



ESTES INDUSTRIES (7-96) 82116  
 1295 H Street  
 Penrose, CO 81240 EST 0835



# NIKE ARROW™

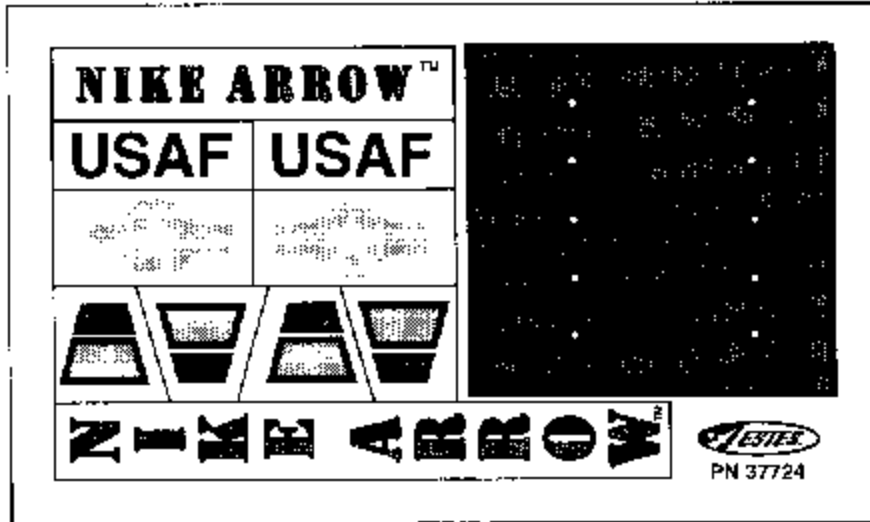
## FLYING MODEL ROCKET KIT INSTRUCTIONS

### TOOLS REQUIRED:

PENCIL, HOBBY KNIFE, MASKING TAPE, RULER, TUBE-TYPE PLASTIC CEMENT AND WHITE OR YELLOW GLUE

ALL GLUED AREAS ARE SHADED IN GRAY

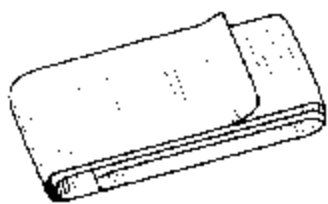
### PARTS LAYOUT



DECAL (1)  
37724



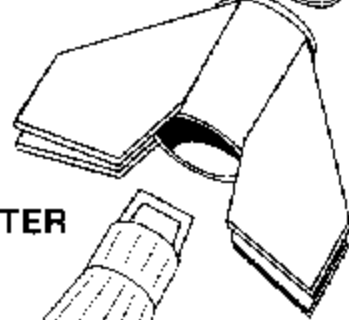
SHOCK CORD  
#1/8 x 9 (1)  
38372



STREAMER #12 (1)  
38275

NOSE CONE  
#5A (1)  
72600

BODY TUBE #5 (1)  
30292



SMALL FIN  
UNIT #5 (1)  
33557

TUBE ADAPTER  
#520 (1)  
33554

LAUNCH LUG  
RING (1)  
33558

BODY TUBE #20 (1)  
30329

ADAPTER RING  
#520 (1)  
30162-2

ENGINE MOUNT  
TUBE #5BJ (1)  
30304

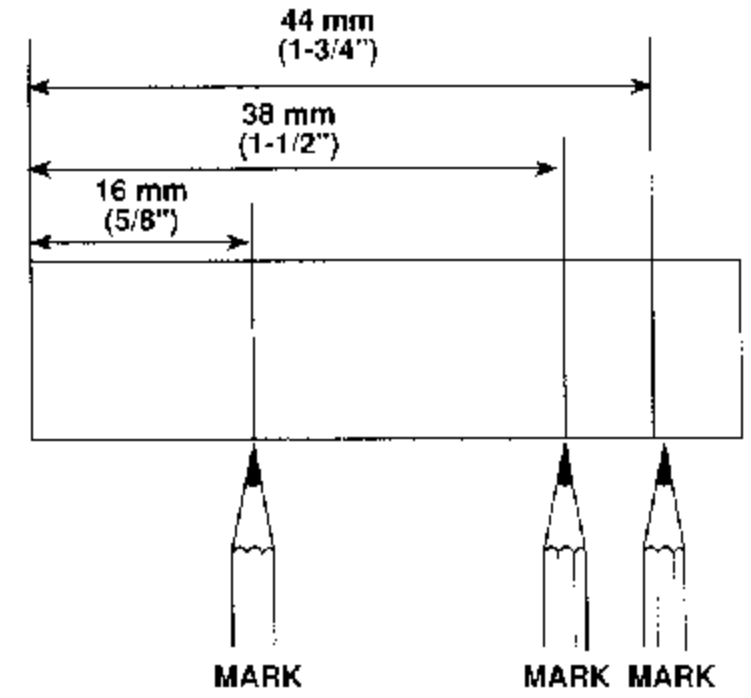
ADAPTER  
RING #520 (1)  
30162-2

ENGINE HOOK  
#3A (1)  
35023

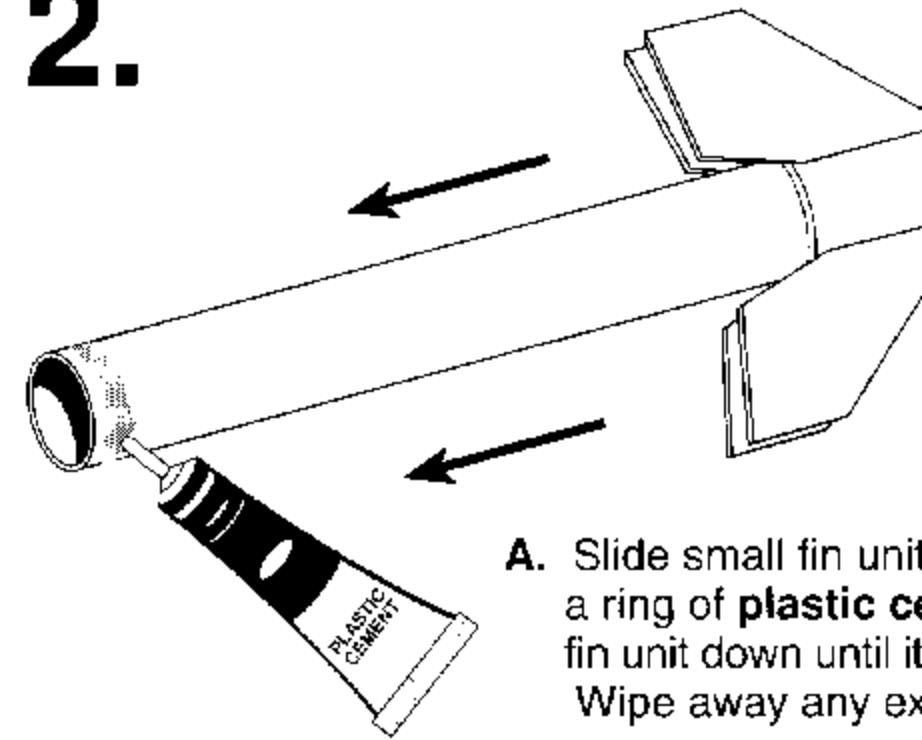
LARGE FIN  
UNIT #20 (1)  
33558

1.

