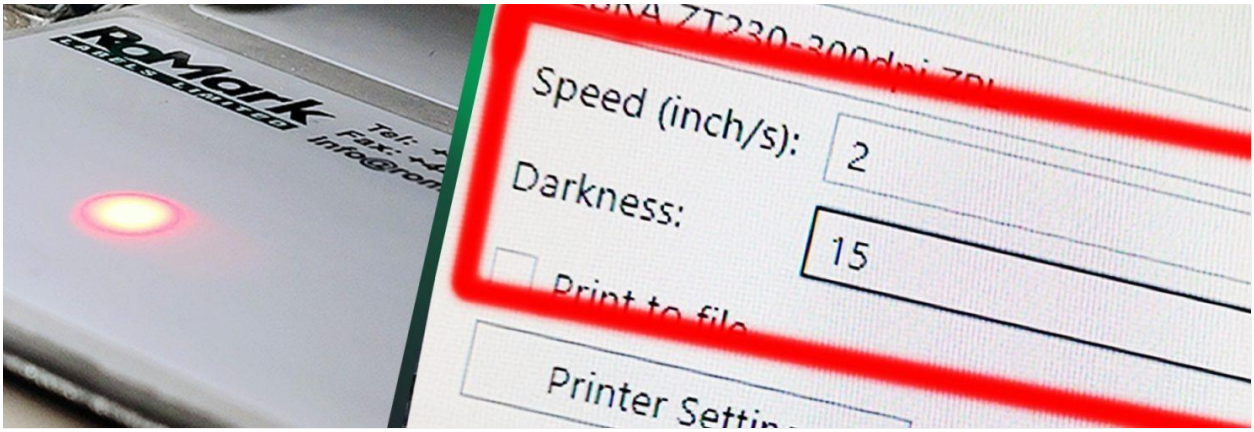


24/03/2022

Industrial Labels, Laboratory Labels

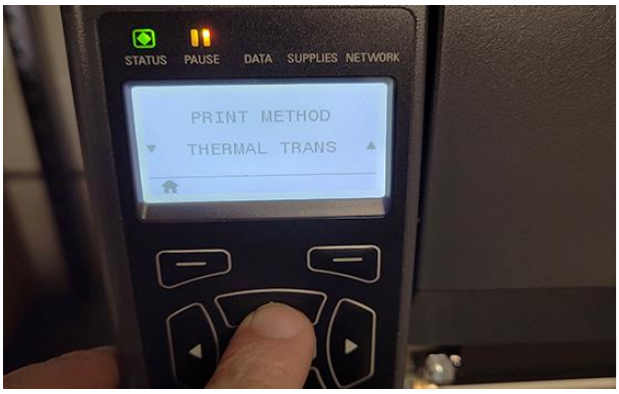
IS YOUR THERMAL TRANSFER PRINTER MISBEHAVING

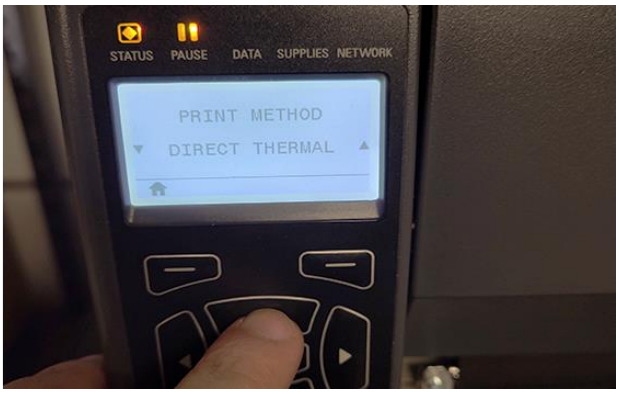
Providing they are set up correctly and properly maintained, thermal transfer printers should be a reliable part of your labelling workflow. If something does go wrong, this post will cover some common problems you may encounter and how to fix them.

THERMAL TRANSFER VS DIRECT THERMAL – PRINT SETTINGS

There are two distinct print settings for your thermal transfer printer. The setting you use will depend on the application and the type of label you are printing on. The **Thermal Transfer** method is used durable label printing, requiring a **Resin or Wax ribbon.** The ribbons are heated as they pass through the print head, thermally transferring the ink from the ribbon to the label substrate. Wax Ribbons are typically used for paper-based labels, while Resin Ribbons are used for more durable labels made up of synthesised materials. The easiest way to identify a Wax vs Resin ribbon is the colour on the outer packaging. A Wax Ribbon will be Blue, and a Resin Ribbon will be Silver.

