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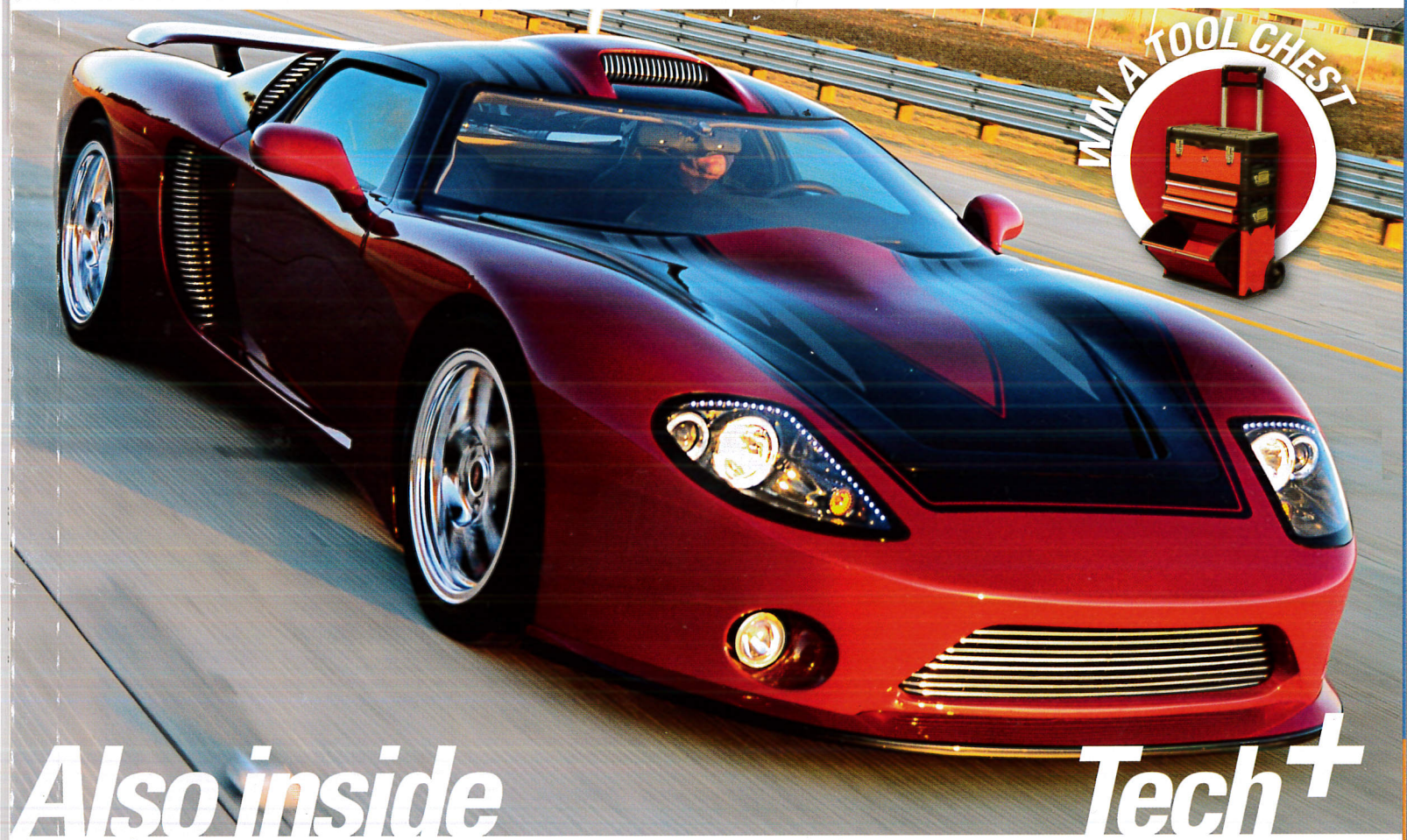

