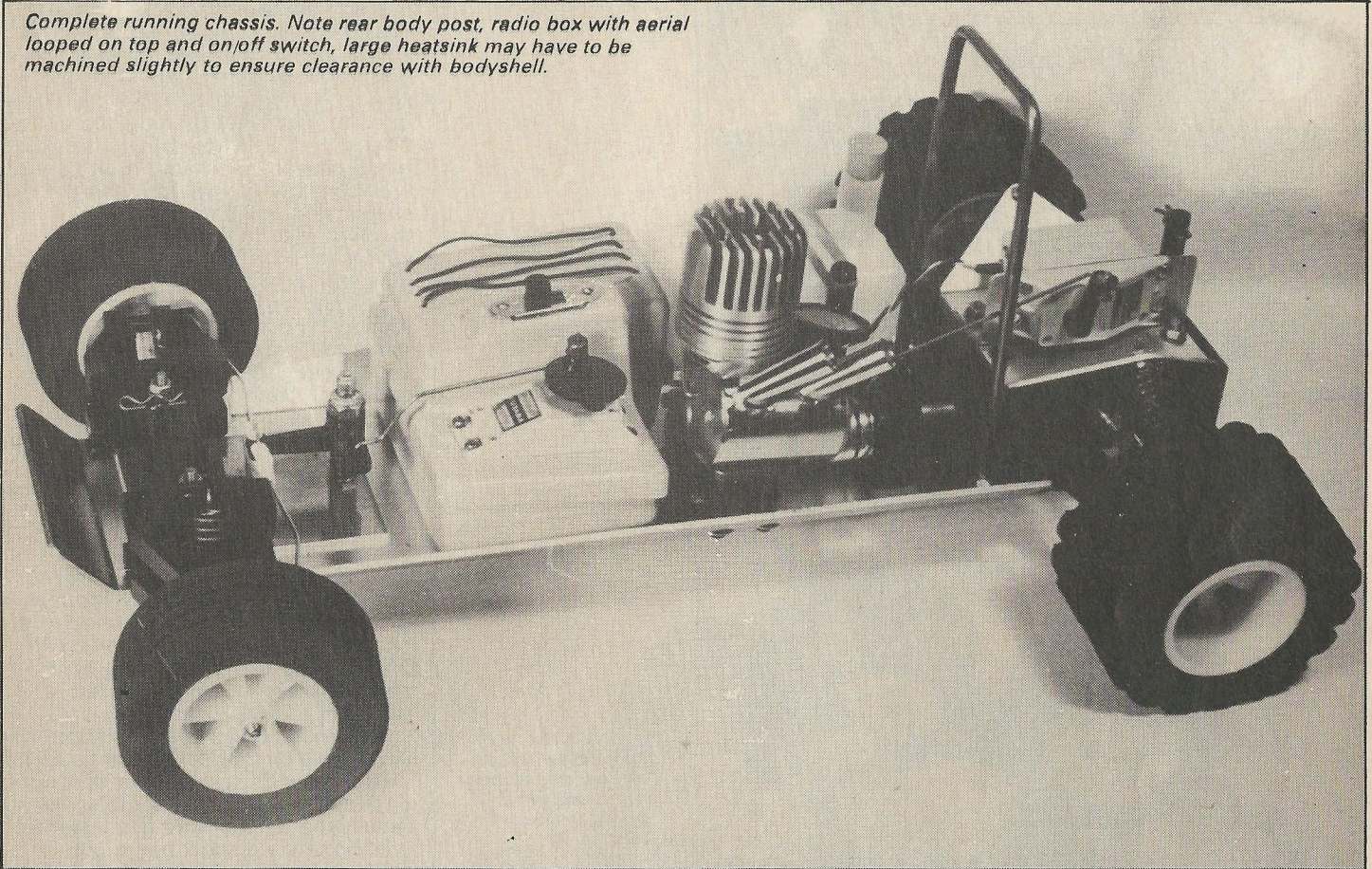


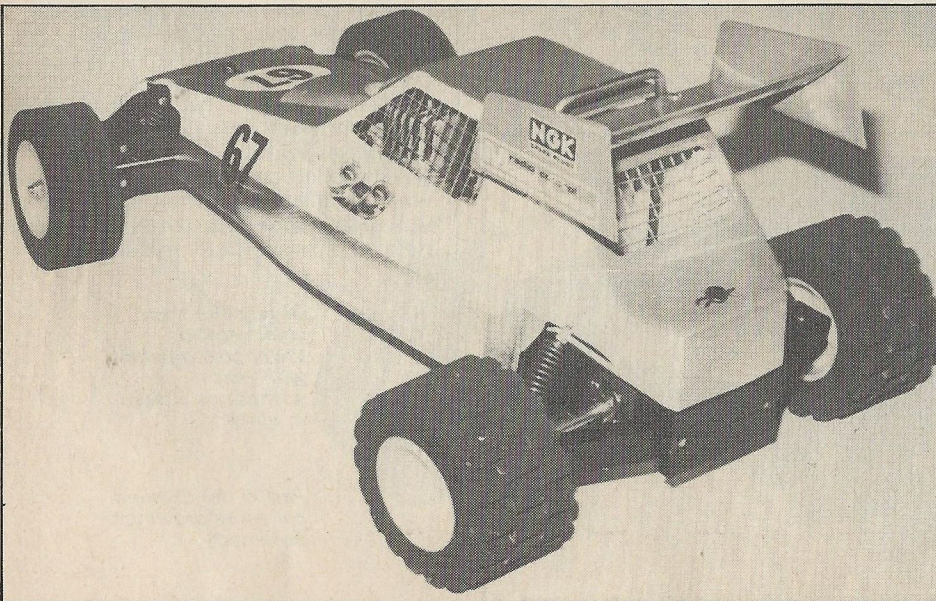
MARDAVE

MARAUDER

Complete running chassis. Note rear body post, radio box with aerial looped on top and on/off switch, large heatsink may have to be machined slightly to ensure clearance with bodyshell.

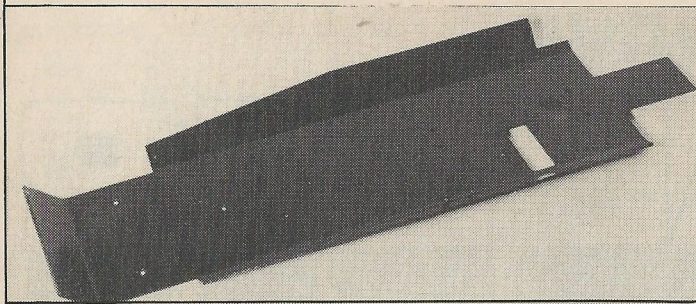


Attractive bodyshell painted in a contrasty pattern with good visibility for the driver.

