

# Straight Six Magazine



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Edition

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**BMW'S AWESOME 500BHP M3 GT2 TO RACE AT  
THE NURBURGRING, SPA AND LE MANS 24H RACES!**

**BMW'S E70 X5 RECEIVES A MIDLIFE FACELIFT AND GOES ON SALE IN JUNE**



Magazine of the  
**BMW CAR CLUB**  
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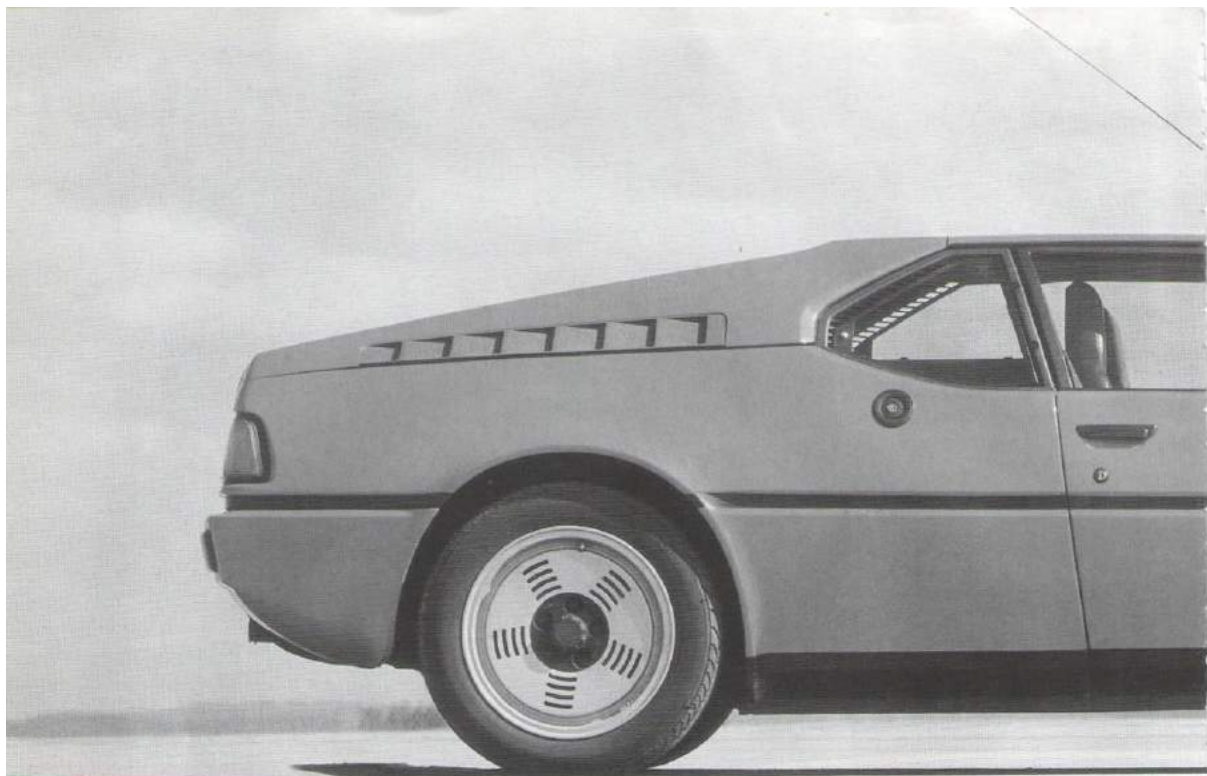
# Probably the best BMW M1 in the World...

Words by Jeff Heywood  
Photography by Don Detlefsen and Menno Vermeulen





A bold statement, but when you already own an M1 yet your passion for BMW's one and only supercar still hasn't been quenched, there was only one thing the owner could do – purchase another M1 and then have it restored to a standard better than when it left the factory...



