

TIGER 60 DELUXE

IMPORTANT: Before beginning to build your Tiger 60 Deluxe, go through this Retract Installation booklet and mark the Tiger 60 Instruction Booklet at the building steps where you will have to refer to the Retract Installation Instructions



WARNING! THIS AIRPLANE IS NOT A TOY!

A radio-controlled model is not a toy and is not intended for persons under 16 years old. Keep this kit out of the reach of younger children, as it contains parts that could be dangerous. A radio-controlled model is capable of causing serious bodily injury and property damage. It is the buyer's responsibility to build this kit correctly and to properly install the motor, radio, and all other equipment. Test and fly the finished model only in the presence and with the assistance of another experienced R/C flyer. The model must always be operated and flown using great care and common sense, as well as in accordance with the safety standards of the Academy of Model Aeronautics (5151 Memorial Drive, Muncie, IN 47302, 1-800-435-9262). We suggest you join the AMA and become properly insured prior to flying this model. Also, consult with the AMA or your local hobby dealer to find an experienced instructor in your area. Per the Federal Communications Commission, you are required to use only those radio frequencies specified "for Model Aircraft."

RETRACT WARNINGS & PRECAUTIONS

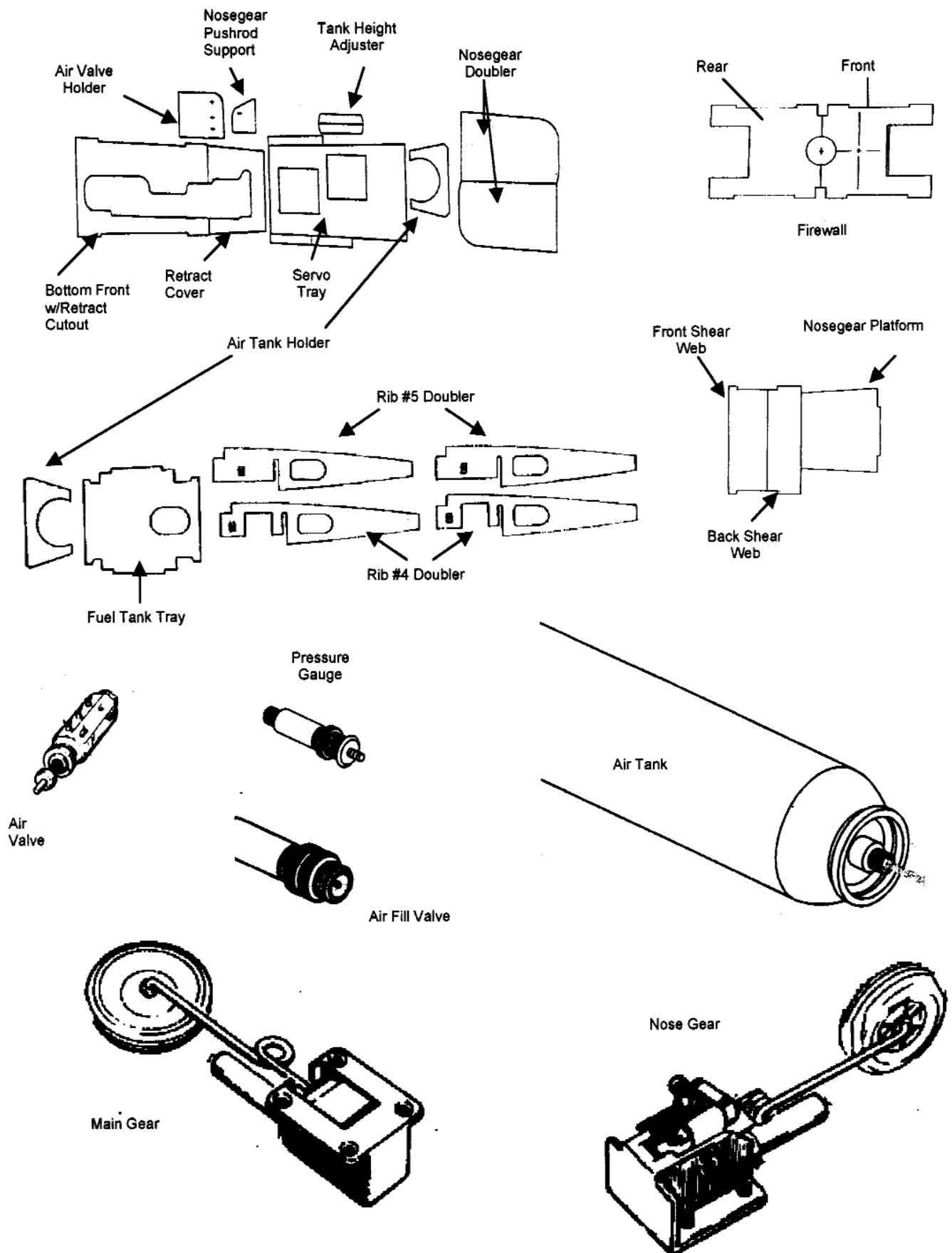
These retracts are for model airplane use only. **READ AND ADHERE TO THE FOLLOWING PRECAUTIONS!**

- **DO NOT** hold the retract when air pressure is present at the cylinder and/or during operation of the gear.
- **DO NOT** place any part of your body in the retract mechanism or in the path of any moving parts.
- **DO NOT** apply more than PSIG to any part of the retract system.
- **DO NOT** attempt to support your airplane on these retracts without sufficient air pressure in the system to properly lock the gear.
- **DO NOT** operate the retracts or your airplane if any retract or retract system part is missing, damaged, or leaking.

FAILURE TO FOLLOW THE ABOVE INSTRUCTIONS CAN RESULT IN BOLDILY HARM.

Pt. # 2058 5/99

PARTS IDENTIFICATION



RETRACT INSTALLATION INSTRUCTIONS

NOTE: The following step numbers correspond to the steps in the main instruction booklet which are being replaced or altered by the installation of the retracts. The "a" designation indicates *additional* work to what is shown in the main instruction book. The "r" designation indicates a *replacement* step. Also, since you are building two wing halves, remember that some steps will be repeated.

