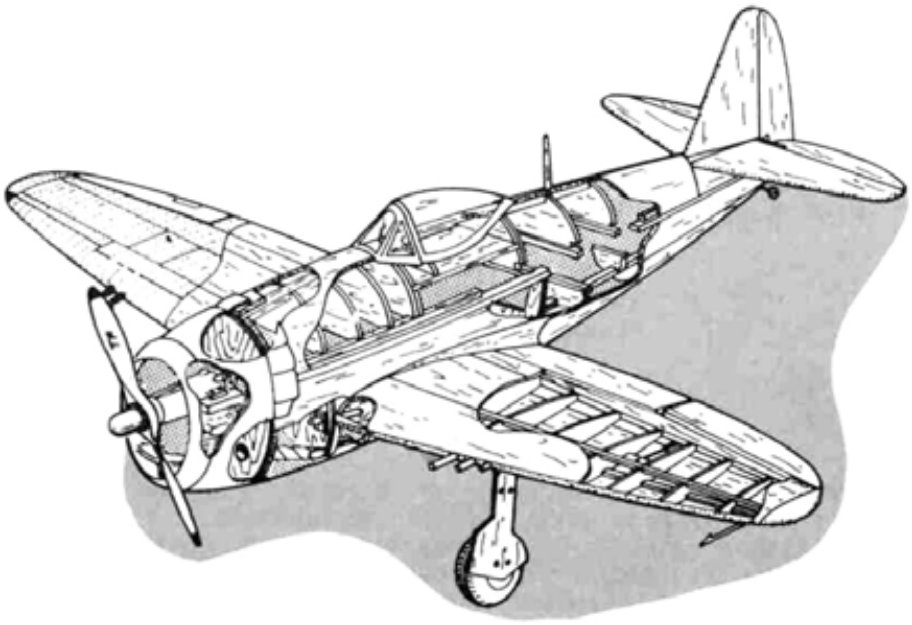
Building the

P-47 THUNDERBOLT



TOP FLITE MODELS INC.
2635-47 SOUTH WABASH AVENUE • CHICAGO, ILLINOIS 60616

Congratulations!

You now own the most accurate R/C Stand-Off Scale kit ever produced.

We at Top Flite hope that you will find this model the most pleasant to build, inspiring to look at and exciting to fly that you have constructed.

It is honest to point out, however, that while this model is no more difficult - in fact is simpler than most comparable kits to make, R/C Scale models generally are not for the newcomer to this hobby. Previous modeling experience and careful attention to craftsmanship are necessary. Even the "old hand" will do well to study and follow the instructions and guidance given in this booklet.

It is our aim to have you say: "This is the finest model I have ever built."

TOP FLITE MODELS, INC.

ACKNOWLEDGEMENTS

The staff of Top Flite wishes to acknowledge the assistance of the following individuals who contributed their time and talent to the successful creation of this kit:

Col. JIM G1LHULY (USAF RET.)
ART SCHROEDER
ART SAB1N
CLARK MACOMBER

Top Flite Models, Inc.

WARNING

A RADIO CONTROLLED MODEL IS NOT A "TOY". CARE **AND** CAUTION MUST BE TAKEN IN PROPERLY BUILDING THE MODEL AS WELL AS IN THE INSTALLATION AND USE OF THE RADIO CONTROL DEVICE. IT IS IMPORTANT TO FOLLOW ALL DIRECTIONS AS TO CONSTRUCTION OF THIS KIT AS WELL AS INSTALLATION AND USE OF THE ENGINE AND RADIO GEAR. THE ADVICE AND ASSISTANCE OF A WELL-EXPERIENCED BUILDER AND PILOT ARE ESSENTIAL. DON'T TAKE CHANCES. IMPROPER BUILDING, OPERATION OR FLYING OF THIS MODEL MAY RESULT IN SERIOUS BODILY INJURY TO OTHERS, TO YOURSELF OR PROPERTY DAMAGE.

THE P-47 STORY

The P47 was produced in larger numbers than any other U.S. Fighter of WWII. 15,683 production versions ranged from the P47-B, C, D, E, F, G, H, J, M, and N. Somewhat overshadowed by the publicity accorded the "Mustang" and the "Spitfire", the "Thunderbolt" was, nonetheless a most distinguished and respected aircraft by friend and foe alike.

The first P47 was test flown in May, 1941 and was known as the XP-47B. This aircraft was designed to fill the need for a fighter aircraft able to exceed the anticipated ceilings of enemy bombers, out gun them offensively; to escort and provide cover for American bombers flying in the Substratosphere, and to out-gun enemy interceptors.

The first production models were assigned to fighter units in England where it **became** extremely popular with AAF Pilots because of its ability to absorb extensive battle damage and still remain flying.

Perhaps the most outstanding tribute to this aircraft is the fact that all ten of the leading Thunderbolt "Aces" survived the war. Colonel Glenn T. Eagleston was one of these. This kit is the P47D-25-RE version flown by Colonel Eagleston while a member of the 35rd Sq, 354th Gp, 19th Tactical Air Force commanded by General O.P. Weyland. Col. Eagleston was the top "Ace" of the ninth Air Force, credited with 23'/2 destroyed, 2 probables and 7 damaged enemy aircrafts. It is to Colonel Eagleston that this kit is respectfully dedicated.

