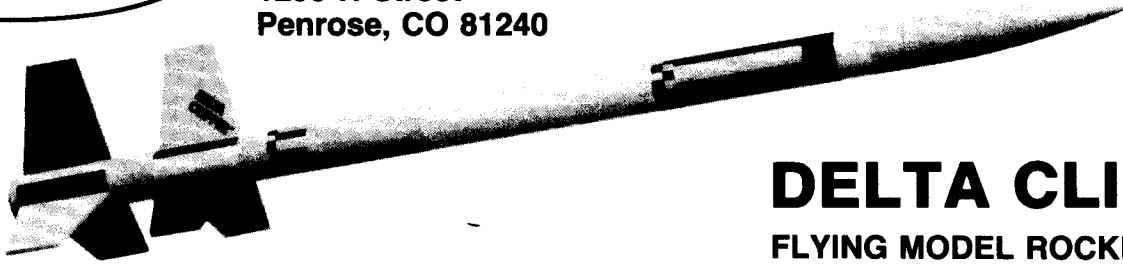




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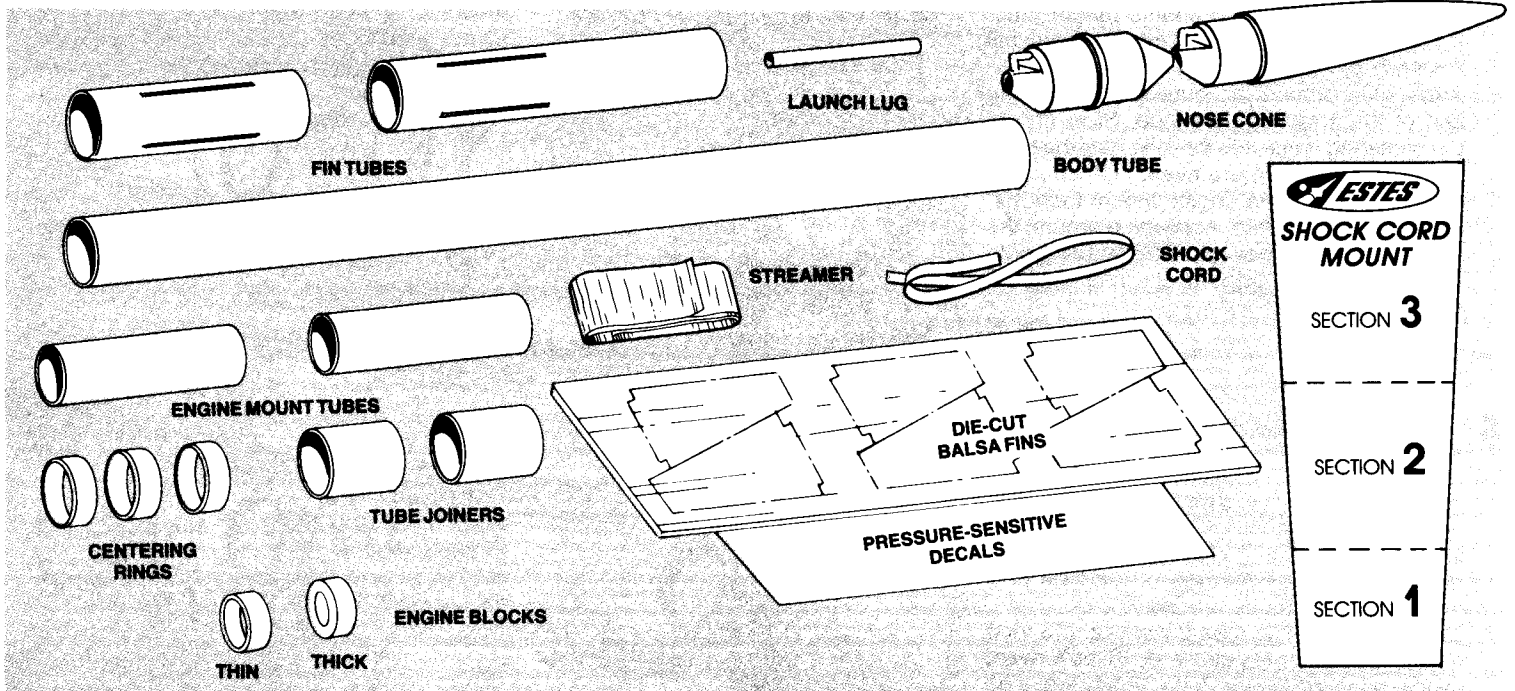


