



PROJECT BMW

Text **Dhruv Behl** Images **Ashish Jha**

Right – we’ve dabbled with a lot of aesthetics so far. We’ve redone the interior, stereo, bodywork, and lights. But now, let’s get down to some serious mechanical work – starting with the exhaust.

If you shook the stock exhaust on our 92 325i, there was a fair amount of rattling from inside the muffler. And, even though there wasn’t a leak, it was loud. This meant, of course, that the rockwool and honeycomb wasn’t exactly doing its job of suppressing

sound. Worse than that, however, it was also robbing power and reducing fuel economy. And we can’t have that, can we? The loss in power that is!

You see, an engine is effectively an air pump. And if you can’t get enough air into an engine, and then get it out again efficiently, it doesn’t matter if you have a Lamborghini V10 under the hood it won’t be very good. In this case, we have a very capable, and proven, BMW straight-six under hood, which is not a bad place to start.

Needless to say, the exhaust needed to be changed. The most

obvious way to go would be to replace the stock muffler with a performance piece. There are plenty to choose from, and they would not only look and sound better, but, considering the condition of the current exhaust, would probably perform better as well. Incidentally, BMW makes pretty good standard exhaust systems – if they’re working correctly that is. So, it’s important to replace it with one that’s engineered specifically for that particular model if you’re looking for performance gains.

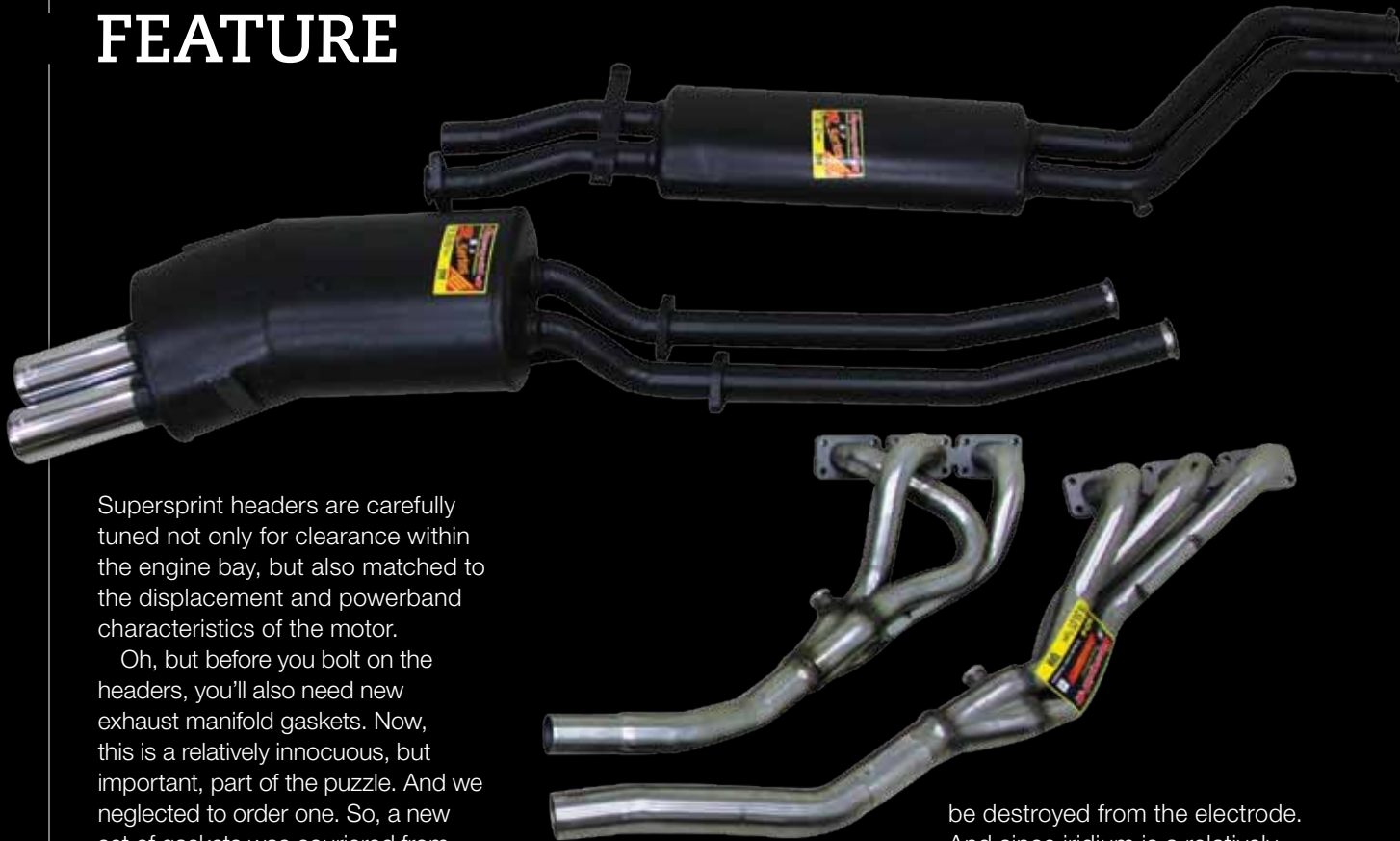
And that’s exactly what we did. Peter Chacko, founder of Pete’s in Cochin, has taken it upon himself to be the guardian angel of this project, and he supplied us with a Supersprint exhaust for our project BMW. But he didn’t just stop at the muffler. He sent us an entire set – right from the stainless steel headers, to the resonator (cat replacement), muffler, and (chrome tipped) tail pipes.

