

Lagondaforum: Tappet clearances - why the variation?

Re: Tappet clearances - why the variation?

Written by Hugo at May 12, 2018 8:14 pm

Oh, I forgot to say, the Lagonda 2 litre engine is complicated by the fact that the rockers bear directly on the camshafts with a profiled pad. The profile of this pad is critical to valve timing and opening profile, and as these wear unevenly (as mine have) this will throw everything out, regardless of clearances or actual cam timing.

Re: Tappet clearances - why the variation?

Written by Hugo at May 17, 2018 12:30 pm

Quote by H 54 John:

... the flaw in my assumptions is that the thermal regime is unchanged - it must be the case that the more mixture in, the bigger the bang and the more heat produced. So it will have been perfectly reasonable to play safe and increase the gap, thereby ensuring that the valve definitely closes under all circumstances...

Ah, but I think there is a flaw in this argument also - the instruction book gives a gap of .004 hot OR cold! So it may not be as susceptible to temperature variations as you imagine?

Re: Tappet clearances - why the variation?

Written by H 54 John at May 18, 2018 11:54 am

Good point Hugo and thanks for the interest. I still think there's an arbitrary look about the doubling of the tappet clearance but I chickened out in the end and went for the 8 thou recommended for my LMB cams. This despite Tim Wadsworth's wise words and his engine throws out about double the horsepower of mine.

Incidentally, the other day I put my car on a local dyno and was a bit disappointed that, despite a higher CR and fancy cams, the peak output calculated back to the flywheel was just the 60 bhp claimed by Lagonda in 1927. Torque fell off a cliff at about 3200 so Tim's downdraught head must be very, very effective to let him rev to 5000.

Best of luck with the project, it sounds a great buy. I look forward to admiring it at Wisborough Green before long.

Re: Tappet clearances - why the variation?

Written by Hugo at May 19, 2018 9:06 pm

I think I'd take any dyno figures with a grain of salt. They're good for comparative testing, but as an indicator or absolute BHP I'm not so sure. I rebuilt a Harley engine for a friend once, and, much to my surprise, it went like an absolute rocket (the reason I was surprised was that he had bought a kit off eBay, like you do, and it wasn't really the spec he wanted, as you could tell by just glancing at the big fat cam lobes). Anyway, he put it on a dyno and complained that the figures were lower than the manufacturer claimed. I gave him the same advice as above.

Anyway, I am new to Lagondas so have no experience of these interesting engines. But having read Tim Wadsworth's post, it seems that he is the living proof that .004" will work ok.

As I said earlier, though, the profiles of the rocker pads are critical to the effective cam profile. I suspect that any wear here will upset the performance.

What is the spec of your engine?

My car (EWF 99) is a hybrid - it looks like a 2 litre Speed Model but started off in life as a 14/60 saloon. It has high comp pistons & twin SU's. My cams and rockers are worn, but not terribly, and that will be another job for another day - when I get my new down-draught head from Wessex.

Right now I am trying to figure a way of sticking the dynamo on the side of the engine - I fitted a new water jacket side plate which the Club says is 'ready to fit', and in a sense it is. But after I had spent hours drilling out the snapped off bolts (a task abandoned by the previous owner), then enlarging the holes in the side plate so it would fit where the bolts had been drilled slightly off by the previous owner (who had tried to do it in situ), and then sealing it all up with RTV including fibre washers under the bolt heads, I then noticed that I was missing a couple of tapped holes in the side plate for the dynamo strap! The old plate had turned to dust so I had nothing to compare. I'm hanged if I'm taking that plate off again so that's another little challenge before I put the engine back in (good job I noticed it before I did!).

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Re: Tappet clearances - why the variation?

Written by Hugo at May 19, 2018 9:12 pm

In my long rambling post, I forgot to ask what condition your cams & rocker slipper profiles are in? I notice you said the torque drops off a cliff above 3,200? Sounds like it's running out of puff, doesn't it?

Re: Tappet clearances - why the variation?

Written by H 54 John at May 20, 2018 11:02 am

Newish modern cams, all new rockers. I suspect the notoriously inefficient induction tracts of the 2 Litre are the dominant problem, your downdraught head is a very good move I'm sure.

I know remarkably little about dynos but I can see that the calculations that purport to correct power at the wheels to power at the flywheel can be dodgy. As you say, they are certainly excellent comparison tools. Taking off the pancake air cleaner on my single SU produced an extra 2 bhp at the peak of the curve.

Re: Tappet clearances - why the variation?

Written by Hugo at May 23, 2018 11:01 am

That extra 2 bhp is interesting. But where on the rev range was it? People always seem to talk about maximum power, but when do you ever need it unless you are going racing? What interests me more is what happens when you press the middle pedal at, say, 2,500 - 3,000 rpm. I can't see that you air filter would make any difference till you hit peak airflow, which is not going to be at that speed.

You know those crazy hot-rod shops in America that will put a 1,000 bhp motor in a 1950's saloon? One of them quoted the figure at the back wheel as 150 bhp less than at the flywheel! How do you 'lose' 150 bhp along the way? By that reckoning, most cars would barely be able to creep forward!
