

Safe Operation of a Hydraulic Workshop Press (Manual, Air/Hydraulic, or Electric)

Standard Operating Procedure (SOP)

1. Purpose

To prevent crush, amputation, fluid injection, and serious injury when using a hydraulic press for pressing bearings, bushes, straightening, bending, or assembly work.

2. Scope

Applies to all open-frame (H-frame and C-frame) hydraulic workshop presses from 10 tonne to 200 tonne, including Hare & Forbes, Steelmaster, Comeq, Enerpac, Powermaster, Prolift, and similar brands.

3. Responsibilities

Operator: Must be trained, authorised, and never bypass any safety device.

Supervisor/PCBU: Ensure only authorised persons operate the press and that pressure gauges, guards, and winch (if fitted) are maintained.

4. Major Hazards

- Crush/amputation between ram and bed or tooling
- Workpiece or tooling ejection under load
- High-pressure hydraulic oil injection injury
- Bed or table falling when winch-operated
- Ram free-falling if valve opened too quickly

5. Mandatory Personal Protective Equipment (PPE)

- Safety glasses or full face shield (AS/NZS 1337.1 medium impact)
- Hearing protection if >85 dB(A)
- Steel-cap safety boots
- Close-fitting clothing – NO GLOVES while operating controls
- No loose sleeves, jewellery, or long hair (tied back and secured)

6. Training & Authorisation

Only persons who have:

- Completed specific hydraulic press training

- Been assessed competent on the exact press
 - Current authorisation recorded in the training register
- may operate unsupervised.

7. Pre-Operation Checks

- Pressure gauge readable and within calibration date
- All pins and bed locking devices present and undamaged
- Hydraulic oil level correct and no leaks
- Ram moves smoothly and returns fully
- Winch cable (if fitted) inspected – no fraying or broken strands
- Emergency stop (if fitted) tested
- Floor area clean, dry, and marked with exclusion zone

8. Safe Operating Procedure

Set-Up

- Select correct press capacity – never exceed rated tonnage.
- Adjust bed to correct height and insert both locking pins fully on both sides.
- Use proper tooling or support blocks – never press on bare bed.
- Centre the workpiece and ensure it cannot slide or eject.
- For bending or straightening, use correct V-blocks or dies.

Pressing

Never place any part of the body under the ram unless the ram is mechanically blocked or on zero-energy state.

- Put on all PPE – NO GLOVES.
- Stand to the side – never in line with the potential ejection path.
- Lower ram slowly until it just contacts the work.
- Apply pressure gradually while watching for movement or cracking sounds.
- If a “pop” or sudden movement occurs, stop immediately and reassess.
- Never leave the press under pressure unattended.

9. Shut-Down & Cleaning

- Fully retract ram.
- Lower bed to lowest position (if safe).
- Isolate at main switch if leaving the area.
- Wipe up any oil spills immediately.
- Store tooling safely.

10. Absolutely Prohibited Actions (Zero Tolerance)

- Putting hands or any body part under the ram without mechanical blocking (e.g., press blocks or pins)
- Exceeding the rated tonnage of the press
- Using makeshift packing or wooden blocks under the ram
- Operating the winch while someone is under the bed
- Leaving the bed supported only by the winch cable
- Bypassing or removing any guard or limit switch
- Wearing gloves while operating the valve

11. Emergency Procedures

- Release pressure immediately and hit emergency stop (if fitted)
- If someone is trapped: DO NOT try to reverse under power – isolate power first, then use the manual hand pump or lowering valve to release slowly
- For hydraulic-oil injection injury: treat as serious – go to hospital immediately (do not wait for swelling)
- Call 111 for any crush injury

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