# **Circular Saw**

This syllabus is intended to aid instructors in providing training for this tool, and for quick reference by existing users. It is not intended to teach you the tool by itself.

### 1. Safety

1.1. PPE

- Safety glasses required
- Hearing protection required
- Respirator recommended when cutting treated wood or producing fine dust
- 1.2. Entanglement risks
  - No loose clothing or cables
  - No gloves
  - Long hair must be tied back
  - No jewellery/watches
- 1.3. Kickback risks
  - Always hold the saw firmly with both hands
  - Allow the saw to reach full speed before beginning a cut
  - Never start the saw with the blade in contact with the workpiece
  - Always support workpiece so the kerf does not close up behind the blade
  - Avoid binding by allowing the cut-off to fall freely or be supported
  - Never remove or disable the lower blade guard
  - If the blade becomes jammed, release the trigger immediately and hold the saw in place until the blade stops

### 2. Startup checks

- 2.1. Surrounding area cleared of obstacles
- 2.2. Other workshop users alerted to keep clear and use appropriate PPE
- 2.3. Blade and guard condition checked
  - Power off and remove battery when performing checks
  - Blade is sharp and undamaged
  - Blade is installed correctly, tightened, and rotates freely
  - Blade guard moves freely and returns to cover blade automatically
- 2.4. Check for correct blade type
  - Use appropriate blade for material (wood, plastic, etc.)
  - Do not use dull, damaged, or inappropriate blades
- 2.5. Workpiece free of metals (nails, screws) etc.
- 2.6. Stable cutting surface
  - Workpiece secured using clamps or bench
  - Ensure both sides of the cut are supported to prevent binding

### 3. Usage

- 3.1. Starting the machine
  - Position saw with blade clear of workpiece
  - Hold securely with both hands
  - Press safety switch and trigger to start
  - Allow blade to reach full speed before contacting workpiece
- 3.2. Stopping the machine
  - Release trigger to stop blade

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- Keep hands on saw and wait for blade to stop fully before setting it down
- Do not set the saw down on its side or while blade is still spinning
- 3.3. Making straight cuts
  - Mark cut line clearly
  - Align blade to cut line using notch or guide
  - · Hold the front and rear handles with a firm grip
  - Keep baseplate flat on the workpiece throughout the cut
  - Feed saw steadily along the line, do not force
  - Let the blade do the cutting
  - Always cut on a stable surface, with workpiece clamped
- 3.4. Bevel and plunge cuts
  - Adjust bevel angle as needed and tighten adjustment knob
  - For plunge cuts:
    - Check manual for correct plunge technique
    - Begin with front of baseplate in contact with workpiece
    - Pivot saw down slowly until blade enters the material
    - Do not plunge into hidden voids, knots, or metal

### 3.5. General

- Never saw freehand without guiding edge or clear markings
- Never bypass the safety mechanisms
- Never adjust the bevel, depth, or blade while running
- Maintain a balanced stance, do not overreach
- Keep both hands on the saw at all times during cutting
- Always let the saw come to a complete stop before removing it from the cut
- 3.6. Intended Use (appropriate materials)
  - The handheld circular saw is designed for straight cuts in wood and sheet materials
  - Can be used for plastics and soft metals (e.g. aluminium) with appropriate blade
  - Not intended for cutting masonry, tile, or hardened metals
  - Typical max cutting depth (guideline):
    - 55mm at 90°
    - 40mm at 45°

### 4. Post Cutting

- Remove battery
- Clean the area of sawdust and offcuts
- Remove and store clamps and guides
- Allow blade to cool before inspecting or changing
- Return saw to storage with blade guard locked in place

### 5. Maintenance

- 5.1. General
  - If there are any issues, please contact a maintainer listed on the power tools wiki page. Example issues: motor stalls, damaged cord, guard malfunction
  - Do not attempt to change the blade without supervision or training
  - Always clean saw and store with blade guard fully covering blade