Schumacher have changed the design and specification of their Nitro truck, a 3.5cc engine is now standard with the power that goes along with that size of engine...

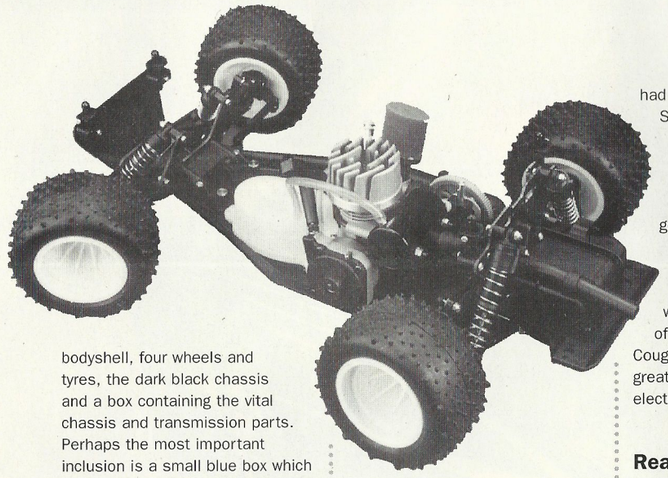
NITRO POWER

Schumacher are well respected within the model car industry as a manufacturer, and the current holder of the European Championship title in both two and four wheel drive. Their Nitro 10 range, gives an introduction for many people into the world of model cars, and especially the growing area of nitro power.

New and Improved

Recent improvements have evolved in the release of a new model called the "Nitro 10 MK 3". The kit comes supplied with engine, but without electric's like all the others available. Other requirements include fuel and glo starter which can be purchased from all good model shops.

On opening the box, you are faced immediately by the truck



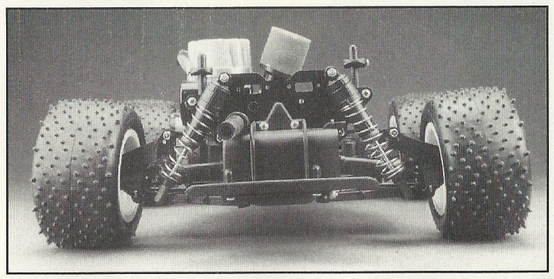
bodyshell, four wheels and tyres, the dark black chassis and a box containing the vital chassis and transmission parts. Perhaps the most important inclusion is a small blue box which protects the 1.5cc engine, capable of some impressive speeds. The instructions though, are securely packaged at the bottom in booklet form, with a few supplementary sheets of updated information.

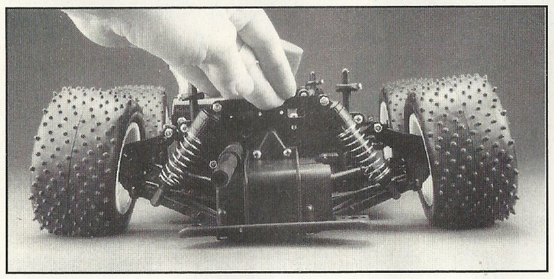
Engine First

Installation of the engine is the initial step, although the carburettor and other items need to be fixed to the engine prior to fitting. The complete unit can then be screwed to the special mounting plate which allows the engine to slide forward and backwards, so that the mesh between the engine, pinion and the spur of the gearbox can be adjusted. This neatly leads on to the transmission and the construction of the internals. A wide belt transmits the power from the layshaft to the differential. Bearings are used throughout, except for a small bronze bush on the layshaft. The shaft on this particular kit is solid rather than the slipper variety. As a result, rotating mass is reduced, so it will tend to accelerate a little quicker than a slipper equipped version.

The differential is of the highly regarded "pro" specification, that had such excellent results in Schumacher's Boss Cat. The action is very smooth and tension was pre-set to further aid the build process. At first, the overall feel of the gearbox was incredibly tight. The belt probably had a lot to do with this as after a few runs will free up and will be a lot better. The width of the belt is cut wider than the Cougar 2 as loads are much greater in the Nitro than that of an electric buggy.

Schumacher Nitro Truck has tough suspension with oil filled dampers and coil over springs. Suspension travel gives the car plenty of off road capability. 3.5cc engine with built in pull start means easy starting and an excess of power.



