Wash Bath Life Basics: Soil Management
Session Questions and Answers

Q: What would you suggest to make it easier to figure out when to change my wash bath?

A: Well, first I would make sure that I am using the right chemistry for the soil and my machine. Then I would make sure to figure out at what point I hit my critical soil load. I would definitely suggest considering doing a wash bath profile. This will give you data to work off of to set a schedule – this way you can change out your wash bath BEFORE it becomes a problem. You can react when it is too late and stops cleaning which costs money, or you can plan your scheduling and your maintenance and save money.

Q: Out of all of the cleaning methods you mentioned, which one is the most common?

A: I would love to say deflocculation – but that is probably not the most common. Since in recent years, people have moved away from traditional solvent vapor degreasing. Aqueous cleaning is getting the job done and those types of chemistries work by wetting and solubilization.

Q: You said pH doesn't work to monitor my concentration, why is that?

A: Aqueous cleaning chemistries are designed with buffers to maintain a steady pH. As you run your parts through you add soil to your wash tank, that soil will go into solution and the pH of the wash bath will not change in any meaningful way that will correlate to concentration. You would be better off by using your chemical suppliers recommended concentration monitoring method to maintain and control your cleaning solution.

Q: Can you explain more about how you might get to Critical Soil Load?

A: Basically, it is when you have put so much dirt into your cleaning solution that it simply cannot handle any more. It has become completely saturated. For example, if you are cleaning steel parts that are heavily coated in oils, you will saturate your wash solution a lot faster than if you are removing light oils or say dust. Another example is if you are using a spray flux system, you will most likely see a lot of excess flux residue all over your boards and all that excess soil will again load your bath a lot faster. The key is to optimize your process and maintain your wash chemistry concentration.