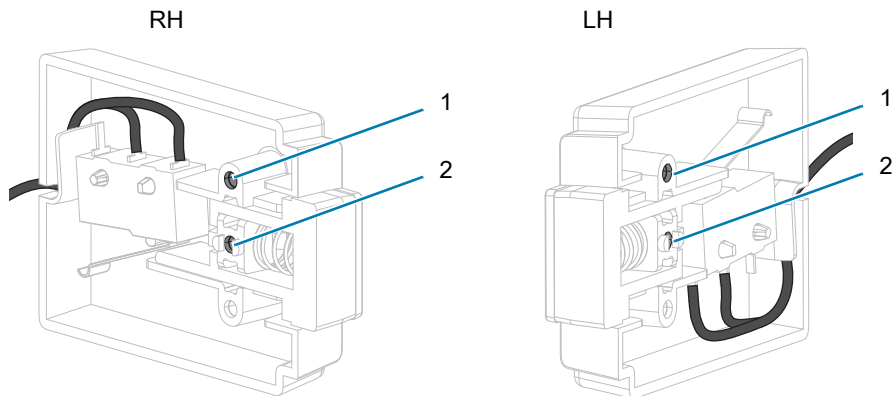



c. Insert the spring (1) as shown.

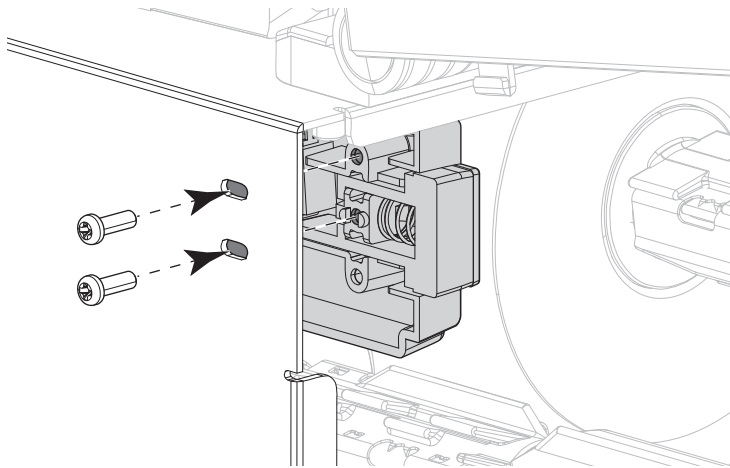


## Door-Open Sensor Maintenance Kit

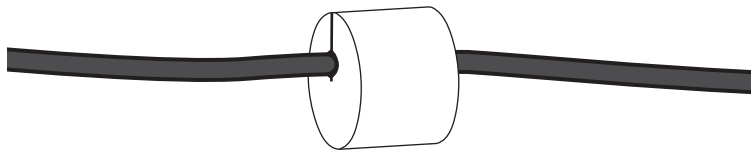
2. Orient the switch as shown for RH or LH print engines. Note the location of the top (1) and center (2) holes.



3. Align the door-open sensor on the inside of the media cover so that the top and center holes line up with the two holes in the media cover, and then secure the sensor with the two  PH1 screws.



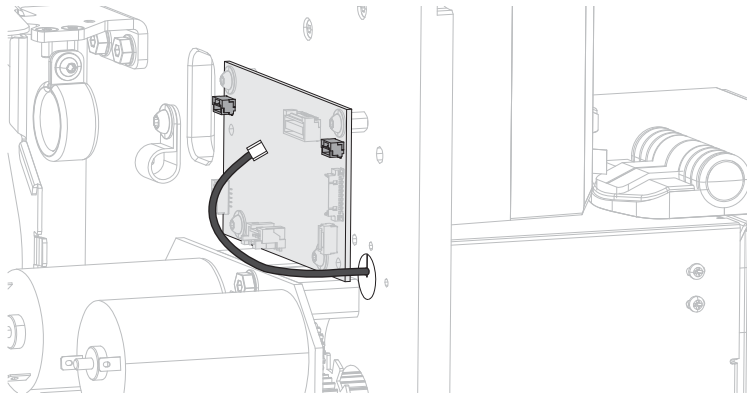
4. Connect the door-open sensor cable to the ribbon tension control board.
  - a. Insert the door-open sensor cable into the slot of the new sealing plug.



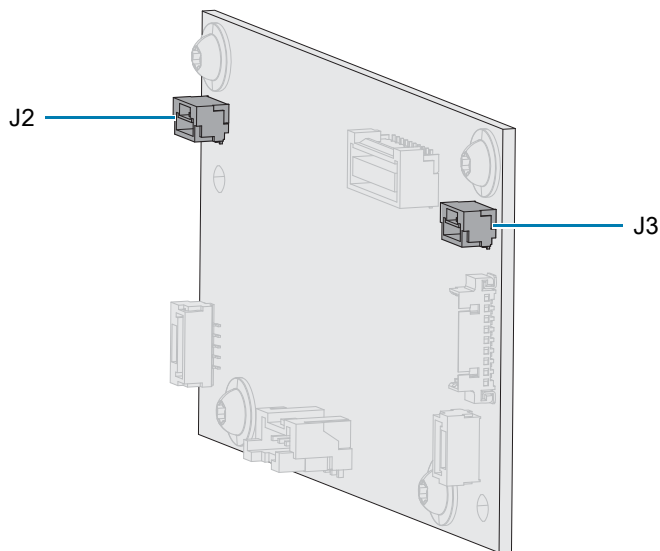
for parts & service call QLC (800) 837-1309

## Door-Open Sensor Maintenance Kit

- b. Thread the end of the sensor cable through the hole in the mainframe, and insert the sealing plug into the hole in the mainframe. The cable comes out near the ribbon tension control board.



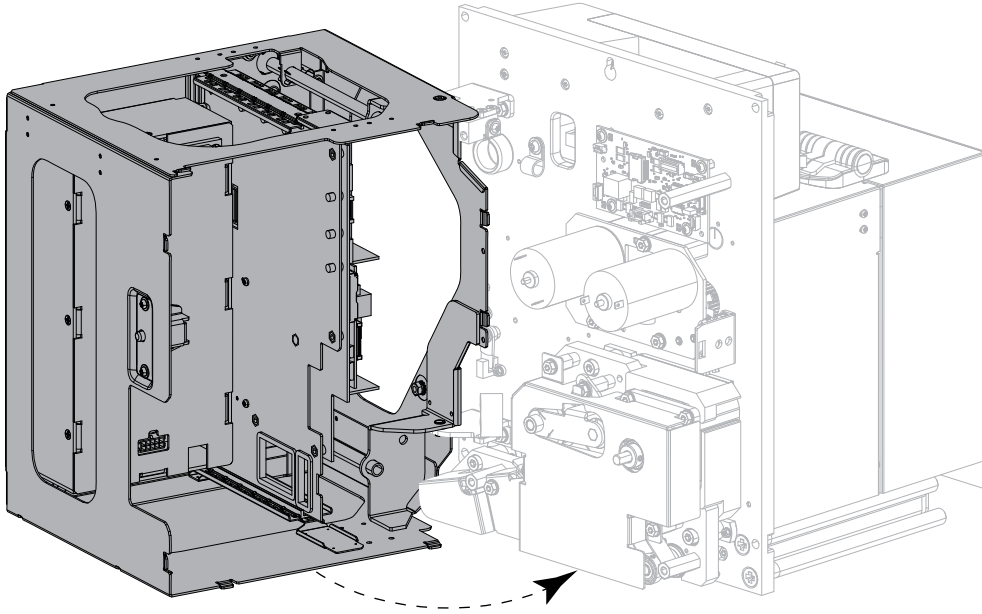
- c. Connect the door-open sensor cable to the appropriate connector on the ribbon tension control board.
- For LH models, the cable connects to J2.
  - For RH models, the cable connects to J3.



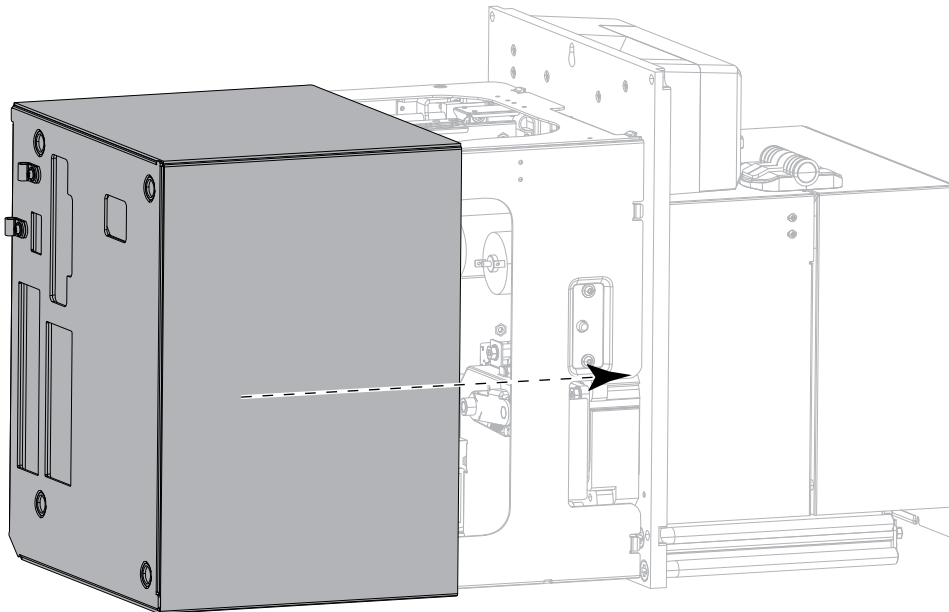
for parts & service call QLC (800) 837-1309

## Close the Electronics Enclosure

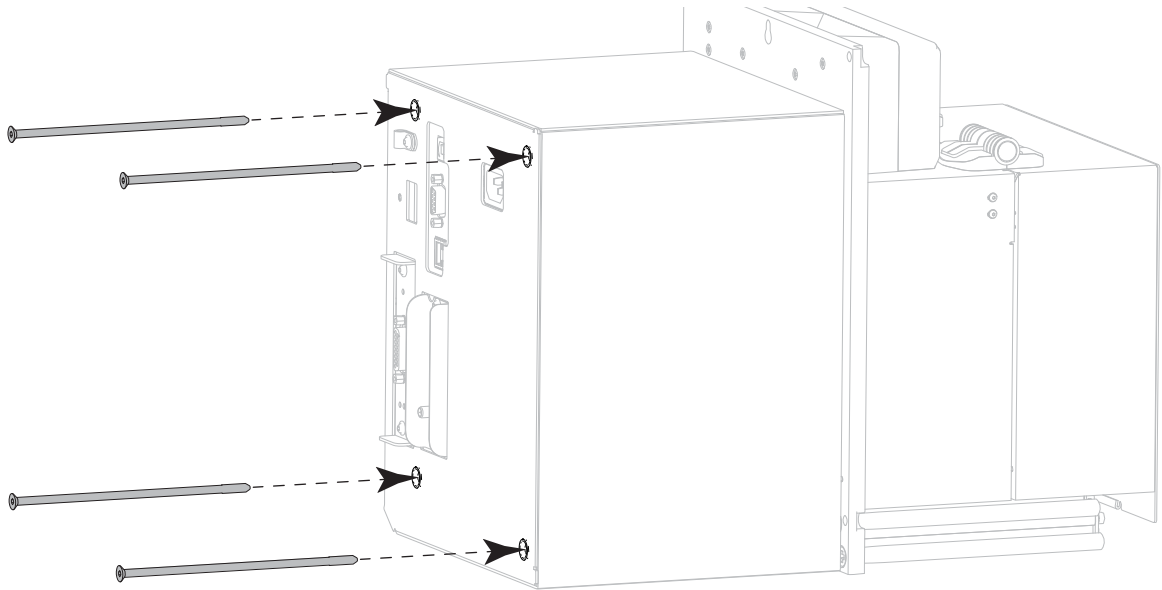
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four screws securing the electronics enclosure cover.



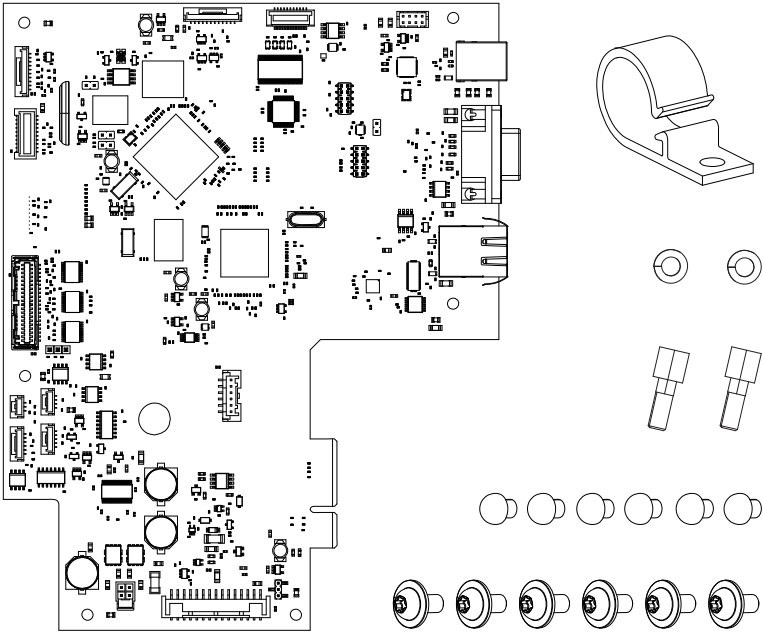
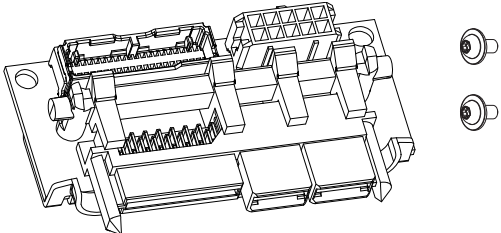
### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the media cover.
3. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
4. Reconnect AC power cord and interface cables.
5. Turn on (I) the printer power.

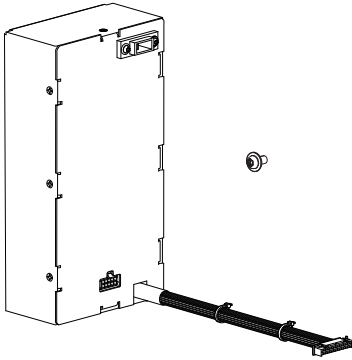
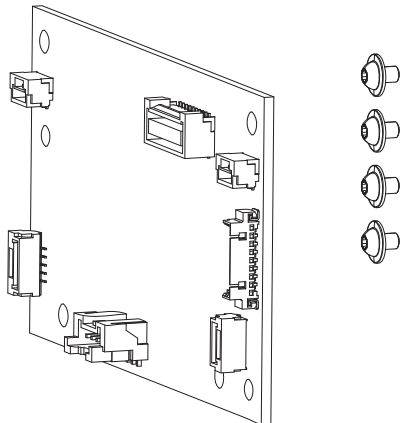
**The installation is complete.**

# Electronic Components

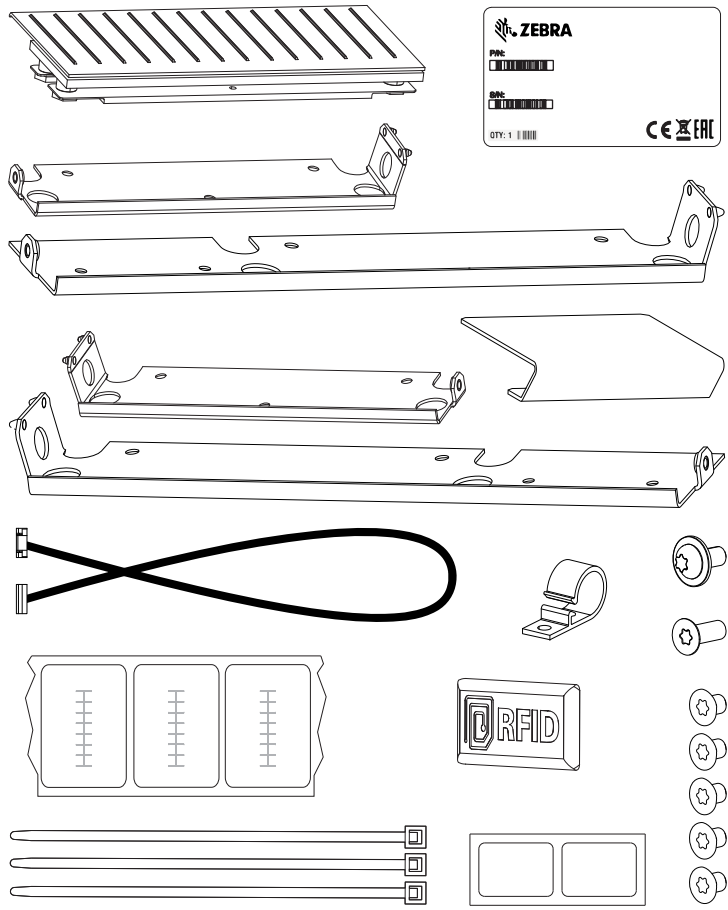
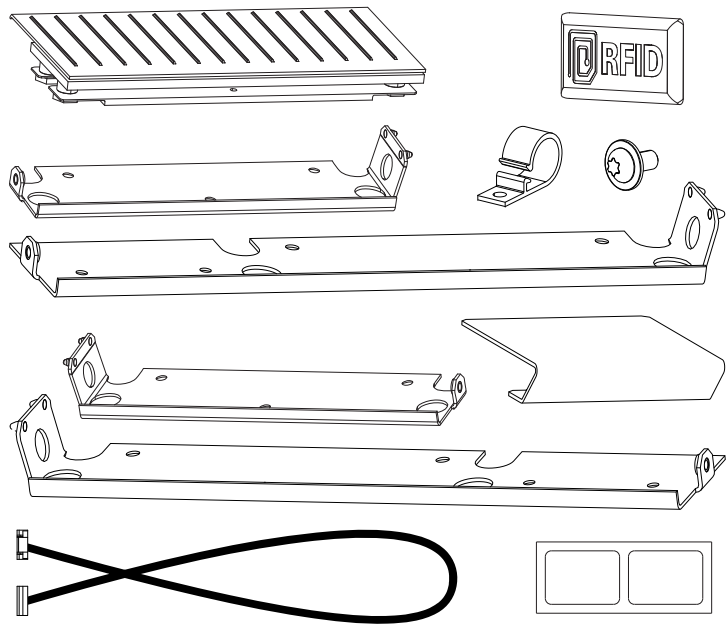
This section supplies you with the parts information and links to installation procedures for various electronic components.

Description	Kit Number	Kit Name
<p><a href="#">Main Logic Board Maintenance Kit on page 611</a></p>  <p>The image shows a detailed view of a main logic board populated with various electronic components such as integrated circuits, capacitors, and connectors. To the right of the board are several individual components: a metal bracket with a curved top, two small circular washers, two rectangular components with pins, a row of six small circular components, and a row of six larger cylindrical components with mounting tabs.</p>	<p>P1112750-041</p>	<p>Kit, Main Logic Board, ZE511, ZE521, RH &amp; LH</p>
<p><a href="#">Printhead Interface Adapter Maintenance Kit on page 627</a></p>  <p>The image shows a 3D perspective view of a printhead interface adapter assembly, which is a complex metal structure with various slots and mounting points. To the right of the assembly are two small circular components, likely screws or washers.</p>	<p>P1112750-036</p>	<p>Kit, PCBA for Printhead Interface Adapter, ZE511 RH &amp; LH</p>
	<p>P1112750-037</p>	<p>Kit, PCBA for Printhead Interface Adapter, ZE521 RH &amp; LH</p>

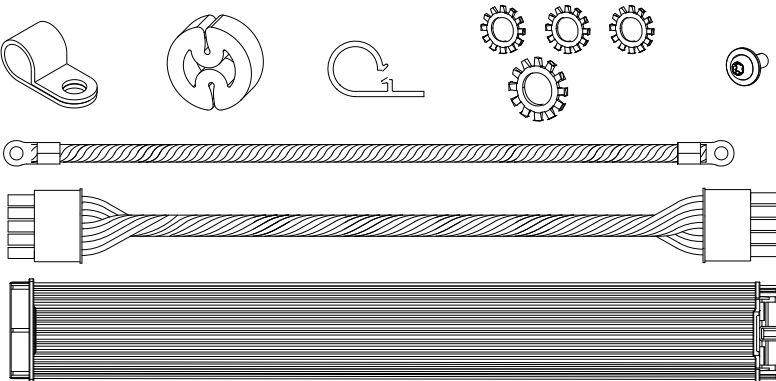
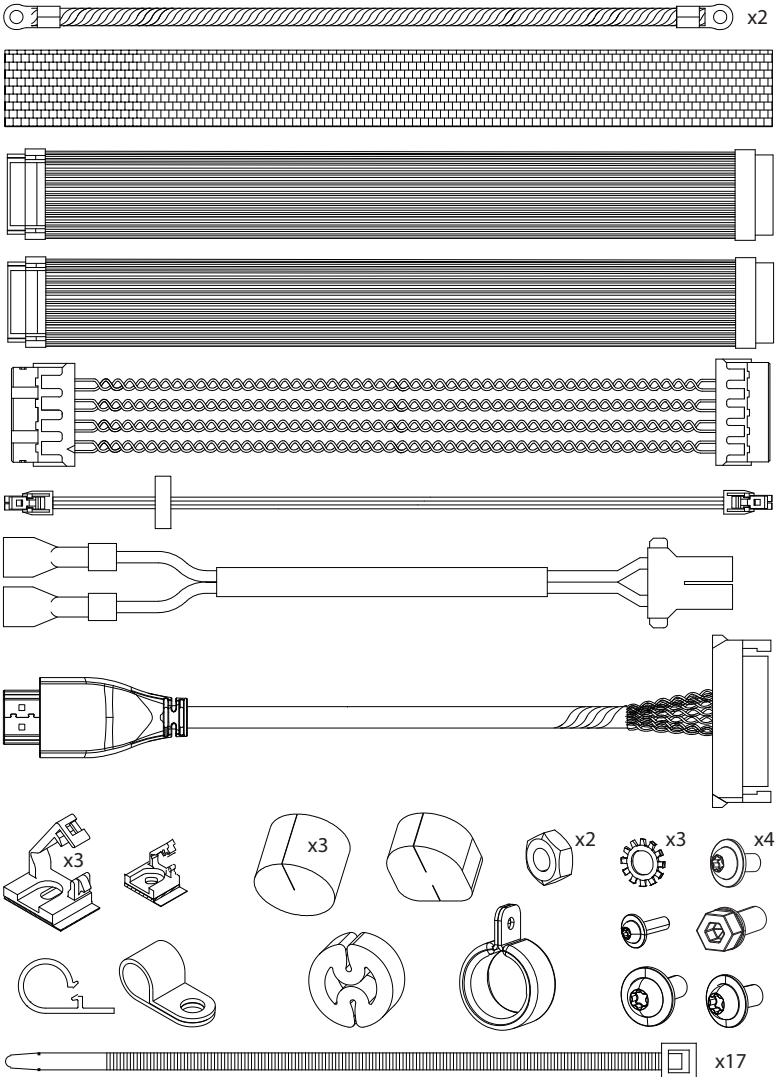
for parts & service call QLC (800) 837-1309

Description	Kit Number	Kit Name
<p>Power Supply Maintenance Kit on page 664</p> 	<p>P1112750-042</p>	<p>Kit, Power Supply, ZE511, ZE521, RH &amp; LH</p>
<p>Ribbon Tension Control Board Maintenance Kit on page 674</p> 	<p>P1112750-043</p>	<p>Kit, PCBA for Ribbon Motor Control, ZE511, ZE521, RH &amp; LH</p>



Description	Kit Number	Kit Name
<p><a href="#">RFID Module Maintenance Kit on page 682</a></p> 	P1112750-046A	Kit, RFID Module, USA and Canada, ZE511, ZE521, RH & LH
	P1112750-046B	Kit, RFID Module, Japan, ZE511, ZE521, RH & LH
	P1112750-046C	Kit, RFID Module, All Countries except USA, Canada, Japan, ZE511, ZE521, RH & LH
<p><a href="#">RFID Replacement Maintenance Kit on page 701</a></p> 	P1112750-047	Kit, Replacement RFID Cables and Hardware, ZE511, ZE521, RH & LH

for parts & service call QLC (800) 837-1309

Description	Kit Number	Kit Name
<p>Printhead Cables Maintenance Kit on page 722</p> 	<p>P1112750-038</p>	<p>Kit, Cables for Printhead, ZE511 ZE521 RH &amp; LH</p>
<p>Electronics Cables Maintenance Kit on page 752</p> 	<p>P1112750-048</p>	<p>Kit, Electronics Cables, ZE511, ZE521, RH &amp; LH</p>

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.



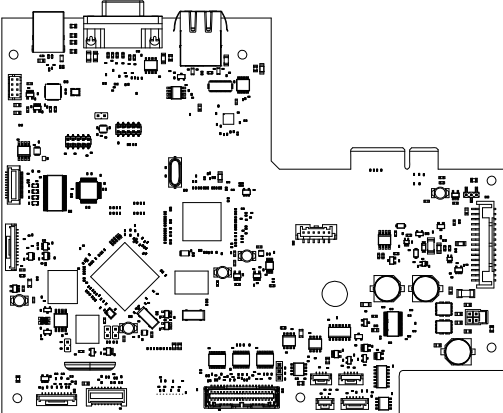
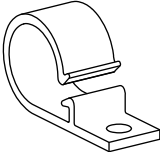




**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.









**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZE511/ZE521 Main logic board Qty: 1
	Cable clamp Qty: 1
	Screw (pan washer mach M3x6) Qty: 7
	Standoff 4-40 hex M-F Qty: 2
	Lock washer #4 Qty: 2
	Domed rubber bumper Qty: 6

## Tools Required

	Metric hexagon keys or bits Size: M3, M5
	6-lobe, star keys Size: T10, T15
	Phillips screwdrivers or bits Size: PH1
	Metric nut drivers Size: 4 mm
	Sorting bin for screws and small parts (optional)
	Antistatic wriststrap and mat

## Prepare for Installation



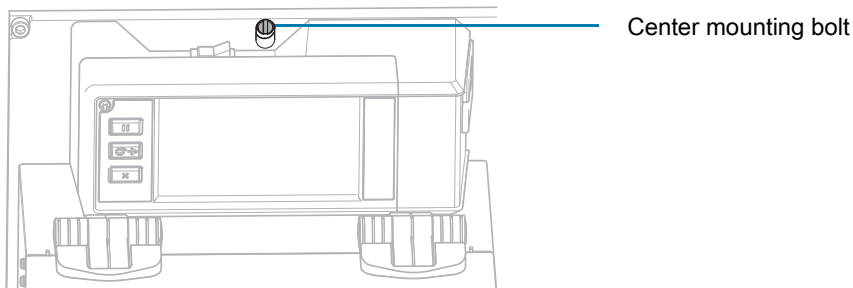
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



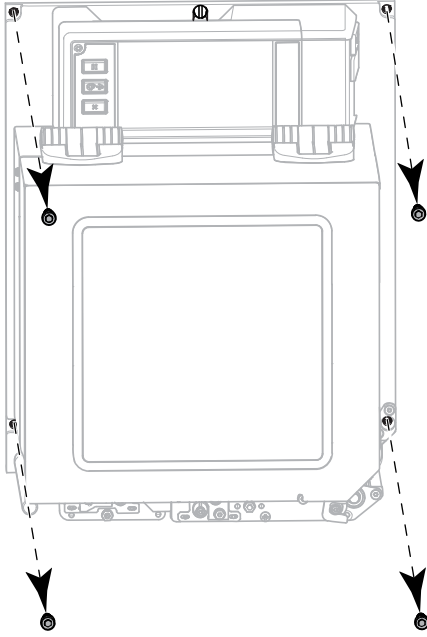
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access to the print engine. Follow these steps if necessary.

1. Loosen the center mounting bolt, but do not remove it. This bolt supports the print engine.



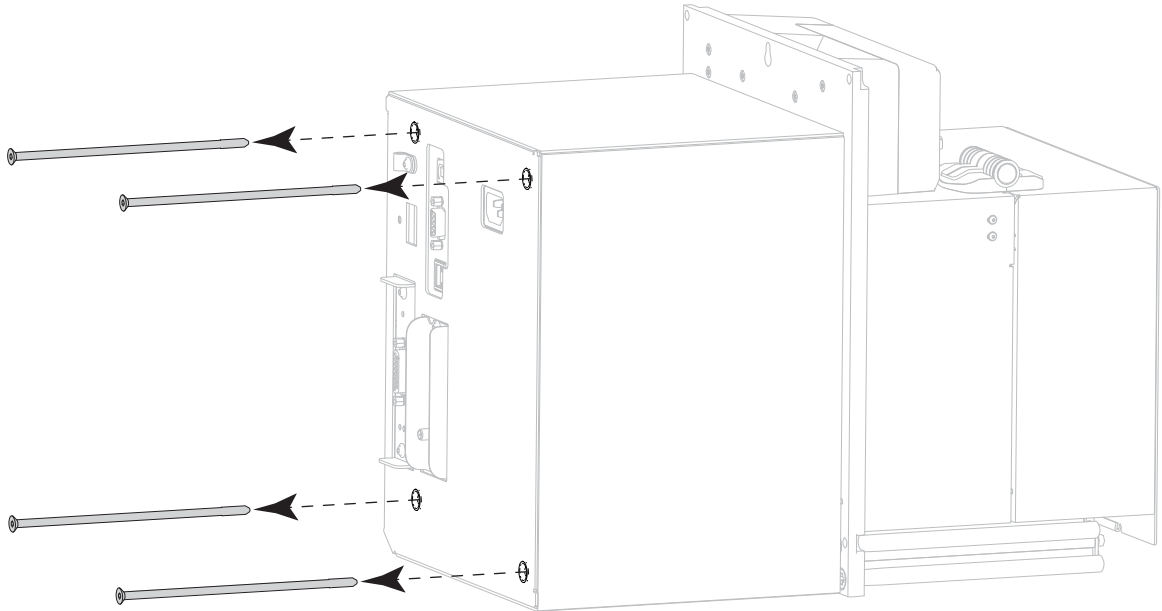
2. Remove the four screws securing the print engine to the applicator.



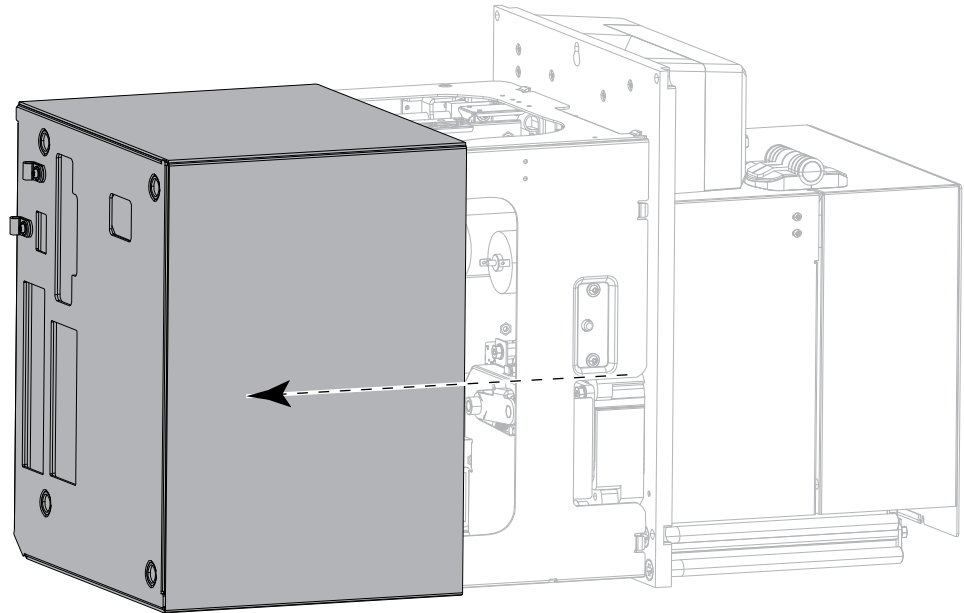
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four M3 screws from the electronics enclosure cover.



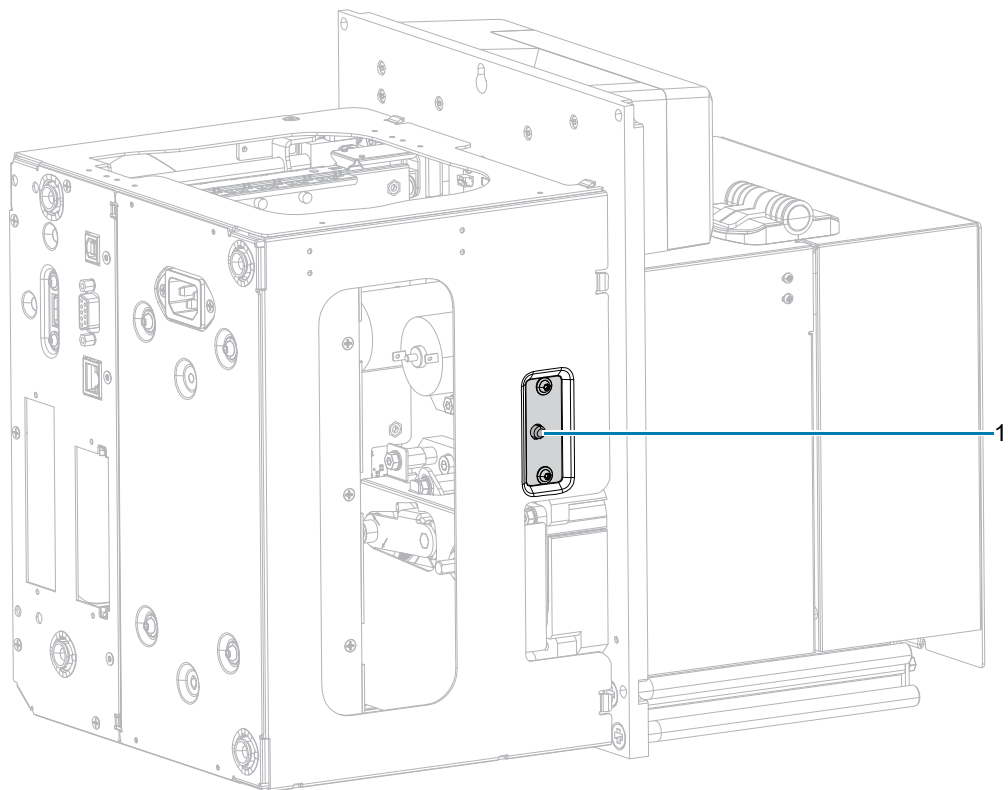
2. Remove the electronics enclosure cover from the print engine.



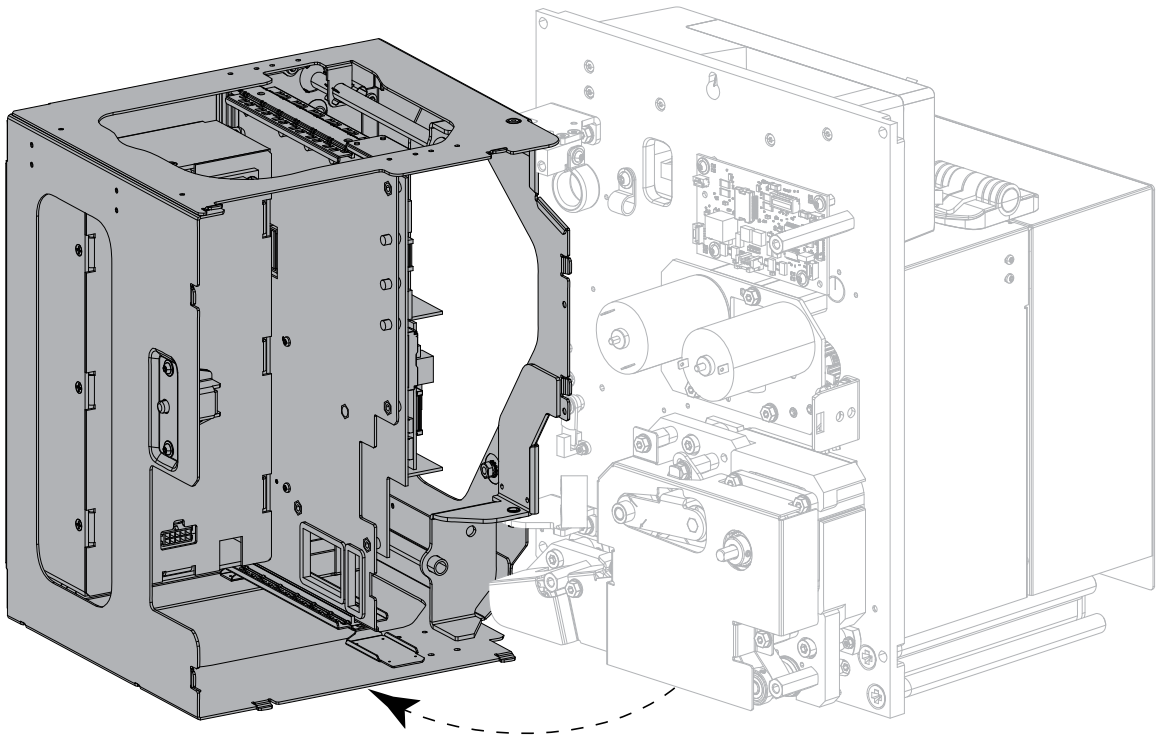
3. Press the electronics enclosure latch (1).



**NOTE:** For right-hand (RH) models, the latch is on the right side, as shown. For left-hand (LH) models, the latch is on the left side.



4. Open the rear of the print engine.



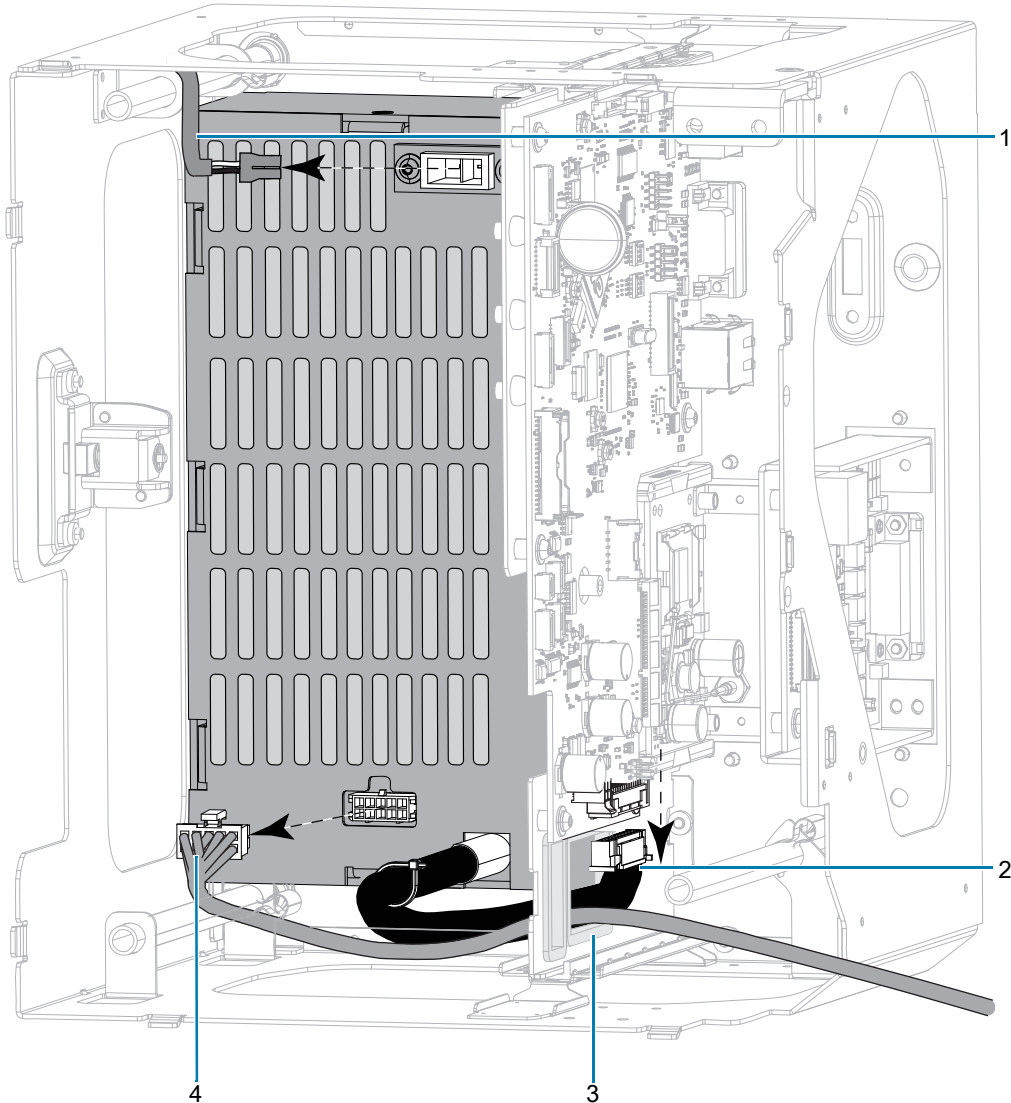
## Replace the Main Logic Board

1. Disconnect all of the cables from the MLB.
2. Guide the power cable from the MLB through the cable pass through holes.



**NOTE:** On a LH printer, it is not necessary to guide the MLB power cable through the pass through holes.


3. Disconnect the power switch cable and the printhead power cable from the power supply.

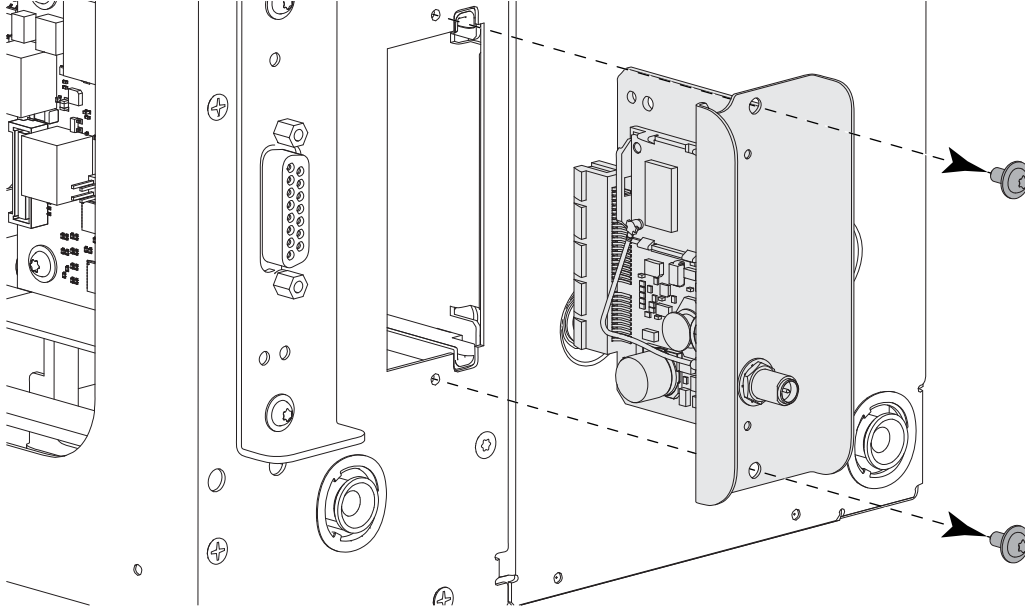


1	Power switch cable
2	MLB power cable
3	Cable pass through holes
4	Printhead power cable




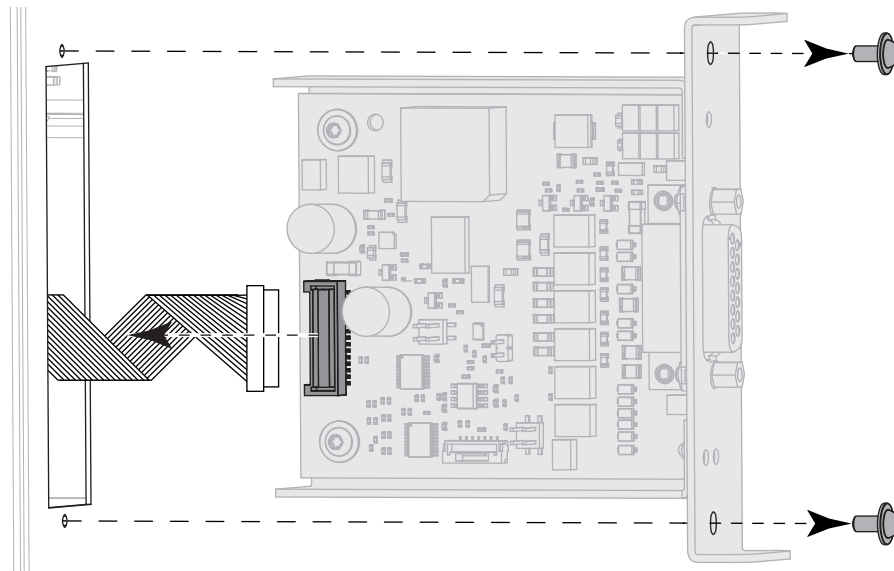
4. If the printer has an option card:

- a. Remove the two  T9 screws securing the option card.
- b. Remove the option card.



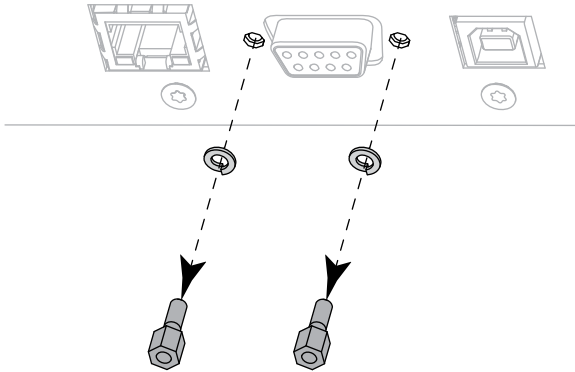
5. To remove the applicator interface board:

- a. Remove the two  T9 screws securing the applicator interface board.
- b. Slide out the applicator interface board.
- c. Disconnect the applicator cable from the applicator interface board.

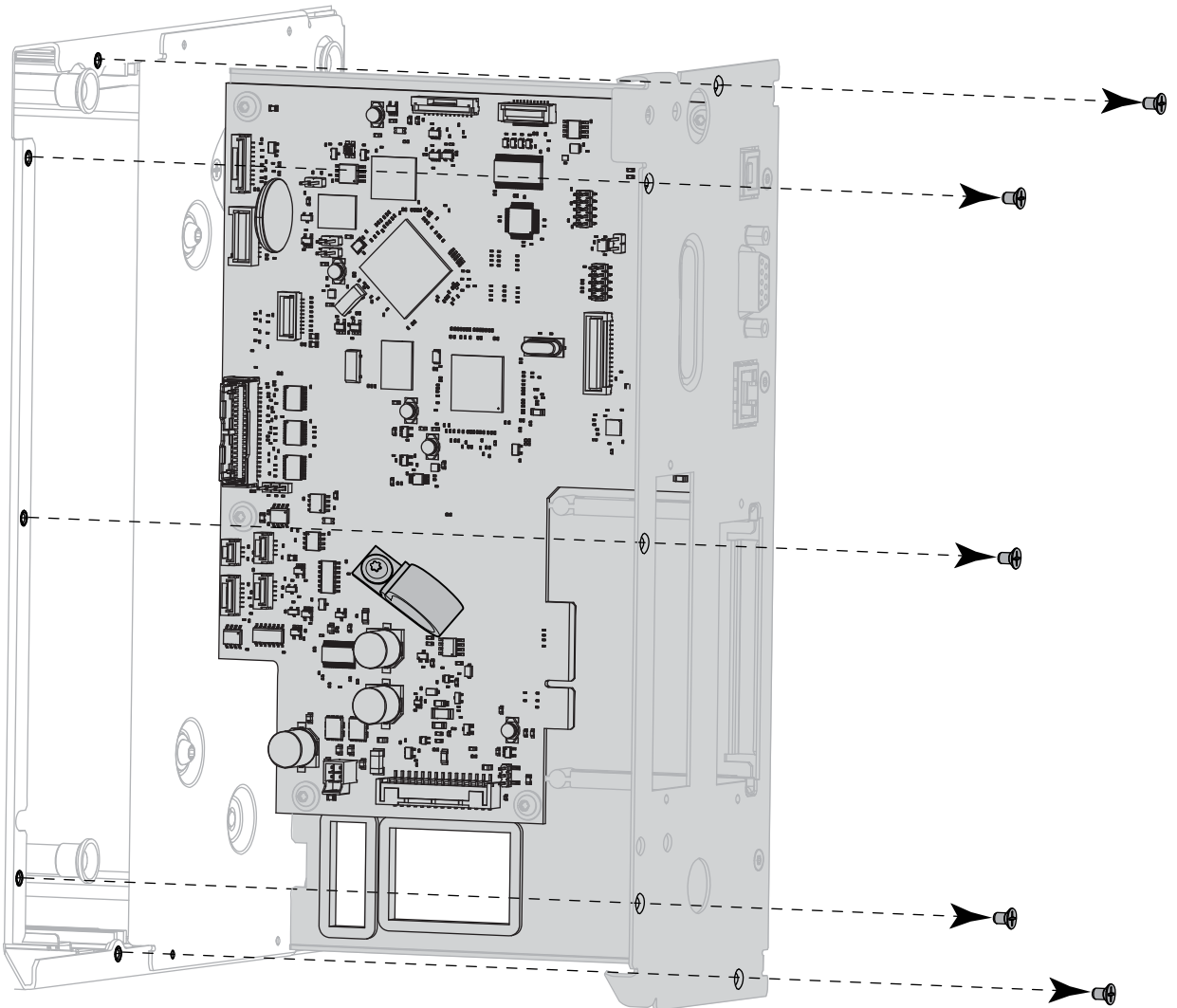


## Main Logic Board Maintenance Kit

6. Remove the two 4mm standoffs and two lock washers from the MLB serial port.



7. Remove the five T8 screws from the back of the electronics enclosure.

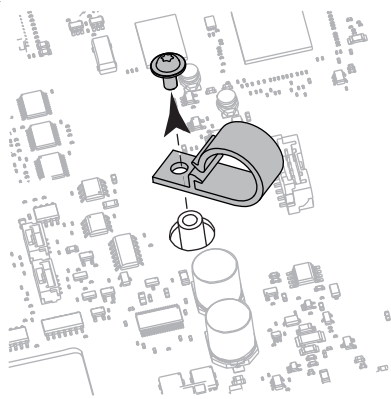


8. Pull the MLB assembly from the back of the print engine.

9. Place the MLB assembly on a flat surface or workbench.

for parts & service call QLC (800) 837-1309

10. Remove the cable clamp and ● M3 screw, if installed.

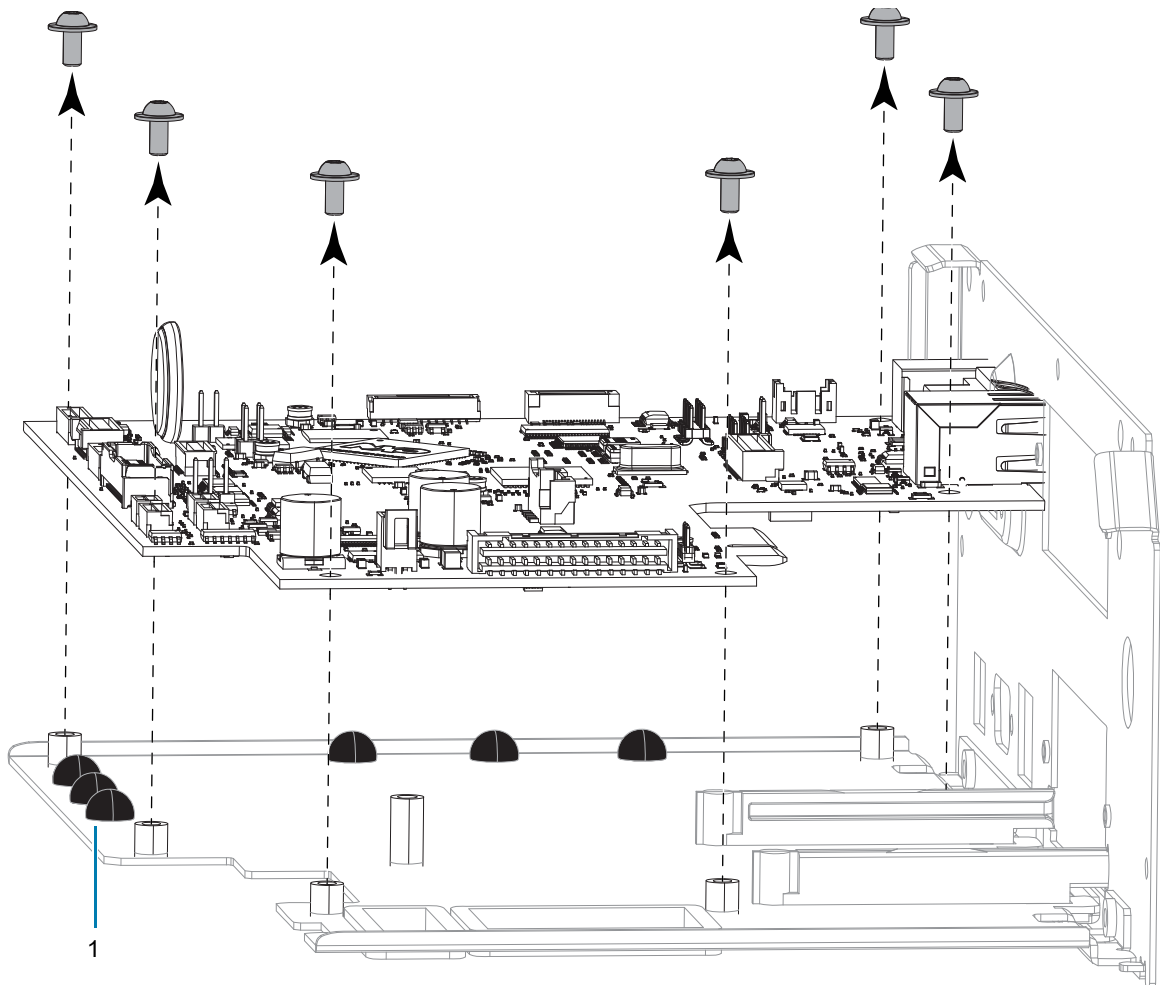


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.



**NOTE:** Leave the six support rubber bumpers in place in the MLB assembly. Replace any bumpers (1) that are lost before installing the new MLB.

11. Remove the six ● M3 screws securing the MLB to the MLB assembly.

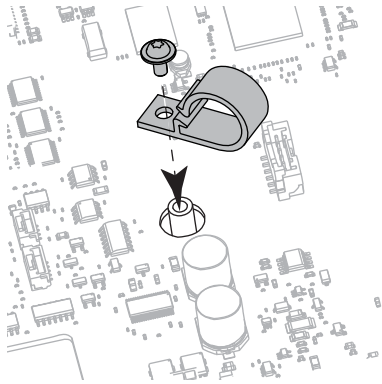


12. Replace the MLB.

for parts & service call QLC (800) 837-1309

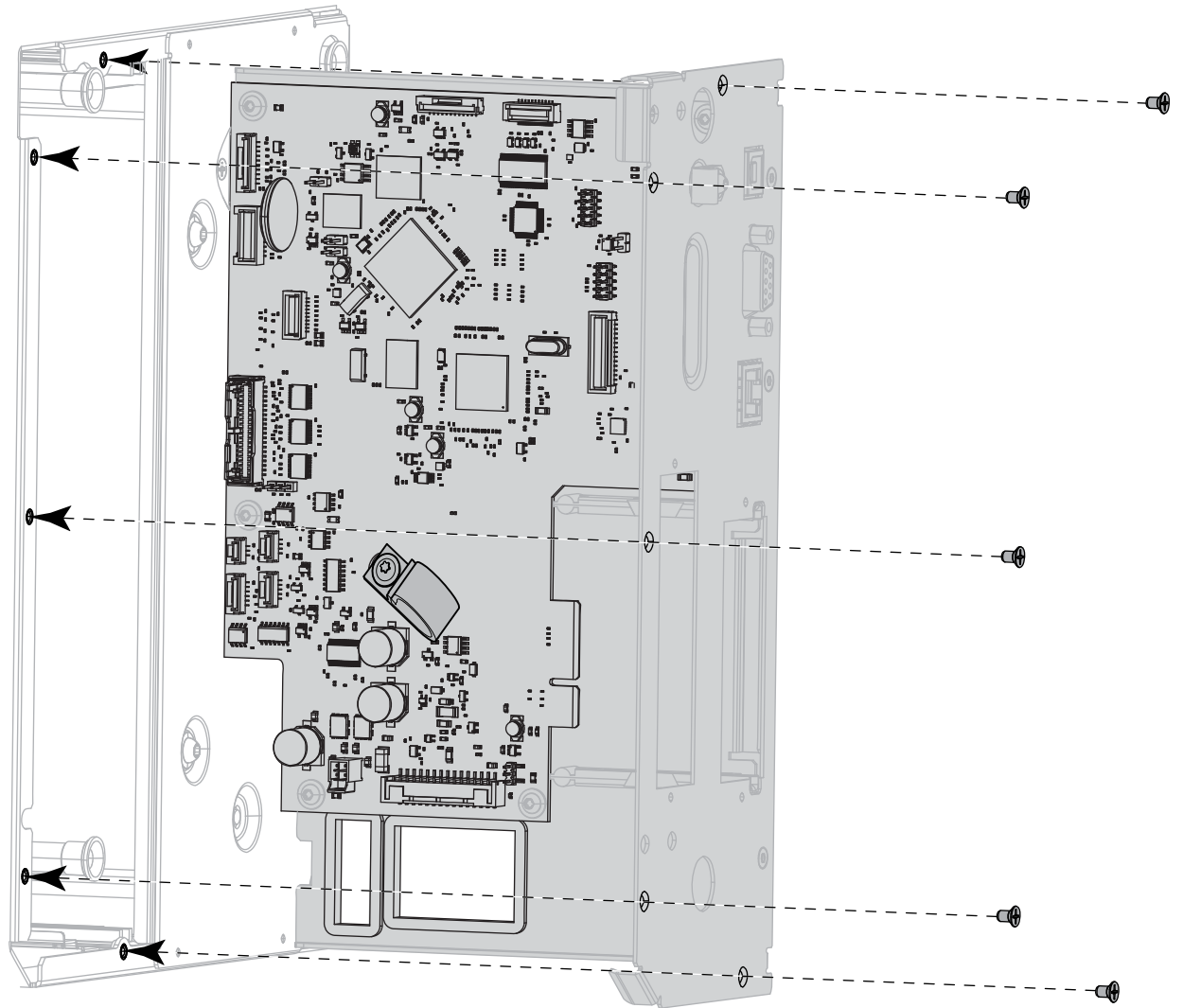
13. Secure the new MLB with the six new ● M3 screws.

14. Reinstall the cable clamp, if it was removed.



15. Insert the MLB assembly into the print engine.

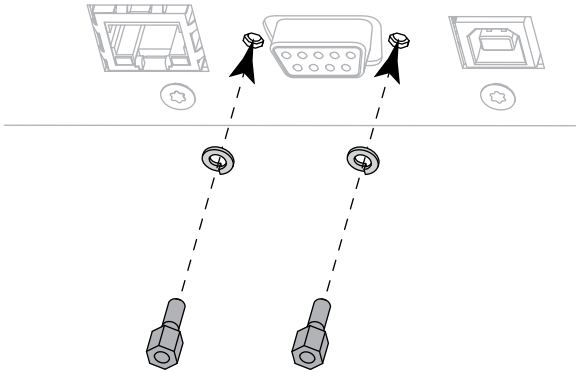
16. Reinstall the five ✪ T8 screws securing the MLB assembly to the print engine.



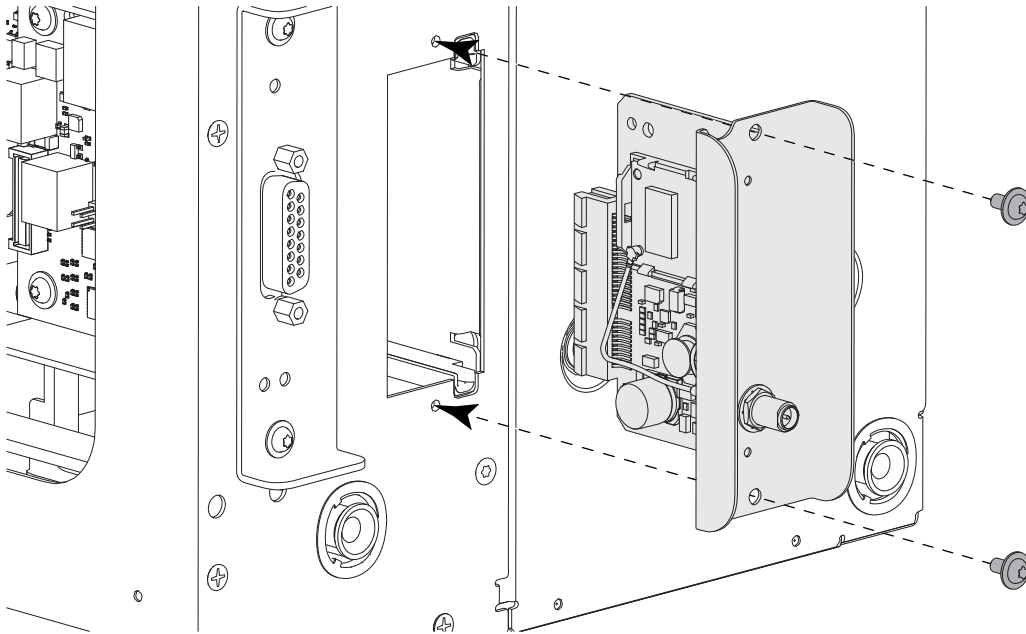
for parts & service call QLC (800) 837-1309

## Main Logic Board Maintenance Kit

17. Reinstall the two 4mm standoffs and two lock washers on the MLB serial port.




18. If the printer had an option card, insert the option card and secure it with the two T9 screws removed previously.

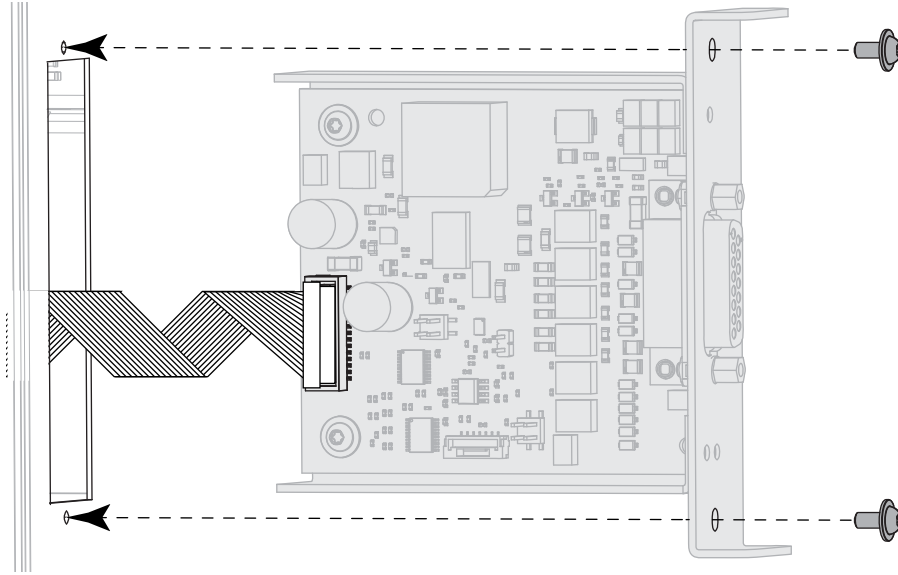


for parts & service call QLC (800) 837-1309

## Main Logic Board Maintenance Kit

19. To reinstall the applicator interface board:

- a. Reconnect the applicator cable to the applicator interface board.
- b. Insert the applicator interface board, and secure it using the two  T9 screws removed previously.



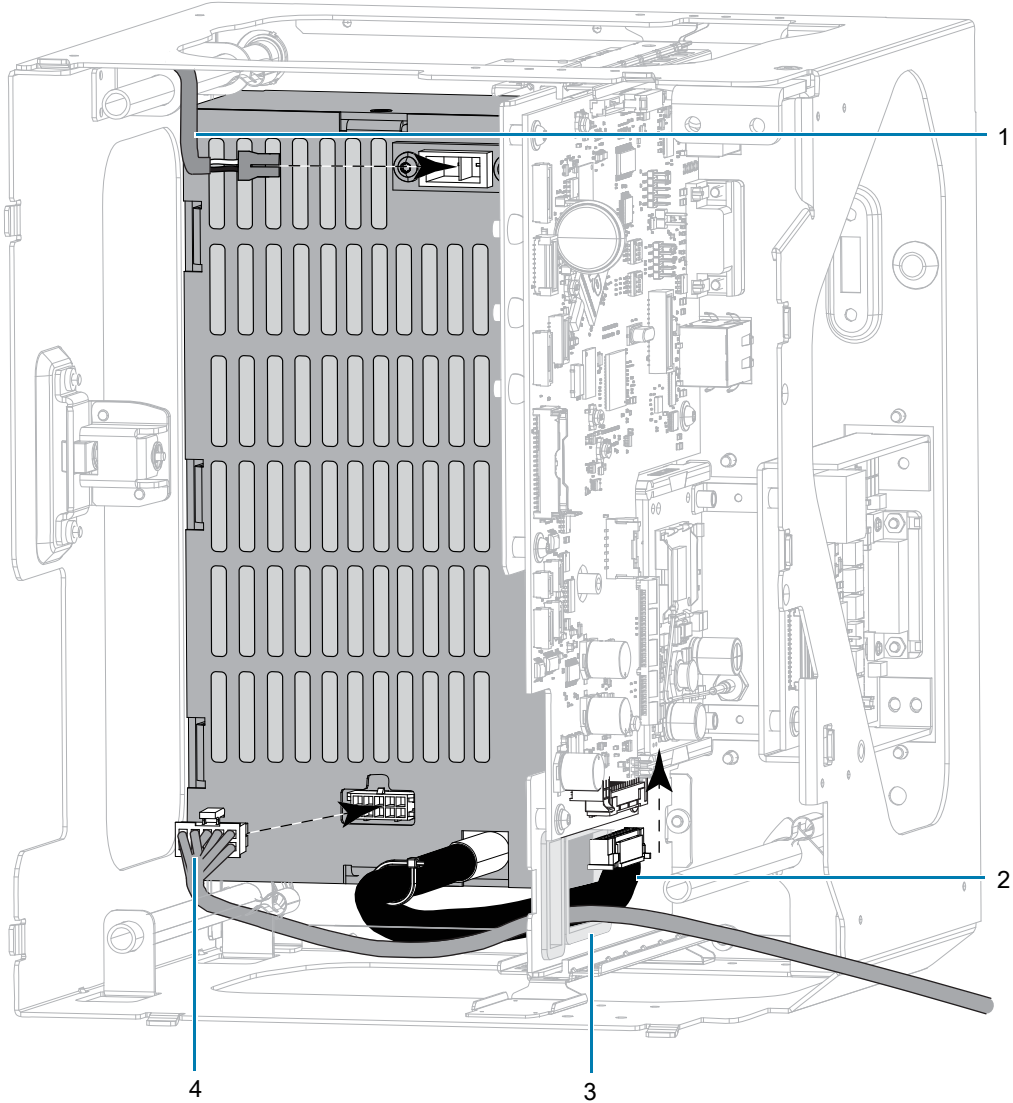
for parts & service call QLC (800) 837-1309

20. Guide the MLB power cable through the cable pass through holes.



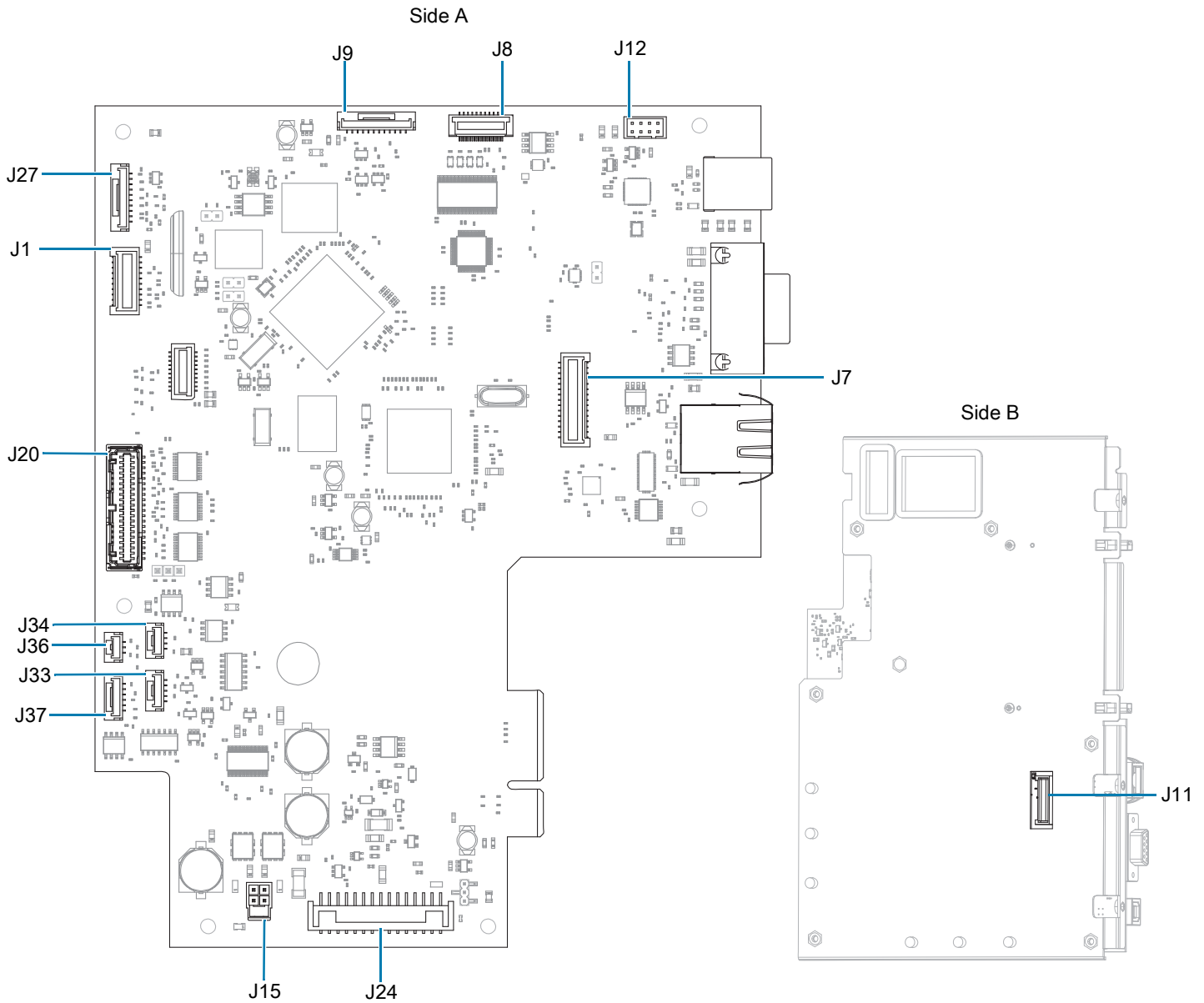
**NOTE:** On a LH printer, it is not necessary to guide the MLB power cable through the pass through holes.

21. Connect the power switch cable and the printhead power cable to the power supply.



1	Power switch cable
2	MLB power cable
3	Cable pass through holes
4	Printhead power cable

## 22. Reconnect all cables to the MLB.

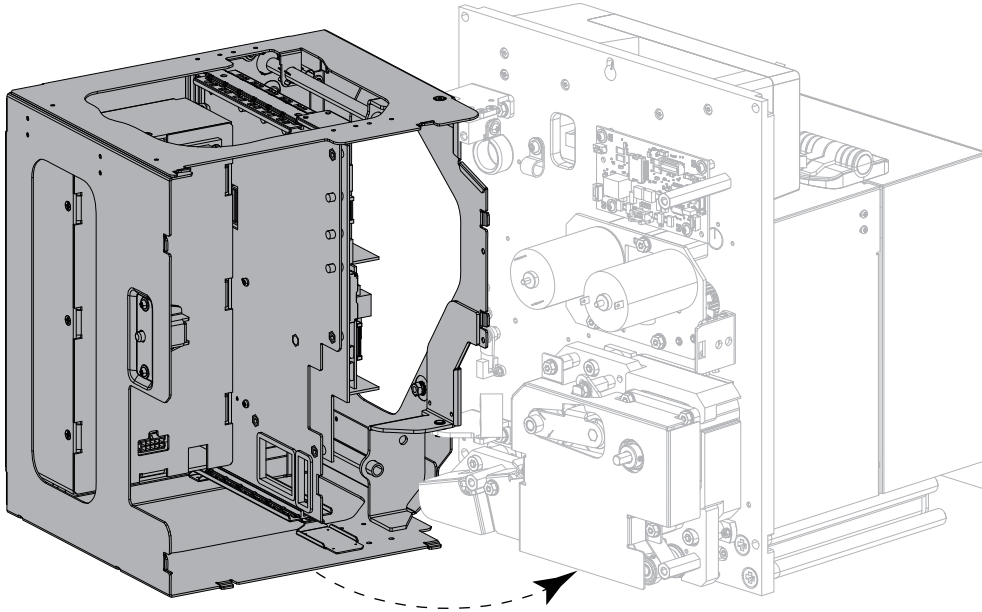


J1	Ribbon tension control board	J20	Printhead data
J7	Applicator port connector for RH print engines	J24	MLB Power
J8	HDMI	J27	RFID
J9	Bluetooth	J33	Ribbon sensor
J11	Applicator port connector for LH print engines (Side B)	J34	Head open sensor
J12	USB	J36	Transmissive sensor
J15	Power	J37	Reflective sensor

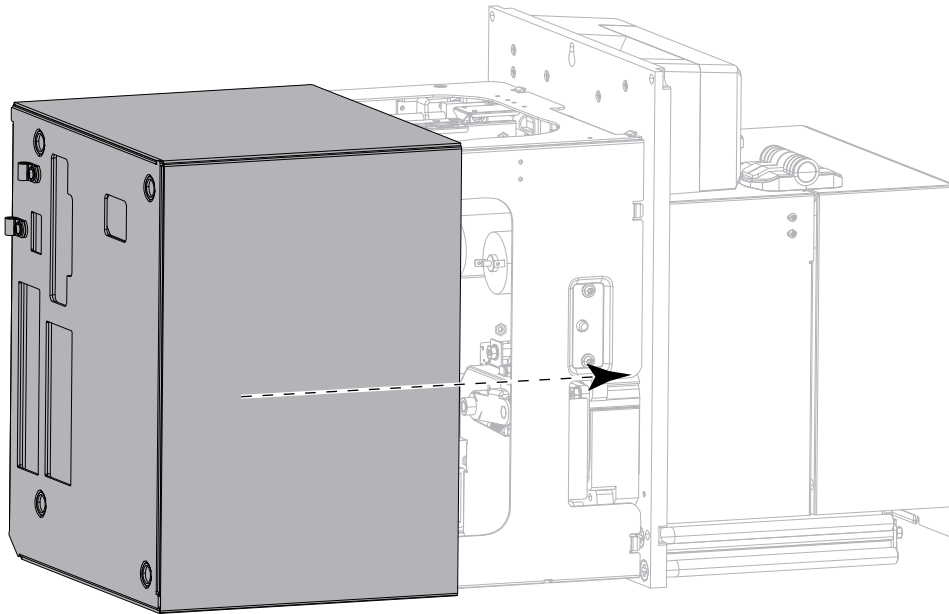


## Close the Electronics Enclosure

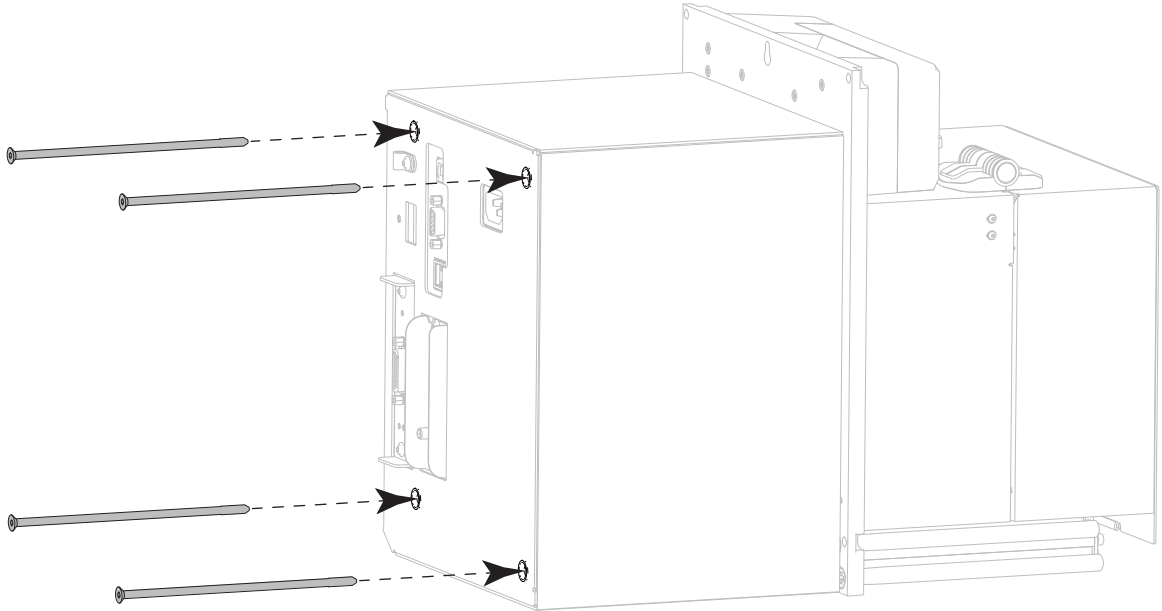
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four ● M3 screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Printhead Interface PCB Qty: 1</p>
	<p>Screw (pan washer mach M3x6) Qty: 2</p> <div style="text-align: right;">  T9         </div>

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T8, T9
-  Metric hexagon key or bit  
Size: 3mm, 4mm
- Zebra preventative maintenance kit (p/n 47362) or a clean swab dipped in 99.7% isopropyl alcohol
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



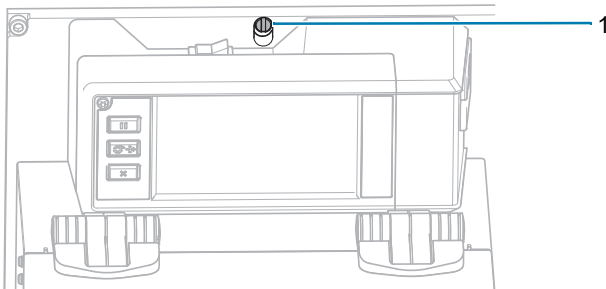
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



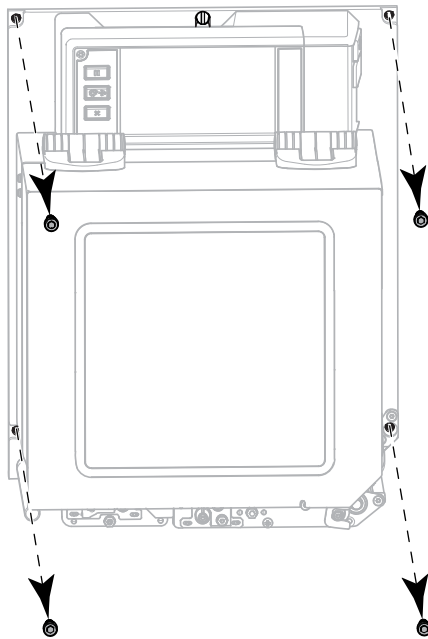
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



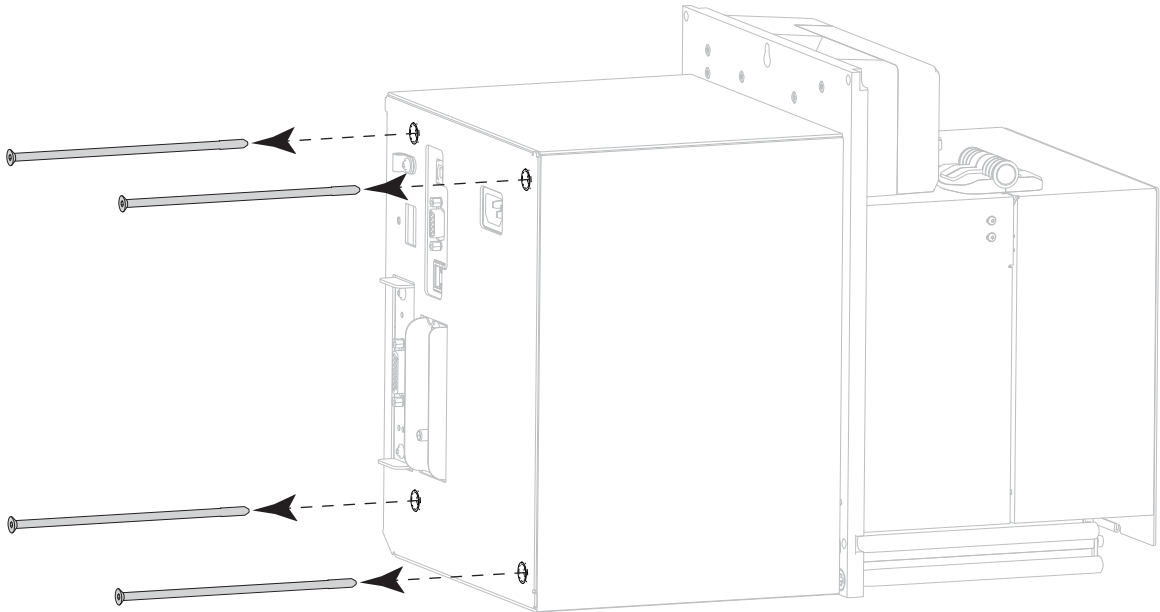
2. Remove the four screws securing the print engine to the applicator.



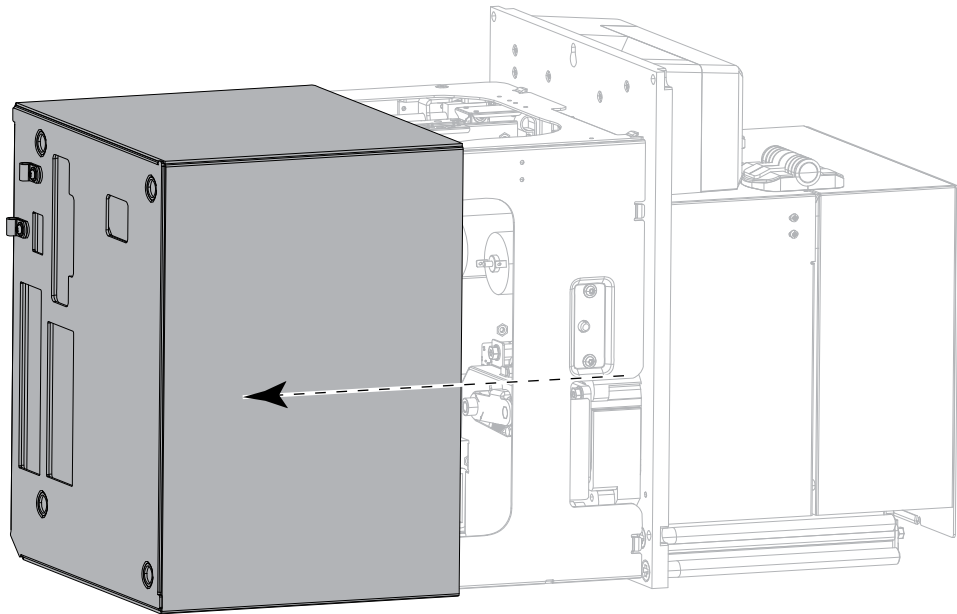
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

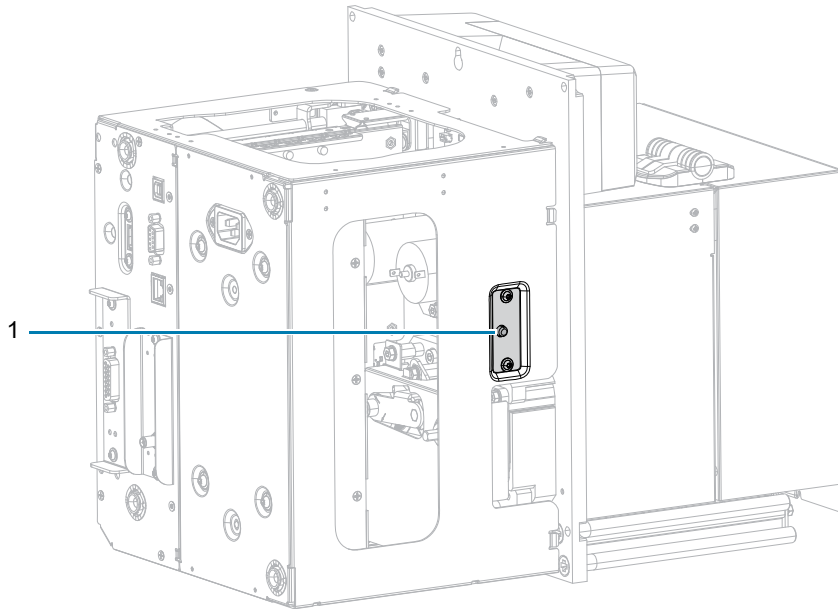


## Printhead Interface Adapter Maintenance Kit

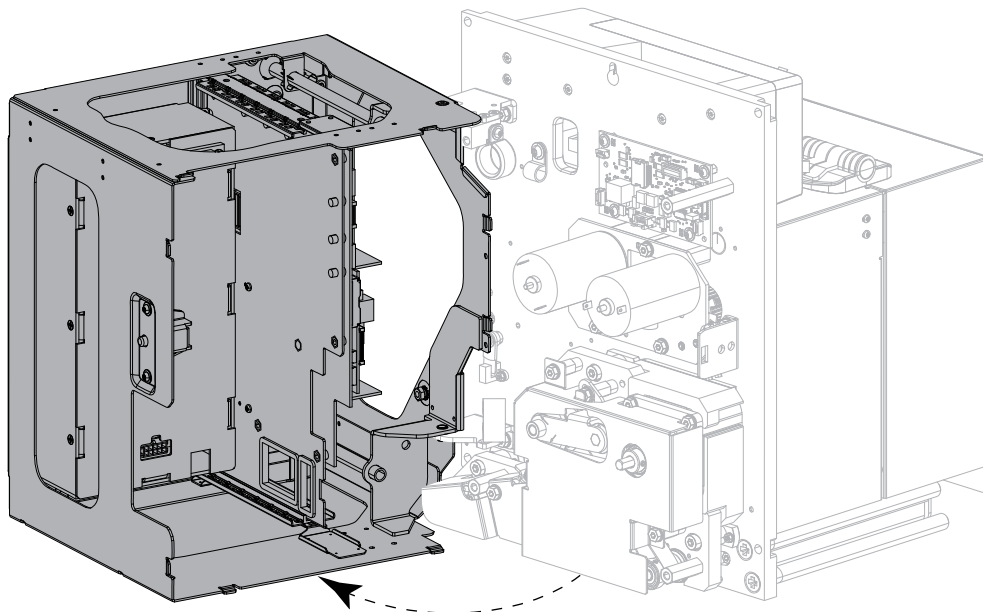
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.



for parts & service call QLC (800) 837-1309

## Remove the Printhead



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



**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

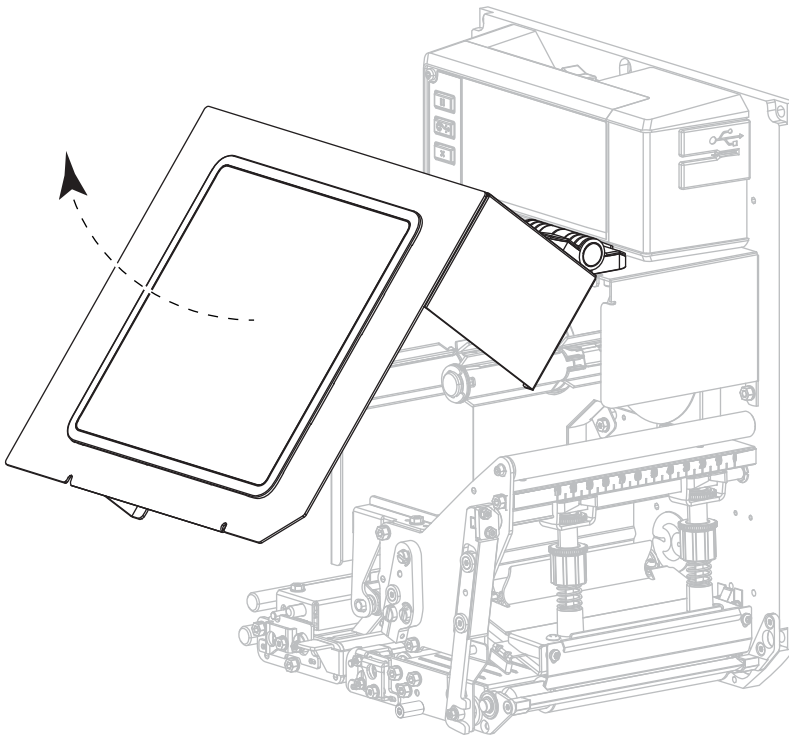


**CAUTION—HOT SURFACE:** The printhead may be hot and could cause severe burns. Allow the printhead to cool.



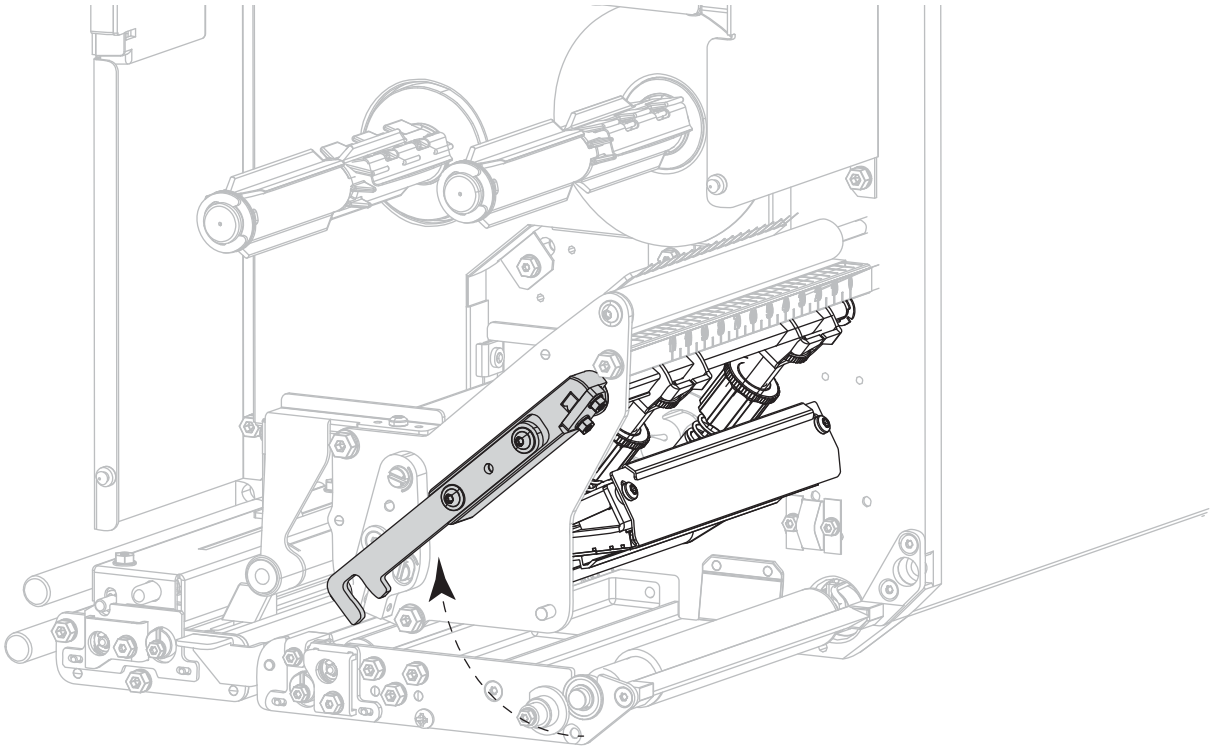
**CAUTION—PRODUCT DAMAGE:** Be careful not to touch the printhead with any tools. This could damage the printhead.

1. Open the media door.

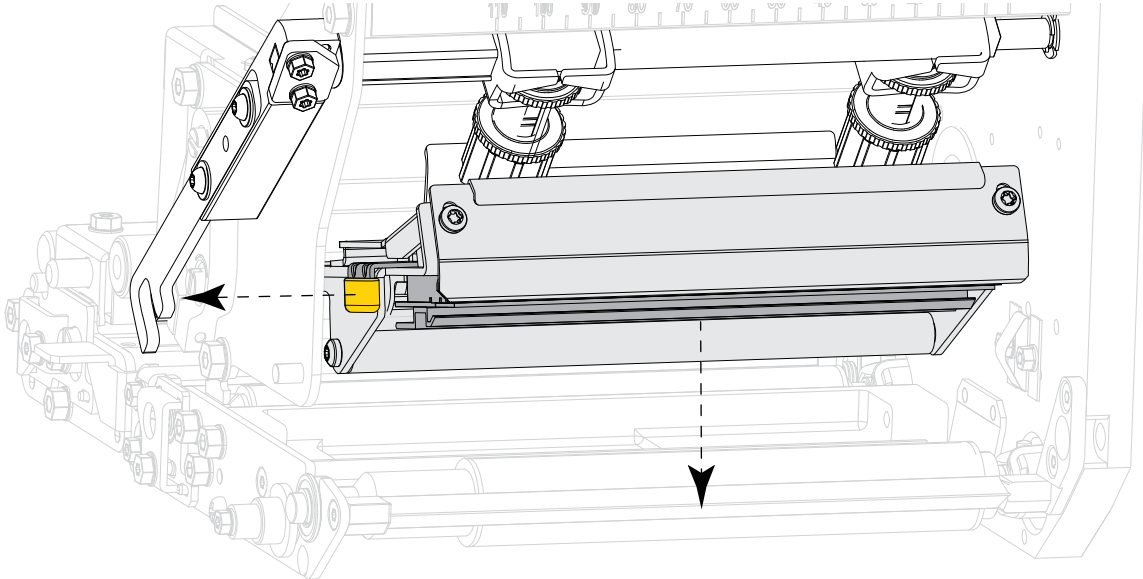


2. Remove the media and ribbon.

3. Release the printhead assembly.

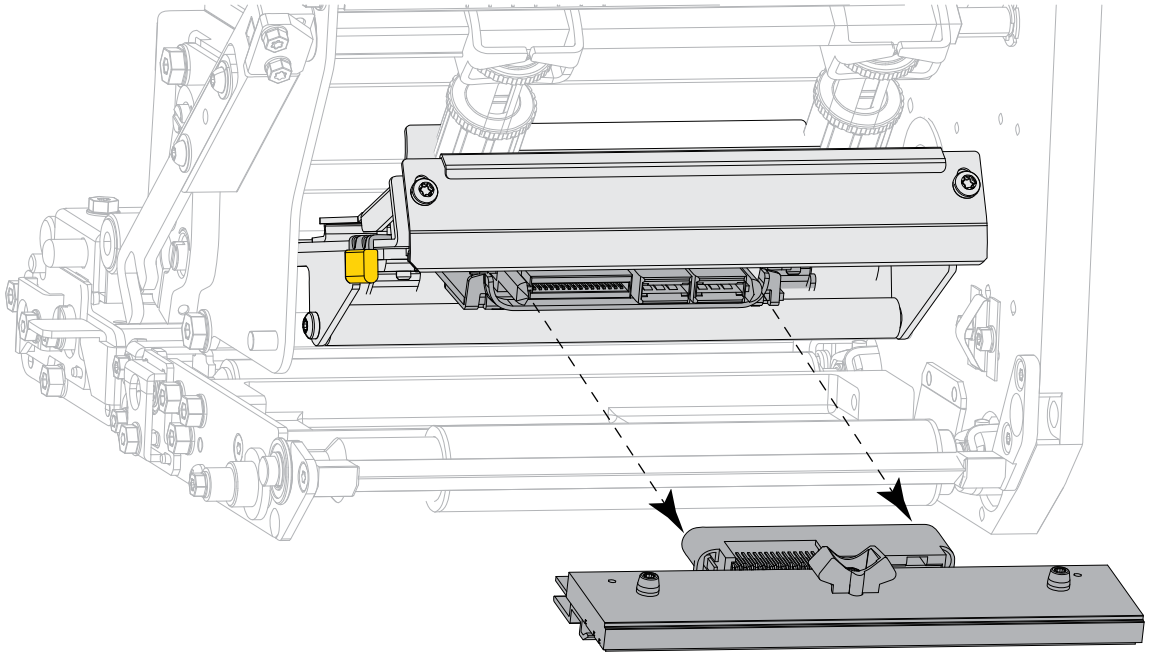


4. Slide the printhead release latch out to release and lower the old printhead.



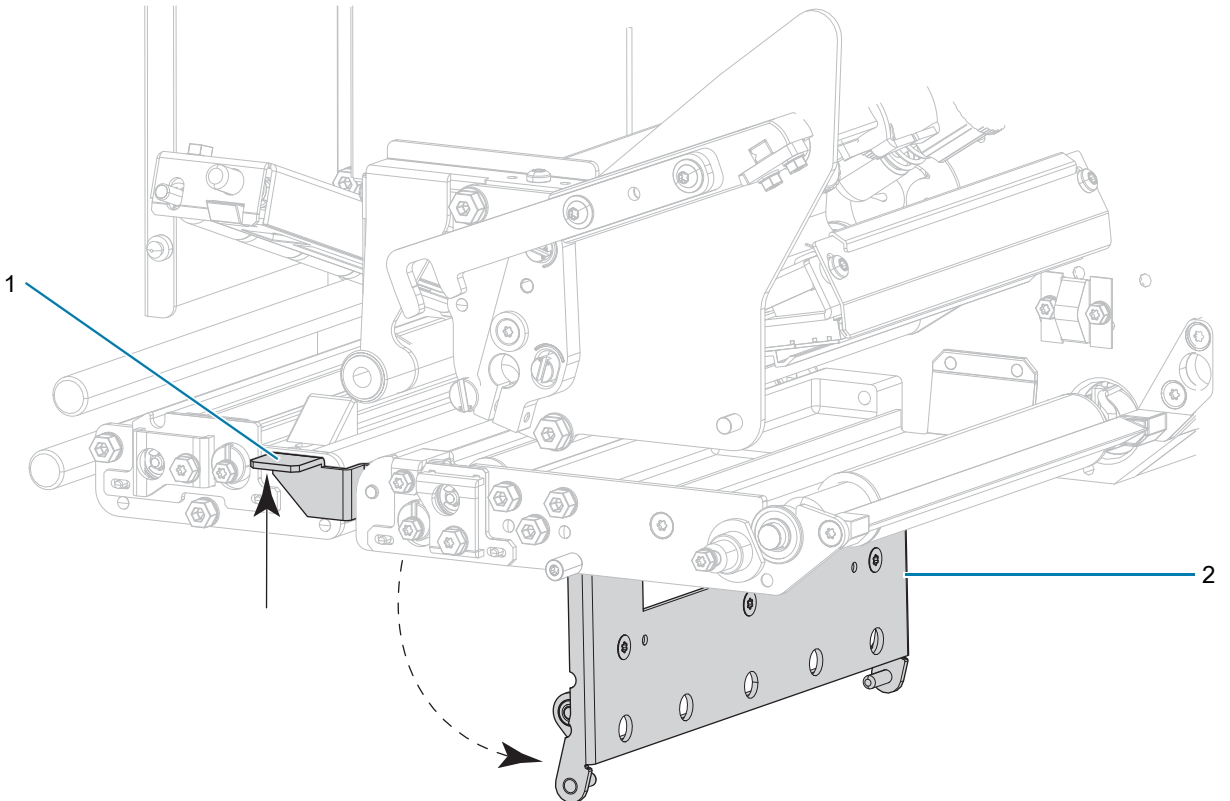


5. Remove the printhead and set it aside.




## Remove the Rollers

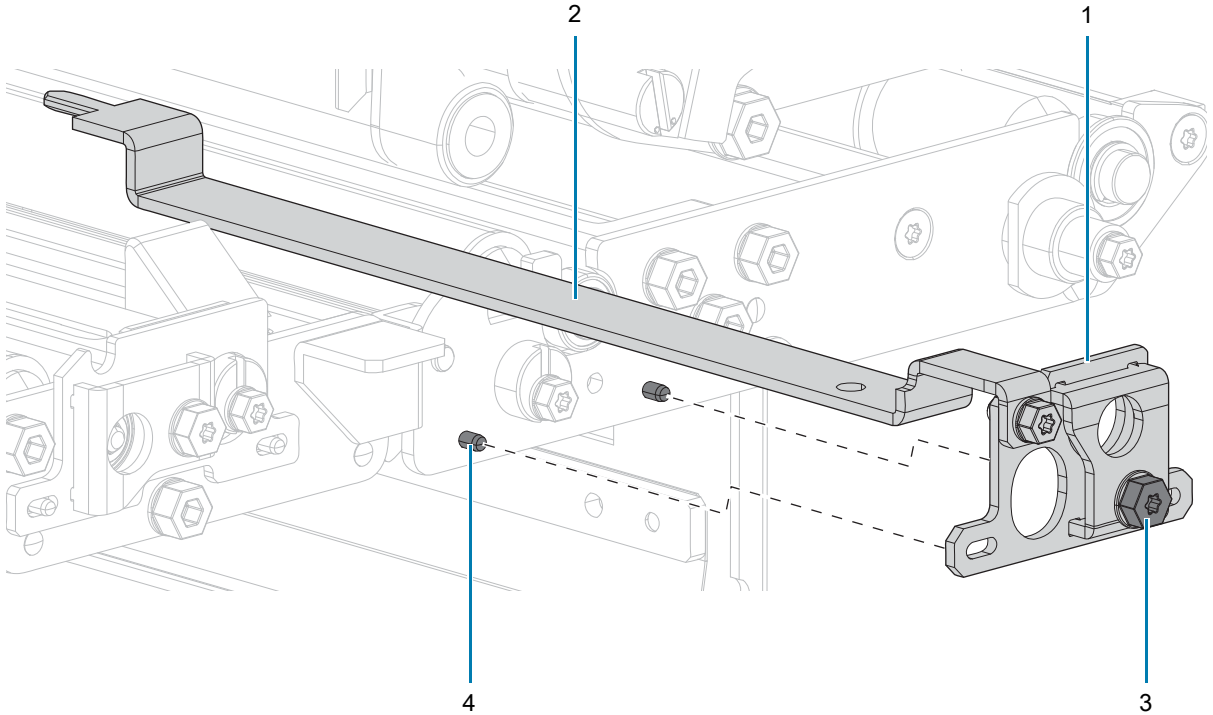
1. Raise the peel roller latch (1) so that the peel roller assembly (2) pivots downward.



