



# THE ENGINE ROOM FITTING RACE COILOVERS

**PPC'S 928 PORKER HAS BEEN CRYING OUT FOR DECENT SUSPENSION FOR YEARS, NOW IT GETS SOME IN THE SHAPE OF SOME THREE-WAY ADJUSTABLE NITRON MONOTUBES**

→ Having shed nearly 500kg and glueing on sticky tyres, PPC's 928 project car needed some decent suspension to match the car's potential. Last month in PPC we looked at how dampers work and using

that knowledge we've chosen some all singing all dancing (very little bouncing), three-way adjustable monotube set-up from Nitron.

Before we get into the fitting and setting up, a quick explanation of what three

way adjustments offer. Two of the adjustments are bump, or compression settings. The slow-speed bump adjustment can be considered to be controlling the chassis during roll, squat and dive, whereas the high-

speed bump adjustment is a kind of blow off valve allowing the car to ride kerbs without jumping uncontrollably. The rebound adjustment controls the hefty 800lb front springs on the way back down.

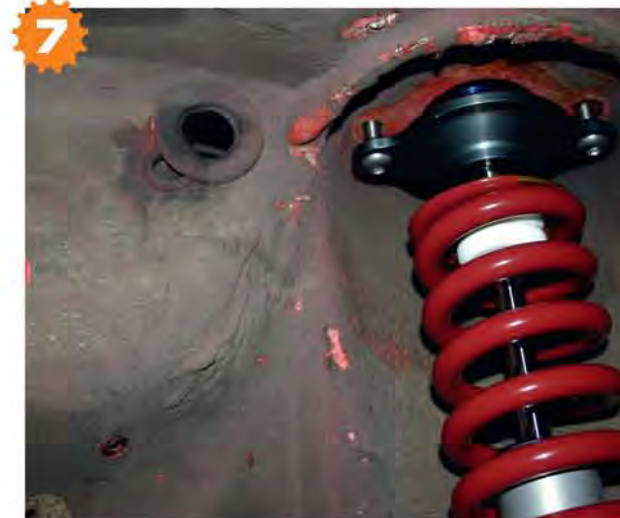




**1** The first thing to note about the Nitron remote reservoir kit is how small and light it is compared with the original Porsche suspension. The reduced size helps a lot when fitting the fronts.



**4** Removing the front suspension isn't as easy as the rear. The top and bottom mounts are easy to undo but the shock won't pull out of the top wishbone without removing it.



**7** If you want to mount the remote canisters inside the car you have to drill some pretty big holes as the shocks come pressurised and the lines cannot be opened at home.



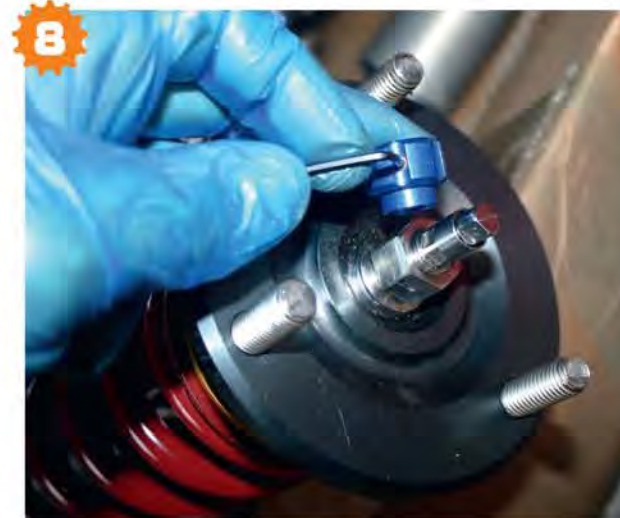
**10** The lower mount is a whopping 22mm shaft that goes through the lower wishbone twice, the rear upright and the shock absorber. Fitting the bushes at the same time was fun.



**2** We'd recently had the rear shock absorbers off the car so we weren't expecting any problems. The top mount bolts through into the boot, the bottom mount is a large 22mm bolt.



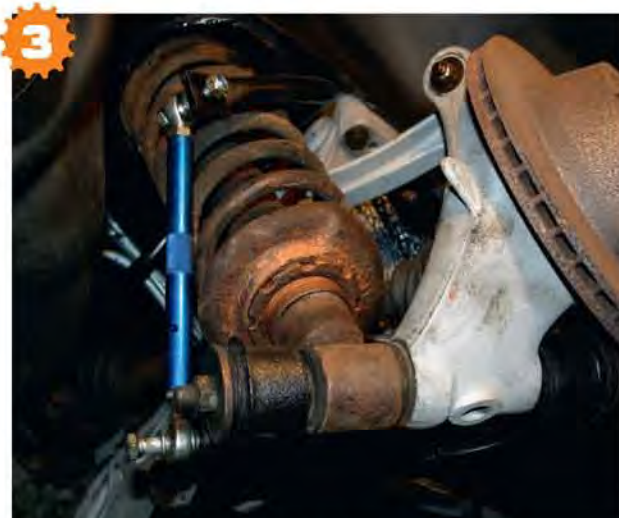
**5** Here's the proof of how much the original shocks weigh. In total the four old shocks weighed 35kg whereas the new set-up including remote reservoirs is just 16kg. Go figure.



