

STANDARD OPERATING PROCEDURE

Safe use of Pneumatic Tools		Document Number: 960C-SOP-500
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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 tool or damages and defects.
 - Inspect tool and air hose prior to use. Tagout and remove from service any damaged or defective tool, attachment, air hose or air compressor. Report damage to supervision.
 - Review the manufacturer's instructions prior to use.
 - Only use the tool for its designed purpose.
 - Do not modify the tool or exceed its operating speed or rating as determined by the manufacturer.
 - Follow up with supervisor if unsure on how to use tool.
 - Keep tools clean and lubricated and maintain them according to the manufacturers' instructions.
 - Use only the attachments that the manufacturer recommends 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 a tool. Hold hose firmly and blow 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 worker or others.
 - Wear appropriate task specific PPE when using pneumatic tools. If there is a risk of debris contacting the face, a face shield in addition to safety glasses must be worn. Additional body coverings such but not limited to leather chaps, aprons, jackets may be required depending on the size and type of debris that could contact 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.
 - Do not point tool at others.

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- Do not use tool or compressed air to blow debris / clean dirt from clothes or body parts.
- Wear respiratory protective equipment if task produces airborne chemical or dust hazards. Follow up with 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 task with supervisor to determine if double hearing protection is required.
- Ergonomic and vibration hazards; body injury from dropping or mishandling tool, changing tools or attachments or sudden twisting of the tool.
 - Take microbreaks to reduce muscle fatigue and ensure 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.
 - Do not place hands or other body parts in the line of fire.
 - Ensure adequate grip on tool to control it. Be aware of body position to prevent hands, feet, or body from injury in the event the tool slips or the tool breaks.
 - Wear impact or anti-vibration gloves if tool causes a vibration hazard.
 - Turn off air pressure to hose when not in use or when changing tools and attachments. Ensure pressure is relieved from connected hoses and tools prior to disconnecting.
 - Ensure all handles are on the tool and are clean, free from grease, oils, etc. Hold the tool with both hands and maintain a firm palm grip. Many air tools have a rotating implement (i.e. drills, grinders, buffers). When they bind, the tool rotates instead of the implement and can twist the wrist or forearm or pull the tool out of the hands.
- 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.
 - Avoid placing air hoses in walkways or heavy traffic areas.
 - Ensure air hoses lie flat and do not have kinks, twists or loops in them.
 - Remove flammable and combustible materials from the area if the task creates a fire hazard.
 - Ensure proper housekeeping in the area to avoid slipping and tripping hazards.
- 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 prior to use.

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- Ensure hoses are rated for the amount of pressure to be used. Inspect clamps for damage, wear, and secure connection to hose.
- Ensure “quick connect” fittings are securely connected and locked prior to using air tool.
- Ensure “Chicago” fittings are locked and pinned with approved pins (absolutely no wire to be used). Ensure “Chicago” connections are fitted with whip check cables.
- Ensure the locking springs on the hose reel are working effectively.

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) Complete a hazard assessment (i.e. FLRA) for the task and determine the type of equipment to be used.
- 2) Inspect all tools, attachments, air hoses and air compressor prior to task. Tagout and remove from service any defective or damaged equipment. Report to supervisor.
- 3) Check all air hose fittings are properly connected, secured and have whip-check cables.
- 4) Ensure all tool guards and shields are in place.
- 5) Blow out air hose before connecting the tool.
- 6) Turn off air pressure and connect tool and attachment. Turn on air pressure.
- 7) Match the speed ratings and composition of the tool and the implement.

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- 8) Before using, observe the position of the tool and identify pinch points should the tool twist or otherwise move because of the forces applied. Make sure the hands and other body parts will not be in any pinch points or lines of fire.
- 9) Have a firm grasp with both hands while the tool is running and take microbreaks as needed.

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.