

INSIDE INFORMATION

Post-shift maintenance—heading production problems off at the pass

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If you are like most finishers, your primary goal is to produce a Class A finish consistently and profitably. It stands to reason that the fewer hassles you have in the process, the more profit you'll see. Unfortunately, in finishing, hassles have many sources and can be hard to track down.

One source that is often overlooked is sloppy, haphazard post-shift maintenance. Substandard maintenance can cause equipment to stop outright, bringing your operation to a sudden and expensive halt. Or, it can just cause equipment to function badly, ruining the finish by spitting out powder seeds and contaminants, producing inconsistent film builds, or worsening your problems with Faraday cages.

If you can't afford hours of downtime and racks of scrap parts, think about starting a regular and thorough program of post-shift maintenance (or end-of-the-day maintenance, depending on which comes first). This checklist contains an orderly plan for post-shift maintenance:

1. As the end of the shift approaches, notice how much powder is in the feed hopper, and run as much powder out of it as possible. The less powder in the hopper, the less there is to become contaminated. Another reason for emptying the hopper is to create room for powder that is cleaned from the booth when an automatic reclaim system is used.

2. Clean all powder pumps on the hopper with compressed air and a test-tube-size brush. Be sure to remove all impact fusion. Check the wear sleeves; if their walls are thin or grooved, they need replacement.

3. Disconnect the powder hoses from the guns and the powder pumps. Physically break up the impact fusion

within the hoses by bending, twisting, or hitting them—whatever it takes. Then, flush the hoses with compressed air until they are clear.

4. Clean all guns with a test-tube-size brush and compressed air. It may be necessary to break the gun down to its smallest components to make sure that all trapped powder and impact fusion are removed. Check guns for excess wear and missing electrode pins. Replace all worn, damaged, and missing parts.

5. Clean the booth interior of all oversprayed powder accumulation. The amount of work this takes will depend on the next shift's color schedule. For instance, if the next shift will run the same color, all you have to do is get rid of the excess powder. If the next shift will run a different color, however, you must clean the booth thoroughly, following your company's color-change procedure.

6. Run the booth exhauster fan and reclaim system for one-half hour to assure that all the powder in the system has been cleaned out and deposited into the reclaim container or hopper. This will clean all the ductwork, if used, or assure that the transfer pumps, if used, have removed all powder from the collector. It will also allow the cartridge back-pulse system to clean the filters for the next shift.

7. Empty all scrap barrels and dispose of the scrap powder according to your local environmental regulations. Also, be sure to empty the sieve scrap container.

8. Clean the cyclone completely of all powder material by following the manufacturer's directions in the system manual. Make sure that a proper seal is maintained at the bottom of the spin-

out chamber by listening or feeling for air leaks.

9. Following the manufacturer's directions, check the entire system for proper operation. If you find deficiencies, correct them now, before they shut the system down during production. Pay particular attention to these system components:

- Gun cables
- Filter monitor panel
- Filters
- Controls
- Sieve screen
- Compressed-air dryer and filters
- Booth lights
- Reciprocators or oscillators

Some systems require additional maintenance because of their design. Review the manual to see if other system components need daily inspection.

There's no getting around it: Post-shift maintenance takes time, and time is money. But remember, you will either spend money on regular maintenance and parts replacement, or you will spend it on downtime, emergency visits from your supplier(s), rework, and scrapped parts. In the long run, money spent on maintenance will buy you more.

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