

# Suited assassin

RENNTECH'S V12 BITURBO MONSTER TAKES LUXURY LIMOUSINE MOTORING TO THE NEXT LEVEL - AND THEN SOME

WORDS & IMAGES LARRY LANE

**I**T IS NO SURPRISE that supercar drivers suffer from withdrawal symptoms when they step back onto their "normal" everyday cars. The drag they are high on is raw power - and this is one of the reasons that super saloons like the E63 AMG and pumped-up SUVs like the ML63 AMG exist. However, if you are a businessman who has to attend high level meetings and social functions, unless you work in the more casually minded high tech business, a full size four-door saloon wearing a prestige badge is an *de rigueur* for a tailored suit and tie. This is where the Mercedes-Benz S65 AMG comes in.

More Armani than Savile Row, the AMG version of Mercedes' flagship adds a dash of hot

chili peppers to the otherwise rather conservative S600 L. The S65's 624bhp and 757lb ft of torque produced by the six-litre twin-turbo V12 is far from the maximum this engine is capable of, but Mercedes felt that these numbers are more than adequate for the vast majority of its clients.

#### THE NEED FOR SPEED

Of course the S65 AMG owners who bring their cars to aftermarket users like RennTech would beg to differ. These power junkies are after even more, to the point where their big two-tonne plus limo will seriously embarrass their Italian fan car in a straight line. For these people, too much power is just enough.

"Factory turbocharged engines are a godsend for both us and customers," explained

RennTech boss, Hartmut Feyhl. "Before Mercedes brought out the biturbo V12, we had to increase the displacement of the old 48 valve right up to 7.3 litres." This was also a lengthy business involving a total engine strip down, a new crank, rods, pistons and lot of losing care in putting it all together. "In the 90s when money was flowing freely, this was not a big problem, and we had enough customers who wanted 630bhp V12 motors," said Feyhl. "These days however, very few clients have the inclination to spend so much - even if they can afford it. So the fact that we can now offer over 850bhp for a lot less money makes it a viable business again."

RennTech's latest conversion for the S65 AMG goes a lot further than that. In fact it

#### JUST THE FACTS



#### RennTech S65 (russ)

Engine	M275 5,800cc V12 biturbo
Power	700bhp@5,500rpm
Torque	940lb ft@2,000-3,000rpm
Transmission	5-speed auto, 4WD
0-60mph	3.5sec
Top speed	186mph
Year produced	2009

#### OVERVIEW

A superior snuggled-in the body of a limo, RennTech's S65 is much more than just an expensive express package for your private motor speedily accompanied driver.

“RennTech's latest conversion for the S65 AMG pushes the boat out to 700bhp and 940lb ft of torque”



▷ pushes the boat out all the way to 700bhp at 5,500rpm with 940lb ft of torque from 2,000 to 3,000rpm. You need a lot of expensive modifications to perform this conversion on an S600 L, but as the AMG already has the larger displacement six-litre motor with many strengthened components, RennTech does not even have to open the engine.

In addition to modified turbos and an ECU remap, the key to the massive increase in output is a bespoke intercooler system that reduces intake temperatures by more than 20 per cent. Sucking in ambient air through a pair of RennTech carbon fibre airboxes, the system was recently upgraded again with a higher flow intercooler pump with twice the flow of the OE pump. This gives a further 80 per cent improvement over RennTech's previous version, and together with a secondary heat exchanger allows increased boost pressure to be safely used throughout the rev range. The AMG headers and main exhaust are very efficient and remain unchanged. Only at the rear does RennTech use its own stainless steel sport mufflers for a deeper V12 growl when you accelerate hard.

RennTech fits the OS Giken Super Lock limited-slip differential to its version of the S65, which functions as a traditional open differential in low and normal load situations, transforming smoothly into a 100 per cent full lock as loads increase. Its multiple clutch packs make the unit incredibly quiet and smooth, without the kind of chatter usually associated with limited-slip differentials. This works seamlessly to help you tame the super saloon's rear end, whether or not ESP is enabled.

It is pretty much universally agreed that Airmatic and ABC equipped Mercedes look better with a lower ride height when static. So this S65 is equipped with a RennTech V3 digital lowering module that allows the driver to alter both the static and dynamic ride heights to the desired level using a laptop and a USB cable. Once you have interfaced with the V3 module, which receives signals from the factory ride height position sensors at each corner of the vehicle, you can modify these signals to change the ride height, either independently between all four wheels, front to rear, or all four wheels simultaneously. You can even specify different ride heights for different speeds.

Airmatic and ABC suspension do not like heavy wheels, and the ride and handling deteriorates as unsprung weight rises.

forged alloy wheels for this reason. The wheels on this S65 are 21x9.0J and 22x10.5J front and rear, with 255/30ZR21 and 285/20ZR22 rubber respectively. Apart from putting a big footprint on the ground to help deploy the power, they also make this big car look better proportioned.

#### WHY LESS IS MORE

"People do not realise that apart from adversely affecting ride and handling, heavier wheels also have a negative effect on acceleration," Feyhl explained. "We have actually measured acceleration with wheels weighing 16kg each compared to 10kg. Rotational mass is equivalent to over three times static weight, so with the lightweight wheels fitted the 0-200km/h [0-124mph] is about one second faster. That is equivalent to having another 20bhp!" RennTech's signature ten-spoke, three-piece wheels have true forged centres, making them lighter and stronger than stock wheels, and are engineered to centre the mass of the wheel close to the hub, which further improves acceleration.

As mentioned at the beginning, although the standard S65 AMG tips the scales at over 2,200kg, with this amount of power and torque, it is capable of annihilating some of the

supercars that might share the same garage. The limited-slip diff definitely helps you launch the car cleanly, and in an ideal situation with grippy tarmac you will see 0-60mph in 3.5 seconds. The more impressive number however, is the 10.9-second quarter-mile, passed at 130mph. Top speed is a bit of

an issue with Mercedes, so even AMG cars come with the 250km/h (155mph) limiter. Although RennTech raises this to 300km/h (186mph) for the US market, it is still restricted by tyre safety issues. However, Feyhl says with no hesitation that with the limiter removed and ultra high speed rubber fitted, this S65 is easily capable of over 200mph.

Performing a hard launch, I left two long black lines on the tarmac as I was pinned back in my well padded sports seat by the monstrous torque. In the periphery of my vision, I could see the rapid rate at which the speedo needle was rushing around its dial as the five-speed automatic surged from one ratio to the next. Oh yes, this is one seriously fast car.

When you are not out thrill seeking, the RennTech S65 is a smooth, ultra refined limousine. I can certainly imagine being driven to a board meeting in the back seat and arriving totally relaxed. But I would not really need much of an excuse to give my chauffeur the

When you are not out thrill seeking, the RennTech S65 is a smooth, ultra refined limousine



A limited-slip diff and wider tyres help this S65 transfer its huge power to the road.



Its stainless steel sport mufflers give a bassier V12 noise.



Subtle extras up the ante without hurting the S65's elegance.



△ RennTech takes the power from 604bhp right up to 700bhp.

△◁ The sumptuous interior underlines its luxury limo status.

◁◁ These three-piece forged wheels help cut unsprung weight.

◁◁◁ This modified six-litre AMG V12 now has 940lb ft torque.