VERON

37" SPAN. 9th Scale

LAVOCHKIN 17

FREE-FLIGHT SCALE POWER MODEL FOR PROPULSION BY THE "IMP SYSTEM" OF DUCTED IMPELLER

PATENT APPLIED FOR.

THIS A NEAR SCALE MODEL OF THE LATEST RUSSIAN ESCORT FIGHTER WE 40" X 3" SPAN & 37" LENGTH, THE STABILIZER HAVING BEEN ENLARGED FOR STABILITY.

SPAN : 37" LENGTH : 34"

DESIGNED FOR USE WITH ENGINES FROM .5 c.c. UP TO .87 c.c. SUCH AS THE FOLLOWING - ELFIN .5 c.c.; ALLBON DART .5 c.c.; FROG 60 ; AMCO .87 c.c. ; MILLS .75 c.c. ; ALL ENGINES USE THE STANDARD 3" DIAM. IMPELLER WITH VARYING PITCHES TO SUIT. ALL UP WEIGHT IS APPROXIMATELY 11½ OZS MAXIMUM. MODEL IS HAND LAUNCHED HAVING NO UNDERCARRIAGE. DOUBLE COVERING THE UNDER-SIDE WITH TISSUE WILL SUFFICE FOR ALL NORMAL LANDINGS.

THE ORIGINAL AIRCRAFT HAS "FLOW-STRAIGHTENERS" ABOVE RIBS R.3. & R.5. TO CONSERVE PRINTED WOOD IN THE KIT, THESE HAVE BEEN OMITTED BUT CAN BE VERY EASILY CUT FROM ⅛" SHEET USING TOP EDGES OF RIBS AS TEMPLATES. SEE BOX LID ILLUSTRATION FOR SHAPE.

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 3A.

STEEL RULE

FIG. 3B.

TRIM WITH RAZOR BLADE OR KNIFE

FIG. 3C.

OF F.7. & F.8. OMITTED PRIOR TO FITTING OF WING TONGUE.

FIG. 4.

PORT & AFT PARTS OF FORMERS 2 & 2A, & F.6 ARE LAMINATED BEFORE FITTING CHIEF DUCT.

FIG. 5.

SHOWING HOW MATCH STRIPS ARE ATTACHED TO FRONT WHOLE STRUCTURE AT SEVERAL POINTS WITH RUBBER BANDS AND LAMINATED FORMERS 2A & 6A TO PROFIT & REAR OF CUT-OUT POSITION. CHECK THAT THESE ARE SQUARE TO F/U.

FIG. 6.

SLOT.

NOTE DOUBLE ⅛" x ⅞" LAMINATION.

FIG. 7.

SKETCH SHOWING LOWER DUCT HALF WITH STAGES OF FORMER CONSTRUCTION & EVENTUAL ADDITION OF ⅛" x ⅛" MAIN STRINGER. ⅛" x ⅛" STRINGERS ADDED LATER.

FIG. 8.

F.7.

⅛" GUSSETS.

R.1.

CARD FAIRING.

SKETCH SHOWS HOW ⅛" WING TONGUE IS LOCATED (AFTER CONSTRUCTION OF WING BOXES IS COMPLETE) & UPPER HALF OF F.7. IS LOCATED - THE TONGUE MUST BE VERT. PURELY LOCATED ON THE DUCT ROOF BY DOUBLE COATING WITH CEMENT THEN SLIDE RUBS R.1 INTO PLACE, AND ADD ⅛" GUSSETS.

PARTS MARKED '2'

FIG. 9.

LAMINATED UPPER HALF OF FORMER 2 TO FORM FORWARD WALL OF ACCESS PANEL. DUPLICATE IN REVERSE FORMING OPPOSING EDGE OF APERTURE.

NOTE STRINGER POSITIONS - 8 ON EACH SIDE.

LAMINATE THREE FORMERS OVER PLAN LEDGE USING TISSUE

FIG. 10.

LAMINATED UPPER HALF OF FORMER 6 & 6A.

PARTS MARKED '2A'

SECTION THRU' W/U AT F.7. SHOWING MAKE UP OF FORMERS OVER HEXAGON DUCT, TOGETHER WITH WING TONGUE & LOCATION OF STRINGERS.

FIG. 11.

INSIDE OF TWO HALVES OF DUCT ARE LINED WITH TISSUE, DOPED IN PLACE & FUEL PROOFED BEFORE JOINING. THEN SEAL ANY GAPS WITH TISSUE DOPED IN PLACE ALONG OUTER EDGE OF JOINT BETWEEN FORMERS.