WING INSTALLATION

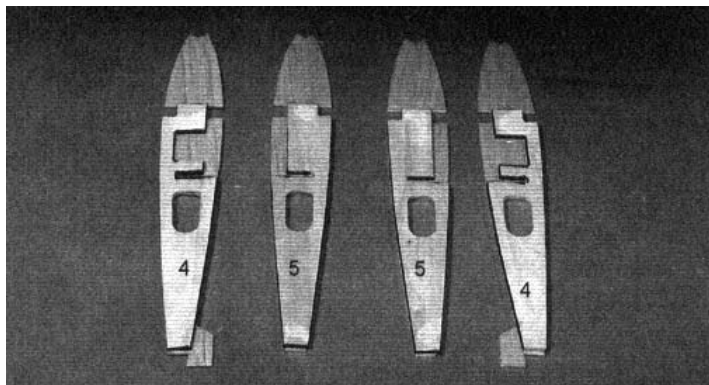
- 1a. Collect the following parts needed to install the wing retracts:

WOOD PARTS

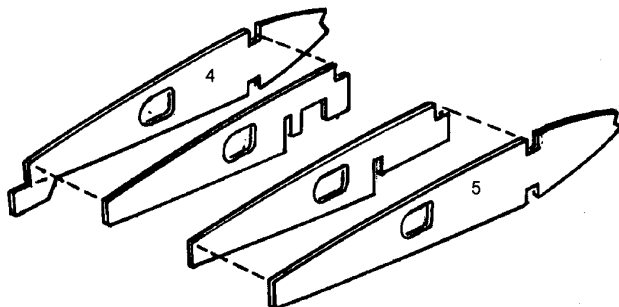
- (2) Front Shear Web
- (2) Rear Shear Web
- (4) Retract Rail
- (2) Rib #4 Doubler
- (2) Rib #5 Doubler
- (5) 5/64 x 3 x 36" Balsa Sheet

ROBART PARTS

- (2) Main Retract
- (8) #4 x 1/2" Phillips screw
- (2) T-Fittings
- (1) Quick Connector (male & female)
- (2) Air Hose (2 colors)



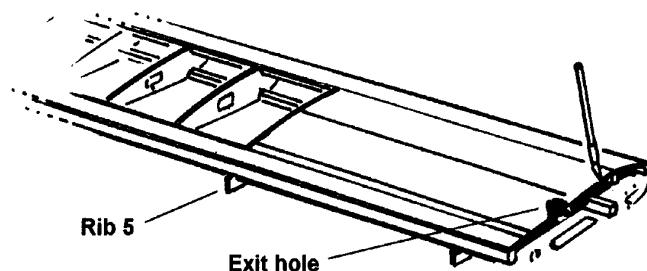
- 5a. ☐ Lay out the ribs, just as shown in the above drawing. **Important!** You will be making a **left** and a **right** rib.
- ☐ Using Super Jet, glue the plywood doublers to each rib, exactly as shown. When dry, remove the center cutout.



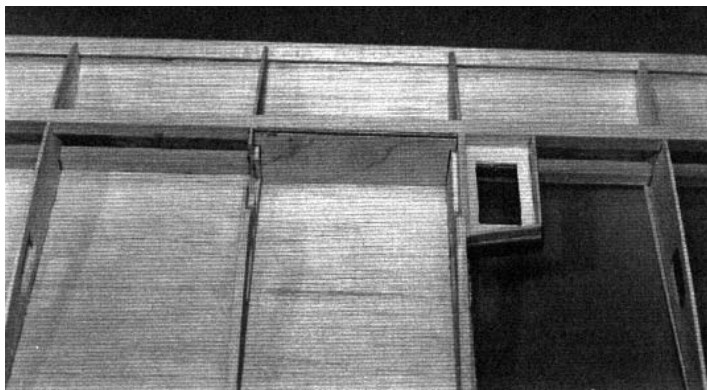
- 6r. ☐ With the rib notches pointing down, and the plywood reinforcement facing inward, place the reinforced tabbed rib at the #5 rib location.

- ☐ With the reinforcement facing outboard (toward the wing tip) place the reinforced untabbed rib at the #4 rib location.
- ☐ Go to the main booklet and complete step #7. Then return to this book and complete step 7a.
- 7a. ☐ When satisfied with the fit of the rib assembly, **Super Jet** in place.
- ☐ Return to the main book and do Step #8.

OMIT STEPS #9 AND #10 IN THE MAIN BOOKLET. Complete Steps #11 and #12 and then return to the Retract Instructions for a new Step #13.



- 13r. ☐ Take five 5/64 x 3 x 36" balsa sheets and cut each in half, making ten 18" long pieces.
- ☐ Working on the top of the wing, install the center wing sheeting, gluing the center portion to the ribs and to the other wing sheeting pieces. The center sheeting should extend to the outer landing gear rib (#5).
- ☐ On the top of the wing only, cut an exit hole for the retract air lines and for the servo extensions.
- ☐ Trim off the excess, in line with the front and back center sheets.
- ☐ Complete Steps #14 in the main booklet, and then return to Step #3 and construct the second half of the wing as you did the first half.
- ☐ When both halves are complete, continue with Steps #15, #16, and #17 in the main booklet.



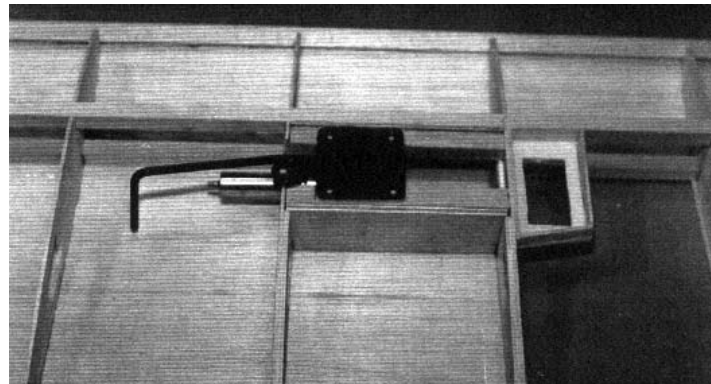
- 18r. ☐ Place the 1/8" plywood front (larger) shear web into the groove between the #5 and the #4 rib. **DO NOT GLUE AT THIS TIME!**



- ☐ Take the smaller 1/8" plywood shear web and set it into the rear groove, between rib #5 and rib #4.
- ☐ Make sure that both shear webs fit easily between the ribs. **DO NOT GLUE!**
- ☐ Take the two retract rails and place them on top of the rib doublers, as shown. Make sure that the shear webs and the rails fit easily into their locations.



