

# Quick Smart

—(Feature)—

Introducing the TTP Scuderati XL

The current Quattroporte was launched in 2004, the fifth Maserati sports sedan to wear this badge. Designed by Pininfarina, it's not only a fine Maserati, but also a pretty good car by any standards. Striking the balance between formal elegance and a sporty attitude, it makes its German rivals—even the suave Jaguar XJR—look rather staid.

by Ian Kuaah photography by the author





Its 396hp, Ferrari-derived V8 has panache to spare and delivers good performance. Not many will complain about a big four-door sedan that launches itself to 62 mph in six seconds and tops out at 170 mph.

In the real world, though, there are always those who want more power. The irony here is that the answer comes from Germany, home of the Quattroporte's keenest rivals: the M5 and E63 AMG. From his workshop in deepest Bavaria, Ferdinand Pietz has built a solid reputation for supercharging and turbocharging Porsches, and uprating factory turbos. His firm, Turbo Tuning Pietz (TTP for short), has also tuned BMW, Mercedes-Benz, and VW cars.

This Quattroporte belongs to the Maserati dealer, Scuderati GmbH in Rosenheim, who commissioned the supercharger project to endow this big sedan with longer legs and the ability to face off the latest German super sedans that come with over 500 hp. The dealer gave the car the improbable name of Scuderati XL.

The Cetoni Turmat supercharger made its public debut at the 1993 Frankfurt Show, under the name ZF Turmat. The system was renamed Cetoni Turmat after Cetoni was subsequently sold to machine-tools manufacturer, Bavaria-Tech. One of Cetoni's employees was Christian Stober, a rookie engineer at the time. The basic principles of the system were sound, but Cetoni had neither the money nor the time to sort out the few niggling problems that did exist, and the company quietly dropped off the map in 1996; Stober returned to Munich.

"I was initially disheartened by Cetoni's demise," he says, "but on the other hand, I had always been my own boss, so I bought some of the remaining parts from Cetoni and carried on developing the system under the ASA banner." The production ASA supercharger is the son of Turmat.

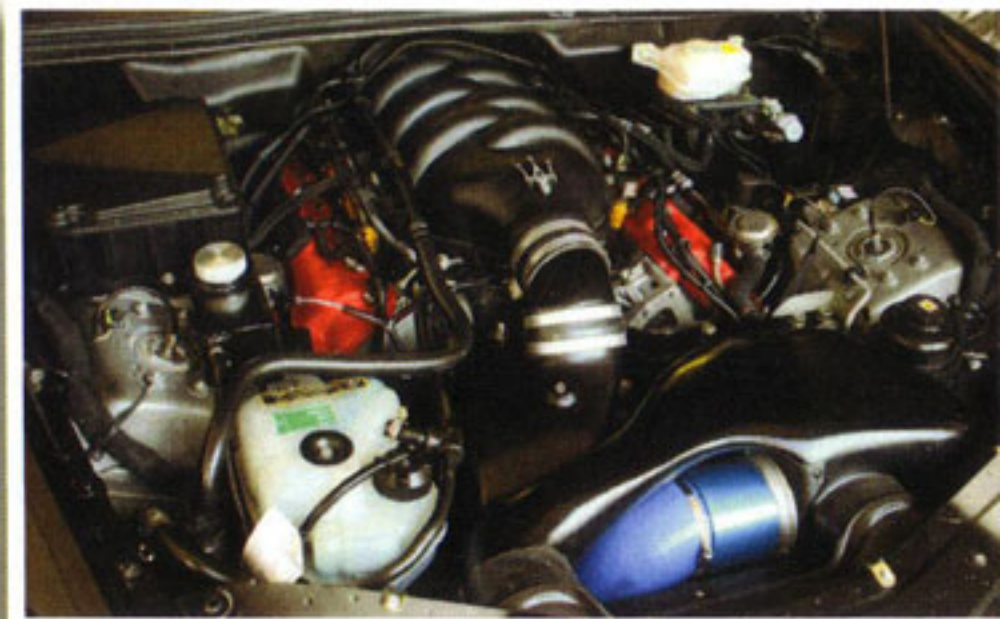
Externally, the ASA blower looks to all intents and purposes like a conventional supercharger driven off the crankshaft by a Poly-Vee belt.

use with high-revving engines like the Maserati's.

Designed to be a bolt-on, the ASA supercharger runs at relatively low boost. On the other hand, more power can be produced with a higher boost—provided the owner can shoulder the expense of rebuilding an engine with low-compression pistons and strengthened internal components.

