



'I wanted to build the most authentic YZR500 replica I could'

Wolfgang Hromada spent six years creating a near-perfect 1999 YZR500 Norick Abe replica from an RD500. And it's road legal

Words Jon Urry Photography Wolfgang Hromada

REALLY LOVE THIS bike a lot. It was the most important thing on my personal to-do list,' says Wolfgang. His calm, near-perfect English masks some of the pride he obviously feels having created this stunning motorcycle. But get him talking about how he dedicated six years of his life to building the closest 500GP replica PB has ever seen and the passion soon bursts through. As well as his fanatical attention to detail...

'I'm just a hobby mechanic, but I have built a few RD500 GP replicas before. However, whenever I looked at them I always found faults, things I could have done better. I was never satisfied. So, nine years ago I decided that I would build the ultimate replica, with no compromises. Time wasn't an issue as long as the bike was correct. I also didn't set a budget, though my resources were limited.'

Austrian-born Wolfgang has that same wonderful mix of German practicality and Italian madness that embodies his country's other famous export – KTM motorcycles. And just like KTM, he seems to have absorbed the best bits of both cultures to produce a blend of controlled craziness.

'I know the RD500 motor isn't the strongest two-stroke engine on the planet,

but I didn't want to build the most powerful replica. I wanted to create the most authentic, the closest to the original,' explains Wolfgang. 'Then I had the idea of building a Norick Abe replica. It's not actually my favourite paint scheme – I prefer the Marlboro or Red Bull colours – but you see so many of those replicas.'

So, with the idea in his mind, Wolfgang quickly sent a spare RD500 engine off for some light tuning and a re-fresh.

'Usually I tune the motors myself, but this time I sent them to a guy in Germany with a good reputation for tuning RDs. He promised to do it in two or three months but it turned out to be nearer a year. But it didn't really matter as I didn't have a chassis at that time.'

And it wasn't going to be any old chassis. 'My previous YZR replica had an RD chassis, but it just didn't look right so I contacted a company called Micoproducts in Australia (now called Costin Motorcycle Engineering. They build GP-style frames for RD specials. However, as this bike had to be identical to an YZR500 I needed them to alter their frame. The YZR has a rounded area near the swingarm pivot which exactly matches my genuine YZR seat unit. I even insisted that my frame had a serial number. It's 002. Micoproducts kept 001!'

Wolfgang spent a huge amount of time getting the bodywork perfect. There was just

one small issue – original YZR bodywork is rarer than hen's teeth.

'After a lot of searching I found a guy in the Netherlands who had some original bodywork. It was basically scrap, a crashed set from a 1999 YZR500, but I had to have it. I couldn't use it on the bike as it was so badly damaged, but it was a starting point to get my own moulds created. The guy knew what he had and it cost me a fortune. I reckon he probably pulled them out of a bin at the back of a GP paddock in 1999.'

By the time a carbon fairing and self-supporting carbon seat unit were finished, and the engine was finally in the frame, Wolfgang was three years into the project. And the bike was still missing a swingarm.

'Originally Micoproducts fitted a modified TZR250 swingarm, but it didn't look like the real thing. Luckily the angular YZF-R6's swingarm was almost identical to the YZR's so I got one of those and modified it to fit using my own linkage and a Wilbers shock. Believe it or not, the wheelbase and even the headstock angle of my bike is identical to the YZR's. I got a picture of Norick's bike, blew it up to 1:1 and stuck it on my wall so I could measure its geometry. Wheelbase is 1400mm and the head angle 22.5 degrees. My bike is identical – very aggressive.'

Some things, however, could not look identical. 'The wheels are magnesium Marchesinis, but getting the right dimensions was very hard. With the TZR

'Believe it or not the wheelbase and headstock angle of my bike is identical to the YZR500's'



▲ Sensor under R6-based swing arm works speedo



▲ Indicators hide in original YZR fairing stabilisers



▲ Aussie-built replica frame, home-built loom



▲ JL Designs stainless pipes took a year to make

WHO IS NORIFUMI ABE?

