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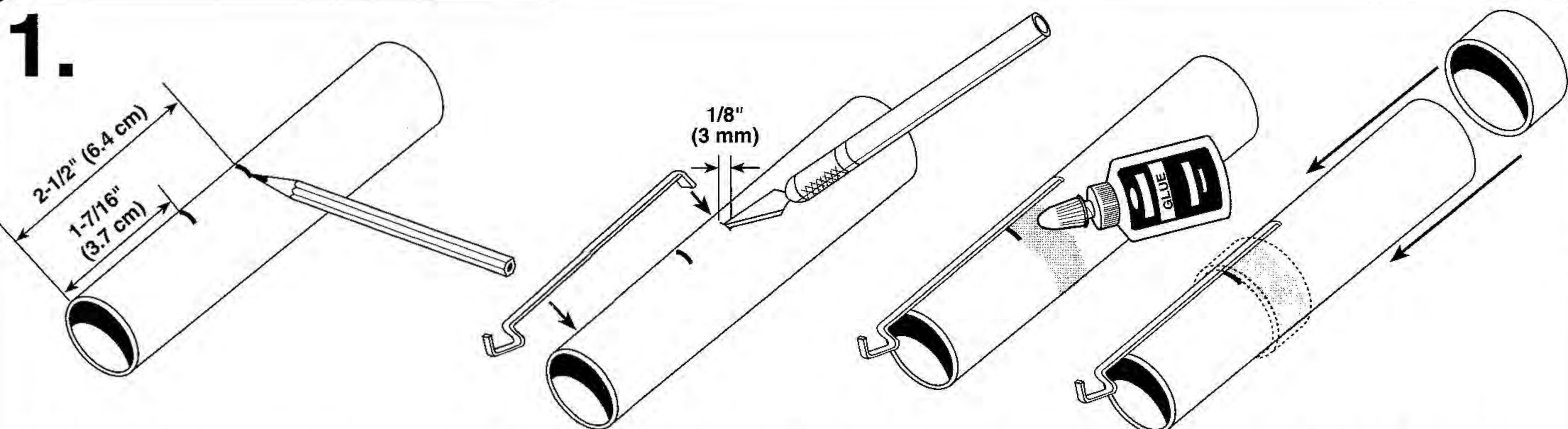
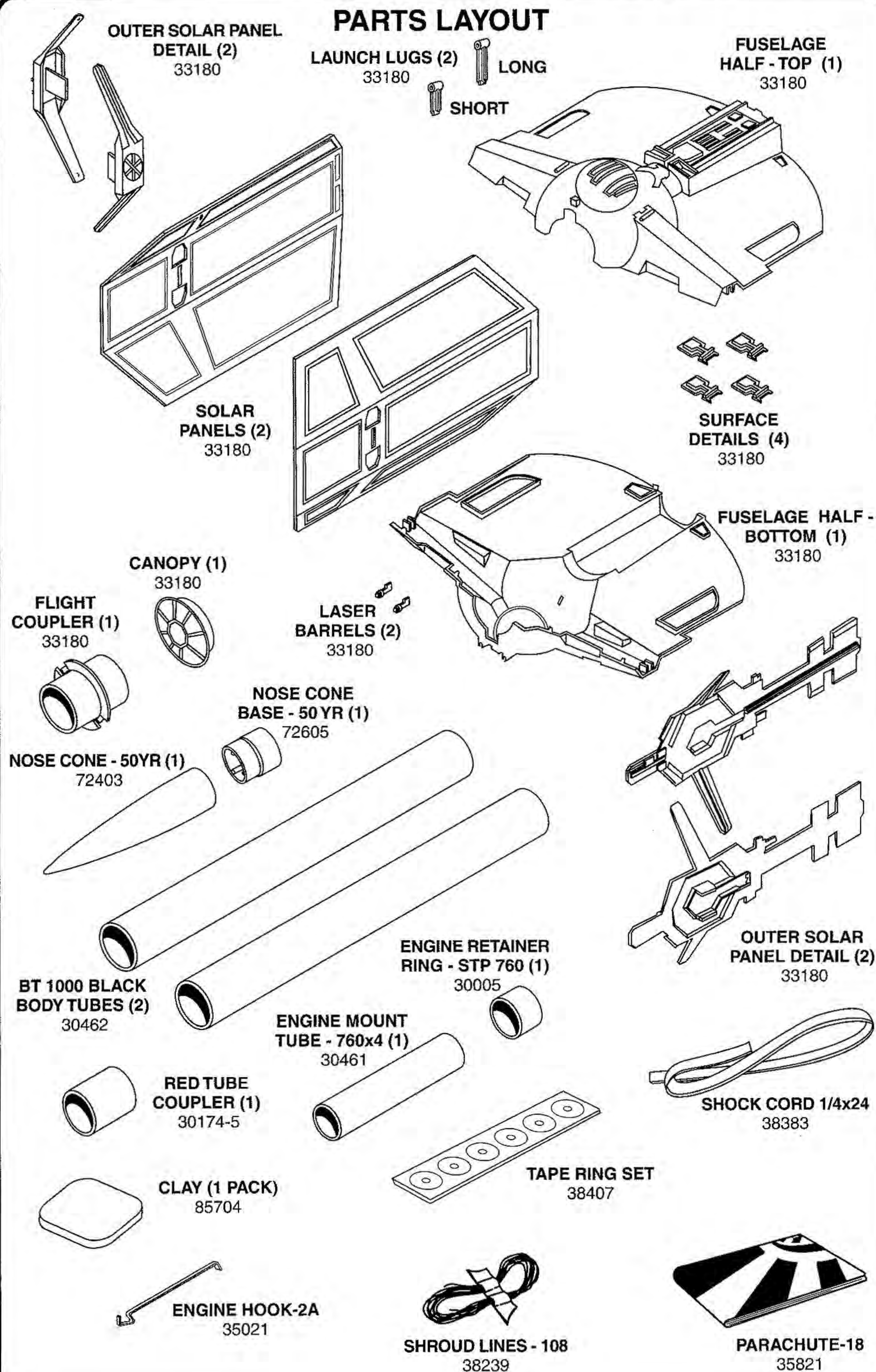
DARTH VADER'S TIE FIGHTER FLYING MODEL ROCKET KIT INSTRUCTIONS

