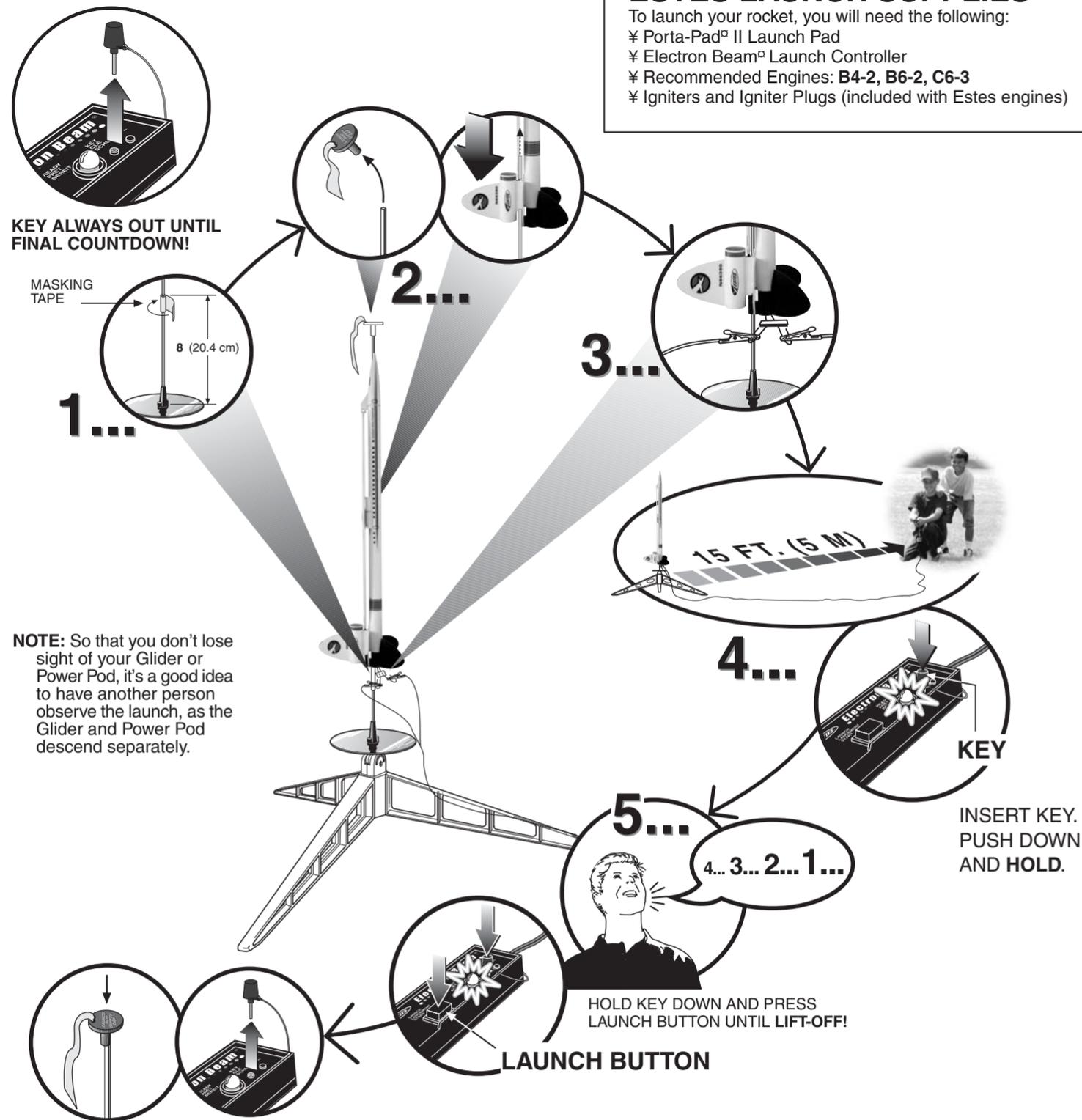


ESTES LAUNCH SUPPLIES

To launch your rocket, you will need the following:
 ¥ Porta-Pad[®] II Launch Pad
 ¥ Electron Beam[®] Launch Controller
 ¥ Recommended Engines: **B4-2, B6-2, C6-3**
 ¥ Igniters and Igniter Plugs (included with Estes engines)



SCISSOR WING TRANSPORT

FLYING MODEL ROCKET KIT INSTRUCTIONS

KEEP FOR FUTURE REFERENCE



ASSEMBLY TIP: Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

TEST FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE!

If any parts don't fit properly, sand as required for precision assembly.

PARTS Locate the parts shown below and lay them out on the table in front of you. DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.

PRECAUTIONS

NAR Safety Code

NO DRY GRASS OR WEEDS

FLYING YOUR ROCKET

Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better the chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the National Association of Rocketry (NAR) Safety Code.

MISFIRES

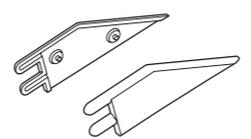
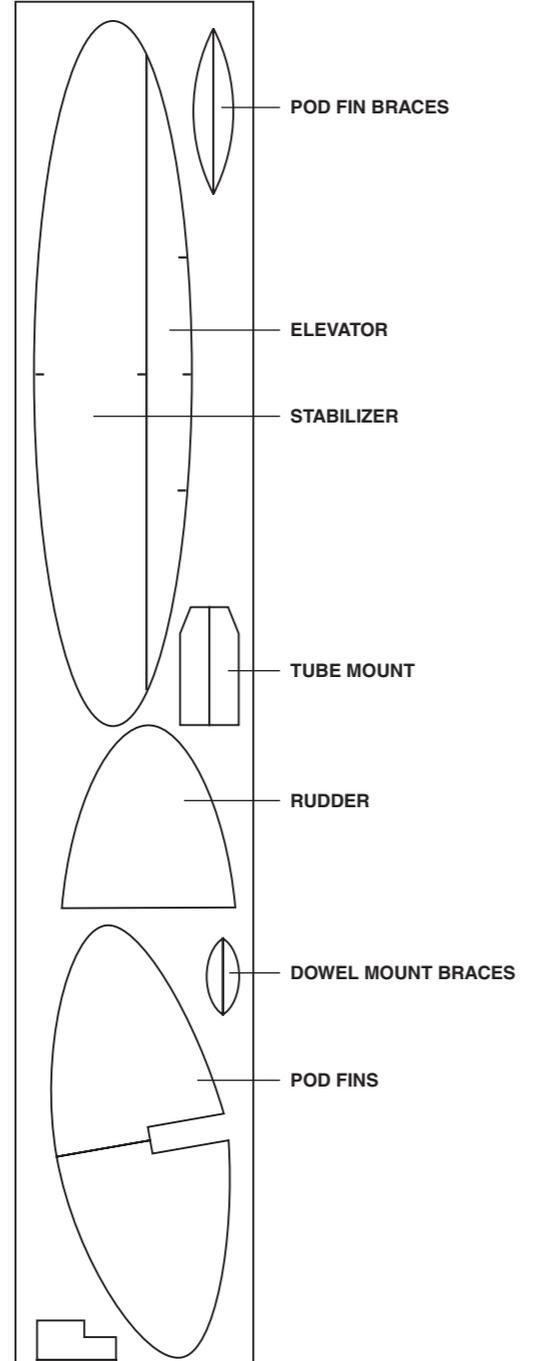
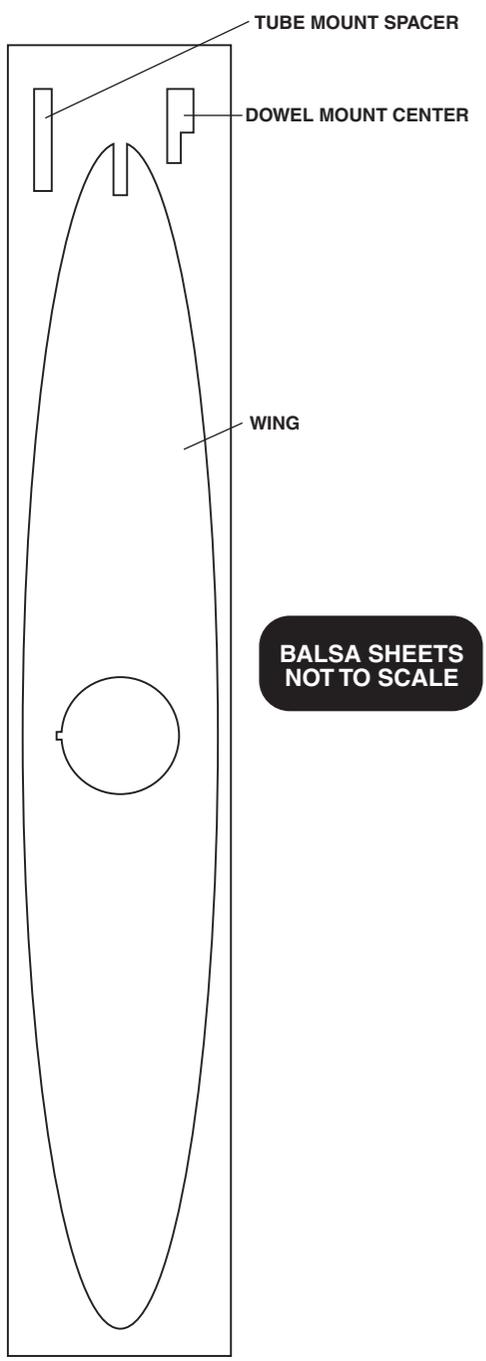
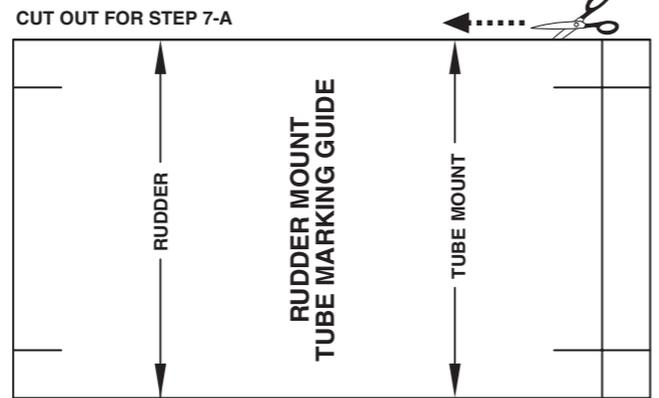
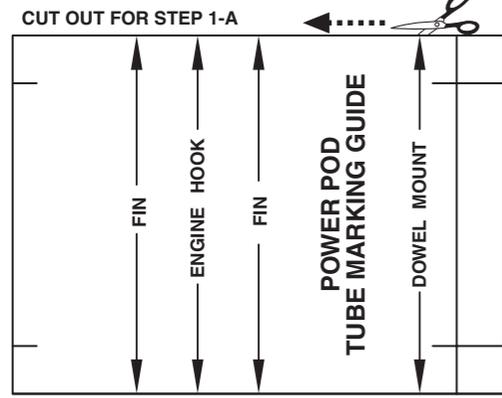
TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the igniter clips and remove the engine. Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.

