DG Aviation GmbH

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

MAINTENANCE MANUAL

FOR THE MOTORGLIDER

DG-1000T

Type: DG-1000
Variant DG-1000T
Data Sheet No.: EASA.A.072
Date of Issue: June 2005

Owner:

Ser. No.:

Registration:



Copyright DG Aviation GmbH any copy or publishing prohibited

DG Aviation
Otto Lilienthalweg 2
76646 Bruchsal
www.dg-aviation.de
Spare part- and material sales:

Telefon (07251) 3020-0
Telefax (07251) 3020-200
info@dg-aviation.de
Tel. 07251/3020-270
spareparts@dg-aviation.de

No.	Page	Description	Date
12	0.2÷ 0.9, 0.9a, 0.10 ÷ 0.12, 1.2, 1.5, 1.11, 1.14, 1.15, 1.27 ÷ 1.29, 1.33, 2.1, 2.4 ÷ 2.6, 3.3, 4.8, 5.1, 6.1, 6.2, 6.4, 8.3, 9.2, diagr. 1, 9, 11, encl. 4 pages 1, 2, 2a, 3, Z193, SI 67-07, remove 5EP50	Manual revision TN1000/18	February 2011
13	0.6, diagrams 8 and 9	Wheel brake TN1000/21	July 2011
14	0.2 ÷ 0.7, 0.10 ÷ 0.12, 1.3, 1.5, 1.11, 1.16, 1.29, 1.30, 2.1, 2.6, 3.1, 4.6, 4.10, 4.12, 4.13, 4.19, 4.20, 6.1, 7.1, 8.2, 8.3, diagrams: 2, 3, 9, Enclosure 4 pages: 4, 7	Manual revision TN 1000/24, New type 12V sockets and plugs, Changes due to TN 4603-14 of the Solo company (Exchange of the axle of the upper drive belt pulley on pages 4.19 and 4.20)	October 2014
15	0.2, 0.3 - 0.6, 0.9a, 0.11, 1.18, 3.5, 3.8, 4.20, 4.20a, 4.26, 4.28, 8.1 – 8.3 diagram 13, diagram 15, diag0ram 15a	Propeller adapter ring with elastomeric damper TN 1000/26 Alternative mechanical fuel pump TN 1000/28	August 2015
16	0.2 -0.6, 0.11, 0.12, 2.1, 2.2, 3.7, 6.3, 8.2, 8.3, diagram 2	Manual revision TN1000/32	July 2017
17	0.2, 0.3, 1.11	TN1000/34 small nose wheel	October 2017
18	0.2-0.7, 0.10 - 0.13, 2.6, 3.9, 6.1, 8.2, diagrams 15 and 15a, file working instruction No. 1 for TN 1000/38 at the end of the MM.	TN1000/38 PU fuel hoses, limitation of life-time, replacement by new types of fuel hoses	February 2018
19	0.2 - 0.6, 1.14, 2.1, 2.2, 4.9, 6.3 diagrams 7, 7a, 20, enclosure 4 page 6	TN1000/42 Canopy lock, rear locking rods, manual revision	July 2019
20	Title, 0.2-0.4, 0.6, 0.11, 0.12, 1.3, 1.27, 2.1, 2.6, diagrams 7a, 11, 20, enclosure 4 page 2 + 7	TN1000/45 Manual revision, raised max. TOW	October 2021

