

# **Electrical Safety**

## **General Company Policy**

The purpose of this program is to inform interested persons, including employees, that Whitworth Tool Inc. is complying with the OSHA Electrical Safety Standard, Title 29 Code of Federal Regulations 1910.333, by determining that this workplace needs written procedures for preventing electric shock or other injuries resulting from direct/indirect electrical contacts to employees working on or near energized or deenergized parts. This program applies to all work operations at Whitworth Tool Inc. where employees may be exposed to live parts and/or those parts that have been deenergized.

Ray Stewart/EHS Coordinator has overall responsibility for coordinating safety and health programs in this company. Ray Stewart is the person having overall responsibility for the Electrical Safety Program. Ray Stewart will review and update the program, as necessary. Copies of the written program may be obtained from Ray Stewart in Safety. Under this program, our employees receive instructions in the purpose and use of energy control procedures, as well as the other required elements of the Control of Hazardous Energy standard. This instruction includes the deenergizing of equipment, applying locks and tags, verifying deenergization, and equipment reenergizing.

If, after reading this program, you find that improvements can be made, please contact Ray Stewart. We encourage all suggestions because we are committed to creating a safe workplace for all our employees and a successful electrical safety program is an important component of our overall safety plan. We strive for clear understanding, safe work practices, and involvement in the program from every level of the company.

## **Hazard Analysis Report**

To determine areas of Whitworth Tool Inc. that need to be included in the Electrical Safety Program, Ray Stewart has conducted a hazard analysis of our workplace. This analysis located in EHS Office, has provided us with information identifying which departments have equipment using electricity, various types of wiring installations, and the types of employee functions that must be covered by the Electrical Safety Program. The departments/areas of our company identified as having electrically operated equipment and/or wiring installations are all areas located at Whitworth Tool Inc.

Electrically operated equipment that must be deenergized before work can be done on it and where it is located includes CNC machines, manual operated machines, powered industrial trucks, aerial lifts, and presses.

Employees of our company who are qualified to work on, near, or with energized electric circuits and equipment are Maintenance Team members.

A qualified person is defined as one familiar with the construction and operation of the equipment and the hazards involved. He or she has training in avoiding the electrical hazards of working on or near exposed energized parts.

Whether an employee is considered to be a “qualified person” will depend upon various circumstances in the workplace. It is possible and, in fact, likely for an individual to be considered “qualified” with regard to certain equipment in the workplace, but “unqualified” as to other equipment. (See 29 CFR 1910.332(b)(3) for training requirements that specifically apply to qualified persons.)

An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

Employees working on, near, or with energized electric circuits and equipment who have limited knowledge of electrical circuitry are Maintenance Team members and outside contractors.

An unqualified person is one who has little or no training in avoiding the electrical hazards of working on or near exposed energized parts.

## **Training Program**

Every employee at Whitworth Tool Inc. who faces the risk of electric shock from working on or near energized or deenergized electrical sources receives training in electrical related safety work practices pertaining to the individual's job assignment.

The goal of our electrical safety training program is to ensure that all employees understand the hazards associated with electric energy and that they are capable of performing the necessary steps to protect themselves and their coworkers.

Our electrical training program covers these basic elements:

- Lockout and tagging of conductors and parts of electrical equipment.
- Safe procedures for deenergizing circuits and equipment.
- Application of locks and tags.
- Verification that the equipment has been deenergized.
- Procedures for reenergizing the circuits or equipment.
- Other electrically related information which is necessary for employee safety.

In our facility, all the persons working on or near energized or deenergized electric sources are considered “qualified” to work safely with electrical energy and have received the appropriate training and certification to do so. In addition to the basic training elements, our “qualified” employees are trained in the skills and techniques necessary to identify exposed live parts, determine nominal voltages, and clearance distances and corresponding

voltages. This group of employees has also received additional training that includes Lockout/Tagout for Authorized employees. Some have also received CPR/AED/First Aid Certification.