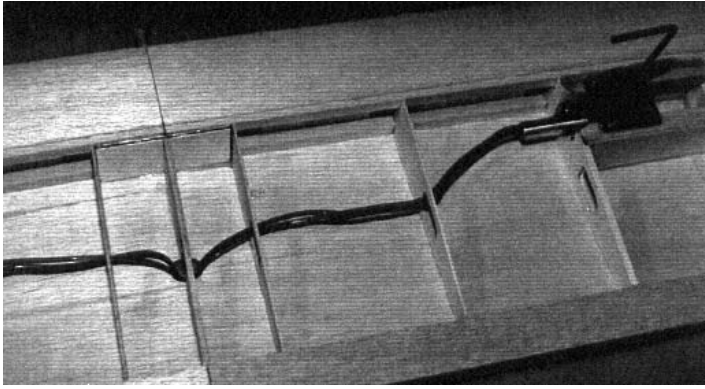
- ☐ Take one of the main retracts and test fit it onto the rails, making sure of the fit. If the fit is not correct, sand the rails a little at a time, checking the fit as you go.
- ☐ When you are satisfied with the fit, **Epoxy glue** the shear webs and the rails into place.



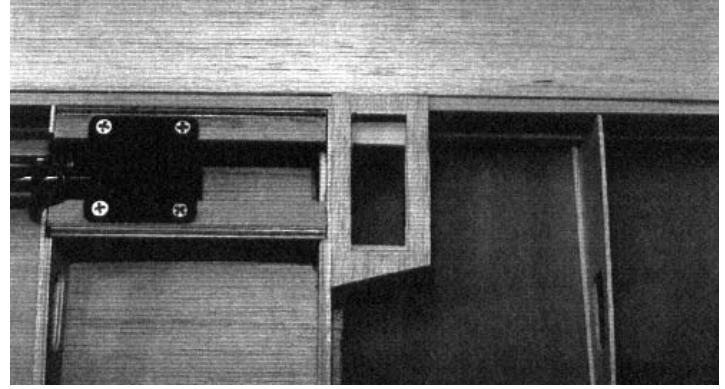
- ☐ When the epoxy has dried, place one of the main gears on the rails.
- ☐ Slide the gear toward the wing tip until it is 1" back from the #4 rib. This should provide enough room for the wheel to retract and have clearance from any rib. Test the fit, making sure the wheel will clear the #3 rib.



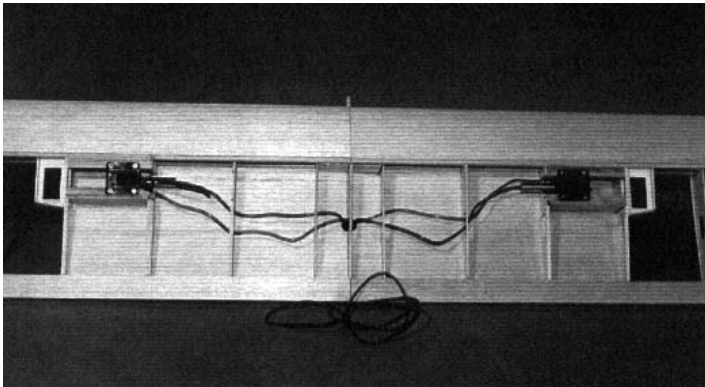
- ☐ When you are satisfied with the position of the retract, mark the location of the screw holes and the outline of the gear top, as shown in the above photo.
- ☐ Next, mark where the wire coil hits the rib and the retract rail.
- ☐ Drill the screw holes using a 3/32" drill.
- ☐ Cut out the clearance for the wire coil.
- ☐ Repeat the above steps for the other side of the wing.
- ☐ Return to the main booklet and complete steps #19, #20, #21, #22 and the first part of Step #23. After the L.E. and T.E. sheeting has been installed, return to this Retract Installation Book.



- 23a. ☐ After completing the L.E. and T.E. sheeting, install the air hoses through the holes in the ribs. Use the same color for each corresponding connection on each of the main gears.



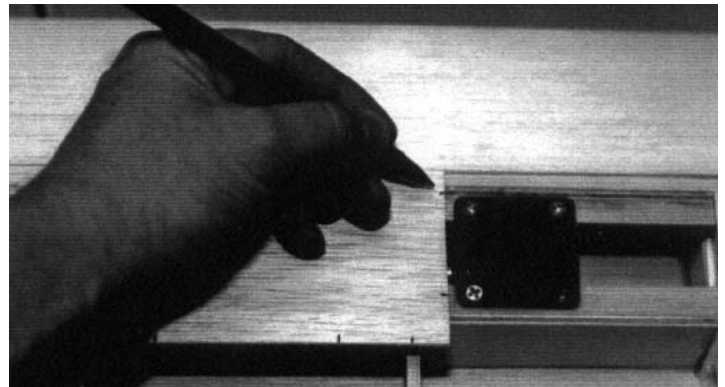
- ☐ Trim the balsa servo cover, so that the edge reaches the center of the top of rib #5, leaving room to glue the bottom sheeting to the other half of the rib top. When satisfied with the fit, glue servo cover in place.



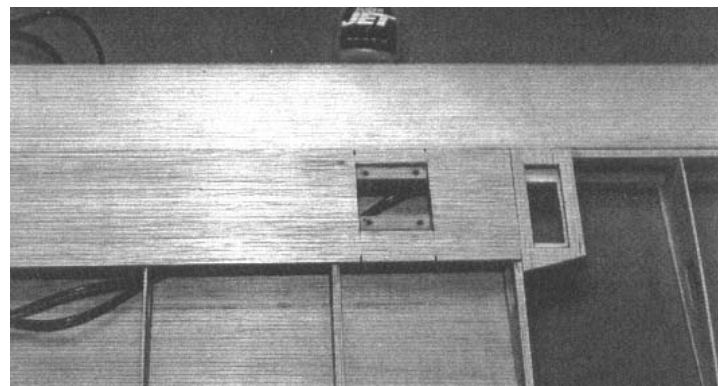
- ☐ Pull the excess airline through the hole in the top of the center sheeting.
- ☐ Tape the air hoses to the top wing sheeting, between the retract rails, so that they cannot be pulled out of position.

NOTE: Since the main gear must be removed before the wing bottom can be sheeted, it is necessary to secure the hoses. **Make sure you will be able to reach the air hoses after you place the sheeting on the bottom of the wing.**

- ☐ Mount your retracts to the rails for the next several steps.



