



نعمه للصيانة والخدمات ذ.م.م
Nehmeh Maintenance & Services LLC

Safety Guides

POWER TOOLS SAFETY MANUAL

This safety instructions and guidelines are a courtesy of Nehmeh Maintenance & Services, the aftersales arm of the Nehmeh Group for use by its valued customers.

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Table of Contents

| | |
|----------------------------------------|----|
| General power tools safety notice..... | 3 |
| Guards | 5 |
| Safety guidelines | |
| Drill press | 7 |
| Grinder | 8 |
| Jointer and shaper | 9 |
| Lathe | 10 |
| Nail/air gun | 12 |
| Planer | 13 |
| Forging machines | 14 |
| Sander | 16 |
| Saw | 17 |
| General industry standard PPE | 19 |

CAUTION

This leaflet is a recommendation only, in case of doubt, please contact Nehmeh Service. Use only genuine spare parts to avoid needless and dangerous circumstances.

DISCLAIMER

In no event shall the Nehmeh Group be liable for any indirect, incidental or consequential damages from the sale or use of their products.

GENERAL POWER TOOLS SAFETY NOTICE

Power tools can be extremely dangerous if they are used improperly. Each year, thousands of people are injured or killed by power tool accidents. Common accidents associated with power tools include abrasions, cuts, lacerations, amputations, burns, electrocution, and broken bones. These accidents are often caused by the following:

- Touching the cutting, drilling, or grinding components
- Getting caught in moving parts
- Suffering electrical shock due to improper grounding, equipment defects, or operator misuse
- Being struck by particles that normally eject during operation
- Touching hot tools or work pieces
- Falling in the work area
- Being struck by falling tools

When working with power tools, you must wear personal protective equipment and avoid wearing loose clothing or jewelry that could catch in moving machinery. In addition to general shop guidelines, follow these guidelines for working with power tools:

- Use the correct tool for the job. Do not use a tool or attachment for something it was not designed to do; correct tool for the correct application.
- Select the correct bit, blade, cutter, or grinder wheel for the material at hand. This precaution will reduce the chance for an accident and improve the quality of your work.
- Keep all guards in place. Cover exposed belts, pulleys, gears, and shafts that could cause injury.
- Always operate tools at the correct speed for the job at hand. Working too slowly can cause an accident just as easily as working too fast.
- Watch your work when operating power tools. Stop working if something distracts you.
- Do not rely on strength to perform an operation. The correct tool, blade, and method should not require excessive strength. If undue force is necessary, you may be using the wrong tool or have a dull blade.
- Before clearing stuck-ups, jams or blockages on power tools, disconnect from power source. Do not use your hand to clear jams or blockages, use an appropriate tool.
- Never reach over equipment while it is running.
- Never disable or tamper with safety releases or other automatic switches
- When the chance for operator injury is great, use a push stick to move material through a machine.
- Disconnect power tools before performing maintenance or changing components.
- Keep a firm grip on portable power tools. These tools tend to "get away" from operators and can be difficult to control.
- Remove chuck keys or adjusting tools prior to operation.
- Keep bystanders away from moving machinery.

- Do not operate power tools when you are sick, fatigued, not sober, or taking strong medication.
- When possible, secure work pieces with a clamp or vise to free the hands and minimize the chance of injury. Use a jig for pieces that are unstable or which can not lie flat.

GUARDS

Moving machine parts must be safeguarded to protect operators from serious injury. Belts, gears, shafts, pulleys, fly wheels, chains, and other moving parts must be guarded if there is a chance they could contact an employee.

