

Why the RE30B?, why carry out conversions, or near total scratchbuilds? These projects will take 6-12 months of precious free-time and the determination to carry on and get it finished through and beyond the pain-barrier. The pain-barrier hits at around 1-2 months in my experience, when one realises that one may have bitten off more than one can chew, but by this stage several people know about the project and are keen to see the end result and saving-face has a part to play too. Carry-on a few more weeks and you've cracked it, you can start to see a vision of what you're aiming for.

One must choose a car that can be practically built, requiring only tyres/wheels, an engine and gearbox from another source and a windscreen if it is multi-curved; the rest, well that's the challenge! This is my view on the matter, anyhow. The challenge involves 'problem solving' as each new area has to be totally conceived anew from raw materials and you have to develop a strategy to bring to pass the vision you have, sometimes requiring Mark I and II attempts.

Skill with the likes of Milliput, plasticard, brass rod and aluminium tube all come in handy as well as an available range of glues (liquid poly, super-glue, rapid epoxy resin and PVA wood-glue). A mini-disc/drill, steel ruler, protractor, set-square, calculator, the interest to draw-up plans for scale parts are all useful and in my case the ever ready close-up camera to record the passing stages; keeping all handwritten notes, helps for writing-up later and for recalling the traumas and the challenge.

A real love for the car is necessary, for like an 1/8 scale Pocher, you're going to be with the car a long time and you really need to like it. The subject matter needs to have sympathy and general interest from others, especially fellow SFC members. Finally, detailed plans, scale/cut-away drawings, your own measurements or photos or example of the car in another scale are vital in order to bring about the transformation into reality of your vision! The final result is an Art Form and it is important to remember it is one's own interpretation of the original and is in the spirit of the thing, rather than strictly perfect for the rivet counter.

The RE30B has so far seemed to pass largely unnoticed at shows, for it doesn't have the charisma of the Ferrari 312B3 which positively leapt out from the exhibition table. The Ferrari was driven by Clay Regazzoni - wow, what a trier! and irresistible with that bandit-smile (70's/80's podium shots). On the other hand, the RE30B was another product of the 'Reggie' whose faceless anonymity and lack of cohesive talent, never quite got it together - in 1982 the RE30B took over from the late season success of the 1981 RE30 and scored two season-opener wins in '82, but it was the '83 RE40 which nearly won the championship but for Renault's poor team coordination. The driving talent was there in Alain Prost, my hero after Emerson Fittipaldi. The Professor, was a bit too good perhaps and later regular success was a little irritating to some: and so, the RE30B needs to be given a helping hand, a push forward as it were, a different form of presentation perhaps.



For the RE30B in 1/12 scale, I had an ideal start base in the 1/12 scale Tamiya Renault RE20 (1980). A rather tired example of which was carefully broken up, with the 1/20 scale Tamiya RE30B of 1982 nearby to act as the pattern for the conversion.

The structural heart of the car, the monocoque was tackled first, requiring lengthening and lowering changes to the fuel tank, using the cutting disc and plasticard. The inside of the tub was more simple and benefited from plasticard and crafting of the smaller seat for the later car. The gearchange was a modified 1/12 version. The new dashboard was completely scratchbuilt from the 1/20 example as was the forward aspect of the monocoque over the drivers legs. The steering wheel shape was slightly modified, but using aluminium tube, a new steering column and rack and pinion system was constructed, linking to the original track rods. The monocoque was extended ahead of the footbox and then the considerable changes applied to the front suspension mountings and arrangement. The forward leg of the lower wishbone was ahead of the axle line instead of being beneath it in the earlier car. The mounting points were relocated in the new positions in order to appear realistic and confer structural rigidity to the model. Fortunately, the wider rear wishbones of the RE20 suited perfectly as forward versions in the newer car and vice versa as it happened. The only parts which remained unaltered were the bulkheads (which served as upper rocker mounting points) and the uprights. The upper rocker arms were slightly altered and the brake ducts were shortened. The coil spring/damper units were modernised in appearance according to the 1/20 kit, but fitted in the same way. Antiroll bar form and position required some modification of original 1/12 parts. The wheels and tyres were retained, plumbing the brakes to the new master cylinders.

The detail area of the fuel tank-top was similar, though the position of the hatch required repositioning and turning round. The key structure here was the roll-over bar which was fashioned from 3mm brass rod and cemented (epoxy resin) very firmly at the right angle and height to the top of the forward aspect of the tank-top. This was later complemented by two 2mm brass rod rearward bracing bars whose locating points were at the rear corners of the new longer lower fuel tank.

Attention to the engine was on several fronts. Firstly, the height of the 1982 engine was reduced on that of the earlier car. This necessitated respectful use of the Minidisc at about sump level and reduction in height of the plenum chamber feeds to each carburettor. Additionally, the exhausts and turbochargers were now to be directed forwards and a new intercooler arrangement was called for. The exhausts were easily reversed needing some changes to the entry/exit routes of the turbos themselves. Next, the updated intercoolers (plasticard and curtain net to simulate radiator core) were made and positioned behind the original oil/water radiators. The new Milliput-sculpted intercooler air intakes were fitted laterally and plumbed by means of 6mm plastic tube into the heart of the turbo on each side, making use of the original exit pipes into the new intercooler. From here, cooled air was transmitted via newly constructed collecting panels alongside



the lower monocoque sides up into the original plenum chambers. Producing the upward directed blow-off and exhaust tail pipes was a challenge. Those from the RE20 kit were used after a process of gentle warming and reshaping, followed by filling with Milliput and applying the Minidisc and drill to fine tune a correct rim angle and thickness. Spraying with Halfords Aluminium did the trick for a final finish after some time spent sanding and filling. The fire extinguisher was relocated behind the left cam cover.

