

# Maintenance Manual LS8

## 0 General

### 0.1 Manual amendments

No	Page	Description	Date
0.1	all	Combination of the initial Maintenance Manuals of the Variants LS8, LS8-a, LS8-b, LS8-18, new standardized format	Dec. 2009
0.2	0-9, 1-15, 1-16, 2-3, 2-5, 3-2, 3-3, 3-6, 4-12, 4-13, 4-15 up to 4-17, 5-2, 5-3, 5.4, 6-1, 9-1 up to 9-4, 10-1 up to 10-3, 11-1, 11-2, 12-2, 12-3	Miscellaneous changes to the contents of the latest amendments of the initial maintenance manuals	Dec. 2009
1	0-1, 0-3, 0-5, 1-1, 1-6, 1-10, 7-5, 7-6	TN8019, wheel brake actuated by airbrake handle.	Feb. 2011
2	0-1, 0-3, 0-5, 1-11, 7-1, 7-2, 7-4, 8-3 and 12-1	TN8020, retrofit of a 5" landing gear	Sept. 2011

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### 0.2 List of effective pages

Section	page	issued	replaced	replaced	replaced
0	0-0	December 09			
	0-1	"	Feb. 2011	Sept. 2011	
	0-2	"			
	0-3	"	Feb. 2011	Sept. 2011	
	0-4	"			
	0-5	"	Feb. 2011	Sept. 2011	
	0-6	"			
	0-7	"			
	0-8	"			
	0-9	"			
1	1-1	December 09	Feb. 2011		
	1-2	"			
	1-3	"			
	1-4	"			
	1-5	"			
	1-6	"	Feb. 2011		
	1-7	"			
	1-8	"			
	1-9	"			
	1-10	"	Feb. 2011		
	1-11	"	Sept. 2011		
	1-12	"			
	1-13	"			
	1-14	"			
	1-15	"			
	1-16	"			
	1-17	"			
	1-18	"			
	1-19	"			
2	2-1	December 09			
	2-2	"			
	2-3	"			
	2-4	"			
	2-5	"			
	2-6	"			
	2-7	"			
	2-8	"			
	2-9	"			
	2-10	"			
	2-11	"			

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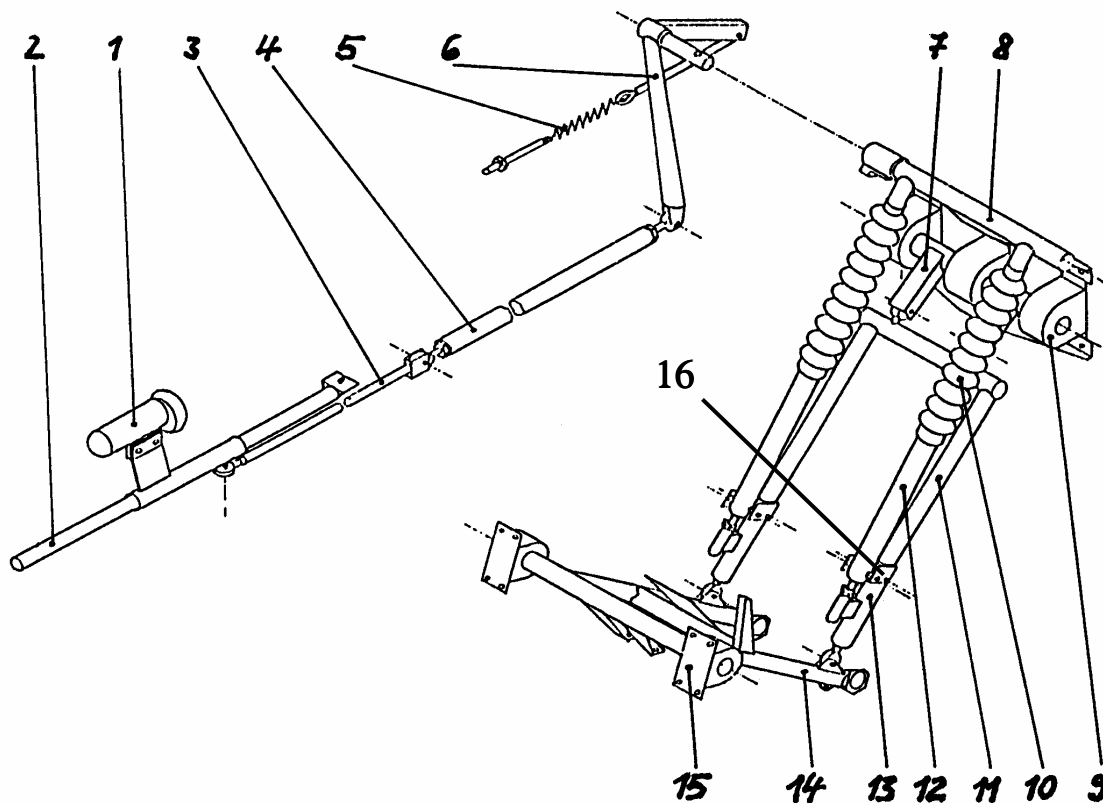
### 0.2 List of effective pages (continued)