Norifumi 'Norick' Abe was a brilliant Japanese GP racer whose career spanned the final two-stroke 500 years and the beginning of MotoGP. Starting young in minibikes and motocross, he was road racing by the time he was 15. His early experience in the USA helped him in later years. Most Japanese riders starting out in GPs suffered massive culture shock in their first season.

After he won the 1993 500 Japanese championship, Honda gave Norick – still just 17 – a wildcard ride for the Suzuka GP. Fearlessly piloting his ridiculously coloured Mister Donut NSR500 he

repeatedly passed Mick Doohan before crashing gloriously three laps from the end. A young Valentino Rossi, watching on the telly, vowed to imitate his hero and, three years later in 125s GPs, invented the character Rossifumi in homage – and as a go-faster talisman.

Abe's daring landed him rides with Team Roberts and, in 1995, a works Yamaha ride.

He won three 500 races: Japan 96, Rio 99 and Suzuka 00, but was never as good on a four stroke, either in MotoGP or WSB. He died following a road accident in October 2007.



YAMAHA RACING



▲ Six years and €30,000. Phew. Wolfgang reckons this could be the only 1999 Abe YZR500 replica



▲ MyChron dash: a fair approximation of the original



▲ Like the original, the carbon seat is lacquered



▲ Frame spar curves are based on scaled-up pics



▲ Box allows mid-ride engine mapping changes



▲ The best and hardest bit: the carbon fibre airbox and intakes are completely home-built by Wolfgang



SPECIFICATION WOLFGANG HROMADA'S YAMAHA RD/YZR500

ENGINE |||||||||||||||||||
499cc, liquid-cooled, V4 two-stroke; ported with bigger reed valves and skimmed head; balancer shaft removed; Keihin PWK flatslide carbs; pressurised airbox; racing gearbox with taller first gear; custom-built Febur radiators; Zeeltronics programmable CDI and power valve controller; AIM MyChron 3 dash; JL Designs exhausts; Yamaha YZR500 silencers

CHASSIS |||||||||||||||||||
Micoproducts chassis; modified YZF-R6 swingarm with custom linkage; Wilbers shock; Ohlins forks from an Aprilia RSV-R; Ohlins steering damper; Marchesini magnesium wheels; Brembo Racing billet calipers; Accessatto radial master cylinder; Ducati 998 Brembo discs; custom-made tank; self-supporting carbon seat unit; carbon fairing; single lens projector headlight; indicators incorporated into the fairing's stabiliser wings; stickers and paintwork identical to 1999 Yamaha YZR500 ridden by Norick Abe.

swingarm I was using at the time I couldn't use really wide rims, so I ended up with a five-inch wheel from an Aprilia RS250 race bike that took a 170 rear tyre. The GP bike had a 190 rear I believe, which annoys me – but I don't want to buy a new set of wheels! I have a second set of Aprilia Mille wheels, which are the same design and can run a wider tyre, so I could swap them. But the Aprilia ones would be heavier.'

Speaking of weight, how does Wolfgang's bike compare to the racer?

'I believe the GP bike weighed around 140kg. Mine is 160kg with half a tank of fuel. I could shave off more weight but that would get too expensive. I have avoided using too much titanium to save costs. If I want to reduce weight I'll just take off my watch and save 1000 euros on titanium fasteners!'

Wolfgang thinks he's spent nearly £20,000 on the bike, but he's also been very clever with his choice of components. The forks look like full GP-spec Ohlins. In fact, they're from an Aprilia RSV. 'I anodised the legs black and the tubes gold, then also painted the feet gold to make them look like the magnesium units on the YZR. It's not 100% the same shade, but it is very close.'

With the rolling chassis now complete, Wolfgang turned his attention towards making the engine run. As well as getting an aluminium tank fabricated using YZR500 moulds, he swapped the power valve controller to a programmable unit, changed the carbs for Keihin flat-slides, and

redesigned the airbox, which he then fabricated from carbon fibre.

'I wanted to reduce the RD's intake noise as I prefer the exhaust noise to the intake sound, and also to make the bike run better and look original. The YZR has intake nozzles for the airbox and I wanted to keep these, not just have fake ones. Carbs also work better in still air, with minimal turbulence, so I wanted to create a still airbox. It was very hard to do as the carbs are still located on the side of the engine, which is a shame, but they now sit within the airbox and run far better. The airbox was the hardest part of the whole project.'

