



ZXP Series 9™



Card Printer

Service Manual





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Introduction

Description

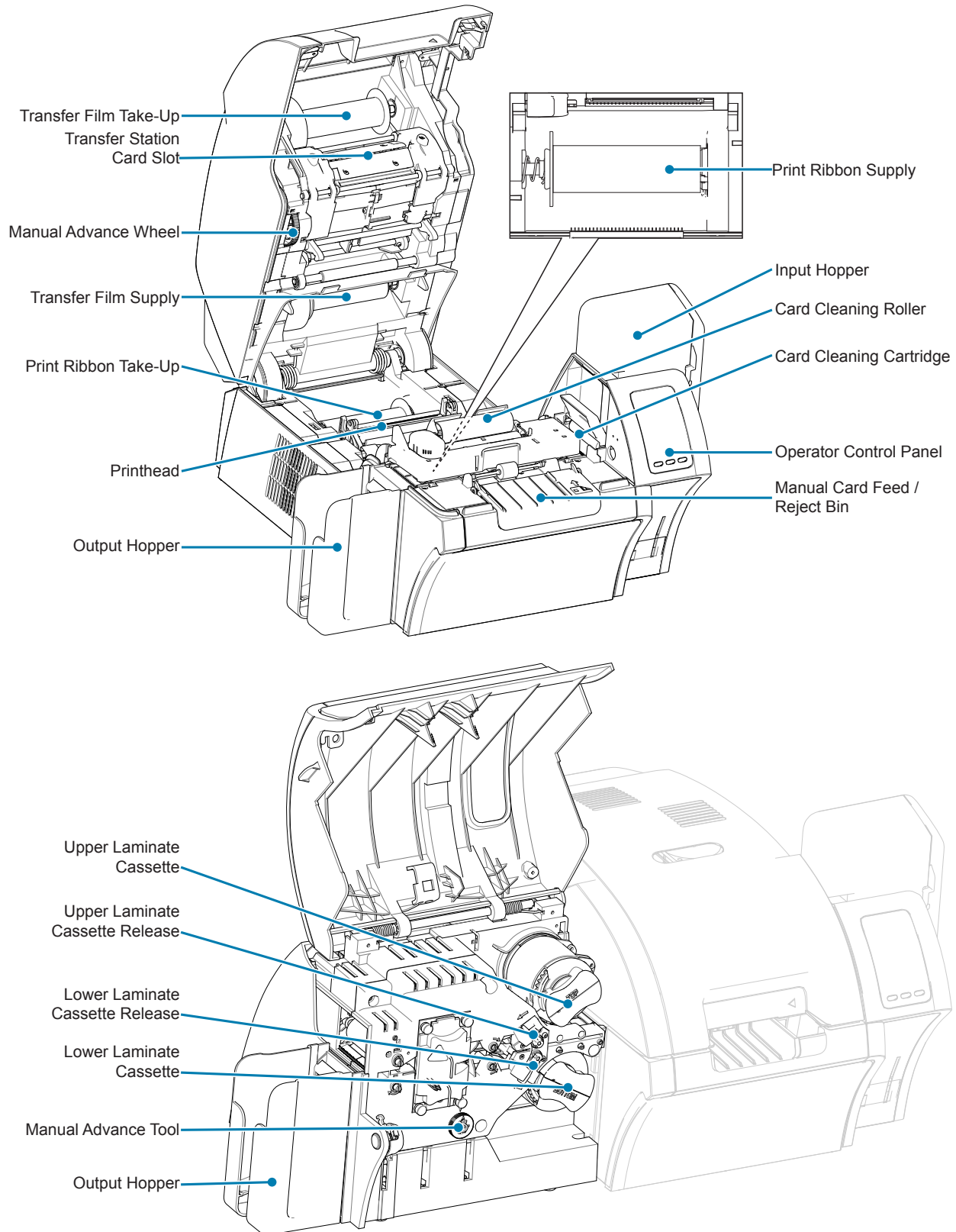
This manual contains installation, operation, maintenance, troubleshooting, and networking information for the Zebra ZXP Series 9 Card Printer; and describes single- and double-sided printers, and double-sided printers with either a single- or double-sided laminator; and is intended to be used by an operator, as well as an experienced IT person.

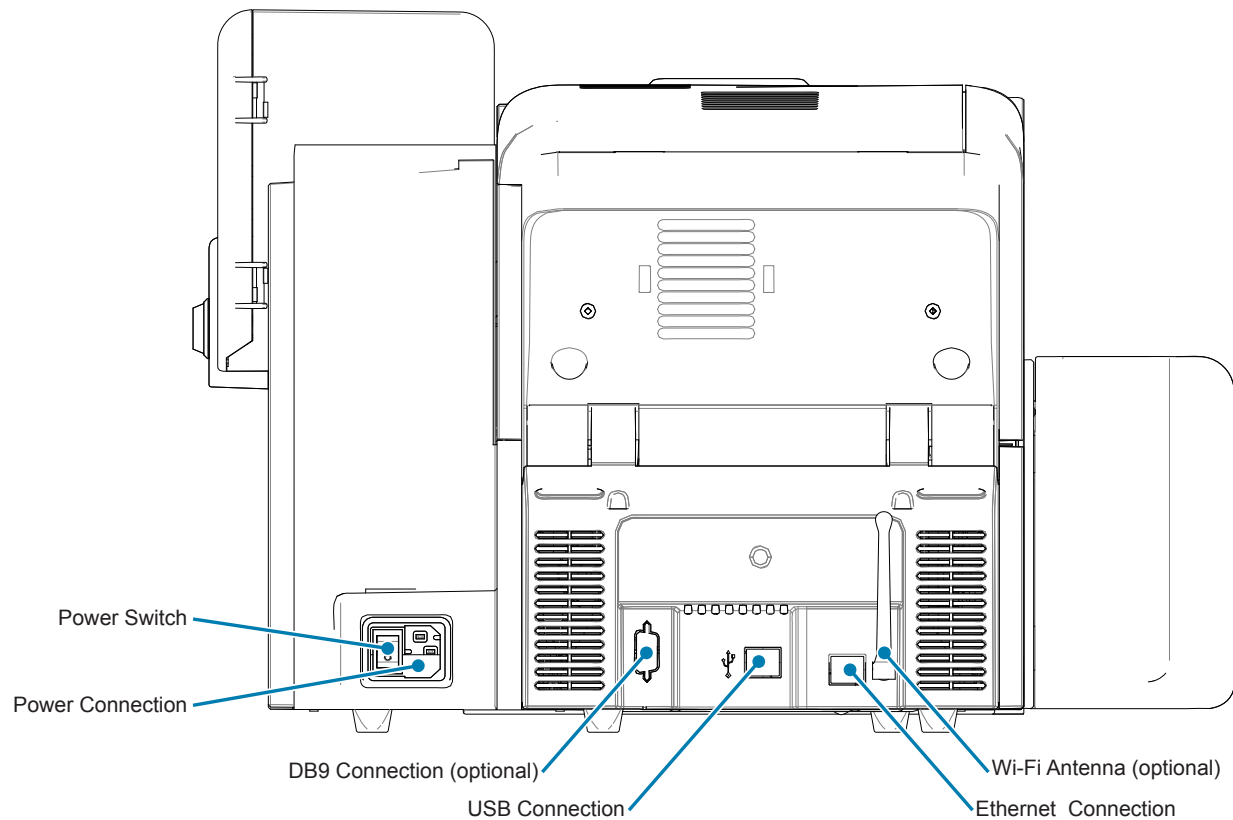
The Zebra ZXP Series 9 Card Printer uses reverse transfer printing technology to create photo-quality and over-the-edge images on plastic identification cards. Zebra's reverse transfer printers provide fast throughput and a range of encoding options for a variety of markets and applications.

The single-sided laminator applies a laminating film on the top surface of the printed card for added security; the double-sided laminator applies laminating film on both the top and bottom surfaces of the card.

References in this document to “the laminator” apply to either a single- or double-sided laminator.

Printer and Laminator Components





Icons

Throughout this manual, different icons highlight important information, as follows:

	Indicates information that emphasizes or supplements important points of the main text.
	Advises you of information that is essential to complete a task, or points out the importance of specific information in the text.
	Warns you of the potential for electrostatic discharge.
	Warns you of a potential electric shock situation.
	Warns you of a situation where excessive heat could cause a burn.
	Advises you that failure to take or avoid a specific action could result in physical harm to you, or could result in physical damage to the hardware.

Zebra Supplies

Genuine Zebra supplies meet stringent quality standards and are recommended for optimal printing quality and proper printer performance. The ZXP Series 9 printer is designed to work only with Zebra True Colours® i Series™ Ribbons, Zebra True Colours i Series Transfer Film, and Zebra True Secure™ i Series Laminates. Go to the ZXP Series 9 support page at www.zebra.com/zxp9-info for ordering information.

General Information

This section provides information on the installation and setup of the ZXP Series 9 Card Printer—procedures should be performed in the order presented.

Unpacking the Printer

Important • Save all the packing material and the shipping carton in case the printer needs to be moved or shipped. If the original packing material is lost or damaged, a replacement shipping kit can be ordered from Zebra.

Make sure the following items are included with your printer:

- ☐ Setup Guide (to be used as a reference poster)
- ☐ User CD
- ☐ Product Registration Card
- ☐ Printer Test Cards
- ☐ Input Hopper with stack of 100 cards
- ☐ Output Hopper
- ☐ Cleaning Cartridge
- ☐ Cleaning Roller
- ☐ USB Cable
- ☐ Power Cable

If any items are missing, please contact your Zebra representative.

Place the printer in a location that meets the following requirements:

- A reasonably dust- and dirt-free environment.
- Flat surface at least 27 x 28 inches (686 x 711 mm) that can support the weight of the printer; additional space preferred. Allow a 4-inch minimum clearance on all sides.
- Vertical clearance at least 32 inches (813 mm).
- Temperature within the range of 59–95°F (15–35°C).
- Relative humidity 20–80% inclusive, non-condensing.
- AC power accessible.

Unpacking the Printer with a Laminator

Important • Save all the packing material and the shipping carton in case the printer needs to be moved or shipped. If the original packing material is lost or damaged, a replacement shipping kit can be ordered from Zebra.

Make sure the following items are included with the printer:

- ☐ Setup Guide (to be used as a reference poster)
- ☐ User CD
- ☐ Product Registration Card
- ☐ Printer Test Cards
- ☐ Upper Laminate Cassette (for single- and double sided printers)
- ☐ Lower Laminate Cassette (for double-sided printers)
- ☐ Input Hopper with stack of 100 cards
- ☐ Output Hopper
- ☐ Cleaning Cartridge
- ☐ Cleaning Roller
- ☐ USB Cable
- ☐ Power Cable

If any items are missing, please contact your Zebra representative.

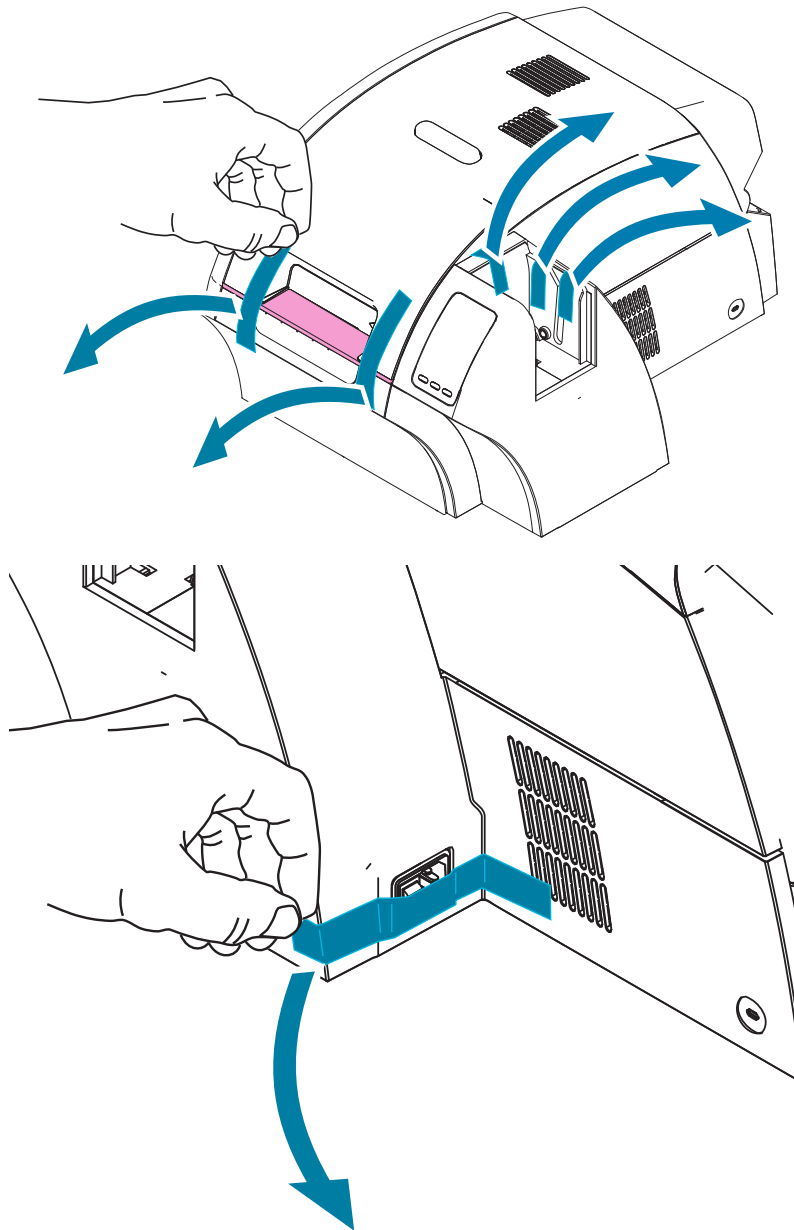
Place the printer in a location that meets the following requirements:

- A reasonably dust- and dirt-free environment.
- Flat surface at least 38 x 28 inches (965 x 711 mm) deep that can support the weight of the printer; additional space preferred. Allow a 4-inch minimum clearance on all sides.
- Vertical clearance at least 32 inches (813 mm).
- Temperature within the range of 59–95°F (15–35°C).
- Relative Humidity 20–80% inclusive, non-condensing.
- AC power accessible.

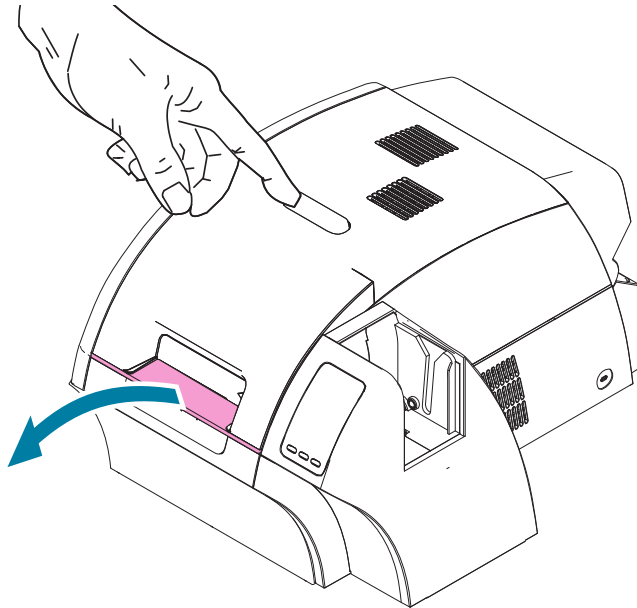
Unpacking (continued)

The ZXP Series 9 Card Printer ships with packing material and tape to protect the printer from damage during shipment—it is important to remove all packing material and tape prior to using the printer.

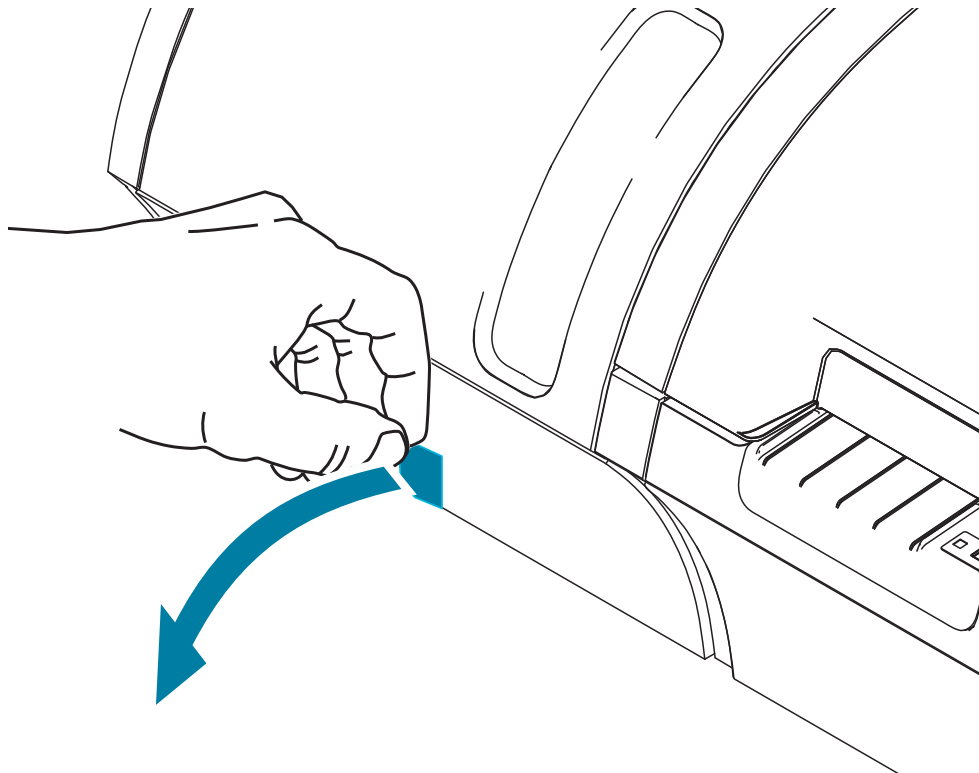
Remove the tape and packing material from the front and rear of the printer as shown in the figures below.



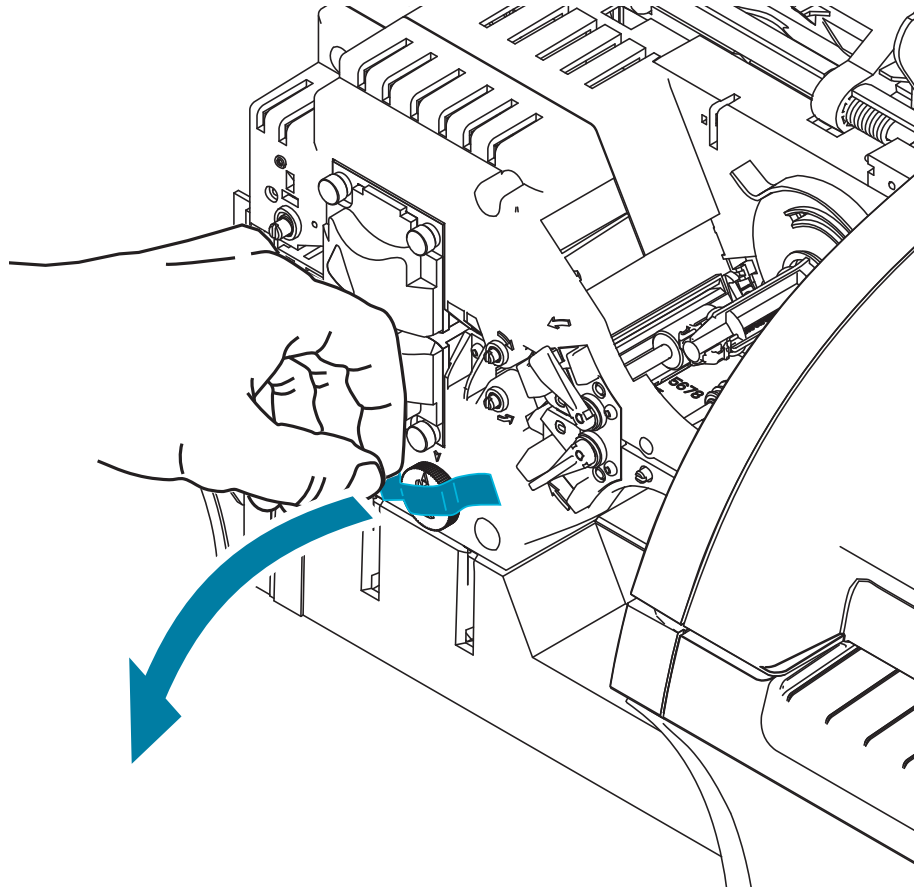
Then, open the printer by pressing the yellow release button and remove the packing material.



If the printer came with the optional laminator installed, remove the packing tape from the laminator as shown in the figure below.



Then, open the laminator cover by pulling forward on the tab on the left side of the laminator cover and remove the packing tape as shown in the figure below.



Loading Cards



Caution • DO NOT bend cards or touch print surfaces as this can reduce print quality. The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible.

Step 1. Remove the wrapping from the card deck.

Step 2. Holding the card deck by the sides (do not touch the print surfaces), hold it vertically against a flat surface such as a desktop. If the deck is too thick for your hand to hold it comfortably, use about half a deck at a time.



Step 3. Push the stack back and forth to an angle of about 45° from vertical, so as to separate all of the cards.



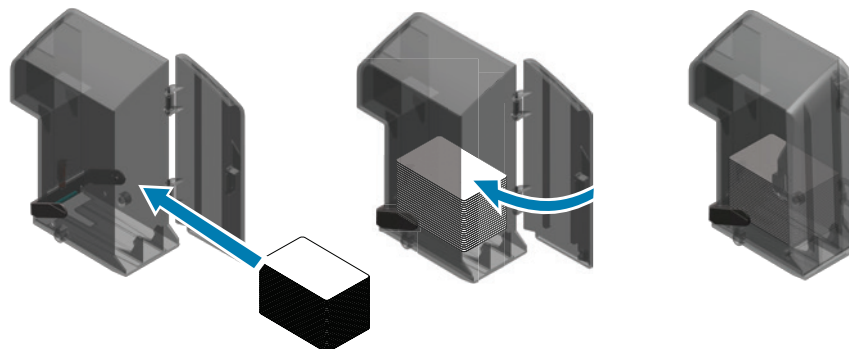
Note • Static charges and edge burrs from the card die-cutting process can render individual cards stuck together with significant adhesion force. These cards must be physically separated from each other before inserting into the feeder; if not separated, feeding or printing problems may occur.

Step 4. Restore the card stack to its original squared-off condition.

Step 5. Open the input hopper door—cards can be loaded into the hopper while it is attached to the printer.

Step 6. Place the cards in the input hopper in the orientation shown: smart card contacts (if present) up and toward the body of the printer; mag stripe (if present) down and to the rear). Ensure that the cards are seated flat on the bottom of the hopper.

Step 7. Close the input hopper door.

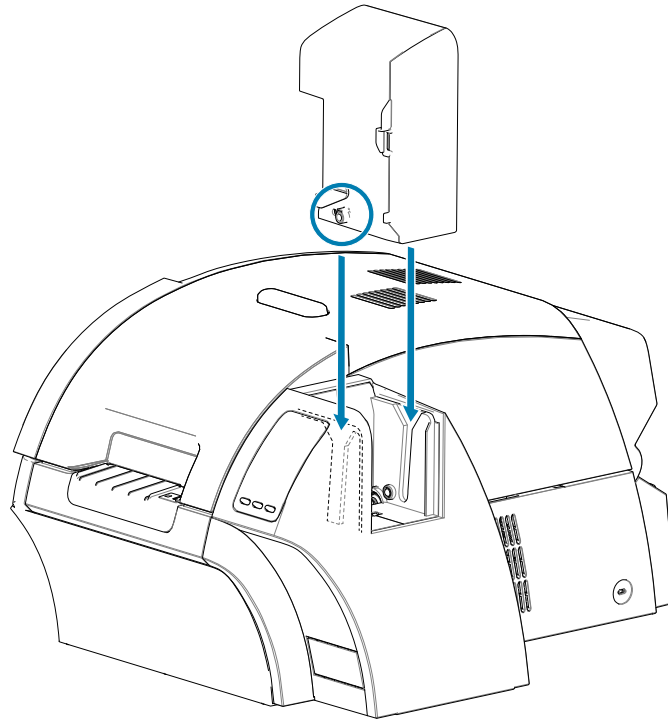


Installing the Card Hoppers

Input Hopper

The input hopper is positioned on the right side of the printer and holds the cards to be printed.

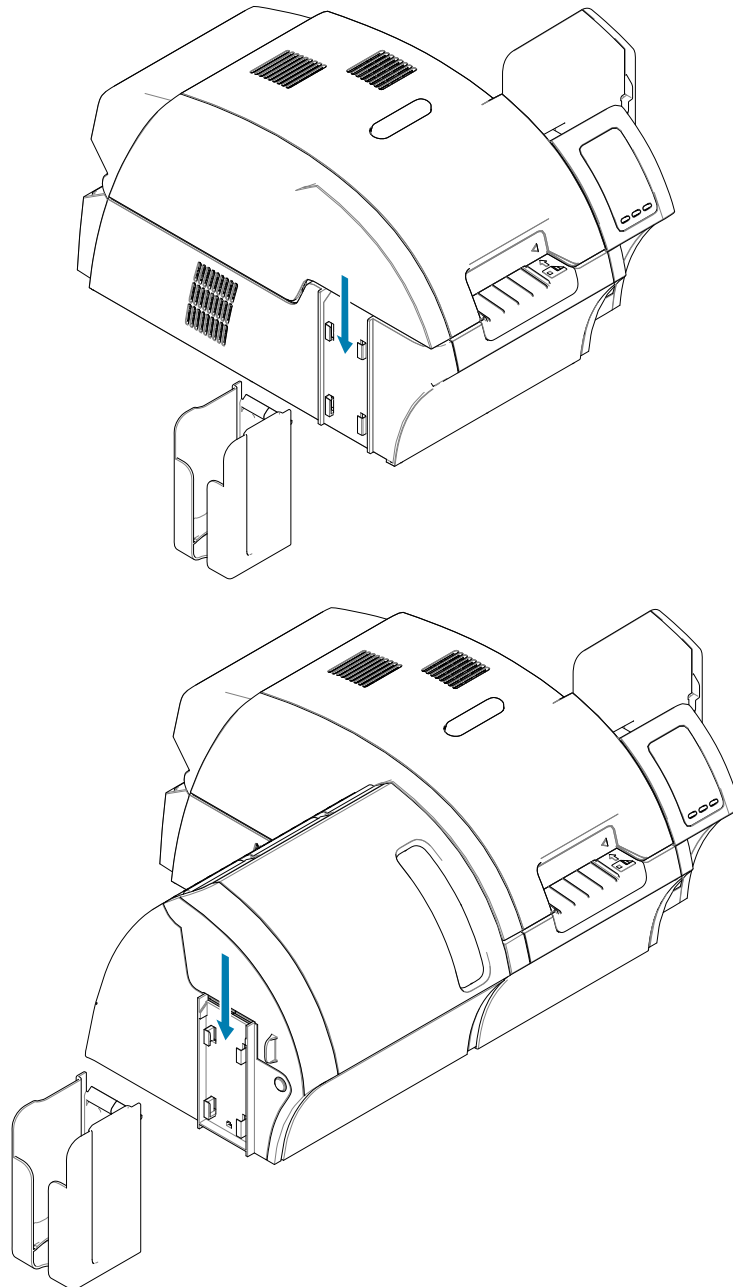
- Step 1.** Install the input hopper by sliding it into the receptacle so that the guide posts on the hopper (circled below) align with the guide slots (arrows below).
- Step 2.** Ensure that the input hopper locks securely in place.



Output Hopper

The output hopper is positioned on the left side of the printer (or the left side of the laminator if the printer includes a laminator as shown below) and receives the printed cards.

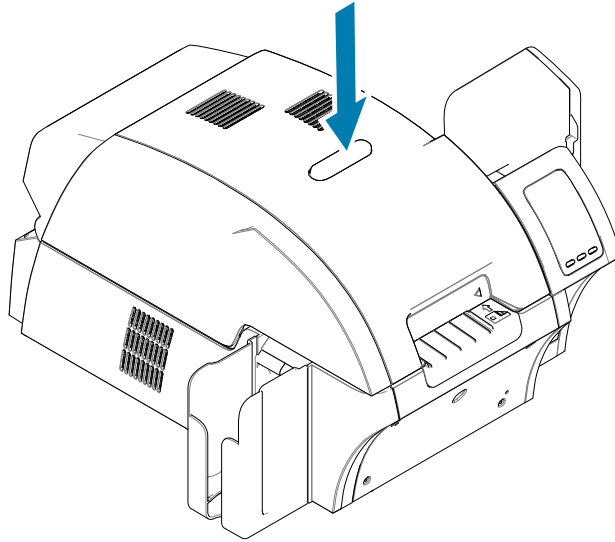
- Step 1.** Install the output hopper by placing the hopper onto the printer or laminator, and then sliding downward into the corresponding slots on the printer or laminator.



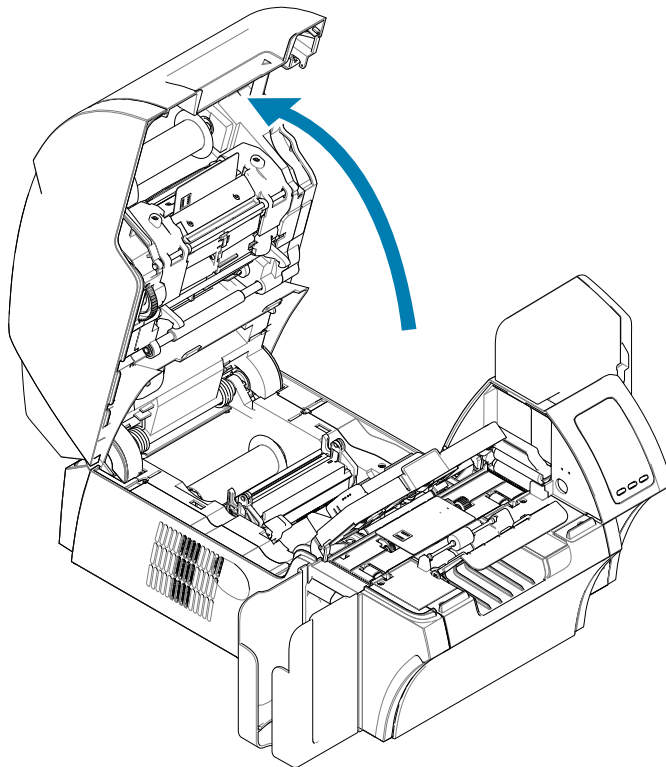
Opening the Printer

The printer should only be opened in order to change the print ribbon or transfer film, to retrieve a stuck or rejected card, or to change the cleaning roller or cartridge.

Step 1. Press the yellow release button at the top of the printer to release the printer door.



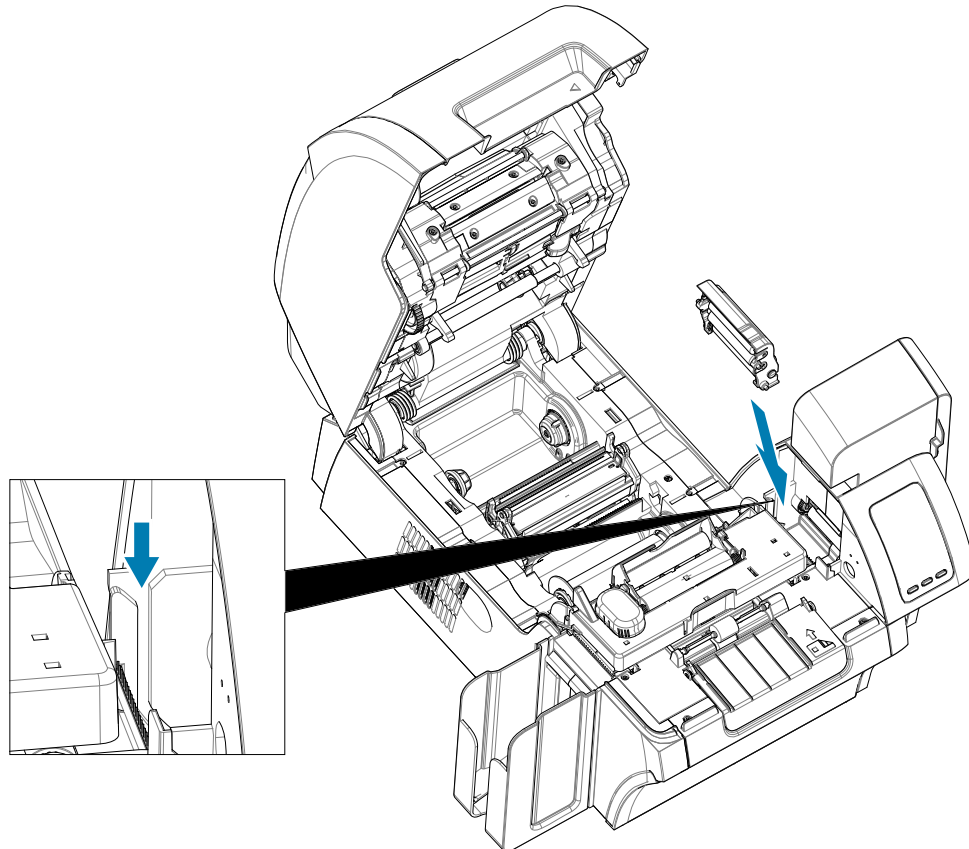
Step 2. Lift the printer door to its full, upright position.



Installing the Cleaning Cartridge

The card cleaning cartridge (X-Cleaning Roller) cleans the cards entering the printer through the input hopper. The cleaning cartridge consists of a cartridge frame and an adhesive roller.

- Step 1.** While holding the cleaning cartridge by the frame, peel the protective wrapper from the adhesive roller. Do not touch the adhesive surface of the roller.
- Step 2.** Install the cleaning cartridge into the area shown in the figure below by sliding the cartridge guide pins into the guide slots on the printer.



- Step 3.** Press down on the cartridge until it is fully seated.

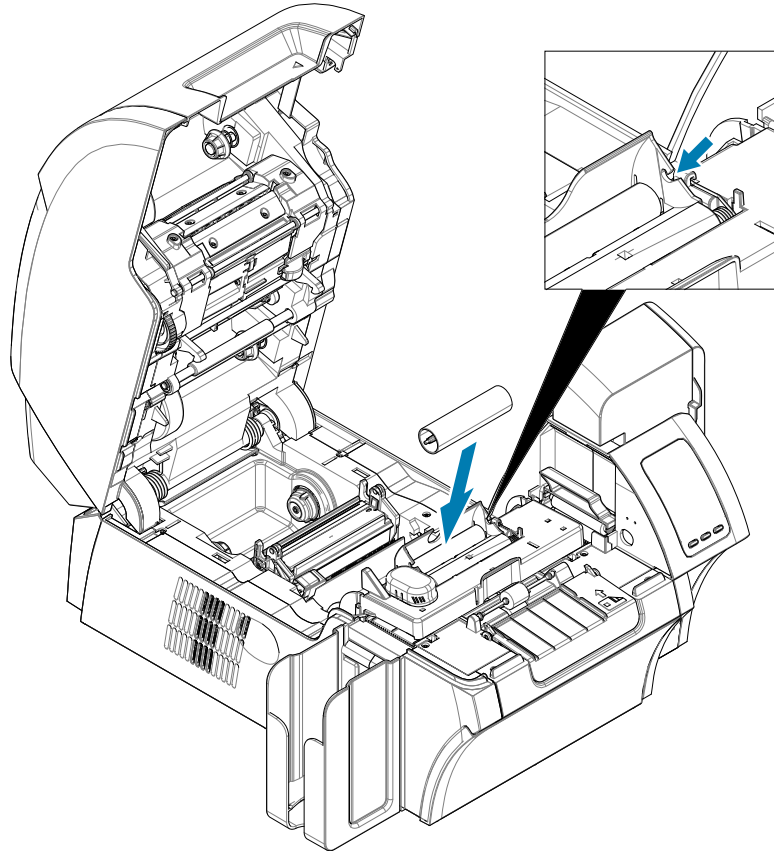


Note • To ensure print quality, the card cleaning cartridge requires periodic replacement. New card cleaning rollers are included with each print ribbon or may be purchased separately. Before replacing the card cleaning cartridge or its adhesive roller, clean the printer (see [“Cleaning the Printer” on page 118](#)). To replace the X-Roller, refer to [“Replacing the Cleaning Rollers” on page 62](#).

Installing the Cleaning Roller

The cleaning roller (Y-Cleaning Roller) cleans the cards entering the printer from either the input hopper or the manual feed slot.

- Step 4.** Peel the protective wrapper from the cleaning roller.
- Step 5.** Install the cleaning cartridge into the area shown in the figure below by placing it into the notches on the printer. Use the protective wrapper to push the cleaning roller into place until it locks into position.

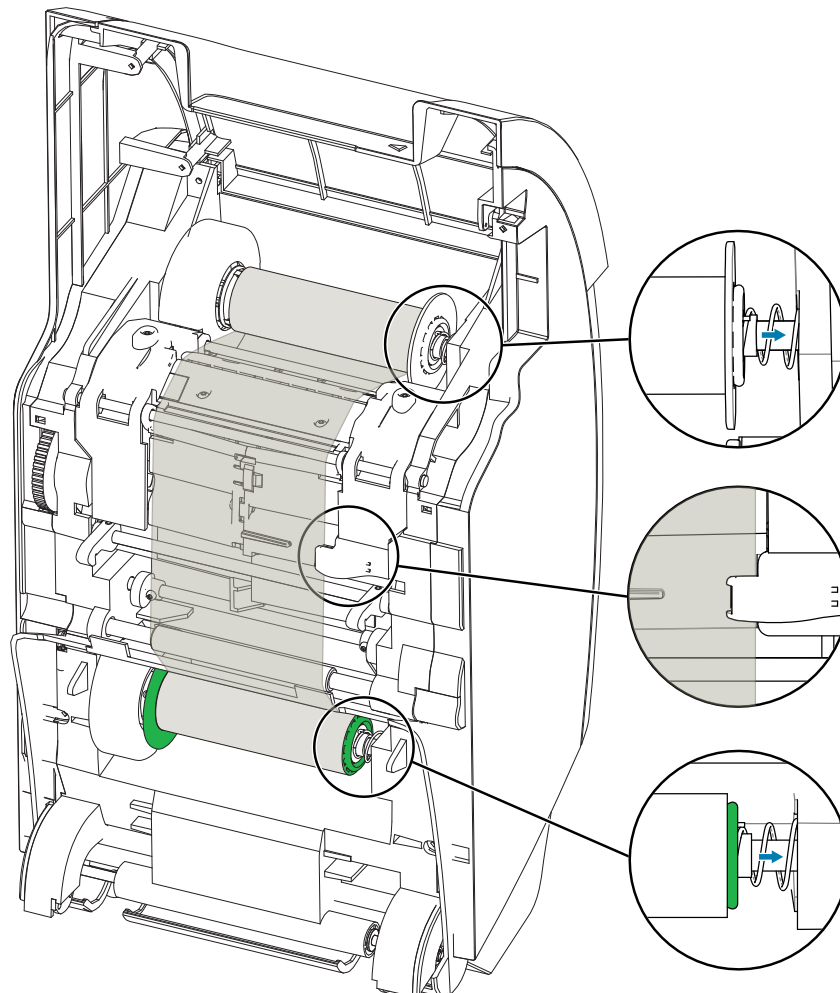


Note • To ensure print quality, the card cleaning cartridge requires periodic replacement. New card cleaning rollers are included with each print ribbon or may be purchased separately. Before replacing the card cleaning cartridge or its adhesive roller, clean the printer (see [“Cleaning the Printer”](#) on page 60). To replace the Y-Roller, refer to [“Replacing the Cleaning Rollers”](#) on page 62.

Loading the Transfer Film

The ZXP Series 9 Card printer is designed to work only with Zebra True Colours® i Series™ Transfer Film for near photographic print resolution and over-the-edge printing.

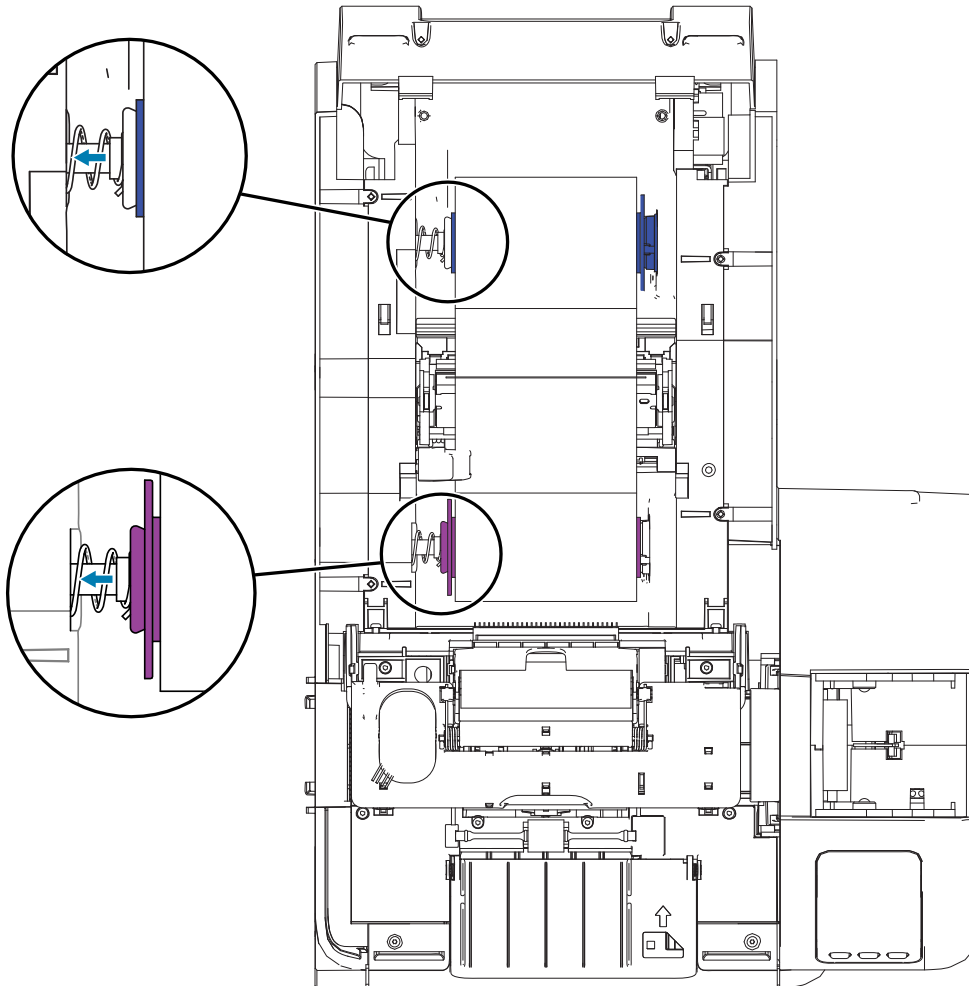
- Step 1.** Locate the transfer film supply spindles and the transfer film take-up spindles. Note that the flanges and spindles are color coded (white-to-white, green-to-green).
- Step 2.** Unroll about 1 foot (30 cm) from the full roll of transfer film on the supply spool and wind it (about 2 wraps) onto the empty take-up spool.
- Step 3.** Load transfer film supply spool onto the supply spindles—green flange side to the left.
- Step 4.** Load the empty take-up spool onto the take-up spindles—white flange side to the right.
- Step 5.** Make sure the spring-loaded spindles on the right seat into the spools.
- Step 6.** Make sure the transfer film comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.
- Step 7.** Route the transfer film under the retaining tab.



Loading Print Ribbon

The ZXP Series 9 Card printer is designed to work with Zebra True Colours® i Series™ Ribbons. Each new ribbon comes with a replacement set of cleaning rollers. It is recommended that they be replaced for each new ribbon or every 5,000 cards. Refer to [“Cleaning the Printer” on page 60](#) for recommended cleaning intervals, and [“Replacing the Cleaning Rollers” on page 62](#) for replacement instructions.

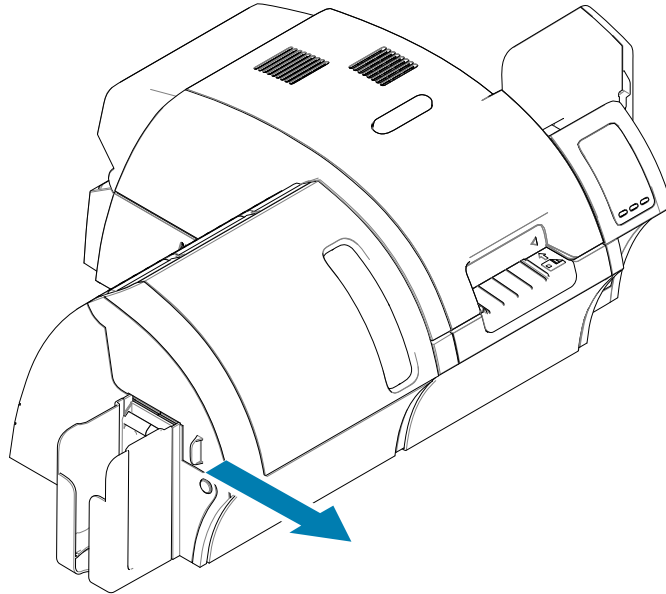
- Step 1.** Locate the print ribbon supply spindles and the print ribbon take-up spindles. Note that the flanges and spindles are color coded (blue-to-blue, purple-to-purple).
- Step 2.** Load the print ribbon supply spool onto the supply spindles—purple flange side to the left.
- Step 3.** Load the empty take-up spool onto the take-up spindle, blue flange side to the right—make sure the spring-loaded spindles on the left seat into the spools.
- Step 4.** Make sure the print ribbon comes off the bottom of the supply spool and feeds to the bottom of the take-up spool.



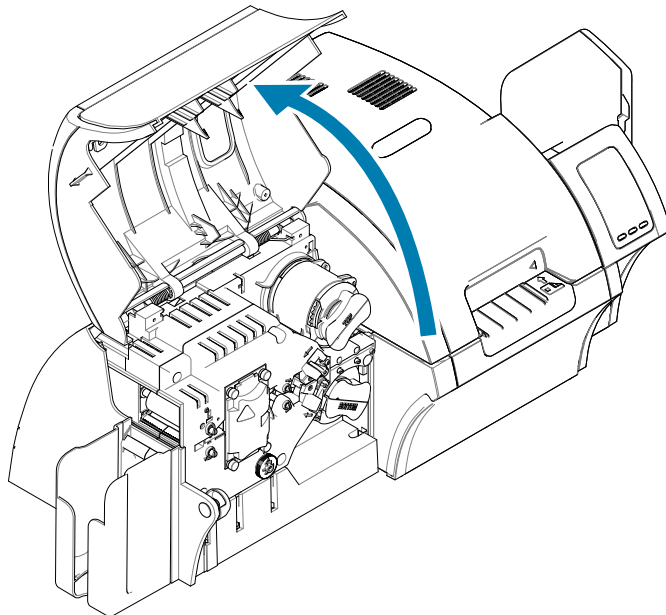
Opening the Laminator

The laminator should only be opened in order to change the laminate, or to retrieve a stuck card.

Step 1. Pull the laminator door side tab forward until the laminator door pops open.

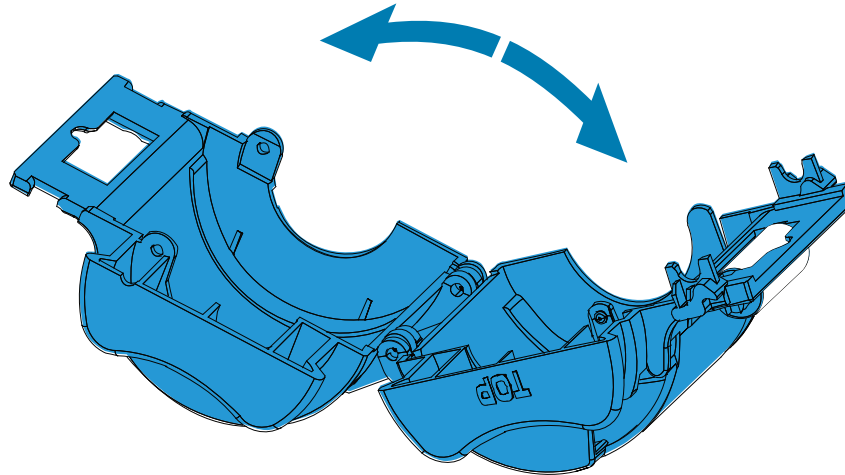


Step 2. Lift the laminator door to its full, upright position.



Loading the Laminate

Step 1. Open each cassette by separating its two halves at the hinge—grasp the two halves firmly then pull apart. **Do NOT use tools.**



Step 2. If there is an empty laminate core in the cassette, remove it.



Note • The laminate roll is specific to either the top (blue) or the bottom (yellow) laminate cassette.

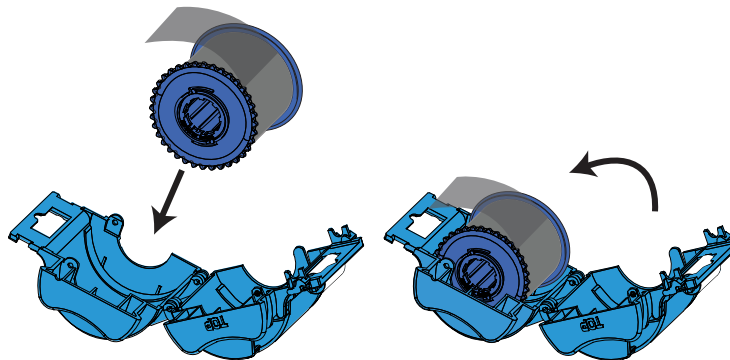


Note • The lower laminate cassette (yellow) is used on a double-sided laminator only.



Important • The geared flange on the laminate spool is removable, but do not remove it. If it does come off, snap it back onto the end of the spool.

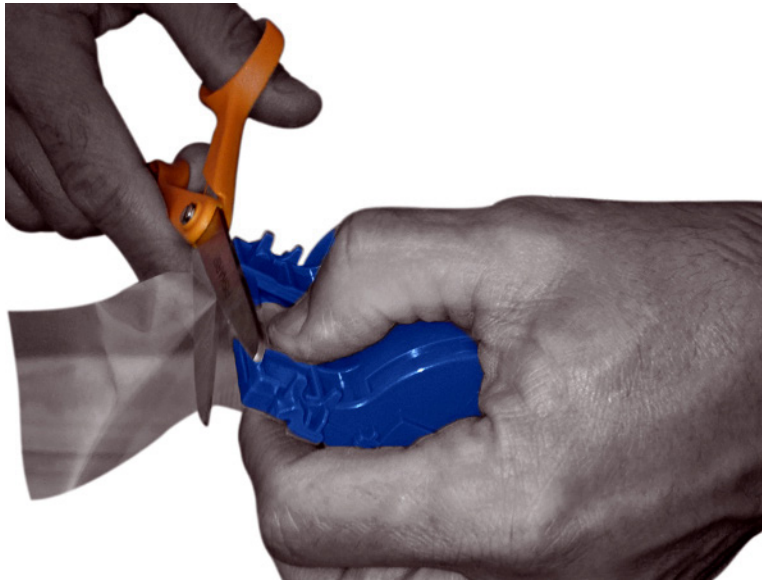
Step 3. Remove a new roll of laminate from its packaging and place it in the upper laminate cassette—note the orientation of the laminate spool with respect to the laminate cassette as shown in the figure below.



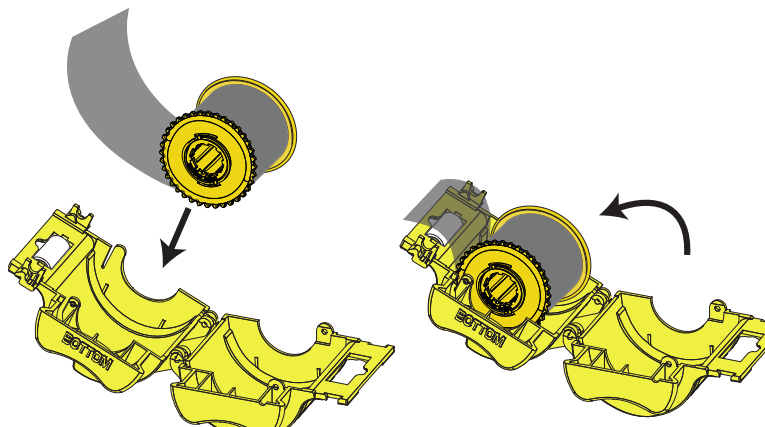
Step 4. Pull out an inch or two of laminate past the lip of the cassette.

Step 5. Close the cassette—press the two halves of the cassette together until it clicks.

- Step 6.** Cut the laminate square (as close to perpendicular as possible) with scissors. Hold the scissors in one hand. Hold the cassette with the other hand. Press the laminate firmly against the white roller thereby keeping the laminate from moving while cutting.



- Step 7.** Remove a second new roll of laminate from its packaging and place it in the lower laminate cassette—note the orientation of the laminate spool with respect to the laminate cassette as shown in the figure below.



- Step 8.** Pull out an inch or two of laminate past the lip of the cassette.
- Step 9.** Close the cassette—press the two halves of the cassette together until it clicks.

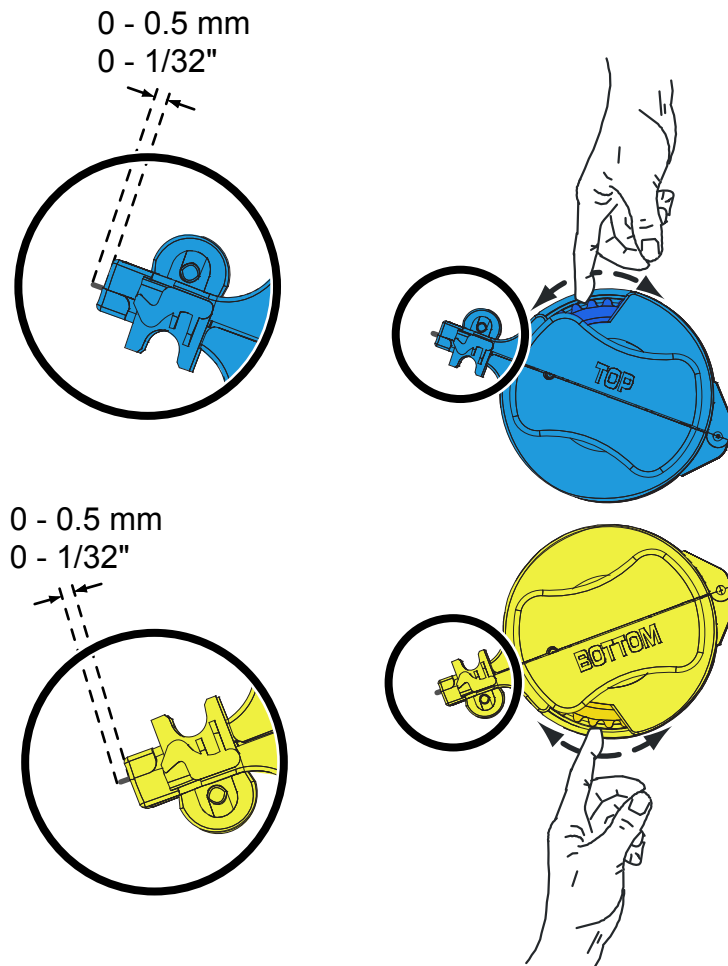
Step 10. Cut the laminate square (as close to perpendicular as possible) with scissors. Hold the scissors in one hand. Hold the cassette with the other hand. Press the laminate firmly against the white roller thereby keeping the laminate from moving while cutting.



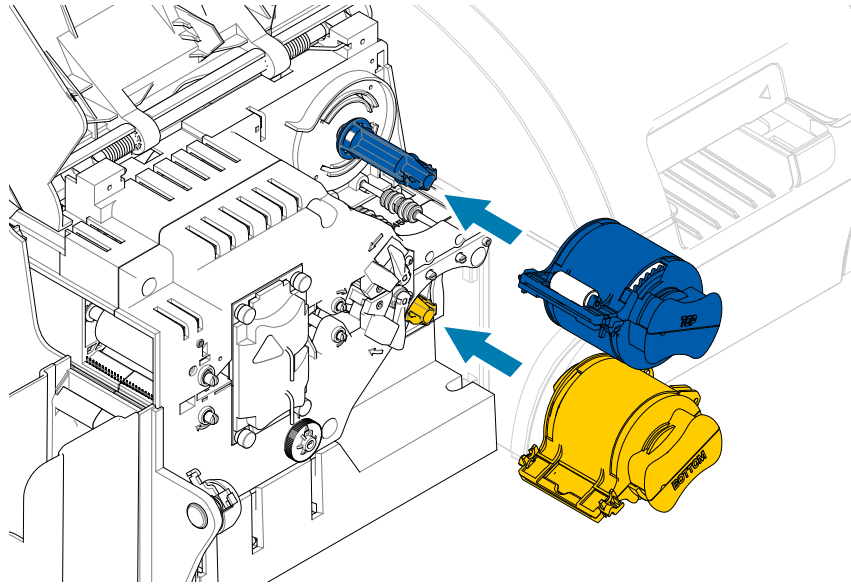
Step 11. Rotate the core to adjust the laminate overhang. Stop when the end of the laminate is just beyond the lip of the cassette, as shown below.



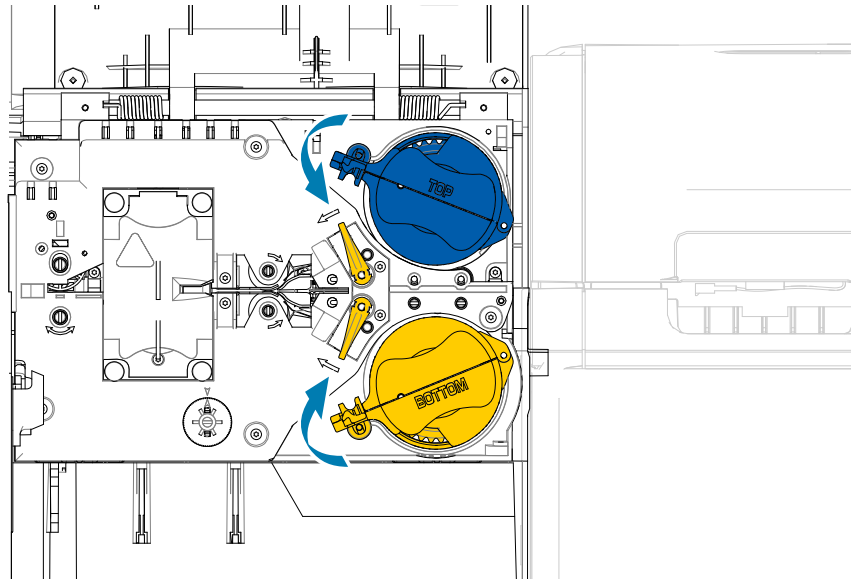
Important • Check for laminate overhang any time the locking lever is pressed or the cassette is removed.



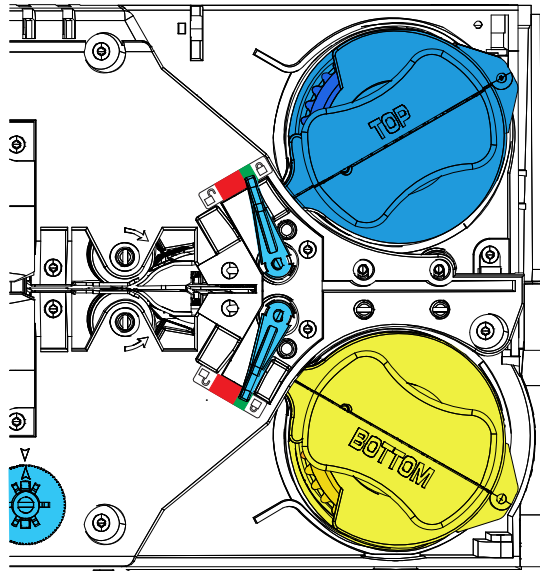
Step 12. Slide the cassette onto the spindle.



Step 13. Rotate each cassette (in the direction indicated in the figure below).



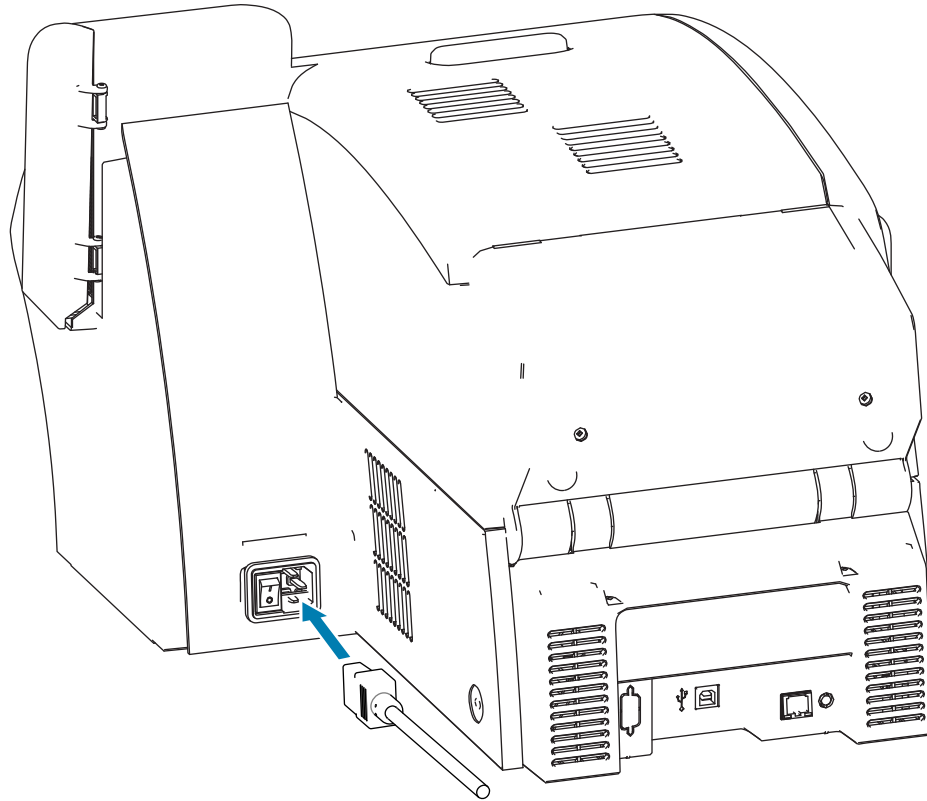
Step 14. Continue to turn the cassette. The locking lever will move to the left as the cassette rotates over the locking mechanism, and will then click into the locked (green) position.



Step 15. Close the laminator door.

Plugging in the Printer

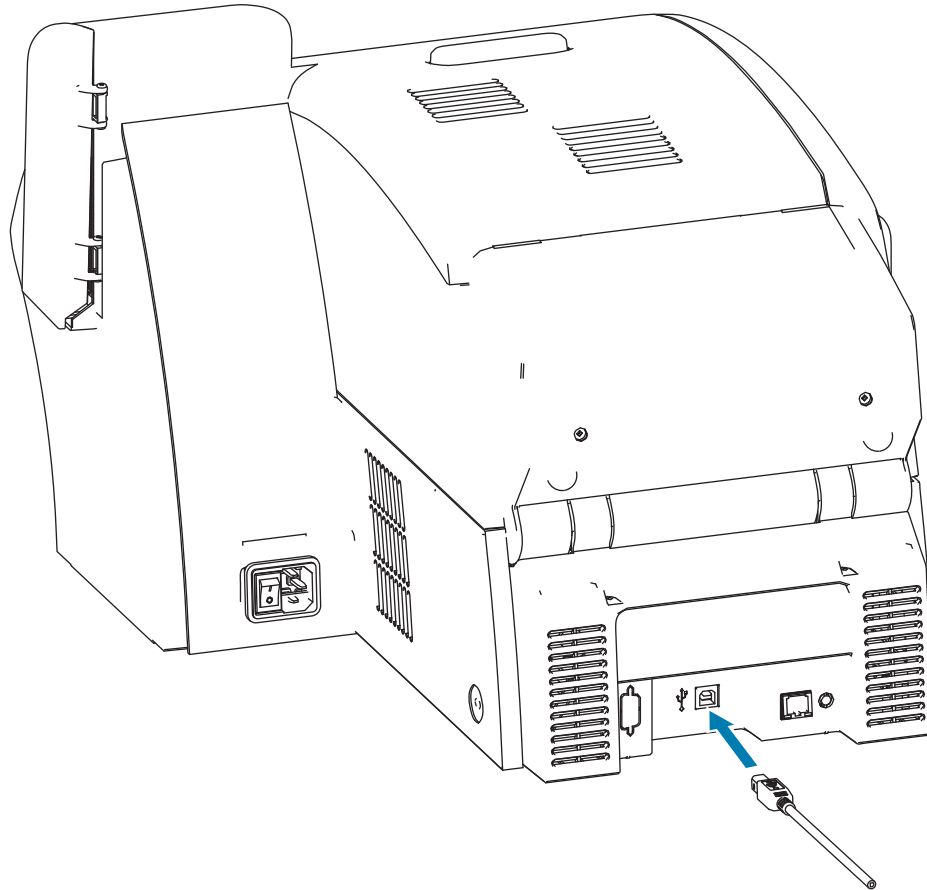
- Step 1.** Insert the female end of the power cord into the printer (as shown in the figure below).



- Step 2.** Insert the male end of the power cord into the power source as shown (power receptacle configuration may vary).

Connecting a USB Cable

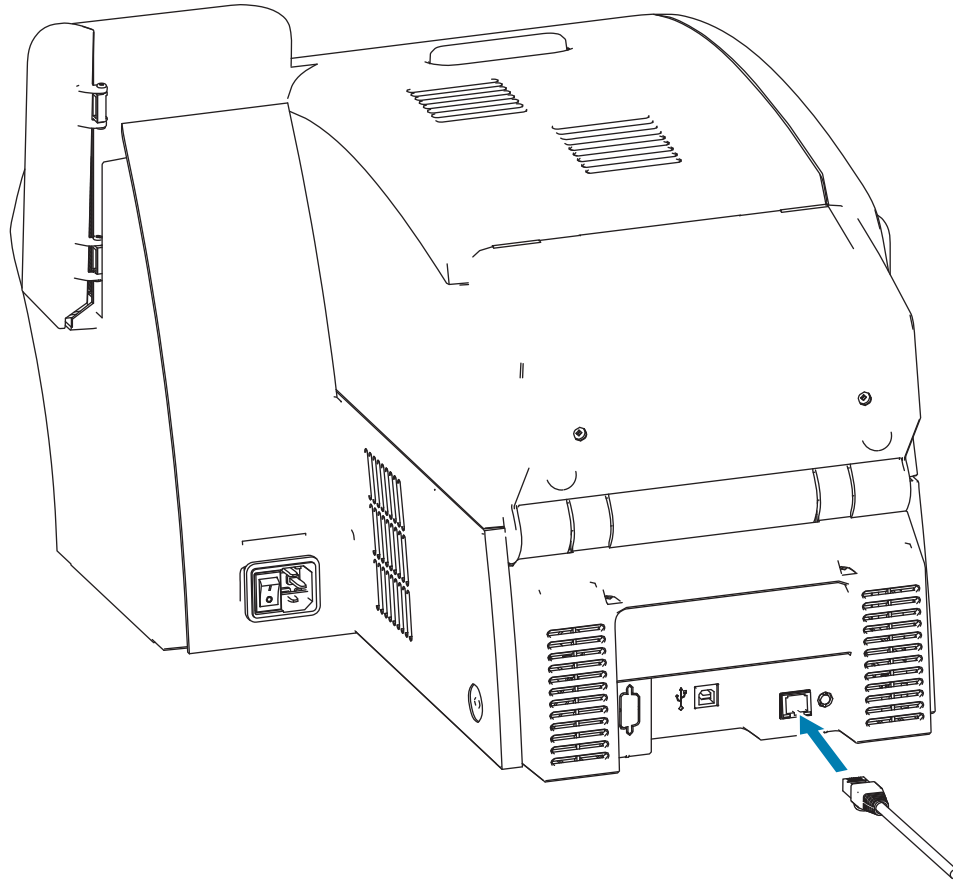
- Step 1.** Insert the device side of the USB cable into the USB receptacle on the printer (as shown in the figure below).



- Step 2.** Insert the host side of the USB cable into an appropriate host port.

Connecting an Ethernet Cable

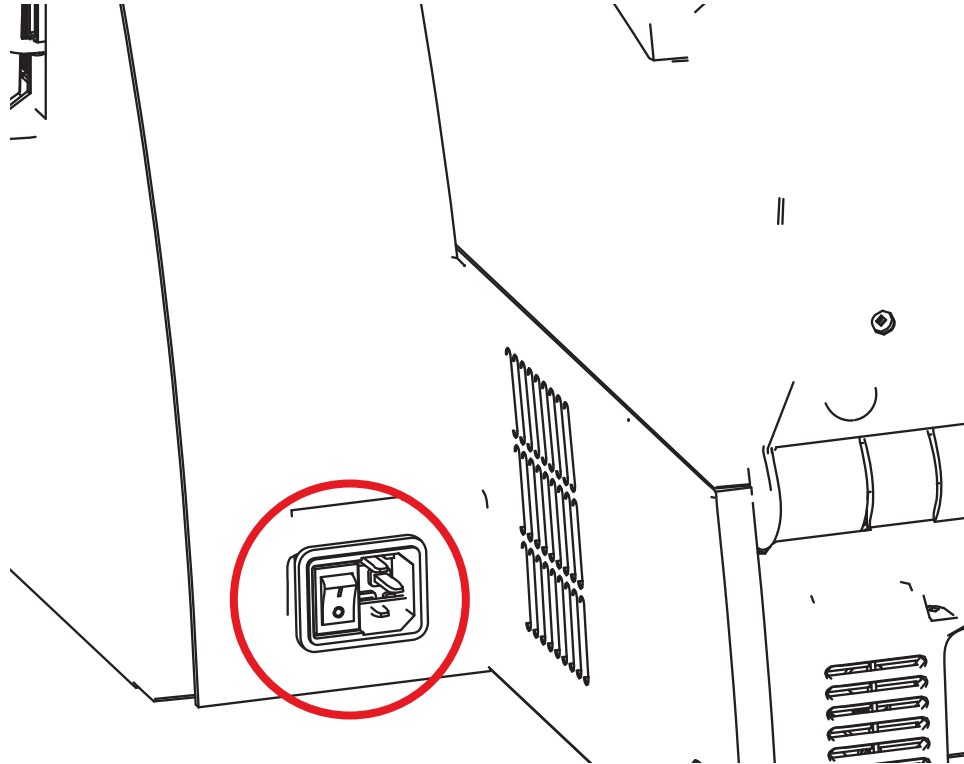
- Step 1.** Insert one end of the Ethernet cable into the Ethernet receptacle on the printer (as shown in the figure below).



- Step 2.** Insert the opposite end of the Ethernet cable into an appropriate Host port.

Turning on the Printer

The power switch is located at the rear of the printer next to the power receptacle (as shown in the figure below).



Press the upper portion of the power switch to the ON (|) position.

Press the lower portion of the power switch to the OFF (O) position.



Installing the Software

The CD that comes with the printer contains the latest driver software at the time of shipping.

It is recommended that the latest driver software be downloaded from the ZXP Series 9 support page at www.zebra.com/zxp9-info.

When installing the software, follow the on-screen instructions to install and configure your printer for the desired network.

Supported Operating Systems

Supported Windows Drivers Microsoft OS ¹	One to One	One to Many	Many to One	Many to Many	Printer Pooling ²
	1 Printer - 1 Host	One Host - Many Printers	Multiple Hosts (Drivers) One Printer	Multiple Hosts (Drivers) - Many Printers	
Windows 10 (32 bit) ³	Yes	Yes	Yes	Yes	Yes
Windows 10 (64 bit)	Yes	Yes	Yes	Yes	Yes
Windows 8 (32 bit) ⁴	Yes	Yes	Yes	Yes	Yes
Windows 8 (64 bit)	Yes	Yes	Yes	Yes	Yes
Server 2008 (64 bit)	Yes	Yes	Yes	Yes	Yes
Server 2008 (32 bit)	Yes	Yes	Yes	Yes	Yes
Server 2012	Yes	Yes	Yes	Yes	Yes
Server 2003	No	No	No	No	No
Windows 7 (64 bit)	Yes	Yes	Yes	Yes	Yes
Windows 7 (32 bit)	Yes	Yes	Yes	Yes	Yes
Vista (64 bit) ⁵	No	No	No	No	No
Vista (32 bit) ²	No	No	No	No	No
Windows XP	No	No	No	No	No

1. Driver installed on individual Client PCs
 2. Printer Pooling Sharing not supported.
 3. Windows 10 Home and Pro only (No support for Windows 10 Mobile)
 4. No support for Win 8 Metro GUI print driver environment.
 5. Need to qualify Service Pack support

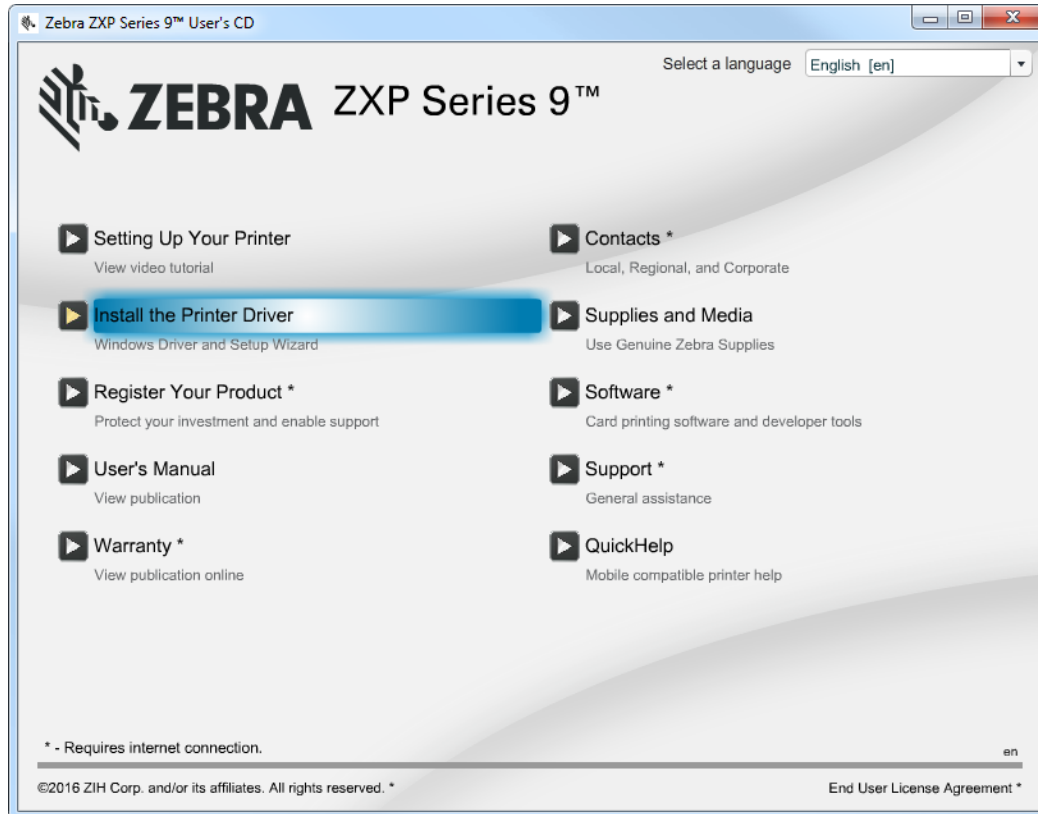
Supported Sharing Combinations

Windows OS Server (Driver Host)	Windows OS (Driver Clients)						Windows XP
	Win 10 (32 bit)	Win 10 (64 bit)	Win 8 (32 bit)	Win 8 (64 bit)	Win 7 (32 bit)	Win 7 (64 bit)	
Server 2012	Yes	Yes	Yes	Yes	Yes	Yes	No
Server 2008 (64 bit)	Yes	Yes	Yes	Yes	Yes	Yes	No
Server 2008 (32 bit)	Yes	Yes	Yes	Yes	Yes	Yes	No
Server 2003	Yes	No	Yes	No	Yes	No	No
Windows 10 (64 bit)	Yes	Yes	Yes	Yes	Yes	Yes	No
Windows 10 (32 bit)	Yes	No	Yes	No	Yes	No	No
Windows 8 (64 bit)	Yes	Yes	Yes	Yes	Yes	Yes	No
Windows 8 (32 bit)	Yes	No	Yes	No	Yes	No	No
Windows 7 (64 bit)	Yes	Yes	No	No	Yes	Yes	No
Windows 7 (32 bit)	Yes	No	No	No	Yes	No	No
Windows XP (All Editions) SP 2 and above	No	No	No	No	No	No	No

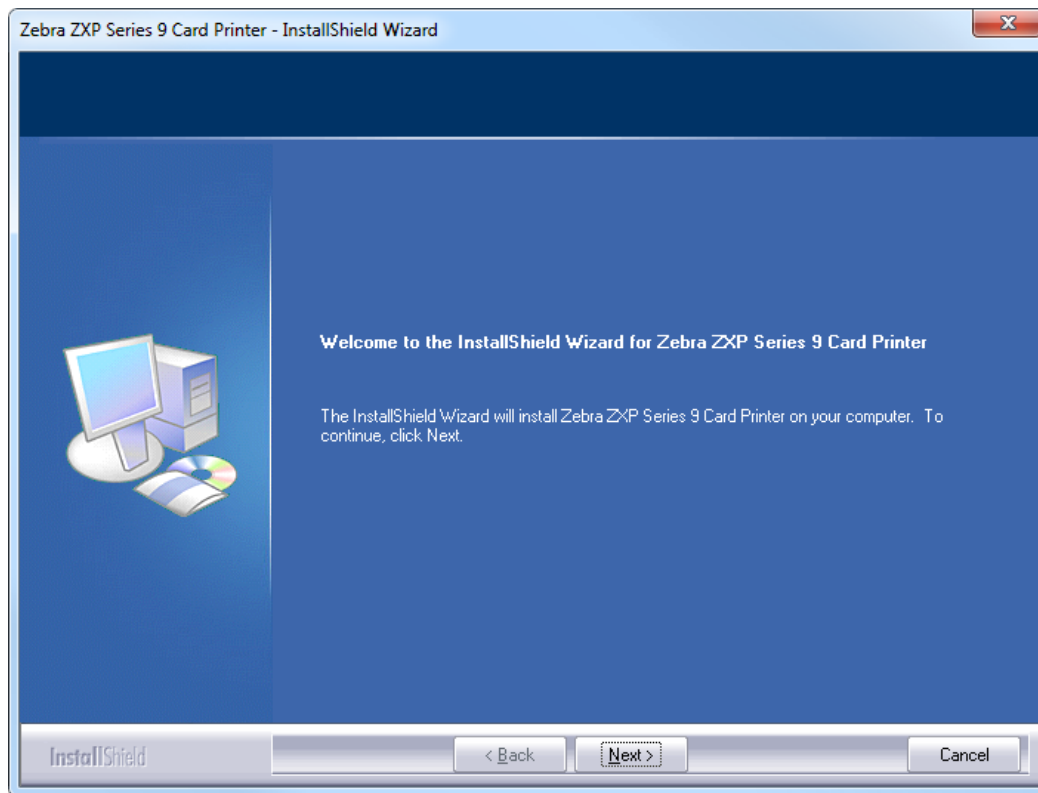
Installing the USB Printer Driver

To install the Ethernet driver, [“Installing the Ethernet Printer Driver” on page 40.](#)

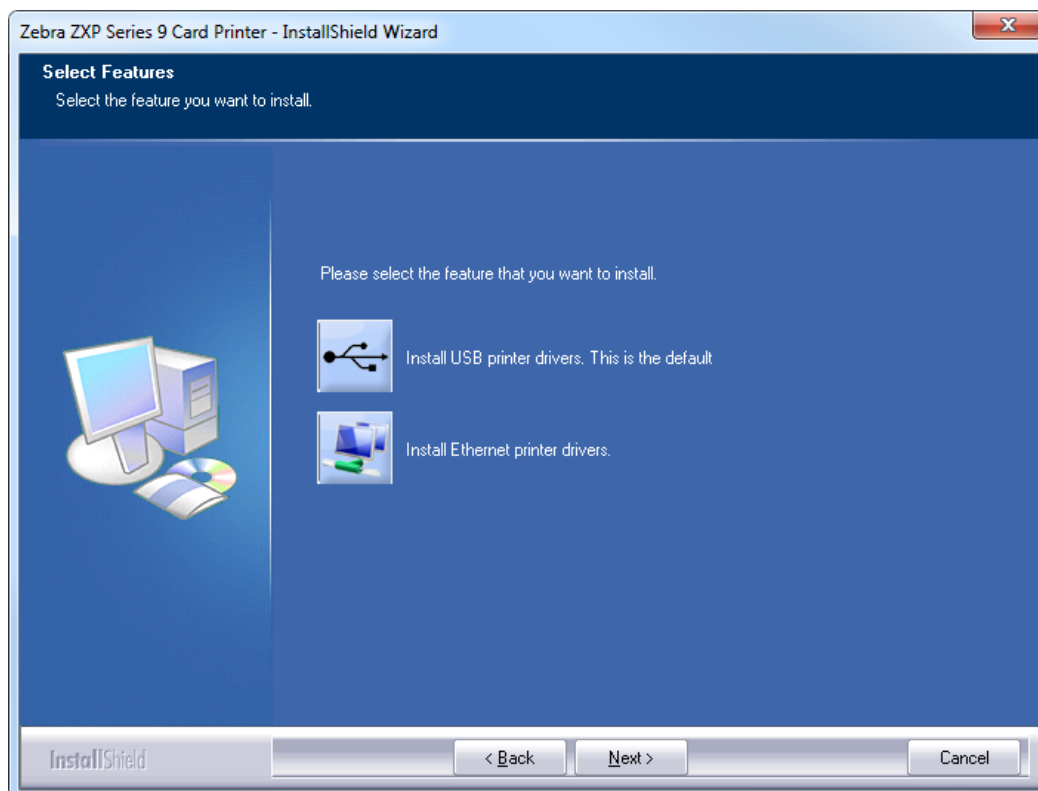
- Step 1.** If not already done, connect power to the printer. Turn power OFF (O).
- Step 2.** Connect the USB cable to the printer and the appropriate port on the host computer.
- Step 3.** Insert the User CD into host computer; the Main Menu will open.
- Step 4.** From the Main Menu, click Install the Printer Driver.



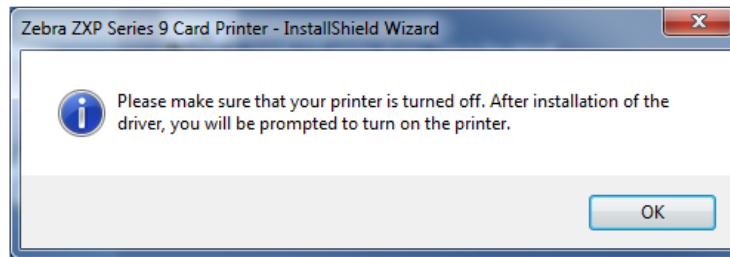
The InstallShield Wizard window will open and the Welcome screen will be displayed. To proceed with the installation, click the **Next** button.



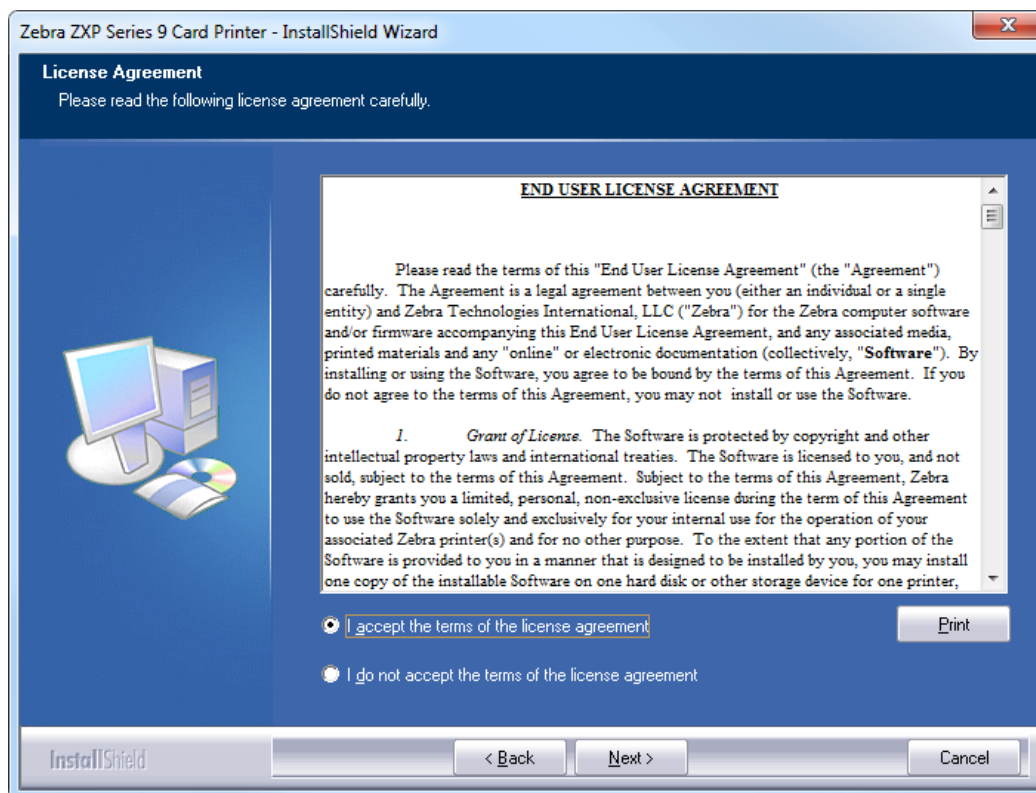
Step 5. Click Install USB printer drivers.



- Step 6.** Ensure that the Printer's power switch in the OFF () position; and then click the OK button.



- Step 7.** This will bring up the License Agreement window. To proceed with the installation, select radio button next to **I accept the terms of the license agreement** and click the **Next** button.



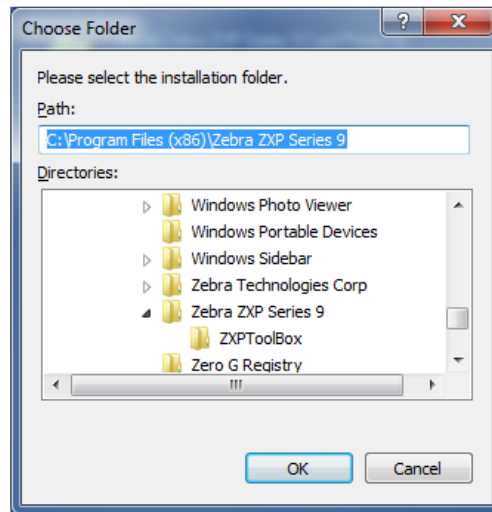
Step 8. This will bring up the Customer Information window; enter User Name and Company Name (if desired) and then click the **Next** button.

The screenshot shows the 'Customer Information' window of the 'Zebra ZXP Series 9 Card Printer - InstallShield Wizard'. The window has a blue header bar with the title and a close button. Below the header, the text 'Please enter your information.' is displayed. On the left side, there is an illustration of a computer monitor, a tower unit, and a CD/DVD. The main area contains the instruction 'Please enter your name and the name of the company for which you work.' followed by two input fields: 'User Name:' and 'Company Name:'. At the bottom, there is a navigation bar with the 'InstallShield' logo, a '< Back' button, a 'Next >' button, and a 'Cancel' button.

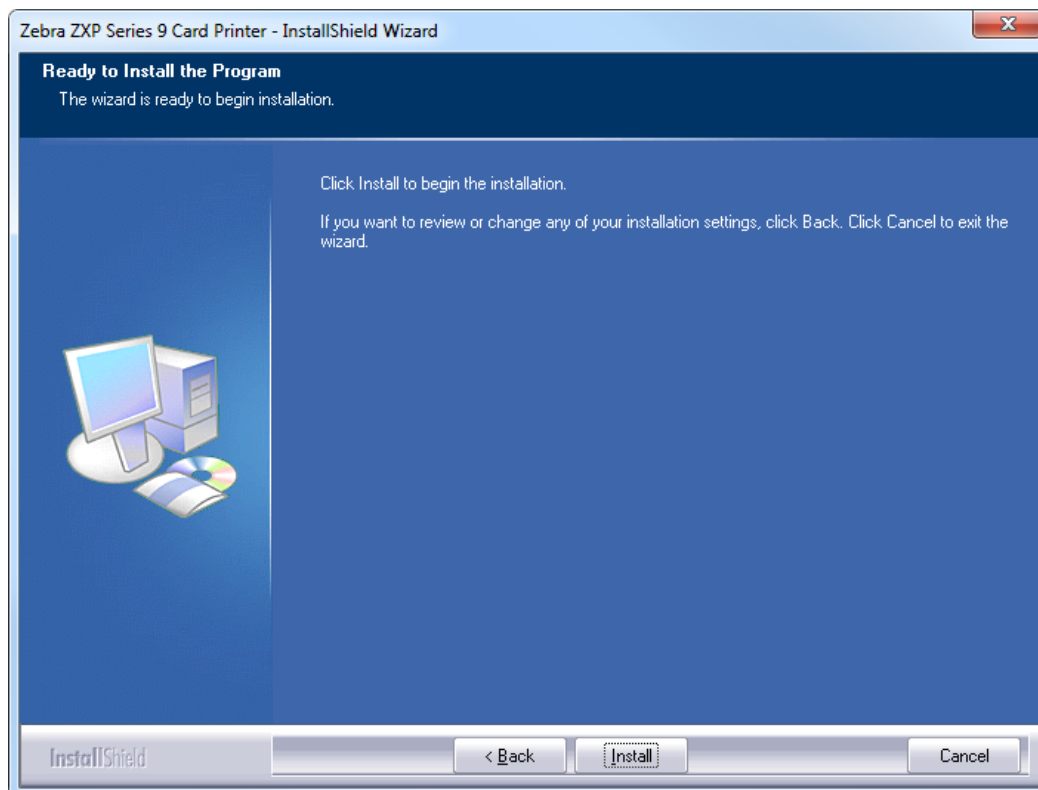
Step 9. This will bring up the Choose Destination Location window. To accept the default destination location where setup will install the files, click the **Next** button.

The screenshot shows the 'Choose Destination Location' window of the 'Zebra ZXP Series 9 Card Printer - InstallShield Wizard'. The window has a blue header bar with the title and a close button. Below the header, the text 'Select folder where setup will install files.' is displayed. On the left side, there is an illustration of a computer monitor, a tower unit, and a CD/DVD. The main area contains a folder icon and the text 'Install Zebra ZXP Series 9 Card Printer to: C:\Program Files (x86)\Zebra ZXP Series 9'. To the right of this text is a 'Change...' button. At the bottom, there is a navigation bar with the 'InstallShield' logo, a '< Back' button, a 'Next >' button, and a 'Cancel' button.

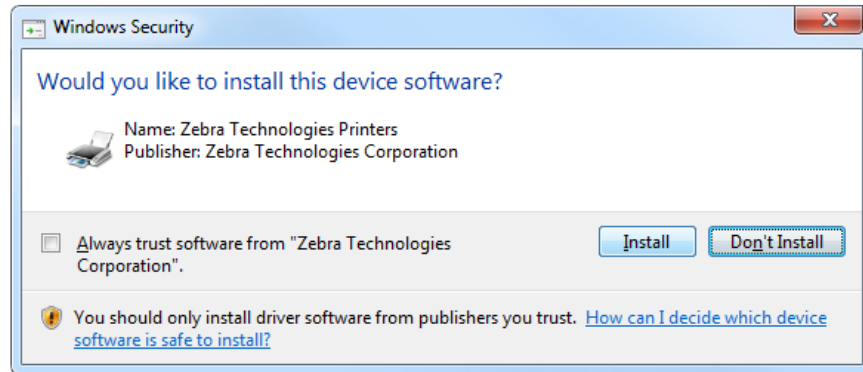
Step 10. To select an alternate destination location, click **Change** and navigate to the desired folder and then click **OK**. You will be returned to the Choose Destination Location window. Click **Next** to proceed.



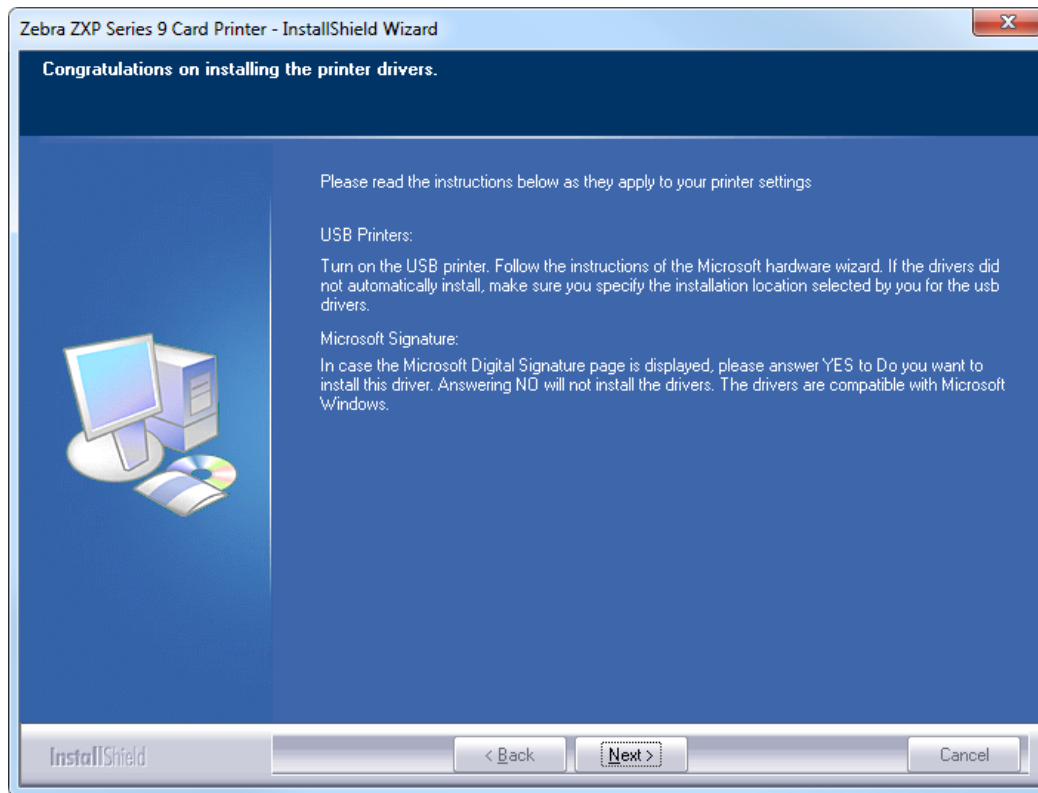
Step 11. This will bring up the Ready to Install the Program window. To continue, click the **Install** button.



Step 12. Depending on your company's policies, a Windows Security pop-up may appear. Click **Install** to continue with the installation.

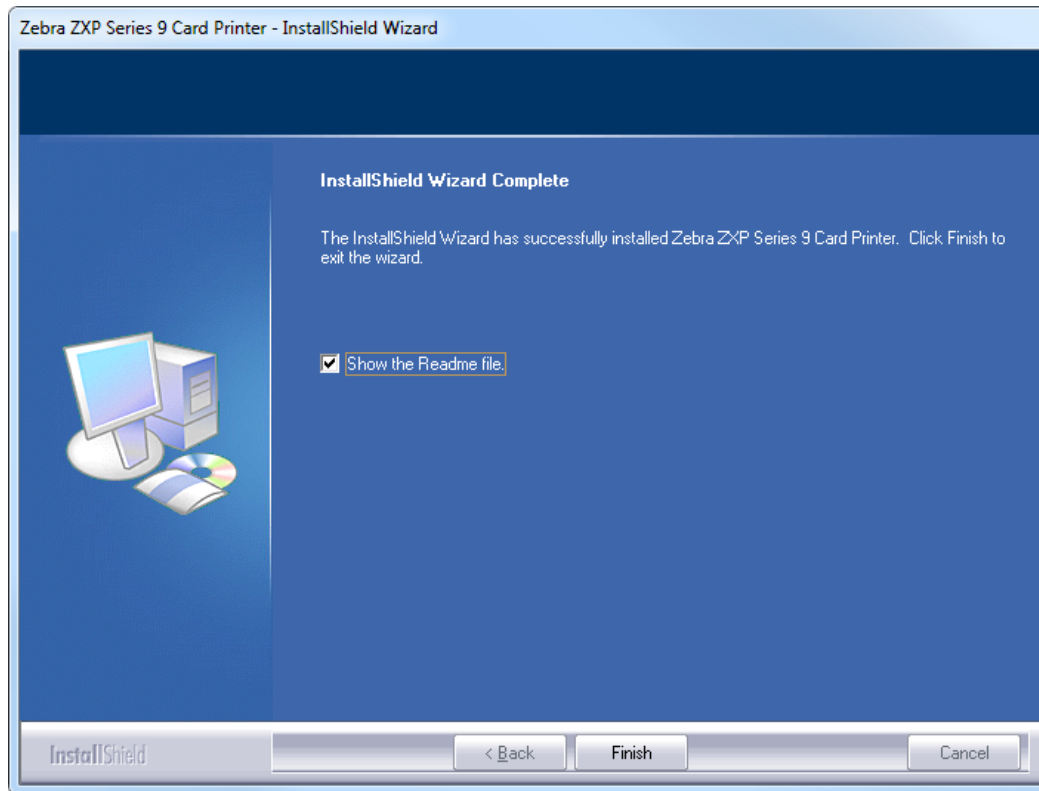


Step 13. The Congratulations window will appear with further instructions.



Step 14. At this point, turn on your printer; and then click the Next button. The Windows New Hardware Found wizard will find the printer.

When the InstallShield Wizard Complete window appears, select the Yes, I want to restart my computer now radio button; and click **Finish**.



This completes USB driver installation.

To change any of the printer's settings (card type, orientation, etc.), encoding, and/or black panel settings, refer to Changing the Printing Preferences on page 78.

Installing the Ethernet Printer Driver

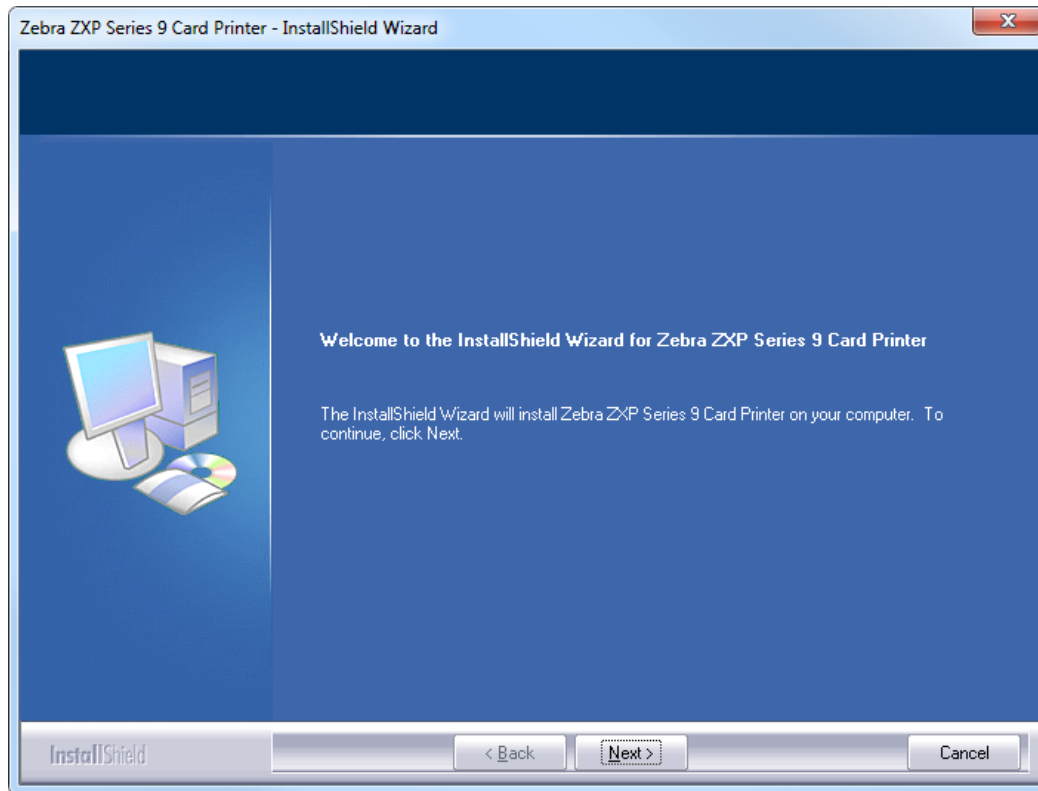
To install the USB driver, see “Installing the USB Printer Driver” on page 33.

The Ethernet Network must be configured correctly, with the Printer and the host computer on the same subnet. If you are not sure how to verify this or change the configuration, consult your company’s IT department.

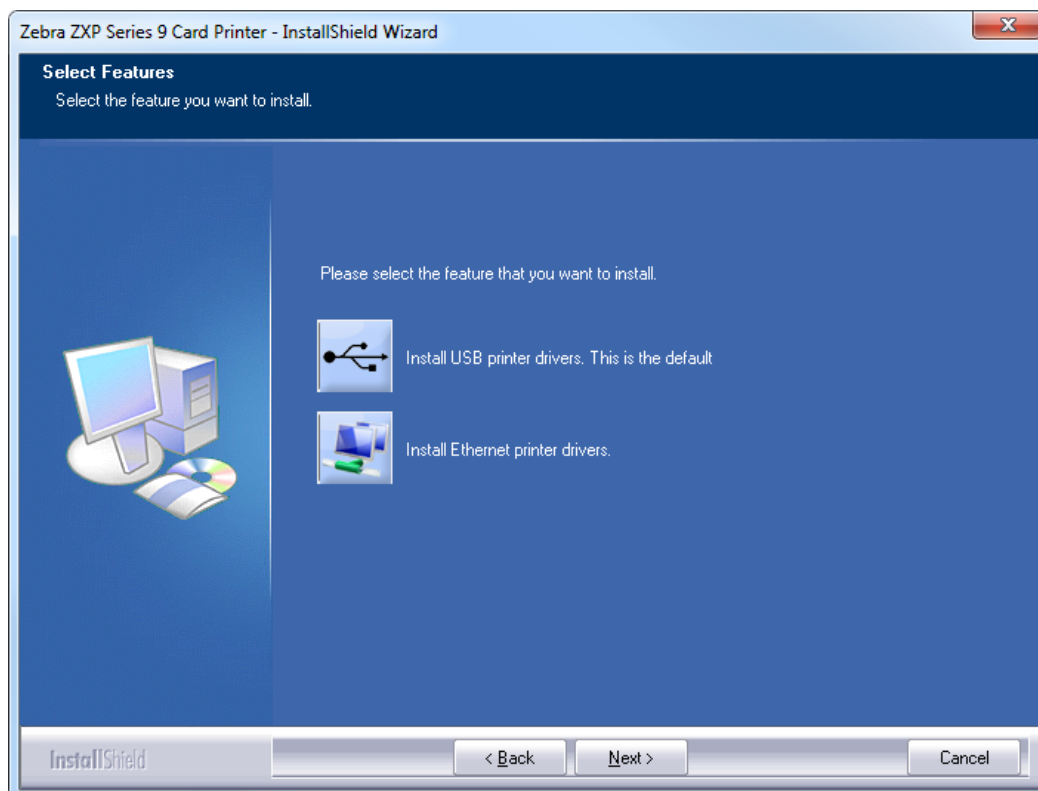
- Step 1.** If not already done, connect power to the printer.
- Step 2.** Connect the Ethernet cable to the printer and the appropriate port to connect to the host network.
- Step 3.** Turn the printer power ON ().
- Step 4.** Insert the User CD into host computer; the Main Menu will open.
- Step 5.** From the Main Menu, click **Install the Printer Driver**.



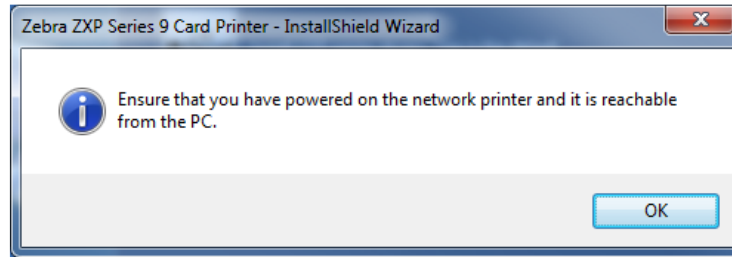
The InstallShield Wizard window will open and the Welcome screen will be displayed. To proceed with the installation, click the **Next** button.



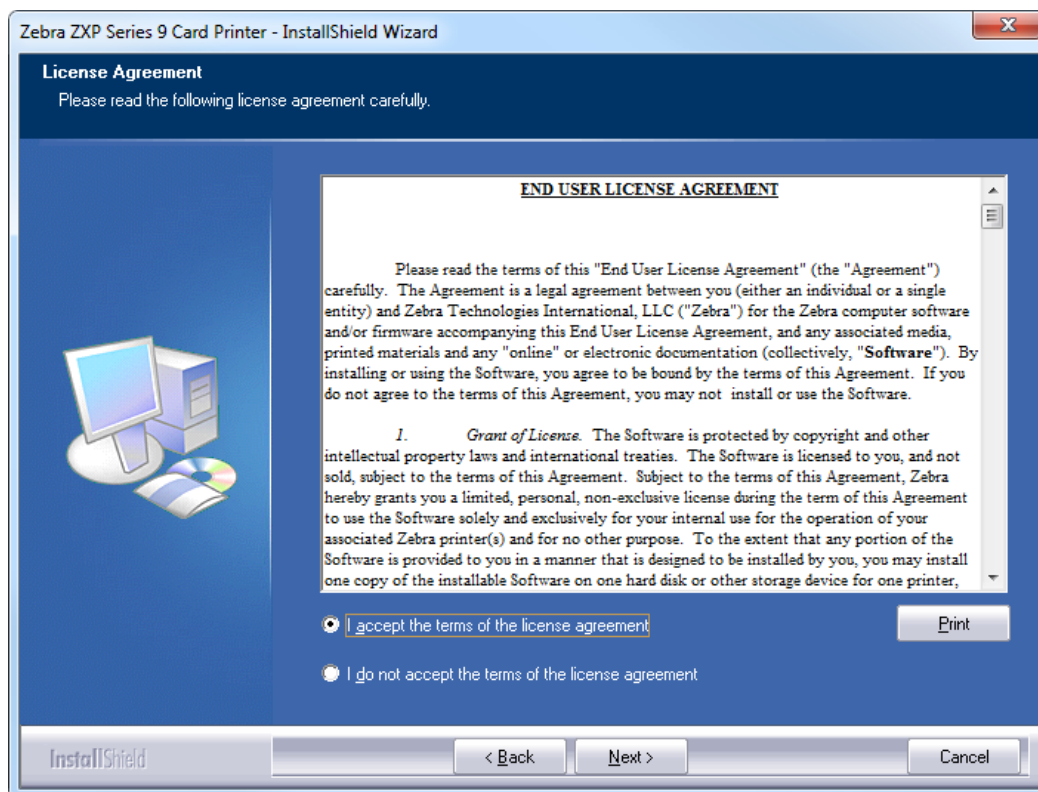
Step 6. Click Install Ethernet printer drivers.



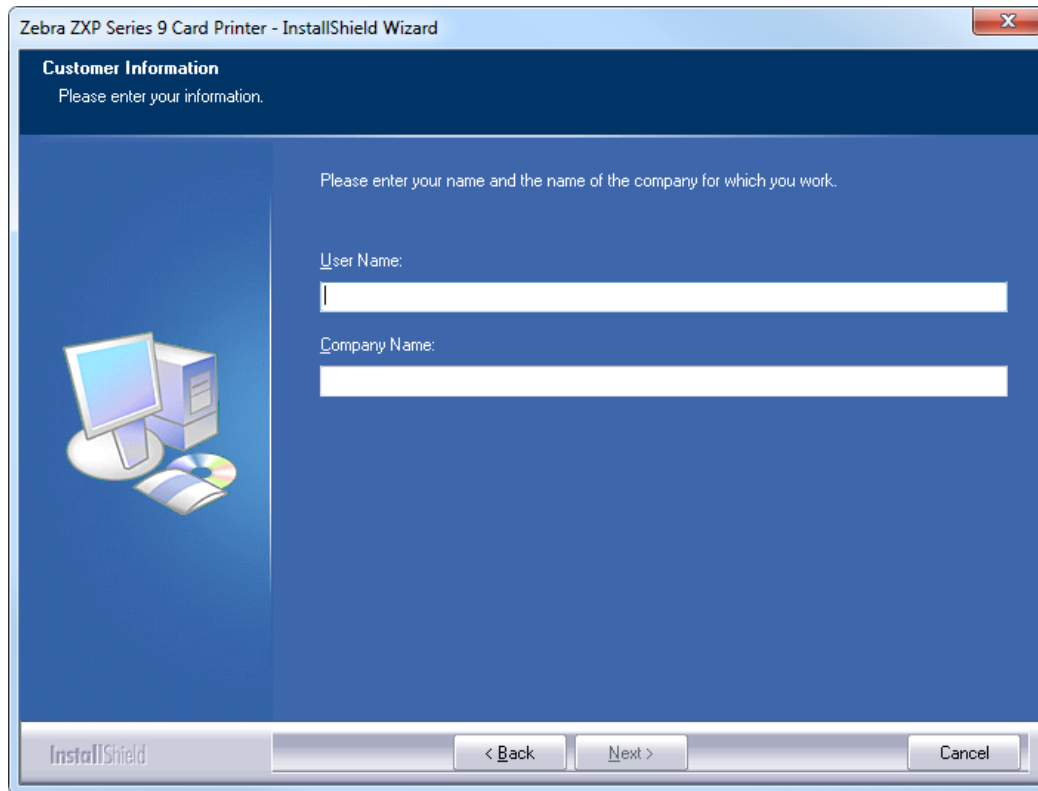
- Step 7.** Ensure that you have powered ON () the network printer and it is reachable from the PC; and then click the OK button.



- Step 8.** This will bring up the License Agreement window. To proceed with the installation, select radio button next to **I accept the terms of the license agreement** and click the **Next** button.



Step 9. This will bring up the Customer Information window; enter User Name and Company Name (if desired) and then click the **Next** button.



Zebra ZXP Series 9 Card Printer - InstallShield Wizard

Customer Information
Please enter your information.

Please enter your name and the name of the company for which you work.

User Name:

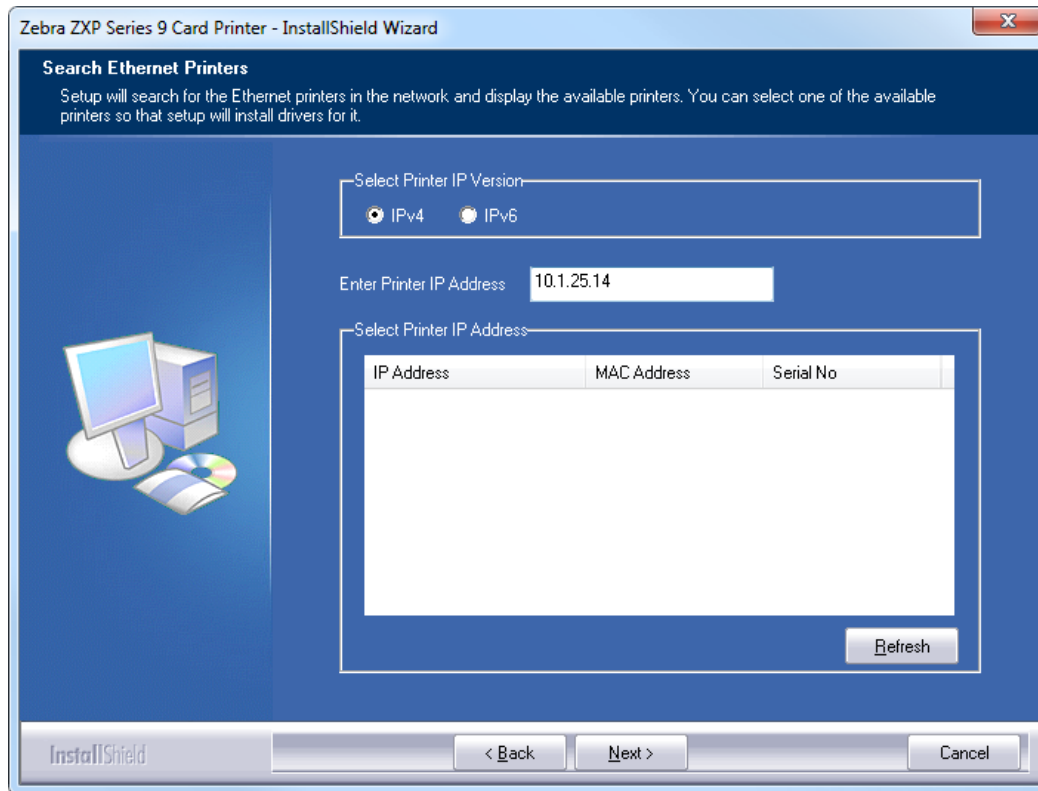
Company Name:

InstallShield

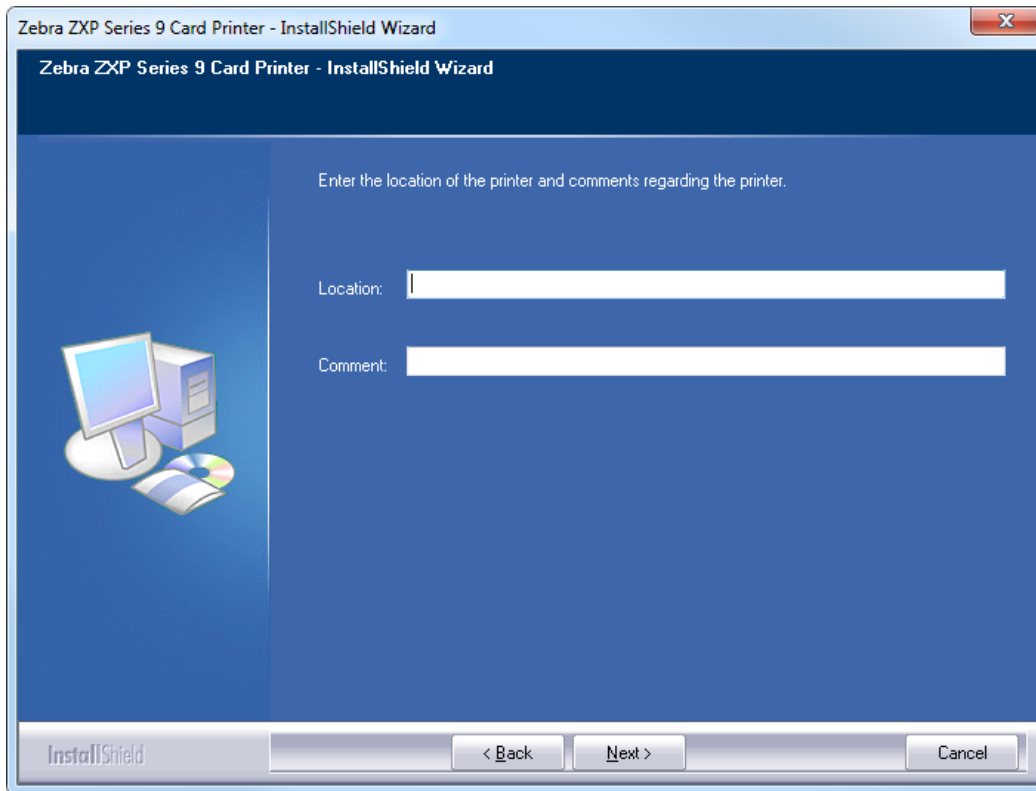
< Back Next > Cancel

Step 10. Setup will search for the printers connected to the network and display the available printers. Select the desired printer, and then click the **Next** button.

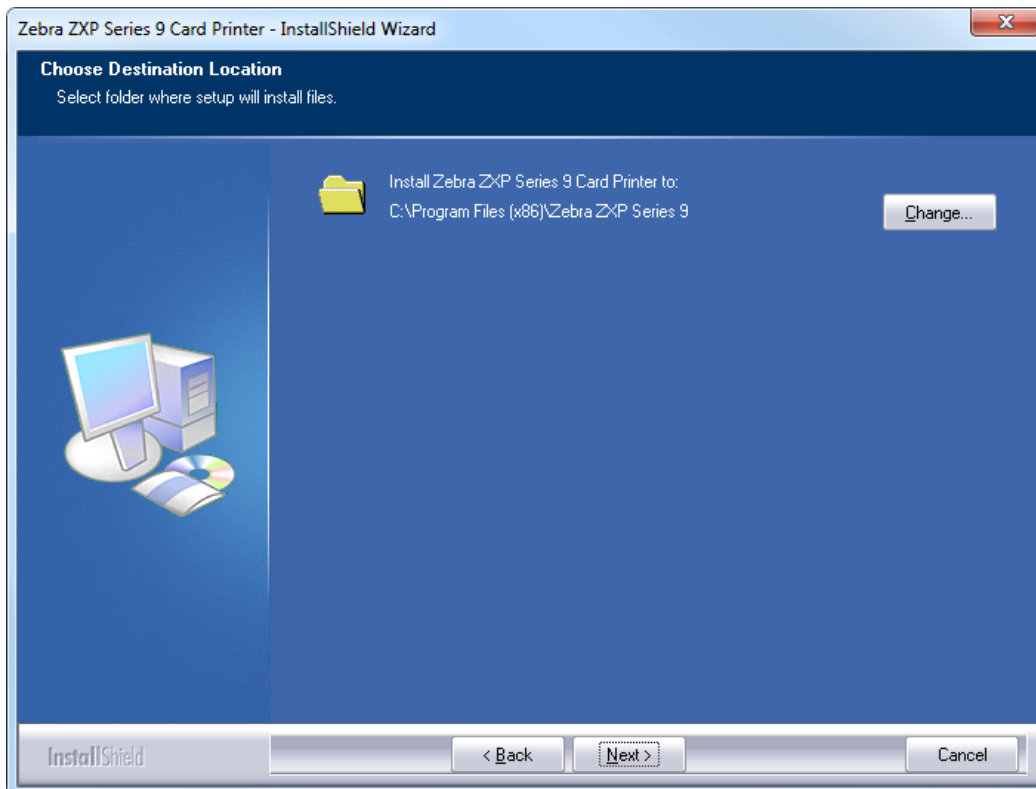
If the printer does not appear automatically, enter the IP Address of the printer and click the **Next** button.



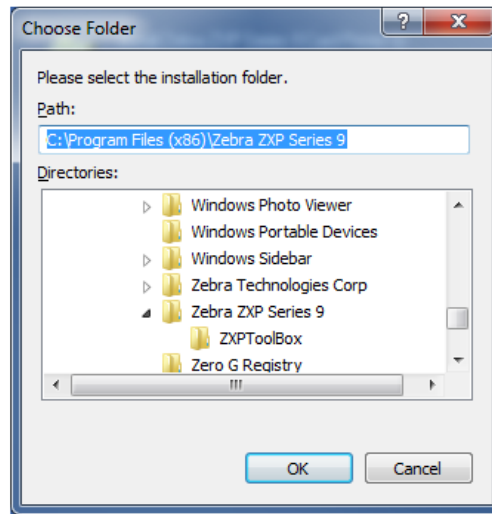
Step 11. Enter the location of the printer and any applicable comments, then click the **Next** button.



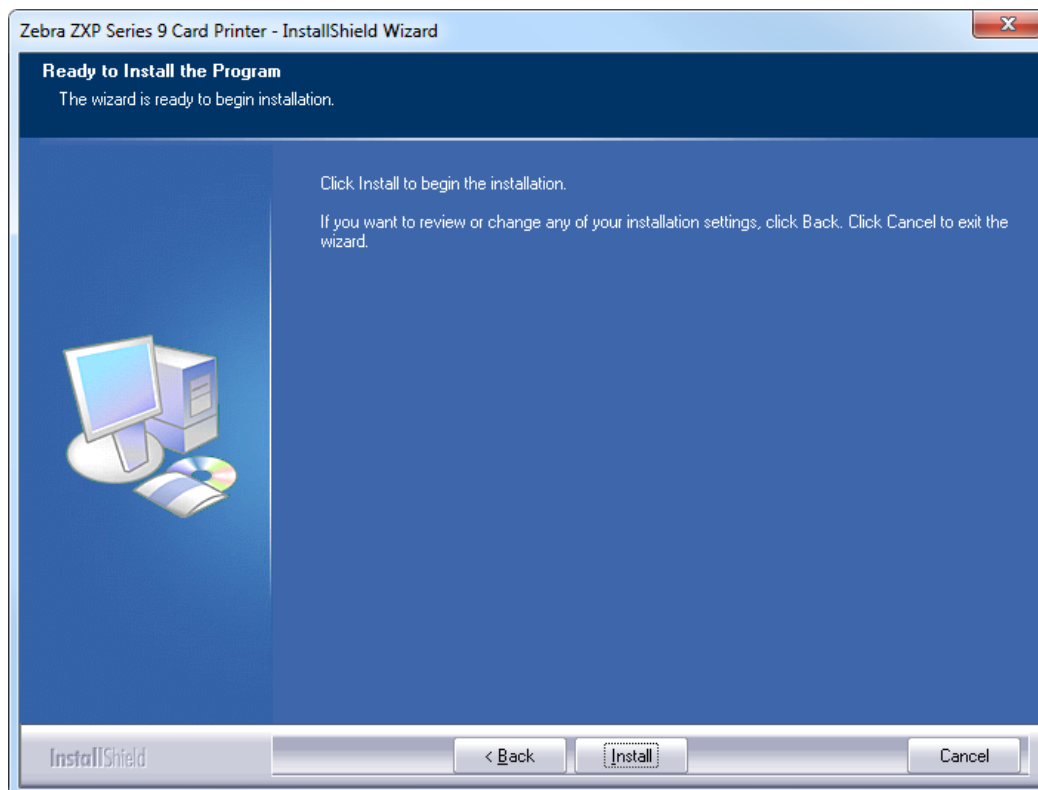
Step 12. This will bring up the Choose Destination Location window. To accept the default destination location where setup will install the files, click the **Next** button.



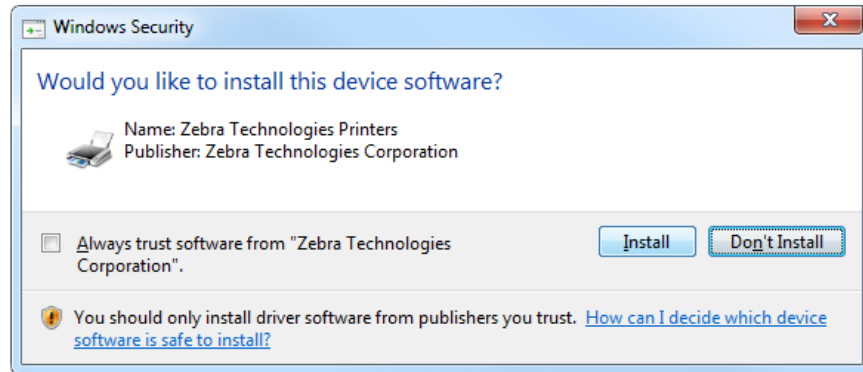
Step 13. To select an alternate destination location, click **Change** and navigate to the desired folder and then click **OK**. You will be returned to the Choose Destination Location window. Click **Next** to proceed.



