

- 3 During assembly of the piston to the piston rod, the rod must be prevented from turning, either by locking the rod end thread or by clamping the piston rod in a soft-jawed vice.

Warning: any damage to the polished surface of the piston rod will lead to early failure of the gland seals.

- 4 Note, from figure 5, that the lips of the chevron seals face outwards from the centre of the piston. Lubricate and install, in order, a header ring (143a), chevrons (143b) and a back-up ring (143c) onto the shoulder of the inner piston.
- 5 Referring to figure 5, repeat step 4 on the outer part of the piston. Slide the bearing ring (142) onto the outer piston until it abuts the back-up ring. Ensuring that the seals and bearing ring do not become dislodged during assembly, slide the outer part of the piston onto the rod and tighten using the face-type pin wrench, until the original locking pin hole between the piston and rod is fully aligned. Drive the replacement locking pin into the pin hole and peen the end to secure.
- 6 Lubricate the piston and cylinder bore with light oil. Insert the piston into the bore, ensuring that the forward-facing lips of the chevron seals do not become twisted on entering the tube.

Cylinder Assembly Figs. 1, 4 & 5

The cylinder should be reassembled as follows:

- 1 If the cylinder cap/body joint has been disturbed (see 'Removal', page 7), the body O-ring back-up washer (47), followed by the body O-ring (26), should be lightly oiled and pressed into the groove in the cap, without twisting.
- 2 Fit the cylinder body, complete with piston and rod, to the cap by 'rocking' it down over the O-ring until the body is in contact with the cap.
- 3 Insert the hex socket-headed cap screws from the outer face of the cap and tighten in a diagonal sequence to the appropriate torque figure, shown in the table on page 4.
- 4 When fitting the head/gland assembly over the rod thread, a slight rotary motion will help prevent damage to the seals. In addition, shim stock or similar thin, tough material should be wrapped around the threads to protect the seal lips.
- 5 Lubricate the cylinder body O-ring (26) and back-up washer (47) and fit the back-up washer, followed by the O-ring, to the head/gland assembly. Lubricate the gland and seals and, taking care not to damage the seal lips, slide the head/gland assembly over the threaded end of the piston rod. Slide the head/gland assembly along the piston rod into contact with the cylinder body and, using a soft-faced hammer, tap around the edge of the head assembly until the body and head are in metal-to-metal contact. Insert the hex socket-headed cap screws from the outer face of the head and tighten in a diagonal sequence to the appropriate torque figure, shown in the table on page 4.

- 6 If the gland seals have been serviced, the gland assembly will be hand tight in the head – see 'Removal', page 7. Tighten the gland cartridge firmly against the head, using the face-type pin wrench.

Storage

If the cylinder is to be stored before use, the following precautions should be taken.

- 1 Cylinders should be stored in an upright position, with the piston rod end uppermost.
- 2 A vapour phase inhibitor should be introduced through both ports. The cylinder should be thoroughly flushed with clean system fluid before being put into use.

Before first use, all seals should be replaced if the cylinder has been in storage for more than five years.

Repairs

For further information or repairs, please contact:

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