


# STANDARD OPERATING PROCEDURE

<b>Safe Use of Powered Tools</b>		Document Number: 960C-SOP-505
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Latest Revision Date: Dec 20, 2022	Next Revision Date: Dec 20, 2025	Document Approval Level: 4

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## SAFE USE OF POWERED 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 the safe use of powered 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 and improper use.
  - Inspect tool before use. Any damaged or defective tools must be removed from service, tagged out and reported to supervision.
  - Only use the tool for its designed purpose. Do not modify tools or exceed their limits as designed by the manufacturer. Ensure that maximum safe operating speed of the accessory is not exceeded (i.e. grinding wheels, circular saw blades).
  - Ensure tools are clean and properly maintained.
  - Never point the power tool at yourself or other persons.
  - Never use a power tool without safety guards.
  - Always refer to the manufacturer's operating instructions and follow up with supervision if unsure how to use the tool.
  - Never carry a tool by the cord or hose.
  - Never yank the cord or the hose to disconnect it from the receptacle.
  - Always disconnect any power tools (power cords, air lines, and batteries) when they are not in use such as before inspection, servicing, cleaning and when changing any accessories such as blades, bits, and cutters.
  - Keep cords and hoses away from heat, oil, and sharp edges.
- Electrical shock.
  - Ensure that the tools are properly grounded using a three-prong plug, are double-insulated (and are labelled as such) or are powered by a low-voltage isolation transformer: this will protect users from an electrical shock.
  - Check electric tools to ensure that a tool with a 3-prong plug has an approved 3-wire cord and is grounded. The three-prong plug should be plugged in a properly grounded 3-pole outlet. If an

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- adapter must be used to accommodate a two-hole receptacle, the adapter wire must be attached to a known, functioning ground. NEVER remove the third, grounding prong from a plug.
- Do not use electric tools in wet conditions or damp locations unless tool is connected to a ground fault circuit interrupter (GFCI).
- Do not expose electric power tools in rain or wet conditions; wet tools increase the likelihood of electric shock.
- Do not use light duty power cords.
- Stop using an electric power tool if you feel a tingle in your fingers. This is a warning that the tool is faulty and needs repair.
- Do not connect or splice extension cords together to make a longer connection: the resulting extension cord may not be able to provide sufficient current or power safely.
- Do not carry electrical tools by the power cord.
- Do not use electrical cords for hoisting or lowering tools.
- Do not tie power cords in knots. Knots can cause short circuits and shocks. Loop the cords or use a twist lock plug.
- Noise exposure.
  - Hearing protection must be worn while using power tools if the noise level exceeds 85 dBA or the jurisdictional' s occupational exposure limit for noise exposure. Double hearing protection may be required depending on the task. Review task with HSE or supervisor to determine if double hearing protection is required.
- Exposure to repetitive vibration/motion (repetitive strain injury).
  - Follow all manufacturer guidelines when using the tools.
  - Use appropriate PPE for the task. Impact or anti-vibration gloves are required when using vibrating tools for an extended period of time.
  - Ensure all safety guards are in place and not tampered with.
  - Take micro breaks and stretch as required.
  - Report any injury or discomfort to supervision immediately.
- Losing focus/distractions in the work area.
  - Keep mind on your task.
  - Stop work if any other workers require your attention.
  - Resume work when it is safe to do so.
  - Intervene and be a mentor to others.
  - Avoid accidental starting; do not hold fingers on the switch button while carrying a plugged-in tool.
- Being struck by or striking against machinery or tools; slipping when tool comes off.
  - Inspect tools to ensure they are in good condition.
  - Proper maintenance of tools.
  - Proper choice of tools for the task.
  - Proper application of the tools.
  - Ensure there is enough room to use the tool and that the action is not blocked or obstructed.

