

Finished 2-21-92

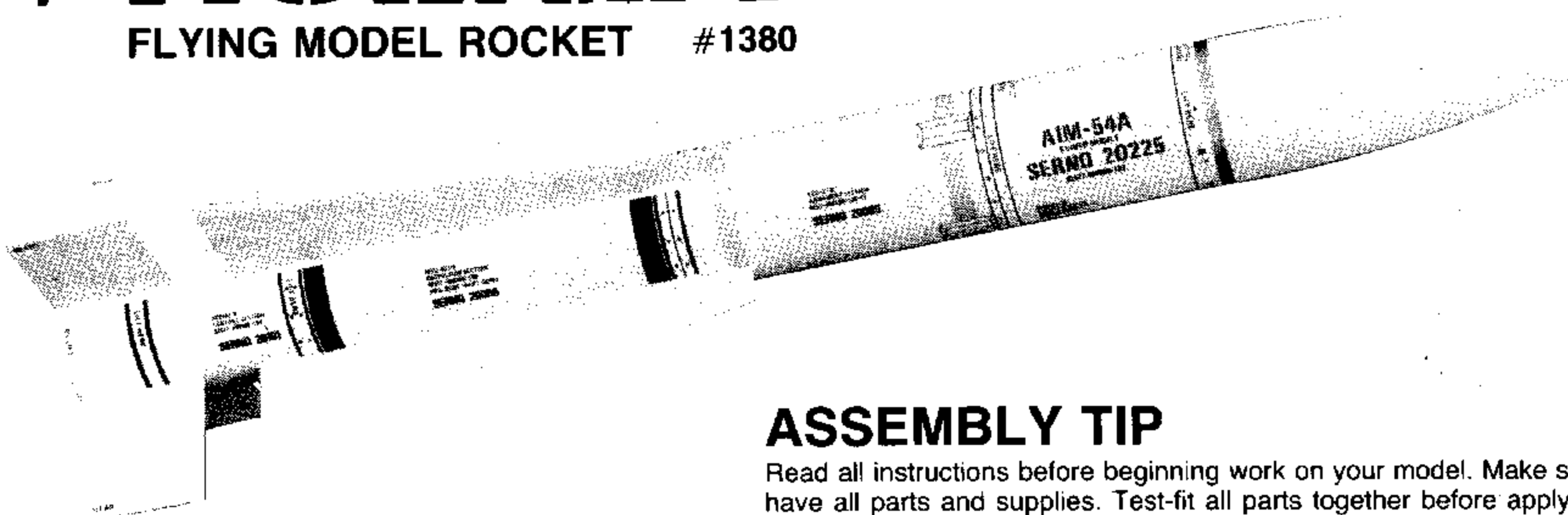
PHOENIX™

FLYING MODEL ROCKET #1380



A DAMON COMPANY

ESTES INDUSTRIES
1295 H STREET
PENROSE, CO 81240 USA

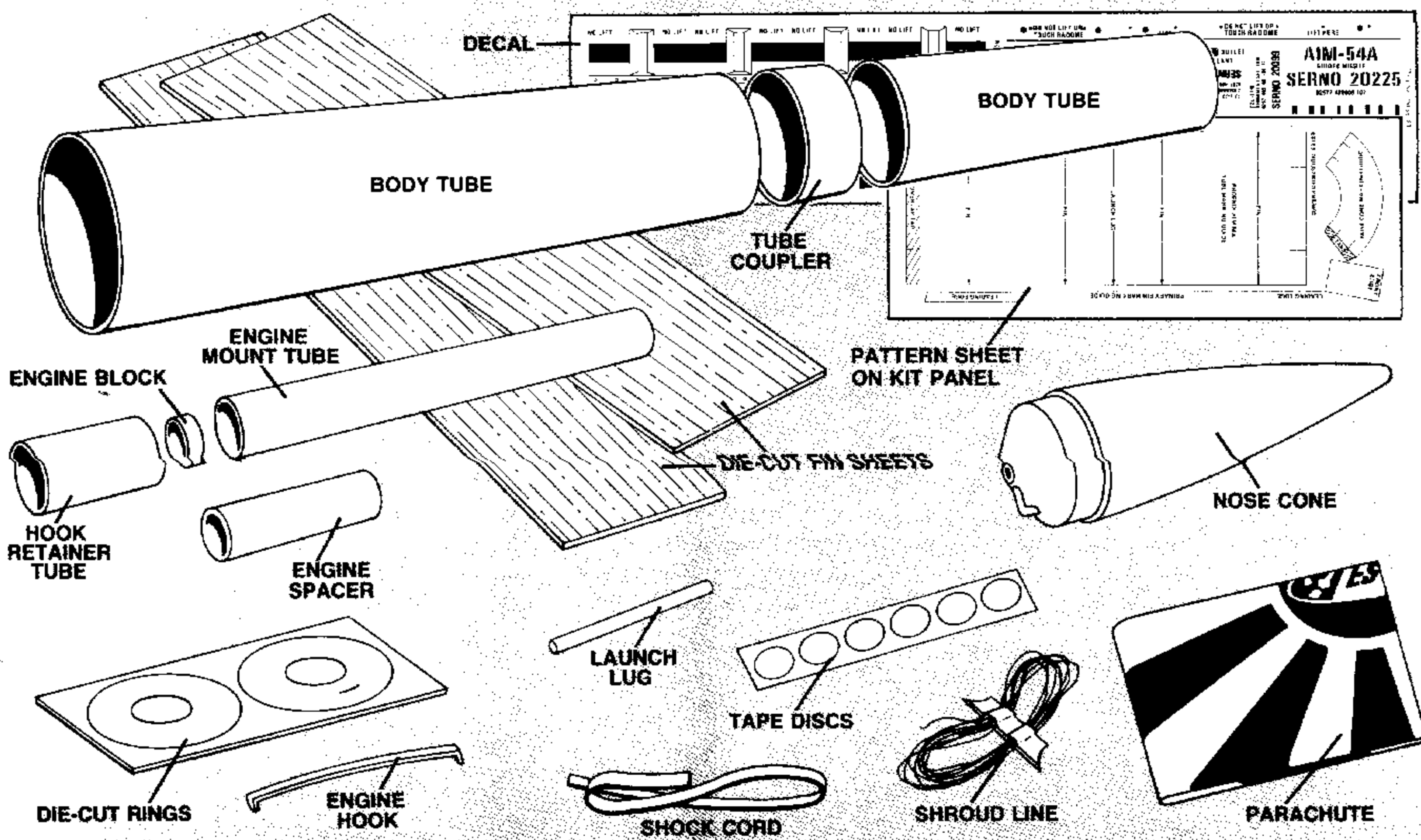
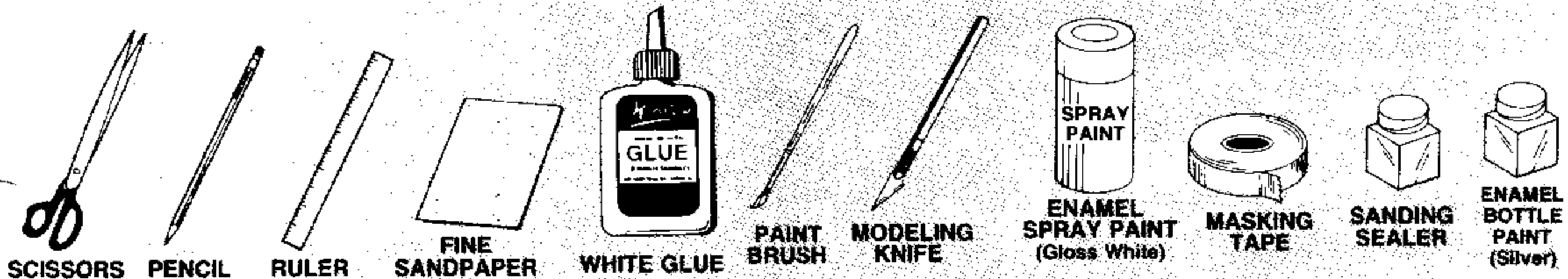


