

# Lagondaforum: Power At Last

## Power At Last

*Written by Julian at Apr 27, 2011 5:00 pm*

Just to let all you 16/80 owners know what is in the pipe line here at the fun lab!

We are in the middle of producing the equivalent to our 2.4litre Lagonda engine but for the 16/80. as some of you will already have experienced, the mods to the 2 Litre took it from a paltry 53bhp to an iron pumping 115bhp with torque almost up to std 4.5 litre figures! we have done about 20 or so of these now and power is always between 110 and 120 @ 3800 rpm, dependant on customers final spec, and it will pull from idle upwards. Great fun!

So now to the 16/80.

I think all will agree that these beautiful cars are very under rated and at the moment under valued! mainly because they don't go half as well as they look!

We have so far got our project half done! It will be 2.8 litres! 🤖 Bored and stroked with a new crank and special rods, modern design pistons and re worked combustion chambers to effect a better mixture distribution! Cooling is at this moment being looked into and new water pumps prototyped. All will look standard from the outside but be VERY different on the inside! We are in the process of developing a new camshaft to go with this package and I expect a lot more in the months to come. I will post some pictures etc as we go if anyone is interested?

As we do with the 2 litre, the whole package needs to be included or it won't give best results. So everything will be included, from Air filter to eg-Zhaust (sorry 🤖 ) and everything in between including the clutch!

I think there is a lot more potential in this engine than there is in the Lagonda 2 litre engine (even though the 2.4s work fantastically well) so am hoping for some good big, but reliable numbers! 4.5s look out!

And watch this space!

Regards,

Julian

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## Re: Power At Last

*Written by Peter S30 at May 01, 2011 2:56 pm*

More Power - originality and Replica

For me still the goal is an original car, as original as possible. This would be the body as it left the factory, ideally with its original paint and leather (with some cracks here and there and some repairs as good as possible). The original engine and chassis, stamped with their numbers and technically not altered.

It makes sense to me to change a seal from leather to a modern one if the old one makes problems, I do not see a need for electronic ignition, superchargers that had not been on the car when new, or a gearbox from another car that had synchromesh if the original had not and so on. And I really do not see the need for double the power than the engine had when it was new. The car than has lost its character, it is no longer a historic vehicle, just looking like one. I would do these tricks on a modern car, put a big strong engine in a little car for surprising the others in traffic.

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## Re: Power At Last

*Written by Julian at May 06, 2011 11:45 am*

Hi Peter,

I know what you are saying, but you are speaking from the point of view as a V12 owner with 150 bhp under your foot!  
With only 50 real hp and a car of 1500kg you may see things a little different if you lived in the hills with such a vehicle?

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As long as it looks standard, "which it will" and it will have all of it's original castings etc, then it is still the original engine.

Does yours have it's original Aluminium con rods with no bearings, original type "Specialoid" pistons etc etc? I suspect not and I sincerely hope not!

So what is the difference?

But I do agree with your idea of syncro gearboxes and superchargers on otherwise totally original cars. Specials OK though.

Regards,

Julian

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### Re: Power At Last

*Written by Peter S30 at May 08, 2011 5:13 pm*

Dear Julian,

I still see it different. When Berta Benz did the first long tour in an automobil (0.8 PS) in 1888 her sons had to push at some hills. Most London to Brighton cars are already more performant and have several PS/HP. The Silver Ghost had "only" 50-70 HP from 7 liter capacity. Each of them could complain about limited performance. But would you increase the power of the engine of any of these cars?

The Lagonda owner of a 2 liter or 16/80 in the early 30's did not have a very slow car. If the owner today thinks it is to slow (on hills) I think he is just a bit impatient (2 liter Lagonda owners comments please!). And if you really need the performance then go for the 4.5l Lagondas (saloons if dropheads are to expensive) or any other more recent and more performant car.

A historic car loses value (not only in money) if it is changed considerably and I love a historic car if I know it is correct as it was built.

Regards

Peter

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### Re: Power At Last

*Written by bruffsup at May 08, 2011 5:40 pm*

I will chime in here if I may with my 2 cents worth. I think what Julian is doing is great for those who actually intend to drive their cars in modern traffic which as we all can surmise is a tad different from 1930!