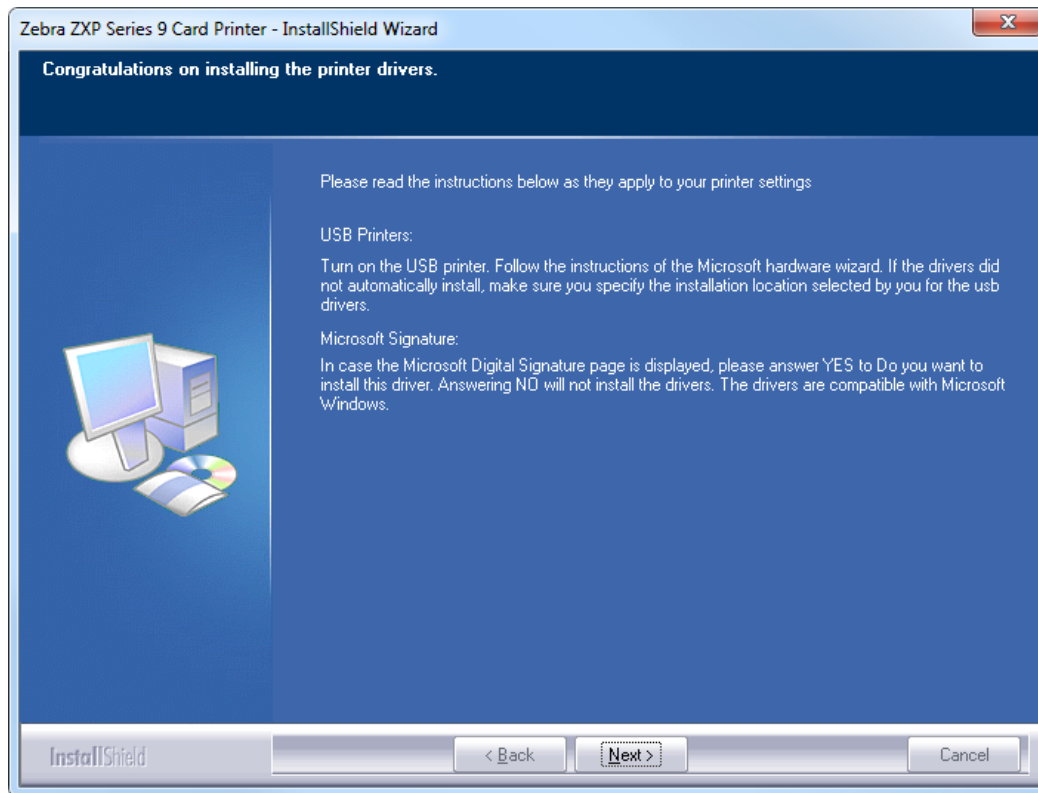
Step 14. This will bring up the Ready to Install the Program window. To continue, click the **Install** button.



Step 15. Depending on your company's policies, a Windows Security pop-up may appear. Click **Install** to continue with the installation.

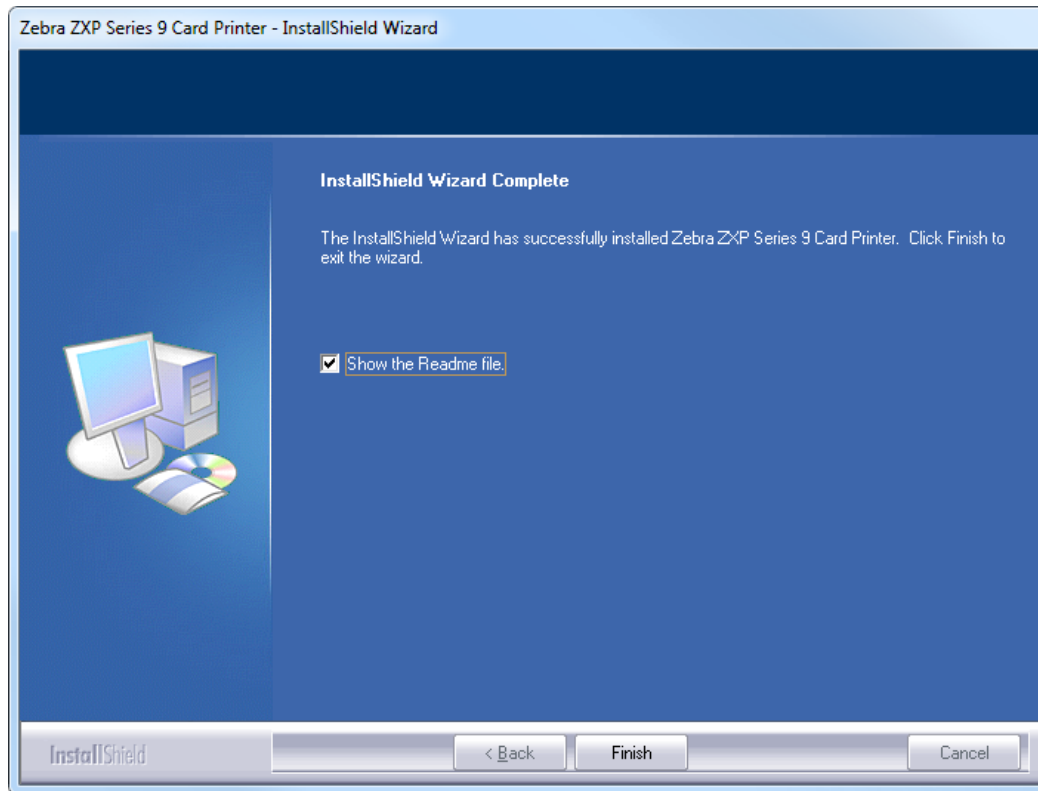


Step 16. The Congratulations window will appear with further instructions.



Step 17. At this point, turn on your printer; and then click the Next button. The Windows New Hardware Found wizard will find the printer.

When the InstallShield Wizard Complete window appears, select the Yes, I want to restart my computer now radio button; and click **Finish**.



This completes Ethernet driver installation.

To change any of the printer's settings (card type, orientation, etc.), encoding, and/or black panel settings, refer to Changing the Printing Preferences on page 78.

Modifying the Software

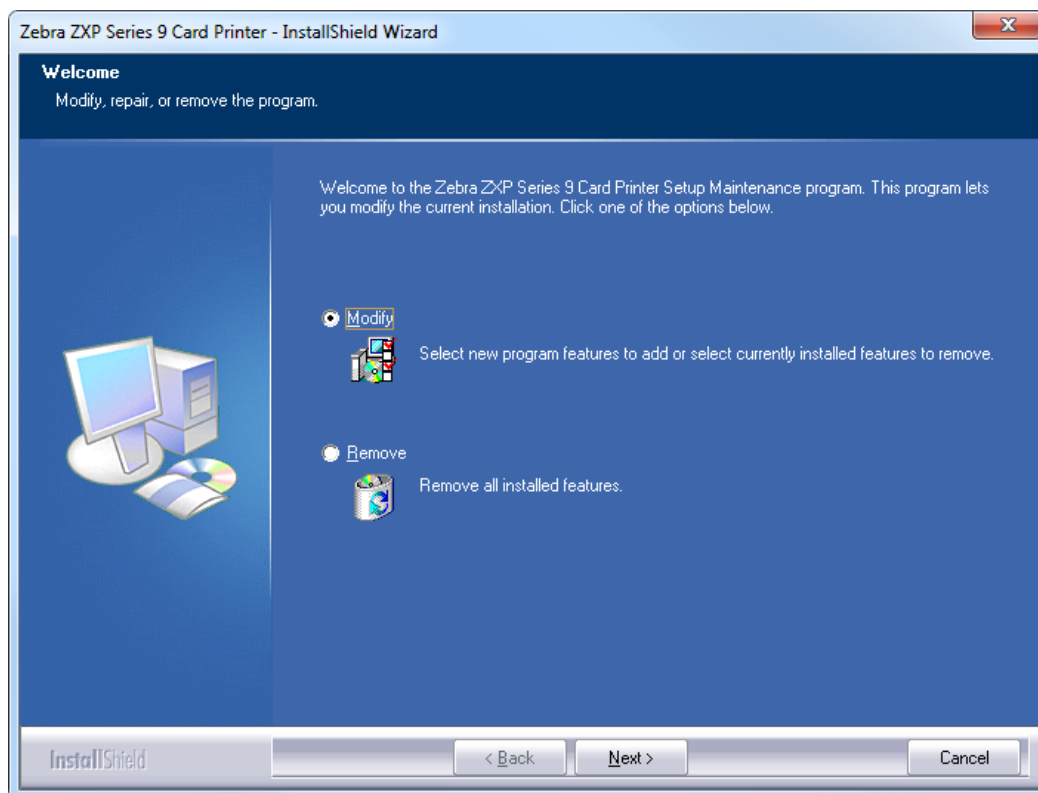
The CD that comes with the printer contains the latest driver software at the time of shipping.

It is recommended that the latest driver software be downloaded from the ZXP Series 9 support page at www.zebra.com/zxp9-info.

At any time after the printer software has been installed, it can be modified to add new features or when an update is available.

If installing from a downloaded update:

- Step 1.** Double-click on the installer icon.
- Step 2.** The Welcome screen will appear. Select the radio button next to **Modify** and then click **Next**.



The procedure following will be the same as installing a new USB or Ethernet printer.

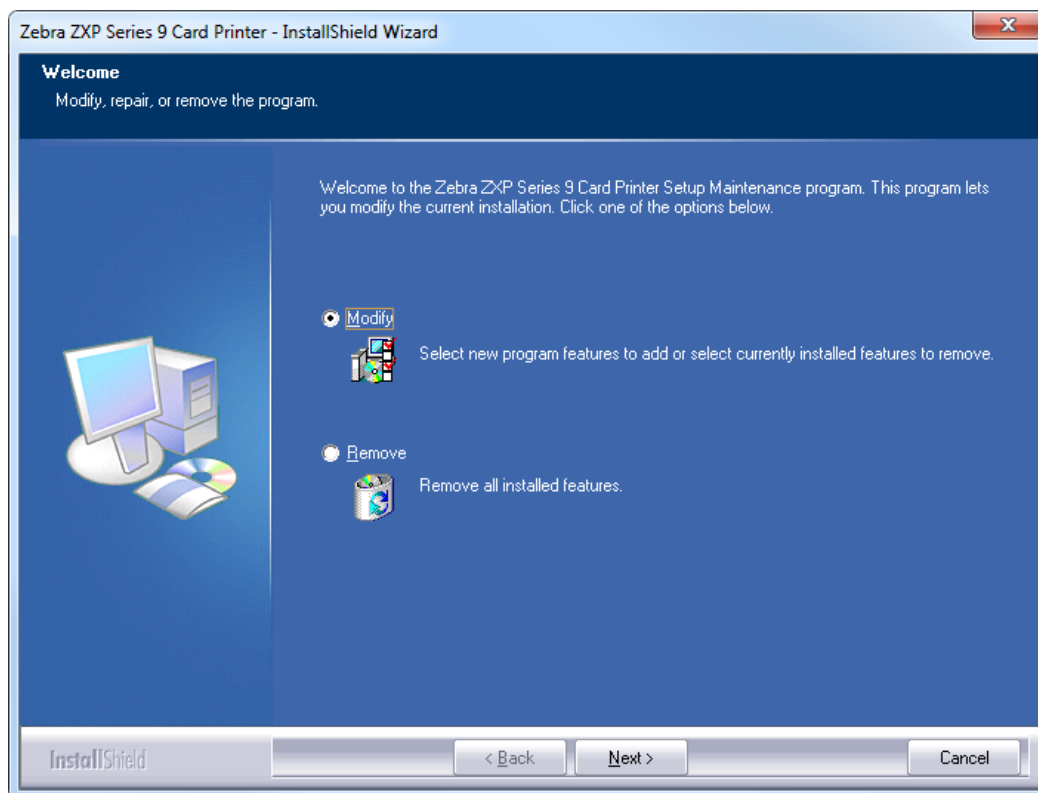
Removing the Software

The CD that comes with the printer contains the latest driver software at the time of shipping.

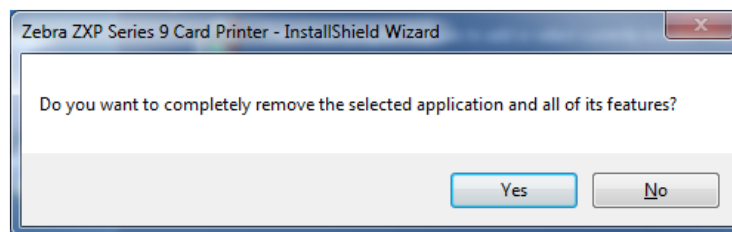
It is recommended that the latest driver software be downloaded from the ZXP Series 9 support page at www.zebra.com/zxp9-info.

At any time after the printer software has been installed, it can be removed from the host computer.

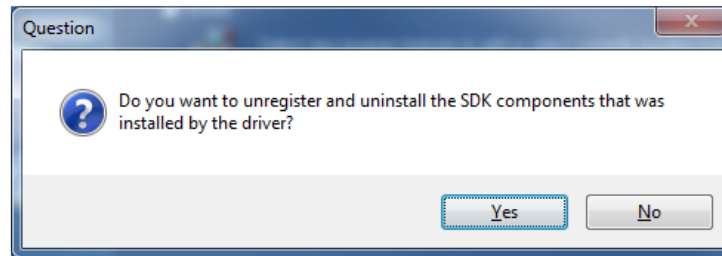
- Step 1.** Insert the User CD into host computer; the Main Menu will open.
- Step 2.** From the Main Menu, click **Install the Printer Driver**.
- Step 3.** The Welcome screen will appear. Select the radio button next to **Remove** and then click **Next**.



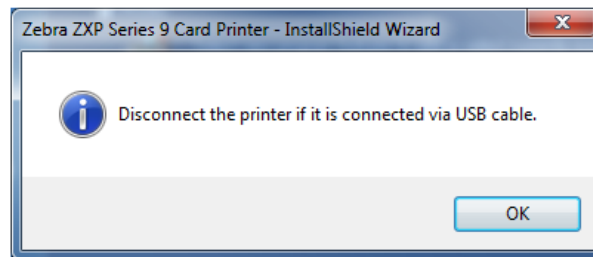
- Step 4.** You will be prompted to confirm the removal of the software; click **Yes** to proceed.



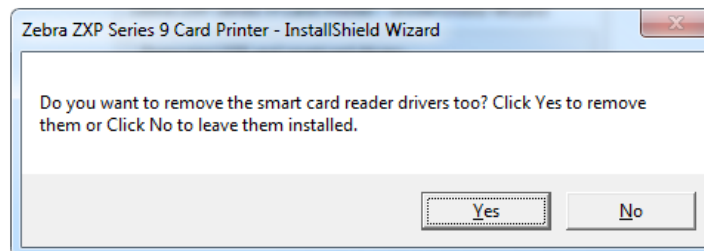
- Step 5.** You will then be prompted to remove the SDK components that were installed with software; click **Yes** to proceed.



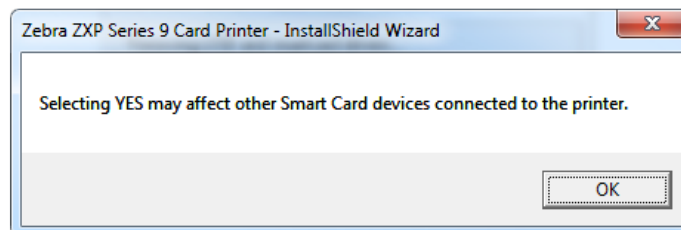
- Step 6.** You will then be prompted to disconnect the USB cable (if applicable); click **OK** to proceed.



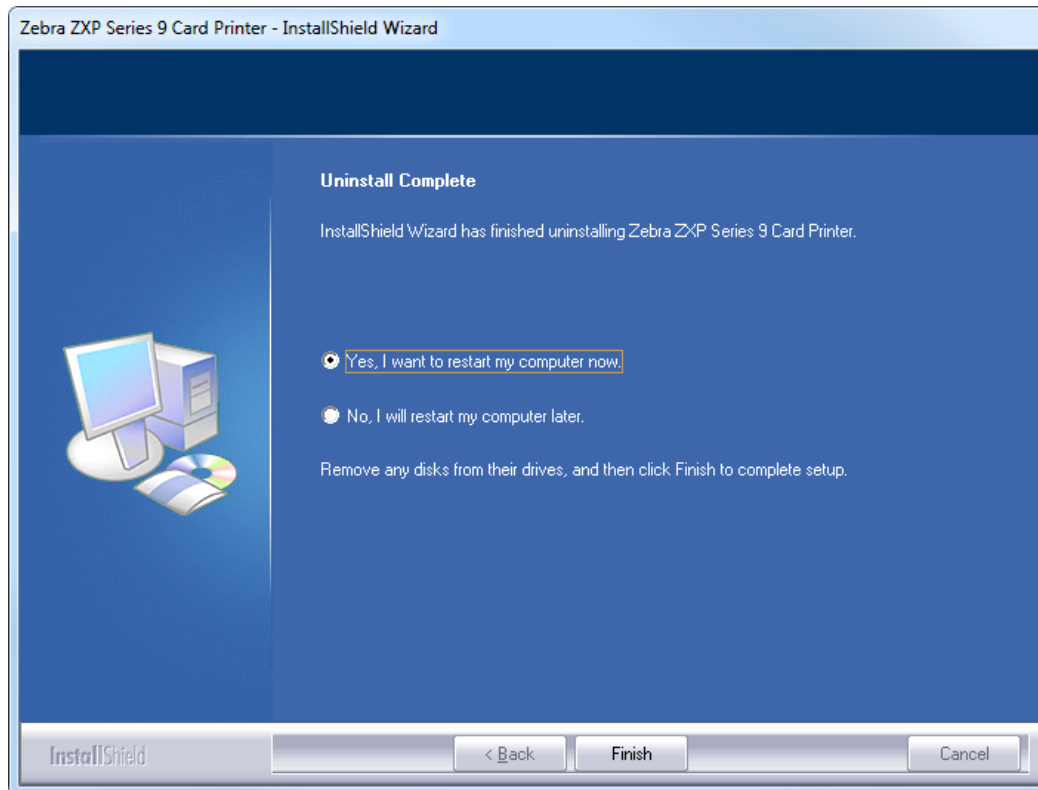
- Step 7.** The uninstall procedure will begin. You will then be prompted to delete the drivers for the smart card readers, click **Yes** to proceed.



- Step 8.** A confirmation dialog will appear, click **OK** to proceed.



- Step 9.** When the procedure has completed, you will be prompted to restart the computer. Select **Yes, I want to restart my computer now** and click **Finish** to complete the procedure and restart the computer. Or, select **No, I will restart my computer later** and click **Finish** to postpone restarting the computer and completing the removal process.



Printer Configuration

Printing Preferences

The Printing Preferences Control panel can be used to determine preferences such as which ribbon panels will be used to print images on the card, what card type will be used, where the card comes from (i.e., the input hopper or the manual feed slot) and its destination. It is also used to make adjustments to colors and black panel quality.

The following tabs are included in the Printing Preferences Control Panel:

- Card Setup Tab
- Encoding Tab
- Black Panel (K) Optimization Tab
- Color (YMC) Optimization Tab
- About Tab

The **Restore Defaults** button sets the printing preferences back to factory settings.

The **OK** button applies the settings and closes the Printing Preferences Control Panel.

The **Cancel** button closes the Printing Preferences Control Panel without applying the changes made.

The **Apply** button makes (or applies) the changes. The Printing Preferences Control panel remains open.

The **Help** button shows this help content.

To open the Printing Preferences Control Panel:

- Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.
- Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.
- Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Card Setup Tab

The Card Setup tab enables the user to adjust selected card and print job parameters, print test cards, and select options for the laminator (if installed).

Card options

The **Card Source** selection lets the user tell the printer where to take the card from. For example, if a single card needs to be printed that is different from the number of cards in the input hopper, the user can select to manually feed a single card to print on.

The following selections are available in the Card source drop-down list:

- Single card feed slot – enables the user to feed individual cards, bypassing the input hopper.
- Card feeder (default) – tells the printer to take the cards from the input hopper.
- Already in printer – for third-party applications that use this feature.

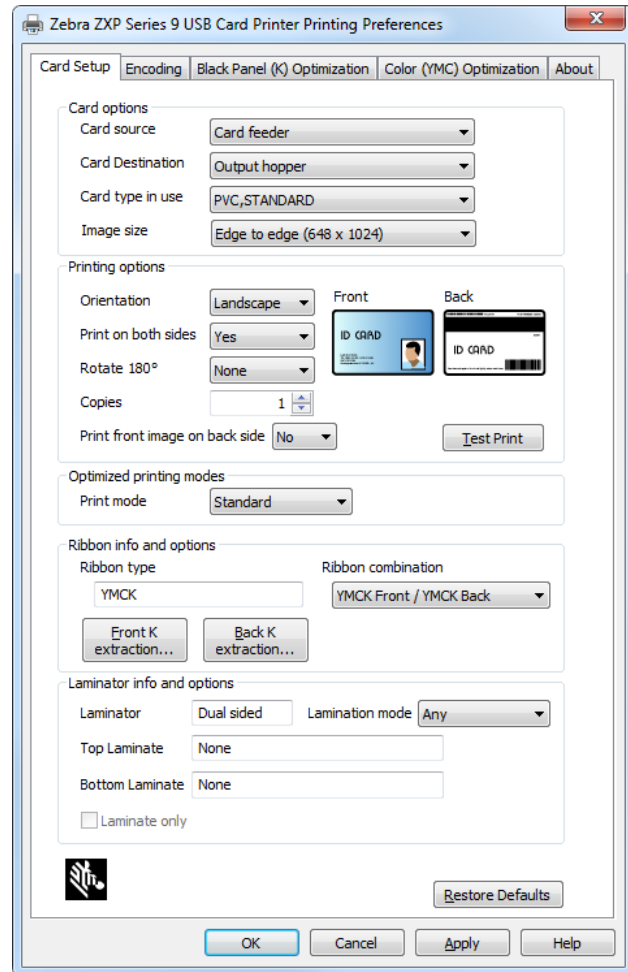
The **Card Destination** selection lets the user tell the printer where to send the finished cards. In some cases, it may be necessary to send the finished card to the reject tray under secure conditions (if the printer lock is installed).

The following selections are available in the Card Destination drop-down list:

- Output hopper (default) – this sends the finished cards to the output hopper attached to the left side of the printer or laminator.
- Reject tray – this option sends the finished cards to the reject tray which is accessible by opening the printer cover.
- Leave in printer – for third-party applications that use this feature.

The **Card type in use** selection enables the user to specify the type of card being used. Based on the selection, the printer automatically adjusts transfer roller temperature, input and output transfer speed, and temperature offsets for optimum print quality. Supported card types are:

- PVC, Standard
- PVC, Mag Stripe
- PVC, Contactless SC
- PVC, Contact SC
- Composite, Standard
- Composite, Mag Stripe



When a predefined card type is selected, the Card Specifications window is shown. This window contains information regarding the transfer temperatures and print speeds defined for that card.

If none of the provided card types matches the actual user card type, or the user is unable to achieve desired results using any of the predefined card types, then custom parameters can be specified using the Custom 1 and Custom 2 selections. For further detail on creating custom cards, please refer to [“Setting Custom Card Specifications” on page 147](#).

For help setting the custom card specifications for your card type, contact the Zebra Card Testing Service at 866-569-9086 (Toll Free), or cardtestingservice@zebra.com.

The **Image size** selection enables the user to specify how much of the card to be printed on. By default, the ZXP Series 9 Card Printer prints on the entire surface of the card. In some cases, it may be necessary or desired to leave an unprinted border on the card – the Image size selection accommodates this too. Note that the image size is expressed in pixels.

The following selections are available from the Image size drop-down list:

- Edge to edge (648 x 1024) – this selection prints over the entire surface of the card.
- P640i Compatibility (578 x 952) – this selection leaves an unprinted border around the card.

Printing options

The **Orientation** selection tells the printer to print in either Landscape (horizontal) or in Portrait (vertical) depending on the design or the desired use of the card. Note that the printing orientation cannot be mixed; in other words, you cannot print portrait on the front and landscape on the back.

The following selections are available from the Orientation drop-down list:

- Landscape – prints the image horizontally (suitable for cards equipped with a mag stripe).
- Portrait – prints the image vertically.

The **Print on both sides** selection tells the printer to print double-sided.

The following selections are available from the Print on both sides drop-down list:

- Yes – prints on both sides of the card.
- No – prints on just the front side of the card.

The **Rotate 180°** selection tells the printer to rotate the image on the card 180° (degrees). Use this option if you want the images to be oriented the same way depending on how the card is flipped over.

The following selections are available from the Rotate 180° drop-down list:

- None – does not rotate the image(s).
- Front – only rotates the image on the front of the card.
- Back – only rotates the image on the back of the card.
- Both – rotates the image on both the front and the back of the card.

The **Copies** selection specifies the number of cards to be printed. Click on the up or down arrow to increase or decrease the number.

The **Print front image on back side** tells the printer to put the image that is printed on the front of the card, on the back of that card as well. Selecting yes will override any image to be printed on the back side (i.e., a barcode or other image specified for the back).

The following selections are available from the Print front image on back side drop-down list:

- Yes – prints the front image on the back side of the card.
- No – does not print the front image on the back side of the card.

Optimized printing modes

The **Print Mode** selection enables the user to choose whether to print high-quality cards, or print faster. Choosing to print higher quality slows the print job but looks better; while choosing print speed makes the print job go faster, but sacrifices image quality.

- Standard – configures the printer to produce cards much faster, but at a lower print quality.
- Fine – configures the printer to print higher quality images, but at a slower print speed.

Ribbon info and options

A variety of ribbons are available for use with the ZXP Series 9 Card Printer.

For example, the YMC ribbon prints yellow (Y), magenta (M), and cyan (C) on the front and the back (if the printer is double-sided). The YMCK ribbon prints yellow, magenta, and cyan on the front of the card, and black on the back of the card (if the printer is double-sided).

The YMCKI ribbon is for use with mag stripe cards, and will print yellow, magenta, and cyan on the front of the card, and black on the lower half of the back—avoiding printing over the mag stripe.

The YMCUvK ribbon adds a layer of ultra-violet (Uv) to print invisible images (text or graphics) that will glow in the visible spectrum when exposed to a Uv light.

The printer will recognize the type of print ribbon installed and display it in the **Ribbon type** field of the Printing Preferences Control Panel Card Setup tab, and (as shown in the following figure) will make available the ribbon combinations from the **Ribbon combinations** drop-down menu. Additionally, selecting Yes or No (double- or single-sided, respectively) from the **Print on both sides** drop-down list will affect the available ribbon combinations.

The table below shows the supported print ribbons and their respective combinations for single- and double-sided printing.

Ribbon	Print on both sides	Ribbon Combinations
YMCK	No	YMCK
	Yes	YMC Front / K Back YMCK Front / YMCK Back
YMCKK	No	YMCK Front
	Yes	YMCK Front / K Back YMCK Front / YMCK Back
YMCKI	No	YMCKI Front
	Yes	YMC Front / KI Back
		YMCI Front / K Back
		YMCKI Front / YMCKI Back

Ribbon	Print on both sides	Ribbon Combinations
YMCKKI	No	YMCKI Front
	Yes	YMCK Front / KI Back
		YMCKI Front / K Back
		YMCKI Front / YMCKI Back
YMCUvK	No	YMCUvK Front
	Yes	YMCUv Front / K Back
		YMC Front / UvK Back
		YMCUvK Front / YMCUvK Back
YMC	No	YMC Front
	Yes	YMC Front / YMC Back
K (Monochrome)	No	K Front
	Yes	K Front / K Back

The **Front K extraction** and **Back K extraction** buttons will become active when the ribbon type and ribbon combination supports a black (K) panel for both the front and back (e.g., a YMCKK ribbon type and a YMCK Front/ K Back ribbon combination).

The **Black Panel Options** window enables the adjustment of the black (K) panel when the installed ribbon type is equipped with a K panel on the same side as the YMC panels (e.g. YMCK Front / K Back).

The Black Panel Options for the front and back are the same.

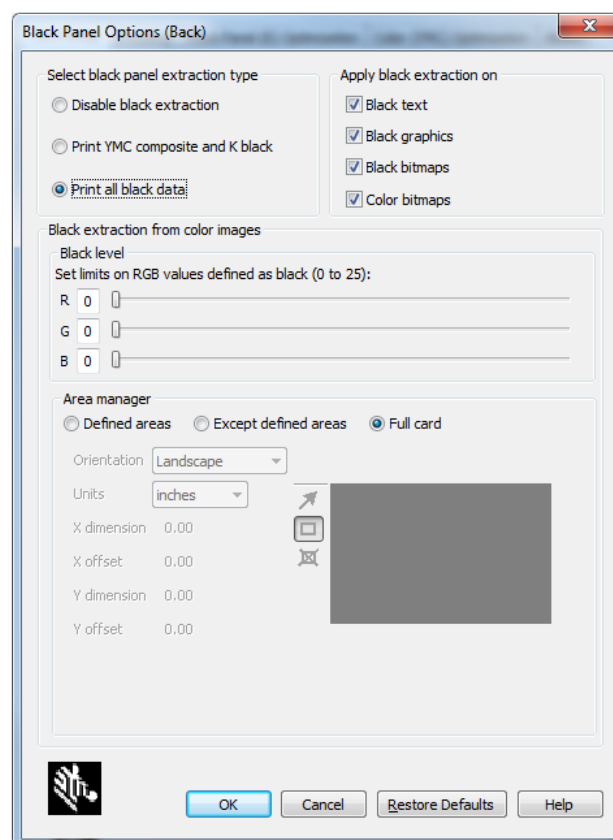
To print black during the print process, equal amounts of process colors Y, M, and C (printer ribbon panels) are delivered, with maximum intensity, to create a near-black image.

However, this “composite” image appears as a dark shade of gray and may not be suitable for elements such as barcodes. For example, a visually-black barcode printed with Y, M and C will not be detectable by most barcode readers and is not a true visible black color.

The remedy for this is to “extract the black.” In other words, print the same text, graphics, or barcode, using the K (black) panel, on top of the YMC barcode. (You can also choose to print only in K, omitting YMC from that region.)

Depending on the application used to design the card layout, different elements of the card image may be identified in different ways to the printer driver. The printer driver needs to recognize four types of basic elements:

- Black text
- Black (monochrome) graphics—lines, circles, rectangles, and area fills



- Black monochrome bitmap images
- Color bitmap images

These elements may not always be sent to the driver as expected. For example, a barcode may be sent as black text, a series of black area fills, or a black monochrome bitmap. Results will depend on the application used to create the card design. Another variable, again controlled by the card design application, is the precedence (stacking order) of the various element types in the event that one or more of them overlap.

If the printer is set up to print both YMC and K on the same side, text, lines and pixels, area fills and monochrome bitmaps—if (and only if) designated black by the application—can be directed to the K panel. For this to happen, the graphic type in question has to be selected on the “Black Panel (K)” tab. For text, lines and pixels, area fills and monochrome bitmaps the designation “black” is set at RGB values of 0,0,0. This threshold can be adjusted up to 25,25,25, with the Black level slider adjustment. Near-black doesn’t qualify.

In the Black Panel (K) tab, the “element selection” portion is straightforward—simply designate any or all of these three graphic types to be printed in K, either K alone, or over process black (YMC).

In the Black Panel (K) tab, the “element selection” portion is straightforward—simply designate any or all of the three graphic types to be printed in K, either K alone, or over process black (YMC).

Black extraction is quite different. It applies only a fourth graphic type – the color bitmap image. To perform black extraction, the driver generates a K image by looking for black features (pixels) in the color bitmap, that is, instances where all three YMC values are at, or close to, the maximum (full intensity). Each such true-black or near-black instance generates a corresponding cluster of black pixels in the extracted image, which will be printed with the K (black) panel either on top of the YMC image, or replacing it entirely – your choice.

A problem that can arise when K is extracted from an entire card image is over-emphasis of every black cluster; e.g., dark hair in a portrait photo or scenic background. K overprinting in such areas can be displeasing. To deal with this, set up exclusion zones within which no extraction is performed. Six such areas are provided for on each side of the card, independently. In the default state, all areas are null (0,0 offsets, and zero size).

To extract black areas from color images (use the K panel instead of the Y, M, and C panels), several selections must be made:

Select black panel extraction type

- Disable black extraction – does not use the K panel for any part of the image. This selection will have the effect of rendering all black images as YMC composite.
- Print YMC composite and K black – uses both the K panel and the Y, M, and C panels to print the portions of the image that are identified as black. This selection will result in a dark, black image; but the edges will be smooth (due to YMC printed under the K), not the sharp edges typically desired for a barcode.
- Print all black data – uses only the K panel to print the portions of the image that are identified as being black. Note that the areas that are identified as black are based on the threshold selections made in the black level area in the black extraction from color images area; see Page 84.

Apply black extraction on


- Black text – applies black extraction to areas of the image identified as text; e.g., company name, address.
- Black graphics – applies black extraction to areas of the image identified as graphics primitives; e.g., lines, circles, rectangles, area fills, etc.
- Black bitmaps – applies black extraction to areas of the image identified as monochrome data in a bitmap; e.g., logos.
- Color bitmaps – applies black extraction to areas in color images identified as monochrome data.


Black extraction from color images


Every dot of a printed image has an RGB color value that ranges from 0, 0, 0 (pure black) to 255, 255, 255 (pure white). The **Black level** setting allows the user to specify the threshold value for any given dot to be treated as black. The maximum setting is 25, 25, 25.

The **Area Manager** is used to define an area on the card to exclude from black panel printing.

- Defined areas – extract inside the zone
- Undefined areas – extract outside the zone
- Full card – extract the entire side of the card
- Orientation– sets the image orientation to either Portrait or Landscape.
- Units – sets the units to either inches or mm (millimeters). The X-dimension, X-offset, Y-dimension, and Y-offset reflect these units.

To create a zone: Select the rectangle icon , click on an area of the image to establish the first corner of the zone, drag the cursor until the zone is the desired size and shape, then release the mouse button. Note that multiple zones can be defined.

To select, move, or resize a zone: Select the arrow icon , click on a zone to select it, then drag it to move it, or drag on the edges to resize it.

To delete a zone: Select the rectangle icon with an “X” through it , then click on the zone that you want to delete.

The **Front Uv** and **Back Uv** buttons will become active when the ribbon type and ribbon combination supports a Uv panel for both the front and back (e.g., YMCUvK ribbon type and a YMCUv front / K Back ribbon combination).

The Uv Panel enables the adjustment of the ultra-violet (Uv) panel when the installed ribbon type is equipped with a Uv panel on the same side as the YMC panels (e.g., YMCUv front / K back). The Uv Panel is used to print invisible images (text or graphics) that will glow in the visible spectrum when exposed to a Uv light.

Select the Uv type

- Disable Uv Print – Disable Uv Print does not print the Uv panel. This is the default.
- Bitmap based Uv Print – Bitmap based Uv Print enables you to import a bitmap image to print on the Uv panel (e.g., import a security seal).

- Uv image area extraction – Uv image area extraction prints a specified image with the Uv panel in zones specified in the Area Manager. Unless you select the Extract Uv from current image checkbox, you must provide two images, the second of which is the Uv image, as part of the print job.

Uv printing options

- Rotate 180° – rotates the bitmap image 180°.
- Double pass – prints the Uv image on a second transfer film panel and applies it to the card, over the first transferred image. This option increases the visibility of the Uv image but uses twice the transfer film.
- Grayscale – prints the bitmap image as a grayscale image, which is composed of shades of gray, varying from black to white.
- Halftone – prints the bitmap image as a halftone image, which simulates continuous tone imagery through the use of dots, varying either in size or in spacing.

The **Security ID** option automatically prints a unique text value in a fixed location on a card using the UV panel.

Uv image extraction

This section is enabled when Uv image area extraction is selected from the Select the Uv type dropdown menu.

- Defined areas – extract inside the zone
- Undefined areas – extract outside the zone
- Full card – extract the entire side of the card
- Extract Uv from current image – extract based on the area defined by the image on the card.


Bitmap-based Uv Print


This section is enabled when Bitmap based Uv Print is selected from the Select the Uv type dropdown menu. This selection tells the printer to print a solid image using the Uv panel, such as a logo, a shape, or text that has been converted to a bitmap.


Area manager

This section is enabled when Uv image area extraction is selected from the Select the Uv type dropdown menu.

- Orientation– sets the image orientation to either Portrait or Landscape.
- Units – sets the units to either inches or mm (millimeters). The X-dimension, X-offset, Y-dimension, and Y-offset reflect these units.

To create a zone: Select the rectangle icon  , click on an area of the image to establish the first corner of the zone, drag the cursor until the zone is the desired size and shape, then release the mouse button. Note that multiple zones can be defined.

To select, move, or resize a zone: Select the arrow icon  , click on a zone to select it, then drag it to move it, or drag on the edges to resize it.

To delete a zone: Select the rectangle icon with an “X” through it  , then click on the zone that you want to delete.

The **OK** button saves any changes that have been made and closes the page.

The **Cancel** button cancels any changes that have been made and closes the page. The Restore Defaults button restores the default values for the page.

The **Inhibit Options** buttons will become active when the ribbon type and ribbon combination supports an inhibit panel for both the front and back (e.g., a YMCKI ribbon type and a YMC Front / KI Back ribbon combination).

The Inhibit Panel Options enables specifying areas on a card where transfer film is not to be placed (magnetic stripe, smart card chip, signature panel, or other non- printing areas of a card).

The Inhibit Panel Options for the front and back are the same.

Select the inhibit panel area

- Disable Inhibit – this is the default selection and will turn off the inhibit feature of the ribbon.
- Inhibit printing on magnetic stripe – places a no-print zone around the magnetic stripe area.
- Inhibit printing on smartcard contact – places a no-print zone around the smart card chip area.
- Custom file based inhibit area – enables inhibiting printing in a custom area.

Bitmap based inhibit panel area

This option is enabled when Custom file based inhibit area is selected from the dropdown menu.

The OK button applies and saves the settings.

The Cancel button exits the Inhibit pop-up window. Changes made are abandoned.

Laminator info and options

This feature applies only to printers with laminator.

The **Laminator** dialog shows the laminator configuration – single- or dual-sided.

The **Lamination Mode** selection tells the printer how to handle the card when it goes through the laminator.

- Default – sets the laminator into its default lamination mode.
- Top (for single- or double-sided laminators) – laminates only the top side of the card.
- Bottom (for double-sided laminators) – laminates only the bottom side of the card.
- Top and bottom (for double-sided laminators) – laminates both sides of the card.
- Pass through – sends the card through the laminator. This selection requires that the laminator cassette(s) be removed.
- Any – laminates whatever goes to it.

The **Top Laminate** dialog shows the type of laminate installed on the top laminator spindle

The **Bottom Laminate** dialog shows the type of laminate installed on the bottom laminator spindle.

When **Laminate only** is checked, the printer will ignore all other printing options and send the card through to the laminator.

Encoding Tab

The Encoding options enable the user to set various magnetic and smart card encoding options.

Magnetic encoding

Disable magnetic encoding prevents the printer from encoding a card, whether the job has magnetic encoding data in it or not.

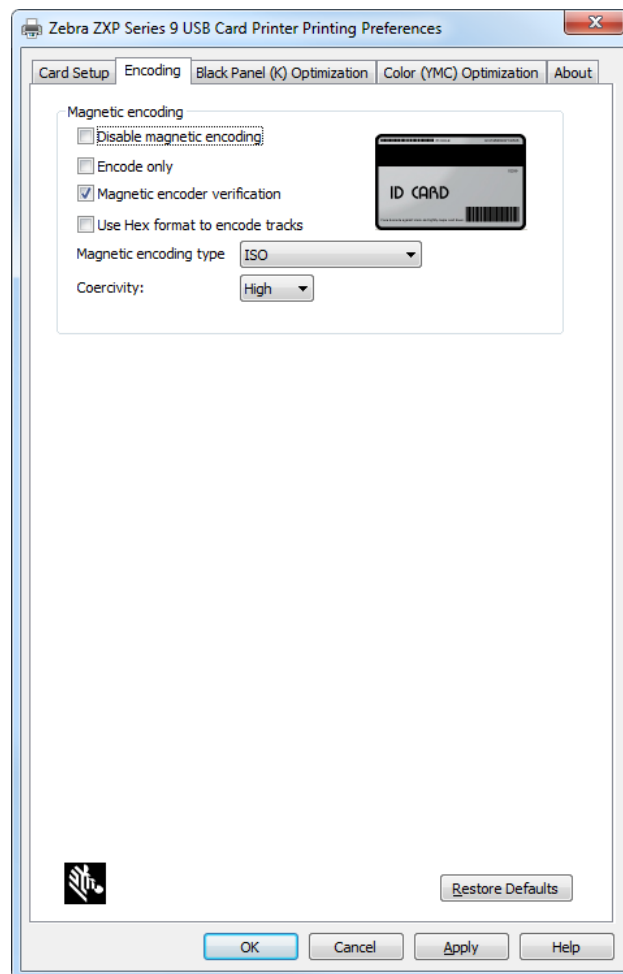
Encode only disables printing, whether the job has an image to be printed or not.

Magnetic encoder verification verifies the data that is written to the card before declaring the encoding action to be successful.

Use Hex format to encode tracks sends the data to be encoded in Hex format.

Magnetic encoding type specifies the parameters such as Bit Density and Start Sentinel that are used when encoding the card. ISO is the default and is the standard used for most cards. AAMVA is a standard used for Motor Vehicle cards. Custom and Binary are custom settings that are adjusted using the Magnetic Encoding section of the ZXP Toolbox; see Magnetic Encoding on page 97.

The **Coercivity** option is set automatically by the Card Type In Use selection made on the Card Setup tab. All other options are user-selectable.



Black Panel (K) Optimization Tab

The Black Panel (K) Optimization tab displays available options to optimize black panel printing for the type of image being printed.

The options for the Front and Back are the same.

Note • The selection that most closely matches the type of image you are trying to optimize for may not be the best selection. If the selection does not produce the desired results, experiment with the other selections. Further adjustments to the K panel can be made using the Advanced Settings in the ZXP Toolbox.

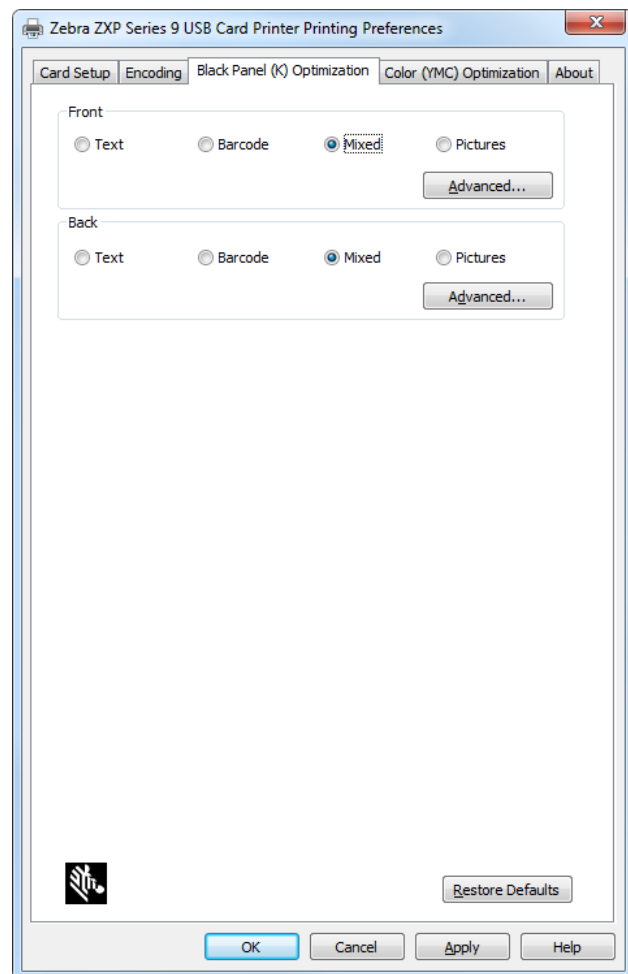
Front / Back

Selecting **Text** optimizes black panel printing to produce crisp, clear text.

Selecting **Barcode** optimizes black panel printing for sharp, pure-black barcodes that are easily read by scanners. For example, a visually-black barcode printed with Y, M and C will not be detectable by most barcode readers and is not a true Visible Black color.

Selecting **Mixed** will optimize black panel printing for both text and barcodes, or text and pictures, or other combinations.

Selecting **Pictures** optimizes black panel printing for bitmap images that need to appear as true black.



Advanced

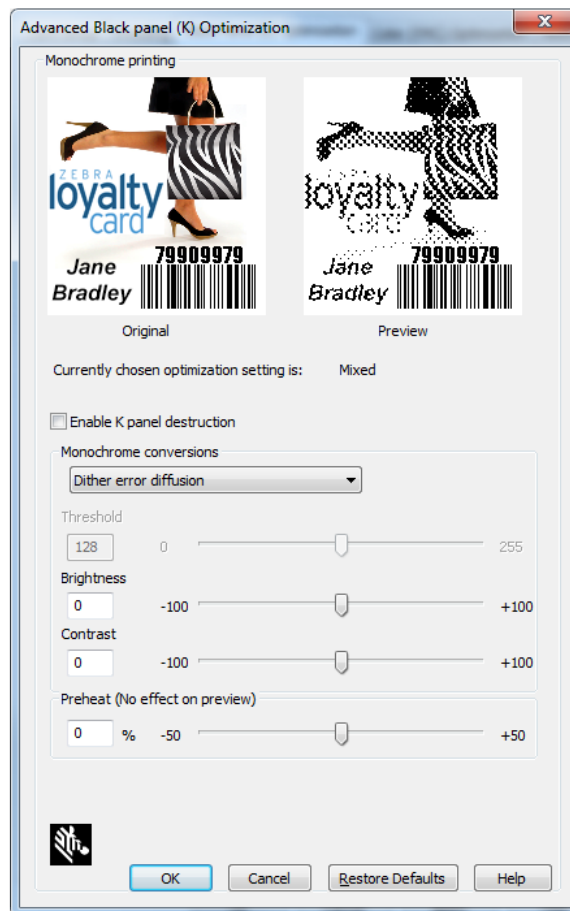
The Advanced window offers additional features for black panel optimization.

Selecting **Enable K panel destruction** will render the black panel unreadable. This is done for security purposes so a discarded ribbon cannot be gleaned for sensitive information.

Monochrome conversions

The monochrome panels in the ribbon can only print binary (pure on or off) images. Monochrome conversion is used to convert continuous tone 8-bit-per-pixel RGB or gray image content into binary 1-bit-per-pixel content.

- **Threshold** – This is the simplest method for converting from 8 bits per pixel to 1 bit per pixel. For example, the input pixel can be a value from 0 to 255. If the threshold is 128, any pixel over 128 becomes full on (1); and any pixel that is less than 128 becomes full off (0). This mode works best for text, barcodes, line art, logos -- everything except continuous-tone pictures. Use the slider to set the threshold value.
- **Dither error diffusion** – Error diffusion is used primarily where you have a full color (RGB image with 8 bits per pixel) or full gray (single color but still 8 bits per pixel) that you need to print with binary printing (can only print full-on or full-off; i.e., 1 bit per pixel). Typically preferred over halftoning for most images. Use the brightness and contrast sliders to adjust the levels to the desired output.
- **Dither 6x6 halftoning (mixed mode only)** – To simulate gray in graphics, halftones are used. Halftones are arrays of dots arranged in a grid (6x6) to represent each image pixel as a shade of Gray. For dark gray, more grid dots are black. For light gray, more grid dots are white.



Preheat

This function controls the intensity of the black panel image. The higher the value, the darker the image and vice versa. Values range from -50 to 50, default = 0

Color (YMC) Optimization Tab

The Color (YMC) Optimization options enable the user to adjust how the color images print—it does not affect the color images.

Full Color Printing

This **Original** image preview shows the look of the original image.

This image **Preview** shows how the image will look with the adjustments applied.

Brightness is an attribute of visual perception in which a source appears to be radiating or reflecting light. In other words, brightness is the perception elicited by the luminance of a visual target.

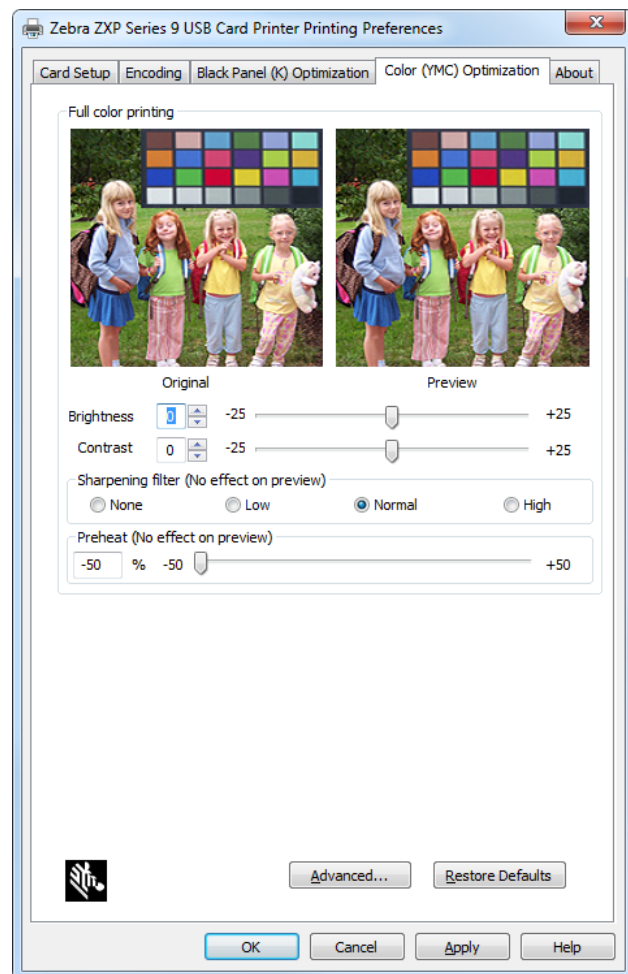
Contrast is the difference in luminance or color that makes an object (or its representation in an image or display) distinguishable. In visual perception of the real world, contrast is determined by the difference in the color and brightness of the object and other objects within the same field of view.

The **Sharpening filter** (not represented in Preview) is a powerful tool for emphasizing texture and drawing viewer focus. It's also required of any digital photo at some point — whether you're aware it's been applied or not.

Digital camera sensors and lenses always blur an image to some degree, for example, and this requires correction. However, not all sharpening techniques are created equal. When performed too aggressively, unsightly sharpening artifacts may appear. On the other hand, when done correctly, sharpening can often improve apparent image quality even more so than upgrading to a high-end camera lens (<http://www.cambridgeincolour.com/tutorials/image-sharpening.htm>).

- None – does not apply any sharpening to the image.
- Low – applies some sharpening to the image.
- Normal – (default) applies a degree of sharpening that, while noticeable, is not unsightly.
- High – applies a degree of sharpening that is noticeable and may seem unsightly. This can also be a purposeful effect.

The **Preheat** (not represented in Preview) function controls the intensity of the color panel image. The higher the value, the darker the image and vice versa. Values range from -50 to 50, default = 0



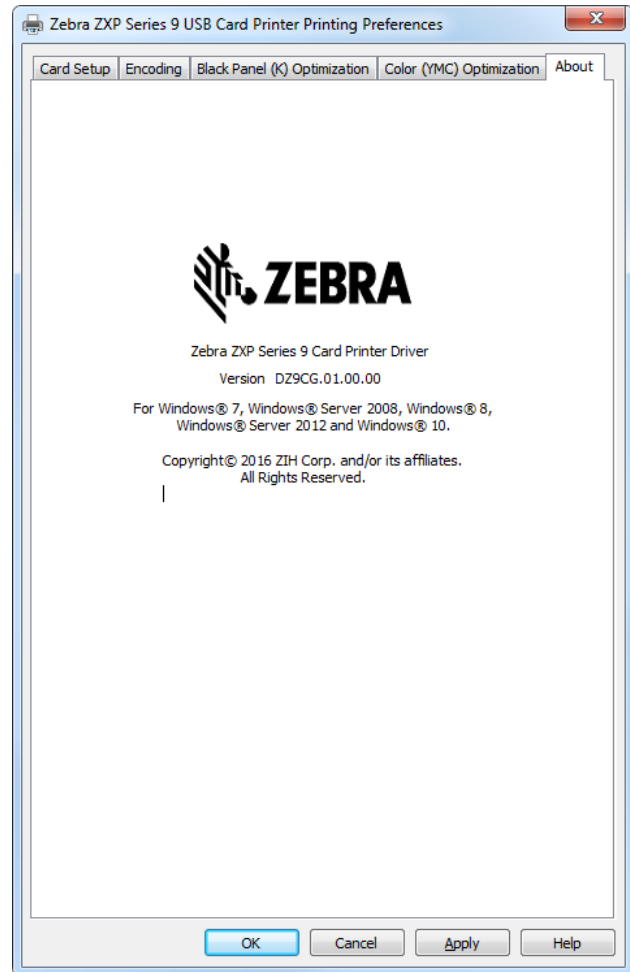
Advanced

- Gamma (mid-range darkness) -- defines the relationship between a pixel's numerical value and its actual luminance. Without gamma, shades captured by digital cameras wouldn't appear as they did to our eyes (on a standard monitor) (<http://www.cambridgeincolour.com/tutorials/image-sharpening.htm>).
- Saturation (vividness) -- defines a range from pure color (100%) to gray (0%) at a constant lightness level. A pure color is fully saturated. From a perception point of view saturation influences the grade of purity or vividness of a color/image. A desaturated image is said to be dull, less colorful or washed out but can also make the impression of being softer.
- Red – Adjusts the levels of red in the image.
- Green – Adjusts the level of green in the image.
- Blue – Adjusts the level of blue in the image.



About Tab

The About Tab shows the driver version, the supported operating systems, and the copyright.



Printer Properties

Card Printer Properties can be used to view the printer firmware/driver/hardware configuration and installed media, to access advanced settings via the ZXP Toolbox, and to set features such as security, ports, and color management.

The following tabs are included in the Printer Properties Control Panel:

- General Tab
- Sharing Tab
- Ports Tab
- Advanced Tab
- Color Management Tab
- Security Tab
- Device Information Tab

The **OK** button applies the settings and closes the Printing Preferences Control Panel.

The **Cancel** button closes the Printing Preferences Control Panel without applying the changes made.

The **Apply** button makes (or applies) the changes. The Printing Preferences Control panel remains open.

The **Help** button shows this help content.

To open the Printer Properties Control Panel:

- Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.
- Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.
- Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.

General Tab

Location lets you specify where the printer is located.

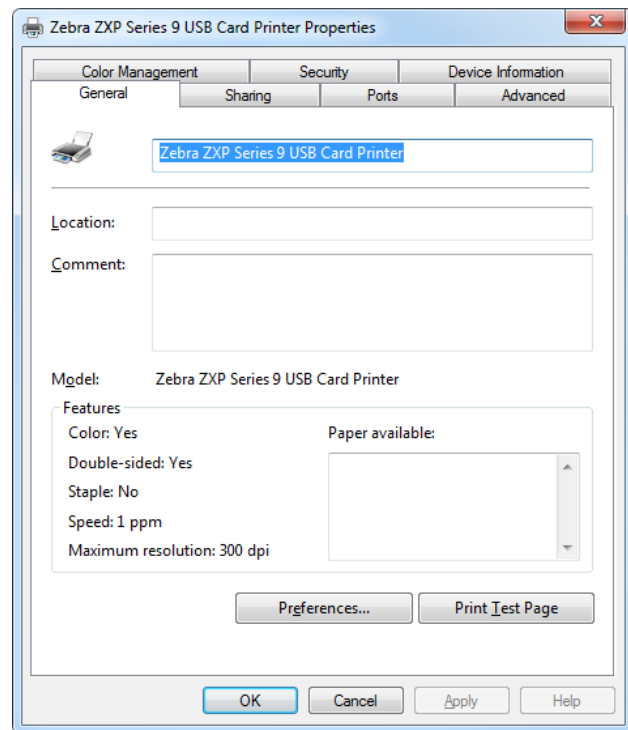
Comment lets you specify general information about the printer, such as the type of print device and who is responsible for it. Once set, these fields can be displayed by applications.

Model specifies the name of the printer driver installed.

Features specifies whether various options are available on the printer.

The **Printing Preferences** button opens the Printing Preferences control panel ([page 53](#)).

The **Print Test Page** button sends the standard Windows test page to the printer.



Sharing Tab

On the Sharing tab (Sharing Property Page), you can choose to share the printer over the network and install additional drivers to accommodate different operating systems.

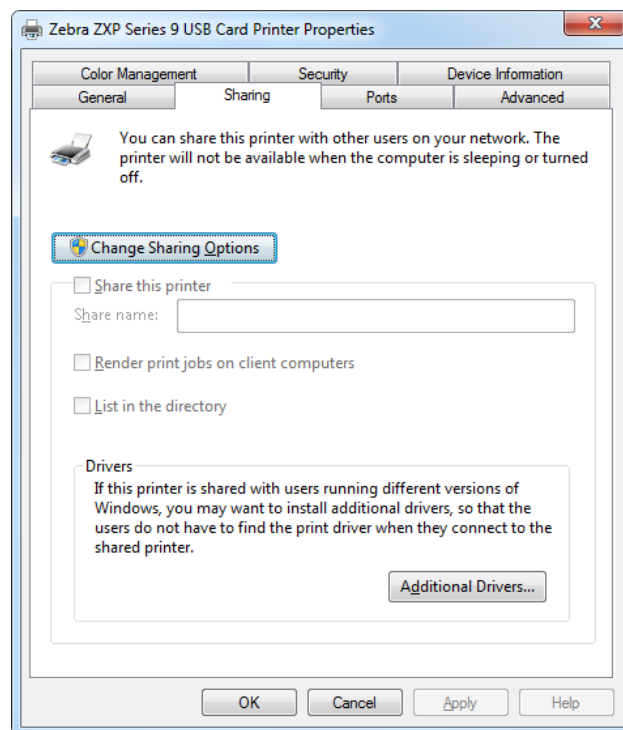
To share a printer, select **Share this printer**; and specify a name in the Share name field for the shared resource.

To change the shared name, simply enter a new name in the Share name field.

To quit sharing a printer, deselect **Share this printer**.

Render print job on client side check-box: This setting should be disabled if the host operating system is Windows Vista, Windows 7, Windows Server 2008, Windows Server 2008 R2, Windows 8, or Windows Server 2012.

Click on the **Additional Drivers** button if this printer is shared with users running different versions of Windows. Additional drivers can then be installed so that the users do not have to find the print driver when they connect to the shared printer.



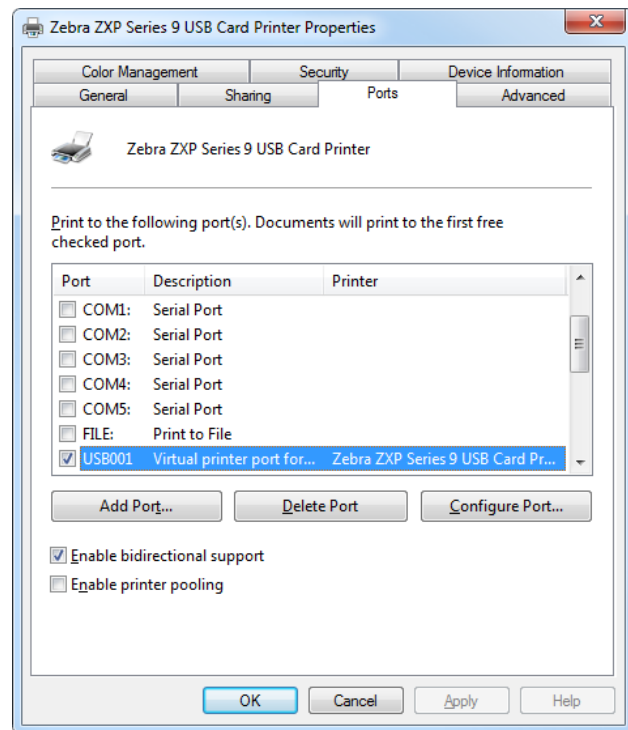
Ports Tab

Use the Ports tab to specify the computer port to which the printer is connected. This will have been established at the initial installation of the printer, and will not normally require attention.

An exception to this is if you wish to use printer pooling, the ability to distribute print jobs to multiple printers (see “[Printer Pooling](#)” on page 170 for details).

To enable printer pooling, check the **Enable printer pooling** box, then check the additional ports boxes. Each port should have a single Zebra printer installed on it. All the pooled printers must be identical models with the same configuration (e.g., all with YMC front, K back); and each must have its own printer driver installed.

Now, when you print to the “main printer” (that is, whichever printer you right-clicked in Devices and Printers to get to this screen), this printer will get print jobs until it has buffered as many jobs as it can take. Remaining jobs will then “spill over” to other printers until all printers in the pool are busy.



Advanced Tab

The Advanced tab determines the spooling (queuing) of print jobs and determines how spooled jobs are handled relative to the most recent job.

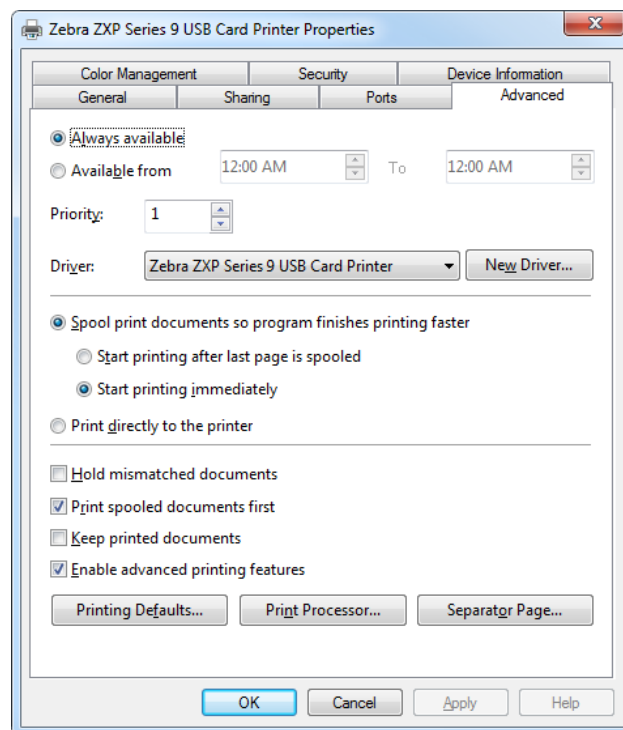
You can make the printer always available by selecting the Always available radio button, or you can limit availability by selecting the Available from radio button and specifying the “Available from” and “To” times. Click the Apply button, and then the OK button.

To enable spooling: Select the radio button labeled **Spool print documents** so program finishes printing faster.

Select **Start printing after last page is spooled** if you want the entire document to be spooled before printing begins. This option ensures that the entire document is sent to the print queue before printing. If for some reason printing is canceled or not completed, the job will not be printed.

Select **Start printing immediately** if you want printing to begin immediately when the print device is not already in use. This option is preferable when you want print jobs to be completed faster or when you want to ensure that the application returns control to users as soon as possible.

To disable spooling: Select the **Print directly to the printer** radio button.



Color Management Tab

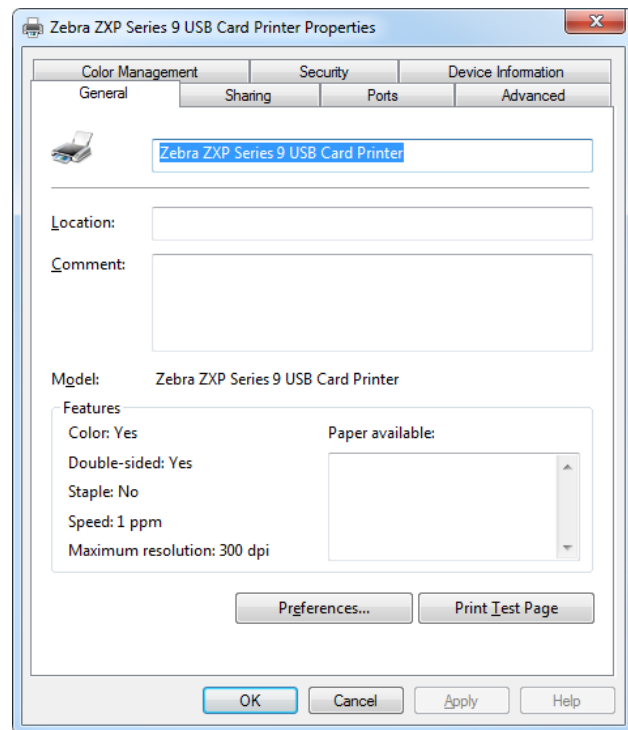
The optimal color profile is automatically selected when the card type is selected (see [“Card Setup Tab” on page 54](#) for details).

Color Management settings allow you to associate color profiles on the printer based on the type of media being used and printer configuration.

When you click on the Color Management button, you will see the following three tabs:

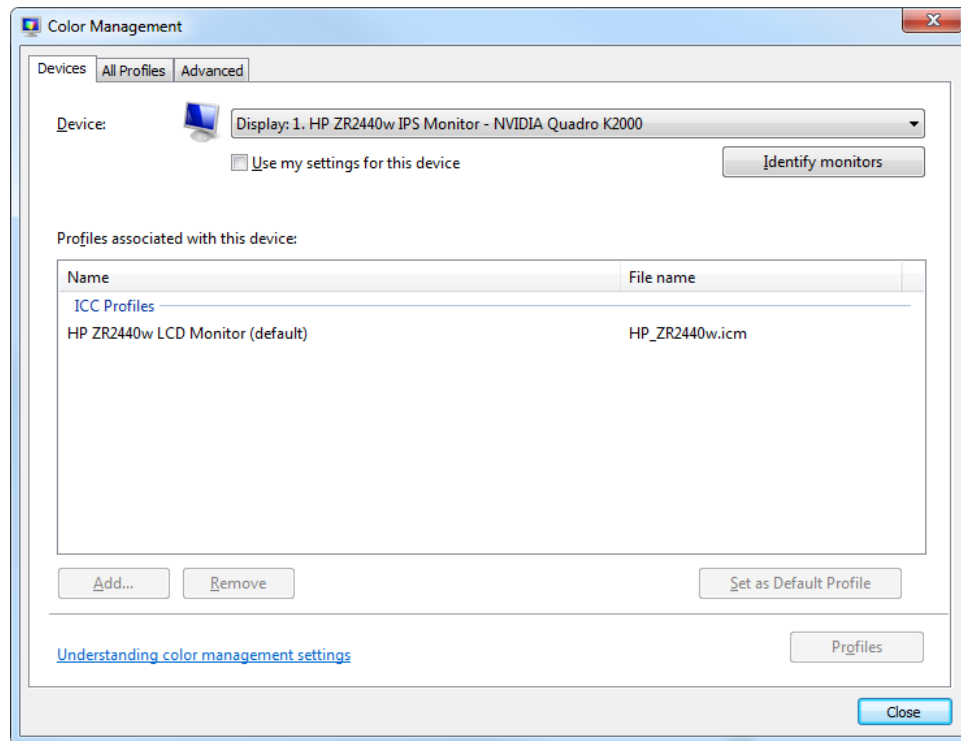
- Devices Tab
- All Profiles Tab
- Advanced Tab

For details on color management, click on the [Understanding color management settings](#) link on the Color Management Devices tab.



Devices Tab

The Devices tab is used to select your printer and to view, add, and select profiles and behaviors to use with your printer.



The **Use my settings for this device** check-box must be selected to enable the following button functions:

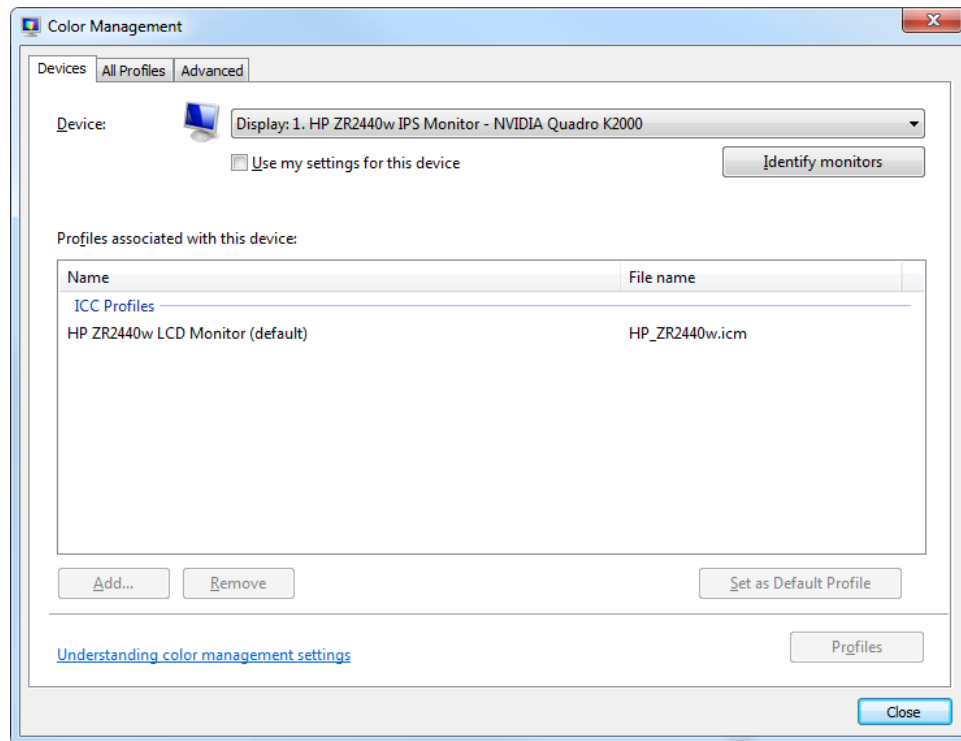
- The **Add** button enables you to add additional profiles to the color profile list.
- The **Remove** button enables you to remove profiles from the color profile list.

The **Set As Default** button allows you to set the selected profile as the default profile.

For details on color management, click on the **Understanding color management settings** link.

All Profiles Tab

The All Profiles tab is used to view and manage the profiles that are in your system. Note that color profiles are usually added automatically during the installation of new devices.



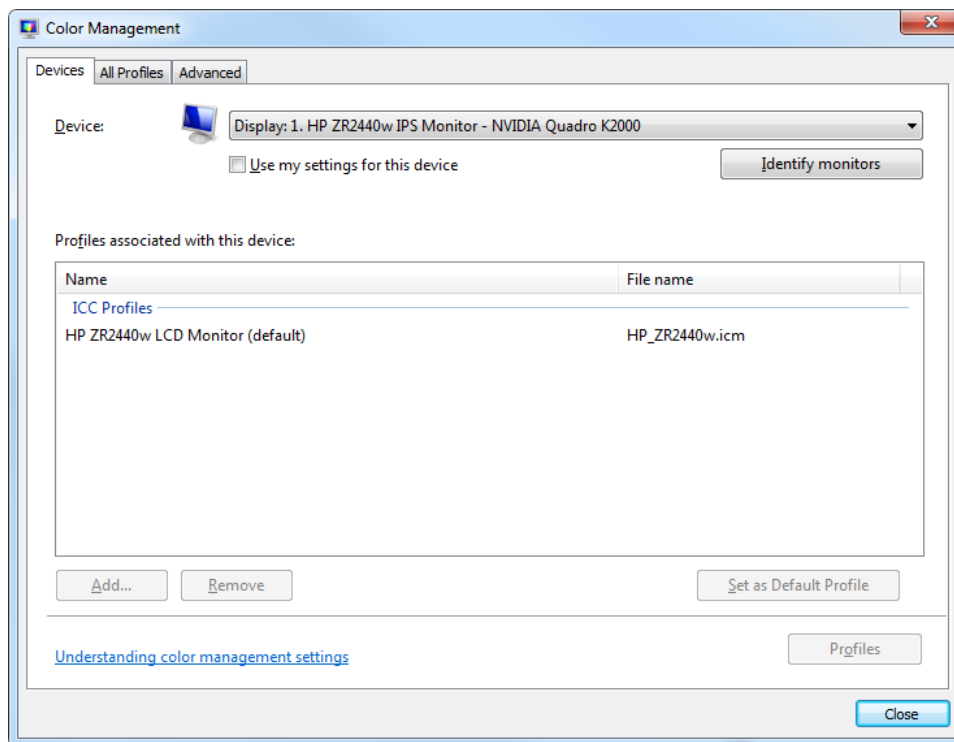
To install a new profile:

- Step 1.** Click on the **Add** button.
- Step 2.** Observe the Install Profile browse window.
- Step 3.** Locate the desired color profile.
- Step 4.** Click on the **Add** button (in the Install Profile browse window).

Advanced Tab

The Advanced tab is used to check your Windows Color System Defaults settings, verify ICC Rendering to WCS Gamut Mapping, and calibrate your display (Display Calibration).

This tab allows you to configure advanced color management settings to ensure accurate display and printing of color information.



Security Tab

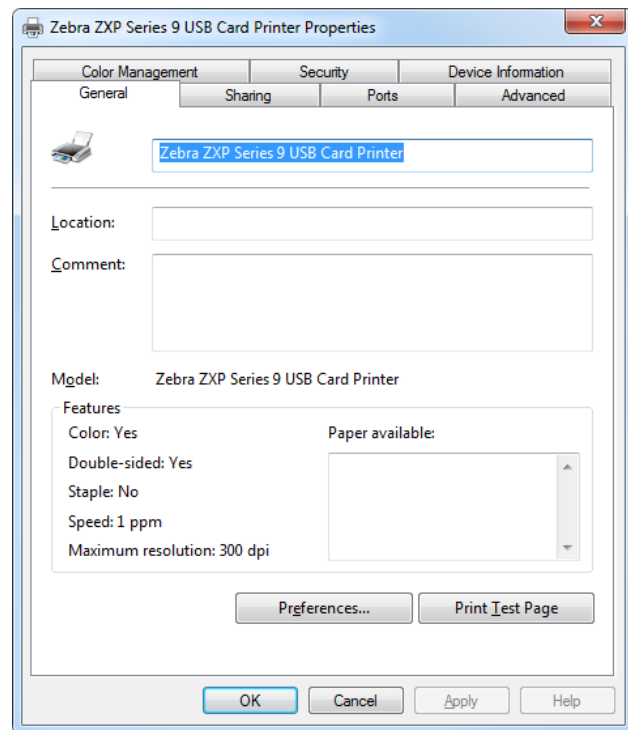
This is the standard Windows security screen, showing user access to various printer control options. Both Print and Manage Printers must be checked for full functionality of the printer.

The Security tab enables you to assign the actual permissions that apply to the print queue. You can apply permissions to both users and to groups. It is usually considered a better practice to only apply security to groups.

The **Allow** checkbox next to both **Print** and **Manage this printer** must be selected to ensure full functionality of the printer.

The Advanced Security Settings properties sheet allows you to assign a more comprehensive set of permissions than the basic Security tab found on the printer's properties sheet does.

For details on security settings, click on the **Learn about access control and permissions** link.



Device Information Tab

The Device Information tab provides device information, security status, and printer usage. Access to Media Info and ZXP Toolbox is included.

The **Media Info** button takes you to the Media Info screen.

The ZXP Toolbox button launches the ZXP Toolbox application which provides advanced configuration capabilities and tools to manage the operation of the printer.

Media Info

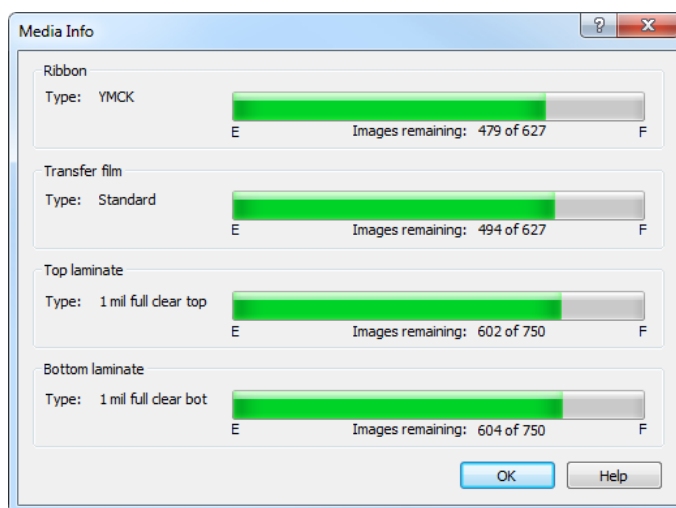
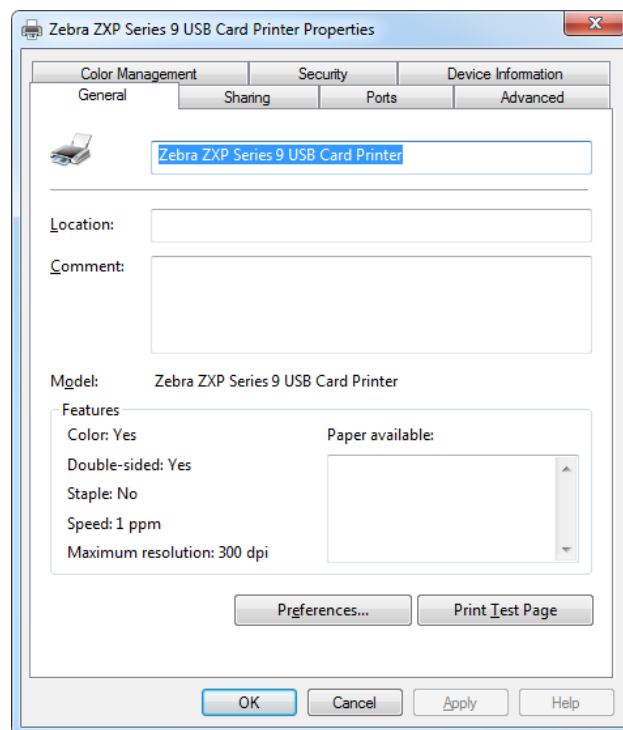
The Media Info screen displays the status of the media installed in the printer.

The Ribbon status bar displays the ribbon type installed and the number of images remaining.

The Transfer film status bar displays the transfer film type installed and the number of images remaining.

The Top laminate status bar displays the top laminate type and the number of images remaining (if the printer is equipped with a laminator).

The Bottom laminate status bar displays the bottom laminate type and the number of images remaining (if the printer is equipped with a double-sided laminator).



Introduction

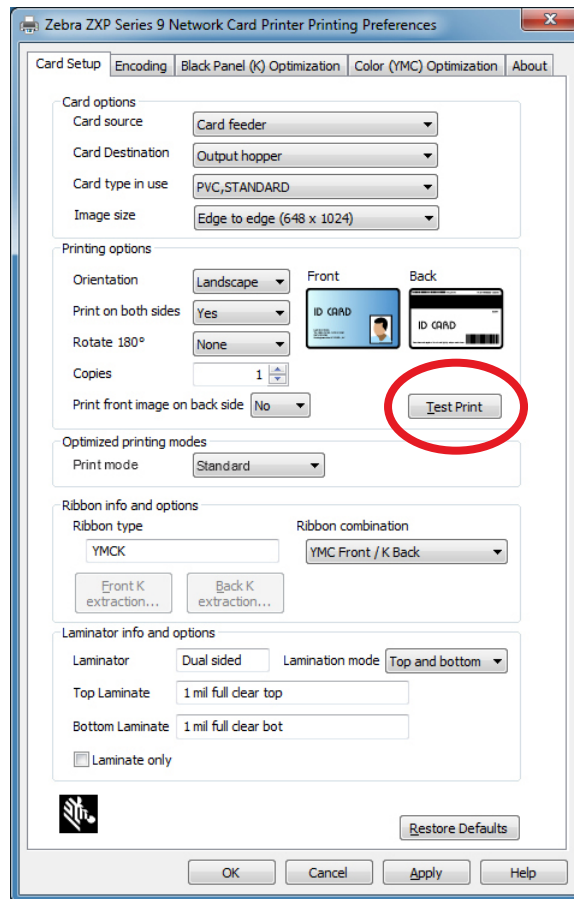
Printing with the ZXP Series 9 Card Printer is similar to printing with any other printer in a Windows environment:

- The printer is connected to either a host computer (via USB), or to a network (via Ethernet).
- The printer is selected by either the operating system or the appropriate software application.
- Printing preferences are set via the printer driver control panel, although the factory default values will be appropriate for many applications (see [“Printing Preferences” on page 53](#)).

Printing a Test Card

The Printing Preferences Control Panel has the option for printing a test card. This is a simple device to ensure the printer is working properly, and to check the quality of the print. The test card is printed according to the settings in the Card Setup tab.

- Step 1.** Open the Printing Preferences Control Panel (“[Printing Preferences](#)” on page 38).
- Step 2.** From the Card Setup tab, adjust the Card Options, Printing Options, etc., to suit your preferences.
- Step 3.** Click **Test Print** (circled below).



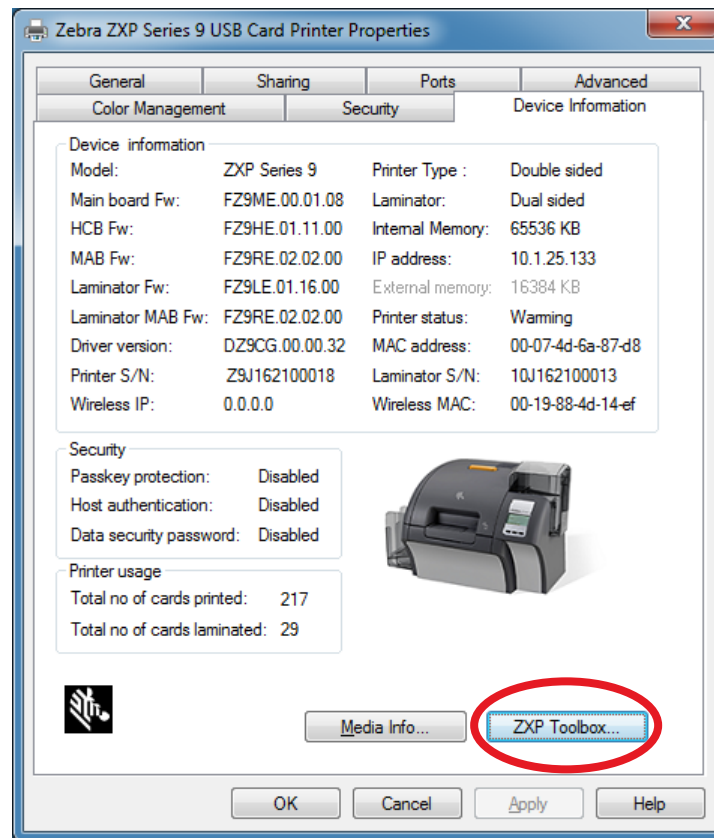
An enhanced test print feature is also available from the ZXP Toolbox. This feature offers a wider range of test cards to showcase the quality of print from the ZXP Series 9 Card Printer. The test card is printed according to the settings in the Card Setup tab.

To print a test card from the ZXP Toolbox:

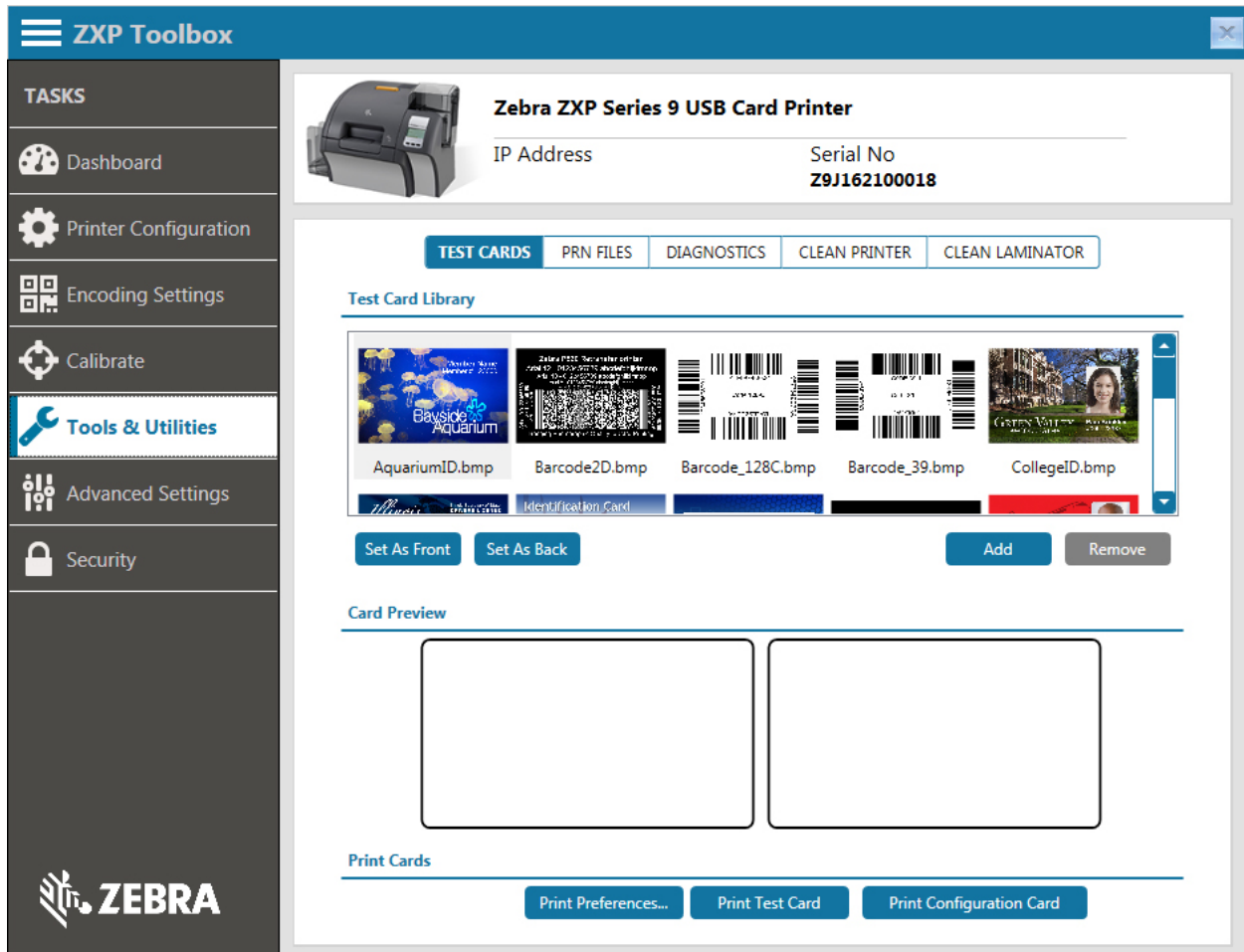
Step 1. Open the Printer Properties control panel:

- Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.
- Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.
- Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printer Properties** from the pop-up menu.

Step 2. Select the Device Information tab and click the **ZXP Toolbox** button.



Step 3. Select the **Tools & Utilities** page (the Test Cards menu is displayed by default).



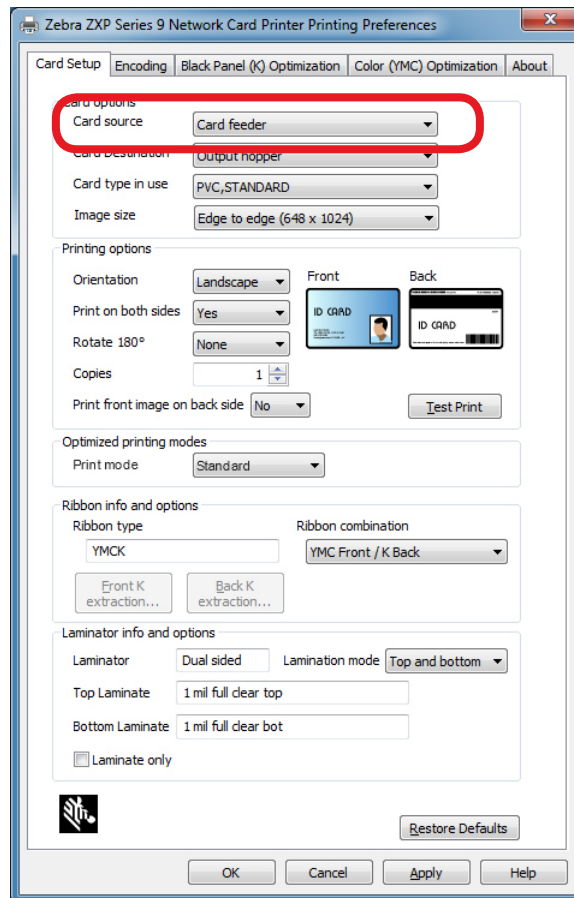
Step 4. Select an image from the Test Card Library and click either **Set as Front** or **Set as Back** to set the front and back of the test card; or you can add your own images to the library and use them for the test card.

Step 5. When the front and the back images are set, click **Print Test Cards**.

Manual Card Feed

A manual feed slot is available for feeding single cards. Note that this option works with cards in the input hopper.

- Step 1.** Open the Printing Preferences Control Panel (“Opening the Printer” on page 14).
- Step 2.** From the Card Setup tab, click the **Card source** drop-down menu and select Manual Feed (circled below).

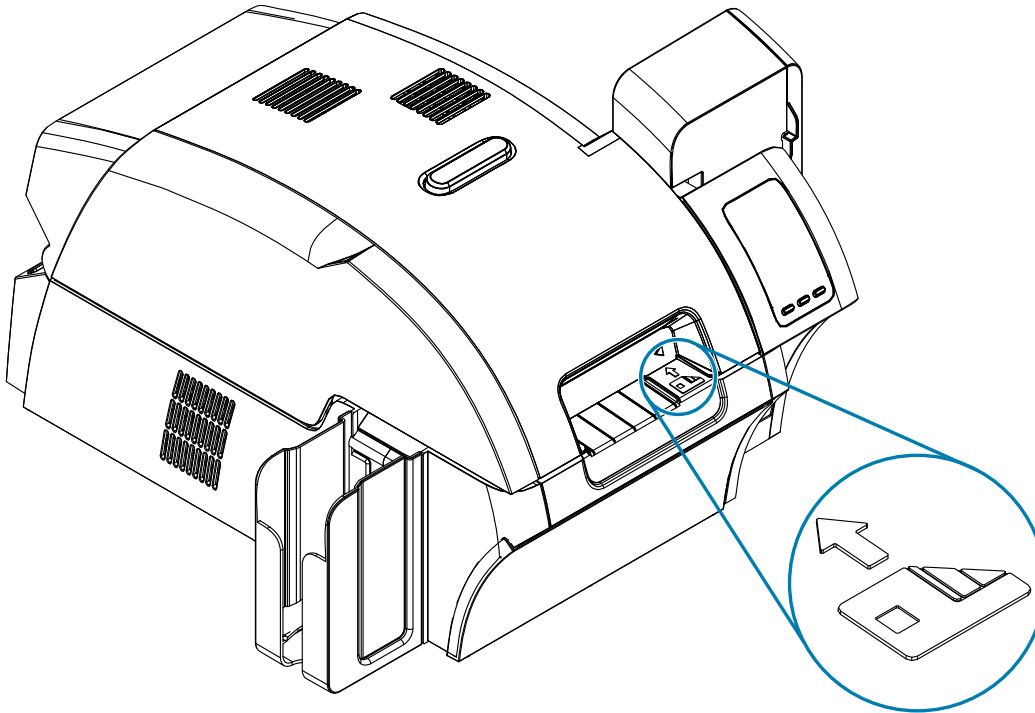


- Step 3.** Click **Apply**.
- Step 4.** Send the print job to the printer. When ready, the printer OCP will prompt you to insert the card.

Step 5. Insert a single card into the slot in the correct orientation. Do not feed more than one card at a time.



Caution • DO NOT bend cards, and refrain from touching print surfaces as much as possible as this can reduce print quality. The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible.

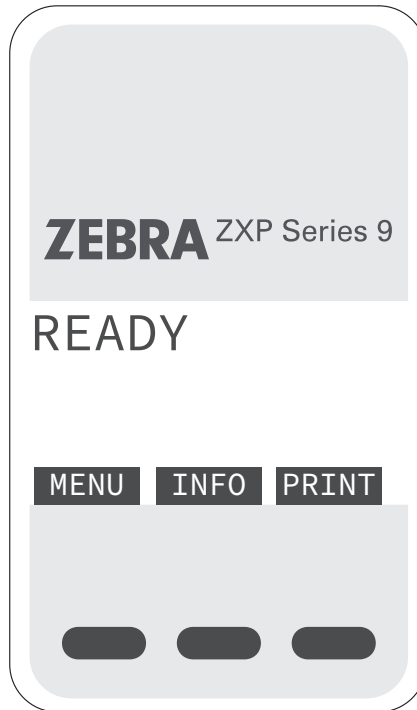


Step 6. The printer will feed in the card and start printing.

Step 7. Once the printing job is complete, the card is ejected from the printer into the output hopper.

Operator Control Panel (OCP)

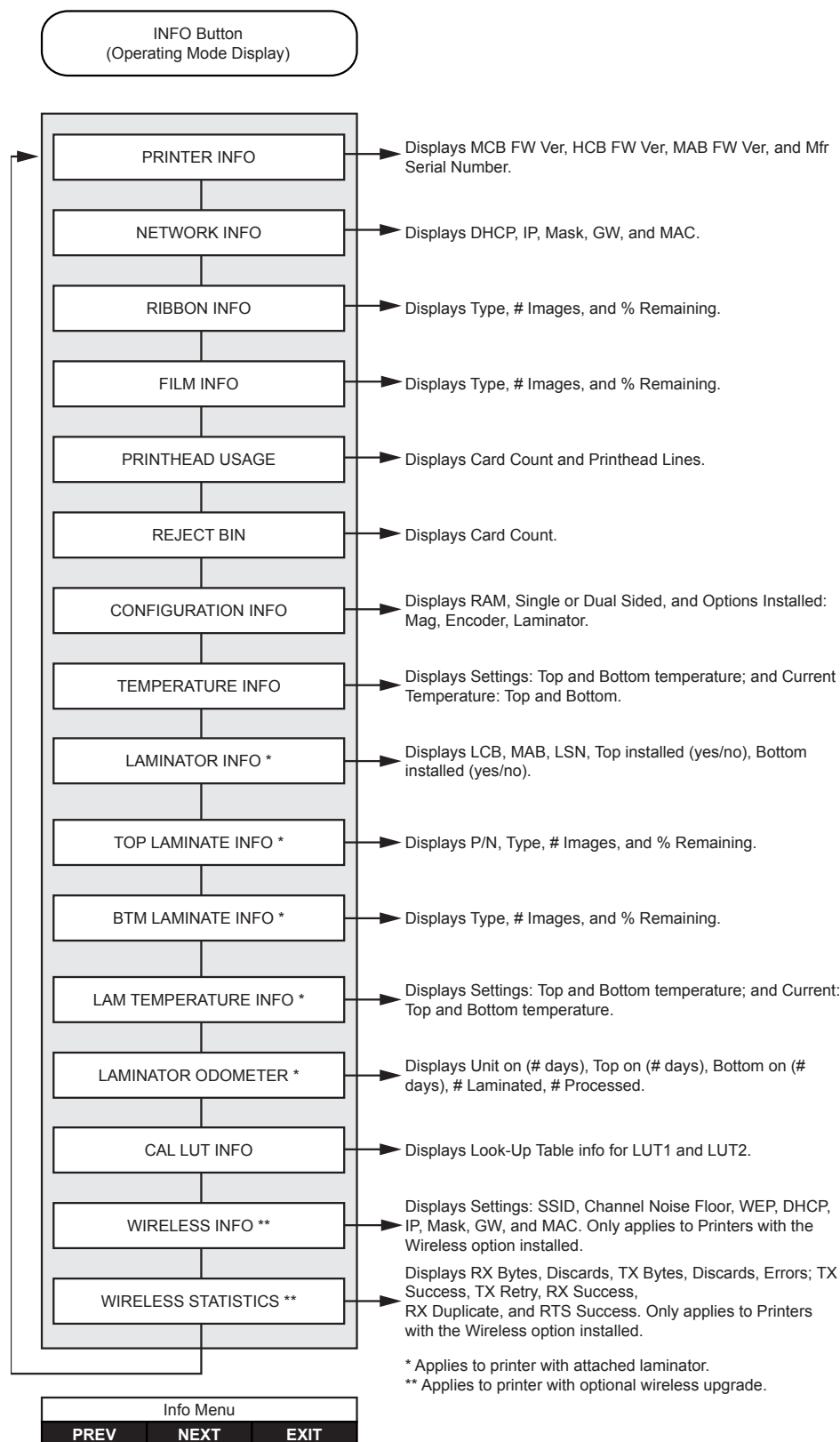
The printer is equipped with an OCP display and three OCP buttons which give access to the printer menus.



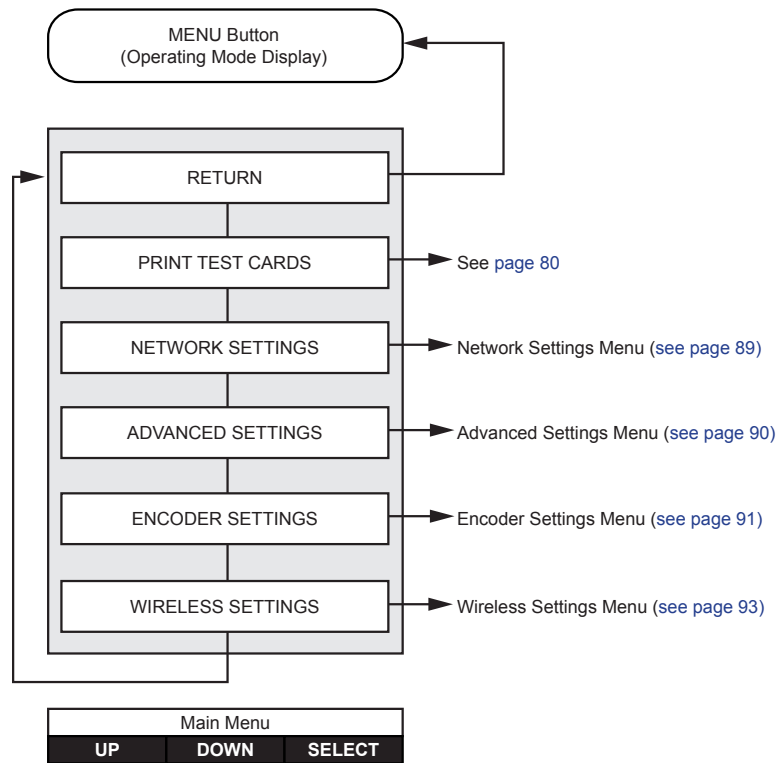
- Press the MENU button to access the Main Menu.
- Press the INFO button to access and view the printer information pages.
- Press the PRINT button to print the last card stored in memory.

Printer Menu Information

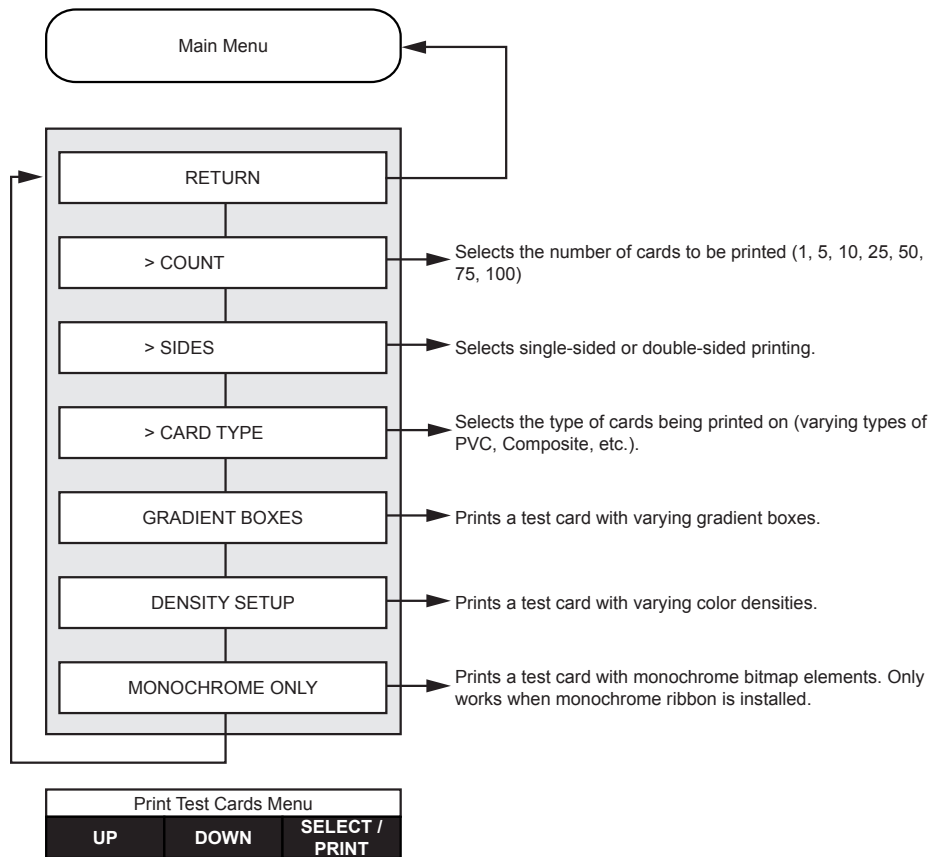
Info Menu



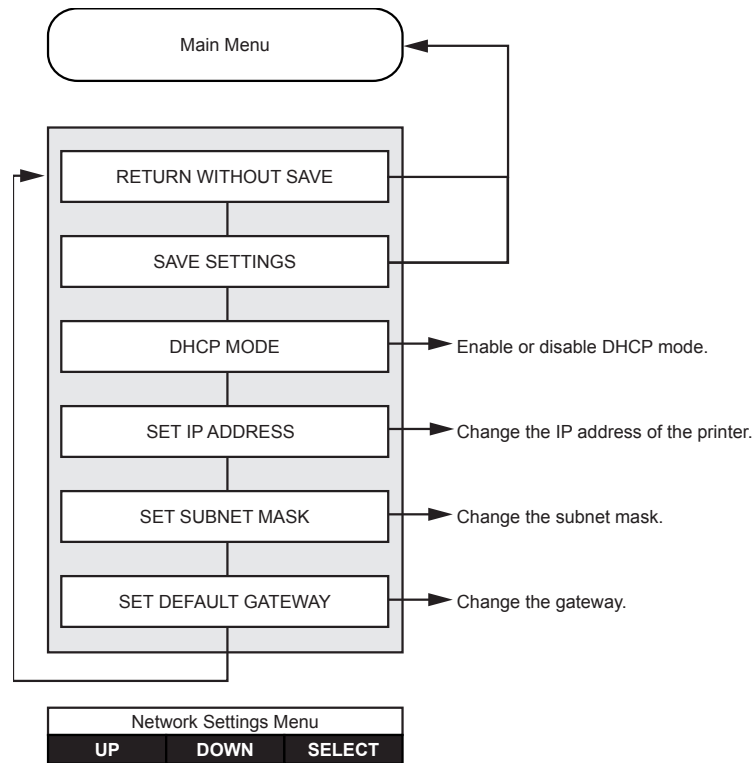
Main Menu



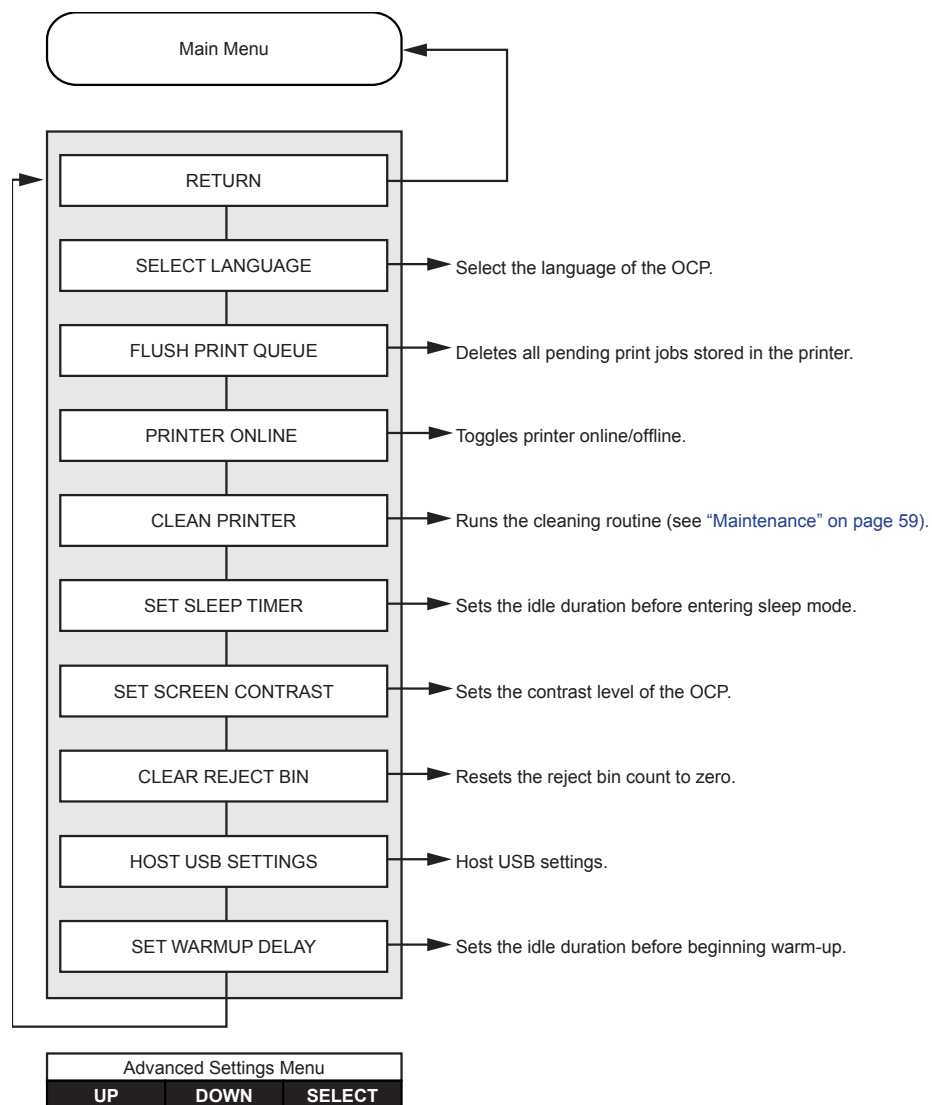
Print Test Cards Menu



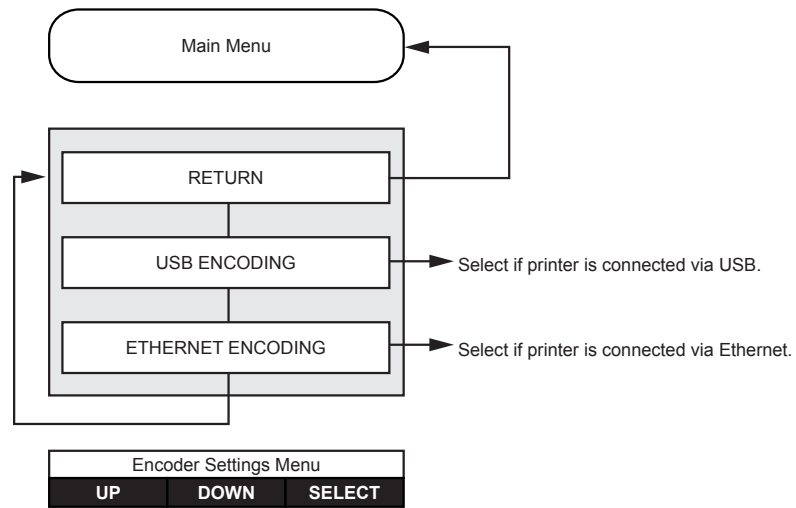
Network Settings Menu



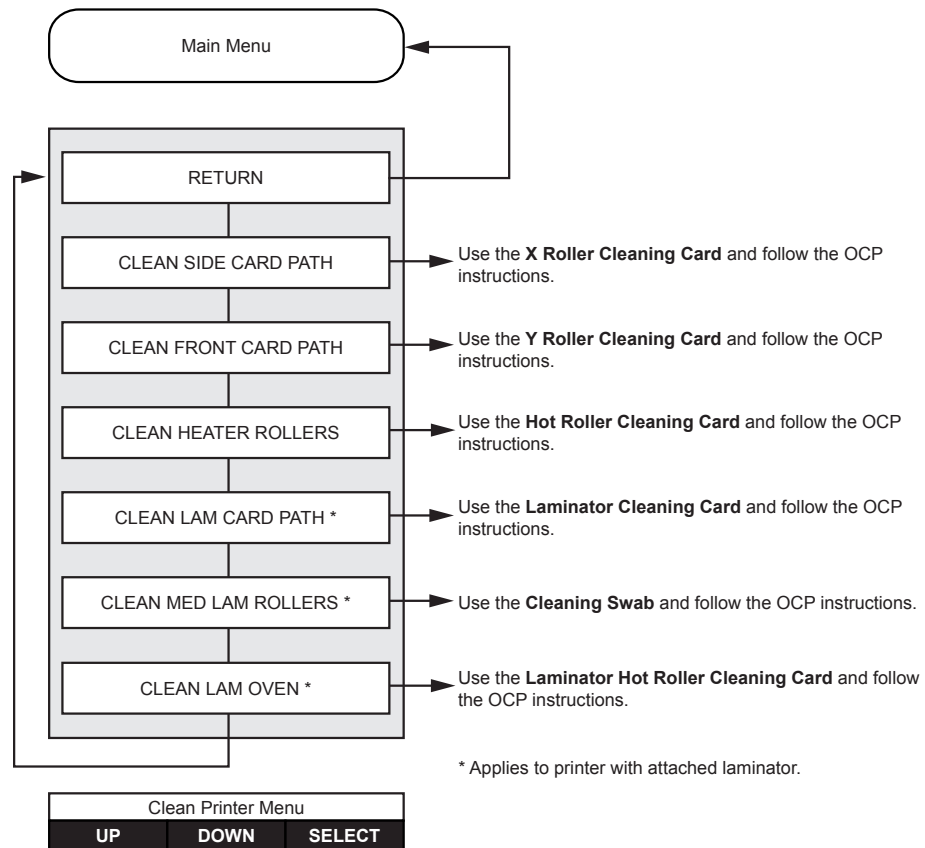
Advanced Settings Menu



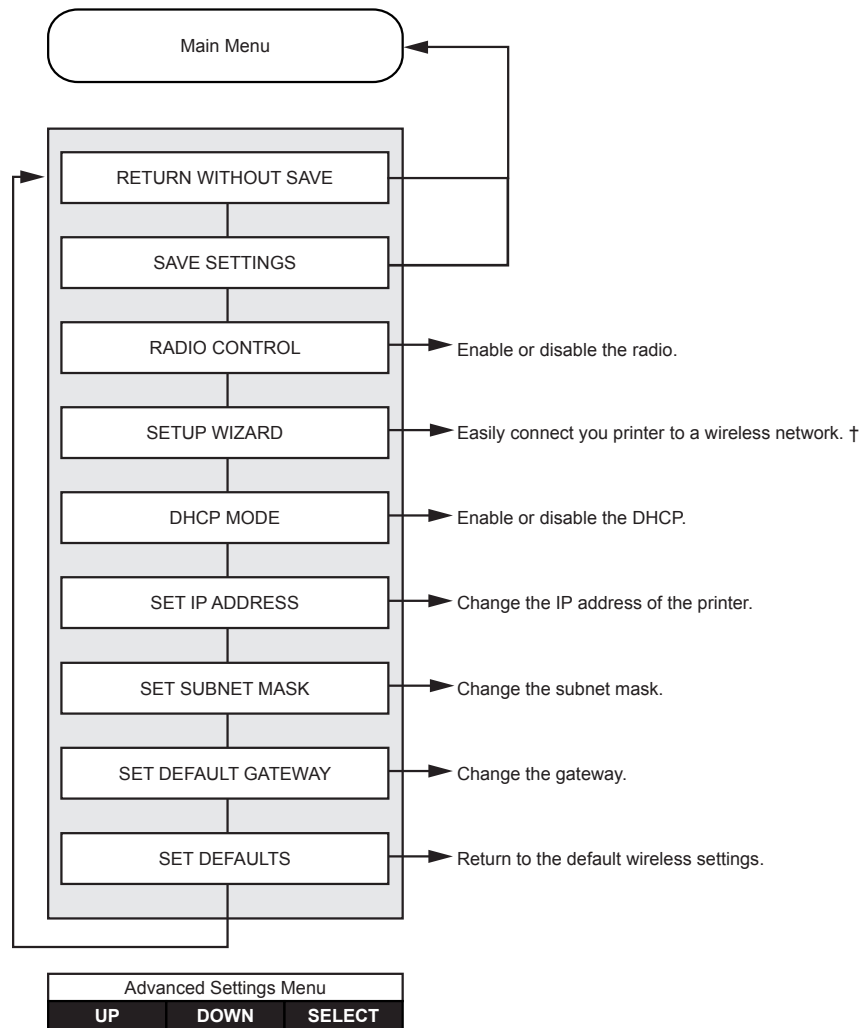
Encoder Settings Menu



Clean Printer Menu



Wireless Settings Menu



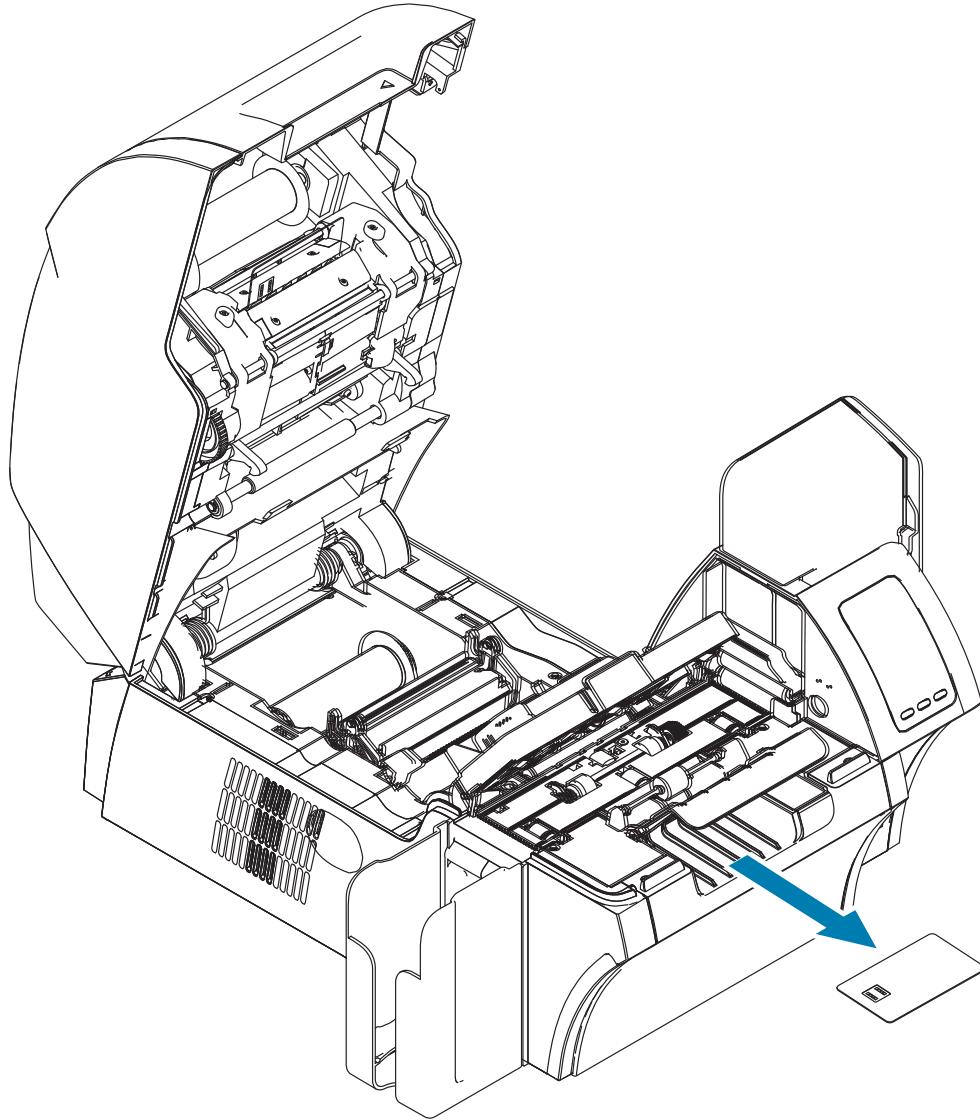
† See “[Setup via OCP](#)” on page 97 for additional information.

Retrieving a Rejected Card

Cards that fail to print, or do not pass encoding red/write tests are sent to the printer's reject bin. The reject bin is located at the front of the printer under the manual card feed and is only accessible when the printer lid is opened.

Step 1. Open the printer (see page 14).

Step 2. Remove the rejected card(s).



Messages

Operational

Operational messages are displayed during normal operation.

MESSAGE	DESCRIPTION
ALARM	An error message needs to be cleared before normal operations can resume.
CANCELING	The Cancel button was pressed, and the current operation is being terminated.
CONFIG DATA	Configuration data is being transferred from the computer to the printer.
CONTACT OPERATION	Contact smart card is being encoded; i.e., the card is in position and data is being transferred.
CONTACTLESS OPERATION	Contactless smart card is being encoded; i.e., the card is in position and data is being transferred.
COOLING	Ready to accept a print job, rollers cooling; e.g., when switching from 2-sided printing to 1-sided printing.
COOLING PRINT JOB WAITING	Print job received, cooling rollers to temperature.
COOLING PRINthead TEMPERATURE	Cooling printhead to temperature.
COOLING WAITING TO LAMINATE	Print job completed, laminator cooling to temperature.
DIAGNOSTIC	Diagnostic testing in progress.
JOB DATA	Data is being transferred from the computer to the printer.
LAMINATING	Print job received, laminating in process.
MAG OPERATION	A magnetic stripe Card is being encoded; i.e., card is in position and data is being transferred.
MANUALLY INSERT CARD FROM FRONT	Waiting for manual card feed.
OFFLINE	Status toggled (offline/online) via the OCP Advanced Settings Menu.
PRINTING	Print job received, printing in process.
READY	Ready and at temperature.
STANDBY	Printer is in "sleep" mode; i.e., power save mode.
WAIT INITIALIZING	Performing a self test on startup.
WARMING	Ready to accept a print job, rollers heating; e.g., at startup or when switching from 1-sided printing to 2-sided printing.
WARMING PRINT JOB WAITING	Print job received, warming rollers to temperature.
WARMING	
WAITING TO LAMINATE	Ready to accept a print job, laminator warming; e.g., when switching from 1-sided laminating to 2-sided laminating.
WARMING PRINthead TEMPERATURE	Warming printhead to temperature.
WARNING	Indicates that additional OCP instructions need to be performed; e.g., PRINT RIBBON LOW, etc.

Warning Messages

Warnings alert the operator to action that should be taken—the printer will generally continue operation.

WARNING (Printer will still operate)	DESCRIPTION
BOTH LAMINATES LOW	Indicates that the Top Laminate cassette and the Bottom Laminate cassette are low.
BOTTOM LAMINATE LOW	Indicates that the Bottom Laminate cassette is low (see “Loading the Laminate” on page 99).
CLEAN FEEDER	Indicates that the Feeder needs cleaning.
CLEAN FRONT CARD PATH	Indicates that the Front Card Path (Y-Drive Rollers) needs cleaning (see Maintenance on page 69).
CLEAN LAM CARD PATH	Indicates that the Laminator Card Path needs cleaning (see Maintenance on page 69).
CLEAN LAM MED ROLLERS	Indicates that the Laminator Media Feed Rollers need cleaning (see Maintenance on page 69).
CLEAN LAM OVEN	Indicates that the Laminator Transfer Path (Heated Rollers) needs cleaning (see Maintenance on page 69).
CLEAN SIDE CARD PATH	Indicates that the Side Card Path (X-Drive Rollers) needs cleaning (see Maintenance on page 69).
CLEAN TRANSFER PATH	Indicates that the Transfer Path (Heated Rollers) needs cleaning (see Maintenance on page 69).
PRINT RIBBON LOW	Indicates that the Print Ribbon spool is low (see “Loading Print Ribbon” on page 19).
TOP LAMINATE LOW	Indicates that the Top Laminate cassette is low (see “Loading the Laminate” on page 99).
TRANSFER FILM LOW	Indicates that the Transfer Film spool is low (see “Loading the Transfer Film” on page 18).

Error Messages

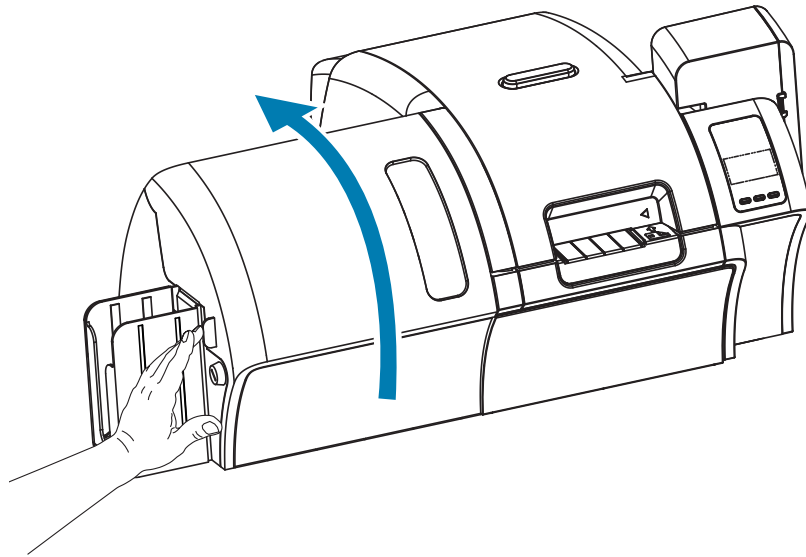
Errors are displayed when a situation causes the printer to stop operating. Depending on the cause of the error message, restarting the printer or clearing the displayed error may return the printer to operational status; or the printer may require troubleshooting and repair.

See [“OCP Error Messages” on page 129](#) for a list of the error messages, possible causes, and possible solutions.

Replacing the Laminate

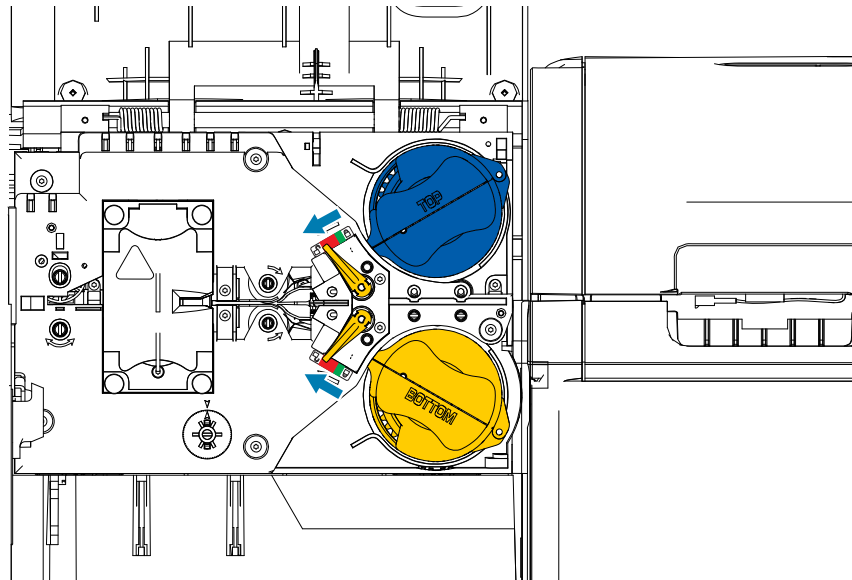
Opening the Laminator Door

- Step 1.** Grasp the door at the side tab front and pull forward and lift the door to its upright position.

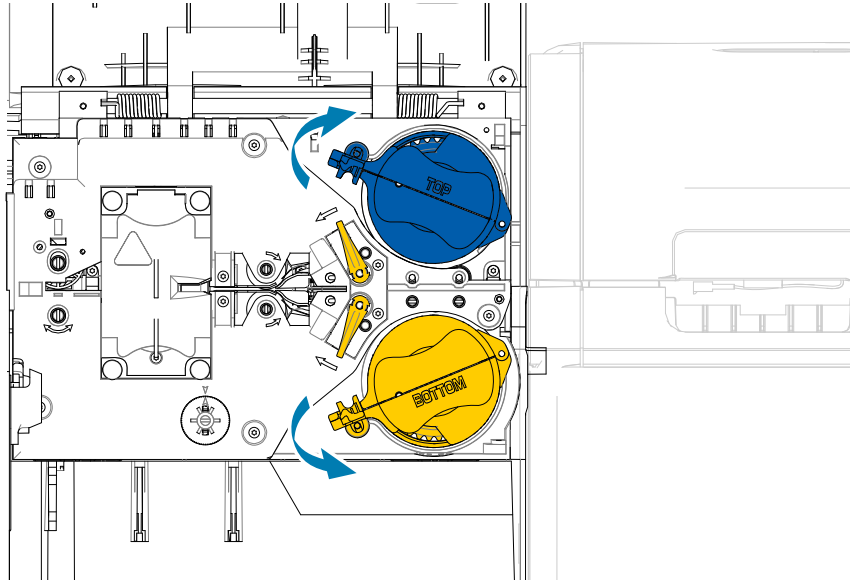


Removing the Laminate Cassette(s)

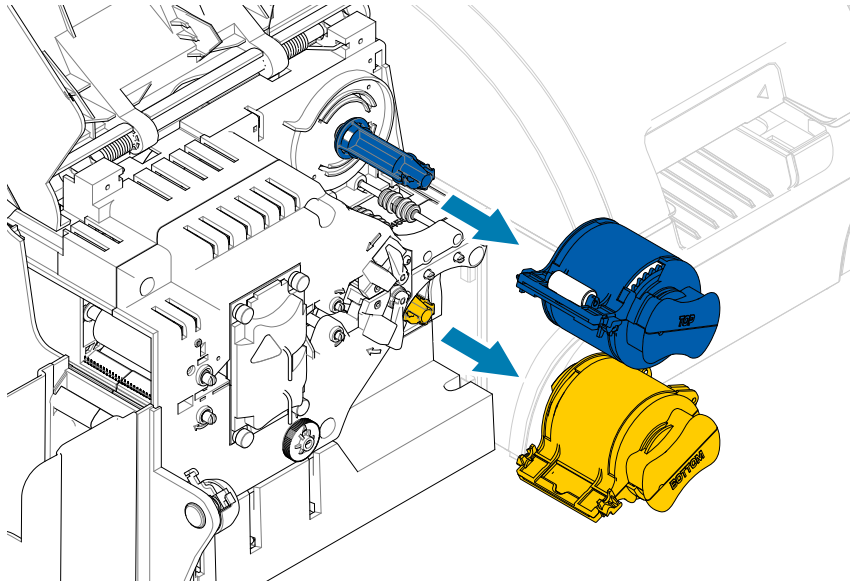
- Step 1.** Unlock the laminate cassette by rotating the locking lever in the direction indicated in the figure below.



