

Rockn' CITY 44B

An RRC Kit Review

by
Jeff Gearing

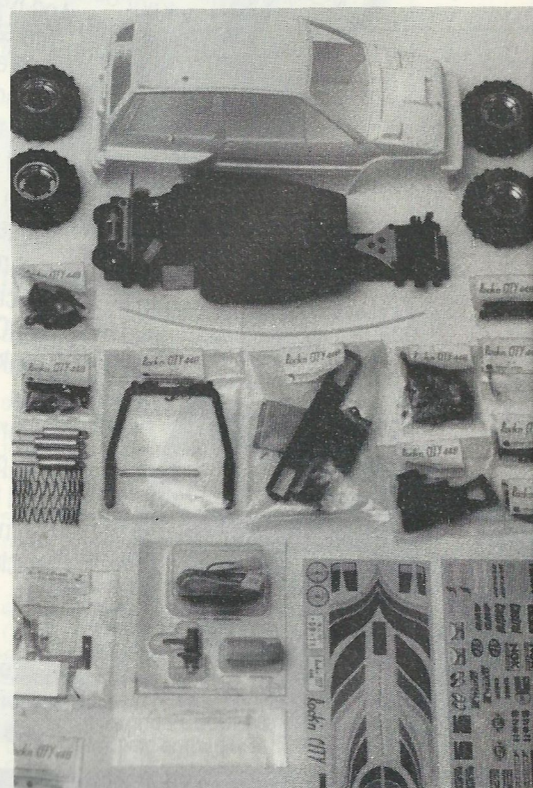
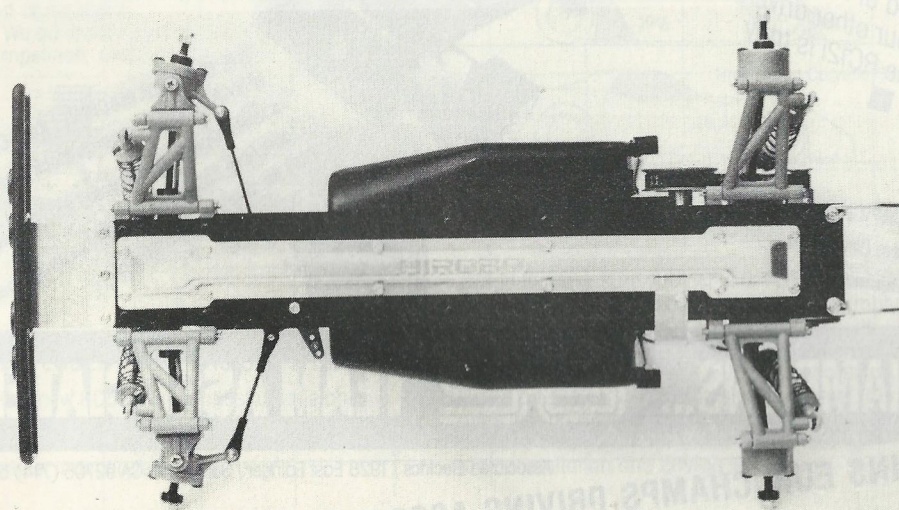


Innovation must be the hallmark of the Japanese model industry. Hirobo, previously well-known for R/C helicopters have taken to producing more earthly products. However not for them anything ordinary or run of the mill, for Hirobo have come up with one of the first 4WD electric off-road racing buggies, and in so doing have incorporated some unique and innovative features. All round independent suspension, differentials in both front and rear axles and a toothed belt drive system for starters.

The kit comes partially assembled. The chassis, with motor, belt drive and radio box comes as a unit. This leaves the front and rear suspension, wheels, axles, steering, speed controller and body to be completed. The presentation is up to the usual high Japanese standards with a colourful picture of

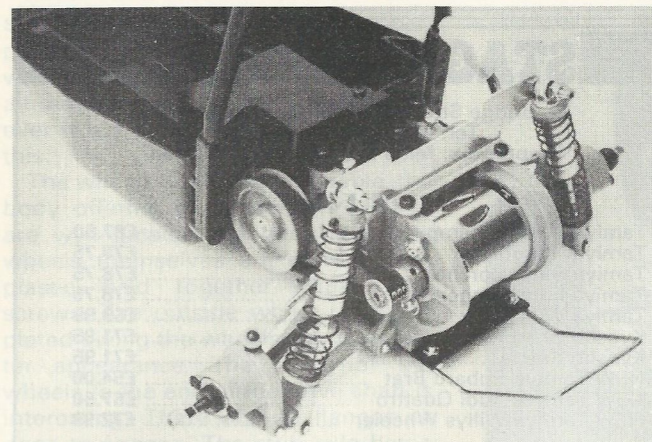
the car on the box. Small components are packed in plastic bags with some bubble packed units. The only items on a sprue are the four wheels.