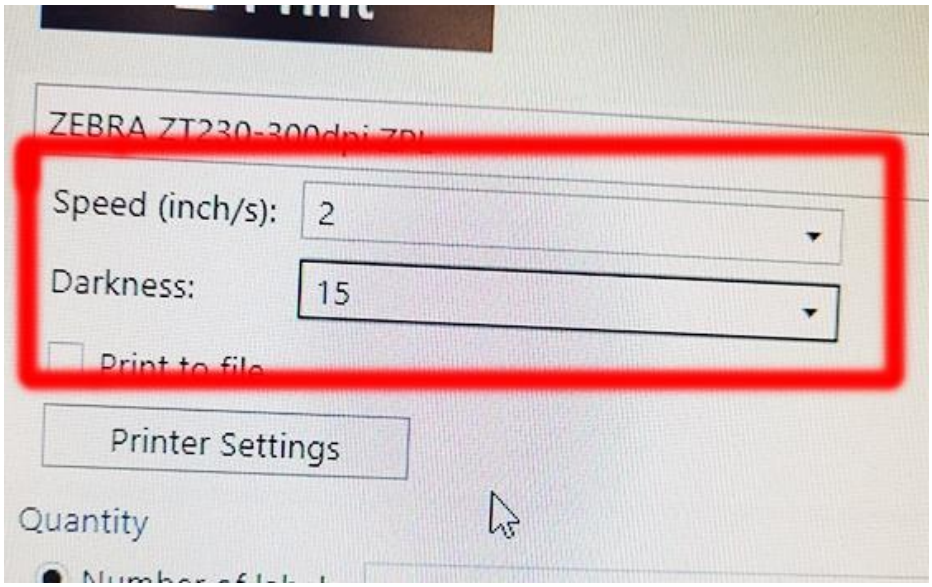
Direct Thermal is a much less durable method of print that **does not require a ribbon** but uses a special heat-sensitive label material instead. The print head heats up, which activates the thermal label material changing the colour from white to black, providing the print.





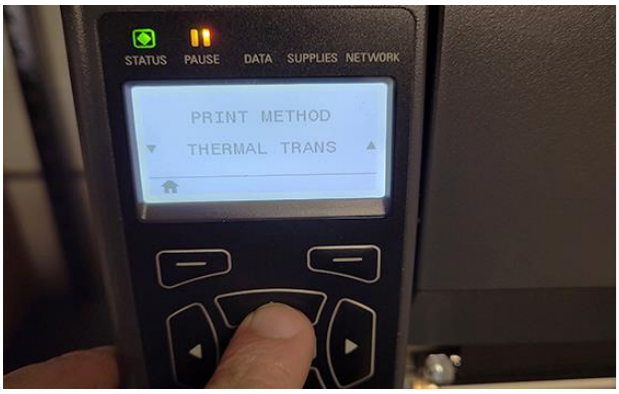
THE PRINT IS FADED OR PATCHY:

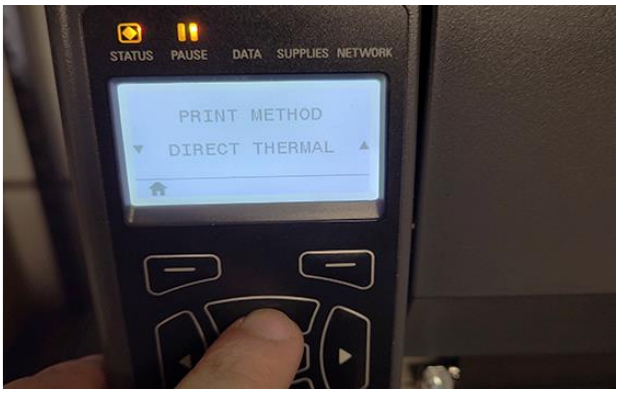
This often comes down to setting the correct speed and darkness in the label printer software. Try to keep the speed and darkness setting as low as possible. Start low and work your way up to find the perfect balance. You may need to print a few labels through this process before an acceptable print is achieved.



STICKING / PATCHY RIBBON WHEN PRINT – INCORRECT PRINT METHOD:

Sometimes the printer's hardware driver print method can reset. On some models, this can be adjusted from the front panel of the printer. A good example of this is the Zebra printer, which can sometimes revert its printer settings after a reset. Navigate to the correct menu via the **Settings** on the front panel and change the **Print Method** back to the desired setting, Thermal Transfer or Direct Thermal depending on your label and application as outlined in the beginning of this post.



