0 General

0.1 Amendments

No.	Page	Description	Date
0.1	all	Combination of the initial Maintenance Manuals of the Variants DG-600M and DG-600/18M, new standardized format	December 2009
0.2	0.11, 1.2, 1.4, 1.11, 1.12, 1.14, 1.18, 1.22, 1.24, 2.1, 2.3, 2.5, 3.1-3.3, 3.7, 4.2 4.7, 5.1, 6.2 - 6.4; 8.1-8.3, diagram 1	Miscellaneous changes to the contents of the latest amendments of the initial maintenance manuals	December 2009
1	0.1, 0.3 – 0.6, 0.11, 3.4, 3.7, 8.2, diagram 11	Fuel hoses TN DG-SS-02	October 2016
2	0.1, 0.3 – 0.6, 0.10, 1.1, 1.3 - 1.6, 4.6, 8.1 – 8.3 diagrams 3, 7b, 6F39	Manual revision TN DG-SS-07	August 2021

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0.2 List of effective pages

Section	page	issued	replaced	replaced	replaced
0	0.0	December 09	See manual amendments		
	0.1	"	"		
	0.2	"	"		
	0.3	"	"		
	0.4	"	"		
	0.5	"	"		
	0.6	"	"		
	0.7	"			
	0.8	"			
	0.9	"			
	0.10	"			
	0.11	"	October 2016		
	0.12	"			
1	1.1	December 09	August 2021		
	1.2	"			
	1.3	"	August 2021		
	1.4	"	August 2021		
	1.5	"	August 2021		
	1.6	"	August 2021		
	1.7	"			
	1.8	"			
	1.9	"			
	1.10	"			
	1.11	"			
	1.12	"			
	1.13	"			
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	1.15	"			
	1.16	"			
	1.17	"			
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	1.19	"			
	1.20	"			
	1.21	"			
	1.22	"			
	1.23	"			
	1.24	"			
	1.25	"			
	1.26				
	1.27				

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List of effective pages (continued)

Section	page	issued	replaced	replaced	replaced
2	2.1	December 09			
	2.2	"			
	2.3	"			
	2.4	"			
	2.5	"			
	2.6	"			
3	3.1	December 09			
	3.2	"			
	3.3	"			
	3.4	"	October 2016		
	3.5	"			
	3.6	"			
	3.7	"	October 2016		
4	4.1	December 09			
	4.2	"			
	4.3	"			
	4.4	"			
	4.5	"			
	4.6	"	August 2021		
	4.7	"			
	4.8	"			
	4.9	"			
	4.10	"			
	4.11	"			
	4.12	"			
	4.13	"			
	4.14	"			
	4.15	"			
	4.16	"			
	4.17	"			
	4.18	"			
	4.19	"			
	4.20	"			
	4.21	"			
	4.22	"			
	4.23	"			

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List of effective pages (continued)

Section	page	issued	replaced/	replaced	replaced
4	4.24	"			
	4.25	"			
	4.26	"			
	4.27	"			
	4.28	"			
	4.29	"			
	4.30	"			
5	5.1	December 09			
	5.2	"			
6	6.1	December 09			
	6.2	"			
	6.3	"			
	6.4	"			
7	7.1	December 09			
8	8.1	December 09	August 2021		
	8.2	"	October 2016	August 2021	
	8.3	"	August 2021		

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List of effective pages (continued)

Diagrams

No.	issued	replaced/	replaced	replaced
1	December 09			
2	Nov. 90			
3	Nov. 90			
4	Nov. 90			
5	Nov. 90			
6	Mai 91			
7	Dez. 91			
7b	August 2021			
8	Nov. 90			
9	Nov. 90			
10	Nov. 90			
11	Nov. 90	October 2016		
12	Nov. 90			
13	Nov. 90			
14	Nov. 90			

Enclosures

No.	issued	replaced/	replaced	replaced
(94)	December 09			
(95)	December 09			
(96)	December 09			
6EP25M	06.05.91			
6EP27M	28.08.90			
6EP28	06.05.91			
6E1	19.06.90			
6E2	13.06.90			
6F39	11.10.90			

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Diagrams

Nr.	
1	Elevator control circuit, trim
2	Rudder control circuit, landing gear
3	Aileron, wing flap and spoiler control circuits, fuselage side
4	Flaperon and spoiler control circuits wing side
5	Tow hooks, waterballast system
6	Pitot static system
7	Placards DG-600M
7b	Placards DG-600/18M
8	Powerplant
9	Powerplant
10	Extension-retraction mechanism
11	Fuel system
12	Powerplant for instruction section 4.17
13	Powerplant for instruction section 4.17
14	Engine retaining cables

Enclosures

(94)	Equipment list
(95)	Checklists for maintenance work
(96)	Checklists for maintenance work
6EP25M	Installation stall warning SPEED CONTROL M
6EP27M	Installation Dräger oxygen system
6EP28	Installation ELT
6E1	Wiring scheme DIN A2 (in aircraft log)
6E2	Wiring plan DIN A1 (in aircraft log)
6F39	Positions for zig-zag tape

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1 System description and adjustment data