MATERIALS REQUIRED: TUBE-TYPE PLASTIC CEMENT, PENCIL, WHITE OR YELLOW GLUE, HOBBY KNIFE, RULER, SCISSORS, PAPER TOWEL OR RAG, MASKING TAPE, PAINT PEN (DARK GRAY)

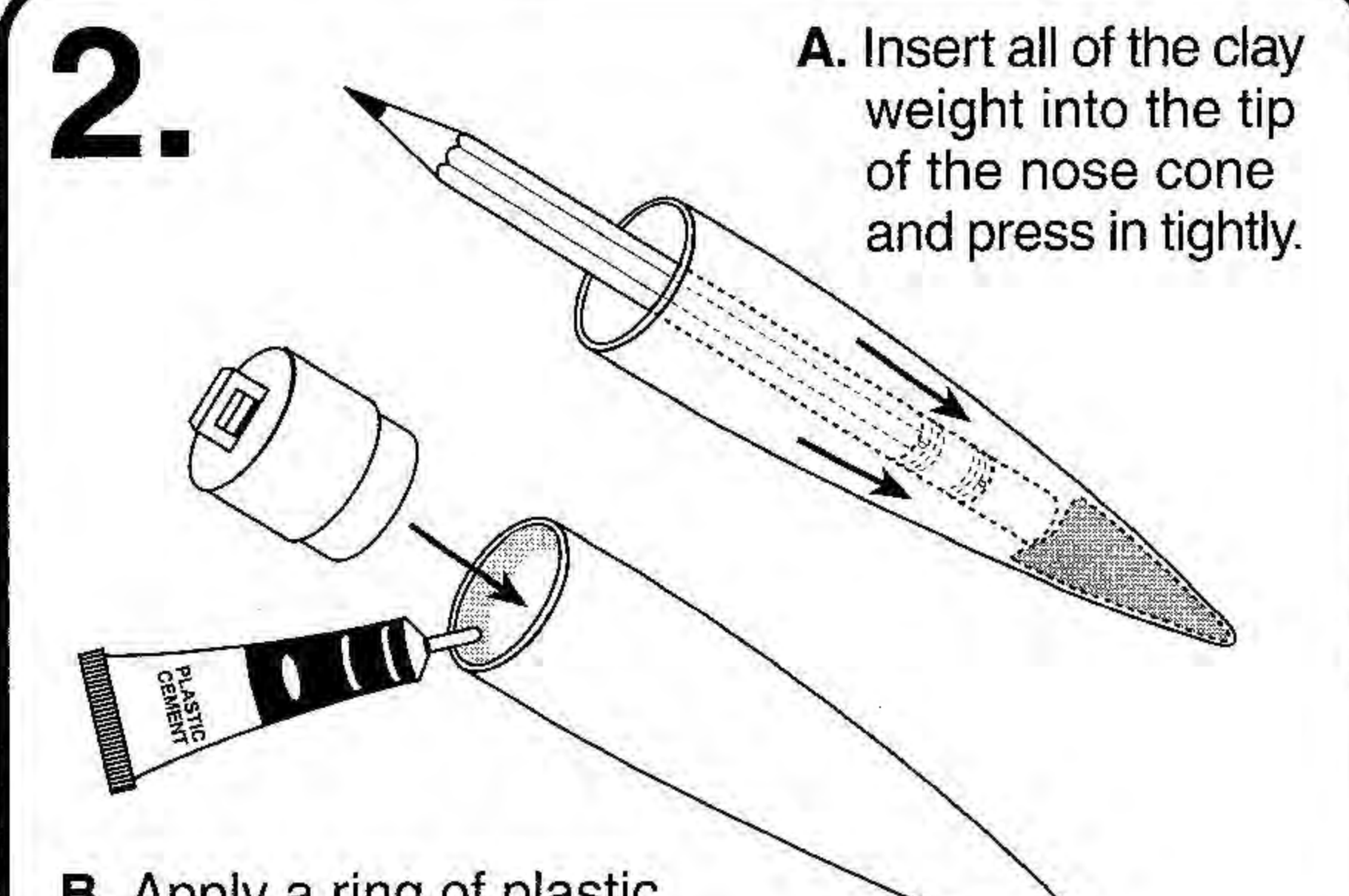
ALL GLUED AREAS ARE SHADED IN GRAY

Be sure to read all instructions and test fit all parts before gluing.