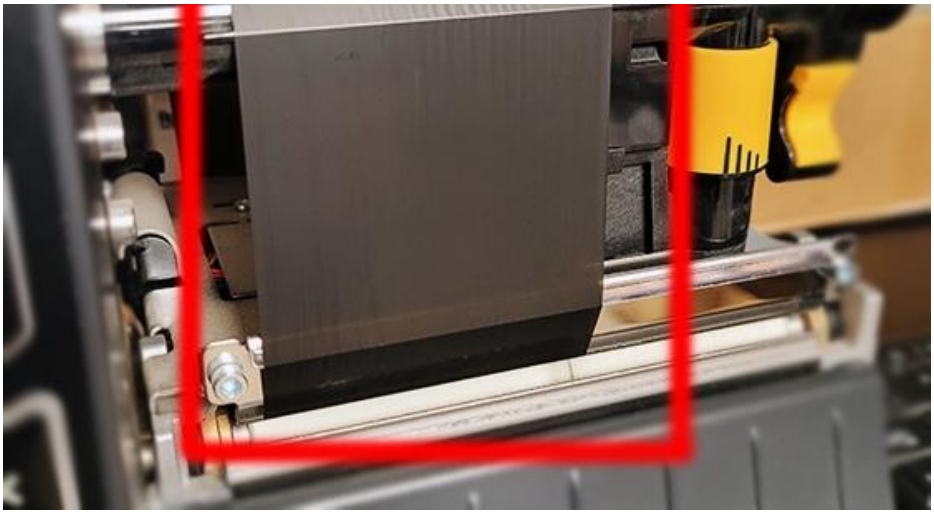


THE PRINT IS MISALIGNED / "NO MEDIA DETECTED":

One of the first things you should do is make sure the media label sensor is centrally aligned with the label. Depending on your printer model, you will either need to rotate a dial to move the sensor, such as with Zebra models or physically adjust its position by gently pushing it with your finger, as with the TSC-247. This will also rectify any "media out" or "no media detected" prompts. If the movable media sensor cannot detect a label, it will not print until the media is detected.

UNWANTED STRIPES / ANOMALIES ON THE LABEL #1:

Make sure the ribbon is smooth with no creases. The cardboard core that collects the ribbon waste should be aligned evenly with the ribbon and changed regularly to prevent excess build-up of waste. Once the ribbon is connected to the waste core, turn the waste core to wrap and distribute the ribbon across the core evenly or until there are no creases in the ribbon.



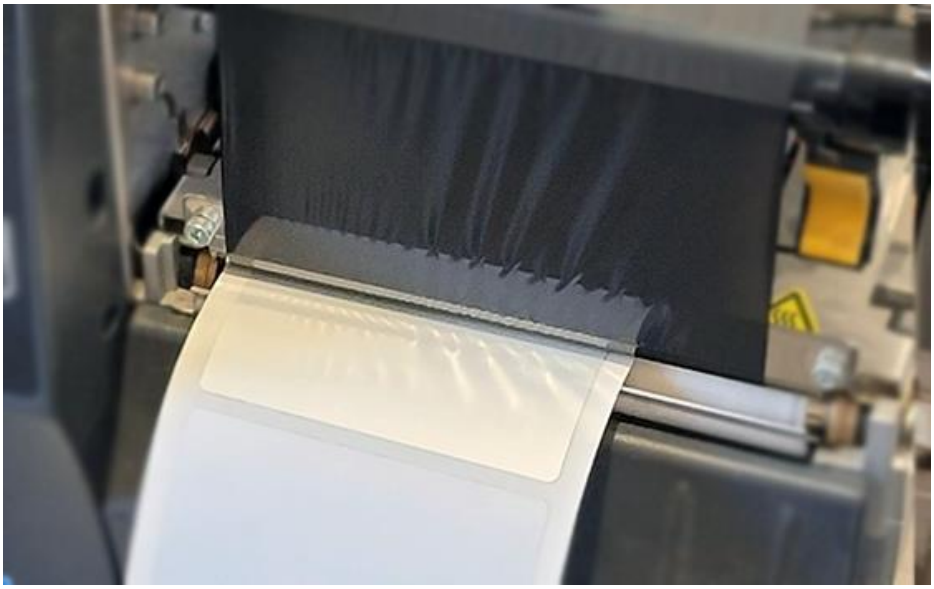
UNWANTED DARK SPOTS OR STRIPES ON THE LABEL #2:

These marks can appear over long term, repeated use as the thermal transfer ribbon passes through the print head during the printing process. As the ribbon is heated, residue from the ribbon can build up on the print head. The solution is to open up the

printer and clean the print head using isopropanol with a clean cloth or cotton bud. There are special tools such as an isopropanol pen that will make this much easier. If you are proactive in cleaning the printer head regularly, it is worth acquiring one of these pens. Zebra Technologies, who manufacture thermal transfer printers, provided a great demonstration on how to clean the print head using a mixture of cleaning solutions in this video below:

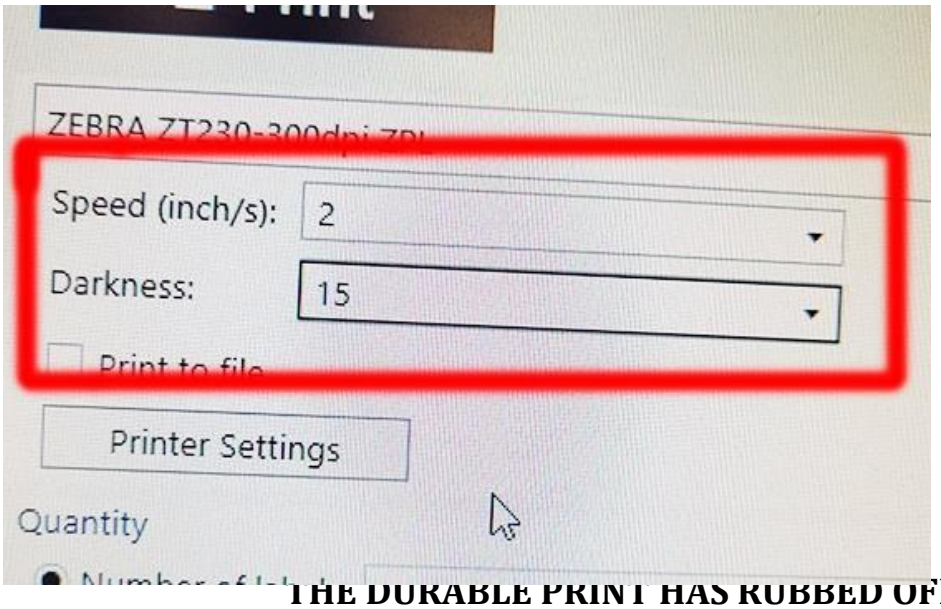
PRINT LABEL COVERAGE – WIDER ROLLS:

You should always use a ribbon wider than the label roll. Using a ribbon that only covers the width of the desired print area increases the risk of wearing the print head and driver roll unevenly. A wider roll will help provide a consistent print and even pressure across the print head, preventing uneven wear over long periods of time.



THE PRINT LACKS DETAIL – SPEED AND DARKNESS SETTINGS:

Sometimes the thermal transfer print can lack detail, where small text and images may appear blotchy or the lines too thick. This can again be due to a mixture of the speed and darkness settings in your label print software.*Try to keep the speed and darkness settings as low as possible. Start low and work your way up to find the perfect balance. You may need to run a few labels through this process before an acceptable print is achieved.*



THE DURABLE PRINT HAS RUBBED OFF:

You may have used the wrong ribbon during the thermal transfer printing process. For example, a Wax Ribbon (blue packaging) should be used for paper-based labels, while a Resin Ribbon (silver packaging) is used for durable, synthetic label substrates. You must use the right ribbon for the label material in order to provide the desired results. Check you are using the correct ribbon.

PRINT LACKS CONSISTENCY – PRINT HEAD PRESSURE ADJUSTMENT:

Sometimes a weak, uneven or faded print can be due to incorrect print head pressure. Adjusting the pressure on the print head toggles will create more contact between the label and the thermal transfer ribbon during the printing process, resulting in a better print. Rotate both print head adjustment toggles to achieve desired results. Zebra Technologies have provided a great video demonstration on how to do this properly with the ZT-230

Zebra printer below.

We hope you found this guide useful and perhaps found a solution to your particular problem. If not, please don't hesitate to send us an e-mail at **info@romark-labels.com** or give us a call on freephone **0800 023 9277.** You can check out another guide here where we list some more tips for getting the most from your durable labels and printer.