

The Magika is the latest in a rapidly expanding range of cars to leave the Mantua factory. The Mantua Models' banner now encompasses the SG Marke as well as Garbo, and the 'Magika' has had a large input from the SG side of the business which has connections with its founder Mr Sabatini.

The kit which Richard Stinson of Windsor Models sent for me to review was the Magika 4WD Pro which differs from the standard kit in several ways. The kit includes a centre differential, large constant volume dampers (Bergonzoni) and the wheel carriers and wheels, which are kept in place by nuts instead of circlips.

The instructions are comprehensive as you might expect but I did like the inclusion of photos of the plastic parts still on their respective sprues which makes for easy identification.

Step One

The first step is the assembly of the front suspension which is straightforward.

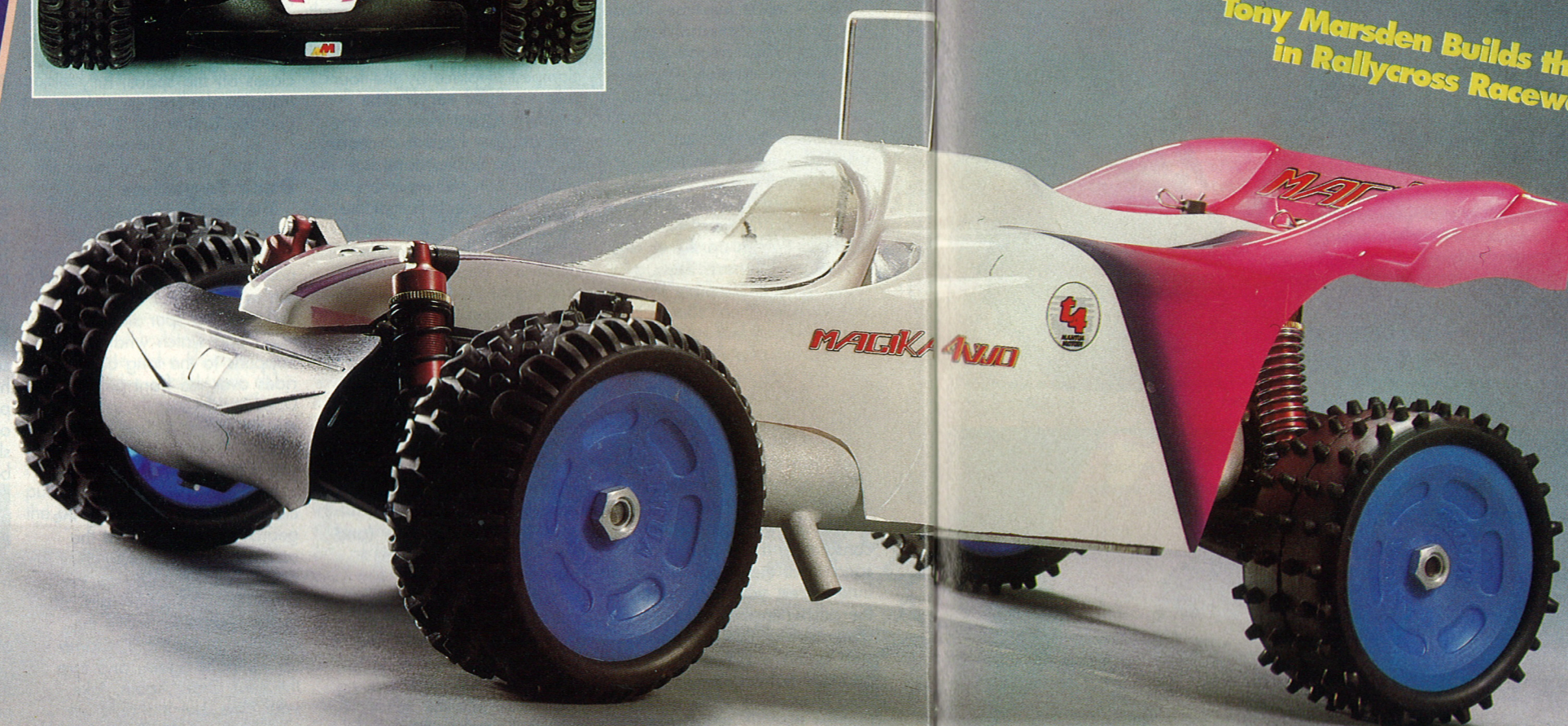
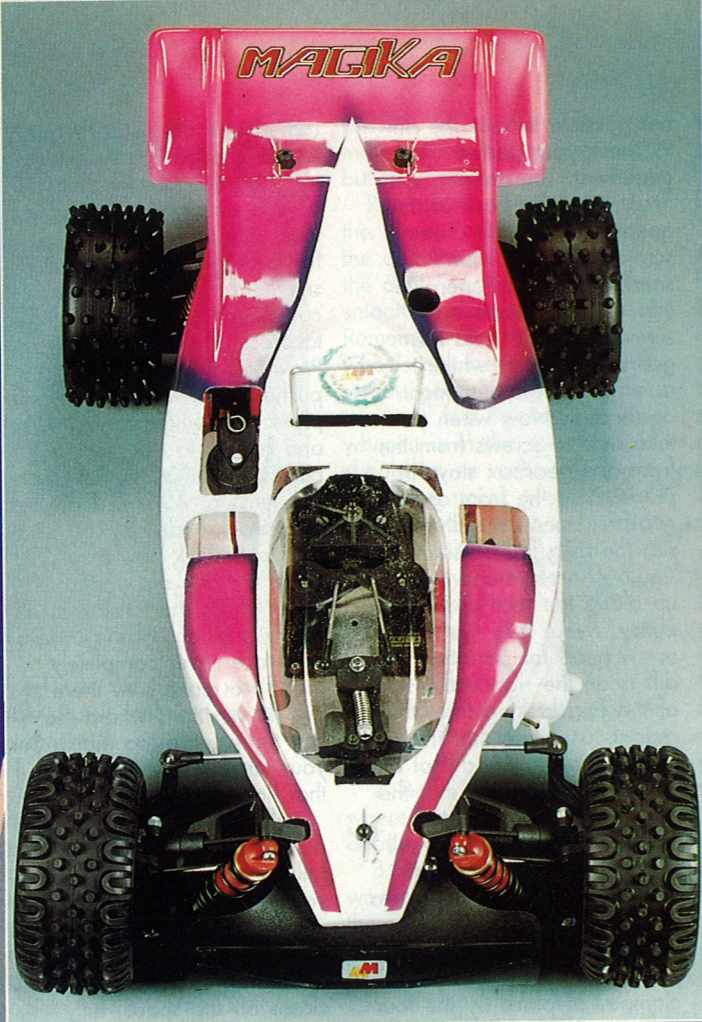
I recommend the use of a 4.2mm drill as opposed to 4.0 as in the instructions in a effort to achieve 'free' suspension, this applies to the wishbones P1 and bulkhead A, in fact any where that a screw E1 is used as a pivot. I also cleaned the sides of P2 and P3 with a sharp knife. The idea is to get the wishbones to drop under their own weight. At this stage I left the 2 washers out to achieve 'sweet' steering. The washers reduce negative camber and increase steering. The second step is virtually a repeat of the front suspension and so the same rules apply, don't forget the ride height

