



**Inside the Happy Time 4-stroke carburetor**

I had some [bogging problems](#) with my recent install; one suggestion was to disassemble and clean the carburetor, as they tended to get gunked up during assembly. I should've done that from the beginning...don't know why I let it scare me off at first, as I've rebuilt my Cutlass's Quadrajet before, and that's a much more complicated device than this thing. Maybe it's just trepidation at tearing into new equipment.

Anyway, disassembly and reassembly are simple enough...but first, a quick lookaround. The first three photos are of the carb as it came off the engine: [front & left side](#),

[back](#),



and [right side](#).



The hose barb on the bottom of the fuel bowl is the fuel bowl drain, which is controlled by the screw at the bottom of the back view. The hose barb sticking straight out on the right side is the fuel inlet; the hose barb that's angled down and forward is the fuel overflow. My engine arrived with short lengths of hose attached to the drain and overflow fittings; while you can probably lose the one attached to the drain without any problems, it might not be a bad idea to replace the short length of hose on the overflow with a longer piece of .170" i/d vinyl tubing routed somewhere away from the engine...like maybe down to the bottom bracket and back to the rear-wheel dropout.

To begin disassembly, use a 10-mm wrench to remove the bolt that holds on the fuel bowl. That exposes [the float and related bits](#).



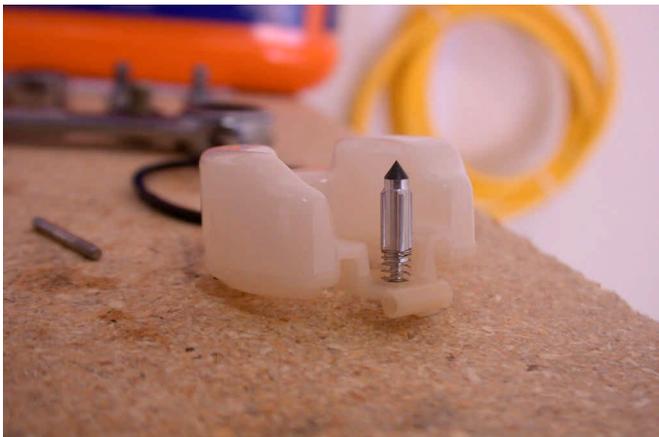
[\(This blurry photo](#) (sorry) is a closeup of the float pivot and needle-valve assembly.)



[Looking down the middle](#), we see the metering jet (?) screwed in place. I didn't touch this; maybe you should count the turns it takes to remove it, or maybe it goes in until it bottoms out. I didn't have a screwdriver on hand that would go in there.



Continuing the disassembly, carefully remove the rubber seal and set it aside. Press out the float pin with your thumb and set it aside. [The float will pull out, with the needle attached](#) (the needle has a spring around it, too)



. The needle-valve seat [remains in the carburetor body](#) (it's at 12 o'clock).



The carb cleaner I used said to keep plastic parts out of it, so remove the throttle limit screw (the big black plastic screw) and the "splitter" (for lack of a better name) from the top of the carb (the splitter can be carefully pried out with a screwdriver). You'll see them removed [here](#)



and [here](#).



I've also removed the idle speed screw from the left front corner of the carb. In the last photo, from left to right, are the throttle limit screw, the idle speed screw (with spring), and the splitter. As near as I can tell, the splitter diverts some fuel from the main circuit and splits it between the idle circuit (controlled by the idle speed screw) and the choke circuit (to supply extra fuel when the choke is closed).

I didn't see an easy way to disassemble the choke without breaking something, so I'd recommend leaving it alone (and open) for cleaning. The carb cleaner didn't appear to have any effect on it. If you had some patience, you could probably take apart the throttle assembly (the butterfly is held in with a couple of screws), but I left it alone.

Soak all of the metal bits in a bucket of carb cleaner (the stuff I bought said to allow 20 minutes for it to work), then rinse and/or dry according to the directions. Assembly is the reverse of disassembly.