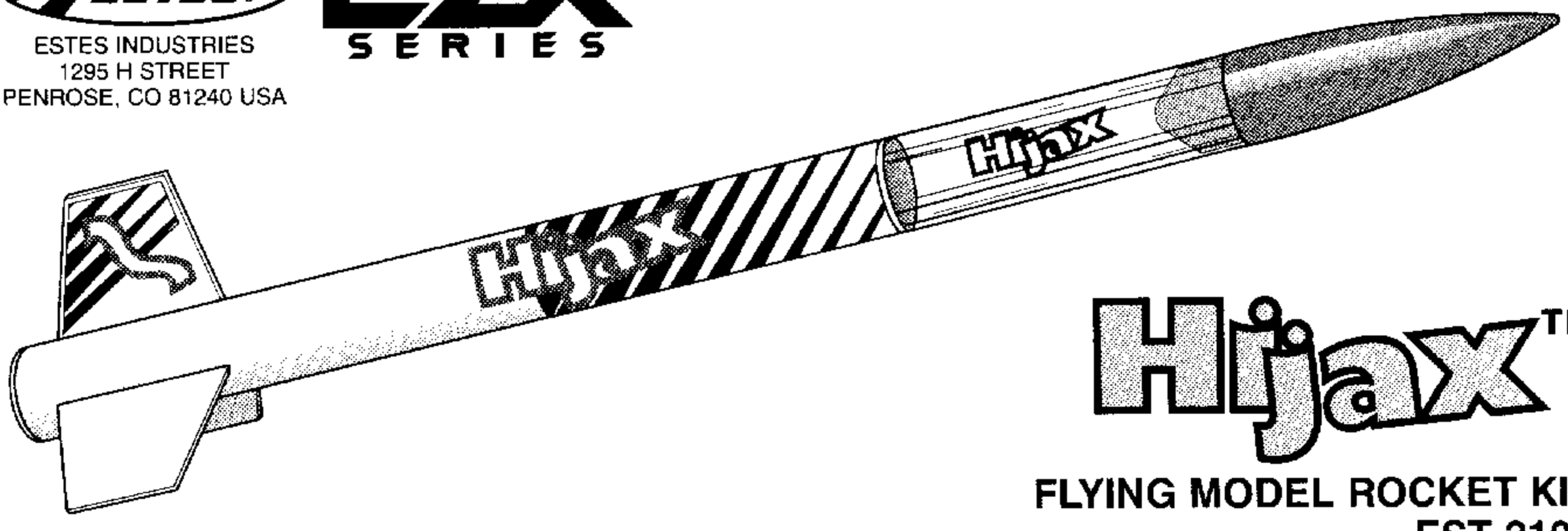
ESTES INDUSTRIES
1295 H STREET
PENROSE, CO 81240 USA

E2X SERIES



Hijax™

FLYING MODEL ROCKET KIT
EST 2105

HOW TO USE THESE INSTRUCTIONS:

READ ALL INSTRUCTIONS BEFORE STARTING WORK ON THIS MODEL.

A. This rocket, incorporating basic model rocketry construction techniques, will help you in the development of your rocketry modeling skills.

B. Test fit parts before applying any glue. Trim parts as necessary for proper fit.

C. The construction supplies required for each step are listed at the beginning of each step.

PARTS LAYOUT

PLASTIC ENGINE MOUNT SECTION WITH LAUNCH LUG OPENINGS (1) (037920)

PLASTIC ENGINE MOUNT SECTIONS (2) (037921)

LAUNCH LUGS (2) (037922)

SHOCK CORD MOUNT (1) (037923)

BODY TUBE (1) (085877)

TUBE COUPLER (1) (072638)

PAYLOAD SECTION (1) (031205)

NOSE CONE (1) (072638)

SHOCK CORD LOCK (1) (037924)

ELASTIC SHOCK CORD (1) (038374)

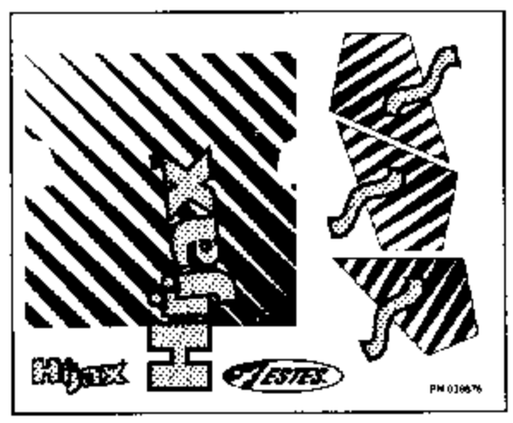
PLASTIC REAR ENGINE RING (1) (037929)

ENGINE MOUNT TUBE (1) (085870)

FINS (3) (037926)

PLASTIC FRONT ENGINE RING (1) (037928)

ENGINE HOOK (1) (035021)



DECAL (1) (037141)

TAPE RINGS (1) (038407)

SHROUD LINES (1) (038237)

PARACHUTE (1) (035811)

EXTREMELY IMPORTANT: THE PARTS LAYOUT IS FOR REFERENCE ONLY!

The parts layout is only intended to assist you in locating the parts included in this kit.

CONSTRUCTION SUPPLIES

In addition to the parts included in your kit, you will need these construction supplies. Each step shows which supplies will be required.

