

Brabham's KISS

Building the SMTS Brabham BT-19

by Wayne E. Moyer

As much as I've always admired Dan Gurney and his beautiful AAR Eagle Formula One cars, I have to rate Jack Brabham and his BT F1 cars ahead of Dan. Not because of his personality or driving skills (lots of the latter but not much of the former) but because of his application of the KISS (Keep It Simple, Stupid) principle to Formula One.

The switch from 1.5 to 3-litre engines in 1966 required simultaneous development of new engines and chassis to handle the increased power. Gurney, BRM, Honda, and McLaren struggled to follow Colin Chapman's example and build new monocoque chassis and/or design and build new engines (BRM's H-16, also used by Lotus, Gurney's Eagle-Westlake V-12, McLaren's Serenissima V-8, Honda's V-12 and Cooper's overweight Maserati) while Ferrari, who had both an engine and a chassis, were distracted by Ford's endurance racing challenge. But Brabham and designer Ron Tauranac (the "T" in BT) stuck with the space-frame chassis they understood and selected the Repco V-8, a relatively simple single overhead cam conversion of the Buick aluminium-block V-8. The combination proved to be very effective, with Brabham taking the pole in five races and winning four Grands Prix with the BT-19 before switching to the mildly updated BT-20 for the last two races of the season. His first win came at the French GP, where he became the first driver to win a Grand Prix in a car of his own manufacture. By the end of the year he had scored four victories (all with the BT-19) and became the first man to win a World Championship in his own car. The Brabham team had earned the Formula One Manufacturer's Championship as well. KISS works!

Brabham's 1966 Championship season has been represented in my F1 Champions collection by the SMTS BT-20 kit I built many years ago, so when I saw the SMTS BT-19 (RL101A) in FSW I immediately emailed my order. Within a couple of weeks the FBB was in my mailbox. Inside was a typical SMTS kit with 52 clean white-metal castings, 8 machined intake trumpets, 4 rubber

tyres, photo-etched steering wheel spokes, and a crisp vac-formed windscreen. Decals are provided for the French and British GP winners and I chose the former because of its historical significance. The double-sided instruction sheet has excellent 4-view drawings, complete painting information, and a large exploded-view drawing. The latter turned out to leave a bit to be desired as far as showing exactly where some parts should fit, so additional references and test fitting are necessary there.



Mould lines on the lower body are small and easy to remove without damaging any detail.

Casting quality was quite good, with only small mould lines on the lower sides of the body shell and baseplate. Mould lines on the very thin suspension arms and coolant pipes are almost invisible, but they do require some careful cleanup. I did have to cut away some thin flash between the holes in the wheels. Total



Flash between some of the wheel spokes was easily removed with a sharp knife blade.

preparation time was about half an hour and the first primer coat showed only a couple of spots that needed to be sanded to bare metal and spot-primed - no filler of any kind was needed. The recommended paint isn't available over here, of course, but I found that Model Car World



My finished model matches all the references very well and has enough detail to be very realistic, but still was an easy build.

2080 Dark green was a good match for the colour photos I found. Tamiya TS-9 "British Green" would also work but looks just a shade too dark - Brabham's BRG was lighter than the colour used by Lotus. I tried something different this time - instead of burnishing the thin suspension arms (which usually results in my bending them) I used Alclad II "Polished Aluminium" (ALC105) on them. It wound up taking more time (cleanup, primer, sanding, gloss black, and Alclad). It looks good, but I don't think I'd do it again.



Parts painted with Alclad look good here, but the paint didn't stand up to handling during assembly. A coat of Future floor wax might have solved that.

Decals are simple, match race photos, and were easy to apply - they also were impervious to my clear lacquer top coat. After painting the bits and pieces per the instructions I began assembling the model, following the directions to do so in numerical order. It was immediately obvious that I couldn't add the springs to the "damper units" part after it had been installed, so don't follow that advice blindly. It also wasn't immediately obvious from the exploded view just



The completed front suspension should look like this. It's easy to pose the wheels in a turned position.

how the anti-roll bar (Part 8) fits - I hope the photos here do a better job of illustrating that. The final "gotcha" was the upper chassis frame, Part 9. Since everything before that had been glued to the baseplate/interior I glued that there, only to realize (frequent test fits are ALWAYS a good idea) that

prevented the body from fitting onto the baseplate. Glue Part 9 inside the body shell, above the semi-cylindrical protrusion. Once I got past these two parts, everything else was more obvious and, once I'd opened up some of the mounting holes with a drill bit and pin vise, they all fit very well. I was especially please to see that all four wheels sat squarely on the "ground" with no tweaking required - although the suspension pieces are thin, once everything is in place, the suspension is quite sturdy.



The upper radius rod completes a very busy rear suspension. Note the pipes go above the suspension arms - that's not obvious from the exploded view.

As you can see, there's a lot of detail in the engine bay with Weber carburetors and several engine-mounted accessories. Thirty years ago I'd have wired and plumbed the Repco V-8 but I'll leave that to you younger - or more ambitious - types. The only addition I made was bracing struts for the exhaust megaphones - they were included in the BT-20 kit so I don't know why SMTS didn't supply them with this one.

My finished model matches the photos in Nye's "History of the Grand Prix car 1966-1985" very well and matches the 1/43 scale drawings in the February 1967 "Model Cars" so well that I suspect they might have been a primary reference for the kit. Dimensions are right on scale, too. It may be "old-fashioned" but the 3-dimensional white-metal suspension arms are MUCH more realistic than the flat photo-etched pieces used in far too many current kits.

To sum it up, the BT-19 kit has excellent castings that required minimal cleanup, and parts fit well with no modifications required. Instructions could have been better in some areas - a couple of close up views or even some "this goes here" arrows would have helped. But it took less than 20 hours to build and the result is a very accurate model with lots of detail right out of the box. It's a great addition to my F1 collection, too.



Kit components are very well cast, but the exploded view drawing could be more helpful.