# Troubleshooting Guidelines

for HP Indigo 7000 Series Digital Presses

User Guide

June 2015

# Legal information



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This English version of the document must be used as the original instructions.

Users must treat all documents received during the training course (whether printed or electronic) as part of the digital press. This material must be retained for the life of the digital press.

**Safety Notice**

The HP Indigo Digital Press is a Class 1 Laser Product. It contains a Class 3R writing head with an embedded Class 4 red laser with multiple scan beams and a total possible power of 130 milliwatts. There is no danger to persons or equipment when the system is operated in accordance with the directions provided by HP in this and other publications. All laser sources are located behind protective covers. Warning labels are attached to each protective cover. Do not remove covers.

The HP Indigo Digital Press contains high voltage power supplies. There is no danger to persons or equipment when the system is operated in accordance with the directions provided by HP in this and other publications. All high voltage power supplies are located behind protective covers. Warning labels are attached to each protective cover. Do not remove covers.

# Table of contents

# 1 Overview

This is explains how, what and where to look in order to solve a problem at the HP Indigo 7000 Series Digital Presses.

## Introducing this guide

This guide is not a step-by-step troubleshooting tool; it is intended to be used to understand *how*, *what* and *where* to look in order to solve a problem at the HP Indigo 7000 Series Digital Presses.

NOTE: This document does not replace the troubleshooting available as part of the press software and Print Care.

This guide discusses the following topics:

- Color issues
- Ink cabinet issues
- PQ (print quality) issues
- Auto Bias / V-light / PIP charge / BID voltage
- Best practices
- Feeder issues
- Stacker issues
- Paper Path issues
- Available information

## Approaching and identifying an issue

When an issue occurs at your press, you first need to understand and identify it. Evaluating the possible causes of the issue will then give you a direction and help you to determine the relevant troubleshooting actions.

To understand the issue and correctly identify it, ask the right questions and use the answers to rule out topics, components, and areas, from the possible causes.

Here is a list of questions that you can ask to define an issue:

- What error appears on the UI screen?
- What errors appear following the first error?
- What print quality (PQ) phenomenon is occurring?
- What was the last thing done on the press before the occurrence of the error / issue / PQ phenomenon? (Also check with operators from other shifts.)

- What press area could be causing the PQ occurrence?
- Could the issue be related to DFE job settings?
- Was any maintenance / fixing performed on the press lately? If yes, what was done and / or what was the issue that required fixing?
- Were any of the press settings changed? (Also check with operators from other shifts.)
- Are there any noises?

You should also:

- Visually check the press for anything that might be unusual.
- Use the Print Care Search for possible solutions to the software error/event.
- Use Print Care to diagnose and troubleshoot issues. (In many cases, Print Care automatically suggests troubleshooting actions.)

According to the findings from the points above, you can proceed to the relevant troubleshooting actions.

# 2 Color issues

The explains the causes and troubleshooting of color issues.

## Possible causes of color issues

List of possible causes of color issues.

- Color adjustment not performed frequently.
- Ink not calibrated correctly.
- Dirty BID.
- Old PIP / Blanket / BID.
- Wrong substrate definitions.
- Substrate conditions, storage, treating, and/or optimization.
- ILD not calibrated.
- Wrong threading of substrate.
- Adhesion issues.
- Dirty charge roller.
- Dirty electrometer.
- Dirty writing head window.
- Incorrect job setup at the DFE.
- Unsupported substrate.
- Dirty ILD roller.
- Dirty SPM roller.

## Troubleshooting actions

Follow these steps for troubleshooting actions to be carried out for color issues.

1. Use the Print Care diagnostics and troubleshooting tools.
2. Check what type of substrate is being used.
3. Check if the issue occurs also with other types of substrates.
4. Check the substrate definitions: type of material, thickness, gloss level, blanket temperature, second transfer, substrate OD (optical density).
5. Check conditions of the substrate priming and treatment.

