

**SAFE OPERATING PROCEDURE**

**HAND TOOLS**

**DO NOT use this equipment unless you have completed the general space induction**

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| Safety glasses must be worn at all times in work areas. | Hair Protection circleLong and loose hair must be contained or restrained. |
| Foot Protection circleAppropriate footwear with substantial uppers must be worn. | ApronClose fitting, protective clothing or a workshop apron is encouraged. |
| Hearing Protection circle**Prohibition circle**Hearing protection must be worn when noise levels are excessive. | Dust mask signA mask must be worn when excessive airborne dust is created. |

### **PRE-OPERATIONAL SAFETY CHECKS**

**1. Ensure no slip/trip hazards are present in workspaces and walkways.**

**2. Set up a working station with enough room to work freely.**

**3. Always check the condition of tools prior to use.**

**4. Faulty equipment must not be used. Immediately report suspect equipment or tools.**

#### OPERATIONAL SAFETY CHECKS

**1. Use tools that are the right size & right type for your job.**

**2. Follow the correct procedure for using every tool.**

**3. Check cutting tools are sharp and in good condition.**

**4. Don’t work with oily or greasy hands.**

**5. Cut away from yourself when using knifes, chisels and other edged tools.**

**6. Handle sharp-edged and pointed tools with care.**

**7. Always carry pointed tools by your side with the points and heavy ends down.**

**8. Never carry tools in your pockets.**

**9. Only use tools for the purposes which they are designed.**

**10. Always place tools or materials where they cannot fall or trip other personnel when not in use.**

**11. Don’t force screws; make sure that the correct screw or fixing for the job is being used.**

**12. Where possible, secure work with clamps or a vice, freeing both hands to operate the tool used.**

**13. Keep your balance and proper footing when working, being careful not to overreach.**

#### IMPACT FORCE

**- Do not apply any serve force with hand tool to the material. If extra force is required, consider a alternative. Such as a power tool equivalent.**

**- Reduce repeated shocks to the hand and wrist from hand tools with shock absorbing gloves.**

#### HOUSEKEEPING

1. **Return all equipment and accessories to the appropriate storage.**
2. **Leave the work area in a safe, clean and tidy condition.**

## POTENTIAL HAZARDS

**◼ High noise levels (some operations) ◼ Flying debris ◼ Dust ◼ Cut ◼ Burns**

**◼ Splinters ◼ Eye injuries ◼ impact/crush injury ◼ Material kickback**

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This SOP does not necessarily cover all possible hazards associated with the tool and should be used in conjunction with other references. It is designed to be used as an adjunct to teaching Safety Procedures and to act as a reminder to users prior to tool use.



**Pliers**

**•Pliers may be used for gripping and cutting operations, but they are not a substitute for a wrench.**

**•Don’t use pliers to turn nuts or bolts.**

**•Replace adjustable pliers if the jaws slip or bind.**

**•Replace pliers if the jaw grooves are worn too much for an effective grip.**

**Punches & Chisels**

**•Keep punches and chisels in good condition. Mushroomed heads can chip & cause injuries.**

**•Punches are designed to mark metal and other materials that are softer than the point end, to drive and remove pins, and to align holes.**

**•Never use a punch with a mushroomed struck face or with a dull, chipped, or deformed point. Only use cold chisels for cutting, shaping, and removing metal softer than the cutting edge.**

**•Factors determining the selection of a cold chisel are the material to be cut, the size and shape of the tool, and the depth of the cut to be made.**

**•The cold chisel should be held steadily but with a relatively loose grip and with the palm of the hand facing the user and the point of the chisel directed away.**

**•Ball chisels held by one person and struck by another require the use of tongs or a chisel holder to guide the chisel.**

**•Metal working chisels can produce flying chips/splinters that can cause injuries to eyes and face**

**Hammers, Mallets and hitting tools**

**•Use pliers to hold small nails.**

**•Choose the correct size hammer for the job.**

**•Never hit hammer faces together.**

**•Never ask other people to hold things you are hitting. Use clamps or a vice.**

**•Keep clean and free from oil, glue or debris which might cause the handle to slip or the face to glance from the object being struck.**