References: Aero Publishers, Inc.
329 Aviation Road
Fallbrook, California

Camouflage & Markings
Ducemus Books, Ltd.
London, England

Thunderbolt in Action
3461 E. Ten Mile Road
Warren, Michigan 48091

U.S. Army & Air Force Markings, 1916-1961
Library of Congress Card No. 61-16739

CONSTRUCTION OF P-47

BEFORE YOU START, READ THIS:

The assembly sequence of your Top Flite P47 has been carefully developed to help assure the correct alignment of your model. Utilize the check-off blocks as you build; this will allow assembly of your model in minimum time.

Before beginning an assembly step, read the instructions to familiarize yourself with the parts to be used. Find the parts mentioned and double check them for proper identification and size with the plans. Do nut separate parts from the die cut sheets until you need them. There are machined parts in your kit which are not identified, such as the fuselage siders, stab, ailerons, etc. These parts can be easily identified by checking the parts against the plans.

We are sometimes asked which glues are best for model construction. The answer to this depends upon the particular job. This is our normal recommendation: For all hardwood-to-hardwoud or hardwood-to-balsa joints, use white wood glue. "Titebond" is especially good, as it dries faster than other white glues and is very strong. For balsa-to-balsa joints, regular balsa-wood cements are ample for the job, although white glue can be used here too. Whichever type you use, remember that excess glue is no substitute for a well-fitting joint. Use a minimum of glue at all times, and wipe off excess glue that squeezes out of joints before it sets hard; when set it is difficult to remove, but if not removed it could spoil the covering job.

CONSTRUCTION SEQUENCE

Follow each step in order and put check marks in the blocks as you complete each phase described.

FUSELAGE

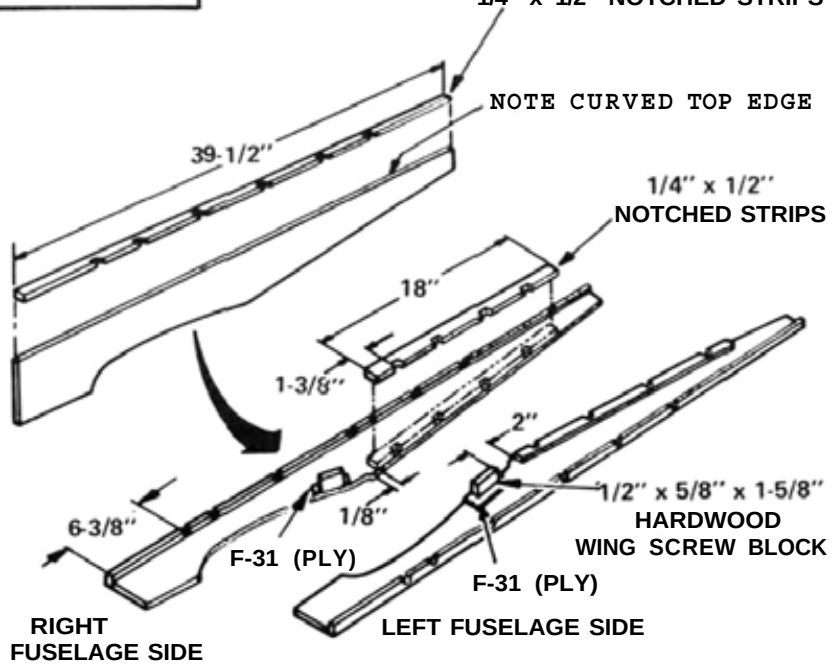


FIG. 1

STEP 1

- ☐ Glue 1/4 x 1/2 notched balsa strips to fuselage sides. Make a right and left side. Note: Curve on top edge of fuselage sides is intentional.
- ☐ Glue ply braces F-31 to fuselage sides. (See plans for position)
- ☐ Glue hardwood wing screw blocks in place.

FUSELAGE

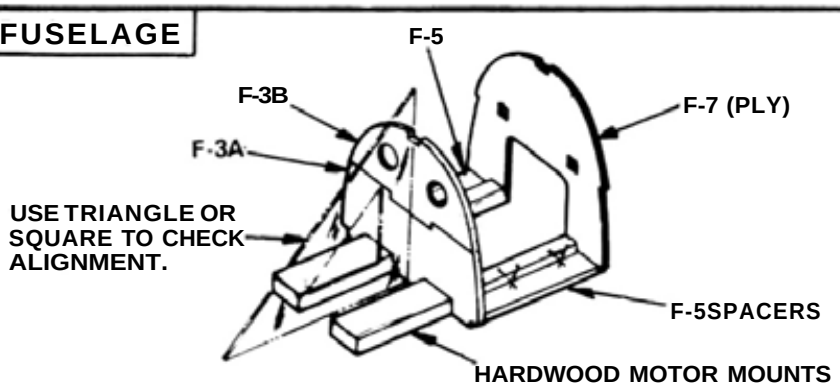


FIG. 2

STEP 2

- ☐ Glue F-3A and F-3B together.
- ☐ Pin F-5 spacers over bottom view of plans BETWEEN F-3AB and F-7.
- ☐ Glue motor mounts to the two F-5's.
- ☐ Glue F-3AB assembly and F-7 (ply) vertical in position.

