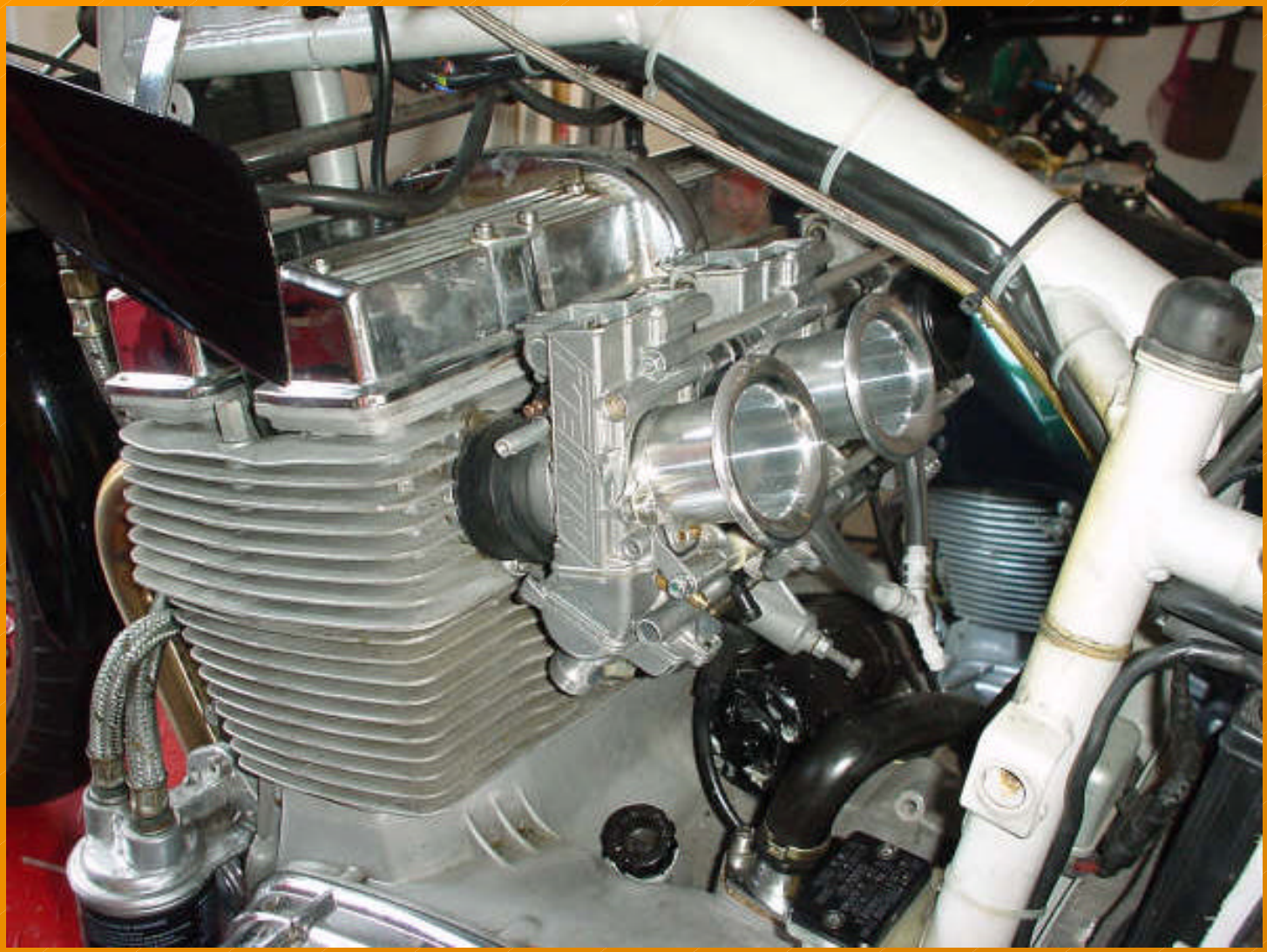
KEIHIN LAVERDA 1200



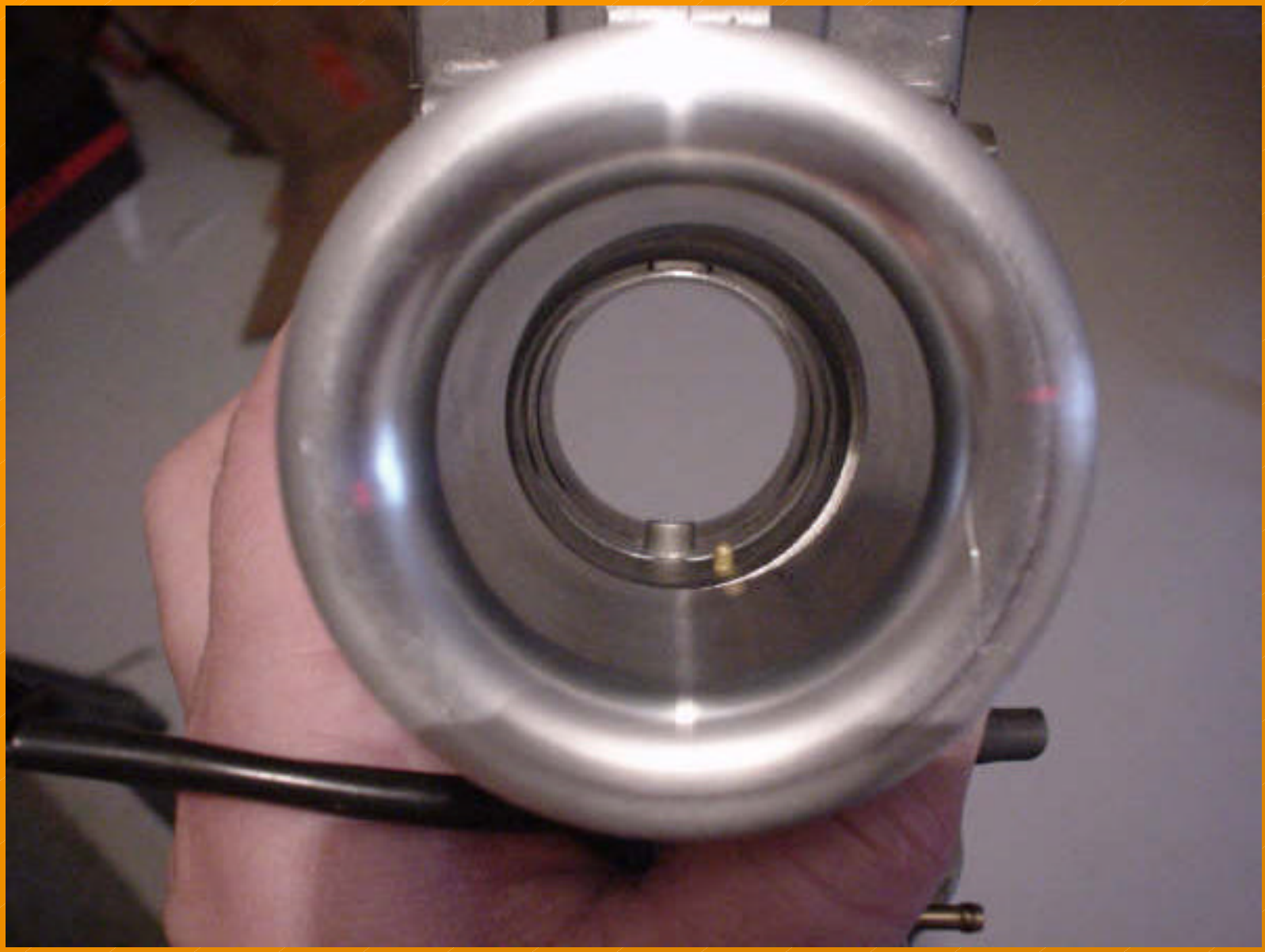
This is the OEM-Version of the KEIHIN FCR 39, which have been used on some Bikes as the Standard Carbs. This Battery is from a ZX9R and has both Choke and Accelarator-Pumps. The choke gauge is set up for 4 carbs and needed to be reconstructed. I entered everything into a CAD-Program and reconstructed this gauge to be lasered out of 1mm stainless steel. Carb number 2 was taken out, new spacers needed to be made (which was the easy part...), the slider shaft needed to be re-bored (stainless - not easy...) and the jetting needs to be fixed. OEM carbs don't have Keihin-Numbers on all parts. F.e. the Needle Jet has no number on it, so it is nearly impossible to say where you start from. Also the jet-needles are different type...

found some brand new aftermarket stacks for 25€ - all 4!!