ASSEMBLY TIP

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 AND SUPPLIES

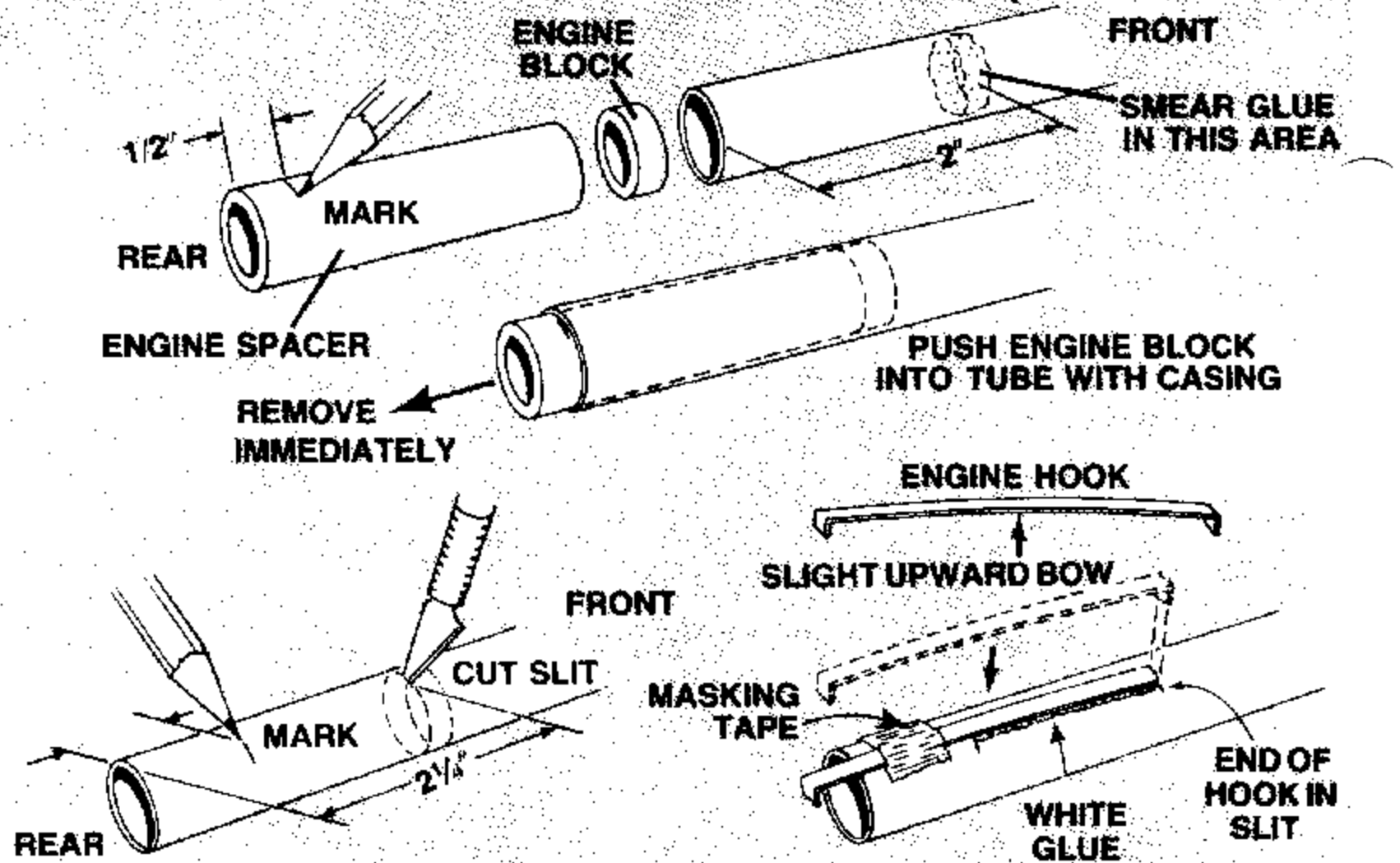
Locate the parts shown below and lay them out on the table in front of you. In addition to the parts included in the kit you will also need:



ROCKET ASSEMBLY

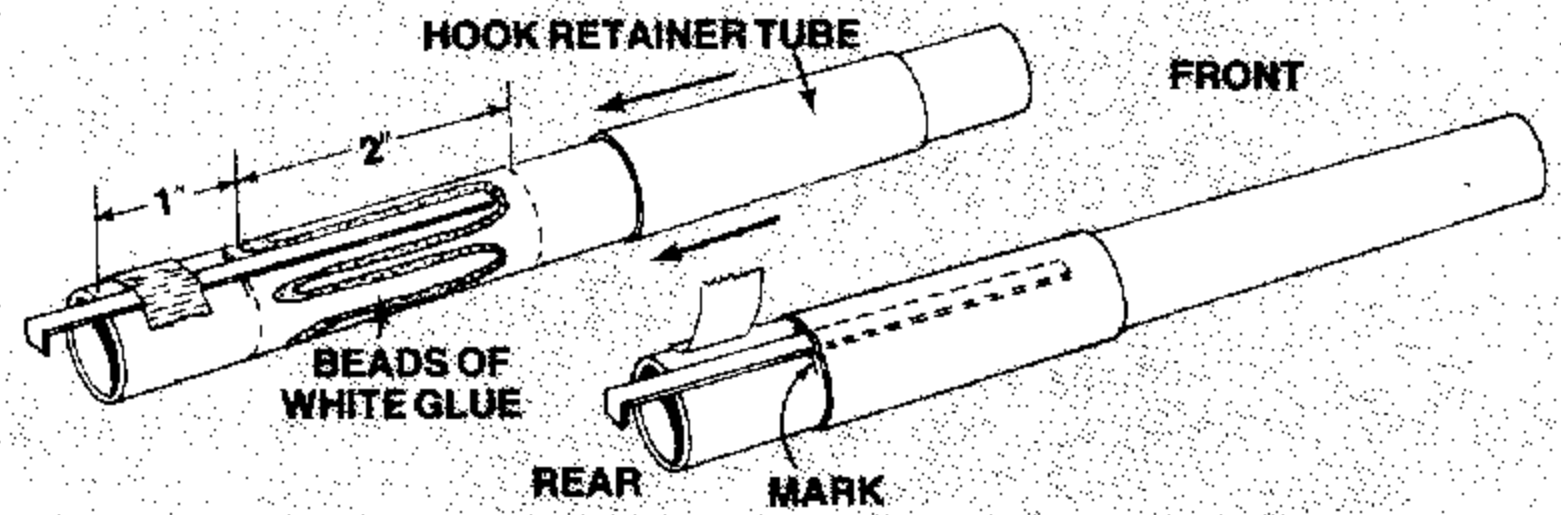
1

- Mark yellow engine spacer tube 1/2 inch from one end.
- Using a piece of scrap balsa, smear glue inside engine mount tube 2 inches from one end.
- Push engine block into place with engine spacer until mark on spacer is even with end of tube. Remove engine spacer immediately.
- Mark engine mount tube 1 inch and 2 1/2 inches from rear end.
- Cut 1/8 inch long slit at 2 1/4 inch mark. Apply a line of glue between slit and 1 inch mark.
- Insert one end of engine hook into slit. Align hook straight along tube and temporarily tape hook into place.



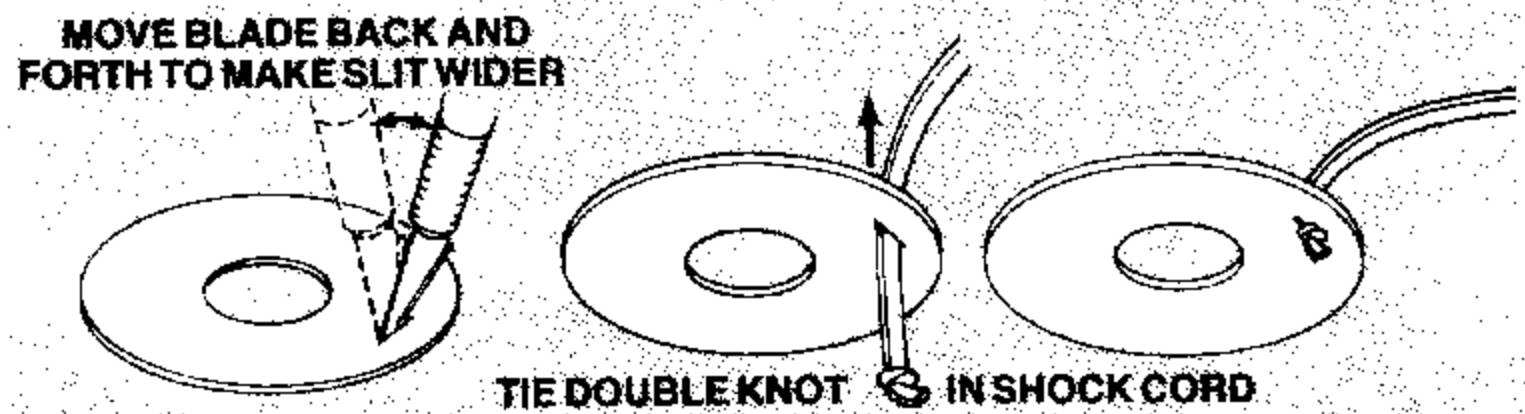
2

- Apply glue around tube about 2 inches above 1 inch mark as shown.
- Slide hook retainer tube from front of engine tube down over glue to 1 inch mark.
- Wipe away excess glue. Remove tape.



