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Radical!

Top Flite Bell P-39 Airacobra on test

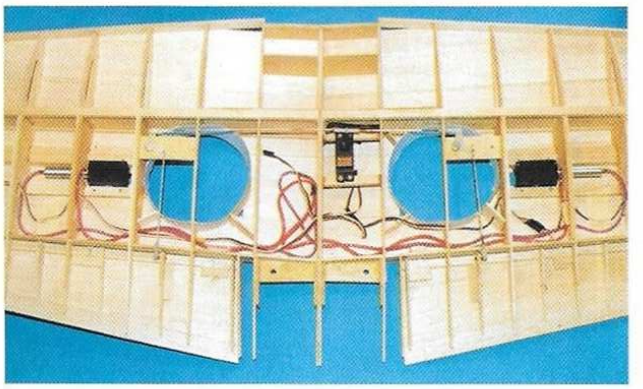
Chuck Yeager loved it, others damned it as a death-trap. The Bell P-39 was a very radical aircraft at the time, as it was the first tricycle gear fighter featuring double car-doors for entry and a 37 mm cannon firing straight through the spinner. The gun position meant the Allison engine was mounted behind the pilot and gave the Cobra its distinctive shape. Although the lack of a supercharger meant that air-to-air combat suffered, the best role for the P-39 was in ground support. The Russians getting particularly good results against axis armour and, in the right hands, it was certainly no sitting duck to enemy fighters.

Always on the lookout for something different to build, I was delighted when the editor suggested the Cobra. Even better was the prospect of it being a top-Flite kit, having heard about this manufacturer, and the great reports of other kits in the range, I duly tidied up the workshop in anticipation for the man with the parcel truck to arrive. The kit box features a stunning picture of a P-39 in flying pose, a real eye-catcher in any model shop, and certainly the kind of image that makes you want to start building. The contents can only be described as first class components from ABS mouldings, excellent die-cut ply sheets, decals, and a superb crystal-clear canopy wrapped up in its own box in the corner. All the reports I'd heard about top-Flite were correct. Two full-size plans and an instruction book, 45 pages, with a photo to show every stage of building, through to flying. First impressions? Sheer quality.

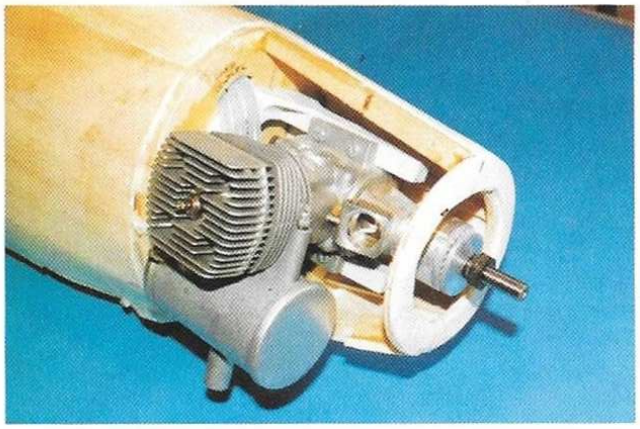
The kit contents showing the quantity of wood supplied and all the mouldings.

Construction

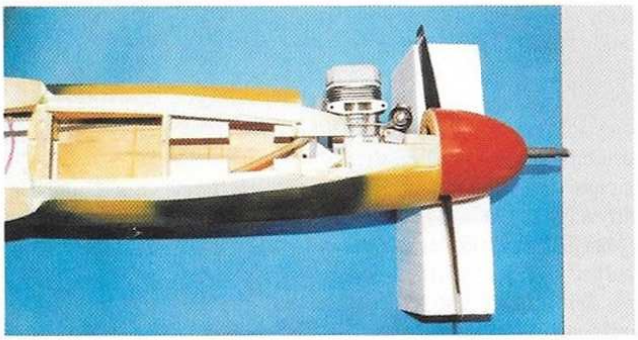
The first items on the list are the tail surfaces, these are of built up construction and 1/16" sheet for stabilizer and fin, with the rudder and elevators being left with an open finish, so



The wing centre section showing the retract plumbing and flap linkage.



