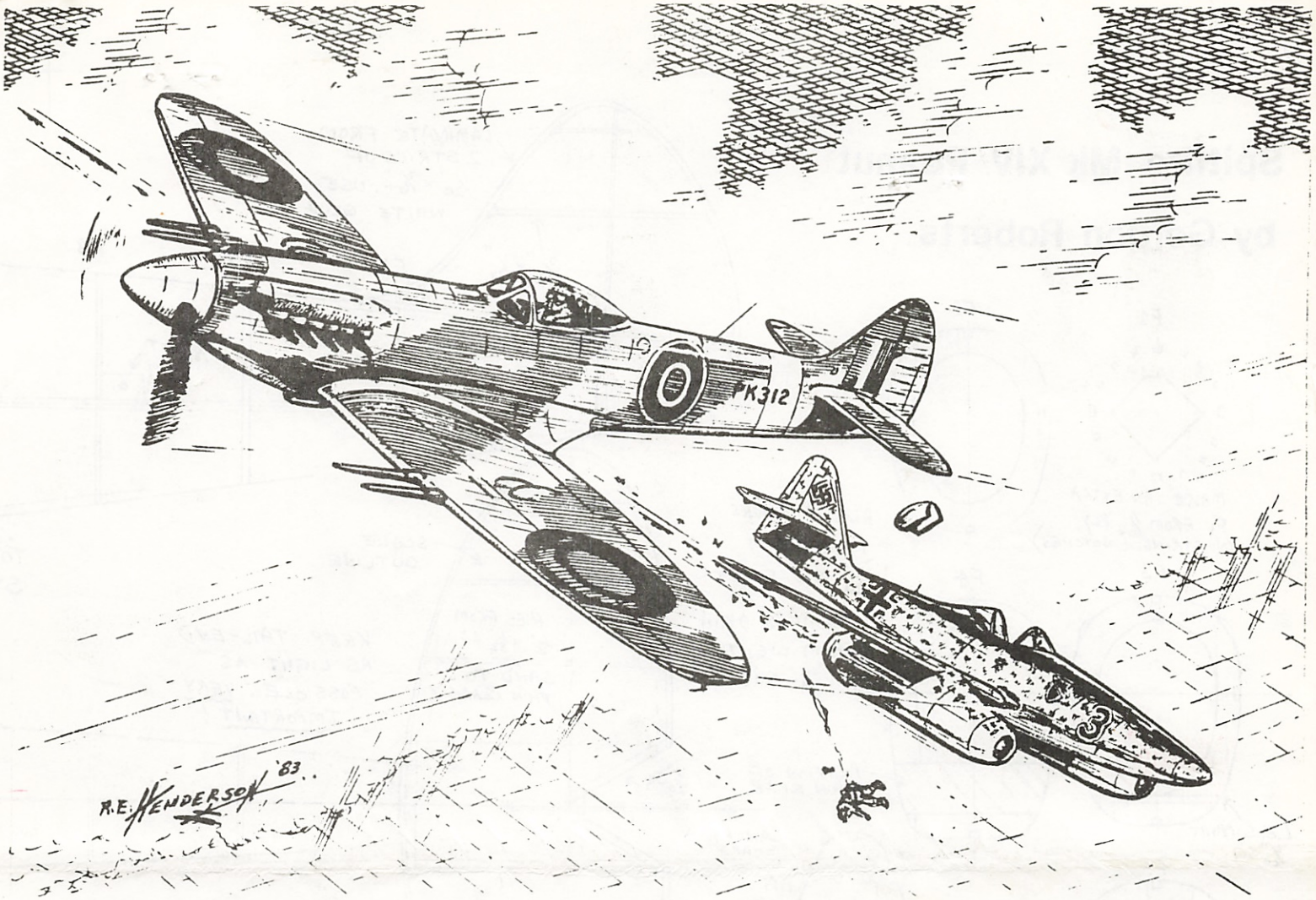
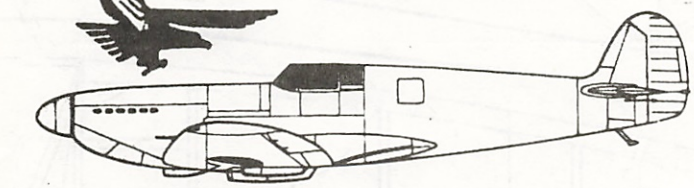
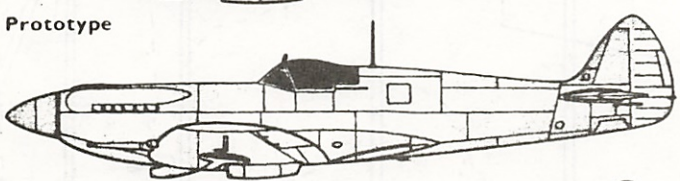


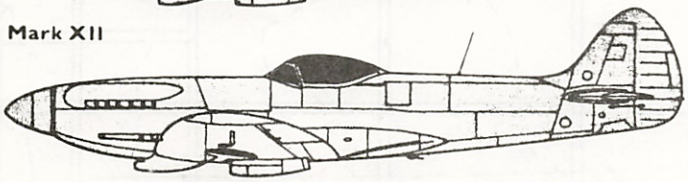
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Prototype



Mark XII

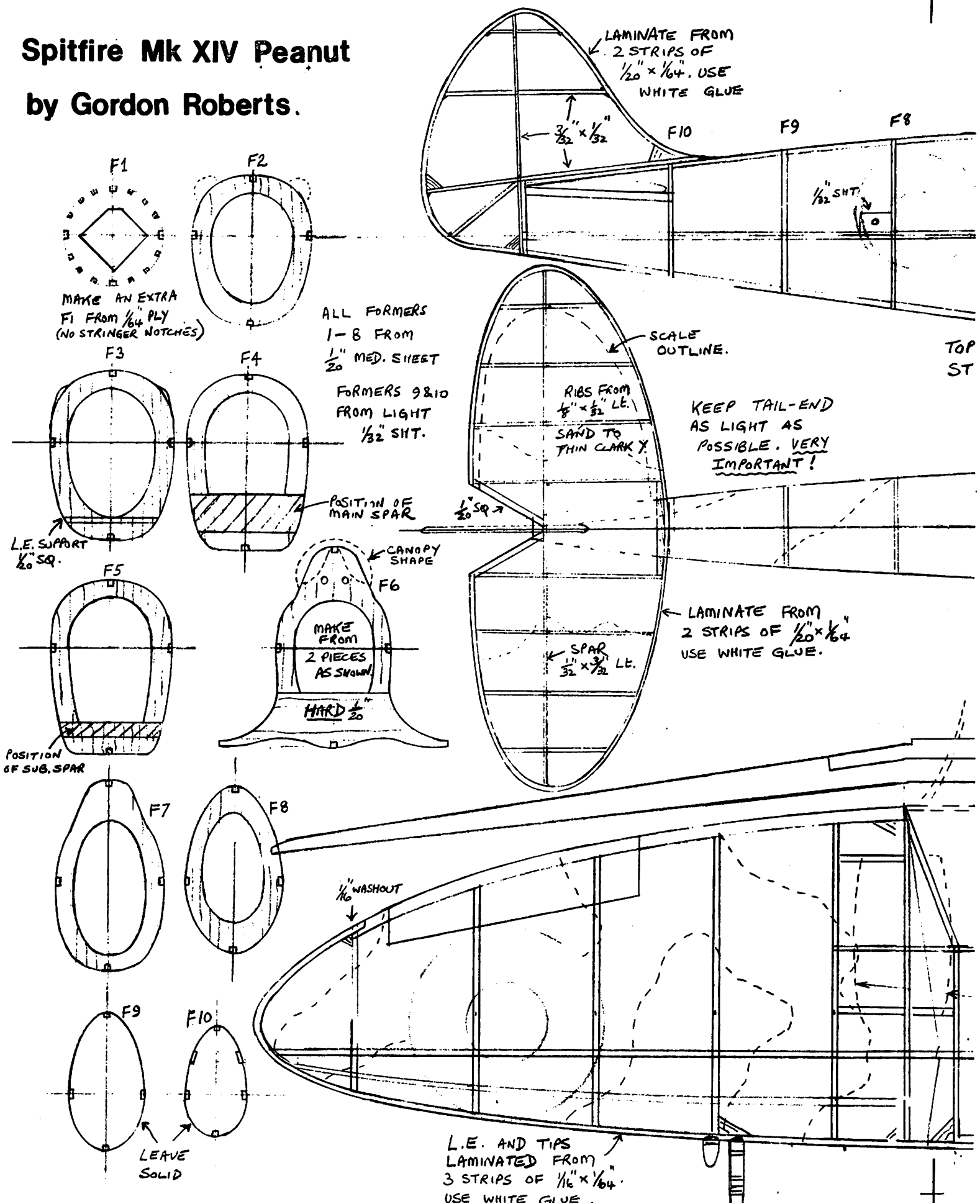


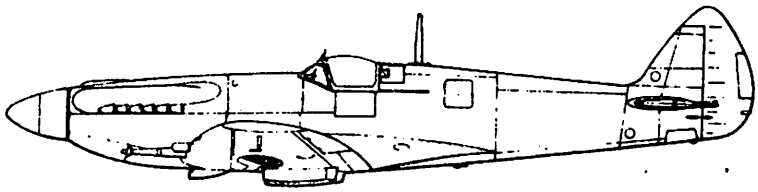
Mark XIVe

CROSSWINDS 73

Spitfire Mk XIV Peanut

by Gordon Roberts.





CROSSWINDS
THE JOURNAL OF THE CLEVELAND FREE FLIGHT SOCIETY

No. 73

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Bratenahl, Ohio 44108
[216] 541-1407

EDITORIAL COMMENT

It has been over two years since I wrote my last editorial. If you remember, that issue of Crosswinds featured racing Mustangs. When I got around to building the 3/4" clipped-wing version, I found to my horror that somehow I had included two F-2 formers, one of these havings slipped in accidentally instead of F-4. To make amends I am including the long-lost F-4 in this issue. The Peanut plans seem to be O.K. Let me tell you that the rest of the model went together very easily, so I don't think I made any more goof-ups. It is light, strong, looks good in its B & W Zebra scheme and it has proved to be a good flier in initial trimming.

I promised [threatened?] in that issue that when my turn came round again I was going to feature the Mark 14 Spitfire, a subject I have wanted to "do" for many years. This is the time!

We FAC-ers have all learned a lot during the last few years about making "difficult" models fly----light rear-ends, forward motor peg positions, larger props etc., so lets see what we can make of the Spit. The Mark 14 is one of the easier versions to model. The use of the Griffon engine led to a longer nose, which helps a lot with the C.G. problem, while a good slice of downthrust is built right in on the original aircraft.

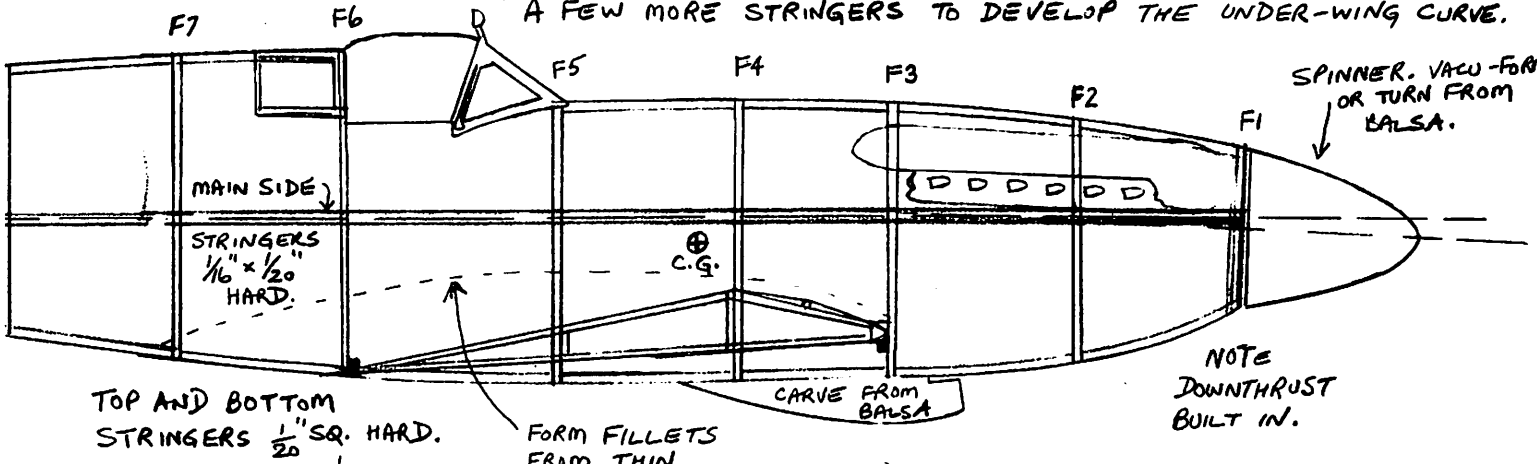
Why my predilection with Spitfires? Well, I consider it to be the most beautiful fighter ever, it was extremely potent and we in the free world owe it and its designer a hell of a debt! Incidentally, Reginald Mitchell, the designer, was a native of Stoke-on-Trent, my own home town. More surprising is the fact that we went to the same High School [separated by many years, of course]. What is most unusual, though, is that two of my teachers [well past retiring age but still working because of the war] actually taught Mitchell. So you can see that I have a proprietary interest in Mitchell and his designs. Unfortunately, a lot of his stuff is not suitable for flying models, but, his Supermarine Sparrow is a delightful parasol ultralight from 1926. Yes, I have built a model of this, too.

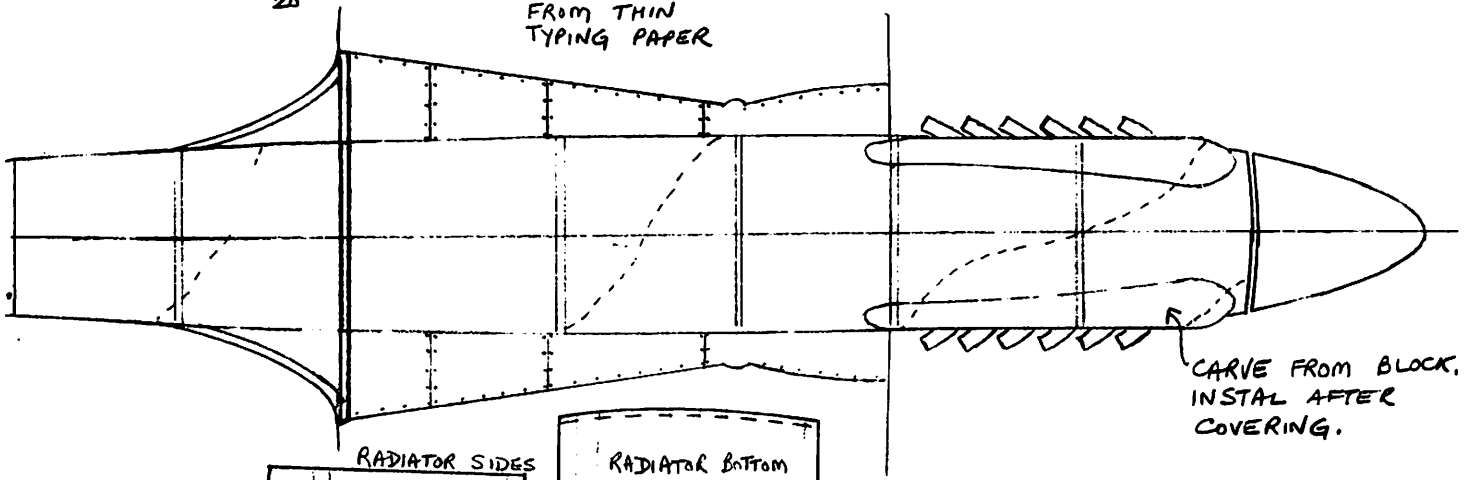
This brings us back to the Spitfire, his ultimate triumph, the last thing he did before his early death in 1937 due to cancer.

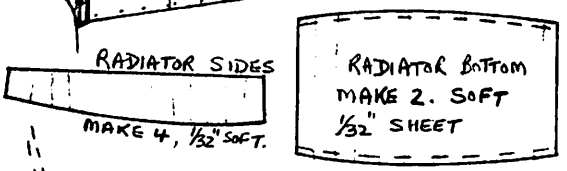
Cover art by artist Ron Henderson shows Spitfire Mk. XIV E with Me 262.

4

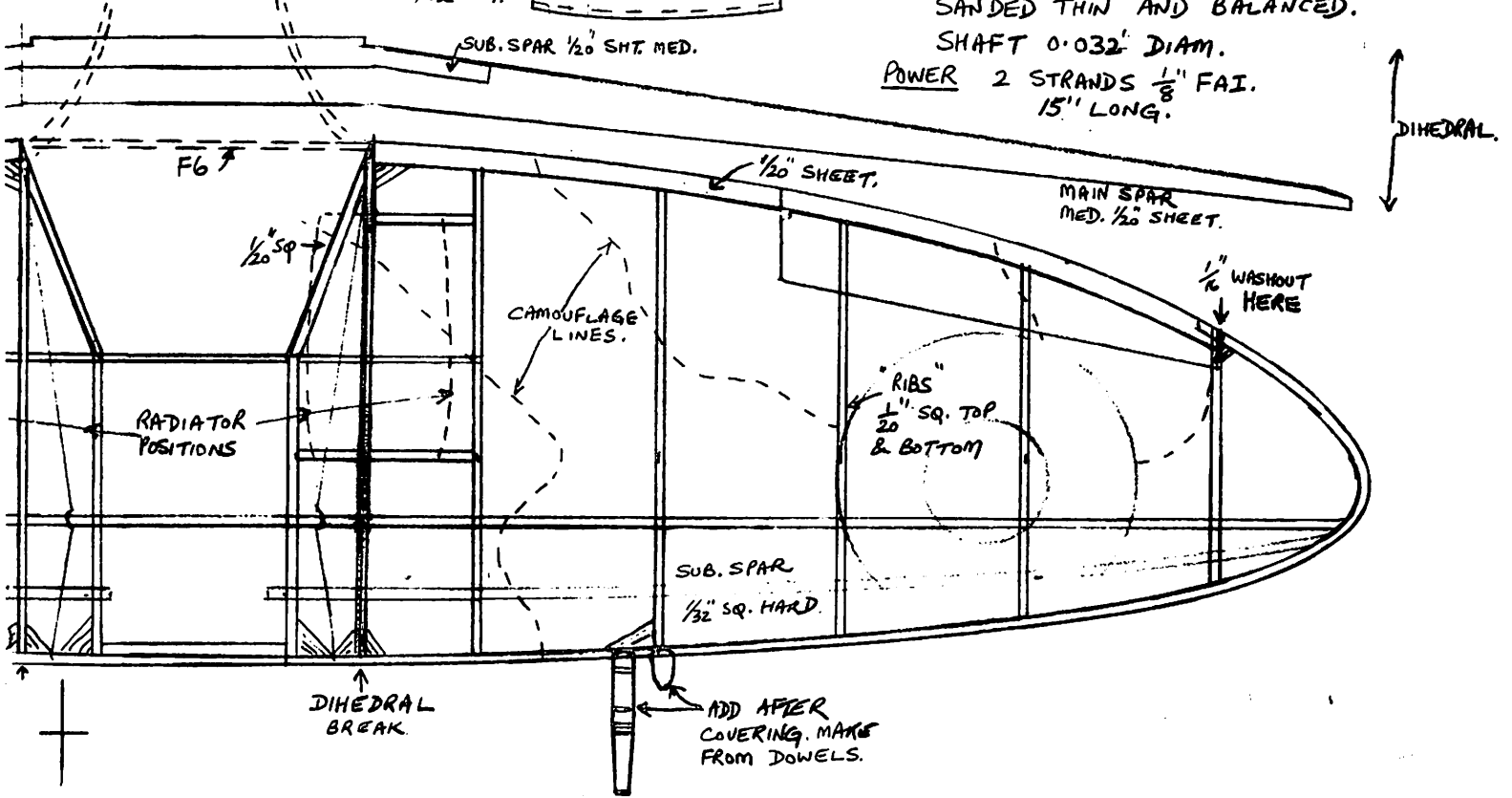
FUSELAGE :- JIG-BUILT UPSIDE DOWN. INSTALL PRE-BUILT WINGS, THEN PUT IN 1/32" SQ. STRINGERS (3 PER QUARTER). PLATE IN FRONT SECTION BACK TO WING L.E. WITH VERY SOFT 1/32" SHEET. YOU MAY WANT TO USE A FEW MORE STRINGERS TO DEVELOP THE UNDER-WING CURVE.







