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, 0.4, 1.4, 2.8, 4.11, 6.4, 6.8	TN 348/8 Ser.no 5E155-159 +5E164 only	Jan. 96	02.04.96	
2	0.3, 4.11	ÄM 500/9/96 not for Ser.no 5E155-159 +5E164	Mar. 96	12.06.96	
3	0.3, 0.4, 4.2, 4.18, 5.6, 6.7, 7.1, 7.9, 7.10	TN 348/9	Oct. 97	26.11.97	
4	0.1, 0.3, 0.4, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 4.7, 4.16, 4.18, 6.6, 7.6	Manual revision TN 348/14	March 2000	09.05.00	
4	0.3,0.4, 4.7, 7.6, 8.2	TN 348/15	Jan. 2001	07.02.01	

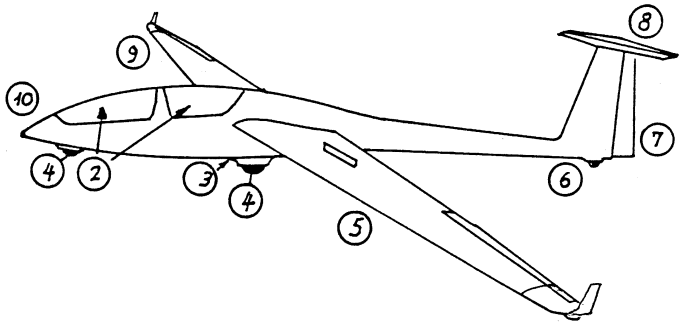
0.2 List of effective pages

Section		page	issued	replaced	replaced
0		0.0	July 95		
		0.1	/		
		0.2	/		
		0.3	see record of revisions		
		0.4	"		
		0.5	July 95		
1		1.1	"		
		1.2	Nov. 95		
		1.3	July 95		
		1.4	"		
		1.4	Jan. 96 (only ser.no. 5E155-159)		
		1.5	July 95		
2	App.	2.1	"		
	"	2.2	"		
	"	2.3	"	March 00	
	"	2.4	"	March 00	
	"	2.5	"	March 00	
	"	2.6	"	March 00	
	"	2.7	"	March 00	
	"	2.8	"	Jan. 96	March 00
	"	2.9	"		
3	"	3.1	"		
	"	3.2	"		
	"	3.3	"		
	"	3.4	"		
4	"	4.1	"		
	"	4.2	"	Oct. 97	
	"	4.3	"		
	"	4.4	"		
	"	4.5	"		
	"	4.6	"		
	"	4.7	"	March 00	Jan. 01
	"	4.8	"		
	"	4.9	"		
	"	4.10	"		
	App.	4.11	"		
		4.11	Jan. 96 (only ser.no. 5E155-159)		
	"	4.12	July 95		
	"	4.13	"		
	"	4.14	"		
	"	4.15	"		
	"	4.16	"	March 00	
	"	4.17	"		
	"	4.18	"	Oct. 97	March 00
	"	4.19	"		
	"	4.20	July 95		

0.2 List of effective pages (cont.)

Section		page	issued	replaced	replaced
5	"	5.1	July 95		
	"	5.2	"		
	"	5.3	"		
	App.	5.4	"		
		5.5	"		
		5.6	"	Oct. 97	
6		6.1	"		
		6.2	"		
		6.3	"		
		6.4	"		
		6.4	Jan. 96	(only ser.no. 5E155-159)	
		6.5	July 95		
		6.6	"	March 00	
		6.7	"	Oct. 97	
		6.8	"		
		6.8	Jan. 96	(only ser.no. 5E155-159)	
		6.9	July 95		
7		7.1	"	Oct. 97	
		7.2	"		
		7.3	"		
		7.4	"		
		7.5	"		
		7.6	"	March 00	Jan. 01
		7.7	"		
		7.8	"		
		7.9	"	Oct. 97	
		7.10	"	Oct. 97	
8		8.1	"		
		8.2	"	Jan. 01	
		8.3	"		
		8.4	"		
		8.5	"		
9		9.1	July 95		

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 and function
   d) check all controls for wear and function, incl. positive control check
   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 radio and other electrical equipment for function. If there is no electric power it must be assumed, that the battery is not in-stalled in the fin. **Flying is only allowed with the battery in the fin as otherwise the forward C.G. limit** may be exceeded.
   i) check the brake fluid level
   j) check if the fin tank is empty
3. C.G. Tow hook
   a) c heck 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!

7.4 Flight controls

Rudder control:
See diagram 2 M.M
Cable system with adjustable pedals in the front cockpit.

Elevator control:
See diagram 1 M.M.
All pushrods slide in maintenance free nylon ball guides.
Automatic control hook up system. Spring trimmer with release lever at the control stick and control knob at the left cockpit wall. To trim, you have to operate the release lever at the control stick and place the control knob to the desired position.

Aileron control:
See diagram 3 and 4 M.M
Pushrods slide in maintenance free nylon ball guides.
Automatic control hook up system..

7.5 Airbrakes

See diagram 3 and 4 M.M.
Double storey Schempp-Hirth type airbrakes on the upper wing surface.
The wheel brake is operated by the airbrake system. Pushrods in the wings slide in maintenance free nylon ball guides. Automatic control hook up system.

7.6 Landing gear

See diagram 7 M.M.

a) Main wheel: retractable, assisted by a gas strut. Spring mounted with steel compression springs, locked in retracted position by an overcentre locking device. Fully sealed landing gear box, hydraulic disc brake.
Tyre 380 x 150 6 PR
Diameter 380 mm (15.0 in.)
Tyre pressure 3.0 bar (44 psi)

b) Tailwheel: Tyre 200 x 50 2 PR
Diameter 200 mm (7.87 in)
Tyre pressure 4 bar (58 psi)

c) Nosewheel: Tyre 260 x 85
Diameter 260 mm (10.2 in.)
Tyre pressure 2.5 bar (36 psi)

8.1 Introduction

This section contains manufacturer's recommended procedures for proper ground handling and servicing of the sailplane. It also identifies certain inspection and maintenance requirements which must be followed if the sailplane is to retain that new-plane performance and dependability. It is wise to follow a planned schedule of lubrication and preventive maintenance based on climatic and flying conditions encountered.

8.2 Inspection period, maintenance

The "Instructions for continued airworthiness (maintenance manual) for the DG-500 ELAN ORION have to be followed.

A Before each rigging all the connecting pins and bushes should be cleaned and greased. This includes the control connectors.

B The contact surfaces of the canopies to the fuselage are to be rubbed with colourless floor-polish (canopy and fuselage side) to reduce grating noise in flight. Polish at the beginning of the flight season and then every month.

C Once a year all the bearings and hinges should be cleaned and greased. See the greasing programme of the maintenance manual.
Each year the control surface displacements, adjustments and general condition must be checked. (See the maintenance manual).

8.3 Alterations or repairs

It is essential that the responsible airworthiness authority be contacted **prior to** any alterations on the airplane, to ensure that the airworthiness of the sailplane is not impaired. It is prohibited to execute the alteration without the approval of the airworthiness authority. The manufacturer will not be liable for the alteration or for damages resulting from changes in the characteristics of the aircraft due to alteration. So it is strongly recommended to execute no alternatives which are not approved by the aircraft manufacturer.
External loads such as external camera installations are to be regarded as alterations! Repair instructions can be found in the DG-500 ELAN ORION repair manual. No repairs should be carried out without referring to the manual.