DG Flugzeugbau GmbH
Otto-Lilienthal-Weg 2 / Am Flugplatz • D-76646 Bruchsal • Germany
Postbox 1480, D-76604 Bruchsal • Germany
Tel. 07251 3020-100 • Telefax 07251 3020-200 • eMail: dg@dg-flugzeugbau.de
Spare part and material sales: Tel. 07251 3020-270 • lager@dg-flugzeugbau.de
www.dg-flugzeugbau.de

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

M A I N T E N A N C E M A N U A L

for the

M O T O R G L I D E R

DG-500MB

Model: DG-500MB

German Data Sheet No.: 843

Factory Serial No.: _____

Year of Construction: _____

Registration No.: _____

Manual amendments

No.	Page	Description	Date	Signature
1	2, 3, 4, 34, 57, 63, 64, 93, drawing W57	Engine, powerplant drive belt tension, DEI- circuit breaker, manual revision TN 843/13	Oct. 1999	
2	2, 3, 4, 11, 19, 27, 45, 47, 48, 49, 51, 54, 62, 71, 79, 91 wiring diagram 5E101, drawing W40	Greasing schedule, new attachment of the throttle cable from ser.no 5E213 on, manual revision TN 843/16	Jan. 2001	

	Content	Page	LBA approved
0	Airworthiness limitations	5	Nov. 98
		6	" "
1.	**System description and adjustment data**		**issued**
1.1	Wing and tailplane setting data	7	Nov. 98
1.2	Elevator control and trim system	8	" "
	" "	9	" "
1.3	Rudder control	10	" "
1.4	Aileron and wing flaps control	11	Jan. 01
	" "	12	Nov. 98
	" "	13	" "
1.5	Airbrake control and wheel brake	14	" "
1.6	Undercarriage	15	" "
	" "	16	" "
1.7	Tow hooks	17	" "
1.8	Water ballast system	18	" "
1.9	Massbalance and weights of control surfaces	19	Jan. 01
1.10	Fore and aft play of the wings	20	Nov. 98
1.11	Power plant	21	" "
	" "	22	" "
	" "	23	" "
1.12	Retraction-extension mechanism	24	" "
1.13	Fuel system	25	" "
	" "	26	" "
	" "	27	Jan. 01
	" "	28	Nov. 98
	" "	29	" "
1.14	Electrical system	30	" "
	" "	31	" "
	" "	32	" "
	" "	33	" "
	" "	34	Oct. 99
	" "	35	Nov. 98
	" "	36	" "
2.	**Inspections**		
2.1	Daily inspection	37	" "
2.2	Regular inspections	37	" "
	" "	38	" "
2.3	Inspection after a heavy landing	39	" "
	" "	40	" "
	" "	41	" "
2.4	Inspection procedure for increase of service time	42	" "
		43	" "

	Content	Page	issued
3.	**Maintenance**		
3.1	General maintenance	44	Nov. 98
3.2	Maintenance of the airframe	45	Jan. 01
3.3	Greasing programme	45	Nov. 98
3.4	Damage of the airframe	46	" "
3.5	Servicing the engine	47	Jan. 01
	" "	48	" "
	" "	49	" "
	" "	50	Nov. 98
	" "	51	Jan. 01
	" "	52	Nov. 98
4.	**Detailed instructions for assembly and servicing work**		
4.1	Water ballast system	53	" "
4.2	Replacement of control circuit cables	54	Jan. 01
4.3	Adjustment and servicing of the control circuit	54	Jan. 01
4.4	Removal and installation of the undercarriage (main wheel)	55	Nov. 98
		56	" "
4.5	Filling and bleeding the hydraulic disc brake	57	Oct. 99
		58	Nov. 98
4.6	Steerable nose wheel	59	" "
4.7	Working instructions for heat-shrink tubing	60	" "
			" "
4.8	Securing with Loctite	60	" "
4.9	Section not effective	(61)	
4.10	Replacement of wing fuel tanks	62	Jan. 01
4.11	Mounting and tensioning of the drive belt	63	Oct.99
	" "	64	" "
4.12	Replacing the bearings of the upper drive Belt pulley	65	Nov. 98
		66	" "
4.13	Section not effective	(67)	
4.14	Replacement of the engine retaining cable	68	" "
4.15	Filling and bleeding the cooling system	69	" "
4.16	Installation and removal of the powerplant	70	" "
	" "	71	Jan. 01
	" "	72	Nov. 98
	" "	73	" "
	" "	74	" "
	" "	75	" "
4.17	Removal and assembly of the engine doors	76	" "
4.18	Securing the propeller bolts	77	" "
4.19	Checking the ignition unit	78	" "
	" "	79	Jan. 01
	" "	80	Nov. 98
4.20	Calibration of the fuel display in the DEI	81	" "
	" "	82	" "
4.21	Further DEI calibrations	83	" "
4.22	Reserved for further instructions	(84-85)	

