Safety talk topic: lock out to live; chock it and lock it!

How to use this content?

1. Talk about this topic during a tailgate or other safety meeting.
2. Have workers practice their lock out procedures with their supervisors, or mentors present.
3. Demonstrate at the safety/tailgate meeting so everyone sees how to properly lock out the particular piece of equipment.

The image (left) is available as a 3x4 inch sticker and an 11x17 inch poster free of charge from the BC Forest Safety Council. See order link on the last page.
There were three incidents between July 2015 and January 2016 where a worker died under a vehicle.

1. On January 31, 2016, a 23 year-old man was killed after being run over by an empty logging truck that he and a co-worker were trying to repair. Both workers were driving the logging truck to a camp south of Fraser Lake when they stopped to fix a mechanical issue.

2. On October 14, 2015, an incident occurred in Ladysmith, Vancouver Island, when a worker was fatally injured while performing repairs on a service truck. The truck was parked on a slope and began to roll while the worker was underneath.

3. On July 8, 2015 in the Cariboo region, a mechanic was fatally injured while working underneath a lowbed truck in a shop setting.

Conduct pre-trips and regular inspections

Pre-trip inspections are required for all equipment. A thorough inspection can identify mechanical problems that could result in upset conditions that create hazards for workers and slow down production. Pick a safe location for the inspection with adequate lighting, flat ground, and not crowded with other equipment or workers. Lock out while doing the inspection.

Lock out

All trucks and mobile equipment must be locked out when maintenance or inspection work is being done. This especially includes ‘change in conditions’ where a mechanical failure is suspected and workers do a ‘quick look underneath to see that the issue is’. Vehicles can roll on even the slightest slope if not secured, crushing a person under the vehicle or between the vehicle and a solid object. During shop and yard repairs, workers may not see the person working underneath the vehicle and if the vehicle or machine is moved, the person may be seriously injured or killed.

Implement a procedure for vehicle and equipment walk around checks prior to moving or driving. This allows the driver or operator to spot potential problems or people who are too close to the machine or truck.

Each vehicle/machine has a specific lock out procedure. Some examples of lockout include:

LOGGING TRUCK AND LOWBED LOCKOUT PROCEDURE FOR FIELD SITUATIONS

1. Stop in a wide, flat and visible location.
2. Exit truck wearing hi-vis vest and hardhat.
3. Notify other affected workers, public (where possible).
4. Apply parking (MAXI) brake.
5. Shut off truck, put truck in lowest gear or in reverse and place wheel chocks. If chocks are not available, use a method that gives equivalent security to prevent the vehicle from moving.

6. Put out safety triangles if on running surface of road.

7. Remove the key and keep it with you if working in a situation where another worker could start the truck.

8. Turn off master switch (if truck is equipped with master / night switch).
   a. Put lock and tag on master switch.

9. Bleed off any hydraulic or air pressure if applicable.

10. Test to verify zero energy (electrical-hydraulic-gravity).

TRUCK LOCKOUT PROCEDURE FOR SHOP SITUATIONS

1. Notify other affected employees.

2. Apply tractor parking (MAXI) brake.

3. Place wheel chocks.

4. Shut off engine.

5. Remove the key and keep it with you or in the shop lock box. Turn off master switch (if truck is equipped with master / night switch).
   a. Put scissor lockout hasp on master switch if more than one worker will be working the truck.
   b. Each worker working on the truck puts their personal lock and tag on hasp.

6. Bleed off any hydraulic or air pressure if applicable.

7. Test to verify zero energy (electrical-hydraulic-gravity).
## EXCAVATOR LOCK OUT

<table>
<thead>
<tr>
<th>Excavator Lockout - Tagout</th>
<th>Excavator Lockout - Tagout</th>
<th>Excavator Tagout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(One person working on machine)</strong></td>
<td><strong>(If more than one person working in machine)</strong></td>
<td><strong>For machine without master switch</strong></td>
</tr>
<tr>
<td><strong>Shut down procedure:</strong></td>
<td><strong>Shut down procedure:</strong></td>
<td><strong>Shut down procedure:</strong></td>
</tr>
<tr>
<td>1. Notify other affected employees.</td>
<td>1. Notify other affected employees.</td>
<td>1. Notify other affected employees.</td>
</tr>
<tr>
<td>2. Lower bucket to ground.</td>
<td>2. Lower bucket to ground.</td>
<td>2. Apply parking brake.</td>
</tr>
<tr>
<td>3. Shut down engine.</td>
<td>3. Shut down engine.</td>
<td>3. Lower bucket to ground.</td>
</tr>
<tr>
<td>5. Turn off master switch.</td>
<td>5. Turn off master switch.</td>
<td>5. Key cut and in pocket.</td>
</tr>
<tr>
<td>6. Put lock and tag on master switch.</td>
<td>6. Each worker attach personal lock and tag to scissor lockout hasp on master switch.</td>
<td>6. Put lockout tag initiated by all workers on ignition switch.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Start-up procedure:</strong></th>
<th><strong>Start-up procedure:</strong></th>
<th><strong>Start-up procedure:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Remove lock from master switch.</td>
<td>1. Each employee removes personal lock from scissor lockout hasp on master switch.</td>
<td>1. Each employee crosses off their initials on lockout tag when their work is completed</td>
</tr>
<tr>
<td>2. Start machine.</td>
<td>2. Start machine when all locks removed.</td>
<td>2. Start machine when all initials on tag crossed off.</td>
</tr>
</tbody>
</table>

