V8

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This month we usually see the level of motoring activity steps up as more MG enthusiasts get their cars back on the road after a winter lay up. Fortunately for the annual V8 Curry in late February we had a benign, dry weekend so many members enjoyed driving their V8s to Cambridge and then on to Stoneleigh on the Sunday for the annual MG Show. As MGBGTV8 members grease up their front suspension this year, do think about having your brake servo checked. Our scheme and special offer makes it as easy as possible, so inertia is no excuse!

MGV8 market is active

With the brighter days as Spring arrives many MG enthusiasts will be watching the classic car market for the traditional upturn in buying and selling activity and wondering what impact the recession may have. Feedback from V8 members and several traders indicates that whilst activity in the fourth quarter of 2008 had tended to be slow, a few MGV8s have been selling during the first quarter of 2009. There are indications that increasingly buyers sense it is a good time to buy a classic car and anecdotal evidence suggests some buyers, disappointed with miserably low deposit interest rates, feel their funds would be better invested in a classic car where the "return" will at least include some pleasure! Another factor behind the upturn in activity is an increase in buying interest from buyers from mainland Europe simply because with the weakness of Sterling against the Euro they can enjoy what amounts to a 25% discount on prices in 2008. Frank Labruier confirmed this saying "at the moment when Sterling lost its former strength, I began to search very actively for a good RV8. In early January 2009, I bought £15.000 at a very good exchange rate which has effectively saved me over 30% of the normal price for a RV8. We have seen six other MGV8s registered with the V8 Register in the first quarter 2009 by enthusiasts in Belgium, Germany, Norway and Sweden.

Difficulty with HPI vehicle data checks

Making an HPI data check is a key part of the initial research recommended in a comprehensive package of useful support and advice launched on the V8 website earlier this year called "Buying and Selling an MGV8". It is available at www.v8register.net/v8/index.htm and is well worth visiting as one member, John Davies, found from studying the comprehensive "How to Buy an RV8" article in Safety Fast! and "all the stuff I could read on the V8 website". His comments on the market as a first time RV8 buyer were "I looked at four cars and found my RV8 advertised in Classic Cars for Sale. There did not appear to be masses of interest from other purchasers and the other cars I looked at are still advertised for sale either on the V8 website or in Classic Cars or other magazines. I think I bought at the cheapest end of the market and got a reduction of approximately 17.5% on the asking price". But having settled on a car he liked and agreed a deal with the seller, he then found his HPI check came back with a mileage of 112,000 miles on the clock. This was clearly incorrect as John had seen every MOT certificate since 1999 when the car was reimported from Japan showing the steady progression of mileages up to 18,000 when the car was put on the market for sale in the UK earlier this year. The owner then made representations to HPI which meant he had to send them all the MOT documents as proof. HPI then agreed that their mileage record was incorrect but stated that it could not be altered because a new odometer had been fitted to the vehicle. John notes "as you are aware, all cars coming in from Japan have new odometers!" so that is not unexpected. This left an ambiguous situation and a question mark over the vehicle because even with that evidence HPI would not record the accurate mileage of 18,000. However HPI did send John an explanatory email for his own records and for the car's history file which stated "I can confirm that the mileage of 112,000 miles has been reviewed and the above vehicle has no discrepancies against it on our database."

Unfortunately when a vehicle has had an odometer change the HPI consumer check still shows all the mileages that have been entered without indicating whether they have been reviewed. This can cause some confusion. During conversations with HPI they said this seems to be a "hitch" on their computer system and John was asked to contact HPI by telephone to get a verbal confirmation that this vehicle is currently clear on their register. He says "you can imagine how long this took to sort out - almost a month - and potentially it jeopardised the sale of the car to me. Luckily, the seller was very cooperative and sorted this matter out which only he could do as the seller." John finally got his RV8 and insured it with Peter Best Insurance Services.