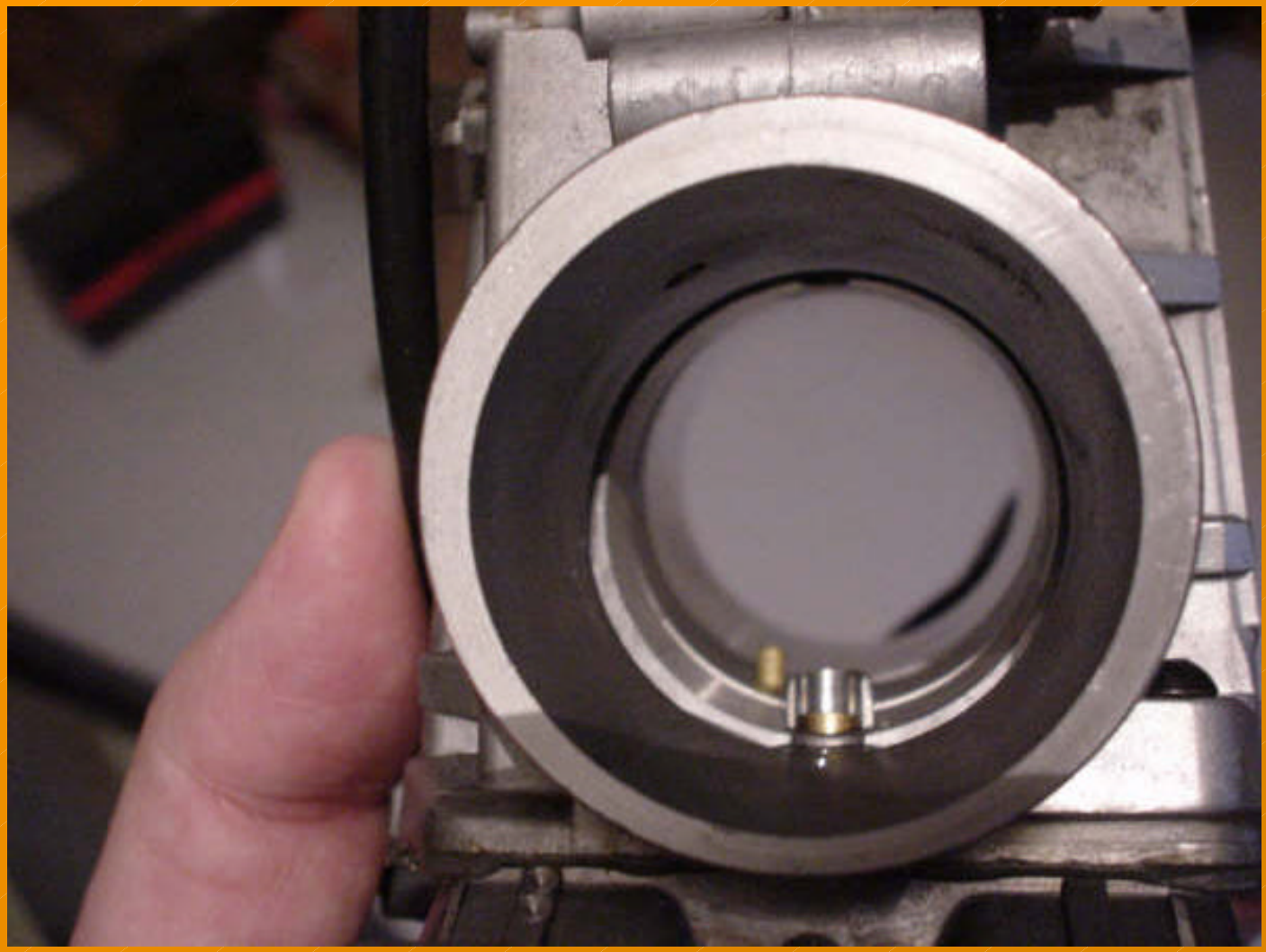
This is the old choke gauge for 4-cylinder Kawasaki (the upper one) and the new designed tripple gauge for the Laverdas. I designed that one in a CAD-Programm, sent it via Mail to a company that lasered it out of 1mm stainless-steel. Needed some finnisching, but was working as if made for it... ;-))

Here you can see why Keihin work much better (also in low revs) than Dell'Orto: it is nearly one single tube from entrance to exit! Compare that with the Dell'Orto and see the difference... There are only some miner "cuts" in the tube to let the front and rear of the slider slip in. Great stuff...!!

