

all showing the world a clean pair of heels and a super-efficient drive train. In this environment Tamiya tried to introduce a radical new design using shaft drive

Tamiya's stubbornness in not following anyone else's lead in model car design has worked for them in the past but in the hostile world of competition car production the results are what counts and the Avante failed to get close to a major win in Britain or Europe.

When asked why they had chosen a shaft drive set-up Tamiya pointed the

years since Tamiya first introduced the Avante, their four-wheel drive competition Off-Road car. In that time it has hardly set the world alight insofar as winning big races is concerned.

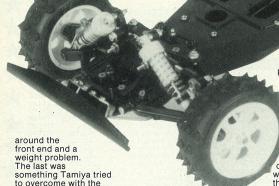
The problems were obvious at the start. Highly complex design, too prone to breakages, particularly

introduction of a carbon

pounds and the front steering stub axle uprights were beefed up to stop them shattering

But still the Avante did. not prove popular (in stark contrast to their stunningly successful Boomerang series) for two further reasons.

First: the price was at the



Up, up and away -

with Tamiya's latest racer

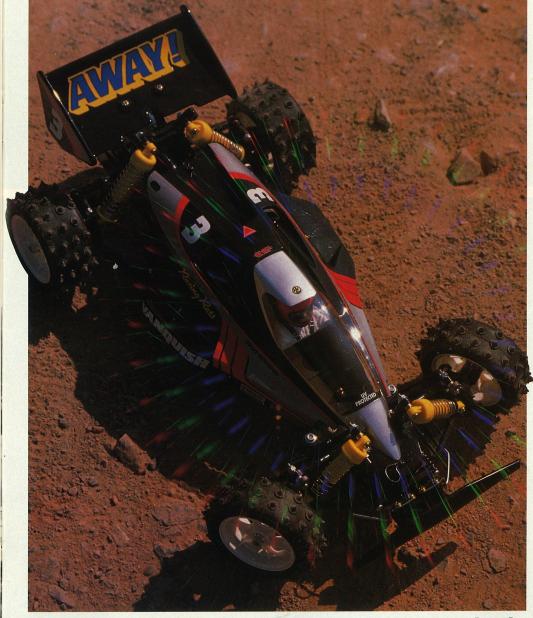
astronomic and Tamiya's basic customers were just not prepared to spend the loot, particularly when they could have almost got a complete Boomerang deal on the track for the same amount of money. So the only people left were the competition boys who will usually sell their own mothers if they think it will make them win, only they weren't buying either because of the other reason. At roughly the same time belt drive became fashionable with the Kyosho Mid, Schumacher

Cat and PB Mini-Mustang

finger at real cars like the Porsche 959, Audi Quattro and Lancia Delta to prove that their design was best. Unfortunately modern rally cars have such a surfeit of power their main requirement is something that will stand the strain. and we ain't talking about rubber bands or toothed belts either. Model cars need efficiency because the power output is still limited.

Despite this the Avante's drive train was supremely efficient, mainly due to the precision of Tamiya's gear moulding and general qualify of manufacture.

One other well known Tamiya characteristic is their unwillingness not to give up. They have had very



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few mistakes (and in truth the Avante still probably sold very well by all the other manufacturers' standards) and they have obviously decided to make a go of the Avante although not in its original format. They have put their faith in a new version of the car – the Vanquish.

The new car is a welcome return to traditional Tamiya values. Basically it is a lightweight, less complex Avante and probably has the potential to be streets ahead of the original car particularly when fitted with the new range of optional parts available (more of which another time).

What Tamiya have done is to take the Avante gearboxes and build a new car around them.

The standard chassis is the more familiar tough plastic monocoque type found on Tamiya's other cars whilst there has been a general tidying up around the suspension system to get rid of those amazingly hi-tec, bomb-proof knuckle joints. In fact this is probably where major weight savings have been made when they sent the Avante off to the health farm to slim off the excess fat.

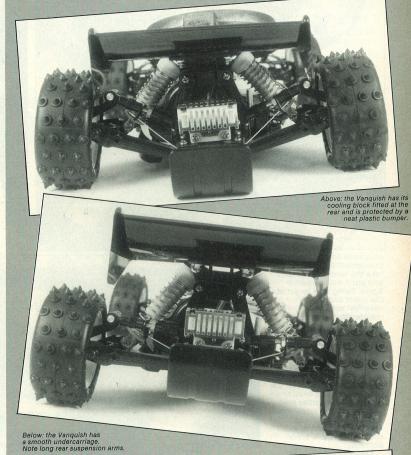
Suspension systems

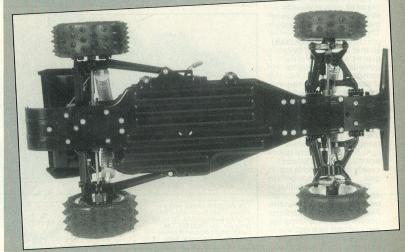
Both suspension systems are changed with new wishbones and at the rear a trailing arm system which pivots on captive balljoints. At the front standard wishbones operate and both ends are fitted with adjustable upper arm links.

