



## B1- 40i Complete Conversion – (base car F20/F21 M140i)



The M140i is the last hot-hatch BMW with rear-wheel drive, the last optionally equipped with a manual transmission, and the last with six cylinders. For these reasons, the M140i has carved itself a unique place in BMW history, and will remain a firm fan favourite. In addition, for those who can't afford the exorbitant prices of BMW's M-Power variants, it is a fantastic value-for-money performance car.

However, the "Ultimate Driving Machine" formula seems to have become diluted over the years outside of the M Division. The B58 has considerable potential, but the engine performance has been capped to a deliberately modest level. The suspension's lack of talent and crashy ride when pushing on over bumpy road surfaces, and absence of a limited-slip differential, means there are significant margins for improvement in the chassis and dynamics, too.

Birds are proud to announce their first fully developed Complete Conversion package for this car.

As always, we strive to provide vice-free engine mapping, with no flat spots or erratic throttle response, and only once the all-important engineering and durability testing has been completed.

We have also coordinated all of the necessary equipment to transform the, handling, traction and ride quality, so that the driver is able to fully communicate with the chassis, truly elevating the dynamics to provide the real ultimate driving experience.

All technical work is undertaken at Birds' facility in Buckinghamshire, UK, with new engine management individually programmed for each car. All conversions are properly guaranteed for both performance and longevity.

Underlining our place at the forefront of BMW tuning in the UK, all complete conversions carry comprehensive warranties of 24 months, without mileage limitation.

---

### Kevin Bird Garages Limited

2, The Ridgeway, Iver, Buckinghamshire, Great Britain, SL0 9HW  
Tel 01753 657 444, Fax 01753 655 963, Web [www.BirdsAuto.com](http://www.BirdsAuto.com)

---



The B1-430 Complete Conversion consists of the following items. We will be pleased to revise specifications from our program to your exact requirements. All items are available individually or as various packages.

Engine	Engine Management 430ps (424hp)
Differential	Exchange QUAIFE LSD Differential
Suspension	B-Series Sport Suspension (also available for EDC equipped models)
Geometry	Hubcentric Shim Kit (20mm Increased Track Front)
Transmission	Short Gearshift (manual transmission only)
Clutch	Clutch pedal weight modification (manual transmission only)



**Engine Management** - When it comes to increasing engine performance, it's easy to focus purely on the maximum power that could be achieved. All our engine development takes into account more important parameters, such as durability, particularly where expensive emissions equipment such as catalysts and particulate filters are concerned. High speed testing is carried out on closed circuits, the only place outside of Germany where the engine can be placed under full load for more than 15 seconds at a time.

Dynamometer testing is conducted as a conclusion to the process, and we are never embarrassed that headline power output numbers don't eclipse the claims of others.



Quaife BMW

Tuning BMW

Service BMW



**Differential** – the Quaife ATB Differential provides significantly improved traction and handling for powerful rear-wheel drive cars, and is an absolute must-have performance upgrade for owners of these brilliant driving machines.

Once installed, drivers will notice an immediate difference as the Quaife patented ATB design automatically biases torque across the axle to the wheel with most grip. Unwanted wheel-slip is greatly reduced, enabling drivers to exploit the full potential of their machines, leading to a more exciting, rewarding and rapid driving experience.

Uniquely, all Quaife ATB Differentials come with a limited lifetime warranty and require no maintenance - a true fit and forget solution.



**Suspension** – the B-Series Sport Suspension features bespoke dampers and springs manufactured by our partners Bilstein and Eibach. The specifications have been refined during many hours of engineering calculation and road testing and have been specifically designed and developed to cope with UK roads.

Although our suspensions have been occasionally tested on the Nurburgring, they are tuned to work properly on everyday roads. No more crashing over bumps, and poor ride control typical of so-called sport suspensions. You will find our suspension to be a revelation, with corner exit speeds and traction massively improved, without compromising comfort.

Customer testimonials grow positively with every installation.

**Geometry** - Perhaps a simple and quite surprisingly effective complement to suspension. The front axle has a significant degree of negative scrub radius engineered in. This might aid very high speed driving on Autobahns, but makes the steering exceedingly dull and unresponsive at UK road speeds.

We utilise self-centering shims on the front axle (normally used to generate a visual enhancement), along with longer wheel bolts and locking bolts. Our hugely experienced chassis dynamics experts do not propose anything more.

With almost all modern cars, there appears to be a growing tendency to remove externally generated feedback from the car. In some cases, this can be a good thing. For example, no one wants to feel every bump in the

# Birds

Ultimate BMW Performance



Quaife BMW

Tuning BMW

Service BMW

road generated by an un-compliant suspension. In other cases, we feel that the driver needs a direct connection to the process and should be truly involved in it. With a manual transmission, gearchange and clutch operation is a part of the drivers involvement, and in the case of the M140i, the clutch actuation can be likened to pushing your foot into sponge. Similarly, the gearshift is over-long and inaccurate. Solutions to those issues have been sought, and we believe our solutions allow a better and more direct connection between driver and car.

Until the first driverless car hits the street, Birds will always believe that driving should be a pleasurable and feedback rich experience.

---

### Kevin Bird Garages Limited

2, The Ridgeway, Iver, Buckinghamshire, Great Britain, SL0 9HW  
Tel 01753 657 444, Fax 01753 655 963, Web [www.BirdsAuto.com](http://www.BirdsAuto.com)

---





## Optional Extras



**Anti-Roll Bars** – B-Series Anti-Roll Bars are available to adjust the chassis balance and trim. Fast drivers will immediately note the prevalent under-steer inherent in the standard BMW chassis. As a consequence we provide significantly more rear stiffness than the front, biasing away from under-steer.

Our B-Series suspension has been designed to reduce understeer too, and it should be noted that stiffer anti-roll bars can produce some undesirable characteristics, such as increasing spring stiffness and "head rock" over bumpy roads. One customer put into words a very good phrase that should indicate whether they will be useful to you. He said "I like to throw the car around a bit!". Beyond that, we definitely recommend their use when using the car on occasional track days.



**Brakes** – Alcon Ø365x32mm curved vane ventilated and grooved discs for the front axle, featuring low weight alloy hubs, with a unique floating rotor system to prevent vibration and fade. Six piston alloy callipers for reduced weight and mighty stopping power.

The feel and progression of these brakes allow fierce braking right up to the point of ABS actuation, both in the wet and dry. Fully protected against corrosion, and they work from cold right up to racing temperatures. Also available for the rear axle. Heavy circuit-use pad materials available at additional cost.

Expert advice comes as standard. We treat all customers as individuals, and recognise that every individual has their own set of desires and criteria. We have nearly 35 years experience in the BMW tuning arena, more than any other BMW Tuning organisation in the UK, and know how to get the best performance from BMW cars. We are enthusiasts and are happy to discuss in detail every aspect of the performance of your car. Options are many, but please let us guide you toward Ultimate BMW Performance.

All technical work is undertaken at Birds facility in Iver, near Heathrow, with new engine management individually programmed for each car. All conversions are properly guaranteed for both performance and longevity. Only the best will do, and only available from Birds.

Underlining our place at the cutting edge of tuning technology, all Complete Conversions carry comprehensive Manufacturer Matching warranties, without mileage limitation.

### Kevin Bird Garages Limited

2, The Ridgeway, Iver, Buckinghamshire, Great Britain, SL0 9HW  
Tel 01753 657 444, Fax 01753 655 963, Web [www.BirdsAuto.com](http://www.BirdsAuto.com)