

FOUNTAIN SOLUTION TROUBLESHOOTING GUIDE

Problem	Cause	Corrective Action
<p>pH Drift</p> <p>High Conductivity</p>	<ul style="list-style-type: none"> • Buffer Capacity Exceeded / Excessive Alkaline Contamination • Contaminated Water System 	<p>Mix fresh fountain solution</p> <p>Run Systems Cleaner to flush lines and tank at 1 oz/gal of tank capacity, then remix fresh</p>
<p>Quick Conductivity Rise / Minimizing the Conductivity Rise</p>	<ul style="list-style-type: none"> • Too little turnover because of large tank capacity • Calcium embedded in rollers • pH too low / Phosphates in fountain solution • Unstable tap / city water • No calcium sequesterant • Poor filtration • DO NOT add water or alcohol to reduce tank conductivity! 	<p>Run solution level at about half the capacity by displacing the water with a weight or gallon jug of water. The tank thinks it is full and replenishes with fresh solution more quickly.</p> <p>Run a Deglaze followed by Erase Decalcification cleaning once a week to minimize contamination</p> <p>Higher pH, non-phosphate fountain solutions leach less calcium and minimize paper / ink interaction</p> <p>Consider purchasing an RO or water softener. Depending on hardness, the water source can contribute to contamination</p> <p>Many ACTEGA Kelstar solutions contain calcium fighters to buffer leached calcium, call to find the correct solution or additive</p> <p>Try a Flo Clear filter unit to filter used fountain solution and extend tank life</p> <p>Both do reduce the actual number, however they also reduce the working amt of gum, desensitizing, buffer etc making problems worse and occur more quickly</p>

ACTEGA Kelstar, Inc.
 1050 Taylors Lane
 Cinnaminson, NJ 08077
 USA

Tel +1 856 829 6300
 Fax +1 856 786 2860
 E-mail info.actega.kelstar@altana.com
www.actega.com/kelstar

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<p>Picture Framing / Backcylinder Buildup</p> <p>Long Runs</p> <p>Short Runs</p>	<ul style="list-style-type: none"> • Excessive form roller settings • Pressure from water form roller dragging plate causing sensitivity • Blanket packing not cut • Excessive ink or emulsified ink with our without high water dials • Printing to edges of sheet • Not enough wetting or solvency • Not enough NPA 	<p>Reduce roller settings to plate</p> <p>Reduce roller setting or % of drag</p> <p>Cut the packing to fit the sheet size. Longer runs usually justify this as it most always fixes the issue.</p> <p>Switch to Starfount SF-5096 or similar version. The solvent reduction and increased desensitizing has been shown to reduce ink and water to improve transfer. This Leaves less ink to build up outside the sheet.</p> <p>Unless there is no alternative, running a larger margin around the sheet enables you to lock out more keys toward the edges</p> <p>Try increasing overall dosage or replacement dosage</p> <p>Increase NPA in fountain solution or add 1 ounce per gallon of NPA #3 to each mixed gallon of Fountain Solution in re-circulator</p>
<p>Dot Gain</p>	<ul style="list-style-type: none"> • Ink and water settings are too high • Blankets are over packed • Excessive plate to blanket pressure 	<p>Reduce ink and water to minimize gain, or try one of our dot gain reducing fountain solutions like Starfount SF-5088</p> <p>Reduce blanket packing</p> <p>Run a thinner strip from plate to blanket; Check press manufacturer specifications</p>

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Plate Blinding - Mechanical	<ul style="list-style-type: none"> • Excessive plate to blanket pressure • Roller durometer too hard • Ink and dampening form rollers improperly set • Plate graining too deep 	<p>Run a thinner strip plate to blanket</p> <p>Weekly usage of Wipe Out, Erase and/or Deglaze will keep rollers soft and ink receptive</p> <p>Replace rollers as needed</p> <p>Reset to correct specification</p> <p>Try running a shallower graining</p> <p>While deeper grains carry more water, they are more susceptible to contaminants</p>
Plate Blinding - Chemical	<ul style="list-style-type: none"> • Too much gum in the fountain solution • Calcium build up on plate and rollers • Plate cleaners and/or scratch removers dried on plate image • Residual surfactant from water miscible wash 	<p>Reduce gum content or gum additives as too much can cause the image to become water receptive and not print</p> <p>Clean plates with CTP Plate Cleaner for conventional ink or Protean Plate Cleaner for UV and deglaze rollers</p> <p>If problem persists, see quick conductivity rise section to minimize or contact plate rep</p> <p>Always rinse plate thoroughly and immediately after using such cleaners, you may have to burn new plates</p> <p>Change to non water miscible wash or run a cycle of Final Rinse to remove residuals</p>