0.2 List of effective pages

Section	page	issued	replaced/	replaced/	replaced/
0	Title	June 2005	January 2007	Oct. 2021	
	0.1	see manual amendments			
	0.2	"			
	0.3	"			
	0.4	"			
	0.5	"			
	0.6	"			
	0.7	June 2005	January 2007	Febr. 2011	Oct. 2014
			Febr. 2018		
	0.8	"	Febr. 2011		
	0.9	"	Febr. 2011		
	0.9a	Febr. 2011	August 2015		
	0.10	"	Febr. 2008	March 2008	Oct. 2008
			Nov. 2008	Febr. 2011	Oct. 2014
			Febr. 2018		
	0.11	"	Febr. 2011	Oct. 2014	August 2015
			July 2017	Febr. 2018	Oct. 2021
	0.12	"	January 2007	Febr. 2011	Oct. 2014
			July 2017	Febr. 2018	Oct. 2021
	0.13	Febr. 2018			
1	1.1	June 2005	January 2007		
	1.2	"	Febr. 2011		
	1.3	"	Oct. 2014	Oct. 2021	
	1.4	"			
	1.5	"	Febr. 2011	Oct. 2014	
	1.6	"			
	1.7	"			
	1.8	"			
	1.9	"	Febr. 2008		
	1.10	"	Febr. 2008		
	1.11	"	Febr. 2011	Oct. 2014	Oct. 2017
	1.12	"			
	1.13	"			
	1.14	"	March 2008	Febr. 2011	July 2019
	1.15	"	Febr. 2011		
	1.16	"	Oct. 2014		
	1.17	"			
	1.18	"	August 2015		
	1.19	"	March 2008		
	1.20	"			
	1.21	"			
	1.22	"	October 2006		
	1.23	"	October 2006		
	1.24	"			

0.2 List of effective pages (continued)

Section	page	issued	replaced/	replaced/	replaced/
	1.25	"			
	1.26	"			
	1.27	"	Febr. 2011	Oct. 2021	
	1.28	"	Febr. 2011		
	1.29	"	Febr. 2011	Oct. 2014	
	1.30	"	Oct. 2014		
	1.31	"	May 2008		
	1.32	"			
	1.33	"	Febr. 2011		
2	2.1	June 2005	March 2008	Febr. 2011	Oct. 2014
			July 2017	July 2019	Oct. 2021
	2.2	"	July 2017	July 2019	
	2.3	"			
	2.4	"	Febr. 2011		
	2.5	"	Febr. 2011		
	2.6	"	May 2008	Febr. 2011	Oct. 2014
			Febr. 2018	Oct. 2021	
3	3.1	June 2005	Oct. 2014		
	3.2	"			
	3.3	"	Febr. 2011		
	3.4	"			
	3.5	"	August 2015		
	3.6	"			
	3.7	"	July 2017		
	3.8	"	August 2015		
	3.9	"	Febr. 2018		
4	4.1	June 2005			
	4.2	"	January 2007		
	4.3	"			
	4.4	"			
	4.5	"			
	4.6	"	Oct. 2014		
	4.7	"	Febr. 2008		
	4.8	"	Febr. 2008	Oct. 2008	Febr. 2011
	4.9	"	Febr. 2008	Oct. 2008	July 2019
	4.10	June 2005	Oct. 2014		
	4.11	"			
	4.12	"	Oct. 2014		

0.2 List of effective pages (continued)

diagram	issued	replaced/	replaced/	replaced/
1	May 2004	Oct. 2010		
2	Nov. 2001	Oct. 2014	July 2017	
3	June 2005	Oct. 2014		
4	Nov. 2001			
5	Nov. 2001	January 2007		
6	Nov. 2001	January 2007	March 2008 Not valid for 10-101, and from 10-128 on	
6a	March 2008			
7	Nov. 2004	July 2019	Oct. 2021	
7a	Oct. 2008	July 2019		
8	Nov. 2001	January 2007	July 2011	
9	June 2005	January 2007 Oct. 2014	Febr. 2011	July 2011
10	May. 2005	January 2007		
11	June 2005	Febr. 2011	Oct. 2021	
12	Sept. 2003	January 2007		
13	June 2005	August 2015		
14	June 2005	October 2007		
15	June 2005	January 2007	August 2015	Febr. 2018
15a	Oct. 2006	Dec. 2006 Febr. 2018	January 2007	August 2015
16	June 2005	May 2008		
17	Febr. 2008			
18	Febr. 2008			
19	March 2008			
20	Nov. 2008	July 2019	Oct. 2021	
21	Nov. 2008	Oct. 2010		
22	Nov. 2008			
5EP34	25.01.90			
5V18	14.10.94			
10FW2	05.10.99			
10E4 issue A	28.10.08			
10E4 issue E	8.10.10			
10E102	14.09.05	5.12.05	26.01.06	
10E103	24.06.05			
Encl. 1	June 2005			
Encl. 2	June 2005	Page 1 January 2007	Pages 2, 3 May 2008	
Encl. 3	March 2008			
Encl. 4	Nov. 2008	Page 2, 2a , 7 Oct. 2010 Page 6 July 2019	1, 2, 2a, 3 Febr. 2011 Page 2,7 Oct. 2021	4, 7 Oct. 2014
SI 67-07	5.11.2007			
Z193	4.11.2009			
Working instruction No. 1 for TN1000/38			Febr. 2018	

