

## Adjustment of the Carburetor

The **EOS 150** is equipped with the type Walbro WB 37 (modified) .

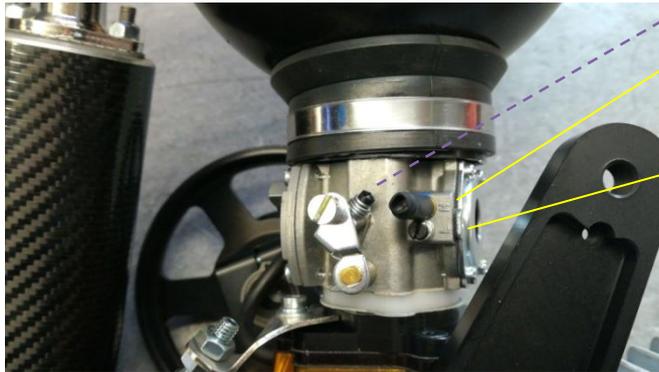
### Standart settings:

L jet adjuster screw: 1 1/4 turns out (anti clockwise) - 1 turn and 15 minutes

H jet adjuster screw: 1 1/4 turns out (anti clockwise) - 1 turn and 15 minutes

Pop Off pressure: 11 PSI

Lever distance: 1mm



idle adjuster screw

H jet adjuster screw (sealed with shrink tube or laquer)

L jet adjuster screw

### For general understanding:

The engines come pre-adjusted from the factory in Austria with above

mentioned standard settings. These are "safe" settings rather on the rich side, for a rich combustion. These resulting in a spark plug picture being on the rather "black" side - please see manual page # 10 (or figure at the end of this chapter) - picture from #14 "best" in direction to left/up/rich. The Austrian factory being on a certain area in a certain altitude MSL (mean sea level), but also in changing conditions of air temperature and humidity. Therefore whenever the engine being operated at another location / in other conditions there is practically need of doing re-adjustments of L jet and H jet screws. As a general rule please note;

- combustion getting richer when;
  - - engine operated in higher altitudes above MSL
  - - engine operated in warmer air temperatures
  - - engine operated in more dry (less humidity) air conditions
- combustion getting leaner when;
  - - engine operated in lower altitudes
  - - engine operated in colder air temperatures
  - - engine operated in more humid air conditions

A slightly to rich engine setting is no problem and safe (spark plug pictures #9-#13 / manual page 10 / figure end of this chapter). A far to rich setting resulting in rough engine run, not reaching max. RPM and has lesser power, dying at idle. Worse start up then normal. Impurifying the engine, excessive oil may come out from the exhaust. Higher to even excessive fuel consumption. Debris building inside the combustion chamber (piston, head). BUT; no damage to the engine can occur! CAUTION(!); - In opposite, a to lean setting will lead to a soon or even instant(!) engine overheat and damage (hole in piston head, seizing). All onward pictures #21-#29 / manual page 10 / figure end of this chapter indicate a to lean up to a way to far to lean setting.

We recommend to aim to reach a spark plug appearance as per pictures #11-#14 by adjusting the H jet accordingly!

If you have any problems or doubt for a correct engine setting, go back to the standard H-jet and L-jet setting as above described and consult with an expertised person and/or your dealer!

Please note; - With a wrong setting of the L jet adjuster screw the engine cannot get damaged. However, with a wrong setting of the H jet adjuster screw very quick (only in case to lean)! The setting of the L jet will not influence the spark plug picture!

spark plug pictures - steps from rich to best;

(H jet adjuster screw only!)

- in 5min. turn steps (clockwise) - each of this step will "jump" about over about 4 pictures

spark plug pictures - steps from best to hot / lean;

- in 1min. turn steps (clockwise) - each of this step will "jump" about over 1-2 pictures  
CAUTION(!); - do not proceed with 5min. turn steps(!). Do not exceed a 3min. turn clockwise from the optimum spark plug picture towards lean as here already the engines starts to run to hot with danger of damage!

=> turning the jet adjuster screw clockwise will go from rich to lean (H and L)

=> turning the jet adjuster screw anti clockwise will go from lean to rich (H and L)

=> the L jet influencing idle to low/medium RPM combustion

=> the H jet influencing medium to high and full RPM combustion

Remark; - To get indication from the spark plug there is need to run the engine at full power from 3min. constant run onward. Engine runs in low or medium RPM will not considerably change the spark plug picture and/or bring a usable result. But also do not run the engine excessively at full power as 3min. or 3-5min. is enough!  
CAUTION(!) - run the engine safely fixed on ground with appropriate distance to the propeller! Or run it on your back only.

If you feel your engine starting and running fine, idles well then stay with the standard factory settings. In case you have problems with idle run, bad acceleration, low power and not reaching max. RPM, seeing a wrong spark plug picture then proceed with adjustments of the L or H jet or both. Also make sure you have a correct setting of the idle adjuster screw!

Remark; - Make sure you have a correct and a from EOS engine recommended propeller installed! A not with the engine matching propeller will never allow a correct engine run!

Make sure you have a correct fuel/oil mix! A too oily mix will not allow a correct engine run.

CAUTION(!) - A too poor oil percentage will make the engine seize! Make sure you have a fresh good working and correct type of spark plug!

For adjustments proceed as follows;

- adjustment of the idle screw

- adjustment of the L jet screw

- adjustment of the H jet screw

starting from the factory settings; L jet adjuster screw 1 1/4 turns out (anti clockwise) and

H jet adjuster screw 1 2/6 turns out (anti clockwise)

To start the tuning procedure:

After having checked and/or set the jets to standard settings, start and run the engine in low RPM until warm. Check idle run and if needed adjust the idle adjuster screw until you reach a smooth constant running with about 2000 RPM.

