0 Manual Contents

0.1 Log of Revisions

Rev no.	Pages	Reference	Rev. date
1	0-1, 0-3, 0-4, 0-5, 0-6, 0-8, 0-11, 1-27, 3-4, 4-16, 4-19, 4-21, 10-2, 10-8, 11-2, 11-18, 11-20	TN 8017, necessary changes to the power plant	Nov. 2010
2	0-1, 0-3, 0-7, 1-1, 1-7, 1-11, 1-12, 8-3	TN8019, wheel brake actuated by airbrake handle.	Feb. 2011
3	Title page, 0-1, 0-3, 0-4, 0-6 ÷ 0-8, 0-11, 1-3, 1-7 ÷ 1-9, 1-22, 1-29, 1-36, 1-40, 1-48a, 4-1, 4-21, 4-27, 6-4, 10-2a, 11-15, 9E2	ÄM LS8-1, Miscellaneous improvements Ser.no. 8474 and from ser. No. 8527 on	December 2011
4	0-1, 0-3, 0-7, 1-17, 8-1	TN 8021 Small tailwheel	January 2015
5	0-1, 0-4 up to 0-8, 1-28, 1-30, 3-7, 4-12, 4-13, 4-23, 4-24, 4-28, 6-1, 6-2, 9-1, 10-2, 10-2a, 10-9	Mechanical fuel pump Manual revision TN 8022	October 2015
6	0-1, 0-3, 0-6 ÷ 0-8, 0-12, 1-10, 4-11, 5-3, 5-4, 5-6, 6-2, 8-1, 8-2, 9-1, 9-2, 10-2	TN 8024 Manual revision, repair manual	June 2016
7	0-1, 0-3, 0-5, 0-7, 0-8, 0-11, 0-12, 3-8, remove 3-9, 9-1, diagrams 2 and 2a, file working instruction No. 1 for TN8026 at the end of the MM	TM8026 PU fuel hoses, limitation of life-time, replacement by new types of fuel hoses	February 2018

0.2 List of Effective Pages

Chapter	Page	Edition	Replaced	Replaced	Replaced
0	Title page	April 2005	Dec. 2011		
	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	See log of revisions			
	0-7	See log of revisions			
	0-8	See log of revisions			
	0-9	April 2005			
	0-10	April 2005			
	0-11	April 2005	Nov. 2010	Dec. 2011	Febr. 2018
	0-12	April 2005	June 2016	Febr. 2018	
	0-13	April 2005			
1	1-1	April 2005	Feb. 2011		
	1-2	April 2005			
	1-3	April 2005	Dec. 2011		
	1-4	April 2005			
	1-5	April 2005			
	1-6	April 2005	June 2016		
	1-7	April 2005	Feb. 2011	Dec. 2011	
	1-8	April 2005	Dec. 2011		
	1-9	April 2005	Dec. 2011		
	1-10	April 2005	June 2016		
	1-11	April 2005	Feb. 2011		
	1-12	April 2005	Feb. 2011		
	1-13	April 2005			
	1-14	April 2005			
	1-15	April 2005			
	1-16	April 2005			
	1-17	April 2005	Jan. 2015		
	1-18	April 2005			
	1-19	April 2005			
	1-20	April 2005			

0.2 List of Effective Pages (continued)

Chapter	Page	Edition	Replaced	Replaced	Replaced
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			
3	3-1	April 2005			
	3-2	April 2005			
	3-3	April 2005			
	3-4	April 2005	Nov. 2010		
	3-5	April 2005			
	3-6	April 2005			
	3-7	April 2005	Oct. 2015		
	3-8	April 2005	Febr. 2018		
	3-9	April 2005	removed	Febr. 2018	

0.2 List of Effective Pages (continued)

Chapter	Page	Edition	Replaced	Replaced	Replaced
5	5-1	April 2005			
	5-2	April 2005			
	5-3	April 2005	June 2016		
	5-4	April 2005	June 2016		
	5-5	April 2005	June 2016		
	5-6	April 2005			
	5-7	April 2005			
	5-8	April 2005			
	5-9	April 2005			
	5-10	April 2005			
	5-11	April 2005			
	5-12	April 2005			
	5-13	April 2005			
	5-14	April 2005			
	5-15	April 2005			
	5-16	April 2005			
	5-17	April 2005			
	5-18	April 2005			
6	6-1	April 2005	Oct. 2015		
	6-2	April 2005	Oct. 2015	June 2016	
	6-3	April 2005			
	6-4	April 2005	Dec. 2011		
7	7-1	April 2005			
8	8-1	April 2005	Jan. 2015	June 2016	
	8-2	April 2005	June 2016		
	8-3	April 2005	Feb. 2011		
9	9-1	April 2005	Oct. 2015	June 2016	Febr. 2018
	9-2	April 2005	June 2016		
	9-3	April 2005			