Supersprint is an Italian performance exhaust manufacturer that’s been around since 1955, and they’re arguably one the best in the world. They make custom

exhaust systems for a range of cars, right from Fiat’s to Ferrari’s – with BMW’s thrown in somewhere in between. They’re also one of the only companies that dyno test every application to make sure that there’s a performance gain with each replacement. And I’ve had my eye on Supersprint headers and an exhaust for over a decade now – for my 87’ 325is previously – so they’ve been a long time coming.

Now, I don’t know if an exhaust can be sexy, but when I took it out of the box – visually at least – it certainly met my expectations. The

headers are nothing short of being Italian works of art. Put it next to a Renaissance masterpiece, and I know which one I’d be looking at in greater detail. Of course, being the land of Ferrari and Lamborghini, Italy is known for its metalwork – and you can’t help but appreciate the exquisite hand welds between the joints. The headers bolt on directly, and you simply have to look at them in comparison to the cast iron stock manifold to see how restrictive the factory exhaust really is. In this case, the length and diameter of each pipe of the



Supersprint headers are carefully tuned not only for clearance within the engine bay, but also matched to the displacement and powerband characteristics of the motor.

Oh, but before you bolt on the headers, you'll also need new exhaust manifold gaskets. Now, this is a relatively innocuous, but important, part of the puzzle. And we neglected to order one. So, a new set of gaskets was couriered from Malaysia to make it just in time for us to put together this report. My advice to anyone working on a project car – make a detailed list of every single, seemingly unimportant, part you'll likely need when changing something as substantial as an exhaust, suspension, or electricals.

With the headers sorted, the rest of the exhaust fell nicely into place. Pandit & Co. in Delhi, who installed the parts, had to fabricate some of the hangers by removing them for the stock system and duplicating them on the Supersprint set – but since it was made for this model specifically, there wasn't too much fabrication required. Nevertheless, it still has to be installed with a certain

amount of skill – because you not only have to make sure that there's sufficient clearance, but also allow for a certain amount of movement in the system.

With the exhaust fitted, we also choose to change the oil to Mobil 1 synthetic, and switch the spark plugs to a set of Bosch Iridium Platinum plugs. These not only have an iridium and platinum fused center electrode to extend the life of the plugs, but also four ground electrodes to create multiple spark paths and ensure effective combustion – thereby maximising efficiency and power.

Every discharge of a spark plug causes a small amount of metal to

be destroyed from the electrode. And since iridium is a relatively hard metal, it can withstand higher temperatures and has virtually no electrode wear. A spark plug is something that we don't often pay attention to when we're looking for performance, but if you're not getting an effective spark, you're not fully utilizing the capability of your engine. An iridium plug may not guarantee better performance, but it will ensure an effective spark, and it's a small price to pay for that peace of mind.

The big question, at the end of it all, is – how does it drive? Well, it's never enough – is it? But, the honest answer is actually quite well. The most prevalent difference, and the most surprising one as well, is



the increase in power and torque at everyday driving speeds. It's like miraculously adding a dollop of torque to the engine – the mid-range, around 2,500rpm, is phenomenal. If it previously felt as though you were driving around with the anchor deployed, so to speak, it's now as if a caged animal has been set free. The revs rise much more freely, and the rev counter hunts for the redline like a spaniel looking for geese.

And it's not just the increase in power and torque either – since the engine is now so much more free revving, it's also incredibly civilised and smooth. I can now accelerate in second gear from below 1,000rpm with the drivetrain displaying no hesitation whatsoever. I have to say, though, that I would have preferred a little more noise (which is music to some). However, if you think about it – since it will be an everyday car, it's probably for the best that the exhaust isn't obnoxious. As is, it has a throaty burble on the throttle and a nice crackle on the overrun. Not to mention the fact that the chrome double-barrel exhaust tips poking out from under the rear

bumper look absolutely incredible.

Acceleration tests will have to wait till we get the suspension and tires sorted – because there's no point trying to set a 0-100 time when you can't put the power down! A full set of Bilstein

suspension arrived, but had to be sent back because they weren't a match. Who said working on a project car would be easy? But, all good things come to those who wait. So, stay tuned for more developments. And thanks again Peter. **ax**

Peter Chacko is a successful businessman from Cochin, who is also known as the Britannica of Automobiles. And it's this love for all things automotive that led him to form Pete's in January 2005, which completely transformed the performance aftermarket scene in the country. Pete's started with custom ECU's from Belgium-based PSI technologies. They then proceeded to introduce some of the world's most renowned tuning brands into India, like Bilstein and H&R for the leading suspension systems from Germany, stunning Borbet rims, also from Germany, Milltek

from the UK, and Supersprint from Italy, for the most advanced performance exhaust systems, Carbonio cold air intakes made from aerospace grade carbon fibre from Canada, and many more. Their project cars range from the Mahindra Thar to the BMW 650i and the Audi R8, which has a Pete's performance remap and a Milltek exhaust. Of course, the Octavia



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RS features in several different variants as well, right up to some examples that triple the stock horsepower. So, if you want the mods on your car done right, get Peter on your speed dial or log onto www.petes.in