DELTA CLIPPER™

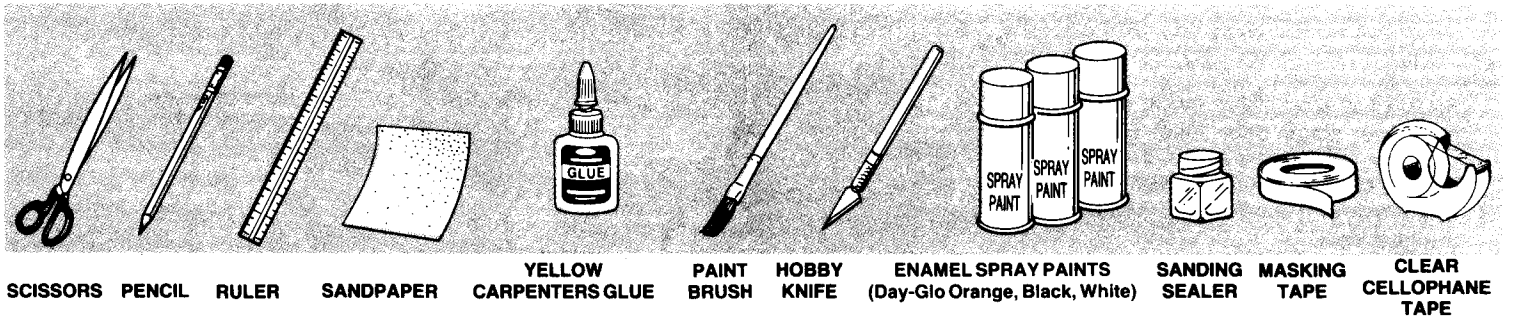
FLYING MODEL ROCKET #2067

PARTS AND SUPPLIES

Locate the parts shown below and lay them out on the table in front of you.



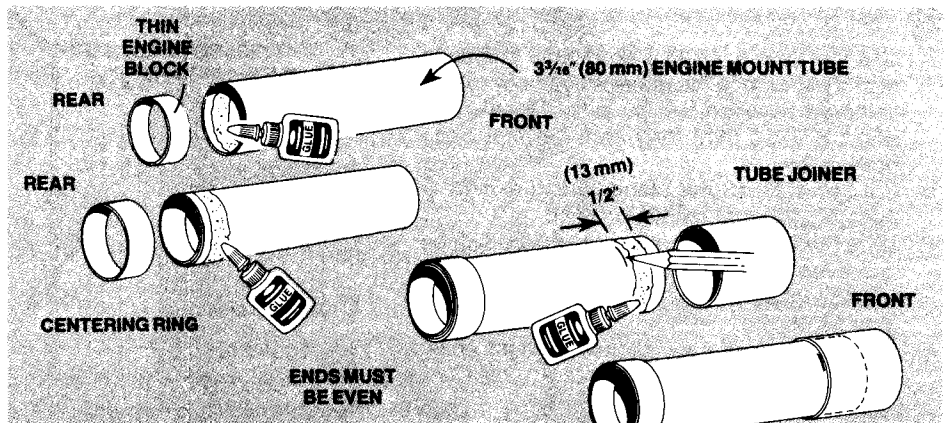
In addition to the parts included in this kit, you will need:



