# SAFE USE OF PNEUMATIC TOOLS

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*The following is a step by step procedure on how to complete a specific task or meet a facility specific requirement. Standard Operating Procedures (SOPs) are written for all identified critical tasks. By virtue of the hazard or complexity associated with critical tasks it is paramount that the SOP be followed as written. SOPs contain a listing of high-level hazards associated with the task, for detailed hazard analysis reference the applicable Task Hazard Assessments. SOPs do not replace the requirements contained in the company Standards, Codes, and Processes nor does it replace the need to comply with required legislation. Section 8.0 references documentation that the worker shall understand before work commences.*

## 1.0 PURPOSE

- To establish a company standard to safely and effectively carry out work as it applies to using pneumatic tools.

## 2.0 SCOPE AND APPLICATION

- This document applies to all company Heavy Construction Mining operations. Ensure all site-specific requirements are being met or exceeded before performing the task.

## 3.0 HAZARDS AND CONTROLS

- Tool failure due to improper use of the tool, damage, and defects.
    - Inspect the tool and air hose prior to use. Tag out and remove from service any damaged or defective tool, attachment, air hose, or air compressor. Report damage to supervision.
    - Review the manufacturer’s instructions before use. If you're uncertain about proper operation, consult your supervisor for guidance.
    - Use the tool only for its intended purpose. Do not modify the tool or exceed its operating speed or rating as determined by the manufacturer. Keep tools clean and lubricated and maintain them according to the manufacturer’s instructions.
    - Use only the attachments recommended by the manufacturer for the tools being used.
    - Ensure the compressed air supplied to the tool is clean and dry. Dust, moisture, and corrosive fumes can damage a tool.
    - Do not carry a pneumatic tool by its hose.
    - Blow out the air hose before connecting it to the tool. Hold the hose securely and direct the airflow away from yourself and others.
    - Trigger locks are not permitted on pneumatic tools.
    - When using an air impact wrench, ensure the sockets are specifically designed for the tool.

- Material and debris striking the worker or others.
    - Wear appropriate, task-specific personal protective equipment (PPE) when using pneumatic tools. If there is a risk of debris contacting the face, a face shield must be worn in addition to safety glasses. Additional body coverings, such as leather chaps, aprons, and jackets, may be required, depending on the size and type of debris that could come into contact with the body. Follow up with supervision to determine if additional body coverings are required.
    - Set up screens, shields, or guards where there is potential for flying debris to contact others.
    - Never point the tool at yourself or others. Do not use the tool or compressed air to blow off debris or clean dirt from clothing or body parts.
    - Wear respiratory protective equipment if the task produces airborne chemical or dust hazards. Follow up with the supervisor to determine the type of respirator required for the task.
- Noise exposure.
    - Hearing protection must be worn when using pneumatic tools. Double hearing protection may be required depending on the task. Review the task with the supervisor to determine if double hearing protection is required.
- Ergonomic and vibration hazards; body injury from dropping or mishandling the tool, changing tools or attachments, or sudden twisting of the tool.
    - Take microbreaks to reduce muscle fatigue and ensure the body position is comfortable and stable when using the tool.
    - Utilize safe body postures when operating pneumatic tools. Make sure hands are clear of rotating components and pinch points, and that body parts are not in the line of fire.
    - Use the correct tool for the job. Choose a lighter tool if possible, or use a tool balancer for heavy tools.
    - Keep hands and other body parts out of the tool's line of fire. Maintain a secure grip at all times, and be aware of your body positioning to reduce the risk of injury if the tool slips or malfunctions.
    - Wear impact or anti-vibration gloves if the tool causes a vibration hazard.
    - Turn off the air pressure to the hose when not in use or when changing tools and attachments. Ensure pressure is relieved from all connected hoses and tools before disconnecting.
    - Ensure all handles are securely attached and free of grease, oil, or other contaminants. Always hold the tool with both hands, maintaining a firm, palm-secured grip. Be aware that tools with rotating components (e.g., drills, grinders, buffers) can react forcefully if they bind, potentially twisting the wrist, forearm, or causing loss of control.

