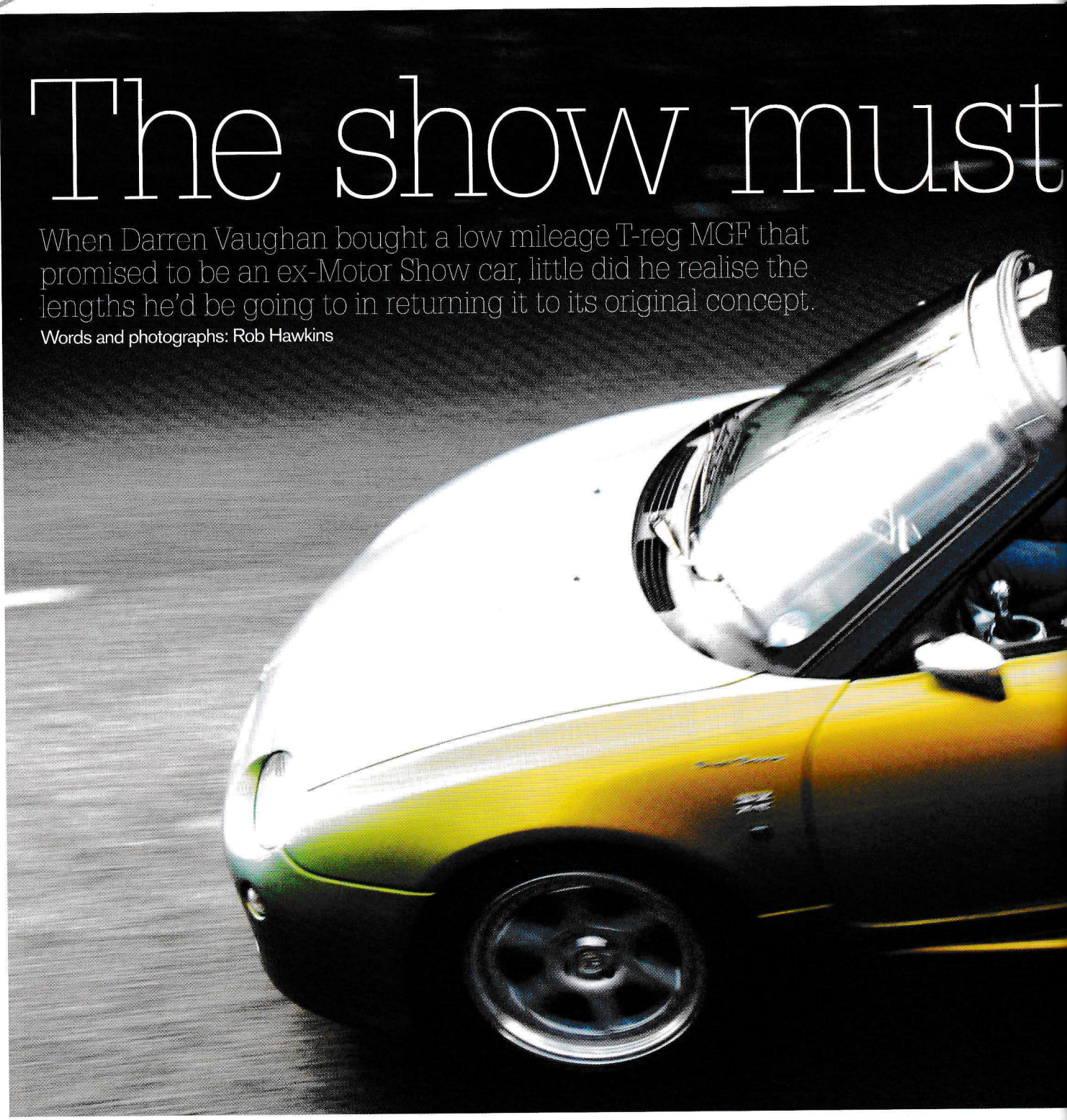
The show must

When Darren Vaughan bought a low mileage T-reg MGF that promised to be an ex-Motor Show car, little did he realise the lengths he'd be going to in returning it to its original concept.