Section	page	issued	replaced	replaced	replaced
5	5-1	December 09			
	5-2	"			
	5-3	"			
	5-4	"			
	5-5	"			
	5-6	"			
	5-7	"			
6	6-1	December 09			
7	7-1	"	Sept. 2011		
	7-2	"	Sept. 2011		
	7-3	"			
	7-4	"	Sept. 2011		
	7-5	"	Feb. 2011		
	7-6	"	Feb. 2011		
8	8-1	December 09			
	8-2	"			
	8-3	"	Sept. 2011		
9	9-1	December 09			
	9-2	"			
	9-3	"			
	9-4	"			
10	10-1	December 09			
	10-2	"			
	10-3	"			
11	11-1	December 09			
	11-2	"			
	11-3	"			
12	12-1	December 09	Sept. 2011		
	12-2	"			
	12-3	"			
	12-4	"			

## 1.8 Main landing gear

No	Designation	Drawing for 4" wheel	Drawing for 5" wheel TN8020 (not for LS8-b)
1	Gear handle	4R2-87	4R2-87
2	Gear handle guide tube	4R2-89	4R2-89
3	Forward landing gear drive rod	4R2-90	4R2-90, or 9Fw3
4	Rear landing gear drive rod	4R2-112	4R2-112
5	Compensating spring	4R2-49	4R2-215
6	Outer drive	1R2-84	1R2-84
7	Swinging arm	3R2-83	3R2-83
8	Inner drive	3R2-75	3R2-202
9	Rubber torsion element (large unit)		
10	Rubber bellow		
11	Upper folding strut	3R2-74	3R2-210
12	Inner drive sliding tube	4R2-73	4R2-211
13	Lower folding strut	4R2-72	4R2-207
14	Landing gear fork	1R2-1	1R2-200
15	Fork rubber bearing (small unit)		
16	Deflector	4R2-104	4R2-204

**Important:**  
Always exchange parts 6 and 8 together because of close tolerances required.



# Maintenance Manual LS8

## 7 Placards and markings

Numbers refer to placards, for positions of placards see drawings

### 7.1 LS8

#### LS 8 Checklist

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

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

>1< at under side of instrument panel

Tyre Pressure  
3 - 3.5 bar  
43.5 to 50.8 psi

For 4" wheel, on right landing gear door

Tyre Pressure  
3.5 bar  
50.8 psi

For 5" wheel, on right landing gear door

Tyre Pressure  
2.5 - 3.5 bar  
36.3 to 50.8 psi

Above tail wheel, when fitted

Maximum Baggage mass 5 kg / 11 lbs  
(Soft items only)

at main bulkhead

#### DG Flugzeugbau GmbH

TYPE LS 8 \_\_\_\_\_  
TCDS A.047 \_\_\_\_\_  
Serial No. 8xxx \_\_\_\_\_ Made in  
Registration D-xxxx \_\_\_\_\_ Germany

>4< Type placard at main bulkhead

**MINIMUM COCKPIT LOAD : \_\_\_\_\_ kg / lbs**  
Minimum Cockpit Load with empty tail tank: \_\_\_\_\_ kg/lbs

>2< under instrument panel cover

DG Flugzeugbau GmbH

Type: **LS 8** Serial Number: **8** \_\_\_\_\_

#### Data Placard

Airspeed Limits (IAS)	km/h	mph	Kt.
Winch Launch / Auto-Tow	140	87	76
Aerotow	190	118	103
In Rough Air	190	118	103
Never exceed (VNE)	280	174	151

Maximum Take-off Mass 525 kg (1157 lbs) including Water Ballast

Aerobatic manoeuvres not approved

#### mass Limitations

Maximum Cockpit Load \_\_\_\_\_ kg \_\_\_\_\_ lbs

**Minimum Cockpit Load** \_\_\_\_\_ kg \_\_\_\_\_ lbs

Minimum Cockpit Load with tail fin tank empty

and without tail battery \_\_\_\_\_ kg \_\_\_\_\_ lbs

Minimum Cockpit Loads for all combinations of tail tank and tail battery see Flight Manual pages 6-1/2.

