

# STANDARD OPERATING PROCEDURE

<b>Safe use of Hand Tools</b>		Document Number: 960C-SOP-504
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## SAFE USE OF HAND TOOLS



4	APP	Apr 07, 2022	Approved			Tammy Siver
3	APP	Jul 24, 2018	Approved	T. Siver	A. Letendre	S. Miller
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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 hand 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

- Damage or injury caused by using faulty or damaged tools.
  - Inspect all hand tools at the beginning of the shift or prior to each use. Damaged, defective, deteriorated, or poorly maintained tools are not to be used. Remove them from service for repair, or discard and replace them.
  - Ensure handles are properly attached to the tools; loose handles or handles with splintering and/or cracking can lead to the head dislodging from the handle and becoming a projectile.

Examples of unsafe tools can include:

- wrenches with cracked or worn jaws
- screwdrivers with broken tips, or split/broken handles
- hammers with chipped, mushroomed, or loose heads and broken or split handles
- chisels with mushroomed heads
- dull saws
- Remove from service and do not use any hammer that shows dents, cracks, chips, mushrooming or excessive wear.
- Regularly clean tools to ensure they will function properly and not slip during use. All tools will be cleaned and put away properly at the end of each shift.
- Do not store tools in direct sunlight for an extended period of time. Avoid excessive contamination with oils and grease as this can degrade the tool's integrity.
- Complete the appropriate maintenance checks and service, as per the manufacturer's recommendations, for repair, shaping and maintenance of tools before and after use.

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- Ensure the tool has been properly dressed so that it is a safe and efficient tool. Do not redress or reshape tools having chipped, battered or mushroomed striking or struck surfaces. When a tool has reached this stage, remove it from service and replace.
- Do not modify, alter, block off or remove any guard or safety device from the hand tool. Only authorized personnel can repair tools.
- “Homemade” tools are not allowed unless they have been approved by the Company and are certified by a professional engineer or approved by the manufacturer to be of sufficient size, strength, design, and made of material that can withstand the stresses created during work.
- Never leave tools unattended or discarded in a manner that places the tool where it may be fallen onto, lost, or damaged.
- Damage or injury caused by using a tool for the wrong purpose.
  - No one is to use a tool for which they have not been trained to use. Training can be tool specific (i.e. slide hammer’s require specific training), or can be obtained through trade school and on the job training.
  - Select the right tool for the job and only use tools for their intended purpose. For example: pry bars are designed to pry objects; files, chisels and screwdrivers are not designed to pry. Wrenches are not hammers. Ensure tools are the proper size and capacity for the task.
  - Do not use extensions or “cheaters” on tools for leverage. Use a larger tool or a power tool. Do not use non-engineered snipes/cheater bars/pipes. The use of an engineered “cheater” pipe wrench is permitted provided it is used as per the manufacturer’s instructions.
  - Always use a hammer of suitable size and weight for the task. Select hammers for their intended uses and use them only for those purposes. Hammers are made in different shapes and sizes, with different configurations and varying degrees of hardness. Each hammer has a specific purpose.
- Being struck by or striking against machinery or tools or being caught in a pinch point when tool slips.
  - Operate hand tools in a manner that does not create a striking / contact hazard to other personnel.
  - Ensure there is enough free space to use the tool and that the action is not congested or inhibited. For example: there are no obstructions in the swing arc of a hammer; knuckles will not be scraped or pinched while pulling a wrench.
  - Be aware of posture and stance while handling hand tools and while servicing them (i.e. sharpening). Be sure you have secure footing and grip and that the tool has been cleaned so that it does not have a potential to slip.

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- Avoid placing body parts directly in the line of fire or in pinch points. Use alternative tools for securing (i.e. vice grip).
- Always pull spanners and ratchets etc. towards the body to prevent slipping and injuring hands or torso.
- Always strike a hammer blow squarely, with the hammer striking face parallel with the surface being struck. Always avoid glancing blows, overstrikes, and under strikes.
- When using a hammer to strike another tool (chisel, punch, wedge, etc.) ensure the striking face of the hammer has a diameter of approximately 3/8 inch larger than the struck face of the tool. Never use a hammer to strike another hammer.
- Keep clean and free from oil, glue or debris which may cause the handle to slip or the face to glance from the object being struck.
- Musculoskeletal injuries, strains and sprains caused by overexertion during tool use.
  - Ensure frequent rests are taken to minimize fatigue, muscle strain, joint strain and exhaustion. Do stretches prior to and during task to increase flexibility and enhance circulation.
- Flying materials from striking tools.
  - The use of normal hardened steel sledgehammers is prohibited. Never use a hard surface hammer to strike another harder surface. Use hammers made of soft materials (i.e. brass, soft metal) or use alternative tools such as a Slide Sledge or dead blow hammer.
  - Any sledgehammer weighing 4 pounds or greater with a handle of 30" or greater will require additional controls, such as a larger swing radius, the use of a face shield in addition to safety glasses and task specific gloves to protect the hands from shrapnel. If there is a high probability of shrapnel or flying metal debris, body covering such as a leather apron, Kevlar body suit or other similar protective covering must be used to protect the body.
  - Any potential for flying metal debris caused by using a hammer smaller than 4 pounds will require the use of a face shield in addition to safety glasses at a minimum. Additional controls such as alternative tools or body covering (i.e. leather, Kevlar body suit) are recommended and should be identified with a hazard assessment.
- Impact force causing shocks to the hand and wrist.
  - Reduce repeated shocks to the hand and wrist from hand tools with shock absorbing gloves.
  - Limit torque reaction by using clutch-type tools, shut-off tools and external devices such as torque bars or articulating bars.

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- Sparks from steel or iron hand tools igniting flammable substances.
  - Use spark resistant tools when working around flammable hazards.

## 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.

## 6.0 PROCEDURE

- 1) Choose the right tool(s) for the task.
- 2) Inspect tool(s) before use.
- 3) Include use of hand tools on FLRA for task; determine appropriate PPE and suitable controls based on type of tool being used for task.
- 4) Ensure proper body position and tool position during task.
- 5) Upon completion of task, ensure tool is cleaned and stored properly.

## 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
- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 3}
- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 25}

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- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 12}
- WorkSafeBC OH&S Regulation Part 3
- Manitoba OH&S Regulations Part 16
- Saskatchewan OH&S Regulation Part III
- Ontario OH&S Reg. 851, Part 1
- Ontario OH&S Reg. Reg. 213/91, Section 93, 94, 187, 192, 195, 275, 298
- 950C-C-028 Hazardous Energy Isolation Code
- 950C-C-025 Hand Tools Code
- 950C-C- 045 Power Tools Code
- Accident Prevention Manual: Engineering and Technology, 12th Edition
- Suncor General Safety and Health Rules - Mine Maintenance MER1008A

## 9.0 APPENDICES

No appendices.