Words and photographs: Rob Hawkins



The demand for greater performance is a common trait in most sectors of the car market, where the manufacturer and several specialists often compete together. Sports cars have always followed this trend and MG has rarely been an exception to the rule. Take the MGB for instance, where Ken Costello developed his own V8 conversions before MG launched the GTV8.

The MGF has a similar story, with MG Rover dealer Stephen Palmer marketing the Cheetah. This was a highly modified MGF using a Turbo Technics-developed supercharger conversion. Just like Costello and the subsequent GTV8, MG soon followed suit with their own supercharged MGF. Their first show car was a concept car speedster, followed by the car seen here, which was planned for production.

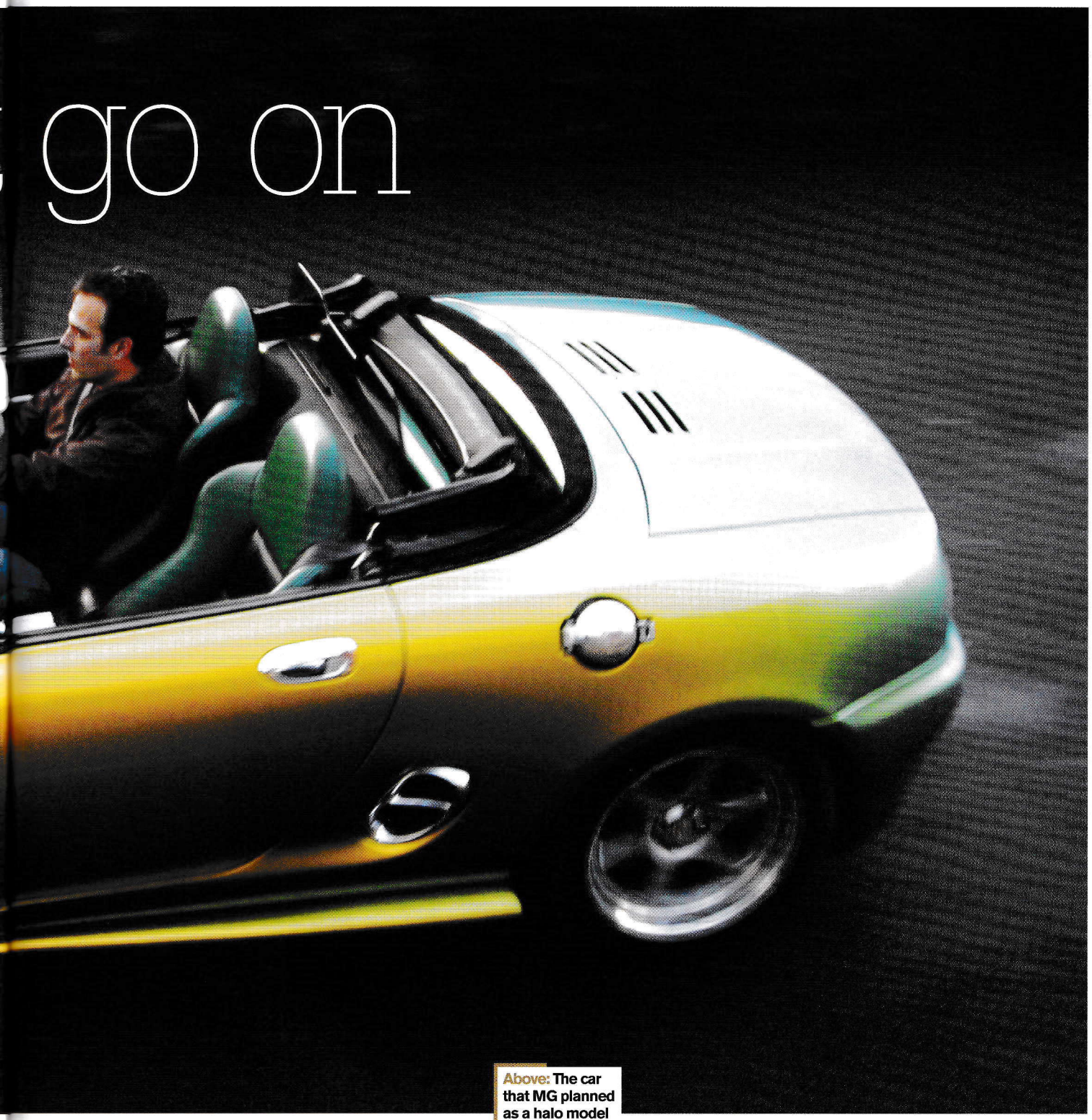
Regular readers will remember seeing this car in the January 2008 issue, when it was first returned to the road and we pitched it against its BMW Z3 nemesis. Now we are back with owner Darren Vaughan because he has taken it one major (and very expensive) step closer to its original guise. But for the benefit of those readers who are seeing the car for the first time, allow us just to recap the salient points to the story.

