



ASSEMBLY

OPERATION

MAINTENANCE



SIMONINI

MANUAL



<i>ASSEMBLY OF THE MOTOR</i>	<i>03</i>
<i>TECHNICAL DATES</i>	<i>06</i>
<i>GAY AND OIL</i>	<i>07</i>
<i>CARBURETTOR UND INTAKESILENCER</i>	<i>08</i>
<i>ENGINE</i>	<i>11</i>
<i>GEARBOX</i>	<i>14</i>
<i>PROPELLER</i>	<i>16</i>
<i>POWER IGNITION SYSTEM</i>	<i>18</i>
<i>EXHAUST</i>	<i>19</i>
<i>THROTTLE RESPECT</i>	<i>20</i>
<i>THROTTLE AIRBOSS</i>	<i>21</i>
<i>HARNESS</i>	<i>22</i>
<i>CHECKLIST</i>	<i>25</i>

TABLE OF CONTENTS

SIMONINI

MANUAL

Open the package with care. Do not use long knife. Parts inside the carton could be damaged.



Check the parts and proof for completeness.



Put the left and the right cages together.



Fix the cage to the frame.



ASSEMBLY OF THE MOTOR

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03

FRESH BREEZE

Press the cage into the black clip.



Secure the cage with the Velcro to the frame.



All 4 parts of the cage should be secured.



The lowest velcro is slipped through the rails.



ASSEMBLY OF THE MOTOR

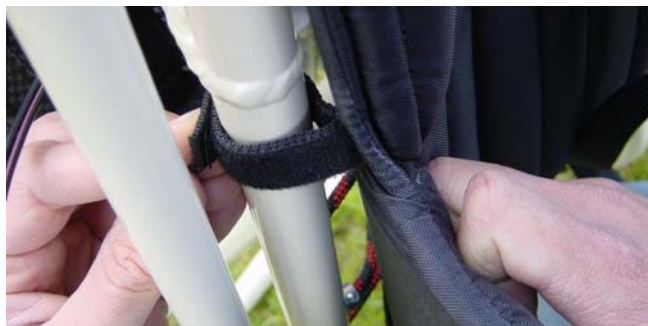
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The backstuffing will fixed also with velcro. The upper and lower ends from backstuffing turn around the upper and lower rope.



In case that you have a shellform-backstuffing fix it on the left and right side.



The Shellform-backstuffing prevent that the motor will turn to cause from torc.



Most maintainance you can make by yourself with the original tools.

Contents:

- Hexagon 4/5/6/12 mm
- Wrench 8/10/
- Wrench for sparking-plug and screw driver
- Beltdressing



ASSEMBLY OF THE MOTOR

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Motor	Simonini 200ccm
Type	2-Stroke, 1 Cylinder
Power	15,5 kW
Cooling	Air
Starter	Manuel / E-Starter
Carburettor	Bing 84, 32mm
Exhaust	Resonator
Propeller	2-Blade
Diameter	44"-48" (110 - 122 cm)
Weight	23 Kg (50 lb)
Tank	10 Liter
Max. Take off weight	105lb (200 kg)



**NEXT DATES ARE DEPEND FROM:
WEATHER, ALTITUDE, PILOTS WEIGHT, GLIDER AND SIZE AS WELL AS ATMOSPHERIC HUMITY.**

Consumtion	around 3l/h
Max. airborne time	up to 3 h
RPM	0 -5800 1/min
Staticthrust	up to 155 lb (80 kg)
Climbrate	up to 3 m/sec.

RESULT FROM THROTTLELEVER-POSITION, FLIGHT-LEVEL, GLIDER AND SIZE AND PILOTSWEIGHT FOR THE CONSUMPTION.

Little throttle	less consumption	
Big throttle	high consumption	
Low flightlevel	less consumption	
High flightlevel	high consumption	
Small glider	high consumption	high speed
Big glider	less consumption	slow speed
Leightweight pilot	less consumption	slow speed
Heavyweight pilot	high consumption	high speed

TECHNICAL DATES

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The motor will delivered with two lid's. The first is for flight with a small hole. The second lid is closed for transport. If you try to fly with the closed one the motor will have a "in flight shut down" after a while. It's will establish inside the tank a vacuum. The carburettor get fuel from tank through gravity.



The fuel comes from tank through this filter. Check before flight.



IMPORTANT INFORMATION

The fuel should have 98 octane or 100 LL. The best oil is Castrol RS 2T. Mix 2 % in addition to the fuel.

For the first 10 h mix 4 % in addition to the fuel. In this time use full throttle very careful.



This picture demonstrate a closed petroltap.



