

RADIO CONTROL



OFF-ROAD BUGGY

Toyota Hilux

The Kyosho version of the Toyota Hilux off road buggy is, as one would expect from one of Japan's prestige manufacturers, presented in a colourful and attractive box. On opening the box one is presented with almost a fait accompli, the only work left to do is to install the radio, paint the nicely moulded clear polycarbonate body shell and screw on the anti roll bar. So, for the person who is as yet not a builder, this model offers an ideal introduction to the off road sport coming virtually ready to run.

In order to understand more about this kit it was necessary to disassemble the parts rather than to assemble the kit.

CHASSIS

The Chassis and radio box are one of the same, being strongly moulded in plastic and being fairly mud proof although not waterproof. The rear mechanism screws directly onto the rear, and the front suspension, which is in the form of cast metal trailing arms, is screwed onto the front of the radio box.

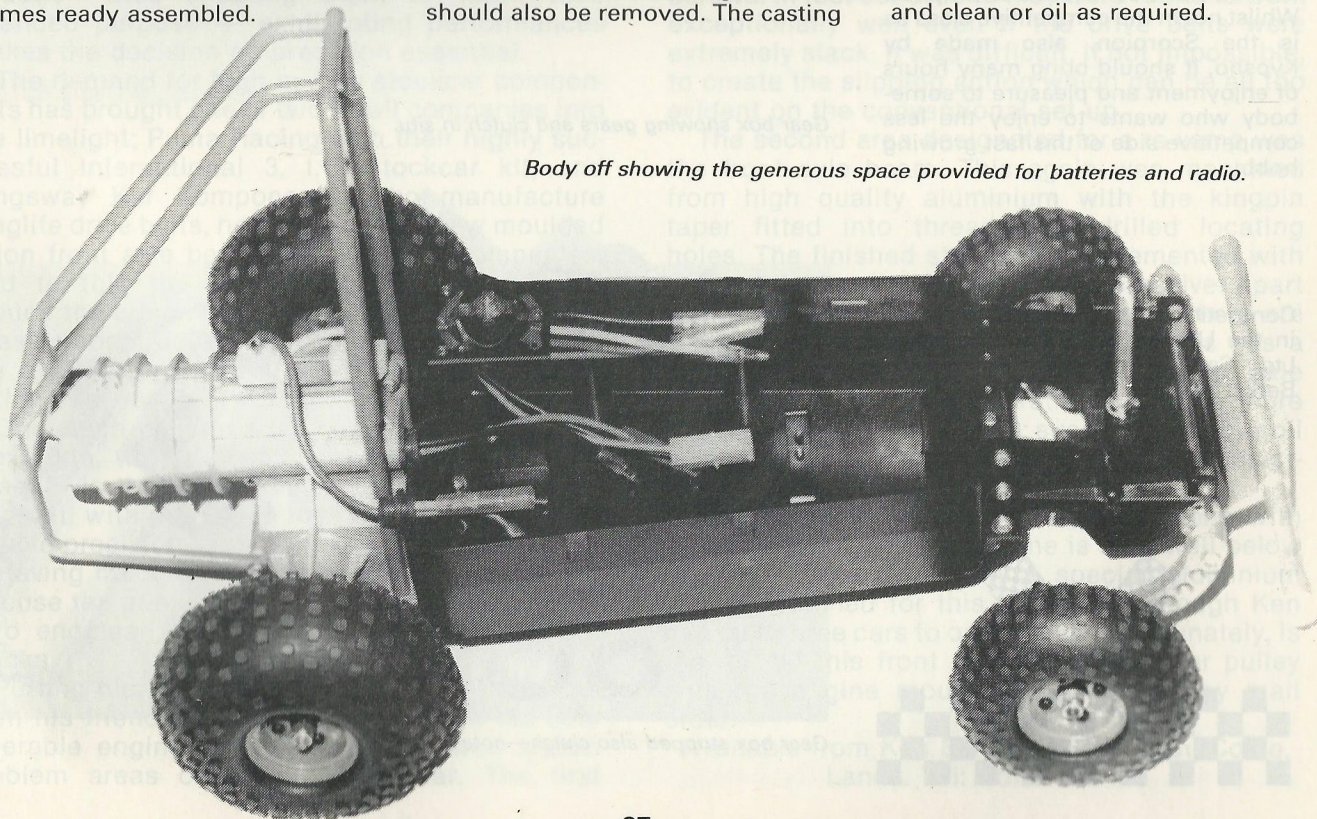
The rear cast metal gear box and rear axle assembly is held onto the rear of the chassis/radio box by four screws and, as the rest of the vehicle, comes ready assembled.