Step 2. Rotate each cassette in the direction indicated below until it stops.

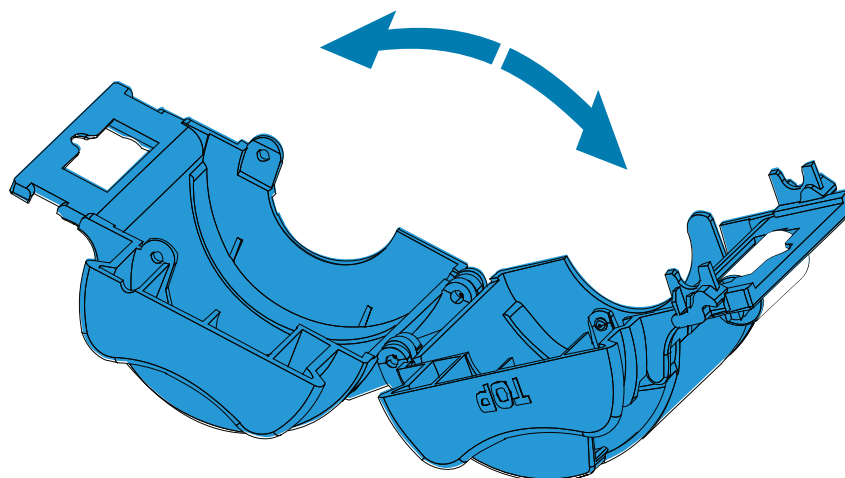


Step 3. Remove each cassette by pulling straight out from its spindle.



Loading the Laminate

Step 1. Open each cassette by separating its two halves at the hinge—grasp the two halves firmly then pull apart. **Do NOT use tools.**



Step 2. If there is an empty laminate core in the cassette, remove it.



Note • The laminate roll is specific to either the top (blue) or the bottom (yellow) laminate cassette.

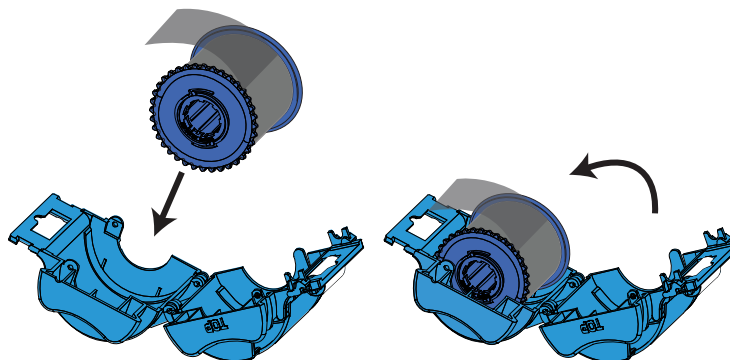


Note • The lower laminate cassette (yellow) is used on a double-sided laminator only.



Important • The geared flange on the laminate spool is removable, but do not remove it. If it does come off, snap it back onto the end of the spool.

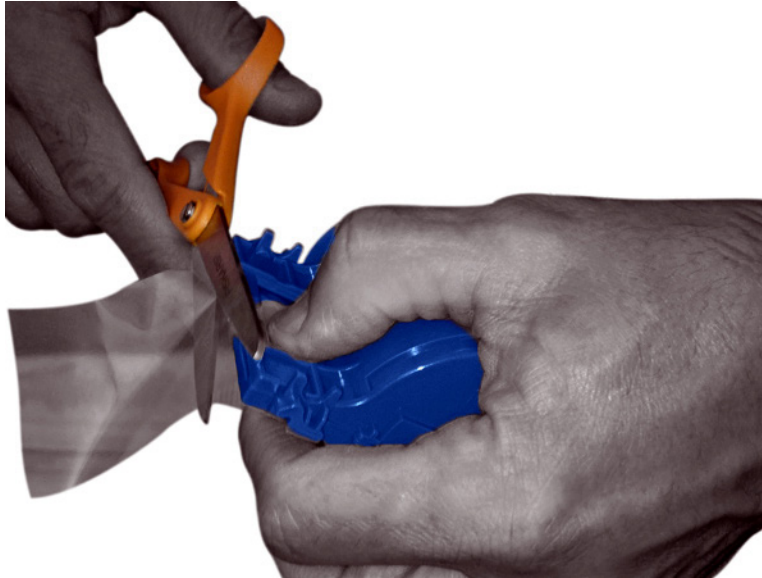
Step 3. Remove a new roll of laminate from its packaging and place it in the upper laminate cassette—note the orientation of the laminate spool with respect to the laminate cassette as shown in the figure below.



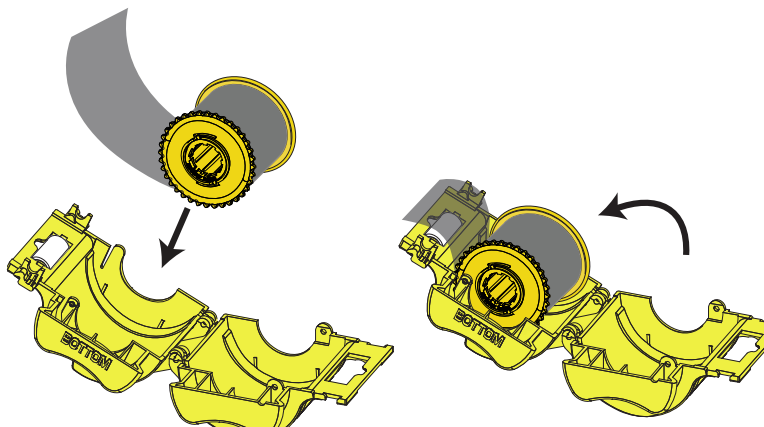
Step 4. Pull out an inch or two of laminate past the lip of the cassette.

Step 5. Close the cassette—press the two halves of the cassette together until it clicks.

- Step 6.** Cut the laminate square (as close to perpendicular as possible) with scissors. Hold the scissors in one hand. Hold the cassette with the other hand. Press the laminate firmly against the white roller thereby keeping the laminate from moving while cutting.



- Step 7.** Remove a second new roll of laminate from its packaging and place it in the lower laminate cassette—note the orientation of the laminate spool with respect to the laminate cassette as shown in the figure below.



- Step 8.** Pull out an inch or two of laminate past the lip of the cassette.
- Step 9.** Close the cassette—press the two halves of the cassette together until it clicks.

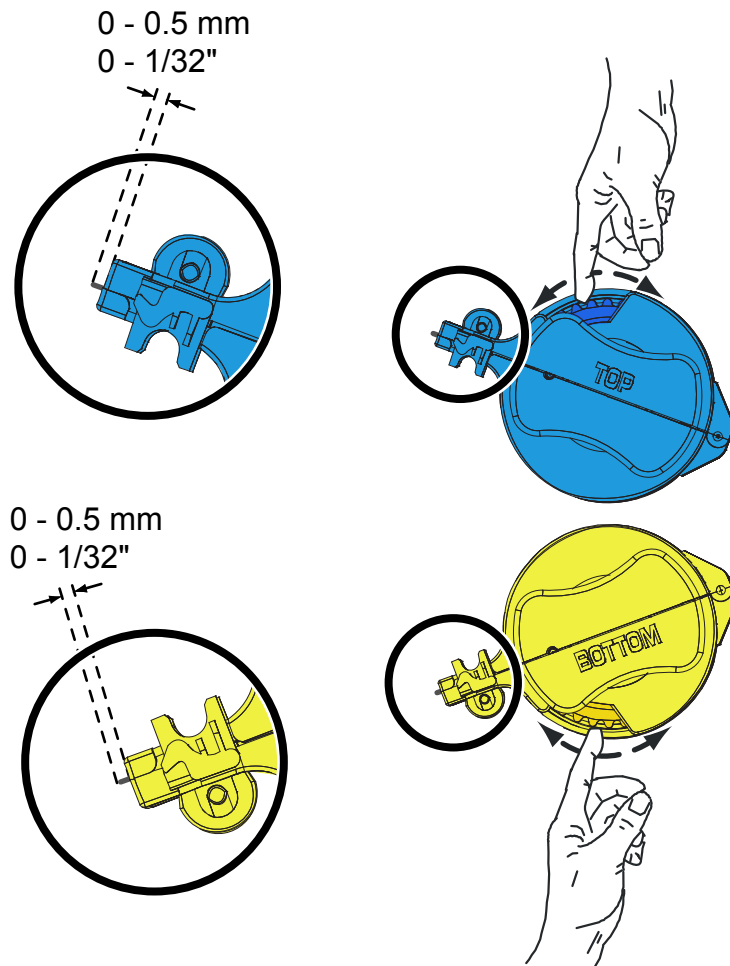
Step 10. Cut the laminate square (as close to perpendicular as possible) with scissors. Hold the scissors in one hand. Hold the cassette with the other hand. Press the laminate firmly against the white roller thereby keeping the laminate from moving while cutting.



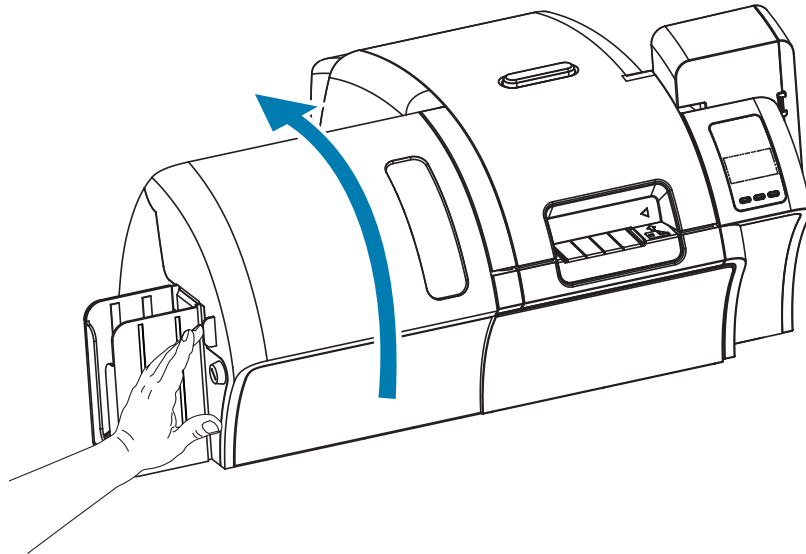
Step 11. Rotate the core to adjust the laminate overhang. Stop when the end of the laminate is just beyond the lip of the cassette, as shown below.



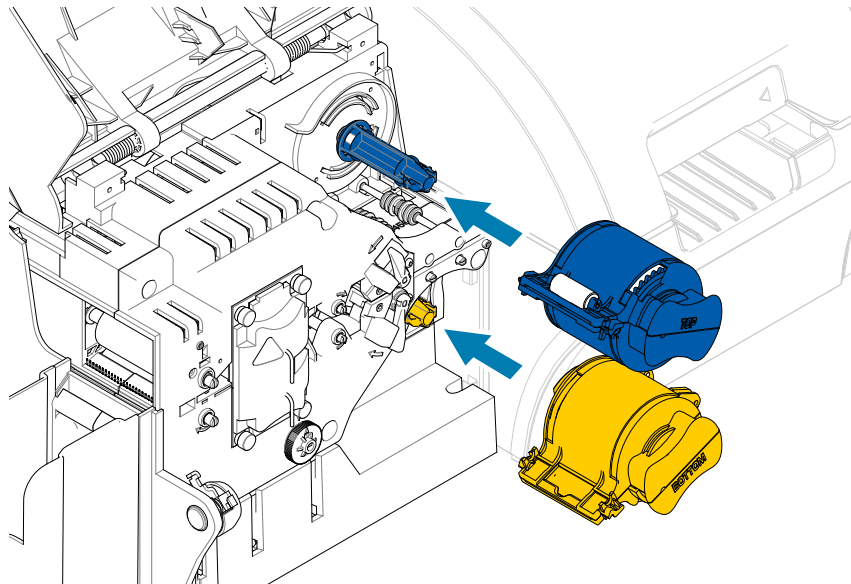
Important • Check for laminate overhang any time the locking lever is pressed or the cassette is removed.



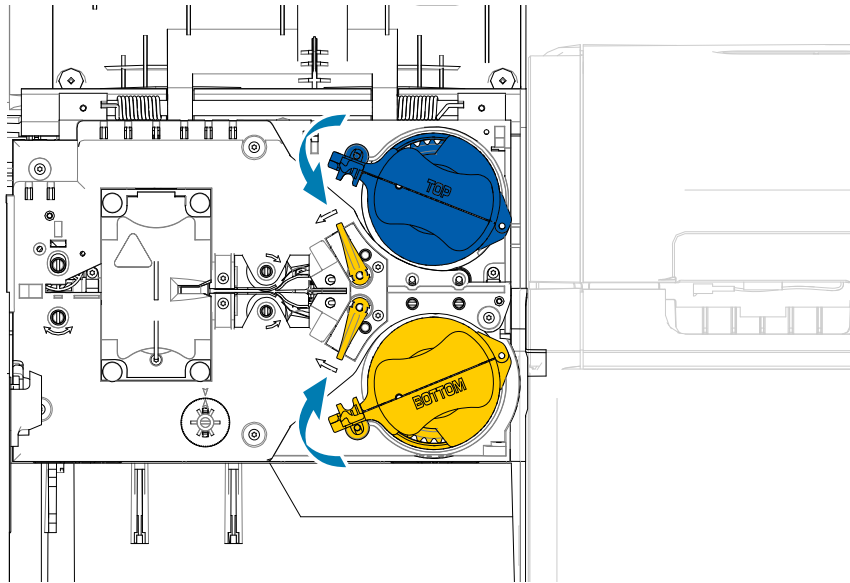
Step 12. Grasp the door at the side tab front and pull forward and lift the door to its upright position.



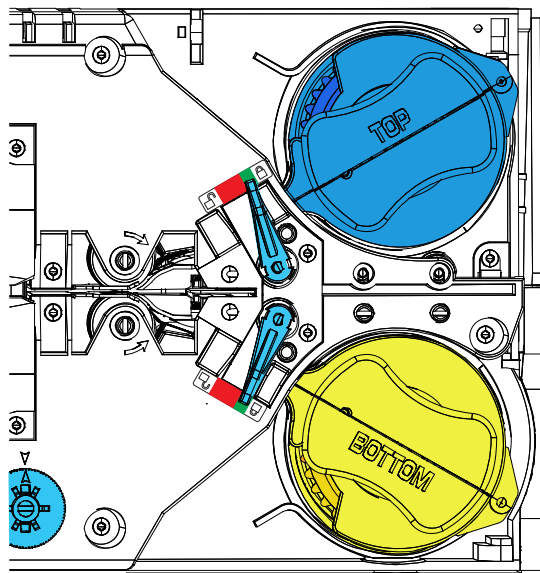
Step 13. Slide the cassette onto the spindle.



Step 14. Rotate each cassette (in the direction indicated in the figure below).



Step 15. Continue to turn the cassette. The locking lever will move to the left as the cassette rotates over the locking mechanism, and will then click into the locked (green) position.



Step 16. Close the laminator door.

Theory of Operation

Card Movement During Printing

- Step 1.** The card is fed from the input hopper into the printer.
- Step 2.** As the card is moved into the printer, it is cleaned via the cleaning cartridge; this cleans dust and dirt particles from the card surfaces.
- Step 3.** If the printer includes an optional smart card encoder (either contact-style or contactless), the card is moved to the encoder and is encoded. As the card is encoded, it is checked to verify that it was encoded properly. If encoding fails, the card is moved to the reject bin. This is done to avoid wasting time, ribbon panels, and transfer film on a defective card. If encoding is successful, the card is moved to the next step.
- If the printer includes an optional magnetic stripe encoder, the card is moved to the encoder; and the magnetic stripe is encoded. The card is then backed up and run through the magnetic stripe encoder again; on this pass the card is read to verify that the magnetic stripe was properly encoded. If encoding fails, the card is moved to the reject bin. As with failed smart card encoding, this is done to avoid wasting time, ribbon panels, and transfer film on a defective card. If encoding is successful, the card is moved to the next step.
- Step 4.** The card is positioned at the X-Y card transport and waits for the image(s) to be printed on the transfer film. Retransfer printing uses the dye sublimation and thermal transfer processes to print the image(s) in reverse onto the transfer film.
- Step 5.** When printing is completed, the card is moved to the transfer station. As the card is moved, it is cleaned via the cleaning roller.
- Step 6.** The card is fed into the transfer station, and the printed transfer film is applied to both sides of a card at the same time. The card and film pass between the heated transfer rollers, where heat and pressure bond the image onto both surfaces of the card.
- Step 7.** As the card exits the transfer station, the blower removes any flash (transfer film residue) from both sides of the card; and the card is cleaned via the cleaning roller.

Step 8. If the printer has a laminator:

- a. The card is moved through the X-Y Card transport into the laminator.
- b. As the card passes through the laminator, laminating film is applied to the card, the top side or both sides depending on the laminator.
- c. The card (with the laminating film) then passes between a pair of heated rollers, which seal the laminating film to the card.
- d. The card is moved from the laminator to the card exit, where it falls into the Output Hopper attached to the left side of the laminator.

Step 9. If the printer does not have a laminator; the card moves through the X-Y card transport to the card exit, where it falls into the output hopper attached to the left side of the printer.

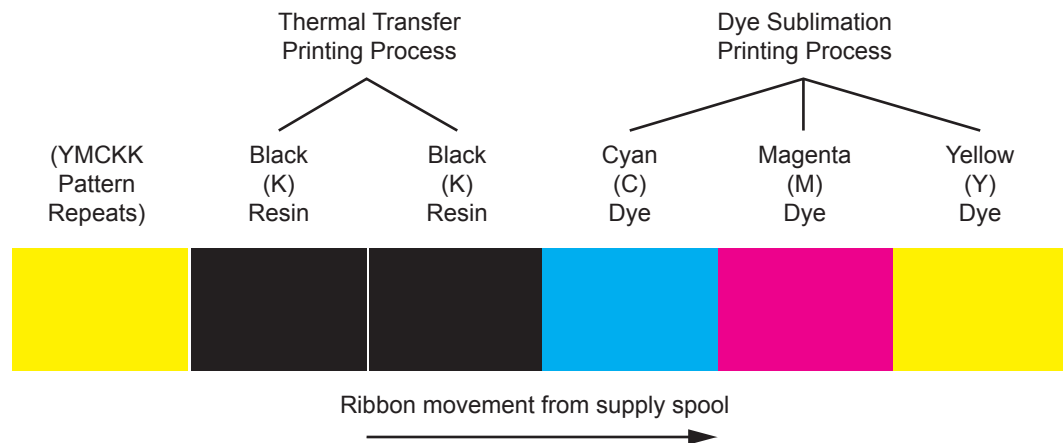
Printing Technologies and Ribbons

There are two types of printing technology used in the printer: dye sublimation and thermal transfer. The technology to use is determined by the type of dye or ink on the ribbon.

Monochrome ribbons have a single color ink on the length of the ribbon. The printer is programmed to use Thermal Transfer printing for monochrome ribbons. Multi-panel ribbons have a repeating sequence of panels of different dye. RFID multi-panel ribbons have an RFID tag on the supply spool; the RFID code identifies the ribbon type and panel count. (Note that the lack of an RFID tag will be interpreted by the printer as being a monochrome ribbon.) Printing with a multi-panel ribbon requires multiple passes of the transfer film under the printhead, once per panel.

For double-sided printing, a typical situation would be to print a full-color graphic (such as a person's picture) along with black text and/or bar-coding on the front, and black text and/or bar-coding on the rear. In this case, a YMCKK multi-panel ribbon would be used. A YMCKK ribbon has successive panels as follows:

Color	Technology	Function / Usage
Yellow ("Y")	Dye Sublimation	Full-Color Printing and Dye Sublimation Black Printing
Magenta ("M")	Dye Sublimation	Full-Color Printing and Dye Sublimation Black Printing
Cyan ("C")	Dye Sublimation	Full-Color Printing and Dye Sublimation Black Printing
Black Resin ("K")	Thermal Transfer	K Resin Black Printing (for the front of the card)
Black Resin ("K")	Thermal Transfer	K Resin Black Printing (for the back of the card)

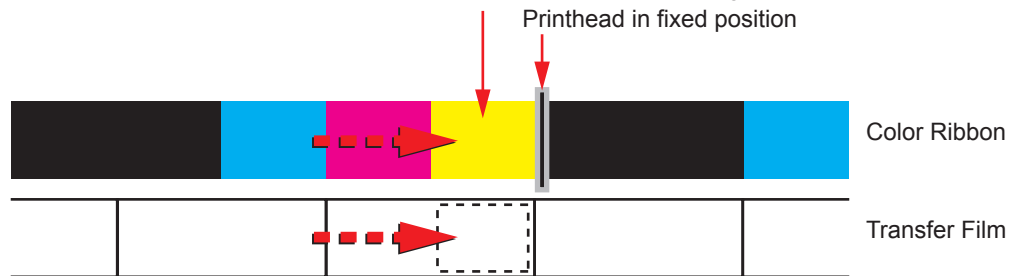


Additional ribbon types are available for this printer. Go to www.zebra.com/zxp9-info for details.

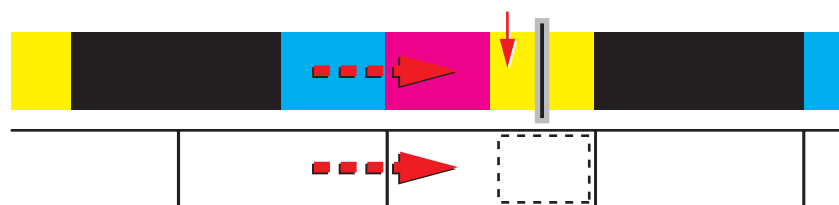
The ribbon synchronizes to its "starting" position whenever the printer door is opened and then closed. For a YMCKK ribbon, the starting position is with the leading edge of a yellow panel at the printhead location.

The following figure shows how the YMCKK ribbon and transfer film move relative to each other during printing.

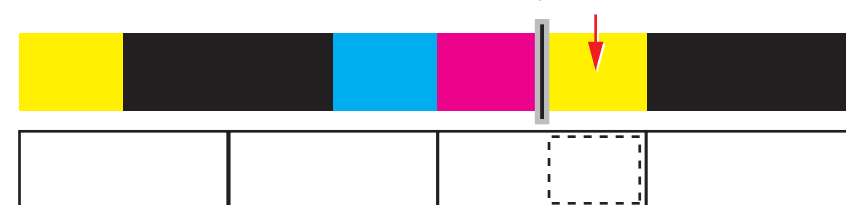
1. Transfer film and ribbon are positioned to print the front-side image.



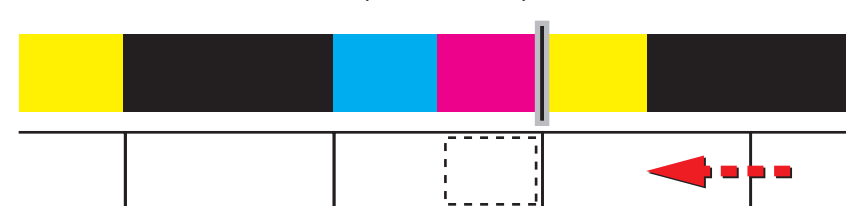
2. Transfer film and ribbon move together as the yellow panel is printed.



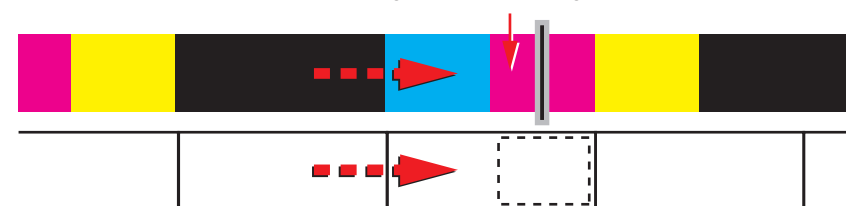
3. Transfer film and ribbon stop at the end of the yellow panel.



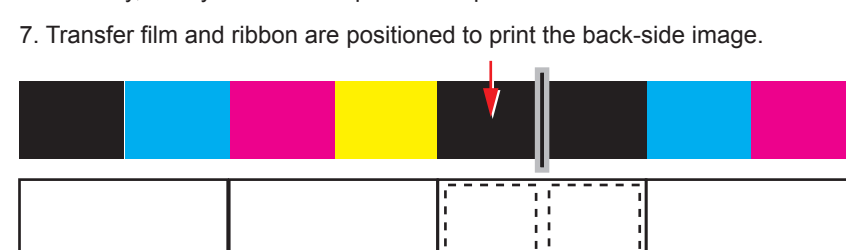
4. Transfer film moves back into position at the printhead.



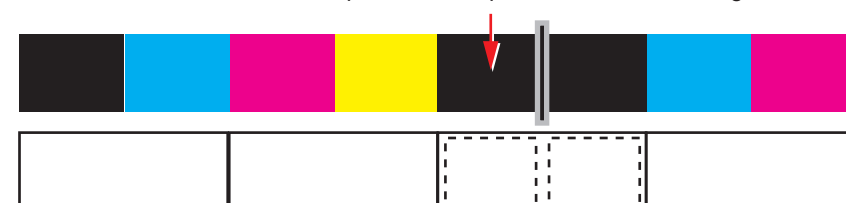
5. Transfer film and ribbon move together as the magenta panel is printed.



6. Similarly, the cyan and black panels are printed.



7. Transfer film and ribbon are positioned to print the back-side image.

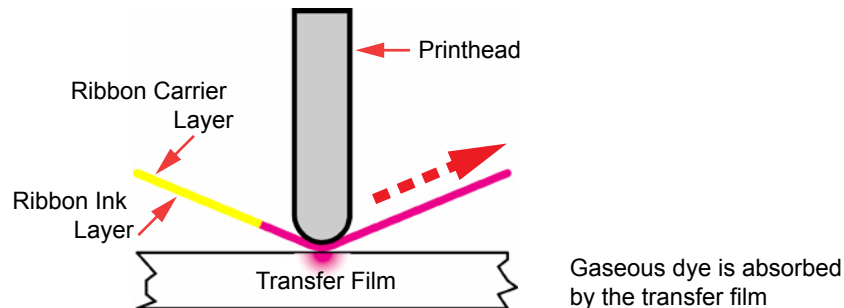


Dye Sublimation Printing

In dye sublimation printing, each printhead heating element is applied voltage at one of a number of pulse widths.

A wider pulse results in the element getting hotter, which converts more of the dye (at that pixel location) to a gas and diffuses it into the surface of the transfer film (a wider pulse gives more intense color at that pixel).

This is repeated for each of the dye panels (i.e., yellow, magenta, and cyan), to result in full-color images.

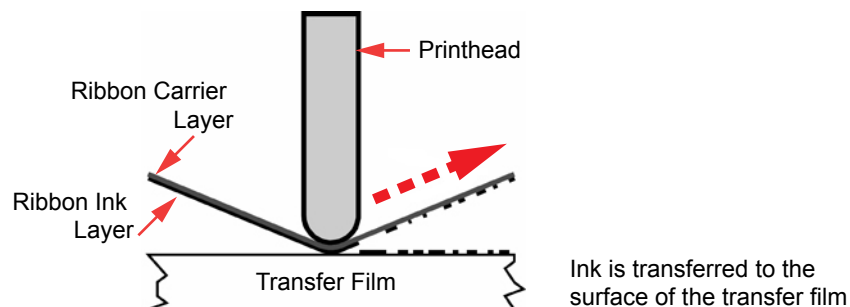


Thermal Transfer Printing

In thermal transfer printing, voltage is either applied or not applied to each printhead printing element. If voltage is applied, the ink at that location is transferred to the surface of the transfer film.

Each pixel is either printed (i.e., the ink transferred to the transfer film) or not; there are no intermediate levels.

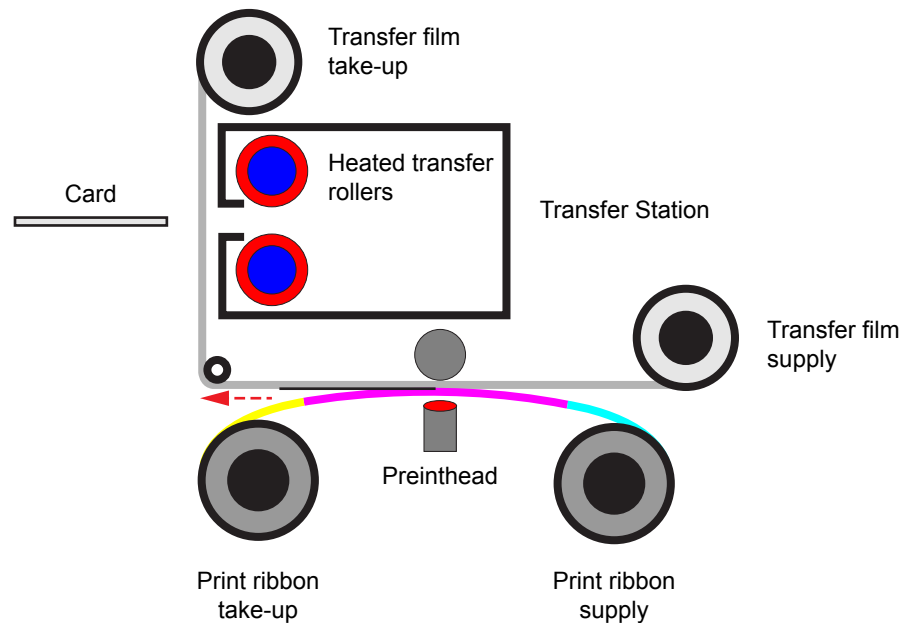
Thermal transfer printing with a black (K) resin panel is used for printing bar codes, since contrast between the light and dark areas is the highest and the edges are the sharpest.



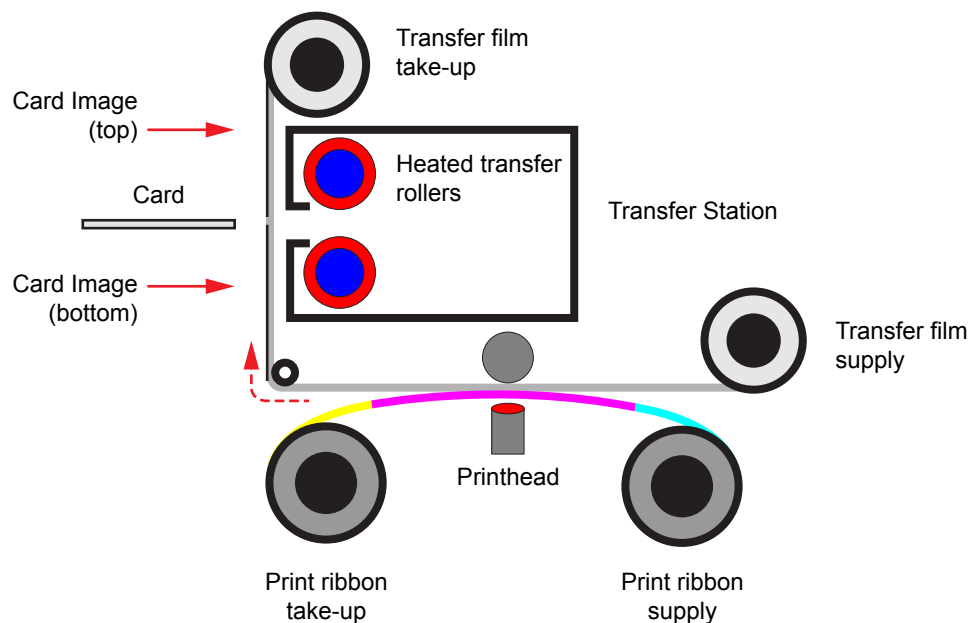
Retransfer Process

Unlike direct-to-card printing, in which images are printed directly onto the surface of the card, retransfer printing is a four-step process:

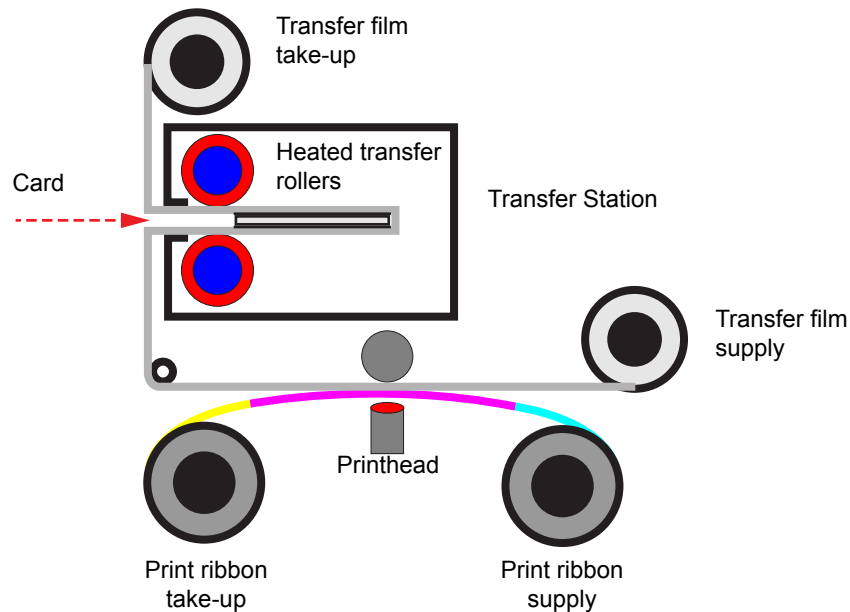
- Step 1.** The card image is printed onto a thin film, called intermediate transfer media (INTM). This INTM has a special transfer layer to hold the image. Note that the card images are printed in reverse.



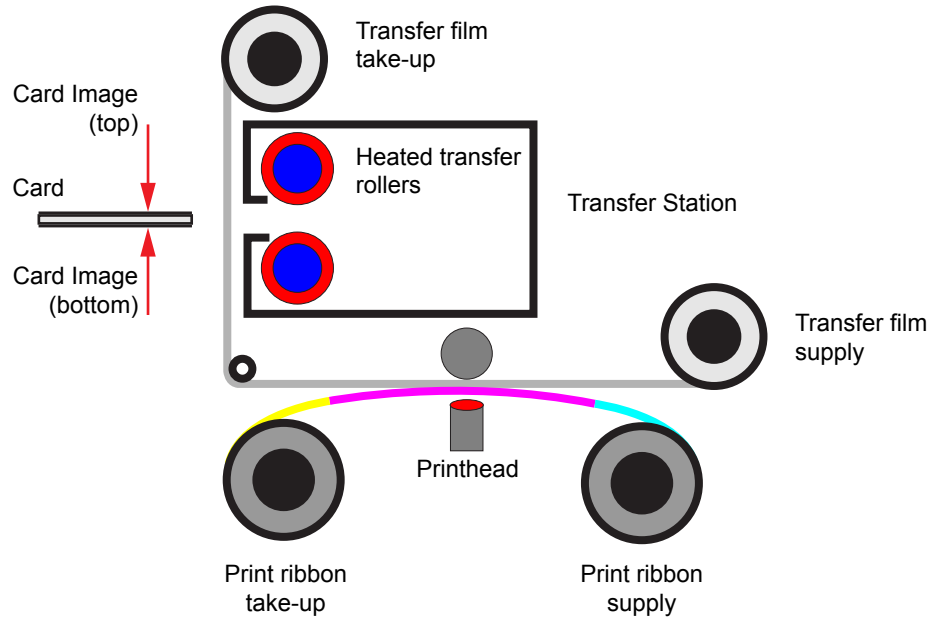
- Step 2.** The card images on the transfer film are moved to the transfer station.



Step 3. As the card enters the transfer station, the transfer film “lays over” both sides of the card. The card and film pass between the heated transfer rollers, where heat and pressure bond the image onto both surfaces of the card.



Step 4. The card is moved from the transfer station to the output hopper via the X-Y card transport.

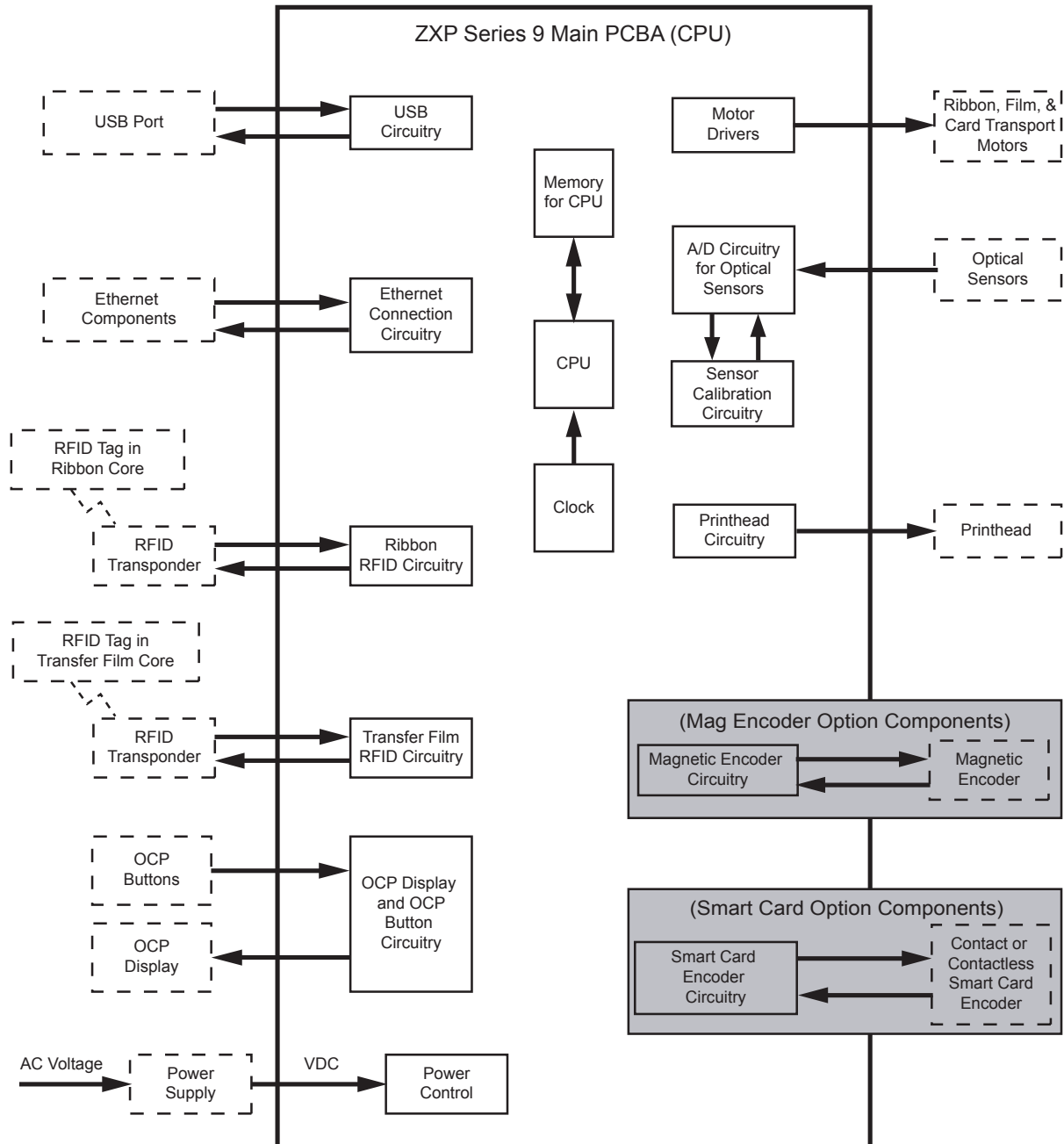


Images printed to the INTM will be slightly larger than the card, resulting in true edge-to-edge coverage after transfer, and because the printing is always done to the same transfer film, the image quality and consistency will be maintained across a wide variety of card types and materials.

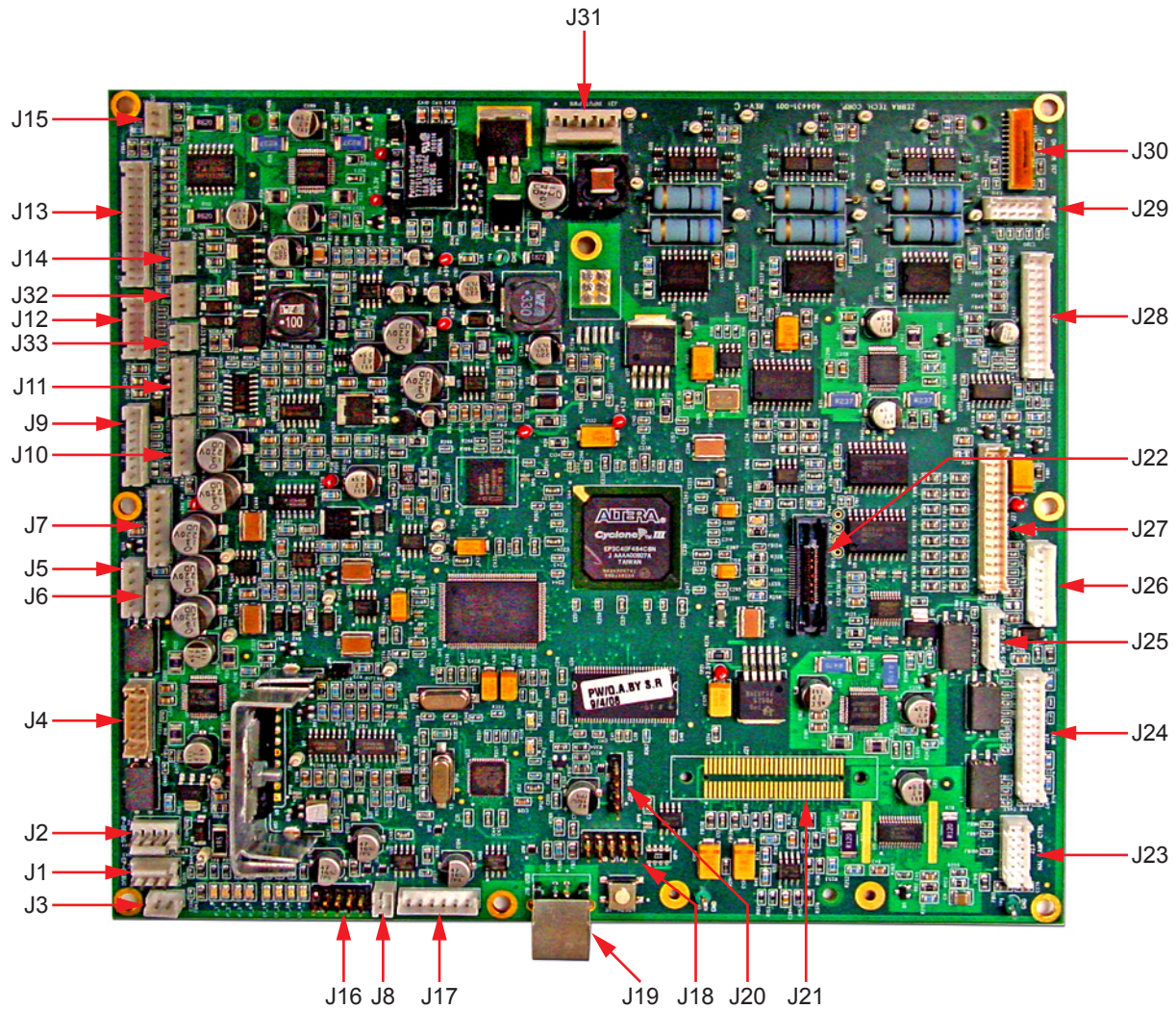
Block Diagram

Most of the circuitry in the printer is on the main PCBA. Since the main PCBA is not a serviceable unit, circuit analysis to the component level is pointless.

Below is a block diagram of the functional circuits of the printer; the block diagram also shows how signals are passed to and from the Main PCBA (CPU) to the rest of the printer.

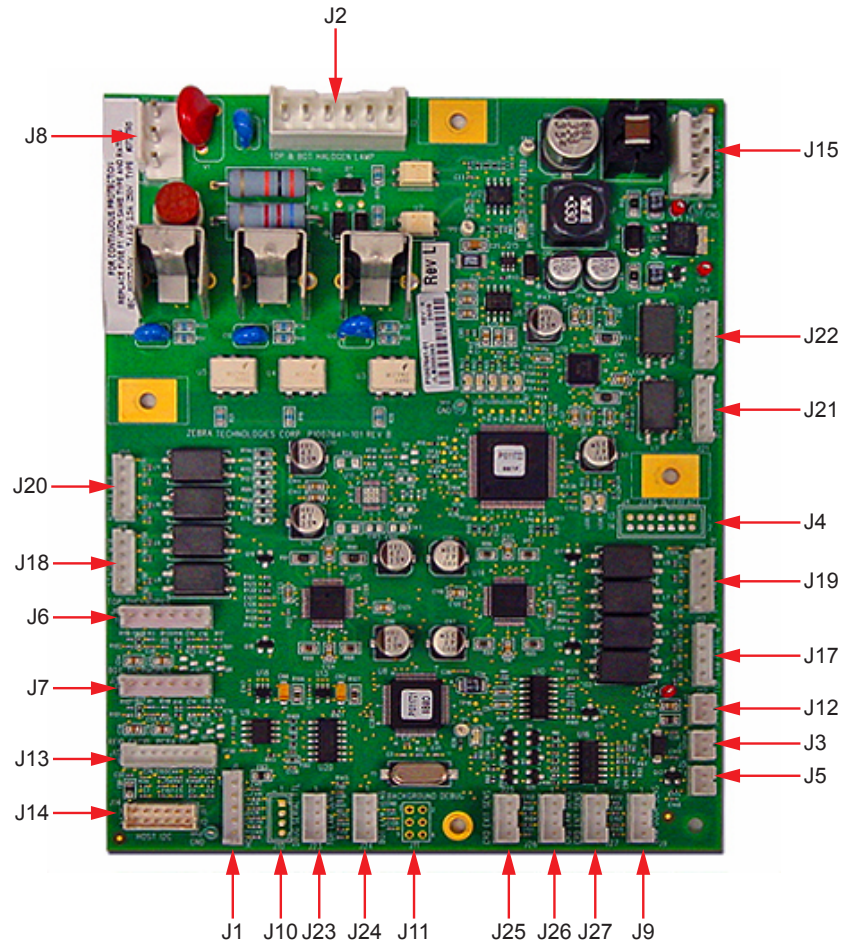


Main PCBA (CPU) Connections



Connector	PCBA ID	Functional Description
J1	EP-DEBUG	Debug/Development ONLY
J2	IP-DEBUG	Debug/Development ONLY
J3	RTU	Ribbon Take-up Motor
J4	-	(P4A) Transfer Roller Motor, (P4B) Transfer Fan, (P4C) Head Lift Motor, (P4D) Head Lift Sensor
J5	PH TU ENC	Printhead Take Up Encoder Sensor
J6	DOOR	Cover Switch
J7	PRNTHD PWR	Printhead Power
J8	-	Smart Card Option (J2 on Smart Card) RF Enable
J9	RFID 2	Future Use
J10	US ATH	User Authentication
J11	UHF	UHF Module Communication
J12	OCP	Operator Control Panel
J13	-	(P13A) Ribbon P.O. Sensor, (P13B) Card Feeder Sensor, (P13C) Ribbon P.O. Motor, (P13D) Card X Motor, (P13E) Card Infeed Motor
J14	PS FAN	Rear Exhaust Fan
J15	SPARE	Future Use
J16	DUAL HOST	2 Port 2.0 USB Hub
J17	RF CONTACTLESS	Smart Card Option (J1 on Smart Card) USB Communication to contactless encoder
J18	JTAG	Debug/Development ONLY
J19	USB	USB 2.0 Connector
J20	SPARE HOST	Spare USB
J21	-	Ethernet Daughter Card Contact
J22	-	Debug/Development ONLY
J23	HAL LAMP CTRL	Halogen Lamp Board Communication
J24	INTM	(P24A) INTM Lower Sensor, (P24B) INTM Bezel Sensor, (P24C) INTM T.U. Sensor, (P24D) INTM P.O. Motor, (P24E) INTM T.U. Motor, (P24F) INTM T.U. Clutch
J25	SMT CARD	Smart Card Motor
J26	MEDIA AUTH	Media Authentication
J27	PHD DATA	Printhead Data
J28	-	(P28A) Card Edge Detector, (P28B) Card Edge Emitter, (P28C) Tri-Color, (P28D) Card Elevator Motor, (P28E) Card Y Motor
J29	LAM	Laminator Communication
J30	MAG HD	Magnetic Read/Write Head (ISO or JIS II)
J31	INPUT PWR	Input Power (24V)
J32	PHF	Printhead Fan
J33	BL FAN	Flash Blower Fan

Laminator PCBA Connections





Maintenance



Caution • PROTECT YOUR FACTORY WARRANTY!

The recommended maintenance procedures must be performed to maintain the factory warranty. Other than the recommended cleaning procedures described in this manual, allow only Zebra authorized technicians to service the Printer.

NEVER loosen, tighten, adjust, or bend, etc., a part or cable inside the printer.

NEVER use a high-pressure air compressor to remove particles from the printer.

Cleaning the Printer

The regular use of cleaning cards will clean and maintain important parts of your printer that cannot be reached, including the printhead, transport rollers, and optional magnetic encoder station.

Printer usage (total number of cards printed and total number of cards laminated) can be found on the printer Properties, Device Information tab, or via the OCP Info Menu (see “[Printer Menu Information](#)” on page 48).

To order cleaning supplies, please visit www.zebra.com/zxp9-info.

When to Clean

- X-Cleaning Roller and Y-Cleaning Roller replacement should occur every 5,000 cards (see “[Replacing the Cleaning Rollers](#)” on page 120).
- Heated Roller cleaning should occur every 20,000 cards.

Rollers



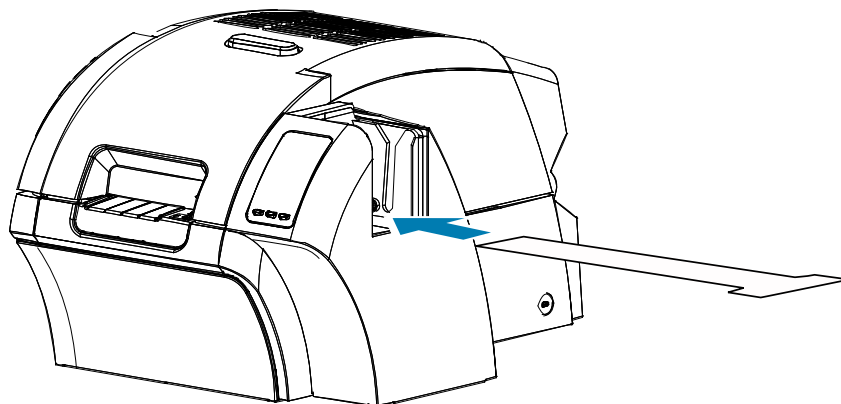
Important • Do not reuse cleaning cards.

To initiate the cleaning process:

- Step 1.** On the operator control panel (OCP) select **Menu**.
- Step 2.** From the Main Menu select **Advanced Settings**.
- Step 3.** From the Advanced Settings menu select **Clean Printer**.

To clean the X-drive rollers:

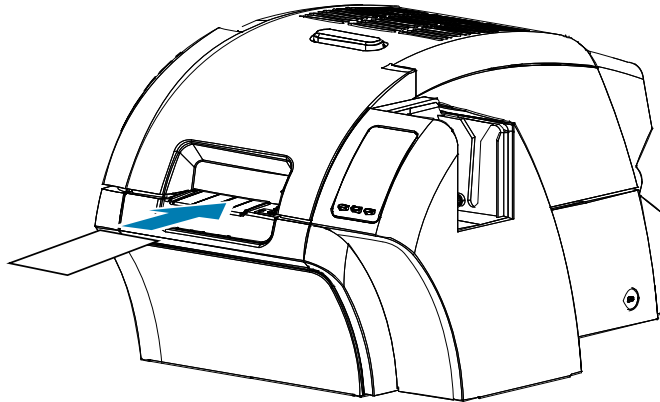
- Step 1.** Select **Clean Side Card Path** to run the X-roller cleaning routine.
- Step 2.** Use the X-roller cleaning card.
- Step 3.** Follow the OCP instructions.



- Step 4.** When complete, the OCP will return to the Clean Printer Menu.

To clean the Y-drive rollers:

- Step 1.** Select **Clean Front Card Path** to run the Y-roller cleaning routine.
- Step 2.** Use the Y-roller cleaning card.
- Step 3.** Follow the OCP instructions.



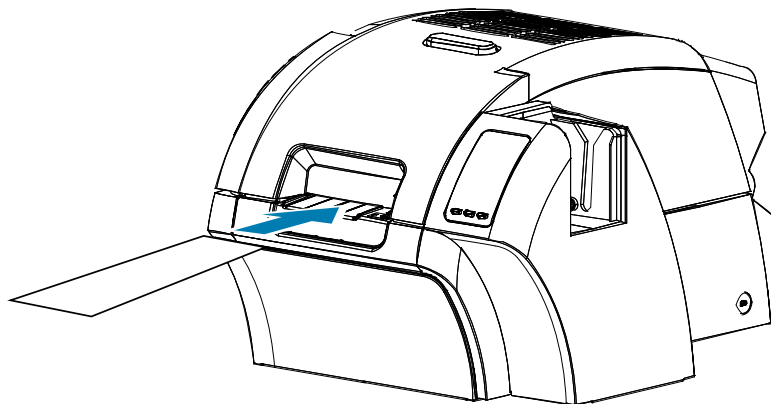
- Step 4.** When complete, the OCP will return to the Clean Printer Menu.

To clean the heated rollers:



Note • To avoid a long wait while the heated rollers cool to 70°C, perform cleaning before the rollers heat up (i.e., when first turned on and the rollers are still cold).

- Step 1.** Select **Clean Transfer Path** to run the heated roller cleaning routine.
- Step 2.** Use the hot roller cleaning card.
- Step 3.** Follow the OCP instructions.

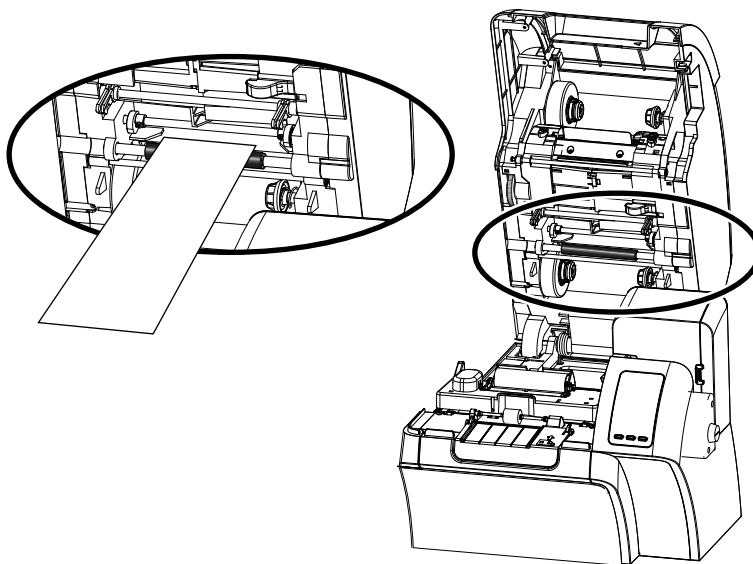


- Step 4.** When complete, the OCP will return to the Clean Printer Menu.

Platen

Platen cleaning is done manually, there is no OCP cleaning routine.

- Step 1.** Open the printer door.
- Step 2.** Remove the transfer film.
- Step 3.** Manually run the hot roller cleaning card over the platen.



- Step 4.** Re-install the transfer film.
- Step 5.** Close the printer door.

Replacing the Cleaning Rollers

The X-cleaning roller is part of the cleaning cartridge assembly—only the roller is replaceable.

To replace the X-cleaning roller:

- Step 1.** Open the printer and remove the cleaning cartridge from the printer.
- Step 2.** Grasp the used roller and pull it out from the cartridge.
- Step 3.** Insert the new cleaning roller into the cartridge—press firmly until it snaps into place.
- Step 4.** Remove the protective cover.

To replace the Y-cleaning roller:

- Step 1.** Open the printer.
- Step 2.** Grasp the used cleaning roller and pull down and out in a singular motion.
- Step 3.** Grasp the new roller by the edges and remove the protective cover.
- Step 4.** While still holding the roller at the edges, insert the new cleaning roller into position by pressing in and up in a singular motion.

Cleaning the Laminator

The regular use of cleaning cards will clean and maintain important parts of your laminator that cannot be reached.

Printer usage (total number of cards printed and total number of cards laminated) can be found on the printer Properties, Device Information tab, or via the OCP Info Menu (see “[Printer Menu Information](#)” on page 48).

When to Clean

- Cleaning should occur every 5,000 cards.
- Heated Roller cleaning should occur every 20,000 cards.

Laminator



Note • To avoid a long wait while the card transport rollers cool to 60°C, perform cleaning before the rollers heat (i.e., when first turned on and the rollers are still cold).



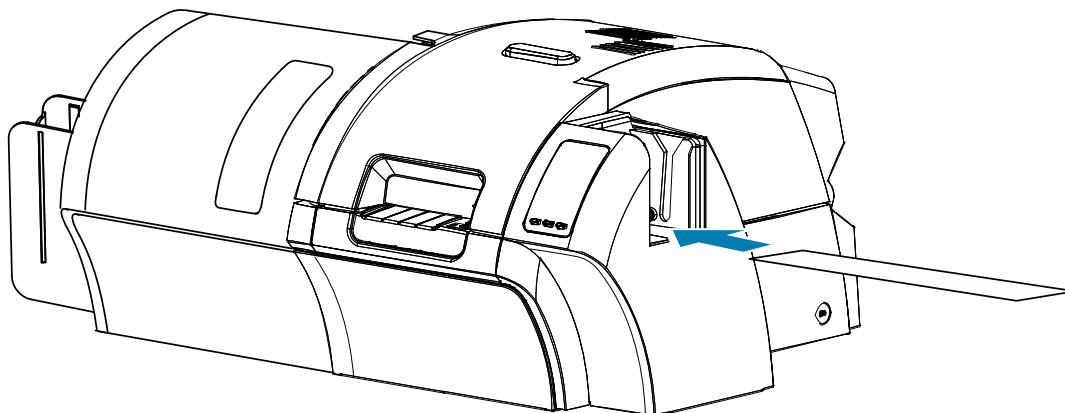
Important • Do not reuse cleaning cards.

To initiate the cleaning process:

- Step 1.** On the operator control panel (OCP) select **Menu**.
- Step 2.** From the Main Menu select **Advanced Settings**.
- Step 3.** From the Advanced Settings menu select **Clean Printer**.

To Clean the Card Path:

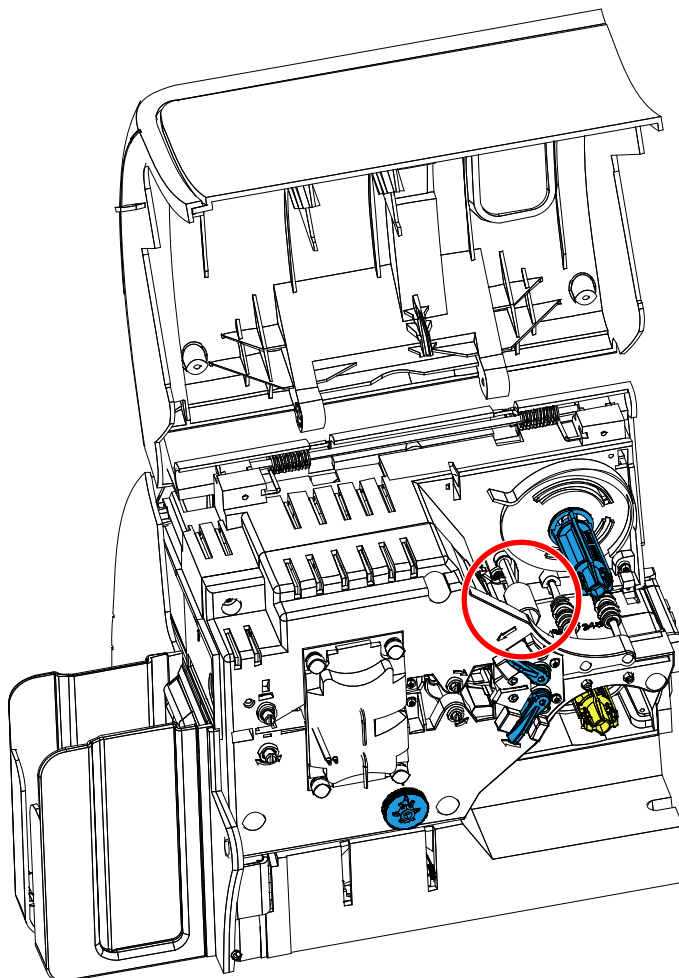
- Step 1.** Select **Clean Lam Card Path** to run the laminator cleaning routine.
- Step 2.** Use the laminator cleaning card in the laminator cleaning kit.
- Step 3.** Follow the OCP instructions.



- Step 4.** When complete, the OCP will return to the Clean Printer Menu.

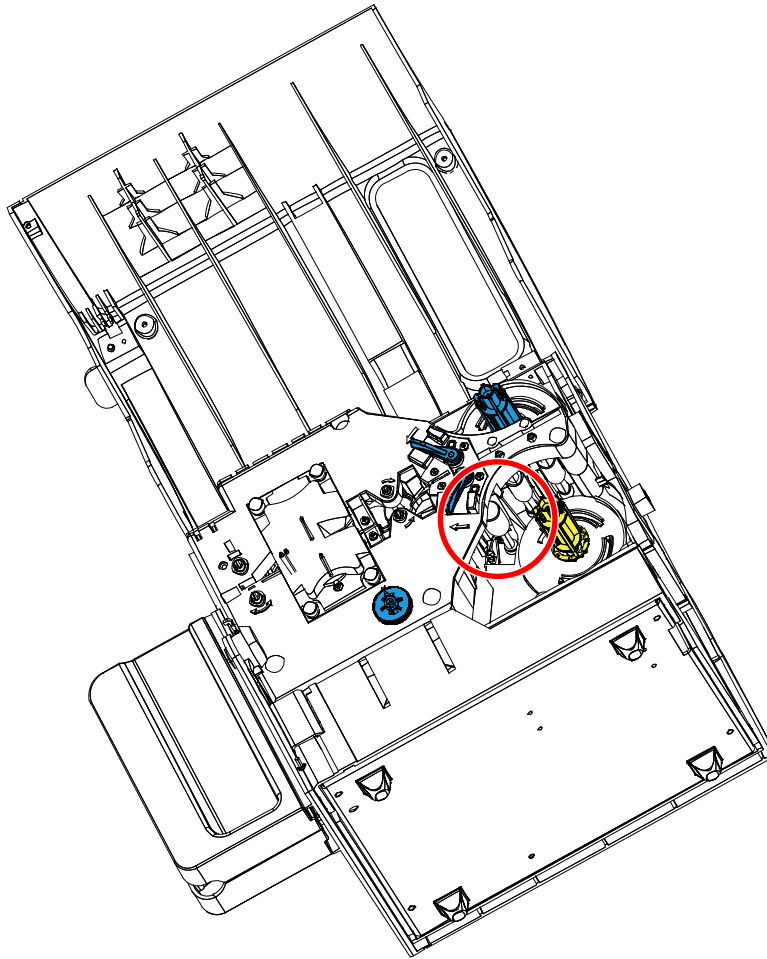
To Clean the Media Feed Rollers:

- Step 1.** Select **Clean Lam Med Rollers** to run the laminator media roller cleaning routine.
- Step 2.** Lift the laminator door to its upright position.
- Step 3.** Remove the laminate cassette(s) (see [“Removing the Laminate Cassette\(s\)”](#) on page 20).
- Step 4.** Leave the laminator door open
- Step 5.** Use the cleaning swab in the laminator cleaning kit. Bend the swab to release the cleaning fluid.
- Step 6.** Press **Next** when ready, then press **Top**.
- Step 7.** Clean the top media roller (circled below) by moving swab tip side-to-side as it turns five full revolutions. Only use moderate force.



Step 8. For the double-sided laminator only:

- a. Locate the roller (circled below) for the lower cassette.



- b. Use a second cleaning swab in the laminator cleaning kit. Bend the swab to release the cleaning fluid.
- c. Press **Bottom**.
- d. Clean the bottom media roller by moving swab tip side-to-side as it turns five full revolutions. Only use moderate force.
- e. When the operation is complete, press **Exit**.

Step 9. Reinstall the laminate cassette(s).

Step 10. Close the laminator door.

To Clean the Heater Assembly Rollers:

Step 1. Select **Clean Lam Oven** to run the laminator oven cleaning routine.

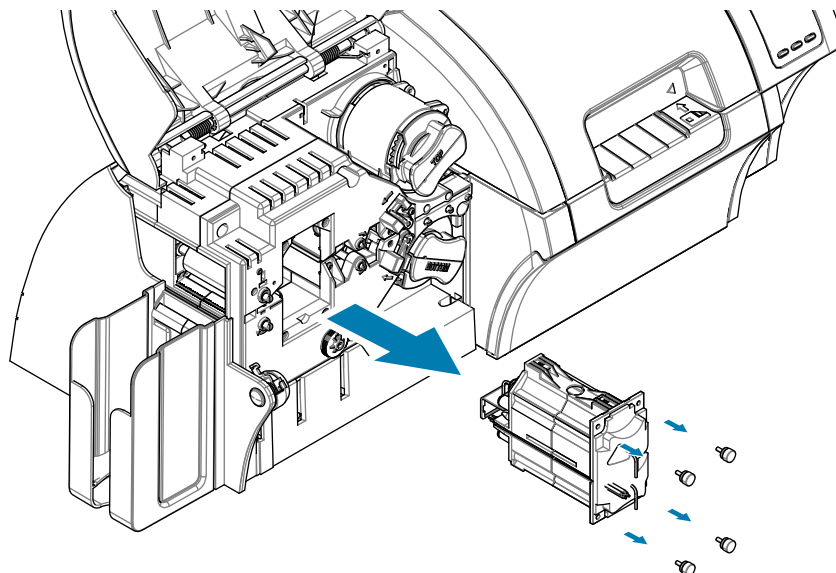
Step 2. Observe the OCP, and wait until the laminator temperature goes below 60°C.



Note • To avoid a long wait while the card transport rollers cool to 60°C, perform cleaning before the rollers heat (i.e., when first turned on and the rollers are still cold).

Step 3. Lift the laminator door to its upright position.

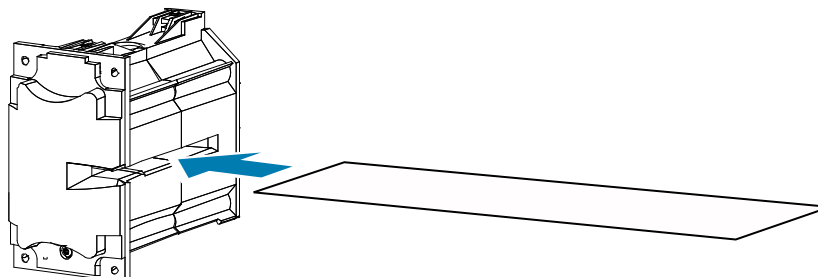
Step 4. Remove the four thumb screws holding the heater assembly in place and slide the heater assembly out of the laminator (shown below).



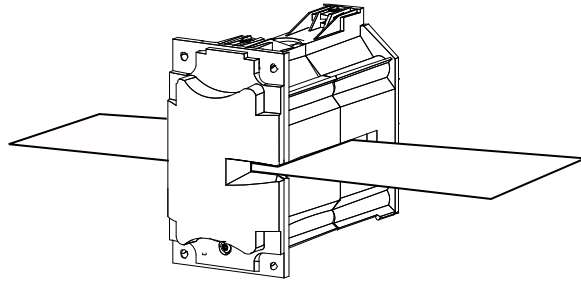
Step 5. Use the laminator hot roller cleaning card (with adhesive) from the laminator cleaning kit.

Step 6. Prepare the card for use.

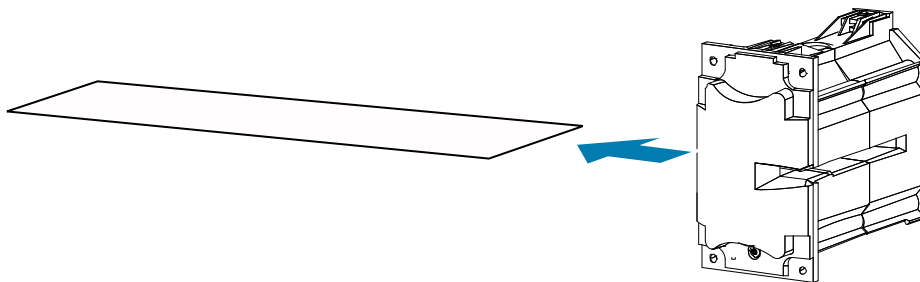
Step 7. Insert the card into the slot (arrow below), adhesive side down.



Step 8. Pull the card all the way through the heater assembly thereby cleaning the heater rollers.



Step 9. Remove the card from the heater assembly.



Step 10. Turn the card over, adhesive side up; and repeat Step 8, Step 9, and Step 10.

Step 11. Reinstall the heater assembly.

Step 12. Close the laminator door.

Step 13. Press **Exit** on the OCP when done.

Cleaning the Printhead



Printhead cleaning removes deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs or pens.



Caution • Never use a sharp object or any abrasive to scrape deposits from the printhead. Permanent damage to the printhead will result.



Hot Surface • Do not touch the printhead if the printer has been in service in the last 10 minutes. It could be very hot and cause a burn.

- Step 1.** Place the printer power switch in the OFF () position.
- Step 2.** Open the door, and remove the print ribbon.
- Step 3.** Bend the cleaning swab to release the cleaning fluid.
- Step 4.** Clean printhead by moving cleaning swab tip side-to-side across the printhead elements. Only use moderate force.
- Step 5.** Reinstall the print ribbon, and close the door.
- Step 6.** Place the printer power switch in the ON () position.

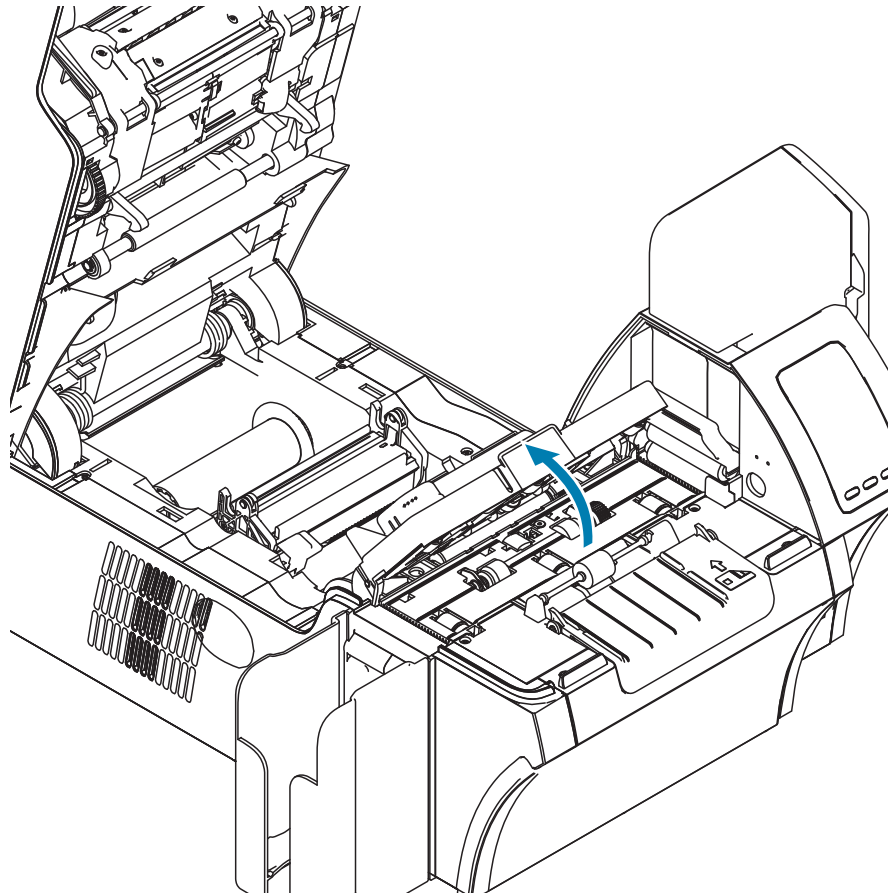
Magnetic Encoder Cleaning

The magnetic encoder is cleaned as part of the printer cleaning process . If the frequency of encoding errors increases, the head may need additional cleaning. To clean, only use foam-tipped swabs. To order cleaning swabs, go to the ZXP Series 9 Card Printer Support Page at www.zebra.com/zxp9-info.

Caution • Never use a sharp object or any abrasive to scrape deposits from the magnetic encoder. Permanent damage to the magnetic head will result.

Step 1. Open the printer cover.

Step 2. Open the idler roller assembly door.



Step 3. Bend the cleaning swab to release the cleaning fluid.

Step 4. Clean the magnetic encoder by moving cleaning swab tip side-to-side across the head elements.

Step 5. Close the idler roller assembly door.

Step 6. Close the door.



Troubleshooting

OCP Error Messages

The table offers causes and solutions to symptoms related to improper operation. Check the table when experiencing any loss of operation or print quality.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
1	SYSTEM NOT READY	A problem was detected during printer start-up.	Power cycle the printer, and retry. If problem persists, contact Zebra Tech Support.
2–4	SYSTEM ERROR	Internal logic error.	Power cycle the printer, and retry.
5	FW UPGRADE ERROR	Firmware upgrade incompatibility.	Verify the version, and retry installing the firmware.
6	DIAGNOSTIC ERROR	Error encountered in Diagnostic Mode.	Power cycle the printer, and retry.
7	FW UPGRADE ERROR	Firmware upgrade failed.	Verify the version, and retry installing the firmware.
8	CRITICAL ERROR SHUTTING DOWN	Major malfunction encountered.	Contact Zebra Tech Support.
3001	PRINTER OFFLINE	Status toggled (offline/online) via the OCP Advanced Settings Menu.	Change status to online via the OCP Advanced Settings Menu.
4002	INVALID CARD TYPE	Encoding error.	<ul style="list-style-type: none"> • Ensure that you are using the correct card type. • In the Encoding tab of the driver Printing Preferences, check that the settings are correct for the cards you are using. • Ensure that the data conforms to ISO Specifications. • Retry writing and reading.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
4003	CARD JAM	Card is jammed in the Printer	Clear the card path.
4010	OUT OF FILM	The transfer film has run out.	<ul style="list-style-type: none"> • Confirm proper installation. • Load new roll of transfer film.
4011	INTM INVALID	Transfer film does not match the printer—incorrect OEM code.	<ul style="list-style-type: none"> • Verify the part number of the transfer film is correct on film RFID tag. • Contact Zebra Tech Support.
4012	FILM JAM	The transfer film is jammed.	<ul style="list-style-type: none"> • Check the transfer film. • Reinstall the transfer film. • Repair the break in the transfer film and reinstall.
4013	FILM MOTION ERROR	Transfer film not correctly responding to motion commands.	<ul style="list-style-type: none"> • Check the transfer film. • Reinstall the transfer film. • Power cycle the printer.
4014	CARD FEED ERROR	Card is jammed in Feeder Cartridge.	<ul style="list-style-type: none"> • Clear card jam in Feeder Cartridge, and re-seat Feeder Cartridge. • Ensure that cards are not stuck together and that they are the correct thickness (30 mil only).
4015	CARD NOT INSERTED	Card was not fed into the Single Card Feed Slot within 30-second period.	Retry and feed card into the Single Card Feed Slot, or cancel the operation.
4016	OUT OF CARDS	<ul style="list-style-type: none"> • The Feeder Cartridge is empty. • Card is stuck in Feeder Cartridge. 	<ul style="list-style-type: none"> • Load cards in the Feeder Cartridge. • Re-seat the Feeder Cartridge.
4017	INTM AUTH FAIL	RFID auth invalid or corrupt.	• Contact Zebra Tech Support.
5001	OUT OF RIBBON	Print ribbon has run out.	Load a new roll of print ribbon.
5002	INVALID RIBBON	Ribbon does not match the printer—incorrect OEM code.	<ul style="list-style-type: none"> • Verify the part number of the ribbon is correct on film RFID tag. • Contact Zebra Tech Support.
5003	RIBBON JAM	Print ribbon is jammed.	<ul style="list-style-type: none"> • Check the print ribbon. • Reinstall the print ribbon. • Repair the break in the print ribbon and reinstall.
5004	RIBBON MOTION ERROR	Print ribbon not correctly responding to motion commands.	<ul style="list-style-type: none"> • Check the print ribbon. • Reinstall the print ribbon. • Repair the break in the print ribbon and reinstall.
5005	RIBBON ADC ERROR	Possible hardware issue.	Contact Zebra Tech Support.
5006	RIBBON BEMF ERROR	Problem with the Back EMF (BEMF) of the ribbon motors.	Contact Zebra Tech Support.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
5007	RIB COLOR DETECT ERR	<ul style="list-style-type: none"> Print ribbon is not installed correctly. Tricolor sensor error. 	<ul style="list-style-type: none"> Reinstall the print ribbon. Perform tricolor calibration in ZMotif Service Partner Tool. Contact Zebra Tech Support.
5008	RIBBON AUTH FAIL	RFID auth invalid or corrupt.	<ul style="list-style-type: none"> Contact Zebra Tech Support.
6001–6008	GENERAL MEMORY ERROR	There is a problem when accessing general memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6009	FLASH ERASE ERROR	There is a problem when accessing flash memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6010	FLASH ERASE VERIF ERR	There is a problem when accessing flash memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6011	FLASH PROGRAM ERROR	There is a problem when accessing flash memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6012	FLASH PROG VERIFY ERR	There is a problem when accessing flash memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6013	INVALID FW SRECORD	There is a problem when accessing flash memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
6015–6025	GENERAL MEMORY ERROR	There is a problem when accessing general memory.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
7001	CARD FEED ERROR	Card is jammed in Feeder Cartridge.	<ul style="list-style-type: none"> Clear the card jam in the Feeder Cartridge, and re-seat the Feeder Cartridge. Ensure that cards are not stuck together and that they are the correct thickness (30 mil only).
7003	PRINthead CABLE ERROR	Printhead cable loose or disconnected.	Check printhead cable connection, reconnect if loose or disconnected.
7005	PRINthead TOO HOT	Printhead temperature out of proper range (HOT).	Contact Zebra Tech Support.
7006	PRINthead TOO COLD	Printhead temperature out of proper range (COLD).	Contact Zebra Tech Support.
7008	COVER OPEN	This warning will be displayed if the cover protecting the Printer Module is opened.	This warning will be cleared when the printer cover is closed.
7010	PRINthead MOTION ERR	Printhead did not move to proper position during initialization.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Re-seat the printhead.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
7011	ROLLERS OVER TEMP	Heated Rollers (used to transfer the image from the transfer film to the Card) are too hot for proper operation.	Turn off power, and contact Zebra Tech Support.
7012	ROLLERS UNDER TEMP	Heated Rollers (used to transfer the image from transfer film to Card) are not hot enough for proper operation.	Turn off power, and contact Zebra Tech Support.
7013	MOTOR VOLTAGE ERROR	Incorrect voltage detected at one or several motors in the unit.	Power cycle the printer, and retry.
7014	SCRIPT PROCESSING ERROR	Internal logic error.	Power cycle the printer, and retry.
7015	MAG MOTION ERROR	Printhead did not move to proper position during initialization.	Power cycle the printer, and retry.
7017	REJECT ERROR	A problem during the reject process.	Contact Zebra Tech Support.
7018	SMARTCARD ERROR	<ul style="list-style-type: none"> • Encoding error. • Faulty card. 	<ul style="list-style-type: none"> • Ensure that you are using the correct card type. • Check that the cards are loaded in the correct orientation. • Ensure that the data conforms to ISO Specifications. • Retry writing and reading.
7019	SCRIPT CONTENT ERROR	Internal logic error.	Power cycle the printer, and retry.
7020	SCRIPT SEND ERROR	Internal logic error.	Power cycle the printer, and retry.
7034	REJECT BIN FULL REMOVE CARDS	The Reject Bin is full.	Remove the cards from the bin, and reset the reject bin card count to 0 via the OCP (Main Menu > Advanced Settings > Clear Reject Bin).
9001	MAG READ ERROR	<ul style="list-style-type: none"> • Encoding error. • Defective magnetic stripe. 	<ul style="list-style-type: none"> • Ensure that you are using the correct card type. • Check that the cards are loaded with the magnetic stripe in the correct orientation. • Ensure that the cards are set-up correctly in the printer driver (coercivity setting). • Ensure that the data conforms to ISO Specifications. • Retry reading.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
9002	MAG WRITE ERROR	<ul style="list-style-type: none"> • Encoding error. • Defective magnetic stripe. 	<ul style="list-style-type: none"> • Ensure that you are using the correct card type. • Check that the cards are loaded with the magnetic stripe in the correct orientation. • Ensure that the cards are set-up correctly in the printer driver (coercivity setting). • Ensure that the data conforms to ISO Specifications. • Retry writing.
9004	NO MAG STRIPE	Magnetic stripe not detected.	<ul style="list-style-type: none"> • Ensure that you are using the correct card type. • Check that the cards are loaded with the magnetic stripe in the correct orientation.
10001	CONTACT READ ERROR	<ul style="list-style-type: none"> • Faulty card. • Incorrect card orientation. • Incorrect Mode or Protocol setting. • Faulty reader. 	<ul style="list-style-type: none"> • Try another card. • Try another card (check orientation). • Correct the Mode or Protocol setting. • Contact Zebra Tech Support.
10002	CONTACT WRITE ERROR	<ul style="list-style-type: none"> • Faulty card. • Incorrect card orientation. • Incorrect Mode or Protocol setting. • Faulty writer. 	<ul style="list-style-type: none"> • Try another card. • Try another card (check orientation). • Correct the Mode or Protocol setting. • Contact Zebra Tech Support.
11001	CONTACTLESS READ ERROR	<ul style="list-style-type: none"> • Faulty card. • Incorrect Mode or Protocol setting. • Faulty reader. 	<ul style="list-style-type: none"> • Try another card. • Correct the Mode or Protocol setting. • Contact Zebra Tech Support.
11002	CONTACTLESS WRITE ERROR	<ul style="list-style-type: none"> • Faulty card. • Incorrect Mode or Protocol setting. • Faulty writer. 	<ul style="list-style-type: none"> • Try another card. • Correct the Mode or Protocol setting. • Contact Zebra Tech Support.
14001	MISSING HCB	The Halogen Controller Board (HCB) is missing.	<ul style="list-style-type: none"> • Check connection to HCB. • Contact Zebra Tech Support.
14002	HCB BULB ERROR	The Halogen Controller Board (HCB) is unable to pulse the upper and lower heaters to bring the upper and lower rollers to the proper temperature.	<ul style="list-style-type: none"> • Power cycle the printer, and retry. • Contact Zebra Tech Support.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
14003	HCB SENSOR ERROR	The Halogen Controller Board (HCB) is unable to detect temperature of the upper or lower rollers.	Contact Zebra Tech Support.
14004	HCB FIRMWARE MISSING	The Halogen Controller Board (HCB) firmware is missing.	<ul style="list-style-type: none"> Update printer firmware. Contact Zebra Tech Support.
15001	MISSING MAB	An error occurred when reading the RFID Tag by the MAB (Media Authentication Board).	<ul style="list-style-type: none"> Check print ribbon orientation. Verify part number of the print ribbon. Power cycle the printer, and retry. Contact Zebra Tech Support.
15002	MAB FIRMWARE MISSING	MAB (Media Authentication Board) Firmware is missing.	Install the firmware.
17001	LAMINATOR MISSING	Laminator data cable loose or disconnected.	Contact Zebra Tech Support.
17002	LAMINATOR FAILED INITIALIZATION	Laminator was detected by the printer, but was unable to communicate to it.	Contact Zebra Tech Support.
17003	LAMINATOR UNKNOWN ERROR	An unknown error has occurred – this is an indication of a FW problem and should not occur.	Press RETRY on the OCP.
17004	MISSING LAMINATOR MAB	An error occurred when reading the RFID Tag by trying to communicate to the Laminator MAB (Media Authentication Board).	<ul style="list-style-type: none"> Check laminate orientation. Power cycle the printer, and retry. Contact Zebra Tech Support.
17005	TOP LAMINATE FEED FAIL	<ul style="list-style-type: none"> Top laminate cartridge is not installed properly. Cartridge is not removed when that side of the card is not being laminated. A mis-cut piece of laminate (rare) is obscuring the media sensor. 	<ul style="list-style-type: none"> Remove, reposition, and re-install the top laminate cartridge. Remove the top laminate cartridge. Remove the mis-cut piece of laminate.
17006	BOTTOM LAMINATE FEED FAIL	<ul style="list-style-type: none"> Bottom laminate cartridge is not installed properly. Cartridge is not removed when that side of the card is not being laminated. 	<ul style="list-style-type: none"> Remove, reposition, and re-install the bottom laminate cartridge. Remove the bottom laminate cartridge.
17007	TOP LAMINATE REGISTRATION ERROR	<ul style="list-style-type: none"> Improperly prepared registered laminate. Media misfeed. Patch length improperly set. Unexpected end of laminate roll detected. 	Remove and recut laminate in the center of the index notch, re-install, and retry.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
17008	LAMINATOR CARD FEED FAIL	Printer has not fed the card far enough into laminator mechanism for infeed rollers to grab it.	Open the Laminator and printer doors to check for jammed/ stuck cards. Note: Only 30 mil cards supported.
17009	LAMINATOR EARLY CARD JAM	Card did not make it to the staging rollers.	Remove the card and/or laminate that is stuck in the laminator staging/cutting area.
17010	LAMINATOR MIDDLE CARD JAM	Card and laminate have jammed inside heater assembly, often due to mis-positioned laminate patch sticking to heated rollers.	Remove the oven, and inspect for stuck cards.
17011	LAMINATOR LATE CARD JAM	Card did not unblock the exit sensor in the specified time.	<ul style="list-style-type: none"> • Check for card jam in the exit area. • Assure that the sliding exit door is not partially blocking the exit path.
17012	LAMINATOR POLL TIMEOUT	The laminator expects the printer to periodically send commands to it within a specified time period. If it fails to do so, it assumes that something is wrong with the communication link or that the printer is down. This error may occur if the printer-to-laminator communications is having intermittent problems.	Power cycle the printer, and retry.
17013	LAMINATOR TOP HEATER FAIL	Top heater did not turn on after being instructed to do so. When the heater is enabled, the controller will wait a certain specified amount of time for it to attain the set target temperature. If the heater fails to reach the target in the specified time, the TopHeaterFail fault will be set.	<ul style="list-style-type: none"> • Power cycle the printer, and retry. • Replace the top halogen bulb.
17014	LAMINATOR BOTTOM HEATER FAIL	Bottom heater did not turn on after being instructed to do so. When the heater is enabled, the controller will wait a certain specified amount of time for it to attain the set target temperature. If the heater fails to reach the target in the specified time, the BotHeaterFail fault will be set.	<ul style="list-style-type: none"> • Power cycle the printer, and retry. • Replace the bottom halogen bulb.
17015	LAMINATOR TOP TEMPERATURE HIGH	If the top roller temperature ever exceeds a fixed temperature threshold, the over temp error occurs.	<ul style="list-style-type: none"> • Power cycle the printer, and retry. • Contact Zebra Tech Support.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
17016	LAMINATOR BOTTOM TEMPERATURE HIGH	If the bottom roller temperature ever exceeds a fixed temperature threshold, the over temp error occurs.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Contact Zebra Tech Support.
17017	LAMINATOR TOP CUTTER STALL	Top cutter blade is obstructed, or top cutter mechanism is damaged.	Contact Zebra Tech Support.
17118	LAMINATOR BOTTOM CUTTER STALL	Bottom cutter blade is obstructed, or bottom cutter mechanism is damaged.	Contact Zebra Tech Support.
17019	LAMINATOR TOP CUTTER FAIL	Top cutter has failed.	Contact Zebra Tech Support.
17020	LAMINATOR BOTTOM CUTTER FAIL	Bottom cutter has failed.	Contact Zebra Tech Support.
17021	LAMINATOR TOP TEMP SENSOR FAIL	The top temperature (thermopile) sensor has failed.	Contact Zebra Tech Support.
17022	LAMINATOR BOTTOM TEMP SENSOR FAIL	The bottom temperature (thermopile) sensor has failed.	Contact Zebra Tech Support.
17023	LAMINATOR FAN FAIL	This should only happen if one or both cooling fans fail or the cooling vents near the heated roller assembly are blocked or the fan(s) have failed.	Check for blocked vents.
17024	LAMINATOR EEPROM DEFAULT	The parameters stored in EEPROM have been reset to their default values. This will not normally happen, but could be seen with certain FW upgrades when new parameters have been added by Engineering. It could also indicate a problem with the Laminator's EEPROM.	<ul style="list-style-type: none"> Press RETRY on the OCP when this error occurs. Power cycle the printer, and retry.
17025	LAMINATOR TOP TEMPERATURE LOW	If the top roller temperature does not reach a fixed temperature threshold, the under temp error occurs.	Power cycle the printer, and retry.
17026	TOP AND BOTTOM LAMINATES OUT	The top and bottom laminates have run out.	Load new rolls of laminate.
17027	TOP LAMINATE OUT	The top laminate has run out.	Load new roll of laminate.
17028	BOTTOM LAMINATE OUT	The bottom laminate has run out.	Load new roll of laminate.
17029	INVALID TOP LAMINATE	Wrong OEM code, laminate not supported.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Replace with valid Zebra laminate.
17030	INVALID BOTTOM LAMINATE	Wrong OEM code, laminate not supported.	<ul style="list-style-type: none"> Power cycle the printer, and retry. Replace with valid Zebra laminate.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
17031	BOTTOM LAMINATE REGISTRATION ERROR	<ul style="list-style-type: none"> Improperly prepared registered laminate. Media misfeed. Patch length improperly set. Unexpected end of laminate roll detected. 	Remove and recut laminate in the center of the index notch, re-install, and retry.
17038	LAMINATOR COVER OPEN	This warning will be displayed if the cover protecting the laminator is opened.	This warning will be cleared when the laminator cover is closed.
17040	LAMINATOR INITIALIZING	This warning will be displayed after the laminator door is closed and laminate spools are re-read/detected.	No action needed
17041	LAMINATOR FIRMWARE MISSING	LCB (Laminator Controller Board) Firmware is missing.	Install the firmware.
17042	LAMINATOR MAB FIRMWARE MISSING	Laminator MAB (Media Authentication Board) Firmware is missing.	Install the firmware.
18001	ETHERNET COMM ERROR	Ethernet communication problem.	<ul style="list-style-type: none"> Disconnect and reconnect the network cable. Power cycle the printer, and retry.
19001	WIFI COMM ERROR	Wireless Ethernet communication problem.	<ul style="list-style-type: none"> Power cycle the printer. Re-run the set-up wizard to re-establish the wireless settings. Contact Zebra Tech Support.
19002	WIFI ACCESS POINT MISSING	Access point, specified by printer wireless settings, not found during initial printer scan after power up.	Verify access point, specified by the printer wireless settings, is properly connected to the network and turned on.
19003	WIFI LINK LOST	<ul style="list-style-type: none"> Connection to the access point was lost. Poor signal quality or low signal strength. Interference. Access point power has been lost. 	<ul style="list-style-type: none"> Verify access point is properly connected to the network and powered ON. Put the printer antenna in a similar orientation than access point's antenna, and re-run the set-up wizard to re-establish the wireless settings.
19004	WIFI INCOMPATIBLE NETWORK	<ul style="list-style-type: none"> Printer, after power up, found the access point specified by the wireless settings, but found the access point settings incompatible. Access point configuration has been modified. 	Re-run the set-up wizard to establish the new wireless settings.

CODE	MESSAGE	POSSIBLE CAUSE	POSSIBLE SOLUTION
19005	WIFI ASSOCIATION FAILED	<ul style="list-style-type: none"> • During association with an access point, the association failed. • Poor signal quality. • Low signal strength. 	Put the printer antenna in a similar orientation as the access point's antenna, and re-run the set-up wizard to re-establish the wireless settings.
19006	WIFI CONNECTION FAILED	<ul style="list-style-type: none"> • They key handshake following the association failed. • WEP Key or WPA passphrase is incorrect. 	Ensure that you have the correct key/passphrase, then re-run the set-up wizard to establish new wireless settings.

Clearing a Card Jam

A card jam is reported by the printer when a card fails to reach a sensor as expected, or a card blocks a sensor unexpectedly.



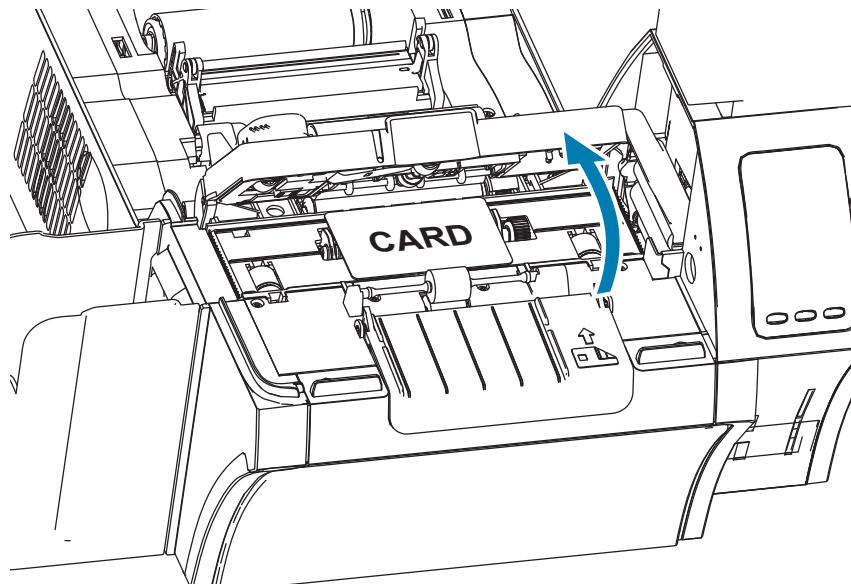
Caution • Do not use tools to remove stuck cards, this will void the product warranty and may cause damage to the equipment.

Printer

A card jam in the printer will normally occur in one of two places: the card path, or the transfer station.

Step 1. Open the printer.

Step 2. Open the idler cover.

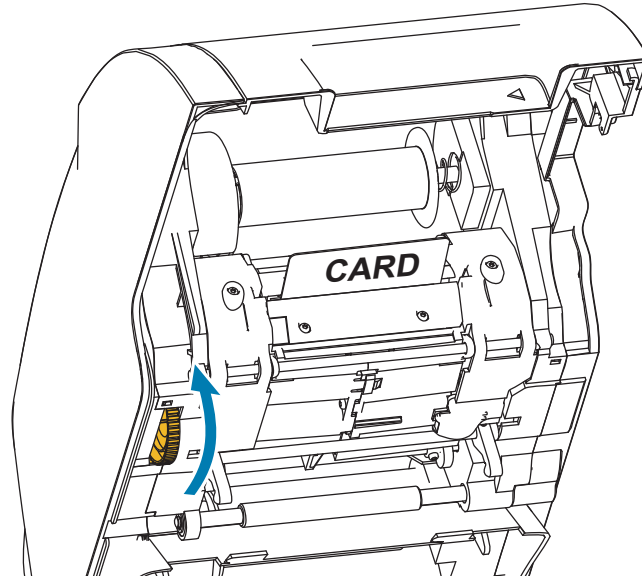


Step 3. Remove the card (if present). If no card present, continue to next step.

Step 4. Turn the manual advance wheel next to the transfer station. Continue turning until the wheel stops or the card has been ejected sufficiently enough to remove it.



Caution • Card may be hot.

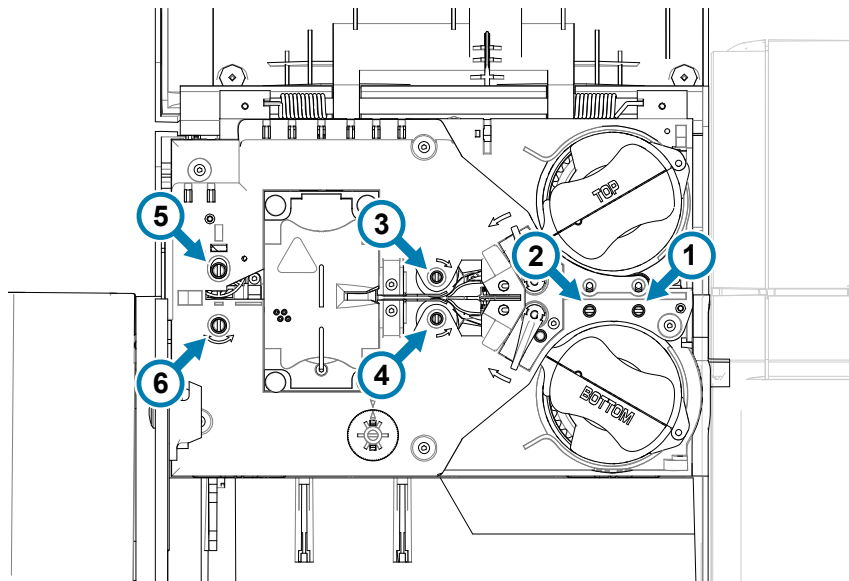


Laminator

A card jam in the laminator will normally occur along the lamination path.

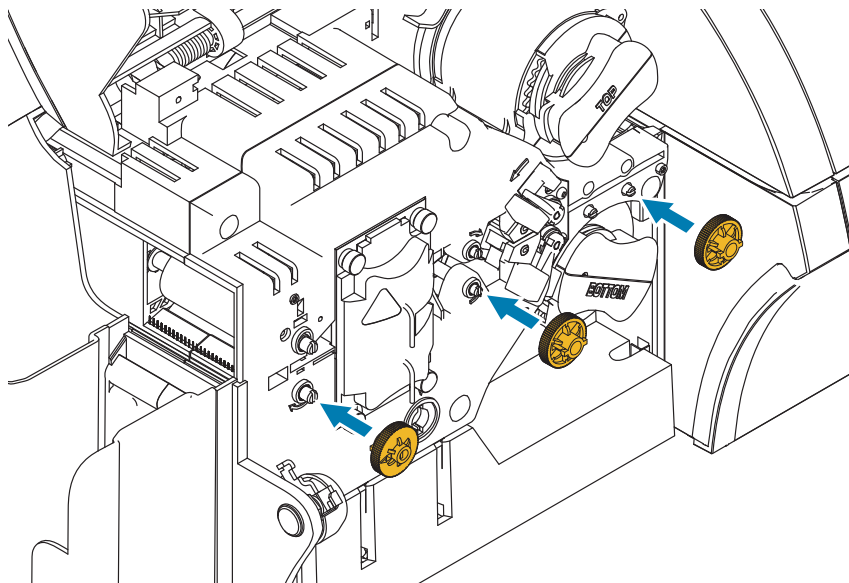
Step 1. Open the laminator.

There are three areas along the lamination path and six rollers that can be manually advanced if a card is stuck.



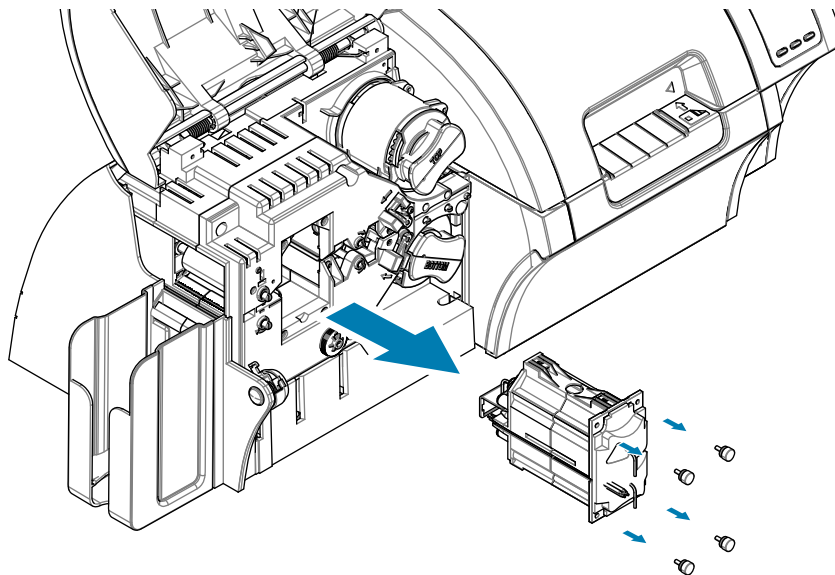
Note • For rollers 1 through 4, use the narrow side of the manual advance tool; for rollers 5 and 6, use the wider side of the manual advance tool.

- Step 2.** Identify the location of the card and, using the manual advance tool, turn the appropriate roller counter-clockwise. Advance the card to the next area or until it has been ejected sufficiently enough to remove it.



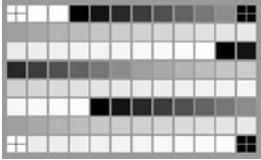
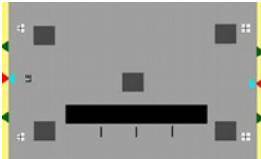

In some cases, a card may get wrapped around the laminator heater assembly rollers. In this case, the laminator heater assembly can be removed.

- Step 1.** Remove the four thumb screws holding the heater assembly in place and slide the heater assembly out of the laminator (shown below).



- Step 2.** Remove the card—do not use tools. If the card is wrapped around the heater assembly rollers, contact Zebra to replace the heater assembly.

OCP Test Cards

Image	Title	Description	Use
	GRADIENT BOXES	3 sets of light-to-dark grayscale ramps	Used to validate the tonal scale of the printer.
	DENSITY SETUP	Mid-gray and maximum density fields on a flat gray surface	Also used to check the left/right and top/bottom offsets or the centering of the image on the card.
	MONOCHROME ONLY	Barcode and text	Used to verify monochrome print capability and quality.

Identifying Job Quality Issues

For the ZXP Series 9 printer, image quality can be broken down into two areas: print quality and transfer quality. Print quality refers to the quality of the text, barcodes, and images that are printed on the film, while transfer quality refers to the quality of the transfer of the film onto the card, as well as card warpage and flash artifacts.

Print Quality Issues

Color Accuracy

When the colors on the printed card do not match the expected result, there are several steps that may be taken to get the desired output.

1. If using the driver, make adjustments in the Color Optimization tab of Printer Preferences.
2. If using the driver, create and apply a Windows ICC color profile.
3. Whether using the driver or not, contact Zebra to create a custom lookup table that can be downloaded to the printer using the ZXP Toolbox.

Dirt and Debris

Spots and speckles appearing on the card may be caused by dirt and debris in the printer.

- Replace the cleaning rollers
- Clean the printer

Image Placement

If the image printed on the card seems to have shifted, this may be an image placement issue.

- Use the Print Position adjustment feature in the ZXP Toolbox, located in the Calibration tab.

Smear

Smear may occur when a sudden shift from a dark color to a light color occurs and the printhead has not sufficiently cooled when printing the light color, thereby the dark color appears to “smear” into the light color.

- Lower the Preheat value on the Color Optimization tab in the Printing Preferences Control Panel.
- Switch to Fine print mode on the Card Setup tab.

Black Extraction

When the black text or images does not appear black or crisp, or text that is supposed to be black appears muddy or not sharp, this may be an issue where the black text or image was not printed using the black panel.

- Check the source image; RGB values up to 25,25,25 can be printed as black by using the sliders on the K Extraction page. If RGB values are greater than 25,25,25, then the
- image will need to be modified to bring the RGB values under this threshold
- Adjust the properties in the Front or Back K Extraction menu (refer to the Help content in the Printing Preferences Control panel).

Ribbon Wrinkle

Ribbon wrinkle appears as a streak of color that was not part of the original image. It typically originates from the edges of the card, and sometimes occurs when printing a really dark image, or near the transition between really dark and really light images

If this occurs, contact Zebra Tech Support.

Mis-registration

Mis-registration occurs when the Y, M, C, and/or K panels are not properly aligned with each other. The effect may appear as a lack of sharpness, or a color halo.

If this occurs, contact Zebra Tech Support.

Transfer Quality Issues

Lack of Transfer

A printed image that appears incomplete on the card may be a sign of lack of transfer. Lack of transfer typically occurs because there is not enough energy to properly adhere the transfer film to the card. There are several steps that can be taken to eliminate lack of transfer.

1. Adjust the transfer settings—raise the top and/or bottom transfer temperature, and/or lower the in and/or out transfer speed. These settings are available by selecting one of the Custom card types in the Printing Preferences control panel.
2. If lack of transfer only occurs for the first few cards after the printer is turned on, set or increase the warm-up delay to allow the transfer station to fully warm up before printing. The warm-up delay can be set in the Advanced menu on the OCP.

Warpage

Card warpage is caused by an imbalance in the amount of energy applied to the top and bottom of the card. There are several steps that can be taken to improve card warpage.

1. Adjust the transfer settings - lower the top and/or bottom transfer temperature, and/or increase the in and/or out transfer speed. These settings are available by selecting one of the Custom card types in Printer Preferences, in the Driver.
2. Switch to a card type that is more resistant to high temperatures.
3. Contact Zebra about custom ribbons with a Helper panel, that may enable good transfer at lower transfer temperatures.

Flash

Flash is an artifact of the transfer process, that appears like little shards of transfer film. The shards may be clear or colored, depending on the image being printed. Flash may appear on the sides or top of the card.

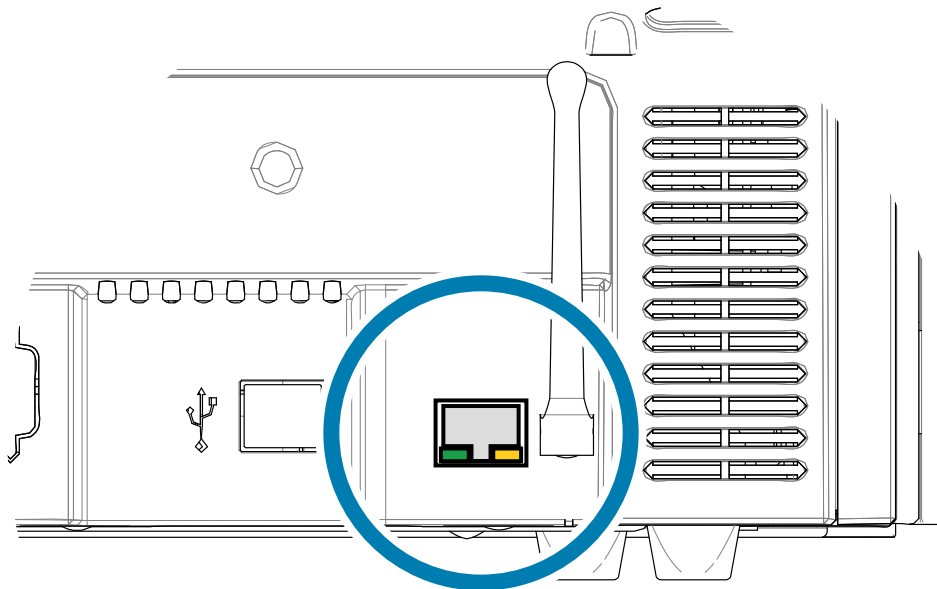
- If flash is seen on the top of the card, adjust the image placement downward. Use the Print Position adjustment feature in the ZXP Toolbox, located in the Calibration tab. If this does not minimize or resolve the issue, contact Zebra Technical Support.
- If flash is seen on the sides of the card, contact Zebra Technical Support.

Delamination

Delamination is the separation of the card layers and may be caused by using substandard cards.

If this occurs, contact Zebra Tech Support.

Ethernet Indicators—Detail



Link/Activity Indicator (Green)

Off	No link (disconnected)
On	Network link has been established
Blinking	Network activity has been detected

Speed Indicator (Orange)

Off	No link (disconnected)
1 Blink	The LED blinks once (one blink, pause, one blink, etc.) when a 10Base link has been established.
2 Blinks	The LED blinks twice (two blinks, pause, two blinks, etc.) when a 100Base link has been established.

If both LEDs are off, the printer has not detected the presence of a network cable. To solve the problem:

- Step 1.** Verify that the network cable is appropriate and has an RJ-45 connector.
- Step 2.** Remove the network cable from the printer. Plug the network cable back in until you hear a positive click. Check the other end of the cable in the same manner. If the printer still does not detect a cable, then continue.
- Step 3.** Connect the printer to a known good network. If the printer is still unable to detect the network cable, contact Technical Support for assistance

Setting Custom Card Specifications

Introduction

This section describes how to set up specifications for a card type that is not pre-defined in the Printing Preferences Control panel.

The Printing Preferences Control Panel enables you to set up two custom card types.

If you need help setting the specifications for your card type, contact the Zebra Card Testing Service at 866-569-9086 (Toll Free), or cardtestingservice@zebra.com.

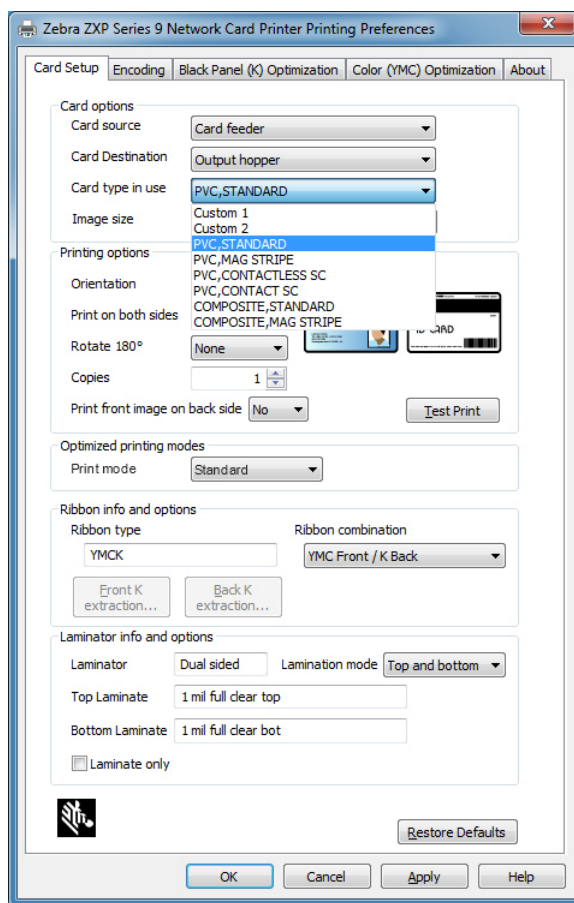
Process

- Step 1.** Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

- Step 2.** From the Card Setup tab, click the **Card type in use** drop-down menu and select **Custom 1** or **Custom 2**.



- Step 3.** The Card Specifications window will appear. Enter a name in the **Card type** dialog box.

Card Specifications

Card type:

Part number: Custom 1

Thickness: 30.00 ☐ inches ☒ mils

Coercivity: None ☐ Mag stripe

Cal table: 0 ☐ Contact encode

☐ Contactless encode

Transfer temperature(C)

Single side printing: Front 155 Back 100

Double side printing: Front 170 Back 160

Transfer speed

Single: Input 1.10 Output 1.30

Double: Input 1.30 Output 1.80

Lamination adjustments

Temperature adjustments: Top 0 Bottom 0

Speed adjustment: 0.00

For more information please email: cardtestingservice@zebra.com

Save... Restore... Restore Defaults OK Cancel

- Step 4.** Select the encoding type for the card: Mag stripe, Contact, or Contactless.
- Step 5.** Make the necessary transfer temperature and speed adjustments (see [“Adjustments” on page 150](#)) and click **OK**.
- Step 6.** Make any necessary temperature and speed adjustments to the laminator (if equipped).
- Step 7.** Print and examine a Test Card (see [“Printing a Test Card” on page 42](#)). The quality of the test card will determine whether or not to continue the process.
- Step 8.** If the result is satisfactory, click **Save** to save the current configuration. If the result is not satisfactory, go to Step 5.
- Step 9.** Click **Restore Defaults** to start over with the default settings.

Adjustments

Overview

When making adjustments, be aware that interdependencies exist between parameters (e.g., parameter changes which reduce warp could induce partial transfer).

There are four basic parameters to control, and these parameters differ for single- and double-sided printing for each card type:

- Front transfer temperature (upper roller temperature in degrees Celsius)
- Back transfer temperature (lower roller temperature in degrees Celsius)
- Input transfer speed (speed entering the print station in inches per second)
- Output transfer speed (speed exiting the print station in inches per second)

It is very helpful to think about the energy being put into the card as opposed to just temperature. Speed parameters are the “big knobs” for adjusting energy, while temperature parameters are the “fine tuning knobs.” Slowing down only 0.1 inches per second (IPS) has almost twice the energy-increasing effect as raising the temperature 5 degrees. In terms of energy:

- Far too little energy = no transfer at all
- Not enough energy = partial transfer
- Too much energy = card warp
- Far too much energy = card jams caused by severe warp

Speed

Going slower in can help guarantee good transfer, while going faster out can prevent the already-transferred card from remaining hot long enough to soften, weaken, warp, and possibly even jam. Usually, the most reliable and stable speed settings range between 1.2 IPS and 2.6 IPS, with lower generally being better for most card types.

Temperature

A top temperature which is slightly higher than the corresponding bottom temperature normally works well for double-sided transfer. For single-sided transfer, there will be significantly lower temperatures for the back side of the card to avoid accidental transfer. In general, a lower temperature difference between the front and back sides will induce fewer warming/cooling cycles in the printer.

To compensate for interdependency issues, try adjusting the parameters as follows:

- Start by correcting any partial transfer issues by using the procedure outlined in [“Partial Transfer” on page 152](#).
- Then attempt to improve warpage by using the procedure outlined in [“Warpage” on page 154](#). Start with acceptable settings from Step 1. While adjusting parameters, ensure that the transfer quality remains acceptable. Do not continue reducing temperatures or increasing speeds if the transfer quality becomes unacceptable.

Transfer Temperature

Transfer temperature is controlled by increasing or decreasing the value in one degree increments. However, changing values in less than five degree increments will take significantly more time in establishing the correct card specification. Values are entered for both single- and double-sided printer configurations, and for the front and back of the card independently (in the case of double-sided printing).

Transfer temperature(C)			
Single side printing		Double side printing	
Front	170	Front	170
Back	75	Back	160

Transfer Input and Output Speed

Transfer input speed controls the speed in which the card enters the transfer station in inches per second (IPS), to an accuracy of one one-hundredth (0.01) of an inch. However, changing values in less than five one-hundredth (0.05) of an inch increments will take significantly longer in establishing the correct card specification. Values are entered for both single- and double-sided printer configurations, and for the input and output speeds independently.

Transfer speed			
Single		Double	
Input	Output	Input	Output
1.50	1.75	1.50	1.75

Additional considerations and information

The thermal conductivity of the card—or from what and how the card is made—fundamentally influences re-transfer performance. Card characteristics affecting re-transfer include:

- **Single- vs. multi-layer construction:** for single-layer cards, warp is often lowest when equal energy is put into each side of the card, while such is not usually true for multi-layer cards made of a mix of metals and plastics due to the widely different thermal properties of the materials;
- **Surface finish:** glossy vs. matte;
- **Magnetic stripe:** more prone to warp, especially low-coercivity (LoCo) cards identifiable by a brown stripe instead of the common high-coercivity black stripe;
- **Smart card:** often containing asymmetrically-distributed, thermally conductive, dissimilar components which can make warp reduction more challenging.

Even cards sold as typical PVC may not all be similar in terms of re-transfer behavior, given their exact binders, fillers, pigmentations, and other materials ratios. While many competitive re-transfer printers tend to discourage the use of PVC because it can be difficult to use in their re-transfer printers, a prime ZXP Series 9 advantage is the ability to successfully re-transfer to economical PVC cards.

Partial Transfer

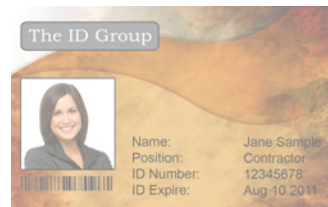
Partial transfer is usually caused by lack of energy being transferred to the card (i.e., the temperatures are too low or the speeds are too fast).



Light or missing transfer on the sides



Spotty transfer anywhere on the card



Light transfer on the entire card

Front of card

Increase Front Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default front transfer temperature settings.
- Step 2.** Increase the appropriate (Single or Double side) front transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Decrease Transfer Input Speed

- Step 1.** From the Card Specifications window, make a note of the default transfer input speed settings.
- Step 2.** Decrease the appropriate (Single or Double side) transfer input speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Decrease Transfer Output Speed

- Step 1.** From the Card Specifications window, make a note of the default transfer output speed settings.
- Step 2.** Decrease the appropriate (Single or Double side) transfer output speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement, return the value to its default setting and contact Zebra Technical Support.

Back of card

Increase Back Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- Step 2.** Increase the appropriate (Single or Double side) back transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Decrease Transfer Input Speed

- Step 1.** From the Card Specifications window, make a note of the default transfer input speed settings.
- Step 2.** Decrease the appropriate (Single or Double) transfer input speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).

Step 5. Examine the test card.

- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
- If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Decrease Transfer Output Speed

Step 1. From the Card Specifications window, make a note of the default transfer output speed settings.

Step 2. Decrease the appropriate (Single or Double) transfer output speed by 0.1.

Step 3. Click **OK**.

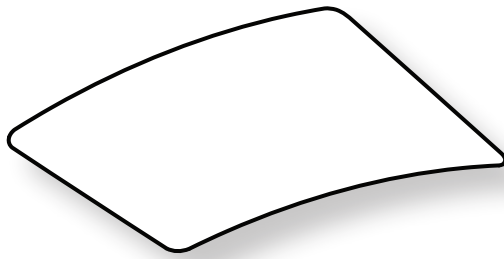
Step 4. Print a test card (see [“Printing a Test Card” on page 42](#)).

Step 5. Examine the test card.

- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
- If there is no noticeable improvement, return the value to its default setting and contact Zebra Technical Support.

Warpage**Edges curled down**

Warpage is usually caused by too much energy being transferred to the card (i.e., the temperatures are too hot or the speeds are too slow), coupled with the card material and the amount of time the card sits before being handled.

**Decrease Back Transfer Temperature**

Step 1. From the Card Specifications window, make a note of the default transfer output speed settings.

Step 2. Decrease the appropriate (Single or Double side) back transfer temperature by 5.

Step 3. Click **OK**.

Step 4. Print a test card (see [“Printing a Test Card” on page 42](#)).

Step 5. Examine the test card.

- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
- If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Increase Front Transfer Temperature

Step 1. From the Card Specifications window, make a note of the default front transfer temperature settings.

Step 2. Increase the appropriate (Single or Double side) front transfer temperature by 5.

Step 3. Click **OK**.

Step 4. Print a test card (see [“Printing a Test Card” on page 42](#)).

Step 5. Examine the test card.

- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
- If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Increase Transfer Output Speed

Step 1. From the Card Specifications window, make a note of the default transfer output speed settings.

Step 2. Increase the appropriate (Single or Double) transfer output speed by 0.1.

Step 3. Click **OK**.

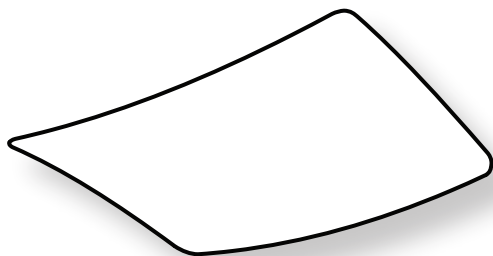
Step 4. Print a test card (see [“Printing a Test Card” on page 42](#)).

Step 5. Examine the test card.

- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
- If there is no noticeable improvement, return the value to its default setting and contact Zebra Technical Support.

Edges curled up

Warpage is usually caused by too much energy being transferred to the card (i.e., the temperatures are too hot or the speeds are too slow).



Decrease Front Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default transfer output speed settings.
- Step 2.** Decrease the appropriate (Single or Double side) front transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Increase Back Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- Step 2.** Increase the appropriate (Single or Double side) back transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

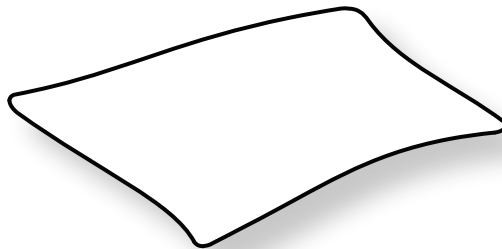
Increase Transfer Output Speed

- Step 1.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- Step 2.** Increase the appropriate (Single or Double) transfer output speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement, return the value to its default setting and contact Zebra Technical Support.

Irregular Warpage

Note • Irregular warpage is more common with smart cards.

Warpage is usually caused by too much energy being transferred to the card (i.e., the temperatures are too hot or the speeds are too slow).



Decrease Front Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- Step 2.** Decrease the appropriate (single or double side) front transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
- If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Decrease Back Transfer Temperature

- Step 1.** From the Card Specifications window, make a note of the default back transfer temperature settings.
- Step 2.** Decrease the appropriate (Single or Double side) back transfer temperature by 5.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Increase Transfer Output Speed

- Step 1.** From the Card Specifications window, make a note of the default transfer output speed settings.
- Step 2.** Increase the appropriate (Single or Double) transfer output speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement after a number of cycles, return the value to its default setting and go to next correction.

Increase Transfer Input Speed

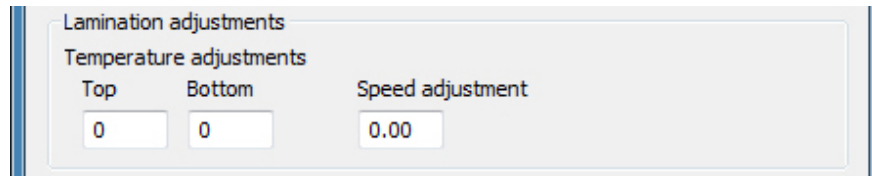
- Step 1.** From the Card Specifications window, make a note of the default transfer input speed settings.
- Step 2.** Increase the appropriate (Single or Double) transfer input speed by 0.1.
- Step 3.** Click **OK**.
- Step 4.** Print a test card (see [“Printing a Test Card” on page 42](#)).
- Step 5.** Examine the test card.
 - If there is noticeable improvement, repeat Steps 2–4 until the problem is corrected or there is no more improvement.
 - If there is no noticeable improvement, return the value to its default setting and contact Zebra Technical Support.

Laminator Adjustments

While in most cases it is not necessary to adjust either the temperature, or the speed of the lamination process, there may be times when it is. This may be due to the particular material of the card, or because of adjustments made to the transfer process.

Temperature adjustments are in degrees Celsius, and are made by changing the value of either the top or bottom laminate independently in one degree increments. However, changing values in less than five degree increments will take significantly more time in establishing the correct card specification.

Speed adjustment is in inches per second (IPS), and is made by changing the value of the lamination speed to an accuracy of one one-hundredth of an inch.



The screenshot shows a dialog box titled "Lamination adjustments". Inside, there is a section labeled "Temperature adjustments" which contains two input fields: "Top" and "Bottom", both with the value "0". To the right of these is a "Speed adjustment" input field with the value "0.00".

Lamination adjustments		
Temperature adjustments		Speed adjustment
Top	Bottom	
0	0	0.00



Network Operations

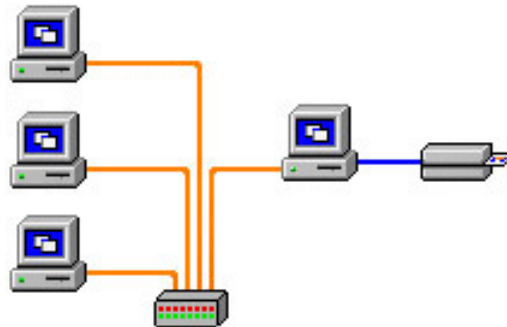
This chapter covers connecting the ZXP Series 9 Card Printer to a network using Windows; connecting the printer to a wireless network via the browser console resident in the printer, and via the operator control panel (OCP); setting up printer pooling and printer sharing.

