0 General

0.1 Amendments

No.	Page	Description	Date
0.1	all	Combination of the initial Maintenance Manuals of the Variants DG-600 and DG-600/18, new standardized format	December 2009
0.2	0.7, 1.2, 1.4, 1.10-1.12, 2.1, 2.3, 2.5, 3.1 - 3.3, 4.2, 4.7, 5.1, 6.1 - 6.4, diagram 1a	Miscellaneous changes to the contents of the latest amendments of the initial maintenance manuals	December 2009
2	0.1, 0.3, 0.4, 0.6, 1.1, 1.3 - 1.6, 4.6, 8.1 diagrams 3a, 7c, 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	"			
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	"			
2	2.1	December 09			
	2.2	"			
	2.3	"			
	2.4	"			
	2.5	"			
	2.6	"			
3	3.1	December 09			
	3.2	"			
	3.3	"			

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List of effective pages (continued)

Section	page	issued	replaced	replaced	replaced
4	4.1	December 09			
	4.2	"			
	4.3	"			
	4.4	"			
	4.5	"			
	4.6	"	August 2021		
	4.7	"			
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	August 2021			

Diagrams

No.	issued	replaced/	replaced	replaced
1a	December 09			
2a	April 88			
3a	April 88	August 2021		
4a	April 88			
5a	April 88			
6a	July 87			
7a	July 87			
7c	August 2021			

Enclosures

No.	issued	replaced/	replaced	replaced
(94)	December 09			
6F39	11.10.90			

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Section	Content	page
4	**Detailed instructions for assembly and servicing work**	**4.1**
4.1	Replacement of the water ballast bags	4.1
4.2	Replacement of control circuit cables	4.2
4.3	Adjustment and servicing of the control circuit	4.2
4.4	Removal and installation of the landing gear	4.3
4.5	Fixing excessive free play of the canopy	4.4
4.6	Removal and reinstallation of the ailerons	4.5
4.7	Working instructions for heat-shrink tubing	4.7
4.8	Securing with Loctite	4.7
5	**Weight and balance**	**5.1**
6	**Instrumentation and accessories list**	**6.1**
6.1	Air speed indicator (0 - 300 km/h, 165 kts)	6.1
6.2	Altimeter	6.2
6.3	Harness (seat)	6.2
6.4	Compass	6.2
6.5	VHF transceiver	6.3
6.6	Variometer	6.3
6.7	Turn and bank indicator	6.3
6.8	Outside air temperature gauge (only with fin waterballast tank)	6.3
6.9	Instruments which are not part of the minimum equipment:	6.4
7	**List of special tools**	**7.1**
8	**Partlist…**	**8**.1

Diagrams

Nr.	
1a	Elevator control circuit, trim
2a	Rudder control circuit, landing gear
3a	Aileron, wing flap and spoiler control circuits, fuselage side
4a	Flaperon and spoiler control circuits wing side
5a	Tow hooks, waterballast system
6a	Pitot static system
7a	Placards DG-600
7c	Placards DG-600/18

Enclosures (94)	Equipment list
6F39	Positions for zig-zag tape

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1 System description and adjustment data