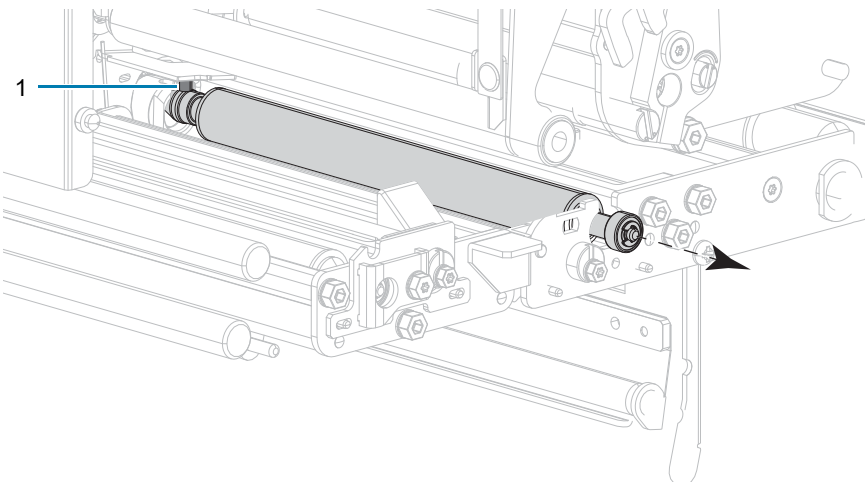
for parts & service call QLC (800) 837-1309

## Printhead Interface Adapter Maintenance Kit

2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).




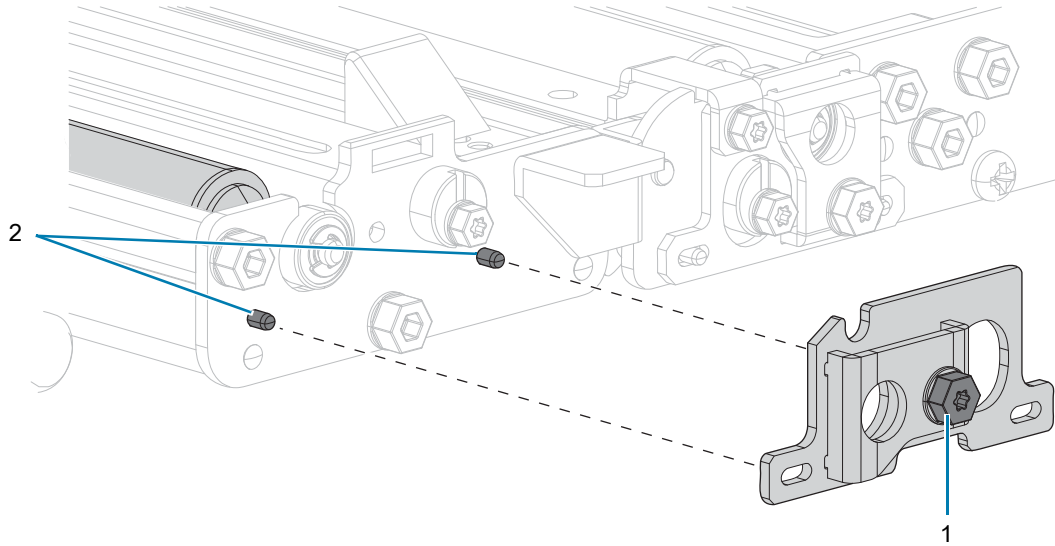
3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.



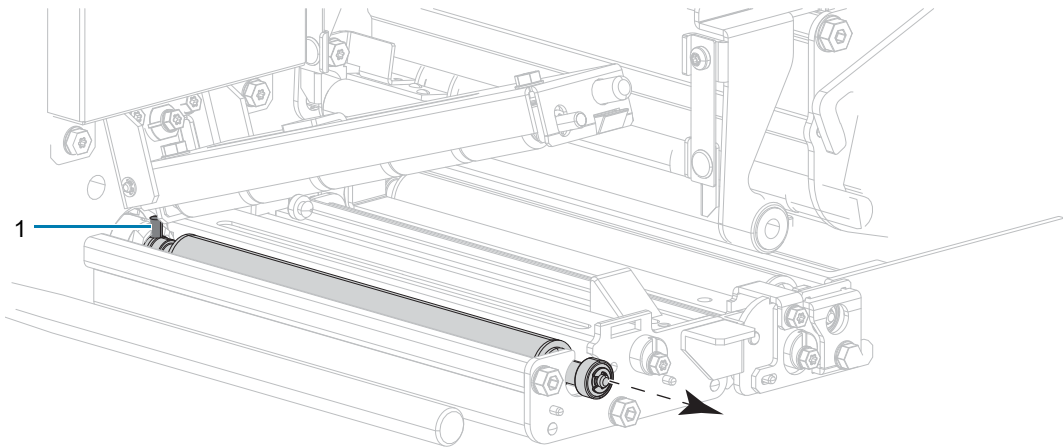
4. Remove the peel roller assembly from the print engine.

for parts & service call QLC (800) 837-1309

5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




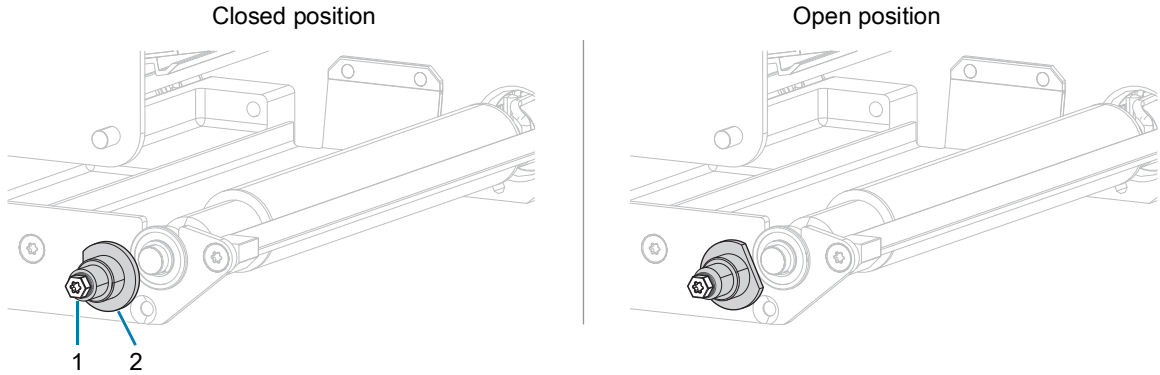
6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



7. Remove the pinch roller assembly from the print engine.

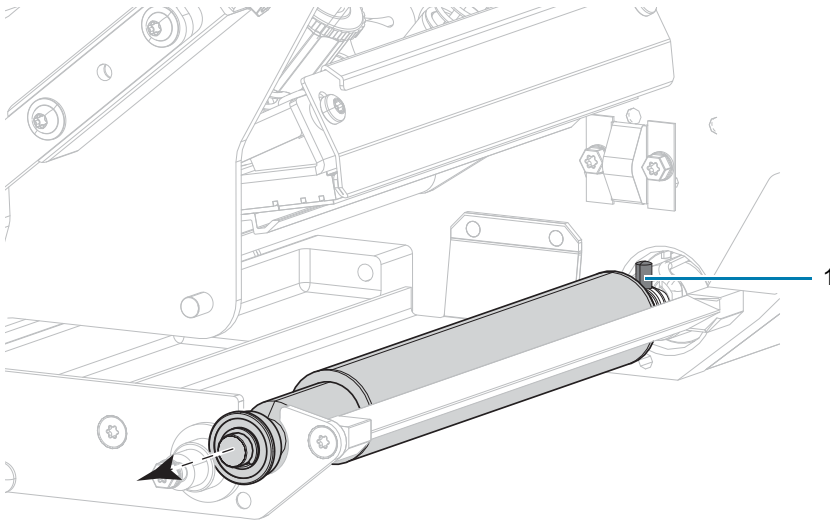
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

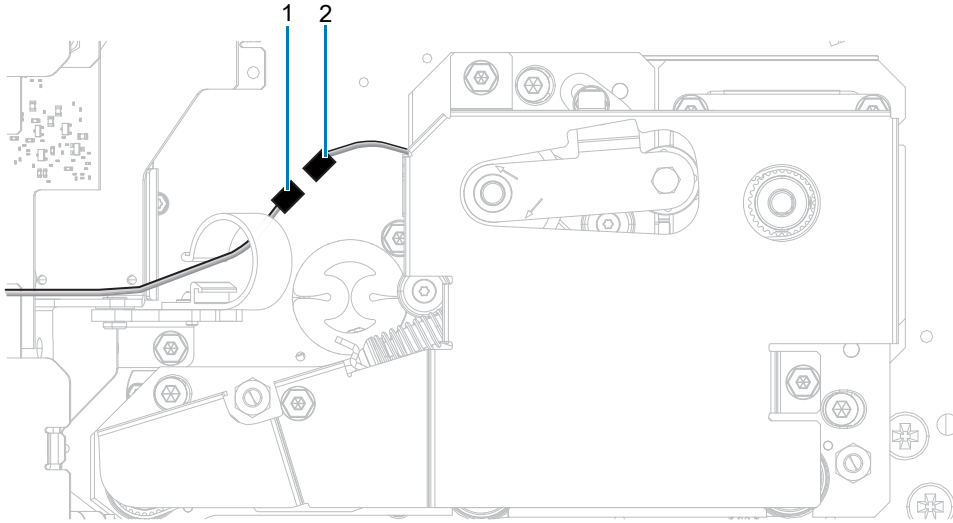


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

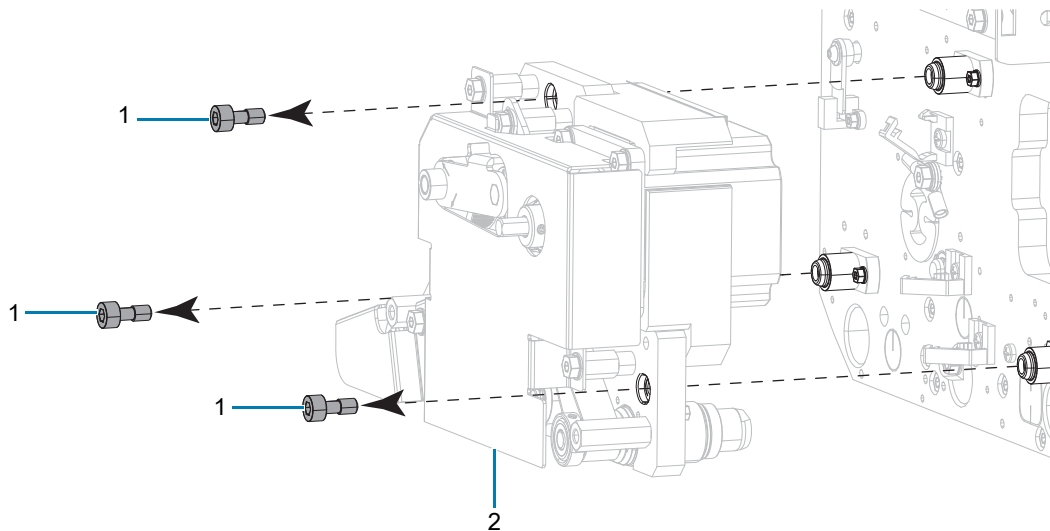


2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.



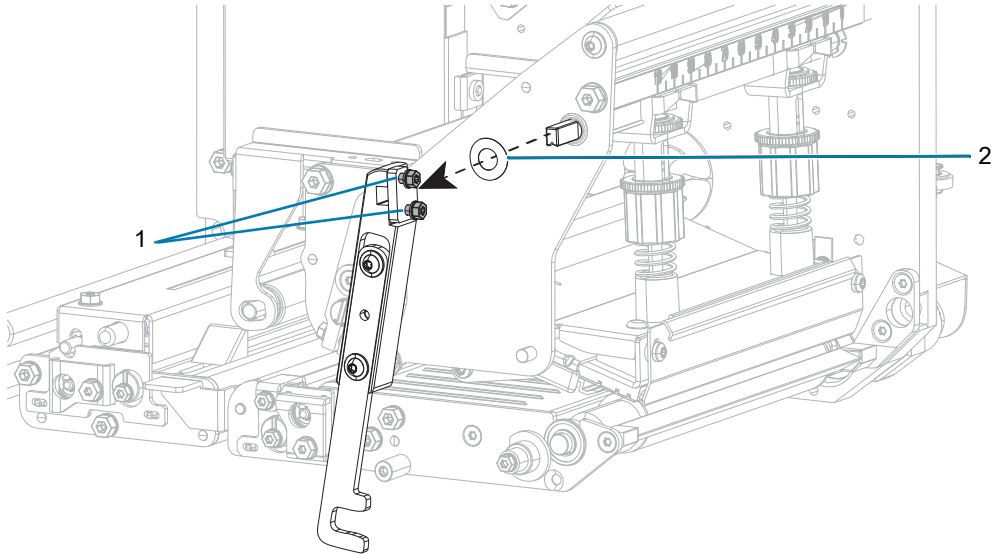
**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.


3. Remove the drive system (2) from the main frame.

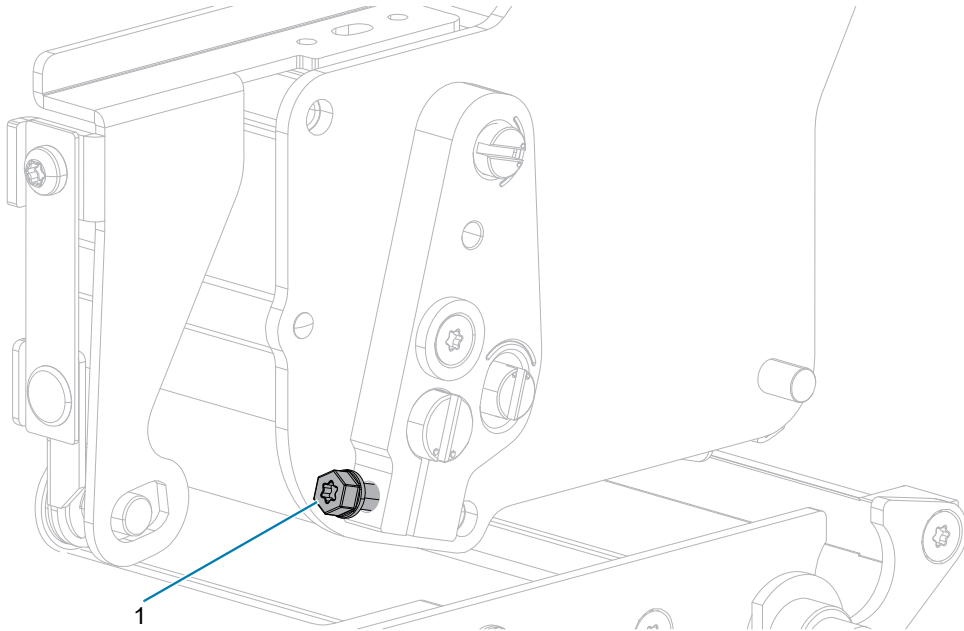


## Remove the Print Mechanism

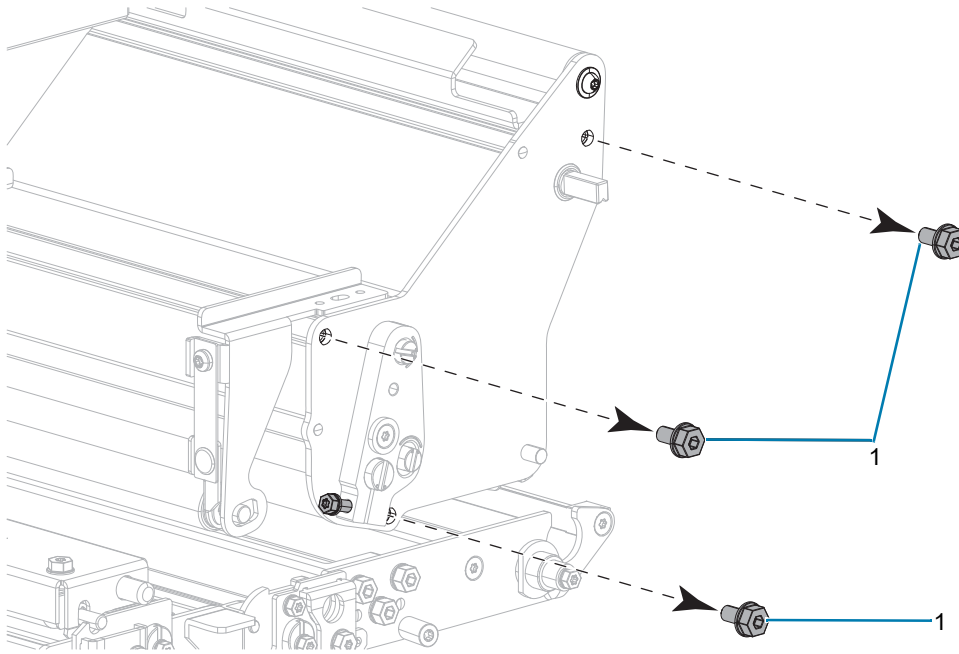
1. Loosen the two  T8 screws (1) securing the locking lever.



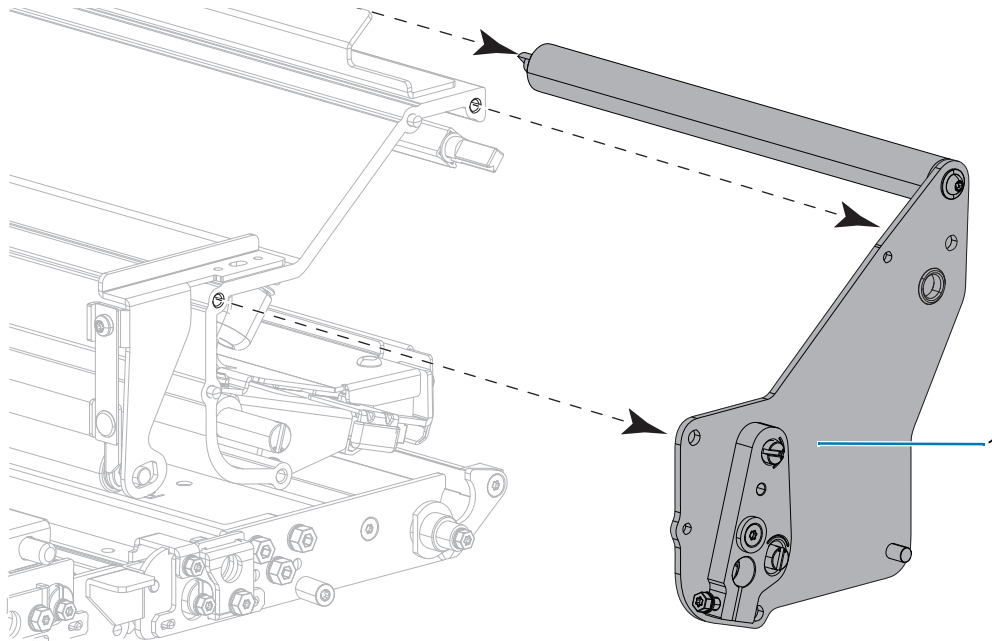
2. Remove the locking lever and the spring washer (2).
3. Loosen the pivot bar retaining  T8 screw (1).



4. Remove the three 3mm screws (1).



5. Remove the extrusion end plate (1) from the print engine.

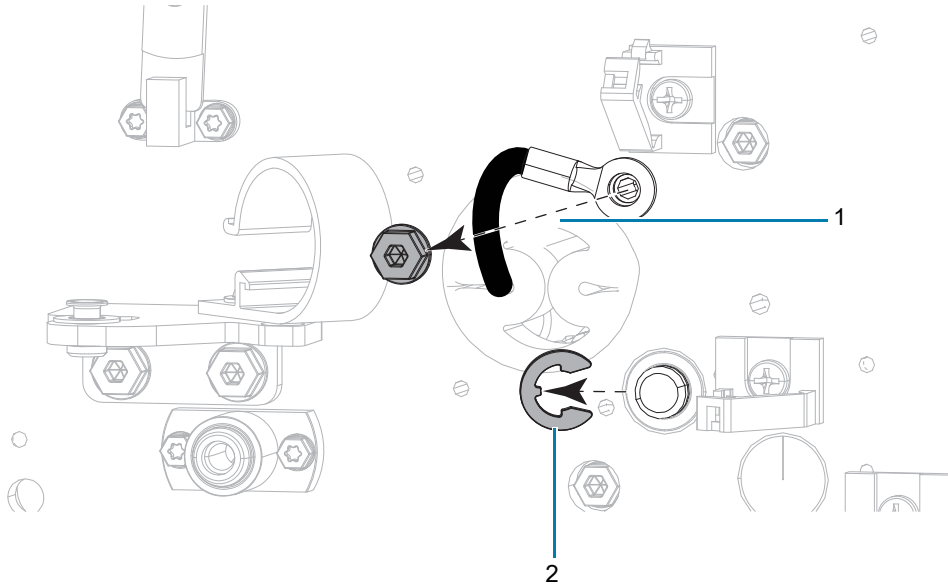


6. Go to the electronics side of the print engine.
7. Release the print mechanism.
  - a. Remove the ● 3mm screw (1).

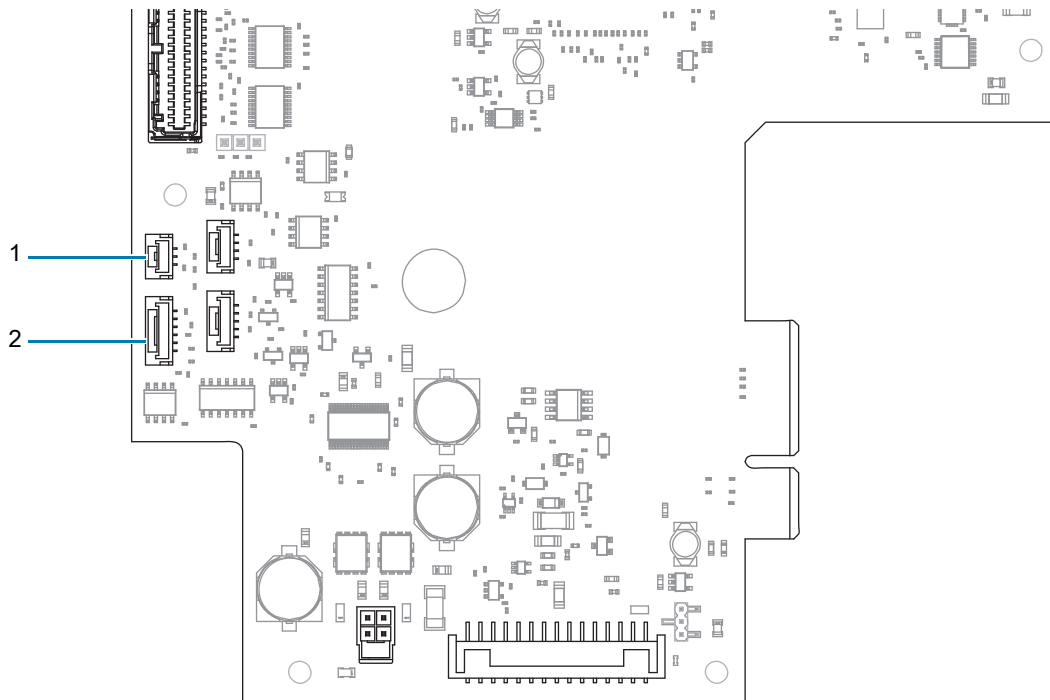


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

- b. Remove the E-ring (2) retaining the print mechanism.



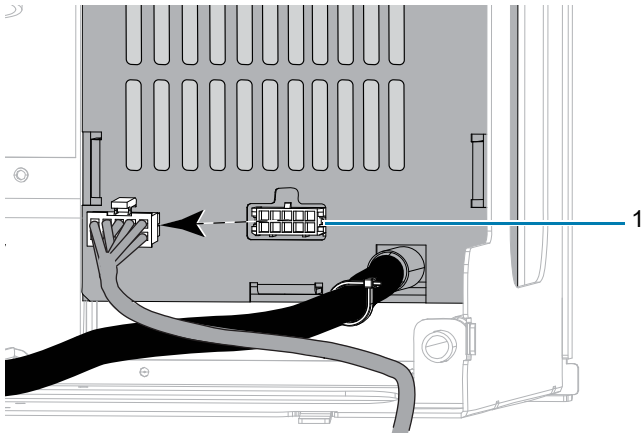
8. Disconnect the print mechanism cables from plugs J36 (1) and J37 (2) on the main logic board (MLB).



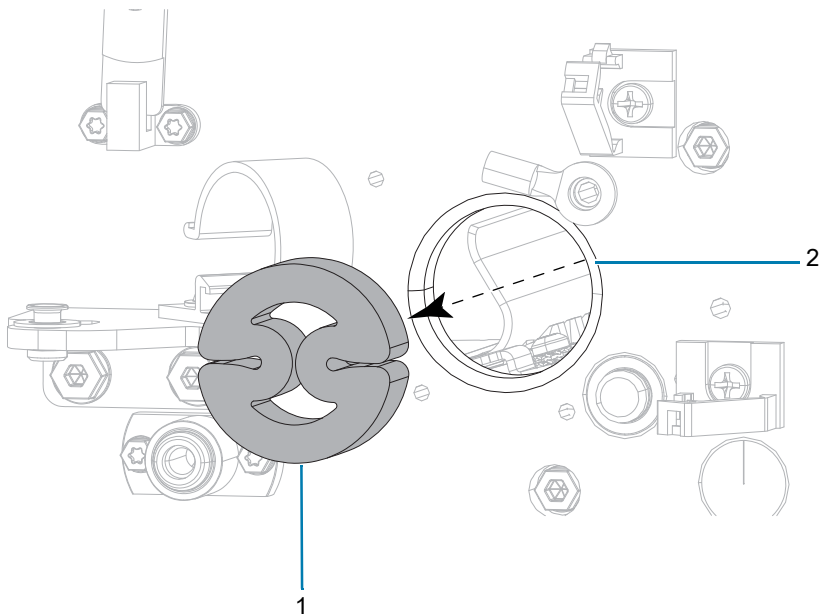
for parts & service call QLC (800) 837-1309



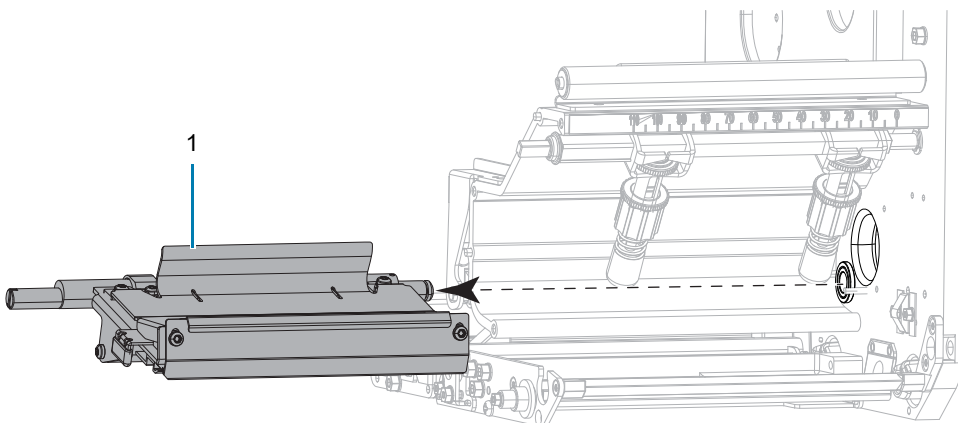
9. Disconnect the printhead power cable (1) from the power supply.



10. Remove the plug (1) from the access hole (2).




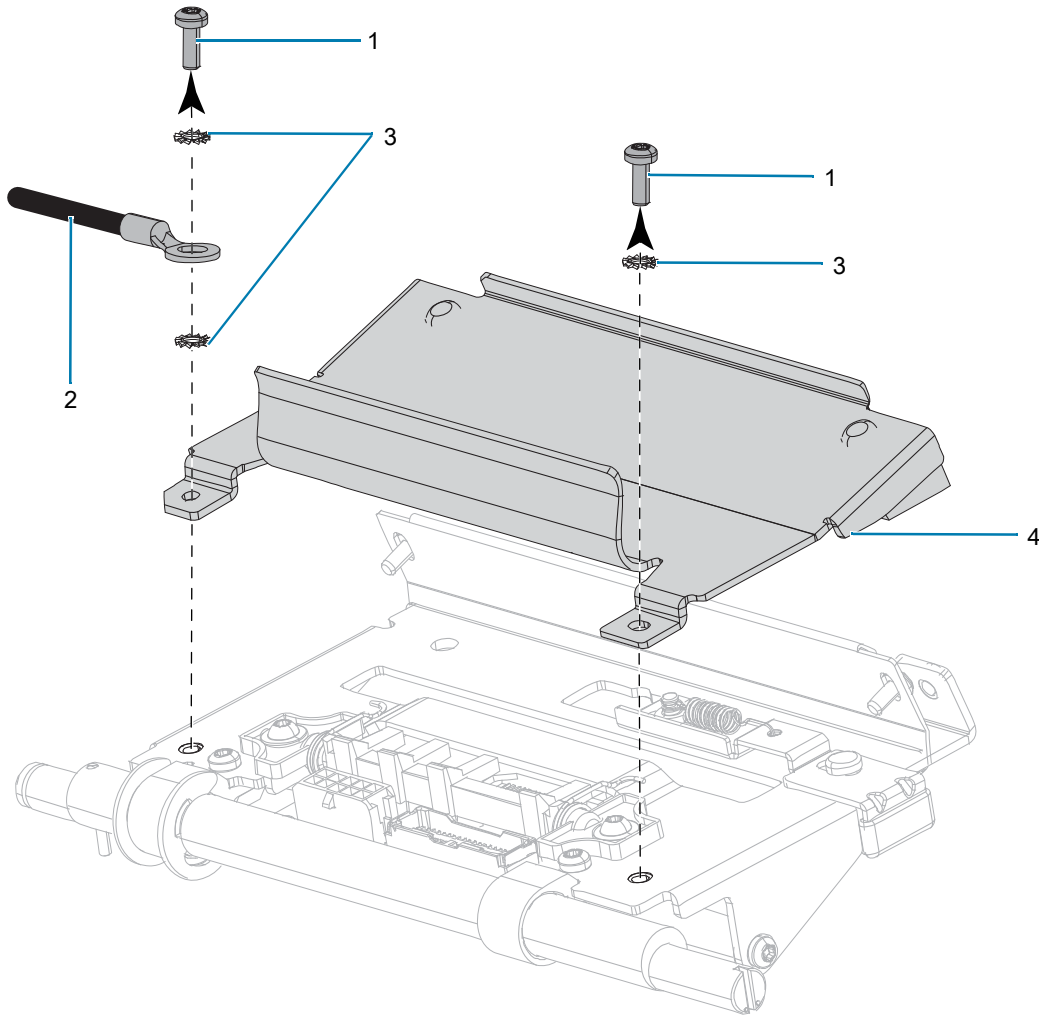
11. Thread the cables from the print mechanism through the access hole, and remove the print mechanism (1) from the print engine.



for parts & service call QLC (800) 837-1309

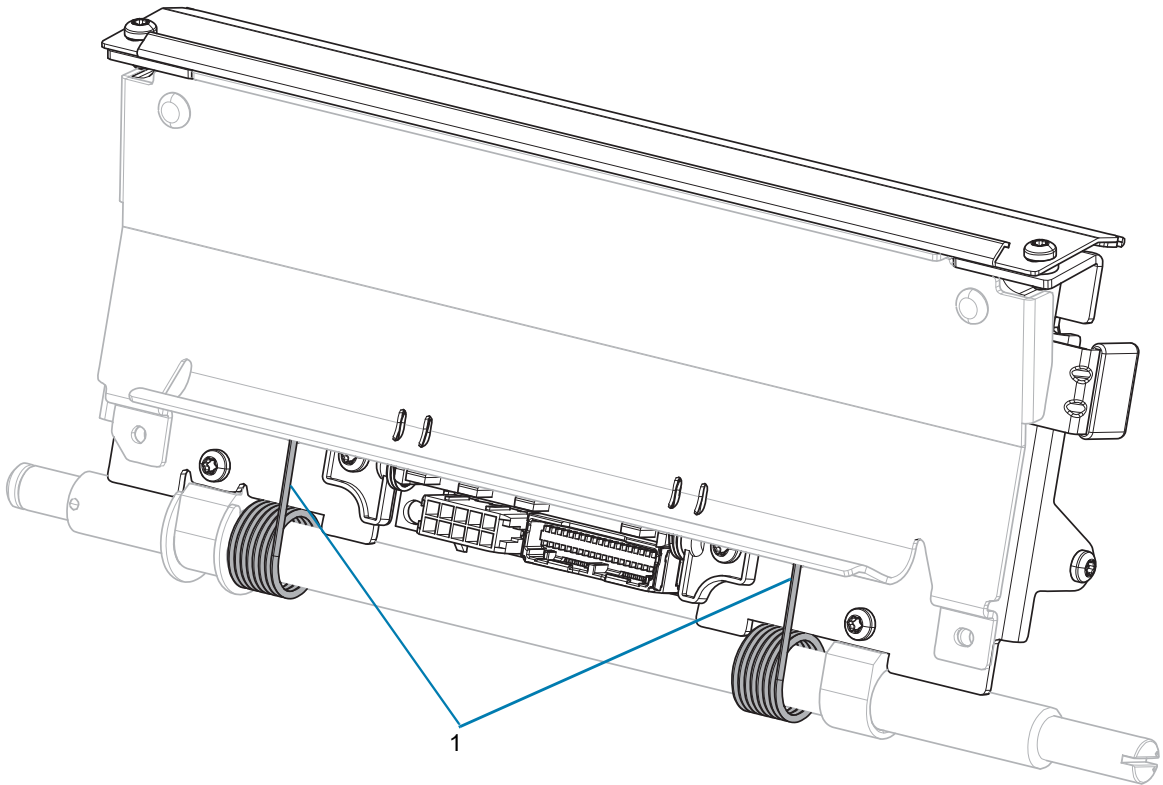
## Replace the Printhead Interface Adapter

1. Disconnect the two cables from the print mechanism.
2. Remove the two  T9 screws (1), grounding cable (2), lock washers (3), and the top cover of the print mechanism (4).




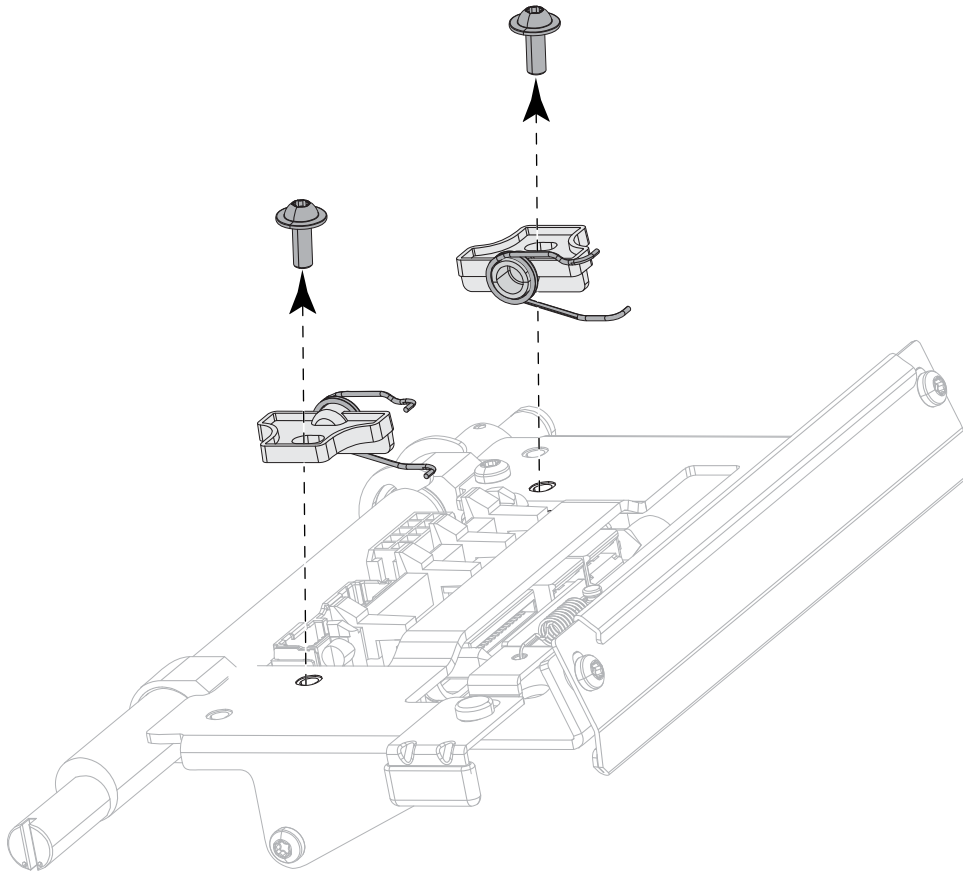


**CAUTION—PRODUCT DAMAGE:** When removing the top cover from the ZE521 print mechanism be aware of the two springs (1) on the pivot bar. If the cover is removed quickly the springs can cause damage. All four springs must be engaged for proper printer operation.

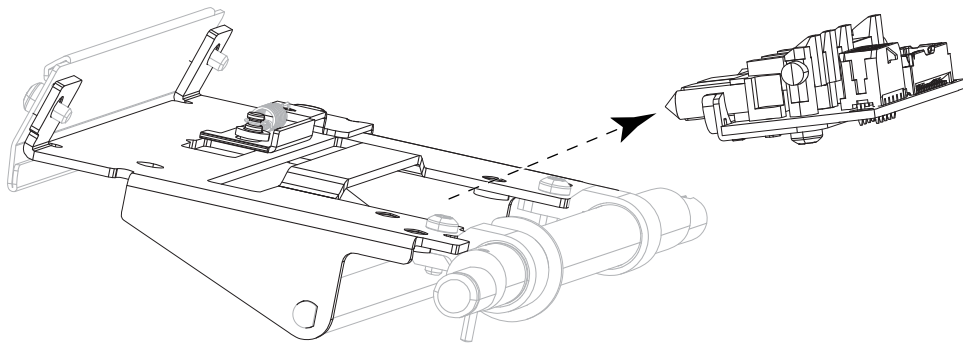


## Printhead Interface Adapter Maintenance Kit

3. Remove the two  T9 screws and pivot bracket holding the printhead interface adapter.

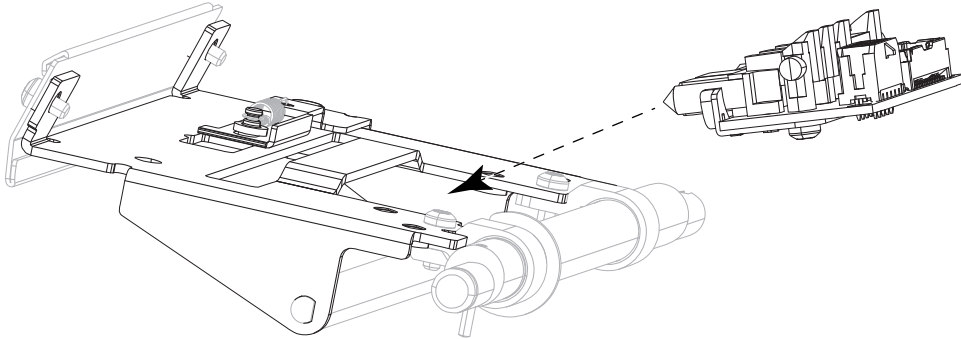



4. Tip and remove the printhead interface adapter from the print mechanism.



for parts & service call QLC (800) 837-1309

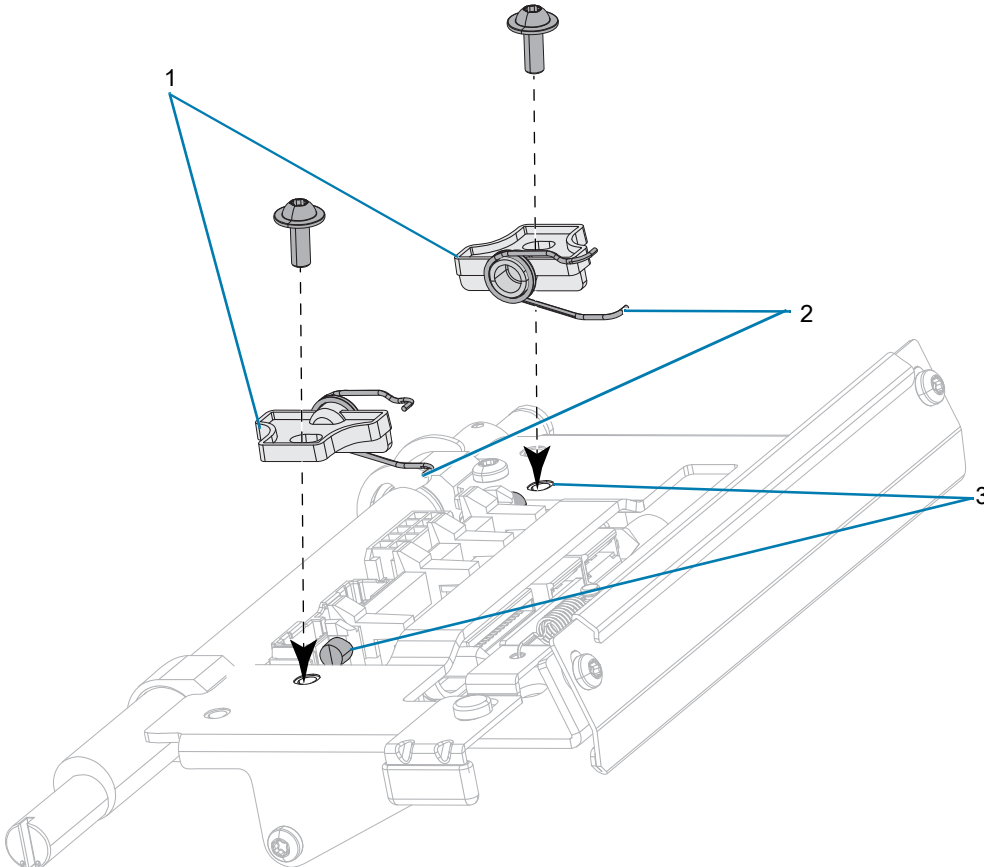
5. Install the new printhead interface into the print mechanism.



6. Slide the pivot brackets (1) over the ends of the pivot adapter (3) onto the printhead interface adapter.
7. Install the two new  T9 screws and pivot adapters securing the printhead interface adapter.



**NOTE:** Ensure the bottom legs of the springs (2) are captured in the openings of the white cover, and, the springs rest on the printhead interface adapter.

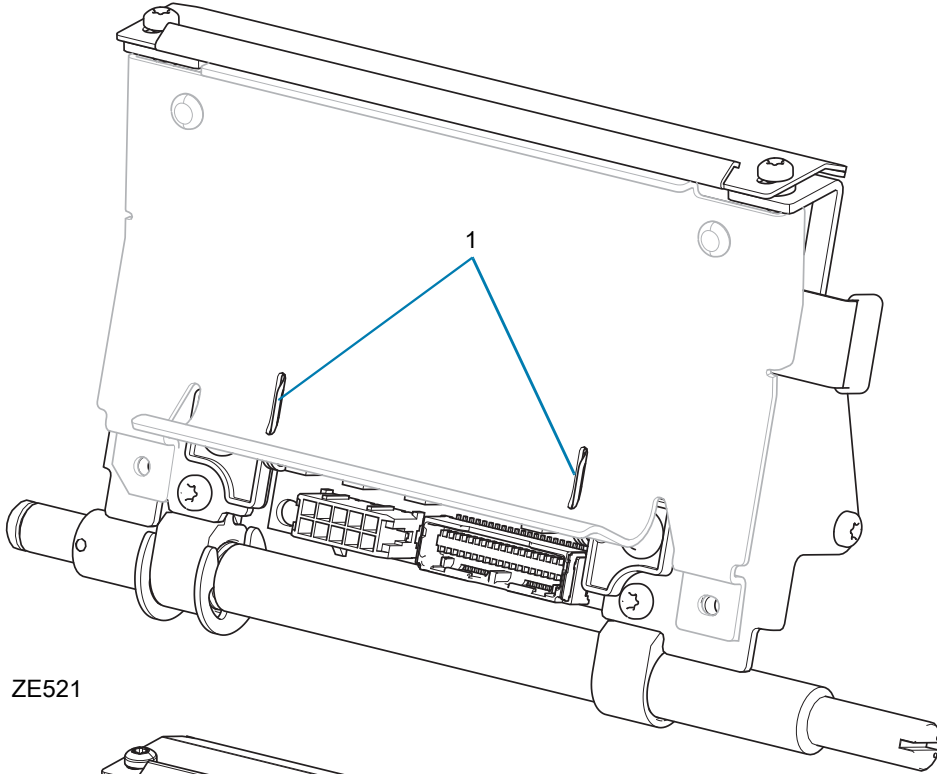


8. Slide the pivot adapters over the ends of the pivot brackets on the printhead interface adapter.

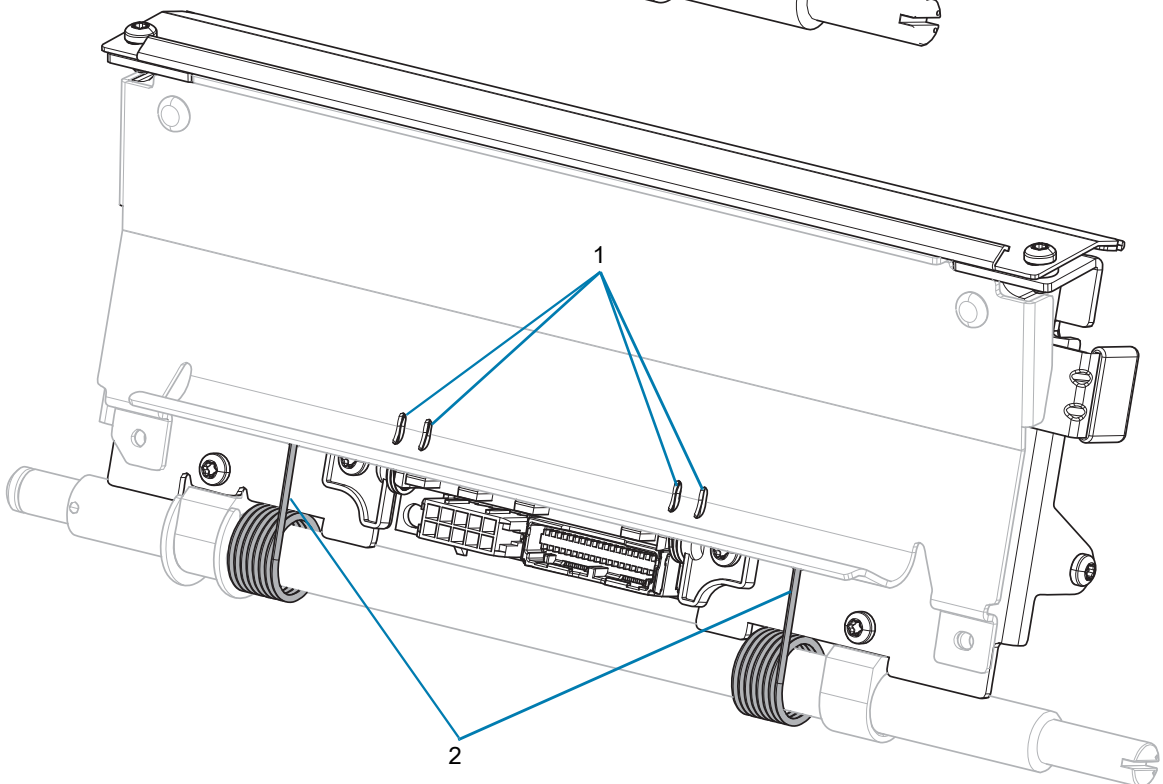
## Printhead Interface Adapter Maintenance Kit

9. Reinstall the print mechanism top cover on the with the printhead adapter PCB springs in the cutouts (1).
10. Reinstall the print mechanism top cover on the ZE521 over the springs (2) attached to the pivot bar.

ZE511

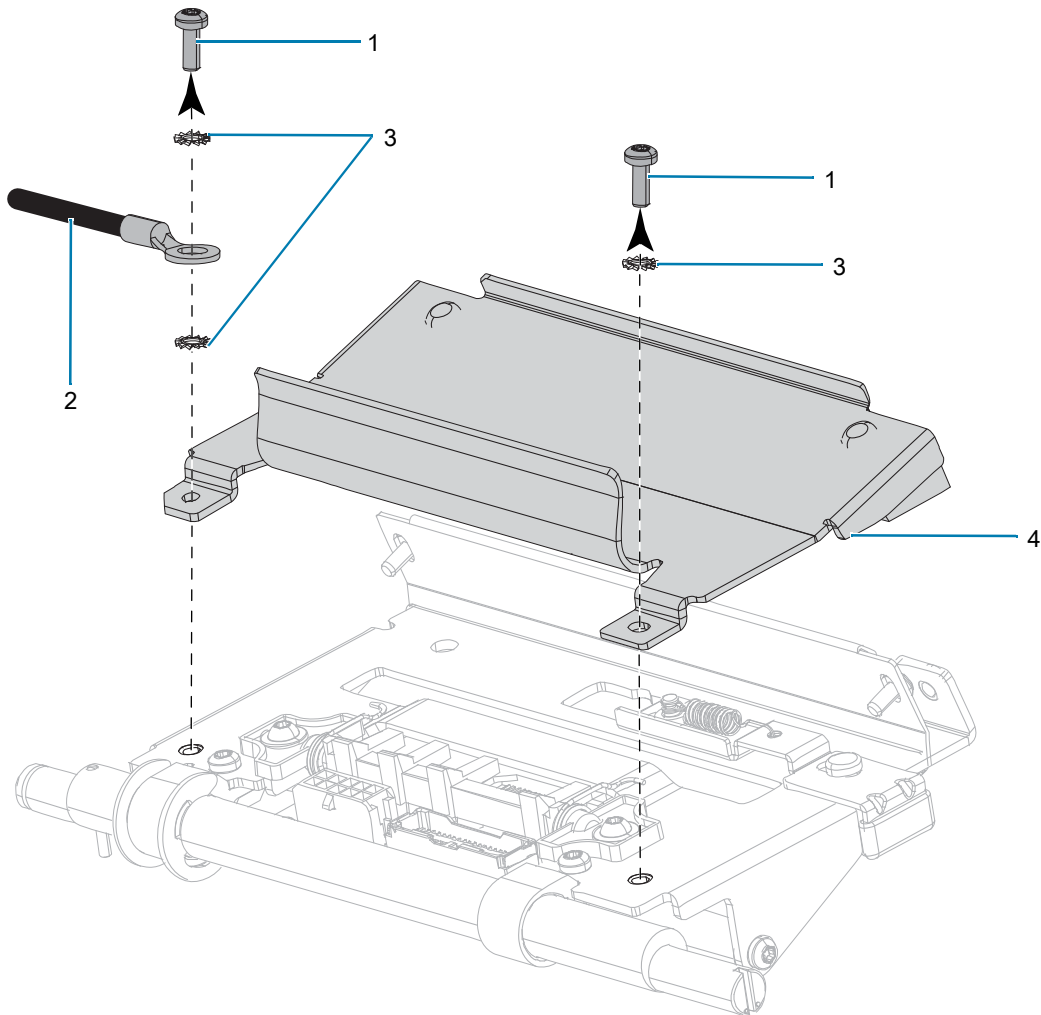


ZE521



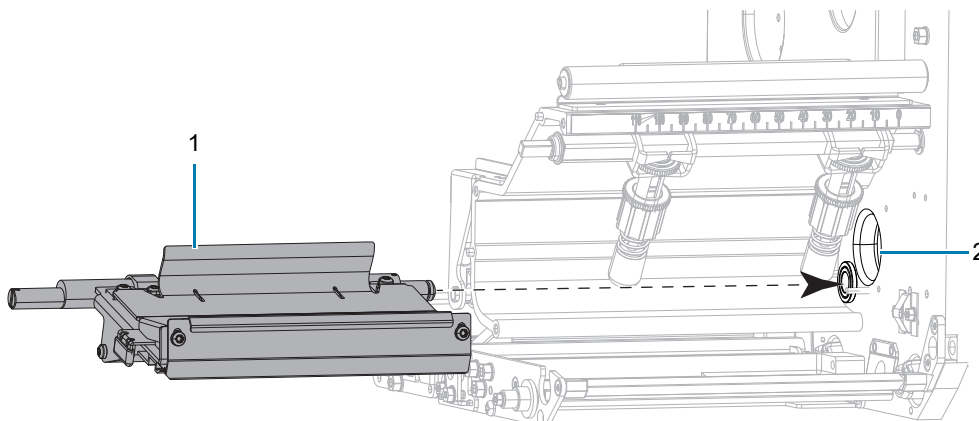
for parts & service call QLC (800) 837-1309

11. Install the two T9 screws (1), grounding cable (2), lock washers (3), and the top cover of the print mechanism (4).



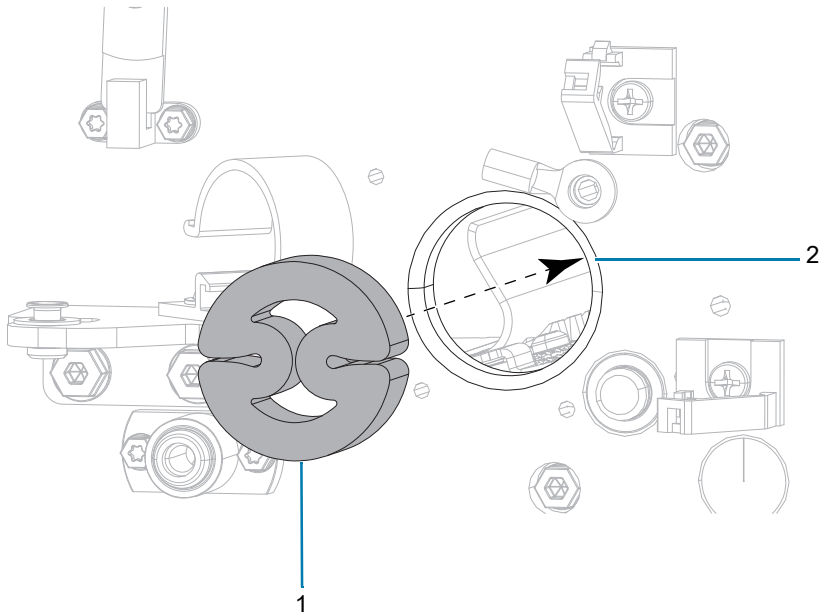
## Replace the Print Mechanism

1. Install the cables for the print mechanism (1) through the access hole (2), and then install the print mechanism.

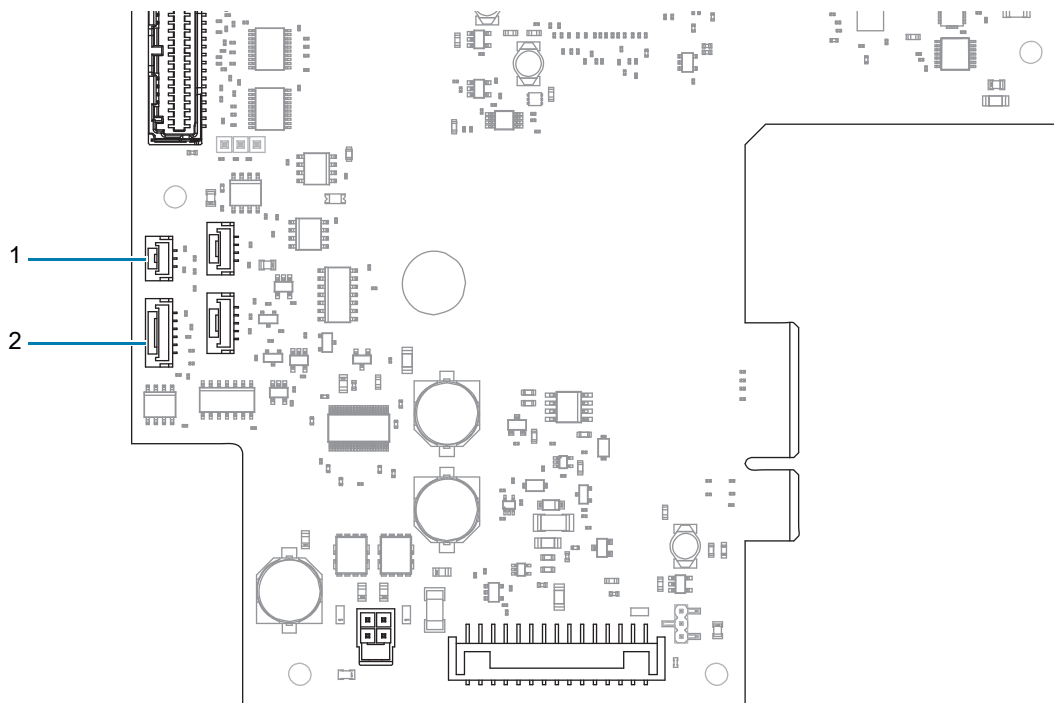


for parts & service call QLC (800) 837-1309

2. Install the plug (1) into the access hole (2).

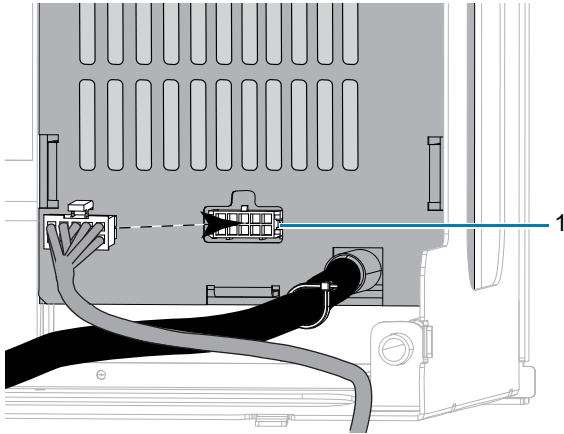


3. Reconnect the print mechanism cables to plugs J36 (1) and J37 (2) on the MLB.





4. Connect the new printhead power cable (1) from the power supply.

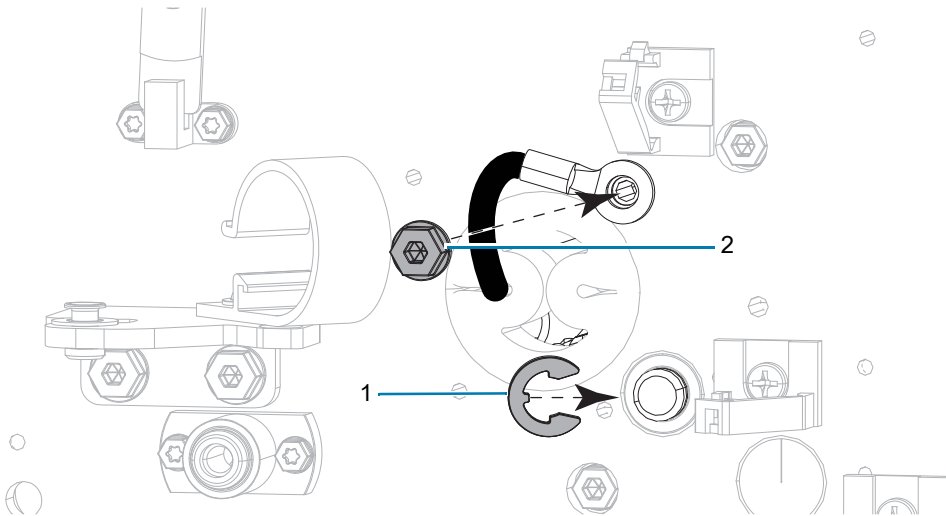


5. Secure the print mechanism.

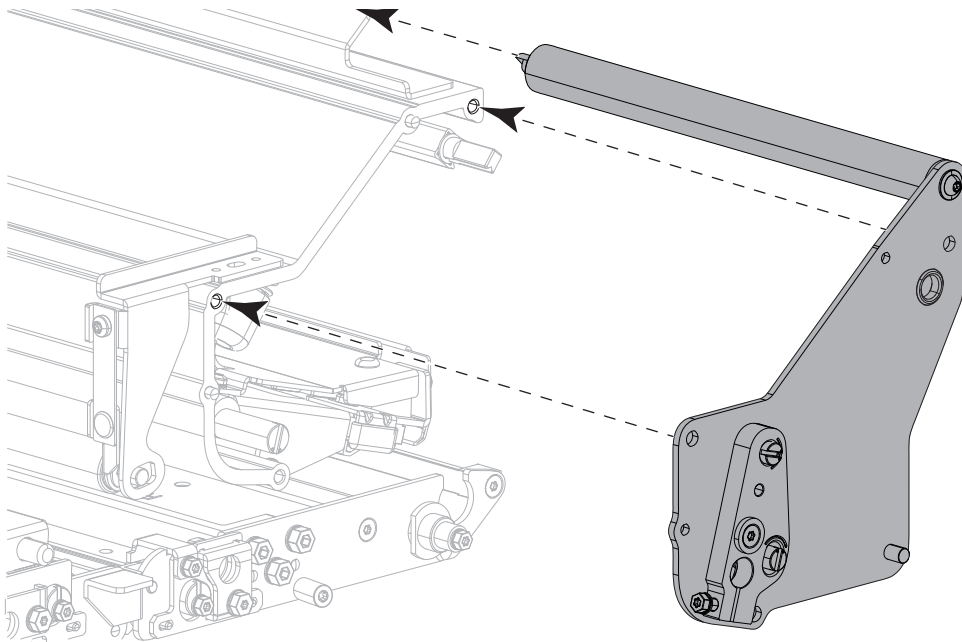
- a. Install the new E-ring (1) onto the print mechanism shaft.
- b. Secure the print mechanism ground cable with the 3mm screw (2).



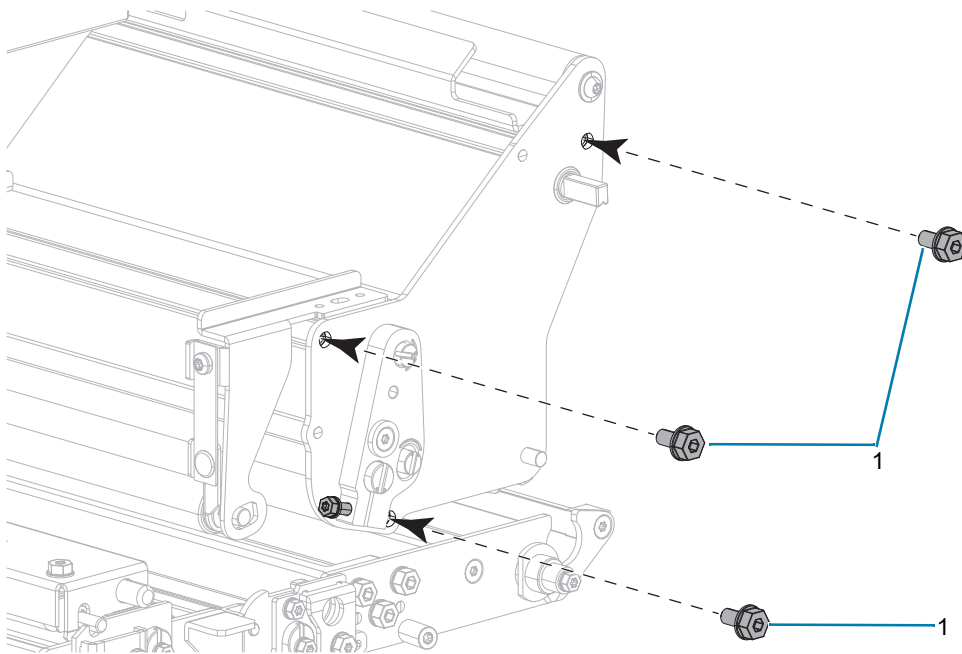
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.




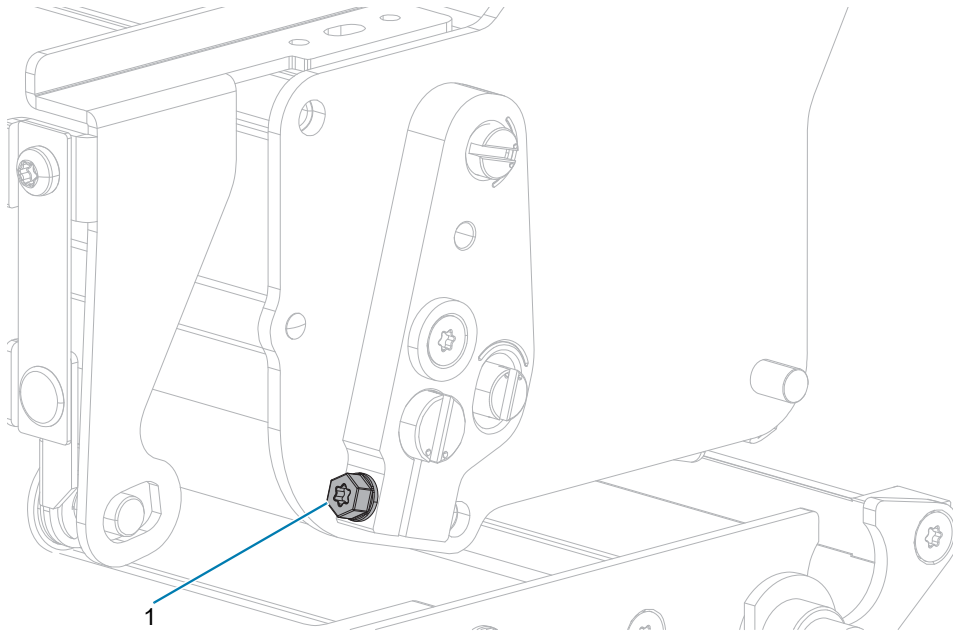
6. Reinstall the side extrusion end plate.



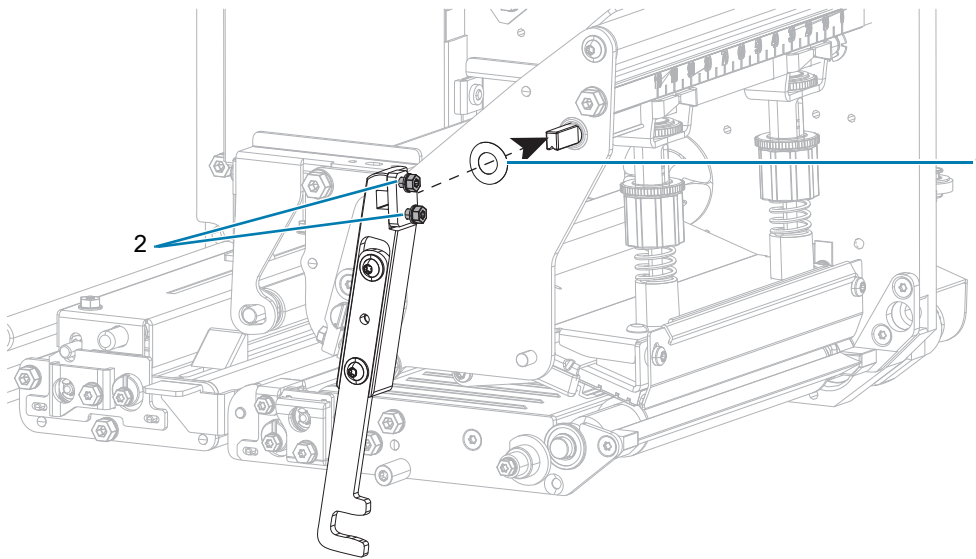
7. Install the three 3mm screws (1).




8. Tighten the pivot bar retaining  T8 screw (1).



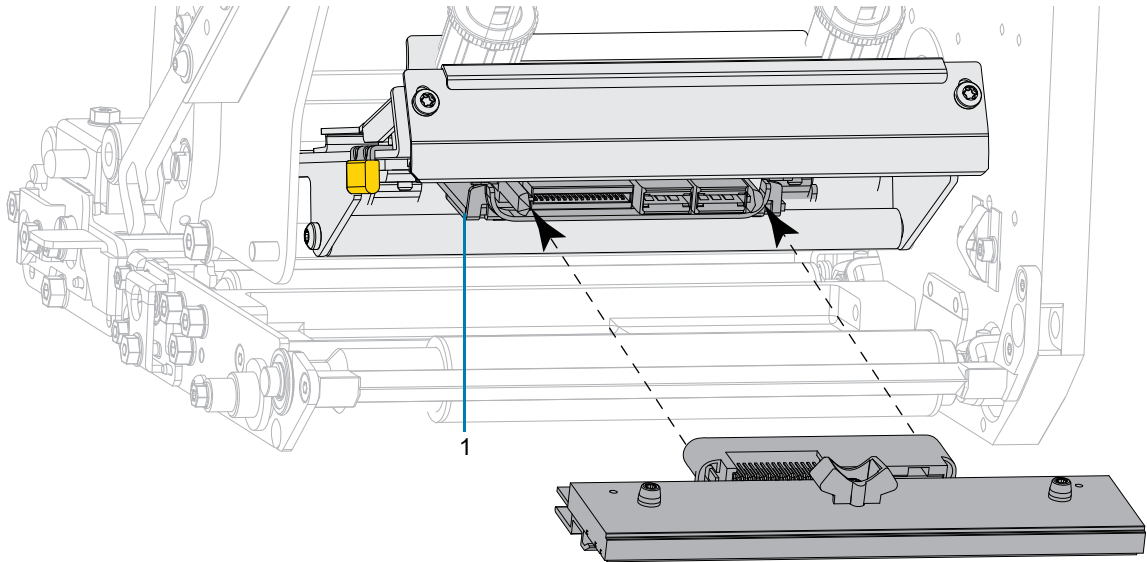
9. Replace the spring washer (1) and locking lever.



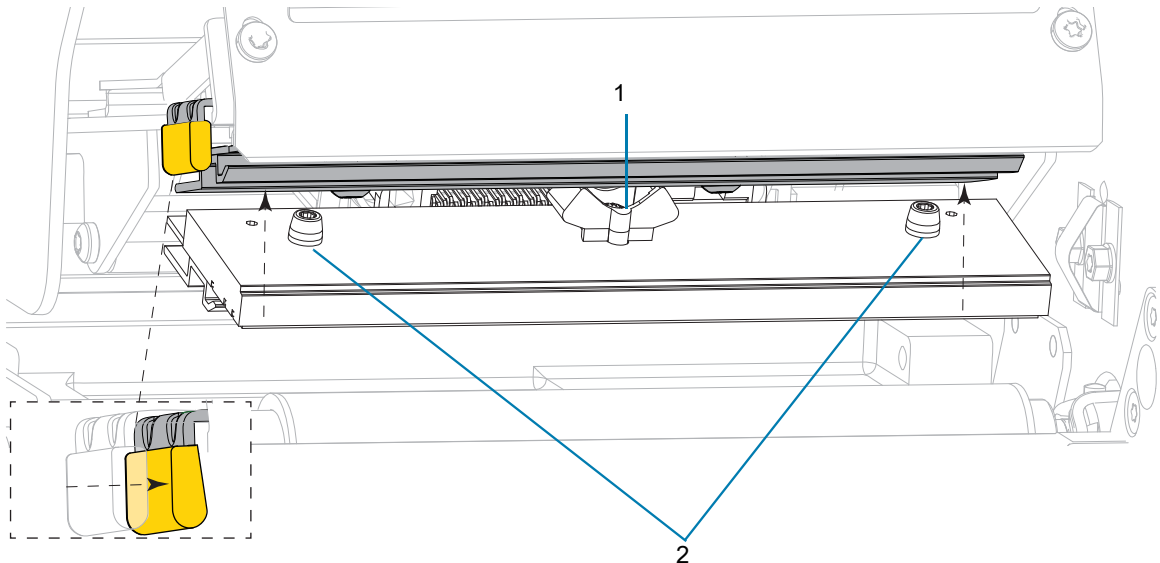
10. Tighten the locking lever retaining  T8 screws (2).

## Replace the Printhead

1. Push the new printhead into the printhead socket (1).



2. Push up gently on the printhead until the printhead securing protrusion (1) and printhead alignment posts line (2) up with the holes in the underside of the printhead assembly.

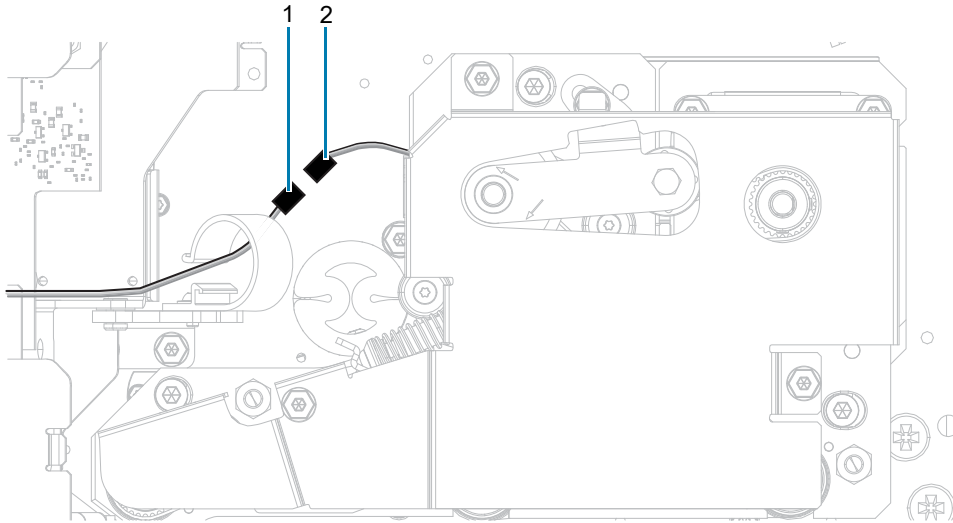


3. Push the printhead release latch in to lock the new printhead in place.

## Install the Media Drive System

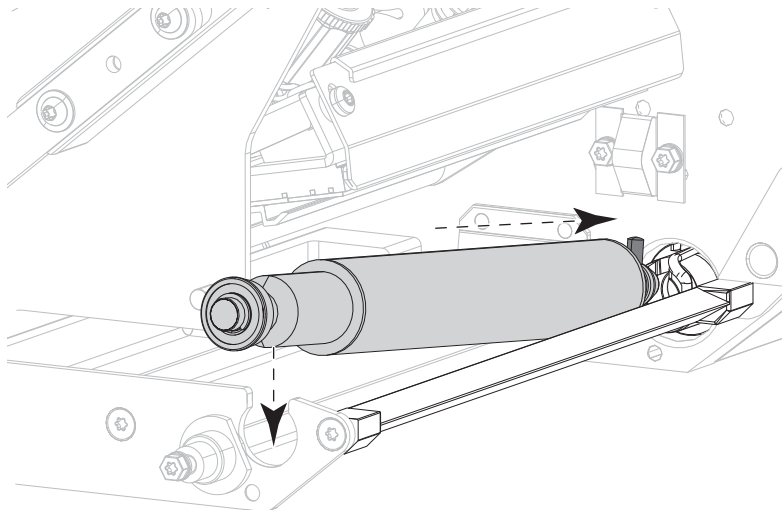
1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three ● 4mm captive screws.
2. Reconnect the stepper motor cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.




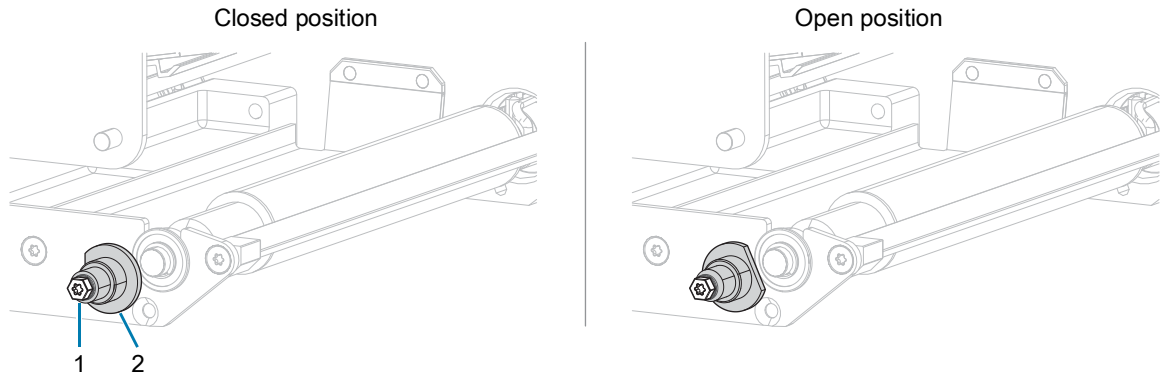
## Replace the Rollers


1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.

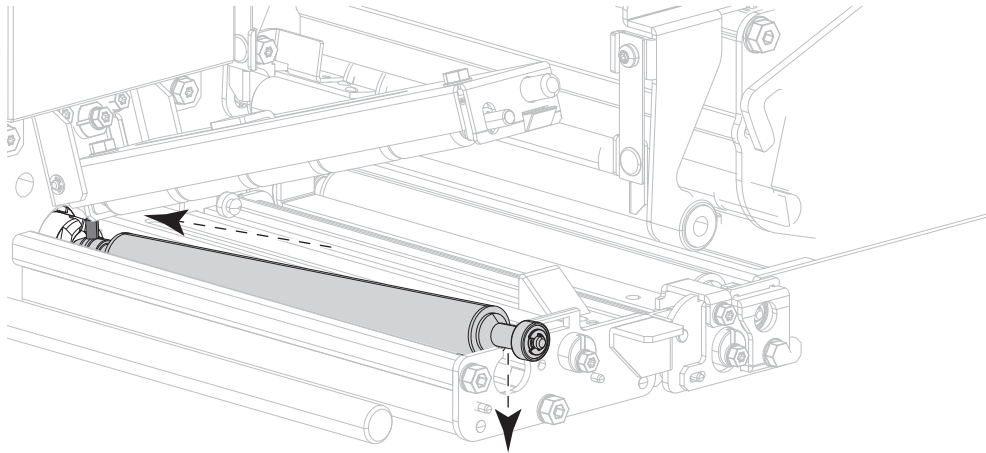


2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.


3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.

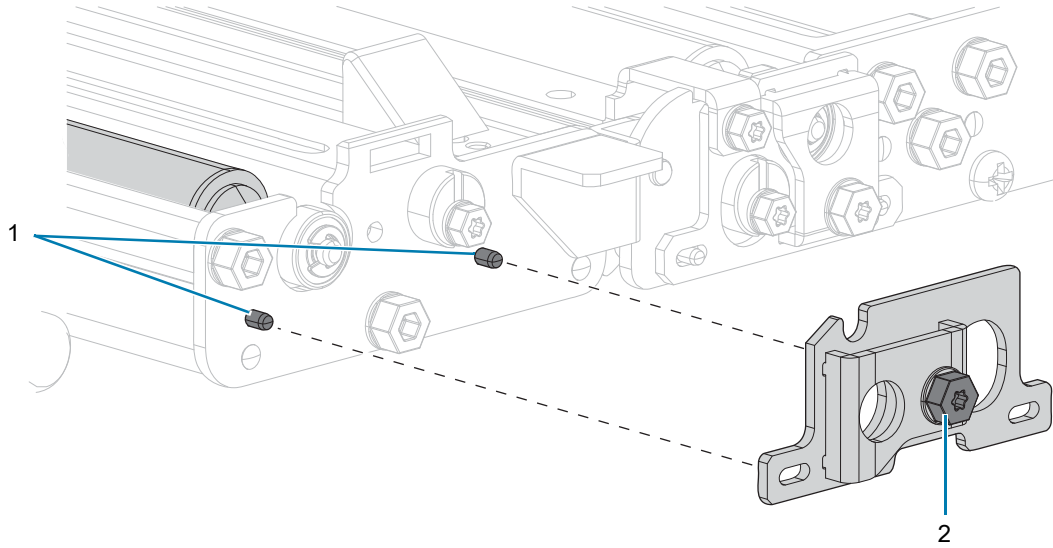


- c. Tighten the  T9 captive screw.
4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.

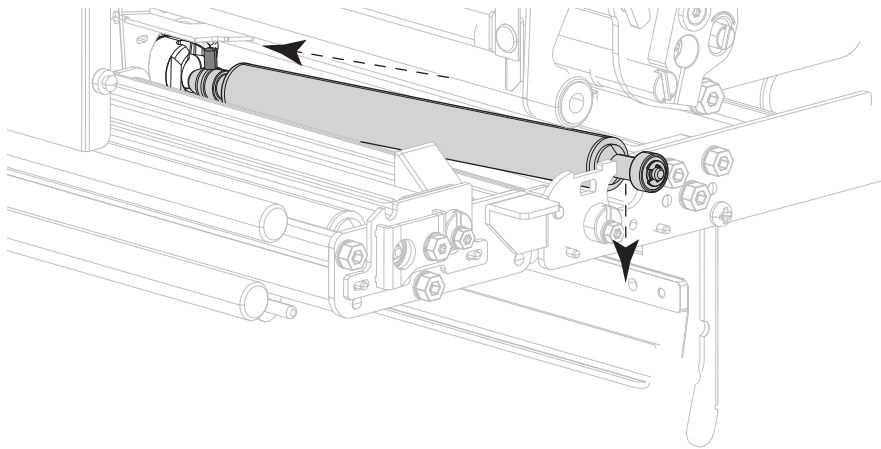


- - 
  -
5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.


6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.

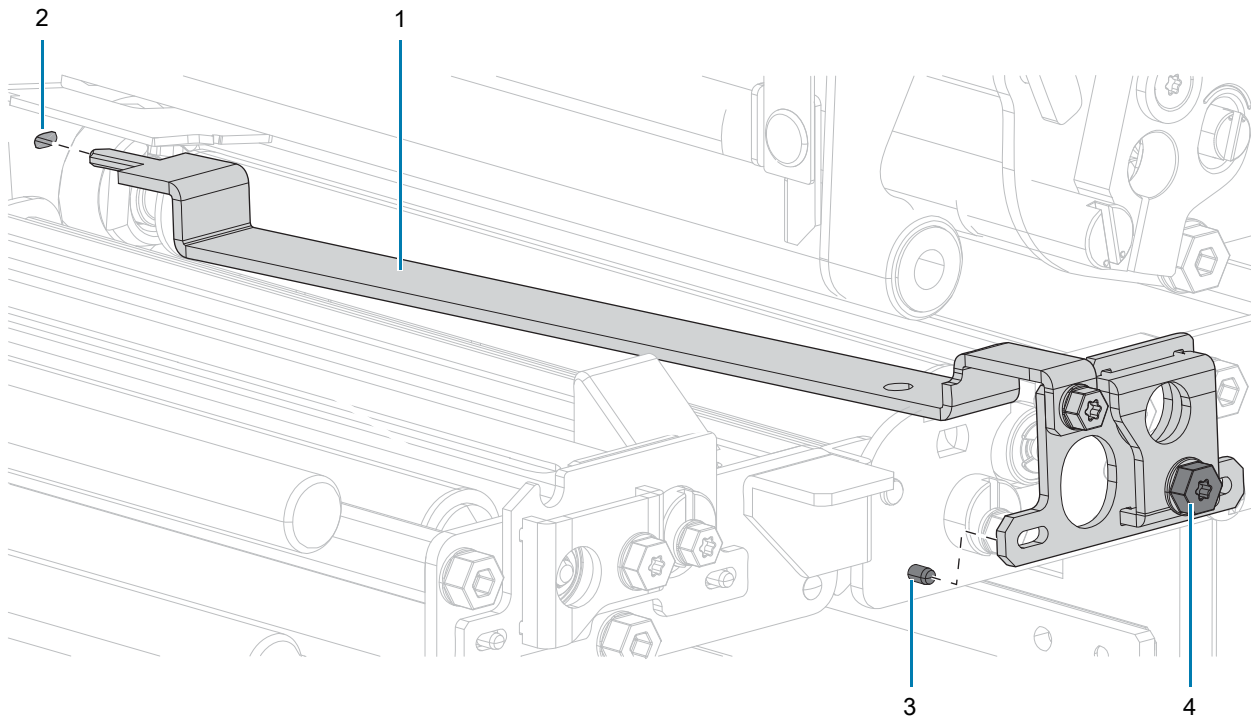


7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.

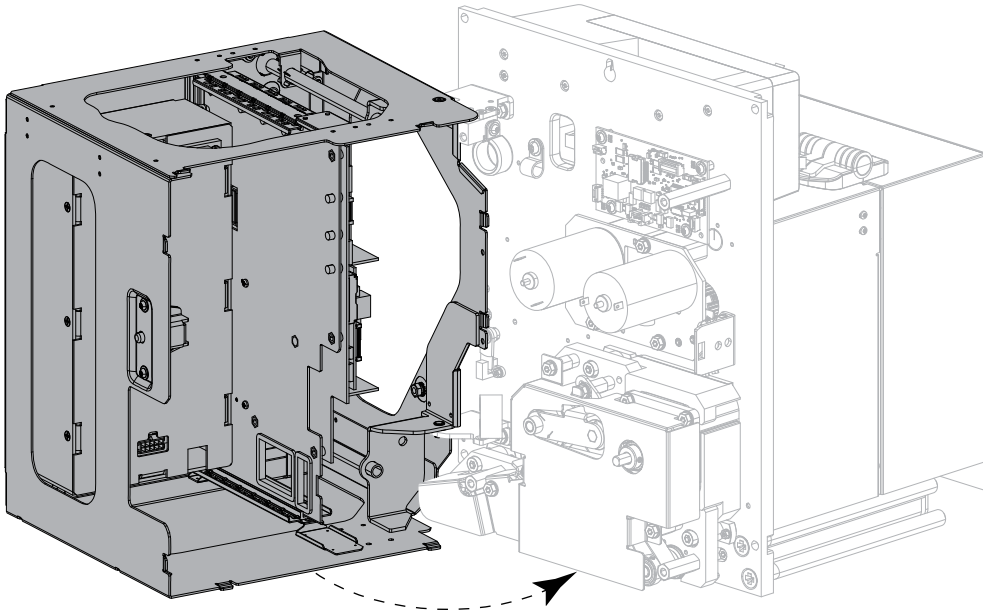
9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



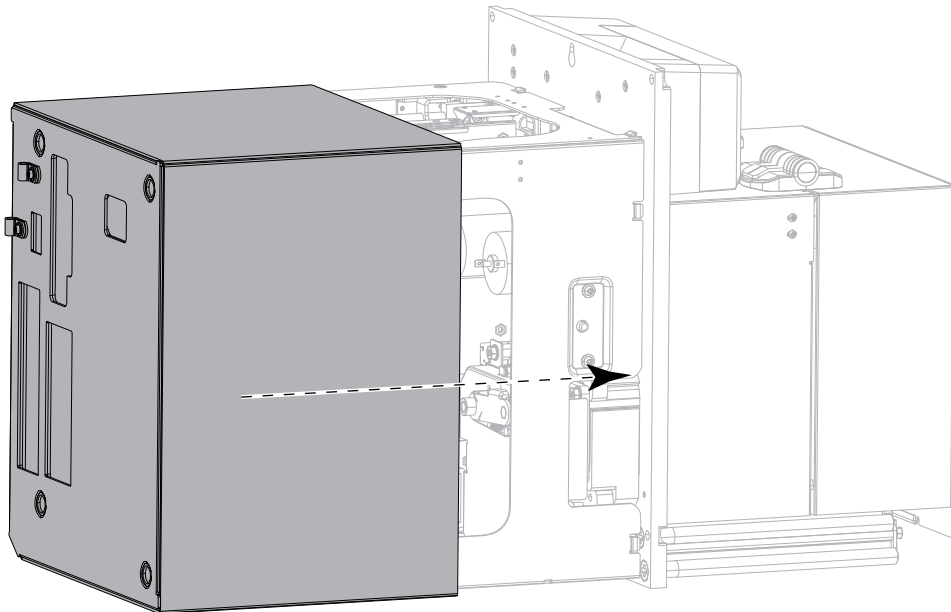


## Close the Electronics Enclosure

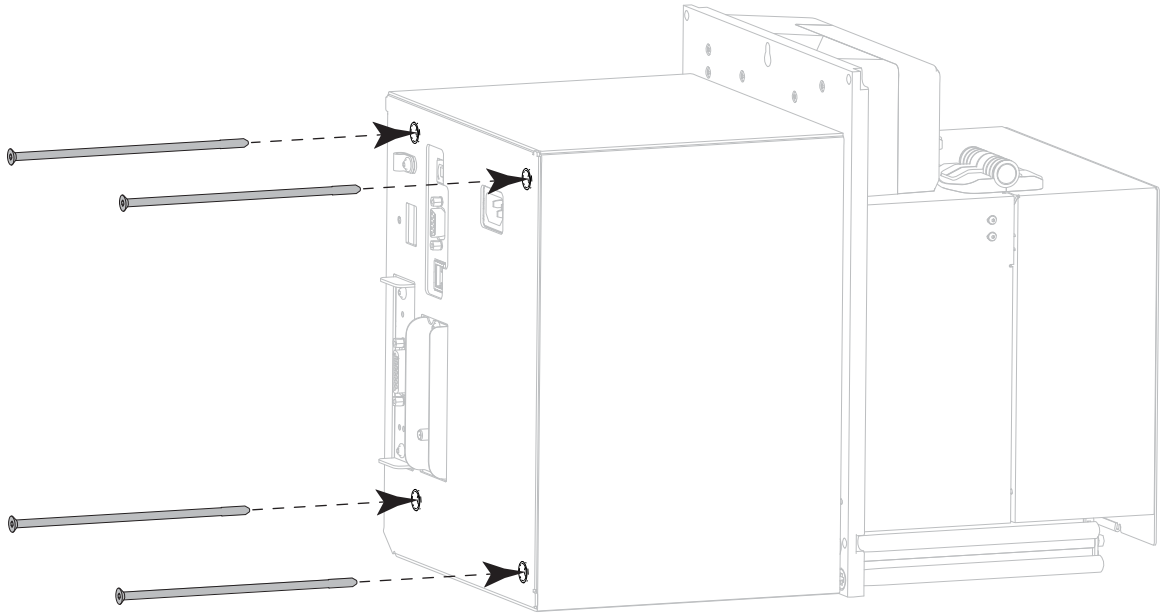
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.

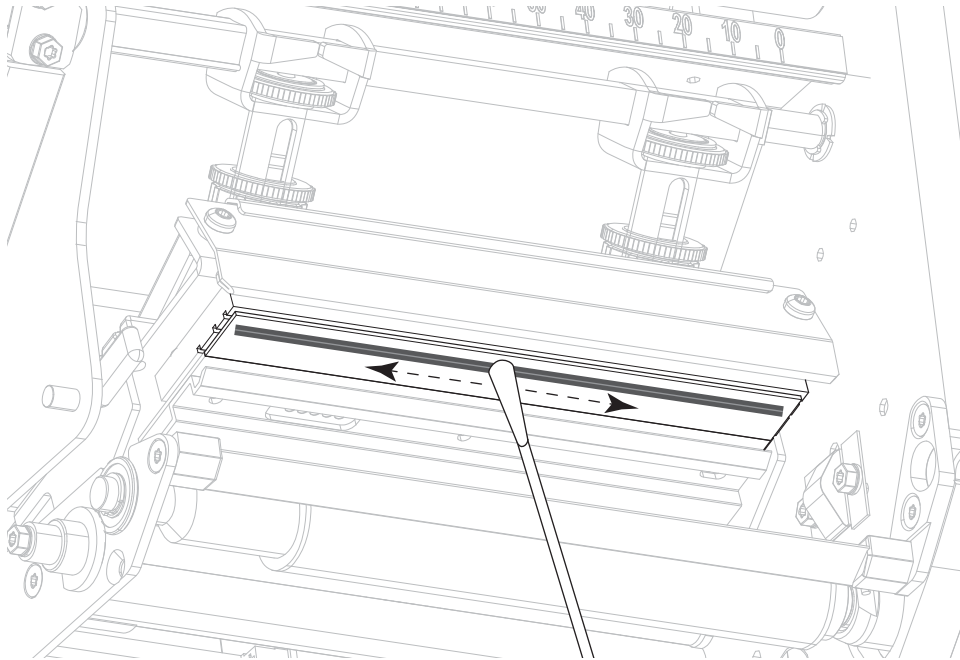


3. Install the four 3mm screws securing the electronics enclosure cover.



## Clean the Printhead

1. Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.
2. Allow the solvent to evaporate.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect AC power cord and interface cables.
6. Turn on (I) the printer power.

## Print Line, Balance, and Skew Adjustment



**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label as the labels print, you can adjust the following:

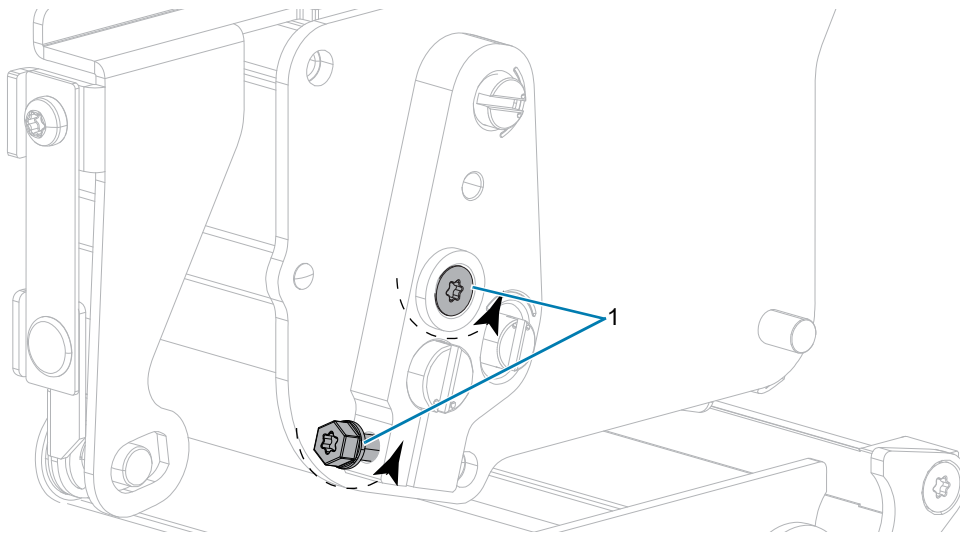
- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

1. Loosen the two ● 3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two ● 3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold **PAUSE** while turning on the print engine.
  - c. Hold **PAUSE** until the first control panel light turns off.

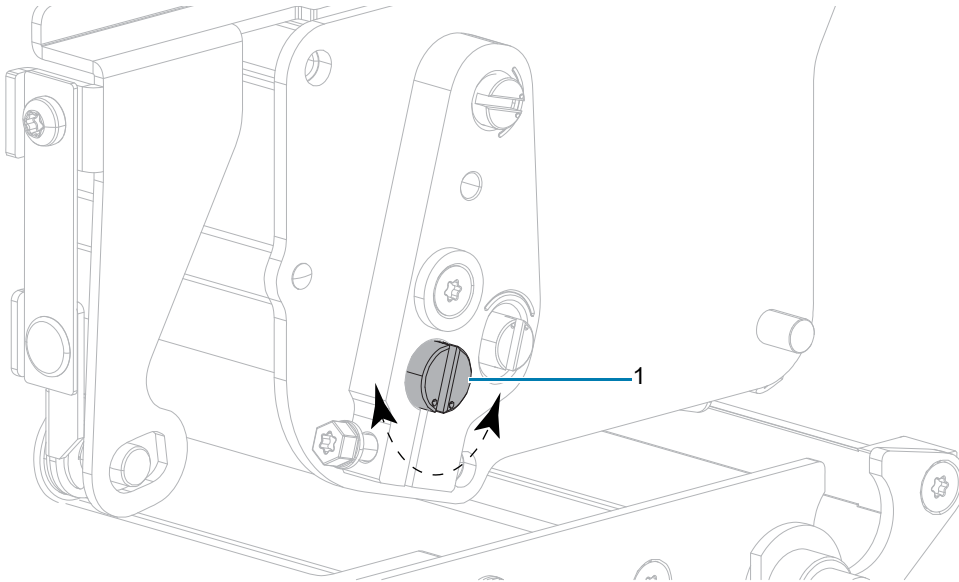


**NOTE:** At any time during the PAUSE self-test,

- Press **PAUSE** to print 15 additional labels.
- Press **CANCEL** to change the print speed.
- Press and hold **CANCEL** to exit the self-test.

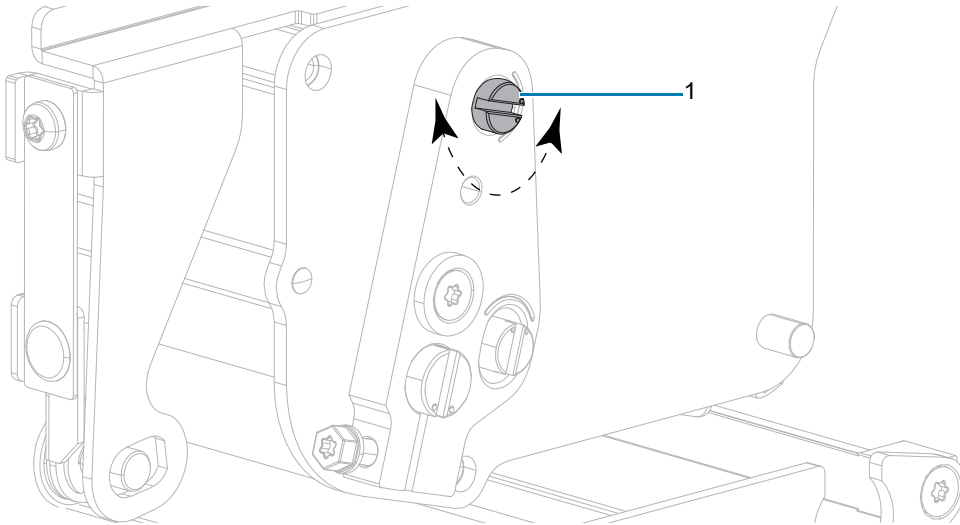
## Adjust the Print Line

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster (1). Adjust the print line forward/backward to find the best appearance of the printed image.



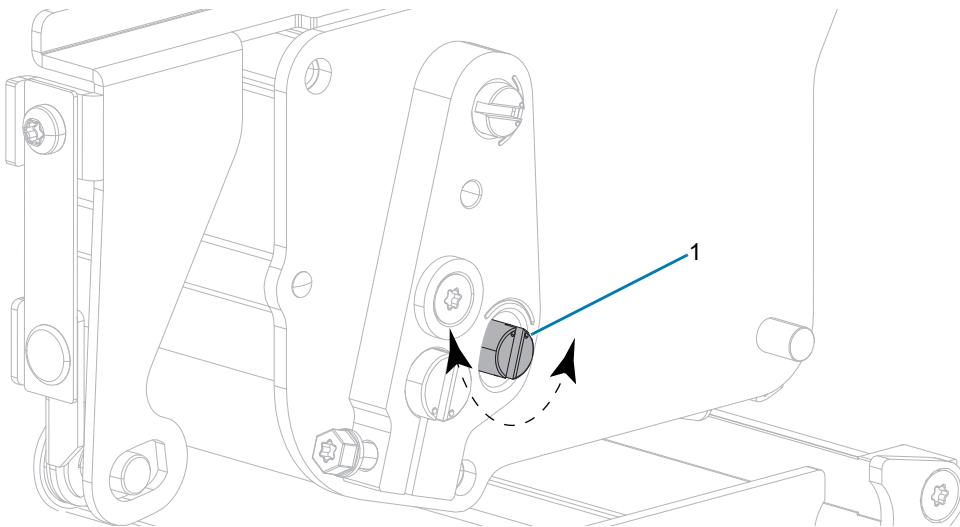
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster. Adjust the balance until the print is even across the width of the printhead.



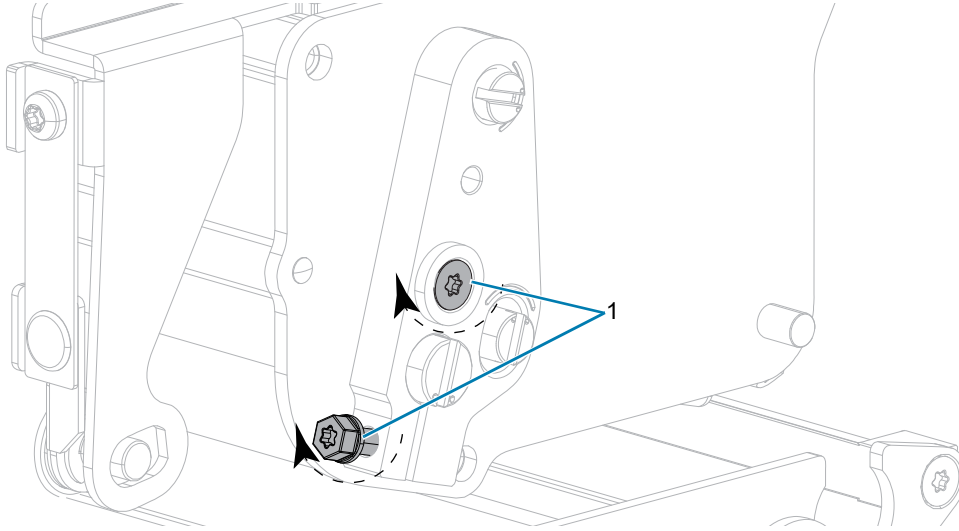
## Adjust the Skew

1. While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster. Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label the label (not at a diagonal).



## Place the Print Engine Back to Operating State

1. Exit the PAUSE self-test by pressing and holding cancel.
2. Tighten the two ● 3mm adjustment screws (1).



The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Graphics for a left-hand (LH) model are a mirror image, in most cases. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZE511/ZE521 Power supply Qty: 1
	Screw (pan washer mach M4x6) Qty: 4 <div style="text-align: right;">  T25                 </div>

## Tools Required

	Metric hexagon keys or bits Size: 3 mm, 5mm
	Hexalobular (6-lobe, star) keys, drivers, or bits Size: T25
<ul style="list-style-type: none"> <li>•</li> </ul>	Sorting bin for screws and small parts (optional)
<ul style="list-style-type: none"> <li>•</li> </ul>	Antistatic wriststrap and mat



## Prepare for Installation



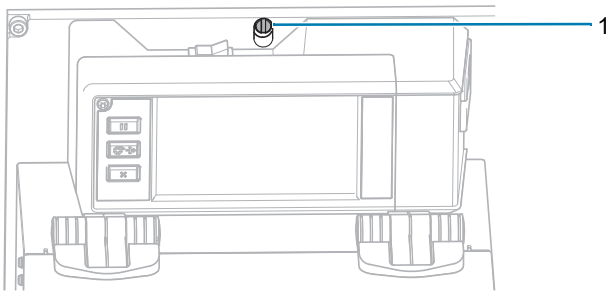
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



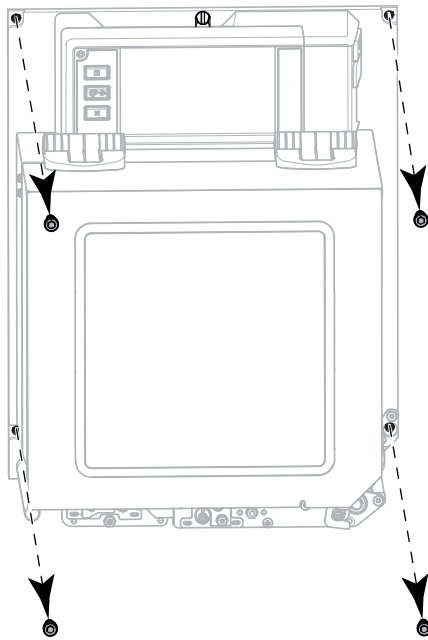
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



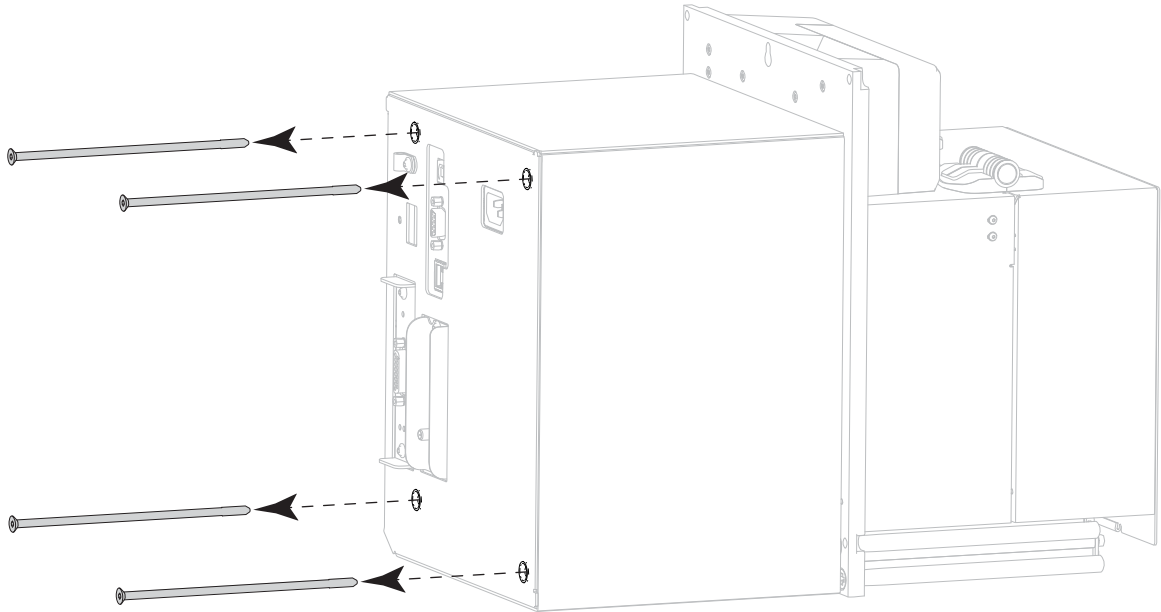
2. Remove the four screws securing the print engine to the applicator.