**8** The top mount of the rear damper has a slightly eccentric stud pattern. After trying it in every conceivable way it became apparent the adjuster knob was too big to fit the hole.



**11** At the front under the bonnet the nuts were much easier. The top mount has room for the adjuster to fit through and the nuts were easy to get on with a socket and ratchet.



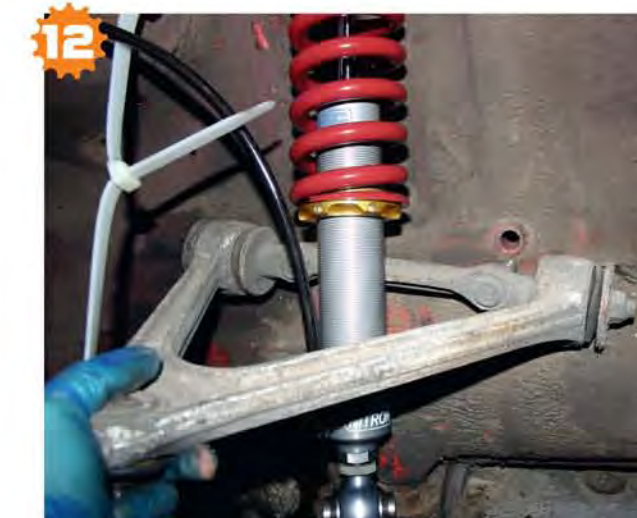
**3** The adjustable anti-rollbar link is from Steve Heath Engineering. This will be most useful when it came to setting up and equalising the car's corner weights later.



**6** Here's one of the new shocks with its separate canister. This has the bump adjusters on it, so mounting it inside the car makes adjustment much easier than if it were on the shock.



**9** The bottom mount of the rear shock needed some spacers to be made up. The O-ring seals the spherical joint while the other two other bushes space out the lower bolt.



**12** Because the front shocks are so much slimmer the top wishbone can be fitted after the shock is secured at the top and wouldn't need removing if the damper had to come off again.



**SETTING UP AT THE WORKSHOP**



**1** We took the car along to Troy at Northampton Motorsport as he's seen the car before. With adjustable platforms on all four shocks we could get the ride height spot on.



**4** As the rear suspension arms had been removed the geometry had to be re set. The rear camber was set up to one degree negative with ten minutes toe-in.



**2** First step was to release the drop links. The theory is set the shocks to get the right corner weights then adjust the drop links so they are not under tension and reconnect them last.



**5** With the settings within tolerance the eccentric adjusters were locked off. Last time we tried to adjust the rear suspension it was seized but now it's rebuilt this was easy.



**3** Sitting on the scales the total weight is down to 1157kg including the cage and safety equipment (from 1600kg). The corners were Fronts R 333, L 326, Rears R 237, L 261.



**6** With the car back on the ground we could see the new lower ride height for the first time. The tyres are now much nearer the arches but the ride is much harder so they may be okay.

We took the car along to Mallory Park to give it its first shake down. The new lower ride height was immediately apparent as the car fouled the trailer trying to get it off!

The new suspension felt much harder than the original shocks even though we'd relieved them of 500kg of weight and cut a full coil out of them. The new Nitrons had 800lb/in Eibach springs on the front and 400lb/in on the rear. This was the suggested rates from Nitron for the weight of the car and the use it's going to get but we may experiment with different springs later.

The day was pretty damp so the initial set up for the damper rates was soft at the rear and middle of the range for the fronts. The fast speed bump setting was left in the middle of the range as Mallory doesn't have any particularly big kerbs to worry about.

First impressions were what a dramatic difference



928 is now so low it's tricky to get it on the trailer.

the coil-overs have made. Before the car always reverted to saloon car mode, wallowing into bends and wanting to break traction at every opportunity (this could have been partly due to the previously seized rear

adjusters) but now the car felt like it liked the track. With changing track conditions and limited time due to oil spills there was little time to play with adjustment but straight out of the box it's transformed

the car and I can't wait to explore the handling on a warm, dry track. Thanks to Troy at Northampton Motorsport and Nitron shocks [www.nitron.co.uk](http://www.nitron.co.uk).

