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GUIDE : Rebuilding a Weber 32/36 DGAV Carb

Started By JSeaman, Mar 11 2013 08:26 AM

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Due to popular demand, OK one (probably drunk) request by Finnon on facebook 🙄, here's a carb stripdown guide

I found it took me about 4-5 hours from start to finish but that includes a lot of time taking photos. Take your time, be methodical and it's not too bad at all to work on one of these, this was my first go

Step 1 - Remove the two retaining nuts on top of the air filter cover, 8mm probably. Note that this is with an aftermarket air filter as used on most kit cars



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Step 2 - Remove the cover to expose the top of the carb



Step 3 - Pull the air filter upwards evenly to clear the studs



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Step 4 - Now remove the four 8mm nuts and washers, carefully take them away and store them so they can't fall anywhere they shouldn't (order is everything when doing this, keep things neat and tidy)



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Step 5 - Now you can remove the air filter base plate from the carb body



Step 6 - There are 6 pan head screws, use a big flatblade screwdriver and apply a lot of downward force onto the screw head as they are quite soft. Crack off all 6 but don't remove them



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Step 7 - Now slacken the fuel feed line jubilee clip, be prepared for a bit of petrol coming out



Step 8 - If you have a DGAV (automatic choke) as opposed to a DGV, also slacken off the clips for the inlet/outlet to the choke. These are coolant lines so, again, expect a bit of fluid loss

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Step 9 - If you are trying to minimise loss of coolant/fuel, you can plug the lines with an old bolt as shown







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Step 10 - Now remove the vacuum advance to the distributor, this simply pulls off but might require a little twist



Step 11 - The next stage is to slacken then remove each of the nuts holding the carb onto the manifold (13mm spanner not socket required). Don't forget the washers too



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Step 12 - If there is a circlip fitted to the choke butterfly linkage then remove with pliers (I didn't have one), then use a flatblade screwdriver to disconnect the choke linkage by simply easing the lever off the stud (second picture shows it disconnected)



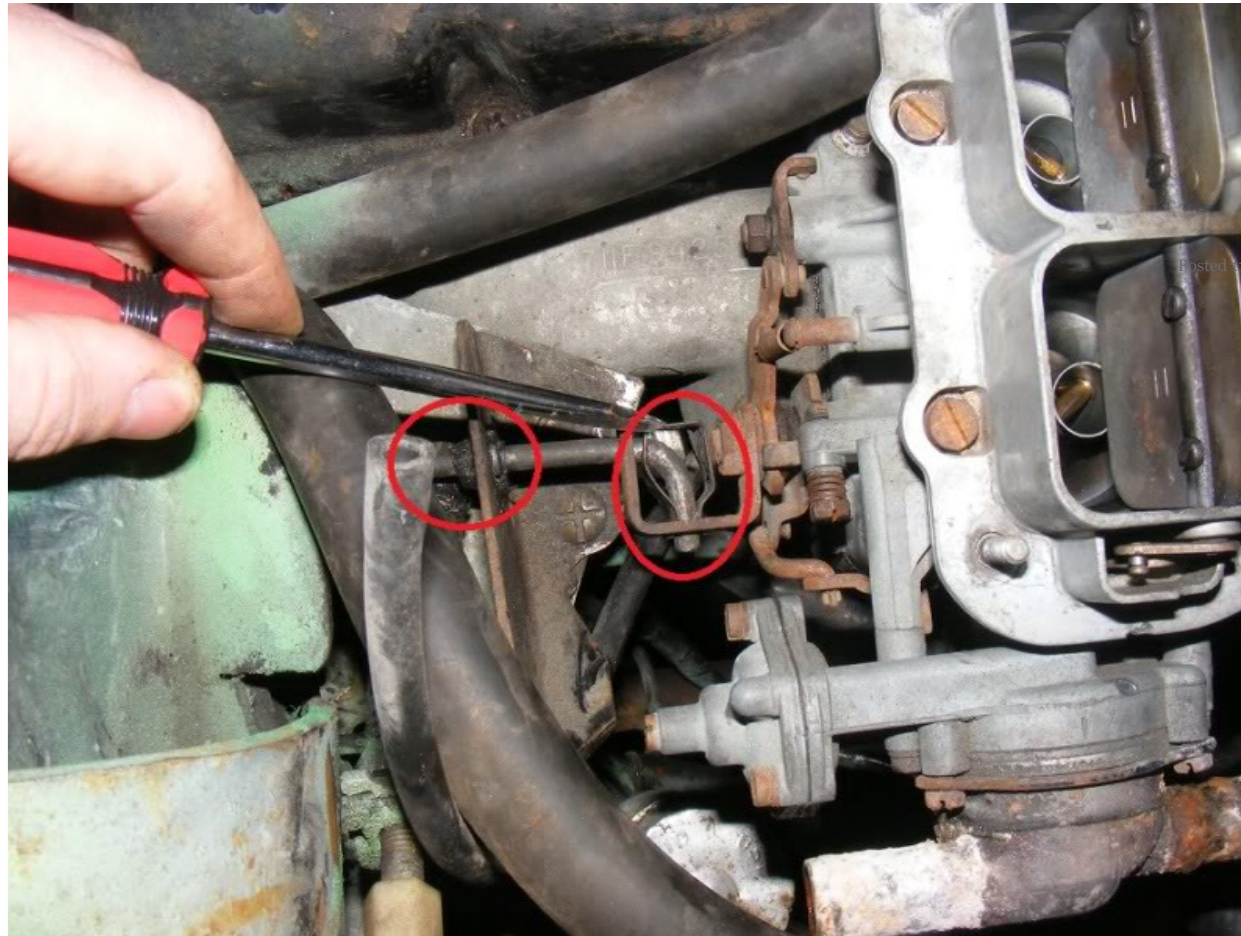


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Step 13 - Give the carb a bit of a wiggle to break the gasket seal on the manifold



Step 14 - Now the throttle linkage needs to be disconnected, use a flatblade screwdriver to ease the plastic bush (circled on the left) out and allow the rod with the right angle bend to move. Hold onto the spring retainer circled on the right and ease the bar out. Remove the clip once the rod is out and place it below the linkage as shown in the third picture



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Step 15 - Now slide the carb off the studs of the manifold





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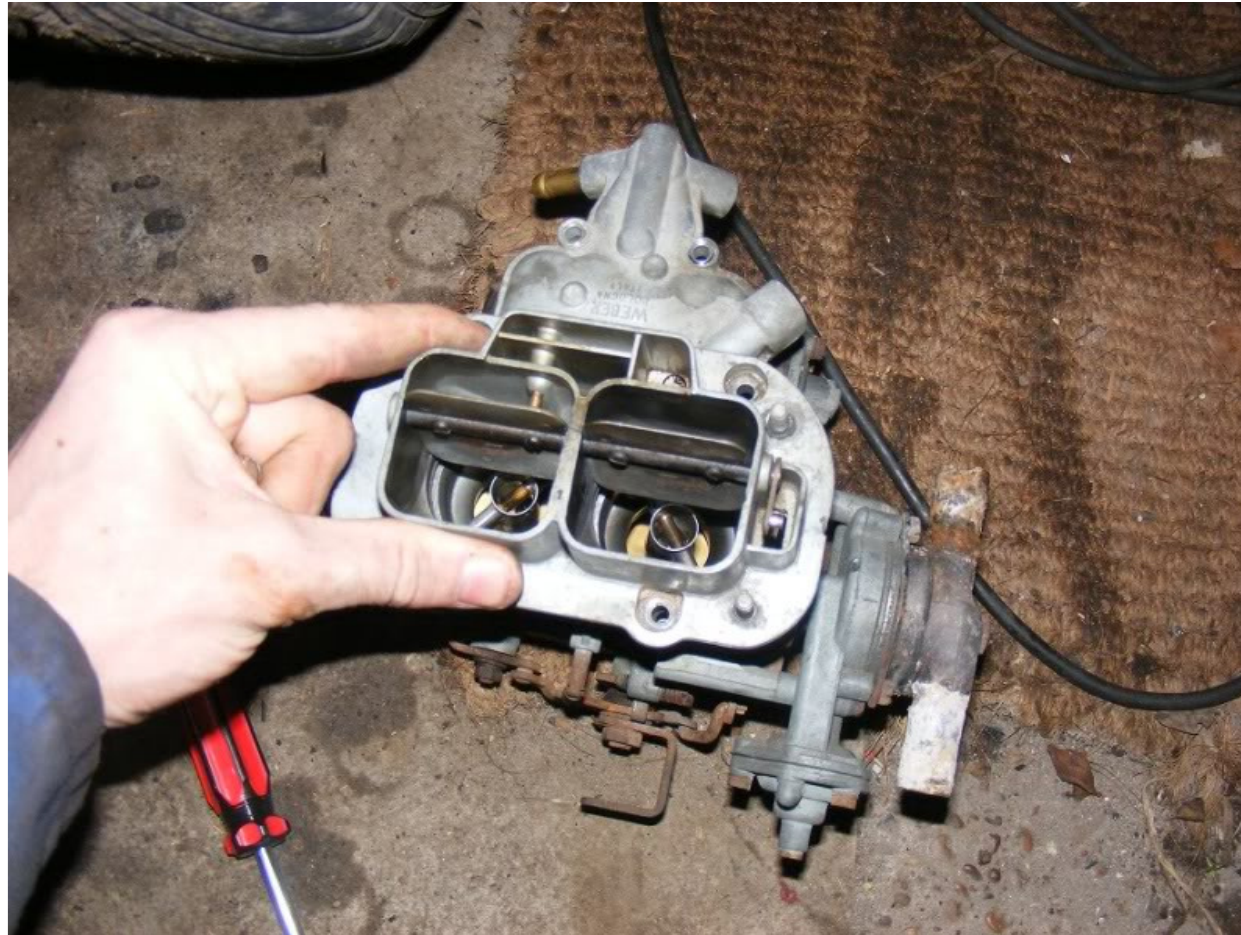
Step 16 - Remove the 6 pan head screws we cracked off earlier in step 6

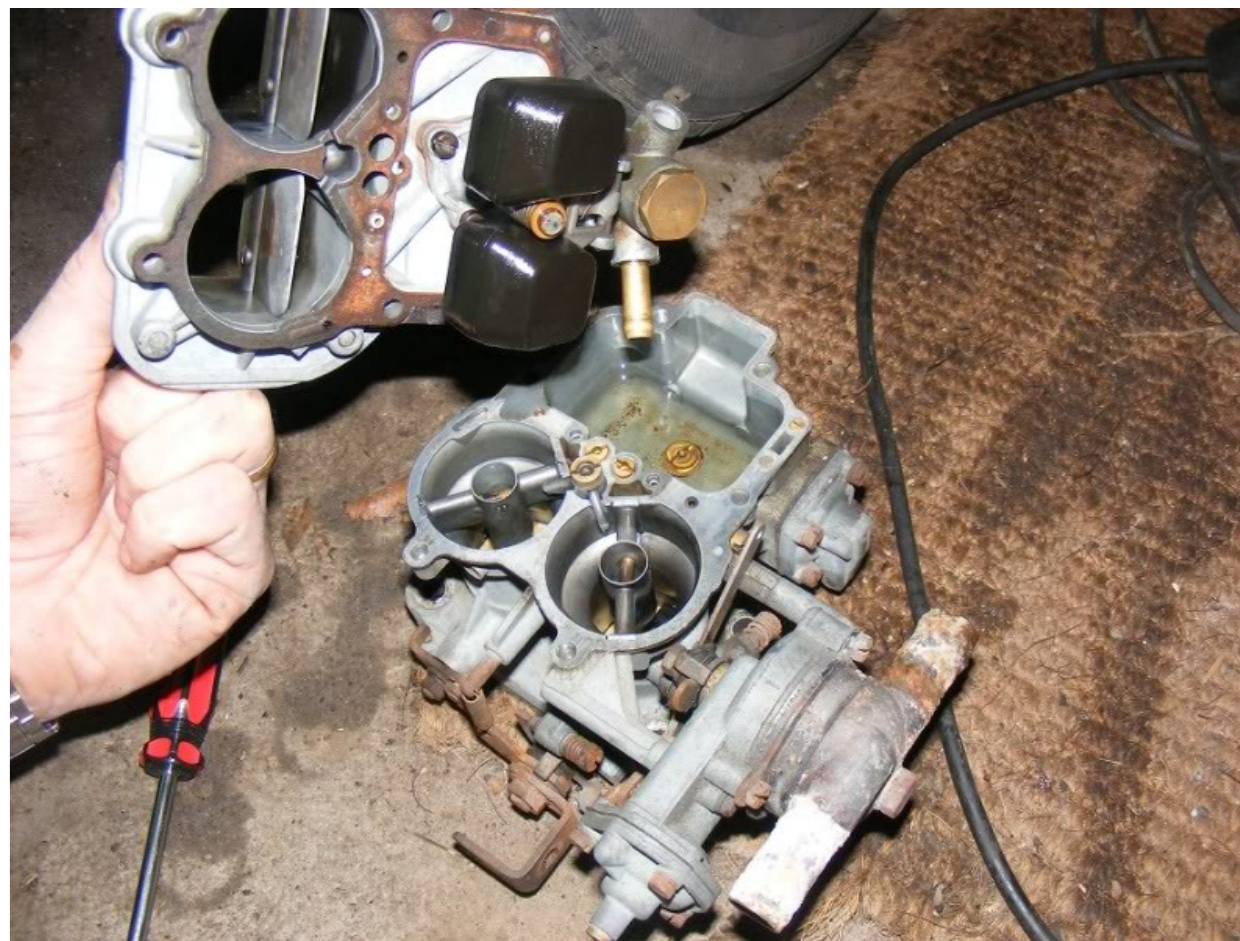


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Step 17 - You can now split the carb in half as shown





Step 18 - At this stage I went to my clean area (kitchen table!) I recommend you get a load of A4 white paper and work on that, as it gets dirty just put another sheet down and work on top. It gives good visibility and helps you keep track of everything well) and gives a nice light background for photos as a side effect 🤪



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Step 19 - Check the baseplate of the carb, you should have markings telling you exactly what it is - mine is a 32/36 DGAV



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Step 20 - We will start on the top half of the carb, handle with care and turn it upside down to expose the floats (the black plastic pieces)



Step 21 - Push the pin out that holds the floats in situ, it may need a very light tap with a drift but mine just pushed out





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Step 22 - With the pin out you can remove and store the floats somewhere safe (keep everything laid out in the order you remove it)



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Step 23 - Note the orientation of the needle valve (the brass piece) and how it hooks onto the floats. The hook is called the 'return hook'



Step 24 - You can peel away the old gasket and, if necessary, use a gasket scraper where it has stuck (or a flatblade screwdriver but careful not to score the metal face)