GAY AND OIL

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The Intakesilencer is fixed on two positions. One with a clamp on the carb and one with a rubberline on the top.



In some flying areas it's necessary to use such a airfilter. Use only a original parts. Otherwise you risk to loose power.



How I change the needle?

Open the lid with the two screws and pull out all parts which are hanging on the cable.



CARBURETTOR AND INTAKESILENCER

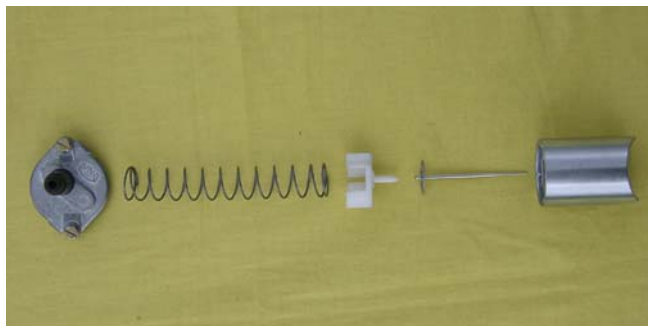
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Press the spring together and loose the cable from slider. Now you hold slider and lid apart in your hand. The needle is now loose inside the slider. At our factory we installed the 6L1 in the second position from top.



Here you see succession from:
Lid/spring/giude piece/needle with ring/slider



Why I should change the main jet?

Each motor will checked and testet before he leave our factory. During this time we find the suitable jet. Nevertheless the motor is running bad at your first trial. At full throttle the motor runs rough (rpm less than 6150 1/min).

The reason is: Other metrologic conditions, higher altitude, more hu-mity, higher temperatur. Normally the main jet is 170. Replace this into a smaller one (165). You find this inside the toolbox.



How to change the mainjet ?

Press the bow back. With the 8 mm wrench screw out the jet.

Attention: Do not loose the small red filter.



CARBURETTOR AND INTAKESILENCER

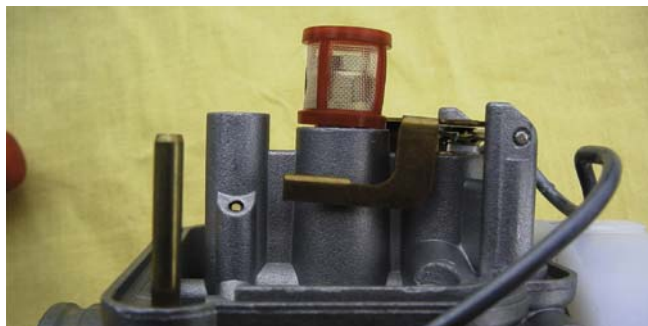
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Overfloating Carburettor. Fuel comes out of the two small tubes. The two swimmer regulate the niveau inside the carb. To reduce the quantity in the carb bend the little tongue careful.



If you hold the carb up side down, the swimmerforc is not parallel to the carburettorcase. If the carb overflow while using the motor the forc should look a little bit more upward.



Before you start the cold motor press down the choke. Start the motor and after a few seconds release the choke.



The big screw regulate the idlerunning. Turning right-high rpm. Turning left lower rpm. The idlespeed should round about 2400 1/min. The smaller screw is responsible for fuelmixture in idle. Turning right-rich. Turning left-lean



CARBURETTOR AND INTAKESILENCER

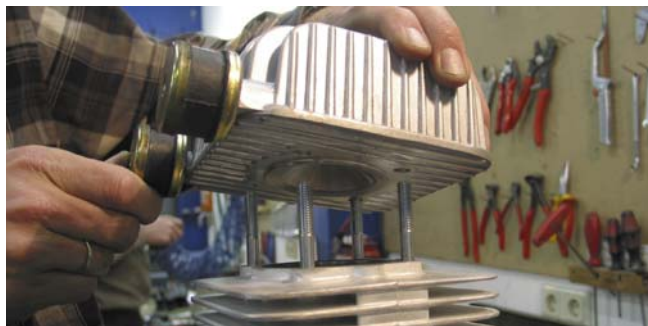
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In flight the motor will become very hot. The most stressed area are the piston and the rings. Remove the exhaust and have a look to appeared piston with it's rings. Test it with screwdriver. The rings should be loose inside the slot.



Dismantling thr head.



After removing the cylinder you can see the piston. Before you pull out the gudgeon pin remove the safety rings on both sides. Than press out the gudgeon pin.



An arrow looks into the direction of outlet.



ENGINE

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How to clean the decompressionhole?