ST.90 with dustbin silencer to keep the shape of the nose as smooth as possible.

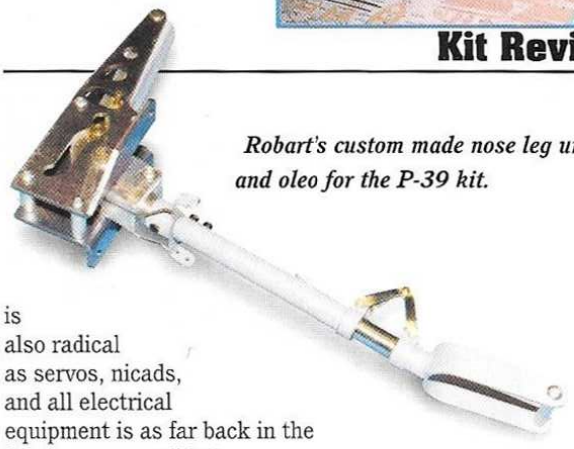


The ply nose leg mounting plate ready for the unit.

that the riblets show through the covering. The instructions are so good that anyone with some modelling experience would be able to produce the finished item. You end up with a light, strong tail end, which is added to the fuselage at an early stage.

Fuselage construction is from two half-shells, with the top half built first. Once the main side stringers are pinned in place the top formers are added. Accuracy at this point is essential for a straight model, but by carefully following the instructions and the precise fitting of the die-cut parts, rapid progress was made. I found myself gluing the stabiliser onto the die-cut seat at the rear much quicker than expected. Tailplane alignment is always a worrying job for many modellers but by using a die cut seat, Great Planes have made the job of lining up the tail very straightforward and accurate.

Once the top half sheeting is on the fuselage, it is then reversed and all other half formers are added. The fuel tank is also fitted at this stage, on a removable ply plate in case of problems at a later date, which is handy when you need to do any maintenance. I decided on a Super Tigre 90 two stroke for power, and all installations, including the adjustable mount supplied with the kit were bolted in place. Throttle, rudder, and elevator servos are installed before the bottom sheeting, and the piano wire push-rods within snake outers work a treat and no slop was present when tested. The P-39 in model form is also radical as servos, nicads, and all electrical equipment is as far back in the fuselage as possible!!



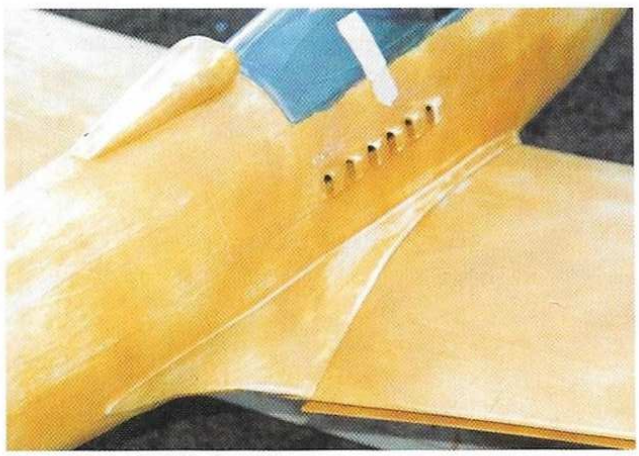
Robart's custom made nose leg unit and oleo for the P-39 kit.

A 105° nose-leg unit was supplied by Robart for the review model and this item is a beautiful piece of model engineering. This has been specially designed for this model and really is worth the extra cost as it makes the front rake of the nose leg perfectly scale. The working oleo helps on those less than perfect landings too! The only other changes I made to the construction was to install 6 mm captive bolts for the wing bolts, instead of tapping the wooded block as per instructions.

