Remove Relief Valve

CAUTION: Do not remove relief valve or change adjustment of pressure regulating screw unless evidence of improper operation is present.

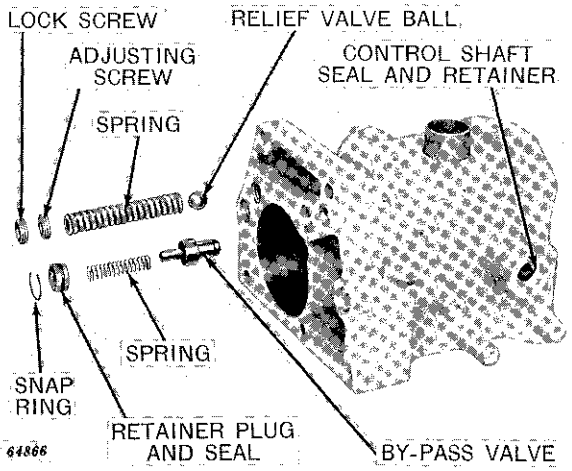

Fig. 210-5-17—Relief and By-pass Valves Exploded

Remove the relief valve lock screw (Fig. 210-5-17) with special wrench No. AM2048T. Unscrew the adjusting screw, noting the number of turns required to remove it from housing—record for use in reassembly. Remove the spring and relief valve ball (Fig. 210-5-17).

Remove By-Pass Valve

NOTE: Removal of snap ring can be facilitated by tapping retainer plug into housing to provide additional clearance for removal of snap rings.

Remove the snap ring and pull bypass valve retainer plug by screwing a 3/8-inch cap screw into the plug and pulling it out. Remove spring and bypass valve.

Remove Cylinder Head

Remove the cylinder head retainer snap ring (Fig. 210-5-18).

NOTE: Press head into housing to provide additional clearance for removal of snap ring.

Place valve housing in an arbor press (Fig. 210-5-19), with cylinder head end of housing

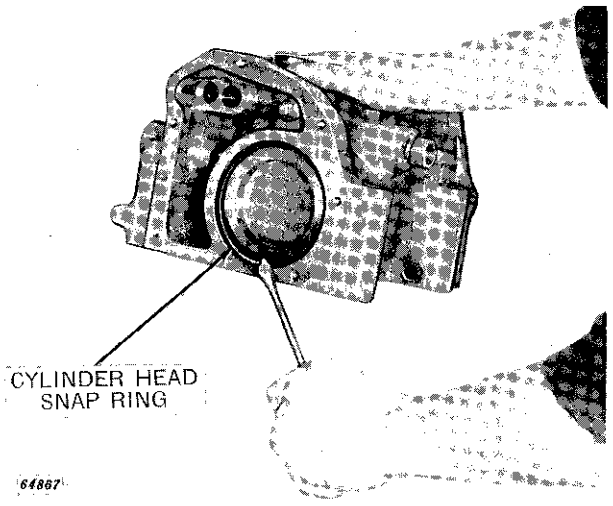

Fig. 210-5-18—Removing Cylinder Head Snap Ring

facing down, and press cylinder head out of valve housing. Remove seal from cylinder head and discard. **Always use a new seal when reinstalling a cylinder head.**

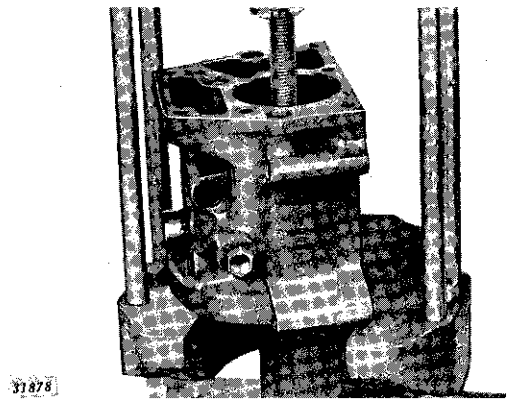

Fig. 210-5-19—Pressing Cylinder Head out of Valve Housing

Disassemble Rockshaft Housing

Drive the rockshaft out or right-hand side of housing (Fig. 210-5-20). The right-hand oil seal will be pushed out by the rockshaft (Fig. 210-5-20). Remove the L.H. seal—always replace oil seals when overhauling rockshaft housing.

Disassemble Quadrant.

Compress the quadrant spring, move the snap ring retainer down on shaft and remove snap ring (Fig. 210-5-21). Slide shaft from disks, quadrant, hub and steel friction plate.

