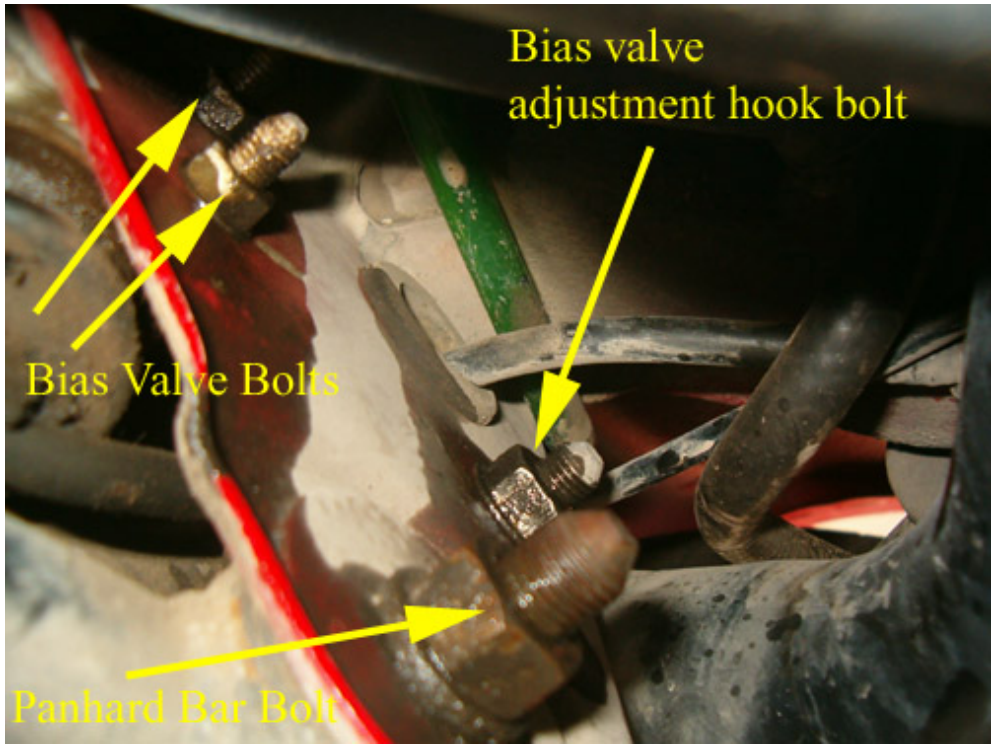
Rear axle bias valve

Next thing I had replaced were the master cylinder and the real axle bias valve. I didn't photo document the MC replacement procedure however I did for the bias valve. The bias valve replacement is however quite tricky as it needs proper adjustment by applying a certain amount of weight in the adjustment hook.

Here you can see the bias valve. It is still the original valve fitted during production of the car back in 1991. Sorry for the angle of the photo but working and shooting in such tight area is very akward !



Here you can see the various bolts and nuts securing the panhard bar, bias valve and bias valve adjustement hook.

Here you can see all the designated bolts and nuts from different angles

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This is the other end of the Panhard bar. In case you need to remove it off the car, then you must have an assistant lift a little bit the rear of the vehicle as the bolt is quite long and hits the fuel tank

