Reciprocating Saw

Safe Operating Procedures

Introduction

A versatile, multi speed power saw for rapidly cutting tubing, steel sheet or plate, timber & composite construction materials. Commonly referred to a Sabre saw, due in part to the shape of its blade. The sabre blade moves in a 'backward and forward' motion - reciprocating. It allows plunge cutting in even the most confined space. Popular tasks include home renovations and a variety of trade and industrial applications.

Blades are available in different lengths 1500mm - 300mm. Blades with coarse teeth are used for timber, while blades with fine teeth are used for harder materials such as metal. Different materials require specially designed blades.

A feature can include variable speed, which allows the operator to use the cutting speed most suited to the job by varying the pressure on the trigger.

The Sabre saw is equipped with a scroll collar that permits 360° rotation of the saw blade, so intricate designs may be cut with minimum effort.

Identified Risks and Hazards

General hazards that may arise when operating portable electrical power equipment include:

- moving and reciprocating blades and bits and tool disintegration
- movement of the workpiece
- inhalation of fumes and dust particles
- electrocution from power faults, faulty equipment or incorrect use
- ejection of waste materials from cutting blades
- burns from hot materials or friction

Specific hazards that may arise when operating a Sabre saw include:

- Sabre saws can be a cutting hazard to the hands and body.
- The blade may snap if saw is not used correctly.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm.

- When removing the blade from the saw avoid contact with skin and use proper protective gloves when grasping the blade. It may be hot after prolonged use.

Top

Pre-operational Safety

Before using any Sabre saw, examine the power cord, extension lead, plugs, sockets and power outlet for damage. Look for:

- cracked or damaged casing
- bare wires or loose connections
- damage to cord sheathing
- loose or missing screws

Before starting the Sabre saw ensure that the cutting blade, fences, guards and attachments are secure and correctly fitted.

Do not use blunt or damaged cutting blades.

Do not test cutting blades for sharpness with the fingers.

Always inspect the workpiece to ensure that there aren't any items which might damage the cutting tool or cause injury to the operator.

Top

Operating Safety Precautions

Keep your work area clean and well lit. Cluttered benches and 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 by-standers and visitors away while operating any power tool. Distractions can cause you to lose control.

Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded. If operating the power tool in damp locations is unavoidable, a Ground Fault Circuit Interrupter must be used to supply the power to your tool. Electrician’s rubber gloves and footwear will further enhance your personal safety.

Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Safe Operating Procedures

Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase
the risk of electric shock.

Stay alert, watch what you are doing and use common sense when operating a power saw. Do not use tool while tired or under the influence of drugs, alcohol, or medication.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Keep handles dry, clean and free from oil and grease.

Remove adjusting keys or wrenches before turning the tool “ON”. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Hold the Sabre saw by the insulated gripping surfaces when performing an operation where the blade may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator. Do not drill, fasten or break into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.

Keep fingers and hands clear of moving parts and the cutting blade.

Always keep the power cord clear of moving parts and the cutting blade.

Avoid blocking or covering the motor ventilation slots while using the Sabre saw.

Always position electrical cords with care to avoid trip hazards and to prevent damage to the cord or extension lead.

Top

Daily Maintenance

On completion of the machining procedure, clean down the Sabre saw and return it to its storage position.

Maintain all power tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.

To maintain peak efficiency of the motor, it is recommended that every two to six months the brushes be examined.

Look for cracked or damaged casing, bare wires, loose connections, damage to cord sheathing, loose or missing screws, or blocked ventilation slots. Never use a defective Sabre saw.

Cleaning

To avoid accidents, always disconnect the saw from the power supply before cleaning. The Sabre saw may be cleaned most effectively with compressed dry air. Always wear safety goggles when cleaning tools with compressed air.

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

Certain cleaning agents and solvents damage plastic parts. Do not use the following to clean: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

Isolating and Lockout Switches

Electrically operated machines should be fitted with a flush **green on** or **start switch** and a **red stop switch** that has a raised mushroom shaped head for fast emergency contact.

As well as start and stop switches, all machines must have an **isolating switch**, which enables the main power supply to be switched off when the machine is being set up, adjusted or when maintenance is being carried out.

Top

Operating Procedures

Always obtain permission from the supervisor before using the Sabre saw.

Switch off and remove the plug from the power outlet before fitting attachments, changing blades, or making adjustments which require fingers or the hands to be near the cutting blade.

Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Safe Operating Procedures

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

Never leave the trigger locked "ON". Before plugging the tool in, check that the trigger lock is "OFF". Accidental start-ups could cause injury.

Keep hands away from cutting area. Do not reach under the material being cut. The proximity of the blade to your hand is hidden from your sight.

Keep hands from between the gear housing and saw blade holder. The reciprocating blade holder can pinch your fingers.

Do not use dull or damaged blades. Bent blades can break easily or cause kickback.

Before starting to cut, turn tool "ON" and allow the blade to come to full speed. Tool can chatter or vibrate if blade speed is too slow at beginning of cut and possibly kickback.

Always wear safety goggles or eye protection when using this tool. Use a
dust mask or respirator for applications which generate dust.

Secure material before cutting. Never hold it in your hand or across legs.

Small or thin material may flex or vibrate with the blade, causing loss of control. Mark the line of cut and grasp the tool with one hand on the handle and the other placed on the insulated rubber boot over the front housing.

Always hold the saw by the insulated boot on the front housing. If you saw into a blind area where live wiring exists, you may be shocked or electrocuted.

Keep the saw footplate firmly against the work to minimize counter-force (jumping) and vibration.

Squeeze the trigger to start the tool. Let the saw reach full speed before starting the cut. Guide the saw so that the blade will move along the marked line.

To reduce the risk of injury, be sure the blade always extends beyond the footplate and work throughout the stroke. Blades may shatter if the front on the blade hits the work and/or the footplate.

Use the correct saw blade for the material being cut and keep extra blades on hand to use when others become dull. Replace cracked or bent blades immediately.

When cutting thin metal, "sandwich" the material between two pieces of scrap wood. Clamp or put in a bench vise. One piece of lumber on top of the metal can be used with adequate clamping. Place your cut lines or design on the wood.

The reciprocating saw can be used to make plunge cuts into softer material, (for example, wood or light building materials for walls), without a starting hole.

To make plunge cutting easier, use a heavy gauge blade, install the blade with the teeth facing upward, and hold the saw upside down. In thick materials and in harder materials, such as metal, plunge cutting should not be attempted. Such materials can be cut with the Sabre saw only by starting the cut from the edge of the material or from a hole drilled all the way through the material that is large enough to fit the saw blade.

Check the following clothing for safety hazards and take appropriate action:

- Fasten any loose clothing and tie cords or straps at the back
- Remove any jacket or coat and any school uniform tie
- Roll up shirt sleeves above the elbows or fasten them securely at the wrists
- Do not wear finger rings, watches, bracelets or necklaces
- Wear solid firm shoes which provide adequate protection for the feet

Top