

# De Tomaso of

## 2001 De Tomaso Guar 

*Story and Photos by Mike Drew*

**T**he De Tomaso Guar  was first unveiled back in 1994, and at the time it represented a giant leap forward for De Tomaso who, with the Pantera, had spent the previous 25 years building what was essentially the same car. While the Pantera was certainly state-of-the-art in the early '70's, it had grown decidedly long in the tooth by the time production ceased in 1991, although admittedly the Nuevo Pantera did boast some useful chassis improvements.

Rather than making another small evolutionary design change, De Tomaso was determined to once again re-establish his company as a maker of cutting-edge cars. Designed to compete in the marketplace with the likes of the

Ferrari F-355 and the Porsche 911 Turbo, the Guar  represents the high-water mark of De Tomaso engineering achievement. Starting with a clean sheet of paper, De Tomaso engineers designed a new chassis that was a complete departure from the Pantera, and in fact hearkened back to the earliest De Tomaso design, the Vallelunga. For 2001, the car has received a few subtle design updates which warrant giving the car a detailed look.

The heart of the Guara is its unique central spine, a sophisticated trapezoidal-shaped extrusion of aluminum and composite honeycomb, whose hollow center doubles as the car's 21-gallon fuel tank. A lightweight alloy subframe bolts to the front to support the front

suspension and cooling system, while an elaborate forged aluminum casting bolts to the rear and supports the engine and gearbox. Another large ribbed casting between the engine and transaxle forms the bellhousing and also provides the anchor points for the rear suspension.

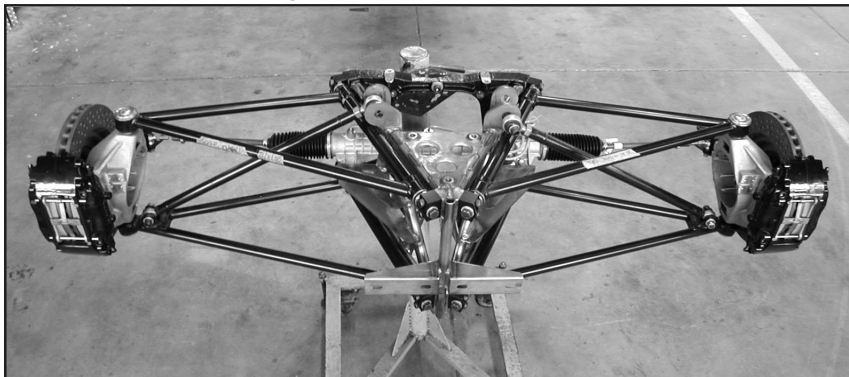
At a time when competitors were equipping their cars with Pantera-style double wishbone-and-coilover suspensions, De Tomaso utilized the latest Formula-1-derived design, where unequal length A-arms are controlled by co-axial Koni springs and dampers mounted horizontally and operated by pushrod. The British race-engineering firm KIA helped design the suspension to produce anti-dive and anti-squat ge-



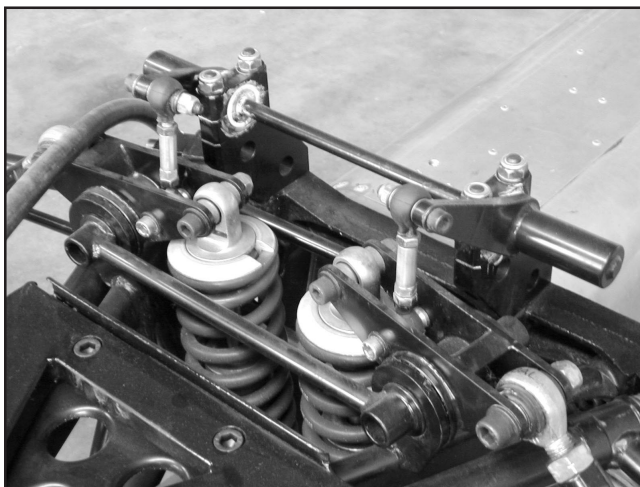
# the Quarter



*The central spine is the heart of the Guará's chassis. The front subframe holds the suspension and radiator, while two massive extrusions are joined by a cradle which supports the engine. The rear suspension attaches to the rear casting*



*The front suspension arms and steering bolt to a triangular subframe*



*Rocker arms actuate the inboard mounted front shocks. Note the sophisticated swaybar*

such as the Ferrari F-40 and the Porsche 911 Turbo. Massive four-piston front calipers squeeze 13-inch ventilated and cross-drilled discs, while smaller, lighter rear calipers and discs (ventilated but not drilled) are used in the rear. They are actuated not by a power-assisted servo, but rather by two conventional non-power master cylinders working in tandem, for superior pedal feel and infinite front/rear adjustability.