The box advertises that this particular model has a "centrifugal clutch system which takes the shock at the time of starting the motor and enables it to run on a muddy road or sandy beach without slip". Fascinated by this description I set about stripping the gear box and rear axle assembly. First by removing it from the chassis, then removing the red plastic anti roll bar section which is screwed onto this. There is a 10 watt speed control resistor also attached to the top of this casting and this should also be removed. The casting

is split and is held together by seven screws. It is first necessary to remove both rear wheels from this unsprung unit, then removing the two collets by unscrewing the grub screws, it is then possible to feel the axle become loose within the phosphorbronze bearings which support the rear axle. Inside this casting is housed not only the motor but the clutch, the main reduction gears and of course the final bevel drive to the rear axle. Once stripped it is a very simple job to maintain these parts and clean or oil as required.

Body off showing the generous space provided for batteries and radio.



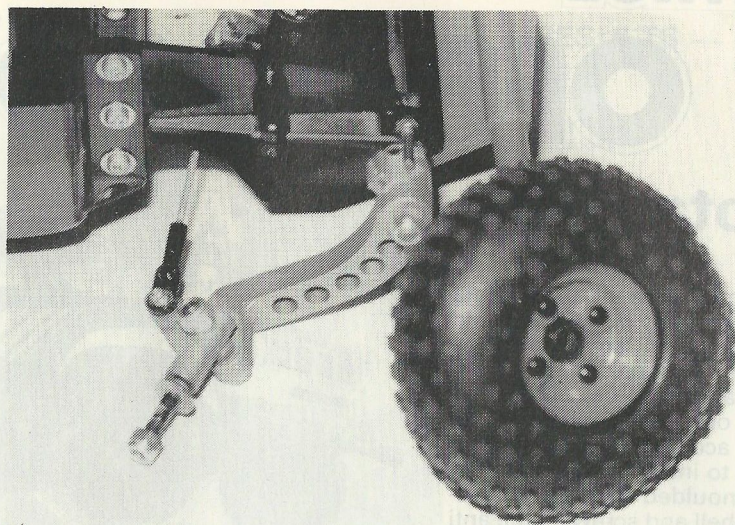
Still fascinated by this clutch (an unusual item to find on any electric powered vehicle) I removed the clutch and gear assembly which is located on the end of the Mabushi 540 motor. By the removal of the end circlip the clutch itself now comes to pieces revealing not two clutch shoes but no less than eight. They are very thin in width and are staggered around the clutch housing. Obviously as the motor starts these shoes are flung outwards making contact with the clutch bell. Grip is excellent and doesn't slip at all. Having satisfied my curiosity I now proceeded to reassemble the unit which is as straightforward and simple as disassembly but in reverse order. The rear unit as I said is unsprung and the rear axle, motor housing and reduction gear unit are all in one and cast in light alloy.

A feature I do like on this vehicle is the inflatable tyres. They are very similar to the ones on the Kyosho 3 wheeled Honda trike we received recently. Again these tyres come ready assembled and should any tyre become slightly deflated the careful use of a hypodermic syringe through one of the tread studs will immediately repair any loss of air and an equal tyre pressure can soon be brought about.