### ENGINE MOUNT TEMPLATE

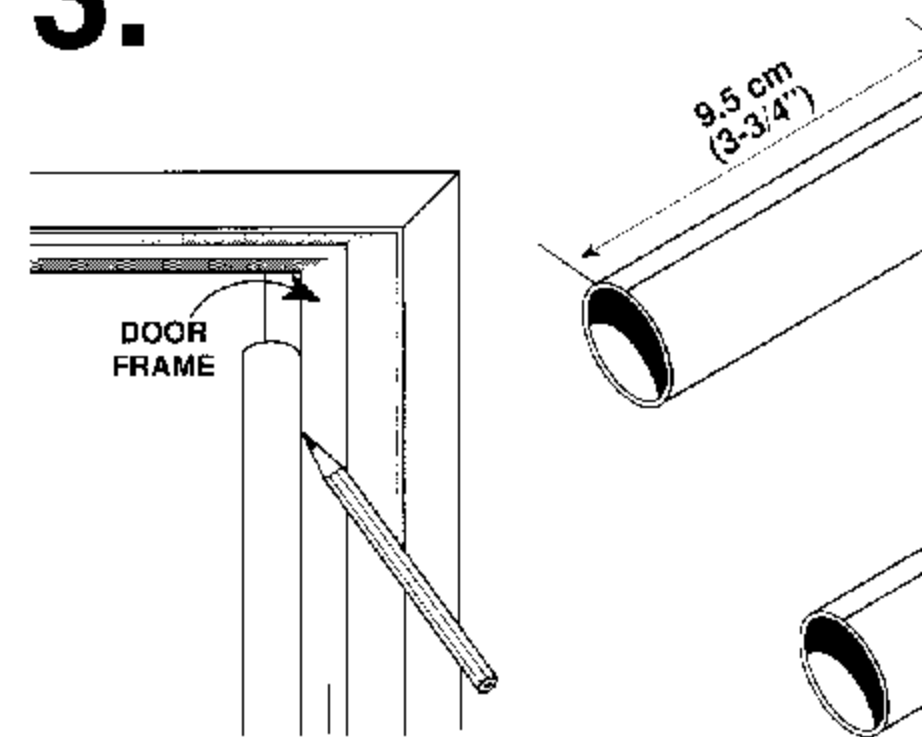


2.



A. Slide small fin unit  
a ring of plastic ce  
fin unit down until it  
Wipe away any ex

3.

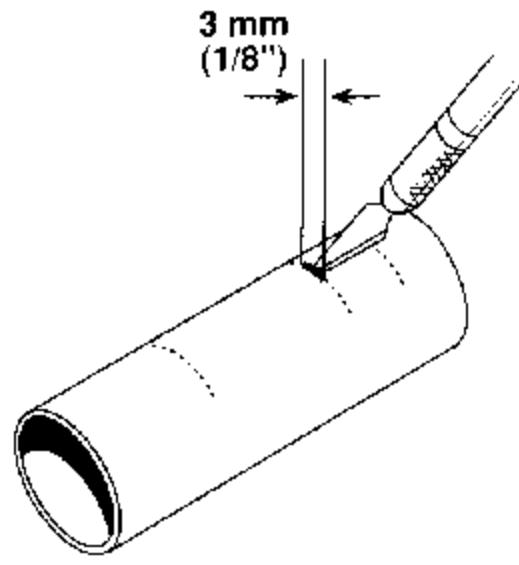


A. Lightly draw a straight line  
down the short body tube.  
A door frame can be used for  
this, but we recommend the  
Estes Rocket Builder's  
Marking Guide (EST 302227).

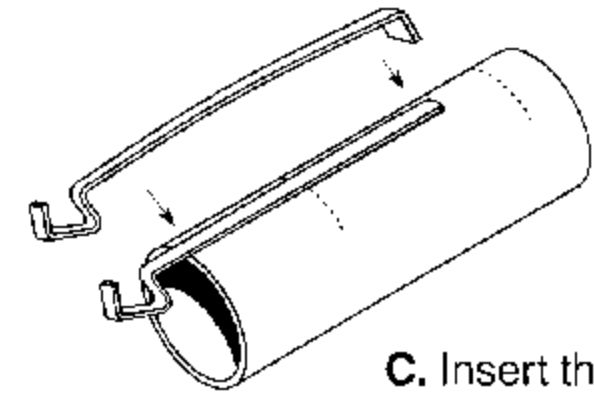
B. Mark the  
(3-3/4")  
straight  
make a  
slit in t

E

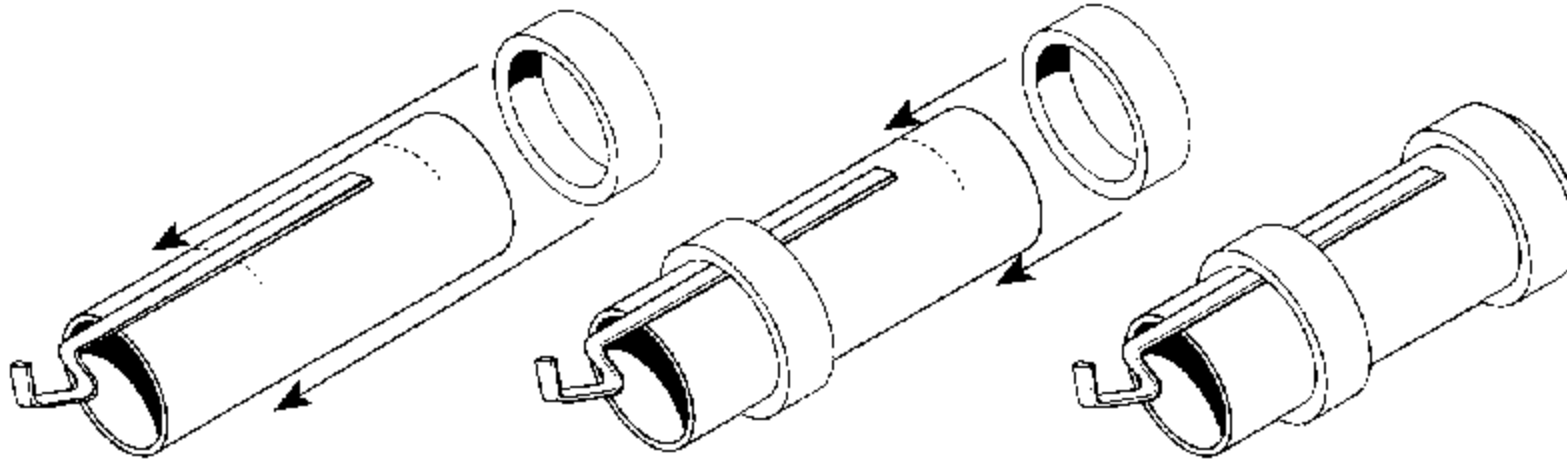
A. Lay the engine mount tube on template. Mark as shown.



