

MODEL D
SWING/PULL CLAMP

Max Capacity: 2850 lbs. Clamping Force (with 2" lg. arm) at 5,000 PSI

SAFETY PRECAUTIONS



WARNING: To help avoid personal injury:

- All connections must be tightened with the proper tools before applying hydraulic pressure.
- Do not overtighten connections. Using two opposing wrenches. Connections should only be tightened securely and leak-free. Overtightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.
- Do not exceed torque of 50-60 in. lbs. on inlet fitting.
- Avoid any conditions that could damage hoses and impair performance. Never allow the hose to kink, twist, curl or bend so tightly that oil flow within the hose is blocked or reduced. This could damage a hose and possibly result in serious injury to persons working in the immediate vicinity.
- Do not subject hoses to potential hazard such as fire, heavy impact, sharp surfaces, or extreme heat or cold, because any of these conditions can damage a hose and result in personal injury.
- Periodically inspect hoses for signs of wear. Never use a defective hose with pressurized equipment.
- Do not exceed the rated capacity of the swing/pull clamp.
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- There must be clearance between the arm and the cylinder when this unit is in the clamped position to ensure that full force is applied to the workplace.

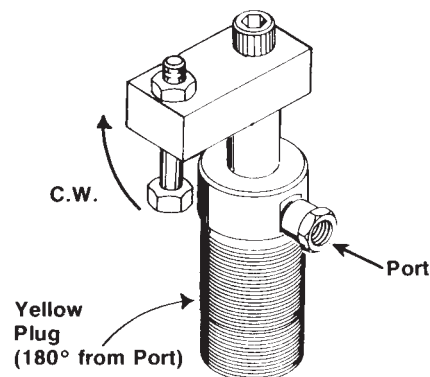


FIGURE 1

SWING/PULL CLAMP OPERATION

The swing/pull clamp arm is adjustable to any position in a 360° circle. Once positioned, it will swing 90° in either direction or pull straight down. All units are assembled at the factory for a right-hand swing (CW rotation). When the swing is completed, 1/2" of downward clamping travel is provided. **IMPORTANT: Clamping of the workpiece must be completed within the final 1/2" of stroke.** If required, a clamping bolt (3/8-16 UNC-2A x desired length) can be assembled to the top of the swing/pull clamp arm. See Figure1.

IMPORTANT: To help prevent equipment damage,

- Do not remove or attempt to adjust the set screw sealed into the wall of the threaded cylinder body. Any tampering with this screw voids warranty on this product. Contact the Technical Services Department, Power Team Division for service information.
- Do not exceed torque of 50-60 in. lbs. on inlet fitting. Increased torque will damage the fitting. When adding other fittings always use a wrench on the cylinder fitting to prevent torque from exceeding the limit.
- A metering valve is provided in the inlet fitting to protect the clamp from damage caused by pressure spikes and flows that exceed the rating of the clamp. Do not remove the metering valve.
- Do not restrict the arm swing.
- Clamping of the workpiece must be completed within the final 1/2" of stroke on right-hand, left-hand and straight pull options.

IMPORTANT (cont'd):

- Seal all external pipe connections with Power Team HT56 thread sealant. Teflon tape can also be used to seal hydraulic connections if only one layer of tape is used. apply tape carefully, two threads back, to prevent it from being pinched by the coupler and broken off inside the system. Loose pieces of tape could travel through the system and obstruct the flow of oil or cause jamming of precision-fit parts.
- Do not align any screw with the yellow plugs in the threaded area. The screw can push the yellow plugs through the cylinder wall and prevent rod movement.
- Do not overtighten any set screw or clamp at the base of the cylinder. It could deform the cylinder and cause the rod to bind.
- Always provide venting in a fixture near or below the base of the clamp. For example: Vent a blind hole in the fixture to provide proper return of the clamp.

CHANGING THE POSITION OF THE SWING/PULL CLAMP ARM

1. Place the arm of the swing/pull clamp in a vise. Loosen the cap screw located on top of the arm. See Figure 2.
2. Adjust the position of the swing/pull clamp arm as desired. Place the arm in the vise again, and torque the cap screw to 100 ft. lbs.

