

Toolbox Talks 2

071: Unsafe Conditions: Lockout/Tagout

Discussion leader duties for this session:

Review your lockout/tagout procedures.

What this Safety Talk covers:

This Safety Talk addresses unsafe conditions that may exist when putting equipment under lockout/tagout or when working under lockout/tagout protection.

Discussion notes:

Background

Lockout/tagout programs are supposed to remove dangerous energy from equipment. Yet, people are still electrocuted. Fortunately, the danger signs are easy to spot.

Unsafe conditions in lockout/tagout

- A disconnect is mounted such that there is insufficient room to operate it with your left hand while standing to the right of it. A disconnect so mounted puts the operator directly in the blast path. Contact your foreman to put in a work request to have this disconnect re-mounted so it can be used as intended.
- Fasteners are missing in panel covers or breaker cubicles. The blast protection integrity of these enclosures is compromised. All covers need to be completely installed before you operate a breaker.
- Uncontrolled drawings. If the drawing you're using doesn't have a control stamp on it, you can't rely on that drawing as being up to date. It's an "information only" drawing, until you verify it's current. Don't risk your life on it. If this is the only drawing available to you, contact your foreman for a known current drawing.
- Outdated drawings. Where a controlled drawing system exists, drawings routinely reach their expiration date. Check the dates on your drawings. Replace any that have expired.
- Incomplete drawing sets. You may need to isolate energy sources other than electrical ones, especially if you are working on (or installing) production equipment or controls. If your work includes more than electrical infrastructure, walk down the system and look for mechanical springs, pneumatic circuits, gas cylinders, and hydraulic cylinders that may interact with the controls or equipment you're working on. Obtain the necessary drawings.
- Untagged locks or tags without locks. If you see either condition on a job site, the site has a lockout/tagout compliance problem. Report this to your foreman, for followup with the site safety administrator. Check your locks and tags throughout the day, to ensure they haven't been tampered with.
- Locks on locks. When you see one lock passed through another lock, this is a sign of either poor compliance or an inadequate lockout/tagout program. Each lock must prevent operation of the mechanism. If only one lock stops the mechanism, the others are there merely for show. Put multiple locks on a multi-lock hasp, not through each other. The hasp prevents operation. The locks keep the hasp from opening.
- Unlockable devices. This is common in small distribution panels. Most lockout/tagout programs allow for this, but it's still an unsafe condition. Work on the affected circuits using "hot work" rules.

Review and discussion

1. How should a disconnect be mounted, and what should you do if it's not

mounted that way?

2. Why is it a problem if even one screw is missing from a breaker panel cover?

3. If a molded case breaker casing is cracked, can you still proceed with lockout/tagout? *[Note to Presenter: No. That device is defective and cannot be counted on to interrupt the circuit. Furthermore, that device poses a high risk of shock, arc flash, and arc blast. Before any work can be done on the circuit for that breaker or even in the panel where the breaker is located, that breaker must be replaced.]*

4. What danger is posed by using uncontrolled drawings?

5. If there's no controlled drawing system for this job, how can you ensure the drawings you are using reflect the actual system you're working on?

6. If you're working under a controlled drawing system, what should you always look for on each of your drawings? Why?

7. Why would you need more than just the electrical drawings if you are wiring in a new control panel on a new stamping machine?

8. If you see untagged locks or tags without locks, what does this indicate? What should you do?

9. If you see locks on locks, what is this a sign of? What should you do? What is the correct way to put multiple locks on a single device?

10. How should you proceed in a situation where devices are only tagged out, not locked out, because they are unlockable? *[Note to Presenter: This problem has been addressed for most unlockable devices today, with products available at most electrical supply houses. Rather than using “work hot” methods, it may be more cost-effective to purchase some of these products. It is certainly safer.]*

Participant's Signature and Date

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