grubscrews.

Step 3 involves installing the front and rear diffs into their cases. As both crown

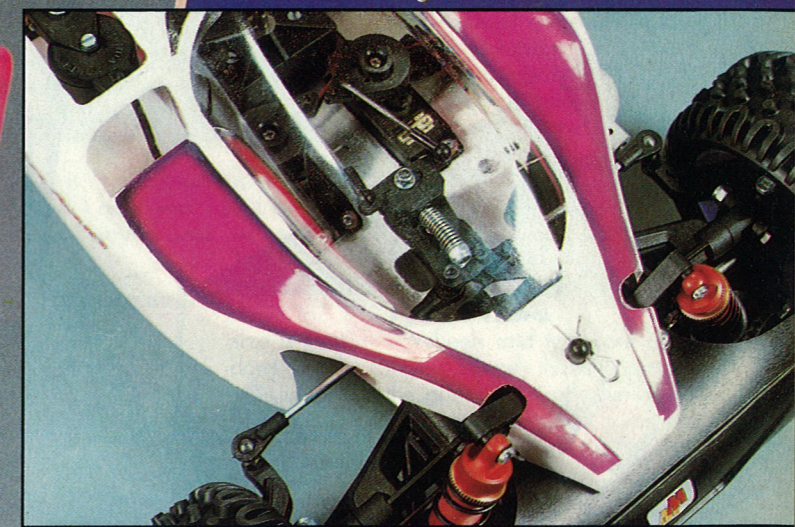
wheel and pinion are both plastic, care should be taken

to achieve the correct amount of backlash, using the shims provided. I also found a slight flash from the injection moulding process which caused a 'tight spot'. A sharp knife again to remove this. Make sure you put the diffs as shown in the diagrams or you may finish up with a very short 4WD car of 2 - 2WD ones. Step 4 Consists of assembling the front and rear uprights, don't forget the lockstop screws B7.