0.4 Airworthiness limitations

0.4.1 Repairs

Repair or replace damaged parts prior to next flight. Follow the instructions of the DG-1000 repair manual for repairs of the airframe. Repairs outside the scope of DG-1000 repair manual and major repairs must be accomplished at a certified repair station or by a certified mechanic rated for composite aircraft structure work in accordance with DG repair methods or those methods approved by the national aviation authorities..
Use only genuine spare parts.
For all aircraft under EASA regulations the following applies: According to part 21, subpart M to accomplish major repairs an approved repair instruction is required, see also TN DG-G-01 “Approved repair methods according to EU Commission Regulation 1702/2003 part 21, subpart M”

0.4.2 Life time of the airframe

The maximum allowable operating time for German composite sailplanes and motorgliders was proofed for 12000 flight hours.
The initial life time for the DG-1000T is 3000 flight hours.
Extension of the life time to 12000 hours can only be achieved by implementing a comprehensive inspection program for the aircraft to be carried out in accordance with data that has been approved by an applicable aviation authority, see section 2.4 of this manual.

Only for USA

Note: *The Airworthiness Limitations section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulation unless an alternative program has been FAA approved.*

0.5 Further service information

0.5.1 Life time of components

Use only genuine spare parts. For part. No.'s of all parts please refer to section 8.
Note: You will find detailed instructions for replacement of the life limited parts (if applicable) in section 4 of this manual.
After exchanging life limited parts change the "Summary of operating hours" for your motorglider by entering the replacement dates of the exchanged parts.

a) All **nuts and bolts** (part No. 39001031) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
b) The **drive belts** (part No. 60510829) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
c) The **rubber mounts** (part No. 45002079 and 45002080) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
d) All **fuel lines** and the gasket for the drainer valve (part No. 60504402) have to be exchanged every 6 years.
TN 1000/38: When instructions 3 of this TN have been accomplished the life time of the lines (part. No. 39001070) is 10 years. the life time of the FPM fuel lines (part. No. 30092047 and 30092048) between primer valve and carburettors is 6 years.
e) The **spark plugs** have to be exchanged every 25 engine hours, part no.40050360.
f) The **fabric straps of the safety harness** have to be exchanged according to the instructions of the respective manufacturer. If no limitations are given, exchange every 12 years, approved types see section 6.
g) The **rubber cord** in the elevator control system see section 1.2.6 has to be replaced at least every 6 years, part no. 390010401.
h) The **adapter ring** with elastic damping element 10M067 for the propeller (introduced with TN1000/26) has to be exchanged every r 50 engine hours or every 5 years, whichever comes first.
i) The **eccentric axle** of the reduction gear (propeller axle) Solo part no. 2031211-V2 has to be replaced every 50 engine hours.
j) The **bearings of the propeller axis** have to be exchanged every 15 years according to Solo TN 4603

0.5.2 Service times for other than life limited parts

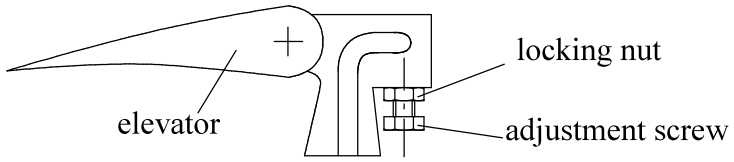
The **brake fluid of the wheel brake (option)** has to be exchanged every 4 years (types see section 1.6.2).

Note: All **other components** like propeller, tow hook, wheels, gas struts, control system parts, bolts, pins etc. have no life time limitation, but should be replaced when worn, damaged or disqualified by excessive corrosion.

1.2.4 Elevator control circuit free play

With the elevator held fixed in the zero position, the free play at the top of the control column can be ± 2 mm (± 0.08 in.). Within the automatic elevator connection there should be no free play noticeable in the zero position when the elevator is moved at its trailing edge.

