

Flight manual DG-800B

Rev. No.	Affected Pages/ section	Description	Issue Date	LBA Approval Date	Inserted Date Signature
8	0.4, 0.5, 4.8, 4.9, 7.14	Hydraulic disc brake TN 873/17 (Option)	October 1999	Nov. 1. 1999	
9	0.4, 4.4, 4.5	Permanently installed refuelling pump (Option)/ pump control from ser.no. 8-173 on ÄM 800-10-99	Nov. 1999	Nov. 12. 1999	
10	0.3, 0.5, 2.7, 6.2	Maximum mass of all non lifting parts ÄM 800-11-99 from ser.no. 8-191 on	Nov. 1999	Dec. 14. 1999	
11	0.4, 0.5, 4.12, 7.6,	TN 873/19 powerplant control extension-retraction switch unit (retrofit, standard from ser.no. 8-195 on)	May 2000	July 5. 2000	
12	0.3, 0.5, 2.10, 7.14	ÄM 800-12-00 Tow hooks/ only for aerotow (Option)	Sept. 2000	24.10.00	
13	0.5, 7.5	TN 873/20 Parking brake combined with an airbrake securing device (retrofit, standard from ser.no. 8-219 on)	Dec. 2000	07.02.01	
14	0.3 – 0.5, 1.5, 1.6, 3.6, 4.12, 4.13, 4.13a, 4.19, 4.20, 4.22, 7.3, 7.6, 7.7	ÄM 800/13/00 Vertical tailplane, steerable tailwheel, powerplant incl. electrics from ser.no. 8-219 on	Dec. 2000	12.02.01	
15	0.3, 0.4, 2.7, 4.14, 4.26	TN 873/23 manual revision	Febr. 2001	26.02.01	

Issued: see last item

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0.2 List of effective pages

Section	page	issued	replaced	replaced
0	0.0	March 98		
	0.1	/		
	0.2	/		
	0.3	see record of revisions		
	0.4	"		
	0.5	"		
1	0.6	Nov. 97		
	1.1	"		
	1.2	March 98		
	1.3	Nov. 97		
	1.4	"		
	1.5	"	Dec. 00	
2	1.6"	"	Dec. 00	
	App. 2.1	"		
	" 2.2	"		
	" 2.3	"		
	" 2.4	"		
	" 2.5	"		
	" 2.6	"		
	" 2.7	"	Nov. 99	Febr. 01
	" 2.8	"		
	" 2.9	"		
	" 2.10	"	Sept. 00	
	" 2.11	"		
3	" 2.12	"		
	" 3.1	"		
	" 3.2	"		
	" 3.3	"		
	" 3.4	"		
	" 3.5	"	Febr. 99	
	" 3.6	"	"	Dec.00
4	" 3.7	"		
	" 4.1	"		
	" 4.2	"		
App.	4.3	"		

Issued: February2001 TN 873/23

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0.2 List of effective pages (cont.)

Section	page	issued	replaced	replaced
	App.	4.4	Nov. 97	Febr. 99
	"	4.5	"	Febr. 99
	"	4.6	"	Nov. 99
	"	4.7	"	
	"	4.8	"	Oct. 99
	"	4.9	"	Febr. 99
4	"	4.10	"	Oct. 99
	"	4.11	"	Febr. 99
	"	4.12	Dec. 97	Febr. 99
			Dec.00	May 00
	"	4.13	Nov. 97	Febr. 99
	"	4.13a	Febr. 99	Dec.00
	"	4.14	"	Febr. 01
	"	4.15	"	
	"	4.16	"	
	"	4.17	"	
	"	4.18	"	June 1999
	"	4.19	"	Dec.00
	"	4.20	"	Febr. 99
	"	4.21	"	Dec.00
	"	4.22	"	Dec.00
	"	4.23	"	
	"	4.24	"	
	"	4.25	"	
	"	4.26	"	Febr. 01
5	"	5.1	"	
	"	5.2	"	
	"	5.3	"	
	"	5.4	"	
	"	5.5	"	
	"	5.6	"	
	App.	5.7	"	
		5.8	"	
		5.9	"	
		5.10	"	
		5.11	"	
		5.12	"	Febr. 99

2.7 Mass (weight)

Maximum Take-Off mass:

18 m wing span	525 kg,	1157 lbs	
15 m wing span	480 kg,	1058 lbs	self launching
	525 kg,	1157 lbs	tow launching

Max. mass without waterballast: $W = WNLP + W_{wings}$

WNLP = max. mass of all non lifting parts
see below

W_{wings} = actual mass of the wings

Maximum landing mass: 525 kg, 1157 lbs all wing spans

Caution: It is recommended to dump the waterballast before landing on airfields. Dump the ballast before an outlanding in any case.