Useful MGBGTV8 buying guide

The monthly Classic Cars for Sale magazine carried another useful four page guide to the MGBGTV8 in its March 2009 issue together with a two page feature in its Classic to Consider series on the "Attraction of Costello". This useful magazine is packed with interesting information including classic car news and auction reports, model reviews and of course many private and trade adverts. The two MGV8 articles are available on the V8 website and reproduced with the kind permission of the editor, Alan Anderson.

Forthcoming events

A V8 Gathering at the Star Inn at Sulgrave on Sunday 31st May is a new event in the Rolling V8 Calendar – see the V8 website for details.

During April and May 2009 four MGV8 specialists have agreed to participate in our V8 brake servo check up scheme. They will remove your servo and then either have it reconditioned by a servo specialist and refitted or have it replaced with a new servo. There will be standard charges for the work which will include a safety inspection of the master and slave cylinders, examining the front rubber flexibles and brake lines, recharging the system with brake fluid, bleeding and final testing. Any additional work from the safety check will of course be a separate charge. The specialists who have agreed to participate in this scheme are Brown & Gammons in Hertfordshire, Hall's Garage in Lincolnshire, Tamar Valley Motoring Centre in Cornwall and Clive Wheatley mgv8parts in Shropshire.

Fortunately brake failures from servo problems are rare but, unlike difficulties with slave cylinders where early warning signs can usually be detected, early warning signs of potential failure with the remote servo on an MGBGTV8 are few. The key feature of a series of alarming servo failures reported by fellow members is the loss of braking is very rapid indeed as the servo swallows the brake fluid! A natural tendency is to think it can never happen to you - your brakes are operating well, without the slightest hint of any servo problems so all seems well. Act now, because the reliability of your V8 brakes is not something to scrimp on!

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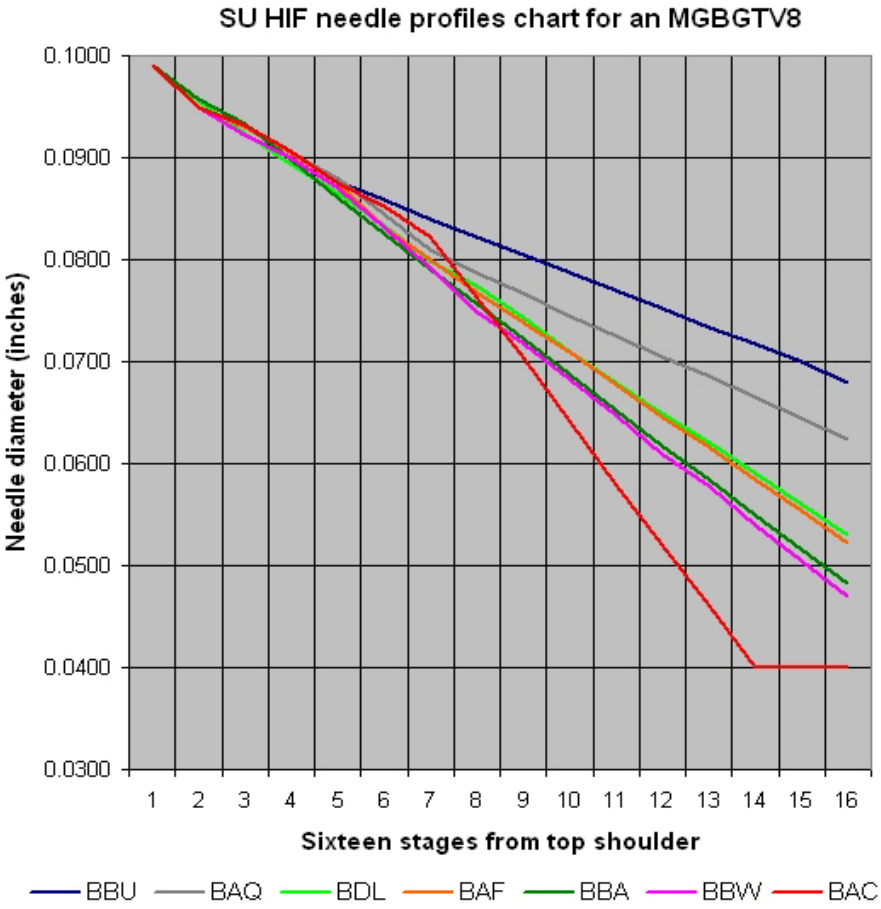
Needles for SU carburetors

