

Inspection Maintenance Safety

- Make sure the swager is in good operating condition and that all gauges, indicators and controls are working properly.
- Make sure all bolts and nuts are in place and tightened to recommended torque as shown in Table A, on page 13 for new style swaging machines, and Table B on page 14 for current swaging machines.
- Load block or die base plate surfaces must be to manufacturers specifications for thickness and flatness to provide complete support of the die during swaging.
- Make sure die holder side rails are not bent, loose or damaged.
- Clean dies and die holder surfaces. Keep free of metal shavings, slag, grit, sand, floor dry, etc.
- Lubricate the four guide bushings daily with light oil.

Die Working Load Limit Pressure Adjustment on Lower Cylinder National 500 Ton through 1500 Ton Swaging Machines

Follow this procedure to adjust swaging tonnage (pressure) on your swaging machine.

1. Install the die holder(s) or die adapter with the dies to be used.
2. Bring the dies together (without a part in the dies) until they just touch.
3. Turn the tonnage control valve, which is located on the control panel left of the tonnage gauge, counter-clockwise about (6) six turns or until knob no longer turns.
4. Now (without a part in the dies) apply pressure to the dies by pressing the foot pedal marked "up".
 - A. If the tonnage is lower than desired Working Load Limit, turn the valve clockwise while continuing to press the foot pedal marked "up" until desired Working Load Limit is reached.
 - B. If tonnage is higher than desired Working Load Limit, release pressure by pressing the pedal marked "down". Then repeat steps 2 through 4.

- Inspect the rods for corrosion. Use #000 emery cloth or steel wool to maintain a high polish surface.
- Do not increase the hydraulic system pressure above the factory preset pressure of: 6500 psi for 500 ton, 1000 ton and 1500 ton swaging machines – 5000 psi for 3000 ton swaging machine.
- Under ordinary operating conditions, drain and clean reservoir every two (2) years.
- Make certain that the hydraulic reservoir is full when the swager is in the full open position.
- Filters inside of the reservoir should be cleaned every time the reservoir is drained and cleaned. The Racine "tell-tale" suction filter should be cleaned every six (6) months.

Die Working Load Limit Pressure Adjustment on 3000 Ton Swaging Machine

For reducing tonnage, use selector switch on front of control panel to select lower tonnage (approximately 1500 Tons) or 3000 Ton.



WARNING

ALWAYS USE 5 X 7 OR 6 X 12 DIES AT 1500 TON SETTING.



WARNING

USE ONLY 6 X 12 DIES ON TONNAGE THAT EXCEEDS 1500 TONS.

Swaging Machine Capacity Chart for Swage Sleeves, Ferrules and Buttons

Hydraulic Swaging Machine Size	Swaging Method	Die Size (in.)	Largest Fitting Allowed to be Swaged (in.)*			
			S-505 Sleeve	S-506 Sleeve	S-510 Ferrules	S-409 Buttons
500 Ton	Full Die	Mark Series 2-1/2 x 5 4 x 5 5 x 7	1-1/2	1-1/4*	9/16*	7/8*
1000 Ton	Full Die	4 x 7 5 x 7	2-1/2	1-1/4*	9/16*	1-1/4*
1500 Ton	Full Die	5 x 7 6 x 12	3-1/2	1-1/4*	9/16*	1-1/4*
3000 Ton	Full Die	6 x 12	4-1/2	1-1/4*	9/16*	1-1/4*

* Largest size fitting available.

Swaging Machine Capacity Chart for S-501 and S-502 Swage Socket

Hydraulic Swaging Machine Size	Swaging Method	Die Size (in.)	Largest Fitting Allowed to be Swaged (in.)*
500 Tons	Full Shank	Mark Series 2-1/2 x 5 4 x 7 5 x 7	3/4
	Progressive	4 x 7 5 x 7	1-1/4
1000 Tons	Full Shank	4 x 7 5 x 7	1
	Progressive	4 x 7	1-1/2
1500 Tons	Full Shank	5 x 7 6 x 12	1-1/4
	Progressive	5 x 7 6 x 12	2
3000 Tons	Full Shank	6 x 12	2
	Progressive	6 x 12	2-1/2

* Largest size fitting available.