ROCKET ASSEMBLY

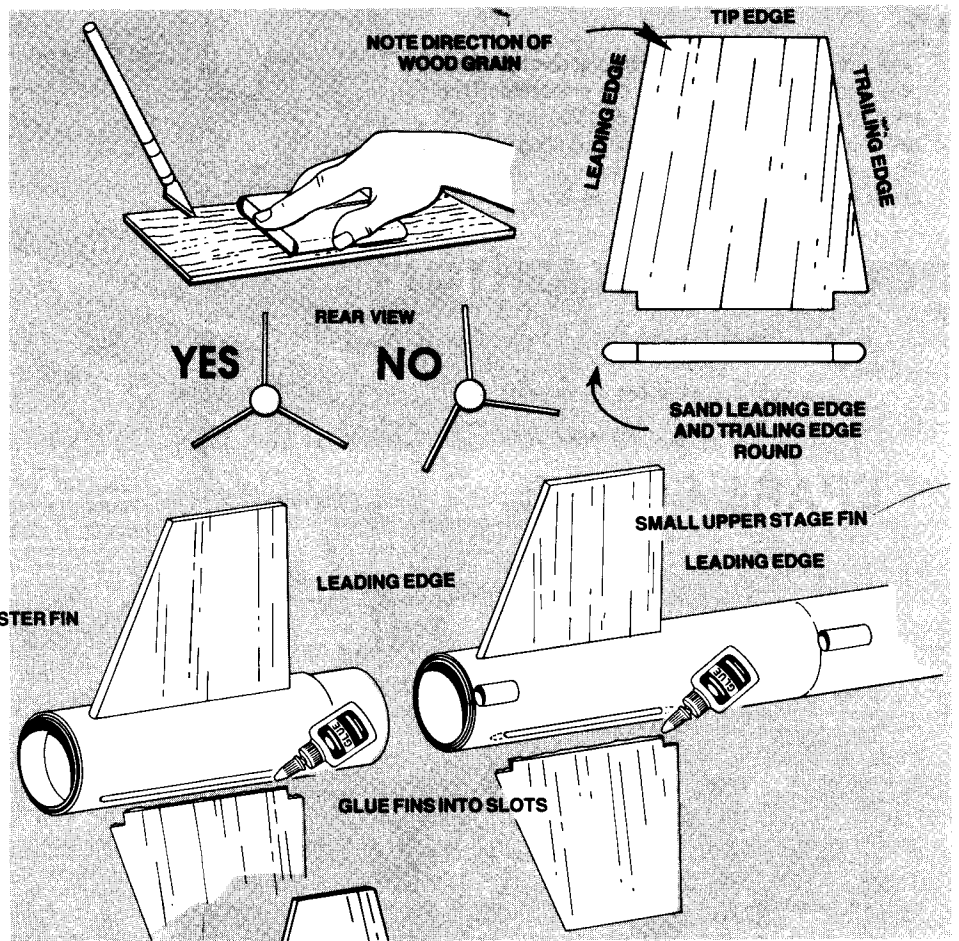
1. LOWER STAGE SUB-ASSEMBLY

- Apply glue around the inside of one end of the 3 3/16" (80 mm) long engine mount tube. Push the thin engine block into this end until the ends of the block and tube are even.
- Apply glue around the outside of the same end of the engine mount tube. Slide one of the centering rings onto the tube until the ends of the ring and tube are even.
- Mark the front of the engine mount tube 1/2" (13 mm) from the end. Apply glue to the tube. Slide one of the tube joiners onto the tube until the edge of the joiner is at the mark.



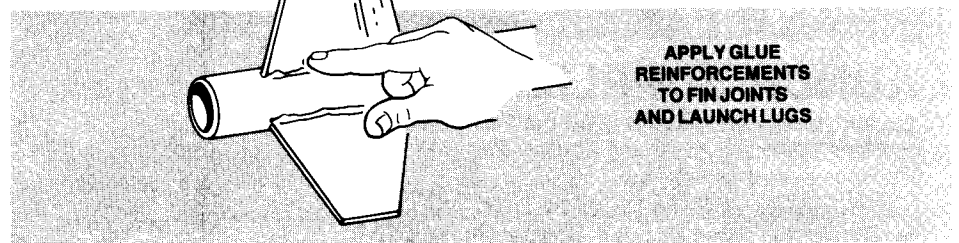
7.

- Fine sand the balsa die-cut sheet. Carefully remove the fins from the sheet by freeing the edges with a sharp modeling knife. Sand the leading, trailing, and tip edges round.
- Test fit all fins in the punched body tube slots. The root edges must touch the inside engine mount tube while the step in the fin must touch the exterior bod tube. Sand as necessary for proper fit.
- One fin at a time, glue the small fins in the slots of the upper stage body tube. Apply a bead of glue along the entire length of the notched edge of the fin and push it into place in a slot. Make sure each fin stands straight out from the tube before the glue sets.
- One fin at a time, glue the large fins in the slots of the booster body tube in the same manner. Make sure each fin stands straight out from the tube before the glue sets.



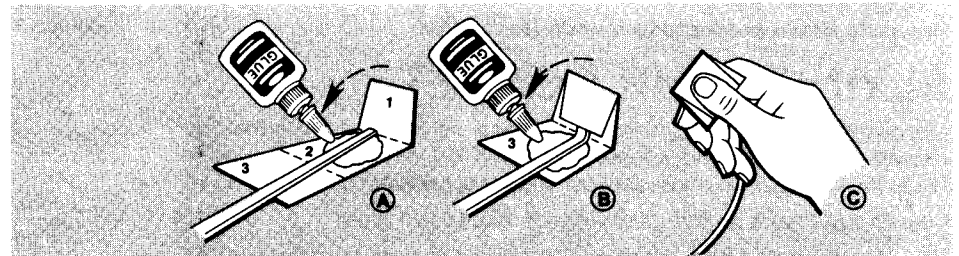
8.

