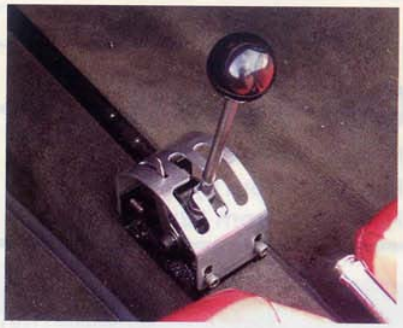
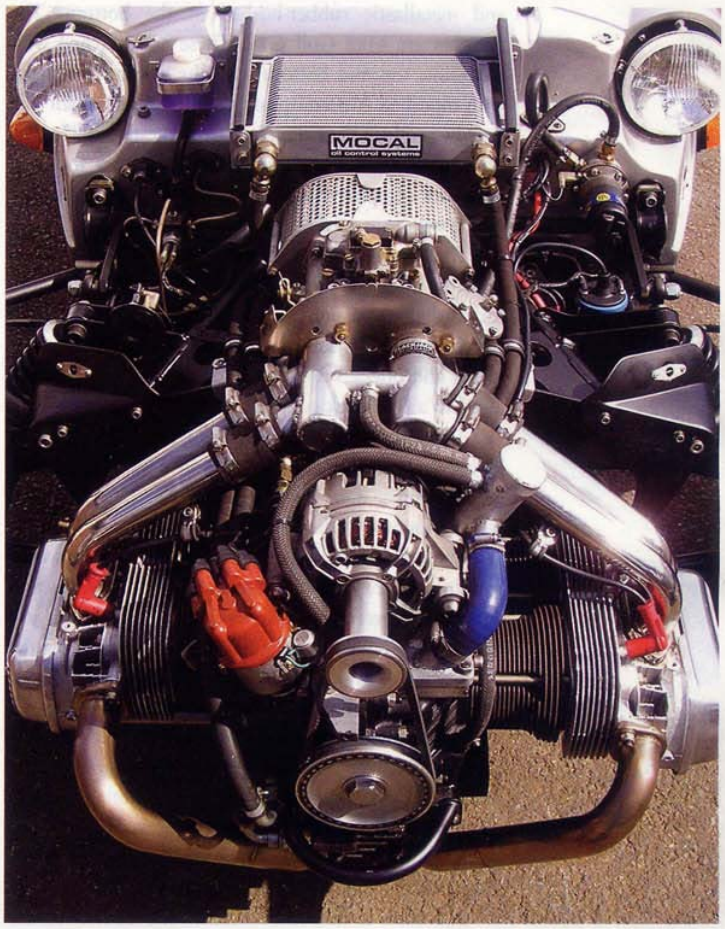


It's been a long time since the combination of a new kit and a Beetle engine caused any great degree of excitement in the kit car industry. It's also been a while since a three-wheeler kicked up any dust but the Blackjack Zero could be set to change all that with its unique combination of outstanding modern style, great performance and sheer driver enjoyment as Ian Hyne reports.

NOTHING BUT THE BEST

It's the shape that hits your squarely between the eyes but what else would you expect from Richard Oakes, the man responsible for a distinguished list of eyesearingly extrovert shapes from the seventies' Nova to the nineties' GTM Libra? The original Blackjack Avion established the style but, though it was enjoyable to drive, somehow, its 2CV power just didn't do the trick for any but dedicated trike fans. That said, the sales figures made it a commercial success. But the new Blackjack Zero is something else. At the time of the Avion, Richard hinted at the provision of greater power through the future option of a Moto Guzzi Vee-twin bike engine but for various design and technical reasons, it didn't happen. Even so, it did demonstrate his recognition of the need for more modern levels of performance in a car that shrieks contemporary chic from every subtle curve of its intricately moulded body. And this is it. An 1,800 air-cooled Beetle engine developing around 80 bhp creating a power to weight ratio of around 170 bhp per ton in a car currently weighing 480 kgs but with a target production weight of under 450 kgs to qualify for motorcycle taxation class boosting it to 180 if you go for



this particular flat-four spec. Performance? Well, it's not the fastest thing on wheels but it's certainly quick. It'll scoot up to three figures without breaking into a sweat but on the way there, it's got flexibility, strong acceleration, firm, effective braking, great handling and very surefooted grip from its front-heavy stance. But of course, this operational finesse is no accident. It's all part of a painstaking design process spanning more than three years and which started with the 2CV powered Avion.

During the six years of Avion production, Richard spent a lot of time with his customers and, as many had owned other three-wheelers, Richard listened to their impressions and gradually built up a mental picture of what was really required. It was a more powerful, longer legged trike with capable, polished and predictable road-holding and handling. Like the Avion, it would have a significant forward weight bias with front-wheel drive for maximum surefootedness allied to a high degree of roll stiffness keeping it flat on the road with the wide rear wheel remaining perpendicular to the road at all times. And that's what Richard has provided.

