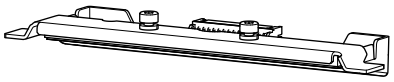
Printhead Conversion Maintenance Kit

Installation Instructions for the ZT231 Printer

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, and select your printer model.

		Qty	203 to 300 dpi conversion	300 to 203 dpi conversion
Printhead		1	x	x
300 dpi lower compound (helical) gear		1	x	--
300 dpi upper compound (spur) gear		1	x	--
203 dpi lower compound (helical) gear		1	--	x
203 dpi upper compound (spur) gear		1	--	x
Compound gear shaft	 3mm	1	x	x
Screw, M4 × 0.7 × 8, CP SO ZnNi	 3mm	3	x	x
Shoulder screw, M5 × 0.8 × 20	 3mm	1	x	x

Tools Needed

- Hexalobular (6-lobe, star) keys, drivers, or bits

P1127842-01EN Rev A

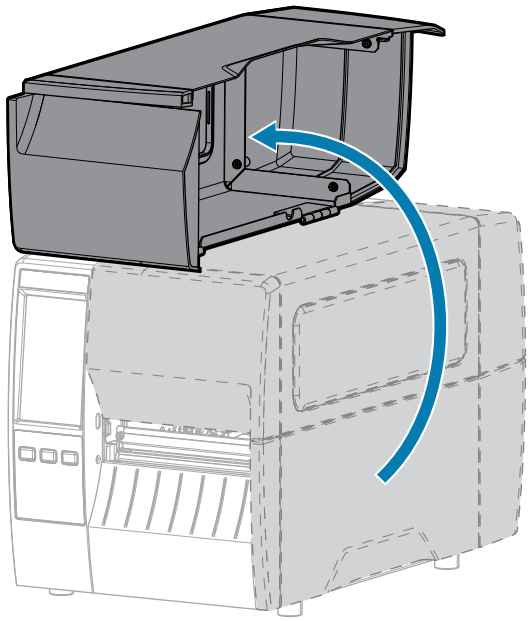
- Metric hexagon keys or bits
- Sorting bin for screws and small parts (optional)
- Zebra preventative maintenance kit (p/n 47362 or p/n 105950-035 for a multipack) or a lint-free cloth dipped in 99.7% isopropyl alcohol
- Antistatic wrist strap and mat

Prepare for Installation

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

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

1. Turn off the printer and disconnect it from the power source.
2. Disconnect all data cables.
3. Open the media cover.



4. Remove media and ribbon (if used).

Table 1 Which printhead resolution are you converting to?

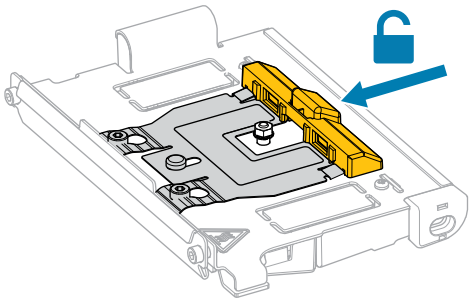
If you are converting to...	Then...
203 dpi	Go to Convert Printer to 203 dpi
300 dpi	Go to Convert Printer to 300 dpi

Convert Printer to 203 dpi

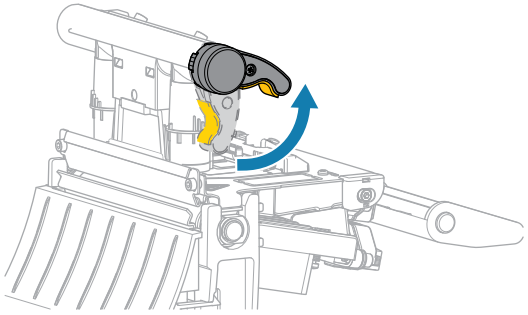
Replace the Printhead

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

1. Connect yourself to an antistatic device.
2. Slide the printhead latch forward to the unlocked position.

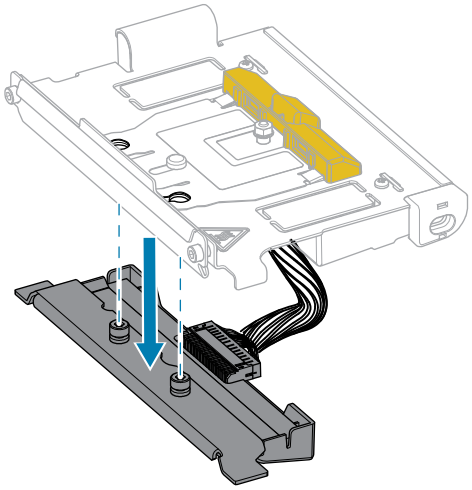


3. Release the printhead assembly.

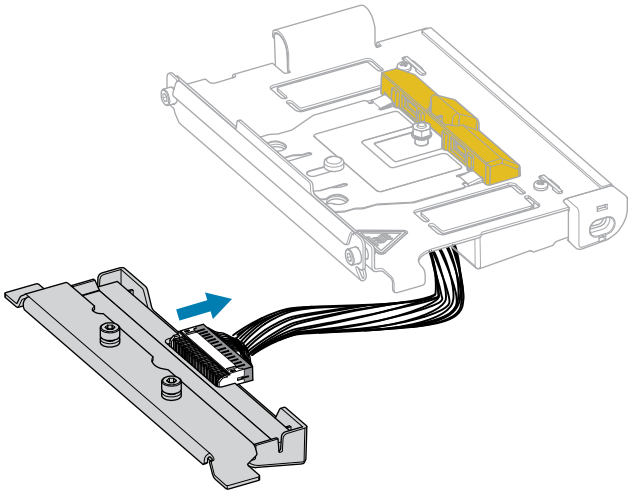


As the printhead lever rotates upward, the printhead assembly pivots upward.

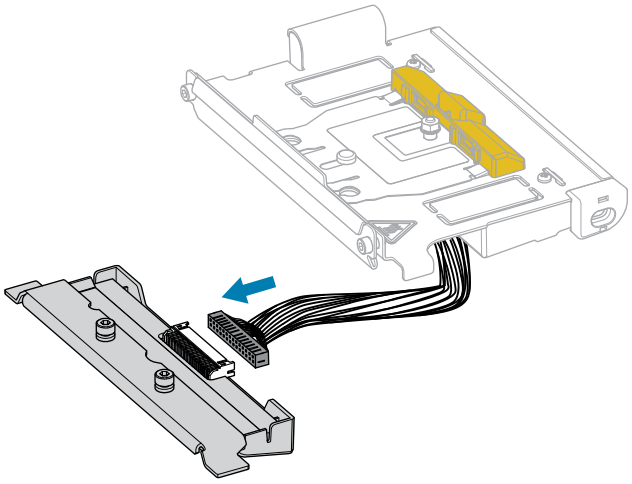
4. Pull the printhead from the upper print mechanism.



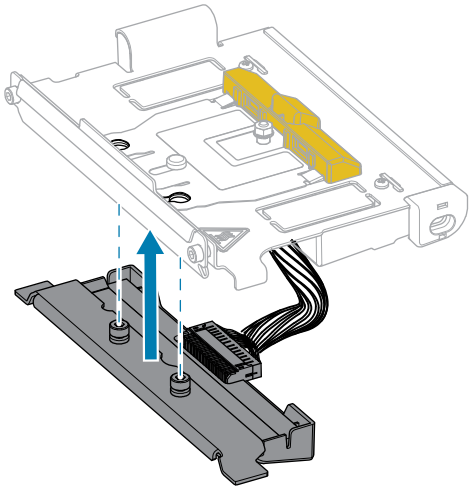
5. Disconnect the printhead cable from the old printhead.



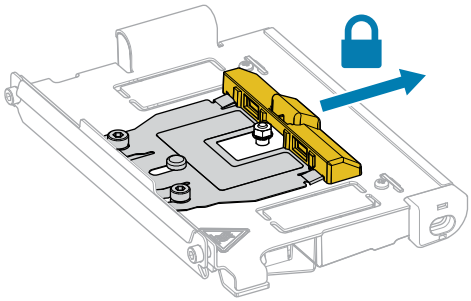
6. Connect the printhead cable to the new printhead.



7. Slide the printhead into the print mechanism, assuring that the printhead locking posts go into the printhead latch holes.



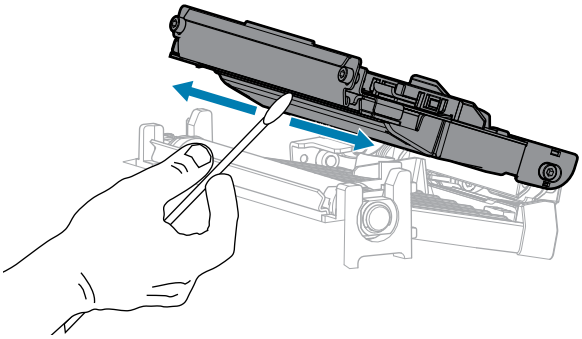
8. While holding the printhead in place, slide the printhead latch back to the locked position.



9. Clean the printhead.

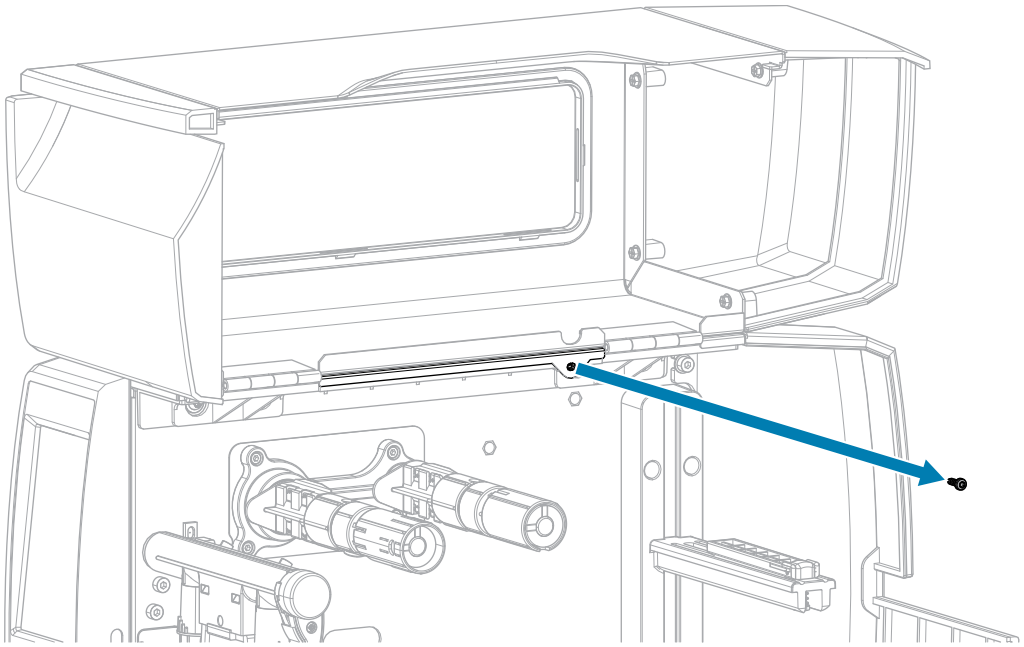
   a) Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.

   b) Allow the solvent to evaporate.

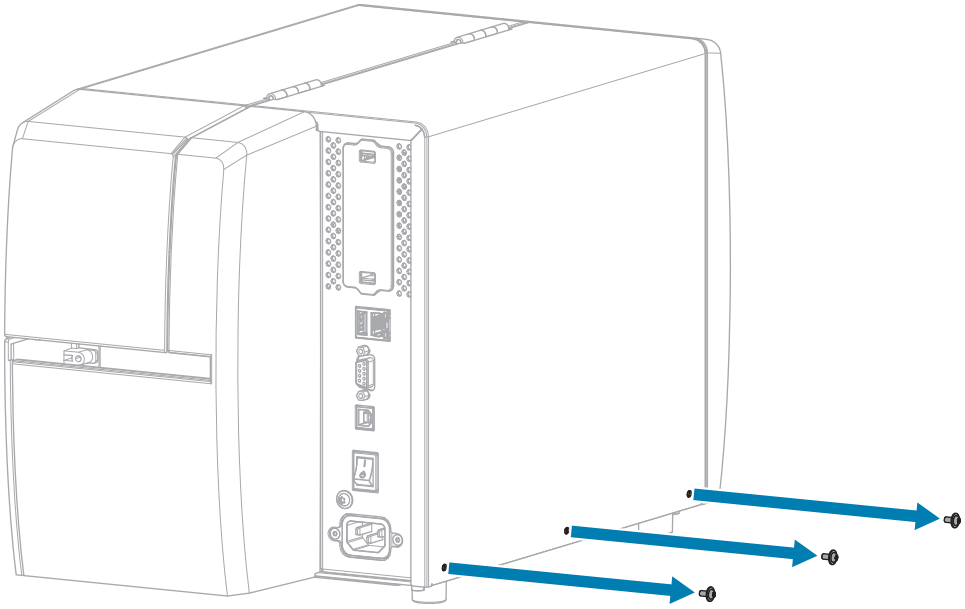


Remove the Electronics Cover

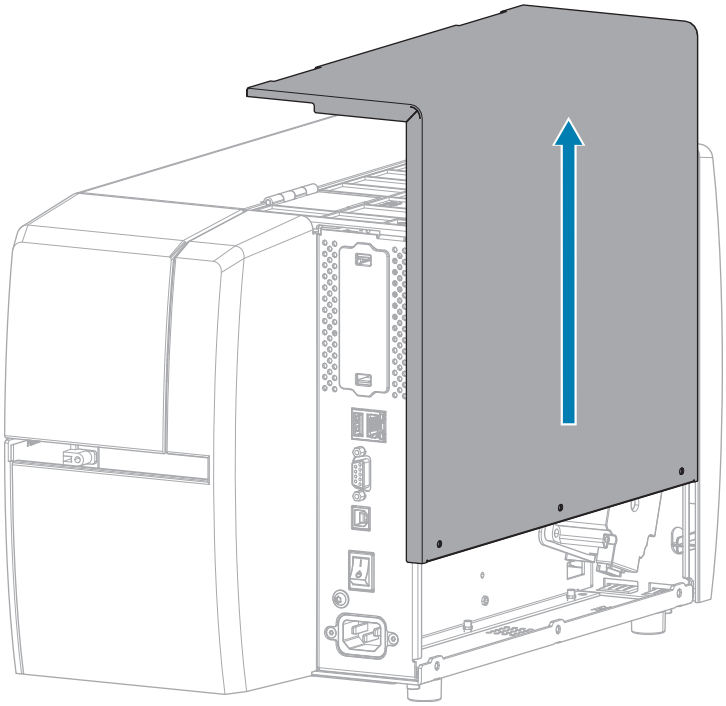
1. Remove the ✱ T10 screw that secures the electronics cover to the media side of the printer.