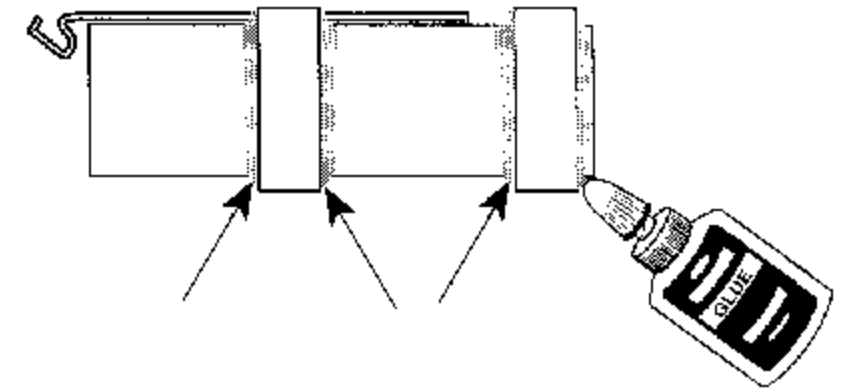
B. Cut a 3 mm (1/8") wide slit with your hobby knife at the front of the tube at the 38 mm (1-1/2") mark only as shown.



C. Insert the engine hook into the slit as shown.

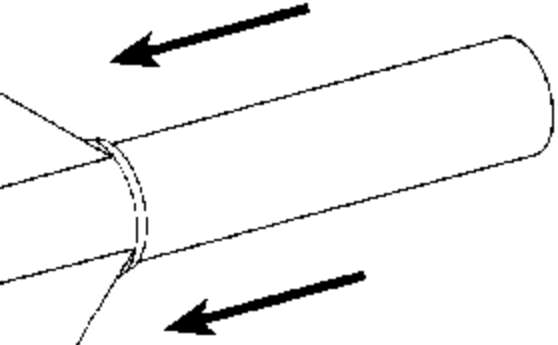


D. Slide adapter rings down to marks on the engine mount tube.



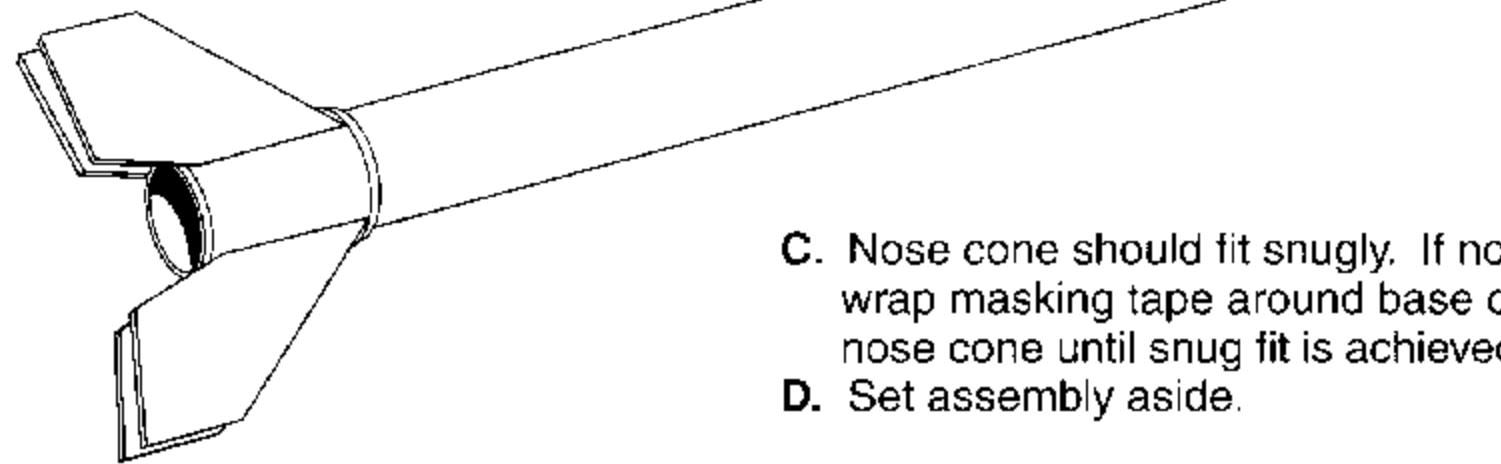
E. Apply a ring of glue to the back and front of the rear and forward adapter rings.

F. While glue is still wet, check the position of the rings against the template and adjust as necessary. Let assembly dry.

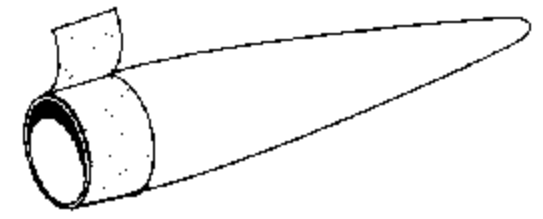


unit halfway down long body tube. Place plastic cement around rear of tube and slide until it is even with the bottom (rear) of tube. Wipe excess plastic cement.

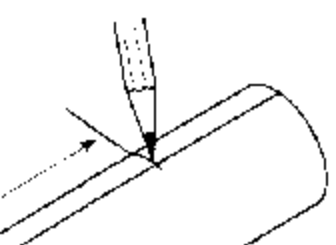
B. Slide nose cone into other end of body tube.



C. Nose cone should fit snugly. If not, wrap masking tape around base of nose cone until snug fit is achieved.  
D. Set assembly aside.

