

MGN



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**French superbike
spied in action**

PAGE 2

**Harley with a
Porsche engine**

PAGE 4

One mile... in 18 seconds

IT'S POLITICALLY INCORRECT TO SAY WHAT THIS TUNED ZX-12 DOES IN MPH: P18

PLUS...

■ Now Vincent's in 500 GPs too: p30 ■ Loads of bikes and bargains in BikeMart®



ROAD TEST

■ CYLINDER HEAD SHOP KAWASAKI ZX-12R 95%

There's fast. And there's 201mph fast

It's fine on twisty roads, but when you have a version of Kawasaki's ballistic ZX-12R tuned for even more top-end power, it's time to look for somewhere very long and very straight...

DOING 200mph on a motorbike isn't easy. Few bikes have that kind of poke and you wouldn't even attempt such speeds on ordinary roads clogged with traffic and forested with Gatsos.

But as I sit waiting for the lights to change on this cold December morning, I'm looking forward to doing just that. Not on the public highway, of course – that would just be silly. No, I'm on my way to Bruntingthorpe Proving Ground in Leicestershire, scene of so many speed feats in the past and the location, I hope, of one of my own.

Over Christmas, while most people were thinking about getting as much booze and grub down them as possible, all I had on my mind was the prospect of seeing the magical two-zero-zero on the speedo of the 196bhp, tuned Kawasaki ZX-12R I'm now sitting on.

Now the moment has almost arrived, and I can't wait. But it almost didn't happen. Heavy snowfall over Christmas meant I looked destined to stay at home, looking wistfully

out of the window while I polished off the last of the turkey sandwiches, rather than blasting down an airstrip at speeds most people find difficult to comprehend.

I wasn't the only one who would have been disappointed, either. Alex Collyer and Len Paterson, of Wimbledon-based tuners Cylinder Head Shop, who had spent many hours preparing their project bike for my 200mph attempt, would have been equally gutted. But today, as the snow melts away in the winter sunshine, it looks like the omens are all on our side.

On the ride to Bruntingthorpe, I get a chance to reacquire myself with the ZX-12's abilities on real roads and at rather less eye-popping speeds than I'm planning later. As I wait for the green light, the rev



■ The LED figures say it all

counter needle flickers at tick-over and I blip the throttle, drinking in the deep note of the exhaust.

A courier pulls up next to me at the front of the queue of traffic. His worn-out workhorse creaks to a halt, its engine rattling away still on full choke. Its bodywork is caked with as many layers of road grime as its rider, with his greasy Dayglo bib. He looks across, nods approval, then shouts: "I bet that shifts, mate." He's right, you know – it does.

But it's with a certain amount of gingeriness that I pull away from him as the lights turn green. Even with the fat 200-section rear tyre, the bike's immense power has the wheel slipping and sliding on the rough Tarmac.

But once you get going, the bike is more civilised than you'd think. You don't need to venture above 5000rpm to keep this souped-up ZX-12R scooting along at triple figures with no hiccups.

Though the Cylinder Head Shop machine has gained an extra 31bhp over the stock bike's "meagre" 165bhp at the rear wheel, it's not a total animal. At sane speeds the motor just purrs along, and though

the air is bitterly cold, I can tuck myself in behind the bulbous, aerodynamic fairing and ride along almost chill-free.

Cosy inside the bubble of warm air, I take advantage of the fast-drying roads, passing car after car. Their drivers and passengers stare – trying to read the graphics displayed on the blue fairing panels.

MY EYES SWEEP ACROSS THE DASH LIKE TOM CRUISE IN TOP GUN - OR SO I LIKE TO THINK

This Kawasaki is just as comfortable as the stock bike. The tuners concentrated on extracting maximum power from the engine, but sensibly they left the bike's friendly nature well alone.

Outwardly, only the lightweight Akrapovic four-into-one exhaust system and new paint make this ZX-12R stand out from the crowd. But behind the bodywork it's a very different story – and I'm about to find out exactly what it's capable of as I pull into the gates of Bruntingthorpe.

Sure, there are a few production bikes out

there, like Suzuki's Hayabusa or Honda's Super Blackbird, which will fool you into thinking you're hurtling along at 200mph, simply by flashing it up on the speedo. But like a politician, speedos don't always tell the truth. It's a well-documented fact that modern units are calibrated to be accurate

at normal road speeds, such as 30mph and 70mph. When the bike is going faster, the reading starts to diverge from the bike's true speed and though the speedo may be showing 200mph, it could be several mph out.

To do a genuine 200mph, you have to employ the services of experts. They use state-of-the-art timing equipment which has to be annually calibrated and certificated in specially designated test laboratories. That's exactly what we've done, so we now have a sure-fire method of recording that double-ton figure.

But to get that mystical 200 displayed on the finely-tuned test equipment's LED panel takes a very special motorcycle indeed.

