

This E30 325i has been constantly revised, having had no less than four engine conversions in the past two years. Now featuring a 3.6-litre E34 M5 lump, is it finally there?

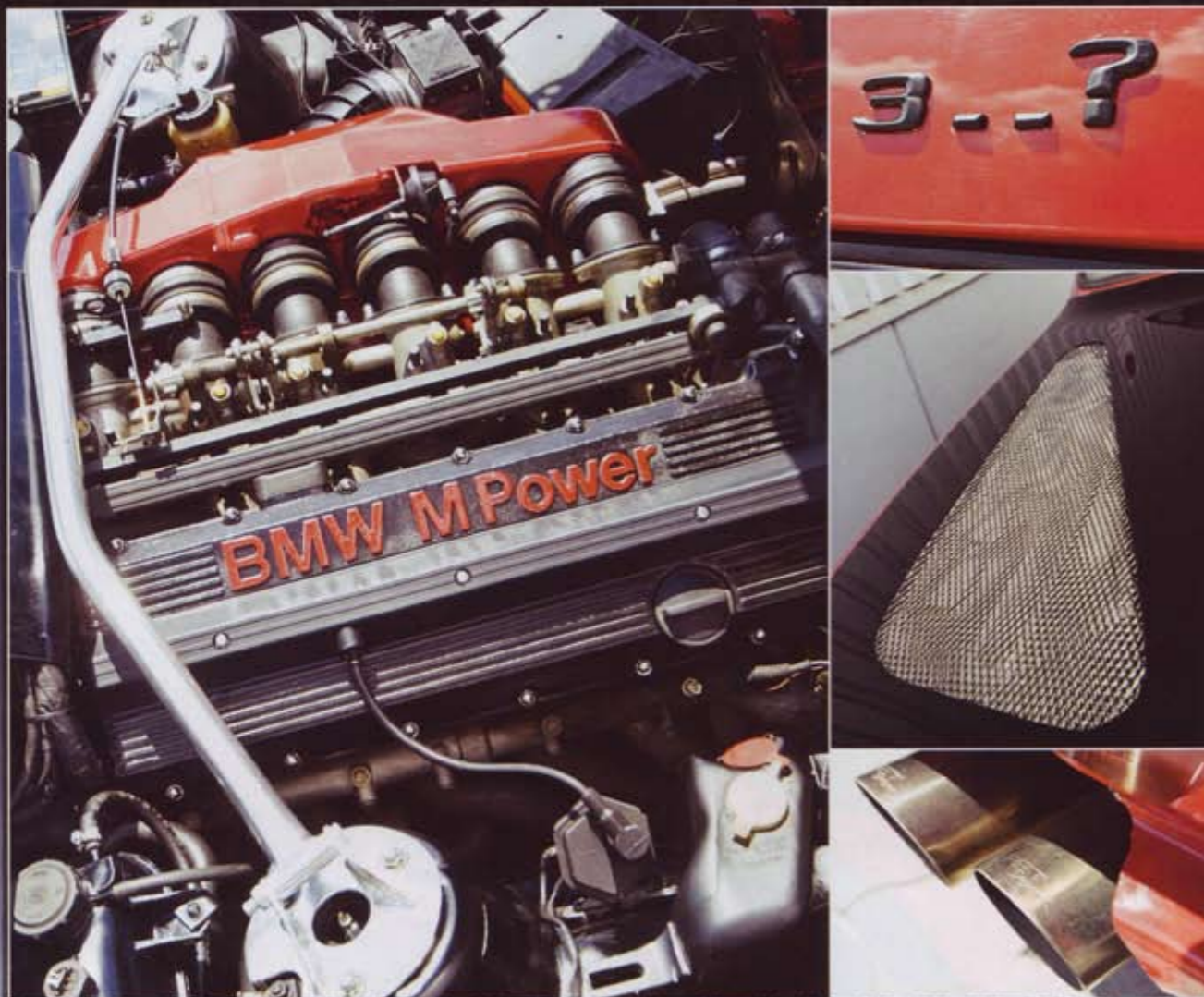
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change

of heart





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The problem with building a truly great feature car is that, for the most part, its creator is capturing the moment. As in any industry, over time ideology changes, the goal posts move, what was 'in' is soon 'out' and all the while expectations continue to rise. We've seen it in the fashion business; one minute last season's must-have accessory can, seemingly overnight, reiterate itself as a huge faux pas. Staying one step ahead of the pack is an arduous and time consuming task and there is no more rapidly evolving scene than that of the modified car.

In the fashion industry followers 'ooohh' and 'aarrhh' at the forthcoming outfits and designs of elitist designers such as Alexander McQueen or Stella McCartney. These new outfits initiate fads that trickle down from catwalk to high street, stimulating and developing the latest must-have phenomenon. In a similar vein 'fashion houses' such as AC Schnitzer, Hartge and Hamann dress up BMW's latest models, enticing us to improve the aesthetics or the driving experience of our motor.