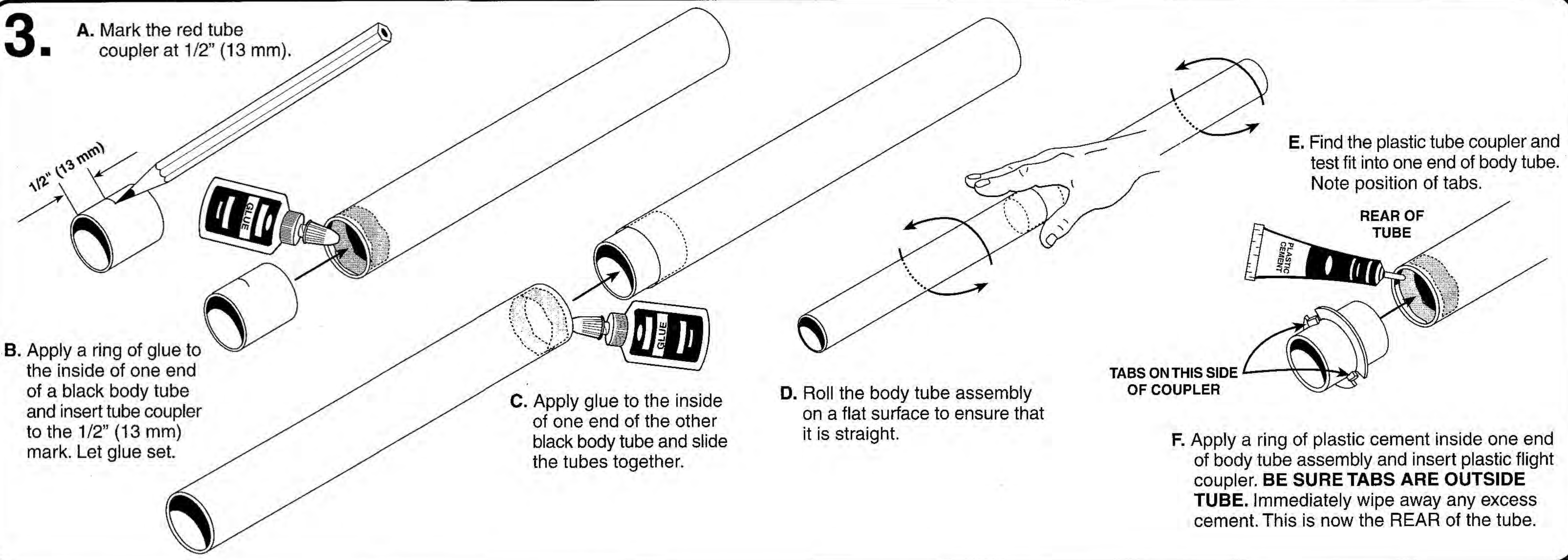
PARTS LAYOUT



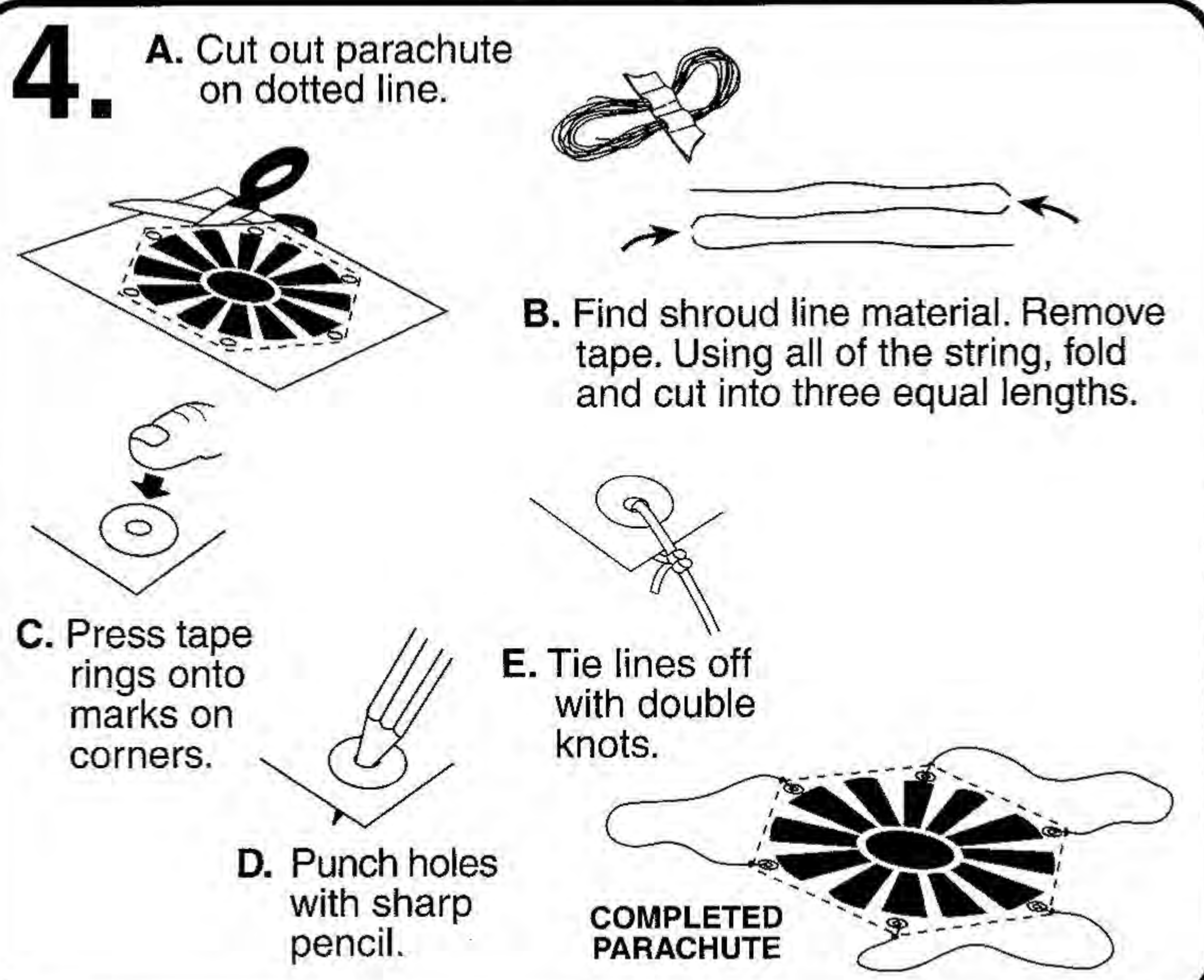
A. Mark the engine mount tube at 1-7/16" (3.7 cm) and at 2-1/2" (6.4 cm).
B. Make a 1/8" (3 mm) wide slit at the 2-1/2" (6.4 cm) mark only and insert engine hook.
C. Apply a band of glue around the tube above the 1-7/16" (3.7 cm) mark and slide the engine retainer ring down until it is even with the mark. Let dry completely.



