



ESTES INDUSTRIES
1295 H Street
Penrose, CO 81240

PYTHON™

FLYING MODEL ROCKET KIT INSTRUCTIONS

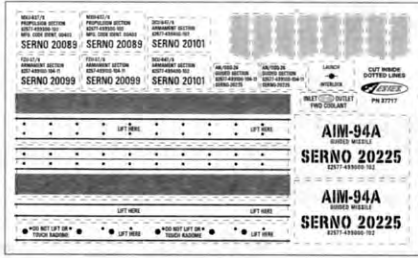
TOOLS REQUIRED:

SCISSORS, PENCIL, RULER, HOBBY KNIFE, RAZOR SAW, WHITE OR YELLOW GLUE, TUBE-TYPE PLASTIC CEMENT, MASKING TAPE, 320 GRIT SANDPAPER, AUTOMOTIVE SPRAY PRIMER, GLOSS WHITE SPRAY PAINT, RED AND SILVER BOTTLE PAINT (OPTIONAL), PAINT BRUSH (OPTIONAL)

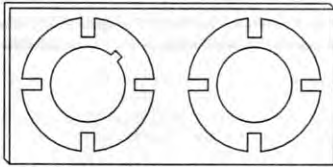
ALL GLUED AREAS ARE SHADED IN GRAY

(3-97) 82104 EST 2129
EXPLORER™
SERIES
SKILL LEVEL 2

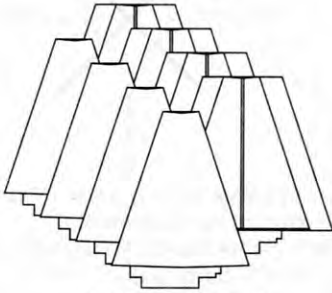
PARTS LAYOUT



DECAL (1)
37717



CENTERING RINGS #501835 (1)
32432



PLASTIC FIN SET (1)
37995

RETAINER RING
#5060 - GREEN (1)
30166-2

ENGINE MOUNT
TUBE #50H (1)
30360-1

ADAPTER RING #2050 (1)
30164-2

ENGINE SPACER TUBE #6 (1)
35004

NOSE CONE
WITH COUPLER
#1835 (1)
72660

PAYLOAD TUBE (1)
31762

SLOTTED BODY
TUBE #1835 (1)
31181

TAPE RINGS (1)
38407

SHOCK CORD #1/4 x 24 (1)
38383

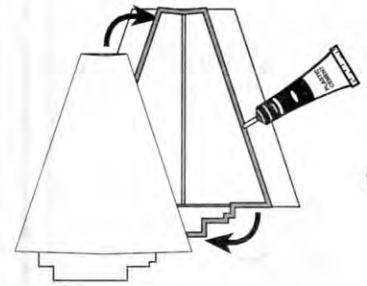
LAUNCH LUG
#12 (1)
38166

ENGINE HOOK #2A (1)
35021

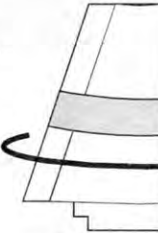
SHROUD LINES #108 (1)
38239

PARACHUTE #18 (1)
35821

1. FIN ASSEMBLY

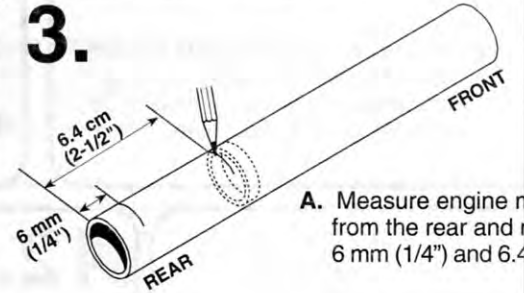


A. Using plastic cement, assemble halves to make four equal size fins.

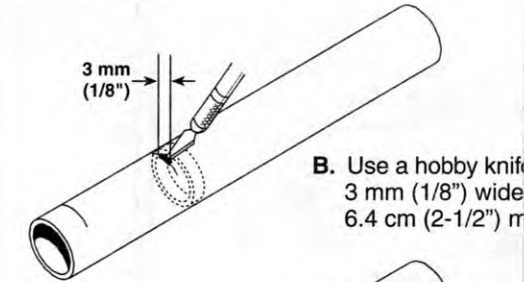


B. Tape fins together dry.
C. Once dry, remove tape.

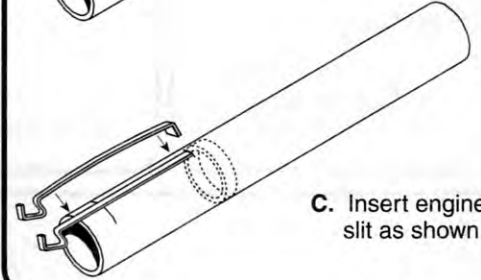
3.



