

## Manual amendments

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1	28, 30, 46, 92, 93, diagr. 7, 9, 11a	Modifications of the powerplant: Fuel system, cooling system from ser.no. 8-103 on	Dec. 1997	
2	20, diagr. 13a	Propellerbrake with band-brake from ser.no. 8-117 on, on choice	Dec. 1997	
3	92	Main-bearings of the powerplant from ser.no. 8-118 on	Dec. 1997	
4	14, diagr. 2	Modification of the landing gear lock from ser. no. 8-131 on	Dec. 1997	
5	2, 3, 4, 4a, 18, 19, 25, 27, 29, 30, 31, 43-46, 49, 57, 63, 67, 68, 69, 90, 91, 92, diagram 13 plan 8EP38 drawing W40	Manual revision TN 873/12	Febr. 1999	
6	93	Fuses ÄM 800/5/99	Febr. 1999	
7	22, 23, 28, 44, 92 diagram 11b	Fuel pumps in line from ser.no. 8-155 on ÄM 800/6/99	Febr. 1999	
8	3, 4, 43, 61, 91, 93, diagram 11c	Powerplant, manual revision TN 873/13	June 1999	

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**3.5 Servicing the Engine**

**Caution:** If you don't operate the engine for periods longer than 2 months you must preserve your engine according to the instructions in the engine manual. The same applies for any overseas transportation.

**3.5.1 25 hour inspection**

The following checks and maintenance work should be done every 25 hours engine time. Items 1, 2, 3, 10, 13 and 25 should be executed at least 1 year after the last 25 hour inspection, preferably with the annual inspection. In your aircraft log you will find stickers on which you can enter the next maintenance dates. Fix these stickers in a visible place in the cockpit, preferably on the right side console. Checklists for this maintenance work are in the enclosures of this manual. Please complete the checklist when executing the inspection and file it in the aircraft log.

1. General visual inspection.
2. Change spark plugs.  
Check if the spark plug connectors have a tight fit on the spark plugs after you have exchanged the spark plugs. If not, the connector must be replaced.
3. Exchange the fuel filter. Filter types see sect. 8. Paper filters should under **no** circumstances be used. Assembly see diagram 11c.
4. Measure fuel flow (see sect. 1.13.3). Disconnect the hose at the T-junction behind the rear carburettor. Hold the hose into a measuring container. Switch on the electric fuel pump with the ignition switch. Determine the time for supplying 1 litre of fuel. For the measurement a minimum of 10 l of fuel should be in the fuselage tank. Note down the value, max. time is 90 seconds for 1 litre.
5. Remove the carburettor cover and membrane, remove the needle valve, flush the carburettor by switching on the fuel pump. The fuel must spout out as a powerful stream. If a large amount of fuel leaks out of the carburettor when you remove the membrane this is a sign that:
  - a) a dirt particle prevents the needle valve from closing completely.
  - b) the main nozzle is clogged (dirty), so that the engine can't receive the full amount of fuel. In this case you have to disassemble the main nozzle and to clean its chamber, see sect. 1.13.7 2a), b).
  - c) Check the screw nipple at the connection of throttle cable for damage.
- 6.a) Check the filter of the primer valve. The filter is installed in the hose connector below the primer valve. Loosen the hose clamps and take out the connector. Flow fuel through the filter in reverse direction and check that as the fuel comes out of the filter any dirt is removed. Reinstall the connector.

#### 4.13 Removal and installation of the engine extension mechanism tension gas-strut

##### a) Removal:

1. Take a piece of tube with 12mm (.47 in.) inside diameter and 80 mm (3.15 in.) length and cut it to receive two halfshells.
2. Retract the powerplant until the gas-strut is extended a little further than 80mm.
3. Place both halfshells onto the piston rod of the gas-strut. Extend the engine a little further, so that the two halfshells block the gas-strut.
4. Remove the gas-strut.

##### b) Installation is the reverse of removal

##### c) Installation of a new gas-strut

1. Extend the new gas-strut with a pulley block to place the halfshells or
2. Install the gas-strut to the front mounting point in the aircraft and produce a metal plate with two holes diameter 8 mm (.32 in.) 80 mm (3.15 in.) apart. Bolt this plate to gas-strut and propellermount and retract the engine to extend the gas-strut far enough to place the halfshells. Remove the plate.

##### d) Securing the rod end to the piston rod

The rod end of the gas-strut must be glued onto the thread of the piston rod with Loctite 638. The correct securing is marked by a red dot of marking paint on piston rod and rod end. After removal of the gas-strut check if the marking is existing and not damaged. If not the rod end must be screwed off and glued on again.

The same applies with installation of a new gas-strut.

Remove any remains of Loctite and any dirt according to the instructions in section 4.8. To tighten the screwed connection, hold the piston rod against rotation using a small pipe wrench, wrap a piece of fine emery cloth around the end of the piston rod to protect the rod.

#### 8. Partlist

In this list you will find only parts of the powerplant and the electrical system.

