

Flight manual DG-500MB

Rev. No.	Affected Pages/section	Description	Issue Date	EASA Approval Date	Inserted Date Signature
10	0.0, 0.0a, 0.2 - 0.5, 2.11, 2.12, 4.8-4.10, 4.12, 4.27, 7.2, 7.13, 8.3	Manual revision, TN500/11	July 2017	10.08. 2017	
11	0.2, 0.3, 0.5, 4.8, 4.9, 7.1, 7.19	TN500/13 Canopy lock, rear locking rods	July 2019	17.09. 2019	

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0.2 List of effective pages

Section		Page	issued	replaced	replaced	replaced
0		0.0	July 1999	July 17		
		0.0a	Febr. 99	July 17		
		0.1	See Record of revisions			
		0.2	"			
		0.3	"			
		0.4	"			
		0.5	"			
		0.6	Nov. 98			
1		1.1	Nov. 98			
		1.2	July 1999			
		1.3	Nov. 98			
		1.4	"			
		1.5	"			
		1.6	"			
		1.7	"			
2	App..	2.1	Nov. 98			
	"	2.2	"			
	"	2.3	"			
	"	2.4	"			
	"	2.5	"			
	"	2.6	"			
	"	2.7	"			
	"	2.8	"	Jan. 06		
	"	2.9	"			
	"	2.10	"			
	"	2.11	"	July 17		
	"	2.12	"	July 17		
3	"	3.1	Nov. 98			
	"	3.2	"	May 08		
	"	3.3	"	July 02		
	"	3.4	"	July 02		
	"	3.5	"			
	"	3.6	"			
	"	3.7	"	Jan. 06		
	"	3.8	Jan. 06			
4	"	4.1	Nov. 98			
	"	4.2	"			
	"	4.3	"	July 02		
	"	4.4	"			
	"	4.5	"	July 02		
	"	4.6	"			
	"	4.7	"			
	"	4.8	"	Jan.01	July 02	May 08
				July 17	July 19	
App.	4.9	"	July 17	July 19		

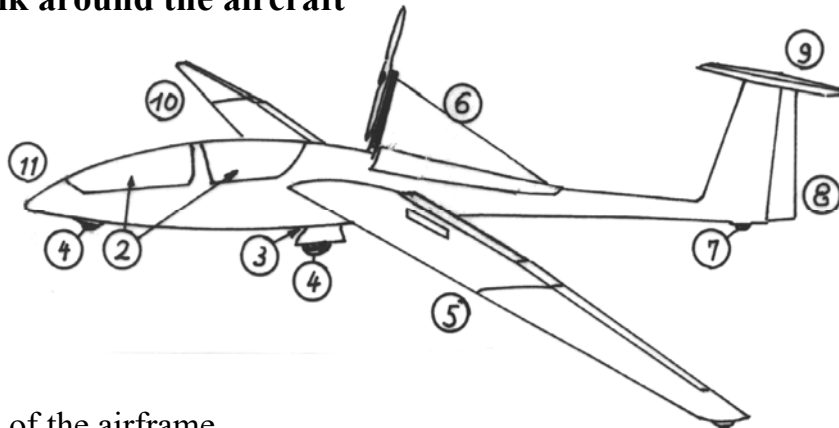
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0.2 List of effective pages (cont.)

Section	page	issued	replaced	replaced	replaced
7	7.1	Nov. 98	May 08	July 1	
	7.2	"	July 17		
	7.3	"			
	7.4	"			
	7.5	"			
	7.6	"	July 02		
	7.7	"	July 02		
	7.8	"	Oct. 99	July 02	
	7.9	"			
	7.10	"			
	7.11	"			
	7.12	"	July 02		
	7.13	"	July 17		
	7.14	"			
	7.15	"			
	7.16	"			
	7.17	"			
	7.18	"	May 08		
	7.19	"	May 08	July 19	
8	8.1	Nov. 98			
	8.2	"			
	8.3	"	July 17		
	8.4	"			
	8.5	"			
	8.6	"			
	8.7	"	July 02	March 04	
9	9.1	Nov. 98	May 10		
	9.2	May 10			

B Inspection after rigging

Walk around the aircraft



1. All parts of the airframe
 - a) check for flaws such as bubbles, holes, bumps and cracks in the surface
 - b) check leading and trailing edges of the wings and control surfaces for cracks
2. Cockpit area
 - a) check the canopy locking mechanism
 - b) check the canopy emergency release see sect. 7.15 (not each day, but min. every 3 month)
 - c) check the main pin securing
check the securing ropes of the headrest in the rear cockpit for wear function and length: is it possible that the headrest interferes with the control stick?
 - d) check all controls for wear and function, incl. positive control check.
Check if the handle of the pedal adjustment cable will be pulled to the front so that it can't hook into the trim release lever at the control stick, even with pedals in a rear position;
 - e) check the tow release system for wear and function incl. cable release check
 - f) check for foreign objects
 - g) check the instrumentation and radio for wear and function
 - h) check the brake fluid level
 - i) check at front and rear canopy if the end of the rear locking rod doesn't protrude over the canopy frame contour with opening mechanism in fully open position.
If the rod protrudes over the contour proceed with instruction 3 of TN 1000/42.
 - j) Option Canopy warning: Check if with front canopy locked and rear canopy open a warning burr appears. If not you have to exchange the battery, see section 7.16.6.
 - k) check if the fin tank is empty
 - l) check the fuel filter for dirt and sludge
 - m) switch on main switch. The fire warning light must flash once (self-test-function). Check the engine controls
 - n) check all fuses including the battery fuse

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4.3 B ff.