A. Measure engine mount tube from the rear and front. Mark 6 mm (1/4") and 6.4 cm (2-1/2").

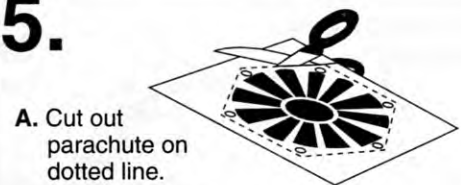


B. Use a hobby knife to cut a 3 mm (1/8") wide slit in the engine mount tube. The slit should be 6.4 cm (2-1/2") long.



C. Insert engine hook into the slit as shown.

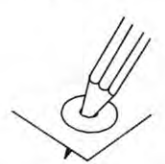
5.



A. Cut out parachute on dotted line.



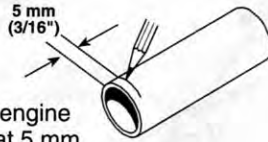
C. Press tape rings onto marks on corners.



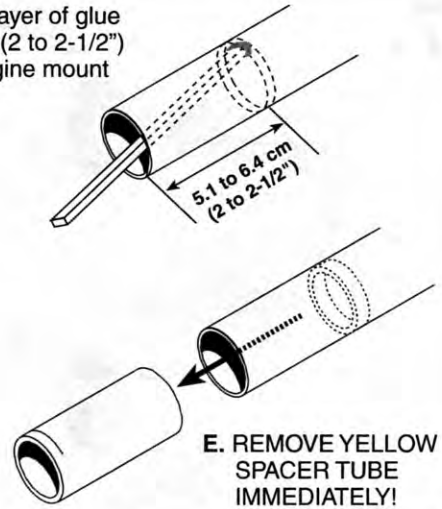
D. Punch holes with sharp pencil.

2. ENGINE MOUNT ASSEMBLY

A. Mark yellow engine spacer tube at 5 mm (3/16") from one end.

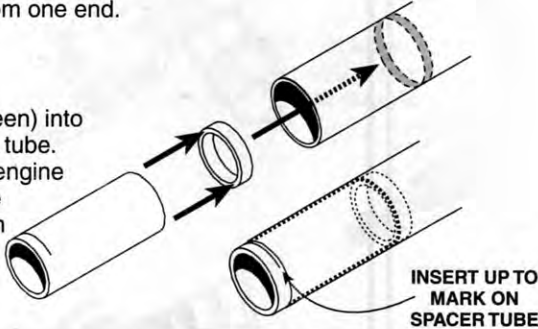


B. Place a thin layer of glue 5.1 to 6.4 cm (2 to 2-1/2") inside the engine mount tube (blue).



C. Insert the adapter ring (green) into same end of engine mount tube.

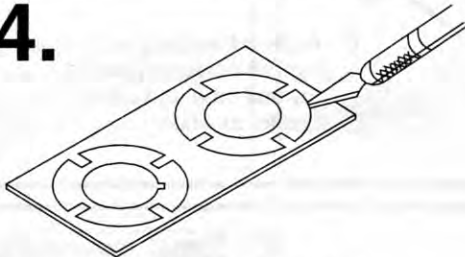
D. Push the adapter ring into engine mount tube with the engine spacer tube up to the 5 mm (3/16") mark on the engine spacer tube as shown.



INSERT UP TO MARK ON SPACER TUBE

E. REMOVE YELLOW SPACER TUBE IMMEDIATELY!

4.



A. Carefully remove the centering rings from their card. Use a hobby knife to finish the cuts.

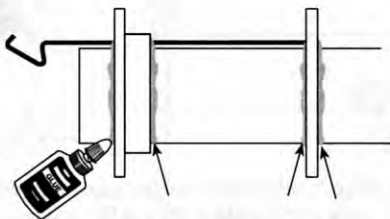
NOTE: YOU MAY NEED TO SAND THE RINGS FOR A GOOD FIT.