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Image Loss	<ul style="list-style-type: none"> • Using alkaline plate cleaners on unbaked CTP plates • Surfactant attack • Very aggressive / too much alcohol replacement • Ink and dampening form rollers improperly set • Excessive piling 	<p>These cleaners act as a deletion fluid on unbaked plates, use the approved cleaners CTP Plate Cleaner for conventional ink or Protean Plate Cleaner for UV</p> <p>Certain surfactants in fountain solutions or washes can harm unbaked plates. Call to discuss and/or have plates sent for compatibility check</p> <p>For the same reasons as surfactant attack, call to discuss compatibility</p> <p>Re-set to correct specification or no tighter than needed for good transfer</p> <p>For longer runs & webs, keep blankets cleaned to reduce friction and squeeze from piling</p>
Restarts – Slow / Poor	<ul style="list-style-type: none"> • Dosage too low • Too little gum desensitizing • Ineffective storage gum • Pre-flood or startup sequence needs adjusting • Surfactant build-up from water miscible wash 	<p>Increase dosage</p> <p>Use a gum arabic additive or call to discuss higher gum/desensitizing alternatives</p> <p>If plates were saved and do not start clean try storing with Total Recall to ensure quicker startups</p> <p>Set pre-damp / pre-flood to a higher setting so that more water is delivered to plate on startup</p> <p>Use proper plate cleaner or Final Rinse to remove build-up</p>

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<p>Plate Sensitivity / Toning / Scumming</p> <p>At Start of Run</p>	<ul style="list-style-type: none"> • Bad plate or bad lot of plates / Plate chemistry needs changing 	<p>Re-burn plates of a different lot. New plates will always start clean and run a few K impressions with only water. Replace finishing chemistry or try a hone test. If honed area stays clean, the plates are bad, if not there may be a problem with the fount, give us a call</p>
<p>In Middle of Run</p>	<ul style="list-style-type: none"> • Finishing gum was not properly removed • Mechanical setting 	<p>Drop a small amount of acetone on the non image area of the processed plate. If a ring the color of the image appears, the plate gum was not removed and needs to be rewashed or have another processed. Also check the scrubber roller in the gum removal area as it may need adjustment or replacing</p> <p>Ask yourself is this 1 press, 1 unit, and/or 1 side of the sheet? If yes, check rollers and settings. Or check the specific problem color with the ink company. The fountain solution is not smart and will not single any of these out from the rest</p>
	<ul style="list-style-type: none"> • Dosage too low • Insufficient gum in the fountain solution • Glazed blanket, ink rollers or dampening rollers 	<p>Increase dosage</p> <p>Add gum, or call to revise the fountain solution</p> <p>Deglaze with Deglaze & Erase</p>

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<p>Foaming</p> <p>For Chemical Foam</p> <p>For Mechanical Foam</p>	<ul style="list-style-type: none"> • Chemical vs. Mechanical Test • Inadequate or insufficient defoamer in fountain solution • Clogged or jammed filters • Air influx from return lines • Impellor in circulator is high impact / too large 	<p>Fill an empty bottle halfway with FRESH dilute solution and shake. If foam is no more than a couple inches and breaks in 10s or less, the problem is mechanical, not chemical</p> <p>Add an ounce of FS Defoamer II to the recirculator or call or inquire about a better defoaming product</p> <p>Replace all filters in the circulator and check the pressure and lines; Try Systems Cleaner to flush contaminants</p> <p>Adjust FS flow rates - incoming / returning to tank</p> <p>Switch to a low impact impellor. Many new Technotrans and AWS unites come with different sized impellor, the smaller of which creates less agitation</p>
<p>Calcium Glazing</p>	<ul style="list-style-type: none"> • Calcium embedded in blankets, rollers, and plate graining 	<p>Run deglaze cycle with Deglaze & Erase. Also, clean with proper plate cleaner, then see minimizing conductivity section to help control future problems, although a continued roller maintenance program is always needed</p>
<p>High Water Dials</p>	<ul style="list-style-type: none"> • Metering nips set too tight • Too little alcohol replacement • Inadequate wetting 	<p>Open or crack settings to allow more water Increase sub or one step</p> <p>Call to get different recommendation if water looks to be sitting in ink train</p>

