

If the new Schumacher Cougar does not sell like hot-cakes, there will be little justice in this world. It was, of course, the A Team that lived by the myth that justice could be dispensed at the point of a gun without anyone getting hurt. A character called Hannibal Smith would come up with elaborate schemes and plans to outwit the opposition, all of which succeeded without any apparent effort! A lot of effort has gone into the Cougar to make it right first time, and that includes some clever schemes and plans.

We took a quick look at the car earlier based solely on a pre-production prototype which was already assembled and

made pretty for the studio. Two weeks later, the parts arrived to convert RCMC's Topcat to Cougar specification. The first question was why convert the car? After almost two years of trying, we finally made a National A Final at the Southport meeting last September. If the Topcat was good enough for that, the Cougar would have to offer more.

Prototype cars had been taken to America and raced in the Florida Nationals. No A Final places, but solid B and C final times from a brand new car were very encouraging against the best opposition in the USA. The response from the car buying public in America was enthusiastic too. The general consensus of

opinion was that the Cougar gave more feel and grip to the front end, quite the opposite of the Topcat when it was first released.

The new front suspension has a number of technical advantages. The unsprung weight of a car is those parts which are not supported by the spring, in the main wheels and hubs. On the Topcat, this included the wishbones too since the suspension pushrod was not connected to the bellcrank. The more unsprung weight the worse a car will handle since it is not possible to control the actions of the unsprung weight. Cougar has less unsprung weight than the Topcat. Weight is our second Cougar advantage, the new front suspension weighing over

an ounce less than the Topcat design. Cars should always be as light as possible. If that means them being under the BRCA weight limit (3lb. 4oz. for a 2WD car) then weight must be added, but it can be added in any position of your choosing. Positions can be chosen which improve the handling of the car. On an over-weight car you are stuck with the weight where it is, and too much of it!

The new Cougar front suspension includes changes to the roll centre, lowering its position to create more weight transfer on the front. This should give more steering, or grip, at the front of the car and indeed was the trait most readily identified by the Team Schumacher drivers who

# COUGAR Update



**Ellis Stafford gave the RCMC  
Cougar a BRCA National win!  
— Pete Winton looks at  
the latest Schumacher  
have to offer.**



used the car before its launch. Lastly, the suspension had been thoroughly tested; firstly by driving a car off a high platform onto a concrete floor, and then by racing at home and abroad. As a result, Schumacher developed a new plastic which is stronger and more resilient, and scrapped a considerable number of parts before sales started. The importance of this car to Schumacher's next export sales drive is obvious from the care and time put into the release of the Cougar. As we shall see, it is going to do them no harm at all at home either!

Our conversion kit came with a complete instruction book for the new car which was requested since I was not building the complete kit, but reviewing the complete car. No good saying how wonderful it is to drive, if it is impossible to build because of poor instructions. Never fear, the book is very good and will present no problems to the average racer. Newcomers will find Cougar easier to build than Topcat, but it still needs an experienced friend or mechanically minded adult to help those under the age of 14 years. Remember, this is not a moving model, it is a model racing car designed with winning in mind and dedicated to that task. A little complication in the gearbox assembly is a small price to pay for the end result.

Using the instructions, the conversion was easy. Build up is as easy as one might hope from looking at the pictures, and the parts fitted together well. The new stronger plastic is easy to identify, and although no problems were encountered with those parts, they do not have the same quality feel about them that the old material did. There is no doubting their strength; one can't have everything! Spares requirements are kept to a minimum by having only one handed part which is at risk from damage, the upright. Wishbone, hub, axle, steering rods; all are common so one in the box is

good for replacement on either side – well done Schumacher.

It is necessary to reposition the steering servo, and some servo tape was provided for this purpose in the bag of bits supplied to me. If I have learned one thing about R/C model cars, it is that unless the steering servo is nailed down to the car, one will never get positive handling without fear of the servo moving in an accident. Using a small plastic post, one end of the servo was bolted to the chassis, and servo tape was used to stick the body of the servo to the chassis. Later, a second post will be added, if needed. It would be useless to pretend that one race meeting can point directly to the potential of a car, but the day at Hatfield Peveril for round one of the BRCA National 2WD series was a very encouraging start. There were three or four Cougar's in the A final, including a superb drive from Steve West (yes son of our erstwhile 'arold I. 'Twest) to take FTD. Incidentally, our car weighed in at 3lb. 5.4ozs., a clear ounce lighter than the Topcat.