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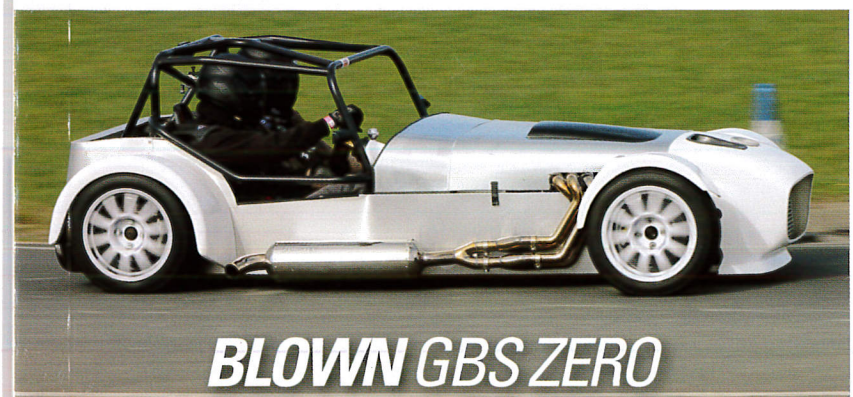

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STATESIDE SUPERCAR

Steve Knecht didn't want to build a standard GTM from Factory Five Racing. Steve Temple discovers the finer detail that has gone into this extraordinary build.

Essentials

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Factory Five's GTM supercar is based on the running gear from a 1997-2004 Chevrolet C5 Corvette along with a Porsche G50 transaxle. It's a stunning looking car that can thankfully be constructed in kit form and is available in the UK via European distributor Hammink Performance of the Netherlands.

While some kit builders prefer to follow the instruction manual, others throw it out and follow their own instincts instead. That's the case with Steve Knecht and his GTM. He couldn't leave well enough alone, and has added an astonishing level of customisation.

As mentioned, the GTM uses the Corvette C5 as a donor, which is quite expensive to purchase in the UK at around £15,000 or more for a roadworthy and maintained example, but the resulting car is unquestionably so much better. The parts that are used include the obvious, such as the engine and gearbox, plus the hubs, uprights, suspension components (except for the leaf springs and dampers), brakes, fuel tanks, cooling system, wiring, wheels and tyres. Even the steering column, wiper motor and seatbelts can be used.

With kit prices via Hammink starting at 19,500 Euros (plus taxes), expect a final build to cost between six and seventy thousand Euros (£53-62,000).

Steve Knecht is from California and prior to building the GTM seen here, he had gained plenty of experience with other cars and kit cars. He started young, building go-karts, mini bikes and anything else he could ride. In high school he bought the family's 1970 VW Beetle. That's where all that go-kart work paid off, as he converted the bug into one hot street car ahead of the Cal-look craze. This practice of drawing on early experiences would bode well for later projects.

After high school Steve went to work as a tune-up mechanic at a local dealership, and then moved on to working as a diesel mechanic. At 23 years old, he decided he was tired of working for someone else and wanted to have his own business. Using the experience of building his own hot-rod VW, he opened Volks Works, a VW repair and fabrication shop. The Cal-look VW phenomenon was in full swing in the early Eighties, and Steve and his crew

turned out some of the VW show cars of the era.

For the last 20 years Steve has been doing work for Frank Hinmon, who has a fine collection of classics, customs and street rods. About four years ago he said, "Hey Steve, there's a new kit car I want to build." It was a GTM from Factory Five Racing and Steve had already built a couple of MG TD replicas and a Sebring kit car. Even so, with the eclectic taste Frank has in cars, Steve was a little hesitant about taking on a GTM.

Fortunately there was someone building a GTM in Bakersfield at the time and Frank took Steve over to look at it. The second Steve saw it, he knew that it was going to become the fulfilment of a lifelong passion, since he had always wanted to build a car from scratch. He felt that no matter how cool you make an existing car look, it's still just a modified car. There's nothing like the feeling of accomplishment of assembling an entire car—not to mention taking it to an even higher level of finish.