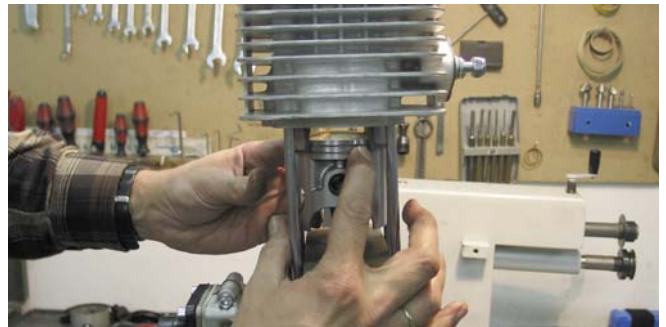
After many hour in service time the decompressionhole will closed with carbon. If you use bad oil it will close earlier. To reopening the hole use a 3,5mm drill. Bore from inside the cylinderwall with an angle from 45 °.



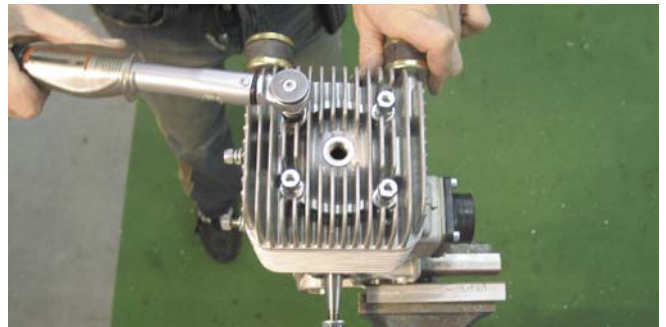
Bore until the drill looks into the outlet-channel.



To mount the cylinder you have to press the two pistonrings into the notch.



To tighten the headscrews with 14 Nm.



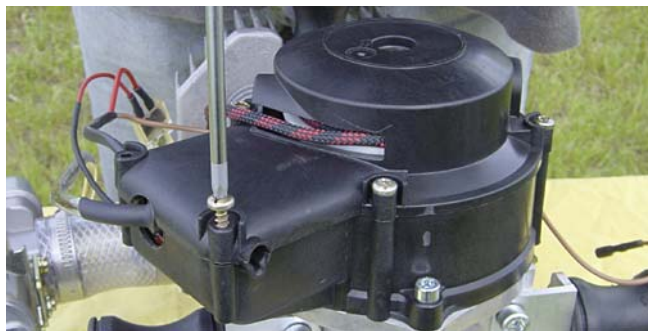
ENGINE

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Replacment of the starterrope:

Unsrew the starter-lid, take off the façade plus finger. The white disc should now be removed by pressing it against the tension-force.



The white disc can now be taken out of the lid.



The starter-rope can be pulled out of the disc.



To give the starter-rope advanced tension one, place the rolled up into the slot and rotate three times.



ENGINE

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The power-transmission of the gears happens via a Poly V Belt (730 8 PK). The transmission ratio equals 1:2,64. The number of the revolution at full load equals 2200 rpm. The lifespan of the belt is aprox. 50-100 hrs. Too little tension shortens the belt lifespan drastically.



How to tighten the belt?

Loose this Screw (6 mm allan-key).



Inside the propellerhub is an allen key-screw. Turn this with the 12 mm allen key until the tension is reached.



How to replace the belt?

Loose maximal the tension of the belt. Now you can pull down the belt during you turn the pulley.



GEARBOX

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After put on the new belt bring tension on it in the same way you loosed the belt. After that tighten the 8 mm screw with allen-key like you saw in picture 3 on this page.



To check the tension turn the belt with your fingers. You should not be able to turn more than 40 degrees.



From time to time use the beltdressing. Only one time spaying on the lower pulley is necessary.



GEARBOX

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The propeller consist of the two parts (only at 48 ") which, put together, measure up fctom 44" to48 " in lengh. The weight is ca 900 gram. The propeller is made of gfk or cfk, which allow for small repairs. But it is essential that after repair is accomplish, the propeller gets balanced out again.

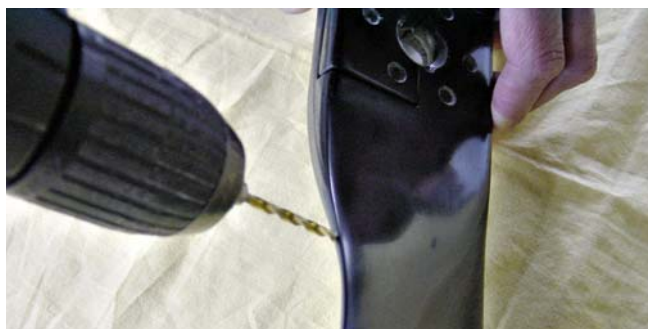


The propeller is fixed onto the hub with 6 screws. Tighten the propeller, use 12 Nm torc.



