



Introduction

Mintor srl, was born as a workshop of high precision mechanics working. Our decades-long activity in high level working in many different industrial sectors and especially our great passion for engines and model aircraft construction, has driven us, in these last few years, to dedicate part of our activity to the design of engines specific for model aircraft.

It has always been our firm belief that, anyone who dedicates time and resources for the model aircraft must have the chance to find high quality and reliable products on the market.

Following this inspiration, our products are designed and manufactured with the main aim of high performances and reliability.

Actually, we are the only firm, all over the world, to design, produce and assemble all the mechanical components of the engine here in our premises with manufacture engineering inspired to the best Italian motor design and engineering traditions.

The search of the best structural stiffness and weight reduction, has given reason for the realization from a solid block of each particular of the engine using the best alloys, no details are made from fusion!

This technique, surely much more expensive than the traditional ones used by any other manufacturer, added to the use of the most sophisticated CNC machinery, allow to optimize to the highest levels the weight and functionality of any single component in order to obtain a very high level whole.

Anyone who choose a Mintor engine, owns a product made with the attention and meticulousness dedicated to competitions, and above all is sure to have always at his disposal the support of a serious, motivate and competent firm.

Mintor srl

Magni Claudio Magni Massimo Magni Giuseppe

Safety instructions

WARNING!!

This engine can cause severe damages to things and/or persons.

Read carefully all of the following instructions.

Mintor srl is not responsible for any loss, injury and any other kind of damage resulting from the miss-use of its products or from the miss-observance of all the following instructions.

- Operate the engine only if you want to be completely responsible for its safe operation and for any damage or injury incurred or caused during it's operation.
- Operate the engine only if you are an expert, if you have any question about any aspect of operating this motor, do not attempt to start or operate it. Ask for information to an expert or contact Mintor srl.
- Never operate the engine alone.
- Always operate the engine in open areas. Never operate indoors.
- This engine develops tremendous thrust; make sure the aircraft is properly secured when starting the engine.
- Keep away from the prop while operating the engine. Do not wear loose clothing near the engine or prop. Do not run the engine near loose material (ropes, cords, gravel, tools, etc.) that can be drawn into the turning prop causing injury or damage to things and/or persons.
- Inspect motor mount bolts and firewall integrity before operating the engine.
- When operating the engine, anyone has to stand behind the prop, never stand in front of or to the side of the prop and always wearing protective clothing and glasses.
- Keep spectators at least 20 meters away when operating the engine.
- Turn off the engine before making any adjustment and/or checking.
- Allow the engine and exhaust to cool before touching or fuelling.
- Always use the recommended size propeller. Never use a damaged or repaired propeller.
- Check regularly that the propeller bolts are tight.
- When mounting the propeller make sure that the fastening screws tighten the propeller and do not stop (if too long) on the bottom of the thread of the hub.
- Do not use spacers behind the propeller or the fastening screws head.
- Always install an ignition kill switch to stop the ignition of the engine.
- Adjust the carburettor linkage so that the engine will stop when the carburettor is completely closed.
- Gasoline is extremely flammable. Be careful and apply all the required safety precautions when using high flammable and volatile substances.
- The ignition system develops extremely high voltage. Do not touch the ignition and/or the cable during operation.

Engine use

Mixture:

The engine needs mid to high octane gas and high quality completely synthetic oil. There are many different brands of high quality oil, they can all be easily found at any motorcycle shop. It is better to choose the ones for high performance 2strokes engines.

Remember that the use of a high quality oil, even if more expensive, lengthen your engine life.

The mixture is usually made with 2% of oil except for the break-in.

Break-in:

The high standard of the coupling tolerance and the quality of the material that we use, allow a quite short break-in.

For the break-in on the ground run 1 litre of mix at 2% of oil. Run at middle and low speed for the first half a litre and with some short and gradual acceleration to high speed for the remaining half a litre.

During the running of the first litre on the ground, you have to keep a slightly rich carburation. Do not exaggerate in richening the carburation!!! For a longer life of all the parts of your engine, it is better to do the first 10 flights (lasting about 10 minutes each) without asking extreme performances to your engine.

During the first 10 flights, it is possible that the carburation needs to be slightly regulated.