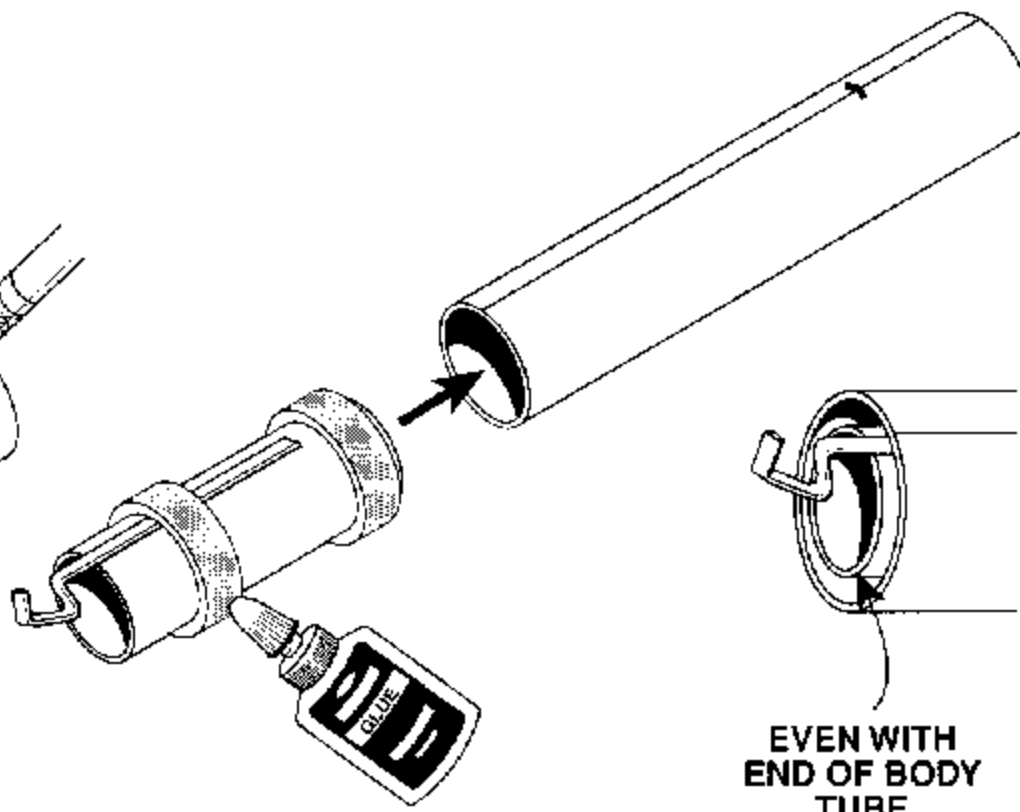


IF FIT IS NOT SNUG, APPLY A STRIP OF MASKING TAPE



3 mm (1/8")

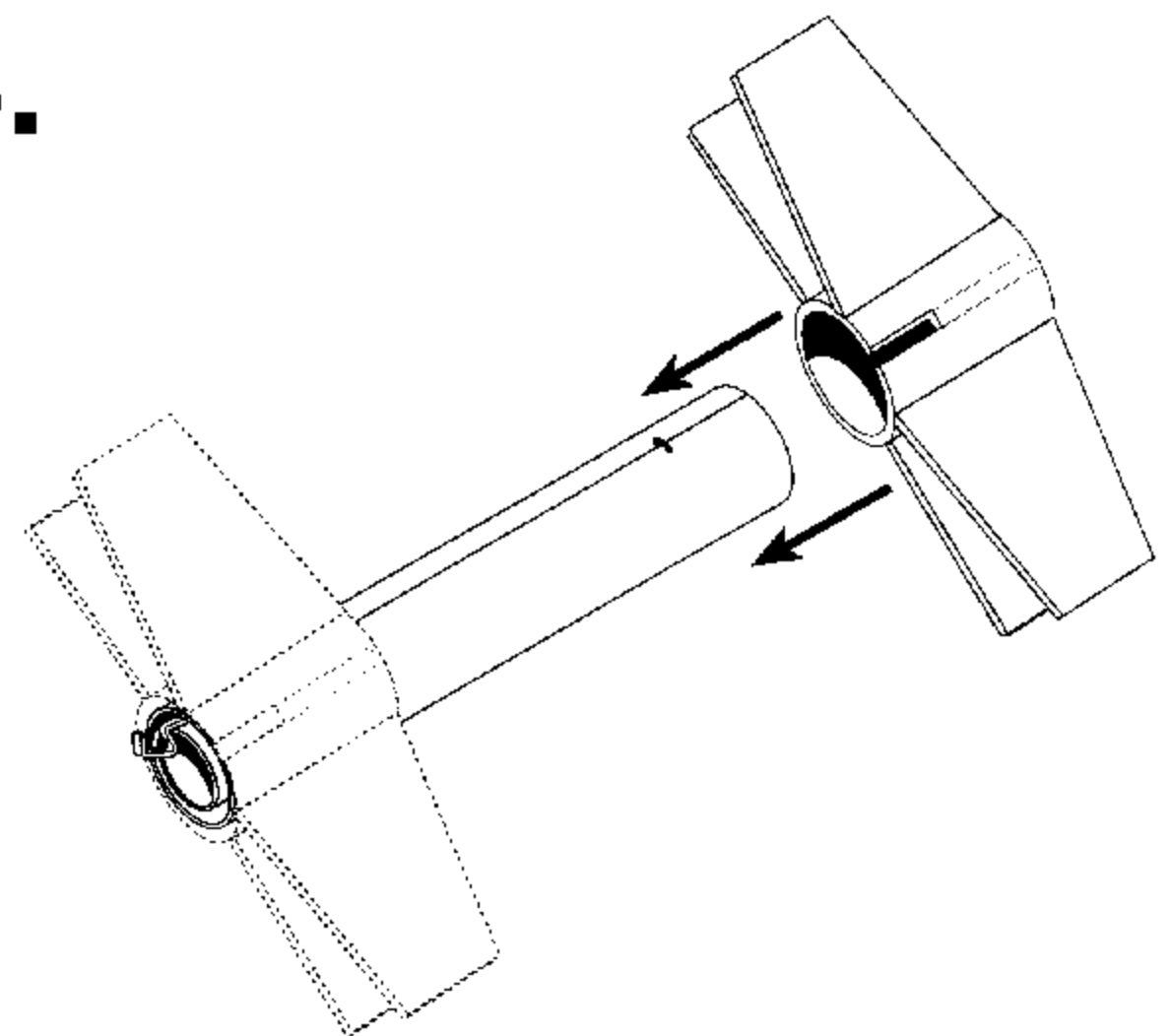
mark the tube at 9.5 cm (3/4") from one end on the straight line you drew and make a 3 mm (1/8") wide slit in tube at that mark.



EVEN WITH END OF BODY TUBE

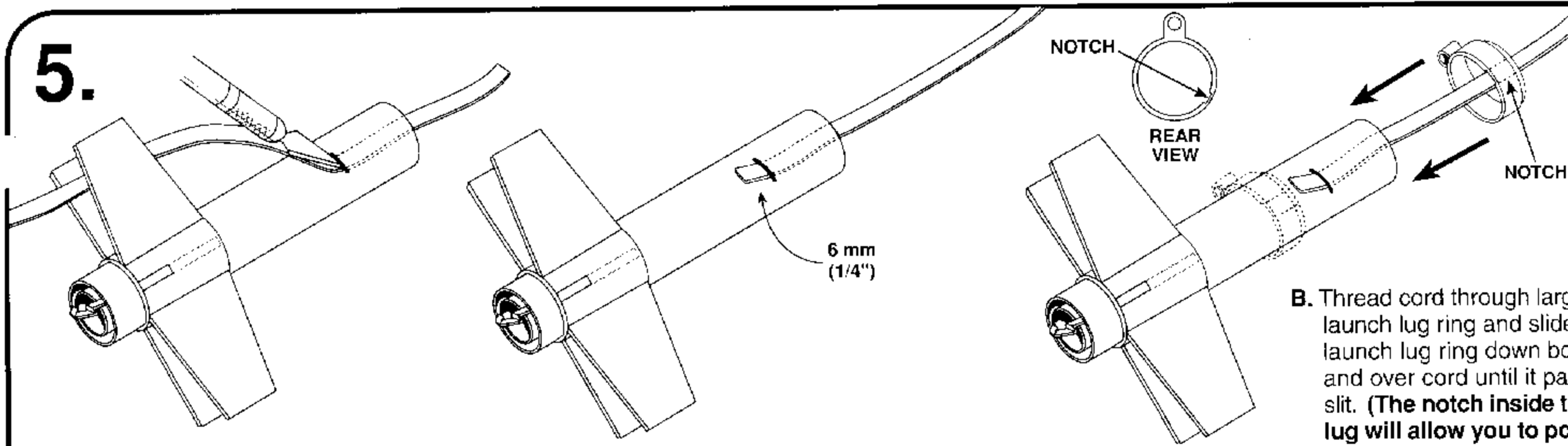
C. When your engine mount assembly is dry, apply a layer of glue around both adapter rings.  
D. Align engine hook with straight line on tube and insert until engine mount is flush with rear of body tube.  
E. Set assembly aside to dry.