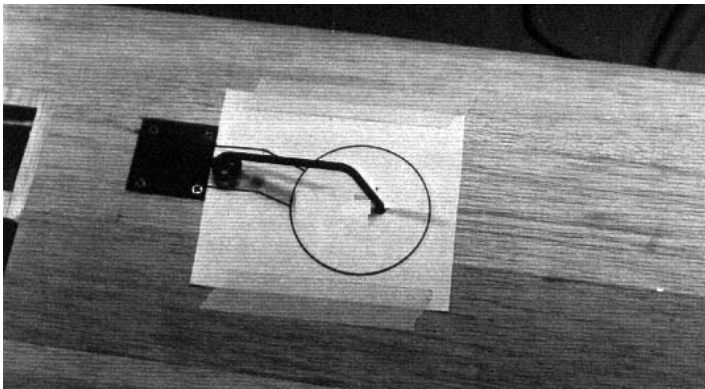
- ☐ Using a 5/64 x 3 x 18" piece, mark where the retract gear will come through the sheeting.



- ☐ Following the marks on the sheet, make the cut-out for the gear top.
- ☐ Trim the sheeting so that it extends from the middle of rib #5 to the center of rib #1.
- ☐ When satisfied with the fit, remove the gear and glue the sheeting in place.

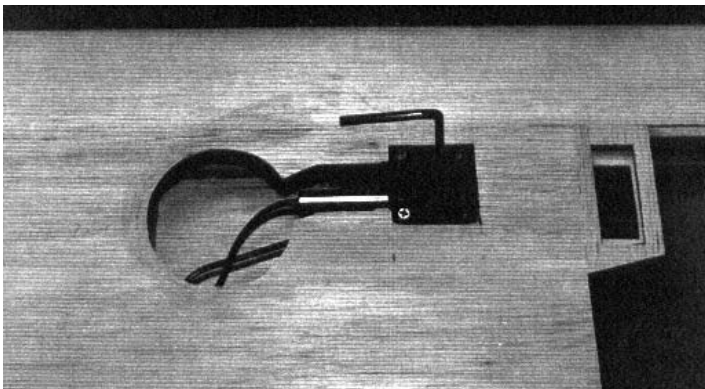
- ☐ Finish sheeting the center of the wing, using two more 5/64 x 3 x 18" balsa sheets.
- ☐ Repeat these steps for the other half of the wing.
- ☐ Before continuing, this is a good time to give the wing a final sanding.
- ☐ Turn the wing over and gently push the excess air hose back into the center of the wing, so that it will not interfere with your final sanding.

Important! Make sure the air hose is securely taped so that you can retrieve it for hook up later on.

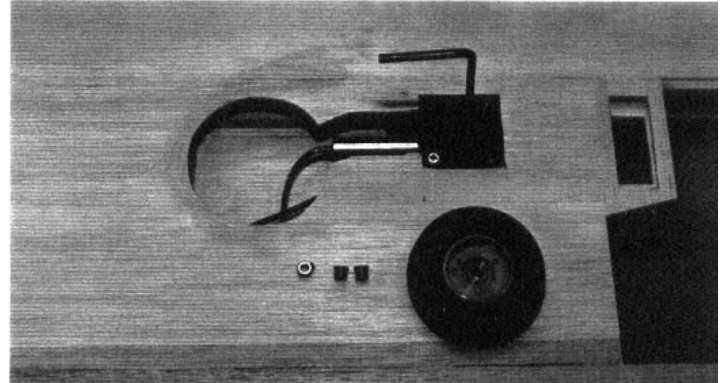


- ☐ Mount the main retracts back into the wing and tape down the wheel well template included with this kit.

Important! The supplied cutout templates are for 2-1/2" wheels. If using a different size wheel, you will have to change the size of the wheel hole.



- ☐ Cut along the template outline with an x-acto knife.



- ☐ Trim the length of the axle on the landing gear wires, if necessary, to fit the wheel. (The wheel shown is a 2-1/2" Robert wheel.) Follow the specific installation instructions included with your wheels.



- ☐ Install the wheel on the gear wire and test the fit of the wheel in the wheel well. Trim as needed.
- ☐ Using thin balsa, line the wheel wells, as shown in the photo. Make sure to keep enough clearance for the wheel.
- ☐ When finished, repeat these steps on the other side of the wing.
- ☐ Return to the main booklet and, beginning with Step 24, finish constructing the wing.

FUSELAGE INSTALLATION

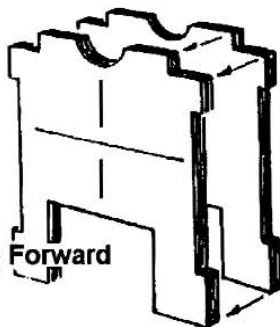
1. ☐ Collect any addition or special parts needed for installing the retract in the fuselage.

WOOD PARTS

- (1) Servo Tray
- (2) Nosegear Platform
- (2) Retract Nose Doubler
- (2) Triangle Stock
- (2) Platform Gusset
- (1) Air Valve Holder
- (1) Nosegear Pushrod Support
- (1) Retract Tank Tray
- (1) Air Tank Holder (Lg.)
- (1) Air Tank Holder (Sm.)
- (1) 1/4 x 2" Basswood Hatch Block

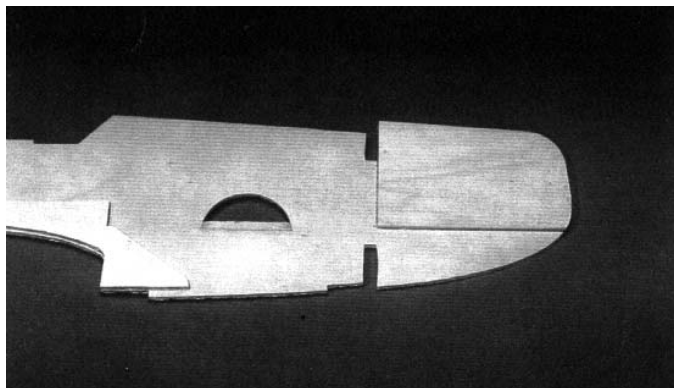
ROBART PARTS

- (1) Nosegear Retract
- (1) Air Pressure Gauge
- (1) Air Valve
- (1) Air Tank
- (3) T-Fitting
- (1) Quick Connector (male & Female)
- (1) Air Fill Valve
- (2) Air Hose (2 Colors)