FIG. 12.

SECTION OF DUCT AT IMPELLER.

NOTE HOW HEXAGON DUCT IS COMPLETED TO A ROUND BY ADDITION OF 12 PIECES OF BALSA - 6 PIECES @ ⅛" SQUARE & 6 PIECES @ ⅛" THICK AT VARYING WIDTHS. THEN WIRE STRIP OF SHEET (WHICH SET CROSSWISE) COMPLETES CLOSE PROXIMITY ABOUT THE SMALL SIDE SMITH HOLE OF IMPELLER. GRIP TIP SEE TO SUIT THE BLADE PITCH. CAREFULLY ALL EDGES OF METAL SMOOTH TO PREVENT ACCIDENTS. ALSO BOWING CORNERS WHERE SHOWN IF TOP REVS CANNOT BE ACHIEVED. CUT EXCESS BLADE WIDTH DOWN WITH HEAVY SCISSORS AS INDICATED BY DOTTED LINES. CHECK ACCURATELY FOR BALANCE SEE INSTRUCTION SHEET FOR DIFFERENT ENGINES.

FIG. 13.

ENGINE MOUNTING DETAILS

ALLBON DART - 5 c.c.

FROG 60 MOUNTING DETAILS NOT AVAILABLE AT TIME OF GOING TO PRINT

AMCO .87 & MILLS .75

MOUNTING THE ELFIN - 5 c.c.

FRET OUT A DISC OF ⅛" PLY (NOT SUPPLIED IN KIT) 1½ DIAM. MARK OUT THE TWO BOLT MOUNTING HOLES, OUT A CROSS, THE CENTRE, THEN DRILL FOUR TWO B.A. BOLTS AT 1" APART THRU' BECKWING STRAP OF TIN. (SEE SKETCH). FRET OUT KEY SLOT IN PLY MOTOR PLATFORM TO SHAPE TWO CONICAL BALSA BLOCKS AS SHOWN AND GLUE SMART ONE TO MOTOR PLATFORM WHEN DRILLING LOWER HALF OF TIN THRU' BOTH. ASSEMBLE TWO PLY DISCS WITH BALSA BETWEEN, FULL SIZE SLOT IN OTHER CONICAL BALSA BLOCK VERY FIRMLY CEMENTED IN PLACE. NOTE THAT ENGINE HAS TO BE MOUNTED SIDE WAYS WITH CYLINDER HEAD LEANING TO STARBOARD ENABLING NEEDLE EXTENSION TO BE CARRIED OUT THRU' DUCT TO STARBOARD LOWER SIDE OF F/U.

KEY SLOT.

BALSA FAIRING.

6 B.A. BOLTS & TIN STRAP.

FIG. 14.

FIG. 15.

NOSERING OF TRIPLE LAMINATED STRIPS ¼" WIDE x 8" LONG ROUND ROUND PINS.

FIG. 16.

TAIL-RING OF TRIPLE LAMINATED STRIPS ¼" WIDE x 8" LONG ROUND ROUND PINS.

VERTICAL PINS.

NOSE & TAIL RING TEMPLATES.

FIG. 17.

WING TONGUE IS CUT FROM ⅛" x 3" BALSA DO NOT CRAMP TO PREVENT UNITS FROM BOWING WHEN BEEN SHAPE PIN FINAL OUTLINE ONTO SHEET SUPPLIED & THEN CUT OFF, USING STRAIGHT EDGE & BALSA KNIFE.

FIG. 18.

SKETCH SHOWING SIMPLE WING CONSTRUCTION OF SPARS TYPE & RIBS WITH LEDGE & TONGUE BOX ADDED AFTER ALL RIBS ARE IN PLACE NOTE SPECIAL INSTRUCTION REGARDING TONGUE BOX.

⅛" x ⅞" NOTCHES IN TRAILING EDGE.

TEMPLATE FOR ANGLE OF BASE RIB.

SPAR IS ⅞" x ⅞" TO B.A. THEN TAPERED TO ⅛" SQ. AT EDGE TO END RIB E.S.

BASE RIB IS BUTT JOINTED TO SPARS

BALANCE C.G. LINE

REAR SPAR IS ½" x ⅞".

T/EDGE IS ⅞"

LEADING EDGE IS ⅛" x ⅛"

⅛" GUSSET.

FIG. 19.