6. Check Blanket and PIP conditions.
7. Check ink density and conductivity readings.
8. If you notice that a certain color is causing the issue, check that the BID is clean.
9. Check the BID flow.
10. Perform first transfer.
11. If color adjustment is successful, perform color calibration.
12. Make sure that the job was created properly at the DFE.
13. Check that the air pressure is not too low.
14. Visually check that the ceramic tiles are clean.
15. Visually check that the ceramic tiles mechanism is not bent or damaged.
16. Check that the ILD roller is clean.
17. Check that the SPM roller is clean.
18. Run the *Ceramic Tiles Cleaning* wizard.
19. Perform Full ILD calibration (if possible)
20. Check ink density and conductivity status; re-calibrate if needed.
21. Reinstall the ILD firmware.
22. Do you notice any background colors (haze)? If yes, which color/s? Try lowering the conductivity and see if this reduces the hazy background.
23. Clean the charge roller.
24. Calibrate the charge roller.
25. Clean the electrometer.
26. Check if the leading edge / trailing edge (LE / TE)feature is activated, and it is set up correctly.

# 3 Ink cabinet issues

This explains identifying and troubleshooting ink cabinet issues.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Ink overheating / temperature issue
- Water leak
- Ink leak
- Ink pumps error
- TIC (tank ink controller) error
- Ink level error
- Ink density or conductivity false reading

## Troubleshooting actions

Follow these steps for troubleshooting actions for ink cabinet issues.

1. Use the Print Care diagnostics and troubleshooting tools.
2. Check that the chiller is functioning correctly.
3. Check the chiller setup.
4. Check water pipes connections to the press.
5. Check water pipes connections to the ink cabinet.
6. Check water pipes connections in the ink cabinet.
7. Check if the ink pump is rotating.
8. Clean the TIC board density / conductivity sensors.
9. Check that the ink pump connectors are not damaged.
10. Check that the ink pump is placed correctly.
11. Check that ink pump level float is not jammed.
12. Check the conductivity and density readings.
13. If you suspect that any of the water valves is stuck, try to “push” air into the valve, from the water hose connections.
14. Check the ink cabinet air pressure.

15. Check that the ink pump rotor is not loose.
16. Reset the MIC (main ink control) board.
17. Check that there is no imaging oil pipe loose in the ink cabinet.
18. Check that there is no air hose disconnected in the ink cabinet.
19. Check that the BID hoses are not bent.
20. Perform BID diagnostics and flow check.
21. Check that the conductivity pump is working (touch the pump while trying to increase the conductivity).

# 4 PQ (print quality) issues

This explains identifying and troubleshooting print quality issues.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Banding.
- Scratches.
- Color haze / background.
- Adhesion issues.
- White spots.
- Dripping marks.

## Troubleshooting actions

Follow these steps for troubleshooting print quality issues.

1. Use the Print Care diagnostics and troubleshooting tools.
2. Check what was the last thing done on the press.
3. Check the humidity and temperature in the room.
4. Check when was the last time that a maintenance routine was done on the press, and what was done.
5. Check what type of substrate is being used.
6. Check that the substrate is approved by HP Indigo.
7. Check if the substrate properties were modified.
8. Check if the issue occurs also with other types of substrates.
9. Check that the substrate was stored correctly prior to usage.
10. Check the substrate definitions: type of material, thickness, gloss level, blanket temperature, second transfer, substrate OD (optical density).
11. Check conditions of the substrate priming and treatment.
12. Check Blanket and PIP conditions.
13. Check if there are any marks on the PIP or Blanket.
14. Perform first transfer.

