

Troubleshooting

This section provides troubleshooting procedures and information.

Resolving Alerts and Errors

The printer uses alerts to notify you that the printer needs attention.

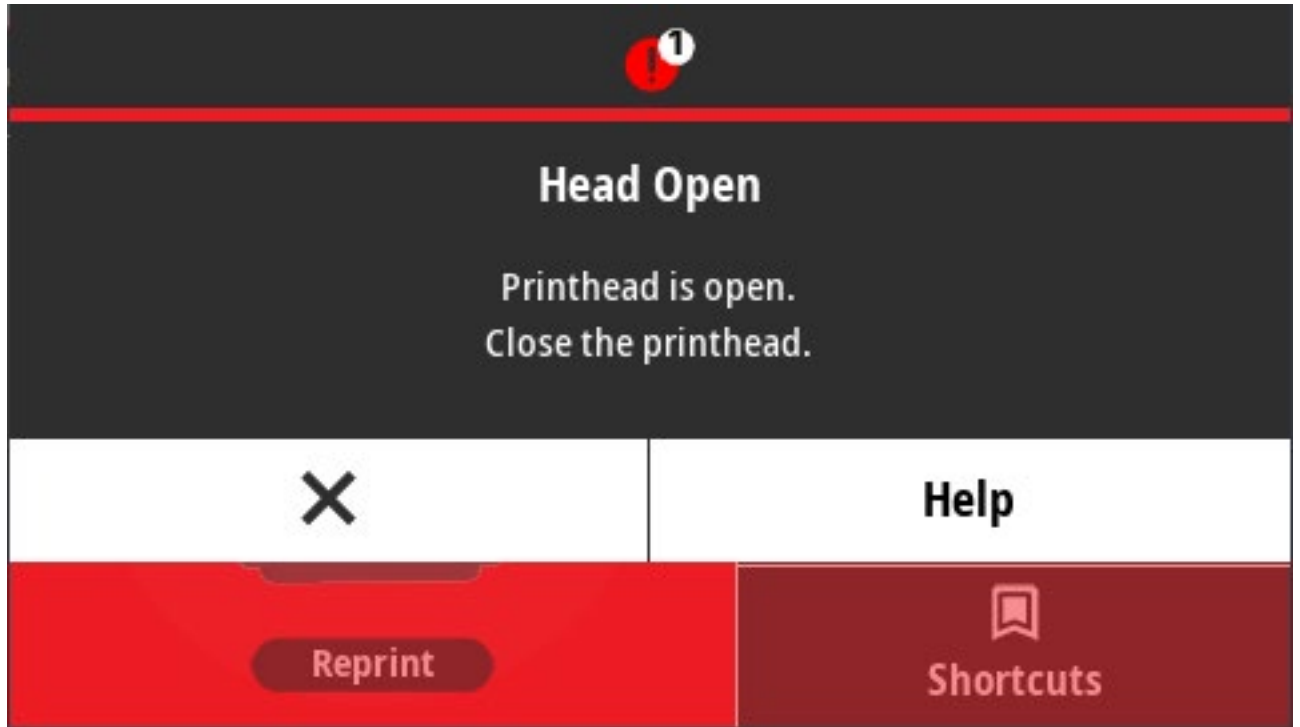
Alert: Printhead Open

The printer has received a print command or sensed a **FEED** button press, but it cannot proceed. The printhead (cover) may not be closed (or closed properly) or the printer's Head-Open switch needs service.

Status indicator alert:



Display alert:



Possible causes and resolutions:

- The cover is open or it has not been closed properly. Close the cover/printhead. Push down on the front top corners of the printer's cover. You should normally hear and feel the cover latches snap in place to lock the cover closed for printing.
- The printer's Head-Open switch needs service. Call a service technician.

Alert: Media Out

A print command, **FEED** has been pressed, or a print job is in progress; but the printer cannot detect media in the print path.

