

SU HS8 Removing, servicing and refitting

Some text taken from an earlier post in this thread By: **Grant Francis** (Grant Francis), Veteran member
& **Ken Hill** (cat_as_trophy), Senior member

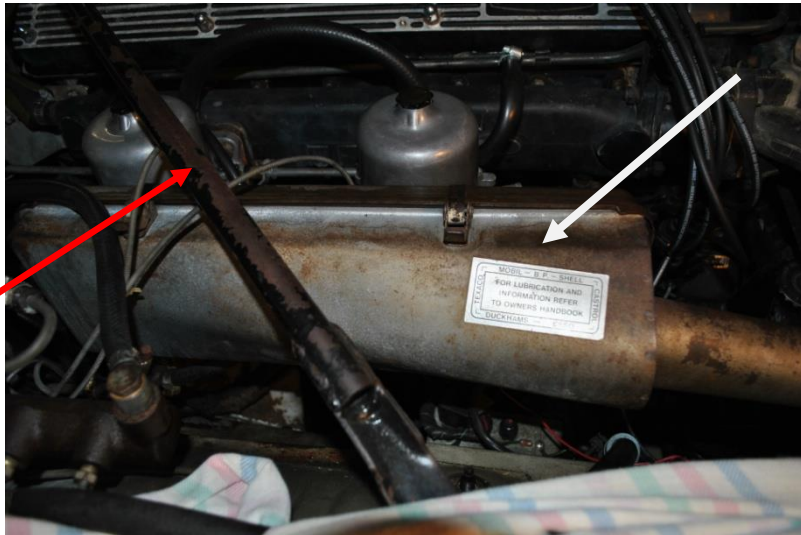
Pictures and car by (and some text): **Clarke Bryant** (o1xjr), Senior member

This is a quick rundown on removing carbys to replace jets, gaskets, mixture needle and float bowl needle and seat. Butterfly and spindle can be changed if needed. I did consider trying this operation with carbys still in car, but good advice from this forum changed my mind.

Take lots of photos before and during the complete process, if you don't do this type of work regularly or you have to wait until next weekend to re-assemble it is easy to forget what goes where.

Remove the air cleaner cover, AND the backing plate. Undo cross stay at from inner gaurd, and loosen bolt at firewall and swing it to other side of motor to sit on the other cross stay. This will allow easy access to rear carby.

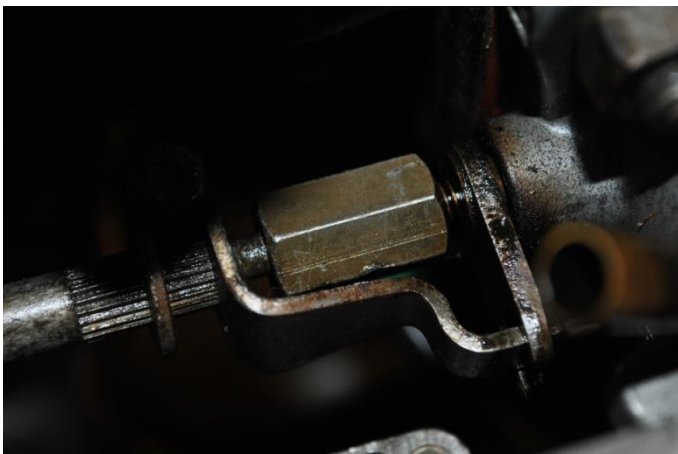
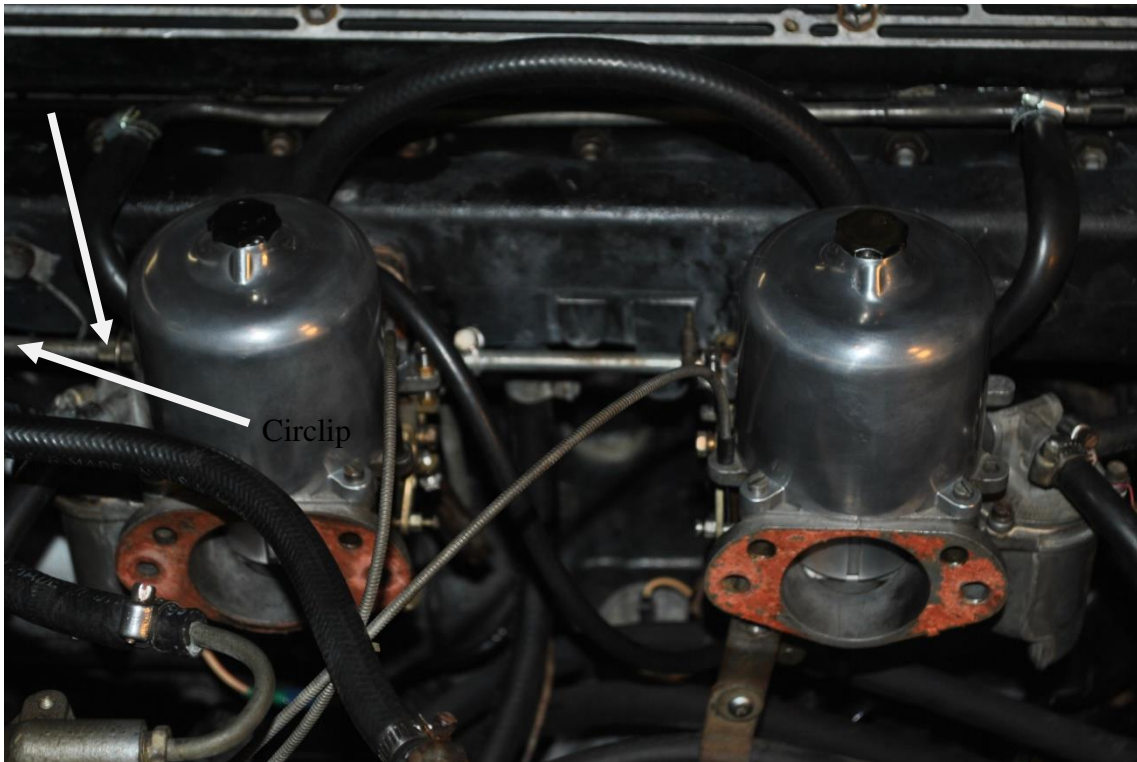
Cross stay



Disconnect choke cables, label them front and rear. Remove vacuum hoses and fuel lines, plugging fuel lines with a bolt or similar. Taking note of where to replace hoses etc.