B. Slide centering ring with engine hook notch over rear of tube and onto 6 mm (1/4") mark.



C. Slide green adapter ring down tube and over engine hook until it backs the centering ring.

D. Slide other centering ring over front of tube and onto the 6.4 cm (2-1/2") mark.



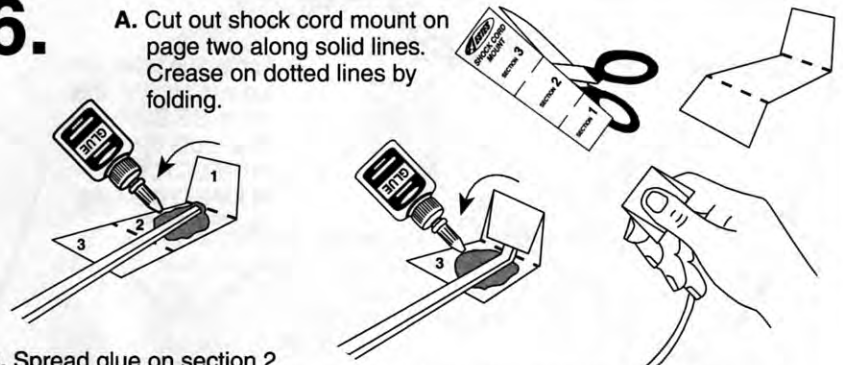
E. Apply a ring of glue to both sides of ring/tube joints.

F. Before glue dries, align notches in rings by temporarily inserting a fin tab between notches and turning rings until notches are aligned.

G. Remove fin and set assembly aside to dry completely, then test fit the assembly into the body tube.

6.

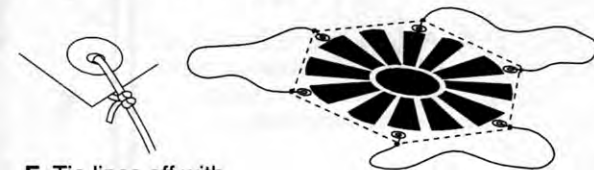
A. Cut out shock cord mount on page two along solid lines. Crease on dotted lines by folding.



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.

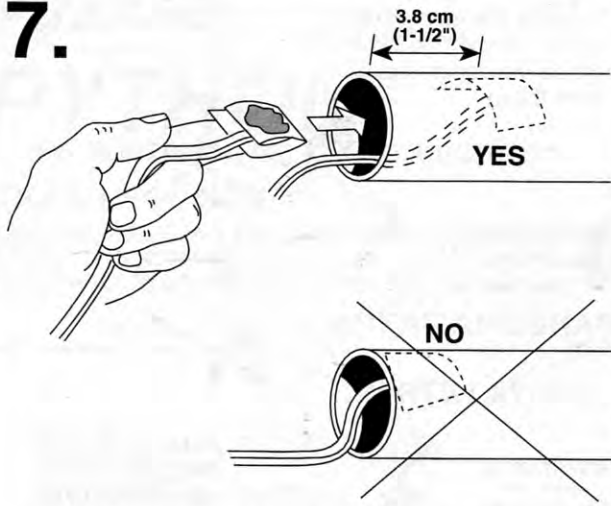
B. Find shroud line material. Remove tape. Using all of the shroud line, fold and cut into three equal lengths.



