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LBA anerkannter Herstellungsbetrieb 16 25
LBA anerkannter Luftfahrttechnischer Betrieb IIA 279



Subject: Massbalance of the ailerons

Concerning: DG-300 (ELAN) serial no. 3 E 1 upto 3 E 210

Accomplishment: within 30 days

Reason: We have observed low frequency (ca. 2 Hertz) aileron flutter in the airspeed range 120 km/h ( 65 kts) up to 150 km/h (80 kts). The flutter was possible due to very low aileron control friction.

Increasing the massbalancing the flutter could be prevented.

Measures:

1. Exchange page 12 of the maintenance manual to the new issue Nov. 1986.
   The max. allowable spring balance reading is reduced from 0,8 kg (1.764 lbs) to 0,66 kg (1.45 lbs).
2. For all DG-300 where the spring balance reading was exceeded during production or by repairs or repainting the massbalance weight is to be increased. Instructions see maintenance manual section 4.5, page 22a,b,c.
   From the enclosed list you can see if your ailerons exceeded the 0,66 kg factorynew.
   If you are uncertain you have to disassemble the ailerons and to determine the massbalance data.

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**Material needed:**

Measure 1: Maintenance manual page 12

Measure 2: Tefloncoated glasfibrefabricband
50 x 0,08 mm, etched on 1 side ca. 7 m ( 23 ft.)
1 roll of film tape 3M No. 465, 9 mm wide,
contact adhesive e.g. Pattex,
2 selflocking nuts M5 DIN 985-8 zn,
leadballs diameter 2 mm (3/32 in.),
Epoxy- or Polyesterresin with hardener,
2 steelrods diameter 5 mm (3/16 in.) each
100 mm (4 in.) long.

**Note:** Measure 1 may be executed by the owner himself.
If measure 2 has to be executed this should be done by a licensed repair shop, and be inspected.
The measures are to be entered in the aircraft logs mentioning TN 359/11.
Technical Note No. 359/12 should be carried out at the same time.

Author

Bruchsal 4
28.11.86

Dipl.Ing. W. Dirks

Type certification inspector

LBA-approved:
The German original of this TN has been approved by the LBA under the date of Jan.7.1987 and is signed by Mr. Skov. The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.

DG 300 ailerons

| Serial No. | weight / kg | | spring balance reading / g | |
|---|---|---|---|---|
| | 3 - 5,7 kg | | max. 660 g | |
| | left | right | left | right |
| 3 E 2 | 4,6 | 4,6 | 675 | 675 |
| 3 E 12 | 3,65 | 3,55 | 675 | 625 |
| 3 E 16 | 3,95 | 3,9 | 675 | 630 |
| 3 E 18 | 3,7 | 3,7 | 675 | 620 |
| 3 E 19 | 3,95 | 3,9 | 750 | 650 |
| 3 E 20 | 3,8 | 3,7 | 650 | 670 |
| 3 E 22 | 3,9 | 3,9 | 725 | 625 |
| 3 E 25 | 3,8 | 3,8 | 750 | 750 |
| 3 E 27 | 3,9 | 3,9 | 700 | 720 |
| 3 E 29 | 3,8 | 3,7 | 700 | 710 |
| 3 E 31 | 3,7 | 3,7 | 725 | 675 |
| 3 E 32 | 3,7 | 3,65 | 675 | 675 |
| 3 E 33 | 3,7 | 3,7 | 675 | 620 |
| 3 E 35 | 4,2 | 4,2 | 720 | 650 |
| 3 E 36 | 3,95 | 3,85 | 750 | 725 |
| 3 E 37 | 3,9 | 3,8 | 725 | 625 |
| 3 E 38 | 3,85 | 3,6 | 675 | 550 |
| 3 E 42 | 3,8 | 3,75 | 700 | 650 |
| 3 E 43 | 3,7 | 3,65 | 675 | 620 |
| 3 E 44 | 3,9 | 4,2 | 700 | 730 |
| 3 E 45 | 4,3 | 3,65 | 740 | 650 |
| 3 E 46 | 3,9 | 3,65 | 675 | 650 |
| 3 E 47 | 3,95 | 3,85 | 725 | 650 |
| 3 E 48 | 3,9 | 3,9 | 750 | 675 |
| 3 E 49 | 3,85 | 3,8 | 750 | 675 |
| 3 E 50 | 3,85 | 3,95 | 675 | 600 |
| 3 E 51 | 4,05 | 3,95 | 725 | 650 |
| 3 E 52 | 3,8 | 3,75 | 675 | 550 |
| 3 E 56 | 4,0 | 3,8 | 700 | 650 |
| 3 E 58 | 3,75 | 3,65 | 700 | 625 |
| 3 E 62 | 3,95 | 4,00 | 750 | 675 |
| 3 E 63 | 3,9 | 3,9 | 700 | 675 |
| 3 E 64 | 3,9 | 3,65 | 675 | 625 |
| 3 E 66 | 3,8 | 3,75 | 700 | 625 |
| 3 E 68 | 3,95 | 3,9 | 725 | 650 |
| 3 E 85 | 3,6 | 3,5 | 675 | 600 |
| 3 E 91 | 3,6 | 3,8 | 625 | 675 |
| 3 E 92 | 3,7 | 3,65 | 675 | 650 |
| 3 E 93 | 3,7 | 3,7 | 675 | 650 |
| 3 E 95 | 3,6 | 3,6 | 650 | 675 |
| 3 E 97 | 3,8 | 3,7 | 725 | 675 |
| 3 E 98 | 3,65 | 3,7 | 625 | 700 |
| 3 E 101 | 3,7 | 3,75 | 650 | 675 |
| 3 E 102 | 3,8 | 3,75 | 725 | 725 |
| 3 E 109 | 3,65 | 3,65 | 675 | 625 |

DG 300 ailerons

| Serial No. | weight / kg | | spring balance reading / g | |
|---|---|---|---|---|
| | 3 - 5,7 kg | | max. 660 g | |
| | left | right | left | right |
| 3 E 116 | 3,7 | 3,7 | 700 | 625 |
| 3 E 117 | 3,65 | 3,6 | 675 | 625 |
| 3 E 119 | 3,85 | 3,85 | 675 | 650 |
| 3 E 131 | 3,70 | 3,55 | 675 | 650 |

Bruchsal 4 11/1986

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