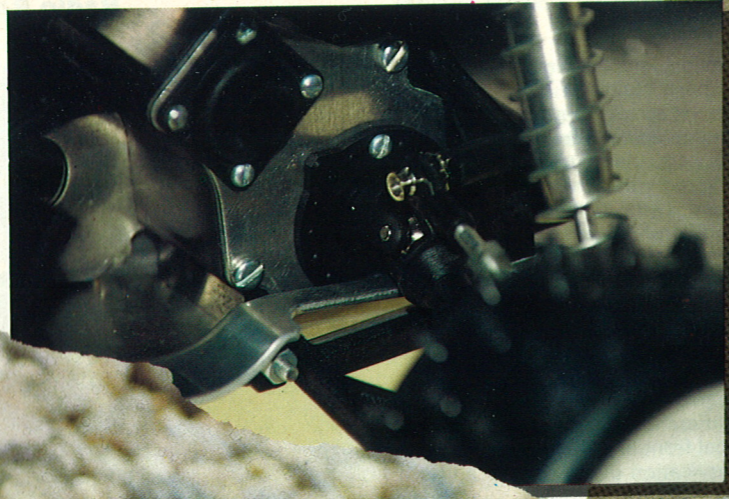


2WD Top Cat

The sliding drive shafts have been retained because there still is no better way of doing the same job.



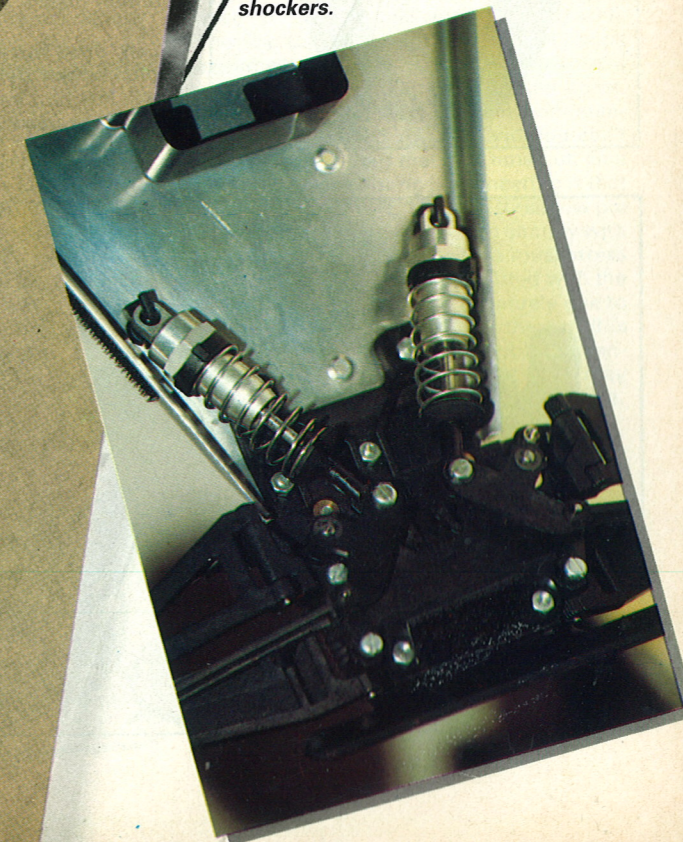
TOP CAT

High Tech.
High Torque.
High Velocity!
All this at low cost
from Schumacher
Racing



A	
7.9	
B	
DIMENSIONS mm	

Inboard suspension, this really cleans up the front end of the Top Cat and keeps all the abrasive grit and mud away from these delicate shockers.



Without any fear of doubt or contradiction one car stands alone as a benchmark for all 4 W.D. cars throughout the world! That car is the Schumacher C.A.T. Schumacher's attention to detail and constant development programme has made certain that the car has always been one step ahead of any opposition, knowledge gained from development has always been available to C.A.T. drivers in the way of beef up parts and help in the way of questions being answered by team drivers, is always available at the track side.