SUPPLIES

In addition to the parts included in the kit you will also need:

SCISSORS PENCIL RULER FINE SAND PAPER (#400-600 GRIT) CARPENTER'S GLUE HOBBY KNIFE PLASTIC MODELING CEMENT MASKING TAPE RAZOR SAW TWEEZERS SPRAY PRIMER WHITE SPRAY PAINT: BLACK WHITE

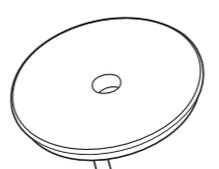
REFERENCE SHEET & MARKING GUIDES



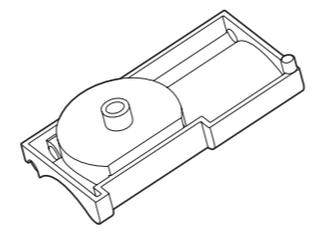
PLASTIC WING HOLDER A & B



PLASTIC WING PIVOT CARD



PLASTIC WING PIVOT

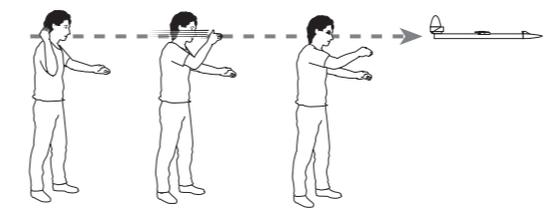


PLASTIC PIVOT BASE

PLASTIC PARTS NOT TO SCALE

GLIDE TEST

NOTE: Test the Glider only on soft, grassy surfaces like a sports field or lawn so that you don't damage your model.



- A.** With Power Pod removed from Glider, aim at a spot about 50 feet away and toss Glider straight out at eye level.
- B.** Observe glide carefully. Make adjustments a little at a time until you are satisfied with the glide.

GLIDER ADJUSTMENTS:

If Glider dives:

- 1) Remove weight from nose cone, or
- 2) Add weight inside of rudder tube, or
- 3) Lightly sand angled part of Tube Mount to increase elevator movement

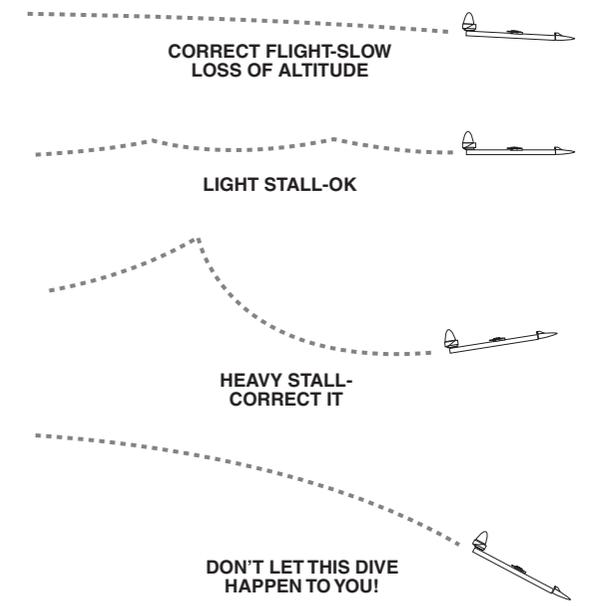
If Glider stalls:

- 1) Add weight to nose cone, or
- 2) Remove weight from rudder tube, or
- 3) Add shims to angled part of Tube Mount to decrease elevator movement

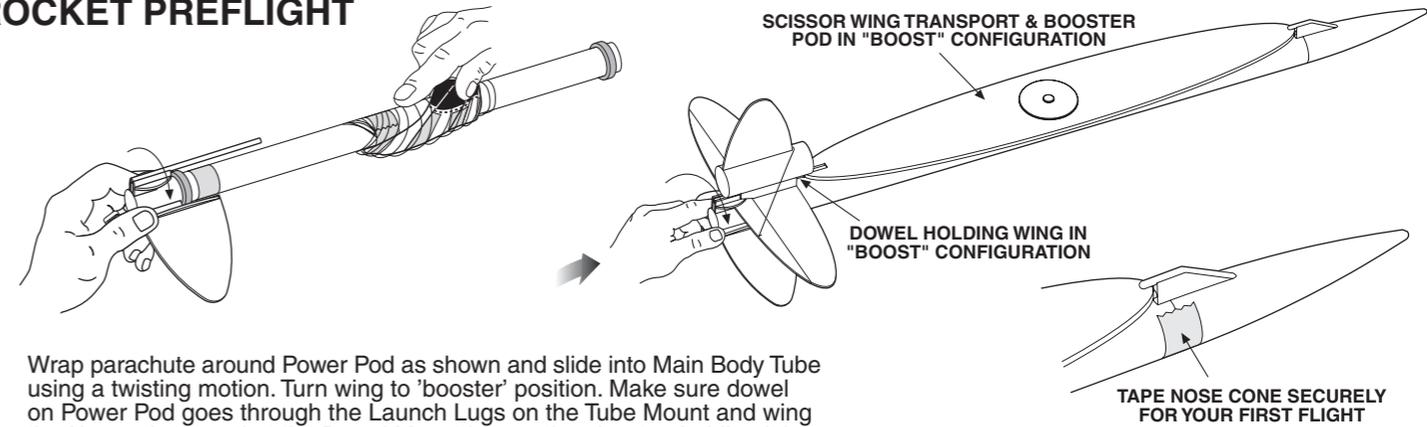
If Glider turns too sharply:

- 1) Be sure that wing is at right angles to body tube in glide position.
- 2) Make sure that wing snaps firmly into glide position when released.
- 3) Make sure model balances span wise (from side to side). If not, add weight, in small amounts, to the light wing tip until nearly balanced.

The Glider should perform a large, gliding circle during descent.