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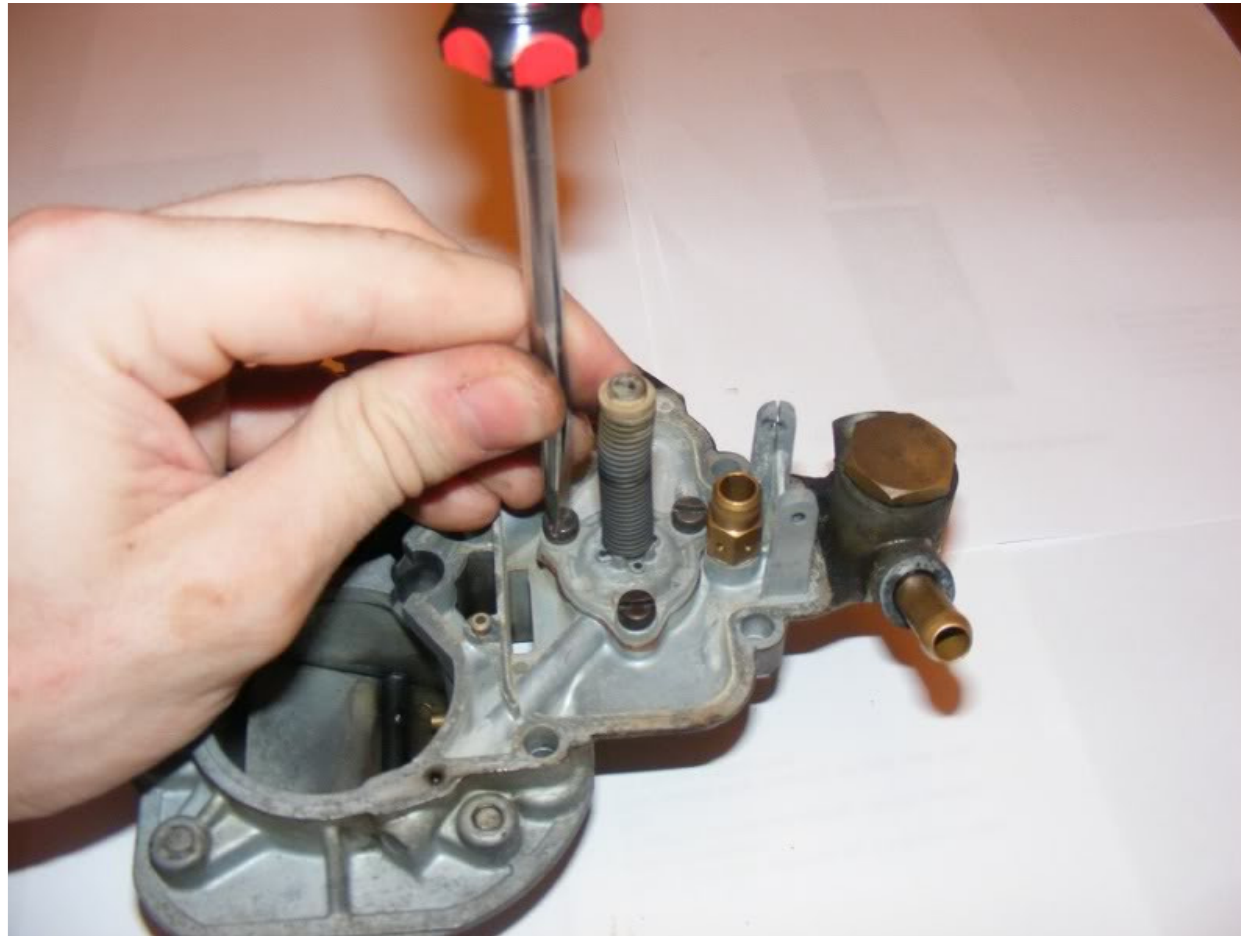
Step 25 - Now onto the power valve diaphragm, a known cause of excessive fuel consumption but a part you have to buy separately to the carb rebuild kit (for £20!), worth having one if you're in any doubt. To test it, press the spring (picture 1) and cover the small hole (picture 2). The vacuum is supposed to be strong enough to hold the spring down but even with my brand new valve this wasn't the case; there was, however, a substantial vacuum created with my new part and absolutely none with the old one! If you have no vacuum you probably need to do the power valve, if not you can skip it





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Step 26 - Removing the old power valve diaphragm is just a case of removing the three screws shown (picture 1) then ease the diaphragm to the side to crack the seal.





Step 27 - Compare old with new, definitely needed replacing! Note the new valve has a metal retainer fitted, do not remove this until you are ready to fit the valve



Step 28 - Now use a 19mm socket/spanner to crack off the big brass nut next to the fuel inlet tube, unscrew this completely



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Step 29 - Inside you will find a fuel filter, mine was quite worn





Step 30 - Use a 10mm socket to remove the seat for the needle valve on the floats you removed in step 21-23, don't forget the washer











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Step 31 - Start scrubbing, use carb cleaner and a scotch pad to clean up the housing, at the very least remove any surface dirt and give a general tidy up, you can go to town if you're that way inclined



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Step 32 - Next we move onto the bottom half of the carb, clear out any fuel that was in the float bowl (shown on the left of the pic with some brown sediment which is a sign of poor fuel quality)



Step 33 - Remove the two screws in the top face of the carb, these are the primary (at the top) and secondary (at the bottom with the screwdriver fitted) air corrector jets





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Step 34 - Now remove the 'emulsification tubes', I did this by inserting a thin screwdriver then pushed it to one side whilst wriggling upwards, one was particularly stubborn!



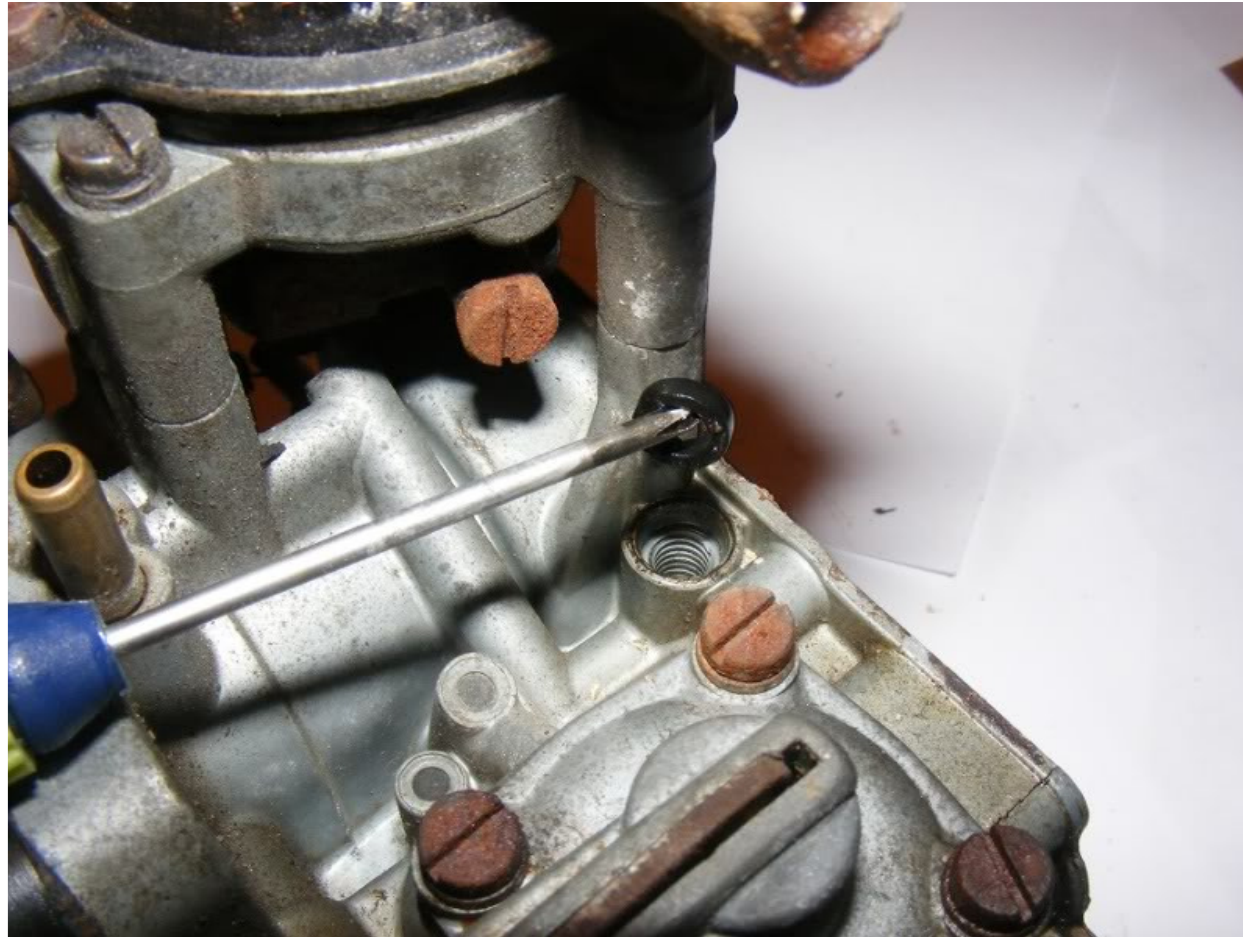
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Step 35 - Now remove the primary main jet from the float bowl which also just requires a flatblade screwdriver and, adjacent to it, the secondary main jet. Make sure you keep all these bits and pieces in the right order so you can reassemble them where they came from!



Step 36 - Remove the idling jet and O ring from between the choke and accelerator pump with a screwdriver. Note the jet is actually the lower part and the upper part is the holder



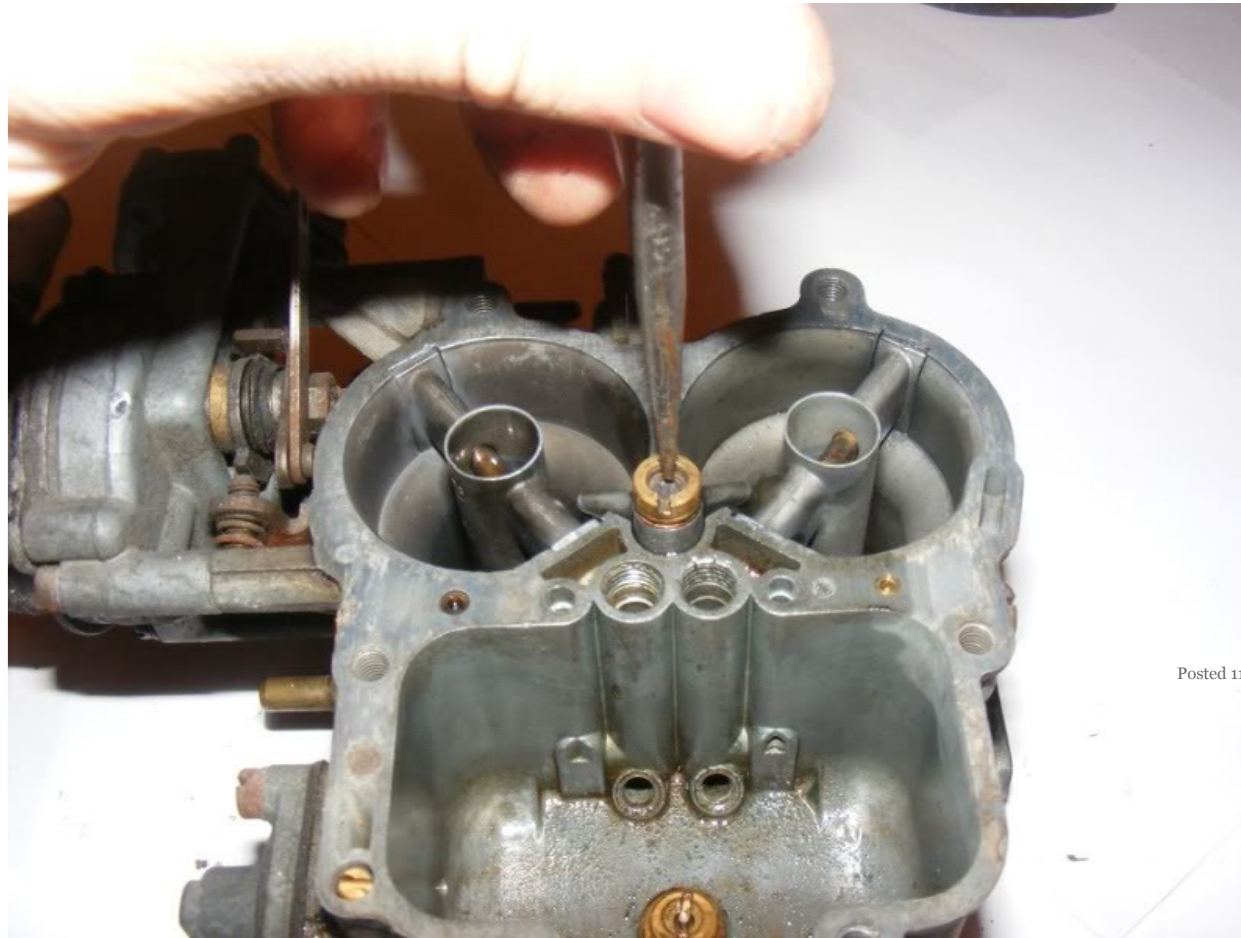


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Step 37 - Now the accelerator pump jet needs to come off, there is a single big screw to remove and it can be a pain. I ended up using a large gasket scraper as shown in the first picture to apply loads of downward force and not destroy the head of the screw. Once the screw is cracked off, a normal screwdriver can be used to fully remove it (picture 2).

Then you can remove the screw, washer, jet and copper washer as shown in pictures 3 and 4





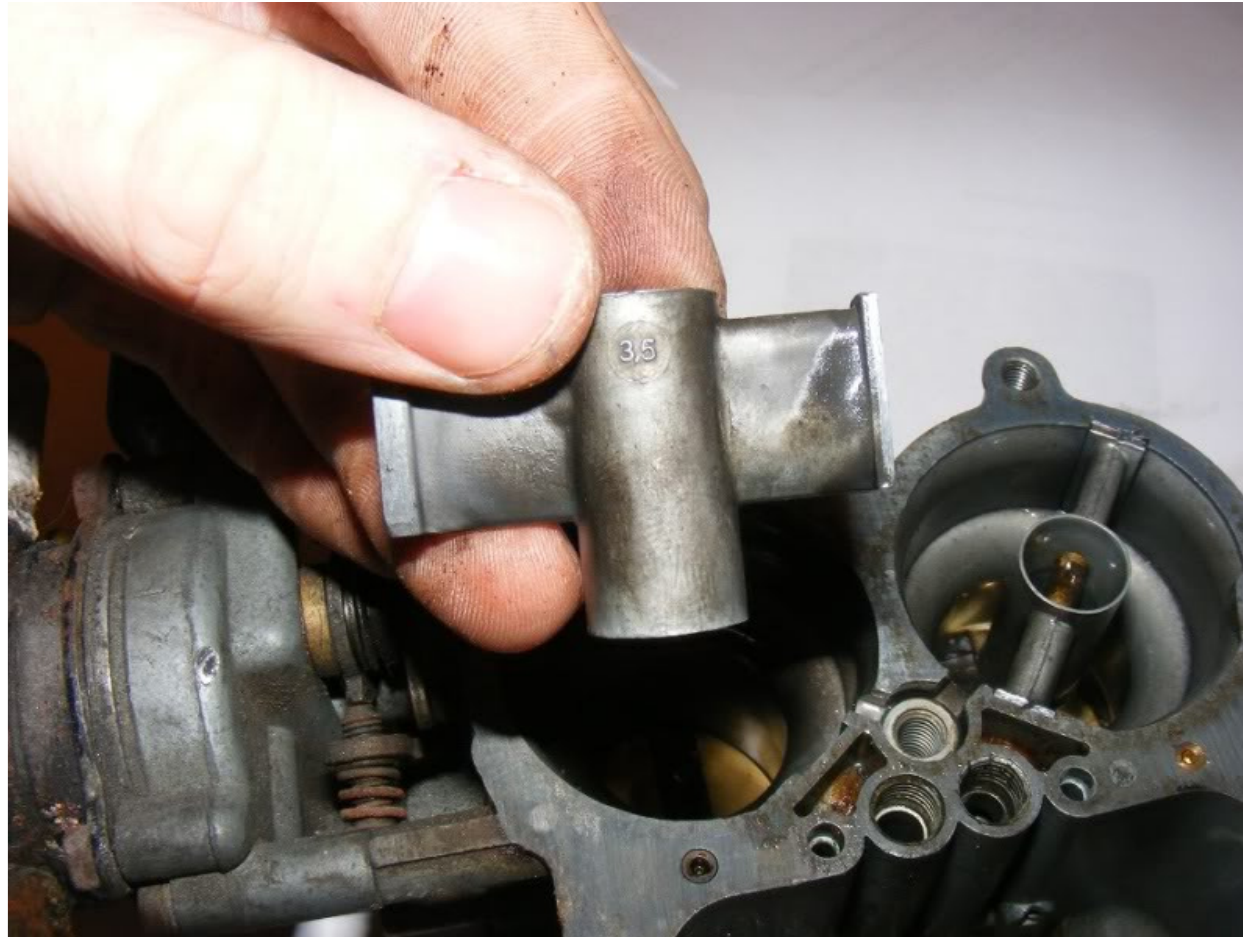
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Step 38 - You can now remove the 'auxiliary venturis' which deliver the fuel into the airflow path, these just pull out as shown. Note the orientation of the hole to allow fuel to flow into the venturi, don't try to fit them back to front so the fuel can't get in!