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Ink Drying Issues	<ul style="list-style-type: none"> • Inadequate or insufficient dryer in fountain solution • High water dials / fountain solution dosage too high • Running stay open inks • Sheetfed low % of IR energy 	<p>Call to check levels or to change to a higher drying product. Also try adding 1oz of Fountain Dryer Stimulator to working fountain solution as needed until desired dry speed is achieved</p> <p>Reduce fountain solution dosage and/or try bringing down water speeds. Call to switch to a solution with better transfer properties enabling a thinner film thickness</p> <p>Try adding a water activated dryer to the ink like speedy dry, or switch to a faster setting non-stay open ink set. Stay open inks do just that, they do not dry</p> <p>Increase % of IR energy / evacuation</p>
Ink Piling	<ul style="list-style-type: none"> • Vibrator rollers / recirculator temperature is too hot • Ink is too tacky, too stiff or dries too fast on the rollers or plates • Poor blanket release / Blanket height over bearer is too low • Ink / water balance issues • Poor fountain solution lubrication 	<p>If ink runs too hot, they can dry up and cause more piling to occur</p> <p>Contact your ink supplier(s) to reduce/check the tack ratings of the ink</p> <p>Improve the blanket release / change or repack blanket. Contact your blanket supplier(s)</p> <p>Call to discuss alternative solutions, water pickup properties</p> <p>More non-piling and softeners can be added, however keep in mind VOC level is raised and dot gain may rise due to ink softening</p>

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Paper Piling / Linting	<ul style="list-style-type: none"> • Inadequate or insufficient NPA • Blankets too tacky / Bad release 	<p>Try adding 1-2oz of NPA #3 or call to discuss alternatives</p> <p>Run a blanket conditioner, or change blanket for better release</p>
Backtrapping	<ul style="list-style-type: none"> • Running Uni-Tack inks or ink sequence is wrong • Ink settings too high • Not enough NPA 	<p>Ink tacks should be arranged highest to lowest on press, generally KCMY. Sometimes Uni-Tack inks tend to backtrap more because the tack ratings are the same, contact ink supplier to discuss</p> <p>Try to reduce the ink film thickness call about a better desensitizing fountain solution</p> <p>Non-piling and softeners can be added to help with higher tack inks that tend to backtrap. Again, remember dot gain may rise due to ink softening.</p>
Dampening System Feedback	<ul style="list-style-type: none"> • Improper ink / water balance • Chrome roller is sensitive 	<p>Call to discuss alternative solutions, water pickup properties</p> <p>Use Chrome Roller Cleaner to clean and desensitize</p>
Chemical Stripping Ink Water Balance Stripping	<ul style="list-style-type: none"> • Usually in magenta unit and contamination causes other issues such as blinding, glazing, etc. • Water rides up the ink unit and sits in the ink train. Stripping usually starting at the top of the plate and sometimes off the ink ball itself 	<p>Run a deglaze cycle, and see glazing and conductivity sections to minimize contamination</p> <p>This is caused by the inadequacy of the current solution or alcohol replacement to cut and emulsify the ink. This inability is why the water sits freely and other problems such as toning and high water dials may occur since the ink is too dry. Fans blowing on the unit itself tend to help, as this helps to evaporate the "free water" acting as a band-aid</p>

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Poor Stochastic Dot Structure (feathered looking dots)	<ul style="list-style-type: none"> • Poor fountain solution desensitizing • Poor blanket release • Plate to blanket pressure is too high 	<p>Call for a higher desensitizing fountain solution or try adding an ounce or two of Metal Plate Cleaner Additive to the circulator</p> <p>Use a high-release blanket to improve transfer properties</p> <p>Back off on the stripe between the plate and blanket to create less of a squeeze. Run only the minimum needed for good transfer and color control</p>
Micro-Printing (small dots of ink in non-image area of stock)	<ul style="list-style-type: none"> • Plate sensitivity • Bad filtration • Ink breakdown 	<p>Check the non-image area of the plate with a loop, if ink is present, grain may be too deep or pre-press issue may have occurred. See the plate sensitivity section for other help</p> <p>Use a Flo Clear or other fountain solution filtration device to remove unwanted free floating ink particles that adhere to the sheet</p> <p>Poor ink/water balance, call to discuss alternatives</p>

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Chasing Color / Control Issues	<ul style="list-style-type: none"> • Out of ink water balance • Ink not transferring • Glazed / damaged rollers 	<p>Many of ACTEGA Kelstar's newer fountain solutions provide much better transfer properties when compared to our competitors. If you are switching from a competitive product make sure to reduce the water in each unit until the sheet tones. Then take a density reading. Bring your ink down until you are within SWOP or your specifications. Then repeat bringing the water down, followed by the ink until you are running as thin a film thickness as possible</p> <p>Check/reset rollers in ink train and in water train</p> <p>Deglaze/ replace worn or damaged rollers</p>

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