

General Power Tool Safety Advice

Power tools and appliances can cause serious injury, even death, so it's absolutely essential that you know how to use them safely. You can move from being safe to unsafe in less than a second, so please take a minute to think about the key safety rules.

The first rule is have you been trained to use the tool? If not, ask for advice and instructions before you use it, or leave it alone.

Is the machine or appliance in perfect working order? Are the guards in place? Does it have a current safety tag? Has it been serviced to the manufacturer's specification?

What about you, are you ready for the task? Are you drug and alcohol free? Do you have the right PPE? Have you got rid of any distractions, especially your phone, and are you fully focused and concentrating on the task? Have you planned your workload to eliminate risks and is your work area tidy? And what about your family, mates and pets, are you keeping them safe as well?

Remember if you're not 100 percent confident using a tool or an appliance, then do the right thing and stop.

General Power Tool Safety Warnings

Please read and understand these instructions before use.

1. Work area safety

- Keep your work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children, pets and bystanders away while operating a power tool. Distractions can cause you to lose control.

2. Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use as this helps reduce the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3. Personal safety

- Always read and understand the tool's operator's manual and tool markings on the body of the tool before starting any work.
- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Ensure you have the correct PPE for the task, some tools require different PPE to others. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, work gloves, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to the power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.
- Do not operate power tools in explosive atmospheres, near flammable liquids, gases, or dust.
- Wait for the tool to stop spinning before placing it on the ground or bench
- Always switch off the tool and remove the plug before making adjustments
- Remove adjusting keys and spanners before operating

4. Power tool use and care

- Inspect the power tool for damage and or wear before use.
- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- If the power tool has guarding or other safety devices they shall be fitted as per the manufacturers specifications
- Wait for the tool to stop spinning before placing it on the ground or bench
- Always switch off the tool and remove the plug before making adjustments

- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use of power tools for operations different from those intended could result in a hazardous situation.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- Never modify or alter a power tool from its original manufacturer's design.
- Never attempt to repair a faulty power tool
- Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. Notify GCTL of any damaged items so they can be taken out of service.

5. Battery tool use and care

- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When the battery pack is not in use, keep it away from other metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or tool to fire or excessive temperatures. Exposure to fire or temperatures above 130 °C may cause an explosion.
- Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions as this may damage the battery and increase the risk of fire.

6. Angle Grinders

Angle grinders can be one of the more dangerous tools in the shed and can present risks such as kickback, and discs can shatter, becoming projectiles. Prior to the use of a cutting disk, safer alternatives are to be considered such as a jigsaw, reciprocating saw, double blade saw, or oxy cutting.

Personal protective equipment (PPE) is to be worn at all times when operating an angle grinder.

Prior to Use

- Verify handles are fitted and use two hands to operate the grinder.
- Handles not to be removed
- Fit the right sized disc that has a hole matching the spindle flange.
- Use the tightening tool supplied by the grinder manufacturer to tighten the disc.

- The use of another device (i.e. punch and hammer) can damage the disc and grinder.
- Check the correct flange and locking nut is in place for the type of disc being used.
- Check there are no defects or damage to the disc and it is the correct speed for the grinder
- Use the correct grinding disc for grinder, the task being performed and for the material it is being applied to, i.e. the right size; has a maximum speed (RPM) that is higher than the maximum speed on the grinder; a 'grinding' wheel for grinding, and a 'cutting' wheel for cutting (and not vice versa); disc appropriate for metal versus other material.

When in Use

- Allow grinder to run-up to operating speed before applying to a job.
- Use minimum pressure, to avoid digging in and kickback.
- Never bump the grinder onto the object, or let the disc hit any other object while grinding.
- Have the workpiece held firmly e.g. bench vice.
- Hold the angle grinder with both hands ensuring the side handle is inserted on the side of the unit that gives the best grip for the work activity.
- Keep the grinding disc at a 15 to 30 degree angle to the object.
- Consider ergonomics - have job at waist height where possible, and have comfortable stance with feet apart so you feel well-balanced, and ensure you have a clear view of the job
- Never use a grinder between your legs while sitting on the floor.
- Stop at regular intervals for a short break to rest your hands and arms.
- Never put a grinder down until the disc stops rotating.
- Remove the plug from the power point before changing discs.
- Ensure damaged discs are thrown out and not re-used.
- When not in use, disconnect the power and place the grinder on a bench with the disc facing upwards.