2. Remove the three ✱ T10 screws that secure the electronics cover to the electronics side of the printer.

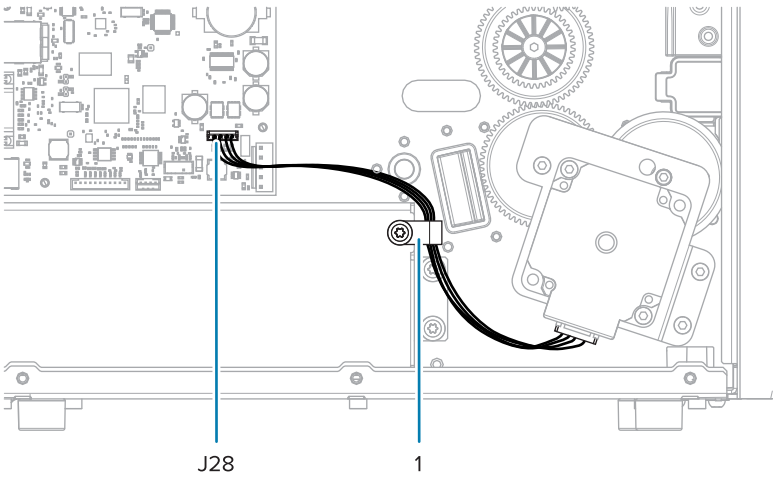


3. Lift the electronics cover off of the printer.

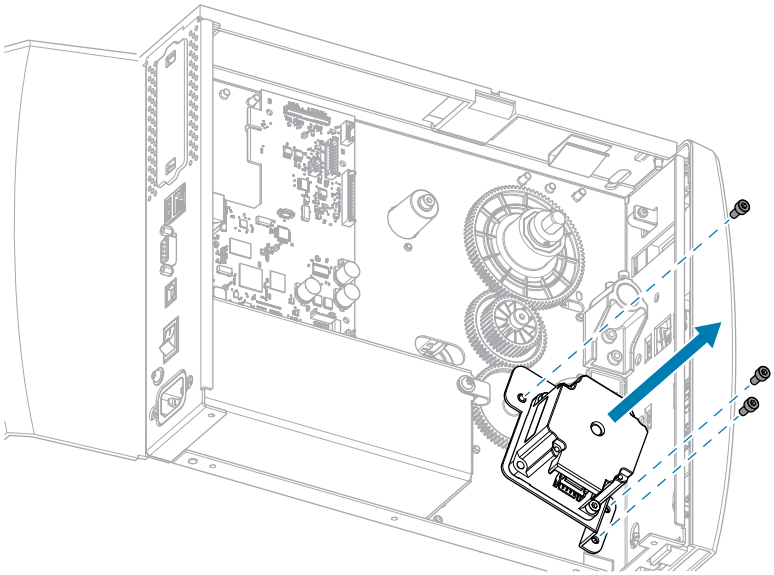


Remove the Drive Motor

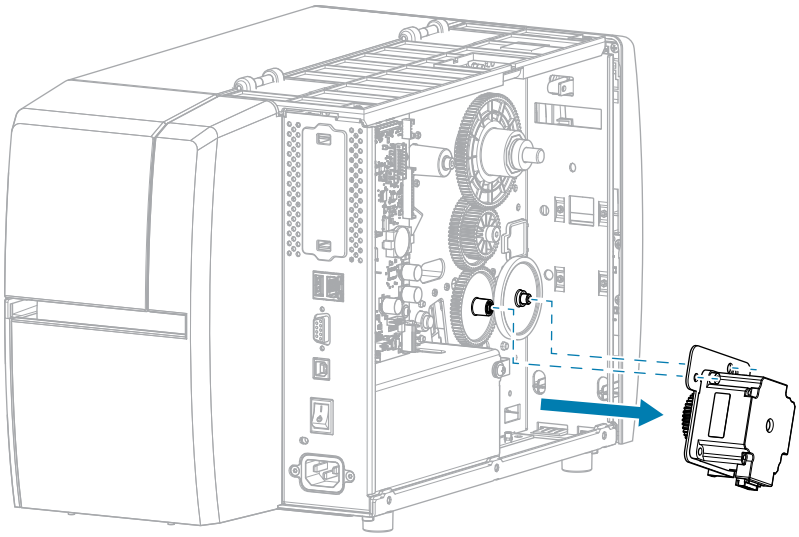
1. Disconnect the drive motor cable.
   a) Disconnect the drive motor cable from J28 on the MLB.
   b) Note the orientation of the wire routing clip (1) so that you reinstall it the same way later.
   c) Remove the ✱ T20 screw that secures the wire routing clip (1) to the power supply.
   d) Remove the drive motor cable from the clip.



2. Remove the three ◉ 3mm hex screws that secure the drive motor to the printer. (A 203 dpi printer is shown. The motor is removed from the 300 dpi printer in the same way.)

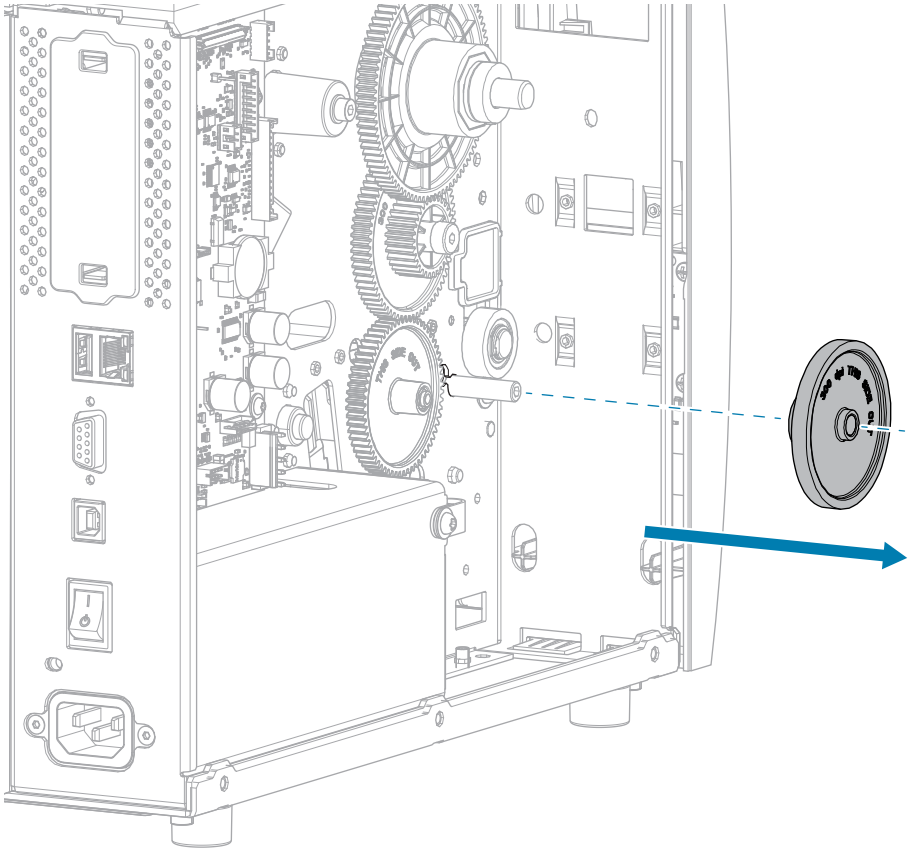


3. Remove the drive motor from the printer.

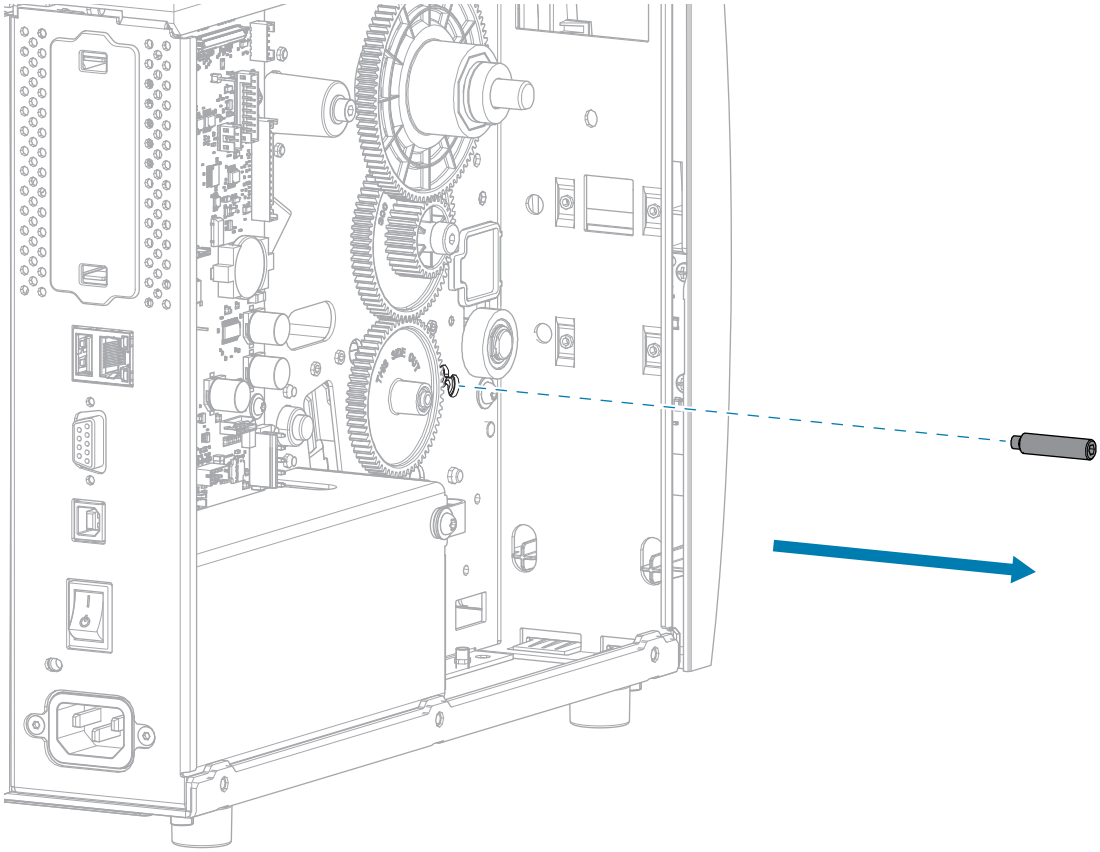


Remove the 300 dpi Drive Gears

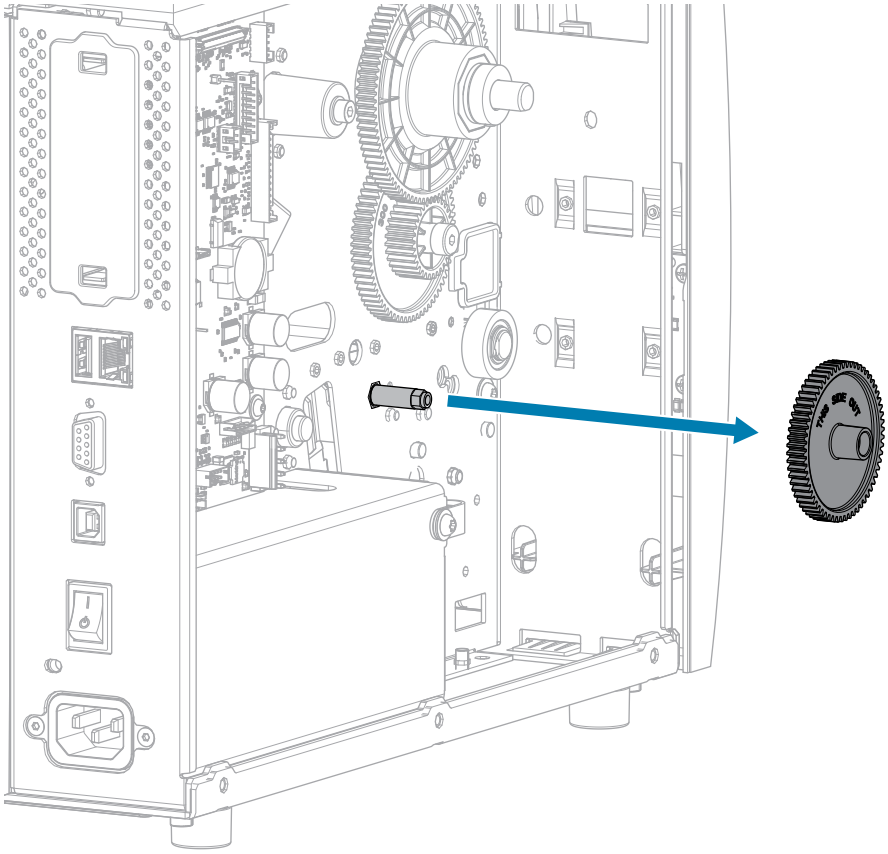
1. Remove the lower compound (helical) gear from the printer.



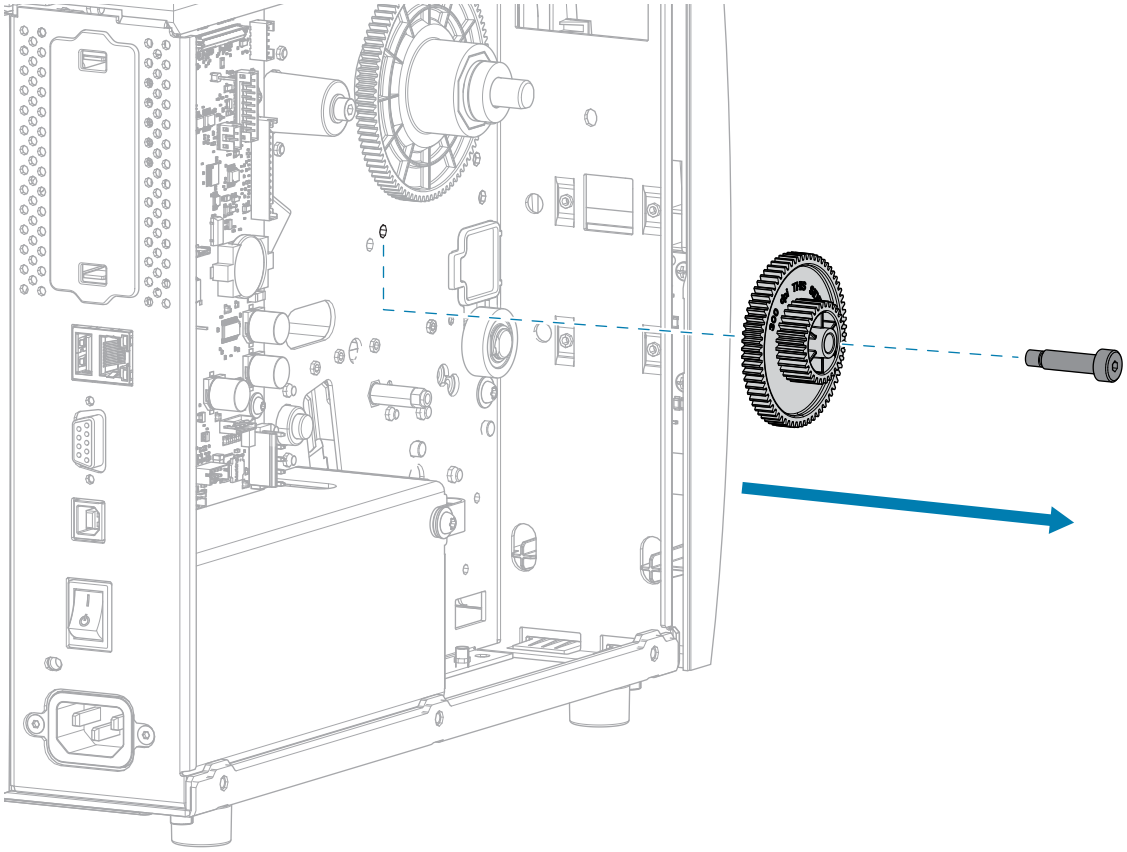
2. Using a 3mm hex key, driver, or bit, remove the compound gear shaft.