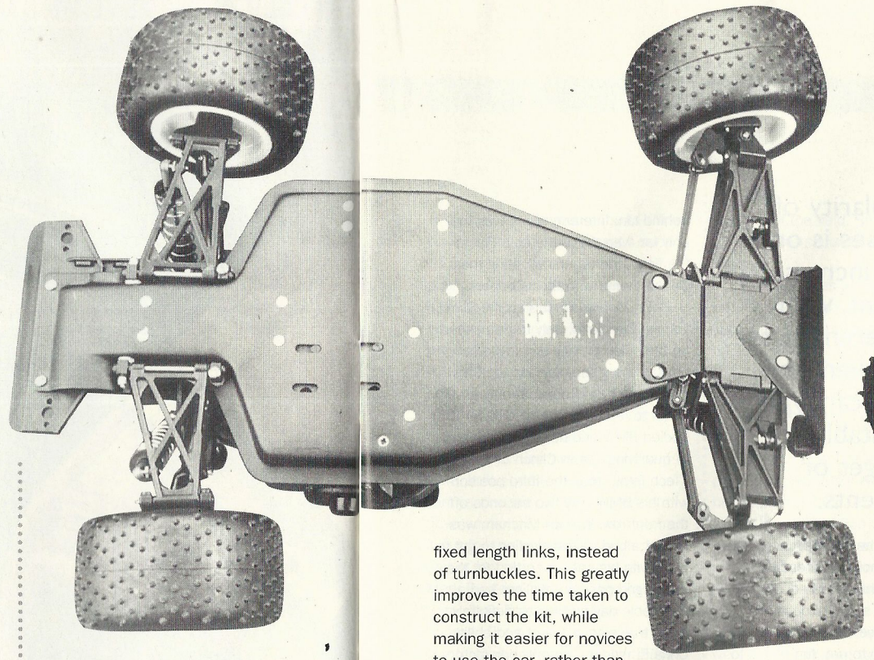


Rear Suspension

With the drive-train complete, the rear suspension could be constructed around the rigid steel chassis. Once again, using parts developed from the Cougar 2 off road buggy, the rear wishbones are screwed to the chassis using thick hinge pins and allen bolts. This method of fixing allows the amount of anti-squat to be reduced or increased depending upon the conditions that the truck is run on. Schumacher recommend the kit setting as a good point to start from.

The wishbones support the hubs again by using a hinge pin. A neat grub screw holds the pin in tight and prevents it from coming out accidentally. Two bearings in each of the hubs support the driveshafts on either side. The shafts are plastic sliding versions, and require a little patience when assembling. Boiling the shafts can make them a little more supple, and reduce the risk of breakage during this stage as a little flexing of the ends is required in order to locate the pivot piece.

Strength is vital at the rear of this truck, because due to it's size, a great amount of leverage is exerted on the hubs and wishbones. The complete rear end is from the Cougar 2 and so there is little to doubt in terms of reliability.

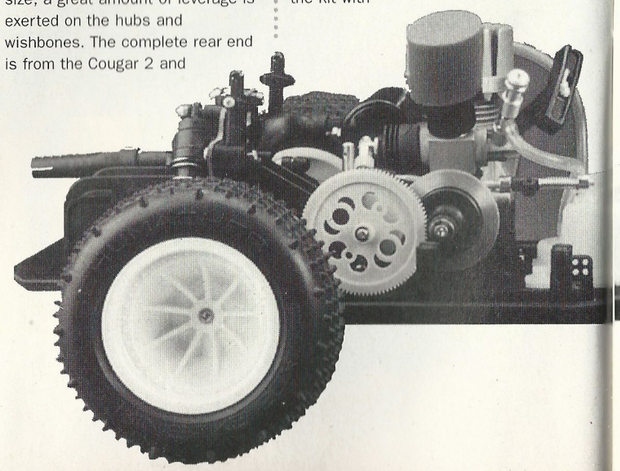


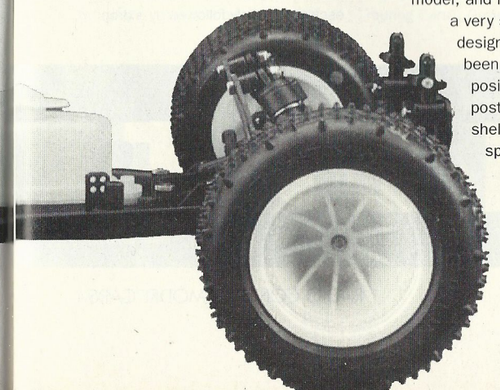
Front Suspension

Attentions can now turn to the front of the car, which includes the steering and suspension. The front bulkhead has many important jobs such as providing a mount for the shock tower, and acting as an inboard pivot for the wishbones.