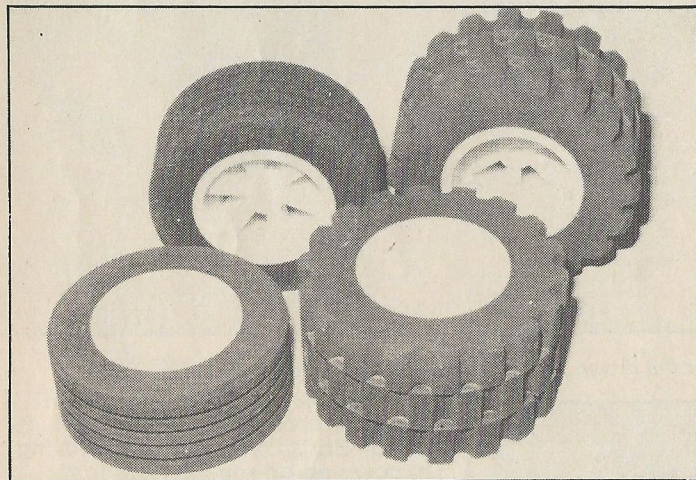
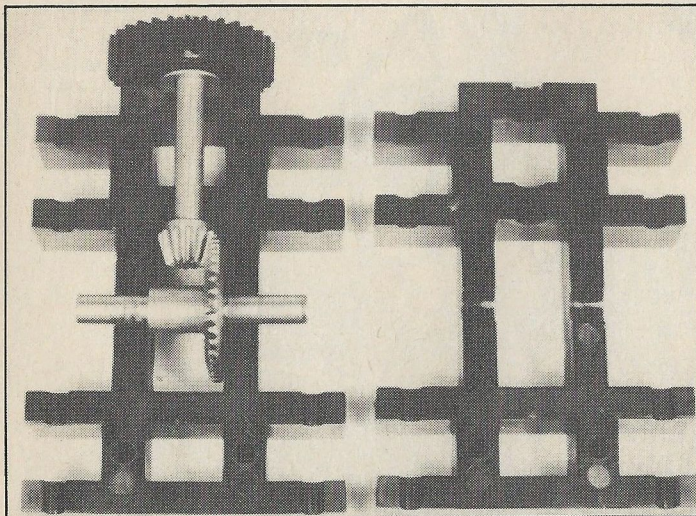


THE MARDAVE MARAUDER represents a breakthrough on several counts. It is the first all-British (yes my flag is waving!) i.c. powered off-road kit: the first off-road car in this category to sell for under £50: the first off-road car to offer full all round suspension and an inline bevel geared drive at the price. It has quite a number of other attractive features as well, including a considerable ease of construction in spite of breaking so much new ground. A splendid cut-away drawing is provided to help the builder.

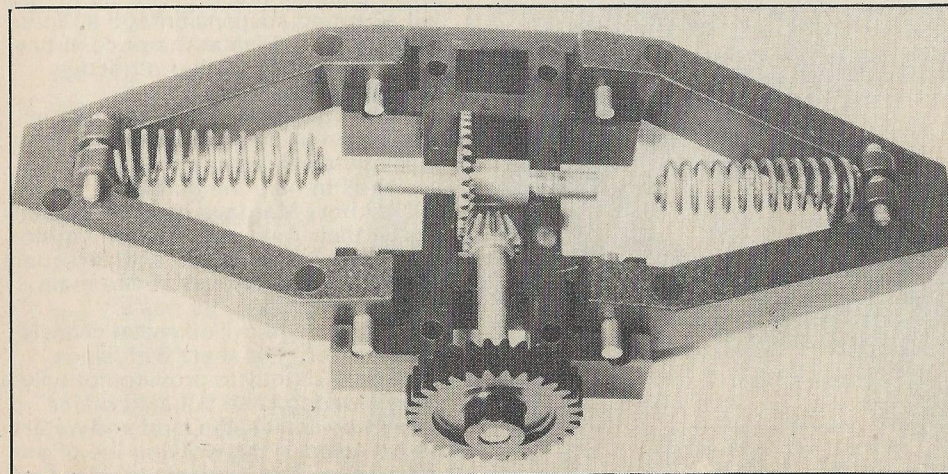
Until now Mardave has based such kits as their Autocross car on a minor variation of the stock car with its square section welded chassis as the main component. Marauder has a pre-formed and drilled metal chassis bent up from the sheet with sides turned up slightly to provide not only a stout working base but also major protection against the mud and water to be expected in the working life of an off-road car. Radio gear is enclosed in a



Shaped metal base, drilled and pressed.



Sturdy tyres, with all weather treads on rear and ribbed front: wheels in bright yellow plastic



version of the usual Mardave plastic box with the novelty that the on/off switch location comes on top of the car and through the bodyshell for greater convenience. Throttle servo is located high up on top of the gearbox cover plate.