With boost set at 8.7 psi, the ASA supercharger adds 149 hp. The total head count rises to 545 hp at 6800 rpm, accompanied by a healthy 435 lb-ft of torque at 4600 rpm. This extra power helps launch the car with the determination to reach 62 mph in 5.5 seconds, a full half-second faster than stock.

The subtle link between art and brute force is illustrated perfectly by the Maser's supercharged V8. In naturally aspirated form, its power delivery is a thing of beauty in the way it feeds layers of sound and sensation as it moves rapidly from idle to its 7500-rpm redline. One of



Pietz has done a lot of work with various superchargers over the years, but now favors the design from fellow Bavarian, ASA, suppliers to Alpina for the B5 and B7. As Pietz rightly says: "If this supercharger can pass the test regime that BMW imposes on Alpina prototypes, then it's good enough for me."

Remember the mid-'80s Lancia S4 Group B rally car that used a supercharger and a turbocharger to optimize both low- and high-rev power? Such a system looked good on paper, but added weight, doubling the number of bolt-on bits and therefore the number of things that could potentially go wrong. Then in 1989, Cetoni (an offshoot of German gearbox manufacturer, ZF) began developing a revolutionary new concept that combined the plus points of both supercharging and turbocharging systems into one unit.

Inside, however, it has a system of planetary gears that multiplies the speed of the input shaft (driven at crankshaft speed) by a factor of 15. This in turn rotates the turbine wheel from a turbocharger unit. The turbine wheel has a maximum effective speed of 110,000 rpm before the blade tips go supersonic and lose their effect, so if an engine makes its peak power at 6800 rpm, the turbine is turning at 102,000 rpm, well within this limit.

One of the problems with the Cetoni Turmat was that it shared its oil supply with the engine. The ASA system has its own oil supply so there's no chance of cross-contamination. The other notable feature is the mechanical centrifugal clutch that brings the system on or off-line. All these attributes make the ASA unit one of the most efficient superchargers ever designed and its low inertia also makes it ideal for

the ASA supercharger's strengths is that it doesn't alter the engine's character, just amplifies its power and torque.

In normal driving, it's the beefier torque curve that makes the real difference to the way the car is driven. The motor doesn't need to be revved as hard to achieve the same speed; full throttle now delivers a solid push in the back rather than just a consistent buildup of speed. This extra rush turns a good engine into a great one.

The car's one serious weakness is the jerky Duo Select manual transmission, which many view as an inappropriate gearbox for a luxury saloon (a proper, torque converter-equipped ZF six-speed automatic is now available as an option and has enjoyed a warm reception, especially in the U.S.). Even so, with a partial lift of the throttle when upshifting, it's possible to smooth out the gearchanges.







## Quick Smart

Nor are the brakes perfect. They don't seem to really bite and scrub off speed in the manner expected from a high-spec Brembo system (this car is based on a '06 Quattroporte Sport GT; the Sport GTS launched at the end of 2007 uses iron/aluminium brake discs for greater fade resistance).

The suspension is also standard, with only the 8.5- and 10.5-width 20-inch AEZ forged alloys, and 245/35 and 285/30 Dunlop SP Sport Maxx tires making the difference. While this combination lowers unsprung weight slightly over the factory 20s and the larger rears provide more grip, the 151 extra horses are still more than enough to bring the chassis to the end of its tether. Coupled to the weak brakes, this holds the car back from realizing its full potential. Pietz was aware of this and wanted to upgrade the chassis to match, but the dealer didn't see the need; he's not a hard driver.

There is no question that, from an aesthetic point of view, the Maserati Quattroporte is the most interesting car in its class, certainly the individualists' choice. Where the Quattroporte's out-of-the-box performance is only fair to middling when compared to its peers, the TTP supercharger conversion gives it the edge it needs to stay in touch with more powerful rivals. When the suspension and brakes are also sorted, this is one competition the TTP-tuned Maserati will be able to call a level playing field. 🏁



### TTP Quattroporte Scuderia XL

#### •Layout

Longitudinal front engine, rear-wheel drive

#### •Engine

4.3-liter V8, dohc, 32-valve, supercharged and intercooled, sport exhaust and catalysts

#### •Transmission

Six-speed Duo-Select manu-matic

#### •Wheels and Tires

AEZ forged alloys, 8.5x20 (f), 10.5x20 (r)  
245/35 (f), 285/30 (r)

#### •Performance

**Peak Power:** 545 hp @ 6800 rpm  
**Peak Torque:** 435 lb-ft @ 4460 rpm  
**0-60 mph:** 5.4 sec.  
**Top Speed:** 172 mph