Mate's Magika!

Tony Marsden Builds the Latest in Rallycross Racewear.



Pro Differences

The Pro kit is slightly different at this stage and you should refer to the options shown on the back page. A tip here is to make sure that the outer bearings are pushed well into P9, P10, P11 and P12 otherwise the alloy spacers 3 will not fit.

The centre diff and brake assemblies are covered in Step 5 which is all very straightforward but I did have a bit of a struggle fitting one of the bearings, it was very tight but did eventually go. Make sure to use the right

disc in the right place as the front one is 2mm thick while the rear is 2.5mm. It is a good time to see just what adjusting the grub screws does. You can achieve more or less braking to either the front or rear simply by adjusting these, very clever.

Before commencing with Step 6, I recommend taking the sharp edges off the chassis with a fine file or you may finish the project with a finger missing.

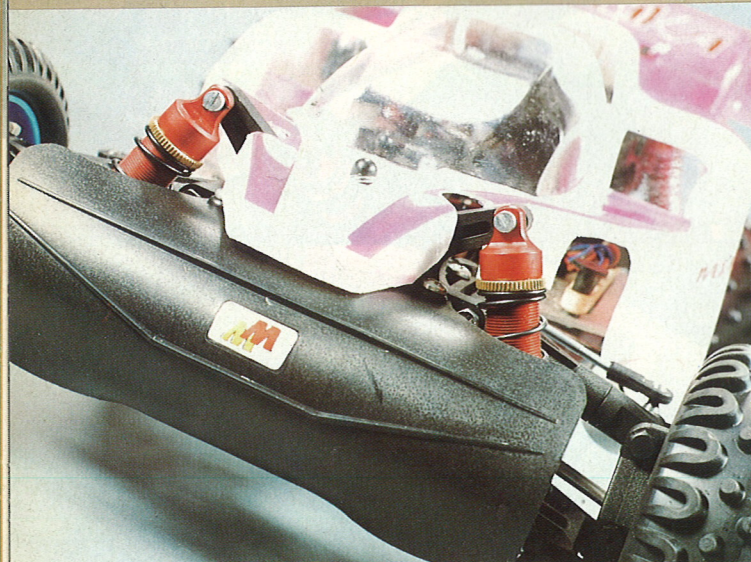
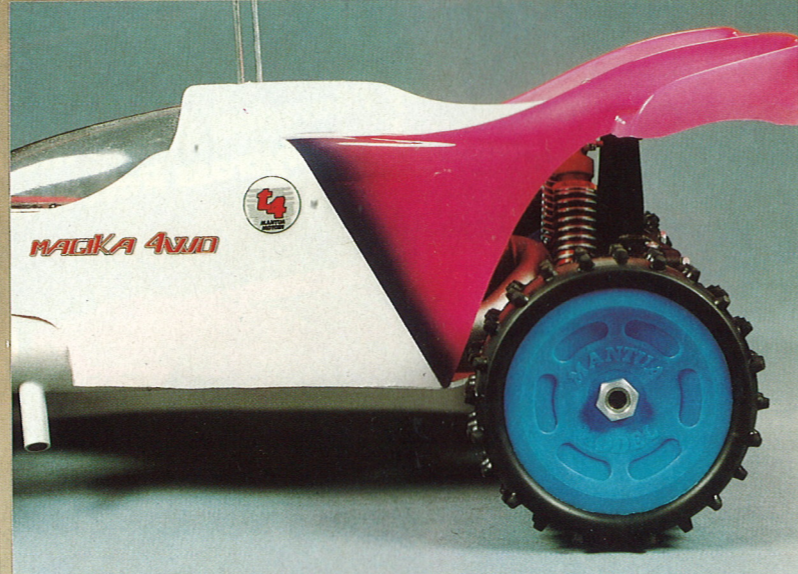
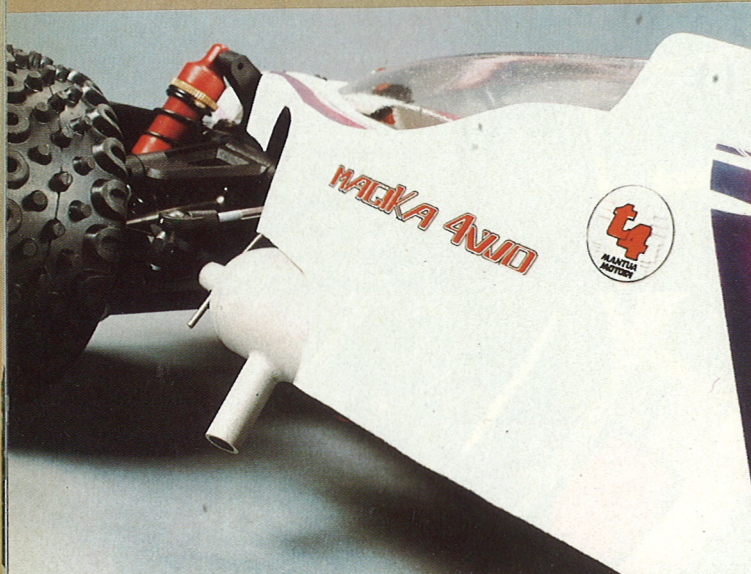
The rear anti-roll bar is interesting and does appear to work but I do know that they are replaced by more conventional types by the top Europeans (eg Ghedini in the Euro finals).