After all the glue has thoroughly dried, apply a glue reinforcement bead to both sides of each body tube and fin joint. Also apply glue reinforcement to each side of both launch lugs.



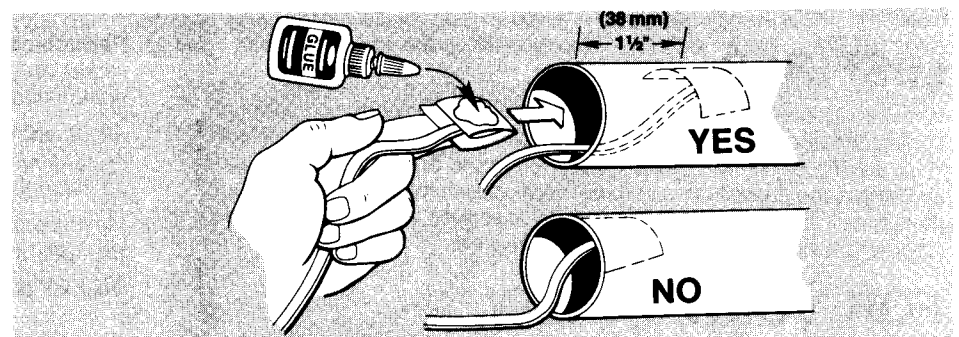
9.

Cut out the shock cord mount from the top of page 1 of this instruction sheet. Crease the mount on the dotted lines by folding. Spread glue on section 2 and lay one end of the shock cord into the glue at a slight diagonal as shown. Fold section 1 forward. Apply glue to section 3. Fold forward again. Clamp the shock cord mount firmly between your fingers until the glue sets.



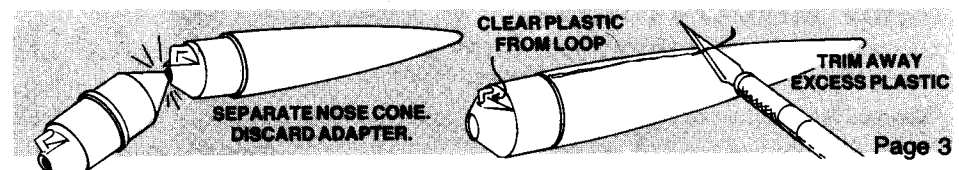
10.

Apply glue to back side of the completed shock cord mount. Push the shock cord mount against the inside of the upper stage body tube about 1½" (38 mm) from the forward edge. Make sure all of the mount curves and contacts the tube wall before the glue sets. More glue may be added and rubbed into the shock cord mount for an even stronger bond if desired.



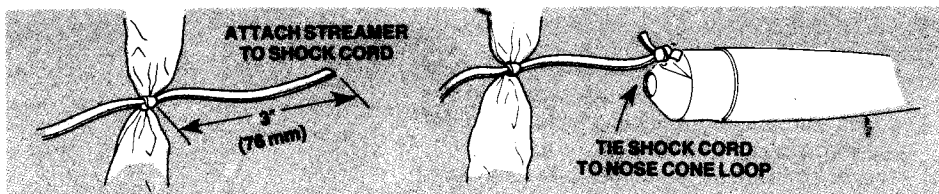
11.

Snap the plastic nose cone and adapter apart. (Note that the adapter section will not be used in this kit.) Use a modeling knife to trim away any excess plastic from the outside edges of the cone. Also remove any excess plastic that might remain in the molded loop being careful not to cut away the loop itself.