MG's supercharged MGF was given the title Super Sports. The speedster was labelled as the MkI and intended for publicity purposes only. The MkII was intended to be sold to the public and was revealed at the Geneva Motor Show in 1999. The very car seen here was the show car, but it had black paintwork and a number of other parts that have since disappeared or been changed. For example, it had a red hood and unique red and black grenadine leather trimmed Recaros. There was lots of brushed aluminium trim, drilled pedals (later seen on the LE 500) and an alloy heel mat in the driver's footwell.

Under the engine cover sat a Janspeed-developed, supercharged 1.8-litre K-series mated to a close ratio PG-1 gearbox. The exterior of the MkII Super Sports was distinctly different from a standard MGF. The front bumper was a new design and featured indicators and sidelights mounted in the outer edges, with large round driving lights fitted below. The front wings were wider than standard and featured an additional swage line along the top. At the rear, the wings were wider and more muscular in shape. Sill covers were fitted, which protrude less towards the front wheels and more towards the rear.

The suspension employed the Hydragas system, but was lowered by

go on



Above: The car that MG planned as a halo model in the MGF line-up has now been brought even closer to its original Motor Show guise.

30mm and used the same spec that was developed for the Cup Cars. Brakes featured AP calipers and larger 295mm discs. Covering the brakes were specially made Image three-piece split rim 17in diameter alloys.

When the same Super Sport appeared at the Frankfurt Motor Show and later in the year at Tokyo, its paintwork had been changed to the Chromaflair green/gold flip colour seen here. The interior had also been updated to 2000MY spec, as seen in our photos. MG planned to sell some 300 Super Sports per year, but BMW stopped the project. Rumours are that it was competition for the Z3 and BMW bosses feared the MGF would be the better of the two. Whatever the reasons for shelving the Super Sport project, it hasn't halted the market for supercharged MGFs and specialists such as Turbo Technics have plenty of customers. As for the original MkII Super Sports, that was purchased from MG amongst a collection of cars when the manufacturer went into bankruptcy, part of a number of MGs purchased by classic and sports car specialist Oakfields (www.oakfields.com) in 2006.

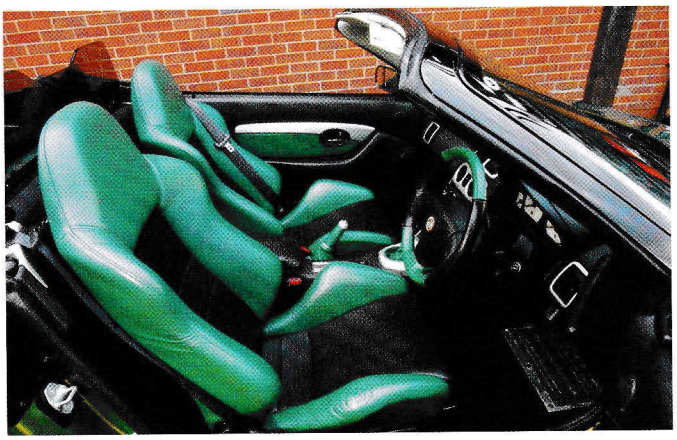
Current owner Darren Vaughan is more of a general sports car fanatic than an MG purist. Despite this, he's owned four Midgets, but his first car was a two-litre Capri S and subsequent motors have included a Triumph Spitfire, XR2, XR3 and a Cooper engined Mini. Before buying the Super Sport, Darren had a TR6, which eventually turned into an abandoned restoration. Darren couldn't see himself finishing the TR6 in the near future and wanted a sports car that was roadworthy.