ROCKET PREFLIGHT



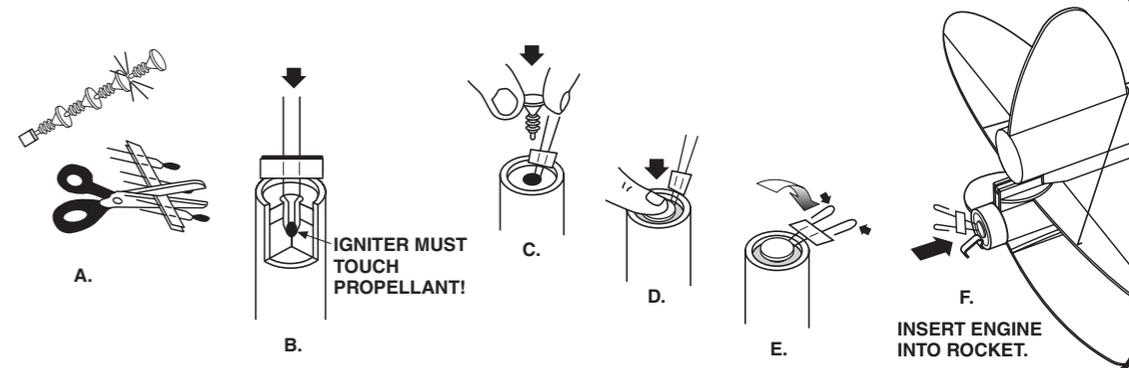
Wrap parachute around Power Pod as shown and slide into Main Body Tube using a twisting motion. Turn wing to 'booster' position. Make sure dowel on Power Pod goes through the Launch Lugs on the Tube Mount and wing tip. Also make sure that the Dowel Mount is over the elevator, holding it in the horizontal position. For your first flight, use a **B6-2** engine. Tape Nose Cone securely as shown for your first flight.

NOTE: After you have flown and are sure your glider is balanced correctly, you can glue the nose cone on permanently using plastic cement.

PREPARE ENGINE

WARNING: FLAMMABLE

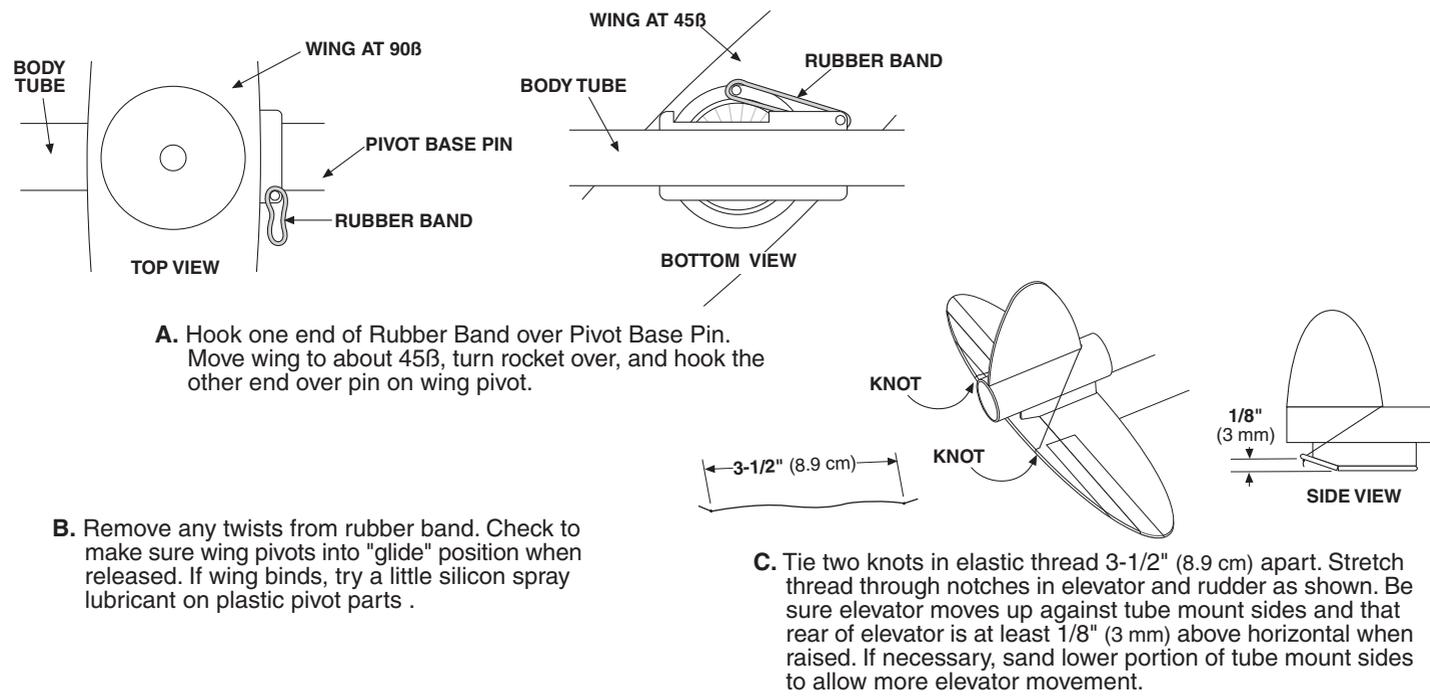
To avoid serious injury, read instructions & NAR Safety Code included with your engines. **PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!** If you do not use your prepared engine, remove the igniter before storing your engine.