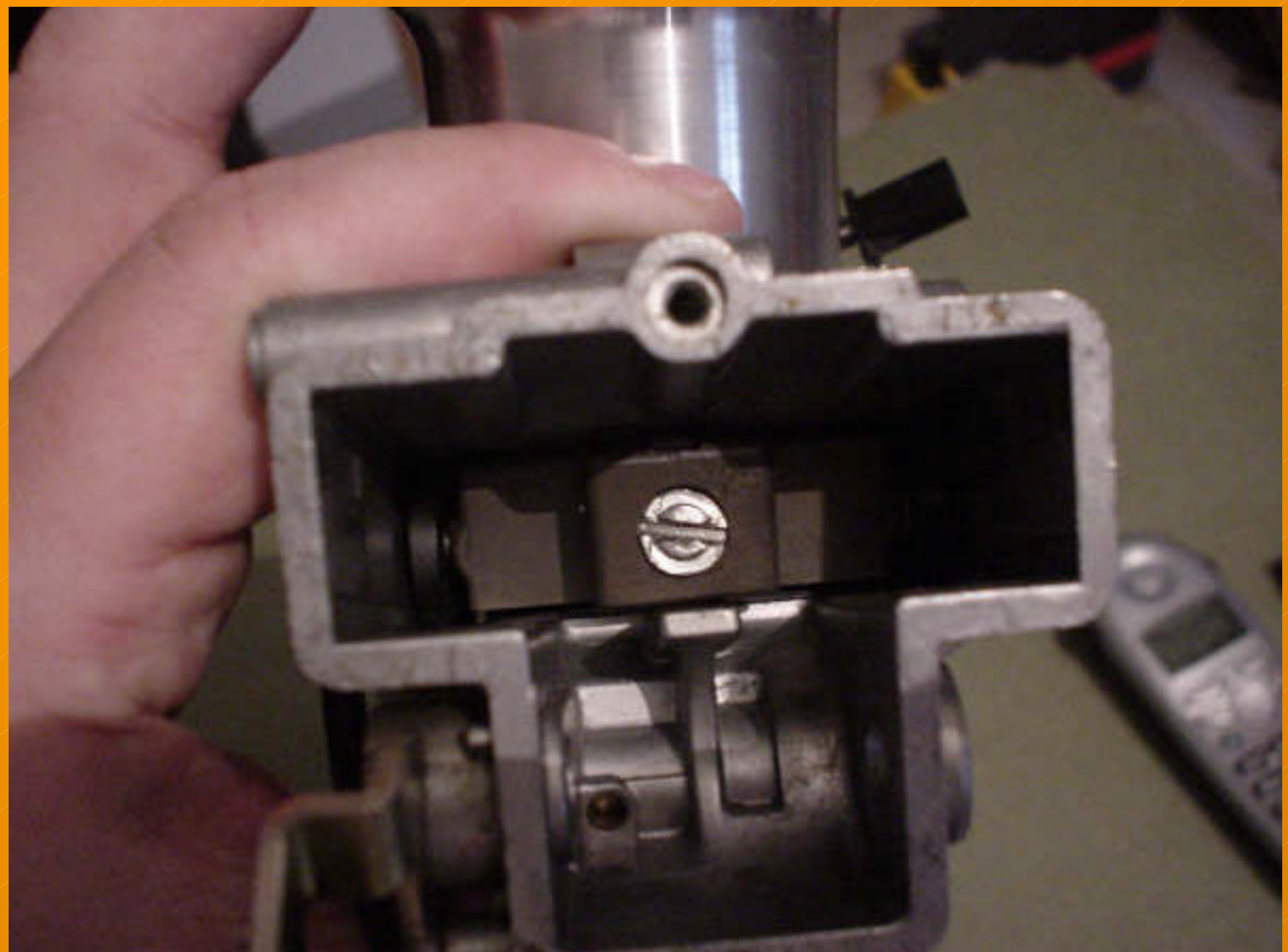
Same view - just with flash turned off... ;-)



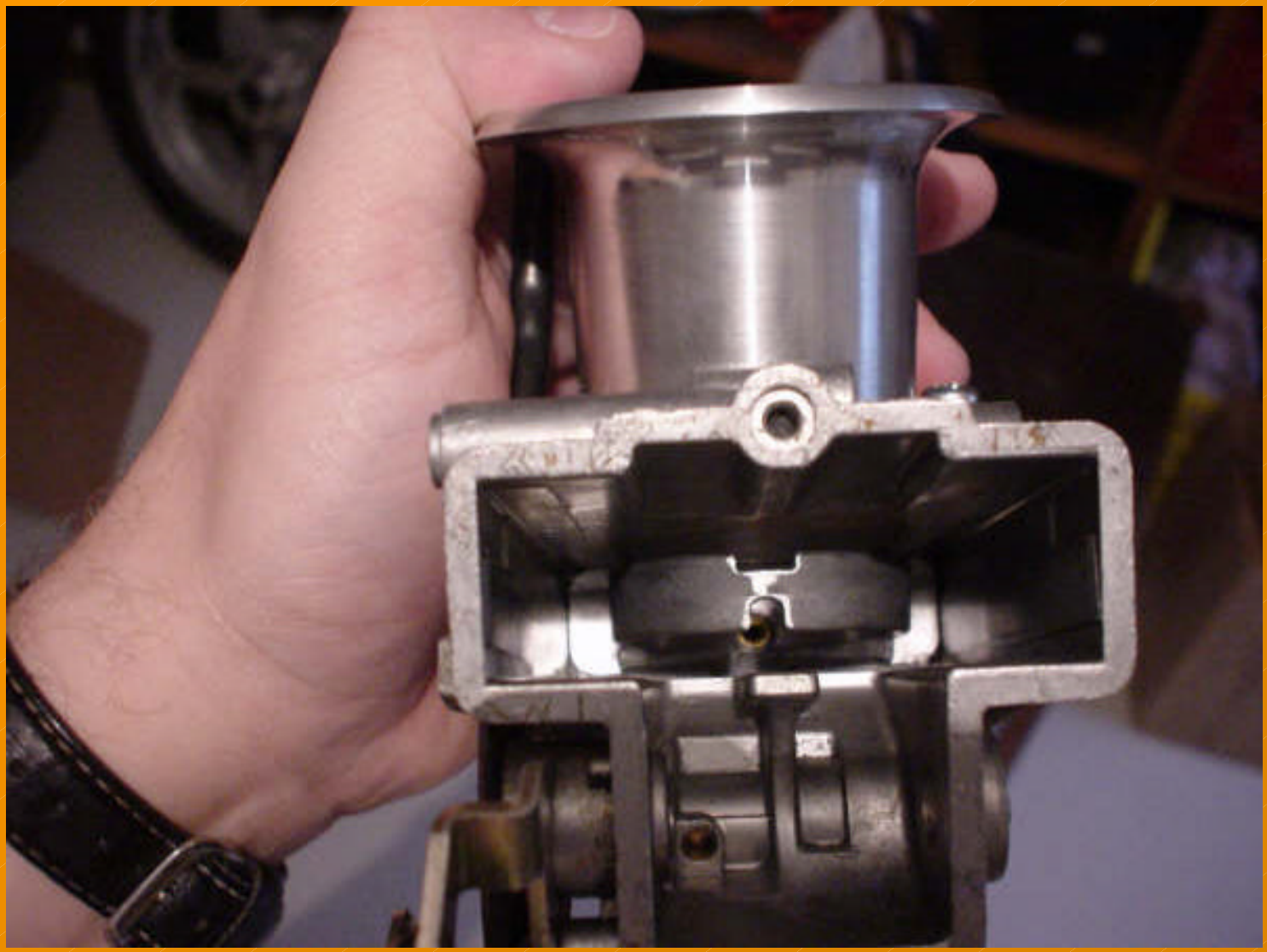
Mark that a) there is a "wall" behind the brass-end of the needle jet which causes a more homogenius spraying of the gas. Also the Accelerator-jet is visible at the rear-end. This is a 39mm FCR; mark the difference in thickness at lower and at top-end (excentric bore...). 41 use the moterial at top-end to get the diameter.