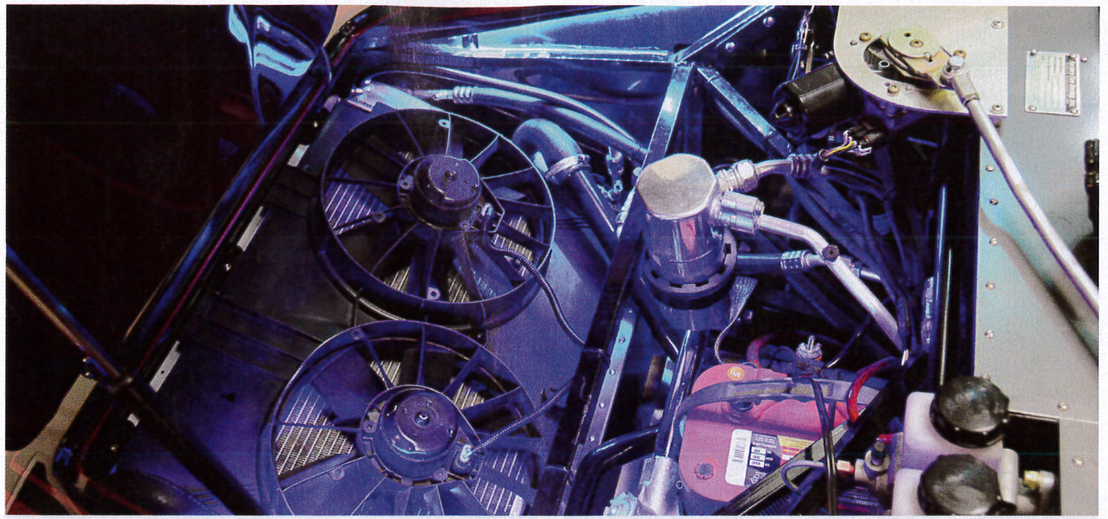
Frank had only two conditions: "You can't paint it blue or pink." Okay fair, enough. So Steve and Frank struck a deal. Steve would bring his years of building experience and a full machine shop to build the GTM, as long as Frank would write the cheques. In retrospect, Frank got the best end of the deal because while there is probably nearly $50K total investment in this car, compare that to four years of long nights, weekends and weeks of vacation time - easily 4000 hours. But no complaints as Steve would finally be able to indulge his automotive impulses to an unprecedented degree—and then some.

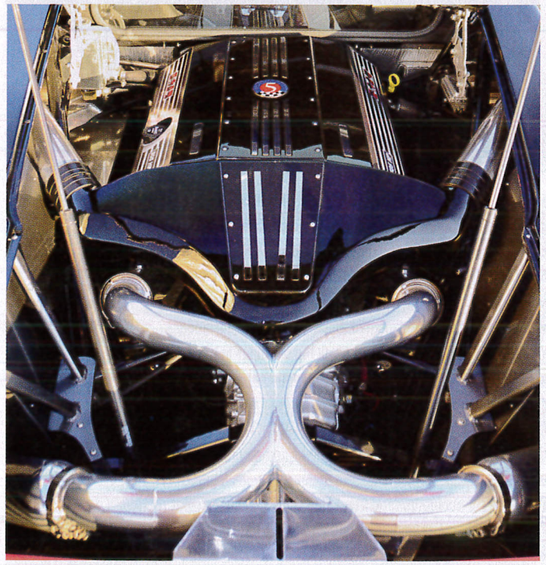
The GTM kit arrived during April 2009, but Frank had been busy long before, doing what he does best (finding the best deals, since he's in the real estate business by trade). He purchased a salvaged 2004 Z06 Corvette for $7500, and found a company that would remove all the parts he needed for the build and keep the rest of the donor car in trade for the labour.

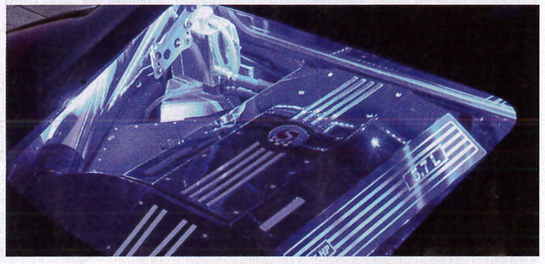
The engine only had 17,000 miles on it, but was stripped down to the long block so high-flow heads and a camshaft could be installed. Frank also found a low mileage G50 gearbox for $3500. With all the major components ready and waiting when the kit arrived, assembly to the go-kart stage went pretty fast.

