

# Vitamin C

*Decisions, decisions. CX3 or CV3? Flat twin or Vee twin? Body roll or firm control? Revvy power or relaxed pace? Ian Hyne ponders the markedly different characters of BRA's twin trikes. At least they're both red!*

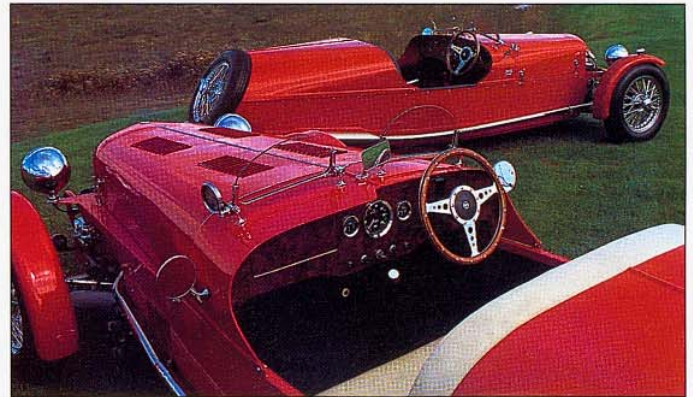
**T**he BRA line-up of CX3 and CV3 three-wheelers represents the culmination of a long road that started with Mr Morgan's surprisingly capable trike. Loved by millions, experienced by few, this fact of life dictated by the simple logic of supply and demand created a tailor made opportunity for a similarly inspired car.

Ex-Lotus man Tony Divey offered to fill the gap with the Moto Guzzi Vee twin powered Triking. This car is the benchmark for light weight, quality and dynamic ability of all the three-wheelers that have followed his example, but it was always on the expensive side and has therefore remained the connoisseur's choice.

Morgan enthusiast, John Ziemba, was a potential connoisseur but couldn't justify the expense of what would merely be a toy so he created his own. It was John who hit on the Honda CX500 as the basis for the machine which finally

emerged as the JZR. This car enjoyed a meteoric career, notching up approaching 500 sales to like-minded individuals, many of whom had lusted after a Triking but lacked the price of indulgence. For that reason, the CX base played host to several engines, amongst which was the Guzzi unit as well as a Harley 1340cc and a Honda Pan European V4 knocking out 104bhp in a car weighing a mere 880lbs. That's well over 250bhp per ton going through one wheel!

At the opposite end of the performance spectrum, Lomax was, and still is, enjoying huge success with its Citroen 2CV powered 223 model. This 602cc, air cooled, flat twin propelled tourer puts 30bhp through the two front wheels. It appeals to 2CV enthusiasts just as much as three-wheeler fans. In a fifteen year career, sales have never faltered and the venerable Citroen donor car can probably boast as many fans as Mr



Morgan's original contraption.

Into this buoyant situation came BRA. Already well known for the first kit form Cobra replica, the company's John Berry is also a fully paid up Morgan nut who produced a very similar car to the JZR although he favoured the barrel back body in preference to the JZR's beetle back version. This was the BRA CX3 Super Sports which the company, having gone to all that effort, then did very little to promote.

James Mather was a happy chap with a foot in both camps. A Citroen 2CV on the drive, a Lomax replacement chassis in the garage in readiness for the rebuild that never happened and a JZR parked in the corner. He and partner David Wiles bought the BRA project along with the name and set about the

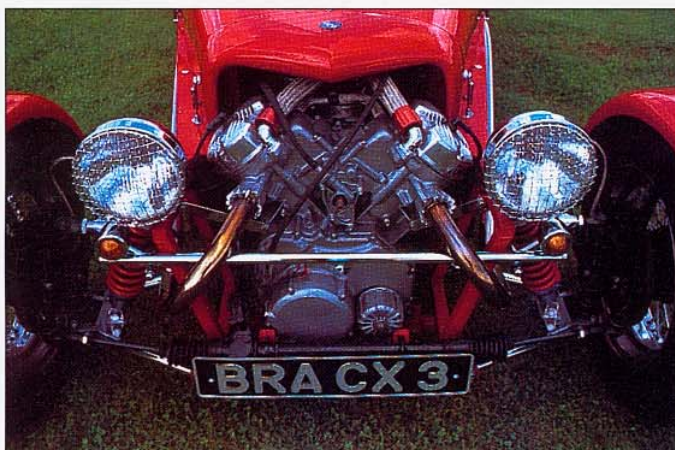
promotion the car had never had. Along the way, James tripped over his 2CV replacement chassis and decided to marry it to a BRA body. The CV3 was born.