1.1 Wing and tailplane setting data

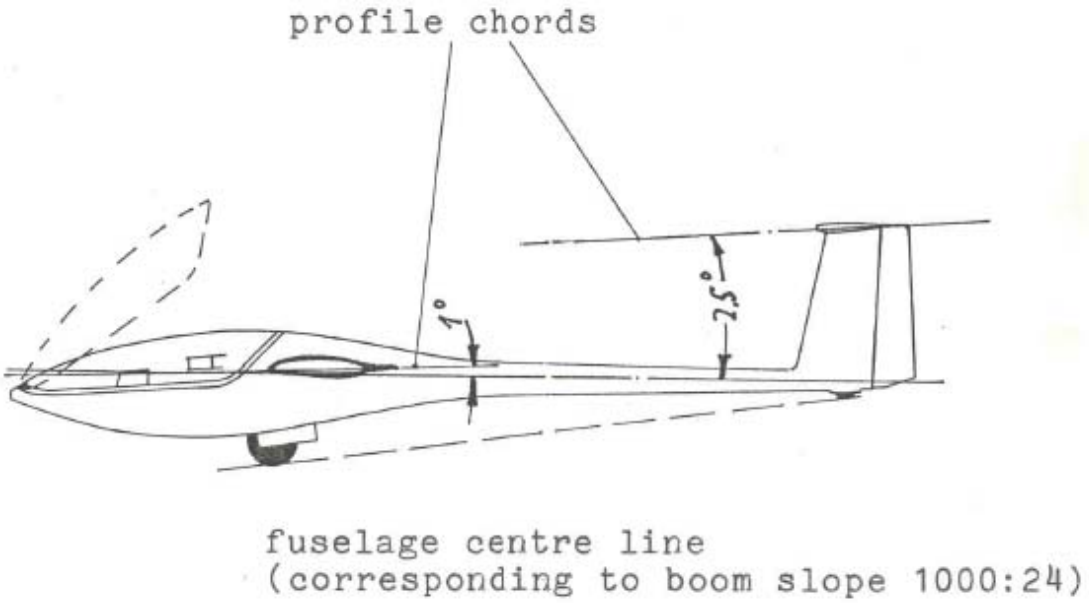
Wing:

Sweep Back (Leading edge):
0 ± 3 mm (± 0.12 in.) at wing taper change

Dihedral (Leading edge line):
2.5° = 316 mm (12.44 in.) at the wing parting (y = 7.25 m)

Angles of Incidence:
Wing: -1° measured at wing flap setting -10°.

Horizontal tailplane: -2.5°



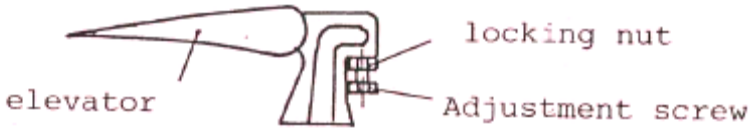
Wing oscillation frequency: ca. 148/min 15 m
128/min 17 m

Aircraft should rest on both wheels during frequency measurements

Turbulators on the wings
The wings are equipped with 90° zig-zag tape turbulators on lower- and upper wing-surface.
Installation see drawing 6F39. Partlist see section 8.

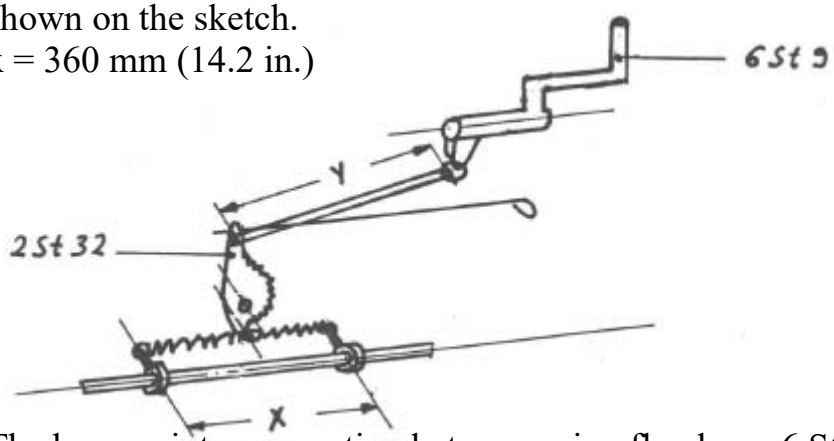
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Any free play can be reduced by screwing in the adjustment screw on the automatic connector funnel.



1.2.5 Trim

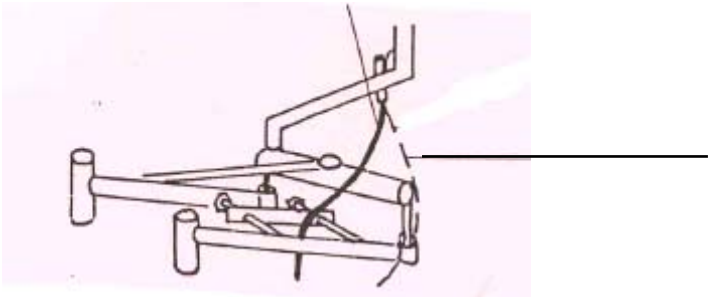
The automatic trim mechanism should be adjusted so that with full forward (nose down) trim the control column is in the maximum forward position. The tensioning of the trim mechanism springs is adjusted as shown on the sketch.
x = 360 mm (14.2 in.)



