

## Lagondaforum: G9 gearbox

### Re: G9 gearbox

*Written by adamgentilli at Oct 18, 2016 5:17 pm*

Gentlemen,

I have just found this thread whilst contemplating the replacement of oil seals front and back of a G9 gearbox. Do they exist and if so in what form? I am looking from underneath and at first glance it does not seem as simple as removing the front and rear propshafts, removing a housing and replacing the seals.

Any advice gratefully received.

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### Re: G9 gearbox

*Written by bill at Oct 18, 2016 7:07 pm*

Adam, do you have the latest Club 4.5 litre handbook ? There is quite a lot of detail about the G9 gearbox in there by David Hine - page 93 - including seal info.

When I rebuilt my G9 a few years ago (before David Hine had produced the revised handbook !) all the seals (and bearings) in modern form were available virtually off the shelf from my local bearing supplier.

I hope this helps.

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### Re: G9 gearbox

*Written by bill at Oct 19, 2016 10:21 am*

Adam, having refreshed my memory by looking at my notes this morning I suppose it could be possible to renew the seals with the gearbox "in situ" and without taking off the front and rear housings (I presume that is what you suggest in your post ?). However the shafts will be in the way and it would be very difficult to remove the old seals and put in new ones without damaging the new ones.

It would be much better to get the gearbox on to the bench and then take off the housings. However having gone that far it would probably also be a good idea to take it all apart to check the condition of the bush in the middle of the main shaft and all the vital oil holes in the helical gears. That probably really means a strip and rebuild but it is not too difficult if done carefully.

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### Re: G9 gearbox

*Written by adamgentilli at Oct 19, 2016 5:04 pm*

Thank you Bill. No I don't have the latest but it sounds as if I had better go shopping.

As the gearbox is easy enough to remove, I am sure you are right and a good clean out can do know harm. I was just being a bit lazy about the seats and floorboards. When they are out I will have no option but to do the steering box as well!

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### Re: G9 gearbox

*Written by bill at Oct 19, 2016 6:50 pm*

Adam, if you are going to strip the gearbox completely I found that there were 2 vital things in my humble opinion. There may be better advice on this Forum from others but ...

1. Renew the bronze bush in the middle of the main shaft (between the output and the input shafts). Any play in this bush is likely to cause the gearbox to jump out of gear on occasions and will also put sideways stress on the helical gears (hence broken teeth)
2. On the mainshaft make sure you get the helical gear off the steel "collar" (for want of a better word) that it has been pressed onto. It was not immediately obvious to me that the "collar" was not in fact part of the gear itself. However after looking at it very carefully I realised that there are various holes into which you need to insert some hardened steel pins in order to push the gear off the collar. Some heat might be needed. When you get the gear off you will find that there are oil holes and pathways hidden underneath which have no doubt accumulated crud and carbon over the 80 years or so. The holes in mine were completely and solidly blocked. The blockage of these holes prevents any real lubrication reaching the bronze bush in the middle of the mainshaft and will cause wear to this important bit of the gearbox.

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It is difficult to describe all this accurately but checking how oil can get to this bronze bush in the middle of the mainshaft should be more obvious to you when you get the gearbox apart !

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### Re: G9 gearbox

*Written by adamgentilli at Oct 23, 2016 9:41 am*

Excellent, you are going to be metaphorically "on my shoulder" whilst operations take place. The car's past pedigree suggests it will have been well looked after in its middle years, so hopefully not too much wear, but we shall see. Please do not hesitate to pass on any more Eureka moments of potential snags:D

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### Re: G9 gearbox

*Written by bill at Oct 23, 2016 1:14 pm*

Well, Adam, I dont know about "on your shoulder" but I will say a few prayers for you if you insist !

When (or before) you take the gearbox apart it is worth checking one other thing. In my (limited) experience the G9 casing can easily crack between the oil drain hole and the front layshaft bearing hole. This is definitely a weak spot. It is also often the cause of oil leaks from this area. My advice is not to try and get it welded. Apart from impregnation of oil in the casting over 80 years or so it seems that the original aluminium casting was very poor and had lots of impurities. My solution (which has reduced leaks by about 95%) was to make up a welded ali "bandage" which was secured to the oil filler hole (under the filler plug) and picked up on one of the studs for the layshaft bearing cover plate. Before bolting on the "bandage" I smeared it with a modern ali epoxy glue as a "belt and braces" fix. You may be able to improve on this mod ! I can let you have a photo of my mod if you have this problem. I dont think it looks very noticeable and you would have to know your G9 gearboxes very well to spot it !

I understand that new G9 gearbox casings are available from LMB but (understandably) they are very expensive.

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### Re: G9 gearbox

*Written by bill at Dec 05, 2016 8:42 pm*

Further to my above post I have been told (by an engineer who knows these things and also knows what an LG gearbox looks like) that it could be possible to weld cracks in old castings by laser welding or alternatively by high velocity welding. Previously these techniques had only been available to professional customers but are now apparently available to ordinary mortals. These welding techniques apparently avoid all the heat build up associated with conventional welding and are not affected by the impurities in old castings.

Does anyone have any experience of these techniques ? Are they very expensive ?

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### Re: G9 gearbox

*Written by davidbracey at Dec 05, 2016 11:33 pm*

Hi Bill,

I looked into explosion welding when I had a sump that needed repairing but couldn't find anyone to even discuss it with. From what I researched it did sound very promising but I decided to go for a new sump and dropped the idea. If you find someone that wants to give it a go, or better still give us a demo, then I still have my damaged sump they could use.

If you haven't already, you should look into how this technique came about. Engineers noticed that shrapnel from WW1 was sticking to armour plating of tanks even though it was a dissimilar material. Fascinating.

David

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### Re: G9 gearbox

*Written by bill at Dec 06, 2016 6:45 pm*

Thanks David for that. Very interesting ! There is hope in the future for all those original castings etc we have had to discard over the years !

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