Rear Suspension

Lets now proceed removing the rear springs. We will need a lift (preferably hydraulic) in order to support the axle when we drop the shock absorbers from the axle. Do not miss this step as the axle will hit the ground and rapture the brake hoses if left unsupported.

Undo and remove the nut (13mm) attaching shock absorber to axle. Notice the extend of rust at the springs which has expelled the powder coating

Nut and screw is out while the jack supports the axle

Lift the axle with the help of the jack so that the spring is compressed. Attach the spring compressors so that they keep the spring compressed and gradually drop the axle. This way you have released the spring from the shock tower and then it is a piece of cake to take it out of the car.

Spring is out ...

Notice the extend of rust on the edges of both springs. Initially I had planned to sandblast and powder coat all four springs but with a second thought it was not worth it. Not only the corrosion had removed a rather large quantity of steel but also the new springs cost was just 70 € more than the price of powder coating the old ones. So I went for new ones having also in mind that the old ones were already 16 years old and sagging...

Rear springs rubber hoses again used to cover the first turn of each spring

New springs along with the rubber hoses wrapped around the first turn of each spring.

Thrust rubber rings fitted between the spring and the shock tower. A notice here for the inexperienced DIY mechanic: The right rubber ring is approximately 0.5 cm thicker than the left one. Initially I thought that this was a mistake from the factory or a wrong part number; however once having a nice talk with my trusted spring supplier it became clear to me that this extra thickness is intentionally done. As I have written above, the side of the driver poses extra weight to the specific side of the vehicle that's why this side sits a little lower that the passenger side. As a consequence we need to take up the slack and use thicker ring to compensate for the difference.

Spring along with the thrust ring in place ready to be fitted on the vehicle. Notice the thickness of the thrust ring.

Spring merely sits in place...

... everything's now bolted and firmly attached.

Here is the right side spring fitted on the axle prior final assembly. Again notice the thickness of the thrust ring and visually compare it to the one of the left side; it is obvious that we need to raise the height of the driver's side to compensate for the driver's extra weight.

Bolt the nut securing shock absorber to axle and the car should be now ready to hit the ground. After some days of driving letting the suspension to "bed in", I measured the distance from the floor to the wheel arch passing from the centre of the wheel. The left photo shows the left side of the vehicle (driver side) whereas the right photo shows the right side (passenger side). Keep in mind that this is not an accurate way to measure things but it is an estimate to keep track of your work; the driver side of the vehicle should sit a little higher than the passenger side by roughly no more than 1 cm. If this is not the case, then generic type rubber rings should be used where there is option to remove slices of rubber until the driver side sits slightly higher than the passenger side. In my case the driver side of the car is sitting less than 1 cm higher compared to the passenger side; this figure is with no load on the car, no passengers and a half fuel tank. When the driver is onboard then this height difference is almost equal between the sides of the vehicle.

The road testing revealed some interesting and positive results. The car is now less flexible than it used to be, cornering is much improved being very accurate and above all the vehicle sticks to the road especially during high speeds exceeding 100 kms/h.

Finally don't forget to have the front end aligned since it now sits a little higher due to the new springs.