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Step 39 - Move on to the full power needle valve assembly at the bottom of the float chamber, the usual flatblade screwdriver removal





Step 40 - The accelerator pump is the next job, remove the 4 screws holding the cover in place and unhook the lever arm to remove this



Step 41 - Now remove the diaphragm for the pump, this should simply pull away



Step 42 - Finally, pull the spring from its seat and store this with the rest of the assembly



Step 43 - With the accelerator pump removed, the only major component left on the periphery is the choke - there are 3 screws that act as a collar to hold the choke in place (called the 'thermostat assembly locking ring'). Once you slightly remove two, you can rotate the housing to get to the third. Remove all three screws and the assembly should come away as shown.

Note the coil is a bi-metallic spring which expands and contracts as it heats and cools respectively. You should see from the second picture that it hooks onto the lever protruding from the choke housing (known as the 'auto choke shaft and lever assembly') and will actuate the choke butterflies as the spring heats/cool from the coolant flowing through the housing



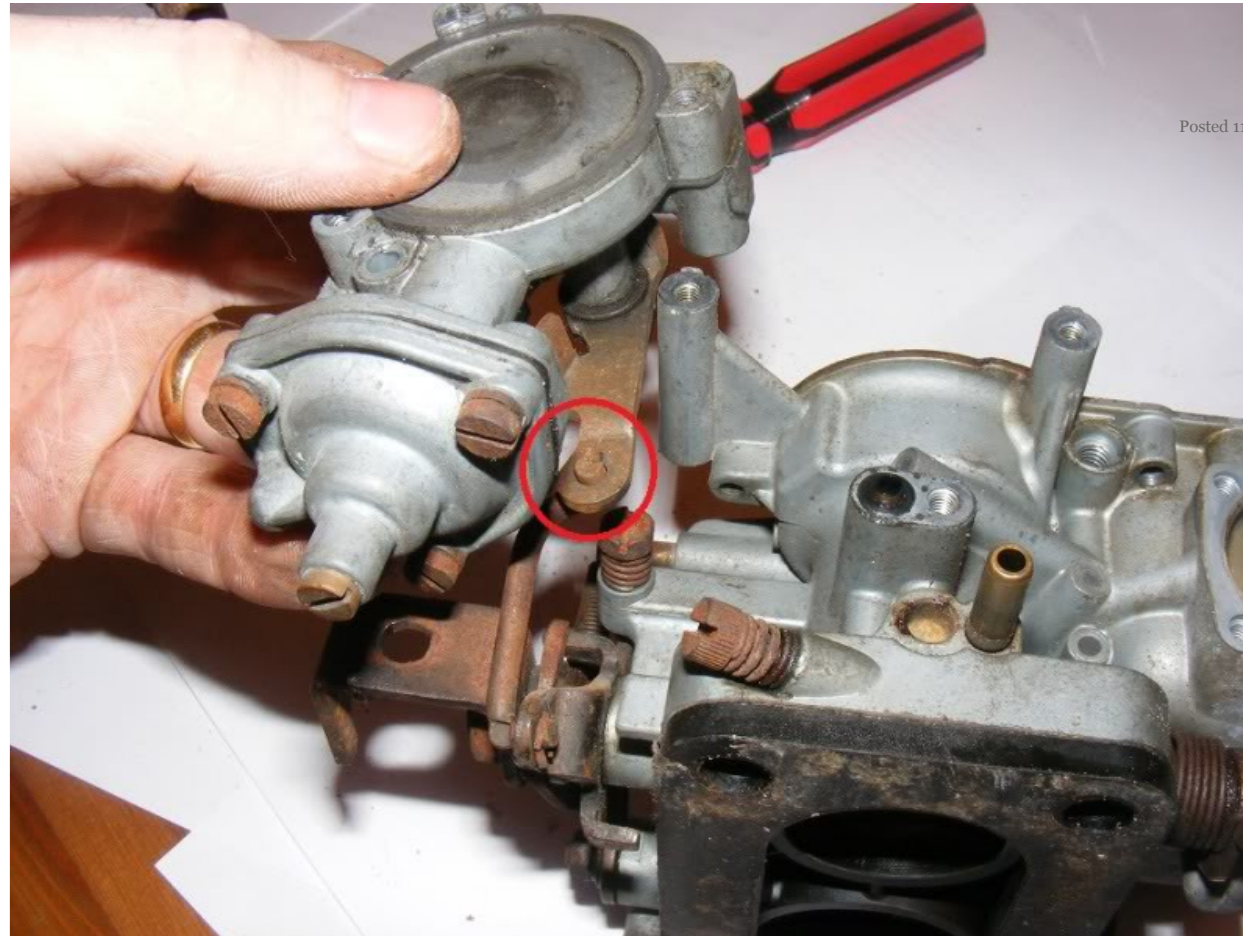


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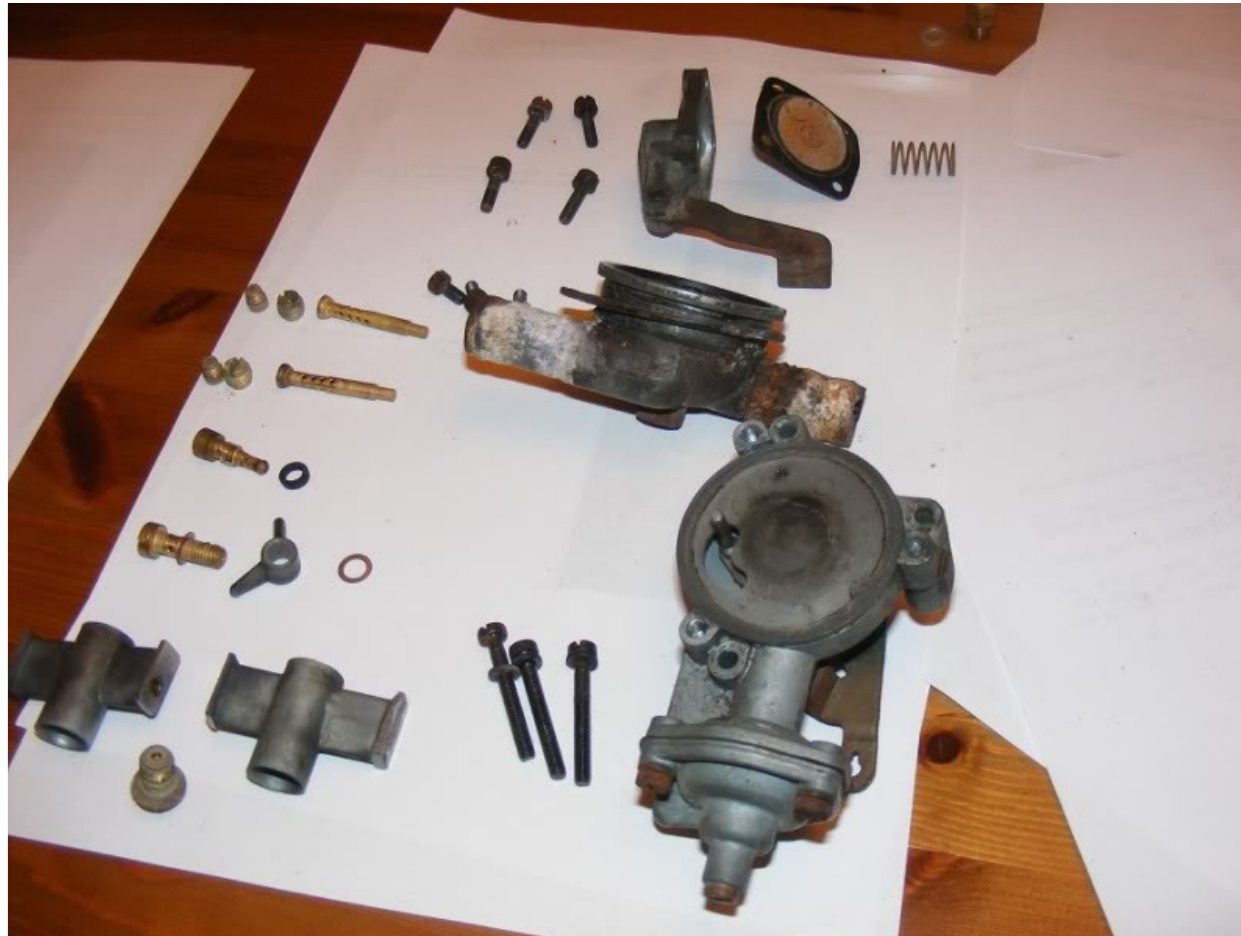
Step 44 - Now you can remove the two long choke fixing screws



Step 45 - Then pull the choke assembly away completely. Note you have to line up the key in the rod/lever which is circled to remove the assembly. Make sure you are keeping everything clean and ordered



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Step 46 - You can now remove the 3 screws holding the choke diaphragm cover in place



Step 47 - Remove the cover and you will expose a spring and diaphragm, remove these and keep them safe



Step 48 - Slide the diaphragm and bar out and add this to the collection of parts



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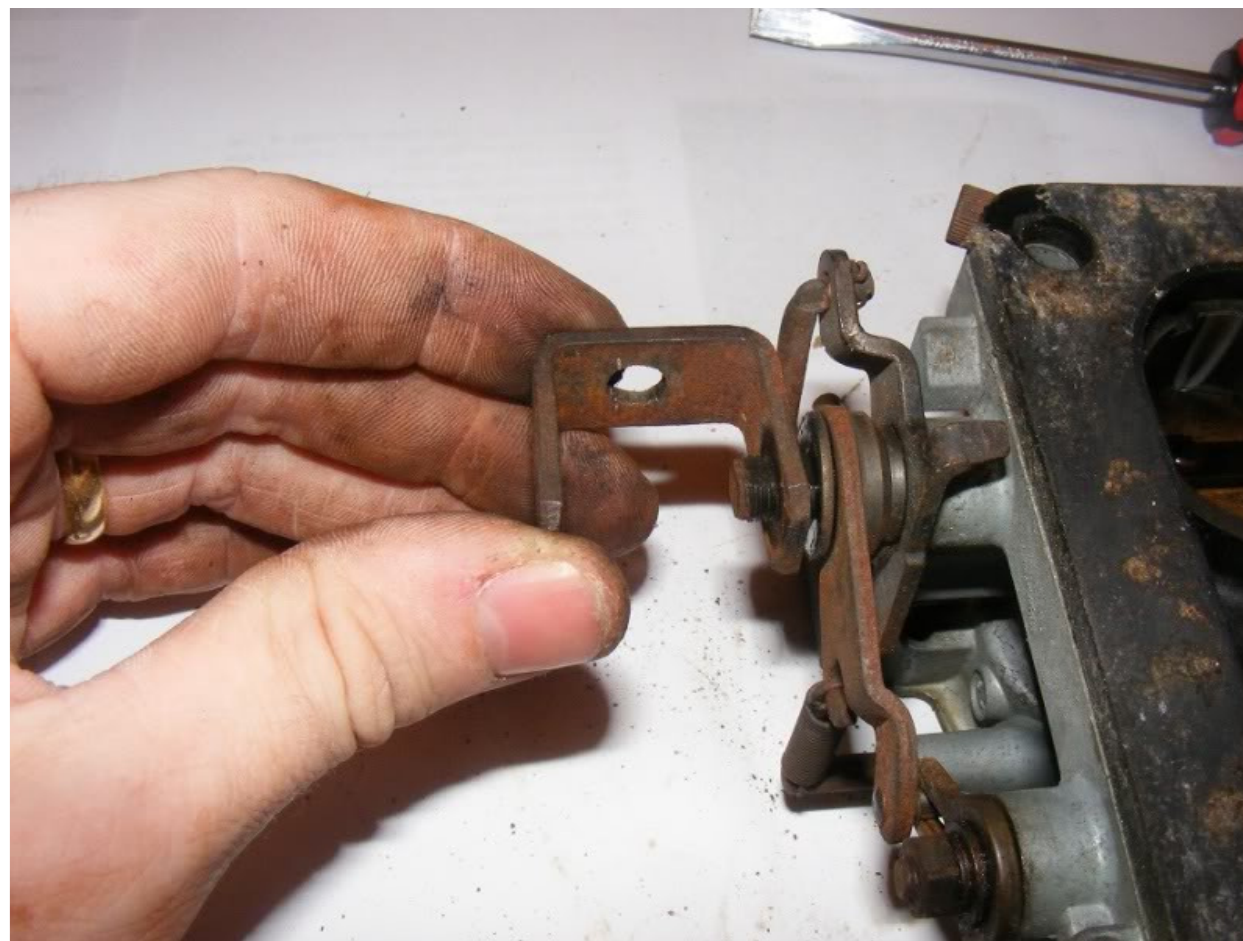
Step 49 - Onto the throttle linkage, use a 12mm spanner to remove the shallow nut ('throttle shaft linkage nut'), this shouldn't be too tight



Step 50 - Now remove the locking tab from the shaft



Step 51 - You can now remove the U shaped bracket called the 'throttle valve control lever'



Step 52 - Then the 'washer for loose lever' which has a square key in it. The loose lever is exactly that, if you tighten it you won't be able to open the throttle butterflies



Step 53 - Then the loose lever assembly can be pulled off too (note you need to unhook the spring)



Step 54 - Next is the loose lever bushing which also simply slides off



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Step 55 - You can remove the other end of the loose lever spring at this stage



Step 56 - The 'primary throttle control lever' and 'bush retaining spring' can now be removed too

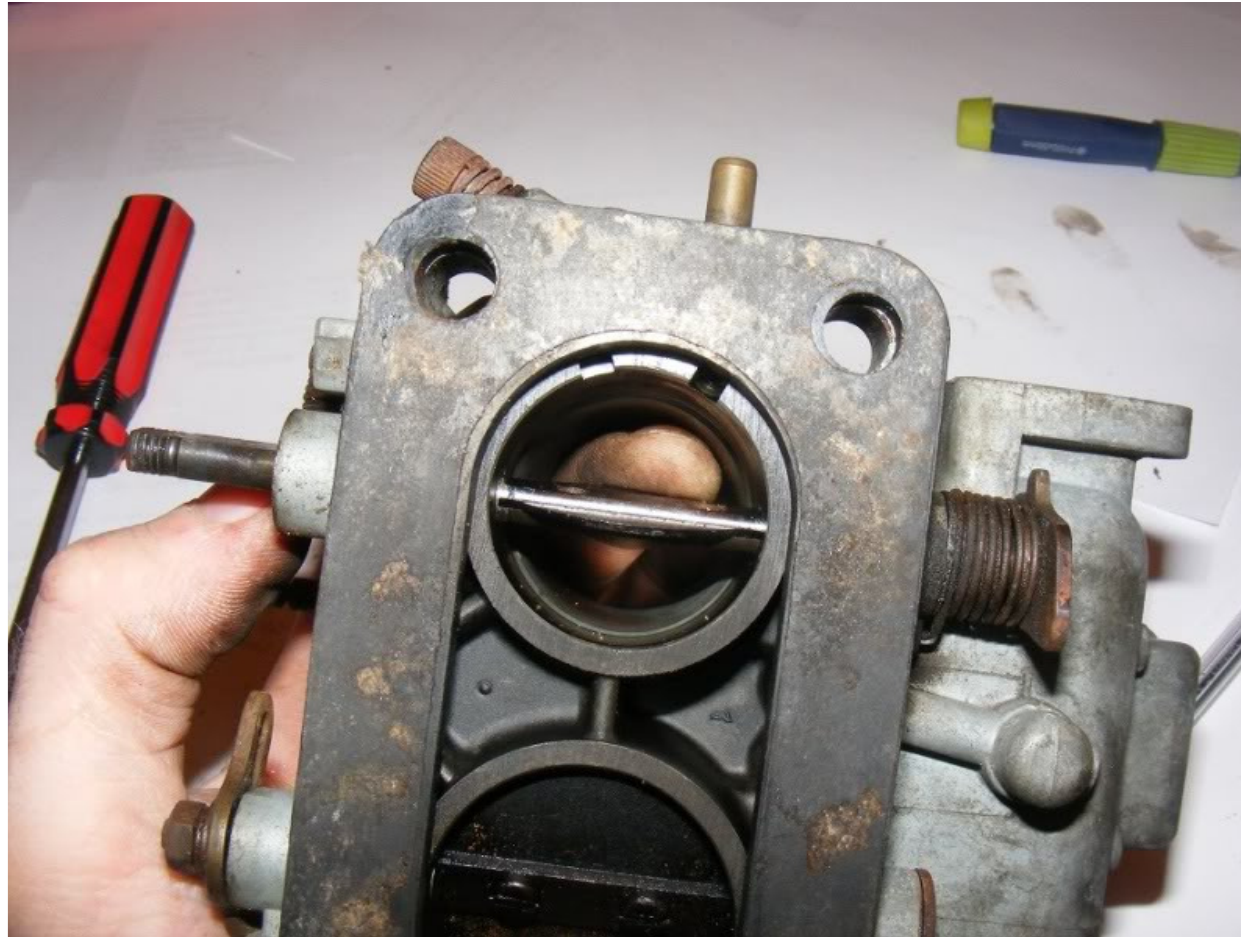


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Step 57 - Getting the throttle plate/valve screws out can be tricky, expect to need a lot of force when doing this. Slacken both screws completely then open the throttle shaft (by rotating the end of the shaft) to allow you to remove the discs