It's not just about sheer power, though. The easiest way to achieve high speeds is simply to bolt on a turbo system or nitrous bottle and propel yourself to warp speed by brute force.

of a 2.2-mile-long deserted runway on this dark winter's morning, fuelled up and ready to go.

At the far end of the straight, a small group is gathered. They've already watched me do several practice runs, the timekeeper checking and double-checking his equipment with its set of multiple red digital readouts.

Now, though, I can't see them and they can't see me. But I can imagine cold ears straining as they listen for the sound of a fast-approaching motorcycle and their eyes peering into the gloom for their first glimpse of me.

I check my helmet strap and click down my visor, then snick the gear lever down into first. My eyes sweep across the Kawasaki's dash like Tom Cruise in *Top Gun* – or so I like to think. Then I rev the engine, pull away from the leaf-strewn start pad and gently roll on the throttle, gradually building up my speed.

As I hook second gear and start to wind the throttle back, the rear

wheel breaks traction on the wet surface. I feather the power, letting the tyre hook up again and propel me forward.

My mind flicks back to the bike's spec sheet and in particular the 196bhp at the rear wheel indicated on the dyno printout's wavy graph. Am I being cautious? Oh yes. This sort of power demands respect.

After a quick glance at the rapidly increasing speedo reading – now well into treble figures – I start the serious business of a high-speed run. I watch the rev counter sweep towards its red line and click gear after gear, tucking in against the cold December wind, which is

Continues over



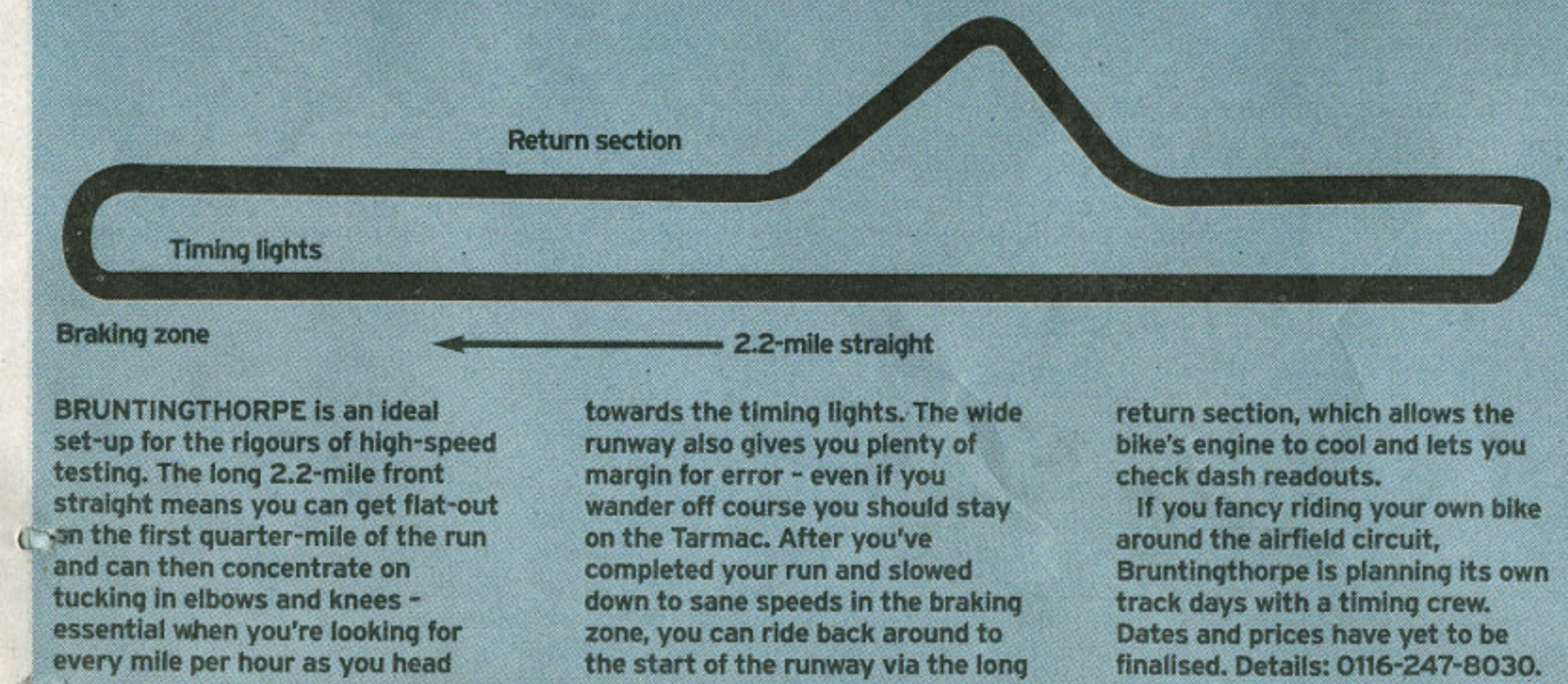
ROAD TEST

Another run gives us an immediate speed through



■ No traffic, no Gatsos, no junctions - just a long, wide stretch of concrete and an appointment with the timing lights

WHY WE CHOSE BRUNTINGHORPE



From previous page

toes tucked into the bike's bodywork.