This is the top-view. You see the slider-top with the screw that holds back the needle. Exchanging needles is soooo easy: just remove the two screws from the top cover, unscrew this screw, move the sliders a bit open and move the needle with the fingers up a bit so you can grap it. Make your changes (Different needle, needle position) and put it back in, shut the screw and screw the cover on. 2 Minutes per carb would be a long time for it my guess... Compare that to the Dell'Orto... ;-))



Here you see the "ring" that slips inside the slider when you close the slider. Can you see how less space is left there... so - no loss through keeping the tube as much closed and streight as possible. I would say one can not improve that to much... ;-))



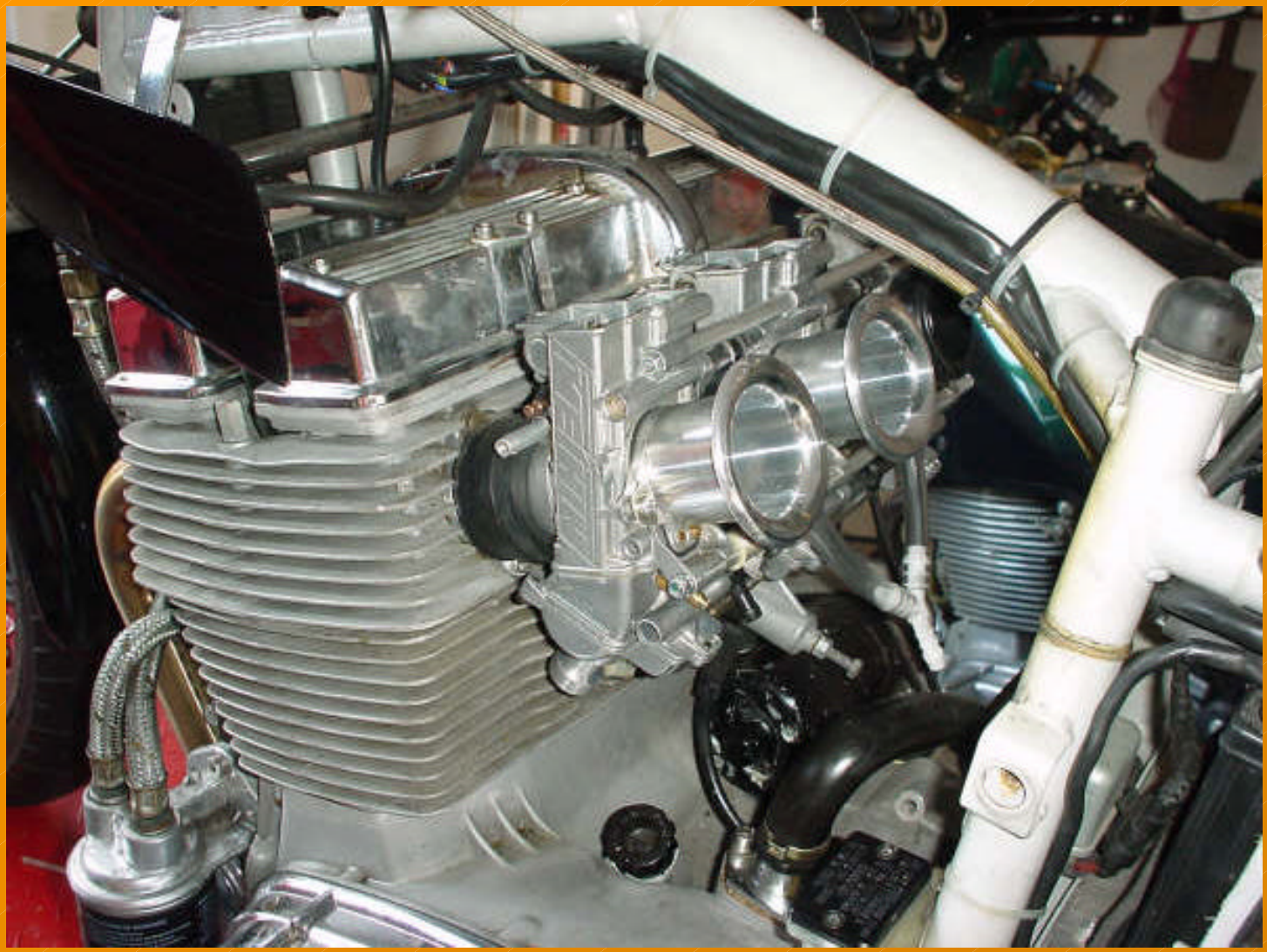
This is the Slider with the rolers. If they get off tollerance, you can easily exchange them one by one. On top of this slider, there is a plate with the cut-away. If you would need different cut-aways, you would only have to exchange this plate, not the whole slider! On Dell'Orto: whole Slider needs to be replaced!

