

First, disconnect the wire to the choke and remove the throttle return spring that goes from the throttle lever to the arm atop the carb. Loosen the three screws around the plate that holds the choke down so that they no longer screw into the carb body--they will still be held loosely by those white nylon washers. When you have loosened all three you can gently pull the plate back with all the screws/washers attached and put it somewhere safe, being careful not to drop those washers and screws. The element should look just like an old clock spring to you and there should be no distortion in the spring (i.e. the element should wind around itself with smooth curves and evenly--if it appears bent/mangled or if it falls out of its housing, you know you'll need a new choke).

Now to adjust the choke (do this with the engine cold). You'll notice when you look at the element it terminates in a little hook. That hook grabs the lever that moves the shaft/butterfly valve on top of the carb. Loosen the clamp holding the rubber tube from the aircleaner to the top of the carb, pull the rubber end off the carb throat and push it back out of your way. For a visual aid, put a hand held mirror over the carb throat so you can see the valve and move the lever that the choke controls. You'll see that when you move the lever down (assuming you properly engaged the element hook on the lever) the butterfly valve closes all the way.

With the choke removed move the lever back and forth--the shaft should open and close the valve smoothly. If it does not, you have a bent shaft or worn bore on the carb and that could be the cause of your problem--getting a good top half off a used carb (it's the bottom end throttle bushing that tends to wear out more than the top) will quickly solve the problem. Now put your choke back in place on the carb (forget about the plate/screws for now) and place it on so that the element hook will engage the lever when you push it in place. Watch the mirror and move the choke slightly forward and backward. You'll notice that the valve opens (choke rotated back) and closes (choke rotated forward).

You want to set the choke so that the valve just barely closes for cold weather. To achieve this, gently turn the choke so that the valve just closes and then back it off just a hair so the valve is open a sliver. You'll have to tweak this initial setting a bit to get it just right--I'll describe that later--but this will get you in the ballpark initially.

You'll notice that there is a dot stamped on the choke disk that lines up between 3-4 ridges on the carb body. Lining up this dot with the lower ridge (choke more closed) is a good setting for cold winter days that require longer warmups. Lining the dot up with the upper ridges will open the valve which is better for warmer days when you don't need the choke to engage the lever for very long. The element does not expand/retract based on engine heat (though engine heat affects it somewhat), but primarily on the duration of the electrical current heating it from the coil wire, so even on a warm day, you'll have to wait almost as long for the choke to spring open the same amount. That's why you have to manually adjust its position when the climate changes.

If you find when you turn the choke element so that it just closes the valve that the dot does not line up at all with the ridges on the carb body (i.e. it's way below them) you have a distorted element and you'll have to replace your choke (you probably noticed this in your visual inspection--could've been the result of someone overturning the choke in the past or the element has simply worn itself out of shape).

If the choke looks good and you position it so that the valve is just cracked open, you can put the plate/screw assembly back over the choke and tighten the screws, being careful not to disturb your setting. DO NOT put a lot of pressure on those screws. Just enough to snug them down to hold the choke in place--the nylon will compress a little giving good fit. It's tempting to give them an extra turn, but you will strip the housing if you are too zealous. If you strip the threaded housing the quick solution is easy: just find a slightly bigger screw at a hardware store and thread it in. But you don't want the hassle of potentially damaging the threads on the carb body so go easy on them and you won't have a problem. Reinstall the spring on the throttle arm and reconnect the choke wire.

You'll probably have to make adjustments to your choke setting to zero it in after observing a few cold start warmups. Before starting the engine, pump the pedal once--this will pull the throttle arm back and the choke element will act as a spring to snap the valve closed and set the step cam. For your first warmup, you might notice that your engine rpm is high a little longer than it should be, or it idles too low and stalls when cold. In this case, your choke setting needs some tweaking. This is because the choke not only closes the butterfly valve, it also controls the stepped cam on the left side of the carb that will affect your idle speed. When your engine is cold, notice on which step the

throttle arm screw rests. The higher the step, the higher the idle, the longer the warmup time before the choke disengages. If your engine idles high for a little too long, just remove the throttle return spring and loosen the three choke screws a bit and gently slide back your choke a hair--now the idle screw should rest on a step lower. Tighten the screws and reinstall the spring. Reverse this procedure if your choke does not hold the step cam at a high enough rpm (your engine will stall when warming up at idle because the choke element will disengage the lever too soon). You will eventually get it just right.

Use both the step cam and the dot on the choke relative to the ridges on the carb body as your guides for positioning the choke and if you get really good at it, you can tweak the adjustment a tad even when the choke is warm so that for the next cold startup, your choke will be set perfectly.

Another thought: Look at the step cam and you'll see a little slot cut into it--a roll pin should be visible. This pin limits the rotational travel of the cam and is secured in the carb body. If the roll pin has vibrated itself out and is no longer there, your step cam could fall back and make idling cold difficult. If it's missing you just have to tap a new rollpin in place.

Also, make sure the wire going from the coil to the choke is actually connected on both ends--that might be your only problem if your choke is set properly.

You have to tweak the choke a few times a year if you live in a region that gets seasonal changes (most places) so that your morning warmup is hassle-free. Don't disable your choke as Muir advocates, just keep it properly adjusted.

Källa: <http://type2.com/bartnik/choke.htm>