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

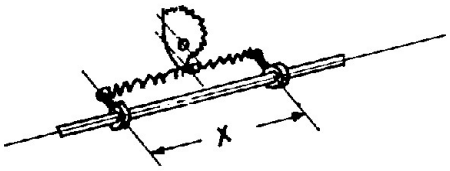


1.2.5 Trim

Re-adjustment

The trim mechanism should be adjusted so that with full forward (nose down) trim the control column is pulled by the trim springs into it's maximum forward position with a force P of approx. 30 N (6.6 lbs.).
The force P is to be measured with a spring balance at the upper end of the control stick. Read the force, when the stick just starts to move.
The tensioning of the trim mechanism springs is adjusted as shown in the sketch.
x = 340 mm (13.4 in.)

The springs are located in the rear cockpit on the left hand side.



The correct adjustment should be verified in flight and corrected if necessary. Trimming should be possible up to 200 – 220 km/h (108 - 119 kts.).

Note: If the DG-1000T can be trimmed up to higher speeds it is likely that the trim is not sufficient in circling flight.

1.15 Electrical system

Note: Before doing any work on the electrical system, isolate the power supply by switching off the main switch. The battery should also be disconnected before working at the control unit. This is done by disconnecting the positive wire from the main battery (located in the engine bay). Isolate the terminal of the wire with tape.

In addition the plugs from the wiring leading to control unit and DEI-NT shall be sealed with tape when they are removed from the control unit or from the DEI-NT.

1.15.1 Layout

see wiring scheme and wiring plan enclosed to this manual.

1.15.2 Batteries

1.15.2.1 Main battery

The installed battery is a sealed maintenance free battery 12V/17Ah with screwed terminals. The battery is installed in the engine bay.

- Recharging is via the 12 V sockets in the front and rear cockpit. Therefore switch on the main switch to the first position (charging). You don't need to remove the battery for charging.
  Type see section 8.3.

1.15.2.2 Additional batteries

Wiring with plugs BSK12 (from ser. No. 10-120 on, before a Preh plug was installed) for additional batteries in baggage compartment and fin are standard equipment.

Caution plugs BSK12: The screws to fix the wires in the plugs must be tightened and secured with securing paint.

a) An additional battery Z73 12V/7Ah with holder Z72 or Z01 12V/10Ah with holder Z200 may be installed in the baggage compartment.
   In this case a battery selector switch must be installed in the front instrument panel.
b) A battery Z110 (12 V, min. 12 Ah, mass 5.5 kg, 12.1 lbs.) may be installed in the battery box in the fin.
   The wiring for this battery is in parallel to the battery in the baggage compartment.

1.15.2.3 All batteries

Caution: Use only automatic chargers suitable for sealed liquid acid batteries. To charge the batteries to their max. capacity a charger with a max. output voltage of 14.4 V is required (most chargers supply only 13.8 V). A suitable charger No. Z 08 is supplied by DG Aviation.

Note: Don't charge longer than for 1 week.

2 Inspections

2.1 Daily inspection

see flight manual section 4.3

2.2 Regular inspections

A Annual inspection (and 100hr inspection – only for USA)

- Execute all items of the daily inspection see flight manual section 4.3.
- Check the rudder cables for wear especially around the "S" tubes on the rudder pedals. Worn rudder cables should be replaced (see section 4.2).
- Check the seals of the rudder (see section 1.3.5).
- Inspect all bolted connections and locking devices ie. locknuts, split pins etc.
- Check all metal parts for adequate greasing and rust prevention. (see section 3.3).
- Check the control surface deflections (see sections 1.2 up to 1.4).
- Check the free play in all control circuits (see section 1.2 up to 1.6)
- Check the fore and aft play of the wings (see section 1.11).
- Check the canopy emergency releases according to section 7.14 of the flight manual.
- Check the tension of the lines of the waterbag attachment (see section 4.1).
- Check the rubber cords in the control system (see sections 1.2.6 and 1.7.5.
- Check the thickness of the wheel brake linings and of the brake disc (see section 1.6.4).
- Check if the brake fluid has to be exchanged (see section 1.6.4).
- Check the airbrakes according to section 4.4.
- Check the fin ballast tank system according to section 1.8.2.
- Check the fin ballast box according to section 1.9.
- Check the friction of the canopy opening handles (canopies removed from fuselage): A force of 10 – 20N (2.2 up to 4.4 lbs.) should be required at the end of the handle. If the force is too low tighten the hinge bolt of the handle accordingly.
- **Only Ser. No. 10-1 up to 10-144:** Check if the rear locking rods of front and rear canopy are screwed in tightly. To accomplish this close the locking mechanism with canopy open and try to rotate the locking rod clockwise using small pipe pliers and a piece of abrasive paper 240 grid around the rod to protect the rod from damage.