Printer Connections

Card printers can be connected to an Ethernet network in three ways.

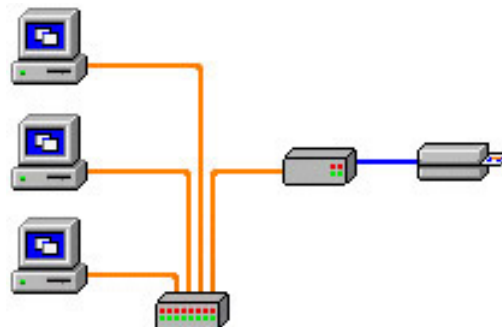
Printer Sharing

In printer sharing, the printer is connected locally to the host computer and configured to be shared to other client computers. Client computers connect to the printer over the network through the host computer.



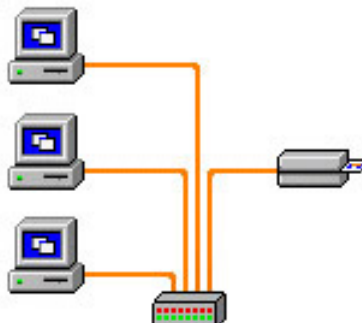
External Print Server

A stand alone device that acts as a server on the network specifically for receiving print jobs and passing them to the printer. Client computers connect to the print server over a network.



Internal Print Server

Similar to an external print server, except the print server is integrated into the printer. This removes the need for a separate power supply and separate device drivers. This is the simplest way to network a printer.



Adding a Network Printer (Windows 7)

Use this procedure if you have already installed an Ethernet printer on your system and you want to install a second Ethernet printer on the network.

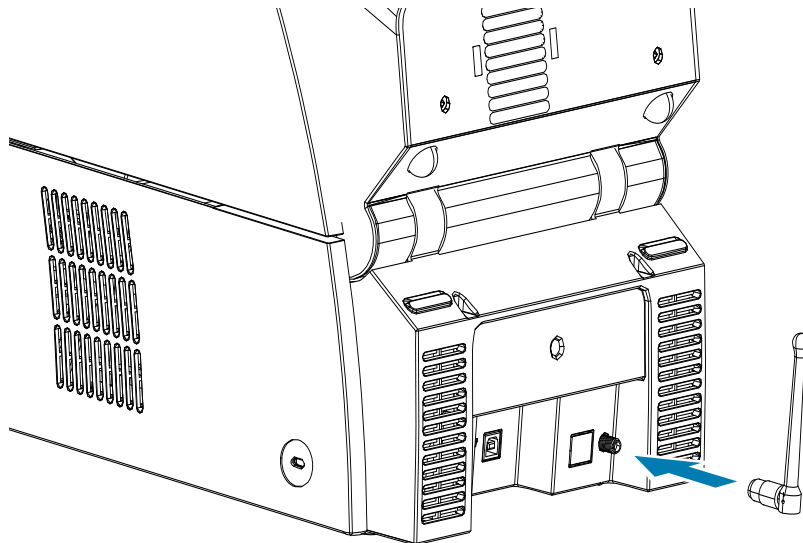
- Step 1.** Click on Start and select **Devices and Printers**.
- Step 2.** Click **Add a printer**.
- Step 3.** Select **Add a local printer**, then click **Next**.
- Step 4.** Select **Create a new port** and then select **Standard TCP/IP Port** from the drop-down menu. Click **Next**.
- Step 5.** Enter the IP address of your printer in the Hostname or IP address text box. Note that the port name will automatically be filled in when you enter the IP Address. Do not change the port name. Ensure that the **Query the printer ...** checkbox is selected. Click **Next**.
- Step 6.** Select the Manufacturer and the Printer, then click **Next**.
- Step 7.** Select the **Use the driver that is currently installed** radio button, then click **next**.
- Step 8.** Enter the printer name: use the default name, or add more information to indicate the printer location (e.g., Ed's Printer, Mike's Office, Room 33, etc.). Click **Next**.
- Step 9.** If appropriate, select the **Set as the default printer** checkbox. Click **Finish**.

For setup on other operating systems, please refer to your system help content.

Wi-Fi Connectivity

A printer with the wireless option ships with the wireless radio pre-installed in the printer. An antenna is shipped in the box with the printer. The antenna must be connected to the rear of the printer before using the wireless interface.

Lightly push the antenna onto the printer antenna connector, and rotate the knurled antenna connector until finger tight. Do not use tools to tighten the antenna.



The antenna orientation is important to maximize the wireless signal strength. Inspect the access point antenna(s), and try to put the printer antenna in a similar orientation. After connecting the printer to the wireless network, the antenna orientation can be adjusted to maximize signal strength. As the distance between the printer and the access point increases, the signal strength decreases. If there are intervening walls, unpredictable signal strength attenuation will occur. Decreasing signal strength results in automatic data rate reduction. At the longest distance, wireless traffic can be very slow.

Printer location is important to ensure that adequate signal strength is achieved. Follow these suggestions:

- Position the printer as close to the access point that it will connect to as possible.
- If possible, orient the printer such that there is a clear line of sight between the printer antenna and the access point antenna.
- Locate the printer such that there are no intervening walls in the line of sight between the antennas.
- Do not put the printer in a cabinet, especially not a metal one.
- Do not locate large metal objects close to the printer antenna.
- Do not locate the printer close to devices that emit RF radiation in the 2.4 GHz range; such devices might include: microwave ovens, cordless phones, wireless surveillance cameras, baby monitors, wireless video transmitters and Bluetooth devices, etc.

For more information, refer to the Card Printer Wireless Reference Manual (P1035089-004).

Description

Communication

To connect to a wireless network, the printer uses wireless protocol IEEE 802.11b/g that communicates data through radio transmission and can talk to Access Points that are either 802.11b or 802.11g compliant.

The wireless printer communicating over 802.11b radio:

- Allows nominal data rates over the air of 11 Mbps as per 802.11b standard.
- Supports automatic rate adaption starting at 11 Mbps and going down as low as 1 Mbps for maximum range and optimal throughput depending on signal strength.

The wireless printer communicating over 802.11g radio:

- Allows nominal data rates over the air of 54 Mbps as per 802.11g standard.
- Supports automatic rate adaption starting at 54 Mbps and going down as low as 6 Mbps for maximum range and optimal throughput depending on signal strength. The 802.11g standard is backwards compatible and, if the 802.11b rates are configured, will automatically decrease to a 802.11b rate as necessary.

Security

The wireless printer supports Open System authentication only.

The wireless printer supports the following security features:

- Wired Equivalent Privacy (WEP)
- Wi-Fi protected access (WPA/WPA2)

Encryption

The wireless printer supports the following encryption protocols:

- RC4 (applicable to WEP)
- TKIP (applicable to WPA)
- CCMP (a form of AES encryption applicable to WPA2)

The ZXP Series 9 wireless printer supports the Personal mode of dynamic encryption key deployment, Personal Shared Key (PSK).

Configuration

You can use a USB or wired Ethernet cable to configure the printer for a wireless network.

The wireless printer can be configured using the Operator Control Panel, the Printer Web Page (see next page), or the Toolbox application.

Setup via Browser Console

This section explains how to connect your ZXP Series 9 Printer to a wireless network via your Web Browser.

Minimum Requirements

- Wired Ethernet environment with a DHCP Server (used to set up wireless parameters).
- Wireless Network environment to include:
 - Wireless Router or Access Point enabled for 2.4 GHz operation
 - Access point Passphrase or Password
 - SSID (network name)
- Computer with:
 - Wired Ethernet connection to the Network
 - Ethernet cable(s)
- ZXP Series 9 Printer with the wireless option installed

Configuration

- Step 1.** Connect the printer to your wired network, and turn the power on.
- Step 2.** Retrieve the IP address of the printer—from the operator control panel (OCP), select **Info** and scroll to the Network Info page (see [“Info Menu” on page 48](#)).
- Step 3.** Start your web browser.
- Step 4.** In the browser address bar, enter the IP address of the printer—the printer configuration page will open.

Step 5. Click the **Wireless Parameters** tab.



Step 6. In the Windows Security dialog box, type **admin** into the User name field and type **1234** into the Password field (these may be changed by the user as necessary). Click **OK**.

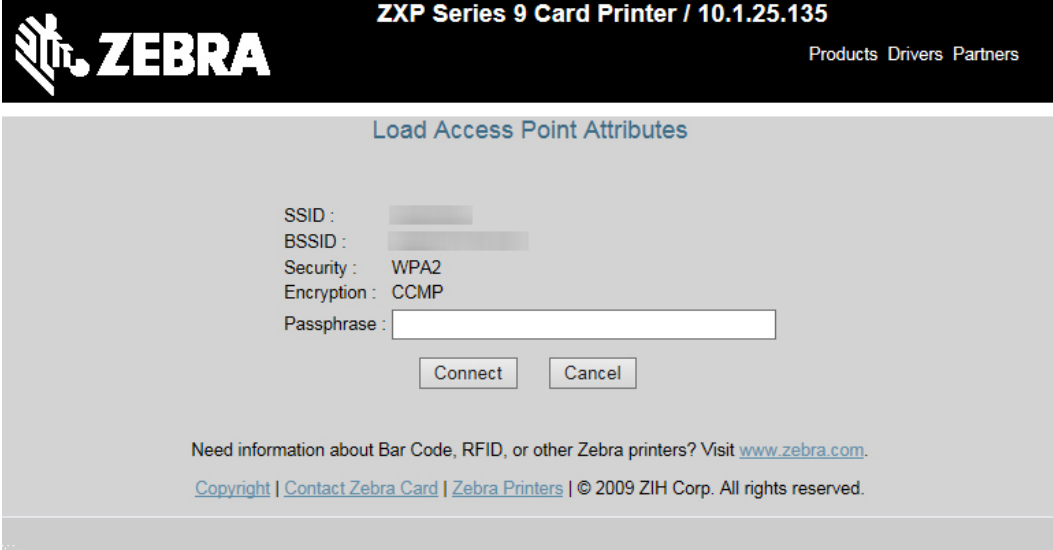


Step 7. The Choose Wi-Fi Connection page will be displayed. Click **Scan for Wireless Networks**.

- Step 8.** The expanded Choose Wi-Fi Connection page will be displayed. Select the radio button of the desired network and click **Connect to Selected Wireless Network**.

Note that if the network you are looking for is not displayed, first click the **Scan for Wireless Networks** button. If the desired network is still not displayed, click the **Update Scan for Wireless Networks** button until the network appears.

- Step 9.** When the Load Access Point Attributes page appears, enter the network Passphrase and click **Connect**.



The screenshot shows the Zebra ZXP Series 9 Card Printer web interface. The header includes the Zebra logo, the model 'ZXP Series 9 Card Printer / 10.1.25.135', and links for 'Products', 'Drivers', and 'Partners'. The main content area is titled 'Load Access Point Attributes' and contains the following fields and buttons:

- SSID :
- BSSID :
- Security : WPA2
- Encryption : CCMP
- Passphrase :
-

At the bottom, there is a footer with the text: 'Need information about Bar Code, RFID, or other Zebra printers? Visit www.zebra.com. Copyright | [Contact Zebra Card](#) | [Zebra Printers](#) | © 2009 ZIH Corp. All rights reserved.'

- Step 10.** When successfully connected to the wireless network, the Input Accepted page will appear.

- Step 11.** Close the browser console.

Setup via OCP

This section explains how to connect your ZXP Series 9 Printer to a wireless network via the operator control panel (OCP).

Minimum Requirements

- Wireless Network environment to include:
 - Wireless Router or Access Point
 - Access point Passphrase or Password
 - SSID
- ZXP Series 9 Printer with the wireless option installed

Configuration

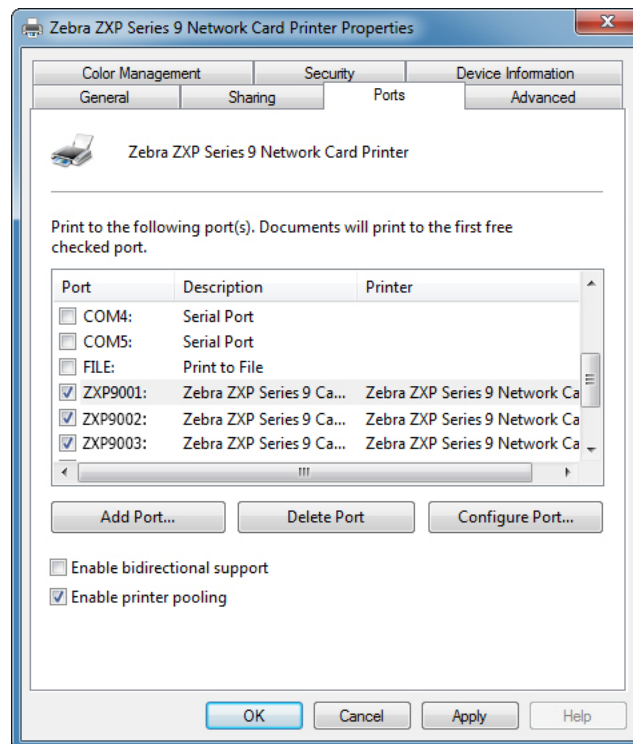
- Step 1.** From the OCP Main Menu, select **Wireless Settings** (see [“Wireless Settings Menu” on page 55](#)).
- Step 2.** Select **Setup Wizard**.
- Step 3.** The OCP will prompt you for it to begin scanning for accessible wireless networks—select **Scan** to begin.
- Step 4.** After the scan is complete, the OCP will display the accessible wireless networks one-by-one. Select **Next** to cycle through the networks, when the desired network is displayed, select **Select** to connect to that network.
- Step 5.** Enter the network passphrase by cycling through each character by pressing **Change**. When the correct character is displayed, press **Next** to proceed to the next character.
- Step 6.** When all the required characters have been entered, select **Connect** to complete the setup wizard.

Printer Pooling

Setting Up Printer Pooling (Windows 7)

Printer pooling is a standard feature of Windows, which lets you spread your printed output across a pool of several printers.

- Step 1.** Before proceeding to pool any number of printers, test them individually to be sure they are configured similarly. Specifically, check the following:
- Ribbon panel configuration (ribbon type, and what prints on which side of the card).
 - Mag encoding configuration.
 - Black extraction configuration (if applicable).
- Step 2.** From the Start menu select **Devices and Printers**. Right click on the Zebra ZXP Series 8 Card Printer and select **Properties**, then select the **Ports** tab.



- Step 3.** Select the desired printers by clicking on the associated checkbox.

- Step 4.** Select the **Enable printer pooling** checkbox.

For setup on other operating systems, please refer to your system help content.

Using the Printer Pool



Note • Send print jobs to the printer pool, not to an individual printer.

When the first printer has taken as many jobs as it can handle (that being two jobs—one to be printed immediately, the other waiting), the following jobs “spill over” to the second printer, and then to the third printer.

Note that if you are only printing two jobs, they would both go to the first printer. Pooling is a spill-over methodology. It does not balance printer usage.

Once the pool has been set up, maintenance and configuration changes should be done through the menus for each individual printer, not through the pool (which can produce undesirable results).



Note • The effect of any maintenance and/or changes can (and should) be tested by sending print jobs separately to each printer, not to the pool.

Printer Sharing

In the printer sharing configurations, the following Microsoft Windows host and client combinations will be supported in USB and network (Wireless or Ethernet) connectivity. Note that Printer Pooling Sharing is not supported.

Supported Windows Drivers Microsoft OS	One-to-One	One-to-Many	Many-to-One	Many-to-Many	Printer Pooling
	1 Printer - 1 Host	One Host - Many Printers	Multiple Hosts (Drivers) - 1 Printer	Multiple Hosts (Drivers) -	Many Printers
Windows 8 32-bit	Yes	Yes	Yes	Yes	Yes
Windows 8 64-bit	Yes	Yes	Yes	Yes	Yes
Win Server 2012 ¹	Yes	Yes	Yes	Yes	Yes
Server 2008 64-bit	Yes	Yes	Yes	Yes	Yes
Server 2008 32-bit	Yes	Yes	Yes	Yes	Yes
Server 2003	Yes	Yes	Yes	Yes	Yes
Windows 7 64-bit	Yes	Yes	Yes	Yes	Yes
Windows 7 32-bit	Yes	Yes	Yes	Yes	Yes
Vista 64-bit ²	Yes	No	No	No	No
Vista 32-bit ²	Yes	No	No	No	No
Windows XP	Yes	Yes	Yes	Yes	Yes
1. No support for Windows Server 2012 Virtual Datacenter, Support for Standard, Essentials, and Foundation editions.					
2. Need to qualify Service Pack support					

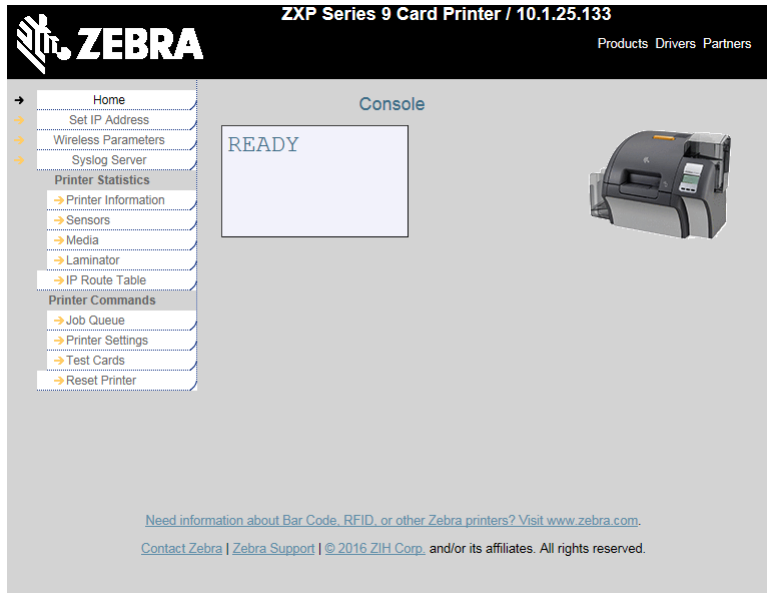
Accessing a Network Printer via a Web Browser

Introduction

If the printer is connected to a local Ethernet network, it can be accessed via a Web Browser. This section describes how to access the printer's web page using a computer connected to the network.

Procedure

- Step 1.** Start your Web Browser.
- Step 2.** In the browser address bar, enter the IP address of the printer connected to the local Ethernet network. The printer IP address can be obtained from the printer OCP (see “Info Menu” on page 86).
- Step 3.** The printer’s browser console will open.



- Step 4.** Click on a menu item on the left side of the browser console.
- Step 5.** The Windows Security dialog box will appear. The user name is “admin” and the password is “1234.”



- Step 6.** The selected tab will be displayed.

Step 7. The Set IP Address screen enables the user to change the assigned IP address of the printer.

ZEBRA ZXP Series 9 Card Printer / 10.1.25.133
Products Drivers Partners

Set/Edit Ethernet Address

DHCP Enable: ☒ ?

IP Address:

Subnet Mask:

Gateway:

DNS Name:

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Step 8. The Wireless Parameters screen enables the user to connect the printer to a wireless network. Refer to “Setup via Browser Console” on page 166 for details.

ZEBRA ZXP Series 9 Card Printer / 10.1.25.133
Products Drivers Partners

Choose WiFi Connection

Radio Inactive

Select	SSID	BSSID	Channel	Privacy	Signal	Security
Choose "Cancel" to return to the main menu. Ensure you are connected to this page via wired Ethernet otherwise you will lose your connection when the printer disconnects. Choosing "Scan for Wireless Networks" or "Connect To Selected Wireless Network" will disconnect printer from access point.						

☐ Alternate Connect

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- Step 9.** The Syslog Server screen enables the user to assign an IP address of syslog server on the network.

The screenshot shows the Zebra ZXP Series 9 Card Printer web interface at IP 10.1.25.133. The left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server (selected), Printer Statistics (with sub-options: Printer Information, Sensors, Media, Laminator, IP Route Table), Printer Commands (with sub-options: Job Queue, Printer Settings, Test Cards, Reset Printer), and Printer Statistics. The main content area is titled 'Syslog Server' and features a text input field for 'Syslog Server' with the value '0.0.0.0' and a 'Submit' button. At the bottom, there is a footer with a link to Zebra's website and copyright information: 'Copyright | Contact Zebra | Zebra Printers | © 2009 ZIH Corp. All rights reserved.'

- Step 10.** The Printer Information screen displays data relevant to the printer, such as firmware version, installed options, operating temperatures, and cleaning information.

The screenshot shows the Zebra ZXP Series 9 Card Printer web interface at IP 10.1.25.133, displaying the 'Printer Information' screen. The left sidebar is identical to the previous screen, with 'Printer Information' selected. The main content area displays various printer details:

- Firmware Versions:**
 - Firmware version: FZ9ME.00.01.08
 - HCB version: FZ9HE.01.11.00
 - MAB version: FZ9RE.02.02.00
 - ZMotif Version: 14.3
 - Laminator version: FZ9LE.01.16.00
 - Laminator MAB version: FZ9RE.02.02.00
- Other:**
 - Type: double-sided
 - Model No: ZXP Series 9
 - Serial No: Z9J162100018
 - Printhead Serial No: 4X-80250
 - Laminator Serial No.: 10J162100013
- Memory:**
 - Available RAM: 1436 KB
- Options:**

Magnetic Encoding:	iso	Contact Encoding:	yes
Contactless Encoding:	mifare	Laminator Type:	2_side
Security Lock:	no		
- Status:**
 - Status: idle
 - Error:
 - Warning:

Step 11. The Sensors screen displays the current state of the sensors installed throughout the printer.

ZXP Series 9 Card Printer / 10.1.25.133

Products Drivers Partners

Sensors

Temperatures

Top Transfer Set Temp	170 °C	Top Transfer Temp	170 °C
Bottom Transfer Set Temp	160 °C	Bottom Transfer Temp	160 °C

Sensor States

Film Takeup Encoder	unknown	Head Cam Blocked	yes
Ribbon Payout Encoder	unknown	Film Strip 2 Blocked	no
Door Open	no	Card Feeder Blocked	yes
Card Edge Blocked	no	Lock Sensor Open	no
Tri Color State	yellow_panel	Printer Lock	unlocked
Tri Color Error	0		

Sensor Values

Voltage 24	24.01	V	Ribbon BEMF	511	V
Voltage AC	110	V	Tri-Color Any	381	
Voltage Raw	748	V	Tri-Color Red	329	
Mag Head Type	iso		Tri-Color Green	340	
Mag Track 1	515		Tri-Color Blue	533	
Mag Track 2	514		Printhead Temp	38	°C
Mag Track 3	514				

Step 12. The Media screen displays information relevant to the media installed in the printer; such as the type of media installed and the number of images remaining.

ZXP Series 9 Card Printer / 10.1.25.133

Products Drivers Partners

Media Information

Color Ribbon

Type:	100
Description:	YMCK
Initial Images:	627
ImagesRemaining:	491

Transfer Film

Type:	104
Description:	Standard
Initial Images:	627
ImagesRemaining:	503

Top Laminate

Type:	166
Description:	1 mil full clear top
Initial Images:	750
Images Remaining:	604

Bottom Laminate

Type:	167
Description:	1 mil full clear bot
Initial Images:	750
ImagesRemaining:	606

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Step 13. The Laminator screen displays information relevant to the laminator; such as the current status and the length of time the laminator has been used (odometer). Note that this information is only displayed if a laminator is present.

The screenshot shows the 'Laminator' screen of the Zebra ZXP Series 9 Card Printer web interface. The page title is 'ZXP Series 9 Card Printer / 10.1.25.133'. The Zebra logo is in the top left, and 'Products Drivers Partners' is in the top right. A left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server, Printer Statistics (with sub-options: Printer Information, Sensors, Media, Laminator, IP Route Table), Printer Commands (with sub-options: Job Queue, Printer Settings, Test Cards, Reset Printer), and a question mark icon. The main content area is titled 'Laminator' and contains three sections: 'Status' showing 'ready' and 'None' for Top and Bottom Rollers with temperatures of 141 °C and 140 °C; 'Odometer' showing 'Total Up Time' and 'Top Heater On Time' both at 6.0 days, and 'Cards Processed' at 183 and 'Cards Laminated' at 29; and 'Laminator Firmware' showing 'Laminator FZ9LE.01.16.00' and 'MAB FZ9RE.02.02.00'. A 'Refresh' button is located below the firmware section. At the bottom, there is a link to 'www.zebra.com' for more information and a copyright notice for © 2009 ZIH Corp.

Step 14. The IP Route Table screen is used to determine where data packets traveling over an Internet Protocol (IP) network will be directed.

The screenshot shows the 'IP Routing table' screen of the Zebra ZXP Series 9 Card Printer web interface. The page title is 'ZXP Series 9 Card Printer / 10.1.25.133'. The Zebra logo is in the top left, and 'Products Drivers Partners' is in the top right. A left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server, Printer Statistics (with sub-options: Printer Information, Sensors, Media, Laminator, IP Route Table), Printer Commands (with sub-options: Job Queue, Printer Settings, Test Cards, Reset Printer), and a question mark icon. The main content area is titled 'IP Routing table' and contains a table with the following data:

IP dest	subnet mask	interface	next hop	options
10.1.25.1	255.255.255.255	et1	10.1.25.1	<input type="button" value="edit"/> <input type="button" value="delete"/>
10.1.2.101	255.255.255.255	et1	10.1.25.1	<input type="button" value="edit"/> <input type="button" value="delete"/>
10.1.24.135	255.255.255.255	et1	10.1.25.1	<input type="button" value="edit"/> <input type="button" value="delete"/>
10.1.25.20	255.255.255.255	et1	10.1.25.20	<input type="button" value="edit"/> <input type="button" value="delete"/>
10.1.25.11	255.255.255.255	et1	10.1.25.11	<input type="button" value="edit"/> <input type="button" value="delete"/>

Below the table is a 'NEW route' button. At the bottom, there is a link to 'www.zebra.com' for more information and a copyright notice for © 2009 ZIH Corp.

Step 15. The Job Queue screen displays the current print job(s) being sent to, or being processed by the printer; and enables the user to cancel select or all print jobs.

The screenshot shows the 'Job Queue' screen of the Zebra ZXP Series 9 Card Printer web interface. The page title is 'ZXP Series 9 Card Printer / 10.1.25.133'. The Zebra logo is in the top left, and 'Products Drivers Partners' is in the top right. A left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server, Printer Statistics (with sub-options: Printer Information, Sensors, Media, Laminator, IP Route Table), Printer Commands (with sub-options: Job Queue, Printer Settings, Test Cards, Reset Printer), and Job Queue. The main content area is titled 'Job Queue' and contains a table with headers 'Action Id', 'UUID', and 'Print State'. Below the table are three buttons: 'Cancel Current Job', 'Cancel All Jobs', and a dropdown menu followed by 'Cancel Selected Job'. At the bottom, there is a footer with a link to 'www.zebra.com' and copyright information: 'Copyright | Contact Zebra | Zebra Printers | © 2009 ZIH Corp. All rights reserved.'

Step 16. The Printer Settings screen enables the user to customize certain behaviors of the printer, such as the language displayed by the operator control panel (OCP), the standby timer, and cleaning intervals.

The screenshot shows the 'Printer Settings' screen of the Zebra ZXP Series 9 Card Printer web interface. The page title is 'ZXP Series 9 Card Printer / 10.1.25.133'. The Zebra logo is in the top left, and 'Products Drivers Partners' is in the top right. A left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server, Printer Statistics (with sub-options: Printer Information, Sensors, Media, Laminator, IP Route Table), Printer Commands (with sub-options: Job Queue, Printer Settings, Test Cards, Reset Printer), and Printer Settings. The main content area is titled 'Printer Settings' and contains several sections: 'Console' with 'Console Language' set to 'English' and 'LCD Contrast' set to '35'; 'Standby Timer' with 'Standby Timer' set to '30 Minutes'; 'USB Timeouts' with 'USB Read Timeout' set to '3 seconds' and 'USB Write Timeout' set to '2 seconds'; 'Printer Cleaning' with 'Side Cleaning Interval' set to '5000', 'ATM (Front) Cleaning Interval' set to '5000', and 'Heater Rollers Cleaning Interval' set to '20000'; and 'Transfer Temperature Offset' with 'Top Single', 'Bottom Single', 'Top Double', and 'Bottom Double' all set to '0'. At the bottom, there is a footer with a link to 'www.zebra.com' and copyright information: 'Copyright | Contact Zebra | Zebra Printers | © 2009 ZIH Corp. All rights reserved.'

Step 17. The Test Cards screen enables the user to print test cards that can be used to determine print quality issues.

The screenshot shows the Zebra ZXP Series 9 Card Printer web interface at IP 10.1.25.133. The left sidebar contains a navigation menu with options: Home, Set IP Address, Wireless Parameters, Syslog Server, Printer Statistics (with sub-options for Printer Information, Sensors, Media, and Laminator), IP Route Table, Printer Commands (with sub-options for Job Queue, Printer Settings, and Test Cards), and Reset Printer. The 'Test Cards' option is selected. The main content area is titled 'Print Test Cards' and contains a 'Test Cards' section with the following settings: 'Copies' set to 1, 'Sides' set to 'Single Sided', 'CardType' set to 'PVC, STANDARD', and 'Image' set to 'Gradient Boxes'. A 'Print Card' button is located below these settings. At the bottom of the page, there is a footer with a link to 'www.zebra.com' and copyright information for ZIH Corp. 2009.

Step 18. The Reset Printer screen enables the user to put the printer back to a default state.

The screenshot shows the Zebra ZXP Series 9 Card Printer web interface at IP 10.1.25.133. The left sidebar is identical to the previous screenshot, but the 'Reset Printer' option is now selected. The main content area is titled 'Printer Reset' and contains a 'Select Reset Type:' dropdown menu with 'Warm' selected. A 'Submit' button is located below the dropdown. The footer is identical to the previous screenshot, including the link to 'www.zebra.com' and copyright information for ZIH Corp. 2009.

ZXP Toolbox

Introduction

Important • The ZXP Series 9 Toolbox is intended only to be used by advanced users and system administrators.

The Toolbox is an advanced set-up and configuration utility for Zebra Card printers. This printer utility enables users to view, set-up, and configure all aspects of their ZXP Card printer independently of the typical Windows driver configuration screens. With the Toolbox, users can see all relevant data for the printer, such as: media in use, network configuration, options installed, and overall printer usage. Toolbox features give users the ability to set and customize printer settings for optimal print quality and performance to insure the best print experience possible.

The Toolbox also enables advanced users—such as IT administrators or service technicians—to access key technical data and adjustments to help quickly install, troubleshoot, and service printers on site. Additionally, with the Toolbox unique printer security settings can be configured based on desired or required levels of printer and data security.

Dashboard

The Dashboard menu provides information about the printer. This printer information cannot be edited or changed by the user. However, this information may be useful for Zebra trained and certified personnel in diagnosing or evaluating printer status.

Printer

The Printer sub-menu shows general information about the printer. These fields are for information purposes and are not editable from this page.

ZXP Toolbox

TASKS

- Dashboard**
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address
Serial No
Z9J162100018

PRINTER
SENSORS
LAMINATOR
MEDIA
WIRELESS NETWORK

Firmware

Firmware version	FZ9ME.00.01.08	HCB version	FZ9HE.01.11.00
Laminator version	FZ9LE.01.16.00	Laminator MAB version	FZ9RE.02.02.00
MAB version	FZ9RE.02.02.00		

Other

Interface	USB	Printer serial no	Z9J162100018
Transfer type	Single sided	Laminator serial no	10J162100013
Card type in use	PVC,STANDARD	OCP status	Standby

Network Configuration

IP address	10.1.25.14	Subnet mask	255.255.255.0
Gateway	10.1.25.1	MAC address	00:07:4d:6a:87:d8

Options

Magnetic encoding	ISO	Smartcard encoder type	Contact/Mifare
Laminator type	Double sided		

Cards Printed/Laminated

Cards printed	259
Cards laminated	31

Print Performance

Print mode	Standard
Error recovery mode	Standard error recovery

Firmware

Firmware version – Shows the version of printer firmware installed.

Laminator version – Shows the version of laminator firmware installed (displayed if laminator present).

MAB version – Shows the version of printer media authentication board firmware installed.

HCB version – Shows the version of heater control board firmware installed.

Laminator MAB version – Shows the version of laminator media authentication board firmware installed (displayed if laminator present).

Other

Interface – Shows the current interface mode: USB, Ethernet, or Wireless Network.

Transfer type – Shows the current transfer setting: Single sided or Double sided.

Card type in use – Shows the type of cards currently being used in the printer (defined by the Printing Preferences control panel).

Printer serial no – Shows the serial number of the printer.

Laminator serial no – Shows the serial number of the laminator.

OCP status – Shows the message currently being displayed on the operator control panel (OCP).

Network Configuration

IP address – Shows the IP address of the printer.

Gateway – Shows the gateway address of the printer.

Subnet mask – Shows the subnet mask of the printer.

MAC address – Shows the MAC address of the printer.

Options

Magnetic encoding – Shows the type of magnetic encoder installed in the printer: None or ISO.

Laminator type – Shows the type of laminator connected to the printer: Single sided or Double sided.

Smart Card Encoder type – Shows the type of smart card encoder installed in the printer: None, Contact/Mifare, or Contact Station

Cards Printed/Laminated

Cards Printed – Shows how many cards have been printed.

Cards laminated – Shows how many cards have been laminated.

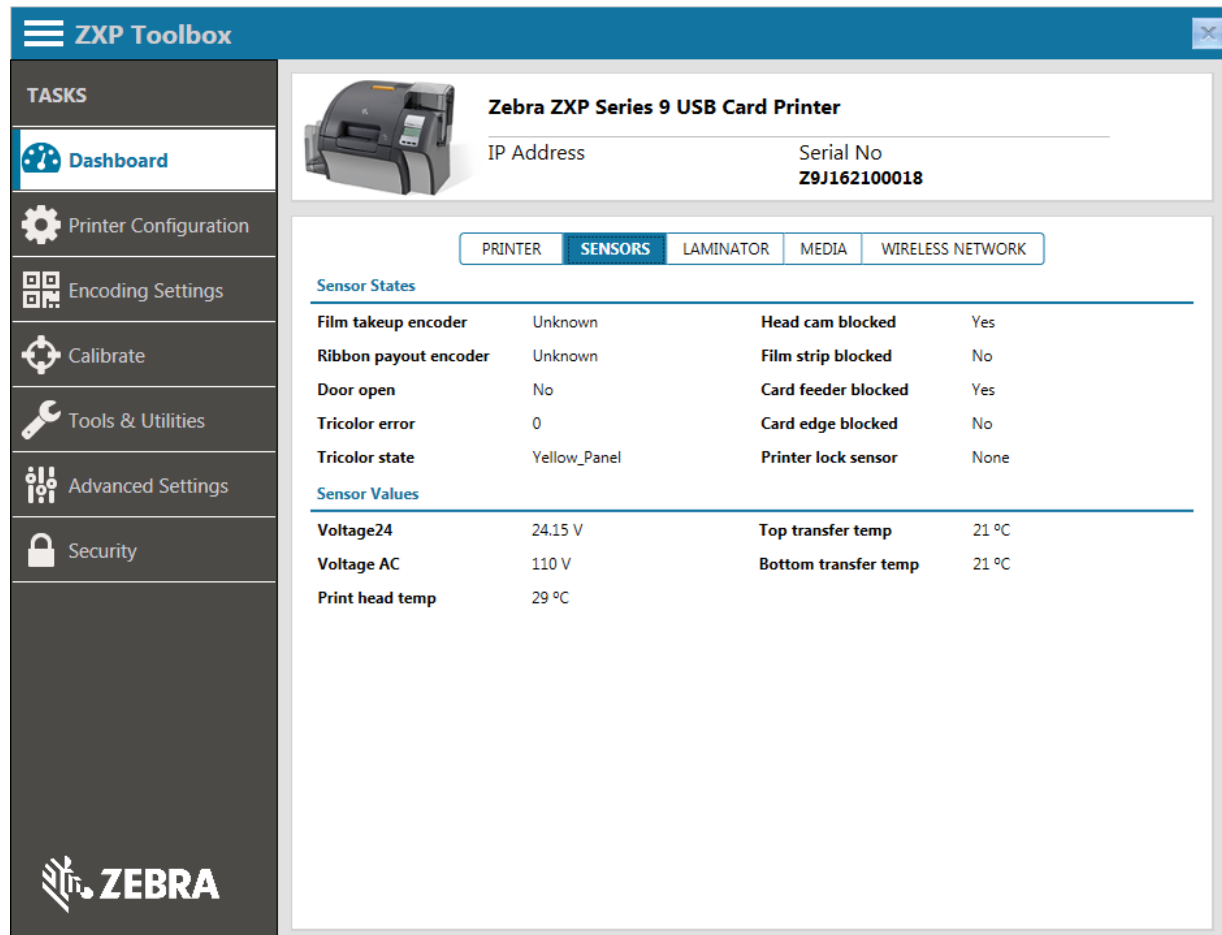
Print Performance

Print mode – Shows the current optimized printing mode: Standard or Fine (defined by the setting in the Driver on the Printing Preferences > Card Setup page).

Error recovery mode – Shows the current error recovery mode: Full, Standard, or No Error Recovery (defined by the setting in the Toolbox on the Printer Configuration > Firmware and Settings page).

Sensors

The Sensors page shows information from the printer and laminator sensors. These fields are for information purposes and are not editable from this page.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

PRINTER **SENSORS** LAMINATOR MEDIA WIRELESS NETWORK

Sensor States

Film takeup encoder	Unknown	Head cam blocked	Yes
Ribbon payout encoder	Unknown	Film strip blocked	No
Door open	No	Card feeder blocked	Yes
Tricolor error	0	Card edge blocked	No
Tricolor state	Yellow_Panel	Printer lock sensor	None

Sensor Values

Voltage24	24.15 V	Top transfer temp	21 °C
Voltage AC	110 V	Bottom transfer temp	21 °C
Print head temp	29 °C		

ZEBRA

Sensor States

Film take-up encoder – Shows the state of the film takeup encoder sensor. The state changes when the film moves.

Ribbon payout encoder – Shows the state of the ribbon payout encoder. The state changes when the ribbon moves.

Door open – Shows the state of the door sensor. The state changes depending on whether the door is open or closed.

Tricolor error – Shows whether there is currently a ribbon tricolor error.

Tricolor state – Shows the state of the ribbon tricolor sensor. The state changes depending on which panel is currently under the tricolor sensor.

Head cam blocked – Shows the state of the head cam sensor. The state changes depending on whether the head cam is up or down.

Film strip blocked – Shows the state of the film strip sensor. The state changes depending on whether the black mark is blocking the sensor or not.

Card feeder blocked – Shows the state of the card feeder sensor. The state changes depending on whether cards are in the input hopper or not.

Card edge blocked – Shows the state of the card detect sensor in the center of the card transport. The state changes depending on whether a card is blocking the sensor or not.

Printer lock sensor – Not used at this time.

Sensor Values

Voltage24 – Shows the voltage of the 24 volt power inside the printer.

Voltage AC – Shows the voltage of the AC power input to the printer.

Printhead temp – Shows the current temperature of the printhead.

Top transfer temp – Shows the current temperature of the top transfer roller.

Bottom transfer temp – Shows the current temperature of the bottom transfer roller.

Laminator

The Laminator page shows information from the laminator. These fields are for information purposes and are not editable from this page. This page is only accessible if a laminator is installed.

ZXP Toolbox

TASKS

Dashboard

Printer Configuration

Encoding Settings

Calibrate

Tools & Utilities

Advanced Settings

Security

Zebra ZXP Series 9 USB Card Printer

IP Address

Serial No

Z9J162100018

PRINTER

SENSORS

LAMINATOR

MEDIA

WIRELESS NETWORK

Status

Status	Ready	Faults	None
Warnings	None	Line voltage	110

Firmware

LCB version	FZ9LE.01.16.00	MAB version	FZ9RE.02.02.00
-------------	----------------	-------------	----------------

Sensors

Entry blocked	No	Door open	No
Staging blocked	No	Top laminate A/D	752
Exit blocked	No	Bottom laminate A/D	717
Top transfer temp	23	Bottom transfer temp	23

Odometer

Total up time	9.68 days	Cards processed	202
Top bulb on time	1.48 days	Cards laminated	31
Bottom bulb on time	1.49 days		

Status

Status – Shows the current status of the laminator.

Warnings – Shows any laminator warnings that are currently active.

Faults – Shows any laminator faults that are currently active.

Line voltage – Shows the voltage of the AC power from the printer to the laminator.

Firmware

LCB version – Shows the version of laminator control board firmware installed.

MAB version – Shows the version of laminator media authentication board firmware installed.

Sensors

Entry blocked – Shows the state of the laminator entry sensor. The state changes depending on whether a card is blocking the sensor or not.

Staging blocked – Shows the state of the laminator staging sensor. The state changes depending on whether a card is blocking the sensor or not.

Exit blocked – Shows the state of the laminator exit sensor. The state changes depending on whether a card is blocking the sensor or not.

Door open – Shows the state of the laminator door sensor. The state changes depending on whether the laminator door is open or closed.

Top laminate A/D – Shows the values coming from the top laminate detect sensor.

Bottom laminate A/D – Shows the values coming from the bottom laminate detect sensor.

Top transfer temp – Shows the current temperature of the top laminator roller.

Bottom transfer temp – Shows the current temperature of the bottom laminator roller.

Odometer

Total up time – Shows the total amount of time, in days, that the laminator has been on, whether laminate has been installed or not.

Top bulb on time – Shows the total amount of time, in days, that the top laminator bulb has been on.

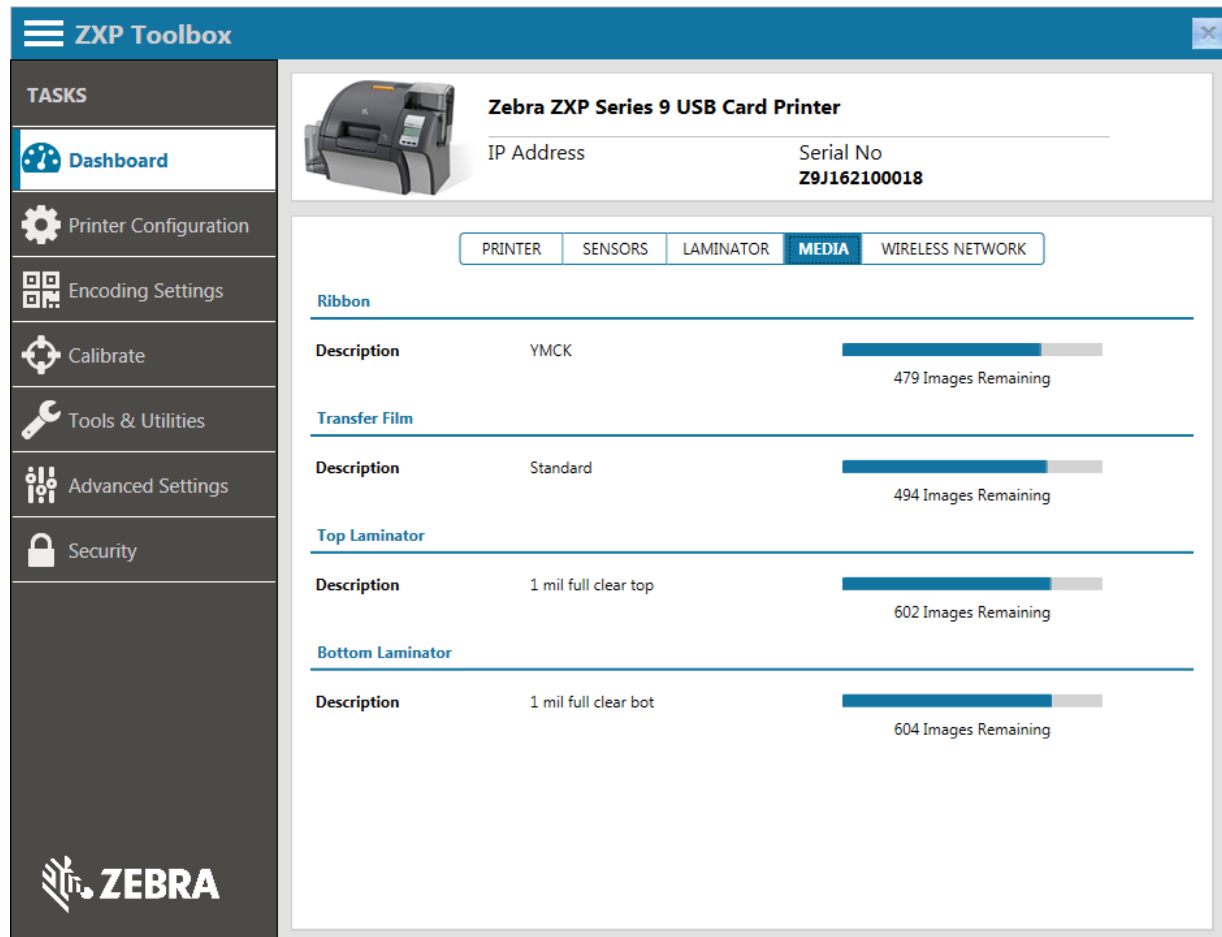
Bottom bulb on time – Shows the total amount of time, in days, that the bottom laminator bulb has been on.

Cards processed – Shows the total number of cards that have passed through the laminator, whether laminate has been installed or not.

Cards laminated – Shows the total number of cards that have been laminated.

Media

The media page displays information about the media installed in the printer.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

PRINTER SENSORS LAMINATOR **MEDIA** WIRELESS NETWORK

Ribbon

Description	YMCK	479 Images Remaining
Transfer Film		
Description	Standard	494 Images Remaining
Top Laminator		
Description	1 mil full clear top	602 Images Remaining
Bottom Laminator		
Description	1 mil full clear bot	604 Images Remaining

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Ribbon

Description – Shows the type of ribbon installed in the printer.

Images Remaining – Shows the number of images remaining on the ribbon.

Transfer Film

Description – Shows the type of transfer film installed in the printer.

Images Remaining – Shows the number of images remaining on the transfer film.

Top Laminator

Description – Shows the type of laminate installed on the top spindle of the laminator.

Images Remaining – Shows the number of images remaining on the top laminate.

Bottom Laminator

This information only accessible if a double-sided laminator is installed.

Description – Shows the type of laminate installed on the bottom spindle of the laminator.

Images Remaining – Shows the number of images remaining on the bottom laminate.

Wireless Network

The Wireless Network page shows information about the wireless network that the printer is connected to. These fields are for information purposes and are not editable from this page. This page is only accessible if the printer has the wireless option installed.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

PRINTER SENSORS LAMINATOR MEDIA **WIRELESS NETWORK**

Status

State	Not Connected	Noise floor	0	Channel	0
Security	Open	RSSI	0	Encryption	None
SNR	0	Rate	0	Link lost	0
BSSID	ff:ff:ff:ff:ff:ff	SSID	125		

Wireless Radio Setting

Failed	0	RTS failure	0	ACK failure	0
Retry	0	Rx frag	0	Multi retry	0
Frame duplicate	0	FCS error	0	Tx success	0
Tx retry	0	Rx success	0	Rx duplicate	0
RTS success	0	RTS success rate	0	Transmission frame	0
Multicast frame receive	0	Multicast frame transmission	0		

Network Configuration

IP address	0.0.0.0	Gateway	0.0.0.0
Subnet mask	0.0.0.0	MAC address	00:19:88:4d:14:ef

Sent

Bytes sent	0	Unicast packets	0
Errors	0	Discard packets	0
Non unicast packets	0		

Received

Byte received	0	Unicast packets	0
Errors	0	Discard packets	0
Non unicast packet	0		

ZEBRA

Status

State – Shows whether the printer is connected or not connected to a wireless network.

Security – Shows the security of the wireless network that the printer is connected to.

SNR – Shows the signal to noise ratio of the printer to the access point. Higher numbers indicate better connection.

BSSID – Shows the wireless MAC address of the access point.

Noise floor – Shows the level of RF noise in the area surrounding the printer. Lower numbers indicate less noise.

RSSI – Shows the relative signal strength of the access point to the printer. Higher numbers indicate greater strength.

Rate – Shows the raw data rate, in megabits per second, of the connection from the printer to the access point.

SSID – Shows the name of the wireless network.

Channel – Shows the wireless channel that the printer connection to the access point is using.

Encryption – Shows the encryption method used by the current security.

Link lost – Shows a counter of the number of times the link to the wireless network has been lost.

Wireless Radio Setting

This section shows statistics for the connection to the wireless network, that may be helpful in troubleshooting connection issues.

Network Configuration

IP address – Shows the IP address of the printer on the wireless network.

Subnet mask – Shows the Subnet mask of the printer on the wireless network.

Gateway – Shows the Gateway of the printer on the wireless network.

MAC address – Shows the wireless MAC address of the printer.

Sent

This section shows statistics for the connection to the wireless network, that may be helpful in troubleshooting connection issues.

Received

This section shows statistics for the connection to the wireless network, that may be helpful in troubleshooting connection issues.

Printer Configuration

The Printer Configuration section provides the ability to make basic changes such as enabling the job log and updating printer firmware.

Firmware and Settings

The Firmware and Settings page enables the user to update printer firmware, make changes to the operator control panel, change the error recovery mode, and save/restore printer and driver settings.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration**
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

FIRMWARE AND SETTINGS | JOB LOG | WIRED NETWORK | WIRELESS NETWORK

Update Firmware

Firmware source: [Browse...](#)

Operator Control Panel

Language: English ▼ LCD contrast: 35 ◀ ▶

Print Performance **Save/Restore**

Error recovery mode: Standard error recovery (Medium) ▼

Printer settings: [Load](#) [Save](#)

Driver settings: [Load](#) [Save](#)

The default location where the configuration files are saved is C:\ProgramData\ZXP Series 9\Config\

[Print Preferences...](#) [Restore Defaults](#) [Save Settings](#)

ZEBRA

Update Firmware

Firmware source – Allows the user to select a new version of firmware to download to the printer.

Browse... – Click on the Browse button to navigate to, and select the firmware bin file.

Operator Control Panel

Language – Allows the user to change the language on the operator control panel.

LCD contrast – Allows the user to change the contrast of the operator control panel.

Print Performance

Error recovery mode – Allows the user to change the error recovery mode of the printer.

Save/Restore

Printer settings – Allows the user to Load and Save the printer settings. The settings are saved in an XML document.

Driver settings – Allows the user to Load and Save the driver settings. The settings are saved in an XML document.

Print Preferences – Opens the Print Preferences pages to allow the user to make changes without having to close the Toolbox.

Restore Defaults – Allows the user to restore all settings on this page to their default setting.

Save Settings – Allows the user to save changes made on this page to the printer.

Job Log

The Job Log page enables the user to save a log that records certain attributes of each job printed, as well as other printer logs.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration**
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

FIRMWARE AND SETTINGS | **JOB LOG** | WIRED NETWORK | WIRELESS NETWORK

Job Log

Enable Logging ☐ OFF Delete Log Files Save Printer Log Files

Log File Contents

- ☐ Time
- ☐ Date
- ☐ Printer serial number
- ☐ Static text
- ☐ IP address
- ☐ Magnetic track 1 data
- ☐ Magnetic track 2 data
- ☐ Magnetic track 3 data
- ☐ User name
- ☐ ZMJ job ID

Log File Definition

The various log files will be saved at C:\ProgramData\ZXP Series 9\ directory

Create new file daily ☐ OFF

File Name

Separator

Save Settings

ZEBRA

Job Log

Enable logging – Allows the user to turn logging on or off.

Delete Log Files – Allows the user to delete job log files.

Save Printer Log Files – Allows the user to save printer log files.

Log File Contents

The items in this section will be included in the log file when checked.

Log File Definition

Create new file daily – Allows the user to specify whether the same log file should always be used, or if a new log file should be created each day.

File name – Allows the user to specify the name of the log file.

Separator – Allows the user to specify how the log file contents are separated.

Save Settings – Allows the user to save changes made on this page.

Wired Network

The Wired Network page enables the user to specify the wired network settings for the printer.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration**
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

FIRMWARE AND SETTINGS | JOB LOG | **WIRED NETWORK** | WIRELESS NETWORK

Network Configuration

☒ Use DHCP

IP address: 10.1.25.14 Subnet mask: 255.255.255.0

Gateway: 10.1.25.1 MAC address: 00:07:4d:6a:87:d8

☒ Use SNMP

Save Settings

ZEBRA

Network Configuration

Use DHCP – Allows the user to specify whether the printer should use DHCP to automatically obtain network settings. When this box is unchecked, the user must specify settings. Note that the printer MAC address cannot be changed.

Use SNMP – Allows the user to specify whether the printer should acknowledge SNMP requests. Enabled when checked.

Save Settings – Allows the user to save changes made on this page.

Wireless Network

The Wireless Network page enables the user to specify the wireless network settings for the printer, as well as to connect to a wireless network. This page is only available on printers with a wireless option installed, but cannot be accessed while connected to a wireless network.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration**
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

FIRMWARE AND SETTINGS | JOB LOG | WIRED NETWORK | **WIRELESS NETWORK**

Wireless Access Points

SSID	BSSID	Channel	Privacy	Signal	Security

Scan

Wireless Configuration

☒ Enable DHCP ☐ Enable SNMP

IP address: 0.0.0.0 Subnet mask: 0.0.0.0

Gateway: 0.0.0.0

SSID: 125 BSSID: ff:ff:ff:ff:ff:ff

Channel: 0 Security: open Encryption: none

Pass phrase:

☐ Don't save Key/Pass Phrase

Connect Load Settings Save Settings

Wireless Access Points

Shows a list of available wireless access points when the user presses the Scan button. The user may need to press the Scan button multiple times to find all available networks, particularly if they have weak signals.

Wireless Configuration

Enable DHCP – Allows the user to specify whether the printer should use DHCP to automatically obtain network settings. When this box is unchecked, the user must specify settings.

Enable SNMP – Allows the user to specify whether the printer should acknowledge SNMP requests. Enabled when checked.

SSID – Allows the user to specify the SSID of the wireless network. Pre-populated when a network with a visible SSID is selected, blank when a network with a hidden SSID is selected. If blank, the user must specify.

BSSID – Shows the wireless MAC address of the access point.

Channel – Allows the user to select the channel for the wireless network. Pre-populated when a network is selected.

Security – Allows the user to select the security for the wireless network. Pre-populated when a network is selected.

Encryption – Allows the user to select the encryption for the wireless network. Pre-populated when a network is selected.

Key – Allows the user to enter the hex key or passphrase for the wireless network. Can be left blank only if the wireless network has open security.

Don't save passphrase/passkey – Allows the user to determine whether the Toolbox saves the passphrase for the selected wireless network, for later use.

Connect – Attempts to connect the printer to the selected wireless network.

Load Settings – Allows the user to load a previously saved XML of the wireless configuration.

Save Settings – Allows the user to save an XML of the wireless configuration.

Encoding Settings

The Encoding Settings section provides the ability to test and change settings for the magnetic encoder (if installed), and to test the smart card encoder (if installed).

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings**
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

MAGNETIC SMARTCARD

Settings

Magnetic encoding ☒ ON Encoder verification ☒ ON

Encoding only ☐ OFF

Magnetic Encoding Type

☒ ISO ☐ AAMVA ☐ Binary ☐ Custom

Track Settings

Type: ☒ Track1 ☐ Track2 ☐ Track3

Bit density (bpi): Start sentinel: Character size:

Start sentinel offset: LRC parity: End sentinel:

Encode/Read Data

Coercivity ☒ HIGH Hex encoding ☐ OFF

☐ Track1

☐ Track2

☐ Track3

ZEBRA

Magnetic

The Magnetic Encoding page enables the user to adjust magnetic encoder settings such as verification, encoding type, and individual track settings, as well as send encoding jobs to the printer to test the magnetic encoder. This page is only available for printers that have the magnetic encoding option installed.

Settings

Magnetic encoding – Allows the user to turn magnetic encoding on or off. When turned on, magnetic encoding jobs are possible. When turned off, magnetic encoding jobs are not possible.

Encoding only – Allows the user to restrict print jobs to magnetic encoding only, meaning no printing will occur if a print or print + encode job is sent to the printer.

Encoder verification – Allows the user to turn encoder verification on or off. When turned on, the printer will read the data that was just encoded to verify that it was encoded correctly. When turned off, the printer will only encode the card.

Magnetic Encoding Type

The selections in this section allow the user to specify that the data to be encoded on the card must meet certain standards, which covers both the track settings and the type and number of characters allowed on each track. ISO and AAMVA have fixed track settings, Binary enables the Bit Density to be changed for each track, and Custom enables most track settings to be changed for each track.

Track Settings

The selections in this section control various parameters of magnetic encoding. They can only be edited if the Binary or Custom encoding types are selected.

Encode/Read Data

This section enables the user to test magnetic encoding. Cards can be both encoded and read. Note that magnetic encoding type and track setting changes must be saved in order to apply to this utility.

Coercivity – Allows the user to set High coercivity or Low coercivity.

Hex encoding – Allows the user to specify whether the data is in hexadecimal format or standard format.

Track 1 – Allows the user to specify whether to use Track 1 when performing the specified operation. Characters must conform to the standard for the magnetic encoding type selected.

Track 2 – Allows the user to specify whether to use Track 2 when performing the specified operation. Characters must conform to the standard for the magnetic encoding type selected.

Track 3 – Allows the user to specify whether to use Track 3 when performing the specified operation. Characters must conform to the standard for the magnetic encoding type selected.

Read – Allows the user to read the card inserted in the input hopper. The card will be ejected after the operation is completed.

Encode – Allows the user to encode the card inserted in the input hopper. The card will be ejected after the operation is completed.

Restore Defaults – Allows the user to restore all settings on this page to their default setting.

Save Settings – Allows the user to save all changes to settings on this page.

Smart Card

The Smart Card Encoding Page enables the user to test various smart card encoding options. For more information on smart card encoding, refer to the ZXP Series 9 Service Manual.

The screenshot shows the ZXP Toolbox interface with the 'Encoding Settings' tab selected. The main content area is titled 'Zebra ZXP Series 9 USB Card Printer' and displays the printer's IP Address and Serial No (Z9J162100018). Below this, there are two tabs: 'MAGNETIC' and 'SMARTCARD', with 'SMARTCARD' being the active tab. The 'Smartcard Options' section includes a 'Card readers' dropdown menu (set to 'Identive SDI010 Contactless Reader 0'), a 'Card option' section with radio buttons for 'Contact' and 'Contactless' (selected), and a 'Card types' dropdown menu (set to 'Mifare 1K') with a 'Feed Card' button. The 'Input Data' section features 'Address' and 'Length' dropdown menus (set to 10 and 16 respectively), an 'Input' text field, a 'PIN' text field (containing 'FF FF FF FF FF FF'), and a 'Hex' toggle switch (set to 'OFF'). Below these are buttons for 'Set PIN', 'Read', 'Write', 'Write Raw Data', 'Get ATR', and 'Eject Card'. At the bottom, there is a 'Messages' section with a checkbox for 'Output as hex format' and a large text area for displaying results.

Smartcard Options

Card Readers – Select the card reader from the drop-down menu.

Card Option – Select either Contact or Contactless.

Card Types – Select the appropriate card type from the drop-down menu.

Feed Card – When the parameters have been set as desired, place a card in the feeder cartridge, and click **Feed Card**.

Input Data

Writing Data: Set the address, set the length, enter data in Input field, and click **Write**. Data can be encoded in hex format using the Hex On/Off switch.

Reading Data: After writing data (above), click **Read**. “Read successful” and the value read from the smart card will be displayed in the Messages section.

Click on **Set PIN** to set a security code for the card. Click on **Write Raw Data** to write “raw data” to a card.

Click **Get ATR** to return the ATR (Answer To Reset) result from the card reader. This is useful to identifying the type of smart card inserted into the printer.

Click **Eject Card** to eject the card.

The **Messages** area displays the output in hex format if the “Output as hex format” box is checked.

Calibrate

The Calibrate screens that follow enable setting several key parameters for the printer.

ZXP Toolbox

TASKS

Dashboard

Printer Configuration

Encoding Settings


Calibrate

Tools & Utilities

Advanced Settings

Security

ZEBRA



Zebra ZXP Series 9 USB Card Printer

IP AddressSerial No
Z9J162100018

CALIBRATE

LOOKUP TABLE

Transfer Temperature Offset

Top single0°C

Bottom single0°C

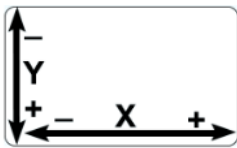
Top double0°C

Bottom double0°C

Print Position

Film print X offset0dots

Film print Y offset-14mils



Print Head

Serial number4X-80250

Resistance3839

Save Settings

Calibrate

Transfer Temperature Offset

Transfer Temperature Offset is provided to globally change the temperature of the heated rollers. If you have a single card type that you want to change the roller temperatures, you would use custom card type. If the printer seems to be running too cold or too hot for every card type, you would use this adjustment to raise or lower the heated roller temperature for all cards. This will not affect what you see in the card parameters for a given defined card type; see Note above. The adjustment range is from -10, to 10.

Note that while you will not see a change in card parameters for a given card type when using the Transfer Temperature Offsets, you will see the change in the OCP Info screen that shows the temperature set-points and current temperatures.

Top/Bottom Single – Used to adjust the transfer temperature offset for a single-sided printer.

Top/Bottom Double – Used to adjust the transfer temperature of a double-sided printer.

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ZXP Series 9 Card Printer Service Manual

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Print Position

The sliders are used to position the image at the center of the card.

Film print X offset (dots) – This is the number of dots (300 dpi / ~3 mils/dot.) to shift the image horizontally to align it on the card. Increasing these values move the image right while decreasing them moves the image left. This parameter can be used to center the image on the card, or to align it with an edge. The adjustment range is from -50 to 50.

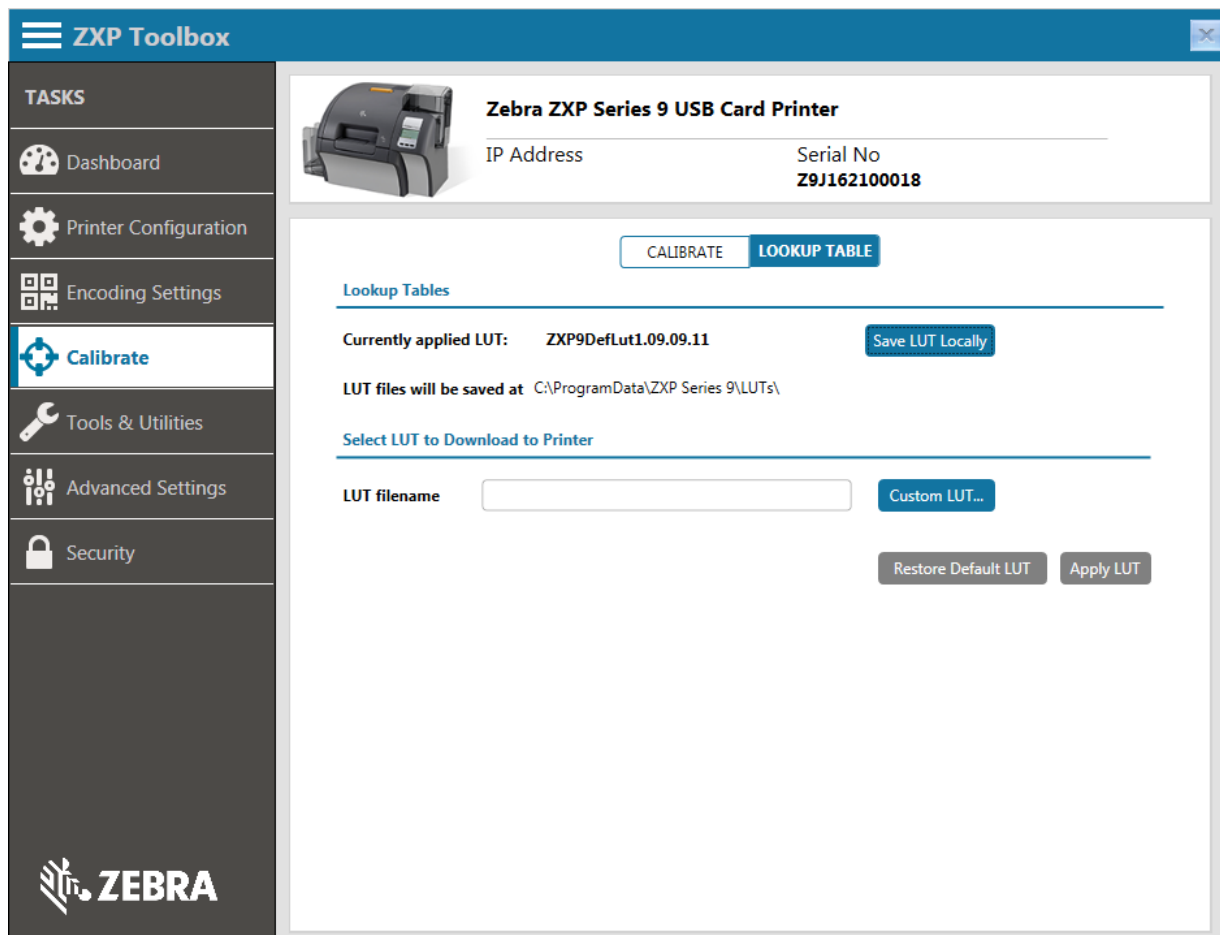
Film print Y offset (mils) – This is the number of mils to shift the image to align it vertically on the card. Increasing these values moves the image up while decreasing them moves the image down. This parameter can be used to center the image on the card, or to align it with an edge. The adjustment range is from -100 to 100.

Printhead

This area enables entry of the Printhead serial number and entry of the resistance value of a replacement Printhead. The resistance value is printed on a label attached to the Printhead.

Lookup Table

A Look-Up Table (LUT) is used to transform a range of input colors into a range of output colors. Use this toolbox option to save and install LUTs, either Default or Custom.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate**
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

CALIBRATE **LOOKUP TABLE**

Lookup Tables

Currently applied LUT: **ZXP9DefLut1.09.09.11** **Save LUT Locally**

LUT files will be saved at C:\ProgramData\ZXP Series 9\LUTs\

Select LUT to Download to Printer

LUT filename: **Custom LUT...**

Restore Default LUT **Apply LUT**

ZEBRA

Currently applied LUT – Shows the current LUT being used.

Save LUT Locally – Saves the current LUT onto a local hard drive or media of choice.

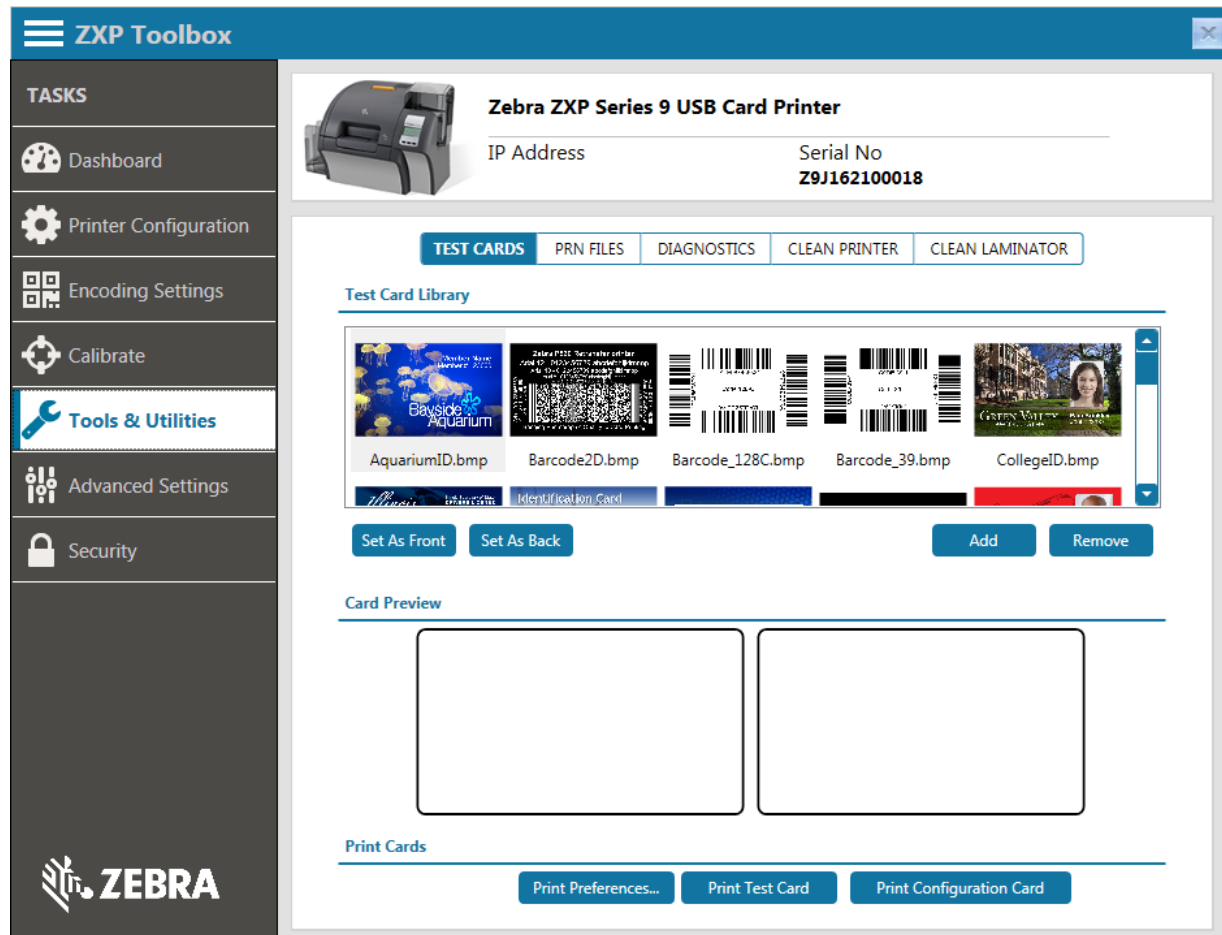
Select LUT to Download to Printer – Click Custom LUT; locate and select the Custom LUT, click Open.

Apply LUT – Click to use the selected LUT.

Restore Default LUT – Resets the LUT to factory parameters.

Tools & Utilities

The Tools & Utilities section includes functions that are used for printer operation and / or maintenance.



Test Cards

Test Card Library – Displays the currently installed test cards.

Set As Front – Sets the currently selected test card image to be printed on the front side of the card.

Set as Back – Sets the currently selected test card image to be printed on the back side of the card.

Add – Adds a custom image to the Test Card Library.

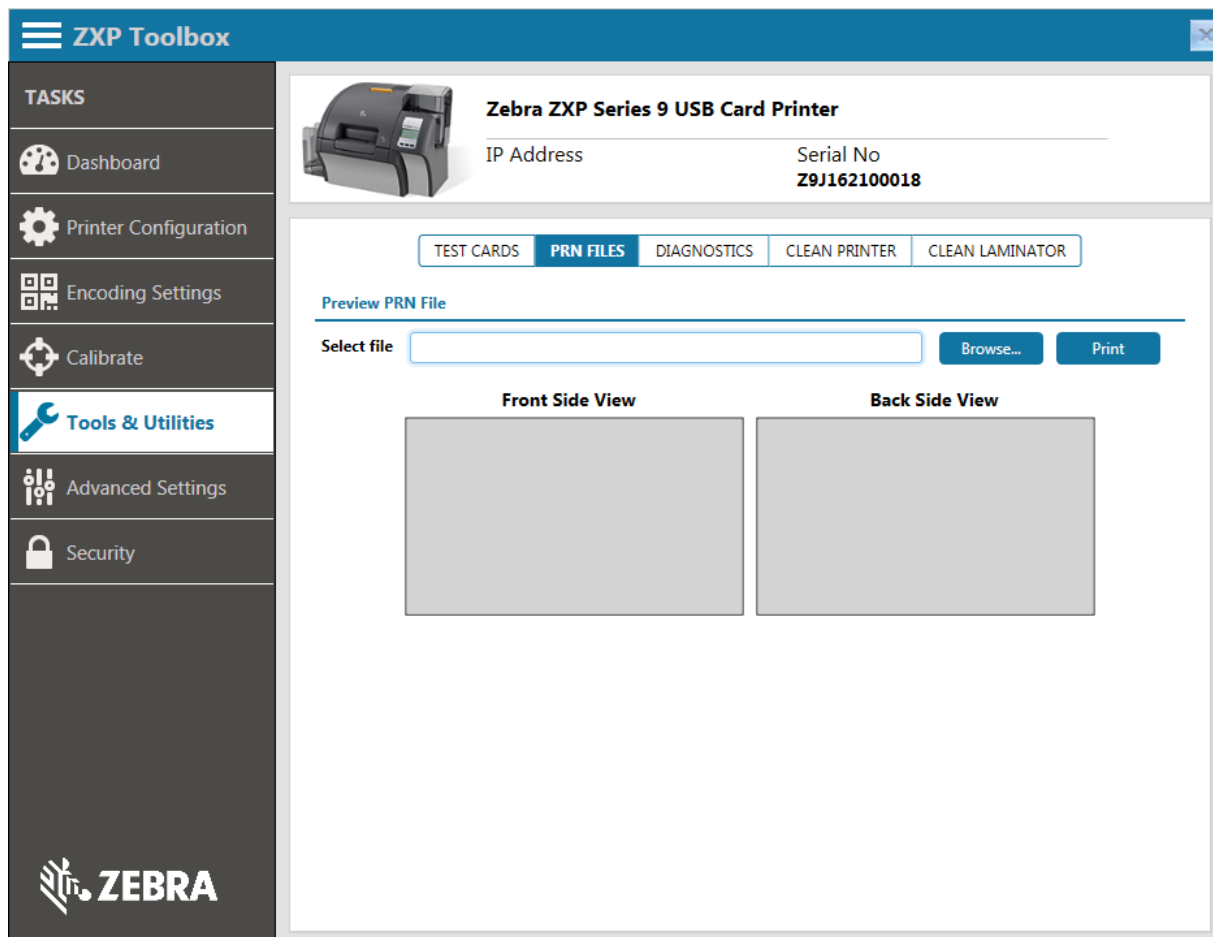
Remove – Removes the currently selected image from the Test Card Library.

Print Preferences – Opens the Printing preferences control panel.

Print Configuration Card – Prints a printer configuration card.

PRN Files

When you print a PRN file, you print directly to the printer, bypassing computer applications and associated printer drivers. This utility can be used to ensure that your printer is working properly by isolating it from driver-related and communication- related issues.



Preview PRN File

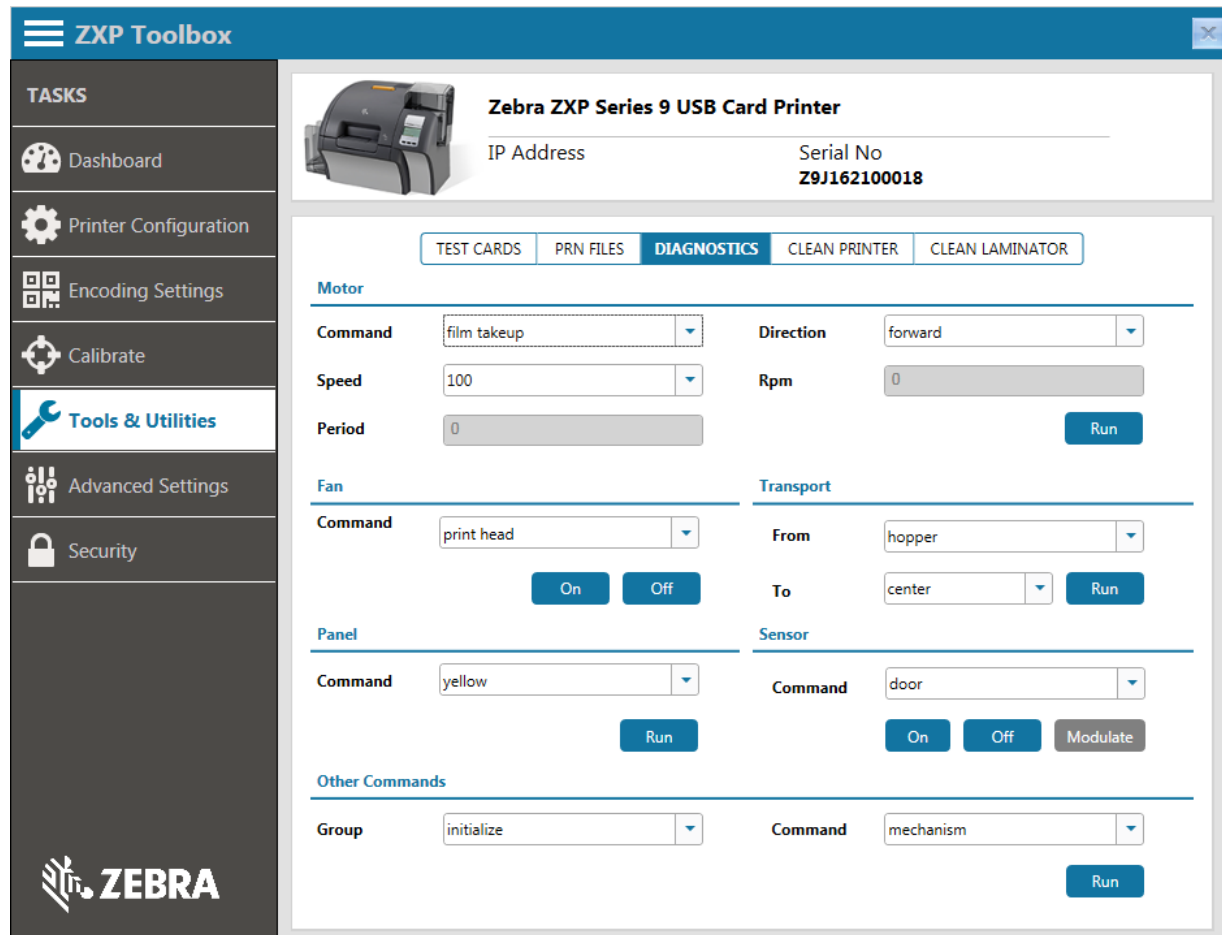
Select file – Sample PRN files are stored in the following default directory/folder: C:\ProgramData\ZXP Series 9\Library. Use the Browse button to select a PRN file from the directory, or to select a PRN file from any location on your computer.

The front and back sides of the selected PRN file will appear in the View windows.

Print – Prints the current PRN file.

Diagnostics

The Diagnostics screen provides troubleshooting capabilities to assist Service Technicians in analyzing printer problems.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities**
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

TEST CARDS PRN FILES **DIAGNOSTICS** CLEAN PRINTER CLEAN LAMINATOR

Motor

Command: film takeup Direction: forward

Speed: 100 Rpm: 0

Period: 0 **Run**

Fan

Command: print head

On **Off**

Transport

From: hopper To: center **Run**

Panel

Command: yellow **Run**

Sensor

Command: door **On** **Off** **Modulate**

Other Commands

Group: initialize Command: mechanism **Run**

ZEBRA

Motor

These commands enable testing the functionality of the selected motor.

For all commands—except ribbon takeup—direction is selectable (forward or reverse) and speed is variable.

Command

- film takeup
- film payout
- card feed
- head lift
- card x
- card y
- card z
- transfer roller (remove transfer film prior to running this command)

- smart card
- ribbon (remove ribbon prior to running this command)
- ribbon takeup (remove ribbon prior to running this command)

Speed – Sets the RPM at which the motor turns; from 100 to 1500 RPM in increments of 100.

Period – Sets the duration for which the motor runs.

Direction – Sets the direction in which the motor turns.

Rpm – Sets the RPM at which the motor turns.

Fan

These commands enable testing the functionality of the selected fan.

Command

- printhead
- transfer roller
- transfer card

On – Turns on the selected fan.

Off – Turns off the selected fan.

Transport

These commands move cards throughout the transport path to ensure/confirm proper operation of card motors, transport rollers, and sensors.

From

- hopper
- center
- atm
- cam

To

- center
- contact
- contactless

Run – Starts the selected transport sequence.

Panel

These commands advance the selected panel (yellow, magenta, cyan, or black) to a position in front of the printhead thereby ensuring functionality of the Ribbon Take-up Sensor, Ribbon Payout Sensor, and Tricolor Sensor.

Command

- yellow
- magenta
- cyan
- black
- uv (if equipped)

Run – Advances the selected print ribbon panel.

Sensor

Command

- door – Use this command to enable or disable the door sensor. This command is not intended be used as a stand-alone command, but as one step of a multi-step calibration process.
- contactless – For use by any agencies that perform radio/EMI certification testing.
- rfid 0 – For use by any agencies that perform radio/EMI certification testing.
- rfid 1 – For use by any agencies that perform radio/EMI certification testing.
- radio – For use by any agencies that perform radio/EMI certification testing.

On – Turns on the selected sensor.

Off – Turns off the selected sensor.

Modulate – Sets the current sensor to modulate.

Other Commands

Use these commands to validate the system operation for troubleshooting purposes.

Group and Command

- Initialize
 - mechanism – Initializes the entire printer (this being the equivalent of opening and closing the door); the printhead is engaged, then disengaged; the ribbon is synchronized to the correct position, and the card transport is engaged to determine if there is a card in the transport (sent to the reject bin if there); the transfer film system is synchronized and diameters are calculated; and (if installed) the smart station card motor is operated to ensure functionality.
 - film – Synchronizes the Transfer Film and calculates diameters.
 - card transport – Activates both the X and Y drive motors, checks for cards in the transport system, and sends any found to the reject bin.
- Engage – Activates the associated motor to contact/close/engage the associated assembly. This is used in conjunction with the disengage function.
 - contact – Brings the contact pad down to the position for contact encoding.

- transfer roller – Closes the transfer rollers.
- printhead – Rotates the cams and brings the printhead to the engaged position.
- Disengage – Activates the associated motor to stop contact/open/disengage the associated assembly. This is used in conjunction with the engage function.
 - contact – Moves the contact pad back to the rest position.
 - transfer roller – Opens the transfer rollers.
 - printhead – Rotates the cams to disengage the printhead.
- Clutch – Activates the transfer film takeup clutch.

Run – Starts the selected procedure.

Clean Printer

The Clean Printer screen enables cleaning the printer via the Toolbox.

ZXP Toolbox

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

TEST CARDS PRN FILES DIAGNOSTICS **CLEAN PRINTER** CLEAN LAMINATOR

Warning: Note: Values may not be accurate while printer is busy printing. Correct values will be displayed if you refresh or open the page when printer is in idle state.

Side Card Path		Front Card Path	
Cards since last cleaning	42	Cards since last cleaning	42
Cleaning interval	5000	Cleaning interval	5000
Clean		Clean	

Heater Rollers

Cards since last cleaning	42	Cleaning interval	20000
Clean			

Restore Defaults Save Settings

ZEBRA

Side Card Path

Cards since last cleaning – Displays the number of cards printed since the side card path was last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the side card path; follow the on-screen instructions.

Front Card Path

Cards since last cleaning – Displays the number of cards printed since the front card path was last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the front card path; follow the on-screen instructions.

Heater Rollers

Cards since last cleaning – Displays the number of cards printed since the heated rollers were last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the heated rollers; follow the on-screen instructions.

Restore Defaults – sets the cleaning intervals back to factory default values.

Save Settings – Applies the changed values so they can be used in the future.

Clean Laminator

The Clean Laminator screen lets you clean the Laminator via the Toolbox; for cleaning the Laminator via Operator Control Panel commands, see the User's Manual or the Service Manual.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities**
- Advanced Settings
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address Serial No
 Z9J162100018

TEST CARDS PRN FILES DIAGNOSTICS CLEAN PRINTER **CLEAN LAMINATOR**

Note: Values may not be accurate while printer is busy printing. Correct values will be displayed if you refresh or open the page when printer is in idle state.

Laminator Card Path

Cards since last cleaning 19 Cleaning interval 5000 **Clean**

Laminator Rollers

Cards since last cleaning 19 Cleaning interval 20000 **Clean**

Laminator Oven

Cards since last cleaning 2 Cleaning interval 5000 **Clean**

Restore Defaults Save Settings

ZEBRA

Laminator Card Path

Cards since last cleaning – Displays the number of cards laminated since the laminator card path was last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the laminator card path; follow the on-screen instructions.

Laminator Rollers

Cards since last cleaning – Displays the number of cards laminated since the laminator rollers were last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the laminator rollers; follow the on-screen instructions.

Laminator Oven

Cards since last cleaning – Displays the number of cards laminated since the laminator oven was last cleaned.

Cleaning interval – Enables changing the number of cards interval between cleanings.

Clean – Click to run the cleaning procedure for the laminator oven; follow the on-screen instructions.

Restore Defaults – Resets the cleaning intervals back to factory default values.

Save Settings – Applies the changed values so they can be used in the future.

Advanced Settings

Caution • Improper use of the Advanced Settings may permanently damage your printer and void your warranty.

The Advanced Settings section includes advanced functions that are used for printer operation and / or maintenance.

A password is required to access the Advanced Settings. If you have not been given an Advanced Password, contact your reseller or Zebra Customer Care.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings**
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

POWER MECHANICAL LAMINATOR CALIBRATION CONFIG REQUEST

Color Adjustments (%)

Color	100	80	Slider	120
Yellow	100	80		120
Magenta	100	80		120
Cyan	100	80		120

Other Adjustments (%)

Adjustment	100	80	Slider	120
Helper	100	80		120
Inhibit	100	80		120

K-resin Adjustments (%)

Adjustment	100	80	Slider	120
Front	100	80		120
Back	100	80		120

UV Adjustments (%)

Adjustment	100	80	Slider	120
Front	100	80		120
Back	100	80		120

Restore Factory Defaults **Save Settings**

ZEBRA

Power

The Power Adjustment screen enables you to make power adjustments to the desired areas.

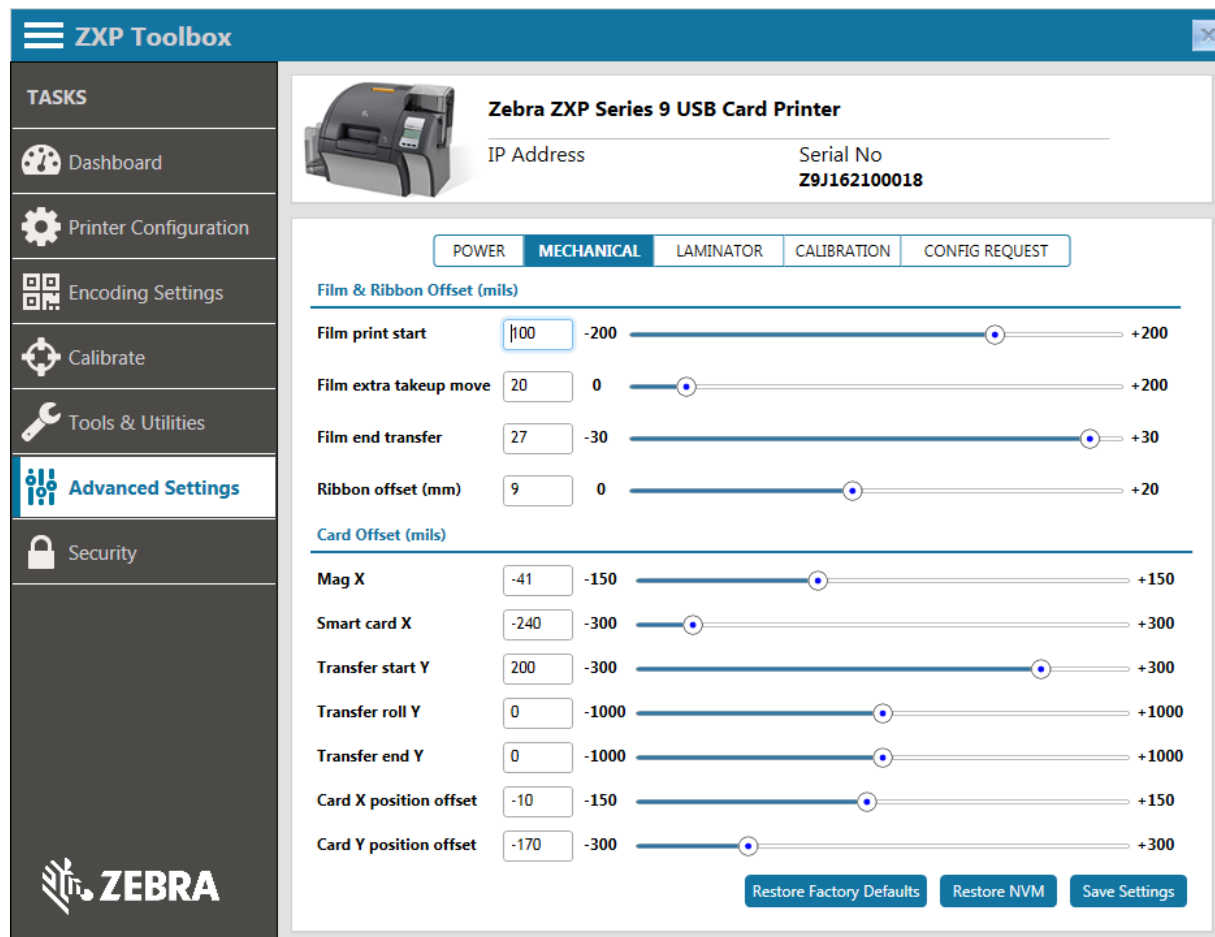
Power adjustments are percentages of the pre-determined fixed energy value assigned to each panel. As the value goes up, the density of that panel will increase; and, as the value goes down, the density of that panel will decrease. Note that if the relative power levels for each color panel are adjusted individually by differing amounts, the color balance of full color images will change.

Restore Factory Defaults – Resets the values to the factory default (100).

Save Settings – Applies the changed values so they can be used in the future.

Mechanical

This Mechanical Adjustment screen enables you to make selected mechanical adjustments.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings**
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

POWER MECHANICAL LAMINATOR CALIBRATION CONFIG REQUEST

Film & Ribbon Offset (mils)

Setting	Value	Range
Film print start	100	-200 to +200
Film extra takeup move	20	0 to +200
Film end transfer	27	-30 to +30
Ribbon offset (mm)	9	0 to +20

Card Offset (mils)

Setting	Value	Range
Mag X	-41	-150 to +150
Smart card X	-240	-300 to +300
Transfer start Y	200	-300 to +300
Transfer roll Y	0	-1000 to +1000
Transfer end Y	0	-1000 to +1000
Card X position offset	-10	-150 to +150
Card Y position offset	-170	-300 to +300

Restore Factory Defaults Restore NVM Save Settings

Film & Ribbon Offset (in mils)

These adjustments can be used to fine tune the film and ribbon positioning with respect to the card.

Card Offset (in mils)

These adjustments can be used to position the card with respect to the various functions along the card path through the printer.

Restore Factory Defaults – Resets the values to the factory default.

Restore NVM – Restores the settings from an XML file to the NVM (Non-Volatile Memory). You would use this feature, for example, if you changed the main logic board and wanted to restore all of the settings from the old board onto the new board.

Save Settings – Applies the changed values so they can be used in the future.

Laminator

This tab is used for making minor adjustments to laminate length and/or position, adjust temperature and speed, and saving the changed settings to laminator memory.

The screenshot shows the ZXP Toolbox interface with the 'Advanced Settings' tab selected. The 'LAMINATOR' sub-tab is active, displaying various adjustment sliders and buttons. The interface includes a sidebar with navigation options like Dashboard, Printer Configuration, Encoding Settings, Calibrate, Tools & Utilities, Advanced Settings (selected), and Security. The main area shows the Zebra ZXP Series 9 USB Card Printer details, including IP Address and Serial No (Z9J162100018). The Laminator settings are organized into sections: Roller Temperature Offset (°C) with sliders for Top and Bottom rollers; Laminator Speed Offset (mm/sec) with a single slider; and Margin and Patch Placement (mm) with sliders for Top and Bottom leading edge margins, Trailing edge margin(both), and Patch placement adjust(both). A diagram of a card with LEM and TEM labels is shown for patch placement. At the bottom, there are buttons for Restore Factory Defaults, Media Calibration, Read From Laminator, and Save Settings.

Roller Temperature Offset (°C)

This is adjusted via two sliders, one for the top roller and one for the bottom roller. The range is -5 to 5, in increments of 1, for both adjustments.

Send – Sends the adjustment to the printer.

Lamination Speed Offset (mm/sec)

This enables you increase or decrease the relative lamination speed. The range is -8 to +8, in increments of 0.1.

Send – Sends the adjustment to the printer.

Margins and Patch Placement (mm)

These adjustments enable you to set the margins of the laminate (i.e., size the patch) and position the patch on the card.

Leading Edge Margin is adjusted via two sliders, one for the top of the card and one for the bottom of the card. The displayed value can be increased (+) or decreased (-) in increments of 0.07 , for both adjustments. Note that this adjustment positions the leading edge of the laminate with respect to the leading edge of the card.

Trailing Edge Margin (both) is adjusted via one slider for both the top of the card and the bottom of the card. The displayed value can be increased (+) or decreased (-) in increments of 0.06, for both adjustments. Note that adjusting the trailing edge margin increases or decreases the length of both laminate patches.

Patch Placement Adjust (both) is adjusted via one slider for both the top of the card and the bottom of the card. The displayed value can be increased (+) or decreased (-) in increments of 0.06, for both adjustments. Note that this adjustment positions the laminate on both top and bottom of the card.

Click on the Send button to send the adjustment to the printer. You have to click on the Save Settings button to save the settings to EEPROM.

Restore Factory Defaults – Resets the values to the factory default.

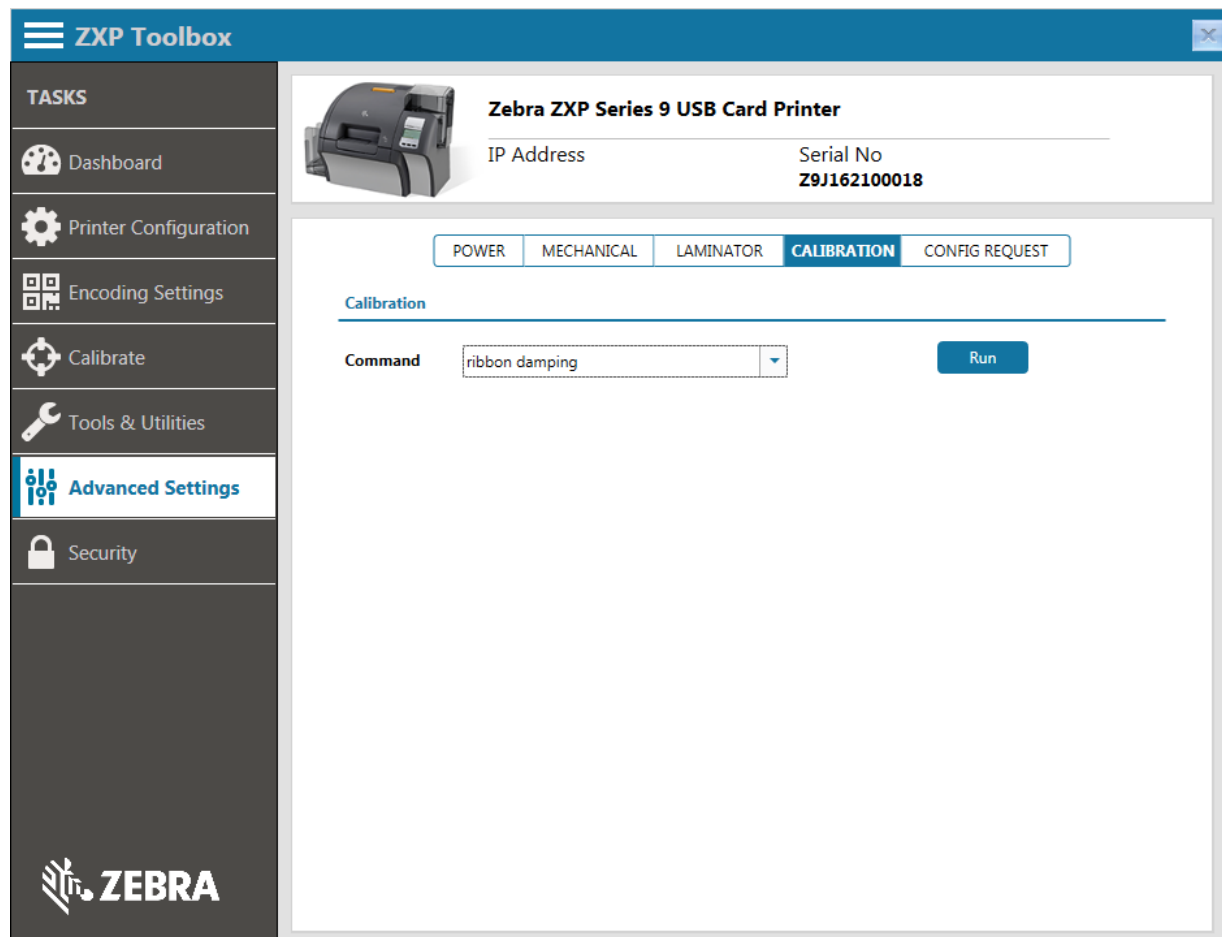
Media Calibration – Calibrates the laminate sensor to see the leading edge of the laminate. That data is used to determine the patch length and placement on the card.

Read From Laminator – Reads all the saved laminator parameters from the EEPROM.

Save Settings – Applies the changed values so they can be used in the future.

Calibration

This page is used to calibrate certain areas of the printer that are not working properly, or have been repaired or replaced.



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings**
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

POWER MECHANICAL LAMINATOR **CALIBRATION** CONFIG REQUEST

Calibration

Command: ribbon damping Run

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Calibration

Ribbon Damping – Perform when you experience print issues, particularly when the ribbon is not peeling properly from the film.

Tricolor – Perform when you experience Ribbon Color Detect errors.

Mag Position – Perform when you experience Start Sentinel errors.

Run – Starts the selected calibration routine; follow the on-screen instructions.

Config Request

This screen enables you to issue commands to alter the printer's configuration (i.e., reset the printer passkey). This screen is also used to send the command that is received to the printer/laminator.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings**
- Security

Zebra ZXP Series 9 USB Card Printer

IP Address: _____ Serial No: **Z9J162100018**

POWER MECHANICAL LAMINATOR CALIBRATION **CONFIG REQUEST**

Advanced Configuration Request

Select field: Save Request

Set new value: Load Response Set New Value

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Advanced Configuration Request

Select field

- cancel printer passkey – If a passkey (password) is set for the printer, you can clear it.
- set single sided – Switches the printer from double-sided to only single-sided.
- set double sided – Switches the printer from only single-sided to double-sided.
- reset physical address – Sets the MAC address to zero.
- reset oem – Sets media “OEM code” to 0000. For factory use only.
- reset printer serial number – Sets printer serial number to zero. clear card cleaning log – Resets the card cleaning log to zero.
- clear service log – Empties Service Log.
- reset card count – Sets the Cards Printed Counter to zero.
- reset impression count – Sets the Printhead Lines Printed Counter to zero.
- clear error log – Empties Error Log.

- reset system defaults – Resets all parameters to the original system default values. For factory use only.
- reset media auth cfg – Resets the media authentication code to factory default value. For factory use only.
- reset laminator serial number – Sets Laminator Serial number to zero.
- reset cards laminated – Sets the Cards Laminated Counter to zero.
- lock printer – Not applicable for the ZXP9 Series printers, since the ZXP9 does not have an electrical lock option.
- unlock printer – Not applicable for the ZXP9 Series printers, since the ZXP9 does not have an electrical lock option.
- clear i2c error stats – For factory use only.

Save Request – Saves the XML file to the default Config folder; give the file a name of your choice, and email the file to Zebra Technical Support.

Load Response – When you receive the response, save the XML file and select it by clicking Load Response.

Set New Value – Reserved for future use.

Security

The Security section includes functions that control access to various areas.

ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security**

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

PRINTER PASSKEY | SECURITY OPTIONS | TOOLBOX PASSWORD | SECURITY ROLES

The printer passkey is generated from a security pass-phrase. It is saved in the printer, and is used to enable host authentication and data encryption.

Enter your security pass-phrase(Plain case-sensitive text of minimum 20 characters. Spaces permitted). If this is first-time setup, use New pass-phrase.

New/Change Pass-phrase

☐ Activate printer passkey ☐ Display characters

Current pass-phrase

New pass-phrase

Confirm pass-phrase

Apply

ZEBRA

Printer Passkey

The printer passkey is generated from a security pass-phrase. It is saved in the printer and is used to enable host authentication and data encryption. Click on the Enable Passkey button to set the pass-phrase and enable secure communications.

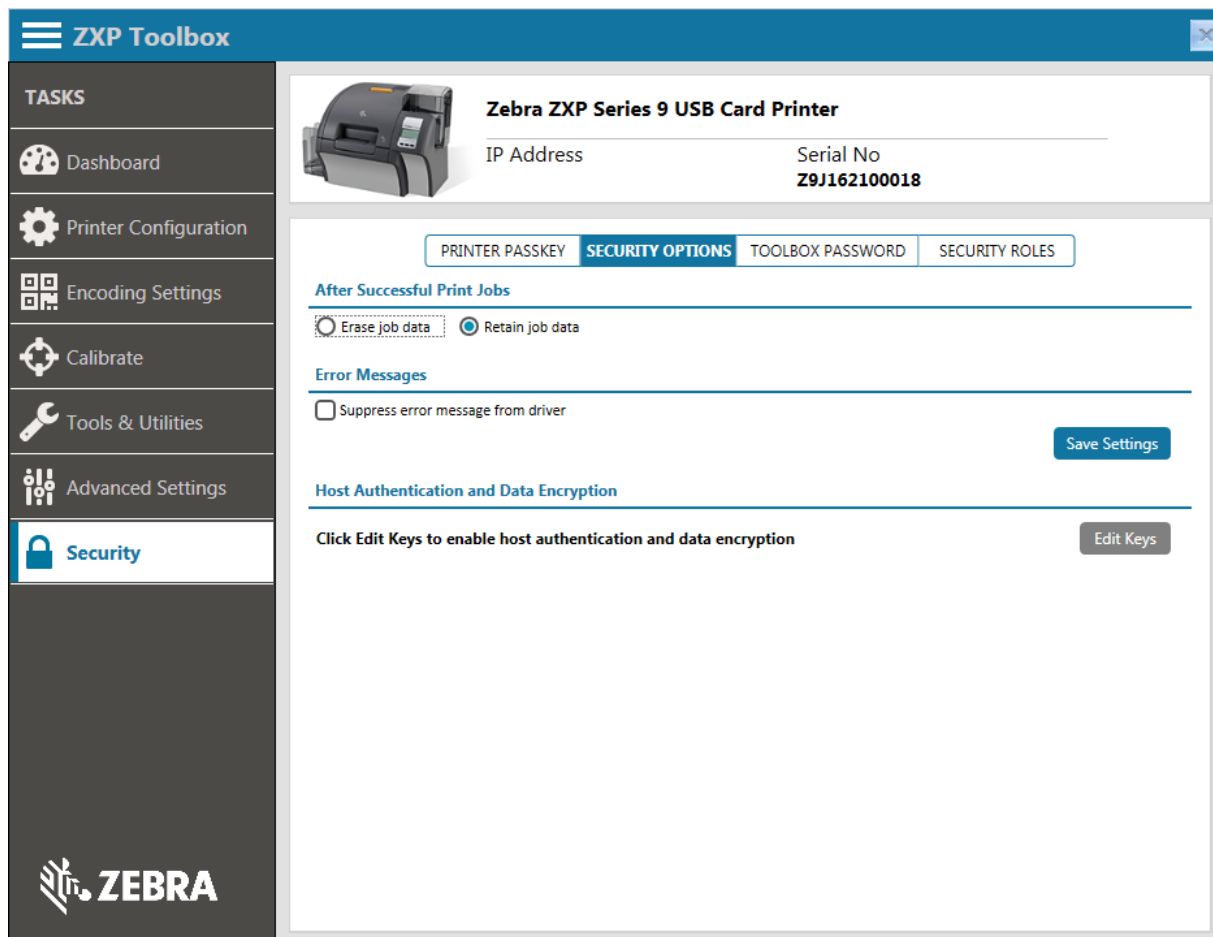
To enter a new pass-phrase:

- Step 19.** Click on the Activate printer passkey checkbox.
- Step 20.** Enter the new pass-phrase on the **New pass-phrase** field. The pass-phrase is case sensitive, twenty characters minimum, spaces permitted.
- Step 21.** Repeat the password in the **Confirm pass-phrase** field. Click **Apply**.

To change the Pass-phrase:

- Step 1.** Enter the current p[ass-phrase in the **Current pass-phrase** field.
- Step 2.** Enter the new pass-phrase in the **New pass-phrase** field and the **Confirm pass-phrase** field. Click **Apply**.

Security Options



ZXP Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate
- Tools & Utilities
- Advanced Settings
- Security**

Zebra ZXP Series 9 USB Card Printer

IP Address: Serial No: **Z9J162100018**

SECURITY OPTIONS

After Successful Print Jobs

☐ Erase job data ☒ Retain job data

Error Messages

☐ Suppress error message from driver

Host Authentication and Data Encryption

Click Edit Keys to enable host authentication and data encryption

Save Settings

Edit Keys

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After Successful Print Jobs

You have the option to save or erase job data after a successful print job. If you change this setting, press the Save Settings button for changes to be applied. Some applications require that no data be retained in the printer.

Error Messages

You have the option to suppress or permit error messages from the driver. If you change this setting, press the Save Settings button for changes to be applied. Some applications require that no error messages be visible.

Host Authentication and Data Encryption

Host Authentication restricts the use of the printer to the authenticated host. This prevents the printer from receiving jobs from an un-authorized computer. Data Encryption encrypts the data being sent from the host computer to the printer.

To enable Host Authentication and Data Encryption:

Note • The Edit Keys button will not be active unless a Passkey is activated on the Printer Passkey page.

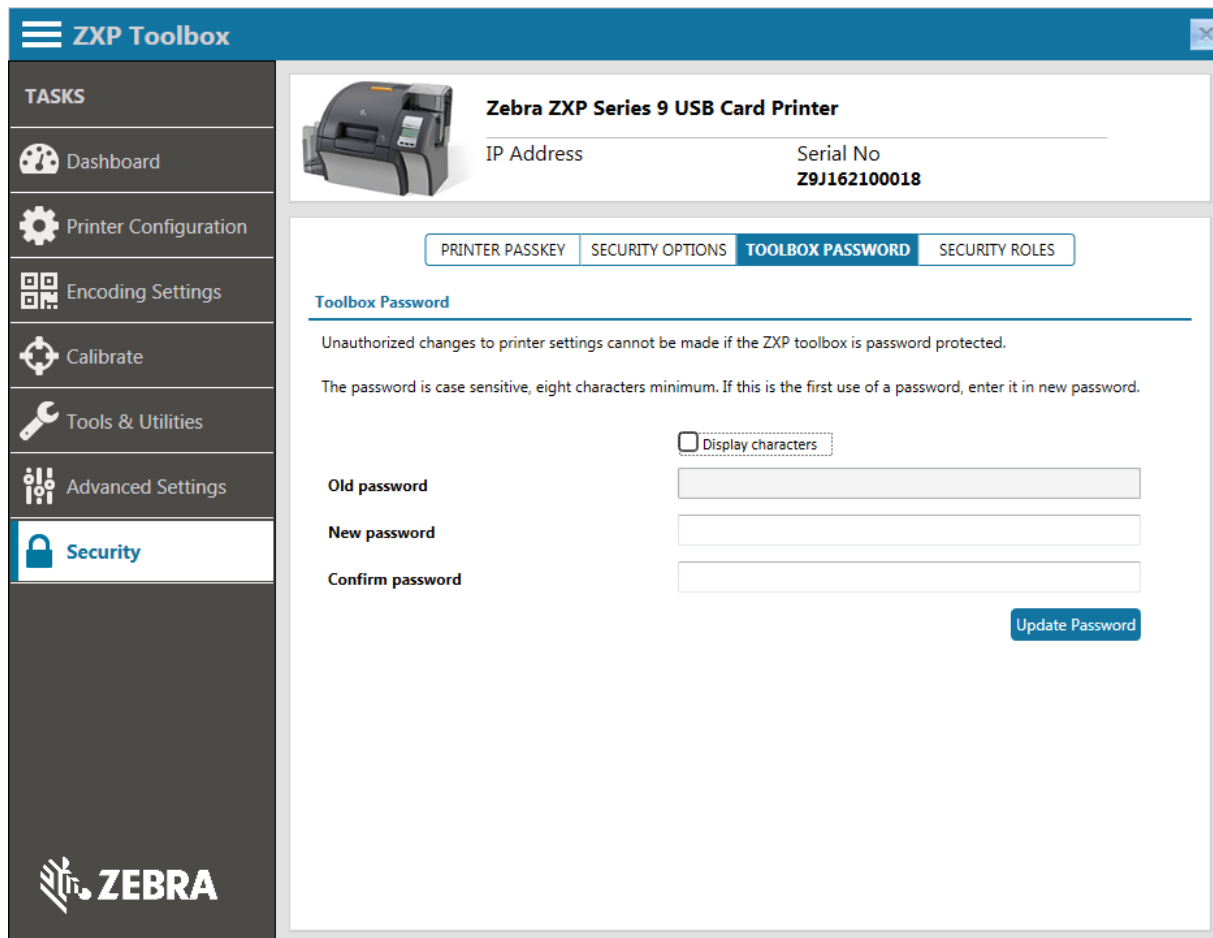
Step 1. Click **Edit Keys**, then enter the passkey that was created on the Printer Passkey page. Click **OK**.

Click the Enable switch and either enter a key or select **Auto Generate Key** to have a key generated for you. The key must be a minimum of 8 characters and a maximum of 32 characters. The Key Strength field reflects the strength of the key entered, from Weak to Medium. After the key has been entered, click **Apply**.

Step 2. Click **Close**.

Toolbox Password

The Toolbox Password restricts access to the Toolbox. Only users who enter the correct password will be able to open the Toolbox.



The screenshot shows the ZXP Toolbox interface. On the left is a sidebar with a 'TASKS' menu containing: Dashboard, Printer Configuration, Encoding Settings, Calibrate, Tools & Utilities, Advanced Settings, and Security (which is highlighted). The main content area is titled 'Zebra ZXP Series 9 USB Card Printer' and shows the IP Address and Serial No (Z9J162100018). Below this are four tabs: PRINTER PASSKEY, SECURITY OPTIONS, **TOOLBOX PASSWORD**, and SECURITY ROLES. The 'Toolbox Password' section contains the following text: 'Unauthorized changes to printer settings cannot be made if the ZXP toolbox is password protected.' and 'The password is case sensitive, eight characters minimum. If this is the first use of a password, enter it in new password.' There is a checkbox labeled 'Display characters' which is currently unchecked. Below this are three input fields: 'Old password', 'New password', and 'Confirm password'. An 'Update Password' button is located at the bottom right of the form.

To enter a new password:

Step 1. Enter the new password on the New password field. The password is case sensitive, eight characters minimum. Repeat the password in the Confirm password field.

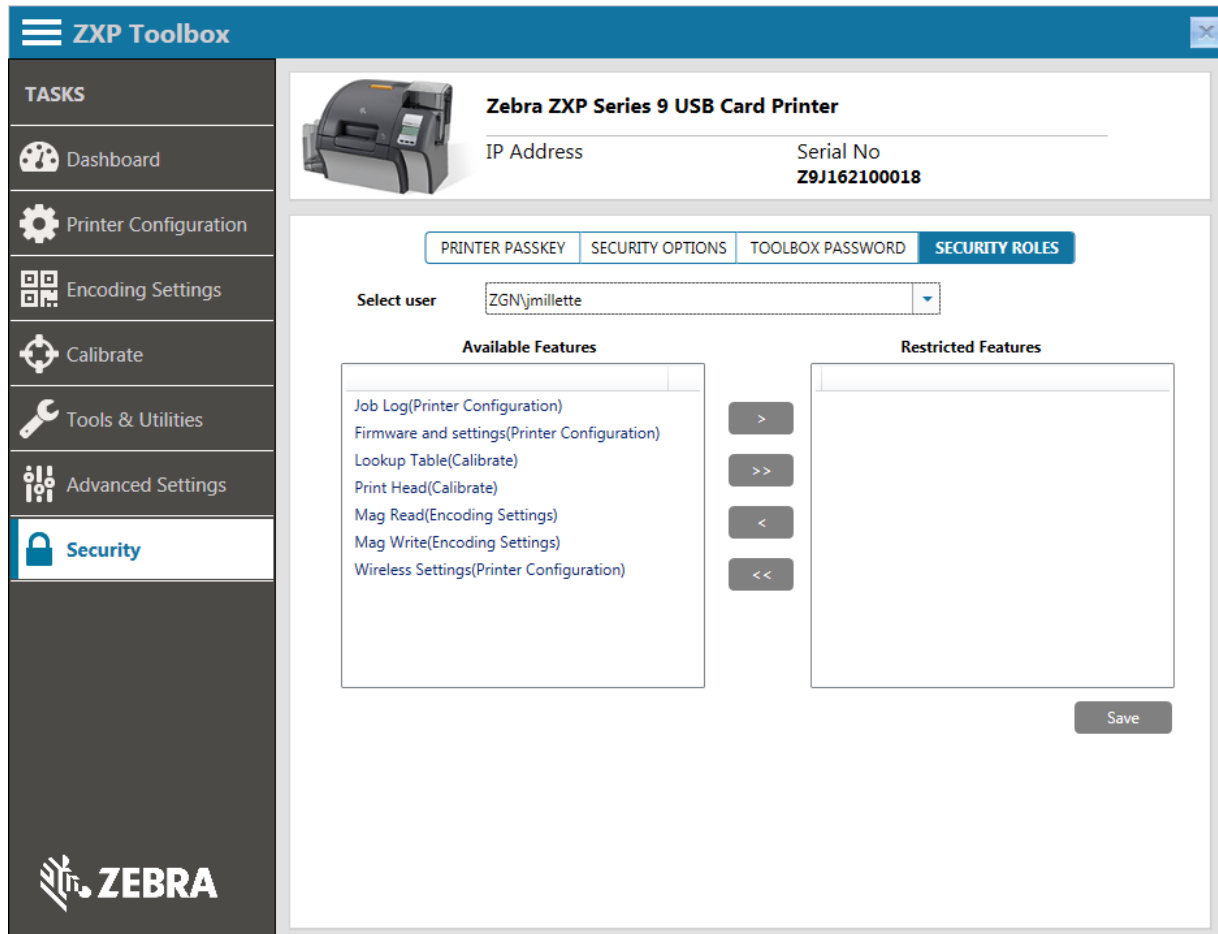
Step 2. Click on the Update Password button.

To change the Password:

- Step 1.** Enter your password in the Old password field.
- Step 2.** Enter the new password in the New password and the Confirm password fields. Click on the Update Password button.

Security Roles

Important • To access this section of the ZXP Toolbox, you must be the administrator of the computer or have administrative privileges.



Security Roles

Use this section to grant and restrict access to various ZXP Series Toolbox screens. The list of users in the drop-down menu is derived from the list of users on the system.

To set security access roles:

- Step 1.** Select a user from the drop-down menu.
- Step 2.** Use the arrow buttons (>, >>, <, and <<) to make specific features available to or restrict specific features from the selected user role. Click **Save**.

At the next log in, the user will only see or have access to the features previously granted.



Replacement Procedures for the Printer

Introduction

The following sections describe removing both major assemblies and, where applicable, sub-assemblies and/or components that are considered replaceable.

In general, only removal directions are presented; unless otherwise noted, replacement would be performed by reversing the removal steps. Replacement instructions for some items are not presented; removal and replacement of these items are considered too obvious to warrant a detailed description.



Electric Shock • Before performing any of the procedures in this section, set the printer power to OFF (O) and disconnect the power cord.



Electrostatic Discharge • All replacement procedures must be performed at a static-free work station, an anti-static wrist strap must be worn and properly terminated, or other appropriate protection must be used.



Caution • Before beginning any of the procedures that follow, read completely through the procedure. If you do not have the specified tools or if any step(s) seem beyond your skill or experience level, do not attempt the procedure. You may cause additional damage to the printer.



Note • Some of the photographs in this section may show additional parts removed in addition to removals for the process being described.



Note • Colors depicted in photos may not be representative of final product. While the color may be dissimilar, procedures are the same.

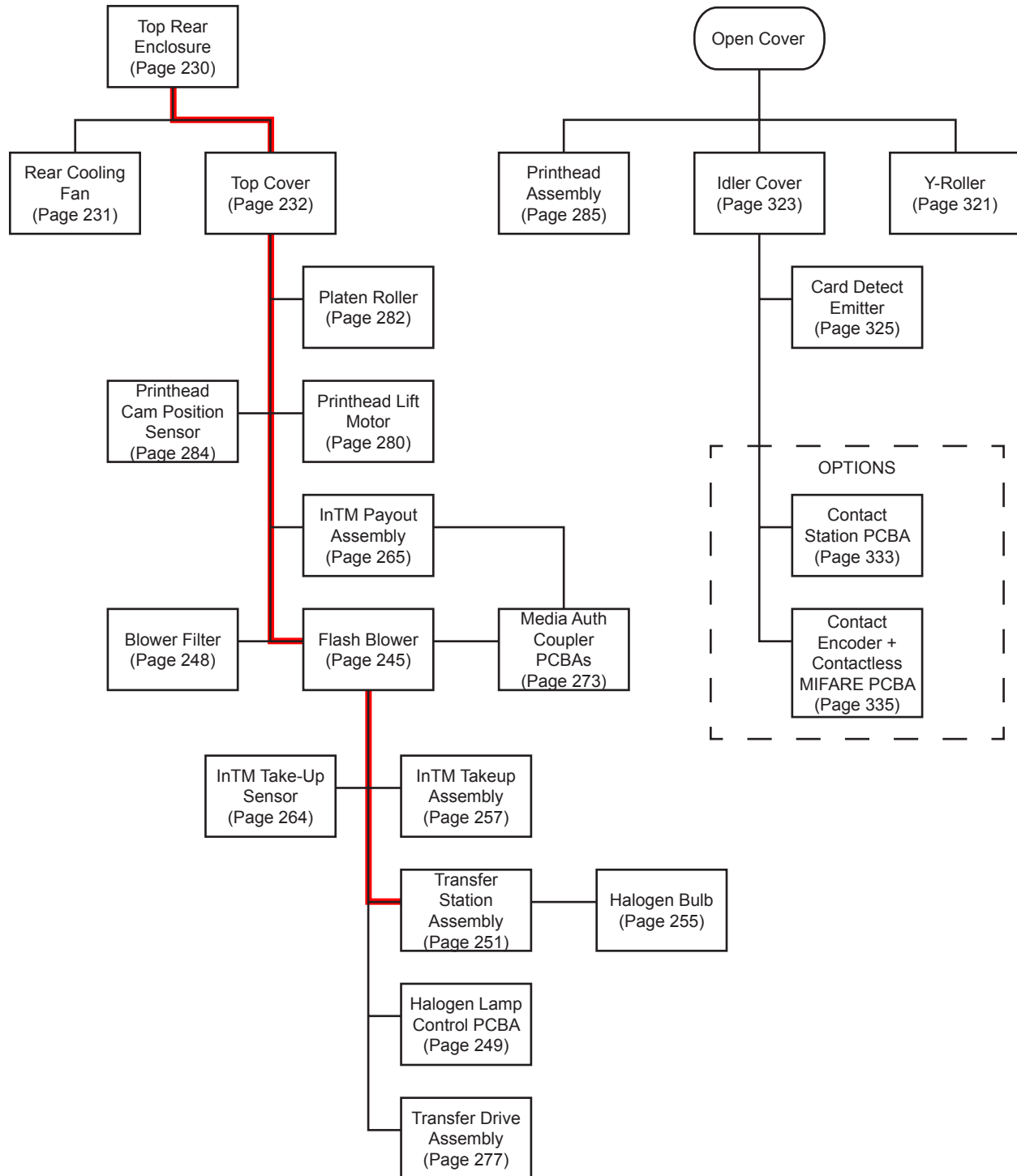
Required Tools

This section lists the tools required for the replacement procedures described in this section. Naturally, not all tools are required for a particular procedure; specific tools are called out in each step as appropriate.

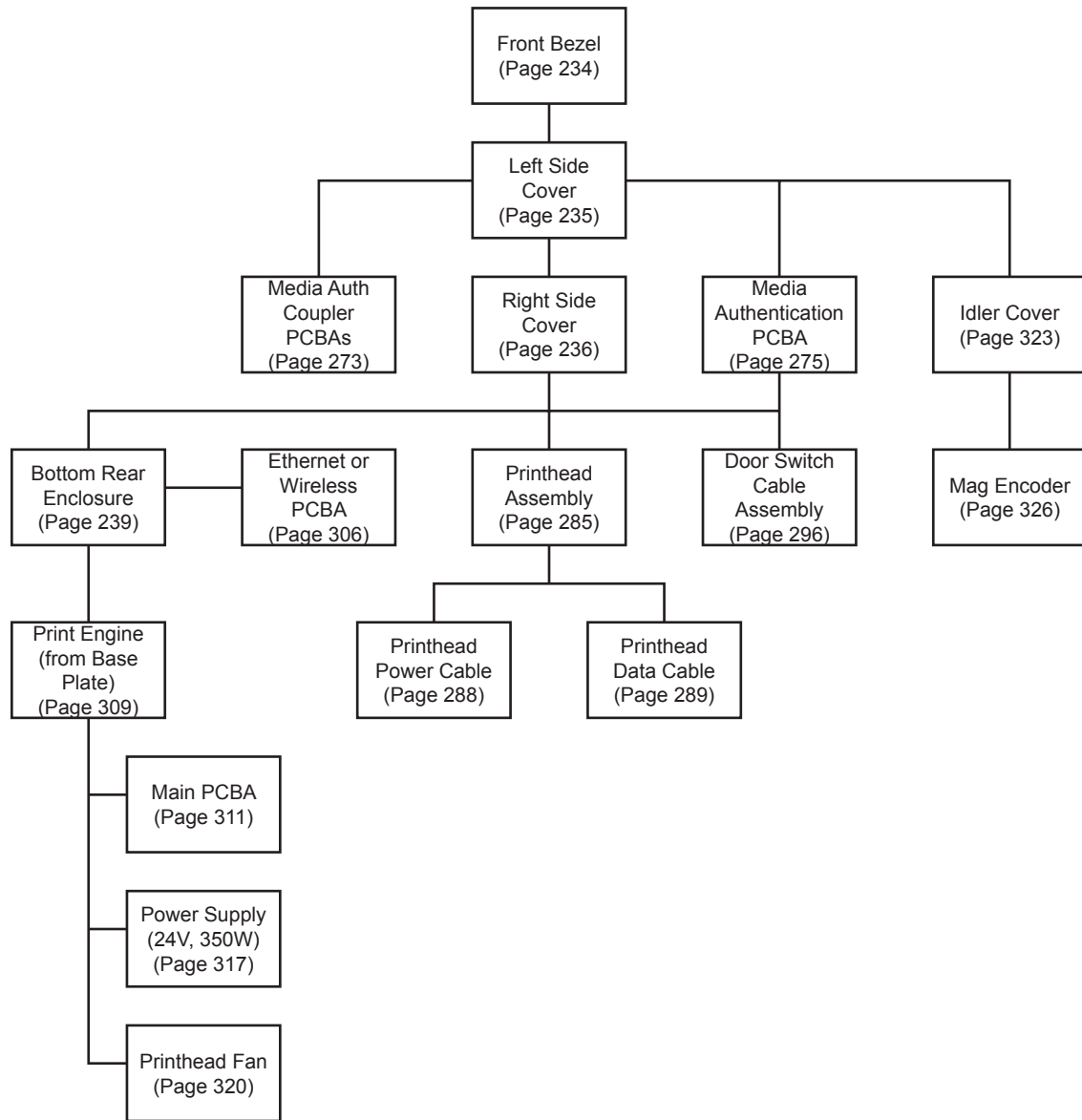
- Flat-blade screwdrivers, from 1/16 inch (1.5 mm) to 1/4 inch (6.5 mm)
- TORX T6, T8, T10, T15, and T20 drivers
- Fine-point, offset fine-point, and needle-nose pliers
- Small diagonal cutters (or other cutter for cutting cable ties)
- 5.5 mm hex driver (this can also be used for securing push nuts)
- 3–10 mm e-ring clip tool
- Small and medium spring hook tools
- Adjustable wrench
- Cotton gloves
- Multimeter
- Several 30 mil cards (not to be reused)
- Zebra ZXP9 Tool Kit (Part No. 105936-058); kit includes:
 - TOOL, TORQUE ADJUSTMENT (Zebra Kit # 105936-046)
 - TOOL, INTM PAYOUT (Zebra Kit # 105936-047)
 - TOOL, INTM TAKEUP (Zebra Kit # 105936-048)
 - TOOL, PCBA REMOVAL (Zebra Kit # 105936-056)
 - TOOL, CABLE ROUTING (Zebra Kit # 105936-057)

Removal Sequence

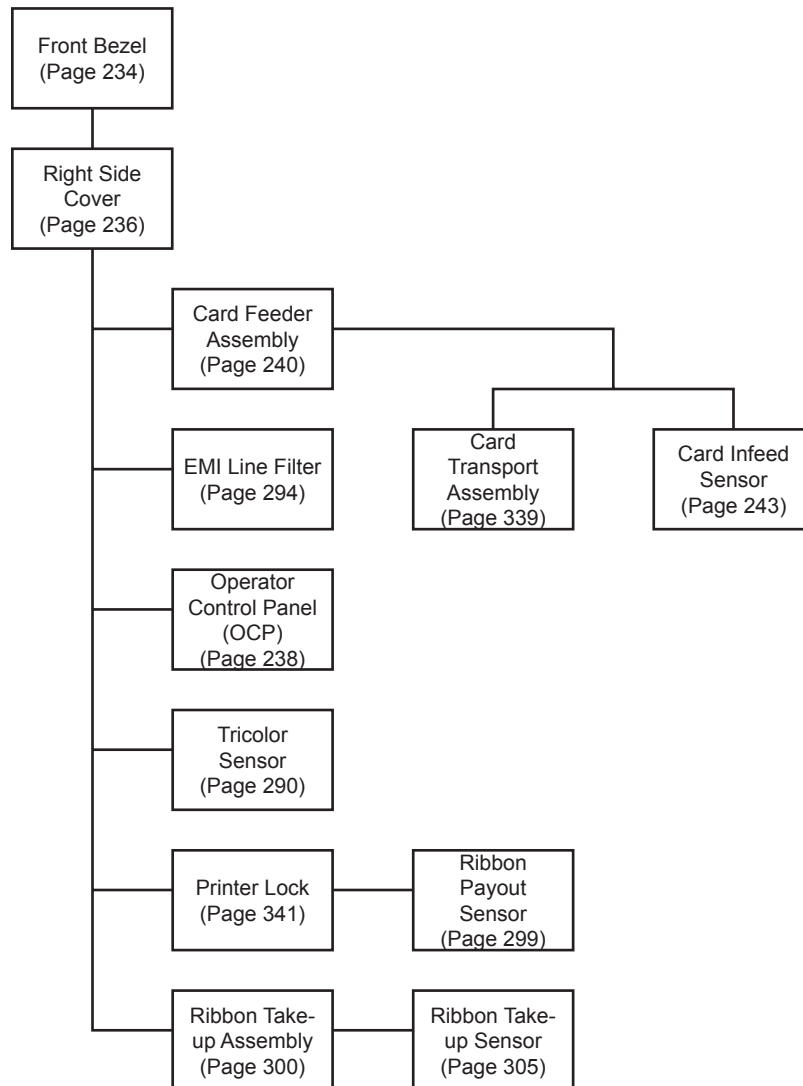
The following figures show the recommended removal sequence. For each item, follow the diagram upward to see what must be removed for access. For example, to remove the Transfer Station Assembly (page 251), you would remove the Top Rear Enclosure (page 230), the Top Cover (page 232), and the Flash Blower (page 245)—follow the red path.



