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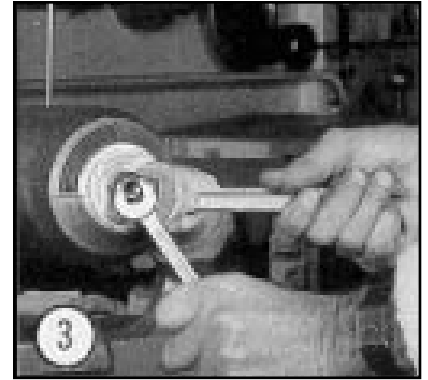
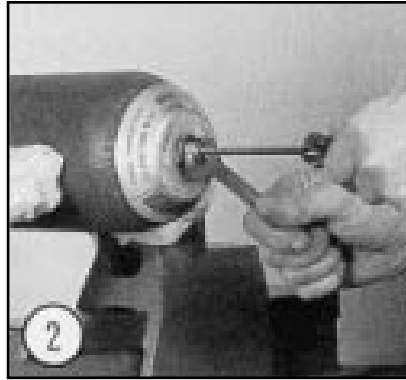
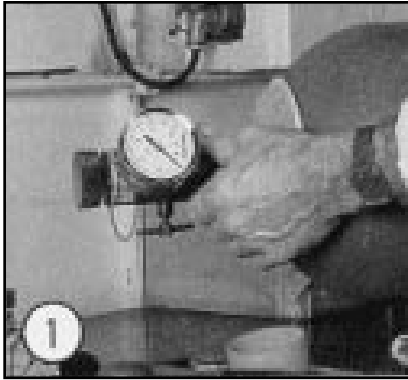
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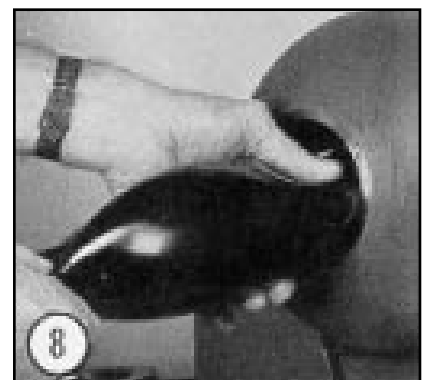
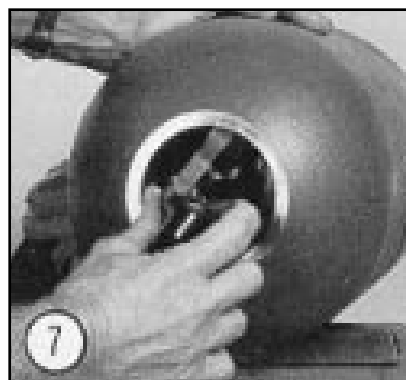
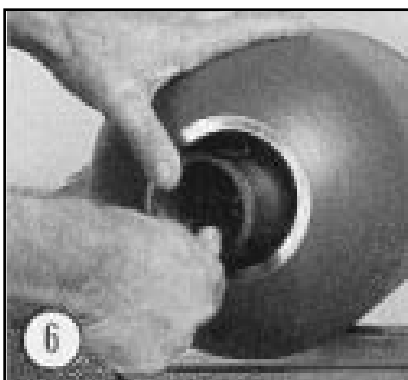
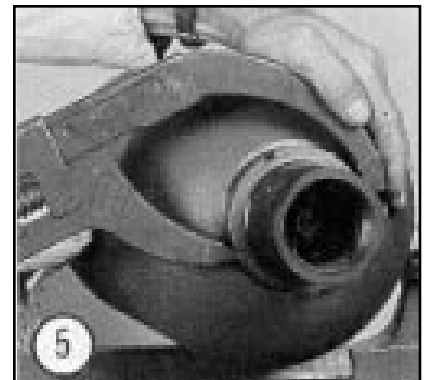
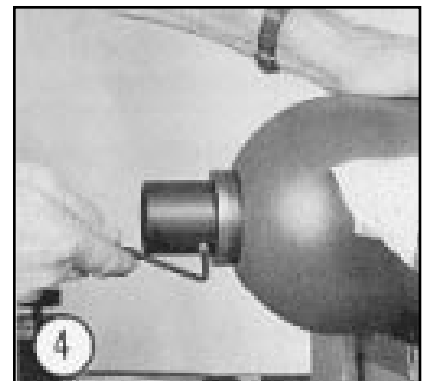
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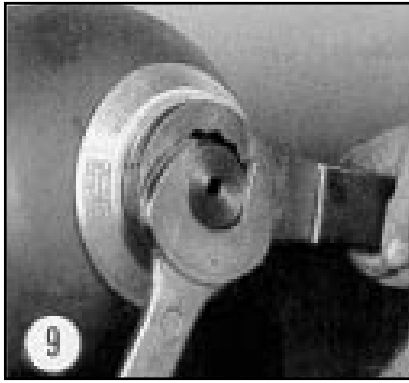
## Repair Instructions Series IHV