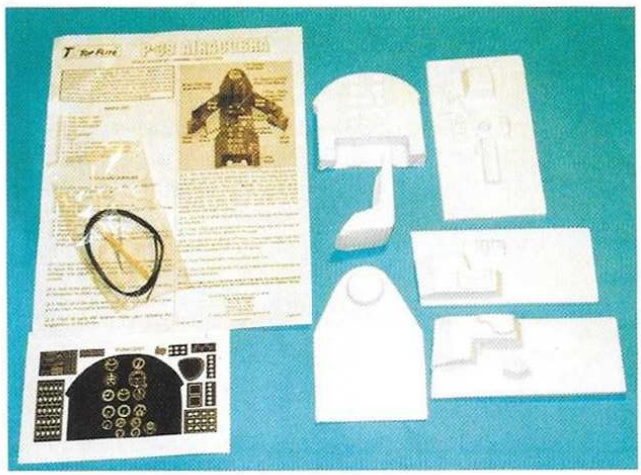
Wings

These are built upside down over the plans. A full depth 1/8" balsa spar web is placed in position with all the ribs being slotted into position. Basswood spars are glued either side of the web, resulting in a strong, lightweight structure. A trailing edge web is also glued in place, which has an embossed line, which keeps the ribs at the correct height from the board. You really couldn't go wrong in any way. Again, the combination of superbly fitting parts, and an instruction manual with a photo and details on every piece of wood you glue, make it practically impossible to get into problems.

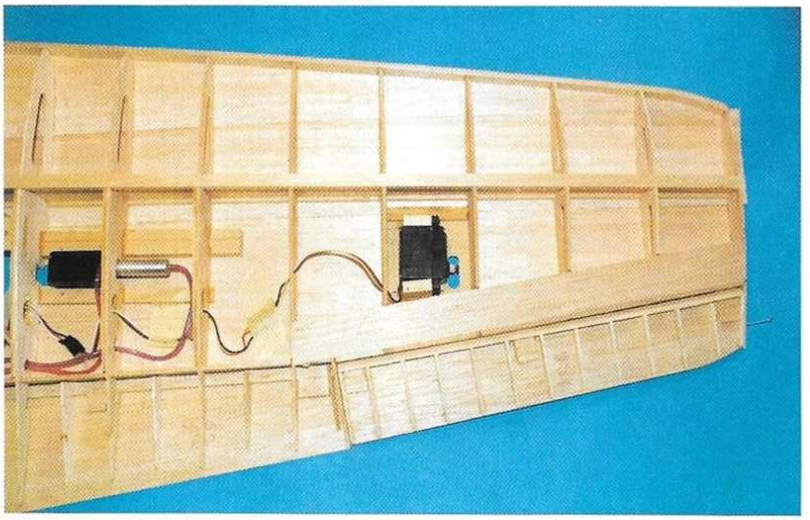
Retract mounting on the main wings was straightforward. The Robart units being a perfect fit, onto the hardwood rails which have rib-doublers to spread the landing loads. The 1/16" sheeting was added to the top of the wings, then I started to tidy-up the wheel-wells and added scrap balsa supports. For the walls of the wheel-wells, I used thick, white card, which is easy and quick, using good, sharp scissors and cyano glue. Next, flaps and ailerons were built and test fitted, and all lined up with no problem. Before the bottom sheet was added, I took time to make sure the aileron servos were secure and that all air-line tubing was kink-free. There is quite a lot of tubing running around the wheel-wells, so make sure it's taped down in place. Wing mounting is also easy and follows the normal dowel and bolt routine. The ABS wing



The supplied ABS wing fillets proved easy to fit and really add to the model.