PROP. 6" PLASTIC. SCRAPED AND SANDED THIN AND BALANCED.
SHAFT 0.032" DIAM.
POWER 2 STRANDS 1/8" FAI. 15" LONG.



The biographical film on his life is still occasionally shown over here on late late TV under the title "Spitfire", though in Britain it was originally called "The First of the Few". As you might imagine, I have seen it quite a few times! If any of you out there have not seen it yet, do try it next time round, you will not be disappointed.

This issue contains two plans, a Peanut version and a 3/4" scale "big one", just right for WW2 combat and FAC scale. As far as I know, neither has been done before, though John Pond has Czech. plan by Koutny at 22" span; the construction is a bit on the heavy side, though. Walt Mooney did a Peanut plan of the speed Spitfire, but, this is essentially a cleaned-up version of the Mk.1.SO there is a need for an up-to-date version of a Griffon-engined Spitfire.

Documentation is plentiful and accurate. Aeromodeller has a beautiful plan pack which shows both 1/4" and 1/2" drawings of Marks 14 and 19. The 1/4" drawings from this pack also appeared in "Scale Models" magazine for October and November 1978 and so are readily available here. The Arco-Aircam No. 8 book has a lot on the Mk.14. One page is reproduced in this issue as an inducement to you to buy the whole thing - it is well worth the cost! [$2.95] Enjoy, enjoy the many great documentation photographs and drawings. Profile 246 deals with the Griffon Spitfires though I found it disappointing in comparison to the other sources. No doubt the Blue Fox will list some more documentation elsewhere in this issue, but the ones listed here will do the job.

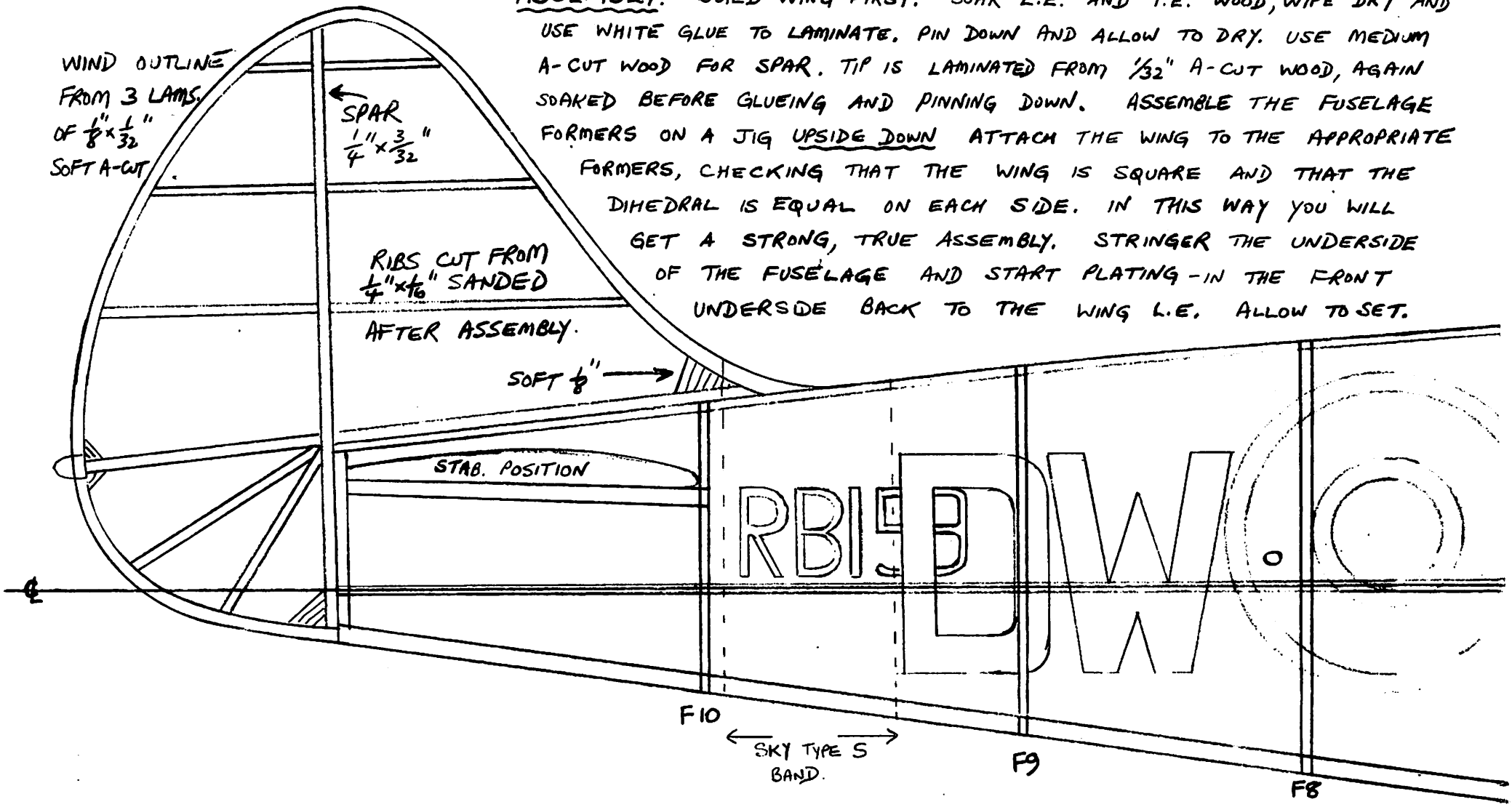
The plans can be used to build other Griffon-engined Marks if the slight changes are put in. The only versions not possible are the Marks 22 and 24. For these, the whole wing was redesigned and the Spit lost its characteristic, beautiful elliptical wing, thus becoming almost "not a Spit". These last two Marks were too late anyway for WW2, so we would lose participation in that great FAC event, so let us not worry about them.

Marks 14s were produced in clipped wing versions as well as with the full elliptical wing. The majority of these clipped wing aircraft were the FR MK. 14 [fighter reconnaissance], though some F MK. 14 [fighter] were also docked. Most MK 14s had the canopy as shown on the plan, but some of the later ones had a bubble canopy with a cut down rear decking to match. The FR versions also carried a camera behind the pilot on the port side to allow oblique photography.

The basic color scheme of the Mk 14 was dark green and medium grey on the upper sides with pale grey undersides. There are many color pictures in Arco-Aircam No. 8 plus great black and whites of both port and starboard sides of the fuselage. Spinner colors varied from black to grey to sky with at least one example of a black and white combination. Just be careful to pick a color scheme which was in use during the war, because the Spit 14 lived

Spitfire XIV by Gordon Roberts, C.F.F.S. 3/4" = 1'

ASSEMBLY. BUILD WING FIRST. SOAK L.E. AND T.E. WOOD, WIPE DRY AND USE WHITE GLUE TO LAMINATE. PIN DOWN AND ALLOW TO DRY. USE MEDIUM A-CUT WOOD FOR SPAR. TIP IS LAMINATED FROM 1/32" A-CUT WOOD, AGAIN SOAKED BEFORE GLUEING AND PINNING DOWN. ASSEMBLE THE FUSELAGE FORMERS ON A JIG UPSIDE DOWN ATTACH THE WING TO THE APPROPRIATE FORMERS, CHECKING THAT THE WING IS SQUARE AND THAT THE DIHEDRAL IS EQUAL ON EACH SIDE. IN THIS WAY YOU WILL GET A STRONG, TRUE ASSEMBLY. STRINGER THE UNDERSIDE OF THE FUSELAGE AND START PLATING - IN THE FRONT UNDERSIDE BACK TO THE WING L.E. ALLOW TO SET.

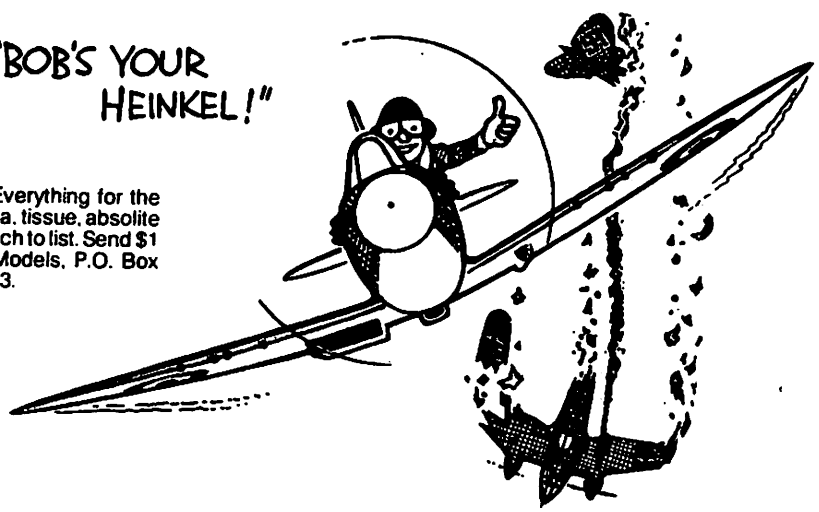


REMOVE FROM JIG AND STRINGER THE UPPER HALF, FINISH THE NOSE PLATING, INSTAL THE REAR RUBBER ANCHORAGE SUPPORTS. SHEET IN AROUND THE WING - FUSELAGE JUNCTION AND THE CANOPY POSITION WITH SOFT 1/16" SHEET. SAND SMOOTH, TAPERING THE STRINGER THICKNESS A LITTLE BEHIND THE REAR PEG.

on well into the 1950s and such late decorations would not be authentic for WW2 combat, although they would be perfectly satisfactory for FAC Scale.

The Mark 19 was finished in PR blue, but whether this model would qualify as a combat aircraft is doubtful, though I'm sure they were fired on many times. They were not armed, of course, relying on speed to get out of the way. The Mark 18 was too late to see much action; a few examples were shipped out to the Far East and to the Middle East as the war was ending, so a replica of one of these would be alright and within the rules. It was very similar to the Mark 14 and our plans would be OK.

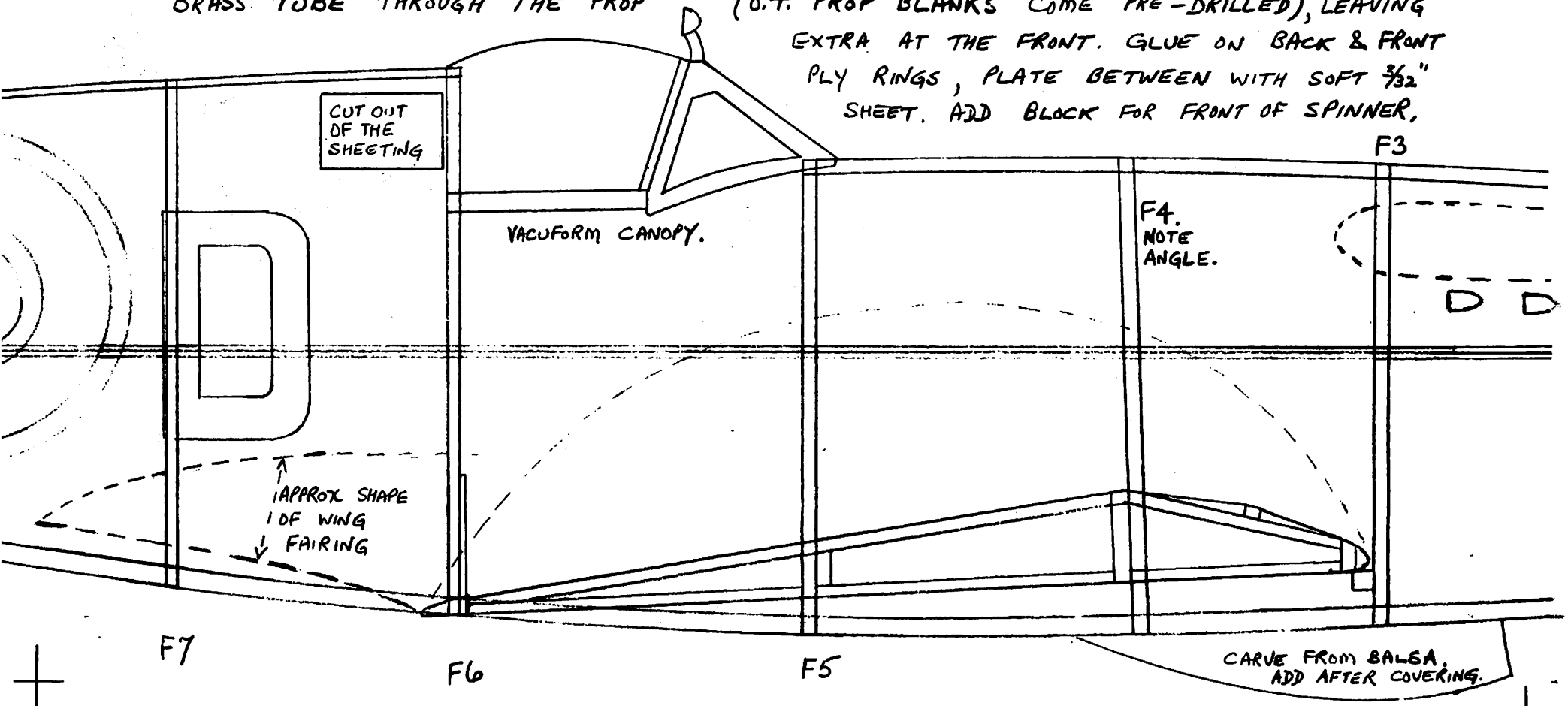
The big model is built in the same way as the racing Mustang. The fuselage is jig-built upside down and the pre-built wing is attached to the appropriate formers, lining everything up carefully, then completing the underside stringering and as much of the plating as possible before releasing from the jig and completing the upper part of the fuselage. The propeller is a carved balsa 12" two-blader from an Old Timer Models blank. I find carved balsa props to be the most efficient way of making a model "go" in these sizes. An efficient freewheel arrangement is a must, as such a big prop acts as an enormous airbrake once the power run is over. Do not use smaller wire than 1/16" for the propshaft. The weight is needed there anyway, and such a shaft will never bend. It is tough to form, though, and I always do a little cussing as I sweat it out with my inadequate pliers! The flying surfaces have laminated outlines, while the wing features cracked rib construction and a hefty spar. Covering should be stronger paper than Japanese, especially on the undersides. Thin Silkspan or Modelspan is the correct grade, doped with at least 3 coats of thinned nitrate dope. Use Floquil for coloring, well thinned and applied by airbrush. Try to arrange a little more washout in the port wing and trim the model to turn right on power using right sidethrust in conjunction with the downthrust already built in.

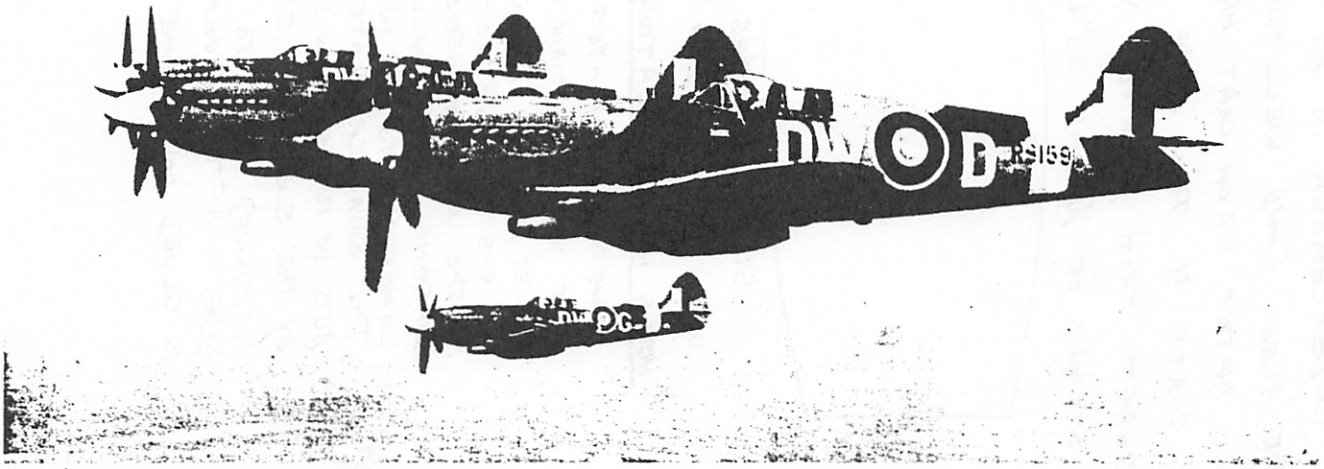


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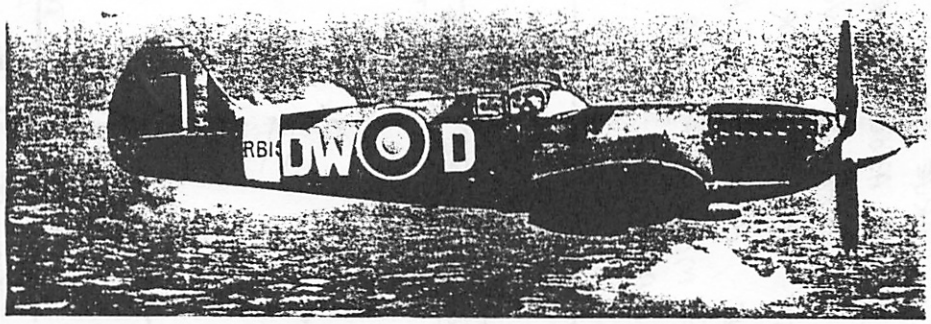
BUILD THE STABILIZER AND FIN FROM LIGHT WOOD, LAMINATING THE OUTLINES ROUND CARDBOARD FORMS. LITTLE FILLETS OF GLUE AT EACH JOINT (AFTER THE STRUCTURE HAS BEEN BUILT) WILL ADD A LOT OF STRENGTH AND WARP-RESISTANCE FOR ONLY A SMALL WEIGHT PENALTY. COVER WING AND FUSELAGE - ITS A LITTLE AWKWARD WITH IT BEING IN ONE PIECE, BUT GO CAREFULLY. COVER STAB. AND FIN. ATTACH STAB. TO FUSELAGE, THEN FIN. MAKE AND ATTACH FILLETS (THIN TYPING PAPER). WATER SPRAY AND DOPE TO YOUR SATISFACTION (AT LEAST 2 COATS 50/50 NITRATE ON WINGS & STAB., 3 ON FUSELAGE). COLOR SPRAY VERY THINLY WITH FLOQUIL. ATTACH COOLERS.