SCISSORS

PLASTIC CEMENT

HOBBY KNIFE

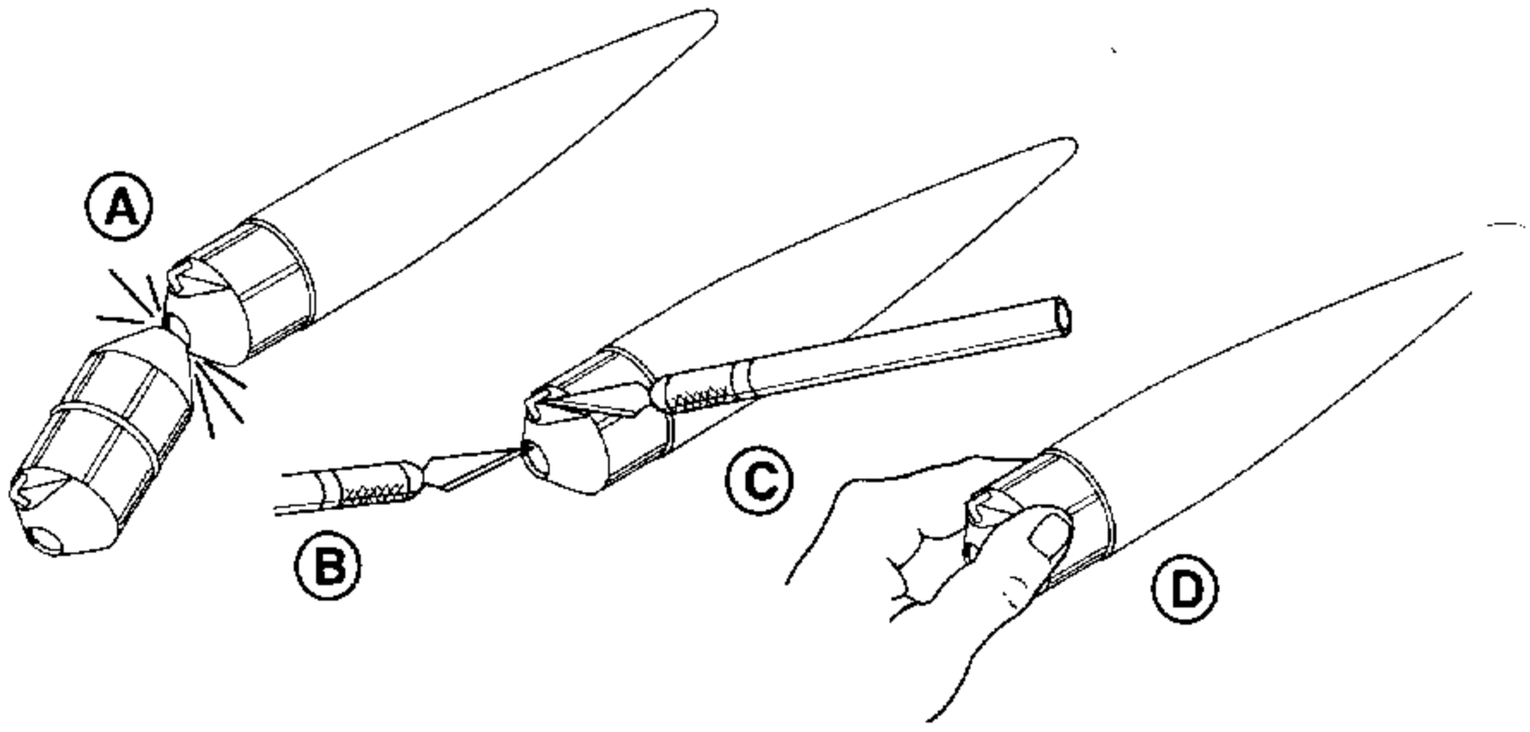
MASKING TAPE

PENCIL

PLASTIC MODEL CEMENT IS APPLIED TO SURFACES SHOWN IN RED.

ROCKET ASSEMBLY

1. NOSE CONE PREPARATION



A. ☐ Snap the tube coupler and nose cone apart as shown. Save coupler for payload section assembly.

B. ☐ Clean off excess plastic

C. ☐ The hole in plastic loop may have to be cleaned out with a hobby knife.

D. ☐ Set nose cone and coupler aside until step 5.

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2. ENGINE MOUNT ASSEMBLY

NOTE: For this step you will need: front and rear engine mount rings, three engine mount sections, engine mount tube and engine hook. **Do not use glue yet!** Read each step, test fit all parts together first without gluing. Trim off any excess plastic to ensure proper fit.

A. ☐ Notice the engine mount tube has a notch on both ends. Position the longer notch to the front.

B. ☐ The front engine ring fits into the end of the mount tube, the rear engine ring fits over the end of the tube.

C. ☐ Using the notches for guides, position the front and rear engine rings on the engine mount tube. Check for proper fit.

D. ☐ Position engine hook as shown with front of hook through opening between front engine ring and engine tube notch. The hook should extend through the split rear ring and beyond the rear of the engine tube.

