

Shock tactics

Do not remove the piston seal nut from the shaft unless you are changing the shaft seal.

Laying all the shims and the piston in order simply helps you keep track of the sequence in which everything is placed, and makes it easier to identify where shims should be added or removed. In **Fig 11**, from left to right we have the bump-stop plate, spacer shims, compression shim stack, piston, rebound shim stack, spacer shims, and the nut that keeps the valve stack altogether. Make a list of the shims in each stack for reference at a later stage.

REASSEMBLY

In the correct order, slide the spacers, shims and piston on to shaft, followed by the nut, with one drop of blue Loctite.

For Nitron shocks, the nut should be tightened to a torque value of 18 Nm (13.3 lb.ft).*

Fill the body with new oil. Slide the piston into the oil, moving it up and down a few times with a bit of force to release any air bubbles. Raise the piston near to the surface of the oil, but do not let it come out of the oil as it will suck air into the system. Make sure the shock adjuster screw is turned all the way out.

Hold the shaft and tap the end of the shaft with a rubber hammer. This action forces oil through the valve stack and displaces any air that is trapped between the shims and within

the piston. You will need to continue tapping the shaft until all the all of the air has been expelled from the system, while topping up the oil level when necessary (**Fig 13**).

Once all the air has been expelled, fill the oil up to the top of the chamber and slowly raise piston so it is level with the threads—about 20 mm down the bore (**Fig 14**). Be careful not to raise the piston too much or it will suck air into the system and you will need to purge it again, tapping with the hammer.

Still holding the shaft, slide the shock nut down the shaft and screw it into the threads. Oil should bleed out from the groove on the side of nut, which indicates that the system is completely full of oil, and does not contain any air. Do not over-tighten the nut, as it's the o-ring that seals the shock.

Place the bottom of the shock on a rag and push down hard to compress it until it hits the bump stop; then release it and let it return under rebound. Now do the same with the adjusting screw all the way in, and there should be a noticeable resistance under rebound and compression. If that checks out, adjust the adjustment valve to a position that will suit your needs; or try setting it halfway between fully-opened and fully-closed, then use it to fine-tune the shocks on the car. ■

A word of caution

This article is intended as a general guide only, and although it is based around Nitron dampers, the concepts should be common to many damper makes.

As always, before undertaking any DIY task on your car, **please ensure** that you are comfortable with undertaking it safely as we cannot accept any liability for problems which you may encounter.

* We did take the opportunity to pass this text via Nitron's technical department for feedback. They made a couple of comments which should be taken into account when reading this advice...

"The torque value stated in this article for the piston nut is too soft at 18 Nm. We use 33 Nm (24 lb.ft).

Also the article does not mention what gas pressure to use – this is crucial whether for air or nitrogen."

On a Club event a couple of years ago, I spotted a Caterham with a small additional mirror mounted on the windscreen. I spoke to the owner, who told me that he spends a lot time in southern France and that on returning to this country, often find himself struggling with a blind-spot when driving on motorways. He told me that this wide-angle mirror resolves the problem and has the added benefit of not vibrating as much as the door mounted ones do.

I traced the make, Stadium, and found that it is sold at Halfords for just over £4. It's meant to clip onto a sun visor to help you keep an eye on the children! After a year's use, I can say it's a great item – it helps you see who's in the outside lane, although it does takes a while to get used to estimating distances due the mirror's wide-angle curve. It is also a great help when reversing.

When I found the most useful mounting position, I fixed a piece of insulation tape to the screen as a reference, and this also prevents any permanent marks on the glass. As I had been told, the mirror

Of mirrors and missing handbags

Mike Harley recounts a tale of lost-and-found, the kindness of strangers – and a useful gadget...

does indeed remain stable at speed and the only real limitation I have found is that it can only be used when the hood is off.

The picture shows it fitted – you will need to accept my apologies for the filthy windscreen and the range of dead wildlife, but there is a story and a justification for this...

We had just had a very fast 40-mile run though the small vineyard roads around Chablis, much

to the delight of the vineyard workers who had clearly heard us coming and were out on the roadsides, waving furiously.

Why the speedy run? Well, following a leisurely lunch beside the river, Kate had left her handbag – which contained our passports, documents and money – on the back of the car when she climbed into the passenger seat. Of course, it fell off onto the road as we left.

Luckily, it was found by a local lady, who took it to the restaurant, guessing we had eaten there. It was only when we arrived back at the campsite that Kate had what can only be described as 'One of Those Moments'.

"My bag, where's my bag? Oh my God! – you'll have to go back. Go fast. Very fast. My life is in that bag!" So I did.

Much to our relief, the restaurateur had the bag and everything was intact. In the meantime, he had also contacted the Police, explained what the bag contained, given them our registration