

### CAUTION

Make small adjustments when adjusting pressure, as fast adjustments do not always respond immediately on the gauge.

Hydraulic pressure should be adjusted to a minimum for proper operation of the system. Excessive high pressure results in more power required to operate the pump, and reduces the serviceable life of the pump.

### NOTE

When pressure adjustment is completed, tighten the jam nut (3) and install the o-ring (2) and cap (1).

(2) Volume Adjustment. The pump output volume can be adjusted with the adjusting screw (15). Loosen the screw (14) and turn the adjusting screw in to decrease the output volume or out to increase the output volume. When the volume adjustment is completed, tighten the screw (14).

### NOTE

The output volume must be adjusted to supply a sufficient quantity of fluid to operate the maximum number of hydraulic components that will be operating at the same time.

## 3.41 MAST RAISING CYLINDER (Figure 3-82).

### a. Removal

- (1) Disconnect both hydraulic hoses from the mast raising cylinder.
- (2) Remove the cotter pin (1), nut (2), lockwasher (3), and bolt (4).
- (3) Remove the cap on the end of the piston rod (19) to disconnect the mast raising cylinder from the mast.
- (4) Remove the cotter pin (5), hinge pin (6), and remove the mast raising cylinder.

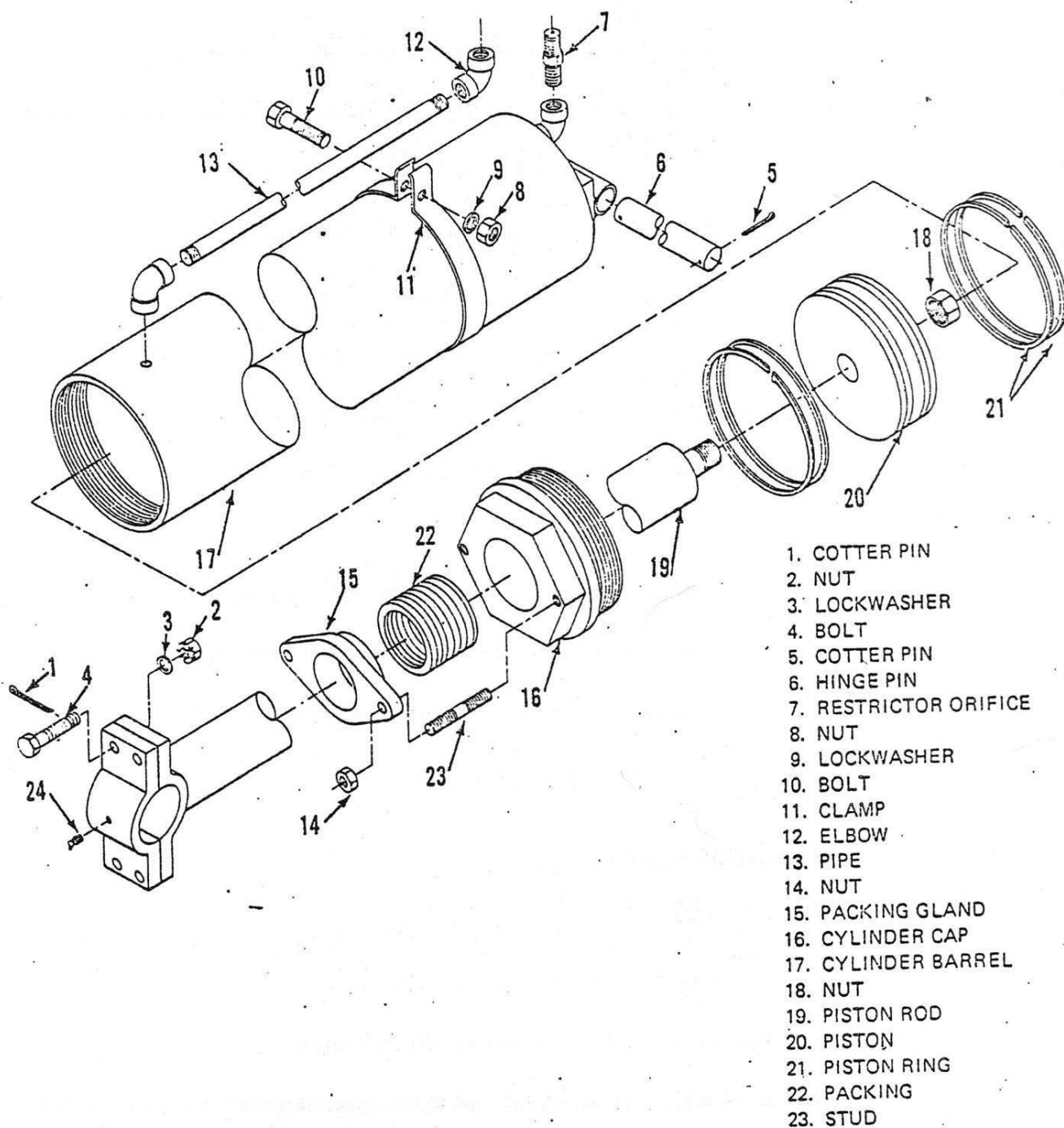


Figure 3-82. Mast Raising Cylinder

b. Disassembly

- (1) Remove the nut (8), lockwasher (9), bolt (10), and clamp (11).
- (2) Remove the elbow (12), pipe (13), and orifice (7).
- (3) Unscrew the cylinder cap (16) from the cylinder barrel (17).
- (4) Pull the rod (19) and attached components out of the cylinder barrel (17).
- (5) Remove the nut (18) and piston (20) from the rod (19).
- (6) Remove the piston rings (21) from the piston (20).
- (7) Remove the nuts (14), packing gland (15) and packing (22) from the cylinder cap (16).
- (8) Do not remove the studs (23) unless replacement is necessary.

c. Cleaning, Inspection, and Repair

- (1) Clean all parts in an approved solvent and dry with filtered compressed air.
- (2) Inspect the interior surface of the cylinder barrel. The surface must be smooth, without any grooves or scoring, and not excessively worn.
- (3) Inspect the piston and piston rings for damage and excessive wear.
- (4) Replace any parts that are damaged or excessively worn.

d. Reassembly. Reassemble the mast raising cylinder by reversing disassembly procedures and performing the following additional procedures.

- (1) When installing piston rings (21) on the piston (20), stagger the ring gaps at approximately 90° intervals around the piston.
- (2) When installing the chevron packing (22), install the packing with the points toward the top of the mast raising cylinder.

d. Installation. Reinstall the mast raising cylinder by reversing removal procedures.

**WARNING**

Before connecting the hydraulic hoses, check to be sure the restrictor orifice (7) is installed. The restrictor orifice is a safety device that slows the rate descent as the mast is being lowered. A restrictor orifice must be installed in both mast raising cylinders.