Status indicator alert:



Display alert:



Possible causes and resolutions:

- No media (roll) in the printer. Load your chosen media in the printer and close the printer. See [Roll Media Types and Loading](#) on page 178. You may need to press **FEED** once or press **PAUSE** to get the printer to resume printing.
- The printer has detected a missing label on the roll. Open the printer: If there is a missing label on the roll between two labels at the end of a roll of labels, then this is a method used by the label roll manufacture to identify the end of the roll. See [Detecting and Recovering from a Media-Out Condition](#) on page 201. Replace the empty media roll and continue printing. Do not power the print off or you will lose your print job.
- Misaligned media sensor. Check the position of the media sensor. See [Movable Sensor Adjustment](#) on page 182. The printer may need to be calibrated for the media after the adjusting the sensor location. See [Running a SmartCal Media Calibration](#) on page 199 and [Print > Sensors > Manual Calibration](#) on page 147.
- The printer is set for non-continuous (labels or black mark) media, but continuous media is loaded. Check the position of the media sensor is in the center default location. See [Movable Sensor Adjustment](#) on page 182. The printer may need to be calibrated for the media after the adjusting the sensor location. See [Running a SmartCal Media Calibration](#) on page 199.
- The media sensor is dirty. Clean the Upper Web (Gap) Sensor Array and the lower Movable Media sensors. See [Cleaning the Sensor](#) on page 281. Reload your media, adjust the Movable Media sensor's position for your media, and recalibrate the printer for the media. See [Movable Sensor Adjustment](#) on page 182, [Roll Media Types and Loading](#) on page 178, and [Running a SmartCal Media Calibration](#) on page 199.
- The printer is unable to sense the media due to possible data corruption of memory or faulty components. Reload the printer's firmware. See [Updating Printer Firmware](#) on page 309. If this does not fix this issue, call a service technician.

Alert: Ribbon In – ZD421 Ribbon Cartridge Printer Only

When you see this alert, a print command has been sent to the printer and it is in Direct Thermal mode with ribbon installed. The printer has two heat settings – one for Direct Thermal printing and another for Thermal Transfer printing. They are designed to have equivalent print density/darkness at the same setting level. Direct Thermal mode does not use ribbon.

Status indicator alert:



Possible causes and resolutions:

- There is a Ribbon Cartridge in the printer while the printer is set to Direct Thermal Mode (and printing on direct thermal media). Remove the ribbon cartridge from the printer without turning the printer OFF. Close the printer. You may need to press **FEED** once or **PAUSE** the get the printer to resume printing.
- The printer is incorrectly set to Direct Thermal mode when you are trying to print using transfer media and a ribbon cartridge to print. Change the PRINT METHOD to THERMAL TRANS (Thermal Transfer) mode. The print format (form) send for this print job may have Direct Thermal mode set with a ^MTD set instead of ^MTT. The ZPL Programming Guide is available at <http://zebra.com/manuals>.
- To change this setting:
 - Use the printer's color touch display user interface (if present) to change the setting. See [Print > Print Quality > Print Type](#) on page 139.
 - Use an Ethernet (LAN or WLAN) printer's Print Server web page to access and set the PRINT METHOD to THERMAL TRANS (Thermal Transfer) mode. See [Print > Print Quality > Print Type](#) on page 139 to learn how to navigate the print server user interface.

Alert: Ribbon Out

The printer is printing and stops while printing. Or, a print job has been sent to the printer and the printer immediately reports this alert.

Status indicator alert:



Display alert:



Possible causes and resolutions:

- The printer has detected the end of the ribbon. The ends of Genuine Zebra Transfer Ribbons have reflective trailers which the printer interprets as end of ribbon, meaning the ribbon supply has been used up. Remove the ribbon and replace the ribbon rolls or ribbon cartridge, then close the printer. You may need to press **FEED** one time or press **PAUSE** to get the printer to resume your print operation. See [Detecting and Recovering from a Ribbon-Out Condition](#) on page 203.
- For ZD421 Ribbon Cartridge printers: A ribbon cartridge must be loaded in the printer. The printer is set for Thermal Transfer mode. See [Loading the Ribbon Cartridge – ZD421 Ribbon Cartridge Printers Only](#) on page 198.
- For ZD421 Ribbon Cartridge Printers only: The printer is unable to sense media possibly because:
 - The ribbon cartridge data chip or cartridge sensor contacts is dirty.
 - Data in memory is corrupted.
 - The cartridge or printer components are faulty.

