0 MANUAL CONTENTS

0.1 Log 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 on the right margin, and the revision No. and the date will be shown on the bottom left hand of the page

Rev. no.	Pages affected	Description	Date	EASA Approval
1	0-1,0-2,0-3, 0-4, 0-5, 4-15, 4-27, 4-28, 4-32, 7-2, 7-3	TN8019, wheel brake actuated by airbrake handle	Feb. 2011	13.10.11
2	Title page, 0-1 ÷ 0.3, 0-5, 4-4, 4-9, 7-2, 7-3, 7-5, 7-13a, 7-14	ÄM LS8-1, Miscellaneous improvements from ser. No. 8527 on	Dezember 2011	14.02.12
3	0-1, 0-3, 0-5, 4-8, 7-6	TN8021 small tailwheel	January 2015	24.02. 2015
4	0-1, 0-5, 9-5	TN DG-G-11 NOAH Improvements	May2015	7.07. 2015
5	0-1, 0-2, 0-3, 0-5, 1-4, 2-12, 4-24, 7-14	TN 8024 Manual revision	June 2016	5.08. 2016

0.2 List of Effective Pages

Chapter	Page	Edition	Edition	Edition	Edition
0	Titel page	April 2005			
	Warnings	April 2005			
	0-1	See log of revisions			
	0-2	See log of revisions			
	0-3	See log of revisions			
	0-4	See log of revisions			
	0-5	See log of revisions			
	0-6	April 2005			
1	1-1	April 2005			
	1-2	April 2005			
	1-3	April 2005			
	1-4	April 2005	June 2016		
	1-5	April 2005			
2	2-1	April 2005			
	2-2	April 2005			
	2-3	April 2005			
	2-4	April 2005			
	2-5	April 2005			
	2-6	April 2005			
	2-7	April 2005			
	2-8	April 2005			
	2-9	April 2005			
	2-10	April 2005			
	2-11	April 2005			
	2-12	April 2005	June 2016		

0.2 List of Effective Pages continued

Chapter	Page	Edition	Edition	Edition	Edition
3	3-1	April 2005			
	3-2	April 2005			
	3-3	April 2005			
	3-4	April 2005			
	3-5	April 2005			
	3-6	April 2005			
	3-7	April 2005			
	3-8	April 2005			
	3-9	April 2005			
	3-10	April 2005			
	3-11	April 2005			
	3-12	April 2005			
	3-13	April 2005			
	4-1	April 2005			
	4-2	April 2005			
	4-3	April 2005			
	4-4	April 2005	Dec. 2011		
	4-5	April 2005			
	4-6	April 2005			
	4-7	April 2005			
	4-8	April 2005	Jan. 2015		
	4-9	April 2005	Dec. 2011		
	4-10	April 2005			
	4-11	April 2005			
	4-12	April 2005	June 2016		
	4-13	April 2005			
	4-14	April 2005			
	4-15	April 2005	Feb. 2011		
	4-16	April 2005			
	4-17	April 2005			
	4-18	April 2005			
	4-19	April 2005			
	4-20	April 2005			

0.2 List of Effective Pages continued

Chapter	Page	Edition	Edition	Edition	Edition
7	7-1	April 2005			
	7-2	April 2005	Feb. 2011	Dec. 2011	
	7-3	April 2005	Feb. 2011	Dec. 2011	
	7-4	April 2005			
	7-5	April 2005	Dec. 2011		
	7-6	April 2005	Jan. 2015		
	7-7	April 2005			
	7-8	April 2005			
	7-9	April 2005			
	7-10	April 2005			
	7-11	April 2005			
	7-12	April 2005			
	7-13	April 2005			
	7-13a	Dec. 2011			
	7-14	April 2005	Dec. 2011	June 2016	
8	8-1	April 2005			
	8-2	April 2005			
	8-3	April 2005			
	8-4	April 2005			
	8-5	April 2005			
	8-6	April 2005			
	8-7	April 2005			
	8-8	April 2005			
	8-9	April 2005			
	8-10	April 2005			
	8-11	April 2005			
9	9-1	April 2005			
	9-2	April 2005			
	9-3	April 2005			
	9-4	April 2005			
	9-5	April 2005	May 2015		
	9-6	April 2005			

1.4 DESCRIPTIVE AND TECHNICAL DATA

The **LS 8-s** and **LS8-sb** are single-seater sailplanes with carbon fibre wing shell, winglets, T-tail, wing and vertical tail fin water ballast systems, retractable and sprung landing gear, and upper wing surface air brakes. They may be operated in 15m or 18m span and winglets in both versions.

The fuselage structure of LS8-s and LS8-sb is different, because the LS8-sb is prepared for later engine installation.
LS8-s: Rear fuselage constructed from glasfibre-reinforced plastic, no engine compartment.
LS8-sb: Rear fuselage constructed from carbonfibre-reinforced plastic, with engine compartment.

Otherwise both planes are structurally identical.

These sailplanes have been produced using the latest technology of industrial fibre design (Glass-, Aramid- and Carbon fibres).

Models **LS8-s** and **LS8-sb** are designed for competition flights – high performance combined with excellent handling characteristics.