The instructions are well illustrated and offer both English and Japanese text although the English is more a source of amusement than information. This delightful piece is contained in the running-in section. I quote "In case when foul or burning smell occurs, please immediately stop warming up. Check for the abnormal part and repair it." Get the idea? And there's a lot more where that came from!



Complete kit.

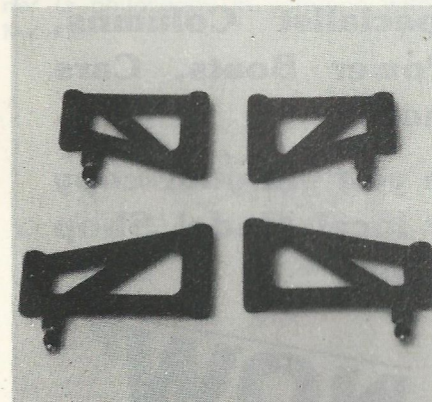
Underside of the chassis. The metal cover reinforces the chassis and covers the drive belt.



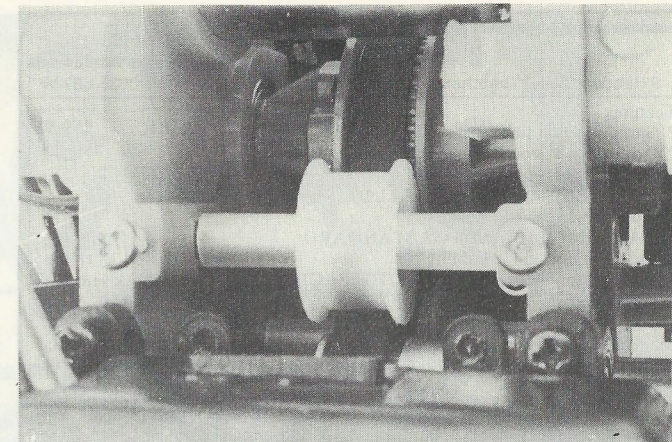
Rear motor pod and suspension

Assembly of this kit is very straightforward. The main chassis is aluminium (a GRP chassis available as an option) with the motor mounted in a pod at the rear. Instead of a normal gear drive the 540 motor is fitted with a toothed gear that drives a short belt to give a primary reduction. This in turn drives a long front to back belt which turns the differentials. To tension each belt there is a jockey wheel that is adjusted by means of two screws. The primary belt is exposed, but the secondary front to rear belt runs through a channel under the radio box to the front axle. It returns under the chassis, where it is guarded by a metal cover which runs the whole length of the chassis. This metal channel also acts as a strengthening backbone to the chassis.

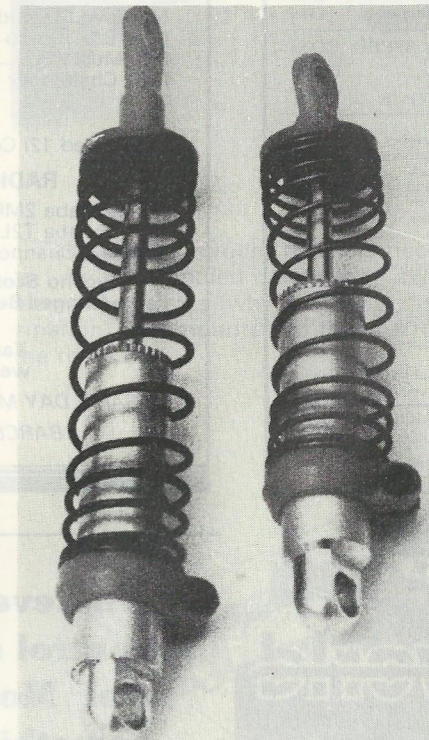
The motor pod and primary reduction comes complete with ball races as standard. Hirobo do offer as an option additional ball races for wheels etc. The motor pod also has the pivot points for the rear suspension moulded in. Bottom suspension arms are almost square frames with triangulated bracing. These are held in place by single pivot pins on chassis and hubs. The top suspension arm is a single bar with the Rose type of ball joint anchoring the hub in position. A protective rear bumper wire extends



Bottom wishbones for Front and Rear.