The Guará's unique wheels are cast in magnesium, following a long-standing De Tomaso tradition, and are 8.5J x 18" front and 10.5J x 18" rear, fitted with Michelin MXX3TL tires in 245/40 and 285/35 sizes.

The Guará was originally engineered to utilize a 4-liter all-aluminum BMW V-8, but shortly after production began, the 4.6 liter double overhead cam four-valve Ford V-8 became the powerplant of choice. Originally producing 305 horsepower, the latest version features subtle internal tweaks which boost the power to 320.

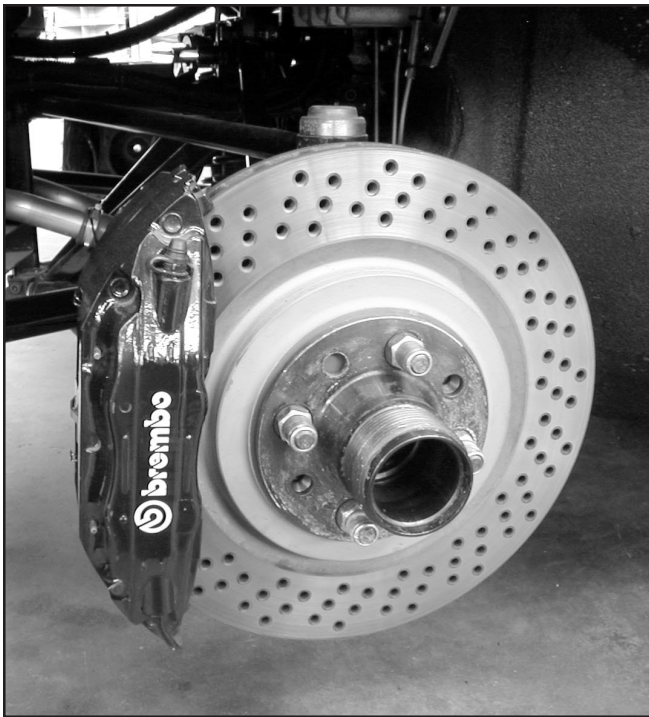
The early Guarás utilized a Getrag six-speed gearbox whose input shaft didn't line up properly with the engine, requiring the use of an intermediate transfer gear between them. This had the effect of altering the gearing to render first gear so low as to be almost useless, and also generated an objectionable howling noise. The current production cars use a different design which eliminates any such engineering compromises.

The design of the body has never been formally attributed to any individual or design house, but it is rumored to have emanated from a firm known

ometry. The wheelbase is 102.75 inches, with a 64.2 inch front track and 65.4 inch rear track. The turning circle is a very respectable 35.75 feet.

The brakes are sourced from Brembo, and are nominally identical to those used on other Supercars





*The front brakes feature massive calipers and fully vented and drilled rotors, while the rear brakes utilize smaller calipers and smaller vented rotors for lower unsprung weight*

as Synthesis Design in the Turin area. The body is formed in several pieces out of a sophisticated composite material (but not carbon fiber.) The car has recently been facelifted with a new nose section which features two deeply scalloped vents to help extract hot air from the radiator. This is the second time

the nose has been changed; originally it was rather plain with no venting whatsoever, then later one wide, broad vent was introduced.

Considerable time was spent on the design of the interior, which is vastly superior to any previous De Tomaso automobiles. Due to the early association

with BMW, virtually all the instruments, controls and vents are lifted directly from the 5-Series BMW, which is decidedly a good thing.

Fine leather is used throughout, with suede atop the dashboard to prevent unwanted reflections. The dashboard has two pods, one containing the

main instruments and the other the glovebox; these are switched for right-hand-drive cars. Radio and HVAC controls occupy the center of the dash, mounted on carbon-fiber panels, with the cigarette lighter and window switches mounted on the center console at the base of the shifter.