To fix this problem:

- Try another working ribbon cartridge if you have one.
- Clean the ribbon cartridge chip with an alcohol-moistened swab.
- Clean the ribbon cartridge sensor's contact pins. See [Cleaning the Sensor – Upper Half of the ZD421 Ribbon Cartridge Printers](#) on page 284 for cleaning instructions.
- Reload the printer's firmware. See [Updating Printer Firmware](#) on page 309.
- If this does not fix this issue, call a service technician.

Alert: Ribbon Low – ZD421 Ribbon Cartridge Printer Only

Status indicator alert:

ULINE

1-800-295-5510



Possible causes and resolutions:

The printer has calculated that the ribbon cartridge has only 10% of the ribbon left in the cartridge.

The ribbon low value can be changed using programming commands.

Check for the availability of ribbon cartridges. For information on changing the Ribbon Low warning point, see [Ribbon Cartridge Programming Commands](#) on page 251. See also the ZPL Programming Guide for details on printer programming. For links to the Zebra support pages for these and other manuals, see [About This Guide](#) on page 13.

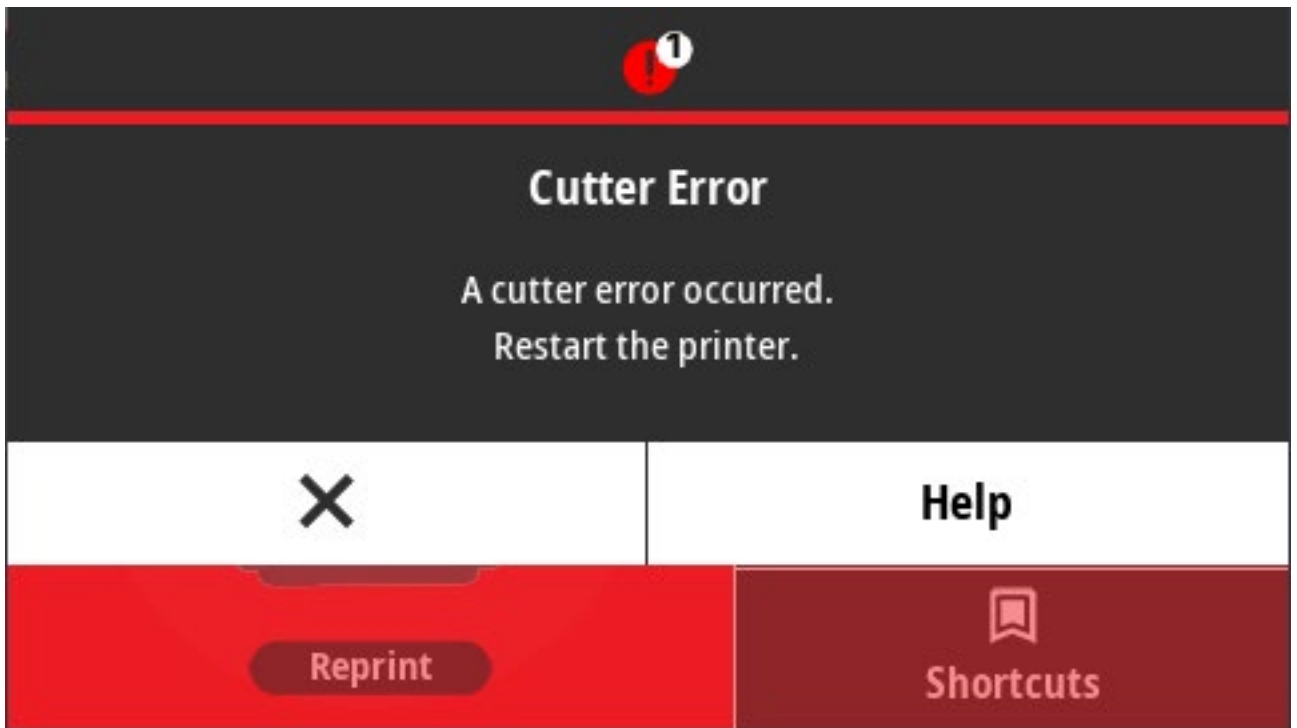
Alert: Cutter Error

The cutter blade is bound and is not moving properly.

Status indicator alert:



Display alert:



Possible causes and resolutions:

Media, adhesive, or an foreign object has stopped the cutter blade from operating. Turn printer power OFF by holding **POWER** down for five seconds. Wait for the printer to shutdown completely, then turn printer power ON. If the printer does not recover from this error, call a service technician for assistance.



CAUTION: There are no operator serviceable parts in the cutter unit. Never remove the cutter cover (bezel). Never attempt to insert objects or fingers in to the cutter mechanism.



NOTE: Using unapproved tools, cotton swabs, solvents (including alcohol), etc. may damage or shorten the cutter's usable life or cause the cutter to jam.