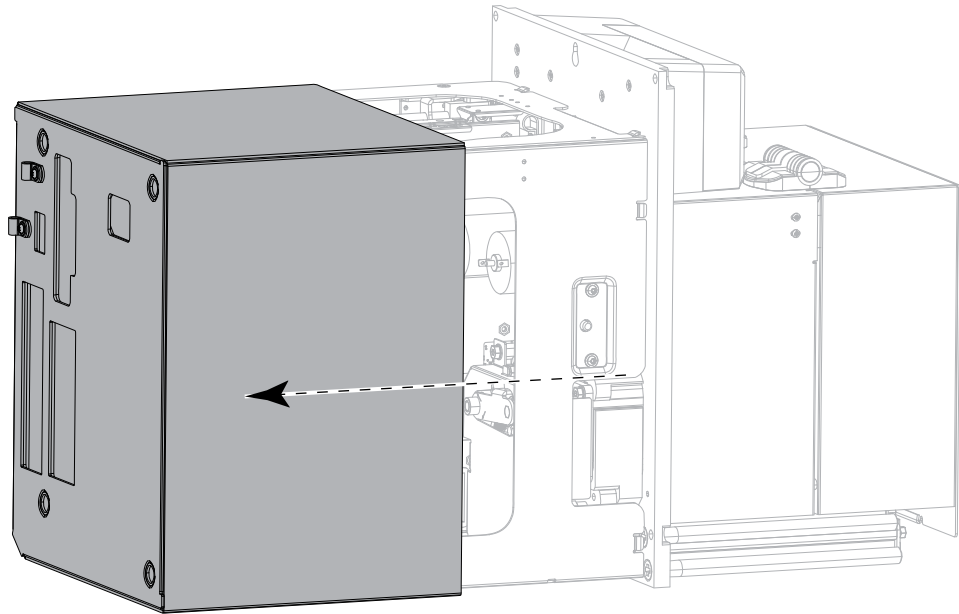
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



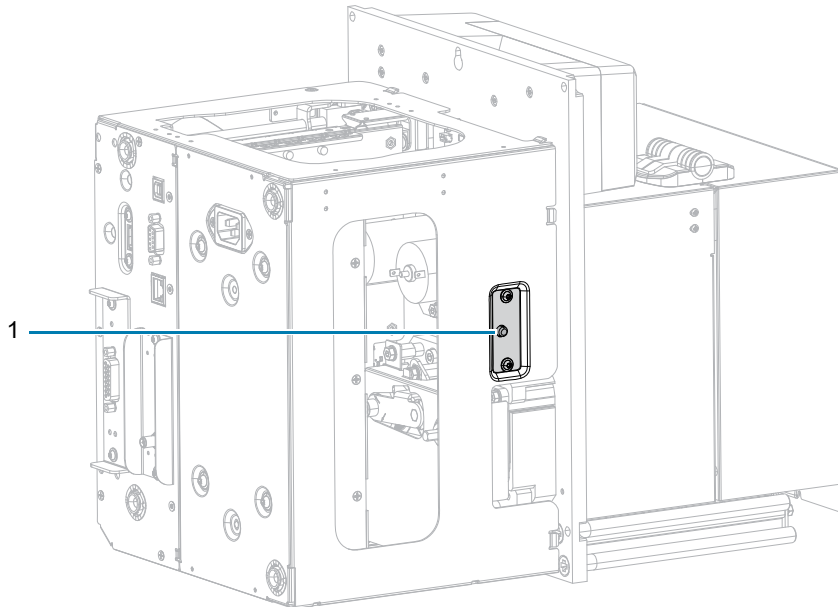
2. Remove the electronics enclosure cover from the print engine.



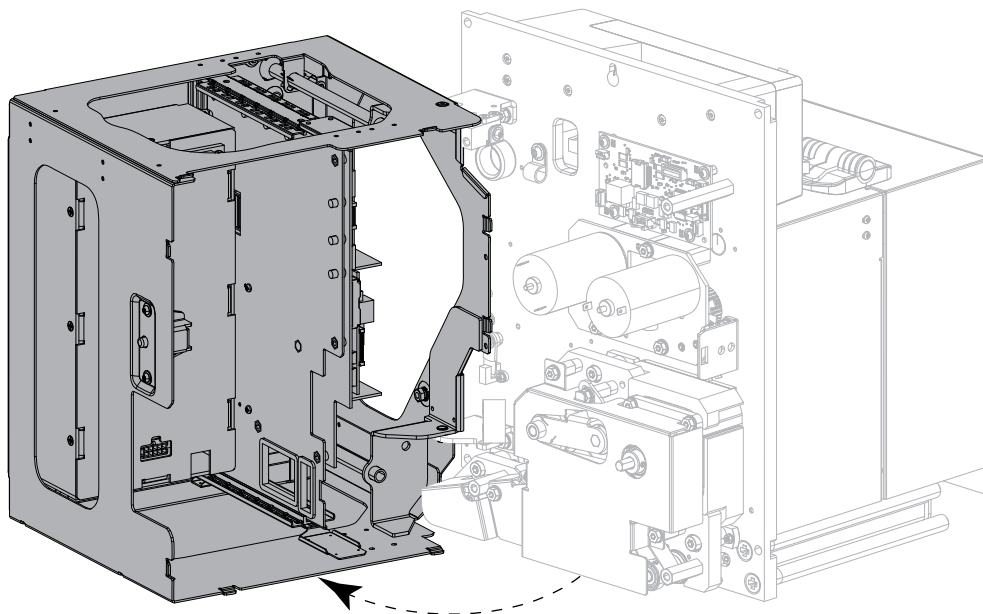
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

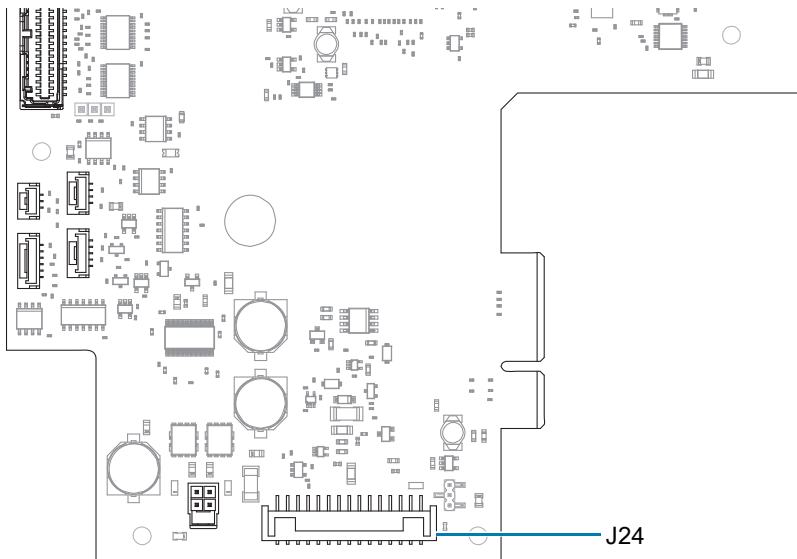


4. Open the rear of the print engine.

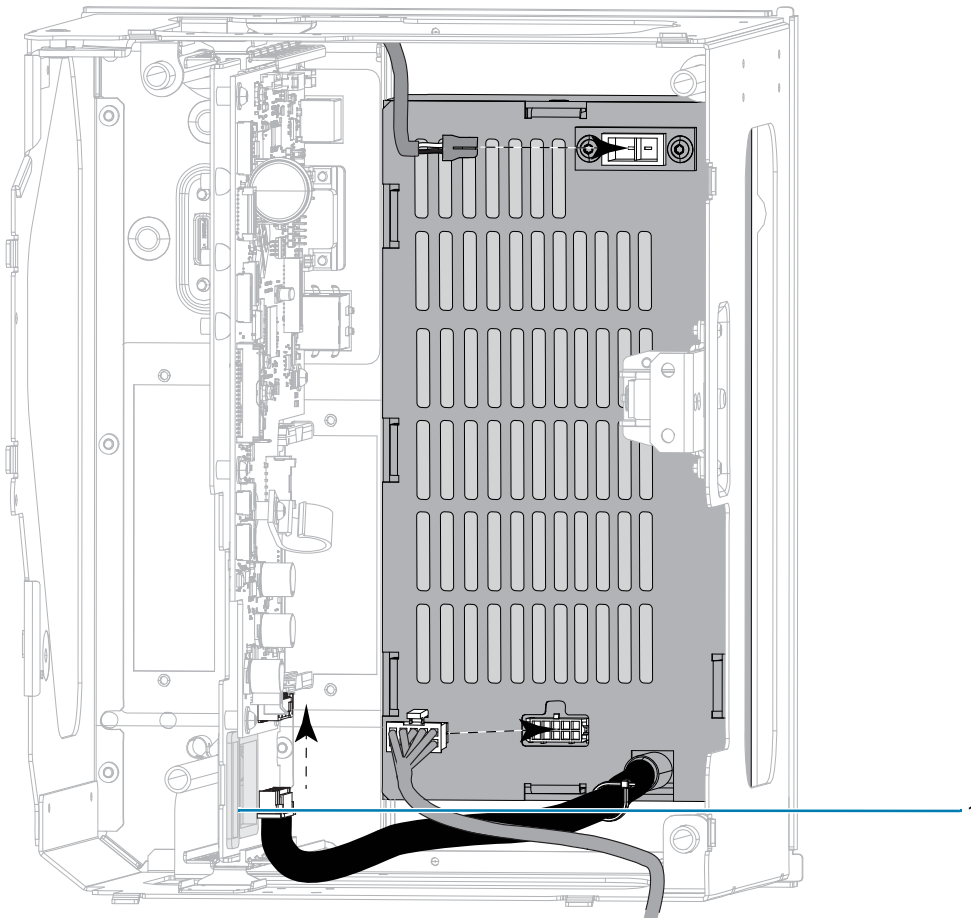


## Replace the Power Supply

1. Disconnect the Main Logic Board (MLB) power cable from plug J24.

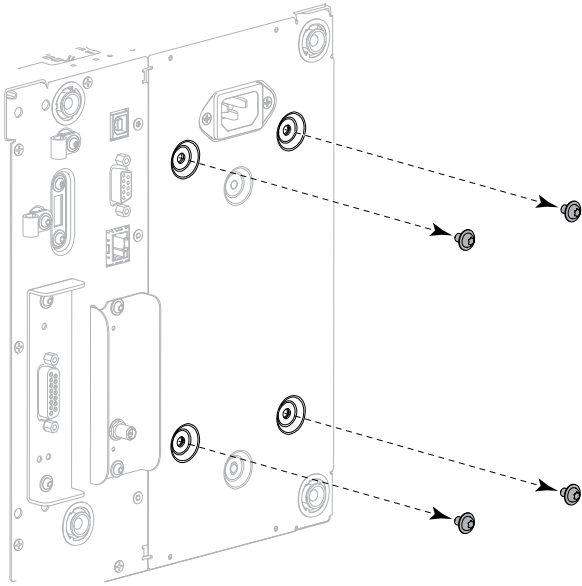


2. Disconnect the two cables plugged into the power supply, and disconnect plug J24 from the MLB.
3. Guide the power cable from the MLB through the cable pass through holes (1).

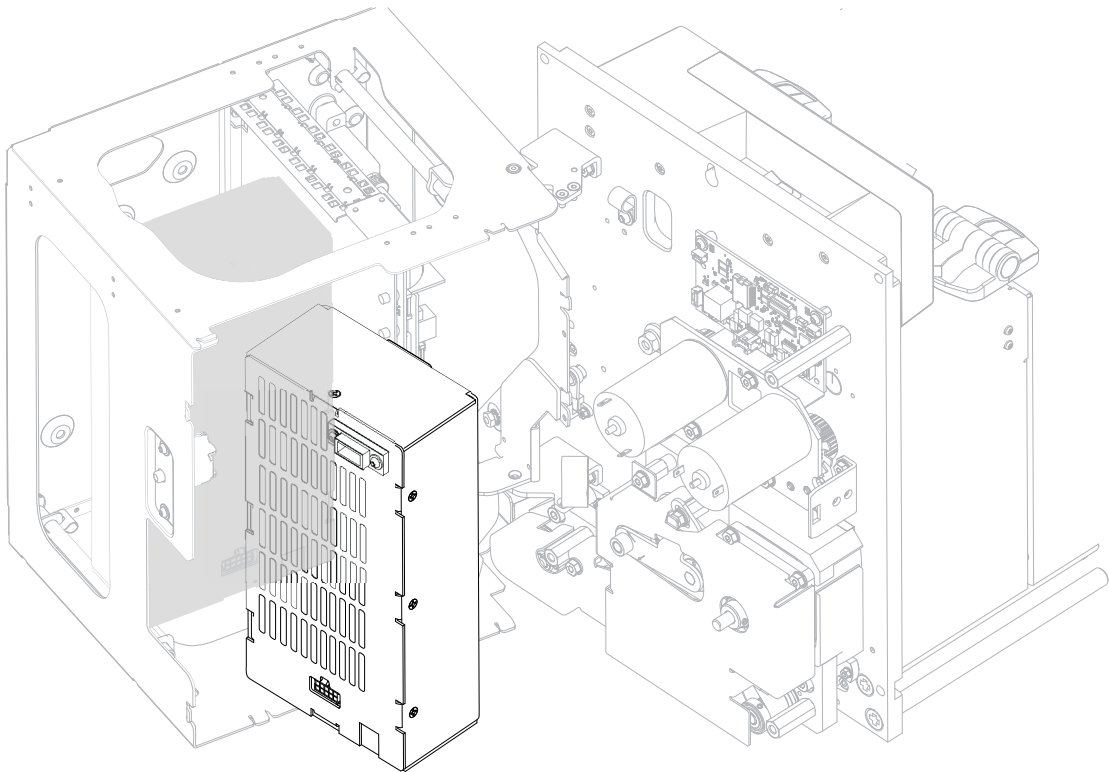


for parts & service call QLC (800) 837-1309

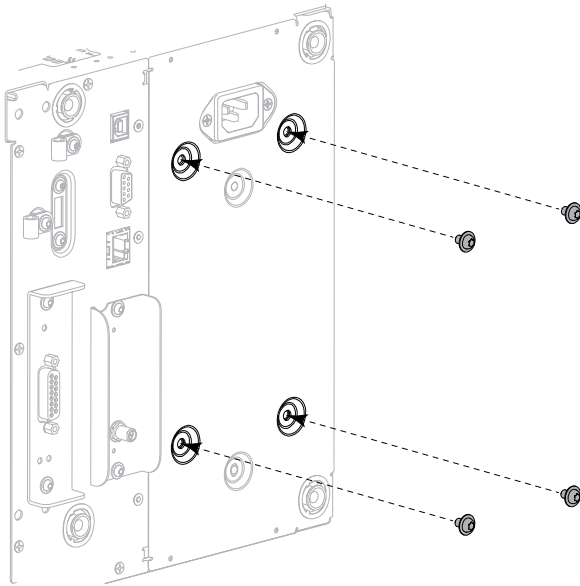
4. Support the old power supply from the electronics side of the print engine and remove the four screws.



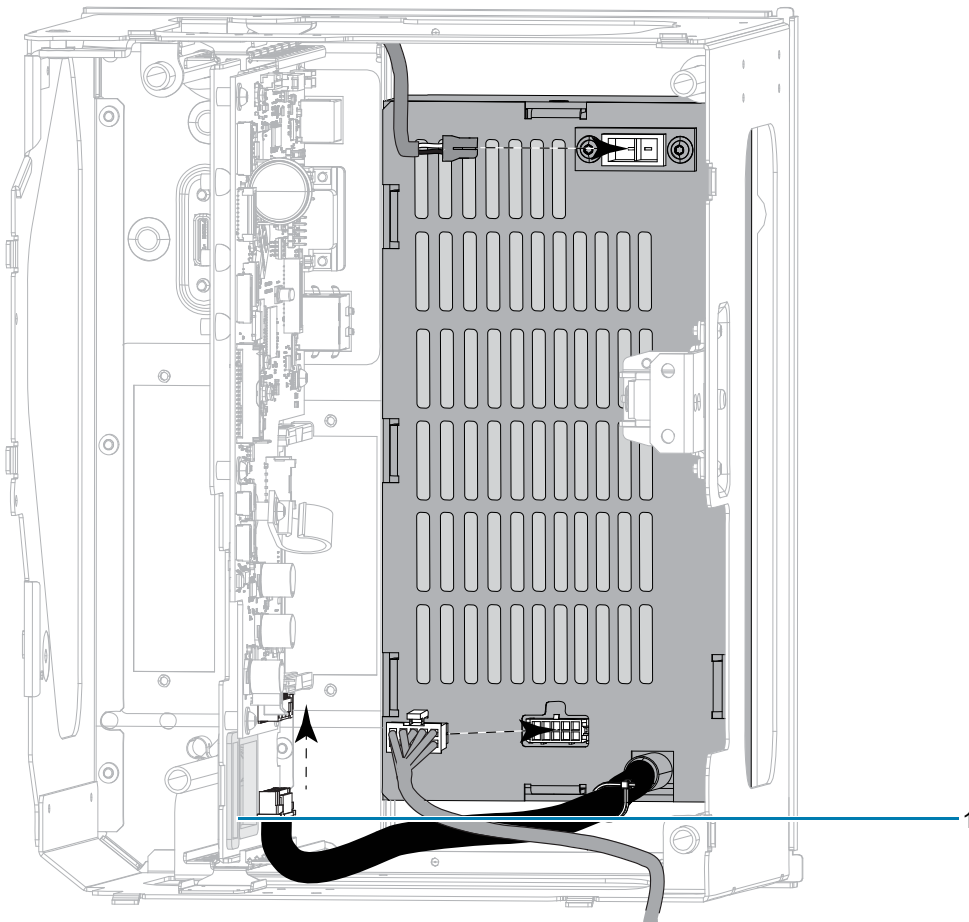
5. Replace the power supply.



6. Support the new power supply from the inside and install the four new screws to secure it.

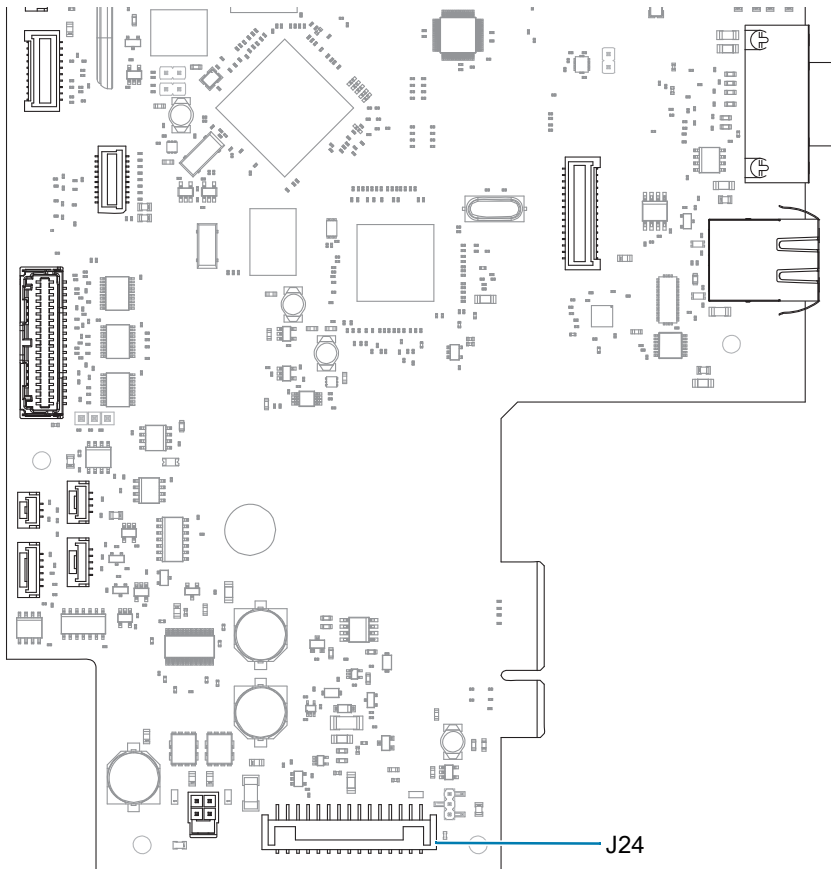


7. Connect the two cables to the power supply.
8. Guide the power cable through the cable pass through holes (1).



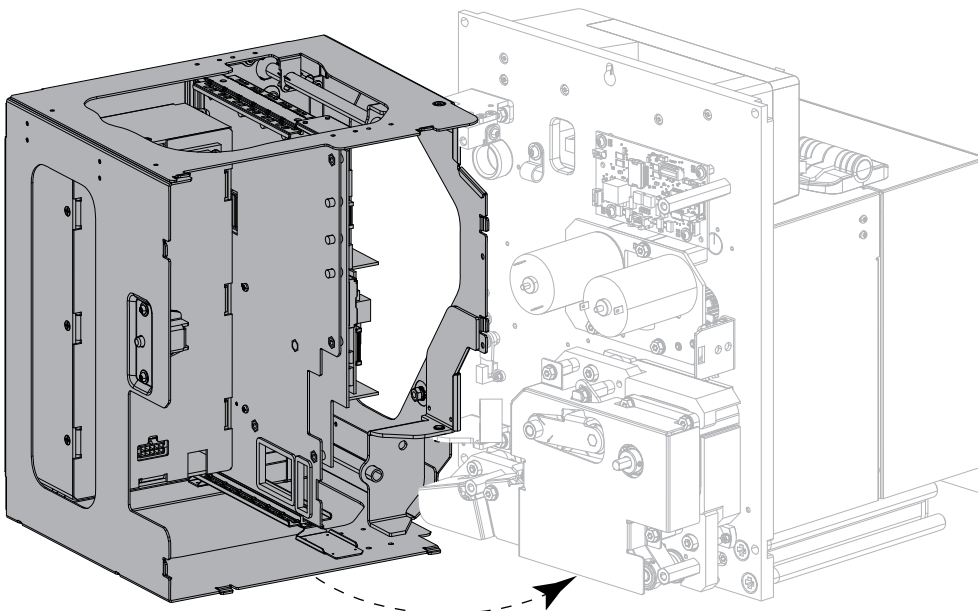
for parts & service call QLC (800) 837-1309

9. Connect the cable to J24 on the MLB.



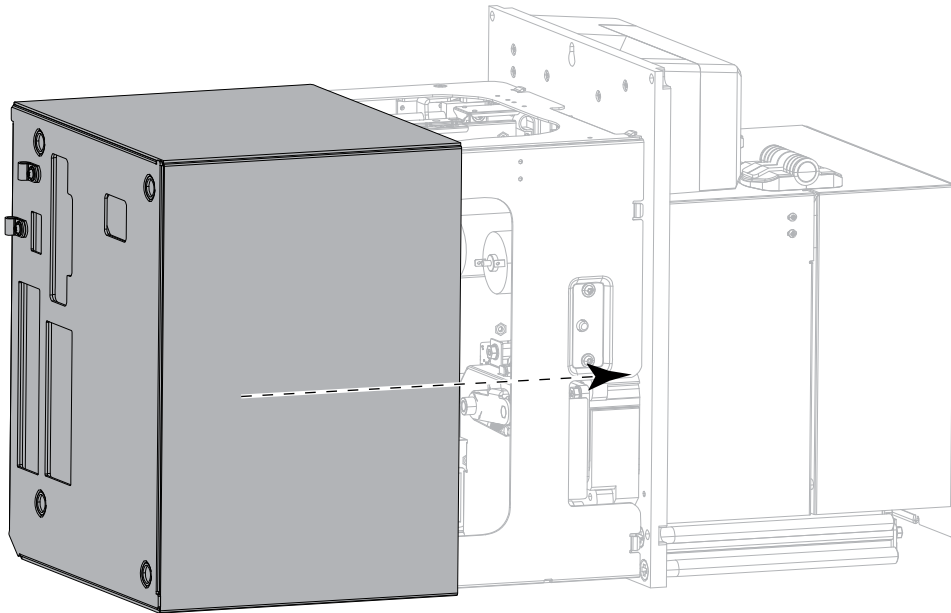
## Close the Electronics Enclosure

1. Close the rear of the print engine.

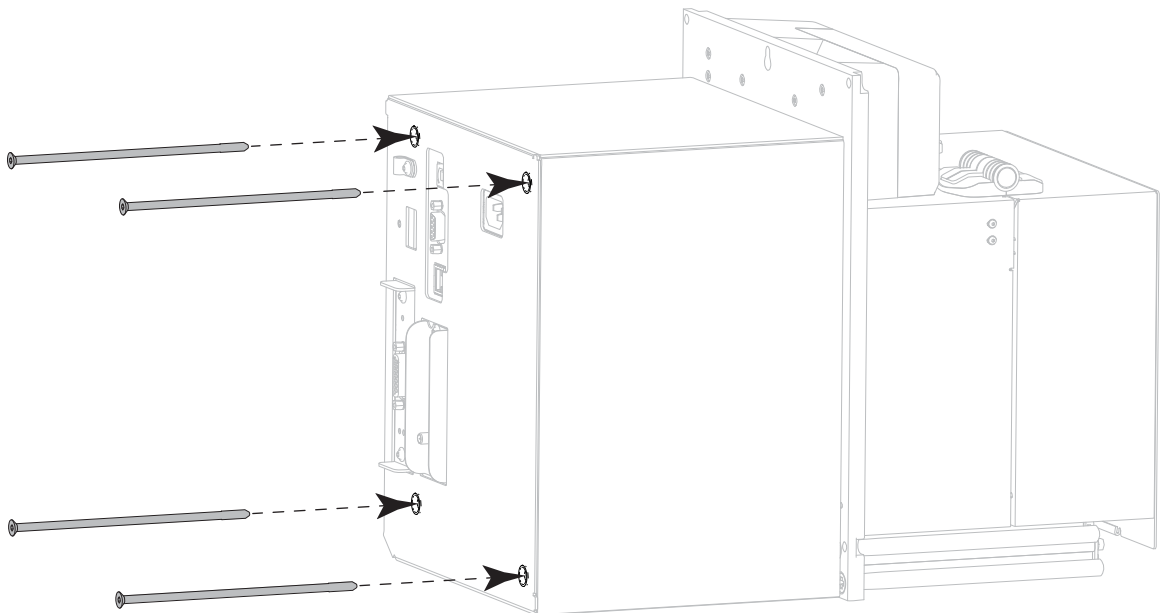


for parts & service call QLC (800) 837-1309

2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.





## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Ribbon tension control board Qty: 1
	Screw (pan washer mach M3x4) Qty: 4 <div style="text-align: right;">  T10                 </div>

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
 Size: T10
-  Metric hexagon keys or bits  
 Size: 3mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



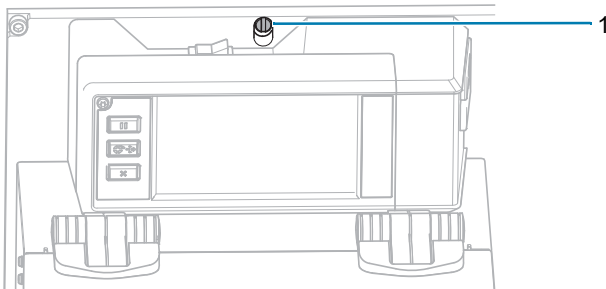
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



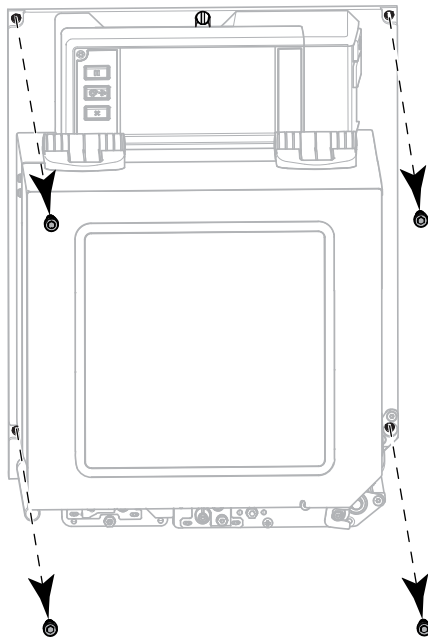
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



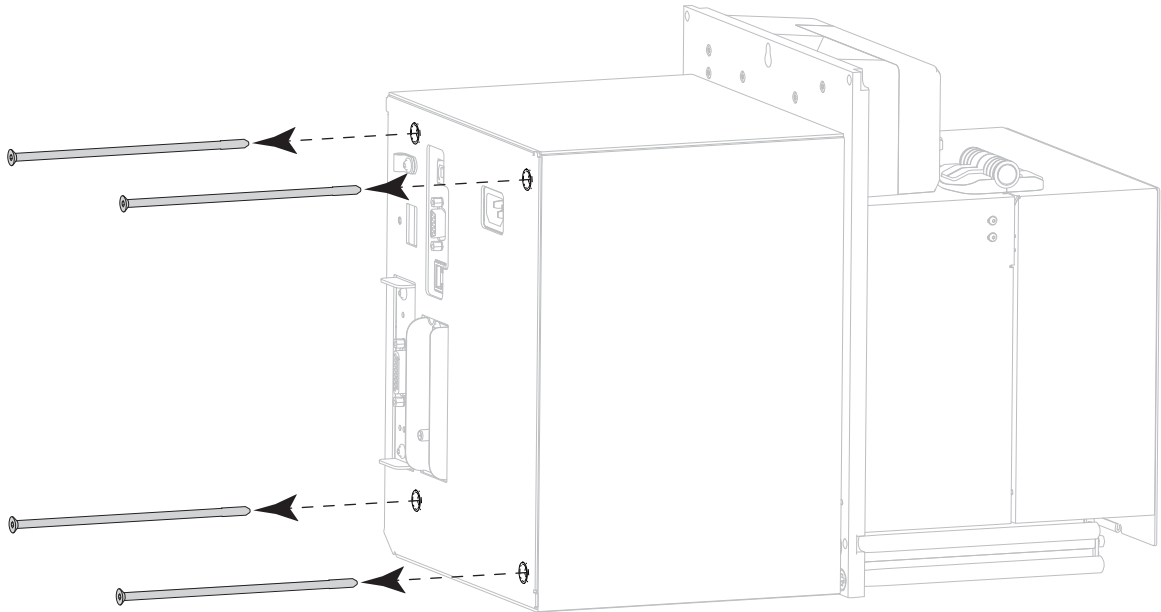
2. Remove the four screws securing the print engine to the applicator.



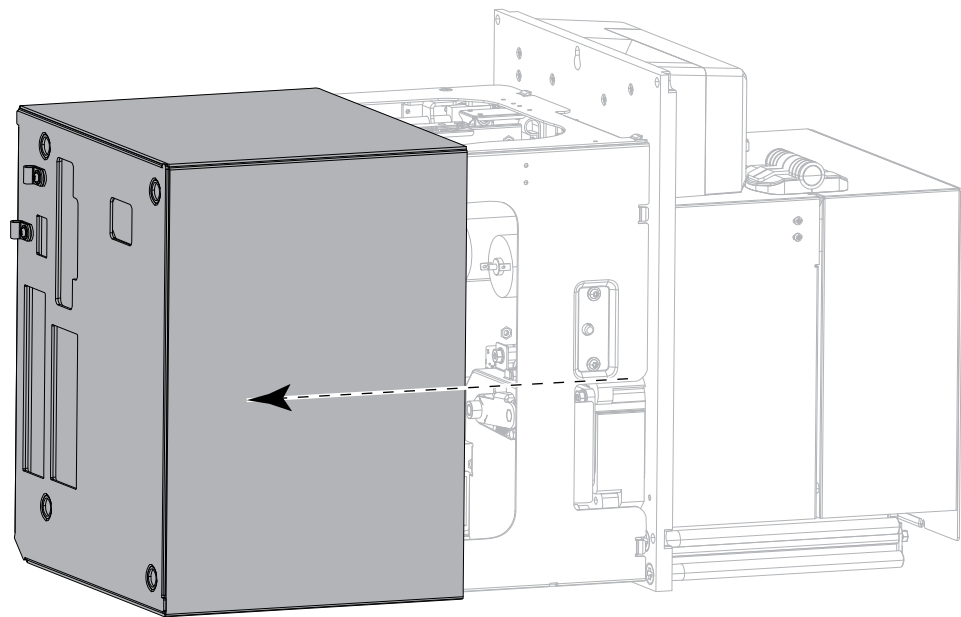
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



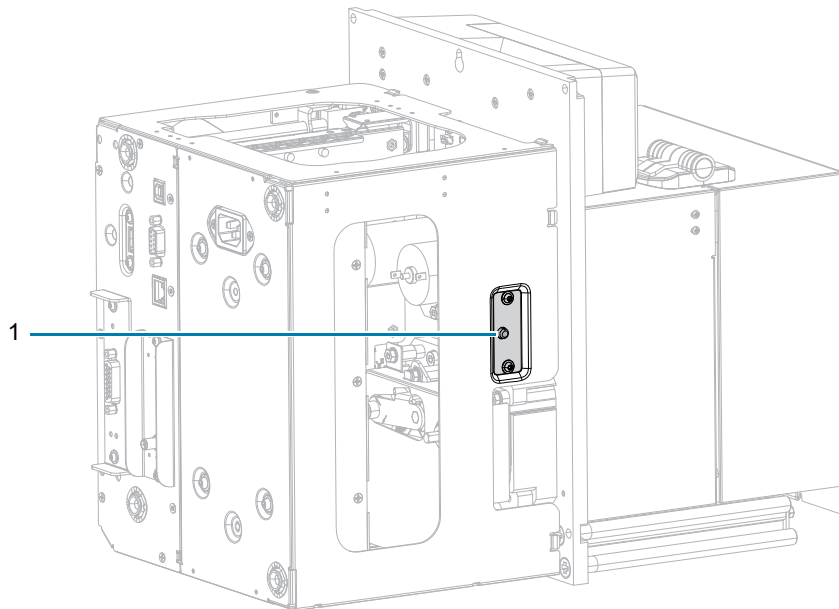
2. Remove the electronics enclosure cover from the print engine.



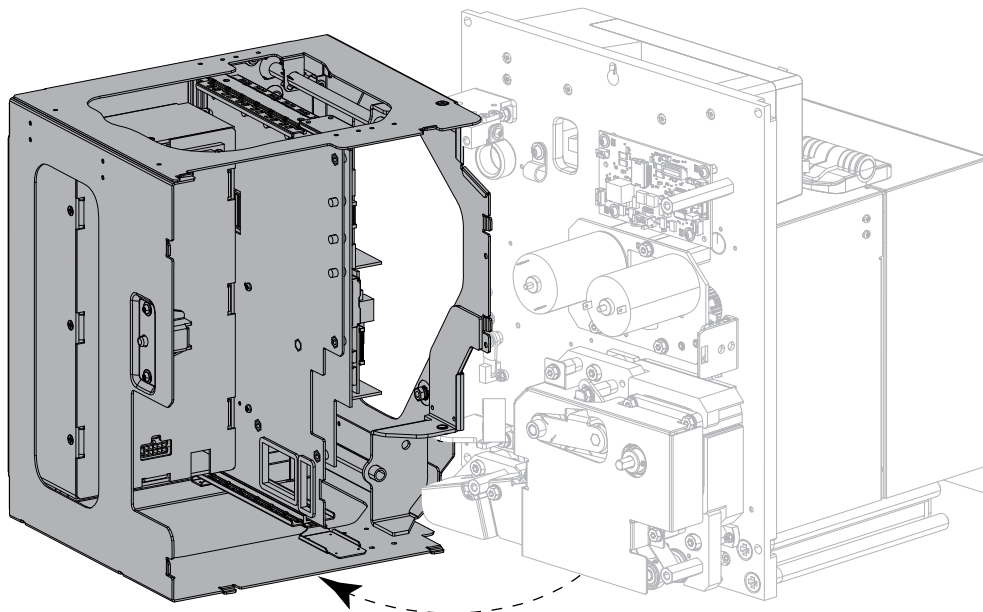
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.




4. Open the rear of the print engine.

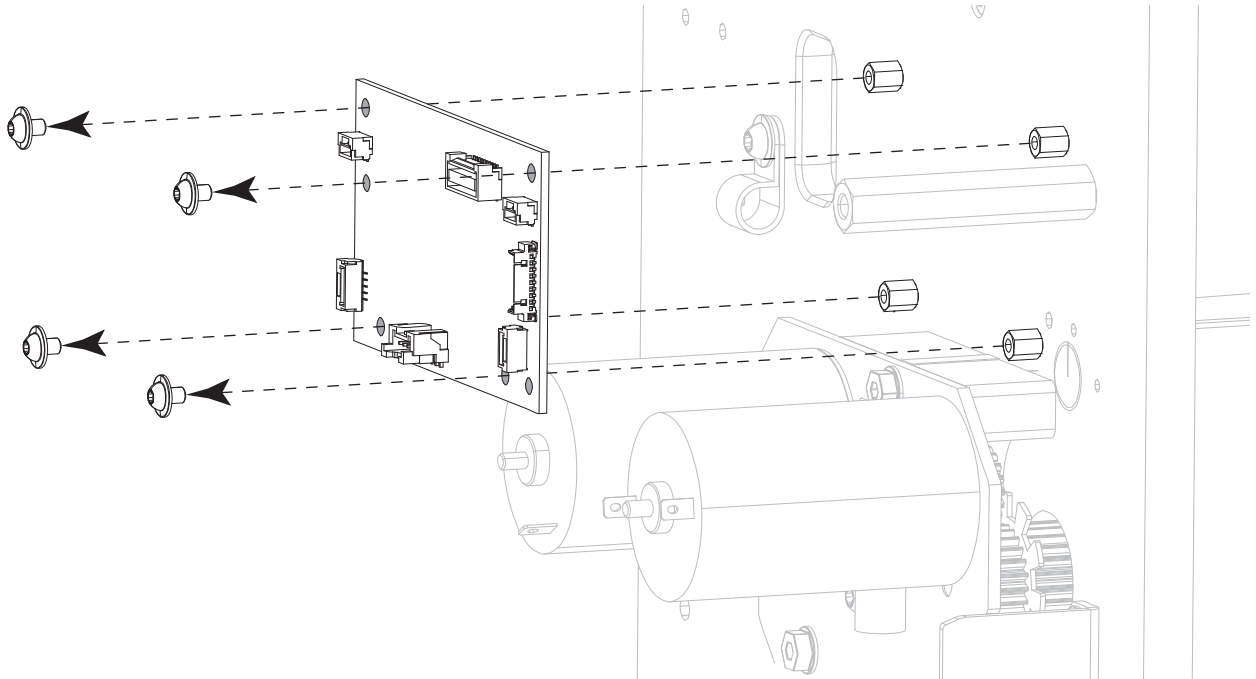



## Replace the Ribbon Tension Control Board

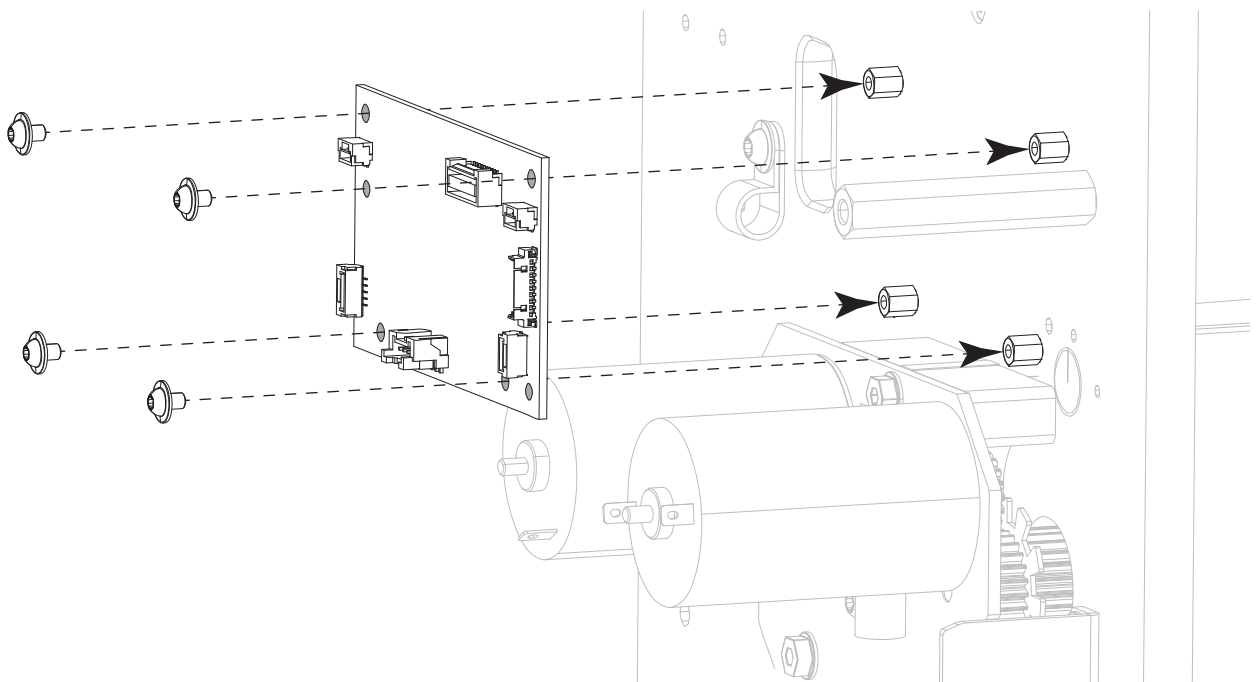


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

1. Disconnect the cables from the ribbon motor control board.
2. Remove the four  T10 screws securing the ribbon tension control board, and then remove the board.



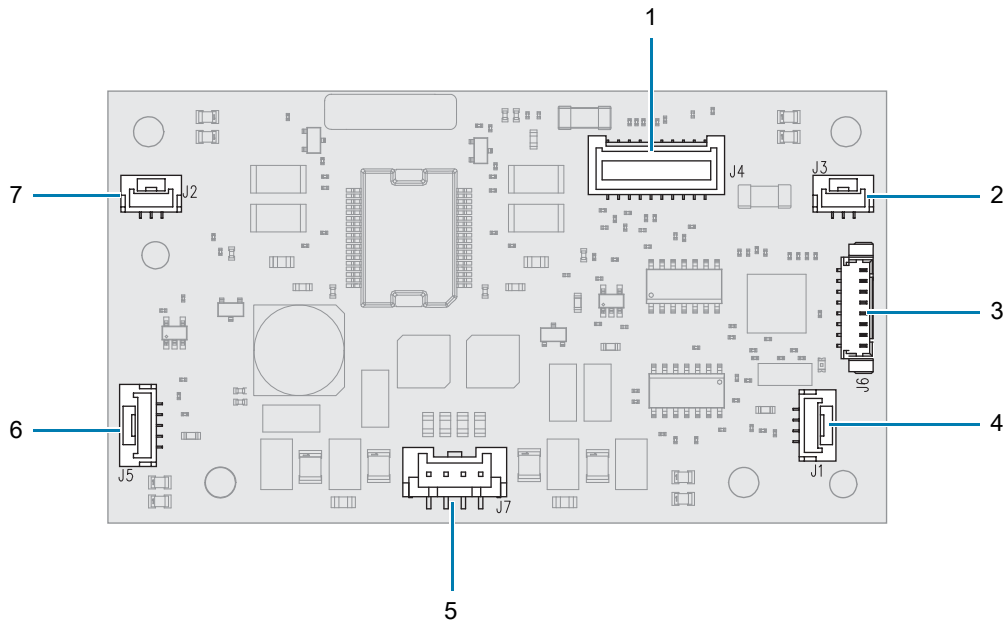
3. Install the new ribbon tension control board, and secure it with four  T10 screws.



for parts & service call QLC (800) 837-1309

## Ribbon Tension Control Board Maintenance Kit

4. Reconnect the cables to the new ribbon tension control board.

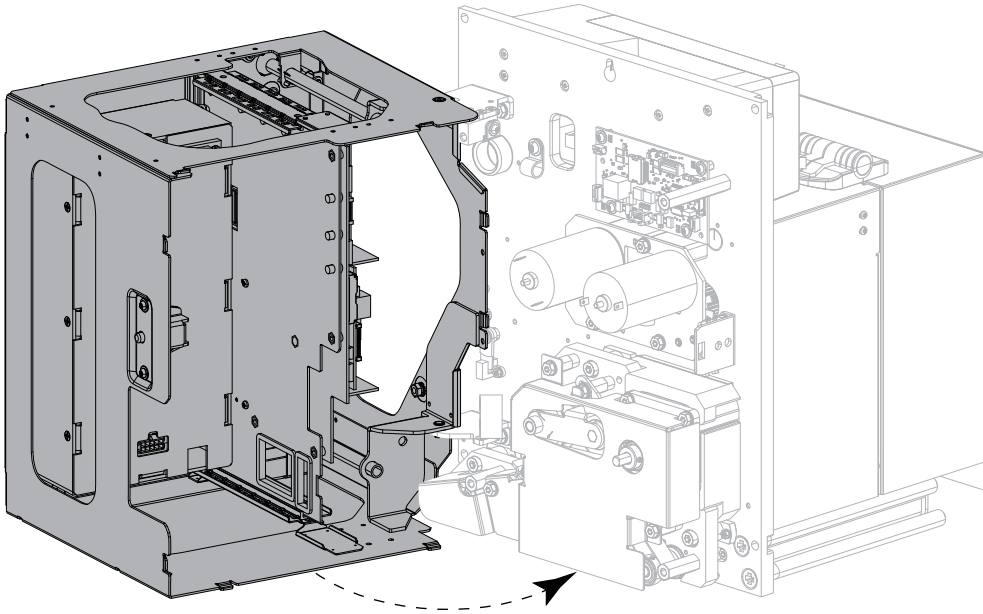


1	Ribbon system connection to the main logic board (MLB)	J4
2	Door-open sensor (RH)	J3
3	Debugging/programming connector (not used)	J6
4	Ribbon supply encoder sensor (red/white/black cable)	J1
5	Ribbon system DC motor	J7
6	Ribbon take-up encoder sensor (red/yellow/black cable)	J5
7	Door-open sensor (LH)	J2

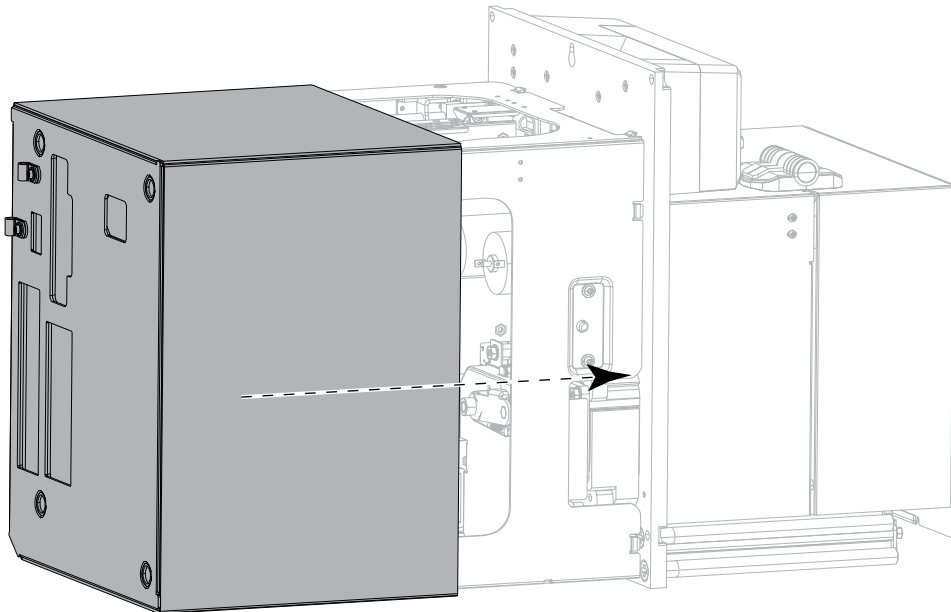
for parts & service call QLC (800) 837-1309

## Close the Electronics Enclosure

1. Close the rear of the print engine.

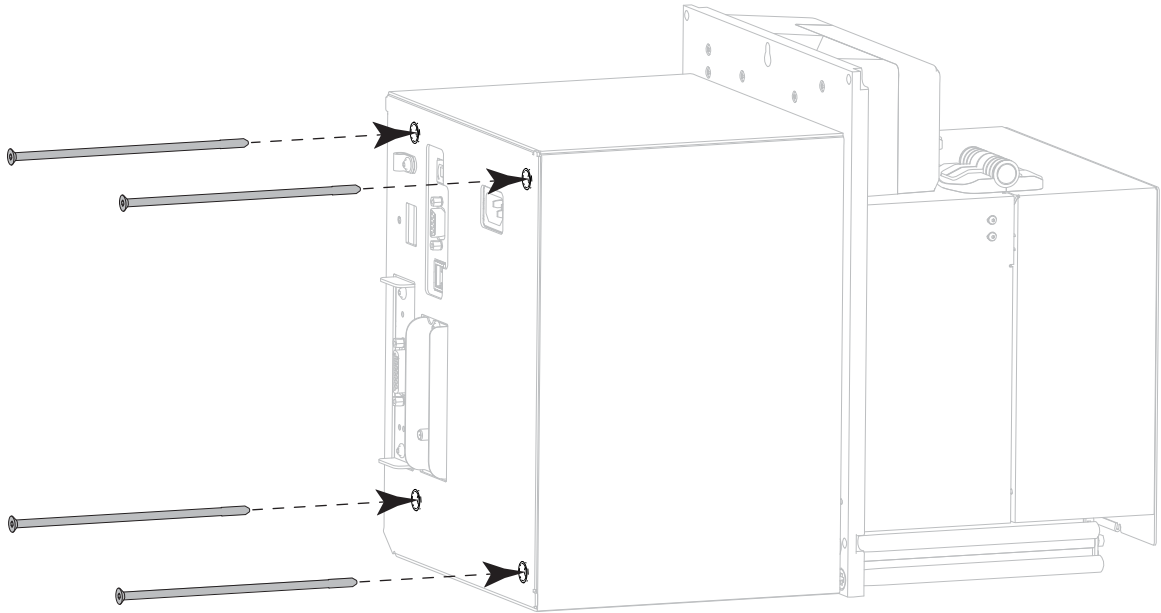


2. Reinstall the electronics enclosure cover on the print engine.





3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



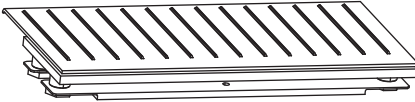







**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



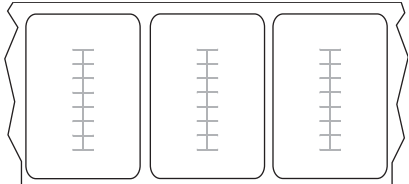

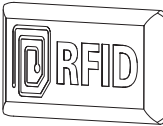







**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

## Parts List



Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Radome, RFID Qty: 1
	RFID cable assembly for ZE511/ZE521 Qty: 1
	Cable tie screw mount Qty: 1
	RFID support bracket (4-inch, ZE511, RH) Qty: 1
	RFID support bracket (6-inch, ZE521, RH) Qty: 1
	RFID support bracket (4-inch, ZE511, LH) Qty: 1
	RFID support bracket (6-inch, ZE521, LH) Qty: 1
	ZE521 RFID filler bracket Qty: 1

# RFID Module Maintenance Kit

	RFID sample media Qty: 1
	RFID radio label Qty: 1
	RFID nameplate Qty: 1
	Screw (M3×4 FL TX NI) Qty: 5  T10
	Screw (pan washer mach M3x6) Qty: 1  T10
	Screw (M3×8 FL TX NI) Qty: 1  T10
	Backing with two strips of tape Qty: 1

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10 and T15
-  Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat
- RFID Programming Guide 3 or internet access to view it on [zebra.com](http://zebra.com)

for parts & service call QLC (800) 837-1309

## Prepare for Installation



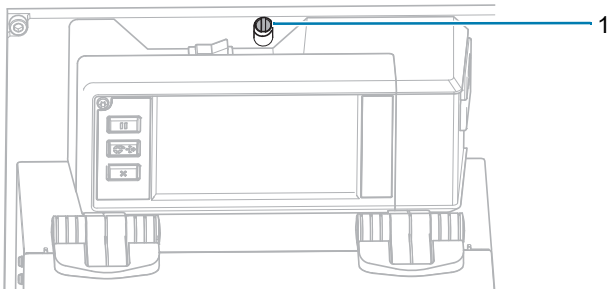
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



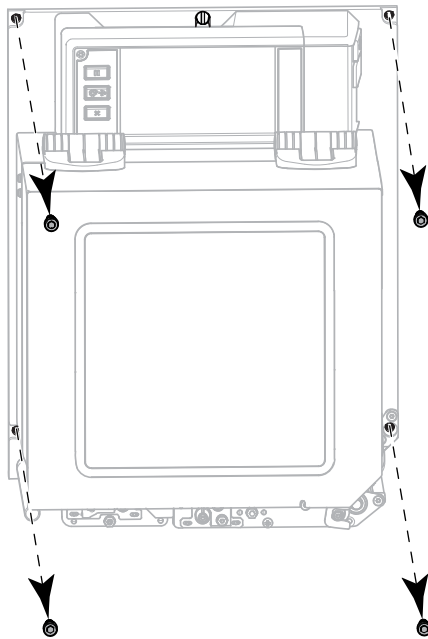
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



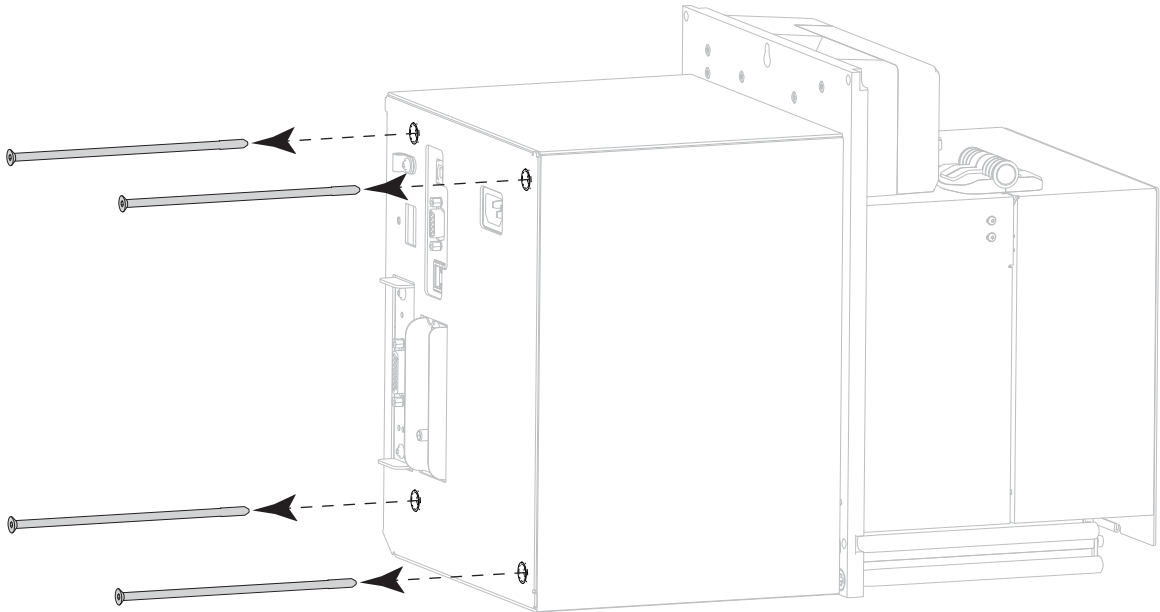
2. Remove the four screws securing the print engine to the applicator.



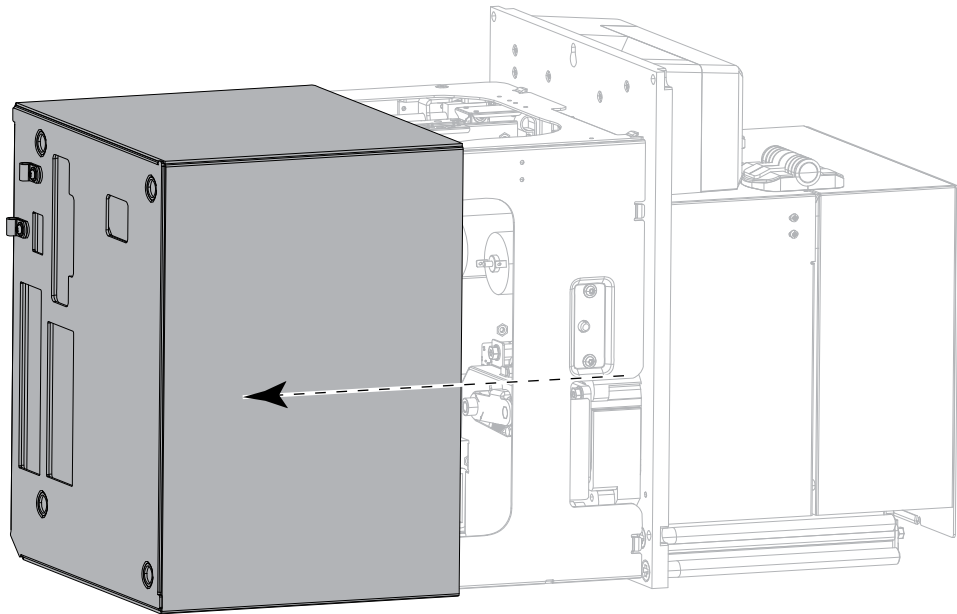
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four screws from the electronics enclosure cover.



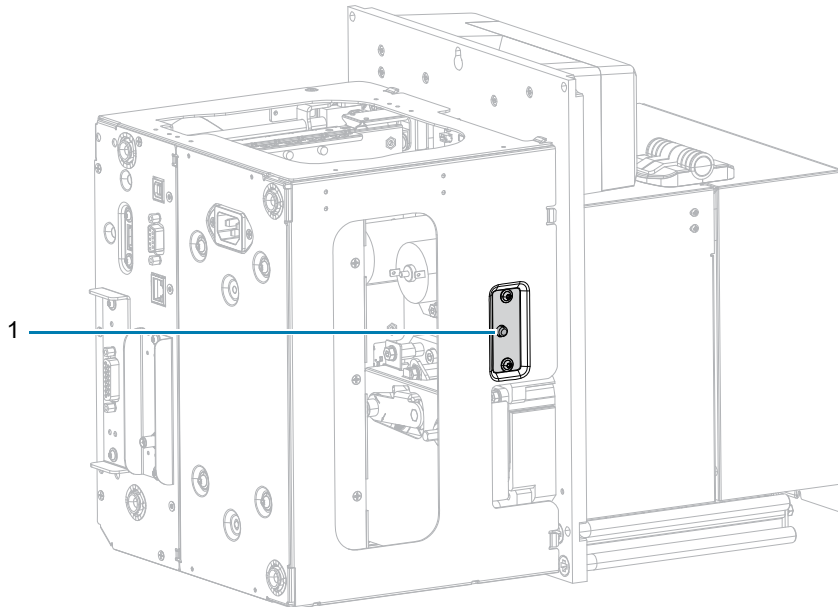
2. Remove the electronics enclosure cover from the print engine.



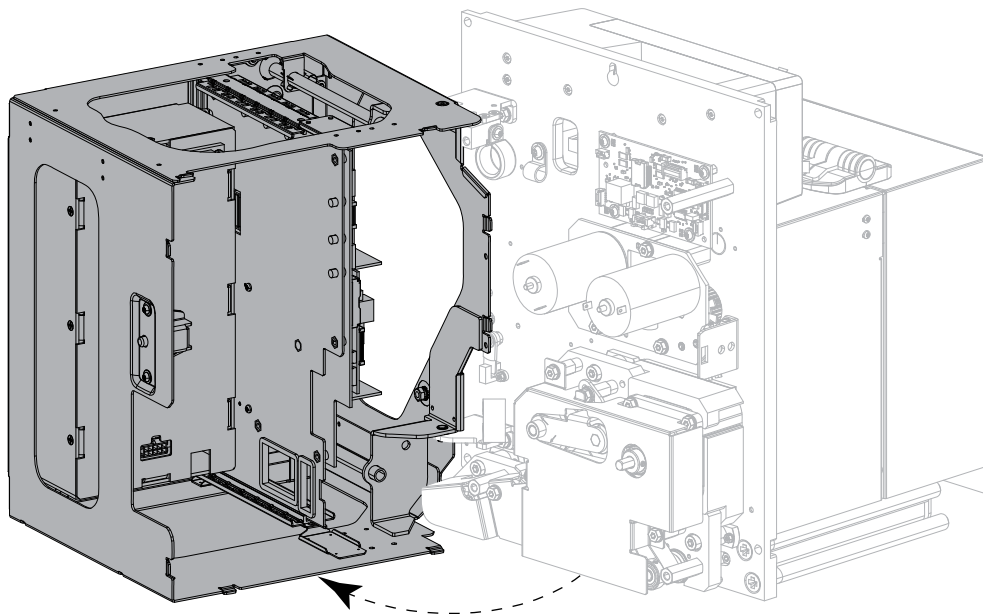
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

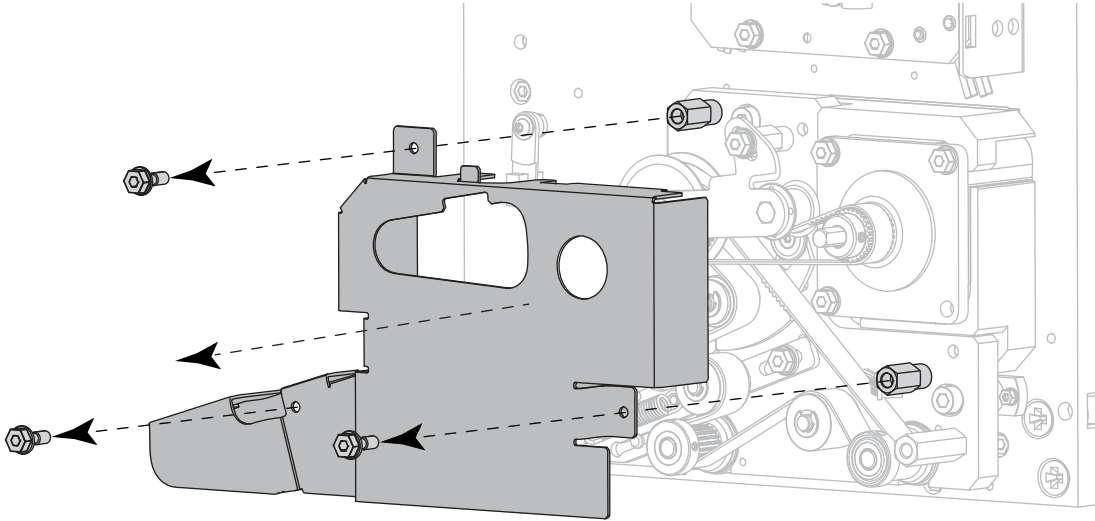


4. Open the rear of the print engine.

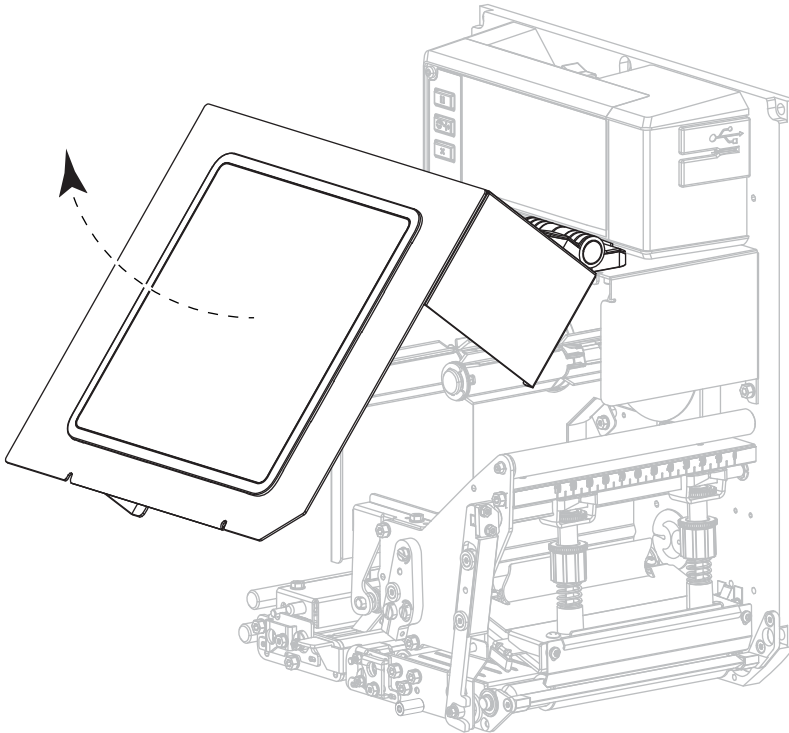


## Install the RFID Module

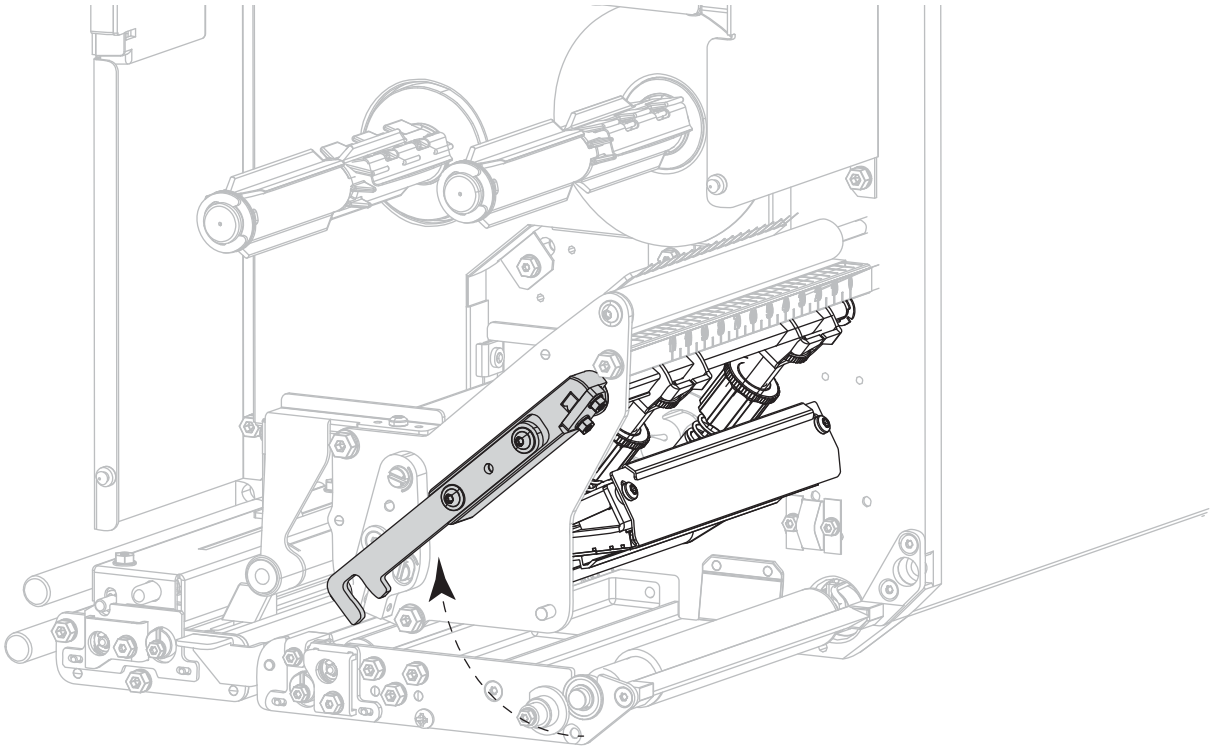
1. Remove the three 4mm screws and remove the belt drive cover.




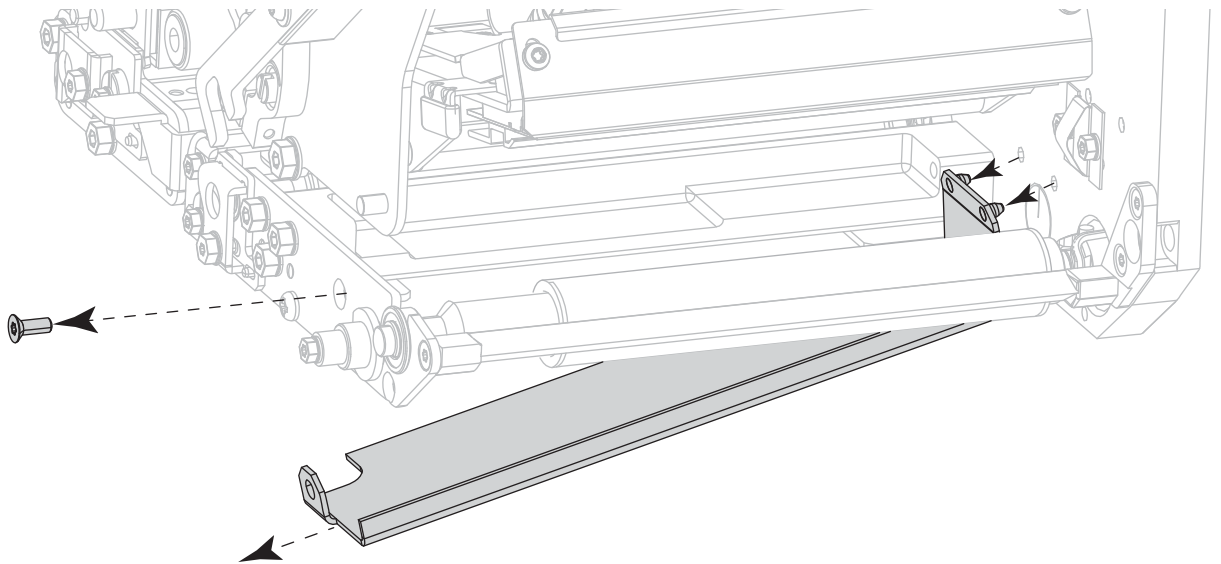
2. Open the media door.



3. Open the printhead.



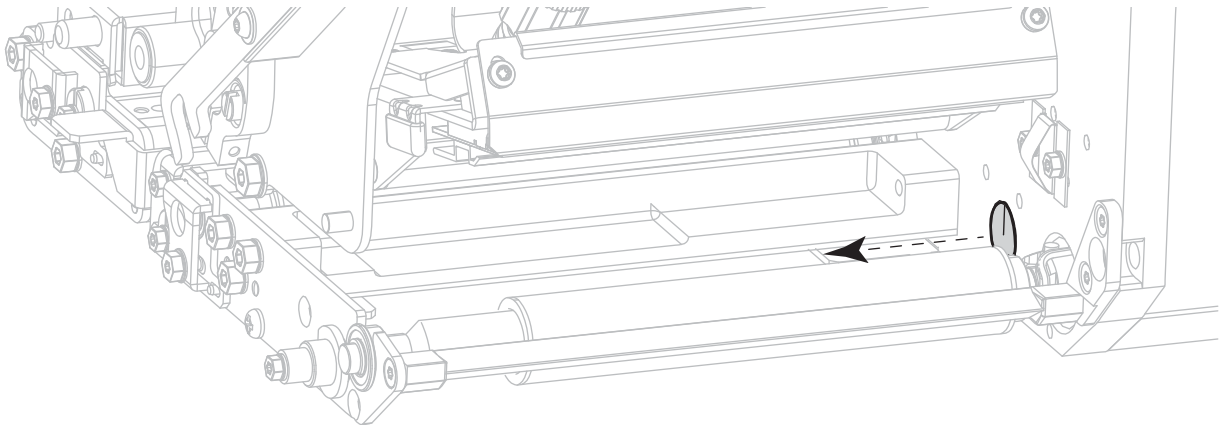
4. Remove the  T9 screw securing the cover plate and remove the support bracket.



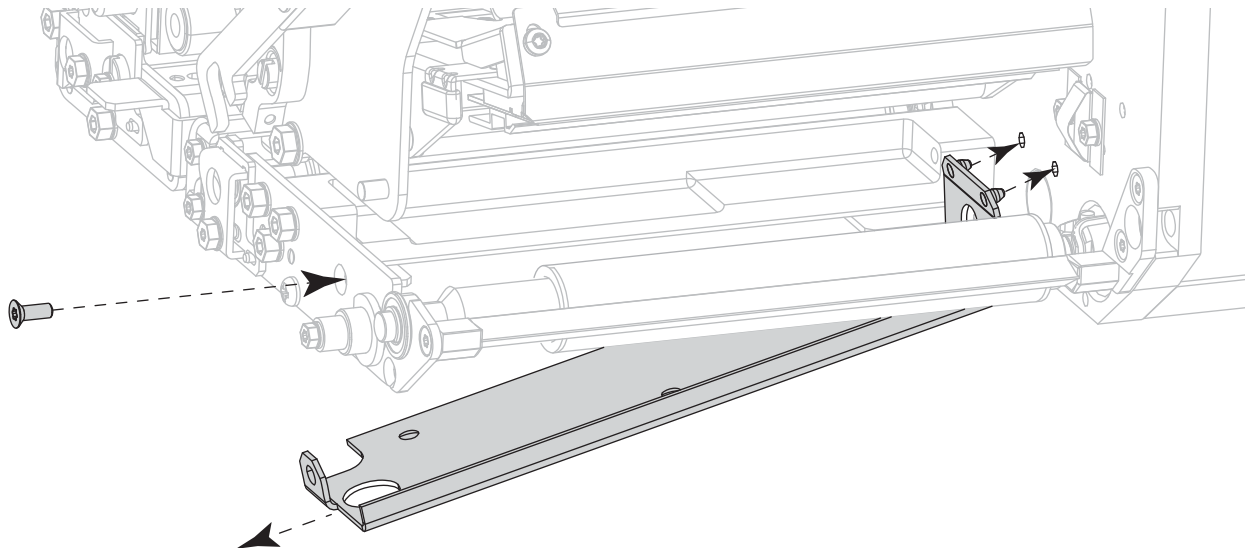
for parts & service call QLC (800) 837-1309




5. Remove the dust seal from the print engine access hole.



6. Align the RFID support bracket guide pins with the mounting holes on the print engine.

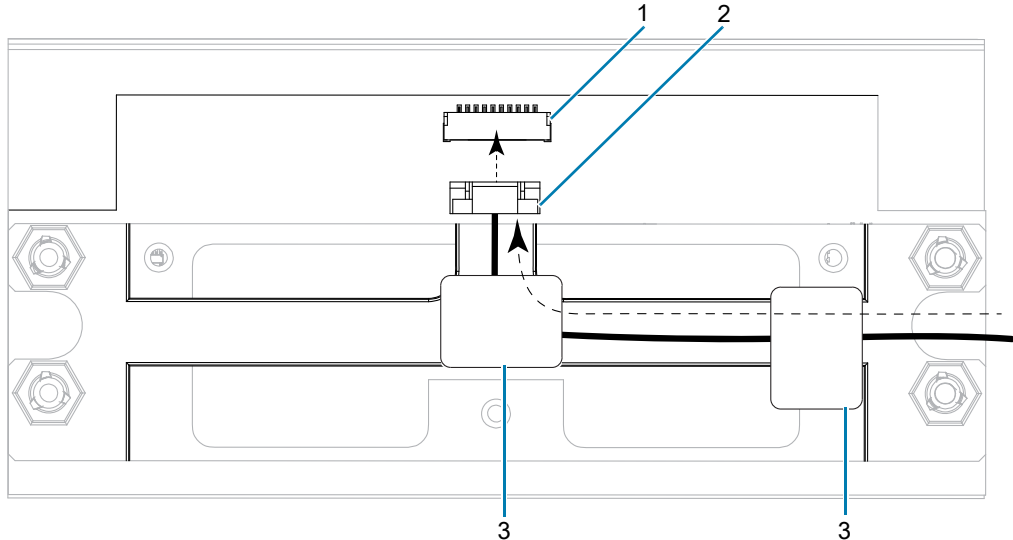
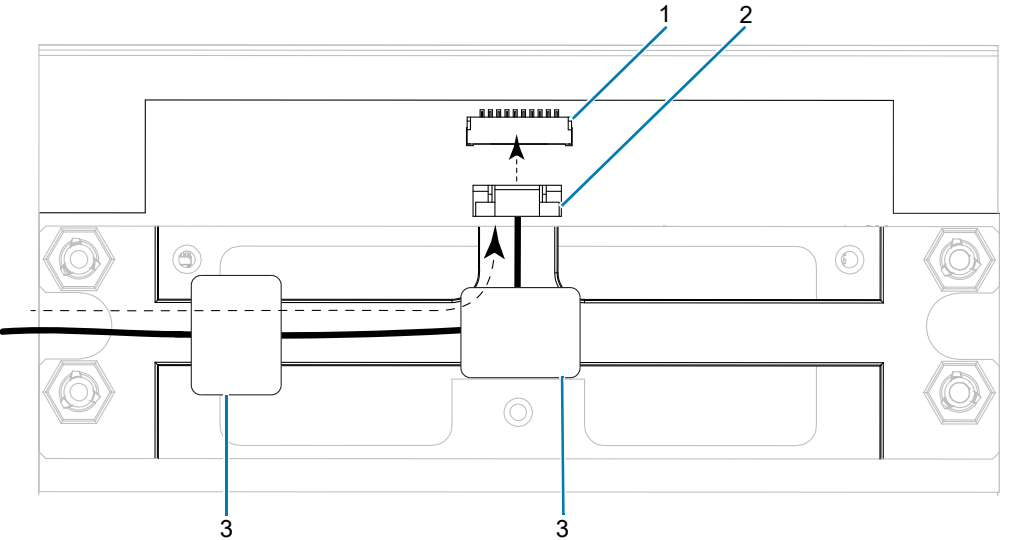


7. Rotate the RFID support bracket into place and secure it with the new the  T9 screw.

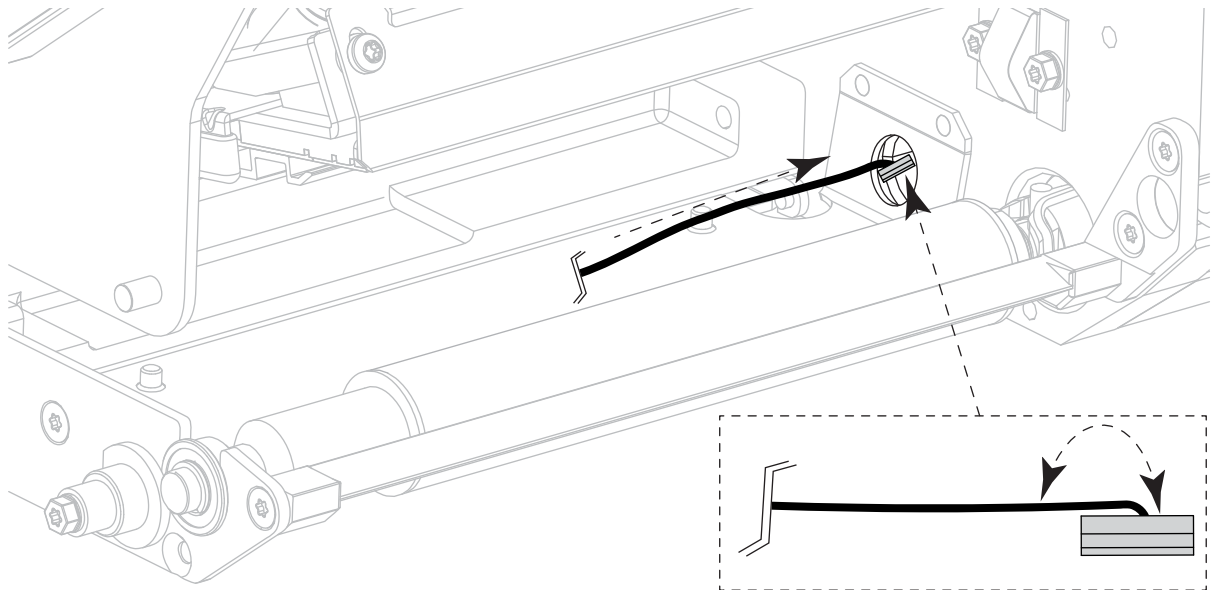


**NOTE:** The RFID cable must be flat against the radome.

8. Are you working on a left hand (LH) or a right hand (RH) print engine?

If...	Then...
LH	<p>1. Connect the RFID cable (2) to the PCB mounted receptacle (1) on the bottom of the radome and route the cable to the right.</p>  <p>2. Secure the RFID cable to the radome using the two pieces of tape (3).</p>
RH	<p>1. Connect the RFID cable (2) to the PCB mounted receptacle (1) on the bottom of the radome and route the cable to the left.</p>  <p>2. Secure the RFID cable to the radome using the tape (3).</p>

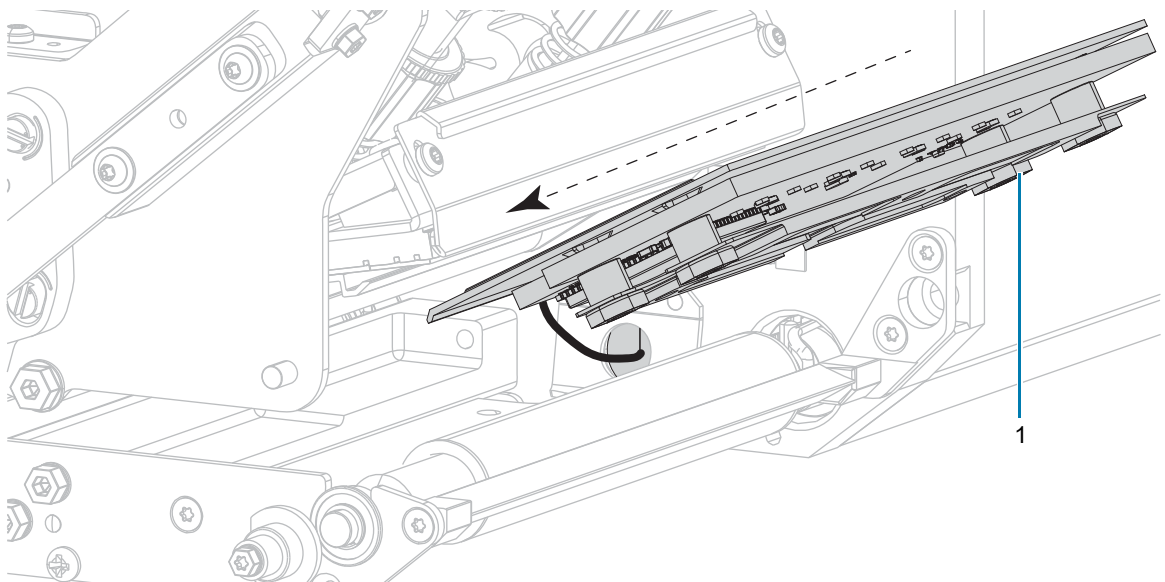
9. With the end of the RFID cable flattened as shown, slide the plug through the port into the electronics side of the print engine.



10. Pull the RFID cable into the electronics side so that there is no slack in the media compartment.
11. Insert the radome into the print engine and slide the RFID cable through the port into the electronics side of the print engine.


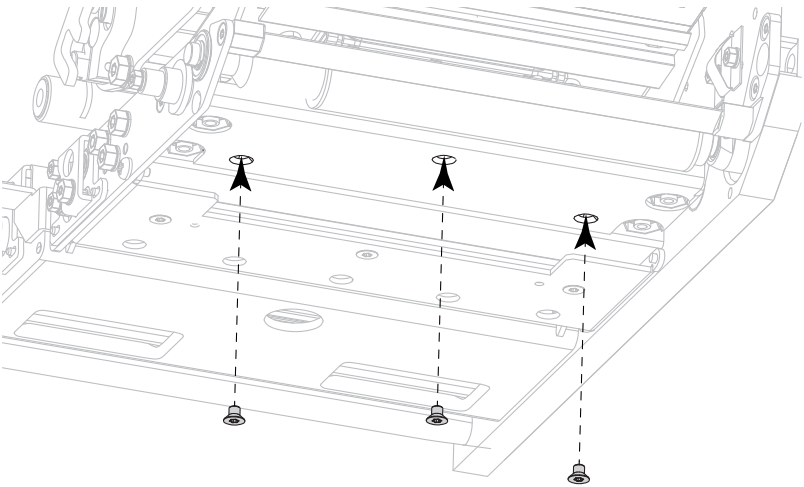
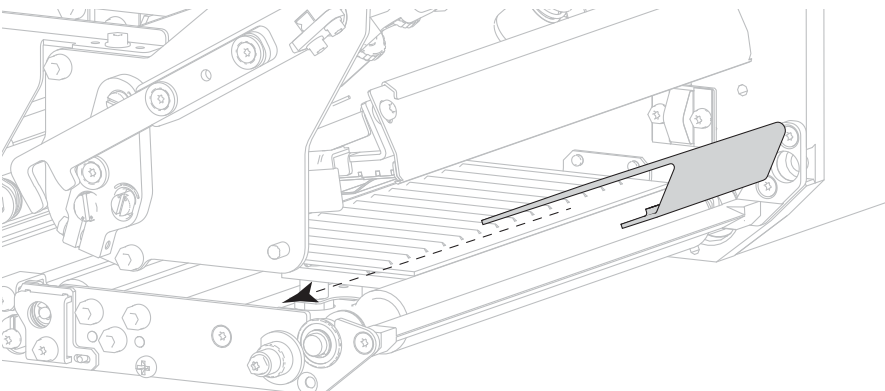

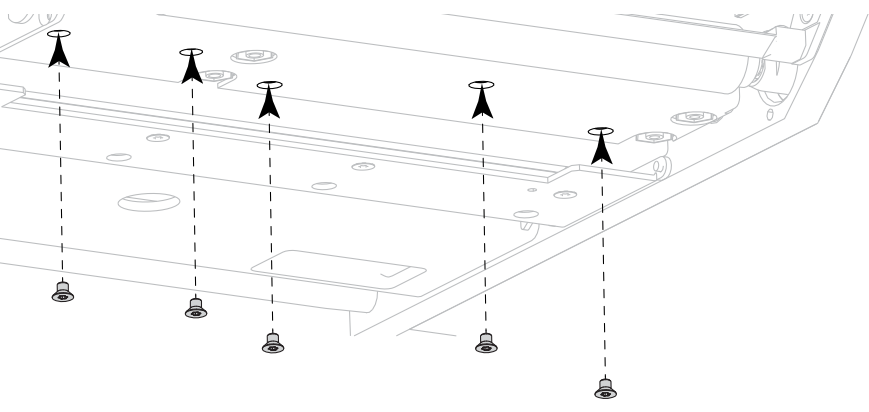


**NOTE:** Pull the RFID cable into the electronics side so there is no slack on the printer side.

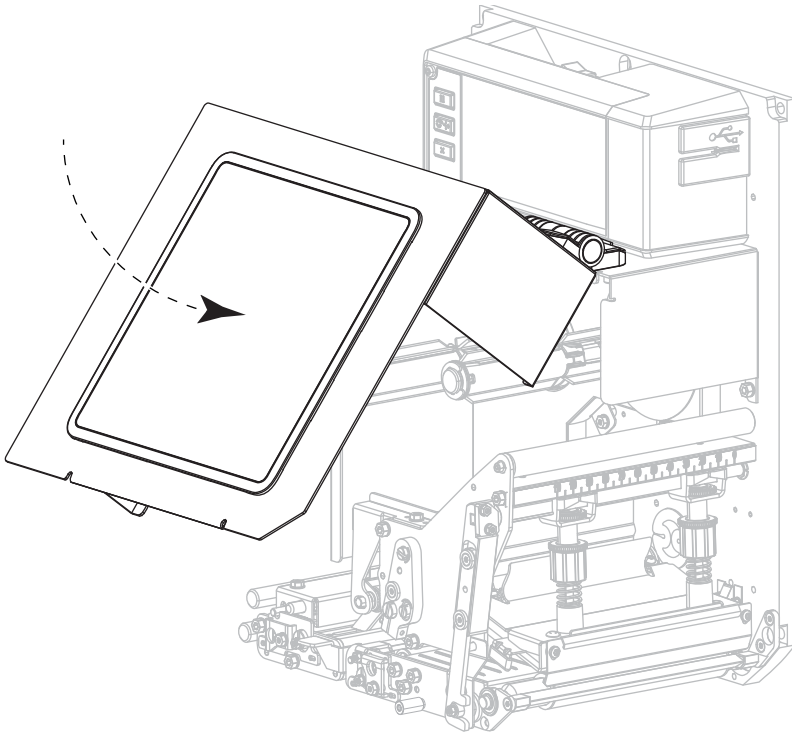


12. Reinstall the dust seal in the print engine access hole and install the radome into the print engine.

13. Which model are you working on?

If...	Then...
ZE511	<p>Secure the radome in place with three  T9 screws.</p> 
ZE521	<p>1. Install the bracket filler.</p>  <p>2. Secure the radome and filler bracket in place with five  T9 screws.</p> 

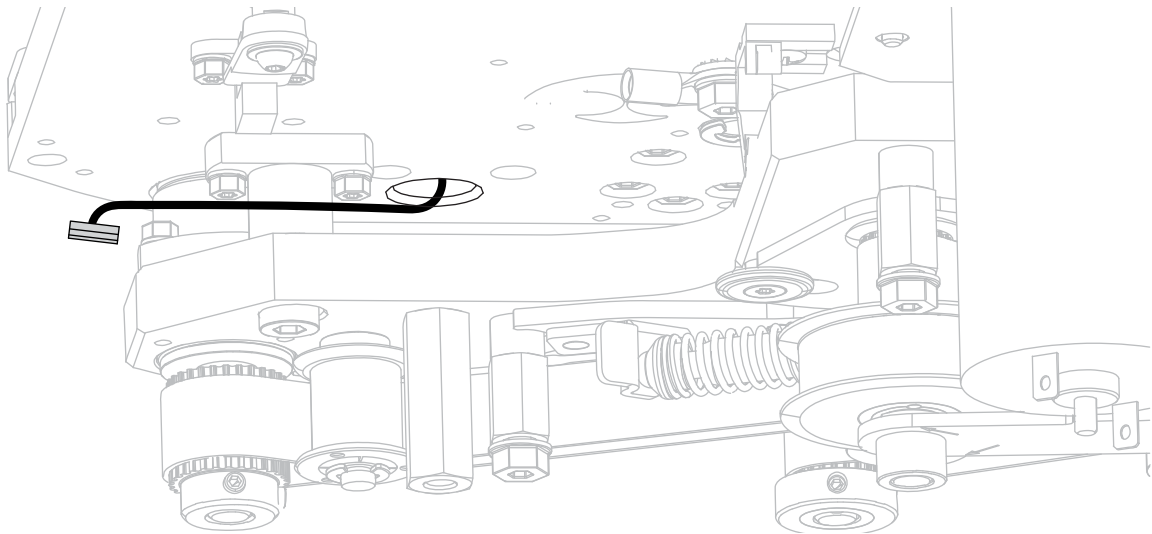
14. Close the media door.



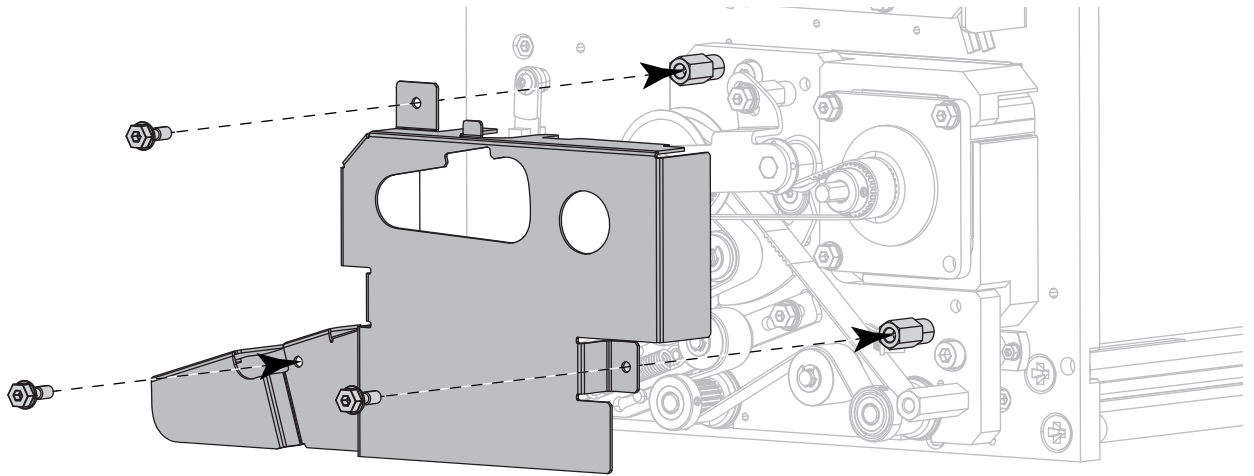
15. Route the RFID cable behind and around the belt drive.



**NOTE:** When routing the RFID cable be cautious of hinges and pinch points in the print engine.

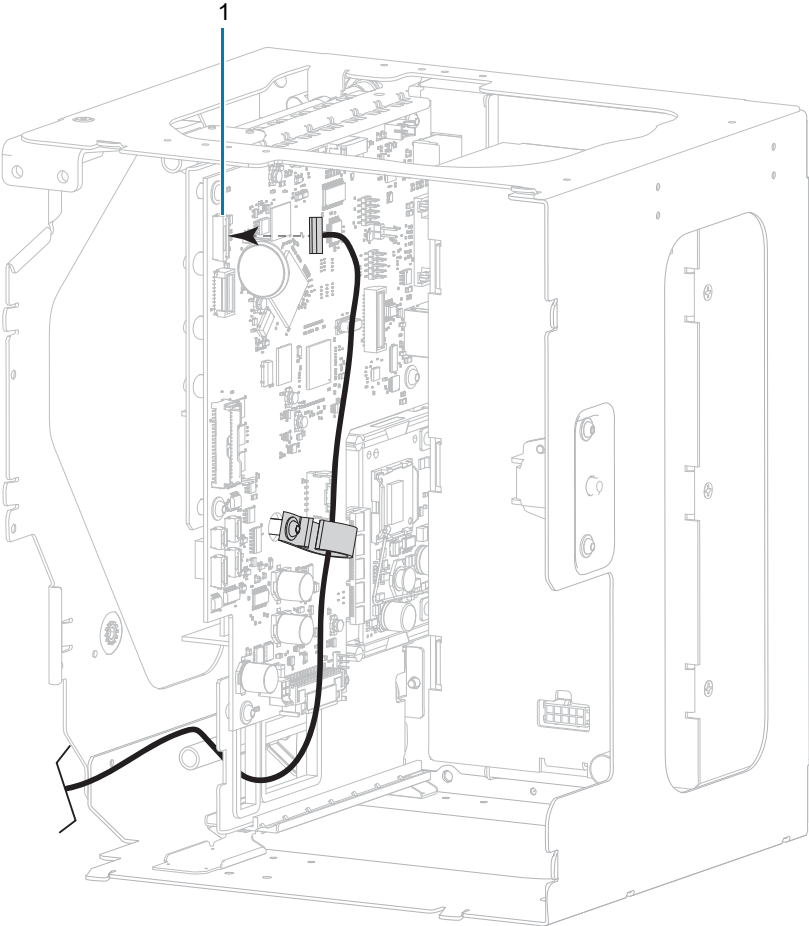


16. Reinstall the belt drive cover and secure with three 4mm screws.


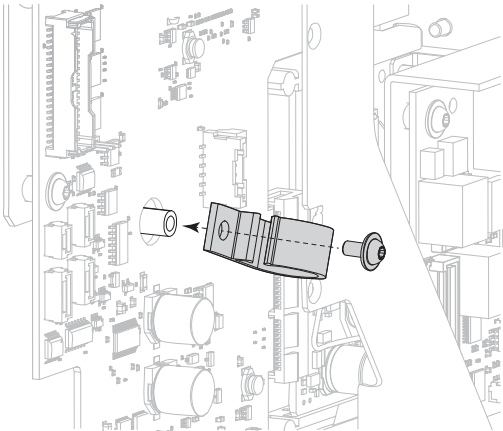
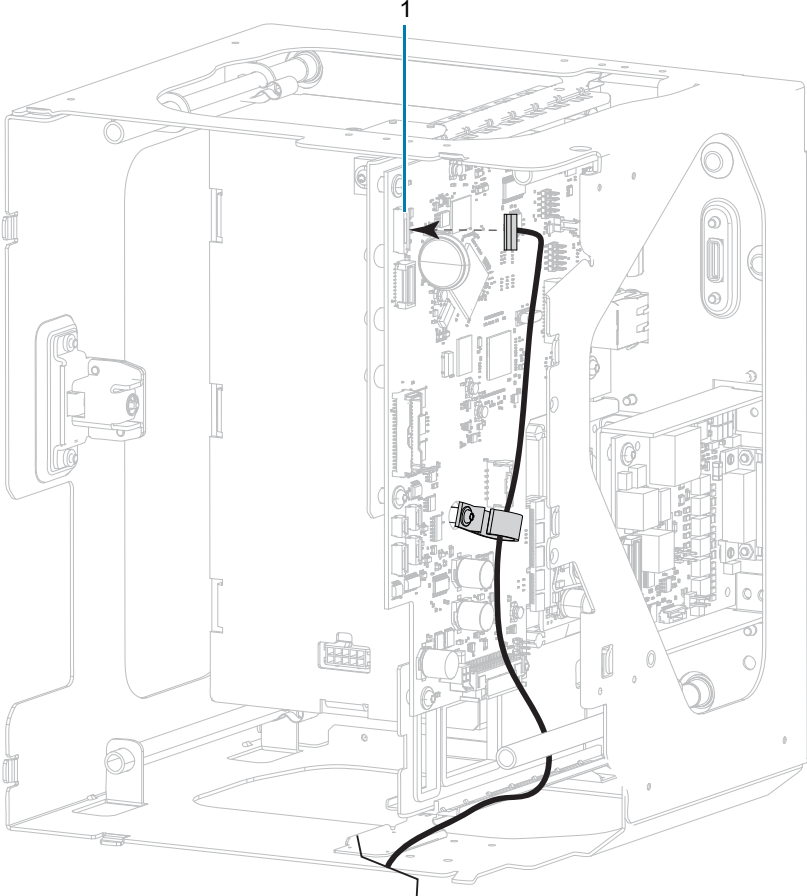


17. Reinstall the three screws securing the belt drive cover.

18. Are you working on a left hand (LH) or a right hand (RH) print engine?

If...	Then...
LH	<p>1. Route the RFID cable as shown and connect to plug J27 (1) on the Main Logic Board (MLB).</p> 

# RFID Module Maintenance Kit

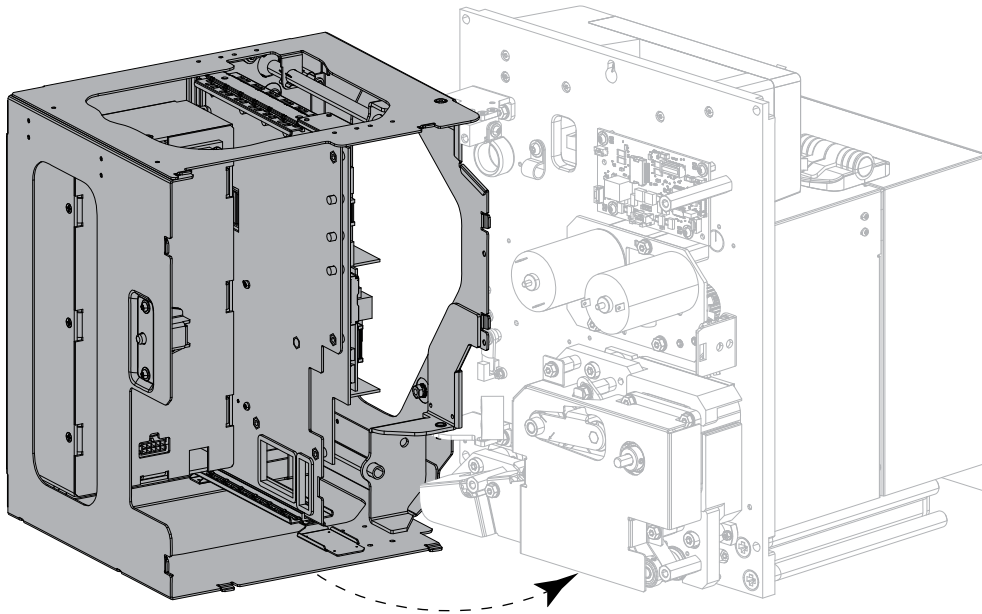
If...	Then...
RH	<p>1. Attach the cable clamp to the MLB with the  T10 screw.</p>  <p>2. Route the RFID cable as shown and connect to plug J27 on the MLB (1).</p> 

for parts & service call QLC (800) 837-1309

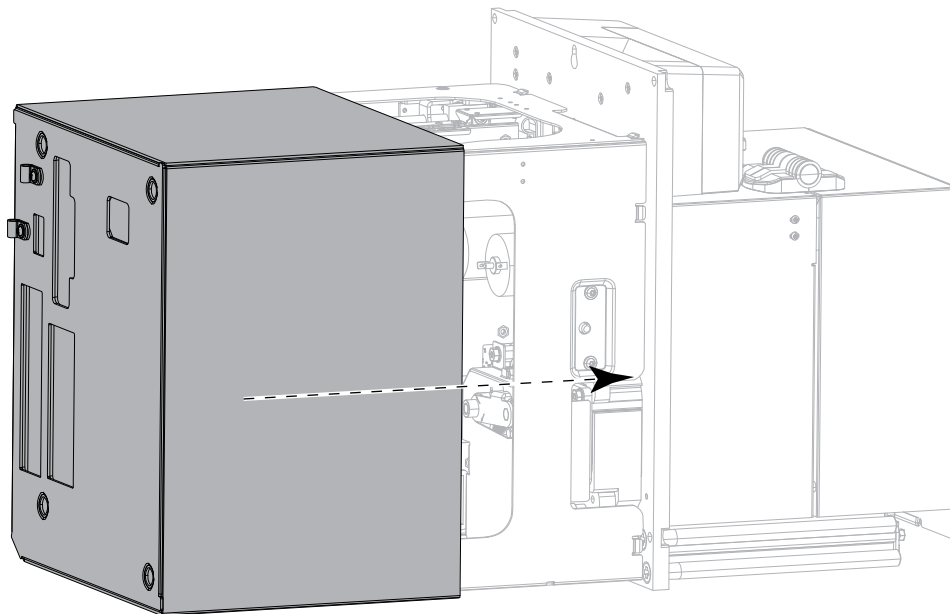


## Close the Electronics Enclosure

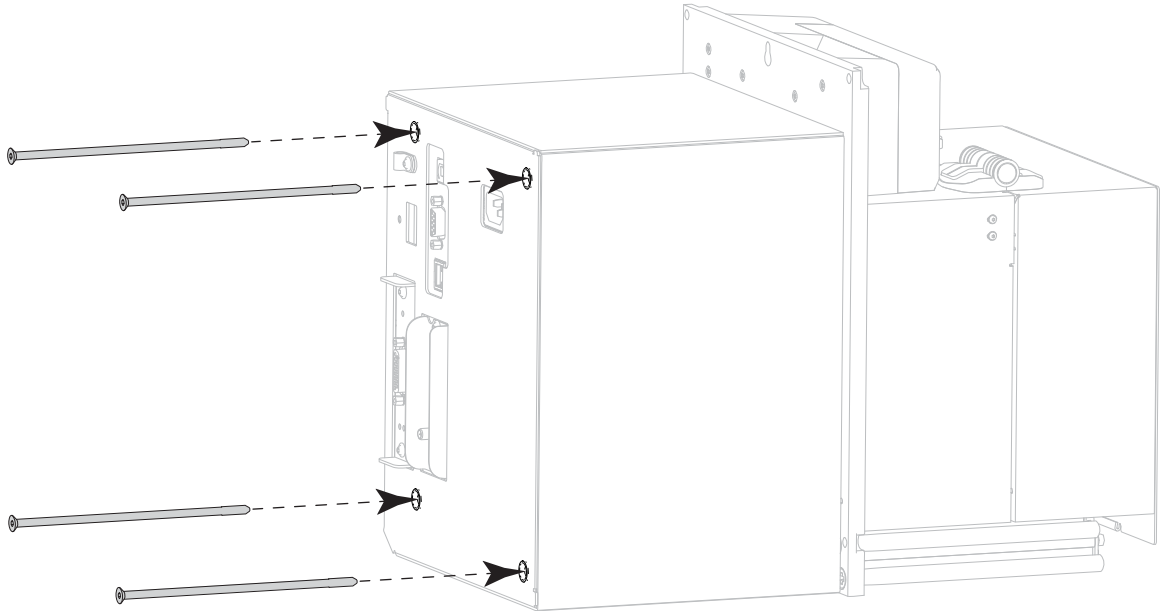
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover.



