



HAND TOOLS USAGE GUIDE



GETSAFE

INDUSTRIAL SAFETY EQUIPMENT



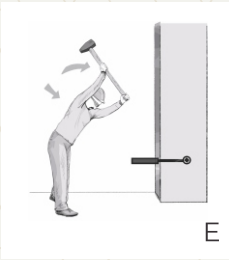
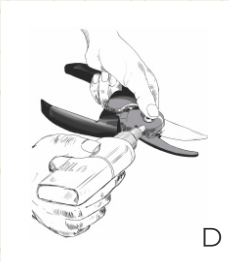
WORK SAFELY WITH HAND TOOLS

Using tools correctly helps prevent injury to the user and bystanders in the area. The following is a list of do's and don'ts when using hand tools. These safe working tips are meant to provide guidelines but are not exhaustive.

Safe use of any tool will always include the need to select the proper tool for the job, training in the safe use of the tool and ongoing inspection and maintenance.

GENERAL GUIDELINES - DO's

- A. Use good quality tools and keep tools in good condition at all times.
- B. Inspect tools for defects before use. Replace or repair defective tool.
- C. Replace cracked, splintered or broken handles on files, hammers, screwdrivers or sledges.
- D. Maintain tools carefully. Keep them clean and dry and store them properly after each use.
- E. Wear safety glasses or goggles or a face shield with safety glasses and well-fitting gloves appropriate for the hazards to which you may be exposed when doing various tasks.
- F. Ensure that the handles of tools like hammers and axes fit tightly into the head of the tool.
- G. Replace worn jaws on wrenches, pipe tools and pliers.
- H. Redress burred or mushroomed heads of striking tools.



I. Pull on a wrench or pliers. Never push unless you hold the tool with your palm open.

J. Point sharp tools (e.g. saws, chisels, knives) laying on benches away from aisles and handles should not extend over the edge of the bench top.

K. Carry tools in a sturdy tool box to and from the work site.

L. Use a heavy belt or apron and hang tools at your sides, not behind your back.

M. Keep cutting tools sharp and cover sharp edges with suitable covering to protect the tool and to prevent injuries from unintended contact.

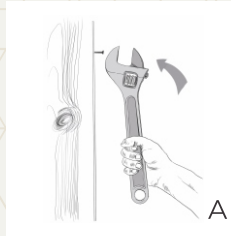
N. Use tools designed to allow wrist to stay straight. Avoid using hand tools with your wrist bent.

O. Ensure that employees are properly trained in the safe use of hand tools.



GENERAL GUIDELINES - DON'Ts

A. Do not use tools for jobs they are not intended to do. For example, do not use a slot screw driver as a chisel, pry bar, wedge or punch or wrenches as hammers.

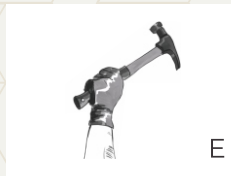


B. Do not apply excessive force or pressure on tools.

C. Do not cut towards yourself when using cutting tools.



D. Do not hold the stock in the palm of your hand when using a cutting tool or a screwdriver.



E. Do not wear bulky gloves to operate hand tools.

F. Do not throw tools. Hand them, handle first, directly to other workers.



G. Do not carry tools in a way that interferes with using both hands on a ladder, while climbing on a structure, or when doing any hazardous work.

H. If working on a ladder or scaffold, tools should be raised and lowered using a bucket and hand line.

I. Do not carry a sharp tool in your pocket.





Wrenches

Wrenches are designed for holding & turning screws, bolts, nuts, plugs and various threaded parts.

Ring Wrenches and sockets completely surround the nut. They are the strongest type of wrench and have the least chance of slipping on the bolt.

Open end, Flare nut and Adj Wrenches do not surround the head completely and are not intended for heavy loads

Select inch type spanners for inch bolts and metric spanners for metric bolts only.



WRENCHES

BEST PRACTICES

- Always pull on a wrench handle.
- Ensure to adjust your stance to prevent fall in case of sudden release.
- When freeing a frozen nut or bolt use a hammering spanner. Apply WD40 beforehand.
- Wear safety goggles when hammering spanners with a sledge hammer.

