

HAND AND POWER TOOL SAFETY



EM 385-1-1 Section 13 Hand and Power Tools

13.A.02 A copy of the manufacturer's instructions and recommendations shall be maintained with the tools

HAND TOOLS 13.A.01,02

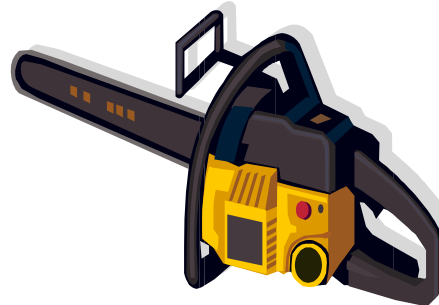
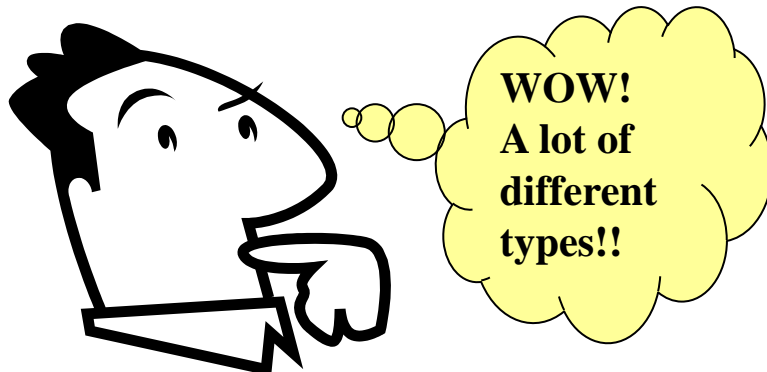
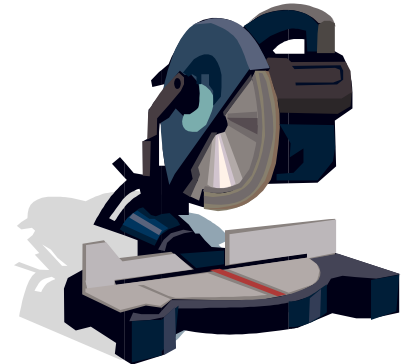
ELECTRIC TOOLS 13.A.03

LIQUID FUEL POWERED TOOLS 13.A.12

PNEUMATIC TOOLS 13.D

EXPLOSIVE - ACTUATED TOOLS 13.E

HYDRAULIC POWER TOOLS 13.A.09,10,11



OSHA 29 CFR 1926. 300 Subpart I Tools- Hand and Power

PPE FOR TOOL SAFETY



Basic PPE

Protective Footwear

Working with Hot Substances

Eye and Face Protection

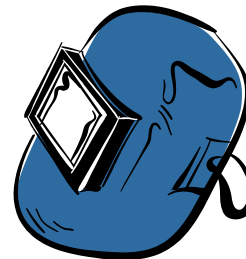
Hearing Protection

Head Protection

Respiratory Protection



**THE RIGHT TOOL
WITHOUT THE RIGHT
PPE DON'T CUT IT!!!
SEE PAGE #2**



HAND TOOLS



- **Hand tools are non-powered. They include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance.**

So don't show up on my job with that mushroom chisel head and broken screwdriver!!!



HAND TOOL SAFETY



• OSHA Requirements Hand Tools

- Employer responsible workers personal tools
- Use of unsafe hand tools not permitted.
(Example: Mushroom chisels, broken handles, etc)
- Electric Power tools double insulated/grounded
- Woodworking auto brake not required
- LOTO switch on stationary tools
- Does not address chainsaws

Yea, he is talking about those broken tools that you are too cheap to replace!