E. Tie lines off with double knots.

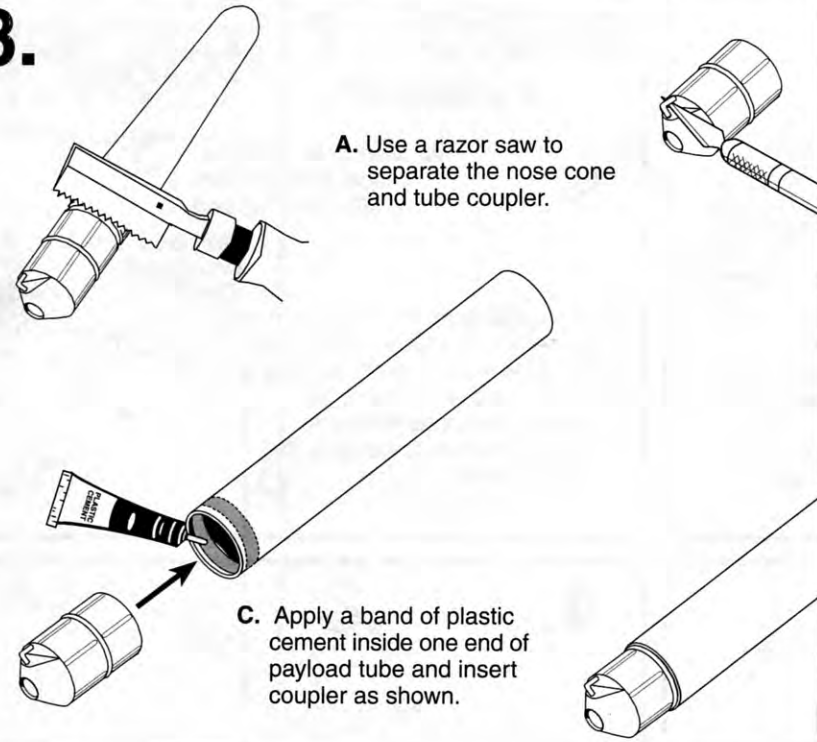
COMPLETED PARACHUTE

7.



- A. Apply glue to back side of shock cord mount.
- B. Push the shock cord mount against the **front end** (no slots) inside of the **body tube** about 3.8 cm (1-1/2") down. (This will ensure there is room for nose cone insertion.)
- C. Be sure mount is securely glued to inside of body tube and let dry.

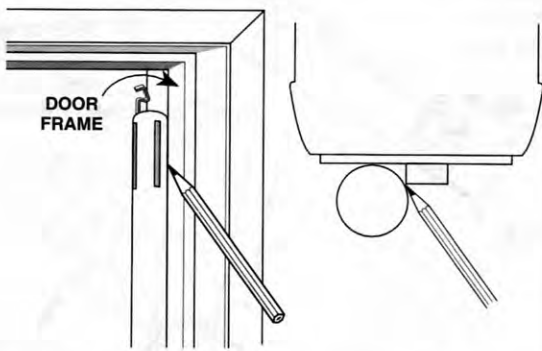
8.



A. Use a razor saw to separate the nose cone and tube coupler.

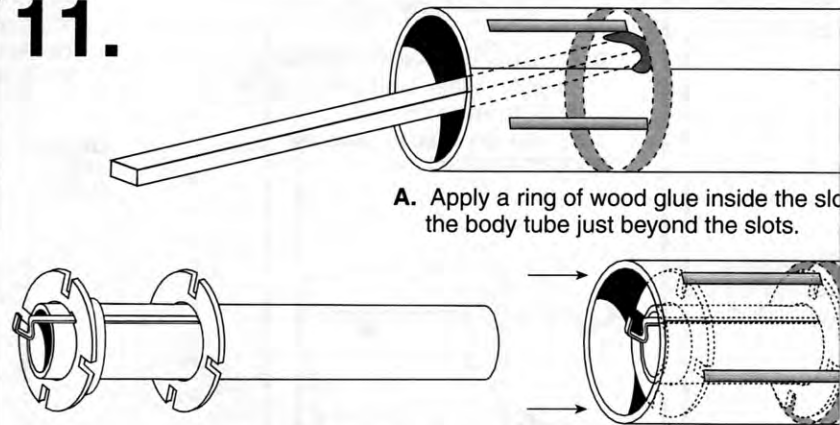
C. Apply a band of plastic cement inside one end of payload tube and insert coupler as shown.

10.



- A. Pencil a line the length of the slotted body tube centered between any two fin slots. A door frame can be used for this, but we recommend the Estes® Rocket Builder's Tube Marking Guide (EST 302227).

11.

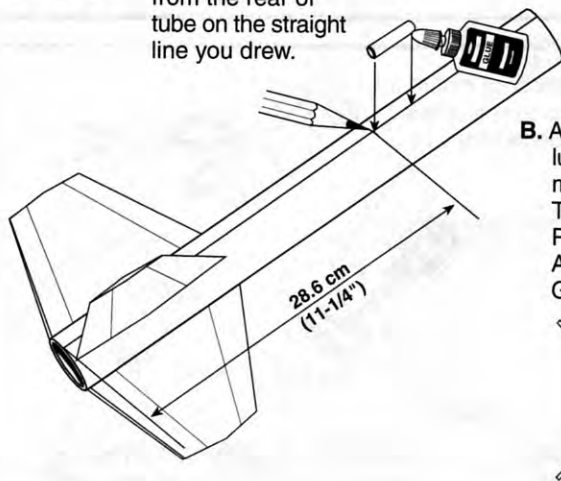


A. Apply a ring of wood glue inside the slotted end of the body tube just beyond the slots.

B. Insert the engine mount assembly into the slotted end of the tube and rotate until the fin notches line up with slots.

