

EIGHT INTO TWO

I was standing at the end of the pit lane wall with my camera during this year's Sport Auto Tuner Grand Prix, when the silver BMW '02 went past at full tilt making a most un-four-cylinder-like noise.



Normally, I would have expected to hear the scream of a highly tuned four-cylinder and the sucking noises of big Weber carburetors or fuel injection, but instead, my eardrums vibrated to the baritone growl of a bent crank V8.

I 'chimed' on the digital camera screen, looking closely at the image I had just taken of the silver BMW with my 70-200mm zoom. The sticker on the door said it all - MKO V8.

My interest piqued, I picked up the phone a few days after the Tuner GP, and said I would visit the next time I was in the Munich area. That turned out to be just a few weeks later. As I pulled up outside MKO's brand new showroom and workshop on the edge of the village of Wörth, I realised that this was no small under-the-arches outfit. There was obviously some serious money behind this operation.

Company owner, Michael Oberhauser, stepped out to greet me with the enthusiasm a teenager has when he wants to show you his new bike. "Welcome to MKO," he said, "Let me show you around."

The silver '02 sat on the immaculately clean showroom floor next to a black 1968 Camaro that perfectly fitted the bill for a street sleeper. Other than the period Cragar mag wheels, this car looked fairly stock at a glance. But hiding under the bonnet was a 9.0 litre V8 good for 680bhp and 900Nm of torque!

I was even more amazed in the workshop as Michael showed me the other BMW projects he is currently working on. The first was the classic 3.0CS with an E39 M5 motor. At least that is how it appeared at first glance.

Michael raised the ramp the CS was on and I was astonished to see that it was actually a 3.0CS body on a shortened E39 M5 chassis. One of the best engines and chassis BMW has ever made combined with one of their most beautiful classic body designs.

With the wider tracks of the M5, the CS's bodyshell had to be subtly altered with wider wheelarch flares. In the case of the rear, the flaring starts at the sill area in front of the rear arches but you have to look closely to spot it.



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With its wider tracks, lower ride height and modern alloy wheels the CS Coupé takes on a much meaner and more purposeful stance than the original. I have to confess that the look of this modern classic with its slim roof pillars appeals to me more than most current cars regardless of cost.

Despite the 3,000 man-hours it takes to build the CS/M5, it costs just 150,000 euros (SGD250,000). "This is because I use a workshop in Romania for the major work," he explained.

"The labour cost there is one third of what it is in Germany, otherwise the car would have to sell for over 200,000 euros (SDG335,000)," said Michael. "I would like to sell two or three of these CS/M5s, and then I will do a similar conversion to the 635CSi coupé, which you can see over there," he said pointing to a nice, clean example of BMW's 1980s Coupé sitting in the corner.

With my enthusiasm for what Michael was doing coming to the boil, I asked him about the V8-powered '02, which now seemed like a relatively simple conversion compared to the CS/M5 body swap project.

"The '02 cars are very light compared to today's BMW 3-Series, and as I love bent-crank V8 motors, I thought it would be a good idea to shoe-horn the BMW M60 V8 into a car weighing just 950kg," he explained.

"I started the project in 2009 when I bought a green 1502 to use as the base car," he said. "The car was somebody's daily driver up until that point and it did not look too bad from the outside. But when we started to dismantle it, we found a lot

of rust underneath. So the project took on a restoration aspect as well."

This did not really matter as a lot of the rusty areas would have received new metal anyway to beef up the bodyshell to take the power and torque of the V8, which effectively gives the unsuspecting 1502 double the grunt of a 2002tii.

"We welded in a new, larger transmission tunnel to take the modern six-speed gearbox, and the suspension turrets were all replaced with new, reinforced ones," said Michael. "Other critical areas were given double skins for extra strength."

"The Romanian bodyshop we use have some of the best metal craftsmen in their country, and they hand-made some body parts to such a high standard that once the car was painted you simply cannot believe it did not leave the factory that way," he explained.

"We used to have craftsmen like that in Germany in years gone by, but they are very hard to find now as it is often easier to simply replace a part with a new one," he continued. "In Romania under the communist regime however, they did not have access to new parts, and simply had to make anything they could not get."

"For this car, we only bought the bigger parts that needed replacing from BMW, like the wings, sills, rear panel and boot floor," said Michael. "In the end, the restoration and conversion of the bodywork ate up 1,700 man hours, at a cost about one third of the going rate in Germany."



A neat trick with this system is an electric switch that closes valves in the exhaust before the centre silencers, diverting the spent gases to side exit exhausts for scaring the natives in the pit lane!