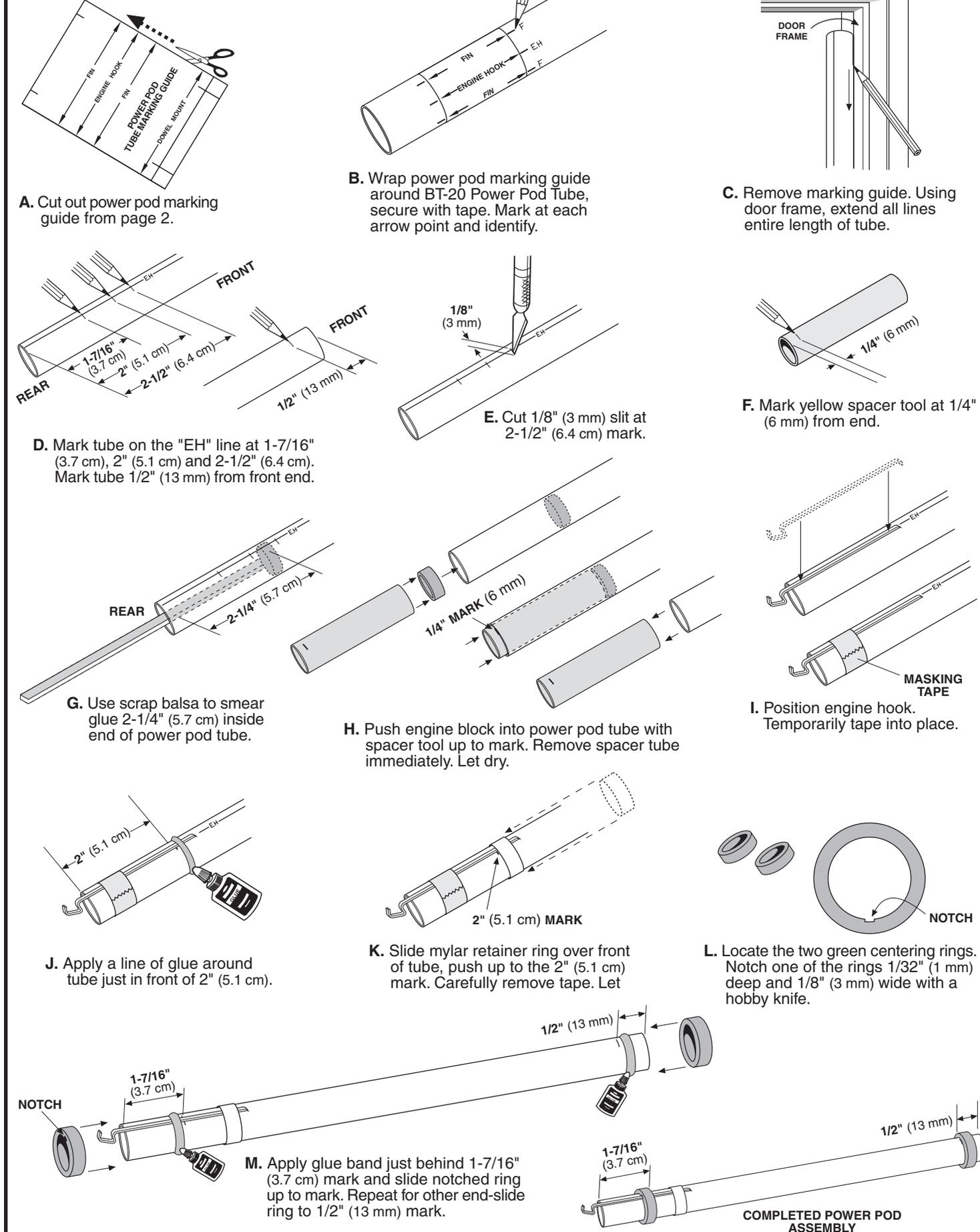
1/8" LASER CUT Balsa SHEET

1/16" LASER CUT Balsa SHEET

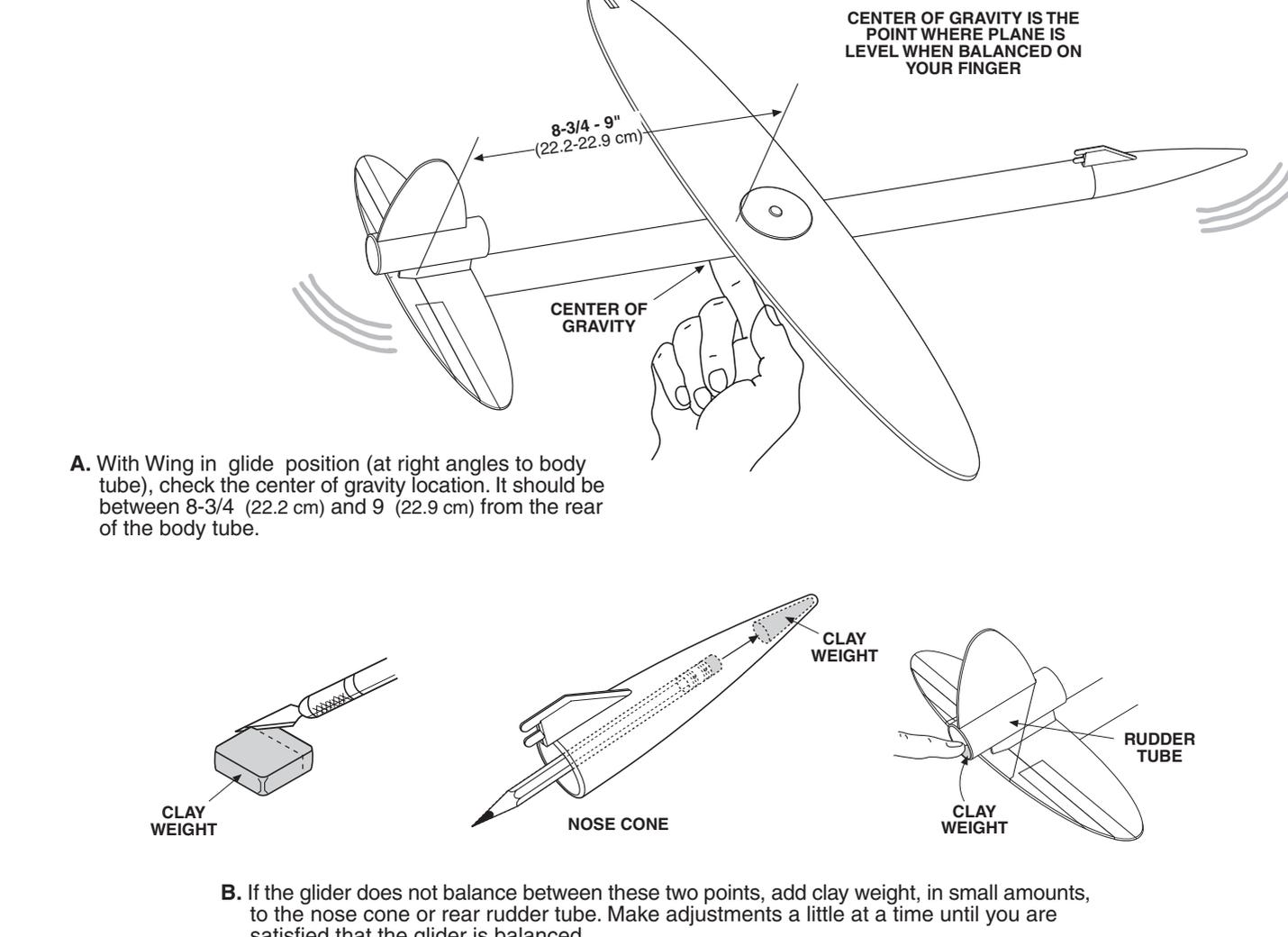
INSTALL RUBBER BAND & ELASTIC THREAD



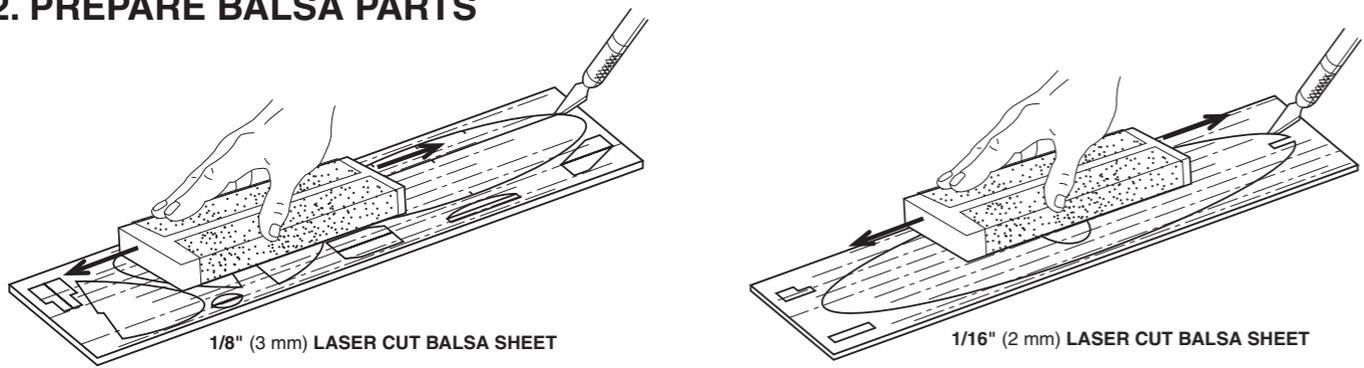
1. ASSEMBLE POWER POD



BALANCE GLIDER



2. PREPARE BALSAM PARTS

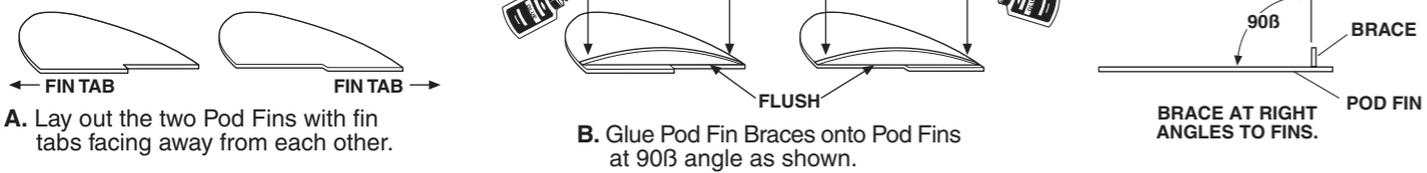


1/8" (3 mm) LASER CUT BALSAM SHEET

1/16" (2 mm) LASER CUT BALSAM SHEET

A. Sand both sides of each balsa sheet with fine sand paper. Carefully remove pieces. Lightly sand edges smooth, but **do not round** edges.

