0 Revisions

0.1 Record of revisions

Any revision of the present manual, except actual weighing data, must be recorded in the following table and in case of approved sections endorsed by the responsible airworthiness authority.

The new or amended text in the revised page will be indicated by a black vertical line in the right hand margin, and the Revision No. and the date will be shown on the bottom left hand of the page.

Rev. No.	Affected Pages/ section	Description	Issue Date	LBA Approval Date	Inserted Date Signature
1	0.3-0.5, 2.1, 2.9, 2.11, 4.5, 5.4, 6.3, 6.5, 6.10, 7.10	Manual revision TN 413/2	September 2003	Sept. 25. 2003	
2	0.3, 2.12, 3.2, 4.3	Manual revision TN 413/3	May 2004	May 10. 2004	
3	0.3, 0.5, 4.5, 7.6	Ballast box in the fin TN 413/4	June 2004	June 29. 2004	
4	0.3, 0.5, 3.2, 7.11	Canopies Gas-struts TN 413/6	October 2004	January 13. 2005	
5	0.3, 0.4, 2.7, 3.5, 4.1, 4.17	Manual revision TN 413/8	January 2005	February 22. 2005	
Rev. No.	Affected Pages/ section	Description	Issue Date	EASA Approval Date	Inserted Date Signature
6	0.1, 0.4, 0.5, 4.9, 4.13, 7.5	landing gear positive locking device TN1000/13	February 2008	April 8. 2008	

0.2 List of effective pages (cont.)

Section		Page	issued	replaced/	replaced/
4	App.	4.6	March 2002		
		4.7			
	"	4.8	"		
	"	4.9	"	Febr. 2008	
	"	4.10	"		
	"	4.11	"		
	"	4.12	"		
	"	4.13	"	Febr. 2008	
	"	4.14	"		
	"	4.15	"		
	"	4.16	"		
	"	4.17	"	January 2005	
	"	4.18	"		
	"	4.19	"		
	"	4.20	"		
	"	4.21	"		
	"	4.22	"		
	"	4.23	"		
	"	4.24	"		
5	"	5.1	March 2002		
	"	5.2	"		
	"	5.3	"		
	"	5.4	"	Sept. 2003	
	App.	5.5	"		
		5.6	"		
		5.7	"		
6		6.1	March 2002		
		6.2	"		
		6.3	"	Sept. 2003	
		6.4	"		
		6.5	"	Sept. 2003	
		6.6	"		
		6.7	"		
		6.8	"		
		6.9	"		
		6.10	"	Sept. 2003	
		6.11	"		

0.2 List of effective pages (cont.)

Section	Page	issued	replaced/	replaced/
7	7.1	March 2002		
	7.2	"		
	7.3	"		
	7.4	"		
	7.5	"	Febr. 2008	
	7.6	"	June 2004	
	7.7	"		
	7.8	"		
	7.9	"		
	7.10	"	Sept. 2003	
	7.11	"	Oct. 2004	
	7.12	"		
	7.13	"		
8	8.1	March 2002		
	8.2	"		
	8.3	"		
	8.4	"		
	8.5	"		
	8.6	"		
9	9.1	March 2002		