However, as any true trend follower will tell you, many styles and crazes come from new and innovative designers hoping to make a name for themselves. They may not have the financial backing or economic advantages of their high profile contemporaries, but they also don't have to worry about the economic viability of their work - actually selling the damn things. This is the very reason why the work of lone individuals and small BMW specialists often far outweighs anything big brand names deliver. Without a reputation to live up to, with no warranties to fulfil and with day to day usability of secondary concern, it is these individuals that are free to experiment, and thus it is these people and the cars they create which we seek out to feature in these pages.

This month it's the turn of Markus Fauth, a 24-year-old gent from Bavaria in Germany. The self-confessed BMW devotee works day in, day out as an apprentice mechanic for Lexus and Toyota. Back in 2004 when he landed the job he had a brainwave: "I decided to buy myself a car that was both lightweight and rear-wheel drive. I thought it would be a shame to waste all the new skills I would be learning at work, and as lover of BMW knew the E30 would be a perfect candidate, although I had no idea what I was actually going to do."

Markus purchased an E30 325i Saloon and began to enjoy its fabulous chassis, indulging in oversteer at every opportunity. Pretty soon, however, he started to feel the itch; he needed more power and with a garage full of tools and a shed load of confidence, decided he would take on the first of four forthcoming engine transplants.

After a hunt Markus found a rare factory bored and stroked 2.7-litre, 250bhp AC Schnitzer S3 engine developed for the firm's E30 ACS3; a hardened and more potent variant of the E30 M3 that utilised a reworked M20 as opposed to the M3's S14 lump.

The installation job was, according to Markus, quite simple, and apart from a small error with the wiring of the ECU (a loose cable resulted in a burnt out Bosch Motronic), a few days later he was enjoying the fruits of his labour. But it didn't last... With a working and unique conversion under his belt he quickly realised that more power was necessary and decided to put his new engine up for sale, to gauge interest if nothing else. Interest in the rather rare engine was high and the offers flooded in, so off it went. With cash on the table Markus began hunting again, and within a few days had found his next target, another revised M20 lump, this time bored to 2.8-litres. It featured Alpha N management and custom induction and came complete with the E30 M3's gearbox, how could he possibly say no?

Again the new engine went in but the performance increase was rather negligible. Not to be defeated, Markus concentrated on the car's styling, fitting a classic M-Tech 2 Aerodynamic body kit that featured the less frequent colour-coded plastic mouldings. He also customised the front bumper to improve cooling by removing the slat. After this he bit the bullet and had the car resprayed in its original Zinnerbar red.

With the new gleaming exterior Markus had been the master of his own fate. "The interior looked shabby against the fresh paint and wheels so I decided to get rid of the car's original cloth seats. I got hold of some black leather E30 325i Sports replacements and they made a big difference, although I'm still looking for some E36 M3 Vaders!" he laughs.

During the same period he also fitted a front-mounted camera which peers through the number plate, and a 7" monitor inside the cabin, housed in a custom red fascia - perfect for recording those track day jaunts, and showing off to his passengers, too!

With improved styling Markus spent some time behind the wheel, but there were begging questions that would not disappear. The handling was not up to scratch and the body roll through the corners was verging on dangerous. Something had to be done, so Markus turned his attention to the suspension, installing INOX Variant 2 coilovers which dropped the car 50mm.





He then set about fitting front and rear strut braces. With a more suitable chassis it was time for improvements to be made to the car's brakes, and as such Markus sought the help of [www.300mm.de](http://www.300mm.de), a company which sells a range of uprated braking systems with one aim – hauling your ass down to speed! One of its custom setups uses E34 540i brake calipers mated to Audi S3 312mm discs. They seemed perfect for the job and Markus was sold. Unfortunately, to get them to fit he would also need bigger wheels, and

his choice, we think you'll agree, was spot on as under the arches now resides a set of polished 17" ASA ARI wheels.

But guess what? New anchors, a firmer chassis and stunning rims weren't enough; it was back to square one. "The new motor was great but it just didn't transform the car as I'd hoped. I knew straight away I wanted to change it and this time I wanted to make a real difference."

And boy he wasn't joking. Markus spent a great deal of time hunting for his next

powerplant and eventually stumbled across a rather unique prospect: a tuned and uprated turbocharged E23 745i lump. The motor had belonged to another enthusiast in Austria who had uprated the turbocharger, fitted a larger intercooler, valves and pistons and revised engine management to suit. It produced some 417bhp.

Unlike the other two transplants some extensive modifications were required if it was to fit and function, so with the help of a friend, Markus got on with the conversion



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and within two weeks it was firing on all six cylinders.

"The very first time I took the car out of the garage I was ambling along waiting for a nice straight to open up. It came pretty soon and I floored the throttle but the boost and surge was so insane that the bonnet just ripped straight off the car, smashing the windscreen before flying off in the wind. I remember thinking 'what have I done here?'" he said.