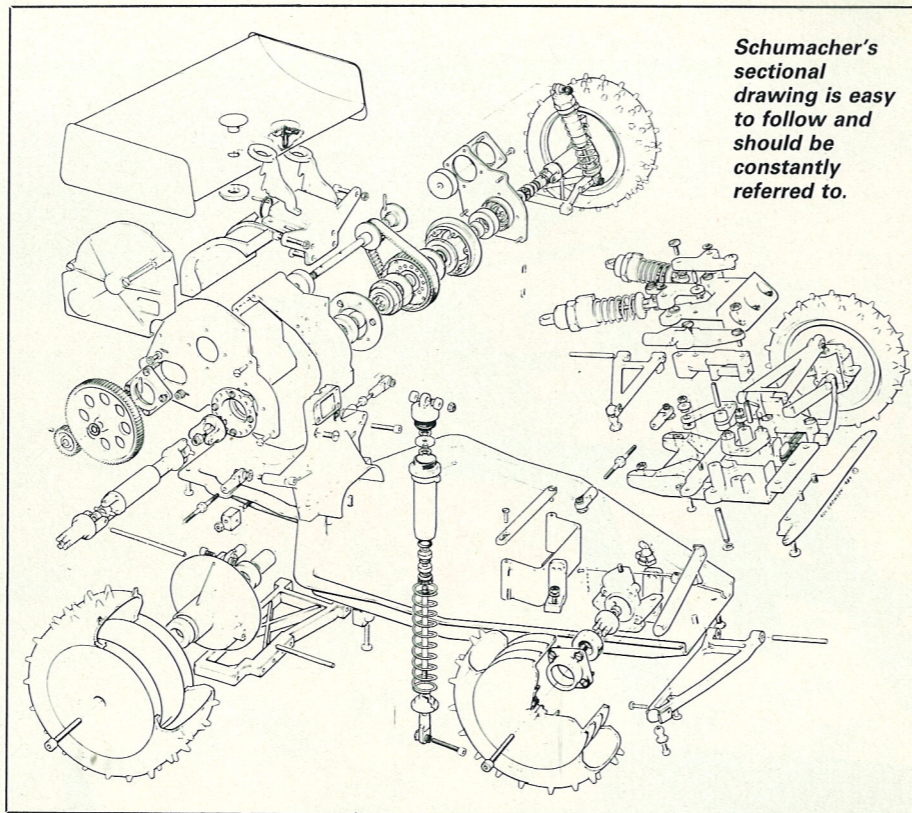
Without appearing to do too much self back slapping, it can be said that R.R.C. refounded an interest that was almost forgotten, when last year the R.R.C. off road series was run for both two and four wheel drive cars, not only in separate classes but at totally separate venues, their own races in other words. Consequently, drivers have been looking toward companies such as

Schumacher to produce a 2 W.D. winner for them, Schumacher have not let us down!

"Top Cat the Indisputable Leader of the Gang"

Well someone had to do it, so now that the cartoon reference is out of the way, the Top Cat is in some ways a traditional solution to taking a mass of metal, plastic and other assorted bits and pieces around a mud, grass or dust filled hell we call a track, in the fastest time possible, there are however, a number of novel features included in the design of the Top Cat that make it just that bit special.

Let's work from back to front, the rear of the car is protected by a large beautifully moulded motor guard which bolts directly to the pressed aluminium chassis. Gearbox next and here we have a very novel set up which is extremely efficient and friction free, due in part to the fact that it is belt driven, the kevlar belt appears to be of a medium pitch and is beyond doubt the best way of transmitting power from primary gear, through layshaft to differential. At this point it must be said that the standard kit employs the use of oilite plain bushes to support all the major rotating bits, you would be well advised to purchase Schumacher bearings and fit these at all the load bearing points, this ensures that friction is cut down to an absolute minimum and extended runs together with high speeds are enjoyed from the word go.