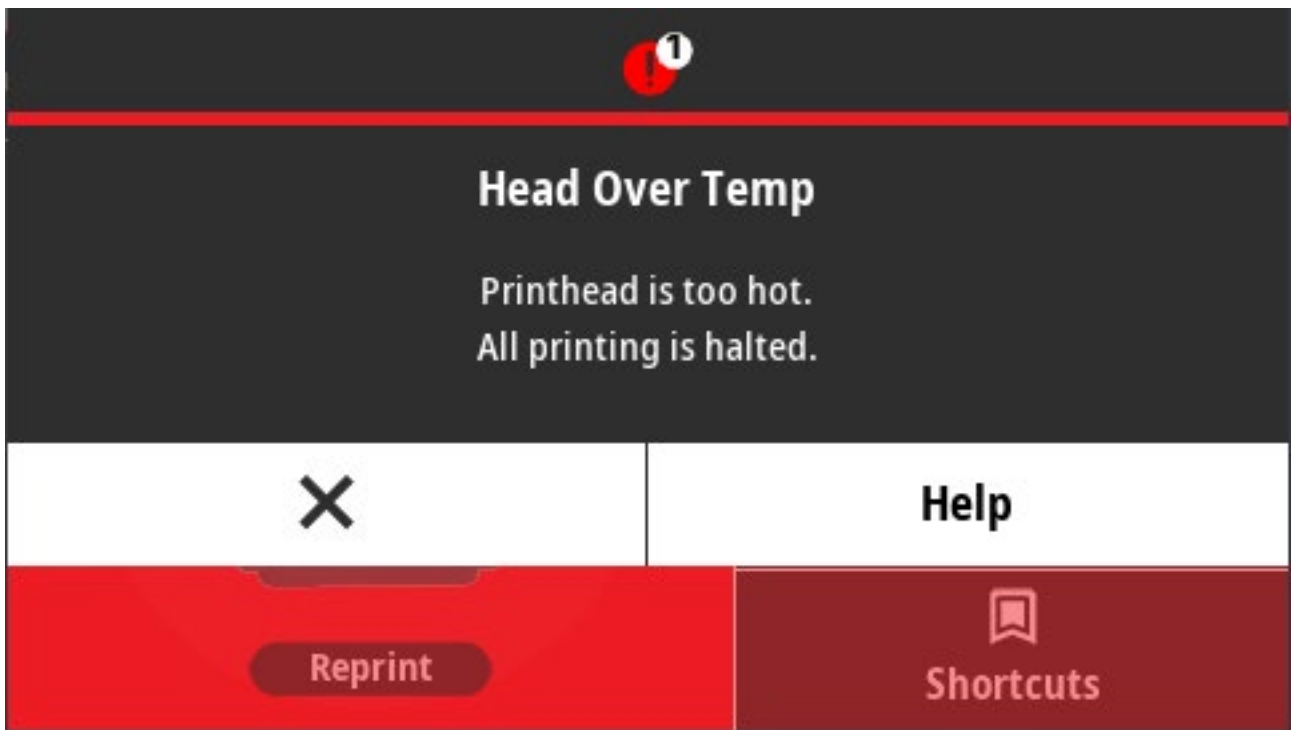
Alert: Printhead Over Temp

The printhead is over temperature and paused to allow the printhead to cool.

Status indicator alert:



Display alert:



Possible causes and resolutions:

- The printer is printing a large batch job, typically with large amounts of print. The print operation will resume after the printhead has cooled.
- The ambient temperature at the printer's location exceeds the specified operating range. Ambient temperatures in the printer can at times rise if it is in a location that receives direct sunlight. Move the printer to a different location, or cool the ambient temperature in the location where the printer is operating.

Alert: Printhead Shutdown

The printhead is below operating temperature for proper printing.

Status indicator alert:

ULINE

1-800-295-5510



The printhead has had a critical temperature or power failure. Turn printer power OFF by holding **POWER** down for five seconds. Wait for the printer to shutdown completely, then turn printer power ON. If the printer does not recover from this error, call a service technician. The printhead is not a operator-serviceable item.

