

### Hints regarding disassembly and assembly of air brake levers and exchange of bearings

- 1) Disassemble upper and lower air brake blades.  
Note size and distribution of bushes and washers to avoid unnecessary trying during assembly. The same applies to disassembly of levers.
- 2) With heavy corrosion **cautious** spraying of metal parts with corrosion solvent (for instance Caramba) may be required; prefer to apply solvent using pointed artists brush. Because oil and solvent may reduce bonding considerably, cover structure in case of spraying. In the end the repair opening must be closed again.
- 3) Check whether rod end bearing 13 at top of lever is still straight and pressed-in bearing outer ring fixed. Before removing rod end, measure distance between upper and lower bearing centres.
- 4) When exchanging lower bearings at levers, do not forget inner bearing spacer 11 (Principle see picture 1), to avoid bracing of ball bearings. Spacer length must be identical to inner bearing distance.
- 5) When new levers should be required, bushes and washers must be placed such, that upper air brake cover sits centrally in air brake cut-out. In span direction the cover must have at least 1 mm <0.04 in> of gap at the inner end and at least 2.5 mm <0.1 in> of gap at the outer end. With too small gaps or without these gaps the cover will touch ends and, depending on wing bending, protrude from section contour more or less.
- 6) Use new locknuts during assembly. Positively check tightening of bolt and nut connections.
- 7) During final functional check of system, covers of both left and right air brakes should lower simultaneously onto wing cut-out. Outer ends of covers must touch down about 5 mm <0.2 in> before inner ends.
- 8) Locking force of both air brakes measured at cockpit lever must not exceed 20 kg <44 lbs>.

For LS6, LS6-a and LS6-b, before cutting openings in front of spar, water ballast bags must be removed:

- a. Water ballast bags are kept straight by nylon cord routed from bag end via caged pulley to root rib, tension about 10 kg <22 lbs>.
- b. Open end knot at root rib and enlongate cord by about 15 m <42 ft> braided nylon cord. Heat seal ends, connect auxiliary cord to free end not by knot (this would not pass caged pulley), but by stitching for about 50 mm <2 in> in length.
- c. When a bag is removed without auxiliary cord, then an opening must be cut near the pulley for installation of new cord.
- d. Disassemble valve from root rib and pull bag through root rib opening. Open stitching and secure both auxiliary cord ends at root rib such, that they can not disappear into wing.

#### Assembly:

- a. Connect nylon cord from bag end to auxiliary cord again by stitching.
- b. Place bag with seam to leading edge, roll bag and insert into root rib cut-out, pull cautiously at only at auxiliary cord.
- c. Disconnect auxiliary cord from nylon cord. Apply approximately 10 kg <22 lbs> tension and place end knot as shown. Do not cut surplus free end off, fix at root rib using tape.
- d. When each wing has it's own valve, check play between fuselage lever and stem for about 2-3 mm <0.08 to 0.12 in>. Adjust at fuselage lever, when required. With existent tail fin tank, this must open before or at least simultaneously with wing tanks.
- e. Fill bags according to details given in Flight Manual, check for tightness, proper discharge and equal discharge times.
- f. When discharge time exceeds 4.5 minutes, the bag may possibly be twisted in wing. When not tight - water dripping from one of the drain holes, the fault must be searched and cleared, this necessitates disassembly again.

End knot for water ballast bag cord