Step 58 - Unhook the return spring from the end of the shaft



Step 59 - Now you should be able to push out the throttle shaft (this is the primary shaft as it is the primary venturi that opens up when you depress the throttle by a small amount) but it might need some 'encouragement' with a hammer, gently tap only though if required





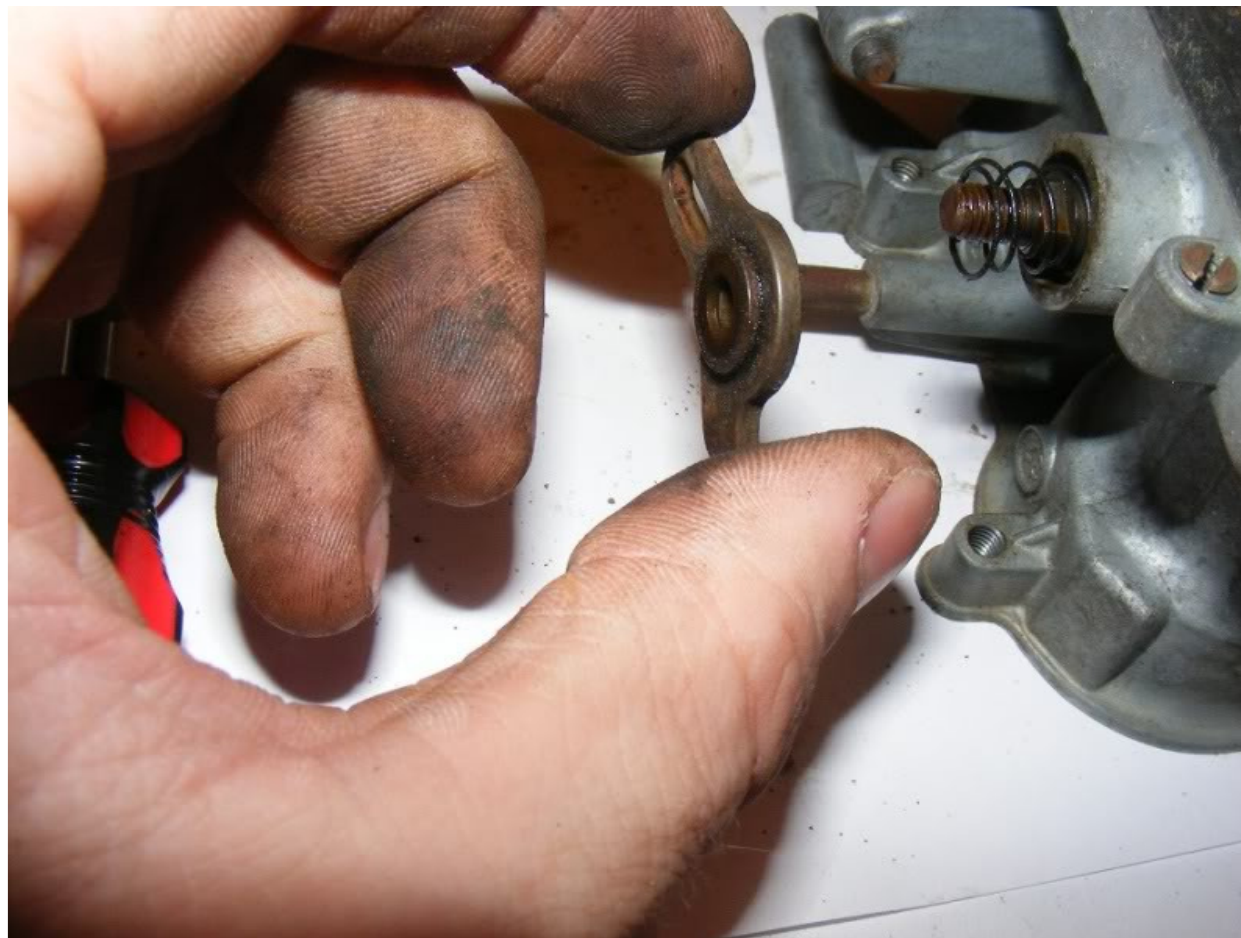
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Step 60 - Next we do the secondary shaft, remove the fixing nut (12mm) and spring washer





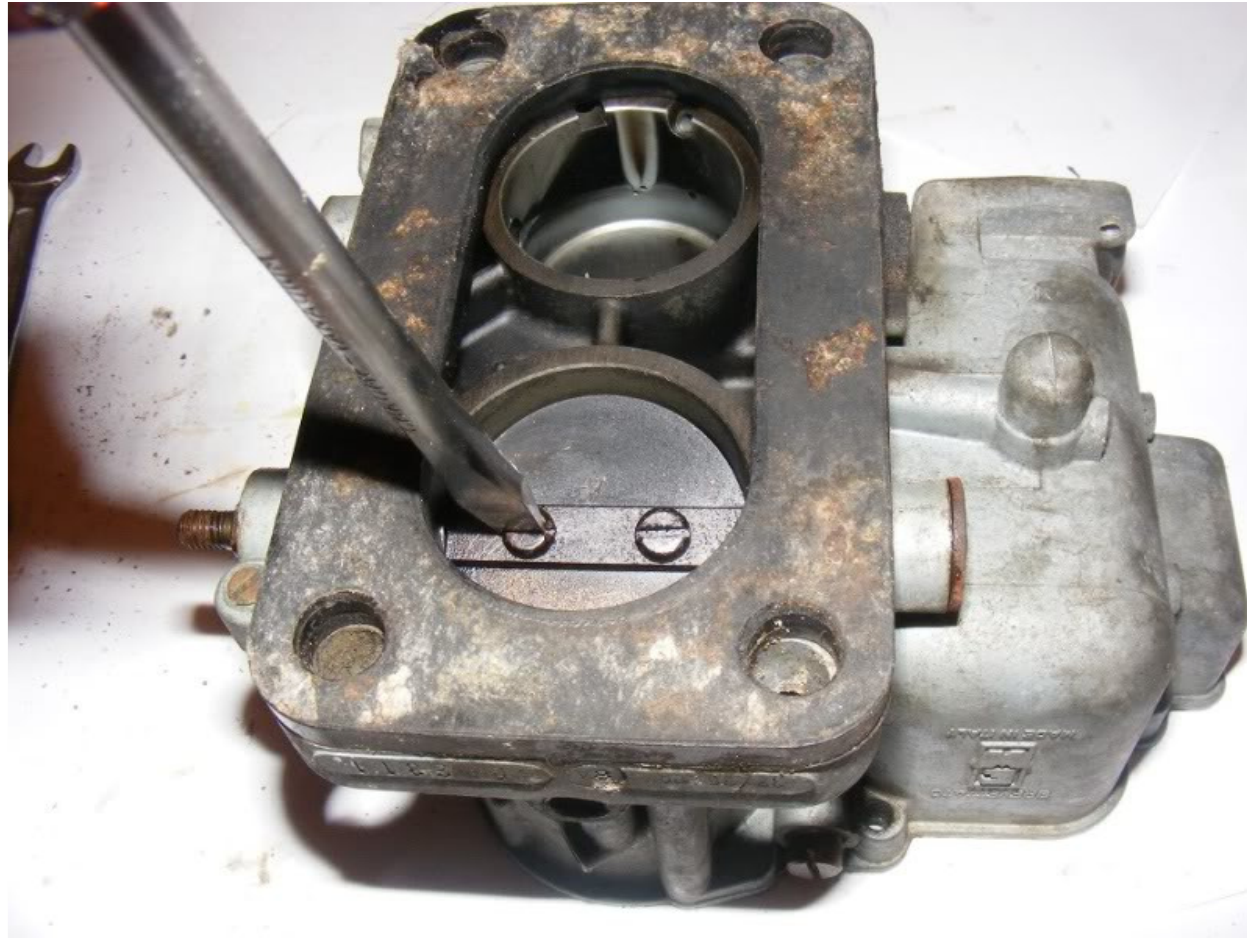
Step 61 - Pull the secondary throttle control lever off the shaft



Step 62 - Next remove the bush retaining spring



Step 63 - Remove the butterfly screws for the secondary shaft, again, they will be tight. Then take the disc out and store safely





Step 64 - Remove the shaft from the carb body



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Step 65 - You have pretty well stripped the carb at this stage so admire all your collection of bits to clean up and restore





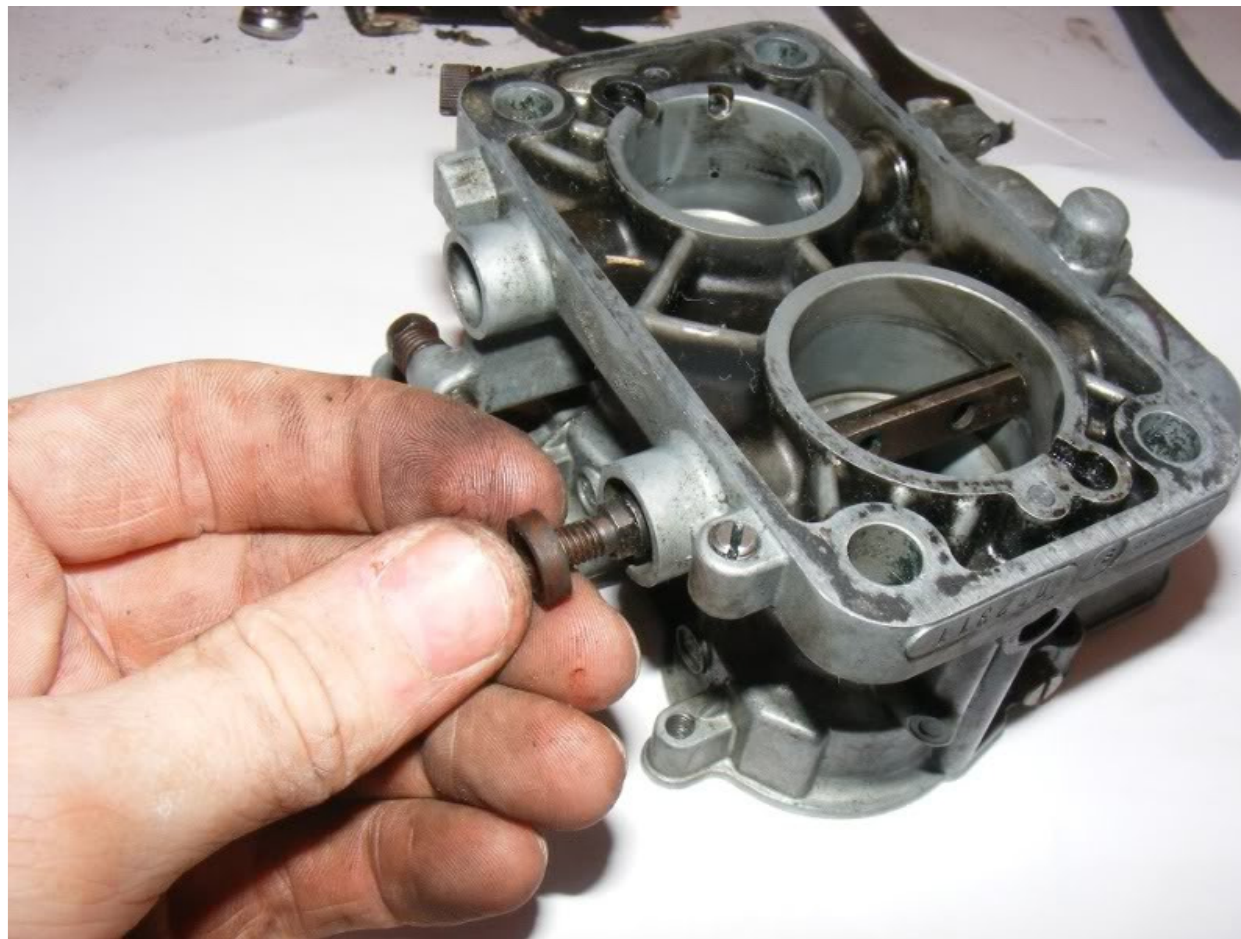
Step 66 - Split the base plate from the base of the carb because this gasket will need to be replaced, it may need some cleaning up if it is anything like mine was



Step 67 - Get busy with the cleaning materials again



Step 68 - Don't forget to remove the bushes for the throttle shafts if you left them behind



Step 69 - Clean up all the screws, jets, tubes, shafts etc to get rid of any debris/material



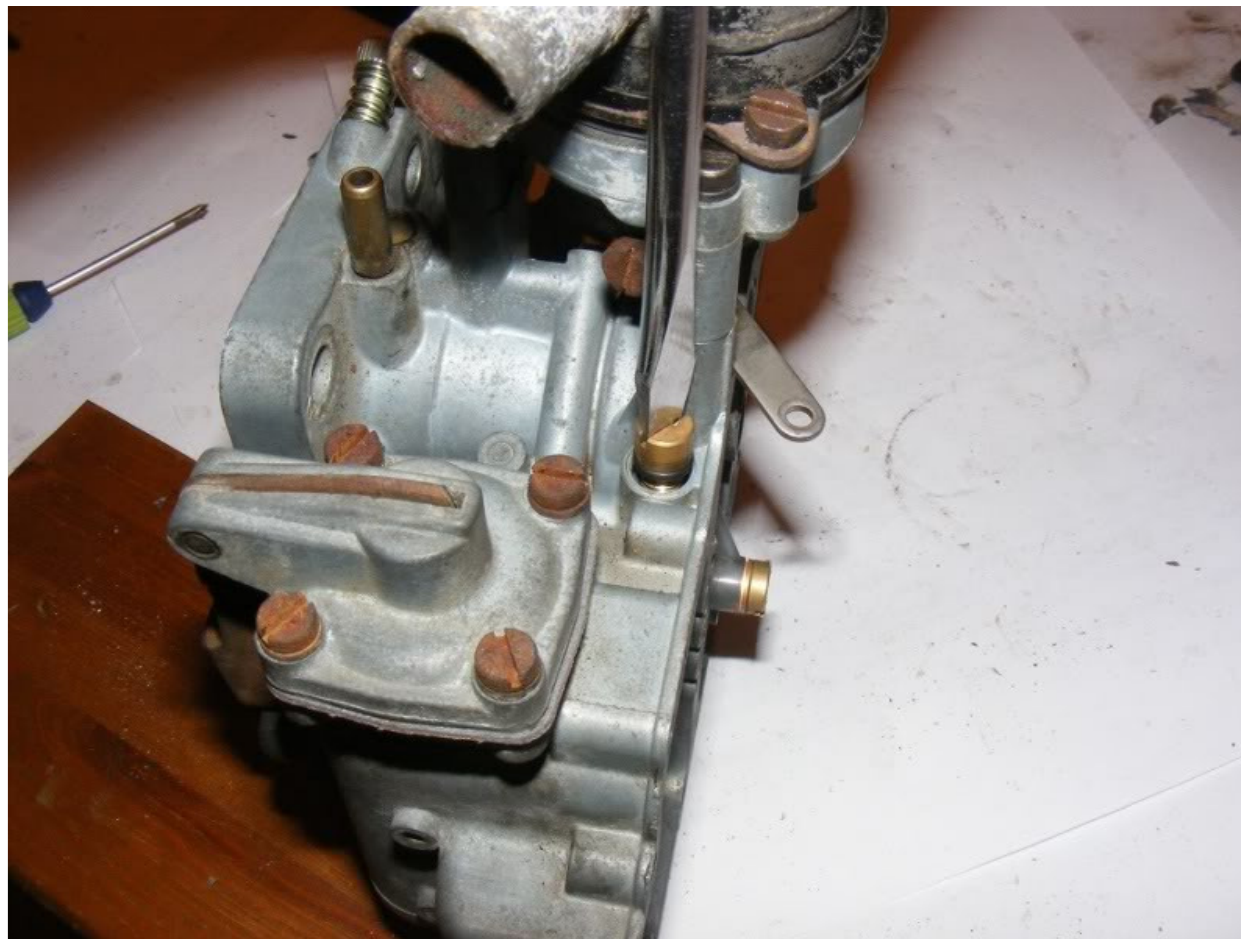
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Step 70 - Remove the idling jet and holder plus O ring. Replace this with the new jet and O ring from your service kit then refit

