

Lagondaforum: LG6 Steering Box refurbishment

LG6 Steering Box refurbishment

Written by Southy66 at May 31, 2017 2:35 am

Hello,

Looking for advice on removing, refurbishing and refitting the steering box from an LG6 DHC.

All other steering components - ball joints, tie rod ends, drag links, etc. - have been attended to (LMB offer a kit for this) but there is still a lot of play in the steering.

I therefore feel that the steering box requires attention, so I intend removing it for inspection of the internals. Any tips or tricks?

Regards, Mike

Re: LG6 Steering Box refurbishment

Written by h14 at May 31, 2017 4:09 pm

Hi Mike,

Welcome to the forum.

I can recommend Steering Services, located in Dorking (UK). See: <http://www.steeringservices.co.uk/>. They rebuilt my LG6's steering box in 2000. Actually I went to him to buy the parts required...but his quote to do the job was so little more than the cost of the parts that I had him rebuild it. Postage obviously an issue, so if you feel competent, ordering the parts might well be your best option.

The box dismantles fairly easily; if you like send me an email and I will send you scans of photos of the parts arrayed in order. By far the worst job is removing the drop arm. Once you've removed the humungous nut (split pin first), you will need a substantial puller to separate this. I used a hydraulic puller, even that had to be wound up pretty tight. Clean and check the drop arm and splined spindle ends for alignment marks, or make marks, to aid reassembly.

As initially rebuilt, I could not turn the inner column by hand, so I took the box back. The rebuilder stated that that was correct (obviously far more leverage using the steering wheel), but accepted there could be more friction as a needle roller bearing was unobtainable, and he had replaced it with a plain bush. On his recommendation, I had the shaft ground to accept available bearings.

I still think it's too tight! Oil leaking from the front plate indicated that there were insufficient spacing shims. Also, now the steering centres with the steering wheel clamp uppermost, whereas I'm sure it should be facing the floor. This may though be because, being a special, the column is at a lower angle than original.

So DIY might be your best option anyway. I think those brass shims either side of the main housing set not only the bearing free play, but also, by trial and error, the centralisation of the steering wheel position.

I suspect my heavy steering could result from insufficient adjustment shims and that the needle roller change for plain bearing was a red herring. Hopefully your bearing will be in re-useable condition.

Take care with the aluminium housing on the end of the box through which the stator tubes emerge. There is a tiny clamp with small nut and bolt to loosen first, then two nuts bolted onto studs on the front plate. Mine is cracked where it bolts to the lower stud...very fragile. Take photos of lever positions before you dismantle!

Laurence

Re: LG6 Steering Box refurbishment

Written by Southy66 at Jun 01, 2017 1:44 am

Thanks Laurence for your reply.

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My plan is to use a local guy, recommended by a friend who is using him for this job on his Railton restoration, and who used to own a Rapier.

Thanks for your kind offer to provide some photos, I'll send you an email to take you up on that.

Regards, Mike

Re: LG6 Steering Box refurbishment

Written by h14 at Jun 04, 2017 11:30 am

Hi Michael,

I have scanned the photos so will send once I have your email address. The needle roller bearing I referred to was the one for the roller, which is attached to the other end of the drop arm shaft to the drop arm.

Two other possibilities for free play; worth checking before you spend time on the box.

1/ The steering idler arms, which are bolted to the underside of the chassis. Check if these tip or display side movement whilst someone rocks the steering wheel...wheels on ground.

2/ King pins. These are an unusual arrangement, with a cup and cone bearing at the top, and a large bronze top hat bearing at the bottom. To check; wheel off ground, grasp the wheel at top and bottom, and rock it hard. Important to do this whilst someone presses hard on the brake pedal. You can then check without the brakes...any additional free play showing then will mean your wheel bearings need attention.

Both 1 and 2 rely on the car's automatic chassis lubrication system. A great arrangement, but massively compromised by using the car's sump as its reservoir...especially given the propensity for less modern oils to turn to sludge. If you have that system...you need to check that it is working. That on my V12 largely came to life with use of the car, and a change to Duckhams Q20/50 detergent oil...the detergent aspect really doing what it said on the tin! Do take advice however before using a detergent oil.