Lighter pilots must compensate lack of mass as suggested in Flight Manual

>3< at right cockpit side

Ball of bearing

Must be fixed

at forward horizontal tail

attachment on vertical tail fin

Batt. I  
Batt. II  
OFF

Electrical switch positions

# Maintenance Manual LS8

## 7.2 LS8-a

### LS 8-a Checklist

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

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

>1< at under side of instrument panel

Tyre Pressure 3 - 3.5 bar 43.5 to 50.8 psi	For 4" wheel, on right landing gear door
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Tyre Pressure 3.5 bar 50.8 psi	For 5" wheel, on right landing gear door
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Tyre Pressure 2.5 - 3.5 bar 36.3 to 50.8 psi	Above tail wheel, when fitted
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Maximum Baggage mass 5 kg / 11 lbs (Soft items only)	at main bulkhead
---	------------------

<b>ROLLADEN-SCHNEIDER Flugzeugbau GmbH</b>			
TYPE	LS 8-a	_____.	
TCDS	402	_____.	
Serial No.	8xxx	_____.	Made in
Registration	D-xxxx	_____.	Germany

>4< Type placard at main bulkhead

<b>MINIMUM COCKPIT LOAD : _____ kg / lbs</b> Minimum Cockpit Load with empty tail tank: _____ kg/lbs
---

>2< under instrument panel cover

Rolladen-SchneiderFlugzeugbau GmbH			
Type: <b>LS 8-a</b>	Serial Number: <b>8</b>	_____	
<b>Data Placard</b>			
Airspeed Limits (IAS)	km/h	mph	Kt.
Winch Launch / Auto-Tow	140	87	76
Aerotow	190	118	103
In Rough Air	190	118	103
Never exceed (VNE)	280	174	151
Maximum Take-off Mass	525 kg (1157 lbs) including Water Ballast		
Aerobatic manoeuvres not approved			
<b>mass Limitations</b>			
Maximum Cockpit Load	_____ kg	_____ lbs	
<b>Minimum Cockpit Load</b>	_____ kg	_____ lbs	
Minimum Cockpit Load with tail fin tank empty			
and without tail battery	_____ kg	_____ lbs	
Minimum Cockpit Loads for all combinations of tail tank and tail battery see Flight Manual pages 6-1/2. Lighter pilots must compensate lack of mass as suggested in Flight Manual			

>3< at right cockpit side

Ball of bearing Must be fixed	at forward horizontal tail attachment on vertical tail fin
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Batt. I	Electrical switch
Batt. II	positions
OFF	

# Maintenance Manual LS8

## 7.4 LS8-18

### LS 8-18 Checklist

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

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

>1< at under side of instrument panel

Tyre Pressure 3 - 3.5 bar 43.5 to 50.8 psi	For 4" wheel, on right landing gear door
--	--

Tyre Pressure 3.5 bar 50.8 psi	For 5" wheel, on right landing gear door
--------------------------------------	--

Tyre Pressure 2.5 - 3.5 bar 36.3 to 50.8 psi	Above tail wheel, when fitted
--	-------------------------------

Maximum Baggage mass 5 kg / 11 lbs (Soft items only)	at main bulkhead
---	------------------

<b>ROLLADEN-SCHNEIDER Flugzeugbau GmbH</b>			
TYPE	LS 8-18		
TCDS	402		
Serial No.	8xxx	Made in	
Registration	D-xxxx	Germany	

>4< Type placard at main bulkhead

<b>MINIMUM COCKPIT LOAD :</b> _____ kg / lbs
Minimum Cockpit Load with empty tail tank: _____ kg/lbs
>2< under instrument panel cover

Rolladen-SchneiderFlugzeugbau GmbH			
Type: <b>LS 8-18</b>	Serial Number: <b>8</b>	_____	
<b>Data Placard</b>			
Airspeed Limits (IAS)	km/h	mph	Kt.
Winch Launch / Auto-Tow	140	87	76
Aerotow	190	118	103
In Rough Air	190	118	103
Never exceed (VNE)	280	174	151
Maximum Take-off Mass	525 kg (1157 lbs) including Water Ballast		
Aerobatic manoeuvres not approved			
<b>mass Limitations</b>			
Maximum Cockpit Load	_____ kg	_____ lbs	
<b>Minimum Cockpit Load</b>	_____ kg	_____ lbs	
Minimum Cockpit Load with tail fin tank empty			
and without tail battery	_____ kg	_____ lbs	
Minimum Cockpit Loads for all combinations of tail tank and tail battery see Flight Manual pages 6-1/2. Lighter pilots must compensate lack of mass as suggested in Flight Manual			

>3< at right cockpit side

Ball of bearing Must be fixed	at forward horizontal tail attachment on vertical tail fin
----------------------------------	--

Batt. I	Electrical switch
Batt. II	positions
OFF	

### 8.3 Permanent installation of equipment in baggage compartment

Equipment may be permanently installed:

- a) Attached to landing gear box >5< (not directly on the baggage compartment floor >4<!) using threaded spacers >1<, three of which are required per unit. Baggage compartment cover >4< has to be cut to insert spacers, see drawing.

