

Safe Operation of a Metal Guillotine (Power Shear)

Standard Operating Procedure (SOP)

1. Purpose

To prevent amputation, crush injuries, and serious harm when cutting sheet metal and plate on a powered guillotine (treadle, hydraulic, or mechanical swing-beam/under-crank type).

2. Scope

Applies to all powered metal guillotines in the workplace, including:

- Foot treadle guillotines
- Hydraulic guillotines
- Older mechanical clutch machines

3. Responsibilities

Operator: Must be trained, authorised, and strictly follow this SOP.

Supervisor/PCBU: Ensure only authorised operators use the machine, all guards are in place and never bypassed, and training records are current.

4. Major Hazards

- Blade descending while hands are under it
- Repeat stroke or unintended activation
- Fingers under hold-down clamps
- Material kick-back or ejection
- Sharp edges on cut pieces

5. Mandatory Personal Protective Equipment (PPE)

- Safety glasses
- Hearing protection
- Cut-resistant gloves (Level 5) ONLY when handling sheet – MUST be removed before operating controls
- Steel-cap boots
- Close-fitting clothing – no loose sleeves

6. Training & Authorisation

Only persons who have:

- Completed specific guillotine training
- Been assessed as competent on the exact model
- Current authorisation recorded in the training register

may operate unsupervised.

7. Pre-Operation Checks

- All fixed and interlocked guards in place and functional
- Hold-down clamps rise fully and are undamaged
- Foot treadle (if fitted) is fully shrouded and returns to raised position
- Two-hand control (if fitted) – anti-tie-down working, buttons <250 mm apart
- Emergency stop bar along front edge tested and working
- Blade sharp, correctly set (gap 5–10 % of material thickness), and securely bolted
- Back-gauge functional and square
- Floor area clean, dry, and free of off-cuts
- Shadow line or laser (if fitted) aligned

8. Safe Operating Procedure

Set-Up

- Isolate and lock out before changing or adjusting blade.
- Use two persons or proper lifting equipment for blades >20 kg.
- Adjust blade gap for material thickness (refer machine chart).
- Set back-gauge to required dimension and lock.

Cutting Operation

Hands must NEVER go past the front edge of the hold-down clamps or under the blade area.

Approved methods – ONE of the following must be used at all times:

- A. Two-hand control (maintain until blade fully down and up)
- B. Protected foot treadle + fixed front guard that prevents fingers reaching the blade zone
- C. Light curtain (set to correct safety distance – AS 4024 Table E.2) – tested daily
- D. Hold-to-run foot pedal + presence-sensing mat (rear only)

Additional mandatory rules

- Use push sticks, magnetic lifters, or vacuum lifters for small pieces.
- Never cut material thicker than machine rating.
- Stack cut pieces safely – never let them pile under the blade.
- For long sheets, use at least one support person or roller tables at front and rear.

- Stand to the side when cutting – never directly in line with the blade.

9. Shut-Down & Cleaning

- Raise blade fully.
- Isolate at main switch.
- Remove off-cuts and stack safely.
- Brush or vacuum swarf (never blow with compressed air near people).
- Apply light oil to blade and table.

10. Absolutely Prohibited Actions (Zero Tolerance)

- Bypassing, wedging, or defeating any guard or two-hand control
- Placing hands under hold-down clamps or blade
- Cutting short pieces by hand without approved jigs or pushers
- Leaving the treadle cover off or wedged open
- Operating without current training/authorisation
- Cutting round bar, rod, or material that can roll (unless specially fixtured)

11. Emergency Procedures

1. Hit the front emergency stop bar immediately
2. If someone is trapped: DO NOT reverse the blade – isolate power first, then use the manual blade release (hydraulic machines) or mechanical jacks
3. Call 111 immediately for serious injury

Approved by: Joshua Klein Ovink

Position: Director

Date: 01 July 2026