4.



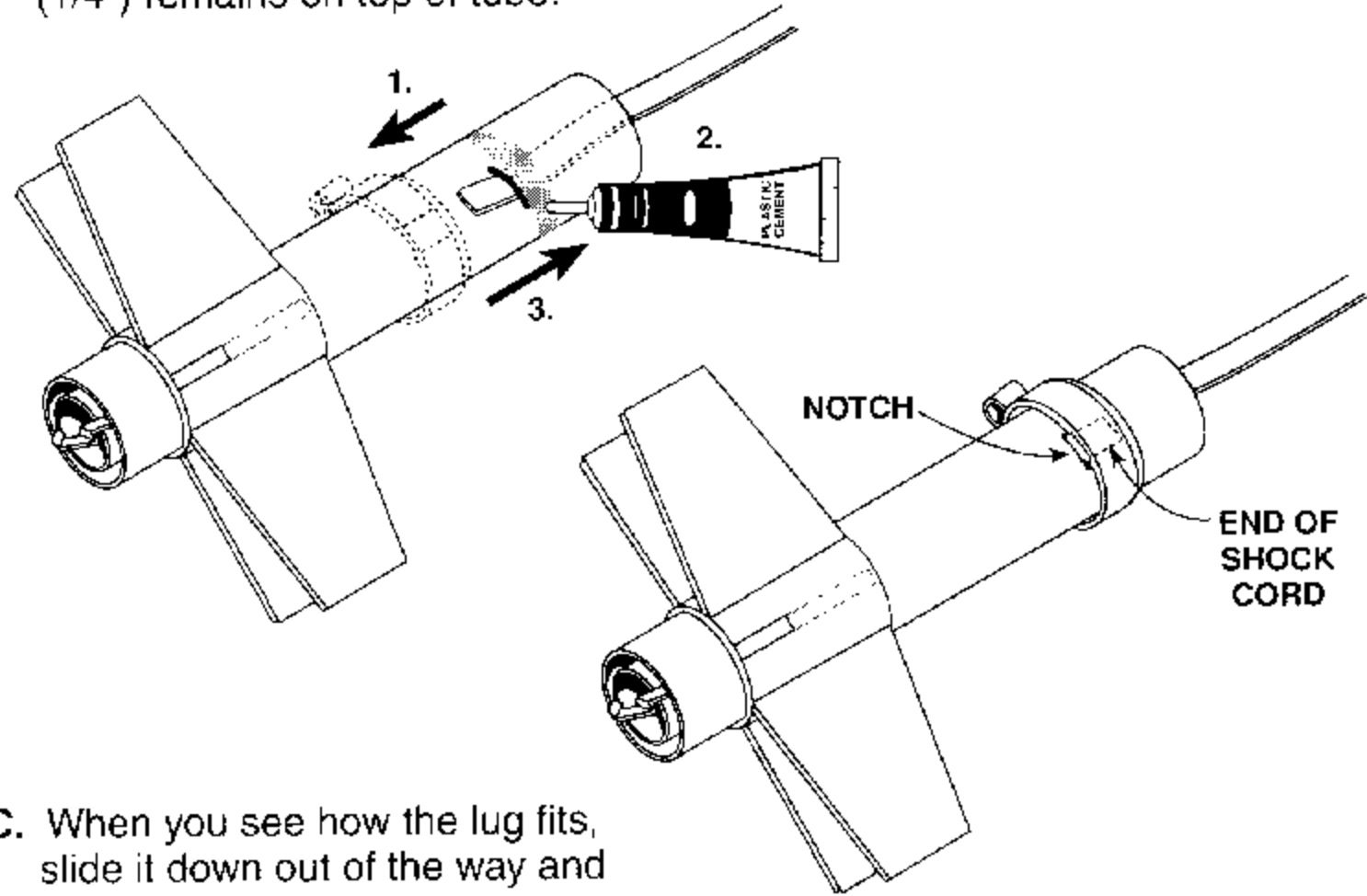
A. When the body tube/engine mount assembly is dry, test fit the large fin unit by sliding it down the tube until it is flush with the rear of the body tube/engine mount assembly. **DO NOT CEMENT YET!**

# 5.



A. Use a hobby knife to carefully push the shock cord into the slit on body tube. Feed cord forward until only 6 mm (1/4") remains on top of tube.

B. Thread cord through large launch lug ring and slide launch lug ring down body tube and over cord until it passes through the slit. (The notch inside the launch lug will allow you to pull the launch lug over the end of the shock cord on top of the tube.)

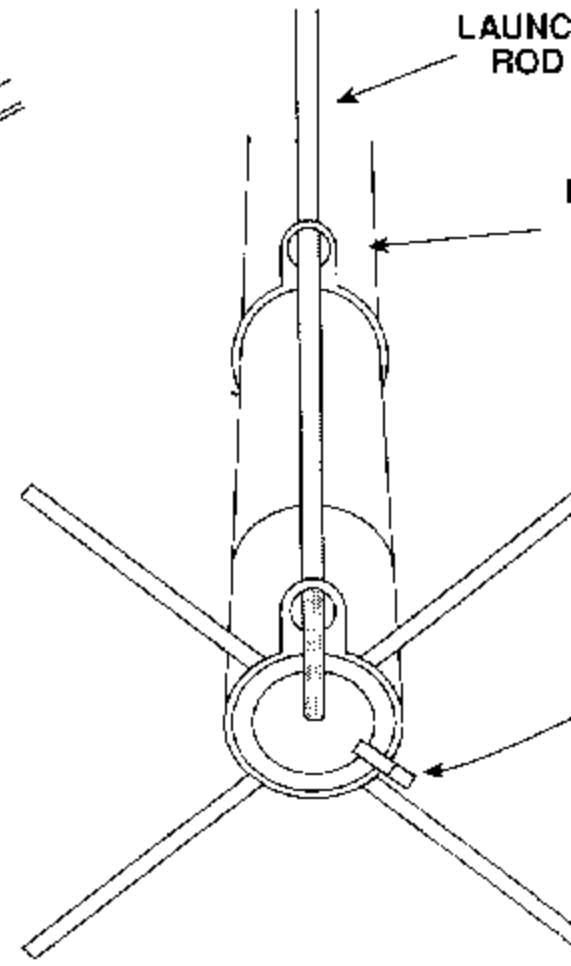


C. When you see how the lug fits, slide it down out of the way and place a ring of plastic cement around tube above cord slit site. Slide lug back into position.