'We wanted a fun car and my TR6 was never going to get finished,' he says. 'We were thinking about a Porsche Boxster.' Searching through the classified ads, Darren spotted an MGF for sale at Oakfields, which was advertised as a Super Sport show car for £14,000 with a T-registration and only 100 miles on the clock. This was a much higher price than a standard used MGF of the same age, but the show car history was interesting and the low mileage tempting.

'I went to look at it with my father-in-law,' says Darren who went to inspect the car in December 2006. 'They had a collection of MGs – there were SVs and even rally MGs. In there was this Super Sport. It was quite dark and it didn't look particularly stunning. It had some blistering and was painted in the same colour as it is now.' ›

Under the engine cover, the supercharged K-series had been removed

"MG planned to sell some 300 Super Sports a year, but BMW stopped the project"



Above: Grenadine green and black leather covers the Recaro seats.

Above: Supercharged engine has been heavily modified to cope.

and replaced with a standard 145bhp VVC motor. Traces of the original black paintwork were easy to spot, with the colour still remaining inside the engine bay and front compartment.

Darren requested a test drive and the Super Sport was removed from its storage place. 'As soon as it was put outside next to a Porsche Boxster, it looked like a totally different car,' he recalls. 'Once the sunlight hit the car, the full effect of the Chromaflair paint was revealed. So I took it out for a drive and two miles down the road we had a flat tyre!'

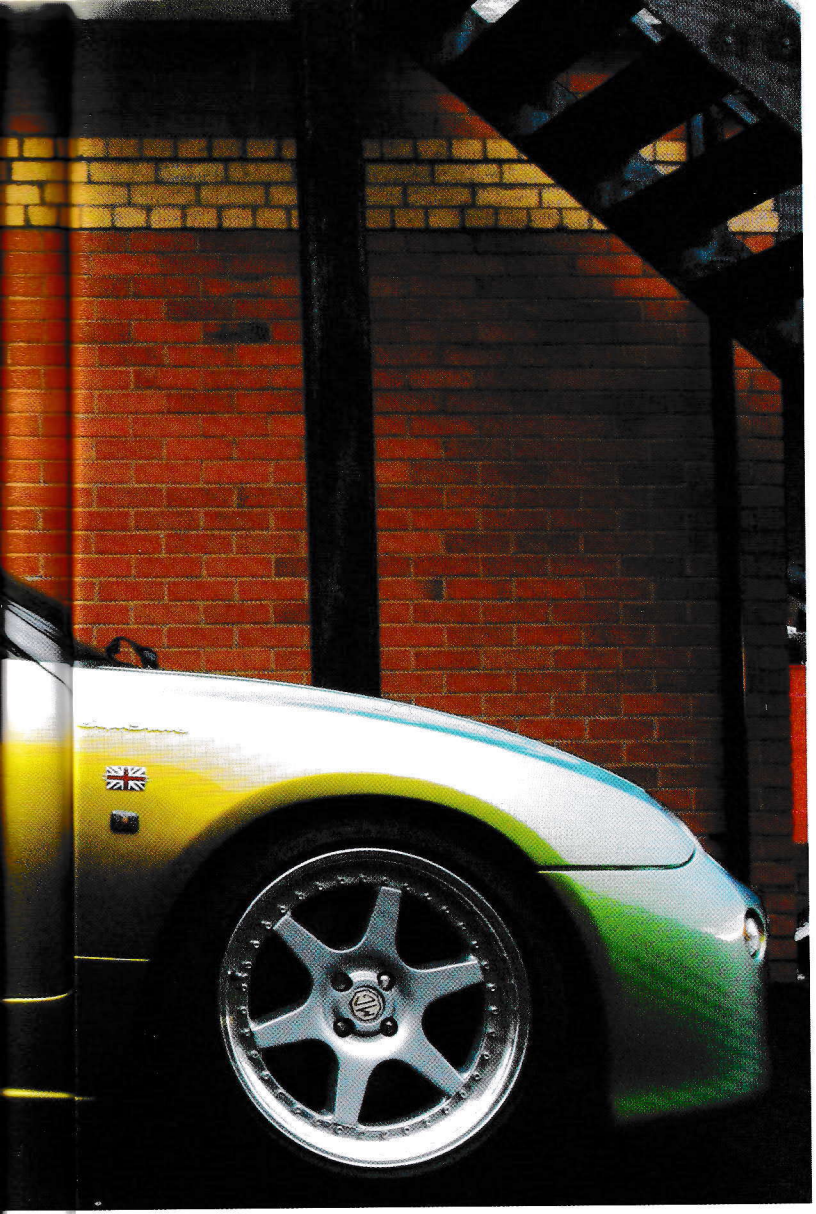
Despite the flat, Darren had been smitten by the Super Sport. The price tag of £14,000 was a little too much in his opinion. He knew the car had gone to auction with a reserve of £10,000 and not sold, so Darren managed to haggle the final price down to £10,000. He also negotiated a respray in the same flip colour for £3000.