3. Remove the idler gear.

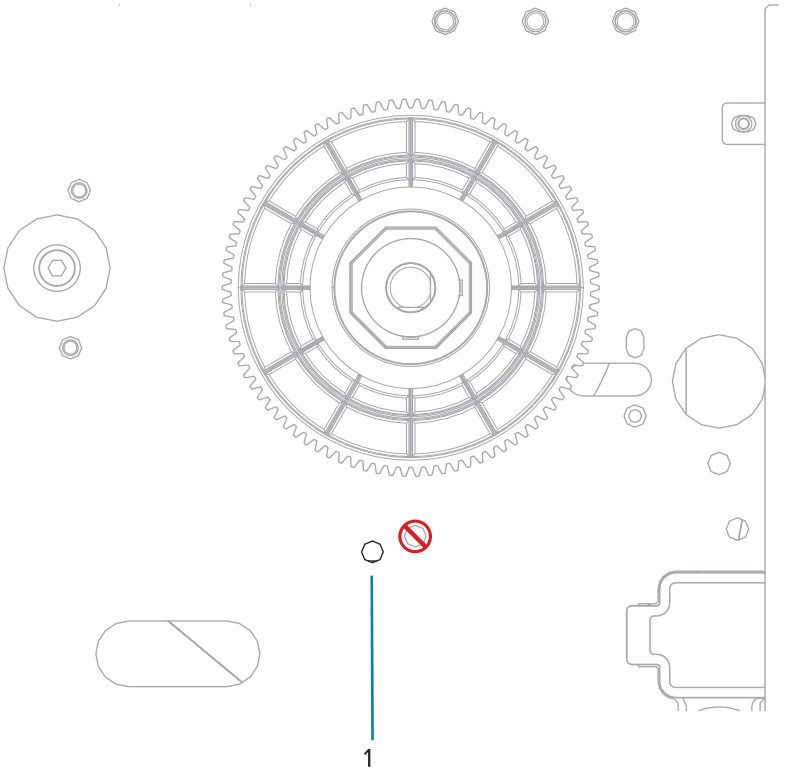


4. Remove the shoulder screw and upper compound (spur) gear.

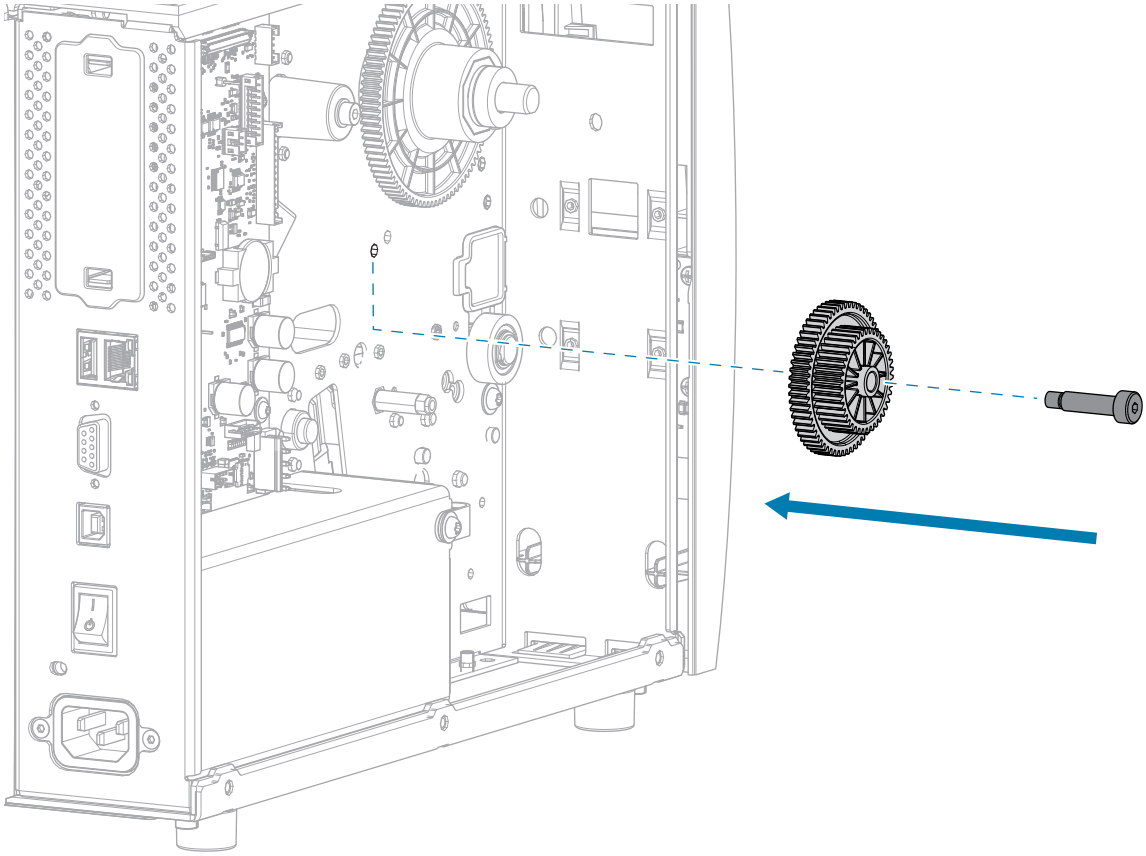


Install the 203 dpi Drive Gears

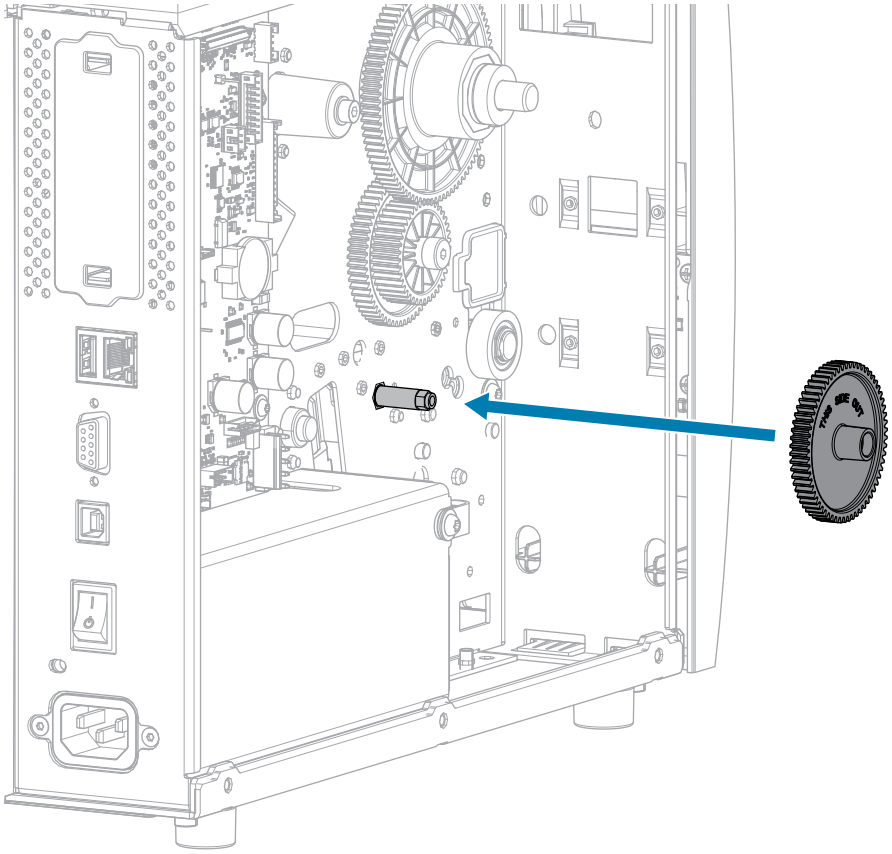
1. Locate the correct mounting hole (1) for the upper compound (spur) gear on the printer backframe.



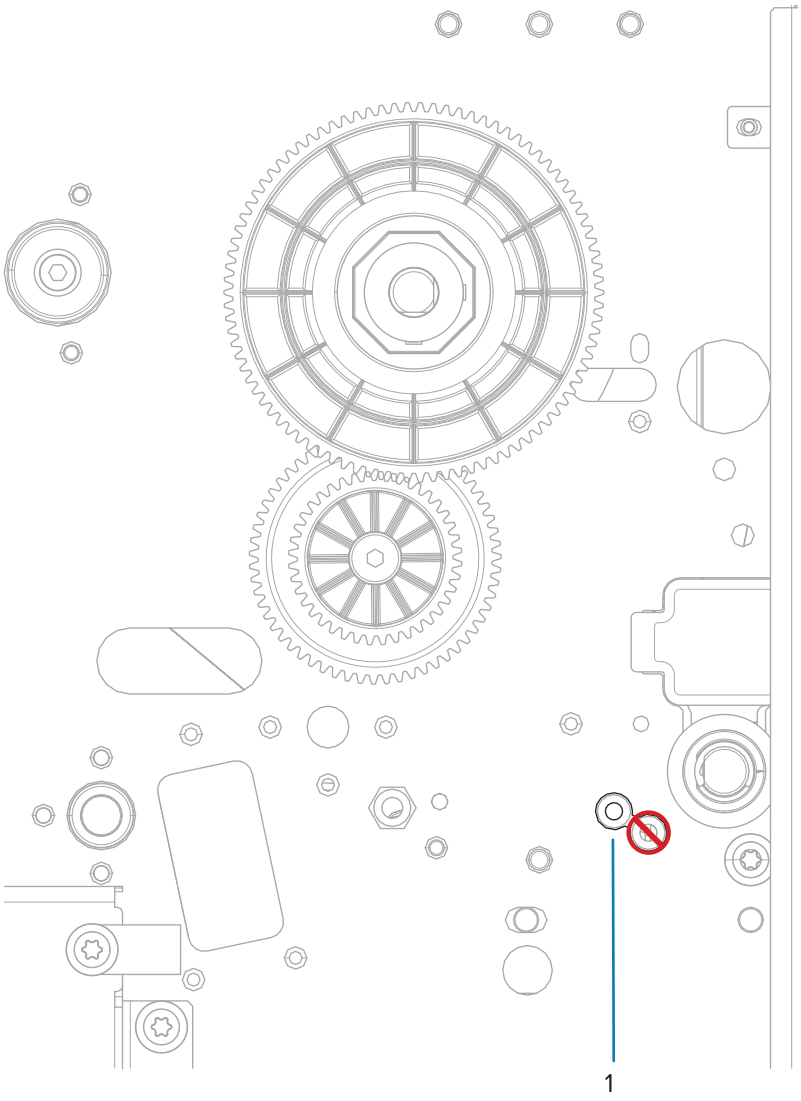
2. Install the upper compound (spur) gear using a shoulder screw. The smaller side of the compound gear faces outward.



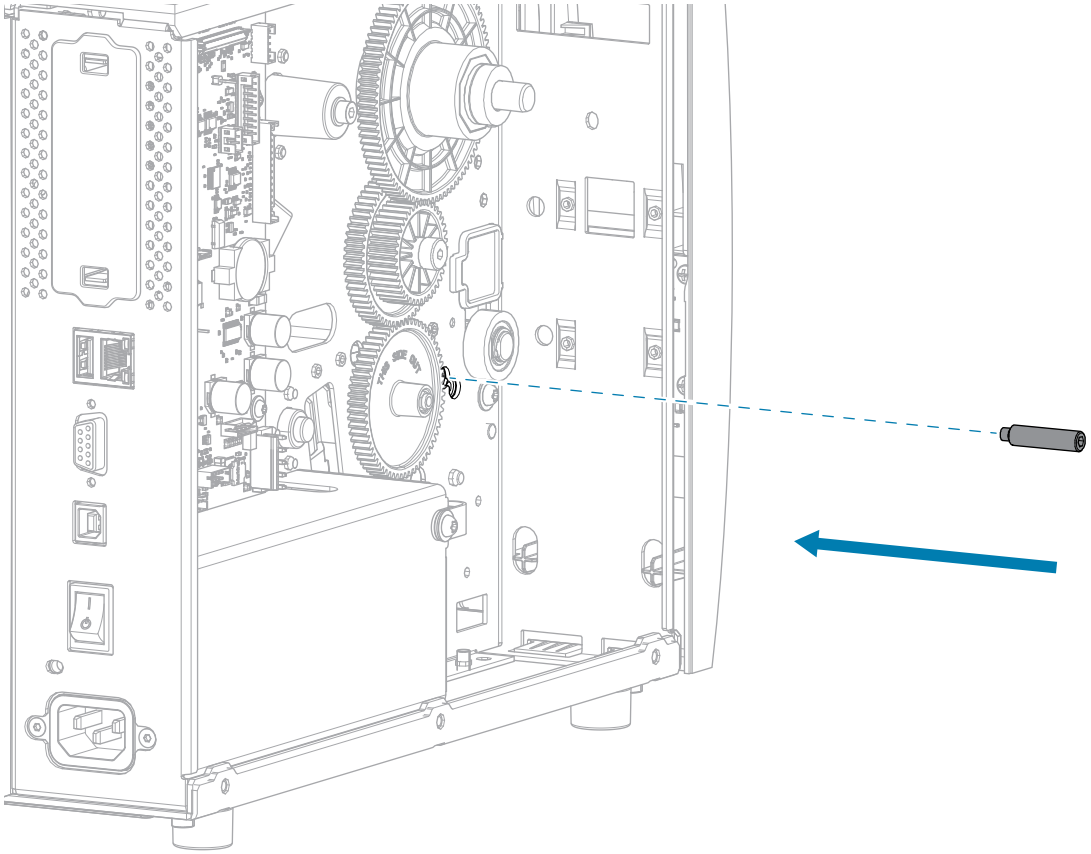
3. Install the idler gear with the writing facing out.



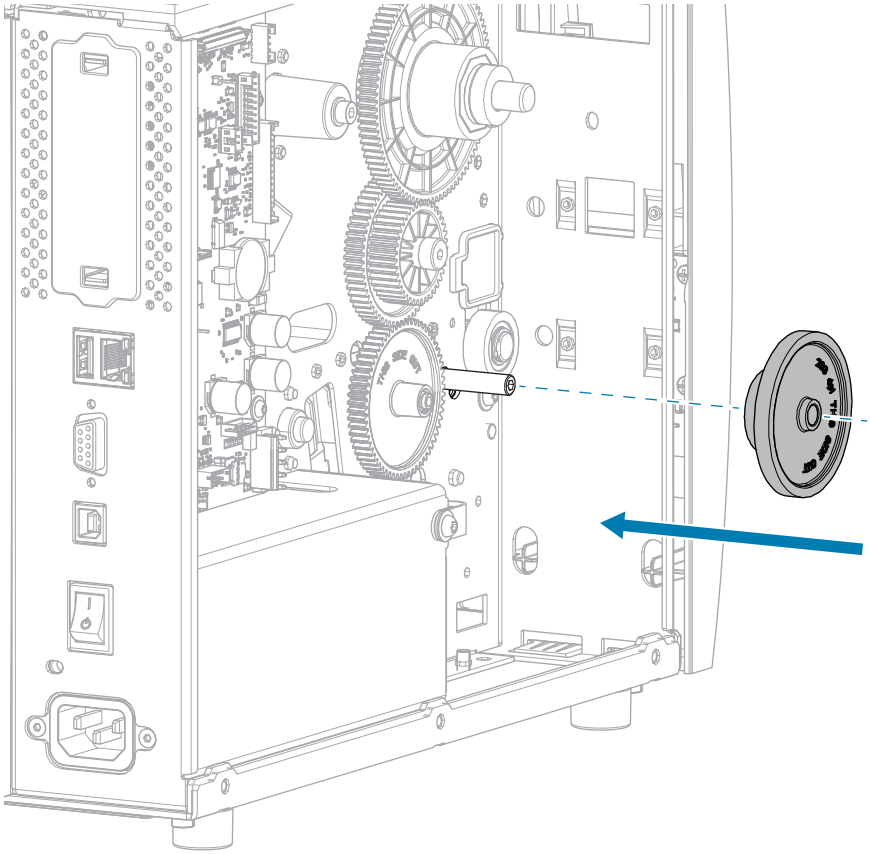
4. Locate the correct mounting hole (1) for the lower compound (helical) gear.



5. Using a 3mm hex key, driver, or bit, install the compound gear shaft into the correct mounting hole.

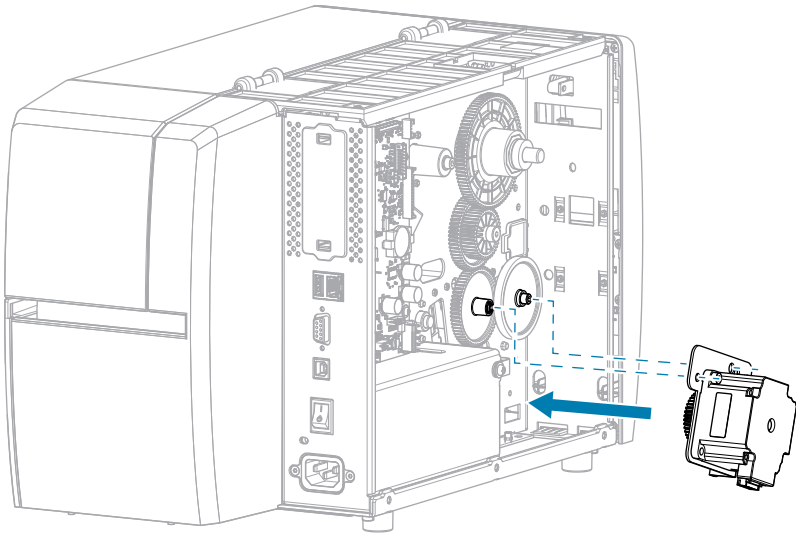


6. Install the lower compound (helical) gear with the writing facing out.

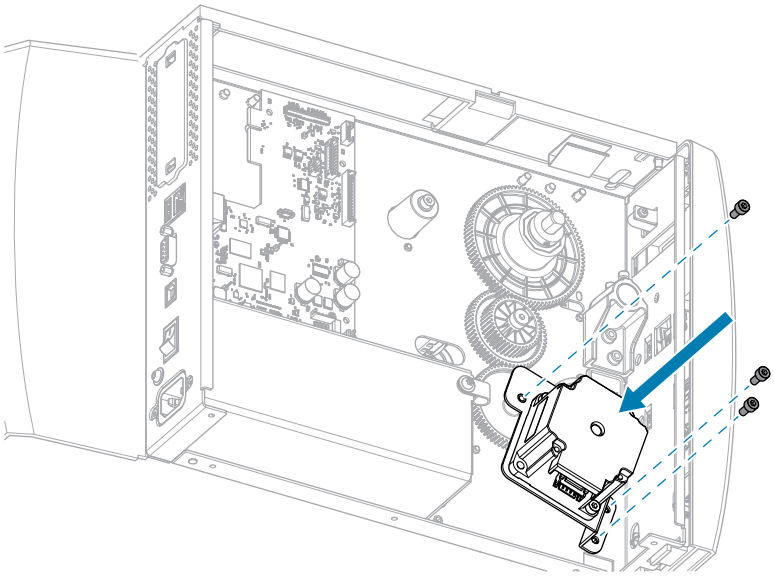


Install the Drive Motor

1. Align the holes on the drive motor with the shafts on the idler gear and the lower compound gear. (A 203 dpi printer is shown. The motor is installed into the 300 dpi printer in the same way.)