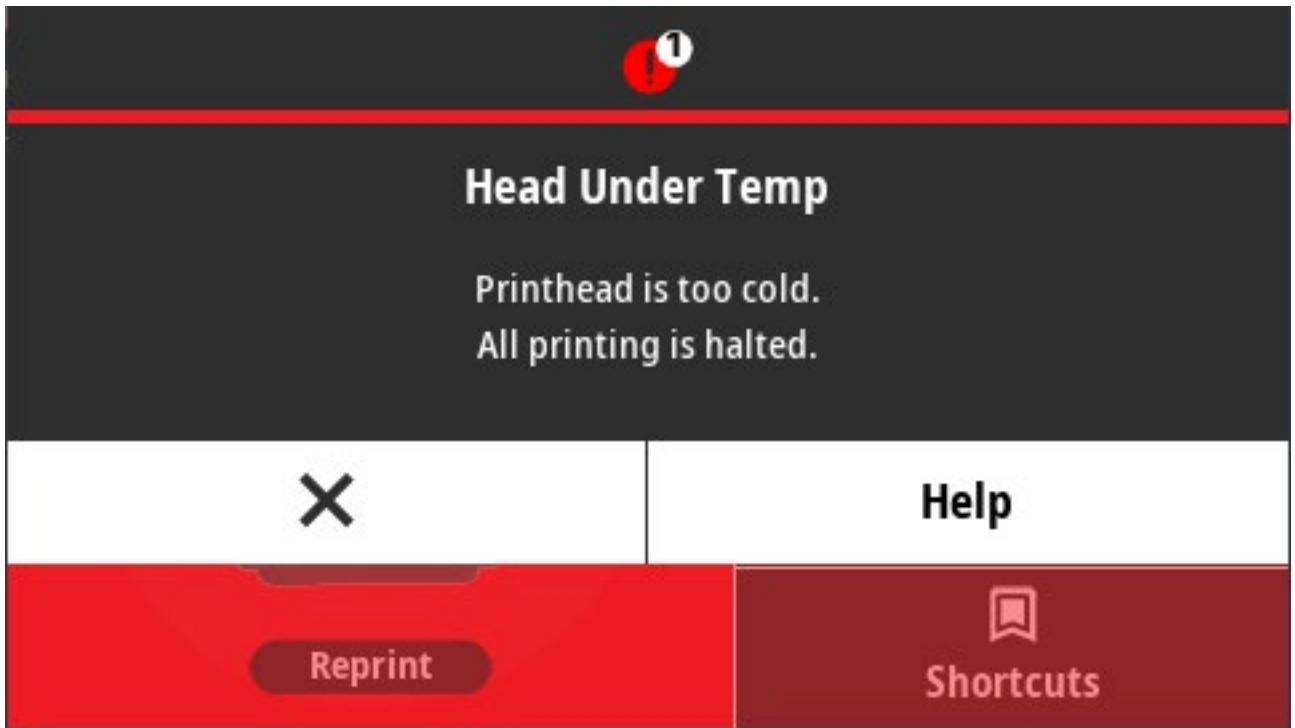
Alert: Printhead Under Temp

The printhead is below operating temperature for proper printing.

Status indicator alert:



Display alert:



Possible causes and resolutions:

- The ambient temperature at the printer's location is below the specified operating range. Turn printer power OFF, then move the printer to a warmer location and wait for it to warm naturally. Moisture may condense in and on the printer if the temperature changes too quickly.
- The printhead thermistor has failed. Turn printer power OFF by holding **POWER** down for five seconds. Wait for the printer to shutdown completely and turn printer power ON. If the printer does not recover from this error, call a service technician.

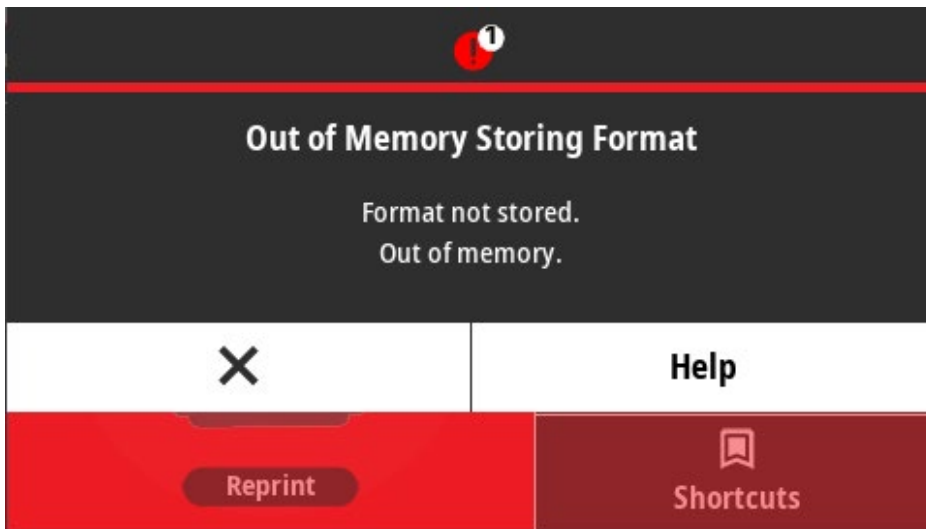
Alert: Out of Memory

Data can not be stored in the specified memory location. There are four types of storage memory: Graphic, Format, Bitmap and Font. There is not enough memory to perform the function specified on the second line of the error message.

Status indicators alert:



Display alert:



Possible causes and resolutions:

There is not enough memory to perform the function specified on the second line of the error message.

- Free up some of the printer's memory by adjusting the label format or printer parameters to make the print area smaller.
- Remove unused graphics, fonts, or formats.
- Ensure that the data is not directed to a device that is not installed or is unavailable.

Resolving Print Issues

This section helps you identify issues with printing or print quality, the possible causes, and the recommended solutions.

Issue: General Print Quality Issues

The printer image does not look right.

Possible cause and resolutions:

- The printer is set at an incorrect darkness level and/or print speed. Perform the Print Quality Report (FEED self test) to determine the ideal darkness and speed settings for your application. Do not set print speeds above the manufacturer's maximum rated speed for your media (print material and ribbons)

both). See [Printing a Print Quality Report \(FEED Self Test\)](#) on page 327 and [Adjusting the Print Quality](#) on page 242.