	Content	Page	issued
5	**Weight and balance**	86	Nov. 98
	" "	87	" "
6.	**Instrumentation and accessories list**	88	" "
	" "	89	" "
7.	**List of special tools**	90	" "
8.	**Partslist**	91	Jan. 01
	" "	92	Nov. 98
	" "	93	Oct. 99

Diagrams		**issued**
1	Elevator control , trim	April 90
2	Rudder control	" "
3	Aileron, wing flap and spoiler controls in the fuselage	" "
4	Aileron, wing flap and spoiler controls in the wings	" "
5	Tow releases	" "
6	Water ballast system	" "
7	Landing gear, hydraulic wheel brake	" "
8	Systems for static and total pressure	" "
9	Placards	Sept. 98
10	Steerable nose wheel	April 90
11	Powerplant	Sept. 98
12	Powerplant	" "
13	Extension-retraction mechanism	" "
14	Fuel system	" "
14a	Installation of the fuel filter	" "
15	Propellerbrake	" "
16	Engine door control	" "
17	Retaining cable	" "

Enclosures		**issued**
Equipment list	(94)	Nov. 98
Checklist for checks and maintenance work	(95)	Nov. 98
5EP31 Installation Dräger oxygen system		08.10.90
5EP50 Installation ELT ACK		07.12.98
5E101 Wiring scheme		10.05.00
5E102 Wiring plan DIN A 1 (in aircraft log)		02.02.99
Instructions for inspection 500/20		July 1995
Questionnaire for TN 348/4		" "
Working instruction No. 1 for TN 348/4		Oct. 1994
Working instruction No. 2 for TN 348/4		" "
Tool for airbrake adjustment		14.10.94
Drawing W40		30.11.99
Drawing W51		20.11.96
Drawing W57		10.09.99
Drawing 8E210		22.05.97
Drawing 5M110		04.02.98

1.4 Aileron and wing flap control

1.4.1 Control circuit (see diagrams 3 and 4)

A spring at the mixer shaft 5St60 provides additional aileron return force at positive wing flap settings.

1.4.2 Deflections and tolerances

Aileron deflections:

up	20° ± 1°	64 ± 3 mm (2.52 ± 0.12 in.)
down	10° ± 1°	32 ± 3 mm (1.26 ± 0.12 in.)

measured at 182 mm (7.17 in.) from hinge axis (at the aileron root), wing flap setting 0°.

Wing flap deflections:

- 10°	- 40 ± 3 mm	(1.57 ± 0.12 in.)
L = + 15°	+ 59 ± 3 mm	(2.32 ± 0.12 in.)

measured at 228 mm (9.0 in.) from hinge axis against the fixed part at the wing root. At flap setting 0° the wingflaps have to be adjusted against the fixed part at the wing root with 0 ± 1 mm (0 ± 0.04 in.).

1.4.3 Stops

The aileron stops are located at the rear control column and can be adjusted with two 10 mm open-end wrenches.

The stop for positive wingflap setting is located under the removable left-hand side panel of the rear seat on the pushrod of the wingflap handle 5St73.
The sleeve which is riveted to the rod must stop at the main bulkhead in landing setting. Adjustment is by adjusting the rear pushrod 5St74 against 5St73.

The stop for negative setting (front) is located in the front cockpit on the inner guiding tube 5ST68/2 of the front wingflap handle 5St72.
Adjustment by placing shims with inside diameter 12 mm (0.47 in.) between 5ST72 and the sleeve which is riveted to 5St68/2.

1.9 Massbalance and weights of control surfaces

After repairs or repainting the control surfaces weights and moments should not exceed the following limits.