Removal Sequence (continued)



Removal Sequence (continued)



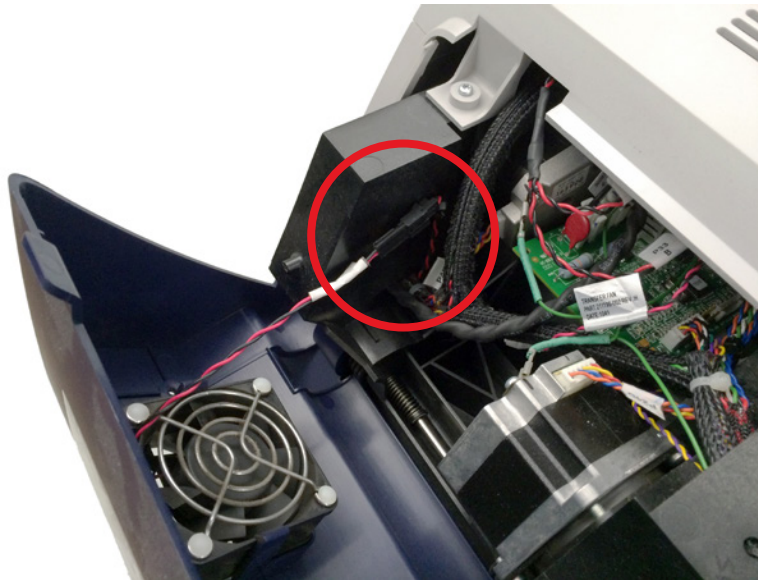
Procedures

Top Rear Enclosure

Step 1. Using a TORX T10 driver, remove the two screws (circled below) holding the top rear enclosure in place.



Step 2. Disconnect the rear cooling fan.

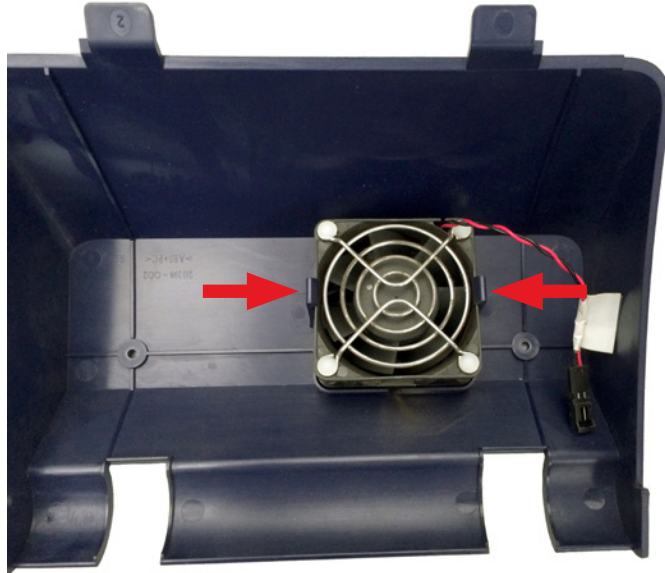


Step 3. Remove the top rear enclosure with rear cooling fan.

Rear Cooling Fan

For replacement, use **Kit Rear Cooling Fan 105936G-023**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Lift the two locking tabs (arrows below) to free the rear cooling fan.



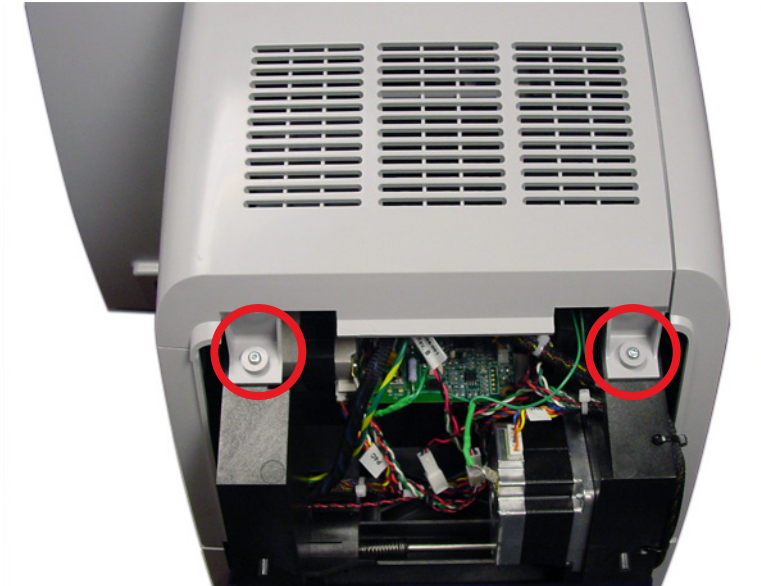
Step 2. Remove the rear cooling fan and two rubber gaskets.



Top Cover

For replacement, use **Kit Enclosure Cover Assembly 105936G-365**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws (circled below) holding the top cover to the lid assembly.

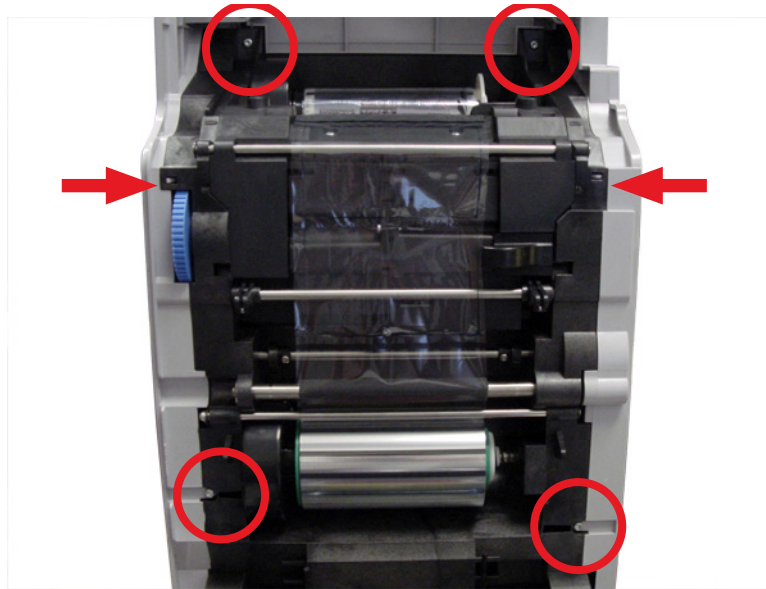


- Step 2.** Open the lid.



Step 3. Remove the four screws (circled below) holding the top cover to the lid assembly.

Step 4. Press the two locking tabs (arrows below) inward to release the top cover.



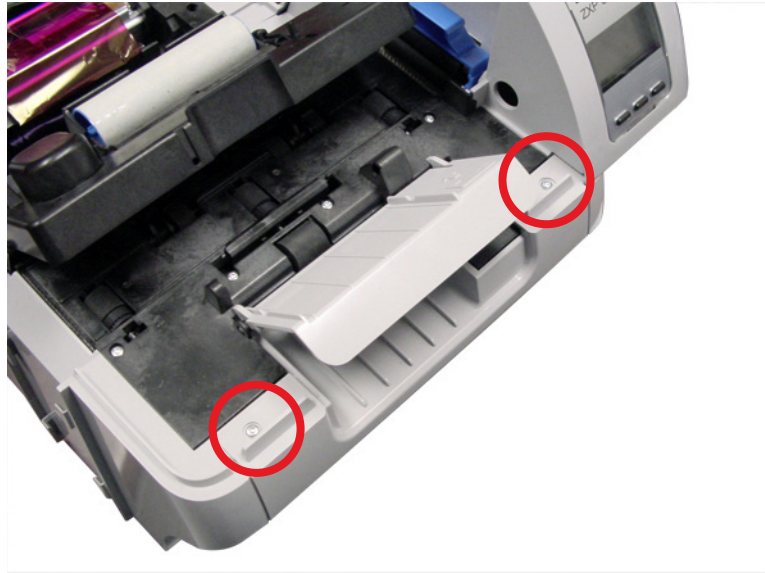
Step 5. Remove the top cover.



Front Bezel

For replacement, use **Kit Enclosure with Panel 105936G-371**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws (circled below) holding the front bezel in place.



- Step 2.** Set the printer on its left side.

- Step 3.** Lift the locking tab and slide a card under the lip of the front bezel to release. Leave the card in place and release the other locking tab. Do not use a screwdriver as damage may occur to the main PCBA.

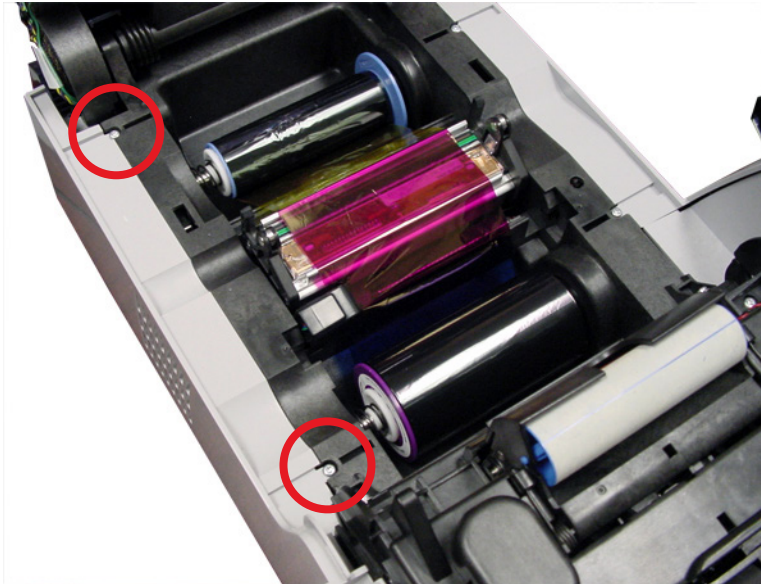


- Step 4.** Remove the front bezel.

Left Side Cover

For replacement, use **Kit Side Enclosures (L & R) 105936G-372**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws (circled below) holding the left side cover in place.



- Step 2.** Set the printer on its right side.

- Step 3.** Lift the locking tab and slide a card under the lip of the front bezel to release. Leave the card in place and release the other locking tab. Do not use a screwdriver as damage may occur to the main PCBA.

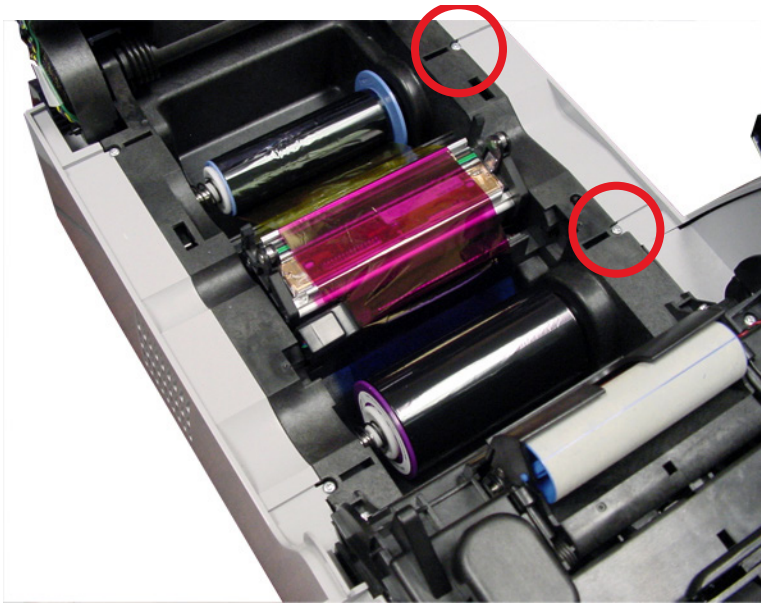


- Step 4.** Carefully remove the left side cover.

Right Side Cover

For replacement, use **Kit Side Enclosures (L & R) 105936G-372**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** If not already done, remove the input hopper.
- Step 2.** With a TORX T10 driver, remove the two screws (circled below) holding the right side cover in place.

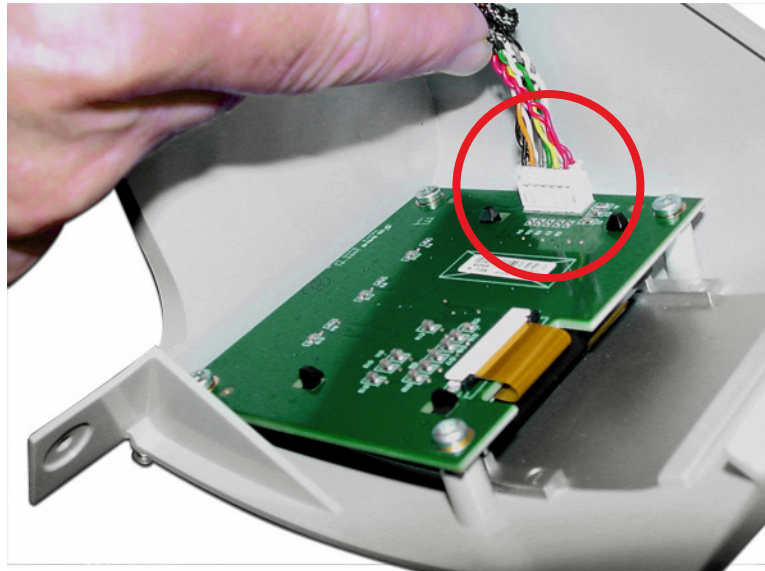


- Step 3.** Set the printer on its left side.
- Step 4.** Lift the locking tab and slide a card under the lip of the front bezel to release. Leave the card in place and release the other locking tab. Do not use a screwdriver as damage may occur to the main PCBA.



- Step 5.** Lift the right side cover up and away from the printer thereby clearing the EMI line filter.

- Step 6.** As you remove the right side cover, unplug the connector to the operator control panel (OCP).



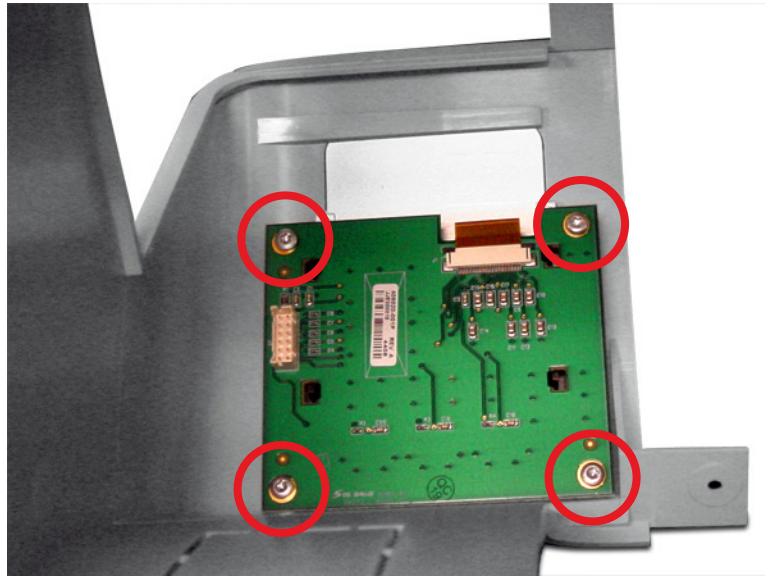
- Step 7.** Remove the right side cover with OCP.

Operator Control Panel (OCP)

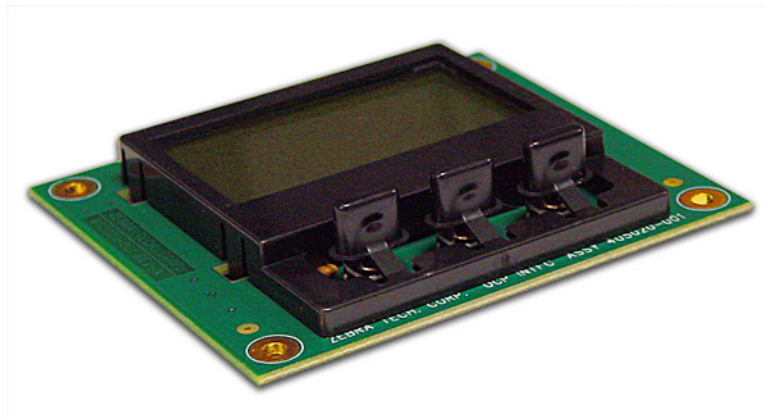
For replacement, use **Kit Operator Control Panel 105936G-012**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

The operator control panel is mounted on the right side cover.

- Step 1.** With a TORX T10 driver, remove the four screws (circled below) holding the operator control panel in place.

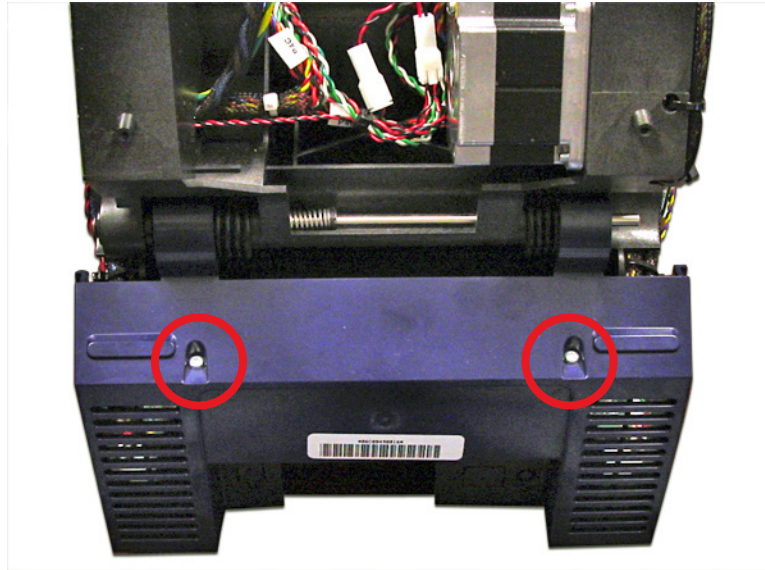


- Step 2.** Set the operator control panel aside.



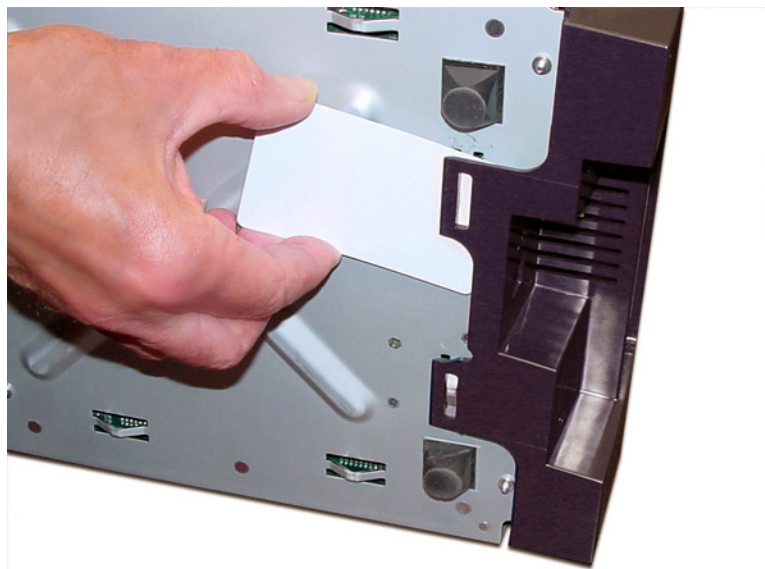
Bottom Rear Enclosure

- Step 1.** With a TORX T10 driver, remove the two screws (circled below) holding the bottom rear enclosure in place.



- Step 2.** Set the printer on its side.

- Step 3.** Lift the locking tab and slide a card under the lip of the rear cover to release. Leave the card in place and release the other locking tab. Do not use a screwdriver as damage may occur to the main PCBA.

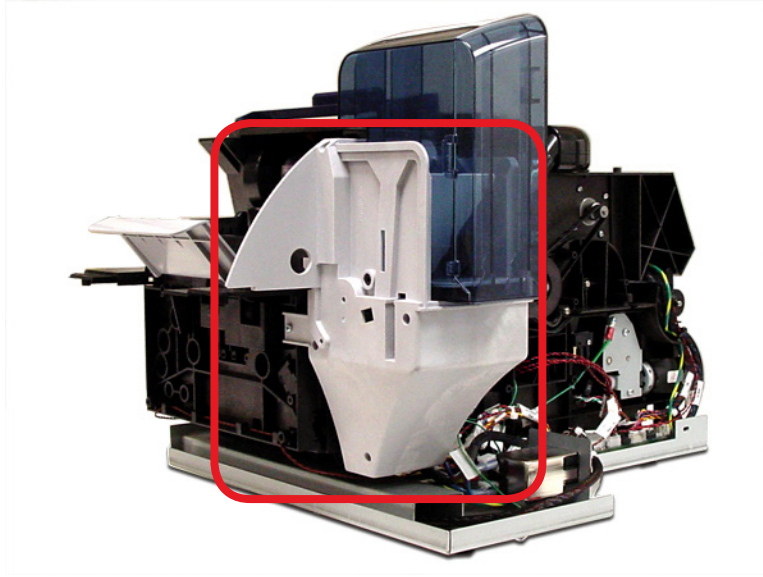


- Step 4.** Remove the bottom rear enclosure.

Card Feeder Assembly

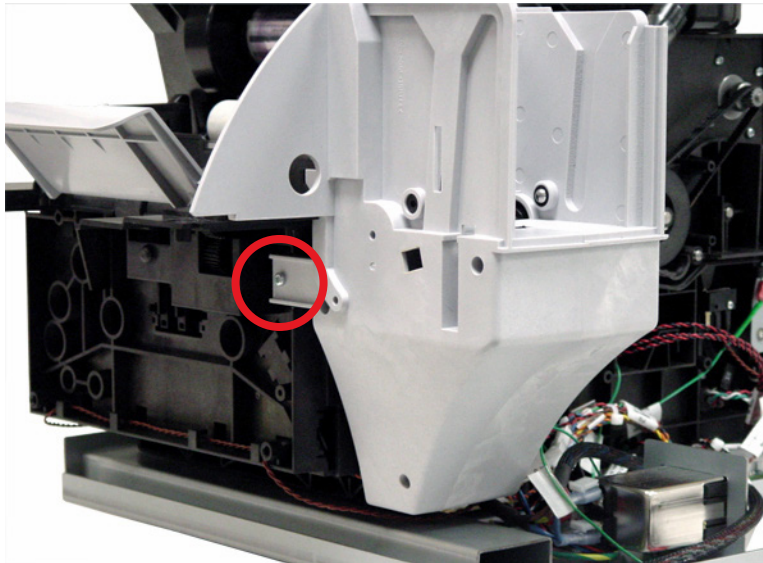
For replacement, use **Kit Card Feeder Assembly 105936G-331**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the card feeder assembly.

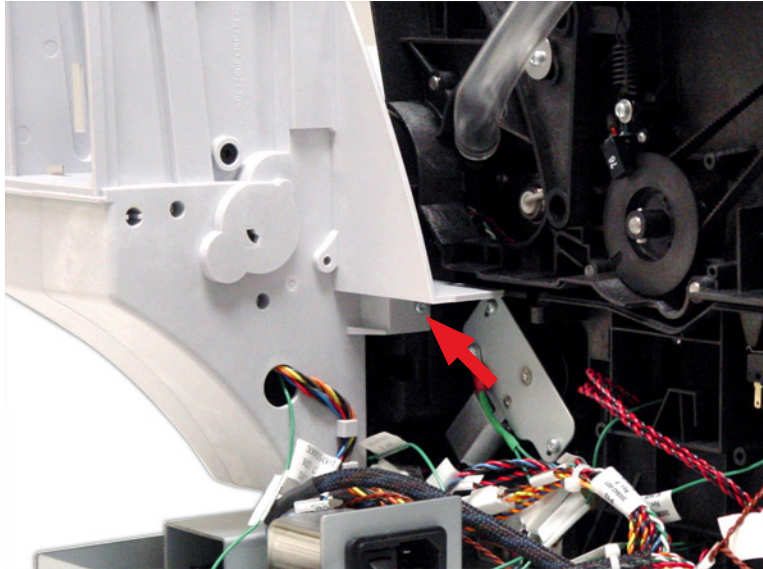


Step 2. If not already done, remove the card cleaning cartridge and input hopper.

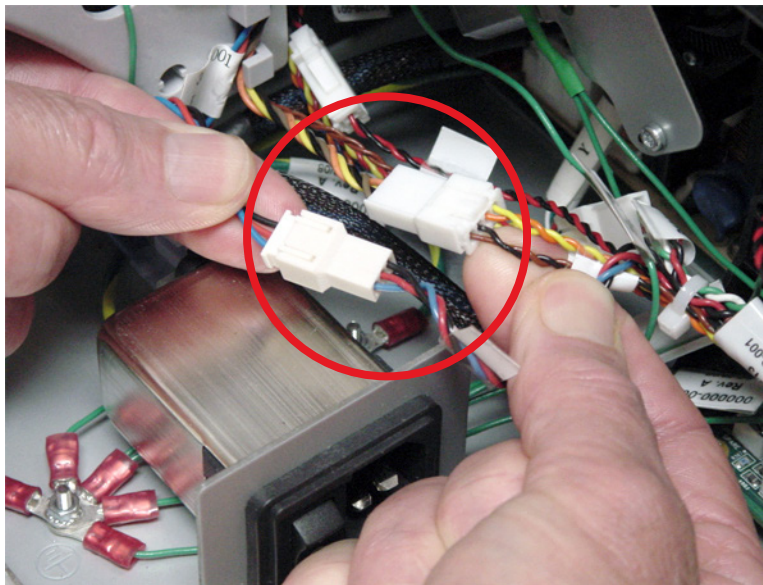
Step 3. With a TORX T10 driver, remove the front-side mounting screw (circled below) holding the card feeder assembly in place.



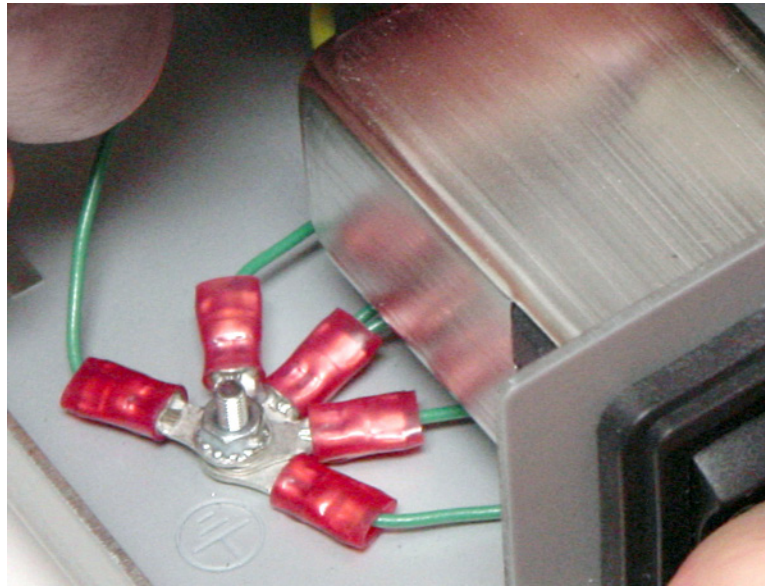
- Step 4.** With a TORX T10 driver, remove the back-side mounting screw (arrow below) holding the card feeder assembly in place.



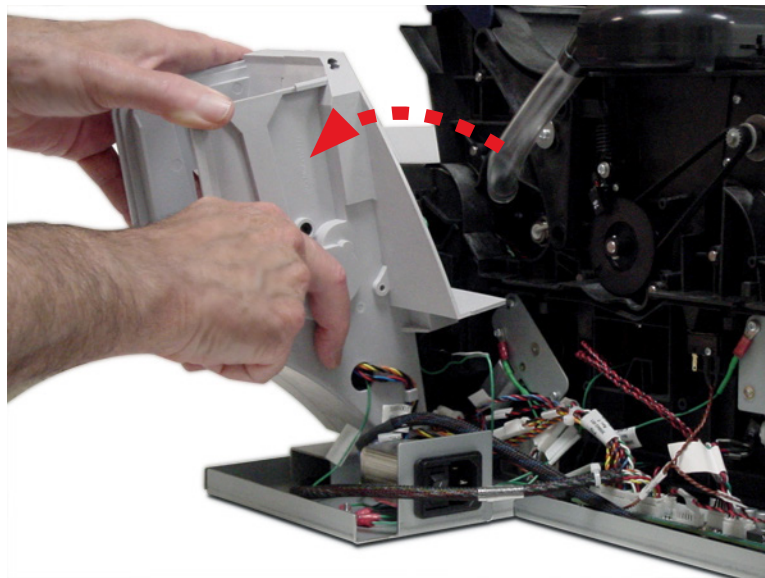
- Step 5.** Unplug the two quick-disconnects, P13B and P13E (circled below).



Step 6. With a 5.5 mm nut driver, disconnect the ground wires.



Step 7. Carefully remove the card feeder assembly. Note that the assembly snaps into place. You may need to use a flat-blade screwdriver to release the snap.

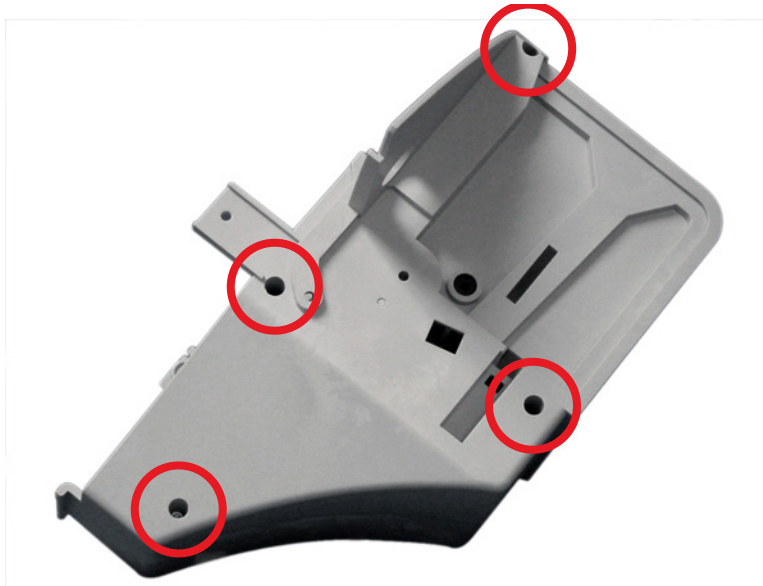


Step 8. Set the card feeder assembly aside.

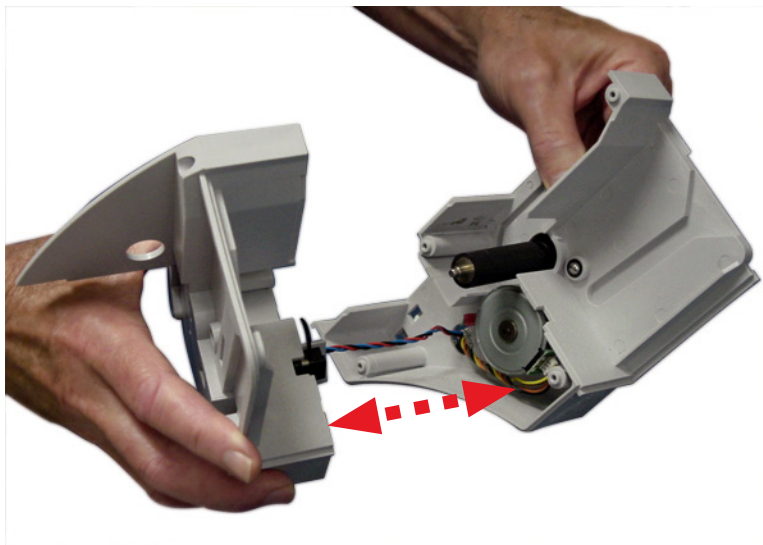
Card Infeed Sensor

For replacement, use **Kit Sensor Card Infeed 105936G-034**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

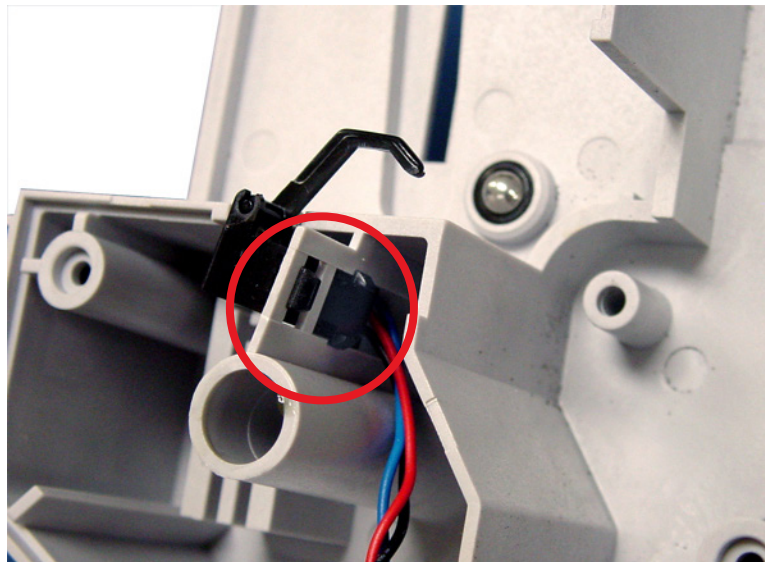
- Step 1.** With a TORX T10 driver, remove the four screws (circled below) holding the two halves of the card feeder assembly together.



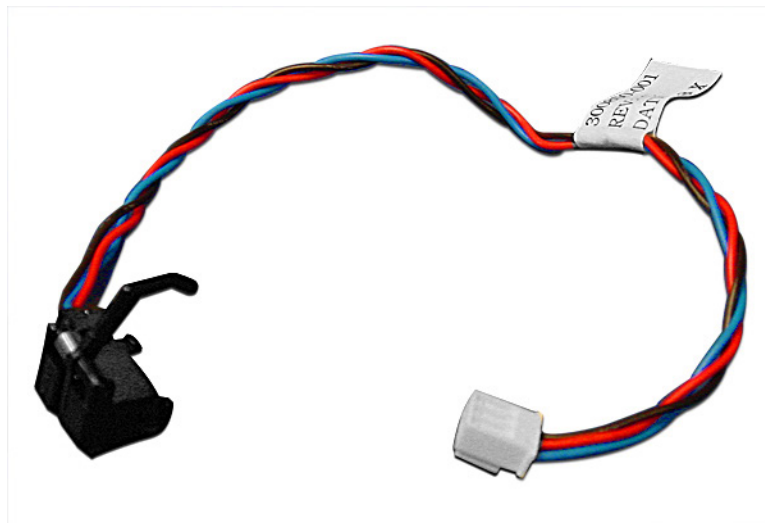
- Step 2.** Carefully separate the two halves.



- Step 3.** With a small flat-blade screwdriver, release the three locking tabs (circled below) that hold the infeed sensor in place.



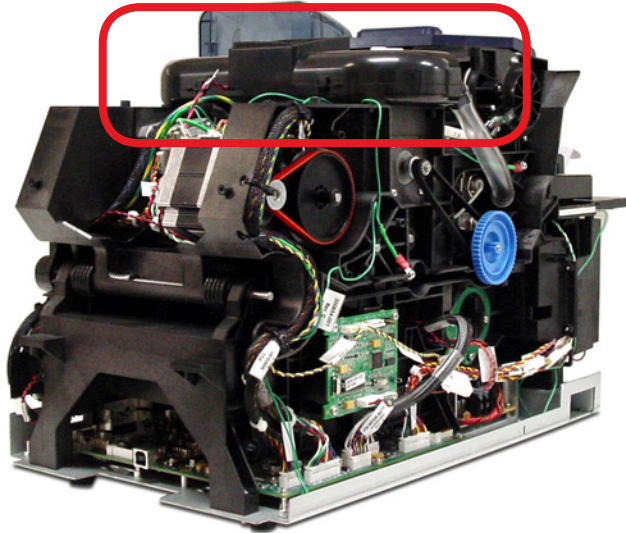
- Step 4.** Remove the infeed sensor.



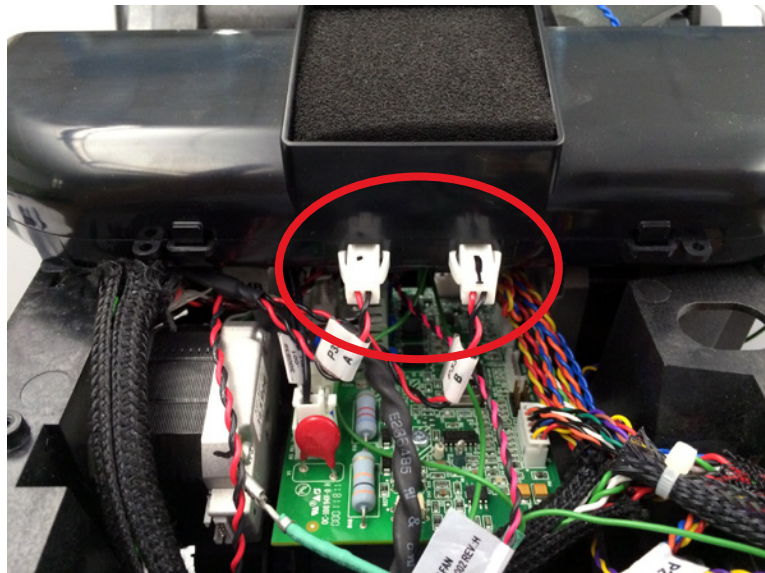
Flash Blower

For replacement, use **Kit Blower Flash 105936G-064**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

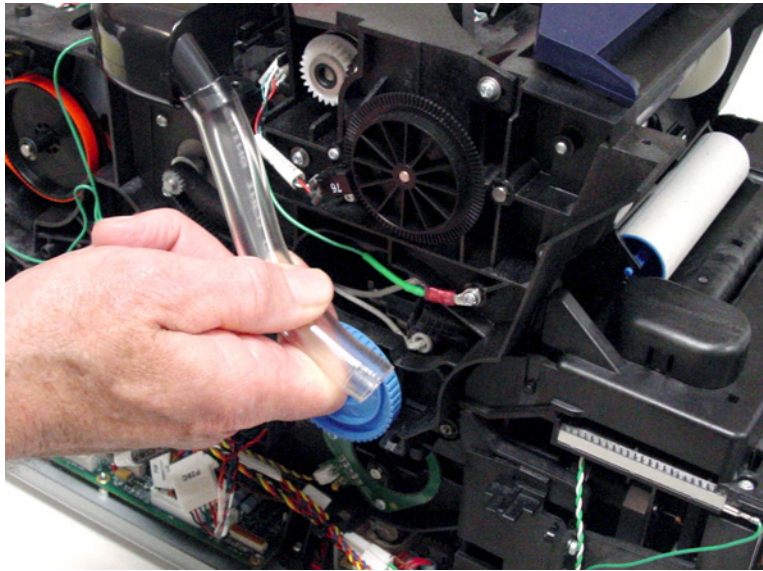
Step 1. Locate the flash blower.



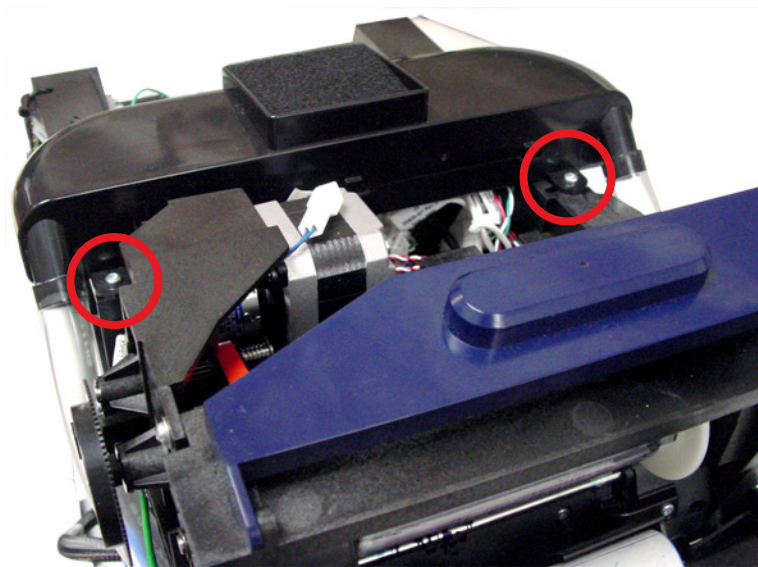
Step 2. Disconnect the cables at the blower (circled below).



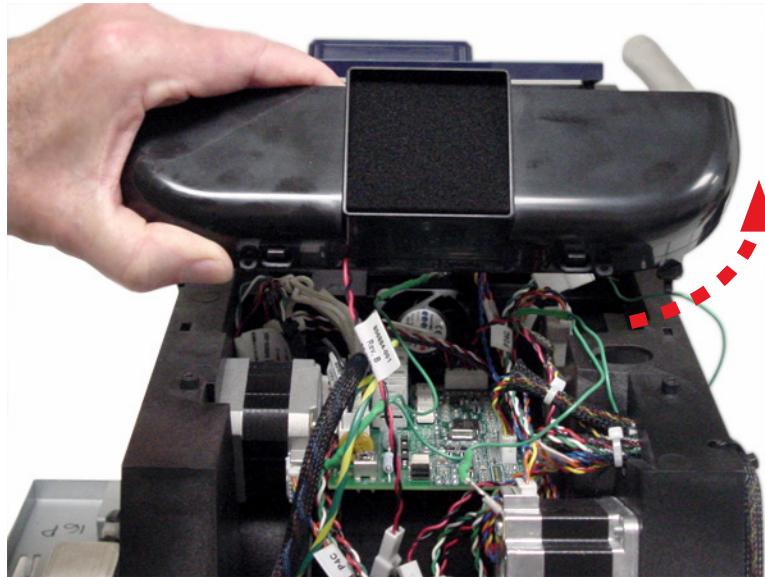
Step 3. Disconnect the two blower tubes.



Step 4. With a TORX T10 driver, remove the two mounting screws (circled below) holding the flash blower in place.



- Step 5.** Carefully lift the flash blower up and out of the printer. Note the tabs holding the flash blower in place.



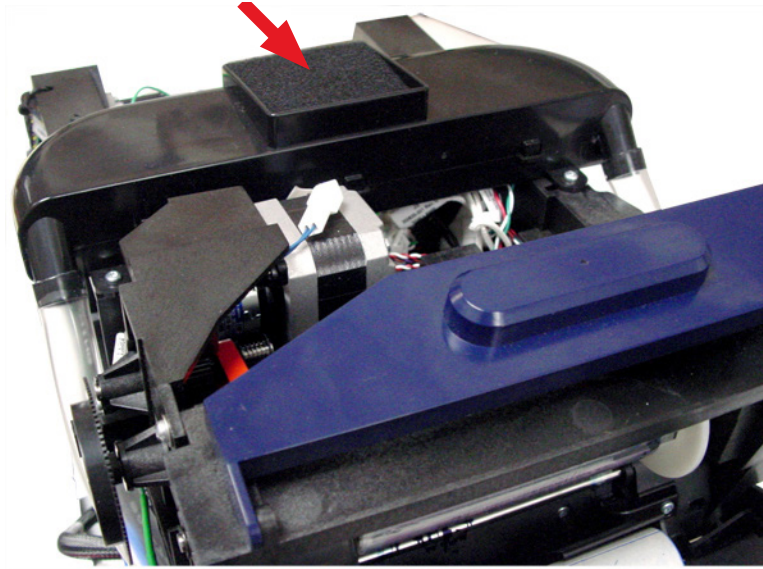
- Step 6.** Set the flash blower aside.



Blower Filter

For replacement, use **Kit Blower Filter 105936G-008** (Qty 8). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the blower filter (arrow below).



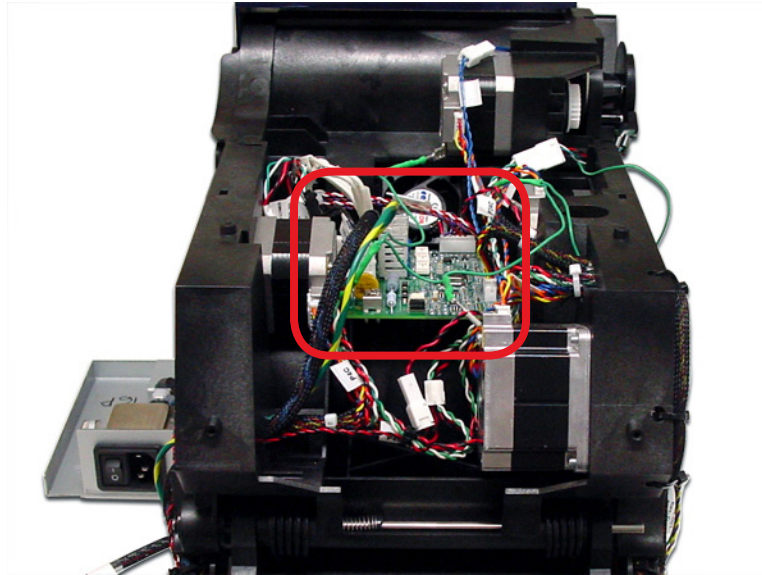
Step 2. Remove the blower filter.



Halogen Lamp Control PCBA

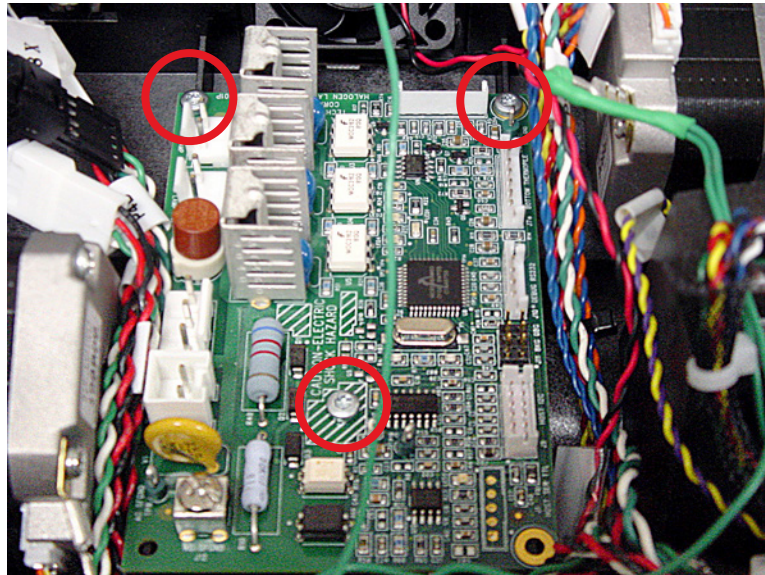
For replacement, use **Kit PCBA Halogen Lamp Control 105936G-025**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Locate the halogen lamp control PCBA and unplug the attached cable connectors (see table).

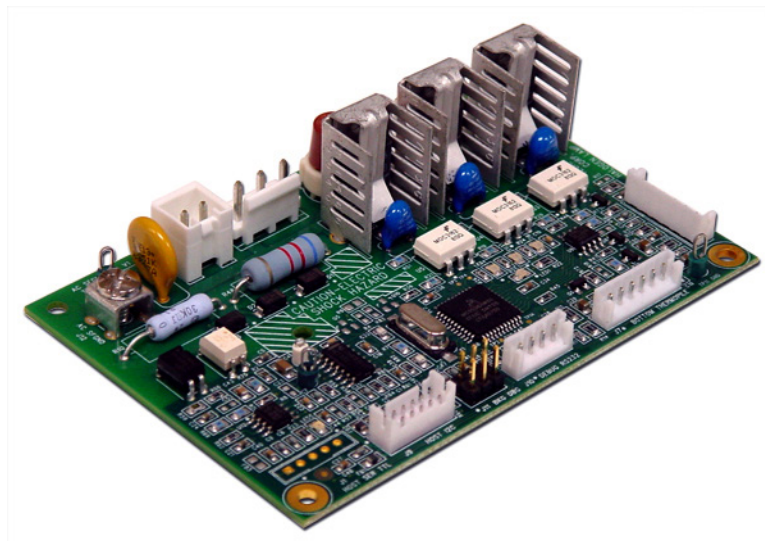


Halogen Lamp Control PCBA Connections		
Connector	PCBA ID	Functional Description
J1	HOST SER TTL	Debug
J2	BOT LAMP	Bottom Halogen Lamp
J3	TOP LAMP	Top Halogen Lamp
J4	-	Thermal Fuse
J5	-	-
J6	TOP THERMOPILE	Top Thermopile
J7	BOTTOM THERMOPILE	Bottom Thermopile
J8	AC IN	AC Power In
J9	HOST 12C	HCB to Host Communication
J10	DEBUG RS232	Debug Development ONLY
J11	BKG DBG	Debug Development ONLY

Step 2. With a TORX T10 driver, remove the three mounting screws (circled below) holding the halogen lamp control PCBA in place.



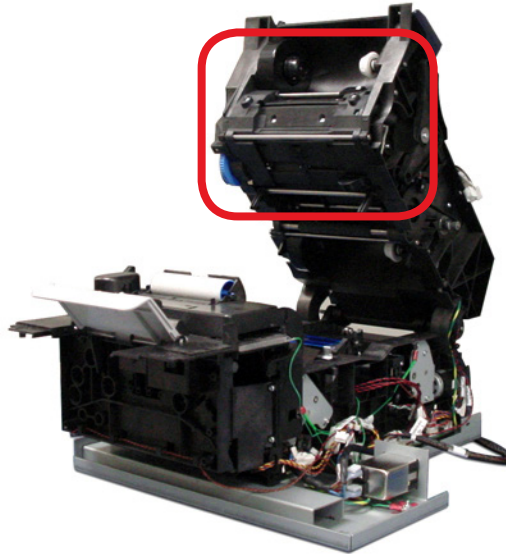
Step 3. Set the halogen lamp control PCBA aside.



Transfer Station Assembly

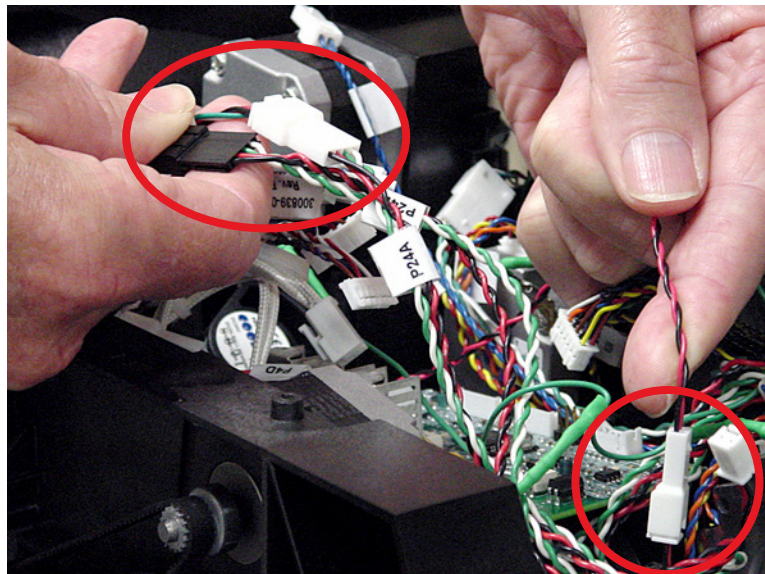
For replacement, use **Kit Transfer Station Assembly 105936G-109**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the transfer station assembly.

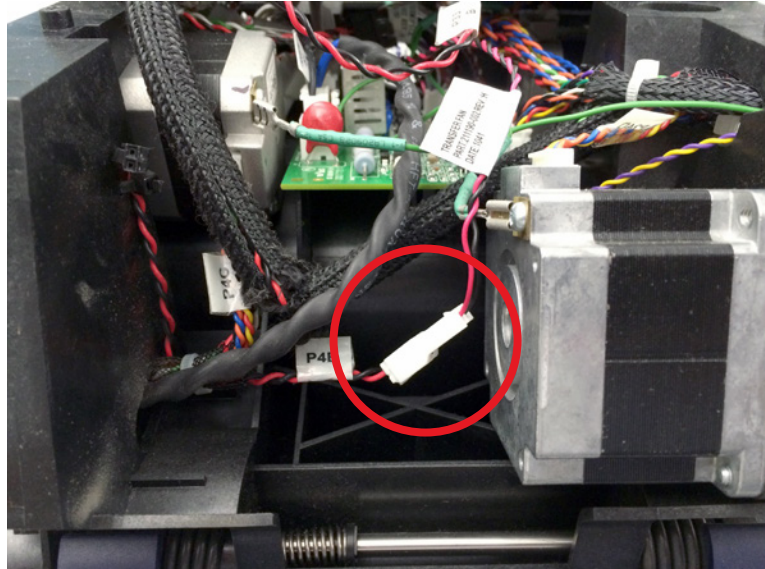


Step 2. If not already done, remove the transfer film and disconnect J2, J3, J4, J6, and J7 from the halogen lamp control PCBA (see [“Halogen Lamp Control PCBA”](#) on page 249 for details).

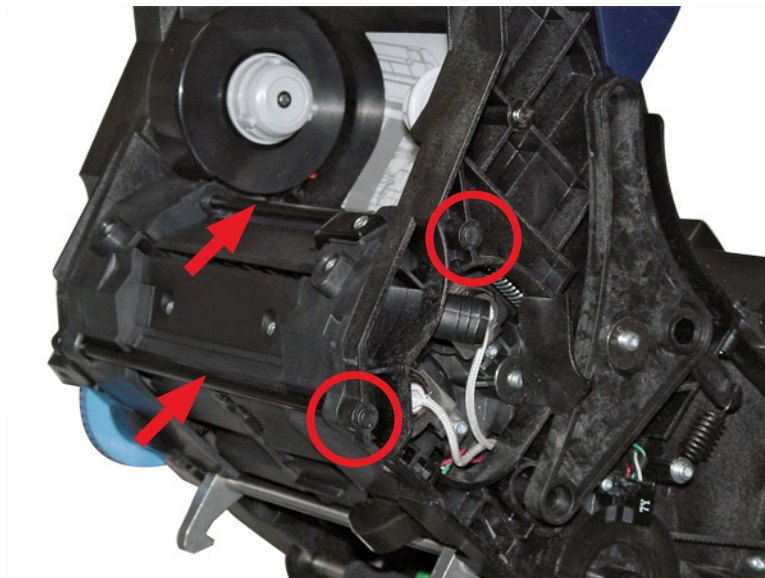
Step 3. Disconnect P24A, P24B, and the fan (circled below). Note: To avoid confusion when reinstalling, mark each plug and associated connector.



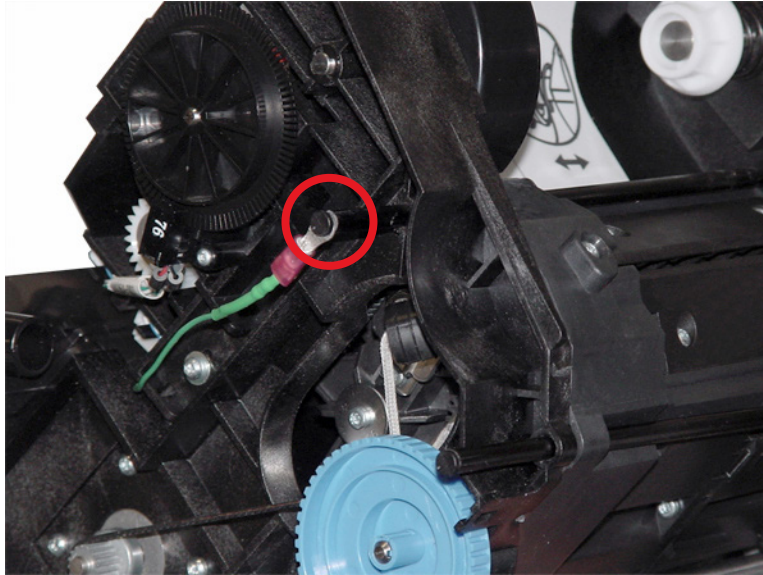
- Step 4.** Unplug the transfer fan connector (circled below). Note: To avoid confusion when reinstalling, mark the plug and associated connector.



- Step 5.** Remove the two retaining shafts (arrows below):
- While holding the push pins (circled below) in place, slide the retaining shafts to the left. Remove the push pins and retaining shafts.



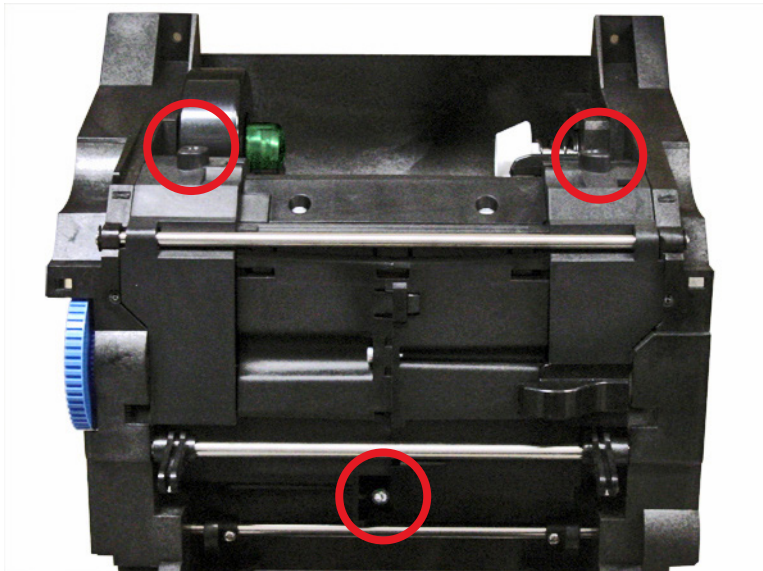
- b. Remove the push-pin (circled below) connecting the ground wire to its retaining shaft.



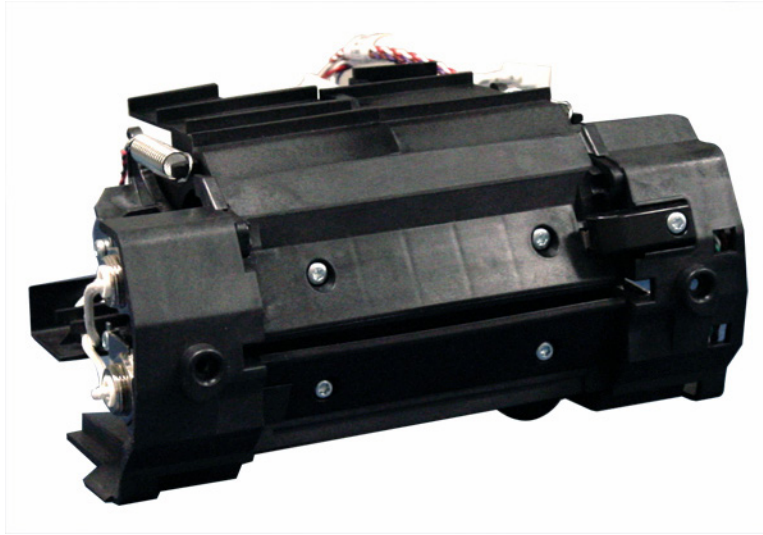
Step 6. With a TORX T10 driver, remove the three screws (circled below) holding the transfer station assembly in place. Note that the two blower hose nozzles are held in place by the two upper screws. Set the nozzles aside.



Caution • When replacing the three screws removed in this step, do not over tighten (may cause stripping).



- Step 7.** Slide the transfer station assembly out of the printer. Note that some tilting may be required.



Halogen Bulb

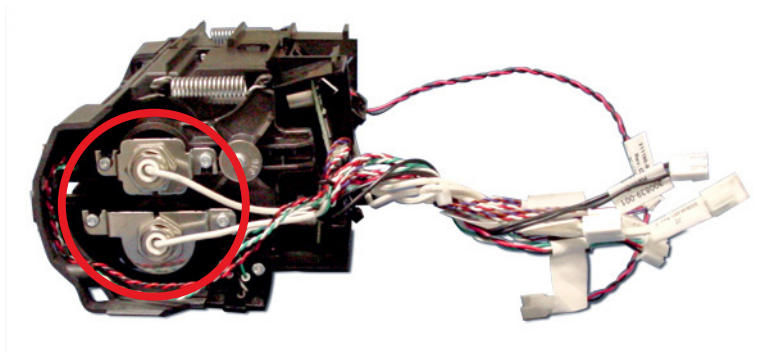
For replacement, use **Kit Halogen Bulb 105936G-110** (Qty 2). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.



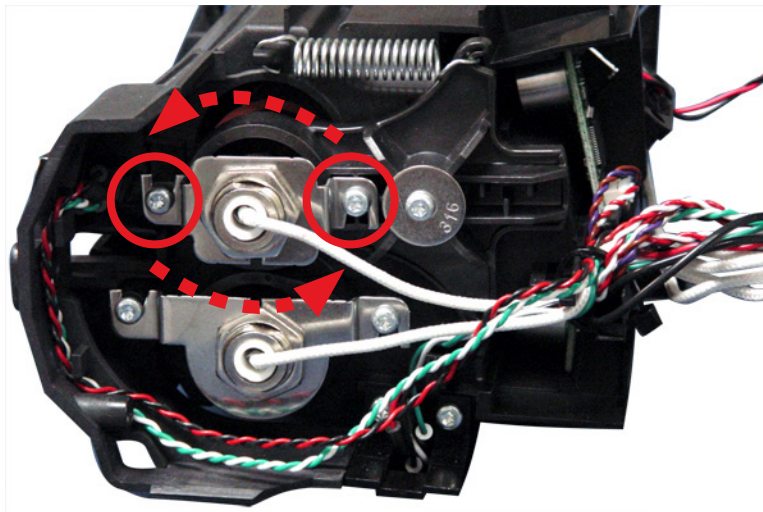
Hot Surface • Halogen bulbs produce intense heat. Use caution when handling the transfer station assembly.

Removal

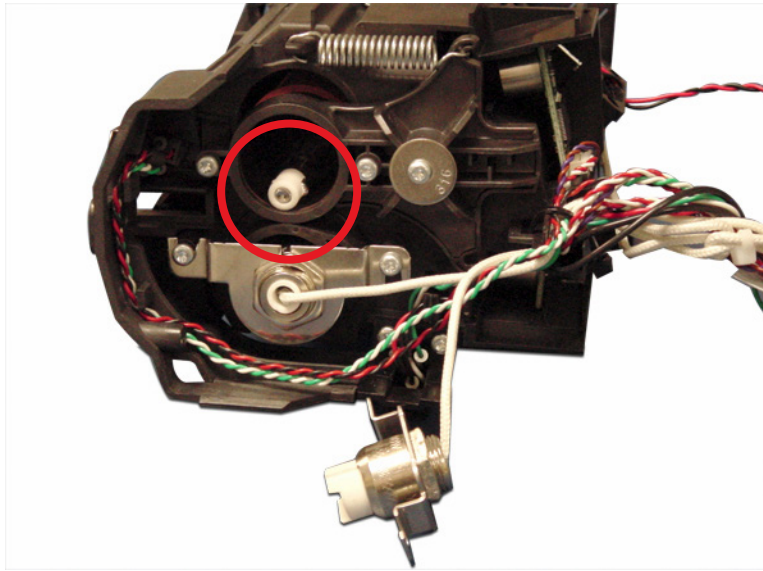
Step 1. Locate the halogen bulbs (circled below).



Step 2. With a TORX T10 driver, loosen the two screws (circled below) and rotate the socket assembly counterclockwise to release the halogen bulb socket.



Step 3. Remove the halogen bulb (circled below).



Step 4. Remove the halogen bulb.



Caution • NEVER TOUCH A HALOGEN BULB WITH BARE FINGERS. Handle it with a wrap or gloves.



Replacement

Replacement is performed by reversing the removal steps.

After installing the replacement halogen bulb(s), use a multimeter to verify that both bulbs are making proper connection.

Step 5. With a multimeter, measure the resistance across the bottom bulb connector pins (J2).

Step 6. Resistance should range between 8 ohms and 15 ohms.

Step 1. With a multimeter, measure the resistance across the top bulb connector pins (J3).

Step 2. Resistance should range between 8 ohms and 15 ohms.

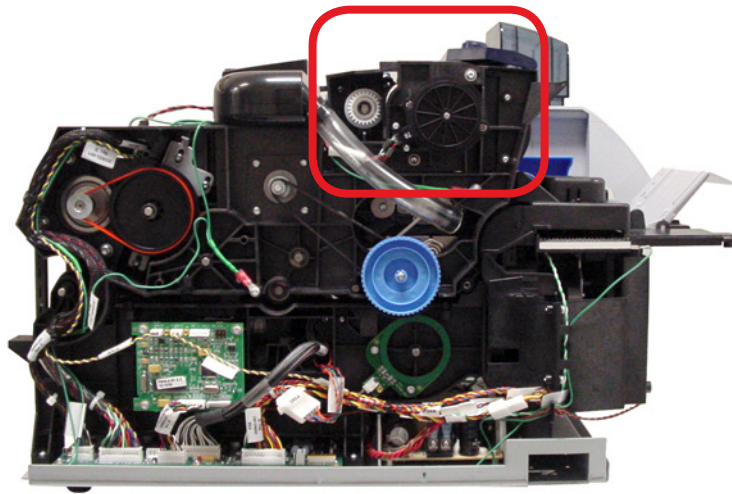
Step 3. If the resistance is out of range, re-seat the halogen bulb(s), and repeat the resistance measurement.

InTM Takeup Assembly

For replacement, use **Kit InTM Takeup Assembly 105936G-005**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

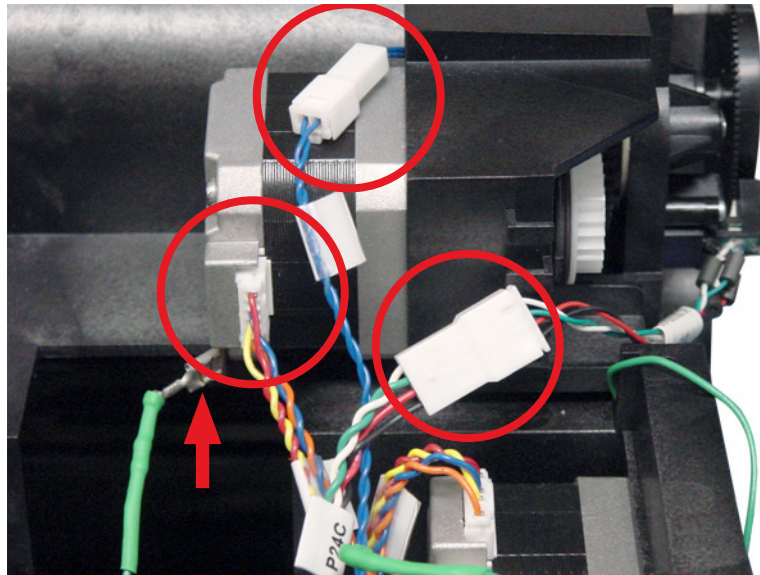
Removal

Step 1. Locate the InTM takeup assembly.

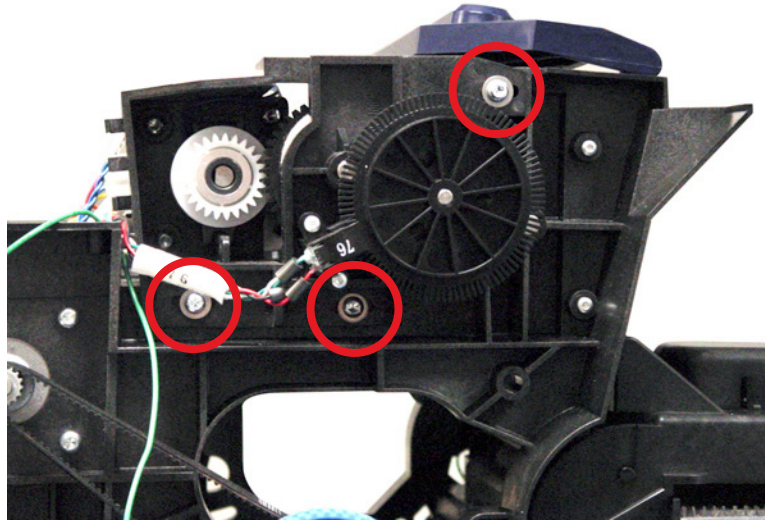


Step 2. Disconnect P24C, P24E, and P24F (circled below).

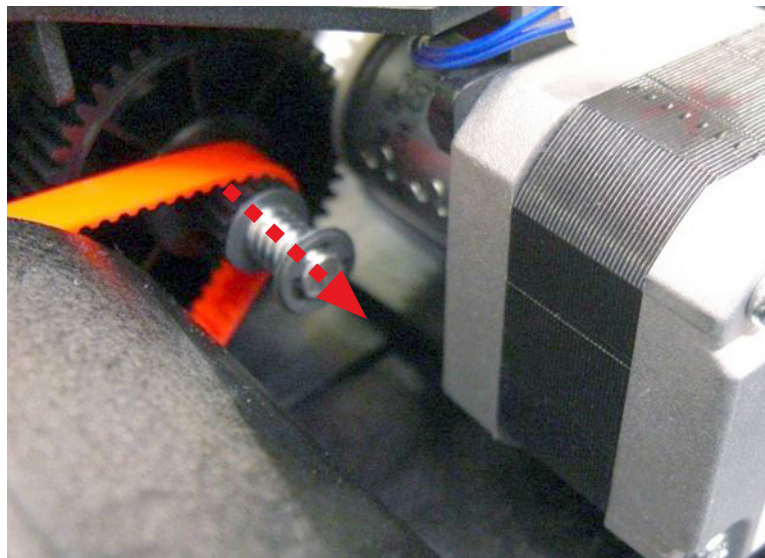
Step 3. Disconnect the ground wire (arrow above).



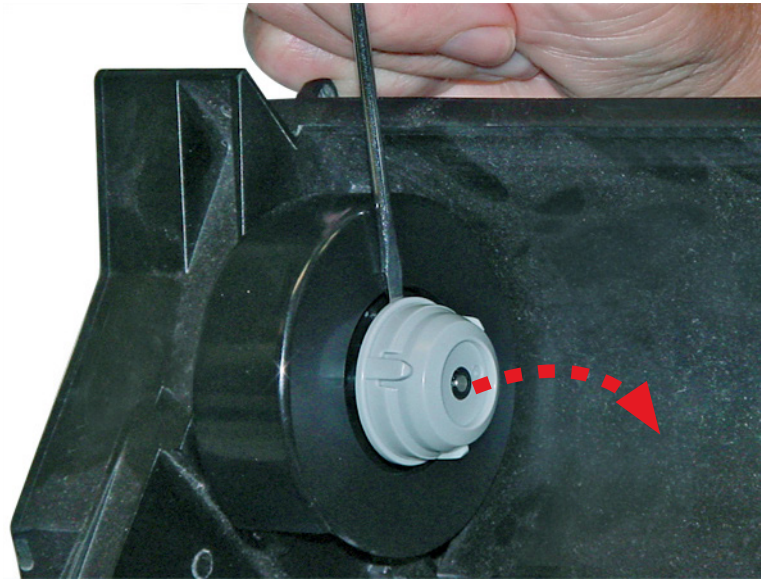
- Step 4.** With a TORX T10 driver, remove the three screws (circled below) holding the InTM takeup assembly in place.



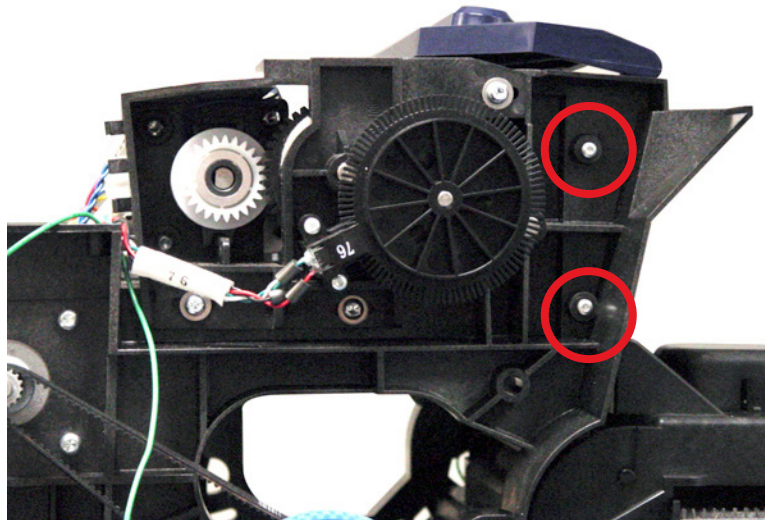
- Step 5.** Slip the belt off the gear.



Step 6. With a small flat-blade screwdriver, carefully slide the spindle hub off the shaft.

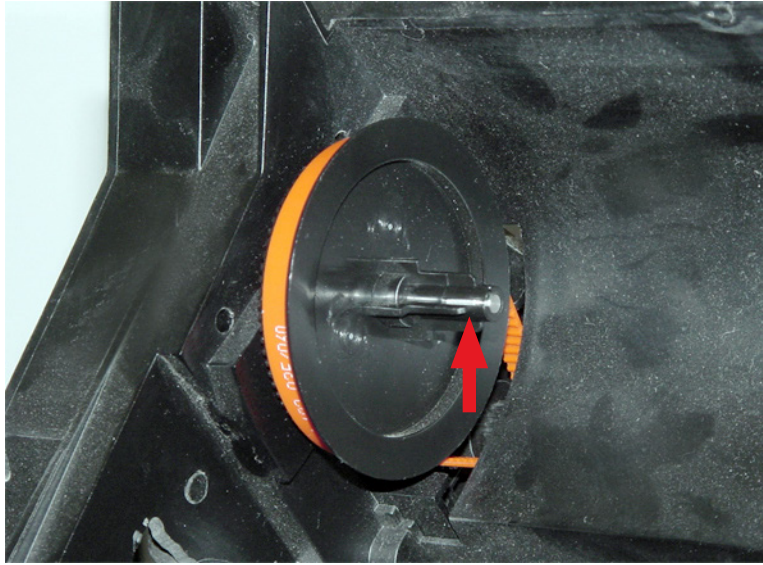


Step 7. With a TORX T10 driver, remove the two screws (circled below) holding the cover in place.



Step 8. Remove the cover.

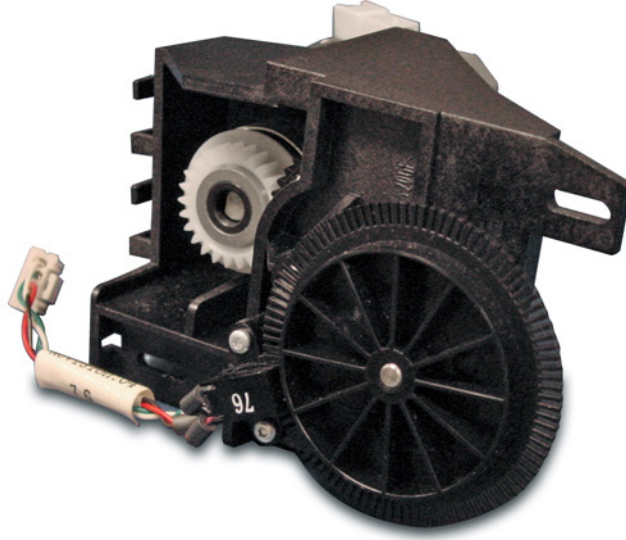
Step 9. Lift the locking tab (arrow below), and slide the pulley off the shaft.



Step 10. Set the spindle hub, pulley, and belt aside.



Step 11. Remove the InTM takeup assembly.



Replacement

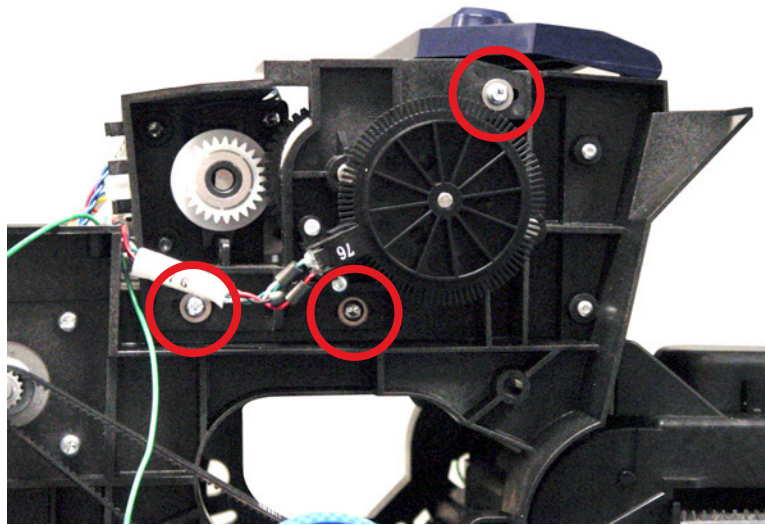
Replacement is performed by reversing the removal steps.

Tests and Adjustments

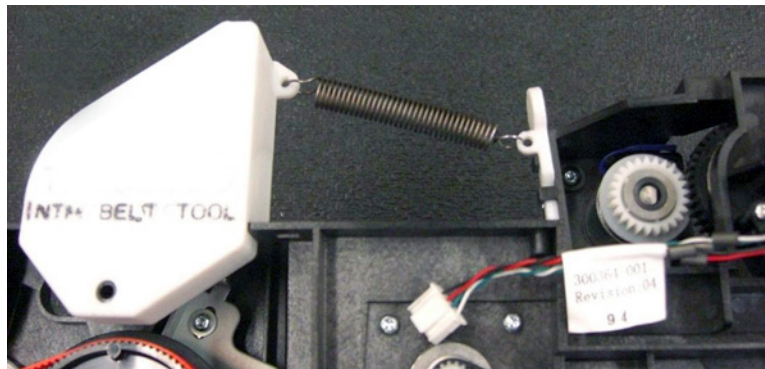
This procedure requires the **InTM Takeup Tool 105936-48** (also part of the ZXP9 Repair Kit 105936-058). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Starting at Step 11 and working the removal procedure in reverse through Step 5, complete the procedure as follows:

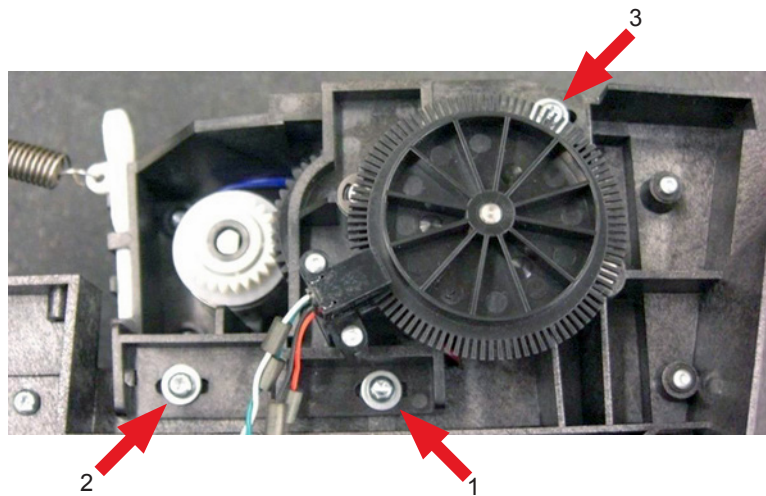
- Step 1.** Set the replacement InTM takeup assembly in place; and secure, but do not tighten (1/4 turn loose), the three mounting screws and associated washers.



- Step 2.** Set the InTM takeup tool in place, and ensure that the tool and the InTM takeup bracket slide freely.



Step 3. Tighten the three screws to 9.0 in-lbs in the order shown.



Step 4. Remove the InTM takeup tool.

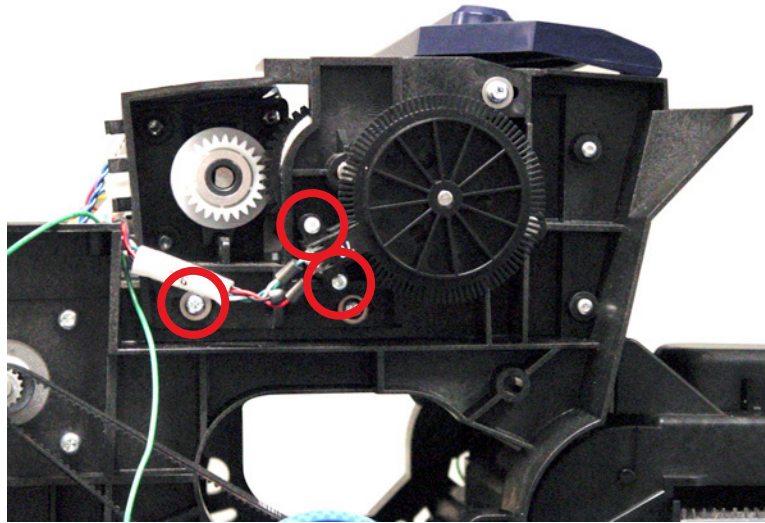
Step 5. Connect the ground wire.

Step 6. Connect P24C, P24E, and P24F.

InTM Take-Up Sensor

For replacement, use **Kit C/A Gap Sensor 105936G-018**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T6 driver, remove the two screws (circled below) holding the ribbon payout encoder sensor in place.



- Step 2.** Disconnect the plug P24B (arrow above).

- Step 3.** Remove the InTM take-up sensor.



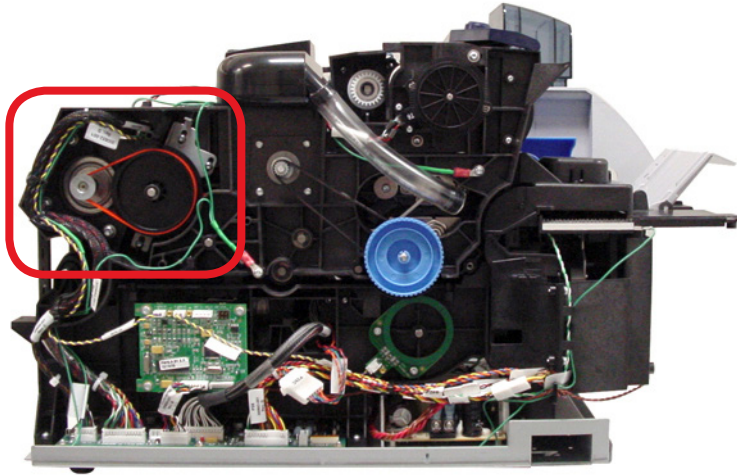
- Step 4.** Set the InTM take-up sensor aside.

InTM Payout Assembly

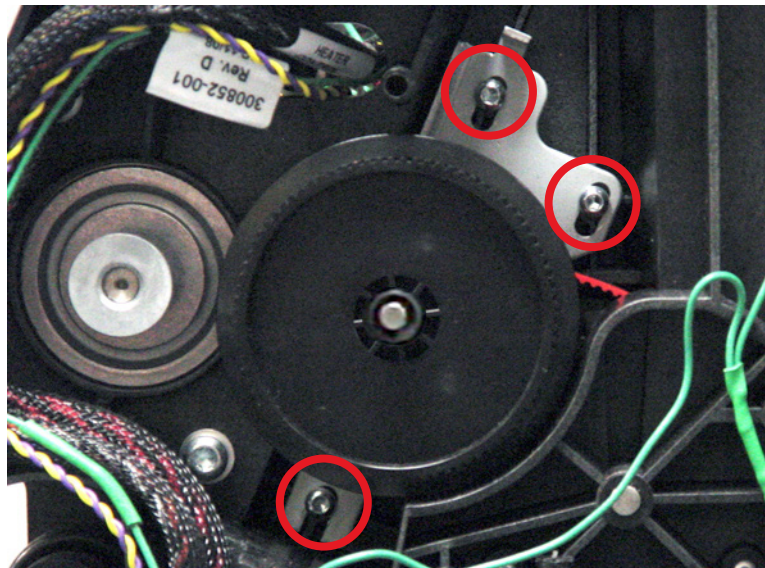
For replacement, use **Kit InTM Payout Assembly 105936G-006**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

Step 1. Locate the InTM payout assembly.

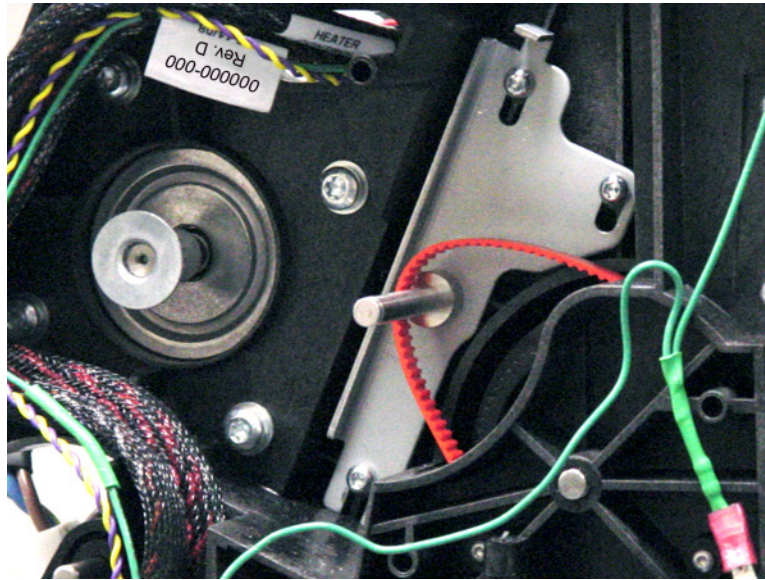


Step 2. With a TORX T10 driver, loosen the three screws (circled below) holding the adjustment plate in place and remove the belt.

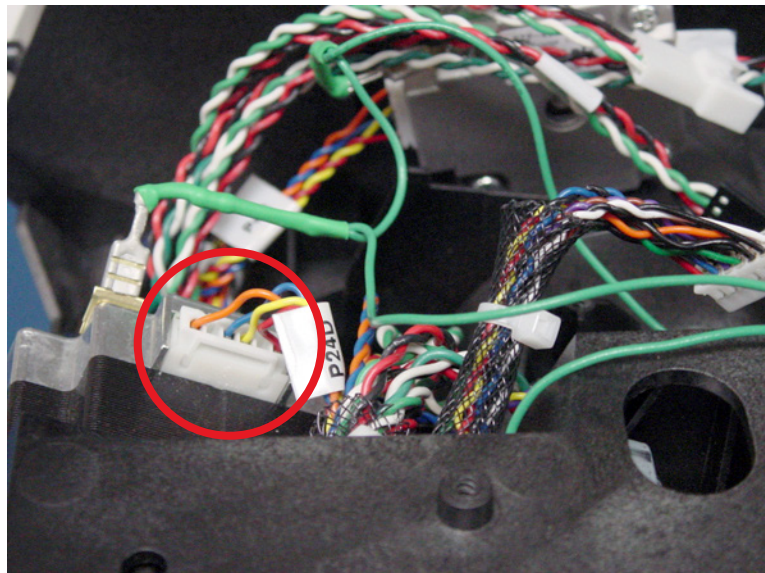


Step 3. Remove the c-clip and washer holding the pulley in place.

Step 4. Slide the pulley off the shaft.

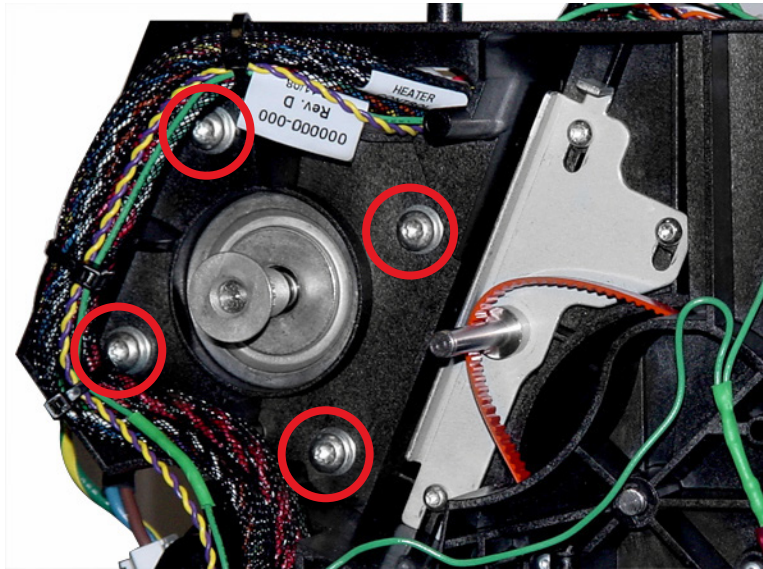


Step 5. Disconnect P24D (circled below).



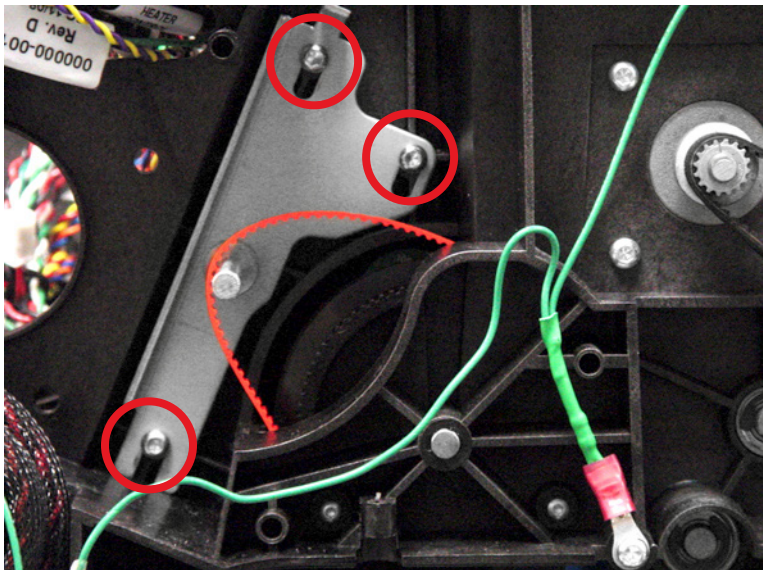
Step 6. Disconnect the ground wire (arrow above).

Step 7. With a TORX T20 driver, remove the four screws (circled below) holding the motor in place.



Step 8. Set the motor aside.

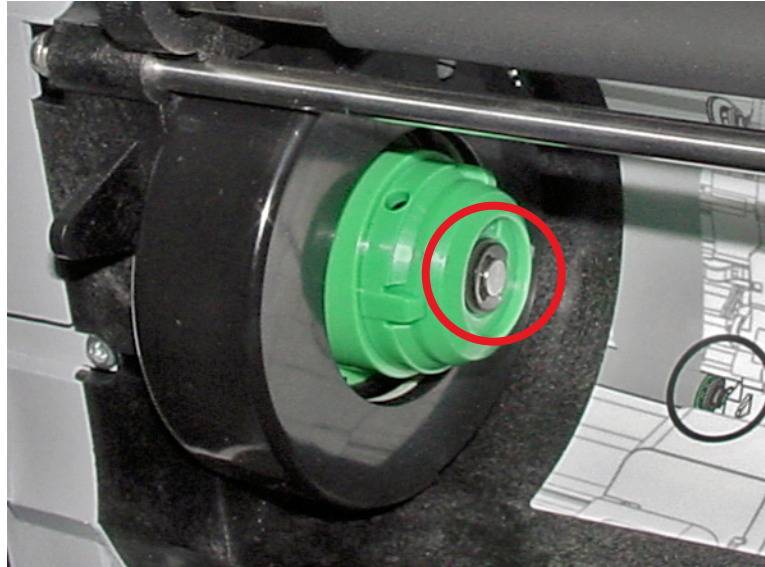
Step 9. With a TORX T10 driver, remove the three screws (circled below) holding the adjustment plate in place.



Step 10. Set the adjustment plate aside.

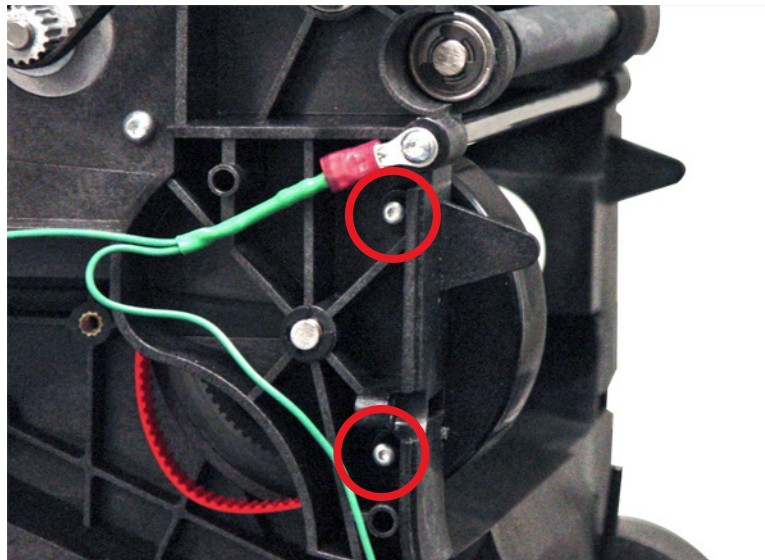
Step 11. Lift the door to access the spindle hub.

Step 12. With a small flat-blade screwdriver, carefully remove the c-clip holding the spindle hub in place and slide it off the shaft.

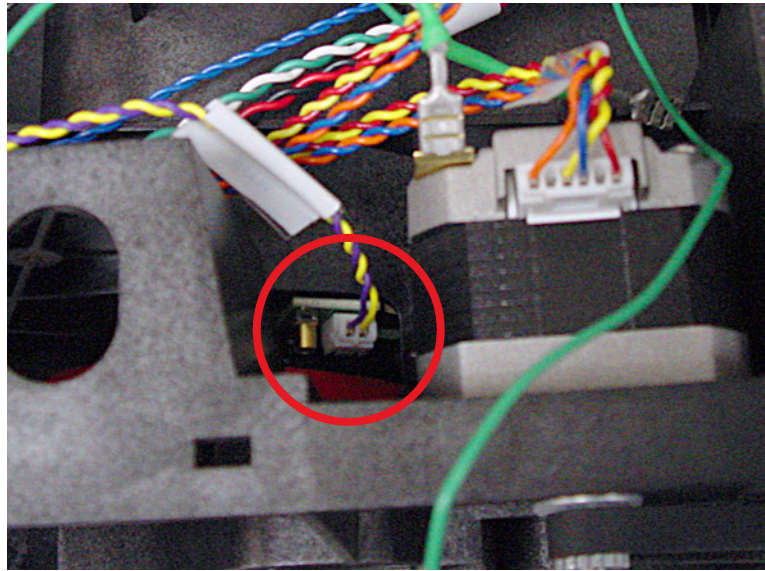


Step 13. Set the spindle hub aside.

Step 14. With a TORX T6 driver, remove the two screws (circled below) holding the spindle cover in place.



Step 15. Disconnect the plug to the InTM coupler PCBA.

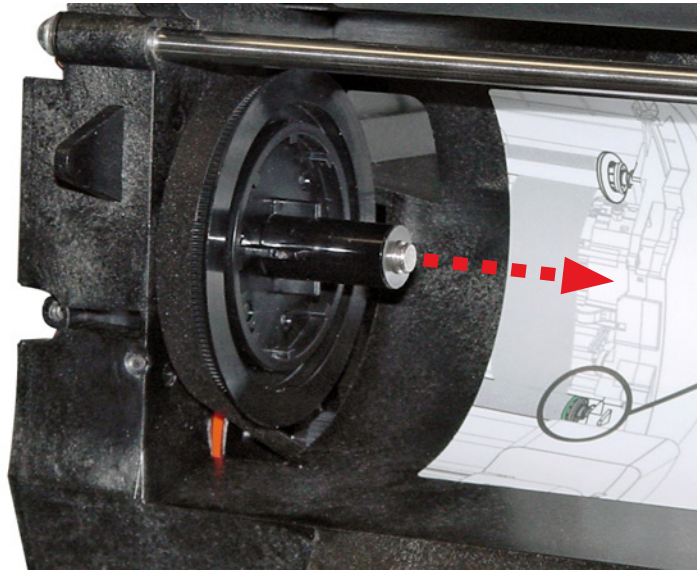


Step 16. Remove the spindle cover (and InTM coupler PCBA).



Step 17. Set the spindle cover (and InTM coupler PCBA) aside.

Step 18. Slide the pulley off the shaft.



Step 19. Set the pulley aside.



Replacement

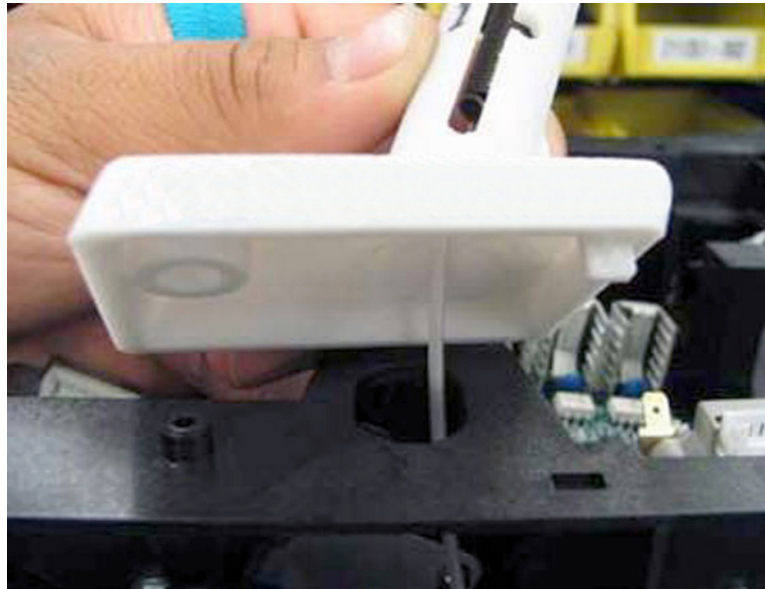
Replacement is performed by reversing the removal steps. You will need to adjust the belt tension using the InTM Payout Tool (see [“Tests and Adjustments”](#) on page 271).

Tests and Adjustments

This procedure requires the **InTM Payout Tool 105936-47** (also part of the ZXP9 Repair Kit 105936-058). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Starting at Step 18 and working the removal procedure in reverse through Step 3, complete the procedure as follows:

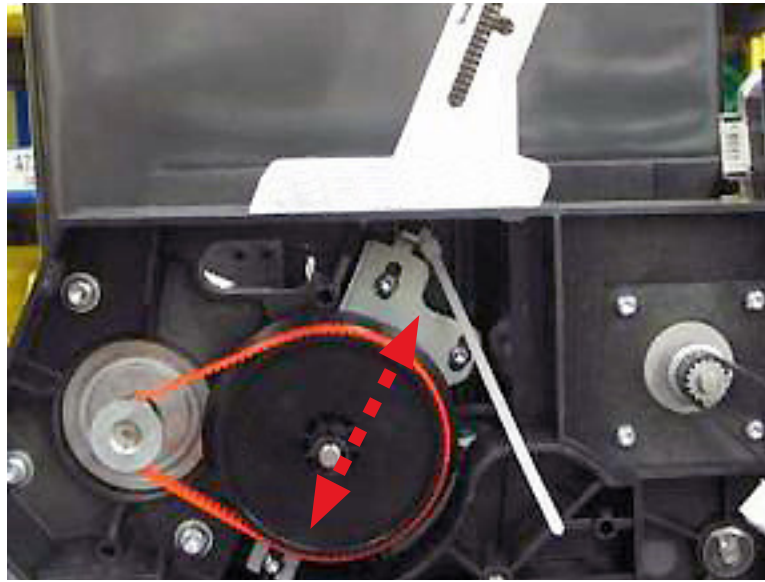
Step 1. Set the InTM payout tool in place.



Step 2. Hook the InTM payout tool to the adjustment plate, and set the tool to #4.

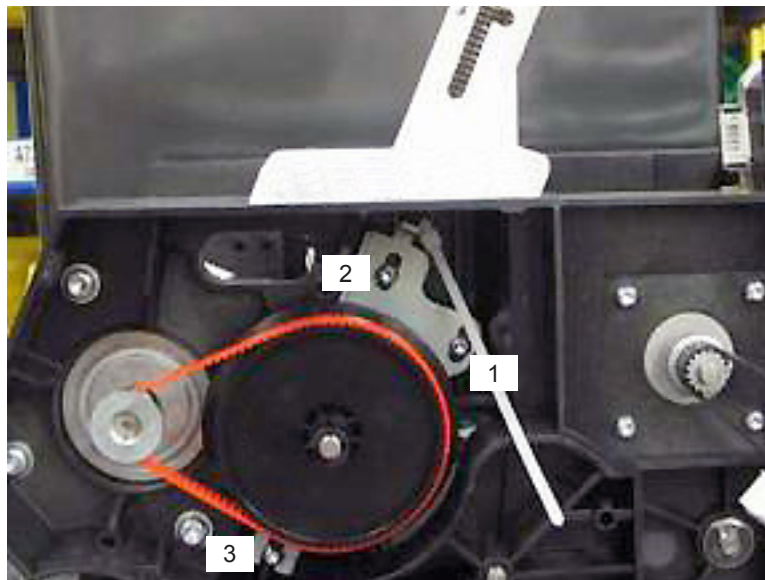


Step 3. Ensure that the adjustment plate slides up/down freely.



Step 4. Rotate the pulley two turns to get the belt(s) to track

Step 5. With a TORX T10 driver, tighten the three screws (in the order shown below) holding the adjustment plate in place.



Step 6. Test and adjustment complete.

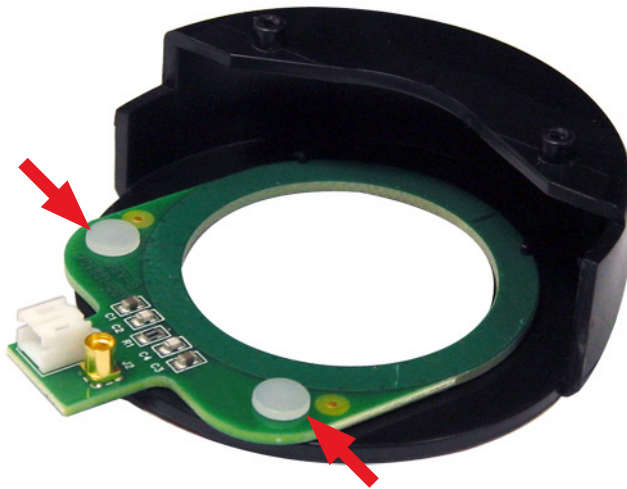
Media Auth Coupler PCBAs

InTM Coupler PCBA

For replacement, use **Kit PCBA Media Auth Coupler 105936G-028**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

The InTM coupler PCBA is attached to the spindle cover, which was removed in [“InTM Payout Assembly” on page 265](#).

- Step 1.** With a small flat-blade screwdriver, carefully remove the two nylon snap fasteners (arrows below) holding the InTM coupler PCBA to the spindle cover.



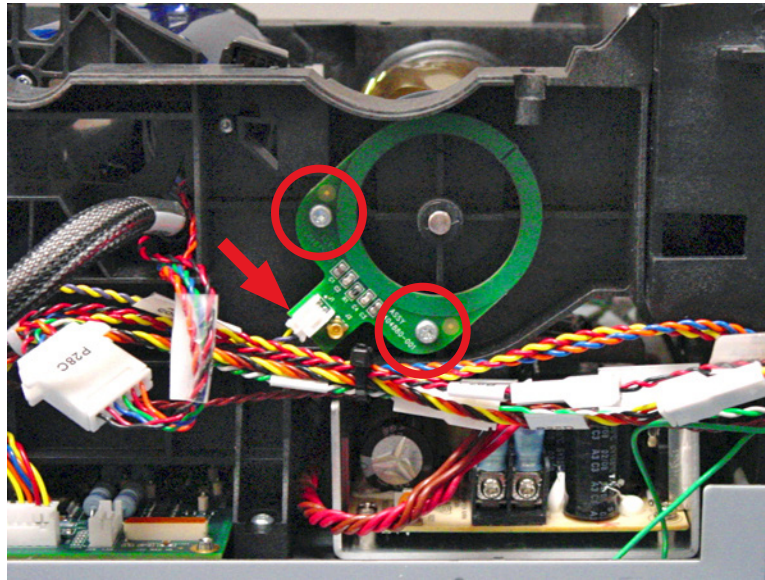
- Step 2.** Remove the InTM coupler PCBA.



Ribbon Coupler PCBA

For replacement, use **Kit PCBA M.A.C. Ribbon 105936G-054**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Disconnect the plug (arrow below) to the ribbon coupler PCBA.
- Step 2.** With a TORX T10 driver, remove the two screws (circled below) holding the ribbon coupler PCBA in place.



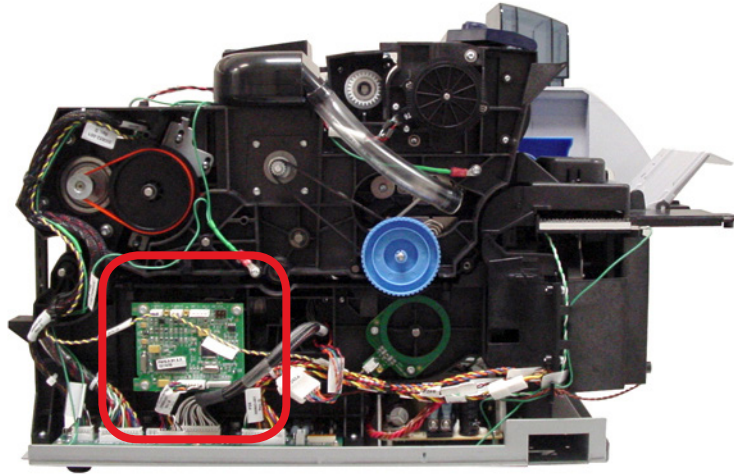
- Step 3.** Remove the ribbon coupler PCBA.



Media Authentication PCBA

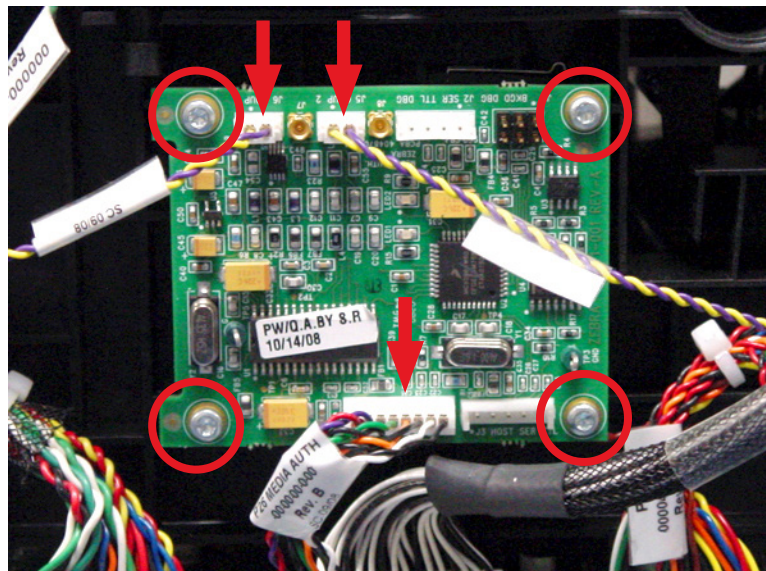
For replacement, use **Kit PCBA Media Authorization 105936G-027**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the media authentication PCBA.

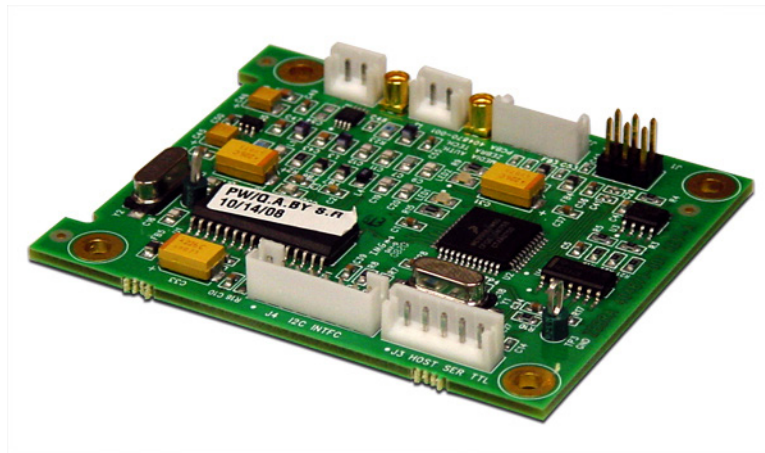


Step 2. Unplug the three cable connectors (arrows below): COUP 1 (InTM), COUP 2 (ribbon), and P26 (media authentication).

Step 3. With a TORX T10 driver, remove the four mounting screws (circled below) holding the media authentication PCBA in place.



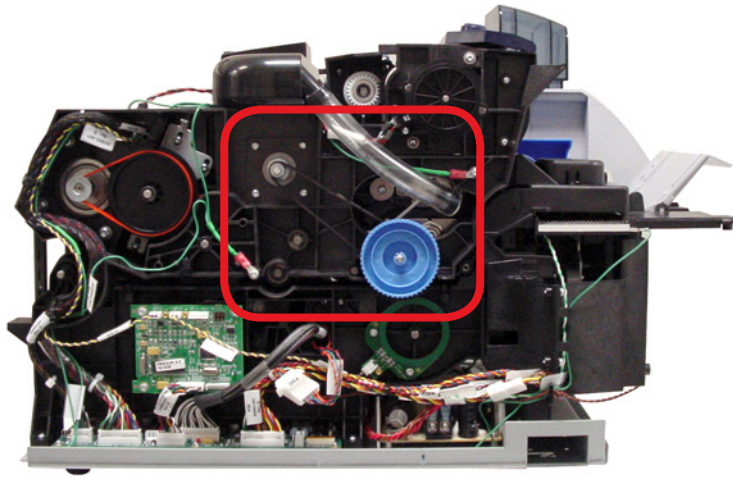
Step 4. Set the media authentication PCBA aside.



Transfer Drive Assembly

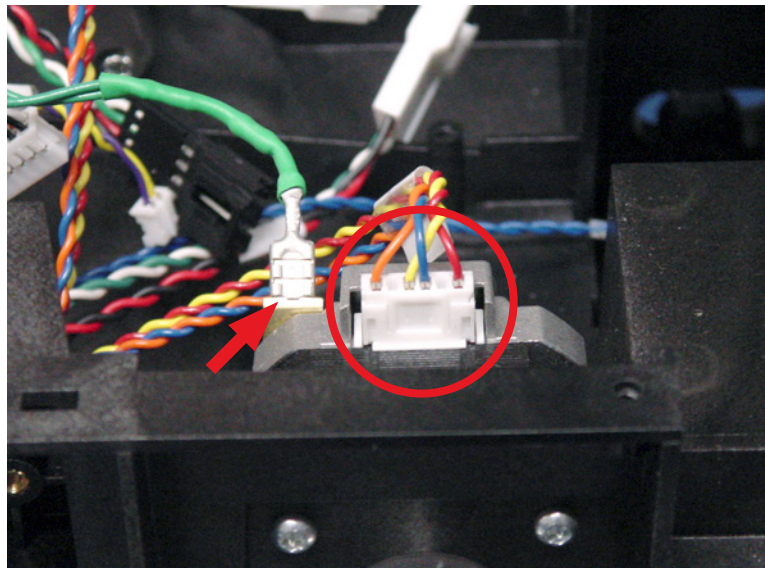
For replacement, use **Kit Transfer Output & Belt 105936G-304**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the transfer drive assembly.

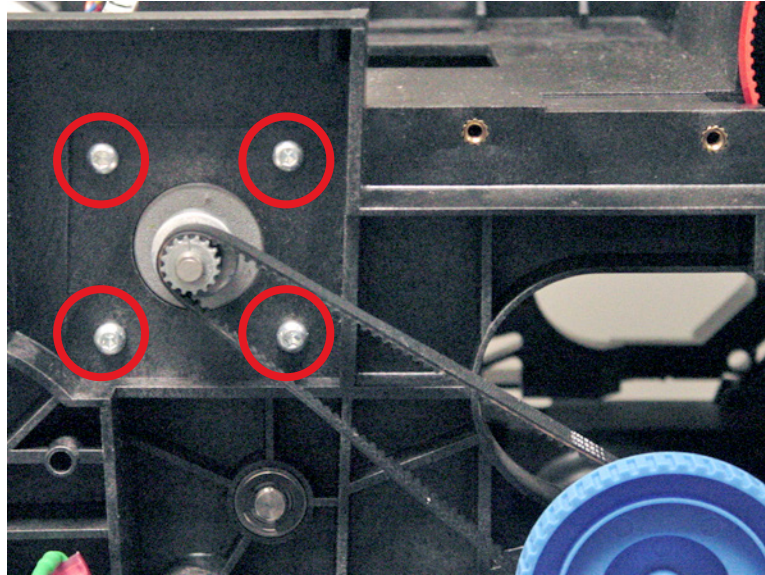


Step 2. Disconnect P4A (circled below).

Step 3. Disconnect the ground wire (arrow below).



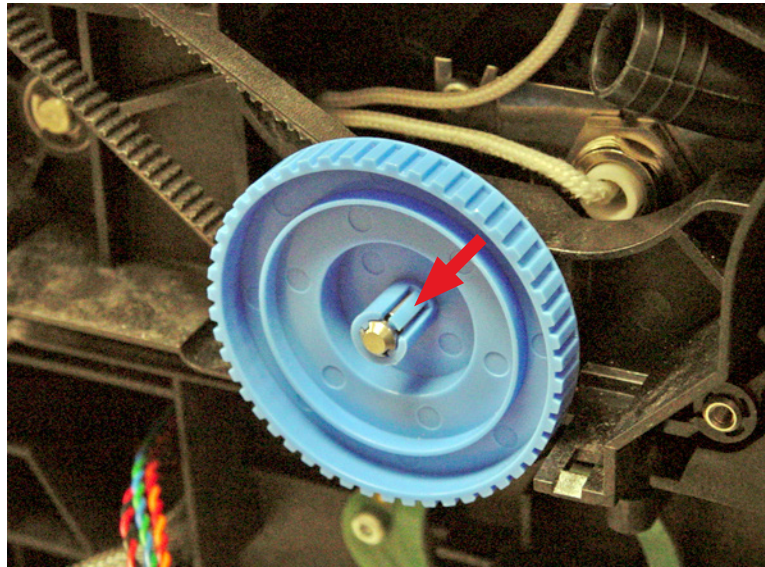
Step 4. With a TORX T10 driver, remove the four screws (circled below) holding the motor in place.



Step 5. Remove the motor.



Step 6. Lift the locking tab (arrow below), and slide the pulley and belt off the shaft.



Step 7. Lift the door, and remove the shaft and pulley.

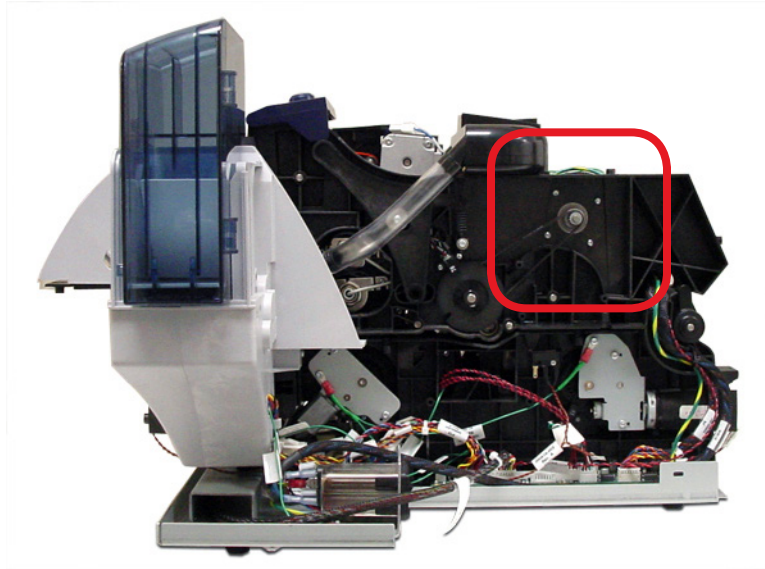


Printhead Lift Motor

For replacement, use **Kit Printhead Lift Motor Assembly 105936G-011**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

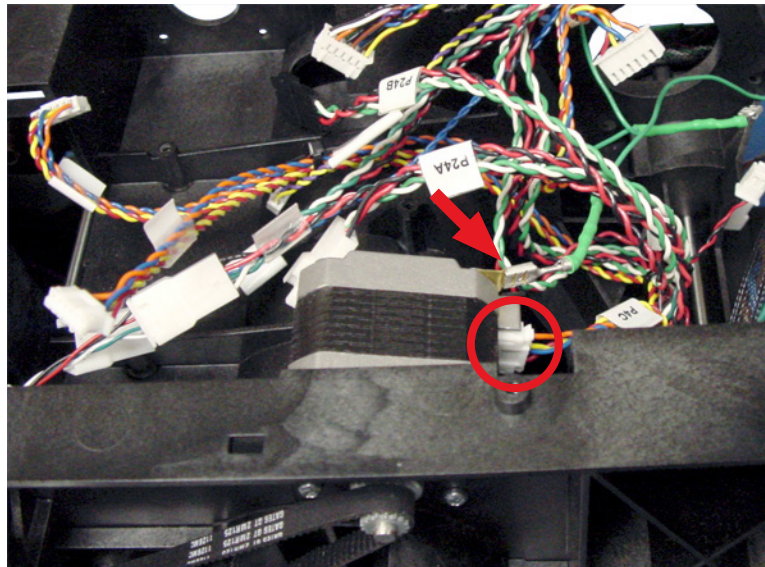
Note • This procedure uses Spare Kit # 105936G-011: KIT, ASSY, PRINthead LIFT MOTOR.

Step 1. Locate the printhead lift motor.

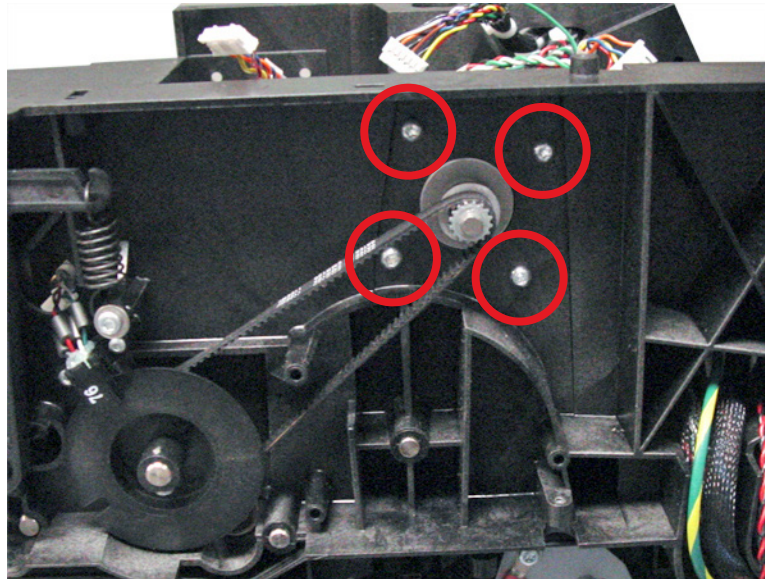


Step 2. Disconnect P4C (circled below).

Step 3. Disconnect the ground wire (arrow below).



Step 4. With a TORX T10 driver, remove the four screws (circled below) holding the motor in place.



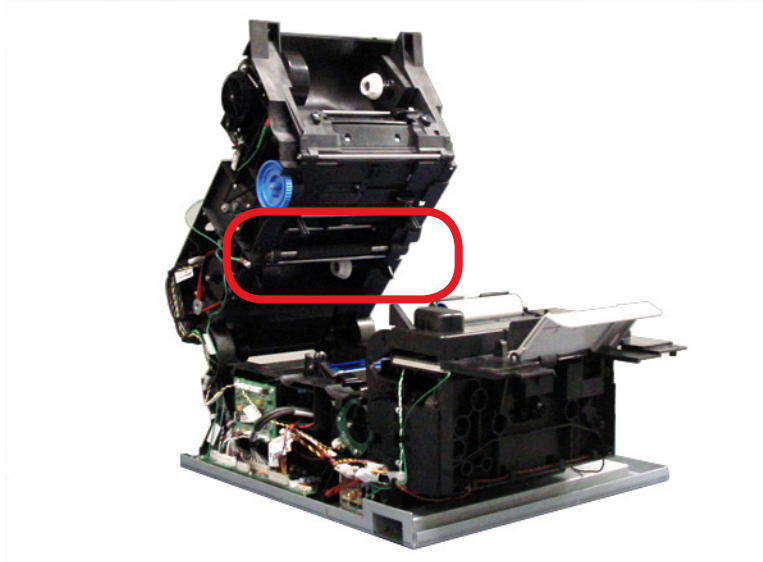
Step 5. Remove the printhead lift motor.



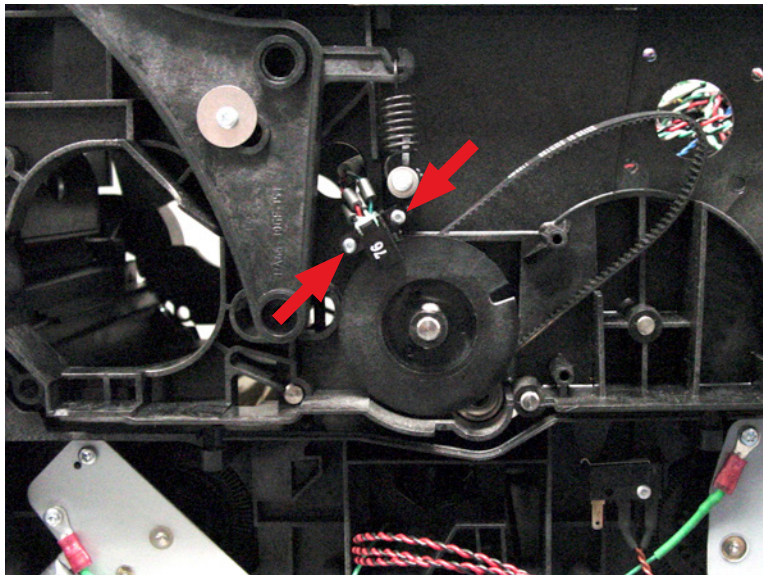
Platen Roller

For replacement, use **Kit Platen Roller 105936G-039**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the platen roller.