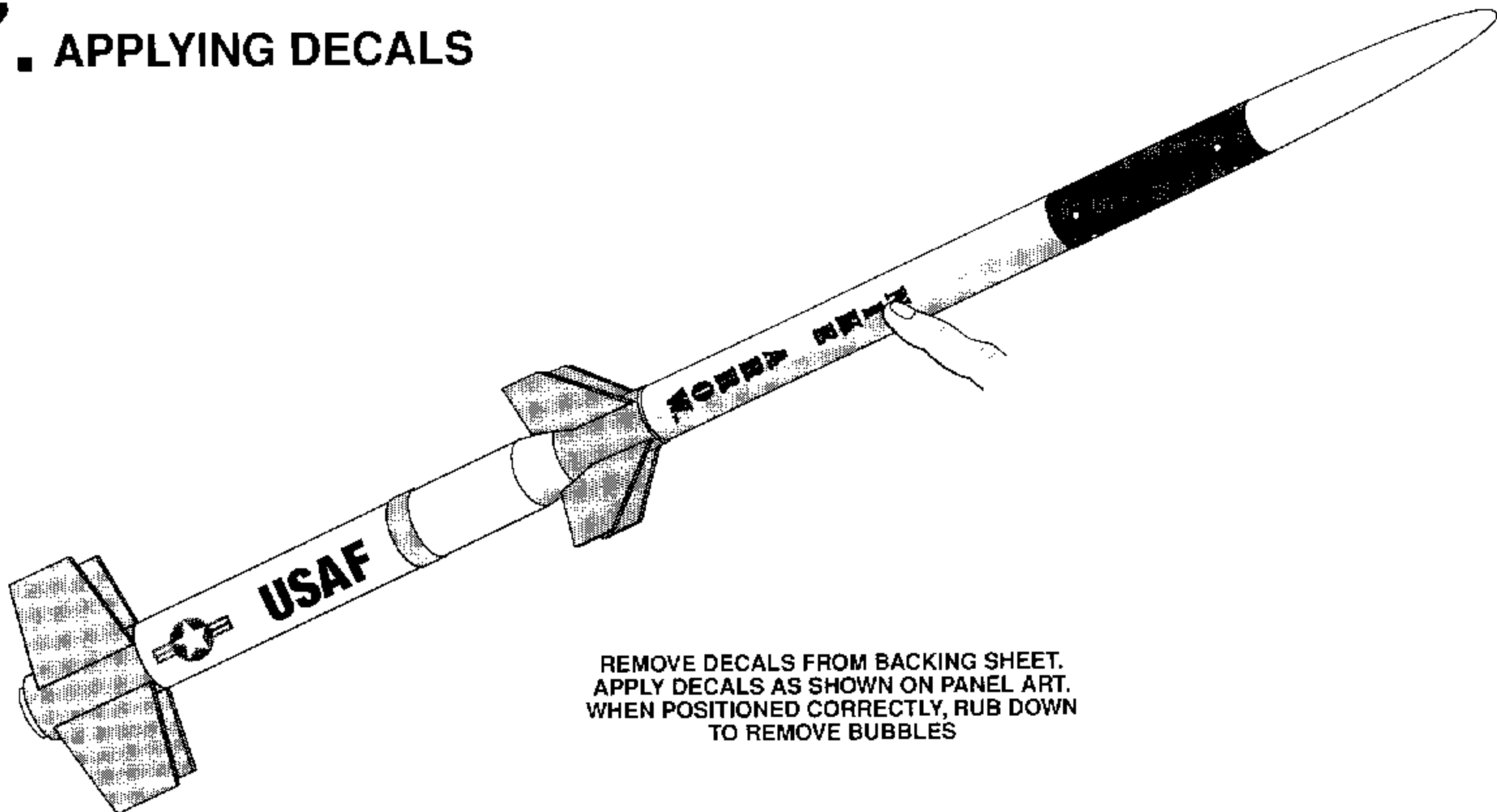
D. Now push the fin unit up out of the way and apply a 1/2" wide band of plastic cement around rear of tube.

E. Slide fin unit back down. Before cement dries, use a launch rod to align the lug on the fin unit with the forward launch lug, so that your launch rod will travel easily through the two.

F. Wipe away any excess cement.  
G. Gently erase pencil line on body tube and let assembly dry.



## 7. APPLYING DECALS



REMOVE DECALS FROM BACKING SHEET. APPLY DECALS AS SHOWN ON PANEL ART. WHEN POSITIONED CORRECTLY, RUB DOWN TO REMOVE BUBBLES

## 8. FLYING ROCKETS

Remove forward shock cord and...

### LAUNCH S...

To launch your rocket, follow the following:

- Launch Pad (Estes)
- Launch Control (Estes)
- Recommended Rocket (Estes A3-4T and A10)
- for your first flight, use your rocket's flight recovery wad.
- Recovery Wad (Estes)
- Igniters and Igniter (Estes engines)

Use only Estes products.

NOTCH

in large circle in  
slide notch on  
own body tube  
it passes the  
side the launch  
to position the  
of the shock  
e tube.)