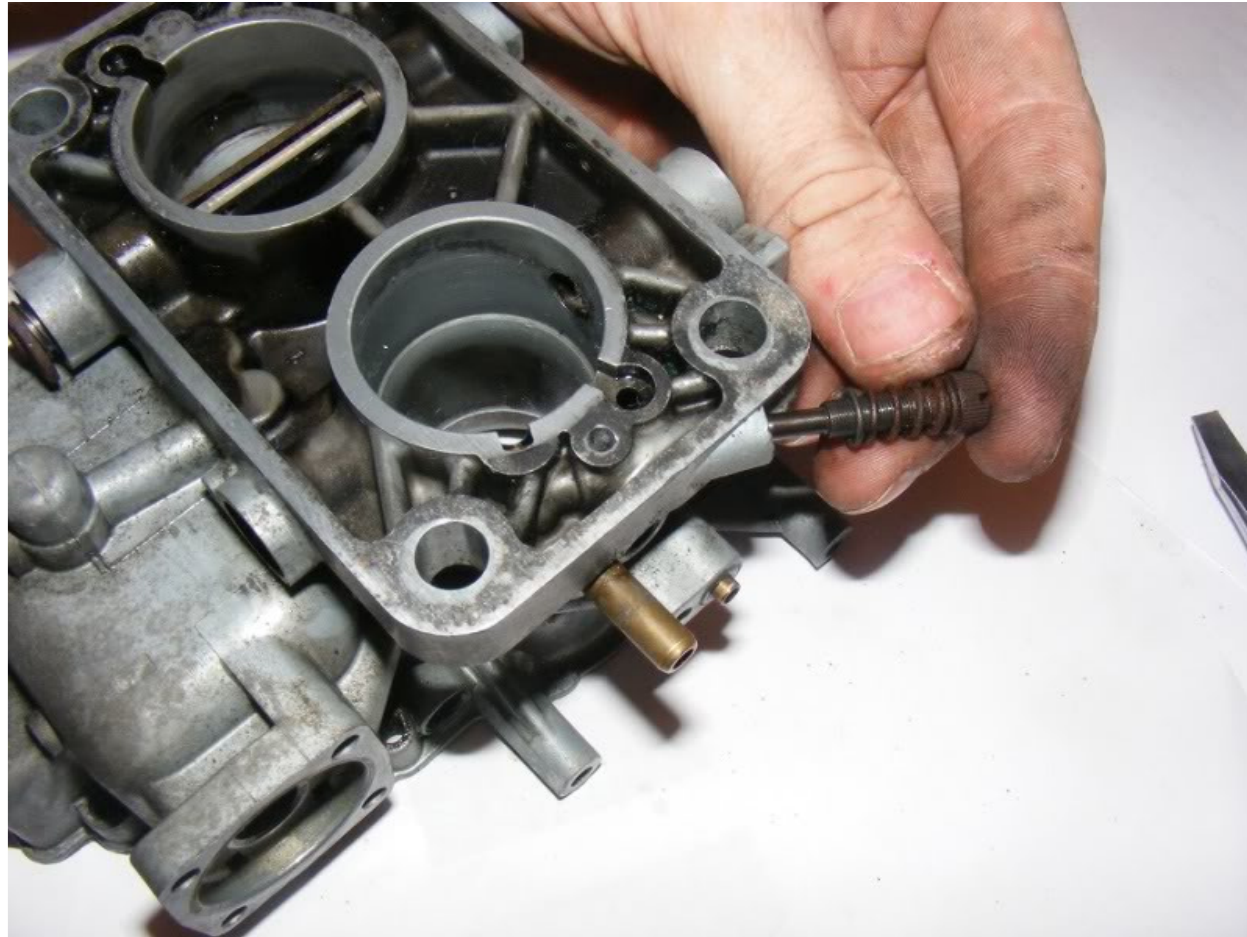


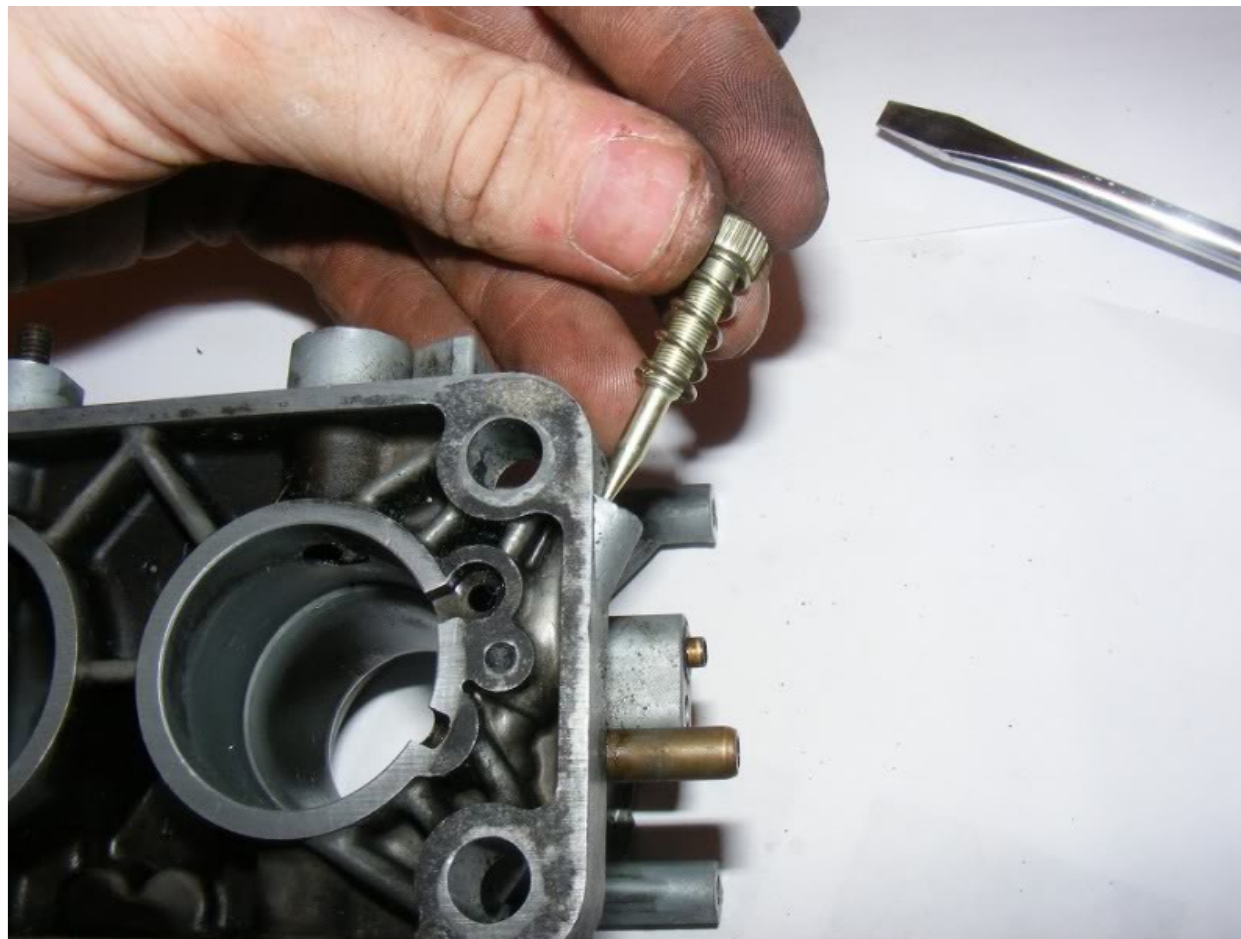


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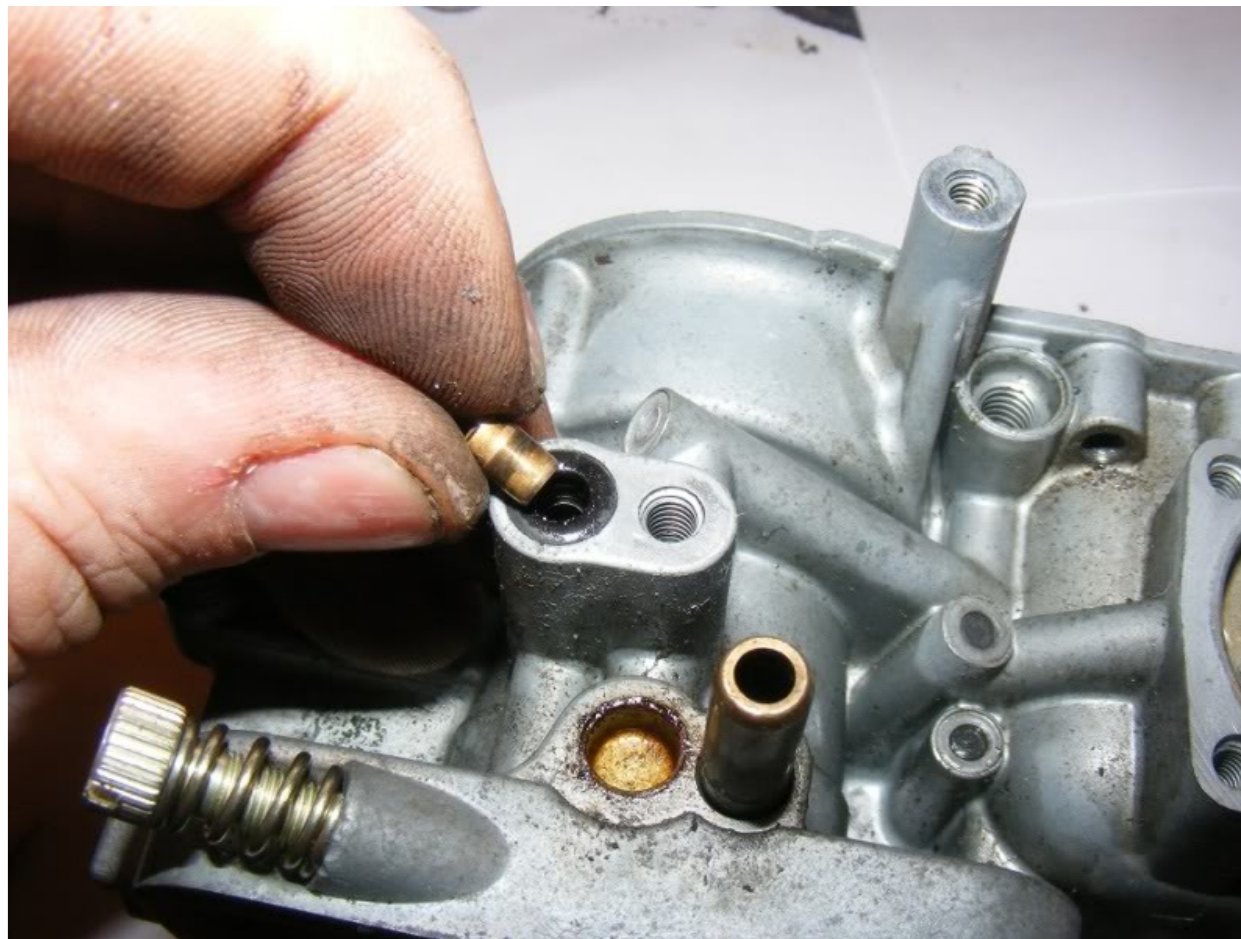


Step 71 - Remove the old idle mixture adjustment screw and spring and refit with a new one from your carb rebuild kit





Step 72 - Replace the O ring for the auto choke unit tube



Step 73 - If you fancy a look at your 'pump discharge blanking needle', this is where it is at!

