



DAVE PLATT MODELS

P-51

Belair Kits are the owners and worldwide suppliers of all Dave Platt Designs, parts sets and accessories including plans.

FUSELAGE

1. First, let's make the plans suit the version you want to build. If it will be a D, leave everything the way it is. If you want a B, cut out the canopy-with-rear-deck section from the plans and paste it down over the side view. If it will be an A (or any Allison variant) do the above with the rear deck *plus* also cut out the nose and radiator sections and paste these over the side view too. The side view should now represent your version exactly.
2. Build crutch over the plan view. Arrange joints in side pieces where supported by a cross-brace.
3. Find the appropriate plywood formers F2, 3 & 4 for your version and discard the duplicated parts. Trim other formers to dotted lines shown on cross-sections as necessary.
4. Glue ply formers F-1, 2 & 3 onto motor mounts. Note that F-3 is not square to the motor mounts in the B & D versions. Slide fuel tanks (just the bottles for now) in place and then glue F-4 and 4A in place (again; not square to mounts in B & D versions), also F-20.
NOTE: The fuel tank bottles are not removeable from the completed model but the internal "plumbing" is, so the tanks will be serviceable.
5. Cut about 20 pieces of scrap stripwood to approx. 7½" long. The actual length isn't critical but all pieces must be *the same as each other*. Tack-glue these strips to the crutch and the bench, supporting the crutch "up in the air" by the aforementioned 7½". Make the elevator pushrod and the two rudder pushrods over the plans.
6. Glue formers 5 thru 18 to crutch. Use triangle to ensure all are true vertical to crutch and bench. Slide pushrods in as you go – they can't be installed later. Some crutch cross-braces must be cut to allow pushrods in. If building A or B, glue F-21B in place.
7. Slide front former assembly into place and glue to crutch. Now glue ¼" sq. keels. If building D, glue rear canopy block and F-21 D. Glue all 4 servo rails, spaced to suit servos you will use.
8. Remove body from jig. Turn upside-down and tack-glue the jig strips back again to the crutch and bench. Arrange the tail end of the crutch to overhang the bench slightly to allow F-19 to be fitted. Glue F-19 in place. Trace the forward air duct sides onto the .020 glass sheet and cut out. Sand well to remove silicone surface – prep, so glue will hold. Glue ⅛" sq. strips to inside edges of sides, using Zap CA. Make a LH & RH pair! Slide the sides into place (don't glue yet). Cut top & bottom of forward duct, sand, and slide into place. When all parts fit well, glue together and to all formers.
9. Cut the 2 bottom corner blocks (F-10 to F-13) to side-view from 1 x 1¼ x 10. Leave a little overlength at front end. Cut & glue rear blocks (F-13 to F-19) from 7⁄8 x 1¼ x 21. Make rear duct pieces and assemble into fuselage as with front duct.
10. Bend the tailwheel strut as shown on plans. Assemble to special Rom-air TW unit (available from Dave Platt Models). Install TW unit mounting blocks to insides of the rear lower side blocks. Cap with ⅛ ply to retain screws. Screw TW unit in place. Fasten TW unit to prevent steering. Anti-caster does not allow steering TW, rudder alone works o.k.
11. Install all servos. Install engine. Make and install throttle and in-flight needle-valve pushrods. Connect pushrods to servos and test functions. Add air lines to TW unit; put connectors on forward ends.
12. Sheet the bottom from F-10 to F-19 between corner blocks. Leave opening in the rear piece for TW unit to retract. Remove the body from the jig and discard the struts.
13. Laying the body on its side, sand slight bevel into the crutch outside face to follow former contours. Run a bead of silicone glue around tanks to prevent movement. Join pieces of ⅛" sheet to make lower side skins. Sand well

and glue to body.

14. Next add the rest of the fuselage sheeting and the upper cowling balsa blocks. Assemble (removeable) lower cowl and tack-glue in place on body. Carve cowl block and (on D model) rear canopy block. Shape lower corner blocks and add side-fillets to complete scale exit duct.
15. The stabilizer is a light and simple structure needing no special procedure to build. Hinge the elevators to stab and try in place on fuselage. Trim side skins to stab airfoil until it sits level (O° incidence). When satisfied, connect elevator pushrod to horn and glue stab in place.
16. Shape fin base block and glue to stab. Build rest of fin upon this block. Check for straightness before skinning.
17. Build rudder, hinge to fin and assemble to pushrod. Test. Make glass TW doors (see finishing booklet), hinge to body and complete closing mechanism. Test assembly.

WING

1. Mark identifying numbers on all diecut ribs. Check against drawings and mark an "UP" arrow on every rib to prevent accidental upside-down placement when building.
2. Make subassemblies: Glue W-1A, 4A, 5A and 6A to W-1, 4, 5, and 6 respectively. Make LH & RH pairs! Glue W-1's together. Glue W-16 to W-15 and W-18 to W-17.
3. Decide Version to be built. If D, leave all ribs as cut. If A, B, or C, trim ribs 1 thru 3 to dotted lines on rib drawings. Glue dowel into W-1.
4. From ⅛ sheet, cut front wing jig to drawing on plans. Make very accurately! Pin and glue front jig and rear ⅛ x 1¼ jig to right wing plan in proper location. Note that the "hump" in front jig occurs at W-4 rib.
5. Cut 2 pieces of ¼ x ½ to 9" and 30¼" long. Pin to forward jig and glue together at W-4 position.
6. Place all ribs W-2 to W-14 on spars; do not glue. Tack-glue to rear jig, using a ⅛ shim under W-10 (in spar slot). Glue W-22 web to W-1 rib (angled face against W-1) then glue to wing spar. Tack rear of W-1 to rear jig. Note that W-1 leans outwardly (half of dihedral angle).
7. Cut ½ x 1 for root L.E., notch for dowel and glue to W-2, 3 and 4. Now add outer L.E. glued to ribs. (At this point, sight along rear points of all ribs. They must be a perfectly straight line. If not, something is wrong. Locate fault and correct).
8. Glue W-15/16 rear spar into ribs. Glue bottom mainspar/rib joints. Glue top mainspar into ribs. Assemble flap/aileron/tank – drop bellcranks onto ply mounts and glue into wing.
9. Measure along top of ribs W-3 and W-9, making a mark 17⁄32" aft of rear of W-15. Glue W-19 on top of ribs 3 to 9 with its L.E. at the marks. In similar fashion, measure ½" space from rear of W-16 to front of W-21 and glue W-21 to ribs W-10 to 14.
10. Now glue rest of ⅛ sheet rear webs to mainspar out to W-8.
11. Remove wing from bench. Glue W-17/18 assembly into wing. Carve and sand L.E. pieces to follow rib contours. Add W-20 and lower W-21. When glueing rear edges of flap and aileron skins together, be careful to get a perfectly *straight* joint. Allow no waves or bends! Glue L.G. rails in place.
12. Transfer the jigs to the *left* wing plan. As before, make bottom mainspar and pin to front jig. Now *carefully* glue the built right wing onto the left spar, supporting the right W-14 rib with a 7⁄8" high scrap wood strut. Glue the strut to the bench and the wing to prevent movement. Add left-side W-22; tack W-1 rib to rear jig. Insert air tanks for RLG.
13. Build the left wing onto the right wing by repeating instructions 5 thru 10. Now add all 3⁄32 rear spar webs, servo rails and trailing edge cap strips.