

TROUBLE SHOOTING GUIDE FOR INLINE WATERBASE COATING

PROBLEM	CAUSE	SOLUTION
Uneven coating weights on sheet	<ul style="list-style-type: none"> • Uneven pressure between coater rollers. • Uneven pressure between applicator roller and blanket. • Uneven pressure between blanket and impression. • Dried coating within coating system. • Applicator roll to blanket ratio unbalanced. 	<ul style="list-style-type: none"> • Adjust coater rollers. KISS CONTACT • Adjust applicator roller to blanket KISS CONTACT • Adjust pressures and/or check for low areas, smashes in blanket and packing. • Clean rollers, blanket and impressing cylinder. • Synchronize applicator roll to press speed.
Build-up of coating on blanket, outside of sheet.	<ul style="list-style-type: none"> • Blanket packing not trimmed properly. • Not enough packing behind blanket. • Too much pressure between applicator roller and blanket. 	<ul style="list-style-type: none"> • Cut packing at least _ inch smaller than sheet size on all sides. • Add .006 to .008 more packing. • Adjust applicator roller away from blanket. KISS CONTACT

PROBLEM	CAUSE	SOLUTION
Sheet Curl	<ul style="list-style-type: none"> • Stock absorbs too much water. • Excessive heat. • Mechanical distortion. • Incorrect coating. 	<ul style="list-style-type: none"> • Precondition Stock. • Check moisture content of paper. • Stock moisture content should be at 5-6%. Too low moisture content (<5%) leads to excessive distortion as water is absorbed from the coating. • Use paper stocks of 80 lb. or higher. • Lessen the coating weight via metering or lowering the viscosity. Reduce heat. • Run the coating to edge of the sheet if possible. • Use inks with a lower water pickup. Check the sheet guides, most notably star wheels can distort the sheet. • Engage sheet decurler if available. • Contact your C&A representative.

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PROBLEM	CAUSE	SOLUTION
Bead of coating on side edges of the sheet.	<ul style="list-style-type: none"> • Too much pressure between applicator roller and blanket. • Coating volume too high. 	<ul style="list-style-type: none"> • Adjust applicator roller away from blanket. KISS CONTACT • Reduce application volume.
Build-up of coating on trailing edge of the blanket.	<ul style="list-style-type: none"> • Too much pressure between applicator roller and blanket. • Blanket packing not trimmed properly. • Too much pressure between blanket and impression cylinder. • Applicator roller speed faster than blanket surface speed. • Dirty blanket. 	<ul style="list-style-type: none"> • Adjust blanket from impression. KISS CONTACT • Packing at least _ inch shorter than sheet length. • Applicator roller and blanket surface speeds should be the same. • Clean blankets thoroughly.
Spitting or slinging	<ul style="list-style-type: none"> • Coating accumulating on edge of rollers. • Flaring on end of rubber roller. • Coating foaming. • Coating drying too fast. • Level in reservoir pan too high. 	<ul style="list-style-type: none"> • Reduce viscosity. • Reduce the amount applied. • Adjust roller speeds. • Apply grease to outside ends of applicator roller. • Clean end of rollers, or change roller. • Contact your C&A representative.

PROBLEM	CAUSE	SOLUTION
Foaming	<ul style="list-style-type: none"> • Level in reservoir pan too low. • Air being introduced into circulating system. • Coating pump pumping too fast. • Air entrapment in coating. • Viscosity too low. • Contamination of coating. 	<ul style="list-style-type: none"> • Increase coating level in coating pan. • Check pump seals and piping for air leaks. • Reduce coating pump speed. • Eliminate any free fall of liquid in your re-circulating system • Change to fresh drum of coating. • Avoid extended idling time. • Thoroughly flush lines prior to use.
Mud-cracking or Crazing	<ul style="list-style-type: none"> • Coating dries faster than ink. Ink shrinkage causes breakup of coating film. • Low relative humidity. • Incompatibility of ink and coating. 	<ul style="list-style-type: none"> • Check water pickup of ink. • Increase coating weight. • Increase IR, reduce air knives. • Climate control the pressroom. • Alternative coating might be needed. • Contact your C&A representative.

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<p>Backtrapping or ink buildup on blanket. Sometimes appears as voids in the coating film.</p>	<ul style="list-style-type: none"> • Coater activating late, allowing ink to transfer to coating blanket at start-up. • Excessive pressure between blanket roll and impression roll causing squeeze out of coating and pick up of ink on blanket • Insufficient amount of coating being carried by blanket. • Ink volume too great for single station application or to allow sufficient bodying before coating application. • Ink tack too low, producing a weak strength ink film. • Excessive water pick up from fountain solution by ink causing extended open time and ink film weakness. • Coating not rewetting properly. • Blanket too soft or tacky due to having been washed repeatedly with petroleum solvent. • Improper blanket cleaning or possible contamination. 	<ul style="list-style-type: none"> • Adjust coater ON/OFF timing switch. • Adjust roll contact to kiss pressure. Back off pressure until coating continuity lost and adjust to continuous film across sheet. • Adjust roll speed or coating viscosity to carry a thicker film of coating. • Where possible, apply the ink in 2 hits and/or move further back in rotation on press. Check density and adjust downward where indicated. • Increase tack of problem ink. • Check fountain solution balance, adjust pH as necessary. • Coating representative may suggest change of coating for this application. Additional rewetting agent may be required in coating. • Thorough removal of all cleaning solutions and other residue. • Apply blanket hardener or replace with a harder blanket. • Rinse or rewet blanket with water or water loving solution.