this is the lower end of the slider. This slips over the ring you have seen on one of the top-views of the carb. there is no needle actually installed here in, which would be visible otherwise... ;-))

This is a view from the open bellmouthe-side into the carb. at the top-end you see the slider coming down. Only the front and the back of the slider is visible, front carrying the plate with the cut-away(black plate).

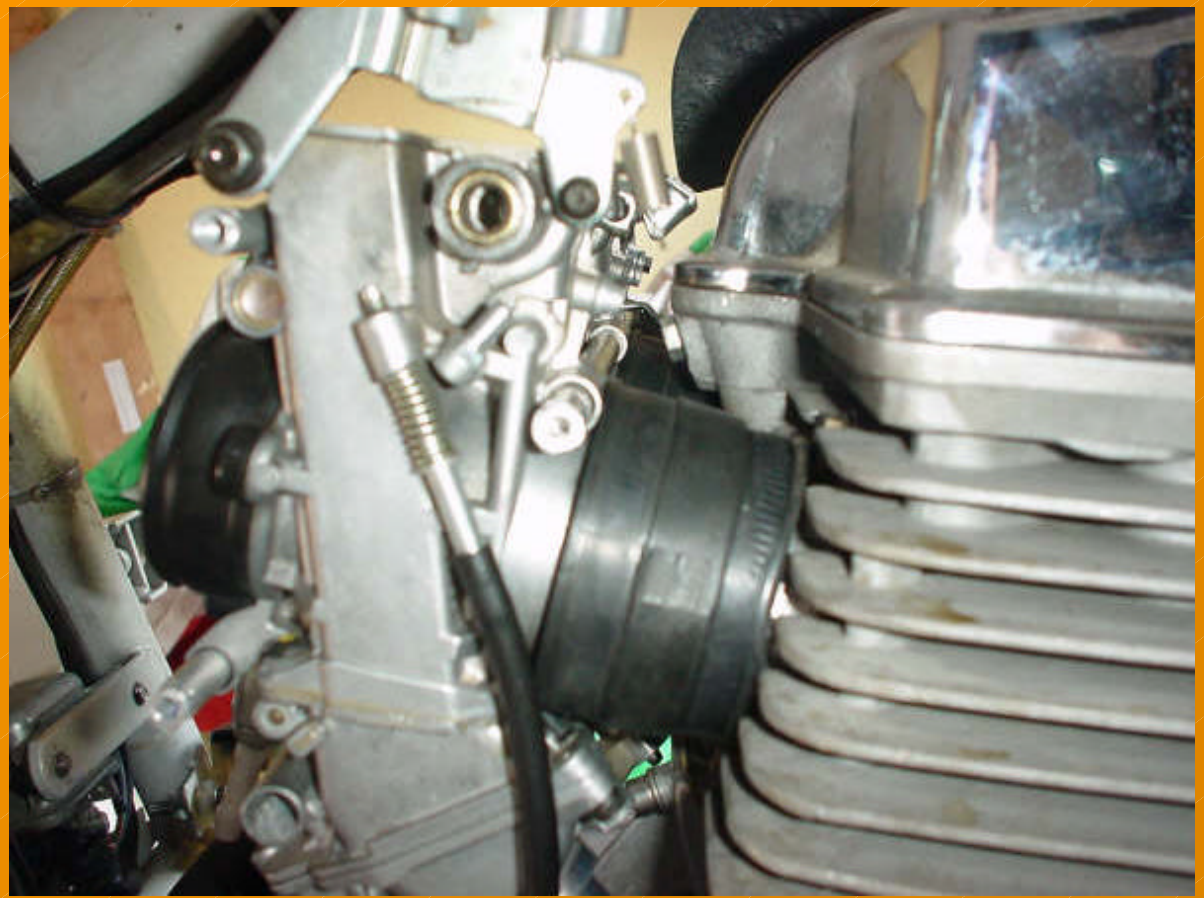
As said, the FCR has much more jets and adjustment-possibilities than the Dell'Orto. Besides the standard things, it has also a Low-Air-Jet and a Main-Air-Jet, which controle how much additional air is provided in low or main area. The low-Air-jet is also available as an adjustable jet so that you do not need to exchange to many jets. Remark also that the Bellmouth is screwed on with two screws - not like with the Dell'Ortos, where - if it is damaged - you nearly have no chance to repair it. Here you can easily drill a bigger hole, use a helicoil or simply a bigger screw... Again - GREAT STUFF!!! ;-))

First try in mounting them onto the Laverda. As these are Down-Draft Carbs, you need 32° at least to mount them. Fortunately I have a 180° Trippl with an SFC head, which sums up close to 32°... With any other combination of Motor and head, you'll need Side-Draft Carbs, which are not easy to get.

