

## 0 General

### 0.1 Manual amendments

No.	Page	Description	Date
1	0.5, 0.6, 4.14-4.16 diagrams 7, 11, 12	Manual revision TN 413/2	September 2003
2	0.6, diagrams 1 and 11	Manual revision TN 413/3	May 2004
3	0.4, 0.6, 1.9, diagram 7	Landing gear / over centre lock in extended position TN 413/7	Nov. 2004
4	0.4, 0.5, 0.11, 2.6, 6.2, 6.4, 7.1	Manual revision TN 413/8	January 2005

**0.2 List of effective pages**

Section	page	issued	replaced/	replaced/	replaced/
0	0.0	March 2002			
	0.1	see manual	amendments		
	0.2		"		
	0.3		"		
	0.4		"		
	0.5		"		
	0.6		"		
	0.7	March 2002			
	0.8		"		
	0.9		"		
	0.10		"		
	0.11		"		
	0.12		"		
1	1.1	March 2002			
	1.2		"		
	1.3		"		
	1.4		"		
	1.5		"		
	1.6		"		
	1.7		"		
	1.8		"		
	1.9		"	Nov. 2004	
	1.10.		"		
	1.11		"	January 2005	
	1.12		"		
	1.13		"		
	1.14		"		
	1.15		"		
	1.16		"		
	1.17		"		
2	2.1	March 2002			
	2.2		"		
	2.3		"		
	2.4		"		
	2.5		"		
	2.6		"	January 2005	
	2.7		"		

**0.2 List of effective pages (continued)**

Section	page	issued	replaced/	replaced/	replaced/
3	3.1	March 2002			
	3.2	"			
	3.3	"			
	3.4	"			
4	4.1	March 2002			
	4.2	"			
	4.3	"			
	4.4	"			
	4.5	"			
	4.6	"			
	4.7	"			
	4.8	"			
	4.9	"			
	4.10	"			
	4.11	"			
	4.12	"			
	4.13	"			
	4.14	"		Sept. 2003	
	4.15	"		Sept. 2003	
	4.16	"		Sept. 2003	
	4.17	"			
5	5.1	March 2002			
	5.2	"			
6	6.1	March 2002			
	6.2	"		January 2005	
	6.3	"			
	6.4	"		January 2005	
7	7.1	March 2002		January 2005	
8	8.1	March 2002			
9	9.1	March 2002			

## **0.4 Airworthiness limitations**

### **0.4.1 Repairs**

Repair or replace damaged parts prior to next flight. Follow the instructions of the DG-1000S repair manual for repairs of the airframe. Repairs outside the scope of DG-1000S 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.

Use only genuine spare parts.

### **0.4.2 Life time of the airframe**

The maximum allowable operating time for composite sailplanes is 12000 flight hours. Therefore inspections according to section 2.4 of this manual have to be executed at 3000 h, 6000 h, 9000 h and every 1000 hours following thereafter.

### **0.4.3 Life time of components**

- a) The **fabric straps of the safety harness** have to be exchanged after 12 years.
- b) The **rubber cord** in the elevator control system see section 1.2.6 has to be replaced at least every 6 years.
- c) **Other components:**  
All other components like 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.

## **2.4 Inspection procedure for increase of service time**

### **1. General**

The results of fatigue tests of wingspan 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 11000 hours (4. step).

Ask the manufacturer for the necessary inspection document.

**Compass**

<b>Manufacturer</b>	<b>Type</b>	<b>Certification No.</b>
PZL	B - 13	FD 19/77
Ludolph	FK 16	10.410/3
Airpath	C 2300	
Hamilton	H I 400	TSO C 7c Type1
	46 MFK 1	(only as additional equipment.)

The compass should be compensated in the A/C. A deviation table must be installed if deviation is more than 5°.

**VHF transceiver**

<b>Manufacturer</b>	<b>Type</b>	<b>Certification No.</b>
Dittel	FSG-40 S	10.911/45
	FSG-50	10.911/71
	FSG-60 M	10.911/72
	FSG-70,71 M	10.911/81
	FSG-90	10.911/98JTSO
	FSG 2T	LBA.0.10.911/103JTSO
Becker	AR 3201-(1)	10.911/76
	AR 2008/25 (A)	10.911/48
	AR 4201	JTSO-2C37 D, ED-23A
Avionik Dittel	ATR 720 A	10.911/74
	ATR 720 C	10.911/83
	ATR 600	O.10.911/106JTSO
	ATR 500	LBA.0.10.911/113JTSO

or other instruments certified for aircraft use according to TSO or JTSO or ETSO standards may be installed.

**Note:** Only radios with diameter 58mm (2 ¼ in.) can be installed at the assigned place in the console below the instrument panel.

**Instruments which are not part of the minimum equipment:**

**Transponders:** Transponders certified for aircraft use according to TSO or JTSO or ETSO standards may be installed.

**Other instruments and equipment (eg. variometers, gliding computers or flight data recorders):**

Instruments and other equipment may be installed if they do not in themselves, or by their effect upon the sailplane, constitute a hazard to safe operation.

**Caution:** If additional instruments or equipment are to be installed after production of the glider, it must be assured that they will be installed in the places provided by the design. If installed in other places it must be assured that they are secured safely.

Electrical instruments and equipment must be connected via a appropriately rated fuses, the power consumption of each single part should not exceed 3A.

After installation raise a new weight and balance report.

**7 List of special tools etc.**

A Special tool with 6 mm thread (W38/2) for the securing of the tailplane and for the locking pins of the rear wing suspension.

B Special tool W36 (or a suitable pin with 6mm diameter) for derigging of the outboard wings and for the cover plate of the ballast box in the fin.

C Tool for airbrake adjustment: 5V17 and rod according to drawing 5V18.

D Open-end wrenches

1/4" = 6,35 mm	SW 14
SW 7	SW 17
SW 8	11/16" = 18 mm
SW 9	SW 19
SW 10	SW 22
SW 13	

E Allen key wrench

3 mm, 4 mm, 5 mm, 6 mm, 7 mm, 8 mm, 10 mm and 12 mm

F Circlip pliers A (outside) for the range 8-14 mm for the tail wheel axis

G Spring balance max. reading 50 N (11 lbs.)

H Nicopress tool 64 - CGMP

I For filling the wing ballast tanks: Hose with outside dia 25 mm (1 in.), 1 m (3.2 ft.) long.

J For filling the fin ballast tank: Z27/2 Funnel with clear PVC hose inner diameter 12 mm (.47 in.) 1.9 m (6 ft.) long and hose connector GS 12.