Secondary drive belt tensioning jockey wheel. The adjusting screws either side of the jockey wheel shaft.

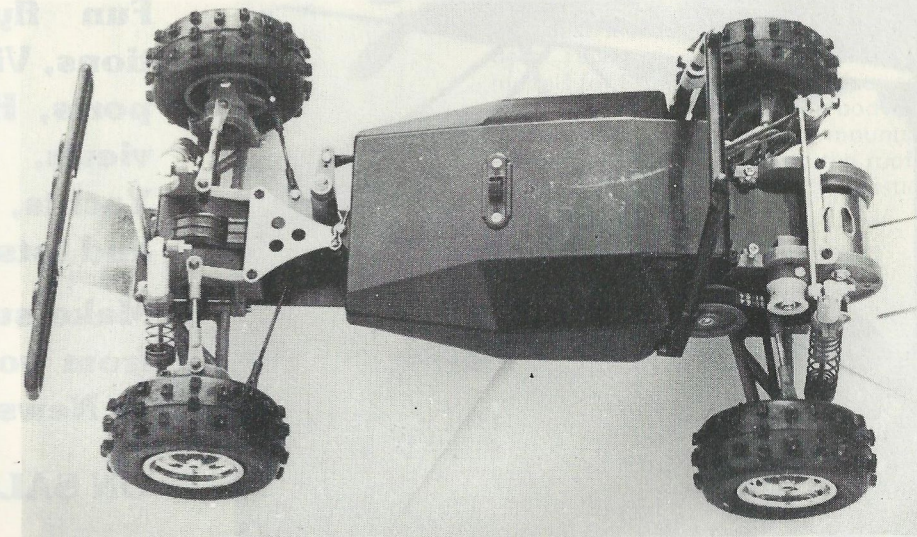


2 sizes of shockers—note adjustable spring collets and variable rate springs.

beyond the back of the car. Coil over shockers are attached to the bottom suspension arm and to a bracket at the top. This bracket extends from one side of the car to the other. The tension of the variable rate springs can be adjusted by moving a collet up or down the barrel of the shocker. The 10mm diameter oil filled dampers provide the necessary anti-bounce characteristics.

The front suspension is of a similar design to the rear, with shorter shockers and softer springs that are attached to the bottom suspension arms, but are more steeply inclined than the rear units. Steering is controlled by a servo mounted inside the radio box. The link from the servo drives the servo saver mounted on the chassis and a tie rod is connected to each stub axle unit.

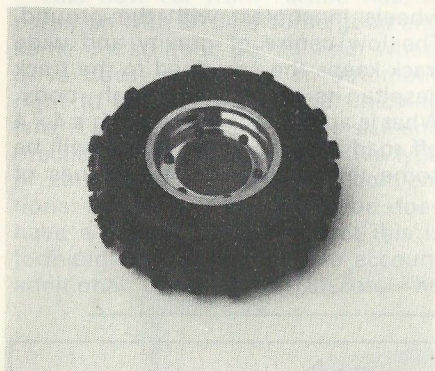
The swivel or king pins are in fact cross headed bolts, incorporating a plain bearing surface for the steering assembly to pivot on. Protection at the front of the car is provided by a plastic bumper bolted to an aluminium exten-



With radio box lid fitted—not completely waterproof but nearly.

sion to the chassis. This, to my surprise has taken quite hard knocks without breaking, although the aluminium support does bend; however it is a small matter to straighten this.

