

White Ink Transition (W0→W1) TROUBLESHOOTING

We share our experience to give you the **best support**

This document provides a structured troubleshooting guide for common print quality issues encountered in DTG (Direct-to-Garment) and DTF (Direct-to-Film) production.

It is designed to help operators and support personnel quickly identify visible print defects, understand their most likely causes, and apply effective corrective actions. Each issue is presented in a consistent format, allowing for fast diagnosis and practical resolution on the production floor.

The guidance focuses on real-world printing conditions, including ink behavior, pretreatment, drying, and transfer processes.

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PRINT QUALITY TROUBLESHOOTING

1 REDUCED COLOR VIBRANCY AFTER INK VERSION CHANGE



METHOD

DTG/DTF

COLOR

All colors

PROBLEM DESCRIPTION

Colors appear dull or less vibrant immediately after a software update or ink version change.

WHEN IT OCCURS

When printing before the ink system has fully transitioned to the new ink version.

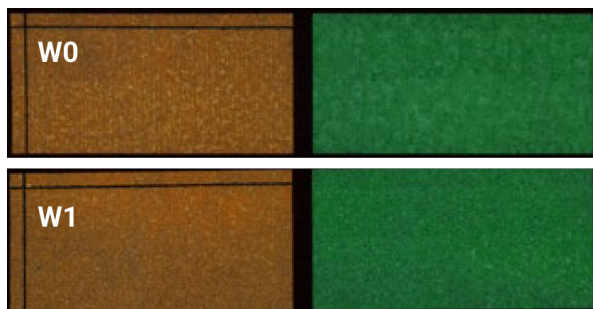
CAUSE

The newer print profile applies a reduced ink amount to suppress bleeding. Until the ink replacement process is fully complete, this can temporarily reduce color saturation.

SOLUTION (HOW TO FIX)

1. Continue printing with the previous print profile until the ink replacement process is complete.
2. Switch to the new print profile only after the ink system has fully stabilized.

2 BLEEDING DURING INK TRANSITION (DTG)



METHOD

DTG

COLOR

All colors

PROBLEM DESCRIPTION

Ink spreads beyond intended image boundaries.

WHEN IT OCCURS

During the period in which the ink system is transitioning between ink versions.

CAUSE

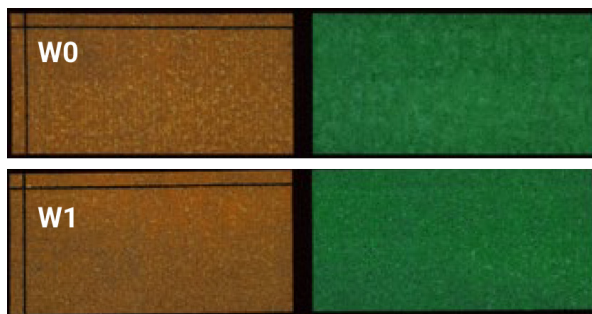
The newer ink formulation is more sensitive to heat and moisture, making bleeding more likely under certain conditions:

- Pretreatment dried using an oven or heat press
- Post-print fixation performed in an oven

SOLUTION (HOW TO FIX)

1. Reduce the white ink highlight level in the print settings.
2. Resume standard settings once the ink transition is fully completed.

3 BLEEDING DIFFERENCES BETWEEN PRINTERS (DTG)

**METHOD**

DTG

COLOR

All colors

PROBLEM DESCRIPTION

The same print file produces different bleeding results on different machines.

WHEN IT OCCURS

After transition to a new ink/profile, especially across multiple printers

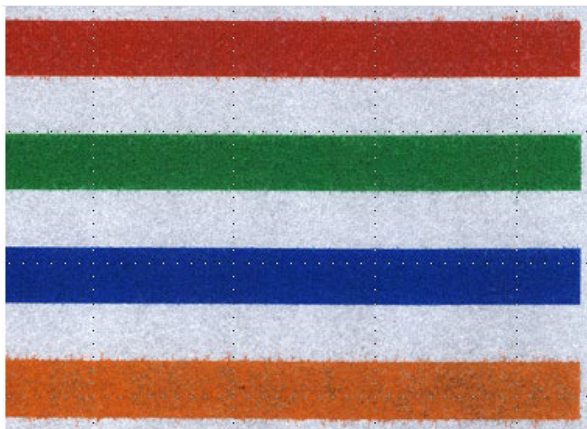
CAUSE

Natural variation between print heads can affect the amount of ink applied, which influences bleeding behavior.

SOLUTION (HOW TO FIX)

Adjust white ink highlight settings individually for each printer.

4 BLEEDING AT THE BOUNDARY BETWEEN ORANGE AND WHITE (DTG)

**METHOD**

DTG

COLOR

Orange & White

PROBLEM DESCRIPTION

Bleeding appears at the boundary where orange areas meet white areas in the printed image.