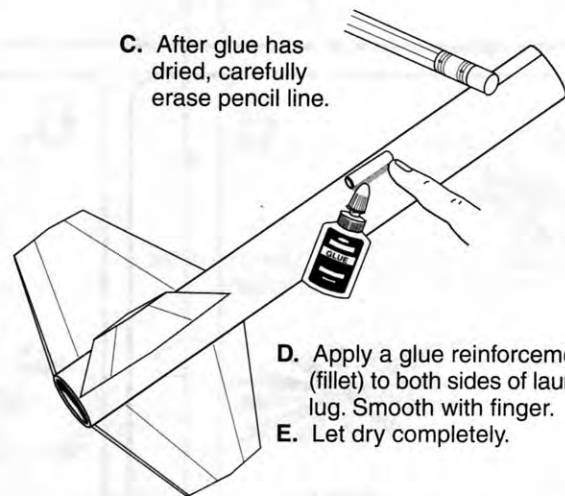
13.

- A. Mark the tube at 28.6 cm (11-1/4") from the rear of tube on the straight line you drew.



- B. Apply glue to launch lug and apply at this mark. **BE SURE THE LUG IS PERFECTLY ALIGNED BEFORE GLUE SETS.**

- C. After glue has dried, carefully erase pencil line.



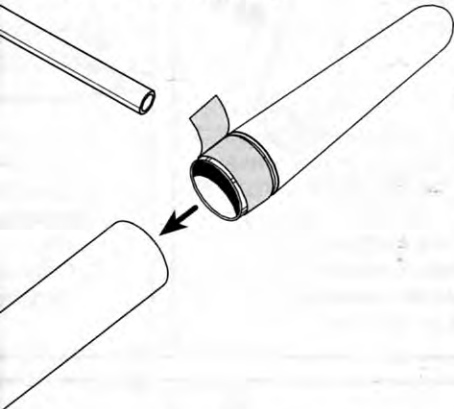
- D. Apply a glue reinforcement (fillet) to both sides of launch lug. Smooth with finger.
- E. Let dry completely.

14.

- A. Apply a primer. Smooth.
- B. Apply a primer to entire surface.



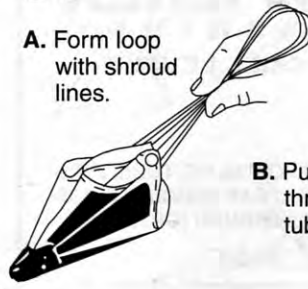
B. Clean any excess plastic out of the eye of the coupler. (Be sure to not cut it off.)



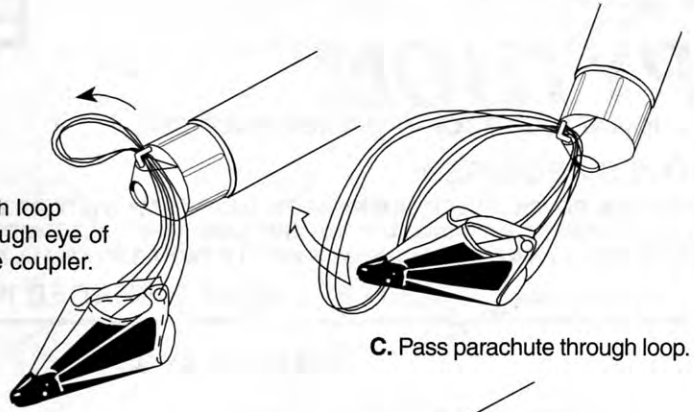
D. Insert nose cone into front of payload tube. If fit is loose, apply masking tape around shoulder of nose cone until fit is snug. Do not glue.

9.