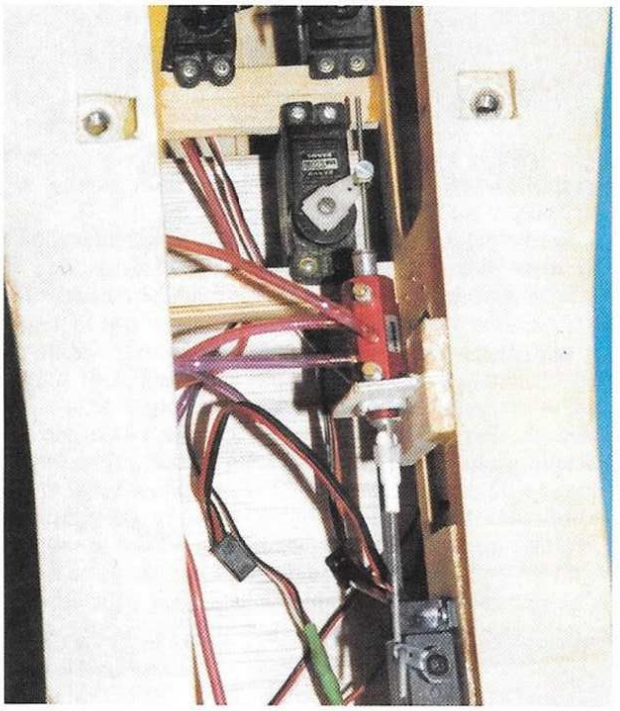


The Top Flite cockpit kit parts and instructions.



Starboard outer panel of the wing showing the aileron servo position and aileron structure. The tip has yet to be added.

The airframe complete ready for painting.



Fuselage radio installation with the Robart retract valve in the centre of the shot.

fillets are cut out and fit great. I didn't think this was going to be as easy as it actually was when I first saw the parts and, as many of us know, wing fillets can be a great source of frustration. I just held them in place and ran thin cyano along the top edge. Job done!

Canopy, cowl and things

A vacuum formed cockpit kit is available for the P-39. Great Planes have a selection of scale kits for many of their planes such as dummy engines, cockpit kits and scale static props and spinners. I'd seen these in other reviews, and now I had the chance to 'take a shortcut' for some quick detail. This saved me a huge amount of time because, like many of us, I just have to have some reasonable cockpit detail and it was nice just to glue some pre-moulded parts together instead of rummaging through the spares box for bits of plastic and wire. When assembled, painted, and suitably worn, it makes a pretty convincing cockpit, and when placed in the fuselage for a trial fit, the P-39 started to change from a sporty looking low winger, to the Warbird she was going to be. With the cockpit still in the fuselage for motivation I cut out the wing-cannons and air scoop, two cannons were made from heavyweight snake and glued into the pods. The plastic snake being more 'ding-resistant' than lengths of brass tube, especially as they stick out from the leading edge quite a bit.

The canopy was trimmed, a little at a time, until a good fit was established and at this point the exhaust stacks were drilled out and tidied up with a rat-tail file. The half-cowl is a simple and practical method of finishing the nose, although any engine you care to use will show a little. A dumpy silencer from Just Engines was supplied to suit the ST.90, and this helped to keep the nose as clean as possible.

With the exception of the canopy, all mouldings were cyanoed into position, any minor flaws being filled with lightweight filler. The whole model was then checked for any cracks or small holes to be filled and sanded, prior to the finishing stage.

Finishing

Throughout the building process, I intended to finish the P-39 as a Russian black Sea Fleet aircraft, or possibly as one of the few British examples. Then a fellow club member lent me a scale magazine for plastic kits, which had the scheme I finally opted for. This was actually quite close to the box cover, with a little extra lettering. The tan and green camouflage would also help with orientation on the test flight! It would be a P-39 of the 350th fighter group based in North Africa for tank-busting missions, which would have been escorted by P-38 Lightnings.

This fired my imagination to get on with the final process. After two coats of sanding sealer, the tissue and dope came next, then more dope, and more sanding! Finally a smooth model appeared through the dust and was ready for panel lines. I added these simply by using a sharp pencil and a straight edge.

I decided to paint the roundels and stars, but used the yellow serial numbers supplied for the fin. If you use the decals as supplied, they are good quality items just like the rest of the kit and I've put mine 'into stock' for another project. Incidentally for reference material I used the Warbird Tech Vol. 17 P-39/P-63 published by Airlife Publishing, Shrewsbury, SY3 9EB, England.

After the enamel was sprayed on, the cannon hatches and exhaust stains were added along with silver dry-brushed for a

The cockpit kit installed.

Ready to go in its desert scheme.

Author Cliff McIlwee fuels up for the test flight.