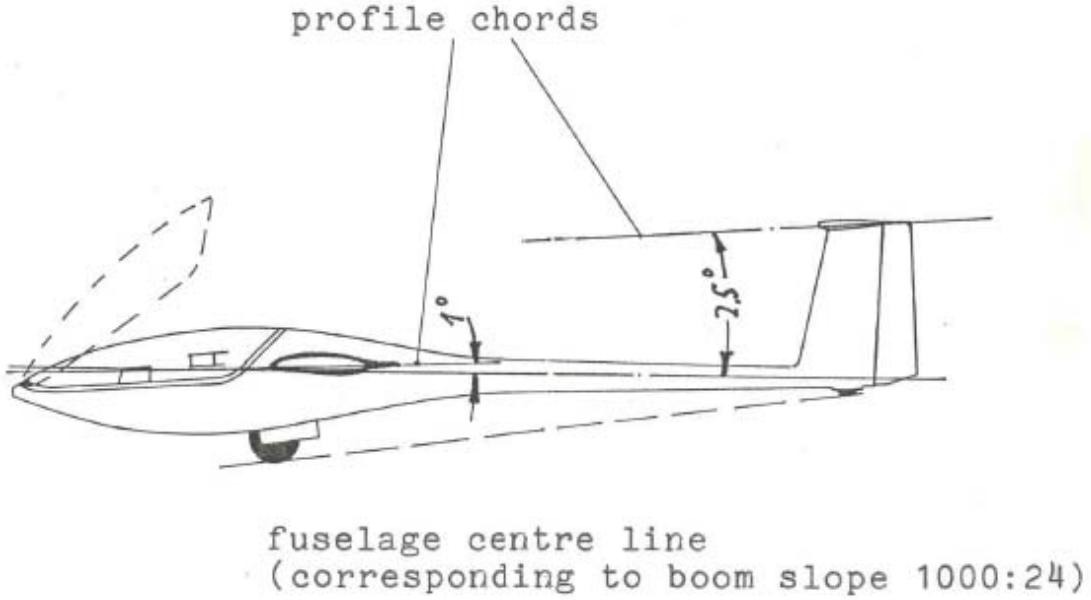
1.1 Wing and tailplane setting data

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°



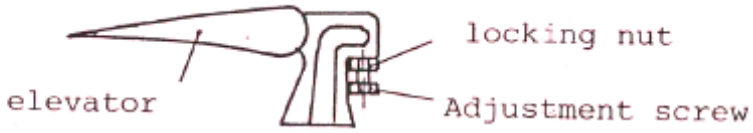
Wing oscillation frequency: ca. 148/min 15 m
128/min 17 m

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.

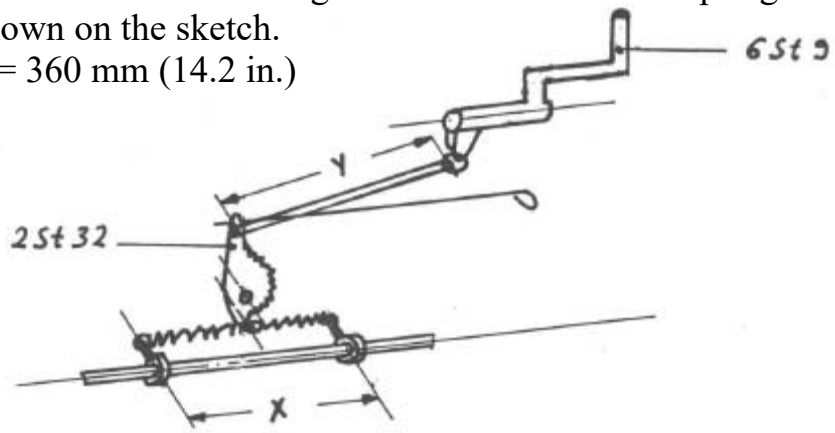
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Any free play can be reduced by screwing in the adjustment screw on the automatic connector funnel.



1.2.5 Trim

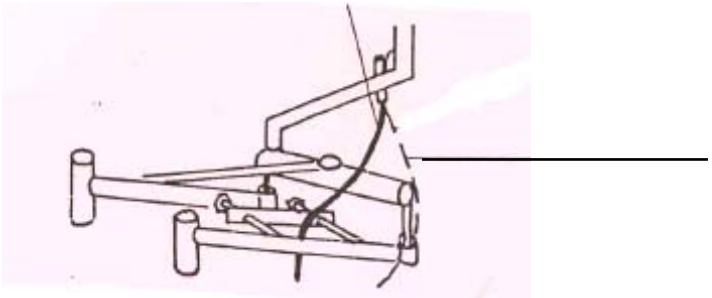
The automatic trim mechanism should be adjusted so that with full forward (nose down) trim the control column is in the maximum forward position. The tensioning of the trim mechanism springs is adjusted as shown on the sketch.
x = 360 mm (14.2 in.)