With less than a few hundred feet to travel to the lights I make tiny final adjustments to make sure I break the invisible light beams as cleanly as possible. Then, in an instant, the parked-up vehicles, speed lights and the gathered spectators flash past and hurtle into the distance behind me.

I hold the power on for a second longer, which is all I dare, as I'm fast running out of straight. Then I roll the throttle shut and start to squeeze the brake lever, forcing the twin front calipers to bite on the discs. One finger is quite enough, as in these rain-soaked conditions slowing the ZX-12R down after its manic charge needs to be done as smoothly, carefully and progressively as possible. With enough speed scrubbed off, I start to turn the Kawasaki and head back up the runway to the timing vehicles.

Flicking down the stand

carefully set. A hurried mistake here could upset the bike's high-speed handling and ruin a ballistic run for the traps. The ZX-12R is checked then double-checked. Oh, and then we check again.

Another run gives us an immediate speed through the traps of 196mph. We can feel in our bones that our target is in reach, and we can't help chattering like chimps at a tea party. We're sure the next run is going to make the Cylinder Head Shop bike the fastest tuned ZX-12R in the country. But first we have the small job of blasting it through the timing lights at 200mph.

We're still 4mph short with the next effort, even though Smith has the throttle butterflies hard against their stops and charges through the second set of timing beams placed almost in the high-speed braking zone.

Back at the van we discuss tactics and decide to remove the ZX-12R's huge, though supposedly aerodynamic, mirrors.

flashed through the second set at 201mph.

It takes us a few seconds to get our heads around it, then we whoop and jump around, celebrating our achievement in a very un-English fashion.

We could carry on, but it's unlikely we'll see more than another 2mph added to that top speed, so we decide to call it a day. We put the ZX-12R back in the MCN van and leave the test track with an intact bike and the glory of a 201mph run - which is good enough for us.

On the way back to the office I give Cylinder Head Shop owner Paterson a call to tell him the good news. Unsurprisingly, he's pretty chuffed about it. After all the worries with the weather, he's getting his project bike back in one piece, together with a 201mph timing ticket and a quarter-mile slip showing a stunning 9.8 second run at 151mph.

So what is the bike's secret? Nitrous? A turbocharger? No. The bike was built to prove a

THE ENGINE SCREAMS, THE LIGHTS FLASH... AND WE'VE DONE IT. THAT'S 201MPH!

and clambering off, I try to look nonchalant, but I can't wait to see the readout from the timing clocks - and I'm disappointed at "just" 190mph. Run after run, myself and MCN hired gun Kev Smith try to improve the bike's numbers, but to no avail.

It's becoming clear the ZX-12R's stock gearing is holding us back. By the end of every run the bike is driving hard in sixth, shooting through the lights flat-out with the revs in the red zone. There's nothing more to come from the speedo, as it's showing 220mph, but the engine is clearly well up for more.

So it's out with the rear wheel and off with the stock rear sprocket. A fresh rear with two teeth less is bolted on. We reckon it should give us 203mph. The wheel is slotted back in and the chain adjusters

Every ounce counts and the weight saving could give us the extra 4mph we desperately need.

There's one small problem - we don't have an Allen key in the van. Then someone suggests using the bike's tool kit - like it's still going to be under the seat...

But, amazingly, this bike is still set up so stock that the tool kit is nestling under the rear seat hump, just where it should be. The mirrors are unceremoniously unscrewed and dumped on the floor of the van.

A quick final check, then it's back around the return loop and on to the straight again. The engine screams, the lights flash... And we've done it. The displays tell us that the Kawasaki entered the first set of beams travelling at 198mph. A quarter-of-a-mile later, it

point - you don't need unsuitable add-ons like that to significantly improve an engine's performance.

Paterson and engine shop manager Collyer have years of experience modifying cylinder heads, improving flow rates, fitting larger valves and even re-shaping valve ports and angles, and they've learned a few tricks.

They bought a Kawasaki ZX-12R and decided to carry out as few modifications as possible to give the biggest power increase they could, but they also set out a few ground rules. The Kawasaki must maintain its user-friendly capabilities. It must still tick over at the lights and must still ride exactly like it did on the day it came out of the showroom.

