

UV Troubleshooting Guide

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Adhesion

Problem: Ink can be removed easily when tape test is done.
(See also [Rubbing/Scratching/Scuffing](#))

Cause:

1. Ink not fully cured.
2. Ink not formulated for the substrate.

Solution:

1. Make sure ink is fully cured – emulsified ink retards cure.
2. Consult ink manufacturer.

Backing

Problem: Ink backing away from fountain roller resulting in colour variation.

Cause:

1. Ink too thixotropic.
2. Ink body too short.
3. Not using a fountain agitator.

Solution:

1. Consult ink manufacture.
2. Formulate ink for better flow.
3. Install fountain agitator.

Curing

Problem: Ink film remains tacky or wet to the touch.

Cause:

1. Lamps not up to power.
2. Lamp reflectors are dirty.
3. Lamps not on.
4. Lamp bulb past useful life.
5. Shutters on lamp not open.
6. Incorrect power going to lamp causing high or low lamp temperature.
7. Too much water being run, ink is emulsifying.
8. Excessive ink film thickness.
9. Not enough photoinitiator or wrong type in ink.
10. Ink contaminated.
11. Excessive speed of press for type of ink being used.

Solution:

1. Let lamps warm up.
2. Clean reflectors.
3. Make sure lamps are on.
4. Replace lamp.
5. Consult lamp manufacturer.
6. Consult lamp manufacturer.
7. Reduce water.
8. Reduce ink film or have ink made stronger.
9. Consult ink manufacturer.
10. Remove ink and replace with fresh ink.
11. Slow down press or change to a different type of ink.

Dot Sharpness

Problem: Halftone dots increase in size causing printed screens and reverses to be plugged and appear muddy.

Cause:

1. Ink body too long and soft.
2. Ink emulsified.
3. Improper ink water balance or fountain solution.
4. Poorly ground ink.
5. Plate incorrectly desensitized or processed.
6. Insufficient dampening solution being run.
7. Too much, form roller to plate, plate to blanket or blanket to substrate, pressure.
8. Running too much ink.

Solution:

1. Consult ink manufacturer.
2. See [**Emulsification**](#).
3. Adjust water balance and/or conductivity/pH.
4. See [**Piling**](#).
5. Remake plate.
6. Increase dampening solution.
7. Reset pressures to press specifications.
8. Reduce ink film or have ink made stronger.

Emulsification

Problem: Ink picks up and hold on to too much water.

Cause:

1. Fountain solution and/or conductivity pH not correct or balanced.
2. Improperly set rollers.
3. Improperly formulated ink.
4. Running too much water.

Solution:

1. Adjust for correct conductivity/pH for fountain solution being used.
2. Reset rollers.
3. Consult ink manufacturer.
4. Cut back on the water.

Ghosting

Problem: A printed area from another part of the form appears in large solids or dense halftones.

Cause:

1. Poor layout.
2. Ink film too thin.
3. Ink too transparent.
4. Too much water being run.

Solution:

1. Adjust layout.
2. Extend ink.
3. Make opaque.
4. Cut back on the water.

Hickies

Problem: Blank area with a dot in the middle, generally caused by a particle.

Cause:

1. Undispersed particle in the ink.
2. Foreign particle in ink.
3. Roller particles.
4. Prematurely cured ink in can.
5. Bad paper.

Solution:

1. Return to ink manufacturer.
2. Inspect press area for cleanliness.
3. Replace rollers.
4. Return to ink manufacturer.
5. See [Picking](#).

Ink/Water Balance

Problem: Ink will not lithograph well and afford good print quality without frequent adjustments on press.

Cause:

1. Excessive fountain solution.
2. Fountain solution too strong.
3. Fountain solution too weak.
4. Improper dampener roller settings.
5. Improper ink form roller settings.
6. Weak ink.
7. Ink emulsification.

Solution:

1. Reduce dampener setting.
2. Adjust fountain solution.
3. Adjust fountain solution.
4. Reset rollers.
5. Reset rollers.
6. Consult ink manufacturer.
7. Consult ink manufacturer.

Laser Printing, Failures

Problem: a) The ink is picked up by the fuser roller.
b) The cured ink will not accept laser imprinting.

Cause:

1. a) The ink is not fully cured.
2. a) The ink film thickness is too high.
3. a) The fuser roller is too hot.

1. b) The ink surface is too hard.
2. b) Not enough open screen.
3. b) Unsuitable laser system.

Solution:

1. a) Modify the ink.
2. a) Print at lower thickness.
3. a) Run the roller at correct temperature.

1. b) Modify the ink.
2. b) Print with more open screens.
3. b) Consult the printer.

Misting

Problem: Ink is being ejected from rollers in the form of a fine mist.

Cause:

1. Too much ink being run.
2. Rollers are not set correctly.
3. Ink is emulsified.
4. Ink too long in body.

Solution:

1. Make ink stronger.
2. Check settings and reset.
3. See [**Emulsification**](#).
4. Consult ink manufacturer.

Picking

Problem: Lifting off of coating from coated stock and pulling paper fibres from uncoated stock.

Cause:

1. Ink too tacky for stock being run and/or speed of press.
2. Excessive printing pressure.
3. Bad paper.
4. Paper surface trash, coating dust, slitter or trimmer dust.
5. Blanket too tacky.

Solution:

1. Reduce ink.
2. Reset pressures.
3. Consult paper manufacturer.
4. Use clean paper.
5. Change blanket.

Piling

Problem: A build up of paper coating, lint or ink on the plate, blanket or rollers (See [Picking](#) for paper related problems).