Wing span	15 m	49,2 ft	18 m	59,6 ft
Length	6,74 m	22,11 ft	6,74 m	22,11 ft
Height	1,33 m	4,36 ft	1,33 m	4,36 ft
MAC	0,700 m	2,30 ft	0,634 m	2,08 ft
Wing Area	10,5 m²	113,0 sq. ft	11,40 m²	122,9 sq. ft
Wing aspect ratio	21,43	21,43	28,38	28,38
Maximum gross weight	525 kg	1157 lbs	575 kg	1267 lbs
Max. wing loading	50 kg/m²	10,2 lbs/sq. ft	50,4 kg/m²	10,3 lb/sq. ft

2.12 Further Limitations

2.12.1 OPERATING PLACARDS FOR LIMITATIONS

DG Flugzeugbau GmbH
Type: LS8-xx Serial No.:_____

Data Placard

Airspeed Limits:	km/h	Kt	MPH.
Winch launch/Auto tow	140	76	87
Aero tow	195	105	121
In rough air	195	105	121
Never exceed (VNE)	280	151	174

	m	ft	kg	lbs
Max. Take-off Mass *)	15	42	525	1157
Max. Take-off Mass *):	18	59	575	1267

*) including water ballast
Aerobatic manoeuvres **not** approved

Weight Limitations
Maximum Cockpit Load ....max._____kg/lbs
Minimum Cockpit Load
with tail battery, tail tank full min. _____kg/lbs
with tail battery, tail tank empty min. _____kg/lbs
without tail battery, tail tank full min _____kg/lbs
without tail battery, tail tank empty min._____kg/lbs
Lighter pilots must compensate lack of weight as suggested in Flight Manual

xx= variant
-s or –sb

at right hand cockpit wall

MINIMUM COCKPIT LOAD: kg / *lbs*
with tail battery, tail tank full min. _____
with tail battery, tail tank empty min. _____
without tail battery, tail tank full min. _____
without tail battery, tail tank empty min. _____

under instrument panel cover

	m	ft	km/h	mph	Kt.
Up to	2000 (	6500) -	280	174	151
Up to	3000 (	9800) -	266	165	144
Up to	4000 (	13100) -	253	157	137
Up to	6000 (	19700) -	227	141	122
Up to	8000 (	26200) -	202	126	109
Up to	10000 (	32800) -	179	111	97
Up to	12000 (	39400) -	156	97	84

near airspeed indicator, if not marked on ASI

Maximum baggage weight **5** kg (11 lbs)
(Soft items only)

at baggage compartment

4.5 NORMAL PROCEDURES

4.5.1 COCKPIT-CHECKLIST

LS8-s and -sb Checklist

This sailplane must be operated in compliance with operating limitations stated in the form of markings, placards and EASA approved Flight Manual.

1. Main pins secured?
2. Elevator secured?
3. Winglets secured?
4. Check controls
5. Tail fin valve operation checked?
6. When using water ballast, then always in wing and tail!
7. Check loading conditions
8. Check tail dolly removed?
9. Fasten seat belt harness
10. Fasten parachute and connect parachute static line
11. Lock air brakes
12. Check trim position
13. Check release system
14. Lock canopy

7.10 VARIOUS EQUIPMENT

7.10.1 EXPENDABLE BALLAST (TRIM WEIGHTS)

Expendable ballast to compensate pilot weight below Minimum Cockpit Load may be fitted in front of rudder pedals and secured with knurled nut.

7.10.2 ADDITIONAL BATTERIES

Vertical Tail Fin Battery

Optional. The tail fin battery must be equipped with a main fuse according to drawing 3BR-199. Measurements L 155mm * B 35mm * H 100mm (over terminals), 6V 7.2Ah, 2 cells required.

From ser.no. 8527 on (ÄM LS8-1): If an optionally battery will be installed in the fin the locking bow (part 10L35 made from piano wire) must be removed. The locking bow prevents the installation of a battery and serves as indicator if a battery is installed, as its ends are visible from the outside.

Battery in Baggage Compartment

Optional. Installation on landing gear box, see Maintenance Manual section 4.8. The battery must be equipped with an appropriate main fuse! Measurements identical to forward seat battery with identical holder or for instance Dittel ZT 092, 12V 6.5Ah complete with holder.

7.10.3 OXYGEN SYSTEM

Fiberglas receptacle at left main bulkhead for 3 or 4 Litre oxygen bottles of 100 mm <3.94 in> in diameter.

After permanent installation of an oxygen system according to its manufacturers instructions by an adequately licensed repair shop, the sailplane including oxygen system must be inspected (Weight and Balance, Loading Instructions).

When using a removable oxygen unit, its weight must be counted as useful load.

7.10.4 EMERGENCY LOCATOR TRANSMITTER (ELT)

Permanent installation according to Maintenance Manual chapter 11 and to manufacturers instructions. Possible installation location in rear portion of the baggage compartment, remote control from instrument panel necessary. After installation, cockpit loading limit values must be checked according to Maintenance Manual chapter 5.

Caution: When installing a 406 MHZ ELT proceed according to TN DG-G-08.