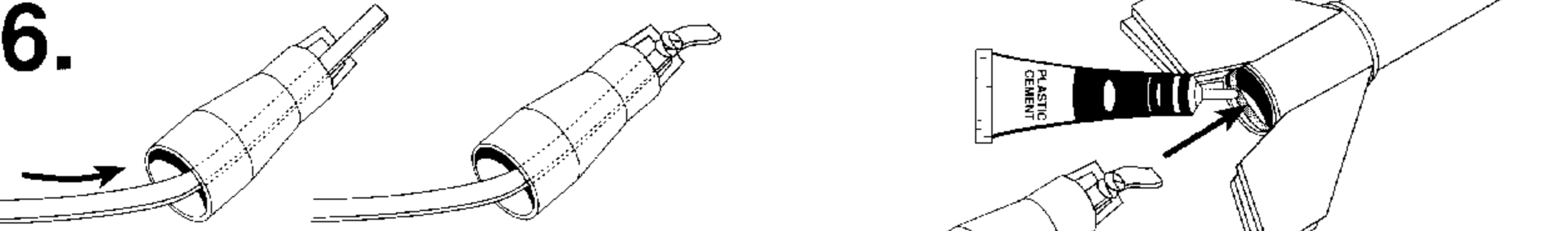
LAUNCH  
ROD

FORWARD  
LAUNCH  
LUG

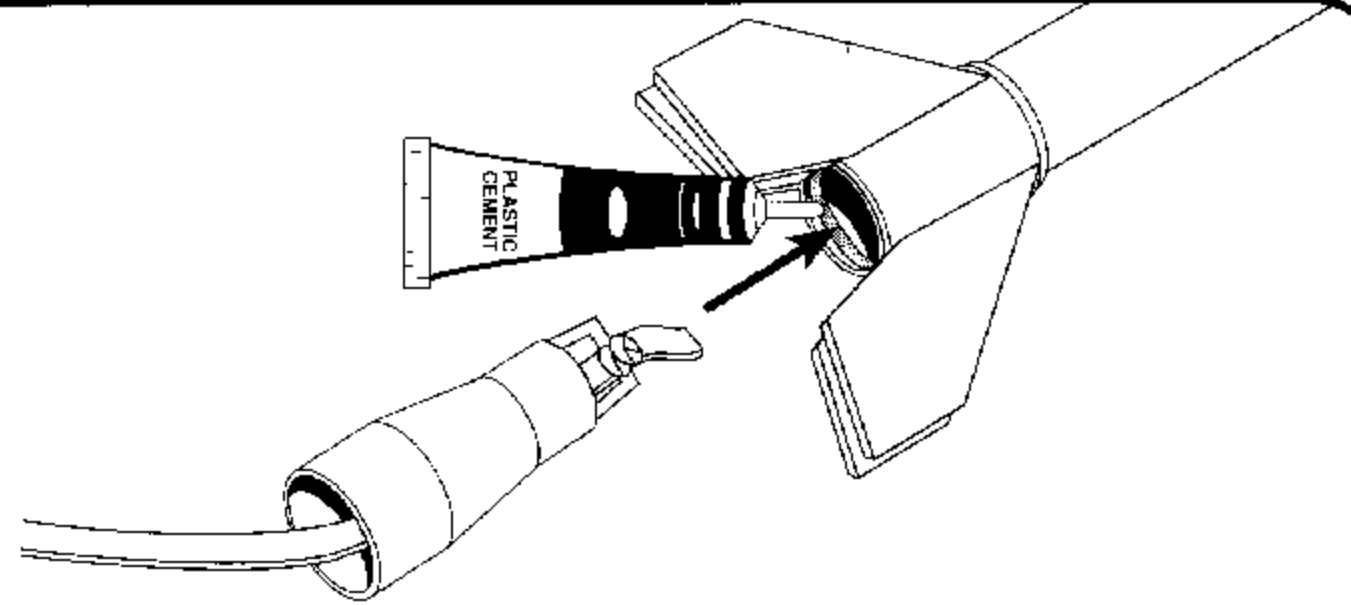
ENGINE  
HOOK

ry.

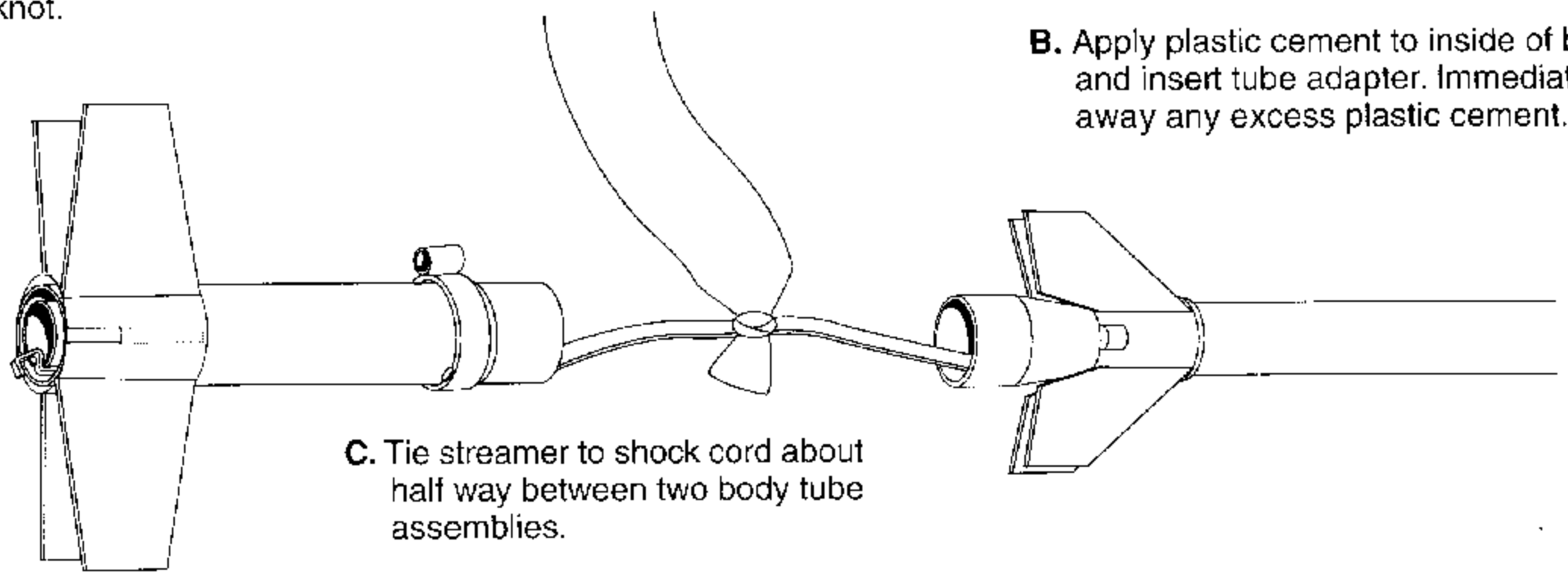
# 6.



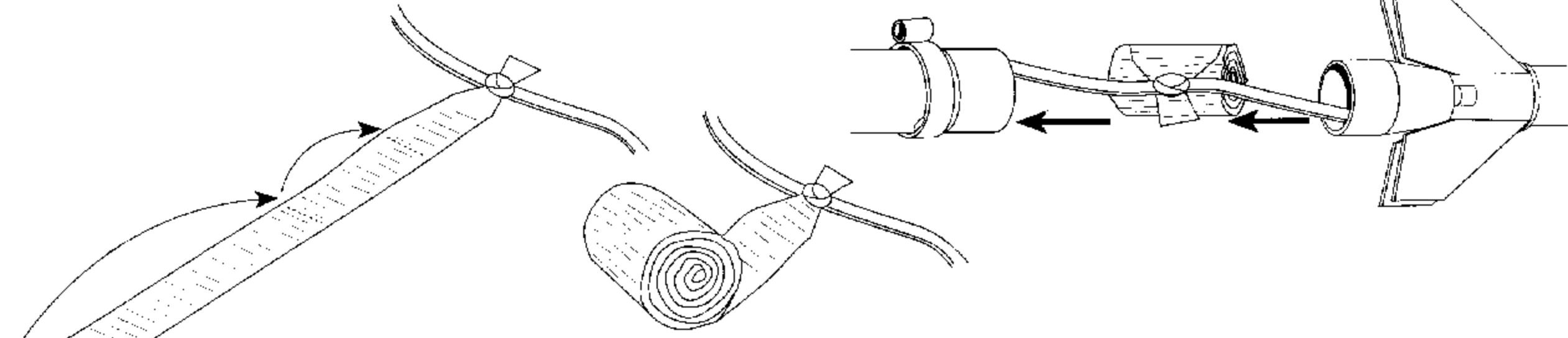
**A.** Feed free end of the shock cord through the tube adapter from the bottom up. Tie shock cord to eyelet at top of tube adapter assembly with a double knot.



