

Tools for Life – Weekly Health & Safety Meeting



Home Healthy - Home Safe

Date: August 2022

Understanding “Arc Flash”

Simply put, an arc flash is a phenomenon where a flashover of electrical current leaves its intended path and travels through the air from one conductor to another, or to ground. The results are often violent and when a human is near the arc flash, serious injury and even death can occur.

Arc flash can be caused by many things including:

- Dust
- Dropping tools
- Accidental touching
- Condensation
- Material Failure
- Corrosion
- Faulty Installation

Three Factors determine the severity of an arc flash injury:

- Proximity of the worker to the hazard
- Temperature
- Time for circuit to break

Because of the violent nature of an arc flash exposure when an employee is injured, the injury is serious – even resulting in death. It’s not uncommon for an injured employee to never regain their past quality of life. Extended medical care is often required, sometimes costing in excess of \$1,000,000.

Understanding the hazard is an important part in protecting oneself from unexpected release of energy involved in an arc flash situation. Workers shall not open electrical cabinets or perform any electrical work without proper training and protections in place. Workers should minimize work activities around open electrical cabinets and any live switch gear operations.

HEALTHY OR SAFETY REMINDER: Take electrical safety home! Nearly 4000 non-fatal injuries occur annually in households with an additional 200 deaths. Most common causes include faulty wiring, electrical cords, and improperly grounded power tools including power washers and vacuums.

Discussion Points/Quiz Questions:

1. What are the common causes of arc flash?
2. What is the primary source of injury from arc flash?
3. What are the three factors in the severity of an arc flash injury?