

# VLR SAFETY TAILGATE TALK

May 2016

*Subject: Control of Hazardous Energy*

Date: \_\_\_\_\_

*Know Your Equipment + Isolation Points + Procedures*

Location (garage, mm, etc...):

**Instructions:**

Safety Coordinators & Supervisors should use this Tailgate Talk as a guide for discussion during their safety meetings. The primary purpose of the safety meetings is to give crews the opportunity to discuss any safety related concerns they may have.

Once the meeting has concluded, the Presenter should have each employee sign this form and include their Employee ID# in the spaces below.

TGT Presenter: \_\_\_\_\_

Name	Employee
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“LOTO”. “Lockout” and “Tagout” are terms which describe procedures for preventing an injury or accident during the maintenance, repair or servicing of electrical and mechanical equipment and systems, by isolating workers from energy sources.

Lockout is the preferred method of isolating machines or equipment from energy sources to ensure the safety of equipment operators, maintenance personnel and others while work is in progress.

This procedure establishes minimum requirements for a Lockout/Tagout program in accordance with OSHA standards (29 CFR 1910.147). It shall be used to ensure that machines and equipment are either locked out, (and/or) tagged out, or out-of-service, before employees perform any work where the **unexpected energizing, start-up or release of stored energy could occur.**

Equipment needing repair and/or replacement, shall be de-energized, placed Out-of-Service and tagged as such.

**Protect yourself and others by following all safety, maintenance, and operational guidelines within the machinery/equipment’s owner/operator manual.**

**IMPORTANT DEFINITIONS:**

**Lockout (LO)**-Placement of a mechanical device (lock, for example) on a piece of equipment or switch to prevent that equipment from being operated or energized until the device is removed.

**Tagout (TO)**-Placement of a warning tag or sign on equipment or machinery to indicate that equipment cannot be operated until the tag is removed.

**Abandoned Lock(s)**-A lock or locks left on equipment/machinery by an individual who is unavailable when the equipment is ready to be placed back into service.

**Affected Employee/Personnel**-Employee/personnel who normally operates machinery or equipment on which service or maintenance is performed under Lockout/Tagout conditions or required to work in an area where such service or maintenance is performed. See Section 9.b of this Tailgate Talk for “Training” guidance.

**Authorized Employee**-Employee trained and designated to use Lockout/Tagout procedures. "Authorized" and "affected" employee may be the same, when the operator's duties include maintaining or servicing machinery or equipment which must be locked out and/or tagged out.

**Capable of Being Locked Out**-An energy-isolating device designed with an attachment hasp or integral part to which a lock can be affixed; or equipment or machinery with a built-in locking mechanism.

**De-Energized**-Disconnected from all energy sources and without stored energy.

**Energy-Isolating Device**- Mechanical device that physically prevents transmission or release of energy including, but not limited to the following:

- Manually-operated electrical circuit breaker disconnect switch
- Manually-operated switch by which circuit conductors can be disconnected
- Blocks to immobilize springs and hydraulic rams
- Pipe blanks

**Energy Source (potential and/or kinetic)**-Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravity, radiation, or other energy.

**Individual Lock**-A lock or locks assigned to an authorized employee responsible for maintenance, servicing, etc., which is identified with that employee only.

**Kinetic Energy**-Energy resulting from moving objects, such as released loads, uncoiling springs, and moving machinery. When these objects are released, their potential energy is converted to kinetic energy.

**Near Miss**-An unplanned event that did not result in injury, illness, or damage but had the potential to do so. Only a fortunate break in the chain of events prevented an injury, fatality or damage; close call.

**Normal Production Operation**-Use of a machine or equipment to perform its intended function.

**Other Employee/Personnel**-Works in the area where LOTO is being used.

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**Out of Service Tag (red tag)**-An attached “Out of Service” Tag indicates machinery/equipment taken out of service, unserviceable, and cannot be used until repaired or replaced. An “Out of Service” Tag shall be attached, properly signed, dated, the reason the equipment is no longer serviceable (maintenance required), and documented when returned to service. An “Out of Service” Tag shall not be used on equipment which is still electronically or mechanically connected to a power or process source.

**Potential Energy**-Stored energy that can be drawn upon to do work. Potential energy can be viewed as motion waiting to happen based on an objects position, such as energy found in elevated, suspended, compressed, or coiled materials. Potential energy can be converted to kinetic energy.

**Qualified Person**-A person who, by possession of a recognized degree, certificate of professional standing or extensive knowledge, training and experience, has successfully demonstrated this ability to solve or resolve problems related to the “Control of Hazardous Energy”.

**Service and/or Maintenance**-Workplace activities such as constructing, installing, modifying and maintaining or servicing machines or equipment including lubrication, cleaning, unjamming, minor adjustments or tool changes. During these activities, employees may be exposed to unexpected energizing or start-up of equipment, or the release of stored-up hazardous energy.

**Setting Up**-Work to prepare machinery or equipment to perform normal production operations.

**RESPONSIBILITIES:**

- Management shall establish, maintain, and approve specific Lockout/Tagout control procedures for all machinery and equipment.
- Only employees authorized by management shall Lockout and/or Tagout machinery or equipment.
- Authorized employees shall notify affected employees whenever a Lockout and/or Tagout is to occur and when equipment is placed back in service.
- Contact the VTrans Safety Manager with any questions. Don't guess your way through it.

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**MINIMUM REQUIREMENTS:**

Lockout is the **required** method of isolating machines/ equipment from the energy source when the energy source is capable of being locked out. No attempt shall be made to operate equipment which has been locked out and/or tagged out of service.