FUSELAGE

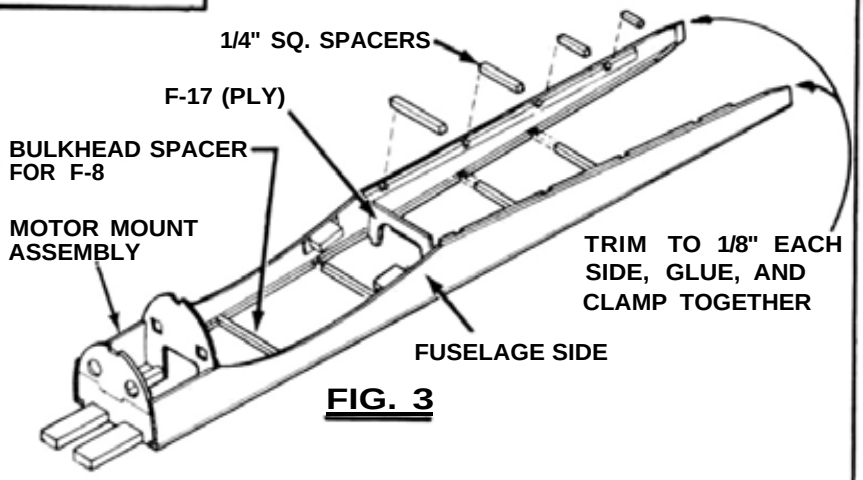


FIG. 3

STEP 3

- ☐ Using bottom view of plans, cut 1/4 SQ. bulkhead spacers from 1/4 x 1/4 x 36 balsa strips.
- ☐ Glue MOTOR MOUNT ASSEMBLY to fuselage sides over bottom view of plans.
- ☐ Starting with bulkhead spacer for F-8, glue and pin spacers in place, working toward rear.
- ☐ Glue F-17 (ply) in place. (Check plans for position). Hold fuselage sides together with tape if necessary.
- ☐ Trim rear, glue, and clamp together.

FUSELAGE

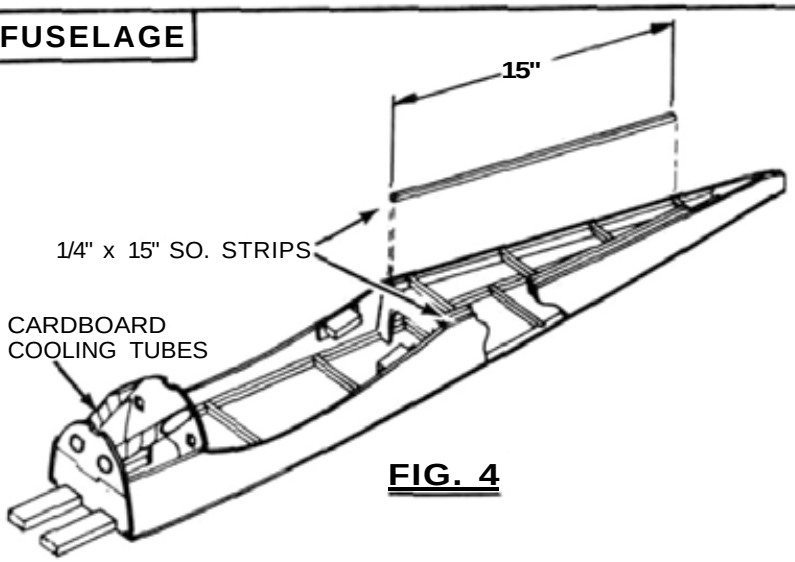


FIG. 4

STEP 4

- ☐ Cut two 1/4 SQ. strips to 15" and glue on top of notched strips flush with the inside edge. Refer to fuselage cross SECTION B-B.
- ☐ Using pattern on plans, cut 2 cardboard cooling tubes to size and glue in place.

FUSELAGE

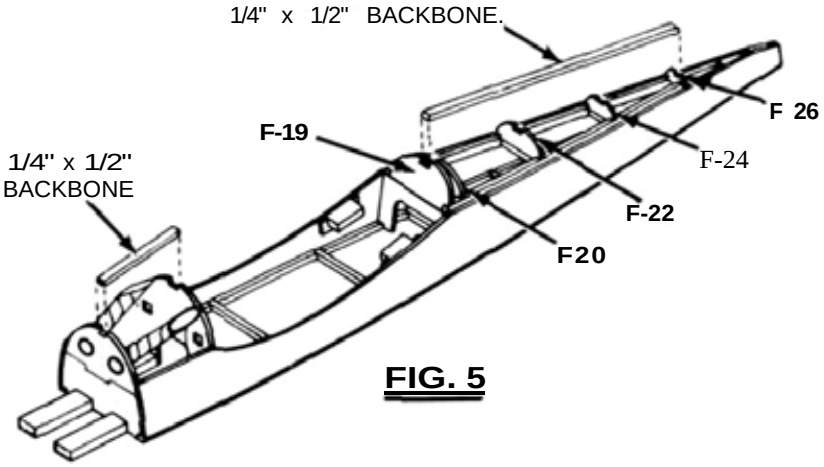


FIG. 5

STEP 5

- ☐ Glue bulkheads F-19, F-20, F-22, F-24, and F-26 in place. Note angle of F-19 on plans.
- ☐ Fit and cut 1/4 x 1/2 backbones to length and glue in place.

