No.	Page	Description	Date
12	0.2÷ 0.9, 0.9a, 0.10 ÷ 0.12, 1.2, 1.5, 1.11, 1.14, 1.15, 1.27 ÷ 1.29, 1.33, 2.1, 2.4 ÷ 2.6, 3.3, 4.8, 5.1, 6.1, 6.2, 6.4, 8.3, 9.2, diagr. 1, 9, 11, encl. 4 pages 1, 2, 2a, 3, Z193, SI 67-07, remove 5EP50	Manual revision TN1000/18	February 2011
13	0.6, diagrams 8 and 9	Wheel brake TN1000/21	July 2011
14	0.2 ÷ 0.7, 0.10 ÷ 0.12, 1.3, 1.5, 1.11, 1.16, 1.29, 1.30, 2.1, 2.6, 3.1, 4.6, 4.10, 4.12, 4.13, 4.19, 4.20, 6.1, 7.1, 8.2, 8.3, diagrams: 2, 3, 9, Enclosure 4 pages: 4, 7	Manual revision TN 1000/24, New type 12V sockets and plugs, Changes due to TN 4603-14 of the Solo company (Exchange of the axle of the upper drive belt pulley on pages 4.19 and 4.20)	October 2014
15	0.2, 0.3 - 0.6, 0.9a, 0.11, 1.18, 3.5, 3.8, 4.20, 4.20a, 4.26, 4.28, 8.1 – 8.3 diagram 13, diagram 15, diag0ram 15a	Propeller adapter ring with elastomeric damper TN 1000/26 Alternative mechanical fuel pump TN 1000/28	August 2015
16	0.2 -0.6, 0.11, 0.12, 2.1, 2.2, 3.7, 6.3, 8.2, 8.3, diagram 2	Manual revision TN1000/32	July 2017
17	0.2, 0.3, 1.11	TN1000/34 small nose wheel	October 2017
18	0.2-0.7, 0.10 - 0.13, 2.6, 3.9, 6.1, 8.2, diagrams 15 and 15a, file working instruction No. 1 for TN 1000/38 at the end of the MM.	TN1000/38 PU fuel hoses, limitation of life-time, replacement by new types of fuel hoses	February 2018
19	0.2 - 0.6, 1.14, 2.1, 2.2, 4.9, 6.3 diagrams 7, 7a, 20, enclosure 4 page 6	TN1000/42 Canopy lock, rear locking rods, manual revision	July 2019
20	Title, 0.2-0.4, 0.6, 0.11, 0.12, 1.3, 1.27, 2.1, 2.6, diagrams 7a, 11, 20, enclosure 4 page 2 + 7	TN1000/45 Manual revision, raised max. TOW	October 2021
21	0.2, 0.3, 1.3, 1.4	TN1000/50 adjustment of elevator free play	December 2023
22	0.2, 0.5, 6.3	TN DG-G-16 Accelerometer LXNAV G-meter	April 2024
23	0.2, 0.3, 0.5, 0.6, 0.11, 0.12, 4.20, 7.1, 8.1, 9.2, diagram 13	TN1000/52 safety pins for propeller adapter ring with elastomeric damper element	August 2025

0.2 List of effective pages

Section	page	issued	replaced/	replaced/	replaced/
0	Title	June 2005	January 2007	Oct. 2021	
	0.1	see manual amendments			
	0.2		"		
	0.3		"		
	0.4		"		
	0.5		"		
	0.6		"		
	0.7	June 2005	January 2007	Febr. 2011	Oct. 2014
			Febr. 2018		
	0.8	"	Febr. 2011		
	0.9	"	Febr. 2011		
	0.9a	Febr. 2011	August 2015		
	0.10	"	Febr. 2008	March 2008	Oct. 2008
			Nov. 2008	Febr. 2011	Oct. 2014
			Febr. 2018		
	0.11	"	Febr. 2011	Oct. 2014	August 2015
			July 2017	Febr. 2018	Oct. 2021
			August 2025		
	0.12	"	January 2007	Febr. 2011	Oct. 2014
			July 2017	Febr. 2018	Oct. 2021
			August 2025		
	0.13	Febr. 2018			
1	1.1	June 2005	January 2007		
	1.2	"	Febr. 2011		
	1.3	"	Oct. 2014	Oct. 2021	Dec. 2023
	1.4	"	Dec. 2023		
	1.5	"	Febr. 2011	Oct. 2014	
	1.6	"			
	1.7	"			
	1.8	"			
	1.9	"	Febr. 2008		
	1.10	"	Febr. 2008		
	1.11	"	Febr. 2011	Oct. 2014	Oct. 2017
	1.12	"			
	1.13	"			
	1.14	"	March 2008	Febr. 2011	July 2019
	1.15	"	Febr. 2011		
	1.16	"	Oct. 2014		
	1.17	"			
	1.18	"	August 2015		
	1.19	"	March 2008		
	1.20	"			
	1.21	"			
	1.22	"	October 2006		
	1.23	"	October 2006		
	1.24	"			