The resprayed Super Sport was delivered in early 2007. Darren then started to look into the history of his car with the intention of trying to recreate the supercharged concept that had appeared at several motor shows. However, before he could begin his project plan, he had a few problems to resolve, including front tyres that would regularly deflate.

'I thought I had cured this by replacing the steel valves fitted to the alloys with rubber valves, but unfortunately that was not the case,' explains Darren. 'I took the car out at the end of February in 2007, prior to its MoT and yet again had to pull over, pump the tyre back up and limp carefully home. The tyre was again ruined with the sidewall being damaged, so I had to buy another.'

Darren eventually found the answer to his tyre deflating problem. A pair of 195 tyres had been fitted at the front when he bought the car and these weren't wide enough, so they effectively popped off the rims and lost their air whenever the car was driven on the road. The puncture on the test drive at Oakfields hadn't been a puncture, but a repeat of the same problem, which Darren eventually resolved by fitting wider 215 rubber. However, Darren hasn't seen the last of his tyre trouble. With race-derived suspension geometry, the rear tyres only last 1000 miles!

Darren tried to source a replacement exhaust system for his Super Sport. At first, he tried a local exhaust specialist who managed to cobble together a couple of slim motorbike-style canisters in an attempt to mimic the look



Above: Image 17x7.5in split rims no longer deflate thanks to wider rubber, but they still get through rear tyres at an alarming rate.

of the original, but the noise was too much. A system was then purchased from Mike Satur and modified to feature twin exit tailpipes. This managed to fill the cavernous holes in the rear bumper. Underneath the rear bumper, there's a diffuser, which was reputedly made of wood on the MkI speedster. Darren's diffuser is thankfully not made of wood, but he found the bottom of the fins fouled speed bumps, so he had to shave a couple of inches off them.

Other problems Darren has encountered are a little more entertaining, including a trip to Newquay where he returned to the car and couldn't open the doors. 'I had to get in via the rear window and manually operate the door catch,' he explains. 'Fortunately, it's only ever happened the once.'

Despite such problems, Darren was determined to keep his Super Sport on the road and re-create the supercharged concept that had caught the public's interest. He returned his wheels to Image to have them refurbished and compliment the fresh paintwork. Under the engine cover, Darren realised a supercharged K-series was the only way to go. In late 2007, he started hunting for a suitable supercharged engine.

'I contacted Janspeed, who quoted £12,000 to produce an engine to the original spec. Plus a donor engine would be required and that didn't include the cost of fitting,' he says. 'Ultimately it was simply a greater outlay than I wanted to spend.'

After missing a Turbo Technics-supercharged MGF from Japan (the engine is now in a Metro), Darren found a Rover 200 BRM, which had initially been modified by Moto-Build, then sent to Turbo Technics to undergo a supercharger conversion.

'It had its VVC cams removed and replaced with Piper 270 cams, banded and strengthened liners, forged pistons and porting and gas flowing of the cylinder head,' explains Darren concerning the work completed at Moto-Build prior to him buying it. 'It was also fitted with Lumenition 42mm quad throttle bodies and Lumenition engine management, producing altogether 197bhp.