- Entanglement hazards due to rotating tools.
    - Wear close-fitting clothing; do not wear jewelry such as bracelets, rings, dangling neckwear, wristwatch, or similar items, and ensure hair (facial and head) is short or confined and cannot be snagged or caught.
- Tripping hazards, flammable or combustible materials, and poor housekeeping.
    - Ensure that air hoses lie flat and do not have kinks, twists, or loops. Avoid placing air hoses in walkways or areas with heavy traffic.
    - Ensure proper housekeeping in the area to avoid slipping and tripping hazards. Remove flammable and combustible materials from the area if the task creates a fire hazard.
- Using compressed air and air hoses.
    - Follow 960C-SOP-112 Safe Use of Compressed Air and Air Hoses.
    - Inspect hoses for damage, wear, and defects before use and ensure they are rated for the pressure to be applied. Inspect clamps for damage, wear, and secure connection to the hose.
    - Ensure all air hose connections are secure before use. (“Quick-connect” fittings must be properly connected and securely locked. “Chicago” fittings must be securely locked and pinned using approved safety pins—never use wire as a substitute. “Chicago” connections must be equipped with whip-check cables. Verify that the locking springs on the hose reel are functioning correctly to prevent accidental hose movement or disconnection.

## 4.0 CHECKLIST

- ☐ Attend all preparatory meetings (IE: daily PSI; job scope; review of JSA’s and SOP’s for the job).
- ☐ Complete FLRA cards before starting the work.
- ☐ Ensure all personnel involved in the task are aware of the hazards and the controls to be used, as identified in the SOP’s; JSA’s; and FLRA’s
- ☐ Conduct a pre-job inspection of all equipment to be worked on and tools to be used.
- ☐ **Standard of Training required for working on this job: On-the job training.**

## 5.0 DEFINITIONS

### 5.1 Company

Means North American Construction Group Ltd. (NACG) and all directly or indirectly owned subsidiary companies, including joint ventures.

### 5.2 Company Personnel

Includes the Company’s employees, officers, directors, agents, associates, consultants/contractors, temporary employees, and third-party processors.

### 5.3 HSE

Refers to the Health, Safety & Environment department

### 5.4 Pneumatic Tool

A tool that is powered by compressed air. Common pneumatic tools include chipping hammers, sanders, impact wrenches, drills, and grinders.

## 6.0 PROCEDURE

1) Perform a hazard assessment (e.g., FLRA) for the task to identify potential risks and determine the appropriate equipment required.

2) Inspect all tools, attachments, air hoses, and the air compressor prior to starting work. Tag out and remove from service any damaged or defective items. Report issues to your supervisor immediately.

3) Verify that all air hose fittings are properly connected and securely fastened. Confirm that whip-check cables, tool guards, and protective shields are correctly installed and in place.

4) Blow out the air hose before connecting it to the tool. Hold the hose securely and direct airflow away from yourself and others.

5) Turn off the air pressure before attaching the tool and its accessories. Once securely connected, restore air pressure.

6) Confirm that the speed rating and material composition of the tool match those of the accessory or implement being used.

7) Before operating the tool, evaluate your body position and identify potential pinch points. Ensure hands and other body parts are clear of any areas where movement or tool reaction could cause injury.

8) Maintain a firm, two-handed grip on the tool during operation. Take microbreaks as needed to reduce fatigue and maintain control.

## 7.0 NOTES

If this task is to be done by a method different than described in this SOP, the work must **STOP,** and the alternate method must be **DOCUMENTED** with an adequate hazard assessment tool such as a JSA. The document must be **APPROVED** by a supervisor before such procedures are implemented.

## 8.0 REFERENCES

- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 25 Tools, Equipment and Machinery}
- Tools and compressor manufacturers' operating manual
- 950C-C-045 Power Tools Code
- 950C-C-028 Hazardous Energy Isolation Code

- 960C-SOP-112 Safe Use of Air Compressors and Air Hoses
- 960C-SOP-500 Rad Gun Operation
- 960C-SOP-502 Safe Use of Grinders
- 960C-SOP-505 Powered Hand Tools
- 960C-SOP-308 Air Arcing – Gouging Metal

## 9.0 APPENDICES

- No appendices.