GENERAL INSTRUCTIONS

FITTING SHELLS

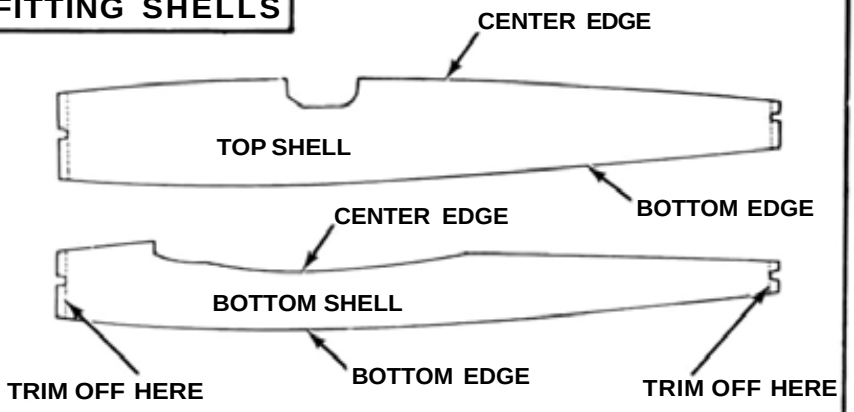


FIG. 6

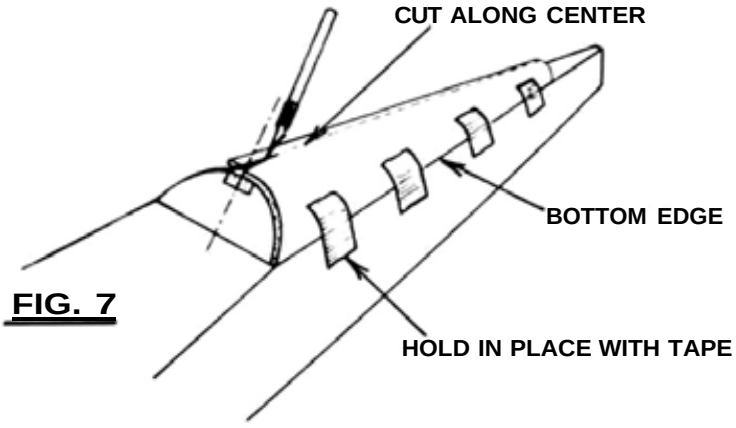


FIG. 7

Extensive effort has gone into the development of the shells provided in this kit. Occasionally one shell may split or crack due to rough treatment during shipment. If this occurs it can easily be repaired with glue. Each shell is purposely oversize. This is to allow you enough wood to work with and attain a perfect fit. When fitting, cut small portions at a time. Trim the shells as in FIG. 6.

When fitting a shell, lay it lengthwise on it's BOTTOM EDGE. If it is not flush, sand it until it is. Tape or pin it in place and cut along the top center. Do the same with the opposite side. When both shells fit properly, glue them in place. Masking tape works well in holding them while drying.

FUSELAGE

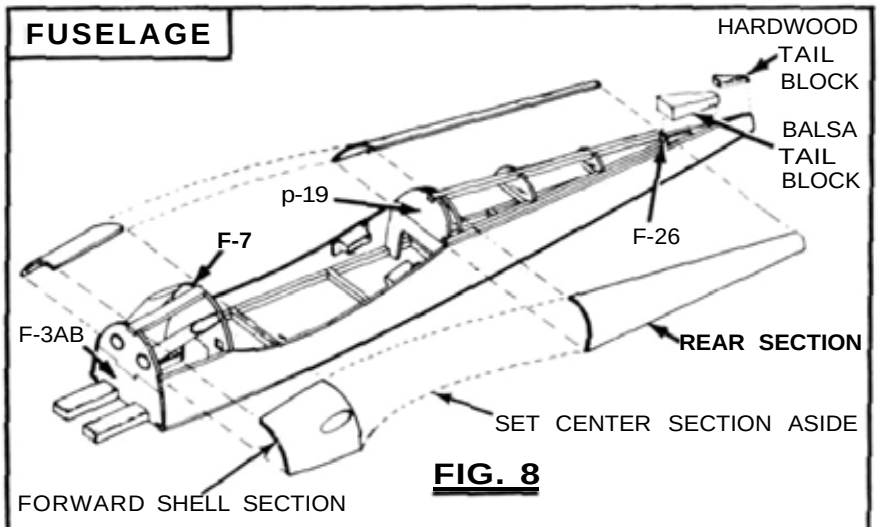


FIG. 8

STEP 6

- ☐ Cut and fit the REAR SECTIONS and glue in place.
- ☐ Glue the tail blocks in place.
- ☐ Trim and fit forward shell sections. DON'T GLUE IN PLACE YET.

FUSELAGE COCKPIT ASSEMBLY

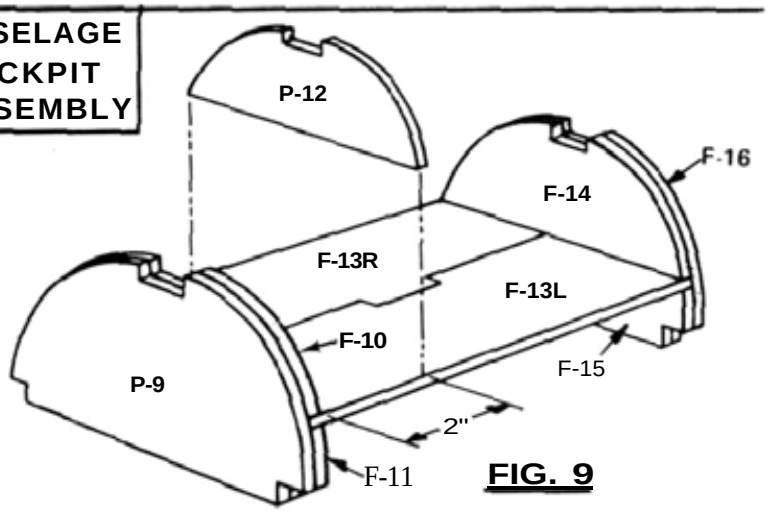


FIG. 9

STEP 7

- ☐ Glue F-13R and F-13L together.
- ☐ Glue F-11 to bottom part of F-9.
- ☐ Glue F-15 to bottom part of F-16.
- ☐ Glue F-13R L assembly on top edges of F-11 and F-15.
- ☐ Glue F-10 and F-14 on top of F-13 RL.
- ☐ Glue F-12 2" behind F-10.