15. In case of white spots, identify the problematic ink and rebuild the ink.
16. Check the ink density and conductivity readings.
17. If you notice that a certain color is causing the issue, check that the BID is clean.
18. If color adjustment is successful, perform color calibration.
19. Make sure that the job was created properly at the DFE.
20. Clean the charge roller.
21. Calibrate the charge roller.
22. Clean the electrometer.
23. Clean the wiper blade.
24. Clean the cleaning station and the sponge roller.
25. Look for any excessive wetness around the cleaning station, catch tray and PIP, that could cause imaging oil drippings.
26. Check if all the blowers at the back of the press are working.
27. Check that the carbon brushes are clean.
28. Check that the BIDs are clean.
29. If you bypass BIDs, check if you can identify any specific BID causing the PQ issue.
30. Check if you can point at the source of the PQ issue: BID, blanket, charge roller, PIP, WHS, banding.
31. Verify that definitions are correct.
32. Check if there is dirt or pieces of substrate stuck in the EBV knifes suction pathway.
33. Check if there is an obstacle in the transfer area (PIP, blanket, cleaning station).

# 5 Feeder issues

This explains identifying and troubleshootinng feeder issues.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Paper jams on VPP.
- Paper left on bridge.
- Paper jam in exit drawer to VPP.
- Paper jam between VPP and bridge.
- Drawer in idle and panel not responding.
- Multipicks.
- Missfeeds.
- Paper is not picked from the correct drawer (no error).

## Troubleshooting actions

Follow these steps for troubleshooting feeder issues.

1. Check media specifications.
2. Check room temperature and humidity (especially if all light media are jamming).
3. Swap media with another drawer to see if problem follows media.
4. Use PrintCare to check the leak valves and Suction/Blower functionality.
5. Check if Drawer is only Heavy Substrate or One Shot configuration.
6. Check that the feed head flaps are moving freely.
7. Check that the Bridge side baffle is not blocking the paper movement.
8. Check Bridge Transport Belts for wear (if they are becoming flat or to thin).
9. Check if media is fed from the top drawer but it jams from the bottom drawers (problem with VPP).
10. Clean paper path sensors and verify functionality from PrintCare.
11. Use vacuum (or compressed air if vacuum is not available to) clean the drawer bottom sensors.
12. Removed any forced drawers and check which media is assigned as special media from the Press Options.
13. Check bridge belts are rotating.

14. Check all bridge fans are working.
15. Check VPP rollers are not damaged.
16. Check VPP belts are in good condition and not worn out.
17. Check flat cables are not torn and connected properly.
18. Check paper guides are closed properly and not opening during print.

# 6 Paper Path issues

This explains identifying and troubleshooting paper path issues.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Paper Jams (Random or Constant).
- Paper Stuck to Blanket.
- Paper lead edge damaged (Dog ears).
- Paper creasing on the trail edge.
- Paper is torn in the middle.
- False “Duplex Conveyor Open” message.

## Troubleshooting actions

Follow these steps for troubleshooting paper path issues.

1. Check media specifications (especially media dimensions).
2. Check room temperature and humidity (especially if all light media are jamming).
3. Check press options for forced destinations.
4. Use PrintCare to run Paper Path Diagnostics.
5. Check Impression paper for torn/folded edges.
6. Check Blanket for mechanical damage.
7. Print in Simplex to see if problem comes from Duplex conveyor.
8. Print using Heavy Substrate mode to see if problem comes from Perfector area.
9. Check Duplex belts for wear (0.5 Height jig).
10. Check Suction Caps (Check for cracks / Reseat using latest best practice method).
11. Check Compressed air to the press / Check Vacuum level (Verify compressed air input to the press is constant and not dropping during printing).
12. Check Exit Conveyor side Baffles for skew.
13. Check duplex conveyor position and magnetic interlock.
14. Verify exit roller movement and spring functionality.
15. Reduce buckle by 0,5 mm (for trailing edge creasing or PSTB).

16. Check gripper plates for bends and verify the paper is not slipping out during printing.
17. Use null cycles to identify if the problem is media stabilization.
18. Check duplex fan is working.
19. Check suction cups condition.
20. Check gripper pads condition, worn pads can cause paper to slip.
21. Check all gripper pads are opening and closing properly.
22. Clean IFR rollers and check visually for any damaged rollers.