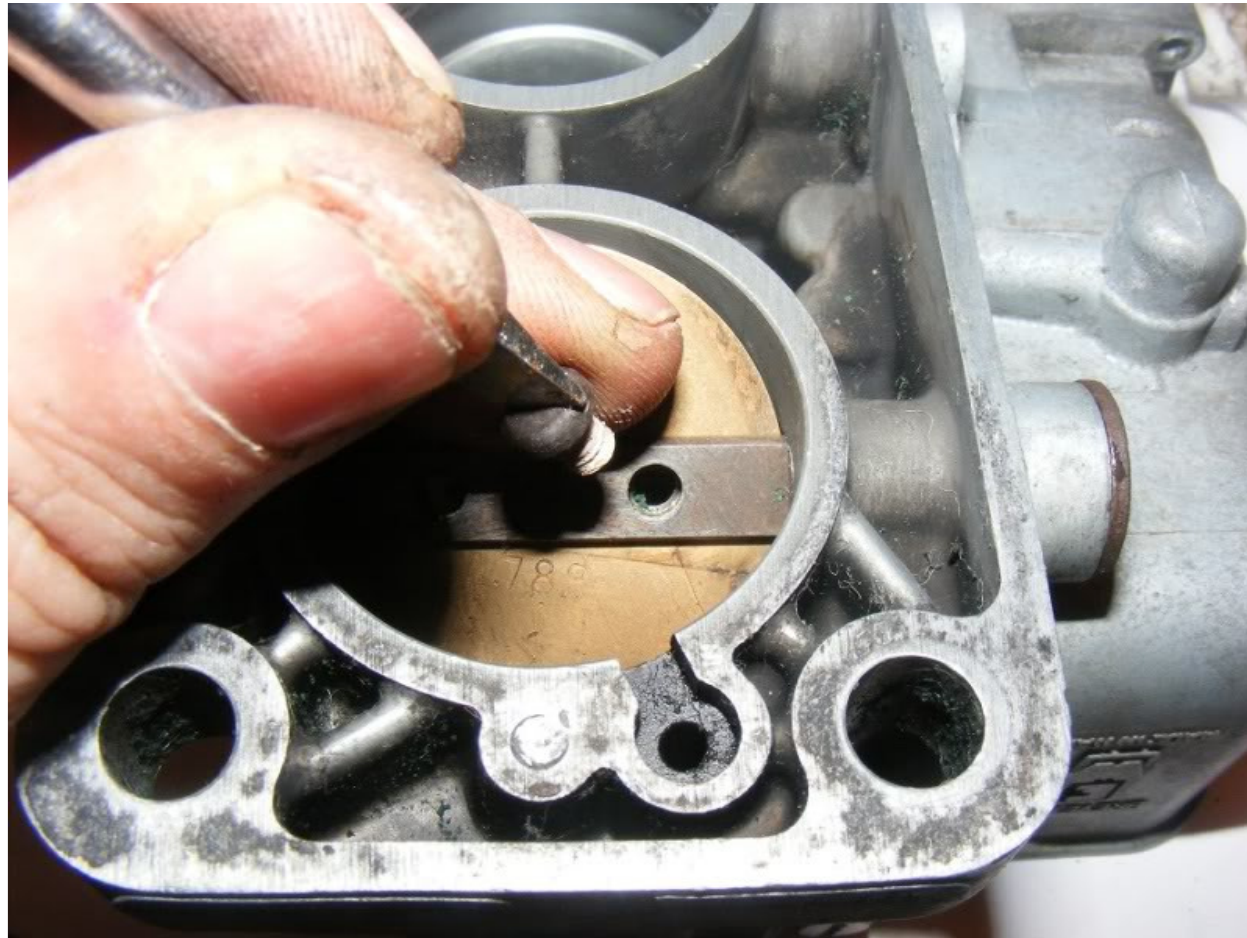


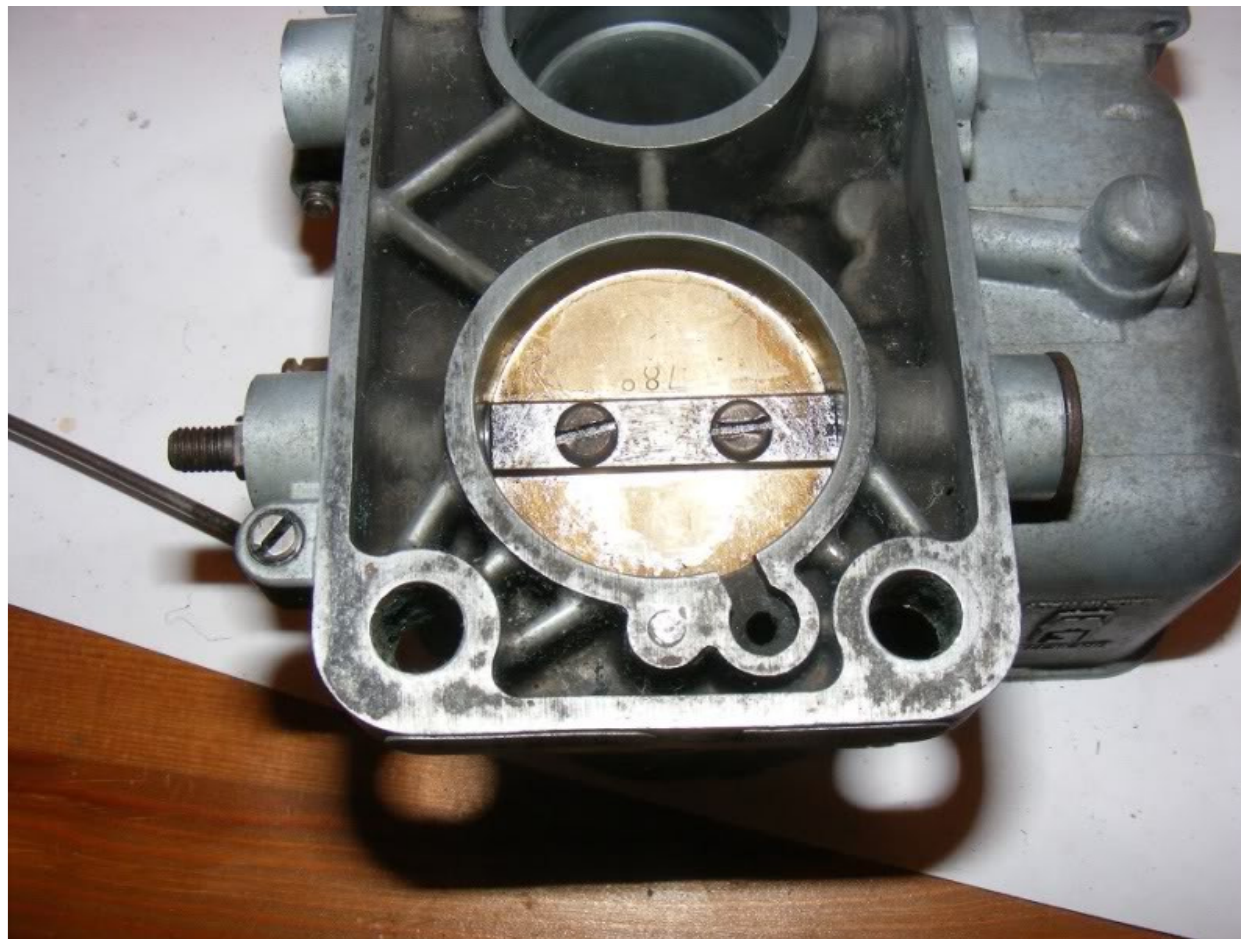
Step 74 - Refit your throttle shaft and valves, use new bushes. You may find a little oil on the shaft helps



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Step 75 - Line up the valves with the shaft to refit the screws - test opening and closing before tightening the screws to get the perfect fit





Step 76 - Refit spring, lever, washer, spring washer and nut to the secondary shaft



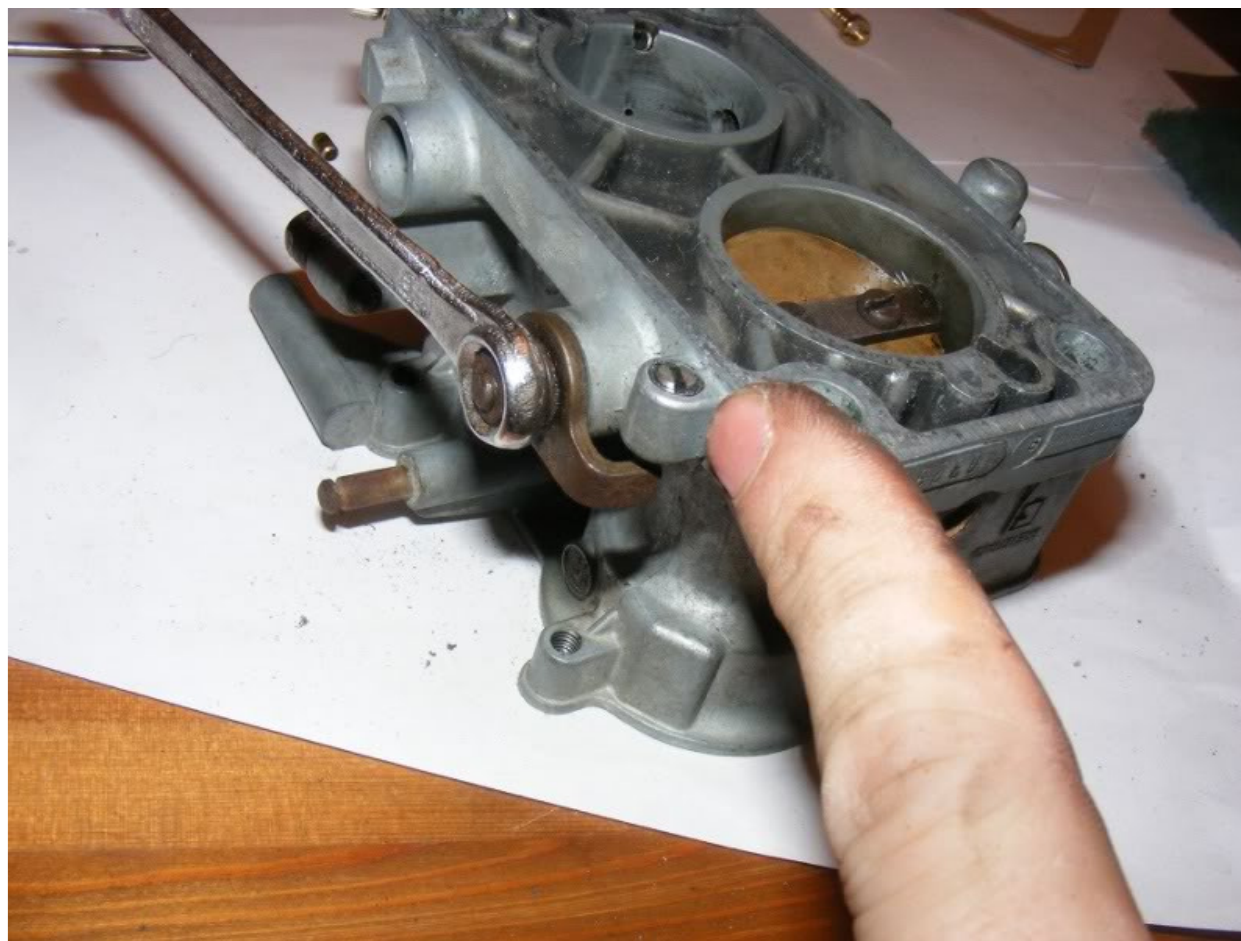
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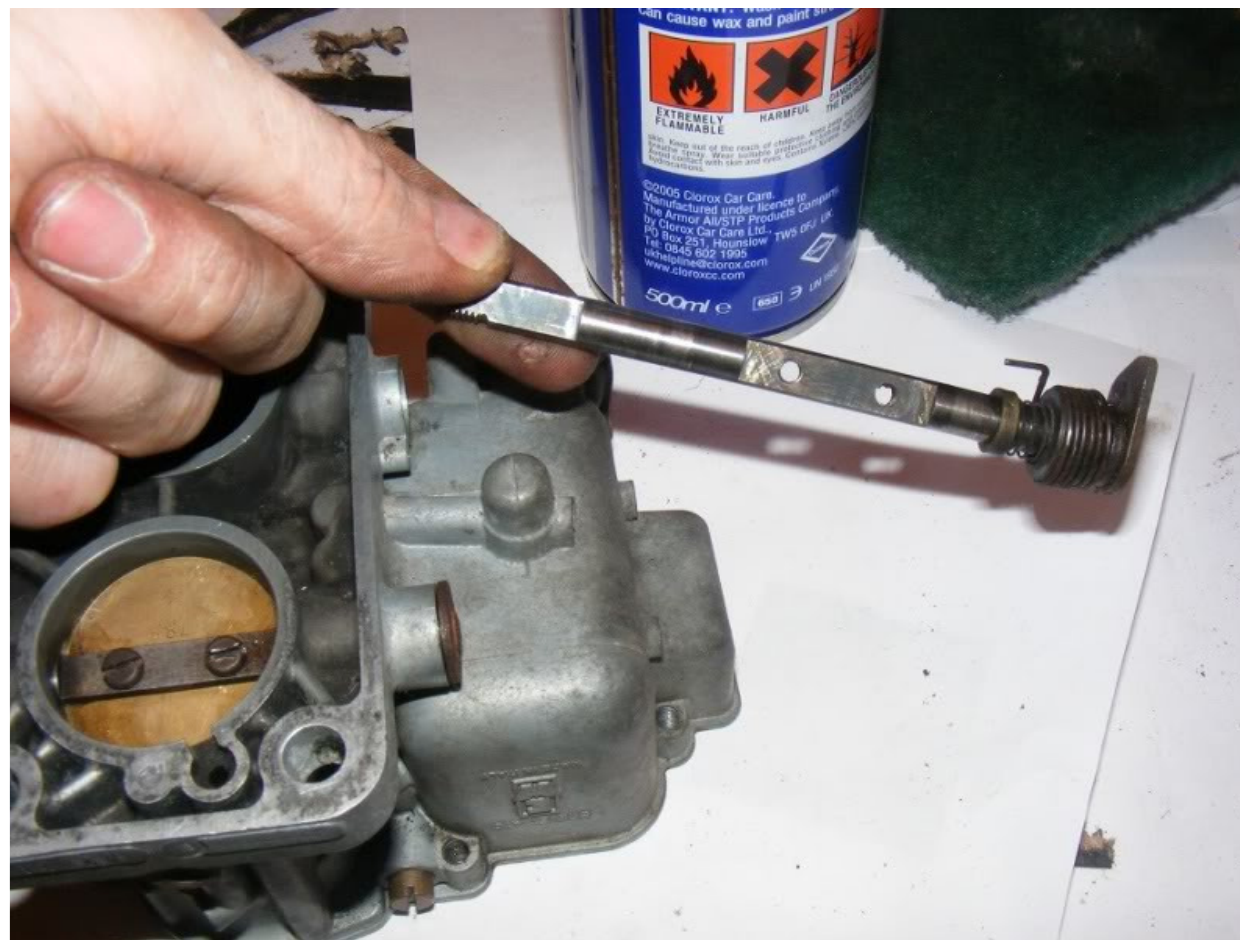