The bungee interconnection between wing flap lever 6 St 9 and trim lever 2 St 32 is to be replaced, when worn or when elongated.
The length in unstretched condition y must be
110 mm (4.3 in.). The interconnection consists of 2 mm diam. bungee layer around 3 times.

1.2.6 Repair of the automatic trim mechanism bowden cable

In the event of a replacement bowden cable being installed, it should be cautioned that the cable must pass between the two parallel arms of the control column mechanism as shown in the sketch.



Warning: If the cable passes outside the mechanism column movement can be blocked.

1.2.7 Sealing the elevator

The elevator is sealed with a Teflon coated glass fibre fabric loop, see section 4.6a. Partlist see section 8.

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1.3 Rudder control

1.3.1 Rudder control circuit

see diagram 2 DG-600M und DG-600/18M, resp. diagram 2a DG-600 and DG-600/18

1.3.2 Rudder deflections and tolerances

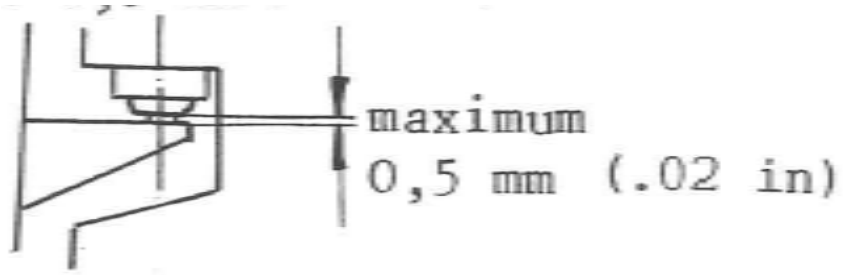
165-5 mm (± 30°) (6.5 - .2 inch)
measured at 318 mm (12.52 inch) from the hinge axis.

1.3.3 Rudder stops

The rudder stops are located at the lower hinge pedestal and can be adjusted with an allen key wrench.

1.3.4 Axial free Play

The maximum allowable free play at the upper hinge point is 0.5 mm (0.02 inch)



1.3.5 Sealing the rudder

The rudder is sealed on both sides with a V sealing tape (3 M Scotch Flexodicht Band 2743 white) which is attached at the fin trailing edge. This seal is not to be removed. If damaged it should be replaced and sprayed with Teflon spray.
Partlist see section 8.

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1.4 Aileron and wing flap control

1.4.1 Control circuit

see diagrams 3 and 4

A spring at the mixer shaft 6St2 provides additional aileron return force at positive wing flap settings.

Note: The bearing of 6 St 9 on 6St15 see diagr. 3 is not to grease (Teflon bearing).

1.4.2 Deflections and tolerances

Aileron deflections: up - 42.5 ± 3 (1.67 ± 0.12 in.)
down +21.5 ± 3 (0.84 ± 0.12 in.)

measured at 122 mm (4.8 in.) from hinge axis (at inboard end), wing flap setting -5°.

Wing flap deflections:

At flap setting -5° the flaperons have to be adjusted against the fix part at the wing root with 0 ± 1 mm (0 ± 0.04 in.).

	DG-600M			**DG-600/18M**		
	°	mm	in.	°	mm	in.
Max. neg.	- 15	- 21.5 ± 3	(-0.84 ± 0.12 .	-10	-11 ± 3	(-0.45 ± 0.12
Max. pos. = L	+15	+42.5 ± 3	(+1.67 ± 0.12	+15	+42.5 ± 3	(+1.67 ± 0.12

measured at 122 mm (T4.8 in.) from hinge axis against the fix part at the wing root.

1.4.3 Stops

The aileron stops are located behind the removable left-hand side panel. The stops can be adjusted with two 4 mm (5/32 in.) diameter rods or drills. The wing flap stops are located at the pushrod 6St8.The stop for the positive setting (welded washer at pushrod 6St8 with Nylon-bush) is at the seatback bulkhead. Adjustment by displacing pushrod 6 St 8 against the rear pushrod 6St7.

The stop in negative setting is a hose clamp, which stops at the leaf-spring 6St4.

Caution: At the DG-600M this stop must be positioned so, that flap setting -15° just can be reached, at the DG-600/18M only -10°.

1.4.4 Free play

The max. free play measured at the trailing edge of the flaperons measured at 122 mm (4.8 in.) from hinge axis should not exceed 2 mm (0.08 in.) The control stick and the wingflap should be in neutral position. For the measurement fix the flaperon of the opposite wing.

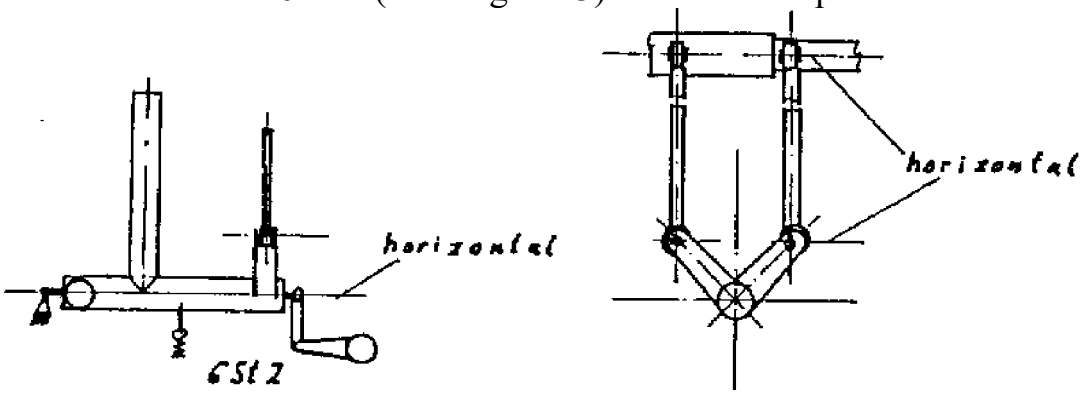
With both flaperons fixed, a maximum free play of 3 mm (0.12 in.) at the top of the control stick is allowed.