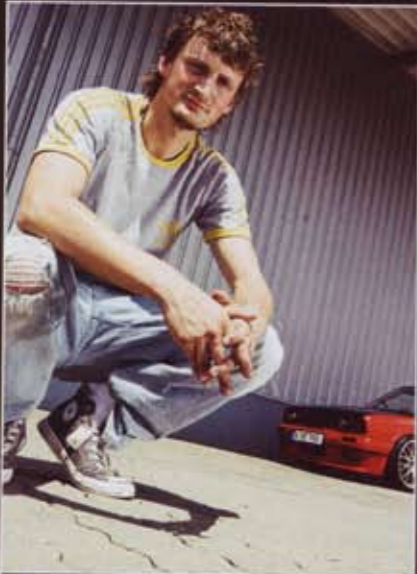
The truth is that even with all that grunt

Markus was distinctly unhappy with the way his pride and joy now delivered its power. "I wasn't used to turbo'd cars at all and the experience isn't for everybody. You have very little power and then out of nowhere more than you could ever handle. On the straight it's great but round a track or on normal roads, if that turbo kicks in at the wrong time anything can happen. I remember going round a roundabout minding my own business when all of a sudden the tyres lit up and I was facing the

wrong way! The linear power delivery of a naturally aspirated motor is very important for controlled driving, especially on the limit. In the wrong gear or at low revs there was so much lag that you had to hammer it constantly if you wanted anywhere near the full 400+ bhp. For me it spoiled the E30 experience because it took over all my focus as the driver," Markus explains.

As impressive as an E30 345i no doubt is, if the power cannot be exploited when and where you want it to, the car becomes about





## DATA FILE

**ENGINE & TRANSMISSION:** 3.6-litre in-line six-cylinder S38, custom exhaust system, relocated oil tank, E34 M5 five-speed gearbox, AC Schnitzer short-shift kit

**CHASSIS:** 9x17" polished ASA AR1 wheels wrapped 215/40 (front) and 245/35 (rear) Toyo Proxes tyres, INOX Variant 2 coilovers, E34 540i brake calipers and Audi S3 312mm discs, front and rear strut braces, E36 M3 steering rack

**EXTERIOR:** Full respray in Zinnober red, M-Tech 2 body kit with colour-coded rubbing strips, custom front bumper with slat bar deleted, black bonnet with custom cooling vents, shadowline grille, rear arches rolled by 2cm, angel eyes, tinted rear lights

**INTERIOR:** E30 325i black leather sports seats, M-Tech steering wheel, silver dial surrounds, volt, oil pressure and temperature gauges

**ICE:** Zenec 7" monitor, four-channel Jackson amp, Sound Stream amp, SPL subs, Axton speakers, BMW tweeters, Sony DVD

as useful as a one-armed juggler. The hunt was again on, only this time Markus was positive he would get things just right.

He and his forum friends agreed that the naturally aspirated S38 3.6-litre lump from the E34 M5 would be nigh-on perfect. Namely because of its awesome low- to mid-range power thanks to the electronically controlled butterfly valve and thrashing potential courtesy of its forged steel crankshaft and lightened flywheel. With 315bhp on tap straight out of the box he was happy with its performance, so went out and located a donor engine, along with the matching five-speed gearbox and, of course, a new bonnet.

But there was to be a change of direction; after completing three conversions Markus and his girlfriend were getting rather sick of the hours spent under the bonnet, so Tauber Motorsport, a firm celebrated in Nürnberg for its tuning work and legendary E30 M3 DTM cars, was selected for the transfer.

Tauber began by stripping the engine and replacing all the worn parts, such as the gaskets, pulleys, coils and ignition leads. It then fitted a new water pump but was very pleased that the new engine was in good nick. The main task was therefore not about getting the motor running, but maintaining the handling characteristics of the original E30. To achieve this Tauber was keen to get the new lump sitting as low and as far back as humanly possible. As we've found out, power is nothing without control, and weight distribution is fundamental to that.

To successfully achieve this the tuning firm first had to modify and relocate the oil tank, then partially remove a section of the rear bulkhead. The manufactured gap meant the S38 could sit a few millimetres lower and further back than the original M20 lump, improving the E30's centre of gravity and therefore its road holding.

The importance of steering feel can also be seen with the adoption of the 3.0 E36 M3's steering rack. A direct replacement which, with its 45° angled teeth, provided the improved responsiveness Tauber and Markus were so keen to induce. The five-speed 'box was gifted a short-shift kit, while inside a sports steering wheel and new dials were also required. These included volt, oil pressure and temperature gauges, in addition to the on-board computer, which was changed from km to mph.

Within a few months the engine was in full working order and running perfectly, and it was time for its first test drive. "The first time I took the car out I knew this was the one. It's producing around 320bhp but the execution of the power is perfect. It's got so much grunt in every gear and you can really work the back end with the throttle. It may not be as powerful as the turbo'd lump, but it's far more useable and that in turn makes it a far quicker prospect." Finally it seems Markus is happy. It may have taken two years of slogging, it may have cost an arm and a leg and in hindsight many aspects may have been a waste of time, but without trial and error he wouldn't be driving an M5-powered E30. He wouldn't have experienced the terror of a turbocharged 417bhp E30 and he certainly wouldn't have been introduced to Tauber Motorsport. All in all it's a learning curve that has ended with a feature-worthy E30, and it's been a hell of a ride, too ●



TAUBER MOTORSPORT