3. ATTACH FINS

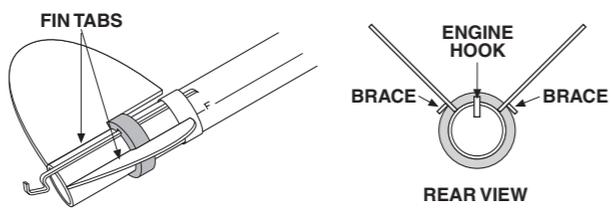


A. Lay out the two Pod Fins with fin tabs facing away from each other.

B. Glue Pod Fin Braces onto Pod Fins at 90° angle as shown.

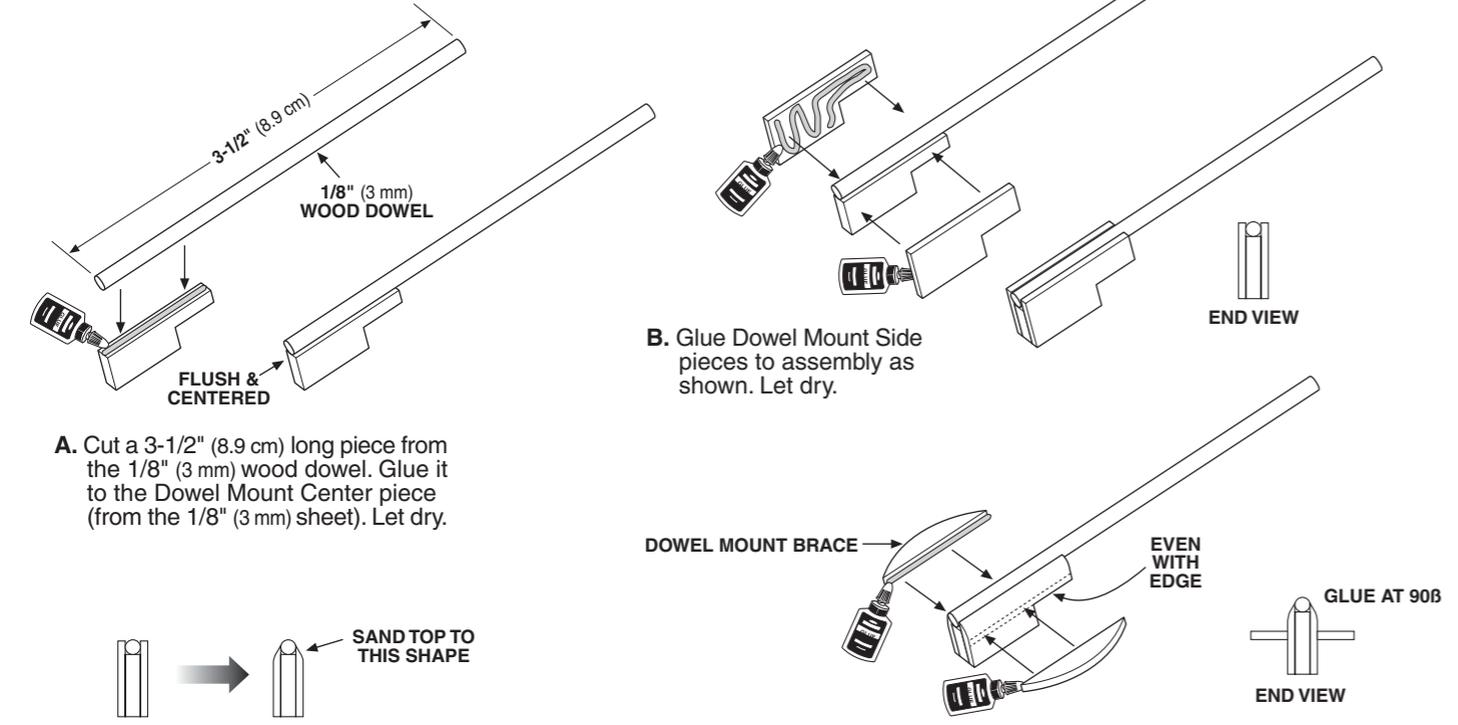
BRACE AT RIGHT ANGLES TO FINS.

C. With Fin Braces to the outside and fin tabs to the rear, glue Pod Fins to Power Pod Assembly as shown. Let dry completely.



NOTE: Fins must be attached correctly for stable flight.

4. ASSEMBLE DOWEL MOUNT



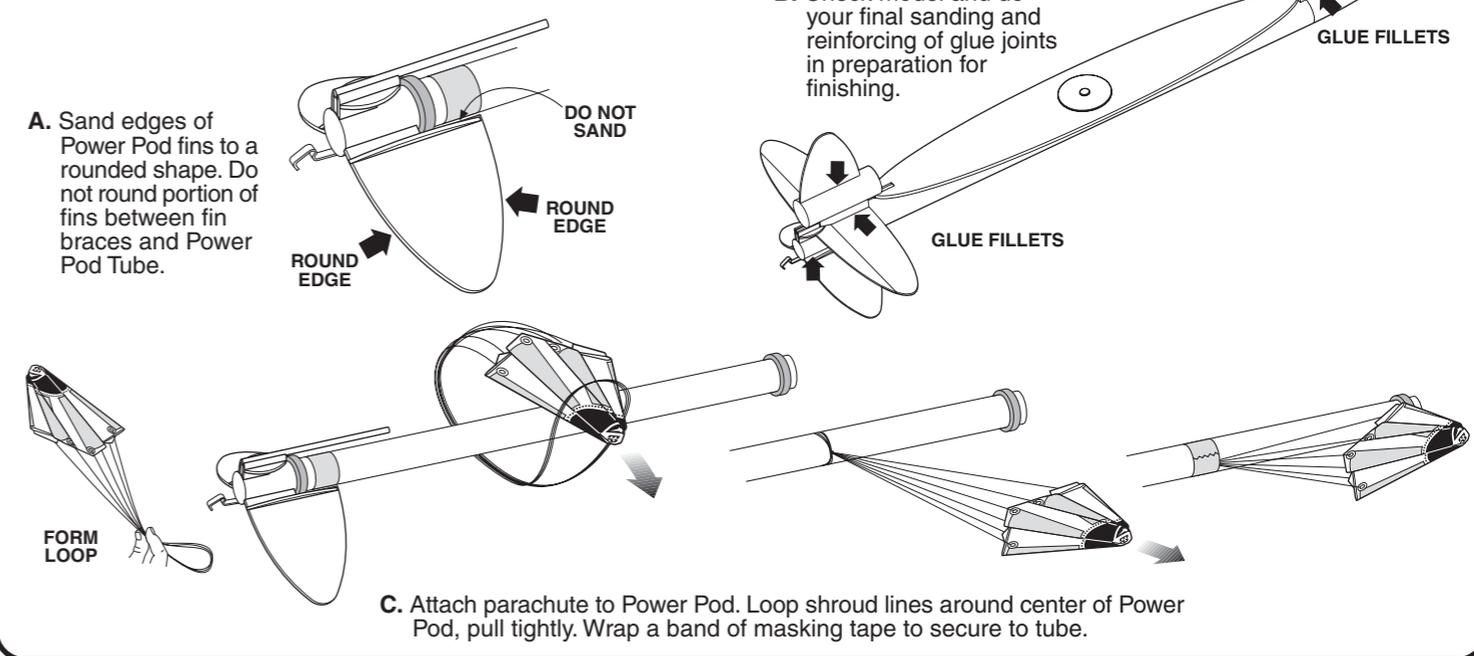
A. Cut a 3-1/2" (8.9 cm) long piece from the 1/8" (3 mm) wood dowel. Glue it to the Dowel Mount Center piece (from the 1/8" (3 mm) sheet). Let dry.

B. Glue Dowel Mount Side pieces to assembly as shown. Let dry.

C. Sand to cross section as shown.

D. Glue Dowel Mount Braces to Dowel Mount Sides. Do not glue Dowel Mount to Power Pod yet. This will be done later to assure proper alignment.

PREP ROCKET FOR FINISHING



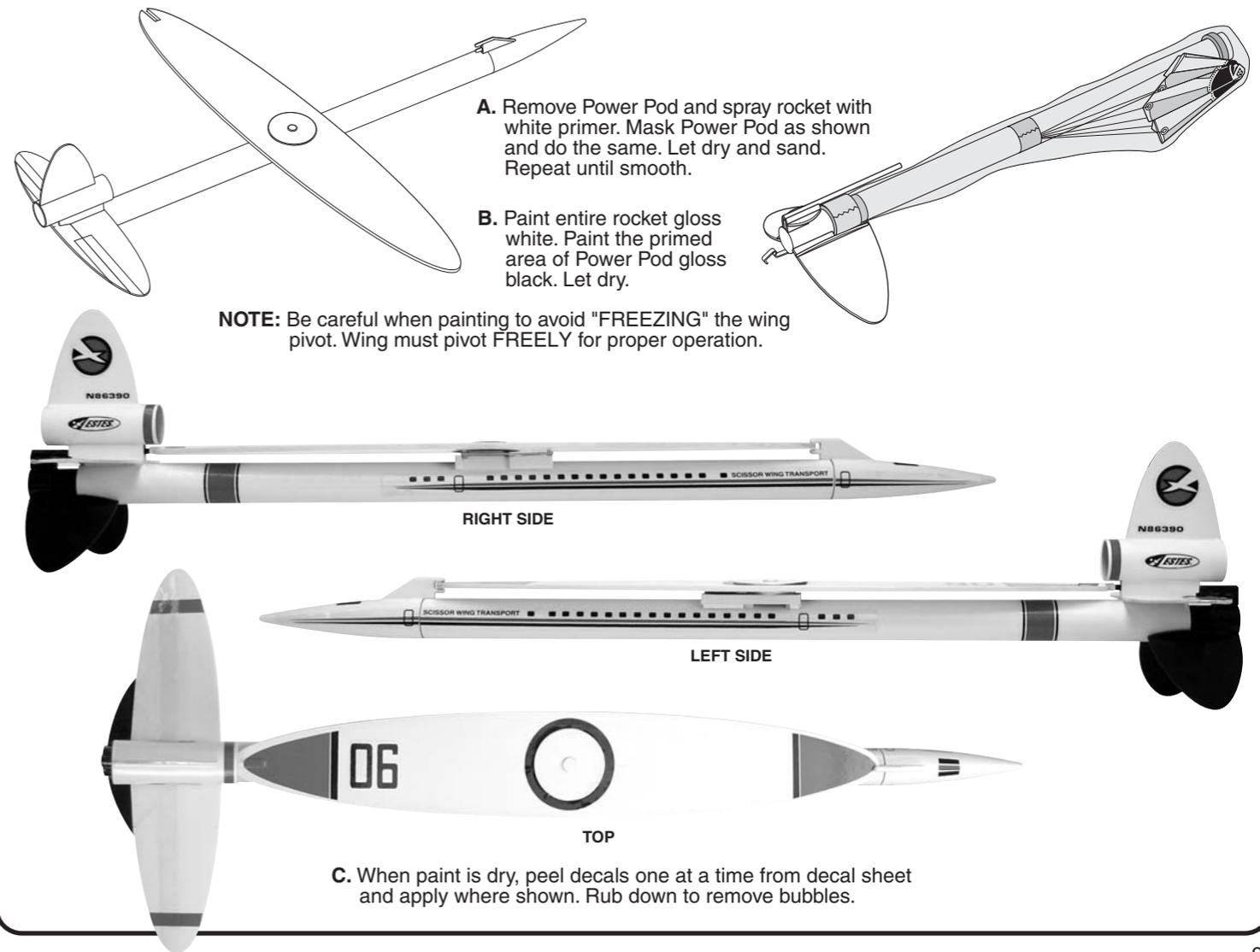
A. Sand edges of Power Pod fins to a rounded shape. Do not round portion of fins between fin braces and Power Pod Tube.