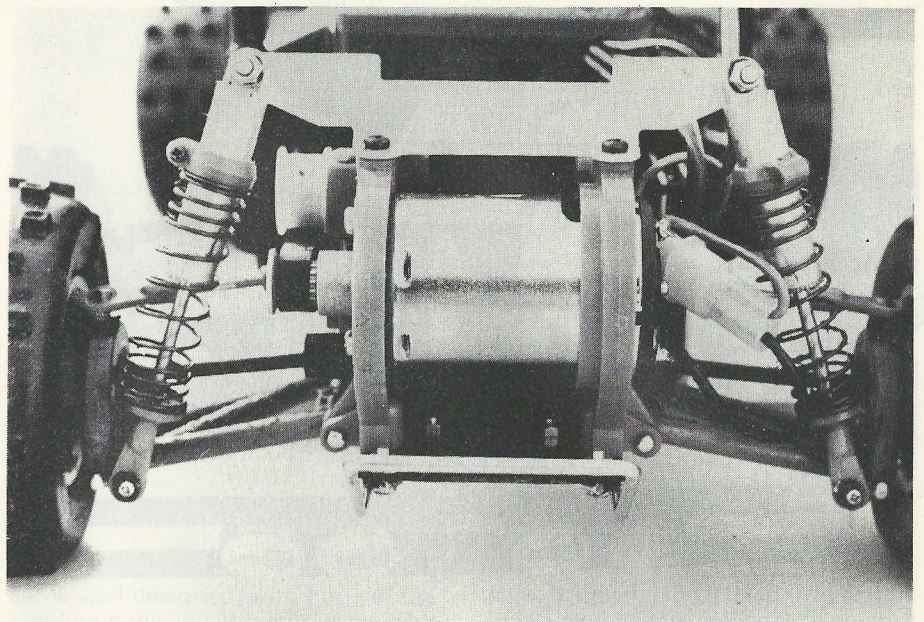
The wheels are fairly vulnerable, the body offering no protection as they are well outside the body line. The wheels themselves are of two-piece plastic held together with small screws. The outside wheel rings are plated giving the wheels a real go faster appearance. The fixing of the wheels to the end of the drive shaft is interesting. There are no flanges or dogs to engage. The stub axle has a taper that accepts a spacer with an internal taper. This spacer is serrated on one end and is forced against the wheel by tightening the single wheel nut. This in turn forces the spacer harder on the taper. Believe it or not the system works very well.



Wheel—with chrome trim.

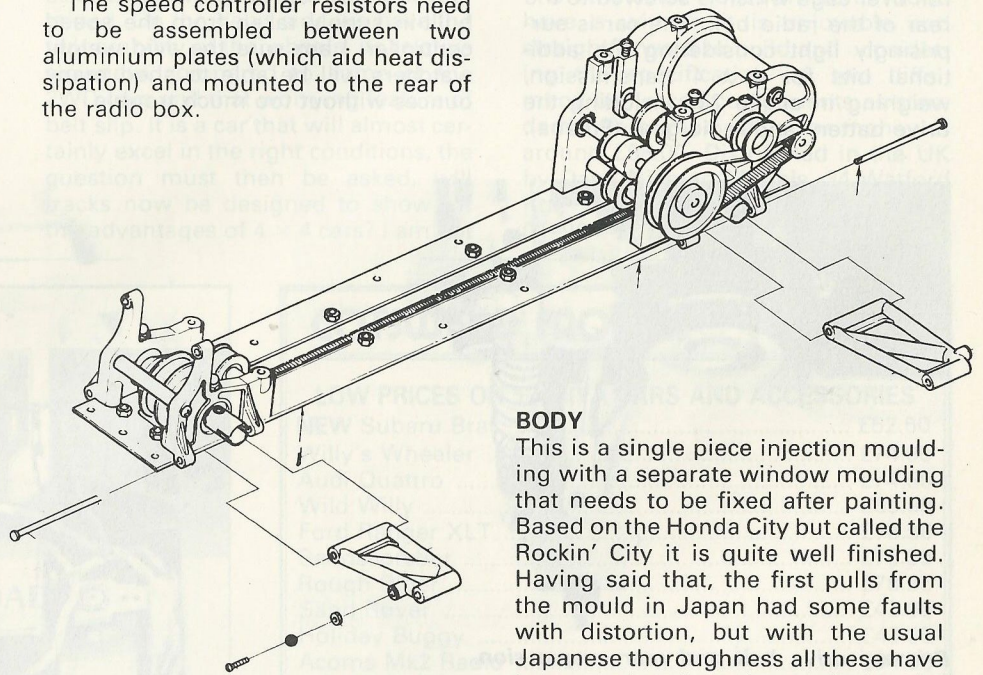
CONSTRUCTION

The main items to be built are the red plastic moulded front and rear suspension. For the most part this involves sliding in pivot pins that are held in position by split pins. Screws are used to locate the shockers and hold the wheels together. The chassis and transmission come already assembled as stated. From this practice of factory assembly it appears that Hirobo are reluctant to entrust the builder with a screwdriver and a spanner (a philosophy in common with Kyosho).