- o) check the extension-retraction mechanism by operating it in both directions.
The extension time should not exceed 15 seconds!
Note: If the mechanism can't be operated with the ignition switch or with the manual switch, check the circuit breaker.
- p) extend the engine with the manual switch
- 3. C.G. Tow hook
 - a) check the ring muzzle of the C.G. hook for wear and function
 - b) check for cleanliness and corrosion
- 4. Main landing gear and nose wheel
 - a) check the struts, the gear box, the gear doors and the tyre for wear; dirt in the struts can hinder the landing gear from locking over center the next time!
 - b) check the tyre pressure
mainwheel: 3.0 bar - 44 psi
nose wheel: 2.5 bar - 36 psi
 - c) check wheel brake and cable for wear and function
- 5. Left wing
 - a) check locking of the outboard wing
 - b) check the aileron for excessive free play
 - c) check the wing flaps for excessive free play
 - d) check airbrake- and box and control rod for wear and free play. It must be possible to retract the airbrake, even if it is pressed in backward direction. If there is any water in the airbrake box this has to be removed.
 - e) check the locking of the rear wing attachment pin
- 6. Power plant checks
Extend the powerplant via the manual switch (ignition off).
 - a) all screwed connections and their securing
 - b) function of throttle, and propeller brake
 - c) ignition system incl. wires and the spark plug connectors for tight fit
 - d) Check toothed belt for wear and correct tension, sudden loss of tension indicates damage of the engine assembly
 - e) engine retaining cable and its connections in the engine compartment and at the engine
 - f) fuel lines, electrical wires, Bowden cables and structural parts for wear and kinks.
 - g) exhaust muffler, propeller mount, radiator, water pump and accessories for tight fit and any cracking. Check especially the cable which lifts the muffler during engine extension.
To check the water pump, switch on the ignition.
You should hear a buzz.
 - h) apply strong pressure to the propellermount in forward, backward and sideward direction to check if the bolted connection between the engine block and the propeller mount or any thing else is loose or damaged. Check the rubber engine mounts also.
 - i) visual check of the propeller

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Section 7

- 7. Sailplane and systems description
 - 7.1 Introduction
 - 7.2 Airframe
 - 7.3 Cockpit, cockpit controls and placards
 - 7.4 Flight controls
 - 7.5 Airbrake system
 - 7.6 Landing gear system
 - 7.7 Tow hooks
 - 7.8 Seats and safety harness
 - 7.9 Baggage compartment
 - 7.10 Water ballast system
 - 7.11 Powerplant
 - 7.12 Fuel system
 - 7.13 Electrical system
 - 7.14 Pitot and static system
 - 7.15 Canopies
 - 7.16 Miscellaneous equipment (Options)
 - 7.16.1 Removable ballast
 - 7.16.2 Radio installation with automatic commutation
 - 7.16.3 Oxygen system
 - 7.16.4 ELT
 - 7.16.5 Heavy tailwheel
 - 7.16.6 Canopy warning

7.16.3 Oxygen system

a) Installation of the oxygen cylinders

It is possible to install two oxygen cylinders with 3 l (0.8 U.S.gal.) capacity, diameter 100mm (3.94 in.) total length 575 mm (22.6 in.) (available through DG Flugzeugbau GmbH).

Installation place: one bottle in front of the rear seat and one bottle in the baggage compartment see installation plan 5 EP 31. It is mandatory to mount the oxygen bottles with the mounting parts available from DG Flugzeugbau.

b) Installation of the oxygen equipment

To ensure a safe installation ask DG Flugzeugbau for an installation instruction. For the installation of the Dräger Höhenatmer E 20088 you will find an installation plan 5EP31 in the maintenance Manual.

7.16.4 ELT Emergency Locator Transmitter

To ensure a safe installation ask DG Flugzeugbau for an installation instruction. For the ELT ACK you will find an installation plan 5 EP 50 in the maintenance manual.

Caution: Concerning 7.16.3 and 7.16.4

The installation has to be accomplished by the aircraft manufacturer or by an approved service station and to be inspected and entered in the aircraft log book by a licensed inspector.

7.16.5 Heavy tailwheel

Instead of the standard tailwheel with plastic hub a tailwheel with brass hub S27/1 may be installed. The installation kit S27/4 is available at DG Flugzeugbau.

The difference in mass between both hubs is 3.1 kg (6.84 lbs.). With the brass hub, the min. front cockpit load is increased by 8.5 kg (18.74 lbs.). This higher value must be entered in the cockpit data placards and on page 6.5. Even if the heavy tailwheel is installed only sometimes, the higher min. cockpit load must be entered.

7.16.6 Canopy warning

Optionally a canopy warning device may be installed according to drawing 5EP36.

This device warns by a buzzer if the front canopy is locked and the rear canopy is still not locked or open. The buzzer is installed at the bow between front and rear canopy at the right hand side. The battery is a Lithium button cell 2430 3V/200m Ah. It is soldered and glued to the buzzer.