CARVING PROP. THIS IS THE FUNCTIONING HEART OF THE MODEL. USE AN OLD TIMER 12" BLANK — ASK FOR STRONG, MEDIUM WEIGHT WOOD, NOT SOFT STUFF! SINK A 3/32" O.D. BRASS TUBE THROUGH THE PROP (O.T. PROP BLANKS COME PRE-DRILLED), LEAVING EXTRA AT THE FRONT. GLUE ON BACK & FRONT PLY RINGS, PLATE BETWEEN WITH SOFT 3/32" SHEET. ADD BLOCK FOR FRONT OF SPINNER,

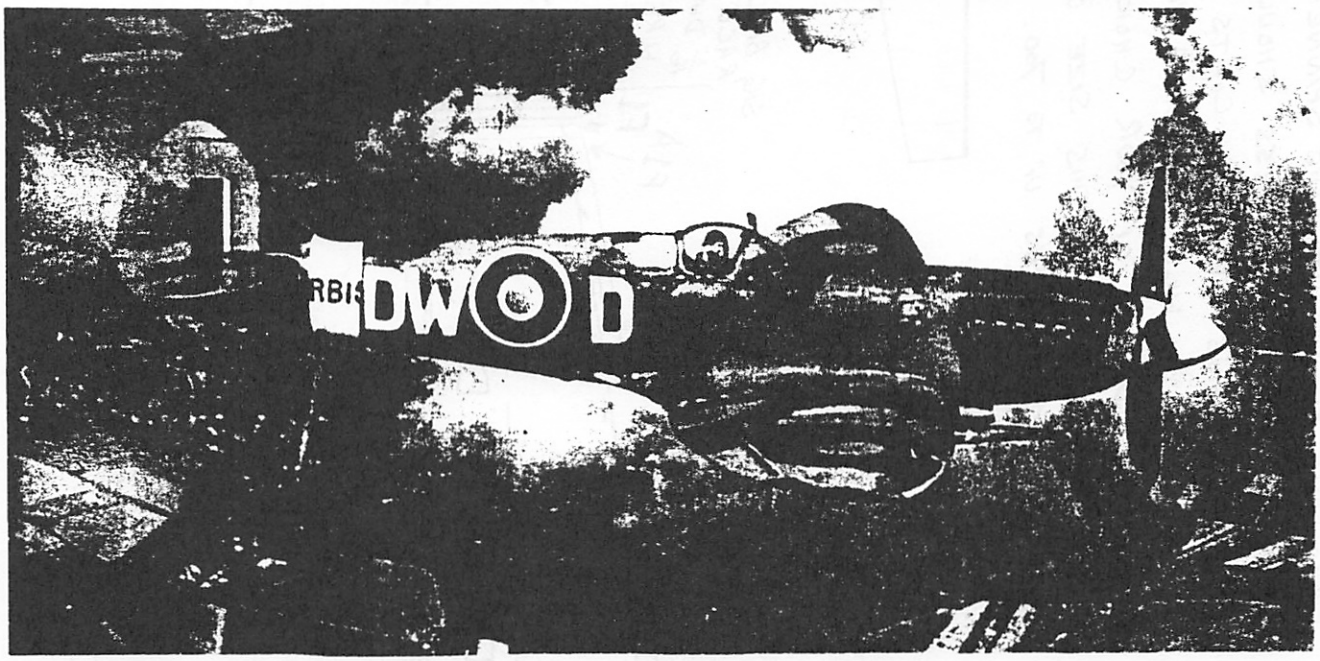




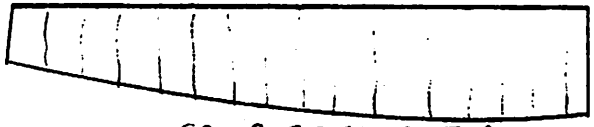
Above: Mk. XIV's of No. 610 'County of Chester' Squadron, spring 1944. DW-D, RB159 is the CO's aircraft, note pennant under windscreen.



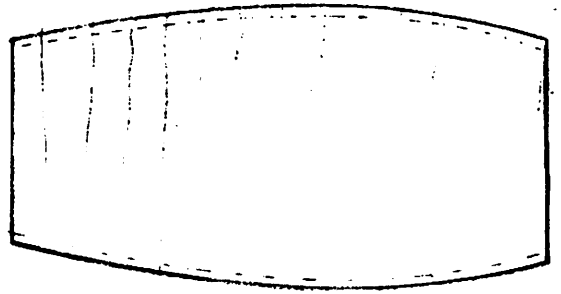
Right & below: Starboard side views of DW-D, sky spinner, code and fuselage stripe. (photos IWM).



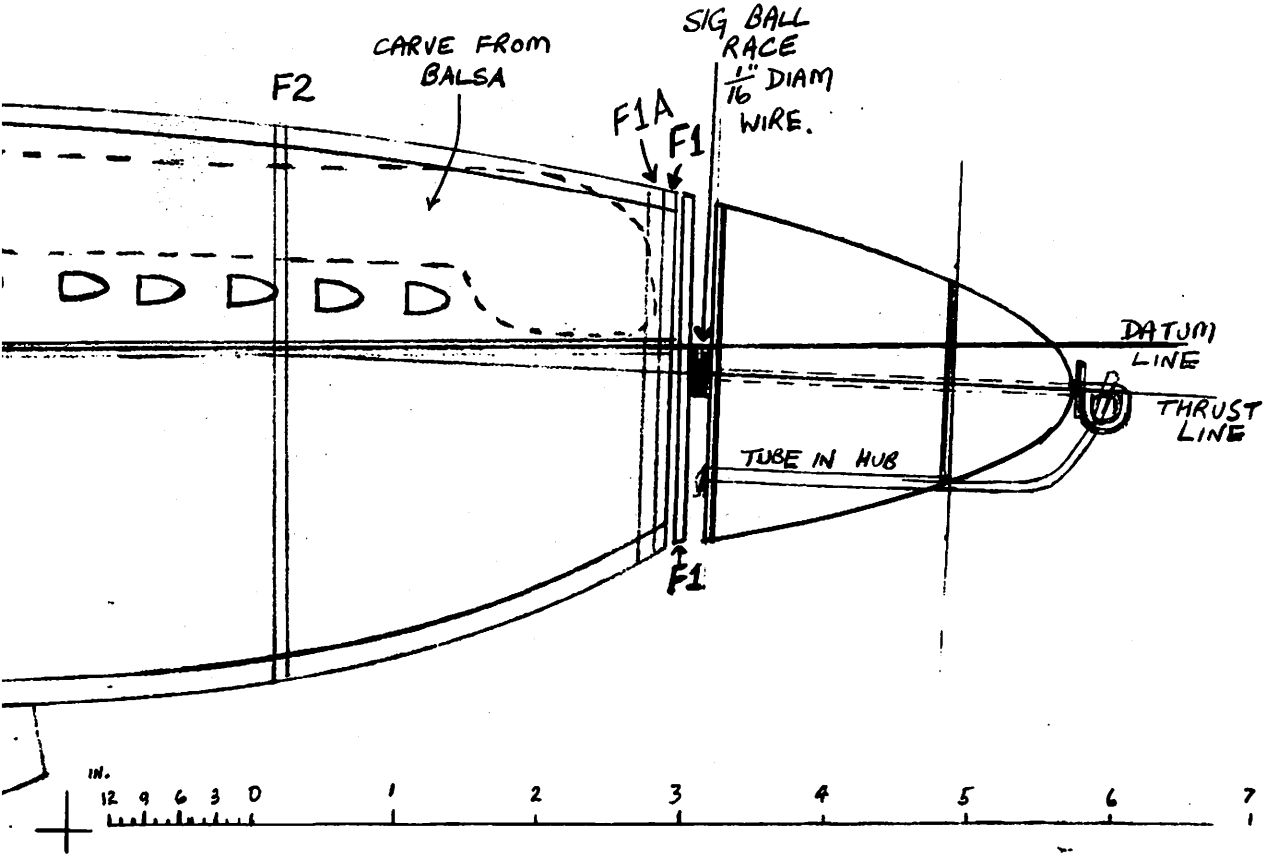
SAND PROP HUB AND FRONT SPINNER TO SHAPE. NOW CARVE BLADES AS USUAL, CAREFULLY SAND AND BLEND INTO THE SPINNER. CARVE ABOUT 3/32" UNDERCAMBER IN AT 3/4 RADIUS POSITION, BLADE THICKNESS SHOULD BE ABOUT THE SAME ALSO. SAND WELL WITH FINE SANDPAPER. GIVE SEVERAL COATS OF DOPE, SANDING WELL AFTER EACH COAT HAS DRIED THOROUGHLY. YOU WILL WORK UP A NICE GLOSS AFTER 4-6 COATS OF THIN DOPE. INSTAL A FREEWHEEL DEVICE OF YOUR CHOICE, BEND THE PROP. SHAFT FROM 1/16" WIRE. YOU WILL NEED A SIG BALLRACE ON THIS SIZE OF MODEL. MOTOR IS 4 STRANDS OF 1/4" FAI 30" LONG, BRAIDED. NORMAL CONTEST TURNS UP TO 700. MAX 1000.



SCOOP SIDES. CUT 4 FROM 1/16" SHEET



SCOOP UNDERSIDES. CUT 2 FROM 1/16" SHEET.



NOTES ON INSTALLATION OF SCOOPS

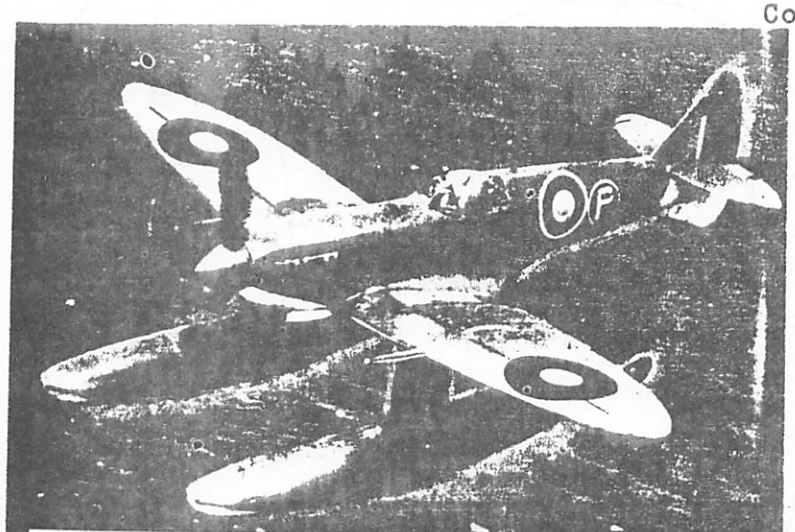
TWO SUPPORT PLATES ARE BUILT INTO THE WING. THE MAIN PLATE IS MEDIUM 3/32" SHEET, 3/4" WIDE, AND RUNS FROM THE REAR OF THE MAINSPAR TO THE T.E., BUTTING UP TO THE LOWER RIB MEMBER. THE LARGE DIAGONAL BRACE WILL HAVE TO BE CHAMFERED TO FIT ON TOP OF THIS PLATE. THE SMALLER PLATE IS 1/2" x 3/32" x 3". IT BUTS UP TO THE MAIN SPAR AND IS SUPPORTED BY THE SUBSIDIARY SPAR. IT SHOUD BE POSITIONED CLOSE TO THE FUSELAGE SIDE. AFTER COVERING, THE SCOOP IS GLUED ON IN THE POSITION SHOWN.

SOME THOUGHTS ON P.R. SPITFIRES

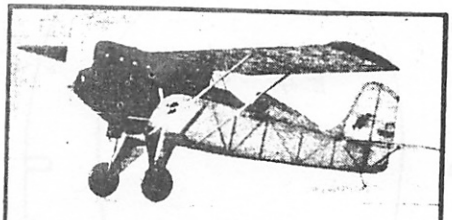
Bill Hannan's pink Spitfire brings a few other thoughts to mind. The first P.R. Spitfires were painted a very pale green, this scheme was in operational use for a short time before the pale pink and azure blue schemes were introduced. The purpose of the unusual colour schemes was quite simple, the pale pink was difficult to see against a cloudy overcast sky wheras the azure blue was difficult to see against a clear blue cloudless sky. If cloud conditions over the target were not known, then two Spitfires would be sent out to photograph the same target, one pink and one blue.

Photographs of the P.R. Spitfires show a large rear view mirror for the pilot, this served two purposes-as well as enabling the pilot to watch out for enemy aircraft on his tail it also enabled the pilot to see if he was leaving a condensation trail behind him. There wasn't much point in painting the aircraft an inconspicuous blue and then allowing a con-trail to pinpoint it's position! The P.R. pilots normallyflew a hundred feet below the contrail layer, accomplishing this by climbing up until the trail started to form, dropping down a few hundred feet. Flying at this altitude had another advantage, the condensation trails of defending fighters above the P.R. Spitfire could be clearly seen as usual fighter tactics consist of diving down to the target. The attacker first has to climb higher than the intruder which means of course that he then gives his position away, enabling the P.R. Spitfire to take appropriate evasive action, usually diving for home at the fastest possible speed. P.R. Spitfires didn't hang around in enemy airspace as they were totally unarmed relying on camouflage, pilot skill and speed to survive.

Courtesy SCALE STAFFEL NEWSLETTER

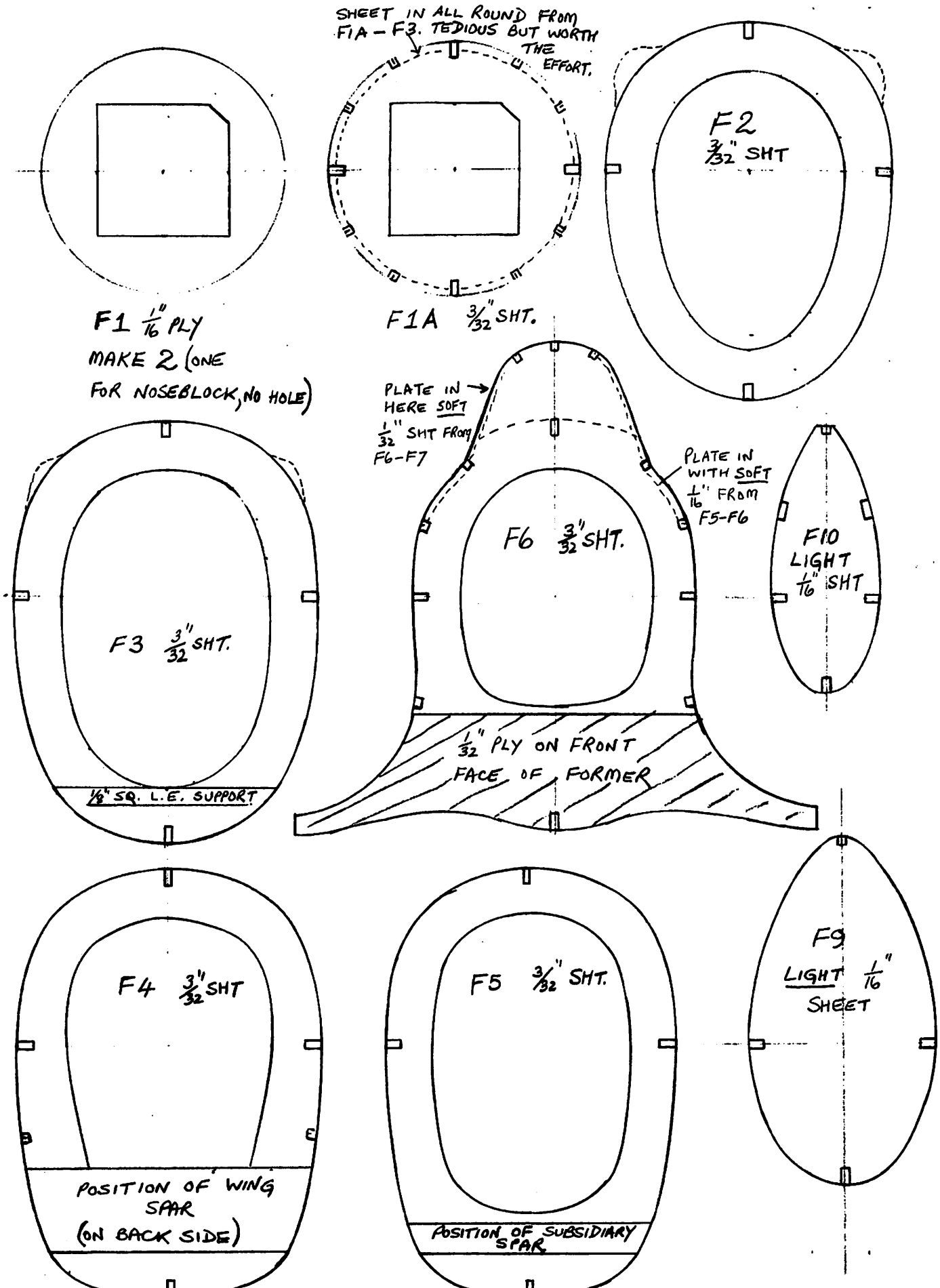


Above: The experimental Mark IXb, MJ892 during a test flight from Hamble, 1943.