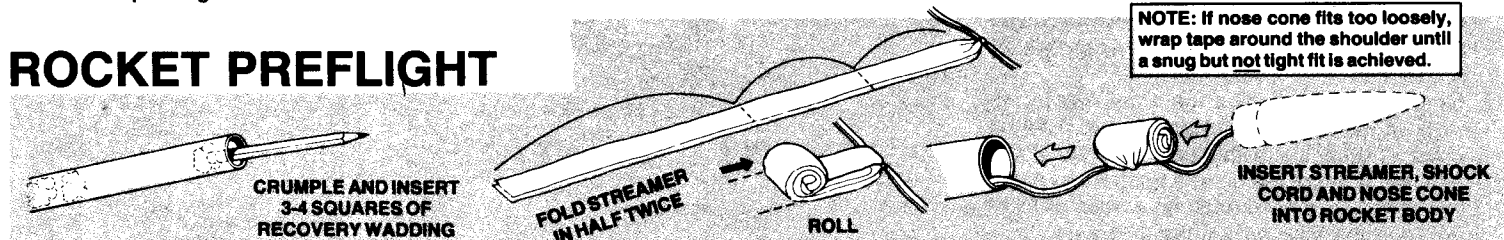


12.

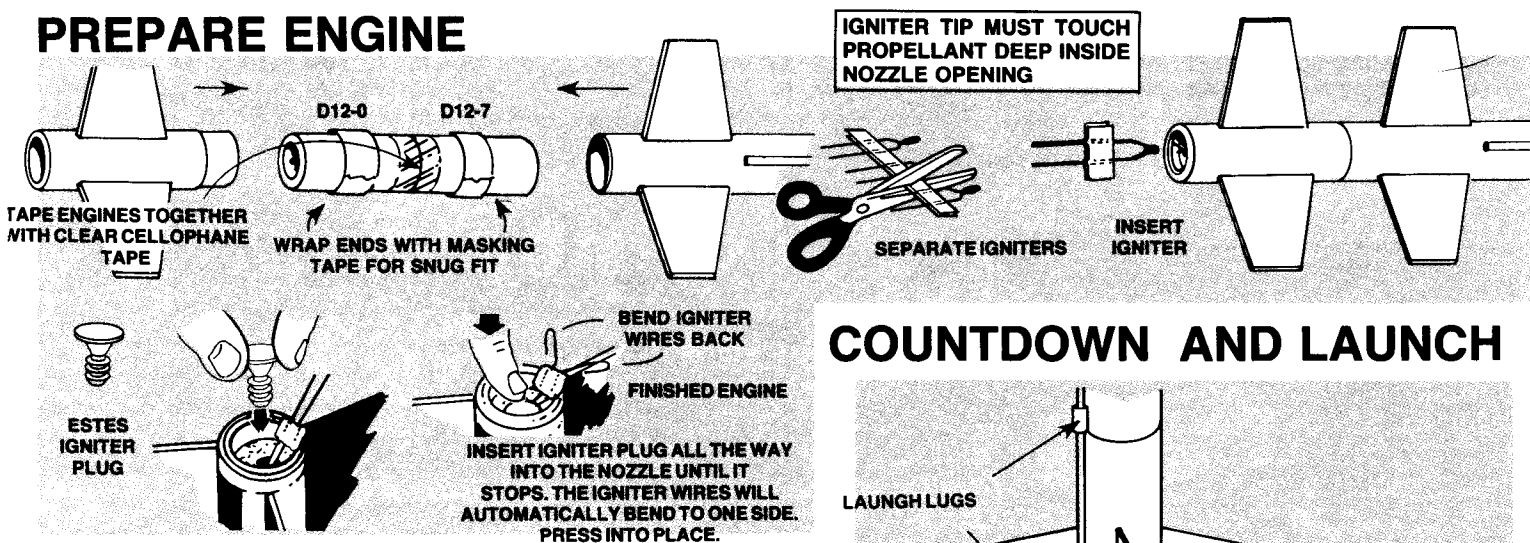
Use a double knot to tie the shock cord around one end or at the middle of the streamer. The knot should be tied about 3" (76 mm) to 4" (90 mm) from the free end of the shock cord. Then tie the free end of the cord to the nose cone loop using another double knot.



ROCKET PREFLIGHT



PREPARE ENGINE



LAUNCH SUPPLIES

To launch your rocket you will need the following items:

- An Estes Launch System and Launch Pad with 1/8" (3 mm) diameter launch rod
- Estes Recovery Wadding No. 2274
- Recommended Estes Engines: Booster Stage: D12-0; Upper Stage: D12-7.

Use only Estes products to launch this rocket.

FLYING YOUR ROCKET

Choose a large field away from power lines, tall trees, and low flying aircraft. Try to find a field at least 1,000 feet (300 meters) square. The larger the launch area, the better your chance of recovering your rocket.

Launch area must be free of dry weeds and brown grass.

Launch only during calm weather with little or no wind and good visibility.