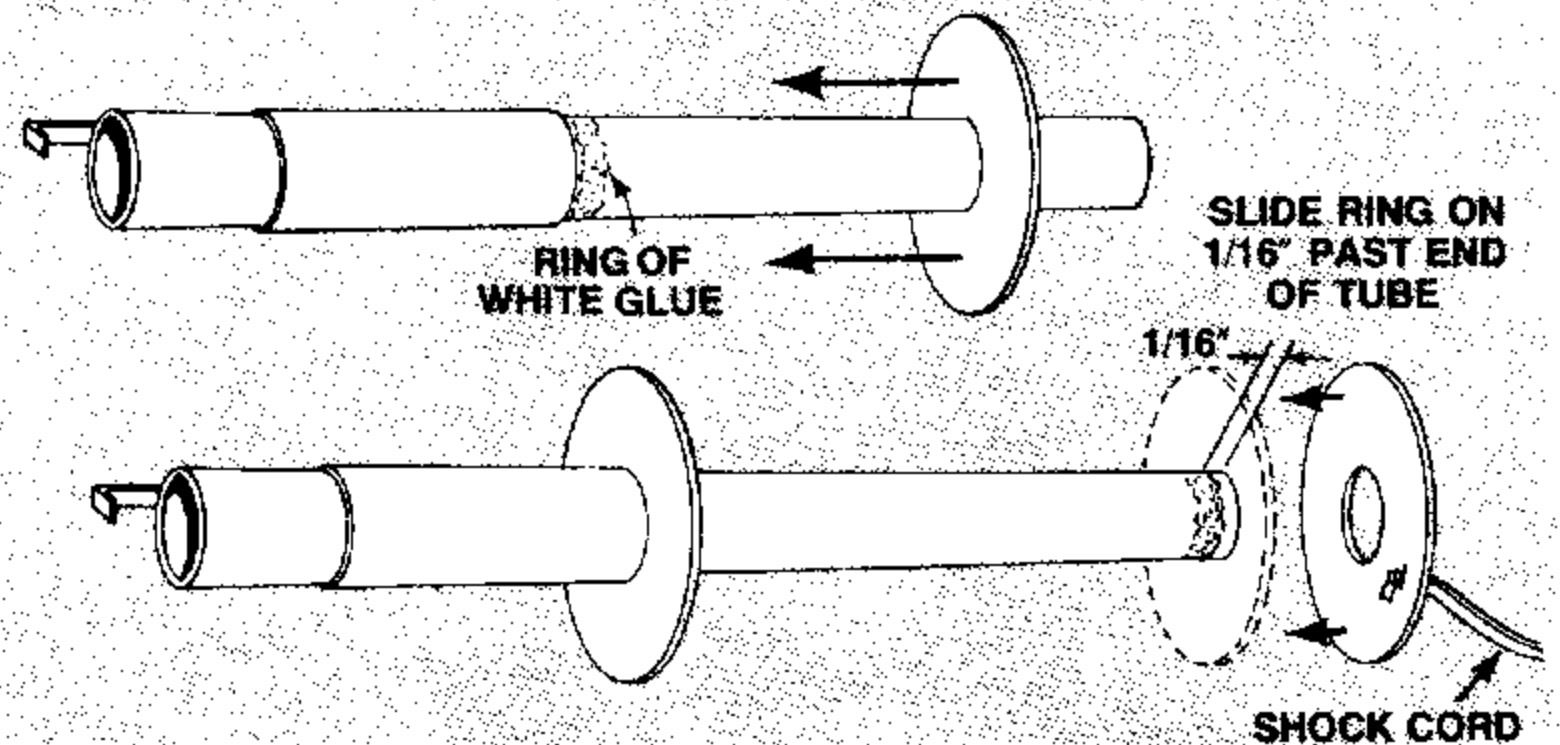
3

- Remove centering rings from die-cut card.
- Slightly widen slit in die-cut ring.
- Insert shock cord through slit and tie double knot in one end of shock cord.
- Pull knot tight against ring and apply glue over knot.



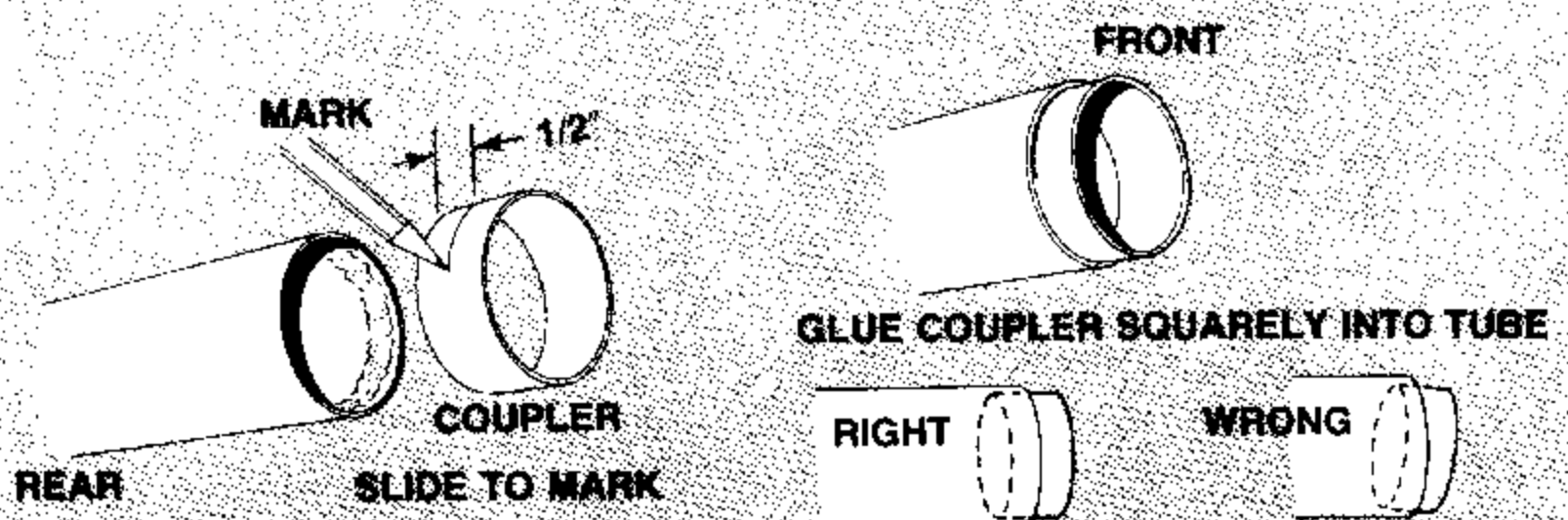
4

- Slide ring without shock cord over front end of tube, down to hook retainer tube. Apply glue to both sides of ring/tube joint.
- Slide second ring onto front of tube about 1/16 inch from end of tube. Apply glue to both sides of ring/tube joint. Set aside to dry.