Menno's donor M1 was delivered to the WerkShop complete with its 'dadgy' Candy Apple red paintwork and aftermarket alloy wheels. The car was then completely stripped. Here we can see the driver's side footwell area with all carpets and soundproofing removed and the M88 engine before it is removed from the shell

**About this restoration:** *Menno Vermeulen is the quintessential car lover, a true perfectionist! He has a few exotic cars but a couple of years ago he purchased an M1 and fell in love with the styling and the way the car drove. We removed all the US conversion items on that car and returned it back to its original European form (the M1 was never officially imported into the US).*

Menno then started to think about buying a second M1, and making it into the finest example in the world. The task he presented to us was to build him an M1 that was perfect in every respect: a true show car. What you see here are the results of the challenge – Don Dethlefsen and Mike Marjanovic from the WerkShop.

Menno searched high and low for a donor vehicle. The car didn't need to be 'concourse' but it needed to be straight, low mileage and rust free. He finally found a car that fitted the bill. The M1 in question was built in 1981, was No 435 off the M1 'production line' and carried the VIN No WBS59910004301435. The previous owner had decided against better judgement to have the car repainted in Candy Apple Red and had fitted similar aftermarket wheels to those found on a period Ferrari – making it obvious he thought Munich's finest should opt one of Maranello's inferior offerings – why didn't he just buy a Ferrari? The odometer reading stood at just 760 miles but Menno was unsure if this was entirely accurate.

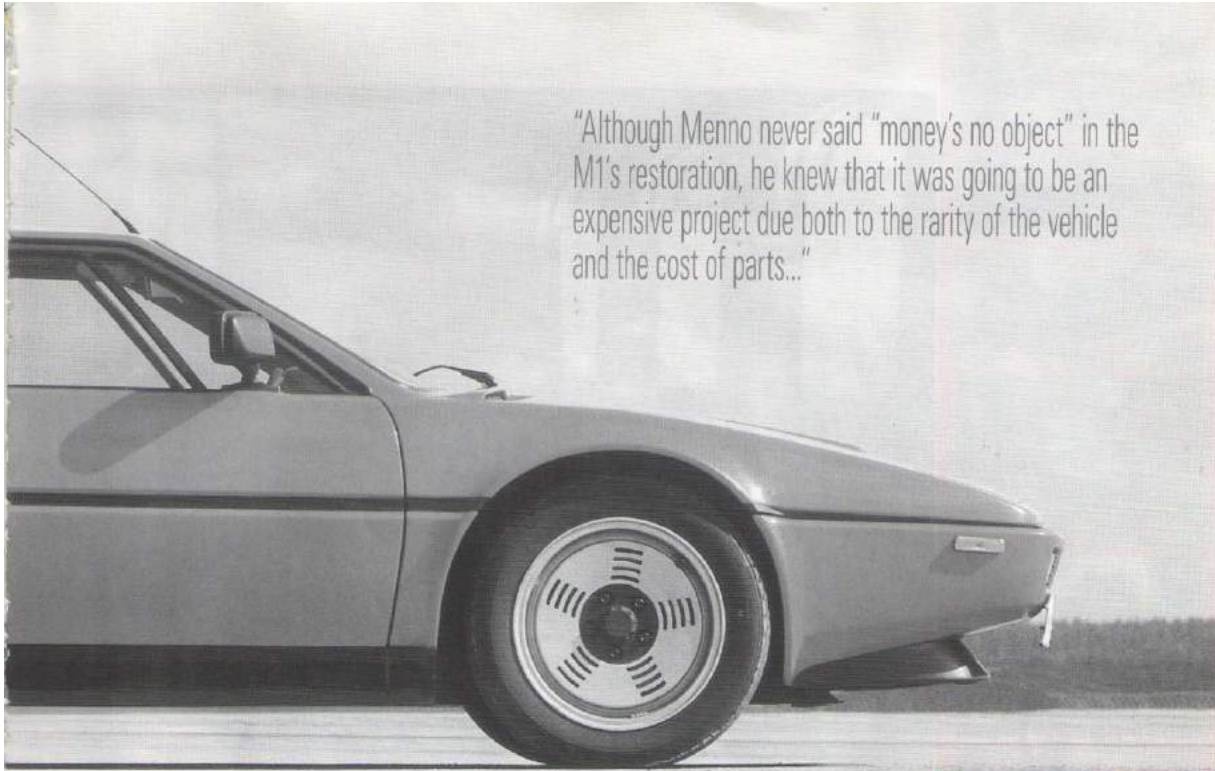
There seemed to be a lot of rust in the fuel-tanks, reportedly a very common problem for M1s that sit still for too long, so they would either need to be totally flushed and re-painted or new tanks fitted. The original Campagnolo wheels were also missing. Only the front wheels (narrower than the rear ones) are available from BMW. There is at least one private party in Germany that still has complete sets of NCS wheels available. Menno paid \$1950 for a set including the original balancing weights, valves and centre caps.