FUSELAGE

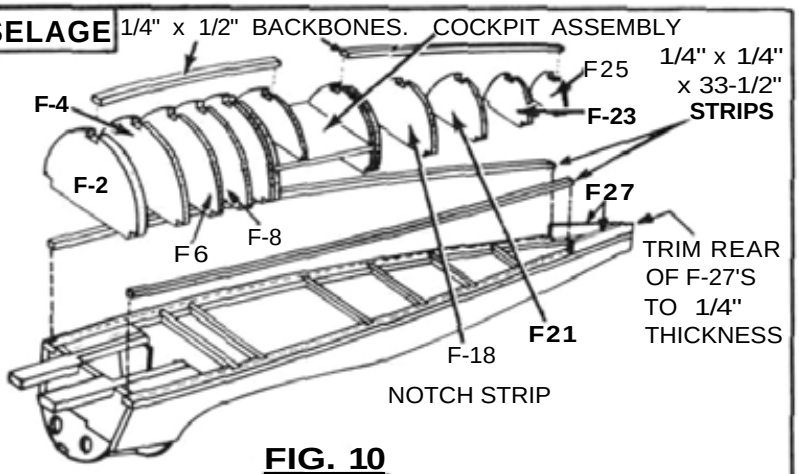


FIG. 10

STEP 8

- ☐ Glue F-27'S to rear of fuselage.
- ☐ Cut and glue 1/4 x 1/4 x 33-1/2 strips to inside half of NOTCHED STRIPS. See fus cross section A-A.
- ☐ Glue COCKPIT ASSEMBLY in place.
- ☐ Glue bulkheads F-2 thru F-25 in place.
- ☐ Cut and glue 1/4x1/2 backbones in place.

FUSELAGE

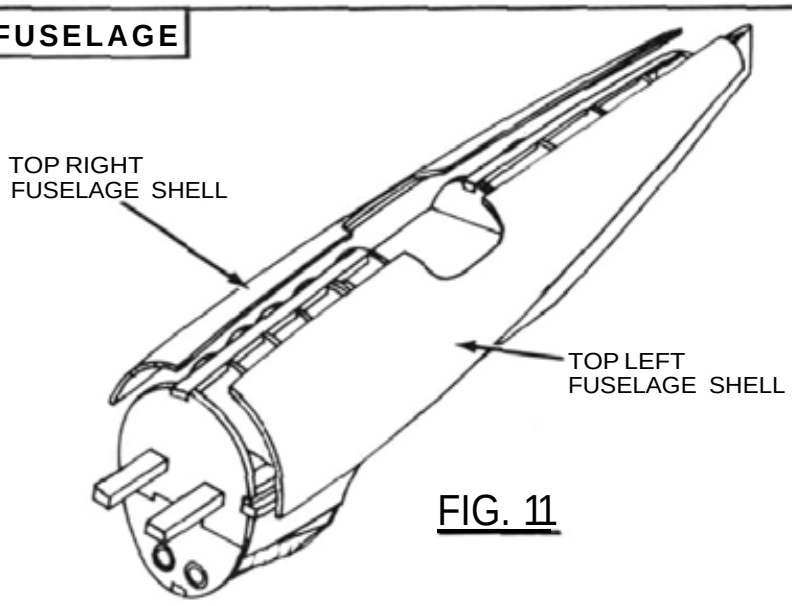


FIG. 11

STEP 9

- ☐ **Trim, fit, and glue top fuselage shells in place.**

WING

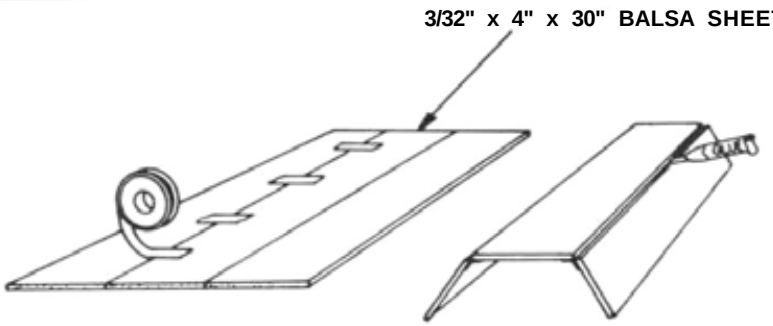


FIG.12

STEP 1

- ☐ Join three 3/32 x 4 x 30 balsa sheets using masking tape as shown.
- ☐ Turn over and glue joints as shown.
- ☐ Pin to a flat surface and allow to dry.
- ☐ Remove tape.
- ☐ Make 4 SETS of panels.

WING

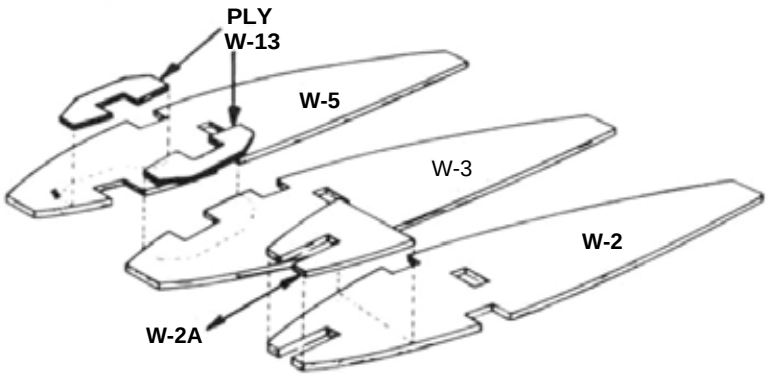


FIG. 13

STEP 2

- ☐ Glue balsa half rib W-2A to RIB W-2.
- ☐ Glue landing gear brace W-13 (PLY) to ribs W-3 and W-5
- ☐ Make sets for RIGHT WING half and LEFT WING half.