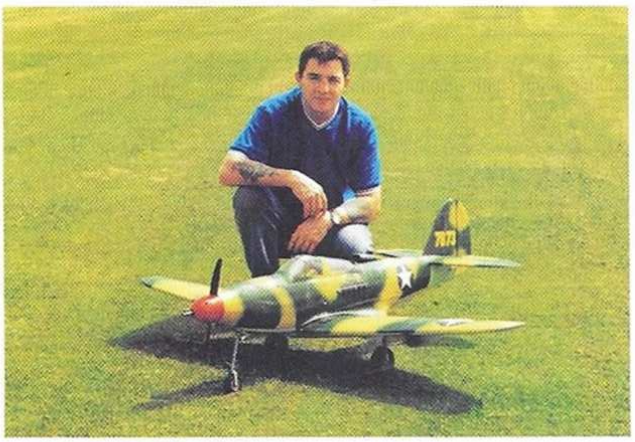
worn look. Because I was modelling an aircraft based in North Africa, I lightly sanded the whole model with 1000 grade wet and dry, giving the impression of faded paintwork. An additional spinner was purchased and a dummy 37 mm cannon epoxied into place, then it was only a matter of swapping the cones before flying. This small detail only adds to the character of the P-39.

Airborne!

Strangely, the day of the test flight arrived with perfect conditions! All possible checks were made in the workshop before leaving for the flying field. After a couple of tanks of fuel to loosen up the new Super Tigre, the P-39 was lined up into wind. Opening the throttle slowly, then fully, she picked up speed, the steerable nose-leg working a treat. After a long (100 yards) run, and a little up elevator she climbed away. A trimming out circuit was made with only a tiny amount of trim required. Very quickly, I found myself at ease and any nerves went out the window. In short, the P-39 flies like a dream, and it's one of the smoothest planes I've ever flown. The control throws given in the instructions are perfect, so don't be tempted to add any more movement 'just in case', because she doesn't need it. Balance point seemed to be spot on also.

In the air the P-39 is a lovely sight, with low passes being the best as you can see the air-scoop and under-wing cannons to good effect. With plenty of photos in the can I concentrated on the landing. Gear down was selected and flaps were lowered. I was surprised how slow the '39' would fly as it came in to land although I kept plenty of speed in hand. Nosing over problems are dispensed with on this model which completely changes your attitude to landings compared to most other Warbirds. However, on landing, the front undercarriage mount broke off. The nose leg is quite long, and gives a fair amount of 'leverage', so I discussed this with fellow club mates and decided to install some aluminium angle below the mount, with an additional hardwood rail, with a rubber bearing directly below the retract rear frame. This prevented any further problems and the frustration of gluing in the mounting rails after every hard landing. I have to say that if you made good landings every time and fly off a smooth tarmac runway, I doubt if you will suffer the same failure as I did. However, I fly, like most of us, from a mown grass strip and I felt it needed 'beefing up'. This is the only thing I could comment negatively about the kit.

Cliff with the finished model.



Conclusion

The Great Planes Top-Flite P-39 will provide the builder with a superb sport-scale model which is definitely a head turner at the flying-field. The kit is both a joy to build and sheer pleasure to fly. Credit has to go to Great Planes for this unusual warbird and to Jim Sandquist, for the way the instruction manual is presented - it's superb. I would not hesitate to recommend the P-39 to anybody wanting a different type of Warbird. I was told by the editor to expect a great kit, and was not disappointed. Personally, this was my first Top-Flite model, and most certainly won't be the last.

PRODUCT DOSSIER:

Model specifications

Name:	*Bell P-39 Airacobra*
Manufacturer:	*Top-Flite*
Scale:	*1:7*
Wingspan:	*63"*
Weight	*10 lbs*
Engine:	*60-90 two stroke. 70-90 four stroke*
Review engine:	*ST 90 13 x 6 APC propeller*
Retracts:	*Robart custom designed nose/ Robart standard 90° main units*
Covering:	*Tissue and dope/Enamel paint sprayed on.*
Price	*£179.99*

Sources

Top Flite kits are available from your Ripmax dealer in the UK or Great Planes dealer in the USA.