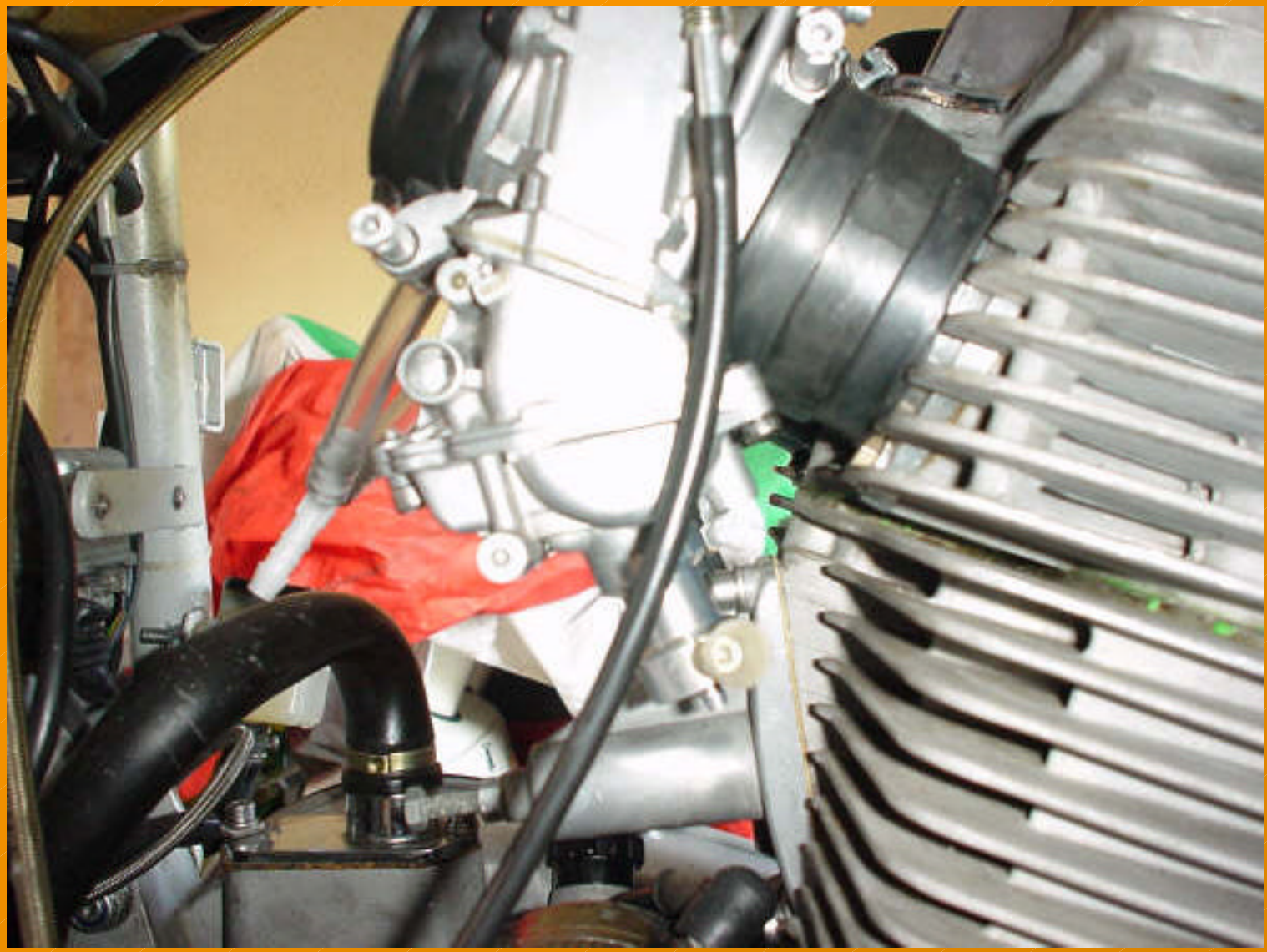


As you can see, there is not to much space between Motor and Carbs, especially at the lower end of the carbs. This shiny parts below the float chamber are some vents to drain water/gas out of the carbs more easy and are a sign of the OEM-carbs (After-Market-Carbs don`t have those...). They might be to close to the motor and may cause heating of the float-chamber. If so, I will cut them away and close the hole with a screwed cap, which allowes also to better access to the main fuel jet.

