

FLYING MODEL

ROCKET™

SKILL LEVEL 1

BLU-97B

CLUSTER BOMB™



FREE Operation Enduring Freedom Sticker Included!

- **1:6.4 Scale Anti-Tank Bomb!**
- **Drops 4 Cluster Bombs in Flight!**
- **Parachute Recovery!**
- **Flies to 390 ft!**
(119 m)



Assembly required. Glue, finishing supplies and launch supplies - not included.

1 MODÈLE RÉDUIT. PEINTURE ET COLLE NON COMPRISES.

Made in China



Call 1-800-43-SPACE Reference ES902, or Visit www.spacecamp.com

P/N 60579 (01/03)

EST 2055



© 2003 Estes-Cox Corp. All rights reserved.

ESTES
www.estesrockets.com

Role: Anti-Tank Bomb
Length: 14 1/2 in. (36.8 cm)
Diameter: 2 3/8" (60.8 mm)
Weight: 2.1 oz. (59.9 g)
Height: 350 ft. (107 m)

Recovery: Parachute
Engines: 1A4, 1A5-2, C6-3

BLU-97B
CLUSTER BOMB™
FLYING MODEL ROCKET

CUT ALONG DOTTED LINE - KEEP FOR FUTURE REFERENCE.



www.estesrockets.com

Estes® Industries
1295 H Street
Penrose, CO 81240
PRINTED IN CHINA

CLUSTER BOMB™ BLU-97B

EST 2055/1246

FLYING MODEL ROCKET
KIT INSTRUCTIONS
Keep for Future Reference



SHOCK CORD
MOUNT

SECTION 3

SECTION 2

SECTION 1



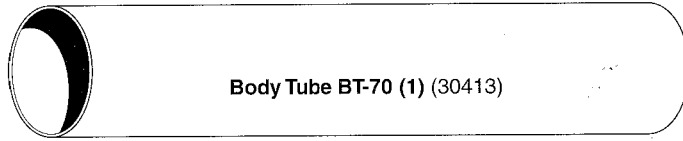
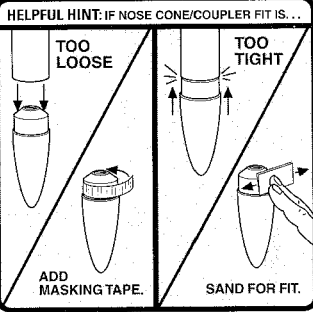
ASSEMBLY TIP

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

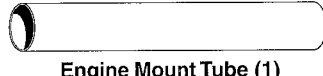
Locate the parts shown below and lay them out on the table. ○ NOT USE THE DRAWINGS TO ASSEMBLE YOUR ROCKET



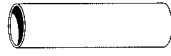
Body Tube BT-70 (1) (30413)



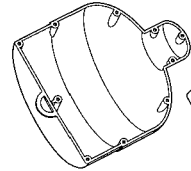
Launch Lugs (2) (38175)



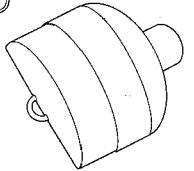
Engine Mount Tube (1) BT-20 (30329)



Yellow Spacer Tool (1) (35003)



Plastic Nose Cone Half A (1) (60558)



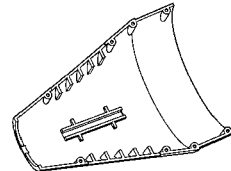
Plastic Nose Cone Half B (1) (60559)



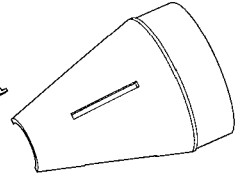
Mylar Retainer Ring (1) (30168)



Green Engine Block (1) (30162-2)



Plastic Tail Cone Half A (1) (60560)



Plastic Tail Cone Half B (1) (60561)



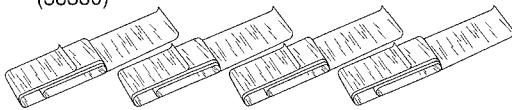
Shock Cord 1/4" x 18" (1) (38380)



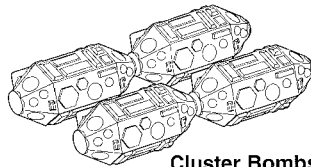
Clay Weights (2) (85705)



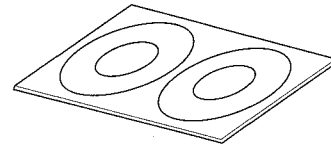
Engine Hook (1) (35021)



Orange Streamers (4) (60034)



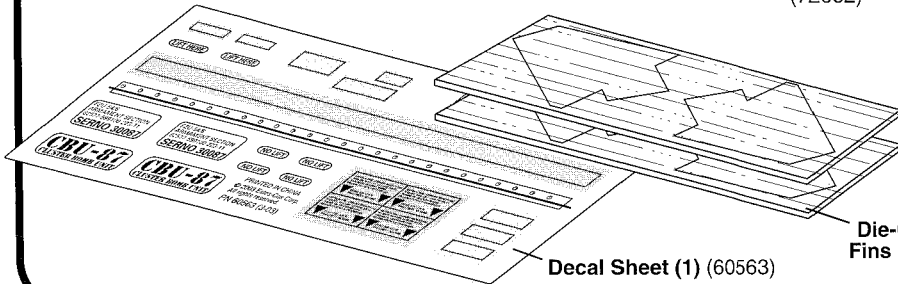
Cluster Bombs (4) (72662)