2. Reinstall drive motor retaining screws.



3. Connect the drive motor cable.

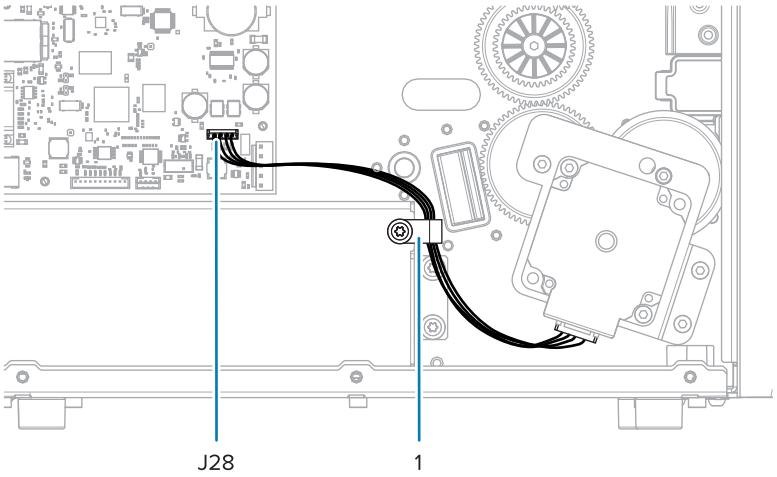
   a) If you have not already done so, remove the ✱ T20 screw that secures the wire routing clip (1) to the power supply.

   b) Orient the wire routing clip the way that it was previously.

   c) Run the drive motor cable through the clip.

   d) Secure the clip to the power supply.

   e) Connect the drive motor cable to J28 on the MLB.



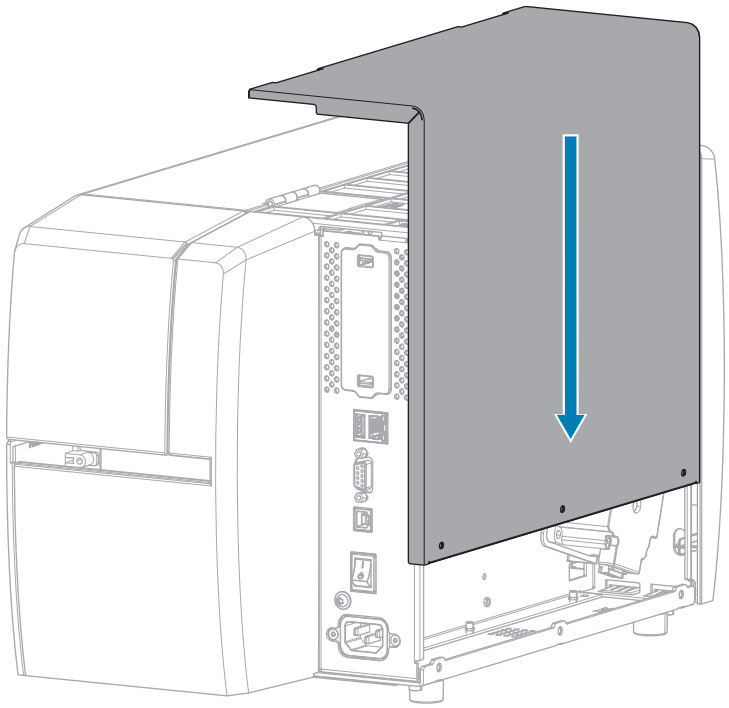
Feed a Label

1. Test the ability to feed a label by pressing **FEED**.
2. Did the printer feed a label?

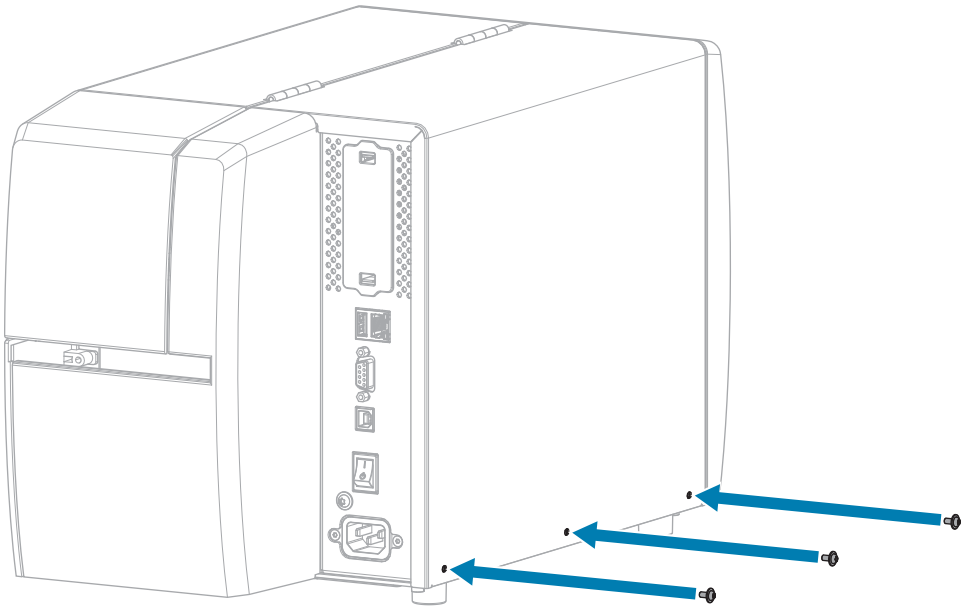
If...	Then...
Yes	Continue with the next section
No	**1.** Check that all of the gears are installed properly. **2.** Press **FEED**. **3.** Repeat as necessary until a label feeds as it should.

Install the Electronics Cover

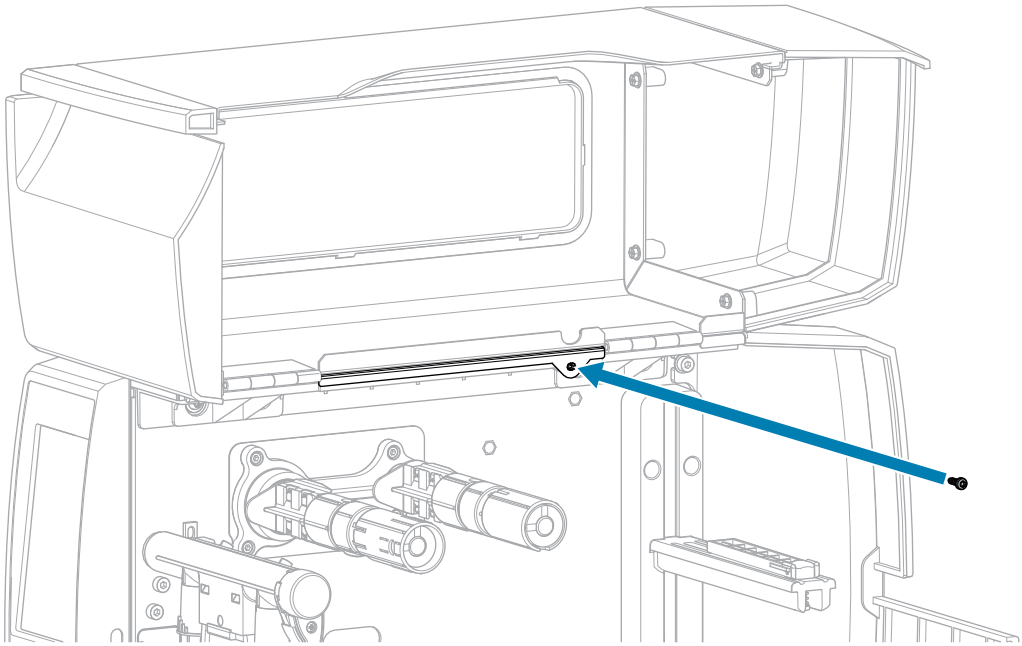
1. Slide the electronics cover onto the printer.



2. Install the three ✱ T10 screws that secure the electronics cover to the electronics side of the printer.



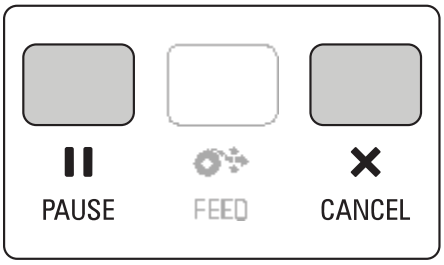
3. Install the ✱ T10 screw that secures the electronics cover to the media side of the printer.



Perform Manual Calibration

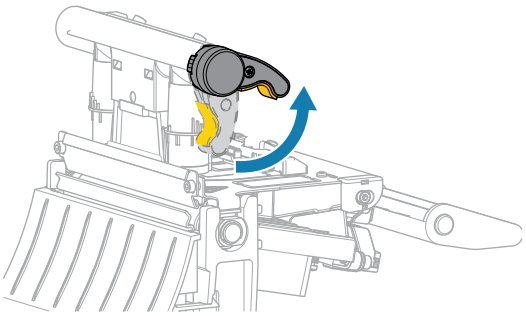
NOTE: This procedure shows a printer with the tear-off (standard) option. The calibration sequence is the same for other options. When reloading media, follow the media loading instructions for your option.

1. On the control panel, press and hold **PAUSE** and **CANCEL** for 2 seconds.



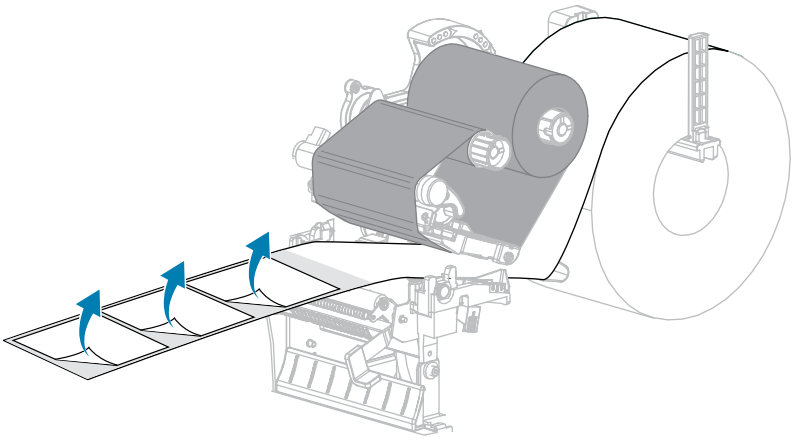
The status and pause lights flash yellow once. Then the pause light blinks yellow.

2. Release the printhead assembly.

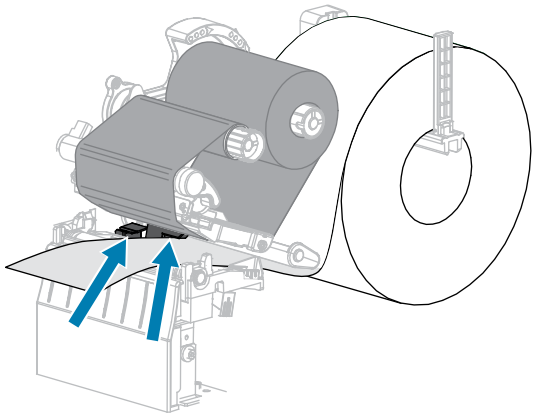


As the printhead lever rotates upward, the printhead assembly pivots upward.

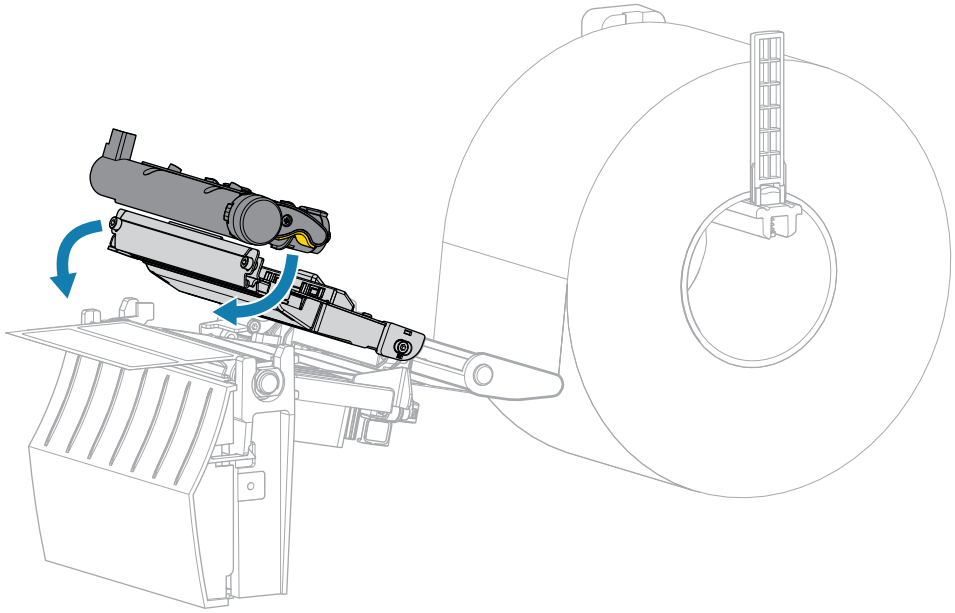
3. Extend the media approximately 150 mm (6 in.) out of the printer, and then remove the exposed labels so that only the liner remains.



4. Pull the media into the printer so that only the backing is between the media sensors.



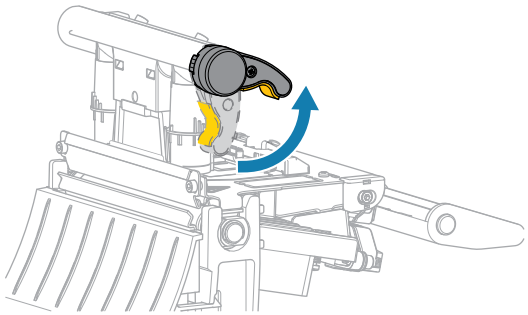
5. Move the ribbon (if used) to the right, away from the sensors.
6. Close the printhead assembly.



7. Press ❚❚ **PAUSE** to begin calibration.

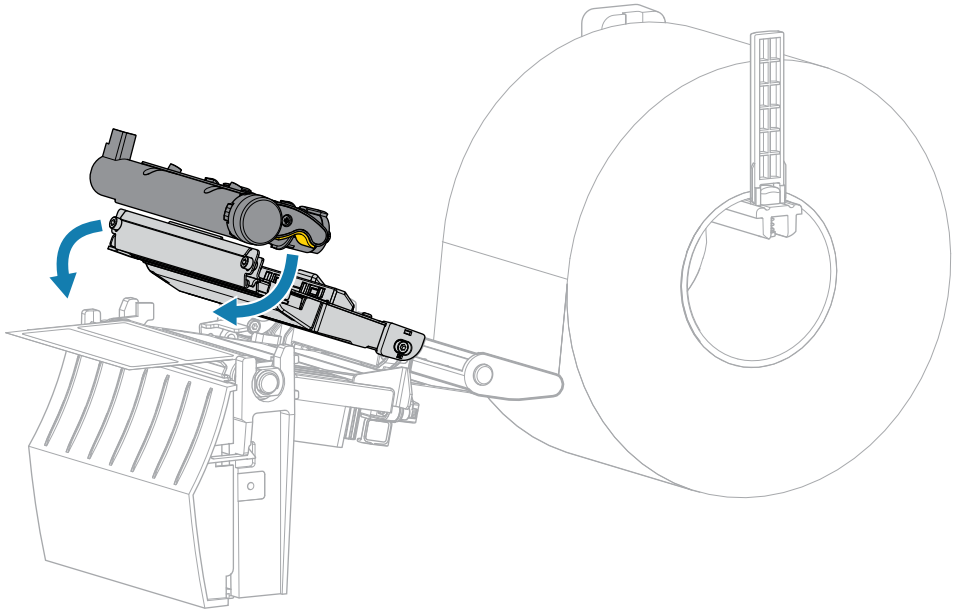
   The pause light turns off, and the supplies light flashes yellow. The process is complete when the supplies light turns off and the pause light turns yellow.

8. Release the printhead assembly.



As the printhead lever rotates upward, the printhead assembly pivots upward.

9. Reload the ribbon (if used) by moving it to the left and straightening it, and turn the ribbon take-up spindle to take up the slack.
10. Pull the media forward until a label is positioned between the sensors.
11. Close the printhead assembly.