TOOL SAFETY



Em-385 MAJOR SAFETY REQUIREMENTS

- **Only tools listed by recognized testing (UL)**
- **Inspected, tested, instructions on site**
- **All safety devices in place, guards, switches, etc**
- **No working with unsafe clothing, long hair, rings, etc**
- **Extensive woodworking tool safety requirements**
- **Pneumatic tool safety requirements**
- **Explosive -Actuated Safety**
- **Chainsaw safety requirements**

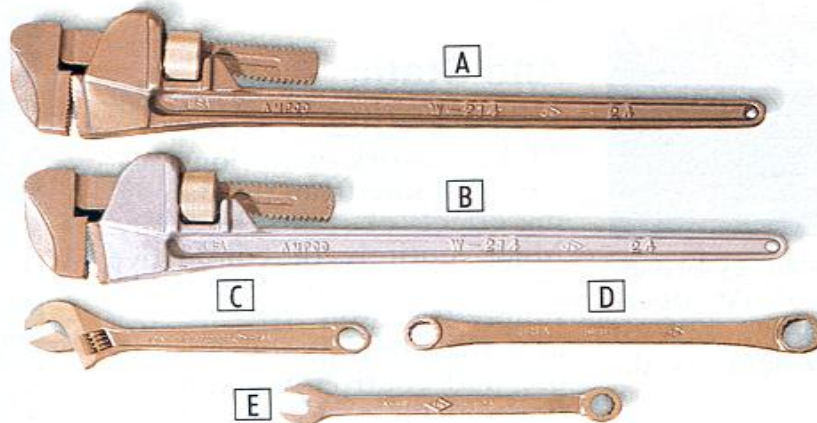
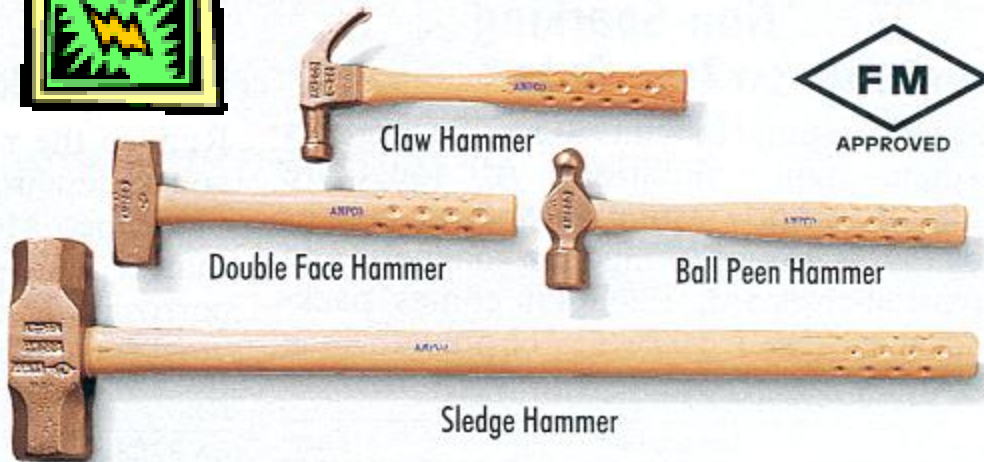
CRITICAL HAND TOOL SAFETY RULE



- **Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source.**
- **Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum, or wood will provide for safety.**

EM-385 13.A.06

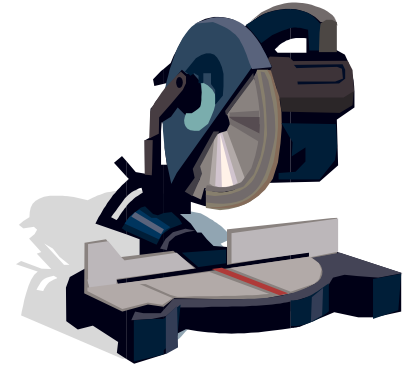
NON-SPARKING TOOLS



POWER TOOLS



- More power, adaptability and dependability
- Enhanced speed & performance
- Greater attention to maintenance
- More safety features & requirements



I could use an electric nail file!