3. Reinstall the four screws securing the electronics enclosure cover.



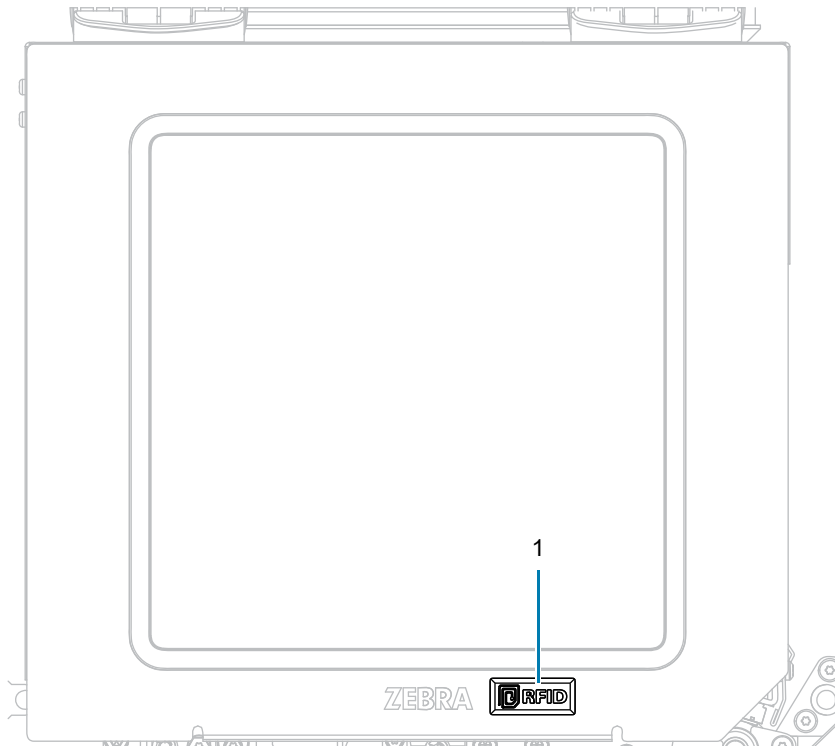
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.

### Verify the Operation of the RFID Assembly

1. Reconnect the AC power cord.
2. Turn on (I) the print engine.
3. Tap Menu > RFID to view the RFID parameters.
  - If the RFID module is operating correctly, the RFID Status will indicate "RFID OK."
  - If no RFID parameters appear, check the RFID cable connections on the radome and on J27 on the MLB.
4. Load the print engine with RFID media, calibrate the printer, and then feed at least one label. Leave all transponders before and after the tag that is being calibrated.
5. Go to RFID > RFID Calibrate and tap Start Calibration.
  - During the tag calibration process, the print engine moves the media, calibrates the RFID tag position, and determines the optimal settings for the RFID media being used. See the RFID Programming Guide 3 for more information.

## Complete the Installation

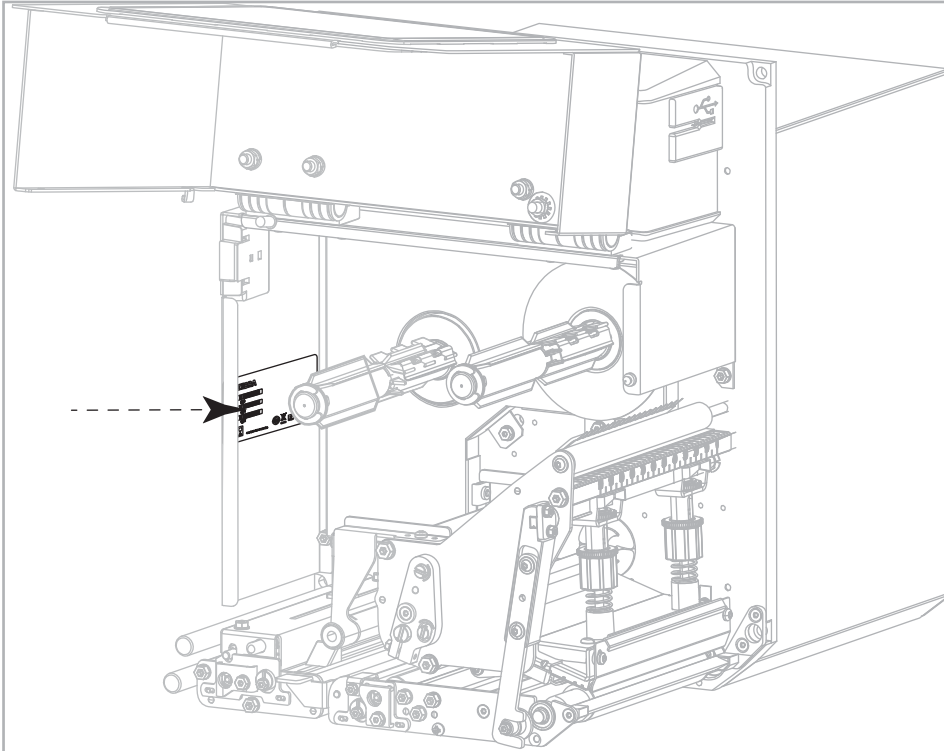
1. Clean the RFID nameplate mounting location on the media door to remove any dust, oil, or other contaminants.
2. Install the RFID nameplate (1) to the right of the Zebra logo on the media door.



3. Clean the RFID label location on the media door to remove any dust, oil, or other contaminants.
4. Install the RFID label as shown.



**NOTE:** If the RFID assembly was replaced, the old RFID label must be removed and replaced with the new RFID label.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

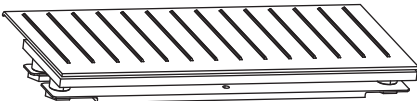
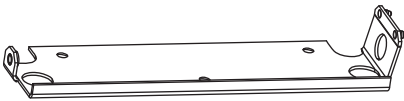





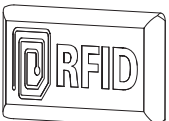


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.


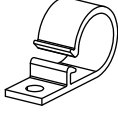

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.



	Radome, RFID Qty: 1
	RFID support bracket (4-inch, ZE511, RH) Qty: 1
	RFID support bracket (4-inch, ZE511, LH) Qty: 1
	RFID support bracket (6-inch, ZE521, RH) Qty: 1
	RFID support bracket (6-inch, ZE521, LH) Qty: 1
	ZE521 RFID filler bracket Qty: 1
	RFID cable assembly for ZE511/ZE521 Qty: 1
	RFID nameplate Qty: 1

## RFID Replacement Maintenance Kit

	Backing with two strips of tape Qty: 1
	Cable tie screw mount Qty: 1
	Screw (m3x6-pan washer mach) Qty: 1

  
T10

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10 and T15
-  Phillips screwdrivers or bits  
Size: PH1
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat
- RFID Programming Guide 3 or internet access to view it on [zebra.com](http://zebra.com)

for parts & service call QLC (800) 837-1309

## Prepare for Installation



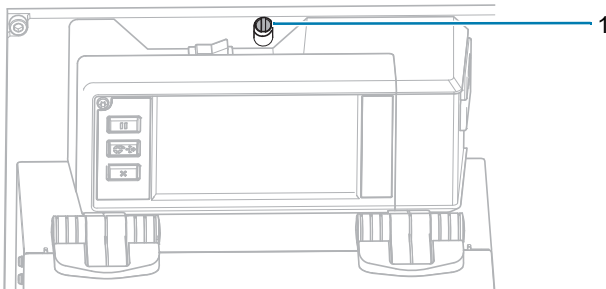
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



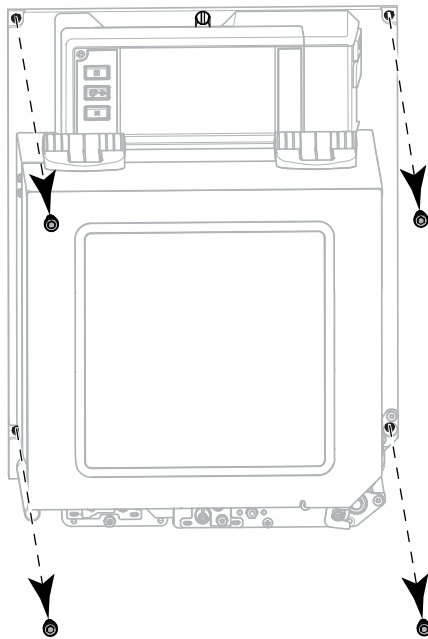
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



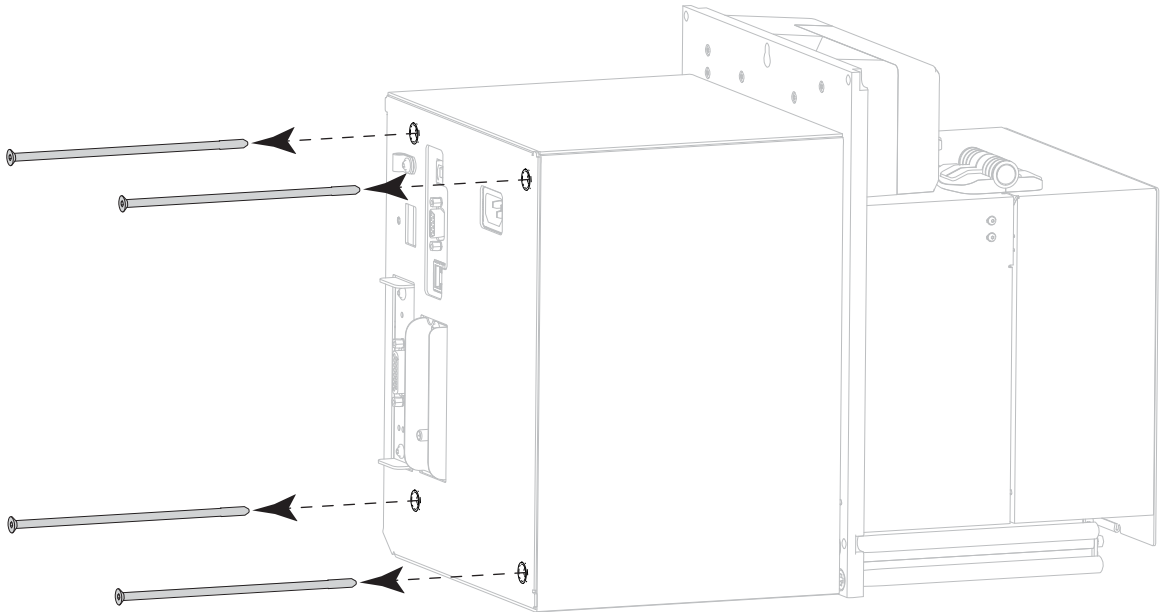
2. Remove the four screws securing the print engine to the applicator.



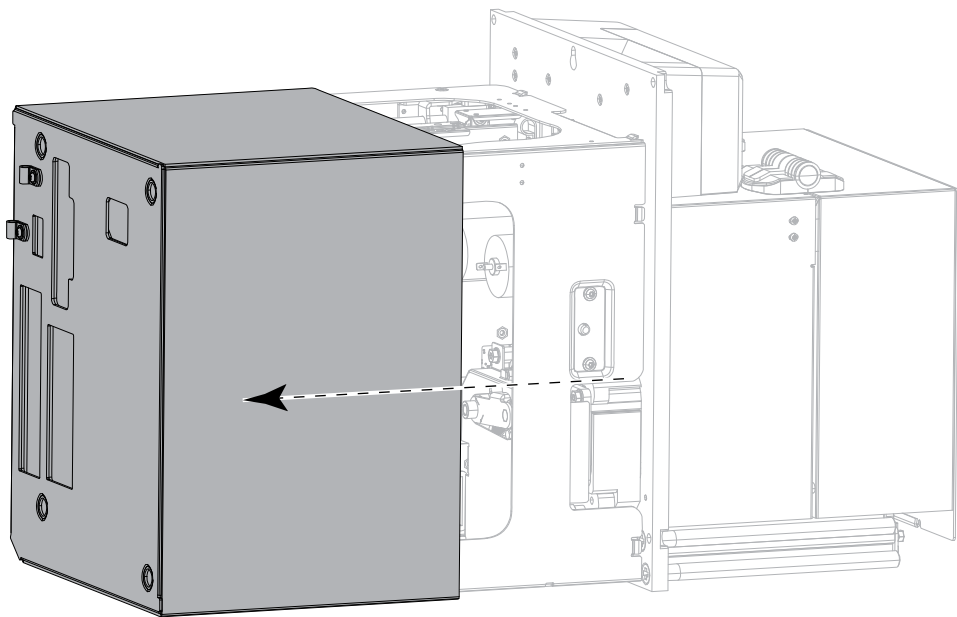
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



2. Remove the electronics enclosure cover from the print engine.

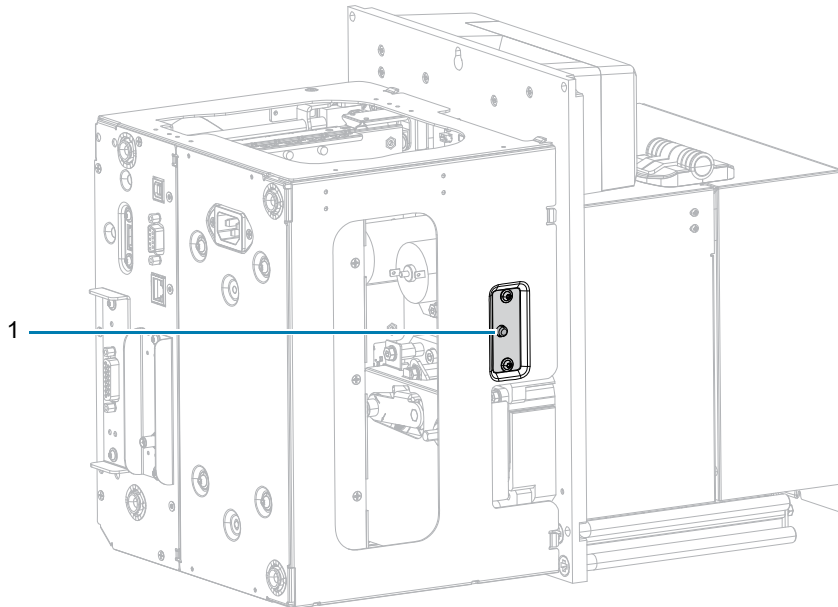




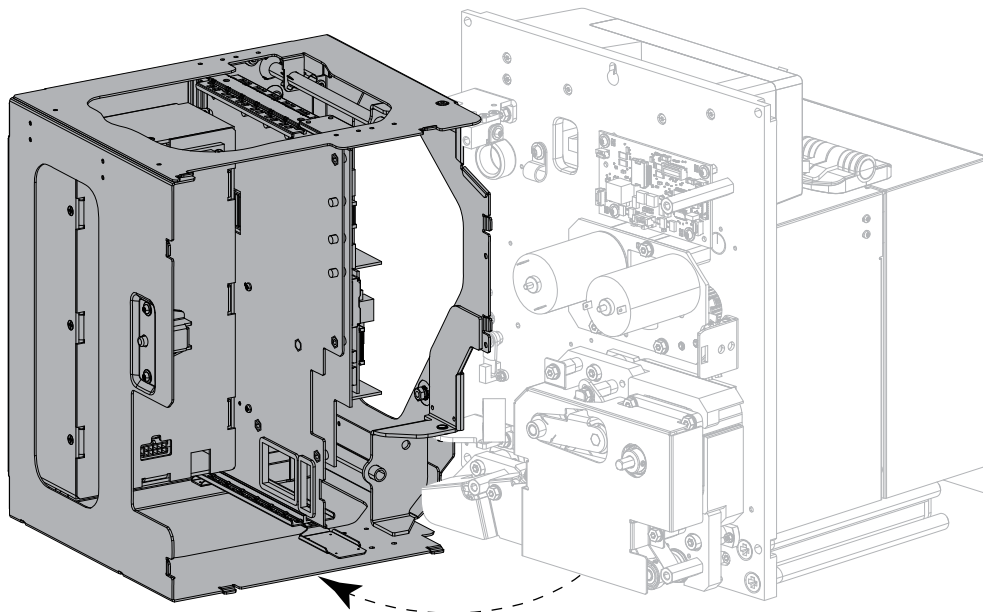
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.



4. Open the rear of the print engine.

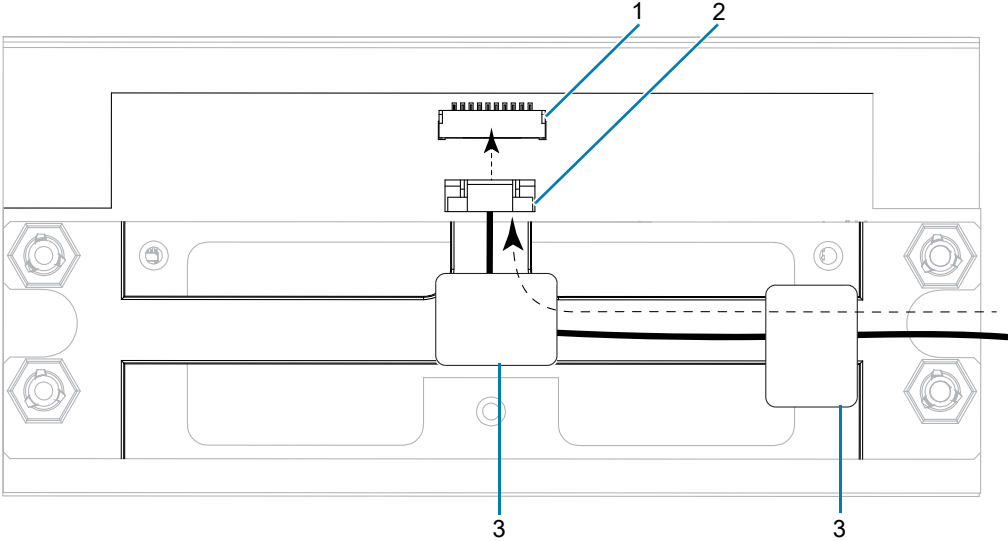
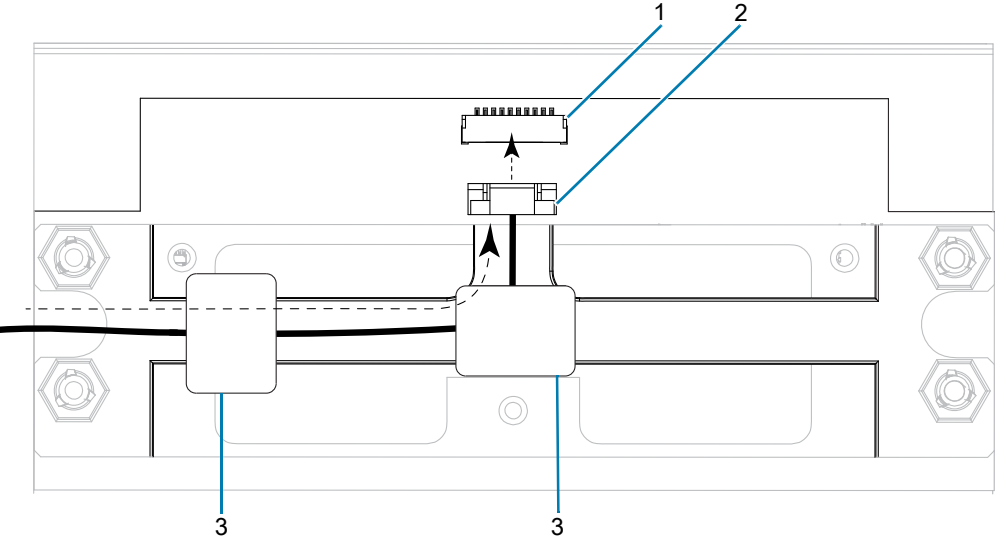


## Attach the RFID Cable to the Radome



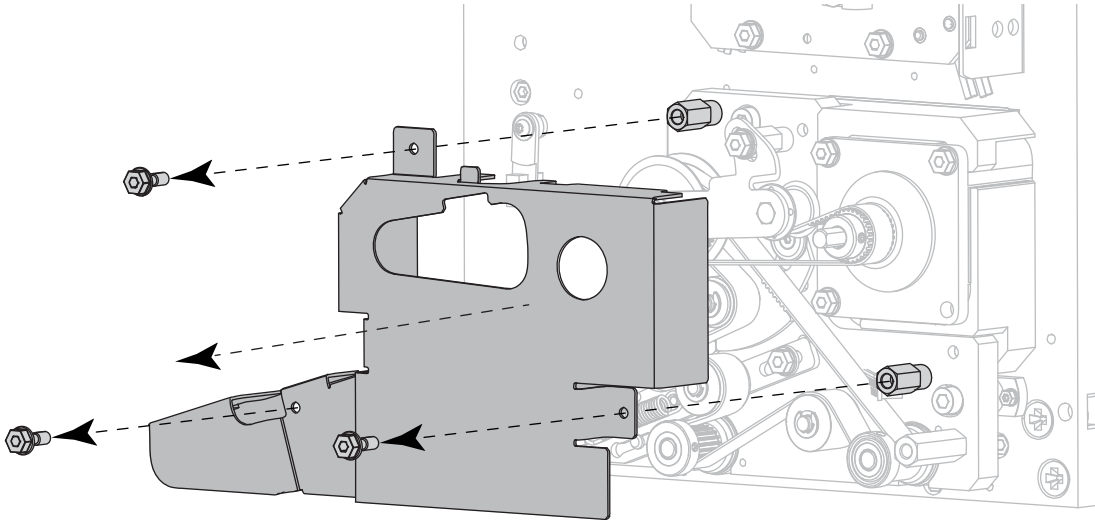
**NOTE:** The RFID cable must be flat against the radome.

Are you working on a left hand (LH) or a right hand (RH) print engine?

If...	Then...
LH	<p>1. Connect the RFID cable (2) to the PCB mounted receptacle (1) on the bottom of the radome and route the cable to the right.</p>  <p>2. Secure the RFID cable to the radome using the two pieces of tape (3).</p>
RH	<p>1. Connect the RFID cable (2) to the PCB mounted receptacle (1) on the bottom of the radome and route the cable to the right.</p>  <p>2. Secure the RFID cable to the radome using the tape (3).</p>

## Replace the RFID Module


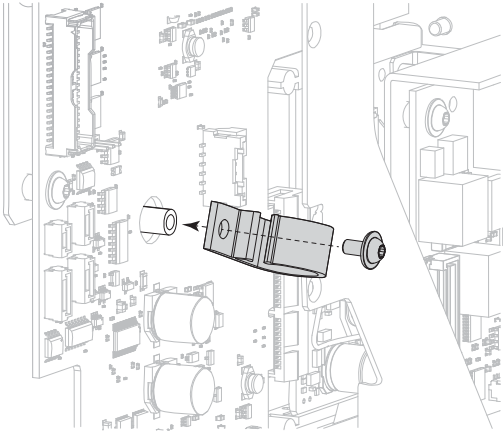
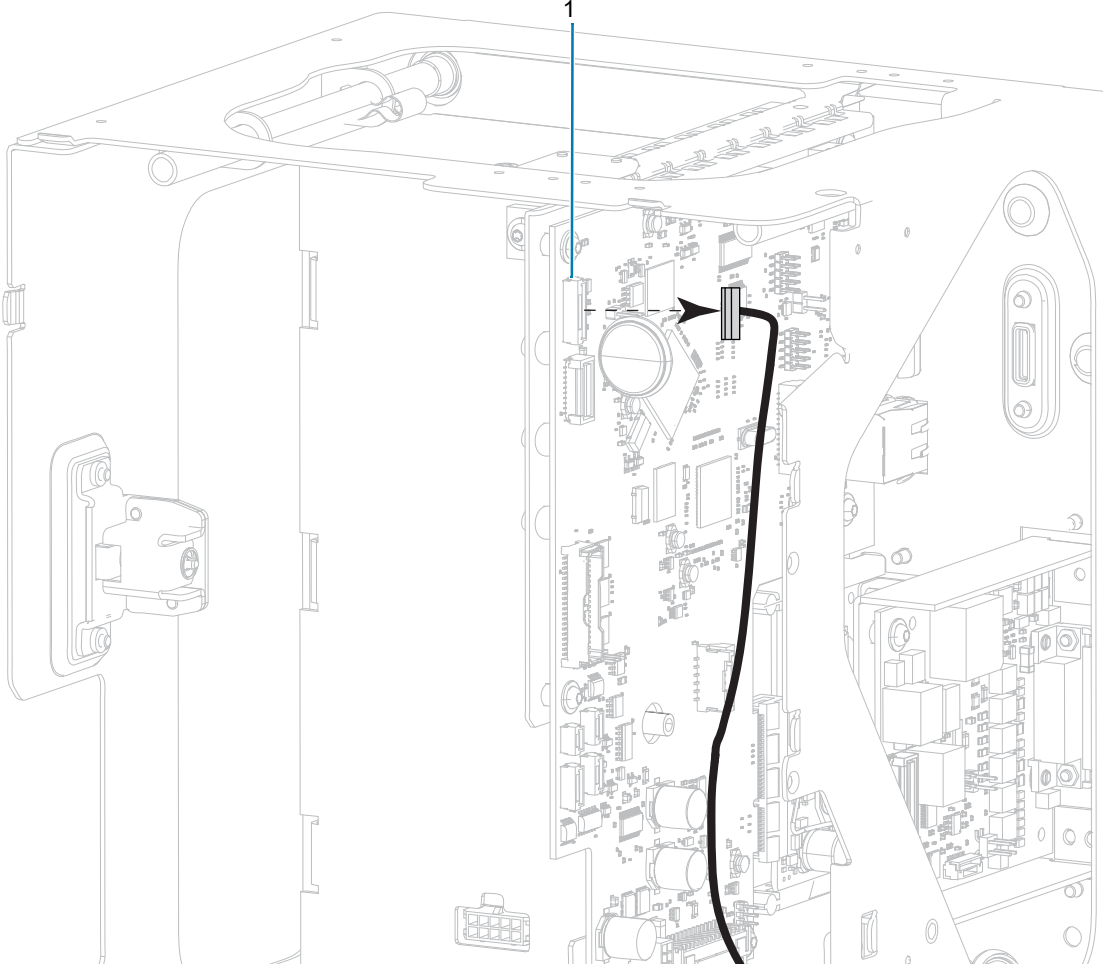
1. Remove the three 4mm screws and remove the belt drive cover.




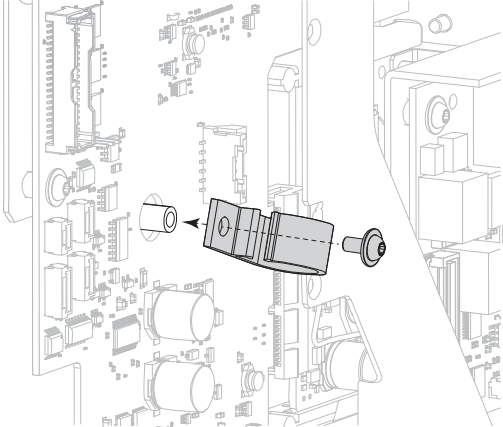
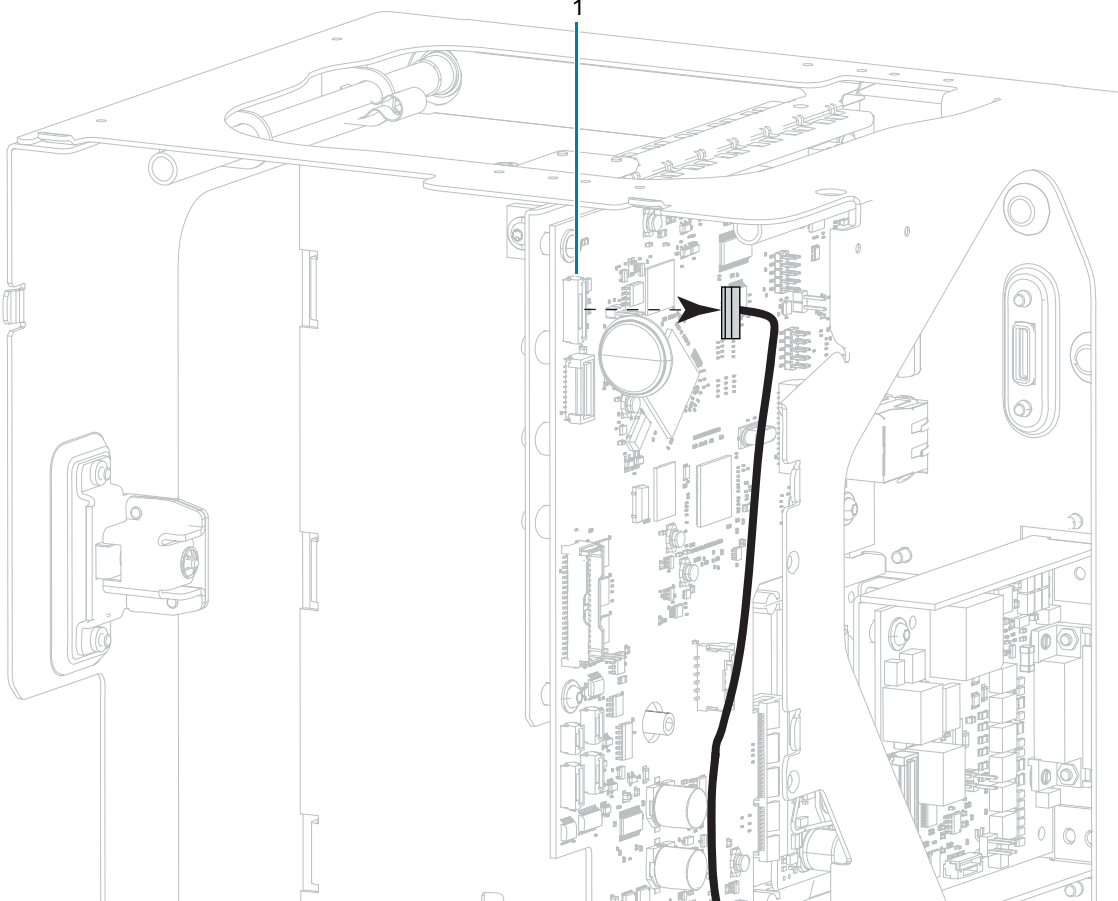


**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

2. Are you working on a left hand (LH) or a right hand (RH) print engine?

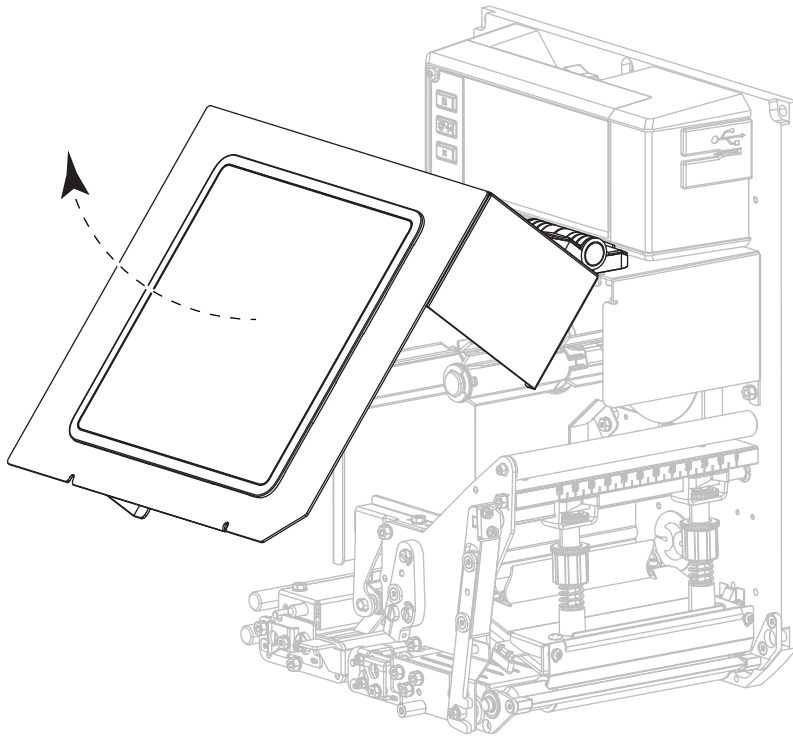
If...	Then...
LH	<p>1. Remove the  T10 screw and cable clamp from the Main Logic Board (MLB).</p>  <p>2. Disconnect the RFID cable from plug J27 on the MLB (1).</p> 

# RFID Replacement Maintenance Kit

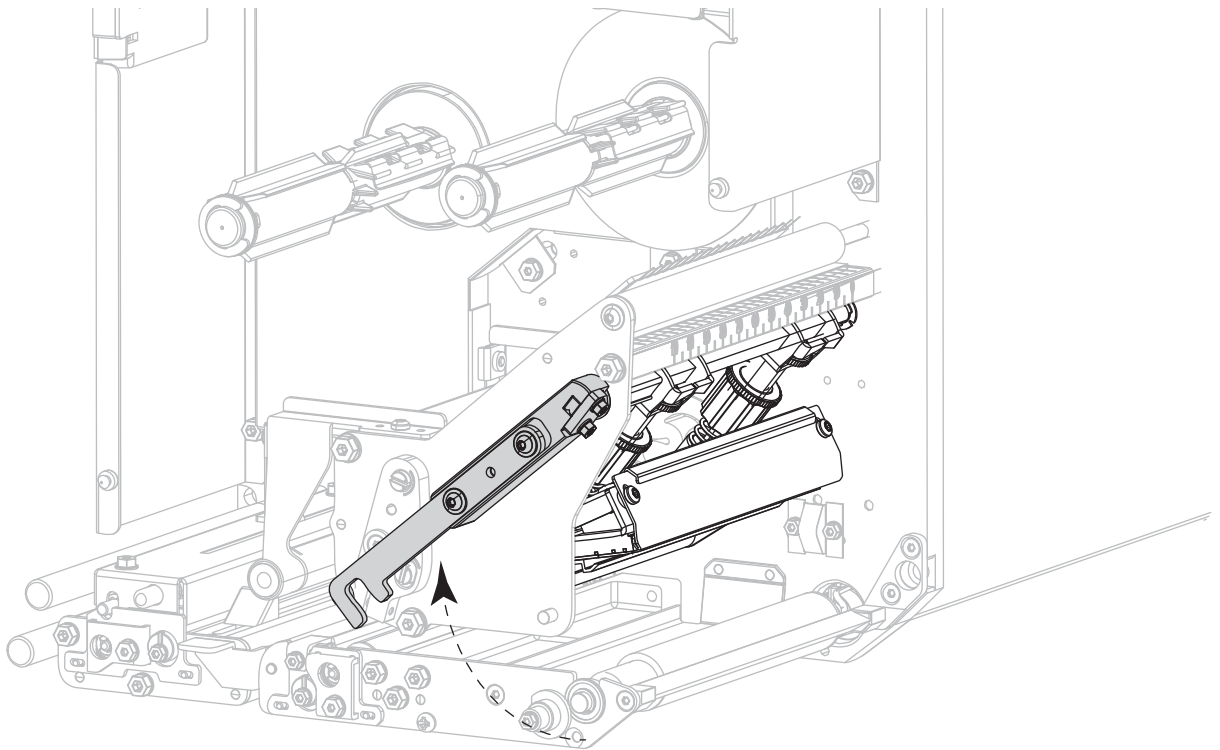
If...	Then...
RH	<p>1. Remove the  T10 screw and cable clamp from the Main Logic Board (MLB).</p>  <p>2. Disconnect the RFID cable from plug J27 on the MLB (1).</p> 

for parts & service call QLC (800) 837-1309

3. Open the media door.


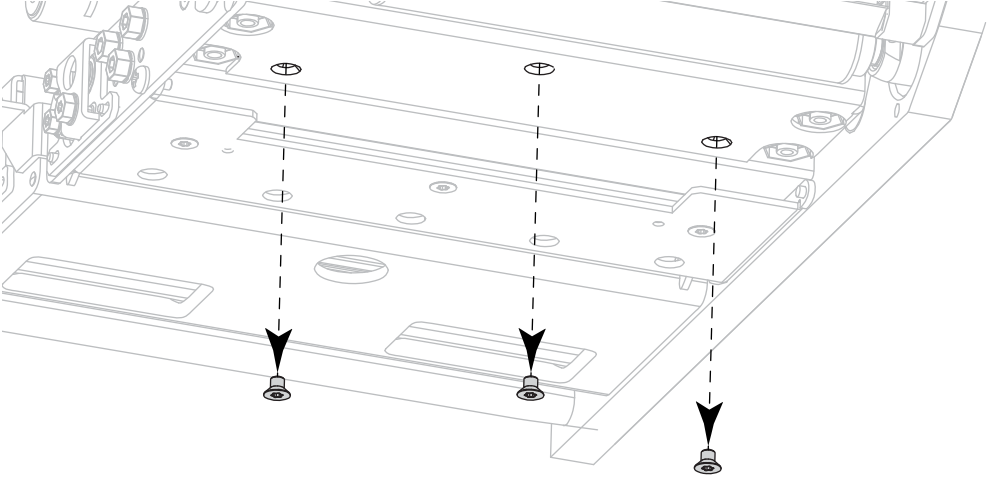

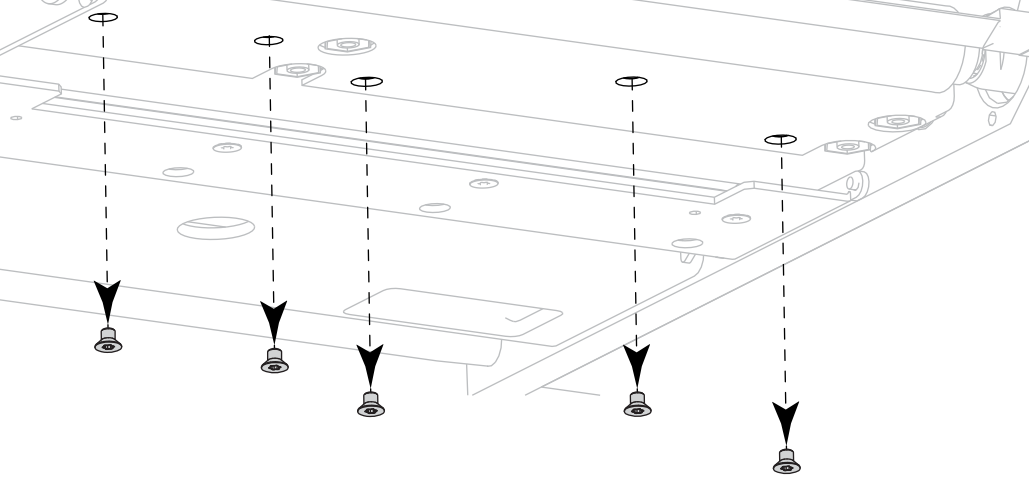
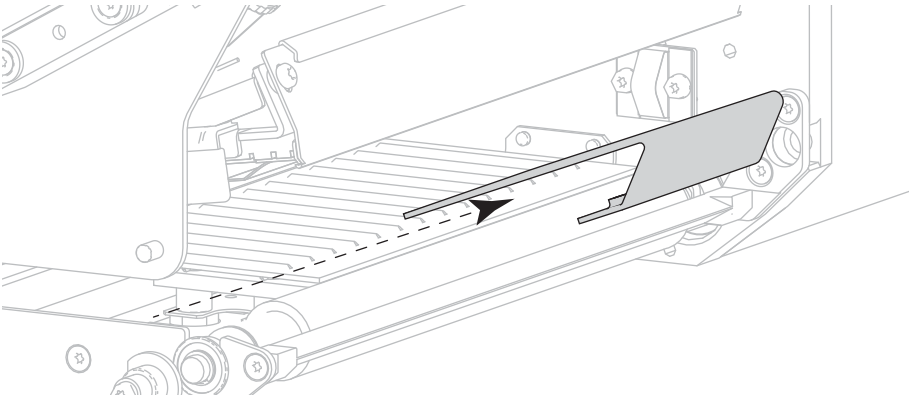


4. Open the printhead.

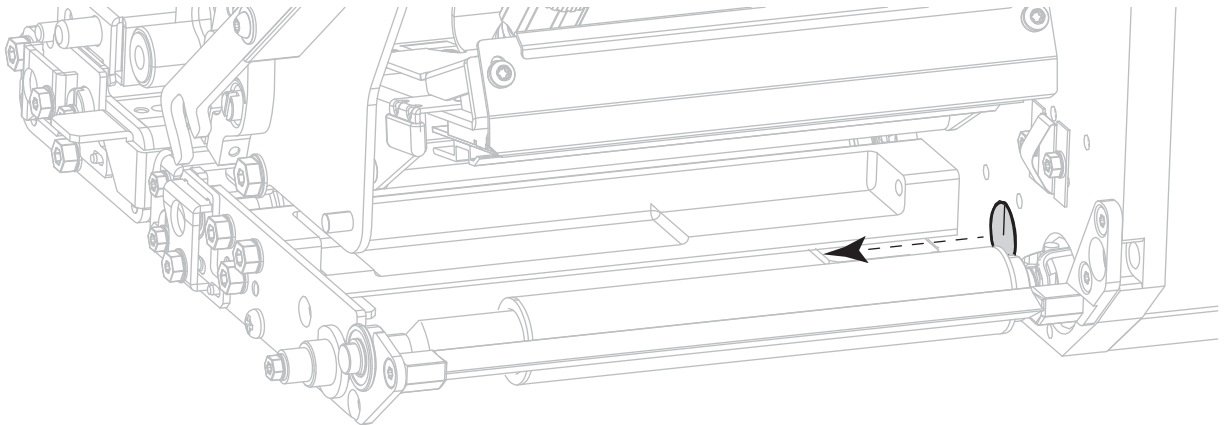


for parts & service call QLC (800) 837-1309

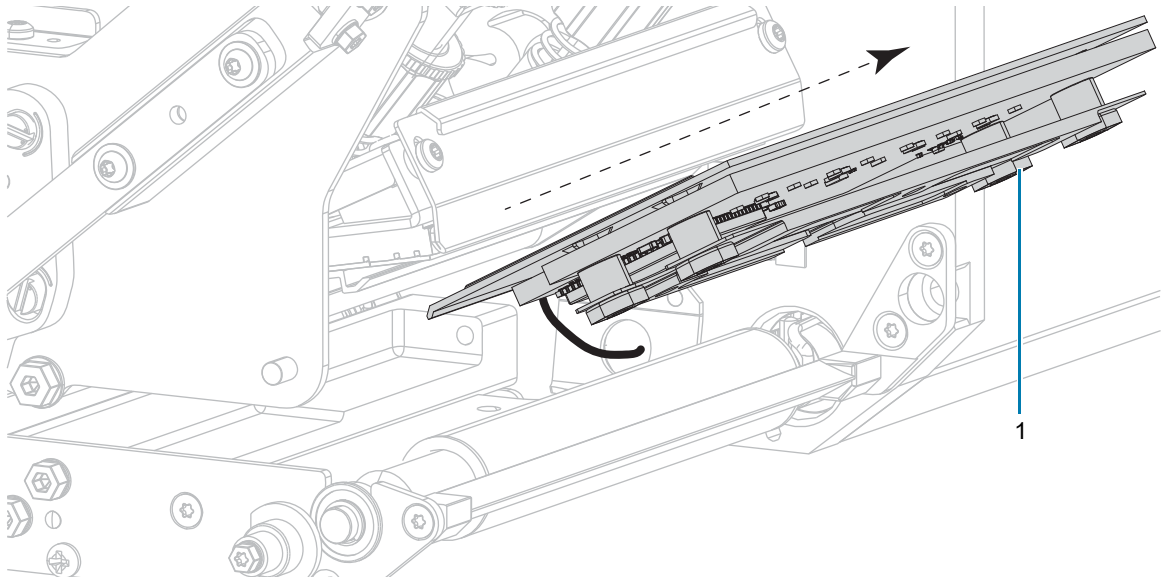
5. Which model are you working on?

If...	Then...
ZE511	<p>Remove the three  T9 screws securing the radome.</p> 
ZE521	<p>1. Remove the five  T9 screws securing the radome and bracket.</p>  <p>2. Remove the bracket filler.</p> 

6. Remove the dust seal from the print engine access hole.



7. Remove the radome (1) from the print engine.

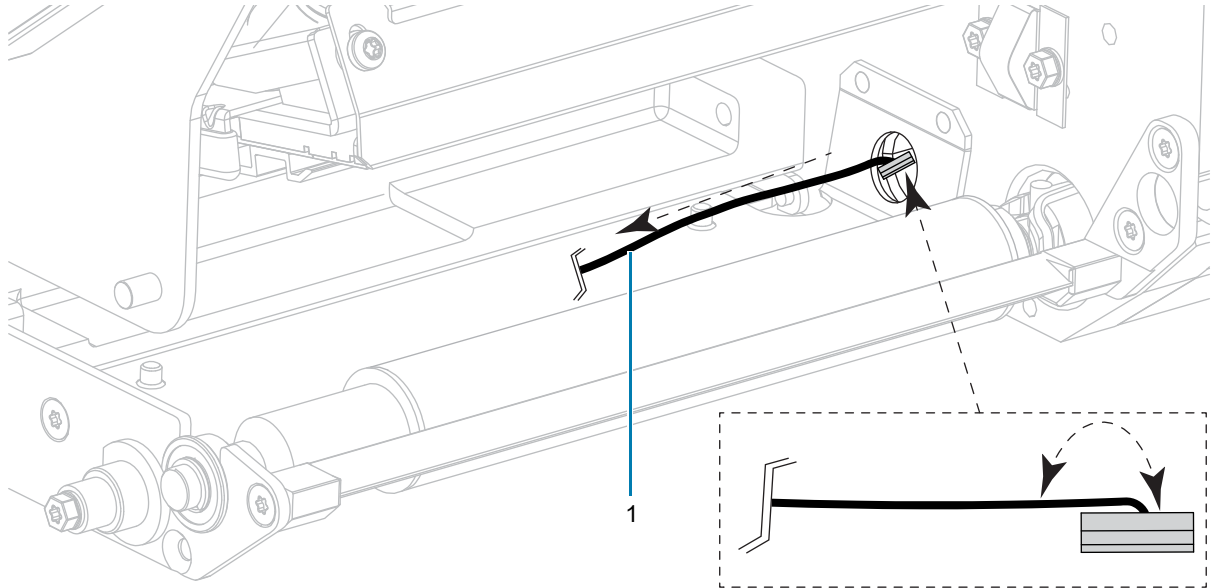




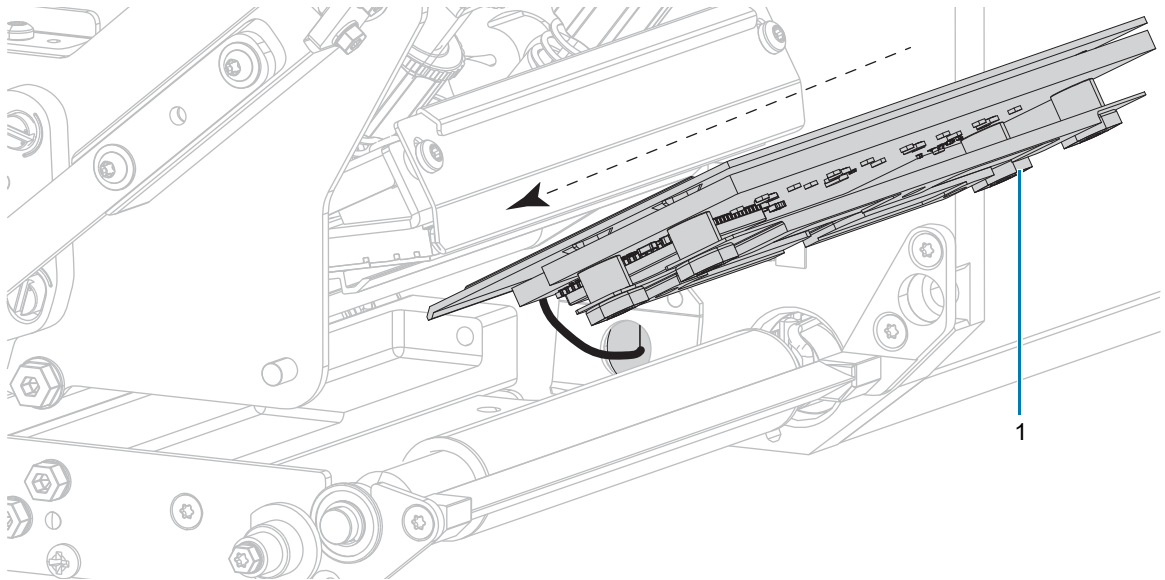


**NOTE:** Guide the RFID cable from the electronics side of the print engine.


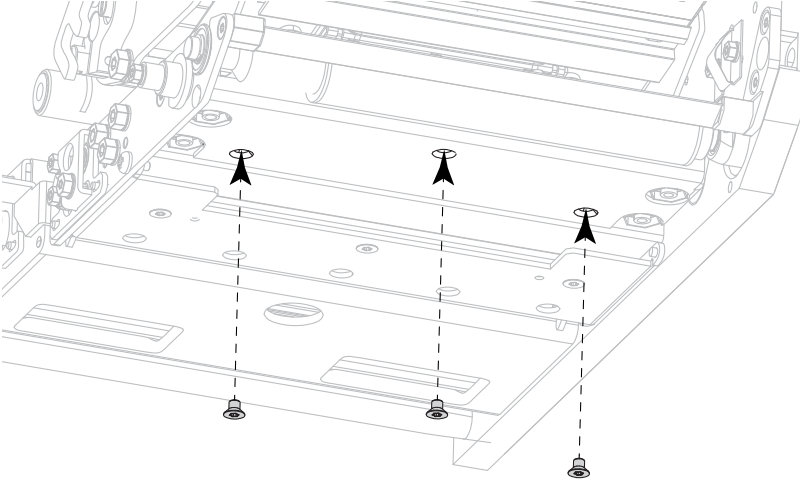
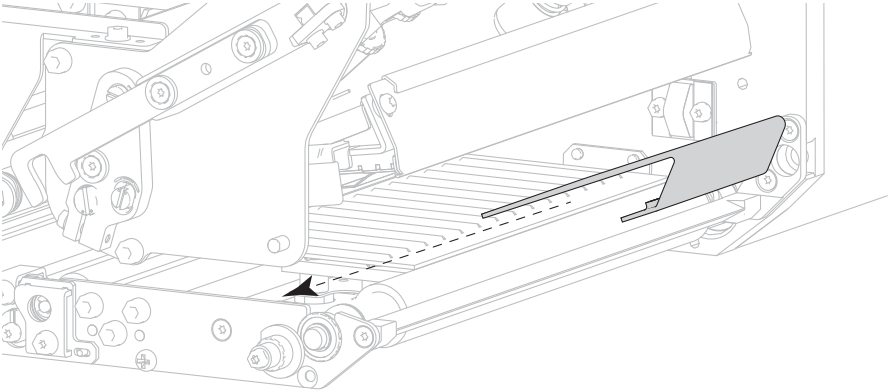

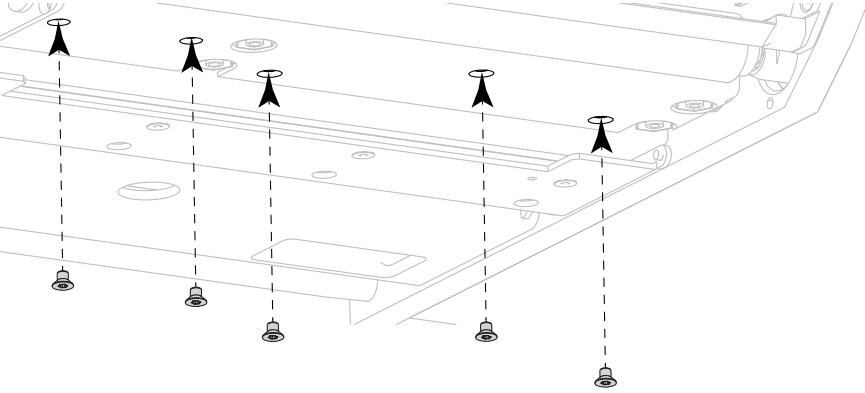
8. With the end of the RFID cable (1) flattened as shown, slide the plug through the port into the printing side of the print engine.



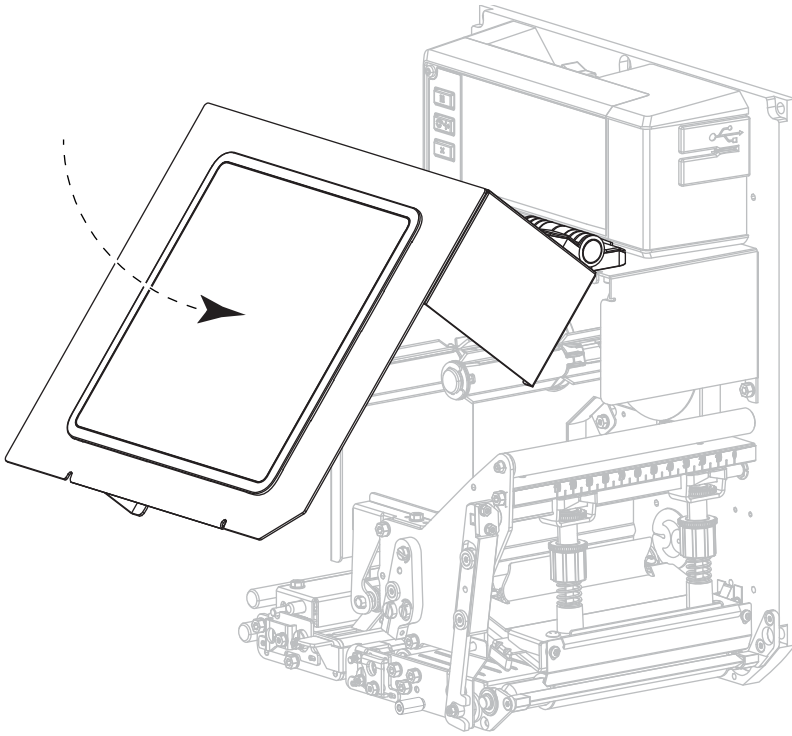
9. Slide the RFID cable into the electronics side so that there is no slack in the media compartment.
10. Reinstall the dust seal in the print engine access hole and install the radome (1) into the print engine.



11. Which model are you working on?

If...	Then...
ZE511	<p>Secure the radome in place with the three  T9 screws.</p> 
ZE521	<p>1. Install the bracket filler.</p>  <p>2. Secure the radome and filler bracket in place with the five  T9 screws.</p> 

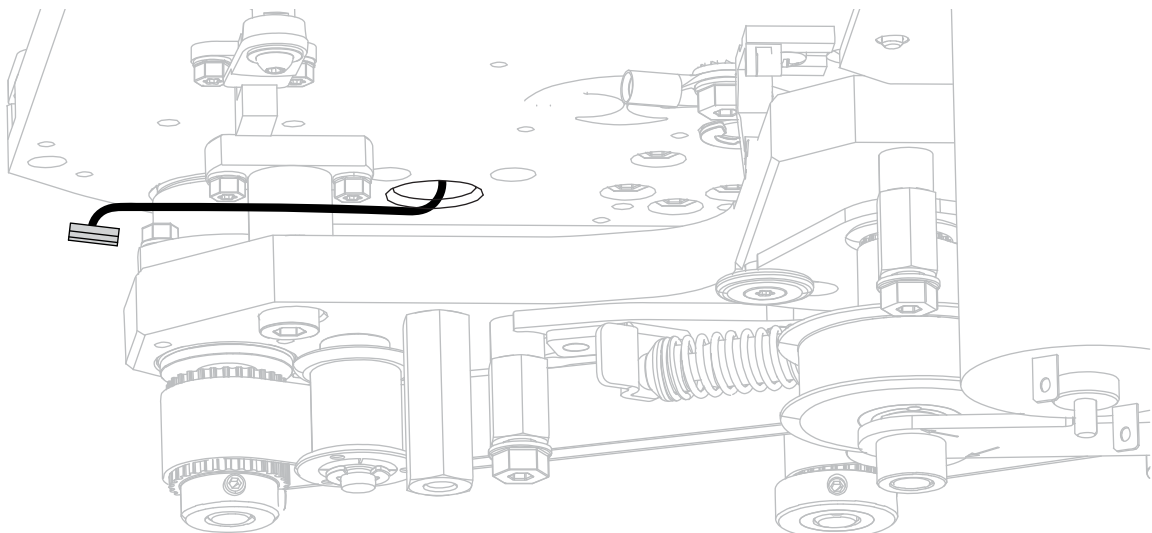
12. Close the media door.



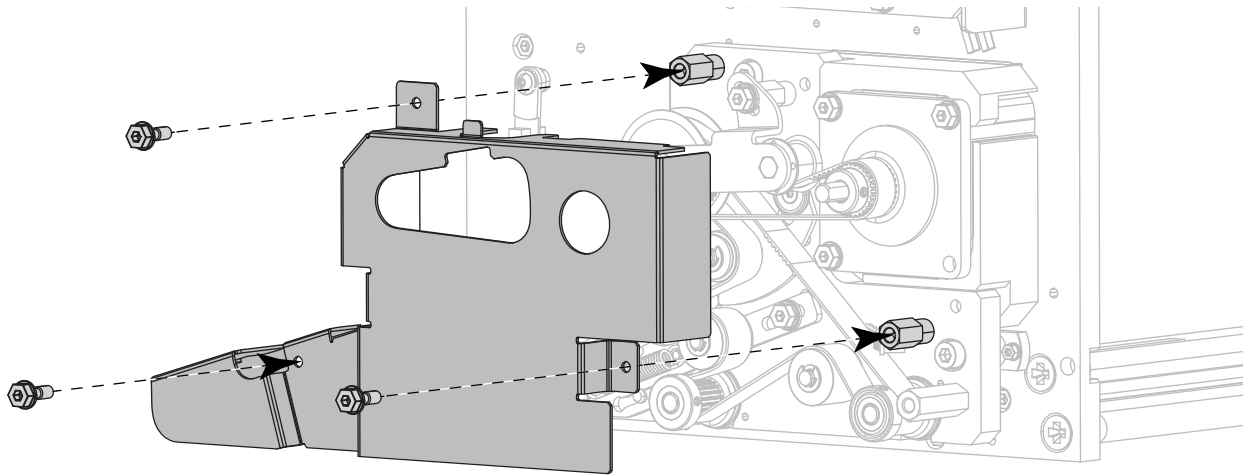
13. Route the RFID cable behind and around the belt drive.




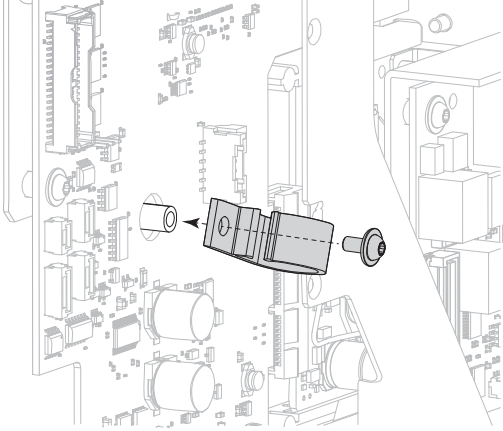
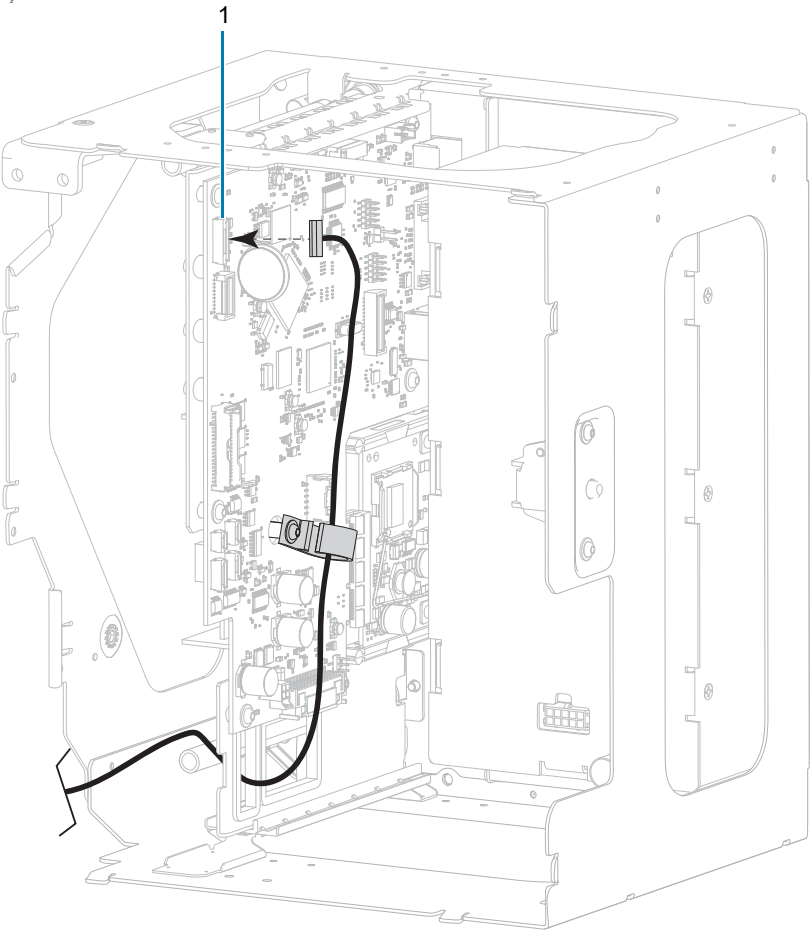
**NOTE:** When routing the RFID cable be cautious of hinges and pinch points in the print engine.




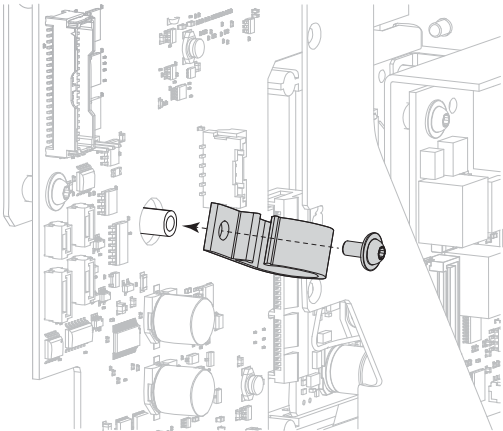
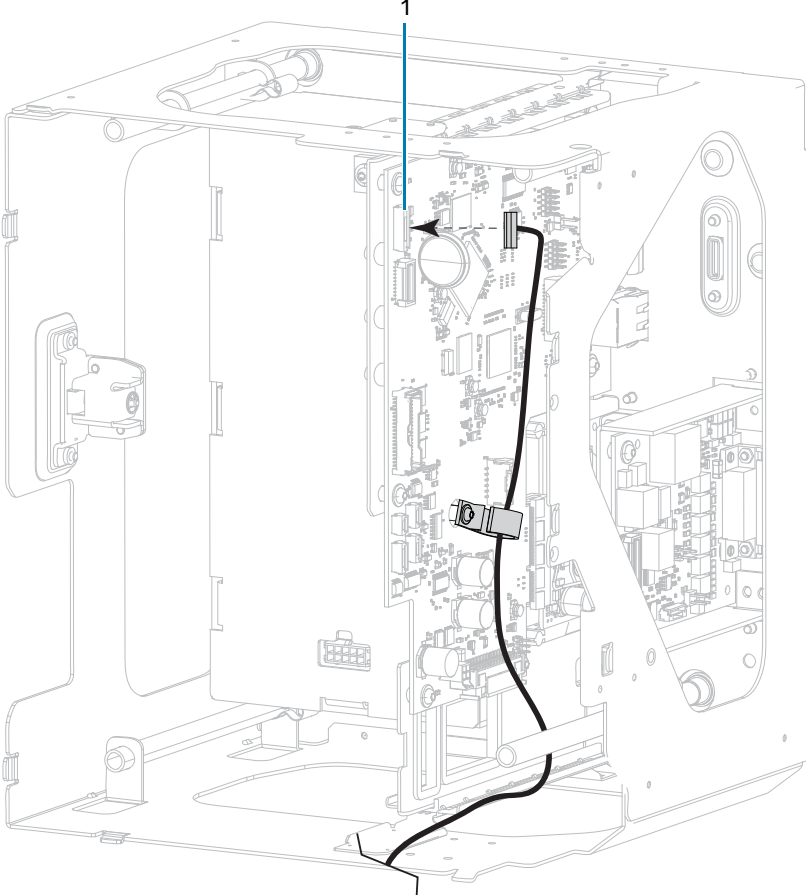
14. Reinstall the belt drive cover with the three 4mm screws.



15. Are you working on a left hand (LH) or a right hand (RH) print engine?

If...	Then...
LH	<p>1. Install the cable clamp to the MLB with the  T10 screw.</p>  <p>2. Route the RFID cable as shown and connect to plug J27 on the MLB (1).</p> 

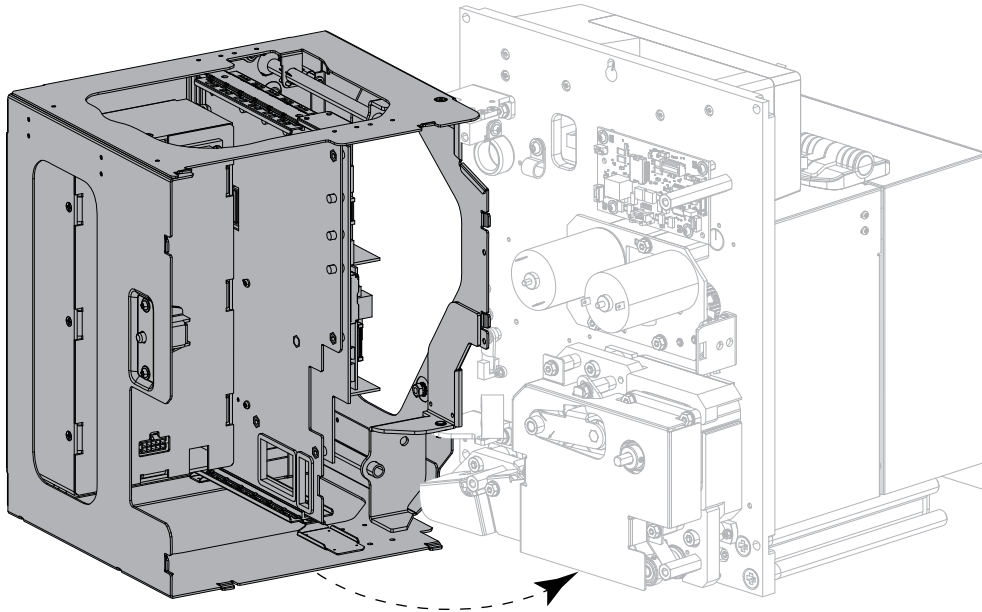
# RFID Replacement Maintenance Kit

If...	Then...
RH	<p>1. Install the cable clamp to the MLB with the  T10 screw.</p>  <p>2. Route the RFID cable as shown and connect to plug J27 on the MLB (1).</p> 

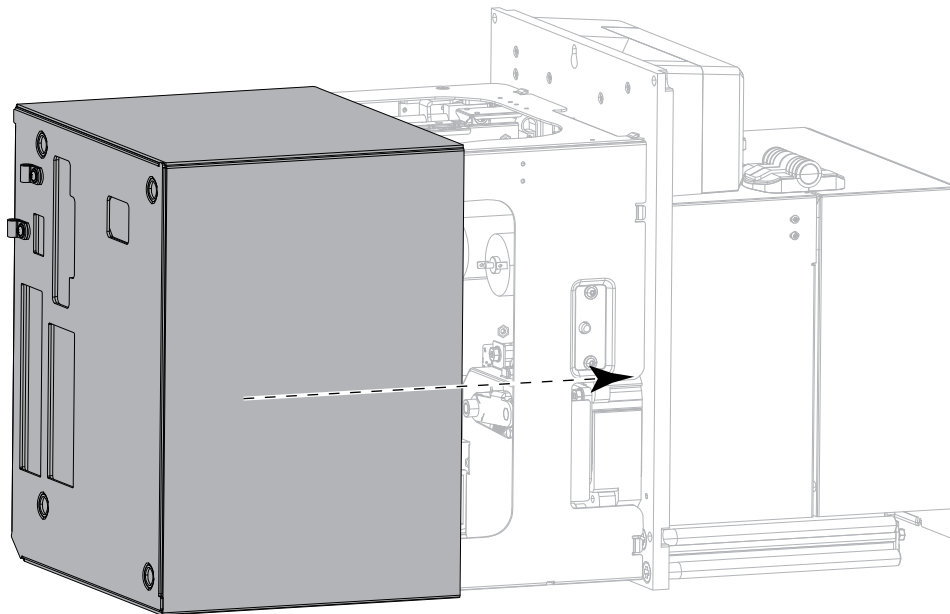
for parts & service call QLC (800) 837-1309

## Close the Electronics Enclosure

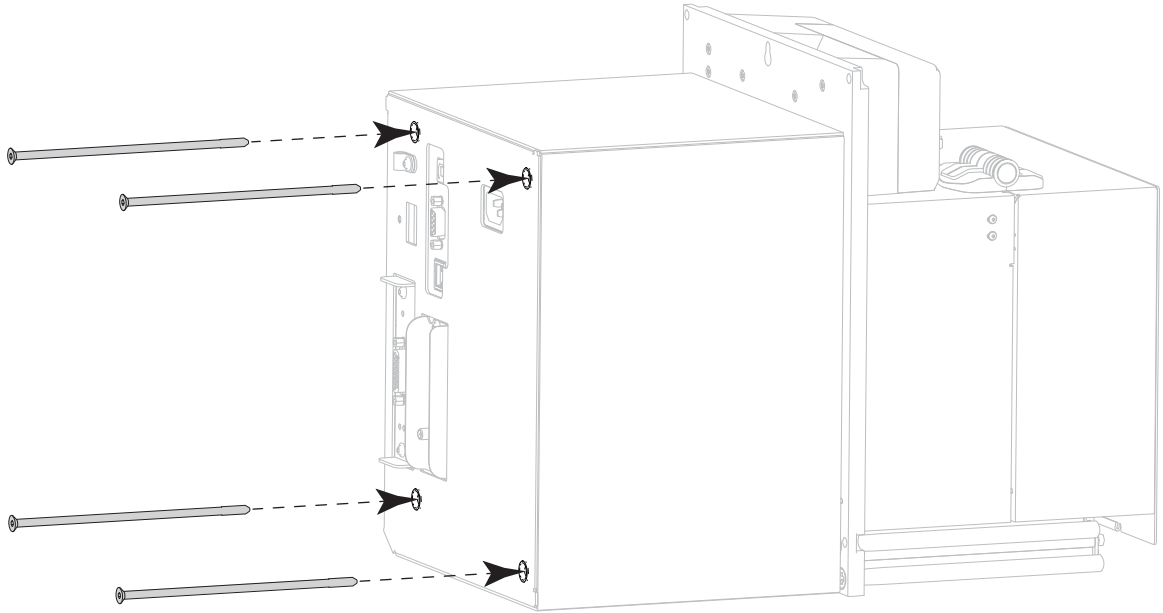
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover.



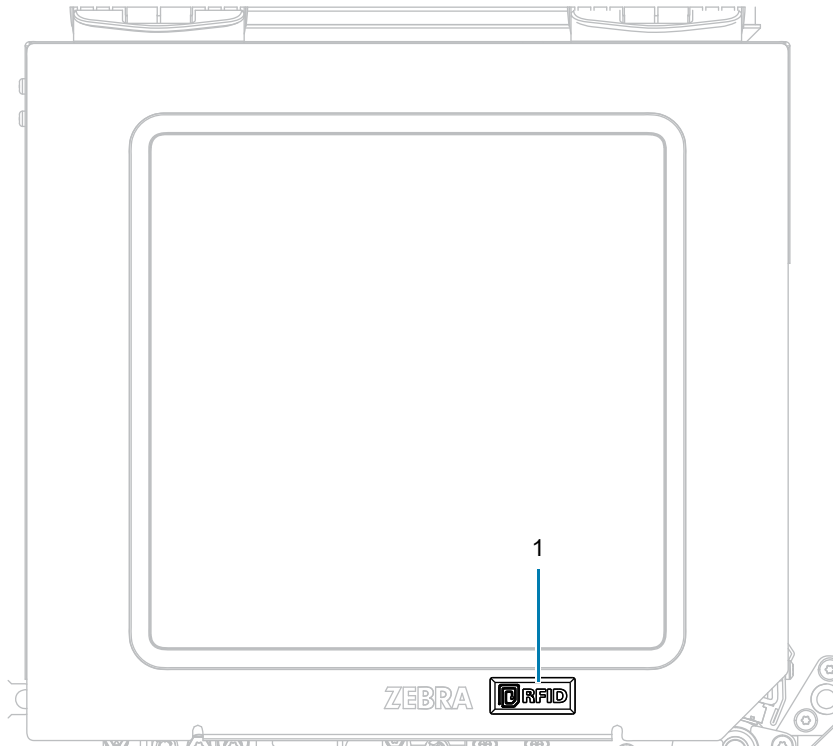
3. Reinstall the four screws securing the electronics enclosure cover.





## Complete the Installation

1. Clean the RFID nameplate mounting location on the media door to remove any dust, oil, or other contaminants.
2. Install the RFID nameplate (1) to the right of the Zebra logo on the media door.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Ground cable Qty: 1
	Printhead power cable Qty: 1
	Printhead data cable Qty: 1
	Cable clamp nylon Qty: 1
	Cable clamp screw mount Qty: 1
	Printhead sealing plug Qty: 1
	Lock washer 3 mm Qty: 3
	Lock washer 4 mm Qty: 1
	Screw (M3x8 pan washer mach) Qty: 1
	T10

## Tools Required

●	Metric hexagon keys or bits Size: 2mm, 3 mm, 4 mm
✳	Hexalobular (6-lobe, star) keys, drivers, or bits Size: T8, T10, T15
•	Antistatic wriststrap and mat
•	Sorting bin for screws and small parts (optional)

## Prepare for Installation



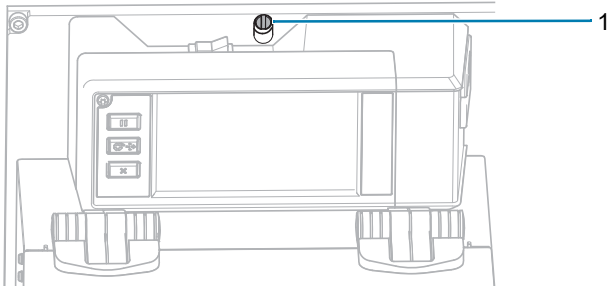
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



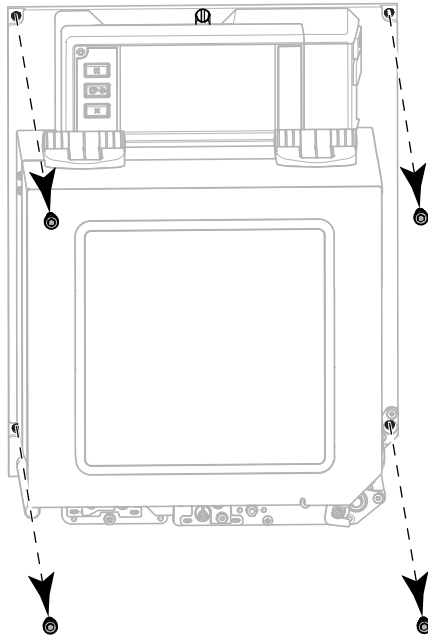
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



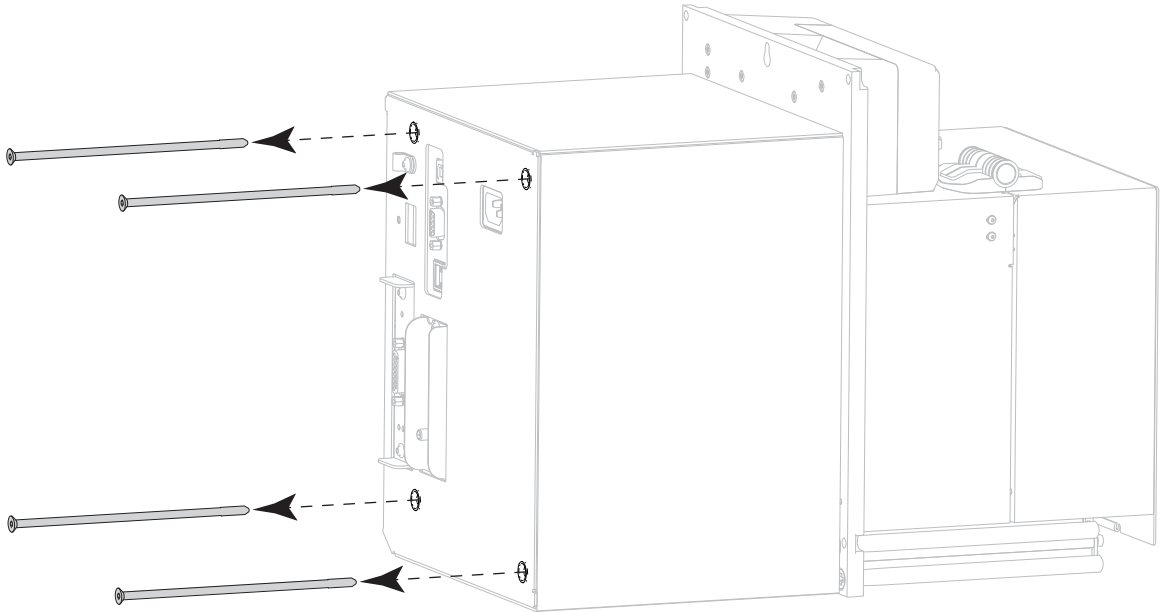
2. Remove the four screws securing the print engine to the applicator.



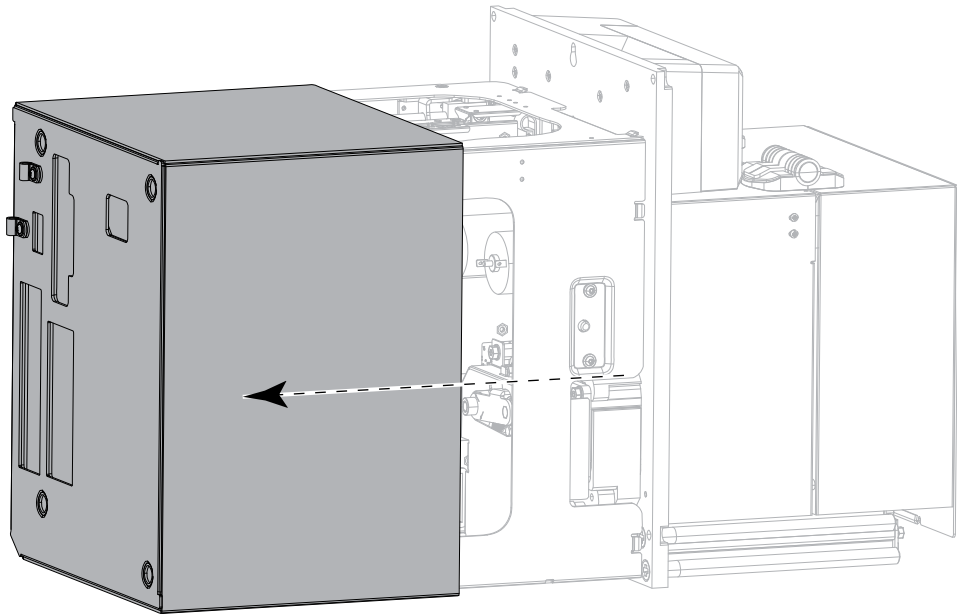
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



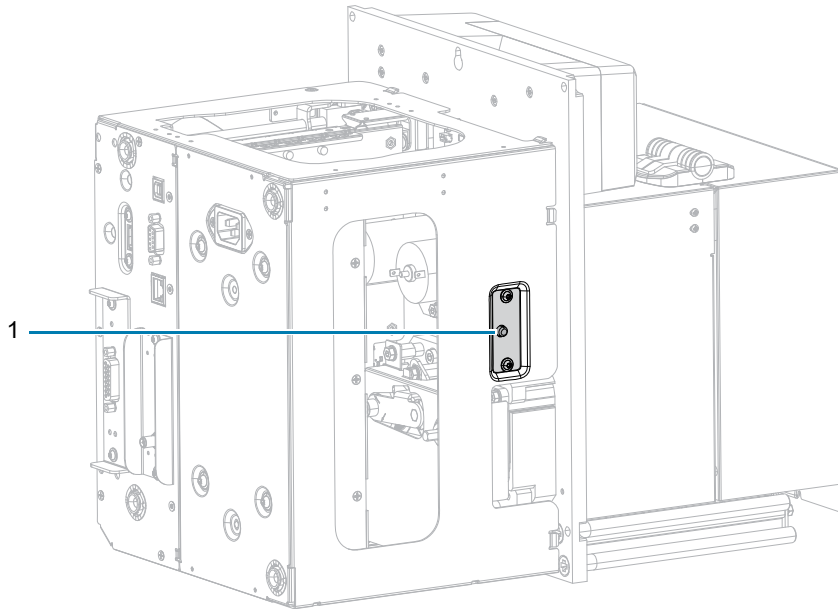
2. Remove the electronics enclosure cover from the print engine.



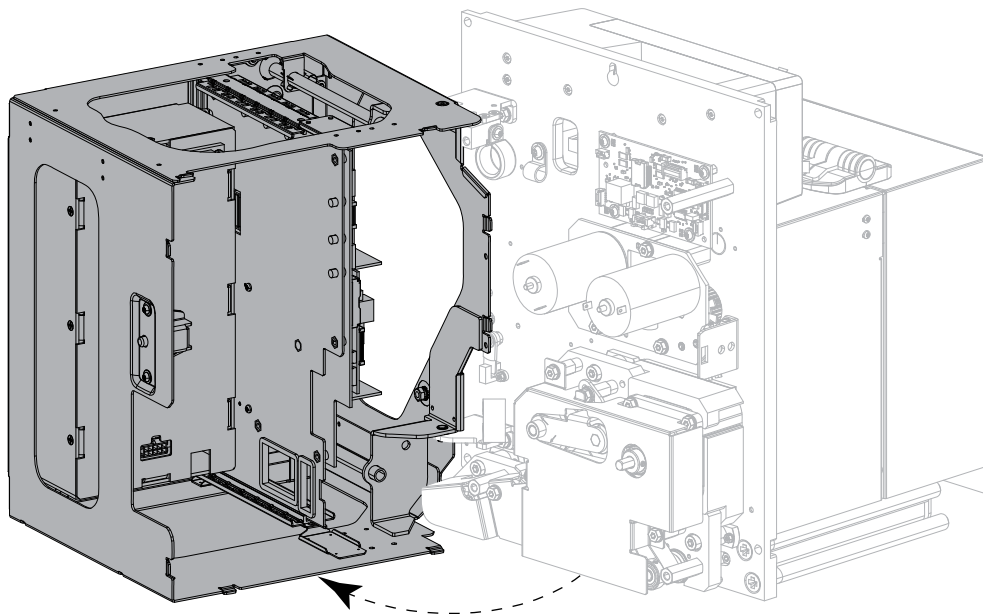
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

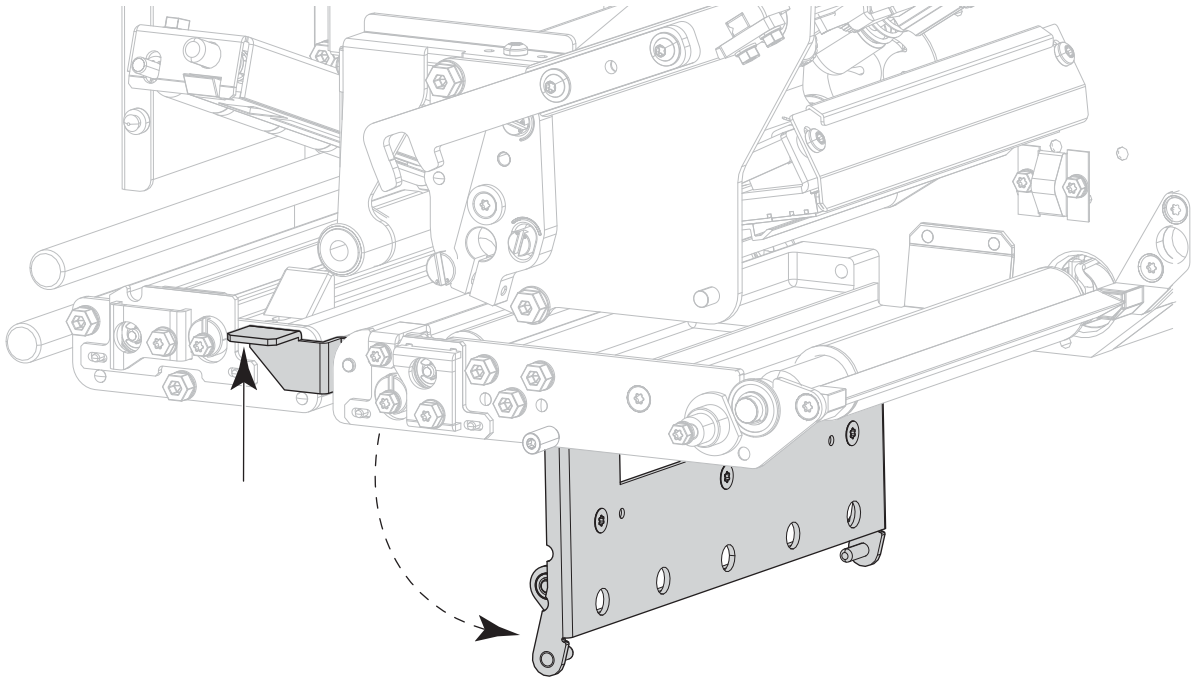



4. Open the rear of the print engine.

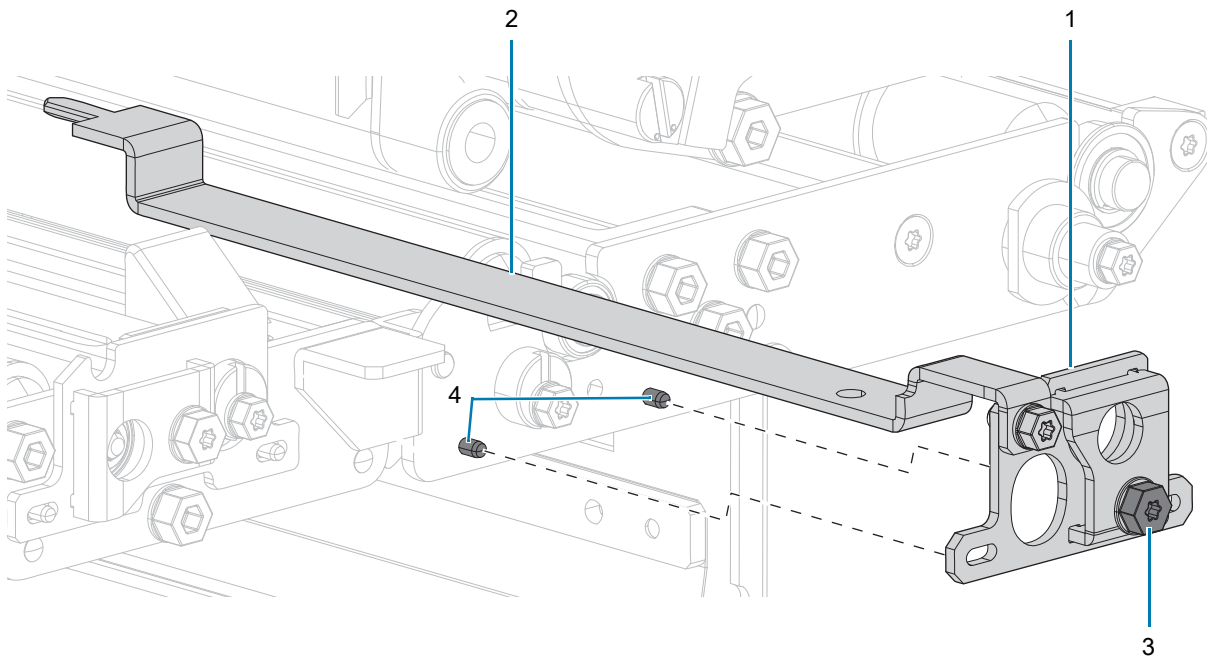


## Remove the Rollers

1. Raise the peel roller latch so that the peel roller assembly pivots downward.

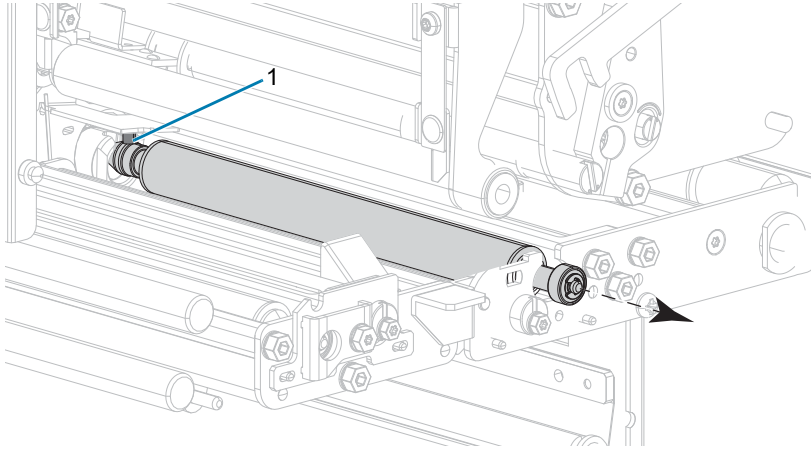



2. Remove the peel roller cam plate (1) and the attached deflector plate (2).
  - a. Loosen the  T9 captive screw (3) securing the peel roller cam plate.
  - b. Remove the peel roller cam plate from the two support pins (4).

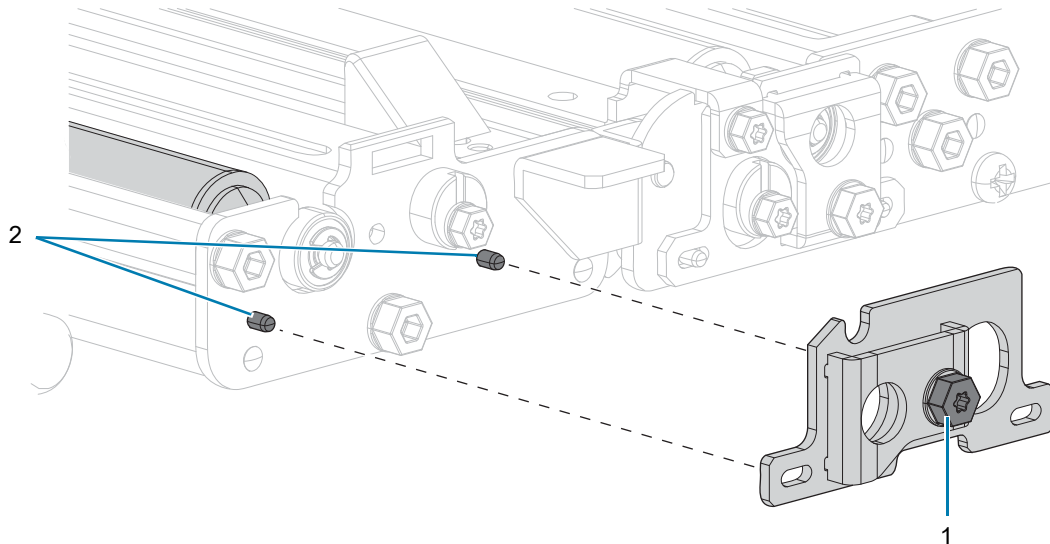


for parts & service call QLC (800) 837-1309

3. Grasp the peel roller tightly, and pull outward until the pin (1) at the far end of the peel roller assembly disengages from the peel roller coupler.

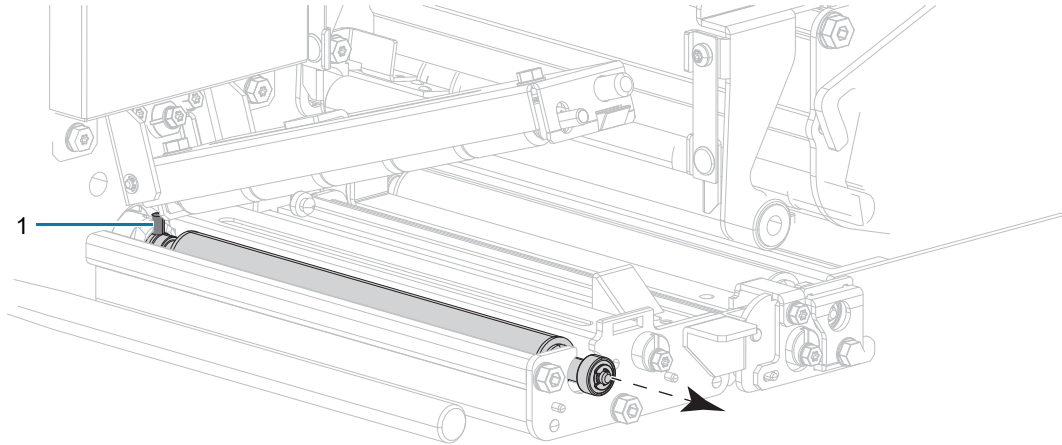


4. Remove the peel roller assembly from the print engine.
5. Remove the pinch roller cam plate.
  - a. Loosen the  T9 captive screw (1) securing the pinch roller cam plate.
  - b. Remove the pinch roller cam plate from the two support pins (2).




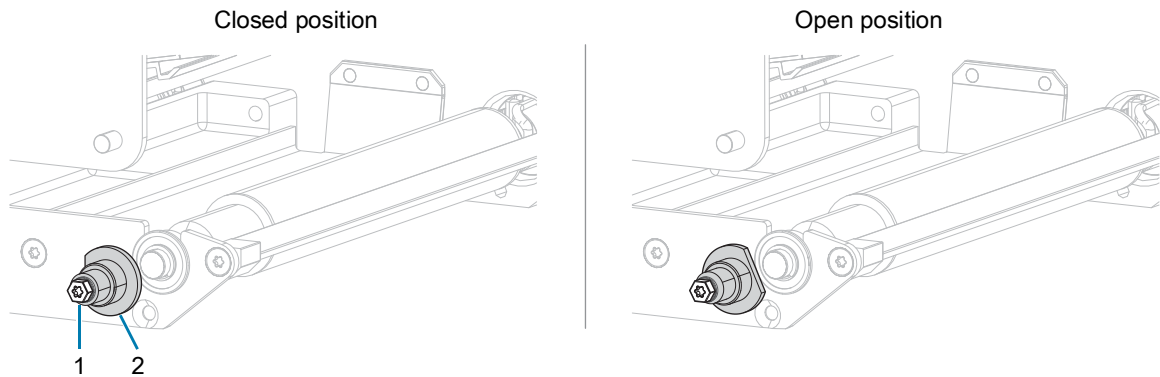


6. Grasp the pinch roller tightly, and pull outward until the pin (1) at the far end of the pinch roller assembly disengages from the pinch roller coupler.



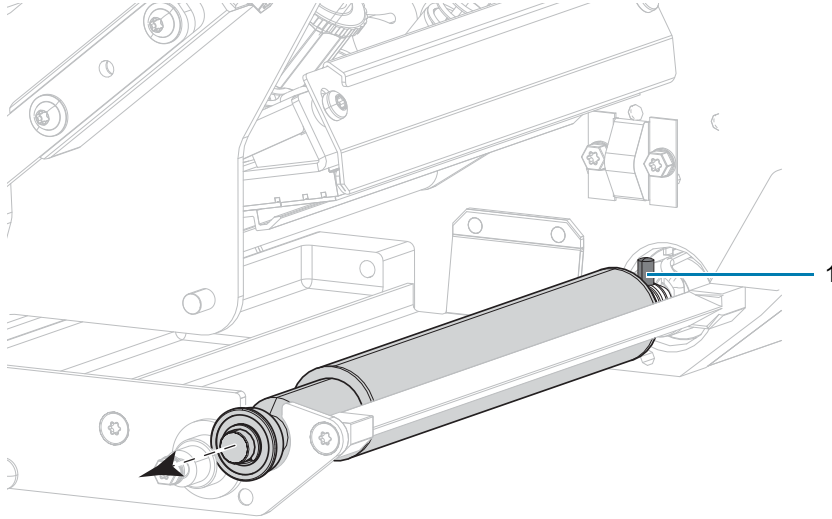
7. Remove the pinch roller assembly from the print engine.
8. Secure the platen support plate latch pin in the open position.

- a. Loosen the  T9 captive screw (1) securing the latch pin (2).
- b. Rotate the latch pin to the open position.



- c. Tighten the  T9 captive screw.

9. Grasp the platen roller tightly, and pull outward until the pin (1) at the far end of the platen roller assembly disengages from the platen roller coupler.

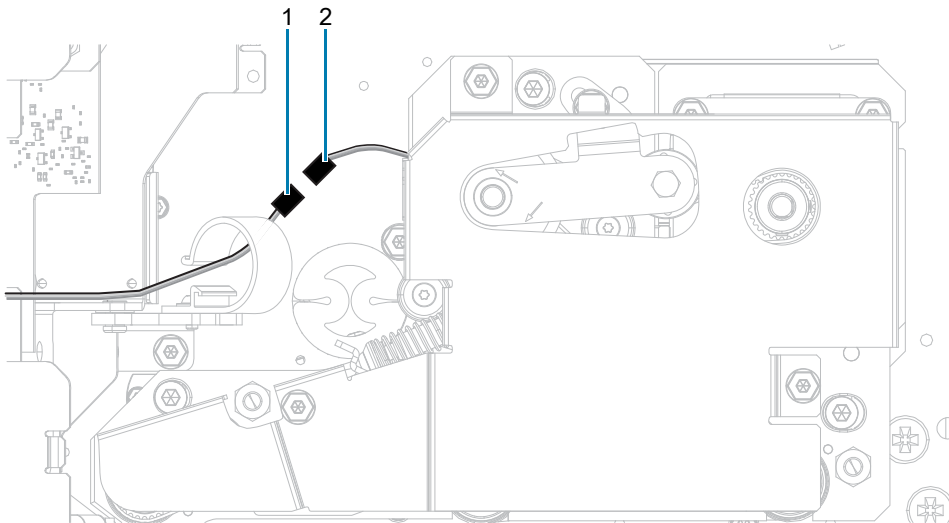


10. Remove the platen roller assembly from the print engine.

## Remove the Media Drive System

1. Separate the drive system cable connectors.

The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.