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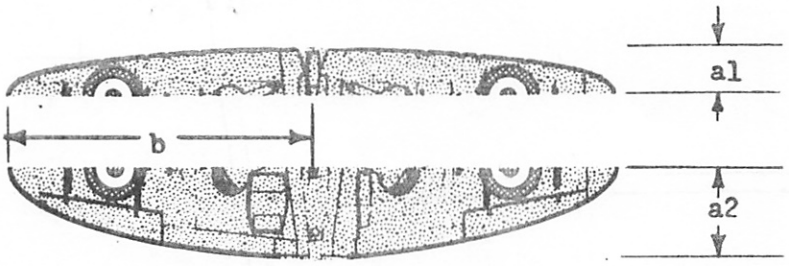
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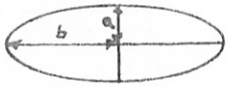

SHEET IN ALL ROUND FROM F1A – F3. TEDIOUS BUT WORTH THE EFFORT.
F1 1/16" PLY
MAKE 2 (ONE FOR NOSEBLOCK, NO HOLE)
F1A 3/32" SHT.
F2 3/32" SHT
PLATE IN HERE SOFT 1/32" SHT FROM F6-F7
PLATE IN WITH SOFT 1/16" FROM F5-F6
F3 3/32" SHT.
1/8" SQ. L.E. SUPPORT
F6 3/32" SHT.
1/32" PLY ON FRONT FACE OF FORMER
F10 LIGHT 1/16" SHT
F4 3/32" SHT
POSITION OF WING SPAR (ON BACK SIDE)
F5 3/32" SHT.
POSITION OF SUBSIDIARY SPAR
F9 LIGHT 1/16" SHEET

RUSS BROWN
CROSSWINDS
4909 N. SEDGEWICK
LYNDHURST, OH 44124

CROSSWINDS QUARTERLY ISSUE 73

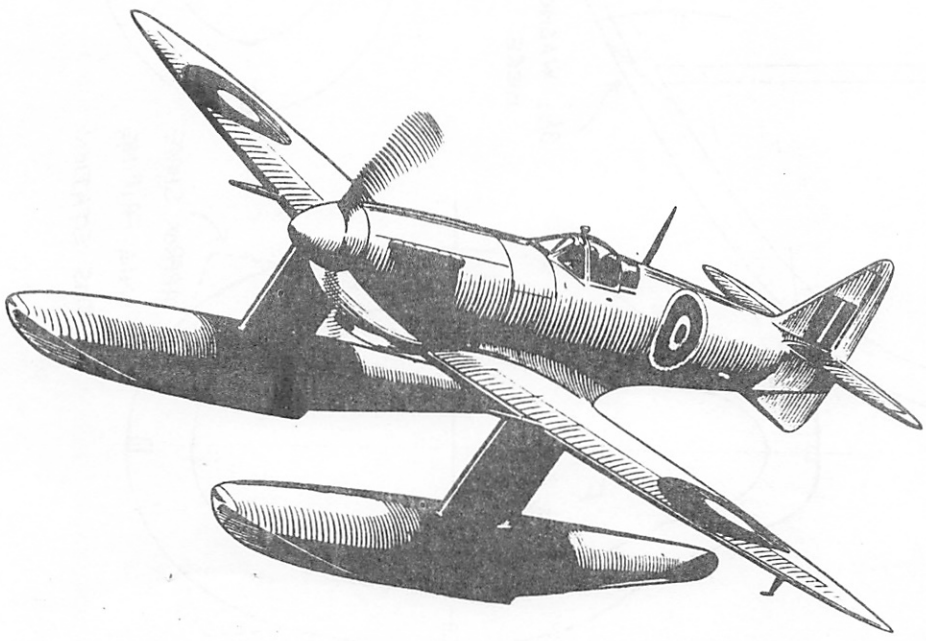
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FLAT HATING ON πab 

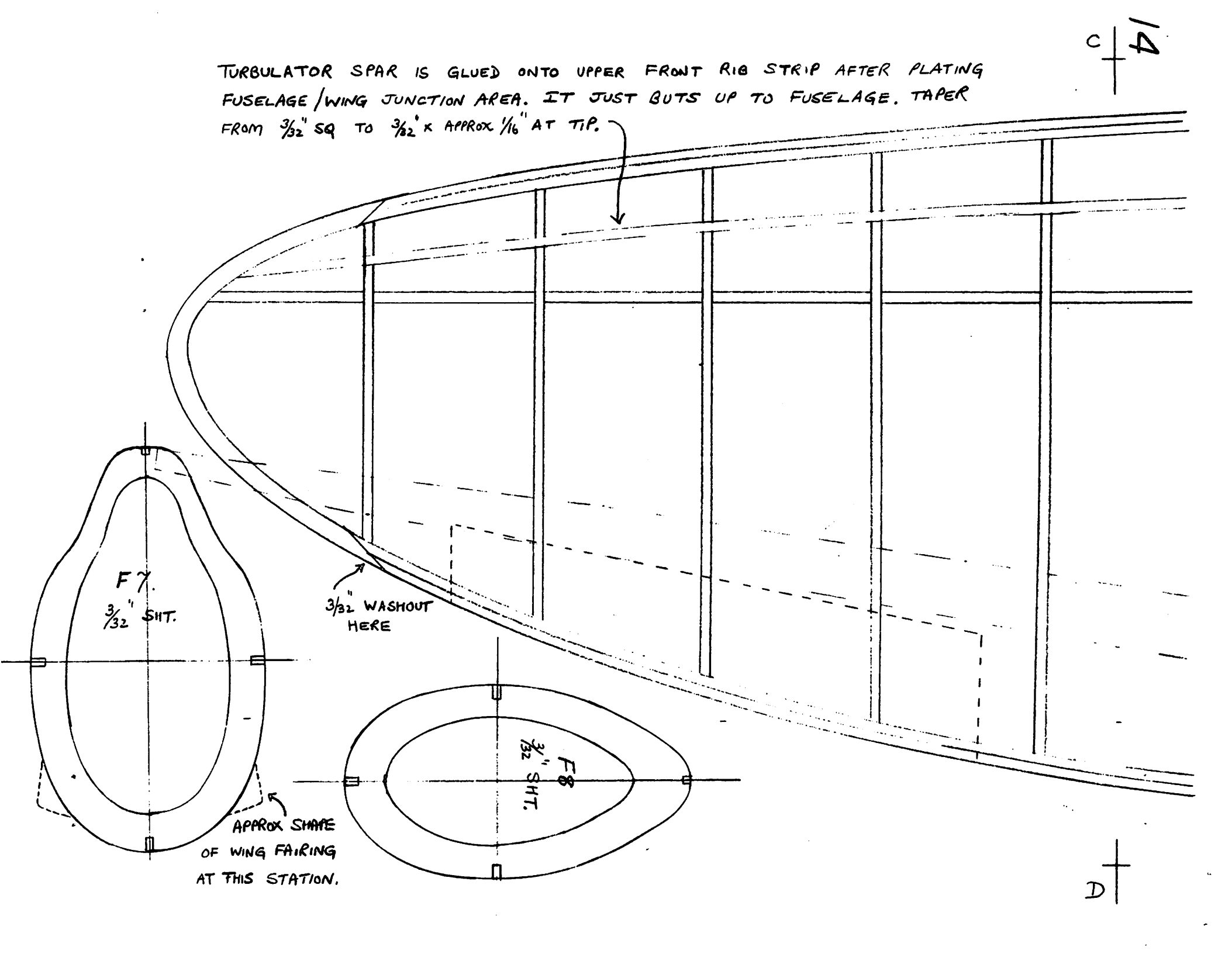
Pie are square 'Nes Paw? You bet your circular slide rule! Square is square, but beauty to fanciers of curvic form is in the area of πab (ellipse area formula). That bit of algebra is a sentimental journey way back to B.C. (before calculators). Elliptical wings and the Spitfires are synonymous to us kids from pre WW II. 'Bout time we cranked out the Spitfire Mark 14 issue. Gordon Roberts provides a pair of model drawings sure to please the eye.

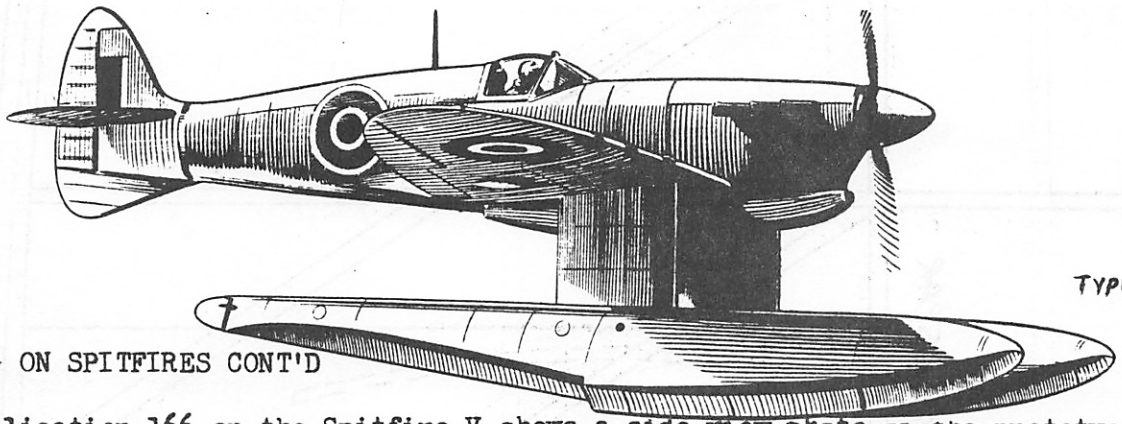
In between CROSSWINDS issues, you may want more news from the Sun Belt. For a place on the SWAMP SQUADRON NEWS subscription list, send $7.50 to Dean McGinnes at HQ. SWAMP SQUADRON FAC 5275 WILLIAM CLARK RD. LAKELAND, FLORIDA 33805 USA. I just got back from a vacation drive through the center of SWAMP SQUADRON Sector, where Mother Nature spit fire all about. May is wet season, but not much rain yet. The forrest fire problem in Florida got out of hand as wind spit fire in lotza hot spots. Mostly timber and bush boondocks cleared out by the fire. Some buildings inland and about 200 homes on the East Coast side above Daytona went up. The homes are a great loss. Fortunately some large Pine trees may loose lower branches, but the tops recover to help hold the water table. Natural growth returns quickly. Mother Nature is harsh on wild life, but the bugs will be right back! Meanwhile the 'Gators will eat fish, and the Swamp Squadron 'Gators (Figments?) can fly in cleared areas. Just to be in uniform in the Swamp Squadron zone, I looked in a Mobile Oil Station for a cap with the famous Flying Red 'Gator symbol in it. Bad Guy Squadron strikes again! Got the same negative pitch we get in Upper U.S. Mobile Oil Stations when asking for a Flying Red Horse. Haw-aw-aw-w-w-w I think Mobile sez in Greece, it ain't no 'Gator. It's a Crock! (Not readily translatable, but hints of regret at the Mobile Oil Co. corporate advertising Dept. sense of identity.) Cyclops are so profuse with the long green rhetoric and pyrite motions, the golden reflections all too readily suffer the arrows of fortune. Whoa there Pegasus; let's set down over by the Supermarine Shop and see what the Griffin is into! There fliers, we ain't lost, we are back to Spitfires.



Between March 5, 1936 when the prototype Mk 1 flew and 1949, "no fewer than 20,351 Spitfires and 2,408 Seafires were built." Griffon engined Mk XIV production totaled 957 of both early form balloon type canopy and later bubble canopy.Both forms had either full ellipse tips or the low altitude clipped tips. The Griffin powered Mk XII and PR XIX are similar combat used types. Now some 72 Spitfires are left in Britain with about 16 flyable.

Supermarine also built a few fast two float planes. At left is a Mk IX conversion capable of 377-mph at 19,700 ft. altitude. This version was powered by the RR Merlin 61. A Mk II and two Mk VBs were twin float converted.
ref. MAY/JUNE 1966 AIR PROGRESS.


TURBULATOR SPAR IS GLUED ONTO UPPER FRONT RIB STRIP AFTER PLATING FUSELAGE/WING JUNCTION AREA. IT JUST BUTS UP TO FUSELAGE. TAPER FROM 3/32" SQ TO 3/32" x APPROX 1/16" AT TIP.
C
D
F7
3/32" SHT.
3/32" WASHOUT HERE
F8
3/32" SHT.
APPROX SHAPE OF WING FAIRING AT THIS STATION.

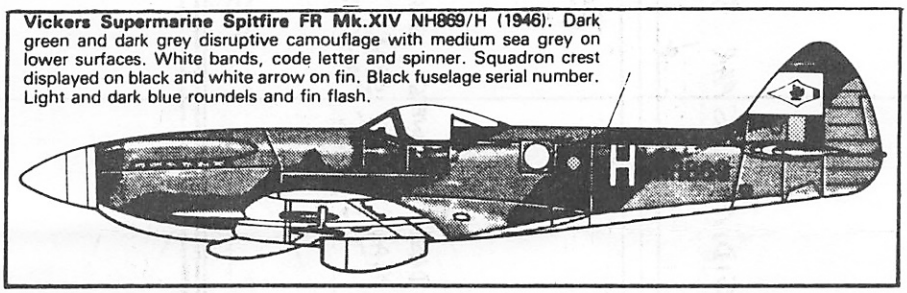


TYPE 355

FLAT HATING ON SPITFIRES CONT'D

Profile Publication 166 on the Spitfire V shows a side view photo of the prototype V twin floatplane W3760 with increased dorsal fin. The under side color is probably all yellow with P in yellow ring behind fuselage C type ring marking. Spinner looks black. None of the Griffin powered Spitfires were float converted. We just tease you with the wet look to stimulate intrest in R.O.W. CFFS flies a hydro option contest June 30.

CFFS also flies a timed event for post war raced planes. Spitfire Mk XIVe race no. 80 on a bare metal skin placed 3rd in the '49 Tinnerman Race at Cleveland. Another Mk XIVe bubble canopy version registered G-FIRE is all bright red with white edged blue trim. Race use is unknown here. But we can't bring this data out of the Fox Hole now,'cause the theme Spitfire Mk XIV is the traditional raised deck canopy type.



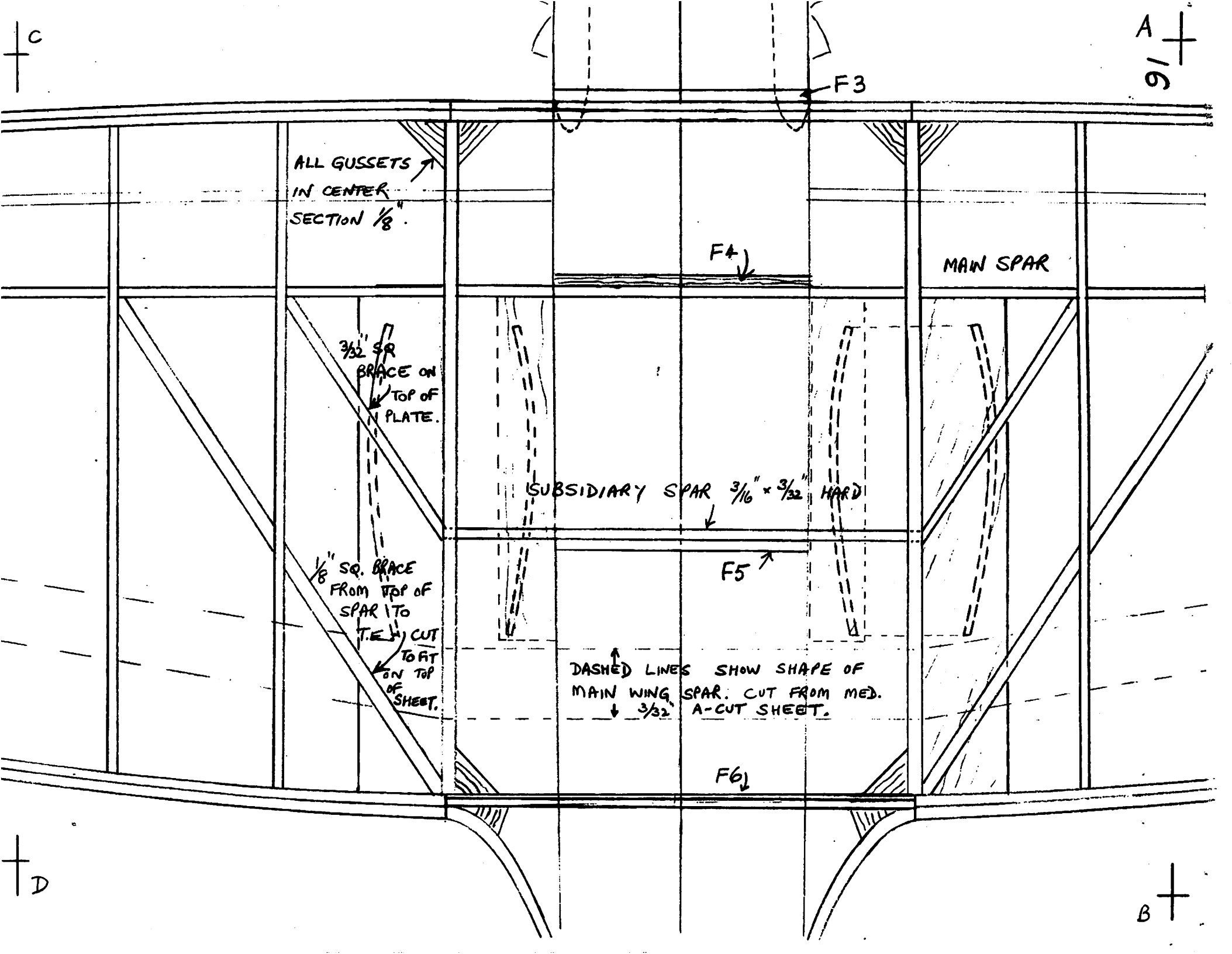
Vickers Supermarine Spitfire FR Mk.XIV NH869/H (1946). Dark green and dark grey disruptive camouflage with medium sea grey on lower surfaces. White bands, code letter and spinner. Squadron crest displayed on black and white arrow on fin. Black fuselage serial number. Light and dark blue roundels and fin flash.

