

# RECOMMENDED JETTING PROCEDURE

*"A bumbler's guide to primitive air-fuel mixing devices as I do it"*

Don't make an already difficult job impossible by using worn parts, especially needles/needle jets. Use only genuine Mikuni parts. Mikuni jets with square characters (EPA) are preferred (5% tolerance). MAKE SURE YOUR IGNITION IS IN TOP CONDITION. Xs have feeble stock ignitions.

1. Mark throttle housing to correspond to closed, 1/4, 1/2, 3/4, and WOT with tape. Put a pin in the grip.
2. Make sure float level is correct.- **Already Checked**
3. Make sure choke plunger seats securely.
4. Warm up engine and set idle.
5. Sync carb cables.
6. Set air screw @ 1 1/2 turns to start. Adjust air screw in or out until engine has max revs, and still returns to idle properly. (No more than 3 turns out or the screw could fall out)
7. Adjust size of pilot jet as necessary. Since pilots work throughout the entire range, if you were to go up 2 sizes on the pilot, you might have to lean out the needle jet, needle, and main, if they were already good.
8. Rev engine. It should come back to idle rapidly and evenly. If it hangs up, pilot/air screw is too lean.
9. In third gear, hold throttle at 1/8 to 1/4 opening at 1/3 max RPM to check cutaway. Surge or flat is too lean. Blubber is too rich. Properly jetting a carb with wrong CA is extremely difficult, in my experience.
10. Still in 3rd, hold throttle at 3/8 to 1/2 to check needle jet. Check this starting 1/3 max RPM.
11. At 1/2 to 5/8, the start of needle taper/ clip position is most influential. Check this starting 1/3 max RPM.
12. At 5/8 to 7/8, the taper of needle is prominent. Check this starting 1/3 max RPM.
  
14. Starting 1/3 max RPM, hold throttle WOT. Roll off to 7/8. If acceleration improves, main is wrong.
15. The air jet changes the balance between WOT at, say, 4000rpm and WOT @ 7,000rpm. For Mikuni VM 4 stroke applications, no air jet is best. To richen WOT @ 4000 and maintain WOT @ 7,000, richen main 4 to 5 sizes for 1 size of air jet. This is tilting the fuel/air mixture curve.
16. Carburetors can only meter in a straight line: so much air for so much fuel. However, engine demand, especially in a racing engine, is anything but. A mismatch of porting, cam, advance, compression, and EXHAUST SYSTEM, will result in a mixture demand curve no carburetor can ever hope to cope with.
17. When changing main and needle jets, make jumps of 2 or 3 sizes. Needle clip position, go from full lean(-1) to full rich(-5). Know where too rich is in each area. To further confuse the issue, lean misfires act and read rich. There is no substitute for experimentation, removed from the pressures of racing.
18. If it runs better cold than hot, it's too rich.
19. If it runs better with the choke(s) on, it's too lean.

**MAKE SURE YOU DO NOT REVERSE THE SLIDES!**