The front, like the rear is a derivative of the successful Cougar system. Wishbones, hubs and caster blocks are all of proven design, providing excellent pivots for the large front wheels and the heavy front tyres. The lower wishbones offer two different positions for the shocks, as does the steering arm at the end of the wishbone. Our kit was constructed following all the kit settings as Schumacher recommend.

One point worthy of note at this point was the decision to package the kit with fixed length links, instead of turnbuckles. This greatly improves the time taken to construct the kit, while making it easier for novices to use the car, rather than having incorrect camber/toe-in settings which can adversely affect the handling.





The steering assembly has been tweaked since it's introduction many years ago. The principle has been retained though, with the use of a draglink and steering arms. Small amounts of threadlock need to be placed on certain screws to stop them vibrating loose. Previous experiences with this particular design has required a little fettling to get free. In this case, the whole mechanism ended up being very smooth with no slop what-so-ever.

With the drive-train complete, and the front and rear wishbone assemblies constructed, it is basically left to the shocks to finish off the more integral parts of the kit.

Schumacher decided to equip this kit with a set of shocks based upon the impressive Pro Shocks that are fitted to the Cat/Cougar/Storm 2000, albeit with plastic bodies. This results in a nice action, that provides effective damping for what is quite a heavy completed kit.

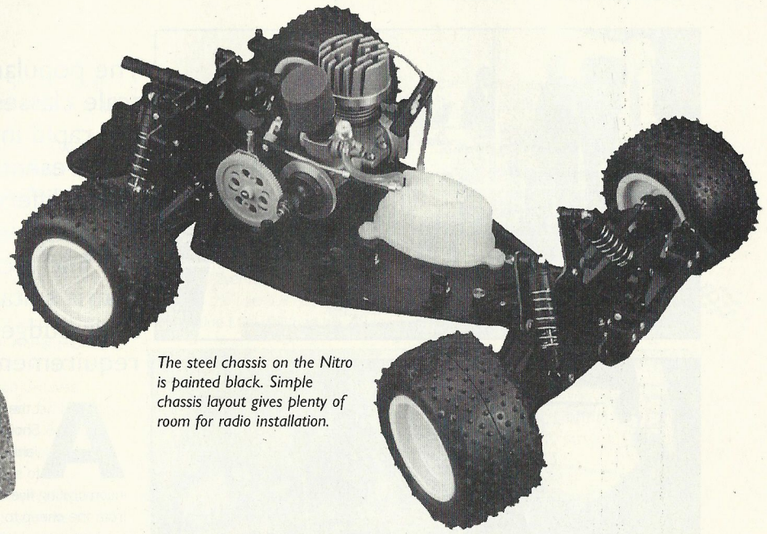
Adjustable pistons are now commonplace throughout the Schumacher range, and were set with three holes open. Schock oil was 30wt, and the springs were Schumacher gold. After the spring retainers were fitted, spacers could be inserted to suit ride height and clearance.

Ancillaries

Servo posts were fitted to the chassis, making a much better hold for the servo instead of just taping them down. there was a pair to hold a servo flat for the steering, while a set of vertical posts would hold a servo to operate the throttle linkage. An aerial mount was also supplied, again screwed to the chassis.

The fuel tank was the final large piece of kit to be screwed down, after the seal and the spring cap had been fitted.

Body posts fasten firmly to the front bulkhead and the rear shock tower, providing a sturdy base for the truck bodyshell. The truck shell appears to have changed for this model, and now incorporates a very sleek, low-line design. Once it had been cut out and the position of the body posts drilled, the shell could be sprayed.



The steel chassis on the Nitro is painted black. Simple chassis layout gives plenty of room for radio installation.