With JZR now having ceased production and the CV3 offering the most popular body style atop the most popular mechanics, the new BRA company has a line-up of powerful attraction to anyone toying with the idea of tri-ped life. So let's have a closer look...

## The CX3

The CX3 is the powerhouse of the pair. A square tube chassis stiffened by aluminium side panels, double wishbone front suspension and a Honda swing arm rear create the platform for your choice of engine. Normally

*Below: CX3 is propelled by Honda's fiery 500cc motorbike engine. Rev it up to 10,000rpm and you'll find a handy and punchy 50bhp.*



*Below: Altogether more relaxed is the 602cc air cooled, flat twin Citroen engine of the CV3. It produces some 30bhp.*







**Above:** CV3 cockpit space slightly restricted by centre tunnel. Gearshift is the Honda bike's sequential unit. **Below:** Thanks to fwd, there's more room in CX3 cockpit. Push/pull Citroen gearchange requires practice.



that will be the Honda CX Vee twin that comes with the bike. Available in 500 and 650cc four stroke forms as well as a 500 turbo, power outputs range from 50 to 65bhp. They're sophisticated too. All-aluminium construction, strong, rugged, long lived and well engineered, they boast water cooling, four valves per cylinder, a five-speed sequential box and shaft drive to the rear wheel.

Naturally, as the company that has assumed the legacy of JZR, BRA is frequently in receipt of enquiries regarding the Moto Guzzi and the Honda Pan European V4 and, though they won't be available tomorrow, they are sort of in the pipe. If you've got a Guzzi engine and

want to fit it to a BRA, James and David will be happy to assist with the prototype work.

But what of the current model? The CX3 is a compact and tightly packed buzz bomb. You climb over the side and squeeze yourself into the narrow cockpit. Once there, you shift about a bit to get comfortable and then test the pedals. It's pretty tight down there and it's easy to hit the wrong peg but most can manage it in ordinary shoes. Those new to trikes will be surprised at the diminutive size of the car and how close you sit to the outside world. You can almost touch the extremities of the thing.

Start her up and the noise and sensation is quite unlike a

conventional car. The Vee twin burble rattles through the frame, the car rocks to the staccato beat while blipping the throttle sends the rev counter to heights few everyday car engines have ever dreamed about. And therein lies the secret of driving the car.

You need to use the revs. There's 50bhp in there somewhere but you need to work to find it. It doesn't lurk anywhere near 3000 and even at 4000 you're still freezing cold. 5000 elicits a bit more response but the big hit is still some way off. At 6000 it's tuning up, at 7000 it's singing and from there on up to peak power at around 10,000rpm, the CX screams, pulling strongly and urgently accompanied by an exhaust bark guaranteed to wake the neighbours.

Aside from the novelty of the driving position and engine response, you also have to deal with the bike's sequential gearbox. It's not a problem but you will frequently forget what gear you're in and end up messing about at the lights trying to find neutral. When you get it, there's a green light of confirmation on the dashboard. That said, the motor's got that much torque it often doesn't matter what gear you're in. As ever, practice makes perfect and, once you are master of the controls, you can really start to exploit the ability of this fine instrument of personal entertainment.

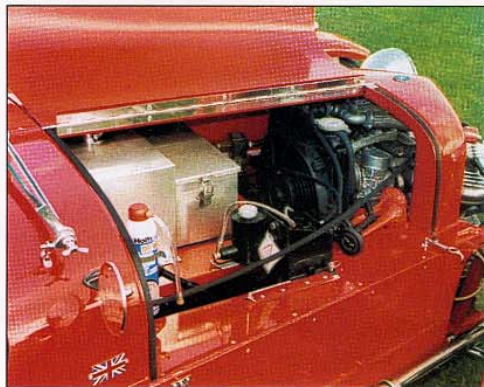
Anyone who knows anything about three-wheelers will openly admit they can be unstable. Many people will cite the example of a three-legged milking stool and tell you it will always create a firm platform on any undulating terrain. That it will but when did you last see a

milking stool doing a ton? A little knowledge can be a dangerous thing! It may be small, it may be a feather-weight and it may only have a reserved 50bhp perched on the front but with 130bhp per ton in standard 500cc form, the CX3 is a powerful performer well able to run a few established stars ragged. But you need to learn to drive it and treat it with respect.

All the power is going through a single wheel so it's very easy to break the grip. When you do, remedial action needs to be swift and this car is fitted with the Escort Mk 2 quick rack. It's got 2.5 turns between directional extremes but most will find it very twitchy and unpleasant at speed. The standard 3.5 turns is much more pleasant to use and well up to the job of staying on top of the thing as long as you concentrate on what you're doing. And you do have to concentrate.

