



OPERATING & SAFETY INSTRUCTIONS

ACTIONRAM HYDRAULIC HAND PUMPS

MODELS: HHB-700 / HHB-700-2000CC / HHB-700S-3000CC /
HHB-700-7000CC

Read this manual and follow
all the safety rules and operating
instructions before using this
product.

ACTIONRAM HYDRAULIC HAND PUMPS

SUMMARY

- 2-speed design enables faster operation with less manual effort
- Maximum output pressure of 700bar (10,000psi)
- Available in 700cc, 2000cc, 3000cc, and 7000cc oil capacities
- Suitable for a range of applications from light to heavy-duty tasks
- Rugged steel construction ensures durability and long service life
- Integrated pressure relief valves enhance user safety
- Standard 3/8" NPT outlet across the range for compatibility
- Compact and portable design relative to capacity for ease of use on-site

OPERATING INSTRUCTIONS

BEFORE OPERATING THE PUMP, CAREFULLY READ ALL SAFETY GUIDELINES AND PRECAUTIONS.

BEFORE USE – PRE-OPERATION CHECKS

1. Ensure all nuts and bolts are securely tightened.
2. Check the function of both the release valve and the tank relief valve by turning them clockwise and anti-clockwise by hand.
3. Confirm the oil temperature is between -10°C and $+55^{\circ}\text{C}$.
4. If using a pressure gauge, make sure it is rated for 0–700 bar (10,000 PSI) minimum.
5. Ensure the oil tank is filled to no more than 85% of its capacity.

HOW TO OPERATE

1. Release the lever hook
2. Turn the tank relief valve anti-clockwise.
3. Hand tighten the release valve in a clockwise direction.
4. Test the pump by raising and lowering the lever repeatedly.
 - If pressure does not build, open the release valve anti-clockwise to release any residual oil and repeat.
5. Connect the pump to a hydraulic cylinder.
 - Minimum distance of 1.8 metres is recommended between the pump and the cylinder.

ACTIONRAM HYDRAULIC HAND PUMPS

SAFETY GUIDELINES

PLEASE READ AND RETAIN THESE INSTRUCTIONS

- The user must be familiar with the correct operation, maintenance, and use of the pump. Lack of knowledge in any of these areas may result in injury.
- Only use approved accessories and hydraulic fluid.
- Do not exceed rated capacities of the cylinders. Excess pressure may result in injury. ActionRam cylinders are designed with a hydraulic pressure rating of 700 bar.
- Do not use on poorly balanced or off-centre loads. The load may tip and result in injury.
- Before operating the pump. Tighten all hose connections using the correct tools. Do not over tighten the connections. Connections must be tightened securely and leak-free.
- Do not allow the hose to come into contact with hazards such as fire, extreme heat or cold, sharp surfaces or to be subjected to heavy impact.
- Do not allow the hose to kink, twist, curl or bend so tightly that the oil flow within the hose is blocked or reduced.
- Do not use the hose or coupler to move attached equipment. Stress may damage the hose or coupler and result in injury.
- Keep clear of raised loads.

PRECAUTIONS

- Avoid straight tubing connections in short runs. Straight-line runs do not provide for expansion or contraction due to pressure or temperature changes.
- Eliminate stress in the tube lines. Brackets or clips should support long tubing runs. Tube through bulkheads must have bulkhead fittings. This makes easy removal possible and helps support the tubing.
- If the hydraulic hose needs to be disconnected, immediately shut off the pump. **Never attempt to grasp a leaking hose under pressure with your hands. The force of the escaping hydraulic fluid could cause serious injury or death.**
- Do not allow the hose to kink, twist, curl or bend so tightly that the oil flow within the hose is blocked or reduced.
- Periodically inspect the hose for wear because any of these conditions can damage the hose and may result in personal injury.
- Do not use the hose to move attached equipment. This can weaken or damage the hose or coupler.
- Hose material and coupler seals must be compatible with the hydraulic fluid used.
- Before painting a hose consult manufacturer.
- Never paint couplers.

ACTIONRAM HYDRAULIC HAND PUMPS

MAINTENANCE

IMPORTANT: INSPECT THE EQUIPMENT REGULARLY AND CHECK FOR DAMAGE BEFORE USE.

Always use high-quality hydraulic oil and avoid mixing different types of oil. Do not use brake fluid, alcohol, glycerin, motor oil, or contaminated oil. Improper fluids can cause serious damage to the ram cylinder and pump, rendering them inoperative. We recommend using #32 low freezing point hydraulic oil or an equivalent.

- Keep equipment clean.
- Lubricate moving parts of the pump handle.
- Avoid sharp kink in the hose.
- If hydraulic oil needs to be added, refill through the oil filler screw hole until the oil level is within 3/8" of the hole, then reinstall the oil filler screw.

REFILLING OIL:

1. Remove the oil filler screw.
2. Turn the pump upside down and drain the oil through the filler screw hole.
3. Refill with oil until the level is within 3/8" of the filler screw hole opening, then reinstall the oil filler screw.
4. After refilling, remove air from the system by opening the release knob and rapidly pumping the handle several times. Once done, reinstall the oil filler screw.

NOTE:

- Ensure waste oil is disposed of in accordance with local authority regulations.
- Do not allow dirt or other foreign material to enter the hydraulic system when filling.

STORAGE:

When not in use, always keep the pump handle fully retracted. Store it in a dry, protected area, away from corrosive vapors, dust, or other harmful elements.

LUBRICATION:

Apply a light lubrication oil to pivot points, axles, and hinge sections every 3 months to prevent rust.

RUST PREVENTION:

Inspect the cylinder every 3 months for any signs of rust or corrosion. Clean as necessary and wipe it down with an oil saturated cloth.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE
Cylinder will not advance	Pump release valve open
	Coupler not tightened fully
	Pump oil level is low
	Load is too great for cylinder
	Pump malfunctioning
Cylinder advances part way	Pump oil level is low
	Coupler not tightened fully
	Cylinder plunger binding
Cylinder advances in spurts	Air in hydraulic system
	Cylinder plunger binding
Cylinder advances slowly	Leaking connection
	Coupler not tightened fully
	Pump malfunction
Cylinder advances but will not hold	Cylinder seals damaged
	Pump malfunction
	Leaking connection
	Incorrect system set-up
Cylinder leaks oil	Worn or damaged seals
	Internal cylinder damage
	Loose connection
Cylinder will not retract or retracts slowly	Pump release valve is closed or not open enough
	Coupler not tightened fully
	Pump reservoir overfilled
	Restricted oil flow
	Broken or weak retraction spring
	Internal cylinder damaged
Oil leaking from external relief valve	Coupler not tightened fully
	Restriction in return valve