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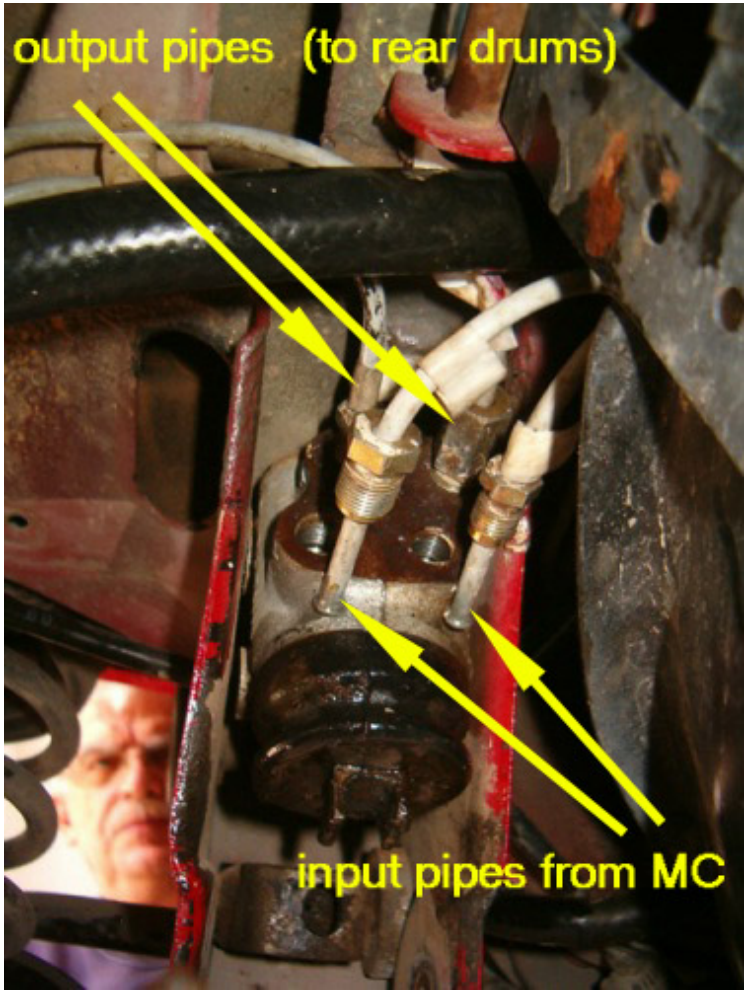
Once the Panhard bar is out of the way the adjustment hook is seen on the end of the spring.

Here is the Panhard bar, along with the spring.



Time to remove the bias valve. It is advisable to marke the brake lines so that you don't mix them up while refitting

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New and old one

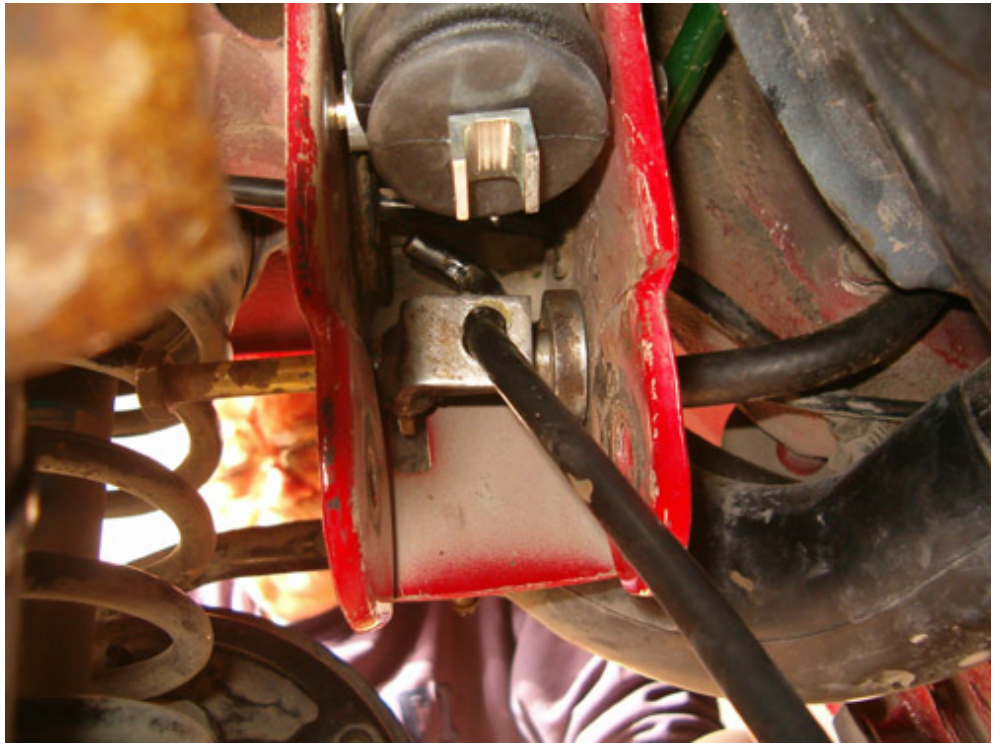
Bias valve cavity

It is time to clean up the Panhard bar. The funky rubbing you may be hearing while driving the car in bumpy roads is originating from this specific bar.

The metal rod you see above is actually the proximity of the spring. Road dirt gets inside the rod and results in metal to metal rubbing hence the funky sound.