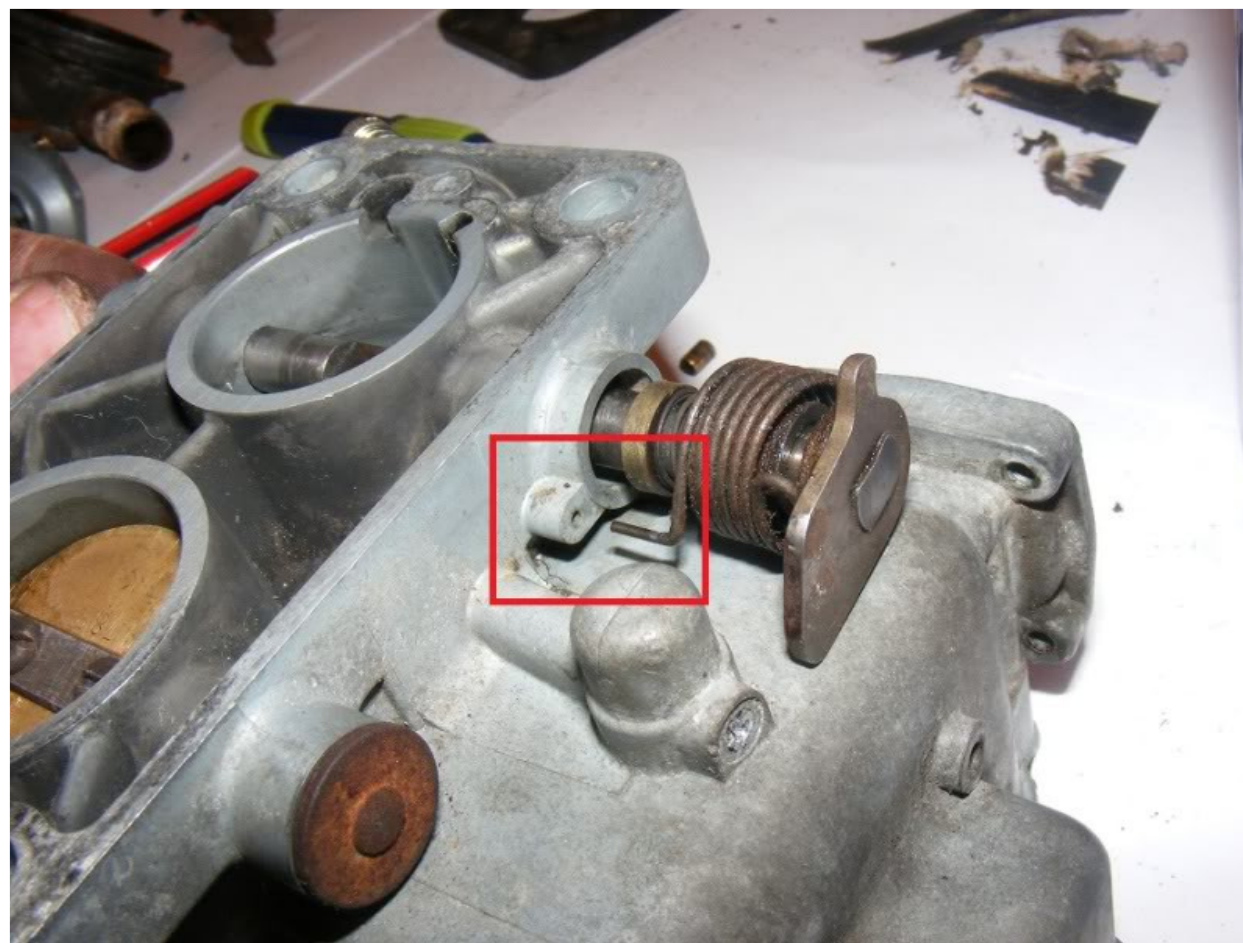
Step 77 - Nip up the 12mm nut



Step 78 - Check for wear, clean and refit the primary shaft next



Step 79 - Line up the return spring with the hole in the carb as shown



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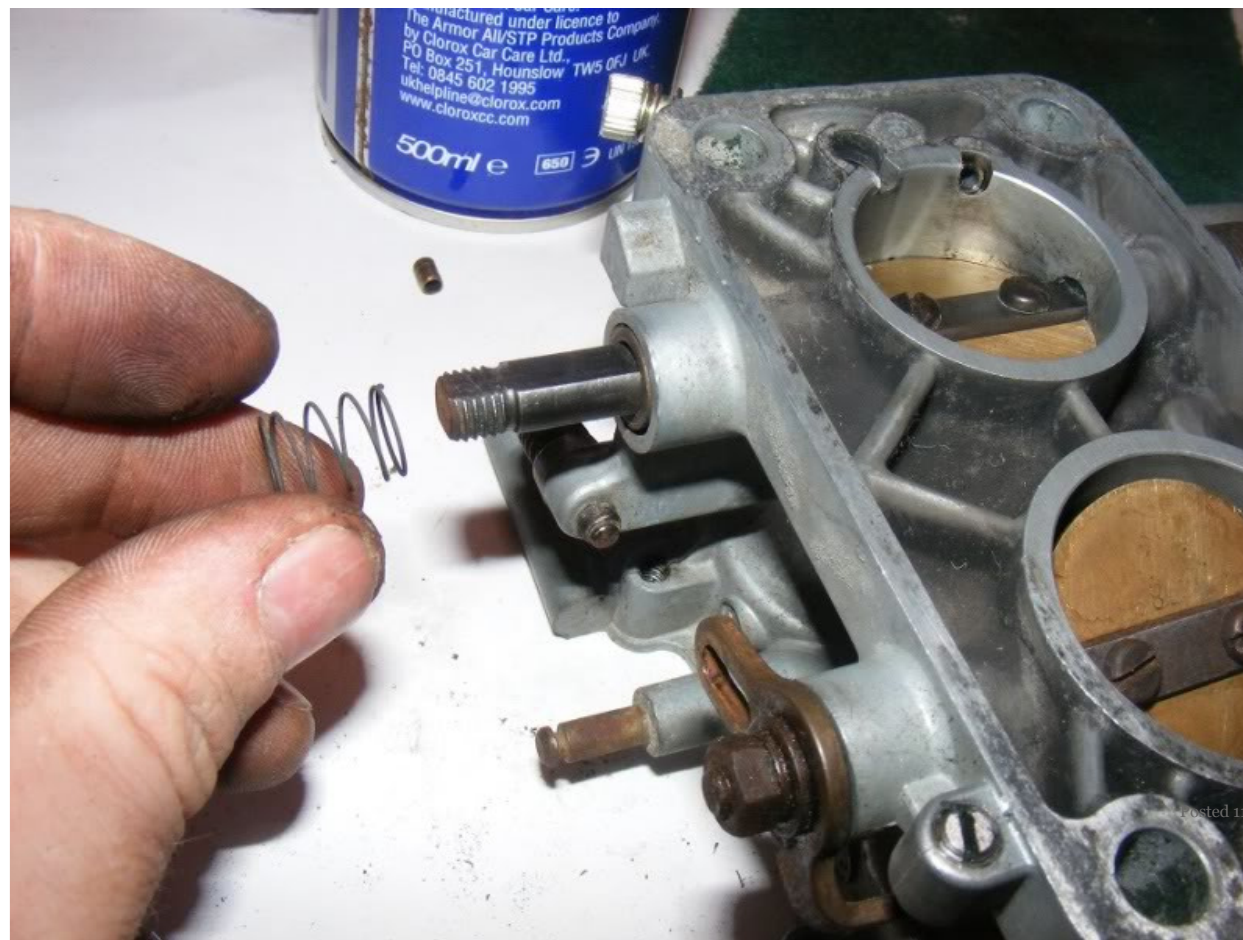
Step 80 - Once the shaft is fitted, use a screwdriver to hook the spring over and return the throttle to the closed position



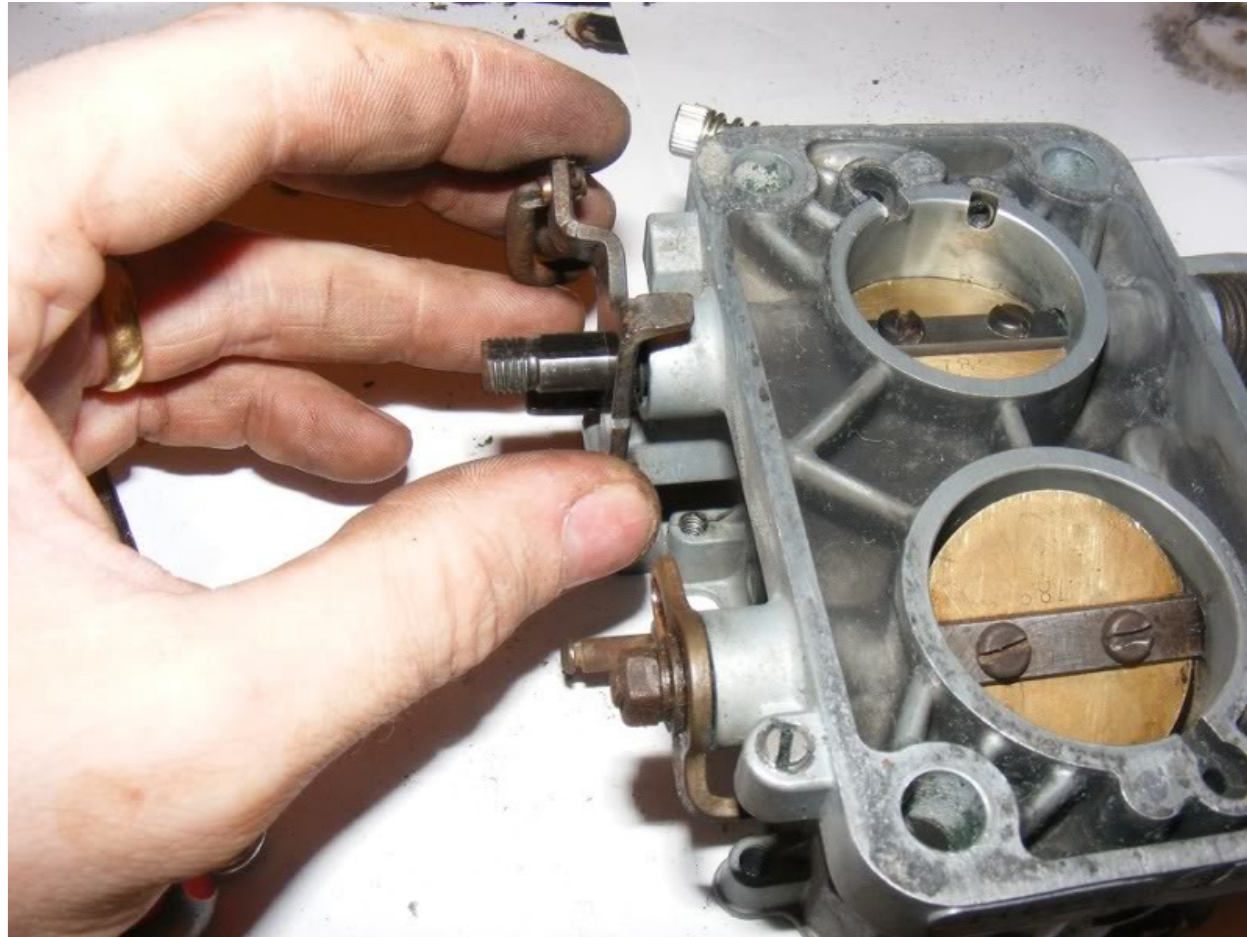
Step 81 - Refit shaft retaining bush, butterfly, spring, lever, spring, loose lever bush and loose lever



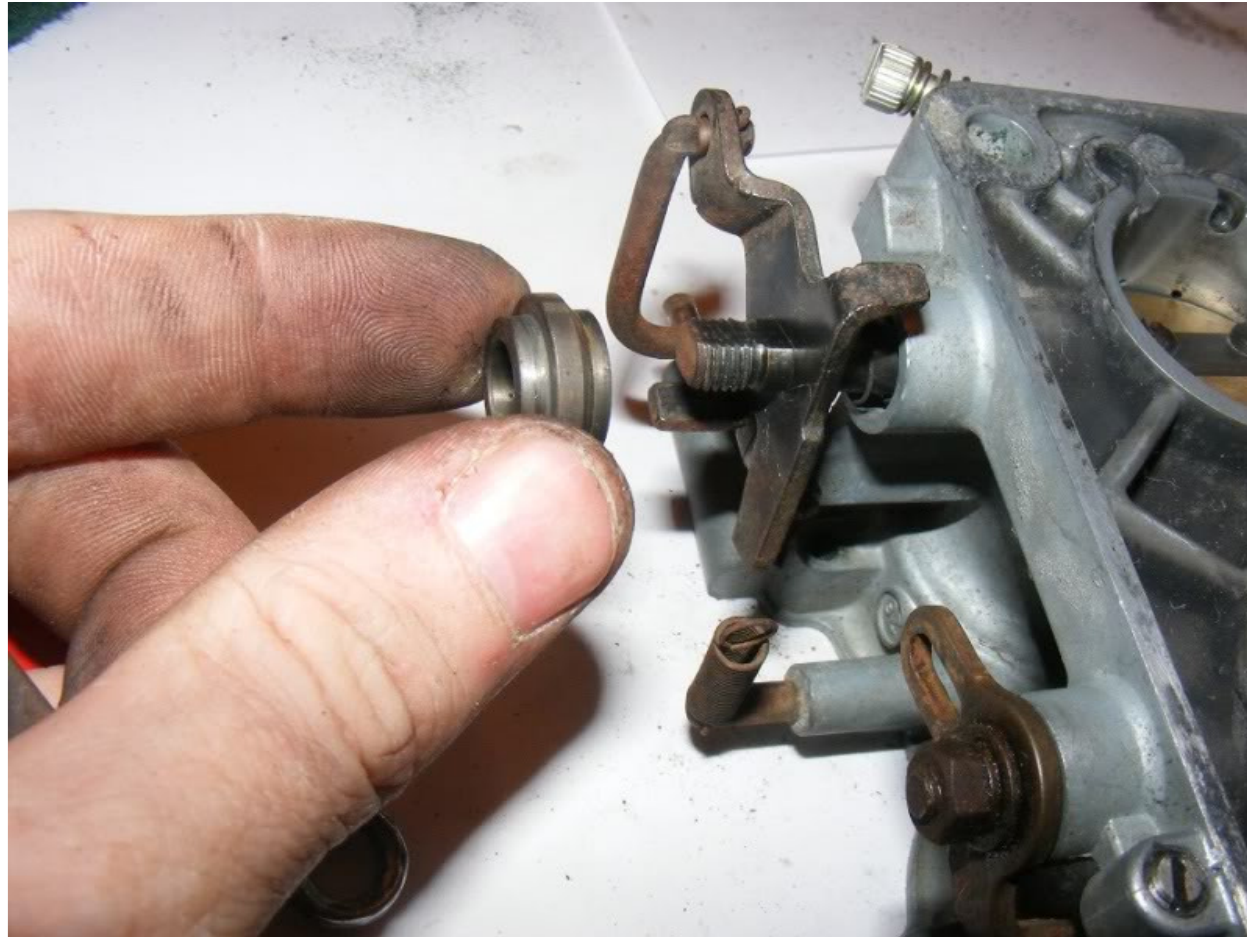




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Step 82 - Hook the spring back in place





step 83 - Finish with washer and lever then fit the locking tab and nut









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Step 84 - Check everything operates as it should, ensure both butterflies are opening smoothly etc

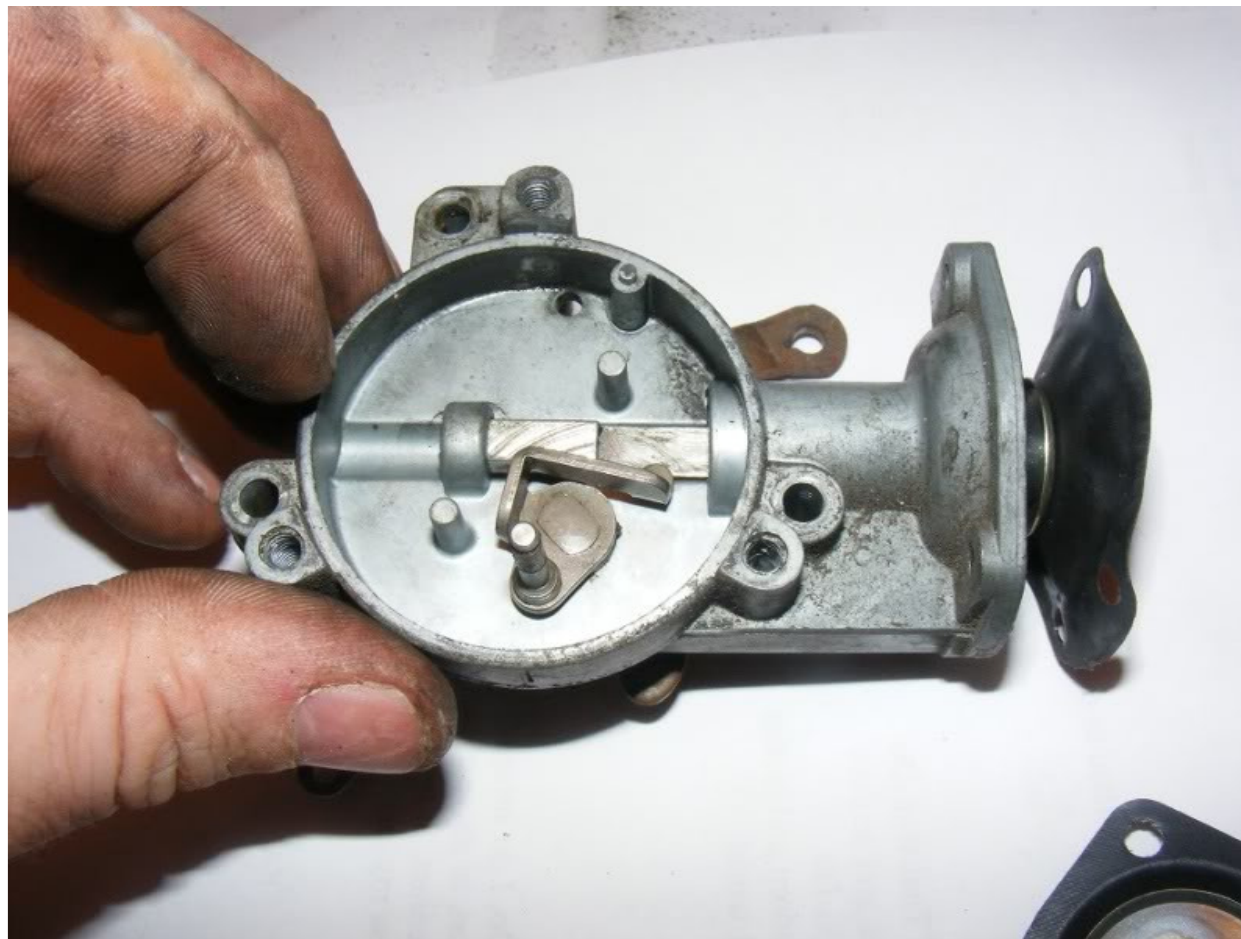


Step 85 - Next, the choke mechanism - remove the cover plate, it simply pulls off



Step 86 - Slide the new diaphragm in place and make sure the mechanism is able to actuate freely