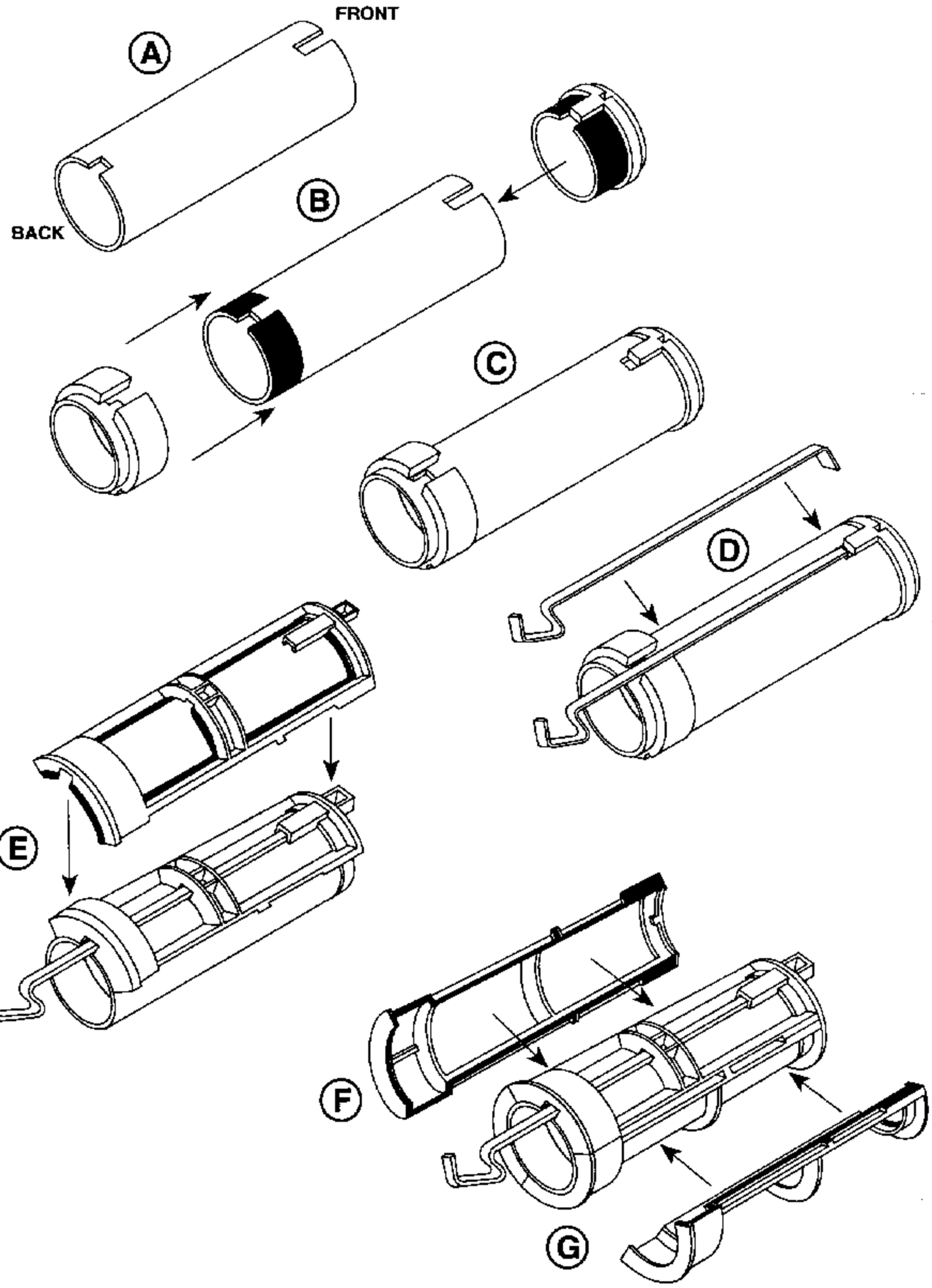
E. ☐ Locate the plastic engine mount section with engine hook notches and launch lug openings. Position this section directly over engine hook on engine mount. Rotate it slightly until it locks into place. Hook should move up and down in slot at rear.

F. ☐ Test fit the remaining two sections, be sure they lock into position.

G. ☐ The illustration shows the complete engine mount assembly.

H. ☐ Now disassemble and work through steps A through G again, this time applying glue to the areas in red.

I. ☐ Complete engine mount. Let dry for ten minutes before installing. This is a good time to build your parachute, step 6.



3. ENGINE MOUNT FIN/LAUNCH LUG INSTALLATION

Do not use glue yet! Read each step, test fit all parts together first without gluing.

A. ☐ Locate the body tube. Notice the tube has three long slots and squares punched out. The slots are located at the rear of the body tube.

B. ☐ Orient the engine mount as shown. Hold the engine hook in your fingers and gently push into the rear of the body tube.