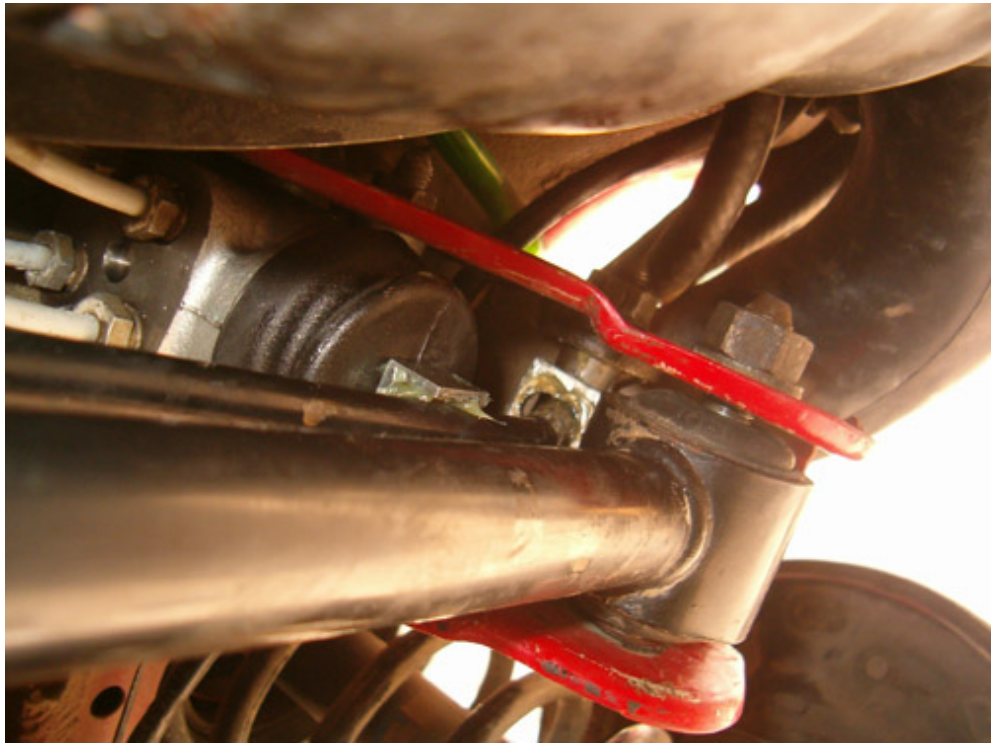
I have used new rubber pads which will keep the spring seated correctly.