But to work. First task is to stick the tyres on the wheels with Evostik. I do like this approach — getting the dirty sticky job over at the beginning. Tyres for the rear are robust all-weather type deeply treaded as opposed to knobblies in a soft compound. Front tyres are ribbed and of slightly harder though still fairly soft material. Wheels are in bright yellow plastic and strongly spoked. Long stub axles are then press fitted to rear wheels being scored to bind in their axle holes. In the same way hinge pins are pressed through ends of wishbones which will provide the rear suspension. I use a small Woden machine vice to do my pressing whenever possible rather than belt the pins with a hammer.

The gearbox is composed of two identical mouldings. The lower half holds the large bevel gear and shaft, small bevel gear and shaft and nylon spur gear. Halfround recesses are moulded in on each side and the wishbones lie snugly there resting on their hinge pins. Before closing the gearbox with its identical top half, gears should be greased. I used some left over from our recent Holiday Buggy by Tamiya but any highmelting point grease, preferably graphited will serve. Top goes on locking the wishbones in place. The unit is then attached to the chassis with a metal gearbox cover plate on top using four long bolts secured with nuts and serrated washers.

This metal cover plate has upturned ears to which rear springs are attached pushing a slim screwdriver up through each spring length to secure screw and nuts. Other end of spring is fastened to wishbone via a short hinge pin.

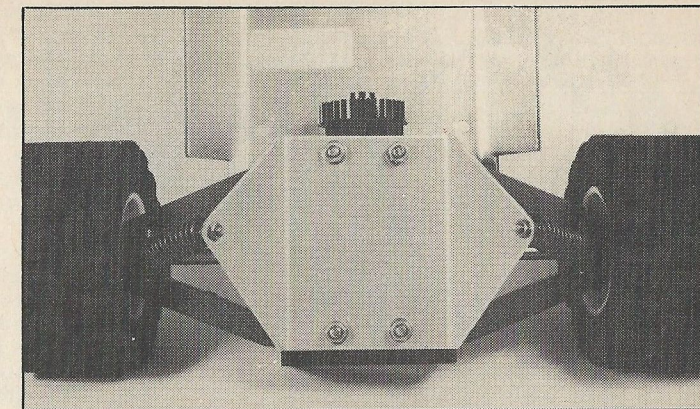
The two universal joints comprise flanged bosses which are attached to flat rubber rings (not really O-rings but flexible Cardan type couplings technically described as rubber doughnut joints). We can now see the point of the long stub axles — half shafts — that go through bearings in the wishbones and are fixed to the universals with two allen screws. Similar allen screws attach the crown wheel shaft on the other side of the universal. Springs provide an excellent degree of movement and the drive is

Bevels and their shafts rest on lower gear box half with rear wishbones slotted in place

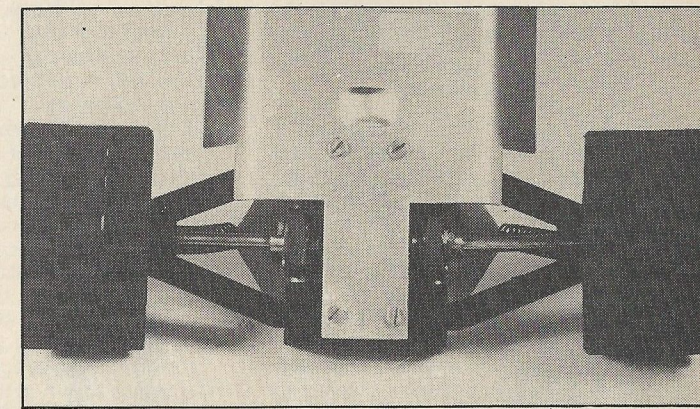
Part of the detailed cut away drawings provided

astonishingly free. Under very hard unkind treatment it is possible these rubber couplings will split as they serve in some degree as a fail safe to the unit, but rejoice, they only cost 33p to replace and Mardave will supply, in case of difficulty, direct from 7 Heanor Street, Leicester; remember to add postage. Or you can always fabricate your own replacements from rubber soles sold for d.i.y. shoe repairs.