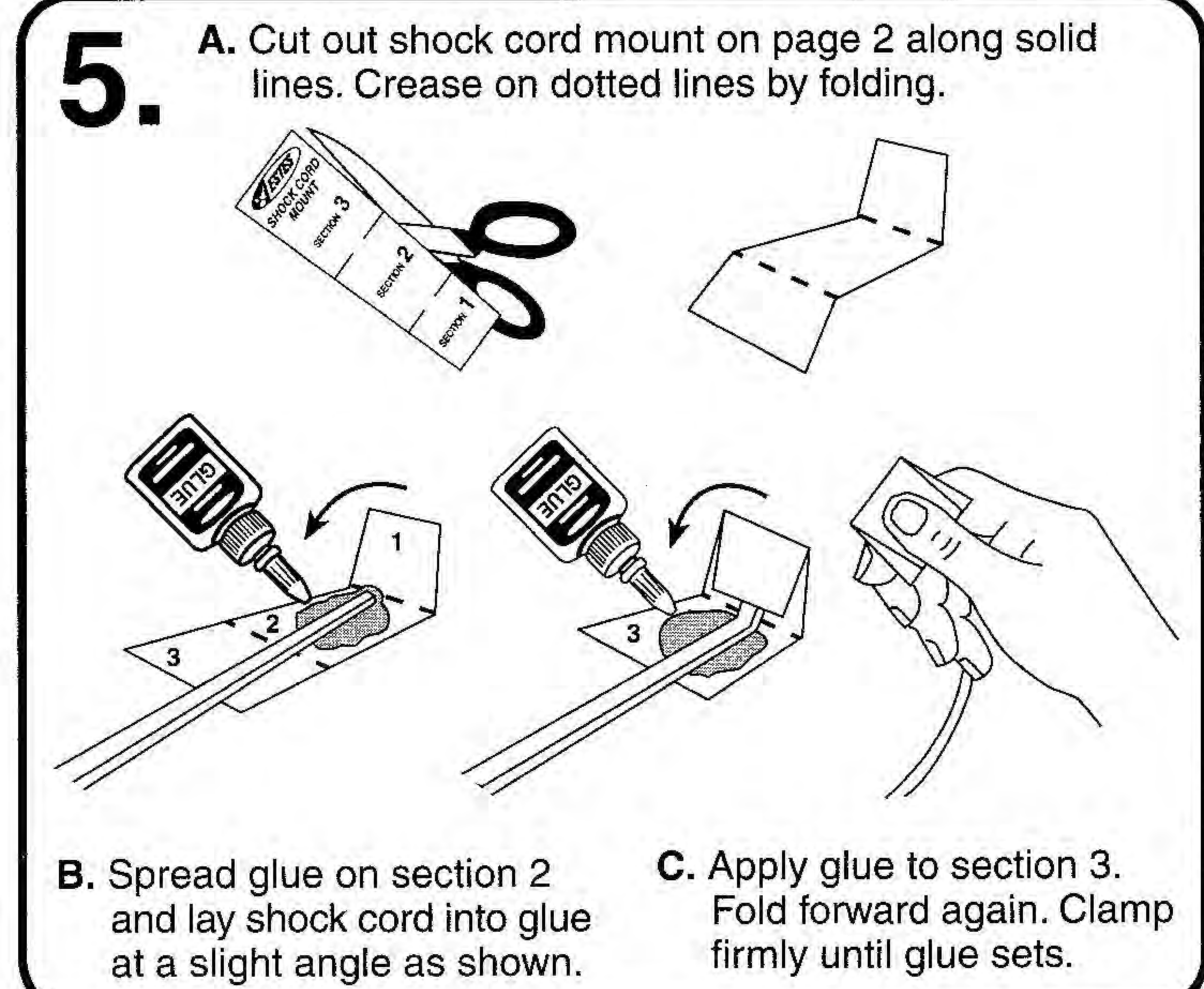
A. Insert all of the clay weight into the tip of the nose cone and press in tightly.
B. Apply a ring of plastic cement just inside the nose cone and insert the nose cone base. Immediately wipe away any excess plastic cement. Let dry.