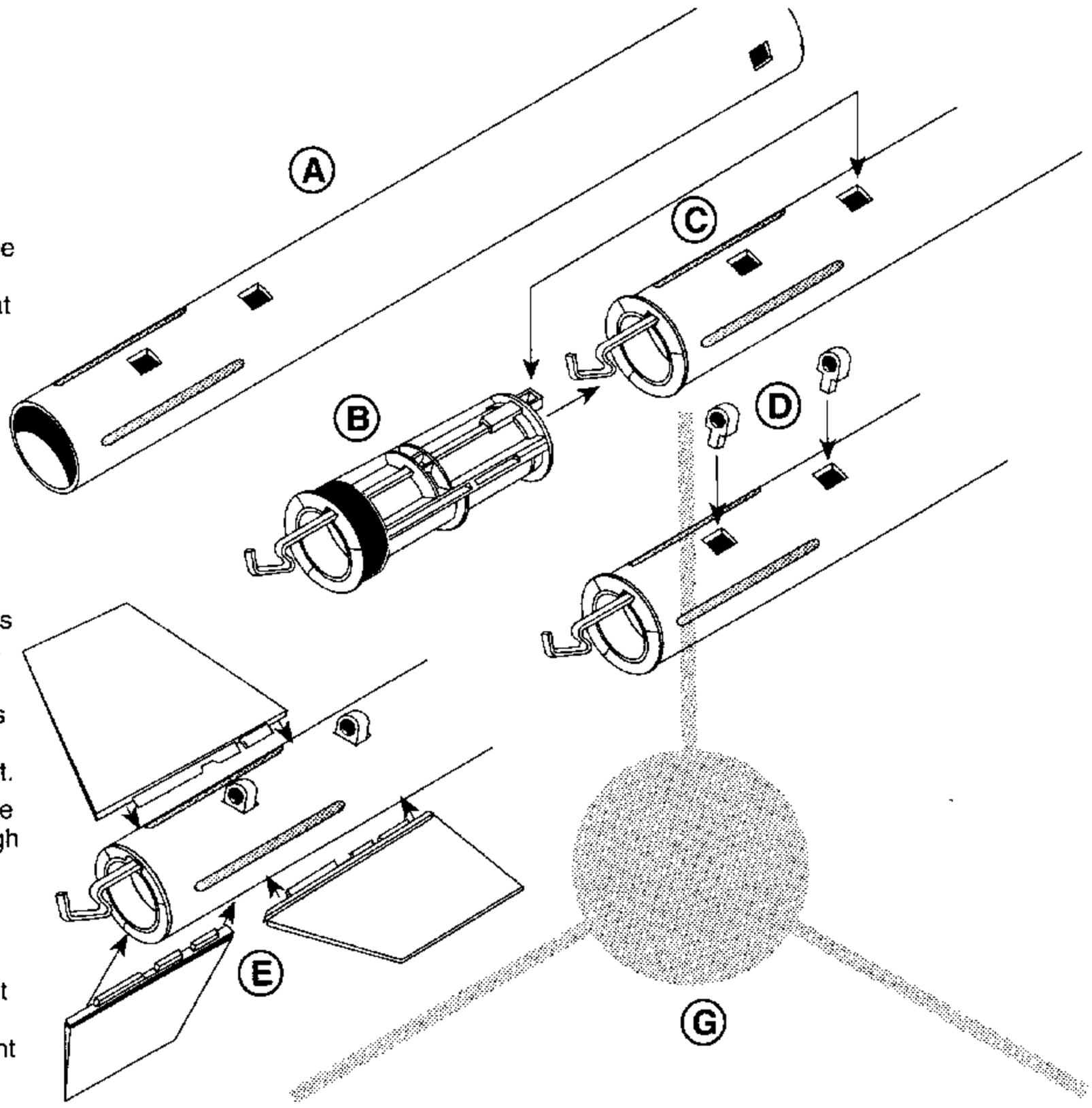
C. ☐ Check for proper alignment of all three fin slots and launch lug openings.

D. ☐ Test fit the two launch lugs into the openings as shown. Make sure holes in launch lugs go the same direction as the body tube.

E. ☐ Test fit fins into slots. Make sure fins rest against body tube side with no gaps. Fins will fit loosely at this point.

F. ☐ Remove fins, launch lugs and engine mount. Work through steps B through E again, this time applying glue to areas in red. Put back together in proper alignment. Gluing on the engine mount is optional.

G. ☐ NOTE: After gluing, check alignment on all three fin slots and launch lug openings using shade pattern at right before allowing glue to set. Allow to dry for ten minutes.