You will get the engine highest performances usually after about 20 flights.

Needle adjustments:

The engine is provided with the right needle adjustment.

Setting will vary during the break-in, when changing propeller or plane, with significant variations of temperature or when changing kind of exhaust.

Indicative needle adjustments:

engine 33cc min. (L) 2 turn, max. (H) 1 and 3/4 turn

engine 38cc min. (L) 2 turn, max. (H) 1,5 turn

engine 55cc min. (L) 1 and 3/4 turn, max. (H) 2 turn

engine 75cc min. (L) 2 and 1/4 turn, max. (H) 1 e 1/4 turn

engine 110cc min. (L) 2 and 1/4 turn, max. (H) 1,5 turn

engine 220cc min. (L) 2 and 1/4 turn, max. (H) 1,5 turn

In the 4cylinder engines, either the carburators has to be adjusted, on the rear cylinders the needles have to be opened to another 1/6 position.

Usually the manufacturer setting corresponds to a proper running.

If you have to change the setting, adjust the “high” needle (H) in order to obtain a full and constant engine running. If the engine lose power and over heat at high speed then the carburation is lean and needs to be richened turning the needle (H) counter-clockwise. When adjusting, turn the needle 1/8 of turn and check.

To adjust the low speed needle (L), make sure that you have already properly adjusted the H needle, then run the engine at about 1100-1200 revolutions for about 30” and accelerate till the maximum of revolutions.

If during the acceleration process the engine “grumble” and do not increase the revolutions the carburation is rich and you have to close the needle (L) clockwise. If during the acceleration process the engine has a moment of “idle” and violently get to the high speed, then the carburation is lean and needs to be richened turning the needle L counter-clockwise.

When adjusting, turn the needle 1/8 of turn and check.

Remember that adjusting a needle can have slight effect on the other.

Remember that numerous tests on the ground can heat the engine and lead to a normal contained loss of power.

Recommended props:

Engine 33cc: 18*8 – 18*10 – 19*8 – 20*6 – 20*7

Engine 37cc: 20*8 – 20*10

Engine 55cc: 23*8 – 23*10 – 24*8

Engine 75cc: 24*10 – 24*12 – 26*8

Engine 110cc: 28*10 – 29* 10 – 30*10(only for haulage)

Engine 220cc: 32*12 – 33*12 – 34*10

Starting:

- Make sure you have followed all the safety instructions given by the manufacturer house.
- Turn on the radio system and check the throttle operation and position.
- Have at least 2 persons firmly hold in safety conditions the plane.
- Close the choke completely.
- Open the throttle to approximately ¼ position.
- Turn on the ignition. **WARNING: FROM NOW ON BE PREPARED FOR THE MOTOR TO START ON ANY FLIP OF THE PROP.**
- Always wear a heavy leather glove when starting the motor.

- Give the prop a quick, firm, flip counter clockwise. Follow through quickly as you flip the prop so your hand is out of the propeller's path.
- Repeat until the motor fires.
- Open the choke.
- Set throttle to idle position slightly open.
- Carefully flip the prop again until the motor runs.
- Let the engine warm up for about 30'' on the low speed. Smoothly accelerate in order to clean possible fuel excesses into the engine. Verify, always following the safety instructions, that the engine has a proper carburation and running before flying.

Warranty

All the Mintor engines are covered by a 3 year warranty, starting from the date of purchase.

This warranty covers defects in workmanship.

Never disassemble the engine, the exhausts and the ignition.

Any tampering even the smallest one, or the misuse of the engine, exhausts or ignition, will void this warranty.

The use of different important accessories, such as ignitions or exhausts, from the ones authorized by Mintor srl, will void this warranty.

All the items that need to be replaced have to be carefully packed and shipped to Mintor srl. Deemed the defectiveness of the item, Mintor will ship the repaired or replaced item.

This warranty does not cover the following:

- Damages caused by a crash.
- Damages caused by using improper fuel, oils or additives.
- Damages caused by a different use from the one described into the instructions or anyhow an improper/unsuitable treatment.
- Damages incurred during transit to Mintor srl. Pack the engine carefully; take the spark-plugs off for the shipping.
- Shipping expenses to and from Mintor srl for warranty service.