

Lagondaforum: LG45 Engine Mountings: Assessment and Replacement

LG45 Engine Mountings: Assessment and Replacement

Written by Mark at Oct 23, 2015 10:03 pm

I am about to commence replacement of the engine mountings on my LG45 de Ville. Inspection of the base of the mountings where the centre bolt comes out, shows a large ((6-8mm) gap between the nut and base of the mounting. I am assuming this is deterioration of the vulcanised rubber in the centre of the mounting and it has dropped due to age. (it must be 30 or possibly 40 years since the mountings the were replaced, or they might be original).

Can anyone offer any advice on the above assessment and the ease of replacement?

Are there any problems I will face? Do I simply support the engine under the sump, remove the centre bolt and the four castle nuts holding the mounting to the underside of the chassis bracket and then reverse the process with the the new parts?

Advice gratefully received

Mark (Y2)

Re: LG45 Engine Mountings: Assessment and Replacement

Written by bill at Oct 24, 2015 9:19 am

This is a job on my list to do but I have delayed as I can see that on the front mountings (I think) it is going to be very difficult to get all 4 of the "castle" nuts out. It seemed clear to me that the engine would have to be lifted quite a bit (maybe 4" or so ?) to get clear access to these bolts/nuts.

Therefore the engine would have to be detached from the radiator, exhaust etc etc.

If anyone knows an easier way to do it please say so !

Apart from the above, when you have done the job you will then have to realign the gearbox (as the engine will now be in a different location). That is quite a difficult operation if done "properly". There was a post by Julian M. some time ago about this.

Re: LG45 Engine Mountings: Assessment and Replacement

Written by DavidLG45 at Oct 24, 2015 12:03 pm

Hi Mark,

Not going to be easy. As Bill says you will need to realign the gearbox. The holes in the brackets are slotted so you will need to align side to side as well as up and down. Take the big bolts out first, that's the easy part. If you try to raise the engine (with bits mentioned detached) it will foul at the front (starter handle dog will hit the underside of the cross bar that supports the radiator, at least it does on my car). If it's like my car the slotted nuts on the rear mounts are on the bottom so can be removed, assuming you can get a spanner on the bolt heads. The front ones have the slotted nut at the top. That is going to be very difficult to get the split pins out and undo the nuts.

If you do try raising the engine and supporting it from below put a hefty plank of timber right along the length of the sump and plenty of support.

Good luck

Re: LG45 Engine Mountings: Assessment and Replacement

Written by Mark at Oct 24, 2015 10:41 pm

I am most grateful for the advice given and today I have spent a couple of hours under the car trying to write up a sequence of tasks to take account of the challenges described. Firstly I discovered that the mountings are almost certainly circa May 1937, this makes the castle nuts/split pins even more difficult to remove due to their condition.

However, I did a note of the work for the front mountings and whilst access to the castle nuts is awkward I felt confident I could swap the fronts. The rectangular plate on the front mountings runs long ways along the chassis making access a little easier from underneath.

So I moved onto to inspecting the rear mountings and immediately noted they are set at 90 degrees to the front ones. As David points out, the outer mounting bolt heads are sandwiched between chassis rail and chassis bracket. If you can get a thin spanner on the bolt head sandwiched between chassis bracket and mounting flange you still cannot get the actual bolt out without removing the chassis bracket that the engine sits on. So as far as I

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can see, even raising the engine will not free the mounting. The only way I could see to get the chassis bracket off would be to raise the engine high enough, but that would still give awkward access, or to remove the engine so the bracket can be taken off whilst supporting the rear of the front wing as the bolts also hold the wing mounting box in place

Considering the manner in which the rear engine mounting is fitted, I feel that originally the mountings must have been bolted to the chassis bracket prior to the bracket been fitted to the chassis rail. Lagonda certainly didnt expect the mountings to be changed with the engine in situ.

As things stand I am not ready to take on an engine out job, the car drives well and the engine mountings were one of my ongoing maintenance tasks following on from last years G10 gearbox mounting change (which makes me quite accustomed to aligning the engine/gearbox)

Grateful for any comments on the accuracy of my analysis above

Regards
Mark (Y2)

Re: LG45 Engine Mountings: Assessment and Replacement

Written by Bill LG45 at Oct 24, 2015 11:29 pm

Mark

The new engine mountings I purchased from the Club spares had excess rubber from the moulding process on the underside which needed trimming off which I did not notice when fitting and they had to be removed again to cure this when the engine was installed...