HAZARDS OF POWER TOOLS



- Preventing mishaps with all 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.
 - Operate according to the manufacturer's instructions.
 - Provide and use the PPE

**COMMON
SENSE TO ME!**

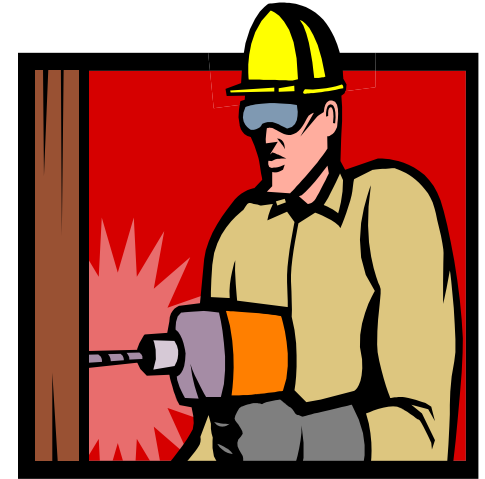


GENERAL SAFETY GUIDELINES

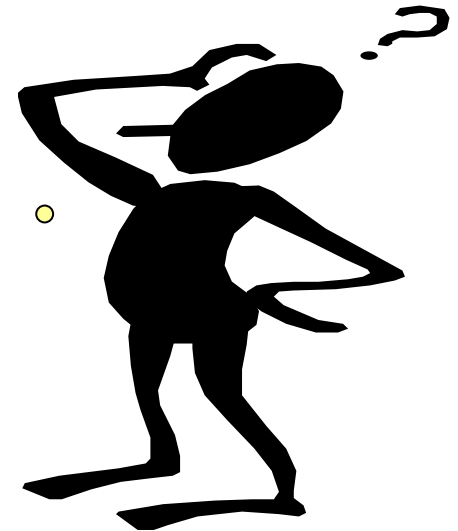
POWER TOOLS



- Be aware of all power lines electrical circuits, water pipes, other mechanical hazards in work area, especially below the work surface, hidden from the operator's view, that may be contacted.



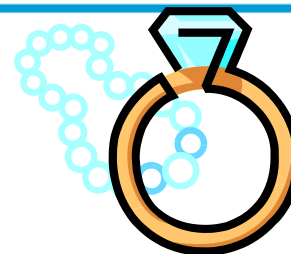
Sure hope nobody
is on the other side
of that wall!!



DRESS FOR THE JOB



- ✓ Wear proper apparel.
- ✓ Do not wear loose clothing, dangling objects or jewelry.
- ✓ Long hair must be restrained.
- ✓ Gloves should not be worn when operating certain power tools.
- ✓ Check appropriate tool

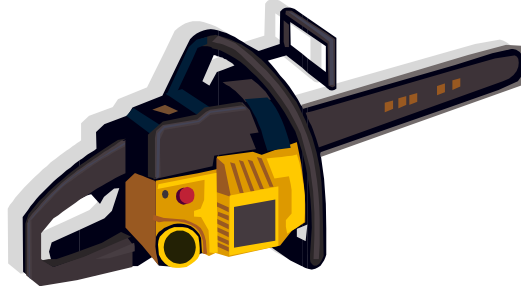


Hey You, with the 3 foot long hair, I need to talk to you!!

POWER TOOL SAFETY

- There are many types of power tools, based on the power source they use:

- electric
- pneumatic
- liquid fuel
- hydraulic
- powder-actuated



ELECTRIC POWER TOOLS



- ❖ **UL Approved, 3 wire or double insulated electric tools should be operated within their design limitations.**
- ❖ **Gloves, if kept clear of rotating parts, and safety footwear are recommended during use of electric tools.**
- ❖ **When not in use, tools should be stored in a dry place.**
- ❖ **Electric tools should not be used in damp or wet locations.**



**THAT GRINDER
IS DOUBLE
INSULATED.
DOES IT NEED
GFCI PROTECTION?**



SAFETY PRECAUTIONS-ELECTRIC TOOLS



- **Employees using electric tools must be aware of several dangers;**
- **The most serious is the possibility of electrocution.**
- **Among the chief hazards of electric-powered tools are burns and slight shocks which can lead to injuries or even heart failure.**

POWERED ABRASIVE WHEEL TOOLS



- **Portable grinders must have safety guards**
 - **Always use eye protection.**
 - **Insure RPM of grinding disc is not less that the RPM of the grinder!**
 - **Ring test before mounting abrasive wheel**



Who's
Abrasive?



