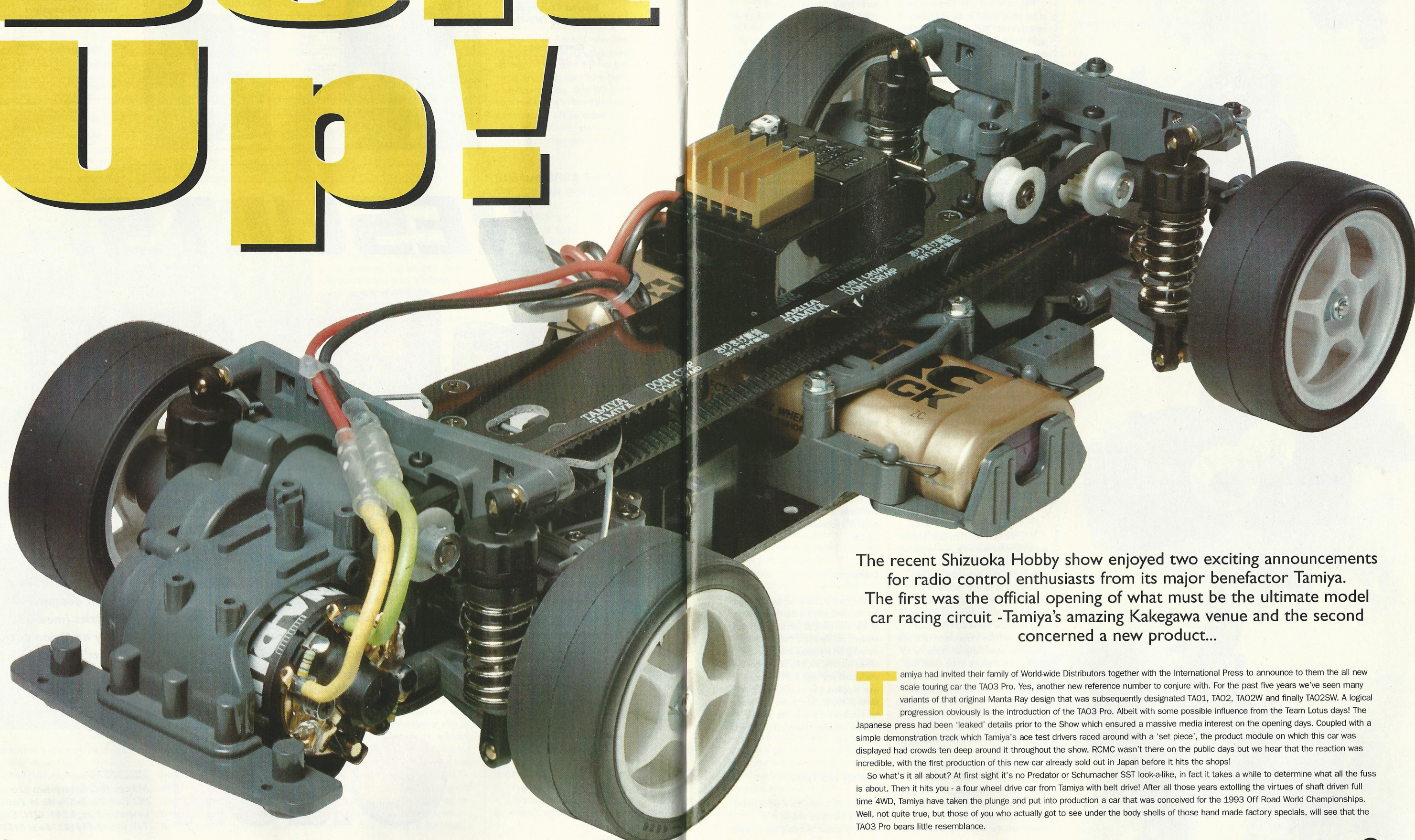


Belt Up!



