CHECKING CONDITION OF TOOLS EQUIPMENT AND PARAPHERNALIA

Checking the condition of tools, equipment and paraphernalia requires to be familiar with the different classification, purpose and job requirement to apply the proper checking and maintenance.

Classification of Tools and Equipment

A **tool** is a device that can be used to produce an item or accomplish a task, but that is not consumed in the process. It can be considered as extension of the human hand thus increasing speed, power, and accuracy and on the other hands **equipment** includes any machine powered by electricity.

1. **Hand tools** are tools manipulated by hands without using electrical energy such as: puller, hacksaw, pull-push rule, pliers, hammer, and others.
2. **Machine/Power tools** are tools manipulated by our hands and with the use of electrical energy such as: electric drill, grinding wheels, vacuum cleaner and others.
3. **Pneumatic tools** are tools or instruments activated by air pressure. Pneumatic tools are designed around three basic devices: the *air cylinder*, the *vane motor*, and the *sprayer*.

A. Hand tools

They include screwdrivers, hammers, pliers, wrenches and pullers.

1. **Screwdrivers** are used to drive, or turn screws. The common type has a single flat blade for driving screws with slotted heads. The other type has the cross slotted head.

1. **Hammers** are mostly used tools in the shop. They should be gripped at the end of the handle.
2. **Pliers** are specified types of adjustable wrenches. The two legs move on a pivot so that items of various sizes can be gripped.
3. **Wrenches** are used to turn screws, nuts and bolts with hexagonal heads. —Hexagonall means six-sided. A variety of wrenches are used in the shop.
4. **Pullers** are used to remove gears and hubs from shafts, bushings from blind holes, and cylinders' liners from the engine blocks.

B. Machine/Power Tools

1. **Electric drill** has an electric motor that drives a chuck. The chuck has jaws that can be opened and then closed to grip a drill kit.

2. **Grinding tool** can be either bench-mounted or installed on a pedestal. They may either have a grinding wheel, view wheel, or two grinding wheels.

3. **Vacuum cleaner** is used for cleaning the floor and car interiors after service.

C. Pneumatic tools

1. **Pneumatic Torque Wrench.** This wrench uses compressed air to quickly and powerfully turn nuts, bolts, and other objects.

2. **Air chisel** uses reciprocating motion to drive a cutting hammering tool. An air hammer drives a chisel to cut off a nut that has frozen to a stud. It can be used with a variety of tools-cutters and punches to do many jobs.

3. **Air drill** is lighter than a comparable electric drill. Repeatedly stalling or overloading does not damage or overheat the air drill.

4. **Air racket** uses the sockets and attachments from a standard socket set.

5. **Pneumatic floor jack** uses compressed air to flow into the jack cylinder and causes the ram to extend and raise the vehicle.

The following are Classification in checking the condition of tools and equipment. Condition of tools can be categorized under the following:

1. **Functional** - this refers that the tools enable the specific execution of a task or a group of tasks allowing the fulfillment of specific objectives within the different stages of product development.

2. **Non - Functional but Repairable** – This refers to the tools that are not functional but possible for repair and can execute task as new.
3. **Condemnable** - These are tools which are not functional or cannot execute its purpose, cannot be repaired and can cause accident or damaged in performing job if continue in using it.

Classification of non-functional and functional tools

Tools are very useful to us in our homes especially to our job. But tools that are no longer functional may cause harm.

A. Make an inventory of functional and non-functional tools in your shop.
B. Classify your tools according to is function.

➢ **Method of identifying non-functional tools and equipment**

1. ***Visual inspection.*** It refers to the visual observation of an expert on the appearance of the tools and equipment.
2. ***Functionality.*** Vibration or extra noise from the operation means problems on parts and accessories started to develop.
3. ***Performance.*** When there is something wrong with the performance of either hand tools or equipment they need an immediate repair or maintenance.
4. ***Power supply (for electrically operated only).*** Failure to meet the required power supply, malfunction will occurs in the part of hand tools or equipment.
5. ***Person's involved.*** It refers to the technical person who has the knowledge and skills about the technology.

➢ **Classifications of tools and equipment according to their uses:**

1. Measuring tools
2. Holding tools
3. Cutting tools
4. Driving tools
5. Boring tools
6. Electrical equipment
7. Miscellaneous tools/instrument/equipment

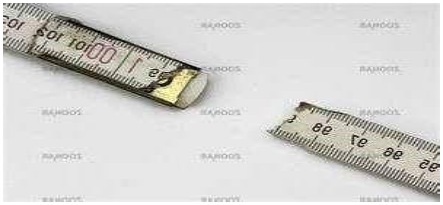
Non-functional tools and equipment are those that are not able to perform its regular function because of impaired and damage part. Examples of these are the following:

Example of Non-functional Tools:

Hammer with a broken handle

Screw driver with a broken handle

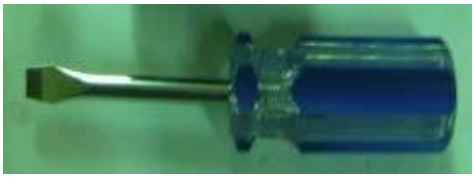
Long Nose Pliers with damage jaw



A broken/cut foot rule

Electrical equipment with damage cord

Functional tools and equipment are those that are in good condition and can perform its regular functions. Examples of these are the following:



Standard screw driver

Philips Screw Driver

Combination pliers

Long Nose Pliers

Wire Stripper

Portable Electric Drill