- The printhead is dirty. Clean the printhead. See [Cleaning the Printhead](#) on page 272.
- The platen roller is dirty or damaged. Clean or replace the platen. Platens can wear out or get damaged. See [Cleaning and Replacing the Platen](#) on page 286.
- The printhead has worn out. Replace the printhead. The printhead can wear out and be damaged. See [Cleaning the Printhead](#) on page 272.
- During thermal Transfer printing, printing looks fuzzy, has smudge marks, or has voids or holes in print with no particular pattern. The print material (wax, wax-resin, or resin) may not match the material (paper, media coating, or synthetics) in use. Set the printer for no higher than the maximum recommended print speed of the ribbon cartridge. For information on reading ribbon cartridge features, see [Ribbon Cartridge Programming Commands](#) on page 251.
- You may be using the wrong power supply. Verify you are using the power supply that came with this printer.

Issue: No Print on the Label

The printed image does not look right.

Possible causes and resolutions:

- The media may not be direct thermal media (and is thermal media made for thermal transfer printers). See [Determining Thermal Media Types](#) on page 368.
- Media has been loaded incorrectly. The media printable surface must face up towards the printhead. See [What You Will Need to Print](#) on page 21 and [Roll Media Types and Loading](#) on page 178.

Issue: Labels Are Distorted in Size or Print Area Start Position Varies

Coincident with this issue, the printed image may skip between labels (mis-registration).

Possible causes and resolutions:

- Media has been loaded incorrectly or the movable media sensor is not set properly. Verify that the sensor is set and positioned correctly for your media type and sensing location. See the following:
 - [Roll Media Types and Loading](#) on page 178
 - [Setting Media Sensing by Media type](#) on page 179
 - [Adjusting the Movable Sensor for Black Marks or Notches](#) on page 183
 - [Adjusting the Movable Sensor for Web \(Gap\) Sensing](#) on page 183
- The media sensors are not calibrated for your media length, physical properties, or sensing type (gap/notch, continuous, or mark). See [Running a SmartCal Media Calibration](#) on page 199. If the printer still skips labels, try a manual media calibration. See [Print > Sensors > Manual Calibration](#) on page 147.
- The platen (drive) roller is slipping or damaged. Clean or replace the platen. Platens can wear out or get damaged. See [Cleaning and Replacing the Platen](#) on page 286.
- The printer has communication issues with cables or communication settings. See [Communication Issues](#) on page 320.

Communication Issues

This section identifies problems with communications, the possible causes, and the recommended solutions.

Issue: Label Job Sent, No Data Transfer

A label format was sent to the printer but was not recognized. The DATA light does not flash.

The communication parameters are incorrect.

Possible causes and resolutions:

- Check the printer driver or software communications settings (if applicable).
- Serial Port only: Check the printer's handshake protocol and serial port settings. The setting used must match the one being used by the host computer. See [Serial Port Interface](#) on page 341 for the printer's default serial port settings.
- The serial cable you are trying to use may not be a standard DTE or DCE type cable, is damaged, or is too long per the RS-232 serial ports specifications. See [Serial Port Interface](#) on page 341.

Issue: Label Job Sent, Skips Labels or Prints Bad Content

A label format was sent to the printer. Several labels print, then the printer skips, misplaces, misses, or distorts the image on the label.

Possible cause and resolution:

The serial communication settings are incorrect. Check the printer driver or software communications settings (if applicable). Ensure that the flow control settings and other serial port handshake setting match the host system.

Issue: Label Job Sent, Data Transfers, But No Print

A label format was sent to the printer but was not recognized. The DATA light flashes but no printing occurs.

Possible causes and resolutions:

- The prefix and delimiter characters set in the printer do not match the ones in the label format. Verify the ZPL command prefix (COMMAND CHAR) and delimiter (DELIM./CHAR) characters. See [Configuration Setting to Command Cross-reference](#) on page 374.
- Incorrect data is being sent to the printer. Check the communication settings on the computer. Ensure that they match the printer settings.
- Incorrect data is being sent to the printer. Check the label format. Refer to the ZPL Programming Guide for details on printer programming. Links to the manual are available from the support pages for each printer model listed in [About This Guide](#) on page 13.

