



Carburetor Information

U.S. CB750 Models 1969-1978

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Repairing 77-78 carb accelerator pump valves

One of the most annoying and difficult things to clean or replace on the carbs everyone loves to hate are the accelerator pump valves. Although it's an ingeniously simple and effective design, it was not designed to withstand the abuse many idiots put them through by leaving gas in the carbs to rot and permanently clog the valves. You can tell if the valves are not working by putting your mouth over the inlet (arrow) and pushing air through it. If no air will pass or will but when you suck on it like a straw air can flow both ways it's not going to do much for you when you yank the throttle. If you want it to work it's time to clean up the tiny bits inside. Here's the list of "stuff" to get it done...



1. Pin vise or other small bit chuck, here I am using an older X-acto knife with the crossed slots.
2. Very small wood/plastic screw, and I do mean small. This I stripped from a dead alarm clock.
3. A Phillips head screwdriver that fits the screw well, one with a magnetic tip makes the job a lot easier.
4. Drill bit about 1.25mm or so, any larger and you make the walls of the nylon retainer too thin to re-use, any smaller and the threads on the screw might not grab and hold.
5. Not pictured but used is some WD-40, a small center punch, Needlenose with tiny tip, small standard precision screwdriver, air pistol with small nozzle, and small wad of fine steel wool along with a clean rag.

Before we get started, no comments about my knarly greasy hands! I turn my own wrenches and it's just something that happens when I do.

The first step is to create a tiny divot in the center of the nylon retainer so the bit won't drift. Using a center punch will push the nylon retainer down onto the ball valve, so be sure you're willing to commit to the process before hand. Alternately if you have a very steady hand you can center the bit itself and twist it backwards. This will create a small dent to guide the bit but will probably also push the nylon retainer down.



Apply a little pressure and begin twisting slowly. You'll see small curly Q's of nylon develop if the bit is doing it's job. Be sure to have the bit aimed straight into the nylon retainer. You don't want an angled hole. As always, take your time!



You only need a hole about 1/8" deep or so. Check your depth several times. Go too deep and you might mar the ball valve itself .

Once you have the hole bored carefully run the small screw into the retainer as shown. It only needs to be snugged up, not super tight. Go too far and you could either split the retainer or strip out the hole and the game gets a lot harder or ends abruptly then.



Gently wiggle the screw ever so slightly and if it's in the retainer well pulling firmly should pull the retainer out without too much difficulty.



The key here is to go slow and deliberate. There is a small spring just under the retainer that fits the end of the retainer. Yank that puppy out too fast and that spring could easily go flying. There is also a small steel ball at the bottom of the valve that rests under that spring. If either spring or ball goes flying it's game over unless you can find the little boogers.

Sometimes the ball is stuck in the bottom and won't fall out on it's own. Here is where that clean rag comes in to save your ass. Cup the entire cast in the rag as shown with only the inlet showing (as shown below in both images).



With your thumb firmly holding the rag over the valve bore and ball use some compressed air to push the ball into the rag.



KEEP THE RAG FIRMLY PRESSED AGAINST THE CASTING! The rag should allow enough air to pass but not the ball. If that puppy goes flying it's the game over thing again and time to go kick the garage door.

Here's a shot of the culprit causing the clog. Well, the real culprit is the a-hole who let gas sit and rot in the carbs in the first place. The rust and gunk on it HAS to come off!



To give you an idea of how dinky this ball is below is a shot of it next to one of the jet needles out of the same set of carbs.



The next step is to clean all that crap off the ball....

I used 600 grit wet-or-dry sandpaper here because I was out of 1000. 600 is acceptable but finer is better.



Hold the ball down with one or two fingers and slowly roll it around in circles on the sandpaper (below). Change the radius of the circles a little as you go to be sure and cover the entire surface of the ball.



As you do this you'll see the rust and gunk come off on the sandpaper. Not a whole lot of work is needed so check your progress regularly.

When all the circling is done you'll notice a whole new critter staring up at you. Good as new!



Take a small wad of that fine steel wool and wrap it around the end of the small flat precision screwdriver. Make sure there is some steel wool balled up past the end of the blade so the only thing rubbing the ball valve set is the steel wool and not the blade itself. Scoring the valve seat would decrease its sealing ability.



Spray a touch of WD-40 on the steel wool so any crud sticks to the steel wool. With moderate pressure spin the steel wool and it will clean any gunk on the seat off with no trouble. Once done blow out the valve seat and inlet bores to remove any steel wool left behind. You don't want that crap getting pumped into the accelerator pump nozzles in the carb throats as it will clog those tiny orifices in no time.

Once you're done the valve ball seat should be nice and shiny clean. Time to put things back together.



Before we go on to the next step you'll want to back that screw out just a bit, to where it is just holding itself in the retainer. If it's still in too tight when you go to back it out at the end of the process the retainer might just spin and you'll have to pull it apart again to loosen the screw. The more times the retainer is removed the less effectively it holds.



I have big stubby fingers so I use a fine tipped needle-nose pliers to hold the spring while I push the nylon retainer back onto the spring as shown.

Carefully drop the ball back into the valve and gently start the retainer with spring in the valve. Use the head of a screwdriver or small hammer to tap the retainer back in until it is just flush with the top of the valve. Slow and easy here. Too far and you're back to disassembly and reassembly again.



Once flush carefully back the screw out and you should end up as shown below. The blow-suck test should confirm that air will pass in one direction and not the other.



There is a second valve identical to this one in the number two bowl, but often that one does not get nearly as crudded up. If it has the same procedure applies. That's it, Done!

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