Axle Oil leakage

A recurring problem with Morris Minors is leaking oil seals in the rear hubs. This inevitably leads to oil getting on to the brake shoes and reinforces the widely held prejudice that Morris Minor brakes are just rubbish. There is another, probably more widespread problem which gives a similarly detrimental effect on the braking efficiency and that relates to corroded brake cylinders which leak brake fluid on to the linings. However, you can usually tell the difference since brake fluid is generally odourless and rear axle oil (EP90) does have a distinctive, rather unpleasant smell.

Returning to the original leakage suspect, it is often the case that long life and high mileage will gradually cause wear to the running surface on the axle caused by the oil seal. Yes, I know it seems a bit unlikely that a rubber seal will wear down a hardened steel surface – but it does happen! There is also the problem of the clumsy mechanic who has damaged the surface (see photos) which will add to the inefficiency of the oil seal.

"What's the answer, Brian" I hear you say. Well, SKF – a well known bearing and other parts supplier makes a repair sleeve which is very thin and will just fit over the axle bearing surfaces giving a new slightly larger diameter running surface. (Congratulations to whoever worked out which part number to specify for the Minor!)

My convertible project has been fitted with a very good condition axle casing that I picked up at our Dorset Branch show at Burley some years ago. It reputedly came from a South African car and had virtually no rust. However, the offside hub mounting had been attacked by 'Mr Clumsy' and the surface was quite badly damaged just where the oil seal runs. An ideal opportunity to try one of these repair sleeves was thus conceived.

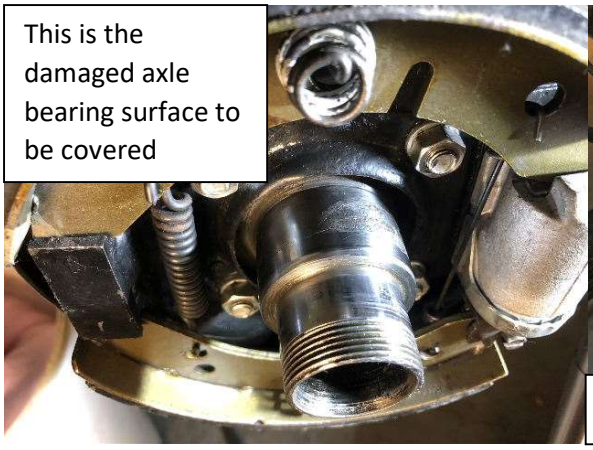
The sleeve comes as a plain ring with an application collar at one end. The collar can be removed when fitted as there is a groove around the circumference which is weakened in readiness. There is also a specially sized 'cup' which is intended to be used to slide the sleeve into position. However, due to the threaded projection which holds the large nut, this is of no use in this process – so it can go in the bin.

Now there is a problem at this point which I only realised after I had fitted the sleeve and discovered it was in the wrong place – thereby wasting the part as it cannot be removed without wrecking it. As the supplied 'cup' was of no use to install the sleeve, I put the hub back on as it is ideally sized to push the rim along the axle into position. When I had pushed the sleeve right back as far as it would go – it dawned that the new oil seal running surface was not in the correct position as it had been pushed right back beyond the reach of the seal which is quite close to the outer shoulder on the axle. The only answer was to fit a second sleeve(!) and trim it to fit the bearing shoulder. I made the expensive mistake so you don't have to.

I had decided to treat both sides – as I believe that it is better to keep things even – and so this gave the opportunity to try and get it right the second time. I 'snipped' the fitting collar prior to fitting so that it could be easily removed afterwards. You just have to be careful to just push the sleeve far enough along the axle so that it is flush with the shoulder – <u>and no further</u>.

I have contacted ESM about this as I felt that a little advice on the website would have helped.

This is the damaged axle bearing surface to be covered



SKF sleeve kit

This shows the sleeve incorrectly fitted too far back. Also note slight damage still exposed.

This shows the sleeve on the other side being fitted using an old locking washer to gently ease it over the axle.

(Left) shows the sleeve fitted in the correct position with the 'snipped' collar ready to be removed.

(Below)shows the collar being torn off with the side cutters showing the finished article ready for reassembly.