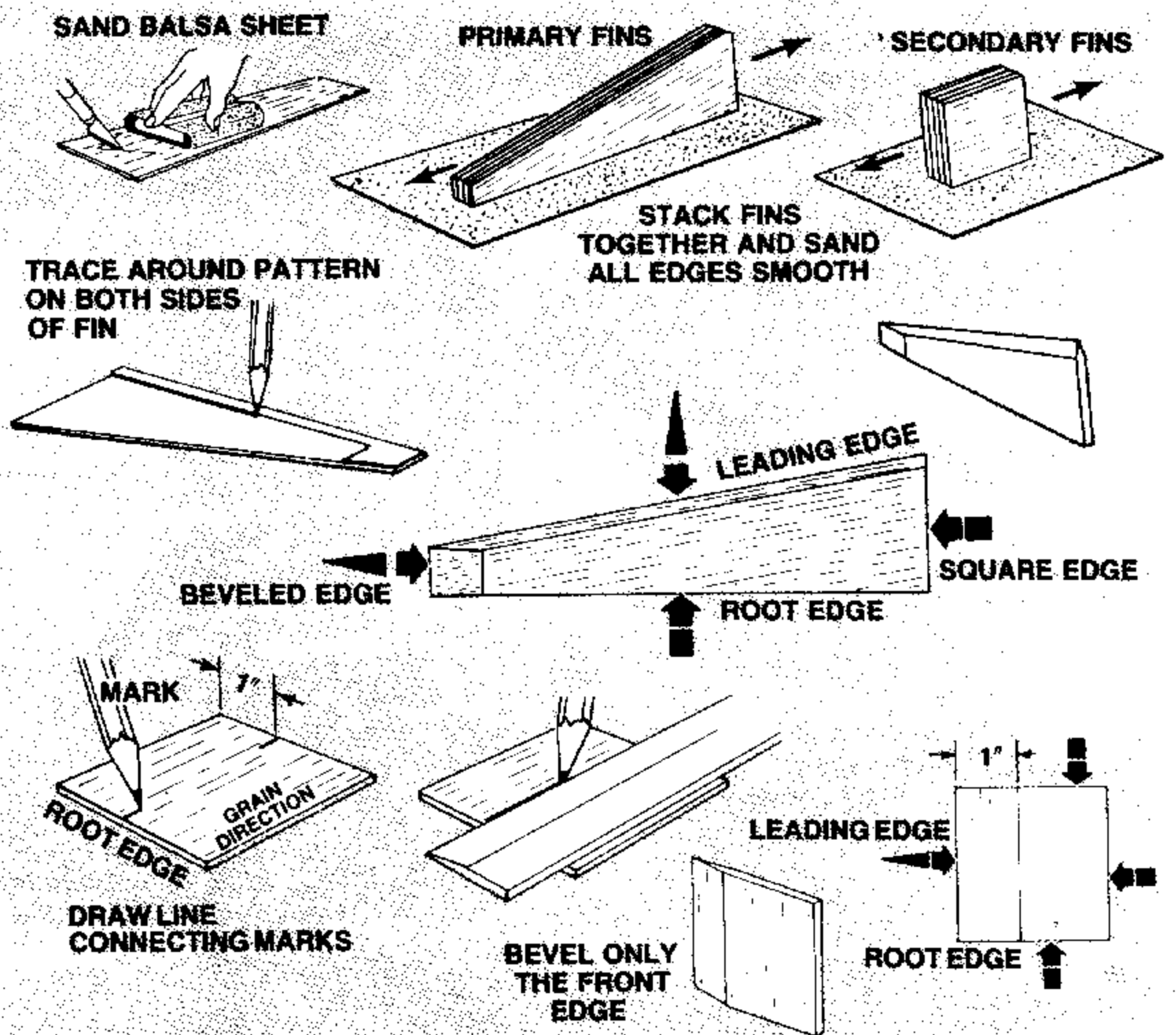
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- Mark tube coupler 1/2 inch from one edge. Apply glue inside one end of long body tube.
- Push tube coupler into tube until mark on coupler is even with end of tube.
- Adjust tube coupler alignment as shown.



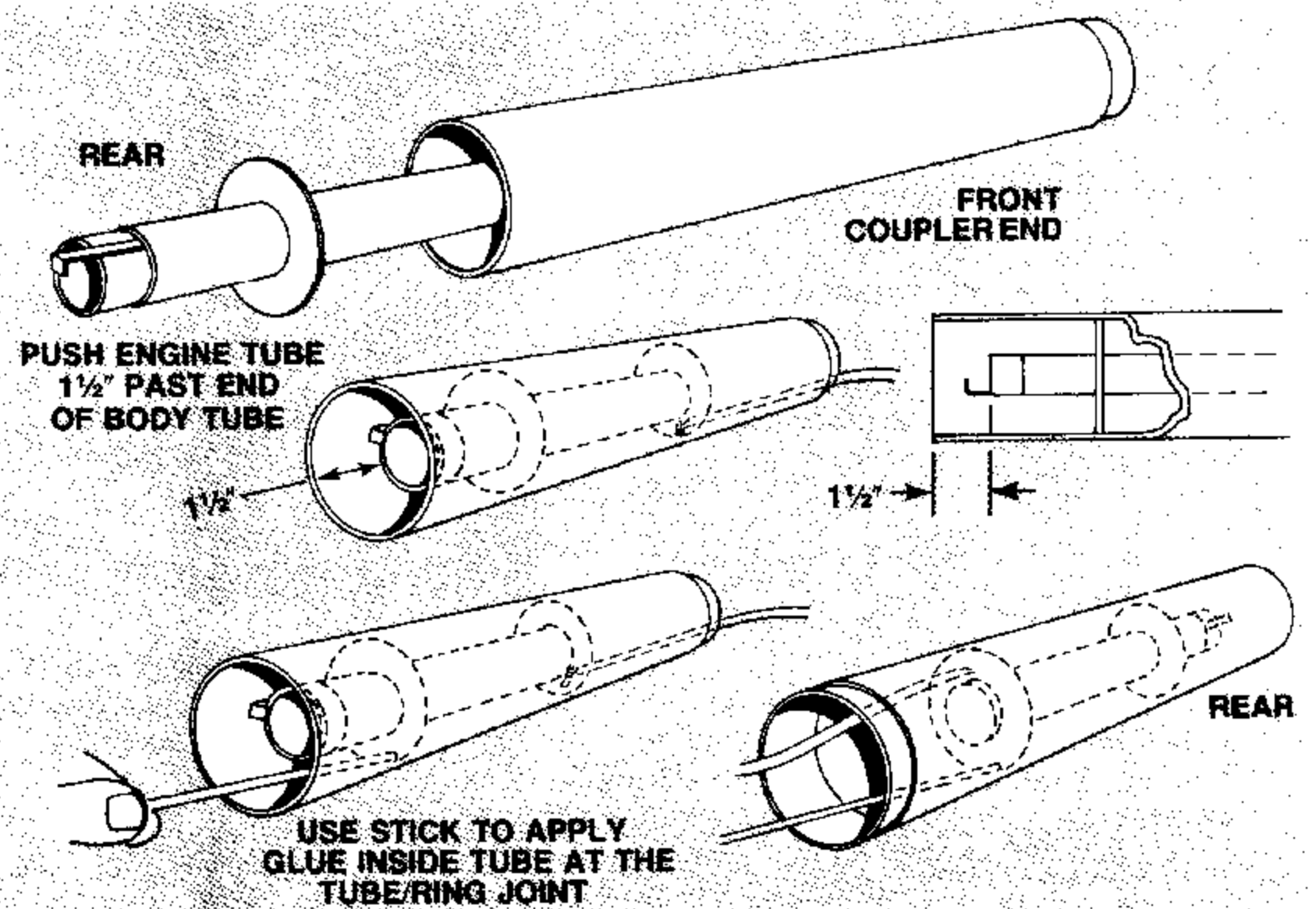
6

- Fine sand balsa die-cut sheet. Carefully remove fins by freeing edges with sharp knife.
- Stack alike fins together. Sand all edges smooth.
- Cut out primary fin marking guide from pattern sheet. Place pattern on fins as shown. Trace pattern with pencil on both sides of each fin.
- Sand bevel edge into each fin. For best results sand from pencil line to center of fin with sanding block.
- Mark 1 inch from one edge both sides of each fin as shown. Connect marks with straight line.
- Sand each fin as shown.



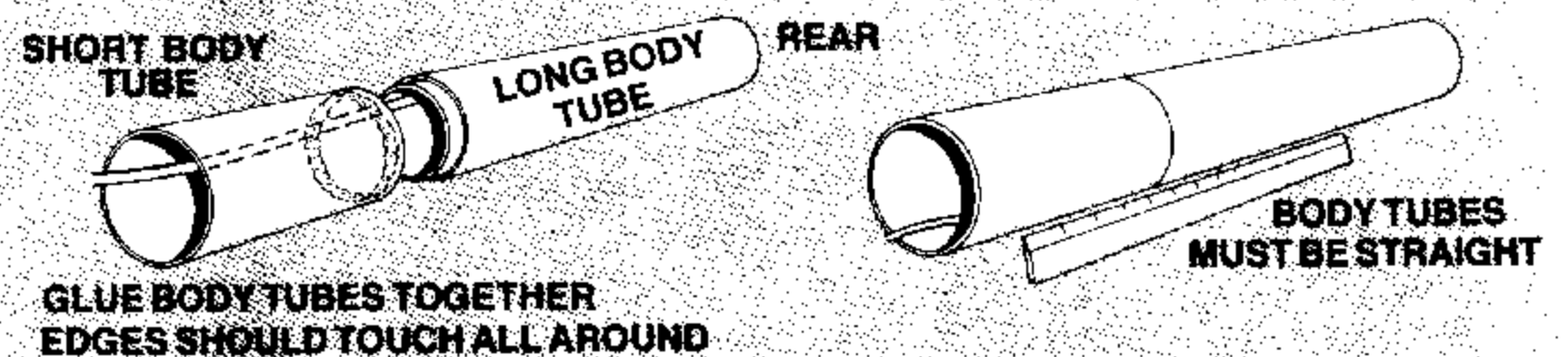
7

- Slide engine mount into rear of large body tube.
- Push mount in 1 1/2 inches from end of body tube.
- Using a piece of scrap balsa or dowel, apply a bead of glue around the front and rear ring/body tube joints.