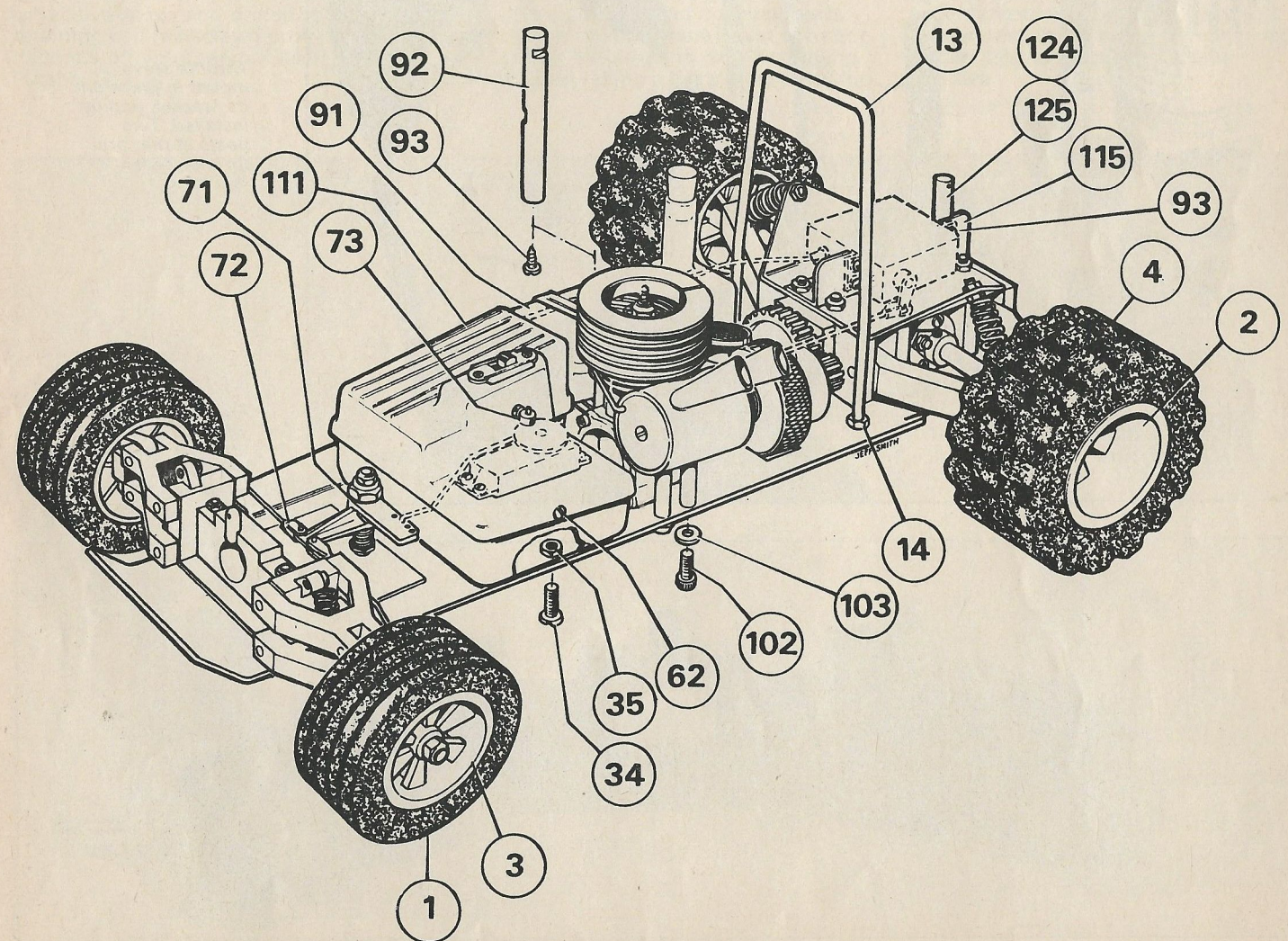
Front sprung steering comprises a further set of wishbones, four of them this time, again with springs connecting them. Front steering blocks are made up by pressing through the stub axles into the plastic moulding, which in turn is held between the wishbones by a further block which takes the king pins. A central cross beam holds the two wishbones and also contains a built-in front body mounting post. The whole unit rests on a strengthening plate which also seats the servo-saver. Very usefully the track rods are shown dimensioned with bending diagram to provide the exact amount of bend to clear the wishbones at all times. Note that the bent ends going into the steering arms are 18mm long and do not require to be colleted. This allows for the up and down movement. Ends attached to servo saver have the usual plastic slip-in retainers provided, as is the track rod wire.