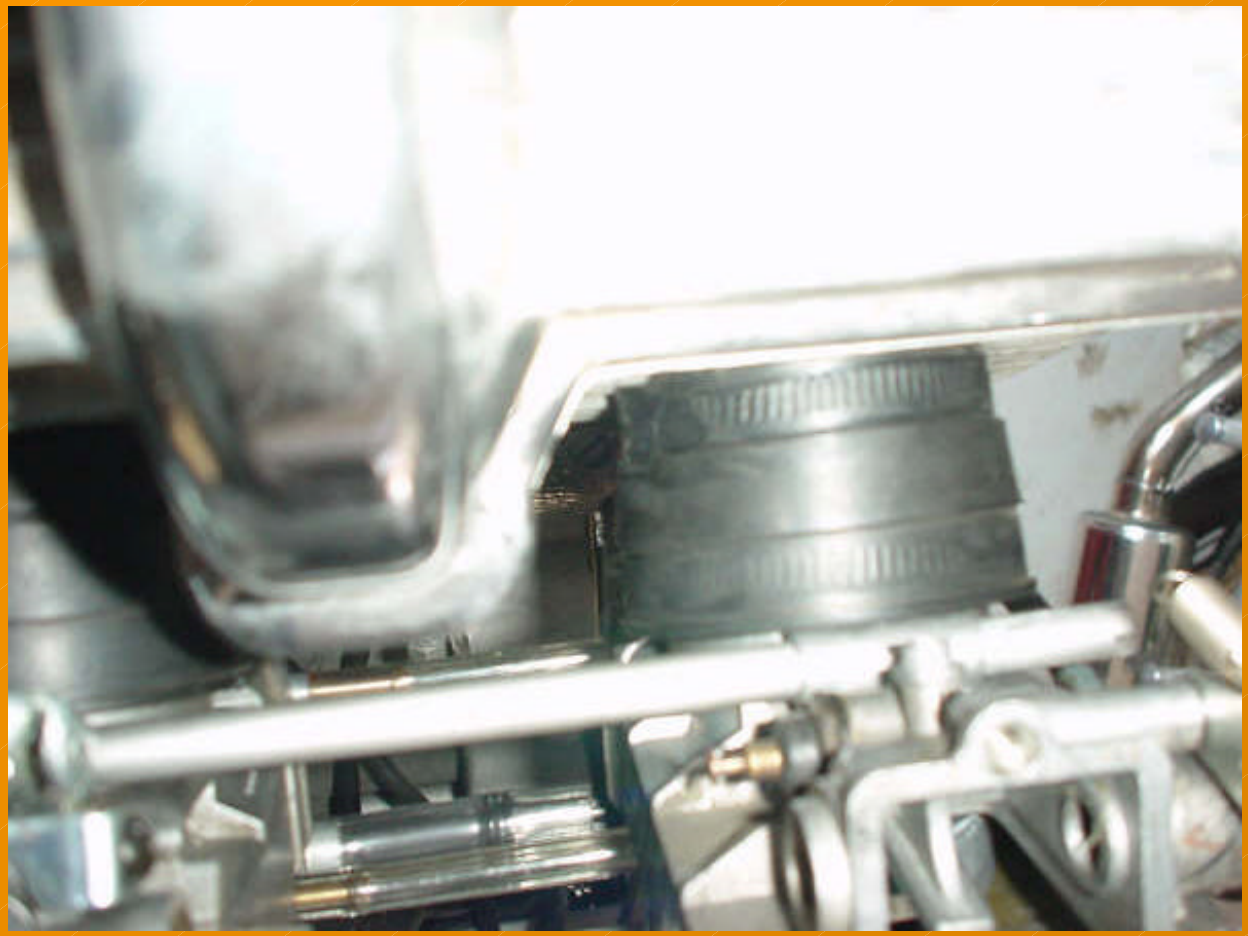
As you can see, even the stearing-chain-cover is no problem for these carbs. In total, they are lower than the Dell'Orto, lighter, easier to turn and have a dual throttle-cable (desmo), where one cable opens and one closes. There is just one central spring moving all slides down, which makes it easier to move throttle compared to the Dell'Orto. Mark that slider shaft, throttle-cables and sliders are not yet mounted, as well as the choke gauge. Shaft and gauge are "under construction" actually and as I'm not doing those myselfe, I need to wait until UPS drops them by... ;-))



this looks closer than it is, just took the wrong angle for the pic...



here you can see that there is enough space for all the links between the carbs. I realy can say that the whole carbs are linked much more solid than the Dell'Ortos. The Dellos can be twisted with just litle force and therewith the synchronization is off again. So - any time you remove and put back the Dell'Ortos, you need to synchronize again. This will be different with those carbs I guess, cause the links are much, much more solid. Next steps will be the Choke gauge and the slider shaft, than to find the right setup... will keep this updated here!!



By the way - these Numbers are from Backwheel, not from crank... ;-))) Have to thank Deddy (DLH-Superbike.de) and Stephen Topham (Topham.de) for their great work!!! Thanks guys - it was realy fun how both of you worked on the results!!

Ciao
Lothar