

PERFORMANCE BMW

E30 M3-POWERED '02
blows away the competition



MEDAL OF HONOUR



Dec 2009
£4.50

ULTIMATE BMW
all the highlights from Santa Pod

FINNISH 700BHP E30
with tuned & turbo'd E34 M5 lump

ALPINA B9 E24 REPLICA
combines power, luxury and exclusivity



**1.8 engine swap,
M5 bronze paint,
houndstooth trim
and slammed on 15"
Ronal Racing wheels...
What a way to fettle an E21**

610 BHP M3

A US reader pulls out the big guns with this supercharged, subtly styled E92





>> TYPE V

Seven Series, X5 and X6 owners with more money than they know what to do with can now get their hands on AC Schnitzer's Type V forged wheels in 22". Despite being much larger than the standard wheels they are much lighter thanks to the forged construction, weighing just 14.3kg each. The distinctive five-spoke design looks great and will no doubt be a future classic. The wheels are available in 9.5", 10.5" and 11.5" widths.

Price: £6339.49

Tel: 01485 542000

Web: www.ac-schnitzer.co.uk



>> ZORST

Advanced FLOW engineering (aFe), an industry leader in performance intakes, filters, manifolds and exhaust systems, is pleased to announce the release of its new Mach Force-XP exhaust for 335i.

Featuring polished 2.75" tips, the system uses a unique crossover pipe to equalise pressure and tune the exhaust pulses for greater flow and improved sound. On throttle the engine tone is aggressive, but the irritating mid- and low-level resonance found on cheaper alternatives has been eliminated. Furthermore, in recent tests, aFe's 335i exhaust delivered 11bhp and 10lb ft of torque against the factory system. To add further value, aFe will also include a PRO 5R performance air filter with the purchase of this exhaust system. Sounds like a bargain!

Price: £743.46

Tel: 001 9514 937 155

Web: www.afepower.com

>> TIGHT BOOTY



If you own an E90 3 Series and have struggled to find decent quality and reasonably priced aftermarket parts then you should check out SSDD's latest offering. The firm now has a CSL-style bootlid, available in both carbon fibre and FRP plastic. In addition, SSDD has new replacement LED lights designed specifically for BMW models, each with different housings and sockets for true plug and play experience.

Available for the new Five, Six and Three Series' they do not cause OBC error code, and with the correct housings they are also far more than just cheap LED bulbs upgrades!

Price: Carbon E90 bootlid in carbon fibre £489, plastic £449.00,

LED £34.95/pair

Tel: 07920 575052

Web: www.ssdd-motorsport.com



>> EIGHT BALL

BM Town has released not one but eight new wheel designs for your BMW, all of which are affordable and rather pretty. Available in 18-19" sizes with a variety of widths, there should be something for everyone. From black motorsport designs to silver, polished and deep dish efforts. For the money we think you'll agree they're a steal, so get in there quick.

Prices: £350 for 18" set, £395 for 19" set

Tel: 0151 548 8565

Web: www.bmtown.com

>> SHOPOHOLIC

With Crimbo around the corner you're probably thinking about all the presents you need to buy – okay, you're not – but maybe you should be.

To cater for the car enthusiast, TopAutoCare.co.uk is a one-stop-shop for all your present buying. As it's an online-only retailer all products are great value and with everything from in-car accessories, to wheel trims, performance enhancers, and general maintenance products from all the big names including Autocare, Autoglym and Rain-x, you can't afford not to check it out.

With 500 products to choose from you're sure to find unmissable deals, making it a must-click for petrolheads and the discerning car owner alike.

Web: www.topautocare.co.uk



THE ROUGH TUNING GUIDE



BASIC TUNING TO GET YOU STARTED.

Regardless of which way you sway, there are a couple of steps you can get started with that work on both a normally aspirated motor and a blown lump too. As we do each month, we start the tuning process with freeing up the air flow into your engine. From the factory your car will have a restricted and compromised intake system that starts with a paper air filter in a box. Fresh air from outside is dragged through the poxy paper filter that puts up as much of a fight as it can. If we replace this restrictive paper filter in a box with a more free-flowing filter and feed it with plenty of cold air, your engine will rev much harder and in turn (with more fuel added by the ECU), generate more power. This principal works on all engines and is a great starting point. A basic drop-in replacement panel filter will cost beer money (around £30) but if you stretch that bit further and into three figures, you can have an enclosed induction filter that will draw air in exclusively

from its dedicated cold air feed. Kits like the Pipercross Viper or BMC CDA carbon air box system are two affordable options among many choices that have been tried and tested. Of course you can spend many more hundreds depending on your brand preference and the quality you demand.

With more free flowing air going in, we now need to get the exhaust gases out the other side of the engine. We'd say hold off on uprating the manifold at this stage until you know what final tuning route you're going down. Instead, start with a full performance exhaust system; preferably either a custom-built stainless system built by one of the many UK specialists such as ExhaustsUK, Top Gear, or R-TEC. If you prefer an off-the-shelf solution that you could fit yourself, one name comes up over and over again in our tuning guides: Supersprint. It is an Italian manufacturer and its

systems match keen pricing with good build quality and proven performance increases. With a massive application range, there will be something for practically every BMW from the last 20 years. If you're on a budget, start with just a rear section and then work your way forward, eventually replacing the whole system and losing the power-sapping catalytic converter (that should be replaced at MoT time, though). Between a full performance exhaust and improved induction techniques, some engines will see gains of between 5 and 10bhp, depending on the wear of the engine and how it's driven. But now you need to decide which route to go down, defining the power delivery of your engine...



NORMALLY ASPIRATED: REV BABY, REV

We'll start here with the affordable, simple bolt-on mods and then work up to the ultimate set-up. Although more costly, the higher you go, the bigger the power gains will be.

STEP 1: PERFORMANCE EXHAUST MANIFOLD

Tuning a normally aspirated engine will make it do what it does normally, only harder and faster through increased efficiency. On top of the initial steps above, we start the additional tuning by removing the last restriction in the exhaust system. Replace the factory exhaust manifold with a performance equivalent and you'll have the optimum route for gas flow the minute it leaves the head. Factory manifolds hold the

engine back with compromised design that sees the exhaust

gases taking a tricky route out of the head and over rough castings and constantly changing pipe profiles. A performance manifold will be constructed from tubular sections of pipework, often in stainless steel. The insides of the pipes are made with smooth flowing lines and any steps or joins are smoothed to aid the rapid flow of gases out of the head as quickly as possible. While this is all great news, the even better news is that recently in the last few years, the price of tubular manifolds has become achievable thanks to European companies, such as HotTuning, as one example, producing affordable options. From as little as £130 you could have a shiny stainless manifold in your engine bay, mated up to your performance

exhaust. If you can stretch a little more there are other premium brands available and the associated quality comes with the price.

But, a word of warning: some manifolds are made for LHD cars and may need slight tweaks to fit properly. If you are in any doubt, first check with the retailer and once you get it, offer up the manifold to your engine in the bay and assess if it looks like it'll work. If you're in any doubt, take it to a custom exhaust builder or a garage that can weld stainless steel. Even with some tweaking cost factored in, this is still an awesome performance step for very little money.

