

Maintenance Manual DG-500M

0 General

0.1 Amendments

No.	Page	Description	Date
0.1	all	New standardized format of the initial Maintenance Manual of Variant DG-500M	December 2009
0.2	0.10, 1.15, 1.22, 1.27, 2.1, 3.9, 4.2, 4.15, 5.1, 6.2, 8.1-8.3	Miscellaneous changes to the contents of the latest amendment of the initial maintenance manual	December 2009
1	0.3, 0.6, 0.9, add diagram 7a	Wheel brake TN500/03	July 2011
2	0.3, 0.4, 0.6, 0.9, 1.10, 2.1, 2.3, 2.6, 2.8,, 2.9, 4.5, 4.6, file working instruction No. 1 for TN348/20 issue 3 at the end of the MM	Headrest securing ropes in the rear cockpit, manual amendments TN500/05	September 2011
3	0.1, 0.3, 0.4, 0.6, 0.10, 0.11, 3.4, 3.6, 3.9, Diagramm 14	Fuel hoses TN500/10	Oktober 2016
4	0.1, 0.6, 0.10, diagram 14	Oil return line, TN500/10 Rev. 1	May 2017
5	0.1, 0.3-0.5, 0.10, 0.11, 1.4, 1.7, 1.11, 1.15, 2.1, 2.3-2.6, 3.5, 3.6, 3.9, 4.19, 8.1, 8.3	manual revision, TN500/11	July 2017
6	0.1, 0.4, 2.1, 2.1a	TN500/13 Canopy lock, rear locking rods, manual revision	July 2019

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List of effective pages (cont.)

Section	page	issued	replaced /	replaced /	replaced /
	1.29	December 09			
	1.30	"			
2	2.1	December 09	September 11	July 2017	July 2019
	2.1a	July 2019			
	2.2	"			
	2.3	"	September 11	July 2017	
	2.4	"	July 2017		
	2.5	"	July 2017		
	2.6	"	September 11	July 2017	
	2.7	"			
	2.8	"	September 11		
	2.9	"	September 11		
	2.10	"			
3	3.1	December 09			
	3.2	"			
	3.3	"			
	3.4	"	October 2016		
	3.5	"	July 2017		
	3.6	"	October 2016	July 2017	
	3.7	"			
	3.8	"	July 2017		
	3.9	"	October 2016	July 2017	
4	4.1	December 09			
	4.2	"			
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	4.5	"	September 11		
	4.6	"	September 11		
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	4.13	"			
	4.14	"			
	4.15	"			
	4.16	"			
	4.17	"			

2 Inspections

2.1 Daily inspection

see flight manual DG-500M.

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 or inspection program on the following pages).
Check especially the headrest securing ropes in the rear cockpit according to “Working instruction No. 1 for TN348/20 issue 3” (attached to this manual) for correct assembly and for wear.
- 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 sealings of the rudder (see section 1.3.5).
- Check all control circuits: Inspect all bolted connections and locking devices ie. locknuts, split pins etc.
- Check all control circuits for adequate greasing and rust prevention. (see section 3.3).
- Check the control surface deflections (see section 1.2 - 1.4).
- Check the free play in all control circuits (see section 1.2 - 1.6) and the fore and aft play of the wings (see section 1.10).
- Check the canopy emergency release (see flight manual section 7.15).
- 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.
- 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 TN500/13 instruction 3.

- Check the tension of the lines of the waterbag attachment (see section 4.1.).
- Check the rubber cords in the control system (see section 1.2.6, 1.4.6 and 1.7.5).
- Check the thickness of the wheel brake linings and the thickness of the wheel brake disc (see section 1.6.1.4).
- Check if the wheel brake fluid has been exchanged (see section 1.6.1.4).

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- Check if the powerplant has been serviced according to section 3.5.1
- Check the complete power plant.
- Check the friction brake of the throttle control (see section 1.11.8).
- **Propeller**
You have to dismount the propeller for inspection especially for cracks at the hub boss. After reassembling the propeller you should check the blade track see section 3.5 of the propeller manual. After the first flight after reassembling the propeller, you have to check the torque of the propeller bolts again see section 3.5.1 item 33 of this manual.
- **Tow hook**
The operating and maintenance instructions for the release mechanisms, see section 0.4 of this maintenance manual have to be followed.
- **All-up weight and centre of gravity** These should be checked at least every 4 years during the yearly inspection.