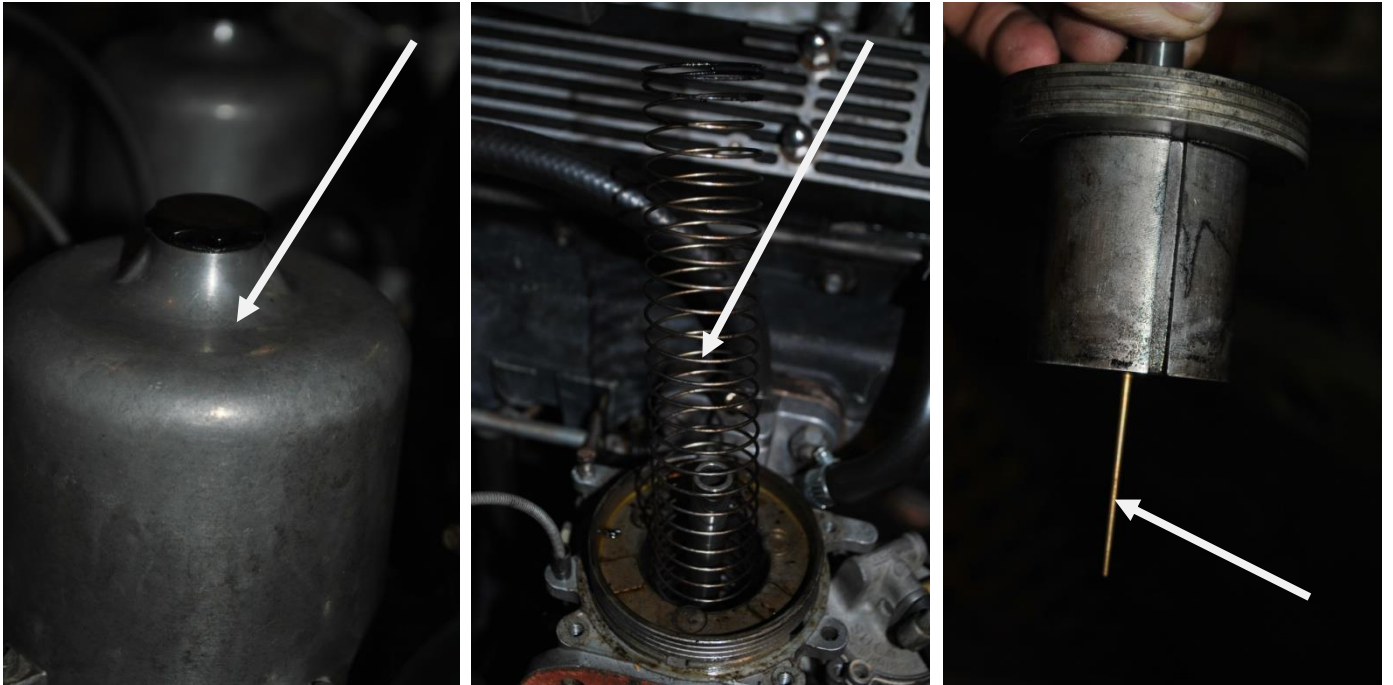


Remove circlip from shaft near cable (out of picture). Disconnect throttle linkage at rear of the rear carb.



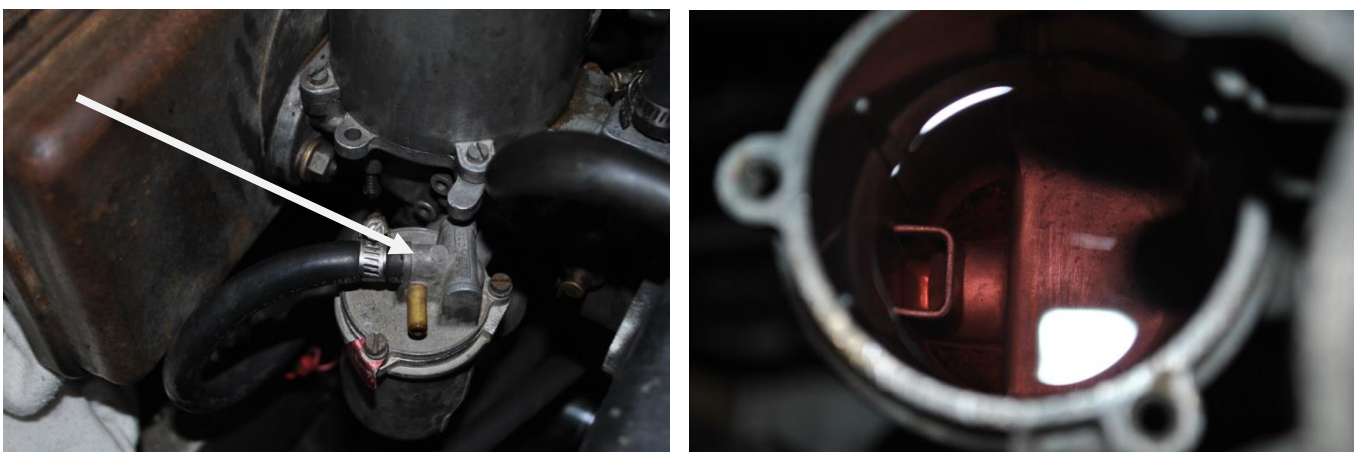
At this point it is best to remove as many parts as possible while carbys are still bolted solid to the manifold. Reducing the risk of slip and damage to screws, fingers etc trying to work on a bench with carby not fixed to motor

Remove the carby bell chambers (the top dome thingy), lift off the long spring, then CAREFULLY lift out the piston. When lifting the piston, lift it straight up until clear of the carby, as the brass needle is easily damaged.

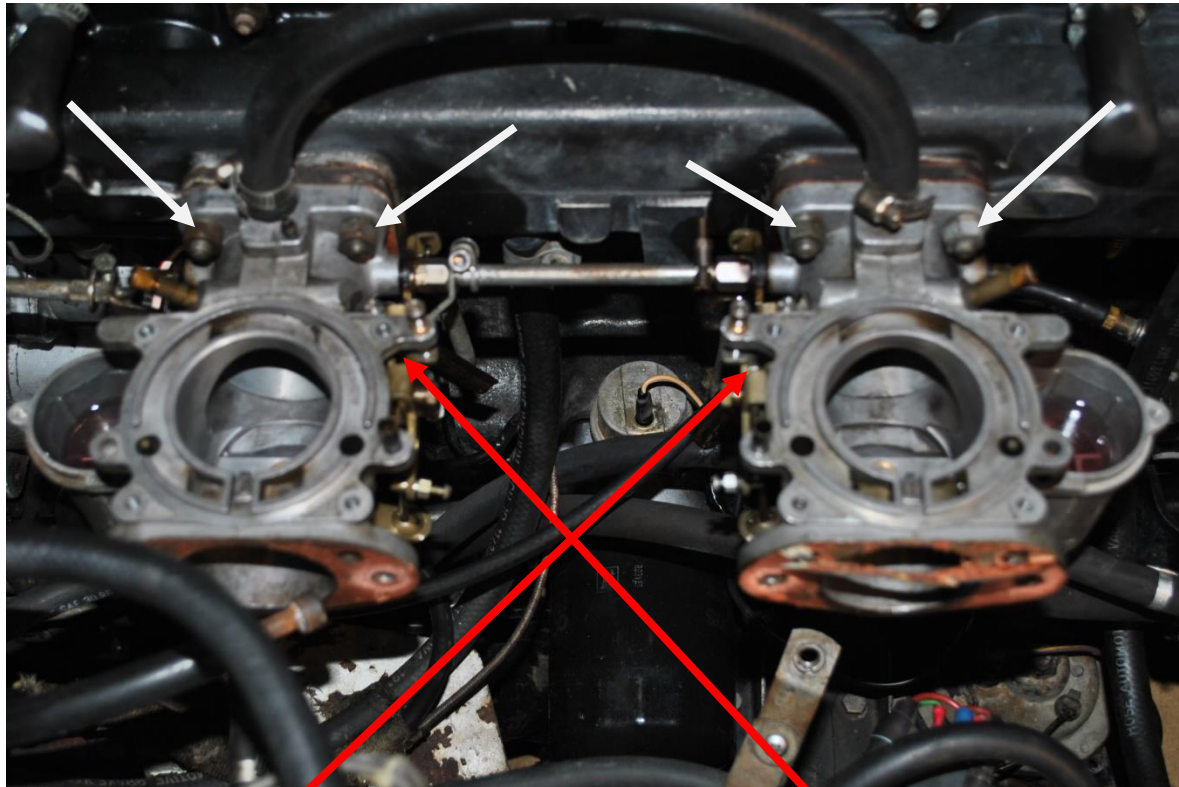


Note: All parts removed must be kept separate so that they can be re-installed into their correct carby. Multiple plastic ice-cream containers are useful.