I have cleaned up the cavity and installed the adjustment hook

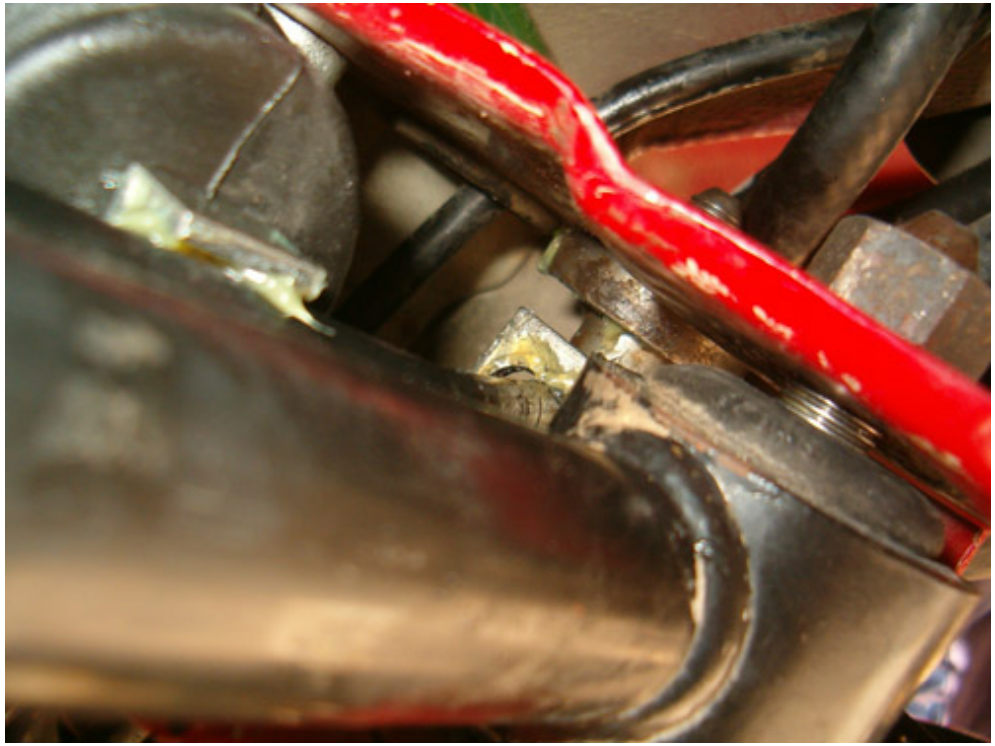


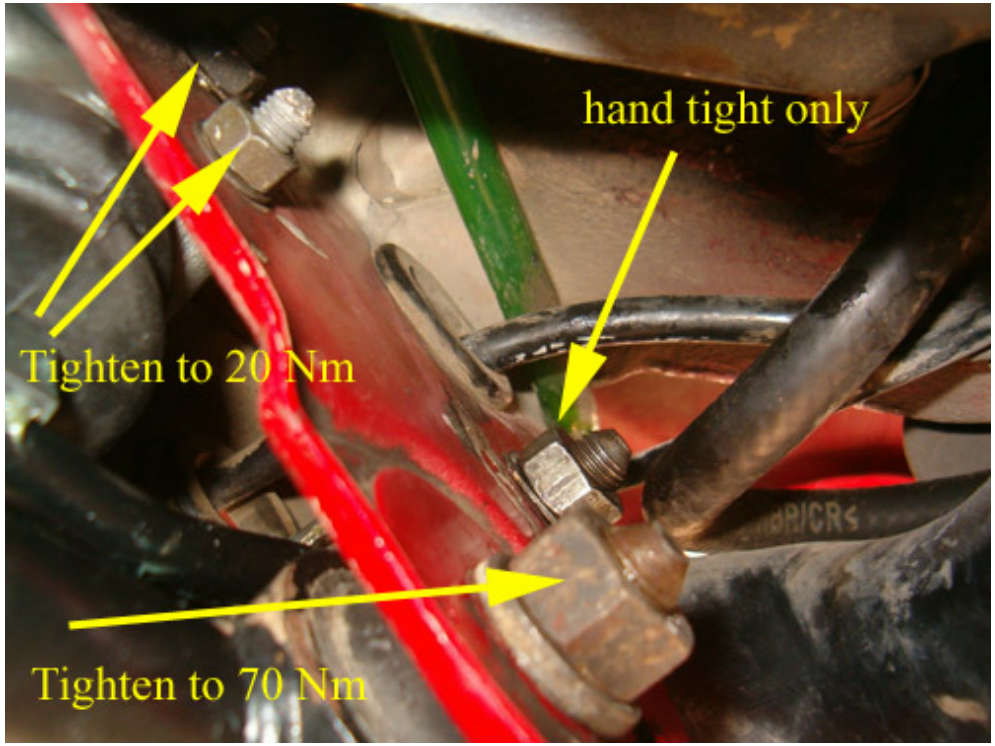
Fit the curved end of the spring,

making sure that the curved end sits as the photo indicates. A piece of advice here: These hooks have are prone to cracking from ageing, thats why you see the welds on the bottom. Mine was cracked so I had it welded to the correct position.



The Panhard bar is back in place, the spring is fitted and lubricated with grease wherever needed. (bias valve actuator fork and bias valve adjustment hook)





Tighten the Panhard bar bolt and bias valve bolts to the specified torque; leave the adjustment hook bolt hand tight only. It is advisable to preload the vehicle in order to obtain nominal height as the workshop manual indicates. However most of the times the vehicle is carries only its driver with no luggage in the trunk so I guess having a full gas tank will do the job. Remember the tightening torque for the Panhard bar nut is approximately 70 Nm.

I have used a weight scale in order to preload the bias valve adjustment hook; the predefined weight is defined at 12.2 Kg. Once you have loaded the adjustment hook with 12.2 Kg, push the bias valve spring upwards until the end of the valve stroke. While pushing the spring up, tighten up the bias valve adjustment hook bolt at 45 Nm.

We are now finished replacing bias valve and Master Cylinder rebuilt, but still no progress made to cure the problem. Here I am runing out of ideas... and start seeking advise. A first bunch of advise came from our famous Alfa Pages Forum where many ideas were presented; one of these ideas was actually the solution to the problem