

Winter to Summer Transition Tips

It's summertime, which may mean your air-conveyed trim collection system will operate differently than it did in the cold dry winter months. What do you need to know to minimize the impact of seasonal changes on productivity?



If you're not prepared, seasonal changes in temperature and humidity can cause some nuisance alarms on your pneumatically-conveyed waste collection system. In the winter, air is dry and an air-conveyed system can have issues due to static electricity. Paper and cardboard are slow conductors of static, which means that they can conduct and bleed off static, but they do it slowly. Forty percent relative humidity is usually required to bleed the static off of the paper. Static electricity can cause real problems for a system ranging from nuisance alarms to plugging. Static problems can be solved with a number of options, including adding static reducing inline equipment and/or controlled water mist injection.

When summer arrives and the humidity increases, static issues seem to magically disappear. But that doesn't mean that all your problems are solved.

Your trim and dust collection system and the house compressed air system that supports it will work best if you make a few adjustments as the weather heats up and the humidity increases. Here are a few tips.

1. Adjust your static suppression system. If you have a water mist unit to address static electricity in the winter and the humidity climbs to 40 percent or higher when summer arrives, the mist unit should be turned down or off completely. Adding too much water to the filter when it's not

needed can cause trim or dust to cake in the bags or cartridges.

2. Take time for maintenance. Remember that mist units require annual maintenance especially if your house water contains minerals. Most water supplies contain calcium and other minerals which can cause the mist unit nozzle and solenoid to stick and drip water when the system is down. Summertime (before the next static season) is the ideal time to perform preventive maintenance tasks on the mist system, including changing the inline water filter, solenoid, water mist nozzle and filter. All are relatively inexpensive and easy to change annually.
3. Eliminate water in house compressed air. Your house compressed air dryer must be set to handle the increased humidity in the air during the summer. Most dryers have a setting that needs to be adjusted up when the incoming air is more humid and adjusted down when the incoming air is dry in the winter. If the dryer is set too low for summer or is not sized properly, water will pass into the photo eyes. Compressed air is used for blasting the photo eyes to keep them clear. Water in the compressed air makes dust stick to the photo eye lenses, which causes false alarms. Puhl systems include a water/oil trap inline that prevents keeps water in the compressed air from affecting the photo eyes. This trap is designed as an indicator that your house air dryer is not set correctly. The trap must remain dry as all traps will pass water as the bowl in the trap fills. When you see water in the trap, drain it and turn up the house compressed air dryer until you don't see water in the trap.

If you don't think a reservoir tank can pass water in a compressed air system, check the lowest trap in the system and check the traps in the lines that have high volume usage. In most cases both the tank and the trap will have water in them as compressed air can carry water through several inline mechanical traps if the volume is high enough and the problem continues long enough.

In summary, photo-eye false alarms can have several causes: static electricity when the humidity is low and water (or oil) in the compressed air when the humidity is high. When the weather changes, consider adjusting the system control devices as well as your house compressed air system as outlined above.

Keep in mind that an air compressor can pass oil at any time. Oil in the compressed air is similar to water in compressed air, only the problems from oil are worse. Oil is harder to get out of a system. Oil usually ruins filter media. Water in the system can permanently ruin or temporarily plug filter media, with the damage dependent on how much water is in the system, the type of filter used, the dust load and how long the filter media was wet.

For more information on how to keep your trim and dust collection system running smoothly, contact Puhl at 615-230-9500 or [email us](#).