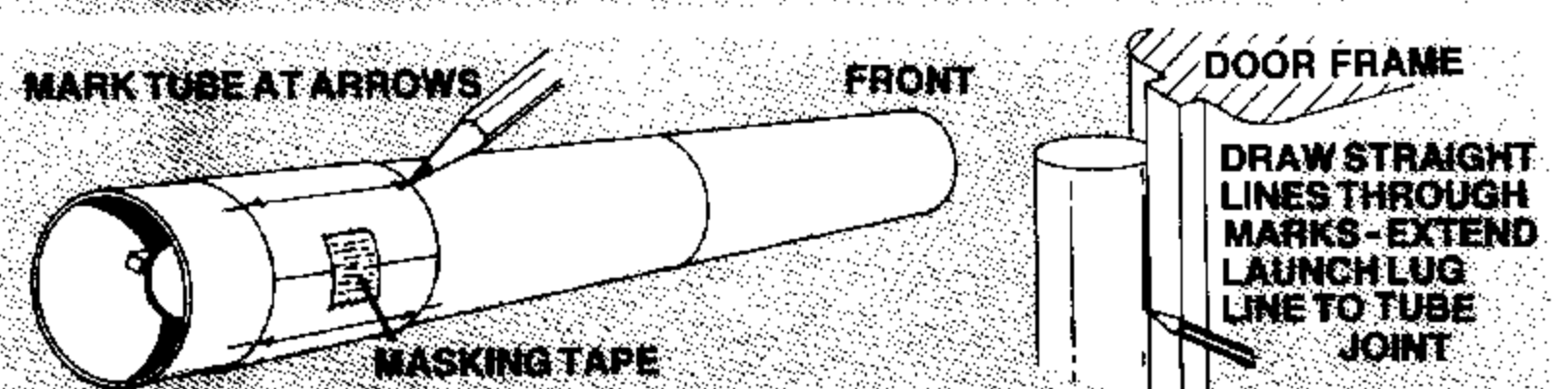
8

- Apply glue around inside end of short body tube. Slide this end of tube over tube coupler of large body tube in smooth motion.
- Edge of body tubes should touch all around. Align tubes perfectly straight.



9

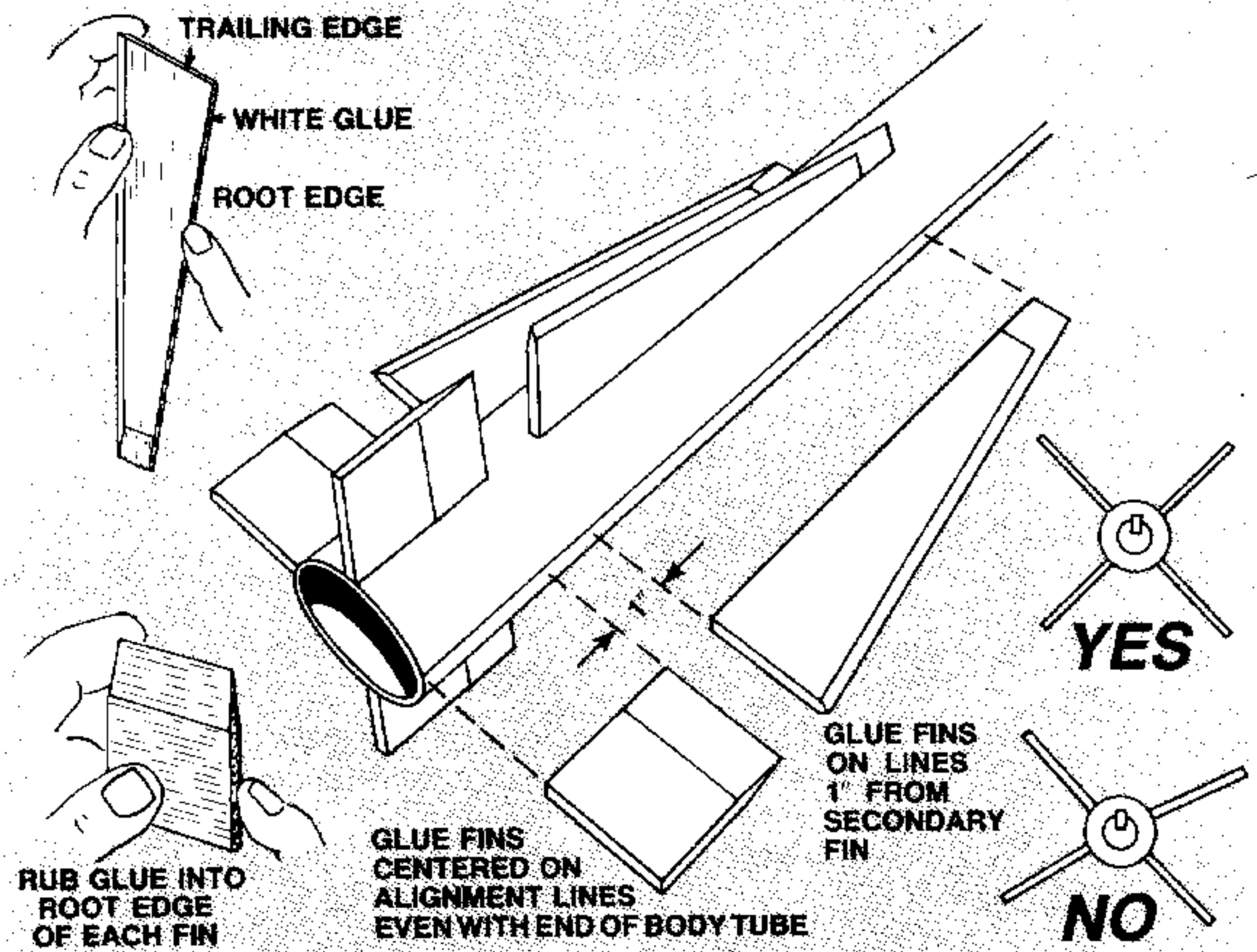
- Cut out tube marking guide from Pattern Sheet. Wrap guide around the tube and tape.
- Mark tube at arrows. Mark launch lug line with "LL". Remove guide.
- Draw straight lines connecting each pair of marks.
- Extend lines the length of tube.



10

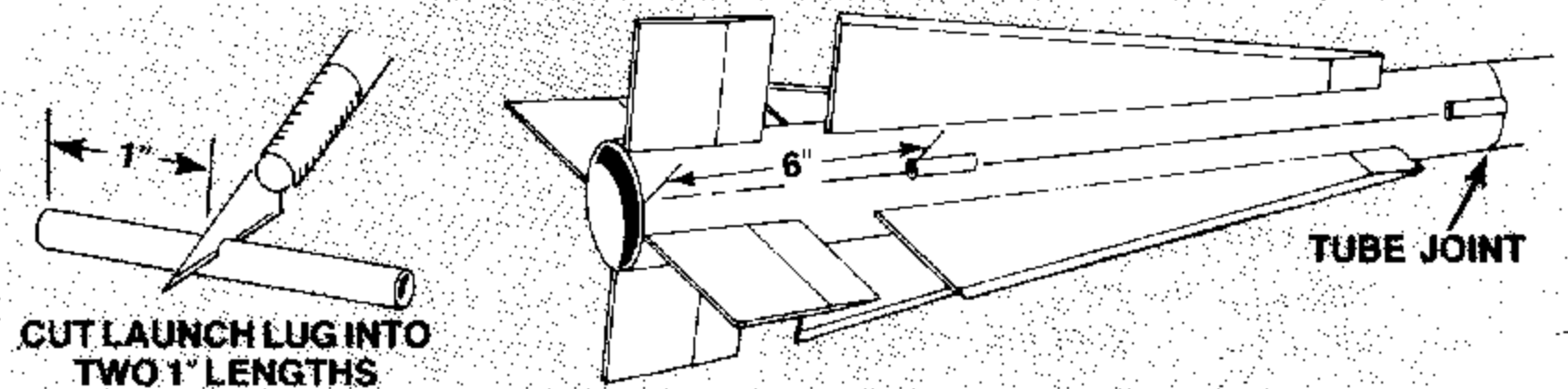
- Compare fins to drawing in Step 6 to find gluing (Root) and Front (Leading) edges of fins.
- Apply a bead of glue to the root edge of each fin. Attach the fins to the body tube with fins centered on alignment lines. Attach lower fins even with edge of tube and primary or upper fins 1 inch from lower fins.
- Adjust fins to project straight out from tube and aligned with bottom fins.

FINS MUST BE ATTACHED CORRECTLY FOR STABLE FLIGHT.



