

STANDARD OPERATING PROCEDURE

Greasing - High Pressure

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Page 1 of 4

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GREASING – HIGH PRESSURE

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APR 07 2022

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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 high pressure greasing.

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

- Hose breaking due to wear or separation from a fitting.
 - Inspect the hose and nozzle at the first use of each shift; check the fittings for cracks, deformity, or separation from the hose; pull the trigger to eject a small amount of grease to ensure the system is working. Ensure the nozzle is pointing away from yourself and other personnel; point the nozzle into a container prior to testing.
- Damaging equipment from using wrong grease or missing fittings.
 - Different climates and seasonal weather will require specific grease, if you are unsure, ask your supervisor.
 - Most grease points are visible from the outside, while others are hidden from sight, you will find a drawing with all your lube points in the operator's manual.
- Muscle strain from bending and twisting.
 - Fittings are in different location for each manufactured brand of heavy equipment. Take adequate time to warm and stretch before starting task to prevent injury.
- Shooting grease because a grease point fitting is broken.
 - Wipe off and check fittings before attaching the nozzle.
- Grease blowing back because line is plugged, and the nozzle is pressurized.
 - Ensure eye protection is snug and in place; always wear gloves. Face shields are recommended for the task.

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Original Approval Date: Mar 24, 2010	Revision Number: 3	Page 3 of 4
Latest Revision Date: Apr 06, 2022	Next Revision Date: Apr 06, 2025	Document Approval Level: 4

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- Burns from hot grease.
 - Wear proper PPE; do not point nozzle at yourself or other personnel.
- Injecting grease through the skin.
 - Stay out of the line of fire, keep hands, fingers, and other body parts away from the nozzle tip; **DO NOT RUN HANDS OR FINGERS OVER HOSES AND FITTINGS TO CHECK FOR LEAKS.**
- Grease pressure system components (hoses, fittings, pumps, holding tanks, pipes, etc.) failing causing bodily harm, leaks leading to fire, damage, and environmental spills.
 - Ensure all components are rated for the system's pressure, never install low pressure components, hoses, or fittings in a high-pressure system.
 - Do not exceed the specified operating pressures as set by a qualified person (i.e. engineer, manufacturer).
 - **DO NOT ADJUST OR TAMPER WITH PRESSURE REGULATORS** unless you are competent and qualified to work on the system. Placards indicating grease system pressures will be located inside lube trailers and trucks, in their absence contact your supervisor for the required information. When applicable, pressure regulators will be equipped with locking devices or tags. Tampering with a locking device or tag will be considered a Life Saving Rule Violation.
 - Never modify a grease system unless you have been authorized to do so.
 - Regularly inspect components for leaks, worn hoses and damage. Regularly inspect pressure relief valves.

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.

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Greasing - High Pressure		Document Number: 960C-SOP-207
Original Approval Date: Mar 24, 2010	Revision Number: 3	Page 4 of 4
Latest Revision Date: Apr 06, 2022	Next Revision Date: Apr 06, 2025	Document Approval Level: 4

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5.4 High Pressure Greasing

Air powered or pneumatic grease guns that use compressed air to apply pressure to an air piston, which drives the grease and forces lubricant out of the coupler into a grease fitting.

6.0 PROCEDURE

- 1) Complete a hazard assessment (i.e. FLRA) for the task. Notify supervision if unsure of task or if there are hazards outside of the worker's control.
- 2) Isolate all hazardous energy. Equipment being greased must be locked out and wheel chocks placed, implements grounded.
- 3) Inspect hoses, nozzles and grease system for wear, leaks, and deformities. Ensure system is set to proper operating pressure. Do not adjust if pressure is incorrect, call your supervisor for further direction.
- 4) Wipe and inspect all fittings before applying the nozzle. Note: Most equipment has the suspension grease system fittings together at a block. Joints, such as on the implements front and back, are independent.
- 5) Pump in grease until it squirts out from the nozzle at the fitting, or it can be seen oozing from the joint casing.
- 6) Catch any drips of grease in a rag to minimize contamination. Wipe the fitting clean to minimize attraction of dust and dirt to the grease.

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, Section 260, Inspection and Maintenance}
950C-C-028 – Hazardous Energy Isolation Code

9.0 APPENDICES

No appendices.