0.2 List of effective pages (continued)

Section	page	issued	replaced/	replaced/	replaced/
	4.13	"	Oct. 2014		
	4.14	"			
	4.15	"			
	4.16	"	January 2007		
	4.17	"	January 2007		
	4.18	"	May 2008		
	4.19	"	Oct. 2014		
	4.20	"	Oct. 2014	August 2015	August 2025
	4.20a	August 2015			
	2.21	"	January 2007		
	4.22	"			
	4.23	"			
	4.24	"			
	4.25	"			
	4.26	"	August 2015		
	4.27	"			
	4.28	"	January 2007	August 2015	
	4.29	"			
	4.30	"			
	4.31	"			
5	5.1	June 2005	Febr. 2011		
	5.2	"			
6	6.1	June 2005	Febr. 2011	Oct. 2014	
	6.2	"	May 2008	Febr. 2011	
	6.3	"	July 2017	July 2019	April 2024
	6.4	"	Febr. 2011		
7	7.1	June 2005	Oct. 2014	August 2025	
8	8.1	June 2005	January 2007	August 2015	August 2025
	8.2	"	Dec. 2006	January 2007	Oct. 2014
			August 2015	July 2017	Febr. 2018
	8.3	"	May 2008	Febr. 2011	Oct. 2014
			August 2015	July 2017	
	8.4	"	January 2007		
9	9.1	June 2005			
	9.2	"	Febr. 2011	August 2025	

0.2 List of effective pages (continued)

diagram	issued	replaced/	replaced/	replaced/
1	May 2004	Oct. 2010		
2	Nov. 2001	Oct. 2014	July 2017	
3	June 2005	Oct. 2014		
4	Nov. 2001			
5	Nov. 2001	January 2007		
6	Nov. 2001	January 2007	March 2008 Not valid for 10-101, and from 10-128 on	
6a	March 2008			
7	Nov. 2004	July 2019		
7a	Oct. 2008	July 2019	Oct. 2021	
8	Nov. 2001	January 2007	July 2011	
9	June 2005	January 2007 Oct. 2014	Febr. 2011	July 2011
10	May. 2005	January 2007		
11	June 2005	Febr. 2011	Oct. 2021	
12	Sept. 2003	January 2007		
13	June 2005	August 2015	August 2025	
14	June 2005	October 2007		
15	June 2005	January 2007	August 2015	Febr. 2018
15a	Oct. 2006	Dec. 2006 Febr. 2018	January 2007	August 2015
16	June 2005	May 2008		
17	Febr. 2008			
18	Febr. 2008			
19	March 2008			
20	Nov. 2008	July 2019	Oct. 2021	
21	Nov. 2008	Oct. 2010		
22	Nov. 2008			
5EP34	25.01.90			
5V18	14.10.94			
10FW2	05.10.99			
10E4 issue A	28.10.08			
10E4 issue E	8.10.10			
10E102	14.09.05	5.12.05	26.01.06	
10E103	24.06.05			
Encl. 1	June 2005			
Encl. 2	June 2005	Page 1 January 2007	Pages 2, 3 May 2008	
Encl. 3	March 2008			
Encl. 4	Nov. 2008	Page 2, 2a , 7 Oct. 2010 Page 6 July 2019	1, 2, 2a, 3 Febr. 2011 Page 2,7 Oct. 2021	4, 7 Oct. 2014
SI 67-07	5.11.2007			
Z193	4.11.2009			
Working instruction No. 1 for TN1000/38			Febr. 2018	

0.4 Airworthiness limitations

0.4.1 Repairs

Repair or replace damaged parts prior to next flight. Follow the instructions of the DG-1000 repair manual for repairs of the airframe. Repairs outside the scope of DG-1000 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 or those methods approved by the national aviation authorities.
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 Life time of the airframe

The maximum allowable operating time for German composite sailplanes and motorgliders was proofed for 12000 flight hours.
The initial life time for the DG-1000T is 3000 flight hours.
Extension of the life time to 12000 hours can only be achieved by implementing a comprehensive inspection program for the aircraft to be carried out in accordance with data that has been approved by an applicable aviation authority, see section 2.4 of this manual.