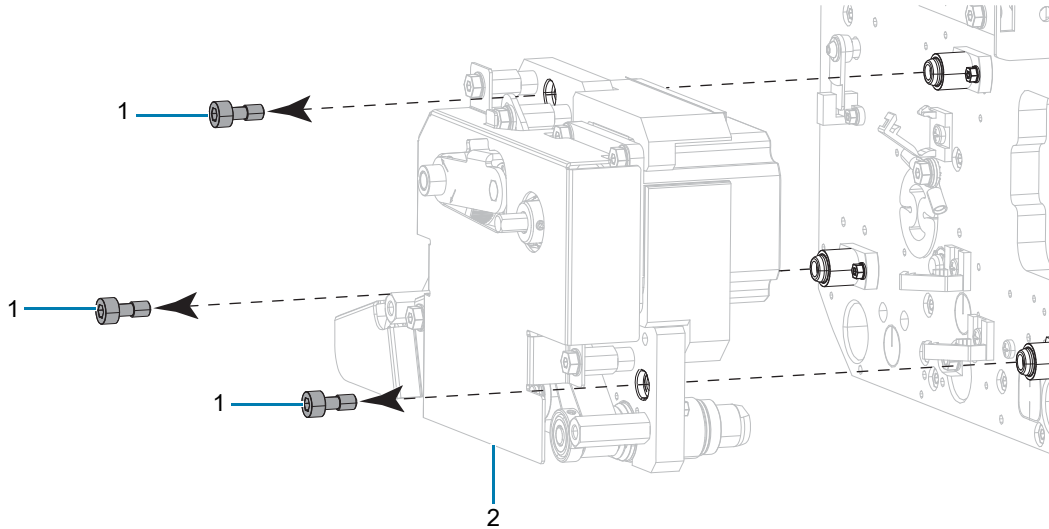
## Printhead Cables Maintenance Kit

2. Loosen the three 4mm captive hexagon screws (1) to release the drive system from the main frame.




**NOTE:** Be sure to loosen the correct screws so that you do not accidentally remove the cover of the drive system.

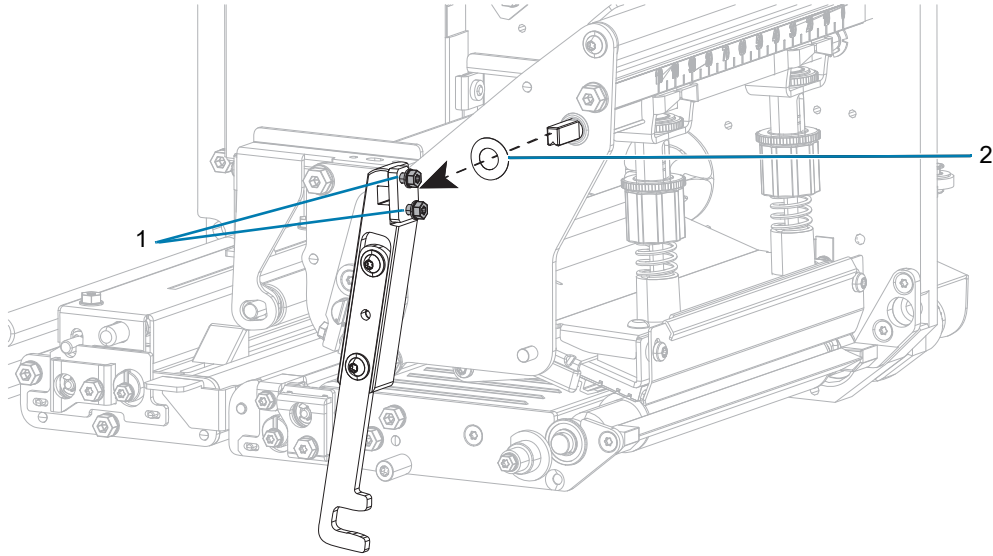
3. Remove the drive system (2) from the main frame.



for parts & service call QLC (800) 837-1309

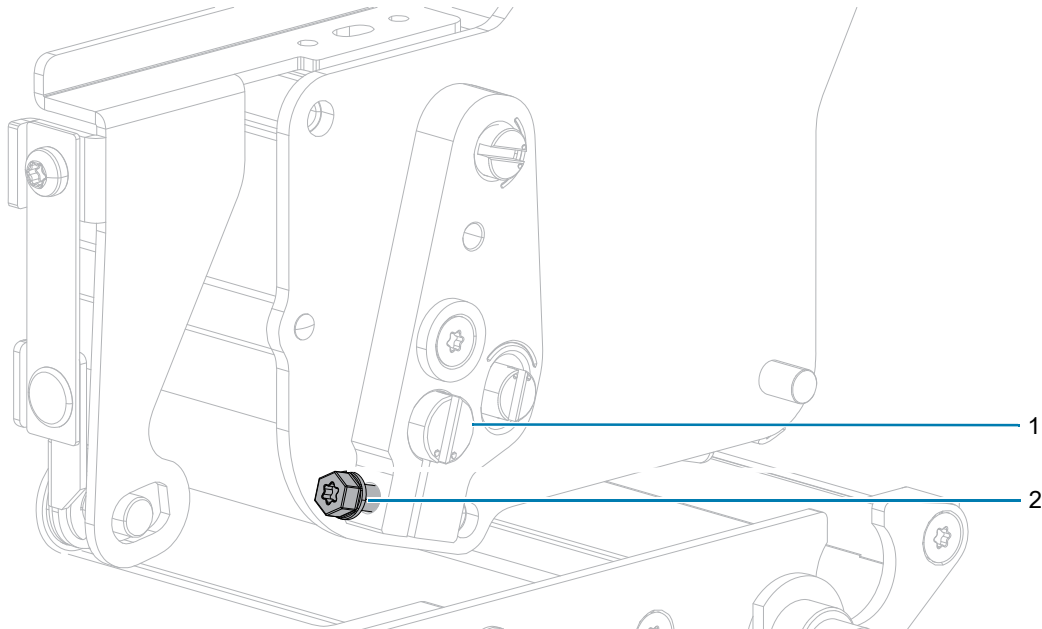
## Replace the Printhead Cables

1. Loosen the two  T8 screws (1) securing the locking lever.
2. Remove the locking lever and the wave washer (2).

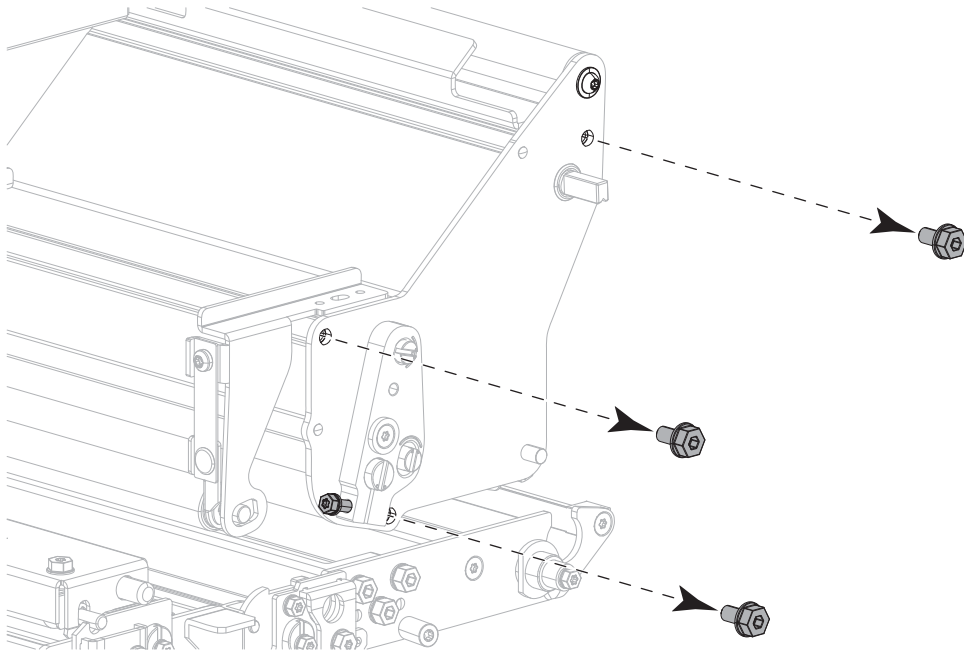


**NOTE:** Use a pencil or marker to mark the position of the pivot bar adjustment screw (1).

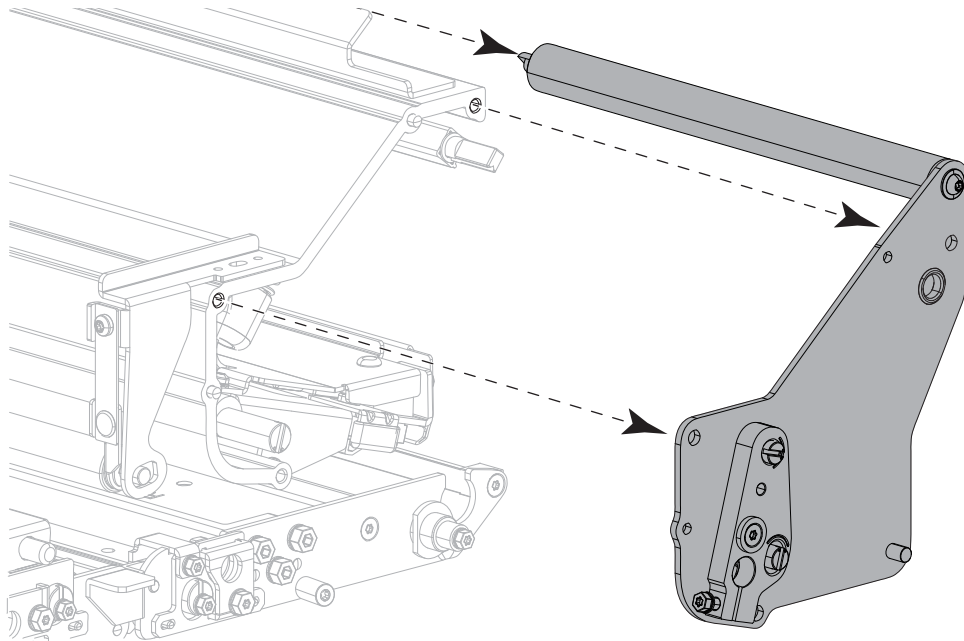
3. Loosen the  T8 pivot bar retaining screw (2).



4. Remove the three ● 3mm screws.



5. Remove the extrusion end plate from the print engine.

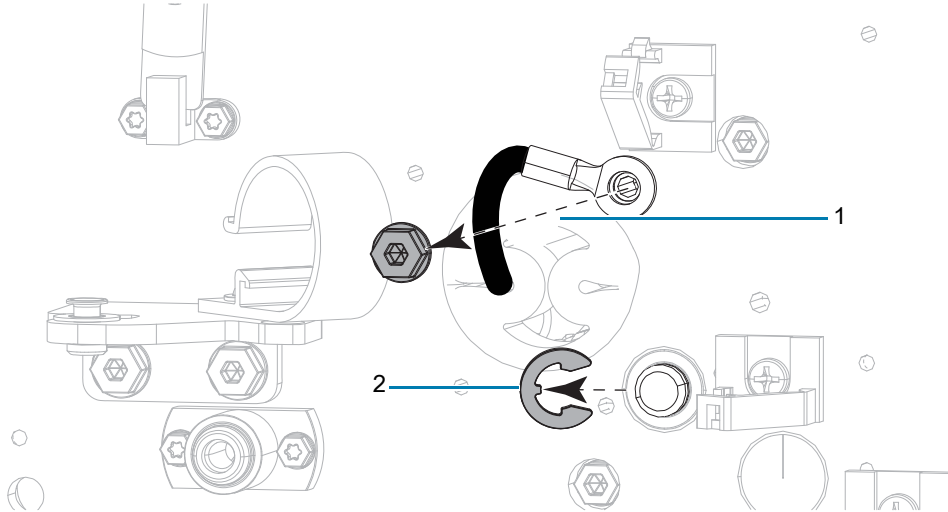


6. On the electronics side of the print engine, release the print mechanism.
  - a. Remove the ● 3mm screw (1).

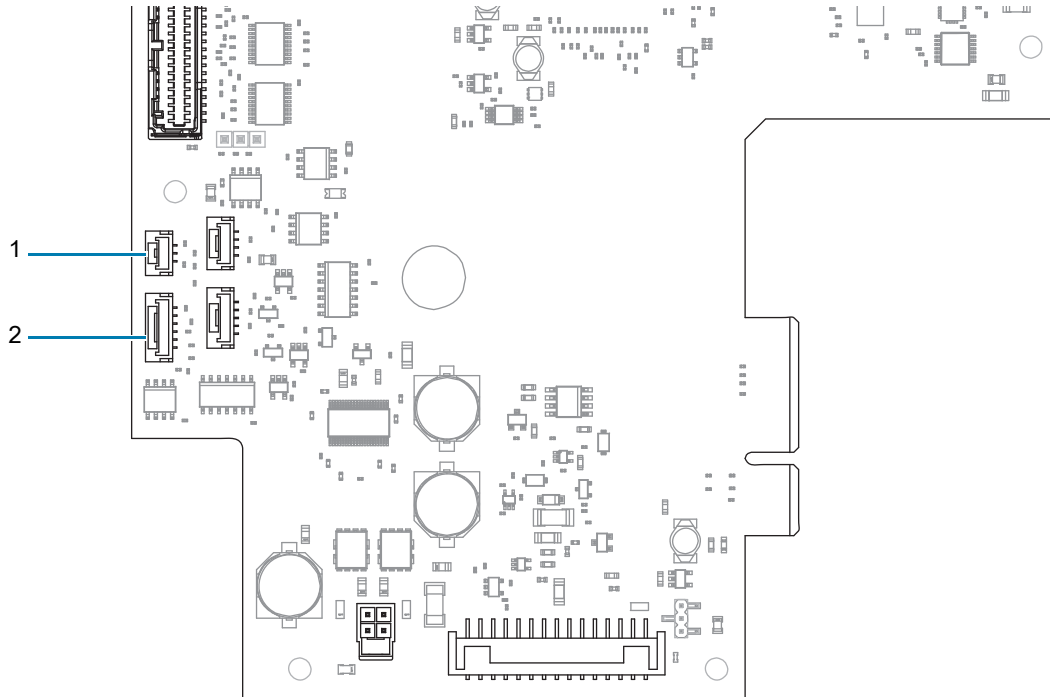


**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

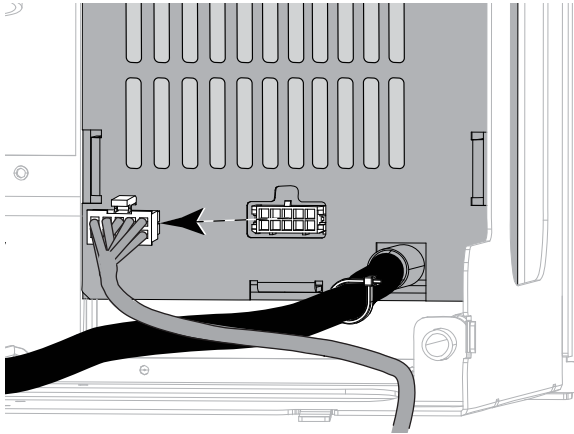
- b. Remove the E-ring (2) retaining the print mechanism.



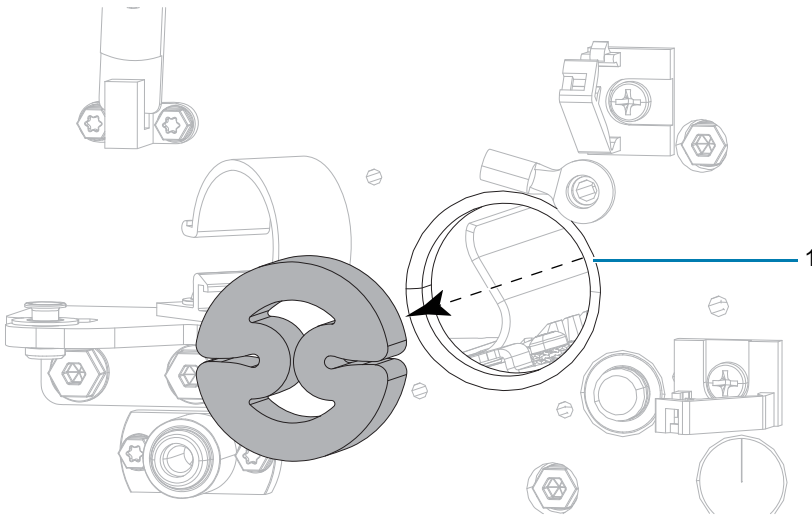
7. Disconnect the print mechanism cables from plugs J36 (1) and J37 (2) on the main logic board (MLB).



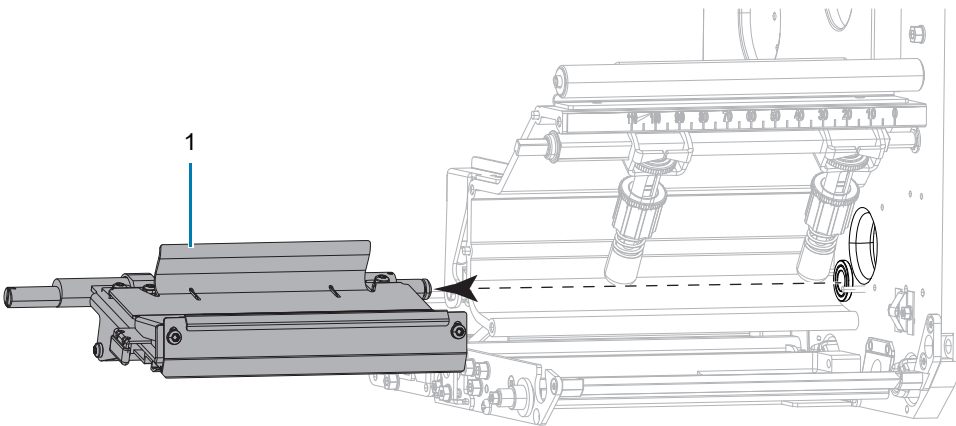
8. Disconnect the printhead power cable (1) from the power supply.




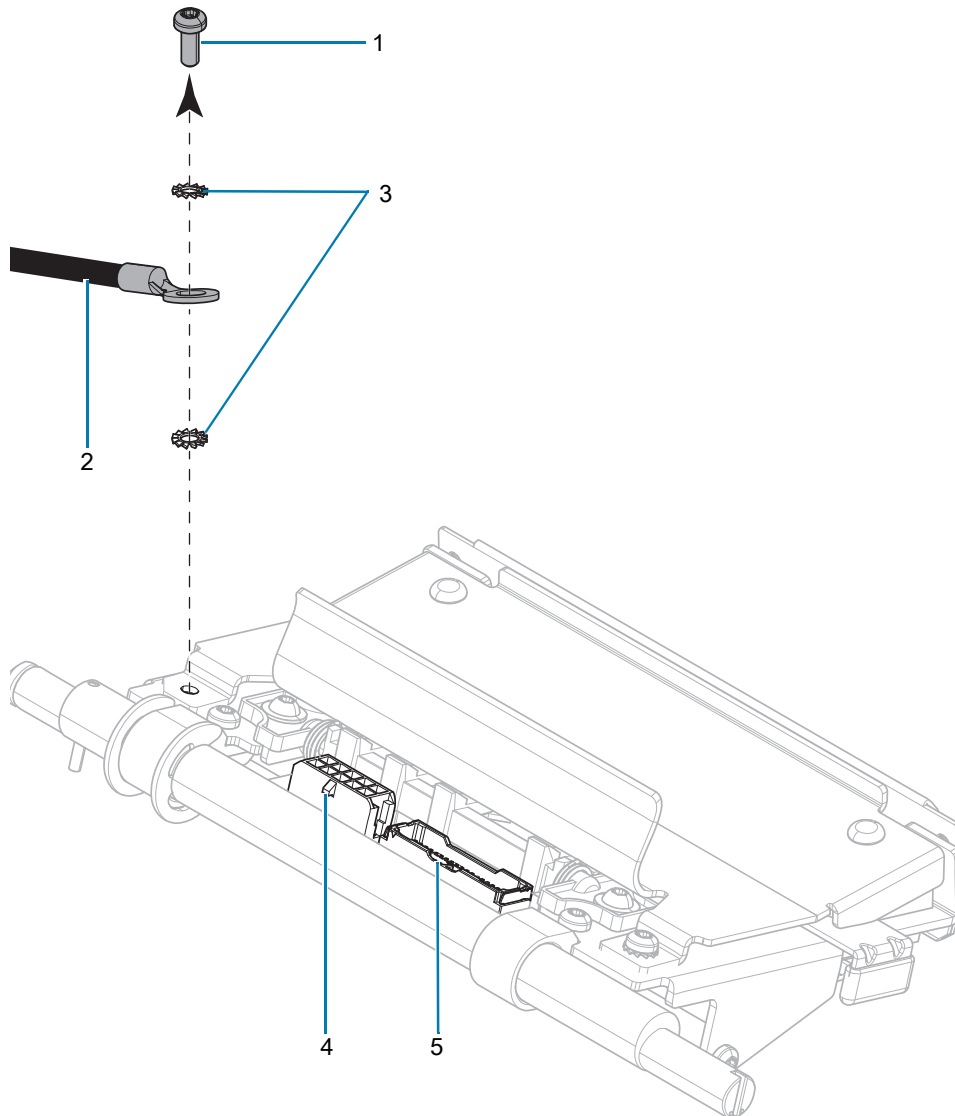
9. Remove the plug from the access hole (1).



10. Thread the cables from the print mechanism through the access hole, and remove the print mechanism (1) from the print engine.



11. Remove the  T9 screw (1), grounding cable (2), lock washers from the print mechanism.




12. Disconnect the printhead power cable (4) and the printhead data cable (5) from the print mechanism.

13. Install the new printhead data cable and printhead power cable.

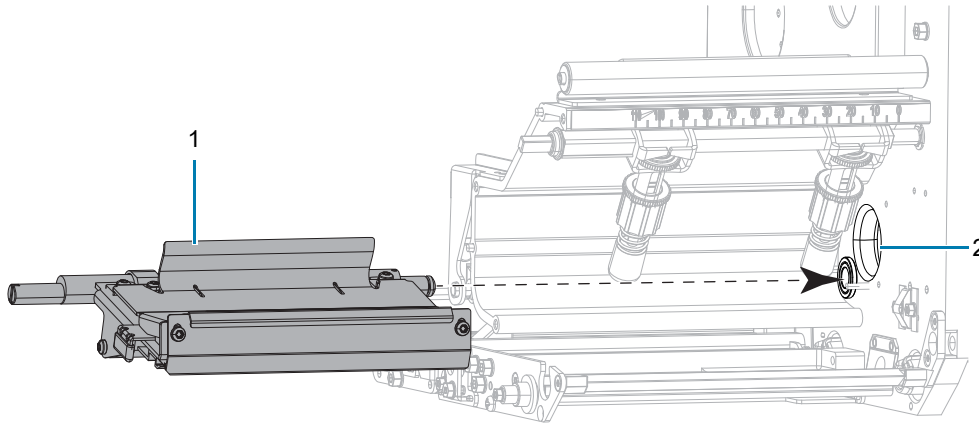


**NOTE:** Press down at the printhead data cable, at the connector, and direct the cable to the access hole.

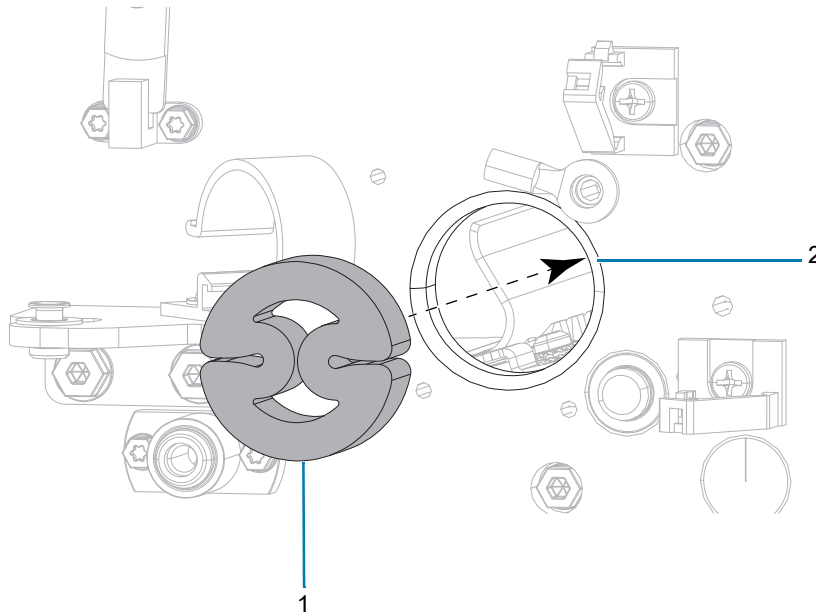
14. Install the new ground cable with the two lock washers and the  T9 screw.



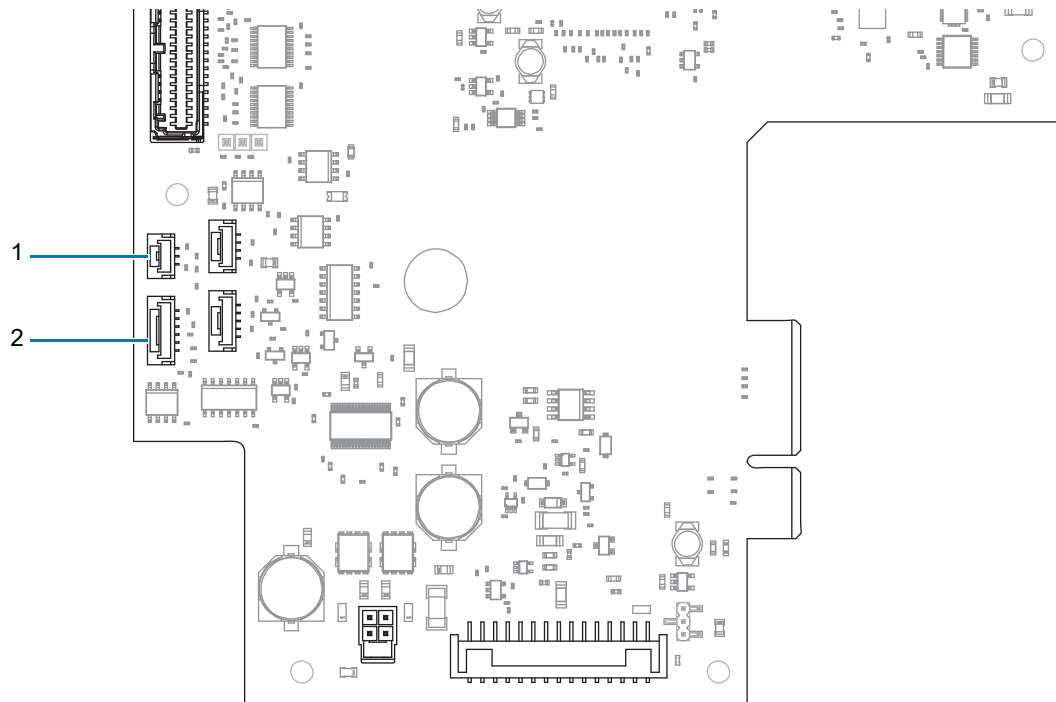
15. Guide the cables for the print mechanism (1) through the access hole (2), and then install the print mechanism.



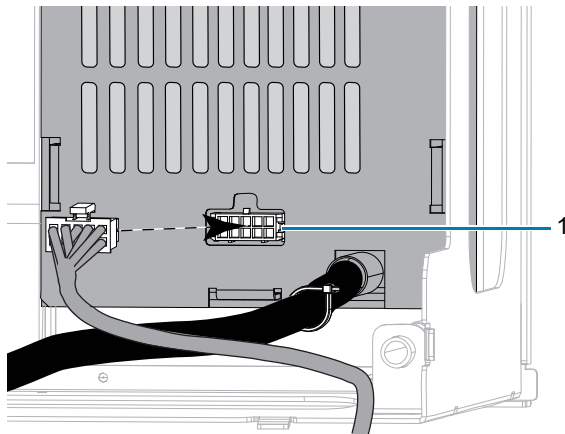
16. Install the plug (1) into the access hole (2).



17. Reconnect the print mechanism cables to plugs J36 (1) and J37 (2) on the MLB.



18. Connect the new printhead power cable (1) from the power supply.

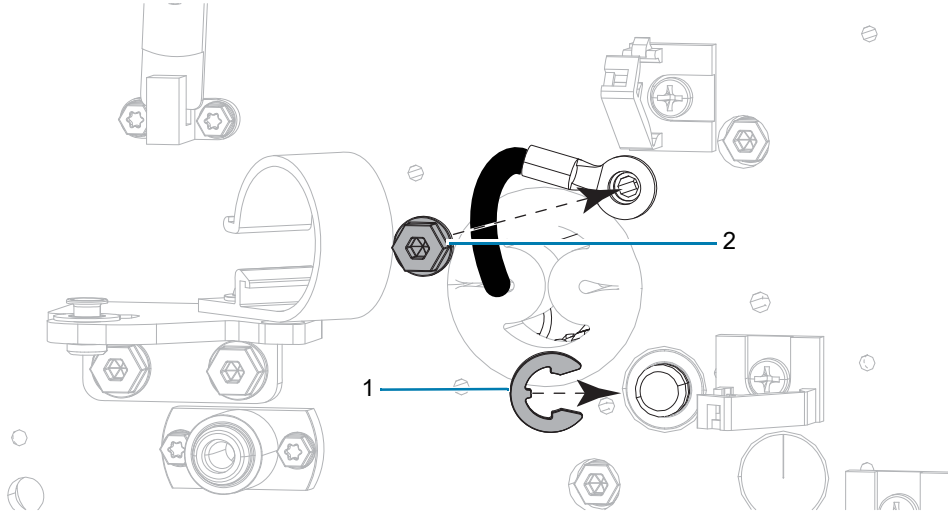


19. Secure the print mechanism.

- a. Install the new E-ring (1) onto the print mechanism shaft.
- b. Secure the print mechanism ground cable with the 3mm screw (2).



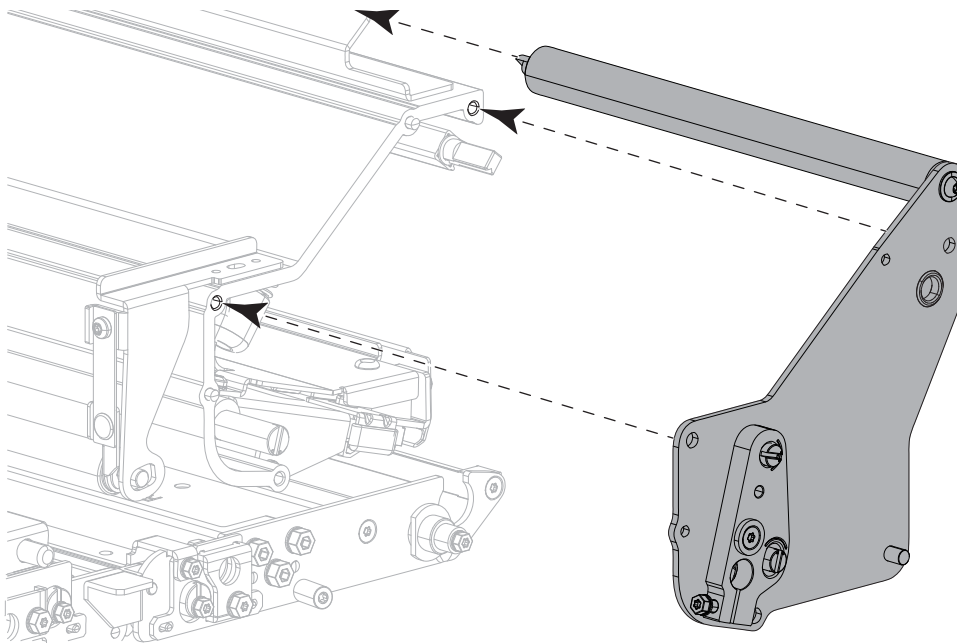
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.



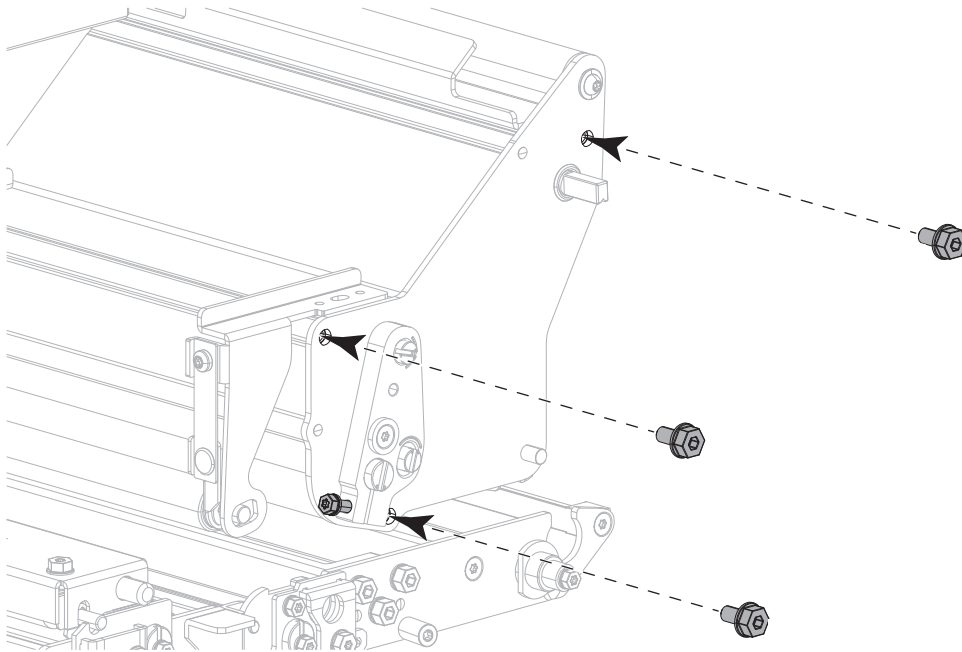
20. Reinstall the side extrusion end plate.



**NOTE:** Before reinstalling the side extrusion end plate, confirm the outboard toggle shaft bearing is in place.

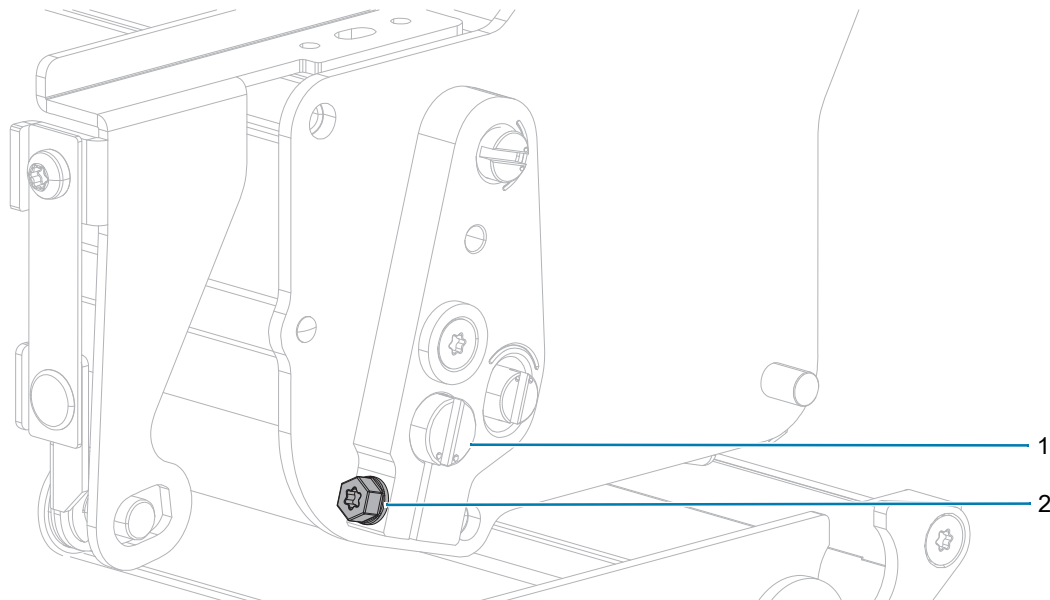


21. Replace the three ● 3mm screws.



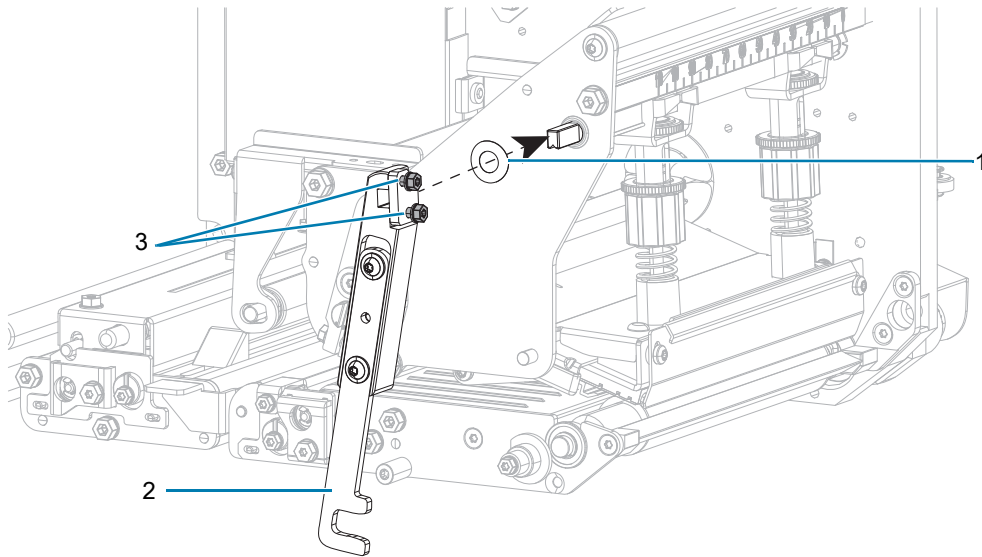
22. Align the pivot bar adjustment screw (1) with the previously made location marks.


23. Tighten the ⚙ T8 pivot bar retaining screw (2).




24. Replace the wave washer (1) and the locking lever (2).

25. Replace the spring washer (1) and locking lever.



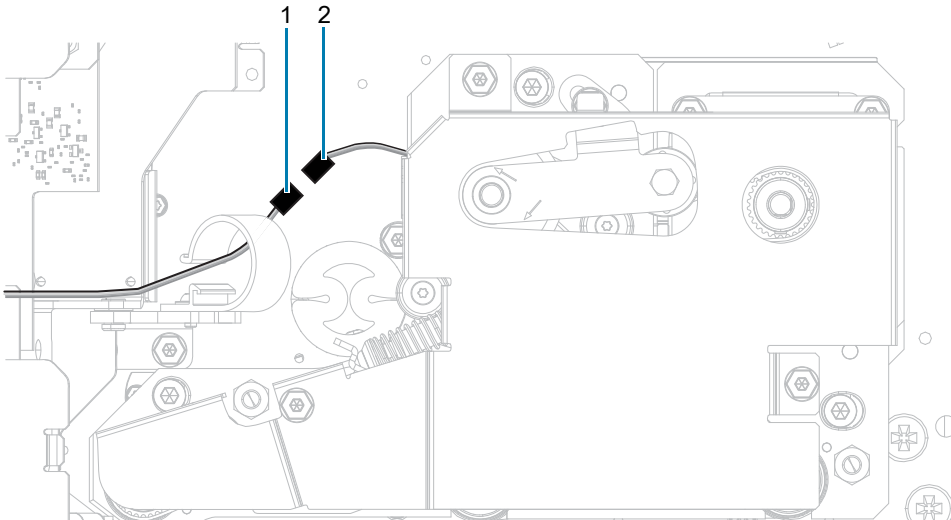
26. Tighten the locking lever retaining  T8 screws (3).

## Install the Media Drive System

1. Align the drive system with the drive system mounts on the main frame, and then reinstall the three  4mm captive screws.

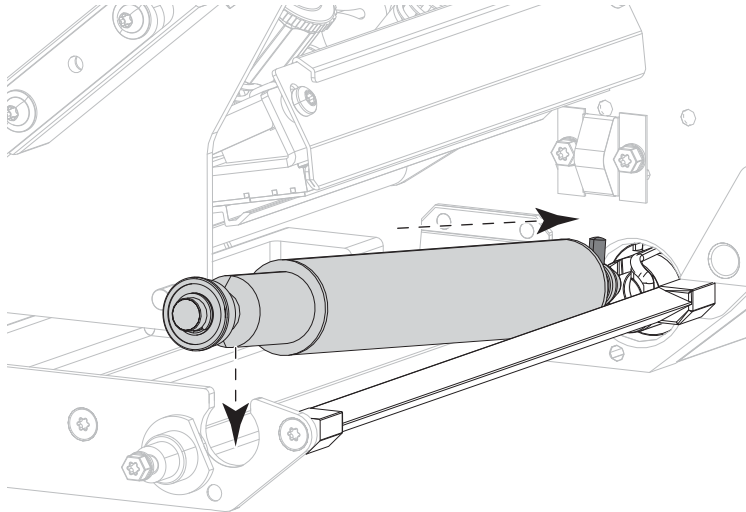
2. Reconnect the stepper motor cable connectors.


The long part of the cable (1) plugs into J15 on the main logic board (MLB). The short part of the cable (2) is wired to the stepper motor.

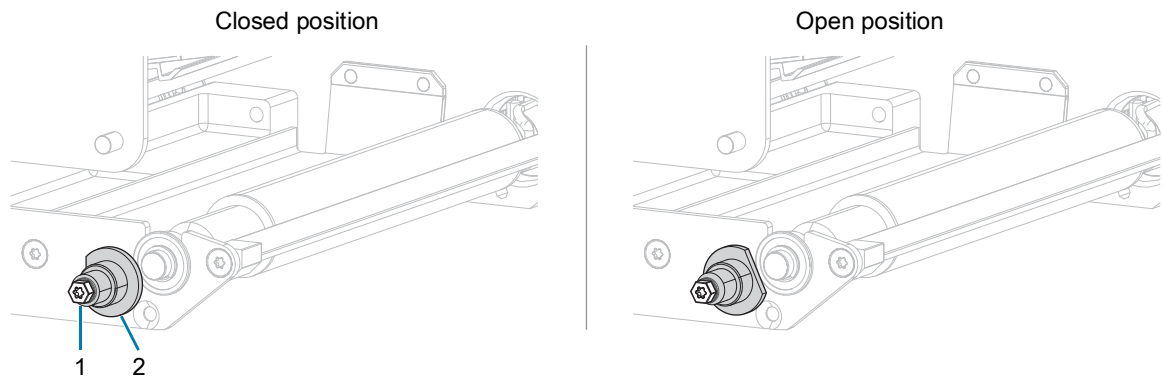


## Replace the Rollers

1. Align the pin on the platen roller assembly with the slot in the platen roller coupler, and then lower the other end of the platen roller assembly into place.

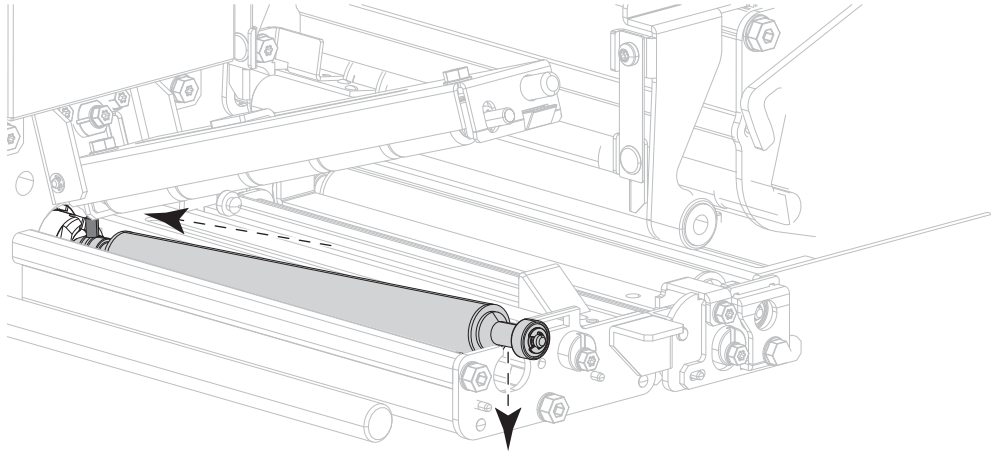



2. Grasp the platen roller tightly, and push the platen roller assembly into the coupler until it clicks into place.
3. Secure the platen support plate latch pin in the closed position.
  - a. Loosen the  T9 captive screw (1) securing the latch pin (2).
  - b. Rotate the latch pin to the closed position.

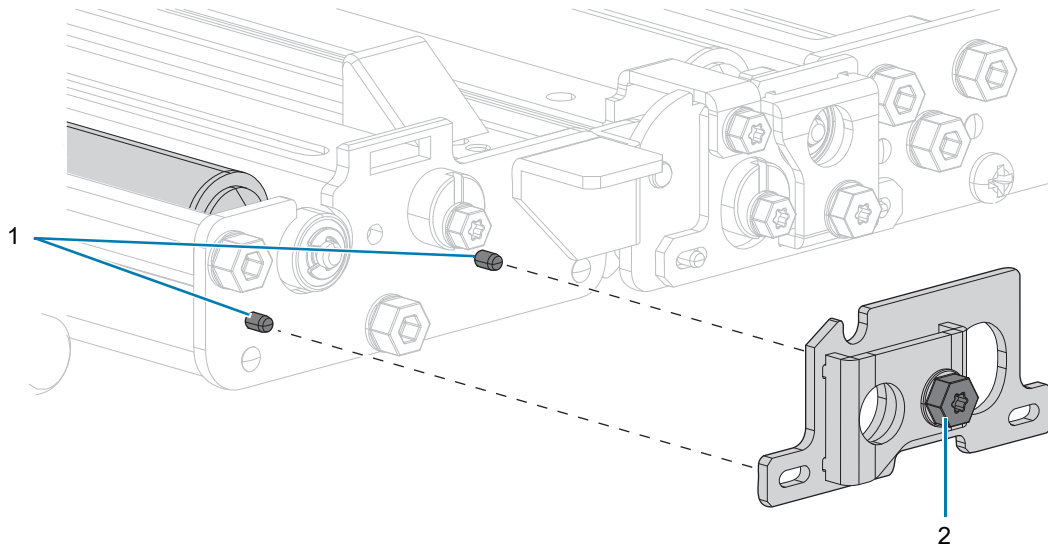


- c. Tighten the  T9 captive screw.

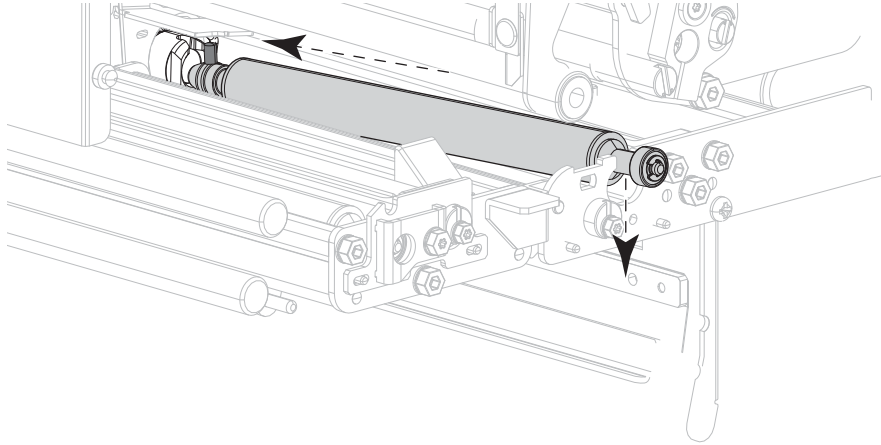
4. Align the pin on the pinch roller assembly with the slot in the pinch roller coupler, and then lower the other end of the pinch roller assembly into place.




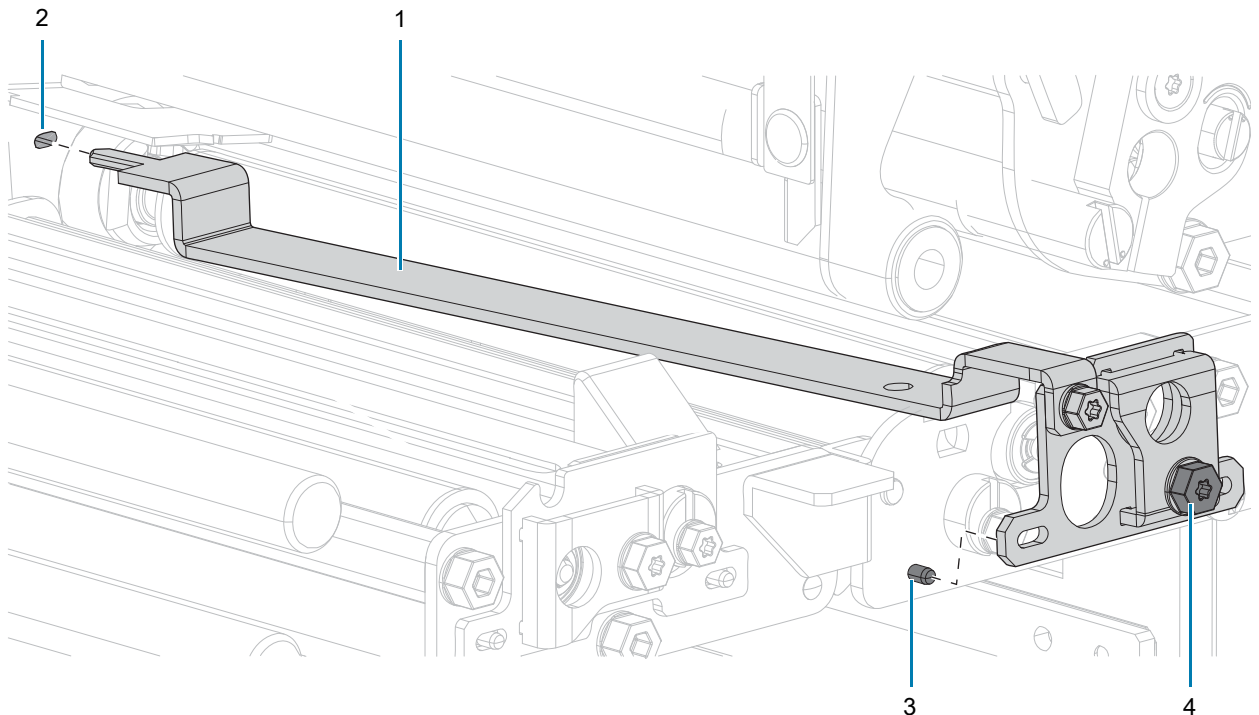
5. Grasp the pinch roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
6. Reinstall the pinch roller cam plate.
  - a. Slide the pinch roller cam plate onto the two support pins (1).
  - b. Tighten the  T9 captive screw (2) securing the pinch roller cam plate.



7. Align the pin on the peel roller assembly with the slot in the peel roller coupler, and then lower the other end of the peel roller assembly into place.



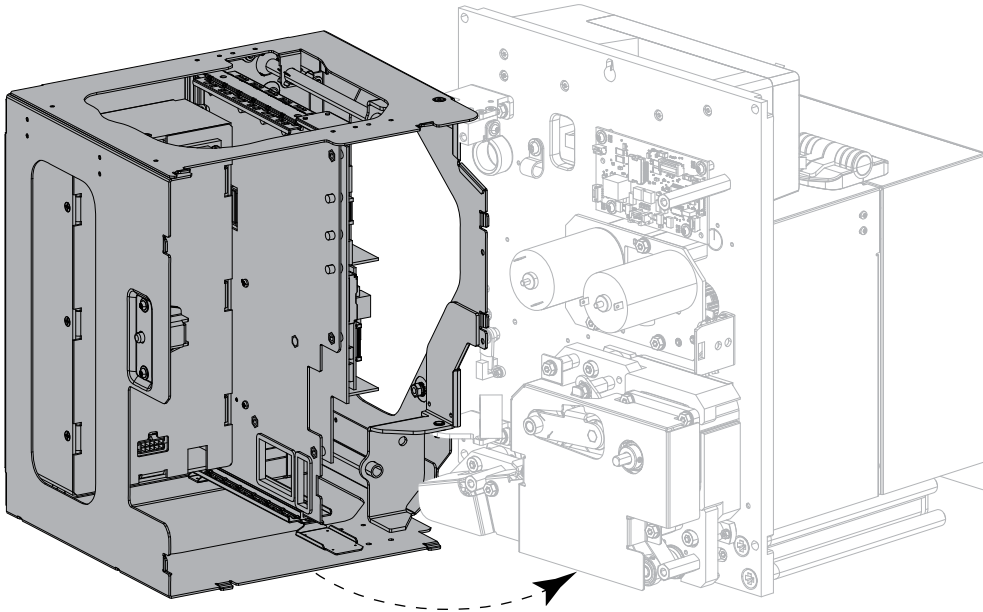
8. Grasp the peel roller tightly, and push the pinch roller assembly into the coupler until it clicks into place.
9. Reinstall the peel roller cam plate and attached deflector plate.
  - a. Align the end of the deflector plate (1) with the hole in the mainframe (2).
  - b. Slide the peel roller cam plate onto the two support pins (3). (Only one is visible in this graphic.)
  - c. Tighten the  T9 captive screw (4) securing the peel roller cam plate.



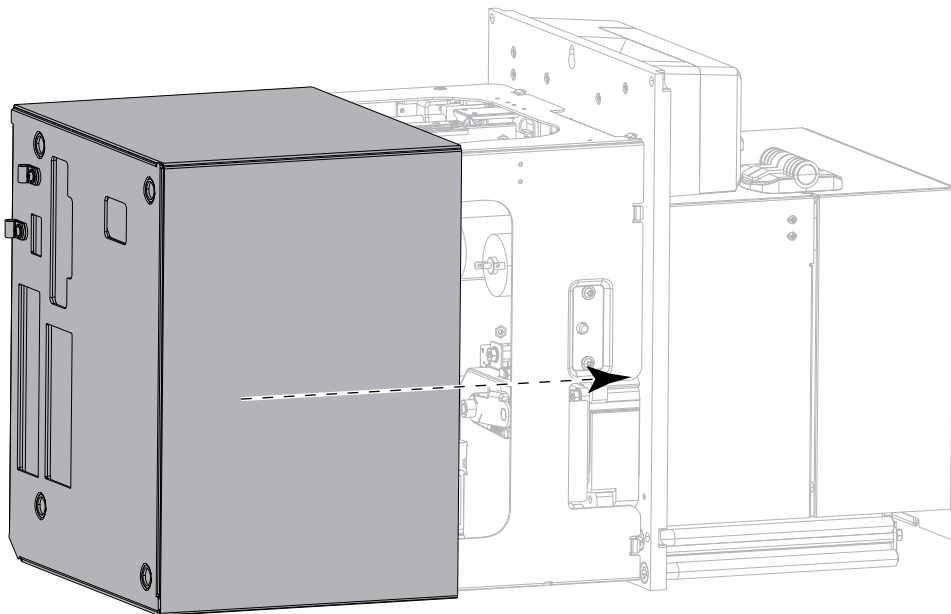


## Close the Electronics Enclosure

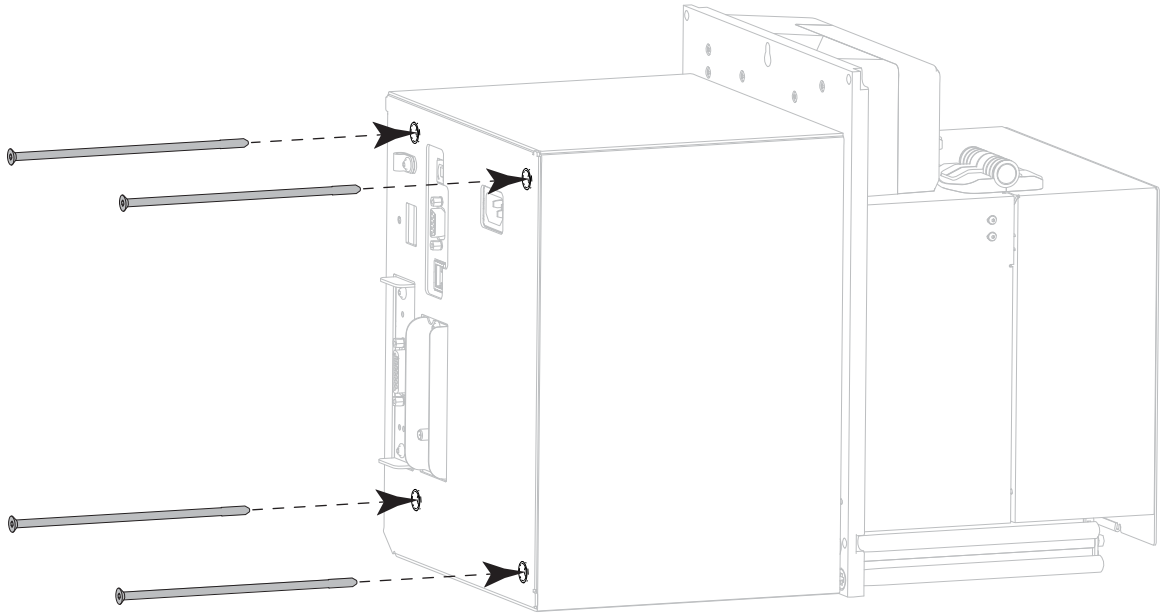
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.

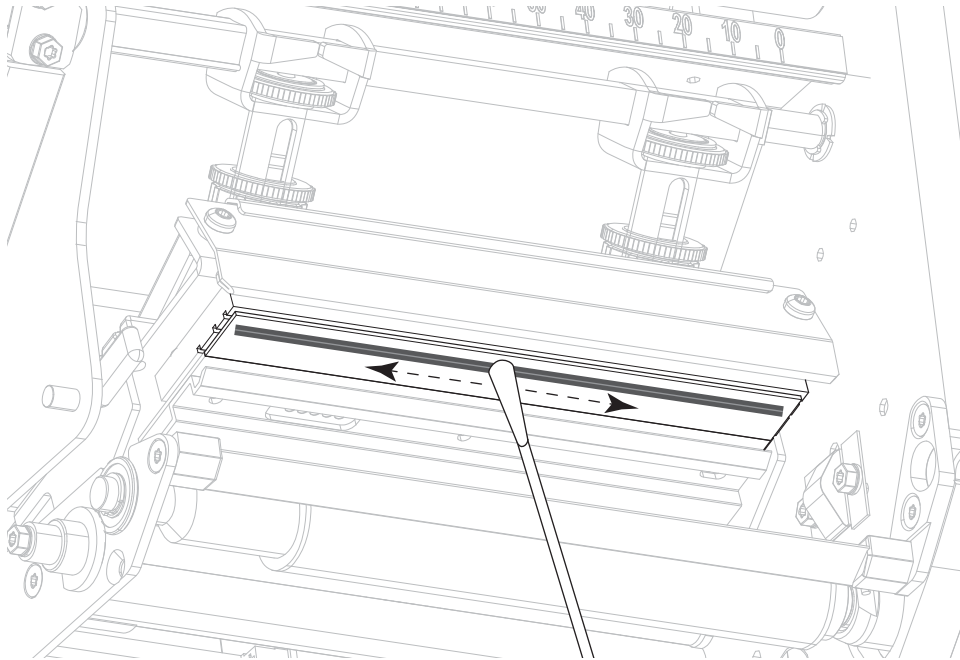


3. Install the four 3mm screws securing the electronics enclosure cover.



## Clean the Printhead

1. Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.
2. Allow the solvent to evaporate.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect AC power cord and interface cables.
6. Turn on (I) the printer power.

## Print Line, Balance, and Skew Adjustment



**NOTE:** Before making these adjustments, space the toggles evenly over the media being used. For the best results, adjust the darkness or toggle pressure as needed to make the print somewhat light before proceeding.

To adjust print line, balance, and skew, it is recommended that you initiate a PAUSE self-test. During this test, the print engine prints multiple copies of a sample label as the labels print, you can adjust the following:

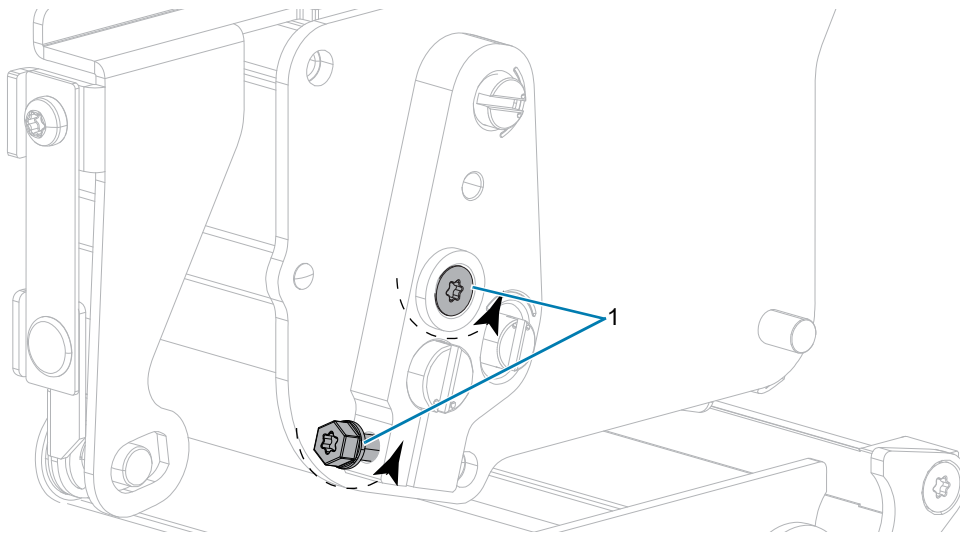
- The location of the print line, to ensure proper positioning of the printhead on the platen roller for the appearance of the printed image.
- The balance, to make sure that labels print with equal darkness from one side of the label to the other.
- The skew, to make sure that the image is parallel with the media.

If any one of the above items is set correctly, you do not need to adjust it. You may opt to print your own label format instead of using the PAUSE self-test.

1. Loosen the two ● 3mm adjustment retaining screws (1).



**IMPORTANT:** Tighten the two ● 3mm adjustment retaining screws between adjustments.



2. Initiate a PAUSE self-test.
  - a. Turn off the print engine.
  - b. Press and hold **PAUSE** while turning on the print engine.
  - c. Hold **PAUSE** until the first control panel light turns off.

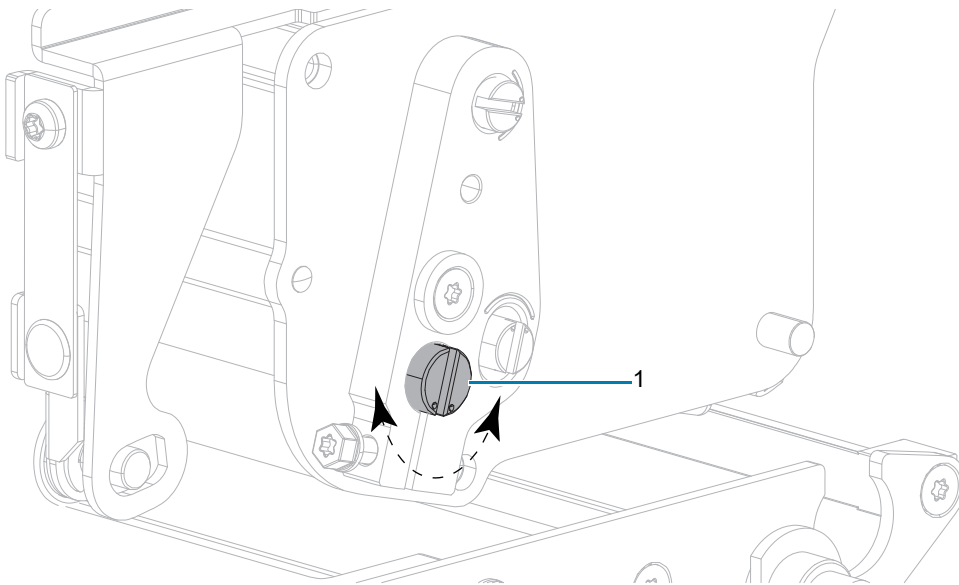


**NOTE:** At any time during the PAUSE self-test,

- Press **PAUSE** to print 15 additional labels.
- Press **CANCEL** to change the print speed.
- Press and hold **CANCEL** to exit the self-test.

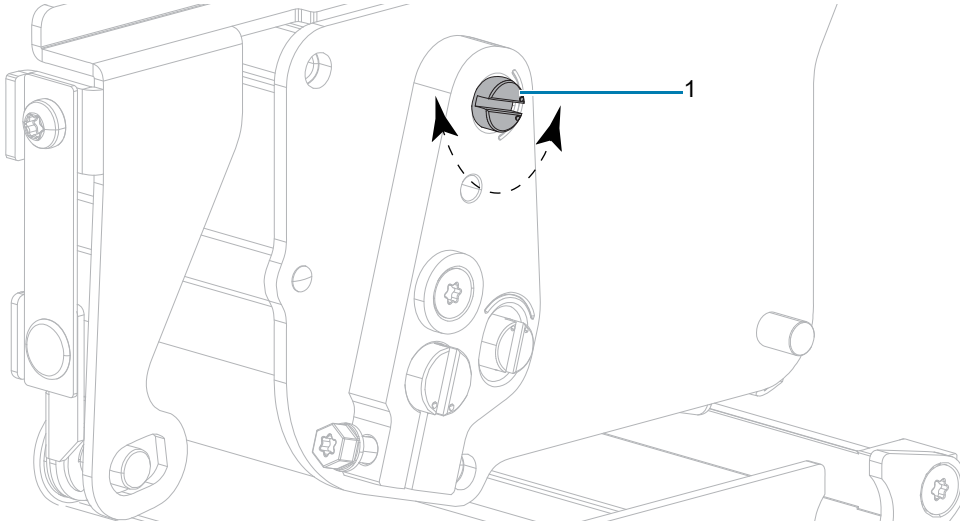
### Adjust the Print Line

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the print line adjuster PAUSE(1). Adjust the print line forward/backward to find the best appearance of the printed image.



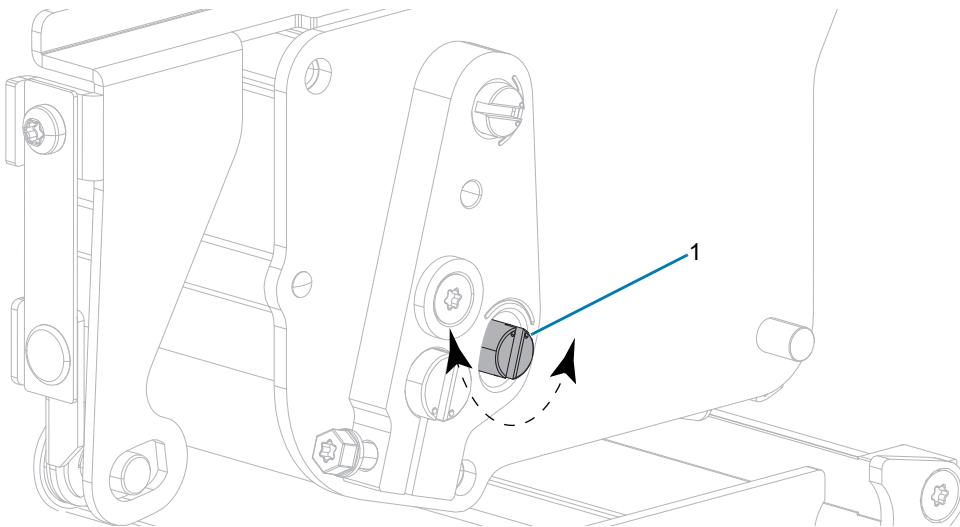
## Adjust the Balance

While PAUSE self test labels are printing, use a flat-blade screwdriver to rotate the balance adjuster (1). Adjust the balance until the print is even across the width of the printhead.



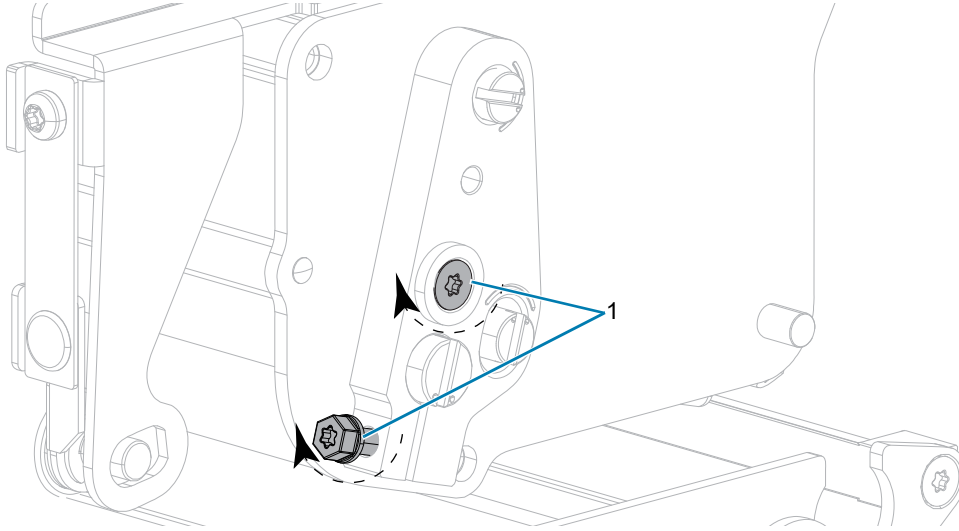
## Adjust the Skew

1. While PAUSE self-test labels are printing, use a flat-blade screwdriver to rotate the skew adjuster (1). Adjust the skew until the vertical lines on the PAUSE self-test label print parallel to the edges of the label the label (not at a diagonal).



## Place Print Engine to Operating State

1. Exit the PAUSE self-test by pressing and holding cancel.
2. Tighten the two ● 3mm adjustment screws (1).



The installation is complete.

## Installation Instructions

This kit contains replacement cables and associated parts for the ZE511 and ZE521 printers. For instructions on replacing any of these parts, refer to the ZE511/ZE521 Service Guide.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

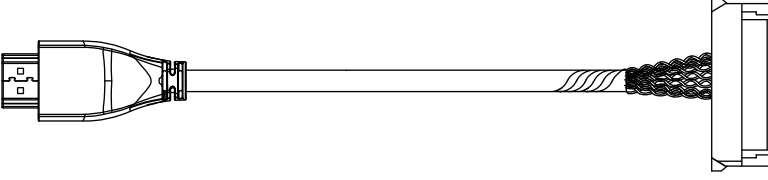

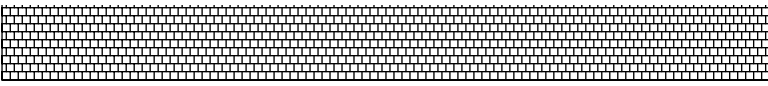
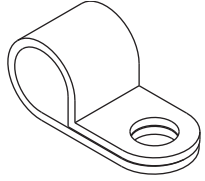
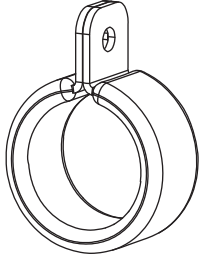


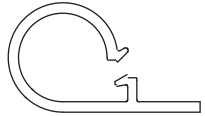


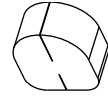
## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Ground cable Qty: 2
	Ribbon take up cable Qty: 1
	Applicator cable Qty: 1
	USB host cable Qty: 1
	Bluetooth cable Qty: 1
	Ribbon take up motor cable Qty: 1
	Power switch cable Qty: 1











# Electronics Cables Maintenance Kit

	HDMI cable internal Qty: 1
	Motor extension cable Qty: 1
	Cable wrap cauterized Qty: 1
	Cable clamp nylon Qty: 1
	Cable clamp stainless steel Qty: 1
	Cable clamp saddle locking Qty: 3
	Cable clamp saddle locking micro Qty: 1
	Cable clamp screw mount Qty: 1
	Ribbon sealing plug Qty: 3
	Printhead sealing plug Qty: 1
	Media sealing plug Qty: 1

for parts & service call QLC (800) 837-1309

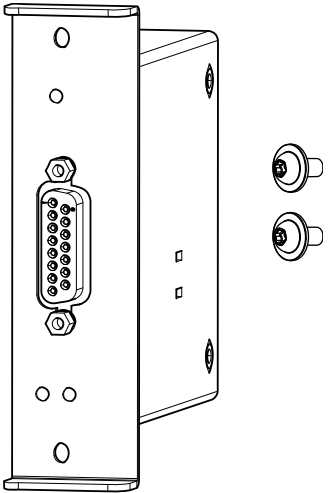
## Electronics Cables Maintenance Kit

	Cable tie Qty: 17
	Screw (M3x10 pan washer) Qty: 1
	Screw (M4x8 pan washer mach) Qty: 1
	Screw (M4x10 hex so ni) Qty: 1
	Screw (M3x6 pan washer mach) Qty: 4
	Screw (M3x8 pan washer mach) Qty: 1
	Nut M4-zn Qty: 2
	Lock washer 4 mm Qty: 3

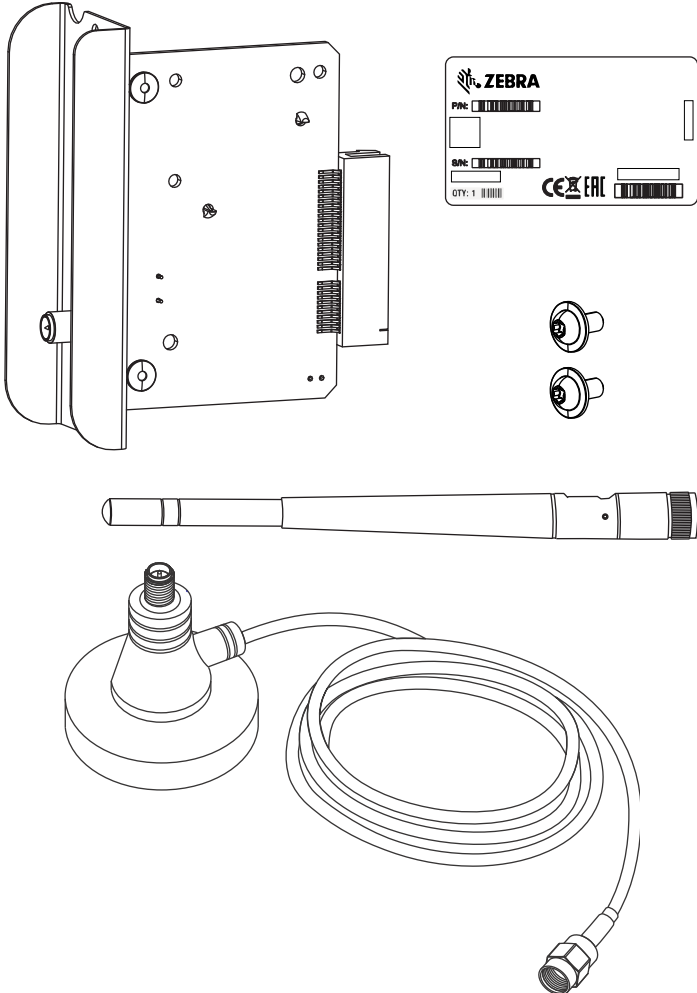

for parts & service call QLC (800) 837-1309

# Option Boards

This section supplies you with the parts information and links to installation procedures for the option boards.

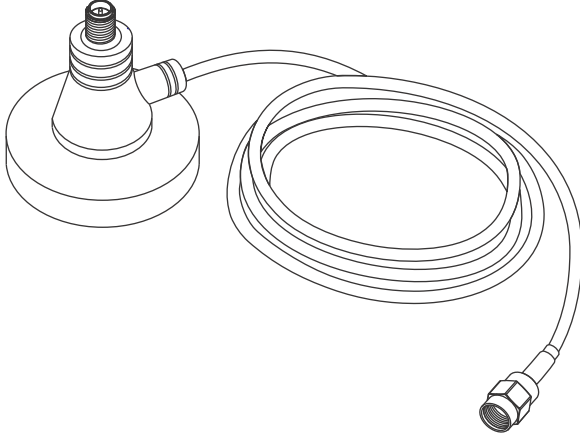
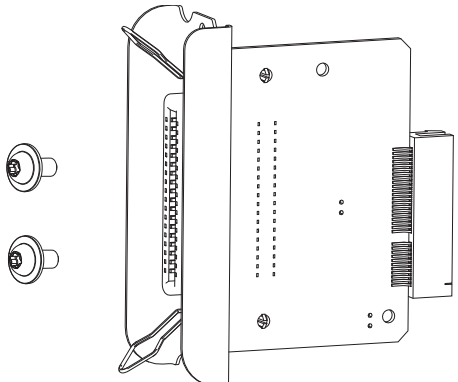
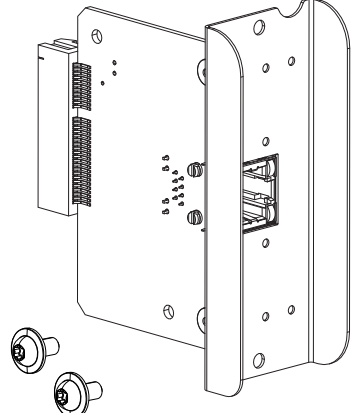
Description	Kit Number	Kit Name
<p><a href="#">Applicator Interface Board Maintenance Kit on page 759</a></p> 	P1112750-044	Kit, Applicator Interface Board, ZE511, ZE521, RH & LH

## Option Boards

Description	Kit Number	Kit Name
<p>ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit on page 774</p> 	P1112750-045A	Kit, Wireless WiFi 802.11ac, USA and Canada, includes magnetic antenna mount, ZE511, ZE521, RH & LH
	P1112750-045B	Kit, Wireless WiFi 802.11ac, Japan, includes magnetic antenna mount, ZE511, ZE521, RH & LH
	P1112750-045C	Kit, Wireless WiFi 802.11ac, All Countries except USA, Canada and Japan, includes magnetic antenna mount, ZE511, ZE521, RH & LH
<p>ZebraNet Wireless Print Server Antenna Maintenance Kit on page 779</p> 	P1037974-053	Kit, Replacement Antenna for Wireless WiFi 802.11ac and n

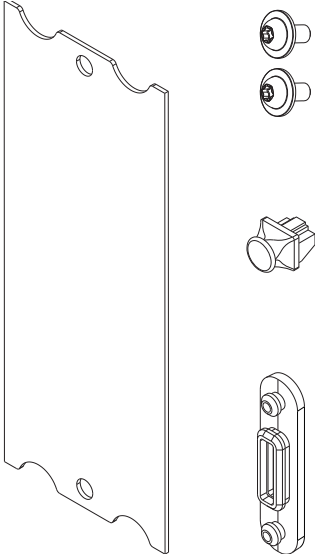
for parts & service call QLC (800) 837-1309

## Option Boards

Description	Kit Number	Kit Name
<p>ZebraNet Internal Wireless Print Server Magnetic Mount and Tethered Cable Kit on page 780</p>  <p>The image shows a magnetic mount with a threaded top and a tethered cable with a connector at the end.</p>	39518M	Kit, Replacement Magnetic Antenna Mount (antenna not included), ZE511, ZE521 (39518M)
<p>Parallel Port Option/Maintenance Kit on page 782</p>  <p>The image shows a parallel port card with two screws and a connector on the side.</p>	P1083320-040	Kit, Parallel Port Card, ZT610, ZT620, ZT510, ZE511 RH & LH, ZE521 RH & LH
<p>IPv4 Internal Print Server Maintenance Kit on page 784</p>  <p>The image shows an IPv4 internal print server maintenance kit with two screws and a connector on the side.</p>	P1083320-039	Kit, Internal Print Server IPv4 (Ethernet) ZT600 Series, ZT510, ZE511, ZE521

for parts & service call QLC (800) 837-1309

# Option Boards

Description	Kit Number	Kit Name
<p>Slot Covers for Options on page 790</p> 	<p>P1112750-050</p>	<p>Kit, Covers for Option Slots, ZE511, ZE521, RH &amp; LH</p>

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Applicator interface board Qty: 1
	Applicator cable Qty: 1
	Screw (pan washer mach M3x6)  Qty: 2 T10

## Tools Required

-  Hexalobular (6-lobe, star) keys, drivers, or bits  
 Size: T10, T15
-  Sorting bin for screws and small parts (optional)

for parts & service call OLC (800) 837-1309

## Installation of Only the New Applicator Interface Board

Follow the instructions in this section if you need to replace only the applicator interface board and not the cable. To replace both the applicator board and the cable, go to [Installation of Both the New Applicator Interface Board and Cable on page 762](#).

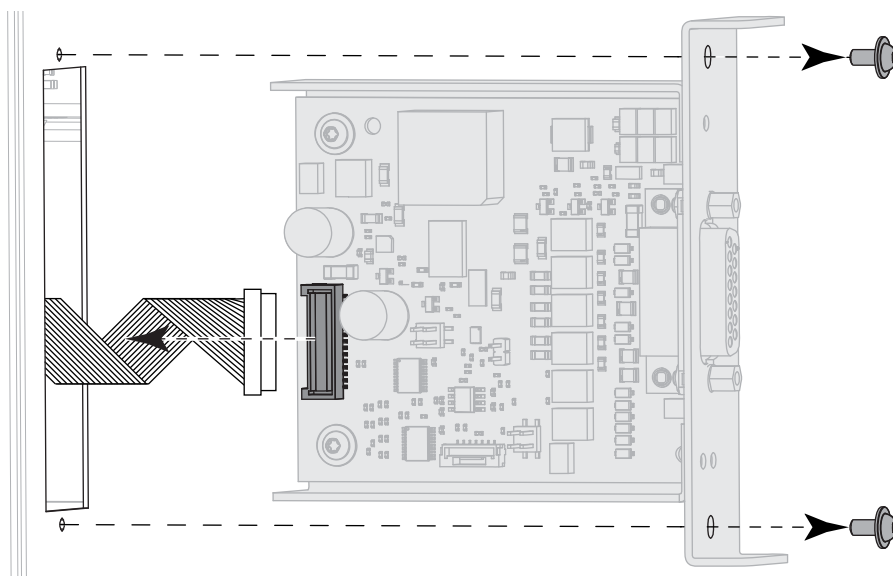


**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

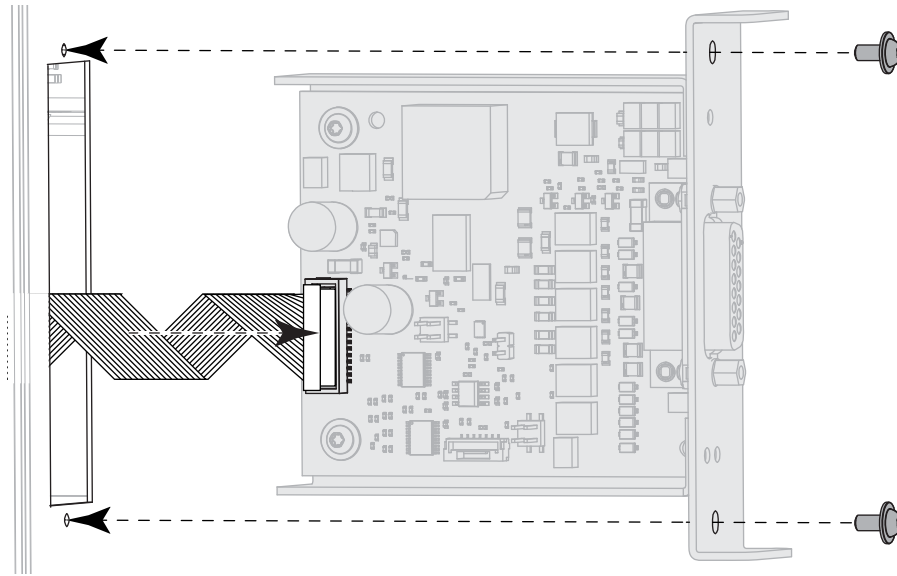
1. To remove the old applicator interface board:
  - a. Remove the two mounting screws securing the applicator interface board.
  - b. Slide out the applicator interface board.
  - c. Disconnect the applicator cable from the applicator interface board, making sure to keep the end of the cable from falling inside the printer.



2. To install the new applicator interface board:
  - a. If necessary, configure the jumpers on the new applicator board (see [Jumper Configuration on page 768](#)).
  - b. Connect the applicator cable to the new applicator interface board.



- c. Insert the new applicator interface board, and secure it using the two new screws.



3. Reconnect the AC power cord and interface cables, and then turn on the printer power.
4. If necessary, change your Energy Star setting (see [Energy Star Effect on the Applicator Interface Board on page 773](#)).
5. If necessary, change the voltage using the `device.applicator.voltage SGD` command (see [Table 7 on page 767](#)). Then power cycle the printer.

**The installation is complete.**

## Installation of Both the New Applicator Interface Board and Cable

Follow the instructions in this section if you need to replace both the applicator interface board and the cable. To replace just the applicator board, go to [Installation of Only the New Applicator Interface Board on page 760](#).

### Prepare for Installation



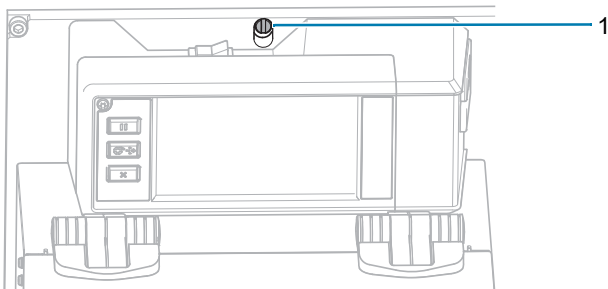
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



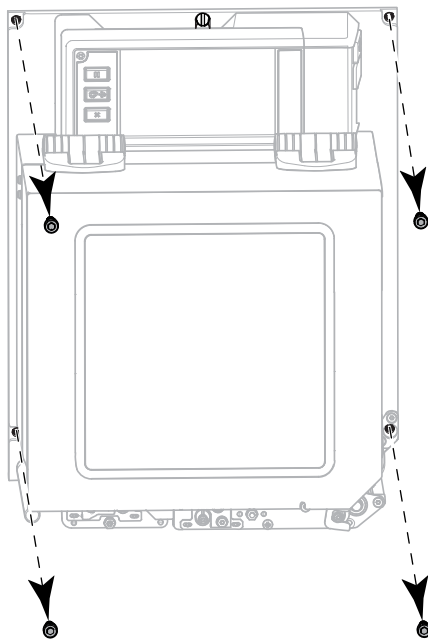
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.

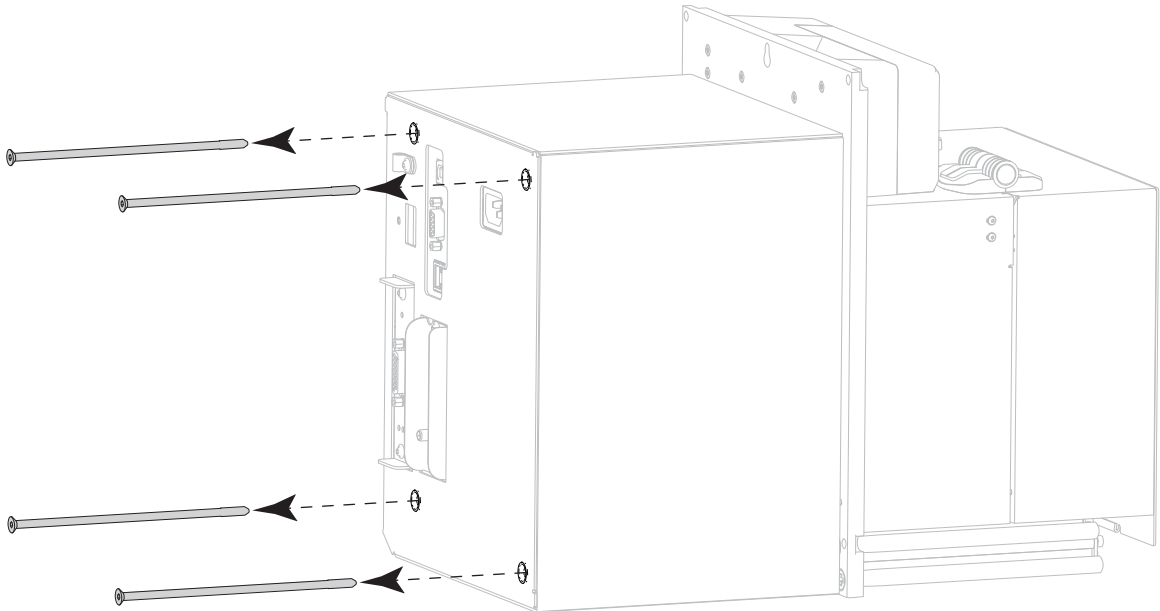


3. Lift the print engine off of the center mounting bolt and place it on a workbench.

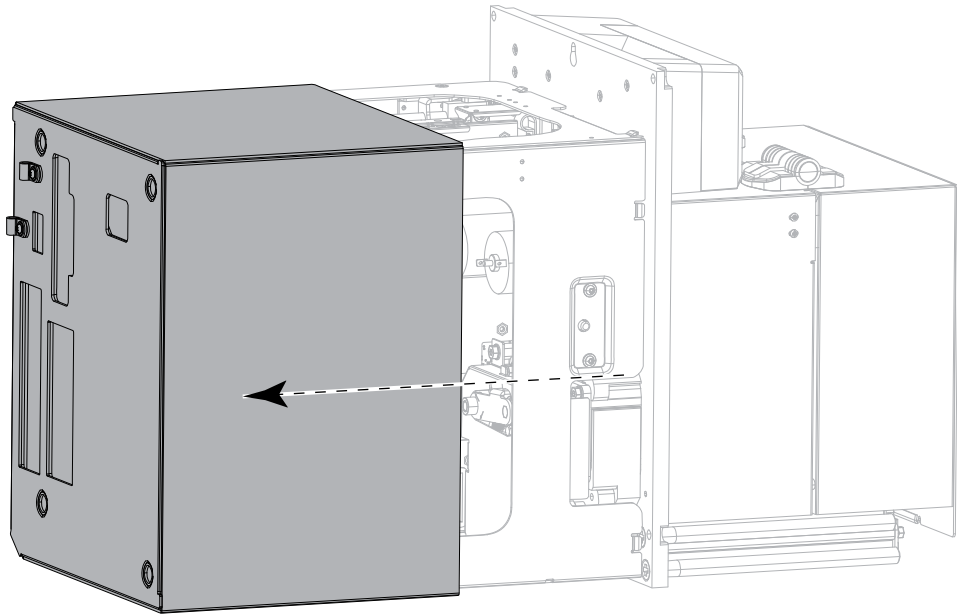
for parts & service call QLC (800) 837-1309

## Replace the Applicator Interface Board and Cable

1. Remove the four screws from the electronics enclosure cover.

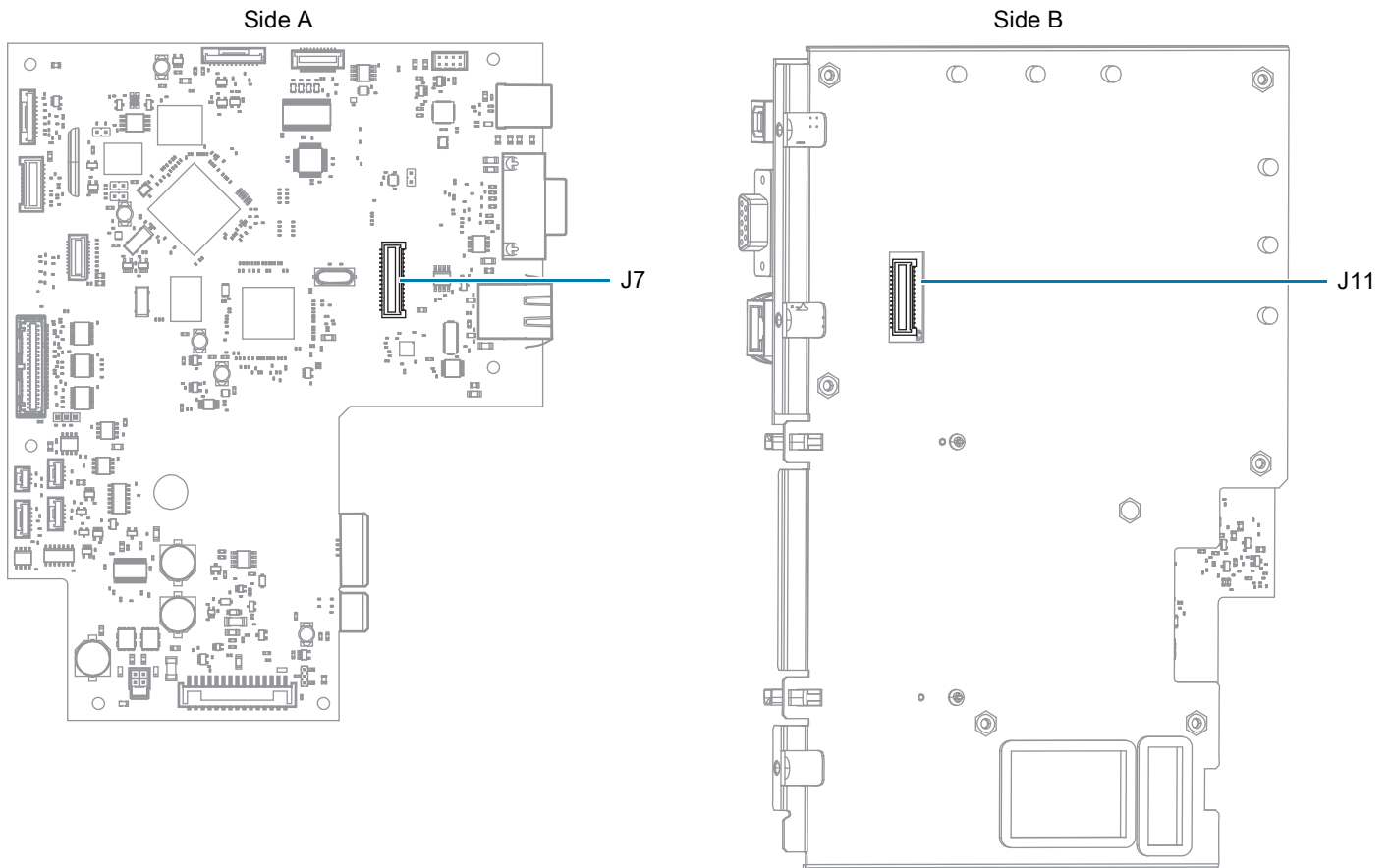


2. Remove the electronics enclosure cover from the print engine.

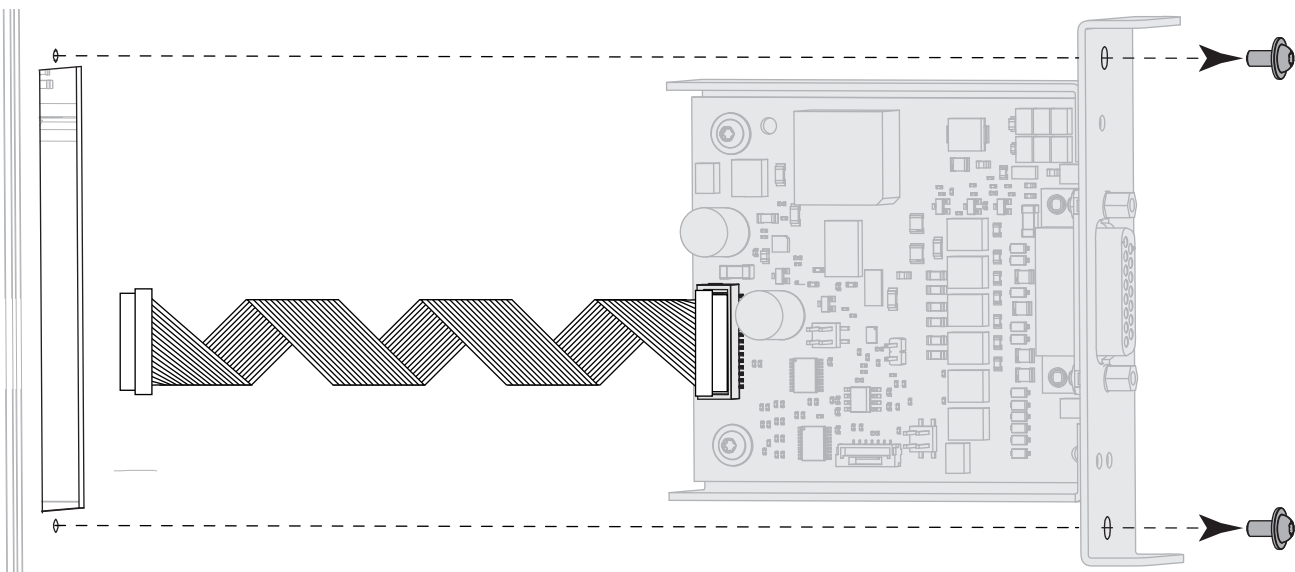


## Applicator Interface Board Maintenance Kit

3. Disconnect the old applicator cable from J7 on side A of the MLB for right-hand (RH) print engines or from J11 on side B of the MLB for left-hand (LH) print engines.

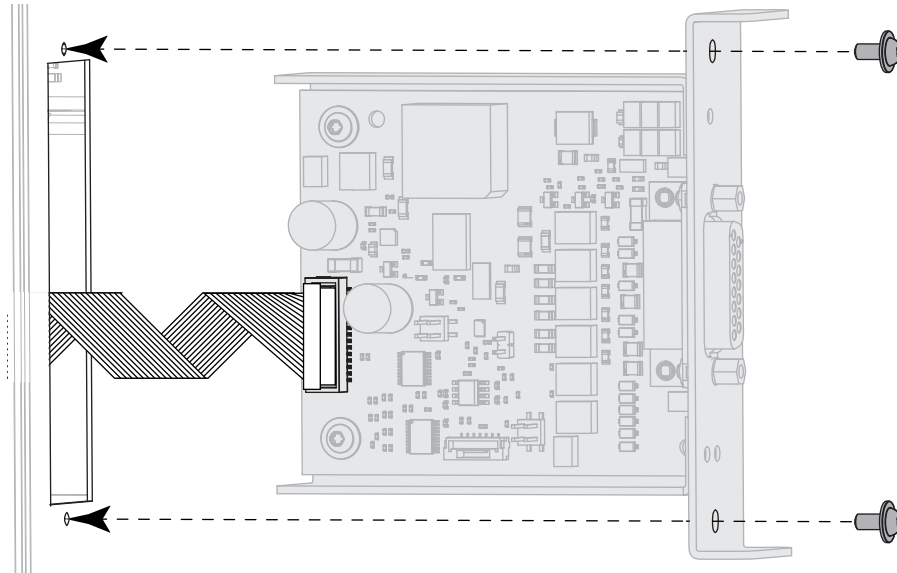


4. To remove the old applicator interface board and applicator cable:
  - a. Remove the two mounting screws securing the applicator interface board.
  - b. Slide out the applicator interface board and applicator cable.

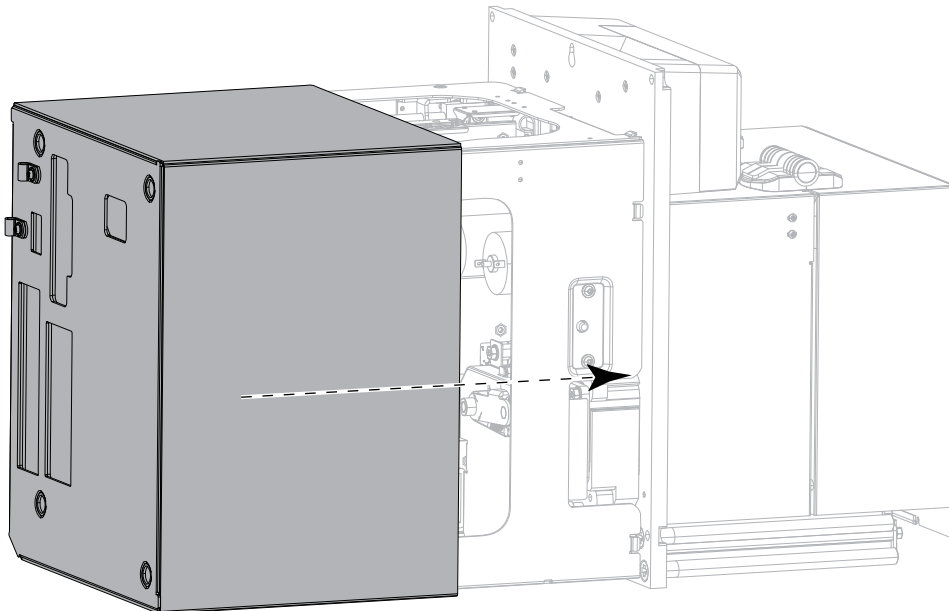


for parts & service call QLC (800) 837-1309

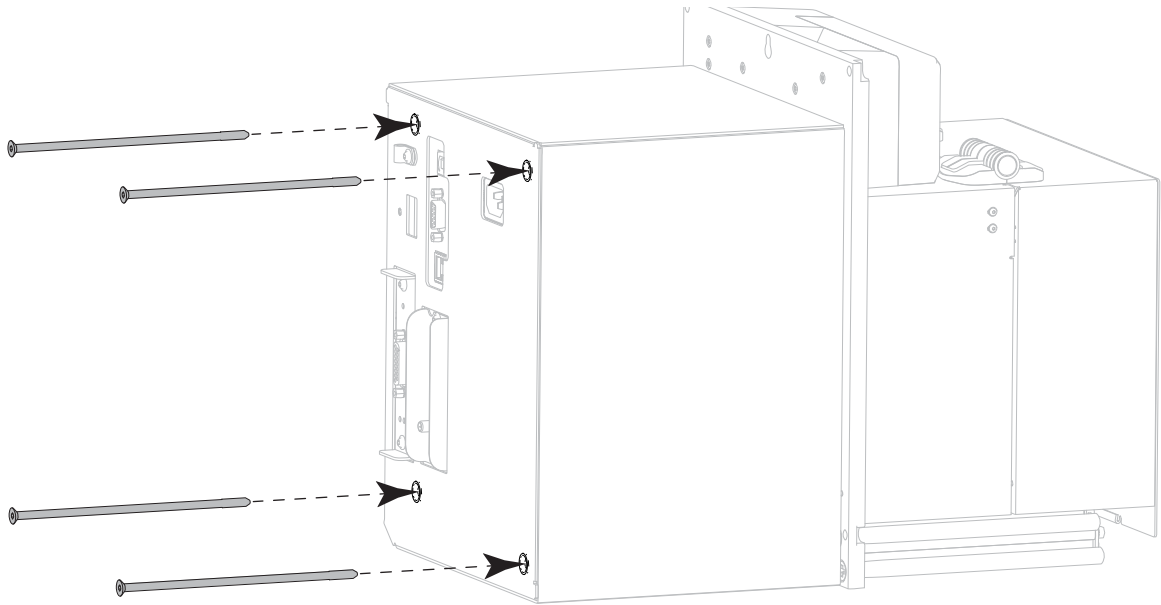
5. To install the new applicator interface board and cable:
  - a. If necessary, configure the jumpers on the new applicator board (see [Jumper Configuration on page 768](#)).
  - b. Connect the new applicator cable to the new applicator interface board.
  - c. Thread the new applicator cable through the slot into the printer.
  - d. Connect the new applicator cable to J7 on side A of the MLB for right-hand (RH) print engines or to J11 on side B of the MLB for left-hand (LH) print engines.
  - e. Insert the new applicator interface board, and secure it using the two new screws.



6. Reinstall the electronics enclosure cover on the print engine.



7. Install the four screws securing the electronics enclosure cover.



8. Reinstall the print engine into the applicator if it was removed.
9. Reconnect the AC power cord and interface cables, and then turn on the printer power.
10. If necessary, change your Energy Star setting (see [Energy Star Effect on the Applicator Interface Board on page 773](#)).
11. If necessary, change the voltage using the `device.applicator.voltage SGD` command (see [Table 7 on page 767](#)). Then power cycle the printer.

**The installation is complete.**

## Applicator Interface Board Overview

The applicator interface board provides a robust electrical signal interface between the printer and the outside world via a standard DB15 connector. The applicator **input** signals allow an external device to control when the printer prints. The applicator **output** signals provide handshaking and status information to the external host.


The applicator output voltage can be set to three levels (0V, 5V, 24V) through the Set-Get-Do (SGD) command shown in [Table 7](#). The applicator provides 5V or 24V power to run the I/O interface and to power small external loads. All output signals are open collector with a light pull-up resistor built in. All signals and power are galvanically isolated from the host printer. The applicator provides a jumper to connect printer and applicator grounds, if required, but the default setting is isolation.



**IMPORTANT:**

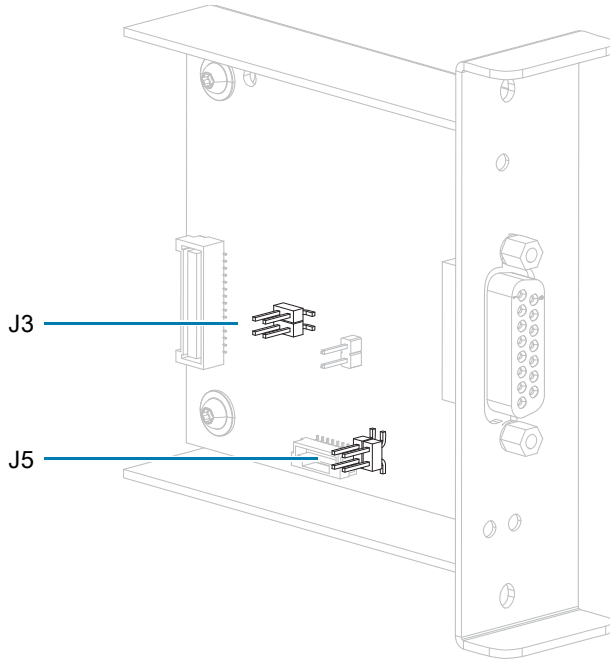
- The 0V setting must be used when an external voltage is provided.
- The applicator output power supply can sustain momentary short circuits but may be damaged with long-term shorts. There are no user-replaceable fuses on the applicator interface board.

