



Lockout / Blockout

Failure to lockout and blockout machinery before working on it is a major cause of serious injury, amputations, and death in California.

Workers are electrocuted---or lose fingers, hands, arms---or suffer severe crushing injuries--- because machinery is inadvertently turned on while it is being maintained, repaired, adjusted, set-up, or cleaned. Additionally, actions related to unjamming machinery and equipment contribute to a large number of accidents. Electrocution hazards are addressed in the Electrical Safety Orders.

Summary of Safety Order [3314](#)

Hazardous Energy Control Procedures Employers must develop a hazardous energy control procedure when employees are engaged in the cleaning, repairing, servicing, setting-up or adjusting of machinery or equipment. Separate procedural steps must be developed for each piece of equipment unless like equipment is essentially the same. Employees involved in these activities must be trained on these procedures and on related hazards.

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During machine servicing operations, the power source must be de-energized or disengaged and the moveable parts of the machine locked or blocked to prevent movement. Potential power sources might include hydraulic, pneumatic, chemical, electrical, thermal, mechanical (including springs or gravity), or other hazardous energy sources.

If you have to be able to move parts of a machine in order to service it, your employer must provide you with extension tools or other means of protection, and thoroughly train you in their safe use.

If the machine you are working with has lockable controls, lock them out or seal them in the off position, tag them. If the machine doesn't have lockable controls, de-energize or disconnect it from the power source and place accident prevention signs or tags. Your employer has a supply of accident signs or tags, padlocks and seals.

Also be aware that some accidents occur when control switches short out and the machine restarts. Machines

should be de-energized at the power source and not just shut off at the controls or emergency stop.

If you work on a repetitive process machine that requires power to maintain indexing, special requirements have to be met when you are servicing, setting-up or testing the machine. The operating station must be under the control of a qualified worker who is in constant communication with the servicing worker, or who keeps that person in sight at all times. When the operator has to leave the operating station to install tools, machine parts that could move rapidly must be individually locked out. When repair procedures require adjustment or replacement of parts, de-energize the machine and disconnect it from the power source.

Discussion Questions

- ◆ Do you have any questions about how to lock out or block out the machinery in this shop?
- ◆ Are there times when you aren't sure whether to lock out or block out?
- ◆ When are workers most likely to fail to lock out or block out the machinery?
- ◆ How can the requirements of safety order 3314 be enforced in this shop?

Resources

Requirements for working on energized electrical systems are prescribed in Title 8, California Code of Regulations, Sections 2320.9 or 2940.

Title 8, California Code of Regulations can be reviewed at: <http://www.dir.ca.gov/samples/search/query.htm>

Publication: *Lockout/Blockout* can be obtained from the Cal/OSHA publications website <http://www.dir.ca.gov/dosh/puborder.asp> or obtained from a Cal/OSHA District Office.

Note: The information provided is not meant to be either a substitute for or legal interpretation of the occupational safety and health regulations. Readers are cautioned to refer directly to Title 8 of the *California Code of Regulations* for detailed information regarding the regulation's scope, specifications, and exceptions and for other requirements that may be applicable to their operations.