The chassis is a twin, 14 gauge (2mm wall thickness) CDS steel tube ladder frame braced by a further tube created by a moulded tunnel in the body floor completed with cross-members connecting both sides under the chassis. The front end is further braced by twin 5 mm steel bulkheads, which locate the engine, transmission and suspension. At the front this is by double, round-tube wishbones being Polyurethane-bushed at the top

The Beetle engine is a powerful, solid, flexible and lightweight engine that brings its symmetry to enhance the appearance of the Zero's front end.

Opposite page, top left to right: The dashboard looks as if it means business with well laid out and accessibkle controls dominated by the big tachometer.

The back end is simple but beautifully engineered, The rear wheel is currently minus its mudguard while the small, 25-litre tank allows good luggage space behind the seats.

The gearlever has a wide field of movement that's accurately controlled by the delicate looking but utterly effective aluminium gate with a reverse lock-out.

and metallastic rubber-bushed at the bottom. The uprights are Mk2 Golf GTi.. These are attached with ball-joints top and bottom with the system completed with modified Avo coilspring damper units, which will now be produced in aluminium by Avo especially for the car. An anti-roll bar is also fitted and this too is a Blackjack component which is in steel bar on this car but which will be in tube on production versions.

The wheels are 7 x 17 currently fitted with 205/40 tyres up front but these too will be changed to 215/40 for production versions and will match the rear tyre. The steering rack is a Vauxhall component from the Nova or Corsa and offers 3 3/4 turns lock to lock and which is allied to a Blackjack column.

At the back, the Blackjack swing-arm is mounted on Nylotron bushes and suspended on a single Avo coil-spring damper unit. The aluminium, 5-gallon fuel tank is also mounted at the rear.

The brakes are a bit of a mix but the system works well in practice and will be even better on production versions. Currently, Kawasaki 280 mm discs are clamped by Willwood aluminium 4-pot callipers at the front with a Golf GTi solid rear disc and calliper. Richard specifically wanted to avoid using a servo and, with the feel and response of the current system, he's succeeded but he intends to make it better by going up to Honda 310 mm front discs for greater initial bite and more powerful braking.

Finally, the pedals are Blackjack components and a work of metalwork art on their own.

For such a modern machine, the choice of the Beetle's air-cooled boxer unit could be looked upon as anachronistic but there are sound technical and stylistic reasons for the choice. Firstly, a trike with an exposed engine needs symmetry. That naturally dictates a flat-four boxer unit and while there are others available, the Beetle's air-cooled design makes for a less complex installation. In addition, it has a good capacity to weight ratio with its super-light magnesium castings and potentially big cylinder bores. Placed at the front of the Zero and open to a constant blast of cool air, it can run without its fan and air-jacket thus allowing the fitment of the unique central induction arrangement and exhaust system. The induction system is Richard's own symmetrical aluminium design fed by a Dellorto 40 DHLA, twin-choke carburettor. With the stainless steel exhaust system, it looks really sweet when the engine covers come off, but it works well too. The gearbox is the four-speed unit from the 1302 model Beetle (1970 – 1972). Because the gearbox is behind the engine on the Zero as opposed to in front of it on the Beetle, the direction of rotation needs to be reversed to avoid one forward gear and four reverse. This is simply achieved by unbolting the drive-flanges and swapping them from side to side effectively reversing the direction of rotation of the crown-wheel. The driveshafts are from the Golf.

The car's mechanical base is covered by a teardrop body of intricate and aerodynamic design. Where many GRP bodies are specifically styled to be as simple as possible, this one revels in attention-grabbing detail. The headlights, rear lights, engine cover panels, luggage compartments and hinges are all riveting details accentuated by the silver paintwork that always enhances the subtle curves of any form. But it's not just detail for the sake of it. There's a practical aspect to it all that collectively contributes to the car's overall visual and technical appeal.

Unusually for a two-seater, three-wheeler, the Zero boasts generous luggage space. In addition to a spacious interior, there is a large luggage locker behind the front seats. At five gallons, some may feel the tank a little restrictive for touring but there is a possibility that this space could be reduced to allow a larger tank and it would still be generous. That said, driving totally open cars is tiring and after 150 miles, you'll be ready for a stop anyway. Additionally, there is luggage space under the scuttle, an area that is very often wasted. The scuttle-top body panels are joined by a hinge. The forward section hinges up to reveal the rear of the engine. With that section in place and secured by Dzuz fasteners, the rear half opens to reveal a commodious luggage locker. In addition, within the locker, there are removable panels granting access to the back of the dashboard and the pedals. Undo, the Dzus fasteners for both panels and the whole lot lifts away to grant enhanced access. Even the cylindrical hinges that join the panels are intricately designed and contribute much to the style of the car as opposed to using off the shelf hinges which would be the automatic choice for anyone tackling the job without Richard's design talents.

Finally, the forward engine cover unbolts via three, hex-headed bolts to reveal the mechanical artistry of the induction system.

It's gorgeous and there's more of the same in the cockpit. At first glance it's utterly simple. Red covered seats contrast beautifully in the summer sun with silver paintwork and good quality grey carpet. The seats actually have easily removable covers for easy cleaning or to keep them dry. Then there's the dashboard which looks as if the car means business. There's a large rev-counter, red-covered master switch and push-button starter and a beautifully crafted gear-shift gate with a reverse lock-out. Climb aboard and it's roomy and comfortable. You sit well down in it with your head behind the instrument bubble which lifts the slipstream over you. Richard does plan a screen but quite what form it will take is currently undecided. However, on a day like this it doesn't matter.

