
Safe Use Of Compressed Air For Cleaning

1.0 Objective & Intent

The objective of this Standard Operating Procedure (SOP) is to eliminate the risk of injury, hearing loss, and environmental contamination when using compressed air for cleaning purposes within the cabinet and millwork manufacturing facility. This procedure is mandated by WorkSafeBC regulations (OHS Regulation Part 12 – Tools, Equipment and Machinery) and the Occupational Health and Safety Act. The specific risks mitigated include eye injuries from flying debris, skin lacerations or air embolism from high-pressure air, hearing damage from excessive noise, and the creation of airborne combustible dust clouds.

2.0 Operational Scope

This procedure applies to all maintenance personnel, machine operators, and cleaning staff who use compressed air for cleaning work surfaces, machinery, dust collection systems, and finished products within the cabinet and millwork production areas. It covers all portable air blow guns, fixed air nozzles, and compressed air lines connected to the facility's central air system. This SOP does not apply to pneumatic tools used for assembly or machining operations.

3.0 Hazard Identification & Mandatory PPE

- Eye Injury: High-velocity wood chips, sawdust, and metal filings can cause corneal abrasions, punctures, or blindness.
- Air Embolism: Direct contact of compressed air with skin, especially open wounds, can force air into the bloodstream, causing a fatal embolism.
- Hearing Loss: Compressed air nozzles can generate noise levels exceeding 85 dBA, leading to permanent hearing damage.
- Combustible Dust Explosion: Airborne wood dust can form explosive concentrations if not properly controlled.
- Slip/Trip Hazards: Air hoses on the floor create tripping risks and can whip violently if disconnected.
- CSA-Approved Safety Glasses with side shields (mandatory, even if wearing prescription glasses)
- CSA-Approved Full Face Shield (mandatory when cleaning near face or high-pressure lines)
- CSA-Approved Hearing Protection (earplugs or earmuffs with NRR 25 or higher)
- CSA-Approved Steel Toed Boots
- Cut-Resistant Gloves (when handling sharp debris or metal shavings)
- Long Sleeve Work Shirt and Pants (no loose cuffs or dangling drawstrings)

4.0 Required Safety Equipment & Tools

- Compressed Air Blow Gun with OSHA-compliant safety nozzle (maximum 30 psi dead-end pressure, with side ports to reduce pressure if blocked)
- Pressure Regulator and Gauge (set to maximum 30 psi for cleaning applications)
- Lockout/Tagout (LOTO) Kit with personal padlock and hasp (for isolating air supply during maintenance)
- Hose Whip Restraint Cables (on all quick-connect fittings to prevent hose whip if disconnected)
- Hearing Protection Dispenser (with CSA-approved earplugs or earmuffs)

- Eye Wash Station (plumbed or portable, within 10 seconds travel distance)
- Vacuum Cleaner with HEPA filter (preferred alternative to compressed air for dust removal)
- Warning Signs (posted at air stations: 'Compressed Air – Do Not Use for Cleaning Without Safety Nozzle')

5.0 Step-by-Step Safety Procedure

1. Verify that the compressed air system is equipped with a pressure regulator set to a maximum of 30 psi for cleaning applications. Check the gauge to confirm the pressure does not exceed this limit.
2. Inspect the air blow gun for damage: ensure the safety nozzle is intact, the trigger operates freely, and there are no cracks or leaks in the body or hose. Do not use if damaged.
3. Don all required PPE: CSA-approved safety glasses with side shields, full face shield, hearing protection, steel-toed boots, cut-resistant gloves, and long sleeves. Ensure no loose clothing or jewelry is present.
4. Clear the work area of all unnecessary personnel and combustible materials. Post a warning sign if cleaning near dust collectors or flammable finishes.
5. Connect the air hose to the blow gun using a whip restraint cable. Ensure the quick-connect fitting is fully engaged and the hose is routed to avoid trip hazards.
6. Before activating the air, test the blow gun by pointing it away from yourself and others. Squeeze the trigger briefly to confirm proper operation and that the safety nozzle reduces pressure when blocked.
7. When cleaning, always direct the air stream away from your body and any other person. Never point the nozzle at skin, eyes, or open wounds. Use a sweeping motion to dislodge debris, keeping the nozzle at least 6 inches from the surface.
8. If cleaning machinery, ensure the equipment is locked out and tagged out (LOTO) before using compressed air. Isolate all energy sources and verify zero energy state.
9. Immediately after use, release the trigger, disconnect the blow gun from the hose, and coil the hose properly. Store the blow gun in a designated holder to prevent accidental activation.
10. Report any injuries, near misses, or equipment malfunctions to your supervisor immediately. Complete an incident report within 24 hours as per company policy.

Regulatory Disclaimer: This document is a generic safety template provided for educational and informational purposes only. It does not constitute professional engineering, legal, or regulatory compliance advice. The end-user assumes all liability for validating all safety protocols against specific machinery manufacturer manuals and local occupational health and safety regulations (e.g., WorkSafeBC, CSA standards) before deployment.