Remove the float bowl lids at this point as well



The next step is to remove the 4 x 1/2" nuts on each carby which fix them to the manifold. Lower nuts are out of sight below throttle linkages.

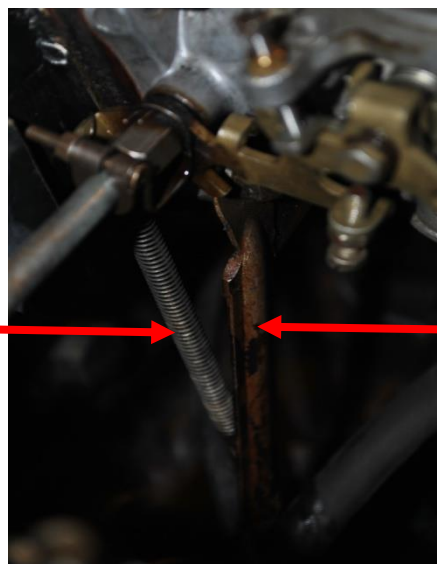


Lower nuts are here (see red arrows)



Throttle return springs and brackets come off with lower nuts to the manifold studs

Return spring



Bracket

You won't be able to reassemble and drive after this point, until you have the new parts.

You will need 4 x base gaskets

2 x backing plate/ intake gaskets

2 x float bowl gaskets

2 x needle and seat kits for float bowl

2 X Jet assemblies

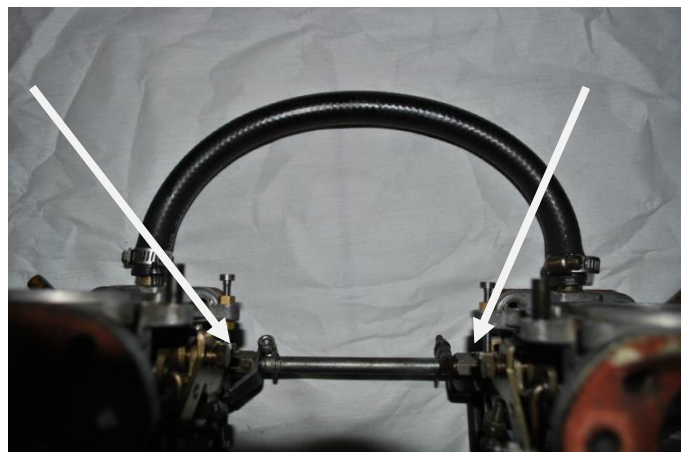
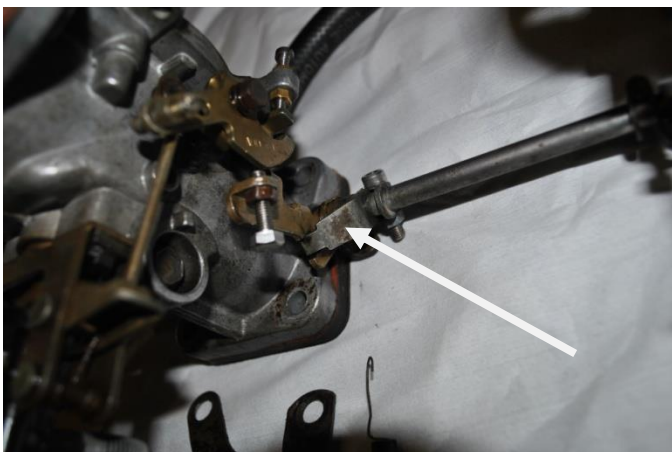
2 x mixture Needles(with the right code stamped on them)



Gently wriggle carbys off manifold



Take pictures before separating carbys so you know where linkages go back together.



Position of return springs and brackets for reassembly

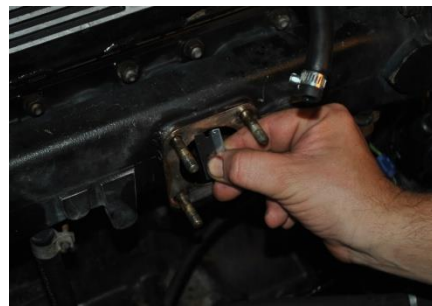
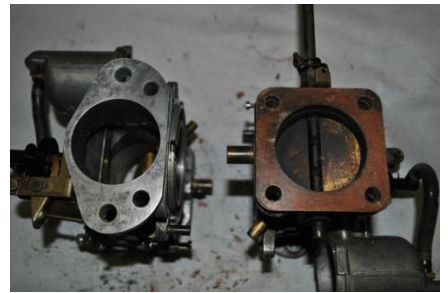


You will have to remove pistons before getting your parts to get the code off your old mixture needles. I was lucky, a previous owner had made a note on the cover of the air filter with paint pen.

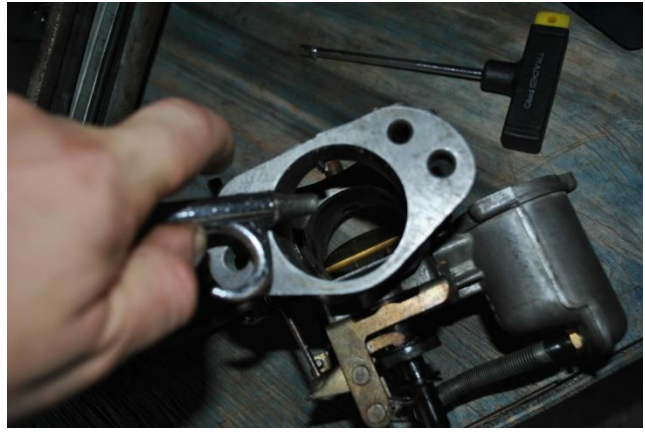
Remember the importance of keeping each carby separated



Remove old gaskets and clean the mating surfaces on carbys and intake manifold as well as air filter backing plate.



Blow out all dust and debris left from removing old gaskets. With compressed air if available.



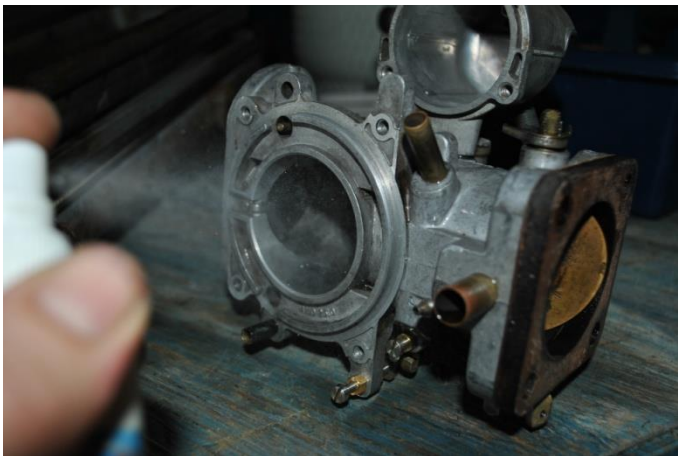
Degrease and scrub carbys with a toothbrush and hose away gunk. This makes removing and replacing serviceable parts clean and contamination free.



