EMPLOYEE SAFETY NEWSLETTER

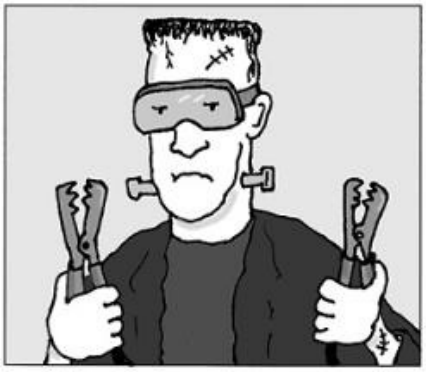
February 2019

What is lockout/tagout?

Lockout/tagout (LOTO) is a practice to prevent injury due to unexpected start-ups or the release of stored energy in equipment during a maintenance or service activity. The item is either locked to prevent the operation of the machine or tagged to provide warning to not start the machine. If you see locks or tags on equipment, leave the devices in place and wait for the *authorized employee* (i.e., the person designated to LOTO equipment in order to perform service or maintenance) to communicate that it's ready to use again.

If you operate equipment, you should understand the steps *authorized employees* follow to properly implement LOTO before performing service or maintenance. The *authorized employee*:

1. Notifies affected employees of the planned lockout or tagout;
2. Shuts down the equipment;
3. Isolates the equipment from energy sources;
4. Applies the LOTO energy isolation device to prevent unexpected start-up;
5. Releases all stored energy from the equipment, such as steam or hydraulic pressure lines, or restrains it from activating (for instance, to prevent movement of rotating parts); *and*
6. Tests the machine by restarting it to make sure the power source has really been isolated and the equipment actually de-energized.



Wear eye protection when jump starting.

Automobile battery safety

Ordinary automobile batteries appear harmless, so many people are unaware of their potential hazards. The result is an increasing number of injuries related to the misuse or abuse of batteries. Many of these injuries can be prevented by recognizing the hazards associated with batteries:

- The electrolytic agent in battery cells is diluted sulfuric acid that can burn exposed skin and eyes.
- When a battery is on charge, hydrogen gas can build up in the air space near the cap of each cell. Unless the gas is allowed to escape, a spark can ignite the trapped gas and explode the battery.

An important rule when working under the hood of a vehicle's engine compartment or on the ground under the engine is to keep metal tools away from the battery. The spark of metal against metal or from accidental grounding by a tool can ignite the battery's hydrogen gas. For the same reason, never light a match near a battery, and never smoke when working near one.

Charging the battery

Charging a battery builds up hydrogen gas that is ignitable. So, all charging must be done with battery caps removed and in the open air or in a well-ventilated area. First, connect the alligator clips of the charger on the battery, and then plug the charger into the wall outlet.

Refilling the battery

When refilling a battery with electrolyte, do not overfill the battery cells. Use distilled or demineralized water when topping off battery cells with low levels caused by normal electrolysis. Here's what you should do if you spill any electrolyte:

- Wipe it up immediately with rags or disposable wipes, being careful to protect exposed skin and eyes.
- Discard the wipe-up rag or paper where others will not be exposed to it.
- Small acid spills can be neutralized using bicarbonate soda, but all residue must be properly disposed of.

Replacing the battery

Never install a battery in a vehicle until the battery has been inspected for weakened posts, split sides, or cell leaks. The vehicle's battery frame must not be too rigid, or the battery walls can be weakened or sprung, allowing acid to leak.

You should never work around a battery that has a buildup of dried or dust-like corrosive acid until you have safely removed the buildup. The dust is as potentially harmful as the electrolyte and can dislodge and blow into your face or fall onto anyone working under the vehicle. Goggles or other eye protection is recommended to guard against dust or electrolyte.

There are special carrying straps for batteries to gently move and lift and help avoid bumping or dropping. Mishandling of a battery can lead to acid or hydrogen gas leaks later on that shorten its life and can be hazardous to anyone

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Shelter in place

There are several types of emergencies when it is safer for employees to stay in the facility—to "shelter in place"—rather than to evacuate the building. These emergencies include hurricanes and tornadoes, a chemical explosion in a nearby facility, and a chemical spill from a derailed tank car.

Sheltering in place during a chemical spill or an accidental release is to avoid exposure to airborne chemicals, which can be inhaled or absorbed through your skin. When a warning of a chemical spill or release is issued, you must seek inside shelter and await instructions from your emergency coordinator or a designated official.

To avoid exposure to the chemicals, take the following steps:

- Close all windows and exterior doors.
- Close blinds and shades if there's danger of an explosion outside.
- Turn off all heating, ventilation, and air-conditioning (HVAC) systems; fans; and heat pumps.
- Do not use the elevators.
- In the shelter location, use wet towels and duct tape to seal gaps in doors, and use plastic sheeting and duct tape to seal the windows and all HVAC ducts from the inside.
- Drink only bottled water in case faucet water is contaminated.

Automobile battery safety: Quiz

1. Batteries contain ____ acid, which can burn unprotected skin and eyes.

   A. Hydrochloric
   B. Sulfuric
   C. Acetic

2. The dried dust-like buildup on a battery can be harmful, like the acid contained inside.

   A. TRUE
   B. FALSE

3. Charging a battery causes which of the following?

   A. The battery shrinks.
   B. The battery leaks.
   C. Hydrogen gas is produced, which can ignite.

4. When working on a vehicle, you must be careful NOT to do which of the following?

   A. Touch metal tools to the battery.
   B. Touch the battery with your hand.
   C. Refill the battery.

Answers. 1. B. Sulfuric. In car batteries, which are lead-acid batteries, the reaction of lead and sulfuric acid electrolyte produces a voltage. **2. A. TRUE.** The dried dust-like buildup on the battery is corrosive, and you should wear eye protection around it. **3. C. Hydrogen gas is produced, which can ignite.** Hydrogen gas can build up in the air space near the cap of each cell. If the gas is trapped, a spark can ignite it and explode the battery. **4. A. Touch metal tools to the battery.** Touching a metal tool to any metal on the battery may cause a spark, which could ignite the hydrogen gas. This is also why you should never smoke or light a match near a battery.

Be aware of pinch points

A pinch point is a place where a part of your body can get caught between two objects. Pinch point injuries can range from minor pain to lacerations, fractures, amputations, or even death. To avoid injury, it is important that you perform a prework inspection to make yourself aware of the potential pinch points around you, even if they are not labeled or guarded. Always ensure that you are properly trained on the machinery you are operating, and maintain alertness while operating it—never take shortcuts. The pinch point situations covered by OSHA regulations include the following:

- Between moving machine parts
- Between moving and stationary parts
- Between moving machine parts and the materials being processed

On many types of machinery, you will find OSHA-required guards that act as barriers between you and pinch points. These are installed for your safety; never remove or disable these guards.

While the consequences may not be as severe as pinch point injuries from industrial machinery, many pinch points are lurking around your home. These can include:

- Slamming fingers in doors (including sliding closet doors, shower doors, and vehicle doors), drawers, or cupboards.
- Placing heavy items on a shelf or floor. Take care to slide the items in place so as not to drop them on your hands or feet. For the heaviest items, have someone assist you.

Pinch points are all around you, so take care to identify them and exercise caution. Note that while pinch points refer to places your body can get caught, items on your body such as clothing, jewelry, and hair can also get tangled in a pinch point.

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