WHEN IT OCCURS

When printing designs that include orange areas adjacent to white, especially after an ink system update.

CAUSE

Compared to other colors, orange ink is more likely to spread into adjacent white areas, making color boundaries more sensitive.

SOLUTION (HOW TO FIX)

- Reduce the white ink highlight level in areas where orange and white meet.
- Avoid excessive pretreatment and ensure even, moderate drying before printing
- If available, use bleeding reduction settings for designs with large orange areas.

5 GENERAL BLEEDING WHEN PRINTING ORANGE



METHOD

DTG / DTF

COLOR

Orange

PROBLEM DESCRIPTION

Bleeding is more visible or pronounced when printing orange compared to other colors.

WHEN IT OCCURS

When printing designs that include orange ink, especially in high coverage areas or near white layers.

CAUSE

Orange ink has a naturally higher tendency to spread and mix with surrounding ink layers.

TROUBLE-PRONE CONDITIONS

- High ink density settings
- Printing over white ink layers
- Certain film or media types (DTF)

SOLUTION (HOW TO FIX)

- Reduce overall ink density or adjust color settings for orange areas.
- Optimize white ink levels to reduce interaction between layers.
- Fine-tune drying and curing conditions for better ink stabilization

6 REDUCED RUB FASTNESS (DTG)

METHOD

DTG

COLOR

All colors

PROBLEM DESCRIPTION

The printed image shows reduced resistance to rubbing after drying.

CAUSE

Insufficient drying or fixation can prevent the ink layer from fully bonding to the fabric.

SOLUTION (HOW TO FIX)

Increase pressure and/or duration during the heat-press fixation process.

Reference settings (example)

Pretreatment pressing: 180 °C, 6.0 PSI, 30 s × 2 or 45 s × 2

Ink fixation pressing: 180 °C, 6.0 PSI, 60–90 s

7 REDUCED RUB FASTNESS AFTER TRANSFER (DTF)

METHOD

DTF

COLOR

All colors (especially orange)

PROBLEM DESCRIPTION

The transferred print abrades or scuffs easily.

CAUSE

Incomplete powder melting or insufficient heat transfer during curing

SOLUTION (HOW TO FIX)

- Extend oven drying time to ensure full powder melting.
- Apply two heat-press cycles, performing the second after film removal.
- Use a conveyor, tunnel, or drawer-type oven for more consistent drying where possible.

8 STICKY PRINTED SURFACE (DTF)

METHOD

DTF

COLOR

All colors

PROBLEM DESCRIPTION

The printed film or transferred image feels sticky to the touch.

CAUSE

Ink and adhesive layers are not fully dried before transfer.

SOLUTION (HOW TO FIX)

- Increase oven drying time prior to transfer.
- Apply an additional heat-press cycle after film removal.
- Ensure stable and even heat during drying.

9 WHITENING AFTER STORAGE OR WASHING (DTF)



METHOD

DTF

COLOR

All colors

PROBLEM DESCRIPTION

A white haze appears on the print after storage or washing.

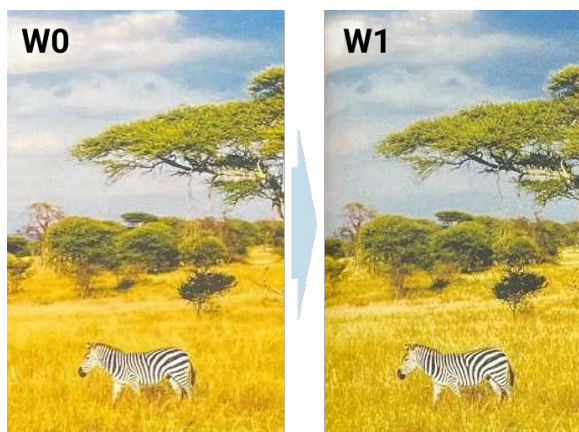
CAUSE

Residual film or adhesive material can absorb moisture over time.

SOLUTION (HOW TO FIX)

- Optimize powder melting and transfer conditions.
- Use films known for lower moisture sensitivity.
- Ensure complete curing before handling or washing.

10 COLOR APPEARANCE CHANGE AFTER INK UPDATE (DTF)



METHOD

DTF

COLOR

All colors

PROBLEM DESCRIPTION

Printed colors appear different compared to previous output.

CAUSE

Updated print profiles are optimized to reduce bleeding, which can slightly alter color output.

SOLUTION (HOW TO FIX)

Use the previous ink setting in the print menu when color consistency with earlier output is required.

11 BLEEDING ON SMALL GRAPHICS (DTG)



METHOD

DTG

COLOR

All colors

PROBLEM DESCRIPTION

Bleeding is noticeable mainly on small or fine designs.

CAUSE

Short intervals between white and color ink application increase the chance of ink mixing.

SOLUTION (HOW TO FIX)

- The printer automatically applies an internal wait period to reduce bleeding.
- No user adjustment is required.