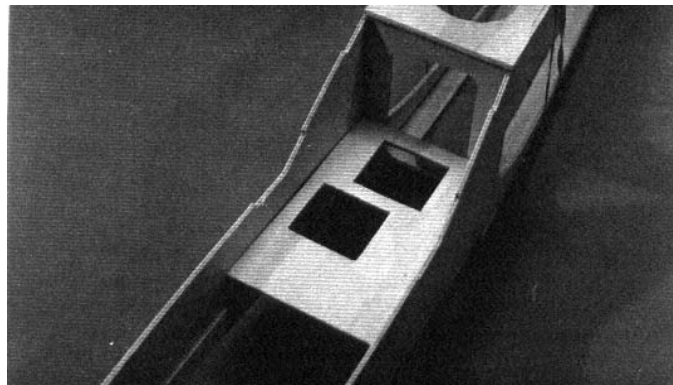
Marks Facing Forward

- 2r. ☐ Making sure the center points and centerline are facing out, and that all edges are in line, Super Jet the special 1/8" ply retract firewall parts together.
- ☐ Tape the glued firewall pieces together and place them under a weight until they are dry.
- 3a. **Important!** If using your own motor mounts, make sure, as you attach the mounts to the firewall, that the mounts do not extend past the cutout in the bottom of the firewall.
- ☐ After completing Step 3 in the main book, continue with Steps #4, #5 and the first two items of Step #6..

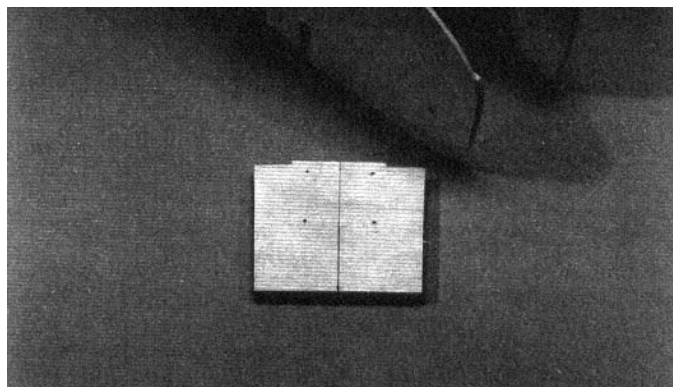


- 6a ☐ After gluing the fuselage doubler to each fuse side, glue the retract nose doubler to each side, using the front edge of the motor mount as a guide.

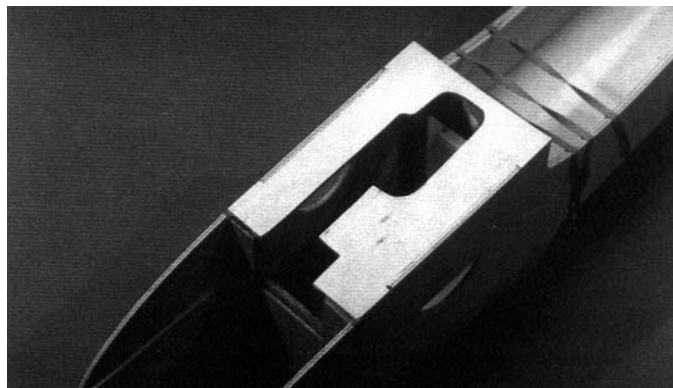
- ☐ Next, glue the special tank height adjusters to the bottom of the half circles in the fuse sides



- 7r. ☐ Install the retract servo tray.
- ☐ Epoxy the two nosegear platform pieces together.



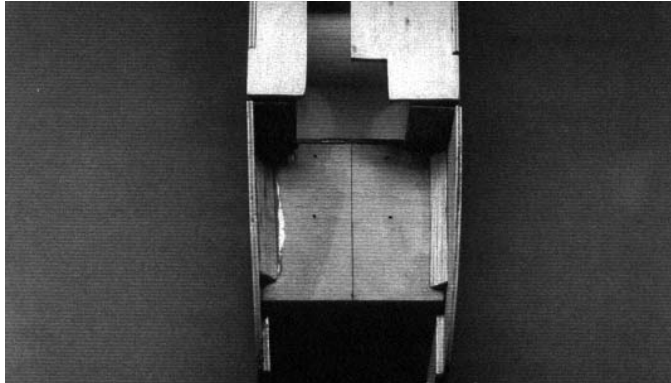
- ☐ When dry, mark a centerline down the middle for ease of retract mounting. This part replaces the nose spreader described in the standard kit construction.



- 9r. ☐ Slide the retract cutout bottom front into position, as shown above, and secure with rubber bands.

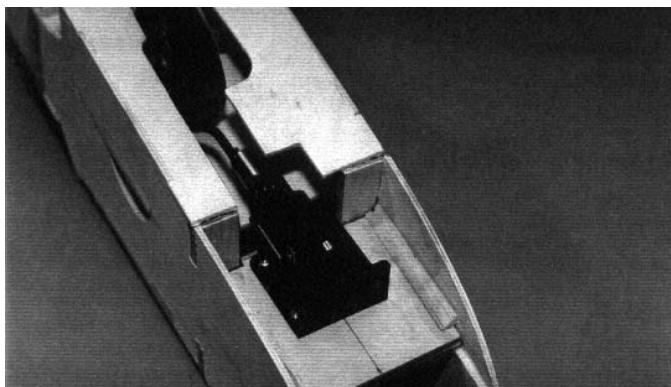
- ☐ Return to Step #9 in the main book and install the 1/8" O.D. x 24" nylon tube.
- ☐ Continue with steps #10, #11. Then come back to this book.

12a. ☐ Following the instructions in the first part of Step 12 in the main book, glue the fuselage parts together. **Read the important notes and the remainder of the Step 12 sections below before you begin gluing.**



IMPORTANT: The areas which support the retract must receive special reinforcement. Use epoxy for added strength.

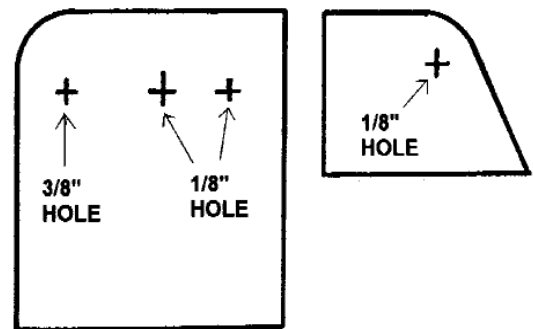
- ☐ Using Jet Epoxy, glue the nosegear platform in place.
- ☐ Position triangle stock along the sides, as shown in the photo, to help support the nose gear. Make sure that the triangle stock is back against the firewall, and when satisfied with the position, epoxy in place.
- ☐ Using a very small amount of Super Jet, tack glue the retract bottom front in place. You will want to remove this part later to work on the retract steering.