Only for USA

Note: *The Airworthiness Limitations section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulation unless an alternative program has been FAA approved.*

0.5 Further service information

0.5.1 Life time of components

Use only genuine spare parts. For part. No.'s of all parts please refer to section 8.
Note: You will find detailed instructions for replacement of the life limited parts (if applicable) in section 4 of this manual.
After exchanging life limited parts change the "Summary of operating hours" for your motorglider by entering the replacement dates of the exchanged parts.

a) All **nuts and bolts** (part No. 39001031) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
b) The **drive belts** (part No. 60510829) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
c) The **rubber mounts** (part No. 45002079 and 45002080) at the powerplant have to be exchanged every 200 h, together with the engine overhaul.
d) All **fuel lines** and the gasket for the drainer valve (part No. 60504402) have to be exchanged every 6 years.
TN 1000/38: When instructions 3 of this TN have been accomplished the life time of the lines (part. No. 39001070) is 10 years. the life time of the FPM fuel lines (part. No. 30092047 and 30092048) between primer valve and carburettors is 6 years.
e) The **spark plugs** have to be exchanged every 25 engine hours, part no.40050360.
f) The **fabric straps of the safety harness** have to be exchanged according to the instructions of the respective manufacturer. If no limitations are given, exchange every 12 years, approved types see section 6.
g) The **rubber cord** in the elevator control system see section 1.2.6 has to be replaced at least every 6 years, part no. 390010401.
h) The **propeller adapter ring** with elastomeric damper element 10 M 067 for the propeller (introduced with TN1000/26) has to be exchanged every 50 engine hours or every 5 years, whichever comes first.
Life time of a propeller adapter ring retrofitted with safety pins (10 M 067 version b), which is 4 years old or older, may be extended after a positive inspection at DG by one year after inspection. The maximum permissible life time of 50 hours is still applicable.
i) The **eccentric axle** of the reduction gear (propeller axle) Solo part no. 2031211-V2 has to be replaced every 50 engine hours.
j) The **bearings of the propeller axis** have to be exchanged every 15 years according to Solo TN 4603.

0.5.2 Service times for other than life limited parts

The **brake fluid of the wheel brake (option)** has to be exchanged every 4 years (types see section 1.6.2).

Note: All **other components** like propeller, 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.

9. If you find any seizing marks inside of the aluminium clamp remove them with fine abrasive paper.
10. Prior to reinstallation apply a thin film of oil to the axis.
11. Reassembly is the reverse of removal.

Caution: Removal of the pulley from the axis and reassembly must be performed by the Solo company.

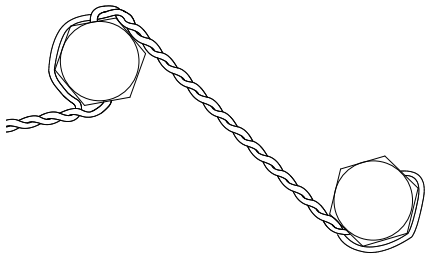
Caution: Run the engine for approx. 30 minutes after exchanging the belts, then measure the drive belt tension again and adjust if necessary.

4.10.2 Mounting the propeller

The propeller adapter ring with elastomeric damper element 10 M 067 is mounted to the upper drive belt pulley using the stud bolts in the adapter. Apply 8,4mm Schnorr lock washers and Thermag M8 nuts using a 12mm spanner. Tightening torque of the propeller adapter nuts is 20 Nm (15 ft lb). Use new self-locking nuts each time when assembling the propeller adapter.
The propeller adapter ring with safety pins (10 M 067 version b or newer) must be aligned in a manner, so the safety pins are placed perpendicular to the propeller blades, see diagram 13.
Tightening torque of the propeller bolts is 20 Nm (15 ft lb) applied at the bolt heads. Tighten the bolts crosswise (torque wrench with 13mm socket and 13mm open end spanner).

Secure the propeller bolts as follows:
Use lockwire with min. 0.8 mm (0.03 in.) diameter.

a) Slide the wire through the hole in the bolthead and bend it around the head. The wire should run tangential to the bolthead so that it secures the bolt clockwise to tighten it. Direct the end of the wire which was laid around the head underneath the wire which runs through the hole.
b) Twist both ends of the wire clockwise up to the other bolthead. Slide the upper wire through the hole in the bolthead and bend the other wire around the head. Twist with max. 8 rotations per inch.
c) Direct the end of the wire which was laid around the head underneath the wire which runs through the hole. Twist the ends anticlockwise min. 3 max. 8 rotation. Cut off the surplus and bend the end to prevent injuries.