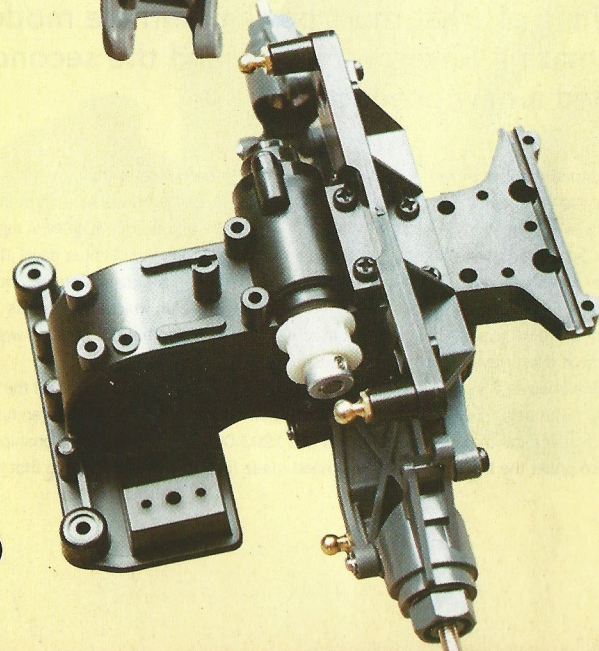
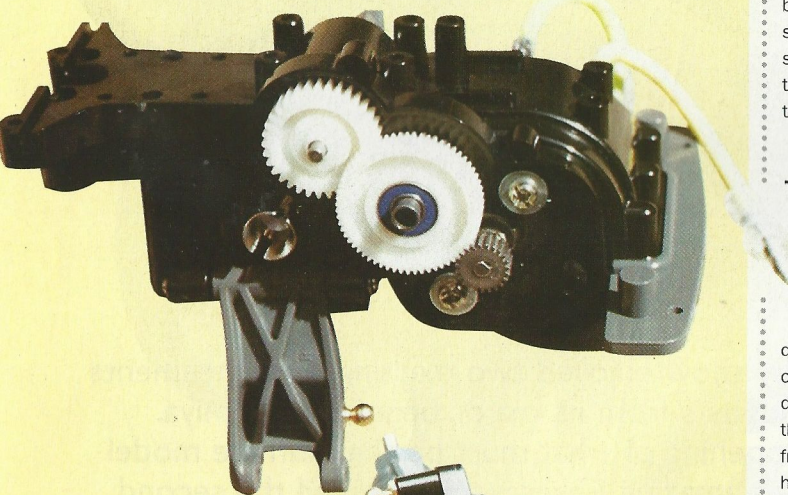
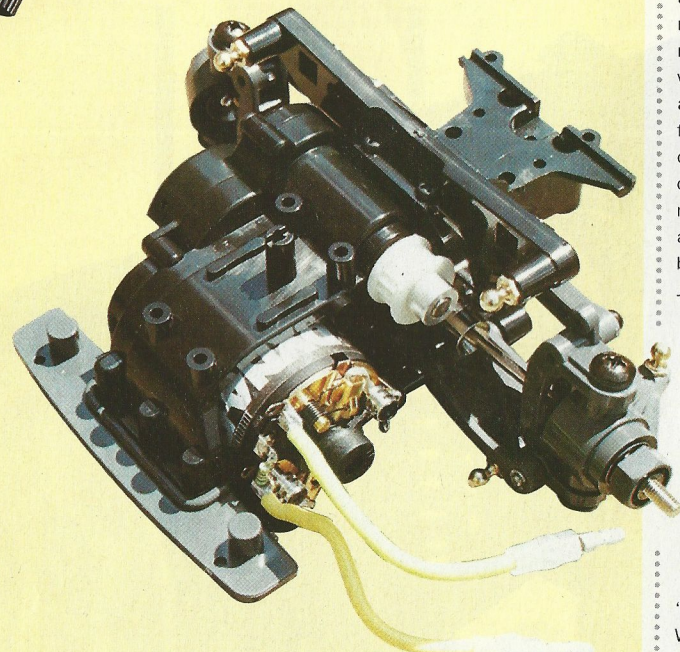
The recent Shizuoka Hobby show enjoyed two exciting announcements for radio control enthusiasts from its major benefactor Tamiya. The first was the official opening of what must be the ultimate model car racing circuit - Tamiya's amazing Kakegawa venue and the second concerned a new product...

