

- Subject : Bolt of bearing stand 5RU61 for the bell crank 5St19 located in the mid-fuselage
Suspension of the airbrake control hook-ups in the wing roots
- Effectivity : DG-1000 all models
Instructions 1 – 3: serial numbers 10-1 up to 10-109 (on ser. no.'s 10-103 up to 105
and 10-109 these instruction have already been executed during production)
Instructions 4 – 6: serial numbers 10-1 up to 10-94 except for 10-84, 10-88 and 10-92
- Accomplishment : Instructions 1 and 4: prior to next flight
Instruction 2 and 6: if necessary prior to next flight
Instruction 3 and 5: by 31.5.2008 at latest
- Reason : 1. The bolt of bearing stand 5RU61 which is the pivot for bell crank 5St19 failed in a DG-500 ELAN Trainer for an unknown reason. As the cause of the failure we suspect that the nut fixing the bell crank had become loose. Otherwise a bending load which may cause the failure can't be explained. As the design is similar in the DG-1000 up to ser. no. 10-109 analogous instructions have to be executed for the DG-1000.
2. Due to overstress during aerobatics a mounting of the airbrake control hook-up in the wing root failed. Therefore the mounting must be reinforced.
- Instructions : 1. Check the actual torque of the nut which fixes bellcrank 5St19 to the bolt according to working instruction No. 1 for TN1000/12. If the torque is 3 Nm (2.2 ft.lb.) or higher it can be assumed that the bolt was not overstressed during operation. Increase the torque to 12 Nm (9 ft.lb.).
2. If the torque was less than 3 Nm (2.2 ft.lb.) the bolt must be replaced according to working instruction No. 2 for TN1000/12. In such a case please send within 7 days after the check a note by e-mail to design@dg-Flugzeugbau.de.
3. An additional bracket must be installed according to working instruction No. 3 for TN1000/12.
4. Check the mountings of the airbrake control hook-ups in the wing roots for any damage. Visual inspection through the access holes in the rear root ribs (refer to photos in working instruction No. 4 for TN1000/12) and check of the overcentre locking moment according to sect. 4.4.2 MM. If the force to be measured during the check is below 50 N (11 lbs.) damage must be suspected. If no damage was detected, the glider may be operated up to execution of instruction 5 but aerobatics are prohibited during this period.
5. The mounting s of the airbrake control hook-ups in the wing roots must be reinforced according to working instruction No. 4 for TN1000/12.
6. If any damage was detected a major repair according to working instruction No. 5 for TN1000/12 is necessary.
In such a case please send within 7 days after the check a note by e-mail to design@dg-Flugzeugbau.de.
The mounting parts subject to this instruction are reinforced by more fibreglas layers according to the actual production state. In this case instruction 5 must not be executed.
Note: If damage was detected on only one wing only this wing must be repaired. The other wing may be reinforced according to instruction No. 5.

Material : For instruction 1:
working instruction No. 1 for TN1000/12

For instruction 2:
working instruction No. 2 for TN1000/12
1 bolt M6x44 LN9037
1 lock nut M6 DIN985-8zn or M6 LN9348

For instruction 3:
working instruction No. 3 for TN1000/12
bracket 5St122
1 lock nut M6 DIN985-8zn or M6 LN9348
Epoxy resin with hardener according to the list in the repair manual
Cottonflocks
Glassfibre fabric Interglas 92125

For instruction 5:
working instruction No. 4 for TN1000/12
30000010 Epoxy resin with approx.145g per wing
30000011 hardener H286 approx.55g per wing
30001161 chopped glasfibres FG400/060 approx. 130g per wi
70002104 50ml Syringe

For instruction 6
working instruction No. 5 for TN1000/12
drawings 10F4 and 10F5
right wing:
10FE18 front airbrake hook-up mounting
10FE19 rear airbrake hook-up mounting
left wing:
10FE20 front airbrake hook-up mounting
10FE21 rear airbrake hook-up mounting
Further material see working instruction

Weight and balance : influence negligible

Remarks : Instructions 1 and 4 may be executed by the owner.
All instructions are to be inspected and entered in the aircraft logs by a licensed inspector at the next annual inspection.
Instructions 2, 3, 5 and 6 are to be executed by the manufacturer or by a licensed workshop.
All instructions are to be inspected and entered in the aircraft logs by a licensed inspector.

The working instructions will be published on the DG web-site:
www.dg-flugzeugbau.de

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