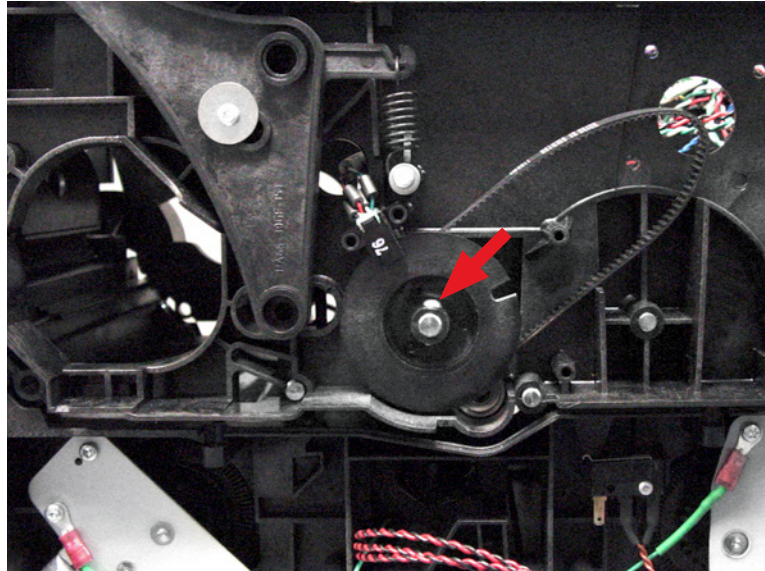


Step 2. With a TORX T6 driver, remove the two screws (arrows below) holding the printhead cam position sensor in place.

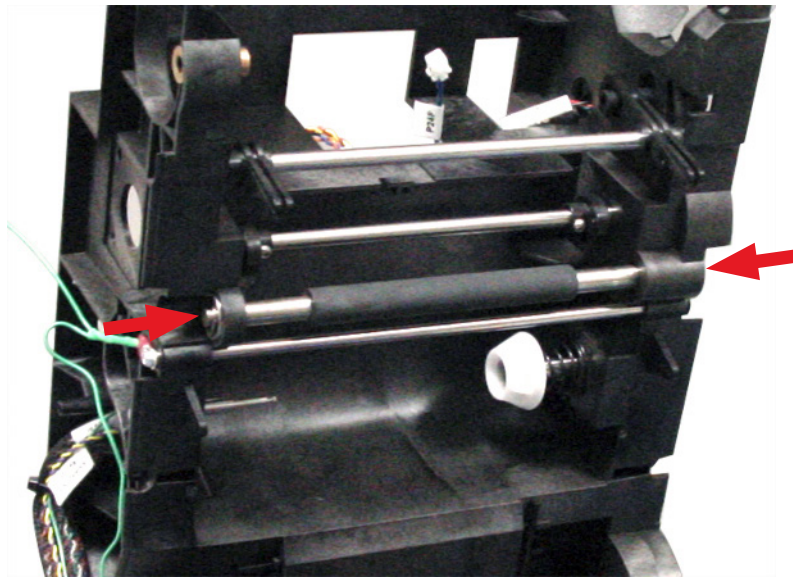


Step 3. Move the sensor aside.

- Step 4.** With a TORX T8 driver, remove the screw (arrow below) holding the printhead cam position pulley in place. Slide the pulley off the shaft.



- Step 5.** Remove the two c-clips (arrows below), one at each end of the platen roller.

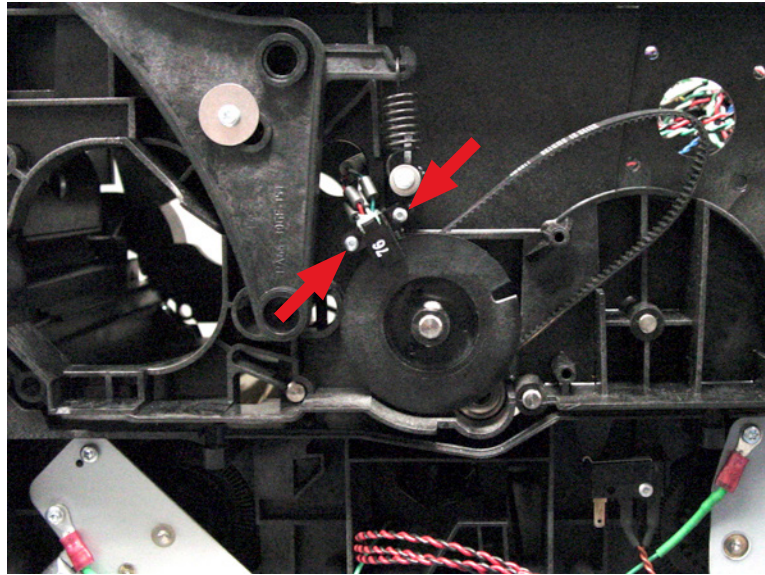


- Step 6.** Remove the platen roller and bearings.

Printhead Cam Position Sensor

For replacement, use **Kit C/A Gap Sensor 105936G-018**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T6 driver, remove the two screws (arrows below) holding the printhead cam position sensor in place.



- Step 2.** Disconnect the plug P24D.

- Step 3.** Remove the printhead cam position sensor.



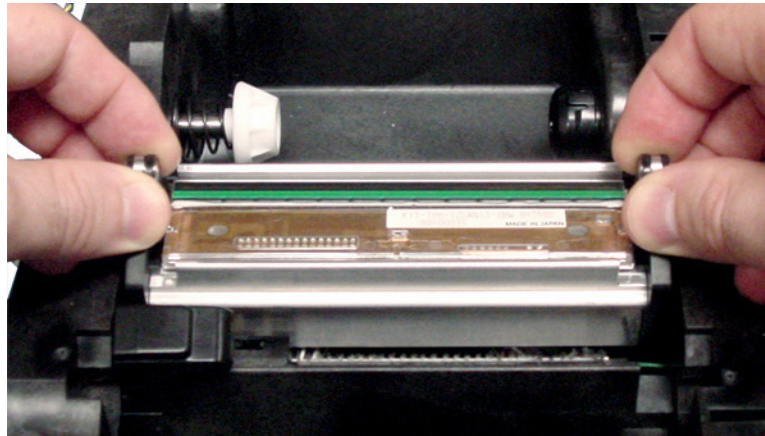
- Step 4.** Set the printhead cam position sensor aside.

Printhead Assembly

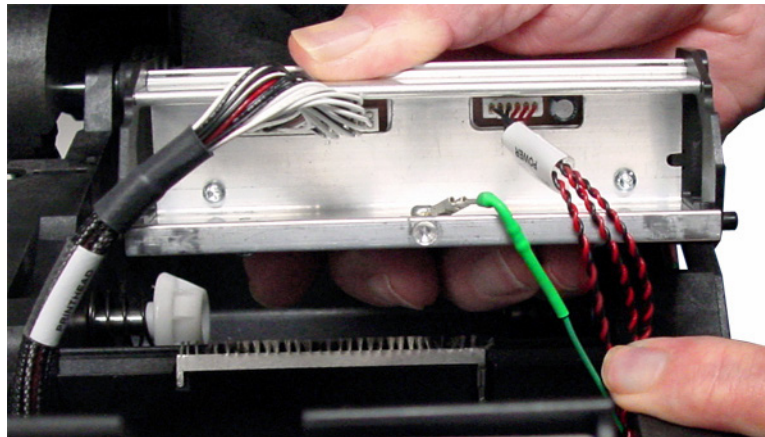
For replacement, use **Kit Printhead Assembly 105936G-003**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

- Step 1.** If not already done, remove the print ribbon.
- Step 2.** Press the printhead down and to the rear to release it.



- Step 3.** Disconnect the red and black power cable.
- Step 4.** Disconnect the white and black data cable.
- Step 5.** Disconnect the green ground wire.



- Step 6.** Remove the printhead.

Replacement

Replacement is performed by reversing the removal steps

Tests and Adjustments

After replacing the printhead, you will need to change the printhead serial number and resistance value stored in the printer—the new value is located on the label applied to the printhead (circled below).



- Step 1.** Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

- Step 2.** Select the Device Information tab and click on **ZXP Toolbox**.

Step 3. From the Toolbox, select the Calibrate tab. From the Calibrate menu, enter the printhead serial number and resistance in their respective fields (circled below).

Toolbox

TASKS

- Dashboard
- Printer Configuration
- Encoding Settings
- Calibrate**
- Tools & Utilities
- Advanced Settings
- Security

Zebra ZXP Series 9 Network Card Printer

IP Address: 10.1.25.135 Serial No: 000162100018

CALIBRATE LOOKUP TABLE

Transfer Temperature Offset

Top single	0 °C	Bottom single	0 °C
Top double	0 °C	Bottom double	0 °C

Print Position

Film print X offset: 0 dots

Film print Y offset: 0 mils

Print Head

Serial number: 02-00032 Resistance: 3379

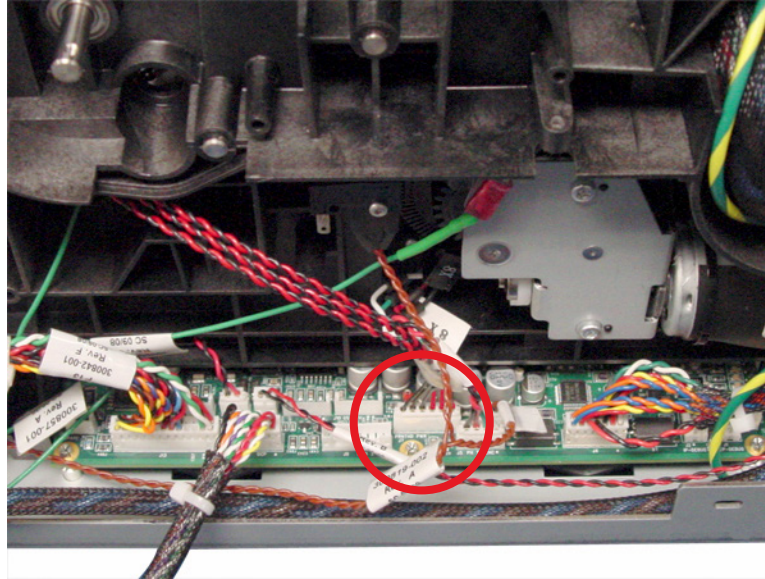
Save Settings

Step 4. Click **Save Settings**.

Printhead Power Cable

For replacement, use **Kit C/A Printhead Power 105936G-040**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Disconnect P7 from J7, PRNTHD PWR, (circled below).



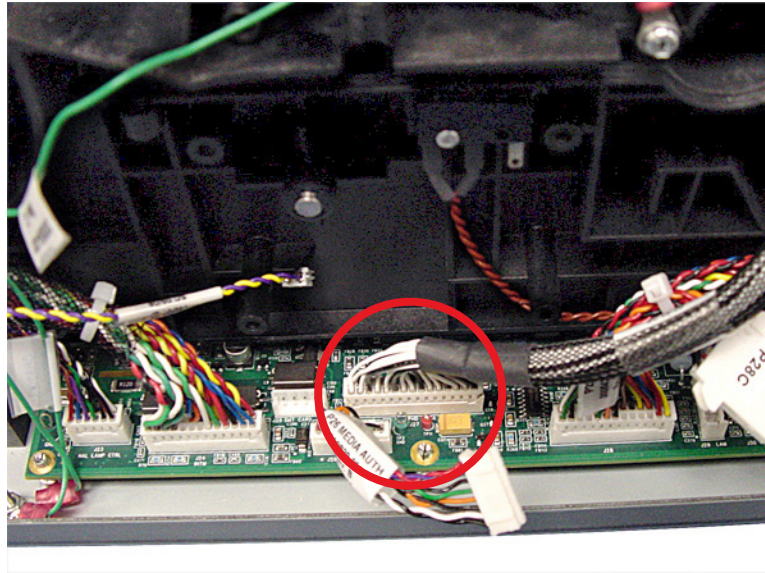
Step 2. Remove the printhead power cable assembly.



Printhead Data Cable

For replacement, use **Kit C/A Printhead Data 105936G-017**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Disconnect P27 from J27, PHD DATA (circled below).



Step 2. Remove the printhead data cable assembly.

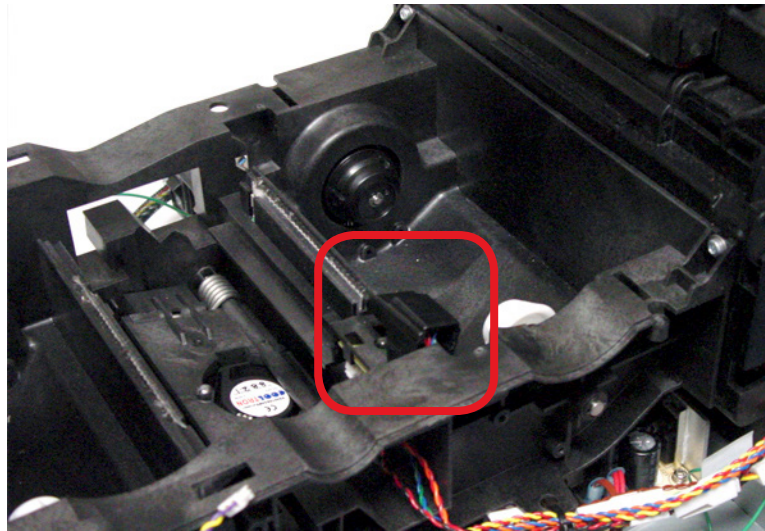


Tricolor Sensor

For replacement, use **Kit Tricolor Sensor 105936G-024**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

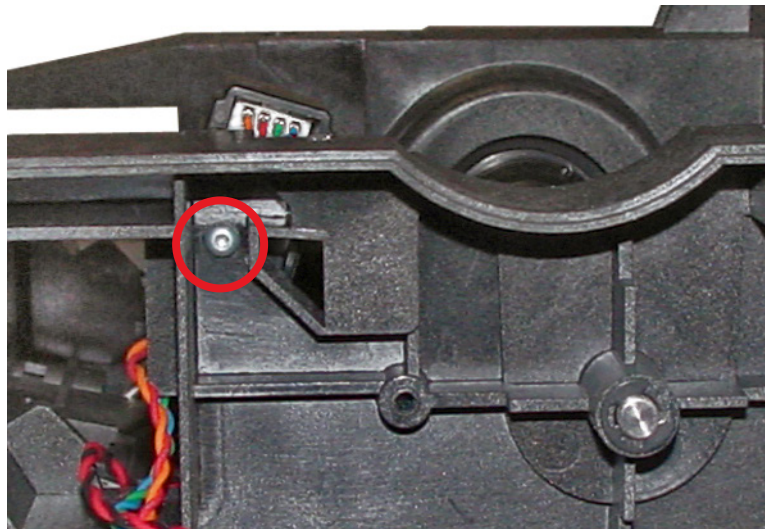
Removal

Step 1. Locate the tricolor sensor assembly (circled below).



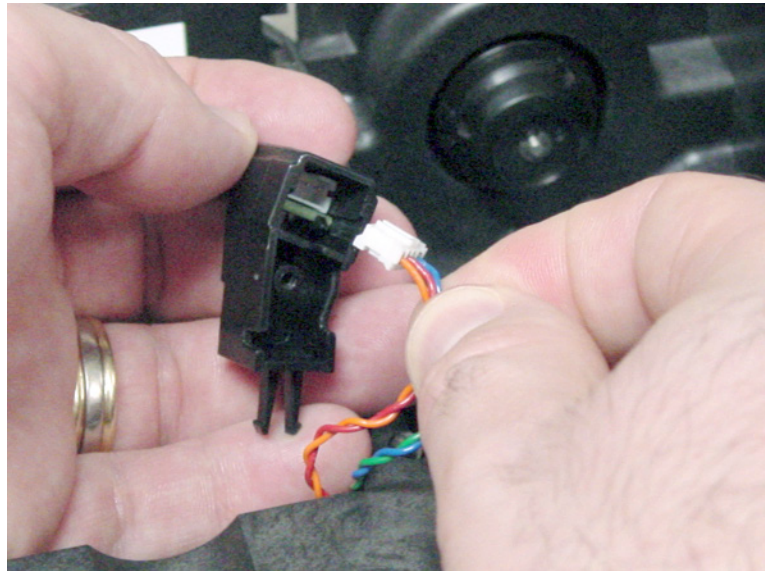
Step 2. Remove the detector.

- a. With a TORX T6 driver, remove the screw (circled below) holding the detector and bracket in place.



- b. Carefully lift the detector up and out of the printer.

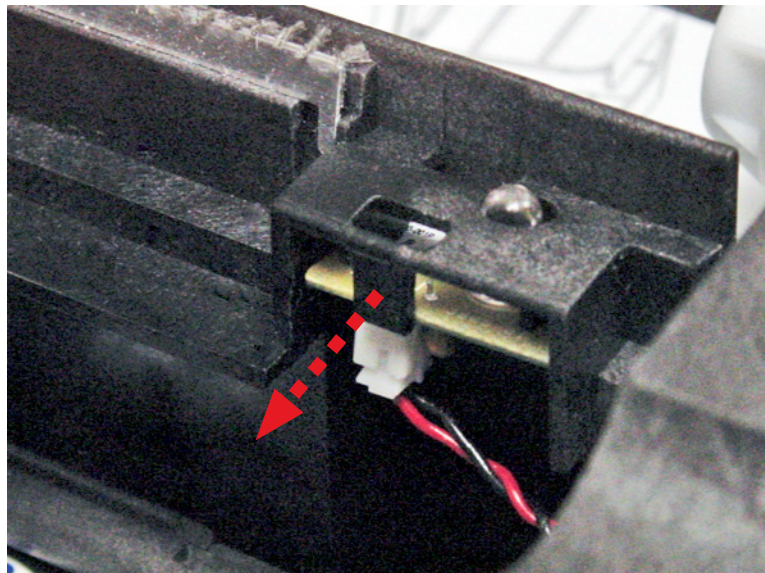
- c. Disconnect the cable connector (part of the P28C harness), and remove the detector.



- d. Remove the detector.

Step 3. Remove the emitter.

- a. Release the plastic clip holding the emitter in place (arrow below), and carefully push the emitter down and out of the printer.



- b. Unplug the connector (part of cable assembly P28C), and remove the emitter.
- c. Unplug cable assembly P28C from the cable harness, and set it aside.

Replacement

Replacement is performed by reversing the removal steps

Tests and Adjustments

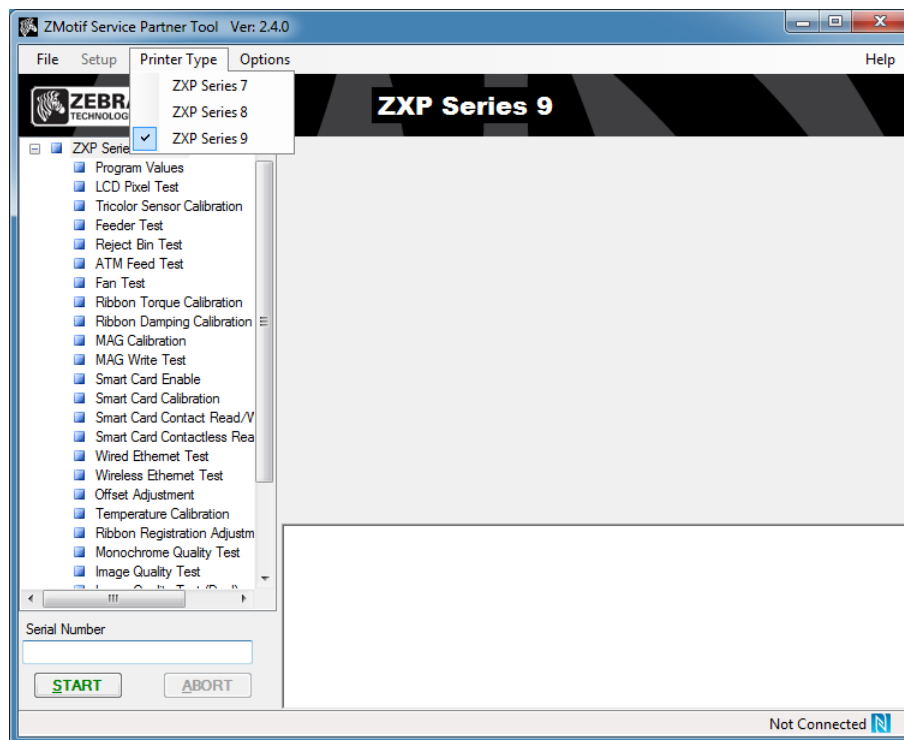
After replacing the tricolor sensor, you will need to perform the ZMotif Service Partner Tool tricolor sensor calibration procedure.



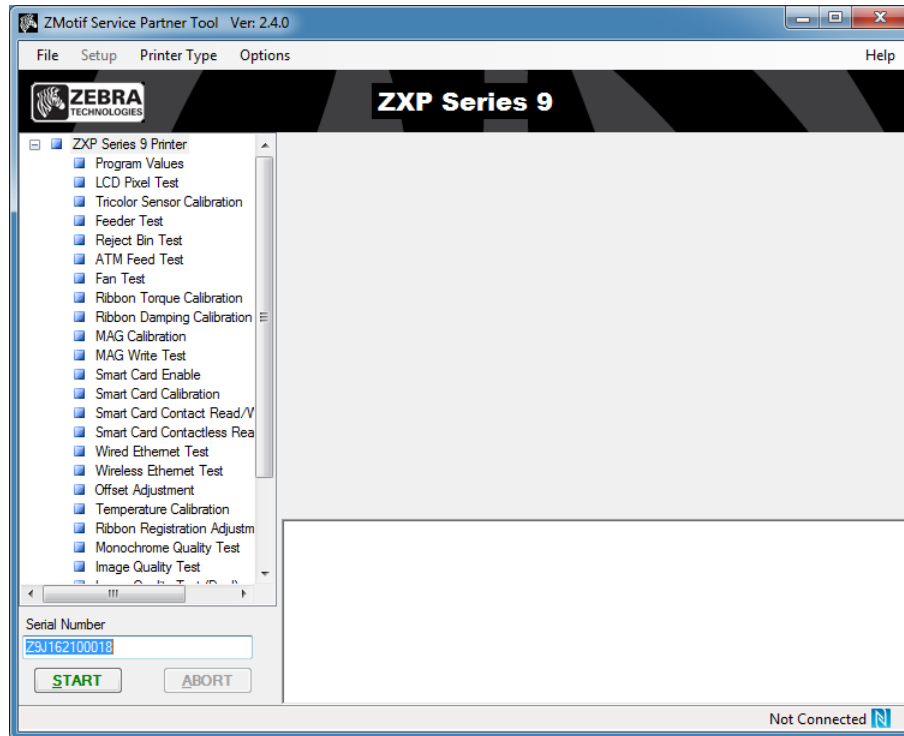
Note • The ZMotif Service Partner Tool only works through a USB connection to the printer.

Step 1. Launch the ZMotif Service Partner Tool.

Step 2. From the Printer Type menu, select **ZXP Series 9**.



- Step 3.** In the Serial Number field, enter the serial number of the printer, or press **ESC** and it will be entered automatically.

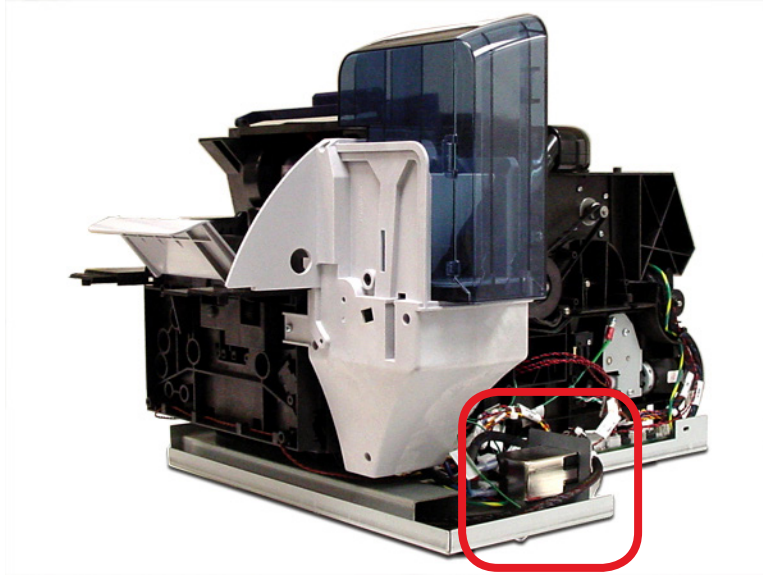


- Step 4.** Select the Tricolor Sensor Calibration test and click **START**.
- Step 5.** Follow the on-screen instructions.
- Step 6.** If the test finishes successfully, the Tool will return a **TEST PASS**.
- Step 7.** If the test is not successful, the Tool will return an **TEST FAIL**. If this happens, run the test again. If the test continues to fail, check the tricolor sensor connections and run the test again. If the test continues to fail, replace the tricolor sensor.

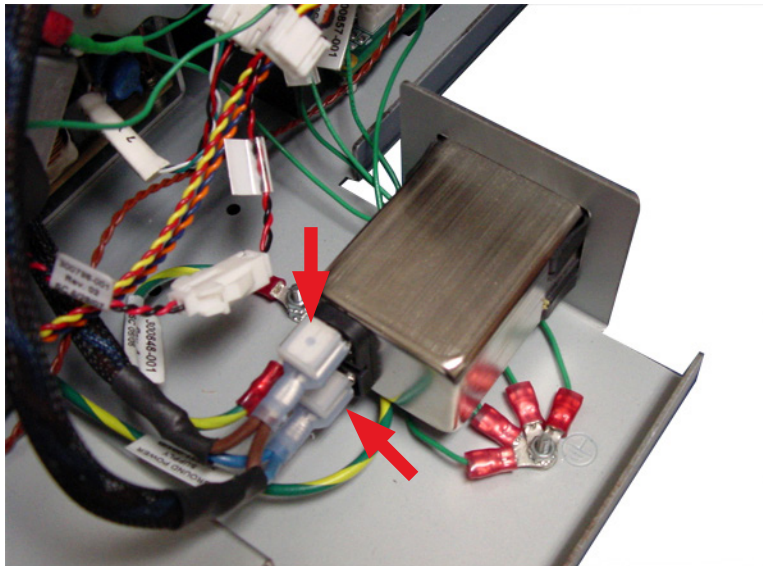
EMI Line Filter

For replacement, use **Kit Line Filter EMI 105936G-020**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the EMI line filter.



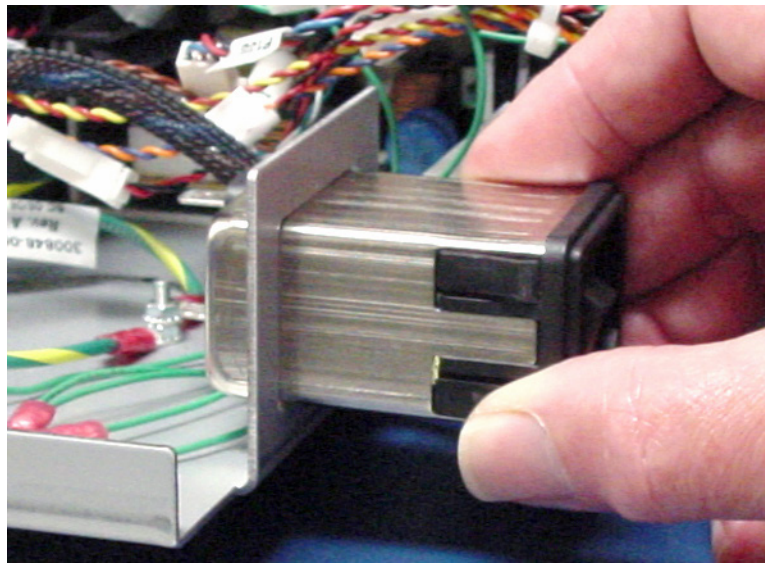
Step 2. Unplug the two connectors (arrows below).



Step 3. Disconnect the ground wire.

Step 4. Depress the four locking tabs (two on each side) to release the EMI line filter.

Step 5. Slide the EMI line filter out of the base plate.



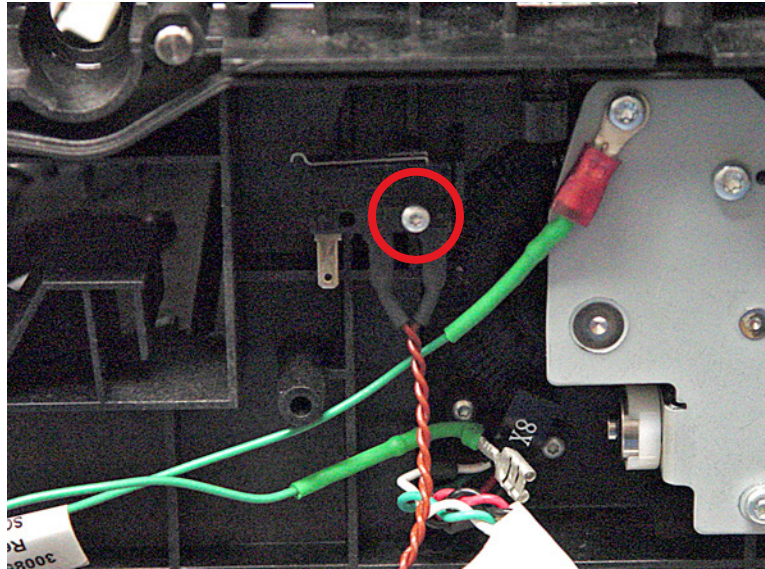
Step 6. Set the EMI line filter aside.



Door Switch Cable Assembly

For replacement, use **Kit C/A Door Switch 105936G-026**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T6 driver, remove the screw (circled below) holding the door switch in place.



- Step 2.** Unplug P6 from J6.

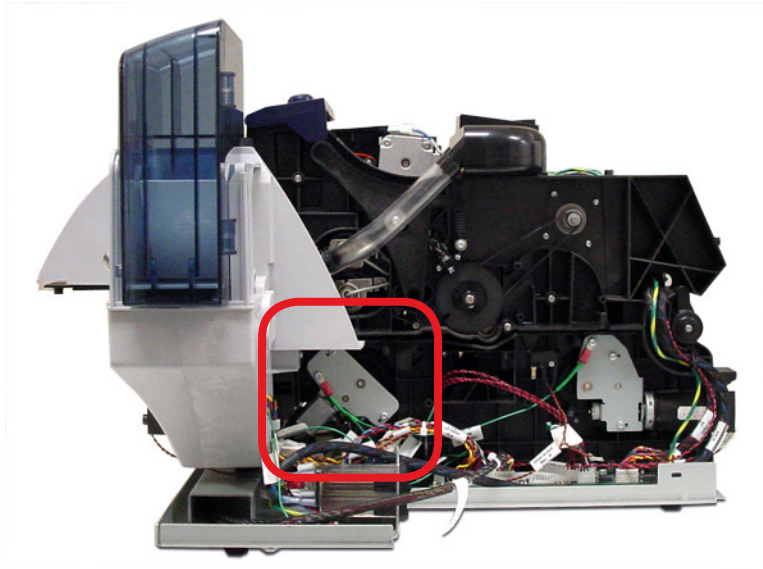
- Step 3.** Remove the door switch cable assembly.



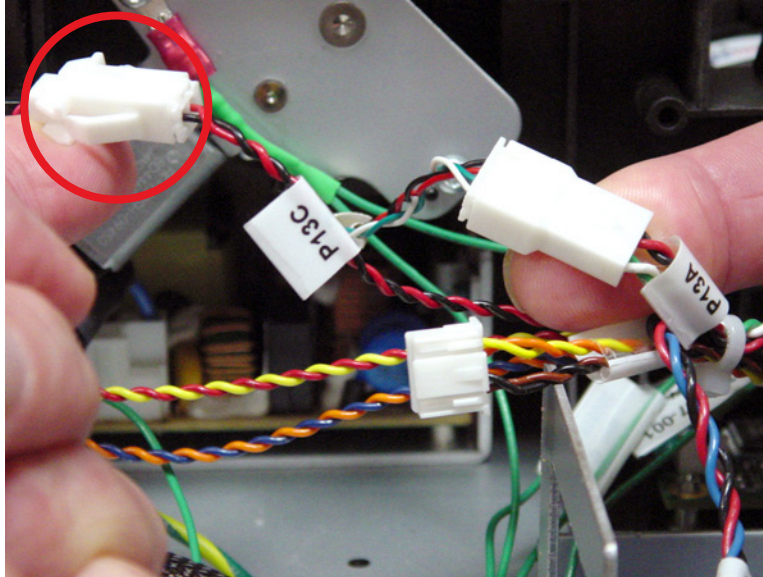
Ribbon Payout Drive Assembly

For replacement, use **Kit Ribbon Payout Drive Assembly 105936G-001**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

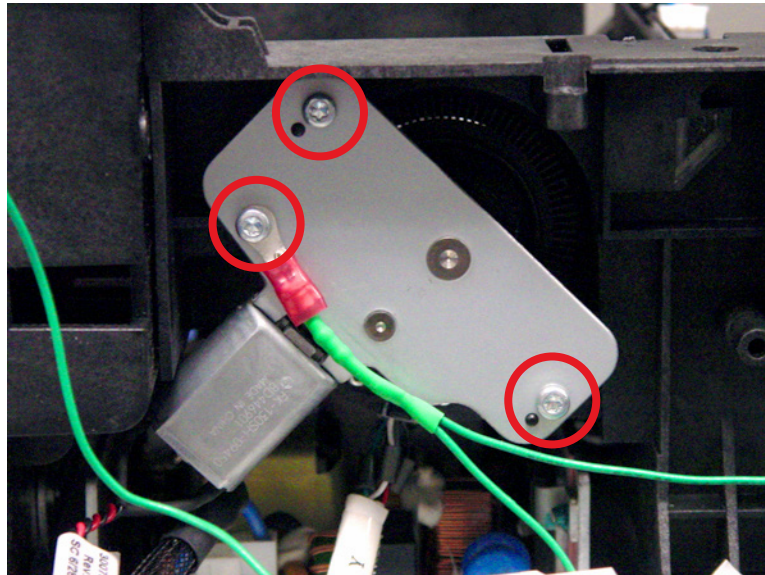
Step 1. Locate the ribbon payout drive assembly.



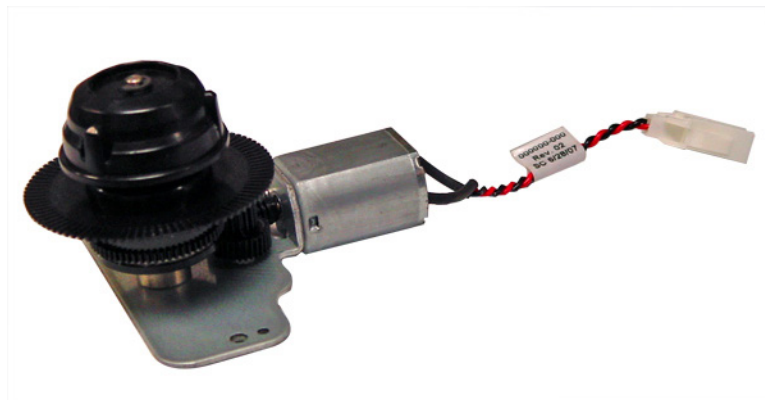
Step 2. Disconnect P13C.



Step 3. With a TORX T10 driver, remove the three screws (circled below) holding the ribbon payout drive assembly in place.



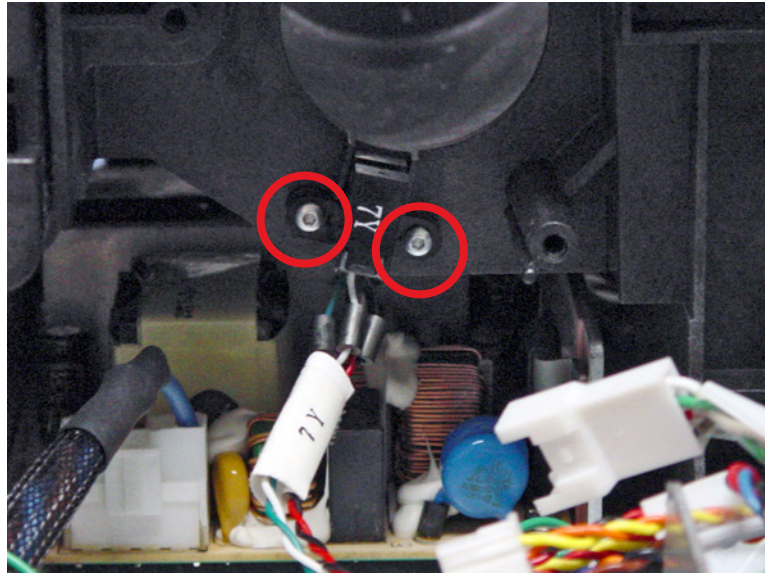
Step 4. Carefully remove the ribbon payout drive assembly.



Ribbon Payout Sensor

For replacement, use **Kit C/A Gap Sensor 105936G-018**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T6 driver, remove the two screws (circled below) holding the ribbon payout sensor in place.



- Step 2.** Disconnect the plug P13A.

- Step 3.** Remove the ribbon payout sensor.

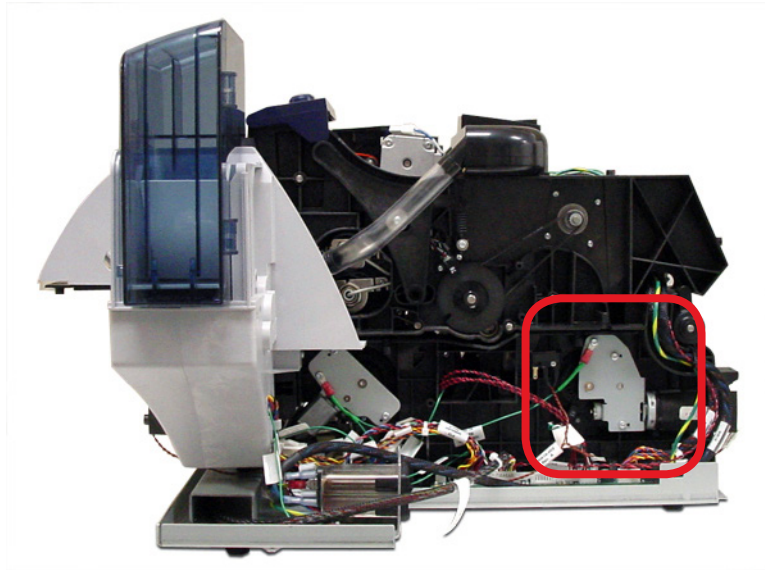


Ribbon Take-up Assembly

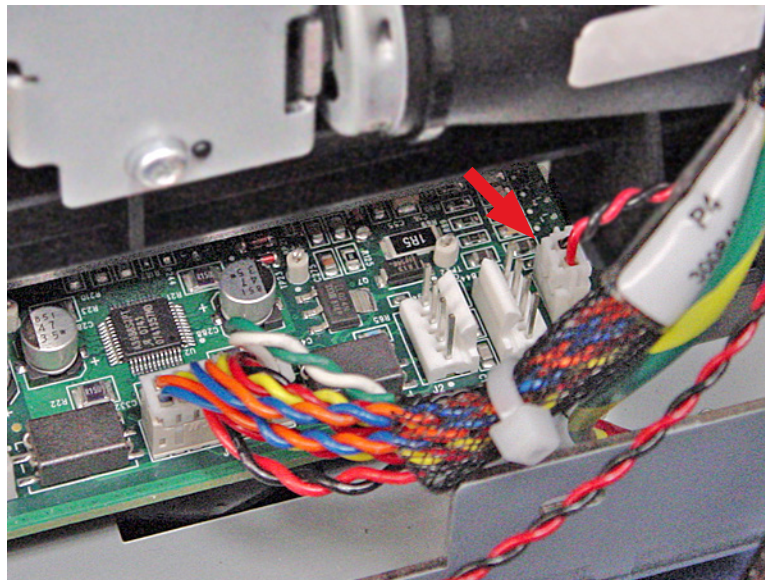
For replacement, use **Kit Ribbon Takeup Assembly 105936G-002**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

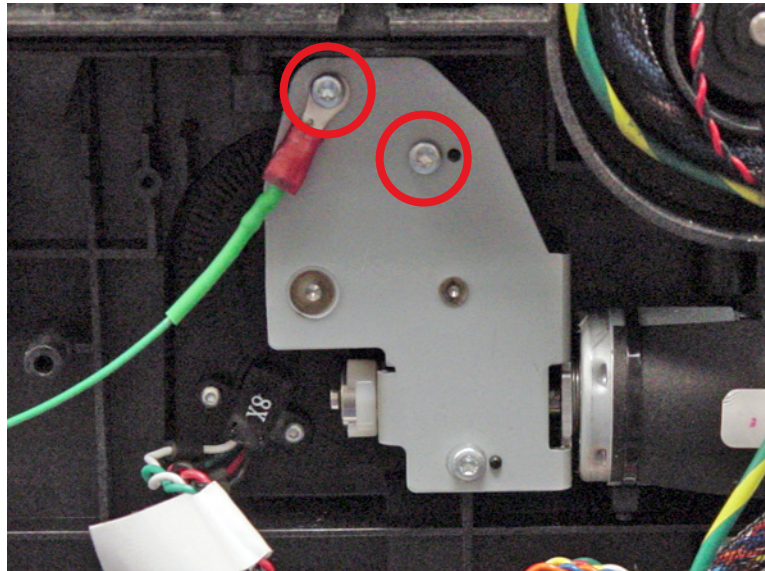
Step 1. Locate the ribbon take-up assembly.



Step 2. Disconnect the plug from J3 (arrow below).



Step 3. With a TORX T10 driver, remove the three screws (circled below) holding the ribbon take-up assembly in place.



Step 4. Carefully remove the ribbon take-up assembly.



Replacement

Replacement is performed by reversing the removal steps.

Tests and Adjustments

After replacing the ribbon takeup assembly, you will need to perform the ZMotif Service Partner Tool Ribbon Torque Calibration procedure.

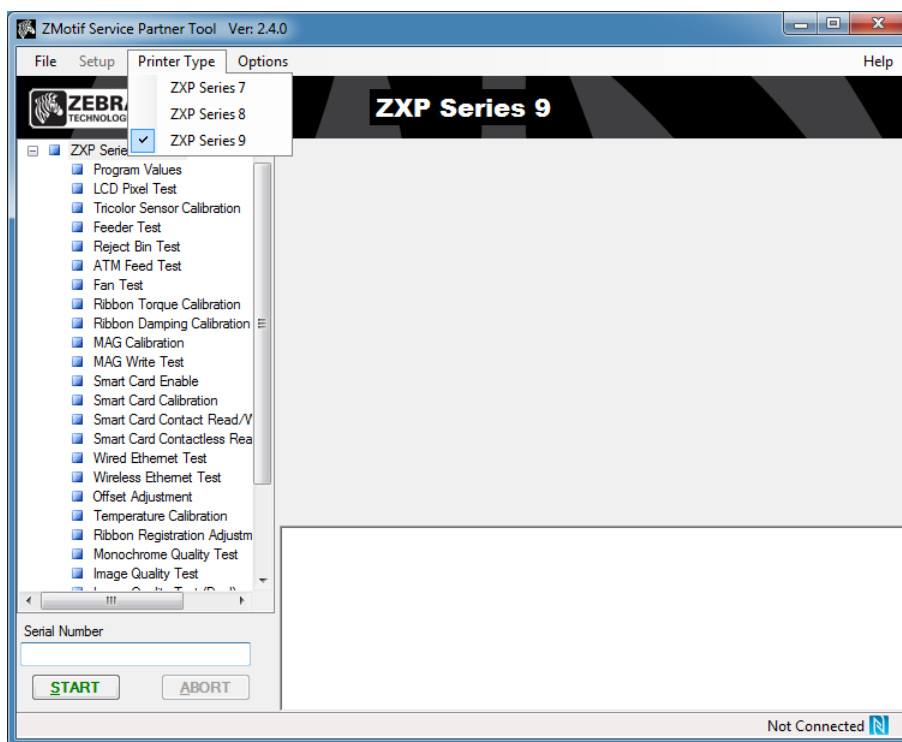


Note • The ZMotif Service Partner Tool only works through a USB connection to the printer.

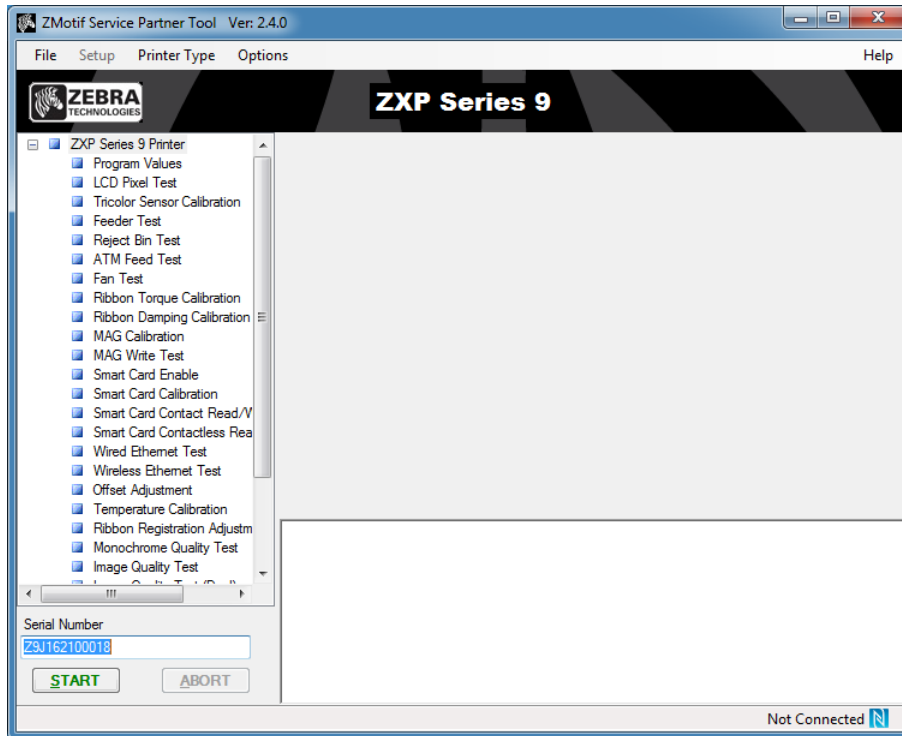
This procedure requires the **Torque Adjustment Tool 105936-46** (also part of the ZXP9 Repair Kit 105936-058). The kit consists of a low-torque fixture and a high-torque fixture; both fixtures should be calibrated once a day using the calibration turn table and each calibrated value should be printed on its associated fixture. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Launch the ZMotif Service Partner Tool.

Step 2. From the Printer Type menu, select **ZXP Series 9**.



- Step 3.** In the Serial Number field, enter the serial number of the printer, or press **ESC** and it will be entered automatically.



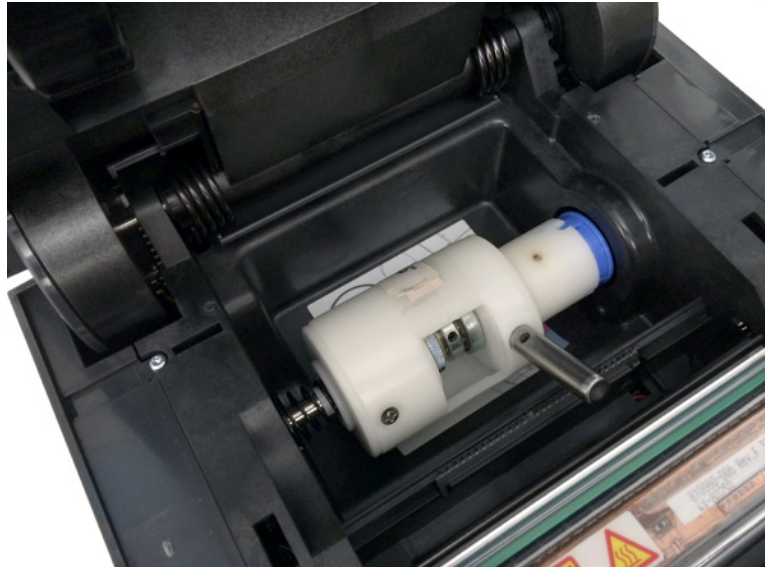
- Step 4.** Select Ribbon Torque Calibration and click **START**.
- Step 5.** You will be prompted to remove the ribbon and the transfer film.
- Step 6.** Enter the torque value printed on the Low Torque tool.
- Step 7.** Insert the Low Torque tool (as shown below) and close the printer door.



- Step 8.** Click **Continue**, the Calibration routine will begin.
- Step 9.** Open the printer door, and remove the Low Torque tool.

Step 10. Enter the value printed on the High Torque tool.

Step 11. Insert the High Torque tool (as shown below) and close the printer door.



Step 12. Click **Continue**, the Calibration routine will begin.

Step 13. Open the printer door and remove the High Torque tool from the printer.

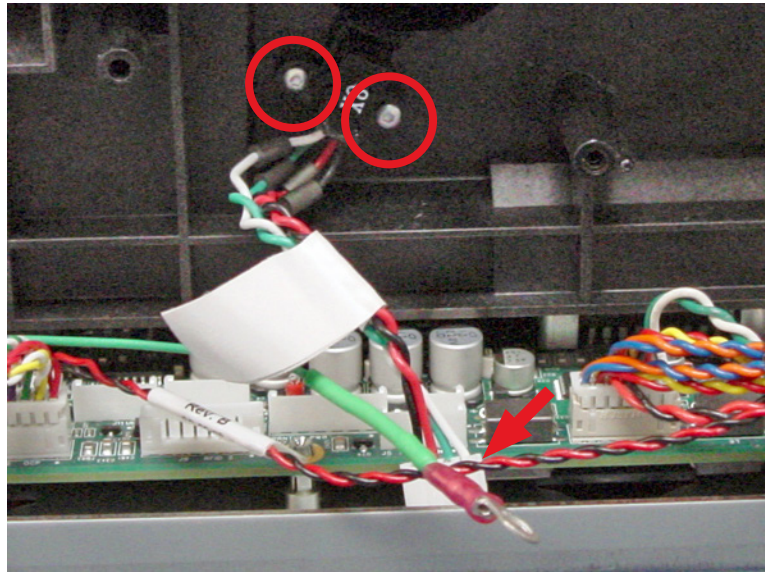
Step 14. Click **Continue**.

Step 15. Calibration is complete.

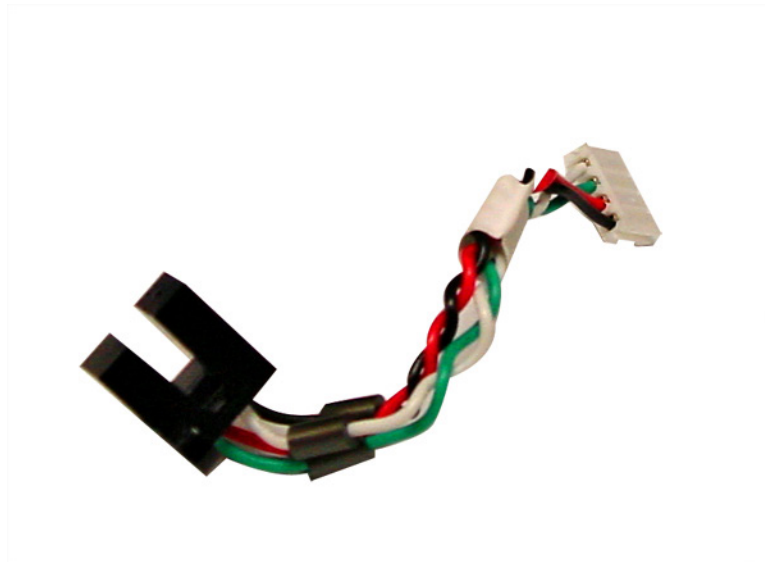
Ribbon Take-up Sensor

For replacement, use **Kit C/A Sensor Ribbon Takeup 105936G-030**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T6 driver, remove the two screws (circled below) holding the ribbon take-up sensor in place.
- Step 2.** Disconnect the plug at J5 (arrow below).



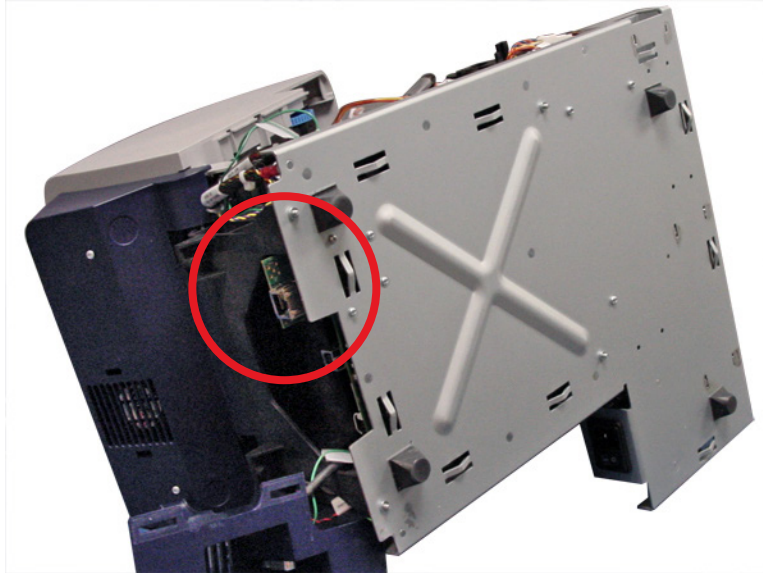
- Step 3.** Remove the ribbon take-up sensor.



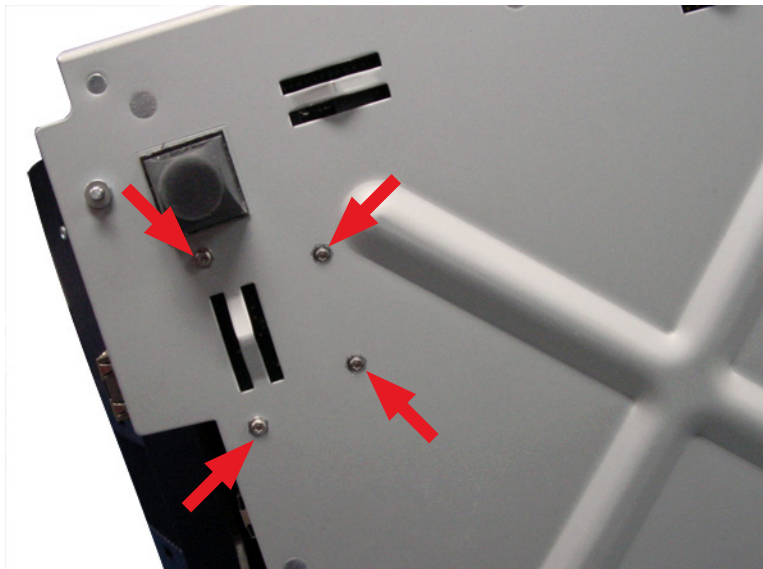
Ethernet or Wireless PCBA

For replacement, use **Kit PCBA Ethernet 105936G-055**; **Kit Wireless (US) 105936G-066**; **Kit Wireless (EMEA) 105936G-067**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

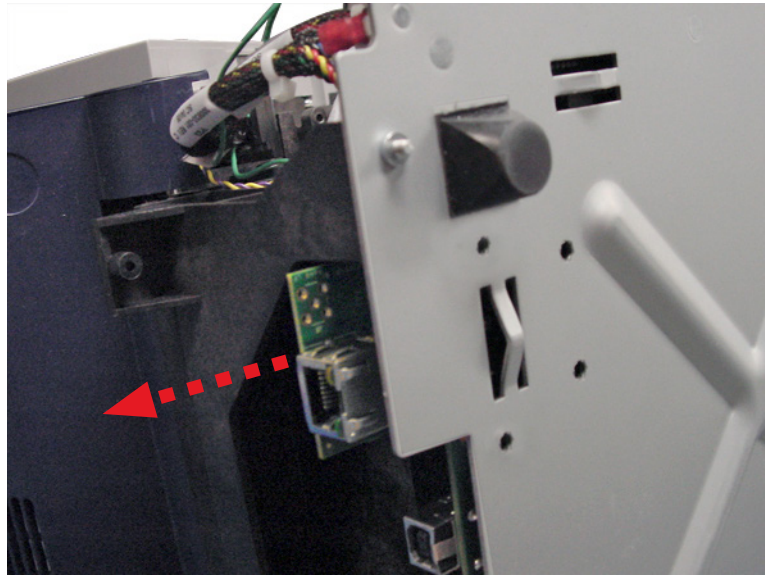
- Step 1.** Set the printer on its side with the PCBA visible (and accessible) from the rear of the printer; circled below.



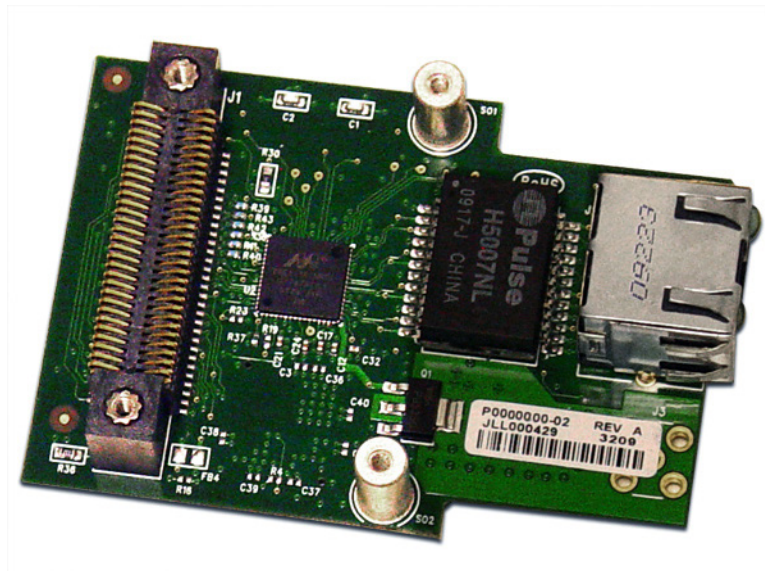
- Step 2.** With a TORX T6 driver, remove the four screws (arrows below) holding the PCBA in place.



Step 3. Slide the PCBA out of the printer.

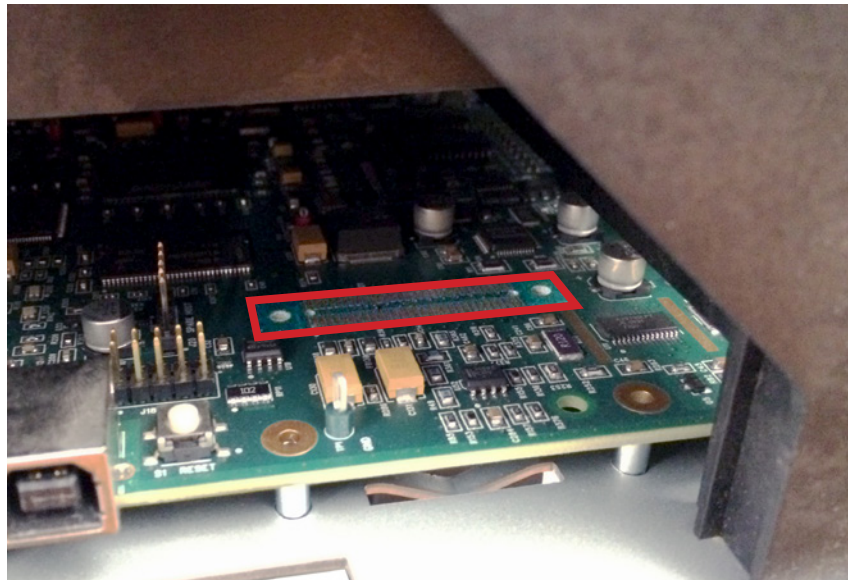


Step 4. Set the PCBA aside.

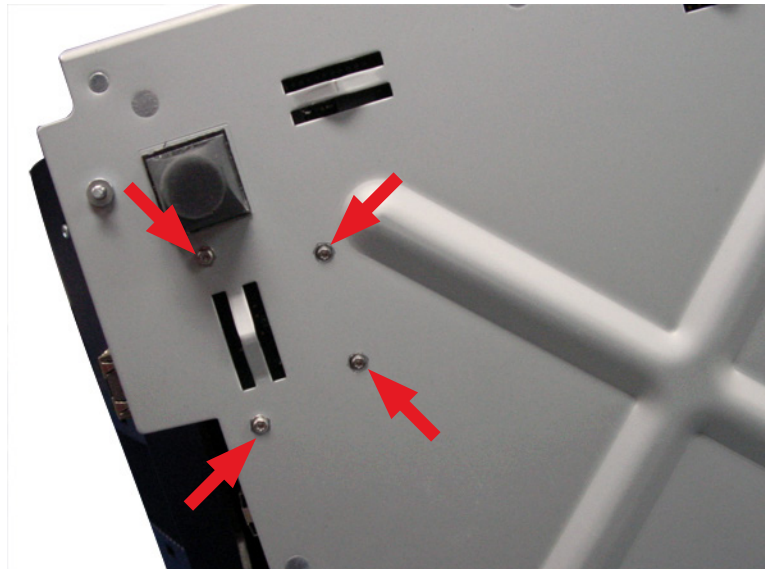


Replacement

- Step 1.** Place the wireless PCBA in place, making sure the contacts align with the main PCBA (outlined below).

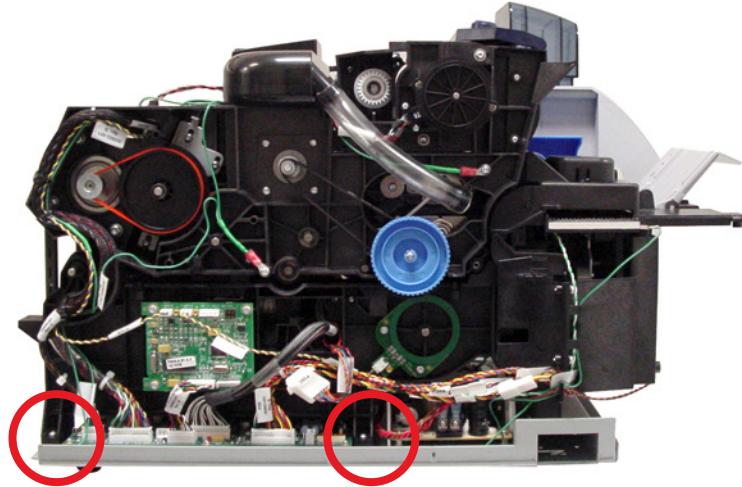


- Step 2.** Using a TORX T6 driver, secure the wireless PCBA with the four screws.

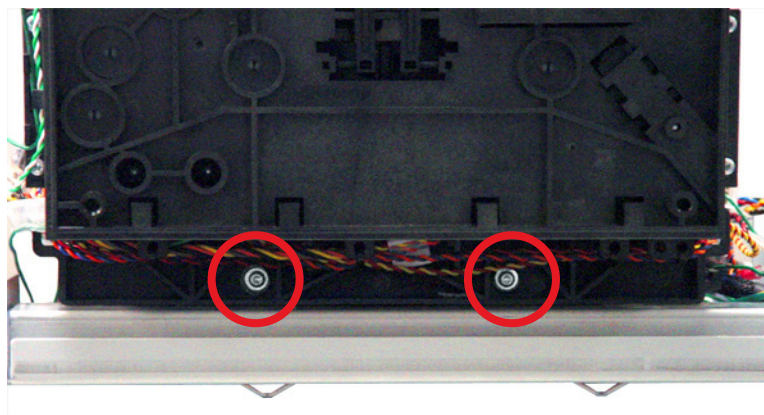


Print Engine (from Base Plate)

- Step 1.** From the left side of the printer, disconnect all connections (plugs and grounds) from the print engine to the main PCBA and base plate.
- Step 2.** With a TORX T10 driver, remove the two left-side screws (circled below) holding the print engine to the base plate.

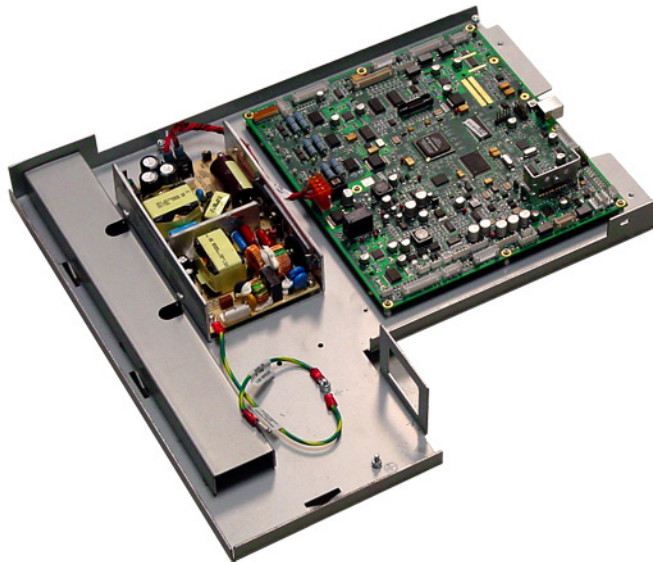
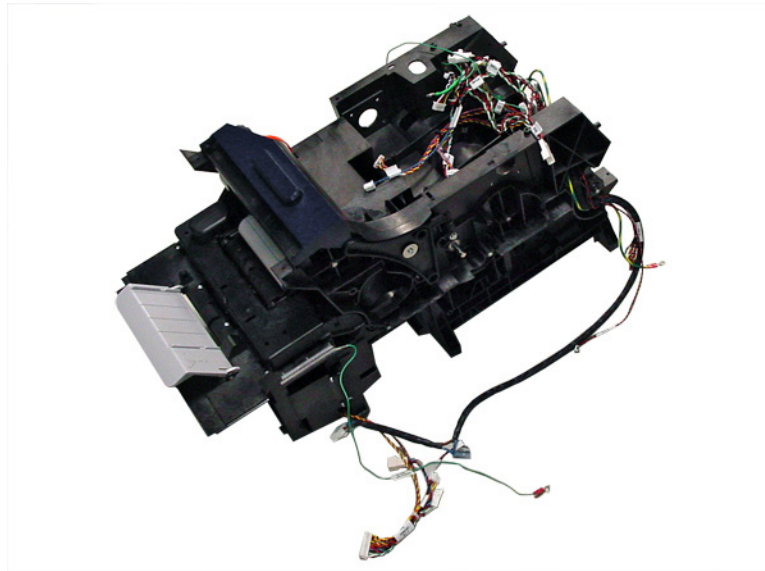


- Step 3.** From the right side of the printer, disconnect all connections (plugs and grounds) from the print engine to the main PCBA and base plate. Use a 5.5 mm hex driver to remove the three grounds.
- Step 4.** With a TORX T10 driver, remove the two right-side screws holding the print engine to the base plate.
- Step 5.** With a TORX T10 driver, remove the two front screws (circled below) holding the print engine to the base plate.



- Step 6.** Unplug the two EMI line filter connectors.

Step 7. Lift the print engine up and away from the base plate.



Main PCBA

For replacement, use **Kit Main Logic Board ZXP9 105936G-319**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

- Step 2.** Select the Device Information tab and click on **ZXP Toolbox**.

- Step 3.** From the Toolbox, select the Printer Configuration tab. From the Firmware and Settings menu, save the Printer settings by clicking **Save** (circled below).

The screenshot shows the Zebra ZXP Toolbox web interface. On the left is a sidebar with a 'TASKS' menu containing: Dashboard, Printer Configuration (highlighted), Encoding Settings, Calibrate, Tools & Utilities, Advanced Settings, and Security. The main content area is titled 'Zebra ZXP Series 9 Network Card Printer' and shows IP Address 10.1.25.135 and Serial No 000162100018. Below this are tabs for FIRMWARE AND SETTINGS (selected), JOB LOG, WIRED NETWORK, and WIRELESS NETWORK. The 'FIRMWARE AND SETTINGS' tab has sections for 'Update Firmware' (with a 'Browse...' button), 'Operator Control Panel' (with a 'Language' dropdown set to 'English' and an 'LCD contrast' slider at 35), and 'Print Performance' (with an 'Error recovery mode' dropdown set to 'Standard error recovery (Medium)'). To the right of these are 'Save/Restore' buttons: 'Printer settings' (with 'Load' and 'Save' buttons, where 'Save' is circled in red), and 'Driver settings' (with 'Load' and 'Save' buttons). At the bottom are three buttons: 'Print Preferences...', 'Restore Defaults', and 'Save Settings'.

- Step 4.** Enter a file name and click **Save**. The Printer Settings are saved as an XML file.

Removal

This procedure requires the **PCBA Removal Tool 105936-056** (also part of the ZXP9 Repair Kit 105936-058). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

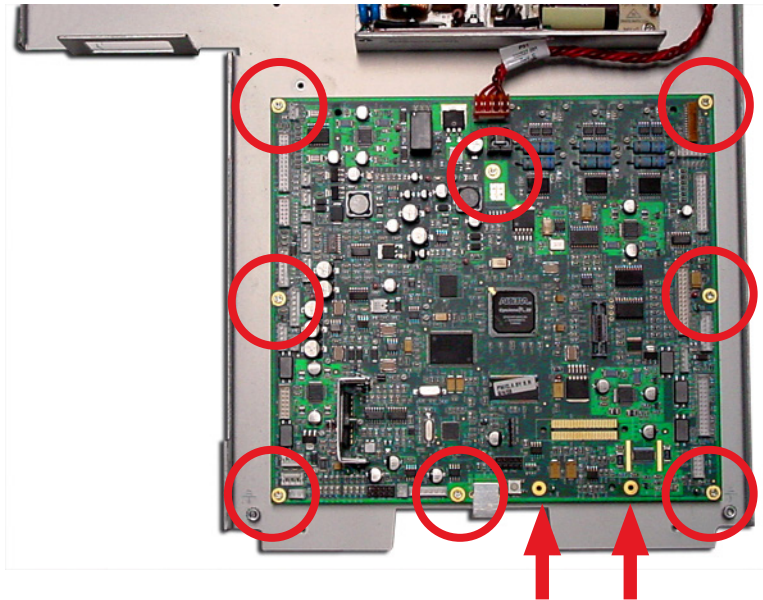
Step 1. Disconnect power plug P31.



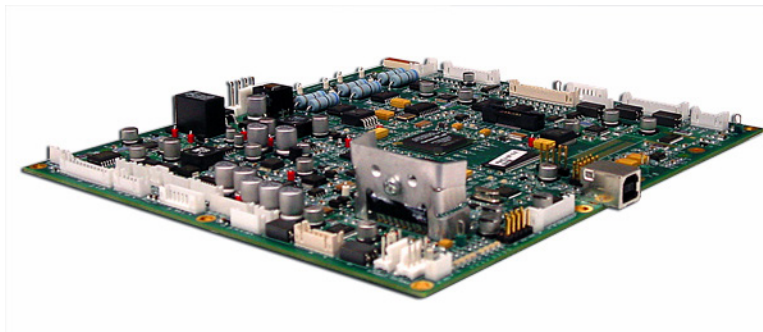
Caution • When releasing the eight pressure snaps, be careful not to bend the main PCBA.

Step 2. With the PCBA removal tool, release the eight pressure snaps (circled below) holding the main PCBA in place.

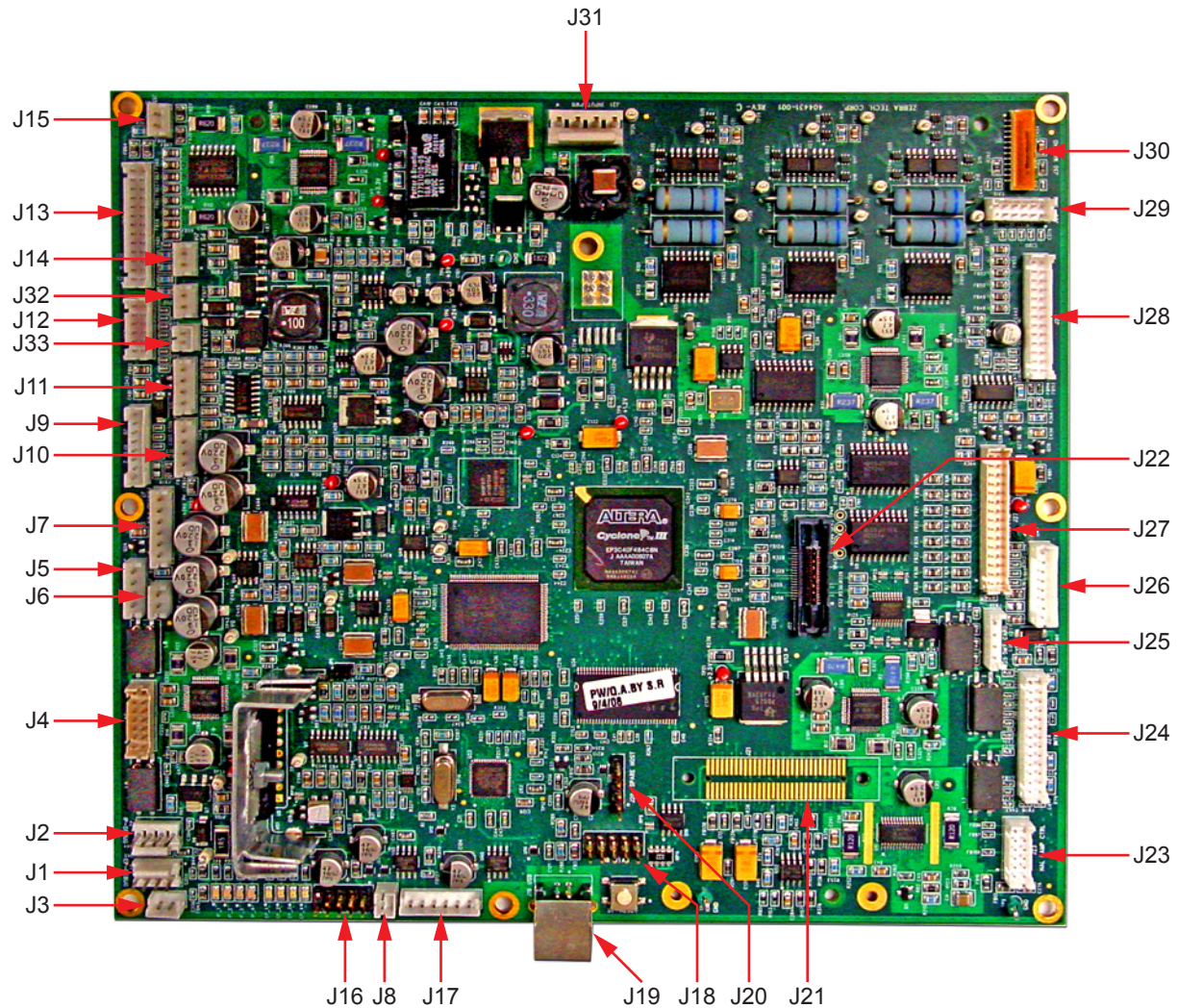
Step 3. With a TORX T6 driver, remove the two screws (arrows below) holding the PCBA to the base plate.



Step 4. Remove the main PCBA.



Main PCBA Connections



Connector	PCBA ID	Functional Description
J1	EP-DEBUG	Debug/Development ONLY
J2	IP-DEBUG	Debug/Development ONLY
J3	RTU	Ribbon Take-up Motor
J4	-	(P4A) Transfer Roller Motor, (P4B) Transfer Fan, (P4C) Head Lift Motor, (P4D) Head Lift Sensor
J5	PH TU ENC	Printhead Take Up Encoder Sensor
J6	DOOR	Cover Switch
J7	PRNTHD PWR	Printhead Power
J8	-	Smart Card Option (J2 on Smart Card) RF Enable
J9	RFID 2	Future Use
J10	US ATH	User Authentication
J11	UHF	UHF Module Communication
J12	OCP	Operator Control Panel
J13	-	(P13A) Ribbon P.O. Sensor, (P13B) Card Feeder Sensor, (P13C) Ribbon P.O. Motor, (P13D) Card X Motor, (P13E) Card Infeed Motor
J14	PS FAN	Rear Exhaust Fan
J15	SPARE	Future Use
J16	DUAL HOST	2 Port 2.0 USB Hub
J17	RF CONTACTLESS	Smart Card Option (J1 on Smart Card) USB Communication to contactless encoder
J18	JTAG	Debug/Development ONLY
J19	USB	USB 2.0 Connector
J20	SPARE HOST	Spare USB
J21	-	Ethernet Daughter Card Contact
J22	-	Debug/Development ONLY
J23	HAL LAMP CTRL	Halogen Lamp Board Communication
J24	INTM	(P24A) INTM Lower Sensor, (P24B) INTM Bezel Sensor, (P24C) INTM T.U. Sensor, (P24D) INTM P.O. Motor, (P24E) INTM T.U. Motor, (P24F) INTM T.U. Clutch
J25	SMT CARD	Smart Card Motor
J26	MEDIA AUTH	Media Authentication
J27	PHD DATA	Printhead Data
J28	-	(P28A) Card Edge Detector, (P28B) Card Edge Emitter, (P28C) Tri-Color, (P28D) Card Elevator Motor, (P28E) Card Y Motor
J29	LAM	Laminator Communication
J30	MAG HD	Magnetic Read/Write Head (ISO or JIS II)
J31	INPUT PWR	Input Power (24V)
J32	PHF	Printhead Fan
J33	BL FAN	Flash Blower Fan

Replacement

Replacement is performed by reversing the removal steps.

Tests and Adjustments

Open the ZXP Toolbox

- Step 1.** Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

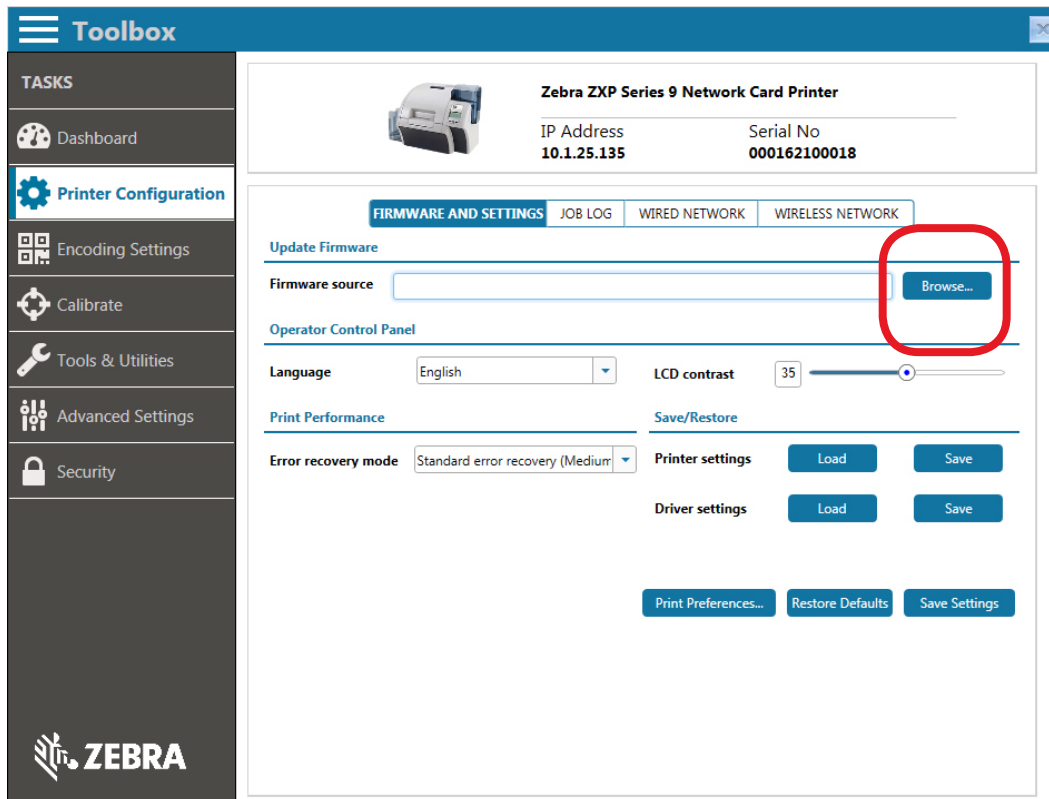
Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printer properties** from the pop-up menu.

- Step 2.** Select the Device Information tab and click on **ZXP Toolbox**.

Upgrade the Firmware

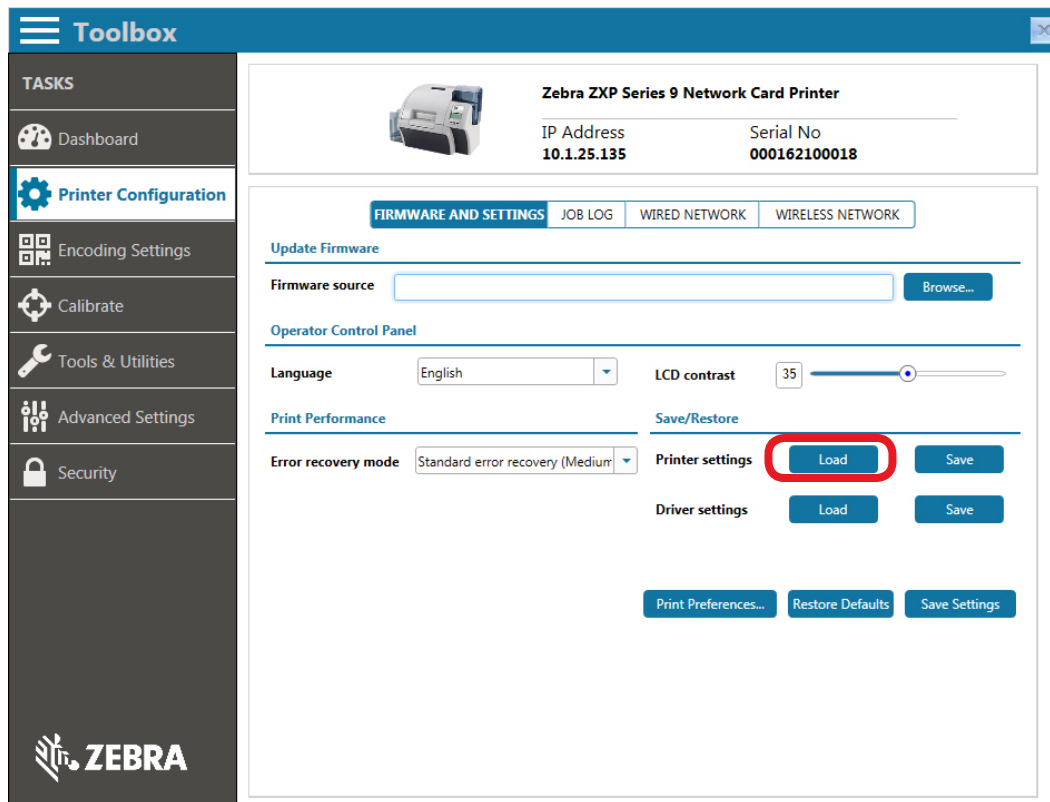
- Step 3.** Download the latest firmware. Go to www.zebra.com/zxp9-info.

- Step 4.** From the Toolbox, select the Printer Configuration tab. From the Firmware and Settings menu, click **Browse** (circled below) and navigate to the location where the firmware file is located.



Restore the Driver and Printer Settings

Step 5. From the Toolbox, select the Printer Configuration tab. From the Firmware and Settings menu, restore the printer settings by clicking **Load** (circled below).



Step 6. Select the printer settings file and click **Open**.

Step 7. Adjust Ribbon Torque—see “Tests and Adjustments” on page 302.

Step 8. Enter Printhead Resistance— see “Tests and Adjustments” on page 286.

Step 9. Reset the Serial Numbers (printer, laminator)

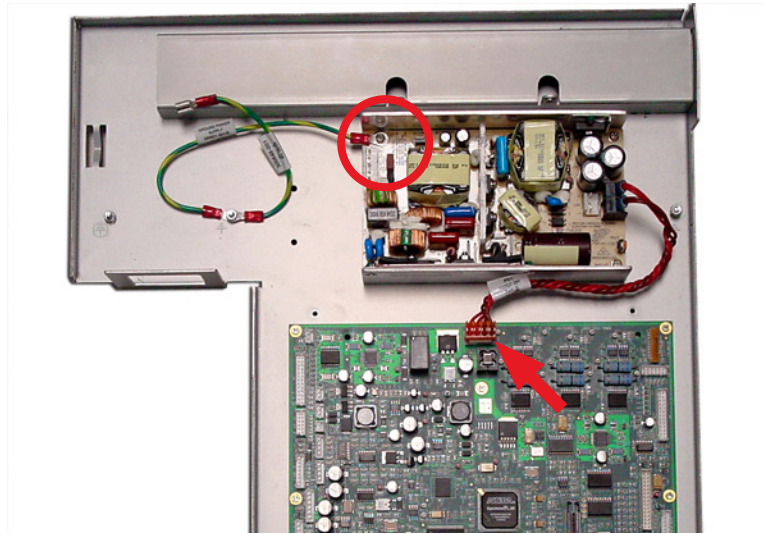
Step 10. Adjust Patch Length and Position

Power Supply (24V, 350W)

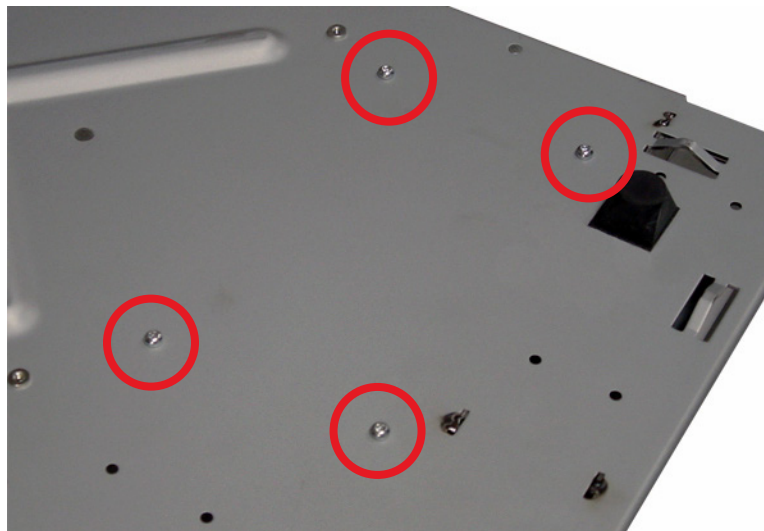
For replacement, use **Kit Power Supply 105936G-021**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

- Step 1.** With a TORX T10 driver, remove the screw (circled below) holding the ground wire; and—if not already done—disconnect P31 (arrow below).



- Step 2.** Turn the base plate over (i.e., bottom side up).



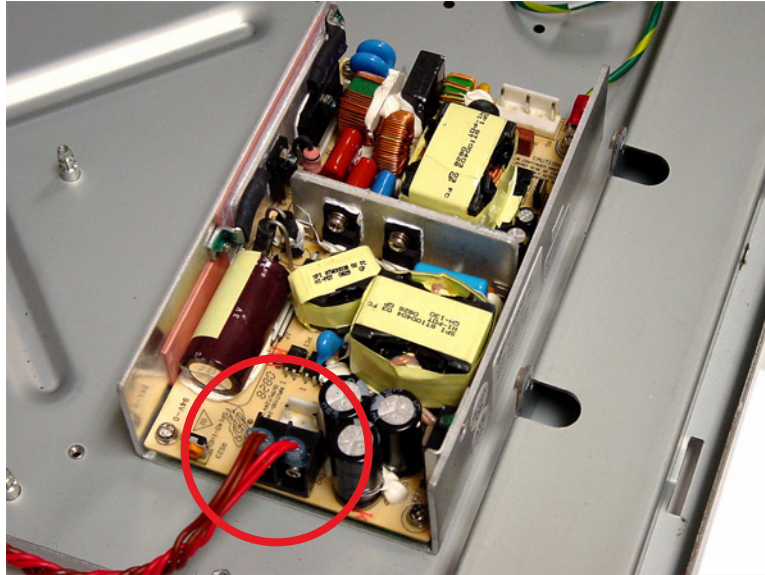
- Step 3.** With a TORX T10 driver, remove the four screws (circled above) holding the power supply to the base plate.

- Step 4.** Remove the power supply.

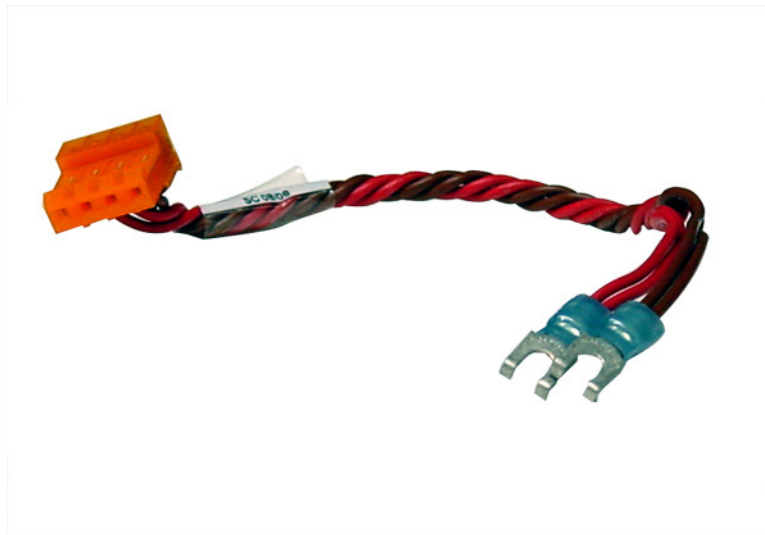


Caution • Note the polarity of the cable connections.

- Step 5.** With a TORX T10 driver, loosen the two screws (circled below), and disconnect the spade lugs.



- Step 6.** Remove the power cable.



Replacement

Replacement is performed by reversing the removal steps. Install the covers after you check the power supply (see [“Tests and Adjustments” on page 319](#)) on the left side of the Printer.

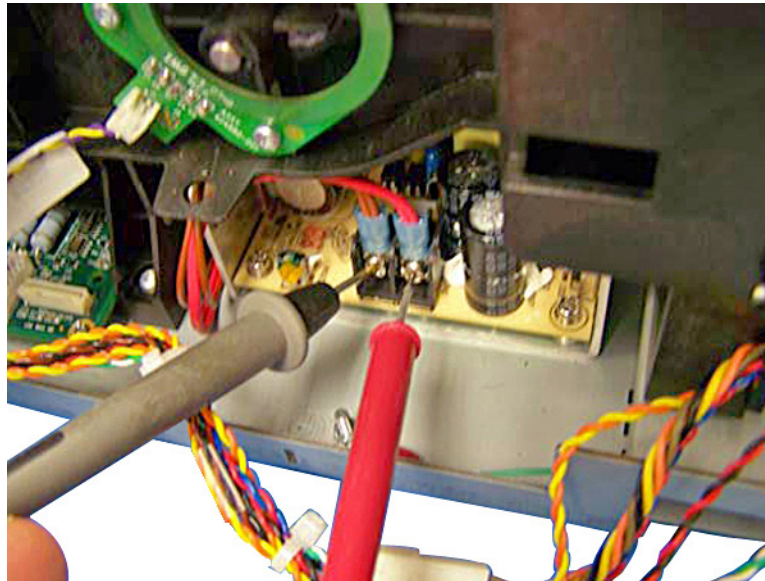
Tests and Adjustments

- Step 1.** Ensure the Printer is fully assembled, except for the covers.
- Step 2.** Install the color ribbon, transfer film, and loaded input hopper.
- Step 3.** Ensure the power switch is in the off position.
- Step 4.** Connect AC to the printer.



Electric Shock • Do not touch the power supply board or the main PCBA. Use extreme caution when working near exposed terminals on the power supply.

- Step 5.** Turn power ON.
- Step 6.** With a multimeter in the VDC mode, attach the negative black probe to the brown-wire terminal; and attach the positive red probe to the red-wire terminal (both terminals circled below).



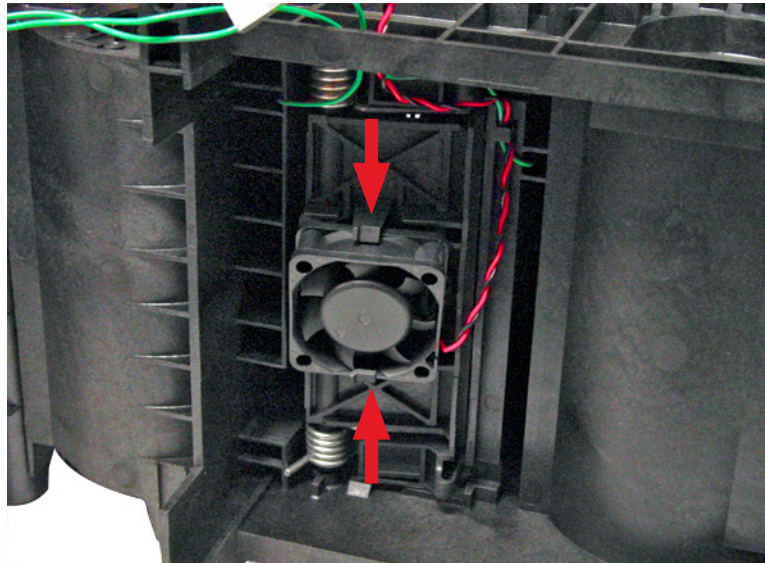
- Step 7.** With a small flat-blade screwdriver, adjust the pot screw (arrow above) until the voltage reads 24 (± 0.2) VDC on the multimeter. Note that turning the pot screw clockwise increases the voltage and vice versa.

Printhead Fan

For replacement, use **Kit Printhead Fan 105936G-022**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. To access the fan, turn the printer on its side.

Step 2. Lift the two locking tabs (arrows below) to free the printhead fan.



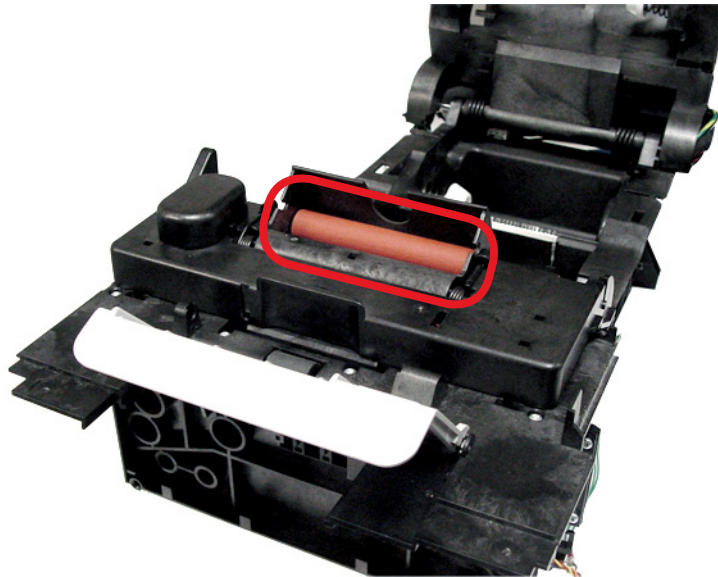
Step 3. Remove the printhead fan.



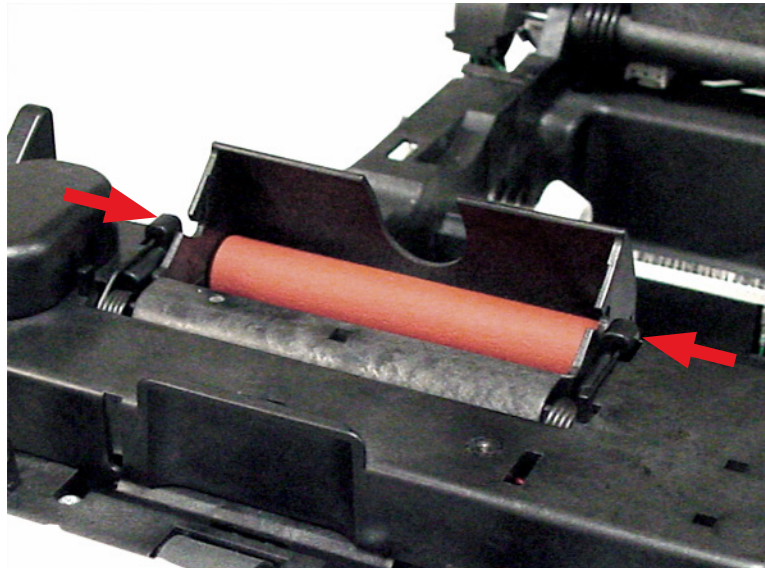
Y-Roller

For replacement, use **Kit Y Roller 105936G-036**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

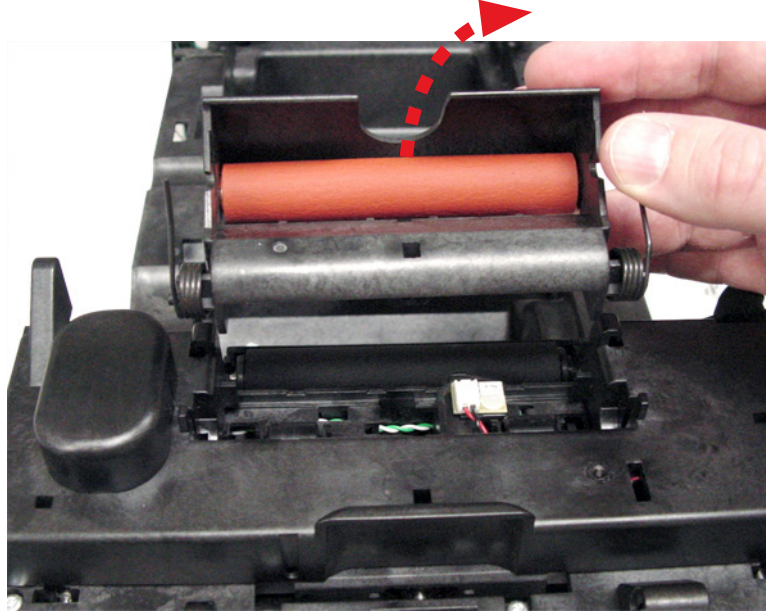
Step 1. Locate the y-roller assembly (circled below).



Step 2. Release the two torsion springs (arrows below).



Step 3. Lift the y-roller assembly up and out of the printer.



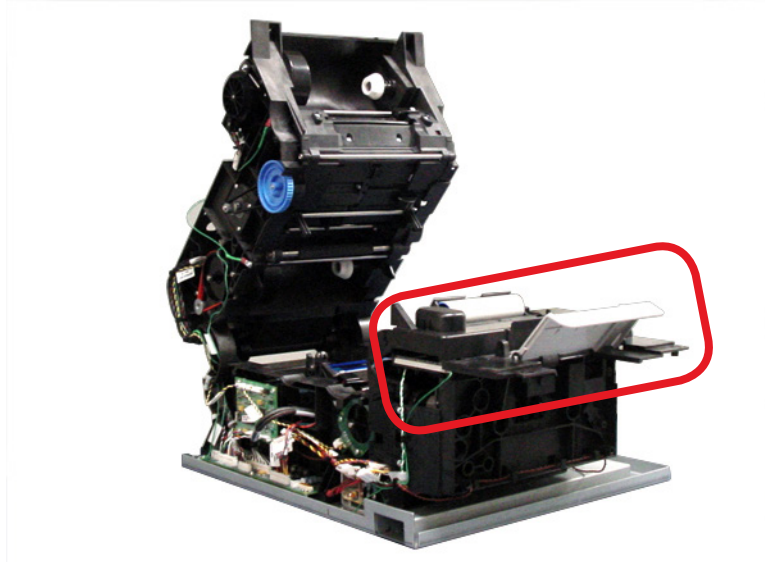
Step 4. Set the y-roller assembly aside.



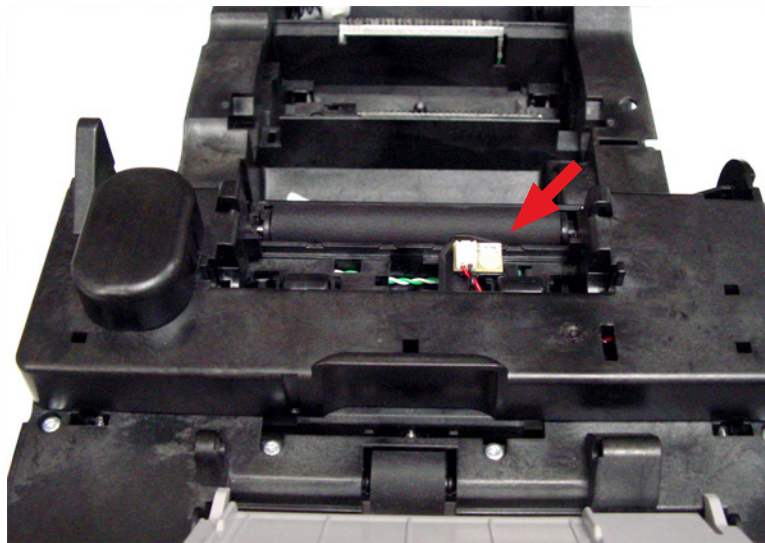
Idler Cover

For replacement, use **Kit Idler Cover 105936G-014**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

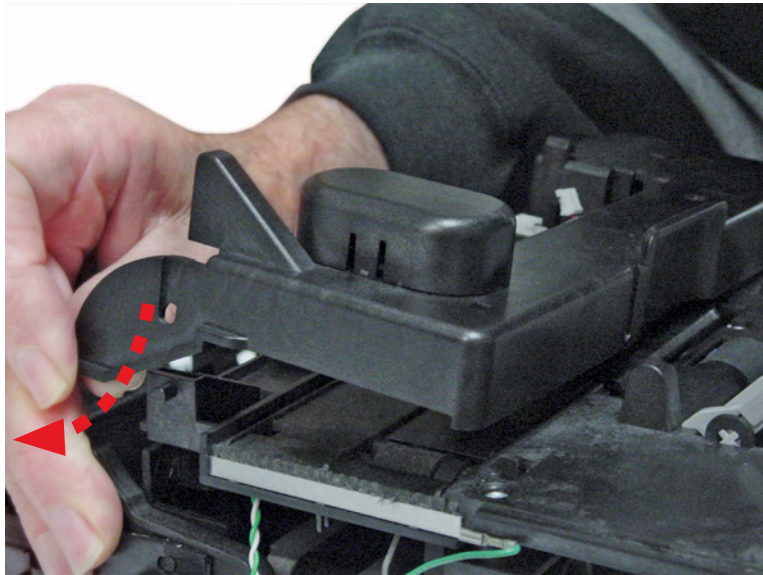
Step 1. Locate the idler cover (circled below).



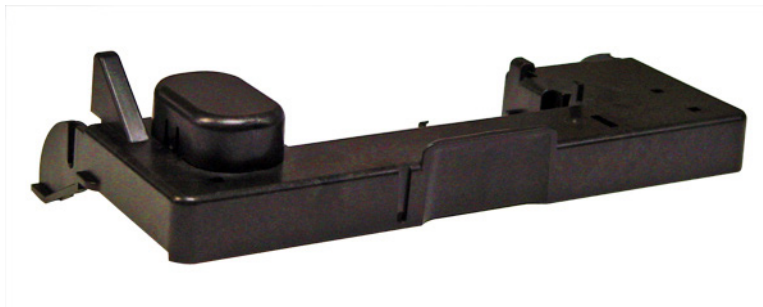
Step 2. Disconnect the plug to the card detector emitter (arrow below).



Step 3. Press outward on the tabs to release the idler cover from the pivot pins.



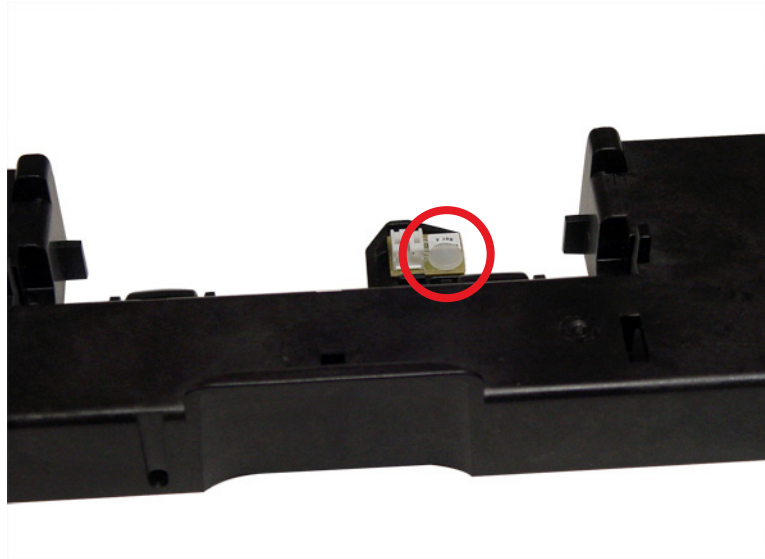
Step 4. Remove the idler cover. Note that you will need to separate the cable from the cover.



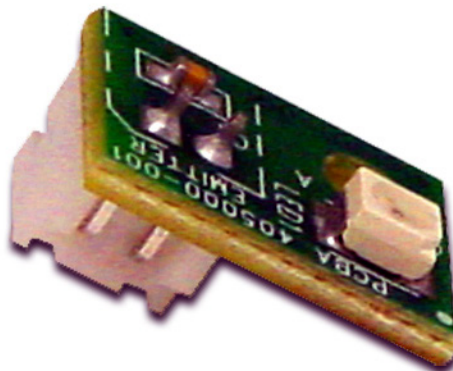
Card Detect Emitter

For replacement, use **Kit Card Detect Emitter 105936G-315**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Remove the plastic pin holding the card detect emitter (circled below) to the idler cover.



- Step 2.** Remove the card detect emitter.

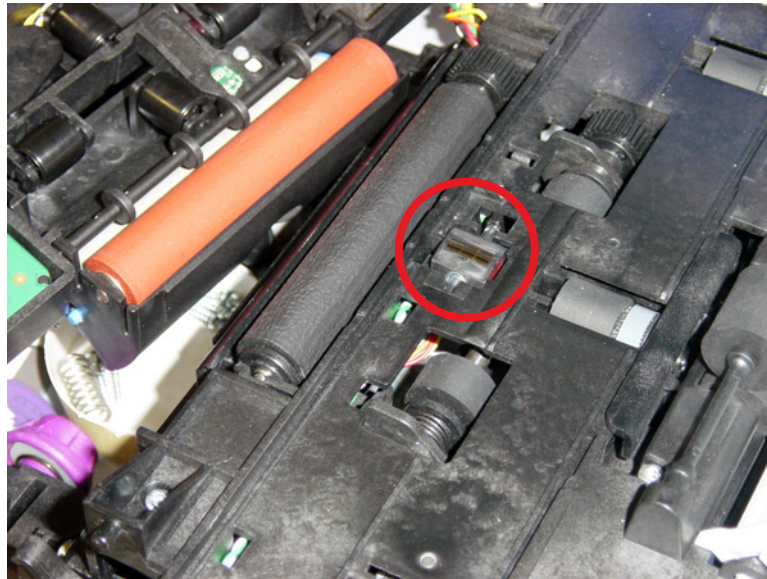


Mag Encoder

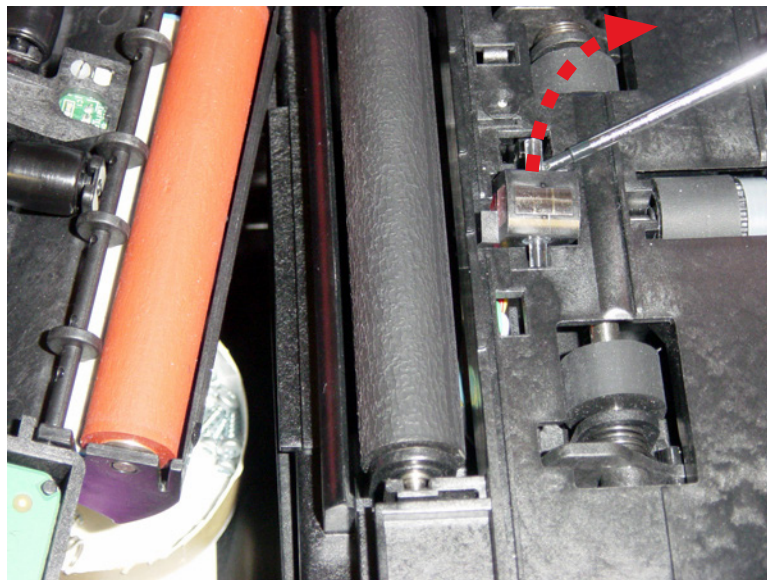
For replacement, use **Kit Mag Encoder 105936G-043**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

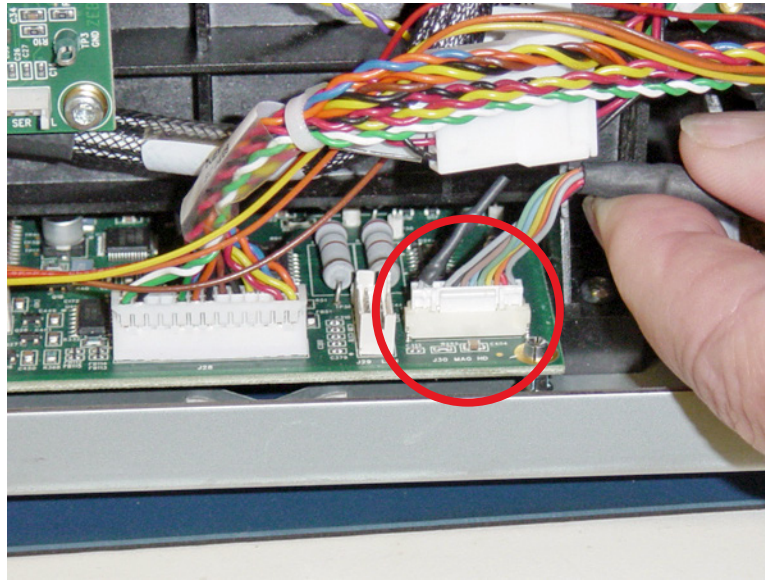
- Step 1.** Lift the idler cover, and locate the mag encoder (circled below). For easier access to the mag encoder, you may want to release the idler cover from the pivot pins.



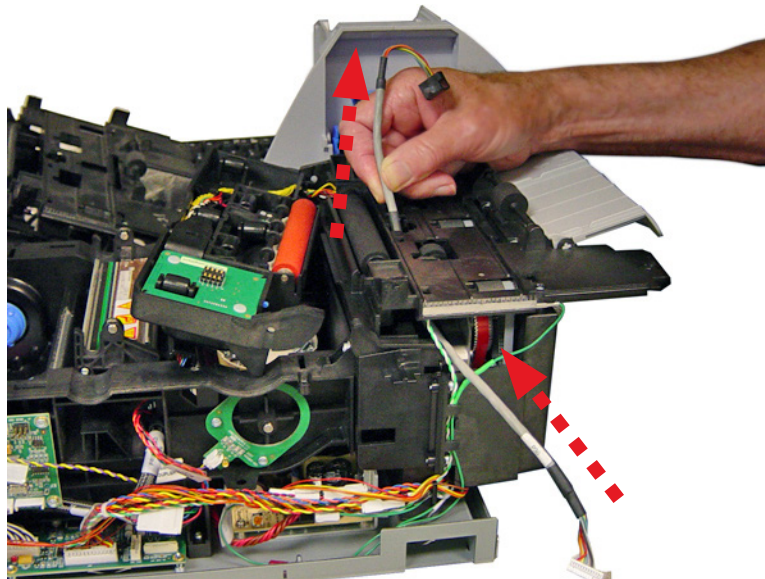
- Step 2.** With a small flat-blade screwdriver, free the mag encoder head (arrow below)—it snaps into place.



Step 3. Disconnect mag encoder cable plug P30 from the main PCBA (circled below).



Step 4. Carefully pull the mag encoder cable through, and out of, the card transport assembly.

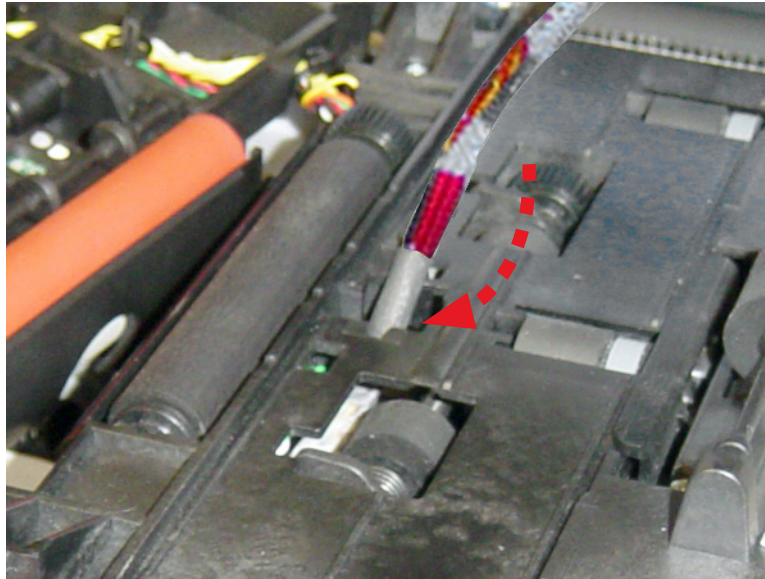


Step 5. Set the mag encoder aside.

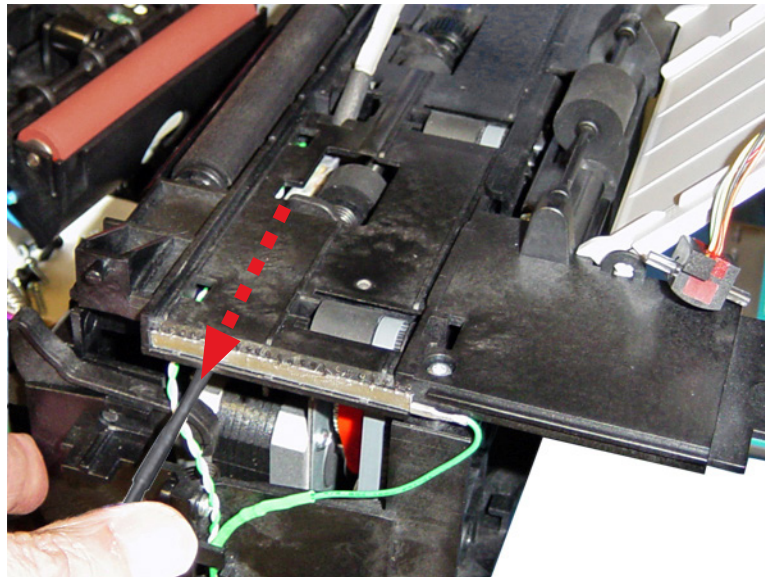
Replacement

This procedure requires the **Cable Routing Tool 105936-057** (also part of the ZXP9 Repair Kit 105936-058). Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

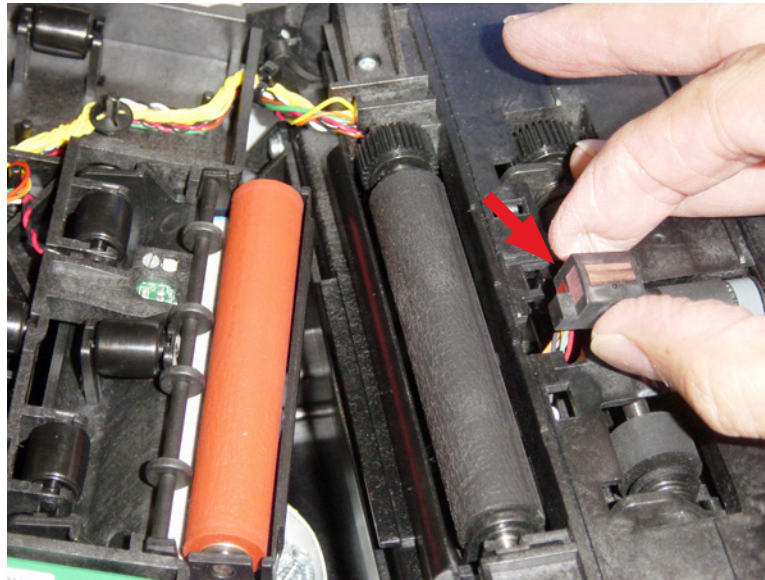
- Step 1.** Insert the connector end of the mag encoder into the mag head mounting hole (arrow below).



- Step 2.** Carefully pull the mag encoder cable through the card transport assembly.

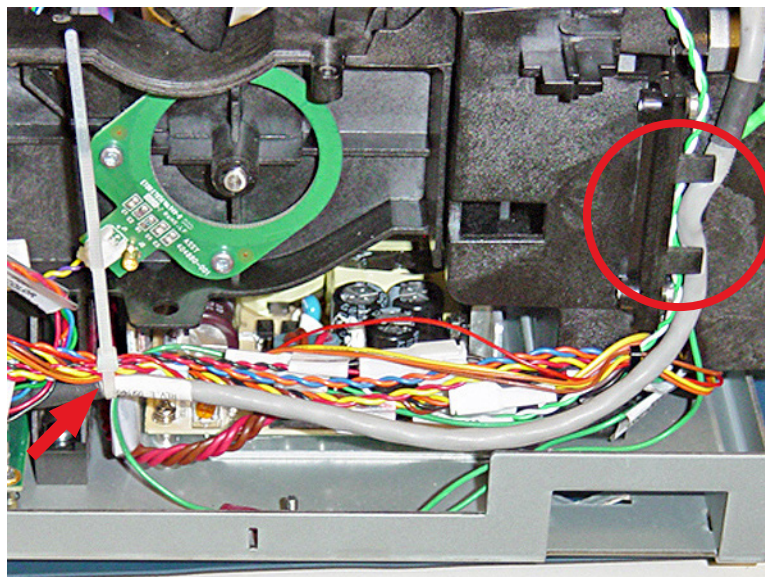


Step 3. Snap the mag encoder in place.

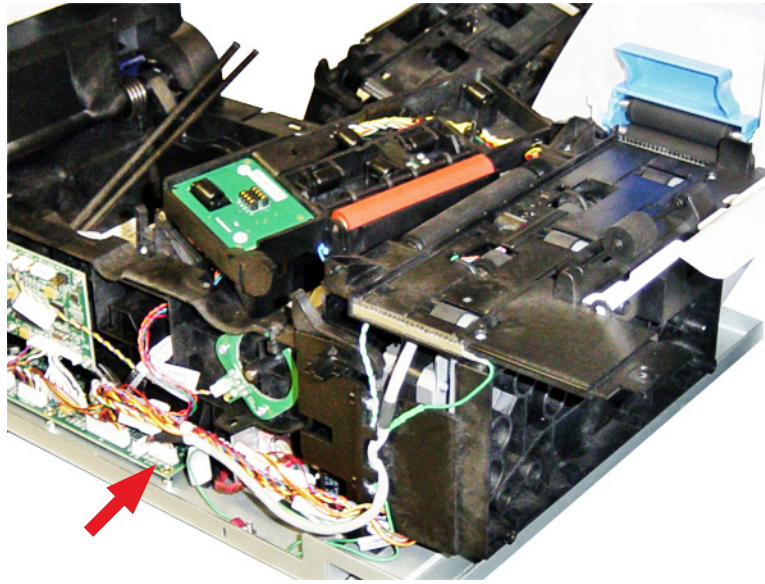


Step 4. Route the mag encoder cable under the cable clips (circle below).

Step 5. Secure the mag encoder cable to adjacent wiring (arrow below) using a zip tie.



Step 6. Connect mag encoder cable plug P30 to the main PCBA (arrow below).



Test and Adjustment

After replacing the mag encoder, you will need to perform the ZMotif Service Partner Tool Mag Calibration, and Mag Write Test procedures.

You will need five (5) PCV HiCo Mag Cards for this procedure.

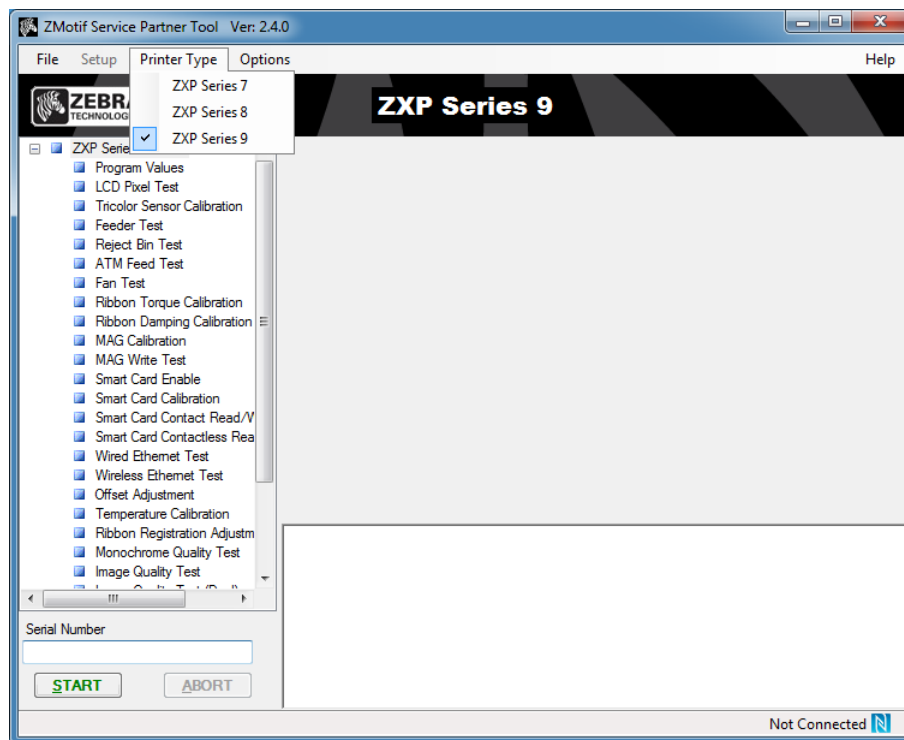


Note • The ZMotif Service Partner Tool only works through a USB connection to the printer.

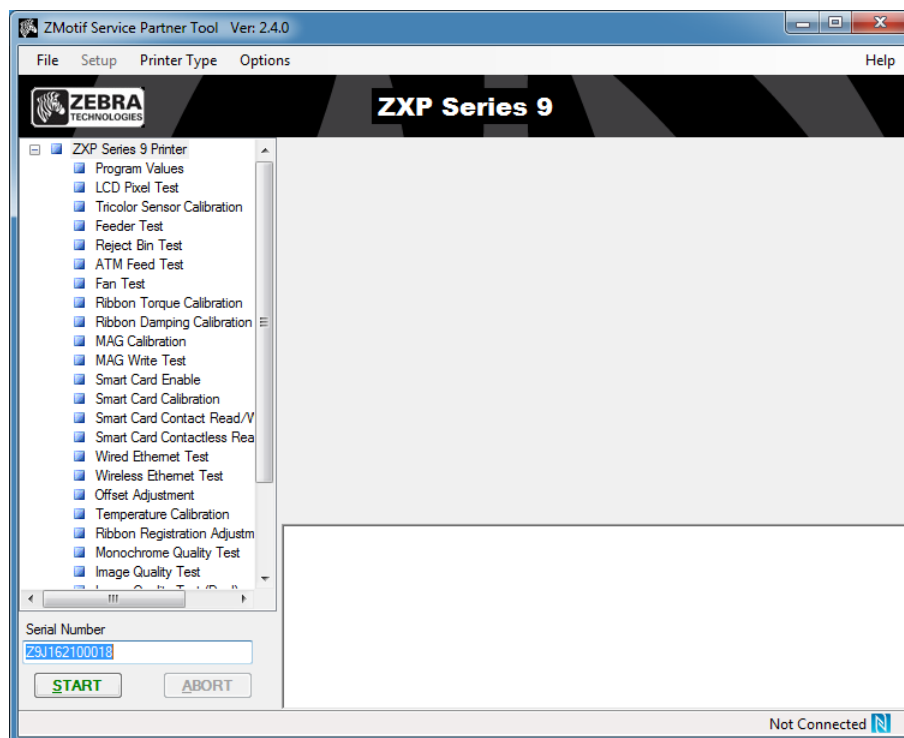
Step 1. Ensure that the printer is fully functional (i.e., ready, with the print ribbon and the transfer ribbon (InTM) installed).

Step 2. Launch the ZMotif Service Partner Tool.

Step 3. From the Printer Type menu, select **ZXP Series 9**.




