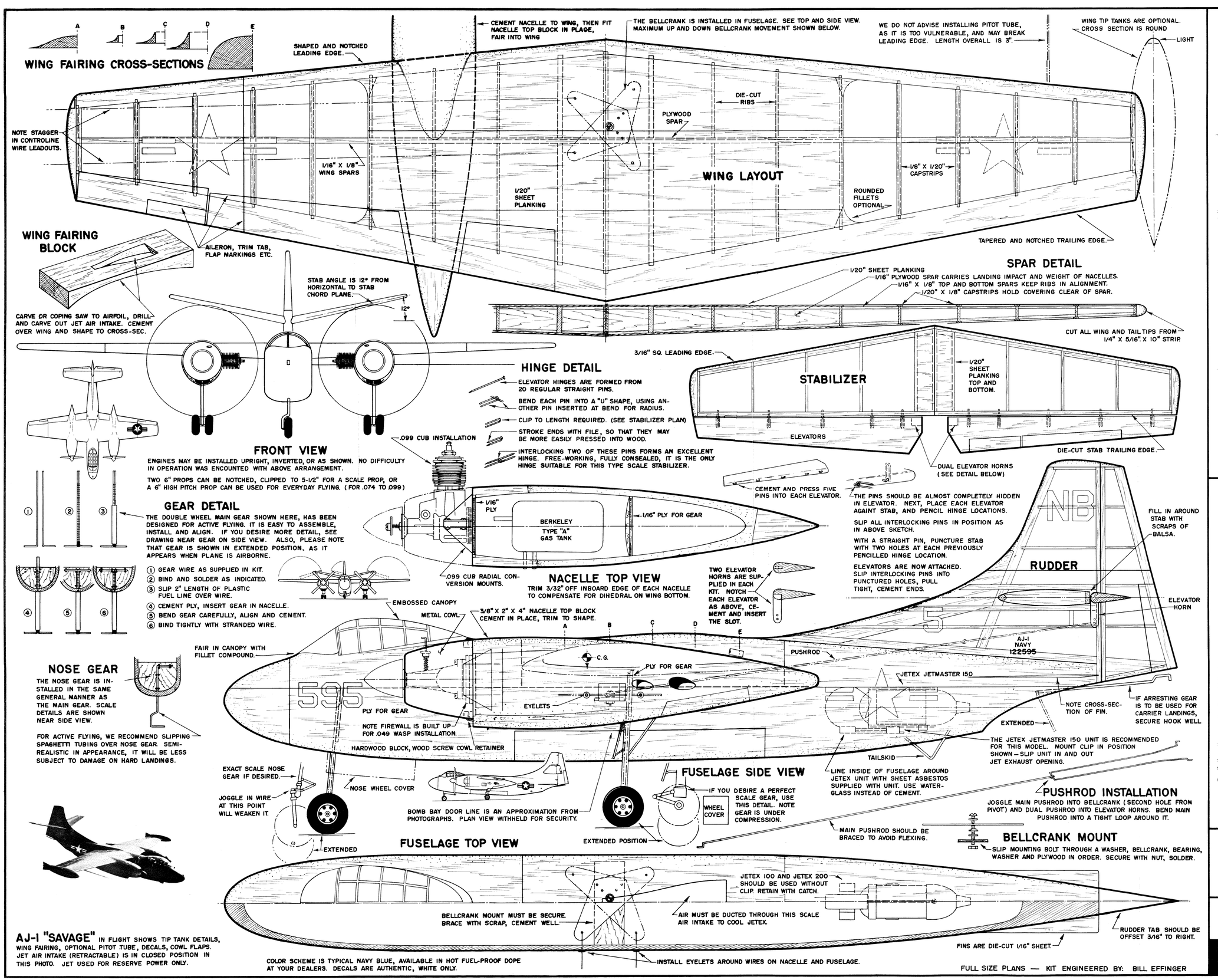
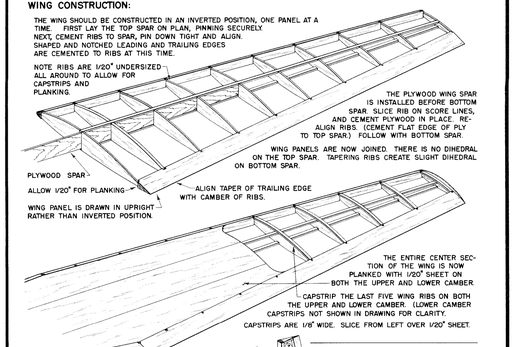


AJ-1 "SAVAGE" IN FLIGHT SHOWS TIP TANK DETAILS, WING FAIRING, OPTIONAL PITOT TUBE, DECALS, COWL FLAPS. JET AIR INTAKE (RETRACTABLE) IS IN CLOSED POSITION IN THIS PHOTO. JET USED FOR RESERVE POWER ONLY.

