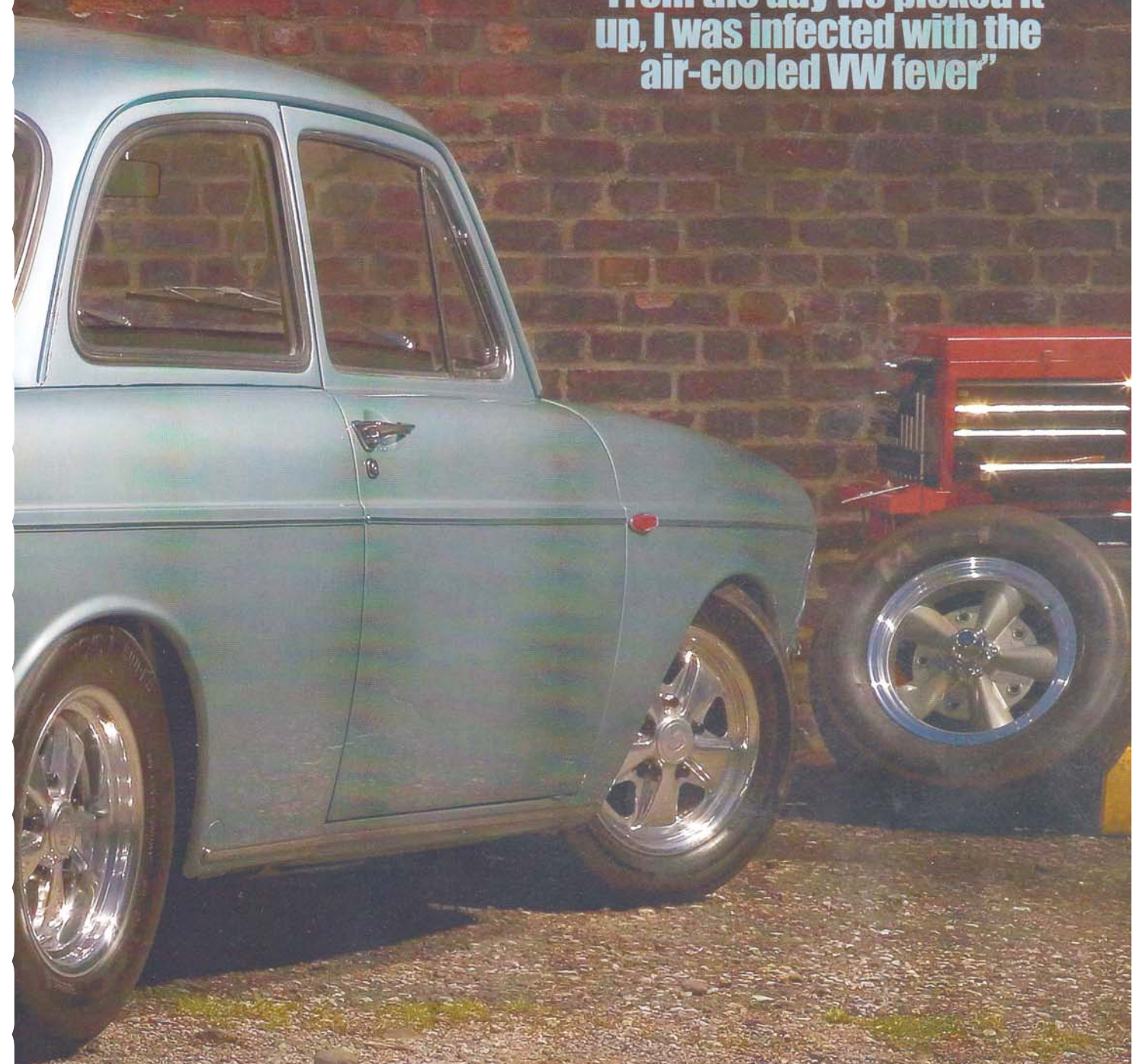




BLOW back

What looks at first glance like an unsuspecting Resto Cal Notchback hides a turbocharged 2386cc motor under its decklid, with enough power to blow yer grandad's wig off!