Step 4. In the Serial Number field, enter the serial number of the printer, or press **ESC** and it will be entered automatically.



Step 5. Select the Mag Calibration test and click **START**.

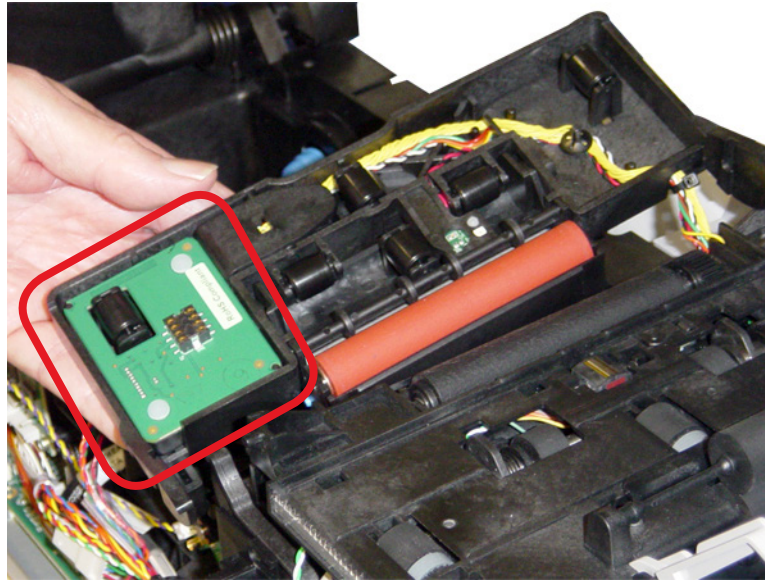
Step 6. Follow the on-screen instructions.

- Step 7.** If the test finishes successfully, the Tool will return a **TEST PASS**.
- Step 8.** If the test is not successful, the Tool will return an **TEST FAIL**. If this happens, run the test again. If the test continues to fail, check the mag encoder and run the test again. If the test continues to fail, replace the mag encoder.
- Step 9.** Select the Mag Write Test and click .
- Step 10.** Follow the on-screen instructions.
- Step 11.** If the test finishes successfully, the Tool will return a **TEST PASS**.
- Step 12.** If the test is not successful, the Tool will return an **TEST FAIL**. If this happens, run the test again. If the test continues to fail, check the mag encoder and run the test again. If the test continues to fail, replace the mag encoder.

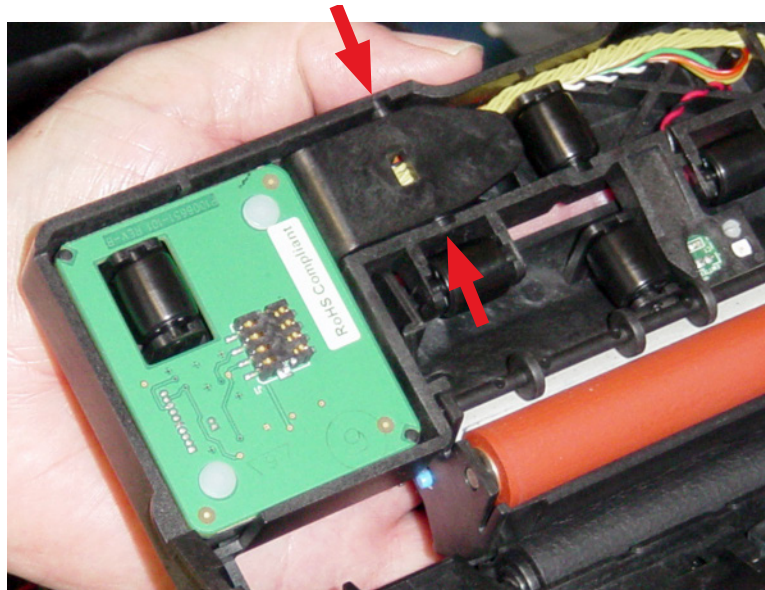
Contact Station PCBA

For replacement, use **Kit PCBA Contact Stn 105936G-044**. For the contact station upgrade, use **Kit Upgrade Contact Station with Mifare ZXP9 105936G-360** and refer to the instructions enclosed. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Lift the idler cover, and locate the contact station PCBA (circled below).

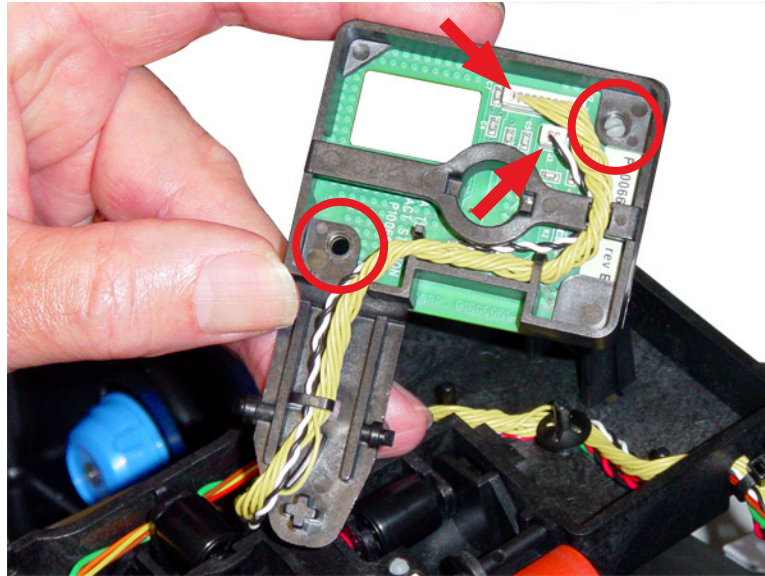


Step 2. Release the pivot pins (arrows below) holding the PCBA pivot assembly in place.

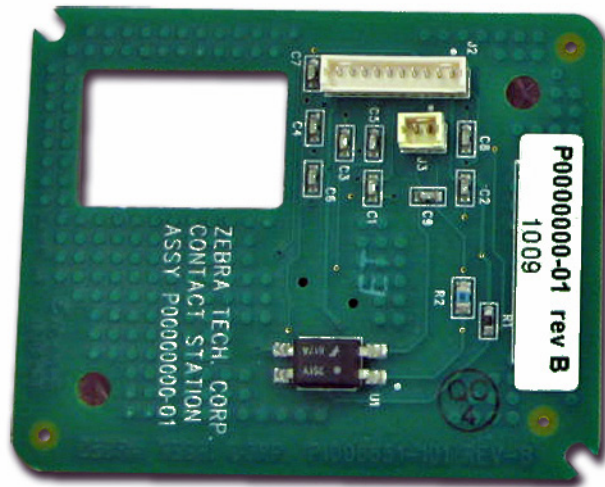


Step 3. With a blunt tool, press the two fasteners (circled below) to release the PCBA.

Step 4. Disconnect the two cables (arrows below).



Step 5. Remove the PCBA from the pivot assembly. Be particularly careful of the wires and wire routing features.

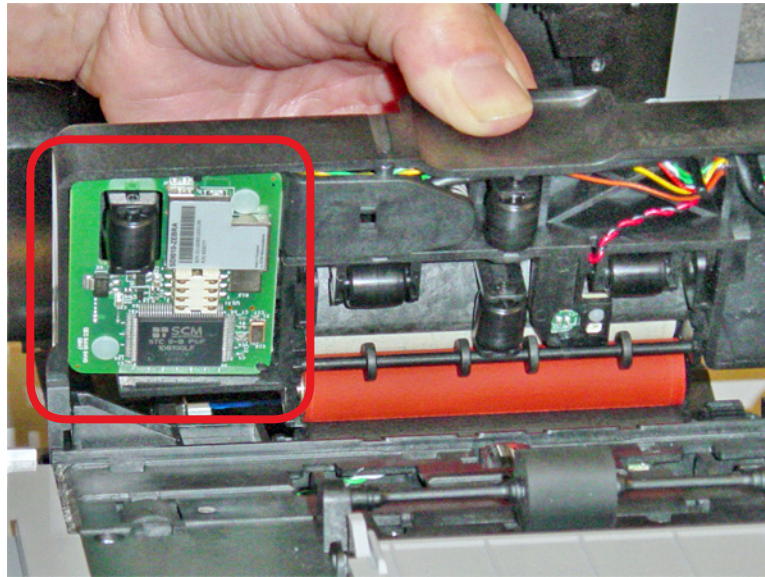


Contact Encoder + Contactless MIFARE PCBA

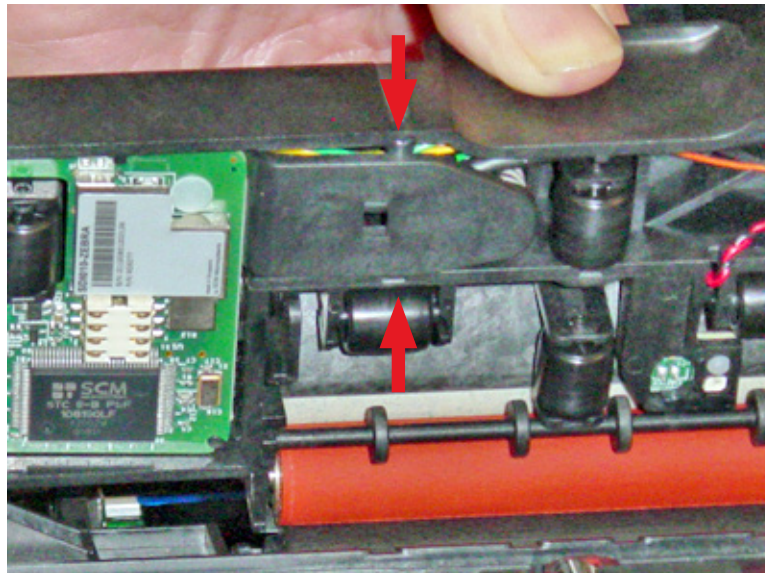
For replacement, use **Kit Contactless Encoder PCBA 105936G-045**. For the MIFARE upgrade, use **Kit Upgrade Contact Station with Mifare ZXP9 105936G-360** and refer to the instructions enclosed. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

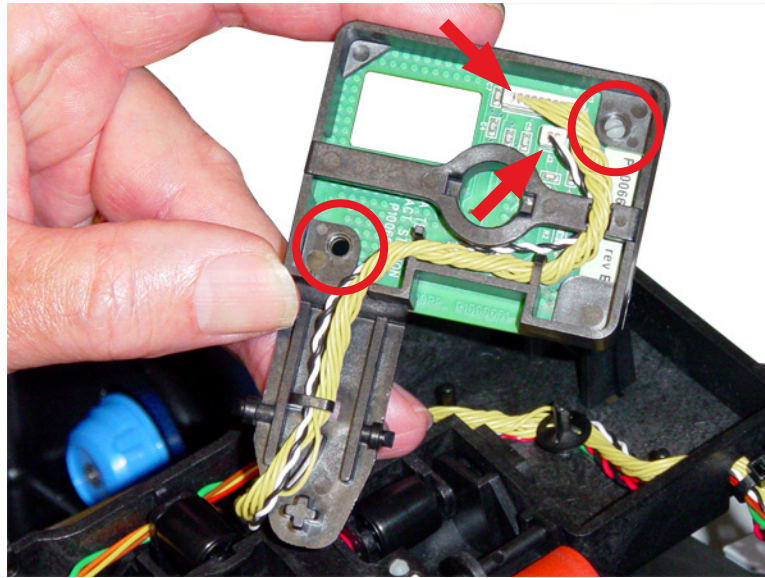
Step 1. Lift the idler cover, and locate the contactless PCBA (circled below).



Step 2. Release the pivot pins (arrows below) holding the PCBA pivot assembly in place.

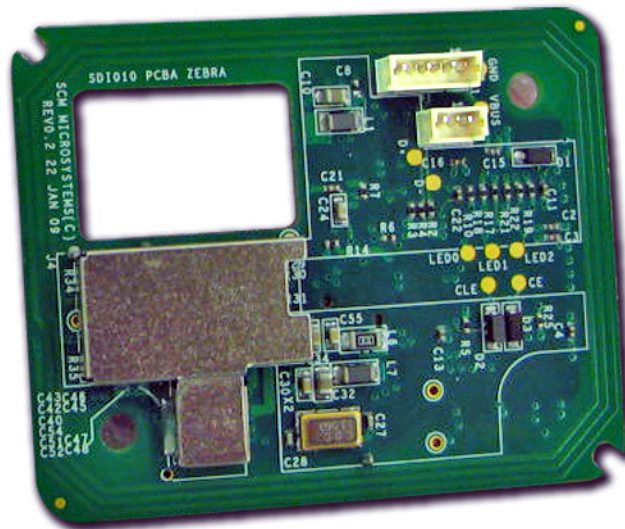


Step 3. With a blunt tool, press the two fasteners (circled below) to release the PCBA.



Step 4. Disconnect the two cable connectors (arrows above).

Step 5. Remove the PCBA from the pivot assembly. Be particularly careful of the wires and wire routing features.



Replacement

Replacement is performed by reversing the removal steps.

Test and Adjustment

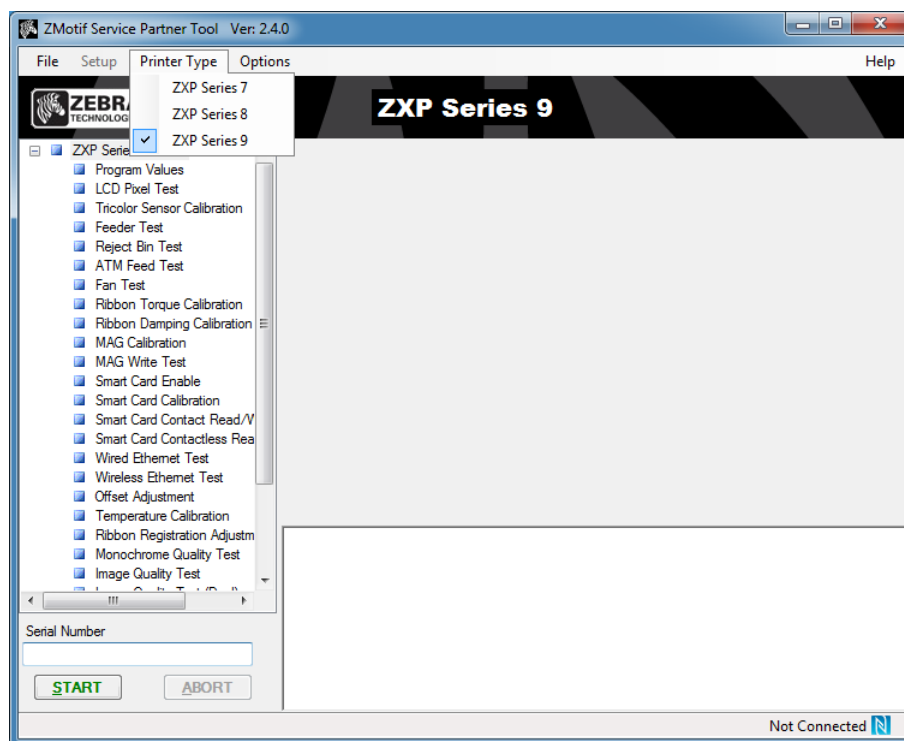
After replacing the contact station, you will need to perform the ZMotif Service Partner Tool Smart Card Enable, Smart Card Calibration, and Smart Card Contact Read/Write Test procedures.

You will need five (5) smart cards for this procedure.

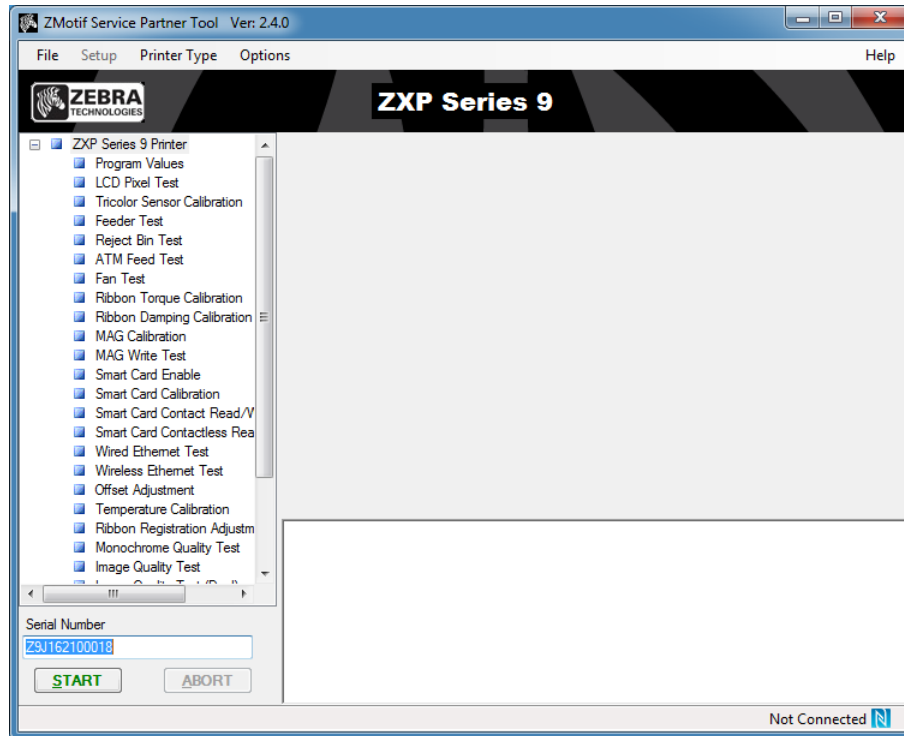


Note • The ZMotif Service Partner Tool only works through a USB connection to the printer.

- Step 1.** Ensure that the printer is fully functional (i.e., ready, with the print ribbon and the transfer ribbon (InTM) installed).
- Step 2.** Launch the ZMotif Service Partner Tool.
- Step 3.** From the Printer Type menu, select **ZXP Series 9**.



- Step 4.** In the Serial Number field, enter the serial number of the printer, or press **ESC** and it will be entered automatically.

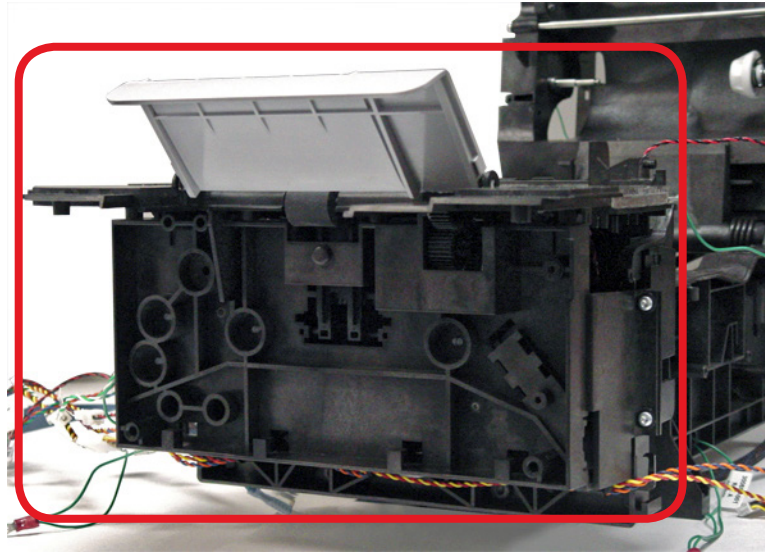


- Step 5.** Select Smart Card Enable and click **START**.
- Step 6.** Follow the on-screen instructions.
- Step 7.** If the test finishes successfully, the Tool will return a **TEST PASS**.
- Step 8.** If the test is not successful, the Tool will return an **TEST FAIL**. If this happens, run the test again. If the test continues to fail, check the smart card encoder and run the test again. If the test continues to fail, replace the smart card encoder.
- Step 9.** Run the remaining tests.

Card Transport Assembly

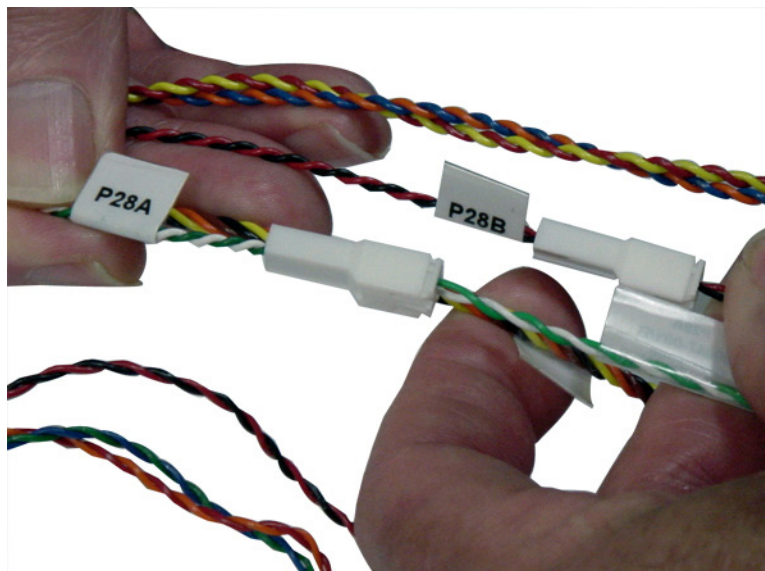
Note • This procedure uses Spare Kit # 105936G-329: KIT, ASSY, CARD TRANSPRT.

Step 1. Locate the card transport assembly.



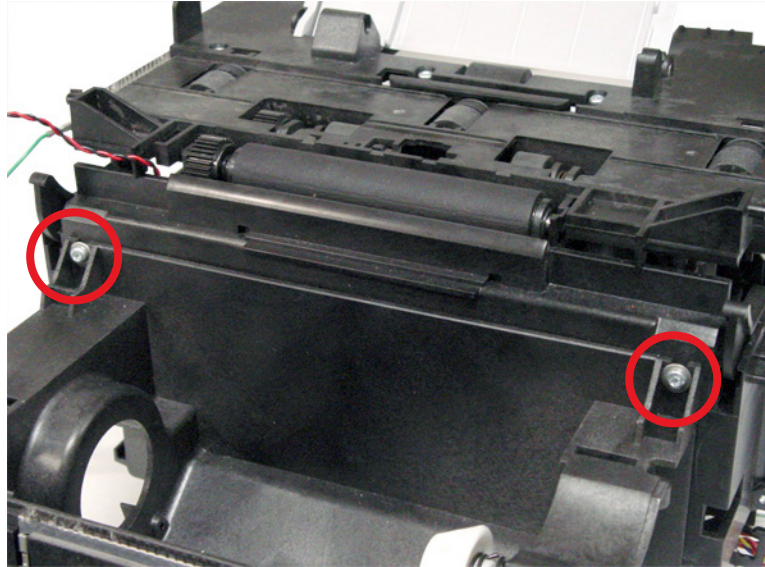
Step 2. If not already done, remove the two front screws holding the print engine to the base plate (see [“Print Engine \(from Base Plate\)”](#) on page 309).

Step 3. Disconnect P28A and P28B from the wiring harness, and cut the cable ties as required.



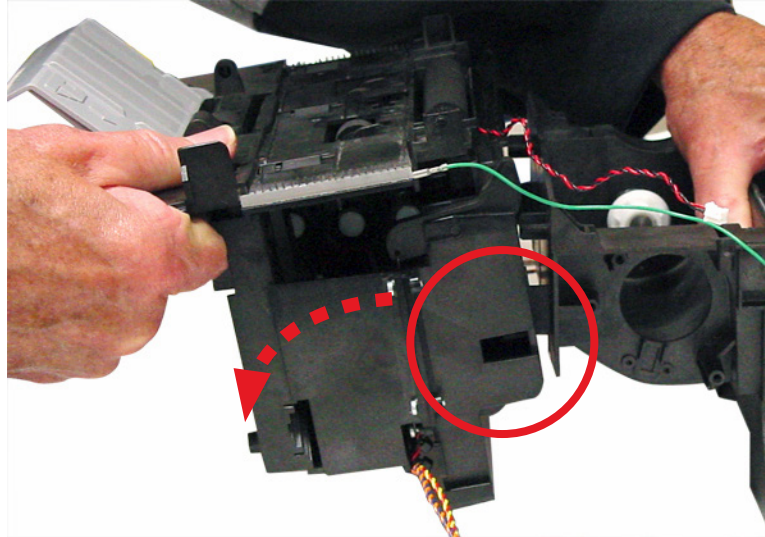
Step 4. Disconnect the two ground wires (on each side of the card transport assembly).

- Step 5.** With a TORX T10 driver, remove the two screws (circled below) that hold the card transport assembly to the frame.



- Step 6.** Release the two locking tabs. Note that these tabs can be reached via the two access holes (circled below), one on each side of the card transport assembly.

- Step 7.** Pull out and downward (arrow below) to free the card transport assembly from the frame; then remove the single-card feed tray.



- Step 8.** Set the card transport assembly aside.

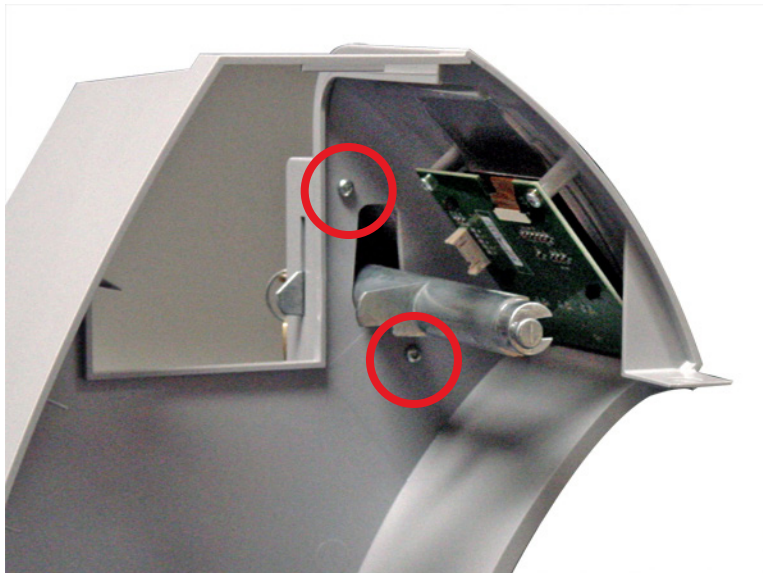
Printer Lock

For replacement, use **Kit Printer Replacement Lock 105936G-049**. For the printer lock upgrade, use **Kit Upgrade Printer Lock ZXP9 105936G-353** and refer to the instructions enclosed. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the lock.

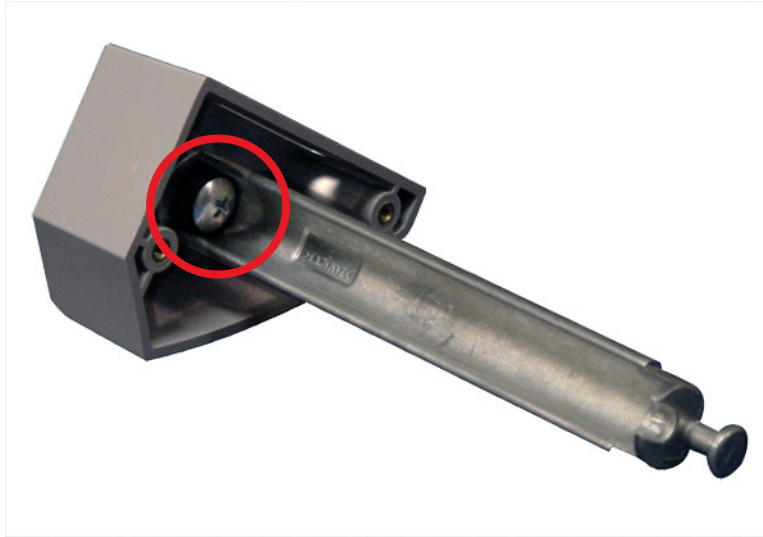


Step 2. With a TORX T10 driver, remove the two screws (circled below) holding the lock assembly in place.



Step 3. Remove the lock assembly.

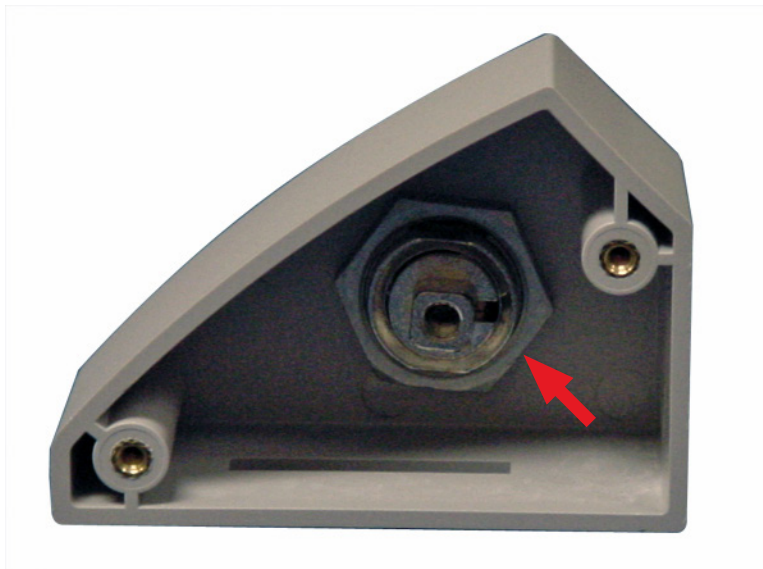
- Step 4.** With a Phillips screwdriver, remove the screw (circled below) and associated lock washer holding the camshaft lock to the lock housing.



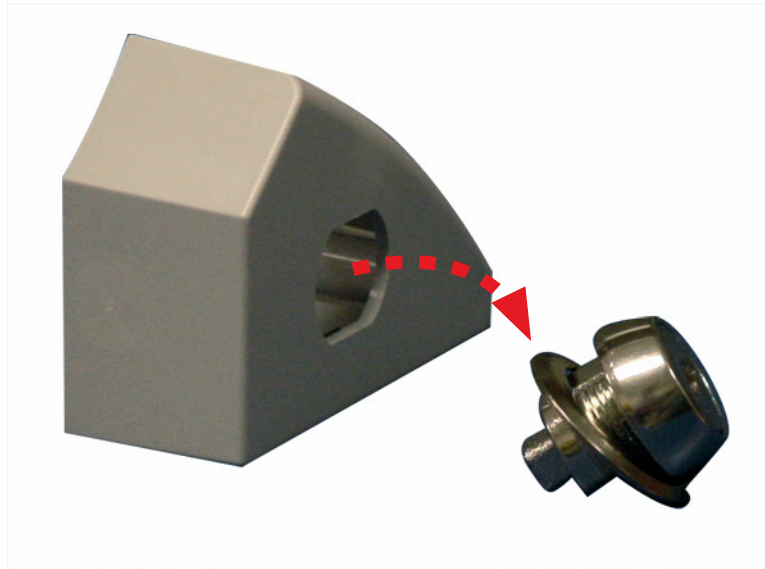
- Step 5.** Set the camshaft lock and hardware aside.



- Step 6.** With an adjustable wrench, remove the large nut (arrow below) holding the lock cylinder cam to the lock housing.



Step 7. Remove the lock cylinder cam.





Replacement Procedures for the Laminator

Introduction

The following sections describe removing both major assemblies and, where applicable, sub-assemblies and/or components that are considered replaceable.

In general, only removal directions are presented; unless otherwise noted, replacement would be performed by reversing the removal steps. Replacement instructions for some items are not presented; removal and replacement of these items are considered too obvious to warrant a detailed description.



Electric Shock • Before performing any of the procedures in this section, set the printer power to OFF (O) and disconnect the power cord.



Electrostatic Discharge • All replacement procedures must be performed at a static-free work station, an anti-static wrist strap must be worn and properly terminated, or other appropriate protection must be used.



Caution • Before beginning any of the procedures that follow, read completely through the procedure. If you do not have the specified tools or if any step(s) seem beyond your skill or experience level, do not attempt the procedure. You may cause additional damage to the printer.



Note • Some of the photographs in this section may show additional parts removed in addition to removals for the process being described.



Note • Colors depicted in photos may not be representative of final product. While the color may be dissimilar, procedures are the same.

Required Tools

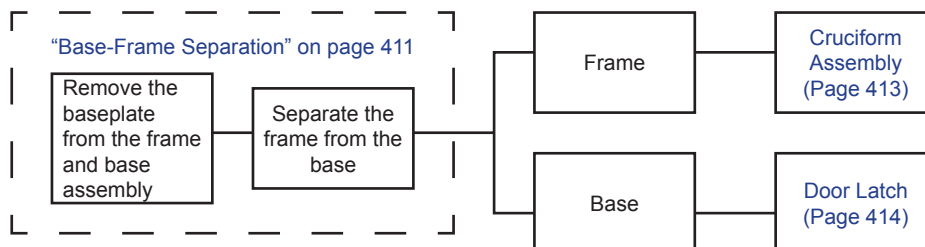
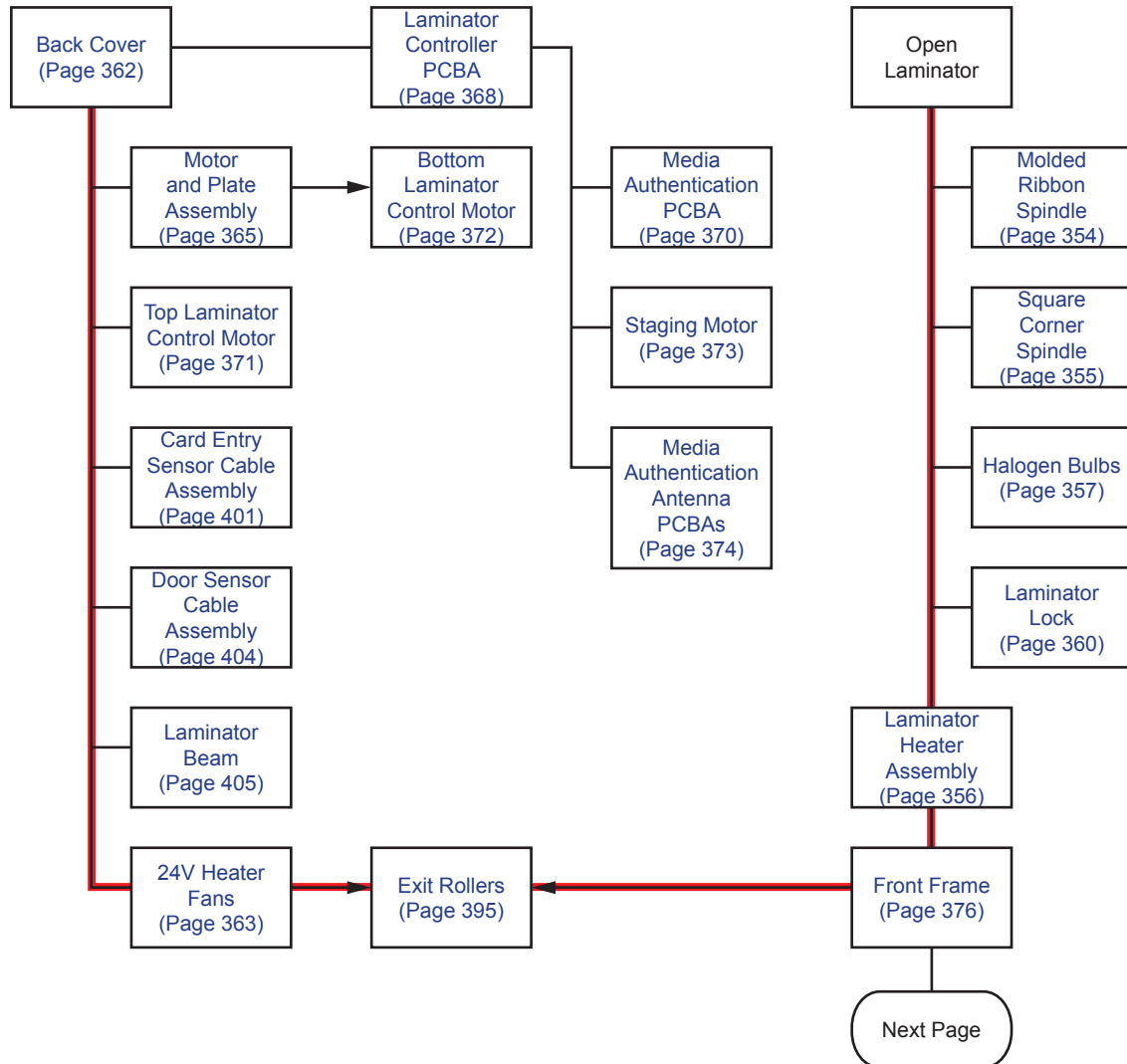
This section lists the tools required for the replacement procedures described in this section. Naturally, not all tools are required for a particular procedure; specific tools are called out in each step as appropriate.

- Flat-Blade Screwdrivers, from 1/16 inch (1.5 mm) to 1/4 inch (6.5 mm)
- Phillips #0, #1 Screwdriver
- TORX T10, T15 Driver
- Adjustable Wrench
- Fine-Point, Offset Fine-Point, and Needle-Nose Pliers
- Small Diagonal Cutters or other cutter for cutting cable ties
- 5.5 mm Hex Driver (this can also be used for securing push nuts)
- 3–10 mm E-Ring Clip Tool
- Small and Medium Spring Hook Tools
- Cotton Gloves

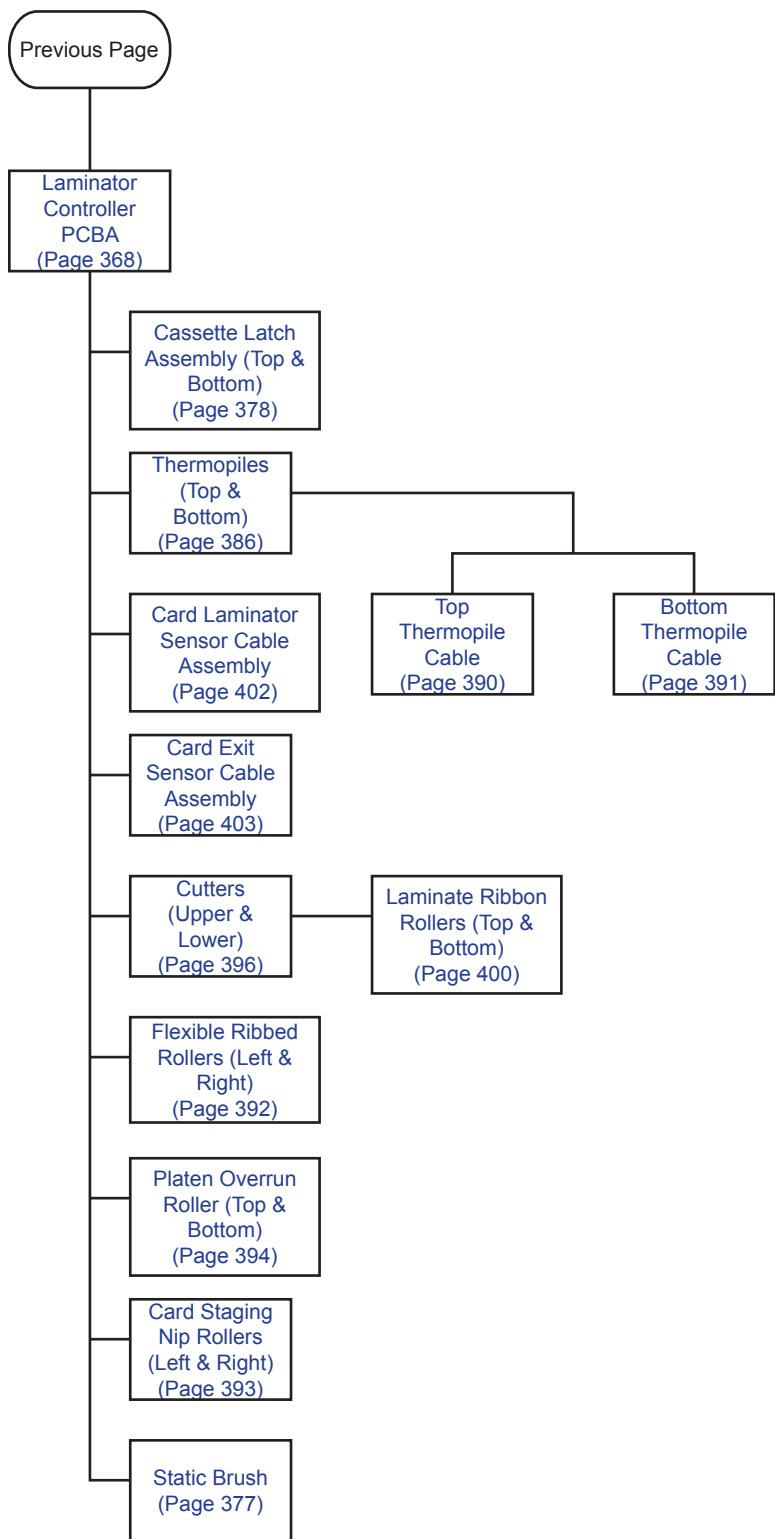
Removal Sequence

The following figures show the recommended removal sequence. For each item, follow the diagram to see what must be removed for access.

To remove the Exit Rollers (page 395), first remove the Back Cover (page 362), and the 24V Heater Fans (page 363); then open the Laminator Door, and remove the Laminator Heater Assembly (page 356) and the Front Frame (page 376)—follow the red path.



Removal Sequence (continued)



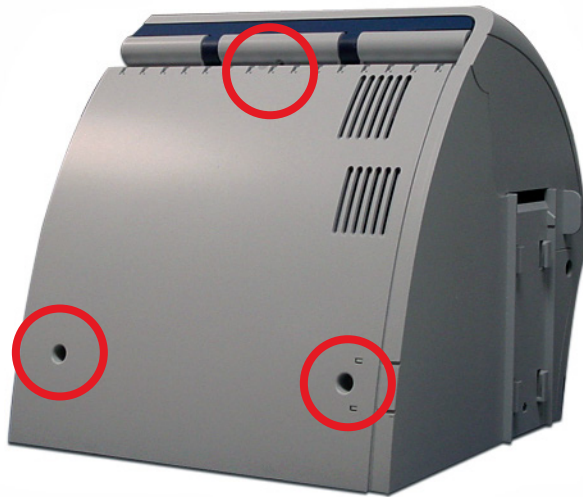
Procedures

Laminator

This procedure specifies how to separate the Laminator from the Printer to facilitate the removal and replacement of selected parts in the Printer.

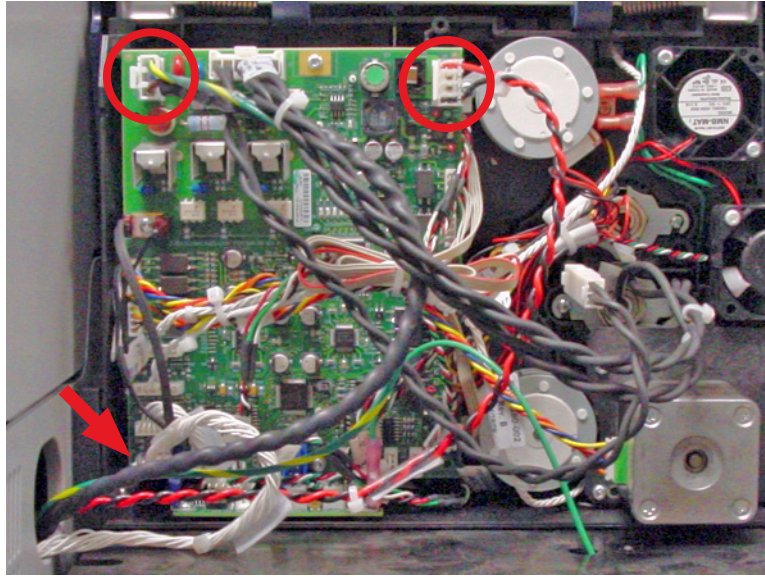
Detach

- Step 1.** Power-down the printer with the laminator. Note that the power switch on the printer also controls the laminator.
- Step 2.** Remove the media (cards, ribbon, transfer film, and laminate).
- Step 3.** Remove the three screws (circled below) holding the laminator back cover in place.



- Step 4.** Set the three screws and laminator back panel aside.

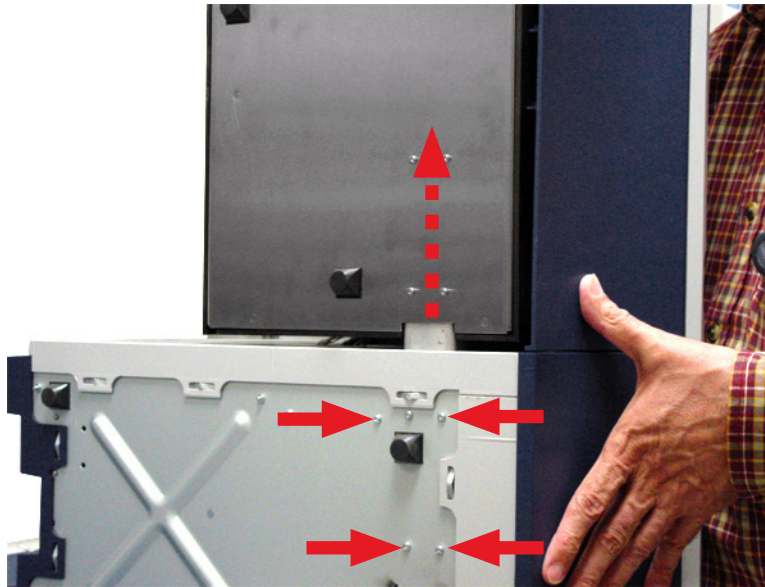
Step 5. Unplug the AC power cable from J8, EXTERNAL PWR.



Step 6. Unplug the DC power cable from J15, DC PWR INPUT.

Step 7. Unplug the logic interface cable from J14 (arrow above).

Step 8. Set the printer on its right side.



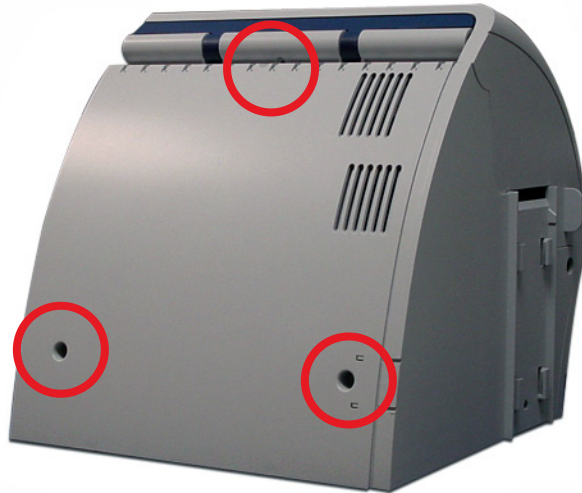
Step 9. Remove the four machine screws (arrows above) that attach the laminator (via the support attachment beam) to the printer.

Step 10. While supporting the printer, slide the support attachment beam and laminator out of the slot (dashed arrow above) on the left side of the printer.

Attach

Step 1. Remove the back panel from the laminator:

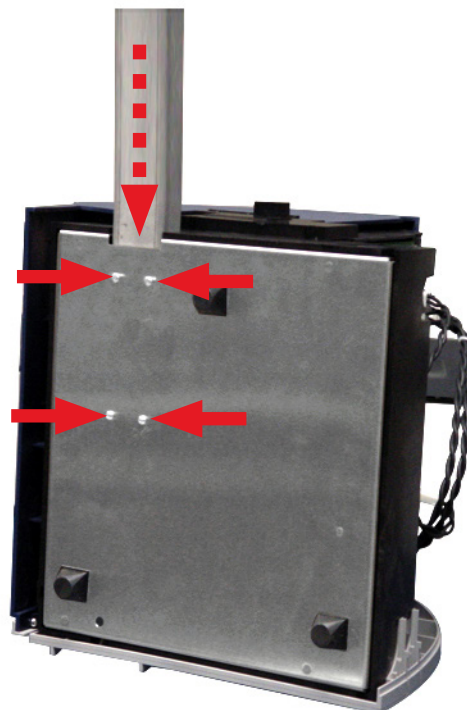
- a. Remove the three screws (circled below) holding the laminator back cover in place.



- b. Set the three screws and laminator back panel aside.

Step 2. Attach the support attachment beam to the laminator:

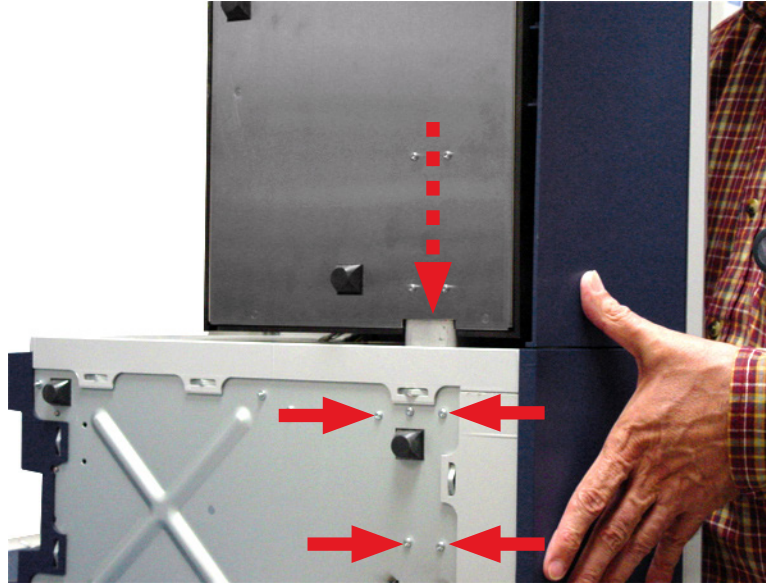
- a. Set the laminator on its left side.



- b. Slide the support attachment beam into the slot (dashed arrow above) on the right side of the laminator.
- c. Align the four mounting holes on the laminator (arrows above) with the four mounting holes on the support attachment beam.
- d. Using four machine screws, attach the support attachment beam to the laminator.

Step 3. Attach the laminator to the printer:

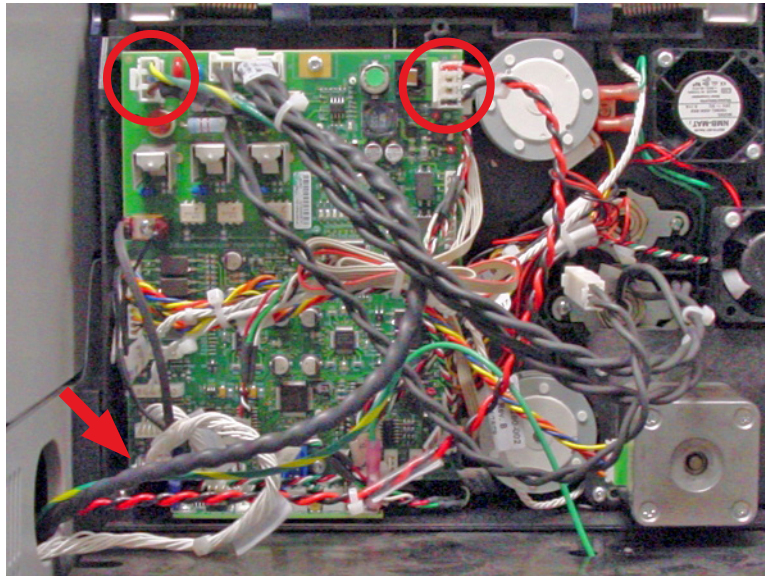
- a. Set the Printer on its right side.



- b. While supporting the printer, slide the support attachment beam and laminator into the slot (dashed arrow above) on the left side of the printer.
- c. Align the four mounting holes on the printer (arrows above) with the four mounting holes on the support attachment beam.
- d. Using four machine screws, attach the laminator (via the support attachment beam) to the printer.
- e. Check the fit and alignment of the laminator to the printer.

Step 4. Connect the cables (circled below) from the printer to the laminator main PCBA.

a. Plug the AC Power Cable into J8, EXTERNAL PWR.



b. Plug the DC power cable into J15, DC PWR INPUT.

c. Plug the logic interface cable into J14 (arrow above).

Step 5. Install the laminator back panel.

Step 6. Install the media (cards, ribbon, transfer film, and laminate).

Step 7. Power-up the printer with the laminator. Note that the power switch on the printer also controls the laminator.

Step 8. Observe the printer go through the initialization process.

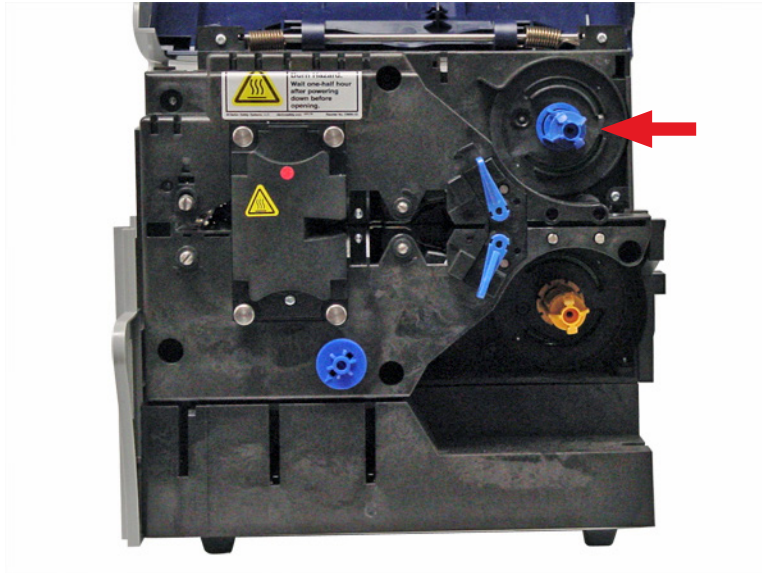
Step 9. Press the INFO button on the OCP about ten times to get to the Laminator Info Screen. If the printer and the laminator are communicating properly, this menu should appear.

Step 10. If no errors are encountered, print a test card via the Operator Control Panel (OCP). Select MENU > PRINT TEST CARDS > PRINT.

Molded Ribbon Spindle

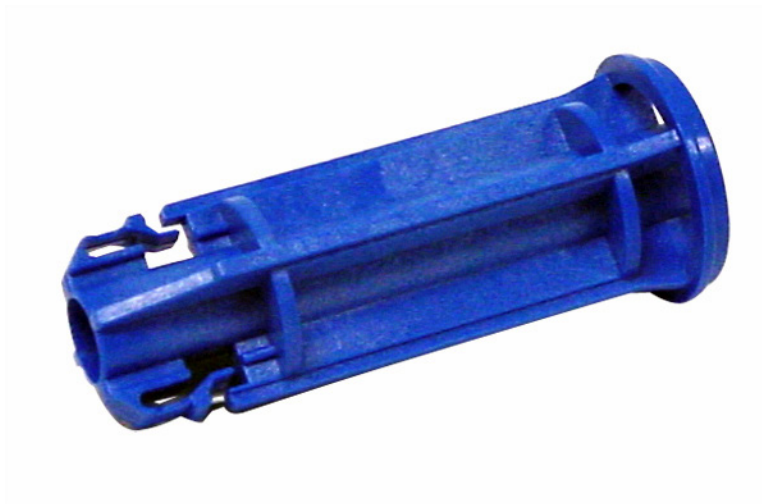
For replacement, use **Kit Spindle Ribbon Molded 105936G-527**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the screw (arrow below) holding the molded ribbon spindle in place.



- Step 2.** Slide the molded ribbon spindle off the spindle shaft.

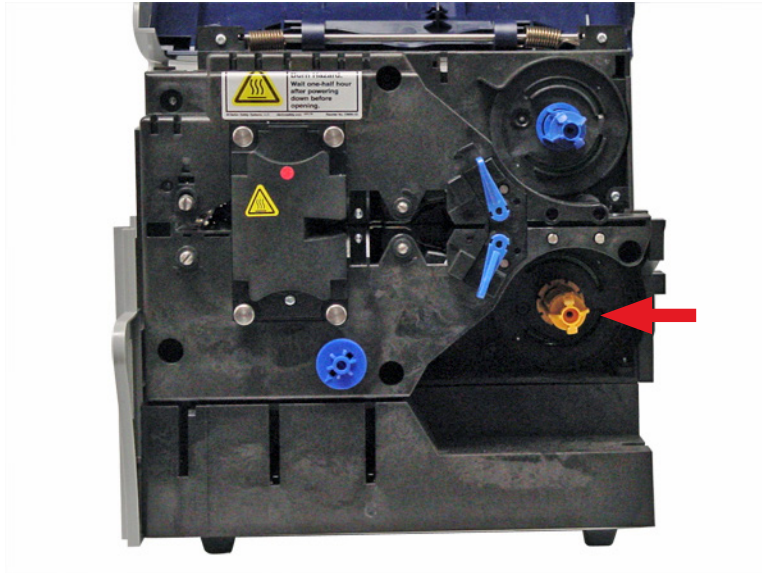
- Step 3.** Set the molded ribbon spindle aside.



Square Corner Spindle

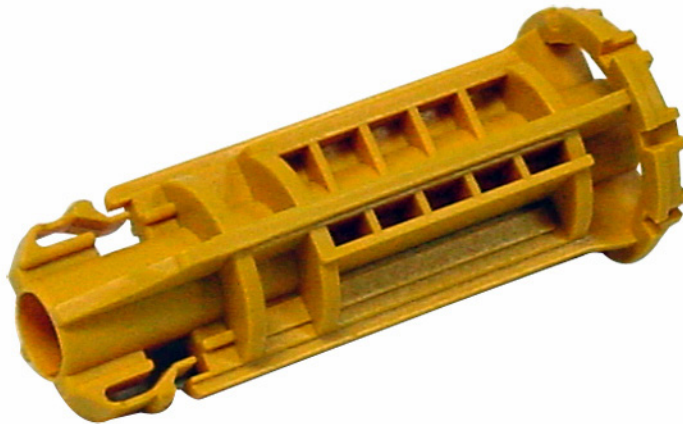
For replacement, use **Kit Spindle Square Corner 105936G-528**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the screw (arrow below) holding the square corner spindle in place.



- Step 2.** Slide the square corner spindle off the spindle shaft.

- Step 3.** Set the square corner spindle aside.



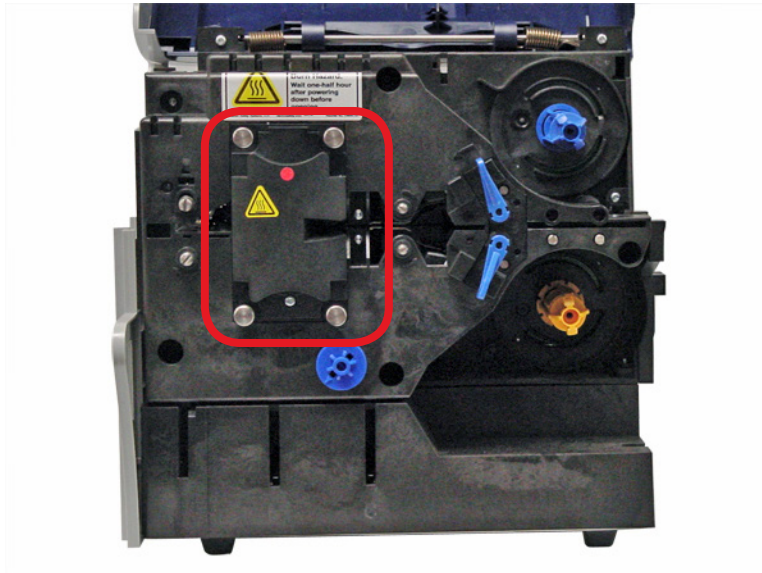
Laminator Heater Assembly

For replacement, use **Kit Assembly Heater Lam 105936G-551**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.



Hot Surface • Halogen bulbs produce intense heat. Use caution when handling the transfer station assembly.

- Step 1.** Remove the four thumbscrews (circled below) holding the laminator heater assembly in place.



- Step 2.** Slide the laminator heater assembly out of the laminator.



Halogen Bulbs

For replacement, use **Kit Heater Hal 105936G-549**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

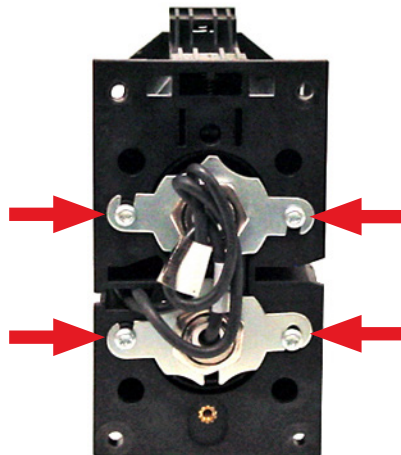
Removal

- Step 1.** With a TORX T10 driver, remove the screw (circled below) holding the laminator heater cover in place.

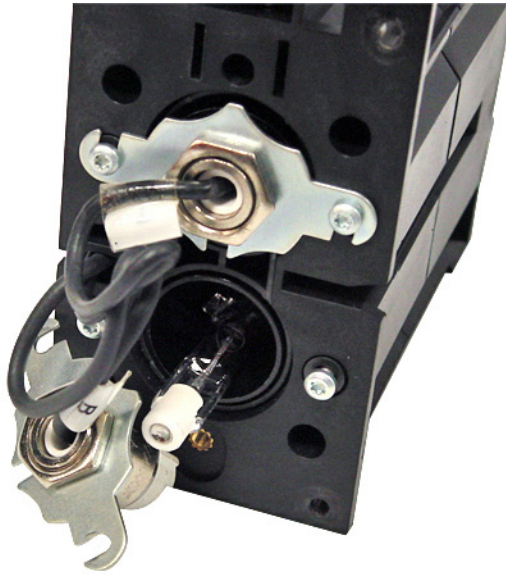


- Step 2.** Remove the laminator heater cover.

- Step 3.** Locate the halogen bulb to be replaced; then with a TORX T10 driver, loosen the two screws holding the socket (and halogen bulb) in place.



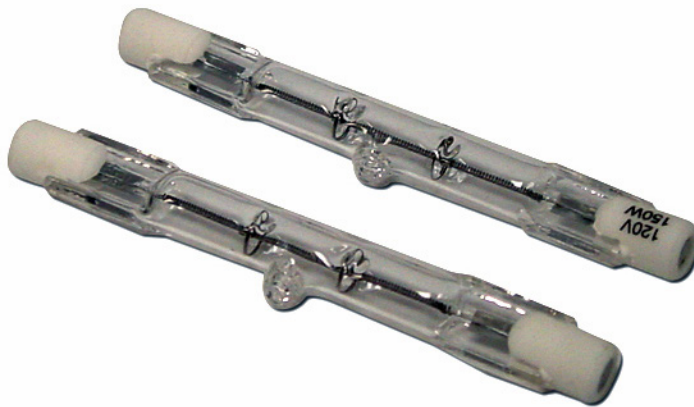
Step 4. Rotate the socket counterclockwise and slide it out of the heater.



Step 5. Remove the halogen bulb.



Caution • NEVER TOUCH A HALOGEN BULB WITH BARE FINGERS. Handle it with a wrap or gloves.



Replacement

Replacement is performed by reversing the removal steps.

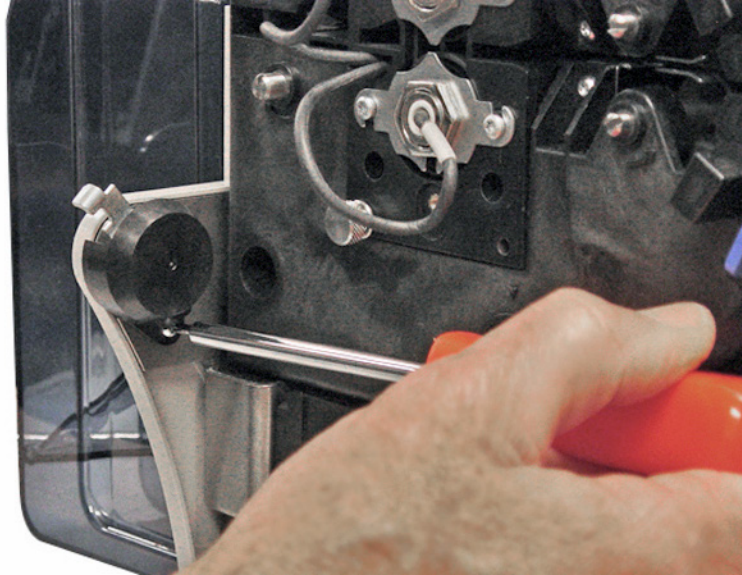
After installing the replacement halogen bulb(s), use a multimeter to verify that both bulbs are making proper connection.

- Step 1.** With a multimeter, measure the resistance across the top bulb connector pins.
- Step 2.** Resistance should range between 8 ohms and 15 ohms.
- Step 3.** With a multimeter, measure the resistance across the bottom bulb connector pins.
- Step 4.** Resistance should range between 8 ohms and 15 ohms.
- Step 5.** If the resistance is out of range, re-seat the halogen bulb(s), and repeat the resistance measurement.

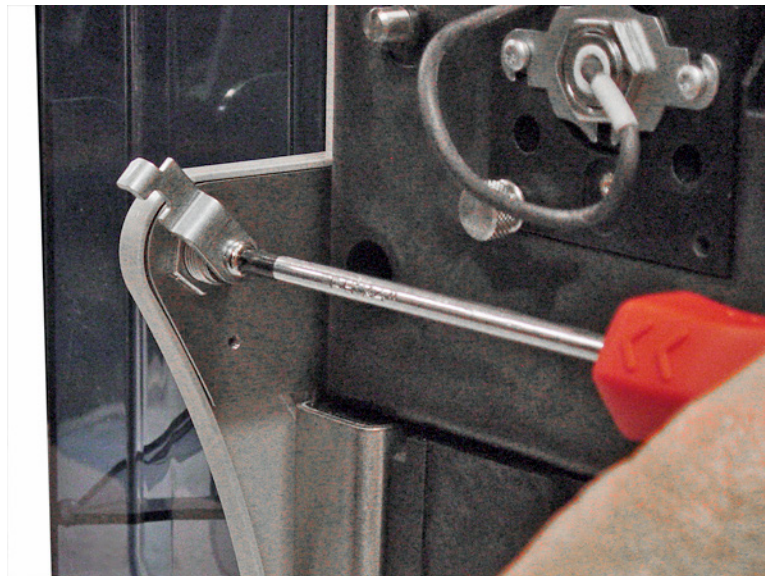
Laminator Lock

For replacement, use **Kit Lam Lock 105936G-502**. For the laminator lock upgrade, use **Kit Upgrade Laminator Lock ZXP9 105936G-535** and refer to the instructions enclosed. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

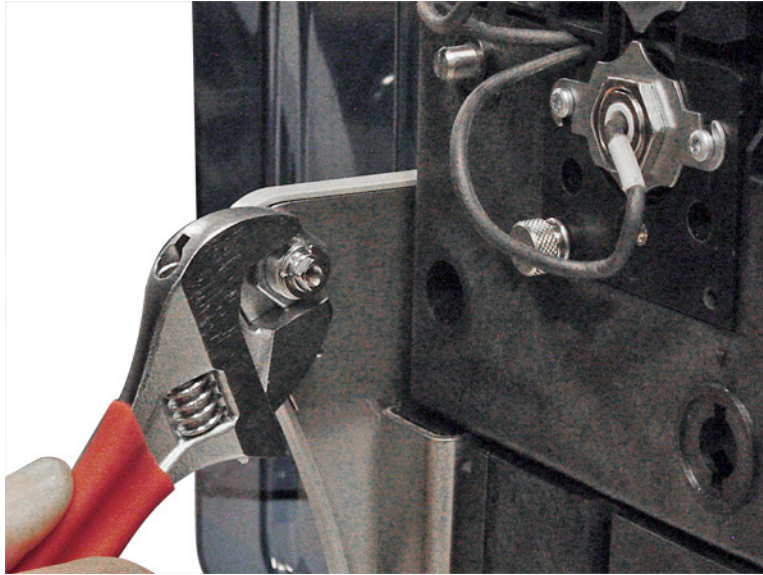
- Step 1.** With a TORX T10 Driver, remove the screw holding the latch cover in place, and set the latch cover aside.



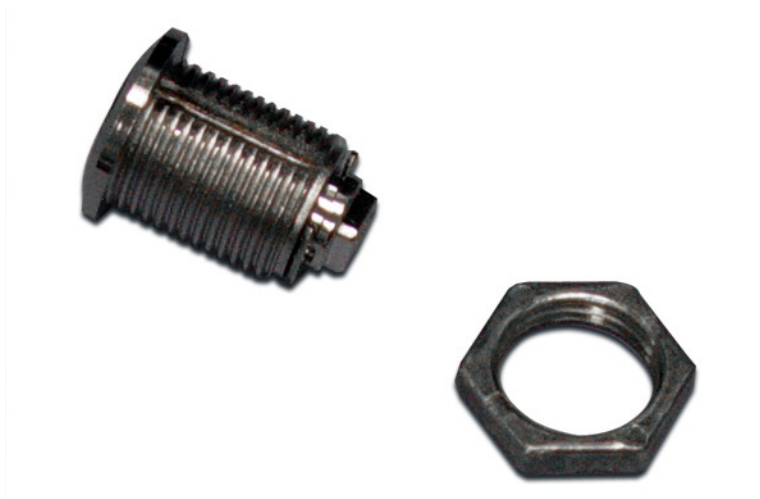
- Step 2.** With a Phillips #1 screwdriver, remove the screw holding the cam in place; and set the cam aside.



Step 3. With a wrench, remove the nut (15 mm) holding the Enclosure Lock in place.



Step 4. Set the enclosure lock and nut aside.



Back Cover

Step 1. With a TORX T10 driver, remove the three screws (circled below) holding the back cover in place.



Step 2. Lift the back cover up and away from the laminator.

Step 3. Set the back cover aside.

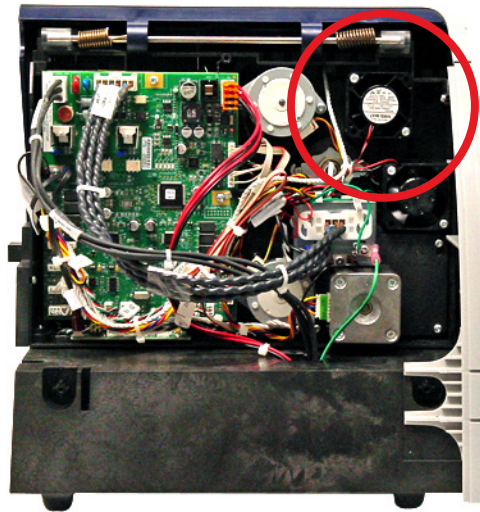


24V Heater Fans

Exhaust Fan (Upper)

For replacement, use **Kit Assy Fan 24V 105936G-503**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Cut the associated zip ties, disconnect the fan plug from the laminator controller PCBA (J12). With a TORX T10 driver, remove the two screws holding the exhaust fan (circled below) in place. Note the orientation of the fan.



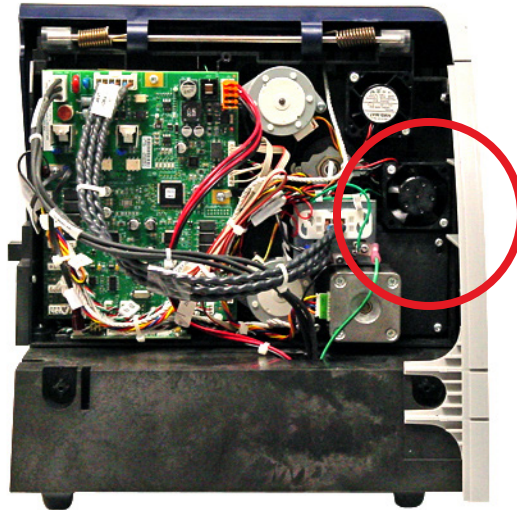
- Step 2.** With a TORX T10 driver, remove the two screws holding the exhaust fan (circled below) in place. Note the orientation of the fan.



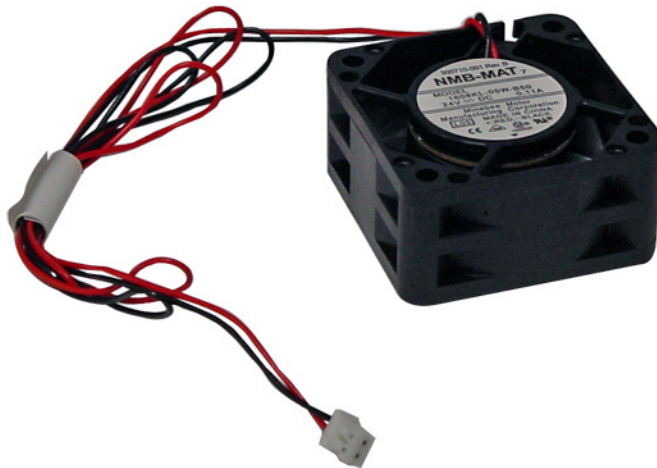
Intake Fan (Lower)

For replacement, use **Kit Assy Fan 24V 105936G-503**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Cut the associated zip ties, disconnect the fan plug from the laminator controller PCBA (J12). With a TORX T10 driver, remove the two screws holding the exhaust fan (circled below) in place. Note the orientation of the fan.



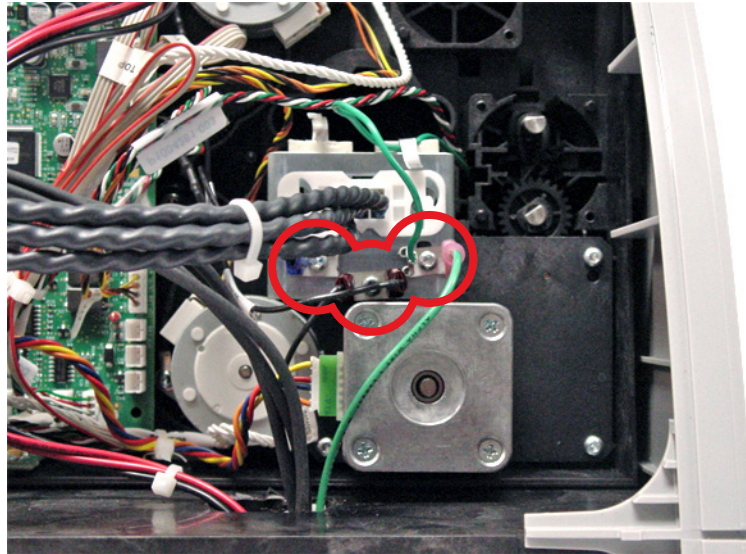
- Step 2.** With a TORX T10 driver, remove the two screws holding the exhaust fan (circled below) in place. Note the orientation of the fan.



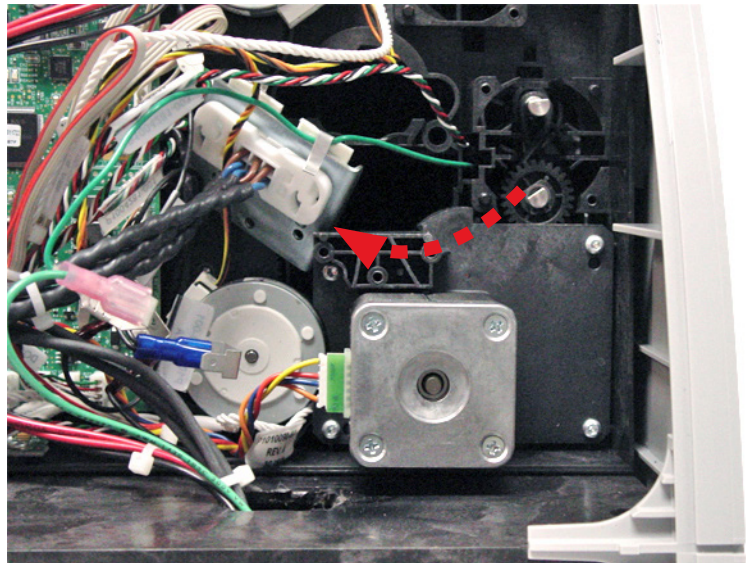
Motor and Plate Assembly

For replacement, use **Kit Motor 17PM ZXP 105936G-511**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

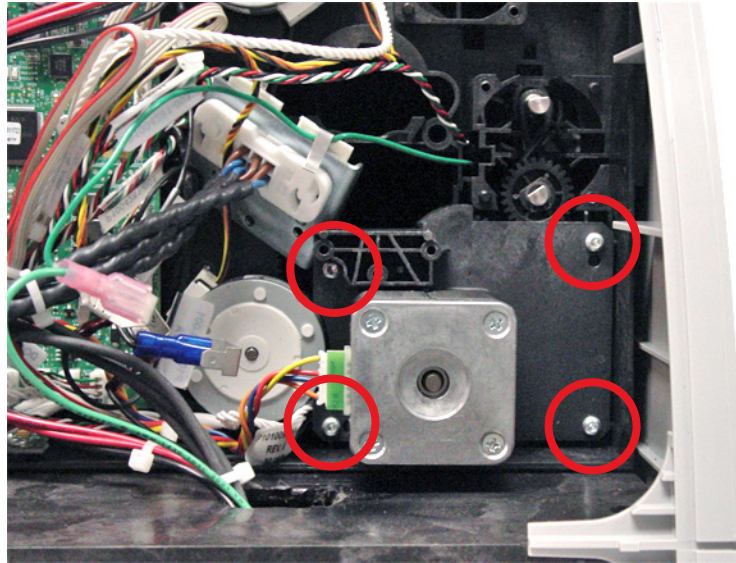
- Step 1.** With a TORX T10 driver, remove the three screws (circled below) holding the bracket to the frame.



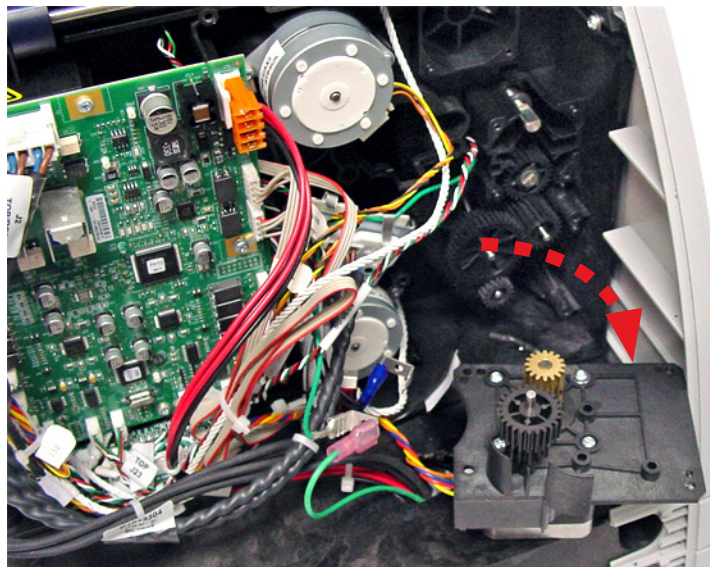
- Step 2.** Move the bracket out of the way.



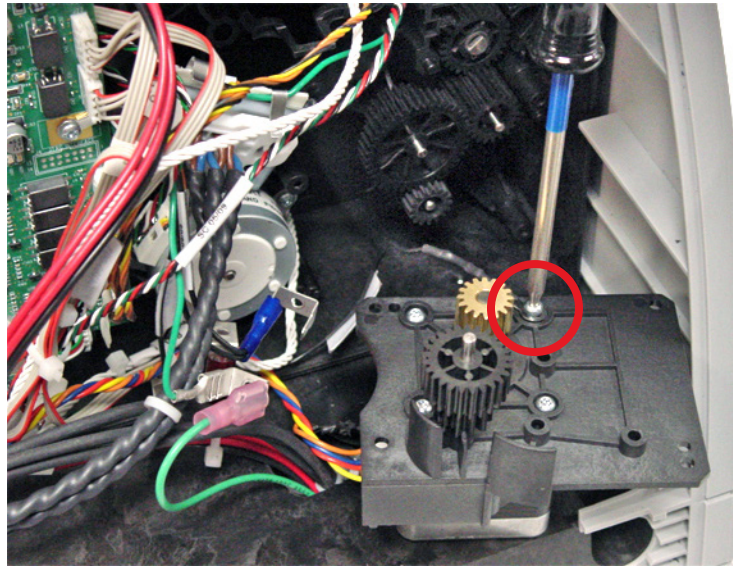
- Step 3.** With a TORX T10 driver, remove the four screws (circled below) holding the motor and plate assembly in place.



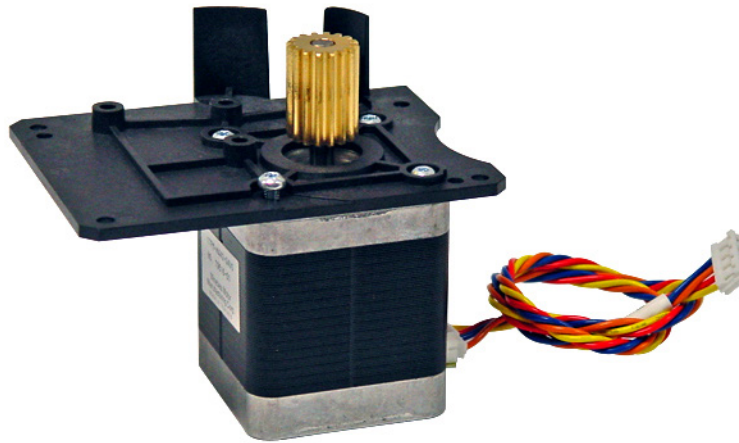
- Step 4.** Carefully free the motor and plate assembly from the frame. Ensure that all gears and shafts remain in place.



Step 5. With a TORX T10 driver, disconnect the ground wire.



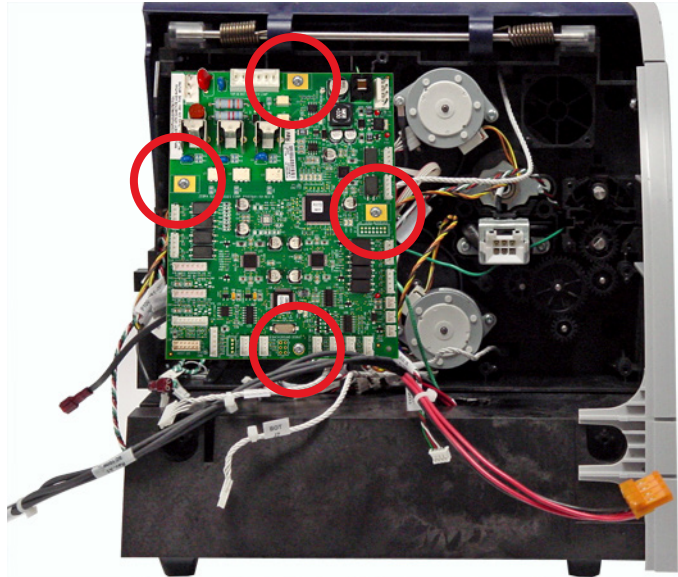
Step 6. Cut the associated cable ties, disconnect the motor plug from J20, and remove the motor and plate assembly.



Laminator Controller PCBA

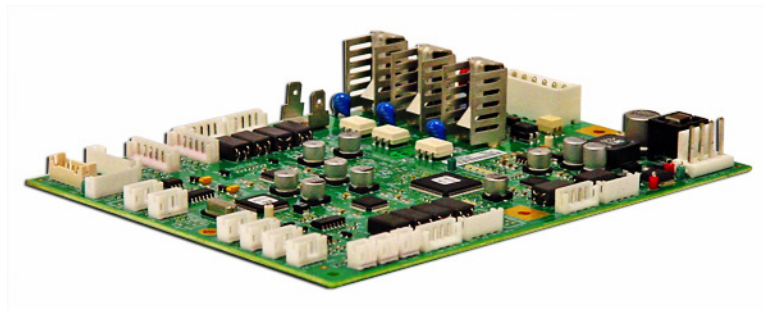
For replacement, use **Kit PCBA Laminator Controller 105936G-510**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Unplug all the laminator controller PCBA cable connectors and ground connections. To avoid confusion when reinstalling, mark all disconnected plugs and associated connectors.

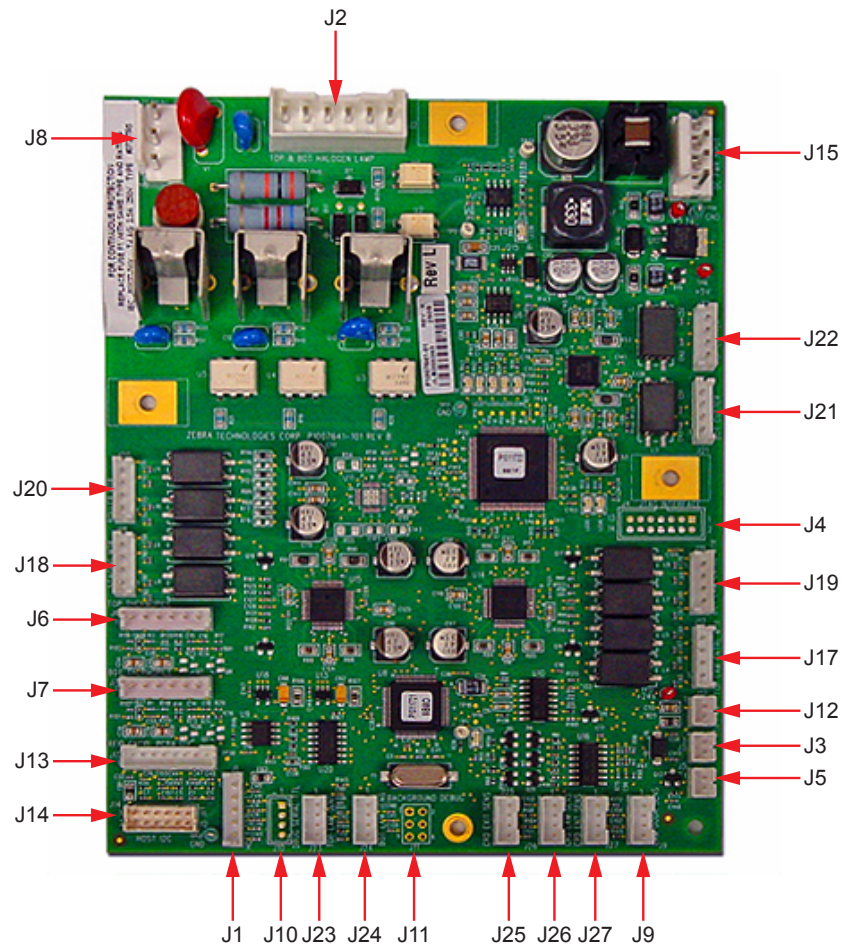


- Step 2.** With a TORX T10 driver, remove the four mounting screws (circled above) holding the laminator controller PCBA in place.

- Step 3.** Set the laminator controller PCBA aside.



Laminator Controller PCBA Connections



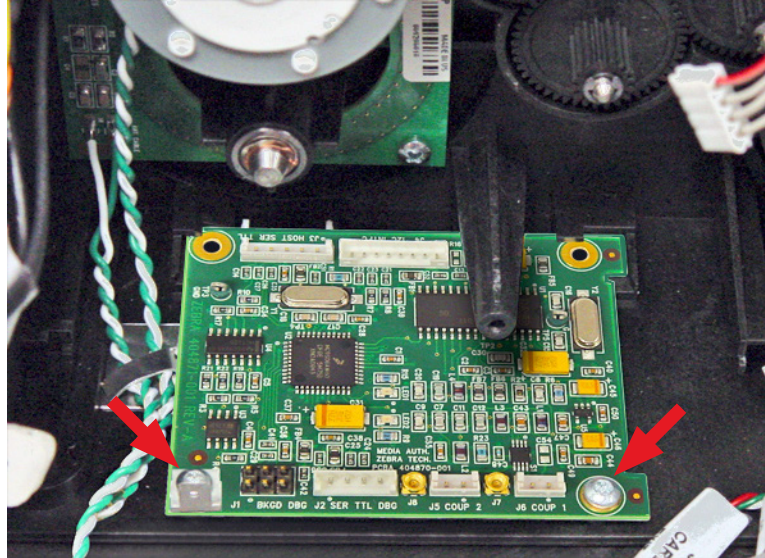
Connector	Description
J1	Host Serial TTL
J2	Top and Bottom Halogen Lamps
J3	Fan
J4	JTAG Interface
J5	Fan
J6	Top Thermopile
J7	Bottom Thermopile
J8	External AC Power
J9	Laminator Door Sensor
J10	Debug Serial TTL
J11	Background Debug
J12	Fan
J13	RFID Control PCBA I/F
J14	HOST I2C

Connector	Description
J15	DC to DC Power Conversion
J16	N/A
J17	Top Laminator Control Motor
J18	Staging Motor
J19	Bottom Laminator Control Motor
J20	Roller Drive Motor
J21	Bottom Cutter
J22	Top Cutter
J23	Top Laminator Sensor
J24	Bottom Laminator Sensor
J25	Card Exit Sensor
J26	Card Laminator Sensor
J27	Card Entry Sensor
-	

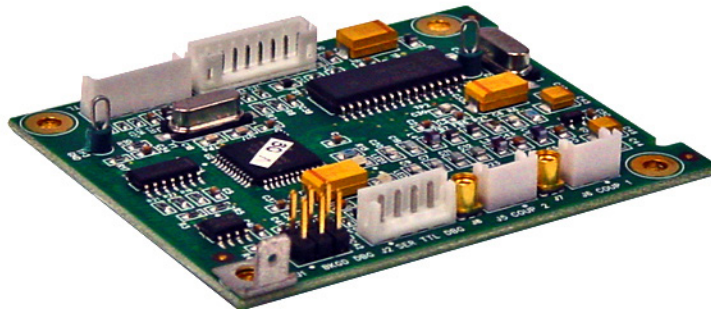
Media Authentication PCBA

For replacement, use **Kit PCBA Media Auth ZXP Lam 105936G-520**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Unplug the three media authentication PCBA cable connectors and ground connection. To avoid confusion when reinstalling, mark all disconnected plugs and associated connectors.



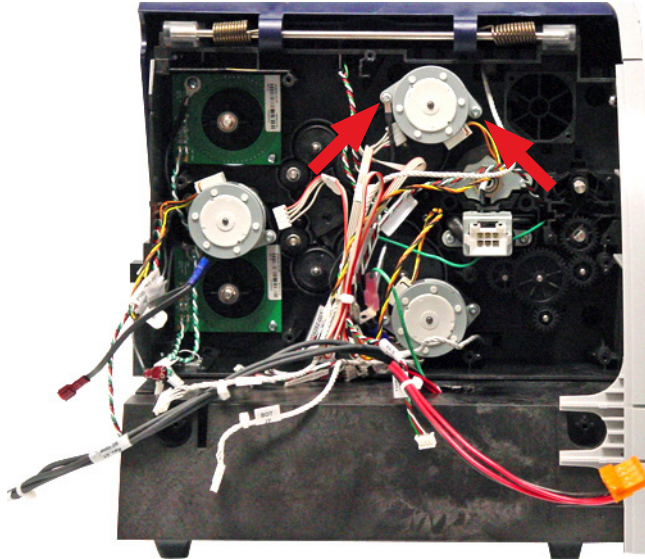
- Step 2.** With a TORX T10 driver, remove the two mounting screws (arrows above) holding the media authentication PCBA in place.
- Step 3.** Set the media authentication PCBA aside.



Top Laminator Control Motor

For replacement, use **Kit Mtr Bi-Stp PM42L-048 RGT 8 105936G-512**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws holding the top laminator control motor in place. Note that the left screw connects a ground wire.



- Step 2.** If not already disconnected, disconnect the motor plug from J17.

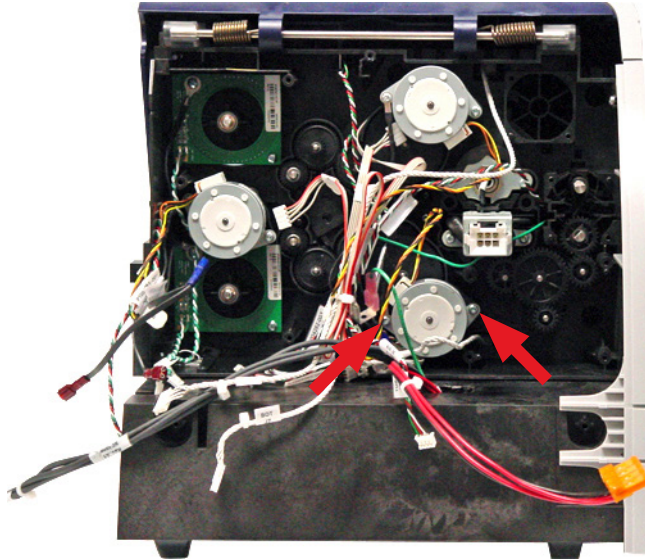
- Step 3.** Cut the associated cable ties, and remove the top laminator control motor.



Bottom Laminator Control Motor

For replacement, use **Kit Mtr Bi-Stp PM42L-048 LFT 8 105936G-513**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws holding the bottom laminator control motor in place. Note that the left-hand screw connects a ground wire.



- Step 2.** If not already disconnected, disconnect the motor plug from J19.

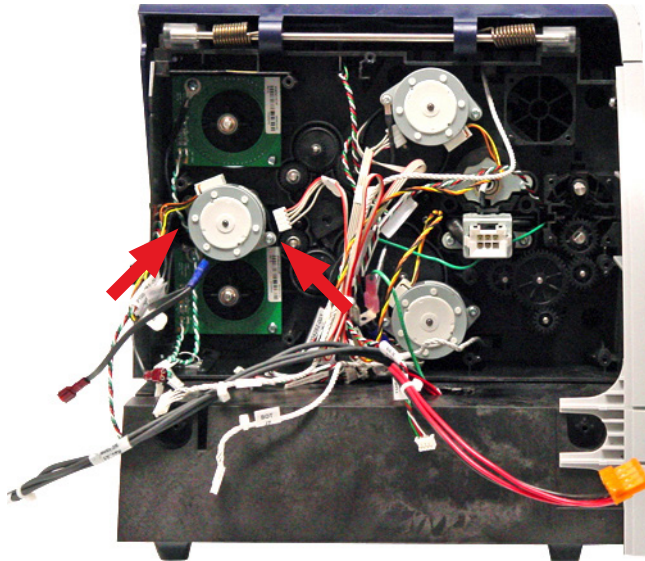
- Step 3.** Cut the associated cable ties, and remove the bottom laminator control motor.



Staging Motor

For replacement, use **Kit Mtr Bi-Stp PM42L-048 RGT 6 105936G-514**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a TORX T10 driver, remove the two screws holding the staging motor in place. Note that the left-hand screw connects a ground wire.



- Step 2.** If not already disconnected, disconnect the motor plug from J18.

- Step 3.** Cut the associated cable ties, and remove the staging motor.

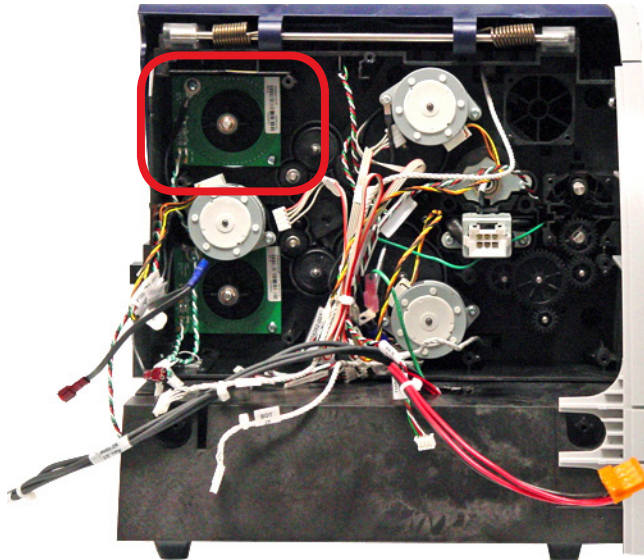


Media Authentication Antenna PCBAs

Upper PCBA

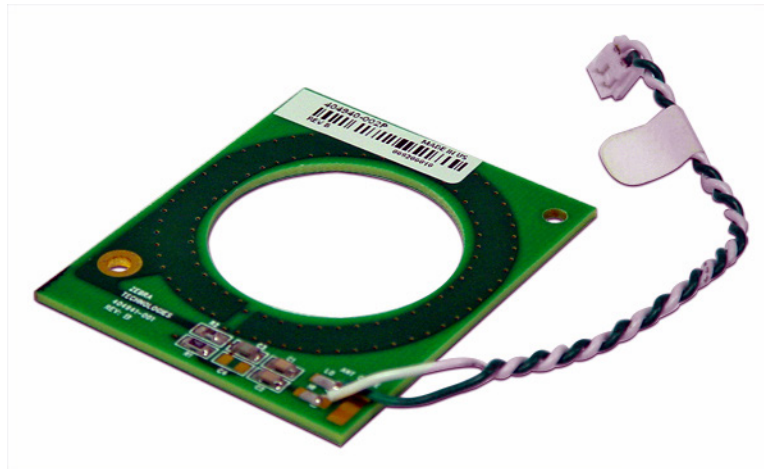
For replacement, use **Kit PCBA LAM MA ANT Upper 105936G-704**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the upper media authentication antenna PCBA.



Step 2. With a Phillips #1 screwdriver, remove the two screws holding the media authentication antenna PCBA in place. Note that the left-hand screw connects a ground wire.

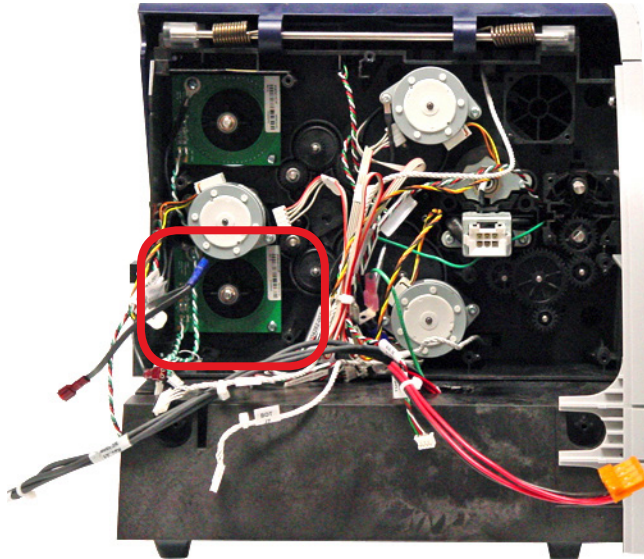
Step 3. Remove the media authentication antenna PCBA.



Lower PCBA

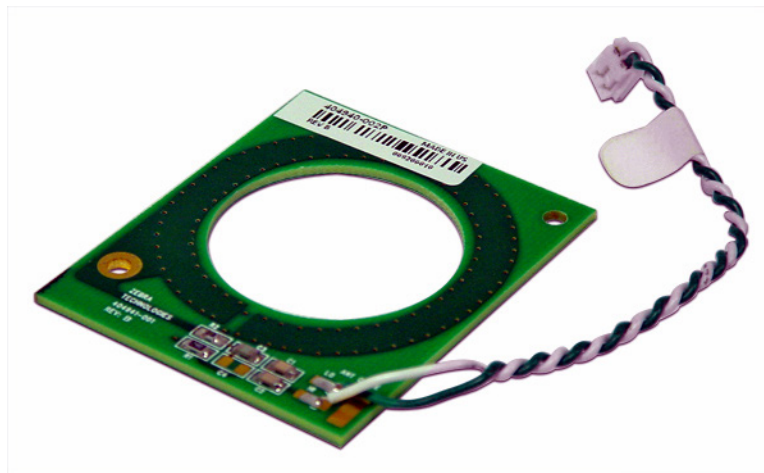
For replacement, use **Kit PCBA LAM MA ANT Lower 105936G-736**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the lower media authentication antenna PCBA.



Step 2. With a Phillips #1 screwdriver, remove the two screws holding the media authentication antenna PCBA in place. Note that the left-hand screw connects a ground wire.

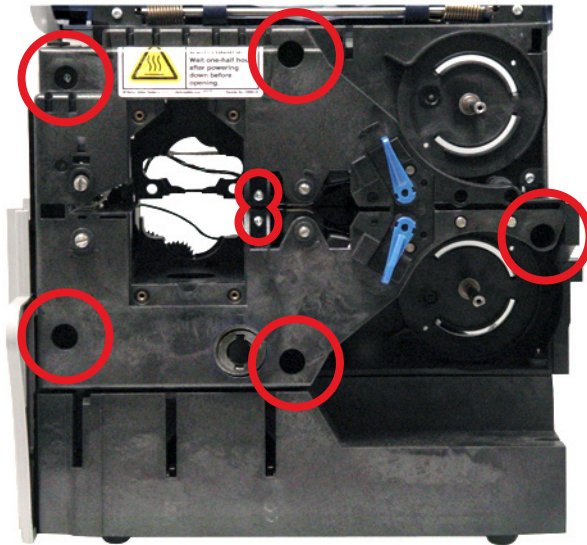
Step 3. Remove the media authentication antenna PCBA.



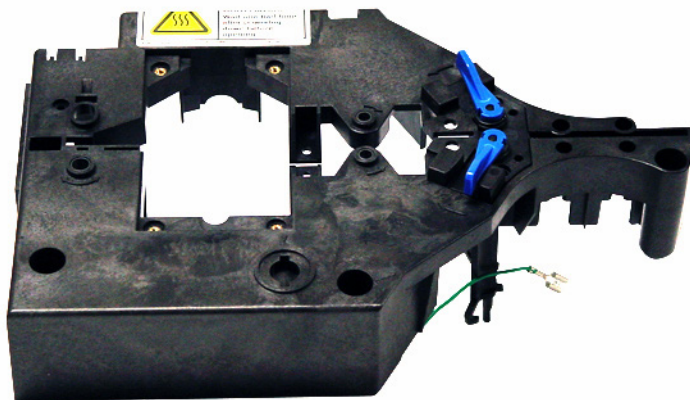
Front Frame

Removal

- Step 1.** With a TORX T10 driver, remove the seven mounting screws (circled below) holding the front frame in place.



- Step 2.** Remove the front frame. Note that a torsion spring is released when the front frame is removed.



Replacement

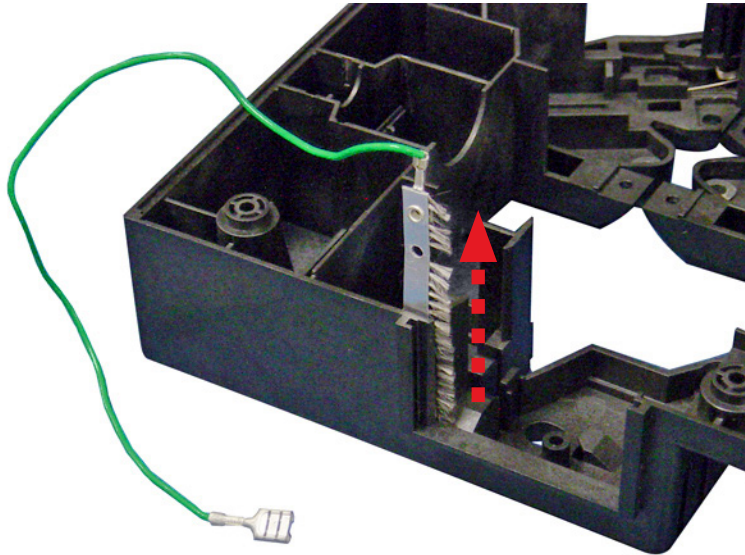
See [“Replacement” on page 381](#) for details.

Static Brush

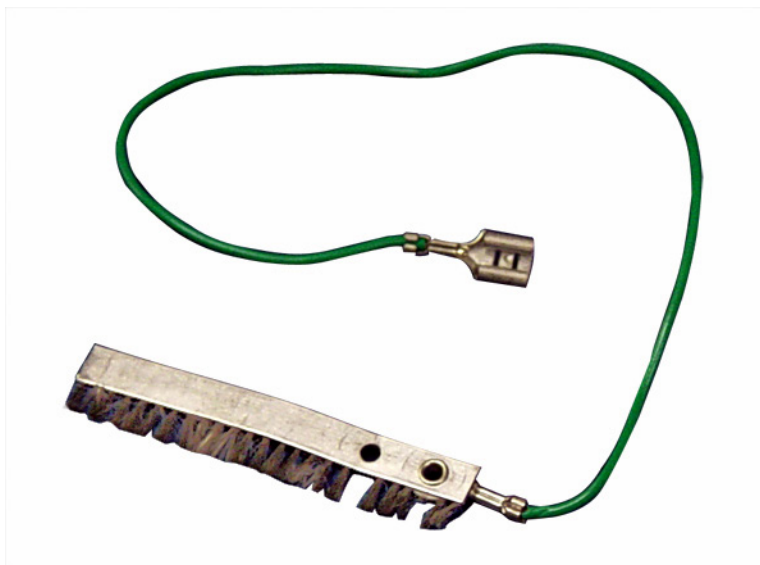
For replacement, use **Kit Static Brush 60mm 105936G-515**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Note • This procedure uses Spares Kit # 105936G-515: KIT, STATIC BRUSH, 60MM.

Step 1. Slide the static brush out of its mounting slot.



Step 2. Set the static brush aside.

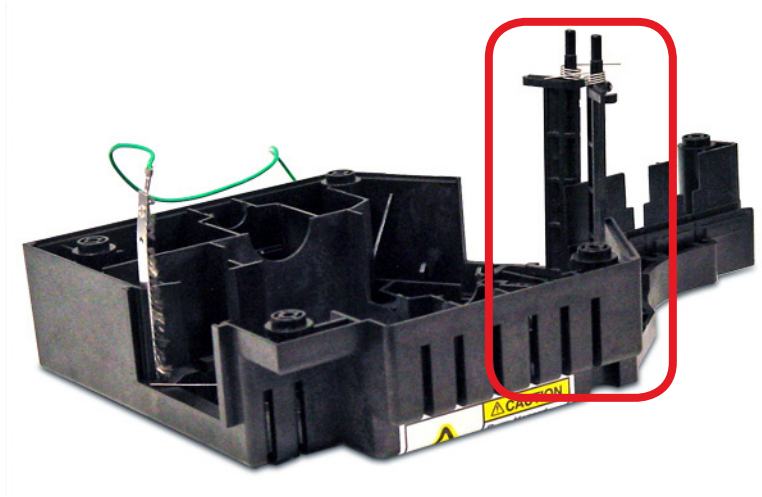


Cassette Latch Assembly (Top & Bottom)

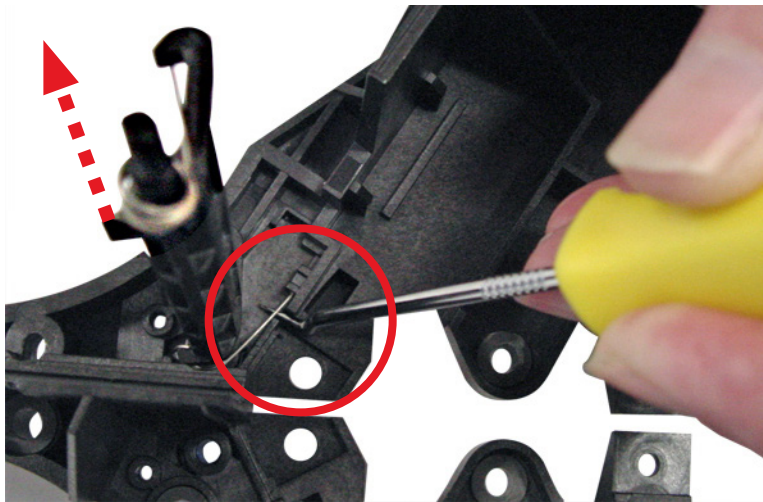
For replacement, use **Kit Lam Upper Cas Latch 105936G-505**, **Kit Lam Lower Cas Latch 105936G-506** Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

Step 1. Locate the cassette latch assemblies.

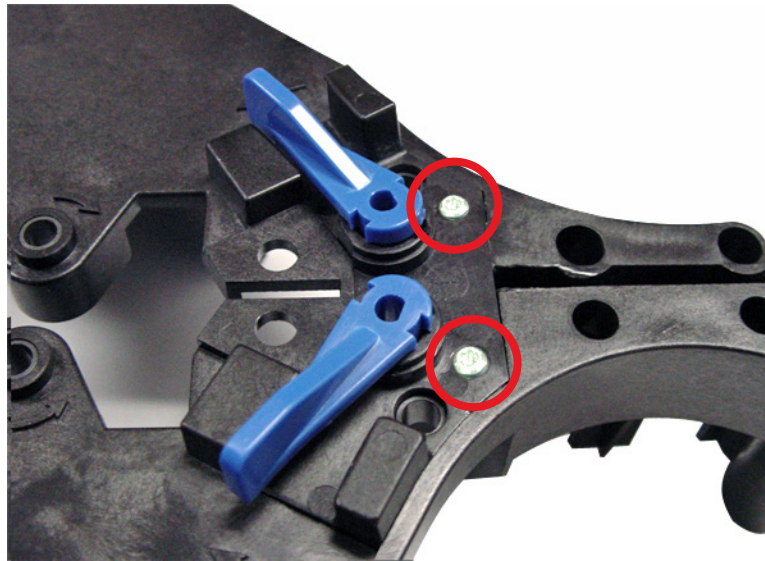


Step 2. With a spring hook tool, carefully release the upper cassette torsion spring (circled below), and slide the cassette latch and spring out of the frame.

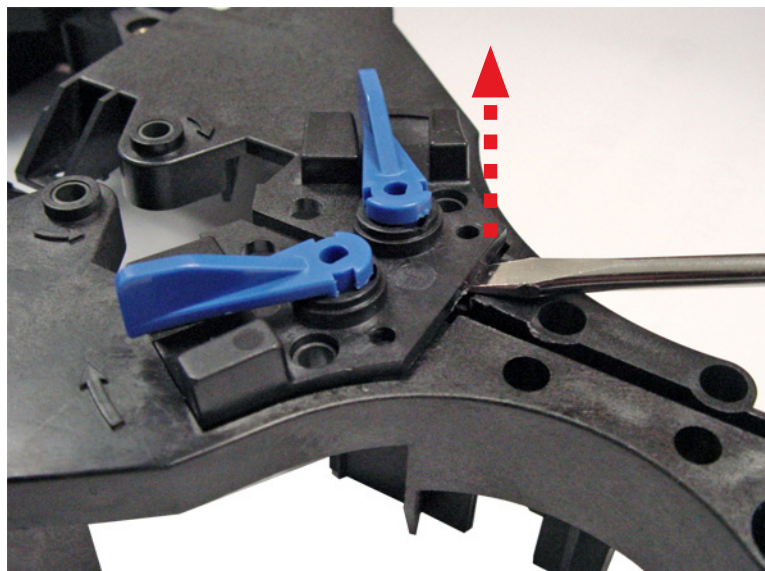


Step 3. With a spring hook tool, carefully release the lower cassette torsion spring, and slide the cassette latch and spring out of the frame.

- Step 4.** With a TORX T10 driver, remove the two screws (circled below) holding the latch plate in place.



- Step 5.** With a small flat-blade screwdriver, carefully lift and free the latch plate. Note that some force is required.



- Step 6.** Rotate the laminator levers in the direction indicated, lifting the levers up and over the stops. Continue until rotation stops; then remove the levers.

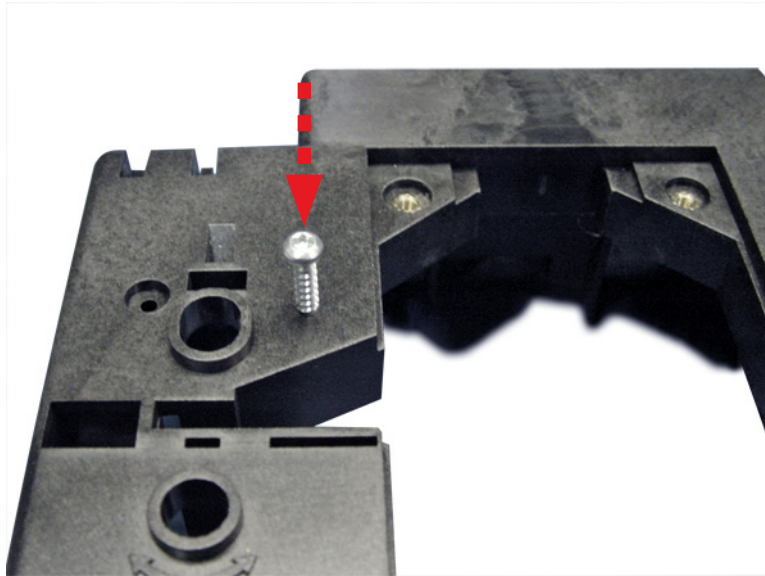


- Step 7.** Set the laminator levers, latch plate, cassette latches, and cassette torsion springs aside.

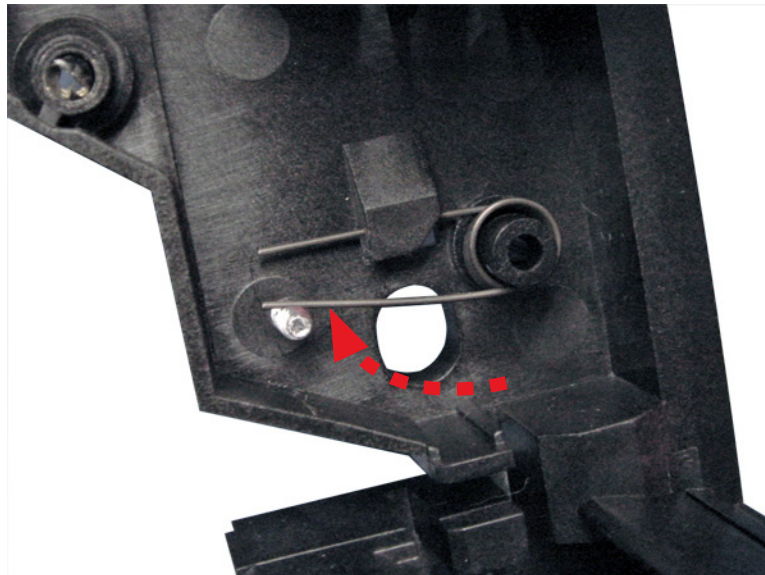


Replacement

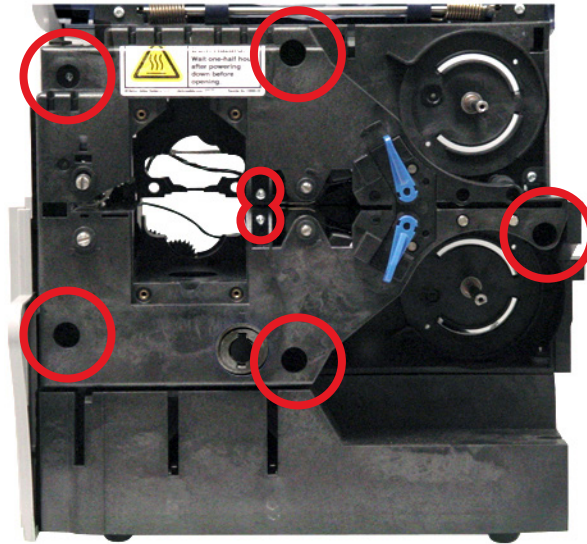
Step 1. Install a screw (SCR,PH,TORX,PLAST,4-.50) in the hole in the front frame.



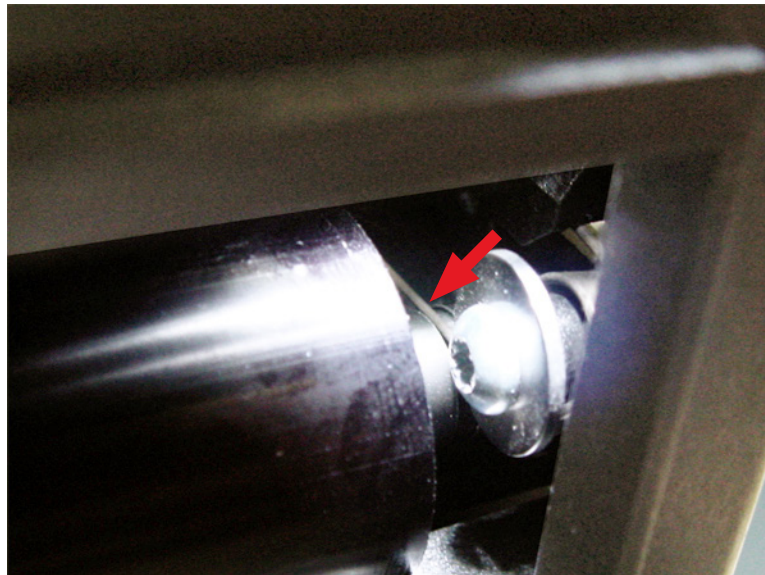
Step 2. Position the torsion spring against the screw. Note that this Torsion Spring was released when the front frame was removed (see [“Front Frame” on page 376](#)).



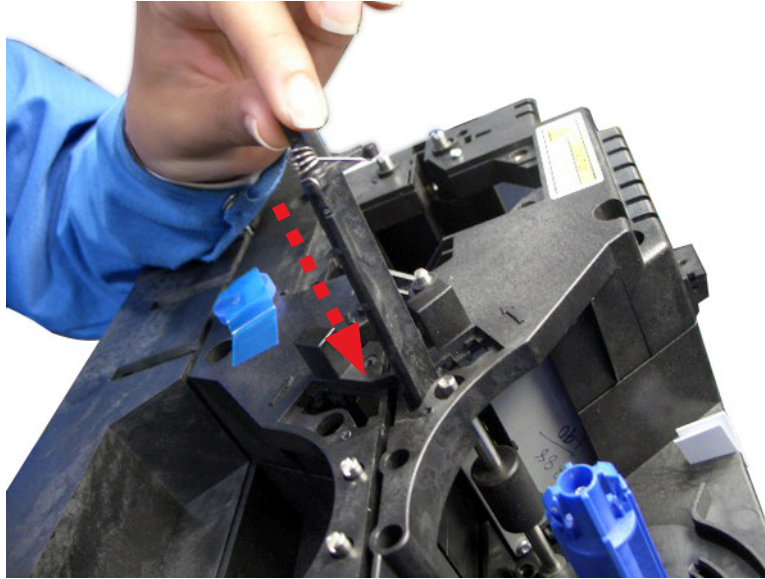
- Step 3.** With a TORX T10 driver, install the seven mounting screws (circled below) that hold the front frame in place.



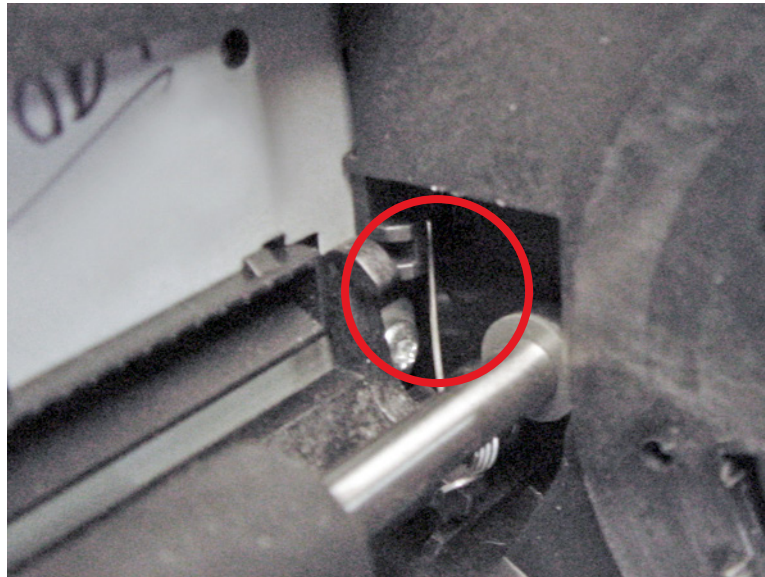
- Step 4.** Remove the screw installed in Step 1. Ensure that the torsion spring is properly aligned on the exit roller bushing.



Step 5. Install the laminator latches.



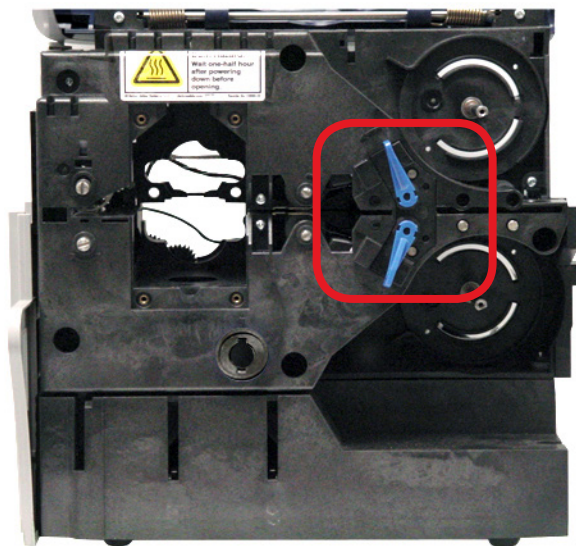
Step 6. Release the top and bottom cassette torsion springs.



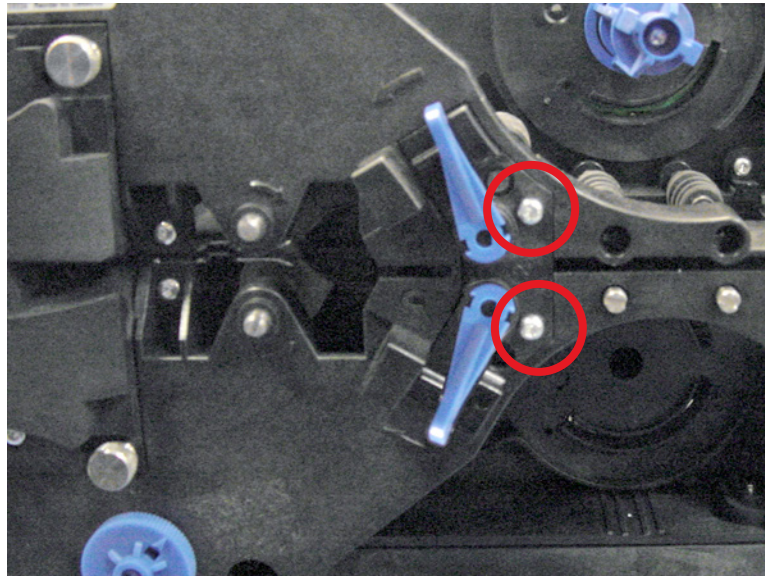
- Step 7.** Set the laminator levers in place, rotate the levers in the direction indicated, lifting the levers up and over the stops. Continue until rotation stops.



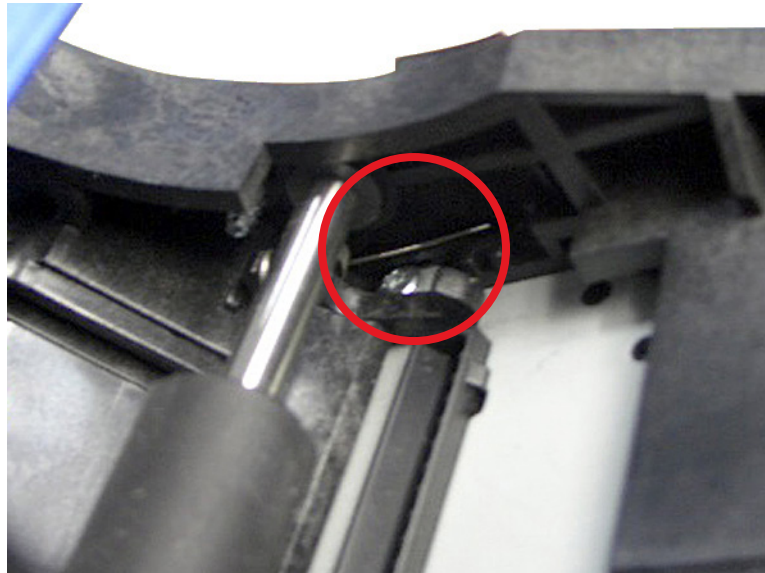
- Step 8.** Reinstall the latch plate.



Step 9. With a TORX T10 driver, re-install the two screws holding the latch plate in place.



Step 10. Release the top and bottom cassette torsion springs.