As mentioned before, the hazards associated with moving machinery can be deadly. Hazardous areas that must be guarded include the following:

- Point of operation
Area where the machine either cuts, bends, molds, or forms, the material.
- Pinch/nip point
Area where moving machine parts can trap, pinch, or crush body parts. (i.e. roller feeds, intermeshing gears, etc.).
- Sharp edges
- Stored potential energy

There are three types of barrier guards that protect people from moving machinery. They consist of the following:

- Fixed guards
This is a permanent machine part that completely encases potential hazards. Fixed guards provide maximum operator protection.
- Interlocked guards
These are connected to a machine's power source. If the guard is opened or removed, the machine automatically disengages. Interlocking guards are often preferable because they provide adequate protection to the operator, but they also allow easy machine maintenance. This is ideal for problems such as jams.
- Adjustable guards
Self-adjusting guards change their position to allow materials to pass through the moving components of a power tool. These guards accommodate various types of materials, but they provide less protection to the operator.



IMPORTANT

Guards must be in place. If a guard is removed to perform maintenance or repairs, it is recommended to stop operations. Replace the guard after repairs are completed.

Do not disable or move machine guards for any reason. If you notice that a guard is missing or damaged, contact your supervisor and have the guard replaced or repaired before beginning work.



NOTE

Hand-held power tools typically have less guarding in place than stationary power tools. Use extreme caution when working with hand-held power tools and always wear a face shield.

SAFETY GUIDELINES

Drill Press Safety

Follow these safety guidelines when using drill presses:

- Securely fasten work materials to prevent spinning. Never use your hands to secure work materials.
- Use a center punch to score the material before drilling.
- Run the drill at the correct speed. Forcing or feeding too fast can break drill bits.
- Never attempt to loosen the chuck unless the power is off.
- Lower the spindle before removing a chuck.
- Never use a regular auger bit in a drill press.
- Frequently back the drill out of deep cuts to clean and cool the bit.



SAFETY GUIDELINES

Grinder Safety

Follow these safety guidelines when working with grinders:

- Ensure that no combustible or flammable materials are nearby that could be ignited by sparks from the grinder wheel.
- Ensure that a guard covers at least 270 degrees of the grinding wheel on bench-mounted machines.
- Place the grinder tool rest 30mm (1/8 inch) from the wheel and slightly above the center line.
- Allow the grinder to reach full speed before stepping into the grinding position. Faulty wheels usually break at the start of an operation.
- Unless otherwise designed, grind on the face of the wheel.
- Use vise-grip pliers or clamp to hold small pieces.
- Slowly move work pieces across the face of wheel in a uniform manner. This will keep the wheel sound.
- Do not grind non-ferrous materials.
- Periodically check grinder wheels for soundness. Suspend the wheel on a string and tap it. If the wheel rings, it is probably sound.
- Replace wheels that are badly worn or cracked.
- Never use a wheel that has been dropped or received a heavy blow, even if there is no apparent damage.
- Before using a new wheel, let it a run a few seconds at full speed to make sure it is balanced.



SAFETY GUIDELINES

Jointer and Shaper Safety

Follow these safety guidelines when using jointers and shapers:

- Ensure that jointers are equipped with cylindrical cutting heads.
- Use a push stick, as necessary.
- Do not use single cutter knives in shaper heads.
- Ensure that knives are balanced and correctly mounted.
- Adjust cut depth before turning the machine on.
- Do not use the jointer for strips that are less than 250mm (1 inch) wide.

SAFETY GUIDELINES

Lathe Safety

Follow these safety guidelines when working with wood lathes:

- Examine wood for knots and other defects before placing it in the lathe.
- Ensure that glued materials are set before placing them in the lathe.
- Before turning the lathe on, slowly turn rough materials a few times to ensure they will clear the tool rest.
- Keep hands off the chuck rim when the lathe is moving.
- Hold all wood cutting tools firmly with two hands.
- Start all jobs at the lowest speed. Ensure that materials are in a cylindrical form before advancing to higher speeds. Never turn large diameter materials at a high speed.
- Firmly screw faceplate work to the faceplate. Take care to avoid cutting too deep and hitting the screws.
- Do not cut too deep or scrape too long.
- Remove the "T" rest when sanding or polishing.