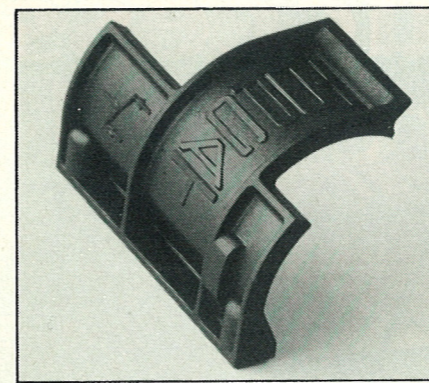
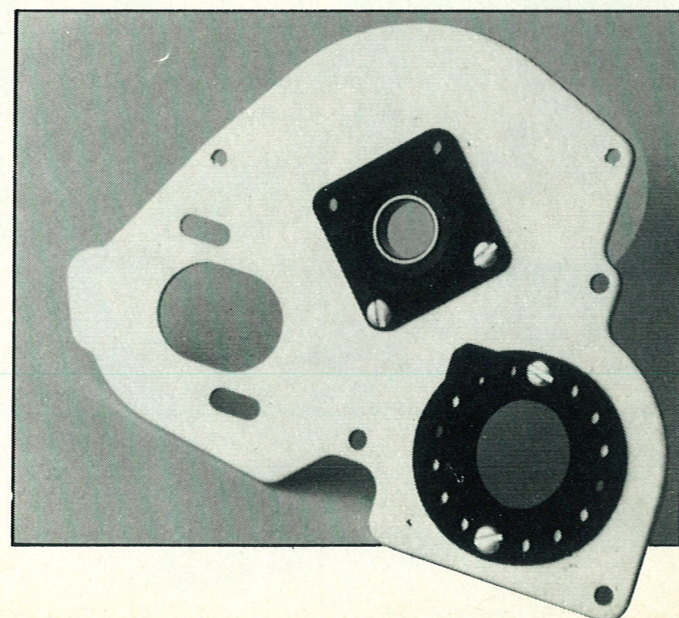
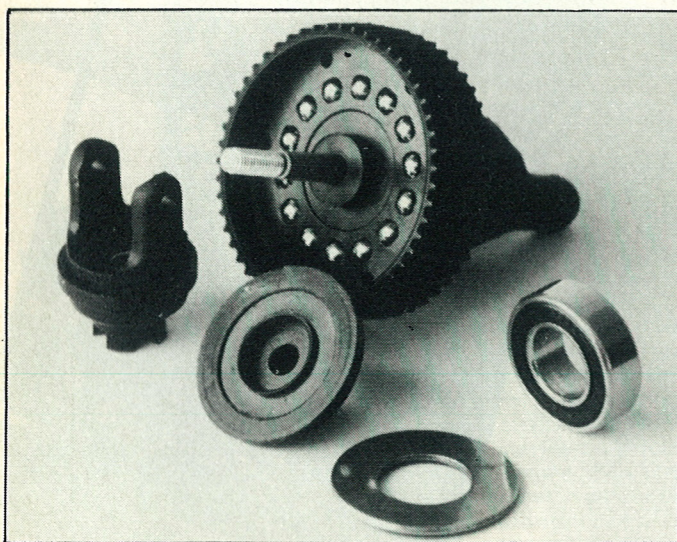
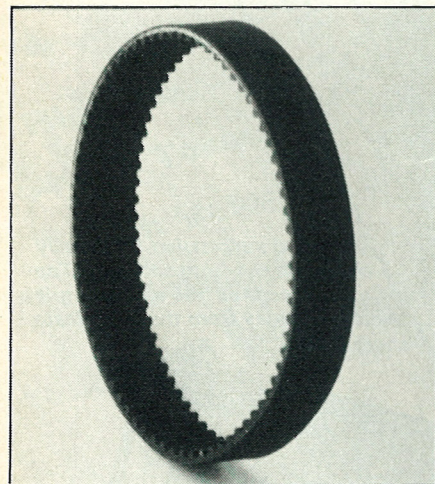
Schumacher's sectional drawing is easy to follow and should be constantly referred to.

No Difference with this Differential

The Top Cat shares the same type of diff as the C.A.T. As this is the subject where most new C.A.T. driver/builders seem to spend the most time pondering, fretting and finally getting suicidal over, let's look at it piece by piece. The Top Cat employs a 14 ball diff, this type of diff really is the easiest to build, use and set up that there is and don't let anyone tell you any different. In essence all it consists of is two pressure plates kept apart by a series of bearings, in this case spherical type (last time I used the word ball, several mothers complained). As the car travels in a straight line the whole diff, in theory, is turning as one unit. How-

Left, drive is transmitted via this medium pitched belt. Below left, semi-built diff, this will not turn you into a frog (see text). Right, gearbox housing complete with bearing.