As you fit the front, rear and centre diffs to the chassis, what I consider one of the most impressive points of the car makes itself apparent. The front and rear suspension is placed over the top of the drive train, which means that there is no connection between the drive, and any shocks that the suspension may encounter will have no affect on the transmission.

At this point I noticed that the grub screws which hold



The Magika is supplied with the wing moulded into the bodyshell, a separate wing can also be fitted on the body posts or on the new wing mount which is now available. Wheels are fitted by a large alloy nut. A good feature standard in the kit is the carrying handle.



the drive cups on to the diff outputs were just catching the insides of the gearbox and required a quick buzz with a dremel. As this was a Pro kit, it came with the dampers already assembled so Step 7 can be ignored, but it is still worth stripping the dampers down to check if the piston is locktited to the shaft.

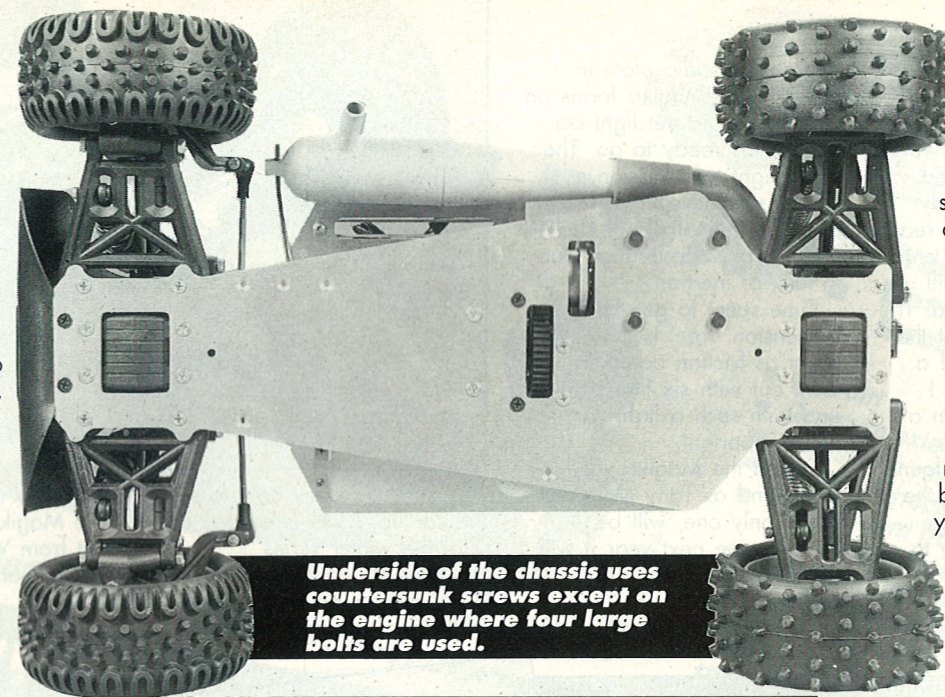
Engine installation is covered in Steps 8-11 and is all very straightforward. A tip that I find useful sometimes is to lock the engine while tightening the clutch nut, by placing a large 'tyrap' through the carburettor hole and into the crankshaft. If you do overdo it a bit and chop the end off it is easy to retrieve by removing the back plate and what is more to the point you won't damage anything. We have all seen people in the past locking engines with screwdrivers through various orifices.