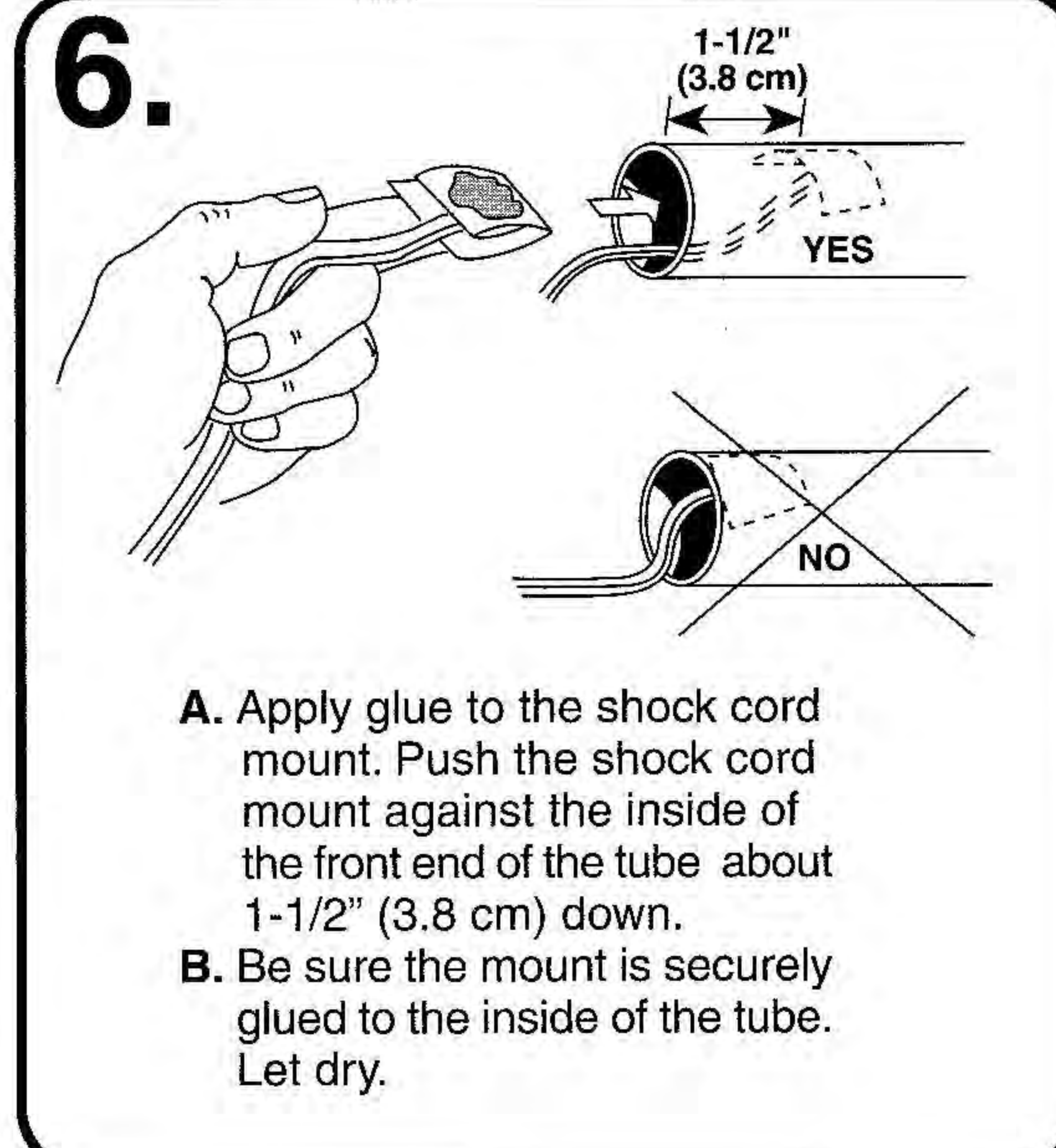
A. Mark the red tube coupler at 1/2" (13 mm).
B. Apply a ring of glue to the inside of one end of a black body tube and insert tube coupler to the 1/2" (13 mm) mark. Let glue set.
C. Apply glue to the inside of one end of the other black body tube and slide the tubes together.
D. Roll the body tube assembly on a flat surface to ensure that it is straight.
E. Find the plastic tube coupler and test fit into one end of body tube. Note position of tabs.
F. Apply a ring of plastic cement inside one end of body tube assembly and insert plastic flight coupler. BE SURE TABS ARE OUTSIDE TUBE. Immediately wipe away any excess cement. This is now the REAR of the tube.



A. Cut out parachute on dotted line.
B. Find shroud line material. Remove tape. Using all of the string, fold and cut into three equal lengths.
C. Press tape rings onto marks on corners.
D. Punch holes with sharp pencil.
E. Tie lines off with double knots.
COMPLETED PARACHUTE



A. Cut out shock cord mount on page 2 along solid lines. Crease on dotted lines by folding.
B. Spread glue on section 2 and lay shock cord into glue at a slight angle as shown.
C. Apply glue to section 3. Fold forward again. Clamp firmly until glue sets.



A. Apply glue to the shock cord mount. Push the shock cord mount against the inside of the front end of the tube about 1-1/2" (3.8 cm) down.
B. Be sure the mount is securely glued to the inside of the tube. Let dry.

7.

A. Form loop with shroud lines.

B. Push loop through eyelet on nose cone.

C. Pass parachute through loop.

D. Pull tight.

E. Tie shock cord to eyelet on nose cone with a double knot.

8. PACKING PARACHUTE

SPIKE **FOLD** **ROLL**

Parachute should slide easily into body tube. If fit is too tight, unfold and repack again.

INSERT SHOCK CORD & NOSE CONE INTO PLACE.

DO NOT FORGET TO PACK RECOVERY WADDING IN THE ROCKET BEFORE FLYING

Wrap shroud lines loosely around chute. Insert parachute into rocket.

9.

