

Wrinkling summary

Wrinkling is one of the most difficult problems to find the cause of it.

So I cannot say to you turn that screw 2 times or replace this motor and the problem is solved.

Wrinkling comes when the ribbon wrinkle during the printing. This wrinkling of the ribbon can have different causes:

- too high energy
- wrong tension on the ribbon

Cassette - Ribbon

Check if the wrinkling happens with only one particular cassette or ribbon.

Cassettes can have burrs that can cause more friction who can cause the ribbon to wrinkle; same problem you can have with ribbon cores. For that you can apply a very small amount of plastic grease on the cores of a ribbon (place: where core touches the cassette).

Check if there is a bulge on the used part of the ribbon. If this bulge is to big than this can also cause problems. What you can do is remove the used part of the ribbon and print 2 bands and check if the result is better. If this is the case then you will have to search the problem in the direction of the carriage of head.

Media

Which kind of media is the customer using? Some medias just do not work with our DC-series. Meaning you have to set the density much to high before you get some transfer resulting in deforming of the ribbon - wrinkling. Also it is possible that one batch of a certain vinyl does work and another batch of vinyl gives a very bad result. The only vinyl we are sure of is the 3M that we sell (not the one with paper backing). So to do test it is maybe better to start with the 3M to check if there is a problem with machine or media.

Head

Clean manually the print head: When the head is not clean but full of residue from the backing of the ribbons than energy setting must be set to height to get transfer resulting in wrinkling

Check the amount of printed meters: print head that get worn down have a worn down glass layer resulting in bad focus of heat. For those heads you have to increase the energy to much to get a proper transfer, however to high energy can also result in wrinkling - send the head status to us so we can check the status of the head

Mechanically problems with the head can deform the ribbon or can cause more friction (so wrong tension) this can also cause the ribbon to wrinkle (for example wrong head alignment)

Carriage - Brakes

First of all set the values of the brakes back to the default values.

Wrong brake settings cause a wrong tension of the ribbon. Only in some cases you can change the tension of the ribbon:

- 1) When you get wrinkling with almost empty ribbons (<15%) - then set the TBER on 1
- 2) When you get wrinkling with new ribbons (>85%) - then set the TAER on 45 - 50
- 3) When you see that density is almost Ok but the printout is a little matt (not glossy) than you can increase the values of TAER and TAFR with 5 - 10

When the brakes are not working correct or the pins inside the carriage are not calibrated OK than this causes wrong tension.

Base - height

When the base is not set to the correct height:

- 1) Too Low - not enough pressure - this will cause less transfer, then you need to increase the density that can cause wrinkling
 - 2) Too High - too much pressure - this will cause the ribbon to deform too much and also give more transfer than the head is calibrated for
- To check the height you however will need a fixture.

Bad contact

carriage board, cable

Kind of wrinkling

Is it wrinkling in full 100% colours or in gradients (light colours <20%)

Environment

Temperature must be stable and between 15-27°C

Humidity between 30-75%

So mechanically the parts that can influence the wrinkling is a print head, a carriage, the base. Before changing parts you will have to be sure it is not a problem with ribbon, cassette, vinyl or settings - set density back to default (double density OFF) and default brake settings (TAER= 35; TAFR= 60; TBER= 10; TBFR= 30) and test on 3M.

Check the settings and head status, if possible send picture of the wrinkling problem (print sample would be better but will take longer).

If an intervention should take place then take carriage, head and head height tool with you..