A V8 Bulletin Board thread on SU carburettor needles for the MGBGTV8, following the release of V8NOTE400 from Alan Rennie on his rolling road test session with his V8, attracted interest from fellow members.

Gordon Hesketh-Jones noted Abingdon originally specified the BBU needles for the SU carburettors on the V8 which give a broad spread of performance when used with the standard flat drum-type air filters. But those filters have a fairly high filtering performance which means a higher resistance to air flow. As an alternative, K & N filters are now widely used, particularly on cars with RV8-style exhaust manifolds. My car has run with this combination for the past eight or nine years and I have often noted that, even though the carburettors have been correctly set up on a KRYPTON machine, the plugs seem to be a whiter shade than might be expected, particularly after a long fast run. It seemed therefore that the K & Ns were allowing more air into the carburettors at say 2,500 rpm than the standard filters, so the engine was running lean at motorway cruising speeds. This in turn meant that I had to use extra pressure on the right-hand pedal when accelerating from 70 to 90 mph - in Germany of course!

A study of the SU needle charts suggested that using BBA needles (fifth profile down on the chart) would effectively allow more petrol into the engine at around 2,500 rpm to balance things out, but the only way to find out was to run a comparative test. So a round trip of just 650 miles from Cornwall to the NEC and on to Buckingham showed the improvement in mid-range performance with the BBA needles is dramatic – the pick-up, acceleration and "lungeability" is quite extraordinary and surprised many a BMW driver. The way the car will accelerate around 70 is astonishing – but it comes at a price, for the petrol consumption for that trip, 90% on motorways or dual carriageways, was 26.3 mpg. By comparison, on long motorway hauls with the BBU needles we would regularly show from 30 mpg up to 34 mpg, always on the basis of filling from brim to brim. On our many long-distance European type trips with the BBU needles in place we have had averages of better than 29 mpg for a whole 5,000 to 6,000 mile trip which would include city, country lane, and mountain driving.

So it seems to me that RV8 manifolds do off-set the effective power deficiency of the BBU needles at around 2,500 rpm (when using K & Ns) and the combination will give a reasonable balance between performance and economy. However if you want the improved performance, fit the BBA needles and accept the extra fuel cost!



Nigel Melbert posted a response noting his V8 is fitted with tubular manifolds and K & N filters and he has changed the needles to BAC (bottom profile on the chart) which produces acceptable average fuel consumption figures of 30 to 32 mpg on long motorway runs and 27 to 28 mpg elsewhere without any apparent detriment to the performance.

Bob Owen, who takes his V8 down to Italy quite often, commented "my V8 is a standard 3.5 with original cast-iron exhaust manifolds. I have had K & N filters fitted for the last ten years. Beech Hill Garage recommended that I fit BAF needles (fourth profile down on the chart) at the changeover to stop mixture weakening as a result of the improved breathing. These appear to perform well and give 30 mpg plus on a long mixed run (3,000 miles to, in and from Italy). For the same set-up Clive Wheatley recommended BBW needles (sixth profile down) but I have not tried these. So there seems to be a big choice!

Gordon Hesketh-Jones responded with some further thoughts. The carburettors on the V8 use spring-loaded needles of 0.1 inch diameter and there are in fact 124 needles in this range – all with different profiles of taper, so the variety of profiles is huge. The SU needle charts list sixteen measurement points at every ⅛" along the taper for each needle. Stage 1 is the idling speed and at 0.099" is common for the needles in the diagram above. Stage 16 represents full throttle.

