

SAFE USE OF HYDRAULIC JACKS

Applies to: Enerpac, Tangye Hydralite, Hi-Force, Holmatro, Simplex, and similar mechanical & hydraulic toe jacks and lifting jacks

Purpose

Hydraulic jacks provide controlled lifting of heavy machinery, structures, and loads when a compact, portable lifting solution is required.

Toe jacks allow lifting from very low access points, while Hydralite and similar jacks deliver high tonnage capability for industrial lifting and positioning.

This leaflet provides guidance for safe setup, operation, and maintenance to prevent overload, instability, or hydraulic failure.

Before Use

- Inspect the jack – Check body, lifting toe, ram, pump handle, release valve, and base for cracks, distortion, corrosion, or leaks.
- Verify tonnage rating – Ensure the jack's capacity (toe and head) exceeds the load weight. Toe rating is often lower than head rating.
- Check hydraulic seals – Look for oil seepage, damaged dust caps, or contaminated fluid.
- Inspect the toe – Ensure it is straight, undamaged, and fully seated when lowered.
- Check base stability – Jack must sit on solid, level ground. Use steel plates, timber cribbing, or load spreaders if needed.
- Check the lift height – Ensure the jack's maximum stroke is sufficient for the required lifting movement.
- Test-run the jack no-load – Pump to confirm smooth operation and leak-free movement.
- Confirm load path – Ram and toe must lift **vertically**, not at an angle.
- Ensure the load can be **supported mechanically** (cribbing, blocks) before anyone approaches.
- Ensure operator competence – Only trained personnel should operate lifting jacks.

During Operation

- Position jack centrally under the lifting point.
- For toe lifts, ensure the toe is fully engaged under the load.
- Use suitable cribbing or jacking blocks to create a stable lifting base.
- Pump slowly and evenly — avoid sudden or jerky movements.
- Keep hands, feet, and tools clear of pinch points.
- Lift in small increments — never exceed the rated stroke.
- After each lift increment, insert mechanical supports (timber cribbing, steel packing) **before** lifting further.
- Maintain a vertical load — do not allow the load to twist, lean, or slide.
- For multi-jack lifts:
 - Maintain synchronisation
 - Communicate clearly
 - Use level indicators where necessary
- Stop immediately if any bending, tilting, leaking, or abnormal noise occurs.

Do Not

- Exceed the head or toe rated capacity.
- Use on soft ground without spreader plates.
- Jack one side of a load excessively — maintain balance.
- Work beneath a load supported only by a jack.
- Side-load the ram or lift at an angle.
- Modify the jack or tamper with safety/overload valves.
- Use damaged, corroded, or leaking jacks.
- Use timber blocks that are split, rotten, or unstable.
- Lift people or use jacks as permanent supports.

After Use

- Lower load fully and remove all cribbing safely.
- Slightly open release valve to return ram to base position.
- Clean jack surfaces and wiping dirt/oil from moving parts.
- Inspect for leaks, bent components, or damaged toes.
- Replace dust caps and keep hydraulic ports clean.
- Store upright, in a dry area, with the ram fully retracted.
- Maintain LOLER inspection records for jacks used in lifting operations.
- Tag out and report any defects immediately.

Safety Reminders

- Always follow manufacturer instructions (Tangye Hydralite, Enerpac, Hi-Force, etc.).
- Use appropriate load-spreading plates and stable cribbing.
- Never exceed rated capacity, especially at the toe.
- Maintain exclusion zones around lifting operations.
- Wear suitable PPE: gloves, helmet, safety boots, and high-visibility clothing.
- Never rely on hydraulic pressure alone — always block/support loads.
- Conduct periodic inspection and maintenance by a competent person.

Support and Maintenance

For service, inspection, and spare parts, contact your local Lifting Gear and Safety Depot

Depot List

Bristol: 0117 9714883

Avonmouth: 0117 9550456

Newport: 01633 334450

Port Talbot: 01639 540007

Pembroke: 01646 574000

Plymouth: 01752 474488

Fareham: 01329 550988

Redruth: 01209 703990