You can't really cruise along in a CX3. Everything's working at a frenetic rate. To keep the speed up, you need to be up and down the box and maintaining the revs. There's always something to do unless you're on the motorway but that's an alien habitat for this accomplished back road bruiser.

Where the CX3 comes alive is on twisting, tortuous, writhing roads where its power, punch and handling ability will conquer everything before it. As well as a power-to-weight ratio equal to many a seven inspired, 1600 crossflow powered sportster, the CX3 has a similar braking system with Cortina discs clamping the front wheels. At the back there's the Honda's drum but it only operates as a handbrake, the footbrake just working the front calipers. OK, so you've only got half the brakes, but you've also got half the weight and the CX3's arresting action is hugely impressive. With that sort of stopping power, lightning gearchanges that let you drop three





cogs in just a second, good front end grip and precise steering, the CX3 is a capable performer. Poke it into a turn and the front end is solid. Squirt it out under power and oversteer is only ever a fag paper away but it's driving on that fine line that creates the buzz in this endlessly capable and thoroughly enjoyable machine.

If you would like to enjoy it and save the trouble of building it, this particular car is for sale at sensible offers around £7000.

## The CV3

That two similarly inspired and constructed cars can be so different is not hard to understand when you get under the skin of the CV3. In place of the CX3's spaceframe, the CV3 has a ladder chassis, albeit with a body supporting steel tube superstructure. In place of the CX3's tightly controlled double wishbones and rear swing arm, the CV3 has the long-travel leading arms and trailing arm that have won international fame as the quirky underpinnings of Citroen's ugly duckling and its related progeny.

Where the Honda provides a revvy, punchy Vee twin, the Citroen supplies a laid back flat twin. Where the Honda is water cooled, the Citroen is air cooled.

And where the Honda has a five-speed sequential box with shaft drive to the rear wheel, the Citroen has a four-speed box driving the front wheels.

As performance three-wheelers, you'd think there was absolutely no contest. On pure performance grounds there probably isn't but, as BRA's James Mather points out: "If you wanted to drive from Lands End to John O'Groats, you'd take the CV3 every time". What he means is that it's far more of a tourer. Far more comfortable, relaxing and less tiring. That said, the 2CV motor can rev to

around 7000 and, with the car's light weight, can produce a fair turn of speed.

Climb aboard and the difference is immediately apparent. With front wheel drive obviating the need for a space restricting tunnel, the cockpit assumes ballroom proportions. You can sit comfortably, spread out, rest your left foot beside the pedals and generally relax.

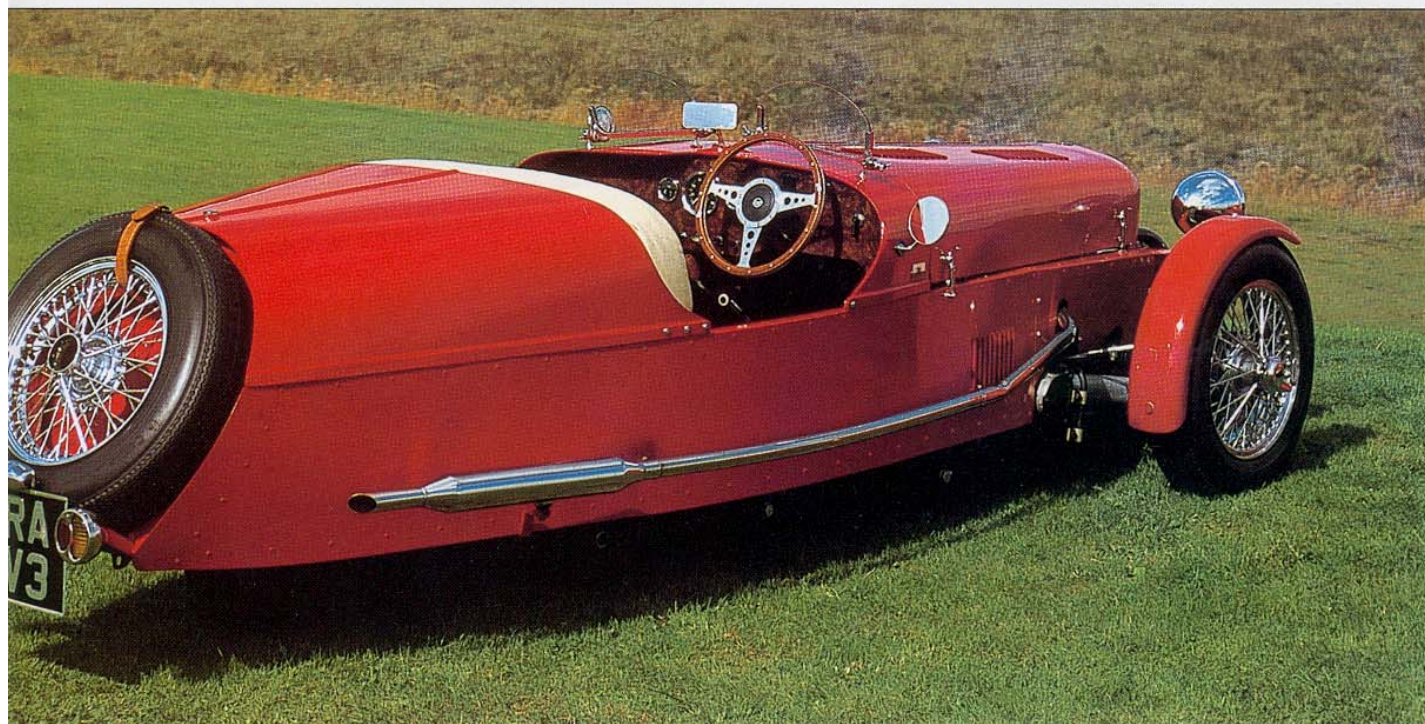
Twist the key and the engine response is less urgent although the stainless steel side pipes still emit a stirring chorus. Going back to a gear pattern, you've some thinking to do as you