POOR PRACTICES

- Never use a pipe extension on a wrench handle to increase the leverage.
- Never tilt or cock and open end wrench. The head of the wrench should completely engage the head of the bolt.
- Avoid over or under torquing (use a torque wrench if required).
- Never expose the wrench to excessive heat as it may change the hardness and structure.
- Never grind a wrench even as a means of identification.
- Never use a wrench that has been damaged by being cracked, bent or severely worn.
- When using insulated tools remember that the dielectric insulation is intended as a secondary protection.



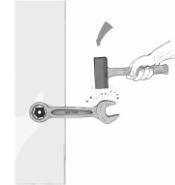
Wear safety goggles and use a heavy sledge type hammer on a striking face.



Adjust your stance and pull when applying high torque.



Never use a leverage on a wrench handle.



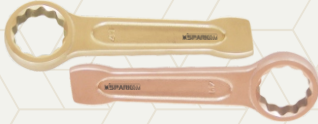
Don't hammer on the wrench.

TOOLS

BEST PRACTICES

POOR PRACTICES

BOX (RING) WRENCHES



- Use only a sledge hammer on the striking face of a slogging spanner.
- Always wear safety goggles for protection.

- Ratcheting type wrenches are meant for light-duty application and should not be used for heavy duty work.
- Never use an extension (pipe) on handle of a wrench.
- Do not attempt to repair ring wrenches.

OPEN WRENCHES



- Open Wrenches are usually used to hold the nut and the ring wrench is used to turn the bolt.

- Never use an extension (pipe) on handle of a wrench.
- Do not attempt to repair open end wrenches.

COMBINATION WRENCHES



- Ring End can be used to loosen the nut and the open end is used to quickly unscrew it.

- Never use an extension (pipe) on handle of a wrench.
- Combination wrenches should not be used to open a frozen nut or final tightening of nut/bolt. Use a ring wrench instead.
- Do not attempt to repair combination wrenches.

TOOLS

ADJUSTABLE WRENCH



- They should be tightly adjusted to the nut/bolt and pulled so that the force is on the fixed side of the jaw.
- Periodic inspection should be done to detect damaged jaws, pins, rollers, etc.
- Damaged parts should be replaced.

BEST PRACTICES

POOR PRACTICES

- Do not use an adjustable wrench to free a frozen bolt/ nut or to final tighten a nut.
- Never pull on an adjustable spanner adjusted to a loose fit with a bolt.
- Never use a hammer or a pipe extension.

HEX KEY WRENCH



- Select correct socket size. Metric keys should be used for metric bolts and inch keys for inch bolts.

- Never hammer an allen key.
- Never use a pipe or extension for extra leverage.
- Do not attempt to repair. If they are bent, deformed or cracked discard and replace them.



Sockets & Accessories

Sockets are made in 2 types – hand and impact.

Sockets are avail in various sizes and capacity.

The sq. dr. size of the socket represents increase in strength
Standard and popular sizes of sockets are available in 3 different
drive sizes and appropriate drive size should be selected.



TOOLS

SOCKETS AND ACCESSORIES



IMPACT SOCKETS



BEST PRACTICES

- Select correct socket size. Metric sockets should be used for metric bolts and inch sockets for inch bolts.
- Select largest possible drive size.
- Select appropriate handle.
- Possibility exists for a lower torque rated accessory or socket to be used in conjunction with a higher rated ratchet or drive tool. In such cases care should be taken not to overload the lowest rated component.
- Adapters and extensions reduce the load capacity of the tool and should not be used for heavy applications.
- Repairs to handles of ratcheting mechanism should be made with the manufacturer's parts only.

- Wear safety goggles when using an impact socket.
- Put the socket on the bolt before starting the impact gun.
- Use adapters only for special applications and not for general use.