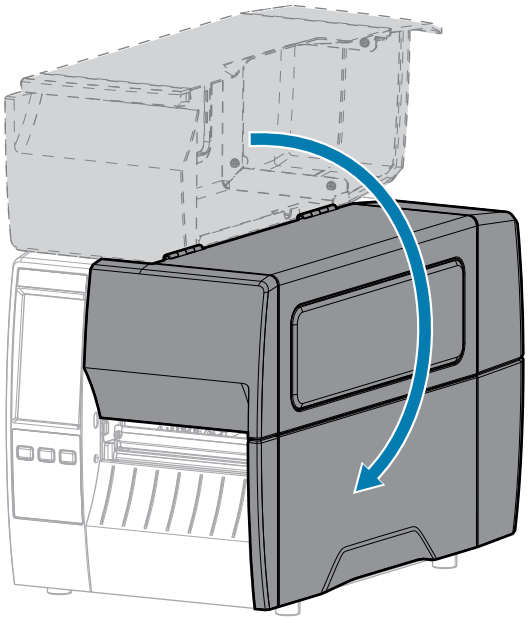
12. Press ❚❚ **PAUSE** to complete calibration.

    The supplies light flashes yellow. The process is complete when the supplies light turns off and the pause light turns yellow.
13. Press ❚❚ **PAUSE** again to enable printing.
14. Press **FEED** to verify that a label feeds to the correct position.

Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.

3. Close the media cover.



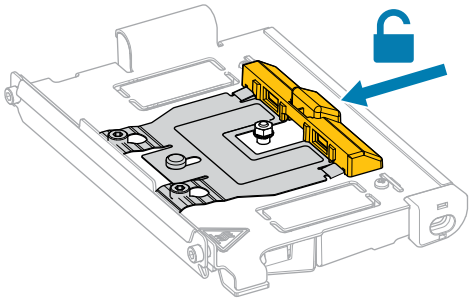
4. Reconnect the AC power cord and interface cables.
5. Turn on the printer power.

Convert Printer to 300 dpi

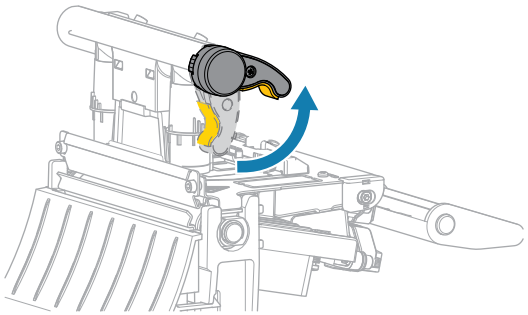
Replace the Printhead

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

1. Connect yourself to an antistatic device.
2. Slide the printhead latch forward to the unlocked position.

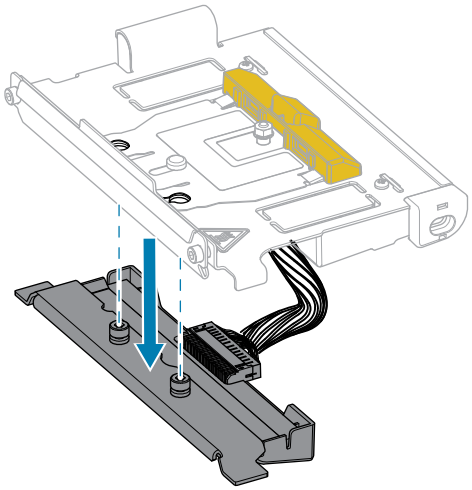


3. Release the printhead assembly.

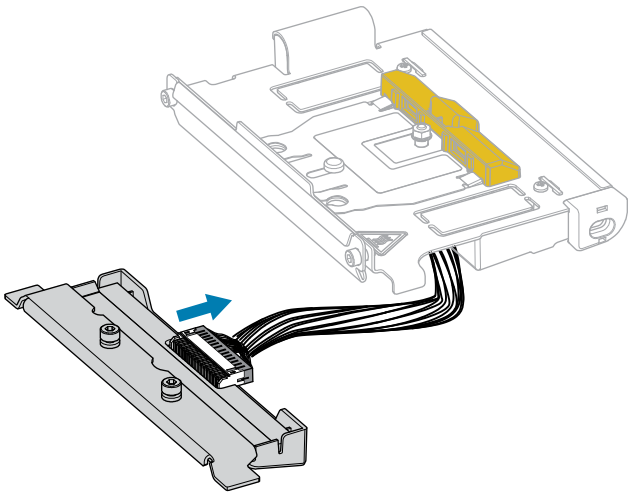


As the printhead lever rotates upward, the printhead assembly pivots upward.

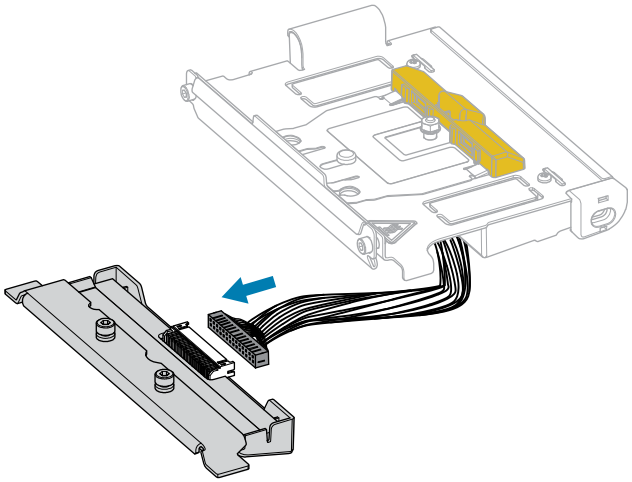
4. Pull the printhead from the upper print mechanism.



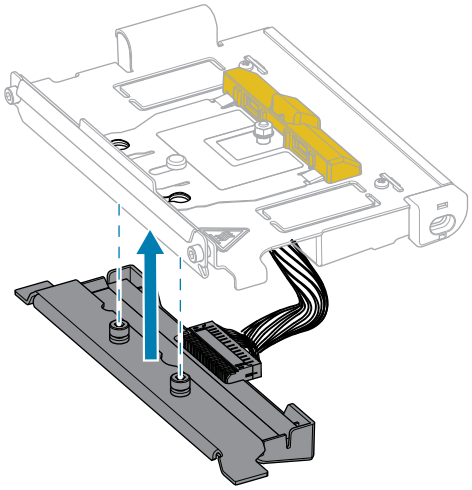
5. Disconnect the printhead cable from the old printhead.



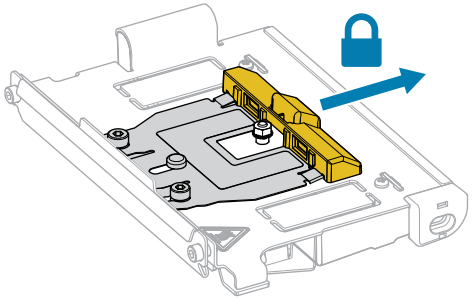
6. Connect the printhead cable to the new printhead.



7. Slide the printhead into the print mechanism, assuring that the printhead locking posts go into the printhead latch holes.



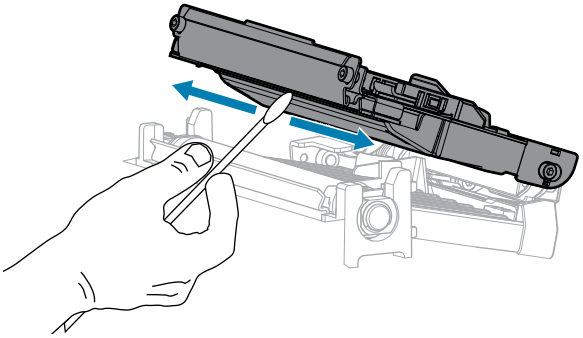
8. While holding the printhead in place, slide the printhead latch back to the locked position.



9. Clean the printhead.

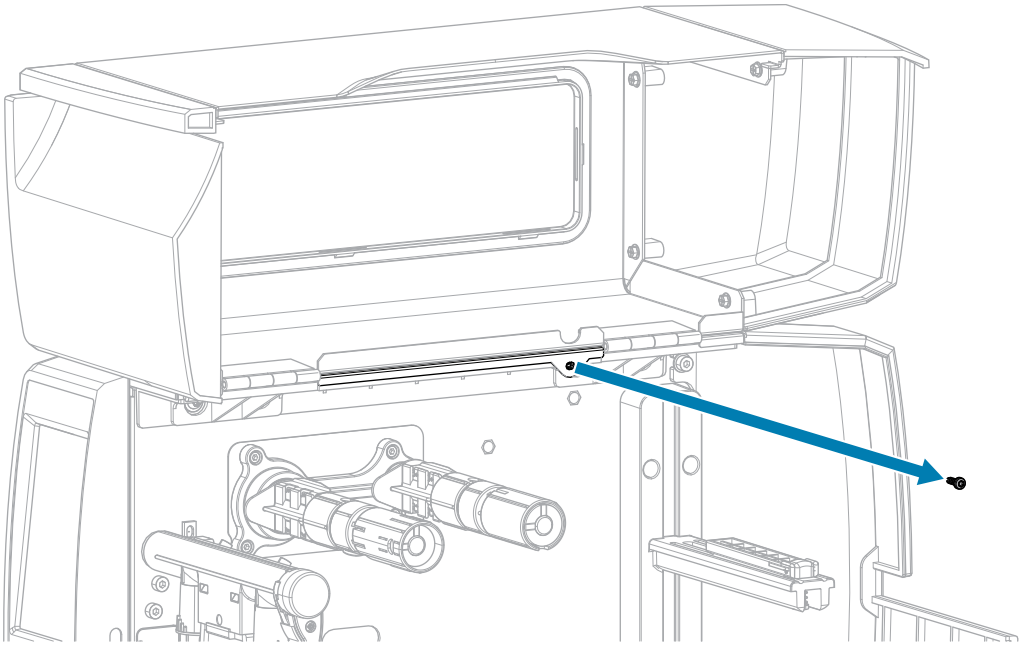
   a) Using the swab from the Preventive Maintenance Kit (p/n 47362 or p/n 105950-035 for a multipack), wipe the print elements (gray strip) from end to end. In place of this kit, use a lint-free cloth dipped in 99.7% isopropyl alcohol.

   b) Allow the solvent to evaporate.

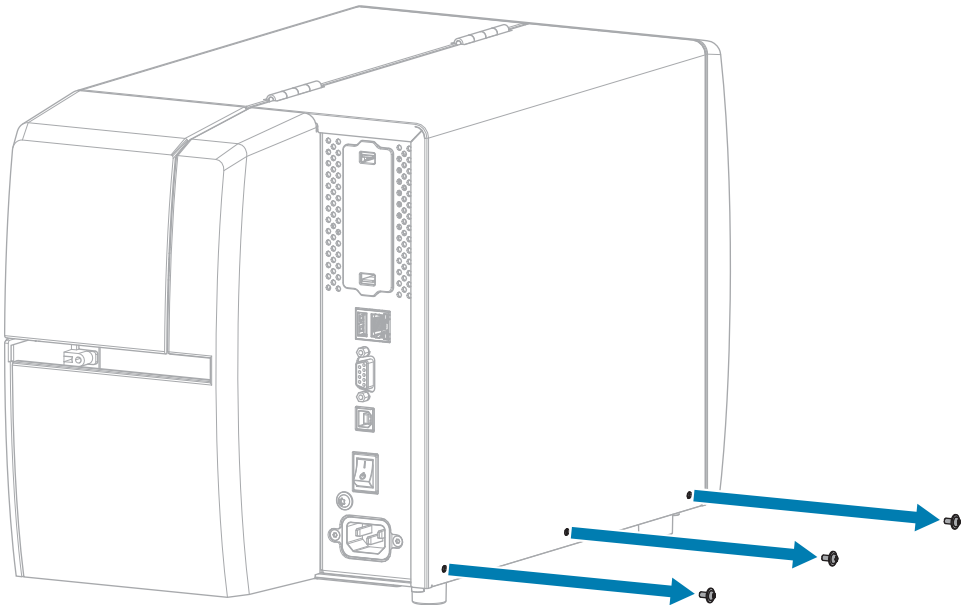


Remove the Electronics Cover

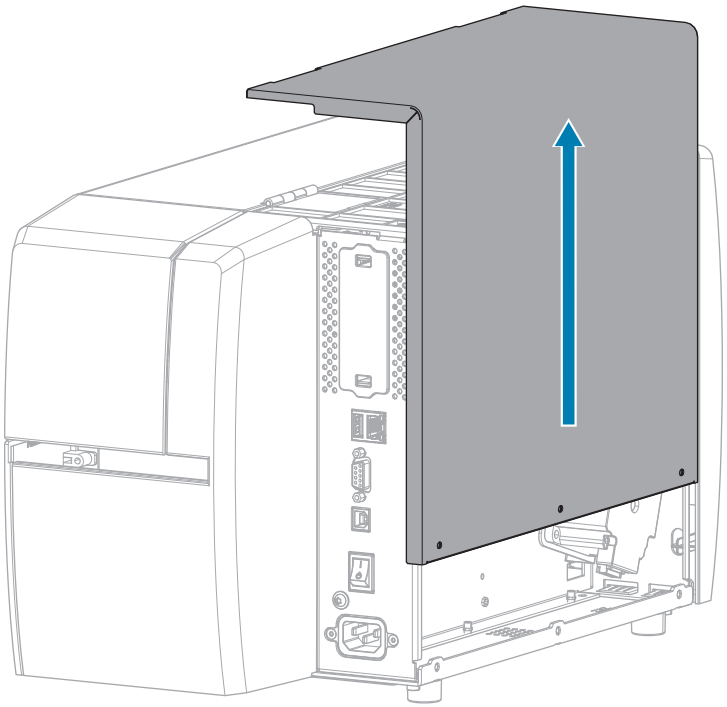
1. Remove the ✱ T10 screw that secures the electronics cover to the media side of the printer.



2. Remove the three ✱ T10 screws that secure the electronics cover to the electronics side of the printer.

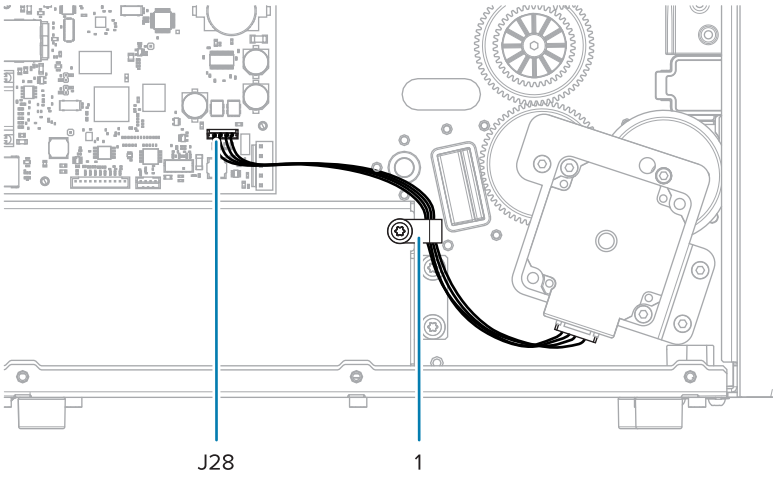


3. Lift the electronics cover off of the printer.

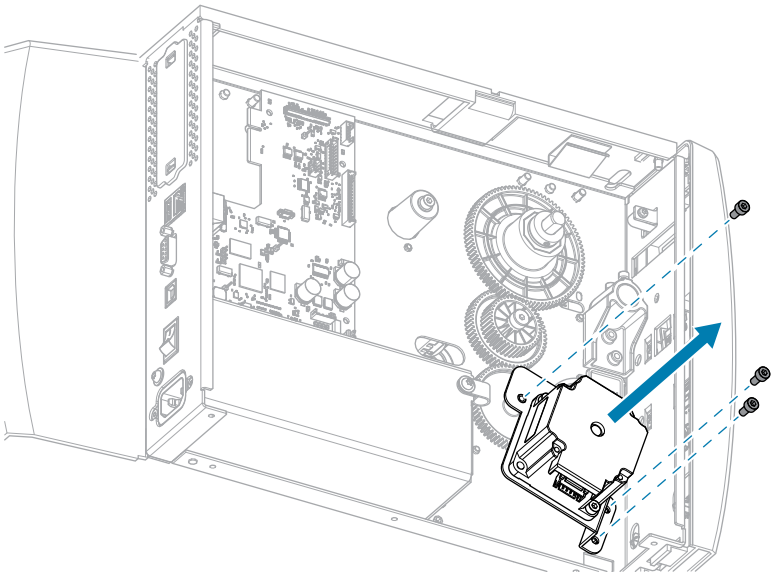


Remove the Drive Motor

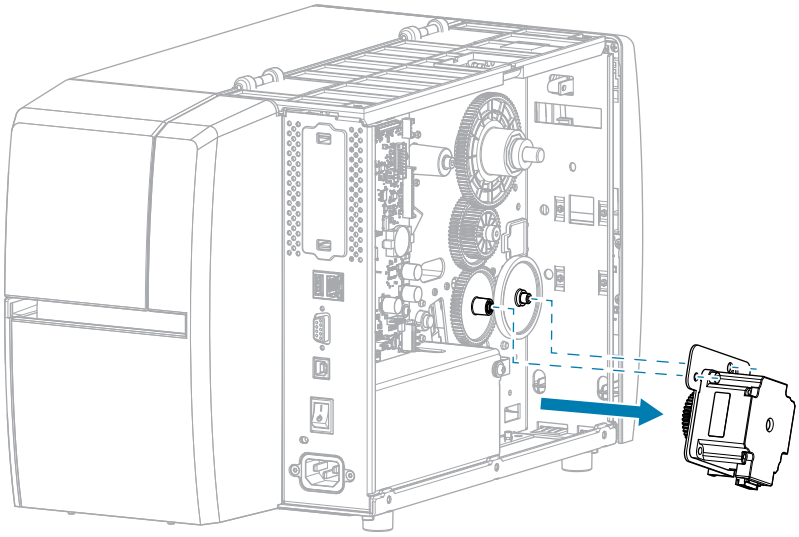
1. Disconnect the drive motor cable.
   a) Disconnect the drive motor cable from J28 on the MLB.
   b) Note the orientation of the wire routing clip (1) so that you reinstall it the same way later.
   c) Remove the ✱ T20 screw that secures the wire routing clip (1) to the power supply.
   d) Remove the drive motor cable from the clip.