4. SHOCK CORD MOUNT ATTACHMENT

A. ☐ Locate the shock cord mount, mount lock and elastic cord. Trim excess plastic from parts for proper fit.

B. ☐ Insert mount into square opening in front of body tube, making sure that rounded end of mount faces forward.

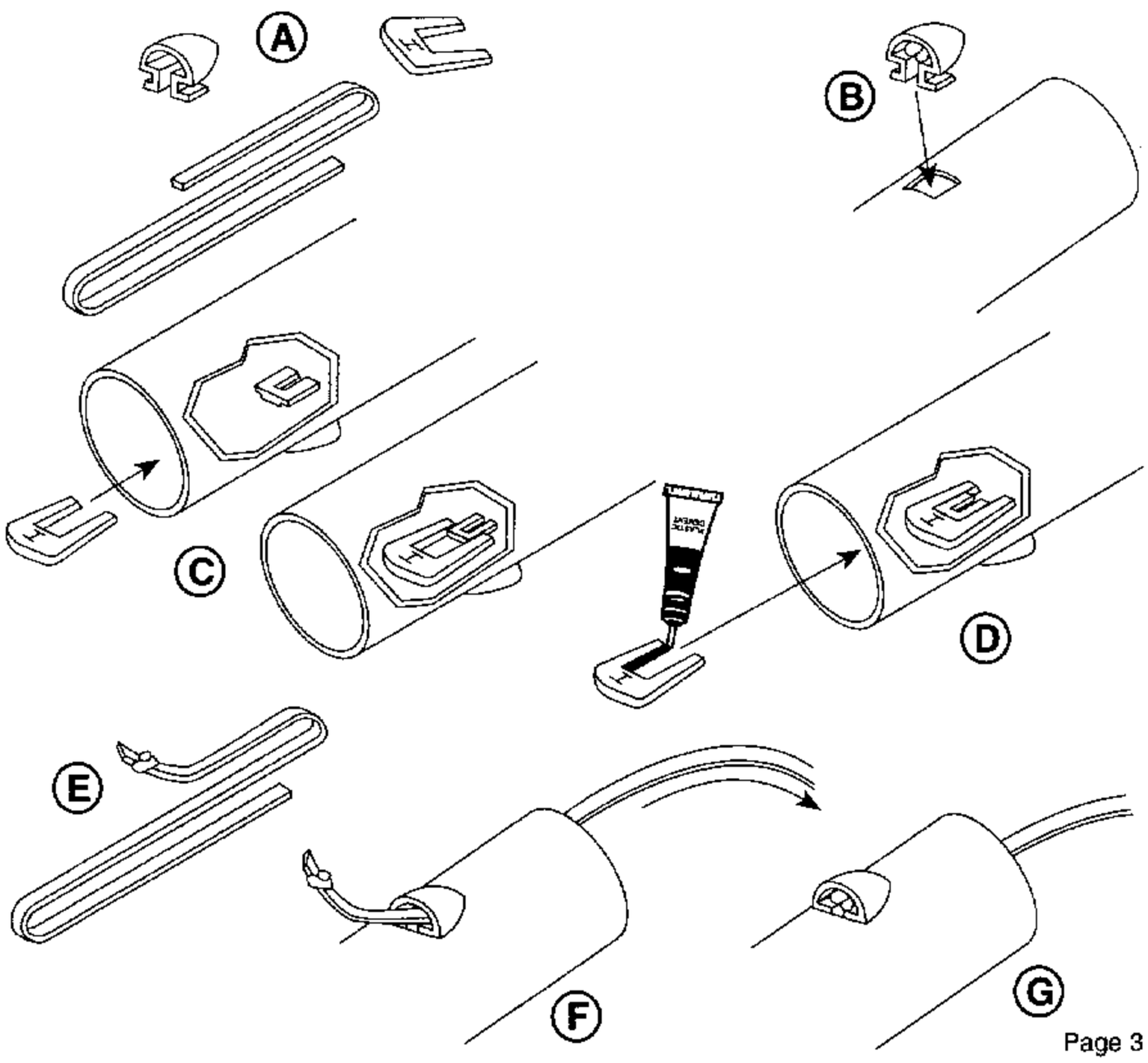
C. ☐ Locate the shock cord mount lock. The lock has the letter "I" molded in the plastic. Face the letter "I" toward the center of the tube. Test fit the lock by sliding it partially under edges of mount.

D. ☐ Remove lock, apply cement as shown and slide it all the way under the mount.
IMPORTANT: Allow glue to dry for ten minutes before proceeding to next step. Getting glue on the elastic shock cord will weaken the material which could lead to shock cord failure during flight.

E. ☐ Tie double knot in one end of the shock cord.

F. ☐ Thread the other end of shock cord into mount from outside of tube. Feed cord through front end of body tube.

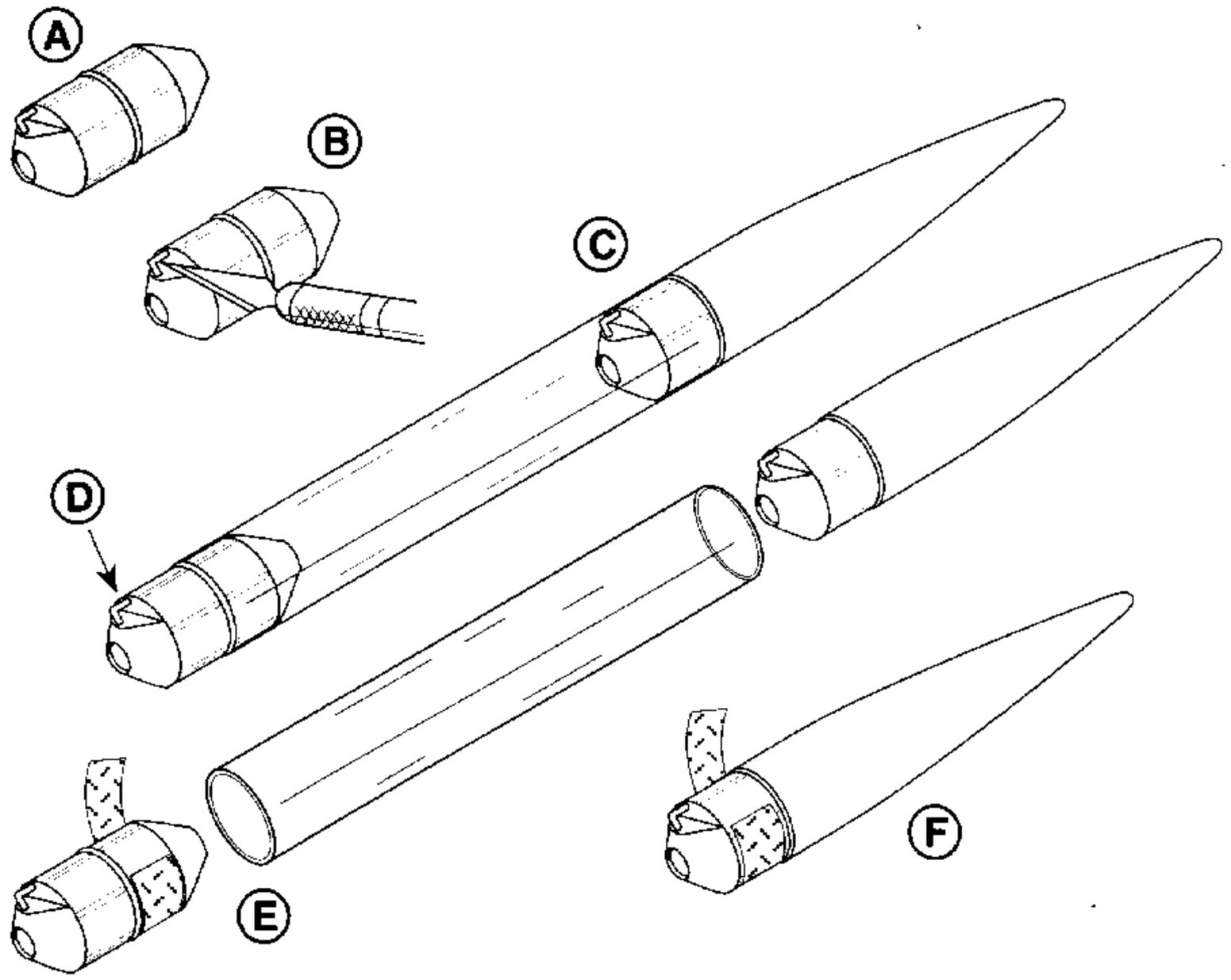
G. ☐ Pull cord firmly and secure knot inside shock cord mount as shown.