![Lockout tag (front)](image1)  ![Lockout tag (back)](image2)  ![Scissor lockout hasp - with marked locks](image3)
# Feller Buncher Lockout

## Feller Buncher Lockout - Tagout

(If one person working on machine)

**Shut down procedure:**
1. Notify other affected employees.
2. Power off head.
3. Wait for saw to stop or stop against stump.
4. Lower head to the ground.
5. Shut down engine.
6. Set hydraulic lockout lever.
7. Turn off master switch.
8. Put on personal lock and tag on master switch.
9. Test to verify zero energy (electrical, hydraulic, & gravity).

**Start-up procedure:**
1. Remove personal lock from master switch.
2. Start machine.

## Feller Buncher Lockout - Tagout

(If two or more persons working on machine)

**Shut down procedure:**
1. Notify other affected employees.
2. Power off head.
3. Wait for saw to stop or stop against stump.
4. Lower head to the ground.
5. Shut down engine.
6. Set hydraulic lockout lever.
7. Turn off master switch.
8. Each worker attaches personal lock to scissor lockout hasp on master switch.
9. Test to verify zero energy (electrical, hydraulic, & gravity).

**Start-up procedure:**
1. Each employee removes own lock from scissor lockout hasp on master switch
2. Start machine when all locks removed.

## Feller Buncher Tagout

*For buncher without master switch*

**Shut down procedure:**
1. Notify other affected employees.
2. Power off head.
3. Wait for saw to stop or stop against stump.
4. Lower head to ground.
5. Shut down engine.
6. Key out and in pocket.
7. Put lockout tag initiated by all workers on ignition switch.
8. Test to verify zero energy (electrical, hydraulic, & gravity).

**Start-up procedure:**
1. Each employee crosses off their initials on lockout tag when their work is completed.
2. Start machine when all initials on tag crossed off.

---

**Lockout tag (front)**

**Lockout tag (back)**

**Scissor lockout hasp – with marked locks**
# LOG LOADER-HOECHUCK LOCKOUT

## Hydraulic Log Loader-Hoechuck Lockout - Tagout

(If one person working on machine)

### Shut down procedure:
1. Notify other affected employees.
2. Lower log grapple to ground.
4. Set hydraulic lockout lever.
5. Turn off master switch.
6. Put lock and tag on master switch.
7. Test to verify zero energy (electrical-hydraulic-gravity).

### Start-up procedure:
1. Remove lock from master switch.
2. Start machine.

## Hydraulic Log Loader Hoechuck Lockout - Tagout

(If more than one person working on machine)

### Shut down procedure:
1. Notify other affected employees.
2. Lower log grapple to ground.
4. Set hydraulic lockout lever.
5. Turn off master switch.
6. Each worker attach personal lock and tag to scissor lockout hasp on master switch.
7. Test to verify zero energy (electrical-hydraulic-gravity).

### Start-up procedure:
1. Each employee removes personal lock from scissor lockout hasp on master switch.
2. Start machine when all locks removed.

## Hydraulic Log Loader Hoechuck Tagout

For Machine without master switch

### Shut down procedure:
1. Notify other affected employees.
2. Apply parking brake.
3. Lower log grapple to ground.
4. Shut down engine.
5. Key out and in pocket.
6. Put lockout tag initialed by all workers on ignition switch.
7. Test to verify zero energy (electrical-hydraulic-gravity).

### Start-up procedure:
1. Each employee crosses off their initials on lockout tag when their work is completed.
2. Start machine when all initials on tag crossed off.

---

![Lockout tag (front)](image1)

![Lockout tag (back)](image2)

![Scissor lockout hasp – with marked locks](image3)
## LOG PROCESSOR LOCKOUT

**Log Processor Lockout - Tagout**

*(If one person working on machine)*

**CAUTION**

*THE HEAD IS ROBOTIC!*

**Shut down procedure:**
1. Notify other affected employees.
2. Lower head to ground.
3. Shutdown computer (See manufacturer's instructions).
4. Shut down engine.
5. Set hydraulic lockout lever.
6. Turn off master switch.
7. Put on personal lock and tag on master switch.
8. Test to verify zero energy (electrical-hydraulic-gravity).

