HEAVY EQUIPMENT OPERATOR’S GUIDE TO
SAFE USE OF ONBOARD COMPUTER SYSTEMS

Lock out procedures to ensure operator safety

From 2011 to 2015, Workplace Safety and Insurance Board statistics for the logging sector rate group indicated that 40 per cent of all lost-time injuries were due to worker coming into “contact with objects and equipment,” which is also the number one injury type for logging workers.

Machine technology is changing and based on recent statistics and reports across the province, there is a noticeable trend regarding challenges faced by heavy equipment operators in implementing lock out procedures on both new and existing mechanical harvesting logging equipment.

HAZARD HIGHLIGHTS

• Logging is a high-risk occupation: dangerous heavy equipment, working alone in remote work locations, extreme weather conditions, and the seasonal challenges of limited or poor lighting to conduct maintenance.

• 28% of workplace injuries are related to machinery, i.e. caught in or compressed by equipment or objects; in many cases the injuries can be directly related to inadequate lock out or machine guarding

• New technology presents special challenges to heavy equipment operators who must figure out how to adapt the technology to meet lock out requirements for operator safety

• Many companies have a mix of older and newer equipment and when operators switch from one piece of equipment to another, they have to adapt their lock out procedures according to the different features of the equipment.

• Some equipment manufacturers have a feature that allows all their machines to be started with a single key, and some company owners with a lot of equipment prefer this set up so they’re never searching for keys for a specific piece of equipment.

EQUIPMENT OPERATOR CRUSHED TO DEATH
BY FEED ROLLERS

In the past, an equipment operator could take their key out of the ignition, disengage the master switch, and safely perform routine maintenance procedures secure in the knowledge that the engine was “locked out” and at a zero energy state. The operator was certain that a colleague could not start the machine up while maintenance was being conducted. When the procedure to ensure a zero energy state is not followed, dramatic circumstances can unexpectedly happen.

Forestry Hazard Alerts
workplacesafetynorth.ca/news/hazard-blog
LOCK OUT PROCEDURES FOR COMPUTERIZED SYSTEMS ON HEAVY EQUIPMENT

Always follow the operator’s manual specific to equipment’s onboard technology

With the addition of newer technology to heavy equipment, there is some uncertainty around the specific capabilities of computerized systems. Some operators incorrectly believe technology can activate equipment remotely, completely lock out equipment, or that lock out procedures don’t change when the equipment has onboard technology. Due to the high potential of a serious workplace safety incident related to heavy equipment technology, every employer and operator needs to review and be knowledgeable on requirements outlined in their specific operator’s manual.

HOW TO PREVENT UNINTENDED MACHINE MOVEMENT

1. Lower: Lower all equipment to the ground during work interruptions.
2. Neutral transmission: Place transmission control in neutral.
3. Park: Press parking brake switch (keypad) to engage park brake.
4. Disable hydraulics: Before allowing anyone to approach the machine, to disable the hydraulics and stop the engine, press hydraulic enable switch off (keypad).
5. Be consistent: Always follow these same steps before standing up, leaving the operators seat, or exiting the machine.
6. Tag out: Apply personal lock out tag as per company policy and procedure.

HOW TO PREPARE FOR MACHINE MAINTENANCE

1. Level ground: Park machine on a level surface and lower equipment to ground
2. Park: Press park brake switch (keypad) to ON to engage park brake.
3. Idle for 2 minutes: Run engine at slow idle for two minutes before stopping, to avoid damage to turbocharger.
4. Stop engine: Press engine stop switch (keypad) to turn engine OFF.
5. Battery: Turn ‘battery disconnect’ switch to OFF position.
6. Tag out: Apply personal lock out tag as per company policy and procedure.

Ontario law: The Occupational Health and Safety Act requires employers to ensure all workers are provided with instruction, training and supervision on the job. Lock out training is an essential element in creating a successful safety culture within a workplace, and good supervision will help ensure success.

Safety culture starts at the top: Employer reinforcement of lock out policy and procedures relating to computerized heavy equipment is essential to enhancing and supporting a strong workplace safety culture.

LOCK OUT SAFETY CHECKLIST

Strengthen workplace safety culture

☐ Whenever lock out policies and procedures are updated, employer provides updated information to workers affected by the updates, and ensures updated information is included in pre-employment training for new workers.

☐ Supervisors and workers alike never allow production pressures to influence or compromise safety procedures; safety procedures are always followed.

☐ Supervisors provide ongoing coaching, monitoring and reinforcement of lock out procedures.

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