OSP 810

Repair instructions series EHV

Dismantling the accumulators

- Disconnect and close the accumulators inlet and discharge the hydraulic fluid from the accumulators.
- Remove the accumulators from its mounting and lay it horizontally in a vice or other fixation system. Take care not to damage the accumulators.
- Unscrew the protective cap **(Fig. 1)**.
- Unscrew the gas valve cap **(Fig. 2)**.
- Deflate the bladder using OLAER tester and pressurize instrument **(Fig. 3)**. Operate the tester and pressurize instrument as described in its manual.
- Remove the gas valve **(Fig. 4)**.
- Release the gas inlet valve sub-assembly nut and remove the name plate **(Fig. 5)**.
- Unscrew the flange or reduction from the hydraulic fluid end (not used with every model).
- **With the accumulators completely free of pressure (gas and fluid), the poppet valve in the fluid port is open or can be pushed inside with hand force (EHV/IHV) series. If this is not the case all further work has to be stopped! Please contact OLAER!**
- Release ring nut and remove gland ring **(Fig. 6)**.
- Carefully push the hydraulic valve inside the vessel casing **(Fig. 7)**.
- 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. 8)**.
- Remove the hydraulic valve. **(Fig. 9)**.
- Extract the bladder through the hydraulic end opening. Be careful, not to damage the bladder. **(Fig. 10)**.


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Cleaning, inspection and repairs

- Carefully clean all metallic parts of the accumulators and dry with compressed air.
- Inspect the vessel from 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 accumulators.
- To facilitate the reassembling of bladder, smear it and vessel interior with the system hydraulic fluid.
- Press the upper part of the bladder together and feed in though the hydraulic end opening **(Fig. 11)**.
- Lightly screw the name plate and gas inlet valve sub-assembly nut on **(Fig. 12)**.
- Check that the bladder is either folded or twisted.
- Put the hydraulic valve into the vessel. 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. 13)**.
- Screw the ring nut on Centralize the parts. With a plastic hammer strike the hydraulic valve carefully from all sides while tightening the ring nut by hand.
- Tighten the ring nut fully **(Fig. 14)**.
- 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 its manual.
- Mount the flange or the reducing fitting (if existing).
- Check the hydraulic valve seal by manipulating the valve tappet.
- Tighten the name plate and gas inlet valve sub-assembly nut fully **(Fig. 15)**.
- Inflate the shock absorber to the precharge pressure required by the system.

Filling

- The first filling of the bladder with N2 must be done slowly!

Volume accumulator	1 liter	5 liter	10 liter	50 liter	100 liter	200 liter
Filling time 0 to 1,5 bar in sec.	10 s	20 s	40 s	120 s	200 s	400 s

First operation

- Pressurise the system at maximum pressure and check the tightness of all connections and gaskets.
- **No welding/soldering or mechanical operations of any kind must be undertaken on the accumulators!**
- Hydropneumatic accumulatorss are subject to official pressure vessel regulations. These regulations demand that the accumulatorss must be inspected on a regular basis. The interval between inspections varies from state to state. Request the appertaining.