

Carb Sync made easy

With information from 650 CC&D Website – Marty Ignazio
And Webslinger

The objective of the vacuum measuring carb synchronizer is to see that the vacuum signals from both carbs are the same. It is the difference between the levels and not the actual level we are interested in however. With a sensitivity of some 16 times greater than a mercury manometer, an oil manometer only needs to look at the difference. (*your trying to get both carbs sucking the same amount that way both cylinders don't fight each other causing many problems*) By hooking each side of the manometer to each of the carbs we have a very sensitive tool for synchronization. Excessive engine vibration at a certain speed and many other problems can be corrected by a good sync. **EVERY** time you open your carbs or change the exhaust - you should sync - **EVERY** time.

Your just not done with the mod till you sync.....(grin)

I filled mine with two stroke oil- 10-W40 will work just as well

- 12 ft of 1/8" ID clear PVC tubing
- 1 piece scrap lumber
- Plastic zip ties

And 2 old mikuni carb main jets - or some vacuum line restrictors (keeps the fluid from bouncing around and lets you get a proper reading)

The tubing was looped and secured to the lumber with the plastic zip ties. Filled with 2 stroke oil to about the midway from the bottom. (Just stick one end in the oil and suck on the other end). If you are careful not to introduce air when filling this is really a no brainer.

Then used the old carb jets as line restrictors (small heads) - warm up the tubing and push em in - when it cools it will contract giving it a tight seal

- Or use vacuum line restrictors - you can get em cheap at almost any auto parts store. (I had the jets laying around)



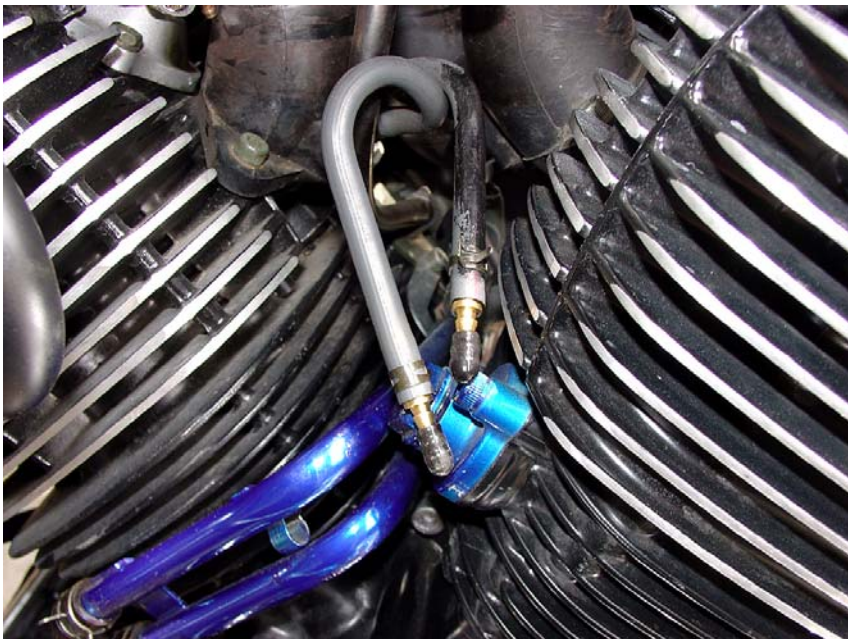
Now Here is the "carb sync made easy" part....

Note: When in use with the engine running both lines must be connected, one to each carb. The oil will be sucked up and out of the manometer if only a single carb is connected and the other end is left open to the atmosphere.



An added benefit to removal of the AIS left me with an extra rubber hose the exact same diameter as the one connected to the port on one of the jugs - cut both hoses to equal length

Get Brass Double Barb hose fittings - and vacuum caps - (almost any hardware store plumbing section or the plumbing section at home depot has them). And insert these in the ends of the rubber lines - the other end leave permanently attached to the nipples on the cylinders



This way you can warm up you engine - and hook the sync lines up without burning your hands in a matter of seconds. Trust me - this comes in real handy...(LOL)

The first time you do this you may be way out of sync.... So warm your engine up shut it off - hook the lines up -



Place your screw driver on the adjustment screw - and start your engine - keep your finger on the engine kill switch in case fluid starts to get sucked into the cylinder. **Tiny turns on the screw** ... It only takes a little bit and the turn takes a moment to take effect... so turn it a little - and wait- turn it a little and wait -

from the left side of the bike, turn the sync screw the direction you want the fluid in the tube connected to front cylinder to go. *As per TimB*

You're trying to balance the level of fluid on both sides...

Once you get em even - blip the throttle.... Let it settle - then adjust the screw - **VERY SMALL TURNS!!!**- Balance the level - wait - then blip the throttle and do it again...



When you're done tuck the hoses up over the idle adjust knob - so that they don't accumulate fuel over time. (*if they do - just drain em off every now and then... no big deal*)

You might want to tell folks that if they decide to attach the carb sync tool directly to the nipples, 3/16" tubing will be a better fit. *As per FrotzMe (soc427)*

Now this is usually a chore the very first time you do this - because your carbs may be way outa sync - and you may have to cut the engine a couple of times then turn the screw a little. But once you get it done it will run at idle and the level of the fluid in the tubes will be even- then the next time you sync it goes really quick - matter of minutes.... You won't have to worry bout hovering over the kill switch anymore.

A dead on sync will greatly reduce backfire and vibration at about 60 to 65mph.

Hope this helps



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