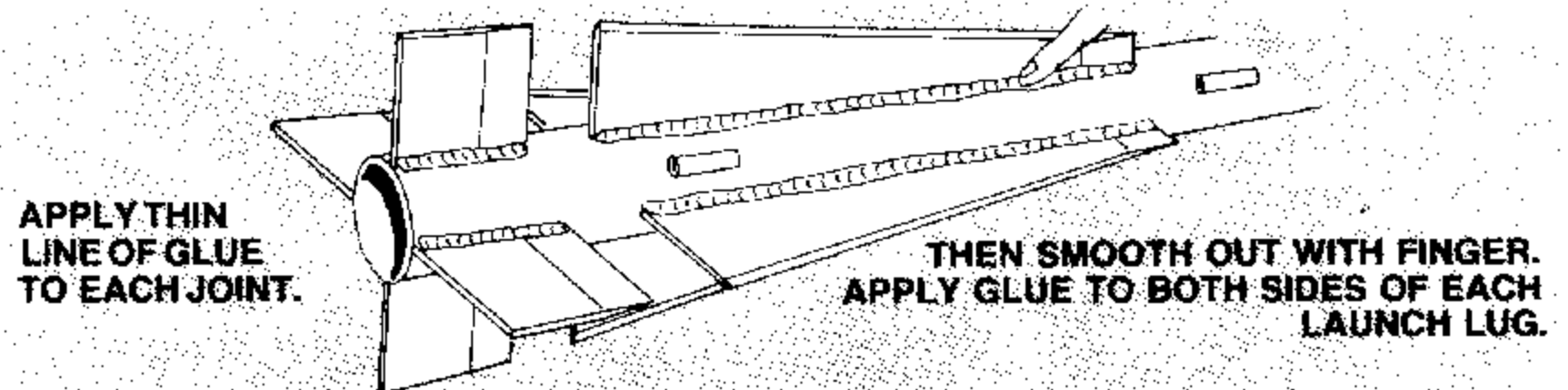
11

- Cut launch lug into two 1 inch lengths.
- Glue one lug on alignment line 6 inches from rear of tube. Glue remaining lug even with body tube joint. Align launch lugs straight on body tube.



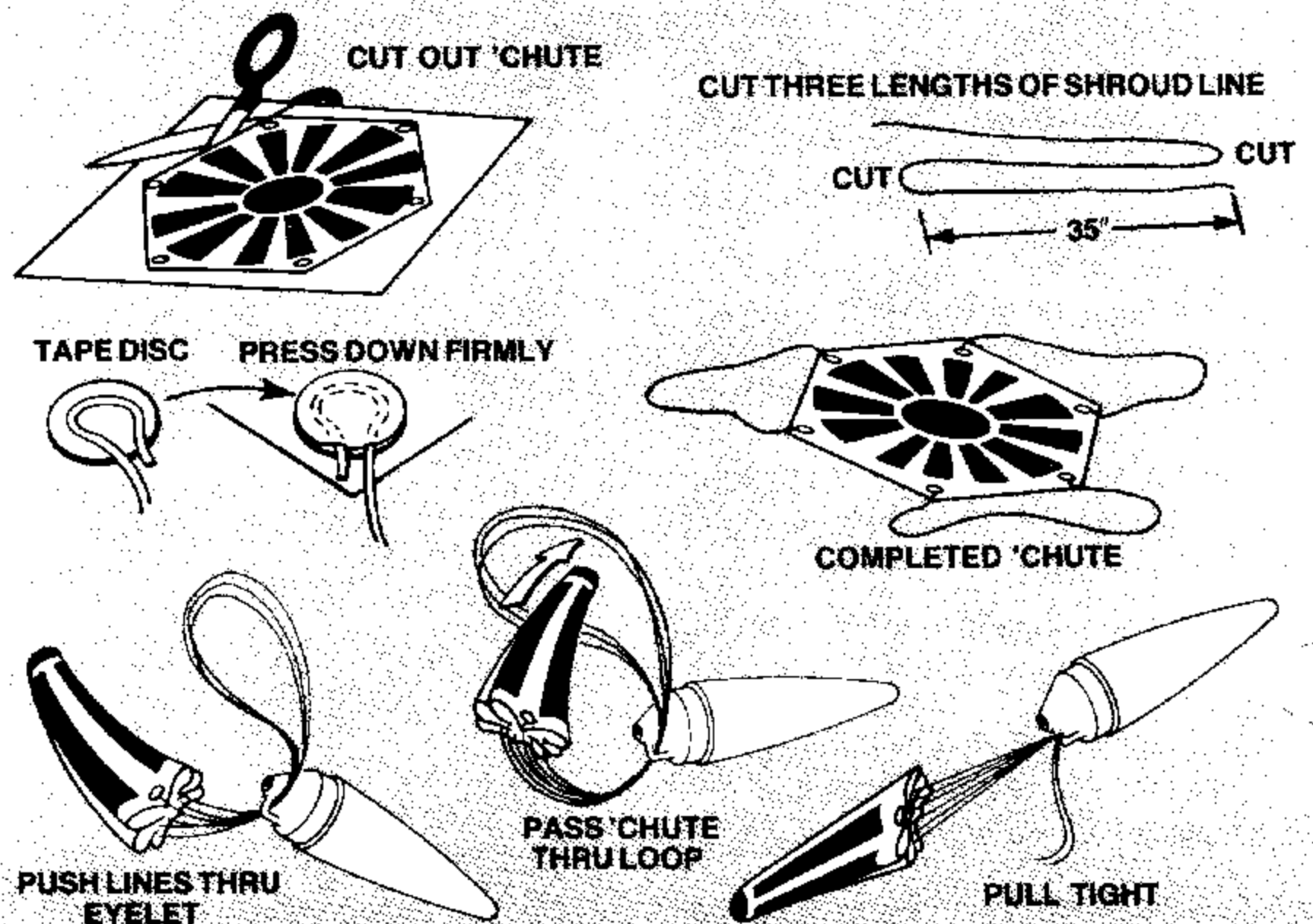
12

- Apply a glue reinforcement to each fin/body tube joint and each side of launch lug.
- Support rocket horizontally (level) until glue dries.



13

- Cut out parachute on edge lines.
- Cut three 35 inch lengths of shroud line.
- Form small loops with shroud line ends and press onto sticky side of tape discs.
- Attach tape discs with line ends to top of parachute as shown.
- Firmly press tape discs into place until both tape discs and parachute material are molded around shroud line loops.
- Pass shroud line loops through eyelet on nose cone. Pass parachute through loop ends and pull lines against the nose cone.
- Tie free end of shock cord to nose cone eyelet.



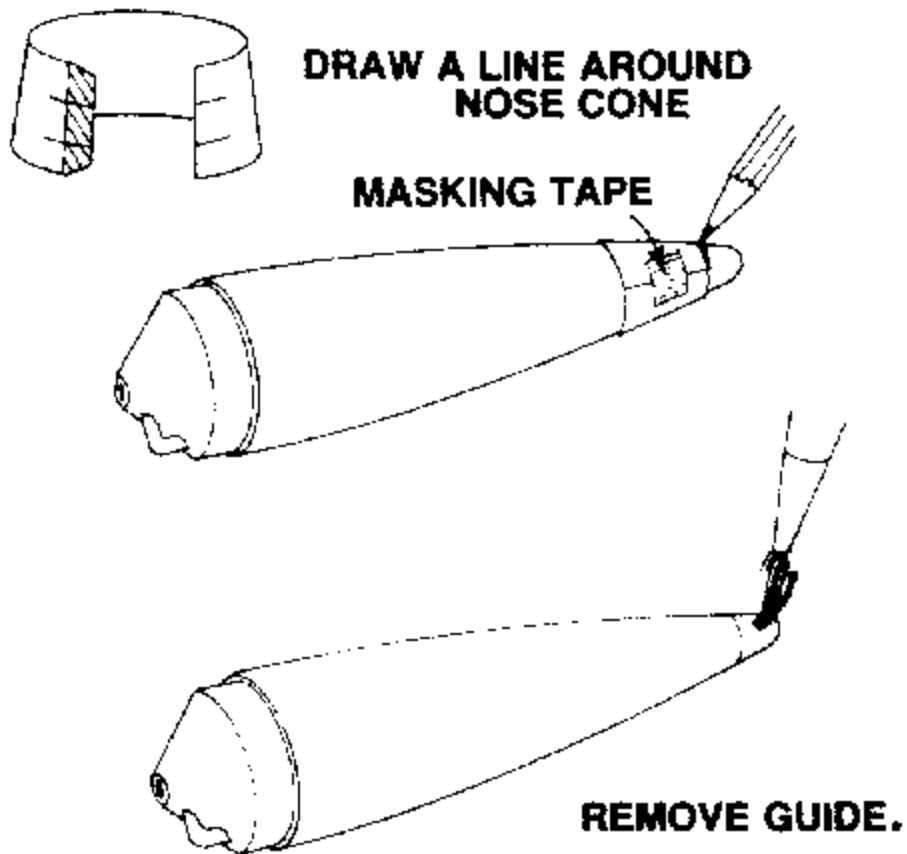
14

- A. Apply sanding sealer to all wood parts with small brush.
- B. When sealer is dry, lightly sand all sealed surfaces.
- C. Repeat sealing and sanding until wood grain is filled and smooth.