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 2a

1.3.2 Rudder deflections and tolerances

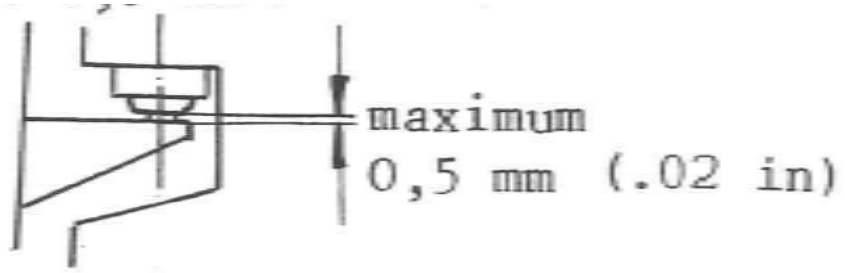
165-5 mm (± 30°) (6.5 - .2 inch)
measured at 318 mm (12.52 inch) from the hinge axis.

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 3a and 4a

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-600			**DG-600/18**		
	°	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 nylonbush) 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-600 this stop must be positioned so, that flap setting -15° just can be reached, at the DG-600/18 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.

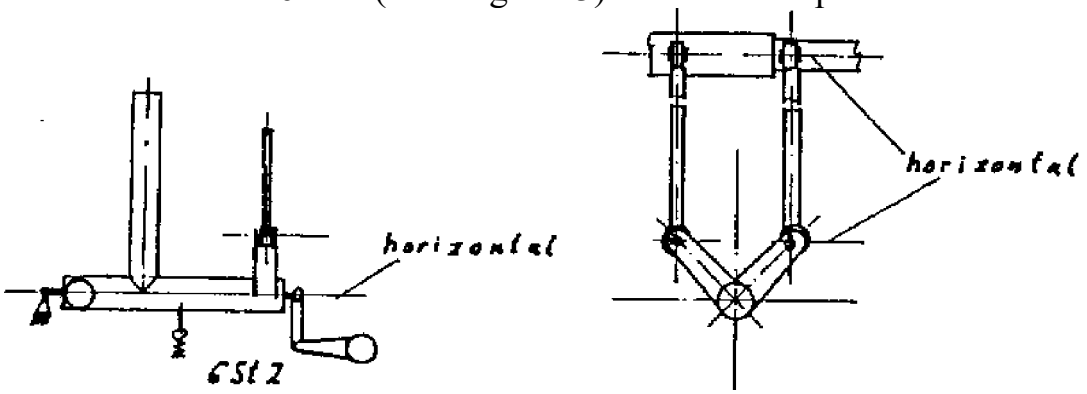
With both flaperons fixed, a maximum free play of 3 mm (0.12 in.) at the top of the control stick is allowed.

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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.

