

Section 5

Safe use of Hand & Power Tools

- Types of hand and power tools.
- Hazards relating to the use of hand & power tools
- Hands injury prevention.
- Five basic rules to prevent hand injury.
- Good housekeeping.

Types of Hand Tools



Screwdriver



Hammers



Punches



Handsaws



Chisels



Files



Hand snips



Axes



Knives



Box cutters



Wrenches



Crowbars/pry bars



Hooks



Pliers

Types of Hand Held Power Tools

Electrical Power Hand Tools



Soldering iron



Portable Grinder



Circular saw



Hand held Router



Hand held Drill



Reciprocating saw



Sander

Types of Hand Held Power Tools

Pneumatic impact tools or air-powered tools

Air-powered Wrench



Pneumatic Screw Driver



Pneumatic grinder



Pneumatic Nail Gun



Pneumatic Hammer



Hand Tools and Hand-Held Power Tools

Hazards from the misuse or poor maintenance of hand tools and hand-held power tools :

1. Broken handles on files/chisels/screwdrivers/hammers which can cause cut hands or hammer head flying off.
2. Incorrect use of knives, saws and chisels with hands getting injured in the path of the cutting edge
3. Splayed spanners that slip and can injure hands or faces.
5. Electrocuted or burns by using incorrect or damaged hand held power tools.
6. Use of poorly insulated hand held power tools.
7. Entanglement of electrical wire in rotating spindles.
8. Direct contact with the cutting blades or drilling bits.

Hand Injury

Some tools are
irreplaceable...



**PROTECT
YOUR HANDS**

Common Causes of Hands & Arms Injuries

- 1. Abrasion**
- 2. Temperature Extremes**
- 3. Cuts & Punctures**
- 4. Handling of Chemicals**
- 5. Electrical Shock**
- 6. Skin Infection**
- 7. Disease Or Contamination**

Hand Injury Prevention

Hand injury is the result of :

- Adopting improper work methods.
- Using the wrong hand tools for the job.
- Failure to apply hand protection.



Finger and Hand Lacerations / Amputations



Hand Injury Prevention



The worker's right hand may be cut by sharp metal sheet even though he has been doing it frequently!

Hand Injury Prevention

Worker's left thumb is resting at Non-Defensive position.

His thumb may be cut by the pen knife if it slips even though he wears hand gloves!



Five basic rules to prevent hand injuries

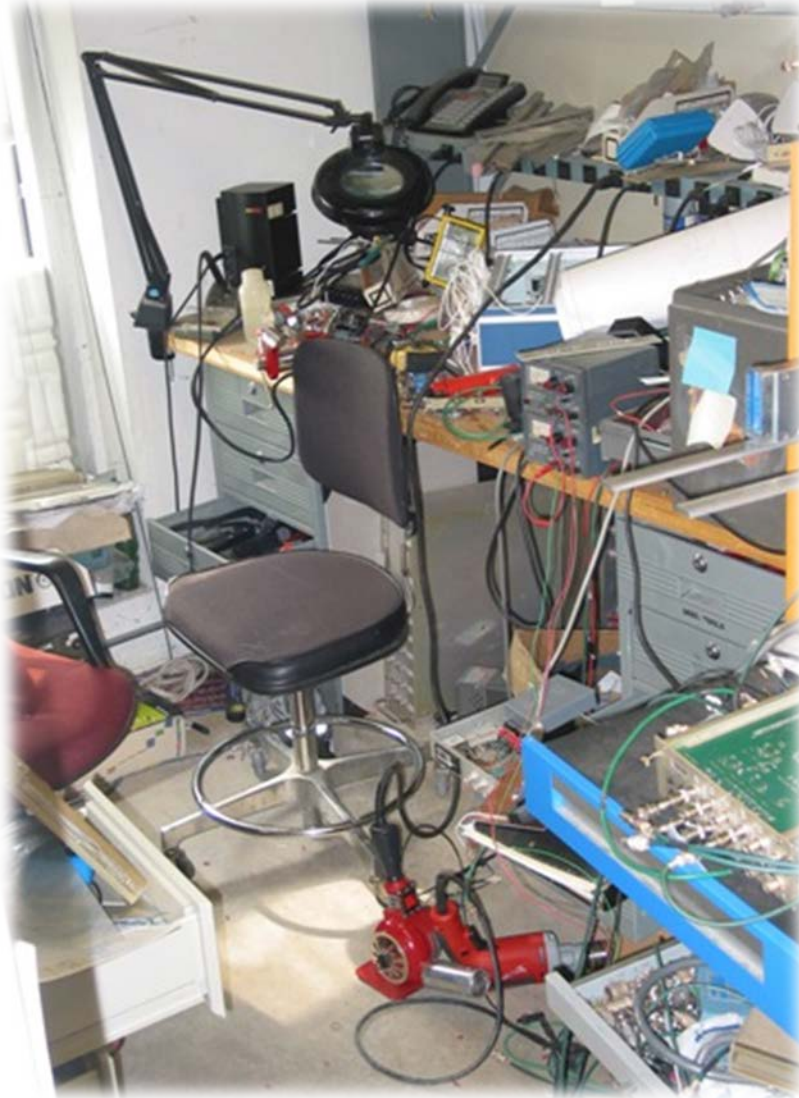
1. Keep all tools in good condition with regular maintenance.
2. Use the right tool for the job.
3. Examine each tool for damage before use and do not use damaged tools.
4. Operate tools according to the manufacturers' instructions.
5. Properly use of the appropriate PPE.

Housekeeping & Tidiness of Workplace

CLEAN IT UP



Poor Housekeeping



1. Poorly arranged work-area with untidy or hazardous storage of materials and tools.
2. Messy & dirty floor and work surfaces.



Housekeeping

Benefits of good housekeeping

1. Eliminates hazards, accident & fire risks.
2. Provides the best use of workspaces.
3. Creates a safe & conducive workplace.
4. Tools and equipment are orderly returned and kept in proper storage for easy access.



Good Housekeeping



Tools neatly arranged on Rack for easy access



Clean/Neat and Orderly Workplace

Good Housekeeping Practices

- 1. Always return the tools back to their designated positions in the tool racks after use.**
- 2. Always keep the workplace neat and orderly after use.**
- 3. Always clear away the debris and chips off the machines or workbenches after use.**
- 4. Always bring unused or leftover materials to the recycle area.**

Housekeeping and Safety



[Video 1: https://www.youtube.com/watch?v=v1E2CMGVkww](https://www.youtube.com/watch?v=v1E2CMGVkww)

[Video 2 :https://www.youtube.com/watch?v=BAk2bJeh5P8](https://www.youtube.com/watch?v=BAk2bJeh5P8)