

STANDARD OPERATING PROCEDURE

Removing (Frozen) Built Up Material From Equipment

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Page 1 of 6

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REMOVING (FROZEN) BUILT UP MATERIAL FROM EQUIPMENT

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Removing (Frozen) Built Up Material From Equipment		Document Number: 962C-SOP-045
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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 removing frozen or built-up material from equipment.

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

- Unintentional movement of equipment.
 - Equipment being manually cleaned by a worker must be isolated from movement which includes proper hazardous energy isolation, implements grounded and operator out of the cab. If live work is required (i.e. to spin tracks), follow 960C-SOP-111 Live Work. Ensure equipment operator is in a safe location while the equipment is being cleaned (i.e. light vehicle).
 - Equipment being cleaned using another piece of equipment (i.e. wheel loader with stinger) must be prevented from movement which includes operator out of the cab and implements grounded. Ensure equipment operator is in a safe location while the equipment is being cleaned (i.e. light vehicle).
- Flying debris contacting worker, personnel in area or equipment.
 - Ensure no other personnel in work area. Control area with flagging or barricades if necessary.
 - When manually removing frozen built up material from equipment, worker must wear a face shield in addition to safety glasses.
 - When using a wheel loader with stinger/jib to remove frozen built up material from equipment, break up the material by pushing the stinger in a forward motion; do not apply upward/downward motion. Do not scrape and pull material towards the cab. Do not clean large surface areas such as dozer blades with a stinger/jib.
 - Take extra caution not to damage idlers/rollers when breaking up the debris, use spotter if necessary to prevent damages.

STANDARD OPERATING PROCEDURE

Removing (Frozen) Built Up Material From Equipment		Document Number: 962C-SOP-045
Original Approval Date: Apr 09, 2018	Revision Number: 3	Page 3 of 6
Latest Revision Date: Jul 21, 2025	Next Revision Date: Jul 21, 2028	Document Approval Level: 4

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- When cleaning large surface areas such as dozer blades, use the corner edge from the blade of a dozer or grader that has been set up perpendicularly to the machine to scrape the built up material in a horizontal direction (i.e. dozer/grader travelling forward).
- Damaging equipment.
 - Do not slam equipment implements on ground to remove built up material. Use a scratching post to clean excavator buckets or install chains on the buckets to loosen material while digging.
 - Use slow and controlled movements when cleaning dozer blades with the blade of another dozer or grader.
 - Do not clean equipment with the implements raised in the air and unsupported.
- Large chunks of material falling from tracks and steps.
 - Keep feet, legs and body parts away from falling material. Do not position body in the line of fire.
- Noise and vibration exposure when using pneumatic tools.
 - Follow 960C-SOP-500 Use of Pneumatic Tools and Compressed Air.
 - Wear hearing protection and anti-vibration (padded) gloves. Take micro breaks.
- Improper use of hand and power tools.
 - Follow 960C-SOP-504 Safe use of Hand Tools and 960C-SOP-505 Safe use of Powered Tools.
 - Inspect tooling before use.
 - Use tooling for its designed purpose.
 - Do not place hands or body parts in the line of fire (i.e. do not scrap or chip towards the body).
- Improper use of equipment.
 - Inspect equipment and attachments prior to use.
 - Ensure operator is trained and competent to use equipment prior to use.
 - Only use wheel loader with attachment to clean small surface areas such as tracks, roller areas and idlers on equipment.
- Slips, trips and falls when mounting or dismounting equipment and walking on uneven ground.
 - Maintain 3x4 contact when mounting or dismounting equipment. Use a ladder if required.

STANDARD OPERATING PROCEDURE

Removing (Frozen) Built Up Material From Equipment		Document Number: 962C-SOP-045
Original Approval Date: Apr 09, 2018	Revision Number: 3	Page 4 of 6
Latest Revision Date: Jul 21, 2025	Next Revision Date: Jul 21, 2028	Document Approval Level: 4

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- Wear traction aids when walking on slippery ground. Use caution when walking or standing on tracks; avoid using traction aids on the equipment tracks.
- Be aware of footing when walking on uneven ground; avoid ruts and lumps as possible.
- Awkward body position leading to musculoskeletal strains.
 - Stretch before task and take micro breaks as required. Work within individual body limitations.
- Cold weather exposure.
 - Dress for conditions and ensure a warm up shelter (i.e. vehicle) is available for extreme temperatures. Follow 950C-C-006 Cold Stress Code.
 - Take breaks as necessary depending on weather conditions.

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) Complete a hazard assessment (i.e. FLRA) for task. Notify supervision if unsure of task or if there are any hazards outside of the worker's control.
- 2) Inspect all tooling and equipment prior to use. Remove from service and notify supervision of any defective tooling or equipment.
- 3) Ensure no unnecessary personnel in area. Flag or barricade as required.

STANDARD OPERATING PROCEDURE

Removing (Frozen) Built Up Material From Equipment		Document Number: 962C-SOP-045
Original Approval Date: Apr 09, 2018	Revision Number: 3	Page 5 of 6
Latest Revision Date: Jul 21, 2025	Next Revision Date: Jul 21, 2028	Document Approval Level: 4

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- 4) Ground all implements for equipment being cleaned; ensure operator is out of the cab. Isolate hazardous energy (lockout) on equipment if cleaning tracks manually.
- 5) Use hand and pneumatic tools to clean tracks and steps, chip frozen mud and debris away from body. Wear face shield.
- 6) Use wheel loader to clean small surface areas such as tracks, roller areas and idlers. Chip frozen mud and debris away from machine. Use controlled movements. Always shoulder check and confirm surroundings before reversing to reposition.
- 7) Rotate tracks to remove debris from track frames.
- 8) Use corner edge of dozer or grader to clean dozer blade, approach the machine perpendicularly and gently scrape the material from the blade while traveling forward. Use slow, controlled movements and ensure the machine remains in first gear while traveling.
- 9) Use an excavator bucket to clean dozer blades. Ensure the dozer blade is completely grounded and gently apply downward pressure to scrape the material off the dozer blade. Note – at no time can the blade be in the air (un-supported) as the added force can damage the lift cylinders on the dozer.
- 10) Use scratching post to clean excavator buckets, place the bucket on post and apply controlled downward motion to scrape and loosen the material in the bucket.

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 19 Powered Mobile Equipment
- 950C-C-006 Cold Stress Code
- 950C-C-028 Hazardous Energy Isolation Code
- 960C-SOP-111 Live Work: Working on Equipment While it is Running
- 960C-SOP-500 Pneumatic Tools and Compressed Air
- 960C-SOP-504 Safe use of Hand Tools
- 960C-SOP-505 Safe use of Powered Tools

9.0 APPENDICES

- Appendix A – Methods of Removing (Frozen) Built Up Material from Equipment

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Page 6 of 6

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Appendix A Methods of Removing (Frozen) Built Up Material from Equipment



WHEEL LOADER & JIB ATTACHMENT



DOZER CLEANING DOZER BLADE



GRADER CLEANING DOZER BLADE



EXCAVATOR & SCRATCHING POST