

Lagondaforum: LG45 brake servo

LG45 brake servo

Written by bill at Apr 23, 2015 5:25 pm

Has any one had experience of fitting a servo or some sort of other power assistance to LG45 brakes ?

After many years of abuse of my back I am finding the heavy pedal a bit of a problem and need to lighten the load required to stop the car safely !.

I have looked at the possibility of fitting an M45 servo but this does not seem to be feasible as the M45/LG45 systems operate in quite different ways as most of you probably know.

I would prefer to fit something which is out of the way and cannot be seen: I am quite happy to use some modern bits if necessary but do not want to cut up or modify any of the original Lagonda bits. The simpler system the better !

Any ideas gratefully received !

Thanks for any suggestions.

Re: LG45 brake servo

Written by Bill LG45 at Apr 24, 2015 9:25 pm

Hi Bill

No experience of fitting a brake servo to Girling mechanical brakes but I do have considerable experience with setting up the basic Girling system.

If properly set up, well lubricated and adjusted, with the arc of the shoes matching the drums then these brakes should be pretty good without a servo.

I have run several cars other than Lagondas with the Girling system and have found that when set up correctly they were able to lock the wheels, the MOT was never a problem...

The brakes on my LG45 were "ok" but not so good as I thought they ought to be so as part of the ongoing restoration I took the brakes completely apart and refurbished them. The main difference between my LG45 and previous systems I have worked on is the relatively long flexible cables between the foot pedal and the axles which I believe were introduced at Sanction 3 to stop the foot pedal being effected by the axles going up and down over a bump. These cables were very stiff to operate due to congealed grease and were also frayed inside so I have replaced them with new cables made by "Speedy Cables" in Wales (who I found did a pretty good job). Freeing up or replacing the cables should make the pedal action much easier.

Also the mechanical actuators in the drums need stripping, cleaning and re-greasing regularly if they are to work as intended. The actuators must be able to slide on the back plate to allow the brake shoes to centralise in the drum. NB: The holes in the back plate are elongated to permit sliding movement and the studs which attach the actuators must be fitted with the original style double spring washers and castellated nut / split pin ...the nuts should not be done up too tight to allow the actuator to slide easily, so split pins are essential for safety to stop the nuts coming undone. (New dirt gaiters are a good idea too and are available from Club spares).

Inside the actuator is a cone attached to the end of the brake rod by a fulcrum pin and then there are two hardened steel rollers which ride up the cone to push the expander pistons outwards and apply the shoes to the drum. If the grease is congealed it makes the actuator stiff / inoperative. Frequently the fulcrum pin is found to be worn "D" shaped and / or the rollers have flats on them (so they skid rather than roll). These defects can cause a loss of movement and unbalanced /poor braking.

Recommend checking the area of brake shoe being rubbed too, which should be most of both shoes. If only one shoe is contacting properly then the actuator is likely to be the problem by not sliding and hence not allowing the shoes to centralise. If the shoes are only rubbing in the middle then they are too small for the drum and if only rubbing at the ends then they are too large and either way the arc of the linings need adjusting by finishing the lining to fit the drum.

If you would like to discuss I am happy to help if I can, my number is listed in the Club Register... But you maybe aware of all this and I am teaching grandmother to suck eggs, so if that is the case then I apologize in advance!

But the above may help someone so I offer it up anyway...

See also the description in the Club's Handbook for the 4.5 litre cars.

Best wishes

Bill Cooper

Re: LG45 brake servo

Written by h14 at Apr 25, 2015 10:16 am

To add to the above, if the rods/levers of the system are adjustable (sorry, my only Lagonda brake experience is V12 & LG6 hydraulic), it is more than likely that well meaning meddlers in the past have adjusted things badly, or to take up wear.

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Levers should ideally be arranged so that arc of the pull occurs at 90 degrees. Variations from that will significantly increase pedal pressures. My brother had an Alvis with a rod operated braking system, and I was utterly amazed at the huge improvement gained by cleaning, unseizing, greasing and correctly adjusting levers. Afterwards it would easily lock all 4 wheels at 30mph.

It would be wise to do all this before you consider fitting a servo.

Re: LG45 brake servo

Written by bill at Apr 28, 2015 9:41 am

Thanks very much for all the input. I think that the main problem is my back and not the brakes ! I rebuilt the whole of the system when I rebuilt the car and the brakes are very good. It is the amount of pedal pressure required that is the problem !

The handbrake is also very good which is what makes me believe that I need to increase the leverage on the foot pedal ie by some type of servo. Anyway many thanks for all the suggestions and also any more ...

Re: LG45 brake servo

Written by Colin M34 at Aug 16, 2017 8:25 am

Hi Guys,

More on brake servos. First of all, the LG 45 Girling system is so different to the M45 one that I do not think that the servo will easily transfer from one to another without adaption.

However that is not what I have a question on. Has anyone had experience of adjusting (ie "timing") the M45 brake servo? I assume that as you press on the brake, so the linkage will open the valve and admit vacuum from the engine to operate the servo. If this valve opens too early or is open all the time, this will introduce air into the inlet manifold.

I would be interested in anyone else's experience here.

Colin

Re: LG45 brake servo

Written by bill at Aug 16, 2017 8:56 am

Colin, I never had any problem adjusting the servo when I had my M45. It all seemed quite straightforward and it worked very well. I assume that you have looked at pages 29 - 31 of the M45 Instruction book (Club revised edition) ?

Do you have any specific problem ?

Re: LG45 brake servo

Written by Colin M34 at Aug 16, 2017 10:16 pm

Bill, no, just need to do it...

Re: LG45 brake servo

Written by bruffsup at Oct 20, 2017 1:04 pm

Anyone know of a source for the internal seal for my M45 Dewandre? I am interested in hearing how your adjustment proceeds Colin !