grapple with the Citroen's distinctive dash-mounted gear lever. First is away from you and back. Gear engaged, you let out the clutch to waft forward on a ride of quite unrivalled and unruffled smoothness.

Acceleration is more relaxed but the CV3 is certainly no crawler. Push the pedal a bit harder and leave it there and the speed comes although it takes its time. Forward, across and forward finds second and the whole show starts over again as the air cooled twin summons its strength. Back and back for third repeats the performance and



*Above left: CX3 front suspension uses twin wishbones and coil-over shockers. Stub axles are Cortina. Above right: Classic Citroen 2CV leading arms dominate CV3's front suspension arrangement.*





forward across and forward sees speed consolidated in top. It feels sluggish but the speedometer says otherwise. 60 comes up in a reasonable time while 70 and a bit more is no problem. Rolling along enjoying the sunshine, you forgive the car its apparent eccentricity and just feel the sensations. Then you come to a corner.

The 2CV brakes are brilliant. Inboard discs at the front, drum at the rear and no flexible hoses to dissipate pedal pressure. Pressing the pedal brings solid braking. Steering's also fine up to a point and then the world seems to turn on its side. The CV3 has inherited its donor's talent for unnatural cornering attitudes. Though it carries the 2CV's standard anti-roll bar, it doesn't seem to stop the car rolling such that a right elbow patch seems a good idea for the extras list. That said, grip is good and directional control easily maintained. It's merely complicated by having to operate at 45 degrees to the perpendicular.

In truth, experience teaches you to counter the natural body roll with throttle control or,

more precisely, to go light on the power as you nose into a turn. That way, you will soon become familiar with the car's inherited quirks and learn to appreciate it for its more constructive talents.

The CV3 has only been out for about a year and this particular car is the prototype. The company has learned a good many lessons from its construction and operation and one of these relates to the imminent arrival of a far more effective anti-roll bar. But even with the standard steel rod, the CV3 is a thoroughly enjoyable car to drive. You just have to be aware of its unique reaction to pushing too hard. If you can't help yourself, then perhaps the CX3 would be the better choice.

### SHARING

Differences in specification aside, the two BRA models have a great deal in common. They are both beautifully made from top quality parts, which is amply reflected in the standard of the demonstrators. The company's talent for finishing detail has ensured



that both cars look their best with many chromed parts, excellent paint, walnut veneer dashboards (OK, one of them's formica but can you spot which one?) and well fitted trim. They also boast excellent luggage capacity beneath the hinged rear body panel. Not content with that, there's more to come. The company is currently working on a more protective, split screen to fit both cars as well as a few other improvements. The basic kits are pretty comprehensive, after which you can make your selection from the long list of optional extras.

There's also the plan form car.

Soon after acquiring the BRA company, James and David announced a set of plans to allow home builders to construct cars from scratch. In the event, they were a bit premature and a bit of reflection convinced them that plans for the CX3 and its additional parts made the plans too complex and too expensive to produce. However, in respect of the CV3, plans are now available at £98.

But whether you go for a set of plans or a basic kit, BRA construction is excellent and thoroughly enjoyable therapy that'll do you more good than any amount of Vitamin C. It makes you smile more, too.