POOR PRACTICES

- Do not use a pipe with socket accessory to increase leverage.
- Never use sockets with hydraulic, pneumatic or impact wrenches.
- When using adapters remember when adapting up i.e. big handle small socket you build up tremendous torque potential and risk breaking the socket.
- When adapting down i.e. small handle and big socket you risk breaking the handle.
- Do not attempt to repair sockets.
- Do not use regular hand sockets with impact sockets.
- Never use a nail or other contraptions to hold the socket in place.
- Never dwell on a socket after it has stopped turning. This can damage both the socket and the bolt.
- If an impact wrench cannot remove a socket do not try using oil, hammering spanner or a larger impact wrench.



Hammer

Hammers are the most widely used and probably the most abused of all hand tools



TOOLS

BEST PRACTICES

POOR PRACTICES

HAMMERS



- Blow of a hammer should be struck parallel to the surface being struck
- The striking face of the hammer should have a dia at least 3/8th inch larger than the face of the struck tool

- Avoid glancing blows.
- Never use one hammer to strike another.

TOOLS

HAMMERS



Sledge Hammer



Ball Pein Hammer



Claw Hammer

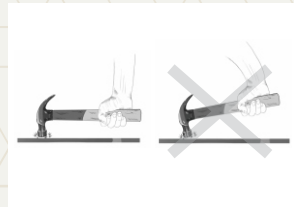


Nylon Hammer

BEST PRACTICES



Always wear safety goggles to protect your eyes

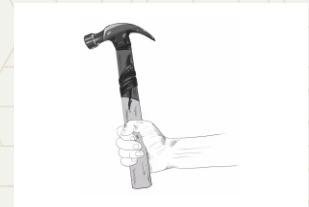


Blow should be paralleled

POOR PRACTICES



Never use one hammer to strike another hammer, a hatchet or other hardened objects.



Never use a striking tool with a loose or damaged handle.

Cold Chisels

Cold Chisels are made from round, square, hexagon or octagon steel stock.

They are designed for cutting, shaping and removing metal softer than the cutting edge itself such as steel, bronze, copper etc.



TOOLS

COLD CHISELS



BEST PRACTICES

- Always use a cold chisel that's slightly wider than what you're cutting.
- Wet the chisel's edge with a drop of machine oil.
- Sharpen the edge of the Chisel with second-cut file.

POOR PRACTICES

- Never use a cold chisel for cutting stone or concrete.
- Never use a chisel with a damaged handle.
- Never use a dull chisel or one with a mushroomed head.



Screwdrivers

Screwdrivers are a very popular tool and is designed for driving/withdrawing a threaded screw.

It is available in many different types – Slotted, Phillips (Star), Torx, Pozi, Hext etc for different screw heads.



TOOLS

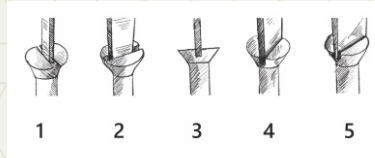
BEST PRACTICES

POOR PRACTICES

SCREWDRIVERS



- Match both the type of screwdriver as well as its size to the job at hand.



1. This tip is too narrow for the screw slot: it may bend or break under pressure.
2. A rounded or worn tip. Such a tip may ride out of the slot as pressure is applied.
3. This tip is too thick. It is likely to chew up the slot of the screw.
4. This tip fits, but it is too wide and will damage the material as the screw is driven home. (See the Image).
5. The right tip. This tip is a snug fit in the slot and does not project beyond the screw head.

- Never use a screwdriver as a chisel or punch.
- Never use a screwdriver near a live wire.
- Never expose a screwdriver to excessive heat.
- Never hammer a screwdriver.
- Never use a screwdriver as a pry bar.
- Do not use a screwdriver with a broken handle.



Pliers

Pliers are used to hold objects firmly. They are also useful for bending and compressing a wide range of materials.



TOOLS

BEST PRACTICES

POOR PRACTICES

PLIERS



- Pliers should not be used for cutting hardened wires unless specifically manufactured for the same
- Always cut at right angles

- Never use a plier as a hammer
- Similarly do not hammer the plier handles as this can cause damage or breakage
- Pliers should never be used on bolts
- Oil pliers occasionally
- Safety glasses should be worn when cutting wires
- Never attempt to cut HOT wires
- Never expose pliers to excessive heat as it may change the hardness and structure



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