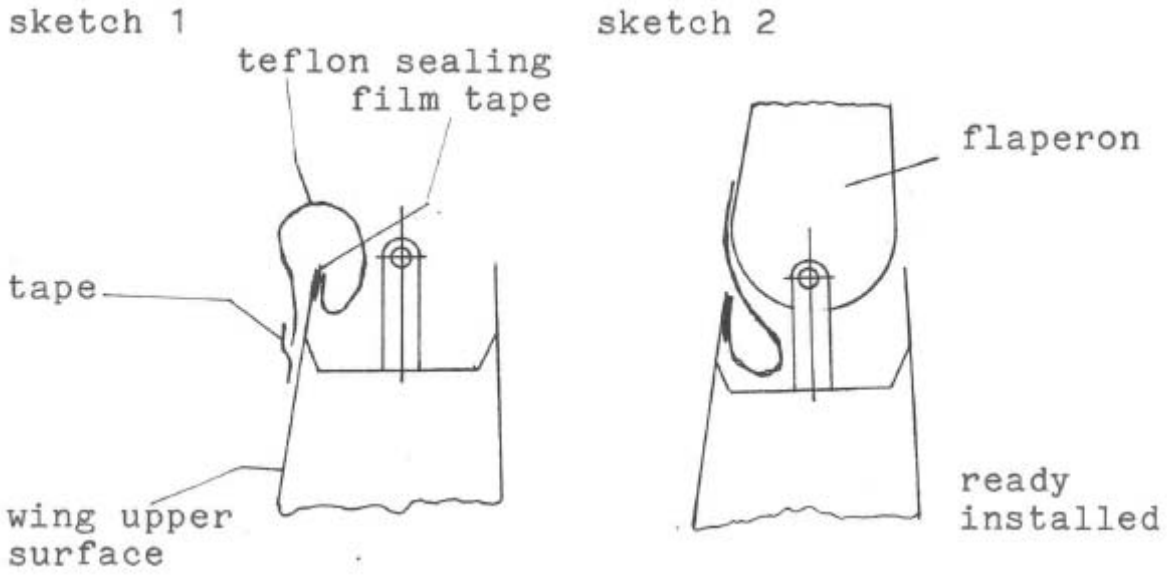
9. Now remove the cover paper from the film tape and press simultaneously the Teflon sealing to the ,film tape.