WING AND RUDDER CONSTRUCTION:



BUILDING AND FLYING INSTRUCTIONS:

The North American AJ-1 "SAVAGE" is a scale controliner that offers numerous opportunities for the model builder to experiment with various power applications. By following the printed notes on the plan, most of the construction problems will be solved. The following procedure should be followed step-by-step in building:

1) Construct wing first, completely finish ready to cover with tissue. See sketches above.
2) Construct stabilizer, completely finish ready to cover.
3) Construct rudder on rear section of fuselage top. Follow the steps shown in the sketch above.
4) Install stabilizer in rudder.
5) Clean all fuselage carvings and sand smooth inside and outside.
6) Install nose gear in fuselage bottom.
7) Install bellcrank in fuselage bottom.
8) Install jetex mount, asbestos lining.
9) Cement rear top of fuselage in place.
10) Cement front top of fuselage in place.
11) Cement 3/16" X 1" X 6½" length of wood along exposed edges of fuselage bottom, between carved front top of fuselage and rear top of fuselage. Carve to match airfoil of wing.
12) Insert pushrod in bellcrank, then up through fuselage, into rudder as indicated on plan. Install wire leadouts, eyelets, etc. Solder. Leadout wires are not included in kit, but are a standard accessory.
13) Cement wing in position, checking alignment with stabilizer, in front view. Wing should be at 0 degrees incidence. (Leading Edge should be same distance above fuselage dividing line as Trailing Edge)
14) Carve or saw 7/8" X 2 3/8" X 6½" wing joining block for jet air intake as outlined on top plan view. See sketch in upper left corner of plans. Cement in place over wing.
15) Sand the assembled airplane before covering or painting.
16) Cement embossed bubble canopy in place.
17) Install firewalls in nacelles.
18) Install plywood landing gear mount in nacelles.
19) Following gear detail sketches, install main gear in nacelles. Metal Hubs are fitted over rubber wheels. Wheels are held in place on axle by soldering copper washer over the axle.
20) Trim 3/32" off inboard edge of nacelles to compensate for dihedral of wing bottom. Also, trim nacelles for leading and trailing edge taper.
21) Install engine of your choice radially, either upright, inverted or prone. If metal conversion mounts are needed, or is advisable to insert a small hardwood spacer under lug bolts to absorb increased vibration of thin engine model. Also install small hardwood blocks for wood screws which hold cowl in place.
22) A large gas tank is installed in each nacelle with the full level with the needle valve. Tanks should be large to allow for starting and adjusting both engines.
23) Drill holes through left nacelle for wire leadouts. Position as indicated on side view.
24) Cement nacelles to wing. Use ample cement. Align carefully. Strap nacelle tightly to the wing while the cement is drying.
25) Install 3/8" X 2" X 4" nacelle top blocks, fairing neatly into wing.
26) Cut out metal cowls for cylinder head, mounting screws, and needle valve. Cowls are most easily cut out by drilling a series of small holes along the outline to be cut out, backing the holes with a small block of wood while drilling. Solder extensions on needle valve if necessary.
27) Bend one of rudder rib as required to clear dual motion of pushrod. Connect to elevator horns, and test for free and accurate motion.
28) Give models a general sanding, then a smooth sanding and if possible, a coupe-coat of coats of fuel-proof clear dope, prior to covering. Use fuel proofing sealers and filletting compounds as required.
29) Only the sections of the wing outboard of the nacelle need be covered with tissue. No tissue is needed on fuselage. The rudder is covered next, followed by the stabilizer.
30) Coverings is waxed if applied dry, before doping. Give the entire model at least 3 or 4 coats of clear dope, sand lightly with very fine sandpaper, then apply three thin coats of Navy blue. Apply paint in embossed lines of canopy.
31) Decals, trim and props are installed last.
32) Regarding props, a scale type prop can be made very easily by notching 2 props halfway through and cementing together. In actual use they are apt to split unless clasped between two washers about 1½" in dia. We recommend flying on 6" conventional props (for .099 engines) with the tips squared off slightly to clear fuselage by 3/32".
33) With equal size tanks, if the left engine is started first, followed by the right, the left should in theory stop first. This is prefered, but not imperative. The original did not show any tendency to sicken lines, no matter which engine cut first.
34) Test fly on about 35 to 40 foot line, in calm weather. Longer lines can be used after the model has been tested. The Jetex unit is not needed for power, as with two .074 or .099 engines, the model has sufficient power for test flying. Do not use Jetex for test flight. When you do use the Jetex power, light it after the engines are running. If the extra power is desired after a period in the air, use a cord fuse soaked in potassium nitrate, tied into the Jetex quick burning fuse. This can be timed to light the Jetex fuse by measuring the length carefully.
35) Test with engines at full speed and needle valve set half a turn rich. Take off down wind. Let model take a long run and ease itself into the air. The model is fairly fast. Correctly trimmed it should fly at neutral, at the height of your handle. Adjust the wires at the control handle if necessary. If the model still does not fly level adjust the balance. If you still have trouble, check the wing warp.
36) The model should fly with the wings parallel to the ground. If it banks towards the center, stress and twist the leading edge of the inboard panel upward and put on opposite twist in the outboard panel.
37) Bold at low altitude at all times when motors are not running smoothly. When engines are due to cut out, keep model low, with the nose down. Do not loose too much flying speed on landing approach. Fast models are the easiest to land, as they are less affected by wind.

NORTH AMERICAN AJ-1 "SAVAGE" CONTROLINER+

3/8" SCALE

DESIGNED AND DRAWN BY: DON McGOVERN

FOR TWO .045 TO .099 ENGINES— AND JETEX 100, 200 OR NEW JETMASTER 150!

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