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Collision Repair Center Best Practices

How to Reduce Dirt and Dust in the Spray Booth

Proper Airflow and Balance

If the airflow in the booth is not balanced, dust-free finishes are virtually impossible. The booth should always be kept as clean as possible. The technician should never open booth doors unless the fans are running and balanced. Negative pressures can cause dirt, dust and other debris to flow and move around the air inside the booth. Positive pressures can force access doors to open and operate on their own. Neither is an acceptable situation.

Proper airflow is critical in spray booths. Invest in high density air intake filters. These filters allow air to uniformly enter the booth. Other filters can cause air turbulence. This can loosen and pull dry paint particles left in the booth into the air. These particles and dust then fall onto freshly applied paint. There goes the smooth finish.

A spray booth is balanced properly when the amount of air entering and exiting are approximately the same. The booth operates at a negative pressure when more air leaves the booth than enters. In turn, it operates at a positive pressure when more air enters than leaves. The trend in body shops today is a slight negative pressure of 0.03- to 0.07- inch water column.

Booth air balance can be achieved by not allowing exhaust filters to build up and clog with overspray. Though expensive, dampers or variable frequency drives will help maintain booth air balance. **How often do you check the filters?** It varies, but when the booth can no longer be balanced, time to check the filters. Start first with the floor filters. If they have been changed and the booth will still not balance, the exhaust and pre-filters should be checked. Ceiling filters are changed less frequently but should still be periodically checked.

To prevent dirt and dust defects, spray booth maintenance is key. The following tasks will help keep the booth in order:

- Wash all surfaces that catch overspray daily
- Monitor and replace filters
- Monitor the compressor on a regular basis

Additional Best Practices

Other best practices to help keep a booth clean are the application of a separable masking on the booth's walls that can be cleaned off and reapplied as needed. The floor can be covered with paper and changed as it gets dirty, helping to eliminate dirt and dust. Sanding and masking should never take place in the booth. All prep work should be done in a prep station or as far away from the paint booth as possible. Masking should be completed as much as possible before entering the booth. The booth should be cleaned before each paint job. Direct the air stream of the blow gun towards the floor filters so dirt can be trapped there instead of contaminating the vehicle during painting.

Limit access to the booth. Only those wearing a paint suit should be allowed in, and as few trips as possible should be made into the booth. Mix all the coatings that will be needed, take them into the booth and paint the vehicle. The fewer times the door is opened, the less likely dirt will enter. If the booth is equipped with a mixing room, entrance to the booth should only be done through the mixing room access door. Booths with a vestibule (a small room that painters go into to clean up and suit up before going into the mixing room) significantly reduce dirt in the paint. Painted floors, which are easier to clean, cut down on dirt in paint.

Standard Operating Procedure

Proper maintenance saves time in the log run. You can dedicate a small amount of time to cleaning the booth properly and maintaining good airflow by using more efficient, higher quality filters that you monitor and maintain regularly. Or, you could have dirty paintwork that takes much longer to detail for delivery. Best to develop a paint maintenance standard operating procedure that can be completed regularly.

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