

BASIC MAINTENANCE OF TOOLS, EQUIPMENT AND PARAPHERNALIA

To ensure that your electric tools work when you need them, you must take proper care of them. A good routine of maintenance for your tools is one thing that you can do to make sure that the tool you need is working when you need it.

1. **Clean out the Dust.** To make sure that your electric tools are ready to go when you are, keep them clean and free of dust. Spend some time to clean out the dust every once in a while on your tools while they are inactive in storage.



2. **Check the Cords.** Look for tear/cut insulator on the power cords on your electric tools. This will ensure that your electric tool can get the power that it needs to function without an accident.



3. **Use the right tool correctly.** Use tools correctly and for their intended purposes. Follow the safety directions and operating procedures recommended by the manufacturer.

When working on a circuit, use approved tools with insulated handles.



4. **Protect your Tools.** Keep tools and cords away from heat, oil, and sharp objects. These hazards can damage insulation. If a tool or cord heats up, stop using it. Report the condition to a supervisor or instructor immediately.



5. **Use double-insulated tools** - Portable electrical tools are classified by the number of insulation barriers between the electrical conductors in the tool and the worker.



6. **Storing Your Tools-** Keep your electric tools stored in their original cases and containers. This will keep them free of dust and dirt while they are not being used.



Note: proper care of your electric tools is the key to making sure that they last for many years

B. Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) are gadgets to protect workers from injury or illness caused by having contact with the dangers/hazards in the workplace whether they are chemical, biological, radiation, physical, electrical, mechanical and others.

These are the common Personal Protective Equipment gadgets:



Hard Hats/ Helmets



Gloves



Goggle



Mask



Work boots



Pants

Pictures of electricians working using Personal Protective Equipment



Pictures of Linemen's working using Personal Protective Equipment



REMEMBER

1. Personal protective equipment should be taken care of as of the other tools and equipment. Wipe your helmets, gloves, safety shoes before keeping it.
2. It should also be cleaned, kept in proper tool rack/cabinet.
3. It should be stored in dry places so that it will not have mold build-up.
4. Over-all suits should be washed regularly so that perspirations and other dirt will be washed clean.

A **lubricant** is a substance introduced to lessen **friction** between moving surfaces. It may also transport external particles. The property of reducing friction is known as **lubricity**.

Types and Uses of lubricants

Anti-rust lubricant spray:

- loosen rusted part
- cleans and protect o drives out moisture
- stops squeaks o free sticky mechanisms



Wire Pulling Lubricant:

- does not damage insulation
- cling to wire and dries to a slippery film
- suitable for use with wire or cable covered with rubber (t, thw, thhn, etc)



All Purpose Anti Rust Lubricant:

- anti-rust
- lubricating
- rust removal
- decontamination
- conductance



Lubricant Oil and Engine Oil:

- lubricating the gear
- cleans and protect
- drives out moisture



Silicon Lubricant:

- heat stable
- lubricates
- protects
- reduces friction
- water repellent



Reminders

A good lubricant possesses the following characteristics:

- High boiling point.
- Low freezing point.
- High viscosity index.
- Thermal stability.
- Corrosion prevention.
- High resistance to oxidation.

Types and Kinds of Cleaning Solvents

Solvent is a component of a solution that dissolves solute and is usually present in large proportion or amount. It can be classified as **polar** and **nonpolar**. Polar solvents are solvents which dissolve/are soluble in water; while nonpolar solvents are solvents which do not dissolve/are insoluble in water.

Solvents are usually used for cleaning in workshops. They are water, gasoline, kerosene, thinner and detergent soap.

The table below shows the kinds of cleaning solvent based on their solubility in water.

Cleaning Solvents	Solubility in Water	Polar	Nonpolar
a. water	soluble	x	
b. gasoline	insoluble		x
c. kerosene	insoluble		x
d. thinner	insoluble		x
e. detergent soap	soluble	x	

Uses of Cleaning Solvents

Cleaning Solvents	Uses
Gasoline	Wash greasy tools/equipment.
Kerosene	Remove dust, grease oil, paint, etc.
Thinner	Remove spilled paint on the floor, walls and tools.
Water	Wash dust in the floor, walls, etc.
Detergent Soap and water	Wash/clean benches, tables, cabinets, etc.