Whenever major replacement, repair, renovation or modification of machines/equipment occurs, energy-isolating devices shall be incorporated into the design.

Lockout/Tagout devices shall be singularly identified; shall be the only devices used for controlling energy; and shall not be used for other purposes.

Lockout devices shall be capable of withstanding the environment to which they are exposed. Tagout devices shall withstand exposure to weather and environment to avoid deterioration of the tag or the message from becoming illegible.

Lockout/Tagout devices shall indicate the identity of the employee(s) applying the devices(s).

**PROCEDURES (in steps):**

1. **ID Energy Sources:** Know the types and magnitude of energy associated with equipment. ID all energy sources feeding the equipment (including potential energy).
2. **Notify Others:** All affected employees/personnel shall be notified when a Lockout and/or tag will be used and why. The authorized employee shall know the type and magnitude of energy involved and understand the hazards.
3. **Shutdown Equipment:** Machinery or equipment to be locked out and/or tagged out shall be shut down by the normal procedure (stop buttons, on-off switch). The authorized employee shall apply a tag on the operator controls to indicate a Lockout and/or Tagout is in effect. Where there are no operator controls, a tag shall be applied at the energy-isolating device.
4. **Isolate Equipment:** The switch, valve, or other energy-isolating device(s) shall be operated to isolate the equipment from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or retrained by methods such as repositioning, blocking, bleeding, etc.

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**PROCEDURES (continued):**

5. **LOTO Equipment:** The energy-isolating devices with assigned individual lock(s) and/or location locks shall then be applied to prevent inadvertent operation. Employees who return to work on a locked out and/or tagged out piece of machinery or equipment, after being out of the area for a time, shall first verify that their individual locks or tags are still in place. If equipment is unable to be locked out, a tag shall be placed on the energy-isolating device.
6. **Release Stored Energy:** After all personnel are safely positioned or removed, the authorized employee shall determine whether the energy sources are disconnected by operating the push button or other normal operating controls to ensure the equipment will not operate.
7. **Verifying Isolation:** After the test is conducted, the operating control(s) shall be returned to the “neutral” or “off” position (de-energized state) after the test. If an employee is exposed to contact with parts of electric equipment or circuits which have been de-energized, a qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed to verify that they have been de-energized and to determine if any energized condition still exists as a result of inadvertently induced voltage. If the circuit to be tested is over 600 volts nominal, the test equipment shall be checked for proper operation immediately before and after the test. A lock and tag are required to be placed on all electrical isolation devices.
8. **Perform Servicing:** Complete required service work. Avoid anything that could potentially reactivate the equipment.
9. **Release from LOTO:** All locks, tags and devices removed by the same person who applied. Remove all tools from equipment area. Replace all guards. Verbally inform all “affected” and “other” employees that LOTO is complete. Ensure area is clear prior to restart.
10. **NOTE:** If more than one employee is required to work on locked out or tagged out equipment, each shall place his/her personal Lockout or Tagout device on the energy-isolating device(s). When a energy-isolating device cannot accept multiple locks or tags, a multiple Lockout or Tagout device (hasp) may be used. A single lock may be used to Lockout the machine or equipment with the key out of the lock and in a location where no one else will have access.

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**PROCEDURES (continued):**

11. **NOTE:** Location locks shall not take the place of individual employee locks.

**ABANDONED LOCKS:**

- Any job where a Lockout device or tag was left in place by an employee and the equipment/machinery must be returned to service without that same employee's involvement or authorization is referred to as an "abandoned lock". For example, a mechanic who was working on a locked out piece of equipment at the end of the day calls in sick, and the equipment he or she was working on needs to be placed back in service the next day.
- When the employee who first locked out the equipment returns to work, he or she shall verify that their individual lock is still in place or has been removed.
- Extra keys for each individual lock shall be maintained in a secure location with access limited to management. Before the lock is removed, a thorough inspection of the equipment shall be conducted.
- Abandoned locks shall be removed only by a supervisor or management using the extra key after the equipment or machinery has been thoroughly inspected by an authorized employee.
- Reasonable effort shall be made and documented as follows:
  - ◇ The employer has verified that the authorized employee (who applied the lock) is not onsite.
  - ◇ All reasonable efforts to contact the employee are made to inform them that the lock has been removed.
  - ◇ The employee is definitely informed of the removal of the lock upon their return to work.

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**CONTRACTOR PERSONNEL:**

**Construction Contracts:** Under the “Standard Specifications for Construction Book”, contractors are responsible for ensuring that their employees and subcontractors comply with all OSHA regulations, including Lockout/Tagout procedures.

**Other Contracts:** The Department often engages contractors to perform other than highway/bridge construction activity (for example, contract maintenance work, or work on building equipment systems, etc.). It is the responsibility of the contractor to have energy control systems in place and ensure that their employees comply with Lockout/Tagout procedures.

**ANNUAL INSPECTION:**

Annual inspections shall be conducted by authorized employees to review Lockout/Tagout procedures. Each location shall be responsible for conducting and documenting inspections. Documentation shall include employee names, dates of inspection and hazardous energy control procedures used.

**TRAINING:**

- Training shall be given to all authorized employees prior to their initial involvement with energy control procedures, including recognition of hazardous energy sources, types of energy, and control methods. Authorized employees shall be provided with a copy of the Safety Bulletin.
- Training shall be provided to all affected employees covering the purpose and use of energy control procedures.
- Retraining shall be provided whenever there is: a change in job assignment; change in procedure; there is a near miss/incident with injury; or if annual inspection identifies a deficiency.
- The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee’s name and dates of training.