Centering Ring Card (1) (60562)

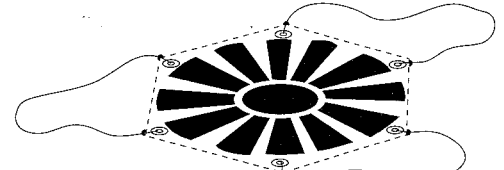


Enduring Freedom Sticker (1) (60586)



Decal Sheet (1) (60563)

Die-Cut Balsa Fins (2) (32217)



Assembled 12" (30 cm) Parachute (1) (35801)

SUPPLIES

In addition to the parts included in the kit you will also need:



SCISSORS



PENCIL



RULER



FINE SAND PAPER (#400-600 GRIT)



MASKING TAPE



CARPENTERS GLUE



PLASTIC CEMENT



MODELING KNIFE



PAINT PEN (SILVER)



SPRAY PRIMER (WHITE)

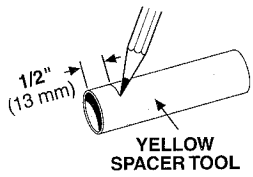


SPRAY PAINT: (OLIVE DRAB, LIGHT GRAY)

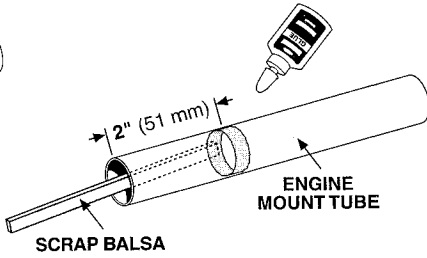


SPRAY DULL COAT (OPTIONAL)

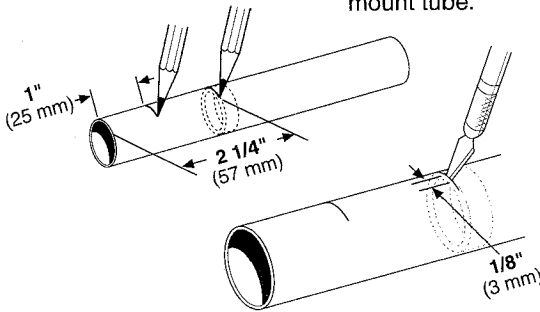
1. ASSEMBLING ENGINE MOUNT



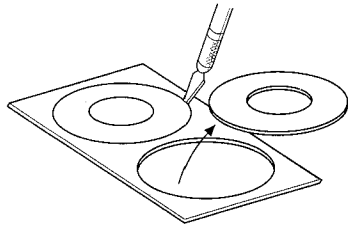
A. Mark yellow spacer tool.



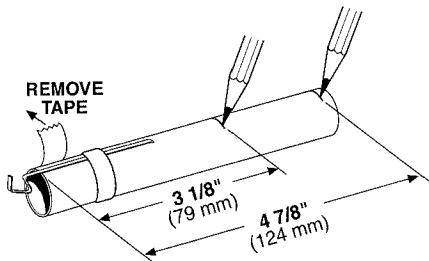
B. Use scrap balsa to smear glue 2" (51 mm) inside engine mount tube.



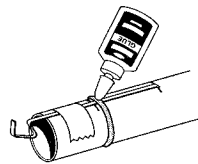
D. Mark engine mount tube at 1" (25 mm) and 2 1/4" (57 mm) from rear end. Cut 1/8" (3 mm) slit at the 2 1/4" mark.



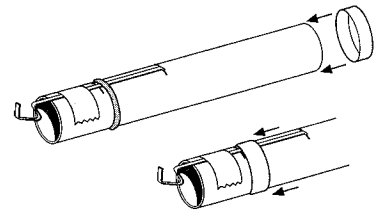
G. Carefully remove rings from card.



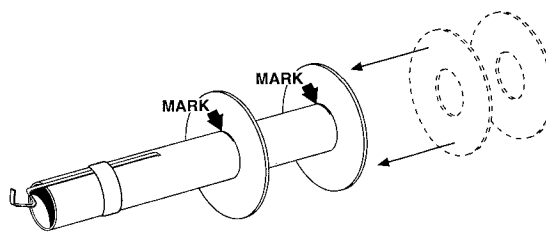
J. Place a pencil mark at 3 1/8" (79 mm) and 4 7/8" (124 mm) from rear of engine mount.



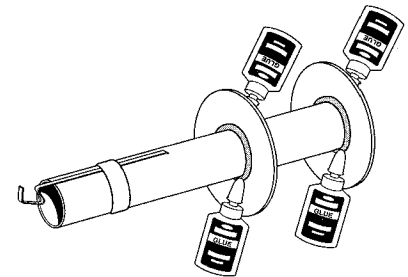
H. Apply glue above the 1" (25 mm) line.