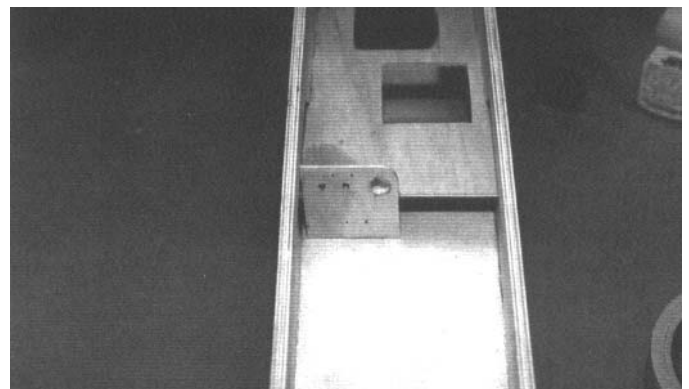
- ☐ Place the nosegear retract on the centerline and slide back until flush with the firewall.
- ☐ Retract the gear to check the fit.
- ☐ Mark the screw hole locations and drill using a 5/64" drill.

- ☐ Using the self-tapping screws, screw the nosegear retract down.
- ☐ Cut the axle to fit the wheel that you are using.
- ☐ After installing the wheel on the axle, test fit the retract gear, as shown above, to make sure the retract cutout on the bottom is correct and that there is no interference. Make adjustments, if necessary.
- ☐ Return to the main book and complete the fuselage construction and Steps #1, #2, and #3 of "Finishing the Model."

Omit Step #4 of "Finishing the Model." Instead follow the replacement steps below.

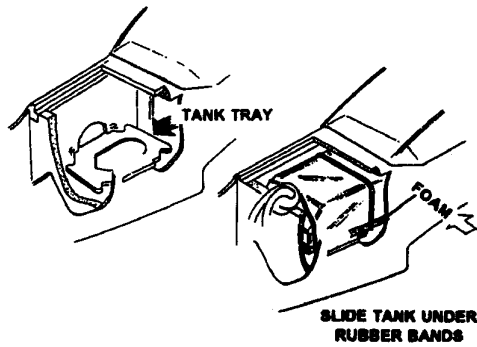


- 4r.** ☐ Locate the center punch marks on the air-valve holder and drill one 3/8" hole and two 1/8" holes, as shown.
- ☐ Drill a 1/8" hole in the nosegear pushrod support guide.

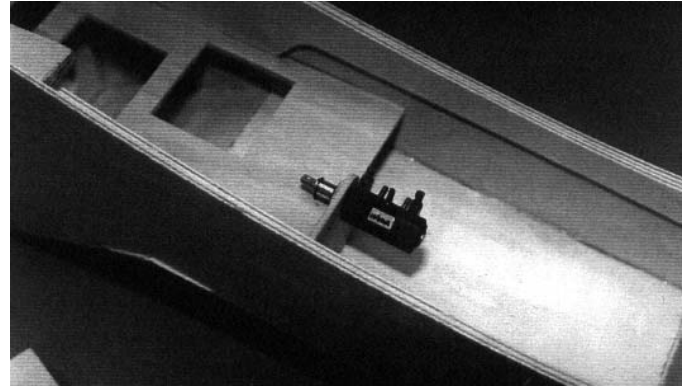


- ☐ After making sure the servo tray is glued into position, glue the air-valve holder onto the end of the servo tray.

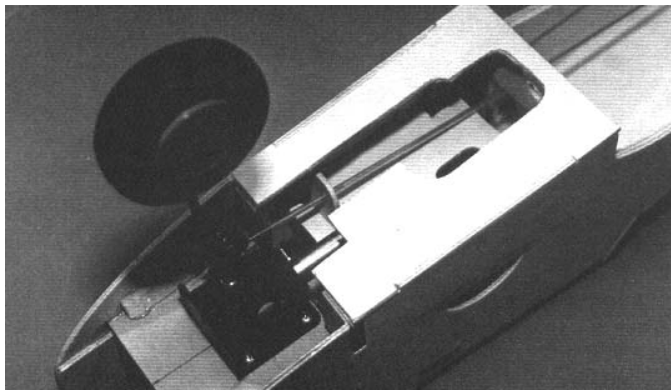
Note: Remove the retract bottom front to make the next several steps easier.



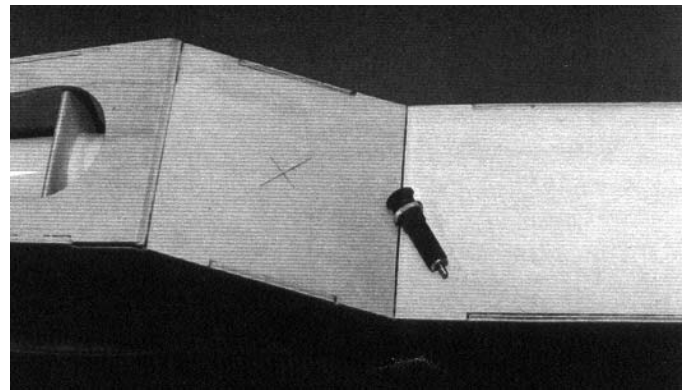
- ☐ Super Jet the fuel tank tray into the slots in the fuselage. Rubber band the fuel tank to the tray, making sure to insert a piece of foam between the tank and the tray.



- ☐ Screw the retract air valve onto the air-valve holder by inserting it into the 3/8" hole.



- ☐ Install the 1/8 x 24" tubing between the nosegear and the servo tray by threading it through the middle 1/8" hole in the air-valve holder and placing the nosegear pushrod support guide on the end closest to the nosegear.

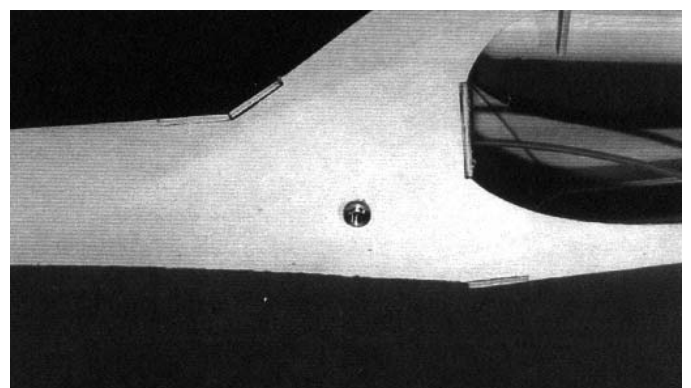


- ☐ Mark the center of the cabin back. Drill a 5/16" hole and mount the pressure gauge in it.