2. Remove the three ● 3mm hex screws that secure the drive motor to the printer. (A 203 dpi printer is shown. The motor is removed from the 300 dpi printer in the same way.)

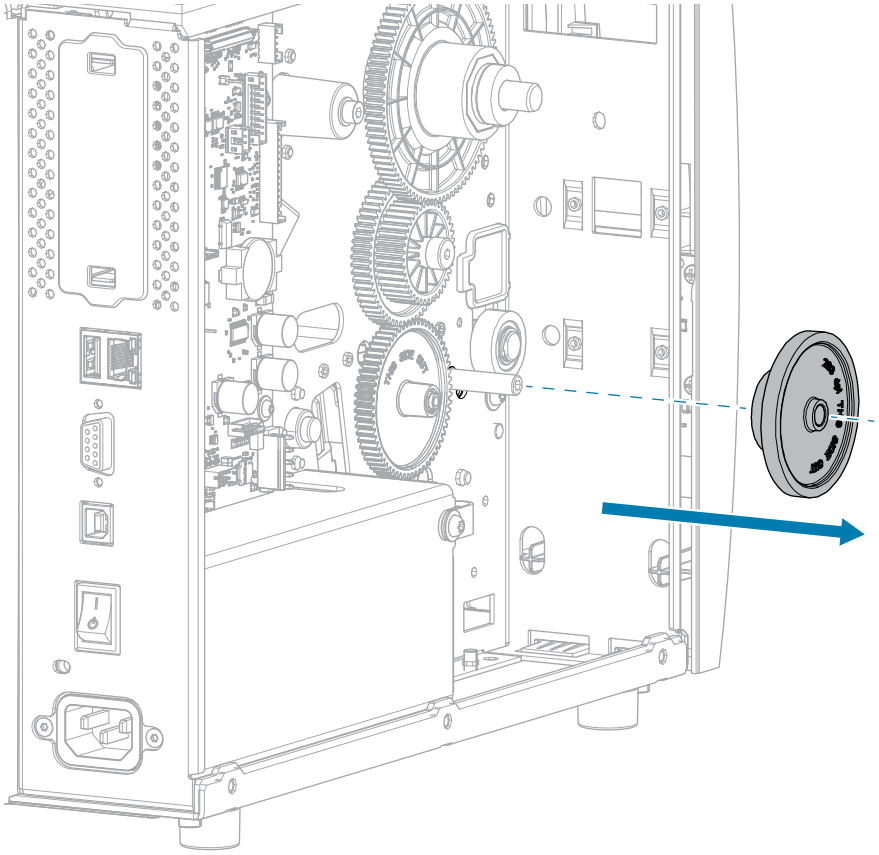


3. Remove the drive motor from the printer.

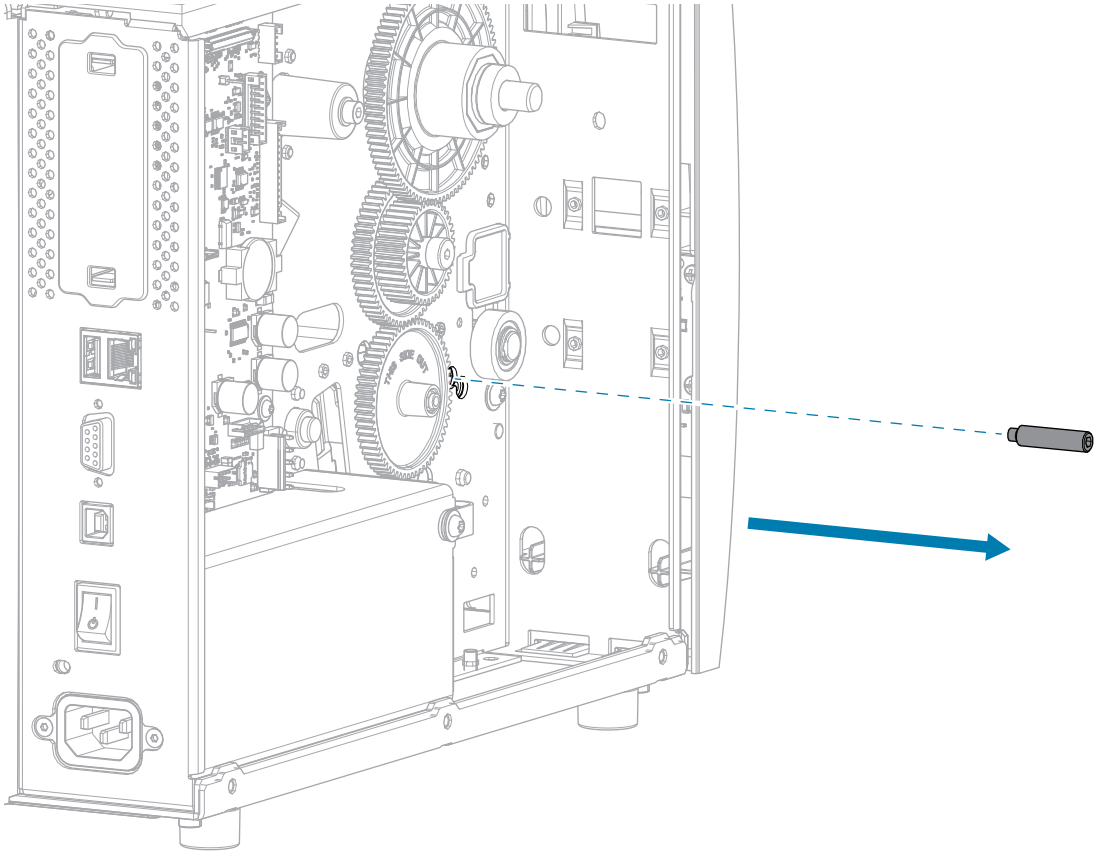


Remove the 203 dpi Drive Gears

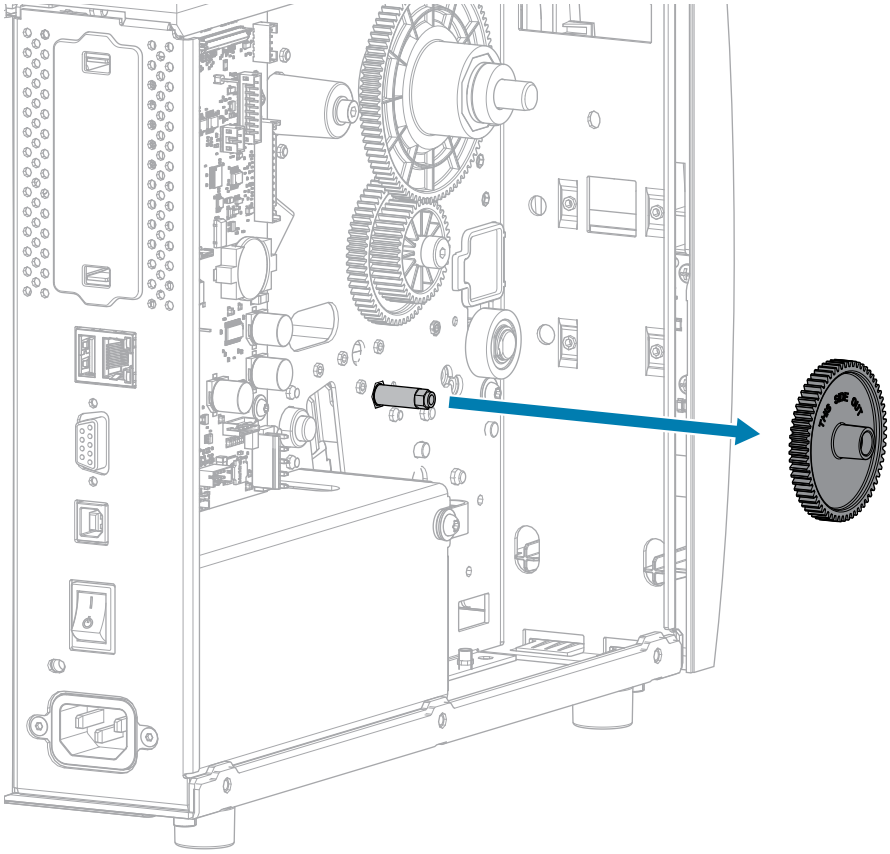
1. Remove the lower compound (helical) gear from the printer.



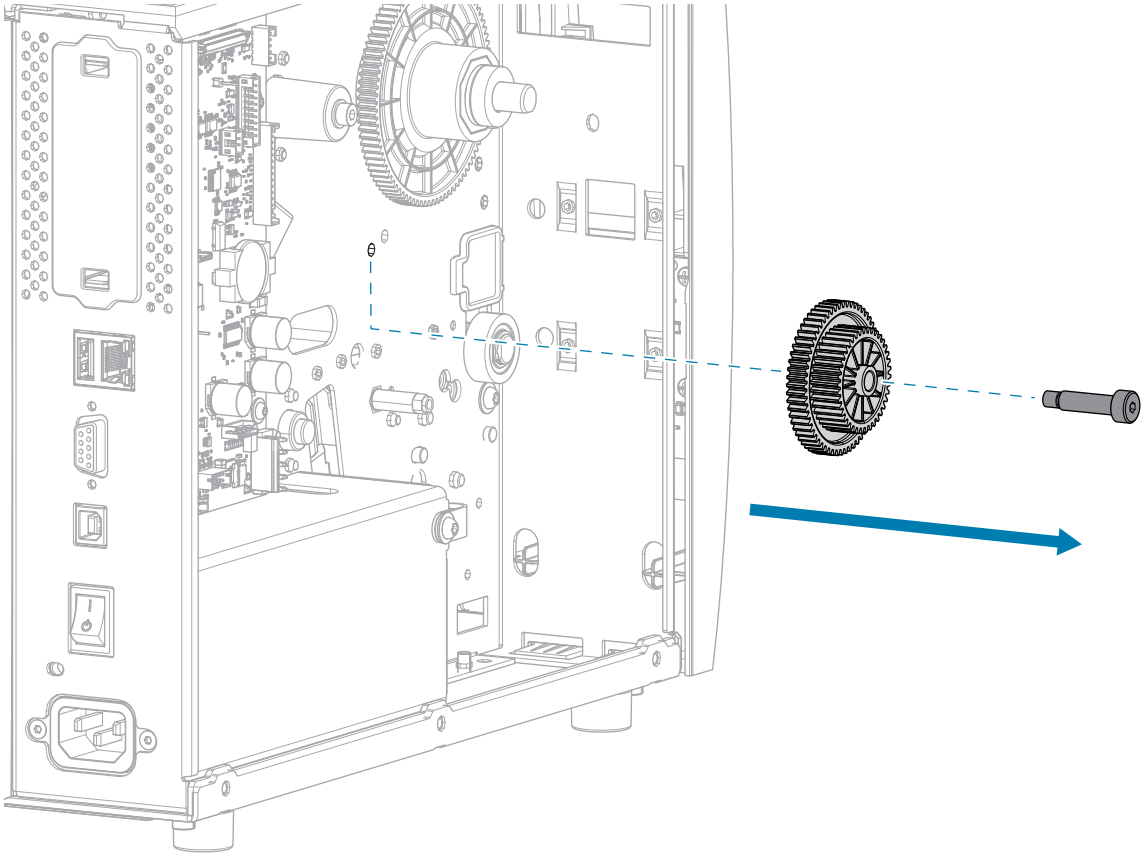
2. Using a 3mm hex key, driver, or bit, remove the compound gear shaft.