Menno then had the task of finding someone he could trust to carry out the restoration. It didn't take

long for him to hand over his newly acquired M1 to Don and Mike at the WerkShop – Menno said "I've been going to the WerkShop with my original M1 (see photo) for some time now and I was always very impressed with the wonderful restoration work done there. It is truly amazing how they can take an old, rusty car and turn it into something immaculate, pristine and mechanically sound; something that is better than what it was brand new. I'd been thinking about asking Don Dethlefsen, the proprietor of the WerkShop, to start a restoration for me since I first walked through his door. Naturally, the question of the make and model of the project car was an important one. I couldn't think of any car more worthy of the WerkShop's tender loving care than the M1. This is how, even though I already had one of these *objets d'art* sitting in my garage, I ended up buying another one!"

Although Menno never said "money's no object" in the M1's restoration, he knew that it was going to be an expensive project due both to the rarity of the vehicle and the cost of parts, plus one must remember that the M1 is now over 30-years-old, so plenty of the original bespoke parts/trim etc may no longer have been available. "M1 parts are not cheap but prices seem to be in line with the prices for parts of other (exotic) cars" said Menno. "It is amazing how many parts can still be ordered through regular BMW dealerships. Some parts appear to be truly NCS ('New Old Stock'). This describes items that have (literally) been sitting on some shelf in some German warehouse for the last 25-30 years. These parts look like they were never used but manufactured many years ago.

To their credit, it seems BMW stockpiles parts for their offerings of yesteryear. Other M1-parts ordered from BMW seem to have been made relatively recently. It is my understanding that BMW, through 'Mobile Tradition' (now BMW Classic) will keep producing M1 parts as demand for specific parts accumulate. This is good news for M1 owners; not all parts are available all the time and parts are not especially cheap but BMW



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seems to genuinely care about its history and is willing to give support to people crazy enough to try and keep old BMWs on the road.” Project M1 was delivered to the WerkShop in March of 2006 for what Menno thought would be an 18 month restoration ...

The first few weeks were occupied by some light trim stripping and parts ordering/chasing. The full strip down finally started in May and lasted for a couple of weeks. The car was now completely disassembled, and the engine and transaxle was removed from the frame leaving a bare shell. The glassfibre body and tubular frame were then ‘media blasted’ to remove all traces of the candy apple paintwork, undercoat, primers and

underbody sealants. With hindsight, media blasting probably wasn’t a good idea ...

Whilst the body and chassis were being blasted, the engine was completely stripped; all individual parts were either cleaned and revitalized or replaced with NOS parts. Apart from some gaskets (most notably the head-gasket) everything was ready to be put together again. The ZF gearbox was sent to RBT Transmissions in California for a full rebuild while the Kugelfischer fuel pump and injection system was rebuilt locally.