PORTABLE CIRCULAR SAW SAFETY PRECAUTIONS



- **Safety goggles or safety glasses with side shields.**
- **Use a dust mask in dusty work conditions.**
- **Wear hearing protection**
- **Blade safety guard in place above and below**



**Yep. I still
have all my
fingers!!!**



PNEUMATIC TOOLS

- **Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders.**
- **One of the dangers is being hit by an attachment of a fastener used with this tool**
- **Safety clips or retainers shall be installed and maintained**
- **Eye protection required, face shield recommended**



POWDER ACTUATED TOOLS



- Lockable Box labeled “Power Actuated Tool”
- Warning inside, "Qualified Operators"
- Daily inspection, cleaned & tested IAW Manufacturer
- Tool never loaded until just before use
- Tool never pointed toward another person
- Operator must have training and license on person
- Operator must know material into which he driving fasteners into



Ramset



Hilti

LIQUID FUEL POWERED TOOLS



- **VAPORS FROM FUELS**
- **SHUT OFF TOOL WHEN REFUELING**
- **VENTILATION FOR INSIDE WORK**
- **EYE AND EAR PROTECTION**
- **FIRE EXTINGUISHER NEAR OPERATOR**



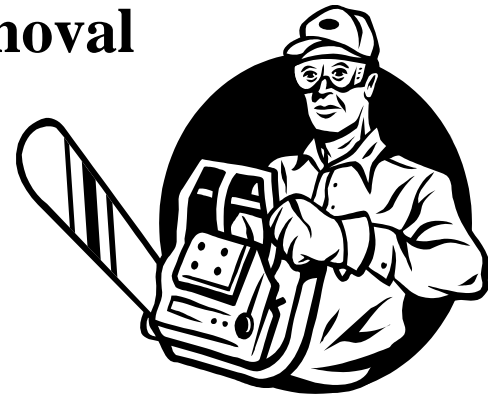
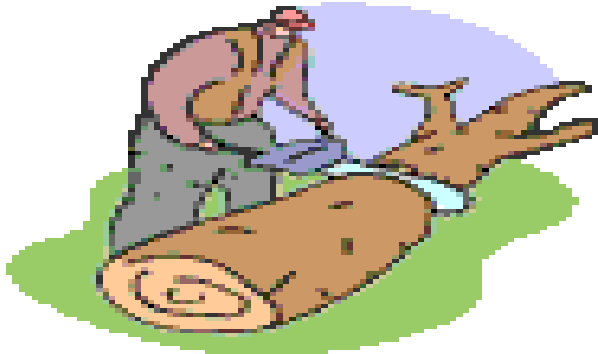
CHAIN SAW SAFETY RULES



- Automatic chain brake or kickback idle speed so chain does not move
- Eye, ear, hand, foot (safety shoes) **and** leg protection required
- Fueling only when chain saw is turned off
- Saws are not to be started within 10 ft. of fuel containers
- Two hand operation only
- Never cut above shoulder height

Reference: EM-385 (13.F)

Also see EM-385 (31) for tree maintenance & removal



HYDRAULIC POWERED TOOLS



- Used only according to manufacturer requirements
- Positive stopping devices on jacks
- Never used to support loads permanently
- Use wood between jacking head to avoid slipping
- Hydraulic fluid capable of operation in all temps



Use in vertical, angular and horizontal positions.



Porta Power