IMPORTANT: To help prevent equipment damage,

- Do not place the cylinder in a vise.
- Do not apply torque to the rod when loosening or torquing the cap screw located on top of the arm.
- The arm must be torqued before the unit is placed in operation.
- Do not remove or attempt to adjust the set screw sealed into the wall of the threaded body. Any tampering with this screw voids warranty on this product.

CHANGING THE DIRECTION OF THE SWING/PULL CLAMP ARM

(Refer to Parts List #100745 for the order of assembly.)



WARNING: Spring tension exerts high pressure against the bottom cap of the cylinder. To help avoid personal injury, **SLOWLY** release spring tension with an arbor press.

1. Place the arm of the swing/pull clamp in a vise, and loosen the cap screw located on top of the arm. Remove the arm of the swing/pull clamp. See Figure 2.
2. Place the cylinder in an arbor press, and remove the retaining ring from the bottom of the cylinder. See Figure 3.
3. Remove the bottom cap, thrust bearing, washers and the internal springs from the cylinder.
4. Push the rod back into the body until the guide ball disengages from the guide path. Do not remove the rod from the cylinder. **IMPORTANT: Do not use a hammer to jar the rod loose, and do not damage the rod. Do not remove or attempt to adjust the set screw sealed into the wall of the threaded body. Any tampering with this screw voids warranty on this product.**
5. View the cylinder from the bottom, and align the letter (marking the direction of swing; i.e. L = left, R = right, S = straight [no swing]) with the inlet fitting. See Figure 4.
6. Turn the rod slightly left and right while pushing it into the cylinder body until the ball inside engages the rod guide path. Push the rod completely up into the cylinder body and reassemble.
7. Assemble the swing/pull clamp arm onto the rod, and adjust as necessary. Place the arm in the vise again, and torque the cap screw to 100 ft. lbs.

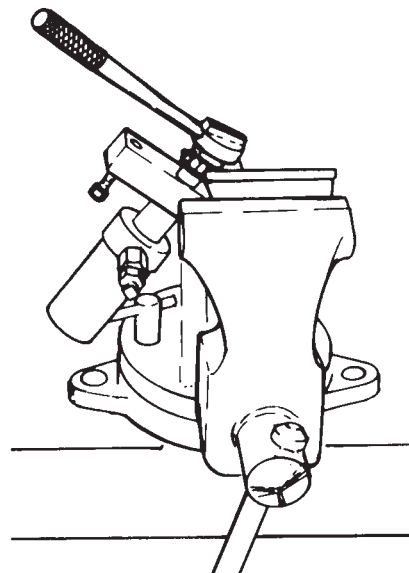


FIGURE 2

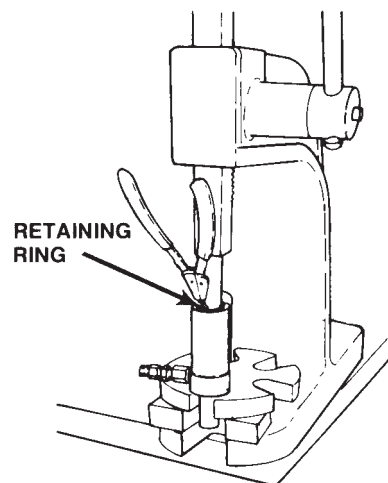


FIGURE 3

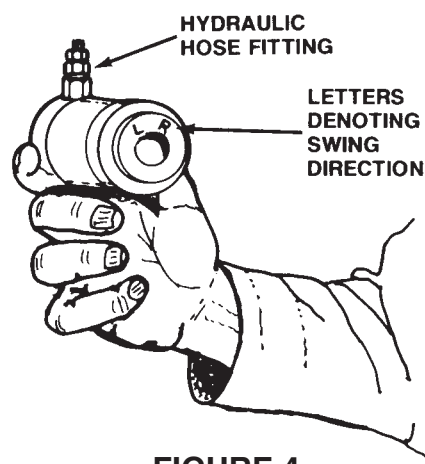


FIGURE 4