If the system has been removed (it has on my LG6, and I wish it hadn't been!) you will have grease nipples (presumably). Grease is OK for the steering idlers, but the kingpins need OIL. I use Hypoy 90. I've recently done a full lubrication service on my LG6...a long and messy job, given the need for oil in many cases.

Regards

Laurence

Re: LG6 Steering Box refurbishment

Written by Southy66 at Jun 05, 2017 10:41 am

Hello Laurence,

Thanks again for your advice, I will check on those items.

I believe the idler arms were attended to as part of a fair bit of work which included a new steering kit from LMB. I believe also that the kingpins were done relatively recently when my dad was still looking after it, but it's worth checking on the lubricating system as you suggest. One other job I'd like to get onto is the jacking system, but that's a subject for another post I feel...

I've sent you a PM via the forum, I hope that works.

Thanks again, Mike

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Re: LG6 Steering Box refurbishment

Written by h14 at Jun 20, 2017 3:11 pm

Hi Mike,

Wondering if you received my email, sent 6th June? Photo attachments may mean it went to your junk folder.

Laurence

Re: LG6 Steering Box refurbishment

Written by Southy66 at Sep 18, 2017 5:00 am

Finally plucked up the courage for this job, and it's progressed to the point of removal, apart from the steering wheel end of the steering column.

The wheel itself is off, by removing the screws that attach each spoke to the hub. The stator tubes for ignition/hand throttle are also off.

Can anyone offer any advice on how to get the collar/clamp off the main shaft? The clamping bolt is out but the collar doesn't seem to want to move, so I thought I'd ask before I apply too much force.

Looking down the inside of the shaft, there appears to be a keyway, so perhaps it's just a tight fit, but with this part still on, it's too large to pass through the hole in the firewall.

Also, does anyone know if the gators are available? Mine has disintegrated, and I suspect it wasn't the original anyway, being rubber.

Many thanks in advance, Mike

PS. By the way, there are a few photos on the Lagonda Owners Facebook group

Re: LG6 Steering Box refurbishment

Written by DavidLG45 at Sep 18, 2017 9:55 am

Hi Mike,

You get the gaiters made to measure from Wefco

<http://www.wefco-gaiters.com/>

Download their form and fill in the details.

David

Just realised you probably mean steering gaiters (the above link is for leaf spring gaiters). Think you can get the steering gaiters from the club.

Re: LG6 Steering Box refurbishment

Written by Southy66 at Nov 08, 2017 9:54 pm

A quick update. I had success in removing the steering hub and the box/column assembly was removed. I took the box to a local(ish) specialist in pre-war cars for them to dismantle, and they found what I had already suspected - the thrust bearings had lunched themselves.

For some reason I thought the steering box was a Bishop Cam type, probably going off what was available in the Lagonda spares catalogue. In fact, it's a Marles steering box, and there is a company making parts for them. I contacted them through their website www.marlessteeringbox.com and after providing them with the various numbers cast or stamped on the various parts, along with a few critical measurements, they provided a quote to supply the necessary parts.

I now await their arrival so re-assembly of the box can begin. Fingers crossed the car will be back on the road before Christmas.

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Regards, Mike

Re: LG6 Steering Box refurbishment

Written by Southy66 at Dec 11, 2017 10:10 pm

Further update: The cross-shaft supplied was different from the one on the car - the original is longer - but the supplier has very helpfully sent a disassembled roller and pin, to which the original cross-shaft can be mounted. We will return the roller/cross-shaft assembly first sent, along with some measurements of the original cross-shaft so they have them on record for the next person who needs these parts.

I have yet to source the gaiter that seals the steering column where it passes through the firewall. The Lagonda club doesn't have these. I am looking at alternatives that could be modified, and perhaps a gearshift gaiter is going to be the most likely candidate, but if anyone has suggestions, or pictures of their gaiter, original or otherwise, I'd be happy to hear/see them.

Regards, Mike