5. PAYLOAD OR BODY EXTENSION ASSEMBLY

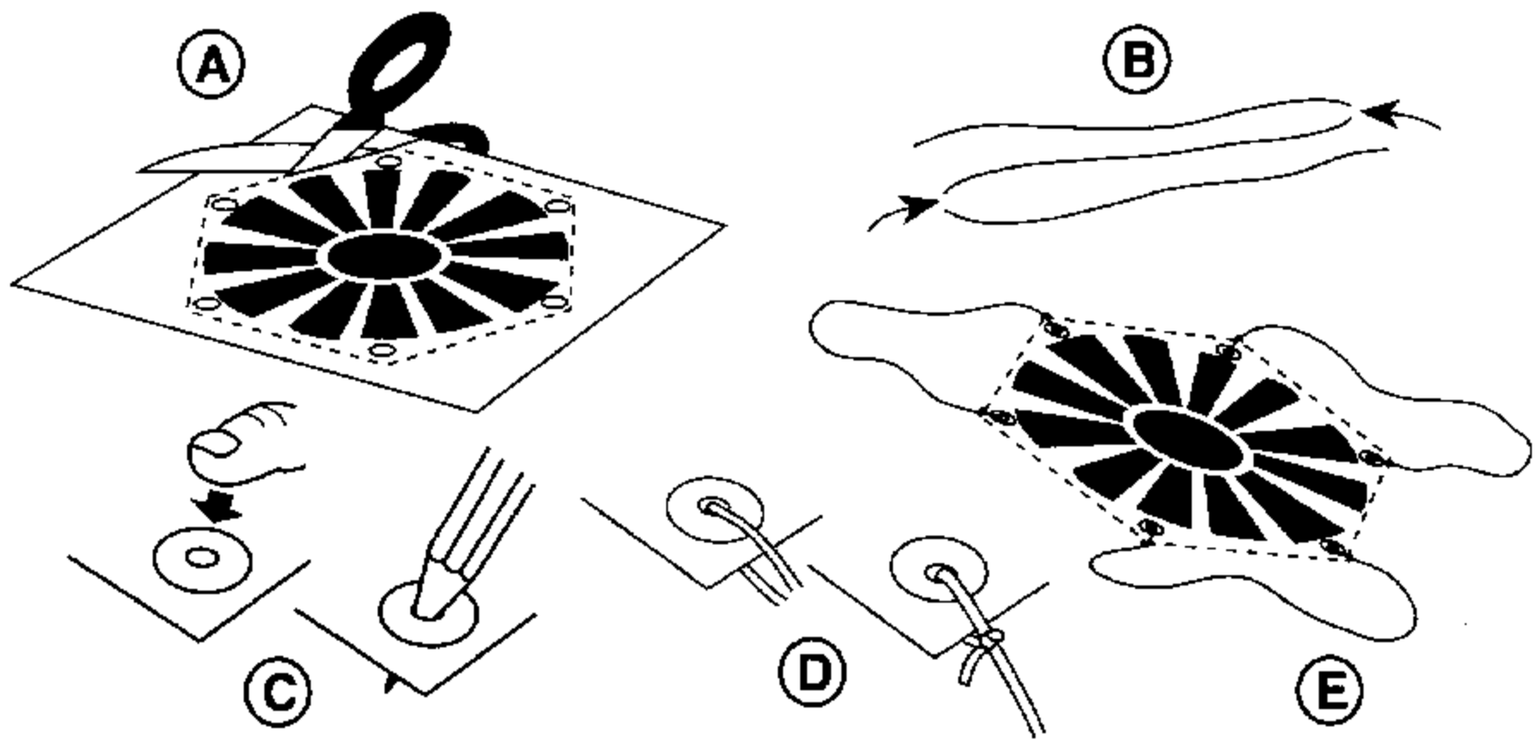
NOTE: The forward section of your rocket can be used to carry objects aloft. If you want to launch experiments in your rocket, do not glue nose cone into payload section.