4. Main landing gear and nose wheel (if fitted)
   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 centre the next time!;
   With TN1000/13 executed, standard from ser. no. 10-133 on:
   Check all parts of the landing gear positive locking device (notch and latch at the landing gear struts) for dirt. Check the Bowden cable for damage.
   b) check the tyre pressure;
   main wheel: 2.5 bar - 36 psi
   nose wheel: 2.5 bar - 36 psi
   c) check wheel brake and hose for wear and function;
5. Left wing
   a) check locking of the outboard wing;
   b) check the aileron for excessive free play;
   c) 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 backwards in direction of flight. If there is any water in the airbrake box this has to be removed;
   d) check the locking of the rear wing attachment pin.
6. Tail wheel
   a) check for wear, free play and excessive dirt in the wheel box. Remove excessive dirt prior to take off;
   b) check tyre pressure: 4 bar -58 psi;
7. Rear end of the fuselage
   a) check the lower rudder hinge and the connection of the rudder cables for wear, free play and correct securing;
   b) check the bulkhead and fin trailing edge shear web for cracks and delamination;
8. Fin - horizontal tail
   a) check the upper rudder hinge for wear and free play;
   b) check the elevator for free play and correct control hook up, look from the rear into the gap at the right hand side of the rudder;
   c) check the securing of the stabilizer;
   d) check the horizontal tail for free play;
   e) check the TE or Multiprobe for correct insertion and fix it with tape
   f) check the trim-weight box, correct number of weights, locking device completely engaged?
9. Right wing see item 5.
10. Fuselage nose
    a) check the ports for the static pressure and the pitot pressure for cleanliness.
    b) if the sailplane was parked in rain, you have to empty the static ports by sucking out the water at the ports.
    c) check the nose hook for cleanliness and corrosion.

4.5.3 Approach and landing

4.5.3.1 Normal landing

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

Abeam the landing point extend the landing gear. In calm weather approach with approx. 100 km/h (54 kts.) (ballast dumped!). With strong wind and / or waterballast fly faster! The very effective Schempp-Hirth dive brakes make a short landing possible. So a slip is not necessary as a landing technique.

Caution: While slipping the rudder is sucked in its displaced position. So it is recommended to practise slipping at a higher altitude.
The slip can be introduced at the recommended approach speed see above.
To recover from the slip neutralize the aileron control first, this will reduce the force which sucks the rudder in it's displaced position.
During the slip the airspeed indicator shows airspeed values which are too low, so the slip must be executed with regard to the position of the horizon.
No influence on the slipping characteristics when slipping with partially filled waterballast is noticeable.

Strong crosswind offers no problem.

Do not approach too slowly with fully extended airbrakes otherwise the aircraft may drop during flare out. When flaring out keep the airbrake setting you were using, opening them further may drop the sailplane!

You can land the DG-1000S on soft fields with the landing gear extended, as there is no tendency of nosing over. During touch down pull the stick completely to avoid the fuselage nose touching the ground.

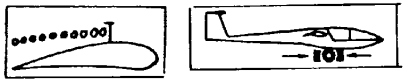
After landing in a muddy field clean the landing gear and tow releases.
Dirt in the front strut can keep the landing gear from locking over centre next time.
With TN1000/13 executed, standard from ser. no. 10-133 on:
Dirt in the landing gear positive locking device (notch and latch at the landing gear struts).may keep the latch from engaging in the notch next time.
Simply hosing with water is the best cleaning method (don't use a high pressure cleaner).

10) Undercarriage retraction - extension handle - black

back = retracted, front = extended,

The undercarriage is locked in the extended position by an overcentre locking arrangement and an additional safety catch in the cockpit.
The handle is to be turned towards the cockpit wall, so that the locking catch will engage.
In retracted position the landing gear is locked over centre.
With TN1000/13 executed, standard from ser. no. 10-133 on:
An additional landing gear positive locking device (notch and latch at the landing gear struts) secures the landing gear in the extended position.
An additional catch in the front upper area of the landing gear box secures the landing gear in retracted position.

11) Airbrake handle - blue
The wheel brake is operated at the end of the airbrake handle travel.



Optional parking brake combined with an airbrake securing device (Piggott-hook): Pull the airbrake handle back to actuate the wheelbrake and rotate the handle to the cockpit wall. A detent will engage in one of 4 notches to hold the system in this position.
In case the airbrakes mistakenly haven't been locked, a detent engages in one of several notches to avoid inadvertent deployment of the airbrakes. To open and to close the airbrakes the operating handle must be rotated into the cockpit so far that the detent passes the notches.

12) Constantly open de-misting air vents

13) Main air vent

14) Main air vent operating knob
pushed to front = closed
pulled = open

15) Swivel air vents