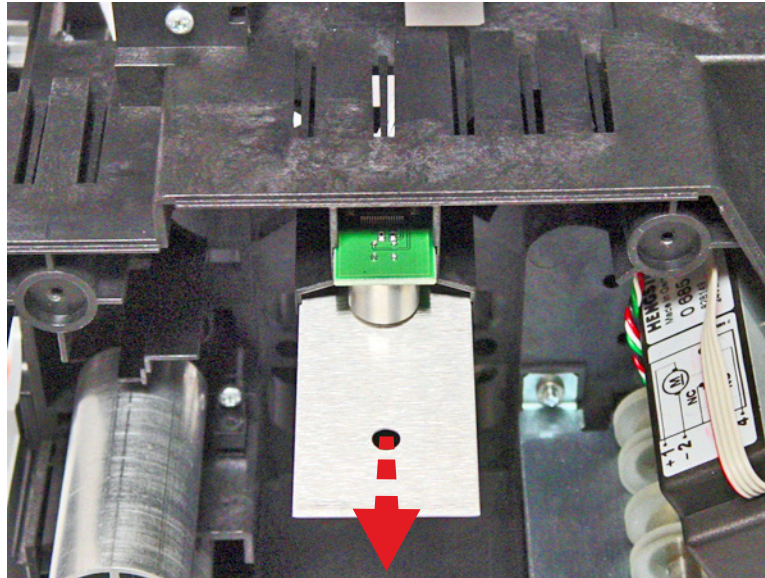


Thermopiles (Top & Bottom)

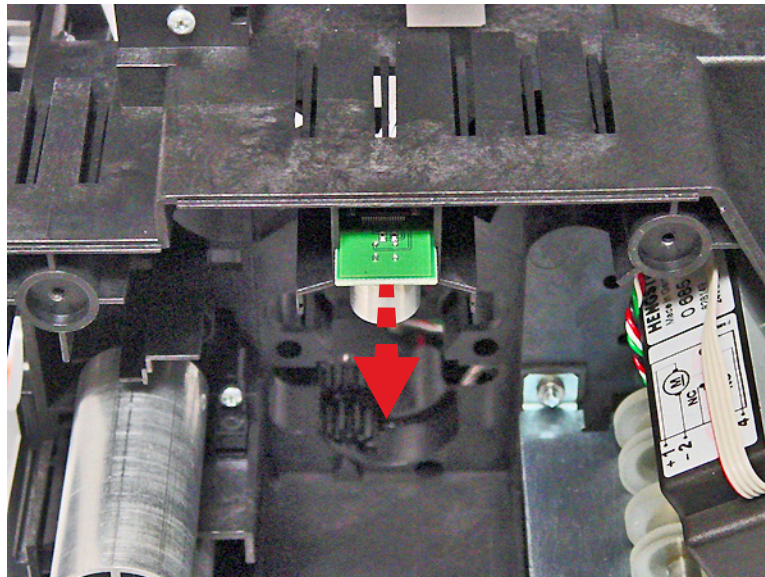
Top Thermopile

For replacement, use **Kit Module Thermopile 105936G-518**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

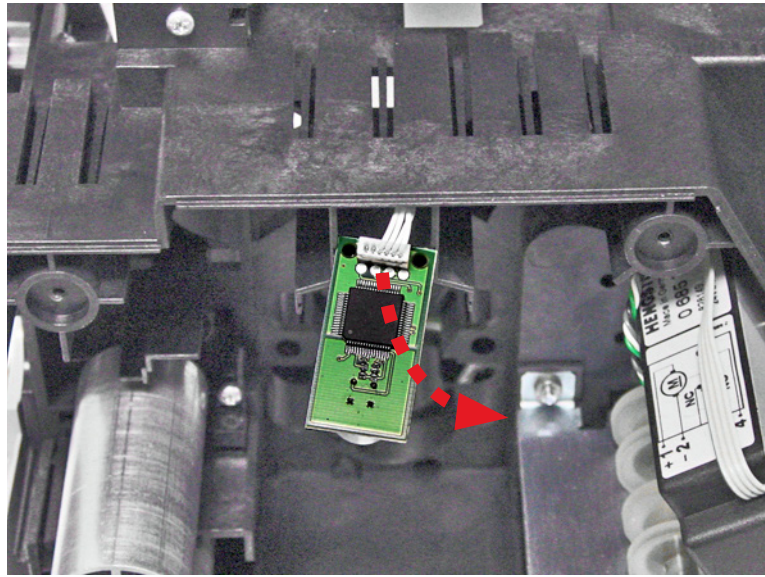
Step 1. Slide out the metal plate.



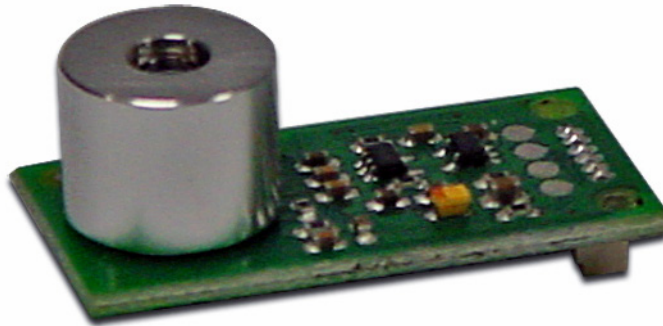
Step 2. Slide out the thermopile.



Step 3. Carefully disconnect the thermopile from the plug.



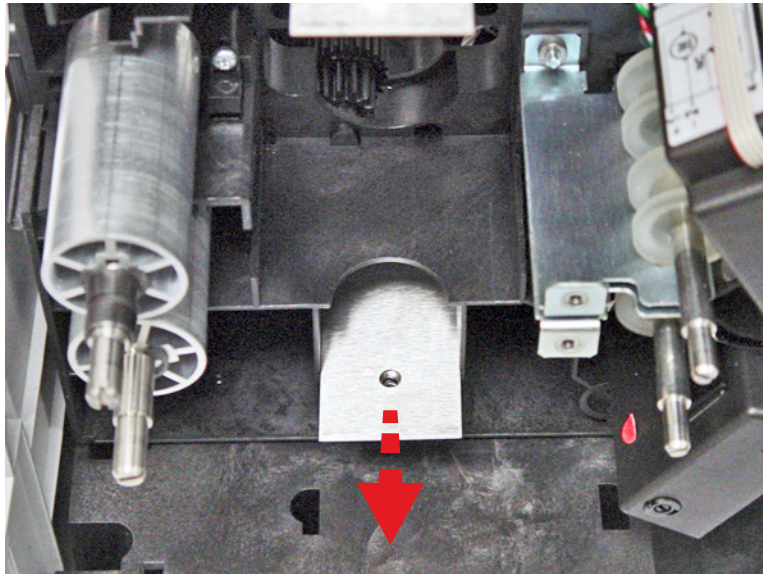
Step 4. Set the thermopile aside.



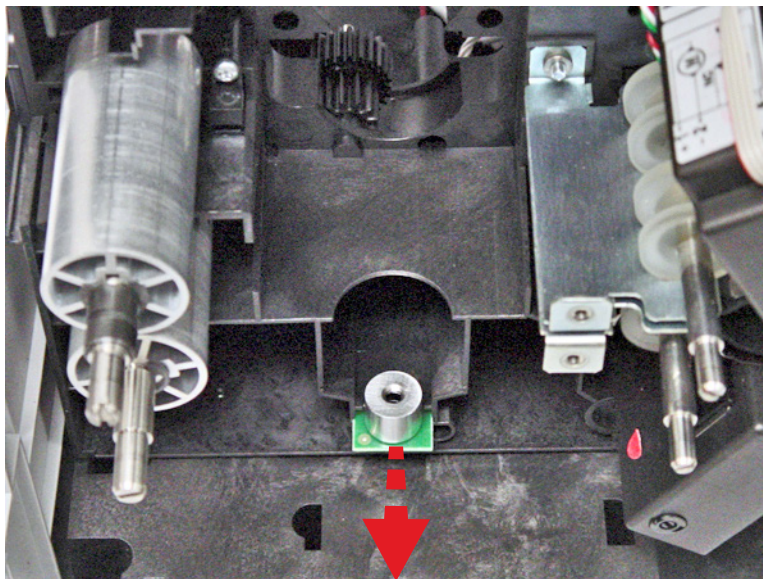
Bottom Thermopile

For replacement, use **Kit Module Thermopile 105936G-518**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

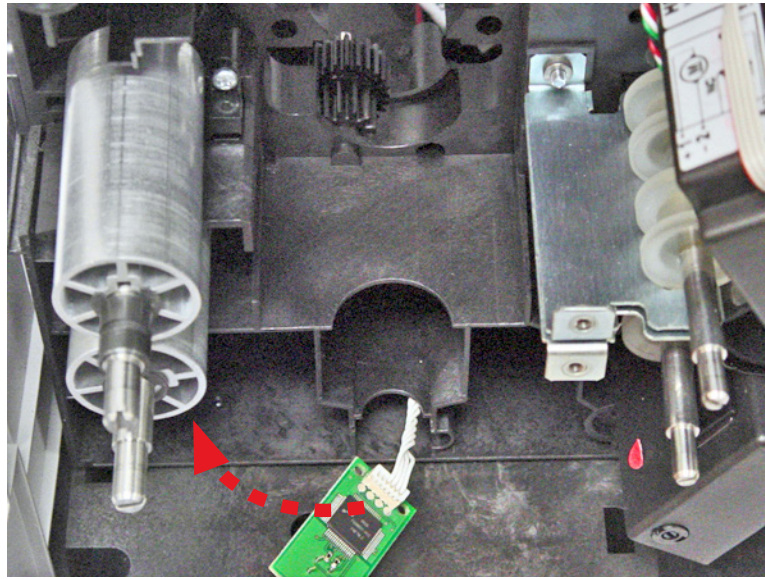
Step 1. Slide out the metal plate.



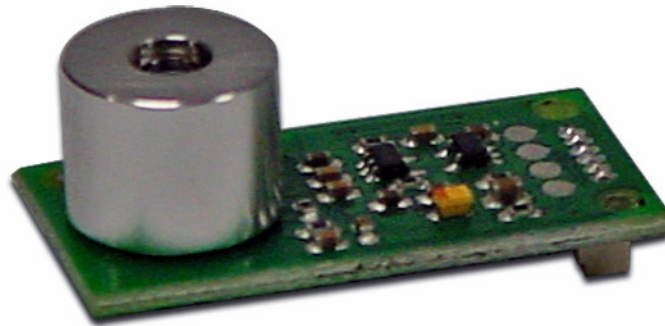
Step 2. Slide out the thermopile.



Step 3. Carefully disconnect the thermopile from the plug.



Step 4. Set the thermopile aside.

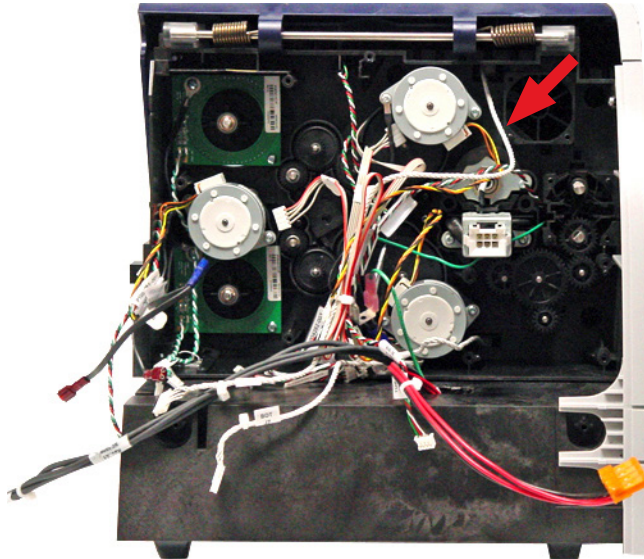


Top Thermopile Cable

For replacement, use **Kit CBL ASY LAM Thermopile Top 105936G-530**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Remove the Top Thermopile (see “[Thermopiles \(Top & Bottom\)](#)” on page 386).

Step 2. Locate the top thermopile cable (arrow below).



Step 3. Carefully slide the top thermopile cable out of the Laminator.

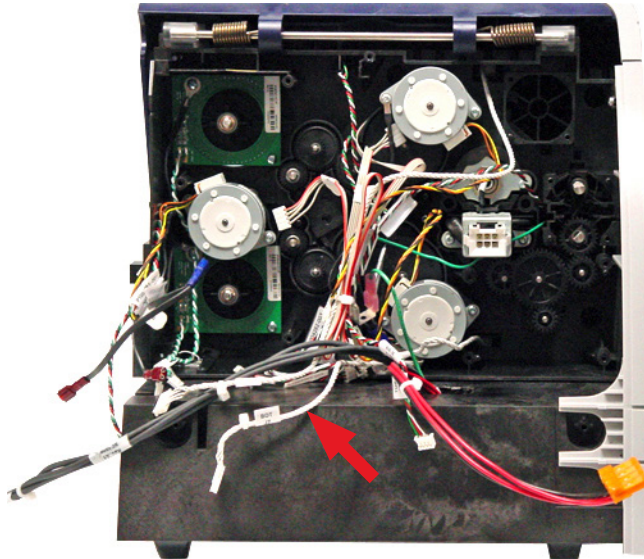


Bottom Thermopile Cable

For replacement, use **Kit CBL ASY LAM Thermopile BTM 105936G-531**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Remove the bottom thermopile (see “[Thermopiles \(Top & Bottom\)](#)” on page 386).

Step 2. Locate the bottom thermopile cable (arrow below).



Step 3. Carefully slide the bottom thermopile cable out of the Laminator.

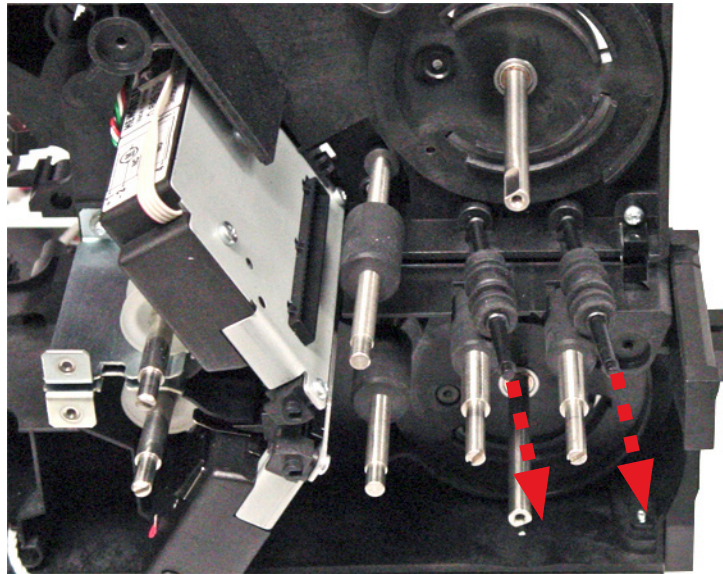


Flexible Ribbed Rollers (Left & Right)

For replacement, use **Kit Roller Ribbed Flexible 105936G-521**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

For this procedure you will need to free (i.e., remove the four mounting screws), but not disconnect, the laminator controller PCBA.

Step 1. Carefully remove the flexible rib roller(s); see arrows below.



Step 2. Set the flexible rib roller(s) aside.

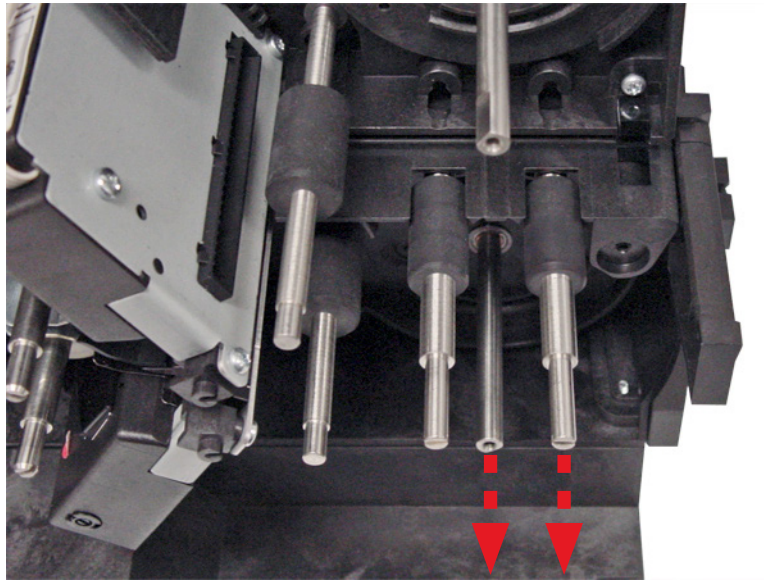


Card Staging Nip Rollers (Left & Right)

For replacement, use **Kit Roller Nip Card Staging 105936G-524**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

For this procedure you will need to free (i.e., remove the four mounting screws), but not disconnect, the laminator controller PCBA

Step 1. Carefully remove the card staging nip roller(s); see arrows below.



Step 2. Set the card staging nip roller(s) aside.

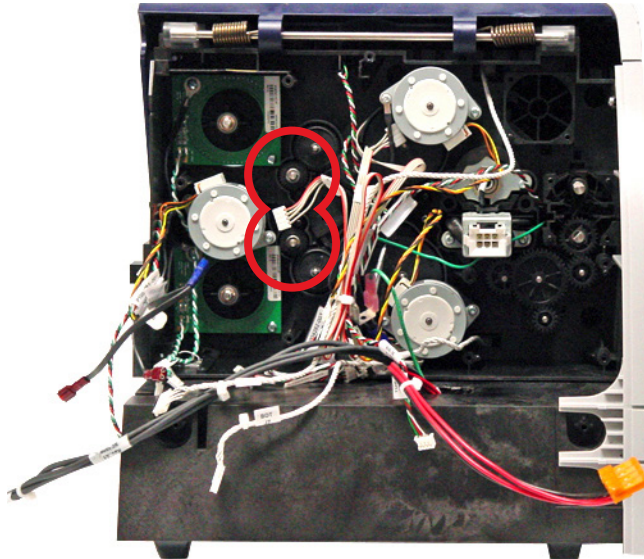


Platen Overrun Roller (Top & Bottom)

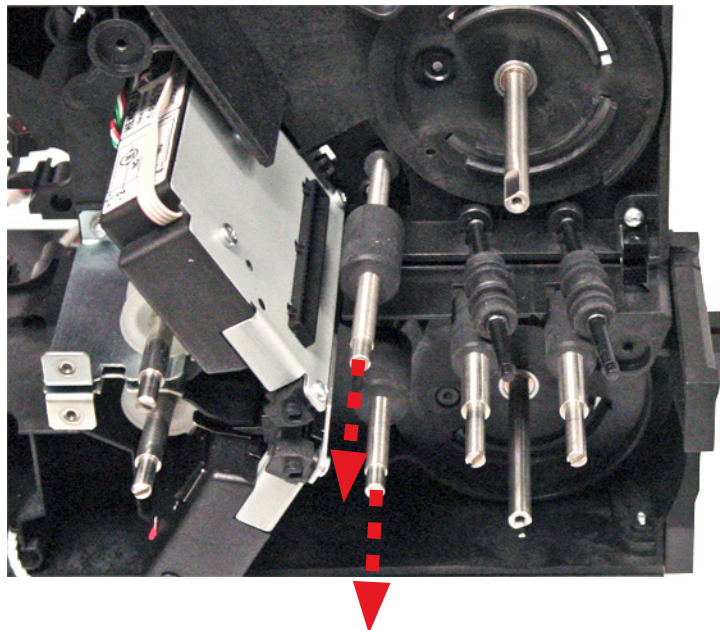
For replacement, use **Kit Platen Overrun 105936G-525**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

For this procedure you will need to remove (both free and disconnect) the laminator controller PCBA.

Step 1. Remove the clip(s) holding the platen overrun roller(s) in place (circled below).



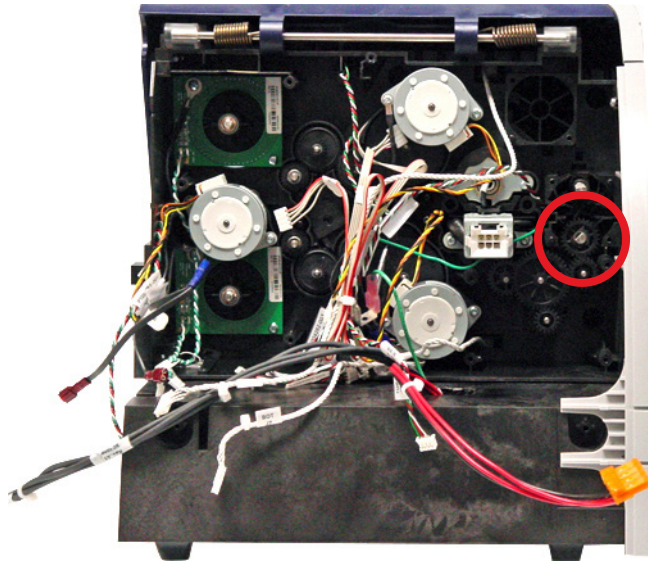
Step 2. Remove the platen overrun roller(s). Do not remove the gear.



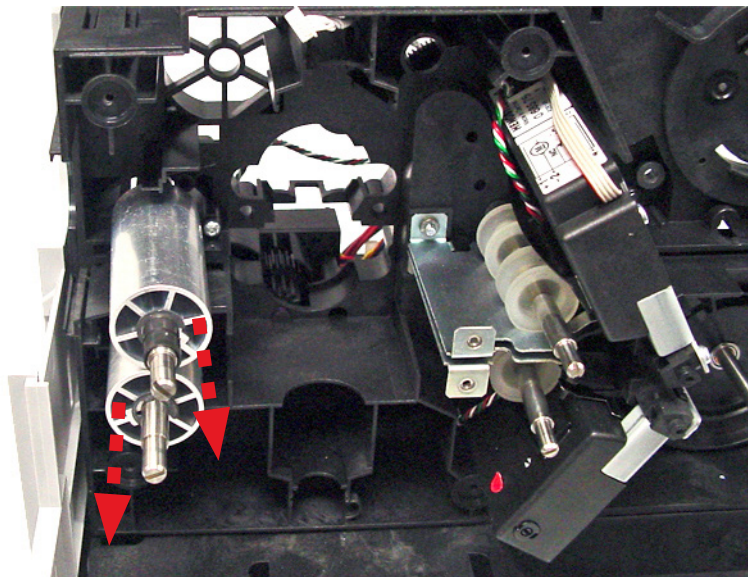
Exit Rollers

For replacement, use **Kit Assy Exit Roller 105936G-526**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** Remove the clip from the bottom exit roller, and slide the gear off the shaft (circled below).



- Step 2.** Remove the top exit roller. Note that this releases a torsion spring. Also note that this roller has bushings.



- Step 3.** Remove the bottom exit roller.

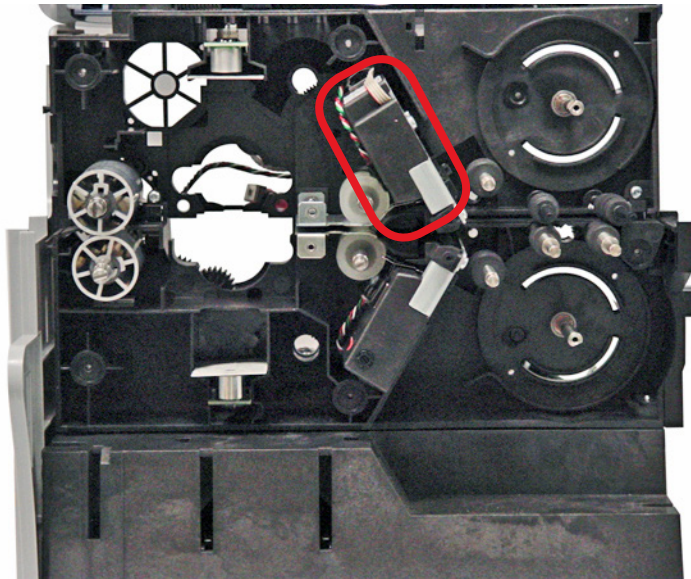
Cutters (Upper & Lower)

Upper Cutter

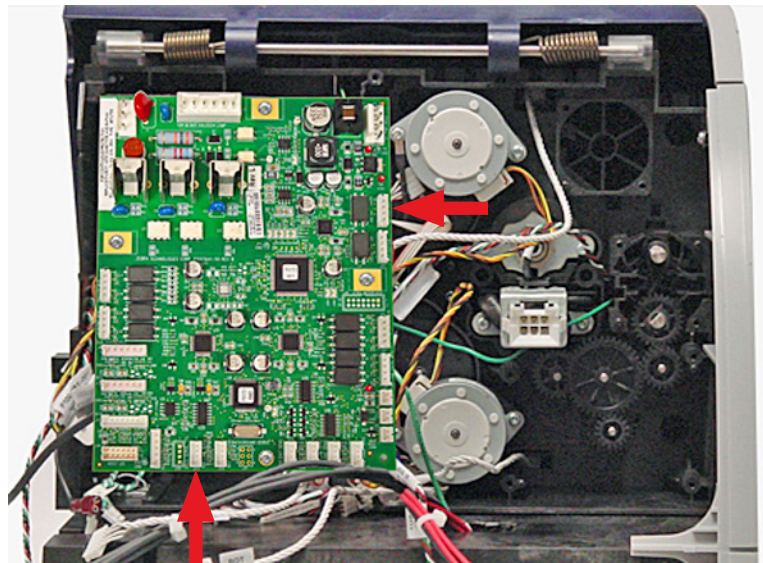
For replacement, use **Kit Assy Cutter Upper 105936G-522**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

For this procedure you will need to free (i.e., remove the four mounting screws), but not disconnect, the laminator controller PCBA.

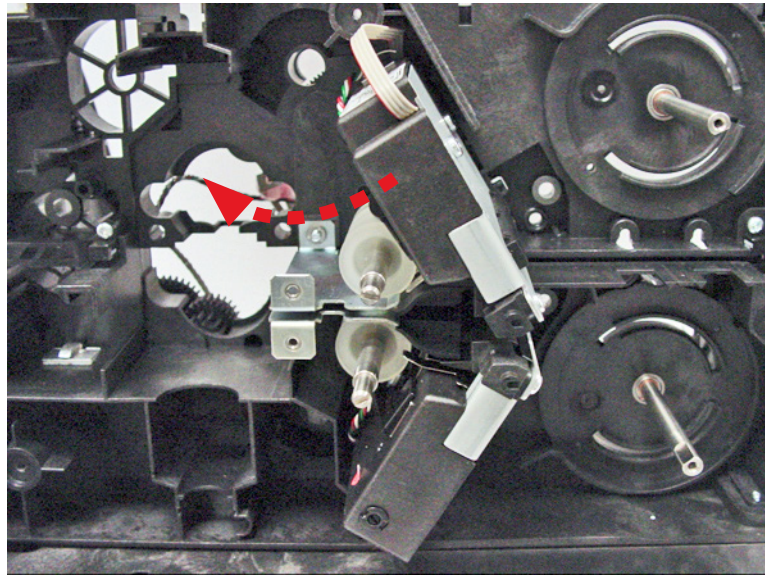
Step 1. Locate the upper cutter (front view, front frame removed).



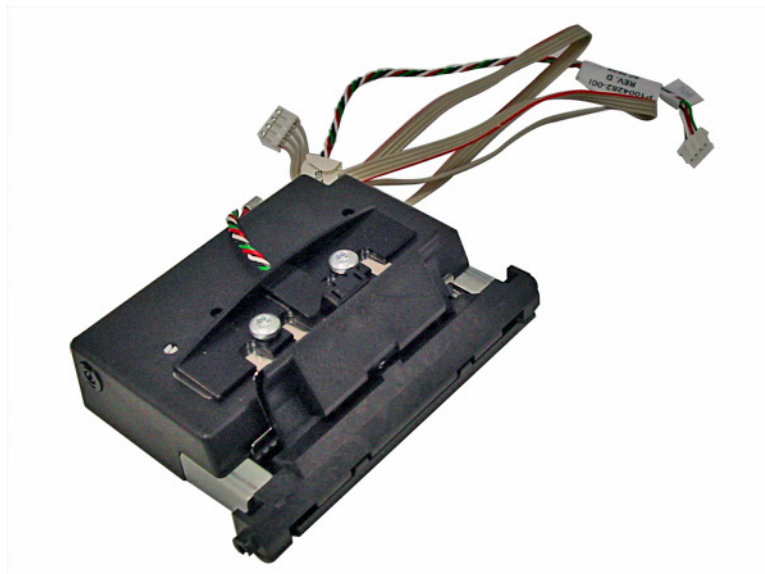
Step 2. Disconnect the cutter plug at J22 and the sensor plug at J23 (arrows below).



Step 3. Carefully slide the upper cutter out of its pressure-fit mount.



Step 4. Set the upper cutter aside.

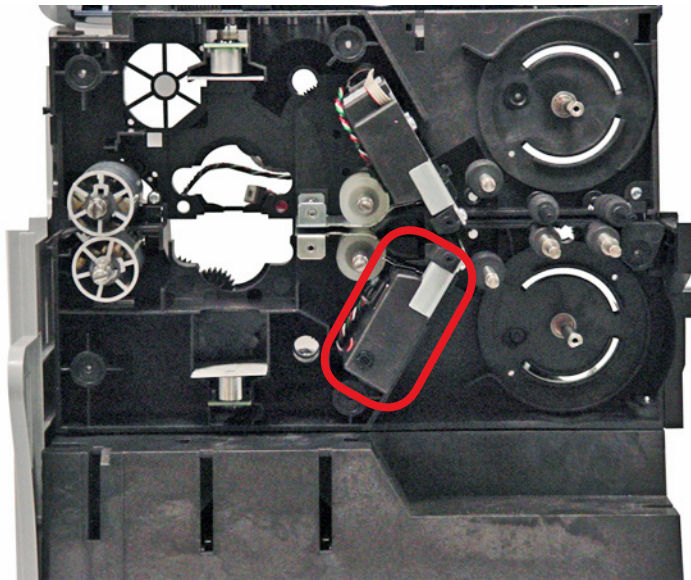


Lower Cutter

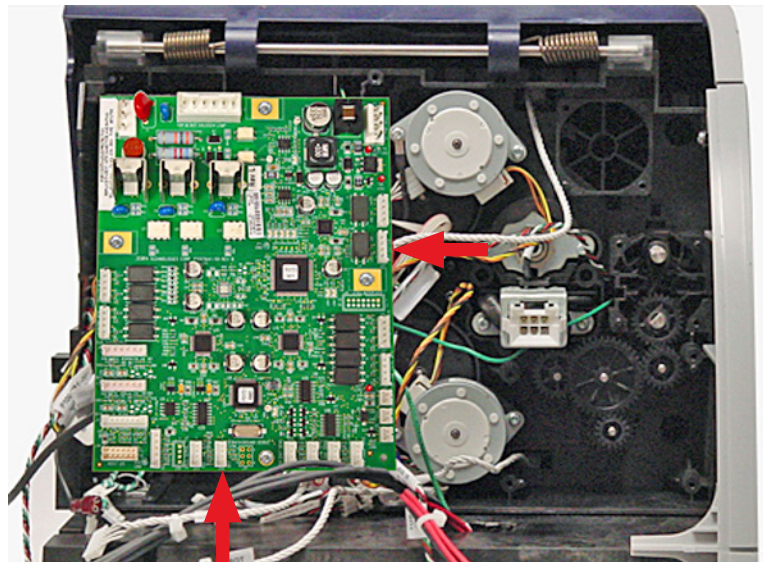
For replacement, use **Kit Assy Cutter Lower 105936G-508**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

For this procedure you will need to free (i.e., remove the four mounting screws), but not disconnect, the laminator controller PCBA.

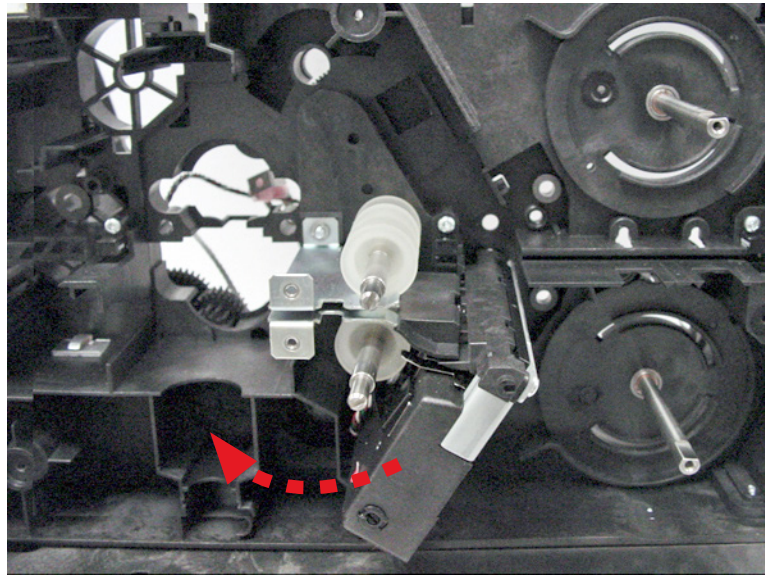
Step 1. Locate the lower cutter (front view, front frame removed).



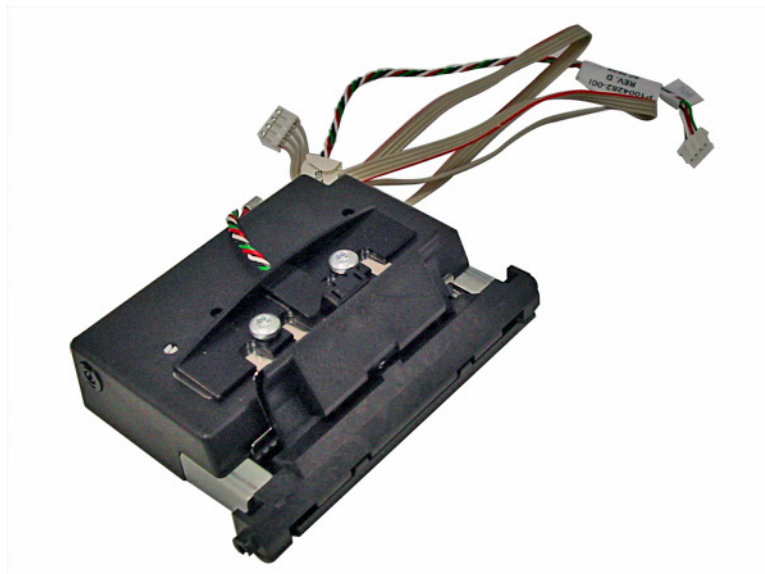
Step 2. Disconnect the cutter plug at J21 and the sensor plug at J24 (arrows below).



Step 3. Carefully slide the lower cutter out of its pressure-fit mount.



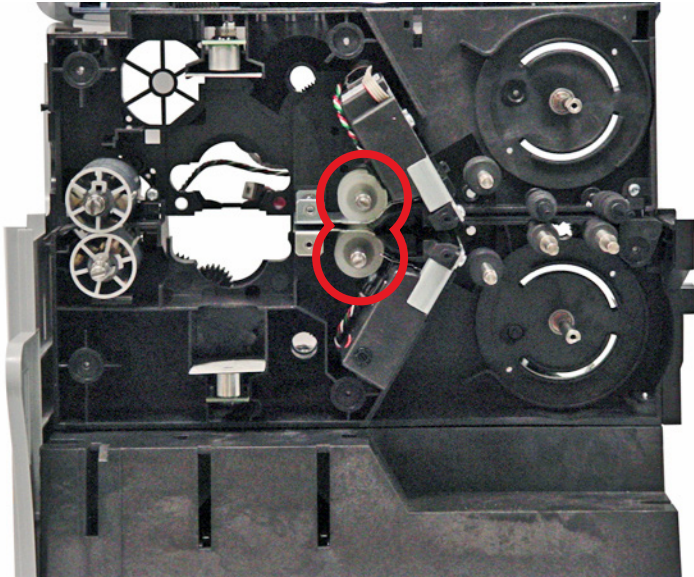
Step 4. Set the lower cutter aside.



Laminate Ribbon Rollers (Top & Bottom)

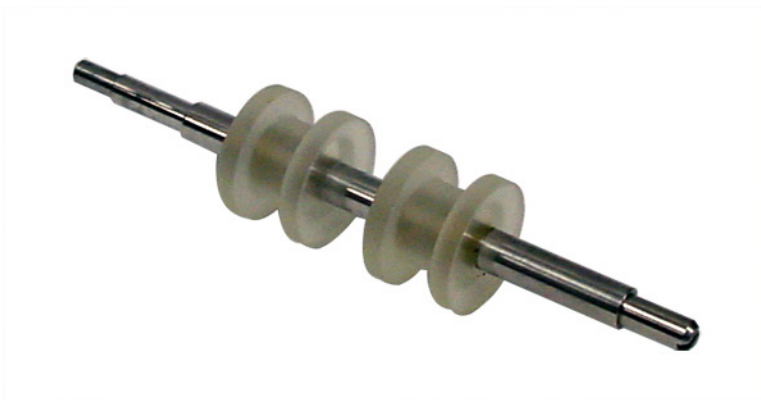
For replacement, use **Kit Roller Rib Laminate 105936G-523**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the laminate rib roller—top and/or bottom (circled below).



Step 2. Remove the corresponding cutter(s) (see [“Cutters \(Upper & Lower\)”](#) on page 396).

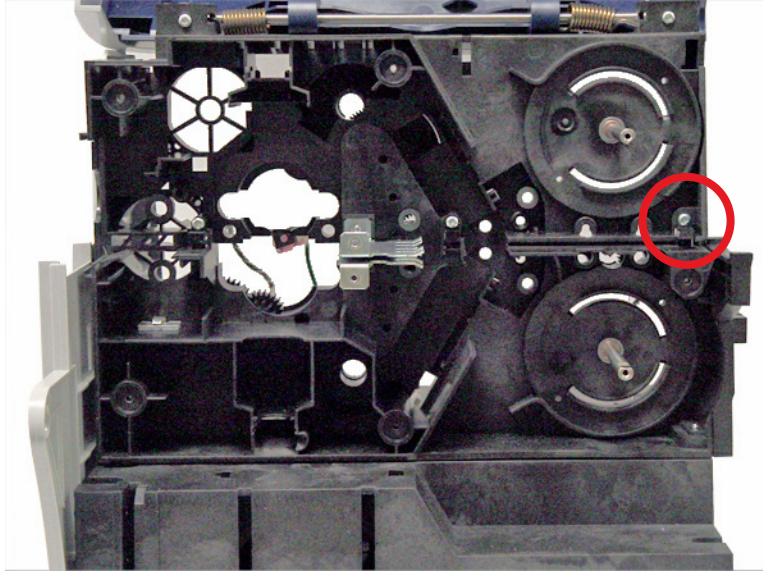
Step 3. Remove the laminate rib roller(s).



Card Entry Sensor Cable Assembly

For replacement, use **Kit Cbl Assy Sensor Card Entry 105936G-532**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the card entry sensor cable assembly (circled below).



Step 2. With a TORX T10 driver, remove the screw holding the sensor in place.

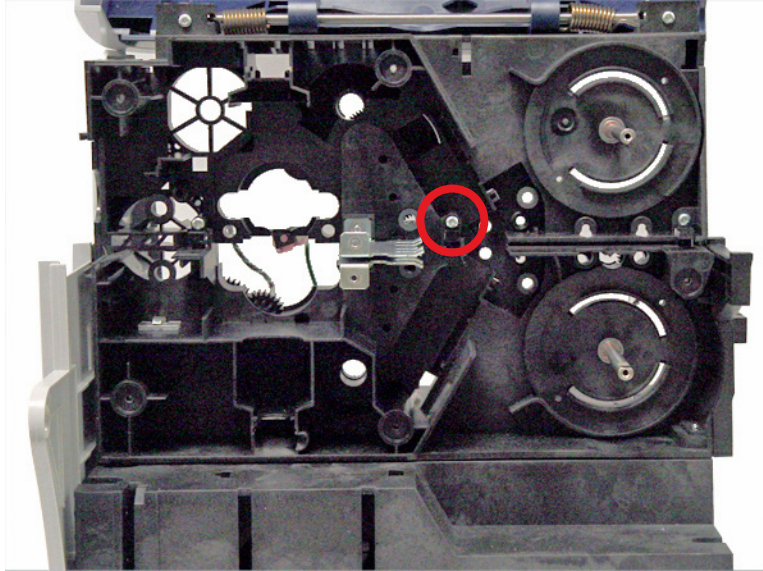
Step 3. Carefully slide the sensor and cable straight out of the laminator.



Card Laminator Sensor Cable Assembly

For replacement, use **Kit Cbl Assy Sensor Card Lam 105936G-533**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the card laminator sensor cable assembly (circled below).



Step 2. With a TORX T10 driver, remove the screw holding the sensor in place.

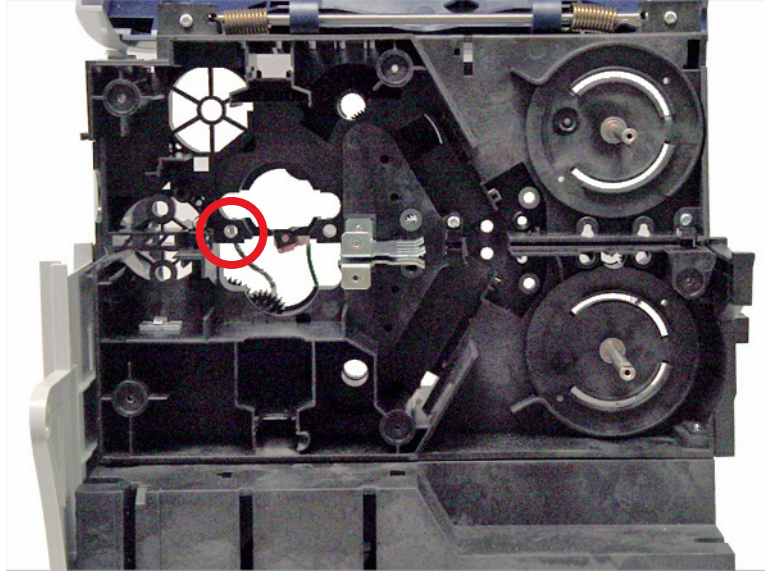
Step 3. Carefully slide the sensor and cable straight out of the laminator.



Card Exit Sensor Cable Assembly

For replacement, use **Kit Cbl Assy Sensor Card Exit 105936G-534**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the card exit sensor cable assembly (circled below).



Step 2. With a TORX T10 driver, remove the screw holding the sensor in place.

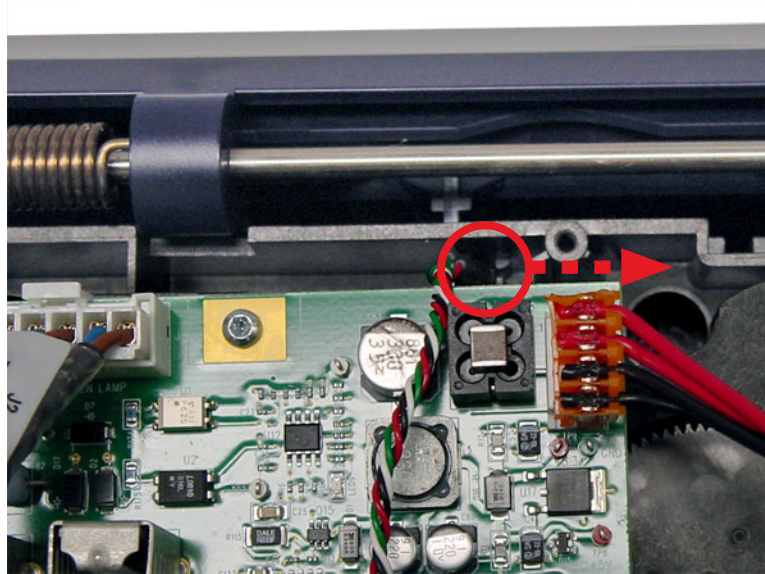
Step 3. Carefully slide the sensor and cable down and out of the laminator.



Door Sensor Cable Assembly

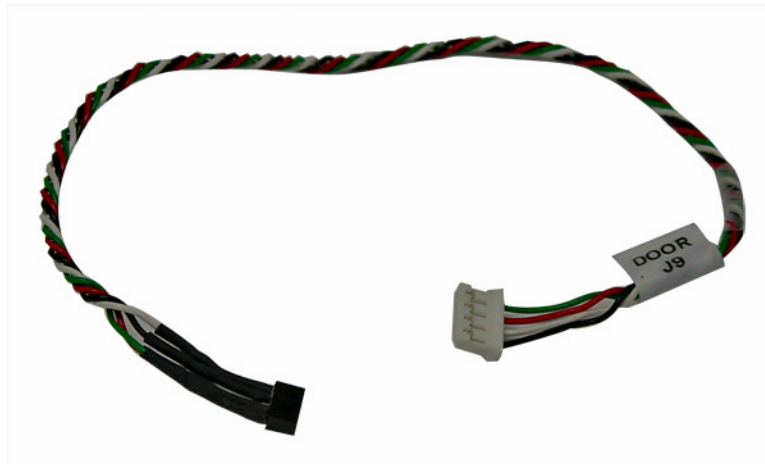
For replacement, use **Kit Cbl Assy Snsr Refl Lam Door 105936G-537**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

- Step 1.** With a small flat-blade screwdriver, release the locking tab (circled below) to free the door sensor.



- Step 2.** Cut the associated cable ties, disconnect J9 from the laminator controller PCBA, and remove the door sensor cable assembly.

- Step 3.** Set the door sensor cable assembly aside.



Laminator Beam

For replacement, use **Kit Beam ZXP Laminator 105936G-500**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Removal

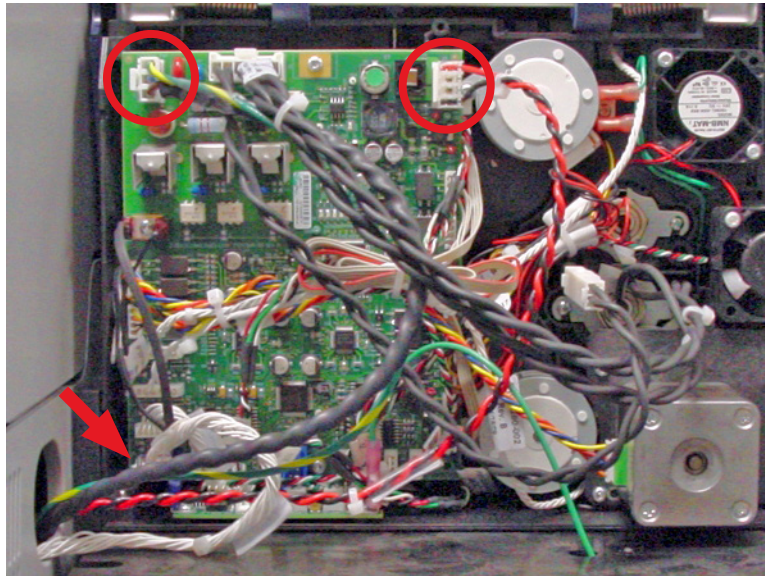
- Step 1.** Power-down the printer with the laminator. Note that the power switch on the printer also controls the laminator.
- Step 2.** Remove the media (cards, ribbon, transfer film, and laminate).
- Step 3.** Remove the back panel from the laminator:
 - a. Remove the three screws (circled below) holding the laminator back cover in place.



- b. Set the three screws and laminator back panel aside.

Step 4. Disconnect the cables from the printer to the laminator main PCBA.

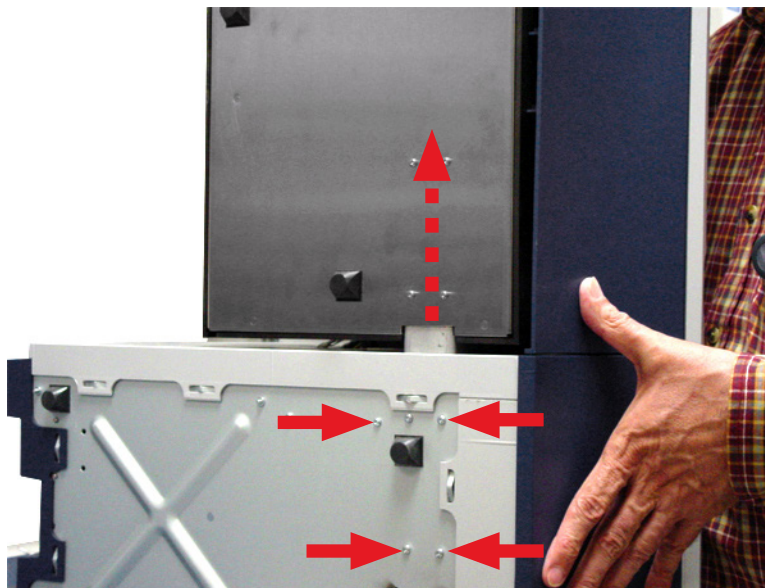
- a. Unplug the AC power cable from J8, EXTERNAL PWR.



- b. Unplug the DC power cable from J15, DC PWR INPUT.
- c. Unplug the logic interface cable from J14 (arrow above).

Step 5. Detach the laminator from the printer:

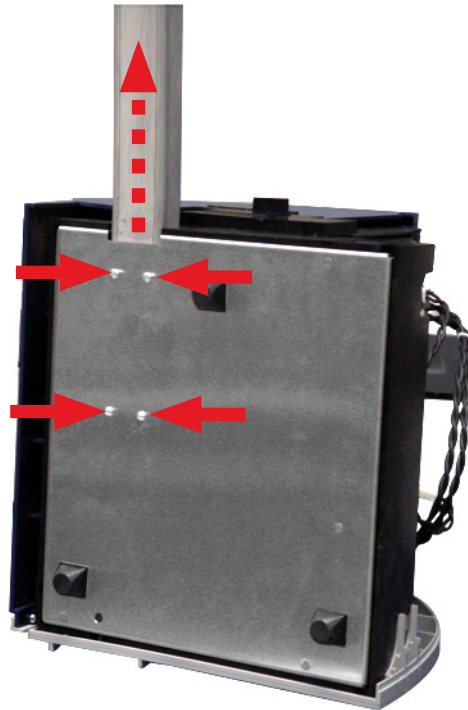
- a. Set the printer on its right side.



- b. Remove the four machine screws (arrows above) that attach the laminator (via the support attachment beam) to the printer.
- c. While supporting the printer, slide the support attachment beam and laminator out of the slot (dashed arrow above) on the left side of the printer.

Step 6. Remove the support attachment beam from the laminator:

- a. Set the laminator on its left side.

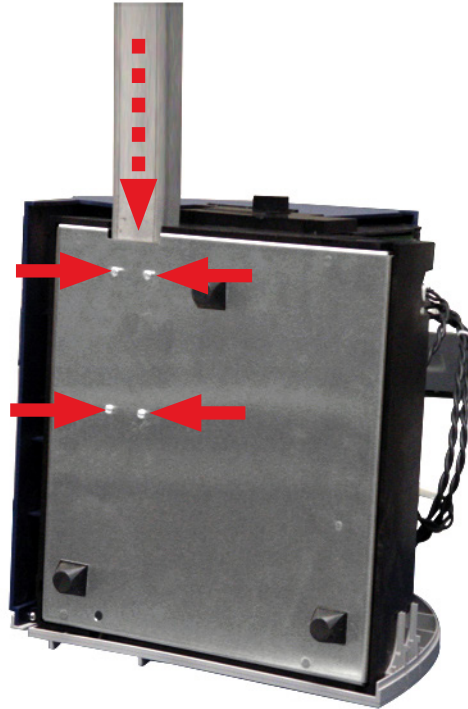


- b. Remove the four machine screws (arrows above) that attach the support attachment beam to the laminator.
- c. Slide the support attachment beam out of the slot (dashed arrow above) on the right side of the laminator.

Replacement

Step 1. Attach the replacement support attachment beam to the laminator:

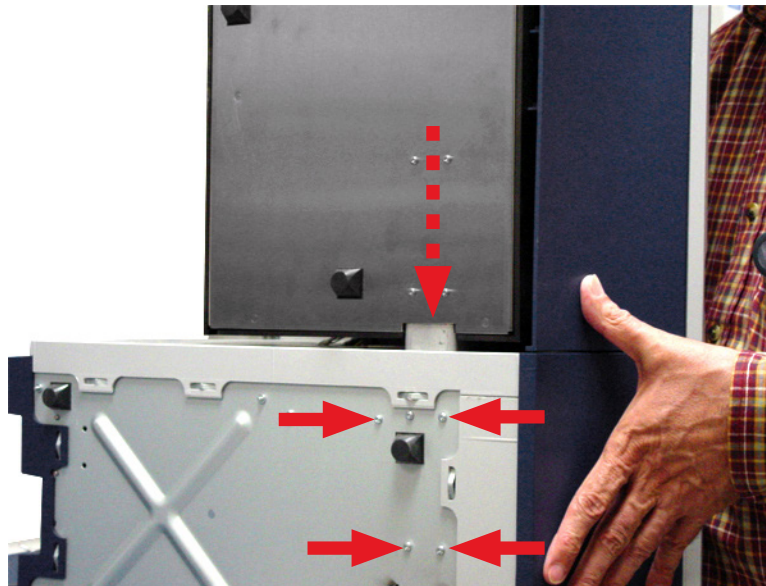
- a. Set the laminator on its left side.



- b. Slide the support attachment beam into the slot (dashed arrow above) on the right side of the laminator.
- c. Align the four mounting holes on the laminator (arrows above) with the four mounting holes on the support attachment beam.
- d. Using four machine screws, attach the support attachment beam to the laminator.

Step 2. Attach the laminator to the printer:

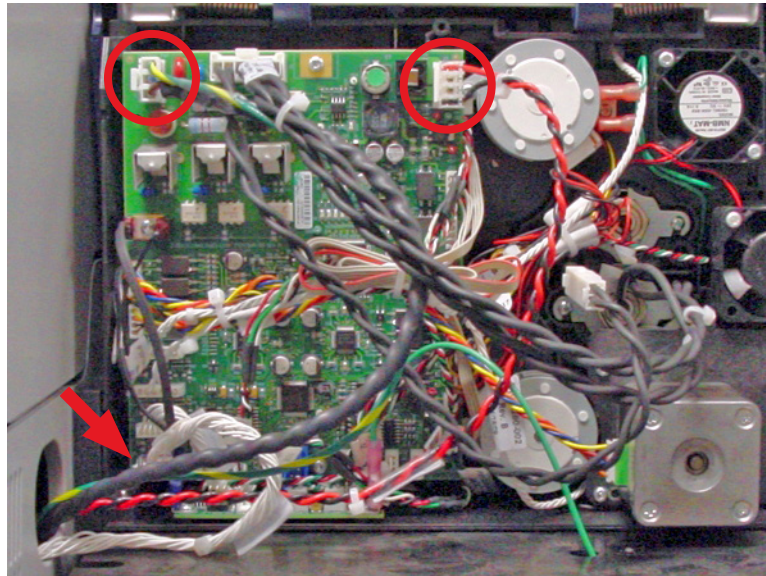
- a. Set the Printer on its right side.



- b. While supporting the printer, slide the support attachment beam and laminator into the slot (dashed arrow above) on the left side of the printer.
- c. Align the four mounting holes on the printer (arrows above) with the four mounting holes on the support attachment beam.
- d. Using four machine screws, attach the laminator (via the support attachment beam) to the printer.
- e. Check the fit and alignment of the laminator to the printer.

Step 3. Connect the cables (circled below) from the printer to the laminator main PCBA.

a. Plug the AC Power Cable into J8, EXTERNAL PWR.



b. Plug the DC power cable into J15, DC PWR INPUT.

c. Plug the logic interface cable into J14 (arrow above).

Step 4. Install the laminator back panel.

Step 5. Install the media (cards, ribbon, transfer film, and laminate).

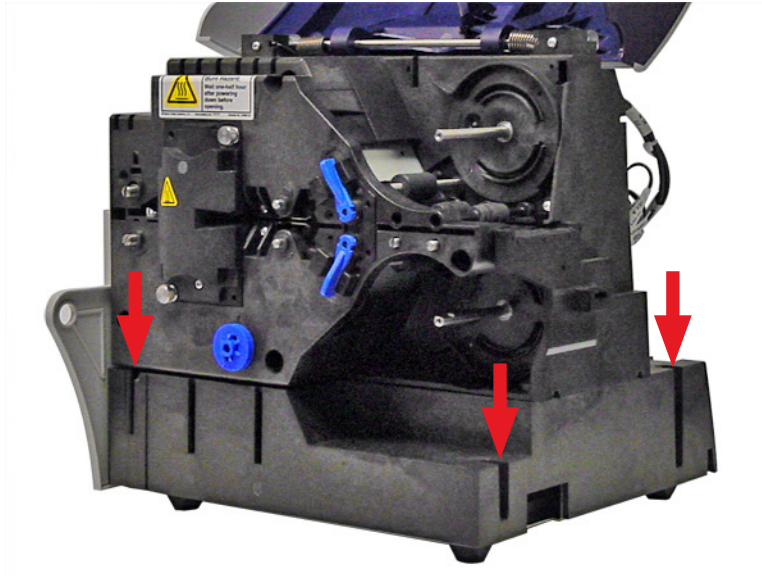
Step 6. Power-up the printer with the laminator. Note that the power switch on the printer also controls the laminator.

Step 7. Observe the printer go through the initialization process.

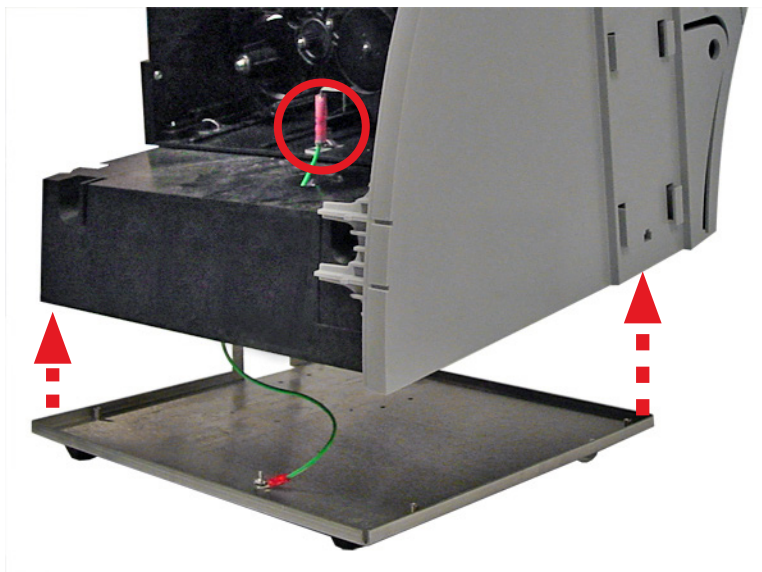
Step 8. If no errors are encountered, print a test card via the Operator Control Panel (OCP). Select MENU > PRINT TEST CARDS > PRINT.

Base-Frame Separation

- Step 1.** With a TORX T10 Driver, remove the four screws holding the frame and base assembly to the baseplate (arrows below).

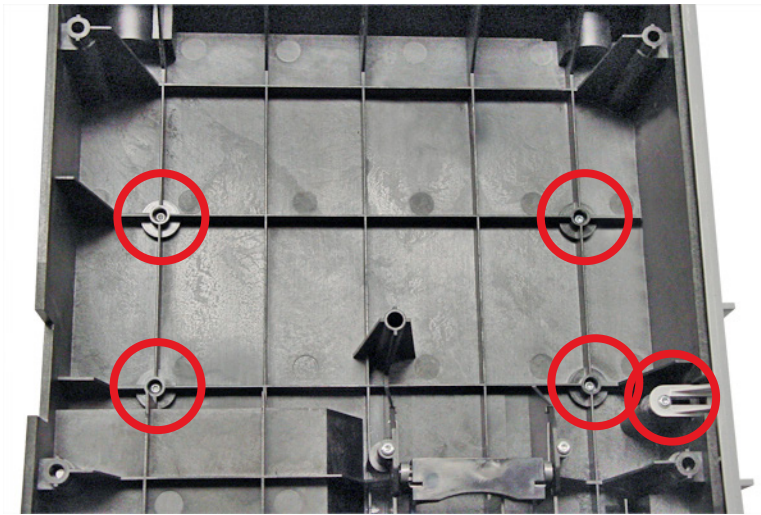


- Step 2.** Separate the frame and base assembly from the baseplate. If not already disconnected, disconnect the ground from the bracket (circled below).

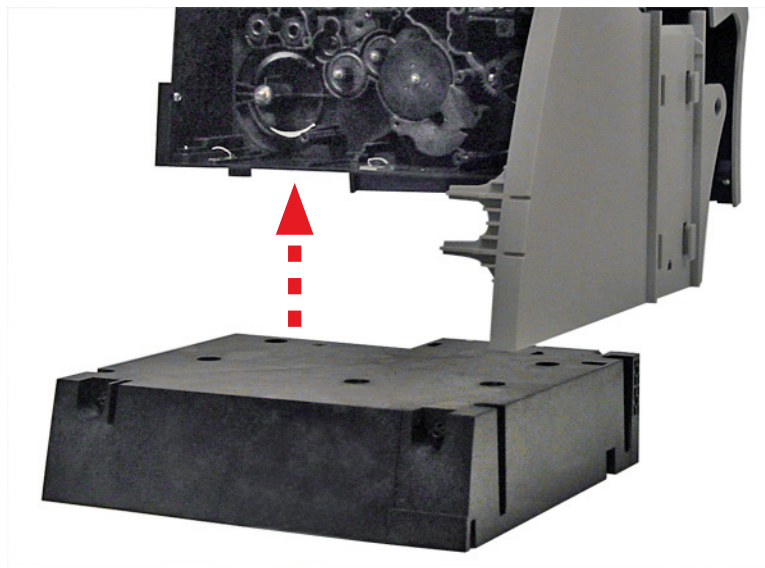


- Step 3.** Turn the frame and base assembly on its side.

- Step 4.** With a TORX T10 Driver, remove the five screws (circled below) holding the frame to the base.



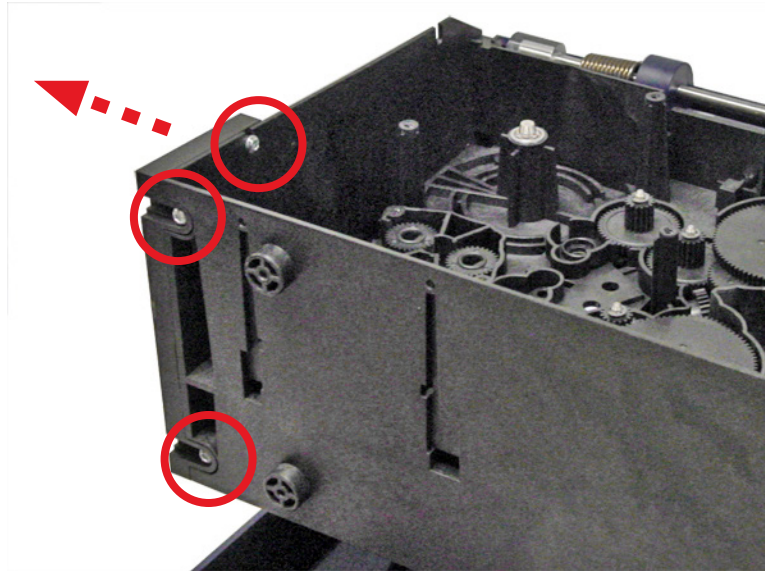
- Step 5.** Separate the frame from the base.



Cruciform Assembly

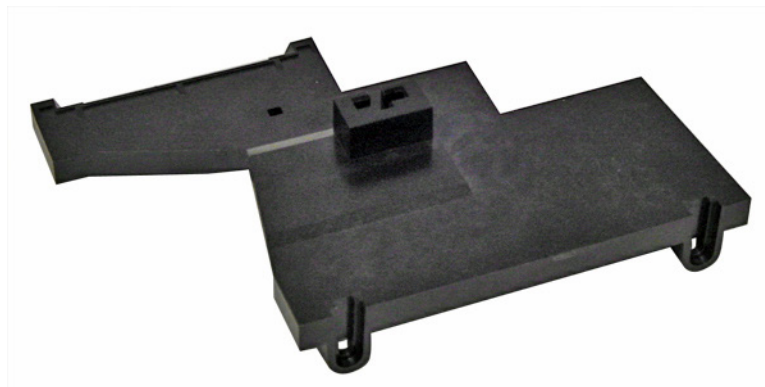
For replacement, use **Kit Assy Cruciform ZXP 105936G-501**. Contact Zebra Customer Service at +01 877-275-9327 for ordering information.

Step 1. Locate the cruciform mounted on the frame.



Step 2. With a TORX T10 Driver, remove the three screws (circled below) holding the cruciform to the frame.

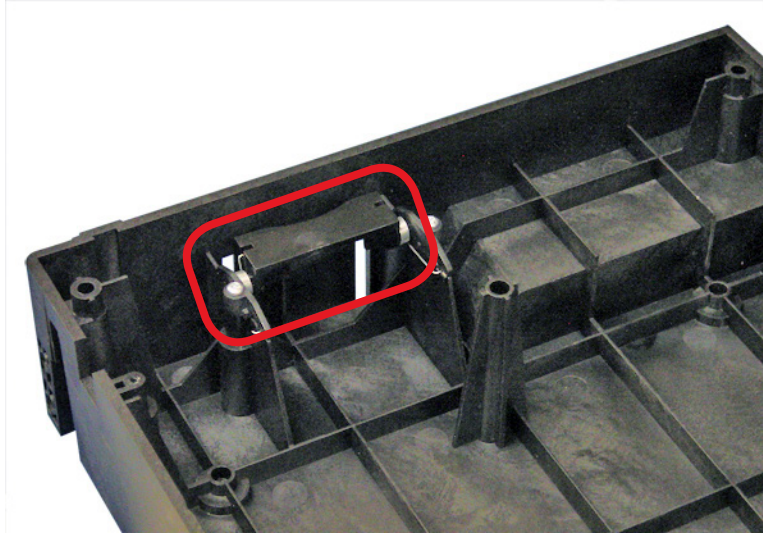
Step 3. Set the cruciform aside.



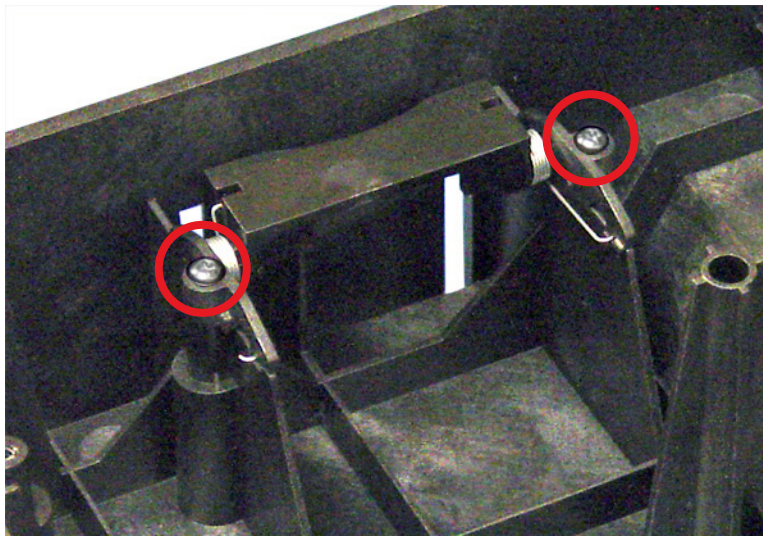
Door Latch

Note • This procedure uses Spares Kit # 105936G-529: KIT, ASSY, ZXP8 LAM DOOR LATCH.

Step 1. Locate the door latch mounted on the base (viewed from the bottom with the baseplate removed.).

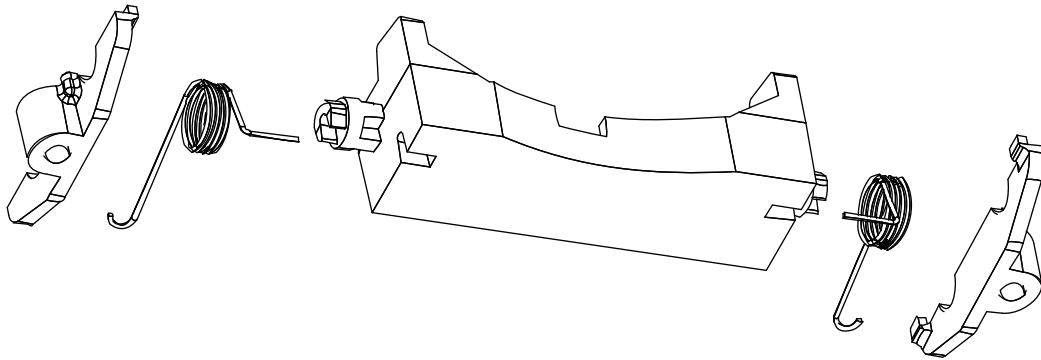


Step 2. With a TORX T10 driver, remove the two screws (circled below) holding the door latch to the base.

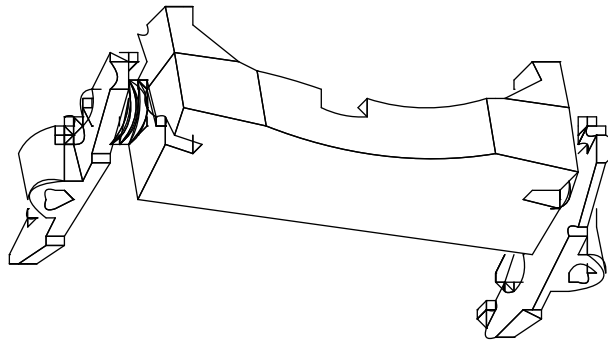


Step 3. Remove the door latch.

Step 4. When reassembling the door latch, note the orientation of the parts as shown in the figure below.



Step 5. The following figure shows the fully assembled door latch.

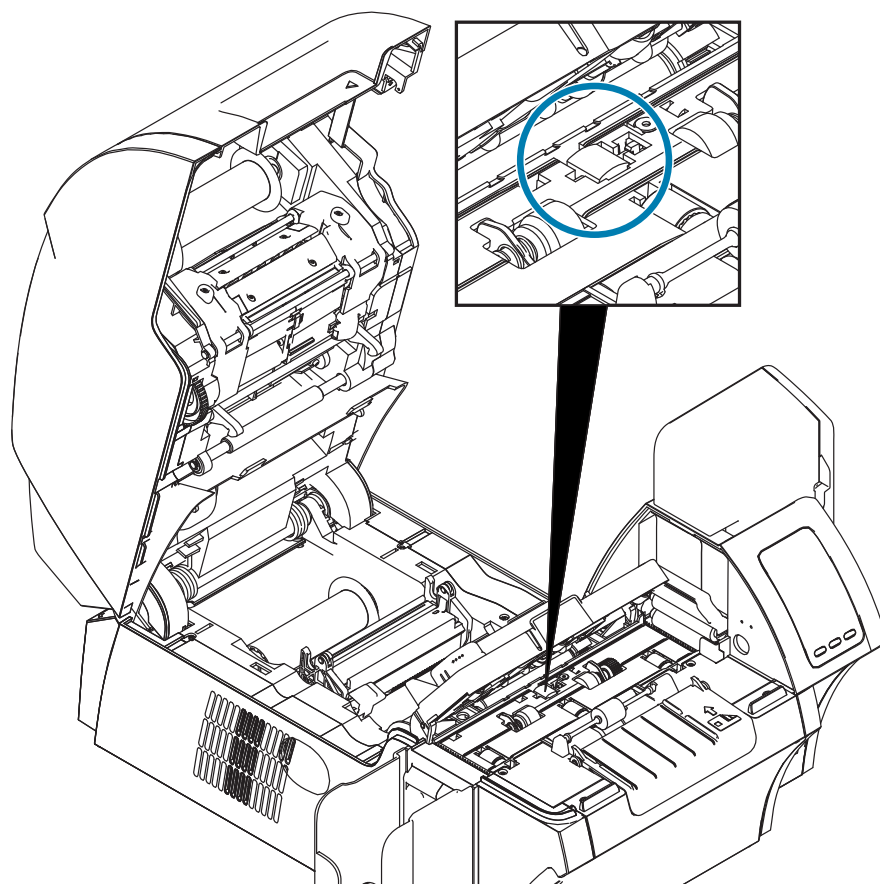




Magnetic Card Encoder

Introduction

The magnetic encoder can be set for either high or low coercivity, which must match the cards being used. Use the Printing Preferences Control Panel to change the encoder setting.



Ribbon Selection

Use a YMCKI or YMCKKI ribbon—this ribbon type has an inhibit panel which prevents printing over the mag strip on the back of the card.

Driver Setting

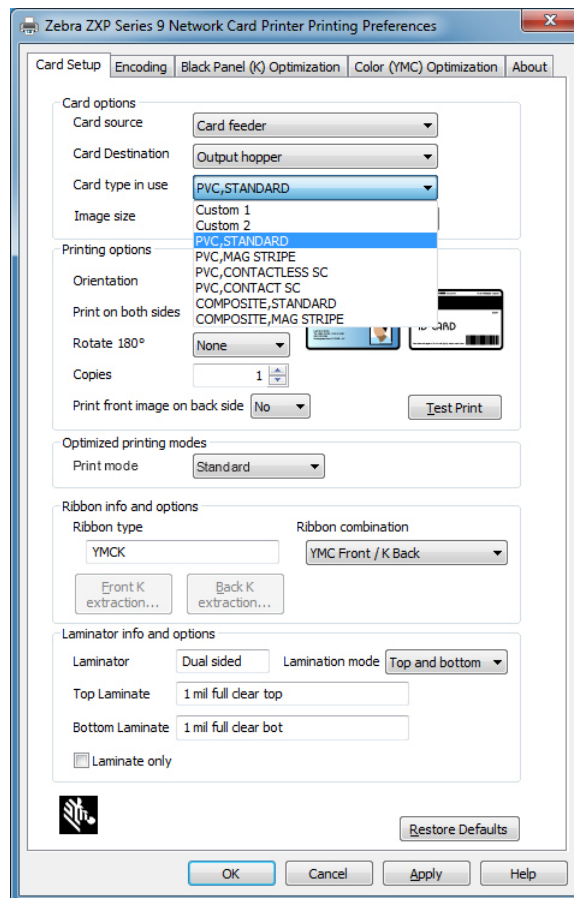
The Printing Preferences Control Panel enables the user to specify the magnetic encoder card type in use. Based on the selection, the printer makes automatic adjustments to optimize performance. Additionally, the control panel enables the user to set various magnetic encoding options.

- Step 1.** Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

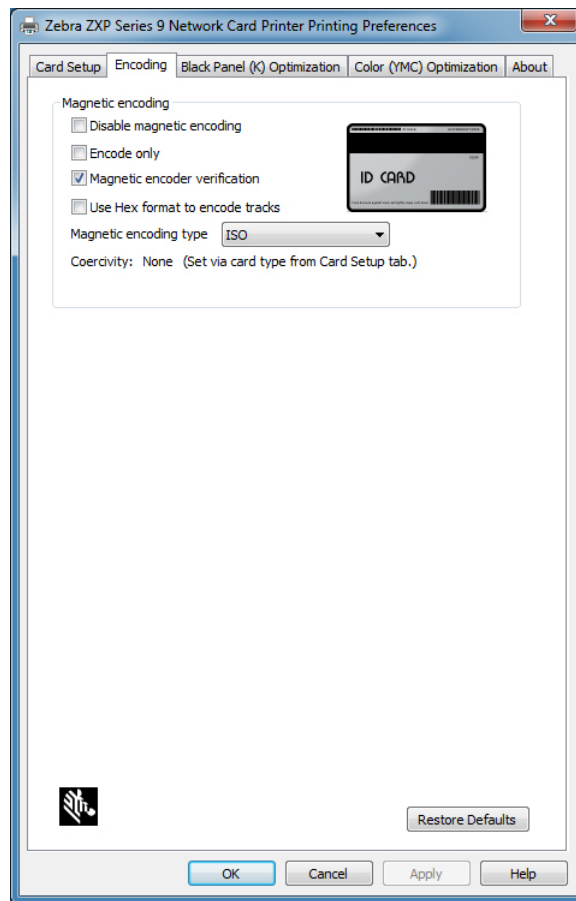
Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

- Step 2.** From the Card Setup tab, click the **Card type in use** drop-down menu and select the appropriate card.



Step 3. From the Encoding tab, click the **Magnetic encoding type** drop-down menu and select the appropriate format.



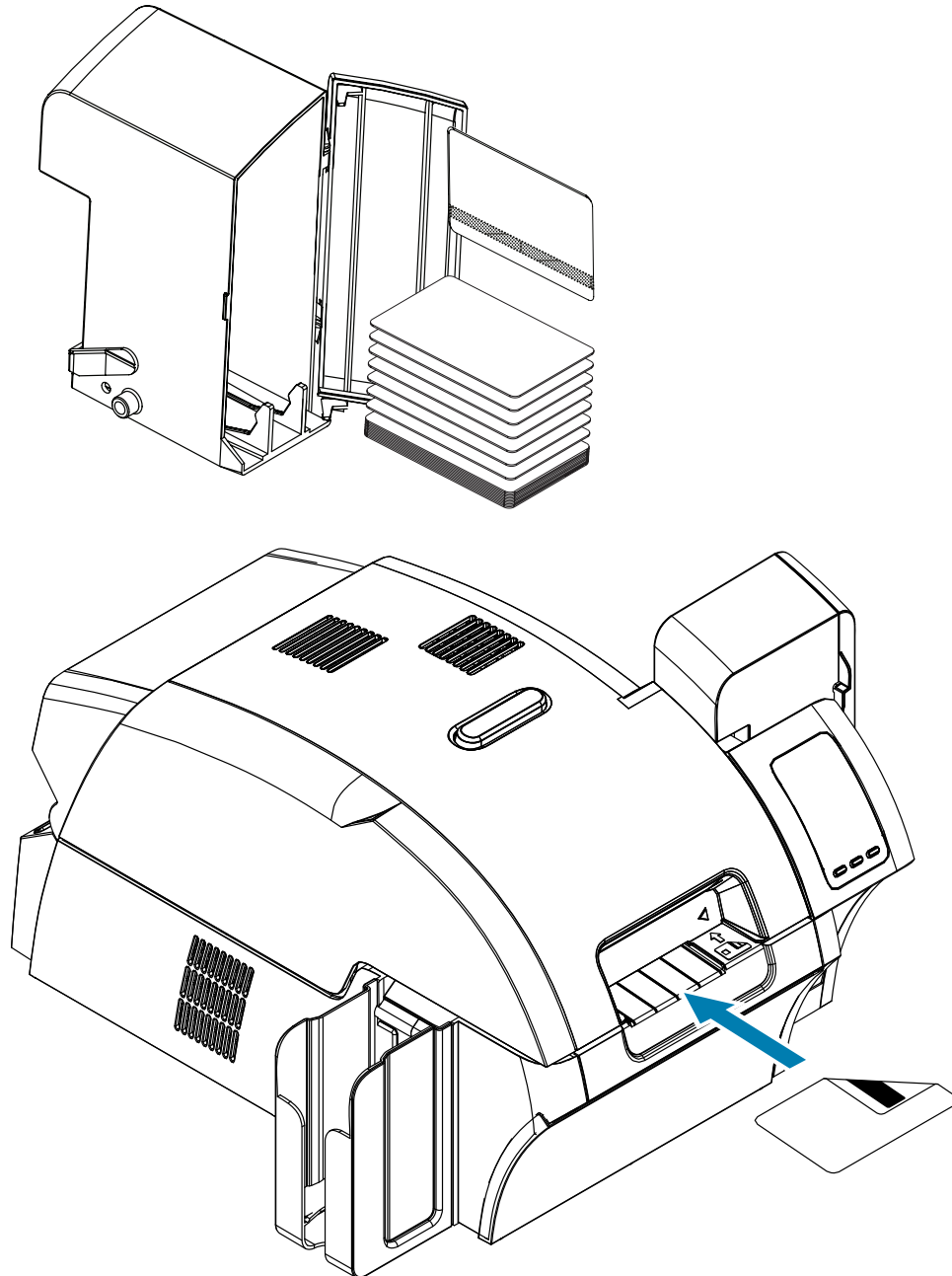
Step 4. Click **Apply**.

Step 5. Click **OK** to close.

Media Loading Orientation

Note • ONLY USE cards that comply with ISO 7810 and 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.

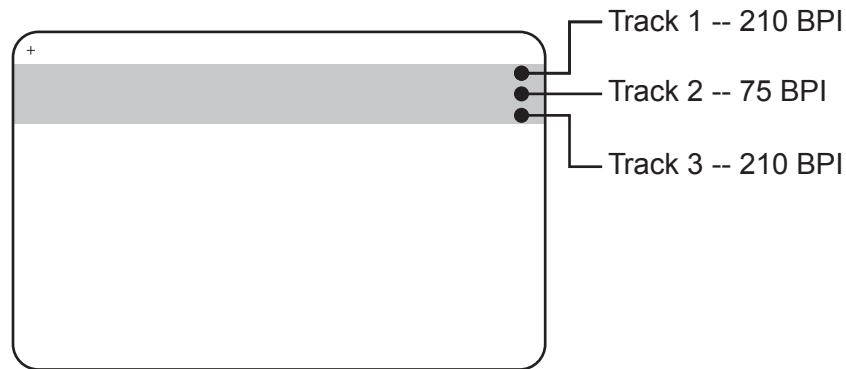
Place the cards in the input hopper with the magnetic stripe down and facing to the rear (as shown). For manual card feed, insert the card into the manual feed slot with the magnetic stripe down and toward the printer (as shown).



Magnetic Encoding Type

ISO (Default)

The encoder reads and writes standard ISO track data formats in standard ISO track locations. The following shows the three standard ISO tracks.



Each track can be encoded and decoded with ASCII characters in the standard default ISO data formats:

Track	Density (bits per inch)	Bits per character	Character parity	Length (characters)	LRC parity	Start sentinel	End sentinel	Start sentinel offset inches (mm)
1	210	7	Odd	76	Even	%	?	0.293" (7.4)
2	75	5	Odd	37	Even	;	?	0.293" (7.4)
3	210	5	Odd	104	Even	;	?	0.293" (7.4)

The magnetic encoder can read or encode up to 3 tracks of digital information onto CR-80 cards incorporating a HiCo or LoCo magnetic stripe in the ISO 7811 format.

Encoding for the three tracks uses the ISO 7811 format.

- Track 1 uses 210 BPI (bits per inch) encoding in the International Air Transport Association (IATA) format of 79 alphanumeric characters, at 7 bits per character.
- Track 2 uses 75 BPI encoding to store 40 numeric characters at 5 bits per character in American Banking Association (ABA) format.
- Track 3 uses 210 BPI encoding of 107 numeric characters at 5 bits per character in THRIFT format.

The ISO data formats include a preamble (all zeros), a start character, data (7-bit or 5-bit as specified by ISO), a stop character, and a longitudinal redundancy check (LRC) character. The 7-bit data format has 6 bits of encoded data and a parity bit. The 5-bit data format has 4 bits of encoded data and a parity bit.

The ISO data formats include a data field separator (or delimiter) that allows parsing of the encoded track data. An example of separate data fields would be the ABA data format (Track 2) that includes a Primary Account Number (PAN) field and an account information field (for expiration date, country code, etc.).

AAMVA

The data stored on magnetic stripes on American driver's licenses is specified by the American Association of Motor Vehicle Administrators (AAMVA).

Alpha-numeric characters on Tracks 1 and 3, numerals only on Track 2.

Track	Density (bits per inch)	Bits per character	Character parity	Length (characters)	LRC parity	Start sentinel	End sentinel	Start sentinel offset inches (mm)
1	210	7	Odd	79	Even	%	?	0.293" (7.4)
2	75	5	Odd	37	Even	;	?	0.293" (7.4)
3	210	7	Odd	79	Even	%	?	0.293" (7.4)

CUSTOM

If a custom format is desired, the ISO standard format may be used as a starting point. The standard format can then be modified by assigning different values to any or all of the density, character, and sentinel attributes. (If any of these attributes is missing, its corresponding value in the standard ISO format will be substituted.)

BINARY

The binary option allows the user to specify directly the value for each bit on the mag stripe.

In this "direct binary" mode, it is the host's responsibility to fully populate the magnetic stripe; i.e., the hex data provided by the host must include the leading zeros, start sentinel, data, end sentinel, LRC, and trailing zeros. Note that the magnetic stripe is encoded from the right-hand end as viewed from the "stripe" side, with the stripe uppermost. The least significant bit of the data is encoded first.

A sufficient number of leading zeros should be prepended to offset the start sentinel by approximately 0.3" (7.5 mm) from the right-hand end, as in the ISO format. Care should be taken to ensure that the payload data does not exceed the capacity of the tracks at their specified recording densities. (In the binary mode, out-of-range data is not recorded, and no error condition will result.)

A CR-80 size card has a nominal capacity of 252 bits per track at 75 BPI, and 708 bits at 210 BPI. These capacities equate approximately to 31 hex bytes (248 binary bits) and 88 hex bytes respectively.

The application developer or user can use a preamble or Macro to indicate to the driver that the data following the Preamble or Macro is to be mag encoded.

The user can have encoding and printing data on the same card, and the driver will filter out the encoding data from the printing data. The user does not have to know job control syntax or ZMotif commands to send mag encoding commands to the printer.

Supported Macro commands are:

Step 1. C01<Track1 Data> C02<Track2 Data> C03<Track3 Data>	Step 2. \${1<Track1 data>}\$ \${2<Track2 data>}\$ \${3<Track3 data>}\$	Step 3. ~1=<Track1 data> ~2=<Track2 data> ~3=<Track3 data>
---	---	---

Using Partial-Width Laminate

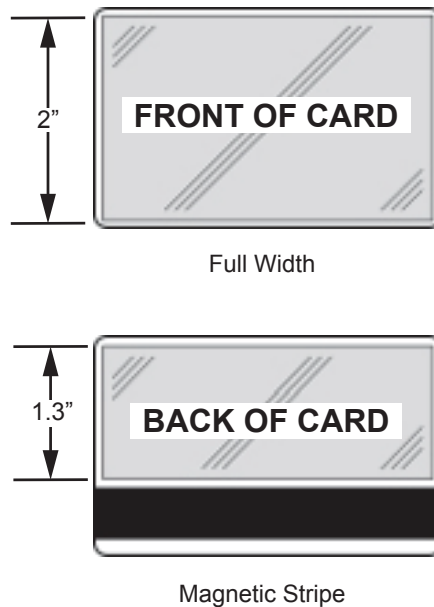
Using Partial-Width Laminate



Note • Since partial-width laminates are only used for the back (i.e., lower) surface of the card, this section only applies to the double-sided laminator.

Laminates come in two widths:

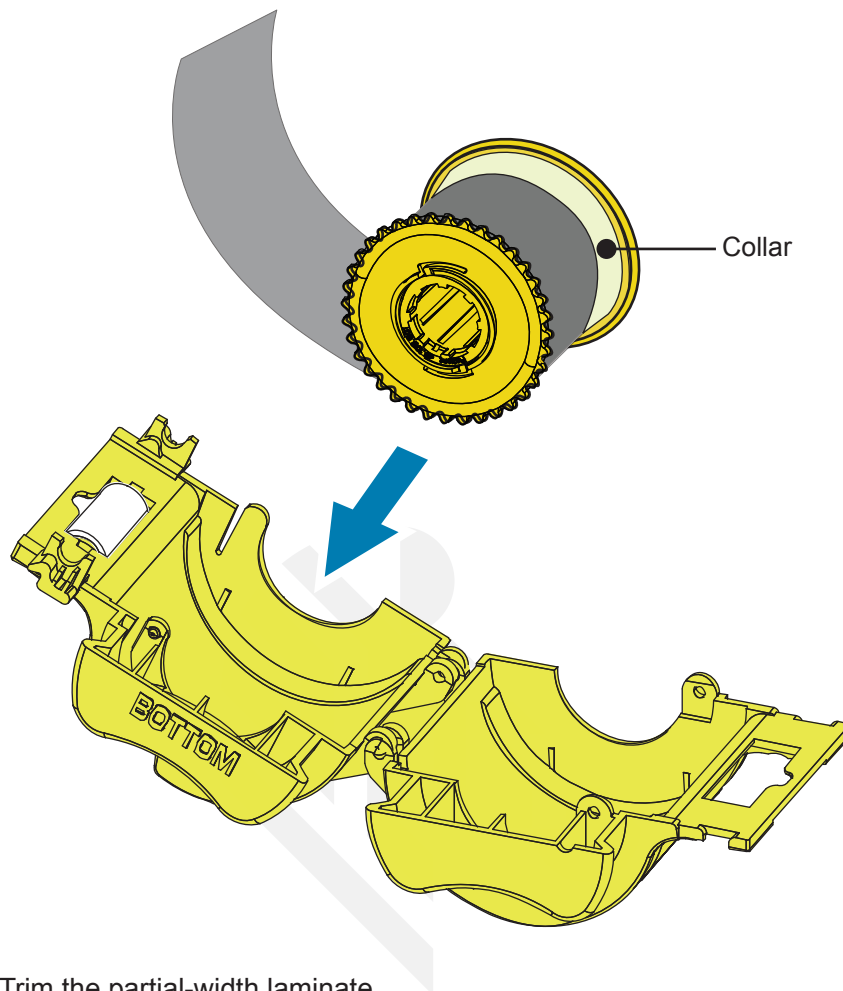
- Full-Width laminate is 2 inches (51 mm) wide. The full-width laminate is used on the front (i.e., upper) or back (i.e., lower) surface of the card.
- “Partial-Width” laminate is available as 1.33 inch (33 mm) wide (used for cards with a magnetic stripe).



Step 1. Remove the lower laminate cassette.

Step 2. Open the cassette, and remove the laminate if present.

Step 3. Load the partial-width laminate into the cassette. Note that the collar on the laminate spool is on the end opposite the geared flange and keeps the laminate positioned correctly.



Step 4. Trim the partial-width laminate.

Step 5. Rotate the core to adjust the laminate overhang—stop when the end of the laminate is even with the edge of the cassette.

Step 6. Install the cassette.

Smart Card Encoder

Introduction

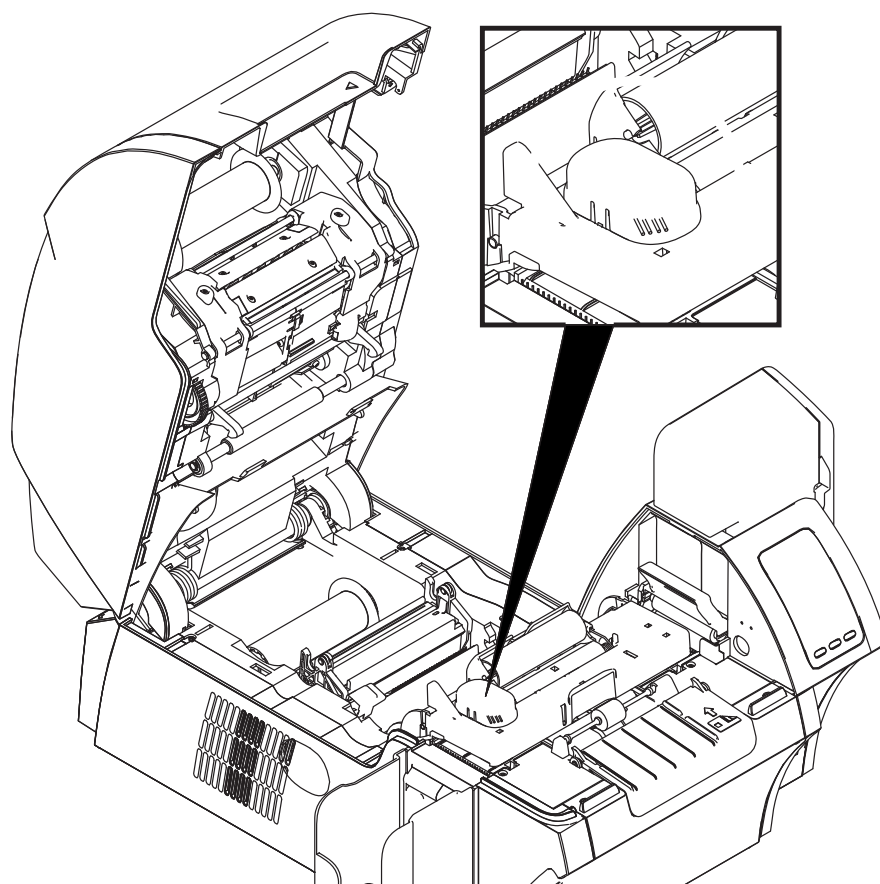
Smart cards can have a built-in microcomputer and/or memory to store information such as fingerprints, voice recognition patterns, medical records, and other such data. All other printer operations remain the same as the standard models.

Contact smart cards have a pad of contacts on the surface of the card that connect to the circuitry embedded into the card.

The printer responds to commands that position the card at the contact location, where the printer connects to the contacts on the smart card. Data to be encoded onto the smart card, and data read from the smart card, can interface via a connector on the printer's rear panel (contact station), or encoding/decoding can be performed by logic on the printer's main PCBA (contact encoder).

Contactless smart cards use various short-range radio technologies to "connect" to the printer. The printer moves the card to an antenna location on the card path, and the encoding or decoding occurs.

All other printer operations remain the same.



Ribbon Selection

Contact Smart Cards

There are no special ribbons to make considerations for the smart card contact. When designing the card, make sure the graphics or any other printed element does not occupy the space of the smart card contact.

Contactless Smart Cards

With reverse transfer printing technology, there are no restrictions when designing material to be printed on contactless smart cards.

Driver Setting

Encoding data onto smart cards and reading the data previously encoded on them is totally under control of the application software. No operator action is required.

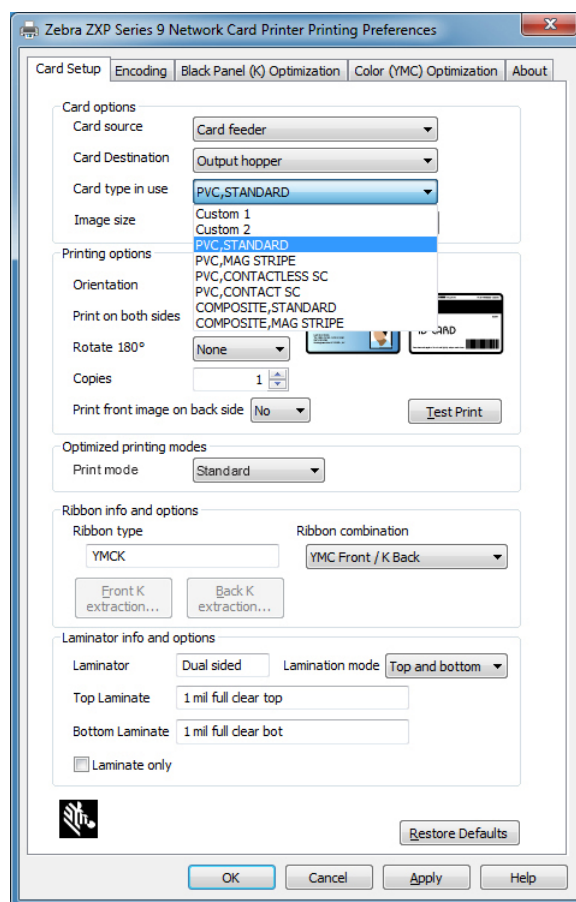
The Printing Preferences Control Panel enables the user to specify the smart card type in use. Based on the selection, the printer makes automatic adjustments to optimize performance.

Step 1. Windows 7: Select Start > Devices and Printers, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Windows 8: Right-click the screen's bottom-left corner (or press Windows+I) and choose Control Panel from the pop-up menu, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Windows 10: Select the Start menu and then select Settings > Devices, right click the Zebra ZXP Series 9 Card Printer, and select **Printing preferences** from the pop-up menu.

Step 2. From the Card Setup tab, click the **Card type in use** drop-down menu and select the appropriate card.



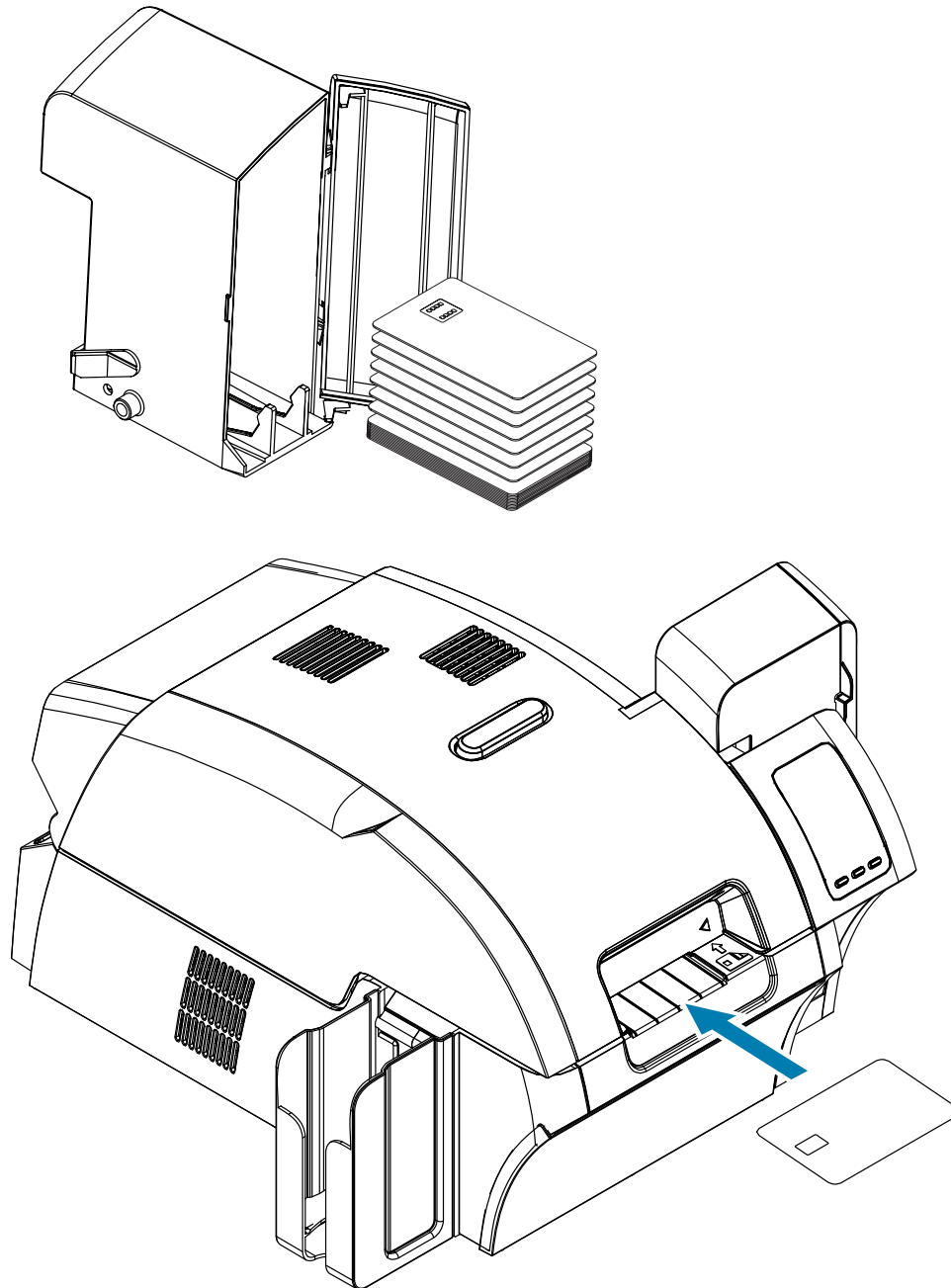
Step 3. Click **Apply**.

Step 4. Click **OK** to close.

Media Loading Orientation

Contact Smart Cards

Place the cards in the input hopper with the gold-plated smart card contacts at the top surface of the card and facing to the left (as shown).

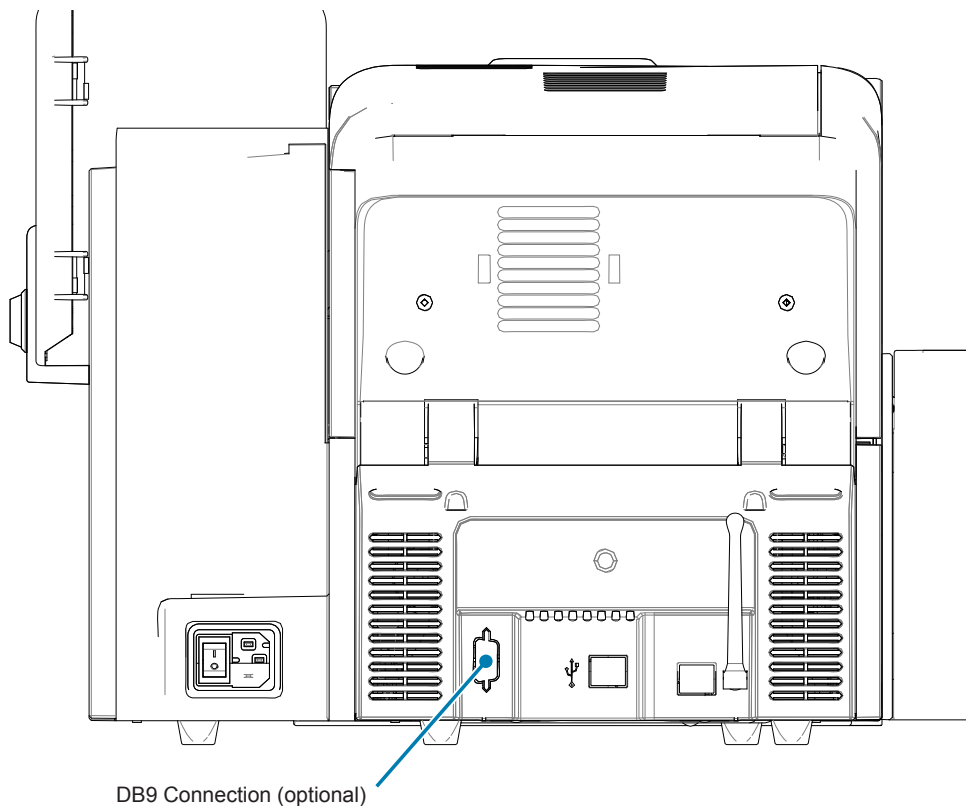


Contactless Smart Cards

For contactless smart cards, orientation is not a consideration.

Contact Station Smart Card Interface

When a command to the printer interface sends a card to the smart card contact station, the printer connects the smart card contact station to the female DB-9 connector on the rear of the printer.

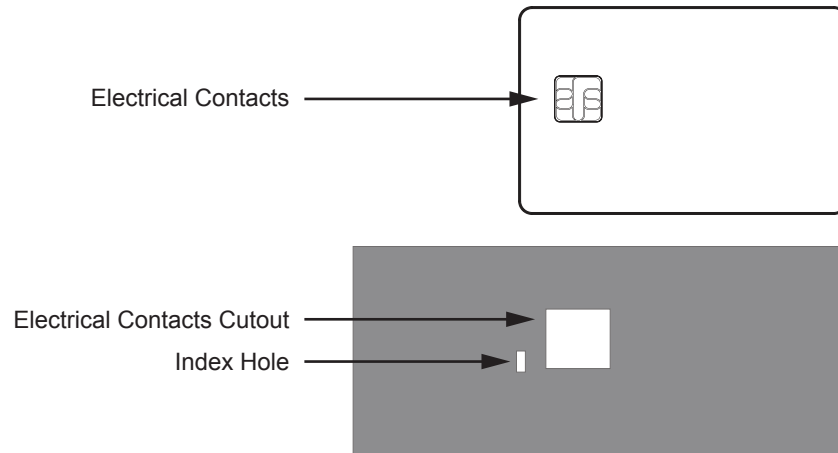


An attached external smart card programmer can be used to program smart card chips. The following table shows the smart card contact points.

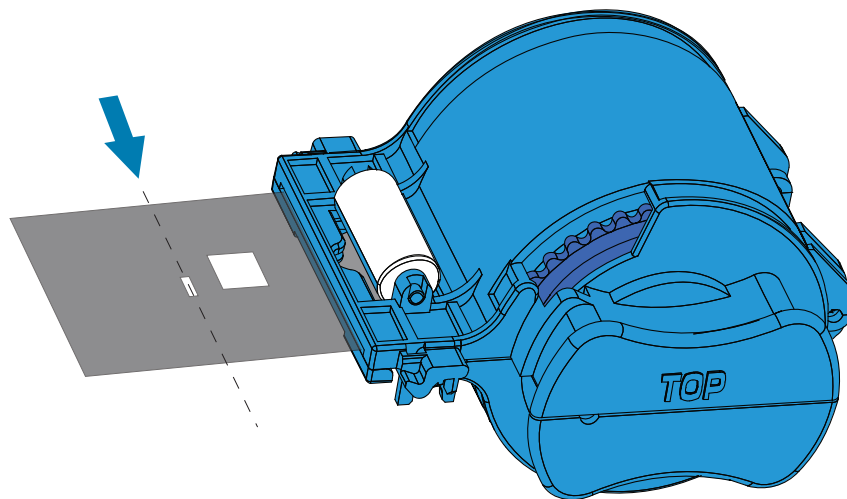
Pin	Smart Card Contact Points	DB-9	Smart Card Contact Points
1	C1 (VCC)	6	C6 (Vpp)
2	C2 (Reset)	7	C7 (I/O)
3	C3 (Clock)	8	C8 (RFU)
4	C4 (RFU)	9	(GND when chip is at station)
5	C5 (GND)		

Laminating Contact Smart Cards

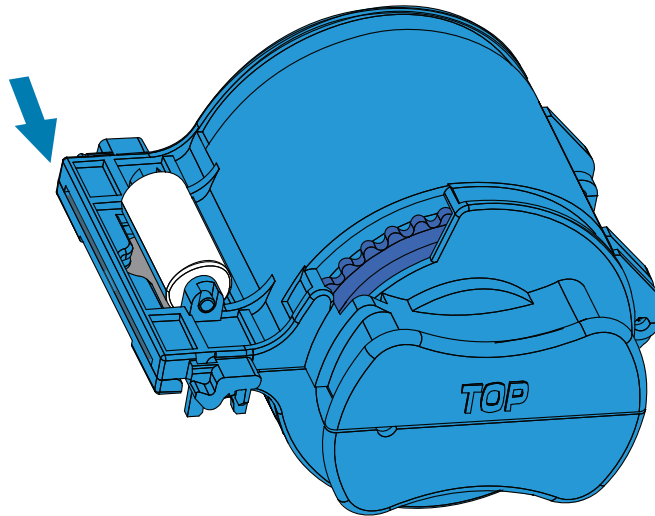
The laminate for the top surface of a contact smart card has a repeating pattern of an index hole and a rectangular cutout to expose the card's electrical contacts.



- Step 1.** Remove the upper laminate cassette.
- Step 2.** Open the cassette, and remove the laminate if present.
- Step 3.** Load the smart card laminate into the cassette.
- Step 4.** Cut the laminate, splitting the index hole as shown.



- Step 5.** Rotate the core to adjust the laminate overhang. Stop when the end of the laminate (not the edge of the index hole) is even with the edge of the lips of the cassette.



- Step 6.** Install the cassette (see “Loading the Laminate” on page 99).



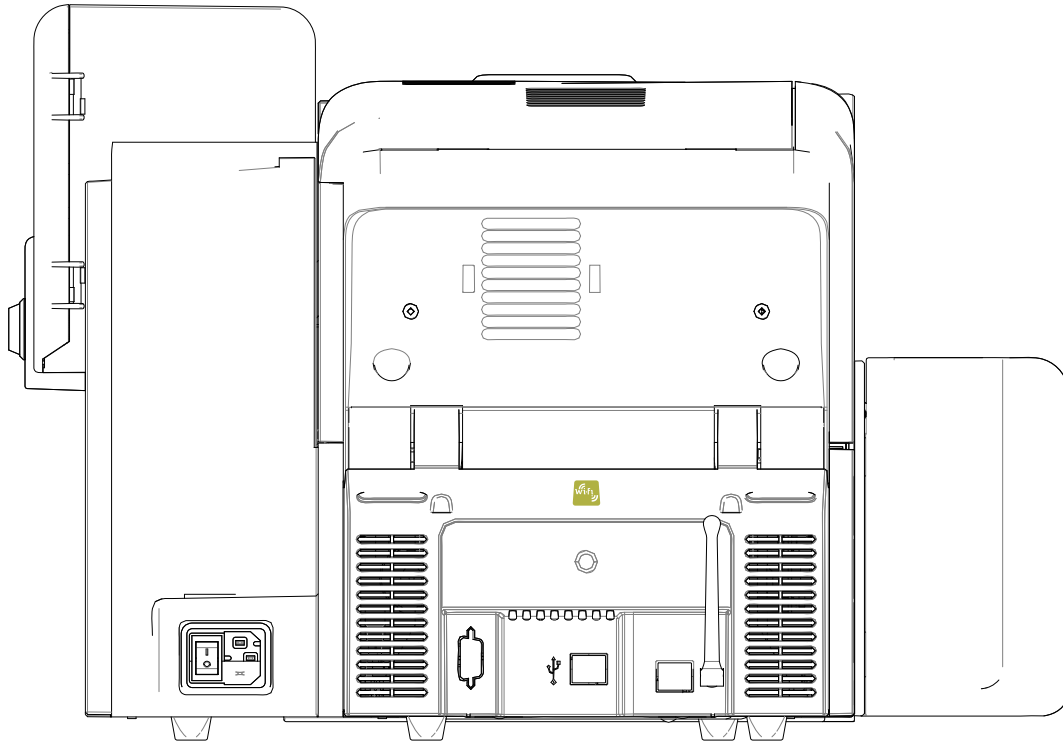
Field Upgrades

Introduction

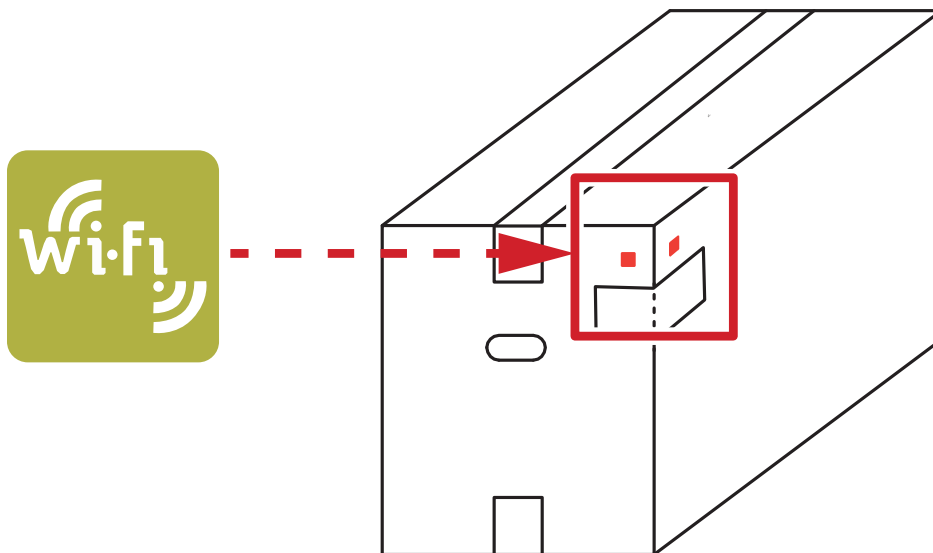
Your printer may have been upgraded with additional features after it left the Zebra Technologies factory. Field upgrades can be easily identified with upgrade-specific labels attached to the printer.

Placing Labels

Step 1. An upgrade label (e.g., Wi-Fi) is placed on the Printer in the area outlined by the dotted orange box.



Step 2. Shipping Box: Two upgrade labels are placed on the Shipping Box as indicated below.



Field Upgrade Labels

Field upgrades can be easily identified with the following labels attached to the printer.



Contact / Contactless MIFARE Encoder upgrade



Wireless upgrade



Packing for Shipment

General Information

This section provides information on how to repack your printer or printer with laminator for return shipment.


Packing for Shipment

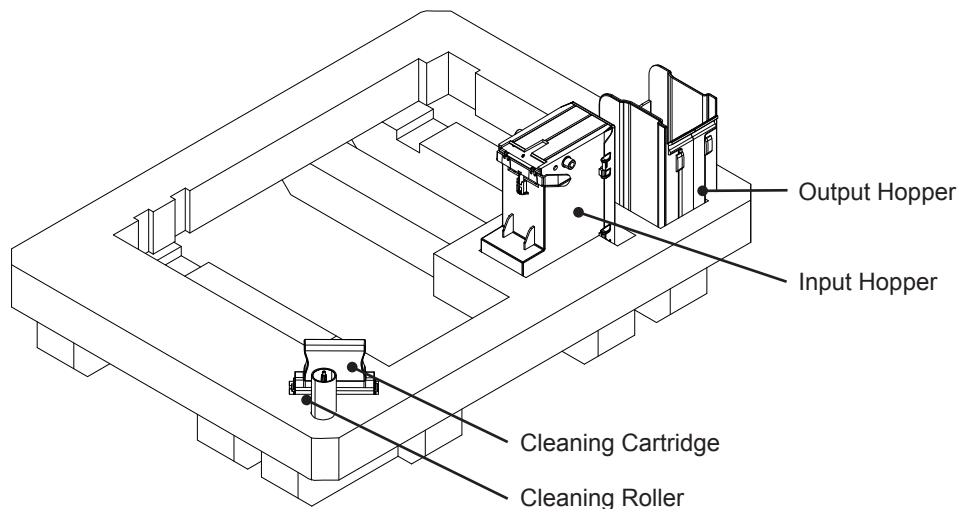
If the printer is to be shipped, it is important to use the original packing and shipping material to prevent damage to the printer.

If the original material is lost, a replacement shipping kit can be ordered from Zebra. Go to the ZXP Series 9 support page at www.zebra.com/zxp9-info for more details.

Printer

Note • The specifics of the shipment and the printer condition may influence which of the following steps are followed; common sense should prevail.

- Step 1.** Ensure the printer power is set to the off () position.
- Step 2.** Disconnect the power cable from the power source, then from the rear of the printer.
- Step 3.** Disconnect the USB cable from the host computer, then from the rear of the printer; or disconnect the Ethernet cable from the network source, then from the rear of the printer.
- Step 4.** Remove any cards from the input and output hoppers—place the hoppers into the foam insert.
- Step 5.** Open the printer door.
- Step 6.** Remove the print ribbon and transfer film (if you wish to save the print ribbon and film for future use, you may want to put them in a plastic bag for storage).
- Step 7.** Remove the card cleaning cartridge and card cleaning roller—place them in the foam insert.
- Step 8.** Close the printer door.

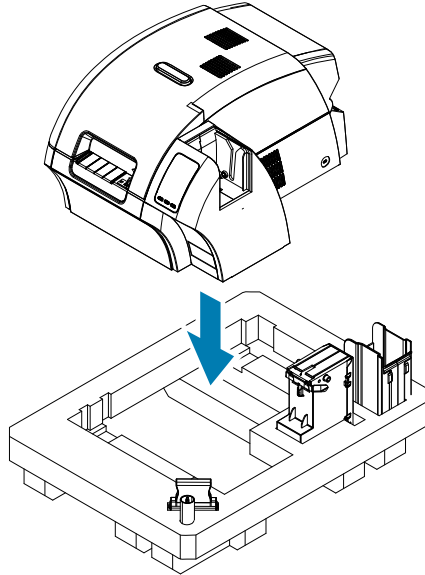


- Step 9.** Place the printer in its protective bag.
- Step 10.** Place the lower foam insert with the accessories into the shipping carton.

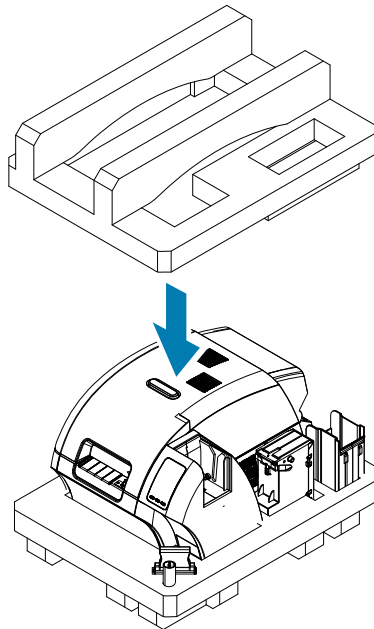


Caution • The printer weighs approximately 27.5 lbs (12.5 kg). Two people may be necessary to lift the printer.

Step 11. Carefully place the printer into the recess in the lower foam insert (shown out of box for clarity).




Step 12. Place the upper foam insert onto the printer, and gently press it down so it makes a snug fit on the printer—the top of the upper foam insert should be even with the upper edge of the shipping carton.

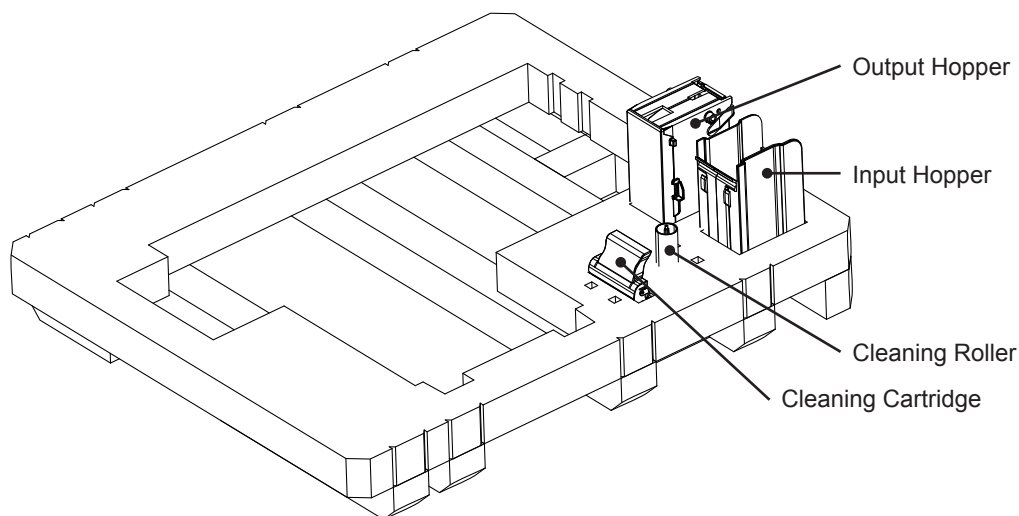


Step 13. Roll up the power cord and USB cable and place them in the recess of the upper foam insert.

Step 14. Close the shipping carton and tape it securely.

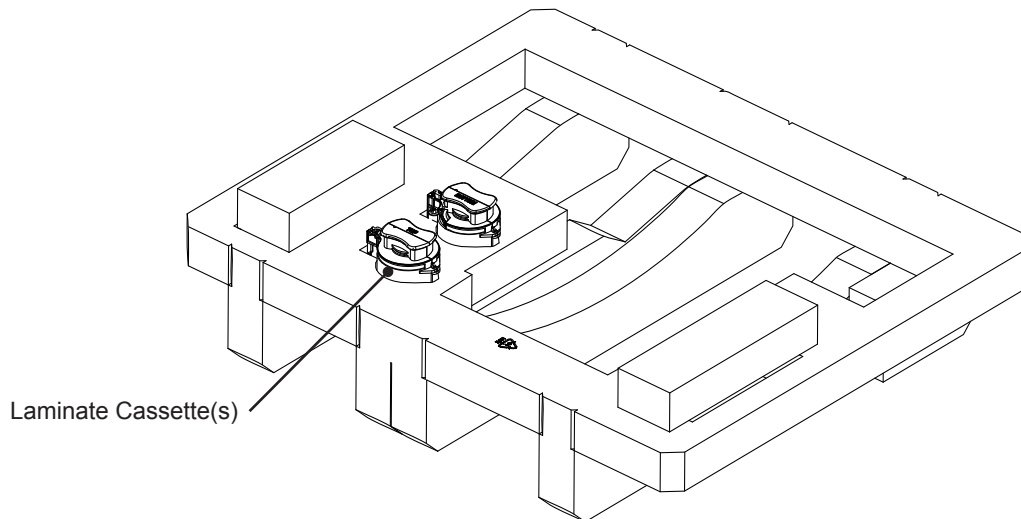
Printer with Laminator

- Step 1.** Ensure the printer power is set to the off () position.
- Step 2.** Disconnect the power cable from the power source, then from the rear of the printer.
- Step 3.** Disconnect the USB cable from the host computer, then from the rear of the printer; or disconnect the Ethernet cable from the network source, then from the rear of the printer.
- Step 4.** Remove any cards from the Input and output hoppers—place the hoppers into the lower foam insert.
- Step 5.** Open the printer door.
- Step 6.** Remove the print ribbon and transfer film (if you wish to save the print ribbon and film for future use, you may want to put them in a plastic bag for storage).
- Step 7.** Remove the card cleaning cartridge and card cleaning roller—place them in the foam insert.
- Step 8.** Close the printer door.



- Step 9.** Open the laminator door.
- Step 10.** Place the lower foam insert with the accessories into the shipping carton.

Step 11. Remove the laminate cassette(s)—any unused laminate can remain in the cassette(s)—and place the cassette(s) into the upper foam insert from the underside.



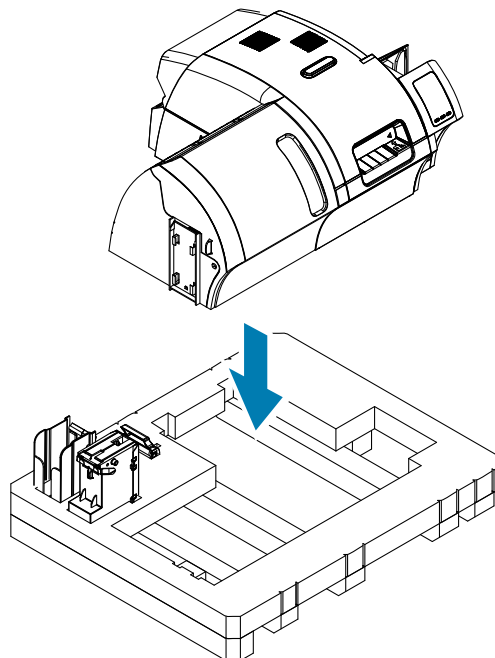
Step 12. Close the laminator door.

Step 13. Place the unit in its protective bag.

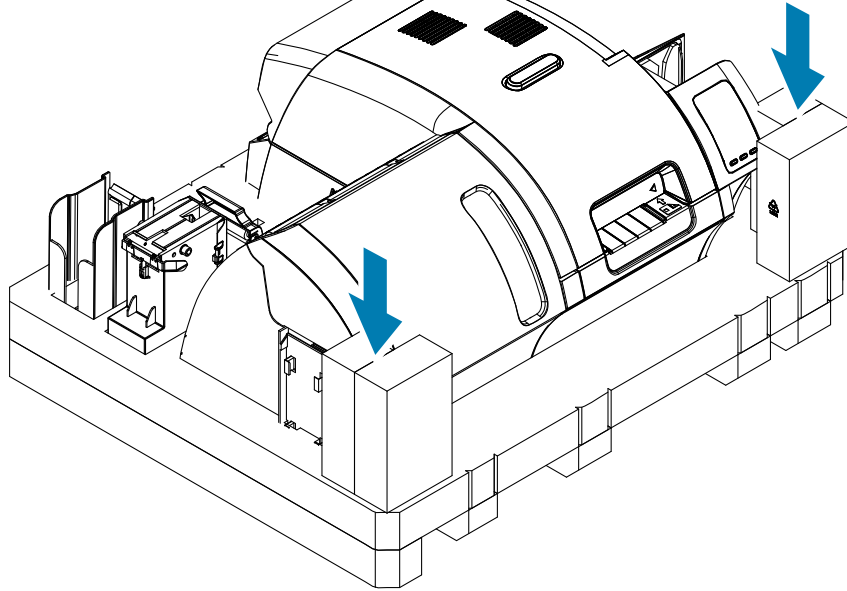


Caution • The printer weighs approximately 44 lbs (20 kg). Use two people to lower it into the shipping carton.

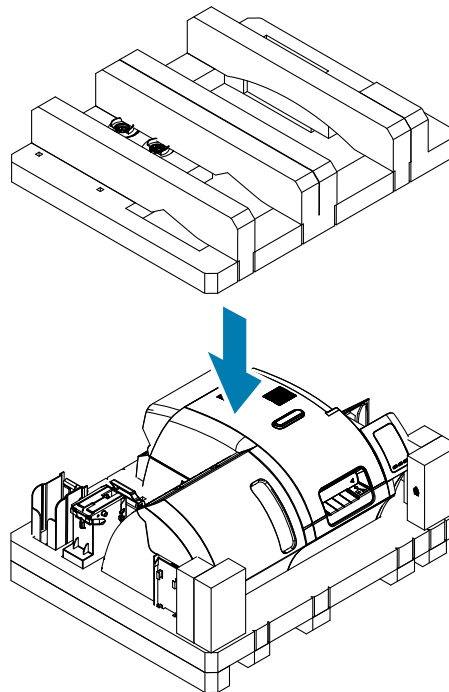
Step 14. With two people, carefully lift and place the unit into the recess in the lower foam insert.



Step 15. Place the two corner blocks on top of the right front and left front corners of the lower foam insert.



Step 16. Place the upper foam insert onto the unit, and gently press it down so it makes a snug fit on the unit—the top of the upper foam insert should be even with the upper edge of the carton.



Step 17. Roll up the power cord and USB cable and place them in the recess of the upper foam insert.

Step 18. Close the shipping carton.

Step 19. Tape the shipping carton securely.