Clutch Clues

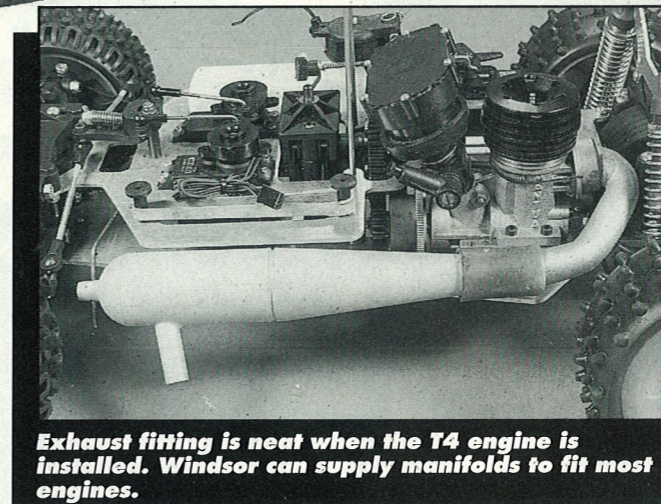
The clutch is vintage Garbo but with brass inserts which push into the PTFE shoe and act as bushes when fitted on to the flywheel. This will make the shoes last longer as it will reduce the tendency of the pin 'tearing' into the shoe. The washer and circlip are also nice touches which should remove any chance of clutch drag caused by the shoes moving forwards on the pins.

Step 12 just covers the fitting of the dampers but you may note as well as the usual choice of positions for the bottom mounts, at the front you can also use the upright, which is the recommendation for, sand or loose surfaces.

The Magika chassis ready to roll, with a line up of good drivers for 1991 the Magika could well give the established Burns a run for its money.



Underside of the chassis uses countersunk screws except on the engine where four large bolts are used.