Words: Mike Pye. Photos: Stefan Bau



"From the day we picked it up, I was infected with the air-cooled VW fever"

When a young Dustin Hoffman famously appeared on TV with a VW 1600, he waxed lyrical about its appointments, its powerful engine and the fact that "It's got a trunk up front where most cars have their motors and in the back where most cars have their trunks, we have a... a trunk... a large trunk." How we all laughed! Still today you can see people looking quizzically at you when you pull up at a petrol station, lift up the bonnet and put fuel in where most people think the engine should be. And it's even worse when you then open the boot and check the oil in your suitcase...

But what do you think Mr Hoffman would have said had he been presented with Christian Wilms' Notch in the studio that day in 1965? "It's got a trunk up front where most cars have their motors and in the back where most cars have

their trunks, we have a... a turbo... a bleeding great big turbo!" Yikes. That's precisely what we thought when we saw this car at the European Bug-In earlier this year. Since we hadn't seen very many turbocharged Type 3s in our time, let alone obvious street cars with draw-through turbo

Nowhere can we find an option code for a turbo

systems like this, we knew we had to delve deeper. Turns out the car began life as a '67 1600L model, coming with the 1600cc motor rather than the 1500cc motor common to the A models. As well as the undoubted benefits of dual-circuit brakes and 12-volt electrics, '67 Type 3s also came with the more safety-conscious soft plastic dash knobs, recessed inner door handles

and a collapsible steering column as standard, while L models had the option of an automatic transmission, IRS and such luxuries as a heated rear screen, headrests and hazard lights. Despite extensive research, however, nowhere can we find an option code for a Holley carb and turbo...

"A friend of mine bought the car years ago for about £5,000," Christian recalls, "and from the day we picked it up, I was infected with the air-cooled VW fever." As a result, when his friend decided to sell the car three years ago, he called Christian first. "I didn't hesitate for a second. The car was light blue at the time and had chromed steel rims and a stock engine, but I loved it and I drove it every day for two-and-a-half years while I completed my apprenticeship as a technician," Christian explains. That apprenticeship led him to a job working at a Volkswagen specialist's in Wuppertal, Germany, as a very serious-sounding 'state certified automobile technician'.

"When I started work at Beetle Factory in 2004, I decided to do a full restoration on the car, as by then I had acquired the skills I needed to do it," he says. So the car was stripped down to a bare shell, sand-blasted and repaired where necessary, before being trailered over to Car Service Wuppertal for a new coating of luxurious silver-blue metallic, which Christian assures us is a '58 Beetle colour.

Full house restoration

He undertook all the welding and repair work himself, making panels from scratch to replace sections in the heater channels, the notorious air boxes and the rear wheel arches. It perhaps doesn't sound like much, but when you look at areas like the door shuts and see that every catch has been re-anodised, every switch cleaned and rebuilt and every rubber grommet renewed, you know that this car had a lot more than just a quick body restoration.

Since Christian had plans for something far removed from the original motor, all the mechanical side of the car was overhauled and uprated in preparation. There are Bilstein shocks at all four corners, Kerscher ventilated discs up front, Type 3 drums on the rear and Kerscher aluminium spacers to get the offset of the 14in Fuchs right all round. To get the power down, he put together a Beetle swing-axle gearbox with a Superdiff and heavy-duty side plate, then

strapped up the rear end like a Christmas turkey with a rubber bushed lower gearbox mount and an adjustable aluminium trapeze bar. Also under there is an ingenious anti-roll bar arrangement, which mounts tight up under the body above the gearbox, with drilled links that pick up on two vertical links mounted on the axle tubes in much the same way as a factory z-bar.

For those who may be unaware, 14in Fuchs wheels were a factory option on late Porsche 912s

we've never heard of anyone modifying a forged aluminium wheel

and some lower spec 911s in the very late Sixties and early Seventies, but they were only ever offered in 5.51 x 14. However, Christian has had a pair banded – for want of a better word – and now has a pair of 7s so he can get some fatter rubber on the back end. We can honestly say we've never heard of anyone modifying a forged aluminium wheel in this way, but that if a state-registered auto technician in Germany has had a set done, then the chances are they've been done right. Tyres, in typically sensible Germanic fashion, are 185/65 and 205/70 front and rear respectively. Keeping it in the family, Christian enlisted the

help of his sister Barbara to stitch up a new set of covers for the stock VW seats in black and beige leather, with matching beige piping, while the rest of the interior trim has been kept just as it would have come from the factory. To keep an eye on the lairy motor, quite literally *in* the boot, Christian has added to the meagre factory instrumentation with VDO oil temperature and pressure gauges, an 8,000rpm VDO tach and the all-important FK boost gauge. All-important because of the forced induction system on the new 2386cc motor he and his buddies Martin and Andreas at Beetle Factory had screwed together for the car (see *Know your turbo*, below, for full spec).