**Table 7** Applicator Interface Board Specifications

Output voltage selections	<ul style="list-style-type: none"> <li>• 0V (required setting when voltage is supplied externally)</li> <li>• 5VDC (+/- 10%) &lt;= 1.0 A</li> <li>• 24VDC (+/- 10%) &lt;= 0.5 A</li> </ul> <p>Set by the following SGD command:</p> <pre>! U1 setvar "device.applicator.voltage" "X"</pre> <p>where X is 0, 5, or 24 to indicate the desired voltage. The printer must be power cycled before the setting takes effect.</p> <p> <b>NOTE:</b> A high-voltage lockout jumper installed on the applicator interface PCBA prevents the output from going above 5V, even if the SGD is sent for 24V output. This precaution prevents accidental damage to external equipment. The jumper must be repositioned to allow for 24V operation. The default setting is for 5V operation.</p>
Pull-up resistor on output	10K +/- 5%
Pull-up resistor on input	4.7K +/- 5%
Output signal current sink	<= 7 mA
User-supplied voltage range when output voltage set to 0V	0–24 Volts

## Jumper Configuration

Figure 17 Jumper Configuration on the Applicator Board



Jumper J3 — High-Voltage Lockout	
	<p><b>J3 Pins 1 and 2 connected</b> V out = 5V max (default)</p>
	<p><b>J3 Pins 3 and 4 connected</b> V out = 0V, 5V, 24V</p>
Jumper J5 — Ground Isolation Jumper	
	<p><b>J5 Pins 1 and 2 connected</b> isolated (default)</p>
	<p><b>J5 Pins 3 and 4 connected</b> not isolated</p>






**Table 8** Applicator Interface Connector Pin Configuration

Pin No.	Signal Name	Signal Type	Description
1	GROUND ISOLATED	Ground	Using jumper J5, this pin can be configured as isolated or non-isolated from the printer circuit ground (see <a href="#">Jumper Configuration on page 768</a> ). Default position is set to isolation.
2	VOUT	Power	Programmable output voltage of 0V, 5VDC, 24VDC. Voltage selection done by SGD command. Depending on configuration, jumper J3 will lock out 24V operation (see <a href="#">Jumper Configuration on page 768</a> ). If set in 5V position, only 0V and 5V will be available. If set to 24V position, 0V, 5V and 24V will be available, depending on the SGD command. Default is 5V configuration.
3	START PRINT	Input	See <a href="#">Applicator Signals on page 772</a> for more information about the start and end print signals. <ul style="list-style-type: none"> <li>• <b>Pulse Mode</b>—The label printing process begins on the HIGH to LOW transition of this signal if a format is ready. Deassert this signal HIGH to inhibit printing of a new label.</li> <li>• <b>Level Mode</b>—Assert LOW to enable the printer to print if a label format is ready. When deasserted HIGH, the printer completes the label that is printing then stops and waits for this input to be reasserted LOW.</li> </ul>
4	FEED	Input	When the printer is idle or has been paused, assert this input LOW to trigger repeated feeding of blank labels. Deassert HIGH to stop feeding blank labels and register to the top of the next label.
5	PAUSE	Input	To toggle the current Pause state, this input must be asserted LOW for 200 milliseconds, or until the SERVICE REQUIRED output (pin 10) changes state.
6	REPRINT	Input	<ul style="list-style-type: none"> <li>• If the Reprint feature is enabled, this input must be asserted LOW to cause the printer to reprint the last label.</li> <li>• If the Reprint feature is disabled, this input is ignored.</li> </ul>
7	VOUT	Power	Programmable output voltage of 0V, 5VDC, 24VDC. Voltage selection done by SGD command. Depending on configuration, jumper J3 will lock out 24V operation (see <a href="#">Jumper Configuration on page 768</a> ). If set in 5V position, only 0V and 5V will be available. If set to 24V position, 0V, 5V and 24V will be available, depending on the SGD command. Default is 5V configuration.
8	GROUND ISOLATED	Ground	Using jumper J5, this pin can be configured as isolated or non-isolated from the printer circuit ground (see <a href="#">Jumper Configuration on page 768</a> ). Default position is set to isolation.
9	RIBBON LOW	Output	Asserted LOW if the Supplies Warning feature is enabled and the amount of ribbon remaining on the supply spindle is below the threshold level.

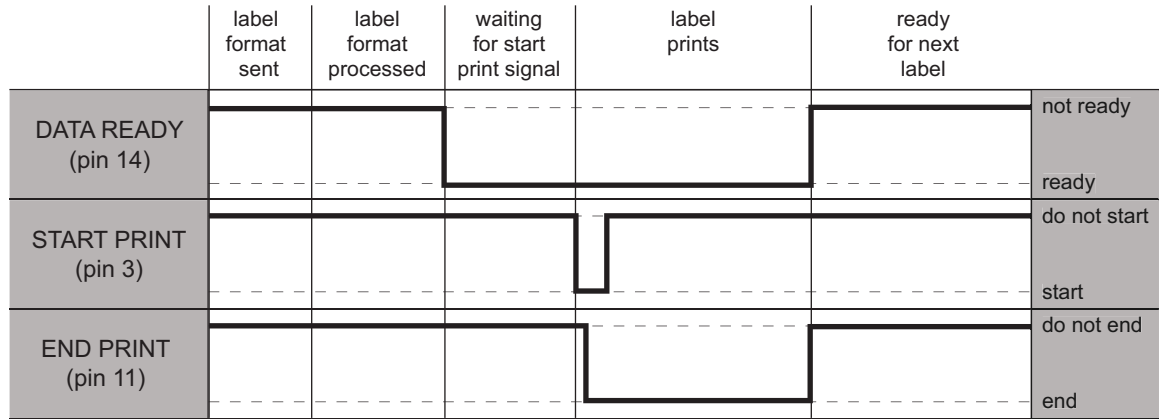
**Table 8** Applicator Interface Connector Pin Configuration (Continued)

Pin No.	Signal Name	Signal Type	Description
10	SERVICE REQUIRED	Output	Asserted LOW in the following circumstances: <ul style="list-style-type: none"> <li>the printhead is open</li> <li>the ribbon or media is out</li> <li>the printer is paused</li> <li>an operational fault occurs</li> <li>a Resynch error occurs while the applicator Resynch mode is set to Error mode</li> </ul>
11	END PRINT	Output	See <a href="#">Applicator Signals on page 772</a> for more information about the start and end print signals.   <b>NOTE:</b> A format (^XA ... ^XZ) that does not print will signal that it is being processed. However, it will not trigger an End Print signal because no motion/printing is required. <ul style="list-style-type: none"> <li><b>MODE 0</b>—The applicator port is OFF.</li> <li><b>MODE 1</b>—Asserted LOW only while the printer is moving the label forward; otherwise deasserted HIGH.</li> <li><b>MODE 2</b>—Asserted HIGH only while the printer is moving the label forward; otherwise deasserted LOW.</li> <li><b>MODE 3</b>—(Default) Asserted LOW for 20 milliseconds when a label is completed and positioned. Not asserted during continuous printing.</li> <li><b>MODE 4</b>—Asserted HIGH for 20 milliseconds when a label is completed and positioned. Not asserted during continuous printing.</li> </ul>
12	MEDIA OUT	Output	Asserted LOW when there is no media in the printer.
13	RIBBON OUT	Output	Asserted LOW when there is no ribbon in the printer.
14	DATA READY	Output	See <a href="#">Applicator Signals on page 772</a> for more information about this signal. <ul style="list-style-type: none"> <li>Asserted LOW when sufficient data has been received to begin processing the next label format.</li> <li>Deasserted HIGH when printing/processing stops after the current label format, either due to a pause condition or the absence of a label format.</li> </ul>
15	RFID VOID	Output	<ul style="list-style-type: none"> <li>Asserted LOW when the RFID transponder over the antenna is “voided.”</li> <li>Deasserted HIGH when the end print signal is asserted.</li> </ul>

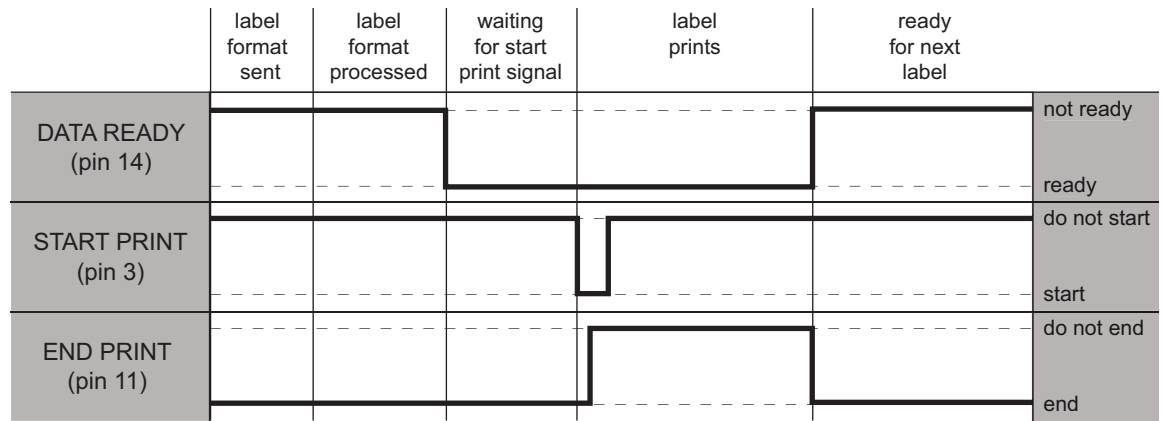
## Applicator Signals

The following timing diagrams show how applicator signals function in each applicator mode during the stages of printing a non-RFID label. For more information about applicator signals during RFID operation, see the RFID Programming Guide 3.

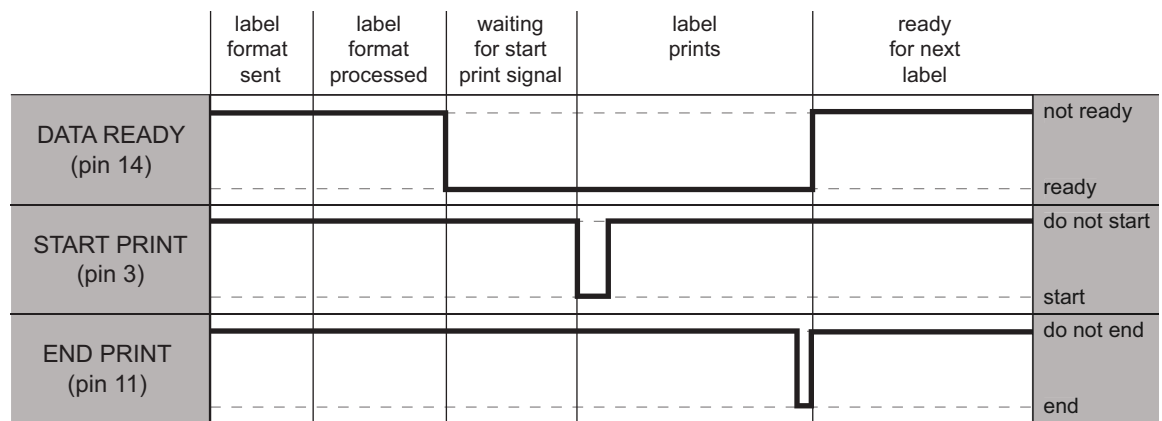
**Figure 20** Applicator Signals (Mode 1)



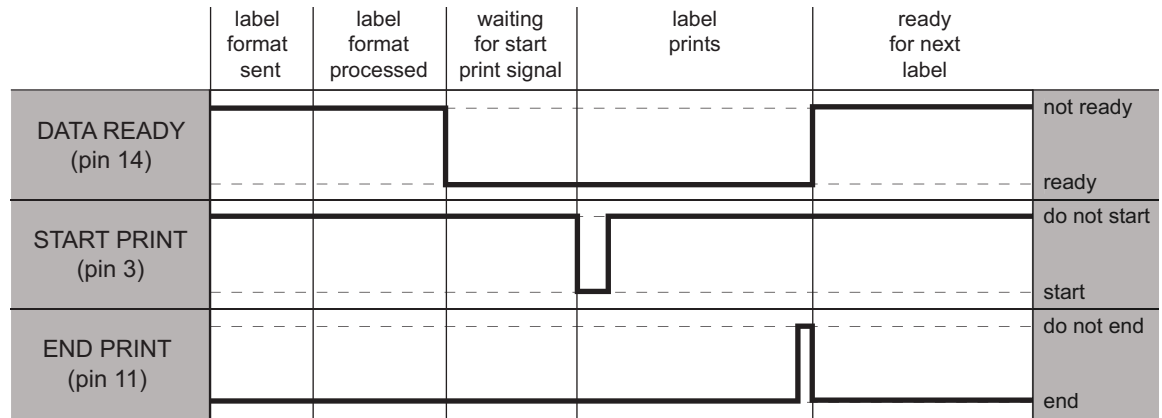
**Figure 21** Applicator Signals (Mode 2)



**Figure 22** Applicator Signals (Mode 3)



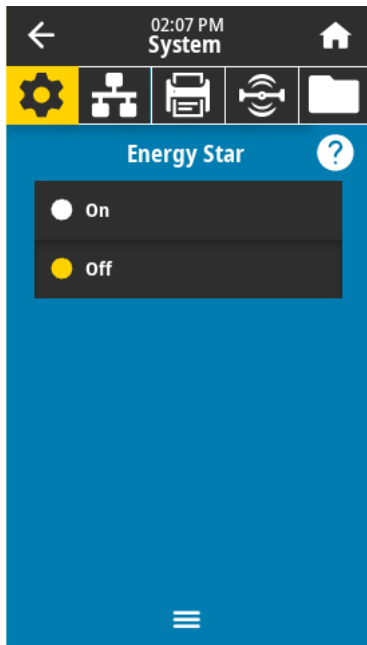
**Figure 23** Applicator Signals (Mode 4)



## Energy Star Effect on the Applicator Interface Board

If the Energy Star feature is enabled and the printer goes to sleep, the applicator interface board shuts down. If the applicator interface board needs to remain on at all times, disable the Energy Star feature in one of the following ways:

- Setting the Energy Star user menu item to OFF:



- Sending the SGD command for disabling Energy Star:  

```
! U1 setvar "power.energy_star.enable" "off"
```

 To reenable Energy Star, send the SGD command with the value "on".

# ZebraNet™ 802.11ac Radio Wireless Print Server Option/Maintenance Kit



## Installation Instructions

Read these instructions thoroughly before installing this kit.

Printers supported:

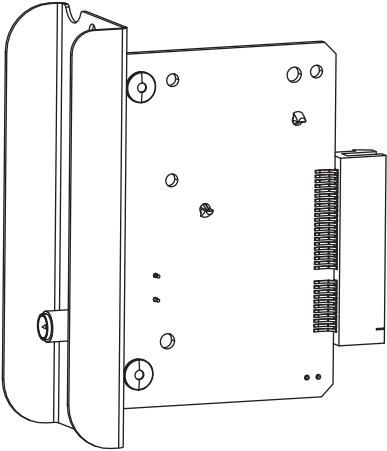
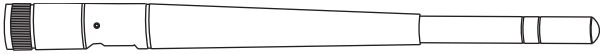



- ZE511
- ZE521



**CAUTION:** If the print server is being used in countries outside of the USA, Canada, or Japan, a qualified service technician must perform this installation.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	ZebraNet 802.11ac radio wireless print server option board Qty: 1
	External WiFi antenna Qty: 1
	Compliance label for WiFi Qty: 1
	Screw (pan washer mach M3x6) Qty: 2
	 T10

for parts & service call OLC (800) 837-1309

## Tools Required

⊛	Metric hexalobular (6lobe, star) keys Size: T10
•	Antistatic wriststrap and mat
•	USB cord or serial cord to connect the print engine to a computer for configuration after installation
•	Sorting bin for screws and small parts (optional)
•	The following PDF guides or Internet access to view them on <a href="http://zebra.com">zebra.com</a> : <ul style="list-style-type: none"> <li>• Zebra Programming Guide (Programming Guide for ZPL II, ZBI 2, Set-Get-Do, Mirror, and WML)</li> <li>• Wired and Wireless User Guide</li> </ul>

## Install the Wireless Card

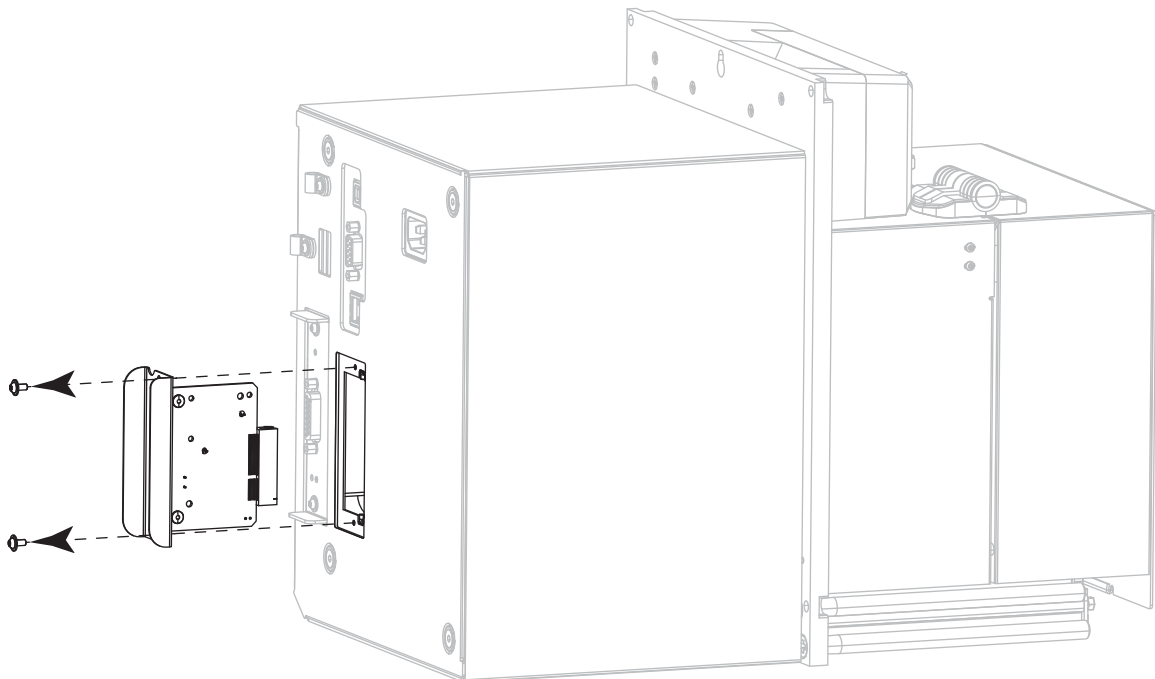


**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.

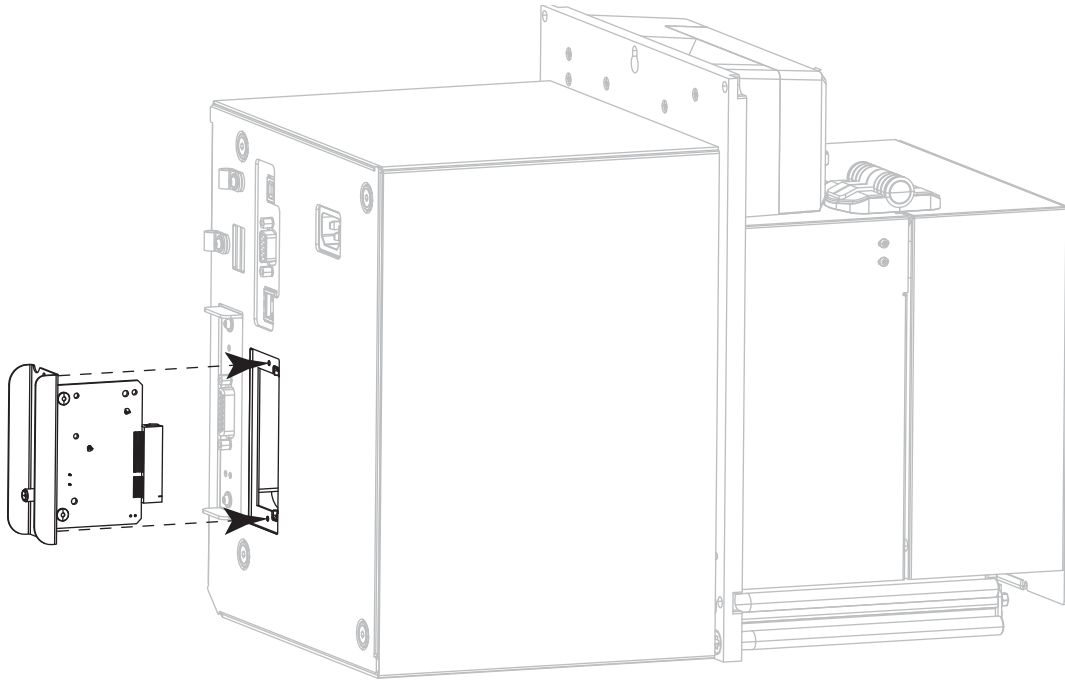


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

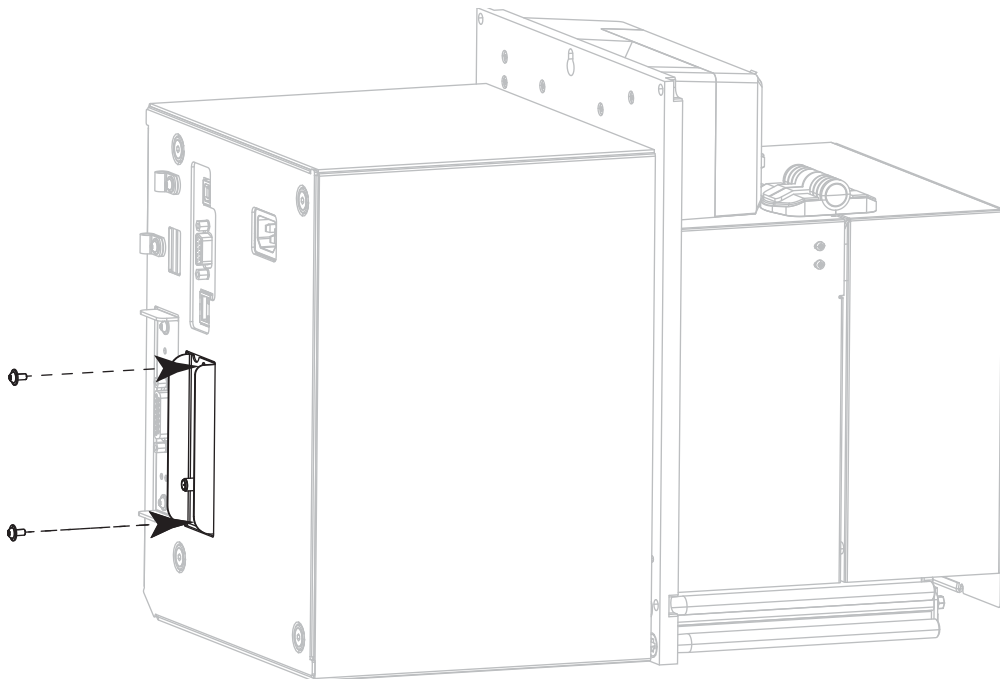
1. Remove the two screws and the cover or option board in the option slot.



2. Slide the wireless option card into the option slot until it stops.

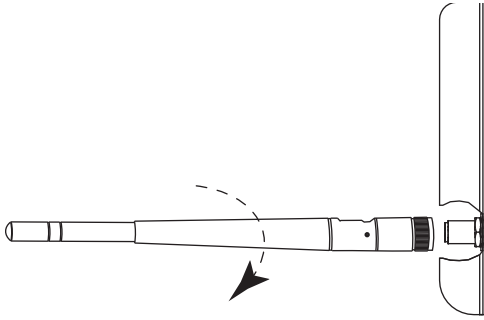


3. Install the two new screws.

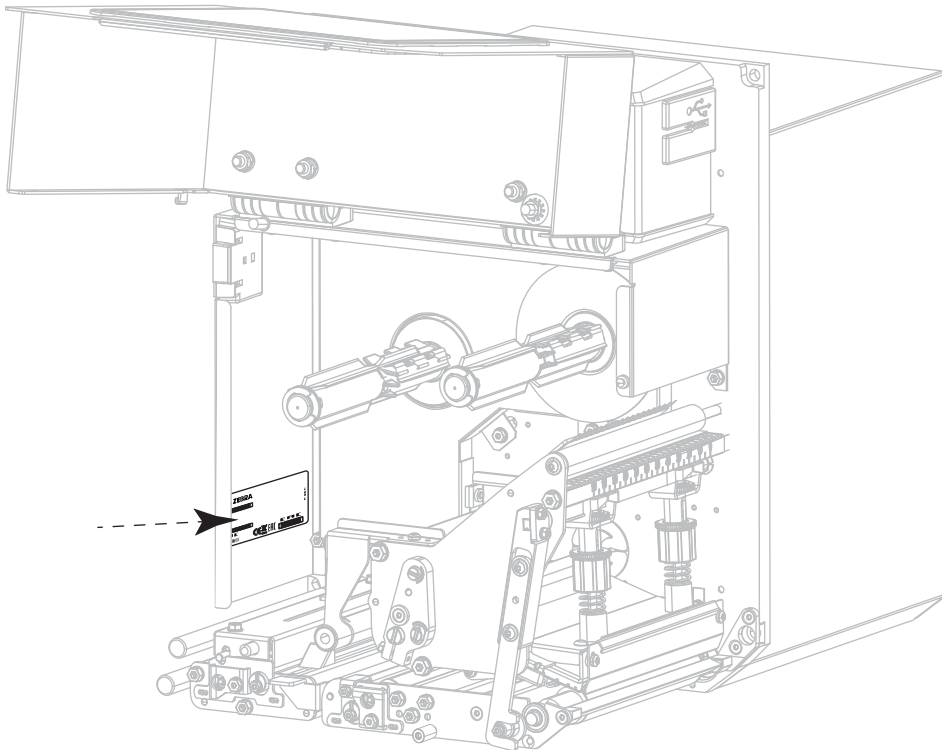




4. Screw the antenna onto the connector extending out of the option card.




5. Install the Compliance label on the inside of the media compartment.



## Configure the Wireless Card

In this section, refer to the Zebra Programming Guide or the Wired and Wireless User Guide for more information, if necessary.

1. Reconnect the AC power cord and all data cables, and then turn on (I) the printer.
2. Connect the print engine to your computer using a USB or serial connection.
3. Is the print engine to be used in the United States, Canada, or Japan?

If...	Then...
Yes	The country code has been preset at the factory and cannot be changed.
No	<p>The country code must be set for your RFID reader.</p> <p> <b>IMPORTANT:</b> 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.</p> <p><b>a.</b> To determine the country code available on your printer, issue the following command to return all commands related to WLAN settings.</p> <pre>! U1 getvar "wlan"</pre> <p><b>b.</b> Locate the wlan.country.code command in the results, and note the country code available for your printer.</p> <p><b>c.</b> Send the following command with the appropriate country code value. When this value has been set, it cannot be changed.</p> <pre>! U1 setvar "wlan.country_code" "value"</pre>

4. Configure the following parameters on the print engine:
  - WLAN IP Protocol (All or Permanent)
  - WLAN IP Address (if you selected Permanent, assign a unique IP address)
  - WLAN Subnet (match the subnet value of your WLAN)
  - WLAN Gateway (match the gateway value of your WLAN)
5. Reset the network to apply the changes.  
On the control panel, tap **Connections > Networks > Reset Network**.

The installation is complete.

# ZebraNet Wireless Print Server Antenna Maintenance Kit




## Installation Instructions

Read these instructions thoroughly before installing this kit.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

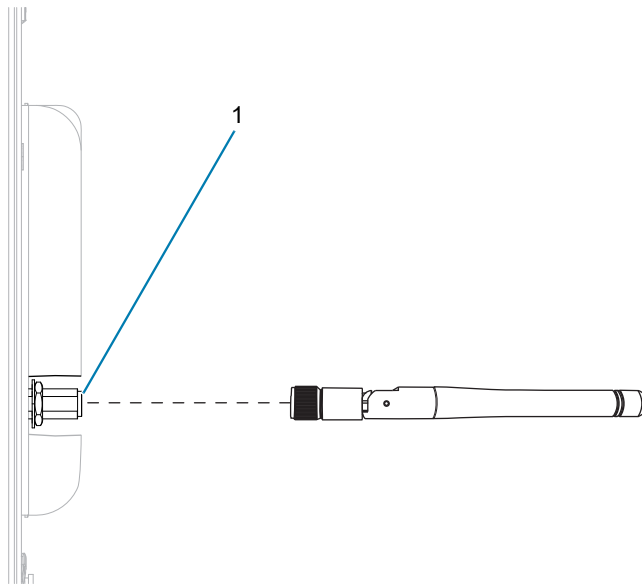
## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

	ZebraNet wireless print server antenna Qty: 1
---	--

## Replace the ZebraNet Wireless Print Server Antenna

1. Screw the antenna onto the RF connector (1) extending out from the back of the wireless print server.



# ZebraNet Internal Wireless Print Server Magnetic Mount and Tethered Cable Kit



## Installation Instructions

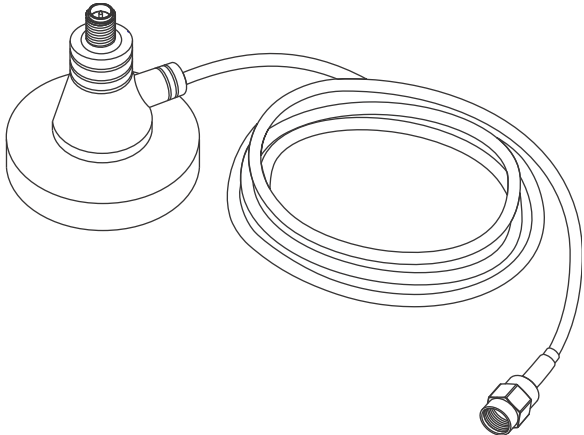
Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Magnetic mount antenna Qty: 1</p>
--	--

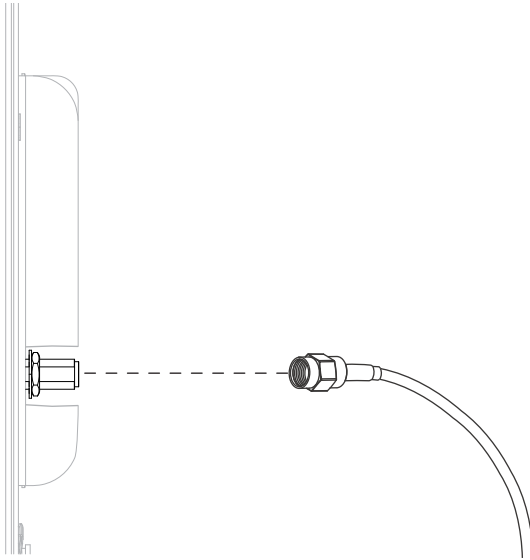
## Install the Magnetic Mount and Tethered Cable

1. Place the magnetic mount base and antenna in the location that yields the best RF reception.  
The magnetic base location may be up to 5 ft away from the print engine.

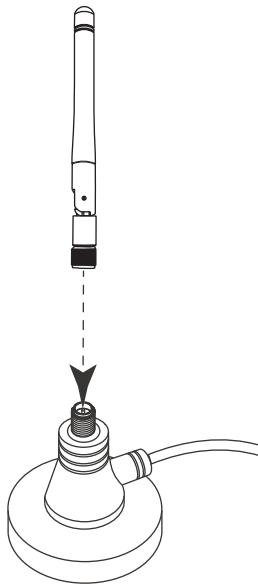


**NOTE:** Tighten the connectors hand tight.

2. Screw the end of the cable connector onto the RF connector extending from the wireless print server.



3. Screw the antenna onto the connector on top of the magnetic mount base.



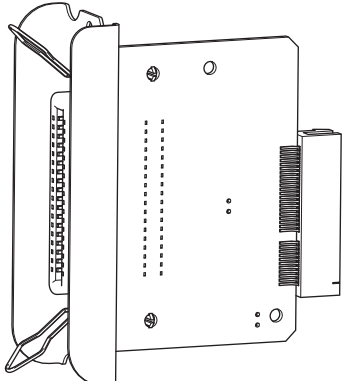


The installation is complete.

## Installation Instructions


Read these instructions thoroughly before installing this kit.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Parallel port option board Qty: 1
	Screw (pan washer mach M3x6) Qty: 2  T10

## Tools Required

 Metric hexalobular (Globe, star) keys Size: T10
Sorting bin for screws and small parts (optional)

## Install the Parallel Port Card

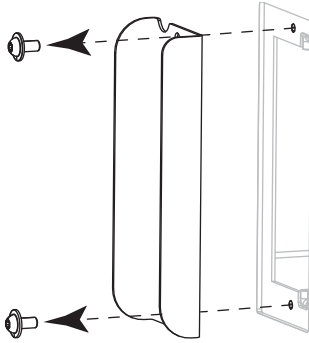


**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.

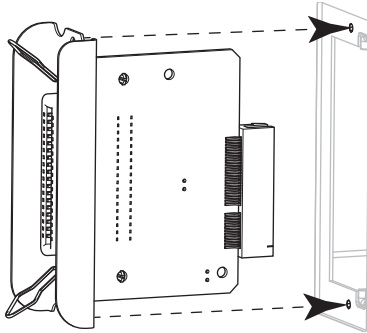


**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

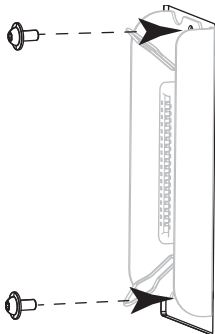
1. Remove the two screws and the cover or option board from the option slot.



2. Ensure that the parallel port card is oriented so that it aligns with the main logic board connector inside the slot.
3. Slide the parallel port option card into the option slot until it stops.



4. Push in the card on the top and bottom until the card is fully seated and flush with the back of the printer.
5. Install the two T10 screws.



## Resume Printer Operation

1. Close the media door.
2. Reconnect the AC power cord and interface cables.
3. Turn on the printer power.

**The installation is complete.**

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>IPv4 internal print server Qty: 1</p>
	<p>Screw (M3x6 pan washer) Qty: 2</p> <p>T10</p>

## Tools Required

- Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

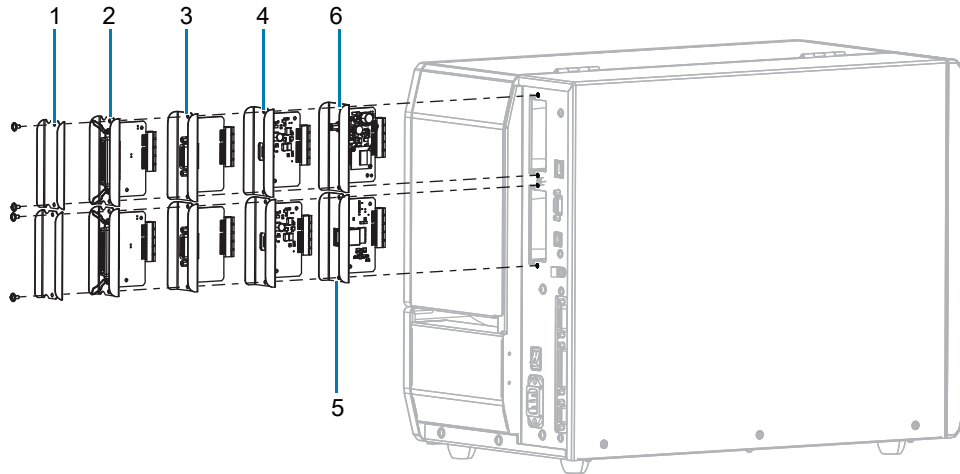


## Getting Started

1. Verify the slots that can be used for the various option cards.



**NOTE:** For the ZE511 and ZE521, there is only one slot.



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	Go to <a href="#">Remove the Old Option Card on page 786</a> .
No	Go to <a href="#">Remove the Cover Plate on page 787</a> .


## Remove the Old Option Card

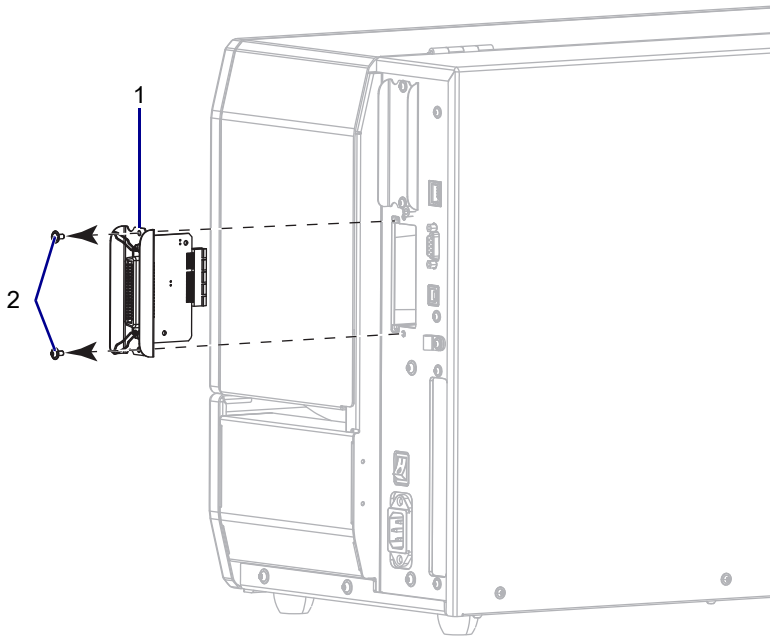


**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.




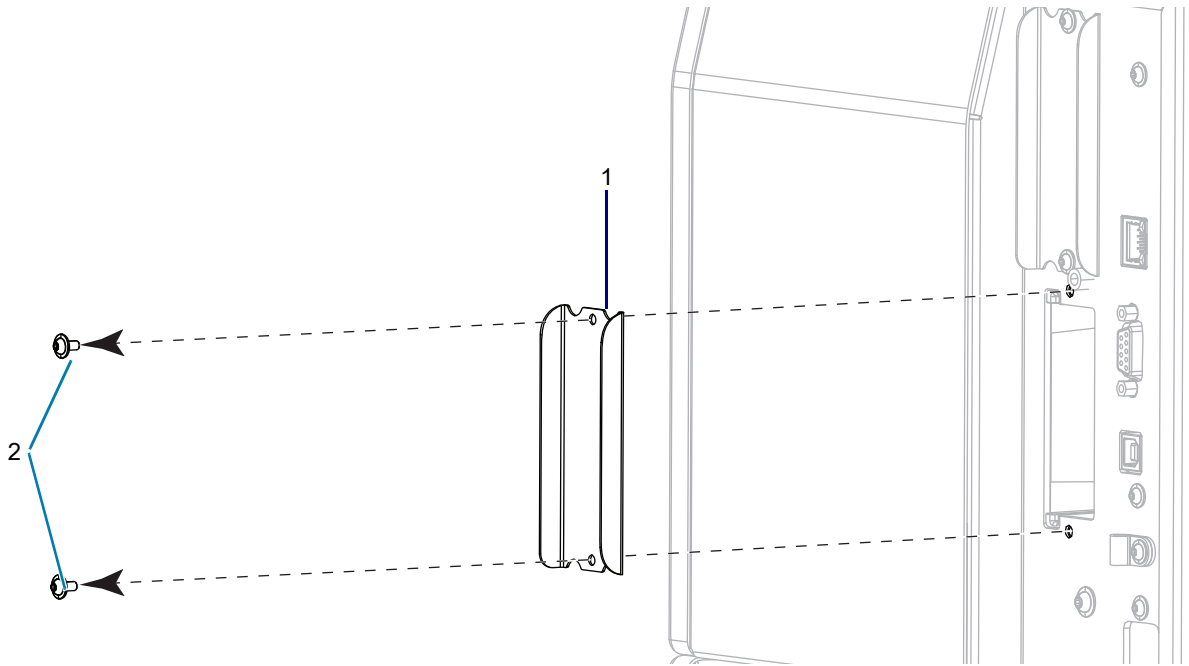
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

1. Remove the two  T10 screws (2).
2. Remove the option card (1).



## Remove the Cover Plate

1. Remove the blank cover (1) by removing the two  T10 screws (2).

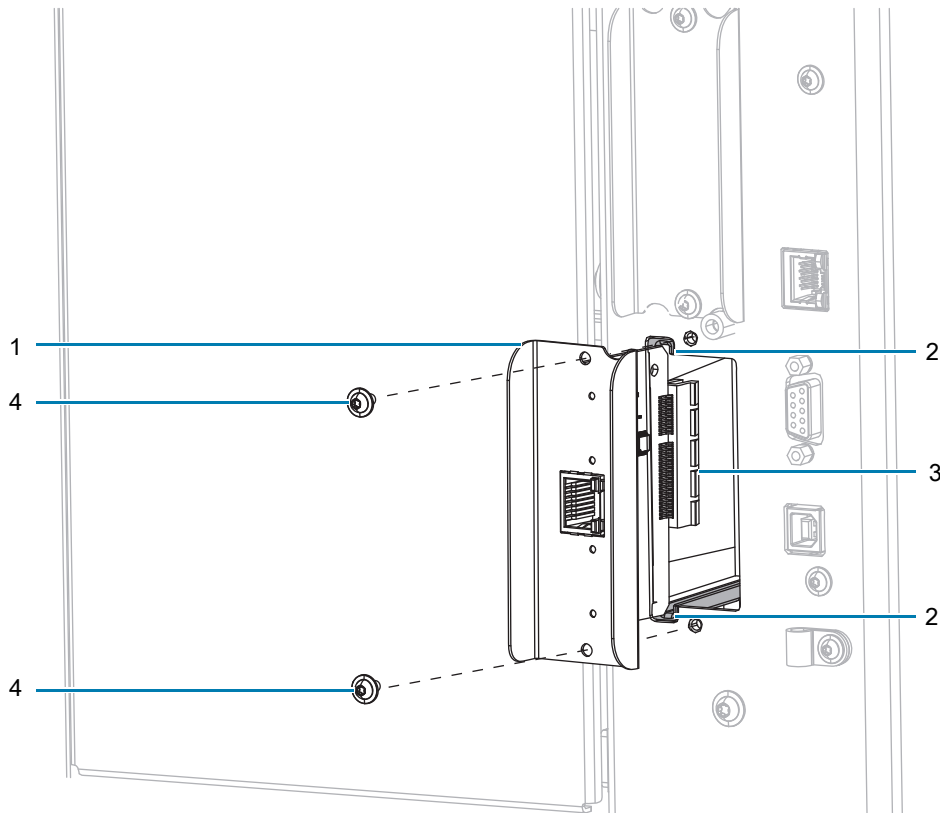


## Install the IPv4 Internal Print Server



**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

1. Align the IPv4 internal print server card (1) with the option card guide slots (2).
2. Install IPv4 internal print server (1).
3. Ensure that the option card connector (3) is aligned with the main logic board connector, and then push it in on the top and bottom until it is against the printer.
4. Install the two mounting screws (4).



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

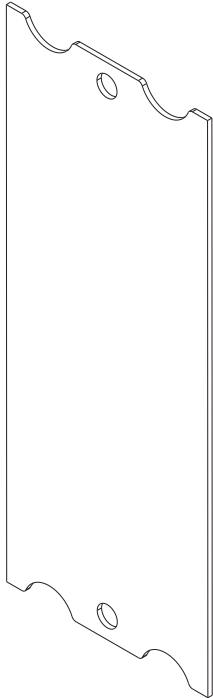



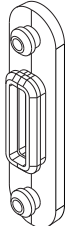


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Option card cover Qty: 1
	Screw (pan washer mach M3x6)  Qty: 2 <span style="float: right;">T10</span>
	Ethernet port plug Qty: 1
	HDMI plug Qty: 1

## Tools Required

- ✳ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10, T15
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



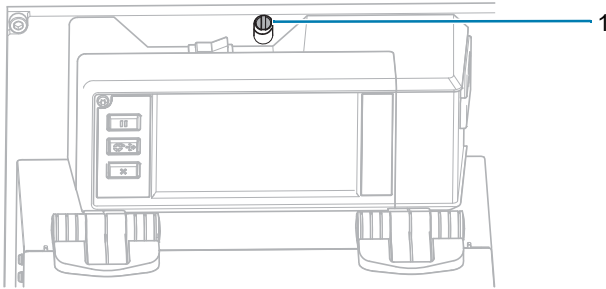
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



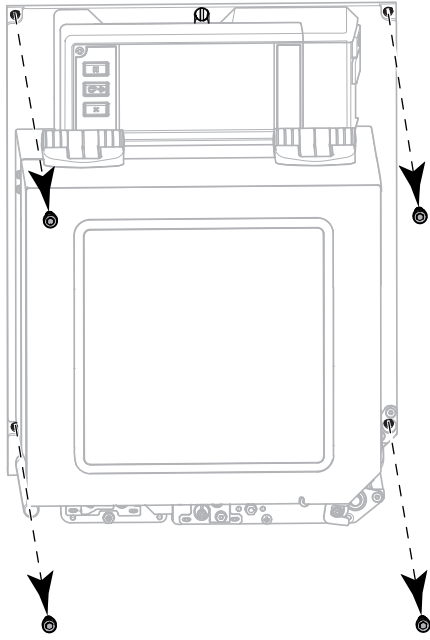
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



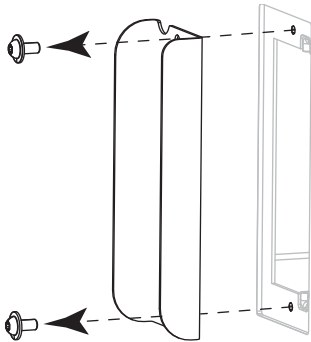
2. Remove the four screws securing the print engine to the applicator.



3. Lift the print engine off of the center mounting bolt and place it on a workbench.

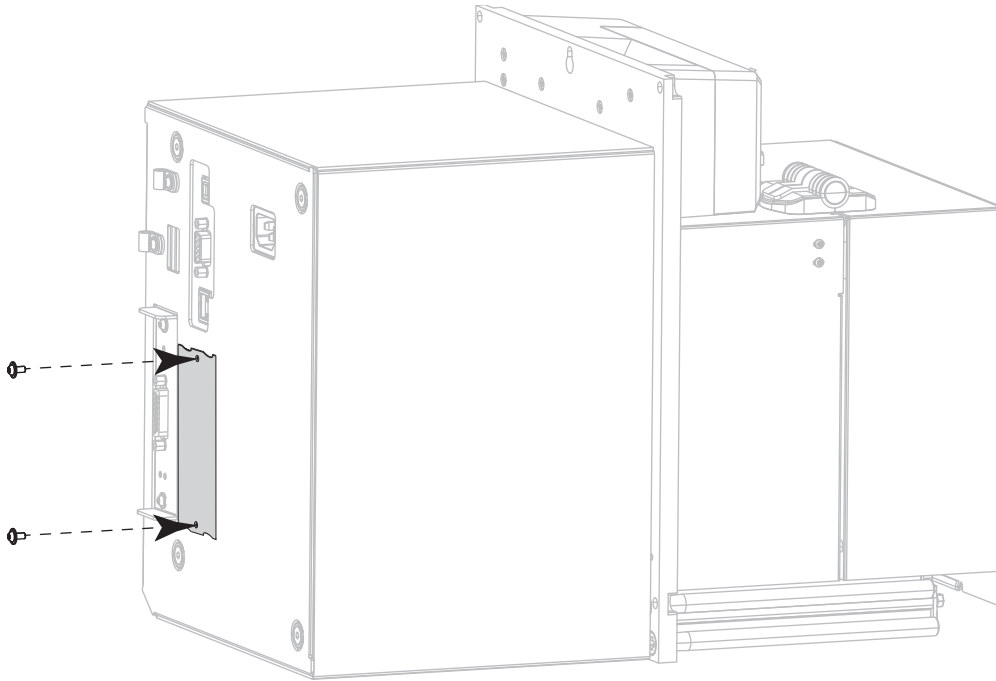
### Install the Option Card Cover

1. Remove the two screws and the cover or option board from the option slot.



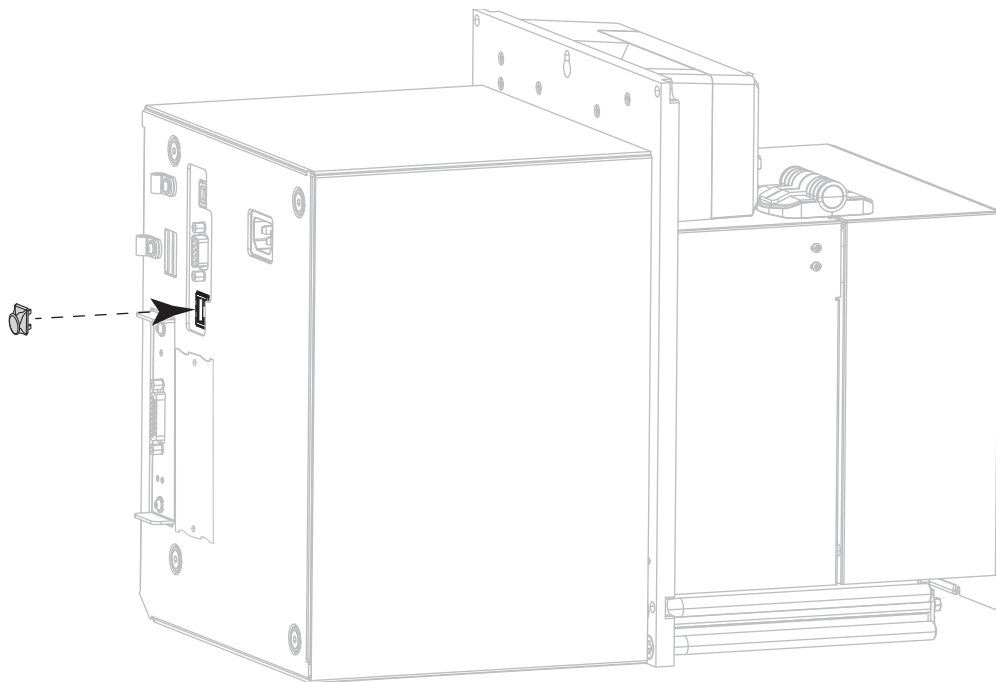


2. Place the option card cover over the option slot, and install the two  T10 screws to secure it.



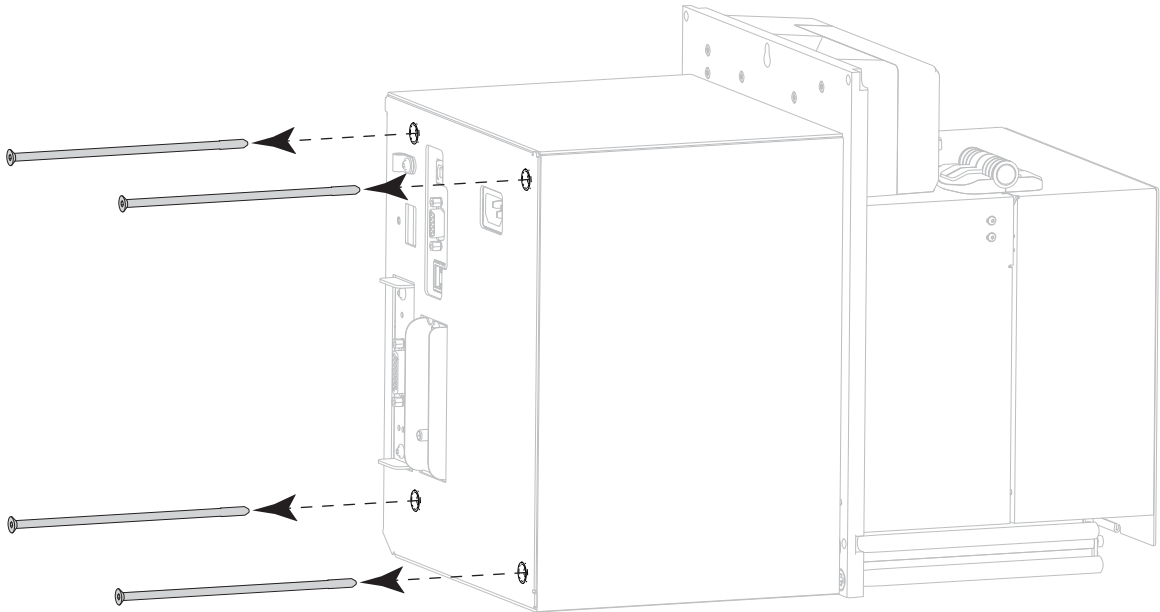
### Insert the Ethernet Port Plug

1. Align the plug with the pins in the Ethernet port on the back of the print engine.
2. Insert the Ethernet plug into the port.

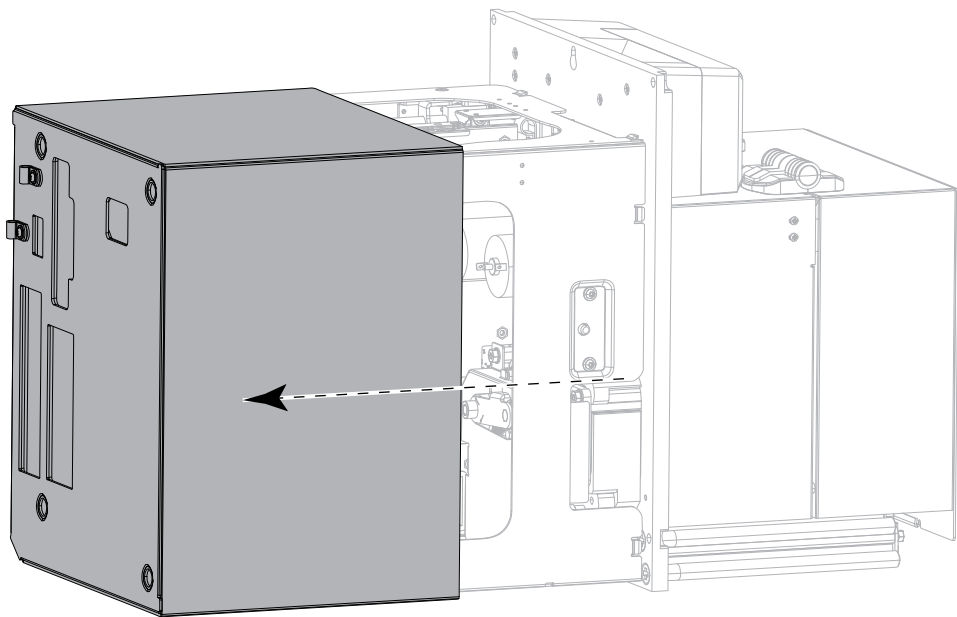


## Install the Rear HDMI Plug

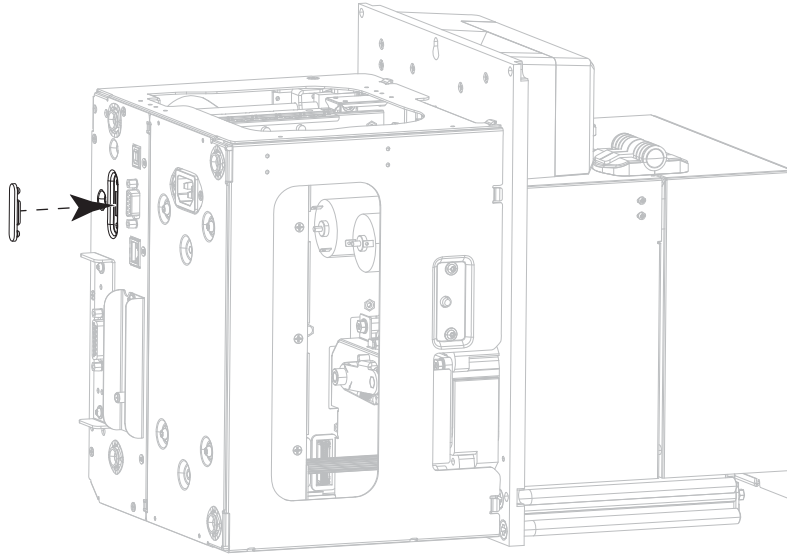
1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



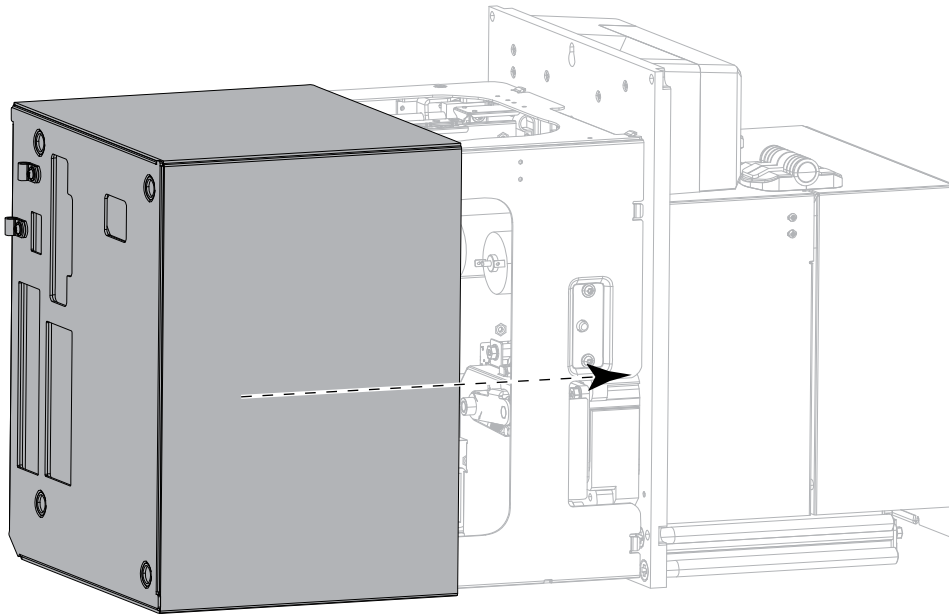
2. Remove the electronics enclosure cover from the print engine.



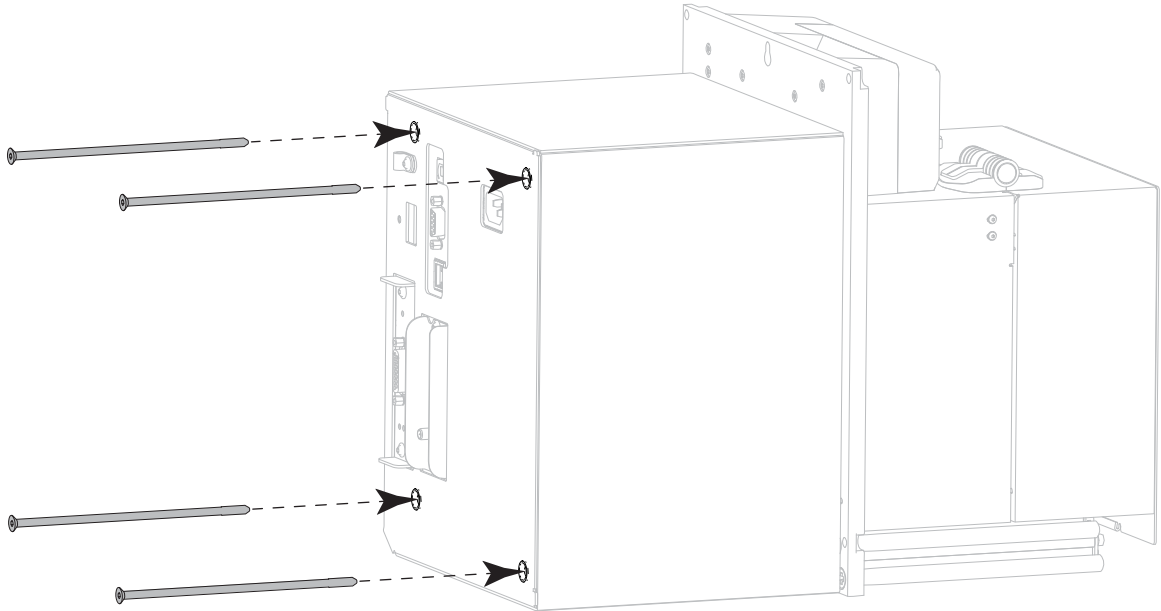
3. Install the HDMI plug.



4. Reinstall the electronics enclosure cover on the print engine.



5. Install the four 3mm screws securing the electronics enclosure cover.



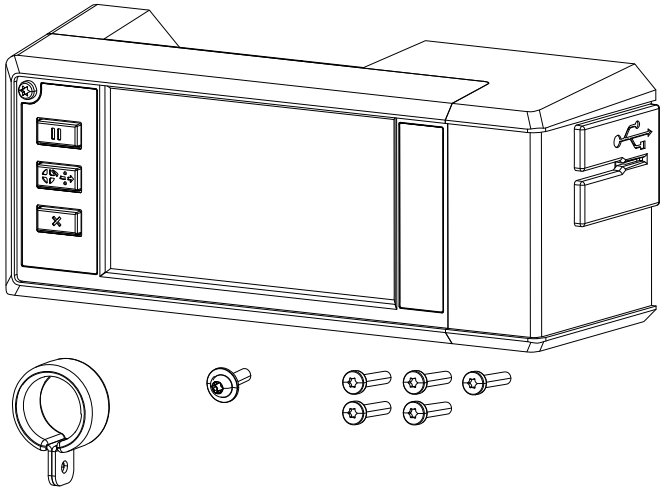
## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

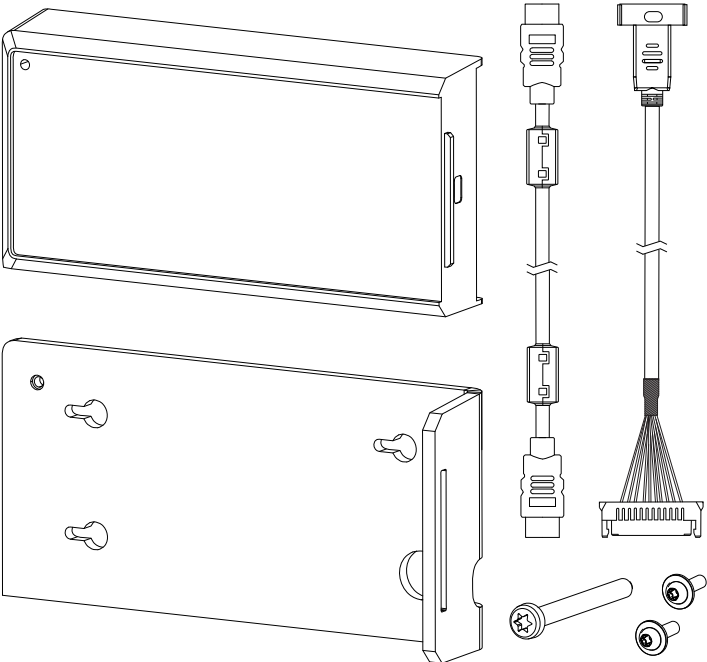
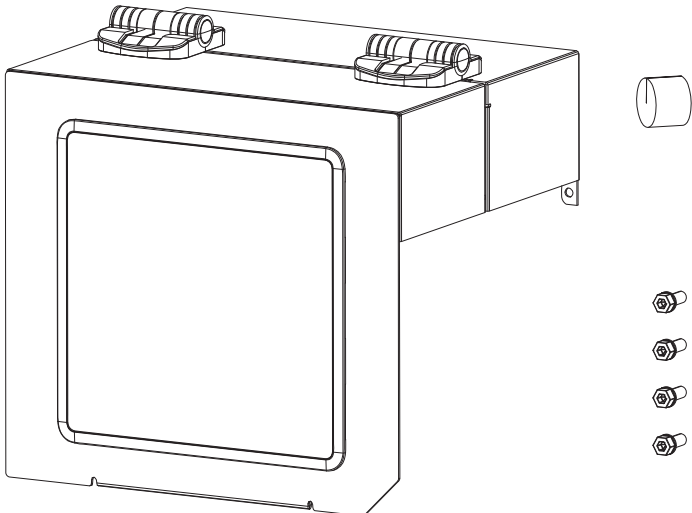
# Exterior Components

This section supplies you with the parts information and links to installation procedures for the exterior components.

Description	Kit Number	Kit Name
<p><a href="#">Control Panel Maintenance Kit on page 802</a></p> 	P1112750-005	Kit, Control Panel, ZE511, ZE521, RH & LH

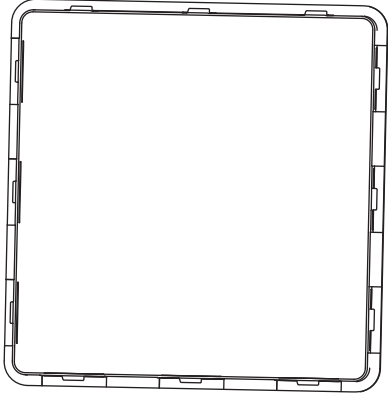
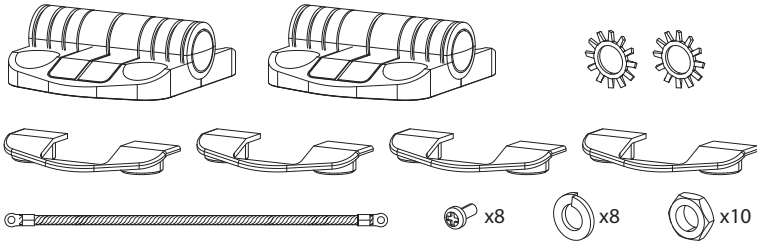
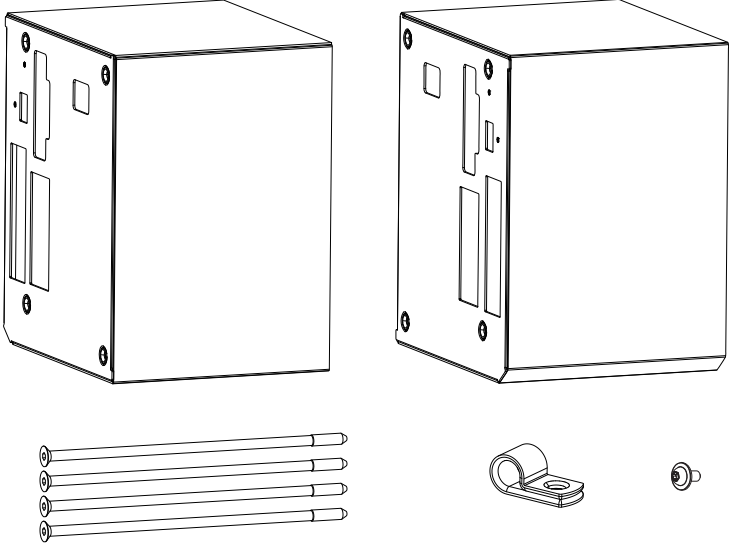
for parts & service call QLC (800) 837-1309

## Exterior Components

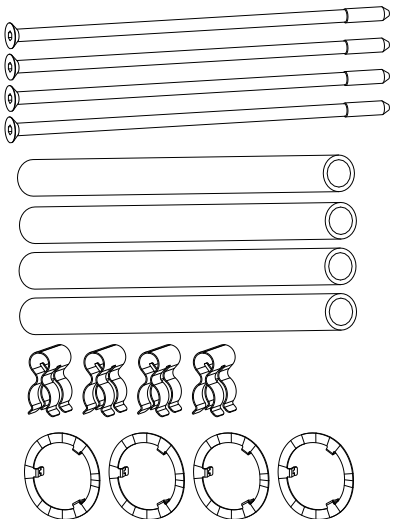
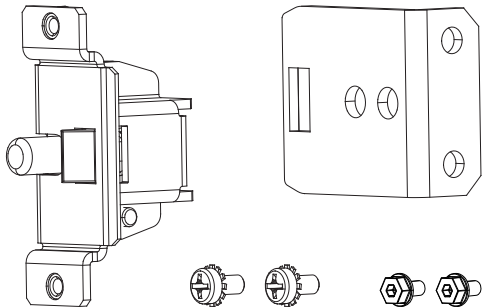
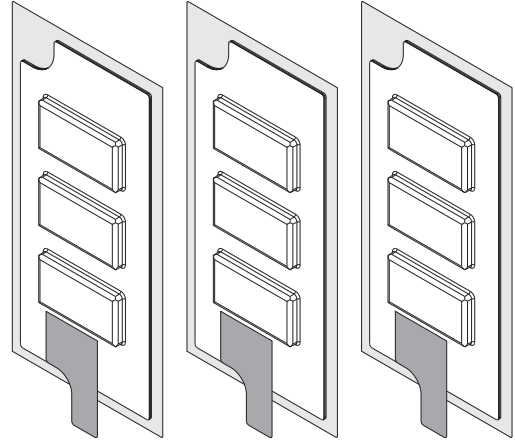
Description	Kit Number	Kit Name
<p style="color: #0070C0;">Deported Control Panel Maintenance Kit on page 814</p> 	P1112750-006	Kit, Hardware to Enable Deported Control Panel, ZE511, ZE521, RH & LH
<p style="color: #0070C0;">Media Cover Maintenance Kit on page 826</p> 	P1112750-001	Kit, Media Cover, ZE511 RH
	P1112750-002	Kit, Media Cover, ZE511 LH
	P1112750-003	Kit, Media Cover, ZE521 RH
	P1112750-004	Kit, Media Cover, ZE521 LH

for parts & service call QLC (800) 837-1309

# Exterior Components

Description	Kit Number	Kit Name
<p>Media Window Maintenance Kit on page 836</p> 	P1046696-080	Kit, Media Window, ZE500 Series
<p>Media Cover Hinges Maintenance Kit on page 839</p> 	P1046696-081	Kit, Hinges for Media Cover, ZE500 Series
<p>Electronics Cover Maintenance Kit on page 843</p> 	P1112750-007	Kit, Electronics Cover ZE511, ZE521, RH
	P1112750-008	Kit, Electronics Cover ZE511, ZE521, LH

for parts & service call QLC (800) 837-1309

Description	Kit Number	Kit Name
<p><a href="#">Electronic Cover Long Screws Maintenance Kit on page 849</a></p> 	<p>P1046696-085</p>	<p>Kit, Long Screws for the Electronics Cover, ZE500 Series</p>
<p><a href="#">Electronics Chassis Latch Maintenance Kit on page 859</a></p> 	<p>P1046696-087</p>	<p>Kit, Latch for Chassis, ZE500-4, ZE500-6, ZE511, ZE521 RH &amp; LH</p>
<p><a href="#">Assorted Hardware Maintenance Kit on page 867</a></p>	<p>P1112750-070</p>	<p>Kit, Assorted Hardware, ZE511, ZE521, RH &amp; LH</p>
<p><a href="#">Control Panel Cover on page 879</a></p> 	<p>P1112750-076</p>	<p>Kit, Covers for the Control Panel, Qty of 3, ZE511, ZE521, RH &amp; LH</p>



# Exterior Components

Description	Kit Number	Kit Name
<p style="color: #0070C0;">Repacking Instructions on page 882</p> <p>The illustration shows the components for shipping a printer. It includes a brown cardboard box, a red latch, a white foam insert, a printer housing (shown in two views), and several screws of different lengths and types.</p>	P1112750-069	Kit, Packaging for Shipping the Printer, ZE511, RH & LH
	P1112750-085	Kit, Packaging for Shipping the Printer, ZE521, RH & LH

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.






The graphics shown in this document depict a right-hand (RH) 4-inch model. Graphics for a left-hand (LH) model are a mirror image, in most cases. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Control Panel Qty: 1
	Cable clamp stainless-steel Qty: 1
	Screw (M3x10) Qty: 1
	Screw (M3x16) Qty: 5

## Tools Required

	Metric hexagon keys or bits Size: 3 mm
	Hexalobular (6-lobe, star) keys, drivers, or bits Size: T8, T10, T15
	Phillips screwdrivers or bits Size: PH1
	Metric nut drivers Size: 4 mm
	Sorting bin for screws and small parts (optional)

## Prepare for Installation



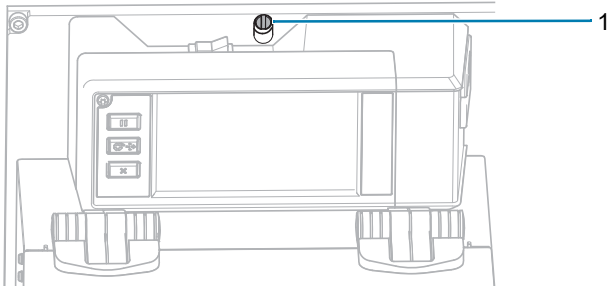
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



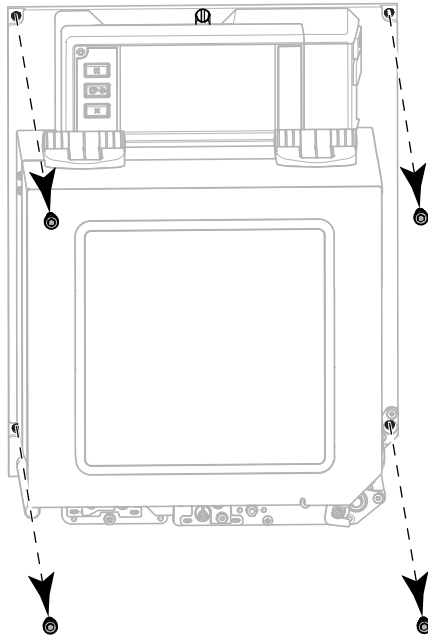
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



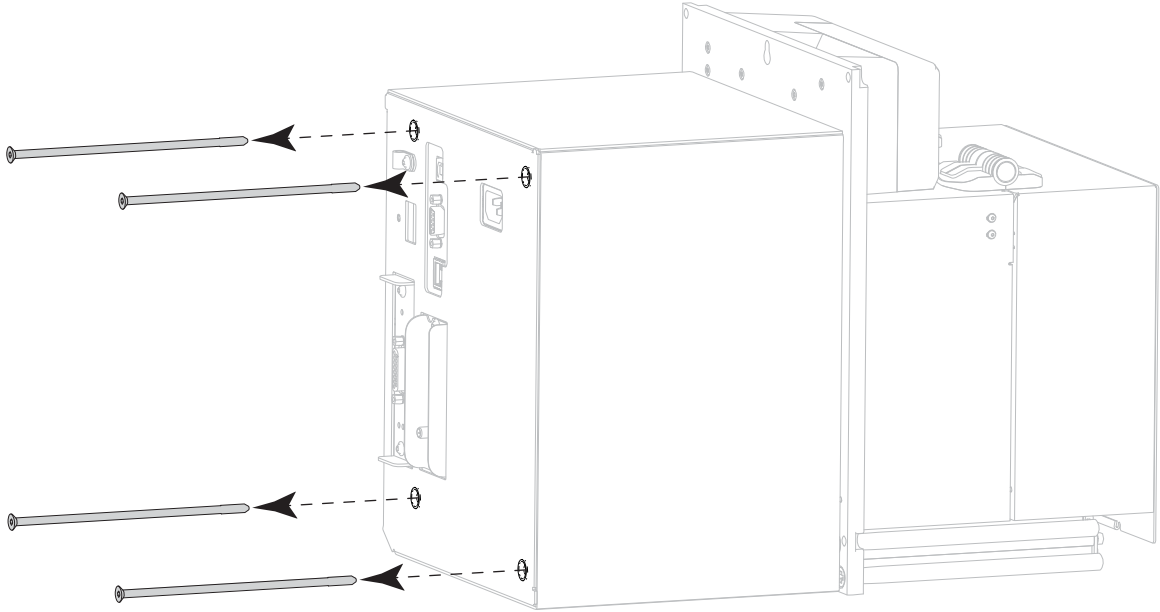
2. Remove the four screws securing the print engine to the applicator.



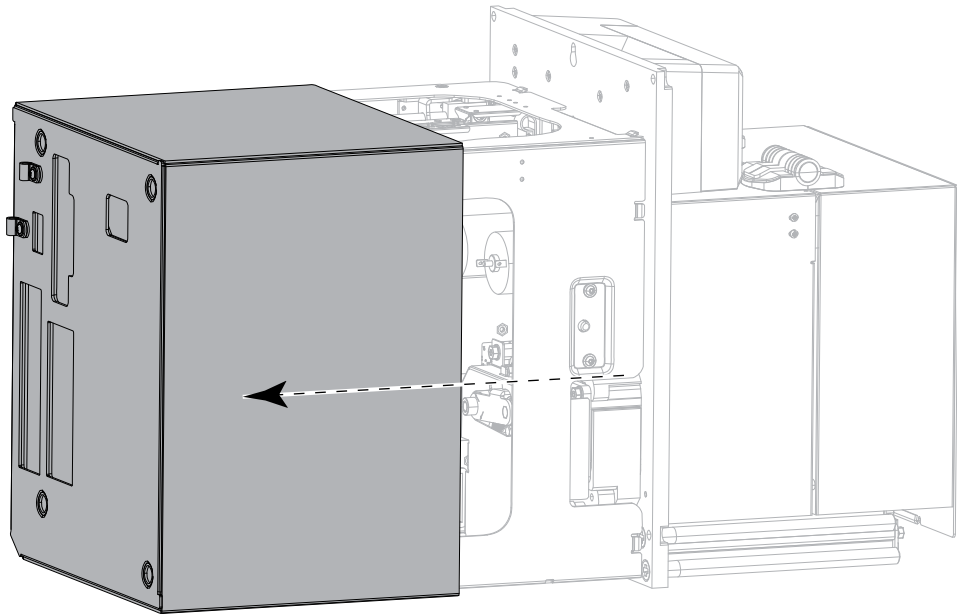
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



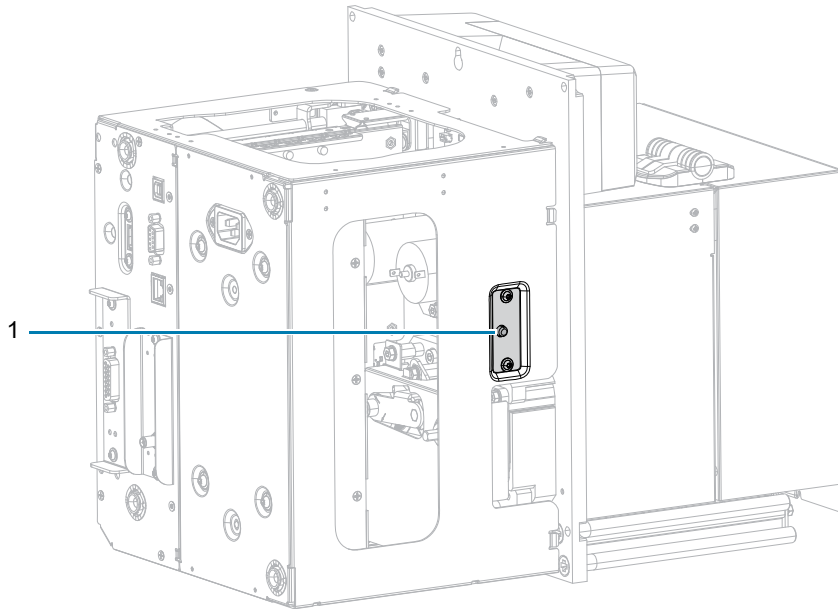
2. Remove the electronics enclosure cover from the print engine.



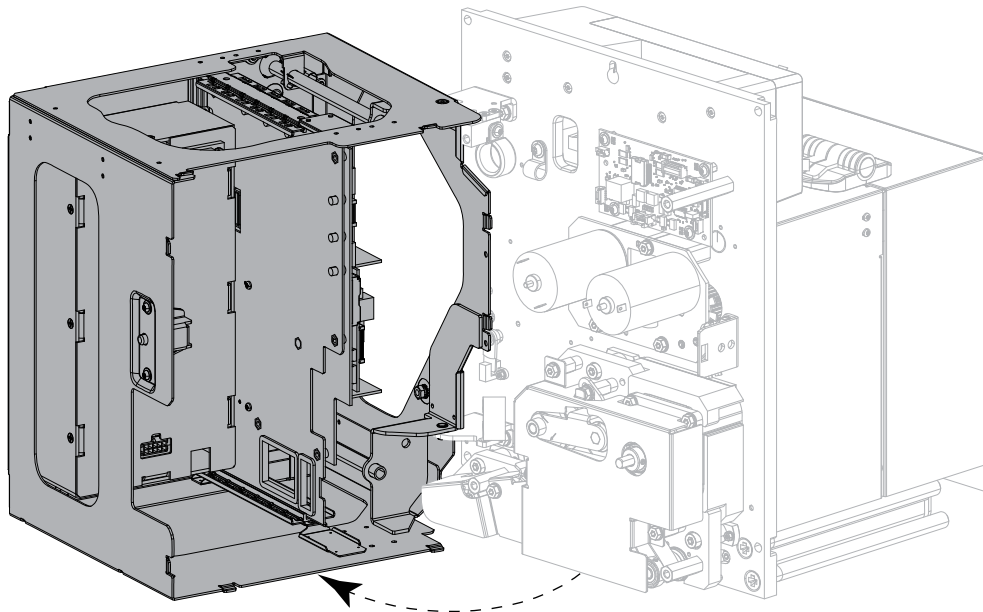
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

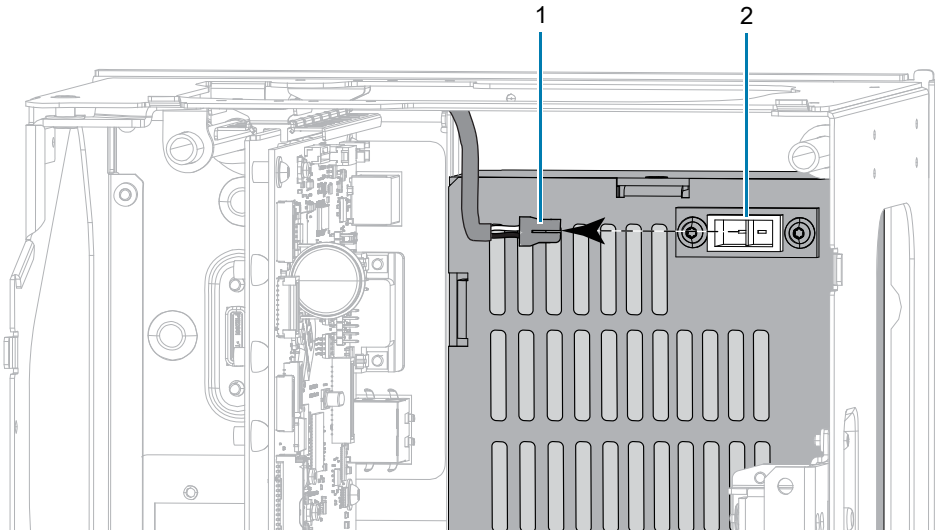


4. Open the rear of the print engine.

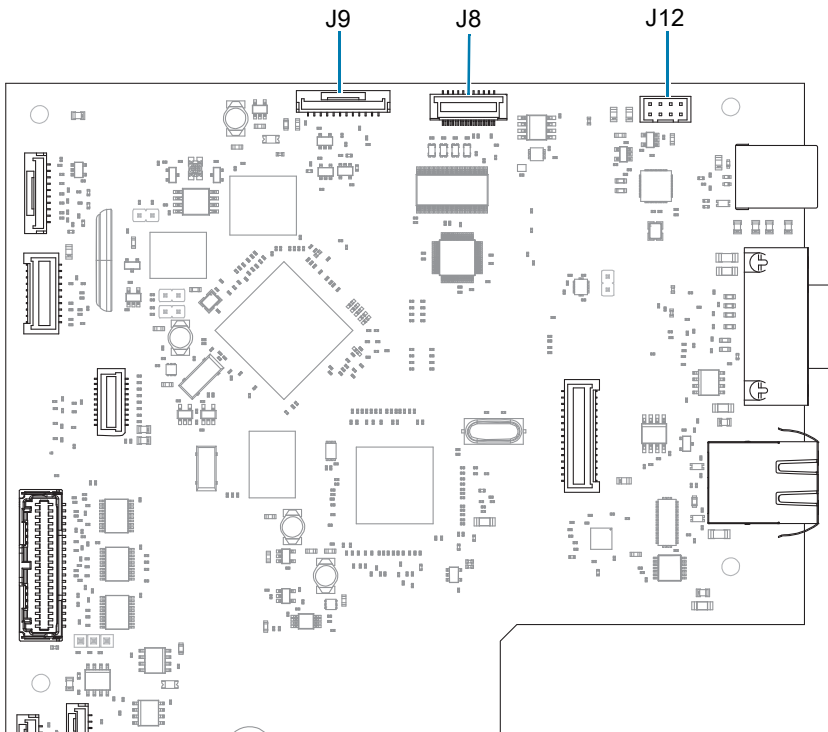



## Replace the Control Panel

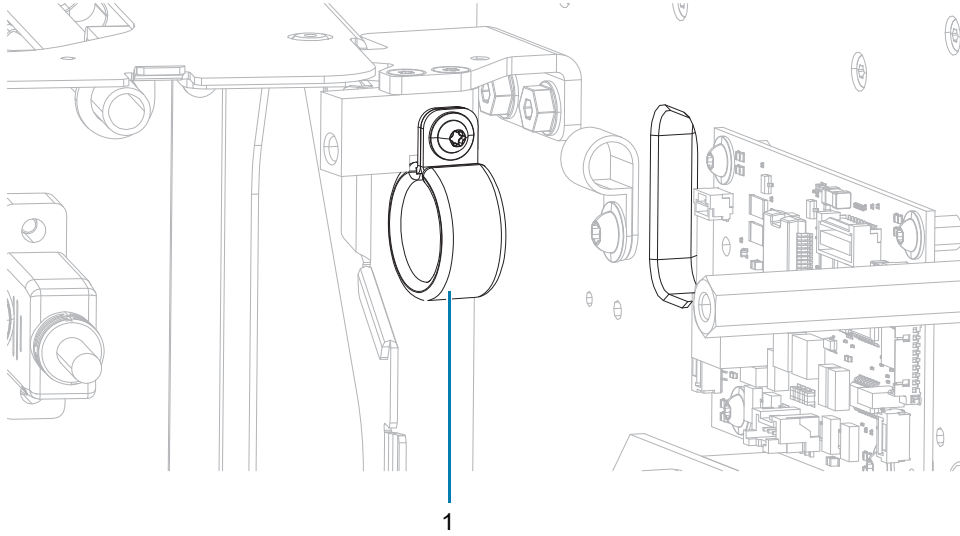
1. Disconnect the power switch cable (1) from the power switch connector (2).




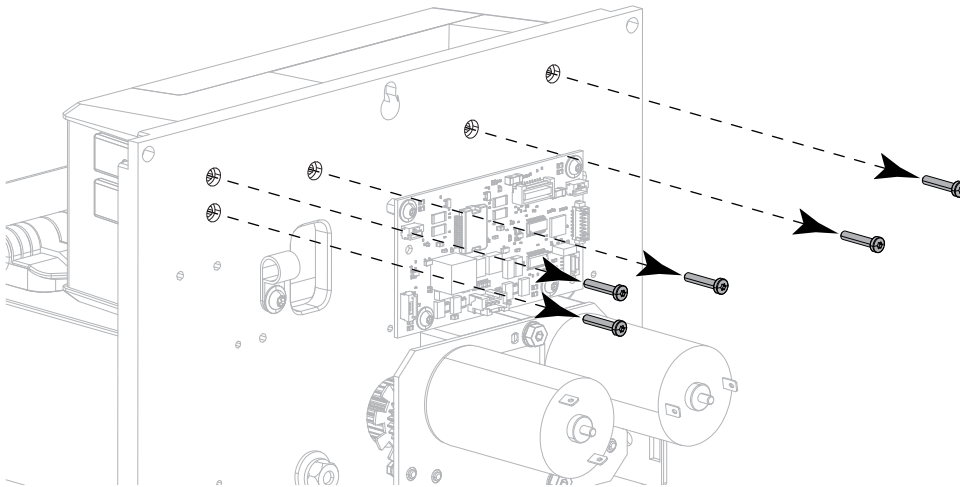
2. Disconnect the USB cable from J12, HDMI cable from J8, and the Bluetooth cable from J9 on the main logic board (MLB).



3. Cut any cable ties. Remove the  T9 screw securing the steel cable clamp (1), if necessary, and pull the disconnected cables free from the printer electronics enclosure.



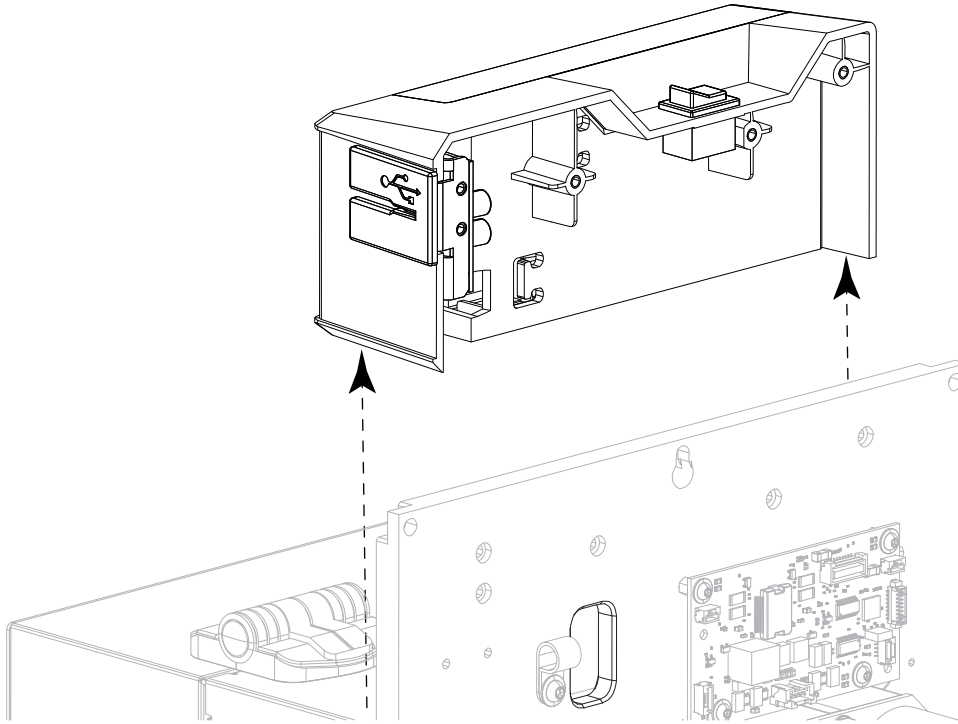
4. From the electronics side of the printer, remove the five  T8 screws securing the control panel.



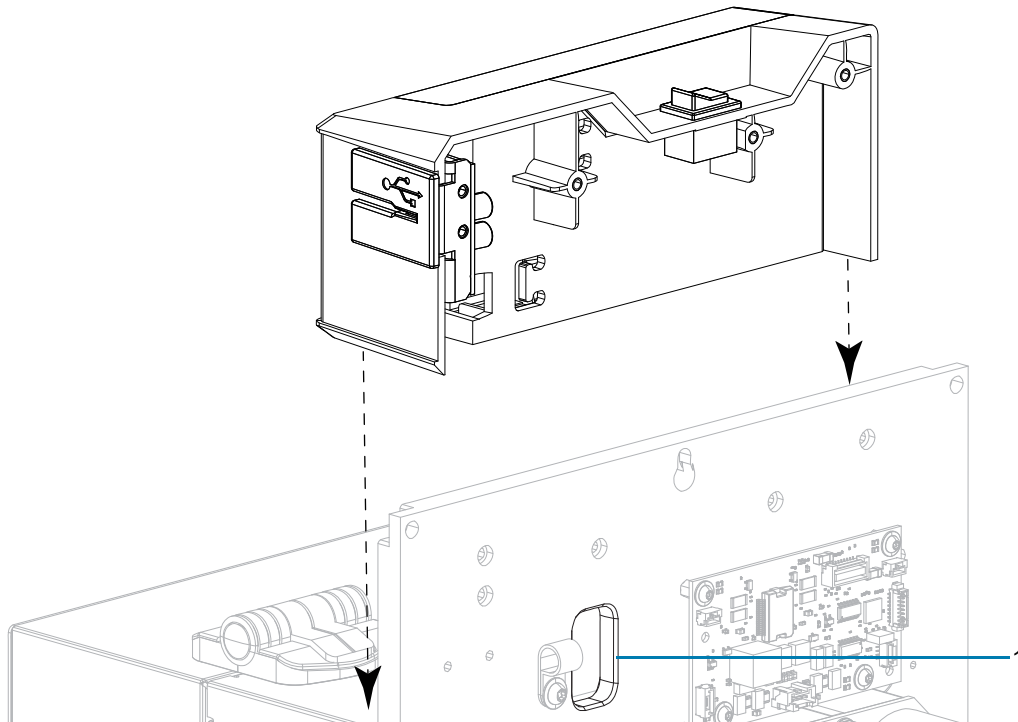


## Control Panel Maintenance Kit

5. Lift the control panel and guide the power switch cable, HDMI cable, Bluetooth, and USB cable through the access hole in the mainframe wall out of the printer. Discard the control panel assembly.




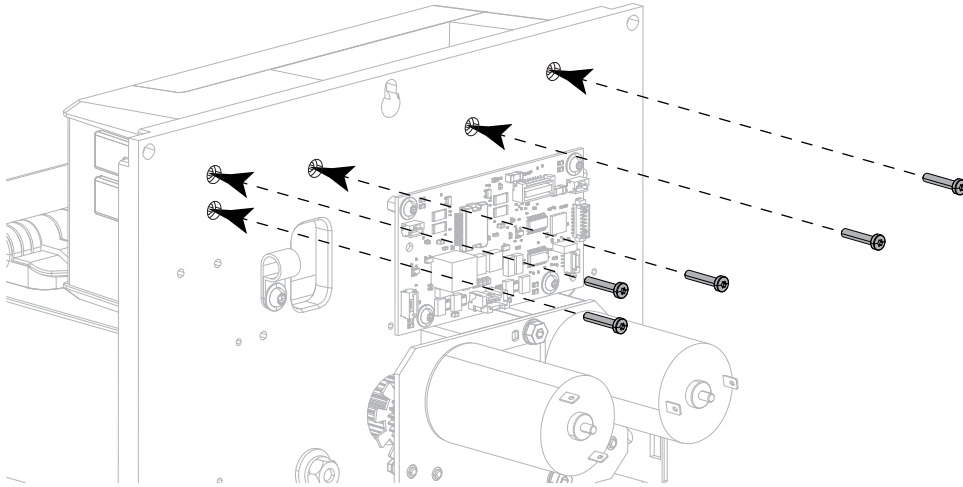
6. Install the new control panel and guide the power switch cable, HDMI cable, Bluetooth, and USB cable through the access hole (1) in the mainframe wall into the printer.




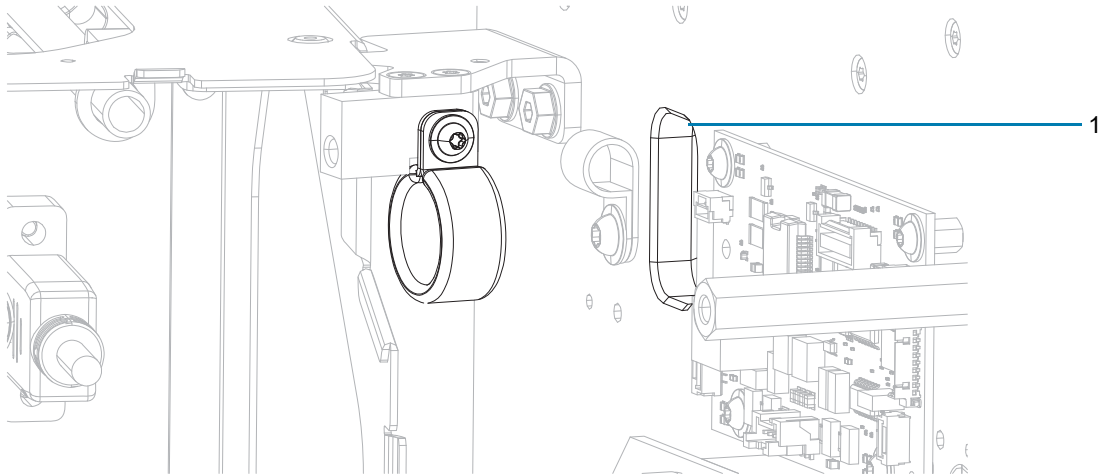
for parts & service call QLC (800) 837-1309

## Control Panel Maintenance Kit

7. Install the five new  T8 screws to secure the control panel.



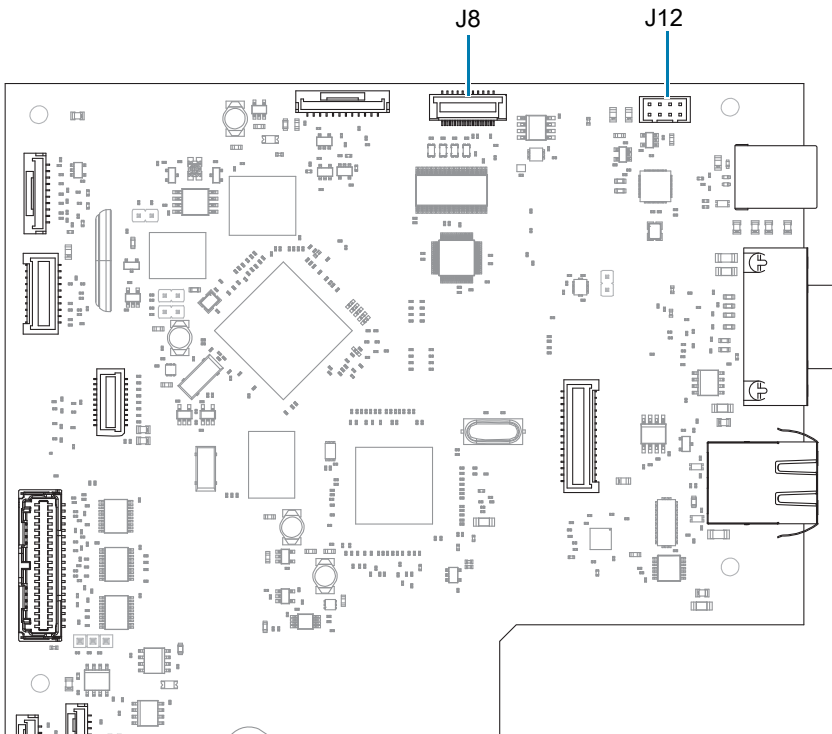
8. Reroute the new cables through the access hole (1) and replace any cable ties. Replace the stainless steel cable clamp and  T9 screw, if necessary.