I seem to buying this stuff in bulk since the XJ6 arrived in my garage.



Spray with IPA (isopropyl alcohol) and blow out with compressed air if available. As it leaves no residue and evaporates quickly taking water with it. Buy some from a computer parts supplier or repairer, you won't believe how many uses it has.



Clean up your work space and put down a clean lint free cloth to work on, this way you avoid getting bits of old gasket etc caught up inside carby causing problems after assembly.



Ready to start parts replacement....tomorrow

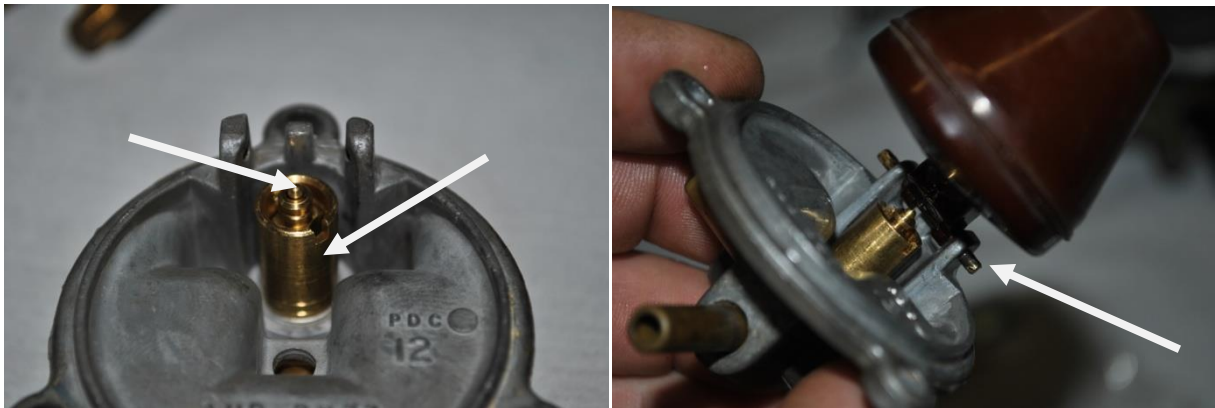
Time for a well earned "Amber happy Juice" in my local footy teams cooler
"Jindalee Jaguars Australian Football Club"



Remove Float from float bowl lid, tap the float hinge pin lightly with a small hammer then pull it out with pliers. Withdraw the float needle and unscrew needle seat, and compare new parts with old parts to make sure they are correct.



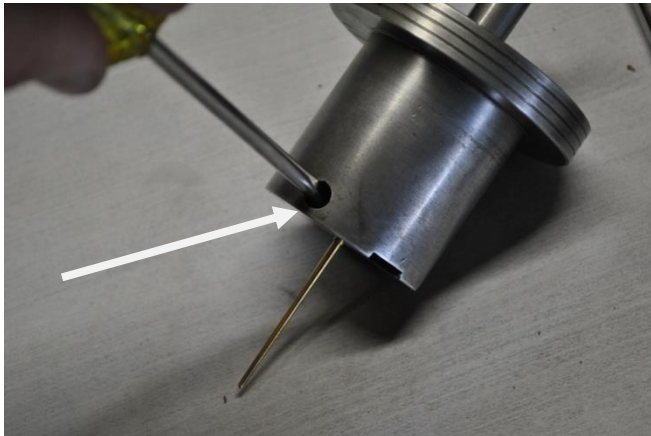
Screw in new needle seat, making sure you use the new gasket (brass washer) and insert needle (pointy end first). Then refit float with hinge pin.



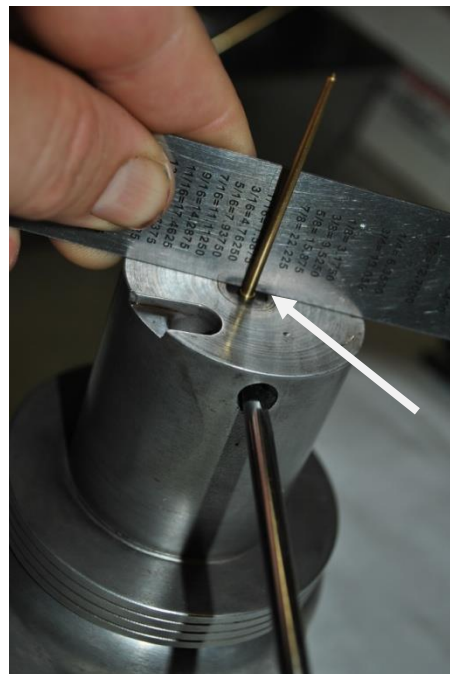
Invert the lid (float upward) and place your mouth over the fuel inlet pipe and SUCK, and ensure you CANNOT suck air. If air is sucked, FAIL. Once vacuum is achieved, turn the lid over (float downward) and blow through that pipe, and carefully raise the float, thus closing the needle, and ensure your “puff” is closed off.



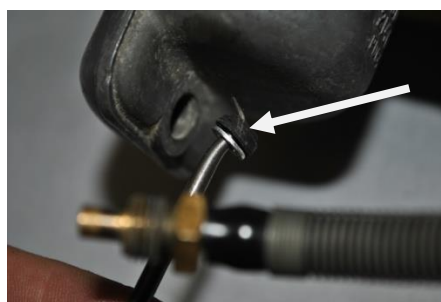
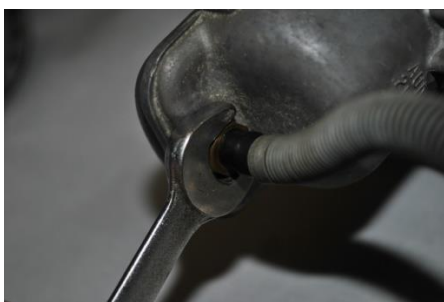
Replace mixture needle by undoing the needle guide clamping screw in the side of the piston, remove the needle, guide and spring. Check the identifying code on new and old needle to make sure you have the correct needle.



Refit needle guide and spring to the new needle. Refit needle to the piston, having the shoulder of the needle flush with the piston surface. Stand the piston upside-down in top of the bell chamber to make it easy to work with. Use a straight edge to level needle shoulder with piston surface.