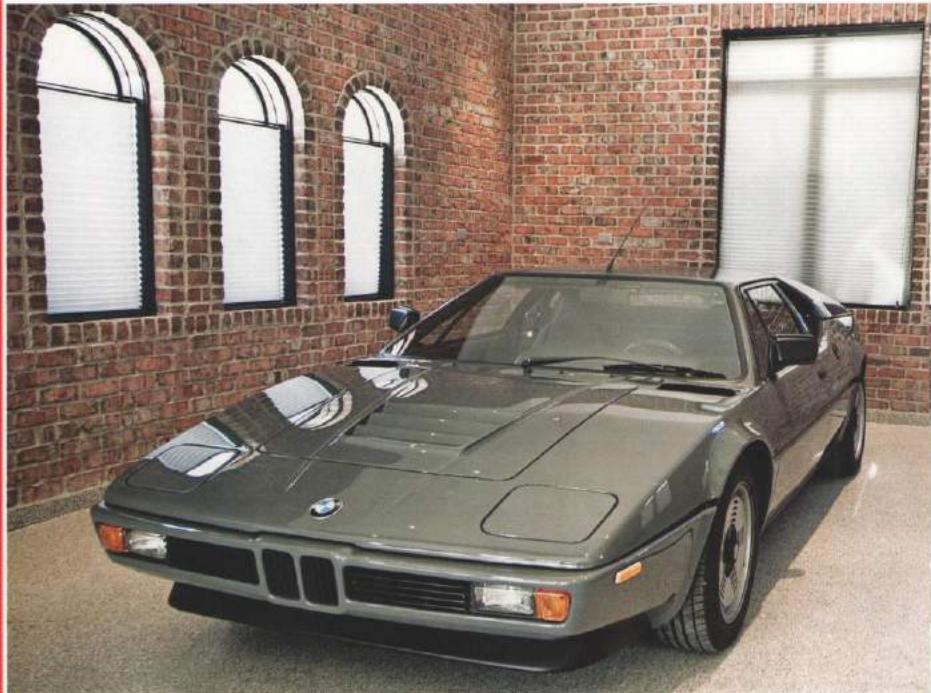
Early September and the stripped bodyshell was delivered to a master bodyshop in Milwaukee. Menno had carried out some research and had found that this



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ProjectM1 was media blasted and then sent to the bodyshop for plenty of body prep (see article!) before painting - eventually! New ‘European’ bumpers were sourced to replace the ugly federalized US ones. Menno also paid a visit in his red M1 to allow bodyshop owner Bob Bennett to take photos to ensure the paint/trim finish is 100% accurate



shop worked on a lot of hotrods and had built up a huge reputation and experience working with glassfibre. For the next three months nothing seemed to be happening and it stayed that way until the body came back from Milwaukee, although the guys at the WerkShop had been busy bead blasting and refinished parts like the anti-roll bars, various suspension parts, the brake master cylinder, cross members, etc and refinished with a 'magic' two-component veneer, making the parts better than new. Not even the Germans had this stuff back in 1980!

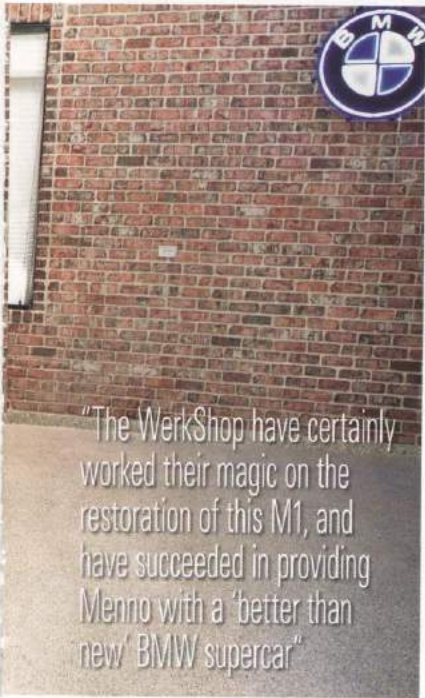
Menno decided to pay the bodyshop a visit in late December of 2006 because the proprietor Bob Bennett was sounding a little nervous over the telephone about the fibreglass body plus they wanted to see his original M1 so that they could make detailed drawings and take photos of where body colour ended and black trim

began etc. It transpired that the media blasting wasn't the ideal way to remove paint from a glassfibre body. Most of the lines that visually define the shape of the M1, like the ones that can be seen running down the bonnet on either side of the louvers and the line that runs up the A-pillar and along the edge of the roof, disappeared when blasting was used to strip the old paint. A lot of time, blood, sweat and tears would eventually have to be spent and shed to bring those lines back...