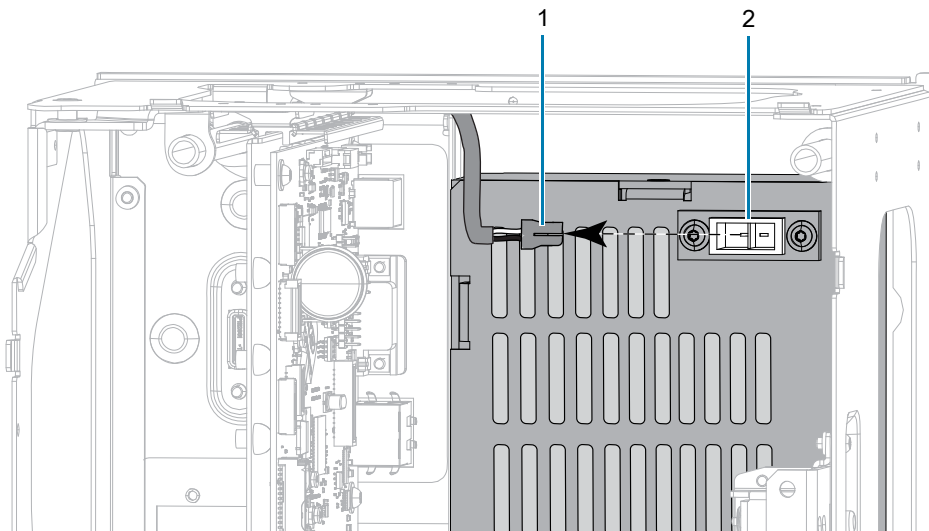
for parts & service call QLC (800) 837-1309

9. Connect the HDMI cable to J8 on the MLB.

10. Connect the USB cable to J12 on the MLB.

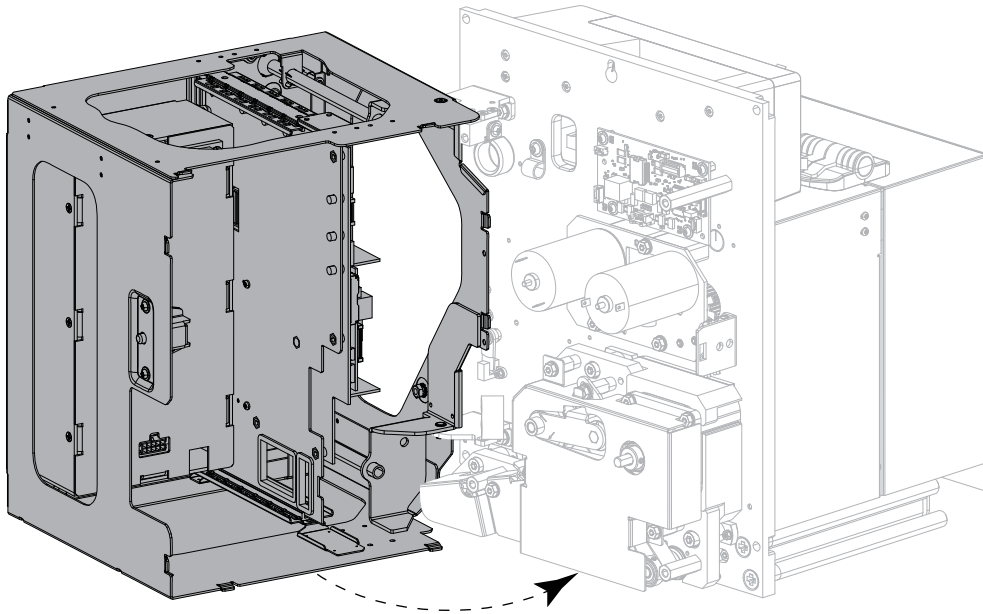


11. Connect the power switch cable (1) to the power switch connector (2).

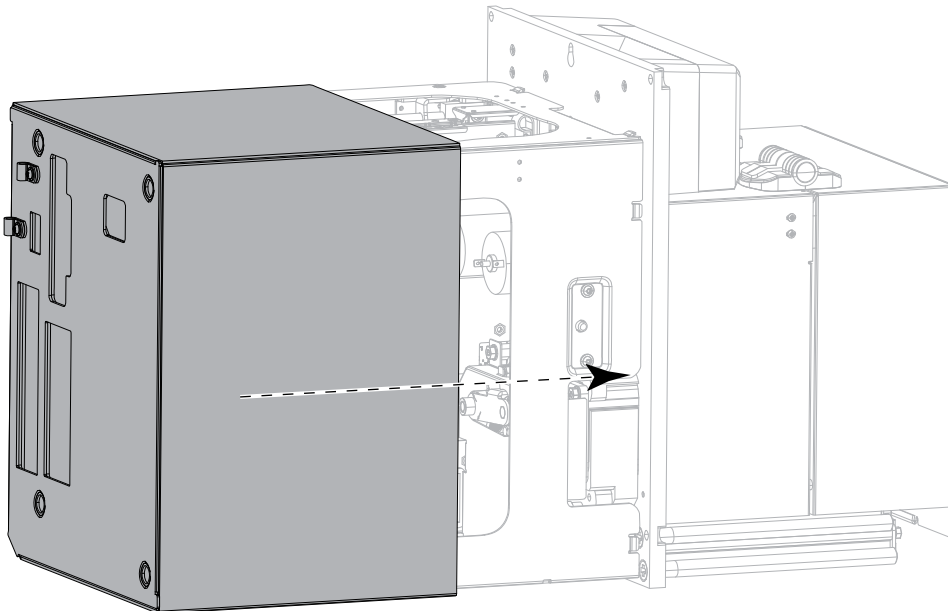


## Close the Electronics Enclosure

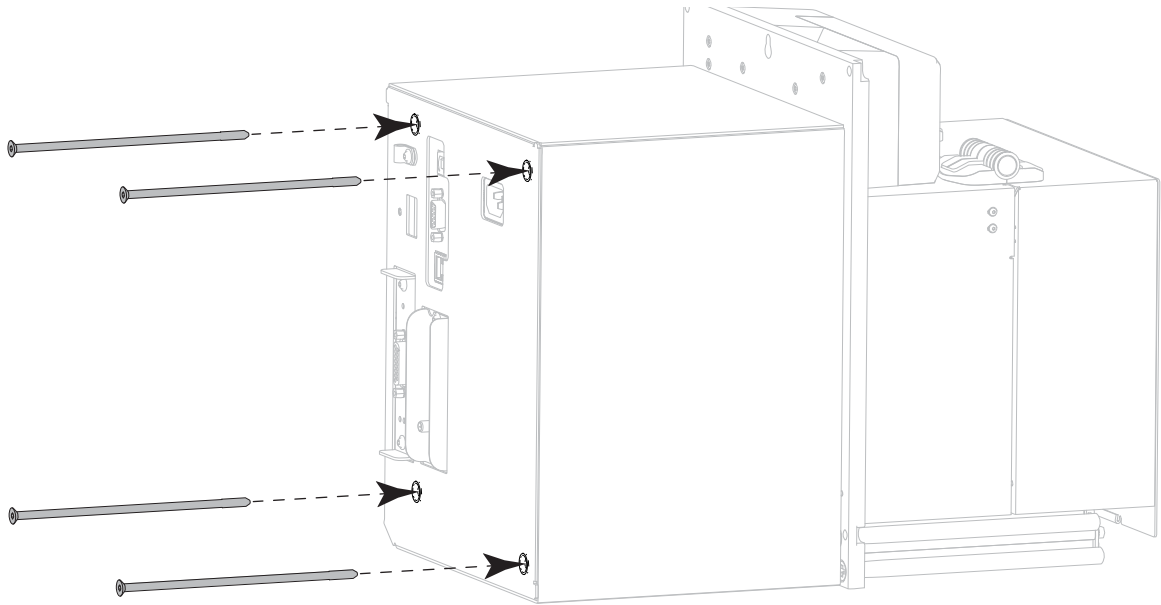
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four 3 mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
2. Reconnect AC power cord and interface cables.
3. Turn on the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

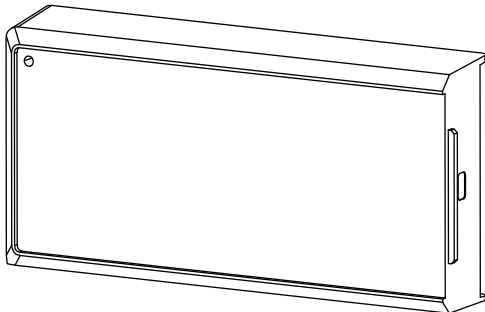
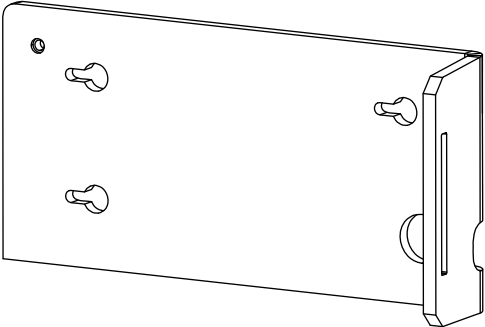
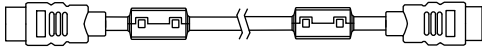
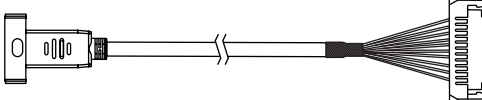

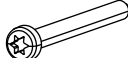


**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Deported control panel cover Qty: 1
	Deported control panel bracket Qty: 1
	HDMI cable Qty: 1
	Bulkhead HDMI cable Qty: 1
	Screw (M3x6) Qty: 2
	Screw (0.5 X 30) Qty: 1

## Tools Required

●	Metric hexagon keys or bits Size: 3mm, 5mm
✳	Hexalobular (6-lobe, star) keys, drivers, or bits Size: T10
•	Sorting bin for screws and small parts (optional)

## Prepare for Installation



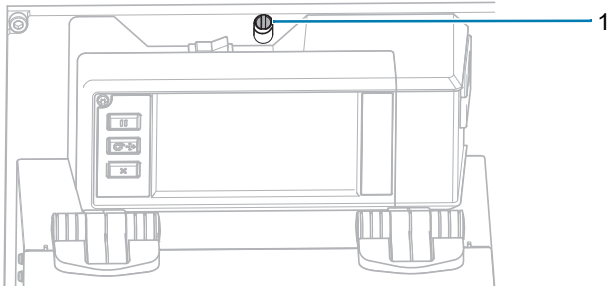
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



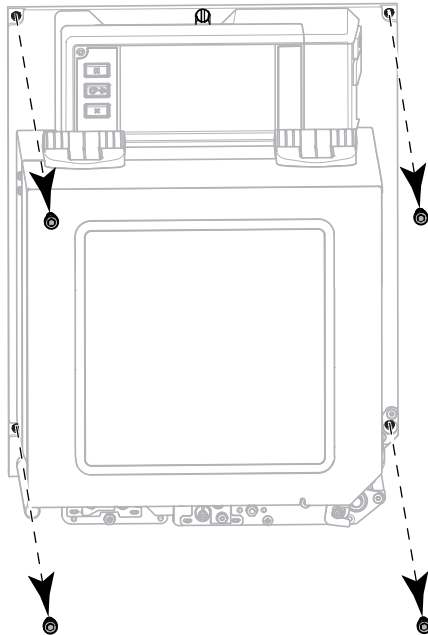
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



2. Remove the four screws securing the print engine to the applicator.

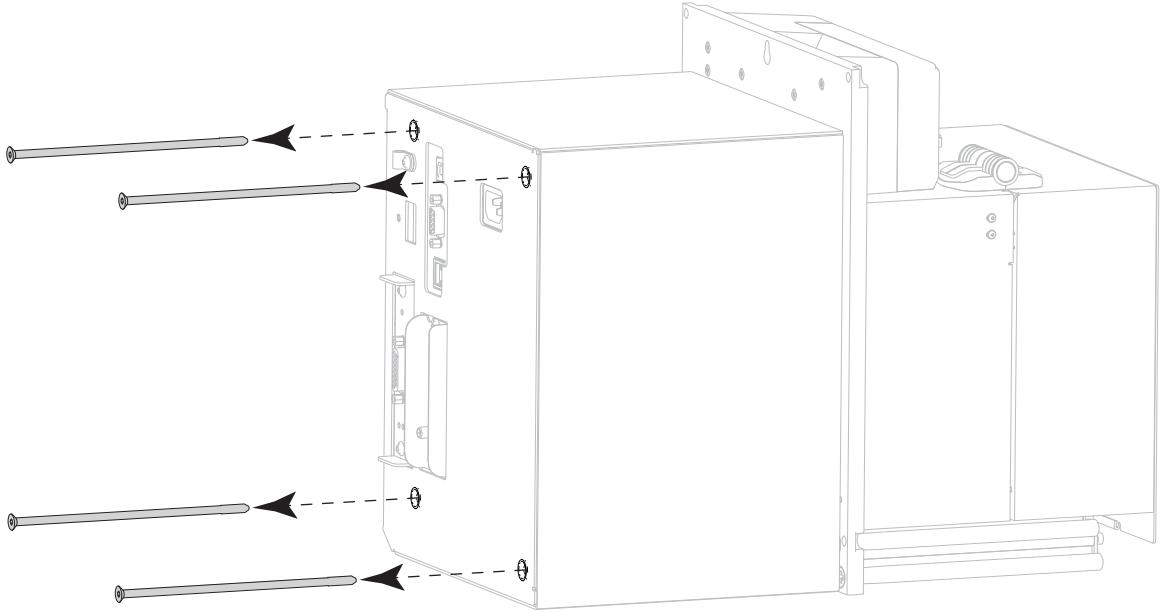


3. Lift the print engine off of the center mounting bolt and place it on a workbench.

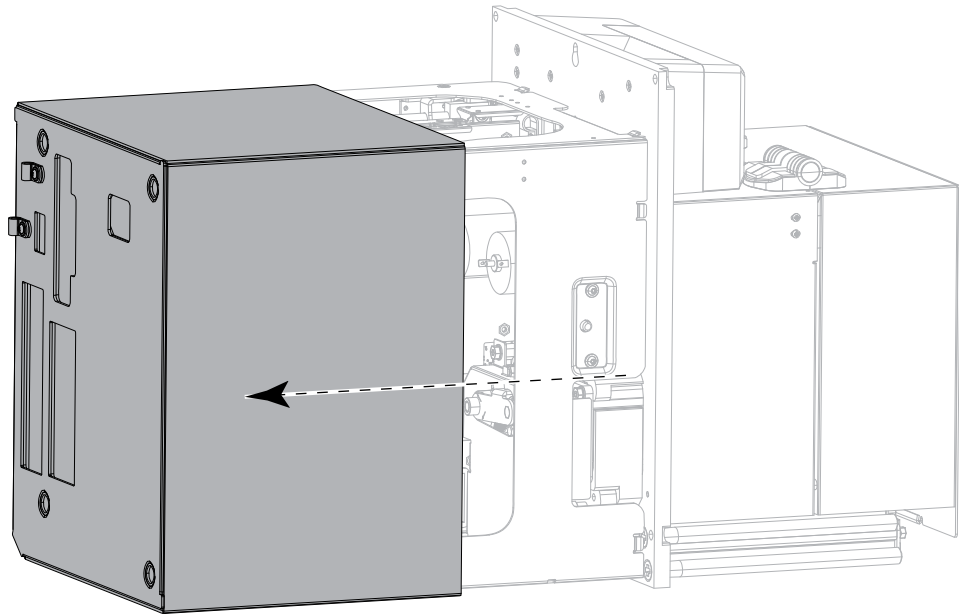


## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



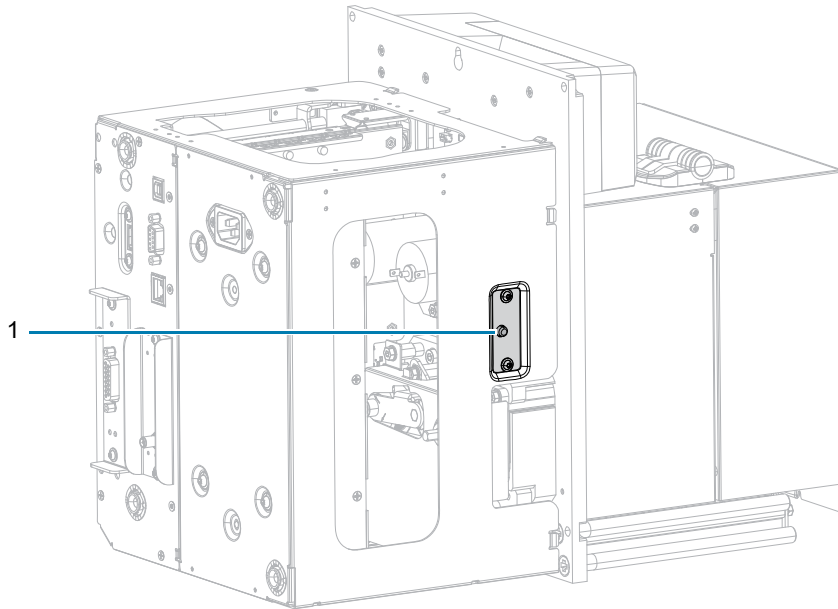
2. Remove the electronics enclosure cover from the print engine.



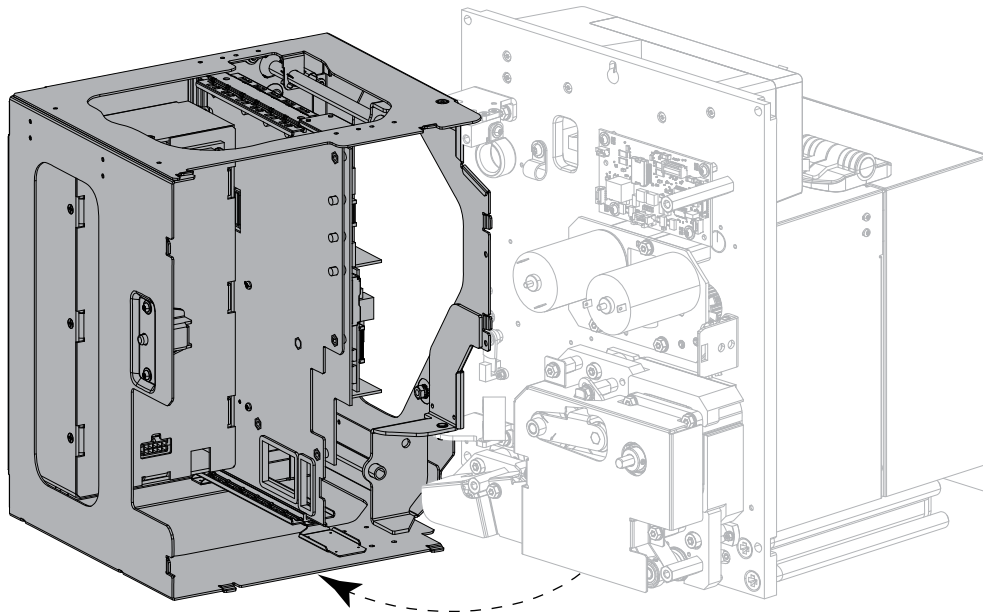
3. Press the electronics enclosure latch (1).



**NOTE:** For right-hand models, the latch is on the right side, as shown. For left-hand models, the latch is on the left side.

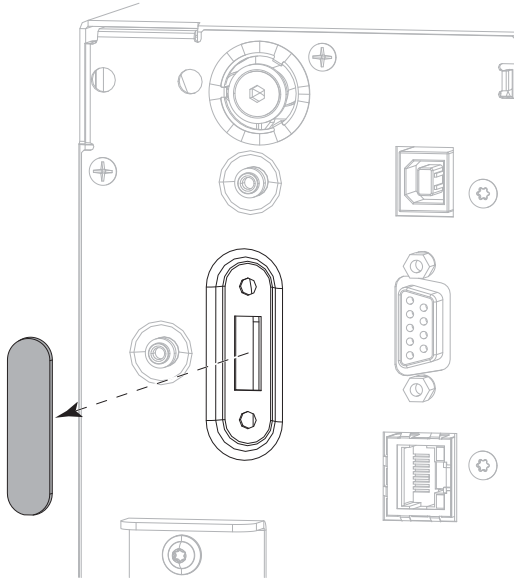


4. Open the rear of the print engine.

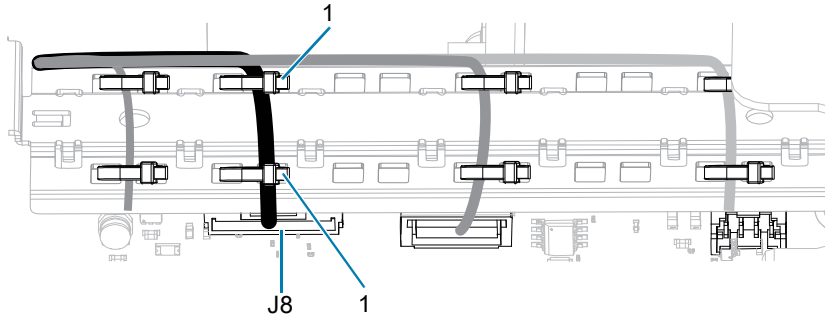


## Install the New HDMI Rear Port

1. Remove the HDMI port cover from the rear of the printer.



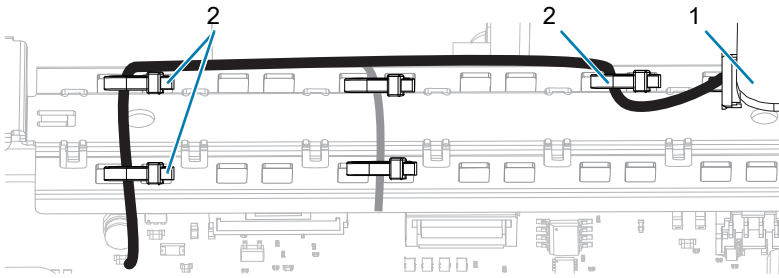
2. Disconnect the old HDMI cable from J8 on the main logic board (MLB) and if necessary, cut any cable ties (1) that secure it.



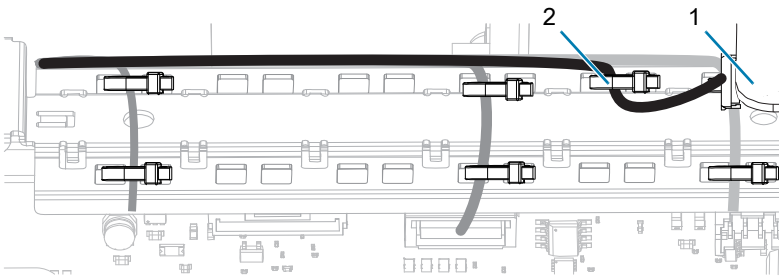
## Deported Control Panel Maintenance Kit

3. Tuck the old HDMI cable plug inside the chassis of the print engine (1), and secure it to the print engine frame rail using one or more cable ties (2).

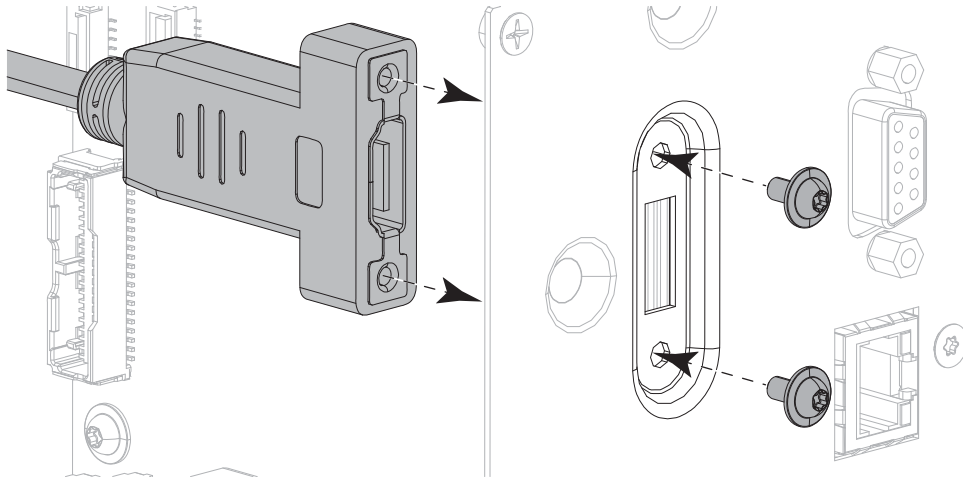
RH



LH



4. Connect the new bulkhead HDMI to the back of the print engine with the  T10 screws.

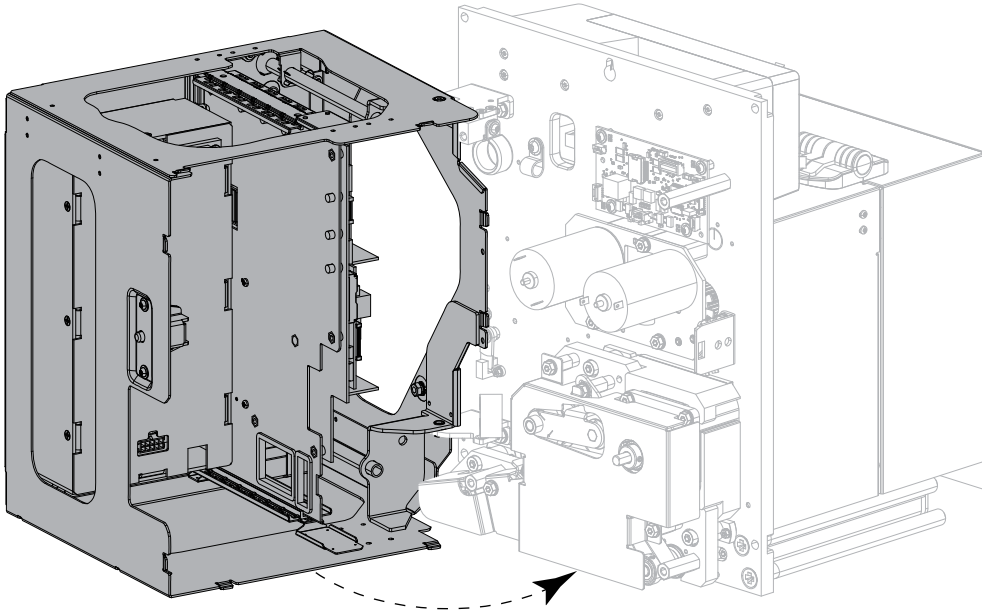


5. Connect the new bulkhead HDMI cable to J8 on the MLB.

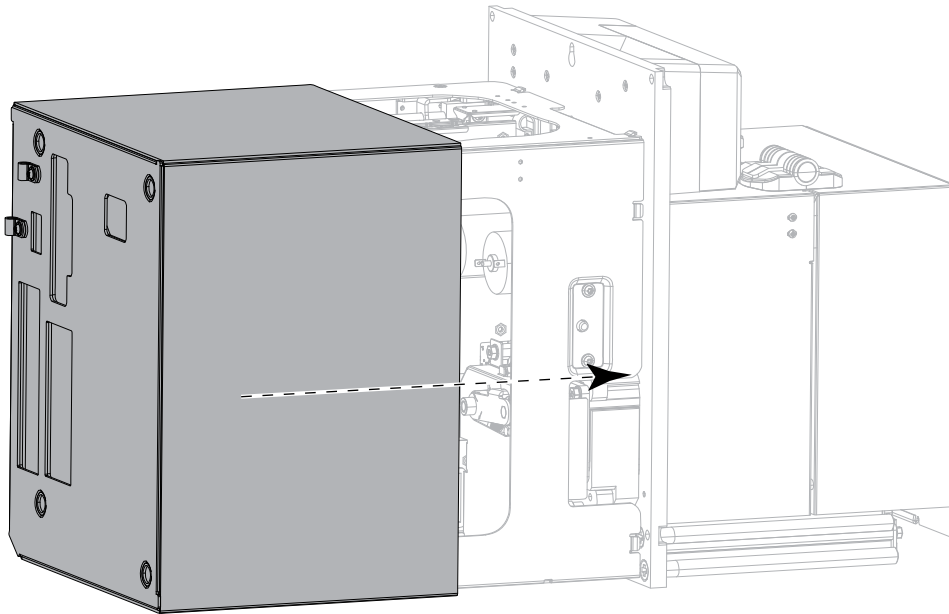
for parts & service call QLC (800) 837-1309

## Close the Electronics Enclosure

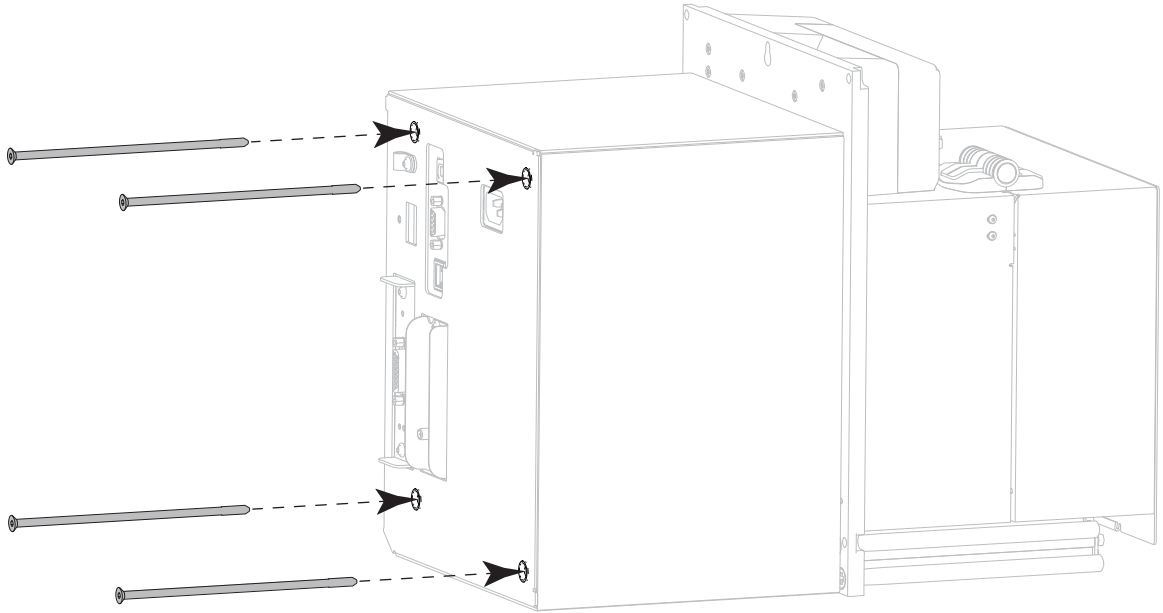
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.

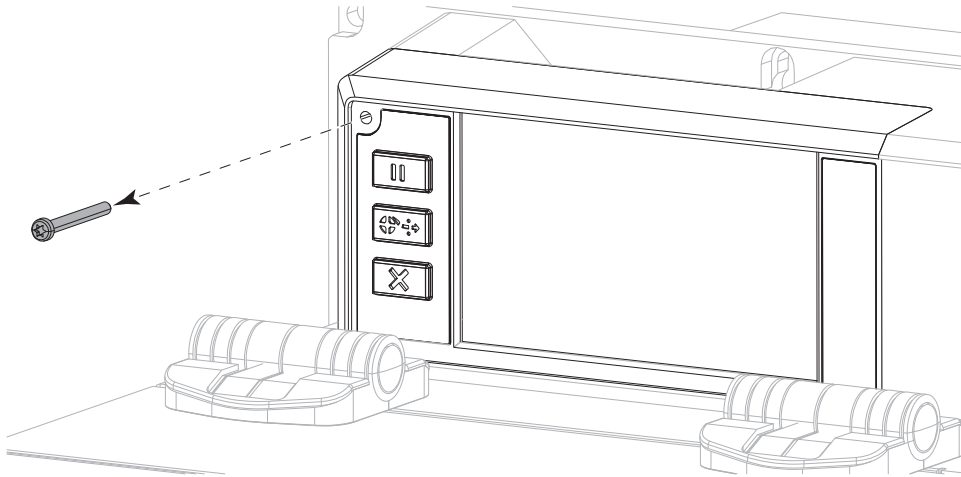


3. Install the four 3mm hexagon screws securing the electronics enclosure cover.



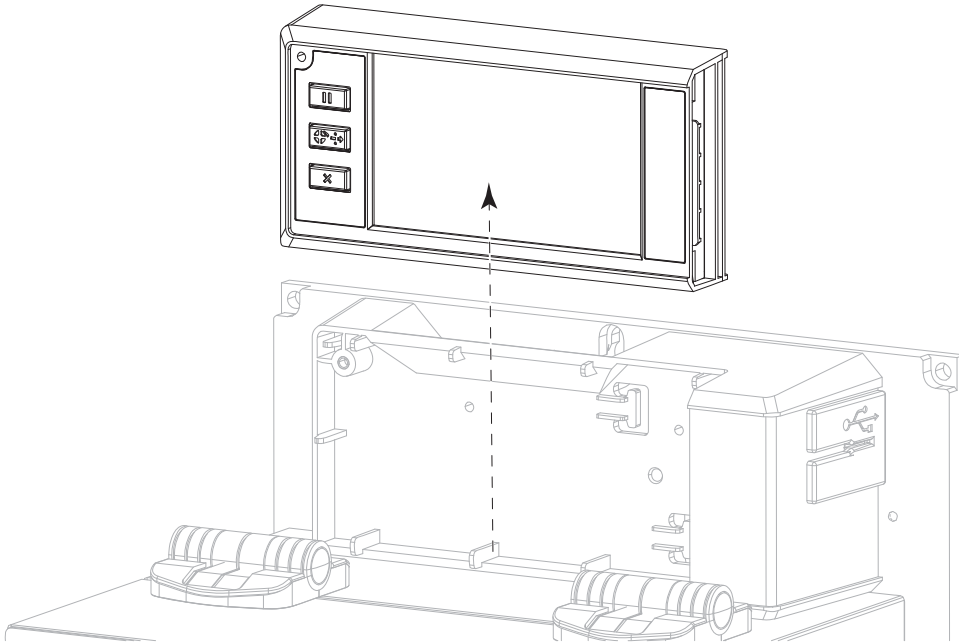
### Install the Deported Control Panel

1. Remove the mounting T10 screw holding the control panel in place.

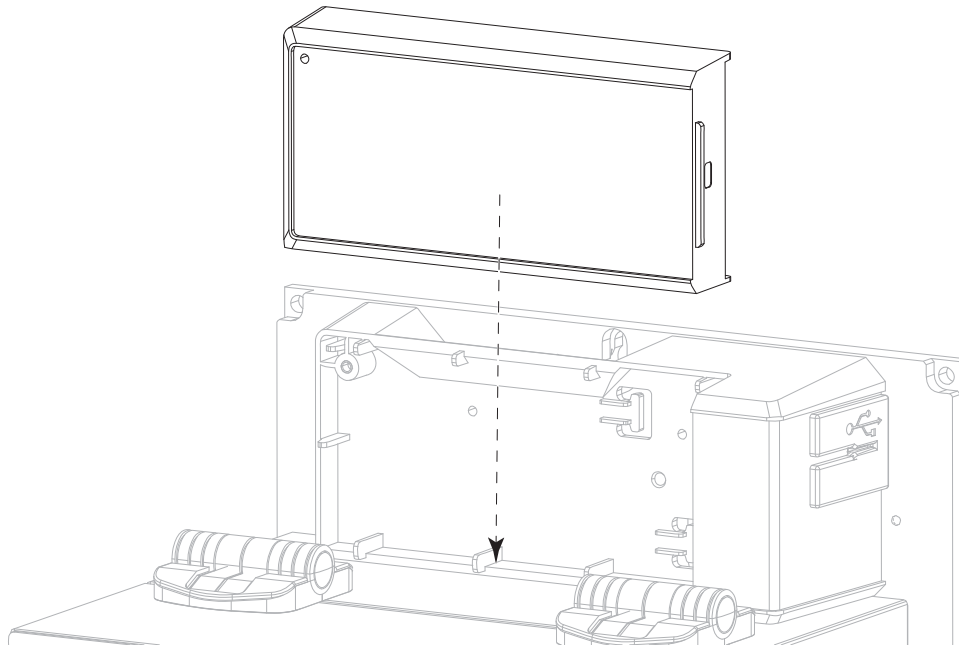


## Deported Control Panel Maintenance Kit

2. Move the control panel away from the printer, disconnect the HDMI cable, and set the control panel aside.

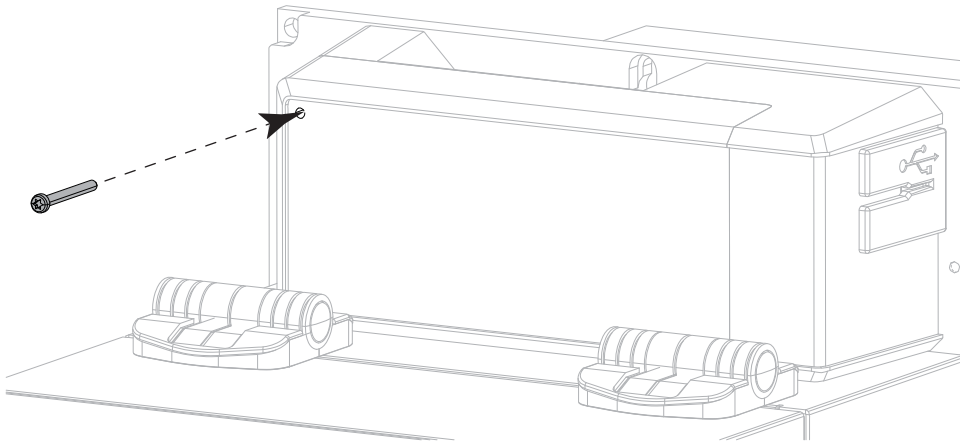


3. Install the control panel cover, covering the old HDMI cable, on the printer.



for parts & service call QLC (800) 837-1309

4. Install the  T10 screw securing the control panel cover.

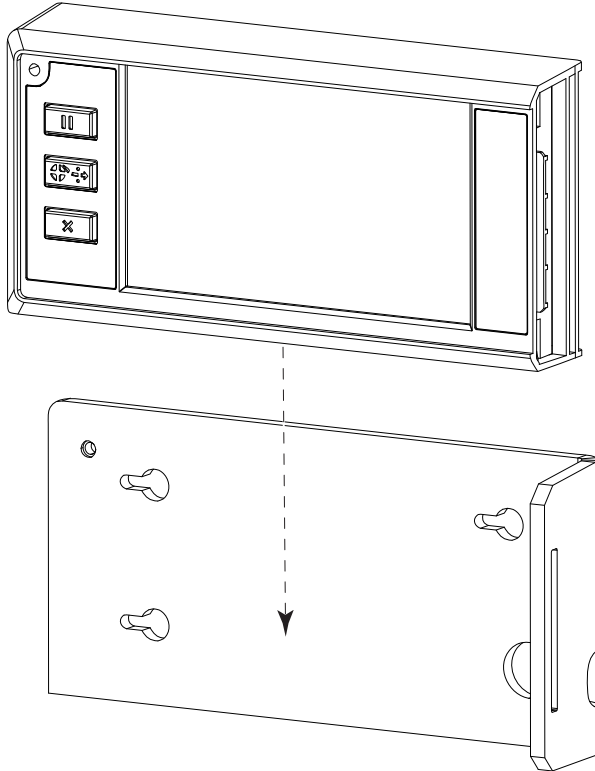


5. Install the deported control panel mounting plate.




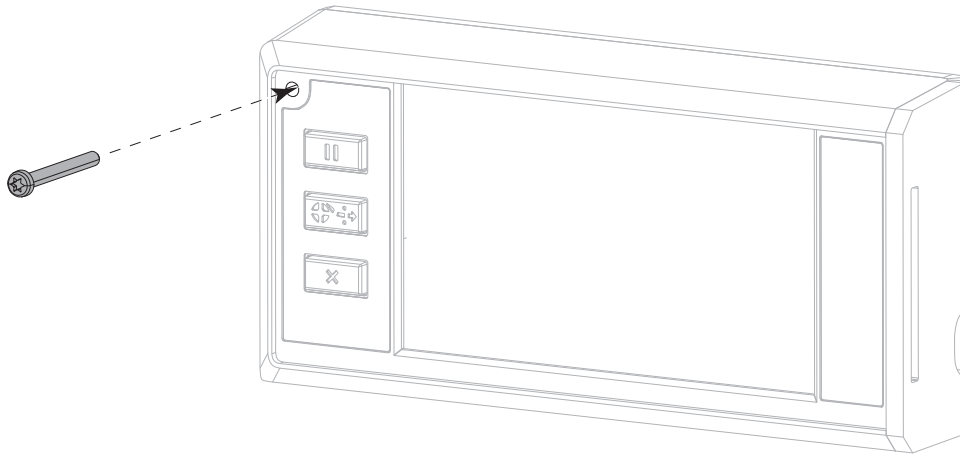
**NOTE:** It may be necessary to install the printer in the applicator to complete the deported control panel installation.

6. Route the HDMI cable through the deported control panel mounting plate to the back of the print engine and plug into the HDMI plug.
7. Plug the HDMI cable into the control panel.
8. Install the control screen onto the deported control panel mounting plate.





9. Install the new  T10 screw securing the control panel to the deported control panel mounting plate.



### Replace Print Engine in Applicator

1. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.

### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reconnect AC power cord and interface cables.
5. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	<p>Media cover assembly Qty: 1</p>
	<p>Sealing plug Qty: 1</p>
	<p>Screw (M4x10 HEX SO NI) Qty: 4</p>  <p>4mm</p>

## Tools Required

- Metric hexagon keys or bits  
Size: 3 mm, 4mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

for parts & service call OLC (800) 837-1309

## Prepare for Installation



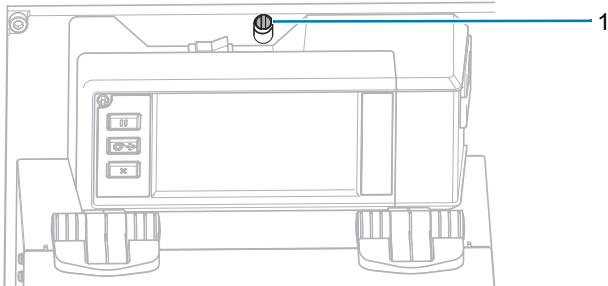
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



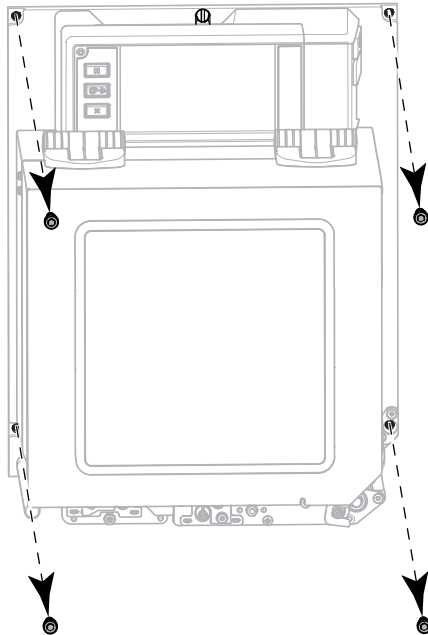
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



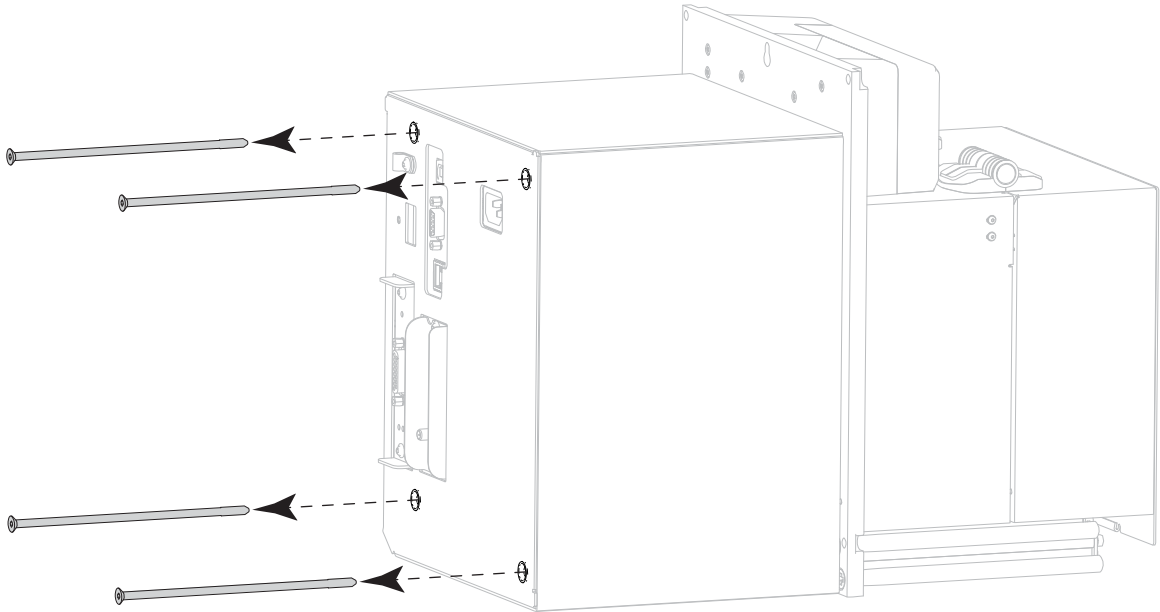
2. Remove the four screws securing the print engine to the applicator.



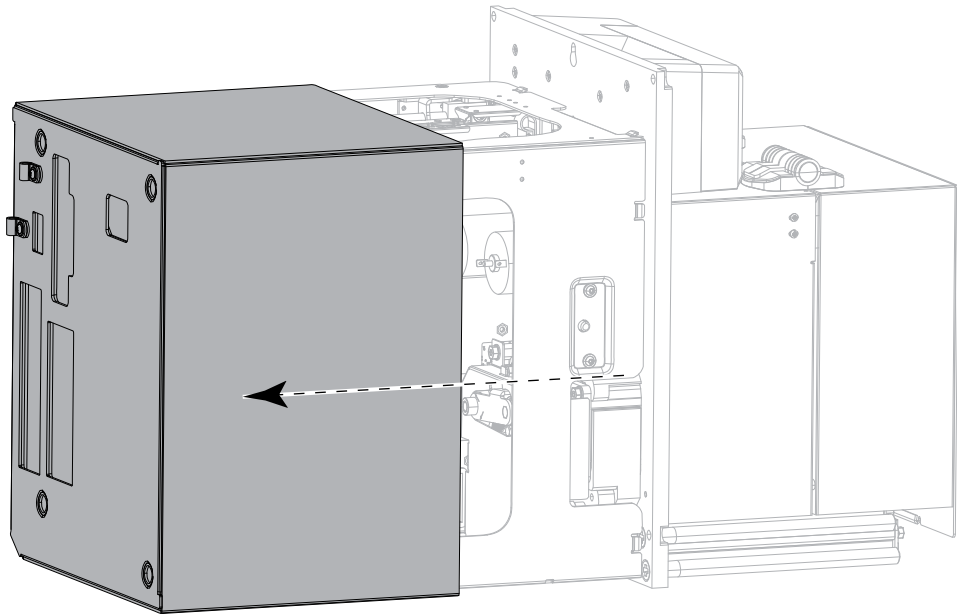
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



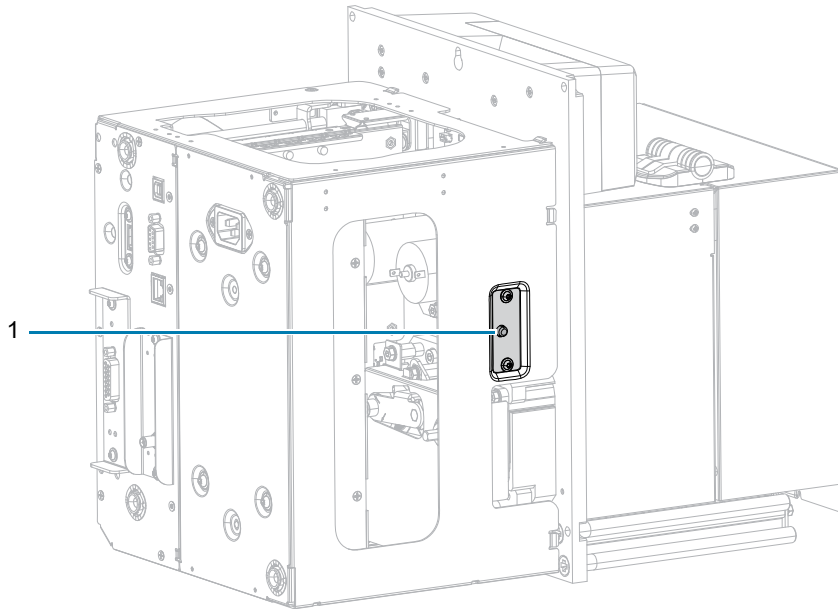
2. Remove the electronics enclosure cover from the print engine.



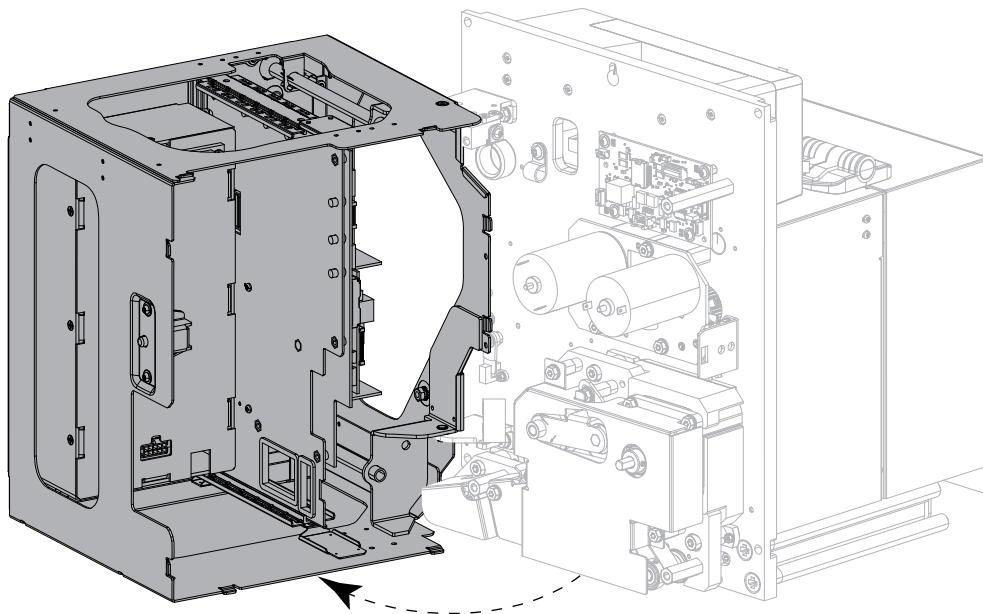
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

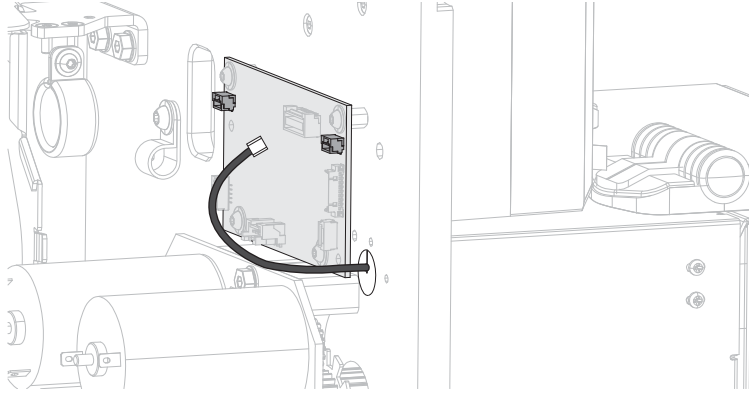


4. Open the rear of the print engine.

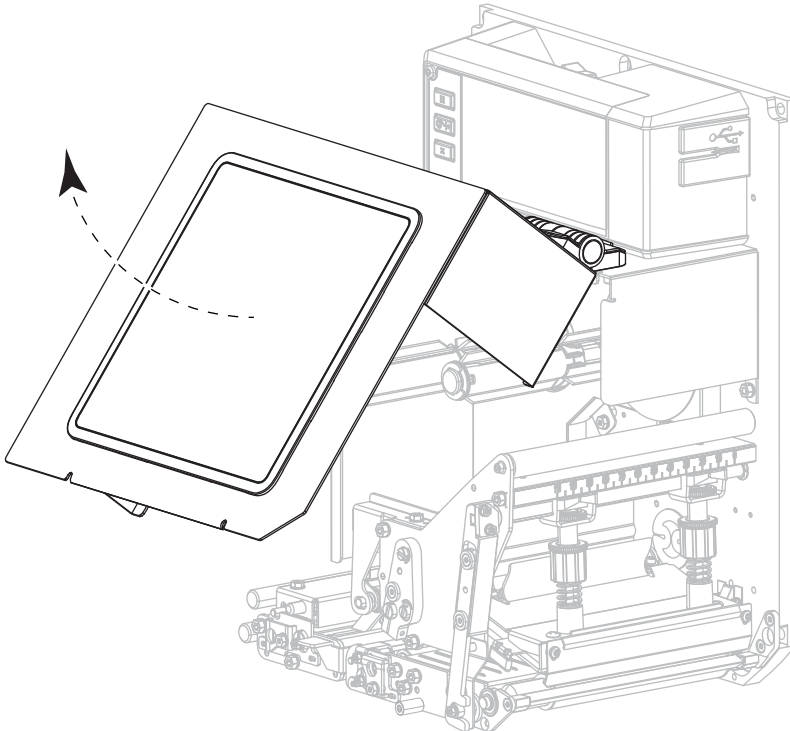


## Replace the Media Cover

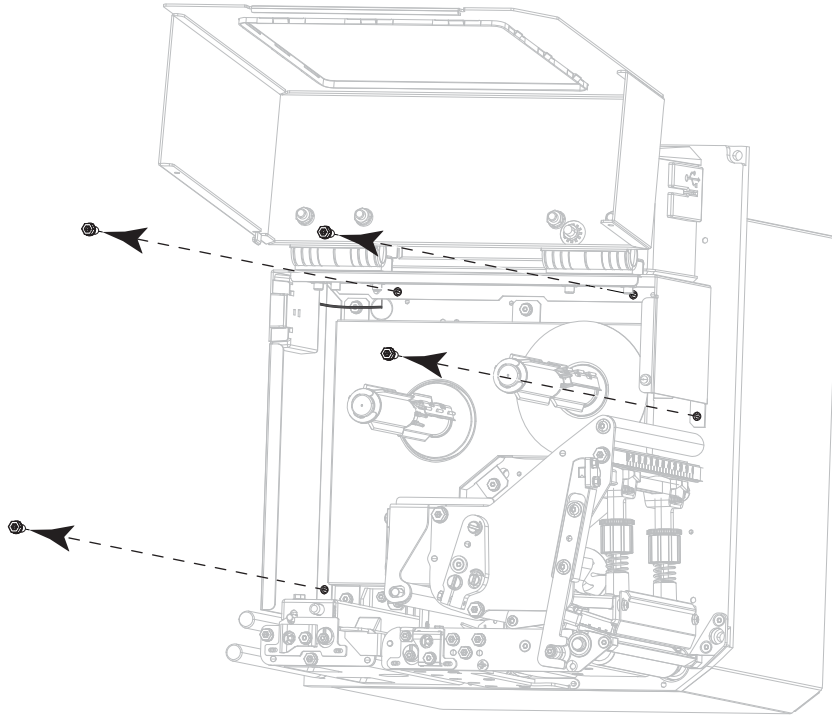
1. Inside the electronics enclosure, disconnect the door-open sensor cable from the ribbon tension control board.



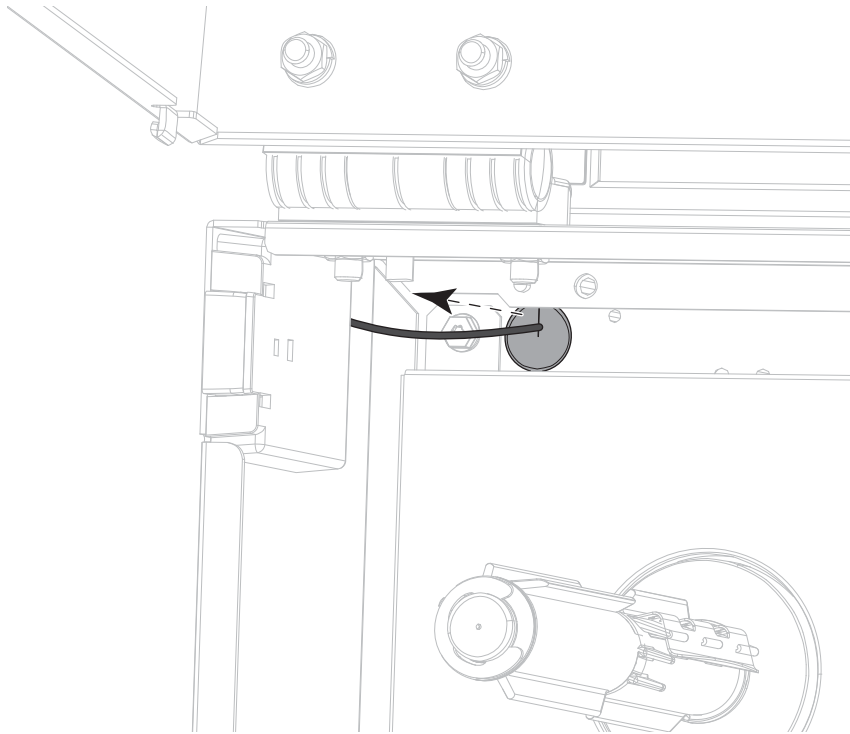
2. Open the media cover.



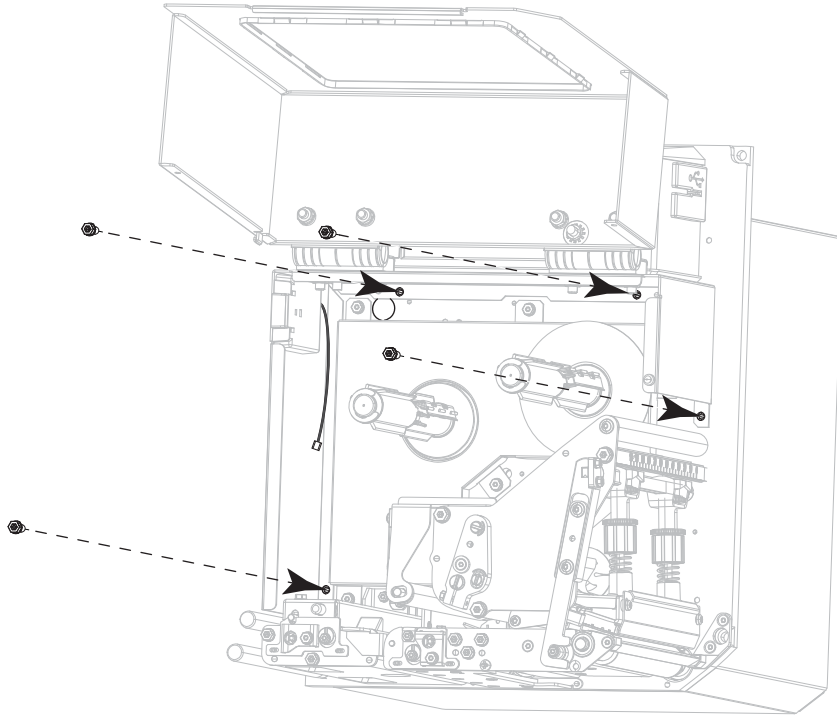
3. Remove the four 4mm hexagon screws that secure the old media cover to the mainframe.



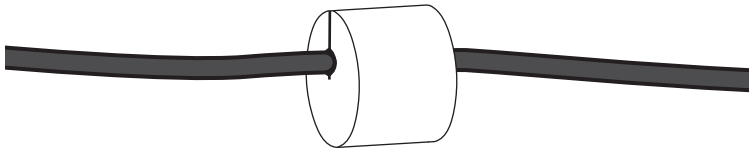
4. While removing the old media door, remove the sealing plug from the hole in the mainframe, and pull the end of the door-open sensor cable through the hole.



5. Position the new media cover and install four 4mm hexagon screws to secure it to the mainframe.

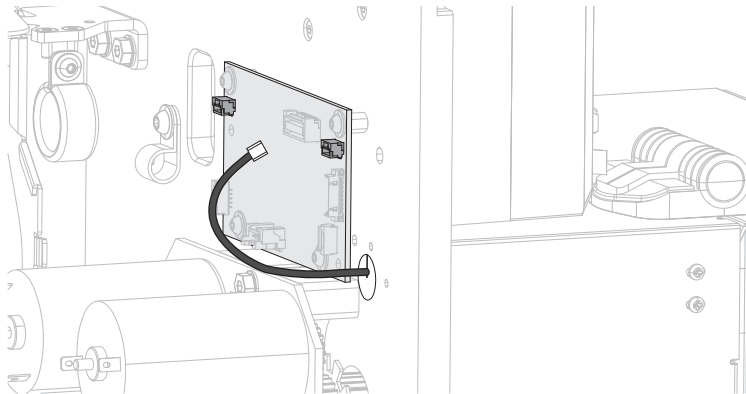


6. Insert the door-open sensor cable into the slot of the new sealing plug.



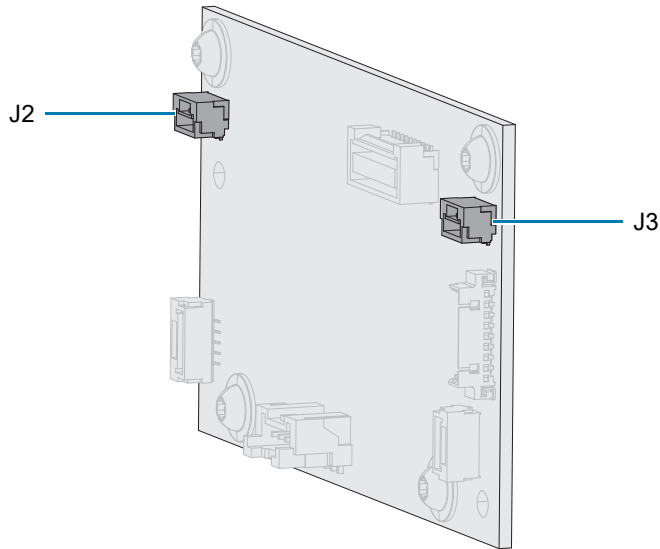
7. Thread the end of the sensor cable through the hole in the mainframe, and insert the sealing plug into the hole in the mainframe.

The cable comes out near the ribbon tension control board.



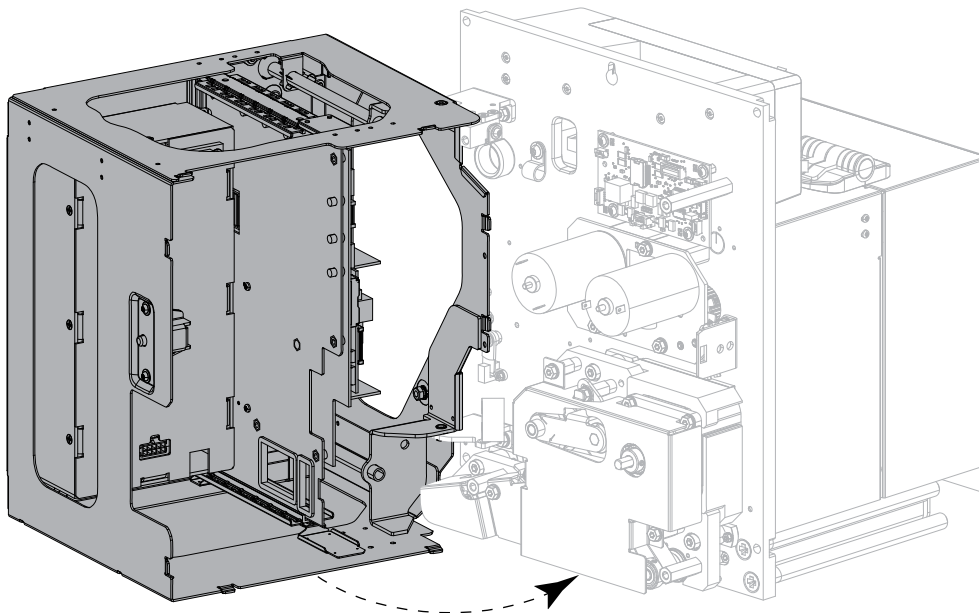


8. Connect the door-open sensor cable to the appropriate connector on the ribbon tension control board.
  - For LH models, the cable connects to J2.
  - For RH models, the cable connects to J3.

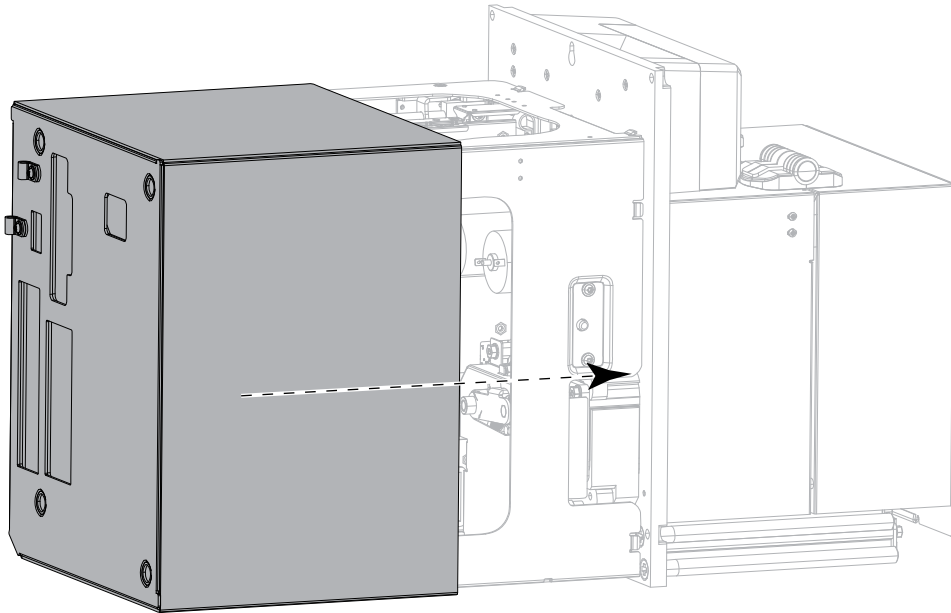


## Close the Electronics Enclosure

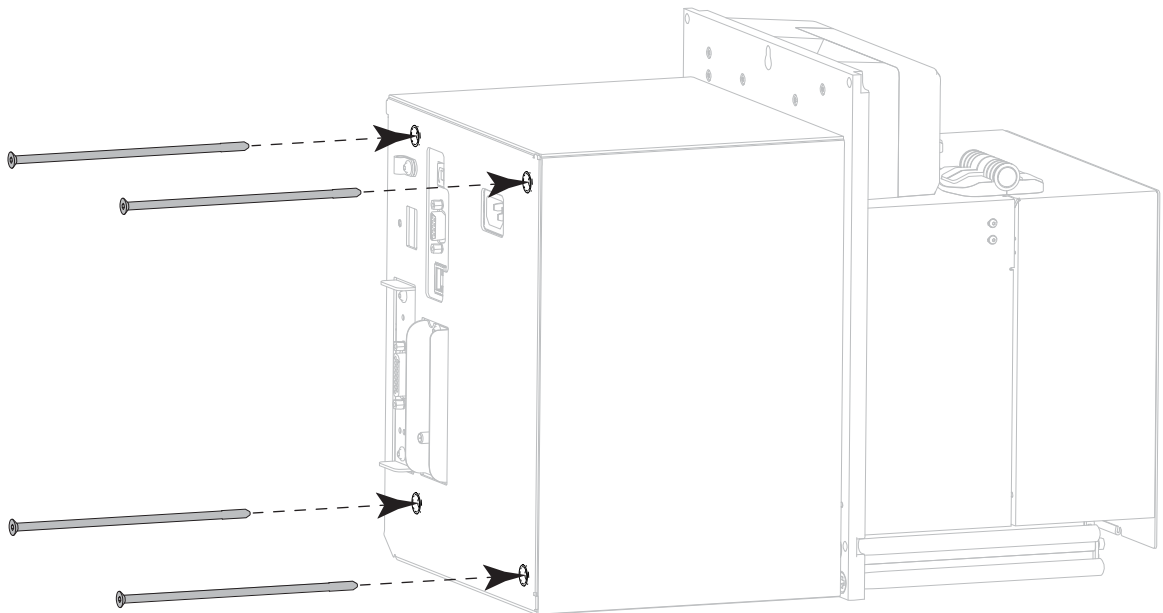
1. Close the rear of the print engine.



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the media cover.
3. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
4. Reconnect AC power cord and interface cables.
5. Turn on (I) the printer power.

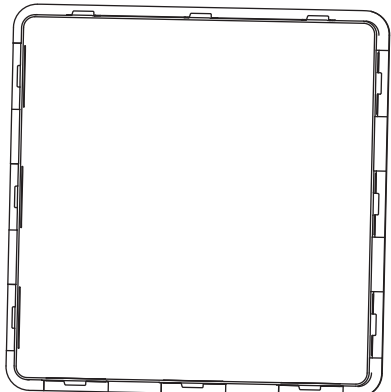
**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

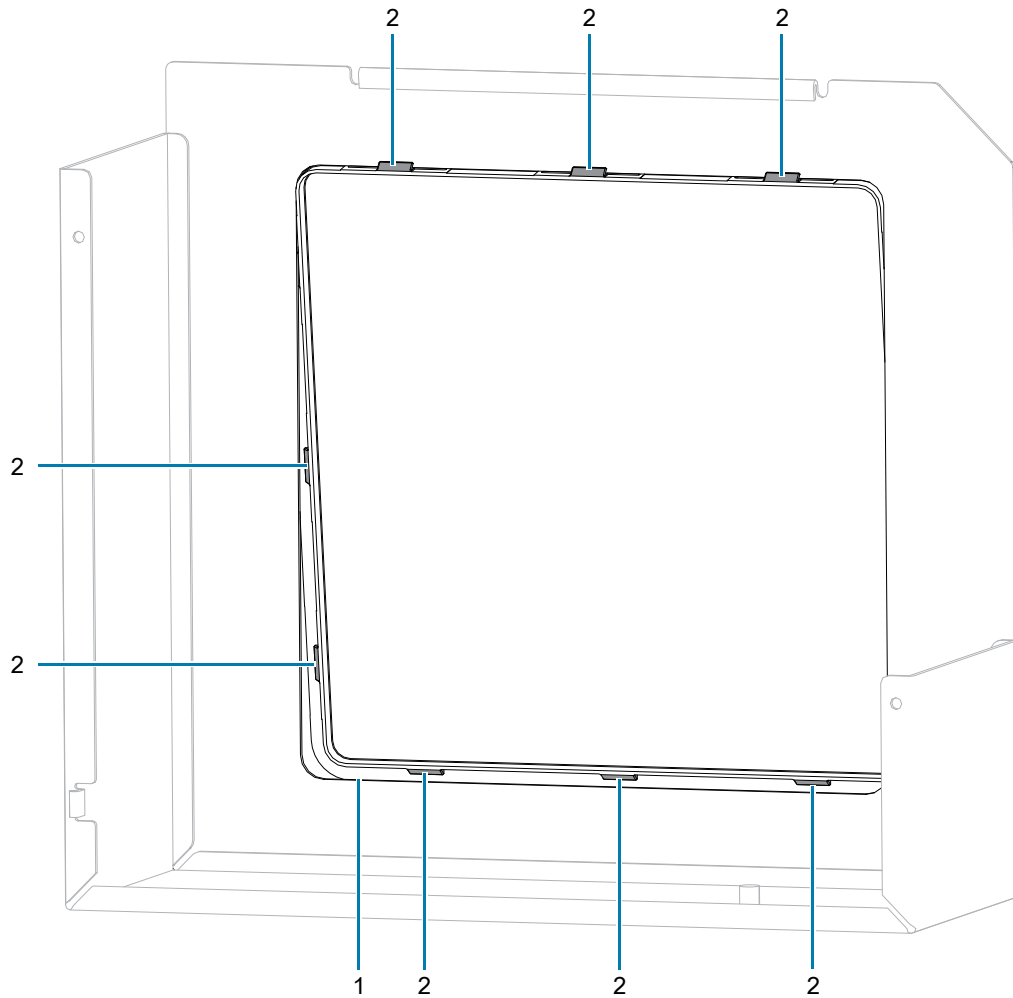
	Media Window Qty: 1
---	------------------------

## Replace the Media Window

1. Open the media cover.
2. Press the window from the inside of the door (1) and until the tabs (2) clear the edge of the door.



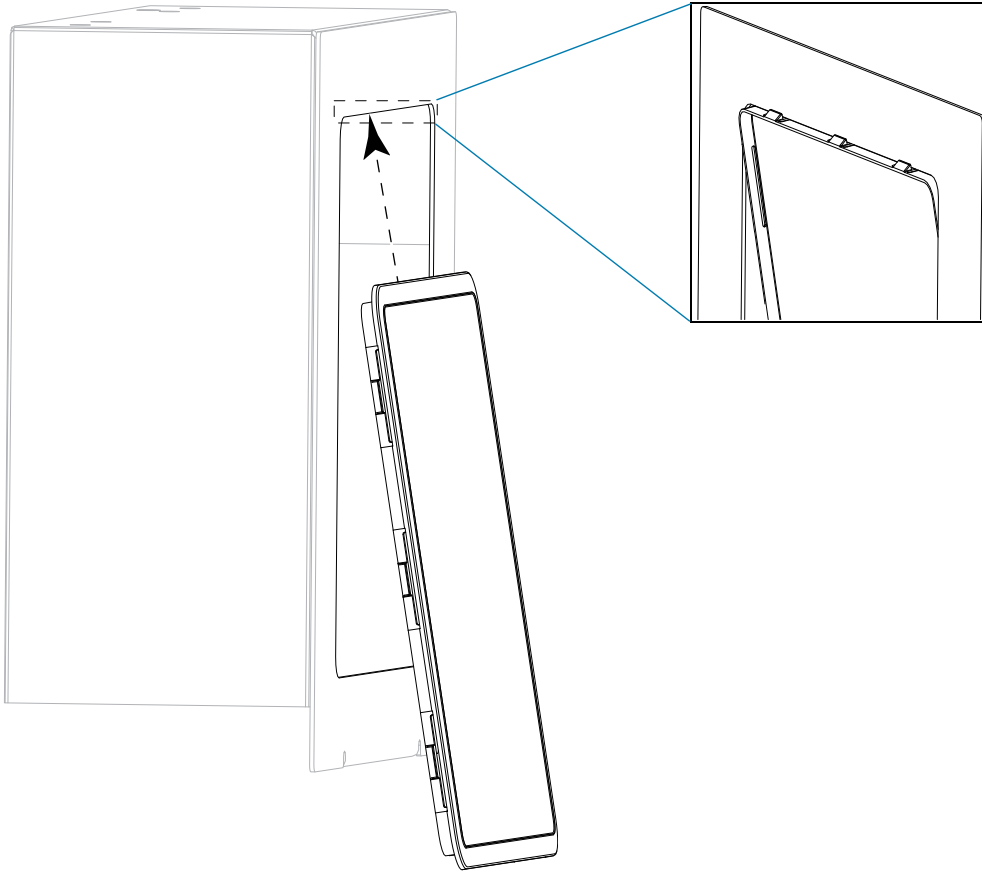
**NOTE:** There are three tabs on each edge of the window.



3. Discard the window.
4. Close the media door.

## Media Window Maintenance Kit

5. Align the media window, with the tabs facing the media door and the window opening on the media door.
6. Seat the fixed tabs into the window opening. Snap the remaining three sides into place and seat the window properly.



**The installation is complete.**

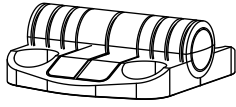

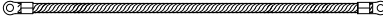






## Installation Instructions

Read these instructions thoroughly before installing this kit.




The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List


Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

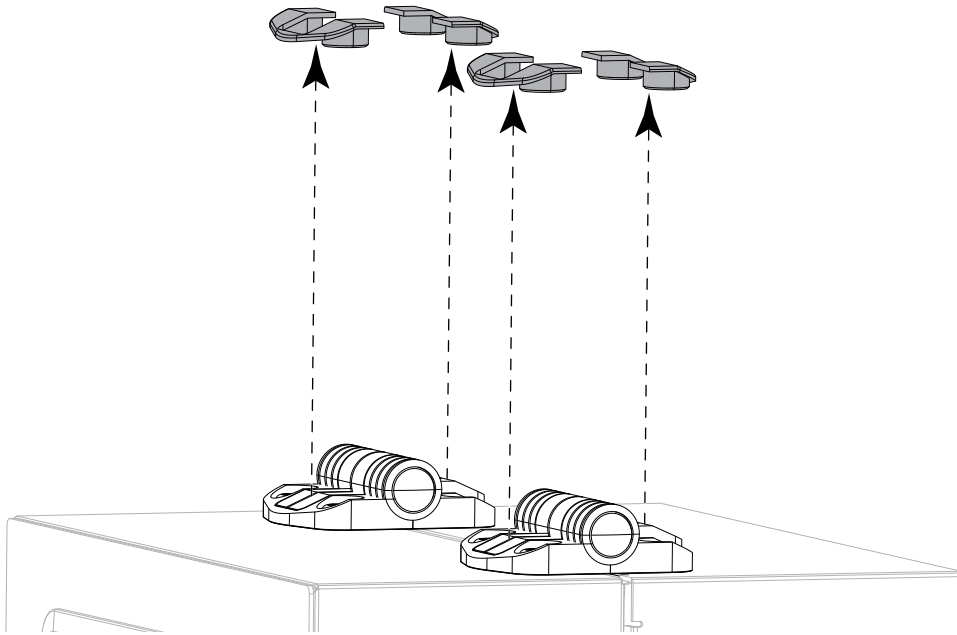
	Media cover hinge Qty: 2	
	Hinge cover Qty: 4	
	Ground cable Qty: 1	
	Screw (M5x0.8x12 pn Ni) Qty: 8	 PH2
	Washer, split (M5) Qty: 8	
	Nut (hex M5x7.9x2.6 Zn) Qty: 10	 5mm
	Washer, lock (M5 ext) Qty: 2	


## Tools Required

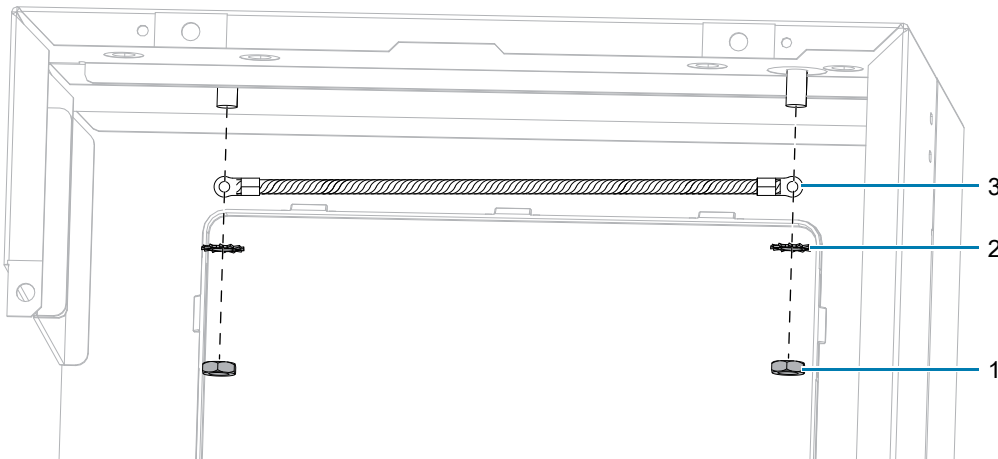
-  Phillips screwdrivers or bits  
Size: PH2
-  Flat-blade screwdrivers or bits
-  Metric nut drivers  
Size: 5mm
- Sorting bin for screws and small parts (optional)


## Replace the Hinges

1. Remove the hinge covers with a  flat-blade screwdriver.





2. Remove the two  5mm nuts (1) and lock washers (2) from the ground cable (3).



3. Install the new ground cable and secure with the new  5mm nuts and lock washers.

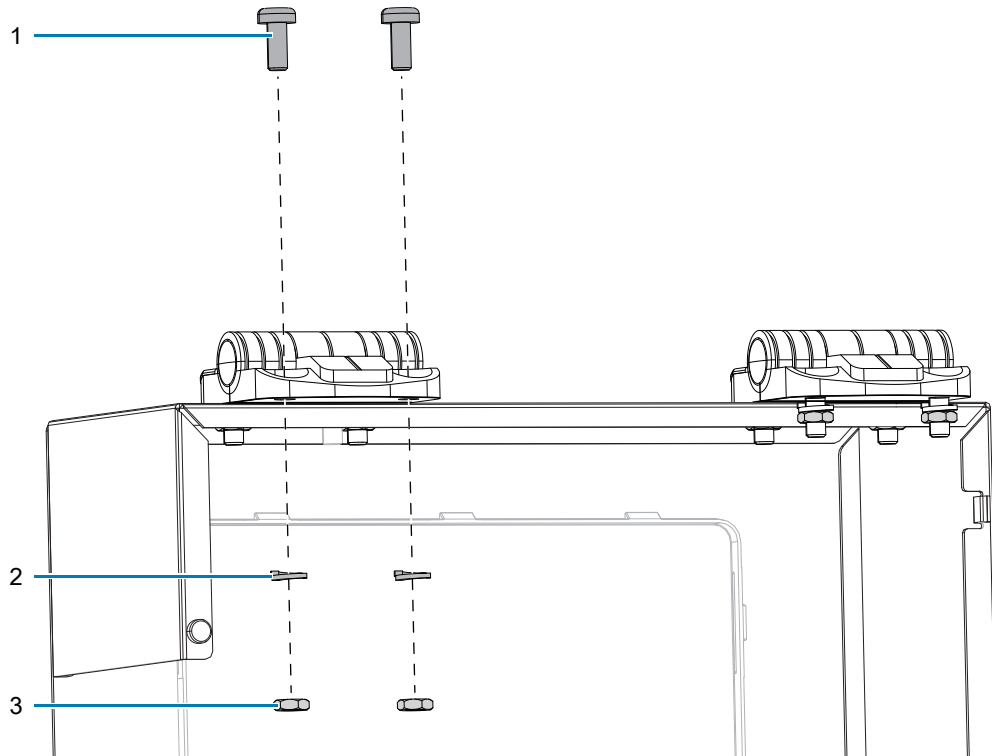




## Media Cover Hinges Maintenance Kit

4. Remove the eight  P2 screws (1), split washers (2), and  5mm nuts (3).



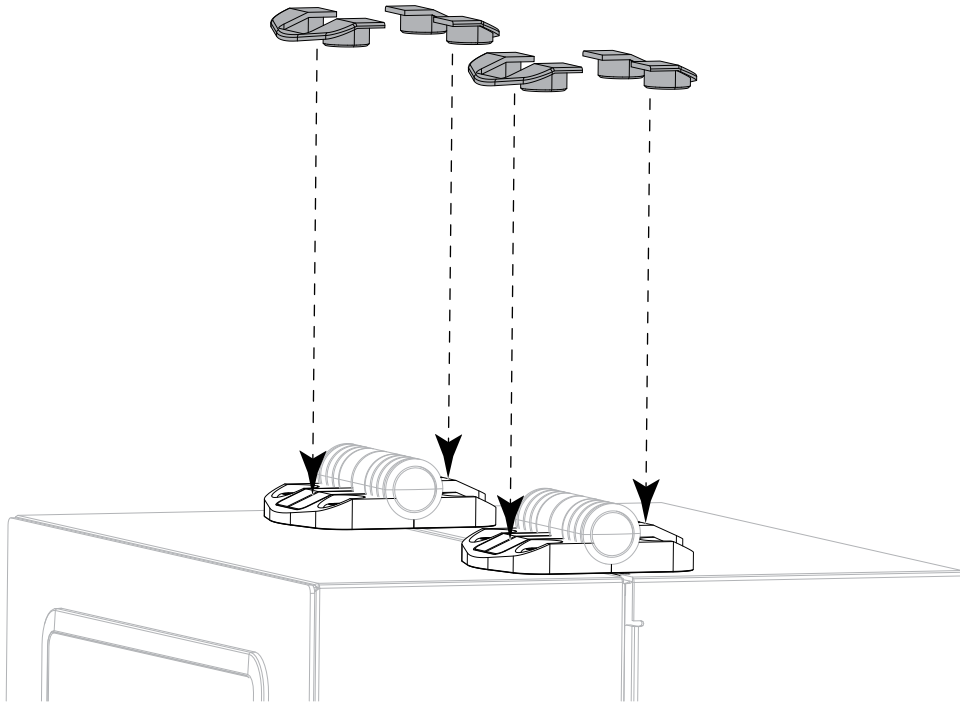
**NOTE:** Remove and replace the hinges one at a time.



5. Install the new hinges with new  P2 screws, split washers, and  5mm nuts.

for parts & service call QLC (800) 837-1309

6. Insert the new hinge covers onto the hinges.



The installation is complete.

## Installation Instructions

Read these instructions thoroughly before installing this kit.







**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.

The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

<p>RH</p>	<p>LH</p>	<p>Electronics Cover Qty: 1 (RH or LH)</p>
		<p>Screw (M5x145 FL SO NI)  Qty: 4 3mm</p>
		 <p>Cable clamp Qty: 1</p>
		<p>Screw (M3x6 PAN WASHER MACH)  Qty: 1 T10</p>

for parts & service call OLC (800) 837-1309

## Tools Required

- ✪ Hexalobular (6-lobe, star) keys, drivers, or bits  
Size: T10
- Metric hexagon keys or bits  
Size: 3mm, 5mm
- Sorting bin for screws and small parts (optional)
- Antistatic wriststrap and mat

## Prepare for Installation



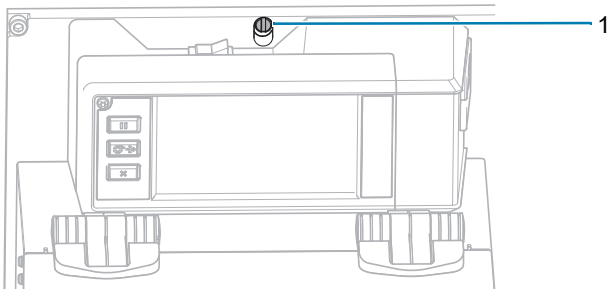
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



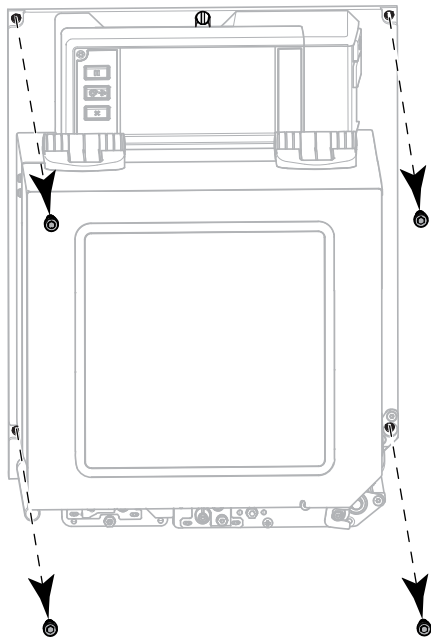
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



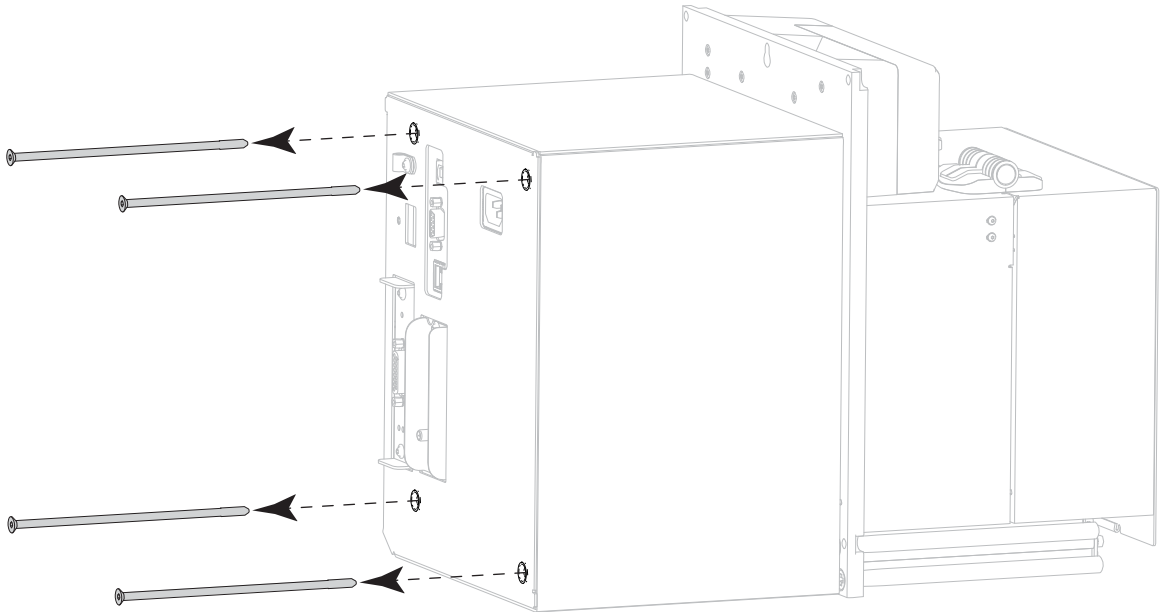
2. Remove the four screws securing the print engine to the applicator.



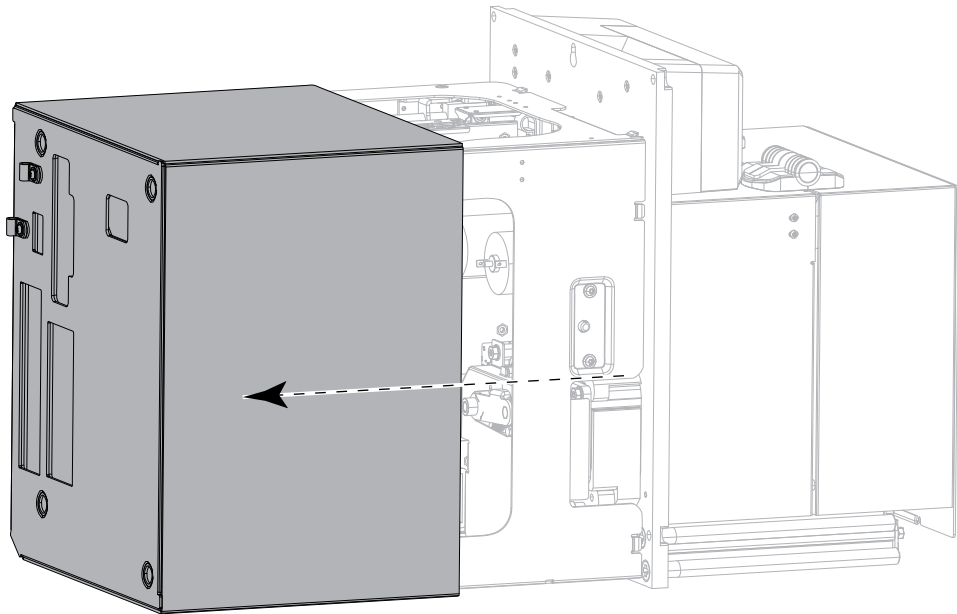
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Remove the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.

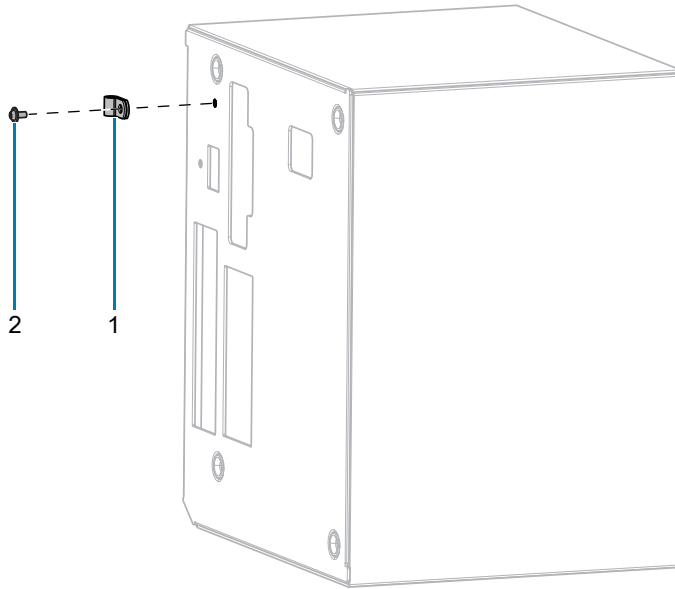


2. Remove the electronics enclosure cover from the print engine.

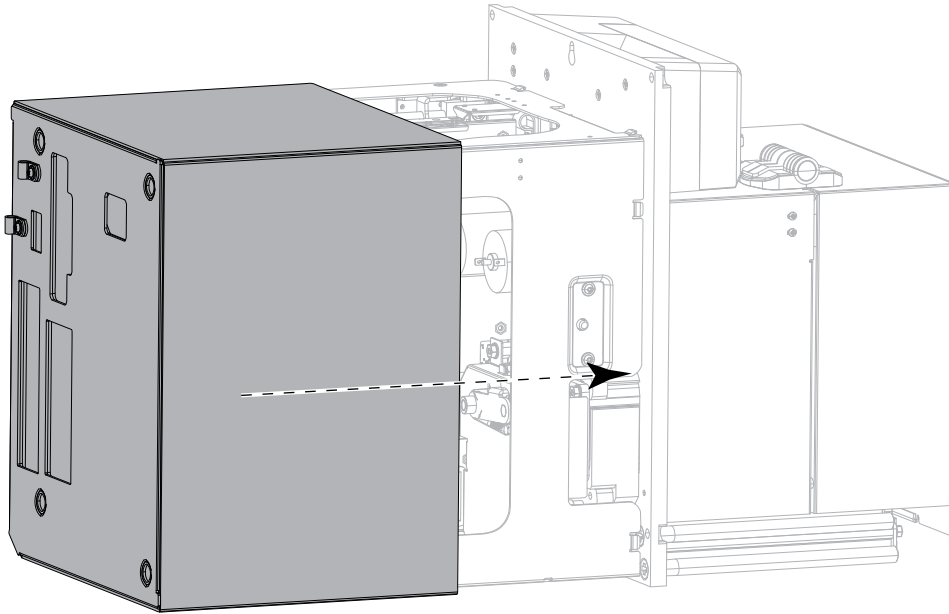


## Install the Electronics Enclosure Cover

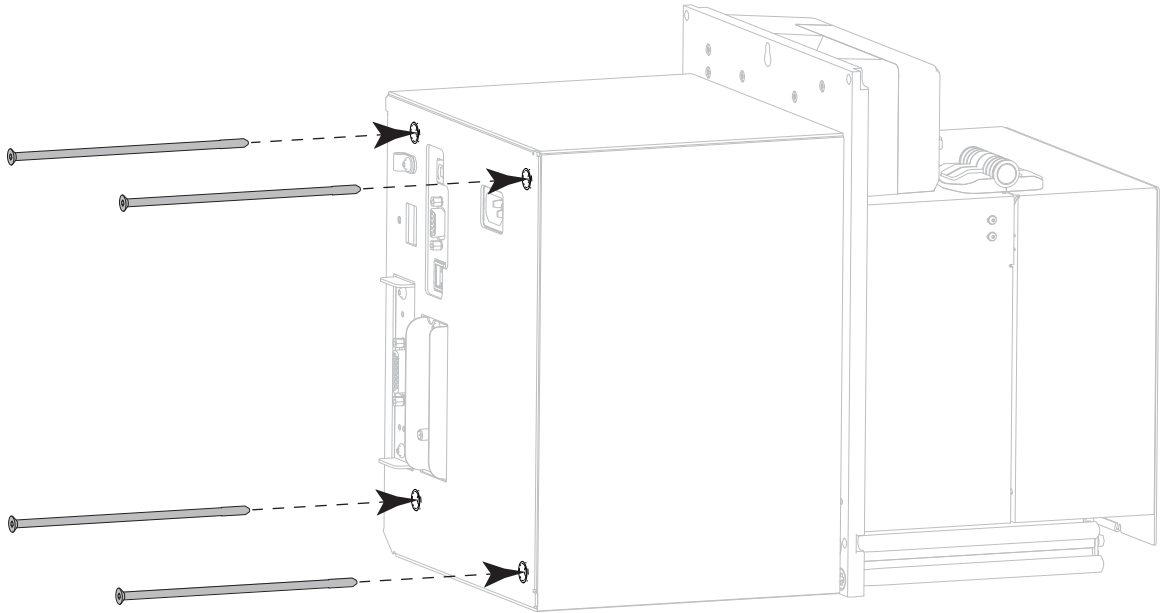
1. Install the cable clamp (1) with the T10 screw (2) on the new electronics enclosure cover.



2. Install the electronics enclosure cover on the print engine.



3. Install the four 3mm screws securing the electronics enclosure cover.



### Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**



## Installation Instructions

Read these instructions thoroughly before installing this kit.



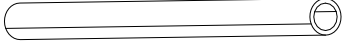




**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.



The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Screw (M5x145 FL SO NI) Qty: 4	 3mm
	Spacer tube (128mm) Qty: 4	
	Clamp, tube Qty: 4	
	Conductive washer Qty: 4	

## Tools Required

-  Metric hexagon keys or bits  
Size: 5mm
-  Flat-blade screwdrivers or bits
- Sorting bin for screws and small parts (optional)

## Prepare for Installation



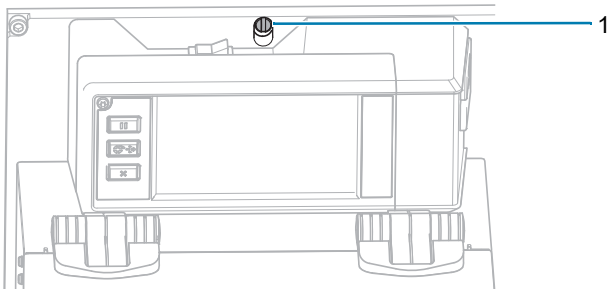
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



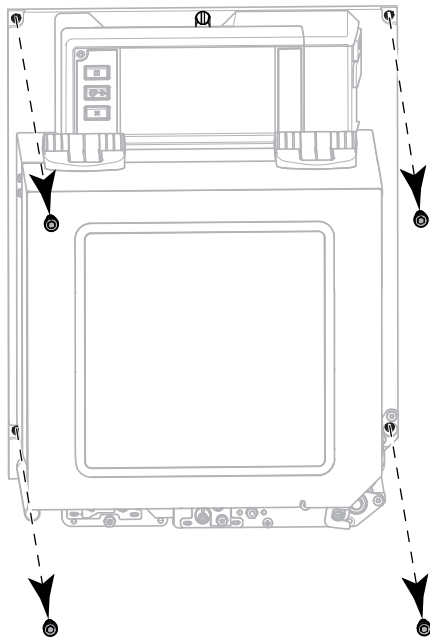
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



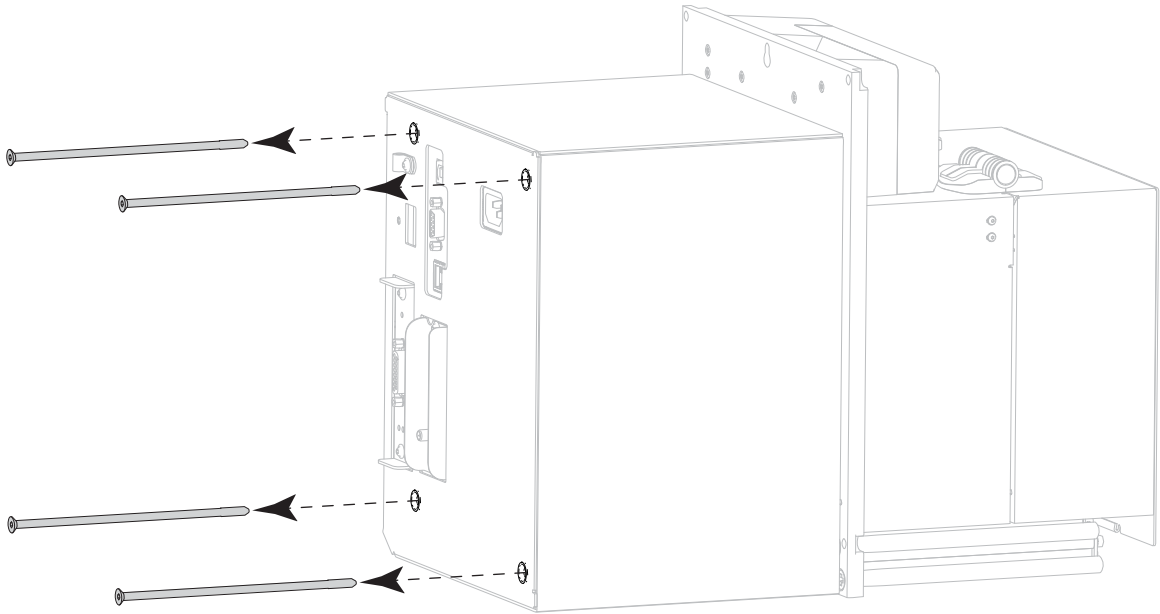
2. Remove the four screws securing the print engine to the applicator.



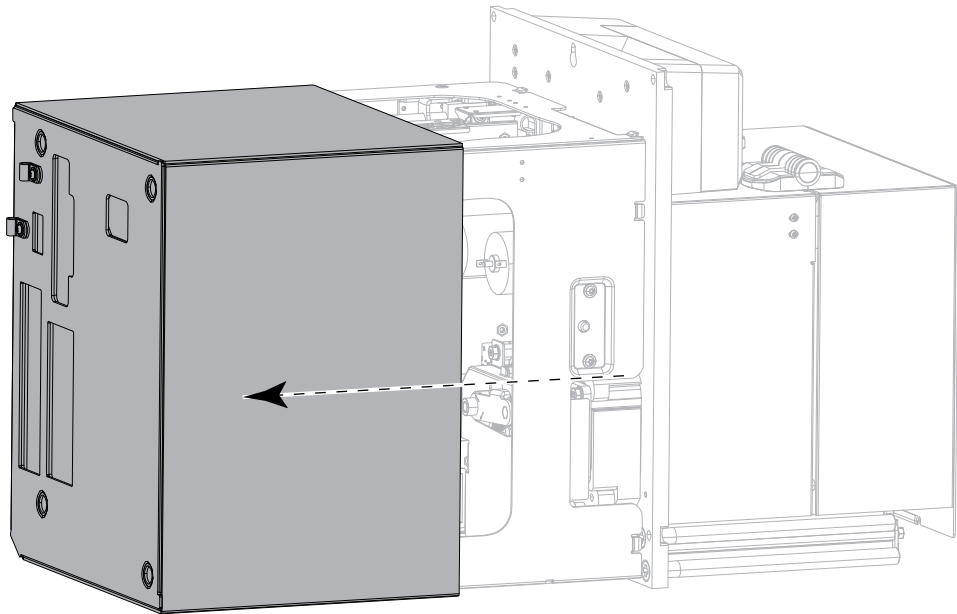
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



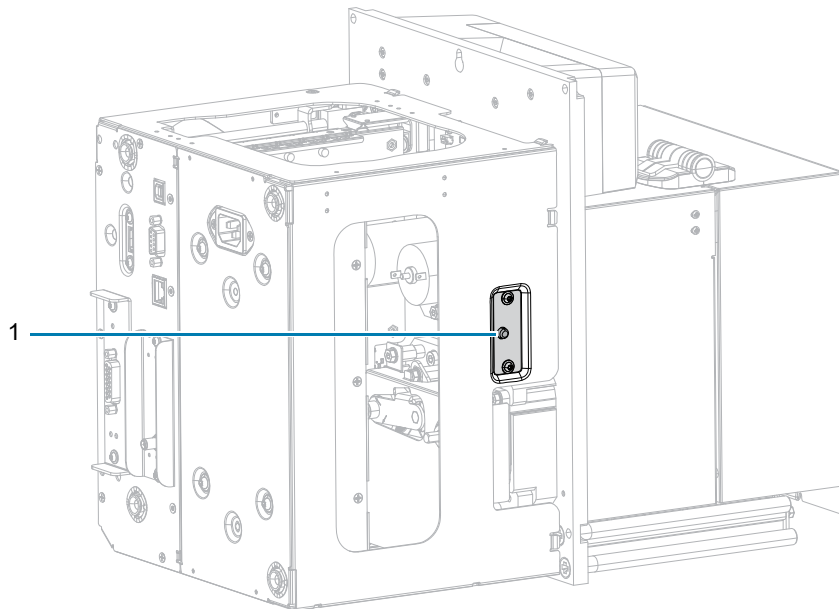
2. Remove the electronics enclosure cover from the print engine.