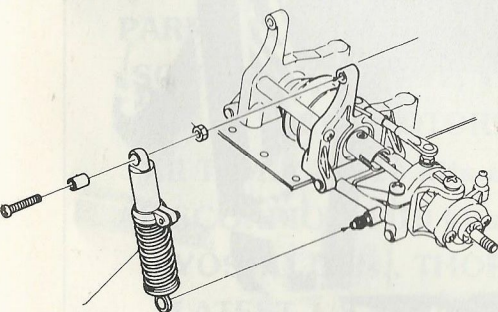
Rear motor pod from the rear.

The speed controller resistors need to be assembled between two aluminium plates (which aid heat dissipation) and mounted to the rear of the radio box.



BODY

This is a single piece injection moulding with a separate window moulding that needs to be fixed after painting. Based on the Honda City but called the Rockin' City it is quite well finished. Having said that, the first pulls from the mould in Japan had some faults with distortion, but with the usual Japanese thoroughness all these have been replaced and no doubt the models for Britain will be first class as was the case with our kit. The body is held in place with three body mounts, one at the front and two on the roof, the latter are extensions of the plastic



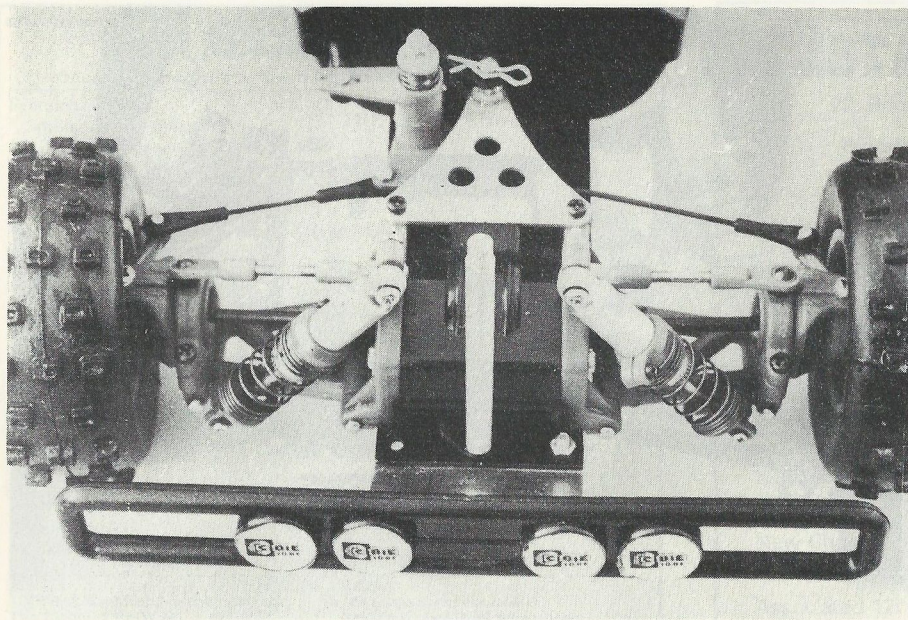
Front shock absorber location



Rear stub axle assembly.



Front drive—stub axle and suspension assembly.



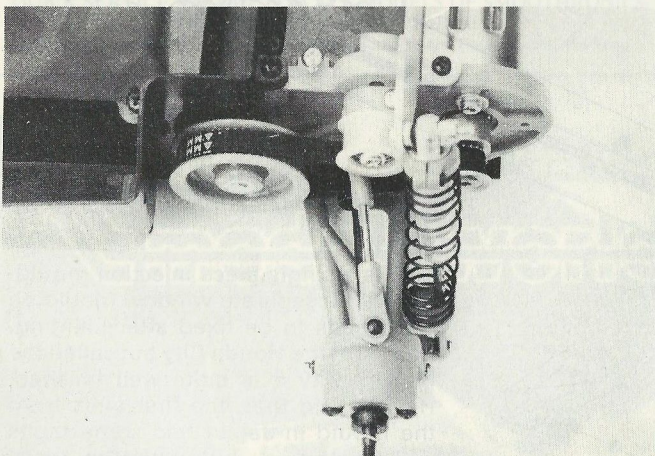
Front suspension and steering.

roll over cage which is screwed to the rear of the radio box. The car is surprisingly light considering the additional bits for 4 x 4 transmission, weighing in at 4lb 2oz including the drive battery and radio gear (Futaba).

