



Instructor Guide

Lockout

Topic Overview (why the topic is important to the students)

Workplace injuries can be caused by unexpected energization or start-up of machines or equipment, or release of stored energy. The purpose of de-energization and lockout is to prevent the release of energy that could cause injury or death. A lock or locks are used to make sure that equipment is not accidentally or inadvertently turned on while workers are performing maintenance on it. Maintenance is any work performed to keep machinery or equipment in a safe operating condition. This includes installing, repairing, cleaning, and lubricating the equipment, as well as clearing obstructions to the normal flow of material.

Demonstration and Discussion Topics

- **Discuss** the types of equipment in the shop that require lockout and the types of lockout used, such as locks on plugs, retained keys, and circuit breaker tags.
- **Discuss** how lockout injuries can occur, and the types of injuries – electrocution, burns, cuts, bruises, crushing, amputation and death.
- **Tour the shop** with the students, pointing out these hazards.
- **Distribute** the student handout.
- **Review** the safety tips.
- **Explain** what can be done in the workplace to minimize the risk of injuries from failing to lockout (e.g., written procedures, lockout clearly marked).
- **Make it real.** Tell at least two stories of injuries from your experience, or use the following examples:
 - A worker was operating a table saw with a self-feeding mechanism. The worker unplugged the machine, and attempted to adjust the height of the feed rollers. The saw blade had not stopped rotating, and two of the worker's fingers were amputated.
 - A worker was using a socket wrench to adjust the end stop of the fingerjoint shuttle, when the machine cycled, and crushed his finger. The machinery had not been locked out.
- **Discuss** the attitude that “it won't happen to me”. Remind them that an injury can and will happen if they take shortcuts or are careless.
- **Emphasize** that there are different lockout procedures for different types of equipment – students should never operate power, hydraulic or pneumatic equipment if they don't know the procedure for lockout.



Lockout – page 2

- ❑ **Instruct** the students to identify and report any safety concerns about lockout.
- ❑ **Answer** any questions or concerns they might have.
- ❑ **Set a good example** by working safely at all times.

Resources

- ❑ Lockout (available in English, Chinese, Punjabi, Spanish and Vietnamese)
http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/lockout.pdf
- ❑ Lockout for Woodworking audio slide show
<http://www2.worksafebc.com/Portals/SmallBusiness/SafetyforBusiness.aspx?ReportID=34411>
- ❑ Lockout/Tagout Standard
<http://www.ehs.utoronto.ca/Assets/ehs3/documents/LockoutStd.pdf>