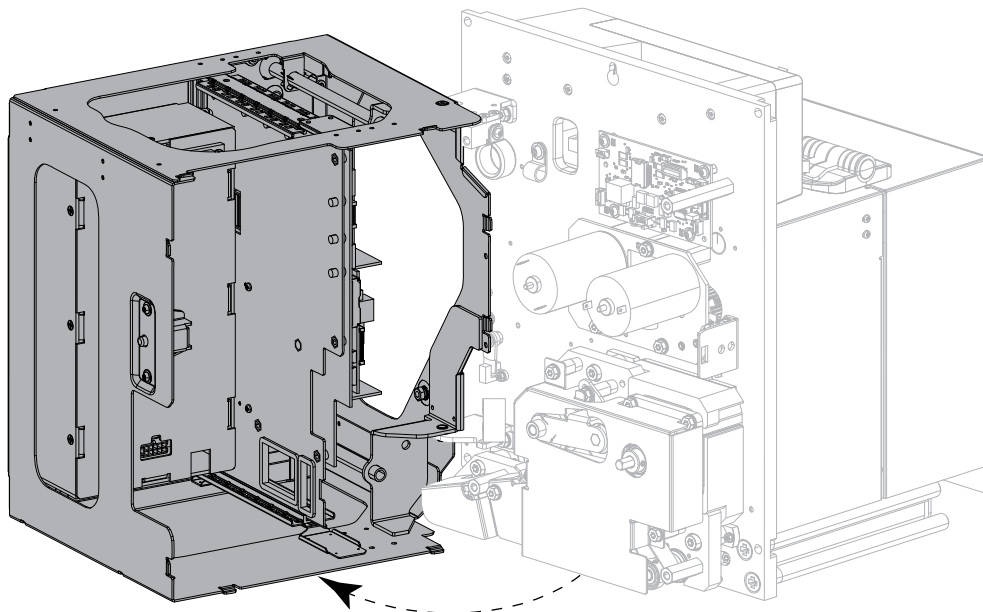
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

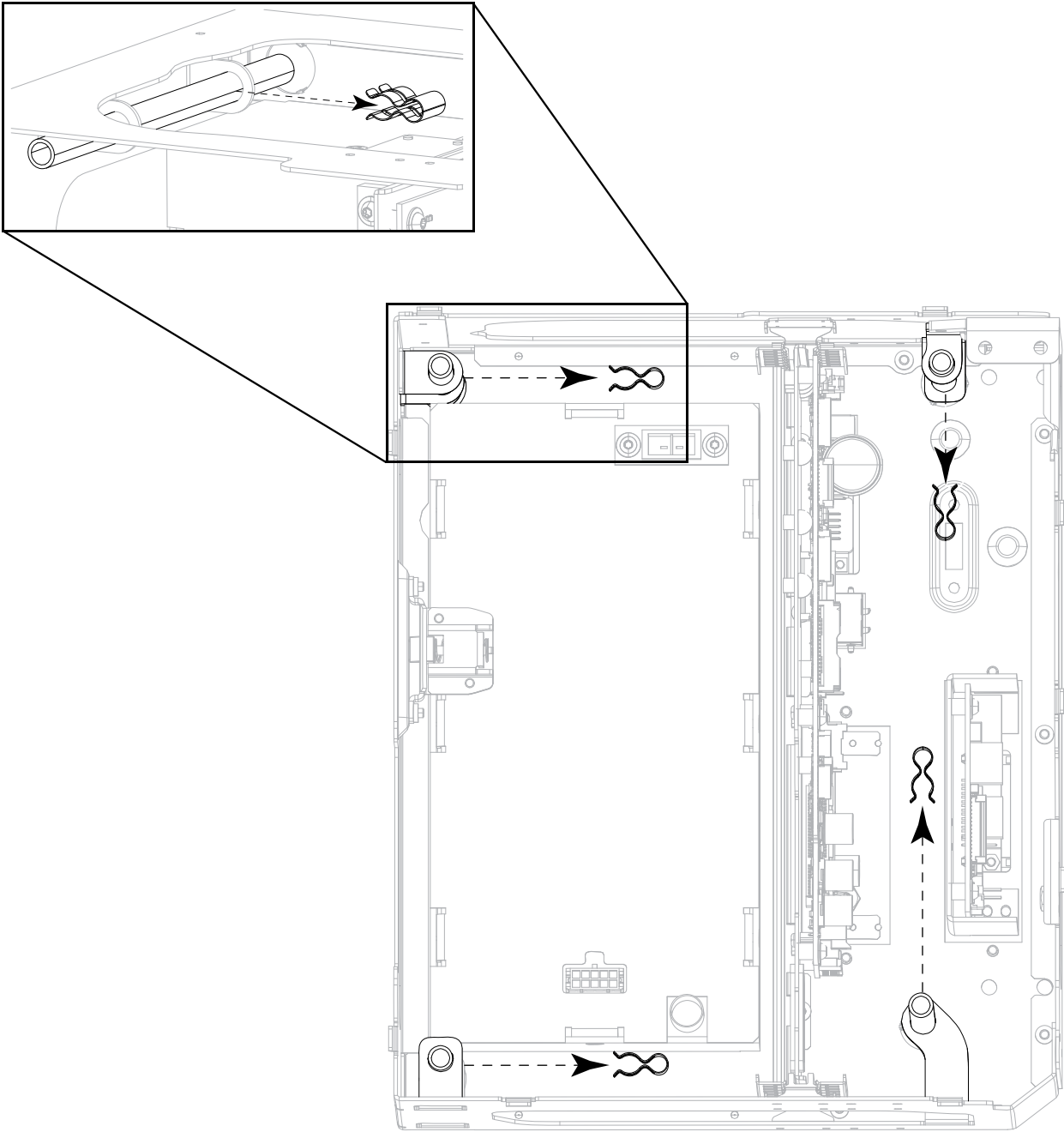


4. Open the rear of the print engine.



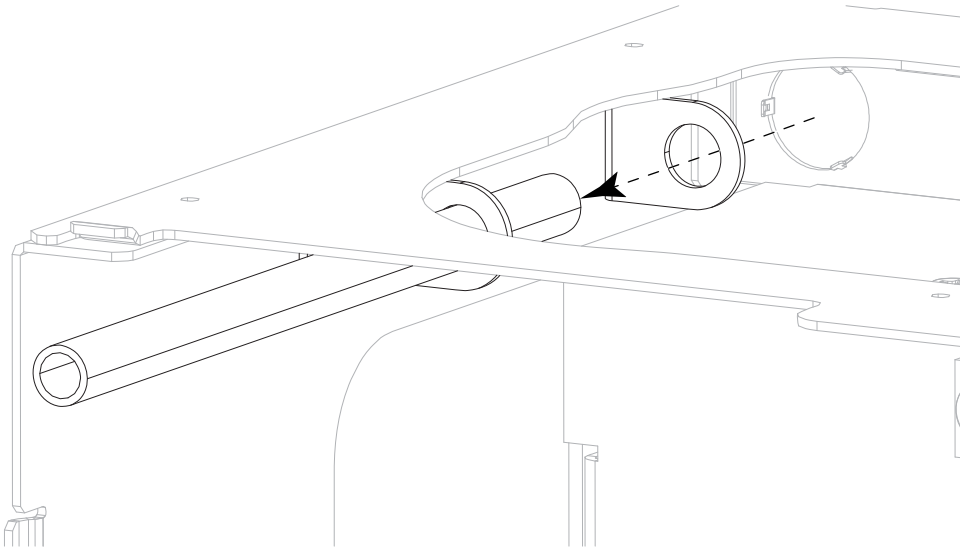
# Replace Spacer Tubes and Tube Clamps

1. Remove the tube clamps securing the spacer tubes.

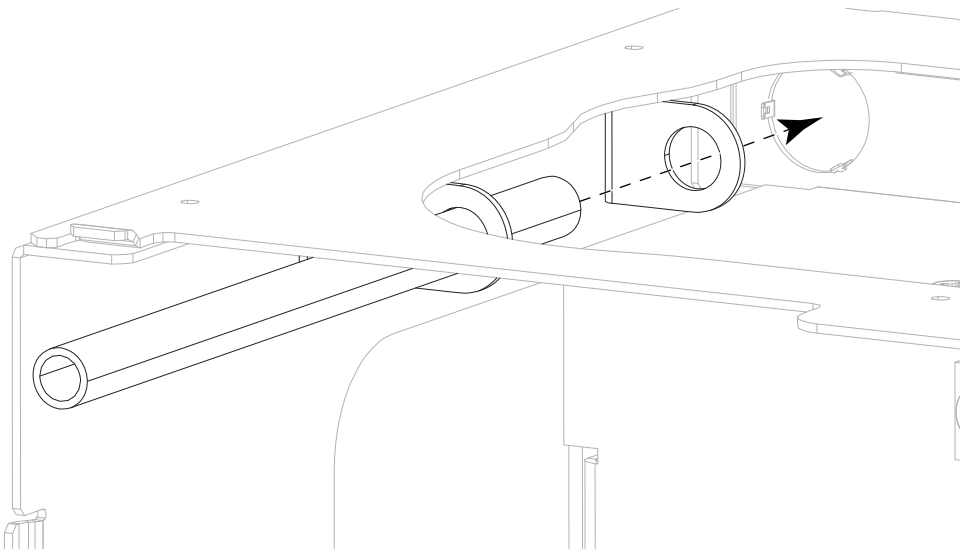


for parts & service call QLC (800) 837-1309

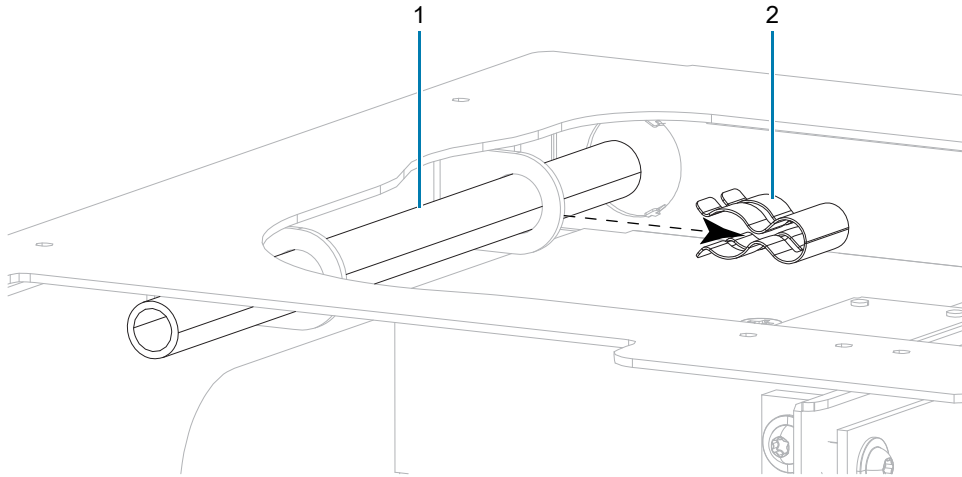
2. Pull the spacer tubes out of the printer.



3. Insert the new spacer tubes into the printer.



4. Install the four new tube clamps (2) onto the spacer tubes (1).

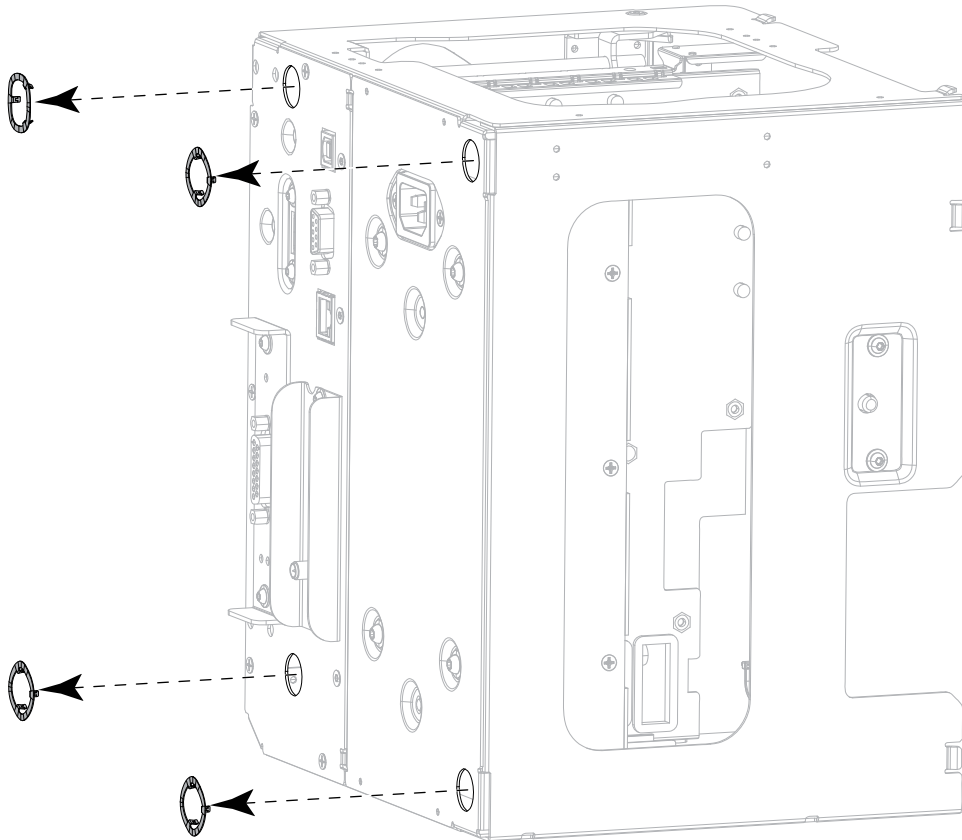


## Replace the Conductive Washers



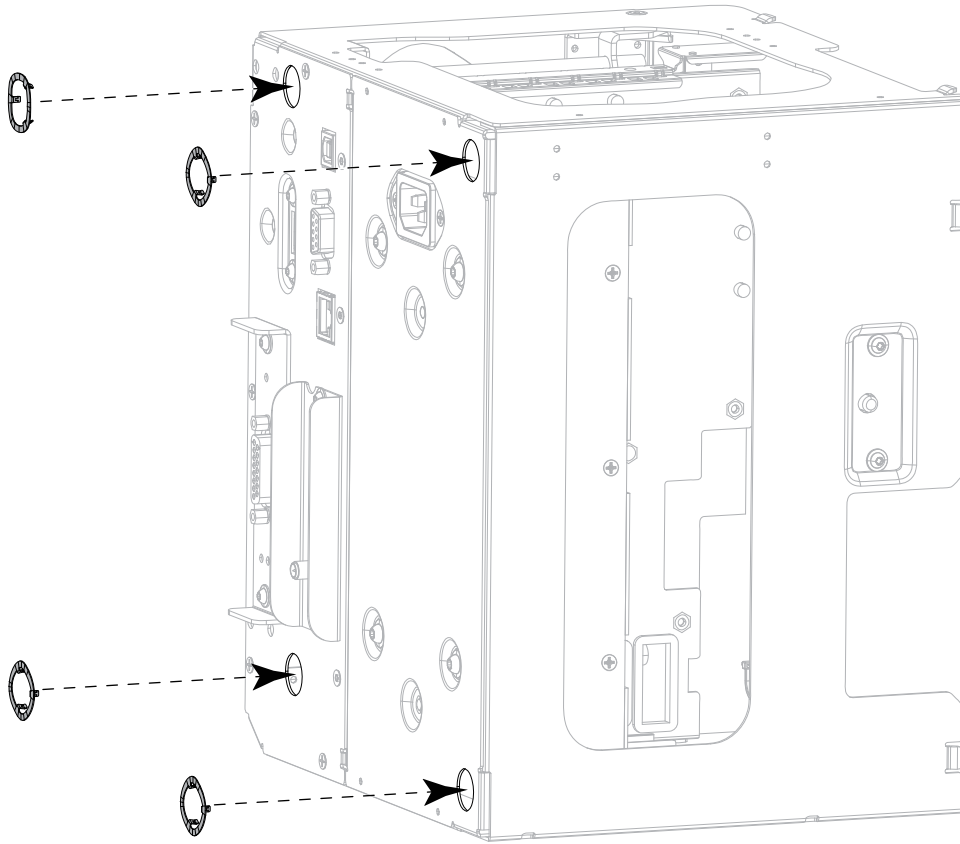
**CAUTION—EYE INJURY:** Wear protective eyewear when installing or removing E-rings, C-clips, snap rings, springs, and mounting buttons. These are under tension and could fly off.

1. Remove the four conductive washers with a flat head screwdriver.



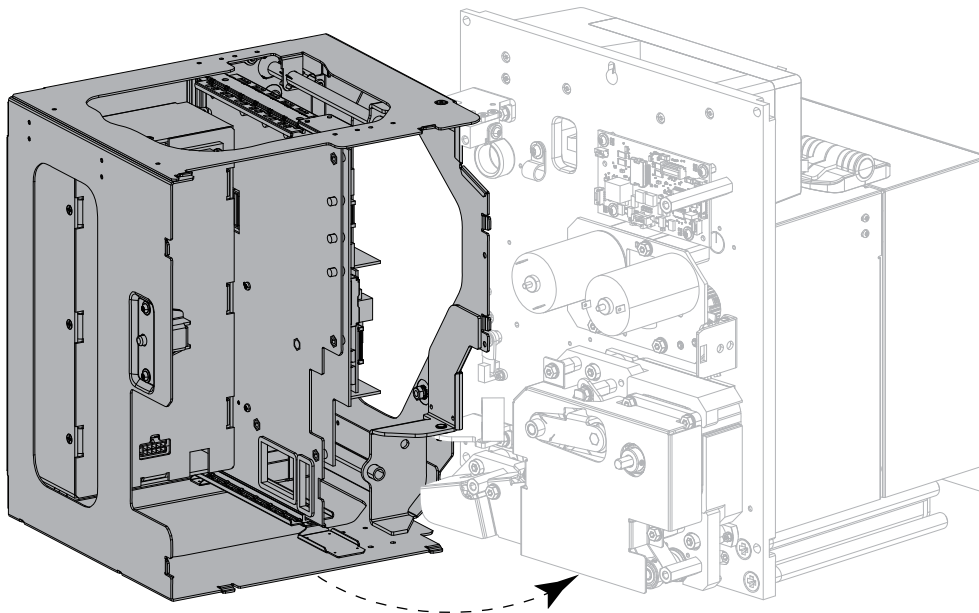
for parts & service call QLC (800) 837-1309

2. Install the 4 new conductive washers.



## Close the Electronics Enclosure

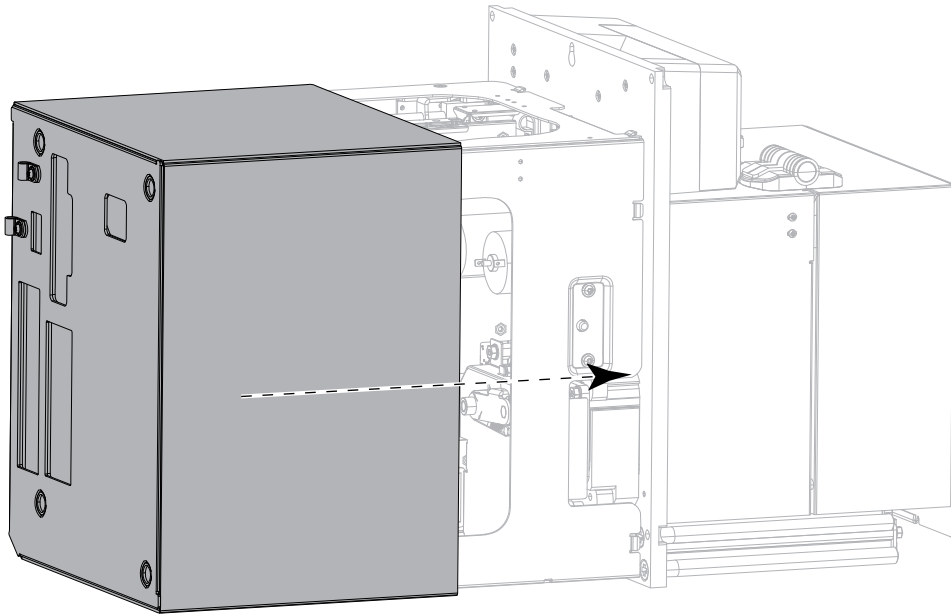
1. Close the rear of the print engine.



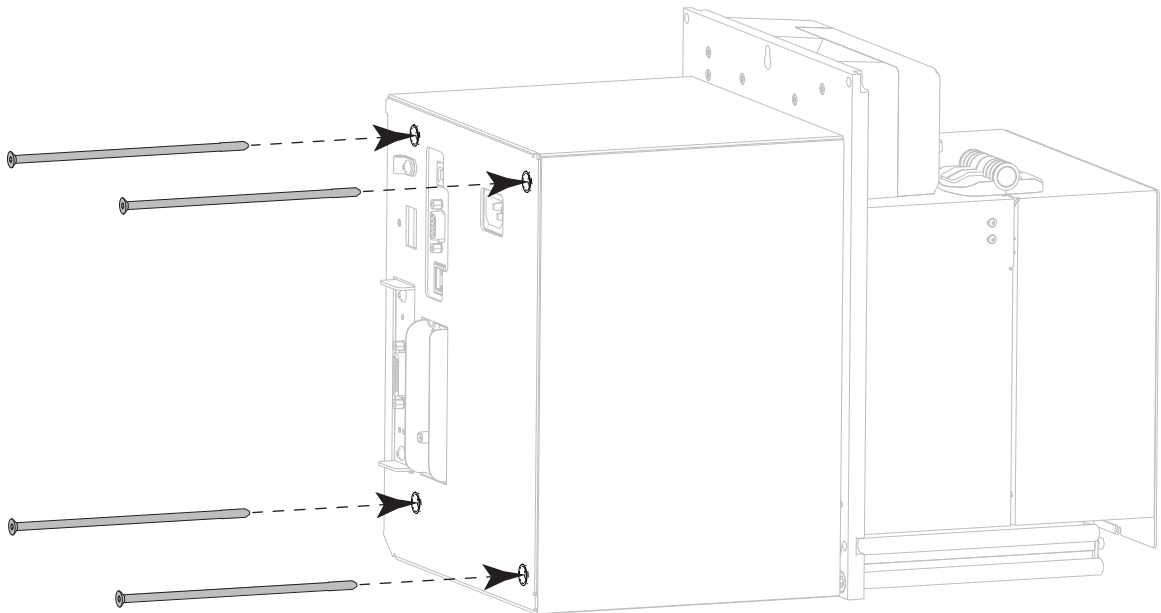
for parts & service call QLC (800) 837-1309



2. Reinstall the electronics enclosure cover on the print engine.



3. Install the four new 3mm screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.
3. Close the media door.
4. Reinstall the print engine into the applicator, if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
5. Reconnect the AC power cord and interface cables.
6. Turn on (I) the printer power.

**The installation is complete.**

## Installation Instructions

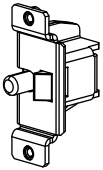
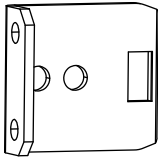


Read these instructions thoroughly before installing this kit.





**IMPORTANT:** Retain all parts removed during disassembly, unless otherwise directed.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.

	Electronics chassis latch Qty: 1
	Electronics chassis catch Qty: 1
	Screw (pan washer mach M3x6) Qty: 2
	Screw M4x8 Qty: 2

## Tools Required

 Metric hexalobular keys Size: M3, M5	 6lobe, star keys Size: T9
Sorting bin for screws and small parts (optional)	

## Prepare for Installation



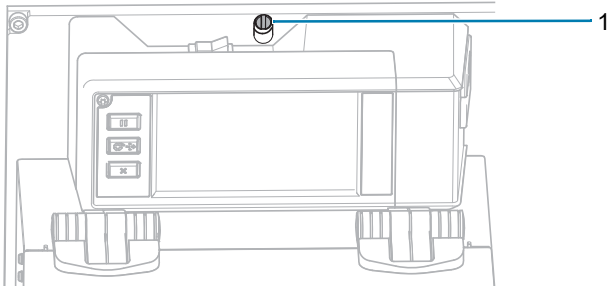
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



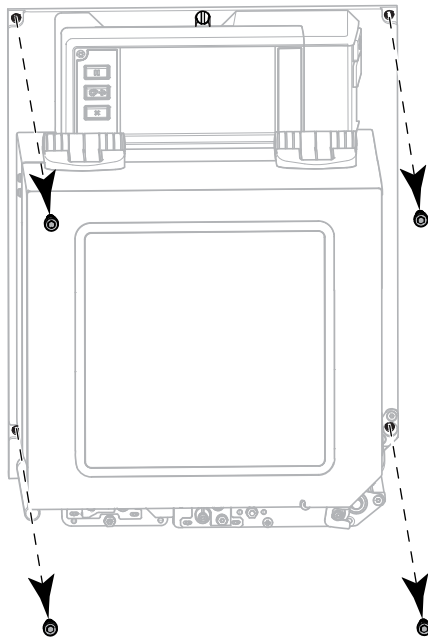
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



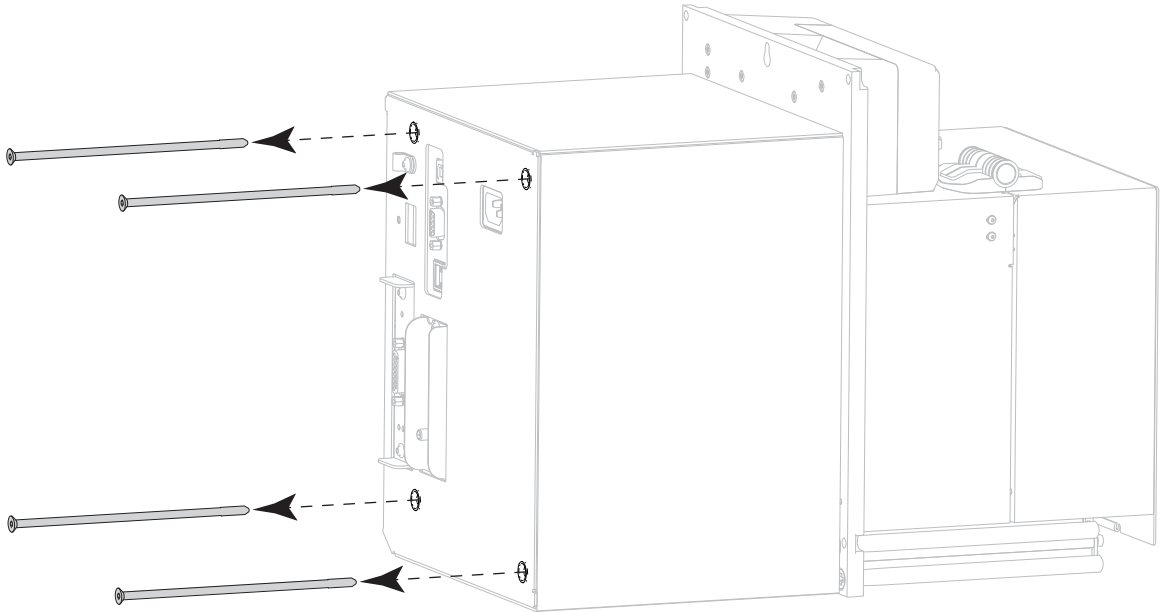
2. Remove the four screws securing the print engine to the applicator.



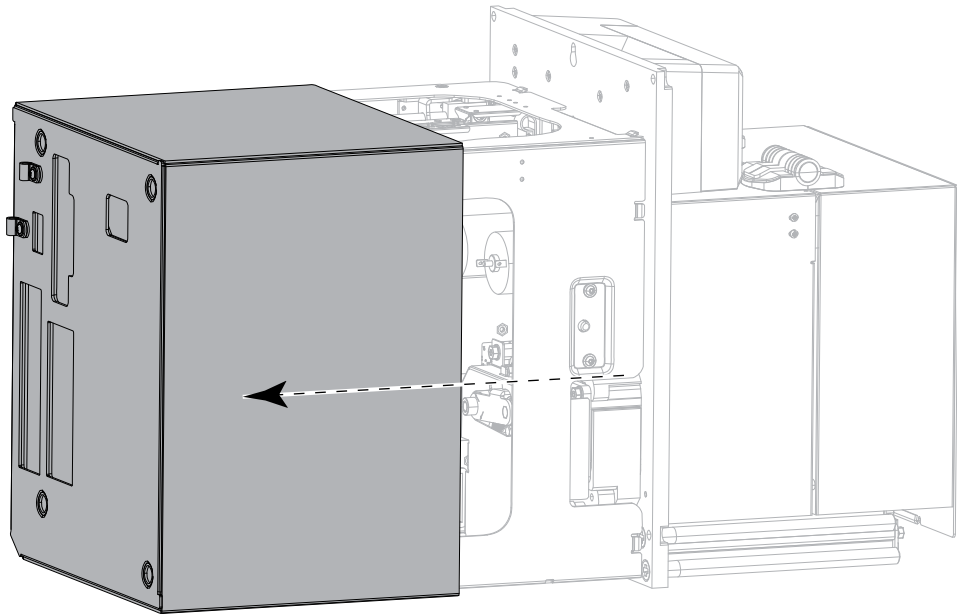
3. Lift the print engine off of the center mounting bolt and place it on a workbench.

## Open the Electronics Enclosure

1. Remove the four 3mm hexagon screws from the electronics enclosure cover.



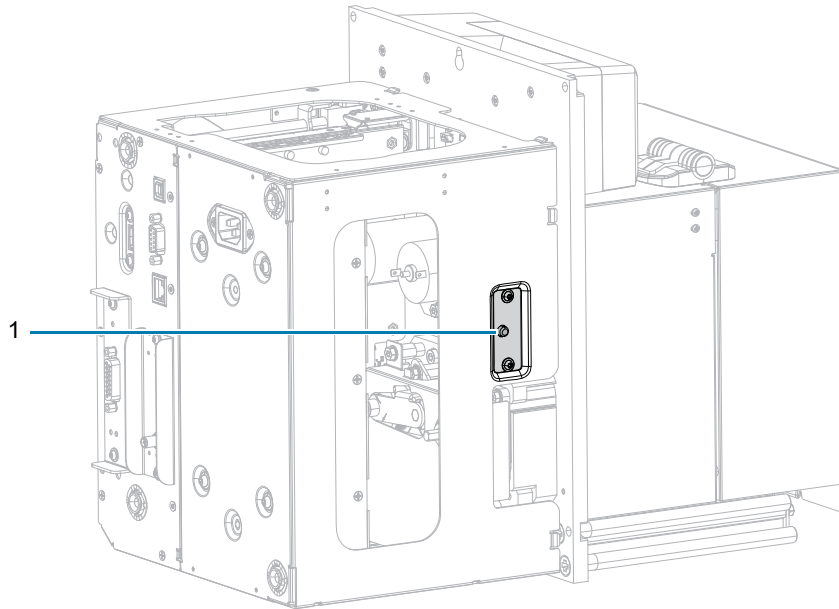
2. Remove the electronics enclosure cover from the print engine.



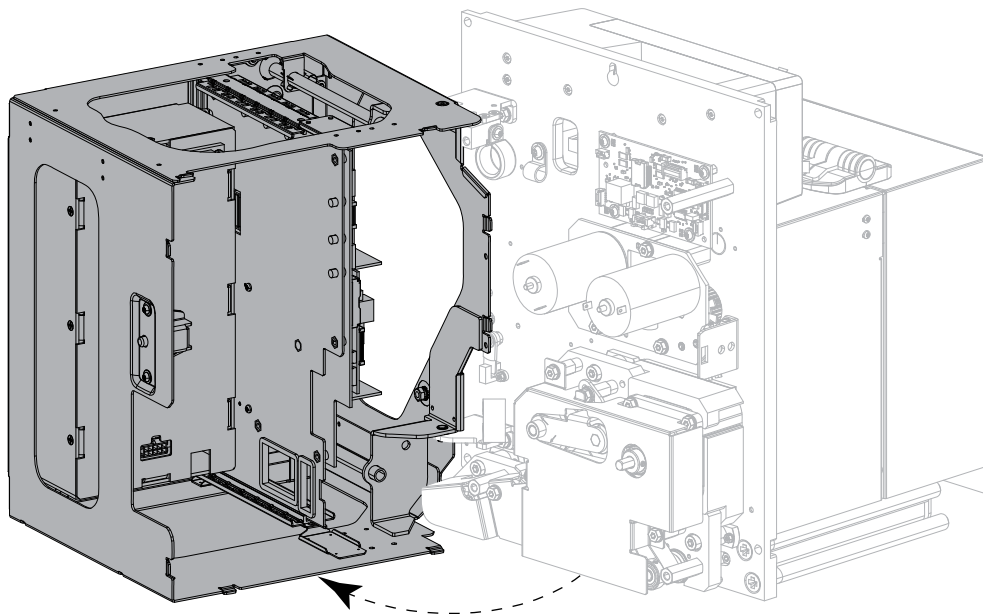
3. Press the electronics enclosure latch (1).



**NOTE:** For RH models, the latch is on the right side, as shown. For LH models, the latch is on the left side.

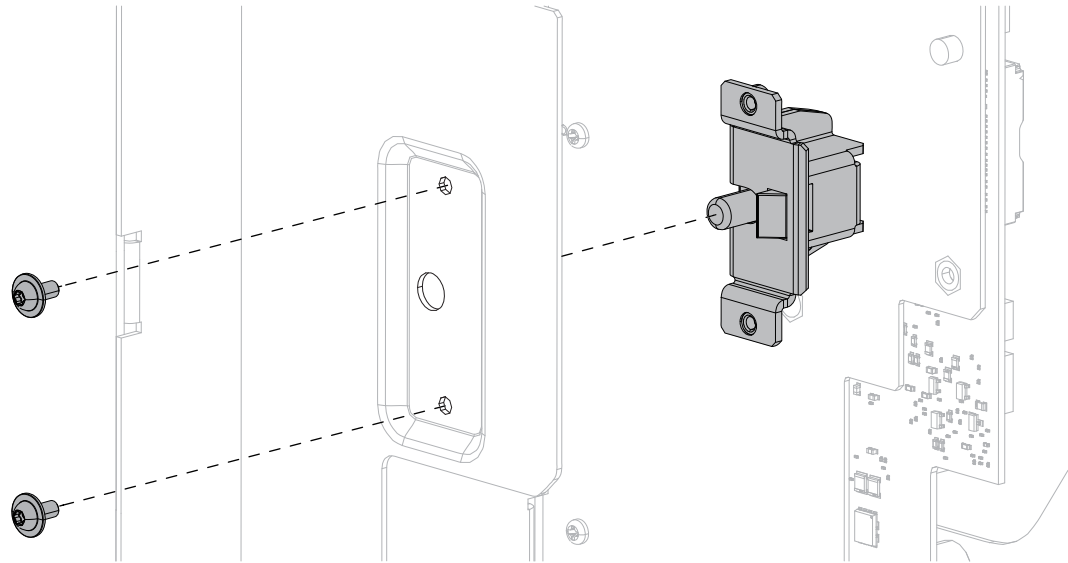


4. Open the rear of the print engine.

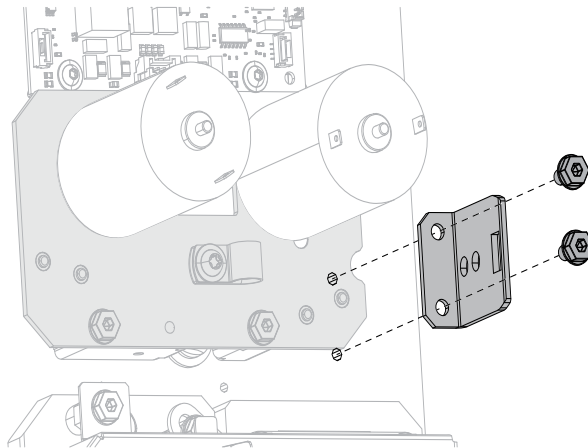


## Replace the Chassis Latch

1. Remove the two screws securing the chassis latch and discard all of the parts removed.
2. Install the new chassis latch and secure it with the two new screws.

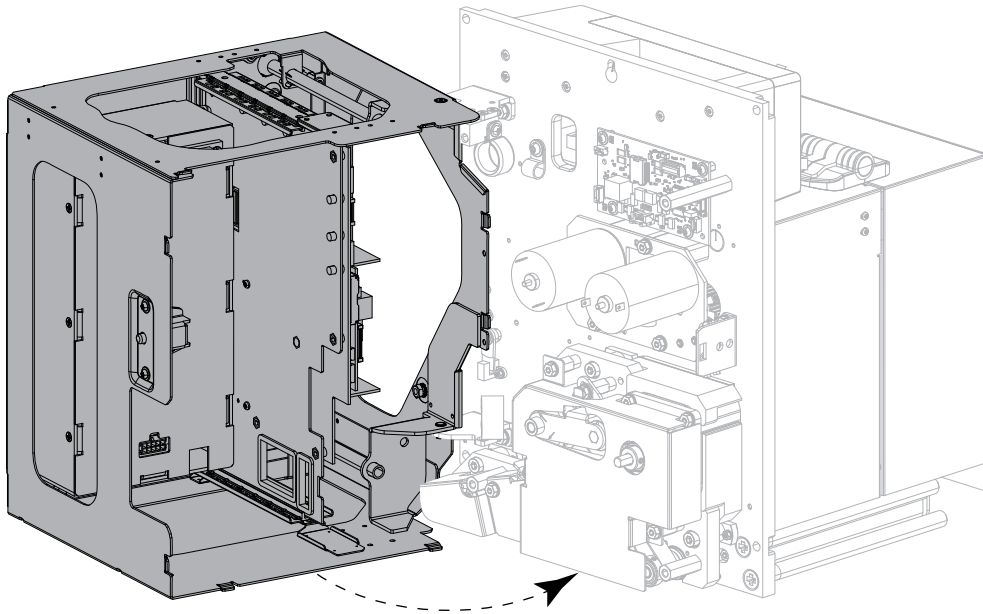


3. Remove the two screws securing the chassis catch and discard all of the parts removed.
4. Install the new chassis catch and secure it with the two new screws.

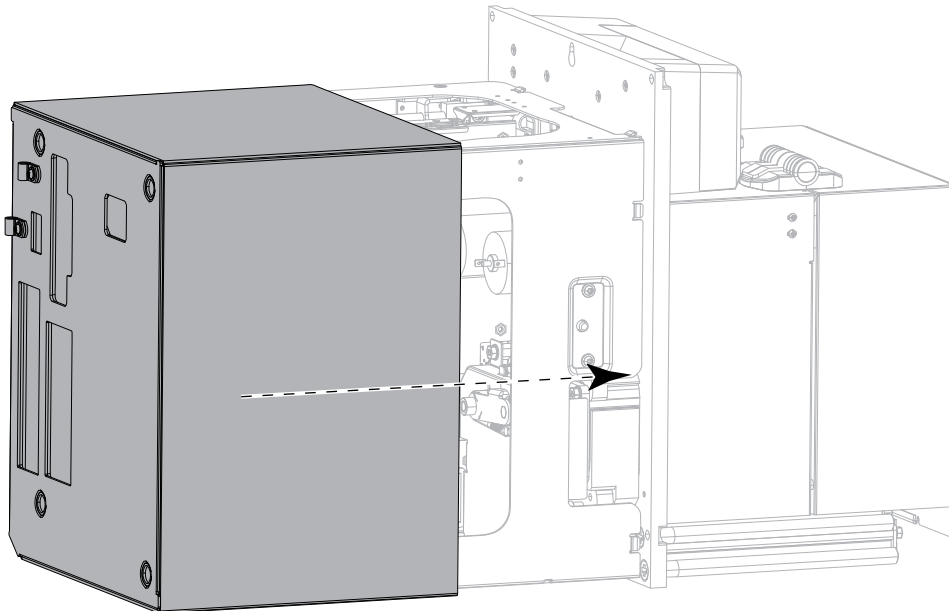


## Close the Electronics Enclosure

1. Close the rear of the print engine.

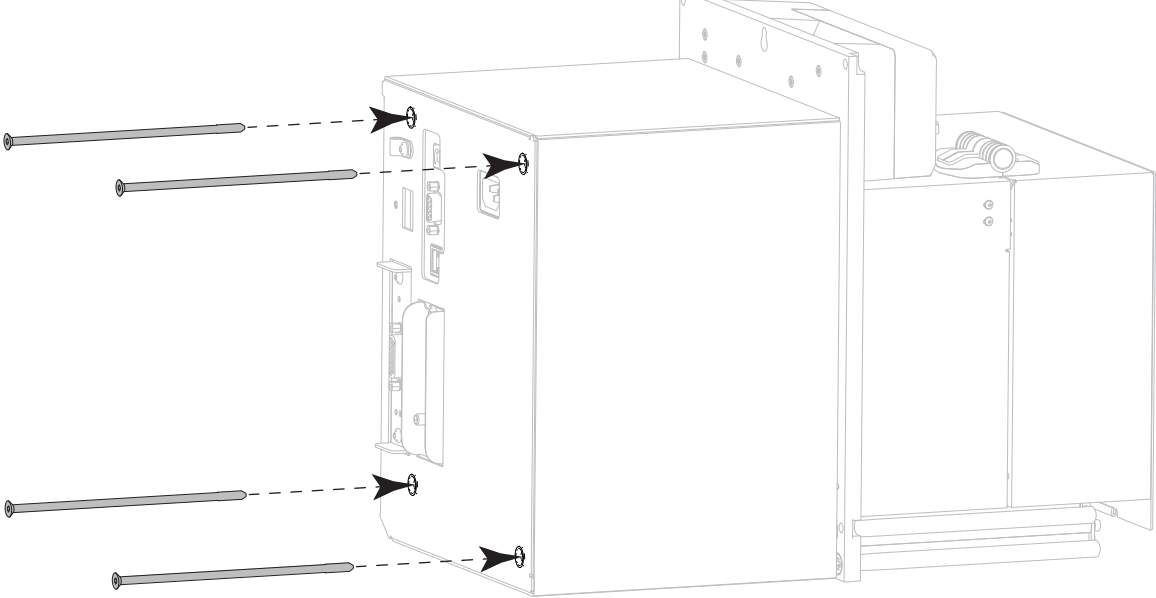


2. Reinstall the electronics enclosure cover on the print engine.





3. Install the four screws securing the electronics enclosure cover.



## Resume Printer Operation

1. Reinstall the print engine into the applicator if it was removed.
  - a. Lift the print engine and support it on the center mounting bolt.
  - b. Reinstall the screws securing the print engine.
  - c. Tighten the center mounting bolt.
2. Reconnect AC power cord and interface cables.
3. Turn on the printer power.

**The installation is complete.**

## Installation Instructions

Read these instructions thoroughly before installing this kit.



**CAUTION—PRODUCT DAMAGE:** Before disconnecting any cables, take note of the cable routing. If the cables are routed incorrectly, they could be pinched, damaged, or broken.



**IMPORTANT:** A qualified service technician must perform this installation. Retain all parts removed during disassembly, unless otherwise directed.





The graphics shown in this document depict a right-hand (RH) 4-inch model. Most of the graphics for a left-hand (LH) model would be a mirror image. Differences are noted when applicable.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](http://zebra.com/parts), and select your printer model.


















	1	Screw (M3x6 TX NI fling) Qty: 10	 T9
	2	Screw (M4x30 TX NI fling) Qty: 10	 3mm
	3	Screw (M3x6 TX NI) Qty: 20	 T10
	4	Screw (M3x10 TX NI) Qty: 20	 T8
	5	Screw (M5x10 cp SO NI) Qty: 10	 4mm
	6	Screw (M4x8 SO NI fling) Qty: 10	 4mm
	7	Screw, captive (M4x12 SO NI) Qty: 10	 3mm
	8	Screw, captive (M5x12 SO NI) Qty: 10	 4mm
	9	Screw (M3x12 FL TX NI) Qty: 10	 T9
	10	Screw (M4x10 SO NI) Qty: 10	 3mm
	11	Screw (M3x4 TX NI fling) Qty: 10	 T9
	12	Screw (M3x12 TX NI) Qty: 10	 T9
	13	Screw (M4x12 SO NI fling) Qty: 10	 4mm

## Assorted Hardware Maintenance Kit

	14	Screw (M3x8 TX NI captive) Qty: 10	 T9
	15	Screw (M2x0.4x10 fling bu SO NI) Qty: 10	 1.5mm
	16	Screw (M5x0.8x12 PN NI) Qty: 10	 P2
	17	Screw (M3x.05x6 PN bo) Qty: 10	 P1
	18	Screw (4-40x0.31 PN SS) Qty: 10	 P1
	19	Screw (M3x0.5 cp SO ZN) Qty: 10	 2.5mm
	20	Screw (M3x8 TX NI) Qty: 10	 T9
	21	Screw (M2.5x45x6 cp SO ZN) Qty: 10	 2mm
	22	Screw (M3x6 washer Mach) Qty: 10	 T10
	23	Screw (M3x8 washer Mach) Qty: 10	 T10
	24	Screw (M3x10 washer Mach) Qty: 5	 T10
	25	Screw (M3x4 washer Mach) Qty: 5	 T10
	26	Screw (M4x8 PN washer Mach) Qty: 10	 T10
	27	Screw (M3x8 ov ZN tfrmng) Qty: 5	 P1
	28	Screw (M3x10 PN hd TX) Qty: 5	 T3
	29	Screw (M3x6 PN hd) Qty: 5	 T3
	30	Screw (M3x4 FL TX NI) Qty: 10	 T3
	31	Screw (M3x0.5x30 PN SS) Qty: 1	 T10
	32	Screw (M3x8 TX NI fling) Qty: 10	 T9
	33	Screw (M3x8 TX NI) Qty: 10	 T9
	34	Screw (M3x5 FL TX NI) Qty: 10	 T9















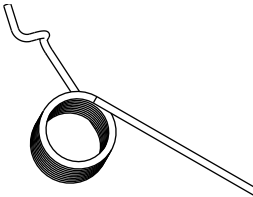




for parts & service call QLC (800) 837-1309

## Assorted Hardware Maintenance Kit

	35	Screw, thumb (M3x5.5x11.6 TX) Qty: 2	 T10
	36	Spacer (9x50) Qty: 2	 9mm
	37	Spacer (9x25) Qty: 5	 4mm
	38	Spacer (8x17) Qty: 5	 4mm
	39	Standoff (M3x6 SS mf) Qty: 4	 3mm
	40	Circlip< RS (4) Qty: 10	
	41	E-ring, ext (.312) Qty: 10	
	42	E-ring (6mm shaft) Qty: 10	
	43	Washer 9 Qty: 10	
	44	Washer 9.5 Qty: 10	
	45	Washer 9x11 Qty: 10	
	46	Ring, crescent (ext 0.25 dia) Qty: 10	
	47	Circlip, RS (2.3) Qty: 10	
	48	Washer, wave (8x4.3x0.5) Qty: 10	
	49	Washer, split (M6) Qty: 10	
	50	Washer (9.4x4x1.6) Qty: 10	
	51	Washer (6.8x4x1.6) Qty: 10	
	52	Washer shoulder (0.125) Qty: 2	
	53	Washer, split (M5) Qty: 10	
	54	Washer, lock (M5 ext) Qty: 10	
	55	Washer, lock (#4) Qty: 10	
	56	Washer, flat (M3) Qty: 10	


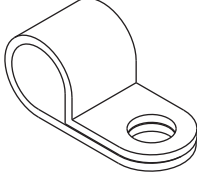

for parts & service call QLC (800) 837-1309

## Assorted Hardware Maintenance Kit

	57	Washer, split (M3 ZN) Qty: 10	
	58	Washer, flat (0.2x437x0.48 st) Qty: 1	
	59	Nut, lock (M4x0.7) Qty: 10	 4mm
	60	Nut (M4x7x3.2 ZN) Qty: 10	 4mm
	61	Nut (M3 ZN) Qty: 10	 5mm
	62	Nut (hex M5x7.9x2.6 ZN) Qty: 10	 5mm
	63	Nut (M6 ZN) Qty: 5	 6mm
	64	Washer, belt stretcher Qty: 10	
	65	Bushing, stretch roller Qty: 10	
	66	Spring, torsion (printhead open) Qty: 5	
	67	Rivet, snap (0.138x.08) Qty: 10	
	68	Wire saddle (micro) Qty: 10	
	69	Wire saddle (lock) Qty: 5	
	70	Cable clamp (screw mount) Qty: 5	

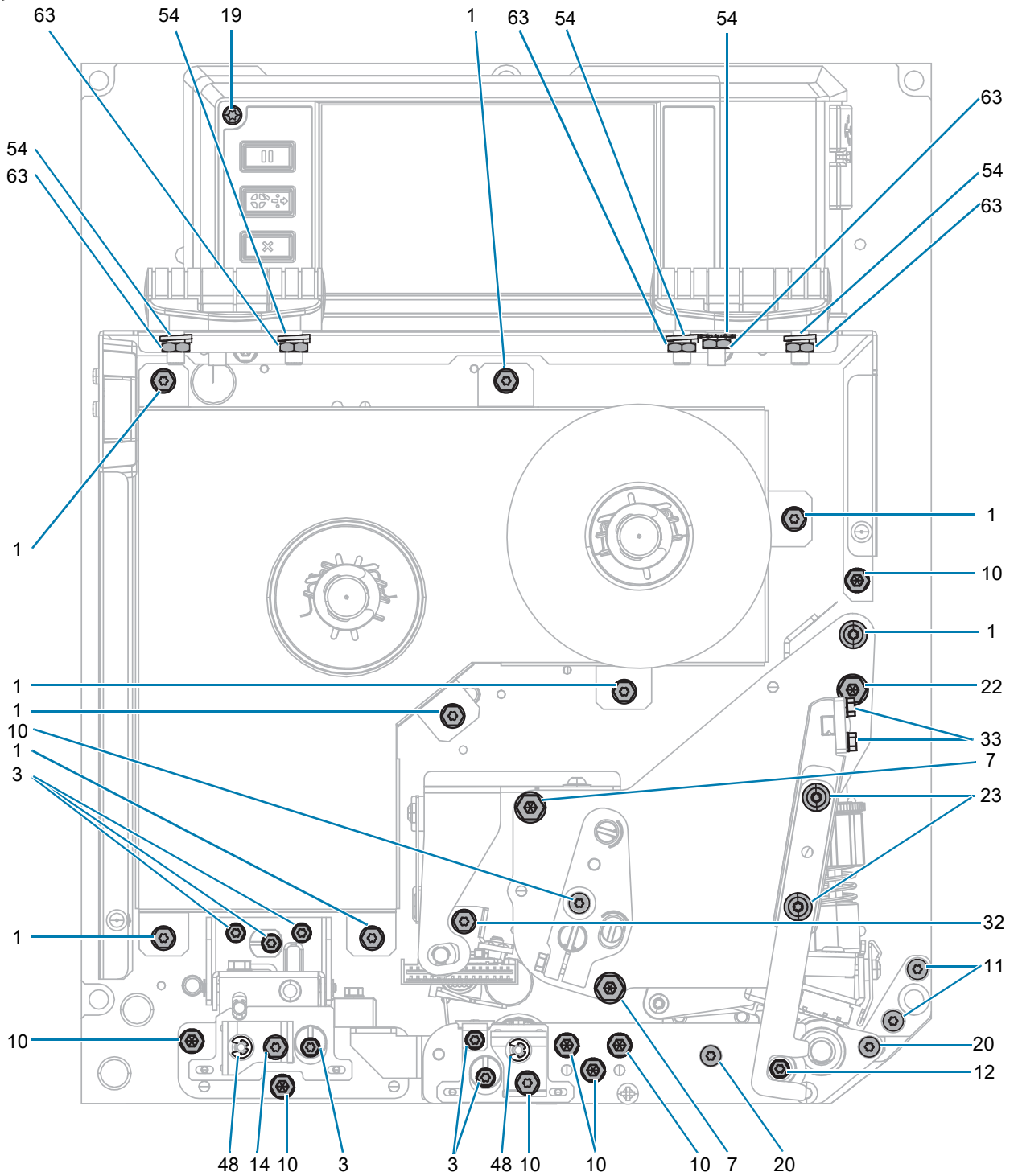
for parts & service call QLC (800) 837-1309

## Assorted Hardware Maintenance Kit

	71	Grease (PTFE) Qty: .03 1
	72	Cable clamp Qty: 2
	73	Cable clamp nylon Qty: 1

for parts & service call QLC (800) 837-1309

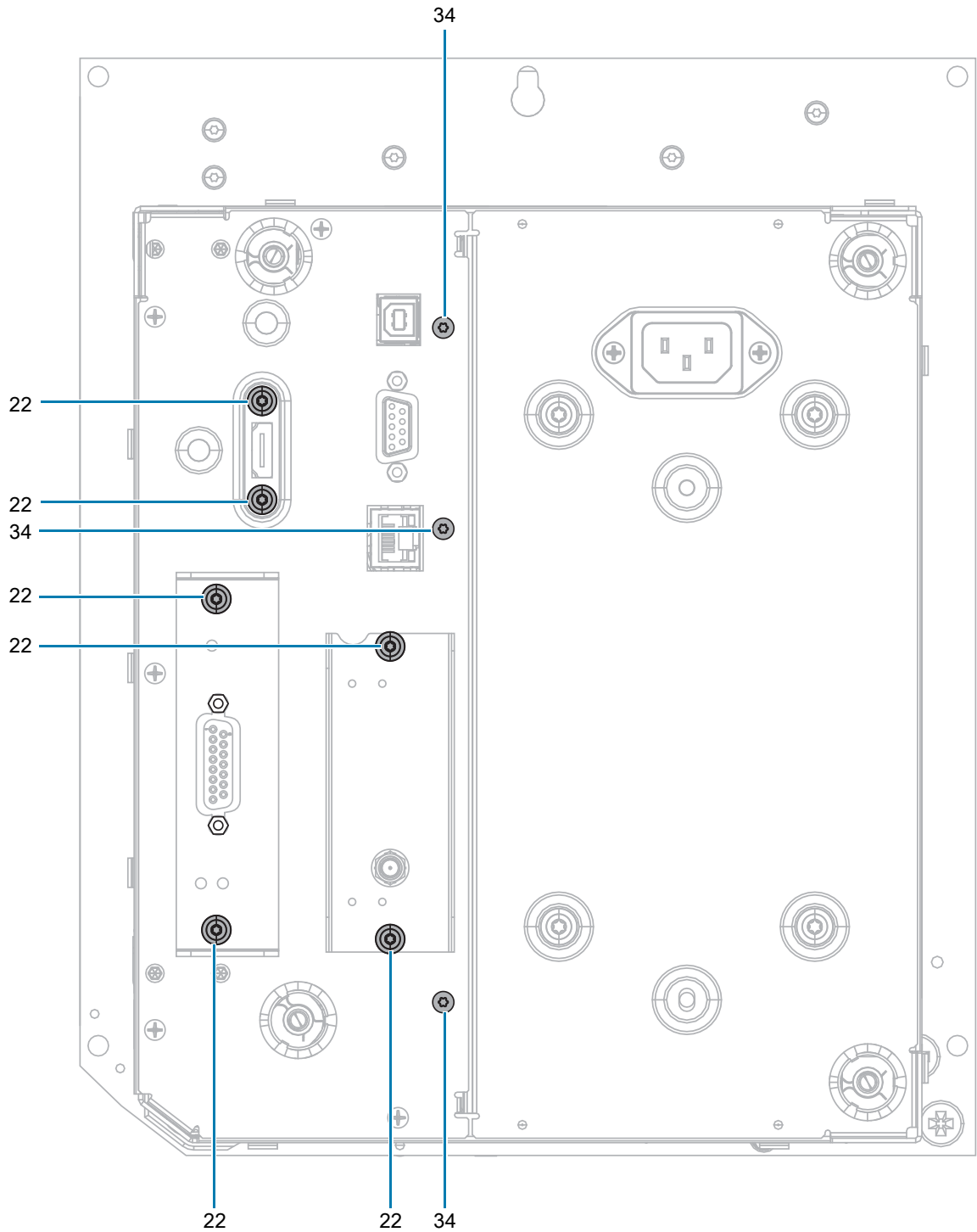
Front View



for parts & service call QLC (800) 837-1309

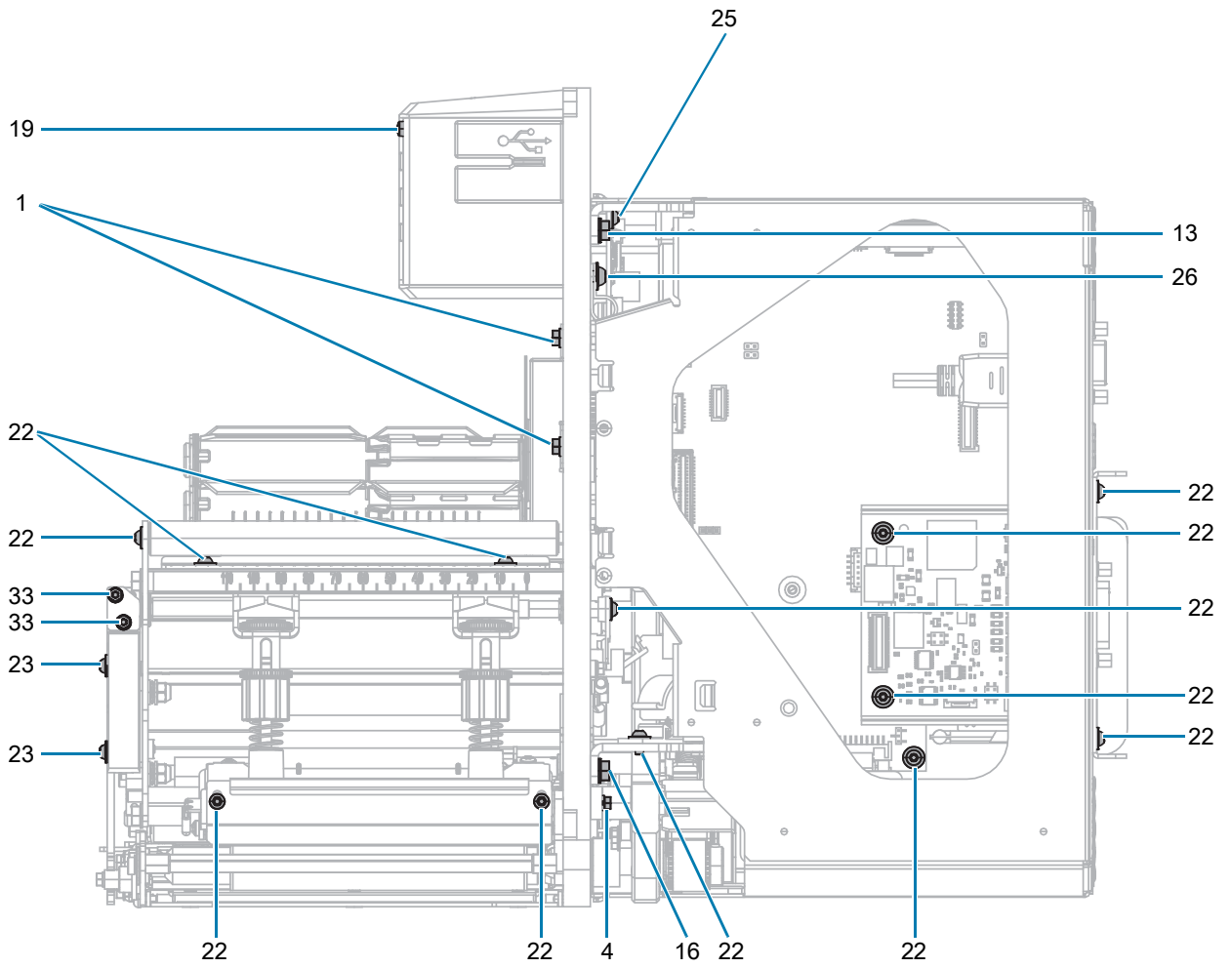


## Rear View



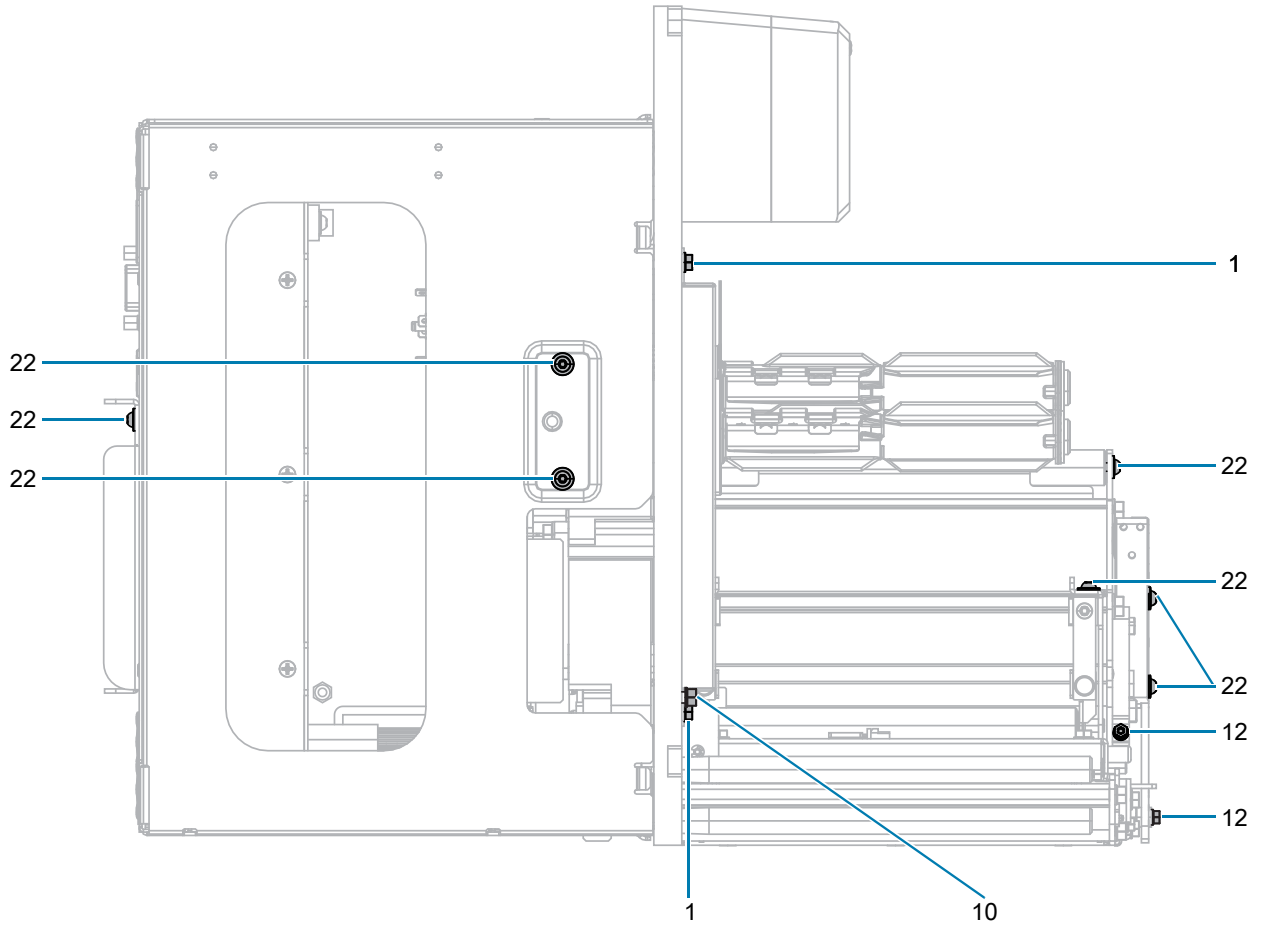
for parts & service call QLC (800) 837-1309

# Right Side View



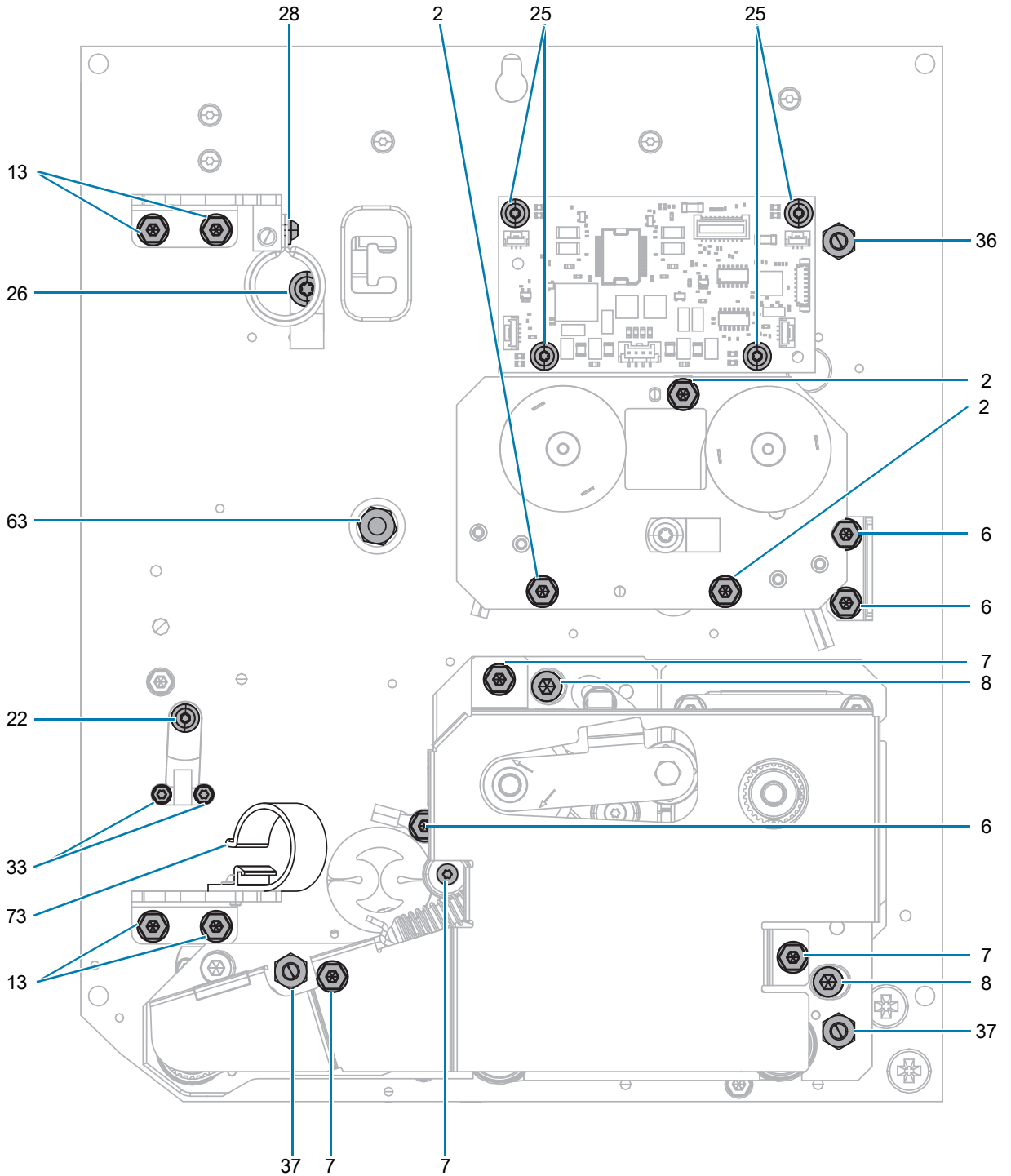
for parts & service call QLC (800) 837-1309

# Left Side View



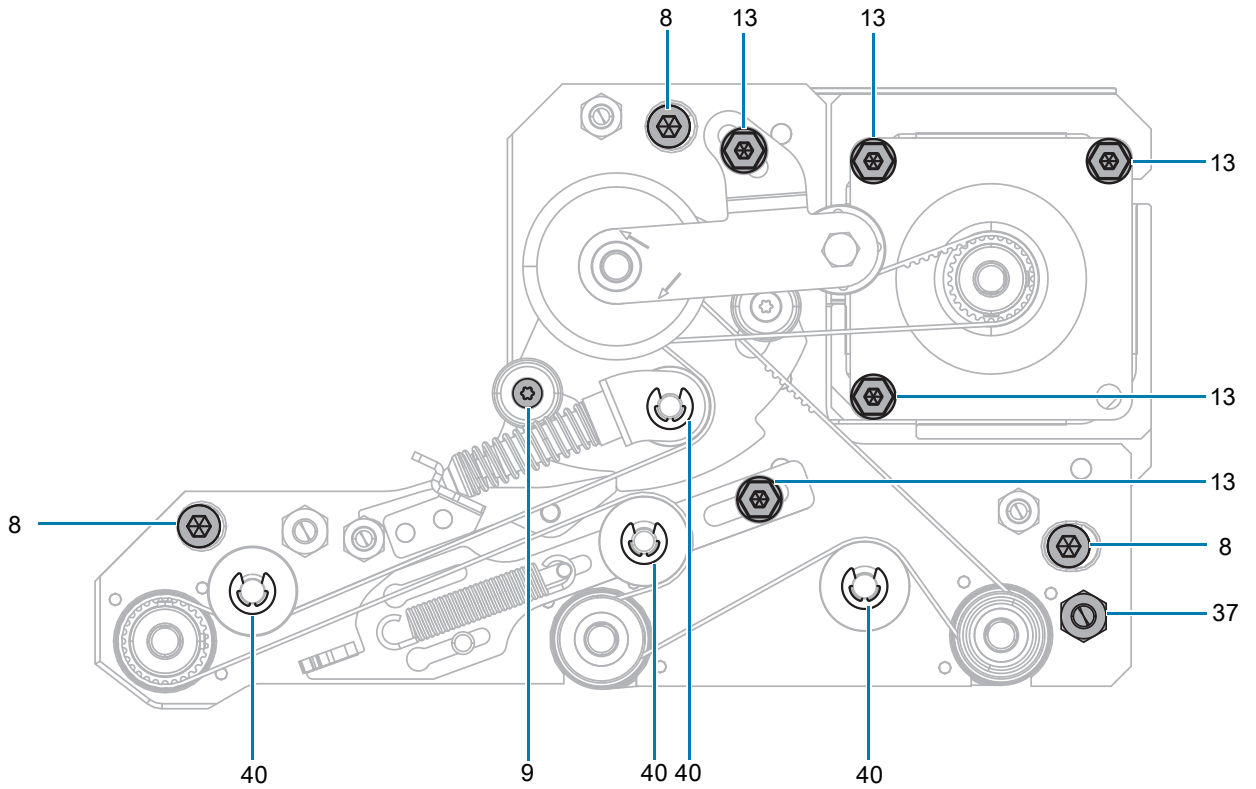
for parts & service call QLC (800) 837-1309

## Rear of Mainframe

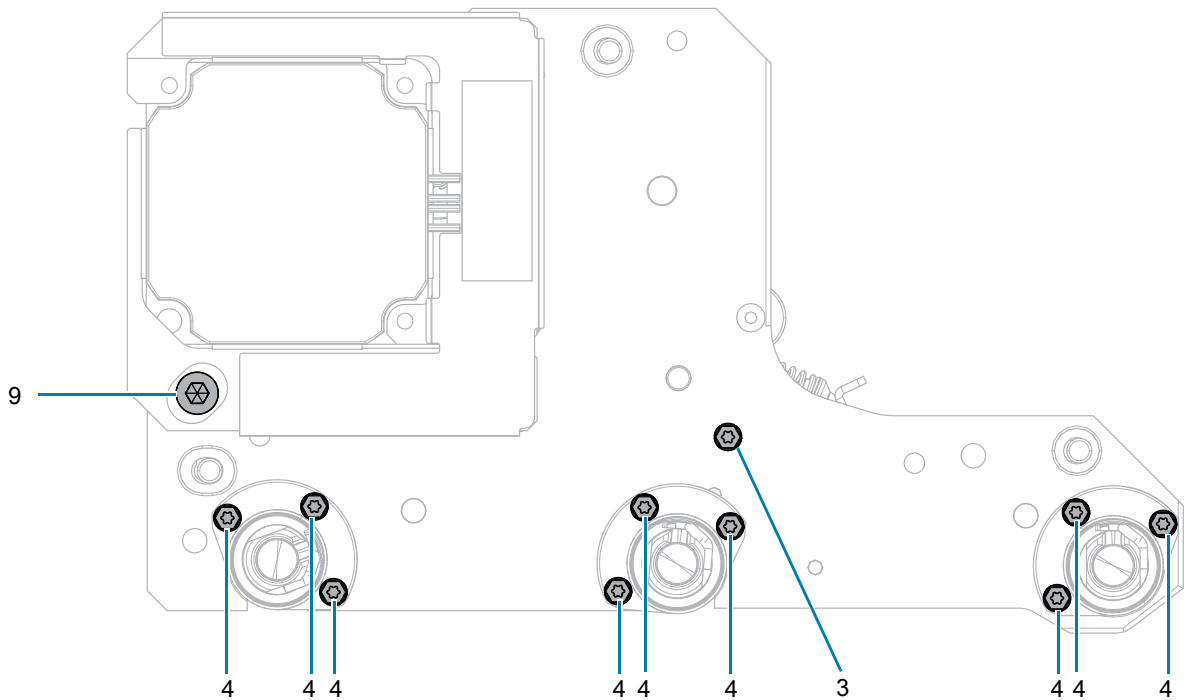


for parts & service call QLC (800) 837-1309

## Media Drive Hardware

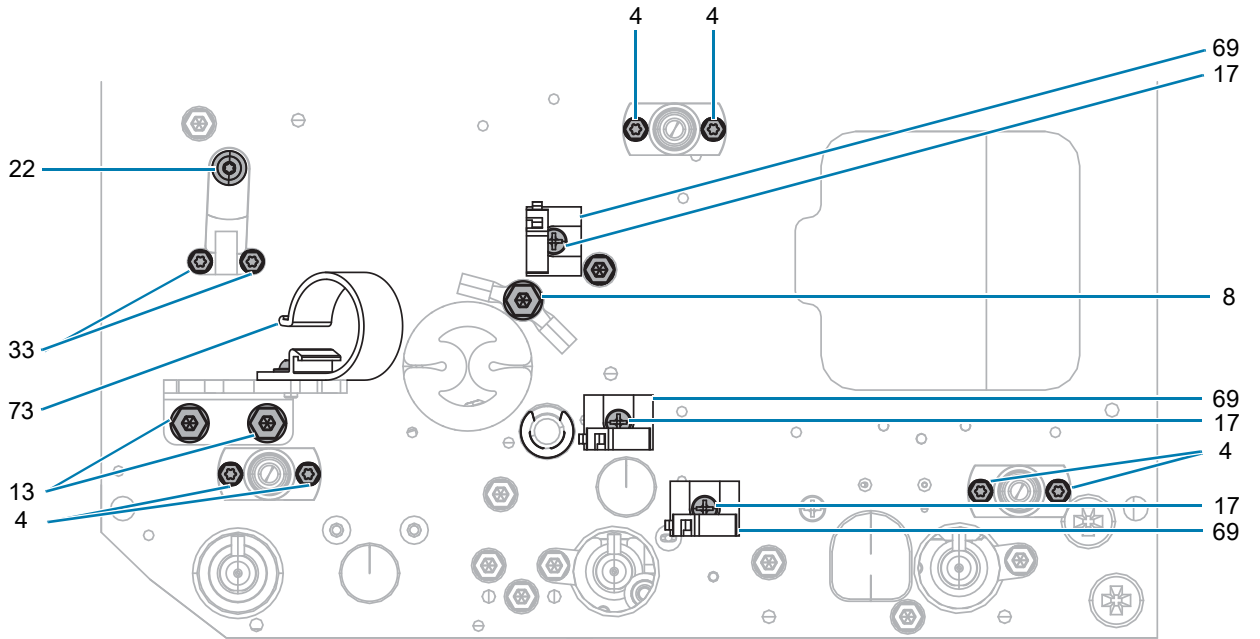


## Media Drive Inboard Hardware

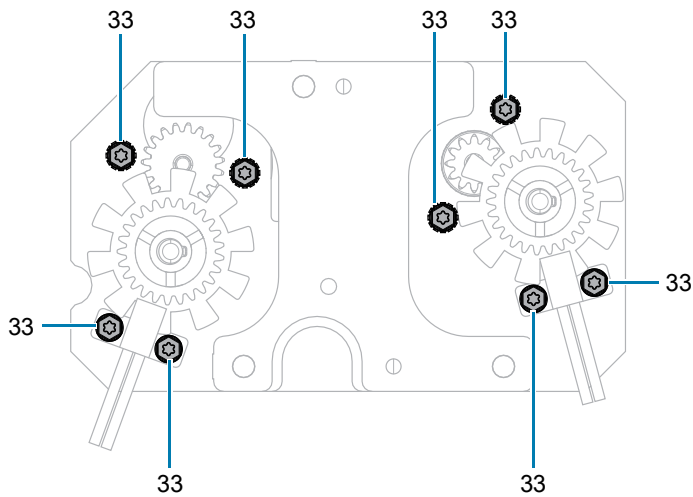


for parts & service call QLC (800) 837-1309

## Media Drive Removed



## Ribbon Drive Inboard

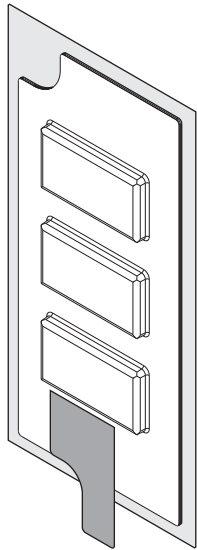


## Installation Instructions

Read these instructions thoroughly before installing this kit.

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

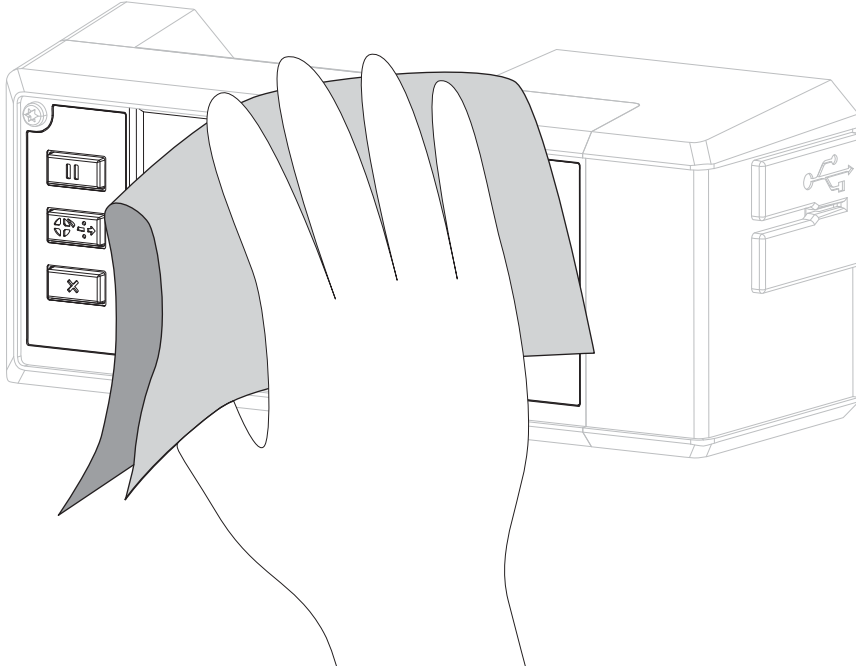
	<p>Control panel cover Qty: 3</p>
--	---------------------------------------

## Tools Required

- A clean, dry microfiber cloth
- [Mild degreaser/detergent \(optional\)](#)

## Clean the Control Panel

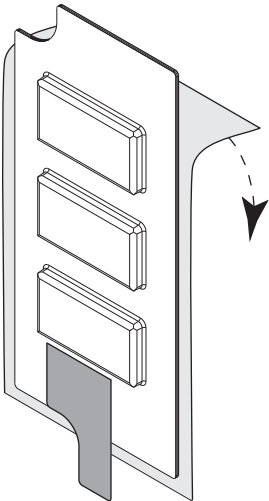
1. Wipe any dust and debris from the printer control panel with a microfiber cloth. If necessary, moisten the microfiber cloth with a mild degreaser/detergent for cleaning.



2. Allow time for the control panel to dry completely.

## Install the Control Panel Cover

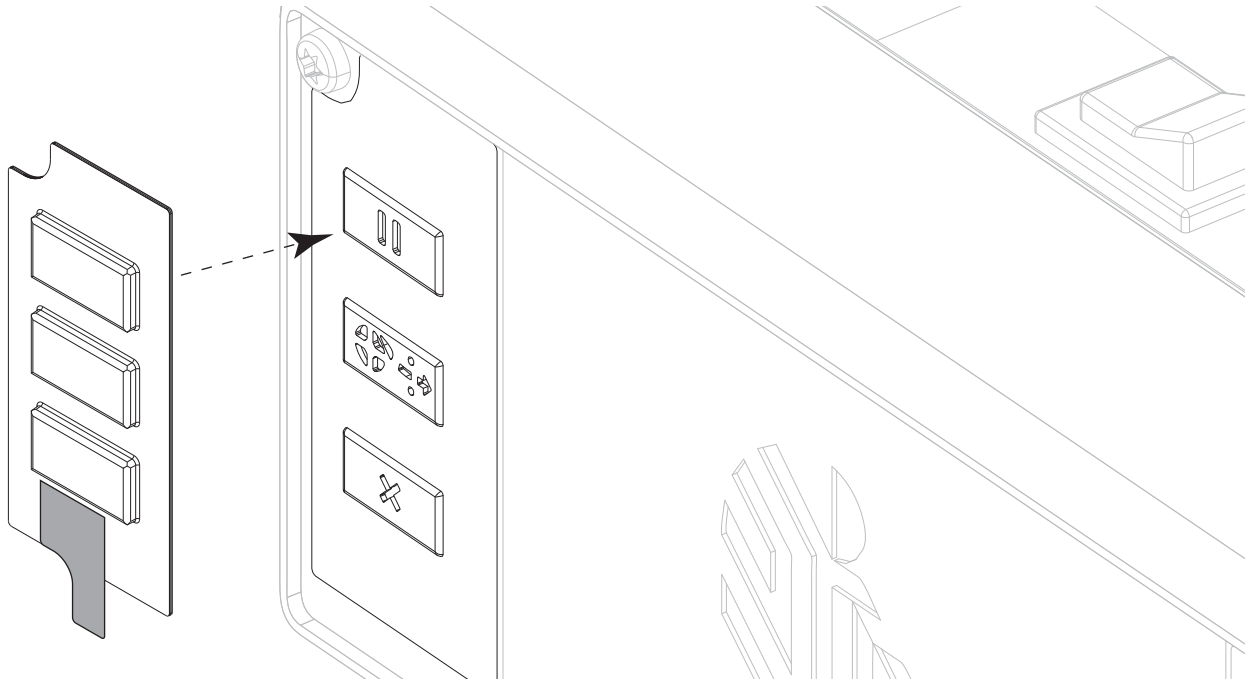
1. Remove the backing from a control panel cover.



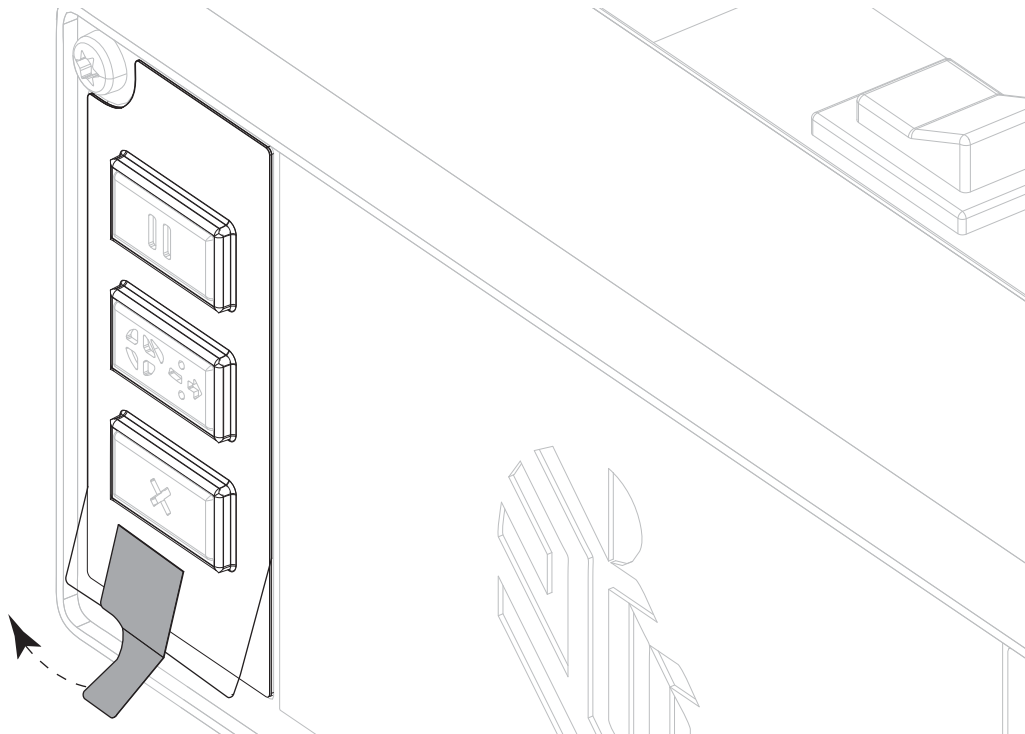


## Control Panel Cover

2. Carefully line up the cover with the buttons on the control panel, and then press the cover to make it adhere to the surface.



3. Gently lift up on the tab to remove the protective coating from the control panel cover.



4. Press and smooth the cover until it adheres smoothly over the control panel buttons.

**The installation is complete.**

for parts & service call QLC (800) 837-1309

## Installation Instructions

Read these instructions thoroughly before installing this kit.

Supported printers:

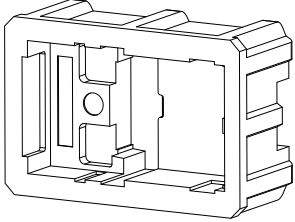
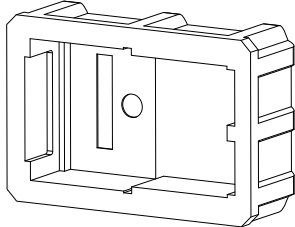
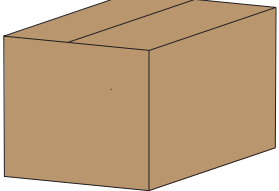
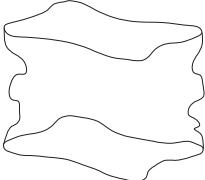

- ZE500
- ZE511
- ZE521






**IMPORTANT:** Before repacking, call 1.877.ASK.ZEBRA (1.877.275.9327) for a Repair Order (RO) number or refer to [zebra.com/repair](https://zebra.com/repair).

## Parts List

Before proceeding, verify that your kit contains the following items. To reorder specific parts, navigate to [zebra.com/parts](https://zebra.com/parts), and select your printer model.

	Top insert Qty: 1
	Bottom insert Qty: 1
	Shipping box Qty: 1
	Plastic bag Qty: 1
	Shipping spacer Qty: 1

## Repacking Instructions

	Cable tie (3.62x0.09 mm) Qty: 1
	Cable tie (140 mm/5.5 in.) Qty: 1
	Cable tie (381 mm/15 in.) Qty: 2

## Tools Required

- Packing tape

## Remove the Print Engine from Applicator



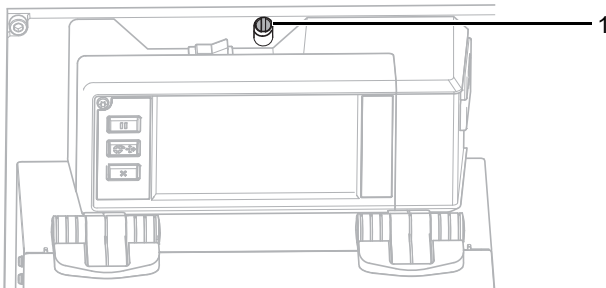
**CAUTION:** Turn off (O) the printer and disconnect it from the power source before performing the following procedure.



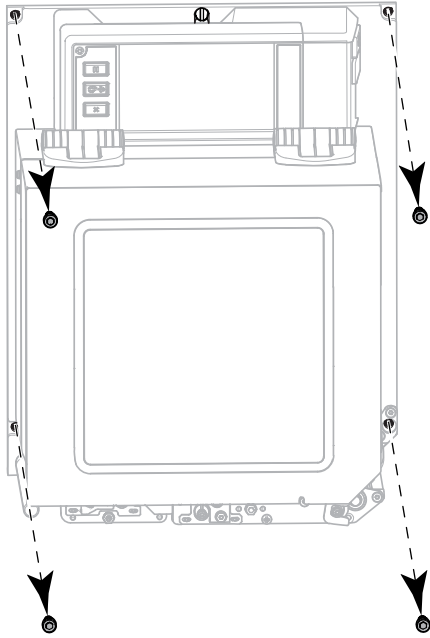
**CAUTION—ESD:** Observe proper electrostatic safety precautions when handling static-sensitive components such as circuit boards and printheads.

It may be necessary to remove the print engine from the applicator to gain unobstructed access. Follow these steps if necessary.

1. Loosen the center mounting bolt (1), but do not remove it. This bolt supports the print engine.



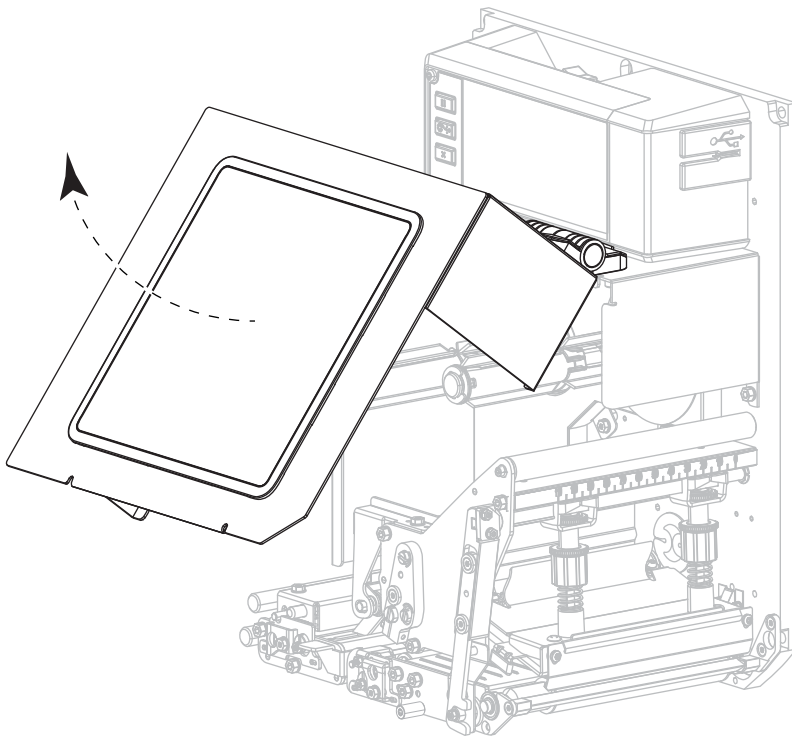
2. Remove the four screws securing the print engine to the applicator.



3. Lift the print engine off of the center mounting bolt and place it on a workbench.

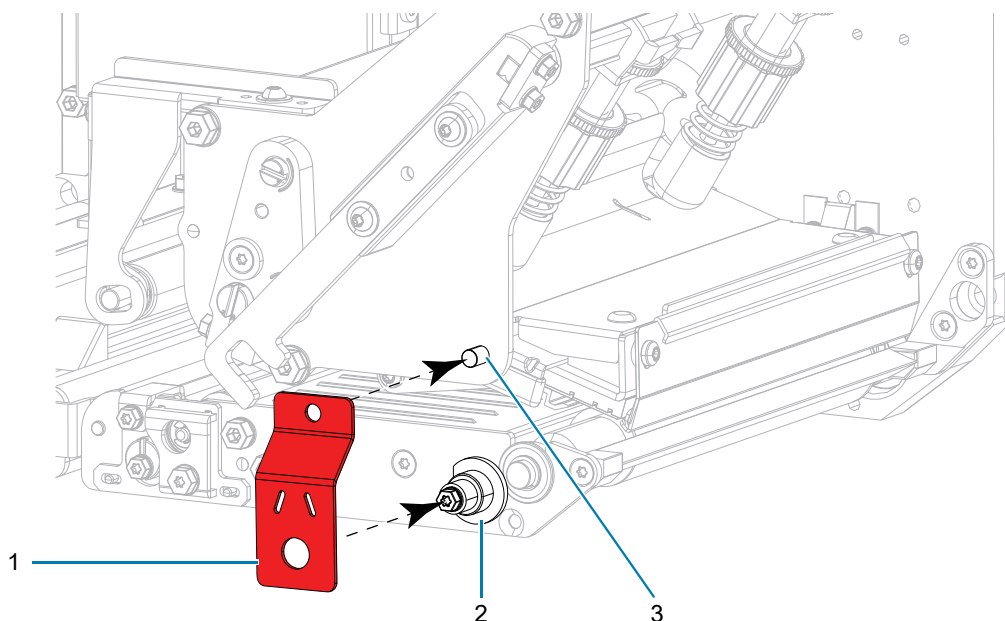
### Repack the Print Engine

1. Open the media cover.



## Repacking Instructions

2. Slide the shipping spacer (1) over the platen support plate latch (2) and the support pin (3).

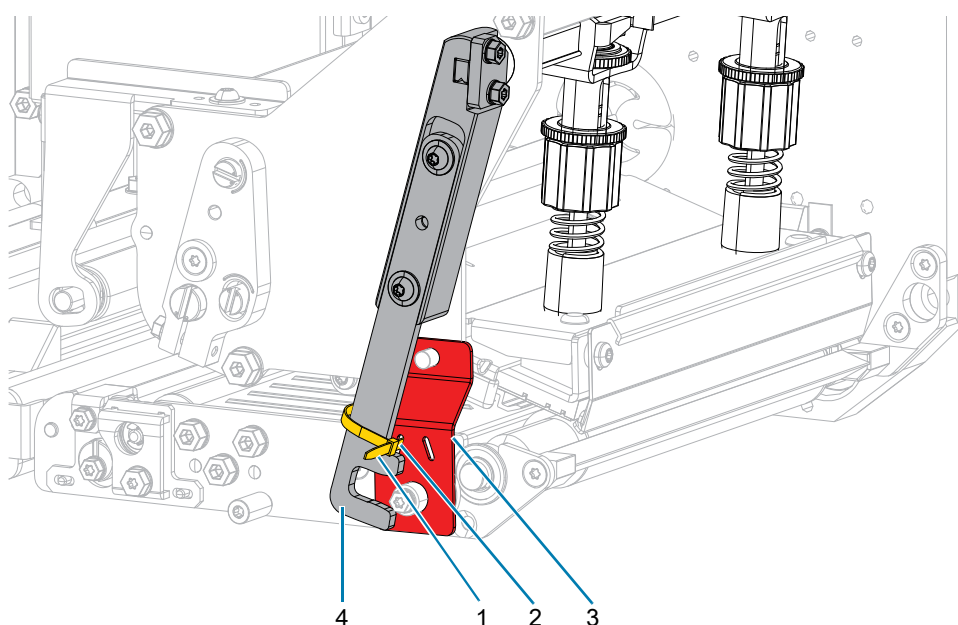


3. Secure the printhead latch.

- a. Thread the short cable tie (1) behind the shipping spacer (2) and through a slot in the spacer (3).  
For a RH print engine, use the left slot. For a LH print engine, use the right slot.
- b. Wrap the short cable tie round the printhead latch (4), and slowly tighten the cable until the latch is secure.



**CAUTION—PRODUCT DAMAGE:** Do not over-tighten the cable tie to avoid damaging the printhead latch.

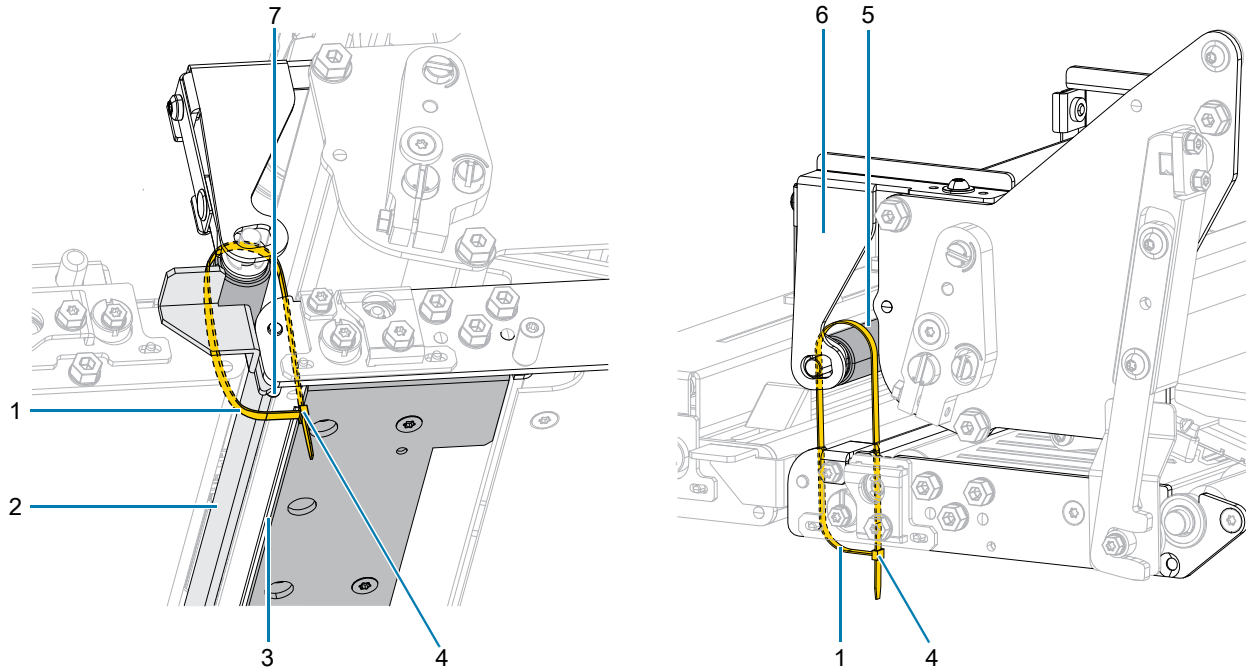


4. Place the print engine on its back with the media door face up.

for parts & service call QLC (800) 837-1309

## Repacking Instructions

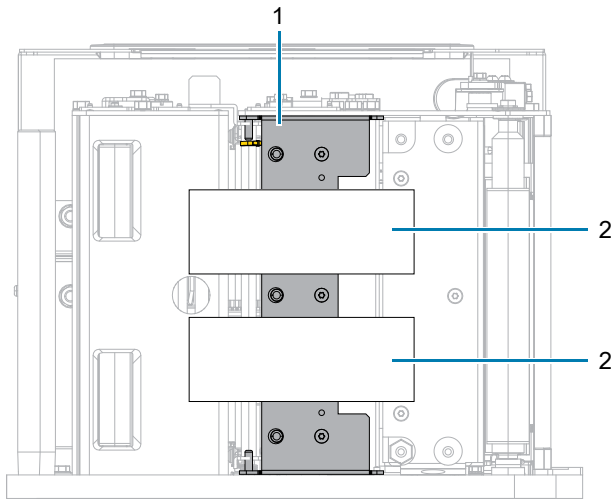
5. Secure the ribbon dancer shaft.
  - a. From the bottom of the print engine insert the 5.5 in. (140 mm) cable tie (1) to the side of the peel bracket shaft (2).
  - b. Push the cable tie until the end completely passes the ribbon dancer shaft (5).
  - c. Bend the cable tie around the ribbon dancer shaft (5), routing it between the shaft and the spring mounting bracket (6).
  - d. Insert the free end of the cable tie through the cable tie head (4). Do not fully tighten the cable tie.
  - e. Push the cable tie head to the outside of the catch pin (7), and pull the cable tie tight.
  - f. Tuck the cable tie head into the small space (3) between the peel bracket shaft and the lower media guide shelf.
  - g. Trim the excess cable tie length so it is shorter than or even with the bottom plane of the peel bracket.



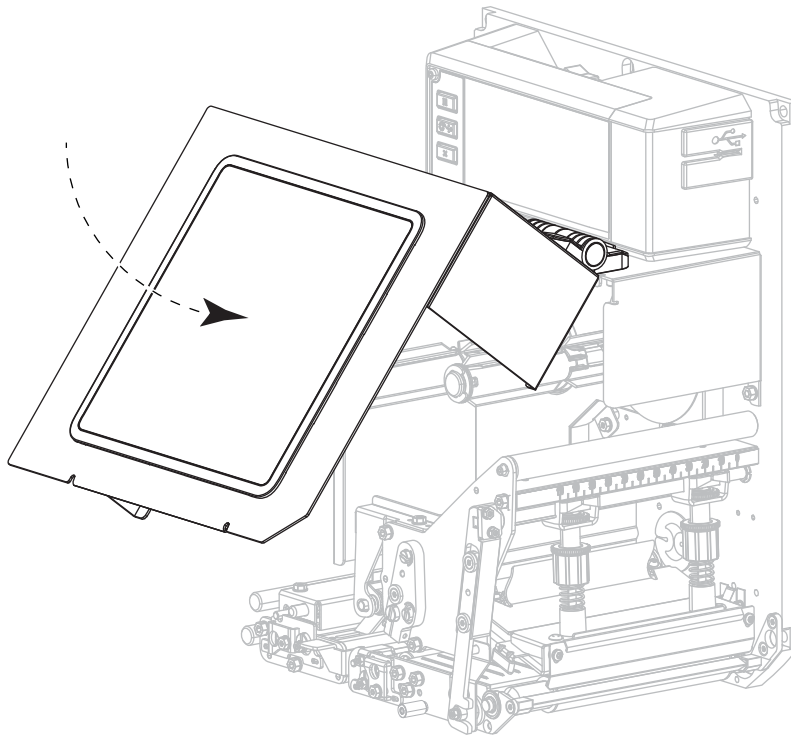
for parts & service call QLC (800) 837-1309

## Repacking Instructions

6. On the underside of the printer, tape the peel mechanism (1) closed with packing tape (2).



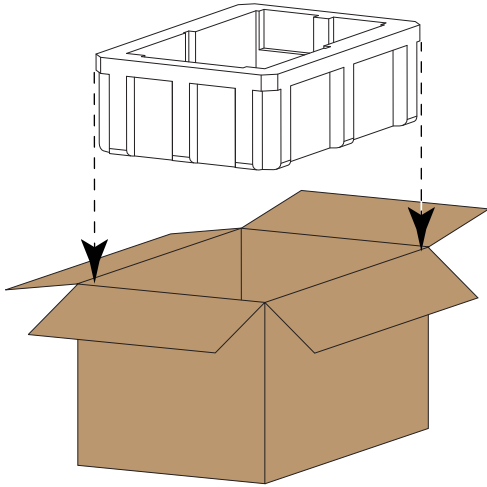
7. Move the print engine to an upright position.
8. Close the media cover.



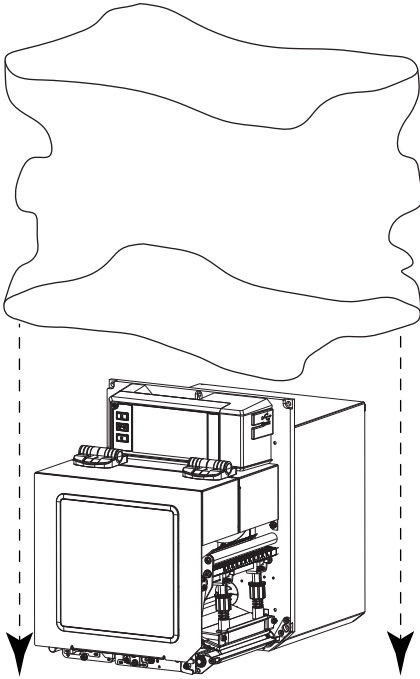
for parts & service call QLC (800) 837-1309

## Repacking Instructions

9. Place the bottom insert into the shipping box.



10. Drape the plastic bag over the print engine.

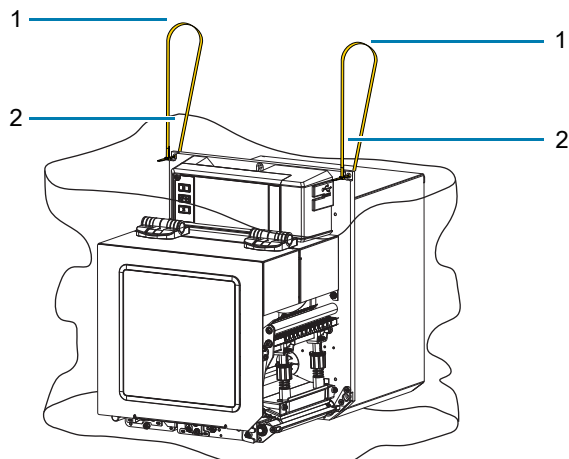


for parts & service call QLC (800) 837-1309



## Repacking Instructions

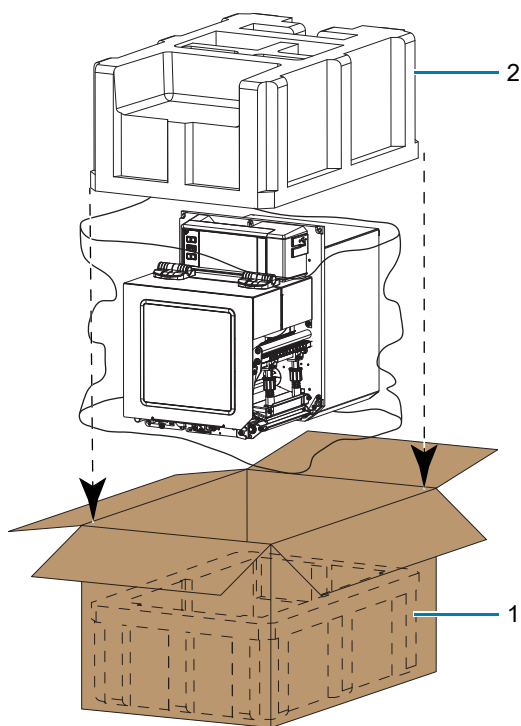
11. Poke the two 15.5 in. (381 mm) cable ties (1) through the bag and the mounting screw holes (2), forming loops.



12. Gather the bag at the bottom of the printer, and fold the bag closed.

13. Place the print engine into the box.

- a. Lift the print engine by the using the 15.5 in. (381 mm) cable ties as lift straps and lower the print engine and plastic bag into the bottom insert (1).
- b. Place the top insert (2) on top of the print engine.



14. Close the flaps on the box, and seal the box with packing tape.

15. Apply the return shipping label to the box, and write the Repair Order (RO) number on the outside of the box.

for parts & service call QLC (800) 837-1309