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1.4.5 Complete readjustment

Should it be necessary to completely reset the flap and aileron control, proceed as follows.

Place the fuselage with the centre line horizontal see sect. 1.1. Fix the mixer shaft 6 St 2 (see diagram 3) in horizontal position.



then:

1. Adjust the control stick to neutral.
2. Adjust the wing flap handle to 0° flapsetting.
3. Adjust the flaperons: + 21.3 mm (0.84 in.) measured against the fix part at the wing root and + 9.6 mm (0.38 in.) against the 15 m wing tip.

To adjust the flaperons you must first remove the fairings at the drives from the wing (glued with Pattex contact adhesive).

Next carefully break away the fairings from the control surface horns. Then screw away the horns (Allen key wrench) and loosen the counter nut (12 mm open-ended wrench) at the rod ends. Adjustment is made by rotating the complete drive.

Note: Secure the bolts again with a small amount of Loctite 243.

4. Adjust the aileron stops. (See 1.4.3)
5. Check the flap deflections and adjust the stops if necessary. (See 1.4.3)
6. Install the fairings again. Glue the fairings to the control surface horns with Polyester resin. Apply pressure when gluing to prevent the fairings interfering.

1.4.6 Sealing the flaperons

The flaperons are sealed with Teflon coated glass fibre fabric loops, see section 4.6. Partlist see section 8..

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8. Displace the flaperon fully downward and fix it in this position.

   Remove the tape which fixes the Teflon sealing to the wing surface and push the teflon sealing into the gap in between wing and aileron until its end corresponds with the film tape on the upper aileron surface. Be careful to avoid wrinkles.

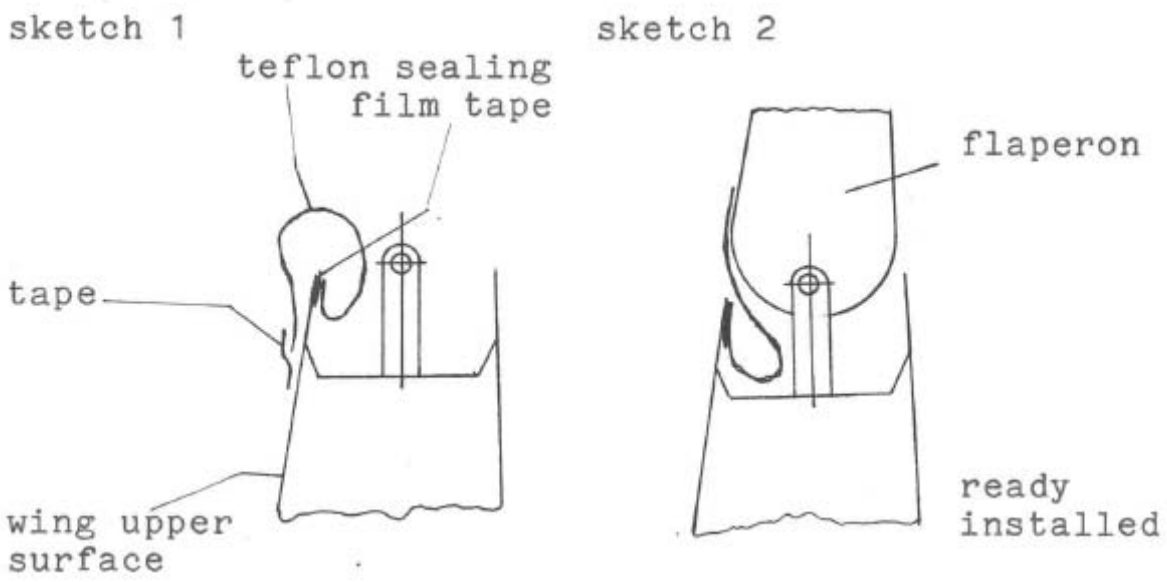
9. Now remove the cover paper from the film tape and press simultaneously the Teflon sealing to the ,film tape.

10. Displace and fix the flaperon so that the pencil mark corresponds with the wing trailing edge (see 2.). Cut of the surplus Teflon sealing tape with a sharp knife along the wing trailing edge.

11. Clean off surplus film tape (if there is any) with petroleum ether.

12. Finally check that you can reach the max. flaperon displacements 80 mm (3.15 in.) down and 70 mm (2.76 in.) up measured against the fix part at the wing root 122 mm (4.8 in.) behind the hinge axis.

D **Reinstallation of the flaperon of the wing tip extensions**
see B. To check the max. displacements, rig the wingtip to the inboard wing.
Glue the fairings again to the control surface horns with polyester resin. Apply pressure when gluing to prevent the fairings interfering.



4.6a **Removal and reinstallation of the elevator**
Removal and reinstallation of the elevator incl. the sealing is done analogous to the flaperons.

