

INTRODUCTION

Chop saws (sometimes referred to as abrasive saws) are widely used in the entertainment industry for construction sets, props, and other structures. This tool may also be used as a prop for some scenes as well. However, these saws can be extremely dangerous when proper safety measures are not followed. In this lesson, we will cover the hazards, the personal protective equipment, and the safe work practices associated with these power tools.

HAZARDS

When working with a chop saw, you could be exposed to one or more of the following hazards:

- Eye injury or damage from flying chips or sparks.
- Cuts, lacerations, or amputations from your extremities or fingers making contact with the moving blade
- Kickback of material when trying to force the blade through the material
- Fire or explosion if sparks ignite flammable or combustible material
- Getting entangled in the blade from loose clothing, long hair, or jewelry getting caught by the blade
- Burns from touching workpieces that were heated during the sawing process
- Respiratory irritation from breathing in dust produced during the cutting process
- Hearing damage or loss from repeated exposure to excessive noise
- Electrical shock if the equipment is improperly grounded



PERSONAL PROTECTIVE EQUIPMENT

To help minimize the chances of an accident occurring, you should wear the appropriate personal protective equipment (PPE) when operating a chop saw. PPE may include:

- Safety glasses or goggles
- Face shield
- Close-fitting clothing
- Close-toe or steel-toe shoes or boots
- Hearing protection
- Dust mask
- Respirator

You should inspect all provided PPE for wear or damage before you put it on. Report worn or damaged items to your supervisor. Do NOT wear damaged PPE.

SAFE WORK PRACTICES

Shop Safety

When working with a chop saw in the fabrication shop or area, there are certain things that you should do before and when working with the saw.



ENTERTAINMENT: CHOP SAW SAFETY

Before Operating a Chop Saw

Before operating a chop saw, you should do the following:

- Read and become familiar with the manufacturer-provided owner's or operator's manual.
- Tie back long hair and remove all jewelry.
- Inspect the unit for damage, including the electrical cord.
 - Report damaged saws to your supervisor.
 - Do NOT operate damaged saws.
 - Tag damaged saws in accordance with your company's policies and procedures.
- Check the blade for dullness or damage.
 - Report dull or damaged blades to your supervisor.
 - Sharpen or replace blades as necessary.
 - Only use blades that are manufacturer-approved or recommended for your unit.
- If your saw has dust extraction or collection facilities, make sure that they are properly connected to the saw.
- Make sure that all guards are in place and secure.
 - If guards had to be removed for maintenance purposes, make sure that they have been replaced and properly secured before starting the saw.
 - Report missing or modified guards to your supervisor.
 - Do NOT operate a saw that has missing or modified guards.
- If applicable, check that the adjusting wrench or key has been removed before you start the unit.
 - Wrenches or keys that are left on the unit could come loose during the sawing process and become flying objects.
- Assure that the unit is plugged into an appropriately grounded outlet.
 - Improperly grounded units could expose you to electrical shock.
 - If extension cords are to be used, inspect the extension cord for damage.
 - Report damaged extension cords to your supervisor.
 - Do NOT use damaged extension cords.
- Make sure that the area around the saw is clean and free of any flammable or combustible materials.
 - Sparks produced during the sawing process could ignite flammable or combustible materials.

When Operating a Chop Saw

When operating a chop saw, you should do the following:

- Only allow trained and authorized employees to use the chop saw.
- Do NOT operate a chop saw while under the influence of drugs or alcohol.
 - If you are on prescription medication that could affect your ability to safely operate a chop saw, please speak with your supervisor.
- Be aware of your surroundings.
- Make sure the saw is on a stable surface.
 - Trying to saw on an unstable surface could lead to an injury.
- Only use the saw in well-ventilated areas.
- Make sure that you have proper footing before making your cut.
- Operate the saw in accordance with the manufacturer's instructions.
- Use the appropriate cutting blade for the material you are cutting.
 - Using an incorrect blade could wear the blade out or cause you to force the blade to cut the material, which could result in kickback.
- Only cut materials that are approved for the saw.
- Assure that the material you are cutting has been properly secured in the vice before starting the blade.



ENTERTAINMENT: CHOP SAW SAFETY

- Make sure that material is properly supported while you are cutting the material.
- Keep your hands out of the cutting zone while the blade is running.
 - Do NOT overreach when making a cut.
- Do NOT leave the saw unattended.
 - If you must leave the saw for any reason, turn off the saw and wait for the blade to come to a complete stop before leaving the area.
 - For added protection, you may want to unplug the unit to help protect against accidental startup.
- Be aware that some materials may be hot after cutting.
 - Either allow material to cool before picking it up with your hands or use another tool to pick up heated pieces to move them to an area to cool down.
- When you are finished with the saw, it should be unplugged to help protect against accidental startup.
- If you store saws, assure that saws are stored in accordance with the manufacturer's instructions and your company's policies and procedures.

Prop Safety

Prop Master

Before actors use a chop saw for a scene, prop masters and/or their assistants should do the following:

- Where possible, provide a mock or prop chop saw in place of a real one to help minimize the chances of a serious injury occurring.
- Where a real chop saw needs to be used, make sure that the saw has been completely disabled so it cannot be accidentally turned on.
 - This may involve removing the power source, the motor, or even the blade.
- Provide a safety orientation to everyone who will be interacting with the prop.
 - The safety orientation should include information on the chop saw's parts, potential danger points, and how the chop saw works, even if the person will not actually be operating the saw.
- Where feasible for the scene, assure that actors are wearing the appropriate personal protective equipment.
- Make sure that the saw is properly stored in accordance with the company's or production's policies and procedures, and where applicable, the manufacturer's instructions when it is not being used for a scene.
- If multiple shows or scenes will involve the chop saw, make sure that everyone knows how to check-in and check-out the prop.

Actors

Depending on the production, actors may be asked to handle or operate a circular saw (either real or fake) for a scene. Due to the potential dangers involved with these saws, actors should do the following:

- Make sure to attend the safety meeting/orientation for the saw.
- Do NOT wear any loose clothing or jewelry, as there is the potential for this to be caught in the saw, even in a staged scenario.
 - Make sure that long hair is properly tied back, as long hair can also get caught in the saw.
- Make sure that you are comfortable with the prop and the choreography that you will be performing with it.
 - If there is something that you are unsure about or do not feel comfortable with either during rehearsals or when shooting the shot, please speak with the director and prop master.
- Do NOT put your hands or fingers near the blade area, even if the tool is non-functional.
- Where allowed by the scene, always carry the chop saw with two hands when carrying it.



ENTERTAINMENT: CHOP SAW SAFETY

- When finished with the prop, make sure that it has been returned to the prop master or a prop master assistant.

CONCLUSION

To conclude, chop saws are often used in the fabrication of sets and props for many productions in the entertainment industry. Additionally, they may sometimes be used as actual props for a scene. However, these saws can expose people to harm if certain precautions are not followed. To help minimize the chances of an accident occurring during operation in fabrication shops, operators should operate the tool in accordance with the manufacturer's instructions and the shop's policies and procedures. When the saw will be used as a prop by actors, prop masters and/or their assistants should do all they can to minimize the risk of injury on set by disabling the saw and providing education to actors on the safe handling of the prop. Actors should also make sure that they are comfortable with handling the prop for their scene, and if they have any concerns about the prop, speaking with both the director and prop master. If you have questions regarding chop saws for your production, please speak with your supervisor.