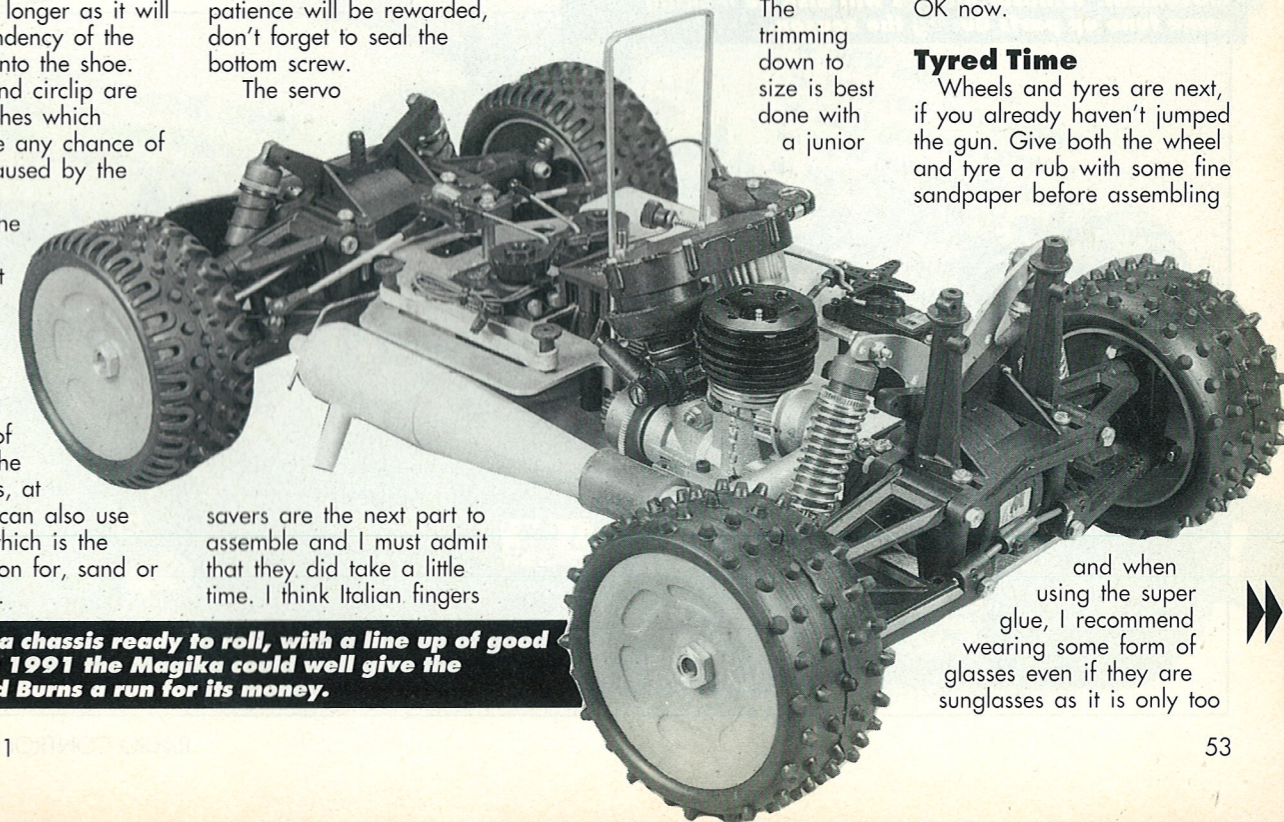


Exhaust fitting is neat when the T4 engine is installed. Windsor can supply manifolds to fit most engines.

The fuel tank is the next for assembly, the baffle (part b) is a bit of a fiddle but patience will be rewarded, don't forget to seal the bottom screw.

The servo

must be different to mine and I only wish I had an easy way to pass on to you. The trimming down to size is best done with a junior



savers are the next part to assemble and I must admit that they did take a little time. I think Italian fingers

Tyred Time

Wheels and tyres are next, if you already haven't jumped the gun. Give both the wheel and tyre a rub with some fine sandpaper before assembling

and when using the super glue, I recommend wearing some form of glasses even if they are sunglasses as it is only too

hacksaw. The next step (14) is the radio installations of which there are several possibilities according to your preference. The holes are already cut into the alloy radio plate but the corners will just need a little filing for most servos. As 2 servos are used on the steering, I recommend checking before installation that you have 2 with similar transit times, as they will fight against each other if not. You will need a Y lead for this unless you do as I do and modify the receiver and so use the 3rd channel plug which makes for neater wiring.

I usually fasten servos in with small tyraps but this time I used the more usual method of small screws and must admit I had a problem finding enough rubber grommets. I had to resort to using short pieces of fuel tubing but don't be tempted to screw the servos down hard without something to absorb vibrations.

When it came to the throttle and brake linkages, I discovered that the brake rod was too short and had to make a slightly longer one, apparently they were a mistake in several kits but are OK now.

easy to flick some into your eyes.

The last lap is cutting out and fitting the body. All very easy, cut along the dotted line and drill for the body mounts. I rather like the rear mounts as it is possible to fit a 2nd rear wing and still use the body pins if required. The moulding of the body at the front prevents the use of a normal body washer so I made one to shape from a lexan off cut.

On fitting the body I found it was necessary to drill the tank lid on the front edge and insert a small tyrap to facilitate refuelling.

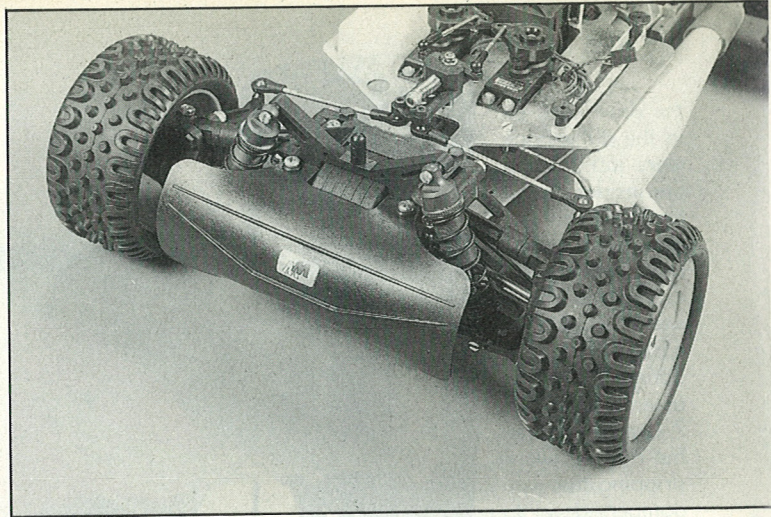
Conclusions

With the radio plate in position, the Magika forms an extremely rigid yet light car, under 7lbs ready to go. The lightweight transmission, which is achieved by the extensive use of plastic, will mean rapid acceleration due to lack of inertia.