ever as the car turns, the wheels on the outside of the turn have to rotate faster to keep up, this is where the diff comes in to play by allowing one half of the transmission to slow down or remain at a constant speed, as the other half speeds up. That's all there is to the ball diff, no black magic, no special honours degrees just simple common sense. So now armed with the sure knowledge that you are greatly more intelligent than a ball diff and it really won't turn you into frog, go to it, follow the instructions and you can't go wrong. Drive is transmitted to the wheels via the tried and tested Schumacher sliding drive shafts, again without doubt, this type of drive shaft is the best available although there is a certain knack to be learned when assembling them for the first time, the golden rule here is not to force anything, anywhere, use just a little pressure in just the right direction and you will end up with a happy result everytime. Primary drive uses the now accepted norm 48 D.P. gears.



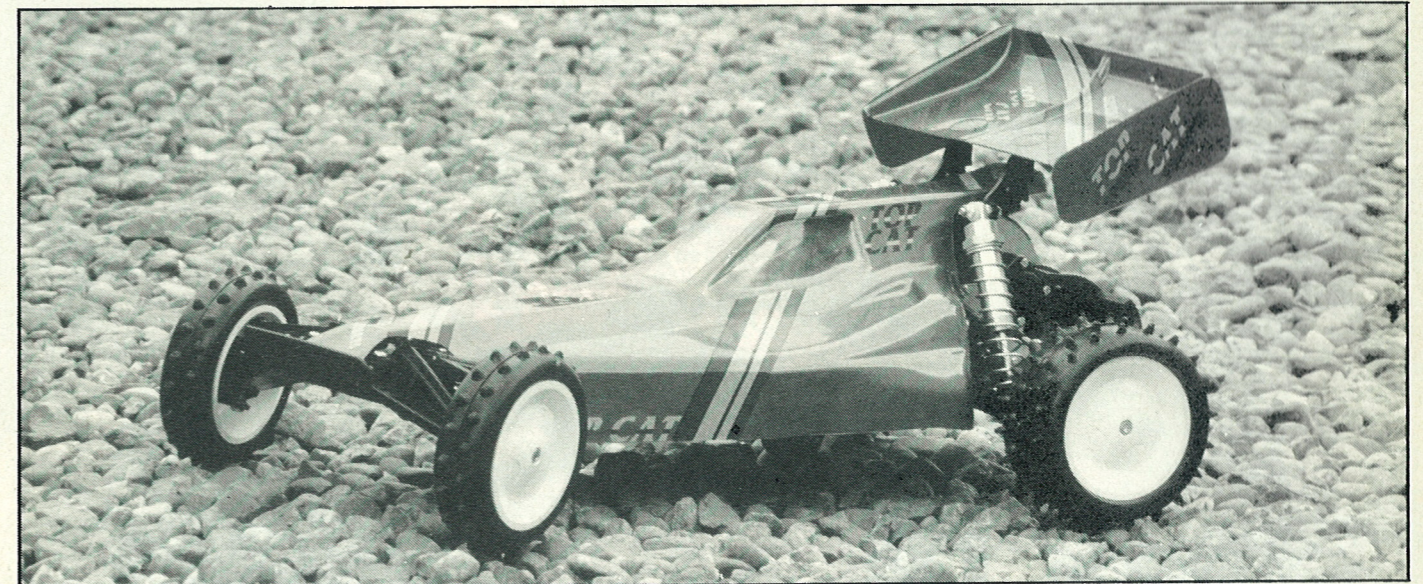
Chassis, Dangly Bits and Others

Top Cat's chassis is stamped from high quality aluminium endowing the car with great strength and a low centre of gravity. A rear mounted motor configuration is used to provide optimum traction, even on the slipperiest of surfaces. A multiple choice of where to mount the cells is also given, pre drilled holes are supplied in the chassis, al-

length, because they are, the set up gives a very smooth ride indeed with no trace of bump steer throughout the entire travel of the suspension. The now famous Schumacher kickback is also incorporated into the front suspension allowing the driver to get away with the most horrendous of front end smashes with little or no damage to the car. The kickback system works simply because the rear of the front suspension assembly is hinged and the front is held together using heavy gauge silicon rubber, until it contacts (something hard and immoveable that is), then instead of breaking the whole unit just deforms and springs back into place.