The chart above shows the profiles for a selection of needles for the MGBGTV8 with the top profile for the original BBU needle. Probably the dimensions at stages 6 to 10 on the chart would best relate to our 2,000-2,500 rpm motorway cruising speed. Obviously, the smaller the diameter of the jet, the greater the petrol flow: The Factory-standard BBU needle is potentially the most economical and the BAC needle used by Nigel Melbert has the smallest diameters at those points which makes me think it might be the most petrol-hungry. The BAF used by Bob Owen sits neatly in the middle of this range so will be fitted before my next long run to check the fuel consumption with that needle.

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Rolling road test session

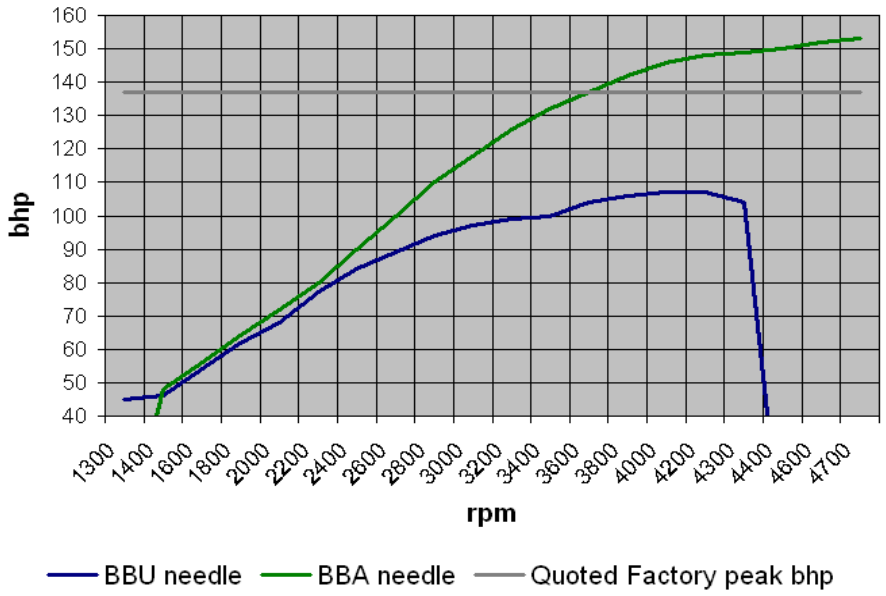
Gordon Hesketh-Jones (Harvest Gold 1904) from Cornwall has clocked up around 400,000 miles using his V8 a great deal in the UK and touring on Mainland Europe. He decided it was time to check out his carburettor needle choice and settings on a rolling road.

If you make any change at all from the original carburettor, exhaust, ignition and air filter arrangements from that tested and specified by the Factory, then you should go through a rolling road test to sort out the correct needles and settings for use with your new filters and other equipment. In my case I had covered around 100,000 miles with K & N filters plus RV8 manifolds and, whilst this arrangement gave excellent fuel economy on long continental runs, I could see that the power output was not as strong as it should have been. Recently I had changed from the original BBU needles to the much richer BBA. These BBAs gave excellent acceleration but at the cost of far worse petrol consumption, so I decided that some scientific tests were needed to find out more about the performance of the two types of needles I had used so far. I made an appointment for tests at Richard Bros Ltd in Redruth (tel 01209 212234) as they have an extremely modern and comprehensive TAT rolling road with all sorts of Bosch diagnostic and data acquisition computers.