3. Remove the idler gear.

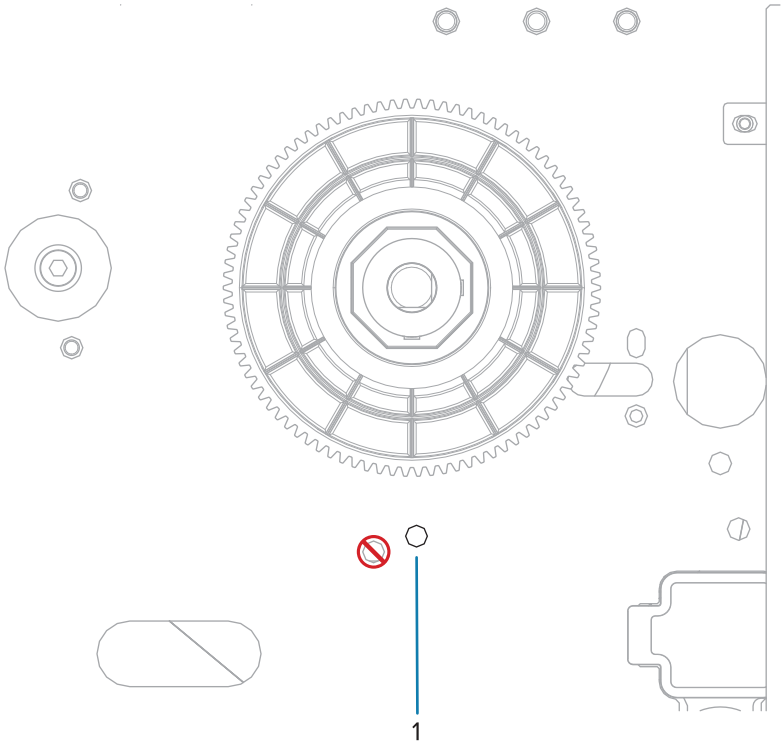


4. Remove the shoulder screw and upper compound (spur) gear.

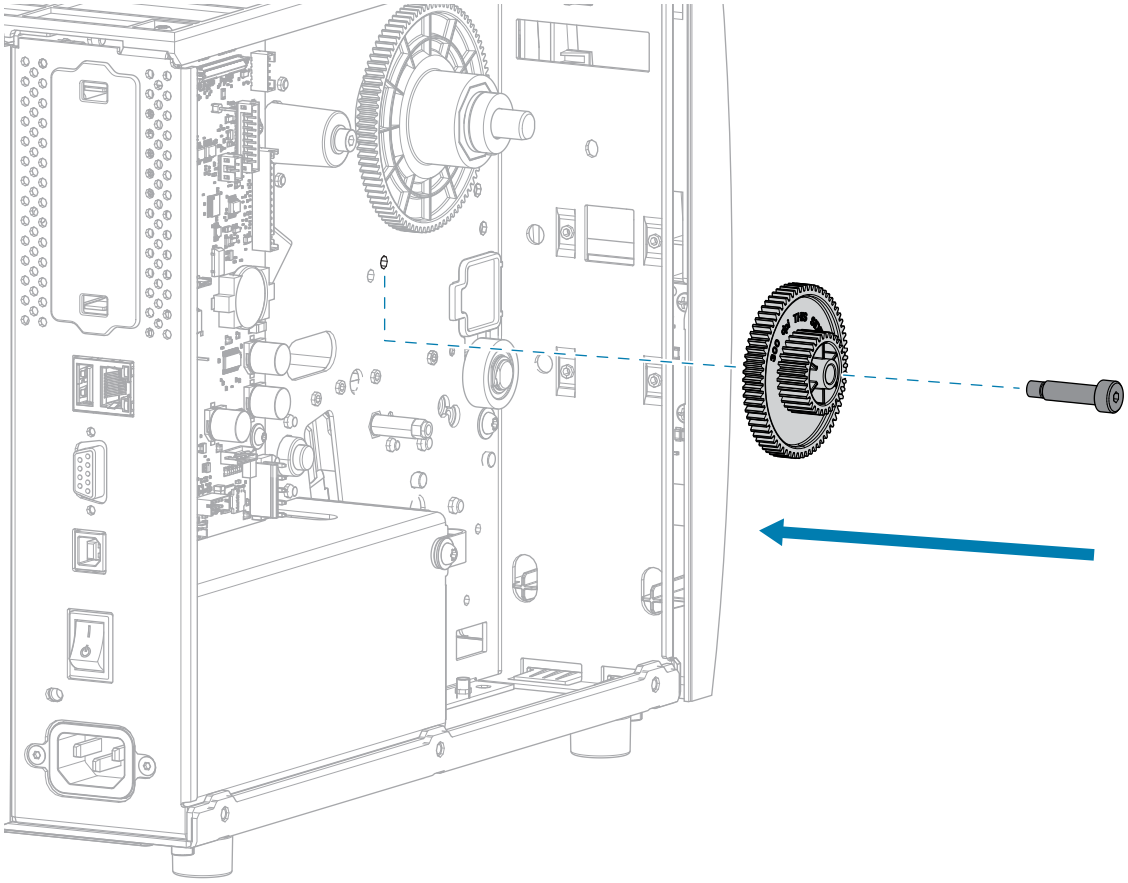


Install the 300 dpi Drive Gears

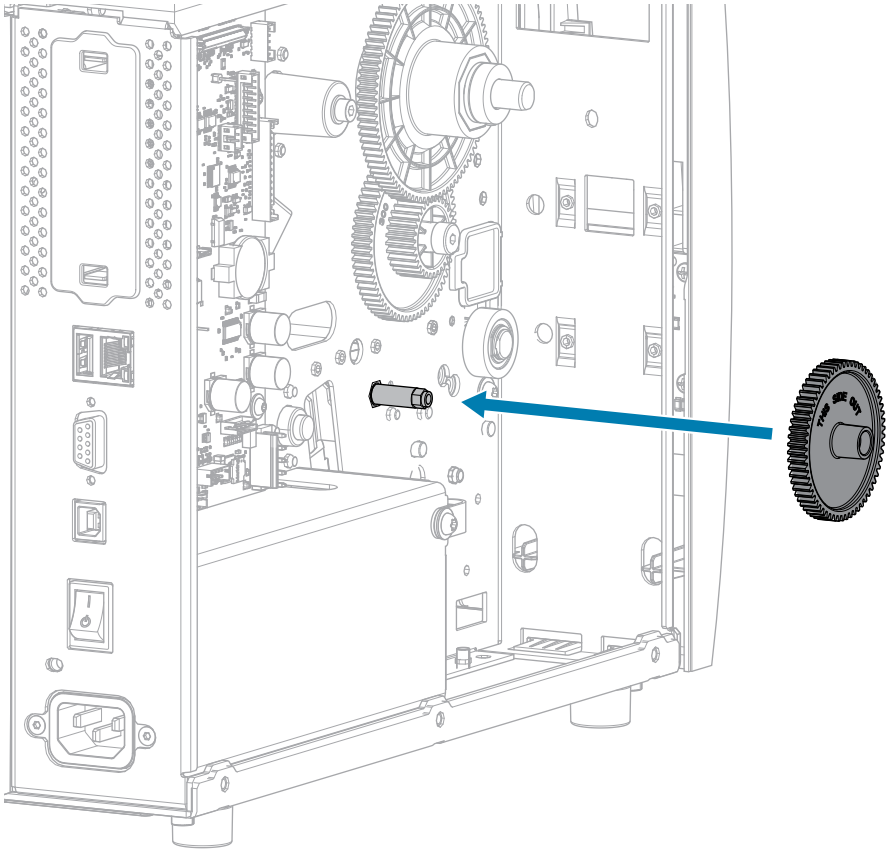
1. Locate the correct mounting hole (1) for the upper compound (spur) gear on the printer backframe.



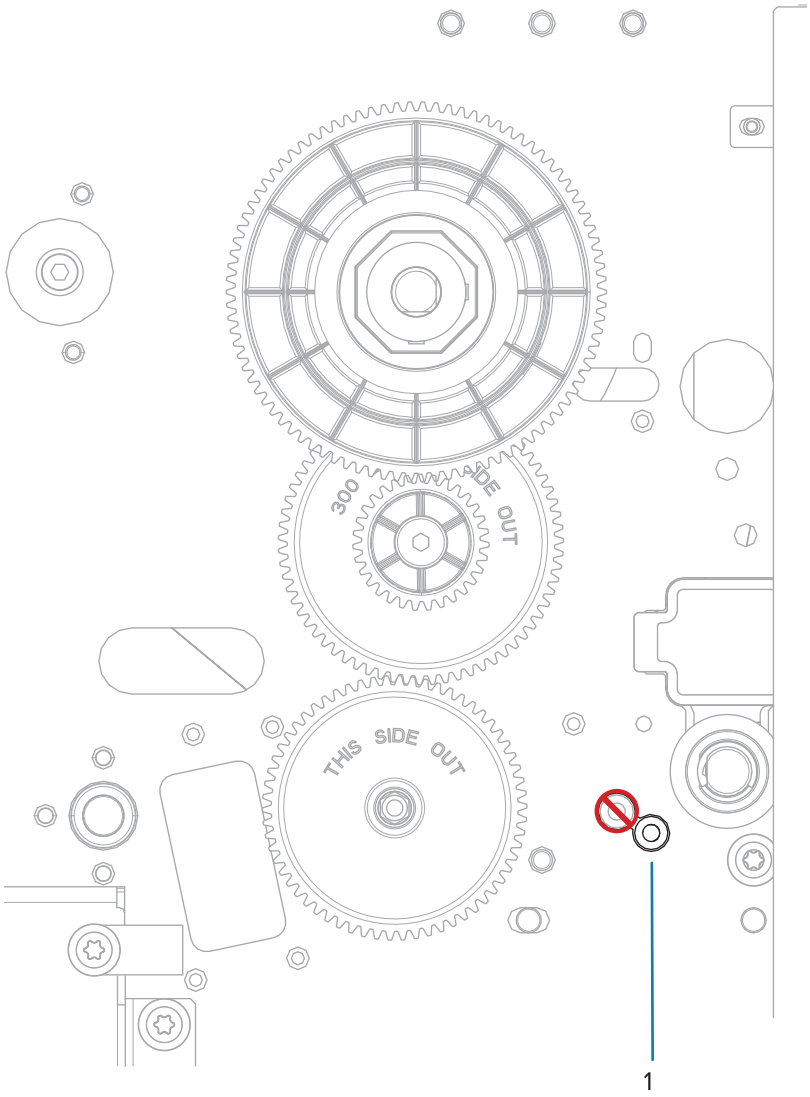
2. Install the upper compound (spur) gear using a shoulder screw. The smaller side of the compound gear faces outward.



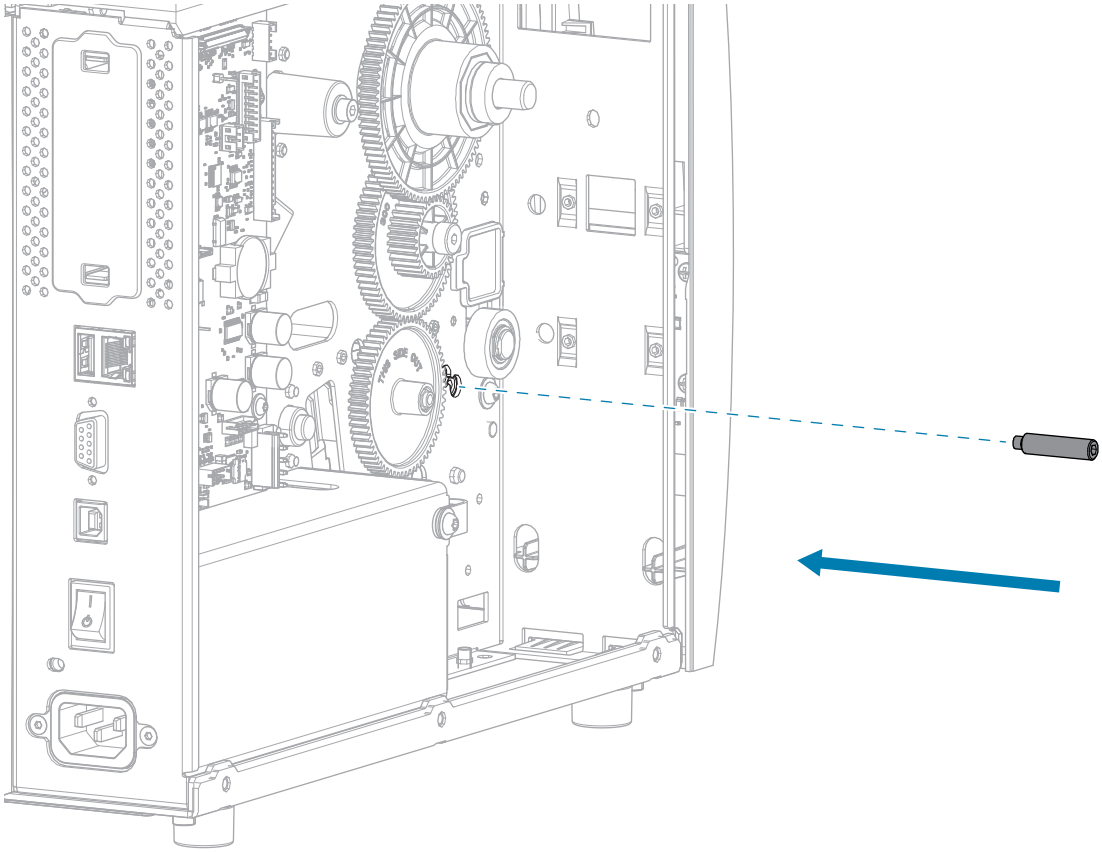
3. Install the idler gear with the writing facing out.



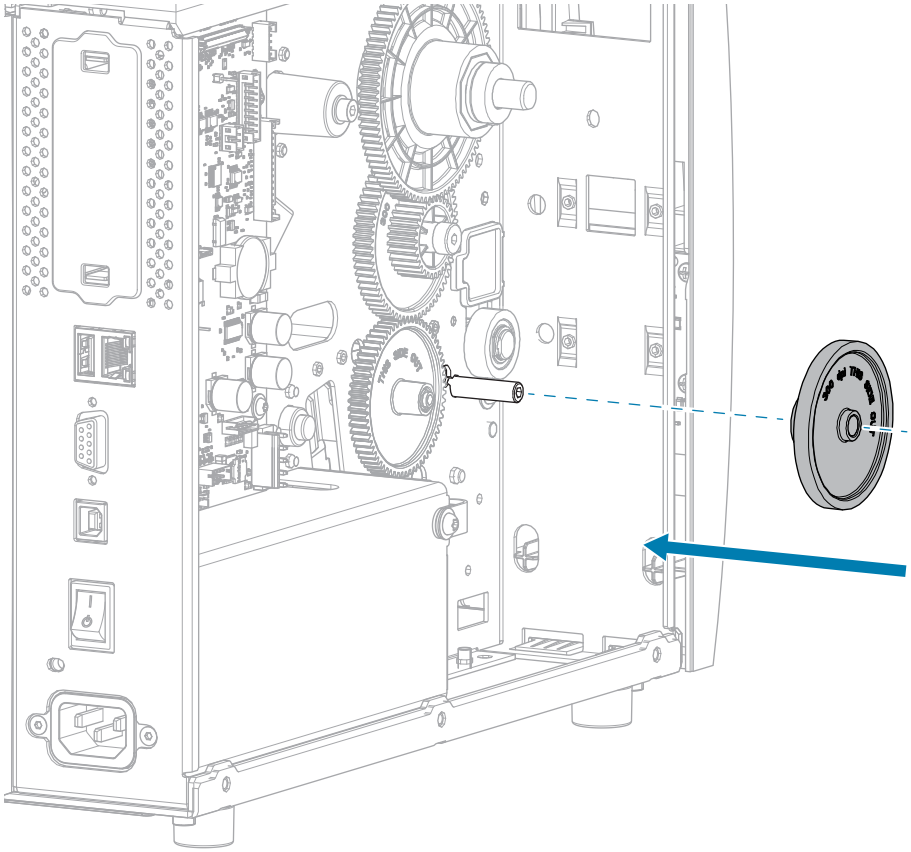
4. Locate the correct mounting hole (1) for the lower compound (helical) gear.



5. Using a 3mm hex key, driver, or bit, install the compound gear shaft into the correct mounting hole.

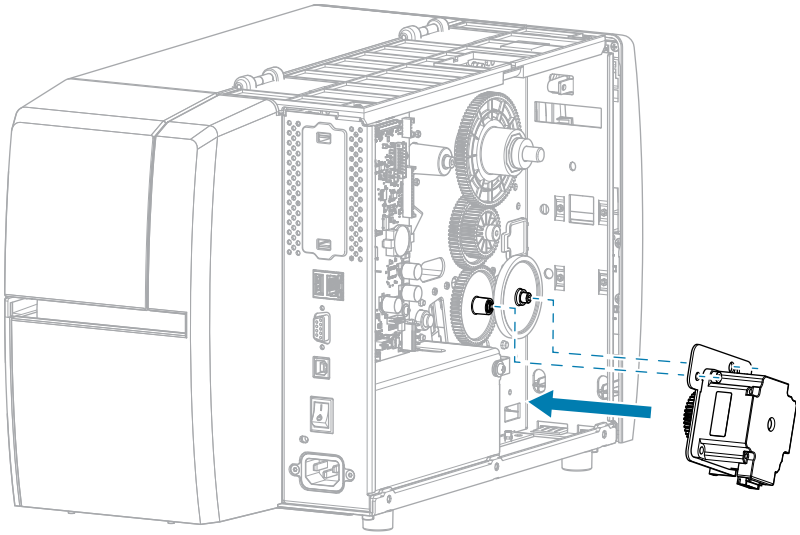


6. Install the lower compound (helical) gear with the writing facing out.

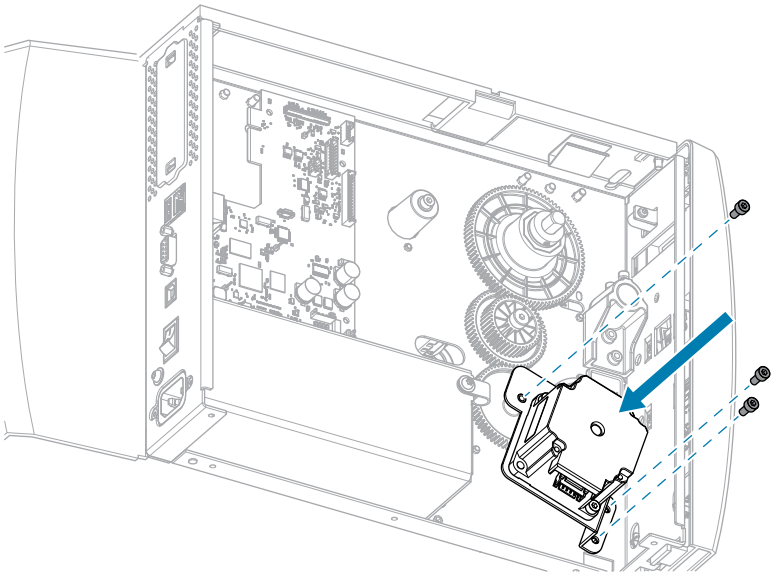


Install the Drive Motor

1. Align the holes on the drive motor with the shafts on the idler gear and the lower compound gear. (A 203 dpi printer is shown. The motor is installed into the 300 dpi printer in the same way.)



2. Reinstall drive motor retaining screws.



3. Connect the drive motor cable.

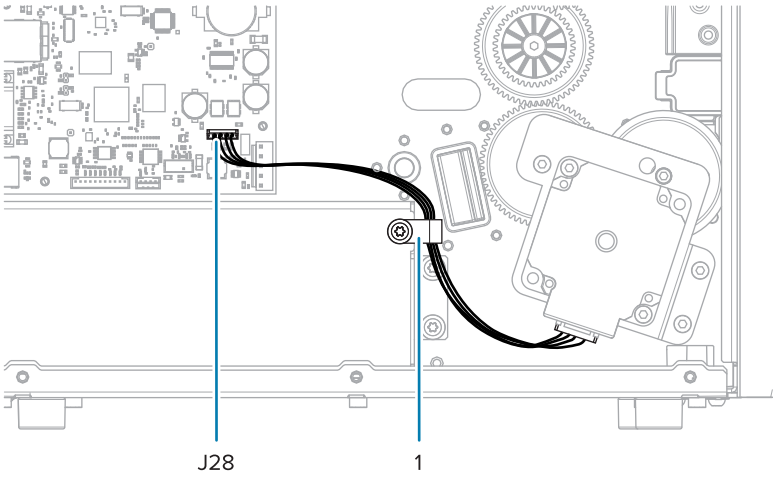
   a) If you have not already done so, remove the ✱ T20 screw that secures the wire routing clip (1) to the power supply.

   b) Orient the wire routing clip the way that it was previously.

   c) Run the drive motor cable through the clip.

   d) Secure the clip to the power supply.

   e) Connect the drive motor cable to J28 on the MLB.