0.2 List of Effective Pages (continued)

Chapter	Page	Edition	Replaced	Replaced	Replaced
10	10-1	April 2005			
	10-2	April 2005	Nov. 2010 Febr. 2018	Oct. 2015	June 2016
	10-2a	Dec. 2011	Oct. 2015	Febr. 2018	
	10-3	April 2005			
	10-4	April 2005			
	10-5	April 2005			
	10-6	April 2005			
	10-7	April 2005			
	10-8	April 2005	Nov. 2010		
	10-9	April 2005	Oct. 2015		
11	11-1	April 2005			
	11-2	April 2005	Nov. 2010		
	11-3	April 2005			
	11-4	April 2005			
	11-5	April 2005			
	11-6	April 2005			
	11-7	April 2005			
	11-8	April 2005			
	11-9	April 2005			
	11-10	April 2005			
	11-11	April 2005			
	11-12	April 2005			
	11-13	April 2005			
	11-14	April 2005			
	11-15	April 2005	Dec. 2011		
	11-16	April 2005			
	11-17	April 2005			
	11-18	April 2005	Nov. 2010		
	11-19	April 2005			
	11-20	Nov. 2010			
	4E01-02	26.05.2005			
	2E01-01	28.07.2005			
	9E2	28.11.2008			
Working instruction N0. 1 for TN8026				Febr. 2018	

0.3 TABLE OF CONTENTS (continued)

		Page
7	**List of Special Tools**	7-1
8	**Markings and Placards**	8-1
9	**Parts List**	9-1
10	**Diagrams**	
	1 Engine	10-1
	2 Fuel System	10-2
	3 Extend-Retract Mechanism	10-3
	4 Propeller Stopper	10-4
	5 Extend Limit Sensor Unit	10-5
	6 Propeller Flange Assembly	10-6
	7 Engine Bay Doors	10-7
	8 Decompression System	10-8
	9 Engine Retard Cable	10-9
11	**Appendix**	
	Equipment List	11-1
	Weighing Report	11-3
	Control Surface Mass and -Moment	11-4
	Control Surface Deflections / Friction / Play	11-5
	25h-Inspection Checklist	11-7
	TB-AD-Accomplishment List	11-8
	TB-AD-Repetitive Inspections List	11-10
	Inspection Report	11-12
	Flight Test Report	11-13
	Annual Inspection Checklist	11-14
	Transponder Aerial Installation	11-19
	Working instruction for lock wire securing deco valve cable	11-20
	4E01-002 LS8-t Wiring diagram	
	E01-001 Cable routing plan (DIN A2 in airplane log) **up to ser. No. 8526 except for ser. No. 8474**	
	9E2 Wiring plan (DIN A 1 in airplane log) (**Ser.no. 8474 and from ser.no. 8527 on (ÄM LS8-1)**	
	Working instruction N0. 1 for TN8026	

0.4 LIFE LIMITED PARTS, MAINTENANCE INSTRUCTIONS

0.4.1 Repairs

Repair or replace damaged parts prior to next flight. Follow the instructions in the Repair Manual LS8.

Major repairs must be accomplished by an approved repair station or by an approved mechanic rated for composite aircraft structure work in accordance with DG repair methods.

Use only genuine spare parts.

For all aircraft under EASA regulations the following applies: According to part 21, subpart M to accomplish major repairs an approved repair instruction is required, see also TN DG-G-01 “Approved repair methods according to EU Commission Regulation 1702/2003 part 21, subpart M”

0.4.2 Airframe structural Life limit

Maximum FRP structural life limit of sailplanes and powered sailplanes is 12000 hours of flight. To reach this limit, special inspections according to chapter 2.4 of this manual at 3000, 6000, 9000 and beyond that at every 1000 hours of flight must be performed.