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### Re: Power At Last

*Written by roystonhouse at May 11, 2011 1:07 pm*

Hello

Very late in the day but I have only just started using the forum and wanted to reply.

I think it depends on what you want to do with the car.

If it is for racing then performance modifications are needed, but for general day to day use (including motorways) there is plenty of power and torque with a 16/80.

It also depends what you want and expect from a 1930's car.

I bought mine back in 2008 when it had been fitted with three carbs and whilst this made it great on the motorway it was absolutely gutless on small lanes and hills.

Reverting back to two carbs, and getting everything back as close to original as possible has transformed everything.

The more the car was used the better it became.

The 16/80's engine (unless wanting to be raced) is in my opinion a very good engine.

That being said mine has just undergone a total rebuild and has not yet been run in so I hope I have not spoken too soon.

Best Regards

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Chris

Regards

Chris

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### Re: Power At Last

*Written by Julian at Jun 02, 2011 11:36 am*

Hi Chris,

Never too late for interesting comments and observations.

Very interesting to read your views.

I do notice Chris in your comments and I notice it a lot with customers I talk to, that when referring to "performance modifications" people tend to associate this with race engines and revvy characteristics. Not necessarily so! These old engines were designed for very poor fuels etc and mostly have very low compression ratios, terrible port shaping and combustion chamber shapes etc, it is a simple enough job to apply modern thinking, understanding and practices etc to achieve very good and useful power increases all through the rev range and many times improving low end drivability and torque even more than outright power. Of course you can also do it badly as it would seem someone did with your triple carb setup.

CR is also a massively misunderstood "word" that I often have to explain.

In short the only CR number you can easily calculate with any real accuracy is your "static compression ratio" (this is simply your engines volumes etc calculated) BUT this has little real relevance to actual "dynamic compression ratio"

eg. if we take a 2 litre Lagonda, this has some of the worst shaped ports imaginable, the flow is dreadful both in and out of the engine, so our "volumetric efficiency" (cylinder filling) is very poor. (let us say 50% at rpm "X") so it does not take a genius to deduct that this engine with a 6:1 static compression ratio will actually only be about 3:1 at rpm "X" simply because the engine can not fill it's cylinders!

Because the initial design is so bad, we can easily help it fill those cylinders with better porting and say a better camshaft profile we immediately increase the dynamic CR and thus help the entire performance curve and gain more torque and ultimate power.

I agree with you that the 16/80 is a pleasant engine, in standard good condition it makes for nice driving. The problems we encounter and the comments we get are Motorway driving when one does not want to sit with the trucks but wants to cruise in the middle lane at standard motorway speeds of today's traffic for any length of time, 70+ mph and also those who like to compete in rallies etc and need a car to pull up the mountains and hills with more ease.

I see Peter's point, but I don't see the difference between changing a piston that gives 6:1cr and changing a piston that gives 8:1cr! etc etc etc, Both are new and so Not Original, so if it does not change the external look of the engine and you can not tell it is in there other than the extra enjoyment and ability when driving, then why not! I am sure the components in Peter's own engine are not exactly as standard either, eg shell bearings to rods, more modern ignition coils etc! are these acceptable but other changes not? Do we revert to using the original pre-war spark plugs too?

Either ABSOLUTELY 100% original with absolutely NO deviation in any way shape or form what so ever. Including leaky oil seals! Surely part of a pre-war car ;o)

OR

Do as you like as long as you keep to "period" modifications.

I would prefer to see original engines and original cars "looking" as they left the factory, but I personally feel we should not be too pedantic!

Personal choices for personal vehicles that are used by different people for different uses.

Neither are wrong or right, and we should refrain from trying to impose our views on others, voice them by all means but not "impose". It is down to the individuals to "choose" that is our right! and let's face it. The more our cars get used and enjoyed the better our hobby will be!

