SKILLSIGNAL™
Construction Safety & Compliance

TOOLBOX TALK

Before You Get Started: The Six Steps, and the Knowledge the First One Demands

TOPIC NO.	DURATION	AUDIENCE
LO-05	10 to 15 min	All Crew

OSHA REFERENCE 29 CFR 1910.147(d)(1) to (d)(6) · 29 CFR 1910.147(c)(4) · 29 CFR 1910.147(c)(7)

PROJECT / JOBSITE	DATE	PRESENTED BY

01 THE HOOK

START HERE

The temptation is to walk up to the machine, flip the disconnect, slap the lock on, and get to work. Fast, visible, feels like lockout. The standard puts one step in front of that, and it is the one that gets skipped: before you shut anything off, you have to know what you are shutting off. Every energy source. How much. Where it is stored. How each one gets isolated and released. A mechanical press has a flywheel that coasts for ninety seconds. A pump has a check valve holding pressure on the discharge side. A compactor has a spring-set brake. If you do not know that before the lock goes on, the lock goes on the wrong thing, and the machine teaches you the rest.

02 STEP ONE IS KNOWLEDGE

29 CFR 1910.147(d)(1), Preparation for shutdown: before an authorized or affected employee turns off a machine, the authorized employee **"shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy."** Three things. Type and magnitude (480 volts, 150 psi, a 2,000-pound bucket). The hazard (electrocution, a cylinder stroke, a crush). The method (which disconnect, which bleed valve, which block).

Where does that knowledge come from? Two places the standard requires. **Training** under **(c)(7)(i)(A)**: authorized employees must be trained to recognize hazardous energy sources, the type and magnitude on the site, and the methods of isolation and control. And the **written procedure** under **(c)(4)**: every machine with hazardous energy needs a documented procedure that spells out the steps for shutting down, isolating, blocking, securing, releasing stored energy, and verifying. The only exception to writing it down is a single-source machine that meets all eight conditions in (c)(4)(i), and almost nothing on a construction site qualifies.

03 THE SIX STEPS OF 1910.147(d)

STEP 1

PREPARATION FOR SHUTDOWN: (d)(1)

Pull the written procedure for this machine. Read it. Identify every energy source, active and stored, its magnitude, and its isolation point. Gather the locks, tags, blocks, and test equipment. **Notify affected employees** that lockout is about to happen (**(c)(9)**).

STEP 2

MACHINE SHUTDOWN: (d)(2)

Shut the machine down **by the normal stopping procedure**, in the order the procedure says. Turn it off at the controls first so you do not open a disconnect under load. An orderly shutdown prevents the extra hazard of a machine stopping mid-cycle.

STEP 3

MACHINE ISOLATION: (d)(3)

Physically operate every energy isolating device: open the disconnect, close the supply valves, set the blocks. **All of them.** A machine with electrical, pneumatic, and gravity sources gets three isolations, not one.

STEP 4

LOCKOUT DEVICE APPLICATION: (d)(4)

Each authorized employee puts **their own lock** on each isolating device, holding it in the safe or off position. Tags go where the lock would go, or on the lock. If more than one person is working, that is group lockout (LO-07).

STEP 5

STORED ENERGY: (d)(5)

Everything that is still loaded gets **relieved, disconnected, restrained, or otherwise rendered safe**: bleed the air, dump the hydraulics, lower the load, block the ram, let the flywheel stop, discharge the capacitors, vent the steam. If re-accumulation is possible, verify isolation **continuously** until the work is done.

STEP 6

VERIFICATION OF ISOLATION: (d)(6)

Before any work starts, **prove it**. Press the start button, then put the controls back to off. Read the gauge at zero. Test the circuit with a meter (and test the meter first). Try to move the part. The lock proves you did the steps. The test proves the steps worked.

04 THE THINGS THAT GET MISSED IN STEP ONE

⚡ CAPACITORS

Drives, welders, and controllers hold a charge after the disconnect opens. Wait the posted time, then test.

⚡ FLYWHEELS AND COASTING PARTS

Presses, grinders, and fans keep turning after power is cut. Wait until it stops, then confirm it is stopped.

⚡ VALVES THAT MUST BE OPENED

Closing the supply does not bleed the line. Some valves have to be opened to release trapped pressure.

⚡ SPRINGS AND CAMS

A spring under load and a cam parked at the top of its stroke both move when something lets go. Release or restrain them.

⚡ SECOND FEEDS AND BACKUPS

A second panel, a backup pump, a generator transfer switch, a battery. Every path to the machine is a separate isolation.

⚡ GRAVITY

Anything raised. The hydraulic lock is not a block. Lower it or crib it before anyone goes under.

⚠️ NO PROCEDURE, NO TRAINING, NO WORK

If there is no written lockout procedure for the machine, or you have not been trained on it, you are not an authorized employee for that machine today, no matter how many years you have in the trade. Working on it anyway is the shortcut the standard was written to stop. Get the procedure, get the walkthrough from the competent person, and then lock it out.

05 WHY IT MATTERS

[JOBSITE]

FOR THE CREW

Written, machine-specific procedures are the first thing an inspector asks for and the thing most often missing. A procedure that names every energy source and every isolation point, kept where the crew can read it, is the backbone of the program and of the annual audit under (c)(6).

[INDIVIDUAL]

FOR YOU

The six steps are not paperwork. Step one is the five minutes that tell you the press has a flywheel and the pump has a check valve. Skipping it means learning those facts with your hand in the machine.

[HOME]

FOR LIFE OFF-SITE

Same six steps on a home project: know what feeds it, shut it down, isolate it, lock the breaker, bleed or block what is stored, test before you touch. It takes two minutes longer than guessing.

06 TODAY'S DRILL

TODAY'S DRILL **WALK THE SIX STEPS ON PAPER**

Take the written lockout procedure for one machine in your area and walk it next to the machine without touching anything. At each of the six steps, point to where it happens: the controls, each isolating device, the lock points, the bleed or block for stored energy, and the test. If the procedure skips an energy source, names a device that does not exist, or does not say how to verify, mark it up and give it to the foreman. That is the annual inspection, done early.

07 CREW DISCUSSION

Take 2 minutes. Pick one.

1. Which machine on this site do you know has stored energy that the lockout procedure does not mention?
2. When was the last time you tested for zero energy after locking out, before putting your hands in? Every time, or when it felt necessary?
3. Who here has been handed a lock and told to lock something out without ever being shown the procedure?

08 ATTENDANCE & SIGN-OFF

All attendees confirm they participated in this Toolbox Talk and understand the content covered.

NAME (PRINT)	SIGNATURE

SUPERVISOR SIGNATURE

_____ Date: _____

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