Caution:
Don't damage the lock wire. Also, minor scratches or removal of the galvanisation have to be considered as damage.

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 13
SW 7	SW 14
SW 8	SW 17
SW 9	11/16" = 18 mm
SW 10	SW 19
SW 12	SW 22

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.) for determination of control surface moments (see section 1.10)

H Spring balance max. reading 100 N (22 lbs.) for determination of airbrake overcentre locking moments (see section 4.4.2

I Nicopress tool 64 – CGMP for cable connections

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

K 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.

L Refuelling hose for fuselage fuel tank Z155/1

M Torque wrench range 0 - 50 Nm (0 - 370 ft lb) with socket wrenches 10, 13, 17, 19 mm and 21 mm (13/16 in.) for sparkplugs, Allen key inserts 3, 4, 5, 10 mm and an open end wrench attachment 12 mm

N Wrench for spark plugs 21 mm (13/16 in.)

O Spring balance max. reading 200 N (44 lbs.) for measuring belt tension

P Crimp tool for clamps XO for 6mm bungee (bungee for retaining cable)

8 Partlist

In this list you will find only parts of the powerplant, the electrical system and control surface seals and turbulators.
Please find the part no's of the control-system parts and of the metal fittings of the powerplant in the following diagrams.

8.1 Parts for the powerplant

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

60510806 Spark plugs Bosch W5AC electrode gap 0.5 mm (.02 in.)
Caution: The removable cap must be secured with a little bit of Loctite 638 on the thread prior to installation
40050360 Spark plug S36 (Bosch W5AC electrode gap 0.5 mm (.02 in.)) with screw cap fastened to the thread by crimping, marked with a red dot of paint on the insulator
60507571 MANN-fuel filter 500009180 WK 31/2(10)
60500150 Gaskets for exhaust manifold (2 pieces needed)
60500142 Air intake filter
70002200 Oil for air filters with cotton fabric K&N 99-05046

b) **Spare parts**

45002085 Spark plug connector PVL, 5kOhm, SOLO Nr. 2300701
60510601 Ignition coil Prüfrex MTZ 120/1 or compatible
60500131 Starter motor: S.J.C.E. Typ 101, 12 Volt, 0,4 kW
60510829 Poly-V belt 4PK755 (4 ribs, profile PK) length: 755 mm
39001031 Exchange kit nuts and bolts for 200 h overhaul
45002081 Gasket for muffler (2 pieces necessary)
60000209 Gas strut for ext.-retr. drive
G10 23 0300 1 0676 AU19 GZ10 01000N
60000154 Gas strut for propeller-stopper
G06 15 0070 0 0222 AG27 GZ07 00080N
60000742 Rubber-buffer D4045 for propeller-stopper and landing-gear over-centre lock
60502240 Spindle-drive HG 7000-12-300-30
41070460 CHT probe
60500163 Seal gasket (for CHT probe)
60001115 Clamps XO for 6mm bungee (bungee for retaining cable)
41070671 Propeller adapter ring with elastomeric damper element 10M67

Rubber mounts for engine suspension:

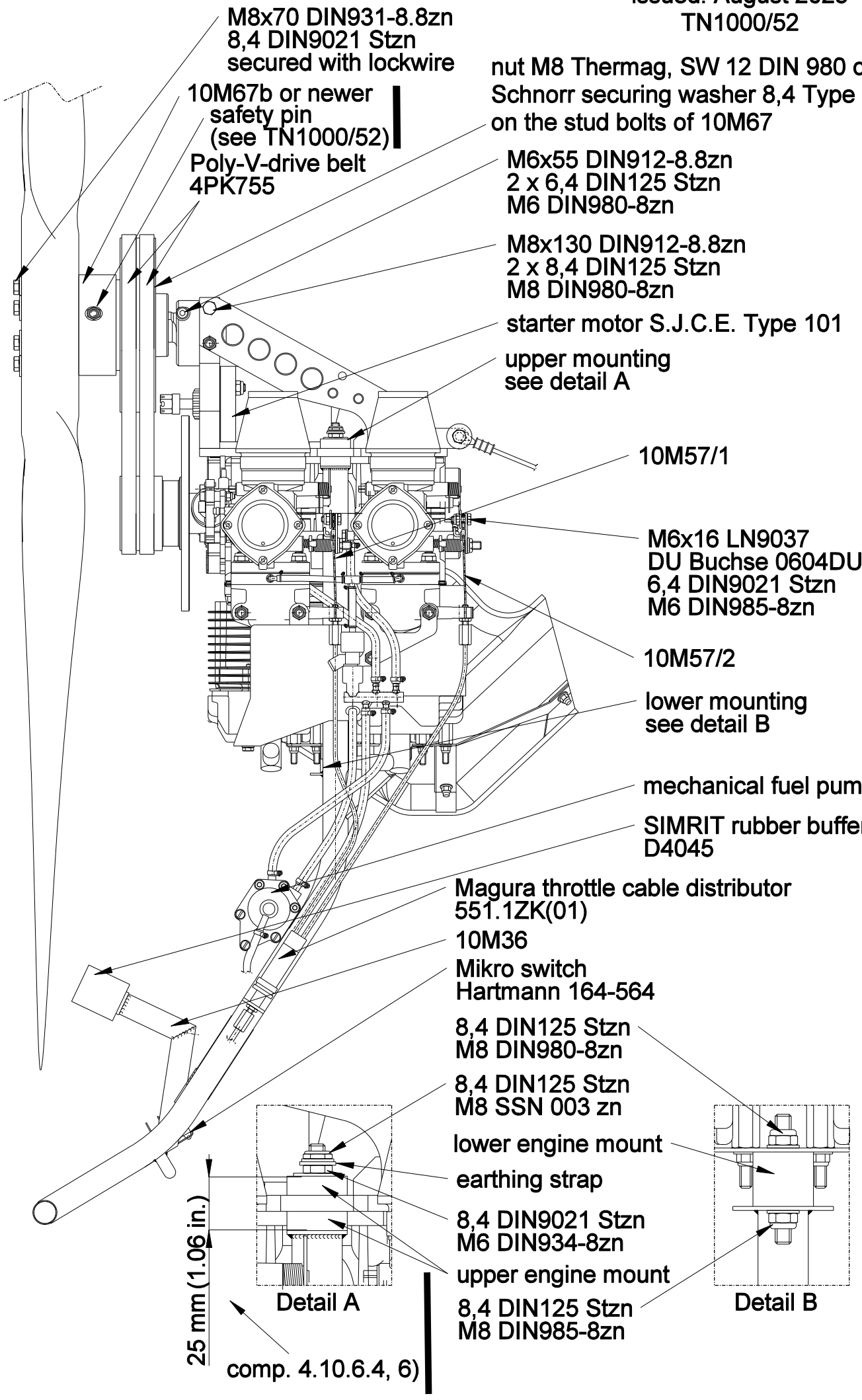
45002079 Upper engine mount (4 pieces necessary)
45002080 Lower engine mount rubber buffer (2 pieces necessary)

9.2 Checklist for checks and maintenance work

according to sect. 3.6.1 of the maintenance manual

h	25	50	75	100	125	150	175	200	225	250	275	300
1												
2												
3												
4												
5												
6												
7												
8												
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11												
12												
13												
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20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
executed by												
place												
date												
engine hrs												
signature												

Each item shall be signed off or the data which was determined shall be entered.
The list is valid for the engine hour range:.....h - .....h
DG-1000T Ser.no. 10-.....TB.....


M8x70 DIN931-8.8zn
8,4 DIN9021 Stzn
secured with lockwire
10M67b or newer
safety pin
(see TN1000/52)
Poly-V-drive belt
4PK755
nut M8 Thermag, SW 12 DIN 980 cu
Schnorr securing washer 8,4 Type S
on the stud bolts of 10M67
M6x55 DIN912-8.8zn
2 x 6,4 DIN125 Stzn
M6 DIN980-8zn
M8x130 DIN912-8.8zn
2 x 8,4 DIN125 Stzn
M8 DIN980-8zn
starter motor S.J.C.E. Type 101
upper mounting
see detail A
10M57/1
M6x16 LN9037
DU Buchse 0604DU
6,4 DIN9021 Stzn
M6 DIN985-8zn
10M57/2
lower mounting
see detail B
mechanical fuel pump
SIMRIT rubber buffer
D4045
Magura throttle cable distributor
551.1ZK(01)
10M36
Mikro switch
Hartmann 164-564
8,4 DIN125 Stzn
M8 DIN980-8zn
8,4 DIN125 Stzn
M8 SSN 003 zn
lower engine mount
earthing strap
8,4 DIN9021 Stzn
M6 DIN934-8zn
upper engine mount
8,4 DIN125 Stzn
M8 DIN985-8zn
Detail A
Detail B
25 mm (1.06 in.)
comp. 4.10.6.4, 6)