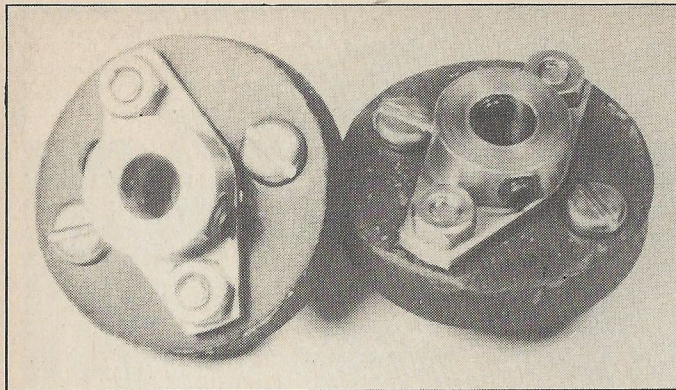


A step further. Gearbox assembled on chassis base with rear box cover screwed on and springs affixed

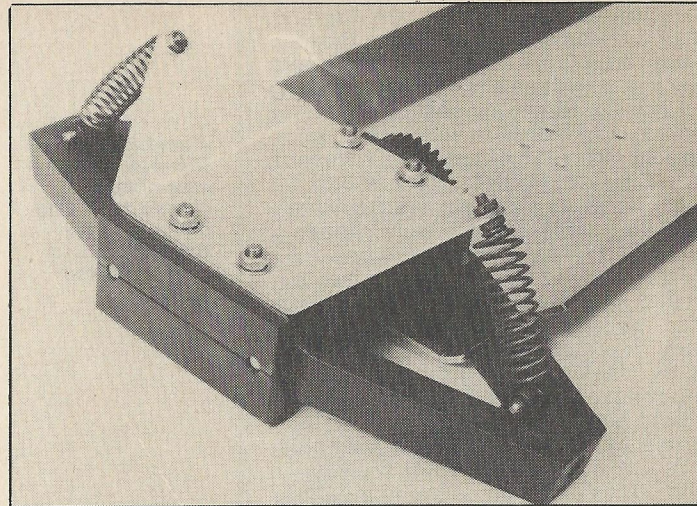


Underside of rear springing with wheels in place showing couplings and half shafts