WING

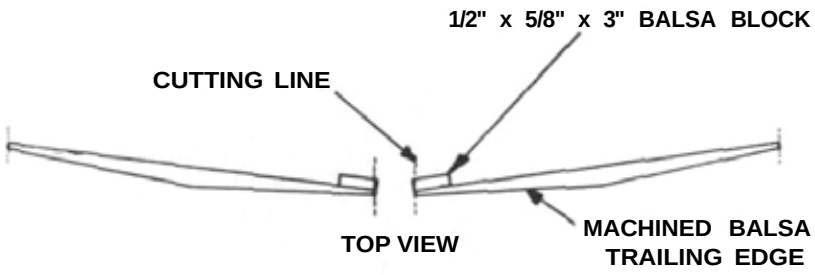


FIG.14

STEP 3

- ☐ Glue 1/2 x 5/8 x 3 balsa blocks to trailing edges as shown.
- ☐ Place above assembly over wing plan and cut ANGLE in center so the two will be flush when joined later. Make sure both trailing edges are equal length after trimming.

WING

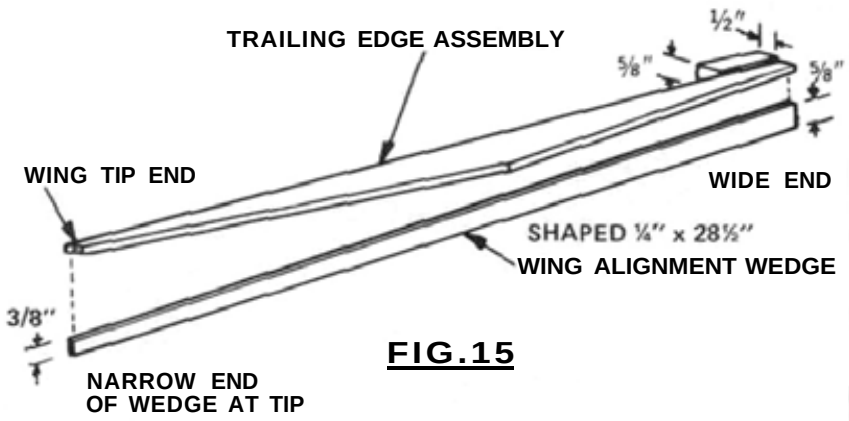


FIG.15

STEP 4

- ☐ Pin wing ALIGNMENT WEDGE to plans over location of machined trailing edge.
- ☐ Pin trailing edge assembly over wing alignment wedge. (Do not glue)

WING

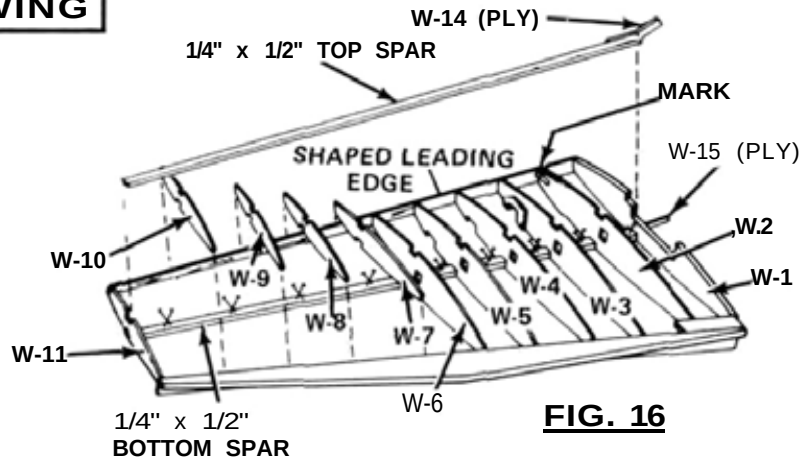


FIG. 16

STEP 5

- ☐ Pin 1/4 x 1/2 BOTTOM SPAR over plans.
- ☐ Glue brace W-15 (ply) to front of bottom spar.
- ☐ Glue ALL RIBS in place over bottom spar.
- ☐ Glue W-14 (ply) to top spar.
- ☐ Glue TOP SPAR in place.
- ☐ Glue LEADING EDGE in place.
- ☐ Mark leading edge at W-2 for location of wing dowel

WING

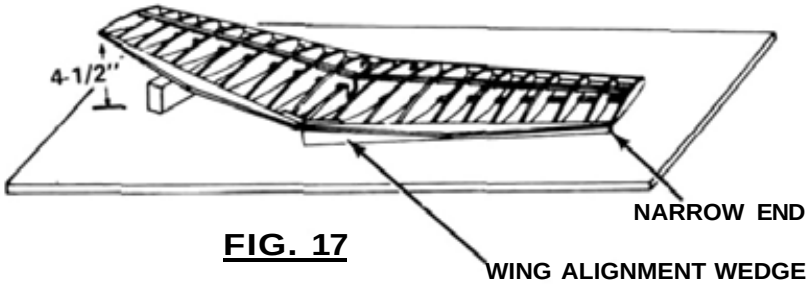


FIG. 17

STEP 6

- ☐ Switch wing alignment wedge to right side.
- ☐ Block left wing up 4-1/2 under tip.
- ☐ Construct right half in the same manner as the left.
- ☐ Glue the two wing halfs together.

