MAINTENANCE HYDRAULIC ACCUMULATORS TYPE EHV / EHVF

SUPPLY

The accumulators are supplied:

- Precharged with nytrogen, @ 120 bar of pressure storage.

or

- Precharged with nytrogen, @ indicated customer pressure.

PUT IN FUNCTION

- Carry out and check precharge to the valve determined throught calcolation using the control set VGU. The pressure precharge has to be absolutely lower than the pressure stamped on the bottle.
  In case of the pressure less than 1,5 bar, it is necessary to execute the inflating process of bladder (see next pages).
- Verify the seal of nytrogen valve. (with soap or appropriate systems)
- Close the protection cap with strength hand
- Periodical test of inflation pressure:
  Using the control set VGU, check that pressure precharge is at the required value, before putting in service the accumulator.
  Repeate the operation during the first work week and, after this period, at least every 6 month in case of regular service. In case of continuative and laborious, execute this process every month.
- Important: It is essential using dry nitrogen in bottle with pressure reducer adaptor. The employment of air or oxigen compressor is absolutely forbidden. Explosion danger!!!

INSTALLATION

- In order to obtain the best performance, the accumulator has to be installed very closed to his user.
  It's important to leave a clearance of about 200 mm around the nitrogen precharge valve for VGU fitting (see next pages).
  The accumulators can be installed in vertical (nitrogen valve on top) or horizontal position. Leave visible the table and the venting screw, if present. The connecting might be executed by the thread joint, SAE or CETOP flange, according models. Accumulators can be supplied with reduction joint or/and flange.

DISMANTING

- Isolate and depressurize the accumulator using the isolating block or depressurize the hydraulic system.
  Remove the accumulator and place it horizontally in a vice or another securing device.
  Protect the shell so as not to demage it.
- Unscrew the guard cap from the charging valve (FIG.1).
- Unscrew the charging valve plug (FIG.2).
- Discharge the gas contained in the bladder using a charging and gauge assembly until 0 is shown on the manometer (FIG.3). Make sure that the bladder is not charged with nitrogen by checking that the the charging valve is open.
  Is important that the bladder not remani in contact with the anti-extrusion system.
- Remove the single-piece charging valve (FIG.4) or the charging valve mechanism (FIG.5/6) or the valve core (FIG.7), according to the model.
- Remove the lock nut from the valve body and then the name plate (FIG.8) according to the model.
- Remove the hydraulic vent screw and its seal (FIG.9/10), according to the model.
- Loosen the locknut (FIG.11).
- Manually push the fluid port body into the accumulator shell to release the spacer, O-ring and washer (FIG.12).
- Release the rubber split ring from the fluid port body. carefully fold it to remove it from the accumulator shell (FIG.13).
- Remove the fluid port (FIG.14).
- Remove the bladder complete with its charging valve body through the fluid port opening, taking care not to damage it (FIG.15).

COMER srl Via G. Rivani, 33 40138 Bologna Italy tel. 051/533007 fax. 051/6010482
Web: www.comer-italia.com Mail: comer@comer-italia.com

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Fig.1


Fig.2


Fig.3


Fig.4


Fig.5


Fig.6


Fig.7


Fig.8


Fig.9


Fig.10


Fig.11


Fig.12


Fig.13


Fig.14


Fig.15

CLEANING AND INPECTION

- Carefully clean all the metallic parts of the accumulator with an organic solvent.
- Visually check the condition of the components installed inside the fluid port (poppet, spring, nut and dash-pot), clean and push poppet head to check that it slides freely.
- Clean the bladder with isopropoly alcohol (for exemple), check that the surface of the bladder is not demaged.
- Check that there is no corrosion inside the accumulator shell. if the inside of the accumulator shell is protected, check the condition of the protection.
- Replace all parts considered defective. the O-rings must be replaced.

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MAINTENANCE HYDRAULIC ACCUMULATORS TYPE EHV / EHVF

REASSEMBLY ACCUMULATORS

- Squeeze the bladder to discharge the air from it (FIG.16).
- Lubricate the inside of the shell copiously by turning it around its axis. use either the medium used in the circuit or a similare liquid (approx. 10% of the accumulator volume for capacities up to 5 lt, 5% for hifher capacities).
- Lubricate the bladder and and insert it into the accumulator shell.
  Check that the bladder is not folded or twisted. For large capacity accumulators, use a suitable tool (bladder extractor)
  Reinstall the name plate anf the lock nut. do not tigthen the lock nut.
- Check that the charging valve slides freely. Insert the fluid port and the anti-extrusion ring into the accumulator shell (FIG.13).
- Install the washer (1), the O-ring (2) and the spacer (3) in that order (FIG.17).
- Thighten the locknut and make sure that the components are centered by striking lighty the fluid port body at various angles using a plastic mallet (FIG.18).
- Tighten the locknut (FIG.19).
- Install the venting screw and its gasket (FIG.20).
- Secure the valve body nut in position using the corret flats and tighten it (FIG.21)
- Install the single-piece charging valve, tightening it to a torque of 1,5 mdaN (FIG.4,5,6) or the charging valve mechanism (FIG.5,6) or the valve body, tightening it to a torque of 0,03 mdaN (FIG.7).
- Before charging the accumulator with idrogen, turn the accumulator shell around its to lubricate its inner wall evenly.
- Immediately after this operation, charge the bladder with nitrogen to a pressure of 1,5 bar (with the accumulator in the horizontal position: see table charging process).

IMPORTANT: USE ONLY NITROGEN THAT IS AT LEAST 99,8% PURE.
IT IS STRICTLY FORBIDDEN TO USE OXYGEN OR AIR TO INFLATE THE ACCUMULATOR! EXPLOSION HAZARD!

Fig.16

Fig.17

Fig.18

Fig.19

Fig.20

Fig.21

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