Control Surface	Weight		Moment		Spring balance reading see instructions below	
	kg (lbs.)		kg×cm (lbs.×in.)		kg (lbs.)	
	min.	max.	min.	max.	min.	max.
Rudder	4.4	5.1	7	10	0.350	0.500
(incl.massbalance)	(9.7)	(11.2)	(6.08)	(8.68)	(0.77)	(1.1)
Elevator	4.3	5.1	13	15.25	0.572	0.672
(without pushrod)	(9.5)	(11.2)	(11.28)	(13.24)	(1.26)	(1.48)
Wing flaps	5.9	8.0	22.24	27.56	1.049	1.300
	(13.0)	(17.6)	(19.30)	(23.92)	(2.312)	(2.865)
Inboard ailerons	0.8	1.1	2.95	3.86	0.162	0.212
	(1.76)	(2.43)	(2.56)	(3.35)	(0.357)	(0.467)
Outboard ailerons	3.6	5.0	4.01	5.99	0.288	0.431
(22 m no parting)	(7.94)	(11.0)	(3.48)	(5.20)	(0.636)	(0.950)
Outboard ailerons	3.24	4.4	2.76	5.00	0.199	0.360
(20 m)	(7.14)	(9.70)	(2.40)	(4.34)	(0.439)	(0.793)
Outboard ailerons	0.36	0.60	0.8	1.61	0.100	0.201
(22 m extension)	(0.79)	(1.32)	(0.694)	(1.398)	(0.220)	(0.444)

Note: Before any changes to the massbalance weights are made, contact the DG Flugzeugbau factory.

Method for determining control surface moments

Rudder

Disconnect rudder cables, lay the fuselage on its side so that the fin is horizontal. Attach (by tape) a spring balance to the lower end of the rudder 200 mm (7.9 in.) behind the hinge axis.

All other control surfaces

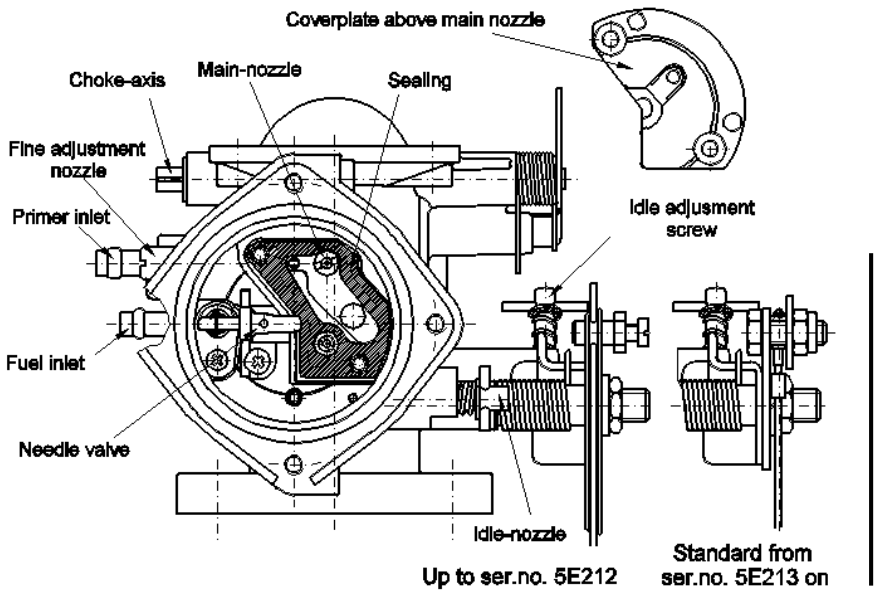
Remove the control surface and hang it friction free on two hinge points.

Control surface	measuring point	behind hinge axis	
		mm	(in.)
Elevator	center	227	(8.94)
Wingflap	1. hinge outboard from root	212	(8.35)
Inboard aileron	root	182	(7.17)
Outboard aileron (20+22m)	2. hinge	139	(5.47)
aileron (22 m extension)	root	80	(3.15)

1.13.7 Carburettor

a) **Type Mikuni Membrane carburettor BN 38, 2 pieces**

Instead of a choke a fuel injection (primer) is installed.



Normal position of the fine adjustment nozzle is fully anticlockwise (open). For high altitude operation the nozzle may be turned in clockwise direction (closed).

b) **Cleaning**

To clean the carburettor you should execute items 1 to 3. Switch on the ignition to clean the carburettor by the electric fuel pump.

3. **Maintenance**

3.2 **Maintenance of the airframe**

The sailplane is service free except for the care of the surfaces (see sect. 3.1) and greasing and oiling of the control system and all pins (see sect. 3.3).

After a landing in a soft field, the undercarriage box and tow hook should be thoroughly cleaned.

3.3 **Greasing and oiling**

A The contact surfaces of the canopies to the fuselage are to be rubbed with colourless floor-polish (canopy and fuselage side) to reduce grating noise in flight. Polish at the beginning of the flight season and then every month.