NOTE: The pressure gauge can be mounted anywhere, so long as it is visible. Depending on location, it may be necessary to buy more airline.



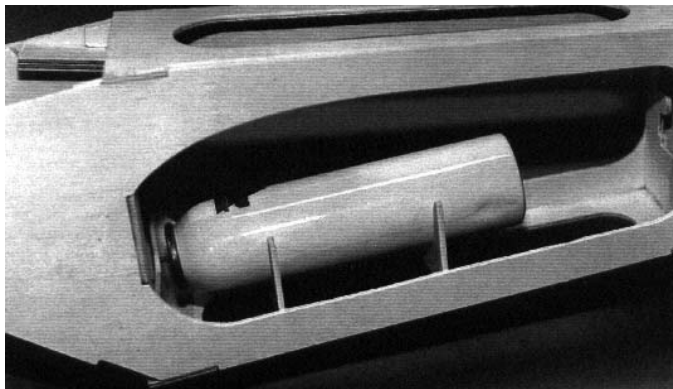
- ☐ Make a 90° bend in the end of the pushrod and insert it through the steering arm slide on the nosegear.



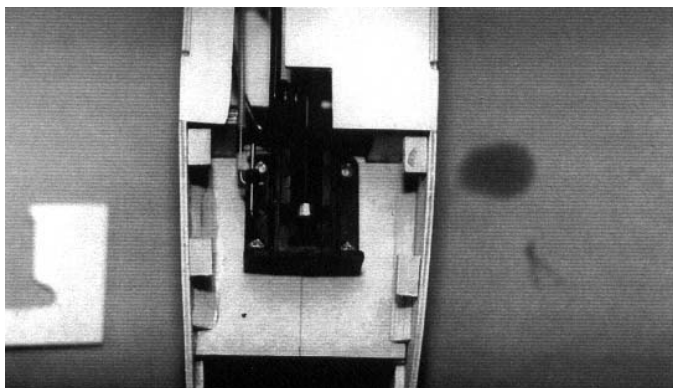
- ☐ Making sure you select a spot on the fuselage side which is opposite from the exhaust, and which will cause no interference with any of the servos, drill a 5/16" hole for the air fill valve.



- ☐ Mount the air tank into the holders and glue in place, using silicone calk. Then mount this air tank assembly inside the fuselage, behind Former "B" and under the fuselage top. See photo. Refer to the photo above and the photo below.

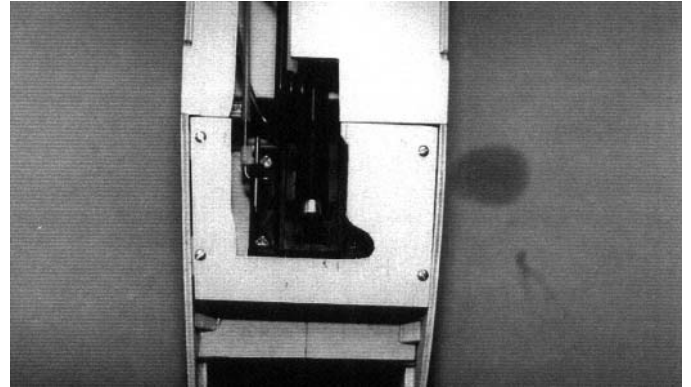


- ☐ Mount the air hoses, as shown in the Retract System Diagram.
- ☐ If you removed the retract bottom front earlier, it now can be glued back into place.

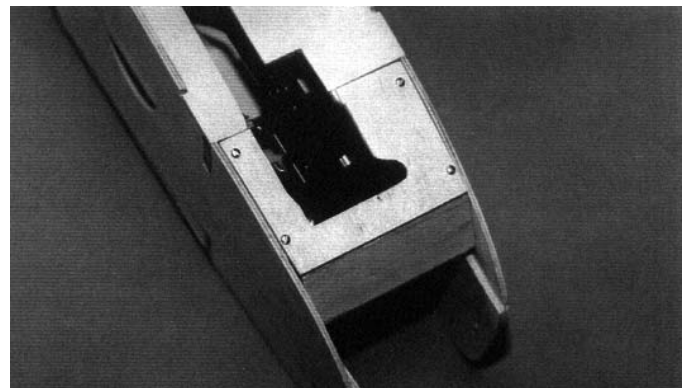


- ☐ Cut the 1/4" x 2" basswood stick into four equal lengths.