Tamiya had invited their family of World-wide Distributors together with the International Press to announce to them the all new scale touring car the TA03 Pro. Yes, another new reference number to conjure with. For the past five years we've seen many variants of that original Manta Ray design that was subsequently designated TA01, TA02, TA02W and finally TA02SW. A logical progression obviously is the introduction of the TA03 Pro. Albeit with some possible influence from the Team Lotus days! The Japanese press had been 'leaked' details prior to the Show which ensured a massive media interest on the opening days. Coupled with a simple demonstration track which Tamiya's ace test drivers raced around with a 'set piece', the product module on which this car was displayed had crowds ten deep around it throughout the show. RCMC wasn't there on the public days but we hear that the reaction was incredible, with the first production of this new car already sold out in Japan before it hits the shops!

So what's it all about? At first sight it's no Predator or Schumacher SST look-a-like, in fact it takes a while to determine what all the fuss is about. Then it hits you - a four wheel drive car from Tamiya with belt drive! After all those years extolling the virtues of shaft driven full time 4WD, Tamiya have taken the plunge and put into production a car that was conceived for the 1993 Off Road World Championships. Well, not quite true, but those of you who actually got to see under the body shells of those hand made factory specials, will see that the TA03 Pro bears little resemblance.



Left; New Tamiya motor is designed for the car.
Below; Some of the gearbox detail show the mix of gear and belt drive systems.
Also a mix of coarse and fine pitch gears are used.



This car is belt drive but the motor is at the front, ahead of the wishbones-radical or not? Remembering that it was again Tamiya who pioneered the in line motor seen today on a certain U.K. manufacturers car their Avante design was just too early to be favourably accepted. Maybe this suggests that a front motor location will be followed by others in the future. Several of you could be asking what difference does it make so we'll try and give you the answers. Fortunately, we were able to bring a TAO3 Pro back with us from Japan to construct and the photo build strip reveals all...

Chassis

This is a double deck FRP set which immediately tells us a Hop Up Carbon Fibre version will soon be on it's way! Mounted to the lower deck is a battery tray designed for the standard stick pack which is 'de rigeur' in Tamiya's domestic market. We've already seen the Carbon Hop Up version of this part. The steering arm assembly is also mounted to the bottom plate and for once there's no slop. Bushes are used to ensure smooth operation. Adjustable track rods then affix to the steering uprights using the normal Tamiya balljoints.

Transmission

The two gearboxes are mounted to the bottom chassis plate and linked by the top plate and a toothed belt. The gear train is quite complex featuring new versions of the proven design of ball differential. Ball races are supplied throughout to further reduce any friction. It's the front gearbox that houses the motor and again Tamiya have provided the option of a total package with the introduction of a new Actopower style Dynarun motor - a 13 Double of 0.7 gauge to be exact and specifically designed to complement the output requirements of the new chassis. A 23T fine pitch (0.4 modular pinion is provided giving a final ratio of 7.34 to 1. The range of ratios available is from 8.44(20T) through to 5.82 (29T).

The gearboxes are moulded from a new softer type of material used extensively on their gas powered TGX. The mix of counter gears and spurs seems complicated but when assembled the assembly revolves

quite freely although the belt tensioner gives the impression of a taut set up.

Suspension

The wishbones are moulded from this softer engineering plastic and are extremely chunky. One piece moulded lower wishbones are retained at the gearbox by E clip shafts rather than the usual Tamiya self tapping pins. Front and rear wishbones are identical so this cuts down on the spares needed. The damper mounts are large and look very strong.