B Once a year your DG-500MB should be carefully checked and all bearings, including control surface hinges, should be cleaned and greased if necessary. The various greasing points are as follows:

- Aileron drive connections at the inboard aileron.
- Airbrake drive connection - in airbrake box, also grease the brake paddle pivots.
- Remove the access panels on the left hand cockpit walls and grease all the pushrod guides, but not those with Teflon linings, note see below.
- Remove the baggage compartment floors and open the baggage compartment rear cover to grease all bearings.
- Open the access panels (2 in the front and 2 in the rear cockpit). In the rear cockpit you have to remove the height adjustable seat pan first. Grease all accessible bearings (ball bearings and rod ends with universal bearings)
- Remove the control column covers and grease all the bearings associated with the control columns.
- Grease the rudder pedal adjustment slide.
- Oil all hinge points on the undercarriage in the undercarriage box.
- Clean and grease all control surfaces hinges.
- Clean and grease the control hook ups for wing flaps, ailerons, airbrakes and elevator control.
- Clean and grease all pins and bushes of the wing and tailplane attachment.
- Grease the powerplant see sect. 3.5

Note: The greases we recommend are lithium based pressure-resistant anti-corrosion greases or lithium-soap greases (multi-purpose greases for rolling element bearings).

Note: The sliding guides of the following parts are made from Teflon and should not be greased:

Landing gear controlhandle 5FW39 on 5St68/2, Airbrake control handle 5St69 on 5St68/1 and wingflaps handle 5St72 on 5 St68/2.

If these parts have been greased inadvertently you have to disassemble the parts and to clean them completely with Acetone.

3.5 **Servicing the engine**

Note: 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, 8, 10, 13 and 25should 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 14a.

4. Measure fuel flow (see sect. 1.13.3). Therefore disconnect the hose at the lower end of the primer filter. 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. 1.13.7b) 2..

   Check the connection of the throttle cable for damage and wear.

6.a) Check the filter of the primer valve. The filter is installed in the hose connector between T-type connector and primer valve. Loosen the hose clamps and take out the connector with the filter. 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 filter.

b) Check the function of the primer valve and nozzles (engine must be cold). Switch the primer switch in auto position. Remove the air intake filters. Press the switch 47 to the left, switch on the DEI and then switch on the ignition. Now the DEI must show **P** on the centre display and fuel must be injected via the nozzles into the intake manifolds of both carburettors. Test only for 2-3 seconds, otherwise you may flood the engine. Check the hoses which connect the primer valve to the carburettors for any damage.

c) Leak test of the primer valve: When only the ignition is switched on (fuel pump running) fuel must not be injected by the primer.

7. Check all fuel lines for any wear, kinks, tight fit and leaks.

8. Check the intake airfilters of the carburettors for excessive dirt and wear, wash with pure petroleum spirit and blow compressed air in reverse direction through the filters. Spray the outside with oil for filters with cotton fabric, reinstall the filters. We recommend exchange of the filters every 25 hours. Also new filters must be sprayed with filter oil.

9. Check all cables and associated levers and the propellerbrake (see sect. 1.11.8 and 1.11.9). Replace levers and pins of the brake in case of excessive free play. Replace cables when worn.

10. Clean engine and radiator

11. Check cooling system for leaks, refill coolant if necessary, check antifreeze. Check the radiator and its mounting. To check the water pump, switch on the ignition. Your should hear a buzz.

12.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. Press against the piston rings with a suitable tool. The rings must be movable. Black remains on the outside of the pistons below the rings indicate sticking or damaged piston rings, this is not acceptable. Illuminate 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 including removal of combustion deposits must be accomplished at a certified repair station rated for such engine work.

13. Check the muffler for cracks and ensure mounting is secure. Check especially the cable which lifts the muffler during engine extension. Remove the moving part at the front end of the muffler. Check for any cracks. Check the exhaust manifold (already removed) for cracks. Reinstall the exhaust manifold, therefore remove any remains of the gaskets, install new gaskets. Check the function of the gas-spring at the muffler frame. Therefore retract the engine until the muffler pops downwards. The gas-spring must press the mufflerframe securely to its lower stop. Check the length of the cable which lifts the muffler. To accomplish this extend the engine and press the muffler body in downward direction at its front end with a force of approx. 5 daN (11 lbs.). If the cable is too long or if the spring in the cable has been permanently stretched, the muffler will interfere with the exhaust manifold.
Check the spring pressure at the coupling of exhaust manifold to muffler. To accomplish this, measure the distance between the brackets for the spring couplings at the muffler pipe and at the movable part of the muffler in disengaged and in operating position. Extend the powerplant to operating position via the ignition switch. As soon as the extension stops, lift the red cover of the manual extension switch and switch off the ignition. In operating position the distance should be approx. 1 mm (0.04 in.) smaller than when disengaged. If the difference should be less than 0.5 mm (0.02 in.) you have to adjust to 1mm using the nut on the eyebolt. By this procedure you will pull the muffler forwards in its frame.
Note: With new manifold and/or new movable part the difference should be adjusted to 2 – 3 mm (0.04 – 0.12 in.) to allow breaking in of the parts.