Shock absorbers all round are the tried, tested and thoroughly reliable Schumacher coil over oil units. You will find no problems with these units once assembled. However, to obtain the very best in performance you

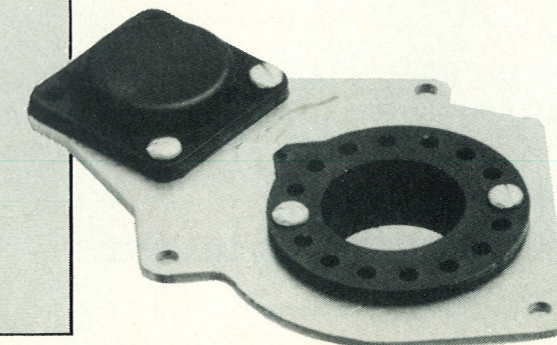
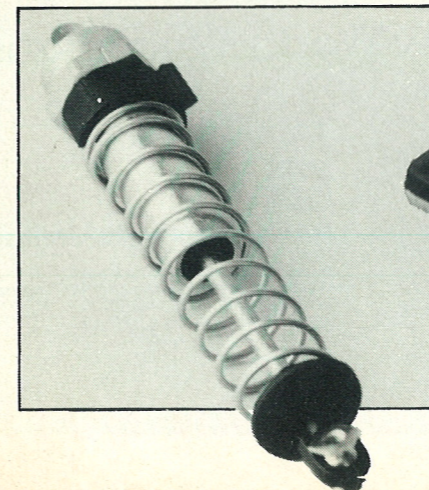
Above left, nicely moulded motor guard adds strength and protects the rear end in a crash.



though you will have to purchase a fixing kit from Schumacher or their agents. This choice of position allows the best balance to be gained for various tracks. The front dangly bits, otherwise known as wishbones are extremely interesting for a variety of reasons, technically referred to as unequal

will need a small range of differing density oils in order that the damping rate can be altered to suit various conditions. The most interesting dangly bit yet produced for sometime actually isn't on the Top Cat and that's because it's inboard, yes, we're talking about the very novel front suspension/shocker assembly. Top Cat is fitted with its front shockers inboard operating through a cantilevered cam, there must be both technical as well as operational reasons why this set up was chosen, unfortunately I can think of no technical reason why, this does not mean to imply that no technical reason exists, merely that I cannot think of one. (Technically eloquent persons may write in

Tried and tested shockers won't let you down. Right, remember that funny round bit does tighten, or loosen your drive belt, this is important.



to explain should they so wish). Operationally there are benefits to be gained from mounting the shockers inboard, reduction in drag, crash resistance, mud and grit resistance, etc. etc. The true test is on the track though, so!

Some Time Later

We find ourselves at Swindon, a track that some politely describe as a true off road track, what they mean is that it has an horrendous array of holes, adverse camber bends, drops, jumps, some at 45 degrees to the direction of travel — as well as other less horrific obstructions! To be truthful we had heard all sorts of tales concerning reliability from the Reedy invitational that we presumed that this was going to be an interesting meeting. As it turned out it was, although not for the reasons we expected.

As there were so many Top Cats at Swindon our remarks concerning performance are made generally. We did not see one breakage all day long, we did see a great deal of fast, open racing on a very difficult track, we did see some cars that were obvi-

ously set up wrongly but still going well. The Top Cat appeared to handle all jumps extremely well and had to be thrown at a jump very badly before it could be upset. Indeed there were Top Cats in both standard and modified A finals and you can't say any better than that first time out. One point that arose during scrutineering is that it appears that Top Cats using three row pin spikes are too wide and do not comply with the current B.R.C.A. rules. We must stress that this only applies to cars fitted with the three row spiked tyre and is entirely due to the width of the tyre and not the car. It is though something to watch out for in serious competition as your great time may well be taken from you for running oversize.

Well

It has to be said that Schumacher's need to be firmly shaken by the hand and congratulated, not only have they produced yet another car that drives well from the box, but they have done it for under the £100.00 barrier. Top Cat is going to be big at the track this season and with the dedicated development programme that we all know Schumachers will launch at this car, Top Cat will get bigger. Well don't just sit there go out and get one! Available from Schumacher stockists everywhere.