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

**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) with screw cap fastened to the thread by crimping, marked with a red dot of paint on the insulator

60507570 Fuel filter Entrata IN straight CH27

60507569 Fuel filter Entrata IN 90° elbow CH28

60500150 Gaskets for exhaust manifold (2 pieces needed)

60500142 Airfilter

70002200 Oil for airfilters with cottonfabric K&N 99-05046

###### b) Spare parts

60510821 Spark plug connector Bosch 0356351032 1kΩ

60500127 Nut for spring coupling M 8 for exhaust muffler

60500128 Spring for spring coupling M 8

60502500 Starter motor: DENSO 128 000-1671 12 V  
or DENSO 12 000-1679 12 V

60500155 Gasket for coolant outlet

60504012 Drive belt Poly Chain GT 8 M 2400-36

59332050 Front bearing for upper pulley 32205B

59320320 Rear " " " " 320/32X

52200054 Securing washer 20 DIN 462 for upper pulley front bearing

30002028 Special grease for upper pulley bearings SKF LGMT3

39001026 Exchange kit nuts and bolts for 400 h overhaul

60000183 Gas spring for ext.-retr. drive

A8 B1 Z-3-230-381/900N

60000182 Gas strut for muffler frame

E1 E1-76-040-130/150N

60507561 Electric fuel pump Facet 40106

60001200 Electric water pump Webasto U4810

60504051 Radiator KTM VW 0095

40871990 Extension-retraction spindledrive type

Magnetic GST 2011-200-01 or

60505000 Extension-retraction spindledrive type Stross ELT 10

40872873 Brake pad for propellerbrake (glued to mounting bracket)

40050350 Screw nipple S35 (throttle cable to carburettor)

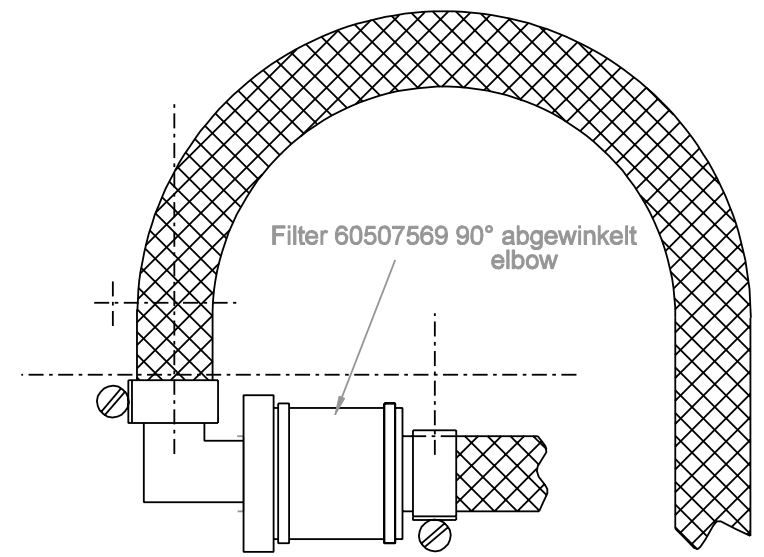
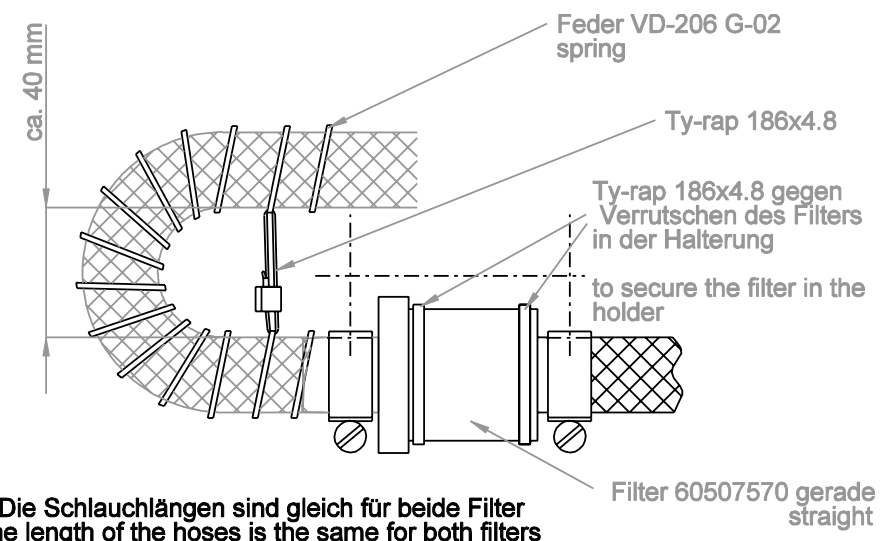
8.2 Parts for the electrical system

- 60510891 Battery 6V, 10 or 12Ah equipped with screw - terminals
- 40876070 DEI MC802
- 40876030 Control unit 8E103
  
- 60510464 Limit-switch engine retracted and engine extended 164-574
- 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-215A
- 60510370 Press-button SECME 07 17801 21 for starter and **from ser.no. 8-103 on** for test of second fuel pump
  
- 60510392 Circuit breaker Klixon 7277-2-10A for spindledrive Magnetic GST 2011
- 60510391 Circuit breaker Klixon 7277-2-15A for spindledrive Stross ELT 10
- 60510391 **From ser.no. 8-150 on** Circuit breaker Klixon 7277-2-4A
- 60510385 Circuit breaker ETA 2A
- 60510386 Circuit breaker ETA 3A
- 60510387 Circuit breaker ETA 4A **not applicable from ser.no. 8-150 on**
  
- 60510388 Circuit breaker ETA 10A
  
- 60510436 Fuse 535257 60 A for batteries
- 60510440 Fuse 250V 0.2A 5x20 m for fire warning light
- 60510439 **From serial no. 8-103 on:** Fuse 250V 1.4A 5x20 m for second fuel pump
  
- 60510550 Proximity switch Insor INCT 1212
- 40877350 Proximity switch ready assembled with wiring and plug
  
- 60510796 Socket BSB 12 (in main bulkhead)
- 60510797 plug BSK12 for socket BSB 12

DG-800B Solo 2625

Diagramm 11c

Einbau des Kraftstofffilters  
Installation of the fuel filter



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