14. Check all engine nuts and bolts with a torque wrench (see sect. 1.11.10).

26. Check the propeller blades for any damage.

27. Check all electric cables and connectors. Check the terminals especially of the starter positive and earth wire for cracks.
Note: The critical spots may be covered by heat shrink tubing.

28. Check the whole electrical system wiring, ensure all equipment is secure and all connections are OK. Check proper functioning of all systems and fuses/circuit breakers.

Ground test run:
Warning: Never run the engine without the wings assembled,

29. If needed adjust the idle RPM (see sect. 1.13.7).

30. Check the magnetos - at 3000 RPM, drop should not be more than 300 RPM.

31. Check max. engine RPM - 6300 RPM minimum.

32. Check EGT's (only with optional EGT probes) EGT should be 600°C ± 10°C at full power and engine warmed up.

33. With engine running at full power press the test button on the front instrument panel for 10 seconds to switch off the first fuel pump. The engine must run with the same speed with the fuel supplied by the second pump.

4.2 Replacement of control circuit cables

The following cable connections are approved:

3.2 mm dia. cable according to LN 9374 or 1/8“ MIL-W-1511A with Nicopress-sleeves 28-3-M Copper and tool No. 51-M850 or 63-V-XPM or 64-CGMP where the M groove is to be used. The above applies to the rudder cables, the tow release cable and the engine retaining cable.

The cable for the rudder pedal adjustment is 1.6 mm dia. LN 9374 or 1/16“ MIL-W-1511 A with Nicopress-sleeves 28-1C Copper and the C groove for tool 64-CGMP should be used.

Attachment of the Nicopress sleeves should only be done using the respective tool. All the procedures and checks noted by the tool manufacturers should be followed.

Please refer to aircraft inspection and repair FAA AC 43.13-1 A.

Note: Instead of cable MIL-W-1511 A the newer MIL-W-83420 may be used.

Note: For the manual propeller brakes and the throttle cable Ø 1.6mm according to LN 9374 is used. Only for the electrical propeller brake Bowden cable Ø 1.5 mm 19 x 0.31 is used.

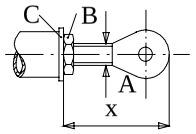
All Bowden outers (2.6 mm inside dia.) are without liner; only the Bowden outer for the electrical propeller brake has a teflon liner.

4.3 Adjustment and servicing of the control circuit

a) In all cases, new self locking nuts DIN 985.8 or LN 9348 must be used.

b) Bolts which are not secured with locking nuts have to be secured with Loctite 243. Before installing the bolt clean the thread and the inside thread see section 4.8. Apply only 1 drop of Loctite on the bolt thread. Too much Loctite may cause damage when you try to loosen the bolt again.

c) With all adjustment work, it should be ensured that the rod ends are not screwed out too far from the pushrod - see sketch below for allowable max. distances for the two sizes used.



A	max. of x	
	mm	inch
M 6	36	1.4
M 8	60	2.36

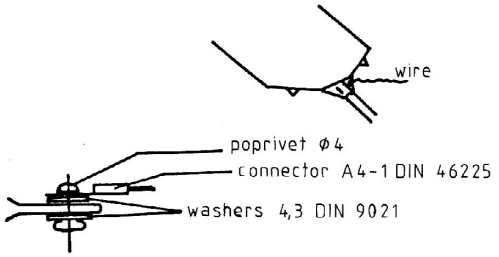
Note:
All lock nuts (B) are secured by a spring washer (C) DIN 6798 I. Be careful not to loose that washer!

4.10 Replacement of wing fuel tanks

Uniroyal rubber fuelbags 4F28

a) Disconnect the plastic fuel line inside the wing at the quick connector attached to the wing root rib. Loosen the perlon cords marked red and black at their attachment at the root rib.
Attach an extension cord 3 mm (1/8 in.) diameter 5 m long to the red perlon cord. Remove the fuel tank by pulling on the black perlon cord and on the fuel line. Disconnect the wire for the electrostatic connection.

b) Replacement is done by reversing the above procedures.
Attach the wire for the electrostatic connection by use of a poprivet see sketch, if there is no plug installed.