B. Check model and do your final sanding and reinforcing of glue joints in preparation for finishing.

C. Attach parachute to Power Pod. Loop shroud lines around center of Power Pod, pull tightly. Wrap a band of masking tape to secure to tube.

PAINT SCHEME

For optimum performance, keep weight to a minimum. We recommend light coats of primer and paint.



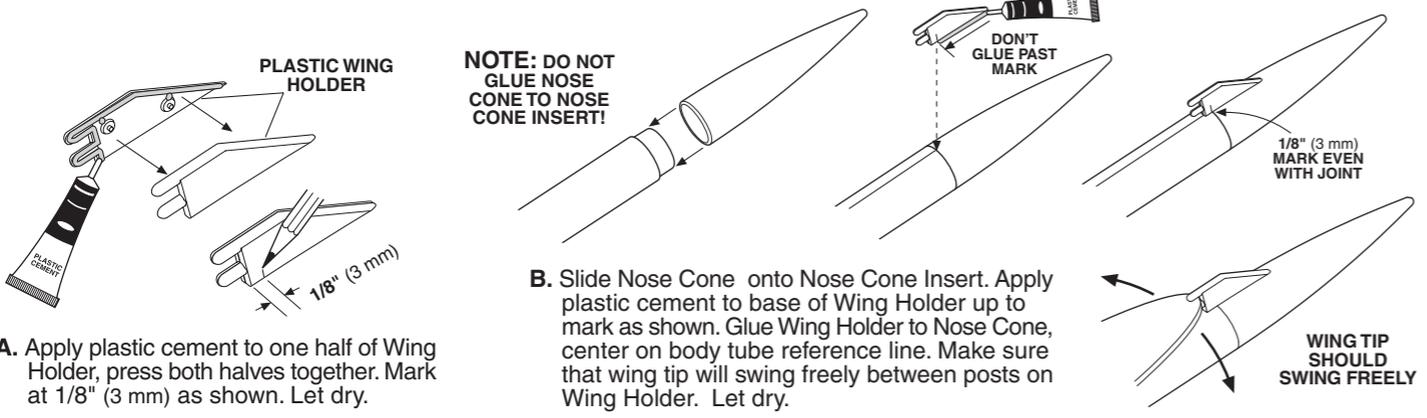
A. Remove Power Pod and spray rocket with white primer. Mask Power Pod as shown and do the same. Let dry and sand. Repeat until smooth.

B. Paint entire rocket gloss white. Paint the primed area of Power Pod gloss black. Let dry.

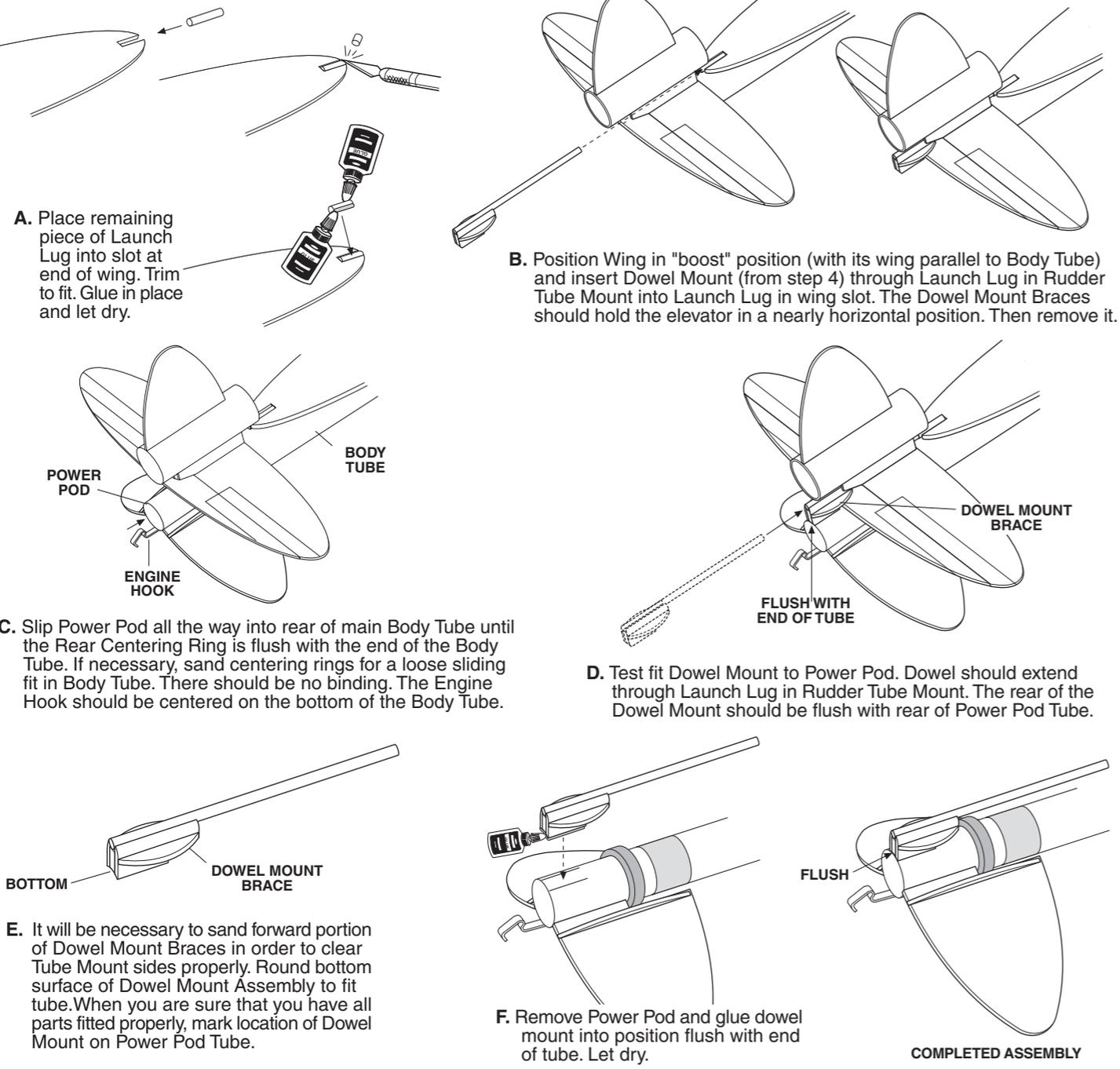
NOTE: Be careful when painting to avoid "FREEZING" the wing pivot. Wing must pivot FREELY for proper operation.