The second problem the guys had was with the colour – Menno's choice was the original factory Grey. There were five different colours that the factory painted M1s in, white, red, orange, blue and grey. Only four cars from the total run were painted at the factory in grey, and all four were in Germany! To make matters worse, the formula for the grey paint was never saved

Whilst the ProjectM1 was away at the bodyshop, the guys at the WerkShop stripped the engine and rebuilt it using NOS parts. The original crank was sound but the WerkShop guys fitted new connecting rods, bearings and Mahle pistons. The 6-branch manifold was re-polished and looks like a piece of art and the rocker cover was refinished to a high standard. They also either bead blasted and repainted all suspension parts or fitted new, a new clutch was sourced and the whole transaxle was refurbished and repainted and the brake calipers were re-passivated. Finally, the engine was then rebuilt to this stunning finish





"The WerkShop have certainly worked their magic on the restoration of this M1, and have succeeded in providing Menno with a 'better than new' BMW supercar"

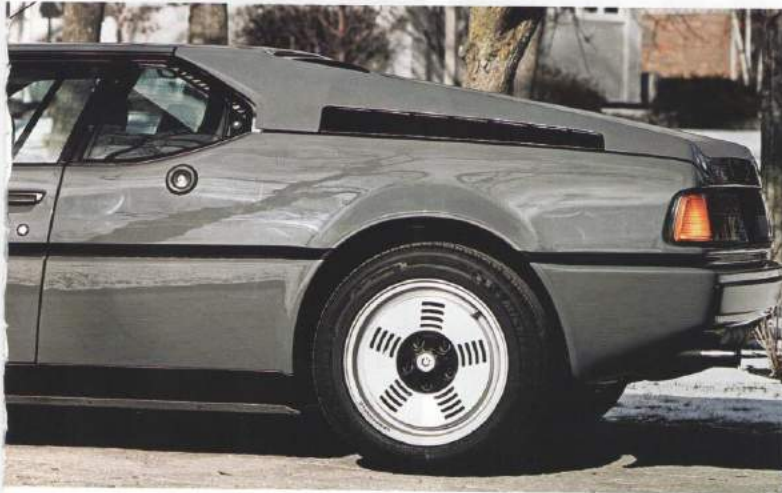


by Glasurit or the factory! Don suggested to Menno that he should join the M1 Club in Germany. Menno then worked with the club President who kindly located one of the original Grey cars. A headlight cover was then 'borrowed' from said car to "read" the paint formula and then the colour was mixed from those specs - phew! The re-painted bodysell finally arrived back at the WerkShop in May 2007 - If anyone at the time had said "perfection takes time" Menno would have punched them in the mouth! It is probably true though, as the new paintjob looked superb.

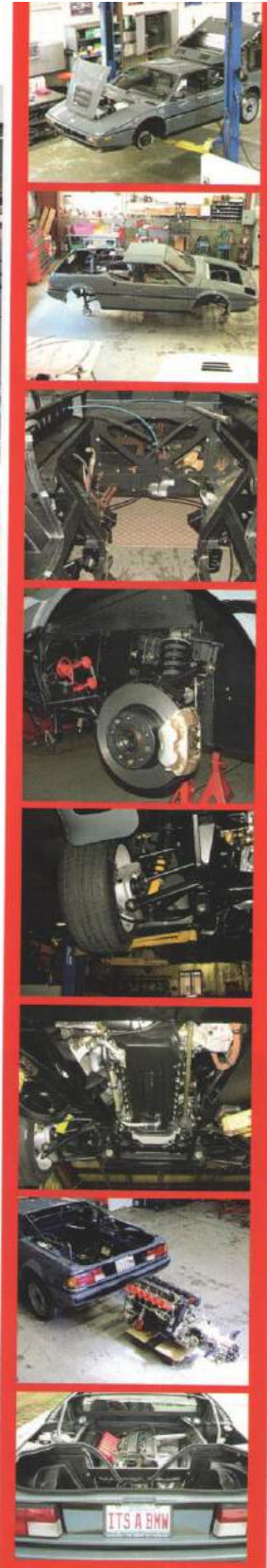
The WerkShop is a busy place with lots of ongoing projects as well as day to day servicing and repair work going on so although in a perfect world the guys would give Menno's car their undivided attention, the fact is that Tom Kelly - the WerkShop's master BMW mechanic - had not been working on the project without

interruption. This is one of the hardest facts one has to learn when you have a car booked in for restoration - the shop just can't drop everything and work solely on your car - life, and work on their customers cars has to go on! And so Christmas 2007 was reached, and the end of ProjectM1 was in sight, as was the second anniversary of the start of the project!