Cause:

1. Ink poorly ground.
2. Improperly packed cylinders.
3. Rollers not set correctly.
4. Lamps flashing blanket causing ink to slowly cure.
5. Ink is emulsified.
6. Insufficient transfer of ink.

Solution:

1. Re-grind ink.
2. Repack press to specifications.
3. Reset rollers.
4. Consult lamp manufacturer.
5. See [Emulsification](#).
6. Reduce ink, consult ink manufacturer.

Plate Blinding

Problem: Part or all of image does not take ink, resulting in loss of image.

Cause:

1. Abrasive particles in ink wearing image.
2. Ink and dampening form rollers too hard or not set correctly.
3. Excessive plate to blanket pressure.
4. Excessive amount of lint being deposited on plate.
5. Fountain solution too low in pH (i.e. too acidic).
6. Too much gum in fountain solution.
7. Plate cleaners or scratch removers dried on plate.
8. Detergents in fountain solution.
9. Plate not completely developed or gum remains on image areas.

Solution:

1. Re grind or reformulate ink.
2. Check roller durometer and reset.
3. Reset pressures to manufacturers specifications.
4. See [Picking](#).
5. Adjust fountain solution.
6. Change fountain solution.
7. Remake plate.
8. Change fountain solution.
9. Remake plate.

Plate Wear

Problem: Gradual wearing away of the plate causing image loss.

Cause:

1. Improperly processed plates.
2. Ink and dampening form rollers too hard or not set correctly.
3. Fountain solution too acidic.
4. Improperly packed plate and blanket cylinders.
5. Plates not suitable for run length.
6. Poorly ground ink.
7. Excessive linting from stock.

Solution:

1. Remake plates.
2. Check roller durometer and reset.
3. Adjust fountain solution.
4. Reset pressures to manufacturers specifications.
5. Remake plate.
6. Re-grind ink.
7. See [Picking](#).

Roller Stripping

Problem: Rollers do not accept ink.

Cause:

1. Fountain solution too acidic.
2. Excessive gum in fountain solution.
3. Too much water being run.
4. Glazed form rollers.
5. Metal vibrators have become sensitized.
6. Ink too strong.
7. Ink too water resistant.

Solution:

1. Adjust fountain solution.
2. Adjust fountain solution.
3. Cut back on water.
4. De-glaze or replace rollers.
5. Desensitize rollers.
6. Extend ink.
7. Consult ink manufacturer.

Rubbing/Scuffing/Scratching

Problem: Printed ink film appears dry but exhibits unsatisfactory rub and/or scratch resistance when abraded.

Cause:

1. Ink not cured.
2. Ink not formulated for rub/scratch.
3. Ink emulsified causing insufficient cure.
4. Curing system problem.
5. Ink not formulated for the substrate.
6. Too much ink being run.

Solution:

1. See [Curing](#).
2. Consult ink manufacturer.
3. See [Emulsification](#).
4. See [Curing](#).
5. Consult ink manufacturer.
6. Reduce level of ink.

Scumming

Problem: The non image area of the plate accepts ink in random areas, usually can not be removed with a damp sponge.

Cause:

1. Glazed blanket or rollers.
2. Excessive printing pressure.
3. Plate improperly exposed or developed.
4. Plate exposed to light after being allowed to dry.
5. Plate improperly gummed between stops or when made.
6. Fountain solution pH/conductivity out of balance.
7. Poorly adjusted or worn dampening rollers.
8. Ink too soft.
9. Overheated ink rollers.

Solution:

1. Change blanket or deglaze rollers.
2. Adjust pressure to specifications.
3. Remake plate.
4. Remake plate.
5. Remake plate.
6. Adjust fountain solution.
7. Adjust or replace rollers.
8. Consult ink manufacturer.
9. Check settings.

Set Off

Problem: Ink transfers from one side of the substrate to the other in a roll of stack.

Cause:

1. Ink not fully cured

Solution:

1. See [Curing](#).

Slurring

Problem: Dots or image appear elongated or smeared.

Cause:

1. Running too much ink made.
2. Excessive play in gears of plate and blanket cylinders.
3. Loose blanket.
4. Press not packed correctly resulting in different speeds between cylinders.
5. Too much pressure between plate and blanket cylinders.

Solution:

1. Cut back on ink or have ink stronger.
2. Consult press manufacturer.
3. Tighten blanket.
4. Repack press to specifications.
5. Repack press to specifications.

Tinting/Toning

Problem: The non image area of the plate accepts ink in random areas, usually can be removed with a damp sponge.

Cause:

1. Too much pressure between plate and blanket cylinders.
2. Improper ink water balance.
3. Fountain solution pH/conductivity out of balance.
4. Settings or durometers of ink or dampener form rollers not correct.
5. Plate improperly exposed or developed.
6. Ink not sufficiently water resistant, emulsifying.
7. Paper coating contaminating ink train.
8. Prolonged use of detergent, wash up solution.

Solution:

1. Repack press to specifications.
2. See [**Ink/Water Balance**](#).
3. Adjust pH/conductivity.
4. Adjust or replace rollers.
5. Remake plate.
6. See [**Emulsification**](#).
7. See [**Picking**](#) or [**Piling**](#).
8. Discontinue use of detergents.

Wet Trapping

Problem: Can not achieve good coverage of one ink printing on top of another when not using the interstation lamps.

Cause:

1. Tack of ink out of sequence.
2. Strength of inks improperly balanced.
3. Inks contain additives that prevent succeeding ink from adhering.
4. Improper ink water balance.
5. Poor ink release from blanket.

Solution:

1. Consult ink manufacturer.
2. Consult ink manufacturer.
3. Consult ink manufacturer.
4. See [**Ink/Water Balance**](#).
5. Change blanket or consult ink manufacturer.