C. When paint is dry, peel decals one at a time from decal sheet and apply where shown. Rub down to remove bubbles.

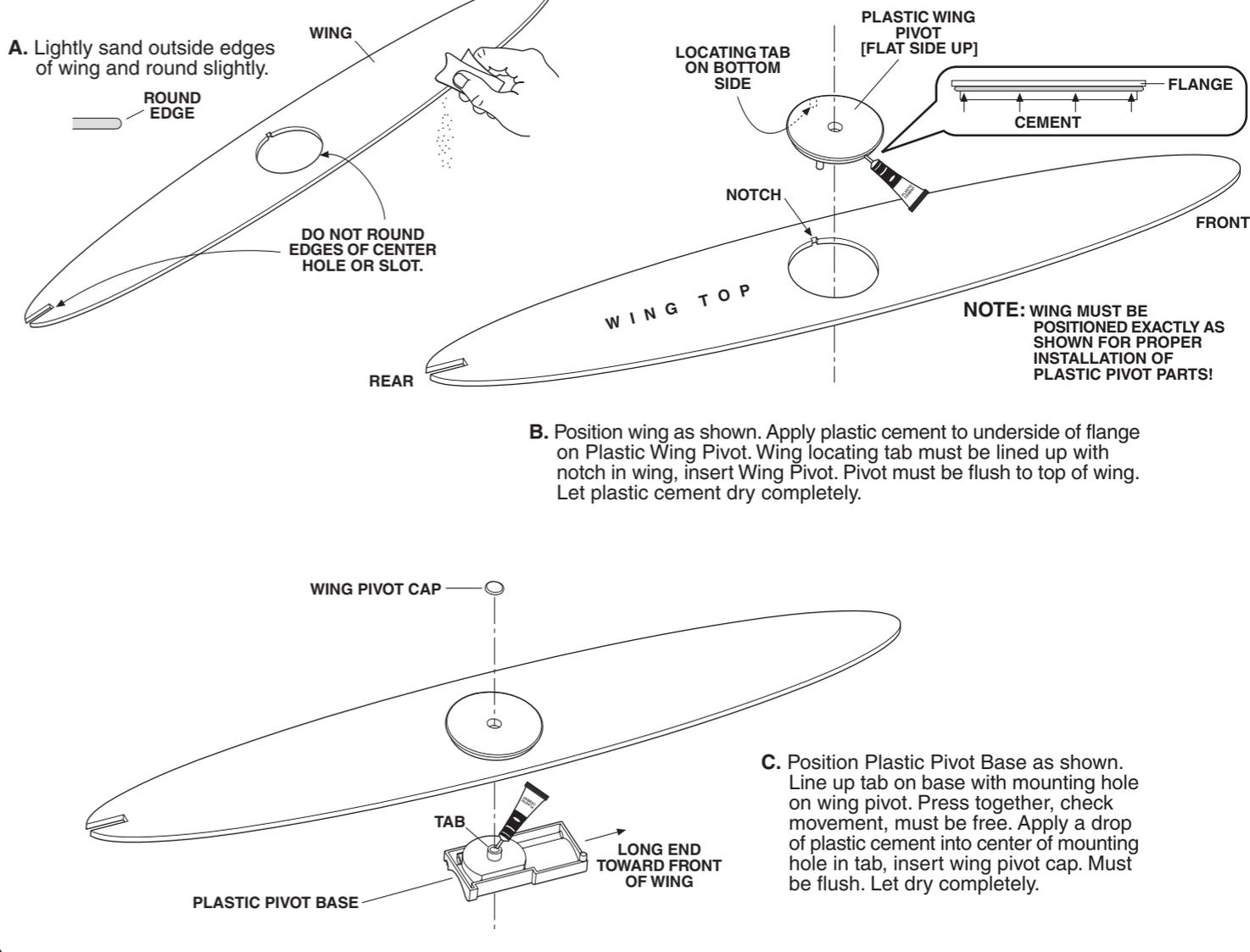
9. ASSEMBLE NOSE CONE



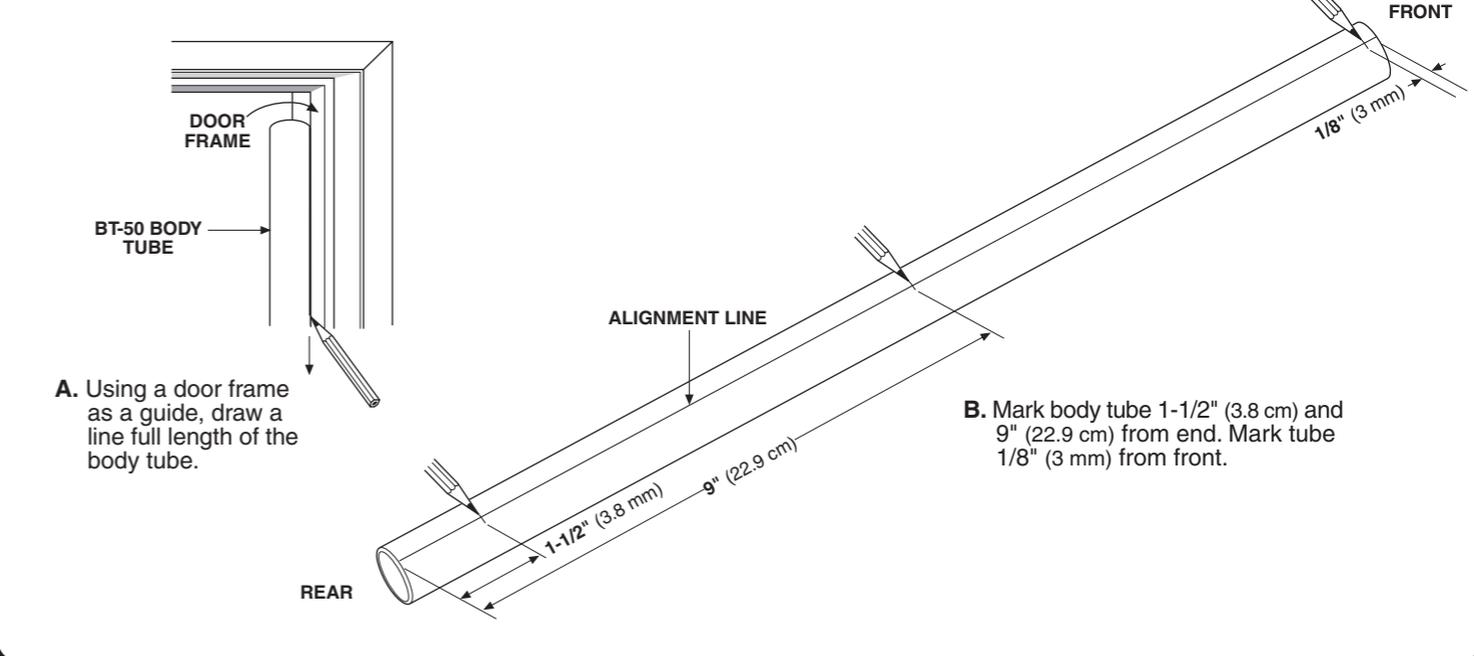
10. ATTACH DOWEL MOUNT



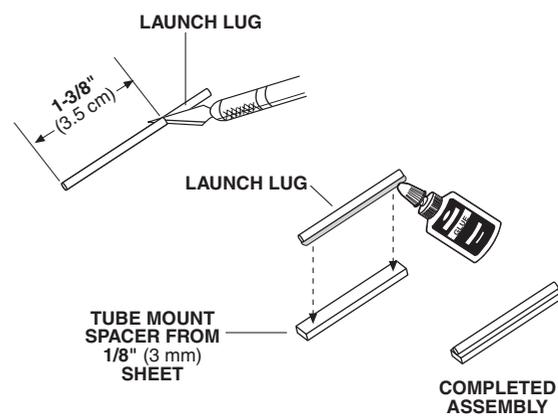
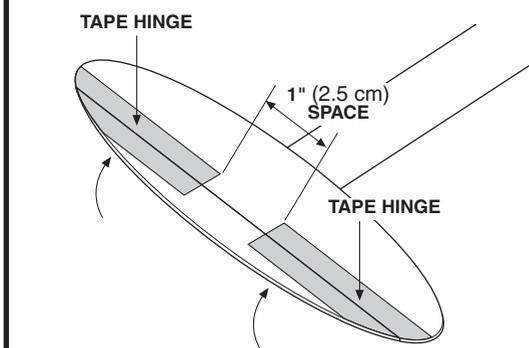
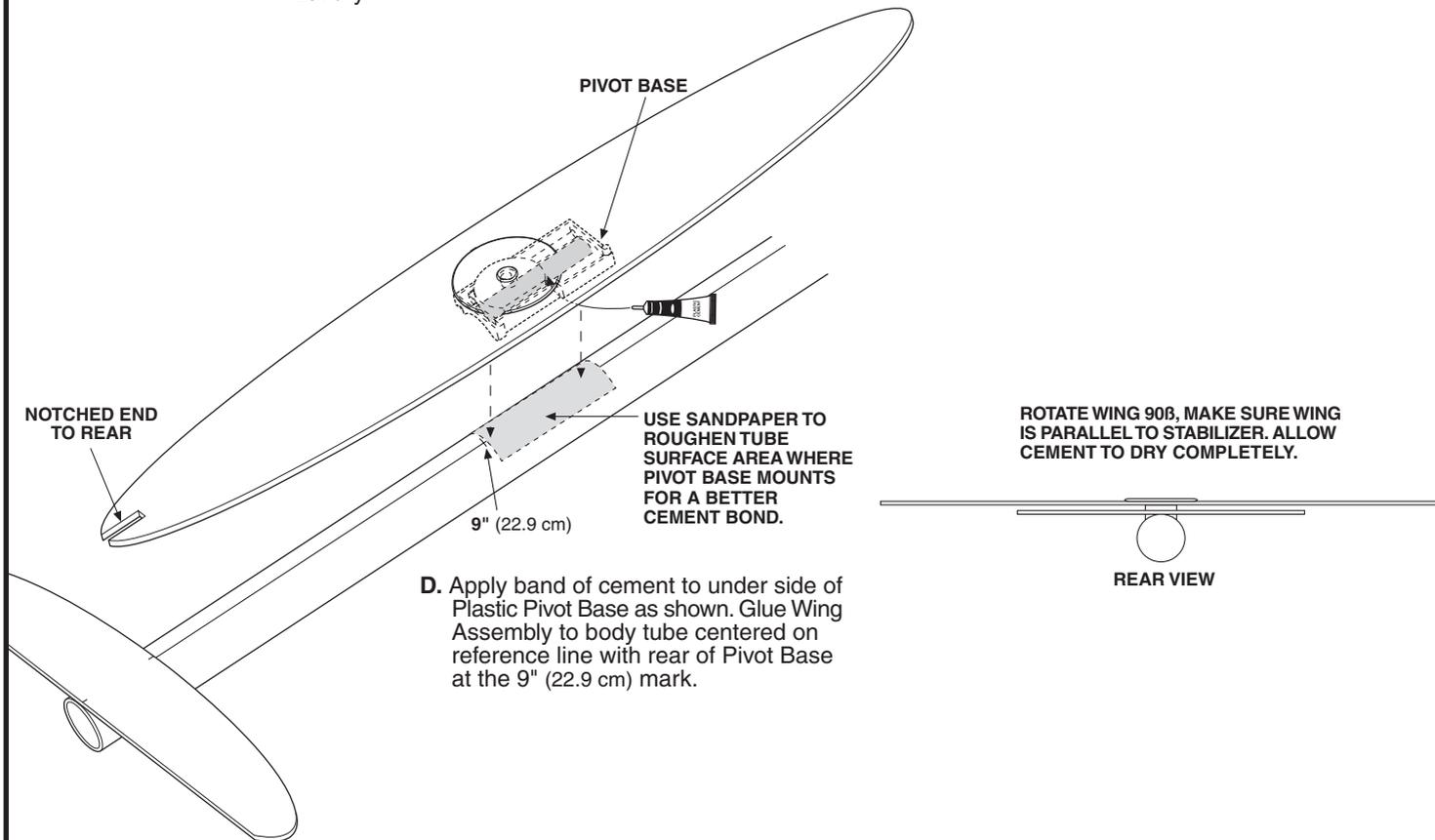
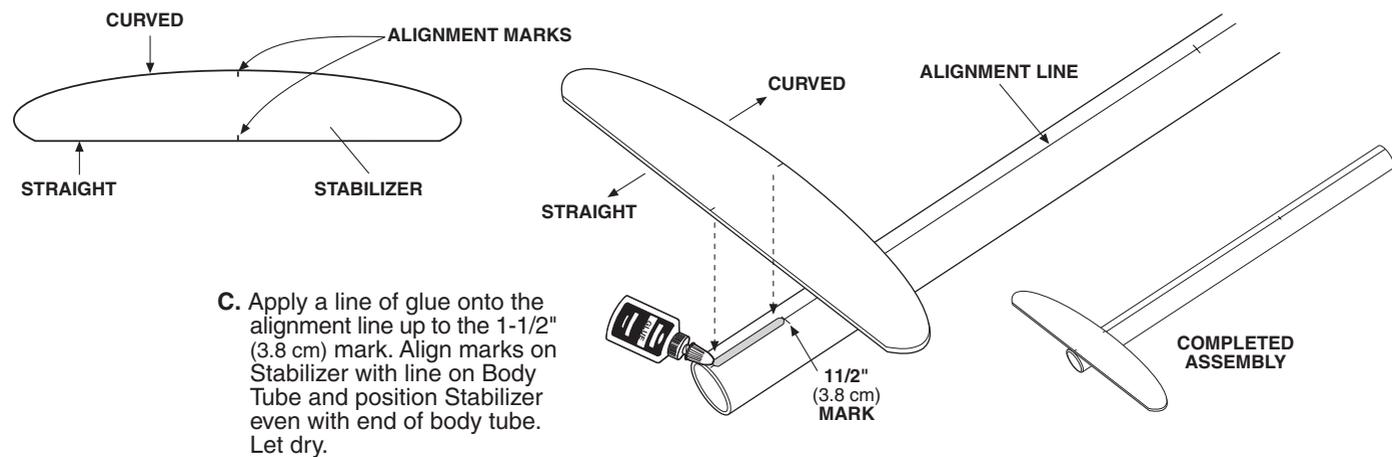
5. ASSEMBLE WING