**Start-up procedure:**
1. Remove personal lock from master switch.
2. Start machine.

---

**Log Processor Lockout - Tagout**

*(If more than one person working on machine)*

**CAUTION**

*THE HEAD IS ROBOTIC!*

**Shut down procedure:**
1. Notify other affected employees.
2. Lower head to ground.
3. Shutdown computer (See manufacturer's instructions).
4. Shut down engine.
5. Set hydraulic lockout lever.
6. Turn off master switch.
7. Each worker attaches personal lock and tag to scissor lockout hasp on master switch.
8. Test to verify zero energy (electrical-hydraulic-gravity).

**Start-up procedure:**
1. Each employee removes own lock from scissor lockout hasp on master switch.
2. Start machine when all locks removed.

---

**Log Processor Tagout**

*For processor without master switch*

**CAUTION**

*THE HEAD IS ROBOTIC!*

**Shut down procedure:**
1. Notify other affected employees.
2. Lower head to ground.
3. Shutdown computer (See manufacturer's instructions).
4. Shut down engine.
5. Key out and in pocket.
6. Put lockout tag initialed by all workers on ignition switch.
7. Test to verify zero energy (electrical-hydraulic-gravity).

**Start-up procedure:**
1. Each employee crosses off their initials on lockout tag when their work is completed.
2. Start machine when all initials on tag crossed off.

---

![Lockout tag (front)](image1)

![Lockout tag (back)](image2)

![Scissor lockout hasp - with marked locks](image3)
## WHEEL LOADER LOCKOUT

<table>
<thead>
<tr>
<th>Wheel Loader Lockout - Tagout</th>
<th>Wheel Loader Lockout - Tagout</th>
<th>Wheel Loader Tagout</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If one person working on machine)</td>
<td>(If more than one person working on machine)</td>
<td>For Machine without master switch</td>
</tr>
</tbody>
</table>

### Shut down procedure:
1. Notify other affected employees.
2. Lower log grapple to ground.
4. Set parking brake.
5. Turn off master switch.
6. Put lock and tag on master switch.
7. Test to verify zero energy (electrical-hydraulic-gravity).

### Start-up procedure:
1. Remove lock from master switch.
2. Start machine.

<table>
<thead>
<tr>
<th>Wheel Loader Lockout - Tagout</th>
<th>Wheel Loader Lockout - Tagout</th>
<th>Wheel Loader Tagout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shut down procedure:</td>
<td>Shut down procedure:</td>
<td>Shut down procedure:</td>
</tr>
<tr>
<td>1. Notify other affected employees.</td>
<td>1. Notify other affected employees.</td>
<td>1. Notify other affected employees.</td>
</tr>
<tr>
<td>2. Lower log grapple to ground.</td>
<td>2. Lower log grapple to ground.</td>
<td>2. Lower log grapple to ground.</td>
</tr>
<tr>
<td>4. Set parking brake.</td>
<td>4. Set parking brake.</td>
<td>4. Set parking brake.</td>
</tr>
<tr>
<td>5. Turn off master switch.</td>
<td>5. Turn off master switch.</td>
<td>5. Key out and in pocket.</td>
</tr>
<tr>
<td>6. Each worker attach personal lock and tag to scissor lockout hasp on master switch.</td>
<td>6. Each worker attach personal lock and tag to scissor lockout hasp on master switch.</td>
<td>6. Put lockout tag initiated by all workers on ignition switch.</td>
</tr>
</tbody>
</table>

### Start-up procedure:
1. Each employee removes personal lock from scissor lockout hasp on master switch.
2. Start machine when all locks removed.

### Images:
- Lockout tag (front)
- Lockout tag (back)
- Scissor lockout hasp with marked locks
Chock it

When working on wheeled equipment, set the maxi/emergency brake before exiting the cab. When inspecting or repairing the machine, use chocking blocks to prevent movement; if blocks are not available, and you have to still proceed to go under the truck, do not do so until you have put sufficient measures in place to effectively prevent the wheels rolling back.

This is critically important when your task requires you to be under the vehicle or between the vehicle and a solid object! Life or death!

Think it through

An upset condition is any event that is unplanned including a mechanical breakdown. Most incidents happen when there is an upset condition. Plan your work carefully before trying to fix the conditions that may lead to you going under the vehicle.

Other resources

Order stickers and posters to remind all workers to lock out and live:  
[http://www.bcforestsafe.org/node/2485](http://www.bcforestsafe.org/node/2485)

Safety Alert - "Chock it - Block it - Lock it" Immobilize your equipment:  
[http://www.bcforestsafe.org/node/1337](http://www.bcforestsafe.org/node/1337)

Integrated Trucking Log Book – Example log books that will help with pre and post trip mechanical inspections:  

More Info on Upset Conditions and RADAR:  
[http://www.bcforestsafe.org/node/1521](http://www.bcforestsafe.org/node/1521)