

IT SEEMED LIKE A GOOD IDEA AT THE TIME!

About eighteen months ago now, I decided that I would take the opportunity presented by the necessity to replace some of the rear suspension bushes, to undertake a complete rebuild of that part of the car. It was de-rusted, and painted with black Smoothrite. The rear calipers were overhauled, the pads replaced, likewise the final drive oil seals, three of the four universal joints, and last, but far from least, all the ratty old bushes were replaced with shiny new polyurethane ones. When I finished it, it looked *great*.

It turned out to be an absolute disaster.

Firstly, there was a *whaaam--whaaam--whaaam* resonance which started at about forty mph, plus a noticeable rumble from the left side rear, which seemed to vary with the movement of the suspension. I jacked up the rear of the car, and found that although the right-side wheel revolved smoothly, the left side wheel seemed to catch at one point in its rotation. I could not see for the life of me what the problem could be, and so took the car to Car Rosner Automobiles, in Standerstead, South Croydon. Their resident Rover guru, John Church, hit the nail on the head at once, before he had even seen the car; were the U/Js fitted with grease nipples? They weren't, which seemed to puzzle him. However, when I collected the car, it was explained that although there were no actual nipples fitted, the necessary bulge in the casting was; Bensham Lane Engineering, who had fitted the U/Js for me, had got the inboard left journal cross back-to-front, so that it was binding on the drive flange at one spot in its rotation, hence the thing gave a jump once each time round. A result! I drove away, through the rush-hour traffic, happy that the problem had been solved.

The next time that I drove the car, as the speed built up over forty mph, back came the resonance, plus a new vibration. Home again, jack up, wheels off. This time, the rotation of the left side drive shaft gave two small jumps with each rotation. Loosening the flange bolts eliminated them, but they returned each time the bolts were tightened up again. But what about the resonance? I was absolutely at my wits' end with all this, I really could see no way out. I asked advice of anyone I could

find who could take a couple of hours out to listen to my tale of woe, but no-one seemed able to understand the symptoms I described. Eventually, I asked Neil Walters, of the eponymous Engineering Co., in Heanor, to have a look at it. He agreed that the problems I had described existed, and found that the incorrect fitting of the U/J had distorted the flange, which he re-machined. However, this left the resonance. I had concluded by now that this must have something to do with the new polyurethane bushes, but why, I could not imagine. In fact, Neil had run the car jacked up, and the resonance had not appeared. Obviously the loading of the suspension had something to do with it, and the only thing which had been changed, were the bushes. Neil added the comment that mine was the only P6 he had heard of in which all the bushes had been replaced with polyurethane. It was about this time that someone mentioned that the new bushes might have changed the resonant frequency of the suspension. That suspension had a resonant frequency was news to me, but it sounded plausible, and I decided that I would have to replace at least some of the new bushes, when I could find the time. I got new Metalastik bushes for the lower link and cross-member in readiness, all I had to do was find the time.

However, over the following period, I had had other heavy calls on my time, a newly-acquired Jaguar S-Type being one of them, and it was not until November that I finally gave up the hunt for time and took the car back to Car Rosner's for those polyurethane bushes to be replaced. After I collected the car, rush-hour or no rush-hour, I took the car up to sixty mph on my way home, and the resonance had *gone*. It was also clear that there were some other small problems to be sorted out, but the chief one, which made the car quite unpleasant to drive, was gone. So, what about polyurethane bushes? Well, I suspect that the answer is, do not replace all of the bushes which have any spring forces on them, as I did. Perhaps someone would like to experiment, to see which ones are critical? One thing's for sure, it isn't going to be me.