'This was not enough for the owner, so the vehicle was shipped to Turbo Technics to have a supercharger fitted. This involved the compression ratio being reduced by fitting new strengthened lightweight pistons and shortened forged connecting rods, an oil cooler for the supercharger and cooling of the air via an air-to-air intercooler. The ECU was changed to a programmable Emerald module and was then sent to Emerald to be tuned on the rolling road, raising the output to 230bhp.'

Darren paid £4300 for the Rover 200 BRM. It only had 17,000 miles on the clock, but had had over £10,000 spent on the engine with only 5000 miles completed since it was rebuilt with the supercharger in 2004 – a bargain at last! Both the BRM and the Super Sport were sent to the MGF Centre in Wolverhampton to complete an engine swap. The plan was to swap over the Super Sport's VVC engine for the BRM's supercharged motor, then sell the BRM.

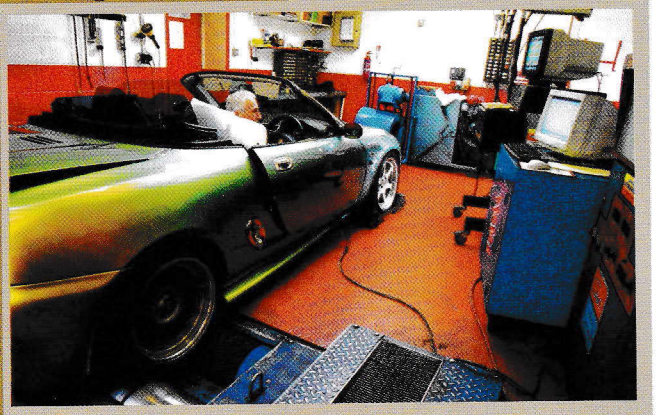
Darren and the MGF Centre liaised with Pete Bland at Turbo Technics to work out how the engine swap should be completed. Issues included the mounting of an intercooler to cool the induction charge for the supercharger. The BRM had a front mounted air-to-air intercooler, but this wasn't so easy on the Super Sport as the engine and supercharger are mounted in the rear, the opposite way round. Routing the induction charge to run from the supercharger to a front mounted intercooler and back again is complex and the path is too long for the system to work effectively. The ideal solution is to fit an intercooler inside the engine bay, but there is insufficient air flow to cool it.

The answer to this dilemma was to mount a water fed intercooler inside the rear inner wing. A separate radiator is fitted to the front of the engine coolant's radiator to cool a separate water based cooling system for the intercooler. The intercooler's coolant is pumped using a Bosch electronic pump around its own circuit between the radiator at the front and the intercooler in the rear wing.

The supercharger conversion created a problem for the brakes. The front mounted servo couldn't use the pressure from the inlet manifold (there was little vacuum pressure due to the combination of throttle bodies, modified cams and the supercharger), so the brakes effectively became non-servo assisted. Darren and the MGF Centre recall trying to drive the car and brake without servo assistance – a solution had to be found.

Darren discovered it in the form of an electric vacuum pump. This was ›

Tuning at Aldon



Darren Vaughan's supercharged MGF Super Sports recently visited Aldon Automotive to check it over on the rolling road and fine tune its timing and fuelling. The first run on the dyno produced an impressive 216bhp, but the modified engine that was originally fitted to a Rover 200 BRM had produced 230bhp at Emerald. Aldon spent a few hours analysing the power curve with the fuelling and ignition timing.

Darren found the engine wasn't as instantly responsive as he'd expected from a supercharged motor with mild, fast road cams. He commented that the engine seemed to hold back until 4000rpm, then take off, which is more characteristic of a turbocharged engine.

Aldon reduced the fuelling by 10% at 1500-2500rpm when the throttle is below half way. They also advanced the spark by three degrees. At full throttle, the spark was advanced above 3000rpm and at 6000rpm with full throttle, the fuelling was reduced by 5%. Aldon also noticed that if the throttle was blipped, it took a long time to settle, so they removed some spark advance at 2500-1500rpm.

After all this fine tuning of matching the throttle position and revs according to the spark advance and fuelling, a second run was completed on the dyno and the results were better than ever; 232bhp at 6283rpm.

