



STANDARD OPERATING PROCEDURES FOR SAFETY


LOCKOUT/TAGOUT PROCEDURES FOR HEAVY EQUIPMENT

Rationale: All heavy equipment must have a standard lockout/tagout (LOTO) procedure to ensure the safety of the employees working on or around the equipment while it is being repaired.

Background: All heavy equipment breaks down at one point or another, and many times the repairs must continue into the next shift in order to get the equipment back in service. The LOTO procedure required for different equipment varies depending on the complexity of the machine. For example a short-wood harvester requires more functions to be performed than an excavator prior to determining the machine is “at rest”.

Procedures:

Generic LOTO procedures have been developed for various pieces of equipment in use across our operations. Contractors have been provided with the LOTO procedure templates relative to their equipment fleet. Contractors must take the generic procedures and customize them for their own equipment. This includes completing the contractor name, location (home base), equipment, and the attachment on the equipment (including contractor’s machine number). Contractors must then review the interventions listed on the generic procedures to ensure the work instructions listed apply to their equipment; if not, they must modify the work instructions as required. Each piece of equipment on a jobsite must have a customized LOTO procedure developed, which should be placed in a plastic sleeve with the out-of-service tags, and stored inside the machine. These procedures must be available to the operator, and be produced for inspection when requested. To the right is a sample of a LOTO procedure for a mechanical cut-to-length harvester.



Lockout Procedures - Mechanical cut-to-length harvesters

CONTRACTOR: Majors Logging (example)
EQUIPMENT: Tigercat 845 (example)

LOCATION: Deer Lake, NL (example)
ATTACHMENT: Waratah (example)

Interventions	Mechanical hydraulic Pilot valve	Equipment motor	Electric Master Switch (on ignition)	Manual Master Switch	Computer	Mechanical Blocking (A-B-C-D-E)	Work Instructions (1-2-3...)
General mechanical repairs	Locked	Shut down	Locked	Unlocked	N/A		1-3-4-5-6-7-8-9-10-11-14
Maintenance and lubrication	Locked	Shut down	Locked	Unlocked	N/A		1-2-3-4-5-6-7-8-9
Diesel tank filling	Unlocked	Shut off	Locked	Unlocked	N/A		1-2-3-4-5-6-7-8-9+14
Oil leakage checking	Unlocked	Operating	Unlocked	Unlocked	N/A	A	1-2-9-10-11-14-15
Change Chain	Locked	Shut down	Locked	Unlocked	N/A		12-4-5-6-8
Regulate Pressure	Unlocked	Operating	Unlocked	Unlocked	N/A	A	1-9-10-11-14-15
Adjustment of measuring wheel	Locked	Operating	Unlocked	Unlocked	N/A	A	1-2-4-5-7-8-14-15
Adjustment	Unlocked	Operating	Unlocked	Unlocked	N/A		1-9-10-11

Work instructions :

1. Lower the boom to the ground
2. Shut off all felling head components (rollers, clamps, etc.)
3. Position felling head on the ground face down (rollers & opened clamps)
4. Close the safety arm (electro-hydraulic arm, hydraulic pilot)
5. Shut off the mechanical hydraulic master valve (if equipped)
6. Shut off engine
7. Shut off the manual master switch (if equipped)
8. Make sure there is no more power by testing the controls
9. Maintain a virtual safety parameter of 3 metres from felling heads
10. Stay within sight of the operator (when 2 workers on the job)
11. Keep a radius of 30 m during testing, or test in a safe zone
12. Position the boom & the felling head (± 1 m from ground) in a stable position
13. Shut off the manual hydraulic valves
14. If machine has to be left out of service due to shift change or waiting for parts, a tag must be affixed in the cab indicating machine is out of service and signed by the person responsible (mechanic, operator or supervisor)

For all mechanical work :

- Wear Individual Protective Equipment required for the type of repair
- Place the machine and felling head in a stable position
- Mount and dismount using 3 point contact
- Work in a flat, dry, well lit work area free of debris
- Remain within sight of operator (when 2 people working on machine) or use radio to communicate

Tag removal procedure:

1. Employee that attached out of service tag must sign off stating machine can return to work. Removed tag must then be given to jobsite supervisor where they will be kept on file. If person who tagged machine is not available, go to step #2.
2. Try locating the person by radio or telephone and have them remove tag. If it is impossible to reach the person, go to #3
3. Call your supervisor
4. The supervisor assesses the workplace and makes sure that nobody is in danger
5. The supervisor authorizes the removal of the tag and the machine can then be restarted

15. Mechanical blocking :

A) Anti roll-over apparatus

Last up-date:

Prepared by:

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