



# Hand and Portable Power Tools

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### **1.0 PURPOSE**

This program establishes the requirements for safety in hand and power tools operation.

### **2.0 APPLICABLE REGULATIONS AND STANDARDS**

California Code of Regulations, Title 8, Sections:

- §3301 Use of Compressed air or gases
- §3556 General
- §3557 Switches and controls for power tools
- §3558 Portable power-driven circular saws
- §3559 Pneumatic and powder-actuated tools
- §3559.1 Airless spray guns
- §3562 Jacks
- §3563 Power lawn mowers
- §3564 Portable winches

### **3.0 5 BASIC RULES**

Five basic safety rules can help prevent hazards associated with the use of hand and power tools:

- Keep all tools in good condition with regular maintenance.
- Use the right tool for the job.
- Examine each tool for damage before use and do not use damaged tools.
- Operate tools according to the manufacturers' instructions.

- Provide and use properly the right personal protective equipment.

#### **4.0 GENERAL PRECAUTIONS**

- Remove tools in unsafe condition from use.
- Ensure you are trained in the use of hand tools prior to use.
- When using saw blades, knives, or other tools, should direct the tools away from aisle areas and away from other employees working in close proximity.
- Knives and scissors must be sharp; dull tools can cause more hazards than sharp ones.
- Observe good housekeeping practices to prevent tripping and fire hazards.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as blades, bits, and cutters.
- Keep all people not involved with the work at a safe distance from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged-in tool.
- Maintain tools with care; keep them sharp and clean for best performance.
- Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance when operating power tools.
- Wear proper apparel for the task. Loose clothing, ties, or jewelry can become caught in moving parts.
- Remove all damaged portable tools from use and tag them: "Do Not Use."

#### **5.0 TOOL GUARDS**

- The exposed moving parts of power tools need to be safe-guarded. Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded.
- Machine guards, as appropriate, must be provided to protect the operator and others from the Point of operation, In-running nip points, Rotating parts, Flying chips and sparks.
- Safety guards must never be removed when a tool is being used.

#### **6.0 SAFE USE OF SPECIFIC PORTABLE POWER TOOLS**

##### **6.1 Electric Tools**

- Use tools with three-wire cords that are plugged into a grounded receptacle, or double-insulated tools for shock prevention.
- Operate the tools within the manufacturers design limitations.
- Use gloves and appropriate footwear.
- Store electric tools in dry areas, and avoid use in damp or wet locations (unless approved for that purpose).
- Ensure that cords do not present a tripping hazard.
- Never carry a tool by the cord or hose or yank the cord or the hose to disconnect it from the receptacle.

## **6.2 Abrasive Wheel Tools**

- Abrasive wheel tools must be equipped with guards that: (1) cover the spindle end, nut, and flange projections; (2) maintain proper alignment with the wheel; and (3) do not exceed the strength of the fastenings.
- Inspect abrasive wheels for cracks or other possible damage to avoid the possibility of having the wheel fall apart.
- Always use face protection and never stand in front of the wheel as it accelerates to full speed.
- Never clamp a hand-held grinder in a vice.

## **6.3 Pneumatic Tools**

- Air hoses should be protected from trucks and pedestrians.
- Do not disconnect an air hose from the tool being used, or use pressurized air for cleaning purposes. Air should be cut off before attempting to disconnect the air hose from the line.
- Air pressure in the hose should also be cleared before disconnecting.
- Eye protection is required when operating air power tools.
- Safety-check valves are recommended to automatically shut off air supply if a crack or leak occurs.
- Compressed air guns should never be pointed toward anyone.

## **6.4 Gasoline Powered Tools**

- Be careful to handle, transport, and store gas or fuel only in approved flammable liquid containers, according to proper procedures for flammable liquids.

## **6.5 Powder Actuated Tools**

- Do not use a tool in an explosive or flammable atmosphere.
- Inspect the tool before using it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions and has the proper shield, guard, and attachments recommended by the manufacturer.
- Do not load the tool unless it is to be used immediately.
- Do not leave a loaded tool unattended, especially where it would be available to unauthorized persons.
- Keep hands clear of the barrel end and never point the tool at anyone.

## **6.6 Hydraulic Tools**

- The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.
- All jacks must have a stop indicator, and the stop limit must not be exceeded. Also, the manufacturer's load limit must not be exceeded. Once the load has been lifted, it must immediately be blocked up.
- Jacks and hydraulic equipment must be inspected regularly.

## **7.0 TRAINING AND COMMUNICATION**

Staff must receive training in the safe use of hand tools related to their job.

**8.0 PROGRAM APPROVAL AND REVIEW**

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