REV0714

Instruction Manual

Hydraulic Stak-Able Ram Kit - 10 Ton Ram

Model #10807

WWW.ESCO.NET

1-800.352.9852

15270 Flight Path Drive • Brooksville, FL 34604
www.esco.net • sales@esco.net
Phone (352) 754-1117 • Toll Free (800) 352-9852 US, Canada & Caribbean ONLY • Fax (352) 754-4508

Instruction sheet for ESCO Model #10807

NOTE

PLEASE READ AND FOLLOW THIS INSTRUCTION BEFORE YOU USE ESCO CYLINDERS.

Carefully inspect all components for shipping damage, if shipping damage is found, please notify carrier at once. The carrier, not ESCO, is responsible for any damage resulting from shipment.

1. SAFETY

To avoid personal injury or property damage, please follow all safety precautions. ESCO cannot be responsible for injury or damage resulting from unsafe and incorrect products use or system operation, or lack of maintenance.

DANGER is **only use when your action or lack of action may cause serious injury or even death.**
WARNING indicates **a potential danger that requires correct action to avoid personal injury.**
IMPORTANT indicates correct action to prevent damage or equipment failure.

DANGER

- The hydraulic equipment user must be a qualified operator familiar with correct training and use of hydraulic equipment. Lack of knowledge in any of these areas can lead to equipment damage or personal injury.
- Please carefully inspect cylinders, couplers and hose before use hydraulic equipment, if you find any damage on the couplers, hose, port threads and cylinders, please contact with your nearest Authorized ESCO Service Center or Sales Office. These damages may cause equipment failure and possible personal injury.
- To avoid personal injury, please do not modify or weld hydraulic equipment without approbated by ESCO.
- Please never lift a load more than the capacity of the cylinders, overloading causes equipment failure and possible personal injury.
- The operating pressure of cylinders are designed for a max pressure of 700 bar (10,000 psi), please do not use a pump or relief valve with a higher pressure rating to connect the cylinder. Higher pump or relief valve may cause equipment failure and possible personal injury.
- Cylinder is a load lifting device, not a load holding device. After the load has been raised or lowered, it must always be held mechanically, please never work under a load supported by hydraulic.
- Please keep hands and feet away form cylinder and workplace during operation to avoid personal injury.
- Please do not put poor-balanced or off-center loads on cylinders. The incorrect load can result in equipment failure and possible personal injury.

WARNING

Please wear safety glasses, safety cap and other necessary personal protective equipment when operating hydraulic equipment

- Use cylinders to lift loads should have solid lifting surface grounded for correct support on. Please select steel or wood blocks that are capable of supporting the load.
- Please install pressure gauges in the system to watch the operating pressure. The gauge must have the same pressure rating as the pump and cylinder(s). The wrong gauges may result in personal injury.
- Please carefully inspect the cylinders and couplers before use cylinders or shift couplers. Never connect the cylinders with damaged couplers or damaged port threads. The damaged coupler or damaged port threads may cause equipment failure and possible personal injury.
- Please shift couplers in a clean environment, prevent dust or other garbage into cylinder body or tube. Dust or other garbage will damage the cylinder and result in equipment failure and possible personal injury.
- Cylinder must be placed on a stable base, please use ESCO cylinder base to improve stability.
- Before removing or tightening hose or couplers, please release hydraulic pressure in system.
- To seek hydraulic technical helps or repair service. Please contact the authorized ESCO Service Center in your area. ESCO is not responsible for any injury and property damage. If you repair your equipment in other hydraulic service centers which dose not authorized by ESCO.
- Hydraulic cylinders must use special hydraulic oil or other approved hydraulic oil.

IMPORTANT

- Please keep the cylinder clean all the time.
- When the cylinder is not in use, please keep the piston rod fully return, remove hose and use rubber cap to recover the coupler(s). If you use collar threads, please use the thread protector to recover the collar threads.
- Please do not drop heavy duty on hose.
- Please do not lift and carry hydraulic cylinders by the hoses or couplers, use the handle or other safe way.
- Please use hydraulic equipment in normal temperature, do not use equipment in temperatures of 65 ℃ (150℉) or higher. Overheating will soften seals and weakens hose materials, resulting in oil leaking or other equipment failure.
- Before load, Please fix a saddle into piston rod. Saddle will protect the piston rod.

OPERATION

Before use cylinder, please visually check all units, to make sure there are no damage on cylinder, port threads, couplers and hose. No oil leaking and shortage of parts. If you find any problem please contact with your nearest authorized ESCO Service Center or Sales office.

2.1 Connection

- **Single Acting Cylinders**

Please use a pump with a release valve or a 3-way valve and one hose to connect with Single Acting Cylinder (Figure 1). After connected all parts, please fully hand-tighten all couplers. If not, oil will be leaked between the pump and cylinder.

- **Double Acting Cylinders**

Please use a pump with a 4-way valve and two hoses to connect with Double Acting Cylinder. After connected all parts, please fully hand-tighten all couplers. If not, oil will be leaked between the pump and cylinder.