How to balanced out the propeller?

The propeller has to be placed vertically onto the balancing-out equipment. If turns to one side, then drill a 3,5 mm hole into the lighter half of the propeller.



Then fill only as much resign into this hole until the propeller does not want to turn to one side only.



PROPELLER

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MANUAL

Likewise proceed as above in the horizontal position.



Attention: An imbalanced propeller created unnessecary vibrati-on in the engine and can destroy many of it's components.



Required materials for repairs and balancing-out!

The propeller balancing-out-resing with hardener, syringe and a stored shaft for a free turning of the propellerblades.

What do I require for repairing the propeller.

Fiberglas-spatula and abrasive paper.



Here now an example when a propellerblade must not be repaired again. If the damage is to large,then repair are dangerous. The repairs sopt has not enough grip and may fall off whern the propeller turns at high revolution. Danger of accident is thus programmed.



PROPELLER

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FRESH BREEZE

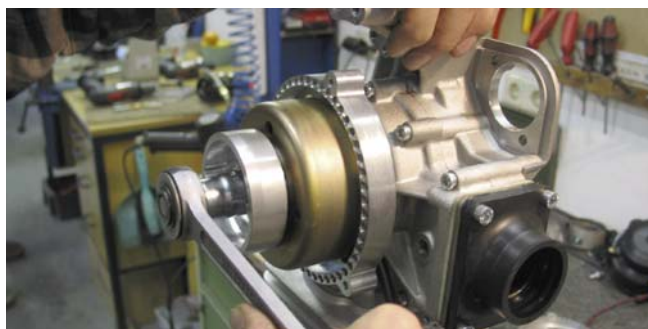
The engine is equipped with a powerful and service free ignition system. It consists of the components: stator, loading-coil of the ignition, generator coil for the supply of electricity and rotor. To be able to work on the coils, the following should be taken care of.



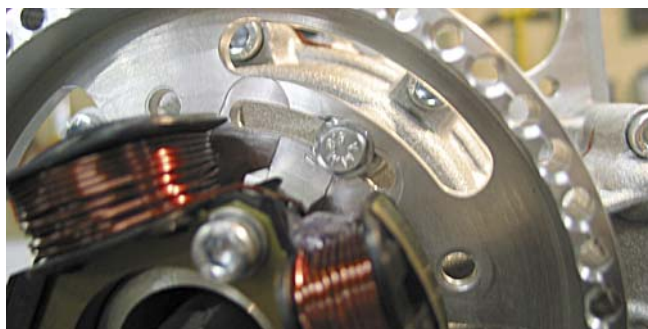
Remove the complete ignitionbox including the lid of the starter. Now the rotor with the starter-pot is visible which is held into place by its central screw.



Once the central screw has been removed, the rotor can then be pulled off via a puller. Because the rotor has to be in a specific position to the crankshaft, the rotor with a suspension-disc on the crankshaft is preordained.



To find the right position of point of ignition look to these picture.



POWER IGNITION SYSTEM

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The engine is equipped with a resonance exhaust which allows for an increase of performance and a decrease of excess noise. The white wrap around tape is made of fiberglass and gummen up with silicon.



The complete exhaust is suspended flexibly as to prevent vibrational eruptions.



To keep the exhaust flexibly mobile we chose different types of fixtures. One is a rubber connection on the gear-plate and two a stress-bearing spring-gasket at the entry and the exit.



After 10 hrs the sealing-rings and their fasten screws needs to be checked. The screw you have to changes each 25 hrs.



EXHAUST

The throttle is taken according to the building kind into the right or left hand. The strap has a variable seize change. Before start the strap should be attracted firmly.



The Respect-throttle-lever has in each case a switch at the tube. The one is for the starting the engine.



The other one for killing the engine.



The throttle has also a travelling locking. After reaching the desired height of flight, the throttle can be fixed via the clasp-lever. Since long holt of the throttle is hard in hand, the throttle can be placed in position onto the legs. The hand are now free for other things.



THROTTLE RESPECT

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The Airboss throttle-lever has also a button for killing the engine and where appropriate about one for starting the engine, if an electric starter is available.



First the throttle is taken into the hand...



...after that the steering line and at last the A-riser are grasped.



This picture clarifies the handling of the riser and the throttle during the start.



THROTTLE AIRBOSS

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This harness is specially constructed for motoring enterprises. Throughout the usage of the machine, ensure that no loose ends are able to get into the propellerblades. The suspension for pilot can be permanently in the snap links.