Suggest check the radiator trunnion rubber mounts, if these are bad the radiator may have dropped. (Mine were badly perished so I replaced them, the Club has these available)

Mine were changed with the body removed but I can see how difficult this is with it in situ.

If you do decide to remove the wing mounting box make sure you mark up the spacers between the box and the chassis as these are similar but not the same!

Cheers
Bill

Re: LG45 Engine Mountings: Assessment and Replacement

Written by DavidLG45 at Oct 25, 2015 9:12 am

Mark,

I had been assuming your plan was to remove just the engine mounts with the rubber bushes. I don't think removing the brackets to the chassis makes it any easier. The slotted nuts for the front chassis brackets are on the outside of the chassis so not too hard to get off, however the brackets are trapped there as you cannot get them out without raising the engine.

With the rear brackets, as you point out, they hold the big wing mounting boxes on the outside of the chassis. You may have noticed there are thick aluminium spacers between the wing box and the chassis. Unfortunately these are not fixed with regular bolts. There is a slotted nut on *both* ends. What you can't see is that they are double ended bolts (ie like a stud with a hex head in the middle). The hex bit is recessed in the aluminium spacer. You either have to remove the whole wing box to get a spanner on it (And that means the wing too as the bolt is trapped there unless you can pull the wing box outwards and you can't do that with the wing in place.) or try to undo the inner slotted nuts and hope the bolt doesn't rotate. You could put a spanner on the other slotted nut inside the wing box but you will not get the bolt right out without removing the wing box. There is also a risk that the nut on the wrong end will undo, then you're stuck (there isn't enough bolt to get a lock nut on to hold it).

If you do manage to get them out and replace the rubber mounting bit you can't tighten the bolts as you need the adjustment provided by the slotted holes to get the engine lined up. So you're still faced with getting split pins in with the engine in place - with the added problem of getting the split pin holes lined up.

I would suggest removing the engine completely and then make up a jig that has the main bolts attached that is referenced to the chassis. Remove the jig. Replace the necessary parts. Then replace the jig and tighten the nuts plus put in the split pins. When you put the engine back in the main bolts

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should, hopefully, line up and push back in. Then align gearbox.

David

Re: LG45 Engine Mountings: Assessment and Replacement

Written by Mark at Oct 25, 2015 10:35 pm

I am most grateful for all the advice and many thanks to Bill for his call earlier today. Davids suggestion to make up a jig to accurately position the engine upon replacement is something I would not have considered and a very sensible solution.

It proved very difficult to photograph (from underneath the car) the rear mounting outer bolt. I wanted to show how it is 'sandwiched' but I gave up. But it is evident that the mounting can only be freed if these two 'sandwiched' bolts are removed and this requires removal of the engine and then the rear chassis bracket on both sides. This has all the complications set out by David above and really needs to be done when it is planned to do work on the front wings.

This is something I will schedule for the future as I do intend to have all the wings and running boards off for refurbishment. It is 30 years since the body was restored so they are showing some battle scars. That said, the car still drives really well, as evidenced in the tours of Scotland I have previously written up in the club mag.

This thread brings home to me how helpful the forum is with such matters. Whilst the published handbooks produced by the club are excellent they cannot possibly go into the detail needed to address questions relating to dismantling and reassembly.

I will now focus on putting my 11.9 engine back together. How I wish there was the same level of knowledge for this model as the LG45 !

Thanks again to David and Bill

Best Regards

Mark

Re: LG45 Engine Mountings: Assessment and Replacement

Written by Colin M34 at Oct 26, 2015 9:17 am

Hi Mark, David and Bill

Can I express my personal thanks for what I think has been a really good technical discussion on LG45 engine mountings. Scary - I am glad I have an M45 instead.

Regarding early models, Mark, let's have a discussion in the early cars section. Those of you at the AGM may have seen the 12/24 which I used to own. I found it as a derelict wreck 40 years ago. Great fun.

Colin