This question is asking for training elements beyond what is required by 29 CFR 1910.332(b)(3). For example, you might include training in first aid and CPR. For your information, 1910.332(b) requires that qualified employees be trained:

- In and familiar with any electrically-related safety practices required by 1910.331 through 1910.335;
- In any other electrically-related safety practices which are necessary for their safety;
- In the skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment;
- In the skills and techniques necessary to determine the nominal voltage of exposed live parts; and
- In the clearance distances specified in 1910.333(c) and the corresponding voltages to which the qualified person will be exposed.

For the purposes of 1910.331 through 1910.335, a person must have the training required by 1910.332(b)(3) of this section in order to be considered a qualified person.

Qualified persons whose work on energized equipment involves either direct contact or contact by means of tools or materials must also have the training needed to meet 1910.333(c)(2).

The format we follow for our training program is Classroom training and on-the-job training.

According to 29 CFR 1910.332(d), training must be of the classroom or on-the-job type. The degree of training provided must be determined by the risk to the employee. Typical occupational categories or employees facing a higher than normal risk of electrical accident include:

- Blue collar supervisors
- Electrical and electronic engineers
- Electrical and electronic equipment assemblers
- Electrical and electronic technicians
- Electricians
- Industrial machine operators
- Material handling equipment operators
- Mechanics and repairers
- Painters
- Riggers and roustabouts
- Stationary engineers
- Welders

Workers in these groups do not need to be trained, if their work or the work of those they supervise does not bring them or the employees they supervise close enough to exposed parts of electric circuits operating at 50 volts or more to ground for a hazard to exist.

The procedures we follow when training new employees who will be working on or near electrical equipment or circuitry are Electrical Safety Classroom Training and Lockout/Tagout for Authorized Employees. When changes involving electrical elements occur in our company, we provide additional employee training to ensure the safety of all affected workers.

Ray Stewart conducts the electrical safety training for all employees. Every employee who participates in the Electrical Safety Program receives a certificate which they sign verifying that they have completed the course, that they understand the information presented, and that they will follow all company policies and procedures regarding electrical safety. These signed certificates of training as well as all training materials and documentation are kept by Ray Stewart in Safety.

### **Lockout and Tagging Program**

It is a Whitworth Tool Inc. policy that circuits and equipment must be disconnected from all electric energy sources before work on them begins. We use lockout and tagging devices to prevent the accidental reenergization of this equipment. These lockout and tagging procedures are the main component of our electrical safety program. The safety procedures that make up our lockout and tagging program include these elements:

Deenergizing circuits and equipment. We disconnect the circuits and equipment to be worked on from all electric energy sources and we release stored energy that could accidentally reenergize equipment.

- **Application of locks and tags.** Only authorized employees are allowed to place a lock and tag on each disconnecting means used to deenergize our circuits or equipment before work begins. Our locks prevent unauthorized persons from reenergizing the equipment or circuits and the tags prohibit unauthorized operation of the disconnecting device.
- **Verification of deenergized condition of circuits and equipment.** Prior to work on the equipment, we require that a “qualified” employee verify that the equipment is deenergized and cannot be restarted.
- **Reenergizing circuits and equipment.** Before circuits or equipment are reenergized, we follow these steps in this order:
  - A “qualified” employee conducts tests and verifies that all tools and devices have been removed.
  - All exposed employees are warned to stay clear of circuits and equipment.
  - Authorized employees remove their own locks and tags.
  - We do a visual inspection of the area to be sure all employees are clear of the circuits and equipment.

In addition to these lockout and tagging elements, we Enter additional lockout and tagging procedures.

Maintenance team members are the persons trained and authorized to deenergize, verify, and reenergize electric circuits and equipment in our company.

Lockout/Tagout must be performed by a qualified person.

### **Enforcement**

Constant awareness of and respect for electrical hazards, and compliance with all safety rules are considered conditions of employment. Supervisors and individuals in the Safety and Personnel Department reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

### **Appendix**

We have attached to this plan any lists, samples, or procedures we thought would ensure better understanding of our written program.