Caution: Don't rotate counter-clockwise, otherwise you may rotate the rod out of the thread and destroy the Loctite and lock nut securing.

If you are able to rotate the rod proceed with TN1000/42 instruction 3.

2.4 Inspection procedure for increase of service time

1. **General**
   The results of fatigue tests of wingspar sections have demonstrated that the service time of GFRP/CFRP gliders and motorgliders may be limited to 12000 hours, if for each individual glider (in addition to the obligatory annual inspections) the airworthiness is demonstrated according to a special multi-step inspection program particularly with regard to the service life.

2. **Dates**
   When the glider has reached a service time of 3000 hours, an inspection must be done in accordance with the inspection program mentioned under point 3. If the results of this inspection are positive or if any defects found have been duly repaired, the service time of the glider is extended by another 3000 hours to a total of 6000 hours (first step).
   The above inspection program must be repeated when the glider has reached a service time of 6000 hours. If the results of this inspection are positive or if any defects found have been duly repaired, the service time of the glider is extended to 9000 hours (second step).
   When the glider has reached a service time of 9000 h the above inspection program must be repeated. If the results of the inspection are still positive, or if any defects found have been duly repaired, the service time may be extended to a total of 10000 hours (third step).
   Proceed analogous when reaching 10000 and 11000 hours (4. + 5. step).

3. DG Aviation will develop an inspection program to be executed at 3000 h, 6000 h, 9000h, and every 1000 hours thereafter up to the 12000 hour limit. This program will be approved by the aviation authorities and will be available for purchase from DG Aviation.
   When you request the inspection program, the following data should be submitted: Model/Type, Registration, Serial Number and the operating hours at which the inspection will be performed. A charge will be made for the inspection program.

4. The inspection must only be done by a licensed repair station or inspector.

5. The results of the inspections have to be recorded in an inspection test report wherein comments are required for each inspection instruction. If the inspections are done outside the DG Aviation facilities, a copy of the records must be sent to DG Aviation for evaluation and information.

Vorratsbehälter
reservoir

Gepäckraumrückwand/
rear baggage compsrtment wall

10Ru49

10FW73

Schnitt A-A
section

Gewinde mit
Teflonband
abgedichtet

10FW15/1

10Fw15/3

10FW20

10 FW13/1

10FW124

10St105

EW 8x1-R1/8"

5R94/1 DG-1000S
10R94/1 DG-1000T

Fahrwerkskasten 10Ru48
landing gear box

A

Anschlag eingefahren
stop retracted position

Ansicht X
view

Schnitt B-B
section

10FW137 nur bei W.Nr. 10-134
10FW137 only with ser.no. 10-134

10FW127

10FW13/1

10FW12/2

alternativer
Anschluss
alternative fitting

5FW19

Schnitt C-C
section

A

10FW14/3

10FW10/2

B

10FW12/2

X

10FW127

B

A1A1-0-0-105-317-600N

10FW63
eingeklebt mit Loctite 638
glued with

Schnitt K-K
section

nur linke Strebe dargestellt
only left hand side hand shown

10FW87

10FW75

10FW14/1

10FW12/2

C

10FW10/2

Simrit Rundpuffer
rubber buffer
D4045

C

M10 DIN934-8zn

K

K

BW-Harz
resin/cottonflocks

GFK-Klotz
10mm dick
GFRP block
10mm thick

10FW14/1

Fahrwerksklappe 10Ru46 links (left)
landing gear door 10Ru47 rechts (right)