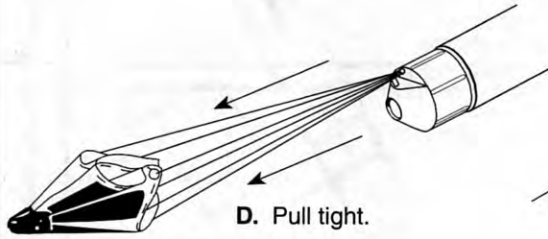
A. Form loop with shroud lines.



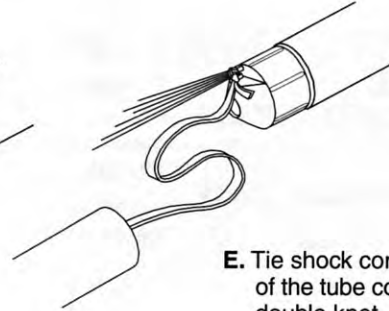
B. Push loop through eye of tube coupler.



C. Pass parachute through loop.



D. Pull tight.

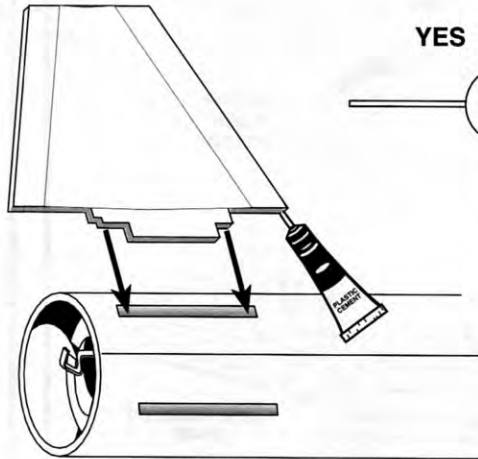


E. Tie shock cord to the eye of the tube coupler with a double knot.

tted end of

body

12.



YES

NO

A. Test fit fins into slots in body tube. (You may need to sand the slots for fit.)

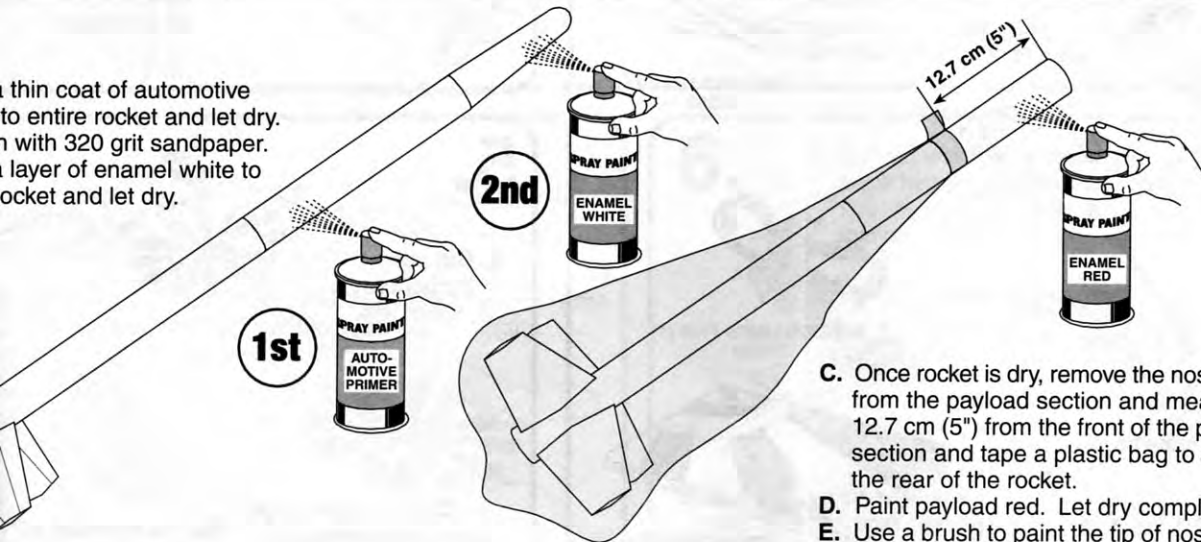
B. Apply plastic cement to the fin tabs and insert into slots in body tube.

NOTE: Be sure the fins are correctly aligned. (See diagram.)

thin coat of automotive to entire rocket and let dry. with 320 grit sandpaper. layer of enamel white to rocket and let dry.