Once the shell was complete, it was returned to MKO where Michael began the mechanical installation. The suspension is KW's Phase 3 coil-over system with motorsport grade rose-joints used on all the suspension arms and top mounts.

The front suspension top mounts are joined by a tubular alloy strut brace, while the strengthened rear mounts have a steel brace. The brakes use 12-inch vented discs all round clamped by Tarox six-pot calipers in front, and Brembo four-pot calipers at the rear.

Open the big clam-shell forward-hinged bonnet and the normally spacious engine bay is so chock-full of V8 engine and ancillaries, you would be lucky to squeeze a thin crust pizza base around it.

"We had to modify the inner wings to get more clearance for the engine," said Michael. "It was also a fine balancing act to try and get it as far back in the chassis as possible."

As the M10 four-cylinder weighs about 83kg, while the V8 M60 unit is 203kg, Michael was quite pleased to have managed a 54/46 percent front/rear weight distribution in the end. The car now weighs 1,150kg, which is about the same as a new MINI Cooper.

With 286bhp at 5,800rpm and 400Nm of torque at 4,500rpm, the 3,982cc, 32-valve DOHC V8 is more than powerful enough for the '02 out of the box, so it remained bog standard.

That said, the bespoke stainless steel exhaust with 200 cell race grade metal catalytic converters is probably good for another 10 or 15bhp on top. A neat trick with this system is an electric switch that closes valves in the exhaust before the centre silencers, diverting the spent gases to side exit exhausts for scaring the natives in the pit lane! "It is really too loud even for the track and I just put it in to have some fun in tunnels," said Michael.

The V8-powered '02 sends its grunt to the rear axle via a six-speed manual BMW gearbox. "The fact that we moved the engine so far back meant that we had to shorten the propshaft," said Michael.

A Drexler limited slip differential with a 40 percent locking action helps to get the power to the tarmac. "When we took part in the Tuner GP, the car had a 25 percent limited slip installed. However, the heat and the grippy 205/50ZR15 Toyo 888 tyres were too much for it, and it broke after just five laps," he said.

The interior of the car is Spartan in the extreme, with no carpets or rear seat. It is fitted with a full race grade roll-cage with side impact bars. The driver holds onto an OMP race steering wheel, and the lightweight carbon-fibre door cards have red fabric pulls that match the red Schroth five-point harnesses mounted on the Sparco race seats.

The massive brake bias lever on the centre console, Tilton alloy pedals and Stack digital instrument pack are further examples of the serious track intent of this car.



The boot is almost filled by the huge Dekra racing fuel tank, fuel pump and the battery. The electronic management black box sits between the tank and the rear bulkhead.

After returning from Romania, the shell underwent a further 3,000 man-hours of work to finish the car. "My mechanic worked on it everyday for about nine months," said Michael. "In the end it probably cost around 100,000 euros (SGD170,000) to build."

The limited slip differential failure meant that the car was not listed as a finisher in the Tuner GP. However, before it retired the professional driver, Michael Schreier, managed a best lap of 1 minute 19.934 seconds.

To put that into perspective, an E46 M3 will do a 1 minute 16.0 seconds lap of Hockenheim, and the MKO V8 '02 would come closer with its new LSD working properly.

Michael fully intends to use the car on track whenever he can. "It is a lot of fun, and after all that is what I built it for," he said with a grin on his face. On my part, I am really looking forward to my next visit to MKO V8. It seems that some of the best ideas come from enthusiasts who build crazy cars for a hobby!



BMW 1502 V8

Engine: 3,982cc V8
Transmission: 6-speed manual
Max Power: 286bhp
Max Torque: 400Nm
Tuning House: MKO V8



MKO is the acronym for Michael and Katherine Oberhauser. An engineer by trade, Michael, who is 45 this year, sold his very successful company, LOG Hydraulic GmbH in 2007, and stayed on for three years to groom his successor.

Meanwhile, this die-hard car enthusiast and V8 junkie was building his dream for when he was finally free of his professional responsibilities. He bought a piece of land in a new industrial estate and began to work on the design and construction of his showroom and workshop facility.

MKO V8 formally opened in March 2011, with two employees, a few cars and an 800bhp capacity, 300km/h MAHA four-wheel dyno, and lots of ideas for 'unusual' V8-powered BMWs.

Always a sucker for V8-powered classic roadsters, Michael is also the European dealer for Californian-based Luca. Their LC 470 roadster is built along the lines of the classic late 1950s Lister racecar, which was powered by a Chevy V8.