15

- A. When sanding sealer and glue are completely dry, paint model with gloss white enamel.
- B. Follow instructions on spray can for best results.
- C. Let dry overnight. Mask off rocket and paint top 1/8" (3 mm) of body tube with silver enamel.
- D. Remove mask from rocket as soon as paint has set.

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PAINT TIP OF NOSE CONE WITH SILVER PAINT.

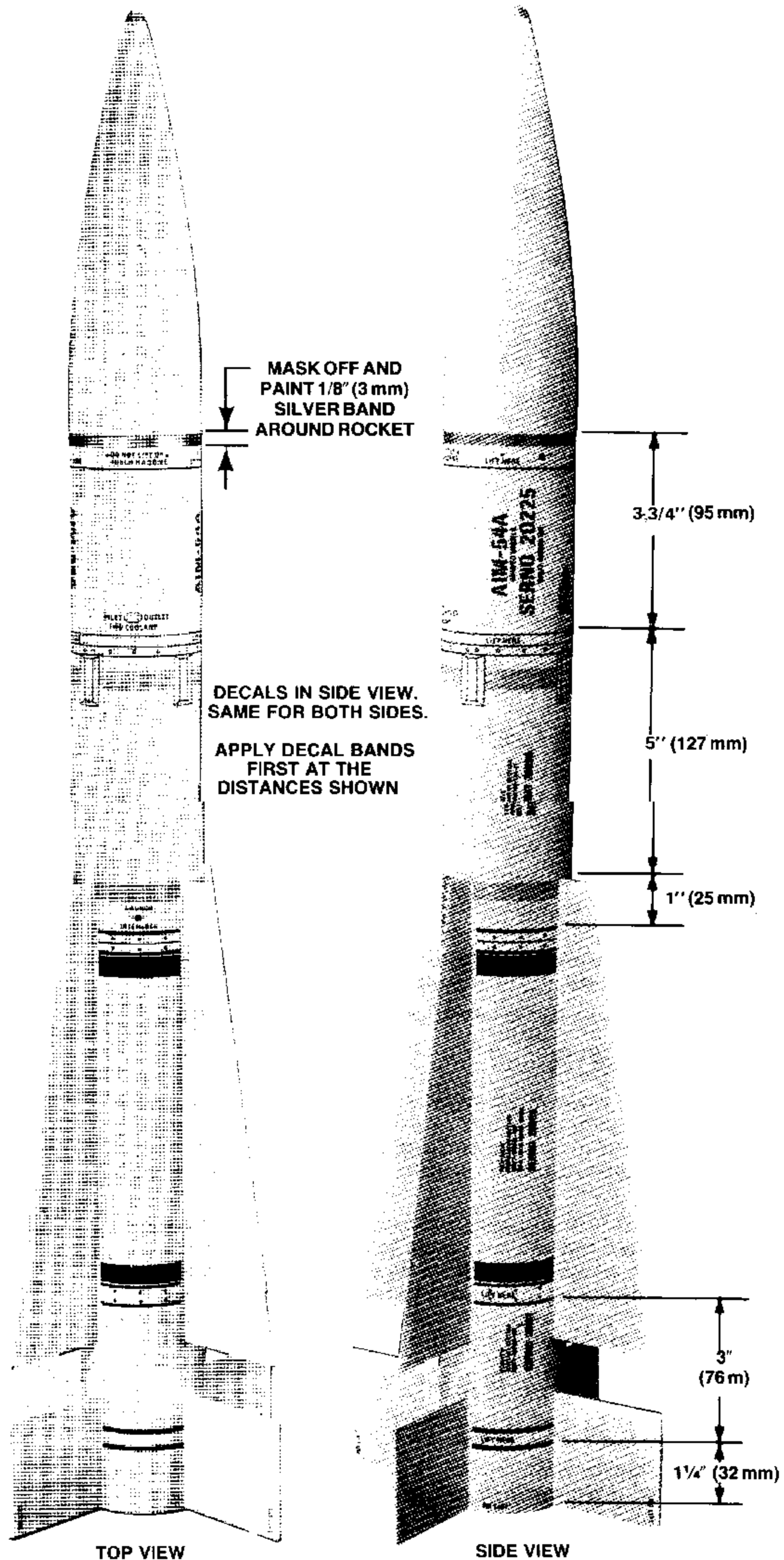
- A. Cut out nose cone marking guide from pattern sheet.
- B. Match alignment marks. Hold guide together with masking tape.
- C. Slip guide over nose tip. Trace around guide with pencil.
- D. Remove guide and paint tip of nose with silver enamel.

FINISHING YOUR ROCKET

Apply decals in position shown. To apply decals, cut out each decal, dip in lukewarm water for 20 seconds, and hold until it uncurls. Slip decal off backing sheet and onto model. Blot away excess water.

DECAL PLACEMENT

REFER TO PANEL FOR FURTHER DECOR PHOTO INFORMATION

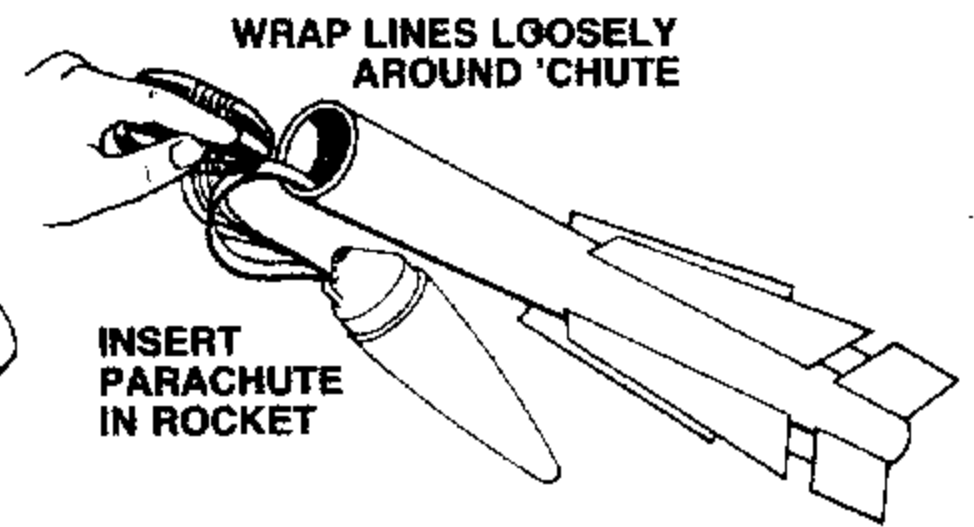
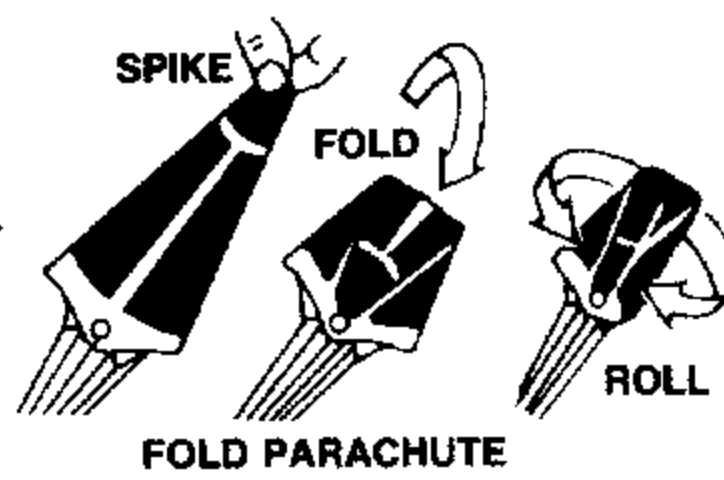
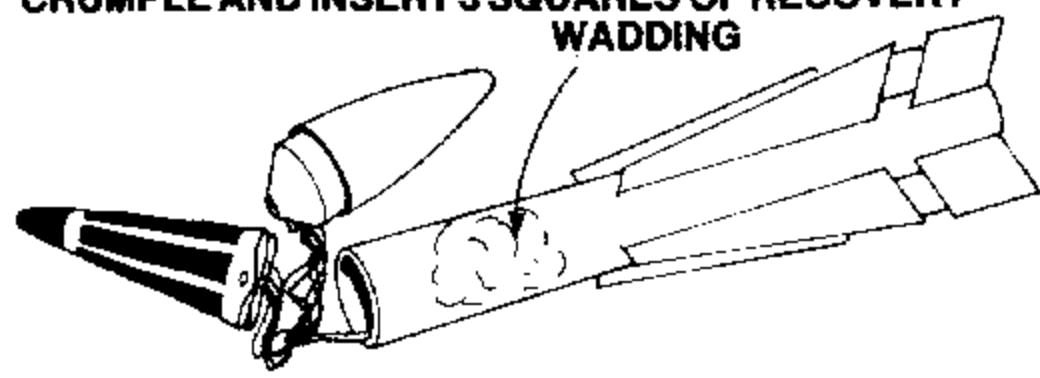