1st

2nd



C. Once rocket is dry, remove the nose cone from the payload section and measure 12.7 cm (5") from the front of the payload section and tape a plastic bag to cover the rear of the rocket.

D. Paint payload red. Let dry completely.

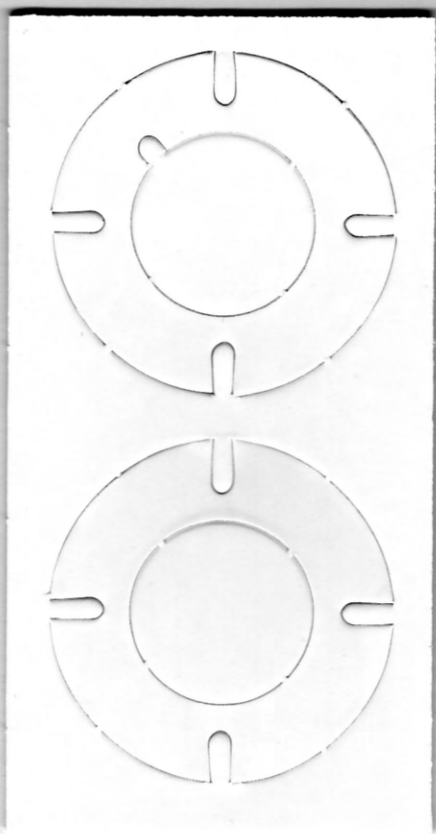
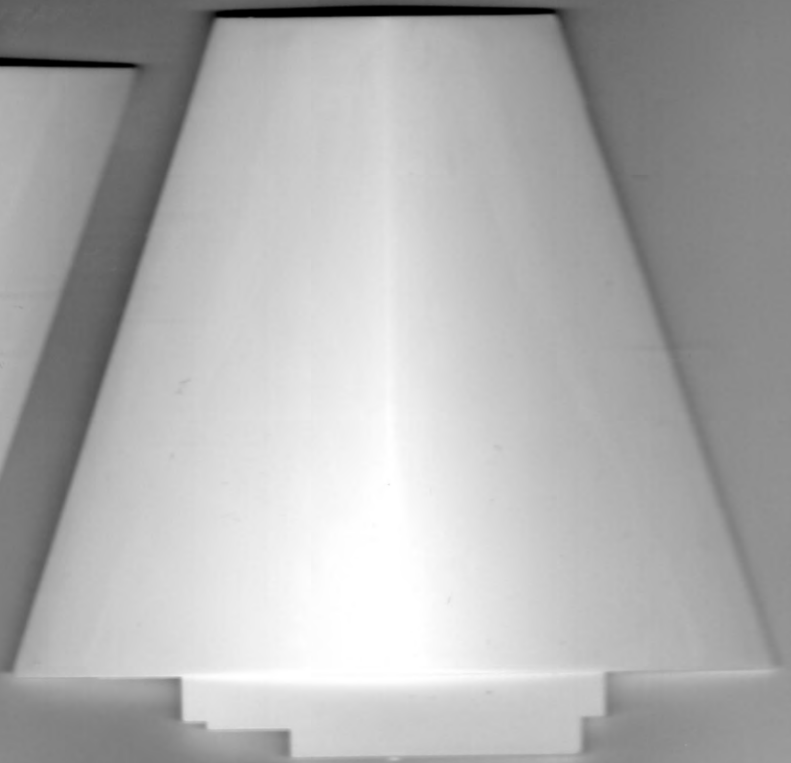
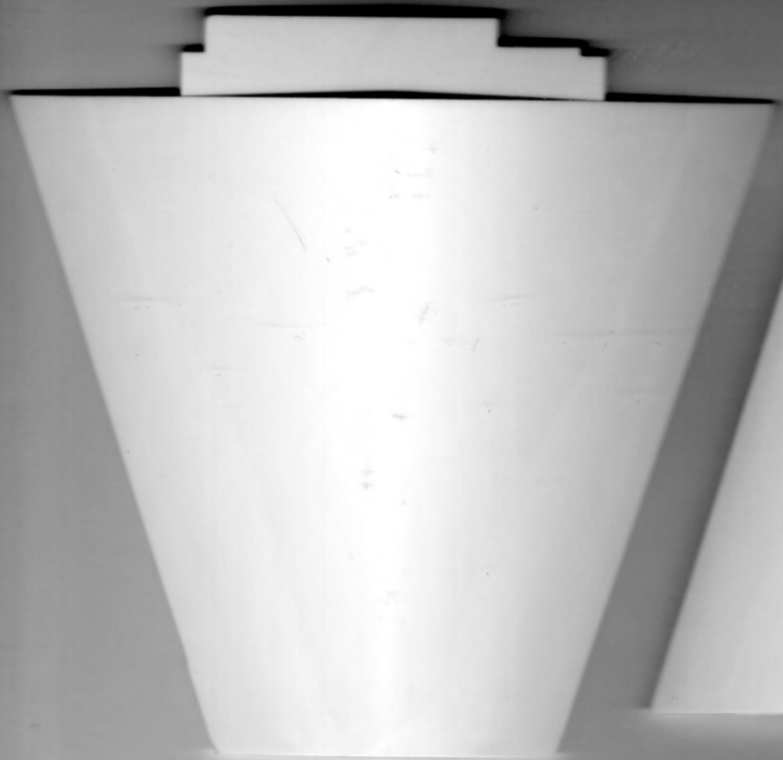
E. Use a brush to paint the tip of nose cone with a red stripe and silver tip.