A. Test fit the two fuselage halves and engine mount assembly together. Note the position of the engine hook in notch and engine mount assembly in the fuselage.

B. Apply plastic cement to the areas shown on the fuselage bottom half and insert engine mount tube. **BE SURE TO POSITION ENGINE HOOK IN NOTCH.**

C. Apply plastic cement to the contact areas as shown, align the two halves, and push together. Secure the fuselage with masking tape until seam is completely dry.

10.

A. Test fit laser barrels to the bottom of the fuselage. Apply a small drop of plastic cement and insert the lasers where shown.

B. Use a small amount of plastic cement to apply surface details where shown.

11.

A. Paint the inside and outside faces of the solar panels as shown using dark gray paint pen.

B. Paint the canopy dark gray where shown. Let painted pieces dry overnight.

C. Apply plastic cement to the contact areas as shown, align the two halves, and push together. Secure the fuselage with masking tape until seam is completely dry.

D. Flex the engine hook to remove any excess cement.

C. Test fit the launch lugs into the slots on the fuselage bottom. **BE SURE THE SHORT LUG ALIGNS WITH THE LONG LUG.** Apply plastic cement and re-insert.

D. Test fit, then use plastic cement to apply the inner and outer solar panel details as shown. Repeat for other side. Let dry overnight.

ESTES
SHOCK CORD MOUNT

SECTION 3

SECTION 2

SECTION 1

12.

A. Test fit, then apply plastic cement to the contact area on a solar panel and position on one side of fuselage.

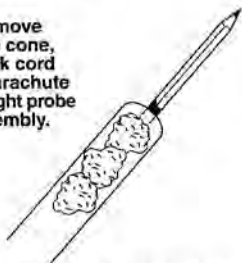
B. Apply the other solar panel in the same manner. Let dry completely.

C. Push in the removable canopy for display. **DO NOT GLUE!** Canopy must be replaced with probe assembly for flight.

13. FLYING YOUR ROCKET

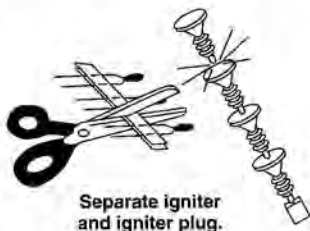
ROCKET PREPARATION

Remove nose cone, shock cord and parachute from flight probe assembly.

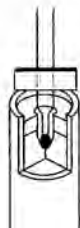


Crumple and insert three squares of recovery wadding. Repack and insert parachute, shock cord and nose cone.

ENGINE PREPARATION



Separate igniter and igniter plug.



Hold engine upright, drop in igniter. Igniter must touch propellant.



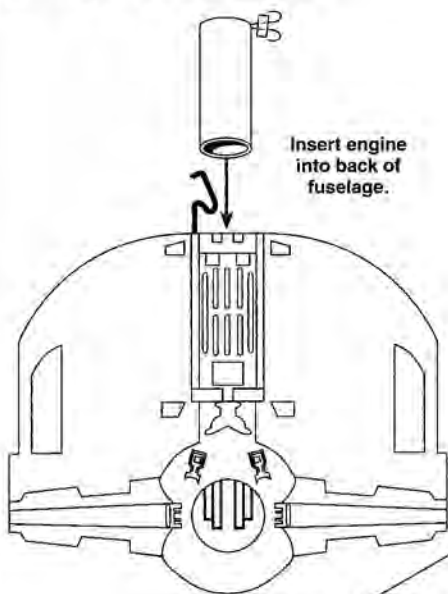
Insert igniter plug.



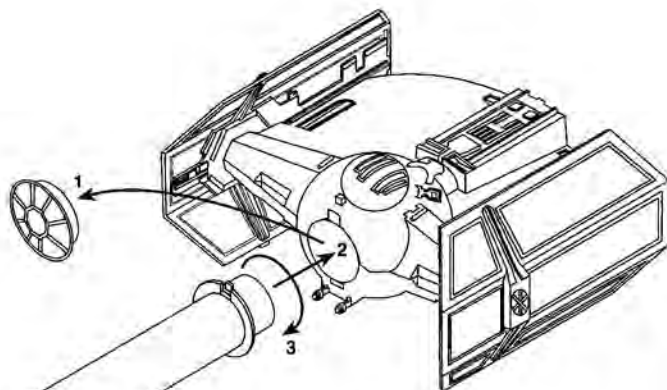
Firmly push all the way in.



Bend igniter wires back.



Insert engine into back of fuselage.



Pull canopy out and insert flight probe. Twist probe until in locked position.