The shift knob is a work of art in itself, machined from billet aluminum. It goes without saying that a proper Italian chrome shift gate is used to delineate the six forward gears plus reverse.

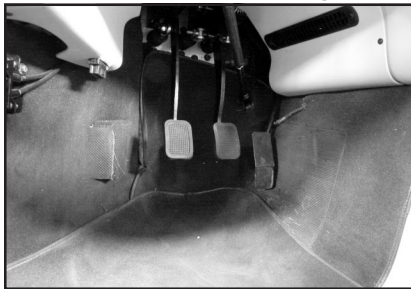
The seats are imported from Germany minus seat covers; they are then covered with the same leather used to line the cabin. They are thin and lightweight, offering ample support and telegraphing road feel to



*De Tomaso has done a masterful job of packaging. The highly advanced rear suspension attaches to castings, one between the engine and gearbox and the other attached to the rear of the gearbox*



*The cabin offers comfort and luxury unlike any previous De Tomaso. The relationship between steering wheel, shifter, pedals and seat is virtually perfect*



*The foot box is surprisingly roomy*



*The shifter is elegantly gated*



*The seats are extremely comfortable and supportive*

the body without being uncomfortable. Although conventional three-point seat belts are fitted, tellingly the seat is configured to allow four-point shoulder harnesses, which are a factory option.

The first Guarás had virtually no storage space at all, but in a concession to practicality, a 5-cubic-foot hard plastic trunk with its own lid is now installed atop the gearbox.

While the design may be highly contemporary, the actual construction of the Guará is decidedly old-school, Italian artisanship at its finest. The major components of the car (chassis, body, suspension interior etc.) are all fabricated by various

Modenese suppliers, but all assembly takes place on the grounds of the factory.

Construction begins by placing the body pieces into a jig, where they are hand-fitted and bonded together. A



The side view mirrors are highly effective, if a bit odd-looking. Due to their high placement, they are at the driver's eye level and enable him to see over the bulbous rear end of the car





*An insulated fiberglass box lies atop the gearbox to serve as a trunk, sized to hold two sets of golf clubs*



*The Guará bodies take shape in this area, and final assembly takes place on the other side of the partition. The machine shop is at the rear of the building. Bare chassis lie on the pallet on the left*

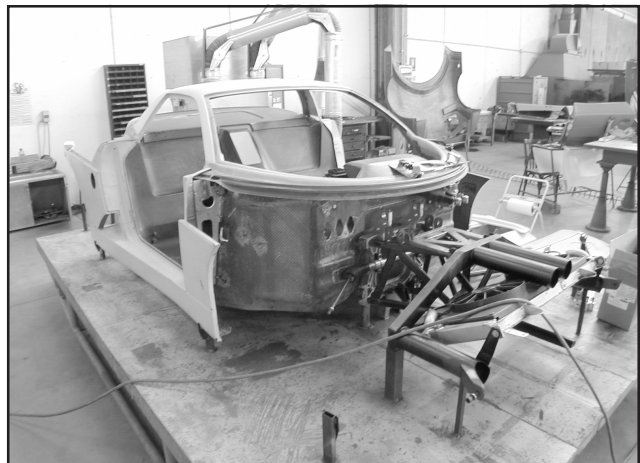
bare chassis spine is set into another jig, and the center cabin is set atop the chassis.

The suspension control arms are mated to their respective hub carriers and spindles, and then the brakes are added. The front suspension and steering rack are bolted to a subframe, along with the radiator, and this is then bolted to the front of the spine.