Follow these safety guidelines when working with metal lathes:

- Make sure that all gear and belt guards are in place.
- Never leave a chuck wrench in a chuck.
- Keep your hands off chuck rims when a lathe is in operation.
- Do not attempt to screw the chuck onto the lathe spindle with the power on, as it may get cross-threaded and cause injury. Stop the machine, place a board under the chuck, and then screw on by hand.
- Steady rests should be properly adjusted to conform with the material being worked on.
- When filing work in a lathe, always face the head stock and chuck.
- See that tailstock, tool holder, and work are properly clamped before turning on power.
- Never attempt to adjust a tool while the lathe is running.
- Never apply a wrench to revolving work or parts.
- Always use a brush to remove chips; never your hands.
- When possible, use pipe sleeves to cover work protruding from the end of the lathe.
- Before removing your work from the lathe, remove the tool bit.



SAFETY GUIDELINES

Nail/Air Gun Safety (Pneumatic Fastening Tools)

Nail guns and air guns are powered by compressed air. The main danger associated with pneumatic fastening tools is injury from one of the tool's attachments or fasteners.

Follow these safety guidelines for working with pneumatic tools:

- Ensure that pneumatic tools which shoot nails, rivets, or staples are equipped with a device that keeps fasteners from ejecting unless the muzzle is pressed against a firm surface .
- Never point a tool at items you do not want to fasten.
- Keep your finger off the trigger until you are ready to begin work. Most pneumatic tools have a *hair-trigger* that requires little pressure to activate the gun.
- Treat air hoses with the same care as an electrical cord.
- Do not drive fasteners into hard, brittle surfaces or areas where the fastener may pass through the material and protrude on the other side.

SAFETY GUIDELINES

Planer Safety

Follow these safety guidelines for working with planers:

- Examine wood for knots and other defects before placing it in the planer.
- Do not plane against the grain of the wood.
- Let go of the materials as the feeder rolls catch. Do not follow the work with your hands.
- Do not run boards that are more than 500 mm (2 inches) shorter than the distance between the in-feed and out-feed rolls.
- Use a push stick if a board stops with its end on the in-feed table.
- If a board sticks under the cutter head, turn off the machine to keep from burning the cutter knives.

SAFETY GUIDELINES

Forging Machines

Once punchers, shears, and benders are activated, it is impossible to stop them until the end of a cycle. Use extreme care when working with these tools.

- Inspection and maintenance:

All forge shop equipment must be maintained in a condition which will ensure continued safe operation.

- Hammers and presses:

All hammers must be positioned or installed in such a manner that they remain on or are anchored to foundations sufficient to support them according to applicable engineering standards.

- Hammers:

Die keys and shims must be made from a grade of material that will not unduly crack or splinter.

- Presses:

All manually operated valves and switches must be clearly identified and readily accessible.

- Power-driven hammers:

Every steam or air hammer must have a safety cylinder head to act as a cushion if the rod should break or pull out of the ram.

- Gravity Hammers:

Air-lift hammers must have a safety cylinder head.

- Forging and trimming presses:

When dies are being changed or maintenance is being performed on the press, ensure the following:

- The power to the pressure is locked out.

- The flywheel is at rest.
- The ram is blocked with a material of the appropriate strength.

SAFETY GUIDELINES

Sander Safety

Follow these safety guidelines for working with circular and belt sanders:

- Ensure that sanding belts are not too tight or too loose. Never operate a sanding disk if the paper is too loose.
- Use the correct grade of abrasive material.
- Ensure that the distance between a circular sander and the edge of the table is not greater than 60mm (~1/4 inch).
- Do not push materials against sanders with excessive force.
- Sand only on the down stroke side of a disk sander.
- Do not hold small pieces by hand. Use a jig for pieces that are difficult to hold securely.