But was it time well spent?

'With the bike nearly complete, I ran it on a dyno and it made 96bhp at the rear wheel. That's about 22bhp more than standard. It's not the fastest but it is good enough and is fun to ride. The power is surprisingly progressive – stronger than a stock RD500 low down, but it wakes up at 6000rpm. I can modify its response; the power valve motor and ECU are programmable. And I can swap maps via a switch on the bars. Open the valve earlier and you get more torque, later and it is peakier. It's great fun to play with when you are riding.'

A crucial touch was the beautiful set of spanners built by Jim Lomas of JL Designs – the routing is identical to the GP bike's pipes. They took more than a year to make. The silencers come from a real YZR500 that Wolfgang found in America. All that was left

was to fit an AIM MyChron digital dash and the bodywork's decals. Which is where Tamiya got involved.

'Before I started the project I had a Tamiya 1:12 model of Norick's bike. I bought another kit and scaled up the decal sheet, which was a nightmare. You have to convert them into special files and touch them up. It was such hard work, it took me well over 20 hours. None of the stickers is available commercially so that was the only way I could do it. Tamiya make their models under licence so I assume they have everything perfect.'

Having spent all this time creating his replica, has Wolfgang ever seen an original Norick Abe YZR500 GP bike?

'I assume there must be several bikes out there, but I have never seen one,' he confesses. 'I certainly haven't seen another Norick rep with the black seat, but this paint scheme was only run in 1999.'

Frustratingly, when the bike was almost finished, Wolfgang discovered something that could have saved him untold time and trouble. 'I should have searched for a YZR500 at the beginning,' he says. 'Red Bull is an Austrian company and in a place called Hanger 7 in Salzburg, two hours from my home, they have a 1999 YZR500 GP bike on display! If I had known earlier it would have saved me many hours. I have visited the bike and checked everything on my bike is correct. I am well known by the security guards and they let me measure the bike and take pictures.'