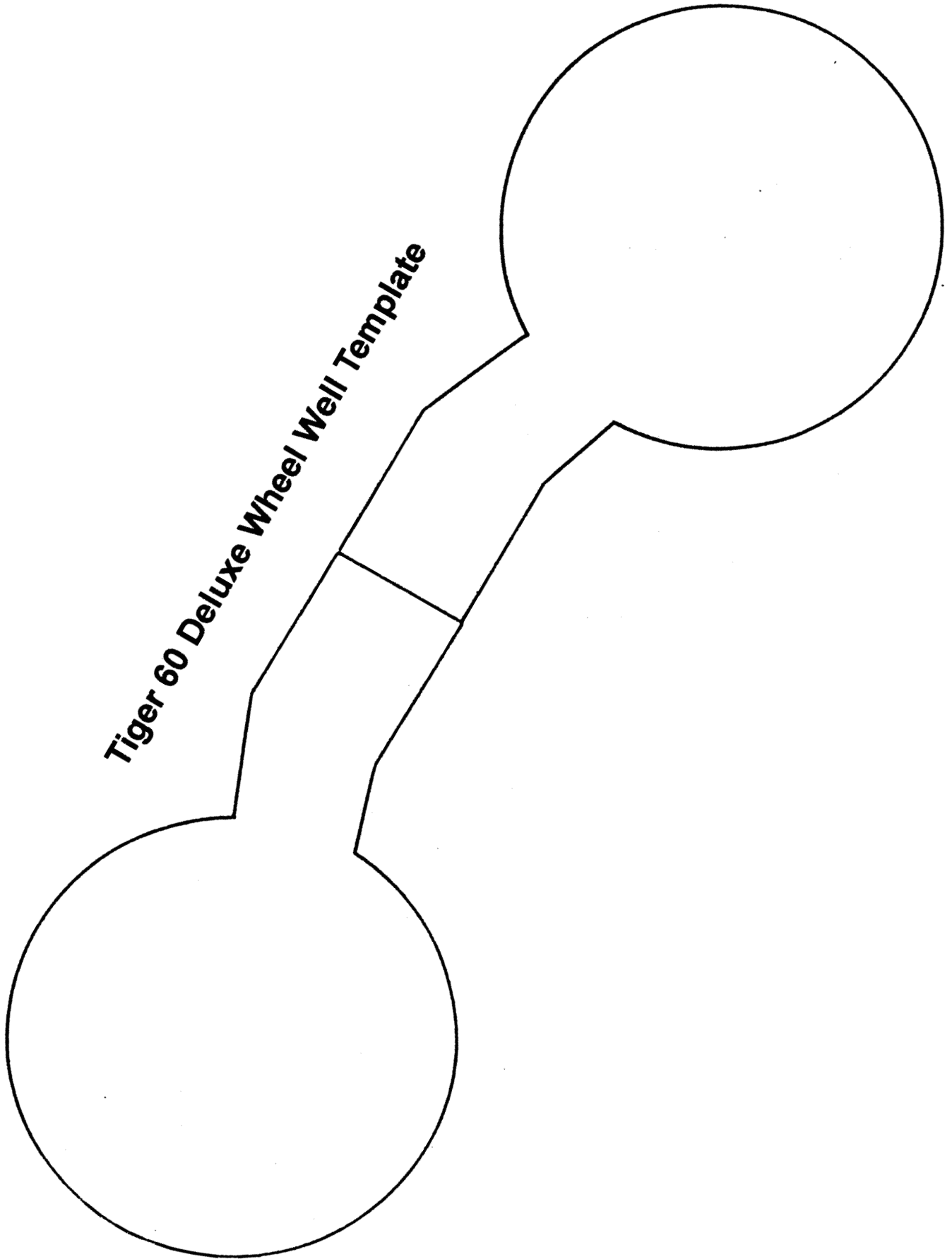
- ☐ Make a mark 2-1/4" out from the firewall and glue in two of the small blocks, one on each side of the nose. Glue the remaining two pieces to the corners next to the firewall.



- ☐ Place the retract cover on the fuse and screw down.

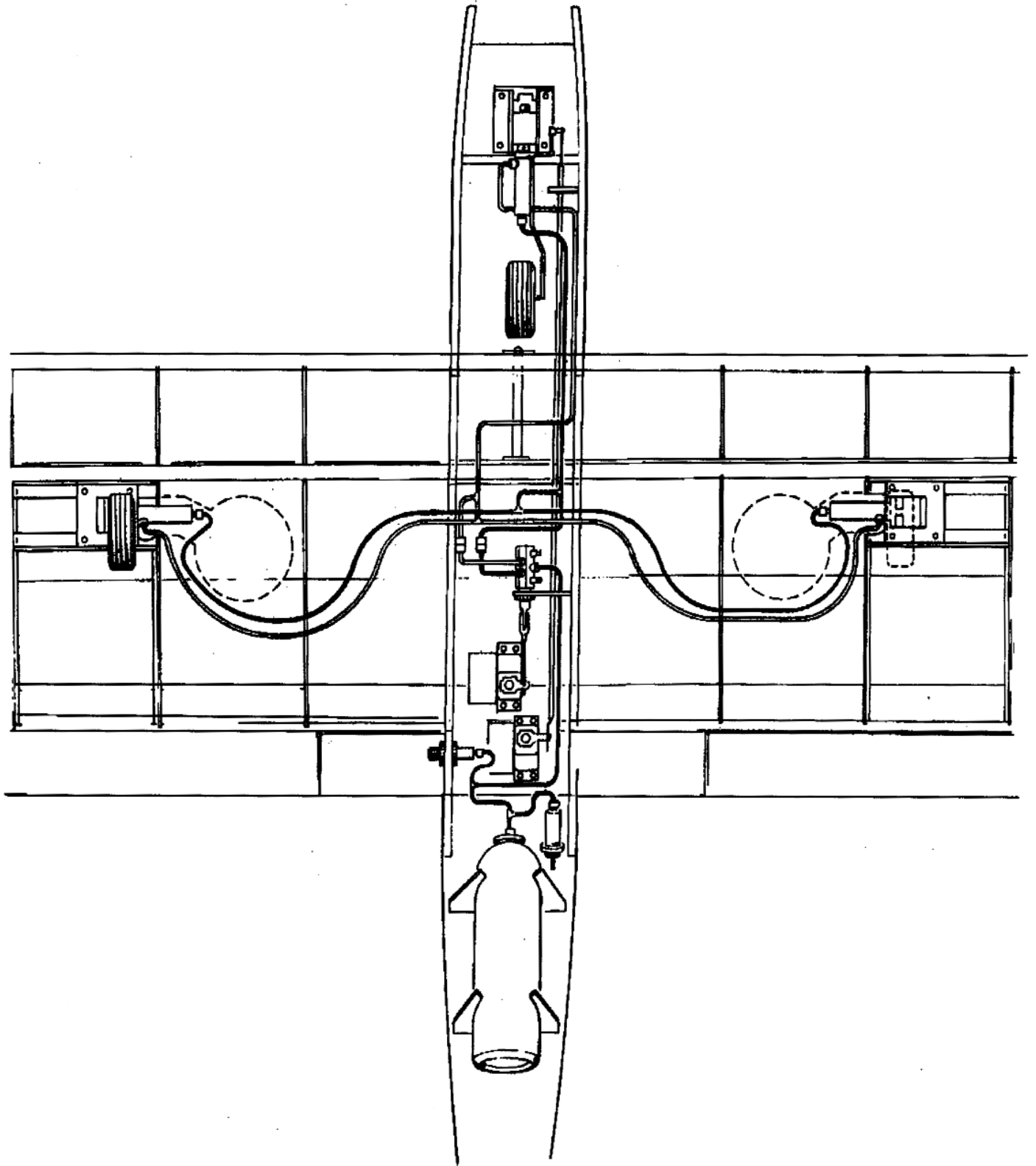


- ☐ Glue the 3/4" triangle across the front to close off the space between the retract cover and the retract platform.
- ☐ Use thin balsa sheeting to enclose the wheel well. Make sure you leave sufficient wheel clearance.
- ☐ Finally, paint all three wheel wells (wing and fuse) to prevent fuel from attacking the wood.



Tiger 60 Deluxe Wheel Well Template

RETRACT SYSTEM DIAGRAM



SUPER CHIPMUNK

All the thrills without the chills!



The Piper Cub

A realistic easy-to-assemble classic