4.16 cont.

1. Disassemble the fuel lines near the firewall in the engine compartment. Loosen the hose clamps with a 6 mm socket wrench. Pull off the fuel lines from the connectors and plug the lines with 6mm bolts.

2. Up to ser.no. 5E212: Separate the throttle cable from the carburettor using a small screw driver and a 6 mm open end spanner.
From ser.no 5E213 and on: Unscrew the throttle cable attachment at the carburettor.

3. Loosen both screw clamps of the Bowden cables for the propeller brake at the brake lever on the engine rear side using a small screwdriver and an 8 mm open end spanner.

4. Remove hose clamp which fixes the electric wiring of the starter at the engine block. Remove the pole insulating cap from the positive terminal, then remove the electric wiring from the starter motor with a 10mm open end spanner (wire with red marking). Insulate the wire terminals with tape. Then remove the earth wire (wire with blue marking) from the starter motor.

5. Unscrew the powerplant's retaining cable from the propeller mount with a 13mm socket wrench and a 13mm open end spanner. Let the prestressed cable retract slowly into the fuselage, otherwise the retaining rubber cord might jump off from the pulley in the fuselage.

6. Disconnect the two electrical connections of the coolant pump. Remove the pump from the firewall by opening the two hose clamps which fix the pump with a 6 mm socket wrench, only the left clamp must be fully opened.

2. If the malfunction remains on the same circuit, then carry on according to the following instructions:

2.1 Check the shorting cables see above.

2.2 Checking the ignition, trigger and charging coils
Disconnect the connector plugs from the electronic boxes see 1. and measure the resistance:

item	pin nos.		resistance (Ohm)
primary ignition coil 1	76 and 77 (right)	approx.	300
primary ignition coil 2	79 and 80 (left)	approx.	300
trigger coil 1	75 and ground (right)	approx.	170
trigger coil 2	78 and ground (left)	approx.	170

With other values identify the defective part by the wire numbering see wiring plan 5E102.

2.3 Checking the air gap between trigger coils and actuators (metal plates on the magneto housing) with a gauge. The gap must be 0.45 – 0.55 mm (0.018in. –0.022in.) wide

3. Checking the generator coil: Disconnect the engine main plug and measure the resistance between wires 491 and 501. It should be approx. 0.5 Ohm.

Warning: Starting and operating the engine with spark plug connectors taken off can damage the ignition electronic boxes. Check for spark only with spark plugs fitted to the connectors and spark plug bodies having ground connection.

3) **Generator**

1. If the red generator control light shines although the engine is running:

- Check the 10 A circuit breaker Gen.. If it has popped out this may be caused by: Short circuit in the battery or defective regulator (in the control unit) or bad contacts in the circuit breaker. Switch the circuit breaker on and off several times to eliminate the contact problems.
- Check the generator. Disconnect the plug (37 poles) from the control unit 8E103. Measure the resistance between pins 34 and 37 with the engine stopped. It should be approx. 0.5 Ohm. Measure the resistance between pin 34 or 37 and ground. It should be infinite.

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.

Parts for the powerplant

a) necessary for the 25 hours inspection

40050360 Spark plugs S36 (Bosch W5AC electrode gap 0.5 mm) with screw cap fastened to the thread by crimping (4 pieces necessary)

Caution: Bosch delivers the W5AC spark plugs with removable caps. It is not allowed to use these spark plugs. Spark plugs S36 can be identified by a dot of red 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 (Rotax 842330)
60500128 Spring for spring coupling M 8 (Rotax 239628)
60502500 Starter motor: DENSO 128 000-1671 12 V
or DENSO 12 000-1679 12 V
60500155 Gasket for coolant outlet
60504013 Drive belt Poly Chain GT 8 M 2520-45
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
60000182 Gas strut for muffler frame E1 E1-76-040-130/150N
60507561 Electric fuel pump Facet 40106
60001200 Electric water pump Webasto U4810
60504049 Radiator KTM VW 00425
60504033 Extension-retraction spindledrive type
Warner LA 10 model D 12.20B5.08 special version for DG
40872873 Brake pad for propellerbrake (glued to mounting bracket)
40050350 Screw nipple S35 (Attachment of the throttle cable to the carburettors, omitted from ser.no 5E213 on)