Time spent to get the suspension 'free' is time well spent as friction damping went out with six litre Bentleys and with such a light car it is more important.

I liked the Magika very much and as Tony Miller, to name only one, will be running one next year it will obviously be a force to be reckoned with.

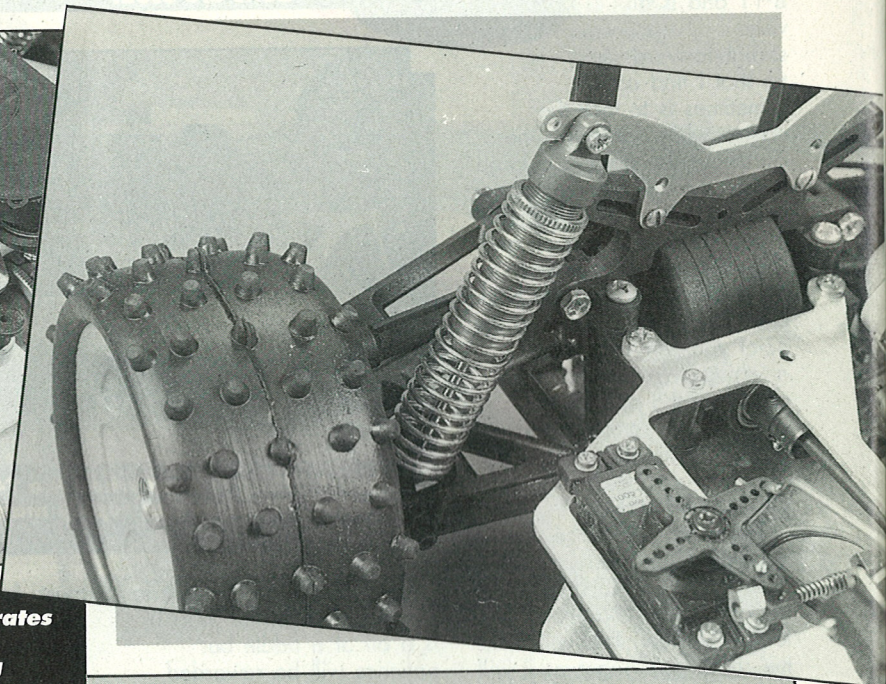
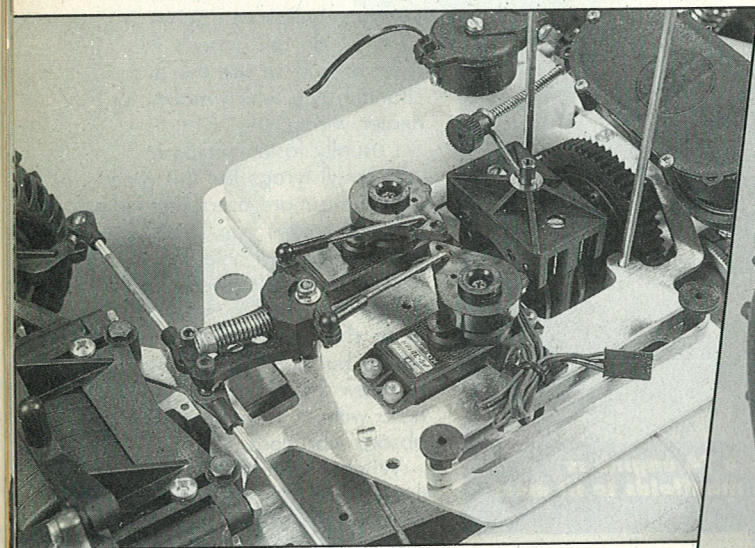
As my car is as yet unrun



it is difficult to say how to set the car up. I will enter one or 2 of the winter series meetings up north and will hope to pass on any information about running the

car as they unfold.

The Magika is available direct from Windsor Models or from your local Mantua stockist.



Above; Twin servo installation requires careful setting up. Below; The front suspension incorporates a small amount of camber change during the movement. Windsor Models will also be making some tune up parts during the season.