MISFIRES

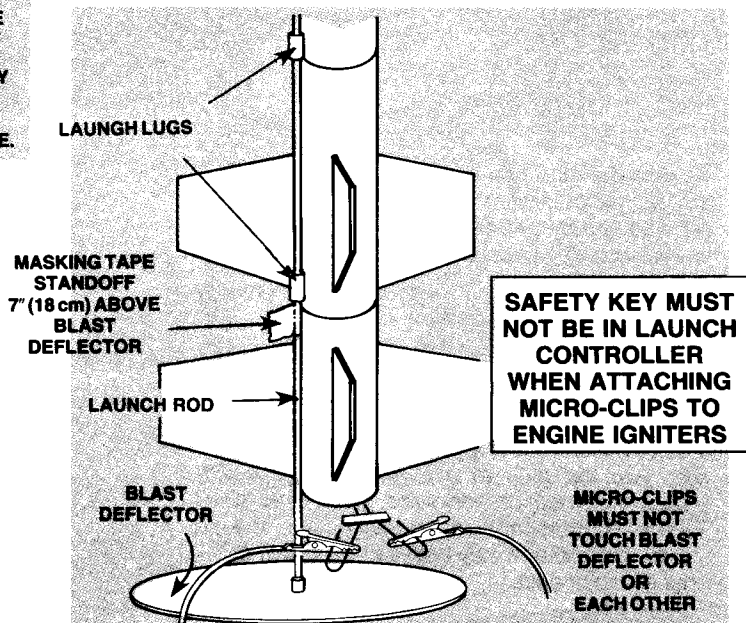
When an ignition failure occurs, remove the safety key from the launch control system and wait one minute before approaching the rocket. Remove the expended igniter from the engine and install a new one. Be certain the coated tip is in direct contact with the engine propellant, then press the igniter plug into nozzle of engine as illustrated above. Repeat the countdown and launch procedure.

FOR YOUR SAFETY AND ENJOYMENT

Always follow the NAR* MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.

*National Association of Rocketry

COUNTDOWN AND LAUNCH



- ⑩ BE CERTAIN SAFETY KEY IS NOT IN LAUNCH CONTROLLER.
- ⑨ Remove safety cap and slide launch lug over launch rod to place rocket on launch pad. Make sure the rocket slides freely on the launch rod.
- ⑧ Attach micro-clips to the igniter wires. Arrange the clips so they do not touch each other or the metal blast deflector. Attach clips as close to protective tape on igniter as possible.
- ⑦ Move back from your rocket as far as launch wire will permit (at least 15 feet - 5 meters).
- ⑥ INSERT SAFETY KEY to arm the launch controller.

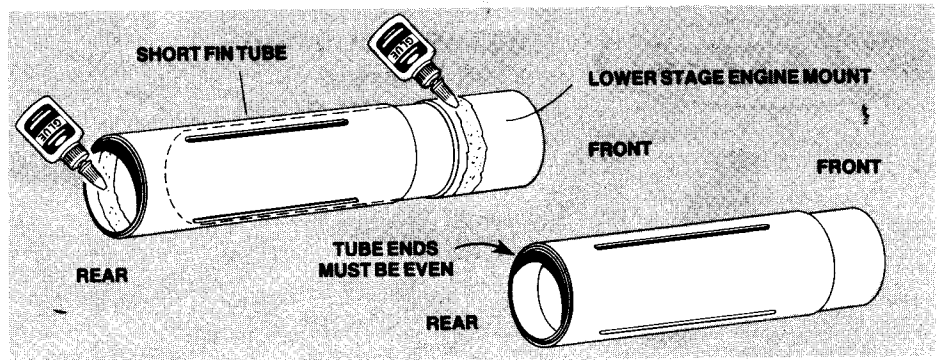
Give audible countdown 5...4...3...2...1

LAUNCH!! PUSH AND HOLD LAUNCH BUTTON UNTIL ENGINE IGNITES

REMOVE SAFETY KEY FROM LAUNCH CONTROLLER. REPLACE SAFETY KEY AND SAFETY CAP ON LAUNCH ROD.