⅛" x ⅞" SPAR

FIG. 20.

SPARS BUTT JOINTED AGAINST RIB.

⅛" x ⅞" SPAR.

TEMPLATE FOR ANGLE OF BASE RIB.

TO FIT ⅛" x ⅛" DIAGONALS, TURN STRUCTURE OVER & MAKE ⅛" x ⅛" SLOT IN SPAR, THEN CUT STRUT TO LENGTH THEN LOCATE SEPARATELY.

⅛" x ⅛ DIAGONALS TO LOWER SURFACE (SEE INSTRUCTIONS)

C.G. BALANCE LINE

FIG. 21.

BUILDING UP TONGUE BOXES.

1" BLOCK.

TONGUE.

WHEN STRUCTURE OF EACH WING PANEL IS COMPLETE, SET UP CUTOUT BOARD WITH TWIN ON WING SLOTS IN POSITION TO SUIT DIHEDRAL & SECURE. USING CUTOUT POSITION SURFACES AS GUIDE, CHECK CHIEF'S CORRECT ITS POSITION & ANGLE BETWEEN SPARS & RIBS R.3 & R.5 BY TEMPORARILY LOCATING ½" TONGUES. THEN SIMILARLY LOCATE UPPER BOX SIDE CHECKING R.3 & F.7 AS BEFORE. WITH TONGUE MAKE SURE THAT TONGUE IS A VERY CLOSE FIT, TEMPORARILY PINNING SIDE RUBS THRU' SPARS IF NECESSARY. NOTE THAT LONGER SIDES OF BOXES PROJECT THROUGH THE RIB. THESE SHOULD BE SANDED FLUSH TO THE RIB SURFACES ONLY. THEN SHOULD THE TONGUE BE SHIFT INTO THE CENTRE SECTION.

FIG. 22.

½" T/EDGE; SLOTS ARE ⅞₆₄" DEEP.

SPAR IS ⅛" x ⅞"

LEADING EDGE IS ⅛" x ⅛"

TONGUE

TWO HALVES OF TAIL-PLANE ARE ONLY JOINED TO F/U AFTER ALL PARTS OF TAIL ASSEMBLY HAVE BEEN COVERED & DOPED.

⅛" x ⅛" DIAGONAL LET INTO SLOTS ON UNDER-SIDE OF STRUCTURE AS IN FIGURE 28.

⅛" GUSSETS.

FIG. 23.

SKETCH SHOWING HOW ENDS OF ⅛" x ⅛" & ⅛" x ⅛" ARE CHAMFERED TO FIT CLOSE AGAINST HOSE-RING & CRAMPED, THEN SANDED PLUSH.

FIG. 24.

⅛" WIRE.

6 TURNS SWIMMING.

FIG. 25.

FILLER TUBE

FIG. 26.

TRACE THIS PATTERN ONTO THIN CARD AND CUT OUT - 2 OFF - FOR WING ROOT FAIRINGS ON UPPER SURFACE.

TANK.

⅛" PLY PLATFORM

FIG. 27.

FILL IN GAP BETWEEN FIN & TAIL WITH SERRATED STRIPS OF SOFT SHEET AND CEMENT IN PLACE.

FIG. 28.

FIVE POINTED RED STAR INSIGNIA ON TOP SURFACES ONLY.

⅛" SHEET TIP.

FIG. 29.

FIN AND TAIL ARE RETAINED UPON THEIR LOCATING PINS BY SPRING CLIPS (SHOWN DOTTED) IN BRASS TUBE FIRMLY CEMENTED TO BASE RIB BEFORE COVERING.

FIG. 30.

DRILL FOR DART.

PROLETS

ELFIN.

FIG. 31.

30° PITCH ANGLE FOR IMPELLER

30° ANGLE.

PITCH TEMPLATE

NOTE THE GRAIN CHOOSE SOFT SHEET.

⅛" x ⅛" BASE KEEL STRINGER

⅛" x ⅛" BASE SIDE STRINGER.

UNDER-SIDE ADDED AFTER COVERING.

HEAVY OUTLINE SHOWS DUCT WALLS CUT & OFF EACH FROM 4" x 3" WIDE ⅛" SHEET - STAGGERING FORWARD PANELS 2 TO A SHEET - TRANSFER PATTERNS BY PIN-PRICKING THRU' & OPTION OUT WITH KNIFE & STEEL RULE OR STRAIGHT EDGE.

FILL IN WITH SCRAP

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