Drop the red switch cover, flick the switch and press the starter. The exhaust note is quite fruity as well as loud but Richard has combated that with a perforated section inside the pipe that quietens it down. The car has passed SVA so it obviously does the trick. The two, two-into-one pipes go into a centrally-mounted silencer box with a single pipe exiting and coming out through the rear panel on the nearside. The two pipes going in are currently connected by a balance pipe but Richard thinks he'll leave it out on the next car.

The engine takes its time to warm up so there's lots of throttle blipping over the first few miles until it's happy to idle without driver effort to keep it going. The first surprise is the steering which catches me by surprise as I negotiate the right, left, right that gets me out of the industrial estate. It seems to involve a lot of wheel twirling as it's quite low geared. Currently the lock is


ZERO

Luggage space is enhanced by the front locker under the scuttle. Interior panels can be removed to gain access to the pedal box and the rear of the dashboard.

3 3/4 turns but the uprights have been modified to add a second locating hole for the track-rod ends to speed it up to 2 1/2 turns.

As I take to the Cornish countryside, the milometer shows just 800 miles, all covered in testing by Richard. My only other criticism related to the first heavy application of the brakes which revealed a slight lack of initial snatch and a tendency for the front end to weave a bit. Richard says he has suspected it but was glad of a second opinion to confirm his feeling. He's already thought about it with the planned modifications to the braking system aimed at increasing the initial bite and providing greater braking power.

That aside, it's all good. I ask Richard for a weight split figure but he says he doesn't know. What he does know is that it's front heavy which was always the design intent. Get it heavy on the front and give the chassis good roll stiffness to promote good grip and keep the rear wheel upright and it all theoretically looks after itself. And you know what? He appears to be right.

Off the mark, the car is lively. It's not a high revving engine but even taking it to 4,000, it's shifting. The ride is smooth and comfortable, the car feels stable and the gearchange, though the stick has a wide arc of movement, is accurately guided by the aluminium gate such that the change is smooth and precise if less than lightning quick. Despite its minor shortcomings in tight manoeuvres, the steering is also fine on the move but what really comes across is the grip. You can whistle up to the bends, hit the brakes drop down a gear and really push it through the turns. While you might expect a lightly loaded rear end to break away, especially as you push harder through the corners, in practice it does exactly what Richard said it would and just follows the utterly positive front, a manoeuvre during which body roll is minimal. Initial testing revealed a degree of rear-wheel steering but this has been totally overcome with the use of hard Nylotron bushes for the location of the swing-arm such that every sensation emanating from the back is utterly positive and confidence inspiring. 180 bhp per ton from the lighter car with the current spec engine is not huge power but it's well delivered and very flexible. You get good strong, acceleration at the bottom end and supreme torque at the top. The Zero romps up to 70, 80 and 90 and still retains good and instantly available reserves of power for quick overtakes. All the while, this performance is accompanied by a staccato exhaust bark that's quickly drowned by the rush of air as the speed increases. But though you hear it, the slipstream doesn't hit you between the eyes but rather, due to the exacting design of the cockpit cowl, it's lifted over your head.

Quite apart from the practical aspects of the Zero and its ability to serve as a tourer, more than anything else, it will be enjoyed as a sports car – and it IS a sports car. It's got power, performance, handling, roadholding, good response to driver inputs, good brakes (that will be better), good steering (that can be quicker) and a neat gearchange. That's what you need to wear the sports car tag and that's what the Zero has.

In addition, it will be an absolute pleasure to build as, due to Richard's design talents, the Zero will be as enjoyable to look at as to drive. And the visual pleasure extends way beyond the physical styling. It includes the chassis design, engine design, the details of the mechanical installation and even the supreme care that has been extended to the fastener selection. I loved this car which will delight three-wheeler fans and will convert a great many more.

So how much? The basic kit including all the GRP parts, fabricated steel components and suspension comes to £3,500. On top of that, there is a brake kit at £850, exhaust and steering kit at £820, a fuel system kit at £1,250 to include the inlet manifold, carburettor, fuel tank and pump, an electrical kit at £850 to include the instruments, a lighting and charging kit at £500 to include the alternator, an interior trim kit at £770 and the oil coler and miscellaneous kit at £450, all prices plus VAT. That comes to £8,990 after which you need wheels, tyres, paint and an engine and gearbox.

The 1,800 engine fitted to this car is a tuned unit that, while great to drive, has caused a few problems such that Richard reckons a better choice would be a new or reconditioned 1,600 Type 1 engine with big-valve heads, a large volume oil pump and the crankcase drilled and tapped for an external oil-cooler. Thereafter it can be enhanced with a lightened flywheel and a fast-road cam to give it the necessary pep and response to give the Zero some zip. Overall, you're looking at an on-the-road cost of around £12,000 for a car that accurately reflects the specification of the prototype demonstrator and it's all nothing but the best.

FURTHER INFO

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