Subject	:	Elevator control bearing stand RU19
Effectivity	:	DG-100 and DG-100G: ser. no. 5, 21 up to 103
Accomplishment	:	Instruction 1: prior to next take-off Instructions 2 and 3: latest until December 31. 2009
Reason	:	This bearing stand was required to be checked for correct production with TN301/6 already published in 1978. In 2009 an accident happened with a DG-100. It was detected that the suspension bolt was torn out of the bearing stand and thus the elevator couldn't be controlled. Although the inspection had been carried out by an approved workshop and the inspector certified that the bearing stand was OK the inspection after the occurrence showed that the bearing stand was not produced correctly. The authorities assume that the inspection method of TN301/6 didn't produce reliable results and requires replacement of the bearing stand against a new one of the latest reinforced version.
Instructions	:	1. Check the bearing stand for cracks or white areas according to working instruction for TN 301/26 part A. If any damage was detected the bearing stand must be replaced prior to next take-off see instruction 3. Otherwise the DG-100 may be operated up to the due date of instruction 3. 2. Check the paperwork of the glider to establish if the bearing stand was already exchanged when executing TN301/6. If the bearing stand was exchanged and no damage could be detected instruction 3 need not be executed. 3. Exchanging the bearing stand according to working instruction for TN 301/26 part B.
Material	:	Working instruction for TN 301/26 Drawing St9a further material see working instruction for TN 301/26
Weight and balance	:	influence negligible
Remarks	:	Instruction No. 1 may be executed and entered in the aircraft logs by the pilot/owner himself. Instructions No. 2 is to be executed by a licensed inspector.. Instructions No. 3 is to be executed by the manufacturer or by a licensed workshop. A release document form DG-F-301/26 is necessary, which indicates model and ser. no. of the aircraft in which the bearing stand is to be installed. The release document must be requested from the TC holder (DG Flugzeugbau GmbH). Instructions No. 2 and 3 are to be inspected and entered in the aircraft logs by a licensed inspector.

Bruchsal, date:
16. July 2009

Author: W, Dirks



Modifications approved by EASA Date 27. July 2009
under Approval No. EASA.A.C. 12695

Working instruction for TN301/26

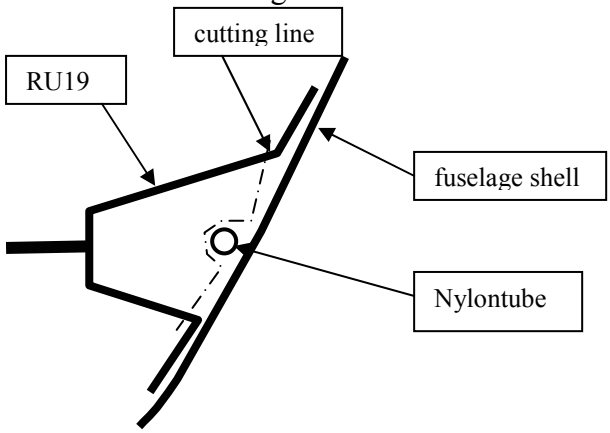
Part A: Inspection of the elevator control bearing stand RU19

1. Remove the left baggage compartment floor.
2. Remove nut and washer which fix the elevator control bellcrank St9/1 (see Service manual diagram 8). Move bellcrank and the 2 washers between bellcrank and bearing stand min. 20 mm (0.8 in.) away from the stand.
3. Check the face of the bearing stand for cracks or white areas. Use a powerful torch.
4. If any damage was detected the bearing stand must be replaced prior to next take-off see Part B.
5. Otherwise the DG-100 may be operated up to the due date of instruction 3 of TN301/26 (=Part B).
6. Reinstall the bellcrank, use a new self locking nut M6DIN985-8 zn.
7. Reinstall the left baggage compartment floor.

Material: 1 self locking nut M6DIN985-8 zn

Part B: Exchange of the elevator control bearing stand RU19

1. Remove the left baggage compartment floor.
2. Remove the elevator control bellcrank St9/1 (see Service manual diagram 8.
3. Cut away the bearing stand with a diamond coated flex-disc. Don't cut into the fuselage shell!
   DG-100 with all flying tailplane: If the Nylon tube and the cable for the trim control go through the stand be careful not to damage them.
4. Abrade the brink of the bearing stand until the fibreglass of the brink is completely removed and the Nylon tube is free, use a high speed grinder.



5. Sand the gluing surface of the new bearing stand and glue the stand to the same place. First apply resin/hardener to the gluing surfaces. Then mix resin/hardener with cotton flocks and apply to the stand. Press the stand to the fuselage wall and secure against slipping out of place.
   DG-100 with all flying tailplane: If the Nylon tube went through the stand make cut outs in the new stand for the tubes. Sand the stand min. 30 mm (1.2 in.) around the cut outs. Place the tube in the cut outs when gluing the stand to the fuselage shell. Lay glasfibre fabric 3x92125 above these areas after postionong the stand.
6. Let the resin cure min. 12 hours at 20°C, then post-cure for 18 hours at min. 54°C.
7. Reinstall the bellcrank, use a new self locking nut M6DIN985-8 zn.
8. Check the elevator displacements and readjust the elevator control if necessary according to Service manual pages 22 and 23.
9. Reinstall the left baggage compartment floor.

Material:

self locking nuts M6 DIN985-8 zn	Epoxy resin L285 with hardener L285 or 286 mixing ratio 100:39 or Epoxy resin LR385 with hardener LH385 or 386 mixing ratio 100:35
bearing stand RU19	
if necessary glasfibrefabric 92125	cotton flocks

Issued: 17.July 2009
Author: W. Dirks

Einbau Höhen-steuer umlenkung Mitte	DG — 200 — 100 (G)	St 9a

Installation elevator control bellcrank, fuselage centre