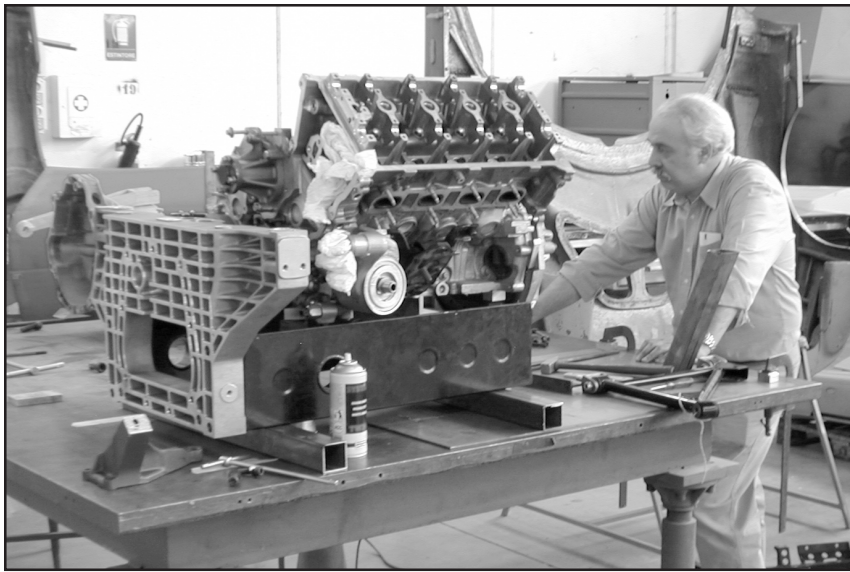
The engine is set into a small tub, with massive aluminum forgings at each end, and they are all bolted together to form a very rigid structure. This is then wheeled over to



*The body panel pieces are assembled and hand-fitted in a jig, then bonded together*



*The cabin is attached to the spine chassis (barely visible here) and the subframes are bolted on*



**Santiago De Tomaso takes a short break, standing before a bare block resting in its cradle, part of a jig used to hand-fabricate the subframe for the rear suspension and gearbox**

the rear of the spine and attached; the rear suspension and brakes are then attached to the forgings and gearbox.

The interior and wiring are installed, and the plumbing components for the brake, clutch and cooling systems are attached and filled.

After the body is painted, the front and rear body panels are then installed, the lights are wired up, wheels and tires fitted, and the car then undergoes a series of test drives and shakedown runs prior to being delivered to the customer.

Due to the extremely labor-intensive nature of the Guará's construction, advertised delivery time is four months from the initial order, although in practice it often takes substantially longer than this. The selling price is 228,600,000 lira, or \$105,429 at today's exchange rates.

Given the nature of its construction, one might expect it to have a decidedly kit-car feel,

but in fact, this car absolutely exudes quality wherever you look.

Sliding behind the wheel reveals a driving position that is virtually perfect. The extreme pedal offset of the Pantera

is largely gone. The front wheels have been pushed to the extreme edge of the body, resulting in increased foot room. In fact, the pedal box is wide enough to allow a dead pedal, always a very nice feature in a performance car. (The experienced eye will also notice the fitment of a Pantera front hood release handle, apparently the only Pantera part included on this otherwise-new car.)

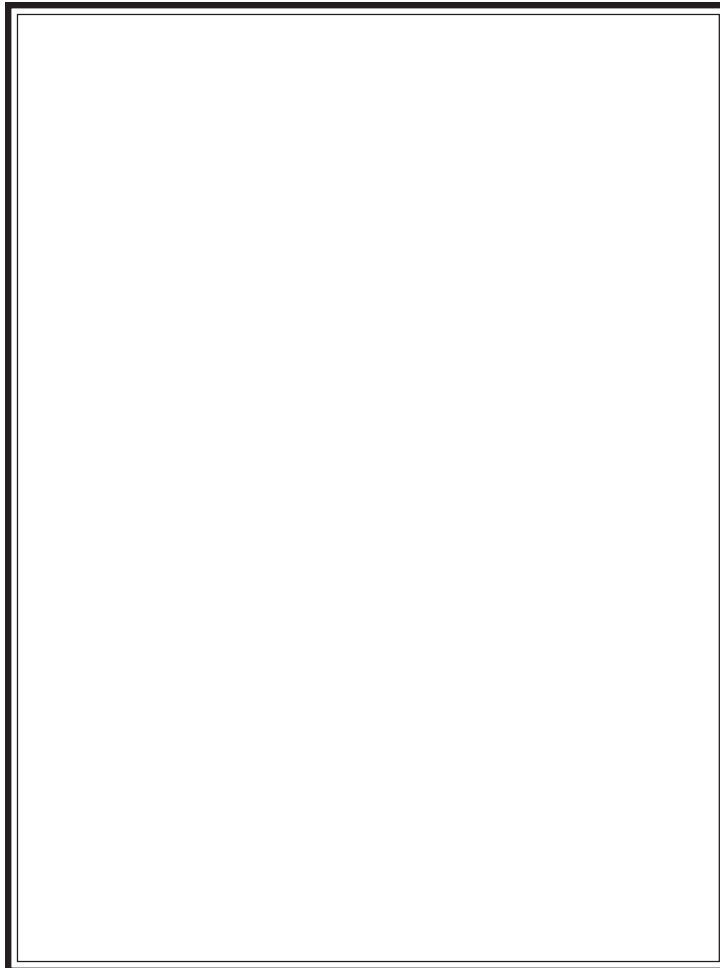
The steering wheel and shifter fall easily to hand, with none of the awkwardness customarily found in Italian sports cars. The high center tunnel provides a natural arm rest and helps to convey a very comfortable, cozy feel. With a turn of the key, the dashboard lights up, and the multipoint sequential fuel-injected engine fires instantly, revving by itself above 2000 rpm before settling down to a smooth, subdued idle.