Note for 4.6 and 4.6a: Partlist see section 8.

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8 Partlist

In this list you will find only parts of the powerplant and the electrical system and in addidtion of sealings and turbulators.
Please find the part no's of the control system parts and of the metal fittings of the powerplant in the following diagrams.

Parts for the powerplant

a. for 12.5 hours and 25 hours inspection

60510811	Spark plug: NGK B 8 ES, The spark plug should not have a cap which can be screwed off! electrode gap 0.4-0.6 mm
60502310	Spark plug: connector: NGK LB 05EZ Rotax part o. 983409
60507570	Fuel filter, filter mesh size 200µ or
60507572	Fuel filter: MANN WK 31/4
10007512	Gear oil: Mobil gear SHC 460, 300 g bottled in a plastic container

b. Spare parts

60500127	Nut for spring coupling M 8 for exhaust muffler (Rotax part.no. 842330)
60500128	Spring for spring coupling M 8 (Rotax part.no. 239628)
60500131	Starter motor: ND 128000-4861 (Rotax part.no. 995435)
60502309	Ignition damping box assy. (Rotax part. no. 866572)
60502315	Contact breaker set (Rotax part.no. 983343)
39001022	Service kit nuts and bolts for 300 hour overhoul
60000179	Gas spring for extension-retraction drive 23-300-687-GZ-A-1200 N (from ser.no. M22 on)
60000180	Gas spring for extension-retraction drive 23-300-1200 A-A (ser.no. M1-M21)
60507560	Electric fuel pump Facet 40105
60502246	Diaphragm vacuum pump Mikuni DF 44-210 (Rotax part.no. 994482)

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60000527 Fuel cock KH 1067-T

60507550 Drainer CAV 110 (1/8" NPT

Warning: Replace the sealing ring of the drainer against partno. 60504402 prior to installation

60507550 Sealing ring for drainer CAV 110 (for automotive fuel)

40470300 Probe for CHT 4M30

39001008 Service kit fuel lines (necessary every 6 years)

Note: When instructions 2 and 3 of **TN DG-SS-02** have been accomplished the fuel lines must not be exchanged after 6 years but have a life time of 10 years.

60507604 Coupling KL-006-2-SL009 for fuel filler hose

40675290 Pressure switch in fuel system with wiring 901.10

Parts for the electrical system

60510891 Battery 6V / approx. 10Ah equipped with screw - terminals

60510830 Regulator Ducati 434.36.6200 or GR4 with filter according to TN866/11

60510350 Extension-retraction relay 0.7.330.00 with diode

60510816 Starter relay 0332002160 with diode

40575200 Control system 5 E 20 for automatic extension-retraction

40675270 Anti interference filter 6 E 27 for extension-retraction mechanism

60510463 Limit-switch engine extended 164-564

60510462 Limit-switch engine retracted 164-594 (push button) or 107-072 Ö2 / GL (terminal 4 removed)

60510476 Manual extension-retraction switch APR 20 - 647 N

60510475 Switch to switch over from manual to automatic extension-retraction APR 20 - 646 N

60510813 Main switch Bosch 0341001001

60510812 Key for main switch Bosch 0341001001

60510370 Starter button SECME 07 17801 21

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60510392 Circuit breaker Klixon 10 A

60510400 Holder for fuses 14.331.1

60510401 Screw cap 14.339.3 for 14.331.1

Note: screw caps with window are no more available

Fuses Wickmann G 250V with indicator 5 x 25

60510428 2 A

60510429 4 A

60510427 2.5 A

60510425 1 A

60510432 10 A

60510437 Fuse Bosch 1191017003 80 A

60510550 Proximity switch Insor INCT 120 2 or IPCT 1212

Socket in baggage compartment and plug

a) initially installed but no more available:

60510801 Preh 71 206 2P (socket in baggage compartment)

60510800 plug Preh for socket in baggage compartment

b) possible replacement:

60510796 socket BSB12

60510797 plug BSK12

Sealings for flaperons and elevator

30003135 Teflon coated glass fibre fabric 50x0.08 mm etched on 1 side

70000253 Film-tape Tesafix Nr. 4965, 9 mm wide, 50 m roll

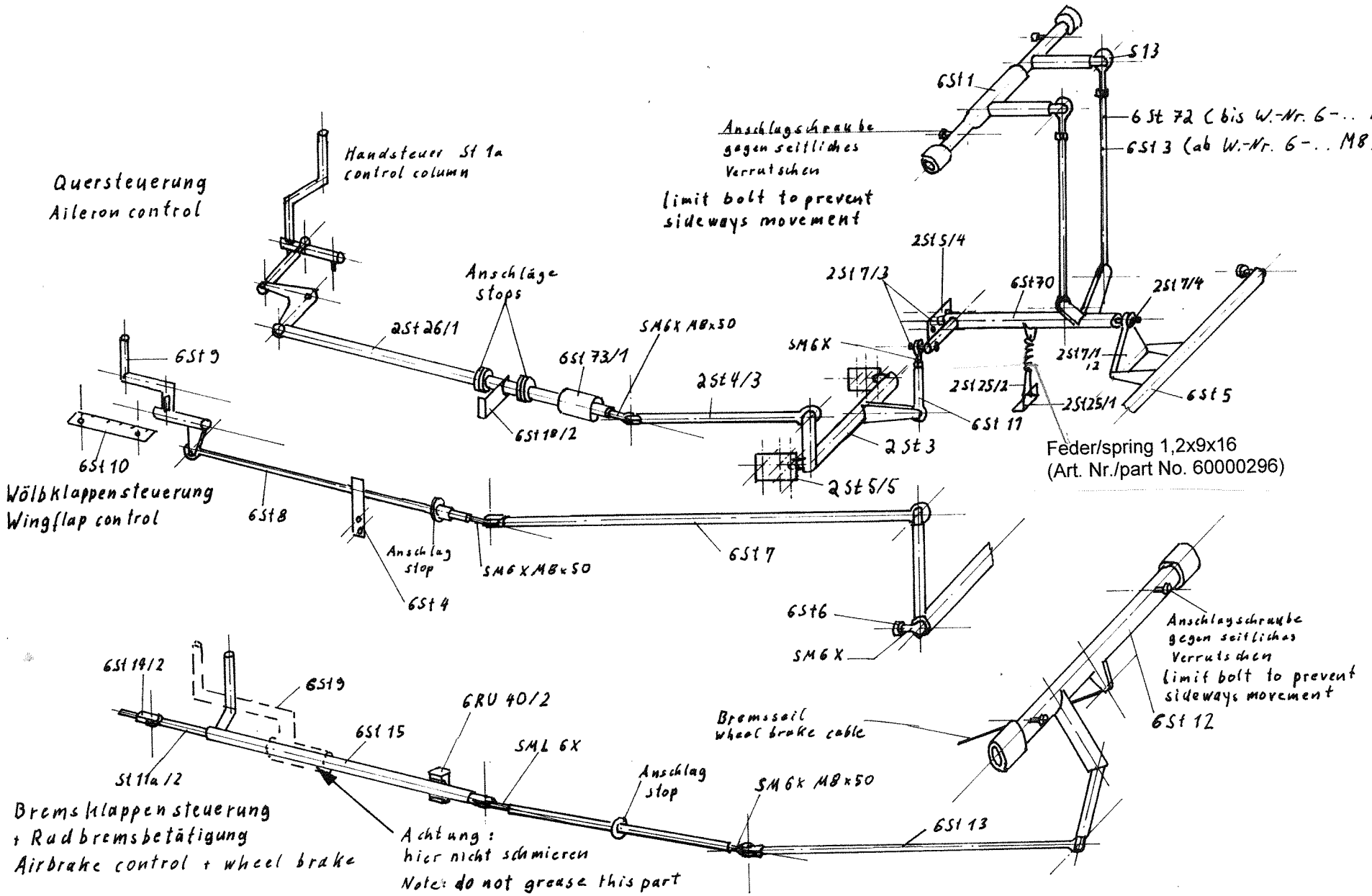
Sealings for the rudder

70000295 3M Scotch V-seal weatherstrip 2 x 1.05 m (3.45 ft)

Turbulators on wing lower- and upper-surface

30003127 90° zig zag tape (installation see drawing 6F39)