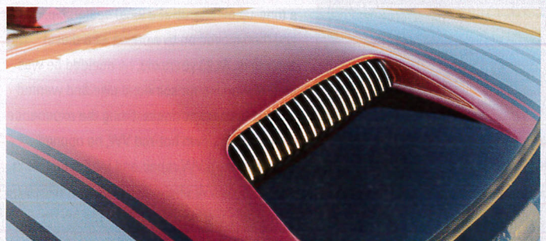
All the suspension parts were fully disassembled, smoothed and powder-coated in chrome metallic, and the aluminium panels powder coated Argento Grey after drilling and fitting. Chassis detail went to the extreme, with features such as every bolt measuring 1/4 inch or more being drilled and tapped so a custom billet nut cap could be secured with a stainless steel button head screw. The same button heads hold on all the aluminium panels. After the suspension work, the engine, gearbox and exhaust were installed. Then the chassis was taken to Ted Harrison of Quick Racing Products in Stockton, California, for a custom wiring harness.

Below left top: Rear lights have been custom made to enable LEDs to be fitted. Below left bottom: Roof scoop flows fresh air into the engine. Below right: Air scoops were designed and made by Steve and are fully operational









Above: Strips of LEDs help to illuminate every aspect of this GTM. Above left: 5.7-litre Chevy is mated to a Porsche G50 transaxle. Above right top: LED illumination inside the engine bay looks stunning. Above right bottom: Once the sun has disappeared, there's the chance to see the interior fully lit.

Since it was never intended to build a bare-bones competition car, creature comforts were included, such as one-touch power windows, heads-up display, automatic lights and intermittent wipers to name a few, all transferred over from the Corvette C5. Harrison also installed the GTM-faced instrument panel from the Corvette. He had developed an anti-roll bar kit for the GTM as well that he expertly installed, along with his aluminium gas tanks

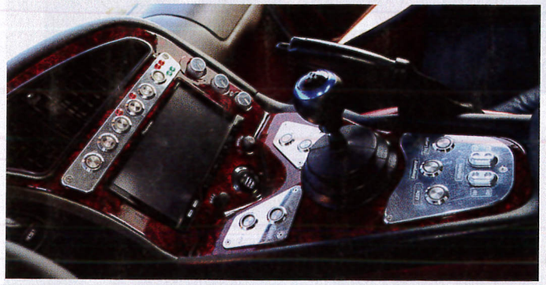
body look just the way he likes them, smooth and curvy. It had been briefly installed on the chassis to trim all the moving parts, ensuring that everything fitted and to make the modifications that could be done only with the body mounted. Steve thought the tilting front end was pretty cool, but didn't think he had the skill to make it open and close or fit the way he wanted, so he determined that the only way to get the look he wanted was to fabricate a single-piece front end and bonnet.

Another area that he felt needed addressing was around the door glass, especially in the A-pillar area. So he fabricated a set of window frames for the glass to seal into. The door frames required the rear-quarter glass area to be reshaped to continue the flowing lines. So he fabricated some fully functional, fresh-

one for the roof after lowering it one inch to allow a larger air flow into the engine. But his original scoop design just didn't do it for him, so out came the Sawzall and a Factory Five roof scoop went in instead.

Since Steve and Frank's vision for the car was to be a street supercar, and the factory vents in front of the front tyres and behind the rear tyres looked more at home on race cars, they decided to fill them in. Also, the front nose opening was deemed too big, so it was reshaped to make it smaller. The air intakes behind the doors were deemed too small so they were enlarged.

Neither Frank nor Steve thought the rear lights or headlights were up to the level of finish they were trying to achieve, so Steve designed and built some custom headlight buckets that



The exhaust was routed out to the custom openings in the lower corner of the body. The registration plate opening was reshaped to tie in with the rear lights. The standard diffuser was a little too aggressive so it was cut down and fitted into instead of onto the body. Any respectable supercar needs a wing and front spoiler so these were also custom fabricated to finish off the look.

INTERIOR DESIGN

With most of the major bodywork done, it was time to move inside. Since they opted to put in the Corvette's instrument panel, a custom dash with a working glovebox was required. Three different versions were tried before choosing the current model. Steve's experience with car audio came in handy for designing and fabricating a custom interior that would hold a 1000-watt sound and AV system. That meant fabricating custom door panels to incorporate door pulls and JL Audio six-inch mids and one-inch tweeters. And also designing and building a sealed enclosure for the eight-inch JL audio subwoofer that resides in the centre console. The centre console also holds all the LED switches, Pioneer double Din head unit and RFID push-button starter. At the back of the console is another cubby for assorted items such as cleaning supplies.