10FW21

10FW10/1

Siehe 10Fw2
see

10FW11/1

D

D

Schnitt D-D
section

10FW11/2

Reifen 380x150-5
tyre

10FW11/7

10FW18

A

10FW11/7

10FW11/3

10FW17

10FW11/6

10FW18

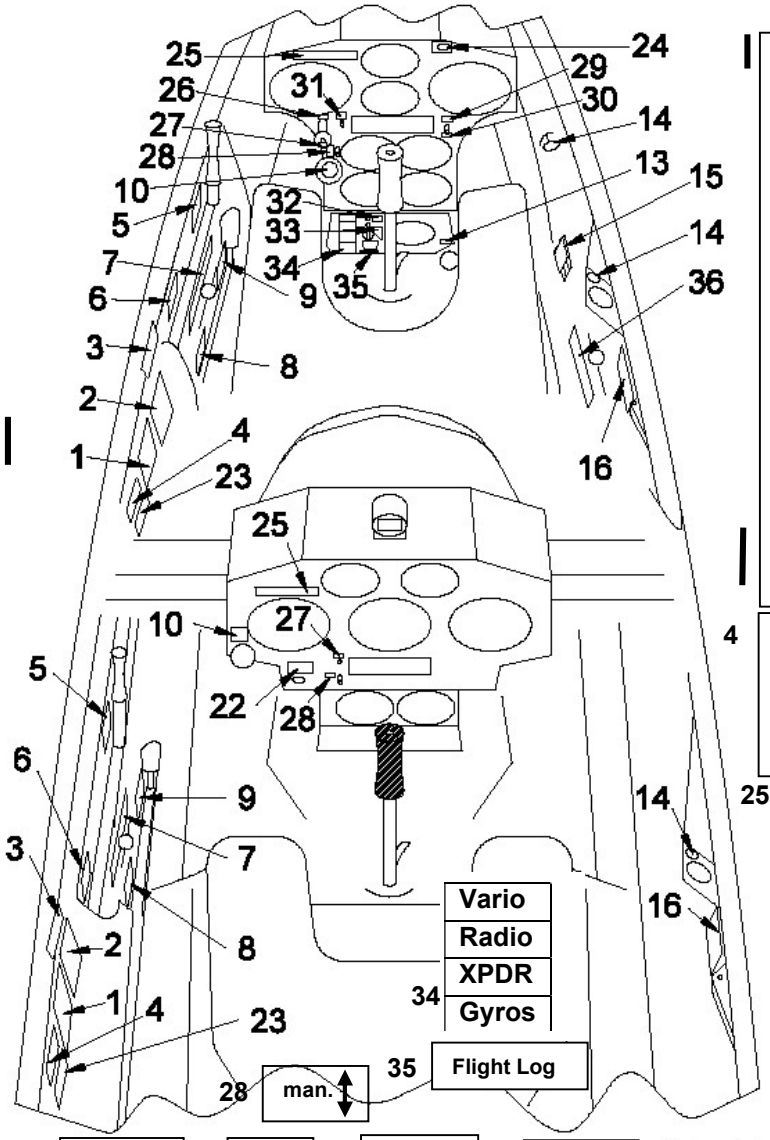
A

TOST Hauptbremszylinder Form 7
mastercylinder

Ausgabe: Oktober 2021 TM1000/45 Diagramm 7a
issued: October 2021 TN1000/45 diagram 7a

Fahrwerk, hydraulische Radbremse ab W.Nr. 10-133
landing gear, hydraulic wheelbrake from ser. No. 10-133 on

placards DG-1000T



DG Aviation GmbH
Type: DG – 1000T Serial No.: 10-
Year of construction:

Maximum airspeeds	km/h	kts.
Winch launching	150	81
Aero-tow	185	100
Manoeuvring V_A	185	100
Rough air	185	100
Maximum speed V_{NE}	270	146
Powerplant extended	185	100
Powerplant extension-retraction	100	54

Approved aerobatic manoeuvres, only without waterballast:
Pos. Loop, Chandelle, Spin, Stall turn
In addition Category A:
Only with 18 m span without waterballast, engine retracted or removed:
Half loop and half roll, half roll and half loop, slow roll, inverted flight, half positive flick roll from normal flight with half loop, half negative flick roll from inverted flight

Maximum mass:		
Category A	630 kg	1389 lbs.
Category U 17.2 and 18 m span	750 kg	1653 lbs.
Category U 20m span	790 kg	1742 lbs.
Category U without waterballast	kg	lbs.