**B.** Apply plastic cement to inside of body tube and insert tube adapter. Immediately wipe away any excess plastic cement.

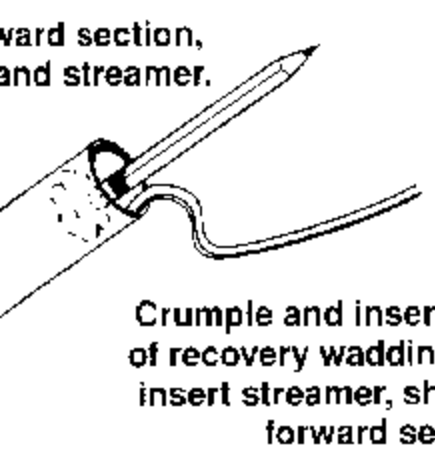


**C.** Tie streamer to shock cord about half way between two body tube assemblies.



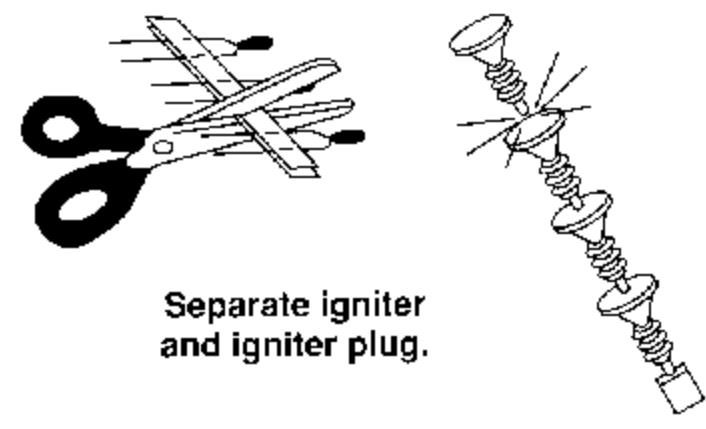
**D.** Fold and roll streamer. Insert streamer, shock cord and upper body tube assembly (forward section) into rear body tube. Recovery device should slide easily into body tube. If fit is too tight, unfold and re-pack.

## FLYING YOUR ROCKET ROCKET PREPARATION

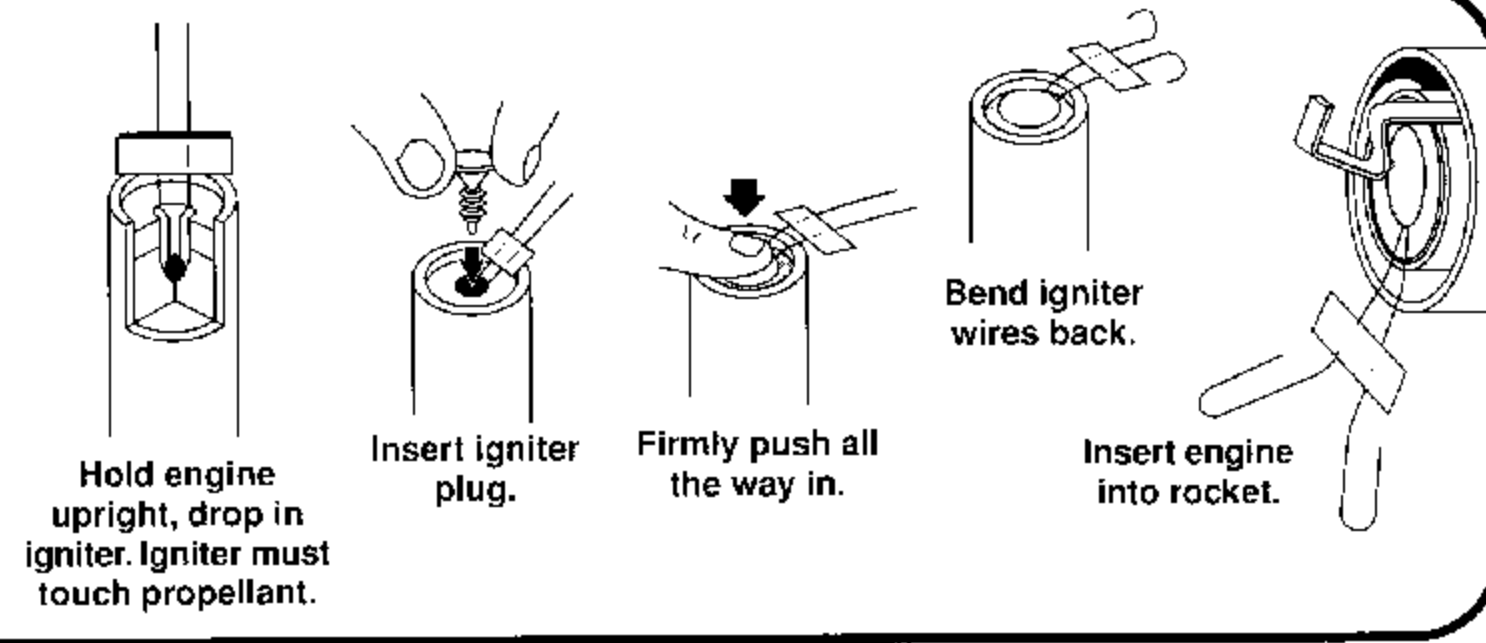


Crumple and insert two squares of recovery wadding. Repack and insert streamer, shock cord and forward section.

## 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 rocket.

## NEED SUPPLIES

For your rocket, you will need the  
 (Estes Porta-Pad® II)  
 Controller (Estes Electron Beam®)  
 and Estes Engines: 1/2A3-2T,  
 A10-3T. Use a 1/2A3-2T engine  
 for your first flight to become familiar with  
 its flight pattern.  
 Recovery Wadding (EST 302274)  
 Igniter Plugs (included with Estes  
 products to launch this rocket.

ENGINE	PROJECTED ALTITUDE	
	Feet	Meters
1/2A3-2T .....	150	46
A3-4T .....	365	112
A10-3T .....	370	113

## 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 76 meters (250 feet) 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 streamer packed more than a minute or so before launch, during cold weather (colder than 4° Celsius [40° Fahrenheit]).
- 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.

Igniter Plugs - U.S. Patent Nr. 5,509,354