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

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

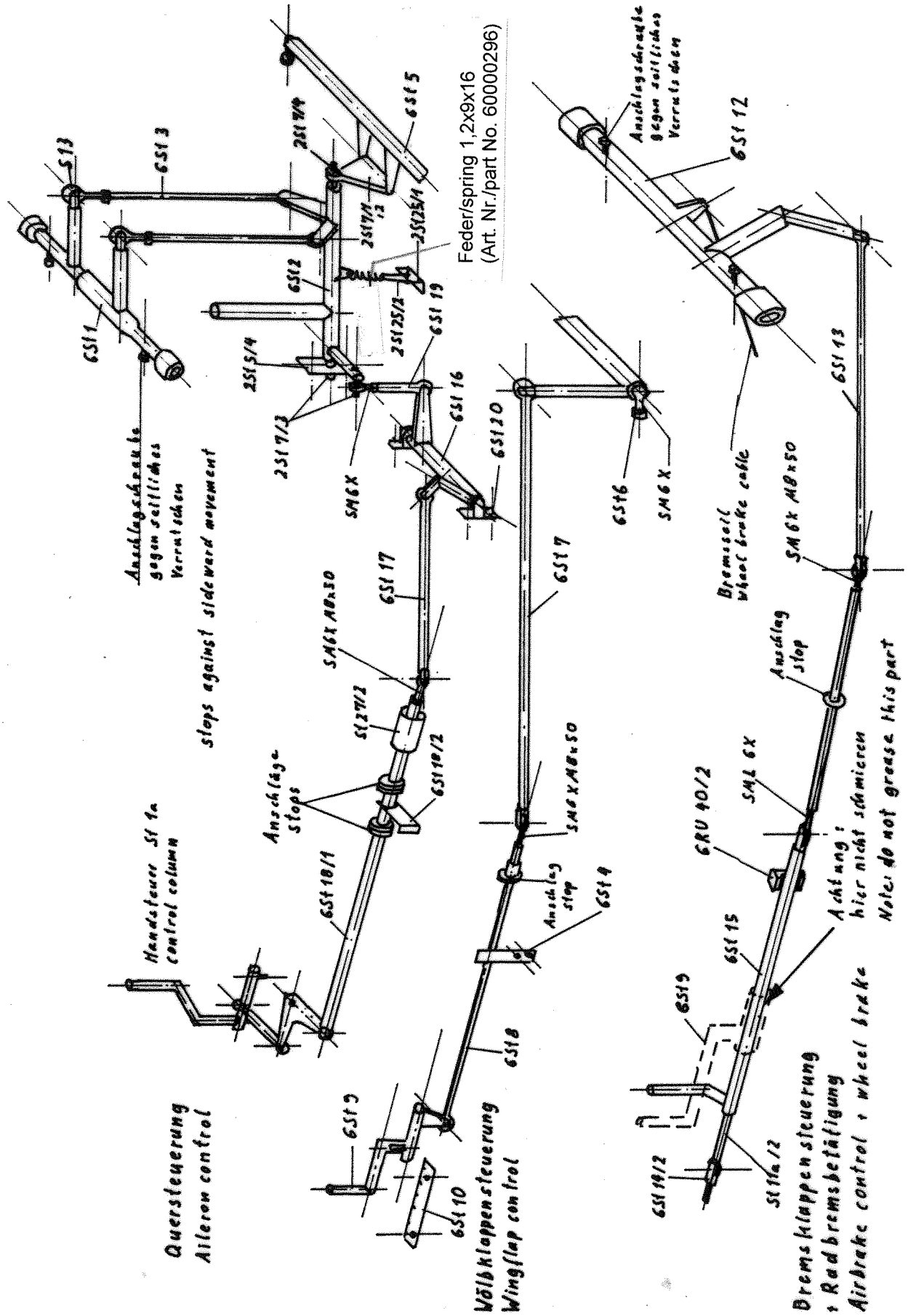
Sealings for the rudder

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

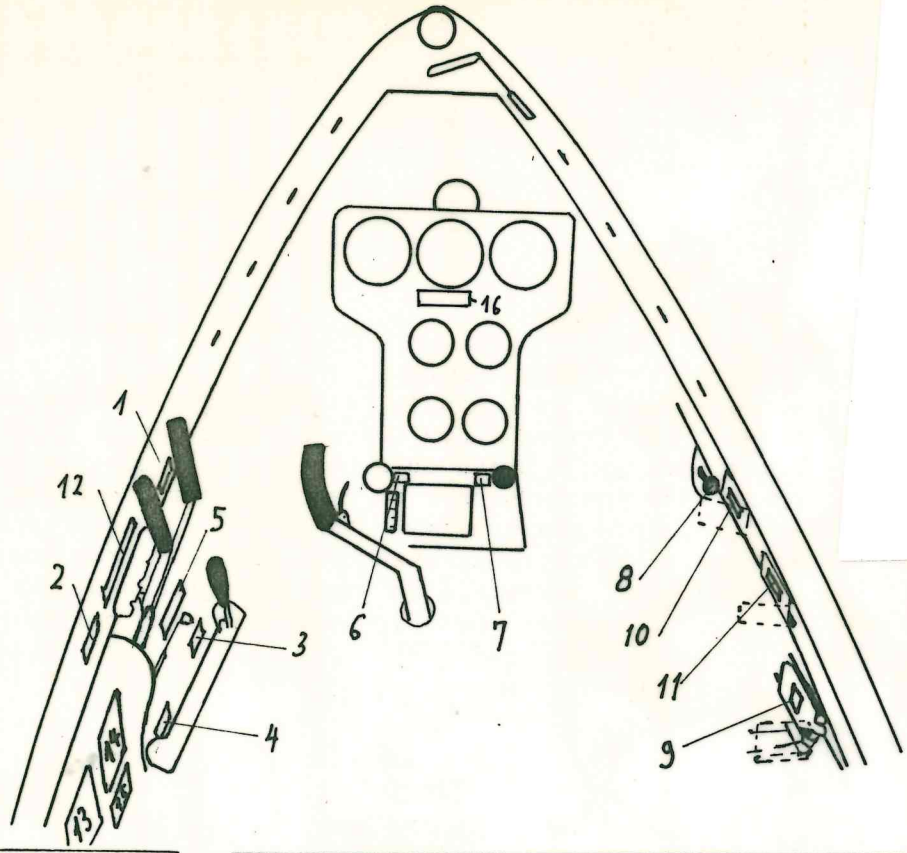
Turbulators on wing lower- and upper-surface