Safe use of hand tools.

Hand tools include a wide variety of non-powered devices such as spanners & shifters, pliers, hammers, and screwdrivers. These tools may seem harmless, but they are the cause of many injuries.

The two most common hazards associated with the use of hand tools are misuse and improper maintenance.

- Misuse occurs when a hand tool is used for something other than its intended purpose. (An example would be using a screwdriver as a chisel. This may cause the tip to break and strike someone).
- Improper maintenance allows hand tools to deteriorate into an unsafe condition. (Examples would include cracked wooden handles that allow the tool head to fly off or mushroomed heads that can shatter upon impact).

1.1 All Hand Tools

- Assess the risks in the environment and with the task in general.
- Ensure you are properly trained to safely use the tool.
- Ensure you have the correct PPE for the task, some tools require different PPE to others.
- If the tool has guarding or other safety devices they shall be fitted as per the manufacturers specifications
- Inspect the tool for damage and or wear before use.
- Specially designed tools may be needed in hazardous environments. (Always use non-sparking tools in the presence of flammable vapours or dust. Insulated tools with appropriate ratings must be used for electrical work).
- Never modify or alter a tool from its original manufacturer's design.

1.2 Knives

- Always ensure your hands are protected
- Ensure the object to be cut is stable and not likely to be dislodged when pressure is applied
- Cut away from the body and never place the object to be cut on your body
- Knife blades are to be kept sharp and clean at all times and damaged blades are to be replaced

1.3 Spanners & Shifters

- Choose a tool that properly fits the fastener that is to be turned. Using the correct size reduces the chances of slippage.
- Do not use a length of pipe or other extension to improve the leverage of a spanner. Manufacturers design wrenches so that the amount of leverage obtained with the handle is the maximum safe application. Avoid placing body parts in the line of fire in case of unexpected movement.
- Use socket wrenches for hard-to-reach areas.
- Always try to pull on a spanner (instead of pushing) in case the fastener suddenly loosens.
- Inspect spanners/shifters & sockets periodically for damage such as cracking, severe wear, or distortion.

1.4 Pliers

- Do not increase the handle length of pliers to gain more leverage. Use a larger pair of pliers or bolt cutters.
- Do not substitute pliers for a wrench when turning nuts and bolts. Pliers cannot grip these items properly and will slip.
- Never use pliers as a hammer or hammer on the handles. Such abuse is likely to result in cracks or breaks.
- Cut hardened wire only with pliers designed for that purpose.
- Always cut at right angles. Never rock from side to side or bend the wire back and forth against the cutting edges.

1.5 Hammers

- Do not use a hammer if the handle is damaged or loose.
- Never weld, heat, or regrind a hammer head.
- Remove from service any hammer exhibiting signs of excessive wear such as cracks, chips, or a mushroomed head.
- Match the proper type of hammer to the job it is designed to perform.
- Sledge hammers with hardened heads are prohibited (refer to prohibited items register)
- Do not strike the surface at an angle. The hammer face should contact the striking surface squarely. Glancing blows made with a hammer often lead to injury.

1.6 Screwdrivers

- Never use a screwdriver as a pry bar, chisel, punch, stirrer, or scraper.
- Always use a screwdriver tip that properly fits the slot of the screw.
- Throw away screwdrivers with broken or worn handles.
- Use magnetic or screw-holding screwdrivers to start fasteners in tight areas.
- Never use pliers on a screwdriver for extra leverage. Only use a spanner on screwdrivers specifically designed to accept them.
- For electrical work specialised insulated screwdrivers shall be used