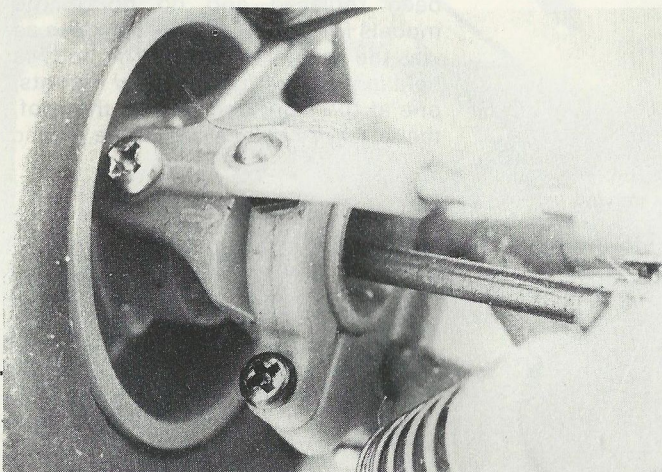
The receiver can be powered from a built-in supply taken from the speed controller. I am sure the avid weight watchers will be able to shed many ounces without too much trouble.

RUNNING

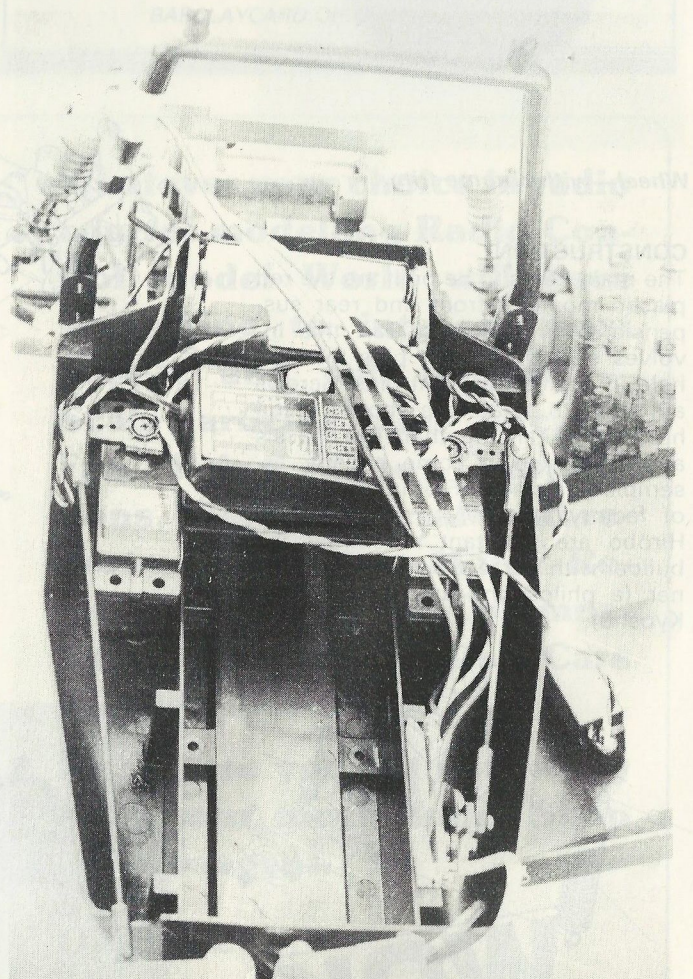
The first noticeable feature of this new off roader is how quiet it is. Used in the past to the grinding and whirring of the cement mixer transmission in Rough Riders, Scorpions and AYK buggies this 'silent drive' is quite a pleasure to listen to. Obviously the toothed belts must be responsible for this. The car shows a good turn of speed but it is probably not as fast as other 2WD buggies available, presumably due to the additional friction of the more complex transmission. Acceleration is also down on the 2WD cars. Having said that, the motor is a standard Mabushi 540, and there are, of course good and not so good 540s. This reduced performance in speed and acceleration must be set against the additional traction provided by the 4WD transmission. It's the usual case of 'horses for courses'. Suspension and roadholding are good. The large diameter shockers certainly keep the wheels in contact with the ground. The low centre of gravity and wide track keeps the car glued to the track despite its deceptively high body. What is apparent is that driving a 4 x 4 off road is an acquired skill. It will be some time before the techniques of