All of the interior panels were made of .030-inch aluminium, covered in Landau foam and red, grey or black leather. They all clip in and can be removed. Custom roll bar covers were fabricated and covered in grey vinyl to complement the grey velour headlining.

With most of the fabrication done, it was time to remove the entire interior and pull the body off the chassis for the final bodywork and paint. For painting, the body was put back on the sanding buck. The doors, bonnet and engine lid were hung. Steve sprayed on one coat of sealer and two coats of the red base coat, and then three coats of the red pearl coat inside and out, plus two coats of clear. Everything was colour sanded using 600-grit and then the doors, bonnet and engine lid were hung in their respective holes.

Next, the graphics were laid out and sprayed. At that point everything was pulled back apart so the graphics could be continued through the door openings and everything would be sprayed with two more coats of clear, inside and out. After a couple of weeks, everything was colour sanded using 1000 grit, then 2000, cut with a cutting compound and finished off with a polishing compound. The body was then reinstalled on the finished chassis.

With the body safely back on the chassis it was time for final assembly. This is the most fun part of the build for Steve. It's also when the laws of physics no longer apply. Fresh paint can cause a tool that was simply dropped on the other side of the shop to magically bounce and fly horizontally.

The entire interior was lined with a layer of thermal protected Hush Mat. Then all the interior pieces were reinstalled. Doors hung, bonnet fitted and engine lid attached. When installing the glass, Steve discovered that the rear window just didn't fit the contour of the car quite right, so a piece of polycarbonate was cut and fitted instead. Billet grilles were designed and fabricated to fill all the openings in the car.

After everything was on the car and the ride height set, it became apparent that if the car was to be driven at the level that looked the coolest, a front end lift was going to be needed just to get out of the driveway. So back to the computer and Steve designed a lift system that could smoothly lift the nose two inches in about three seconds flat.

Further details were added at the time of assembly, including blue LEDs in all the grille openings under the bonnet and engine bay. An engine cover from a V Raptor provided the starting point for a custom air cleaner cover to be fabricated that ties in with the side scoops to provide fresh air to the engine.

