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# Blown Away

Mark Tossell's supercharged MGA was repatriated to Britain from the USA and perfectly recreates period American tuning practices.

Words and pictures: Andrew Roberts



Imagine the clock has been turned back to 1958. The location is a sun-drenched Santa Barbara in California, with the Pacific Ocean lapping the beach. You have just driven your new MGA, top down of course, to the newsstand to collect the latest copy of *Road & Track*. Now, back home with a mug of coffee, your attention is caught by a test of the MG-Judson and what would seem a well-engineered supercharger installation for the MGA. There is a power increase of some 25% and an equivalent increase in torque. Reliability doesn't sound like a problem either. It seems like something you could fit yourself in the garage. And you get to thinking of that club hillclimb a month away. Wouldn't the Judson supercharger give your MGA an extra edge?

Back in the late 1950s such a scenario would have frequently been played out among sports car owners on both the West and East Coasts of the USA. Then, British sports cars from MG, Austin-Healey and Triumph were the choice of literally thousands of drivers. Their imagination was fuelled by motorsport – the Watkins Glen road circuit had opened in 1948 – and American drivers like Phil Hill, Dan Gurney and John Fitch were rising stars. *Road & Track* was the magazine that sporting drivers turned to for news of the European Grand Prix scene and it fired the enthusiasm of owners. Always there was the quest for performance and there was no shortage of companies keen to cash in on this pent-up demand.

Which is where the Judson supercharger entered the scene. It was the Volkswagen Beetle brigade that took vast numbers of Judson supercharger kits, which explains why few have apparently survived in MG applications. A number are known to the North American MGA Register (NAMGR), while possibly three reside in the UK. So what were the attractions to the American buyers of yesteryear?

Firstly this was bolt-on performance improvement. According to *Autocar* the MGA 1500 had a top speed of 98mph and a 0-60mph time of 15.6 seconds, while its power output was 72bhp. With the Judson supercharger fitted, *Road & Track* estimated a top speed of 105mph, but



"The real pleasure is just being able to drive it whenever I choose"



more importantly a reduction in the 0-60 time to 12.5 seconds. Power was increased to 90bhp. Similarly, there were improvements in torque, from 77.4 to 95lb.ft. Secondly, this was performance that did not compromise the driveability of the car, unlike stage tuning or a hotter cam which, while delivering top end performance, would invariably do so with a loss of flexibility. Thirdly, it was affordable at \$260 including a Holley carburettor, exhaust manifold and all necessary parts. Finally, it was within the abilities of a mechanically minded owner and could be installed in around five hours – a comfortable weekend job, with ample time for testing.

Supercharging at high pressures can cause reliability problems, but Judson sensibly set a relatively modest boost figure of 5.5psi. The supercharger is a vane type, which delivers its performance gain at all speeds, unlike a turbocharger with its lag time. To counter the problem of rubbing friction of the vanes, Judson set them at an angle, which resulted in the centrifugal force being virtually cancelled. Lubricant was used at a rate of around two pints per thousand miles and an aluminium rocker cover, which incorporated a metering valve, was supplied with the kit. The lubricant was SAE 10, or Marvel Mystery Oil, which is still available.

The scene now moves forward to 1990. Mark Tossell, whose MG ownership had included an MG Metro, 1275cc Midget and an MGB GT, decided that an MGA was to be his next project. He sourced a 1958 MGA 1500 that had been purchased from an American dealer and reimported



to the UK from Bellevue, Washington State. Its UK owner was in the throes of acquiring a narrowboat and subsequently the MGA changed hands. Ostensibly the 117,000-mile example looked sound but being a car that had been well used and living in the Pacific Northwest with its damp climate, all was not as good as it seemed. Even so Mark used the MGA for a couple of years before restoration started in earnest.

Anyone who has seen any of Mark's cars will know that they are always beautifully presented and the MGA would be no exception. The engine was the first to be overhauled and fitted with a Stage II cylinder head, a Weber carburettor and an Aldon distributor. This was followed by the gearbox, which was restored in its original four-speed guise, Mark not succumbing to the growing trend to fit a Ford Sierra five-speed gearbox.

Next, the body was completely renovated and painted, while by now the chassis was restored to better-than-Abingdon standard and the steering transferred to the right. MGB shock absorbers were fitted to the front and telescopic Konis to the rear. Brakes remained drum all round, but with competition shoes.

The seats are special, but totally in period being recreations of those used in the Works MGAs. Bob West, the renowned MGA restorer supplied these, as he did the cylinder head, along with a huge amount of advice. The finishing touch was a set of replica Dunlop knock-on wheels, shod with





**Right:** Screen-mounted spotlight recalls rallying days of the era.

**Left:** Headlamp grilles and spotlights are also period-perfect extras...

**Right:** ...as are side vents in the wings, though they're not yet functioning.



Firestone Firehawk tyres, that really do set the car apart. Here, by sheer persistence, Mark was fortunate to be able to add his wheel requirement to a batch being made for a Jaguar restoration.

The choice of body colour was seemingly easy, because the car had always been red and it would clearly stay that way. But the colour is not the ubiquitous Orient Red or the later Chariot Red used by the factory. Instead, it is a specially mixed red after Mark, who had originally fallen for a vibrant colour sourced by his paintshop, demurred when he learned that it was Volvo Truck Red. 'I really couldn't have the car painted in a truck colour,' he said. Notwithstanding this, the chosen colour is so perfect for the sweeping lines of the MGA that you wonder why Abingdon didn't go brighter in the colour spectrum.

