

Clarksville-Montgomery County School System
HAND TOOLS SAFETY PROGRAM
OSHA Standard - [29 CFR 1910.241](#) ; [.242](#) ; [.243](#) ; [.244](#)

1.0 OBJECTIVE

This policy provides basic safety guidelines for those employees who are required to work with powered and non-powered hand tools.

2.0 GENERAL POLICY

The department Supervisors will have the responsibility for ensuring that all powered and non-powered hand tools are operated in a safe manner.

3.0 POLICY

General Information:

- Employees should use only tools and equipment which are in good condition, and only for the purpose for which they are designed. When proper and safe tools are not available for the work at hand, the employee should report the need to their supervisor.
- All tools should be inspected at regular intervals and tools which develop defects while in use should be removed from service, tagged and not used again until placed in good condition.
- A hand held power tool must be disconnected from its power source during servicing or when changing mounted points, burs, cutting or grinding wheels.
- The maximum RPM (Revolutions Per Minute) of the rotor of all hand held power tools should not exceed the maximum RPM of the mounted point, bur, or grinding wheel in operation.
- When working with rotating powered hand tools, employees should wear close fitting clothing and avoid dangling sleeves, neckties, and long hair. Finger rings and loose jewelry should not be worn.
- Never hold small work with your hands; always use a clamp, jig or vise.
- A tool shall not be modified except by an authorized and trained employee or a qualified outside service.

Manual Hand Held Tools:

- Impact tools with deteriorated or mushroomed heads on chisels, drills, hammers, or wedges should not be used. Report all damaged tools to your supervisor.
- Hammers, axes, shovels, and other similar tools should not be used if the handles are loose, cracked or splintered.
- Defective wrenches (ex. open-ended and adjustable wrenches with spread jaws or pipe wrenches with dull teeth) should not be used.
- Pipes or other extensions should not be used on a wrench handle to increase the leverage.
- Files or other tools with pointed tongs should not be equipped without handles.

Jacks:

- The rated capacity should be permanently marked on the jack and never be exceeded.
- A jack should be set on or against a firm foundation or block for stability.
- If a jack at the point of contact with the load could slip, a wood block should be placed between the cap and the load.
- After a load has been raised, it must be secured by blocks or stands before work is started under or between the load.

Hoists:

- All hoists should have a chain catch bucket, pulley and a safety latch.
- The rated load capacity of the hoist, pulley or chain catch bucket must be permanently marked on it. This capacity must not be exceeded.
- Ensure the sling is in good condition and never, under any circumstances, stand under a raised load.
- The controls on the hoist should be labeled and the booth attached to the hoist should be bolted to the floor.
- A hoist, chain catch bucket and pulley should be inspected for defects before each use along with an annual inspection conducted by an outside service.

Powered Hand Held Tools:

- All couplings on pneumatic tools must be secure. The use of pneumatic hoses for hoisting or lowering is not permitted.
- Pneumatic and electric-driven hand tools with finger or hand controls *that are equipped with a safety device that prevents accidental start-up shall be maintained in proper working condition at all times.* The finger and hand controls shall also be equipped with safety device that will stop the tool when the operator's finger or hand is removed.
- All portable electric hand tools, unless self-contained, will meet one or more of the following requirements:
 1. Equipped with a three wire cord having the ground wire permanently connected to the tool frame.
 2. Constructed of a double insulated material.
 3. Connected to the power supply by means of a fully insulated isolating transformer.
- Portable electric hand tools are not to be used in potentially flammable atmospheres.
- Electrical or extension cords will not be used for hoisting or lowering tools.
- Extension cords must be maintained in a safe condition. Worn or frayed cords and broken plugs should be promptly replaced.
- Extension cords should not be passed through door openings or holes in the wall. This causes pinch-points on the cord. They should also not be placed across aisle ways where they could be damaged by forklift trucks or other traffic, or pose a tripping hazard.

Grinding and Cutting Wheels:

- Ensure the maximum rated RPM speed of the tool rotor does not exceed the maximum rated RPM speed of the grinding or cutting wheel.
- Do not grind on the side of a wheel unless the wheel is designed for such use.
- When operating a grinding or cutting wheel, stand to one side (out of the line of flying particles) in case the wheel breaks.
- Grinding or cutting wheels shall be equipped with safety washers or flanges. Arbor ends shall be guarded by acorn nuts or an equivalent guard.
- Safety glasses are required when the potential for flying debris is present. Face shields will be made available and are recommended. Safety glasses should be worn any time face shields are used.
- Where tool rests are required, they should be adjusted to a maximum of 1/8 inch from grinding for wire wheels and 1/4 inch for buffing wheels.

Mounted Points:

- Ensure the maximum rated RPM speed of the tool rotor does not exceed the maximum rated RPM speed of the mounted point.
- Never use mounted points with shanks that are bent, out-of-round, burred, undersized or oversized.
- Insert mounted point at a minimum of one inch into the collet.
- Mounted points over three inches in length should be tested under the work bench at full RPM speed prior to use.
- Mounted point extensions should only be operated in an enclosed casting cavity.
- Face shields should be made available and are recommended.

Burs:

- Ensure the maximum rated RPM speed of the tool rotor does not exceed the maximum rated RPM speed of the bur.
- Insert bur into the collet as far as possible.
- Never use burs with shanks that are bent, out-out-round, burred, undersized oversized.
- Burs over three inches in length should be tested under the work bench at full RPM speed prior to use.
- Bur extensions should only be operated in an enclosed casting cavity.
- Face shields should be made available and are recommended

Associated Documents: none