The uprights and knuckles total ten degrees of caster to aid straight line running coupled with responsive turn in. Again ball races are used throughout. Dog bone drive shafts are supplied as standard but the U/J versions currently available for TAO2 models will fit if you so decide. Again the E ring shafts are used to mate all the suspension components together. In their normal way Tamiya have provided a neutral camber setting by including fixed length top arms. Adjustable types are available for those with the time and expertise to experiment. Rear wishbones incorporate anti squat and a few degrees of toe in as standard. Top arms are of the fixed type but again adjustable versions can be fitted. Front and rear stabilisers are standard issue slotting neatly into a moulded hole at the top of the uprights. When fixing the top arms take care that you don't try and screw their mounts into these stabiliser holes or else you could find yourself without a hole for the roll bar.

Dampers

The normal plastic Tamiya style units are supplied with the recommendation of one hole pistons, two spacers and medium oil. We made the mistake of screwing on the usual short bottom mount but beware, they don't clear the wishbones you need to fit the longer type supplied. Shocks mount on ball joints all round. Springs are the same front and rear but again the tune up springs and alloy shocks can be directly substituted.

Wheels and Tyres

Standard fitment are a set of nicely finished five spoke wheels in a gunmetal colour. Standard foam inserts

and slick radial tyres get you running but all of the Touring Car Saloon wheels and tyres from the existing range will fit.

To complete the rolling chassis four body mounting posts are fitted which follow the normal Tamiya practice of clips and variable height choice location holes.

Virtually all of Tamiya's Touring Car, FWD Saloon and Rally body sets will fit as wheel base and track are to the standard Tamiya scale saloon dimensions.

Radio Installation

Nothing unusual here, the steering servo mounts with two posts to the bottom chassis plate and a horn mounted servo saver protects those fragile output gears. Tamiya recommend installing an electronic speed controller and receiver in 'tandem' fashion on the top plate but we managed to squeeze or slim line K.O. receiver on top of the steering servo for a lower centre of gravity. If your chosen speedo uses a switch then tape it to the top deck. A 1700 SCRC was used to evaluate our new baby and to establish 'was it all worthwhile'?

Track test

First we called the West London Racing Centre to ensure our test could enjoy some secrecy. Those of you who have driven WLRC will know that grip levels change dramatically there and we felt it would be a good choice. Richard Kohnstam provided a selection of Tamiya Body shells not knowing why we wanted them! Eurocup Competitors have during the season experimented with different shells but the Loctite Skyline seems the top choice from those in the know. Richard Isherwood favoured the wide Supra when asked 'what do you recommend at West London but this would have meant changing several components including uprights and offset wheels. We weren't ready for that yet!

A well sorted TAO2 chassis from a certain Mr X was our benchmark. Tyre warmers were the order of the day and very quickly we were circulating quite rapidly. A timed run resulted in a 14 lapper that was good enough for the 'A' at this years opening Eurocup Round. Mind you, there was no traffic and the car had been set up by it's home track owner. The Skyline was very lively with a Dynatec 02H but the set up was