Cockpit Check
1. Lead ballast (for under weight pilot)?
2. Parachute worn properly?
3. Safety harness buckled?
4. Front seat: pedals adjusted?
   Rear seat: seating height adjusted?
5. All controls and knobs in reach?
6. Altimeter?
7. Dive brakes cycled and locked?
8. Positive control check ? (One person at the control surfaces).
9. Fin ballast tank emptied or correct amount filled in?
10. Trim ballast box in the fin, correct amount filled in? Locking device completely engaged?
11. Battery in the fin? Loading chart regarded?
12. Trim?
13. Fuel level?
14. Fuel cock open?
15. Both canopies locked?
16. Runway free?

2

1 **Senden transmit** 22

Loading chart

Cockpit load	front seat		rear seat		(Parachute
maximum	110 kg	242 lbs.	90 kg	198 lbs.	included)
or maximum	105 kg	231 lbs.	105 kg	231 lbs.	
minimum	kg	lbs.	/	/	

With lower pilot weight necessary ballast must be added.

4

23

limits for use of the fin waterballast tank

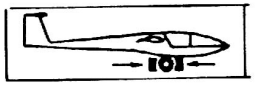
minimum ground	°C	13.5	17	24	31	38
temperature	°F	56	63	75	88	100
maximum flight	m	1500	2000	3000	4000	5000
altitude above GND	ft	5000	6500	10000	13000	16500

25

Altitude in [m]	0-3000	4000	5000	6000	7000	8000
V_{NE} IAS km/h	270	256	243	230	217	205
Altitude in [ft]	0-10000	13000	16000	20000	23000	26000
V_{NE} IAS kts.	146	138	131	124	117	111

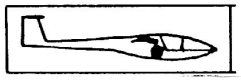
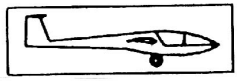
Ballast box in the fin
Min. load in the front seat
24
kg box empty
kg box filled

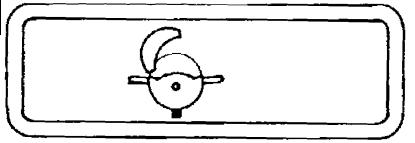

5

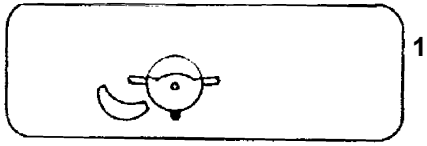

6



7



8 9


3


16


14


15


10


13

Benzin min. 95 Okt. petrol min. 95 ROZ. 50:1 Zweitaktöl two stroke oil 22 l

at the holder in the engine bay

Tankpumpe Refueling pump

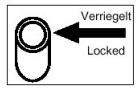
Bauteil Nr.:
part no. of component at all parts

Typ:	DG-1000T
W.Nr.	

fire proof placard at front main bulkhead

Gepäck max. 15 kg
baggage max. 33 lbs.

at front main bulkhead



at cover plate of fin ballast box

Reifendruck 2,5 bar
Tyre pressure 36 psi

at the right wheel door

Sollbruchstelle 10000 N
rated load 2200 lbs.

Drainer ↑

at the right wheel door rear

Reifendruck 4 bar
Tyre pressure 58 psi

right above the tail wheel

Reifendruck 2,5 bar
Tyre pressure 36 psi

right above the nose wheel if installed

	Bemsflüssigkeit
---- min.	brake fluid
	DOT 3 / DOT 4

on brake fluid reservoir

Warning:
Rigging of the horizontal tailplane is only permitted with nose down trim-setting

upper left hand side of the fin

diagram 11
issued October 2021
TN1000/45

Diagramm 20
diagram 20

Ausgabe: Oktober 2021 TM1000/45
issued: October 20219 TM1000/45

elektrisch betätigtes Hauptfahrwerk, hydraulische Radbremse
electrically operated main landing gear, hydraulic wheelbrake

Schnitt A-A
section

Vorratsbehälter
reservoir

Gepäckraumrückwand/
rear baggage compsrtment wall

10FW89

10FW109, ab/from 10-268 10FW256

10FW124, ab/from 10/268
10FW252/1 verschraubt/bolted

Endschalter (FW ein)
164-564
limit switch
(LG retracted)