The harness is secured via 3 springlocks; two legs spring and one breast spring lock. It has two adjustment possibilities. One there are the buckles which are fastened onto the front of the seat. At the start these should be pulled on lightly, as to make the climbing into the harness easier at the lift-off. Before landing it is advisable to lower the seat fully, to enable a maximal favourable touch-down position. The leg loop does not need to be pulled too tightly.



All other adjustment options are regulated while flying. Are the straps pulled right and left, then one sits up straight, are they loose a slight back prone position can be adopted.



The harness has also two pockets, which are easily reached at flight.



HARNES

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Now one kneels in front of the engines and pulls the carrying straps over the shoulders.



Thereafter the pilotsuspension has to be hang into the dropping device of the engine. Usally the hind most hole is used for this. The dropping device should be activated at pending danger, for example at a water landing, fire at high altitude or a tree touchdown. The activation occurs when the two strings of the dropping device are pulled outwards. Because the engine is now not hanging over the suspension of the chute anymore,the pilot will be in a brought into a strong reclining position. Thus the engine can now slide easily over the shoulders. The landing proceeds from now on without the engine.



HARNES

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Now one get up with the whole engine and goes to the glider. The glider will then be hang into the springlocks for the pilots suspension.

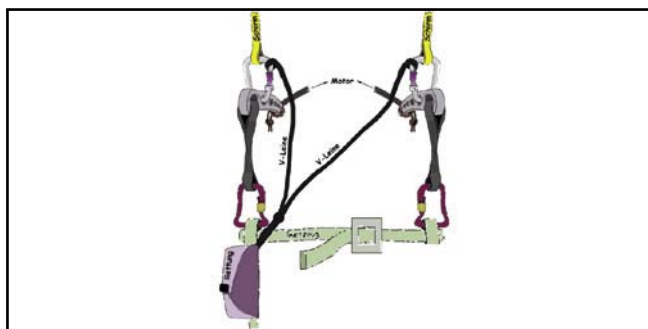


After all has been done, the throttle and the break-loop had to be taken into the hand. The engine will now be started and the starting run can begin.



RESCUE SUSPENSION

The picture shows an example of how to fasten the rescuedevice using the V-line. The rescuedevice should be connect with the pilot suspension using the V-line. So it's an optimal landing position in case of a possible release. The rescuedevice should not be hung in the harness using the spring hooks, because of supine in rescue release.



HARNES

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CHECK BEFORE EACH FLIGHT

- CAGE SECURED ON THE FRAME
- CAGE IN GOOD SHAPE
- PROPELLER-CLEARANCE
- PROPELLER WITHOUT FREE SPACE
- PROPELLER WITHOUT DAMAGE
- BELT AND TENSION ENOUGH
- KILLSWITCH O.K.
- FUEL MIN.98 OCTANE OR HIGHER
- FUEL TANK LEAKY
- PILOT SUSPENSION AND STRAP WITHOUT STRESSMARKS
- SPARKING PLUG AND WIRE WELL FIXED
- TANK-LID WITH SMALL HOLE ON THE TANK
- PROOF GLIDER,LINES AND RISER FOR STRESSMARKS OR DAMAGE'S.
- INTAKESILENCER AND IT'S FIRMNESS
- FULL RPM MIN 5600 1/MIN

CHECK ALL 10 HOURS

- FUEL FILTER
- CLEAN THE CARBCHAMBER
- BELT
- EXHAUST INCL. THE SELAINGRINGS AND THE SCREWS.
- ALL CONNECTION FROM THE WIRES
- CHECK ALL 50 HOUS
- REPLACE THE BELT
- METAL-WIRE FROM THROTTLE
- REPLACE THE SPARKING PLUG AND THE CONNECTOR
- REPLACE ALL RUBBERJOINT FROM EXHAUSTSYSTEM
- REPLACE THE SEALINGRINGS AND THE SCREWS
- CHECK ALL SCREWS

CHECKLIST

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CHECK ALL 100 HOUS

- CLEANING THE DECOMPRESSIONHOLE INSIDE THE CYLINDER
- PISTONRINGS

CHECK ALL 300 HOUS

- THE ENGINE AND HIS COMPONENTS SHOULD SEND TO THE MANUFACTURING FOR GENERAL MAINTENANCE

MOTOR

THE ENGINE SHOULD BE CHECKED EACH YEAR ALIKE HOW MUCH HOURS IT'S USED

GLIDER

THE GLIDER SHOULD BE CHECKED ALL 2 YEARS.SEND TO THE MANUFACTURER

CHECKLIST

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