Note: Double-acting cylinders must have both couplers connected and every coupler must be fully hand-tightened

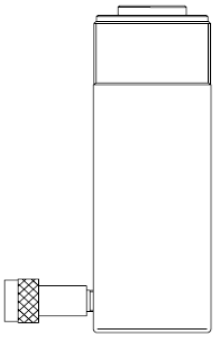

Figure 1

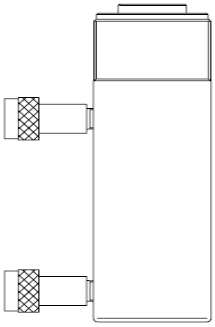

Figure 2

2.2 Bleeding Air from the cylinder

Air may accumulate within a cylinder during shipment or after prolonged use; this air can cause the piston rod to respond "dithering." Please follow the steps below to bleed the air from cylinder.

- **Single-acting cylinders:**

Position the cylinder as figure 3 shows, so that the piston rod is extended down and the cylinder lower than the pump. Fully extend and retract the cylinder 1 or 2 times. It may be necessary to repeat the above steps several times.

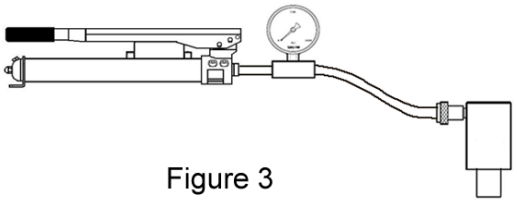

Figure 3

- **Double-acting cylinders:**

Lay the cylinder as figure 4 shows, to make sure the couplers facing up. Fully extend and retract the cylinder1 or 2 times. It may be necessary to repeat the above steps several times.

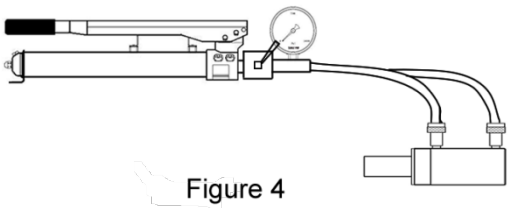

Figure 4

2.3 For single acting cylinders, please do not allow piston rod to rotate when installing adaptors or during the work. Rotating piston rod may damage the return spring.

3. MAINTENANCE

3.1 Please always use clean oil or other approved hydraulic oil with these cylinders. Use other unapproved oil or dirty oil will damage the cylinders.

3.2 Always keep cylinder clean, use thread protector and dust cap to protect collar thread and couplers.

3.3 After finish work, Cylinder must be fully retracted, cleaned and stored in ventilation, moist-proof, corrosion-proof place.

TROUBLE-SHOOTING

WARNING: ESCO Cylinders should be repaired only by a qualified operator or Authorized ESCO Service Centers. Repair cylinders without special tools and knowledge may result in personal injury. Please release pressure and disconnect hose(s) before making repair.

Problem	Cause	Solution
Cylinder will not extend or fully extend	1. Pump release valve open 2. Couplers not fully tightened 3. Oil level in pump reservoir is low 4. Pump or valve malfunctioning 5. Overload for cylinder 6. Cylinder piston rod binding	1. Fully tighten pump release valve 2. Fully tighten couplers 3. Fill oil in pump 4. Repair, or use another pump and valve 5. Change another cylinder with appropriate capacity 6. Check for dirt or leaks, change the damage parts
Cylinder can not maintain pressure	1. Leaky connection 2. Cylinder seals leaking 3. release valve not fully closed 4. Pump or valve malfunctioning	1. clean and reseal thread, tighten connection 2. Replace worn seals. Clean inside cylinder and use clean hydraulic oil 3. Fully tightening the release valve 3. Repair, or use another pump and valve
Cylinder extends slower than normal	1. Leaky connection. 2. Coupler not fully tightened. 3. Pump malfunctioning.	1. clean and reseal thread, tighten connection 2. Fully tighten couplers 3. Repair, or use another pump and valve
Cylinder extend in dithering	1. Air in cylinder 2. Cylinder piston rod binding.	1. bleed air 2. Check for dirt or leaks. Check for bent, misaligned and worn parts
Cylinder leaks hydraulic oil	1. Leaky connection. 2. Worn or damaged seals 3. Cylinder damage.	1. clean and reseal thread, tighten connection 2. Replace worn seals, clean inside cylinder and use clean hydraulic oil 3. Use new cylinder of contact with your nearest Authorized ESCO Hydraulic Service Center.
Cylinder will not retract or Retracts slower than normal	1. Pump release valve closed. 2. Couplers are not fully tightened. 3. Pump reservoir is full 4. hose is blocked 5. Return spring is damaged 6. Cylinder damaged.	1. open release valve 2.Tightening the couplers 3. Drain hydraulic oil to correct level 4. clean or change hose 5. change return spring 6. Use new cylinder or contact your nearest Authorized ESCO Hydraulic Service Center.

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