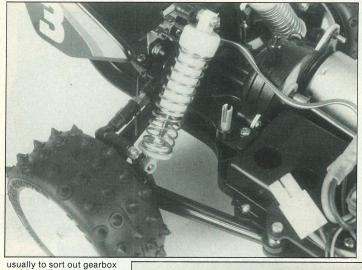
adjustable upper arm links. Those early problems with the front steering uprights have been cured according to Colin Spinner of UK Tamiya importers, Richard Kohnstam. "Basically we're on about the Mark IV versions now, they are thicker and all the edges are radiused – we haven't broken one yet," he claimed.

This was always the Avante's weak link and if the problem is no longer there it will do a lot to bring back confidence in the car.

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Inside the two gearboxes are the same precision moulded geared differentials – fully enclosed to keep the dirt out but easy to maintain when fitted inside the gearbox cases because of an access panel in the top. This is another good point. At club level there is not a lot of time







problems if you have got to

take the whole thing apart

and put it back together

maintenance and a calm state of mind. Because this

the Avante, the bearings

rather than full ball races.

opinion, much better than

ordinary plastic types. You

could quite happily use these until they wear out

and then invest in some

Tamiya's idiosyncratic brand of car design also

the motor in the chassis. This is set in-line (i.e.

stretched to the position of

pointing down the chassis)

so that a system of bevel

Not content with two

differentials Tamiya have

added a third limited slip, ball-type which sits in the rear gearbox. The reason

behind this is that although

the drive ratio between the front and rear wheels is

split 50/50 the centre diff

evenly if either end loses grip.

There are mixed feelings

necessary or not. When the

Avante first came out, most

drivers locked the thing up

solid so that all it did was

transfer the drive straight

through. Tamiya feel this

will distribute the power

gears transmit the drive

down the car through a

central drive shaft.

ballraces.

although not as good as the proper thing are, in our

phosphor/bronze type

The standard bearings,

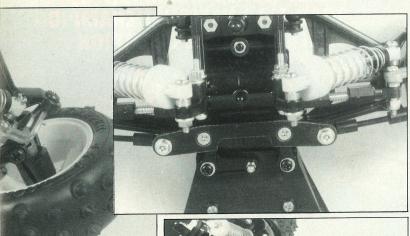
is also a budget version of

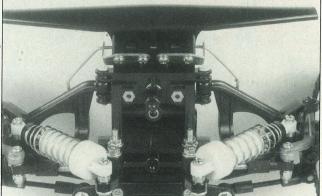
essential to speedy

throughout are the

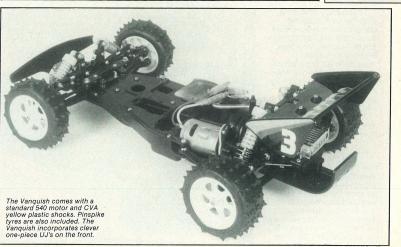
again. Being able to get at the gears and diffs is

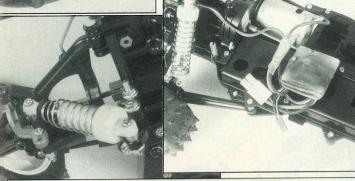


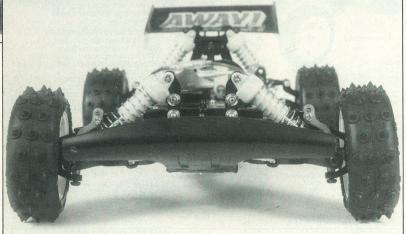












may be a good thing in certain cases and have produced an optional 'solid' unit. Because of the position of the motor and the shaft running down the centre of the car, the chassis layout

is also unconventional with the Ni-Cad pack on one side with the motor and steering servo providing the

balance on the other. The battery pack sits inside the monocoque and is accessed through a plastic panel in the bottom of the chassis.

Tamiya have also included at the front of the Vanquish a set of universal-joint drive shafts, the ones at the rear are the ordinary ball and pin type. Also the well-known CVA plastic shocks are used to provide the springing and damping.

On the suspension, one nice touch we noted was the plastic gauge which you fit around the threaded rod of the upper arm links. Now instead of measuring the length of the link to make sure it is right you just screw in the ball joints until they touch the gauge. Right first time – brilliant!

The whole gearbox and suspension sub-assembly at the front can be removed by undoing just a few screws. At the rear the motor and gearbox can be lifted clear of the chassis by again just a matter of taking out a couple of screws. This makes maintenance much easier if you can get at the bit you want rather than having to fiddle with the rest of the car as well.

Anti-roll bars are featured at either end whilst the steering is now through a pack and pinion system which should reduce bumpsteer to virtually zero.

The last notable feature are the lightweight wheel hubs which are produced from one-piece plastic moulding incorporating a nice spoke design. The bodyshell is the usual cuti-half-coke-bottle type, all aerodynamics and very little shape as is the current fashion.

And that is basically about it. Against the likes of the CAT, Mid and others the Vanquish will probably still lose out but at club level where a high degree of sophistication is not so necessary the Vanquish will be an excellent car. Above all else it should do a lot to eradicate the memory of the Avante particularly with a more attractive price tag of approximately £139.99.

With the range of optional extras on the way for the car the competition potential could be greater. Parts like Titanium screws, carbon graphite steering set and ball raced steering set will give the Vanquish a lot more flash and dash.

We will keep you informed.