**SEE MORE
PICTURES**
ON THE PB
IPAD EDITION

DOWNLOAD NOW
AT THE APPLE
NEWSSTAND

**'I scaled up a Tamiya
decal sheet to make
the stickers'**





The GP bike has a curved frame, but no kickstart

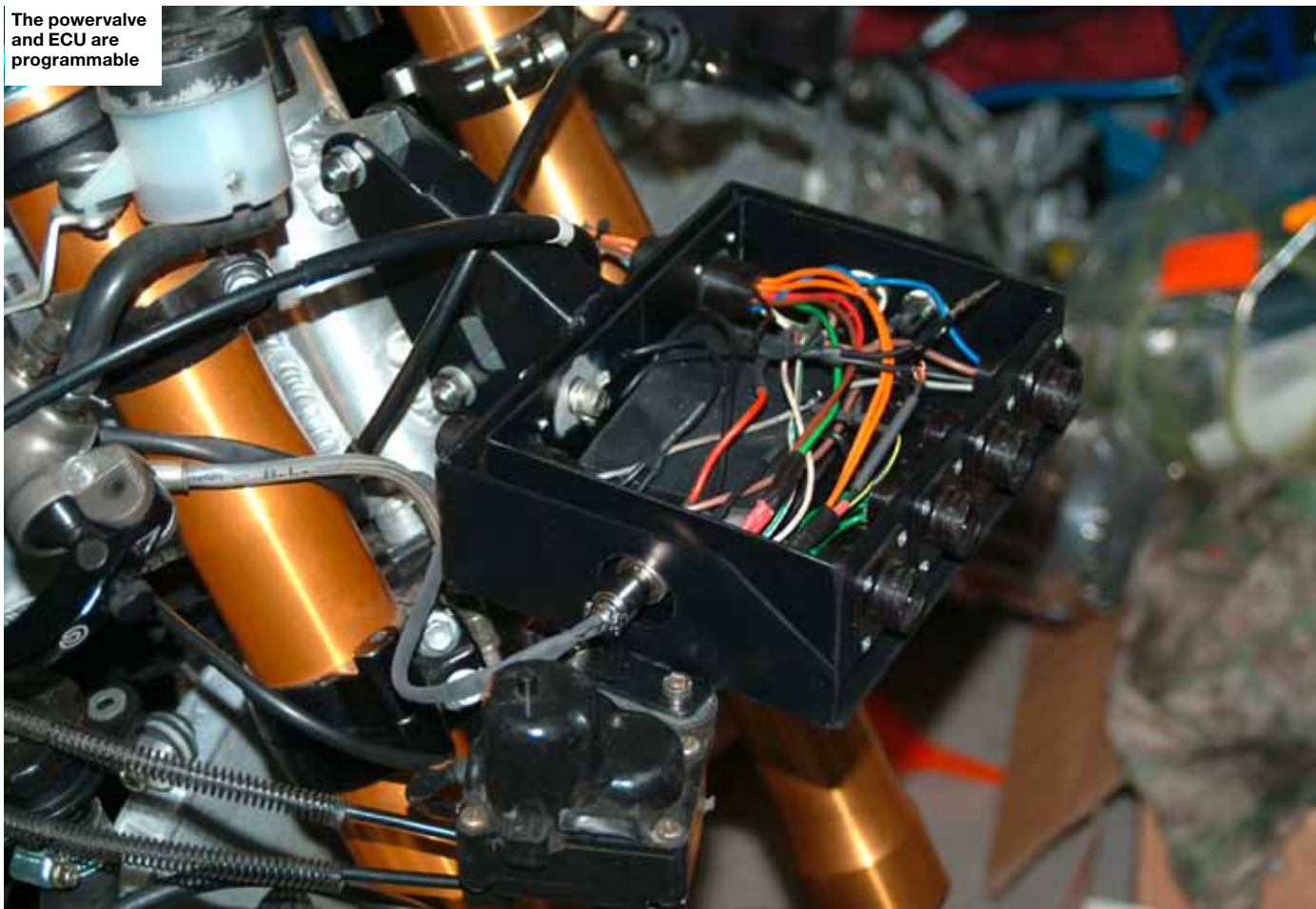


Micoproducts YZR rep frame, just add RD...



Wolfgang's garage is as tidy as his bike!

The powervalve and ECU are programmable



Seat is a self-supporting unit, like the racer



Tank has a dent in the top for the rider's chin

Even the rear caliper holder is a work of art

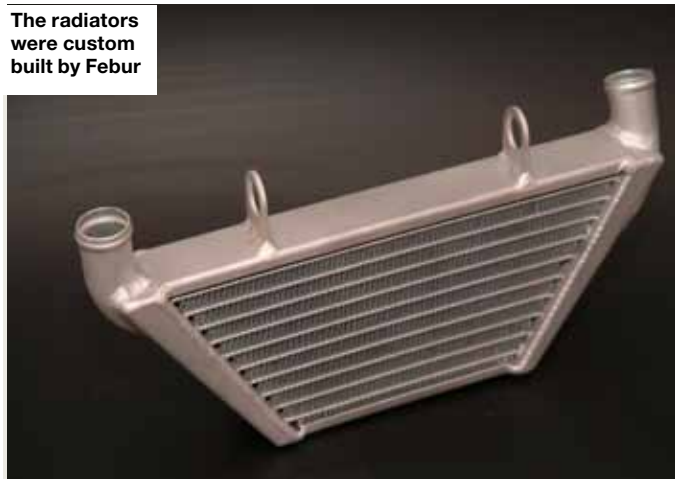


Ohlins forks were painted to replicate magnesium

An initial foam mock-up for the carbon airbox



The radiators were custom built by Febur



Wolfgang's other RD is a Rainey rep



The fairing stabilisers hide the indicators



With the R6 swingarm and painted frame

Road legal with a single projector light



It may not be original but it's looks identical



The moulds for Wolfgang's carbon airbox



Do YZR500s have any engine branding?



Norick's seat also had a clear lacquer finish

The JL Designs spannies are simply stunning



Keihin flatslide carbs nestle inside the airbox



Found too late: John Hopkins' 2002 YZR500



Wolfgang's airbox improves the RD's fuelling