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DG-600M

Diagramm 3

Ausgabe August 2021
issued

TM/TN DG-SS-07

16 zu Brandhahn auf
closed fuel cock open

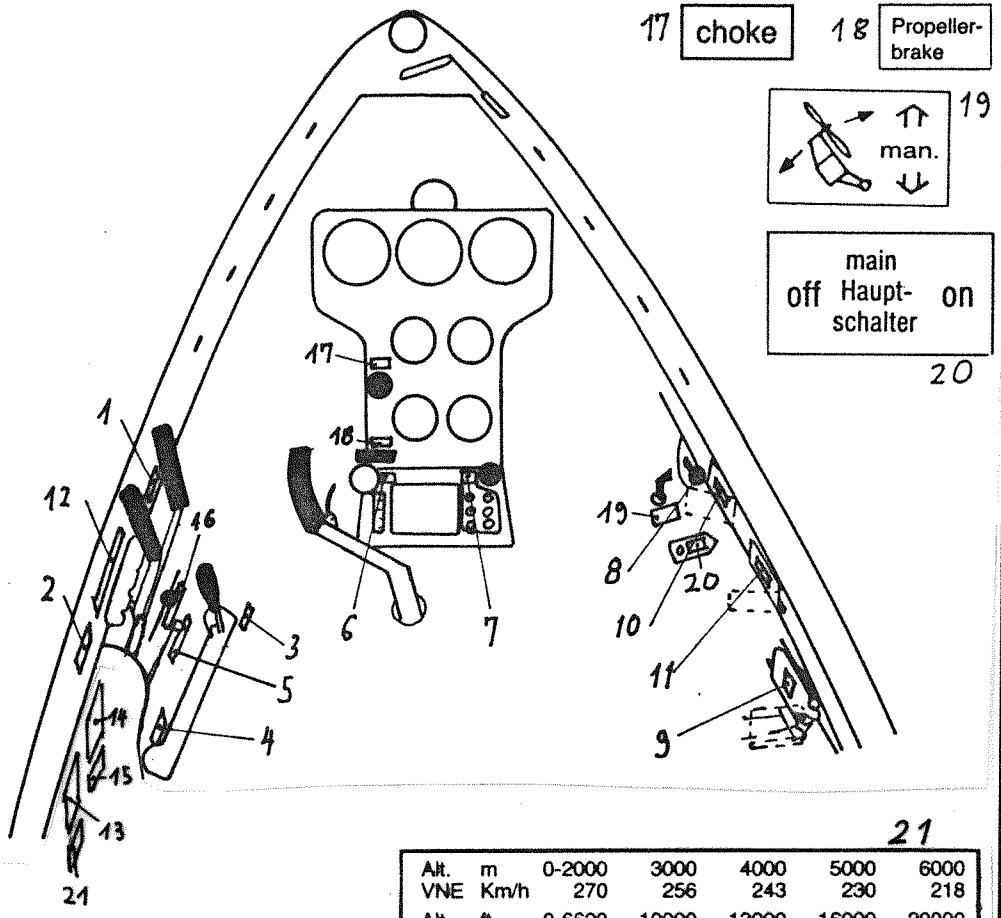
17 choke

18 Propeller-brake

19 man.

main
off Haupt- on
schalter

20



Glaser-Dirks Flugzeugbau GmbH

type: DG-600/18M Year of construction:
serial no: 6- M

Maximum airspeeds	km/h	kts.
Winch launch	150	81
Aero-tow	185	100
Manoeuvring V_A	185	100
Rough air	185	100
Max. flap extended speed + 10°, + 5°	185	100
Landing gear operating	185	100
Maximum speed V_{NE}	270	146
Max. flap extended speed L	150	81
Powerplant extended	180	97
Powerplant extension-retraction	110	59

Approved aerobatic manoeuvres (only without waterballast and with the engine retracted): pos. Loop, Stall Turn, Chandelle, Spin

Maximum mass:
Selflaunching = 440 kg (970 lb.)
Tow launching = 480 kg (1058 lb.) wingspan 18 m
Tow launching = 525 kg (1157 lb.) wingspan 15 m and 17 m

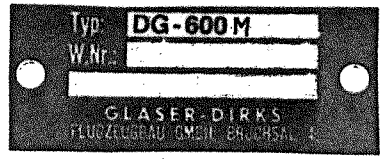
Loading chart
Cockpit load (parachute included)

maximum	110 kg	242 lbs
minimum	kg	lbs

13

Gepäck max. 15 kg
baggage max. 33 lbs.

at the main fuselage bulkhead



fireproof placard at the main fuselage bulkhead

Bauteil Nr.:

part no. of airframe components at main bulkhead, at the root ribs of wings and flaperons, at the rudder nose, at the stabilizer shear web

12V near socket in baggage compartment

14

Benzin min. 96 Okt. petrol min. 96 ROZ. **50:1** Zweitaktöl two stroke oil **22l**

screen print at main fuselage bulkhead

Preflight inspection

1. Lead ballast (for under weight pilot)?
2. Fin ballast tank emptied or filled to correct amount?
3. Parachute worn properly?
4. Safety harness buckled?
5. Seat back and pedals adjusted?
6. All controls and knobs in reach?
7. Altimeter?
8. Dive brakes cycled and locked?
9. Wing flaps in initial take off position?
10. Positive control check? (One person at the control surfaces).
11. Trim?
12. Canopy locked?

Additional checks before self launching

13. Fuel level?
14. Max. mass 440 kg (970 lb.) not exceeded?
15. Canopy open - propeller clear?
16. After starting the engine - close canopy.
17. Check engine RPM.
18. Check the fuel flow.

21

Alt.	m	0-2000	3000	4000	5000	6000
VNE	Km/h	270	256	243	230	218
Alt.	ft	0-6600	10000	13000	16000	20000
VNE	Kts	146	138	131	124	117

above the tailwheel: Reifendruck 2 bar
tyre pressure 29 psi

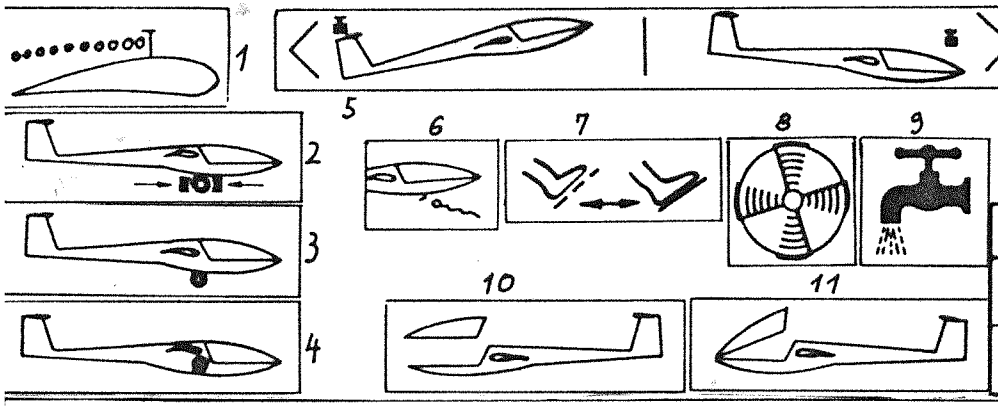
Sollbruchstelle max. 6800 N
rated load max. 1500 lbs.

on the left wheel door

front: Reifendruck 3,5 bar
Tyre pressure 51 psi

on the right wheel door

aft: Drainer ↑



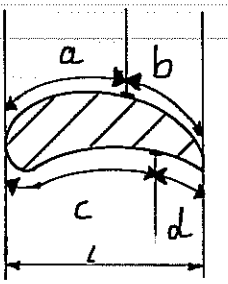
15 (option)