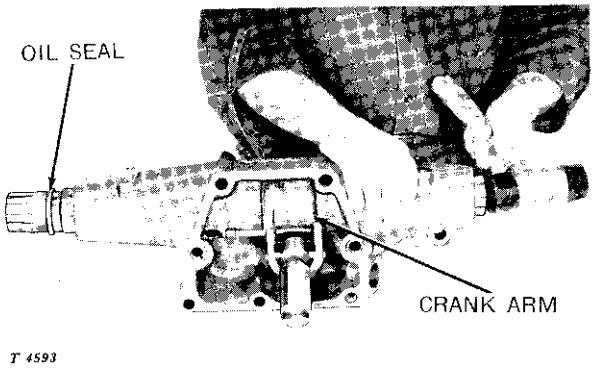

Fig. 210-5-20—Driving Rockshaft from Housing

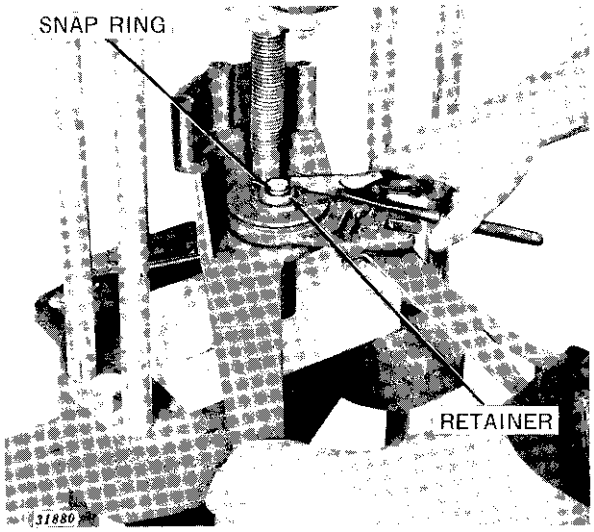

Fig. 210-5-21—Removing Snap Ring from Quadrant Shaft

INSPECTION AND REPAIR

Cleaning

Wash all parts of the hydraulic unit in cleaning solvent. Be sure all passages in housing are clean.

Control Valves and Linkage (Fig. 210-5-22)

Inspect all pins and linkage for excessive wear. There will be a shiny line on the control valve ramp where the check valve push rod contacts the control valve during movement. If this shiny line is worn to a groove, it will affect check valve setting. Check to see that snap rings have enough tension to hold tightly in groove.

Inspect crosshead for excessive wear, and replace if necessary.

Check ball joints of ball joint linkage for excessive looseness and replace if necessary. Be sure to free up threads on link to make adjustment easy after assembly.

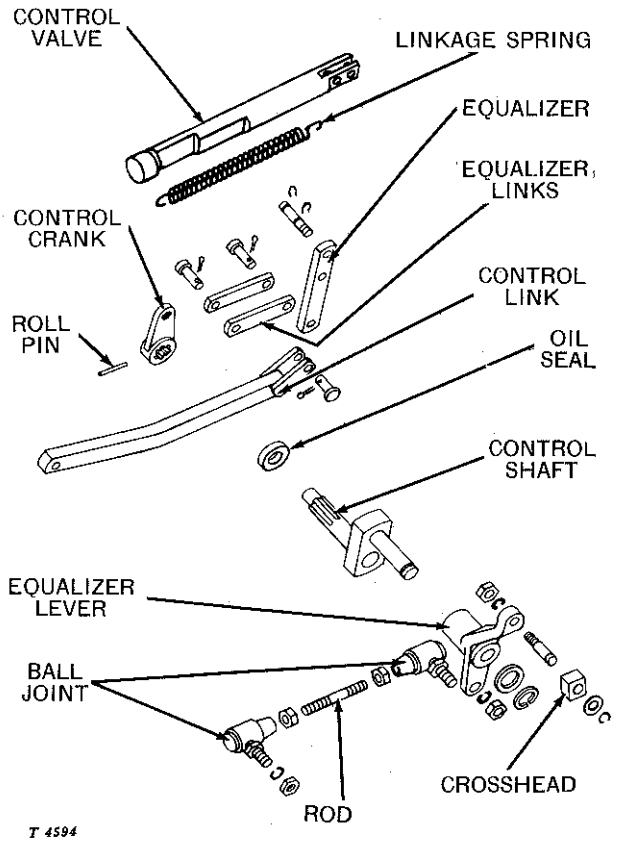

Fig. 210-5-22—Linkage and Control Valve

Valve Housing (Fig. 210-5-23)

Housing

Inspect the housing (S) for damage or cracks. Check cylinder and valve bores for scoring. See that all passages are open and clean. Check valve seats to make sure mating valve can seat and seal.

Cylinder Head

Visually inspect cylinder head (R) for damage which might make it unserviceable.

For further tests of cylinder head refer to testing procedure on page 210-5-7, in this group.

Check Valve

Inspect the valve face and head of push rod (J) for wear. Examine ball valve push-pin (I) and shims (H) for wear or damage. Drive rollpin (FF) from valve body and remove spring (E) and ball valve (F). If ball or spring is rusted or pitted they must be replaced. Inspect ball seat in check valve body (G). If this seat is pitted, replace valve body.