**Manual amendments**

| No. | Page | Description | Datem |
|---|---|---|---|
| 1 | 2, 3, 4, 25, 28, 49, 86, 91, 93, 8E101, 8E105 | Manual revision TN 873/27 | Nov. 2001 |
| 2 | 1 - 5, 43, 44, 47, 92, diagram 11 | Fuel hoses TN 800/44 | October 2016 |
| 3 | 1-6, 33,34, 44, 93, diagrams 3, 9 | manual revision, coolant hoses TN800/45 | July 2017 |

# 0. Airworthiness limitations

## 0.1 Repairs

Repair damaged wings, fuselage and tail surfaces prior to next flight. Follow the instructions of the DG-800 B repair manual. Repairs outside the scope of the DG-800 B 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.

## 0.2. Life time of the airframe

The maximum allowable operating time for composite sailplanes and motorgliders is 12000 flight hours. Therefore inspection according to sect. 2.4 of this manual has to be excecuted at 3000 h, 6000 h and every 1000 hours following thereafter.

## 0.3. Life time of components

a) The following components of the power plant have to be replaced after 400 engine hours.
   1. All nuts and bolts on the engine
   2. The bearings of the upper drive belt pulley

b) All **flexible fuel lines and the gasket of the drainer** have to be exchanged after 6 years.
   **TN 800/44:** When instructions 2 and 3 of this TN have been accomplished the life time of the flexible fuel lines is 10 years.

c) The **hoses of the cooling system** have to be exchanged after 6 years.

**Note:** The **coolant** (type see section 1.11.2) **ha**s to be exchanged after 6 years.

d) The **drive belt** has to be exchanged after 50 engine hours.

e) The **spark plugs** have to be exchanged after 25 engine hours.

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 after 12 years.
g) **Flexible fuel bags in the wings (option)**
Type Uniroyal (rubber): these will have to be exchanged after 10 years.
Type HFK (plastic): see Mounting and testing instructions for HFK TLF.

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

## 0.4 Service time, maintenance documents of equipment and components

Follow the instructions of the respective manufacturer:

a) Operating Manual for Safety Tow Releases Series: Europa G 88 Safety Tow Release
latest approved version.

And if installed:
Operating Manual for Tow Releases Series: E 85 Nose Tow Release
latest approved version.

b) Safety harness: instructions of the manufacturer latest approved version.
Approved types see section 6.3.

c) Minimum instrumentation: instructions of the manufacturer.
Approved types see section 6.1, 6.2 and 6.4.

d) Engine: Manual of the engine manufacturer latest approved version.

e) Propeller: Technoflug Operation and maintenance manual No. P3 latest approved version.

## 0.5 Power plant trouble shooting

Please find a checklist in the DG-800B flight manual section 8.8.

## 2. Inspections

### 2.1 Daily inspection

see flight manual DG-800B section 4.3..

### 2.2 Regular inspections

**A Annual inspection**

- Execute all items of the daily inspection see flight manual section 4.3.
- Check the rudder cables for wear especially around the S tubes on the rudder pedals. Worn rudder cables should be replaced (see section 4.2.
- Check the sealing of the rudder (see section 4.9.5.
- Inspect all bolted connections and locking devices ie. locknuts, split pins etc.
- Check all metal parts for adequate greasing and rust prevention. (see section 3.3).
- Check the control surface deflections (see sections 1.2 up 1.4).
- Check the free play in all control circuits (see section 1.2 up to 1.6)
- Check the fore and aft play of the wings (see section 1.10).
- Check the canopy emergency releases according to section 7.15 of the flight manual.
- Check the tension of the lines of the waterbag attachment (see section 4.1.).
- Landing gear: Check if the bolted connection between actuating lever and rear upper fork is tightened?
- Check all accessible drain and ventilation holes if clogged, especially on the lower fuselage side.
- Check if the powerplant has been serviced according to section 3.5.1.
- Check the friction brake of the throttle control (see sect. 1.11.8).
  Check the torque of the propeller bolts see sect. 3.5.1 item 26 of this manual.
- Tow hooks: The operating and maintenance instructions for the release mechanisms, see sect. 0.4 of this maintenance manual have to be followed.
- All-up weight and centre of gravity: These should be checked at least every 4 years during the annual inspection.

**B) Special inspections**

**Tow hook:**

After a wheel up landing, the tow hook mechanism is to be carefully checked for any damage.