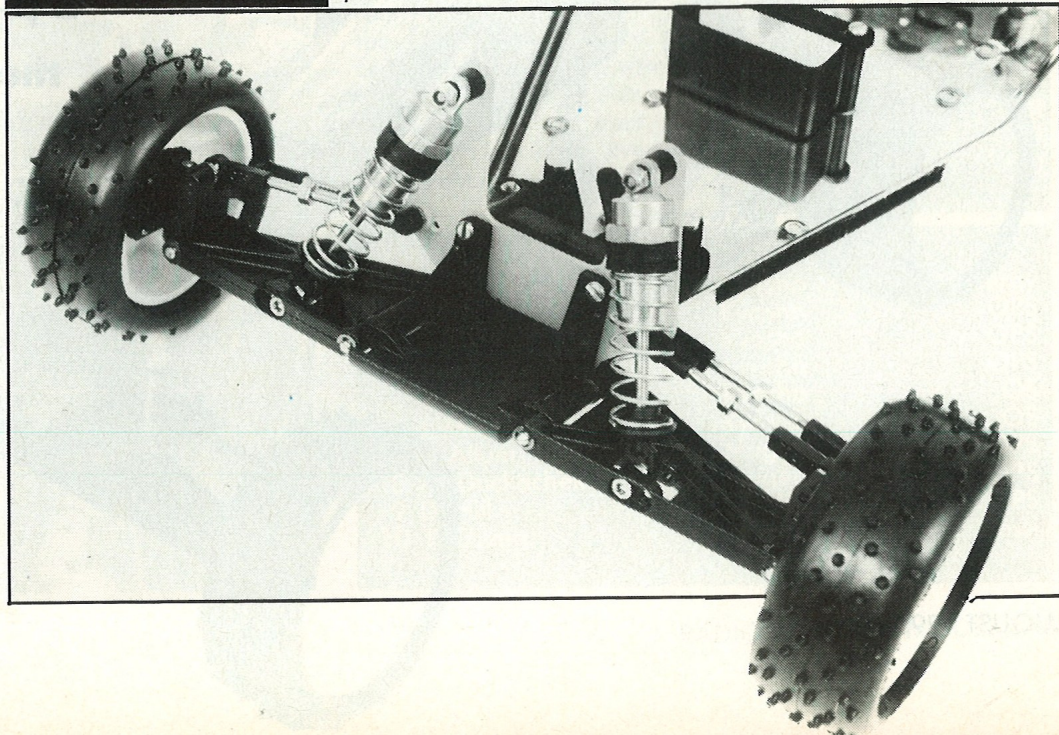
**Below: Short shocks are standard in the kit, but Schumacher now produce a long shock conversion.**

Serious Cougar owners should avail themselves of two items (three sets of parts) which will prove invaluable for setting the car up on different tracks. The first is a rear anti-roll bar. This comes as part number U739M ready to fit to the car. The second (and third) are a range of springs for the front and rear of the car (front part no.: U7670, rear part no.: U768P) which allow the springing to be tuned for different tracks. Each kit comes with four different rate springs. We found that the second hardest spring in the kit was best at the front, but that the standard kit spring at the rear would do if the lower damper mount was placed in the second hole out on the wishbone. The car also worked well with the second hardest spring from the tune-up kit, but the damper lower mount in the third hole out on the wishbone. Interestingly, the rear anti-roll bar didn't seem to make much difference to the handling, so more experimenting is required to find out why – it did on the Topcat.

The one thing that marks out the Cougar from the Topcat is a more stable reaction to commands from the helm. I did not find much more steering response either with or without the rear anti-roll bar fitted (although we elected to run without the roll bar in deference to the very bumpy surface); nor indeed any greater speed in a turn.