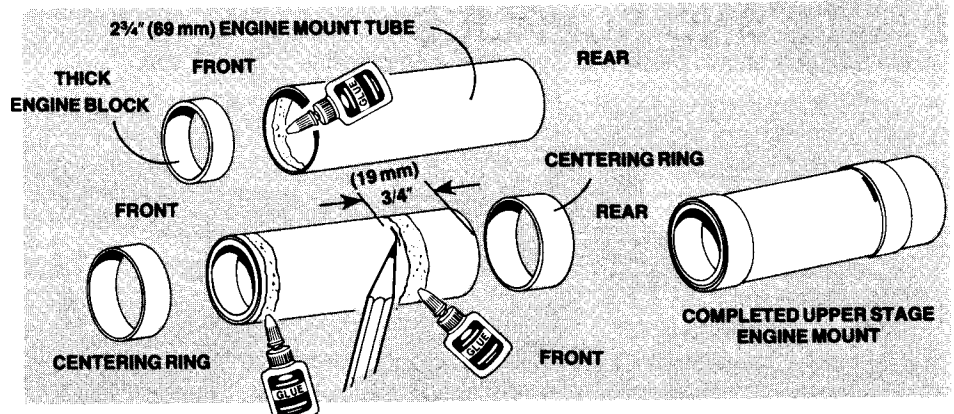
2. LOWER STAGE SUB-ASSEMBLY (Continued)

- Insert the completed booster engine mount halfway into the short fin tube from either end.
- Apply glue around the inside of the fin tube end nearest the rear of the engine mount. Apply glue around the outside of the tube joiner as shown. Push the engine mount into the fin tube until the ends of the tubes at the rear are even.



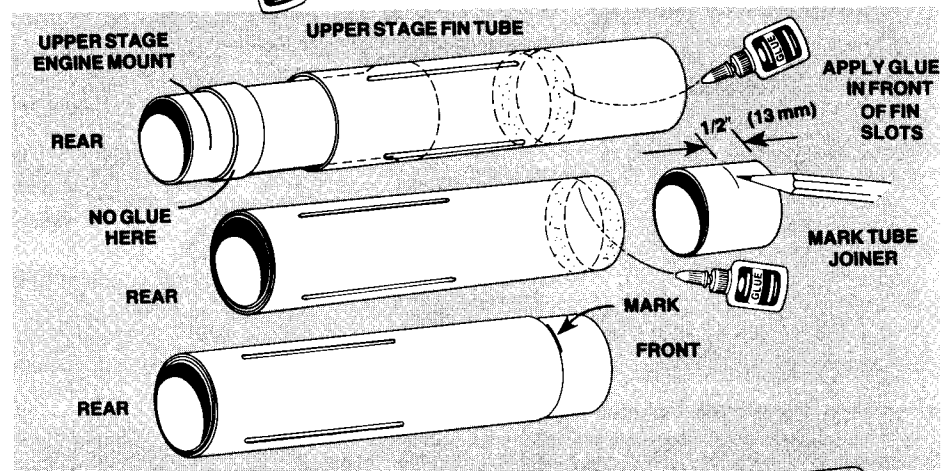
3. UPPER STAGE SUB-ASSEMBLY

- Apply glue around the inside of one end of the 2 3/4" (69 mm) long engine mount tube. Push the thick engine block into this end until the ends of the block and tube are even.
- Apply glue around the outside of the same end of the engine mount tube. Slide one of the centering rings onto the tube until the ends of the ring and tube are even.
- Mark the rear of the engine mount tube 3/4" (19 mm) from the end. Apply glue around the tube. Slide the remaining centering ring onto the tube until the edge of the ring is at the mark.



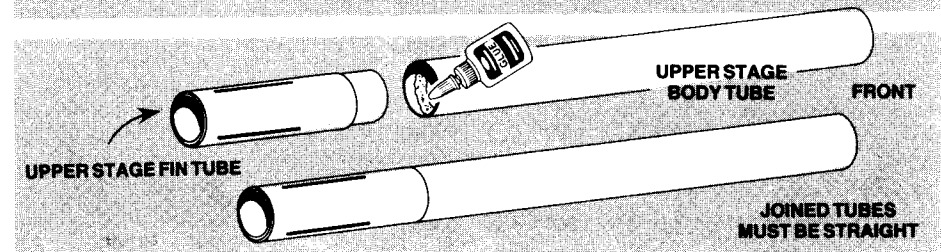
4. UPPER STAGE SUB-ASSEMBLY (Continued)

- Apply a band of glue around the inside of the long fin tube just in front of the fin slots as shown. Push the completed upper stage engine mount into the rear of the tube until the ends of the tubes are even.
- Mark the remaining tube joiner 1/2" (13 mm) from one edge. Apply glue around the forward inside edge of the fin tube. Push the tube joiner into the tube until the forward edge of the fin tube is at the mark on the tube joiner.