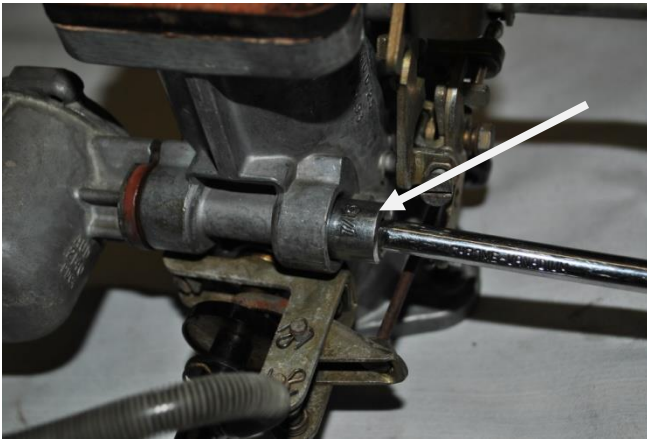


Disconnect jet tube from float bowl, and remove copper washer and rubber o-ring from float bowl if they don't come out with ferrule. An o-ring pick is perfect for this.

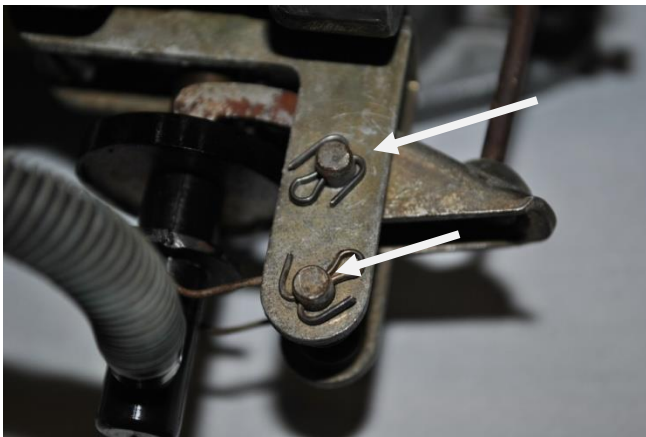


If you don't have an o-ring pick get yourself one next time you are at a tool shop. Worth every cent, I use mine for all sorts of fiddly little jobs where even a small screw driver just won't work. Five bucks well spent.

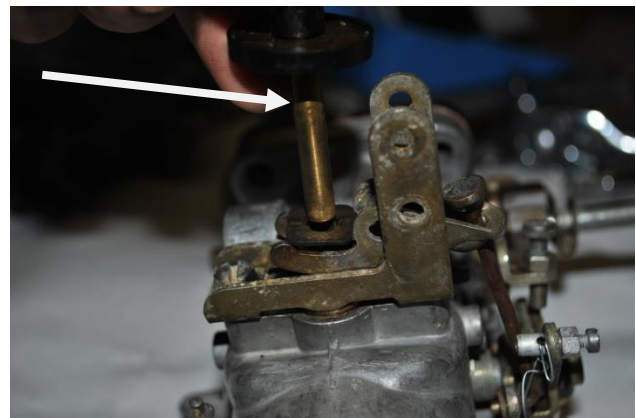
Remove float bowl from carby body by removing the securing bolt that passes through body. You will need a thin walled 7/16" socket.



Remove split pins retaining the jet spring and pin and jet fork pivot pin. Remove the pins with pliers from the bracket



Remove jet spring and jet,

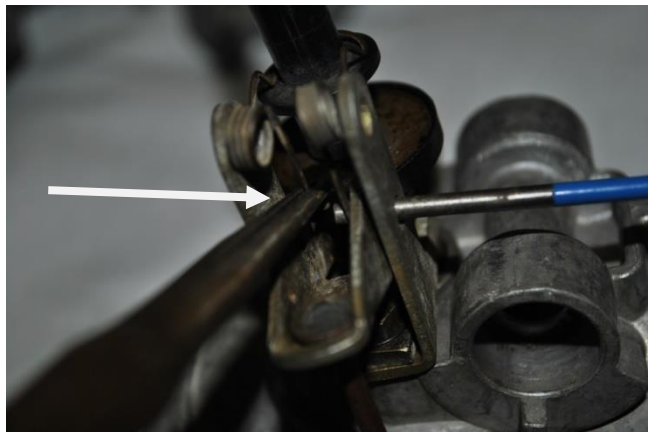
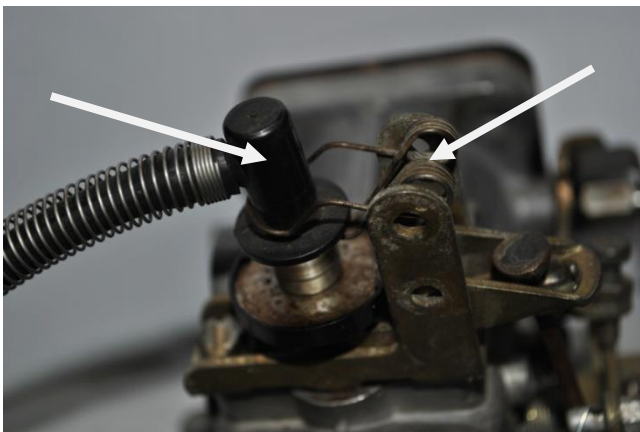


Refer to other carby as a reference when reassembling.

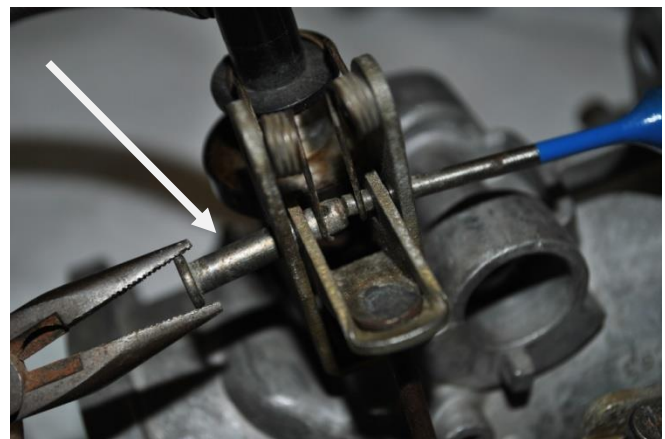
Compare old jet with new jet to make sure it is the right one. Place centring washer and copper washer on new jet.



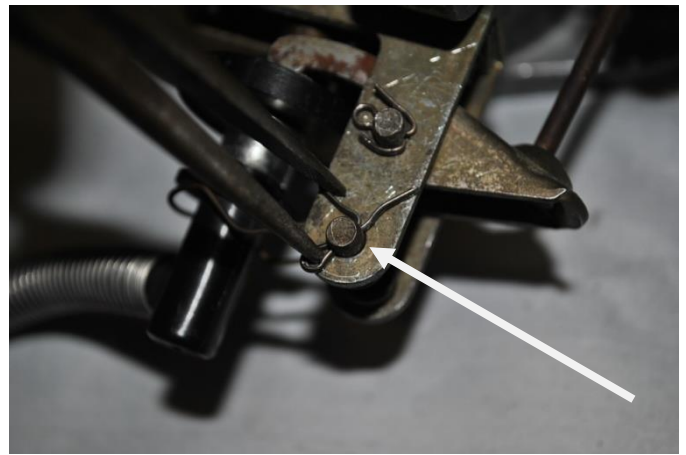
Fit new jet and replace the jet spring, use a punch and pliers to line up jet fork and jet spring.



Replace the punch out with the jet fork pivot pin, by gently pushing the punch out.