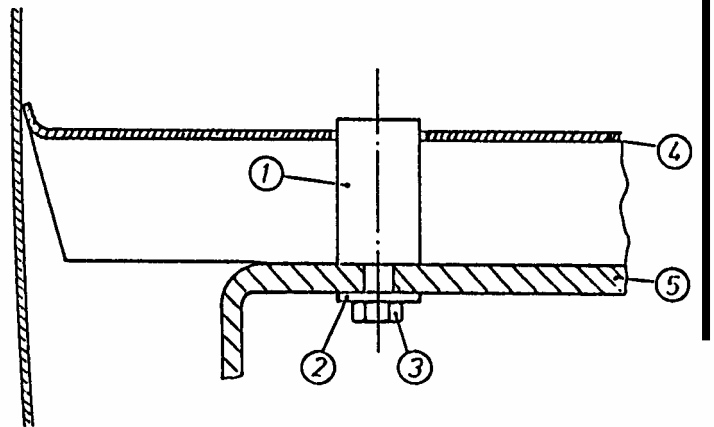
1 - Spacer, diameter 15 mm <0.6 in>,

**For 4''-wheel:**

Part No. 4R7-8d,  
length 23mm <0.906 in>.

**For 5''-wheel:**

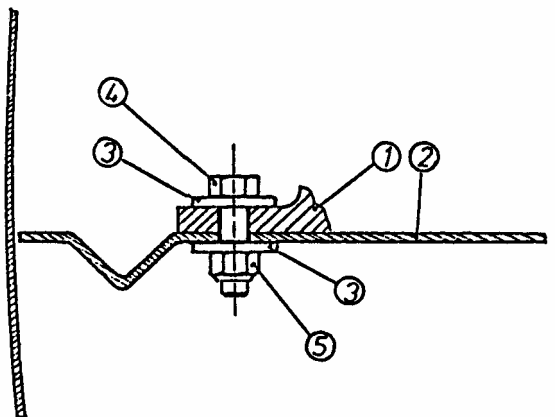
Part No. 4R7-96  
length 45 mm <1.772 in>.



- 2 - Washer B6.4 DIN9021-St  
outer diameter 18 mm <0.71 in>
- 3 - Bolt 6 mm thread\*10 mm  
DIN 85-A2, corrosion resistant
- 4 - Baggage compartment cover
- 5 - Landing gear box

- b) Attached to cover >2< behind spar connection and as close as possible to stiffening corrugation, approved for ELT and barograph only.  
See drawing.

- 1 - Flange of unit
- 2 - Rear baggage compartment cover
- 3 - Washer B5.3 DIN9021-St  
outer diameter 15 mm <0.59 in>
- 4 - Bolt 5 mm thread, length depending  
on flange thickness,
- 5 - Self locking nut, 5 mm thread, width  
over flats 8 mm, M5 DIN985-8





# Maintenance Manual LS8

## 12 Appendix

### 12.1 Equipment list

Serial No.: \_\_\_\_\_ | Reg. Signs: \_\_\_\_\_ | Year of Manuf.: \_\_\_\_\_

**Minimum equipment** (check function annually, calibrate every fourth year)

	Type	Manufac-turer	Serial No.	Position	Certificate	Function
Airspeed Ind.						
Altimeter						
Radio						
Microphone			---			
Loudspeaker			---			
Battery			---	Seat front		
Batteryholder			---	Seat front		
Lapbelt				Seat		
Shoulder strap				Main bulkh.		
CG-Hook	G 88	Tost		Landing gear		
Nose hook	E 85	Tost		Nose		
Thermometer	TF-00-59K	Störck	---	Below Panel	---	
Tail tank adapter	4 BR-169			Cockpit pocket		

**Additional equipment**

	Type	Manufac-turer	Serial No.	Position	Certificate	Function
TEK-Unit				Vert. Tail		
Variometer						
E- Variometer						
<i>4"-braked wheel</i>	Kobold 103- 20	Tost		Landing gear		
<i>5"-braked wheel</i>	Standard 113-20	Tost		Landing gear		

Place: \_\_\_\_\_ Date: \_\_\_\_\_ Stamp: \_\_\_\_\_ Signature: \_\_\_\_\_