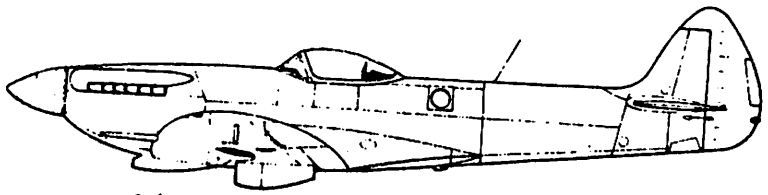
Pssst! Eyes front and don't look left. The 1946 trim on FR Mk XIV NH869 code H drawn by Mike Keep for Scale Aircraft Modelling No. 28 Squadron text is an example of what Blue Fox Base dare not show you here. Great Editors like Gordon are hard to find. We will humor him and not mention Bubble Canopies.

In addition to the doccumentation listed earlier in Gordon Roberts' editorial, the Squadron/Signal publication Spitfire in action AIRCRAFT NO. 39 for $4.95 is still available. This text has detail views of several Mks' and a double page centerfold with 10 side views in color. The Mk XII EB-D in Sea and Slime trim has clipped tips, so I won't mention it here. The PR XIX is shown in all over PR Blue with a white I and small white RM645. It has Red and Blue B Type roundels and a thin white stripe fin flash. The Mk XIV has 1945 Pacific WW II marking. The Squadron 610 DW-D selected by Gordon to model is shown in flight photo on page 39. A nit picking bit of detail here is the B in the small black RB159 serial is fuzzed on the left side to look like a stencil S. Photos of the right side elsewhere show the B clearly on the Sky band. The ARCO-AIRCAM AVIATION SERIES No.8 has the best variety of color and marking views. It may also be best for three view judging pack use with plenty of panel line detail shown, but not all the extreme detail you can't see in aircraft photos. The lack of same scale size top and side views may annoy some AMA experienced judges.

Even the attractive PR Blue colors that compliment the Spitfire shape are candidates for FAC WW II mass launch use. The basic Spitfire airframe was certainly designed for combat use; not for observation like a Cub type. Even designs that were intended for combat use, but never made it are flown now. Period marking is applied to these. Many of the fliers who get out and fly the event are inspired to model these unusual subjects in WW II action. This CD and Judge views the PR XIX as certainly within the spirit of FAC WWII Combat.

To warm up the Spitfire production for next year's 50th anniversary and on flying action, All CFFS Contests include an unofficial event for all Spitfire type rubber power FFS. Local rules are 5 fliers required. Any FAC event type is eligible. Winners are grounded from further action in this event. For 1986 All Spitfire action, a good black & white photo of the winner will be required for participation in the MAX-FAX International Event. The Event at CFFS will be flown as one flight mass launch. A report goes to GHQ for Kanones.


C
A
F3
ALL GUSSETS IN CENTER SECTION 1/8".
F4
MAIN SPAR
3/32" SQ BRACE ON TOP OF PLATE.
SUBSIDIARY SPAR 3/16" x 3/32" HARD
F5
1/8" SQ. BRACE FROM TOP OF SPAR TO T.E. CUT TO FIT ON TOP OF SHEET.
DASHED LINES SHOW SHAPE OF MAIN WING SPAR. CUT FROM MED. 3/32" A-CUT SHEET.
F6
D
B

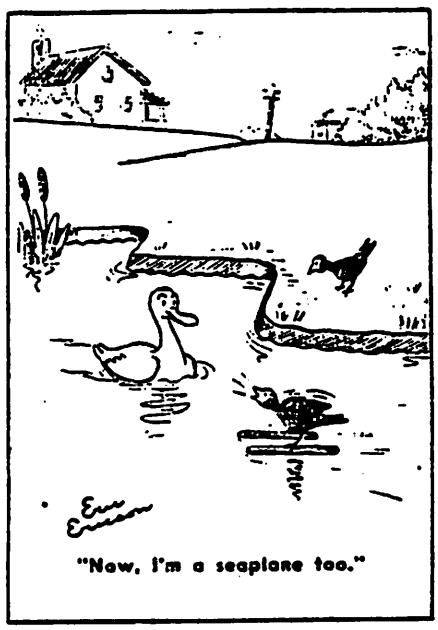


FLAT HATING

Let the good times fly! The '85 Contest Calendar offers action for all sectors. Indoor flying peaks June 18-20 at Niagara Falls, N.Y. June brings heat and thermals to Outdoor flying in the Central Sector. Erie GHQ had a good meet May 26, with another for June 9 at Prangmore Field, Pa.

CFFS Contest action outside starts the afternoon of June 23 at L.C.C.C. 1 to 9 PM . A CFFS club meeting followes at the field. Some one has to feed the Mosquitos 'Nes Pas? The CFFS annual hydro meet is another calm air afternoon meet 1 to 9 PM on June 30 at LCCC. The plus 20 bonus points for an R.O.W. will "whet" the R.O.W. enthusiasts to build floats. Spit twoie what a splash a bit of foam will make under a Spitfire! Blue Fox Base will save space here to run the Dime Scale era Comet 16 inch span plan from Mark Fineman via MAX-FAX.

Light foam floats can be cut from solid foam or built up with sheet foam. Experiments with the hot wire cutting hand shaping yoke tool that plugs in the GREAT AMERICAN FOAM MACHINE provided sheet foam as thin as .040 inch thick. The GAFM is a handy table wire saw form of hot wire foam cutter. The Dow blue insulation foam that comes with the GAFM is a fine bubble size 4 lb. / ft^3 foam that is nice to work with. The lighter white packing foam at 2½ $lbs./ft^3$ is more open in thin sheets. Burr Stanton from Lexington, KY flew a few all foam sheet sport models at LCCC last season. Burr developed his own hot wire equipment with variac power supplies. A large bow is required for long wing cutting in one piece. You may prefer the handy GAFM to speed operations. John Valentine at P.O. Box 50118 in Phoenix, AZ 85076 makes the Foam Shop. Write or call Frank A. Milo at Firecat Technology, Ins. at 707 Continental Circle, Suite 1930 in Mt. View, CA 94040 Phone 415-969-2743. The whole Foam Shop was $149.99 A 40 inch PRO-BOW was $79.99 in mid '84. Besides the float fabrication we want to look at foam and boron fiber composites with silicon glue as a flexible binder. Be careful if you work with Boron filaments; as we said before Boron bites and is toxic. Drop in the Fox Hole to try the GAFM Foam Shop. Drop by LCCC on June 30 and see how small the floats are to skip an Embryo Off the water. Just a couple sq. inches does it. Butch, you bring the lake!

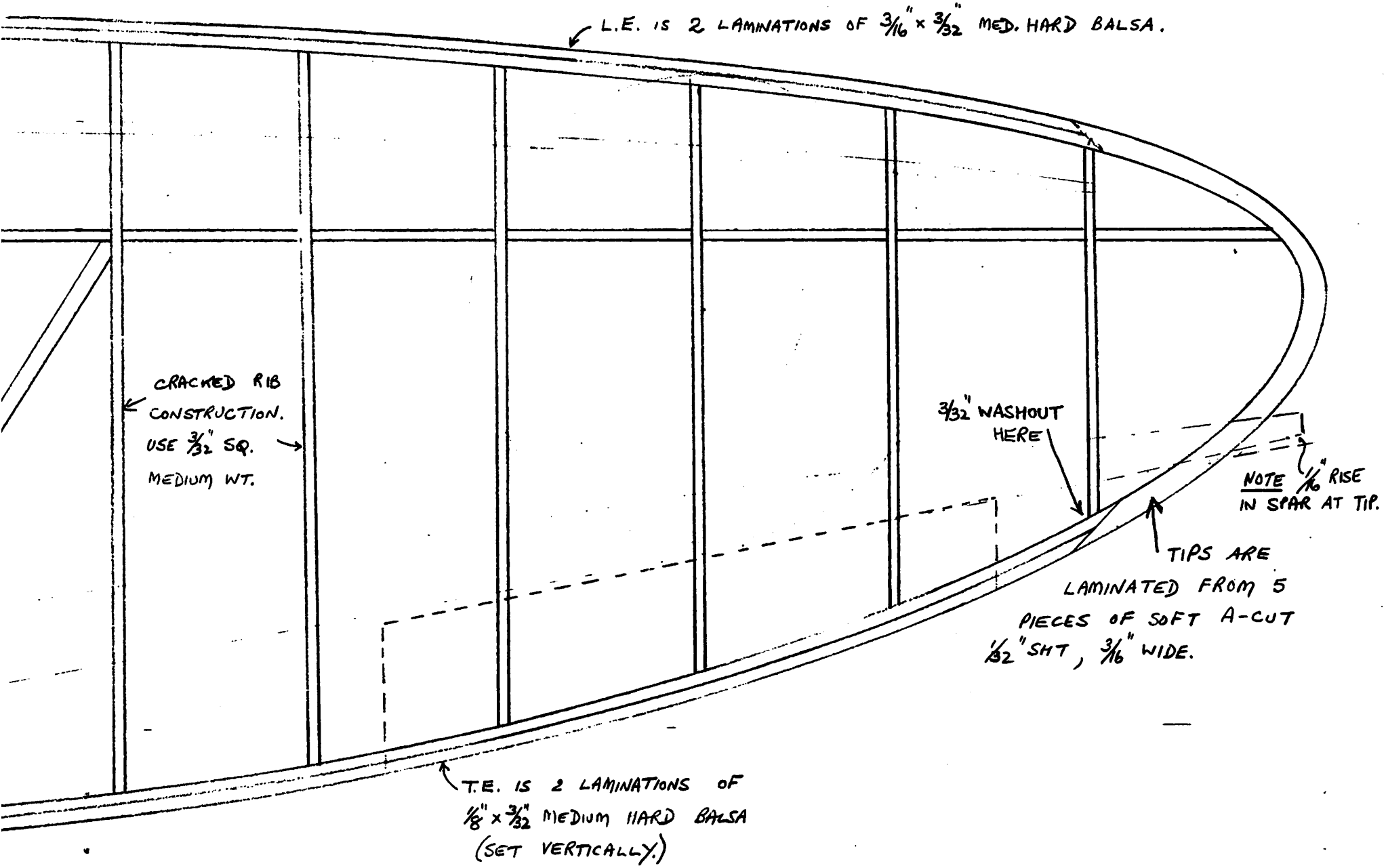


Old Timer Dime Scale kit or plan models join the early Hi-Flier kit models for a 24 inch max. wingspan O. T. rubber scale kit event at CFFS contests June 23, August 11, and Sept 15 at L.C.C.C. Models should retain character of design with material substutions and minor modifications allowed. Props, fromt ends, rear hooks and stabilizer surfaces and mountings may modified. Wing airfoil shape is to be retained with no extra turbulator spars added up front. Top and bottom tissue cover flying surfaces. Flying points are three flights total time (with local max. of day), no subject bonus points. The 24 inch Corben Super Ace from Scale Flight Model Co. and/or Golden Age Reproductions for example can be flown here. June 1985 EAA VINTAGE AIRPLANE cover photo is the bright yellow and black trim Corben Super Ace NX 17288.

Larger than 24 inch wingspan kit or plan models can fly in Golden Age Rubber Scale events June 30, and July 21. The smaller Dime Scale size can fly here too. This is the place for high wing cabin monoplane builders to get out and fly.

Jack Fike at Scale Flight Model Co. 630 Fairway Lane, Bloomington, IN 47401 phone 812-339-8274 has many Dime Scale kits and plans and print wood. The Megow 16" T-Craft on floats is a good flier. I still have one of the floats from about 1943! T-Craft floats may be mounted on light planes like Stinson 105, Monocoupe, Fairchild 24 or Cessna C-34 also for R.O.W.

A


L.E. IS 2 LAMINATIONS OF 3/16" x 3/32" MED. HARD BALSA.
CRACKED RIB CONSTRUCTION. USE 3/32" SQ. MEDIUM WT.
3/32" WASHOUT HERE
NOTE 1/16" RISE IN SPAR AT TIP.
TIPS ARE LAMINATED FROM 5 PIECES OF SOFT A-CUT 1/32" SHT, 3/16" WIDE.
T.E. IS 2 LAMINATIONS OF 1/8" x 3/32" MEDIUM HARD BALSA (SET VERTICALLY.)

B

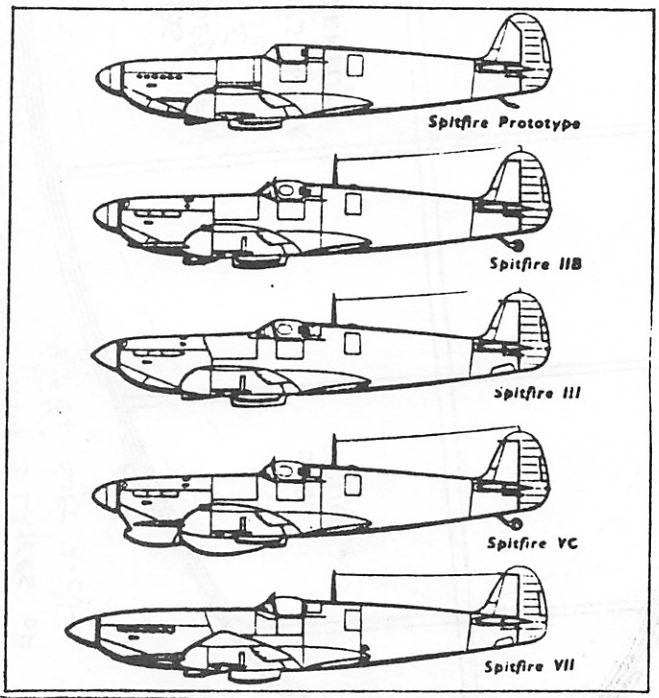


The Legendary SPITFIRE

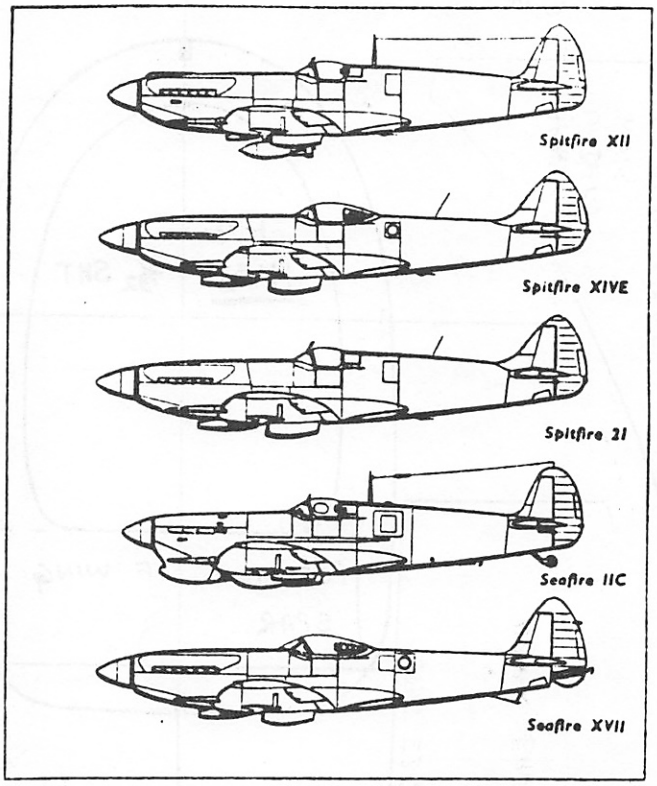
WHEN, on June 11, 1937, Reginald J. Mitchell, one of Britain's most brilliant aircraft designers, died at Southampton, he left as a legacy to the Royal Air Force the greatest fighter of all time; a fighter destined to remain supreme throughout a half-decade of warfare —the superb SPITFIRE! Long after the last manned fighter has given place to the impersonal guided missile the name *Spitfire* will be remembered for it is almost synonymous with the most stirring period in the forty years of the RAF's history.

But to the British people, *Spitfire* is more than the name of a warplane; it is the name of the weapon which, more than any other, symbolised final victory for the Allied cause during England's darkest hours. Mention *Spitfire* to any wartime member of the RAF and he will conjure up mental visions of white contrails weaving a tracery over a cloudless summer sky: the droning of enemy bombers and the staccato chatter of machine guns. Any of his *Luftwaffe* opponents who fought in the "Battle of Briain" will recall the electrifying warning so frequently heard over their intercom: "*Achtung Schpitfuer!*"

The Spitfire fought in every major air action in which the RAF was engaged during the war years, and from beginning to end it was treated with respect by every enemy pilot who had the misfortune to encounter it in the air. During its long production life it was to be produced in no fewer than 33 different versions, and the constant stream of Spitfires that were to pour off the production lines from June, 1938, was to dry up only after 20,351 machines, plus 2,408 examples of its seagoing version, the Seafire, had been produced.



Colour transparency by Air Ministry photographer George Dovey



It had undertaken some 935,000 sorties during the war years, and was to perform another 312,000 with the RAF in the post-war years until finally supplanted by jet aircraft. And even today, *twenty years* after the first deliveries commenced, the Spitfire is still in first-line service with several foreign air forces!

The Spitfire may not be able to lay claim to having been built in larger quantities than any other wartime fighter, but it *was* the only Allied fighter in production on the first day of World War II to be still in production when the War ended. It was also aesthetically one of the most pleasing aircraft designs ever produced, and of the many tributes paid to it by friend and foe alike, and most widely quoted, is undoubtedly that of General Adolf Galland who, when asked by Hermann Goering what his fighter requirements were, replied, "I should like a *Staffel* of Spitfires for my *Gruppe*!"

Few if any fighters have been the subject of such extensive development as was the Spitfire, and some measure of this fantastic evolution may be gauged from a comparison of the accompanying specifications for the first and final production variants of the design:

	Spitfire I	Seafire 47
Weight, normal	5,280 lb.	10,300 lb.
Weight, overload	—	12,500 lb.
Wing area	242 sq. ft.	244 sq. ft.
Wing loading	24 lb./sq. ft.	42.2 lb./sq. ft.
Maximum horse power ...	1,050	2,350
Power plant weight ...	2,020 lb.	3,650 lb.
Maximum Speed	362 m.p.h.	452 m.p.h.
Maximum rate of climb ...	2,500 ft./min.	4,800 ft./min.
Time to 20,000 ft.	9.4 minutes	4.8 minutes
Weight of fire/sec.	4.0 lb.	12.0 lb.
Fuel capacity, internal ...	85 gallons	154 gallons
Range including allowance for take-off, climb and 15 minutes combat	395 miles	405 miles
Maximum range	575 miles	1,475 miles
Rate of roll at 400 m.p.h. ...	14.0 degrees/sec.	68 degrees/sec.
Permissible C.G. range, percentage mean chord ...	2.7	11.5
Factored wing loading ...	240 lb./sq. ft.	464 lb./sq. ft.
Maximum diving speed ...	450 m.p.h.	500 m.p.h.
Structure weight, % ...	33.0	31.0
Energy absorption of undercarriage	8,300 ft./lb.	26,600 ft./lb.
Undercarriage stroke ...	4.9 inches	9.0 inches

LAMINATE OUTLINE FROM 3 LAYERS OF
1/8" x 1/32" SOFT A-CUT.