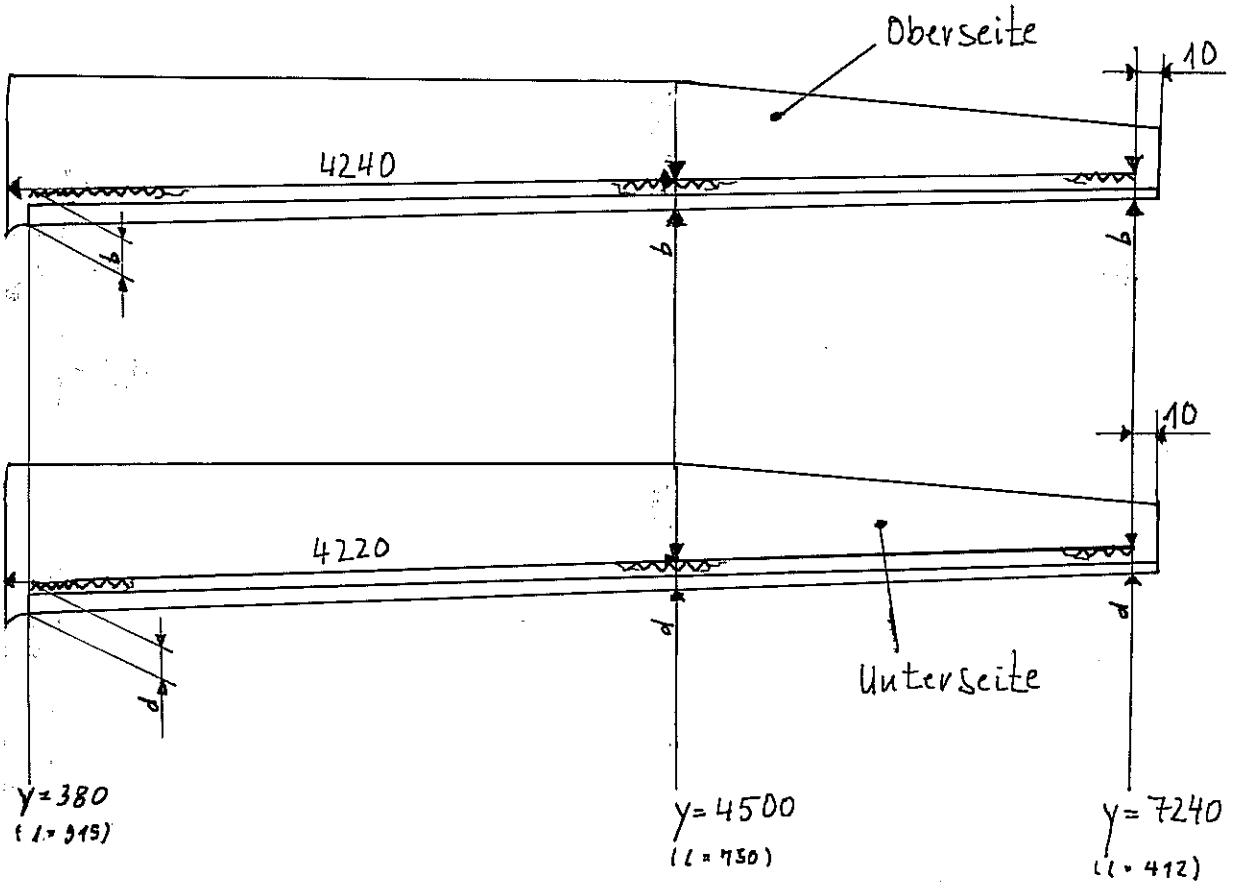
limits for use of the fin waterballast tank

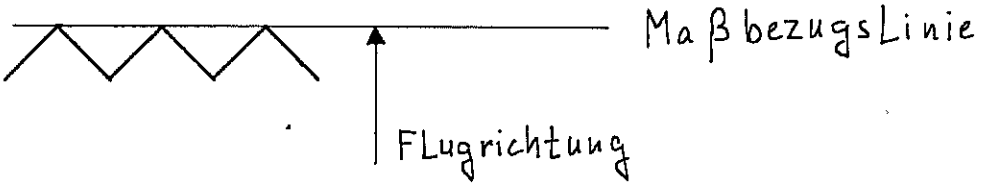
minimum ground temperature	°C	13,5	17	24	31	38
	°F	56	63	75	88	100
maximum flight altitude	m	1500	2000	3000	4000	5000
	ft.	5000	6500	10000	13000	16500

placards DG-600/18M
diagram 7b

			y=380	y=4500	y=7240	
Ober-seite	~68%	zur Nase	622	510	297	a
		zur Endkante	298	243	132	b
Unter-seite	82%	zur Nase	750	615	337	c
		zur Endkante	165	135	74	d







Ausg.	Änderung	ÄM	Tag	Name
a	Reihe korrigiert	/	11.10.00	W.Dirks

	Tag	Name
Gez.	13.11.98	REIBEL
Gepr.		
Norm.		

Maßstab

Maße ohne Toleranzang. nach:

Montage
Zackenband
DG 600

Glaser-Dirks
Flugzeugbau GmbH
7520 Bruchsal 4
Im Schollengarten 19-20

GF 39