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- Ensure work areas are well-lighted.
- Tools failing, slipping, rebounding, flying materials:
  - Use tools for their intended purpose only (e.g., a wrench is not a hammer; a screwdriver is not a chisel).
  - Use the proper size of tool; use the right type of tool (e.g., a box-end wrench not an adjustable wrench).
- Puncturing or tearing the skin on splits, jiggers, etc.
  - Dress tools and handles.
  - Replace plastic/fiberglass handles with splits, cracks, or other damage.
  - Dress metal handles to remove burrs, jiggers or other damage.
- Tools striking, pulling, winding body parts when control is lost.
  - Trigger locks are to be removed.
  - Maintain firm 2-handed control of all power tools; ensure you have and stable footing.
  - Ensure there is a complete stop before setting a tool down.
  - Do not operate a power tool in a manner that creates a kick back / striking / contact hazard to other employees.
  - Do not modify tool or substitute/exchange parts.
  - Ensure the tool to be used is ergonomically appropriate for the task to be completed.
  - Be cautious of posture and stance while sharpening, maintaining and using power tools.
  - Ensure frequent rests are taken to minimize fatigue, muscle strain, possible vibration related injury, joint strain and exhaustion.
  - Ensure that if contact between moving or rotating parts of machinery or electrically charged equipment can occur with a worker's clothing, jewelry or hair, the worker shall:
    - Wear close fitting clothing.
    - Do not wear bracelets, rings, dangling neckwear, wristwatch, or similar articles; and ensure that head and facial hair is short or confined and cannot be snagged or caught.
- Power tool use resulting in ignition of flammable materials.
  - Practice good housekeeping when using or storing flammable liquids. Clean up spills immediately and place used rags /absorbent pads in proper disposable container. Carefully read and understand the manufacturer's label on the container before using or storing products.
  - Store flammable and combustible materials away from power tools and ignition sources such as open flames, sparks, smoking, cutting, welding, etc.
  - Use flammable liquids only where there is plenty of ventilation.
  - Always disconnect any power tools (power cords, air lines, and batteries) when they are not in use such as before inspection, servicing, cleaning and when changing any accessories such as blades, bits, and cutters.

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- Whenever possible use nonflammable cleaning products to clean power tools. When using flammable products to clean power tools ensure adequate time or additional cleaning has allowed for removal of any flammable product residue. Use compressed air to blow off any residue.
- Avoid spraying cleaning products directly onto the tools, especially into ventilation slots. Spray cleaning products onto cleaning cloth first and wipe down tools.

## 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 Repetitive strain injury (RSI)

Repetitive strain injury (RSI) is a general term used to describe the pain felt in muscles, nerves and tendons caused by repetitive movement and overuse.

## 6.0 PROCEDURE

- 1) Complete a hazard assessment (i.e. FLRA) for the task being done. Follow up with supervision if unsure of the task or how to use tool.
- 2) Select the correct power tool for the task. Ensure it is unplugged from power source and complete an inspection of the tool. Remove tool from service if there are any damages or defects. Attach a tag and report to supervision.
- 3) Do not tamper with, bypass, or remove any safety guard.
- 4) Inspect work area and ensure power tool does not create a hazard to other workers in the area. Ensure the tool is not being used in a wet environment that could cause an electric shock.
- 5) Plug in power tool to power source and ensure electrical cord does not cause a tripping hazard.
- 6) Wear appropriate PPE for task and tool (i.e. face shield, anti-vibration gloves, hearing protection). Ensure clothing, hair and jewelry do not create a snagging hazard.

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- 7) Ensure adequate grip, control and body position prior to using power tool. Take micro-breaks as required.
- 8) Do not exceed limits of the power tool or the safe operating speed of its accessories.
- 9) Never leave power tool unattended with parts still moving; even after the machine is turned off, some parts may still be moving.
- 10) Complete task, unplug power tool from power source.

## 6.1 Cleaning Power tools

- 1) Disconnect the power source (power cords, air lines, and batteries).
- 2) Use compressed air to loosen or blow off accumulated dirt. Use a wire brush or steel wool to scrub off any remaining material.
- 3) Use a nonflammable cleaning product first, if this is not available use extra caution when using flammable cleaning products. Avoid spraying cleaning products directly onto the tools, especially into ventilation slots. Spray cleaning products onto cleaning cloth first and wipe down tools (provide adequate time for power tools to dry).

## 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

- Manufacturers' use and maintenance instructions
- 950C-C-045 Power Tools Code
- 950C-C-028 Hazardous Energy Isolation Code
- CSA Z432-16, Safeguarding of machinery
- Alberta Occupational Health and Safety Act, Regulation and Code (Part 2, section 7,8, & 9 Hazard Assessment, Elimination and Control)
- Alberta Occupational Health and Safety Act, Regulation and Code (Part 16, section 218 Noise Exposure)
- Manitoba OH&S Regulations, Part 16, Division 1
- Ontario OH&S Reg. 851, Part 1 Section 43 & 44
- Ontario OH&S Reg. Reg. 213/91, Section 93, 94, 187, 192, 195, 275, 298
- OSHA 29 CFR 1910.242 Hand and Portable Powered Tools and Equipment, General
- OSHA 29 CFR 1926 Subpart I Tools – Hand and Power

## 9.0 APPENDICES

No appendices.