Miscellaneous Issues

This section identifies miscellaneous issues with the printer, the possible causes, and the recommended solutions for them.

Issue: Settings are Lost or Ignored

Some parameters are set incorrectly.

Possible causes and resolutions:

- Printer settings were changed without saving them. The ZPL ^JU command was not used to save your configuration before turning the printer off. Turn printer power OFF and back ON to verify settings have been saved.
- The label format/form commands or commands sent directly to the printer have syntax errors or have been used incorrectly.
 - A firmware command turned off the ability to change the parameter.
 - A firmware command changed the parameter back to default setting.

Refer to the ZPL Programming Guide to verify command usage and syntax. The guide is available from the support pages listed in [About This Guide](#) on page 13.

- The prefix and delimiter characters set in the printer do not match the ones in the label format. Verify the ZPL programming settings of the Control, Command and Delimiter settings are correct for your system software environment. Print a Configuration Report or use the display Language Menu (if present) for these three menu items and compare it the commands in label format/form you are trying to print. See [Test Printing with a Configuration Report](#) on page 200, [System > Language](#) on page 93, and [ZPL Configuration](#) on page 373.
- The Main Logic board may not be working properly. Firmware is corrupted or the printer needs service.
 - Reset the printer to factory defaults. See [System > Settings > Restore Defaults](#) on page 104 or use the Zebra Setup Utility and select **Open Printer Tools > Action > Load printer defaults**.
 - Reload printer firmware. See [Updating Printer Firmware](#) on page 309.
 - If the printer does not recover from this error, call a service technician. This is not a user-serviceable item.

Issue: Non-continuous labels act as Continuous labels

The printer was not calibrated for the media being used, or the printer is configured for continuous media.

Possible causes and resolutions:

Set the printer for the correct media type (gap/notch, continuous, or mark) and calibrate the printer. See [Running a SmartCal Media Calibration](#) on page 199. If necessary use [Print > Sensors > Manual Calibration](#) on page 147 to manually calibrate the printer for the media type you are using.

On ZD621 printers with a color touch display, check and set the media type by accessing [Print > Print Quality > Label Type](#) on page 140.

Issue: Printer Locks Up

All indicator lights are on and the printer locks up or the printer locks up while restarting.



The printer memory has been corrupted by an unknown event.

Possible causes and resolutions:

- Reset the printer to factory defaults. See [System > Settings > Restore Defaults](#) on page 104 or use the Zebra Setup Utility and select **Open Printer Tools > Action > Load printer defaults**.
- Reload printer firmware. See [Updating Printer Firmware](#) on page 309.
- If the printer does not recover from this error, call a service technician. This is not a user-serviceable issue.

Issue: Erroneous Ribbon Cartridge Faults

Printer indicates a Ribbon Out warning, but a ribbon cartridge is installed. Or a Ribbon Cartridge Authentication error occurs even when a Genuine Zebra Ribbon Cartridge is installed and has not been refurbished or altered.

Possible causes and resolutions:

The ribbon cartridge sensor contact pins or the ribbon cartridge's smart chip's contacts may be dirty or the chip may be damaged. Clean the ribbon cartridge's smart chip contact, if the contacts look dirty or contaminated, clean with a lightly-moistened cotton dipped in 97.3% pure (medical-grade) alcohol. Try a different cartridge if this does not work.

Also clean the ribbon cartridge sensor contact pins. See the steps that explain how to clean the pins in [Cleaning the Media Path – Upper Half of ZD421 Thermal Transfer Ribbon Cartridge Printers](#) on page 278.

Issue: Battery Displays a Red Indicator

The battery has a fault.

Possible causes and resolutions:

- The battery is too hot or too cold. Let the battery cool down or warm up to ambient temperature and recheck the battery charge.
- The battery may have reached its usable life. Remove the battery from the printer and check charge status by charging the battery.
- A battery component may have failed. Replace the battery.