IRS! PART 3

Component parts dismantled

Jim Patten follows the stripdown of Jaguar's pre-XJ40 independent rear suspension, here showing how parts are prepared to receive new bearings and bushes.

"What a pile of junk. You'll never do anything with that lot, it's ready for the scrap heap." If you're not careful you could so easily fall into Mr Nosy Parker neighbour's trap and feel pretty dispirited by now, surrounded bits and pieces. But take heart, dear Jaguar disciple, because by the time we've finished your neighbour will think you mad for fitting such a beautiful assembly back on a car.

Well, we're knee deep in springs, shafts and wishbones. Let's see if we can make some sense of it. Leave the calipers to one side, they can have their turn in a later issue. We might even get into some re-assembly this time round, always a positive step. You will need a set of spring clamps but they are easily available at your local spares shop.

Measure the disc to see if wear exceeds manufacturer's limits. Check for deep scores or cracks. There's no way to tell if they are warped or distorted without spinning them on a lathe or similar. If they appear to be good, have them slightly skimmed anyway, just to make sure that they run true. But you may decide to do what we did – although these were fine, we replaced them anyway as the cost is relatively low.

With the spring/damper unit firmly secured in a vice, attach the spring clamps and gradually compress the springs tightening each clamp progressively. Note! Road springs are dangerous – always use the correct equipment and if you do not feel competent, leave this job to a professional.

The retaining blocks can now be removed. They are very similar to valve spring retaining cotters in a cylinder head. The clamps can now be slackened and the spring removed. Unless the dampers are known to be as new, discard and replace with new. Don't just pump them up and down and pass them as fit if they feel tight, that isn't an accurate test.

One of our spring seating rings had corroded beyond use, so Alan turned another in the lathe. However, they are available at one of the many specialist Jaguar spares outlets.

The hub will still have an inner bearing race attached and will need to be removed. Secure the shaft end in a soft jawed vice and drive the race from the shaft with a drift. This can be a very difficult operation and if you get stuck you may have to use the facilities of a local machine shop.

Lay the hub carrier on the bench and tap out the outer bearing seats using a suitable drift. If the seats just fall out then the bearing would have been spinning in the carrier and you will need to source another carrier. Luckily it is fairly common across the range but do check that it is the same carrier. If not, change in pairs.

Tap out the lower fulcrum pin bearing seats using a longish drift. Slots are machined in the carrier to give access to the seat.

Read this!

Every care is taken to observe safety rules in these articles, but readers undertake this work at their own risk.

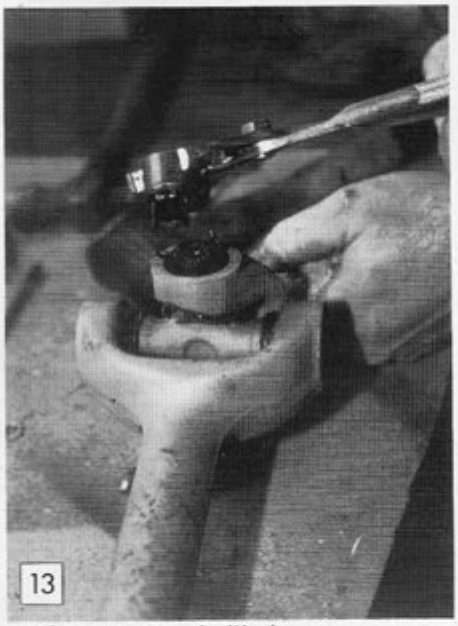
It's actually easier to clean and paint the lower wishbone with the old bearings still in place. This way, no stray paint can enter the bearing seats. There are two bearings in each fork so that's four per wishbone. To push out the old bearings choose a socket that is larger than the diameter of the bearing. Then select another of exactly the same diameter as the bearing. Place the sockets either side of the wishbone fork and position in a vice so that when it is tightened, the smaller socket will push both bearings out and into the larger socket. What a lot of words for such a small job.

Remove the grease nipple on the inner, lower wishbone and make sure that the hole is clear. Old grease will have congealed at the base and solidified to defy new grease entry. Discard the grease nipple as this will later be replaced with new.

Place a new bearing into place and press home in the vice. Repeat this operation for the other side. Early cars had a wider fork end and used a spacer between the bearings.