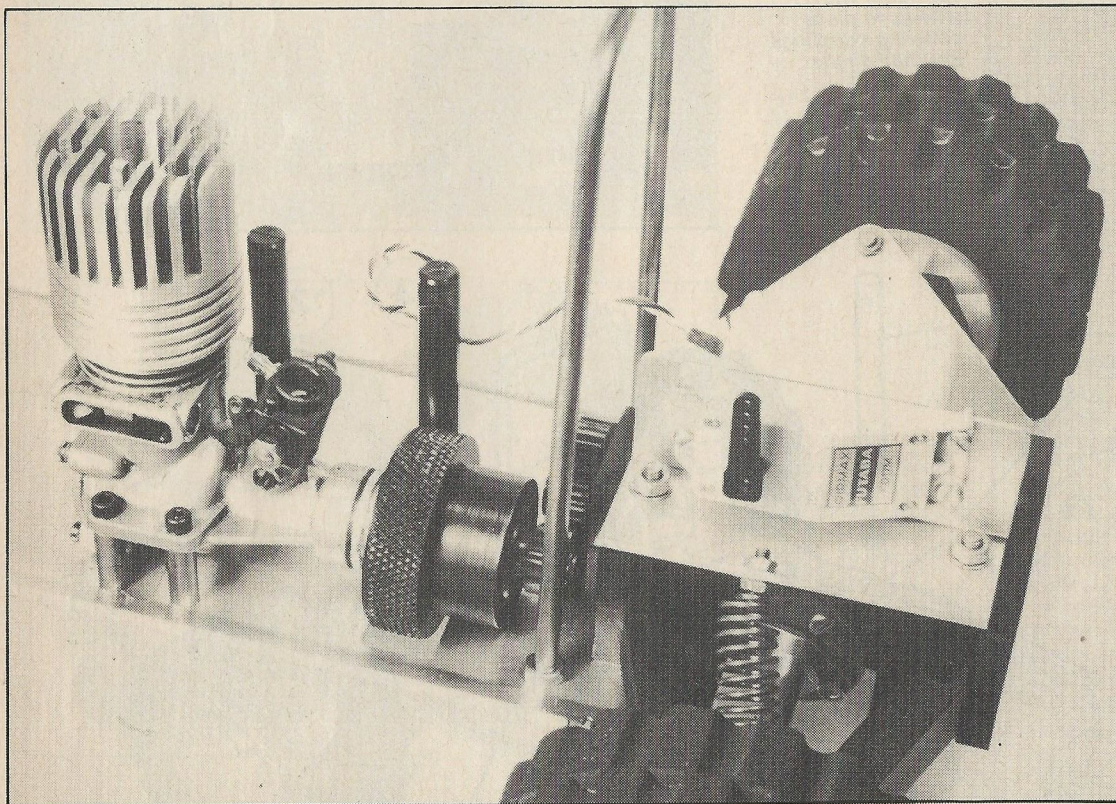




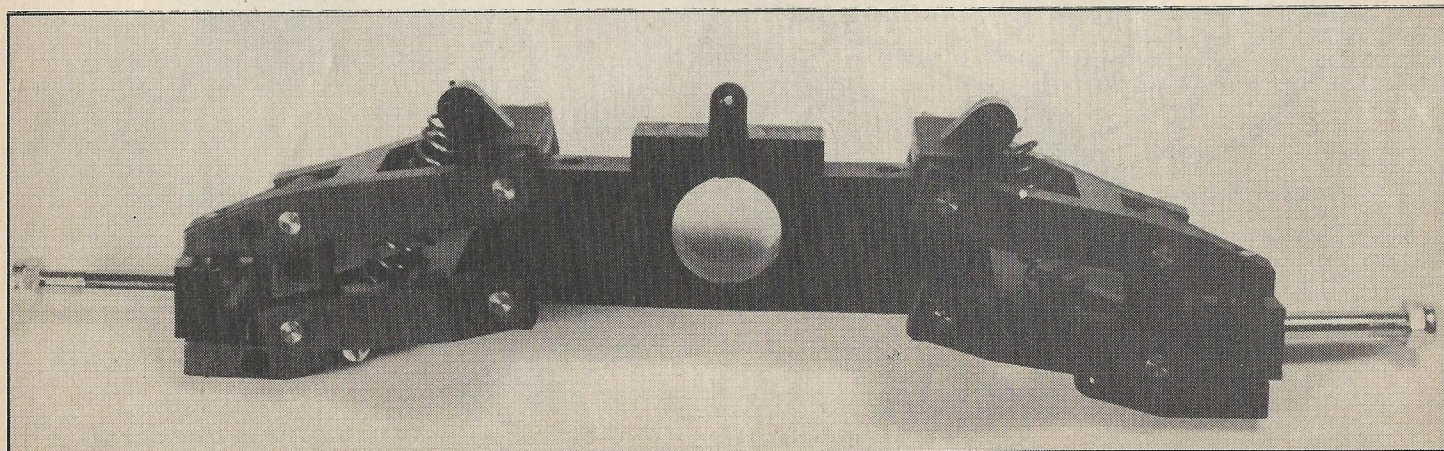
The 'doughnut rubber couplings' with bosses attached.