As for value. Well Peter, your comments need clarifying here with a little "insider knowledge" In the context of engine power your comments are far from the reality! however, I agree that in general a more original car will be worth more than a highly modded one. But if the car looks great but goes

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very badly then you will struggle to sell it. "period". (unless it has something extra to offer in the way of super rarity etc) We can now get a very good premium for a 2 litre with one of our special engines fitted, as opposed to a standard 2 litre. They both look exactly the same so it's Simply because it is much more powerful and usable and "for most" more enjoyable. Same goes all the way through the range! and through many other makes and models right up to the top! Simple reason is that more people own the less rare and less expensive cars and can't afford the price of an 8c Alfa etc, they want the experience but without paying silly prices. (some want both) They want to do the classic events etc and want to have fun with their cars. They don't want to be the "slow car" or to spend every evening of the rally fiddling with their engines to try to make them work half reasonably so they can participate the next day! People want cars they can enjoy the pleasure of driving with, and in the majority of cases today this means having a reasonably powerful engine with fairly good reliability! They vote with their pockets and we see this on the showroom floor!

Again, Each to their own and I am not saying you are wrong Peter, just that we are all entitled to our own views! and we as a company are led by our customers / fellow enthusiasts, we do not create things that nobody wants, we do as we are asked! and when asked by enough people we undertake projects like this one.

Very best regards and secretly wishing we were not so busy so we could maybe get a bit further with this project!

Julian

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### Re: Power At Last

*Written by daveroberts at Jun 18, 2011 8:23 pm*

Hi Julian,

I have completed the 2.4 litre blown engine, started by the late Peter Whenman, installed in a low chassis 2 litre. A Marshall cabin blower was modified to a supercharger and fitted between the front dumb irons similar to my MG J3 and the Blower Bentleys. I made new camshafts with the Ridout profile and fitted a gasflowed downdraft head, and a sensible exhaust header. A Borg and Beck clutch and an Alvis box complete the non-original mods, and all the original stuff is boxed if any future owner wishes to return it to the original, whatever that means precisely.

It does look a bit odd with the dynamo mounted vertically at the front of the engine where the blower should be. Use of the starting handle dog would require a hole through the header tank and the bonnet!

I have achieved on Stanton Motorsport's Dyno at Membury,

147 bhp at 4650 rpm and 187 Ftlb torque at 3510 rpm.

It climbs steep hills and will crawl along at 20 mph in top gear.

0 to 60 mph is about 12 seconds. Overtaking is a joy, as is high speed cruising at the legal limit.

I had a 16/80 in 1963, and drove it with three friends to Italy, a trip of 3000 miles. As my previous car was a 1924 a chummy, the performance was impressive. I now have another and although everything is as it should be in the engine dept., I find it tiresome to drive with little low end torque, and you have to keep the revs up to get anywhere. It has a lovely Wilson box, that compensates for the lack of power during acceleration. I have learnt a lot from Steve Stanton with his vast experience of 2 litre Bristol engines, and applied this info to a new 16/80 engine I am building for the car.

Once again Lagonda failed to understand gasflowing, with two carbs supplying mixture to the valves through 3 90 degree bends. one bend even has a 5/16 bolt through the middle of the port!

My Alvis Silver Eagle has three Su's and that runs fine in all conditions and I am fitting a similar set to the 16/80.

The original 16/80 engine will be retained in "original condition" for the purists.

I would be interested in the performance figures of the 16/80 project, and what other mods you have done internally, especially to the lubrication system.

Regards...Dave

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### Re: Power At Last

*Written by Julian at Jun 20, 2011 2:17 pm*

Afternoon Dave,

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Your 2.4 now sounds like it is a real flyer! glad you are having some fun wit it!

The 16/80 is still in the "development" stage but we will be doing the whole hog with better oil pump, and the water pump will also be completely changed internally to make it work better in many ways! We do this a lot with Alvis water pumps which always give similar problems to 16/80s. (ie. little flow at low revs and leaking)

The Crosley engine is not a bad one really, just very under developed, which is typical for the period I suppose.

Will keep you posted. But need some time as we are very stacked with work at the moment.

Best regards,  
Julian

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### Re: Power At Last

*Written by daveroberts at May 17, 2012 5:20 pm*

Julian,  
i must point out that the 2.4 Blown car is owned by Simon Carrel, a non- member of the Lagonda Club. i restored the car, and maintain it in the UK for him. Not a lot of people know that.  
I have been running it for two years with an alternator , hiding inside a 2 litre dynamo casing. Never a flat battery any more!  
Dave

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