ESTES
SHOCK CORD MOUNT

SECTION 3

SECTION 2

SECTION 1



MXU-637/8
PROPULSION SECTION
82577-499300-100
MFG. CODE IDENT. 00403
SERNO 20089

MXU-637/8
PROPULSION SECTION
82577-499300-100
MFG. CODE IDENT. 00403
SERNO 20089

DCU-647/8
ARMAMENT SECTION
82577-499400-102
SERNO 20101

DCU-647/8
ARMAMENT SECTION
82577-499400-102
SERNO 20101

FZU-37/8
ARMAMENT SECTION
8257-499100-104-11
SERNO 20099

FZU-37/8
ARMAMENT SECTION
8257-499100-104-11
SERNO 20099

DCU-647/8
ARMAMENT SECTION
82577-499400-102
SERNO 20101

AN/DSQ-26
GUIDED SECTION
82577-499100-104-11
SERNO-20225

AN/DSQ-26
GUIDED SECTION
82577-499100-104-11
SERNO-20225

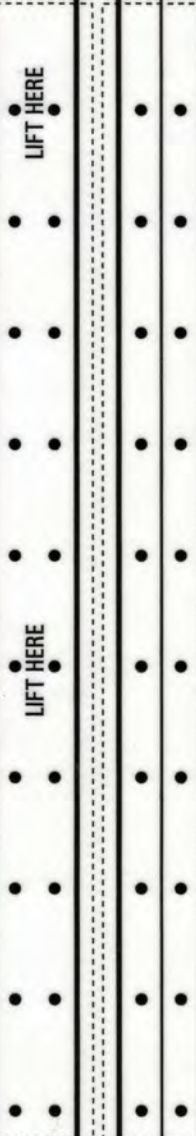
LAUNCH
●
INTERLOCK

CUT INSIDE
DOTTED LINES

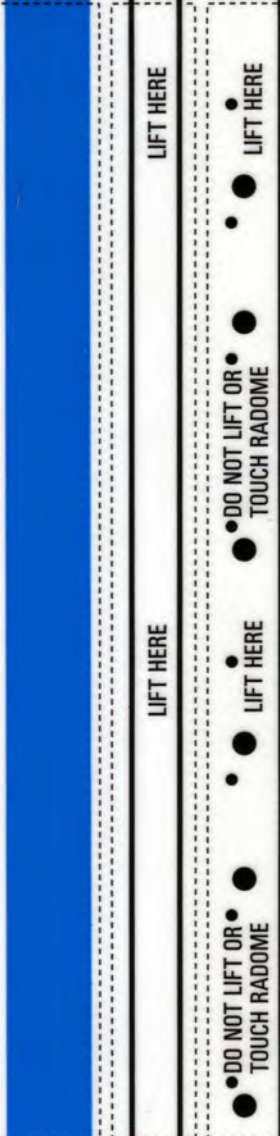


PN 37717

INLET ● OUTLET
FWD COOLANT



AIM-94A
GUIDED MISSILE
SERNO 20225
82577-499000-102



AIM-94A
GUIDED MISSILE
SERNO 20225
82577-499000-102