Maximum mass of all

non lifting parts = 320 kg (705 lbs) up to serial no 8-190
= 338kg (745 lbs.) from serial no. 8-191 on

Maximum mass in baggage

compartment = 15 kg (33 lbs)

Caution: Heavy pieces of baggage must be secured to the baggage compartment floor.

The max. mass secured on one half of the floor (left and right of fuselage centre line) should not exceed 7.5 kg (16.5 lbs).

Maximum waterballast

in the wings = 100 kg (220 lbs)

Warning: Follow the loading procedures see sect. 6.

The respective take off mass is not to be exceeded.

2.8 Center of gravity

Center of gravity range in flight is

238 mm (9.37 in.) up to 383 mm (15.08 in.) behind datum.

datum = wing leading edge at the rootrib

reference line = aft fuselage centre line horizontal

C.G. diagrams and loading chart see sect.6.

4.5.2 Self launching, take off and climb

4.5.2.1 Take off distance

Prior to take off check according to sect. 5.2.3 if the available runway length is sufficient.

It must be appreciated, that a rising runway, wet or uneven surface, long grass etc. will increase the take off distance considerably.

Selflaunching should only be executed if in case of powerloss or engine failure there are possibilities to clear obstacles or for a safe out-landing. In case of doubt choose a safe tow launch.

4.5.2.2 Start roll and take off

Wing flaps + 8°, trim fully tail down.

The take off roll may be executed with one wing on the ground.

With a crosswind if there is no wing runner the into lee-wind wing should be on the ground. The drag of the wingtip wheel partly compensates the moment of the wind on the vertical tail. This technique reduces the tendency to turn the glider into the wind.

Gently apply full throttle, as soon as the aircraft rolls lift the wing by applying aileron.

Use back stick during start roll.

Then roll on the mainwheel until you reach take off speed.

4.5.2.3 Climb

After take off accelerate the DG-800B to $V_y = 90 \text{ km/h}$ (49 kts) and climb with this speed.

Retract the landing gear after reaching safety altitude.

Execute the whole climb with full throttle to ensure a smooth engine run.

4.6 Flight with the engine removed from the aircraft

The DG-800B can be flown without the engine when the engine is sent for a major overhaul, or removed to decrease the aircraft empty weight for competition flying.

The following items must be executed: (see sect. 4.16 in the DG-800B maintenance manual).

1. Remove the powerplant.

The engine extension-retraction mechanism and the exhaust system will remain in the fuselage.

2. Remove the batteries, insulate the battery connector cables. Switch engine master switch off.

Install one 12 V 6.5 Ah battery in the baggage compartment and connect to the socket on the rear bulkhead.

3. Install a mass behind the tailwheel box according to drawings 8R86 and 8R87. The drawings and the necessary parts can be ordered from DG Flugzeugbau.

Warning: Installation of a heavier tailwheel as a compensation mass is prohibited for flutter reasons.

4. 1 kg = 2.2046 lbs	0.305 m = 1 ft		
	mass	C.G.behind	moment
	kg	datum	kg x m
mass reduction		m	
engine with propeller	-46.4	1.120	-51.97
batteries in front	- 8.2	-1.291	+10.59

additional mass

battery in baggage			
compartment	+ 2.9	+0.17	+ 0.49
mass	+ 5	+4.580	+22.9
total difference	-46.7	+0.385	-17.99

5. Tape the engine doors carefully with fabric tape.

6. Carry out a C.G. calculation according to section 6.9. The inflight C.G. will be moved forward by appr. 0.0-0.020 m (0.0-0.8 in.) depending on the flightmass and empty mass C.G.