SAFETY GUIDELINES

Saw Safety

There are numerous types of power saws, such as band saws, circular saws, radial arm saws, saber saws, and table saws. Regardless of the type of saw you use, never reach over the saw line to position or guide materials.

Follow these safety guidelines for working with **band saws**:

- Set the blade evenly with the proper amount of tension.
- Keep your hands on either side of the cut line. Never reach across the cut line for any reason.
- Do not stand to the right of the band saw.
- Be sure the radius of your cutting area is not too small for the saw blade.
- If you hear a rhythmic click, check the saw blade for cracks.

Follow these safety guidelines for working with **circular saws**:

- Do not raise the saw any higher than absolutely necessary.
- Fasten a clearance block to the fence when cutting off short pieces.
- Never attempt to clear away scraps with your fingers.
- Do not cut thin tubular materials with a circular saw.
- Ensure that the fence is not in the cut line of the saw.
- Take care when working with warped or twisted lumber.

Follow these guidelines when working with **radial arm saws**:

- Push the saw blade against the stop before turning on the power.
- Never place one piece of wood on top of another when using this saw. The top piece may kick over.
- This saw pulls itself into wooden materials. It may be necessary to hold the saw back to prevent it from choking.
- Never leave the saw hanging over the end of the arm.

Follow these guidelines when working with **table saws**:

- Circular table saws must have a hood over the portion of the saw above the table. The hood must automatically adjust to the thickness of, and remain in contact with, the material being cut.
- Circular table saws must have a spreader aligned with the blade. The spreader must be spaced no more than 100 mm (~1/2 inch) behind the largest blade mounted in the saw.
- Circular table saws used for ripping must have non-kickback fingers or dogs.

- Feed rolls and blades of self-feed circular saws must be protected by a hood or guard to prevent the operator's hand from coming in contact with the in-running rolls.



GENERAL INDUSTRY STANDARDS FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye and Face Protection

Goggles and face protection must be used when workers are at risk from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors. Workers must also be protected from radiation during welding, torching, soldering, and brazing, or other operations that emit light. Goggles and face protection must meet certain design criteria for safety.



Head Protection

Hard hats must be worn where there is a danger of falling objects. Specialized hard hats are required to reduce electrical shock hazards. The OSHA standard contains a chart to aid in head gear selection.



Foot Protection

Safety shoes with impact protection are required in work areas where heavy objects or tools could be accidentally dropped on the feet. Safety shoes with compression protection must be worn where objects could roll over workers' feet, and in operations involving skid trucks, hand trucks, dollies, etc. Safety shoes with puncture protection are required when working around nails, wire, tacks, scrap metal, and other objects that could pierce the feet.



Hand Protection

Gloves are required to protect workers from cuts, scrapes, punctures, burns, chemical absorption, or temperature extremes. It is crucial that the type of glove being used is the right one for the job since incorrect gloves may provide no protection. This is a particular problem with chemical absorption where incorrect gloves may allow certain chemicals to reach your skin, and you may be unaware that it is happening. Charts to help determine the right gloves for the job are available from glove manufacturers.



Body Protection

There are many varieties of protective clothing available for specific hazards. Examples of body protection include laboratory coats, coveralls, vests, jackets, aprons, surgical gowns and full body suits. Protective clothing comes in a variety of materials, each effective against particular hazards.



Hearing Protection

Appropriate ear muffs or ear plugs must be made available if it is not possible to make the workplace less noisy. This requirement is a small part of the Occupational Noise Exposure standard, which requires employers to ensure that workers are exposed to less than 90 decibels of noise over an 8-hour day. If noise levels reach 85 decibels over an 8-hour day, employers must develop a hearing conservation program per the regulation.



Respirators

Appropriate respirators must be worn as a last resort, if it is not possible to ventilate the work area properly. Known as the Respirator Protection standard, this regulation requires that employers develop a written, comprehensive respiratory protection program for all workers who are required to use respirators on the job.