A top view of rear end.



Throttle servo mount in place on its bracket, engine installed. Two posts at rear are for attachment of fuel tank.



Front springing with wishbones attached to cross beam, and stub axles in place

Recommended engine is either Veco or HB. I used a Veco as I already had a turned heatsink for it — a relic from the days when PB used to machine heatsinks individually before demand led to automation — but very pretty when Gunked and polished up! Less fortunate builders can obtain the Mardave circular heatsink still at £1.80 which presses down over the head. Installation is trouble free: four little threaded posts secure engine to chassis with short socket head screws. It may be necessary to enlarge mounting holes on engine to take the screws to 3.6mm diameter. If engines other than recommended are used chassis mounting holes may require a little slotting.

The clutch unit is already put together and can be assembled straight away on the crankshaft when the retaining circlip (don't drop it) is eased off. With all nicely tight this is of course then replaced. Engine and large nylon spur gear mesh happily, as a test will show.

Throttle servo mounting plate is provided as an angled alloy unit. It is ready drilled to take the bolts holding the gearbox together. There is also another little hole drilled in it with countersunk. This is to take the single countersunk screw in the kit which holds the rear body post and must be fitted before fixing to gearbox cover plate. The mounting plate must be cut to receive servo and drilled for the retaining self tap screws provided. Size depends on your servo. I used my Futaba 17M.

The usual Mardave plastic radio box comes into its own for an off-road vehicle. This version is shaped to give space for the inline engine and only encloses the steering servo a suitable hole for which is cut out and drilled to take the securing st. screws. Connection to servo saver is direct and needs only a little kinking to clear box.

Two mounting posts are provided to take the fuel tank. They are notched half way up to take the tank 'rib' which holds it firmly in place when two rubber bands are adjusted round it. There are two more notches on the posts to prevent the bands from slipping.

Distance to carb is short, so be careful in connecting up — with fuel filter inserted of course — to avoid any kinks.

No silencer is provided in the kit but the usual "stock car" type which clamps directly onto the exhaust manifold is required. For those wishing to have a specially attractive car Mardave offer a de luxe version which I have fitted. This has two exhausts pointing rearwards and upwards and comes through the bodyshell via an oval opening cut out for it. This chromed twin pipe silencer costs £3.75 and adds a finishing touch. I have fitted the little Perry carb air filter to complete the engine attachments.

Last item to install is the roll over bar.

Bodyshell is in white ABS with window openings and cutaway parts scribed, so that this part is just a matter of time — either using drill, modelling knife etc or taking a hot iron to parts to

be removed. Either way finishing requires file and glass paper. Note the slot required for the roll bar to come through. Another small hole must be made for the on/off switch where indicated on top of the bonnet. This is part of the body design and does not look out of place. Window openings are covered with wire mesh provided. The sheet is just enough to do them all, but try your cutting pattern out on a sheet of paper first! I attached mine with Evostik, but hot glue or epoxy will do the trick equally well. If you expect to adjust car with body on leave tankside window uncovered as this will also enable refills to be made body-on. An airfoil is also included and is screwed and stuck in place on top of the body. Note that roll bar will not protect this part.

Colour scheme is up to you. ABS takes kindly to retouch aerosols so quite elaborate schemes are reasonably simple. Masking tape can be used to separate colours in a big way, or for smaller items I have just been trying Winsor and Newton's Art Masking Fluid from art shops. This can be peeled off with a finger, or use a soft rubber.

Further decoration can be added with Letraset (sheets are quite expensive so it pays to share a sheet in a mutually agreed typeface — there is enough for several modest letterings). I see that Screenprint are offering personalised names decals as another useful additive.