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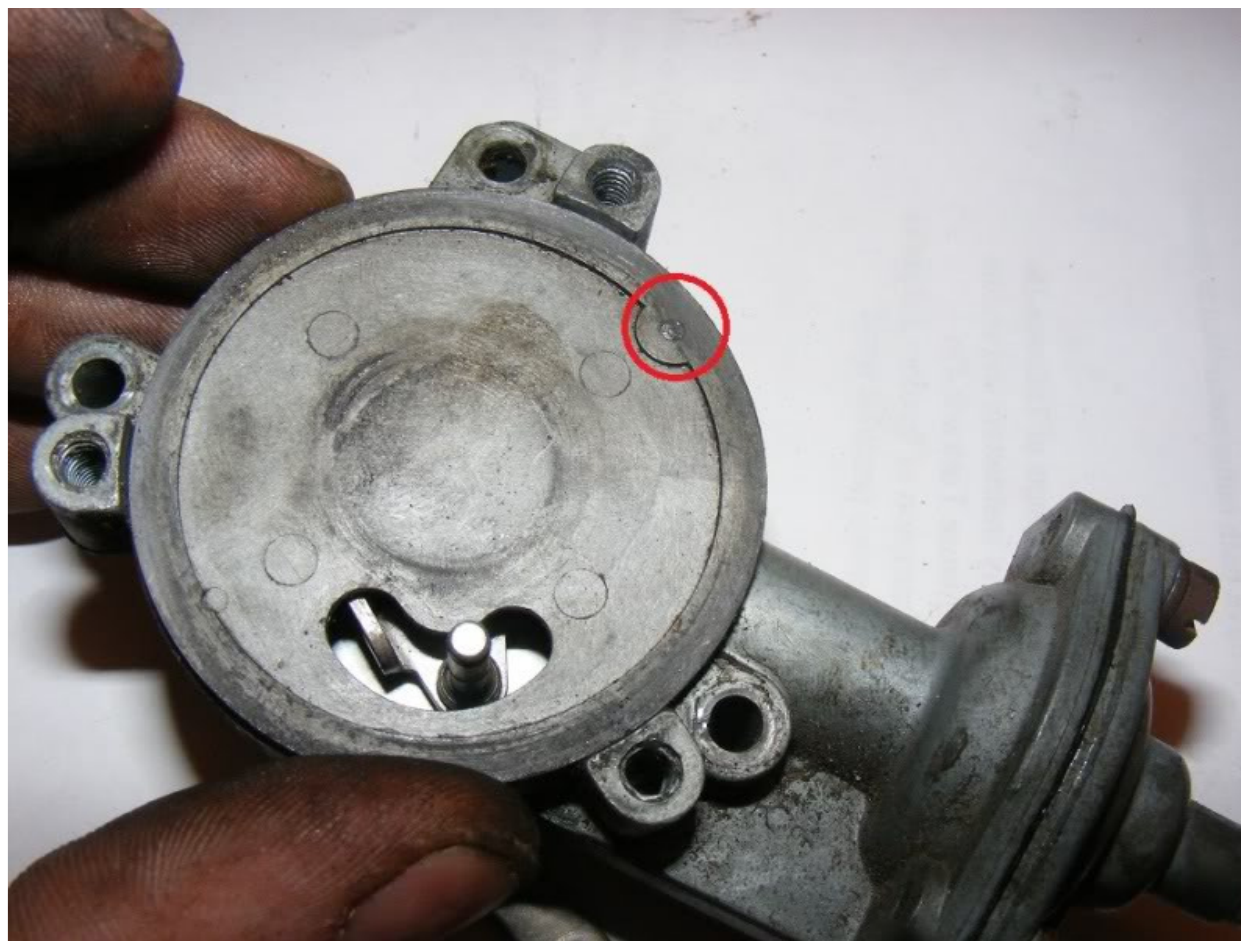


Step 87 - Line up the diaphragm holes, fit the spring and tighten the cover





Step 88 - Refit the housing cover aligning the dowel as highlighted



Step 89 - Make sure everything moves freely before refitting



Step 90 - Refit the two long choke fixing screws (don't forget to put the keyed 'fast idle control rod' in place before fitment)

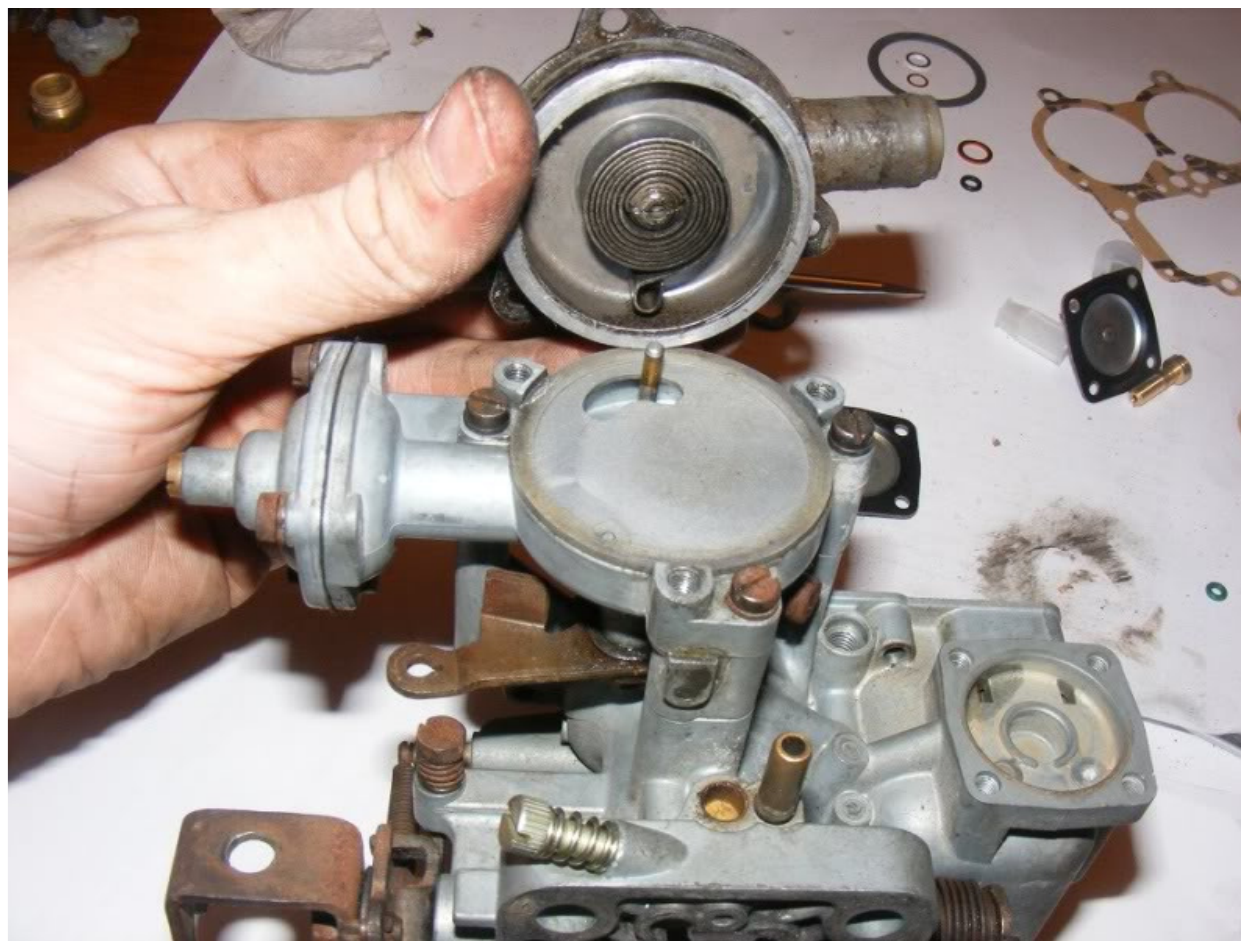




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Step 91 - Clean up the outer housing of any residue coolant then loop the coil over the choke actuator rod as shown in the second picture





Step 92 - Refit the outer locking ring with a new gasket from your rebuild kit then tighten in place but not fully (you will need to adjust this later)



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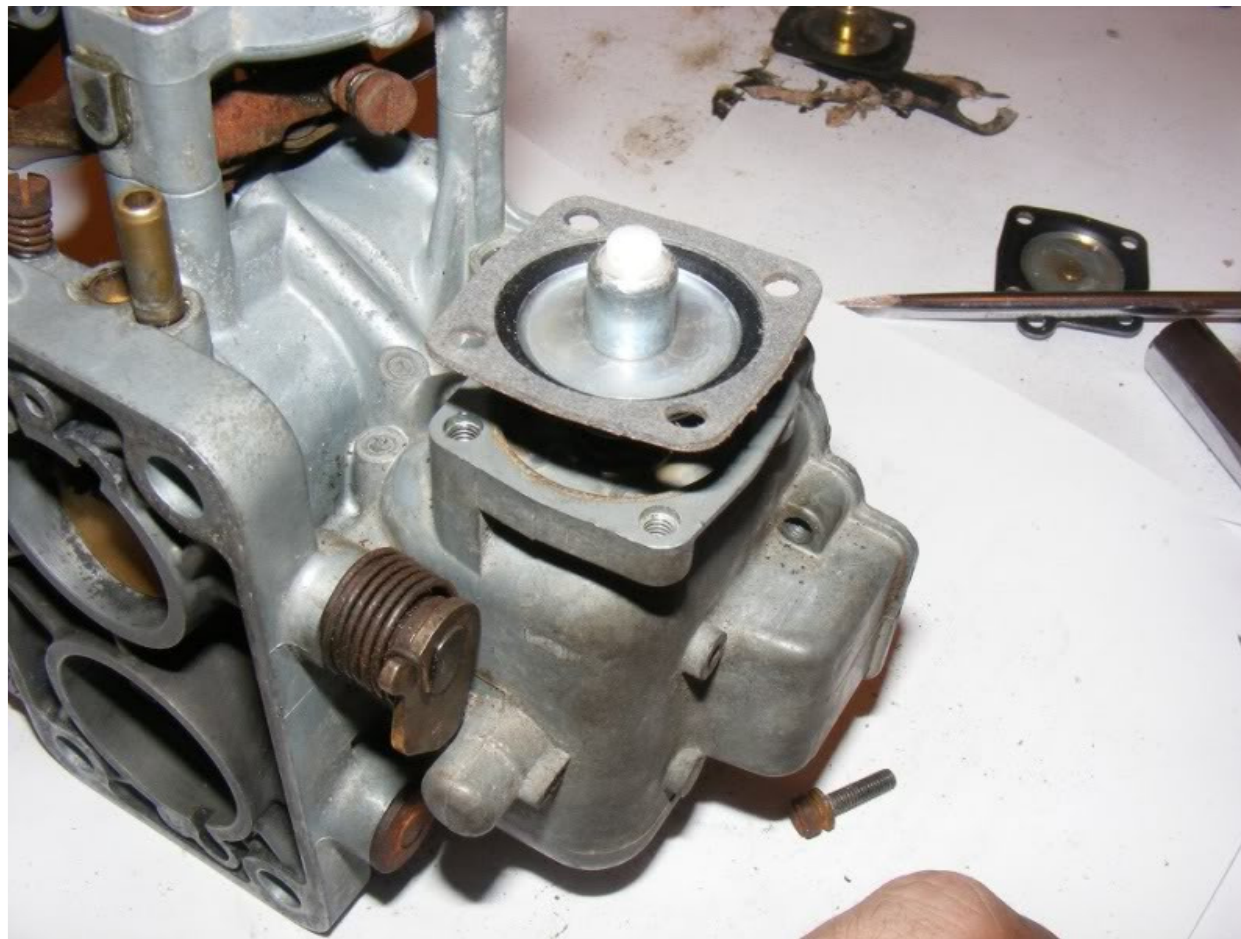


Step 93 - Pop the pump loading spring into the accelerator pump housing on the carb

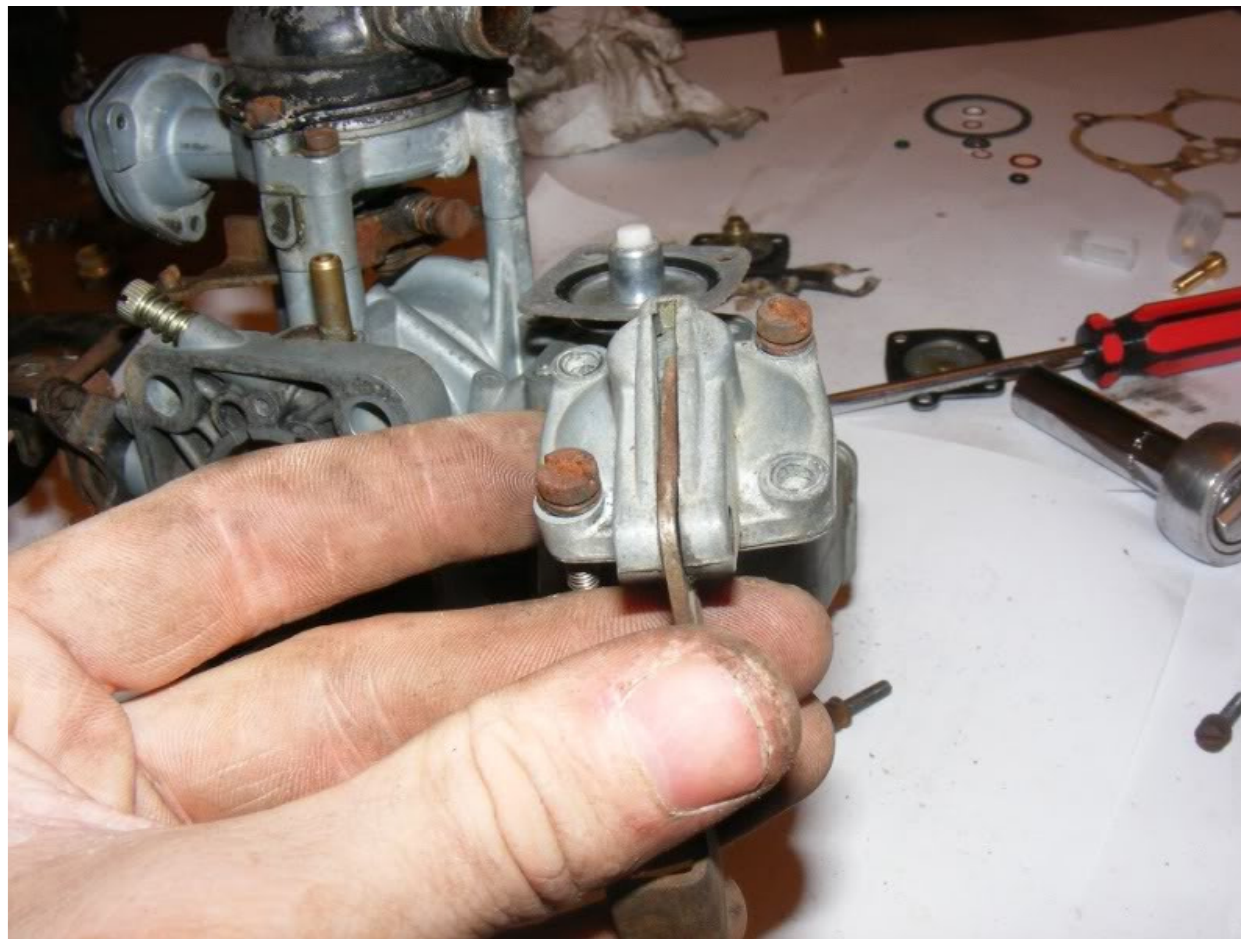


Step 94 - Fit your new diaphragm against the spring





Step 95 - Drop a couple of screws in the pump cover assembly



Step 96 - Lower the cover over the spring/diaphragm and gently tighten the two screws. Then fit the remaining two screws and tighten



Step 97 - Fit a new copper washer from your rebuild kit to the full power valve and refit into the float bowl





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Step 98 - Put the auxiliary venturis back in place (careful to align the hole in the right direction as shown in the second picture)





Step 99 - The venturis shouldn't rattle, if you find they are loose then tap them with a flatblade screwdriver or similar punch to seat them and make sure they don't move





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Step 100 - Fit a new copper washer (in the set of course) and replace the accelerator pump jet. Refit another copper washer then tighten the pump delivery valve assembly down (new brass bolt from the service kit should be fitted)









Step 101 - Refit the emulsification tubes, these should just drop in gently and be pressed home





Step 102 - Fit the air corrector jets and tighten them down





Step 103 - Now return the main jets to the float bowl and tighten them