0.4.3 Life Limits of Equipment Items

a) All nuts and bolts at the powerplant (part No. 39001044) must be exchanged after 200h engine time together with the engine overhaul.

b) The **rubber mounts** (part No. 45002079 and 45002080) at the powerplant have to be exchanged after 200 h, together with the engine overhaul.

c) All **fuel lines** and the gasket for the drainer valve (part No. 60504402) have to be exchanged after 6 years.
TN8026: When instructions 3 of this TN have been accomplished the life time of the fuel lines (part. No. 39001065) is 10 years, the life time of the FPM fuel lines (part. No. 30092047 and 30092048) at the carburettors is 5 years.

d) The **spark plugs** (part No. 40050360) have to be exchanged after 25 engine hours.

c) **Safety harness webbing** life limited to 12 years after manufacture. Multiple point buckle and brackets on condition (Wear, corrosion etc.).

d) **Further parts**:
These parts as for instance wheels, gas struts, control system parts, pins and bushes are not life limited, but may require exchange based on condition (Wear, damage, corrosion).

3.5 Engine Maintenance (continued)

3.5.2 Every **5 years** a special engine inspection is due, which may be performed by either the engine manufacturer, an appropriately certified repair shop or an appropriately certified maintenance technician.
The FPM fuel hoses at the carburettors must be exchanged with this inspection, they are part of the SOLO material kit for this inspection.

3.5.3 After **200 engine hours** an overhaul is due, which may only be performed by the engine manufacturer.
Apart from work described in section 3.5.1 the following steps are required:
1. Dismount engine and send to engine manufacturer.
2. Use new bolts, nuts and rubber elements during re-installation of engine to tower.

3.5.4 After a **forced stop** a special inspection of the engine must be performed either by the engine manufacturer or an appropriately certified repair shop.

3.5.6 **After 6 years**

1. Replace the gasket of the drainer valve.
2. Replace all fuel lines
   TN8026: When instruction 3 of this TN has been accomplished the rubber fuel lines must not be exchanged after 6 but after 10 years. To allow this after 6 years all fuel hoses are to be inspected visually thoroughly and completely for any damage especially fissures, kinks or leaks. For the check switch on the ignition to run the electric fuel pump to demonstrate operating fuel pressure.
   Repeat this inspection every following year.

Note: The FPM fuel hoses at the carburettors must be exchanged every 5 years, they are part of the material kit for the inspection every 5 years, see 3.5.2..
Caution: New fuel lines must be flushed thoroughly with fuel after assembly.

3.5.7 **When required:**
When a greater amount of dirt is being found in the tanks, rinse tanks thoroughly and exchange fuel filters.

9. Parts List

In this list, the most important parts of propulsion system, electrical system as well as components of control surface sealing and water ballast system are provided.
For drawing numbers of control system parts refer to diagrams section 1. For drawing numbers of propulsion system brackets refer to diagrams section 10.

9.1 Engine parts

a) **necessary for the 25 hours inspection**

40050360	Spark plug S36 (Bosch W5AC Electrode gap 0,5 mm <0,02 in>) with pressed on screw cap, marked by red dot on insulator.
60507571	Fuel filter

b) **necessary for the inspection every 5 years**

60500204	„Maintenance instruction for the engine SOLO 2 350 after 5 years of operation" with material kit including the fuel hoses at the carburettors

c) **Spare parts**

45002085	Spark plug cap Denso, 5kOhm
60510601	Ignition coil for SOLO 2350
45002081	Exhaust gasket, 1.5mm thick (2 units required)
45002071	Decompression valve (2 units installed)
45002088	Lift cylinder for LS8-t, HG7000-12-225-30, modified
45002038	Gas strut 600N for extension-retraction mechanism
45002039	Gas strut 100N for propeller stopper
45002074	Propeller stopper rubber stop

Shock mounts for engine installation

45002079	Upper engine shock mounts (2 units installed)
45002080	Lower engine shock mounts (2 units installed)

Fuel system

60507608	Fuel quick connector KL-006-2-SL007 (Coupling for re-fuelling line)
60507550	Drainer CAV 110 (1/8" NPT)

Caution: Exchange O-ring (Avgas type) as delivered with drain valve against part No. 60504402 !

60504402	O-Ring for Drainer CAV 110 (Mogas type)
39001065	Material kit fuel lines (every 10 years)
60507561	Electric fuel pump Facet 40106 (engine fed and re-fuelling)
60500164	Mechanical fuel pump Bing 8080 (no more available)
60500257	Mechanical fuel pump Mikuni DF44-18 from ser. no. 8529 on and as spare part (for installation follow TN 8022)
45000162	Fuel cock 4M1-034