

## Lagondaforum: Brake overhaul - brake drums

### Brake overhaul - brake drums

Written by DavidLG45 at May 03, 2015 10:35 am

My brake drums need skimming. I think one pair are alright but the others are not. Someone in their wisdom relined the brake shoes on one axle and not the other. I don't think they are bad but certainly not smooth.

I have been advised not to have them skimmed but replace them. The reason being that they will possibly go out of round after skimming. I don't think much would need to be removed.

Does anyone have any thoughts on this or experience of having the drums skimmed?

David

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### Re: Brake overhaul - brake drums

Written by Bill LG45 at May 05, 2015 5:58 pm

I am not aware of any limits specified regarding drum diameter for the LG45 in the car's handbook or in Club literature. Does anyone know different?

As well as grooves, wear occurs in the form of bell mouting or barrelling ,out of round and concentricity ...any of which can cause poor braking.

Suggest using an inside micrometer to check overall wear and roundness.

Concentricity can be checked by mounting drums back to front on their hub so that the register is engaged on the hub and clocking the drums using a dial test indicator clamped to an axle stand.

If wear, roundness/ concentricity are within a few thousandths of an inch, say 0.005" ,the surface is not too rough and there is no evidence of cracking or other defects such as "hot spots" then I would suggest re-using the drums without machining. (Just de-glaze the surface using production paper and wash out thoroughly with brake cleaner)

Light scoring would normally be accommodated by new linings within a reasonable period of use and have little effect on braking.

Note: If the drums are badly out of round then the brake pedal may "pulse" when pressed or the brakes may grab.

Things to consider before skimming:

1. After the wear has been removed and the drum trued there must be sufficient thickness of material left for some more wear to take place in service without the drums being too thin and becoming dangerous.

2. Without any specific limits, whether the drums are recoverable or scrap is a judgement call and one needs to see them really but I suggest as a general rule that 0.040 inches or 1mm of diameter is the most that should be removed by skimming provided they have not already been skimmed previously by others?

3. Drums on the same axle should be machined to the same diameter.

4. The thinner the drum is, the more susceptible it is to overheating and distortion or expansion and brake fade when the brakes are applied. Thin drums are dangerous!

5. If skimmed in a centre lathe the drum would need to be securely clamped to a face plate then clocked in for centre using the register.

A relatively big / robust lathe or better still a vertical turret lathe (VTL) is required to avoid the tool chattering and an operator with experience of machining cast iron and brake drums in particular.

I have used lathes and a VTL's many years ago and can confirm that experience is needed to get it right when turning cast iron!

DO NOT use a three or four jaw chuck on a centre lathe because the clamping force is likely to distort the drum and /or break the fins .

Suspect the cost of skimming could be as much as a third or half the price of a new drum...

There are specialist disc / drum skimming machines ( which are more common in the USA) but I have not come across one being used for drums in the UK...has anyone else?

"Oselli" at Milton Keynes offer a drum skimming service and out of interest I spoke to them this afternoon: They use a specialist machine for discs but say they stick to a large centre lathe for drums... they seem to know what they are talking about ... I have no actual experience of using them...does anyone else?

Hope the above helps David and best wishes with your brakes

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Bill

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### **Re: Brake overhaul - brake drums**

*Written by DavidLG45 at May 05, 2015 7:36 pm*

Hi Bill,

Very useful and comprehensive.

I very much doubt if they have been skimmed already. I will do some of the checks you mentioned and go from there.

Many thanks.

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