It was encouraging on arrival to see an assortment of interesting cars there such as Lotus/Caterham Sevens, an “E” type Jaguar, a genuine rally Austin Healey 3000 and many others. Their set-up was capable of measuring up to 1,200 bhp but it was highly unlikely that my MGBGTV8 would exceed this figure at any time! The first stage is to mount the rear wheels centrally onto the rollers and then hefty luggage straps (similar to those used to fasten bulky loads on lorries) were used to secure the car at the front and the rear to eyebolts in the floor. They were tightened up with ratchets on those straps to prevent the car from moving. A huge axial fan (3ft diameter) was located in front of the car to provide a gale of cooling air during the power runs. After this a calibration run was carried out which entailed a run up to an equivalent of 60mph in both 4th and 5th gears, during which the emissions and ignition setting were checked. The computer also calculated the difference between the power delivered to the rear wheels and the effective fly-wheel power. This was needed for a comparison with the handbook figures which are often thought to be optimistic, particularly when reading American magazines.

During the power runs four graphs were produced showing the fly-wheel power, the road-wheel power, the torque and the lambda curve. The lambda curve measures the mixture going into the engine and should be basically a flat line at around 0.85 to 0.90 – roughly equal to between 4% to 5% on a full-throttle basis as opposed to the 3.5% CO2 reading you should see when your car is checked at tick-over during its MoT emissions test. The lambda curve therefore shows whether the mixture your needles are providing is too rich or too weak throughout the whole rev range as opposed to an MoT emissions test which is just done at tick-over speed. Having said that, the advice from Richards Bros for setting up SU carburettors is to have a slightly richer mixture at low engine speeds to improve pick-up and to overcome light-

MGBGTV8 with K&Ns on the rolling road - bhp



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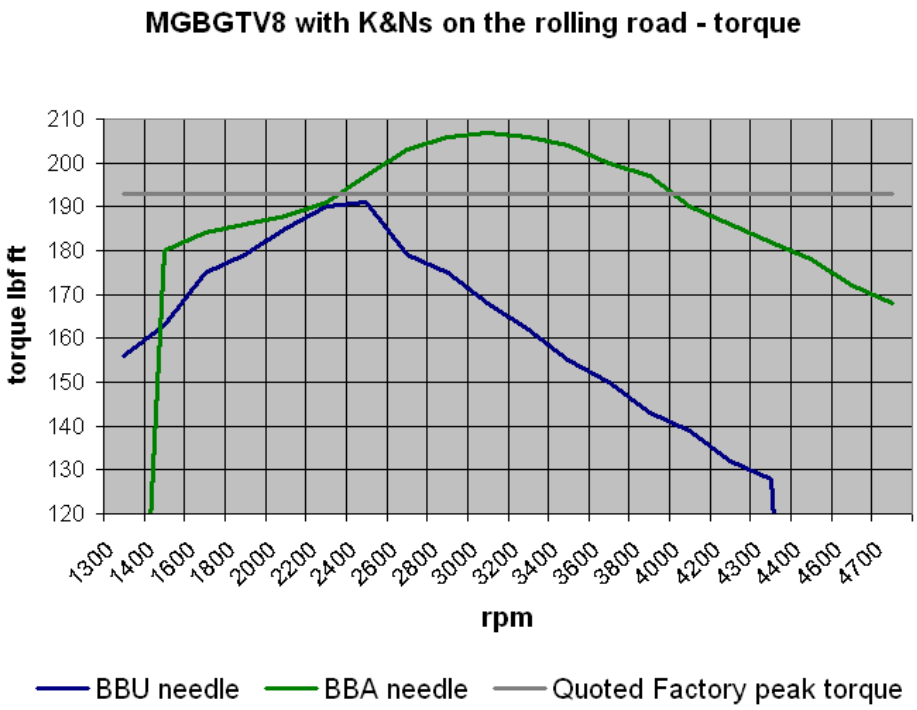

throttle flat-spots. A separate diagnostic machine measured the CO2 and also the hydrocarbons - i.e. un-burnt fuel - which could point to a variety of problems such as worn or faulty spark plugs, timing errors, or lack of cylinder compression. The acceptable figures for carburettor-engined cars are in the range of 300 to 400 ppm (parts per million). These readings were monitored during the test and confirmed the subsequent lambda curves on the graphs.