# 7 Stacker issues

This explains identifying and troubleshooting stacker issues.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Paper Jams on Proof tray.
- Paper Jams on Stack.
- Stack alignment is not straight .
- Paper is not exiting to the assigned destination.
- Paper is going to the waste tray.
- Pallet is not moving up (front panel is not responding).
- Stacker door not closing.
- Light creasing from the stacker bridge.

## Troubleshooting actions

Follow these steps for troubleshooting stacker issues.

1. Check media specifications.
2. Check room temperature and humidity (especially if all light media are jamming).
3. Check press options for forced destinations.
4. Use PrintCare to check the diverters functionality.
5. Perform the Stacker calibration.
6. Check the Job Ticket if it's configured for Special Finishing devices (forced to waste tray).
7. Check reflection sticker on pallet.
8. Check that the Blue handle of Stacker cover Area No 5 is properly closed and not jamming against the door.
9. Clean paper path sensors and verify functionality from PrintCare.
10. Remove any loads from the Stacker Bridge top cover.
11. Check registration table belts are rotating.
12. Check registration belts are in good condition adn not worn out.
13. Check registration table fans are working.

14. Check bridge rollers are in good condition and not damaged.

# 8 Auto Bias / V-light / PIP charge / BID voltage

This explains identifying and troubleshooting issues of auto bias/V-light/PIP charge/BID voltage.

## Identifying the issue

See if any of the cases below describes the issue occurring at your press.

- Auto Bias failing.
- PIP charge errors.
- V-light errors.
- BID high voltage errors.

## Troubleshooting actions

Follow these steps for troubleshooting issues of auto bias/V-light/PIPcharge/BID voltage.

1. Use the Print Care diagnostics and troubleshooting tools.
2. Check what was the last thing done on the press.
3. Check when was the last time that a maintenance routine was done on the press, and what was done.
4. Check if anything around the PIP / charge roller / cleaning station is touching the PIP during work: this might cause a discharge of the PIP power.
5. Check that the charge roller is clean.
6. Check that the carbon brush is OK.
7. Visually check at the UI if the PIP is charged correctly; look for any indication of a component which might be faulty.
8. Check that the PIP is placed correctly inside the PIP holder.
9. Check if the PIP is touching the PIP drum shoulders.
10. Check if the PIP lays flat or it is “floppy” (no imaging oil is holding the PIP).
11. Perform charge roller calibration.
12. Check that the pre-transfer heater lights are ON.
13. Check that the pre-transfer heater is clean.
14. Check that the BID hoses are not bent.
15. Check the BID flow.
16. Check that the ink pump is rotating freely.

17. Check that the BID is clean.
18. Remove the BID and check the conditions of if its rear connectors and back wall (use a flash light).
19. Visually check to see if you can identify any loose / exposed wire at the back of the BID and around the BID motor.
20. Try bypassing the BIDs one by one to identify which BID is causing the error.

# 9 Best practices

This explains the best practices to be followed for below given subject.

## Tips and recommendations

It explains the tips and recommendations to be followed.

- Work with wide substrates first, and gradually move to narrower substrates.
- Refresh your knowledge with the following document: *CA394-07583 - Supplies Best Practice Guide 7000 Series.pdf*.

## Blanket

Follow these stepss for best practices of blanket.

1. Verify that the PIP and Blanket are not replaced at the same time.
2. Check that the substrate was defined correctly – FaceStock, thickness, tension, gloss level, and substrate OD (optical density).
3. Check that the second transfer pressure is properly defined in the *Substrate properties*, according to the type of substrate used.
4. Check that the correct blanket type is selected.
5. Make sure that the substrate is approved by HP Indigo.
6. Verify that the impression drum IR sensor is clean. If needed, clean it using IPA with a lint free wipe.
7. Run the *First transfer* wizard after replacing blanket.
8. Make sure a “Cold Start” process is not bypassed after replacing the blanket.