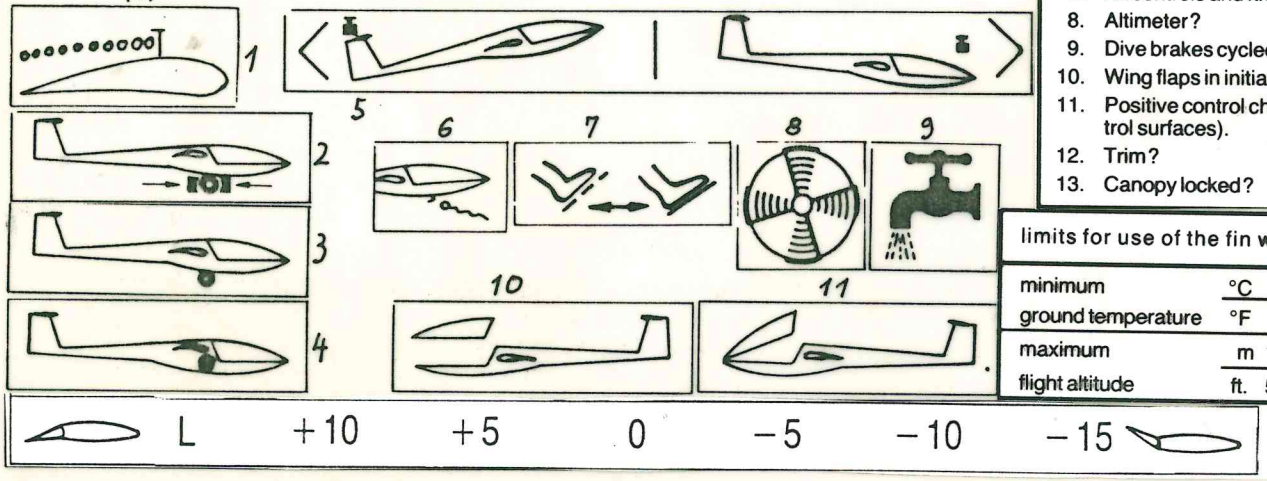
30003127 90° zig zag tape (installation see drawing 6F39)

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Ausgabe
Issued August 2021





Glaser-Dirks Flugzeugbau GmbH

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

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

Approved aerobatic manoeuvres (only without ballast in the wings): pos. Loop, Stall Turn, Chandelle, Spin

Maximum mass: 480 kg (1058 lb.) wingspan 18 m

Maximum mass: 525 kg (1157 lb.) wingspan 15 m and 17 m

Loading chart

Cockpit load (parachute included)

maximum	110 kg	242 lbs	
minimum	kg	lbs	battery in baggage compartment
minimum	kg	lbs	battery in fin

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Gepäck max. 15 kg
baggage max. 33 lbs.

at the main fuselage bulkhead



fireproof placard at the main fuselage bulkhead



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

14

Preflight inspection

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

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

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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