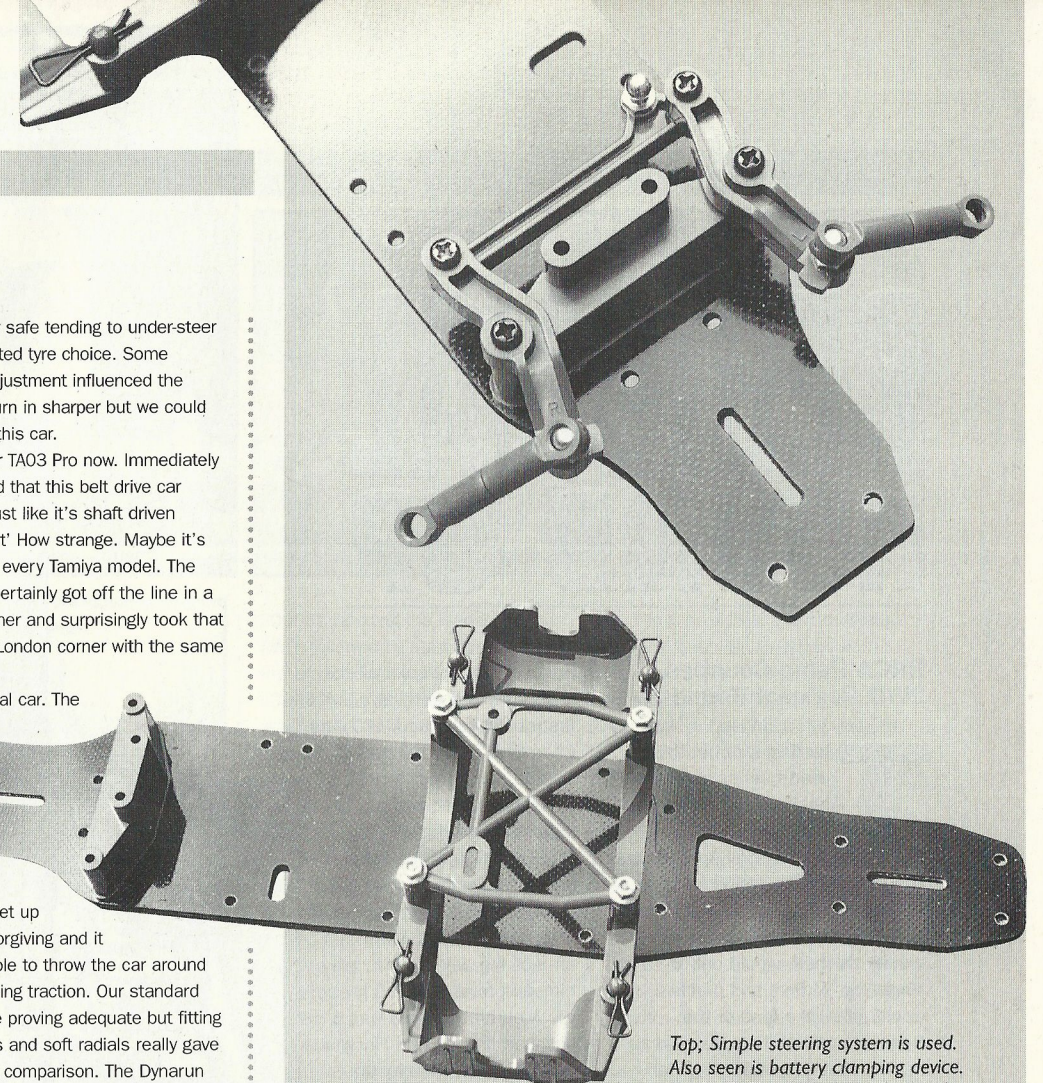
reasonably safe tending to under-steer with the fitted tyre choice. Some damper adjustment influenced the ability to turn in sharper but we could cope with this car.

Time for TAO3 Pro now. Immediately we realised that this belt drive car sounded just like it's shaft driven counterpart! How strange. Maybe it's inbuilt into every Tamiya model. The TAO3 Pro certainly got off the line in a quick manner and surprisingly took that first West London corner with the same line as the conventional car. The

standard set up was very forgiving and it was possible to throw the car around without losing traction. Our standard slicks were proving adequate but fitting superslicks and soft radials really gave us a direct comparison. The Dynarun motor was obviously softer than the 02H but speed was good. A change of final ratio to compare the shaft cars set up produced equal results in terms of maximum speed. After some twenty minutes familiarising ourselves with the TAO3 handling we went for the timed run. A fairy tale ending perhaps but we improved by three seconds! Unfortunately, it then started to rain so we abandoned further attempts to improve or.

First impressions suggest that this car will quickly take over at the top of qualifying in Eurocup if it's allowed! Whether it can succeed instantly in the competition of EFRA or BRCA Scale Saloons remains to be seen. In the right hands we're sure it will be a winner and for those of you who just want to be among the first with the next generation of Tamiya's model whether destined for top competition or not, then a visit to your nearest model store is a must.

Remember that the TAO3 Pro comes without motor, speedo and body but if you are already a Tamiya racer you've probably got all the bits you will need...



Top; Simple steering system is used. Also seen is battery clamping device.
Below; Diffs in the sit snugly into the gearbox casings.
Bottom; Nearing completion - the belt carries power from front to rear - for a change!