Fans of the Pantera's exhaust note will initially be disappointed. In order to meet modern noise restrictions, the exhaust is muted, sounding exactly like a current production Mustang Cobra. It

is pleasant and still quite audible, but lacks the muscular aural presence of earlier De Tomaso cars.

The brake pedal feels quite firm, while the clutch pedal is pleasantly light, and the gearbox quite easily snicks into first gear. The shift throw is extremely short and quick. With a blip of the throttle, the car is smoothly underway.

The doors are unusually high, which creates a rather odd sensation of sitting too low in the car, but the view out the front is unlimited as the nose quickly falls away; in fact it's all but impossible to see the nose at all. Headroom is ample, as the car stands 47.25 inches tall, a good five or six inches taller than a





## Guará Barchetta—Performance Without Compromise

The Guará Barchetta is actually the first model produced, and draws much of its inspiration from the short-lived Maserati Barchetta (which was designed and built at the tail end of De Tomaso's ownership of Maserati, and shared the basic chassis design with the Guará which followed.) Mechanically it is identical to the other versions of the Guará, but it is a stripped-down, minimalist pseudo-legal race car for the street as opposed to a high-performance GT car. Lacking anything not directly dedicated to the missions of going, turning or stopping, it weighs in at a mere 2314 lbs.

Historically, Barchettas were small-displacement, lightweight Ferraris designed for competition in long-distance road races such as the Mille Miglia and Targa Florio. Barchetta is Italian for "little boat", and the cars were so named because they resembled nothing as much as an overturned row-boat. They were equipped with the bare minimum equipment to make them road-legal, but they offered absolutely zero amenities; windscreens were usually minimal at best.

The Guará Barchetta differs from the standard model most obviously by the complete lack of any wind protection whatsoever. The body is configured in a manner that would seem to invite the fitment of a simple, short, curved windscreen, but curiously none is normally installed.

All of the carpeting and sound-deadening is absent, as well as the interior leather. Since there are no side windows or window mechanisms, the doors are feather-light. The standard seats are replaced by extremely supportive Sparco racing seats. The modern-appearing steering wheel of the coupe is replaced with a classic '70's three-spoke Momo wheel. The instrument panel is lacking most of the instrumentation found in the coupe; only a tachometer, speedometer, oil pressure gauge and a few idiot lights are installed. (Curiously, a fuel gauge is deemed unnecessary!)

Driving the Barchetta is certainly an eye-opening experience. Italian law dictates that anyone driving a car without a windshield must wear a helmet, so if the appearance of the car wasn't distinctive enough, that alone guarantees attention!

The deep seats are considerably lower than the stock seats, and as a result, the top of the door is practically at eye level and the steering wheel seems too high. The experience is not unlike what a ten-year-old feels when sitting behind the wheel of daddy's car! Oddly, no center rear-view mirror is fitted; instead a curious aerodynamic device is nestled between the two dash pods, nominally to smooth airflow into and through the cabin. This means that the door-mounted mirrors take on even greater importance. Due to the driver's

low position in the car, the mirrors are above eye level, again adding to the odd feeling.

All this is forgotten the moment you turn the key. The engine lights immediately, and due to the lack of any sound absorption material, every hum, buzz and click is transmitted directly to the driver's ears along with the melodious exhaust note.

The car feels palpably lighter than its road-going sibling; this translates into faster acceleration out of corners and even more pronounced stopping ability. The thin seats, solid steering wheel and solid pedals means that every message, no matter how subtle, is transmitted directly to the driver's body—minor nuances in the road surface can easily be felt.