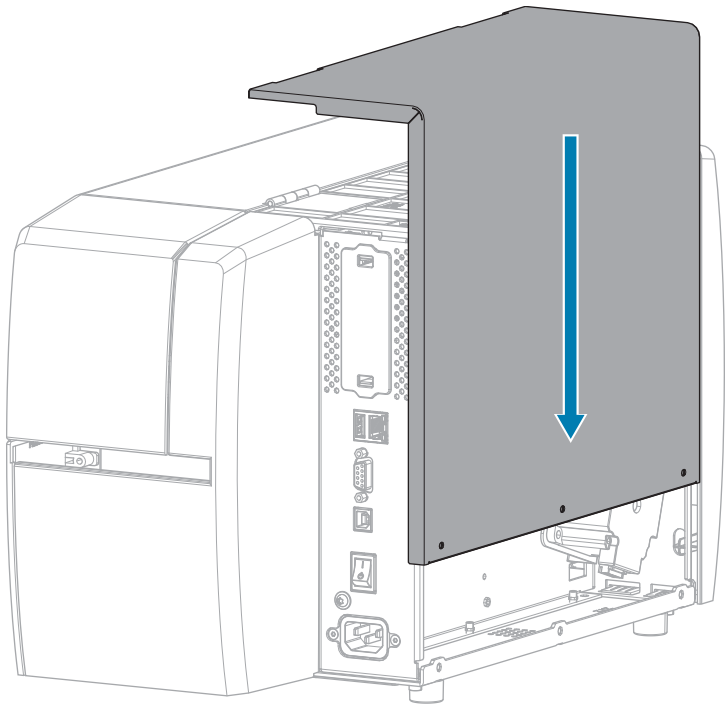
Feed a Label

1. Test the ability to feed a label by pressing **FEED**.
2. Did the printer feed a label?

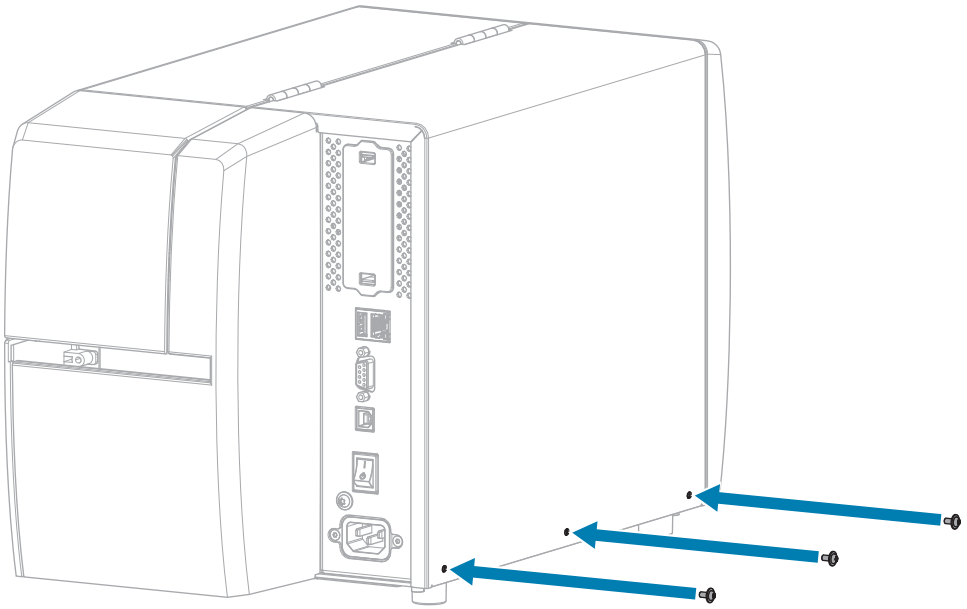
If...	Then...
Yes	Continue with the next section
No	1. Check that all of the gears are installed properly. 2. Press **FEED**. 3. Repeat as necessary until a label feeds as it should.

Install the Electronics Cover

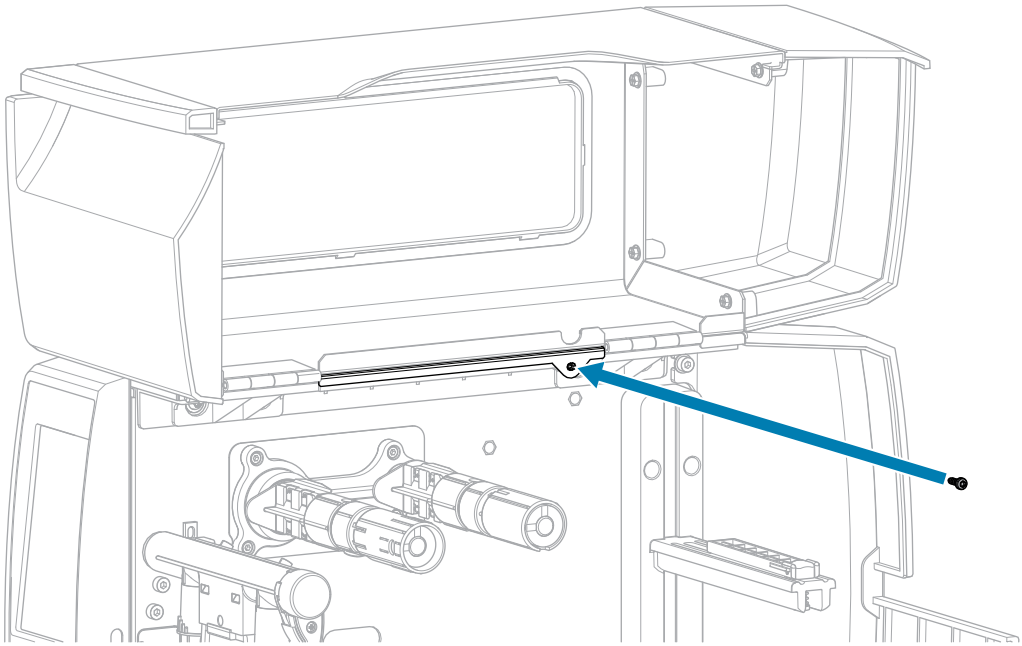
1. Slide the electronics cover onto the printer.



2. Install the three ✱ T10 screws that secure the electronics cover to the electronics side of the printer.



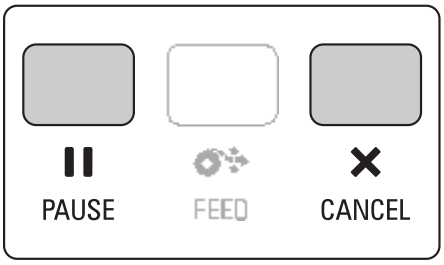
3. Install the ✱ T10 screw that secures the electronics cover to the media side of the printer.



Perform Manual Calibration

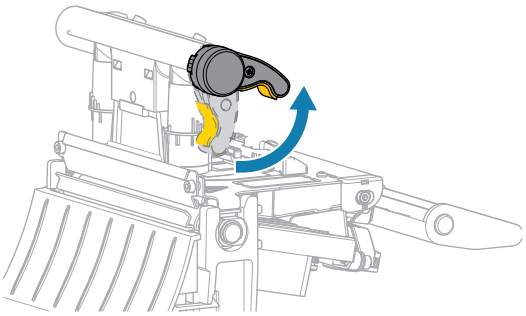
NOTE: This procedure shows a printer with the tear-off (standard) option. The calibration sequence is the same for other options. When reloading media, follow the media loading instructions for your option.

1. On the control panel, press and hold **PAUSE** and **CANCEL** for 2 seconds.



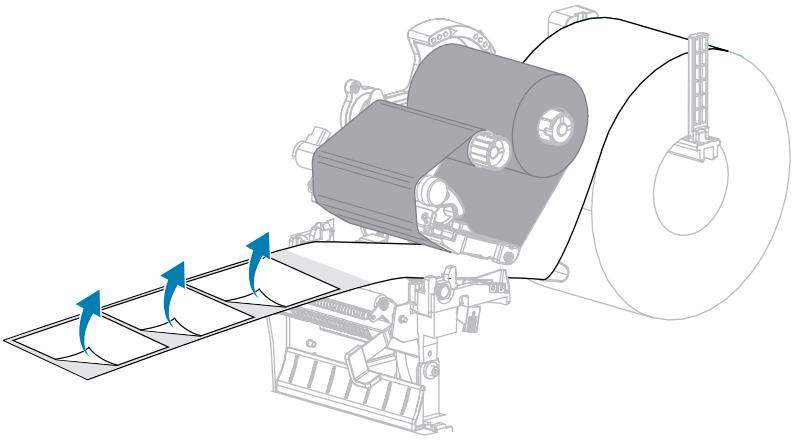
The status and pause lights flash yellow once. Then the pause light blinks yellow.

2. Release the printhead assembly.

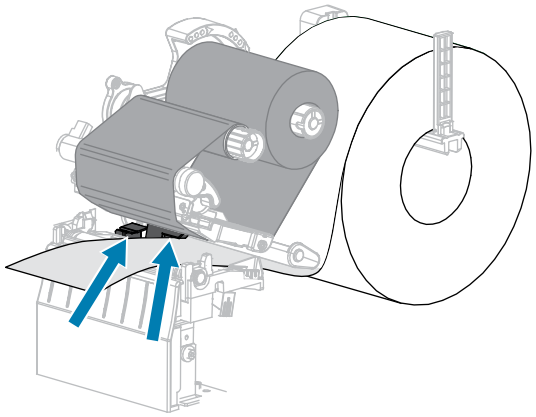


As the printhead lever rotates upward, the printhead assembly pivots upward.

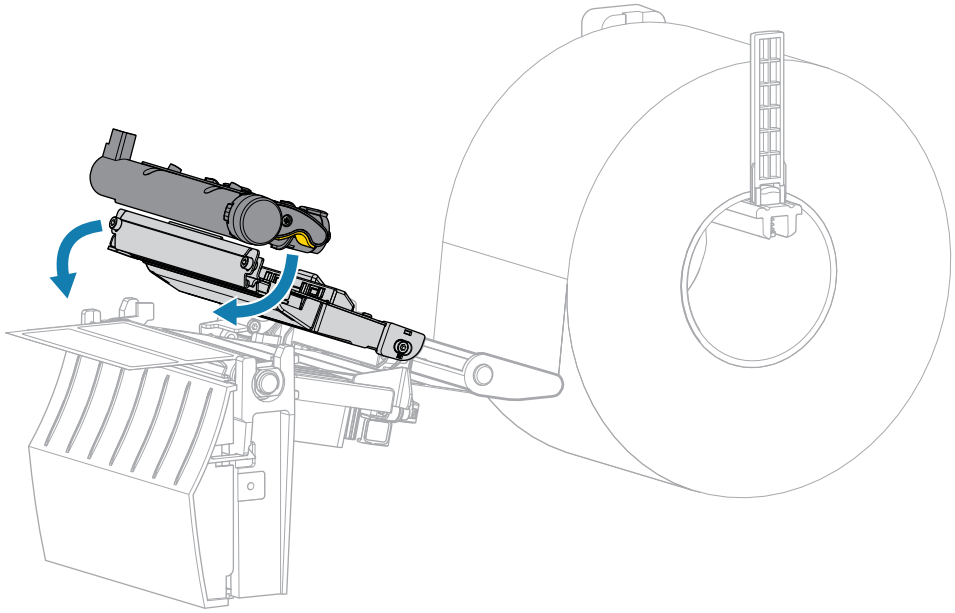
3. Extend the media approximately 150 mm (6 in.) out of the printer, and then remove the exposed labels so that only the liner remains.



4. Pull the media into the printer so that only the backing is between the media sensors.



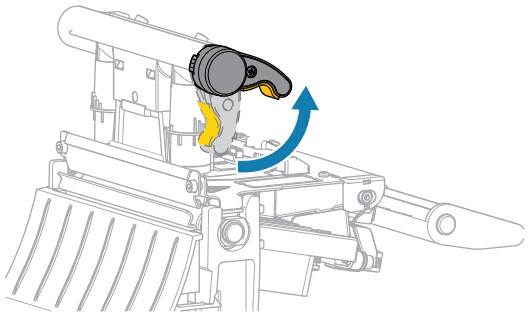
5. Move the ribbon (if used) to the right, away from the sensors.
6. Close the printhead assembly.



7. Press ❚❚ **PAUSE** to begin calibration.

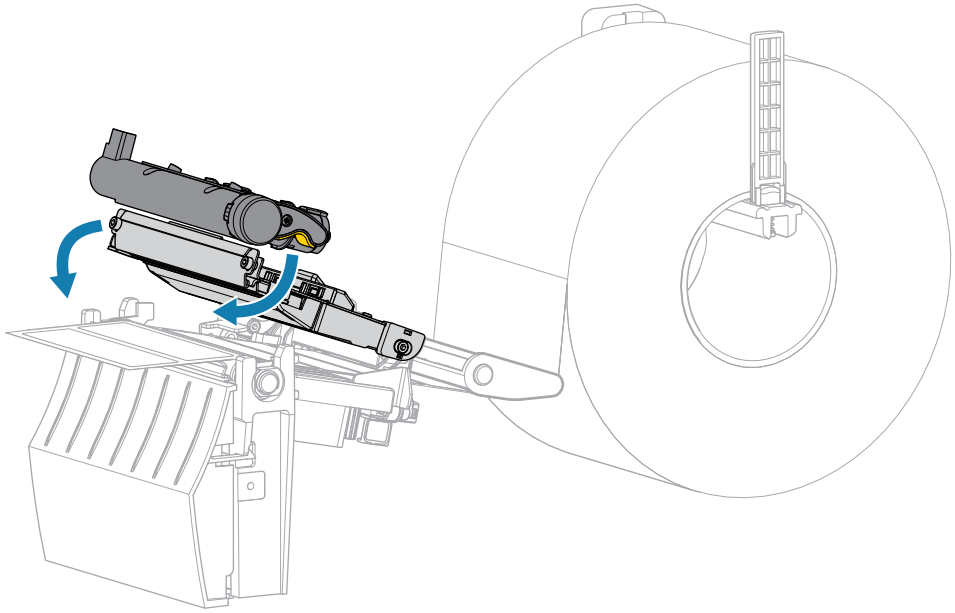
   The pause light turns off, and the supplies light flashes yellow. The process is complete when the supplies light turns off and the pause light turns yellow.

8. Release the printhead assembly.



As the printhead lever rotates upward, the printhead assembly pivots upward.

9. Reload the ribbon (if used) by moving it to the left and straightening it, and turn the ribbon take-up spindle to take up the slack.
10. Pull the media forward until a label is positioned between the sensors.
11. Close the printhead assembly.



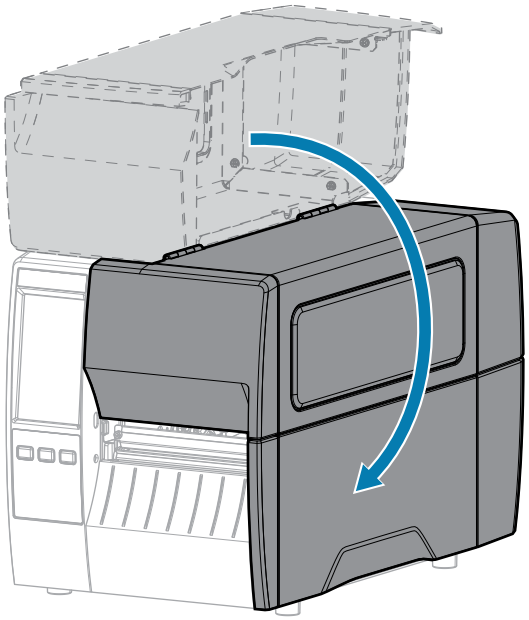
12. Press **PAUSE** to complete calibration.

    The supplies light flashes yellow. The process is complete when the supplies light turns off and the pause light turns yellow.
13. Press **PAUSE** again to enable printing.
14. Press **FEED** to verify that a label feeds to the correct position.

Resume Printer Operation

1. Reinstall media and ribbon (if used).
2. Close the printhead assembly.

3. Close the media cover.



4. Reconnect the AC power cord and interface cables.
5. Turn on the printer power.