So, once again, a pristine MGA was seen on the wonderful driving roads around Mark's Barnstaple home and further afield too. For this would be no cosseted MGA that rarely felt tarmac under its tyres. Trips to France, Belgium, Luxembourg and Germany have been regular forays but the great favourite is the Jersey MGOC event. 7000 miles a year is typical.

Mark had joined and registered his car with the NAMGAR and this not only brought him valuable contacts throughout the restoration, but also alerted him to the existence of the Judson supercharger. A brace of articles in *MG World* and *Total MG* on Judson-supercharged MGAs fired his enthusiasm to follow the same route. 'I loved the neatness of the installation and how well it fitted under the bonnet,' says Mark. 'And because this was an American car, the conversion would be both correct and in period.'

The question was where to start and inevitably eBay entered the frame. Soon, a Judson was offered for sale, complete with its Holley carburettor but elation quickly turned to despair as the supercharger was not as

described. The only solution was to rebuild it completely, a task that would tax everyone involved. Not the least of the problems were the supercharger vanes, which had to be painstakingly remade one by one.

When the supercharger was complete and plumbed in, Mark and his fellow helpers might have expected their problems were over. Not so, for overheating problems now revealed themselves. The bottom pulley that carried the fanbelt turned out to be the wrong size and a replacement had to be manufactured, but not before overheating and a subsequent supercharger seizure had resulted in a blown head gasket. A custom-made head gasket, considerably thicker than the original, together with a new radiator from Pro Alloy finally cured the overheating problem and with the correct size pulley the supercharger worked exactly as Judson predicted half-a-century before. For good measure, a Kenlowe electric fan was added to the underbonnet specification to augment the bonnet vents. Operating pressure was, and is, around 5.25psi.

The finishing touch was a finned rocker cover from a 1960s B-series engine that Mark found at the MG Show at Stoneleigh and this has been superbly finished in a high-temperature crackle black finish that perfectly matches the Judson supercharger. The overhauled chrome Holley carburettor complements the exceptionally neat underbonnet installation, while the Ampco Vapor Lubricator completes the period atmosphere. An authentic boost gauge was sourced to complete the installation and then astonishingly an original can of Marvel Mystery Oil was found in his local garage and presented to Mark. The contents were immediately put to their intended use, while regular supplies are sourced via the internet to keep the Judson supercharger running sweetly.

Everything about this MGA is in period, something that Mark is very >





**Above:** Despite its pristine condition, Mark's MGA averages 7000 miles each year. **Right:** Ampco Vapor Lubricator adds authentic period touch, as does Marvel Mystery Oil.

particular about. The radio is an example, picked up for a few pounds at a car boot sale. Similarly the spot and fog lamps, when it would have been a far easier route to simply buy replicas. The headlamp grilles are a period accessory too, typical of those found on the other side of the Atlantic, as too are the highly effective wind deflectors on the windscreen. The side vents in the wings were fitted Stateside to provide cockpit cooling – a notorious MGA problem.

Period this MGA may be, but there is nothing dated about its performance as Mark proved on the driver's roads of North Devon to a photoshoot location. Coming back to an MGA after driving an MGB or an MGF, it immediately becomes apparent how compact the car is in relation to its siblings. There is an extraordinarily one-piece feel about this car, with driver and passenger feeling an integral part of it.

But these are generalities about the MGA. How does Mark's MGA perform and does the supercharger installation add to the driving experience or not? The answer in a single word is 'Yes', and undeniably so. The advantage of the supercharger is immediately apparent, the extra torque being evident on the hilly departure from the environs of Barnstaple. Where with a standard MGA 1500 you would be expecting downward changes, the Judson supercharger means this isn't necessary, while the improvement in acceleration is marked.

Coupled to a suspension set-up that is ideal for the car, this turns out to be a model that epitomises everything an MG sports car should be. Responsive, predictable and demanding that it be given its head, this is precisely what Syd Enever and John Thornley envisaged all those years ago when they formulated the design. Pin-sharp steering and roadholding that ensures the performance can be used to the full mean that this MGA is a car to be seriously enjoyed and of all the examples that made their way back across the Atlantic in the 1990s, this is surely now one of the very best. The marriage of MGA 1500 power and the Judson supercharger is a well-nigh perfect one and demonstrates that painstaking attention to detail can result in an MG that is greater than the sum of its parts.

There are countless MGs restored to very high standards that scarcely turn a wheel but, as we have seen, this is not the life of this MGA. 'It is a car for driving,' says Mark, not even flinching when a passing vehicle propels a stone towards the MGA's pristine paintwork. 'You don't have to worry about things like that. Everything can be put right and I do try to keep the car in tip-top condition.' Is he tempted to show the car? 'Because it is modified it can only be a Pride of Ownership car and I sometimes enter,



but just for fun,' he says. 'The real pleasure is just being able to drive it whenever I choose and that means throughout the year.'

Bringing any car up to a standard like this MGA is inevitably a team effort and Mark Tossell is appreciative of the help he has received along the way. He singles out for special thanks MGA guru Bob West, staunch friends Paul Turner and Dave Boswell, Ben at West Cross Garage, Braunton and Colin at the Carbody Centre in Ilfacombe, together with the NAMGAR, MGCC MGA Register and MGOC members. As this very special MGA celebrates its half-century, it is a credit to every one of them, not least its custodian.