NOTE USE OF LITTLE GLUE FILLETS ON ALL JOINTS

SPAR 1/8" x 1/16" PIED.

RIBS SANDED FROM 1/20" x 5/16" PIECES AFTER ASSEMBLY.

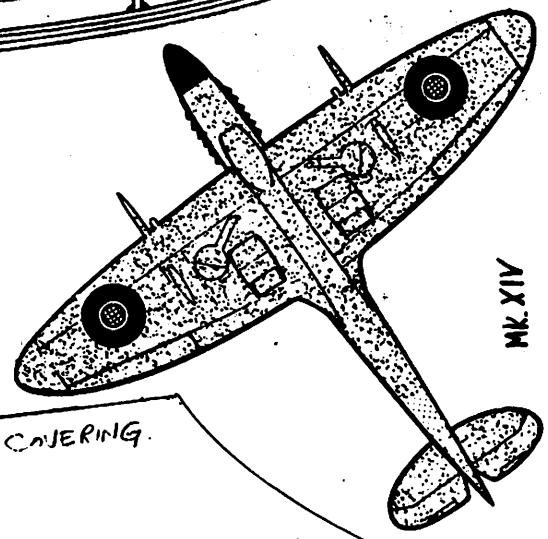
SCALE OUTLINE

1/8" SQ TAPER TO 1/8" x 1/16" AT T.E.

CLIP-WING MUSTANG PLAN

F4 HARD 3/32" SHT

POSITION OF WING SPAR.



MK. XIV

THIS EDGE GLUED TO ROOT RIB AFTER COVERING.

APPROX SHAPE UPPER FAIRING PIECE. FROM TYPING PAPER

THIS EDGE GLUED TO F6.

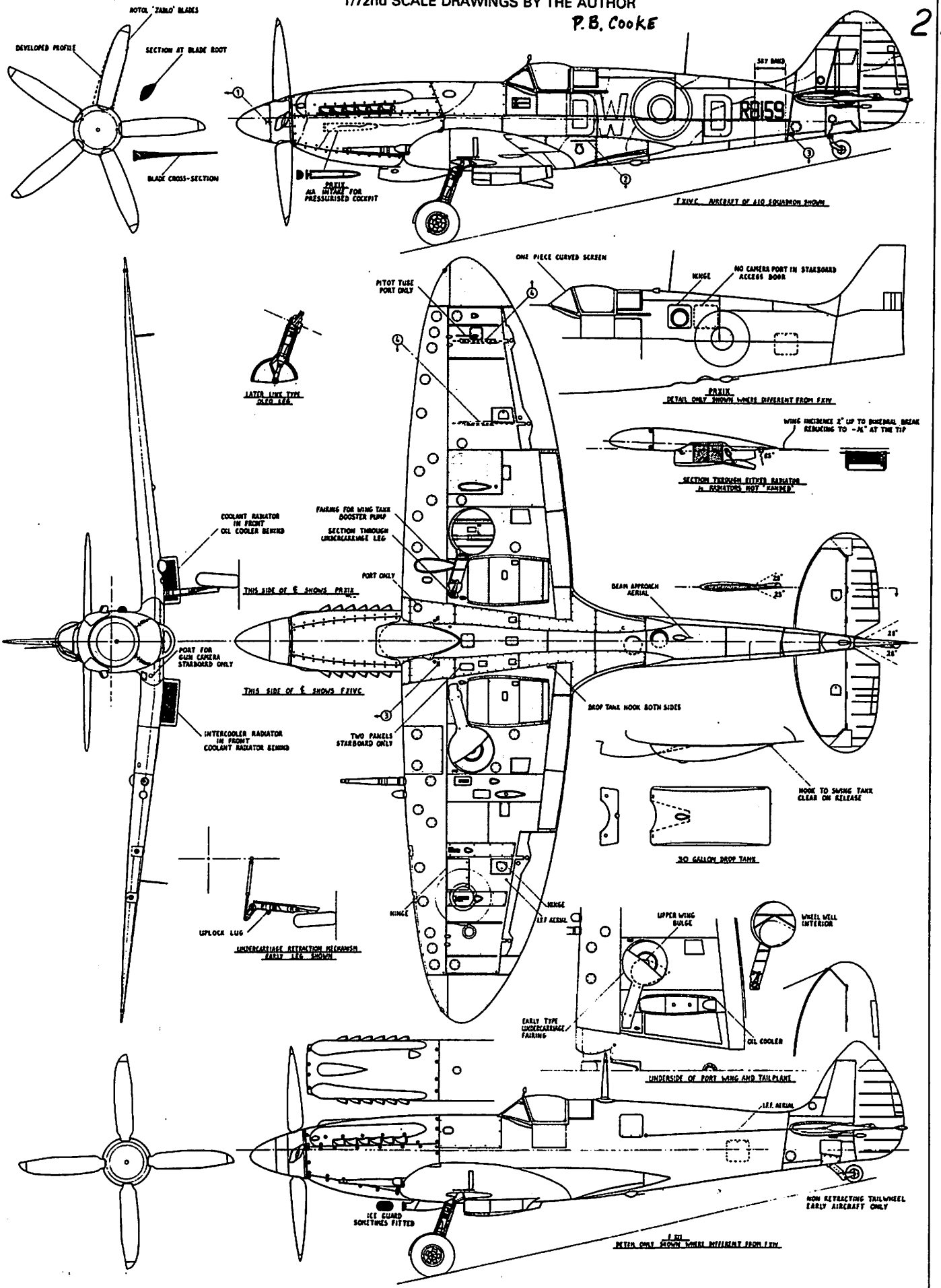
APPROX. UNDER WING FAIRING PIECE. TYPING PAPER

THIS EDGE GLUED TO 1/32" SHEET LET INTO FUSELAGE

1/72nd SCALE DRAWINGS BY THE AUTHOR

P.B. Cooke

21



22

SCALE FLIGHT MODEL CO. 1-812-339-8274 Telephone

630 Fairway Lane Bloomington, Indiana 47401

"Dime Scale" Full Kits

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Curtiss Airmail	16"	6.95
Corben Super Ace	16"	6.95
Consolidated BT-7	16"	6.95
Great Lakes Trainer	16"	6.95
Fokker D-7	16"	6.95
Stinson 105	16"	6.95
Art Chester Racer	16"	6.95
Boeing P26-A "Peashooter"	16"	6.95
Monocoupe 90A	16"	7.95
Spad 13	16"	7.95
Rearwin Speedster	16"	7.95
Fairchild 24 Ranger	16"	7.95
Vought Pursuit	16"	7.95
Curtiss Hawk P-6E	16"	6.95
Harlow	16"	6.95
Hawker Hurricane	16"	7.95
Vultee Attack V11-GB	20"	7.95
Aeronca Low Wing	16"	6.95
German Arado Ar96B-2	16"	6.95
Taylorcraft	20"	6.95
Curtiss Falcon	16"	6.95
Aeronca Seaplane	16"	6.95
Farman Stratoplane	16"	6.95
DeHavilland Puss Moth two part plan 1935 #324	16"	8.95
Mr. Mulligan	16"	7.95

Megow		
Curtiss Helldiver	12"	$6.95
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Corben Super Ace	18"	8.95
Corben Super Ace	12"	6.95
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Aeronca C-3	12"	6.95
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Consolidated P-30	12"	6.95
Tipsy -S	15"	6.95
Curtiss Export Falcon	12"	6.95
Polish Fighter	12"	7.95
Rearwin Speedster	15"	7.95
Hi Climber R.O.G.	12"	5.95
Fleet Trainer	12"	6.95

Peerless		
Bellanca Junior	15"	6.95
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Scientific		
Raven Endurance Model	25"	8.95
Bantam Endurance Model	25"	8.95

Catalog Reprint List

Year	Company	Price	Pages
1939	Modelcraft	$3.00	18
1939	Scientific	4.00	34
1940	Scientific	4.00	32
1940	Comet	4.00	38
1940	Megow	12.00	128
1941	Comet	10.00	64
1941	Megow	12.00	128
1942	Megow	12.00	128 War Time
1942	Comet West Coast	12.00	40 8½"X11" Big! War Time
1943	Scientific	4.00	20 War Time

All kits suitable for the new "Dime Scale" rubber event and the Brown Jr. A23-CO_2 motor. All kits are handmade and include the new Scale Flight Model Co. kit box.

Scale Flight kits consist of the following--Contest grade printwood (all parts printed out). Contest quality stripwood cut size. Machine cut balsa propeller(just like the old days) Or a plastic competition prop. The best Japanese tissue available-Has that superfine "krinkle". Wood wheels-Not plastic. Competion nose plug (bushed). Thrust washers (brass)and prop shaft. Prop freewheeler. FAI rubber strip motor. Copy of a genuine 10¢ plan that was used in the 1930-1940 era. Many plans 50 years old.

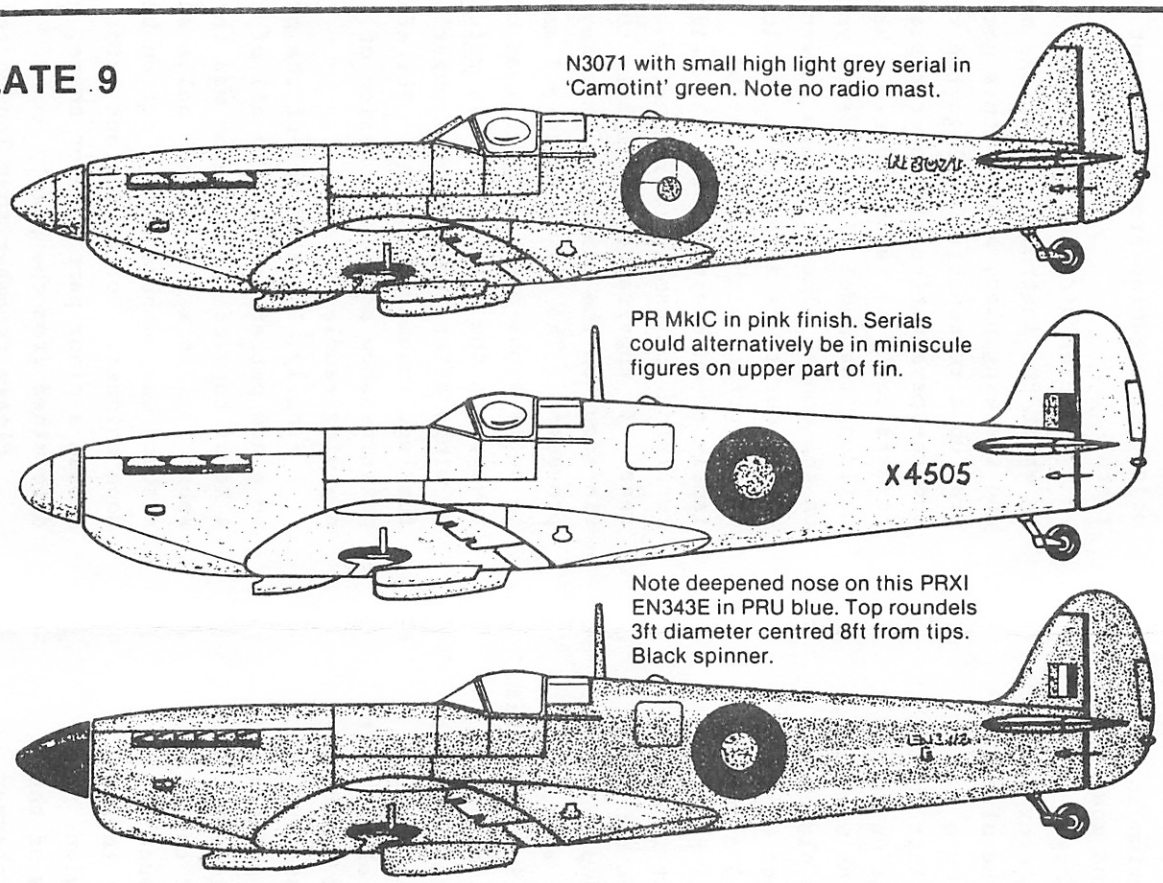
All prices subject to change without notice.

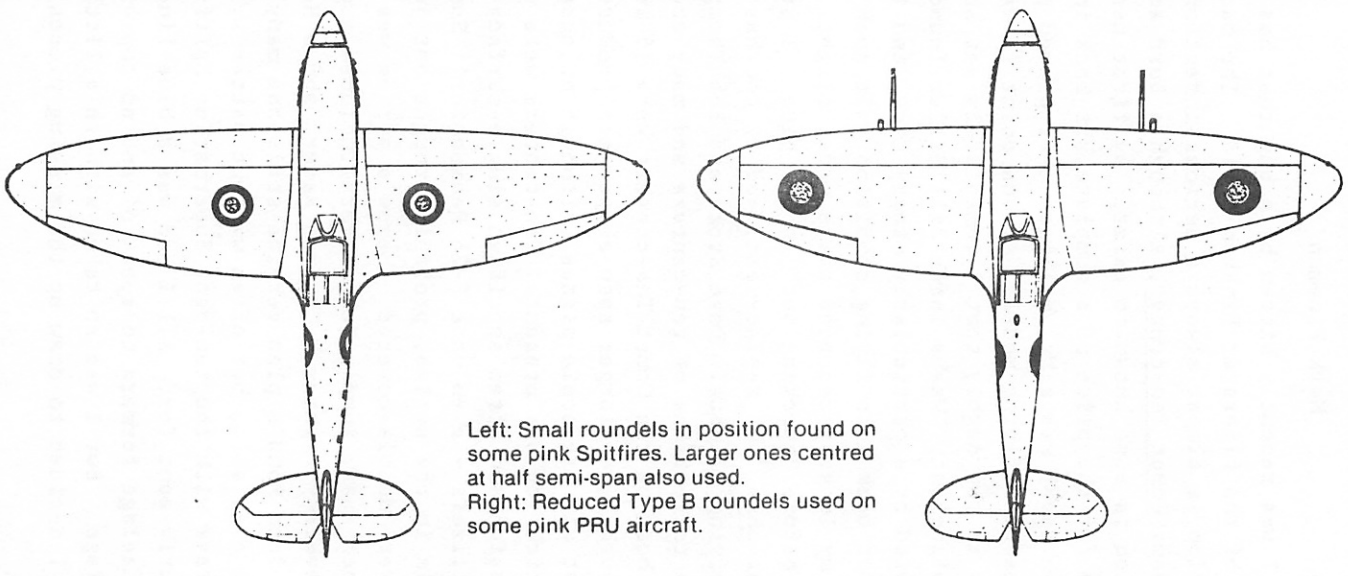
WITH NEW KIT BOX

PR Spitfires:

Hi ho Silver! From out of the West, the great masked Spitfire shot silver bullets 'Nes Paw? And FR Spitfires shot 'em with both camera and cannon. The silver bullets (film) had the greater impact. For Detroiten Geschwader fliers, think pink is is pretty on early PR Spit's. Solid colors compliment the Spitfire curves. D-Day stripes offer artistic contrast and brilliance. Opaque paint is really good for spotting models. Even Poly S water base Railroad model paint can be sprayed well by adding a drop of dish washer liquid soap and / or 30% Isopropyl alcohol. The Grillo 3/4 inch Spitfire has a good canopy vacuum form for use or plug.

PLATE 9





Left: Small roundels in position found on some pink Spitfires. Larger ones centred at half semi-span also used.
Right: Reduced Type B roundels used on some pink PRU aircraft.

Clifford Frost Ltd, Lyon Road,
Windsor Avenue, Wimbledon SW19 2SE.
01-540 2396

Subscriptions — Annual rates including postage £12 (UK and Eire, £13 (Overseas). If paid in currency other than Sterling, please add equivalent of £1 Sterling to cover Bank Charges. Send orders with remittance to Clifford Frost Ltd.

Courtesy

Aircraft Modelworld 10/84

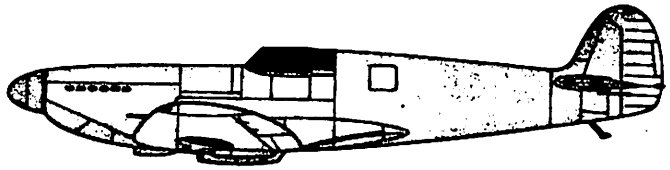
COMET TEN-CENTERS, OR ADVENTURES IN MODEL AIRPLANE ARCHEOLOGY

Mark Fineman

I was recently bitten by a bug that has long infected many of the fliers at Pinkham Field. The bacterium in question is almost always a serious infection and goes by the name Comet Ten-center, although a Burd and Megow version is also known to exist. My first ten-center (so named for the price of a complete kit back in the olden, golden days) was a Mr. Mulligan that proved to be a spectacular flying model. At one point it was lost in the woods so thoroughly that I immediately set about building a replacement. Weeks later Bill Miller found the wreckage, occupied by a particularly ornery tick, and the plane was put back into flying condition. It soon went on to make my longest recorded scale model flight: 10 minutes plus before "specking out" in the blue. I still have the sister ship, the replacement, and it too has put in many satisfying flights. Dave Stott and Bob Thompson both have large collections of ten-centers and many are superb fliers.

Most of the Comet Ten-centers were 16-inch span, although a few larger span ships were produced in the series. Almost all are scale planes, although an occasional sport or stick job was present. Ten-centers were usually simple in design and often specified single-surface wings and stabilizers - even on a P-26 Peashooter! Some of the last models in the series, probably brought out just before WW II, were double-covered. Megow's series was usually 15-inch span; Burd's Ten-centers included such goodies as a "Seversky Fighter," Caudron Racer, and a Helldiver.

John Pond's plan service still has many of these plans available, but often without patterns. Such was the case with the ten-cent Supermarine Spitfire that I recently sent for. All I had was a blue line plan; no fuselage formers to speak of and no top view of the fuselage. But I was so taken with this little charmer that I decided to draw up the missing pieces, much as an



Prototype

anthropologist or paleontologist reconstructs a complex object or organism from a fragment of pottery or a single tooth.

