

## Lagondaforum: pistons etc. needed for M45 rebuild

### pistons etc. needed for M45 rebuild

*Written by bruffsup at Jun 25, 2011 1:49 am*

Well I have started in earnest on the M45 and have removed the head and checked. It is in need of a valve job. The pistons are now at +.040 and have a lot of wear and my machinist says +.060 should do it so I am wondering if there is an easily available piston as I recall, seeing a reference to Volvo pistons. Since the crank etc. will all be coming out what else can I do to increase performance and reliability without resorting to full race spec as i won't be racing! I am still in need of a pair of carbs. I realize they are rare .

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### Re: pistons etc. needed for M45 rebuild

*Written by h14 at Jun 25, 2011 10:19 am*

Hi Barry,

My LG6 was rebuilt with Volvo pistons. If you wish I'll look & see if I have the references.

A word of warning. The engine was rebuilt by vintage engine specialists for the previous owner. They failed to allow for the fact that the longer stroke means the pistons run hotter (further from cooling oil thrown up from the crank) than in their designed application. Result...engine siezed after 500 miles. Owner takes engine back..."specialists" bore out block...but this time go too far...result I have a lovely quiet rebuilt but effectively worn out engine, burning & blowing out oil...grrr!

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### Re: pistons etc. needed for M45 rebuild

*Written by bruffsup at Jun 25, 2011 11:37 am*

I am not an engineer but if the engine seized at 500 miles I would suspect inadequate piston clearance especially if the pistons were forged. Whatever pistons I run I will have treated with a thermal barrier on the crown and special skirt coating. There is a company called "Swain" near Rochester New York that does this. Google their webpage, you may find it interesting.

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### Re: pistons etc. needed for M45 rebuild

*Written by eddie bourke at Jun 26, 2011 1:19 pm*

Dear Mr Bruffsup,

There was a Volvo piston that could fit the Meadows also Rover V8 pistons and I think a Toyota piston. However I would think that the Lagonda Club or LMB might have ones made for the Meadows, "Omega Pistons" made various pistons for car clubs but I don't know if they are still about. Its worth getting water transfer castings for the back of the block to the head as on the later LG45 S3 Meadows and your engine man could bore the back cylinders with some extra clearance to help, you need to get the cooling to circulate all around the block .

Also check your radiator is up to the job as often you may have got away with a worn engine. A stocking in the top hose to catch the silt will save blocking up the rad.

Eddie.

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### Re: pistons etc. needed for M45 rebuild

*Written by bruffsup at Jun 27, 2011 2:47 am*

Eddie, Thanks for the interesting insight into potential problems! I will take your suggestions to heart . I really appreciate you and others on this valuable forum putting up with what must seem to many stupid questions! Unfortunately there will be many more unless the moderator steps in. Cheers, Barry

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### Re: pistons etc. needed for M45 rebuild

*Written by Julian at Jun 27, 2011 4:46 pm*

Afternoon Barry,

We have pistons in stock, for bores, 3.5" 3.52" and 3.53" I do not recommend going larger than this!

These are "Forged" top quality low expansion silicone alloy pistons and are designed specifically for the Meadows engine by us.

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The Volvo piston is a bit of a common problem as this piston is designed to be run "fully floating" ie. moving in the big end AND in the piston. the pistons are HIGH expansion ally and the pin is fitted a little tight in the piston so that when the piston expands, the pin is then the correct fit. The problem occurs when fitted with locked pins in the connecting rod, as in a standard Meadows, so that when cold the piston can not move freely on the pin, it then exerts excessive side load onto the rings and skirts and over heats the piston. The high expansion means the bores must be loose to start with and this also allows more piston "flop" as the piston goes from upwards thrust to downward thrust at tdc, Not very good but we all were thankful to Volvo when we had no other choice!

Running in was also crucial for at least 1500 miles at very gentle throttle loads!

Life is easier now thankfully ;o)

Best regards,  
Julian

PS.

Barry,

There are no genuine "stupid Questions"

There are only ones we know the answer too or those we don't,

Unfortunately in our short lives, the latter are in a vast majority! 🤖