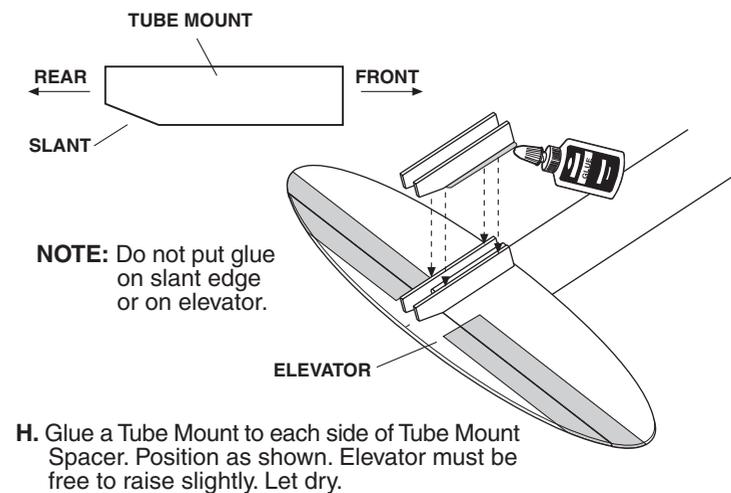
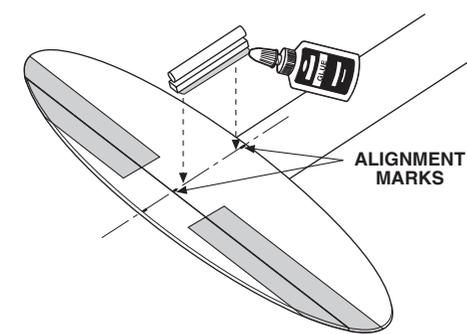
6. ASSEMBLE STABILIZER AND ATTACH WING TO BODY TUBE



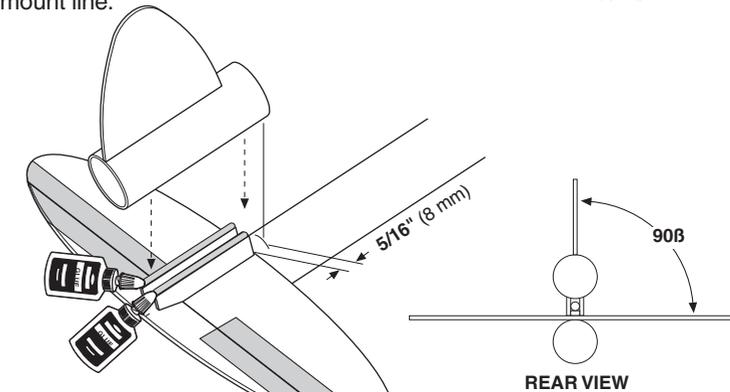
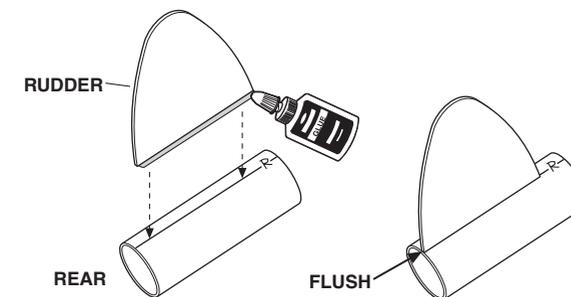
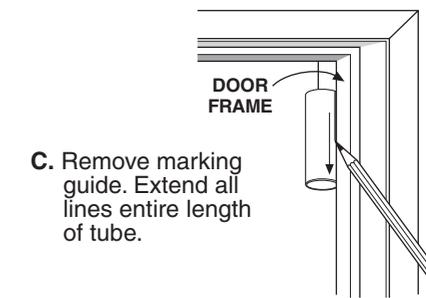
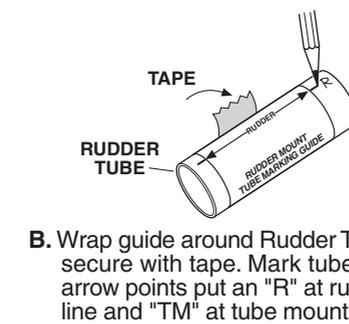
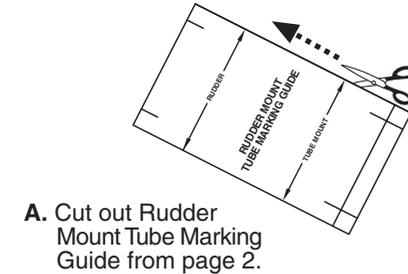
6. ASSEMBLE STABILIZER (Continued.)



6. ASSEMBLE STABILIZER (Continued)



7. ATTACH RUDDER



8. INSTALL NOSE CONE INSERT