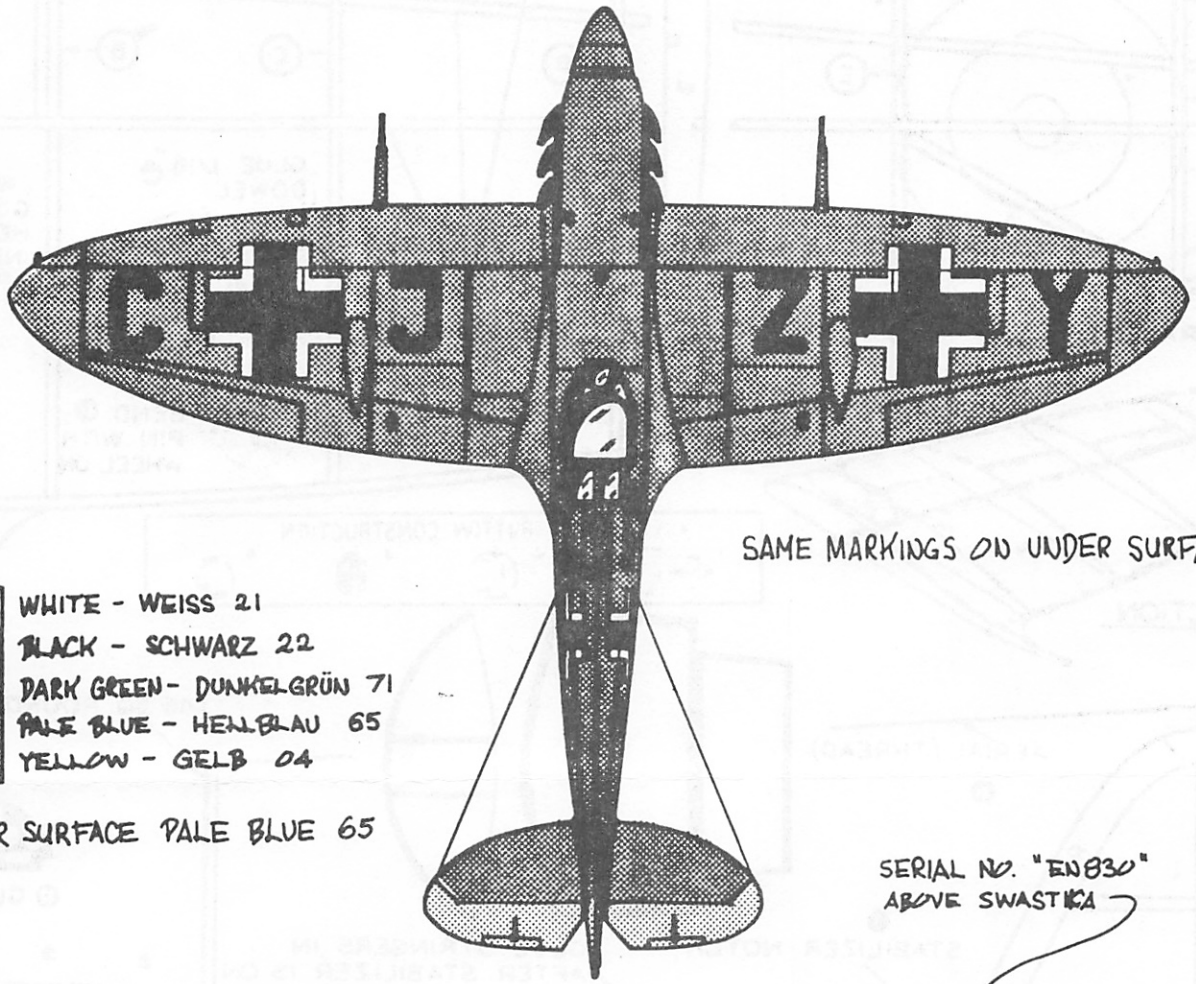
The plan did show one former, the number 3 former on which the instrument panel was mounted. Using this and the wing plan, along with a good 3-view, I was able to draw up a reasonable fuselage top view. Armed with that and the perspective view on the plan, all of the remaining formers could be reconstructed. Having just finished building the model, I can assure you that it looks right on the money. The plan also showed one wing rib. This worked out to be much like a section using a Simplex 4% upper surface with a flat bottom. Simplex airfoils are a family of curves that have the delightful property of retaining the same proportions, even when cut from the rear. It appears to be slightly thinner than the root rib shown on the plan, but that may actually be an improvement. The only departure I made from the plan was to build a one-piece wing instead of the stuck-on kind favored on the plan. I simply refuse to build stuck-on wings after regluing my Avenger's panels back to the fuselage innumerable times. Therefore the accompanying patterns show a revised version of part number 11, the new wing saddle.

Finally, I traced all of the parts, new and old, onto a new pattern sheet with all of the writing reversed. A Xerox copy of the patterns was then taped face down to a sheet of 1/16 x 3 x 12 inch balsa and the back of the pattern was swabbed with a cotton ball lightly dipped in dope thinner. Voila, instant print wood! I may have missed a minor part here or there, but they can be easily determined from the plan.

Please remember that Ten-centers are greasy kid models. Please, no vacuum-formed canopies or other evidence of super-detail. Keep it simple with lots of charm.

LUFTWAFFE MADE IN BRITAIN

SPITFIRE V, SERIAL EN 830 AT ECHTERDINGEN AIRFIELD

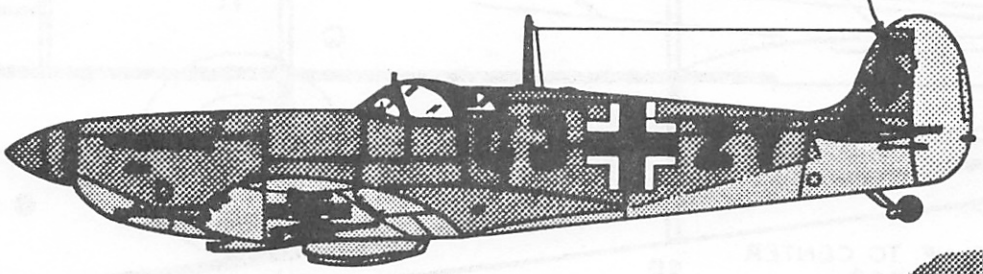


SAME MARKINGS ON UNDER SURFACE

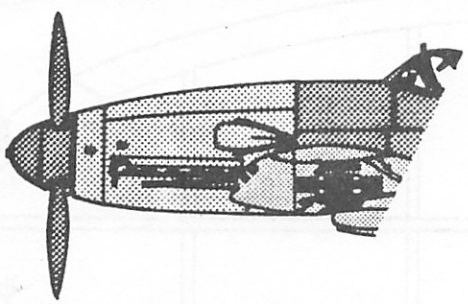
WHITE - WEISS 21
BLACK - SCHWARZ 22
DARK GREEN - DUNKELGRÜN 71
PALE BLUE - HELLBLAU 65
YELLOW - GELB 04

UNDER SURFACE PALE BLUE 65

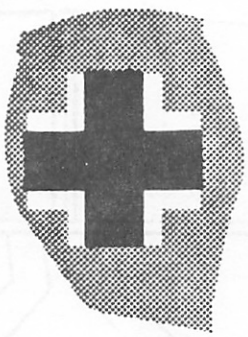
SERIAL NO. "EN830" ABOVE SWASTIKA



AFTER CONVERSION TO BF 109 G COUL



CROSS DETAIL

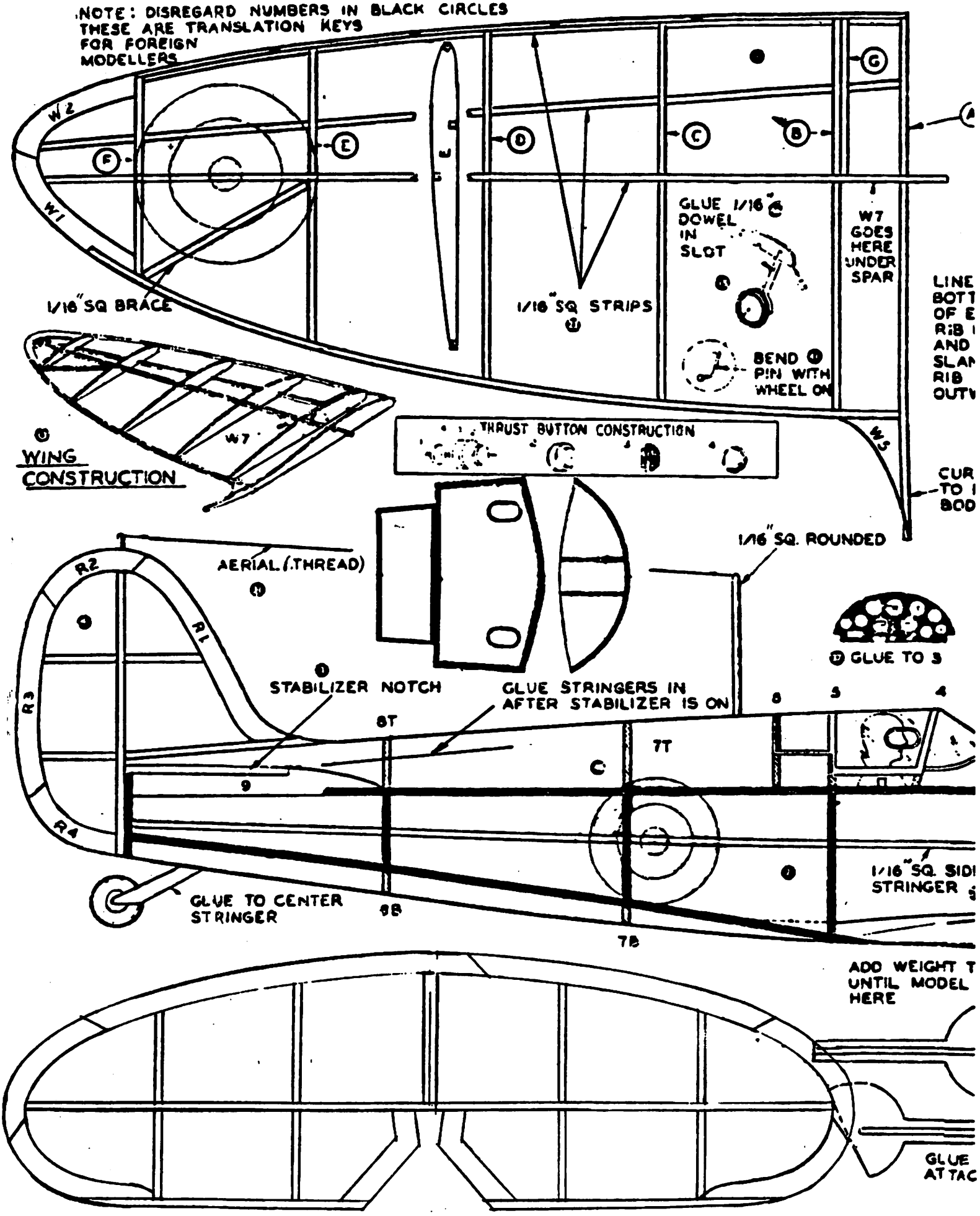


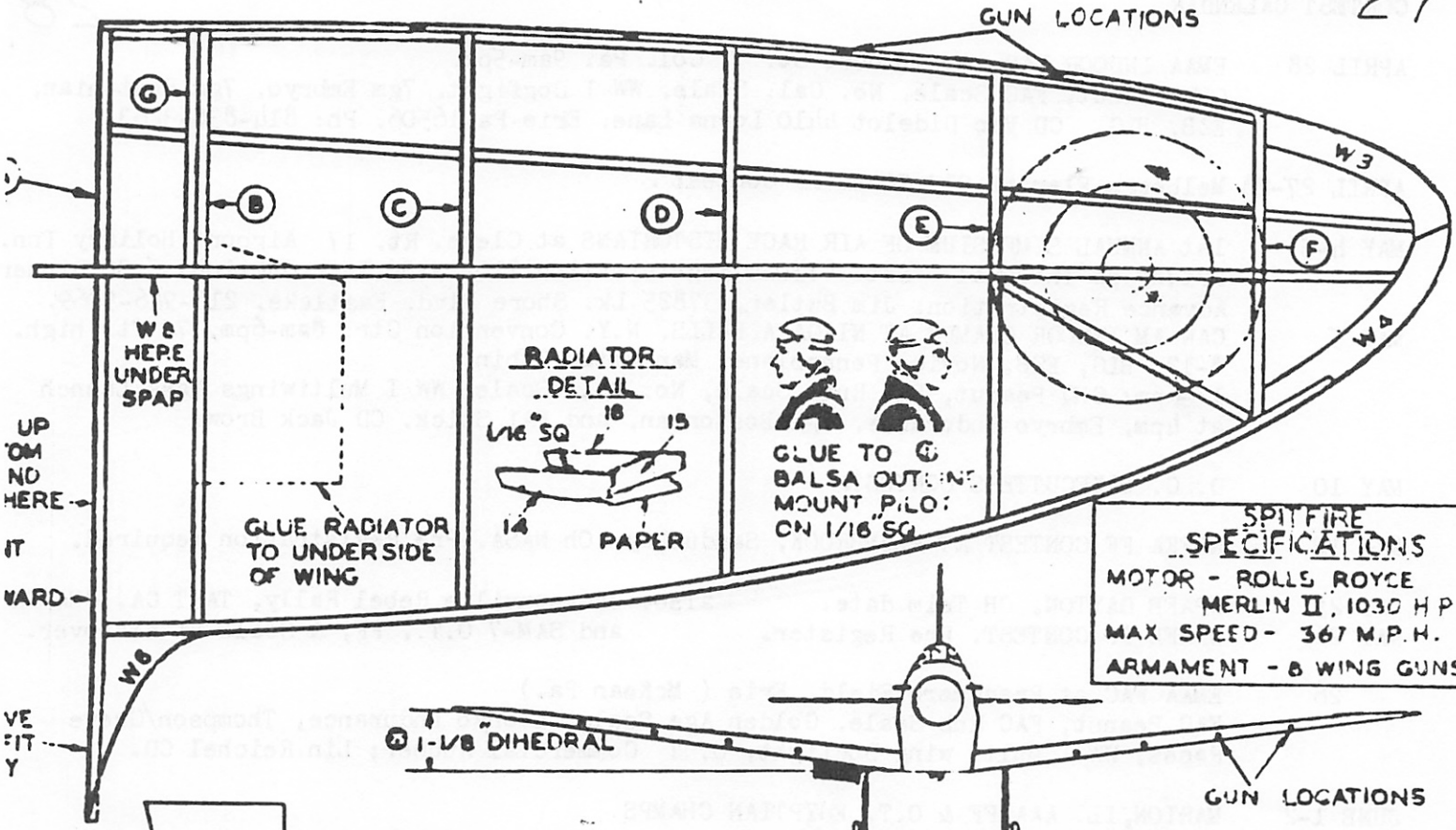


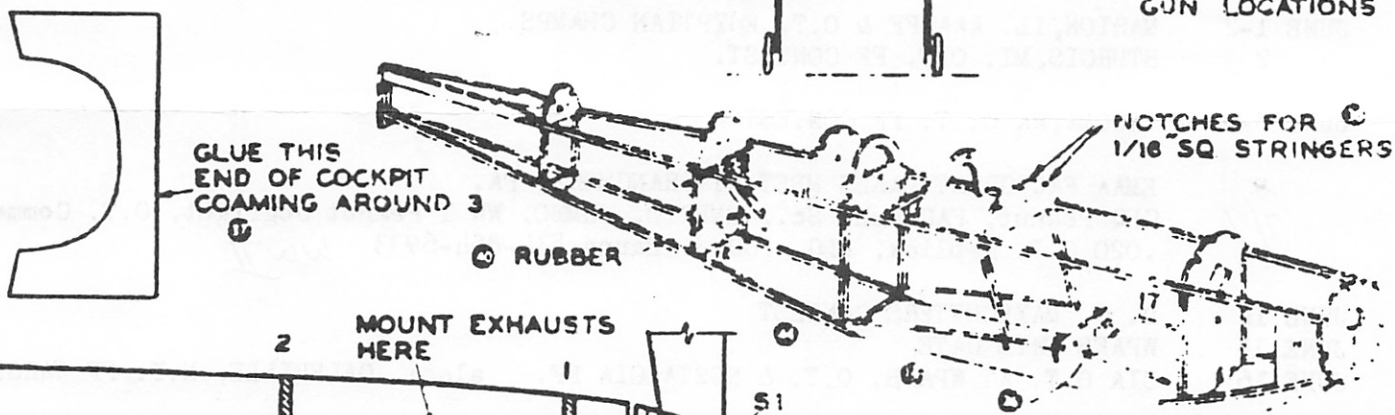
SWASTIKA DETAIL

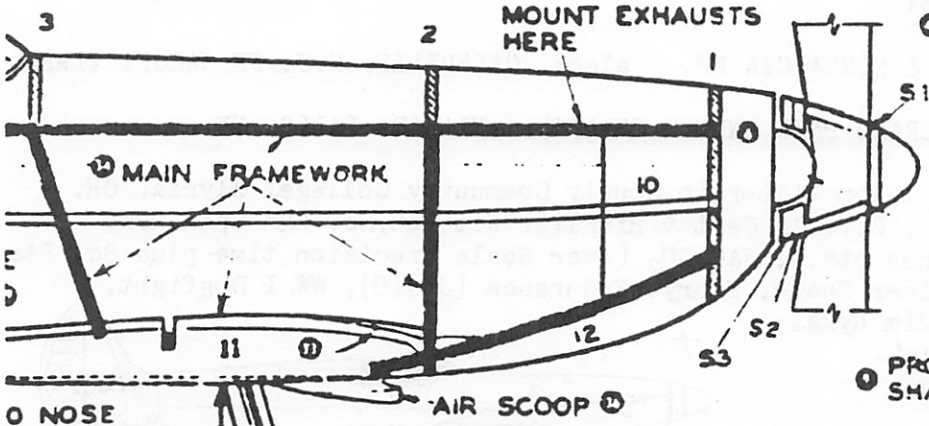
COURTESY DIRTY PLASTIC FALL '83

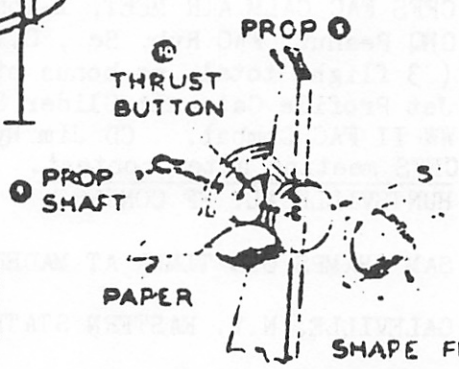
72 ND SCALE • • HENZ F. JACOBS

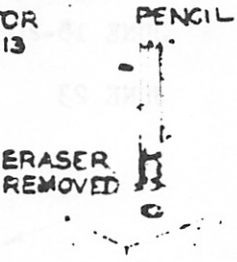

NOTE: DISREGARD NUMBERS IN BLACK CIRCLES
THESE ARE TRANSLATION KEYS
FOR FOREIGN
MODELLERS
W2
W1
F
E
D
C
B
G
1/16"SQ BRACE
1/16"SQ STRIPS
GLUE 1/16" DOWEL IN SLOT
W7 GOES HERE UNDER SPAR
BEND PIN WITH WHEEL ON
LINE BOTT OF E RIB AND SLAN RIB OUTV
W7
W3
WING CONSTRUCTION
THRUST BUTTON CONSTRUCTION
CUR TO BOD
1/16"SQ. ROUNDED
AERIAL (.THREAD)
R2
R1
R3
R4
STABILIZER NOTCH
GLUE STRINGERS IN AFTER STABILIZER IS ON
8T
7T
9
C
8
5
4
GLUE TO S
GLUE TO CENTER STRINGER
9B
7B
1/16"SQ SIDE STRINGER
ADD WEIGHT T UNTIL MODEL HERE
GLUE AT TAC

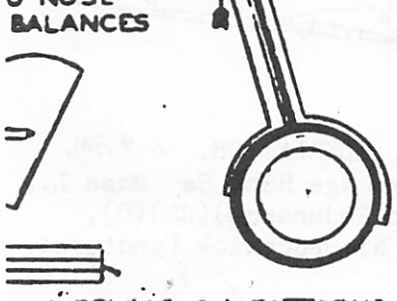


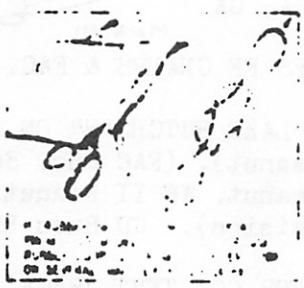












L 16" DOWELS ON PATTERNS
H WHEELS WITH PINS & GLUE

COLOR: ALL PALE BLUE
3/5/1936 B

SUPERMARINE SPITFIRE	
WINGSPAN 16"	LENGTH 12-3/4
KIT NO A38	DRAWN BY

CONTEST CALENDAR

APRIL 28 EMAA INDOOR FAC at Edinboro St. T. Col. Pa. 9am-5pm.
GHQ Peanut, FAC Scale, No. Cal. Scale, WW I Dogfight, 7gm Embryo, 7gm Bostonian, EZB, HLG, CD Vic Didelot 4410 Lorna Lane, Erie Pa 16506. Ph: 814-838-3263.