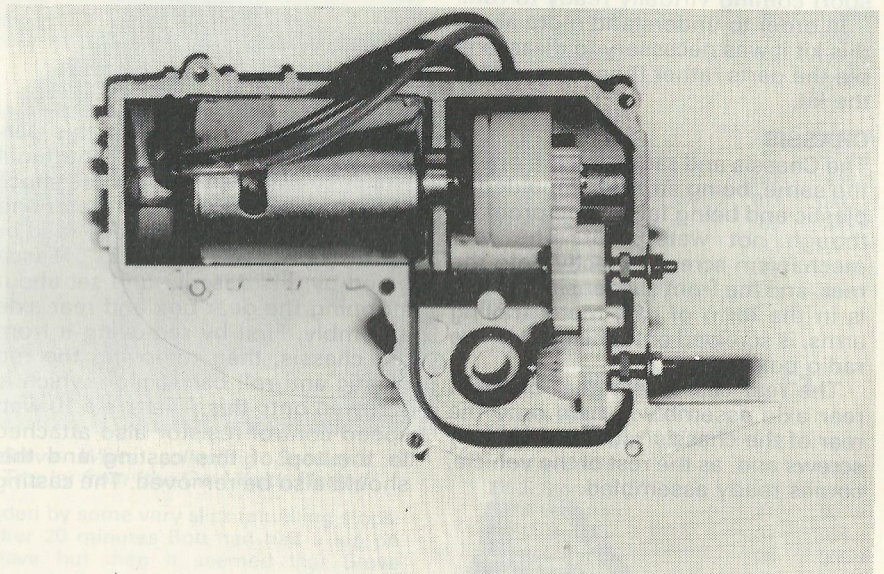
TO SUMMARISE

This almost ready to run kit comes with its own speed controller which is ready wired for a battery pack and also incorporates a 10 watt speed control resistor. To operate, it requires only a 2 channel radio and either a 5 or 6 cell nicad battery pack. Whilst not in the competitive class as is the Scorpion, also made by Kyosho, it should bring many hours of enjoyment and pleasure to somebody who wants to enjoy the less competitive side of this fast growing hobby.

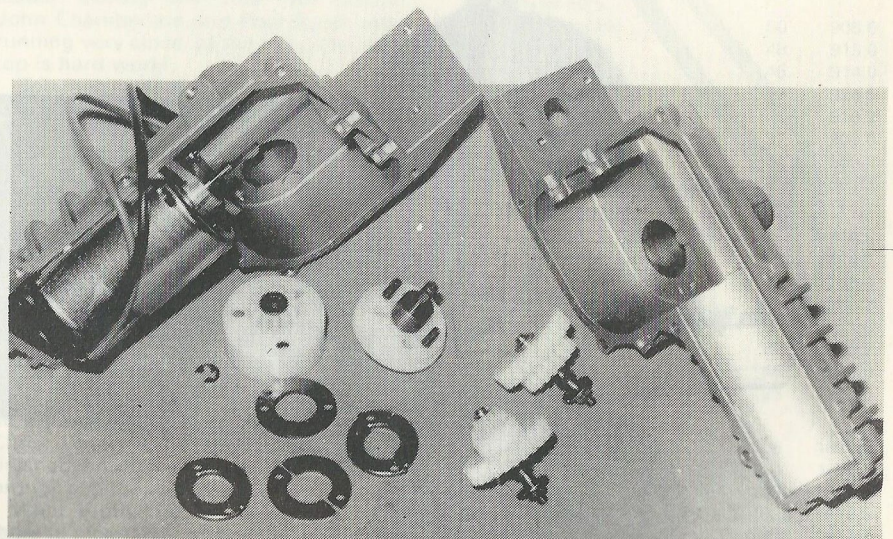
Competitively priced and distributed in the UK by MacGregor Industries Ltd., Canal Estate, Langley, Slough, Berks. Tel: Slough 49111 & 42251.



Front suspension detail.



Gear box showing gears and clutch in situ.



Gear box stripped also clutch—note multiple clutch shoes.

