



Tech Talk from

Prisco®

Tech Talk #17

ACID-BASED FOUNTAIN SOLUTION WEB OFFSET TROUBLESHOOTING GUIDE

At **Printers' Service**, the pressroom is our only business. Our "value added" package includes an extensive network of technical representatives who service both sheetfed and web offset printing customers. Their collective experience is available to help you solve your pressroom problems.

A previous **Tech Talk (#15)** focused on possible fountain solution-related causes for some of the most common problems encountered on sheetfed offset printing presses.

This Tech Talk is intended to assist web offset printers using acid-based fountain solutions (pH 5.5 or less). The guide is divided into three sections: Problem, Possible Cause and Suggested Remedy. It is a starting point for the trouble shooting process; not all potential problems are listed, and the cause and/or remedy may turn out to be something that is not shown.

Although the web and sheetfed offset printing processes have a lot of similarities, there are some important differences. These are due mainly to the longer run lengths, higher press speeds and lower basis weight, uncoated papers commonly encountered in web printing. Premature plate wear, plate sensitivity and excessive blanket piling, for instance, are more often encountered in web offset printing.

Our technical representatives are trained to be aware of these differences and are experienced at troubleshooting both processes. They, and your Printers' Service sales representative, are always available to assist you in solving your printing problems.

SERVICE AND TECHNOLOGY FOR THE GRAPHIC ARTS®

PRINTERS' SERVICE

26 Blanchard Street • Newark, NJ 07105 • www.prisco.com • (973) 589-7800 • (973) 589-3225 Fax

ACID-BASED FOUNTAIN SOLUTION WEB OFFSET TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Color Variation (surging)	<ul style="list-style-type: none"> - Too much wetting - Ink/fount incompatibility - Ink improperly formulated 	<ul style="list-style-type: none"> - Revise dosage to reduce - Replace fountain solution - Consult ink vendor
Emulsified Roller Train	<ul style="list-style-type: none"> - Fountain solution less than pH 3.5 - High water speeds - Ink/fount incompatibility - Dosage too high - Ink WPU too low 	<ul style="list-style-type: none"> - Replace fountain solution - Revise dosage to reduce water speeds - Replace fountain solution - Reduce dosage - Consult ink vendor
Excessive Dot Grain	<ul style="list-style-type: none"> - Improper dosage – too low or too high - High water speeds - Blanket over packed - Ink too soft/low in tack - Too much wetting 	<ul style="list-style-type: none"> - Adjust dosage - Increase dosage/wetting - Reduce packing .001-.002 - Consult ink vendor - Reduce dosage/replace fountain solution
Feedback in Dampening System	<ul style="list-style-type: none"> - Improper ink/water balance, water too low or high for the amount of ink - Change in stock has upset ink/water balance - Sensitive dampening system rollers - Ink/fount incompatibility 	<ul style="list-style-type: none"> - Change water speed settings while maintaining ink settings - Consult paper vendor - Desensitize rollers - Replace fountain solution
Foam in Reservoir	<ul style="list-style-type: none"> - Reservoir too cold - Solution contaminated - Mechanical reasons 	<ul style="list-style-type: none"> - Raise to 60+/-5 degrees - Dump, replace with fresh - Many - See Tech Talk #7
Fountain Solution less than pH 3.5	<ul style="list-style-type: none"> - Fount concentrate too acidic for the water being used - Excessive use of pH lowering additives in reservoir 	<ul style="list-style-type: none"> - Consult fountain solution vendor - Reduce/eliminate use
Heatset ink film dry but comes off on hands	<ul style="list-style-type: none"> - Poor squalene resistance 	<ul style="list-style-type: none"> - Consult ink vendor
Heatset ink not drying	<ul style="list-style-type: none"> - Web temperature too low - Water speeds too high (damp ink film) - Fountain solution less than pH 3.5 	<ul style="list-style-type: none"> - Increase dryer temperature or reduce press speed - Reduce water speeds/raise dosages - Replace fountain solution
High water metering speeds	<ul style="list-style-type: none"> - Dosage too low - Insufficient wetting 	<ul style="list-style-type: none"> - Increase dosage - Revise dosage/fountain solution to increase
Image area blinding	<ul style="list-style-type: none"> - Deposition/adsorption of finisher, organic compounds or calcium-based compounds on image area 	<ul style="list-style-type: none"> - See Tech Talk #11, also check finisher viscosity