## PIP

Follow these steps for best practices of PIP.

1. Verify that the PIP and Blanket are not replaced at the same time.
2. Check that the substrate was defined correctly – FaceStock, gloss level, and substrate OD (optical density).
3. Check that the cleaning station rotates in the proper direction.
4. Check that the cleaning station is clean.
5. Check that the imaging oil in the reservoir is clean.
6. Check the wiper holder conditions and replace as needed.
7. Check that the wiper is clean. If needed, clean using imaging oil with a link free wipe.

8. If needed, replace the imaging oil filters.
9. Check that no foreign object touches the PIP.
10. Check that the BIDs are not damaged or scratched.
11. Check that the charge roller surface is clean.
12. Check that the PIP enhancement unit (PEU) is not bypassed.

# 10 Available information

*My HP Indigo* is a personalized, password-protected, business optimization portal for HP Indigo press owners. The portal is a 24/7 resource for comprehensive and customized support.

Access the *My HP Indigo* portal at: https://myhpindigo-int-pro.houston.hp.com

The following information is available on the *My HP Indigo* portal:

- Technical Support:
  - Service calls (go to **Technical Support > Service Calls**) – Place service calls and view call history
  - Documentation (go to **Technical Support > Labels & Packaging Presses**) – Choose your press and, under **Latest Resources**, view the relevant documentation (user guides, how-to guides, parts catalogs, etc.). (For a list of relevant documents, see "Documentation" below).
- Product ordering (go to **Supplies and Business ManagementTechnical Support**) – Online ordering of parts and supplies.
- Supply usage guidelines (go to **Supplies and Business ManagementTechnical Support > Labels & Packaging:Supplies & Media > Supplies Best Practice Guides**) – Select the relevant Supplies Usage Guidelines document.
- Material Safety Data Sheets (MSDS) for supplies (go to **Supplies and Business ManagementTechnical Support > Labels & Packaging:Supplies & Media**) – View a comprehensive list under **Resources – Quick Links**, or select a specific category (e.g., **Primer Products**, **ILP Primers**), and view the available information.
- HP Indigo Serve reports – Go to **Supplies and Business ManagementTechnical Support > HP Indigo Serve**, **Resources > My HP IndigoServe Reports**
- Media Solutions Locator – Go to https://myhpindigo-int-pro.houston.hp.com/MediaSolution/

## Documentation

It references the list of documentation available.

- *CA394-00182 – HP Indigo 7000 Digital Press User Guide*
- *CA394-04773 – HP Indigo 7500 Digital Press User Guide*
- *CA394-10792 – HP Indigo 7600 Digital Press User Guide*
- *CA394-18341 – HP Indigo 7800 Digital Press User Guide*
- *CA394-07583 – Supplies Best Practice Guide 7000 Series*
- *CA394-14421 – Excellence Routines Maintenance Checklist*

# A Service and support

## List of service and support

To obtain service, please contact the customer care center within your country/region:

| | |
|---|---|
| **Europe:** | |
| Belgium: | +32 (0)2 626 4803 |
| France: | +33 (0)1 57 32 41 07 |
| Germany: | +49 (0)69 38 07 89 193 |
| Ireland: | +353 (0) 1 656 9760 |
| Italy: | +39 02 69430637 |
| Luxembourg: | +352 (0)24 87 13 98 |
| Netherlands: | +31 (0)20 547 6870 |
| Spain: | +34 9 12757781 |
| UK: | +44 (0)84 5604 7435 |
| **APJ:** | |
| Japan: | +81 (0)3 3335 8440 |
| Singapore: | +65 6376 2941 |
| **Distribution Channels (DC):** | +31 (0)20 654 5543 |
| **North America:** | 1-800-204-6344 |
| **Israel:** | +972 (0)8 938 1818 |

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