The Factory figures for the MGBGTV8 engine are 137bhp at 5,000rpm and 193lbf/ft of torque at 2,900rpm, however the technique Richards Bros use is to run the engine speed up progressively until they see the power curve dropping off – there is no point in going further. To underline that I had already explained to them that I could not remember when I last took the engine over 4,000rpm!

So, the richer BBA needles showed a roughly 12% increase in power output and a 6% increase in torque over the Factory figures, however I already know that these needles result in a motorway petrol consumption of around 26mpg which these days is expensive no matter how exhilarating the increase in power and acceleration may be. The lambda curve was, surprisingly, below the ideal 0.85 reading up to 2,800rpm but slightly above this figure when over 2,800rpm.

The BBU needles fitted originally at the Factory clearly do not work well with the K & N filters which allow in too much air, so that the lambda curve showed the engine running weak at all times – something I had been aware of over the years from looking at the colour of the plugs after long motorway runs. As can be seen, these needles failed to produce anywhere near the peak bhp or torque figures, however in real-life driving conditions nowadays I rarely go much over 3,000rpm and my main focus is on the economy and reaction time at around 2,500rpm – the typical motorway cruising speed. It is worth noting from my records that over the past 100,000 miles with the BBU needles, K & N filters and RV8 manifolds in place the car has averaged 26-27 mpg on local running and 30-34 mpg on long motorway hauls. Also, if I look at the torque figures at 2,500rpm I see 198lbf/ft for the BBA and 181lbf/ft for the BBU so there is not a great deal of difference in the range of my main usage.

The rolling road session, including the calibration run, two power runs with the BBA needles, fitting the BBU needles and adjusting the carburettors plus two power runs with the BBUs, took two hours. As we drove home through the hills my wife and I both remarked how sprightly the engine felt even with the BBU needles in place. Had the high-rpm runs given the combustion chambers a good clean-out? We don't know but could certainly tell the difference. Richards Bros will consider these results and will let me know which SU needles best suit my driving pattern and economy objectives, then we will arrange fitting and a retest on the rolling road during which they will use a "retarded dyno technique" which simulates the actual work the engine has to do to accelerate the car from say 60mph to 80mph in fifth gear. This then gives real-life fuel consumption and a revised *lambda* curve.

Engine speed/rpm	2,000	3,000	4,000	
The "flywheel" power figures (bhp) came out as follows				
BBA needles	70	118	147	153 @ 4,700 rpm
BBU needles	68	92	105	108 @ 4,200 rpm
The torque readings (lbf/ft) were:				
BBA needles	187	205	193	172 @ 4,700 rpm
BBU needles	178	186	135	128 @ 4,200 rpm

Check you MID record

Unlike the MOT database, the Motor Insurance Database or MID may not be updated promptly as it relies on your insurer submitting the data to MID following either the issue or renewal of your motor insurance cover, so there is a danger of being caught if insurance is not in place in good time. Several V8 members reported problems with the MID record for their cars. Gordon Hesketh-Jones noted "on seeing the MID news item on the V8 website, I promptly checked and whilst my V8 is properly recorded I found my wife Jennifer's MGBGT is still not recorded even though I have chased the insurance company three times!" He later reported the insurance company confirms they had submitted the information twice and still MID has not updated their systems! Mike Taylor also checked his MID record and found neither of my classic cars came up as being insured when his policies had a minimum of 4 months to go! The FHBC notes it has "heard of instances where local police forces have recently been more active in confiscating vehicles deemed to be uninsured

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according to the MID. Their records are of course is only as good as the data supplied by the insurance companies, who undertake to notify the MID within seven days of commencement of cover." So you are recommended to check that the MID entry for your car is correct. This can be done very easily at the ASKMID website at www.askmid.com