Fahrwerkskasten 10Ru48
landing gear box
ab/from 10-268 10Ru48/3

10St105

EW 8x1-R1/8"

5R94/1 DG-1000S
10R94/1 DG-1000T

Gewinde mit
Teflonband
abgedichtet/
thread sealed
with Teflon tape

A

Ansicht X
view

alternativer
Anschluss/
alternative fitting

Schnitt B-B
section

10FW127, ab/from 10/268
10FW251/1 verschraubt/bolted

10FW108

10FW91

TOST Hauptbremszylinder Form 7
master cylinder

X

B

A

Schnitt C-C
section

10FW10/2

10FW19/1

10FW10/1

Benabech A1-A1-0-0-105-317-600N

C

C

Fahrwerksklappe 10Ru46 links (left)
landing gear door 10Ru47 rechts (right)
ab/from 10-268: 10Ru46/2 + 10Ru47/2

10FW102 rechts (right)
10FW102/2 links (left)

10FW21

10FW10/1

10FW11/1

Siehe 10Fw2
see

D

D

10FW11/7

S84

A

10FW18

Reifen 380x150
tyre

Schnitt D-D
section

10FW11/2

10FW11/7

10FW11/3

10FW17

10FW11/6

10FW18

A

1.6.5.2 Adjustment / limit switches

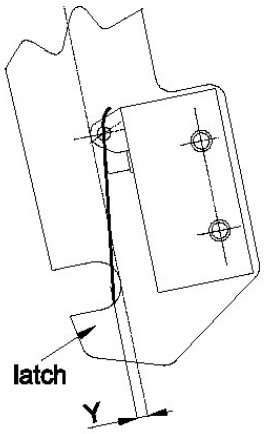
With the electrically operated landing gear only the limit switches have to be adjusted

a) Limit switch landing gear extended

1. Extend the landing gear electrically and check if the drag struts 10FW102 and the struts of the rear fork 10FW91 touch each other at their joint hinge point.
2. Apply a force of 100 N (2 lbs.) to the hinge point perpendicular to the centre line of the struts in anupward direction. The system should be so stiff that you can move the hinge point no more than 2 mm (0.08 in.) out of line.
3. If it is possible to move the hinge point more than 2 mm, the limit switch must be adjusted. To accomplish this you have to bend the arm of the switch accordingly. The limit switch is mounted on the landing gear box and is activated by the lever 10FW108.
4. Retract the landing gear a small amount, extend again and check if the lower green control light starts shining. If not, the arm was bent too faar.
5. If the adjustment is correct, retract the landing gear and extend via the emergency system. Check if the lower green control light starts shining. If not, the arm was bent too faar. After adjustment repeat the check according to item 2.

b) Limit switch landing gear retracted

The spindle drive must be shut off in the retracted position when the bolt at the left drag strut 10FW102 engages in the notch of the left latch on shaft 10FW109 and activates the limit switch which is mounted to the latch.
Check: Activate the limit switch. The distance Y shall be 2 - 3 mm (0.08 – 0.12 in.) when the switch activates.
If necessary adjust the switch by bending its arm.



c) Limit switch gas strut (emergency extension system)

This switch (position 12 in diagram 21) is mounted to the upper end of the gas-strut at bracket 10FW120. When resetting the gas strut the spindle drive must be stopped by the limit switch before the gas strut becomes completely compressed. To accomplish this the distance X in diagram 21 (from counter nut up to gas strut body) must be minimum 8 mm (0.32 in.). If necessary shift the limit switch. To accomplish this the switch must be dissembled and the holes in the bracket must be elongated.

Section 8 Partlist

new Subsection

8.5 Parts for the electrically operated landing gear

60000139 Lockable gas strut K0V2P-3-200-647-004/460N
41041400 Spindle drive completely assembled
60510463 Limit switch 164-(LG retracted)
60510464 Limit switch 164-574 (LG extended)
41040008 Limit switch XGG2-88-S20Z1 (gas strut)
60510506 Extension-retraction switch MTG 106 G (LG up, down)
60510375 Press button 12G2904 with cap 12G2910 black (LG up)
60510865 Switch 1006.1511 **(optional with TN1000/19, standard from ser.no. 10-157 on)**