- **A.** ☐ Locate the tube coupler from step 1.
- **B.** ☐ Clean off excess plastic. The plastic loop may have to be cleaned out with a hobby knife.
- **C.** ☐ Test fit the nose cone and tube coupler into payload section.
- **D.** ☐ CAUTION: Make sure loop on tube coupler is on the outside when assembled.
- **E.** ☐ Remove coupler. Use a piece of tape to shim the shoulder for a tighter fit, and put back together.
- **F.** ☐ If the nose cone fits loosely, you may lose your payload. Use a piece of tape to shim the shoulder for tighter fit.



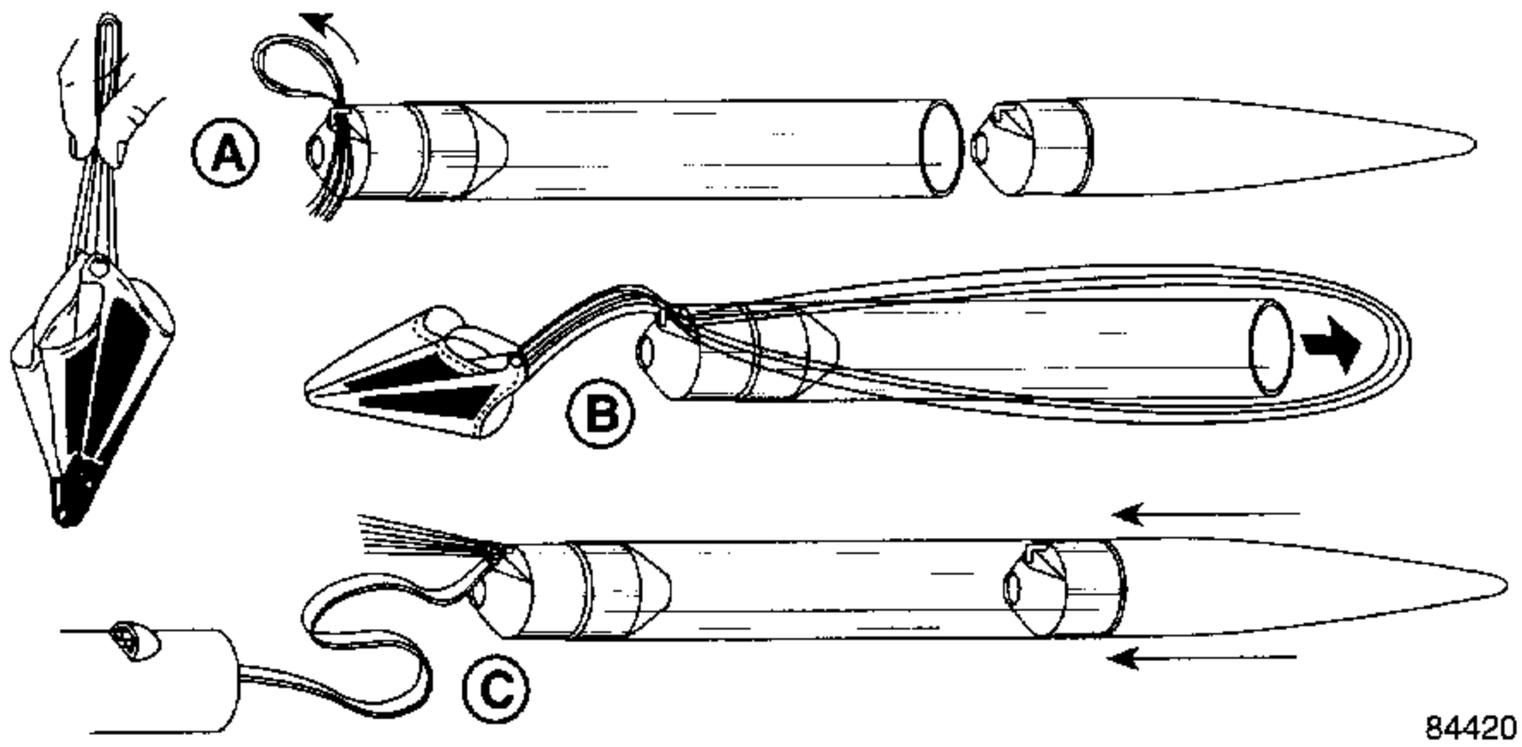
6. RECOVERY DEVICE ASSEMBLY

- **A.** ☐ Cut out parachute on printed edge lines.
- **B.** ☐ Remove tape from shroud lines, fold and cut into three equal lengths.
- **C.** ☐ Attach tape rings to top of parachute and press firmly into place. Punch hole through the parachute material with the point of a sharp pencil. (Do not use a dull pencil or ballpoint pen).
- **D.** ☐ Pass shroud line through hole in parachute and tape ring. Tie lines together with a double knot.
- **E.** ☐ Attach remaining lines to other corners to complete parachute.



7. RECOVERY DEVICE AND SHOCK CORD ATTACHMENT

- **A.** ☐ Remove nose cone. Gather shroud lines to form a loop. Thread shroud lines through loop on coupler.
- **B.** ☐ Pass tip of payload section back through loop of shroud lines as shown. Pull lines tight.
- **C.** ☐ Tie free end of shock cord to loop on coupler. Use a double knot. Replace nose cone.