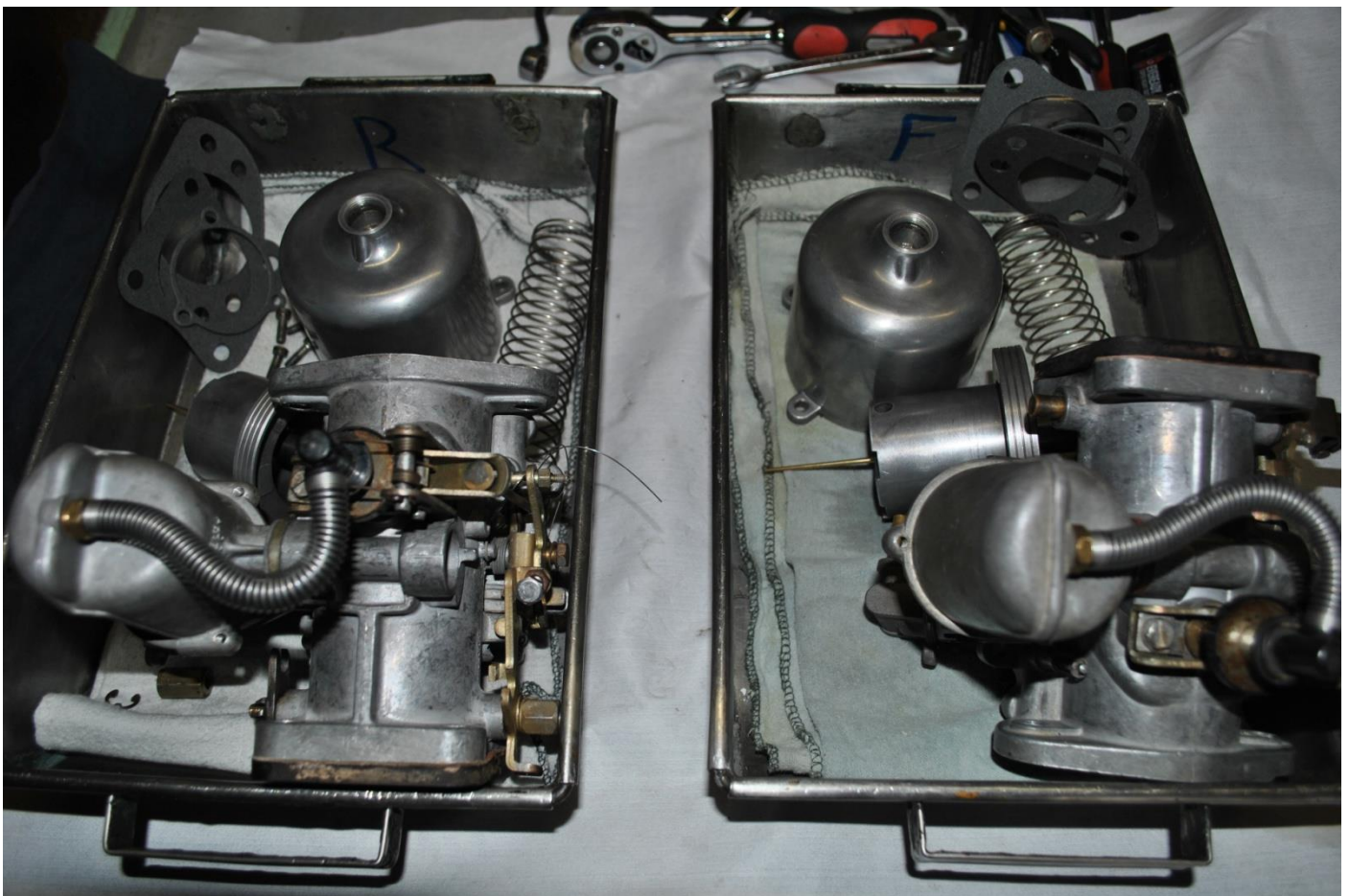
Push in jet spring anchor pin, then insert split pins and bend around to secure.



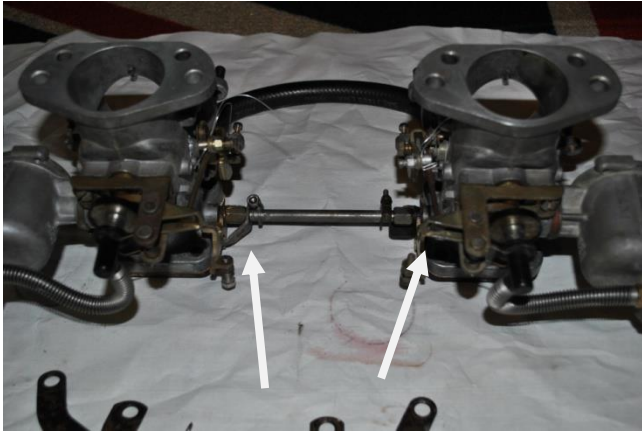
Replace float bowl, and connect jet tube to it.



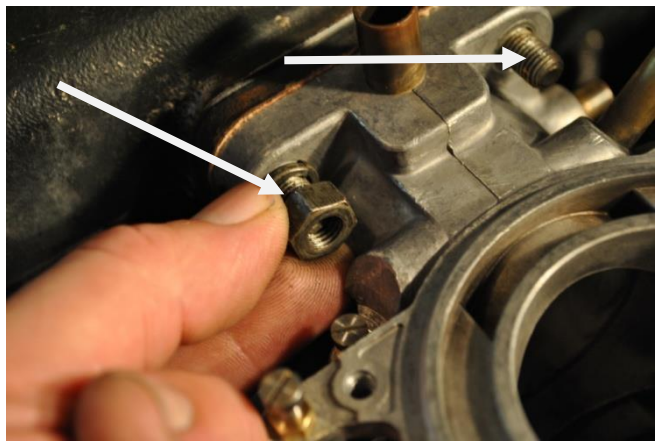
Repeat this process for the other carby



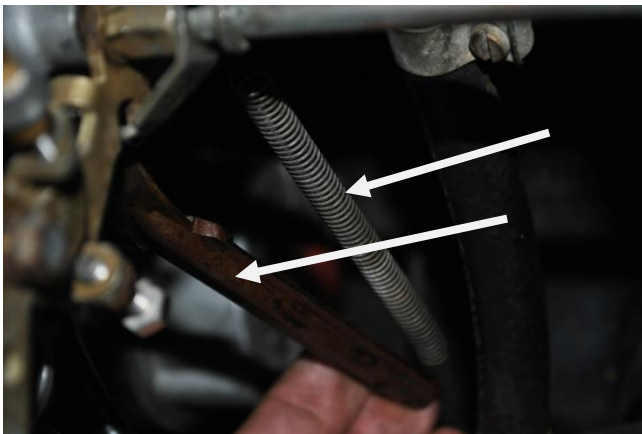
Reattach linkages on the carbys, and fit base gaskets to the intake manifold.



Carefully wriggle carbys back onto intake manifold studs. And loosely replace top 4 washers and nuts.