APRIL 27-28 Melbourn, Florida Old Timer FF Contest.

MAY 4-5 1st ANNUAL SYMPOSIUM OF AIR RACE HISTORIANS at Cleve. Rt. 17 Airport Holiday Inn. Friday pm informal - Sat. 8:30am Regristration $10- 9:30 Introductions 5:30 Dinner Advance Registration: Jim Butler, 37825 Lk. Shore Blvd. Eastlake. 216-946-9069.

MAY 5 CAN-AM INDOOR CHAMPS AT NIAGARA FALLS, N.Y. Convention Ctr. 8am-6pm. 70 ft. high.
8-12: HLG, EZB, Novice Pennyplane, Manhattan Cabin.
12-6pm: GHQ Peanut, FAC Rub. Scale, No. Cal. Scale, WW I Multiwings Mass Launch at 4pm, Embryo Endurance, 7gm Bostonian, and FAI Stick. CD Jack Brown

MAY 10 D. C. MAXECUTTERS CONTEST.

MAY 19 NOFFA FF CONTEST AT PLUMBROOK, Sanduskey, Oh NASA. Pre Registration required.

MAY 25 WPAFB DAYTON, OH Trim date. also: Jacksonville Rebel Rally, TAFT CA. CHAMPS
MAY 26 WPAFB FF CONTEST. Pre Register. and SAM-7 O.T., FF, & Scale at Westover.

26 EMAA FAC at Prangmore Field, Erie (McKean Pa.)
FAC Peanut, FAC Rub Scale, Golden Age Scale, Embryo Endurance, Thompson/Greve Races, WW I Multi wing Dogfight, O. T Commercial Rubber; Lin Reichel CD.

JUNE 1-2 MARION, IL. AAA FF & O.T. EGYPTIAN CHAMPS.
2 STURGIS, MI. O.T. FF CONTEST.

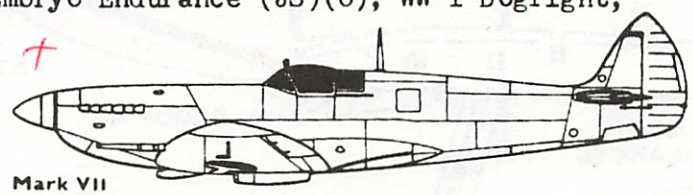
JUNE 8-9 TACOMA, WA O. T. FF CONTEST.

~~9~~ 7/7 EMAA FAC GREAT LAKES MEET AT PRANGMORE, PA.
GHQ Peanut, FAC Rub. Sc., EMBRYO, JUMBO, WW I Peanut Dogfight, O.T. Commercial, .020 O.T. Replica, HLG. CD J. Barna 814-864-6933 WWII

JUNE 14 D. C. MAXECUTTERS CONTEST
JUNE 15 WPAFB TRIM DATE
JUNE 16 CIA O.T. AT WPAFB. O.T. & NOSTALGIA FF. also: GALEVILLE, N.Y. FF TARGET TIME.

JUNE 18-20 NFFS, NIMAS, And MIAMA GRAND PRIX INDOOR CHAMPS at NIAGARA FALLS, NY.

JUNE 23 CFFS FAC CALM AIR MEET, 1-9pm at Lorain County Community College, Elyria, OH.
GHQ Peanut, FAC Rub. Sc., O.T. 10 Cent & Hi-Flier Kit Rub, Sc. 24" Span Max.
(3 flight total, no bonus pts.), FAC CO_2 Power Scale Precision time plus Sc. Pts.
Jet Profile Catapult Glider Scale, Embryo Endurance (JS)(O), WW I Dogfight,
WW II FAC Combat. CD Jim Hyka.
CFFS meeting after contest.
23 HUNTSVILLE AL. FF CONTEST.

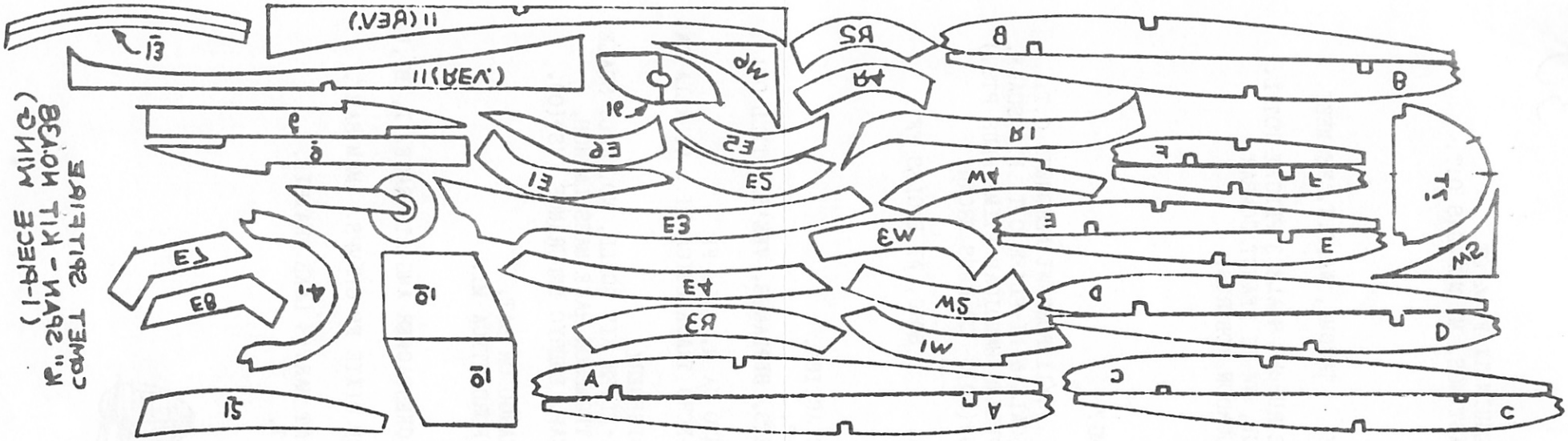

Mark VII

JUNE 24-27 SAM CHAMPS OLD TIMER AT MADERA, CA.

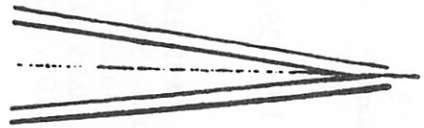
JUNE 29-30 GALEVILLE, N.Y. EASTERN STATES FF CHAMPS & FAC.

JUNE 30 CFFS FAC CALM HYDRO & FF AT "LAKE BUTCHSAN" ON L.C.C.C., ELYRIA, OH. 1-9 P.M.
(PLUS 20 for R.O.W.): (FAC Peanut), (FAC Rub. Sc.), Golden Age Rub. Sc. Mass L., No. Cal. Profile Sc., WW I Peanut, WW II Peanut, (Embryo Endurance)(JS)(O), (O.T. CO_2 Power Replica Precision). CD Russ Brown 4909 N. Sedgewick Lyndhurst.

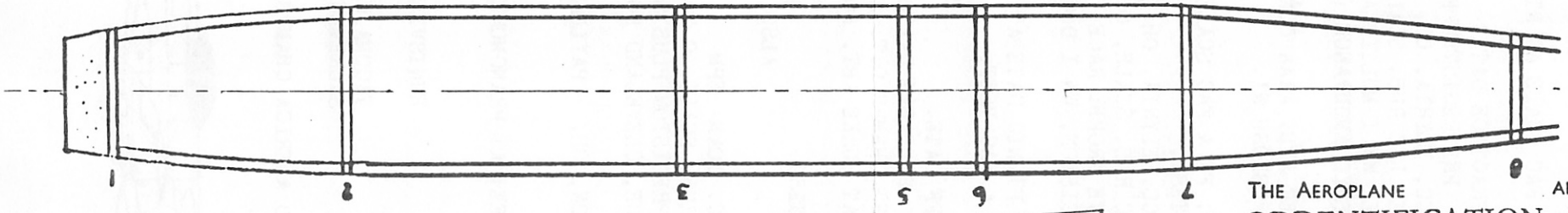
30 DETROIT FF ACTION AT FORD MOTOR CO. TEST TRACK, UTICA, MI. per vonRot ensox.

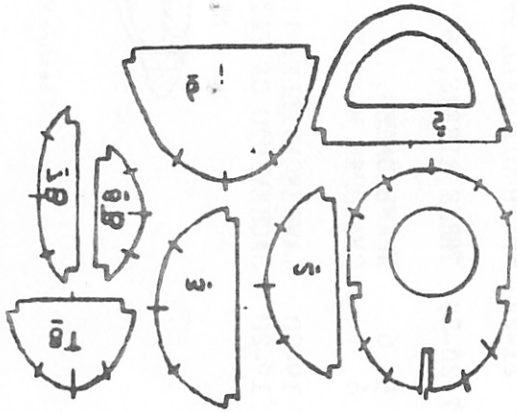


(1-PIECE WING)
½" SPAN - KIT NO. A3B
COMET SPITFIRE

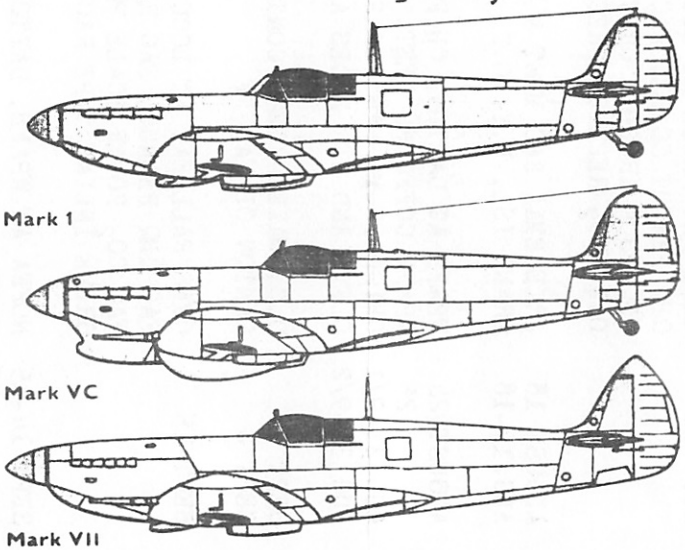


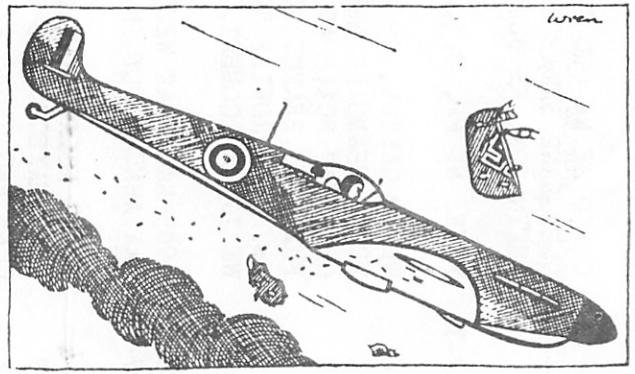
TOP VIEW
COMET SPITFIRE
½" SPAN - KIT NO. A3B





ODDENTIFICATION—V





'Gainst Merlin's magic Spitfire speed.
Elliptic wings and tail,
'Gainst super 'planes and super deed,
No German could prevail.

CONTEST CALENDAR

JULY 4 CHICOPEE, MA OLD TIMER FF AT WESTOVER AFB.
JULY 6-7 CLEVELAND BUDWEISER CAR RACE, CFFS USHERS SEGUIN, TX FF & OT
JULY 7 LEXINGTON, KY BLUEGRASS FF CHAMPS HASTINGS, MI NON-GAS O.T.

JULY 13-14 PIKE, NY FF, O.T., & FAC SCALE AT RT. 19 & 39.

JULY 20 WPAFB DAYTON, OH FF PRACTICE DATE.
21 WPAFB FFAMS FF MEET. PRE REGISTER FOR GATE ENTRY. TACOMA, WA.O.T. FF MEET.
JULY 21 CFFS FAC SCALE AT LCCC, ELYRIA, OH. 10AM- 5PM.
FULL FAC PEANUT SCALE, FAC RUB. SCALE, GOLDEN AGE RUBBER SCALE 3 FLIGHT TOTAL.
No. Cal PROFILE SCALE, WW I MULTIPLANE MASS LAUNCH, WW II PEANUT COMBAT,
WW II FAC COMBAT, EMBRYO ENDURANCE (JS)(O). CD GORDON ROBERTS.

JULY 28-8/3 1985 NAT'S AT WESTOVER AFB. AAAA CONTEST.
27-8/4 EAA ANNUAL FLY IN AT OSKOSH WI.

~~AUGUST 4 GRAND ISLAND,~~ NY O.T. FF & FAC SCALE. DATE PENDING?
AUG. 9 D.C. MAXECUTTERS CONTEST.
AUG. 11 CFFS FAC RACES AT LCCC, ELYRIA, OH. 10AM- 5PM. 8/11 BONG WI AERONUTS O.T.
GHQ PEANUT SCALE, FAC RUB. SCALE, O.T. 10 CENTS SCALE & HI-FLIER O.T. KIT SCALE,
THOMPSON TROPHY, GREVE TROPHY RACE, POST WAR CLEVELAND HANDICAP (TIME PLUS PTS.)
O.T. CO_2 REPLICA PRECISION, WW I DOGFIGHT, HLG (J)(SO). CD RUSS BROWN

AUGUST 18 ERIE EMAA FAC MEET & PICNIC DATE AT PRANGMORE, PA. BONG, WI EAGLES FF
AUG.17-18 GRAND ISL. N.Y. O.T. & FAC MEET.

AUGUST 24 WPAFB AT DAYTON, OH FF DATE.
25 WPAFB COFFC FF MEET. PROBABLE DAYTON BUZZARD FAC ACTION.
AUG 31-9/1 CHICOPEE MA EAST COAST CHAMPS O.T. AT WESTOVER AFB.
AUG 31-9/2 CLEVELAND AIR RACES AT BURKE APT. FORMULA I MIDGETS, BIPLANES, VEE'S. STILL ON!

SEPT 7 D.C. MAXECUTTERS CONTEST. 9/5 SACREMENTO CA N. CAL. FF
SEPT 8 CANTON OH FAC FF ALSO : DETROIT AT FORD TRACK UTICA MI.; VISALIA CA.

SEPT 15 CFFS FALL FAC AT LCCC. 10AM- 5PM CD DAVE PISHNERY
FAC GHQ PEANUT, FAC RUB. SCALE, O.T. 10 CENT & HI-FLIER KIT SCALE, NO. CAL. SCALE,
FAC CO_2 POWER SCALE PRECISION PLUS SCALE POINTS, THOMPSON RACE MASS LAUNCH,
GREVE INLINE TYPE RACE, CLEVELAND POST WAR HANDICAP, EMBRYO ENDURANCE (JS)(O).

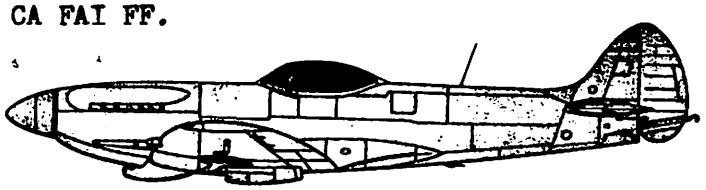
SEPT 14-15 NOFFA AT WPAFB, DAYTON, OH. PAYLOAD / CLIPPER CARGO ON SAT.
15 NOFFA AT WPAFB DETROIT AT FORD UTICA MI.

SEPT 22 ERIE EMAA FALL GHQ MEET AT PRANGMORE, McKEAN PA.
21-22 WPAFB CIA FALL FF COLUMBUS RICKENBACKER ANG AIR RACE. I, BI, V.

SEPT 28-29 THREE RIVERS, MI FF HUNTSVILLE AL HEART OF DIXIE FF CHAMPS. MAM SAM .

OCT 5- 6 WPAFB DATES. TACOMA WA SAM 8 O.T. AT HART'S LAKE PRAIRIE.
6 CHICOPEE MA O.T. FF SACREMENTO CA FF & O.T.

OCT 19-20 LAWRENCEVILLE, IL MID AMERICA CHAMPS FF & O.T.
19-20 SACREMENTO CA FAI FF.



Seafire XVII