The engine was stripped to check tolerances and



■ This ZX-12R may be designed to go very fast in a straight line, but it does real roads as well

the traps of 196mph

valves and camshafts modified. The firm used a £40,000 computer-controlled, multi-angled valve seat cutter to set about re-shaping and gas-flowing the stock cylinder head. The reshaped head was then treated to a set of Nucleus inlet and exhaust valves and guides, which were then bench-tested for optimum performance.

Hours were spent treating the cylinder head to a special high-flow valve seat cutting procedure and massive inlet and exhaust

port modifications were made. The stock camshafts were reprofiled and a set of special slotted cam wheels were installed to enable various different cam timing configurations to be tested. Piston crowns and deck heights were checked to ensure optimum valve clearances, all in the never-ending chase for more power.

With engine work completed, the bike was reassembled and a lightweight Akrapovic exhaust system bolted on to vent the spent gases

more efficiently. In less than a month the duo had the modified bike running, but were then faced with a different problem - the new top end now flowed so much more gas, it would not run properly with the stock electronic fuel injection system. Doh!

After hours of phone calls, the Kawasaki was sent off to the workshops of dyno specialist Ryno Dyno for final tuning and test runs on its rolling road. After several hours of tweaking, the bike was the proud owner of a Dynojet Power Commander and a re-programmed chip to suit the new engine's fuel and ignition requirements.

After more dyno runs and a shakedown on the roads to prove driveability and reliability, the ZX-12R was returned to Ryno Dyno for final tweaks.

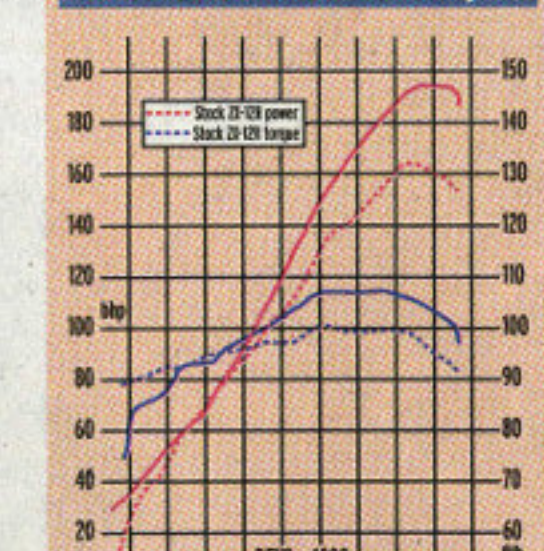
With some more slight tweaks, the final dyno reading of 196bhp at 10,500 rpm was reached. That's an increase of more than 30bhp over the stock ZX-12R - and all it took

was a new pipe, some clever cylinder head work and a bit of trickery with the electronic ignition and fuelling systems.

Fancy owning a bike with a proven top speed of more than 200mph? Cylinder Head Shop is working on a new project bike for 2001, so this very ZX-12R is on sale for just £10,000. If you're interested, call the firm on: 0208-946-2434. Alternatively, if you have a ZX12-R and a few grand to spare, you can get them to work their magic on your own bike (see box).

THE FACTS
CYLINDER HEAD SHOP KAWASAKI ZX-12R £10,000
Availability
Now
Cylinder Head Shop: 0208-946-2434
Deals, offers and bonuses
None
Colours
Metallic blue
Insurance group NI, max 17
Group 17 (applications will be assessed individually)
Specification
Engine: Liquid-cooled, 199cc (83mm x 55.4mm) 16v DOHC four-stroke inline four. Electronic fuel injection. 6 gears
Chassis: Aluminium monocoque with detachable aluminium rear subframe
Front suspension: 43mm inverted forks, adjustments for pre-load, compression and rebound damping
Rear suspension: Single shock with rising-rate linkage, adjustments for pre-load, compression and rebound damping
Tyres: Dunlop D207; 120/70 x 17 front, 200/50 x 17 rear
Brakes: Tokico; 2 x 320mm front discs with 6-piston calipers, 230mm rear disc with 2-piston caliper

PERFORMANCE



Weight, power to weight ratio
208kg (457lb), 1.06bhp/kg
Acceleration Standing 1/4-mile time, terminal speed
9.8s, 151mph
Top speed
201mph
Geometry Race, trail, wheelbase
23.5°, 9.3cm, 144cm
Fuel consumption
Average mpg, tank capacity, range
36mpg, 20 litres, 160 miles
Spares costs
Combined cost of 13 standard items
£3591 (high)
Running costs Depreciation + insurance + servicing + consumables
£1000 + n/a + £200 + £300
TOTAL: £2500 (minus insurance)
(Based on 1yr, 5000 miles, 32-yr-old, no recent convs/claims, urban, Comp)

OUR VERDICT
Engine
97% Puts an Exocet to shame
Handling
90% Not quite an R1
Braking
92% It slows from 201mph
Comfort
90% You could tour on it
Grin factor
96% Dare you not to giggle
OVERALL
95% Runway and road

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