Yet somehow, the car immediately inspired in the driver a confidence lacking in the Topcat. Frankly I reckon my position (23rd) would have been the same with either car, but we shall stick with the Cougar to experiment with the castor angle and damper positions in the wishbone. The most telling thing to say is that out of the box, the Cougar is as good as the Topcat which has had a season's development work already completed.

Before leaving the car to talk about other new areas, it is nice to report that this is still the original car reviewed last year which had new driveshafts and wishbones (stronger design although we never broke one) fitted to the rear, and new steering geometry items fitted to the front (see previous issue). These were partly for review purposes, and partly for the World Champs in Sydney. Of the items which wear out, only a differential service kit (washers and balls) has been 'consumed' during a full National season. We broke two front uprights in Topcat format, both as a result of high speed excursions off the track into solid objects, and in both cases we hit them hard and at the right angle to cause maximum damage. The part in question has been strengthened. We can only repeat our message from the old RC10 articles of last year, 2WD racing is cheap and fun. The car has been





very sturdy, totally reliable, and very cheap to run.

We have been trying a number of new items for all Schmacher (and other) cars which are worthy of mention. Firstly, the new range of tyres for 10th-Off Road. Schumacher have introduced a new tyre pattern called the mini-spike. This is available in low profile (for some time), and now in the usual profile we are familiar with. This tyre has twelve sets of a special pattern containing 15 small spikes, and is called a 15 × 12. This is an answer to the Yokomo tyre used at Sydney by WorldChamp Hirosaka, and its most important feature is invisible – the rubber grade. This tyre features a new grade of rubber called 'Blue', and it is very effective. The new grade is both hard wearing and grippy, and was used by Steve West to take FTD on a dusty surface produced when the grass wore away and the mud dried out. The Blue grade of rubber is added to the existing hard and soft

grades, and is available on all existing tyre types including the traditional CAT spikes.

New also is the same mini-spike pattern, but in a 'high' profile tyre which has 15 rows of the 15 spike pattern, and is called a 15 × 15 mini-spike. This is at the maximum permitted EFRA (European Rules) diameter of 90mm.

A new variation on the idea of cutting the studs of your tyres down has been pioneered by Craig Drescher. Instead of cutting half the spike off the top, or removing the outside row of studs, Craig removed every other stud in the tyre and allowed those remaining to stay at full length. The idea is to retain the penetrative nature of the long stud into the ground, but reduce the number acting this way to reduce the grip at the front of the car. Having tried the principle at Hatfield, it is well worth a go since the effect on the track exactly follows the theoretical outcome. Steering is positive and progressive whilst retaining good grip.

Schumacher are now supplying all kits with a new wheel design featuring significant additional ribbing to stiffen the wheel. This follows the problems experienced at the WorldChamps with wheels deflecting and giving handling problems off the big jump. Although I would love to go back to Australia and test the wheels in the same circumstances, I shall content myself with some results obtained nearer home to confirm that these are a definite improvement over the previous design, and would rate a buy if you race regularly on tracks with a large jump. The old design is discontinued, so replacements bought in the normal course of racing will be of the new design anyway.

Jamie Booth won the 2WD class at Hatfield Peveril, and indeed the 4WD class at Southend, as no doubt you will have read in this magazine. Tamiya Astute sales should rise, adding yet another new car to the scene in numbers. The 2WD class remains the

racing bargain of the R/C car scene, offering a technical challenge to those who experiment with car set-ups, and a driving challenge to those who persist with fast motors. For the average club enthusiast driving his standard Ultima, RC 10, Cougar, Topcat, or Astute, with a reasonable motor and a respectful caution for the prevailing conditions, the costs are minimal and the fun maximum. The new Schumacher 'blue' grade tyres enhance grip to further your enjoyment on slippery tracks.

The Schumacher Cougar is, in my opinion, a better car than the Topcat. There is a greater simplicity in the car, equal strength, and a more even response on the track. We can only repeat our closing line from the initial review – another winner to buy and enjoy. All the ingredients planned by Schumacher to make this car a winner have mixed well and given the right result – increased sales. As Hannibal Smith would have said – I love it when a good plan comes together.