

UV Troubleshooting Guide

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- ▶ Tinting / Toning
- ▶ Wet Trapping

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- ▶ Flexography
- ▶ Pub Gravure
- ▶ Pkg Gravure
- ▶ Sheetfed Offset
- ▶ UV
- ▶ Web Offset
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Adhesion

Problem: Ink can be removed easily when tape test is done.

Cause:

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

Solution:

1. Make sure ink is fully cured
2. Consult ink manufacturer

Also see RUBBING / SCUFFING / SCRATCHING

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Backing

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

Cause:

1. Insufficient ink in fountain
2. Ink too thixotropic
3. Ink body too short
4. Not using a fountain agitator

Solution:

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

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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

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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 pressure: form roller to plate, plate to blanket or blanket to substrate
8. Running too much ink

Solution:

1. Consult ink manufacturer
2. Consult ink manufacturer
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

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Emulsification

Problem: Ink picks up and holds 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

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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

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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

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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

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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

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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

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Offsetting

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

Cause:

1. Ink not fully cured

Solution:

1. See CURING

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Picking

Problem: Lifting-off of coating from coated stock and pulling paper fibers 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

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Piling

Problem: A build-up of paper coating, lint or ink on the plate, blanket or rollers.

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

See PICKING for paper related problems

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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. Regrind or reformulate ink
2. Check roller durometer and reset
3. Reset pressures to manufacturer specifications
4. See PICKING
5. Adjust fountain solution
6. Change fountain solution
7. Remake plate
8. Change fountain solution
9. Remake plate

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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 manufacturer specifications
5. Remake plate
6. Re-grind ink
7. See PICKING

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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. Deglaze or replace rollers
5. Desensitize rollers
6. Extend ink
7. Consult ink manufacturer

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Rubber / 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

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Scumming

Problem: The non-image area of the plate accepts ink in random areas; usually cannot 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

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Slurring

Problem: Dots or image appear elongated or smeared.

Cause:

1. Running too much ink
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 use stronger ink
2. Consult press manufacturer
3. Tighten blanket
4. Repack press to specifications
5. Repack press to specifications

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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

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Wet Trapping

Problem: Cannot 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

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