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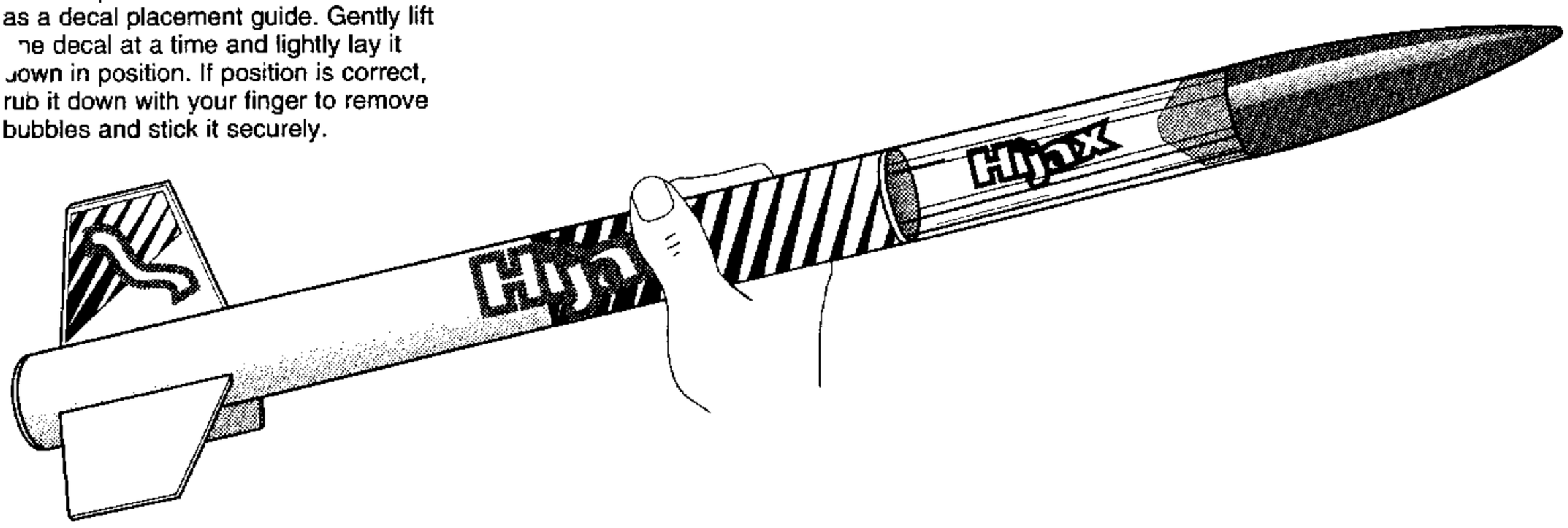
8. FINISHING YOUR ROCKET

Use the photo on the front of the box as a decal placement guide. Gently lift one decal at a time and lightly lay it down in position. If position is correct, rub it down with your finger to remove bubbles and stick it securely.

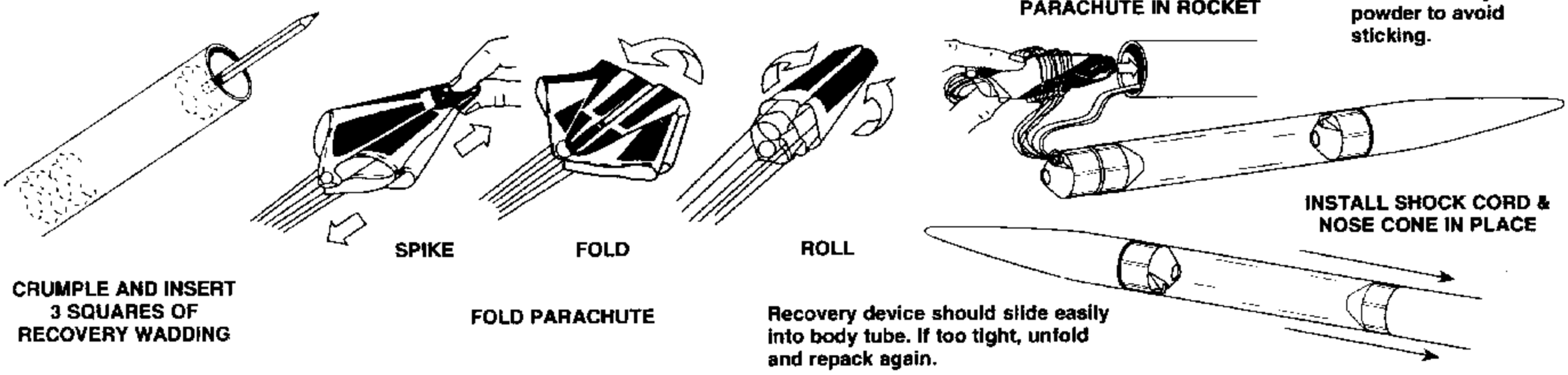


WHAT TO EXPECT WHEN FLYING YOUR HIJAX™ ROCKET

Your new HiJax™ represents the latest in model rocket design and component technology. Sporting an integrated engine mount and pre-aligned fin slots, the HiJax™ utilizes the maximum energy available from whatever recommended engine you use. No thrust is wasted. Using a C6-5 engine, the HiJax™ will approach 305 meters (1000 feet) in altitude. If your model is loaded with a pay-load, expect slightly less altitude for a given engine. Remember to "size" your field and engine properly. Fly "A" engines from baseball field-size areas, "C" engines from football field-size areas.

At apogee (the highest point of your rocket's flight), the parachute will eject and the rocket will drift down range with the drift distance depending on the wind speed. Always keep wind conditions in mind when selecting your engine size. Enjoy flying your HiJax™.

ROCKET PREFLIGHT



PREPARE ENGINE

NOTE: Igniter plugs come with rocket engines. If your engines did not come with plugs, follow the instructions that came with the engines.