Four months later and the engine and gearbox were now in situ (see photo), the project inching ever closer to its conclusion, although a problem with the Magneti Marelli ECU would test everyone for a good few months. ECU Problem - As mentioned previously, the engine was completely rebuilt using NOS parts. Most engine and ancillary parts are still available for the M88 engine, except for the Magneti Marelli ECU (Part No 12141304851). This 'RMFD' Control Unit is a crucial part of the M88's ignition system, unfortunately the



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At last, ProjectM1 is finally back from the bodyshop, its factory Grey paintwork looking resplendent - now the rebuild begins!

The refurbished engine bay awaits the M88 engine. The suspension is fitted, and here's a view of the suspension and ancillaries from below. A view of the mighty M88 engine in place as seen from below. This photo shows just how much space the engine and transaxle requires, and here it sits proudly once more in the engine bay



The underbonnet area is completed – check out the high standard of workmanship. The next two photos show just how much wiring and trunking runs through the centre console. Menno is 6'2" so every inch counts to provide a comfortable position in the M1. The rails that give the seats fore and aft adjustment have been eliminated, resulting in an additional 1 to 1.5 inch of precious headroom. ... The upholsterers did a fabulous job with the interior re-trim, thankfully the fabric for the grey cloth inserts on the seats and doors is still available from BMW, and here's a photo of the interior, 99% finished and looking pretty stunning

ProjectM1's original unit wasn't functioning properly. The problem became exacerbated when they discovered on the RealOEM website lists this part as "Ended", and so the search for a replacement began. The Magneti Marelli unit is the bane of 'little-used' M1s. The unit 'likes' to have a regular, full power supply to it, so a strong battery and a trickle charge is a must, plus damp can also invade the unit and causes it to malfunction – it is a problem BMW UK's M1 suffers from on a regular basis as do many UK and European based M1s that are in storage or are used sparingly. Anybody who knows anything about digital technology will tell you that this is a field where substantial progress has been made in the last 25 years. Menno therefore chose to replace the old unit with something more modern rather than trying to find somebody that can fix the old one.

Google came to the rescue! There is a company called Lenz Motorentechnik in Germany that makes a modern replacement for the faulty unit. They can deliver the updated technology in two ways. They can build the new electronics into the old (Magneti Marelli) box, preserving the original under-bonnet look, or they can send a complete replacement for the original box, that looks, if you squint really hard, almost the same as the original. The replacement seems to have the exact same dimensions as the original. It also has the same type of connectors on each side – problem eventually solved. Menno did try to come up with a backup plan but he hasn't found any other product that can simply replace the Magneti Marelli ignition control unit while leaving everything else the same. August arrived and

the project was then delayed due to serious health problems with the upholsterer. Another month or so now is all that was needed and the re-upholstering of the seats, door cars etc plus making and fitting the custom carpets would be complete. Thankfully, the grey cloth used to cover the seat and door inserts is still available from BMW.

In October 2008 Menno received an email from Don that he had been waiting for, for a long time – "Menno, the M1 is finished" Don said, "The door is open and #435 awaits your arrival on Saturday for delivery ... As you can see, the door panel is on, and I've solved the light above the radio issue ... Otherwise, it's been an interesting project and we thank you for giving us the opportunity to show you what we can do at the Werkshop. I think it's safe to say you now have the finest M1 in the world. I suspect if you put it side by side with a brand new one, it would look every bit as good, and better in many areas." I think most of us will agree with Don's sentiments!

The project has been a labour of love for both Menno and the guys at the WerkShop and has taken the best part of two and a half years to complete, but it has been well worth the wait. Menno has nothing but praise for Don and the guys at the WerkShop – "their dedication to producing the best has been unflinching, and the quality of work outstanding." He won't disclose just how much the whole restoration has cost, but it has obviously been an expensive exercise. But when you want the best in the world, I'm afraid money really has to be no object!