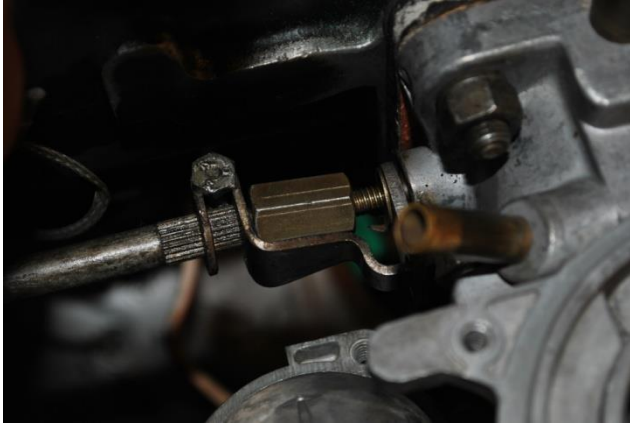
Fit throttle return spring brackets to lower studs and attach the return springs. This will hold the linkages up out of the way to make it easier to replace lower 4 washers and nuts.



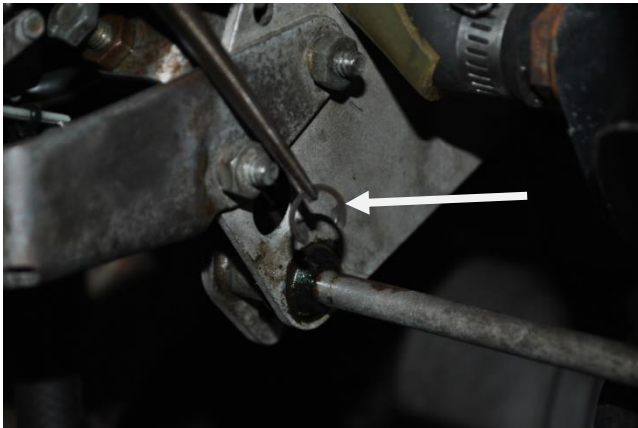
Now do up all 8 nuts finger tight and check if the linkages are moving and returning without sticking. Getting one of the carbys slightly out of square can cause linkages to bind and stick.(not what you want on throttle linkages).

Nip up all 8 bolts ½ a turn each with a spanner, then check linkages. Repeat this process until you are happy the nuts are tight and the linkages are moving freely. If the linkages stick at any stage, undo the nuts to finger tight stage and start again. Repeat until you are satisfied. (you have to drive it)

Reattach throttle linkage to back of the rear carburetor and tighten.



Replace circlip to linkage shaft ensuring it is properly seated in the groove. This will stop horizontal movement of the shaft.



Fit new gaskets to float bowl lids and fit lids to float bowls. Refit all vacuum and fuel hoses.



Turn ON the ignition, pump runs, and ensure the fuel is NOT flowing out of the jet, indicating a needle seat issue that's need your further attention.

I had fuel flowing out of the overflows and jet. After a lengthy process of fiddling around including refitting old needles and seats and testing successfully and returning to new items, overflow again. Inverting and sucking test was working, as was blowing and raising float test.

I took float bowls with new and old seats to supplier. After more than an hour with the parts supplier installing numerous seats and attaching to a fuel pump he was going down the track of a faulty batch of seats.

Turns out he had given me the wrong part (externally the dimensions were the same) and the bore inside the seats was 0.5 mm bigger than the original causing the needle to bind inside the seat when the float was all the way down while fitting lid to bowl.

If you are planning to tune the carbys (which is recommended).

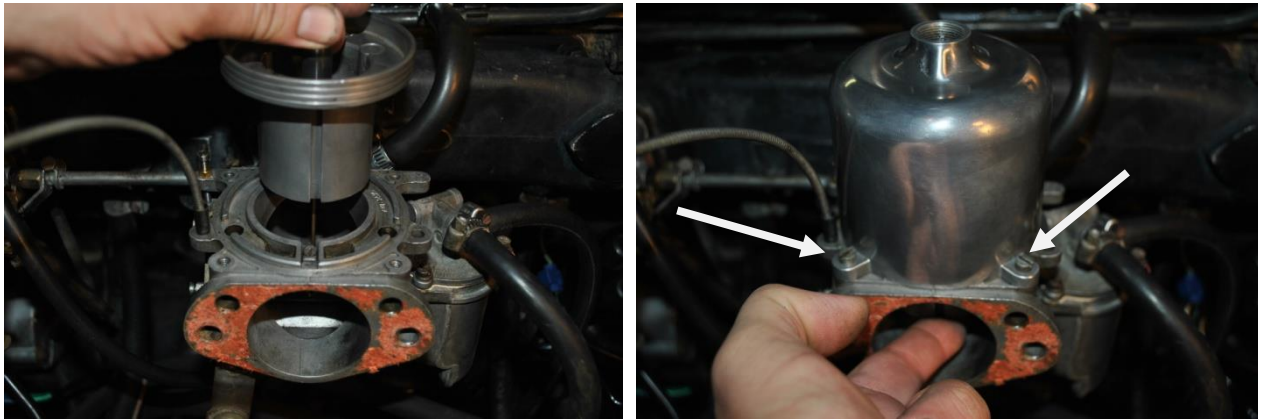
This is the point where you need disconnect the throttle cable and undo the “Z” clamps securing the throttle rod joining the 2 carbys (the rod closest to the manifold, as the outer one is the choke shaft joiner, if fitted). Loosen the small bolts (just loosen will do), enough so that the front carby shaft moves without the rear carby shaft moving at all.



Next step is to go to the first post of this thread and read the attached word document ([SU HS8 Tuning and setting up, including fuel level.](#)) or the PDF in the 6th post. And pick up at the appropriate point and continue with the tuning.

If you plan on tuning later (not advisable), carry on following this word document.

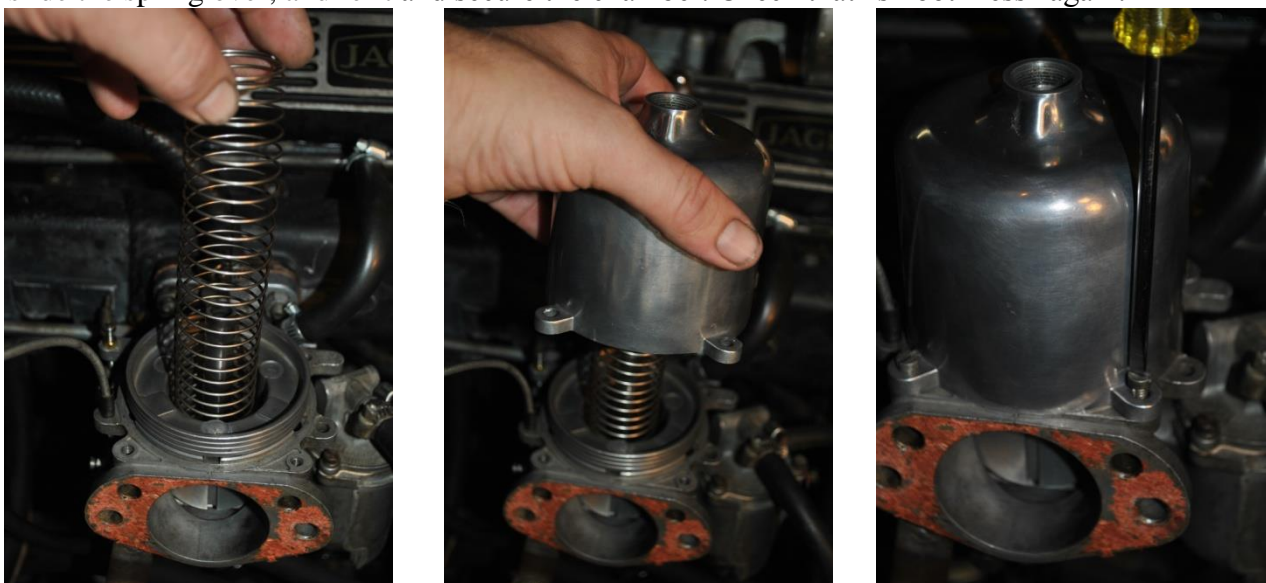
Refit the piston, paying attention to the needle fit, FORGET the spring for now, refit the bell chamber (it only goes one way, so pay attention). Tighten the 4 screws. Put your finger in the throat of the carb, and push the piston to the top of its travel, and let it slide down again. It MUST be a smooth slide UP and DOWN. If not, remove it and check for score marks, grit, whatever that is stopping this smoothness. Piston should drop quickly and smoothly with a pronounced “thunk” as it hits the bottom.



