power tool institute, inc.

Miter Saw Safety Video Lesson Plan

Presented by the
manufacturer members
of the Power Tool Institute

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MITER SAW SAFETY VIDEO LESSON PLAN

1. Introduce the video by instructing the class that it covers a variety of miter saws and rules for using these tools safely. Emphasize that it takes just a split second for a mistake to result in an accident and possible serious injury.
2. Encourage the student to note the main points in the video.
3. Show the video.
4. Have the students recount as many of the safety rules as they can.
5. Use the outline provided here to fill in any of the points they missed.
6. Show the video a second time. There is a lot of material to absorb.

- Miter saws are one of the most versatile tools in wood working, used for tight comers, concise angles, and fine finishing. With blade tip speeds of nearly 140 mph, improper use can cause serious injury. It takes only a split second to change the course of your life forever.

- **ALWAYS READ THE INSTRUCTION MANUAL.** This video is not intended to replace the instruction manual.

- Miter saws should only be used to cut wood and non-ferrous materials. It should not be used to cut ferrous materials such as metal bars, rods, and studs. Excessive sparking could damage the blade guards, and the excessive loading could damage the motor.

- When cutting aluminum use only blades designated for cutting non-ferrous materials.

- Make sure the miter saw is secured to a stable, level, work surface.

- The work piece is the only thing that should be on the miter saw work surface. Eliminate all other wood scraps, debris, and loose objects.

- Always keep hands away from the blade in accordance with the instruction manual.

- Uneven or excessive force could cause the hand to slip into the blade.

- Do not hold only the work piece. Support part of your work by holding hand on the fence or table.

- Short work pieces must be clamped. Do not attempt to hold short pieces with your hand and do not use a miter saw to cut pieces that are too small to be securely clamped.

- For pieces longer than the worktable, make sure they are properly supported using table extensions or other supports. Do not use a second person to support a long work piece.

- Never tamper with the blade guard system and make sure it is always in good working order.

- The proximity of the saw blade to your hand may not be obvious over the entire range of the saw's path to complete the cut.

- Never have your hand and arm holding the work extending across the line of the cut.

- There are three types of miter saws:
  - Standard cut miter saw - miter cuts only.
  - Compound miter saw - miter and bevel cuts.
  - Slide compound miter saw - miter and bevel cuts plus movement of the saw along rails for increased capacity.

- Before using the saw:
  – Make sure guards and brake are in good working order.
  – Make a dry run of the cut with and without the work piece in place to project the path of the blade.
  – Secure the work piece against the fence and table.

- Tum on saw and let the blade reach its full speed before contacting the work piece.

- When the cut is complete, let the saw blade come to a complete stop before returning the saw to its rest position or removing the work piece.

- Never feed the work piece into the blade or attempt to cut "free hand." The work piece must be securely held or clamped against the fence and table.

- Never use a miter saw for 'free hand' notching.

- The cut off piece must not be wedged or bound in any way against the spinning saw blade.

- When using a length stop, securely clamp or hold the work piece between the length stop and the blade.

- If a work piece becomes jammed, tum the miter saw off by releasing the switch. Wait for the miter saw to come to a complete stop and unplug or remove the power source it before removing the jammed piece.

- When using a slide action miter saw:
  – First move the saw head away from the fence until the blade clears the work piece or is at its full extension.
  – Make sure a clamp, if used, does not interfere with the guard or head assembly.
  – Turn the saw on and make sure the blade is at full speed before lowering the saw and moving it through the work piece.
  – Pull cutting may cause the blade to kick back unexpectedly driving the blade towards the operator.
  – For plunge cutting, slide the head all the way back towards the fence and tighten the slide lock knob. Let the blade reach full speed and lower the blade into the work piece. If you fail to tighten the slide lock knob, it may cause unexpected kickback and serious injury.

- When cutting irregular work pieces, make sure they are stabilized and secured.

- If the work piece is bowed, clamp it with the outside bowed face toward the fence to stabilize the piece.

- For rods or tubes, always use a fixture and clamp to hold the work piece. Do not attempt to hold it by hand.

- Blade braking action may cause the blade head to jerk downward. Be aware of this whenever the cut does not end with the saw head in the full down position.

- Reaching under a coasting blade is very dangerous.

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