1<sup>st</sup> step - L jet

Activate throttle by quickly accelerating the engine and quick releasing the throttle thereafter, watch how it comes back to idle each time ...

... acceleration is fast and even, engine run comes down to idle quick and stays at proper idle	no adjustment needed
... engine run comes down to idle quick but engine kills	to rich setting, turn in clockwise the adjuster screw
... engine run comes down to idle to slow but then stays at idle (and/or idle run is unstable and "dancing"), and acceleration is not fast enough	to lean setting, turn out anti clockwise the adjuster screw (mostly from that point a 5min. turn out anti clockwise then is the right setting)

Make changes of the adjuster screw in 5min. turn steps only and re-try procedure until finding the right setting. There may be need to also re-adjust the idle adjuster screw after having made to big adjustments on the L screw! Both settings have to be balanced together.

2<sup>nd</sup> step - H jet

Go to max RPM / full throttle for 3min. (3-5min.) and afterwards stop the engine.

Check the spark plug for color ...

... compare to the sample spark plug pictures below	if matching a picture from #11 - #14 no adjustment needed
... spark plug pictures like #10 or #9 or lower	to rich setting, turn in clockwise the adjuster screw

Make 5min. turn steps (clockwise) - each of this step will "jump" about over about 4 pictures

And again ...

Go to max RPM / full throttle for 3min. (3-5min.) and afterwards stop the engine.

Check the spark plug for color ...

(see advices written before)

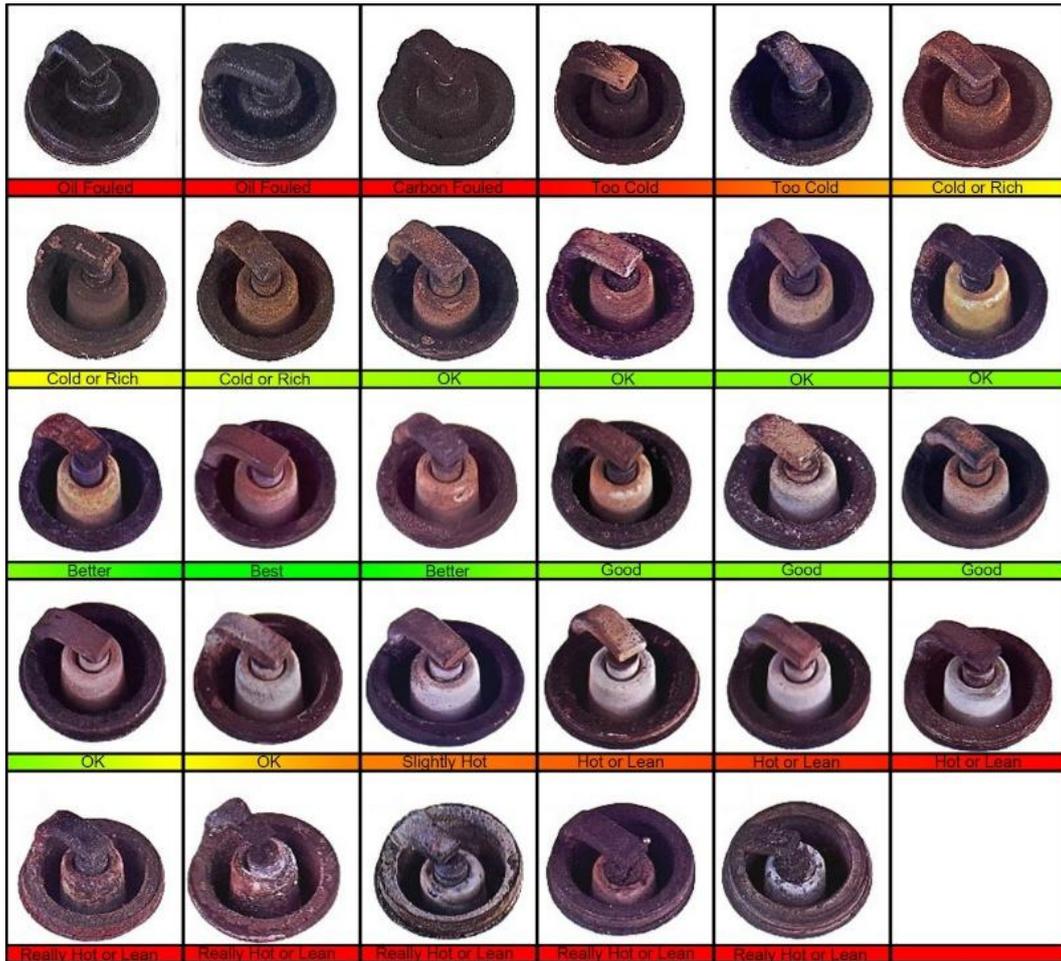
... compare to the sample spark plug pictures below	if matching a picture from #11 - #14 no adjustment needed
... spark plug pictures still "to black"	to rich setting, turn in clockwise the adjuster screw

Continue until you have the perfect result.

Please note; - Starting with the standard setting of the L jet should never show a to lean spark plug picture but good or to rich only. In case nevertheless you see a to lean spark plug picture ...

... compare to the sample spark plug pictures below	if matching a picture #15 to higher, then as a first step turn out anti clockwise the adjuster screw for 5min.
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Continue until you have the perfect result.



first picture up left is #1, last picture down right is #29, "best" is #14