WING

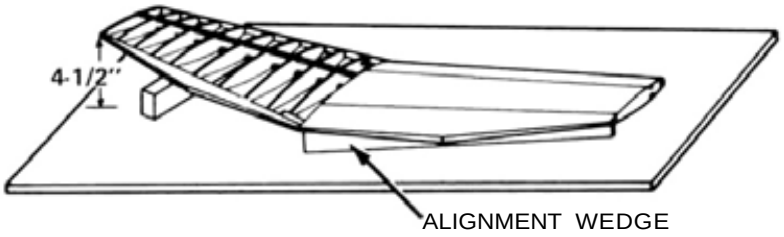


FIG. 18

STEP 7

- ☐ Remove pins from spar and cover the top of right wing with sheets prepared in Step 1. Allow to dry.
- ☐ Switch wing alignment wedge back to left side, block right half up 4-1/2, and sheet the top of the left side.
- ☐ Allow to dry completely.

WING

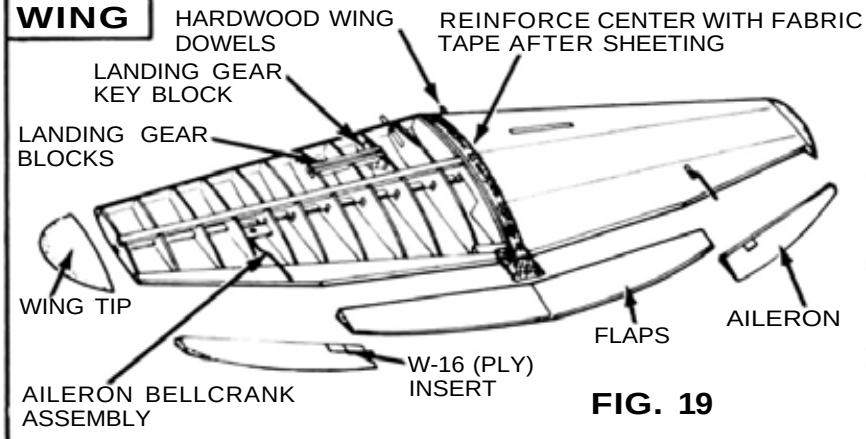


FIG. 19

NOTE: IF RETRACTABLE LANDING GEAR IS TO BE USED, FOLLOW INSTALLATION INSTRUCTIONS PROVIDED BY GEAR MFG.

STEP 8

- ☐ Install LANDING GEAR BLOCKS and key blocks. Drill 5/32 holes for gear strut.
- ☐ Drill 1/4 holes in leading edges and install hardwood dowels.
- ☐ Install aileron bellcrank assembly and aileron pushrod wires. (See wing cross SECTION CC)
- ☐ Sheet both bottom halfs marking location for landing gear.
- ☐ Glue wing TIPS and FLAPS in place.
- ☐ Glue fabric reinforcing TAPE to center section.
- ☐ Sand ailerons to final shape. Glue W-16 (ply) insert in place in each aileron.

WING

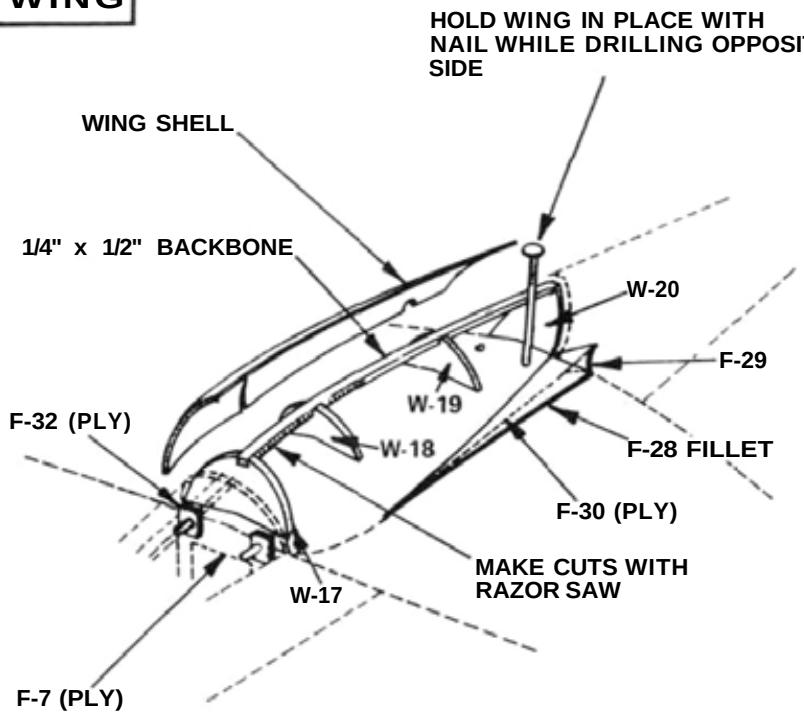


FIG. 20

STEP 9

- ☐ Place wing on fuselage. Put braces F-32 (ply) over wing dowel: and glue to bulkhead F-7 (ply). DON'T GLUE DOWELS.
- ☐ Drill 1/8 holes in wing and hold down block for wing screws.
- ☐ Remove wing and tap threads in hold down block with NO. 8 SELF TAPPING SCREW SUPPLIED.
- ☐ Glue fillet base F-30 (ply) to fuselage and replace wing, holding with nylon screws. (Protect with monokote backing)
- ☐ Glue fillets F 28 and fillet ends F-29 in place.
- ☐ Glue formers W-17, W-18. W-19. and W-20 to wing bottom.
- ☐ Glue 1/4 x 1/2 backbone in place.
- ☐ Fit and glue SHELLS to wing bottom.
- ☐ Cut notch in shells for access to wing screws.
- ☐ Fit and glue shells to bottom front of fuselage.