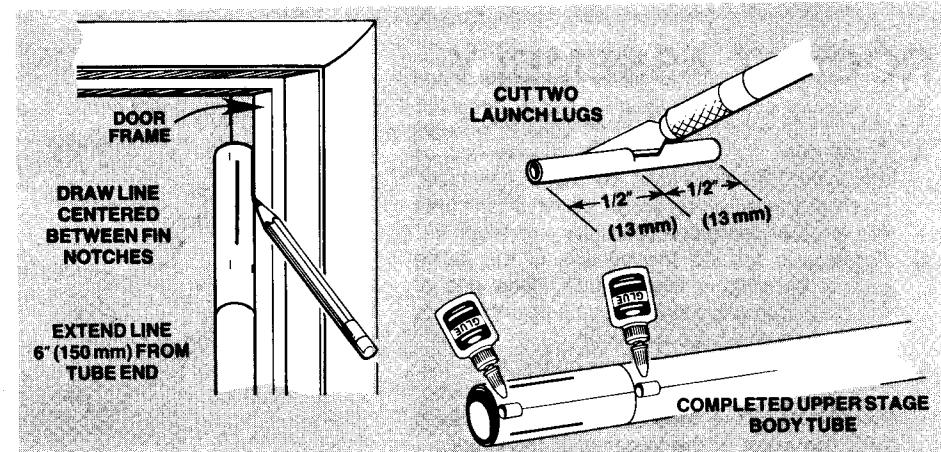
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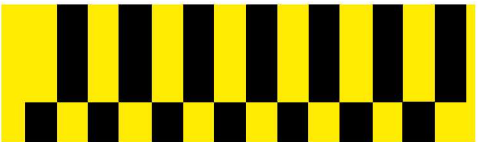
- Apply glue around the inside of one end of the upper stage body tube. Push the tube joiner on the forward end of the long fin tube into the body tube with a twisting motion.
- Check that the joined tubes are straight before the glue sets.



6.

- Use a groove such as a door jamb to draw a straight line along the upper stage body tubing centered between two fin slots. Draw a line about 6" (150 mm) long from the rear edge of the tube.
- Cut two 1/2" (13 mm) long launch lugs from the 1 1/4" (32 mm) length supplied.
- Glue one of the launch lugs on the body tube line even with the rear of the tube. Glue the remaining launch lug just forward of the tube joint as shown.
- Be sure the lugs are aligned straight along the tube before the glue sets.





PN 37578

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1

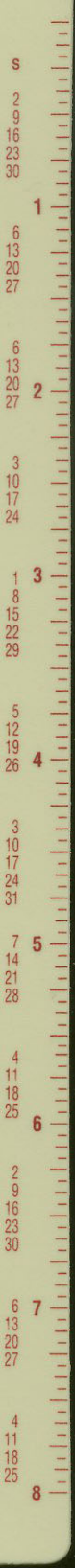
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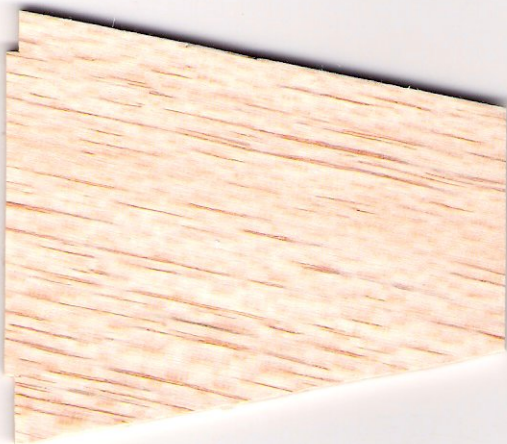
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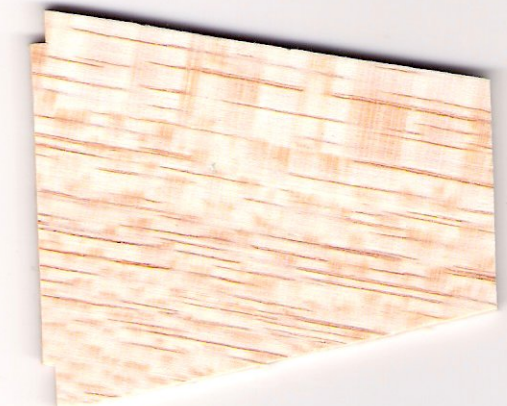
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