TOP VIEW

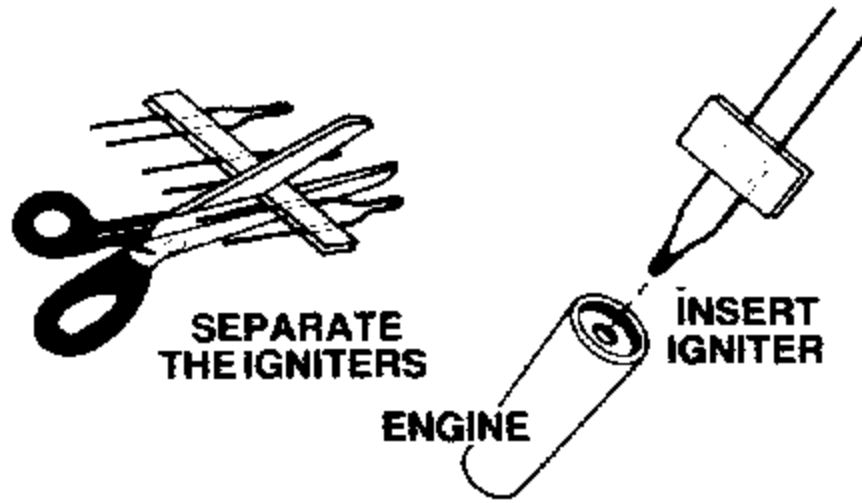
SIDE VIEW

ROCKET PREFLIGHT

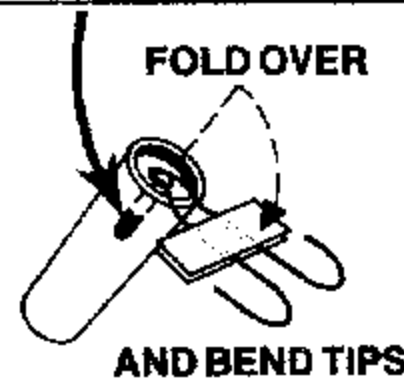
CRUMPLE AND INSERT 3 SQUARES OF RECOVERY WADDING



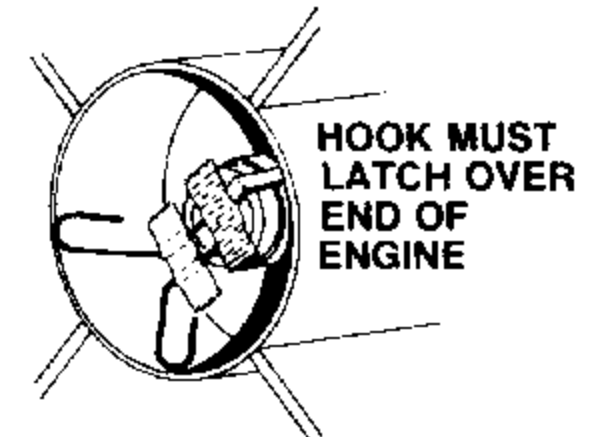
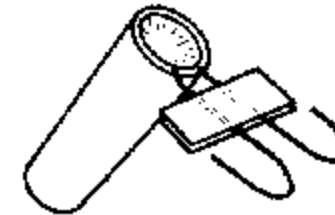
PREPARE ENGINE



IGNITER TIP MUST TOUCH PROPELLANT DEEP INSIDE NOZZLE OPENING



APPLY AND FIRMLY PRESS TAPE DISC OR MASKING TAPE IN PLACE



INSTALL ENGINE IN ROCKET

LAUNCH SUPPLIES

To launch your rocket you will need the following items:
 —Estes Electrical Launch System and Launch Pad
 —3/16" (2 mm) diameter Maxi-Rod No. 2244
 —Estes Recovery Wadding No. 2274
 —Recommended Estes Engines: D12-3 or D12-5
 Use only with Estes products.

FLYING YOUR ROCKET

Choose a large field away from power lines, tall trees, and low flying aircraft. Try to find a field at least 500 feet (152 meters) square. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great.

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

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

Don't leave parachute packed more than a minute or so before launch during cold weather [colder than 40° Fahrenheit (4° Celsius)].

Parachute may be dusted with talcum powder to avoid sticking.

MISFIRES

Failure of the model rocket engine to ignite is nearly always caused by incorrect igniter installation. An Estes igniter will function properly even if the coated tip is chipped. However, if the coated tip is not in direct contact with the engine propellant, it will only heat and not ignite the engine.

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 tape the igniter leads firmly to base of engine as illustrated above. Repeat the countdown and launch procedure.

FOR YOUR SAFETY AND ENJOYMENT

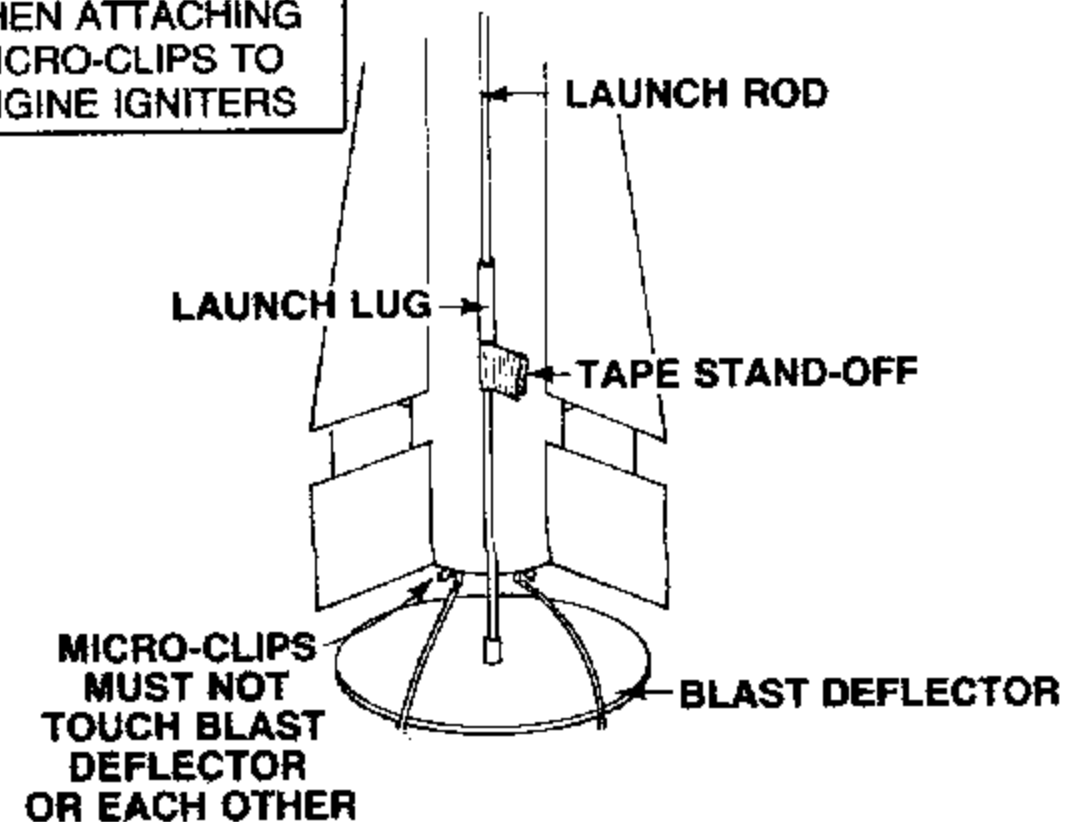
Always follow the NAR* MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.

*National Association of Rocketry

83407B

COUNTDOWN AND LAUNCH

SAFETY KEY MUST NOT BE IN LAUNCH CONTROLLER WHEN ATTACHING MICRO-CLIPS TO ENGINE IGNITERS



- 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.