COWL ASSEMBLY

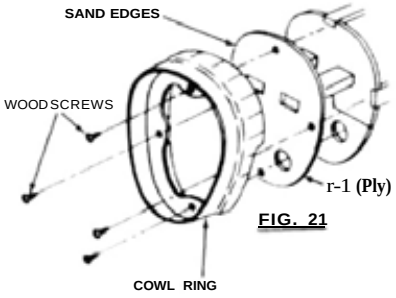


FIG. 21

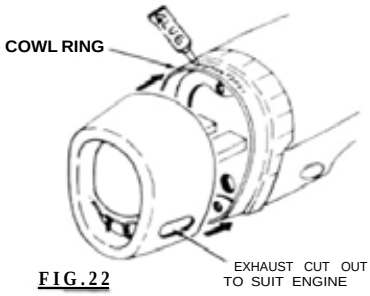


FIG.22

- ☐ **Sand edges of F-1 (ply) to fit losely inside plastic rear COWL RING.**
- ☐ Glue F-1 (ply) to fuselage and sand entire fuselage to final shape. Mount cowl ring to fuselage with wood screws.
- ☐ Align and glue cowl sections together as shown with model cement (ambroid, sigment, etc.)
- ☐ Remove assembled cowl and sand lightly with 400 grit paper.
- ☐ Make CUT-OUTS for exhaust and glow plug access.
- ☐ Cowl will accept most common model paints available in your local hobby shop. Paint as desired.

TAIL ASSEMBLY

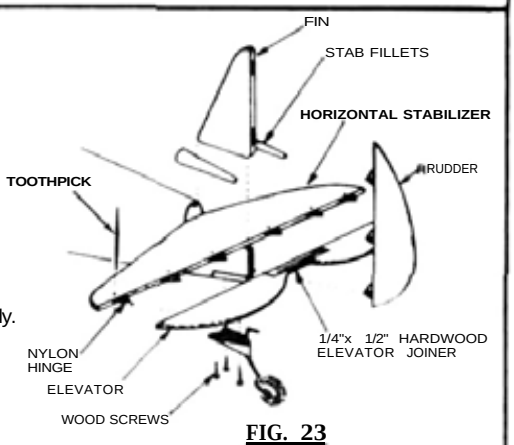


FIG. 23

- ☐ Join elevators with 1/4 x 1 / 2 x 4 hardwood strip.
- ☐ Glue HORIZONTAL STABILIZER to fuselage body.
- ☐ Glue FIN on top of horizontal stabilizer.
- ☐ **Shape and glue balsa STAB FILLETS in place.**

- ☐ Attach landing gear cover W-21 (ply) to landing gear strut.
- ☐ Trim excess from canopy. Attach after covering fuselage.
- ☐ **Attach plastic scoop to bottom rear of fuselage. (See plans for location)**

COVERING

Sand the entire airplane with 200 grit paper. Then final sand with 400 or 500 grit paper. Remove all sanding dust with a clean cloth and cover model. A very realistic finish for this model can be obtained with MONOKOTE. This material can be scratched and textured to look like the skin on the actual P-47. Try to have the seams along rivet lines, panels, etc. and they will be unnoticeable.

FINAL STEPS

Install the R/C equipment, hinge control surfaces, install engine, fuel tank, wheels, and push rods using the plans for location. Make sure PLANE BALANCES at or slightly forward of the CENTER 01 GRAVITY shown on plans, NOTE: THE FAILURE TO BALANCE THE COMPLETED MODEL AS SHOWN WITH ALL RADIO GEAR INSTALLED MAY MAKE THE MODEL UNCONTROLLABLE IN FLIGHT RESULTING IN POSSIBLE INJURY TO OTHERS, TO YOURSELF OR TO PROPERTY DAMAGE. Make sure all controls work freely, with no binding and in the proper direction. Carefully follow all installation and operation instructions given by the radio control unit manufacturer.

FIRSTFLIGHT

It is CRUCIAL that a well-experienced R/C Modeler-Pilot go over the plane carefully before attempting the first flight. If you are not well-experienced in checking out all construction and operating details and in flying, GET HELP. R/C modelers are a fine group of people that will gladly offer help when asked. Your hobby dealer may also be able to assist you. Write (and join!) the Academy of Model Aeronautics, 806 Fifteenth St., N.W., Washington, D.C. 20005. They will supply you with a list of R/C Clubs in your state and you can contact one of them. They will be happy to help.

The well-experienced R/C modeler-pilot will thoroughly go over all aspects of your construction and gear installation. He will then re-check everything at the flying field and then, if-but only if-all is right, he will perform the all important first flight of your aircraft and "trim it out", that is, make in-flight adjustments of the moving surfaces and make further changes on the ground, as necessary. Remember that even experienced R/C pilots turn to really well-experienced modeler-pilots for this crucial final check-out and trim-flight.

What is at stake is not just your model, but the SAFETY of others, yourself and property. Do Not fly until you are certain you are flying a checked-out model that you can SAFELY control under all circumstances!

We believe that we have passed on to you some helpful ideas gathered from our own experience and sincerely hope that building and flying your P-47 will be a rewarding experience.

Best of Luck!

TOP FLITE MODELS

FLIGHT LOG