Darren's journey home proved the visit to Aldon was worthwhile. 'The car accelerated from low revs with more gusto and the engine backed off when lifting the throttle, then ticked over smoothly and at 1000 revs lower than it did before.'

MGF SUPER SPORT 2

Right: The flared rear wings and sill extensions are clear from this elevated position, as is the extra swage in the widened front wings.

mounted in the front compartment and can be heard running whenever the vacuum pressure for the servo drops. Darren sourced the pump from the USA, but it would have cost twice the price in the UK.

The Rover 200 BRM donor vehicle was put back on the road with the Super Sport's VVC engine and sold for a bargain £2000. Selling unwanted donor items helped to recover some of the costs towards this project, but Darren admits he'd spent in excess of £10,000 in modifying and restoring the Super Sport. And he wasn't out of the woods yet.

Whilst Darren has clearly tried to return his Super Sport to how it was conceived, you have to remember this was a show car, so many of its parts had not been tried and tested. 'On driving to Aldon Automotive for a rolling road tune up, once out of town the first press on the brakes caused the front driver's side wheel to lock with minimal brake pressure,' says Darren. 'What had happened was that the modified lowering knuckle had popped out of the Hydragas sphere, leaving the wheel unloaded and thus locking up when braking.'

As you might by now expect, the lowering knuckles on Darren's Super Sport are not a standard design. As Darren comments: 'When the car is jacked up, they can fall out of the sphere, and it seems that the severe speed humps just down the road from my house caused the right hand side to do just that.' Problems and irritations such as this usually form the differences between a development car and a production car, although it is of little consolation that on many occasions over the years, these two phases do seem to have overlapped each other by a considerable margin!

The supercharged MGF should have gone into production. MG have a reputation for producing models that evolve to produce outstanding amounts of performance. Past examples from the MGA twin cam and MGB GTV8 to the turbocharged Metro, Maestro and Montego are just some of the cases. The Chinese manufactured TF LE500 will hopefully pick up the pieces of this tradition. In the meantime, devotees such as Darren Vaughan help to keep the true spirit of extreme MGs alive.

Above: Darren Vaughan at the wheel of his Super Sports 2, a car he has spent a small fortune on putting back to show condition.

Super Sport Contacts

Turbo Technics 01604 705050 www.turbotechnics.com
Aldon Automotive 01384 572553 www.aldonauto.co.uk
MGF Centre 01902 453100 www.mgfcentre.com – Darren would like to thank the MGF Centre for all their help and enthusiasm with his Super Sport.

TECH SPEC

MGF Super Sport 2

Engine

1.8-litre blueprinted K-series, Omega forged pistons, banded and strengthened liners, lightened flywheel, Piper BP270 fast road camshafts, re-worked cylinder head, quad 42mm Lumenition throttle bodies, Turbo Technics supercharger, water cooled intercooler, standard panel air filter, standard exhaust manifold, standard catalytic converter, Mike Satur exhaust system with modified tail pipes, front mounted oil cooler.

Gearbox

Five speed gearbox with limited slip differential, AP clutch.

Brakes

Front: AP four pot calipers with vented 295mm discs. Rear: solid 295mm discs with AP four pot calipers.

Suspension

Hydragas system with Trophy spheres, non-adjustable uprated dampers, front and rear anti-roll bars, 30mm lowering knuckles.

Wheels and tyres

Image 17x7.5in split rims with 215/40x17 (front) and 235/40x17 (rear) tyres.

Exterior

Super Sport shell painted in Chromaflair gold/green flip colour. Widened front wings with additional crease line, flared rear arches, seamless sills, Super Sport prototype front and rear bumpers, standard headlights, flushed clear front indicators, jewel rear light units with clear indicator lenses, smoked side repeaters, two bumper-mounted driving lamps, alloy race type fuel filler, large chromed air intakes, stainless steel mesh inserts to front bumper, Super Sport and Union Jack badges.

Interior

Recaro sports seats, grenadine green and black leather bound three spoke steering wheel, grenadine green leather gearshift and handbrake gaiters, door panels trimmed in grenadine green and black leather, drilled alloy pedals, alloy driver's heel mat, brushed aluminium trim, Super Sport logo'd kick plates, MGF Centre smoked wind break.