16

Reifendruck 2 bar
tyre pressure 28 psi

over the tail wheel

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

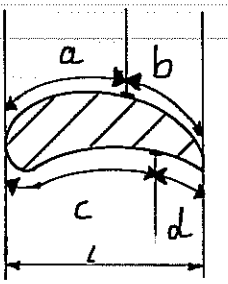
on the left wheel door

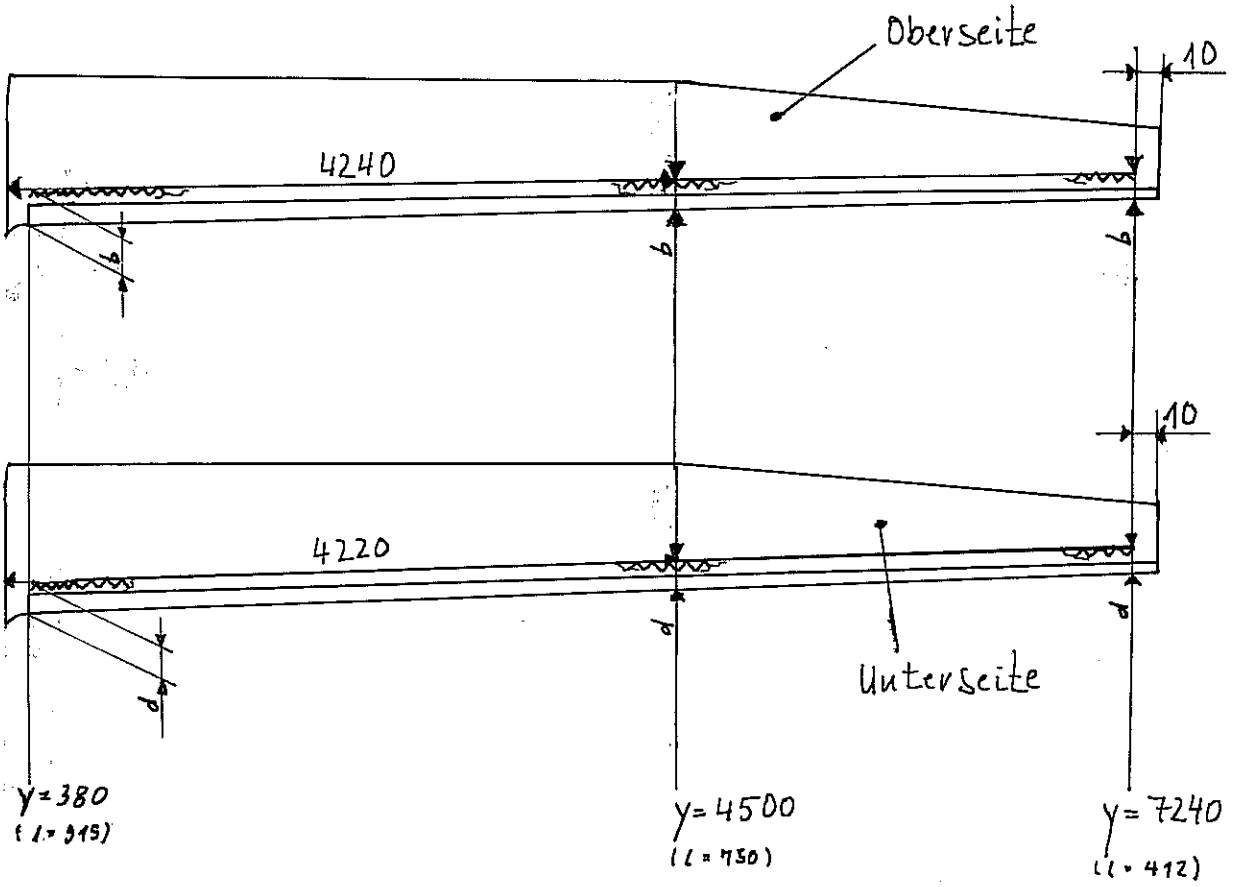
Reifendruck 3,3 bar
Tyre pressure 46 psi

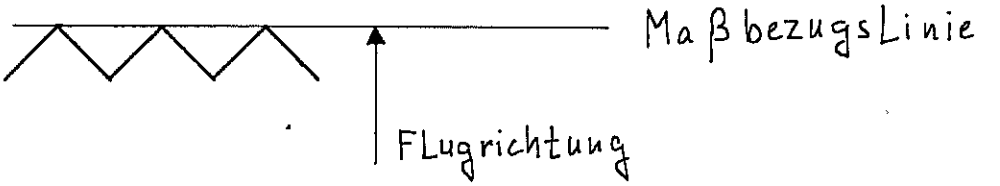
on the right wheel door

Placards Issued August 2020 diagram 7c

			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