With regard to the rear suspension in the '82 car, the concentric spring/damper units were relocated just in front of the half shafts alongside the gearbox having scratchbuilt a new subframe under the gearbox on which these units were supported. In the 1980 RE20, these spring/dampers were housed within cylindrical castings of the oil tank which acted as a spacer. This arrangement brings to mind the neat packaging of the coil springs in the Ferrari 312T4 of the previous year. The RE30B's rear rockers were reprofiled considerably to accommodate quite an updated suspension geometry. This required breaking-down and rebuilding, with altered top links. Integral to the RE30B was the rear crossbeam over the gearbox made up from dozens of plasticard pieces to simulate the original fabricated item; I was careful to scale it up exactly in terms of dimensions and appearance using the 1/20 scale kit. The lower wishbones were narrower and those used on the front suspension of the 1980 car proved to be close substitutes, needing a little modification only. New rear mounting points were fashioned on the gearbox casing. The rear uprights were retained with modified brake ducts to allow them to fit through the altered suspension arrangement; aluminium tube was then used to replace the rather poor plastic half-shafts.

Speaking of gearboxes, the RE30B rejoiced in its own Renault gearbox, but I felt this couldn't be faithfully reproduced without spoiling the realism of the rear of the car. As a compromise, the Hewland 'box from the RE20 was pressed into service once again and painted semi-gloss black as Mike's works of art usually were. The gearbox casting was modified for change of position of gearlinkage entry point and also to accept an altered rear wing support for the later car. The oil catch-tank in the RE30B was situated on the spacer between the gearbox and engine, that rather useful, otherwise redundant area to site an oil tank perhaps. It could also be used to alter the wheel base and perhaps to change the centre of pressure position, in an 80's 'wing' car. A plasticard replica of the catch-tank was made for this car and the height of the oil tank reduced. To complete the rearmost aspect of the car, the gearbox oil cooler was re-sited on top of the gearbox rather than alongside. This was plumbed in the usual fashion.

The rear wing of the 1980 car was characteristic and that in the '82 car completely different in having a central support. These new parts were made following scaled-up drawings taken from the 1/20 kit; this involved use of plasticard and Milliput with a brass pin to secure the vertical support to the back of the gearbox. Profiling a large rear wing in a typical aerodynamic way required layers of bonded plasticard, with Milliput and filler to smooth over the graduated changes on top and on the under surface. The bad



weather light was mounted vertically rather than horizontally to finish the appearance of the vertical wing support. To complete a rolling chassis, the wheels had repainted centers, dull aluminium rather than orange and then fitted.

The bodywork... what a task; huge, challenging and sometimes a worry. The undertray was the first item to consider and this needed some adjustment to the rear upward sweeping areas either side of the gearbox. Extensions and reprofiling according to the 1/20 car were straightforward. The venturi aspect of the 1980 car was retained through to 1982, after which the flat bottom rule came in. In 1981, along with the sliding skirt ban, it was decided to enforce a proposal that no part of the bodywork should be less than 6cm above the ground. It was in circumventing this, that the infamous hydropneumatic suspension systems were developed and subsequently dropped in 1982. This U-turn followed the scrapping of the ride height checks for '82 and the agreement to implement the flat bottom rule the next year. Fixed 'skirts' of 6cm depth were allowed for that interim year in which Prost brought the RE30B home in fourth place in the Championship. Inwardly inclined 'skirts' were therefore cut from plasticard and fixed to the lower side pods. The sides of the undertray were rigid for support of the side pods and needed shortening at the front and reducing in height all along. This was cleaned up and resprayed and then screwed back into position under the car. This enabled the accurate alignment of body work panels in situ. The upper body was essentially scratchbuilt, no part of the original, serving any visually useful part. The body was made in three parts, the rear body deck, the forward and cockpit part, with a nosecone a final addition. The basic shape within the dimensional restraints was provided by plasticard upon which the contoured body surface was borne of months of sanding and filling Milliput. The actual dimensions were taken strictly from the 1/20 kit with licence as to precise final profile by judgment of eye and 'fit'. Viewed from the side, the side pod panels are split horizontally into a top and lower level. The yellow top level, is attached to the upper body panels and was split into forward and rear halves for exact register. The white lower side pod panel was scaled-up and cut from 0.75mm plasticard and affixed to the undertray so that the upper body parts could be matched perfectly. It was important to me that the bodywork sections would fit together properly and could all be unscrewed for removal. There were two areas of particular frustration, the body work under the front suspension and the side pod entry ducts. Both of these had to be made by trial and error respecting the exact shape requirements dictated by the 1/20 car. For these there's nothing but hard work and application with the Milliput and plasticard with final sanding of a standard filler before the usual primer and Halfords top coats of yellow, white and black. The nosecone was an important part to look right and fit perfectly for a smooth contour up onto the cockpit area. For this, the best way I found, was to attach the two and sand and fill as one, with the end separation of the two parts aided by having originally included a thin layer of paper between them. A brass rod attached to the front surface of the cockpit section fitted a hole in the cut surface of the nosecone, enabling the two to fit onto each other and at the same time be detachable and reveal the mastercylinder area of the footbox.

The front wing was made from profiled plasticard with added Gurney flap. This was cut in such a way as to locate rigidly into the front of the monocoque as in the original car. As with all these masterpieces and precious friends the final paint work is all important. Thanks to Richard Hower, my learning curve for this has improved immeasurably in the past two years and with Richard's generous help with respect to reproducing decals, the final appearance has been very satisfying. Finishing touches included windscreen (0.25mm acetate), wing mirrors (Milliput and brass rod), headrest and extinguisher hole and pull ring. The end result should be able to grace Alain Prost's sideboard, dream on.

PROPRIETARY  
MRO F1 ENGINEERING