After a landing where the fuselage nose has touched the ground, the nose tow hook (Option) is to be cleaned and to be checked for correct functioning.

**C.G. weighing:**

After all work which may influence the C.G., but at least every 4 years with the annual inspection.

**C) Wing fuel bags, every 5 years**

Check for external wear and execute pressure check with 0.15 bar (2.2 psi), tanks installed in the wings.

6. Check the function of the primer valve and nozzle (engine must be cold).
   First disassemble the positive wire from the starter motor and insulate the wire. Remove the intake air filters.
   Switch the primer switch in auto position.
   Switch on DEI and ignition:
   Press the starter button. The DEI must show P on the center display and fuel must be injected via the nozzles into the intake manifolds of the carburettors. Test only for 2-3 seconds, otherwise you may flood the engine. Switch off the ignition.
   Check the hoses which connect the primer valve to the carburettors for any damage.
7. Check all fuel lines for any wear, fissures, kinks, tight fit and leaks. For the check switch on the ignition to run the electric fuel pump to demonstrate operating fuel pressure.
8. Check the intake airfilters for excessive dirt and wear. Reinstall the filters.

8.a With the airfilter still removed check the screws of the throttle valve and of the choke valve (if existent) for tight fit.

9. Oil all cables and associated levers and check for proper functioning. Replace cables when worn. (see 1.11.8 and 1.11.9).
10. Clean engine and radiator
11. At the first 25 hr.check, tighten all cylinder head nuts with 2.2 daN m (16 ft.lb.).
12. Check cooling system for leaks, refill coolant if necessary, check antifreeze.
    Check the radiator and its mounting.
    Check the coolant hoses.
    To check the water pump, switch on the ignition. You should hear a buzz.
13. a) Remove the exhaust manifold.
    b) Check the cylinders and pistons via the exhaust ports for seizing marks, for carbon remains and for sticking piston rings. Iluminate the combustion chamber and check for combustion deposits. Use a torch and mirror for these checks.
    If seizing marks are detected the engine must not be used.
    Excessive combustion deposits have to be removed.
    With sticking piston rings the cylinders must be removed. Take out the piston rings and clean the grooves and the rings or replace the rings.
    Remove also any combustion deposits inside the pistons.
    **Caution:** Necessary repair work must be acomplished at a certified repair station rated for such engine work.

## 8.2 **Parts for the electrical system**

| | |
|---|---|
| 60510891 | Battery HDS 6120 6V 12Ah equipped with screw - terminals |
| 40876050 | DEI MC801 |
| 40876030 | Control unit 8E103 (including relays and regulator) |
| 60510555 | Ignition electronic boxes IGN 0295 |
| 60510440 | Fuse 5 x 20 0.2A mt for '' |
| 60510556 | Ignition coil SEM 10079000 P17 |
| 60510463 | Limit-switch engine retracted 164-56401 modified by soldering a plate to the actuator |
| 60510464 | Limit-switch engine extended and propeller aligning position 164-503 |
| 60510476 | Manual extension-retraction switch APR 20-647H |
| 60510475 | Switch to switch over from normal to emergency extension-retraction APR 20-646H |
| 60510813 | Master switch Bosch 0341001001 |
| 60510812 | Key for master switch Bosch 0341001001 |
| 60510478 | Engine master switch 631 H/2 15A |
| 60510370 | Starter button SECME 07 17801 21 |
| 60510392 | Circuit breaker Klixon 7277-2-10A for spindledrive Magnetic GST 2011 |
| 60510391 | Circuit breaker Klixon 7277-2-15A for spindledrive Stross ELT 10 |
| 60510385 | Circuit breaker ETA 2A |
| 60510386 | Circuit breaker ETA 3A |
| 60510387 | Circuit breaker ETA 4A |
| 60510384 | Circuit breaker ETA 5A |
| 60510388 | Circuit breaker ETA 10A |
| 60510436 | Fuse 535257 60 A for batteries |
| | |
| 60510550 | Proximity switch Insor INCT 1212 |
| 60510796 | Socket BSB 12 (in main bulkhead) |
| 60510785 | plug BSK12 for socket BSB 12 |

# Quer-, Wölbklappen- und Bremsklappensteuerung im Rumpf DG-800B MW Diagramm 3
# Aileron, wingflap and airbrake control circuits, fuselage side diagram 3





