

SPARK PLUG READING AS I SEE IT.

The information and pictures in this section have been used by me for 40 years with good results. There are other ways to read plugs that I'm sure will give very good results, but this is the way I have done it. Your results may vary. Because of so many other influences like the type of premix oil or fuel quality can change the way the spark plug will color. Be careful. Too lean can destroy an engine in seconds. Always be too rich (over dark) when you start to change your jetting. This does not mean only the main jet. The needle and needle jet, if too lean, can do just as much damage. On a motorcross or dirt track you are mostly on or off the throttle (main jet). When you tune for a road race or street bike you are using a lot more middle throttle (needle and needle jet).

Always use a new sparkplug when you want to check your jetting. If the sparkplug already has color on it you will not be able to see any jet changes. Don't throw away any of those plugs with color on them as they are still good, just not for tuning.

Make sure the ignition timing is correct for your engine as well as the spark plug heat range. I have a chart for most of the OSSA engines in the tech section. If the wrong heat range plug is used you will not be able to get a correct plug reading. If the timing is off it will effect your readings also.

To do a plug chop, kill the ignition as you pull in the clutch and do not let the clutch out until the bike has stopped. I have had bad luck using a compression release to kill the engine when doing a jet check. That seems to give a false color reading.

Put tape around the throttle grip and mark idle, half throttle and full throttle. If you want to do a part throttle jet check just hold the throttle at that position for a 1/4 mile or so then do a plug chop. The key here is to hold the throttle steady for the position you want to check then cut the ignition. Sometimes I will carry a spare sparkplug and switch the spare out with the one in the engine (tuning plug) so I can look at the tuning plug later.

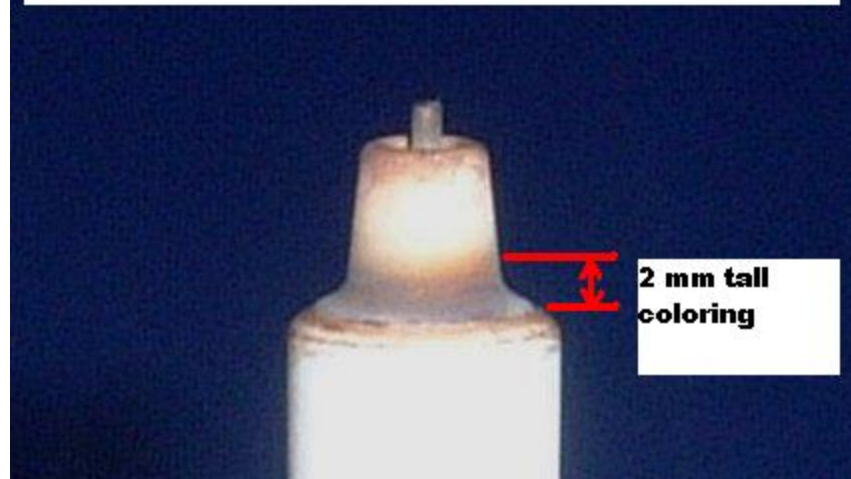
I recommend that you pick a type/brand and octane rating of fuel and stick to it. This would also be true of your oil pre-mix and the mix ratio. I have had the best luck with the RED LINE two-stroke racing oil. This is a full synthetic. I do not sell RED LINE oil products at this time but if you look around I'm sure you can find some.