### DISMANTLING THE ACCUMULATOR

- Disconnect and close the hydropneumatic accumulator inlet, and discharge the hydraulic fluid from the accumulator.
- Remove the accumulator from its mounting and lay it horizontally in a vice or other fixation system. Take care not to damage the accumulator.
- Where necessary, remove the lead seal from the protective cap(s) of the gas inlet valve. Unscrew the protective cap(s).
- Deflate the bladder using the OLAER tester and pressurizer instrument (**Fig. 1**). Operate the tester and pressurizer instrument as described in OSP 746.
- Unscrew the gas inlet valve (**Fig. 2**).
- Release the gas inlet valve sub-assembly nut, and remove the nameplate (**Fig. 3**).
- Unscrew the flange or reduction from the hydraulic fluid end.
- Dismantle the venting screw, without damaging the gasket ring (**Fig. 4**).
- Release the ring nut and remove gland ring (**Fig. 5**).
- Carefully push the hydraulic valve inside the vessel casing (**Fig. 6**).
- Extract the O-ring.
- Separate the divided anti-extrusion ring/ retention ring from the hydraulic valve sub-assembly, carefully fold together, and remove from the vessel (**Fig. 7**).
- Remove the hydraulic valve.
- Extract the bladder through the hydraulic end opening (**Fig. 8**).





## CLEANING, INSPECTION AND REPAIRS

- Carefully clean all metallic parts of the accumulator and dry with compressed air.
- Inspect the vessel for any internal damage.
- By depressing the valve head, check the valve for correct operation.
- Check that the safety nut on the valve tappet is fully tightened (secured with Loctite).
- Check that the O-ring shows no sign of wear or any indication of rubbing.
- Check that the bladder has no sign of major frictional wear or other damage.
- Under no circumstances attempt to repair the bladder.
- Replace all worn or damaged parts.

## ASSEMBLY

- Ensure that no foreign bodies are in the accumulator.
- To facilitate the reassembling of the bladder, smear it and the vessel interior with the system hydraulic fluid.
- Press the upper part of the bladder together and feed in through the hydraulic end opening (Fig. 8).
- Lightly screw the nameplate and gas inlet valve sub-assembly nut on (Fig. 9).
- Check that the bladder is neither folded or twisted.
- Put the hydraulic valve into the vessel (Fig. 10).
- Put the divided anti-extrusion ring/ retention ring into the vessel, and position on the hydraulic valve. Retract the hydraulic valve so that it sits on the interior of the vessel.

- Mount the O-ring and the gland ring (Fig. 11).
- Screw the ring nut on. Centralise the parts. With a plastic hammer, strike the hydraulic valve (Fig. 12) carefully from all sides while tightening the ring nut by hand.
- Tighten the ring nut fully (Fig. 13).
- Before mounting the reduction on the hydraulic end, inflate the bladder slowly with nitrogen to a pressure of 1 - 1.5 bar with the tester and pressurizer instrument. Operate the tester and pressurizer instrument as described in OSP 746.
- Check the hydraulic valve seal by manipulating the valve tappet.
- Mount the venting screw and gasket (Fig. 14).
- Tighten the nameplate and gas inlet valve sub-assembly nut fully (Fig. 9).
- Inflate the accumulator to the precharge pressure required by the system.

## FIRST OPERATION

Before pressurizing the system, vent via the venting screw. Retighten the screw carefully as soon as the hydraulic fluid has left the vessel. Finally, pressurize the hydraulic system to the maximum, and check the seal of the connections and gaskets.

No welding/soldering or mechanical operations of any kind must be undertaken on the accumulator.

Hydropneumatic accumulators are subject to official pressure vessel regulations. These regulations demand that the accumulator be inspected on a regular basis. The interval between inspections varies from state to state. Request the appertaining intervals for your operation from the authorities responsible.