Primary drive belt and rear suspension.



The castor angle is adjustable, by loosening the pinch bolt on the bracket fixed to the suspension arms.



Plenty of space in the radio box for servo's receiver and batteries.

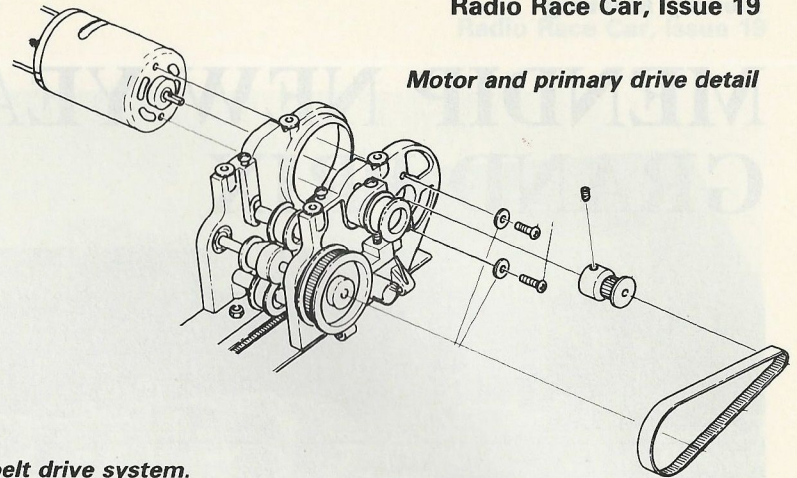
competitive 4 x 4 driving are fully mastered, the only consolation is that Hannu Mikkola probably did not get it right first time either.

One rather alarming feature is that when the car is reversed hard, it is possible to get the toothed belt to jump teeth on the gears. This can do no good to either the belt or the plastic final drive gears.

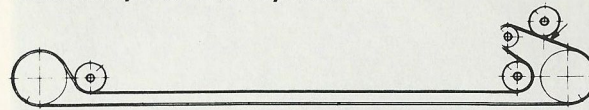
The car has already had its first taste of competition and has been involved in a number of hard physical contacts on the track resulting in a bent shocker and other minor damage that was quickly rectified. Unknown at the time one of the front half shafts also dropped out. The car continued, and in fact completed its race in 2WD, a fine illustration of one of the advantages of 4 x 4 transmission. It must also be said that the speed of the car increased in 2WD and that its handling characteristics are quite different.

This new car from Hirobo has, in common with all cars some good and some not so good points. Four wheel drive does not decree an automatic right to be first across the finishing line, if anything it takes more skill and practice to get the best from this type of car than from cars with conventional transmission. The Hirobo does have a weight advantage but this is forfeited when you take into account additional transmission losses. The

Motor and primary drive detail



Secondary belt drive system.



car is well designed, with none of the niggling bugs you sometimes get with a new car. It is robustly constructed, a fact demonstrated by the on track collisions and the minimal damage sustained. On the debit side we have the vulnerability of the wheels, its relative slowness compared to some of the 2WD cars and that worrying feature of belt slip. It is a car that will almost certainly excel in the right conditions, the question must then be asked, will tracks now be designed to show off the advantages of 4 x 4 cars? I am not

sure. In conclusion, I liked the car, it is interesting from a mechanical point of view and no doubt with a hotter motor will be a match for the competition.

On the sales front I am sure Hirobo have a winner, it is enjoyable and straightforward to build and considering the specification i.e. two diffs., many ball raced components as standard offers good value for money at around £98.00. Distributed in the UK by Dave Nieman Models, 34 Watford Rd., Sudbury, London. Telephone 01-904-6879.