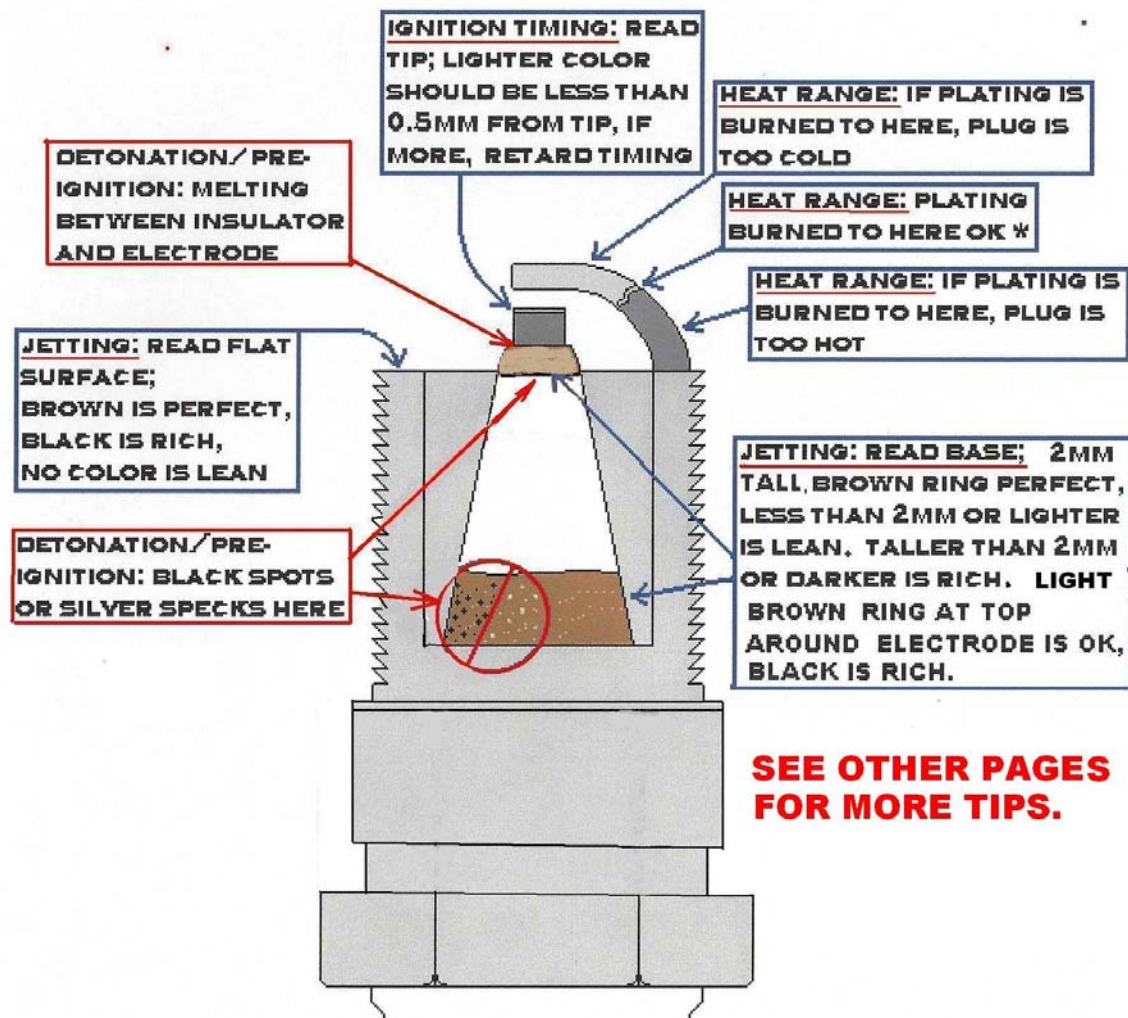
SummitRacing.com sells it on the internet, but you may be able to pick up RED LINE products locally.

I mix all my fuel at 32 to 1 and I would suggest using no less than unleaded premium for your fuel. Just keep using the same fuel and mix when you do your jetting. Changing fuel, brand of oil or ratio of oil mix will change the jetting of your engine. This makes it very hard to get consistent color readings.

There has been some talk about not using synthetic oil for break in. Because of the type of rings we use this does not apply to OSSA engines.

This is what your plug should look like down inside. I cut the metal off so you could see an example that looks like the plug drawing. You will need a strong light to see down inside the plug at the lower fuel mixture ring. It's very hard to take a picture of this but you can get the idea. If the color is lighter or not as tall it's too lean. If the color is darker or taller it's probable too rich but on the safe side. You can also see the color at the top by the center electrode.



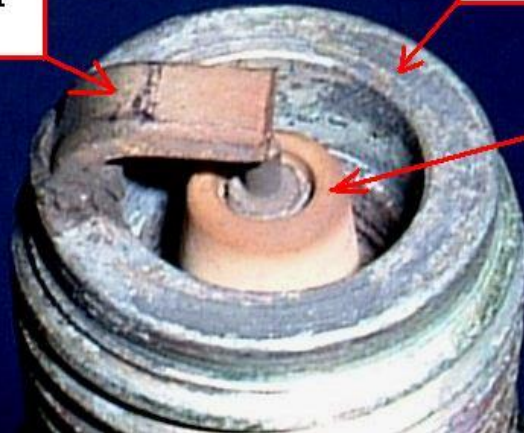


This is the way your plug should look after a plug reading with a new plug. Be sure to do a plug chop when reading plugs. Always use a new plug. You cannot read an old spark plug. Don't forget that even if your main jet is OK, you can still seize the engine with a lean needle or needle jet. Always be too rich and lean it out from there. Darker color is always safer.

Ground strap burned half way down is correct heat range plug.

Flat surface has color. Black here would be too rich or no color here would be too lean.

Light brown color here is good. Not black or white.



**Heat range:
Check here. Ground
strap burned half way
down. OK**

**Ignition timing :
Check here. Should
be no more than
.5mm light color on
tip.**

**This is the way your plug should look after a
plug reading with a new plug.**