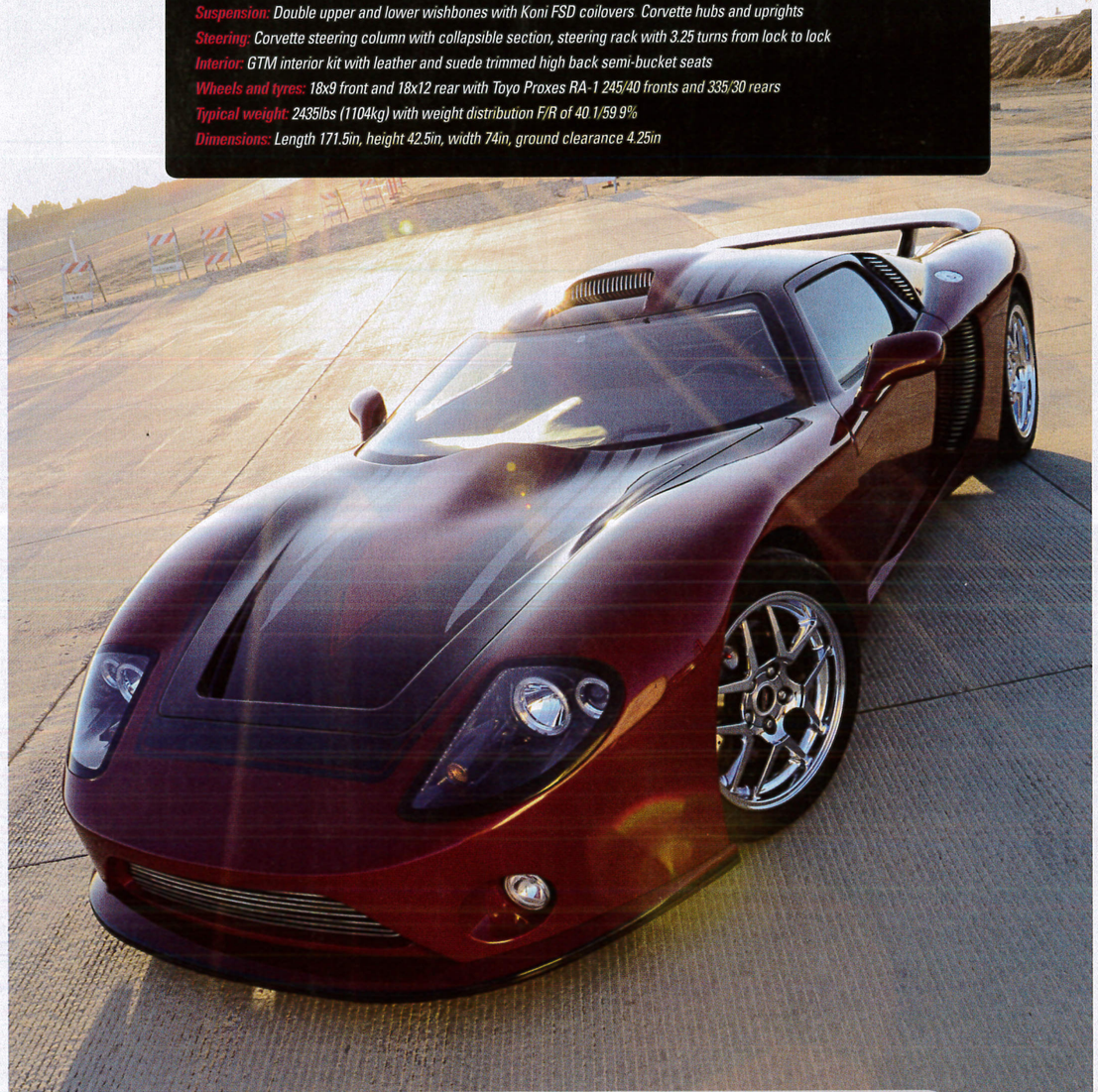
Believe it or not, all of the preceding description is actually a Reader's Digest version of what went into this car.

"Like most projects, once you start modifying one thing, it leads to ten others and so on," Steve admits. "But that was the thrill of building this car. There were no boundaries. It was always my dream to be able to build a supercar from scratch just the way I wanted, without having to worry about budgets, customer expectations, timelines or any of the other factors that limit creativity." ■

Above: Dashboard is version number three and looks stunning. Above left: Centre console houses an assortment of switches, including the ultimate accessory: a push-button starter. Above right: Steve designed his own window framework for the GRP doors and altered the air intakes around it.

Technical

Make and model: Factory Five Racing GTM
Chassis: Spaceframe with integral six point roll cage, crumple zones, footwell protection and side impact bars. Steel floors
Body: GRP
Donor car: Chevrolet Corvette C5 manufactured between 1997 and 2004
Engine: 5.7-litre Chevrolet V8
Gearbox: Six speed Porsche G50 transaxle, 3.44:1 final drive ratio via LSD
Front brakes: Vented disc brakes all round (13in front and 12in rear)
Suspension: Double upper and lower wishbones with Koni FSD coilovers Corvette hubs and uprights
Steering: Corvette steering column with collapsible section, steering rack with 3.25 turns from lock to lock
Interior: GTM interior kit with leather and suede trimmed high back semi-bucket seats
Wheels and tyres: 18x9 front and 18x12 rear with Toyo Proxes RA-1 245/40 fronts and 335/30 rears
Typical weight: 2435lbs (1104kg) with weight distribution F/R of 40 1/59 9%
Dimensions: Length 171.5in, height 42.5in, width 74in, ground clearance 4.25in



THANKS

Steve Knecht would like to thank his Dad, Clifford Knecht, who has supported Steve in what he calls, "all my goofy ideas since before I bought my first car from him all those years ago. He was always there when I needed something done. Because of this car, I was able to spend many hours with my dad that I wouldn't have had if not for this project." He would also like to thank his wife, Teri who was always supportive and ready with a sandwich or anything, plus all the support from people on the GTM forums.