Ausgabe: Juli 2017 TM 800/45
issued: July 2017 TN 800/45

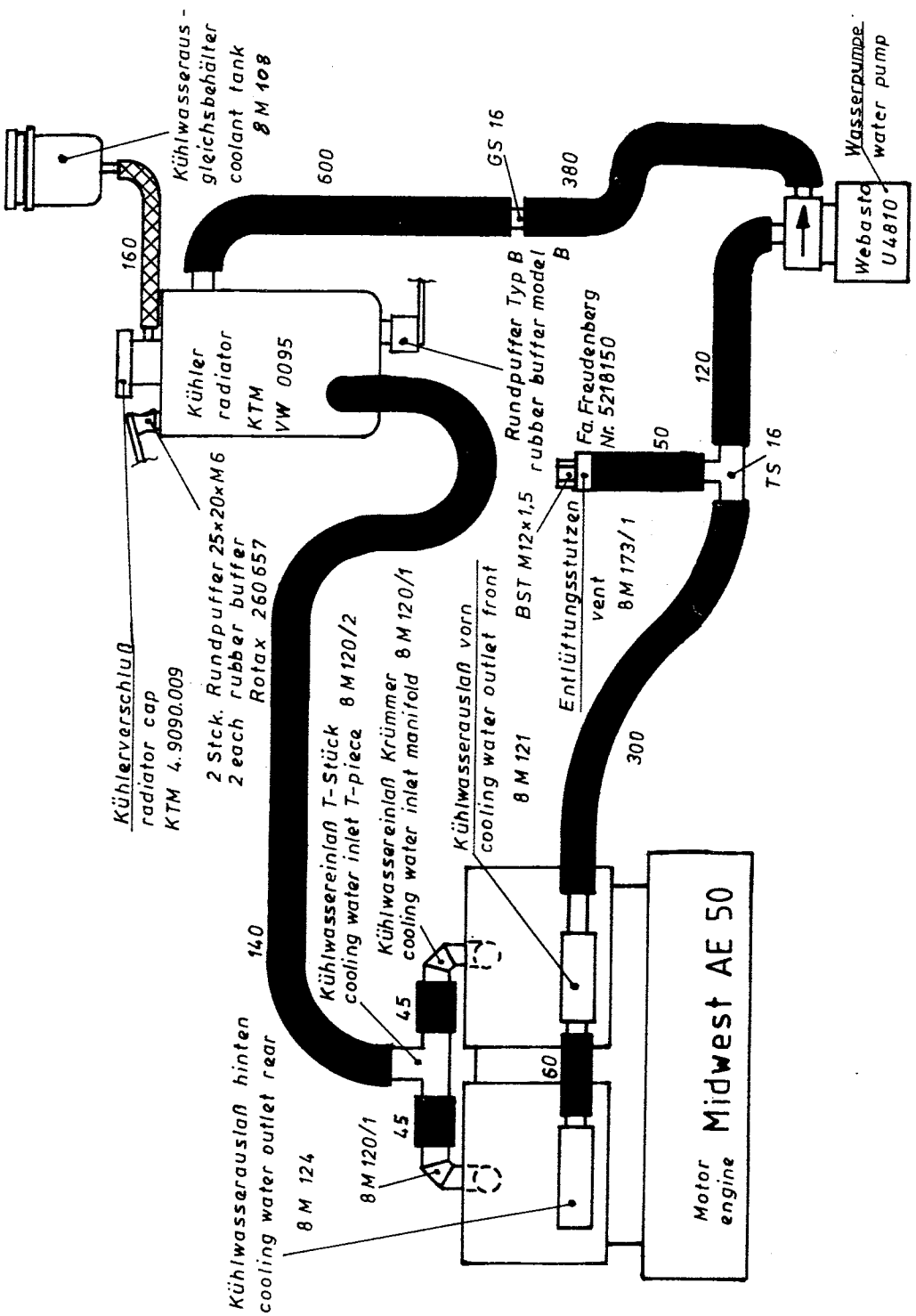
# Kühlwassersystem DG-800 B (cooling system)

Diagramm 9

Wasserschläuche : Schläuche hergestellt aus 2 Stück Artikel Nr. 60504053
water hoses : coolant hoses made from 2 pieces Artikel Nr. (part No. 60504053

Metallgeflecht ⌀ 6 mm innen
metal fabric shield inside dia. 6 mm

250 Länge length mm




Ausgabe Juli 2017 TM800/45
Issued July 2017 TN800/45