**•Grasp handle firmly near the end and keep your eye on the point to be struck.**

**•Reduce strain when pulling nails by placing a piece of wood under the hammer to increase leverage.**

**•Don’t use a screwdriver, wrench, or other tool as a hammer as this will damage the tool.**

**Drill (battery operated):**

**•Tighten drill bits/drivers correctly in the chuck.**

**•Only sharp drill bits should be used. Never use dull, chipped, rounded, or tapered drill bits.**

**•Before starting the drill, check the drill is in the correct setting position for the task.**

**•Remove the drill bit before storing drill.**

**Saws**

**•The work piece should be securely held in a vice or other firm support.**

**•When crosscutting, start the cut with two long slow pulls upwards.**

**•When ripping, start the cut with the finer teeth at the end of the blade.**

**•During the cutting process, apply downward force only on the forward cut not when drawing back.**

**•As the cut approaches completion, reduce the force applied to the saw to avoid breaking through the material and injuring hand.**

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**Screw Drivers**

**•Select the correct size screwdriver for the job.**

**•Don’t carry screw drivers in your pocket.**

**•Pass a screwdriver to another person handle first.**

**•When using a slotting screwdriver, use the correct size blade for the given slot.**

**•Use Phillips head tools for Phillips head fasteners.**

**•Don’t use screwdrivers as a pry-bar.**

**•Do not use screwdrivers as levers, chisels, or scrapers.**

**•Don’t hold the work piece in the palm of the hand while tightening up screws. A slip can result in a serious injury with the blade penetrating the hand or wrist. The work piece should be securely held in a vice or other firm support.**

**•Use insulated tools around energized equipment. Electrical tape wrapped on the shank of a screwdriver is not suitable insulation.**

**Wrenches/Spanners**

**•Safe use of all wrenches requires that the user always be alert and prepared for the possibility that the wrench may slip, the fastener may suddenly turn free, or the wrench or fastener may break.**

**•Where possible, use penetrating oil to loosen tight nuts.**

**•The user must always inspect the wrench for flaws. Keep jaws sharp and clean. Gripping teeth or smooth jaws should not be worn or damaged.**

**•Place the wrench so the pull on the handle tends to force the jaws further into the nut (lower jaw leads).**

**•Pulling on a wrench is safer than pushing**

**•Open end wrenches have strong jaws and are satisfactory for medium-duty turning.**

**•Box and Socket Wrenches are necessary for a heavy pull. Never overload the capacity of a wrench by using a pipe extension on the handle or be striking the handle with a hammer.**

**•Socket and Adjustable Wrenches should be kept clean of dirt and grime inside the socket to ensure that the tool fits securely on the bolt or nut.**

**•Shift wrenches must work freely and adjust properly. Always use the proper size wrench for the job.**

**Files**

**•Select the proper file for the work.**

**•Ensure that teeth are sharp and clean.**

**•The correct way to hold a file is to grasp the handle firmly in one hand and use the thumb and forefinger of the other to guide the point. Push the file forward while bearing down on it. Release the pressure and bring the file back to its original position.**

**•Don’t pry or hammer with a file.**

**Knives and sharp cutting tools**

**•Use a knife only for the correct purpose.**

**•Keep hands behind the cutting edge at all times.**

**•Never cut towards yourself, always cut away from your body.**

**•Where possible, use a cutting board underneath the material being cut.**

**•Always pass knives to others handle first.**

**•Never run with knives or push/shove people around using knives.**

**•Ensure knives are sharp – blunt knives can be dangerous.**

**•To clean, wipe the blade with a cloth keeping the knife’s sharp edge turned away from the hand**

**•Do not substitute knives for can openers, screwdrivers, or picks.**

**•Dispose of all broken or blunt blades in a sharps container.**

**•Only use wire cutters for cutting light gauge wire or component leads. Do not use to cut sheet metal.**

**HAND TOOLS**

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