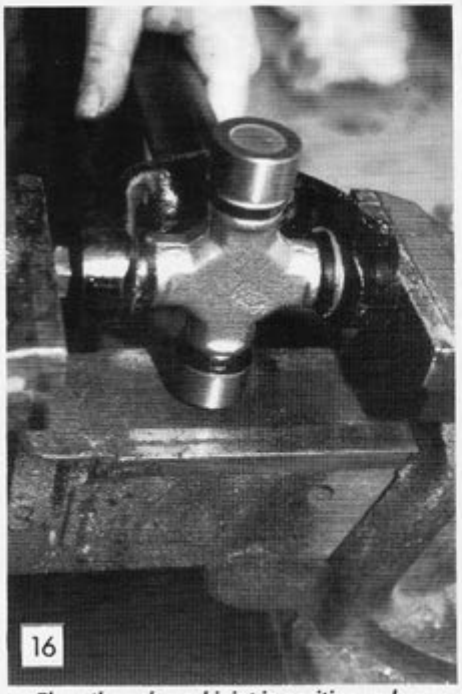
Before doing anything with the drive shafts, use a number punch or other means of identification and mark each yolk with its mate. Remove all circlips. Most will need a jar with a hammer and drift to loosen them from their grooves.

Deliver a series of blows with a soft faced hammer to drive the yolk down on the universal joint.



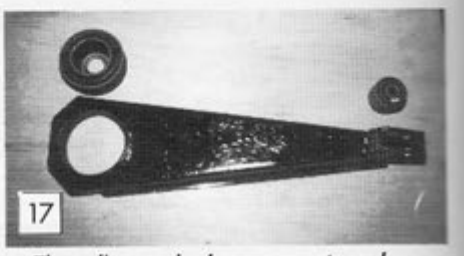
The cup can now be lifted away.

Remove the cups from the new universal joints and place one in position and tap home (see how good our newly painted shaft looks). Check inside the cup to see that none of the needle rollers have fallen out of place. Modern kits are pre-greased and don't need any added. Earlier types fitted with grease nipples can be greased after fitting.

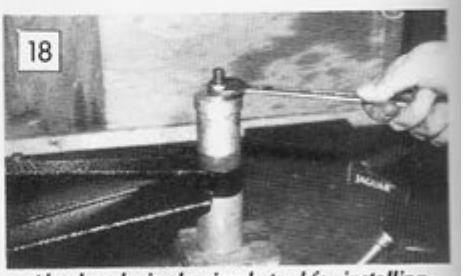


Place the universal joint in position and slide into the fitted cup. Place another cup into the vacant hole. Push the two cups home using a vice. You will need to use a spacer (small socket or even a nut will do) to push the cups past the circlip groove. Check that the joint moves freely and then fit new circlips. Do not be surprised if a needle roller falls and obstructs the joint. If this happens then the cups have to be extracted, the roller put back in place and the cups pushed home again. Fit the other section of the driveshaft to the universal joint ensuring that all pre-punched numbers correspond.

Manoeuvre the yolk away from the universal joint and repeat operation 12 for the other half of the universal joint.



The radius arm bushes are an extremely tight press fit. The old rubber will most likely have fallen out and the best way to remove the metal section is to use a fine, sharp cold chisel and collapse the outer metal part of the bush inwards. Unless that is, you have access to a press, in which case simply press out the old bushes.



Alan has devised a simple tool for installing the bushes. The bottom section shown is the same diameter as the eye in the radius arm. The top is the same diameter as the bush. Through the two runs a threaded rod. The bush is pulled down by the top part of the tool when the thread is tightened. Any machine shop will press the bushes in for you for a matter of a few pounds.

Both ends of the radius arm are treated in the same way but make sure that the hollow section of the large bush is to the front of the arm.

That little lot is a nice leap forward, you should feel like you're getting somewhere. In the next instalment we start to look at setting things up, end float, pre-loads, all that sort of thing. So I suggest that in the meantime you prepare yourself for the deep thinking to come by taking long walks breathing good fresh air or by ea ver you do to stimulate the brain cells.

All the work involved in this strip down has been entrusted to Alan Slawson, specialist in rear end rebuilds 07831163158 to whom our thanks go for his help with this feature.