With a final push and a bit of help with the wiring Christian was back out on the road in the car that got him into VWs in the first place, just in time for the first European Bug-In at the Chimay race circuit in Belgium. He may have a whole lot less luggage space now than he did before, but with that motor, you can bet he's got a whole lot more of a smile on this face, too. Best of all though, with the bootlid shut no one would be any the wiser to what's secreted within. At least not until he mashes the throttle and leaves them, like Dustin Hoffman in the old VW advert, wandering off with a confused look on their faces. **VW**

Thanks: My girlfriend Stefanie, my sister Barbara, my friends Martin and Andreas for the electrics, Thorsten, Olaf and all others who helped out.

► Christian's sister Barbara gets the credit for re-upholstering the seats in black and beige leather. Check out the detailing in the door shut, for example. This car is clean, clean clean



▼ Mota-Lita wood rim is mounted on a custom-made boss, while supplementary VDO gauges look neat in colour-coded cups. Original T3 trip speedo and clock: a very rare and desirable combination these days



Know your turbo

There's a lot of pub talk surrounding turbos and you've more than likely heard someone refer to a Garrett T3 or T4 or maybe even a hybrid, but what does that actually mean?

The T3/T4 Super 60 turbo used here is a hybrid turbo (that is to say it's made up of parts from two different turbos), a smaller T3 unit on the exhaust side, combined with a larger T4 compressor housing and impeller wheel. The 60 part refers to the 'trim' of the impellers and also to the ratio between the turbine and compressor wheels, although our research suggests that so-called Super 60s are actually Garrett units modified by independent turbo specialists, not by Garrett themselves.

A hybrid turbo can work more efficiently, reducing the thermal heat produced in the exhaust side, therefore releasing more energy for making power and offering greater flow at the same boost pressure than a non-hybrid design. So why doesn't everyone use them? Well, because it's all about matching the components to the application. Christian's choice of a draw-through system here is unusual for a street car, since this is quite an outdated system that is generally considered more suitable for all-out drag race motors. However, it is said to be an easier set-up to install, although the turbo itself will need to have a carbon seal on the compressor side to prevent the lubricating oil being sucked out when the engine is on vacuum.

As far as Garrett turbos are concerned, T3 (now called GT3), T4 (GT4), T3/4 and T04 units are all suitable for use on air-cooled VW engines because they all have oil-cooled and lubricated centre sections and are quick-spooling and relatively small in size. To buff up on your turbo knowledge, look up Garrett's excellent site: www.turbobygarrett.com.



unusual to see Type 3s painted in metallic blues, but doesn't Christian's car look great in its coating of '58 Beetle metallic blue?



in-house turbo guru, Matt, reckons a 60 this should be good for 300-350bhp winding up the boost to detonation point. It's Crane ignition and an Edelbrock carb to replace the current 500cfm Holley

detailing like this that caught our eye at Beetle Factory. This car is super-clean everywhere. Even all bolts and fixings have been re-cad plated



Tech spec

2387cc draw-through turbo Type 1 motor
Autolinea aluminium engine case
86mm CB Performance forged and nitrided crank with 2.0in Chevy journals
5.6in CB forged chromoly Super Race Rods
ARP 2000 rod bolts
94mm Mahle barrels and pistons
VW 044 cylinder heads, ported and polished by Beetle Factory, with modified combustion chambers and fitted with 42mm and 37.5mm stainless steel valves
8:1 compression ratio
Beetle Factory turbo-grind camshaft
1.4:1 Scat ratio rockers
Garrett T3/T4 Super 60 turbo
Single 500cfm Holley two barrel carb
Bosch 009 distributor with Compu Fire ignition module
Full-flow oil system, Type 3 cooling fan, Facet red-top fuel pump and pressure regulator, Beetle Factory custom-made manifold and exhaust