ACID-BASED FOUNTAIN SOLUTION WEB OFFSET TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Ink Piling	<ul style="list-style-type: none"> - Fountain solution less than pH 3.5 - Ink/fount incompatibility - Blanket under packed - Not enough release agent in ink - Ink too tacky/stiff - Poor blanket release 	<ul style="list-style-type: none"> - Replace fountain solution - Replace fountain solution - Increase packing .001-.002 - Consult ink vendor - Consult ink vendor - Quicker release type blanket
Mottled/Snowflaked Dots	<ul style="list-style-type: none"> - More water than ink can emulsify - Water speeds too high - Poor quality emulsion 	<ul style="list-style-type: none"> - Reduce water speeds/increase ink WPU - Revise dosage to reduce water speeds - Consult ink and fountain solution vendors
Paper piling on non-image area of blanket	<ul style="list-style-type: none"> - Dosage too low - Not enough anti-pile - Blanket under-packed - Water speeds too low - Paper has poor water resistance 	<ul style="list-style-type: none"> - Increase dosage - Add separate anti-pile or switch to solution that contains more anti-pile - Increase packing .001-.002 - Increase slightly - Reduce water speeds or consult paper vendor
Poor ink rub/scuff	<ul style="list-style-type: none"> - Ink film too thick - Not enough/wrong wax and/or slip agents 	<ul style="list-style-type: none"> - Reduce settings/consult ink vendor - Consult ink vendor
Premature plate wear	<ul style="list-style-type: none"> - Dosage too low - Not enough plate protectants - Excessive packing - Plates too dry - Fountain solution less than pH 3.5 - Excessive piling - Abrasive stock - Improper plate exposure 	<ul style="list-style-type: none"> - Increase dosage - Replace fountain solution - Reduce packing .001-.002 - Increase water speeds or replace fountain solution - Replace fountain solution - See piling remedies - Consult paper vendor - Check exposure
Rapid increase in conductivity, pH stays relatively constant	<ul style="list-style-type: none"> - Poor paper stock - Contamination carried into reservoir by wash 	<ul style="list-style-type: none"> - Consult Paper vendor - Reduce wash frequency – consult fountain solution vendor
Rapid increase in pH and/or conductivity	<ul style="list-style-type: none"> - Inadequate buffer capacity - Dosage too low - Inadequate filtration - Excess materials leaching out of paper and/or ink 	<ul style="list-style-type: none"> - Change to solution with more buffer capacity - Increase dosage to provide more buffer capacity - Improve filtration system - Consult vendors

ACID-BASED FOUNTAIN SOLUTION WEB OFFSET TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Rapid increase in pH and/or conductivity	<ul style="list-style-type: none"> - Inadequate buffer capacity - Dosage too low - Inadequate filtration - Excess materials leaching out of paper and/or ink 	<ul style="list-style-type: none"> - Change to solution with more buffer capacity - Increase dosage to provide more buffer capacity - Improve filtration system - Consult vendors
Roller stripping	<ul style="list-style-type: none"> - Fountain solution less than pH 3.5 - High water speeds – water logged ink - Ink WPU too low - Glazed inking rollers - Dosage too high 	<ul style="list-style-type: none"> - Replace fountain solution - Revise dosage to reduce water speeds - Consult ink vendor - Clean/de-glaze rollers - Reduce dosage
Scumming – one side of press only	<ul style="list-style-type: none"> - Improper roller settings - High temp. - that side 	<ul style="list-style-type: none"> - Reset rollers - Possible maintenance item
Scumming/dry-ups at outer edges of form	<ul style="list-style-type: none"> - Dosage too low - Insufficient wetting - Too much pressure – ends of dampener rolls - Dirty brushers/water stops in place 	<ul style="list-style-type: none"> - Increase dosage - Revise dosage/fountain solution to increase - Lighten setting - Attend to dampening system
Slow initial rollups	<ul style="list-style-type: none"> - Dosage too low - Water speeds too low - Too much plate finisher 	<ul style="list-style-type: none"> - Increase dosage - Raise water metering speeds - Check finisher viscosity
Slow/poor restarts	<ul style="list-style-type: none"> - Dosage too low - Sensitive plates - Not enough plate protectants - Excessive downtime - Water from lifting early - Plate dries out too much 	<ul style="list-style-type: none"> - Increase dosage - Clean with plate cleaner - Replace fountain solution - “Gum in” plates - Revise shutdown procedure - Replace fountain solution
Tinting/toning	<ul style="list-style-type: none"> - Fountain solution less than pH 3.5 - Dosage too low - Ink breaking down - Sensitive plates - Fountain solution more than pH 5.5 	<ul style="list-style-type: none"> - Replace fountain solution - Increase dosage - Revise dosage to decrease wetting - consult ink vendor - See remedies – sensitive plates - Replace with fresh solution

As always, your local PRINTERS' SERVICE office is happy to answer your questions:

10/05

Atlanta (800) 241-6049 • (404) 602-4140 • (404) 602-4139 Fax
Miami (800) 432-5068 • (954) 385-1975 • (954) 385- 8875 Fax
Boston (781) 749-4590 • (781) 740-2866 Fax
New York/Newark (973) 589-7800 • (212) 962-6565 • (973) 589-3225 Fax
Chicago (800) 654-1357 • (630) 543-4600 • (630) 543-0856 Fax
Dallas (800) 338-2241 • (817) 477-4770 • (817) 473-4515 Fax
Los Angeles (800) 825-4846 • (909) 923-1879 • (909) 923-4079 Fax
Toronto (888) 460-4406 • (905) 953-9393 • (905) 953-1331 Fax
Philadelphia (800) 222-0146 • (856) 662-3373 • (215) 462-3636 • (856) 486-4552 Fax
U.K. +44 (0) 1423 810 320 • +44 (0) 1423 810 319 Fax
Belgium +32 56 40 41 82 • +32 40 41 83 Fax

SERVICE AND TECHNOLOGY FOR THE GRAPHIC ARTS®

PRINTERS' SERVICE

26 Blanchard Street • Newark, NJ 07105 • www.prisco.com • (973) 589-7800 • (973) 589-3225 Fax