PROBLEM	CAUSE	SOLUTION
<p>Drying — The coating will not dry within acceptable limits, even though nothing has changed from last run.</p>	<ul style="list-style-type: none"> • Dryer failure. • The system was likely near its limit without the operator being aware of this threshold. • Excessive coat weight. • Coating viscosity is too high. • High relative humidity. • Heavy ink coverage. • Excessive moisture content in the stock. • Variations in stock absorbency. 	<ul style="list-style-type: none"> • Check IR lamps, air movement & exhaust. • A faster drying coating might be needed. Other adjustments would be: <ul style="list-style-type: none"> a) Boost heat b) Increase air flow c) Slow the press down d) Lower the coat weight e) Check the ink density • Lower coat weight <ul style="list-style-type: none"> a) With coater settings. b) By decreasing viscosity. • In the summertime, ambient air has a higher moisture content and therefore less ability to dry. If the pressroom is not climate controlled, boost the heat and airflow or try a faster drying coating. • This can be a problem especially with dark colors. A more efficient drying system or coating might be needed. The ink water pick up should also be investigated as this can sometimes be a swing factor. Run stronger ink if possible. • Try changing the paper stock first. If the drying problem does not persist with the new stock, check the original stock for moisture content. The ideal range is 5-6%. Higher than that can severely limit absorption, thus adversely affecting drying speed.

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Rings or ridges of coating on rollers or blankets.	<ul style="list-style-type: none"> • Not enough pressure between rollers or blanket. • Not enough coating being applied. • Too much coating being applied. 	<ul style="list-style-type: none"> • Adjust rollers and blanket settings, tighten NIP. • Increase coating viscosity. • Check for low areas in roll blanket and blanket packing. Replace or repack if necessary. • Reduce coating viscosity.
Orange Peel Surface appearance.	<ul style="list-style-type: none"> • Too much coating applied to the blanket. • Coating viscosity too high (too thick). 	<ul style="list-style-type: none"> • Reduce roller speeds to apply less coating. • Reduce coating viscosity (make thinner). • Check NIP pressure.
Cratering , Crawling or Pinholing .	<ul style="list-style-type: none"> • Coating not rewetting, or trapping over the wet ink because of waxes in inks. • Too much reducer or additive in the inks. 	<ul style="list-style-type: none"> • Use NO WAX INKS. • Consult CAC about materials with better wetting properties. • Eliminate or change additives for inks.
Volcanoing or Rupturing of coating surface.	<ul style="list-style-type: none"> • Volatiles in ink film burst through coating resulting in voids. 	<ul style="list-style-type: none"> • Use lower VOC inks. • Lower pile or dryer temperature.

PROBLEM	CAUSE	SOLUTION
<p>Poor UV adhesion (flaking, crawling or scratching).</p>	<ul style="list-style-type: none"> • Proper primer not used. • Waxes in inks. • Water entrapment. • Trapped ink oils or solvents. • UV crawling (not wetting properly). 	<ul style="list-style-type: none"> • Use <u>qualified</u> primer coating only. • Use wax free inks. • Use glycol-free etch. • Allow additional drying time prior to UV coating. • Use low VOC or high solid inks. • Avoid excessive use of open-time, spray or additives. • Consult UV supplier for wetting agent, flow aid, or different UV coating formulation.
<p>Gas Ghosting</p>	<ul style="list-style-type: none"> • Waxes in inks. • Retardation of ink oxidation by stock. • Too much solvents in inks. • Selected stock is prone to ghosting. • Turning a job too quickly. 	<ul style="list-style-type: none"> • Reduce waxes. • Change to more porous stock. Second pass through the drying system. • Reduce solvents in ink. • Run heavy solids side first. • Change stock. • Allow as long as possible before printing second side.

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PROBLEM	CAUSE	SOLUTION
Offset, Blocking or Picking of Non Porous Stocks	<ul style="list-style-type: none"> • Inadequate drying. • Inks remain soft. • Excessive pile height. • High heat. • Too much coating applied. • High Humidity. • Defective spray powder unit. 	<ul style="list-style-type: none"> • Use maximum air knives and extraction. • Only use enough heat to set and dry the inks. • Maintain ink/water balance. • Use specially formulated inks for non-porous stocks. • Run smaller lifts. • Reduce Viscosity. • Slow coater down, increase NIP pressure. • Maintain pressroom climate control. • Inspect and clean spray unit and run minimal amounts.
Loss of Ink Density	<ul style="list-style-type: none"> • De-wetting of ink. 	<ul style="list-style-type: none"> • Use faster drying coating. • Monitor ink/water balance. • Avoid glycols and glycol ethers in fountain solution. • Run stronger inks allowing for thinner film thickness. • Use faster setting inks. • Change to a more porous stock. • If possible, leave open unit between coating and ink station.