IMPORTANT: FLIGHT PROBE MUST BE ATTACHED TO DARTH VADER'S TIE FIGHTER PRIOR TO LAUNCH FOR SAFE AND STABLE FLIGHT.

LAUNCH SUPPLIES

To launch Darth Vader's TIE fighter, you will need the following:

- Launch Pad (Estes Porta-Pad® II)
- Launch Controller (Estes Electron Beam®)
- Recommended Estes Engines: B4-2, B6-2, C6-5.

For your first flight, use a B6-2 engine.

- Recovery Wadding (EST 302274)
 - Igniters and Igniter Plugs (included with Estes engines)
- Use only Estes products to launch this rocket.

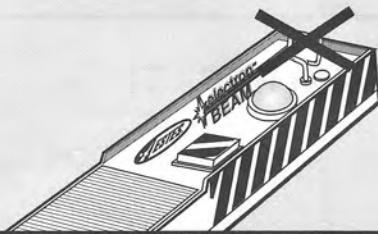
| ENGINE | PROJECTED ALTITUDE | |
|-----------|--------------------|--------|
| | Feet | Meters |
| B4-2..... | 144 | 44 |
| B6-2..... | 166 | 51 |
| C6-5..... | 532 | 162 |

TIPS FOR FLYING YOUR ROCKET

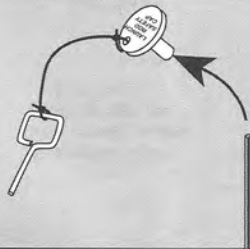
- Choose a large field away from power lines, buildings, tall trees, and low flying aircraft. Try to find a field at least 250 feet (76 meters) square. The larger the launch area, the better your chance of recovering your rocket.
- Launch area must be free of dry weeds and brown grass.
- Launch only during calm weather with little or no wind and good visibility.
- 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 or baby powder to avoid sticking.
- Always follow the National Association of Rocketry (NAR) MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities. The safety code is enclosed with this kit.

COUNTDOWN AND LAUNCH

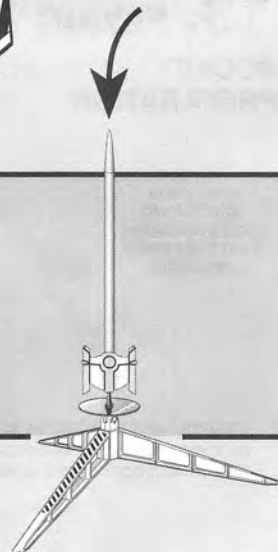
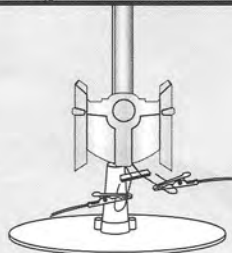
10... Safety key must not be in launch controller. The safety cap with safety key attached should already be on the launch rod.



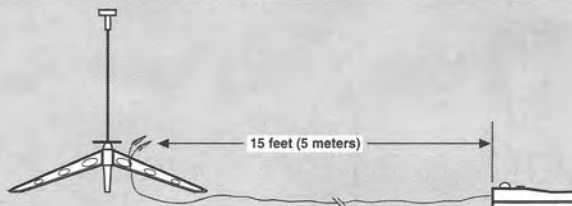
9... Remove safety cap from launch rod, slide launch lugs over rod. Make sure rocket slides freely and micro-clips are clean for good electrical contact.



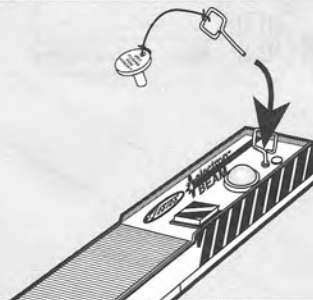
8... Attach micro-clips to the igniter wires. Arrange the micro-clips so they do not touch each other or the metal blast deflector. Attach micro-clips as close to protective tape on igniter as possible.



7... Move everyone 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.



5... Start audible countdown.

4...3...2...1.....

5...

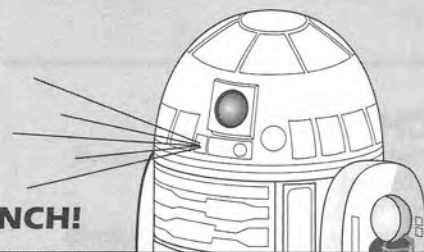
4...

3...

2...

1...

LAUNCH!



LAUNCH!

Push and hold button until engine ignites.

For safety, immediately remove safety key from launch controller and replace safety cap on launch rod. May the Force be with you!

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. Broken or chipped coating will not affect the performance of the igniter. Reinstall the igniter plug as illustrated previously. Repeat the countdown and launch procedure.