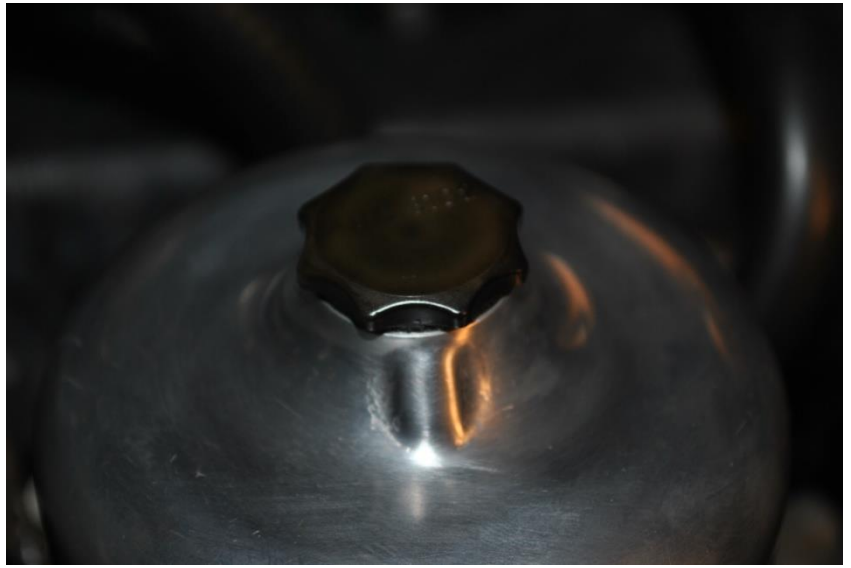
If it is OK, remove the chamber, fill the centre tube of the piston with ATF (trans fluid), to about 1/2” from the top. I used a 2ml syringe with about 50mm of vacuum tube on the end, and added 2 Syringes of fluid.



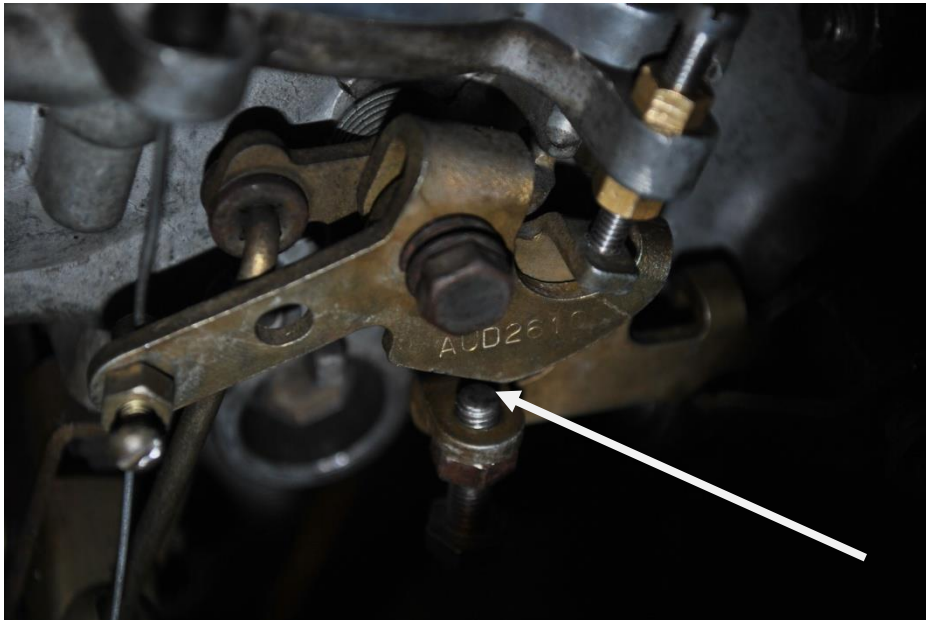
slide the spring over, and refit and secure the chamber. Check that “smoothness” again.



Screw in the damper.



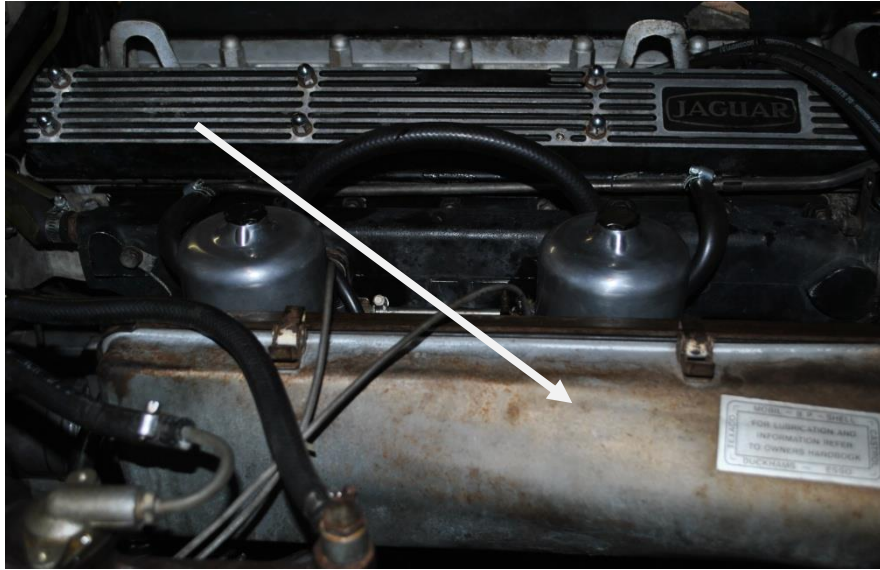
Reconnect the choke cable. Operate the choke lever a small amount (about 5mm inside the car) and ensure the “fast idle” stop screw just contacts the fast idle cam, and lock it up. Some experimenting with this fast idle adjustment will be needed, as most engines I have had/worked on, have only required that extra fuel for that initial fire up, and then the choke is pushed almost fully in, leaving some amount of fast idle for warm up, and the cam is clear of the stop screw when fully pushed in.



Some fine tuning may be needed as things settle, and the 2 seperated carbies situation is only required if idle speed is being played with. The mixture screws only affect the related carby.

Spray all moving parts with lubricant, I use a spray lanolin penetrating lube

Replace backing plate with the new gaskets, and air cleaner cover



Re-attach cross stay

And reconsider the need to go through the tuning process before driving