However, these messages are often overwhelmed by the violent airflow which absolutely bombards the driver. Helmet buffeting is considerably worse than on a motorcycle, as is wind roar. This absolutely spoils the driving escapade at anything above about 50-60 mph, and triple-digit speeds are virtually impossible to bear.

Were this car to be equipped with taller seats and at least a vestigial windscreen, it could be an extremely entertaining weekend play toy. In its current configuration however, it's a decidedly mixed driving experience, and it's no wonder that relatively few Barchettas have been sold.



Pantera. A glance in the center rear view mirror reveals considerable distortion from the highly curved rear window, but the two door-mounted mirrors offer an excellent view to the sides.

Due to the fundamentally tractable nature of a stock Ford V-8, the Guará is perfectly comfortable ambling through Modena traffic, although the extreme width of the car (six feet, eight inches!) can be a bit intimidating on narrow European city streets. Even in extensive stop-and-go traffic, the engine temperature never gets past the halfway mark on the gauge, indicating that the cooling system is more than up to the task at hand.

Perhaps surprisingly for an Italian car, the air conditioning system is fantastic. The controls are easy to use without looking at them, and the cabin can quickly be cooled to the point of being uncomfortable even on an extremely hot day. The electric windows raise and lower quickly and quietly.

Leaving the city and climbing out of the valley on one of the myriad narrow roads which surround Modena brings the Guará into its element. Free from the constraints of traffic, it is free to run with abandon, and indeed it does!

As a corner approaches, turn-in is reasonably crisp, and the traction provided by the sticky Michelin tires seems unending. Unfortunately, the Guará is saddled with a power-assisted steering rack that delivers plenty of feel, but whose ratio is far too slow, resulting in an undue amount of arm-twiddling when the road becomes twisty. While the chassis is capable of cornering so hard your spleen winds up on the other side of the car, the slow steering doesn't inspire confidence. It would probably be difficult to react

quickly enough should the rear end suddenly step out, and this effectively serves as an informal speed governor in the corners.

There is nothing preventing ridiculous speeds in the straight sections, however! The engine, by virtue of its four-valve design and relatively small displacement, lacks the prodigious torque commonly found in American V-8 engines, although the torque is still impressive by European standards. The engine is extremely willing to rev towards the stratosphere, and at higher RPM it is indeed quite rewarding. Due partly to low gearing, and partly to low weight (3086 lbs), the Guará absolutely launches out of corners. The exhaust howls pleasantly, and the gearbox shifts extremely quickly and smoothly.

When a corner approaches, the brakes do an absolutely spectacular job of shedding excess speed. Brembo brakes are widely considered to be the best in the world, and an aggressive drive in the Guará quickly shows how they have earned their reputation.

Over bumpy roads, the ride is firm but well-damped; clearly somebody has done their homework in the chassis department. Bump-steer seems nonexistent, and the car continues to track smoothly through corners even on rough, rutted roads.

If anything, the chassis is so competent that it sticks *too* well, making it virtually impossible to discern its char-

acteristics at the limit on any public road. But it should go without saying that its combination of decent power, prodigious cornering grip and otherworldly brakes enable it to easily leave any Pantera for dead on a twisty road. It also feels quite stable and secure at speeds well over 100 mph, while wind noise is pleasantly muted. Top speed is listed as 168 mph.

The styling of the Guará has always been criticized, and indeed even the most charitable will agree that it appears decidedly odd from some angles, although most agree that the nose is rather attractive. But from where it counts—behind the wheel—the Guará really delivers the goods. The wealthy European driving enthusiast desiring something a bit different can find in the Guará a very viable alternative to mass-market sports cars, one which will deliver genuine driving excitement at a competitive price.

Although the Guará has been extensively (and expensively!) crash-tested and meets all current European regulations, sadly it was never engineered to meet the more-stringent USA standards, and thus it's unlikely that they will ever be sold here (although Steve Wilkinson managed to get one licensed for the street on a manufacturer's plate, and Joe Moore imported the very first Guará built as a dedicated track car.)

But if nothing else, a drive in the



Guará demonstrates just how far De Tomaso's engineers have come. If this type of technical excellence can be combined with an attractive body, and supported by a comprehensive and competent dealer network, the new Vallelunga promises to be quite a spectacular car!