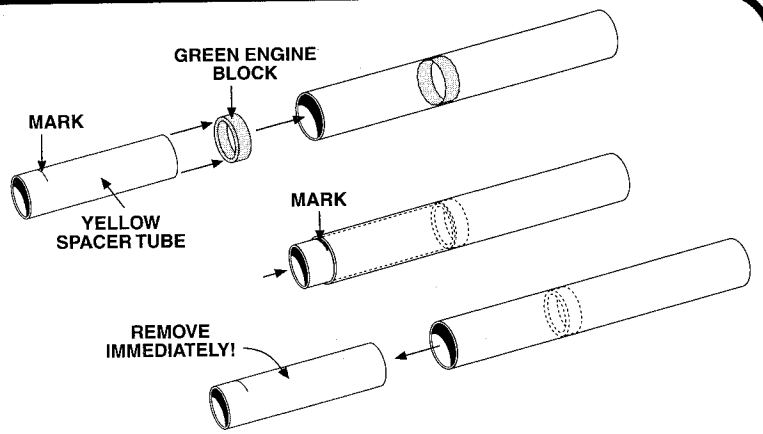
I. Slide the mylar retainer ring onto engine mount tube up to 1" (25 mm) mark. Let dry.



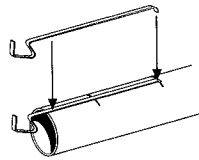
K. Slide centering rings up to the marks.



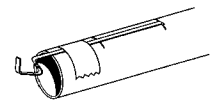
L. Apply glue fillets to both sides of each centering ring. Let dry.



C. Push engine block into BT-20 engine mount tube with spacer tool up to the mark. Remove spacer tool.

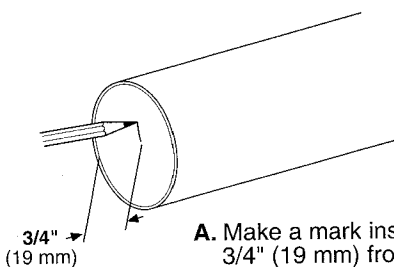


E. Position engine hook.

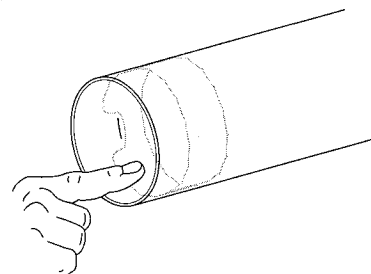


F. Temporarily tape engine hook into place.

2. INSERTING ENGINE MOUNT

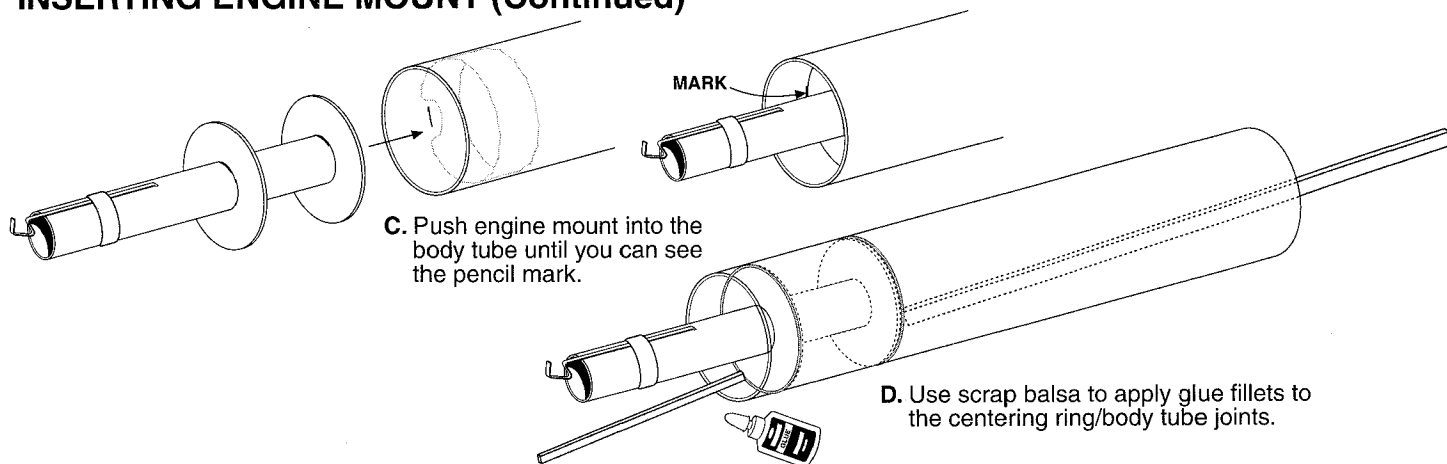


A. Make a mark inside the body tube 3/4" (19 mm) from end.

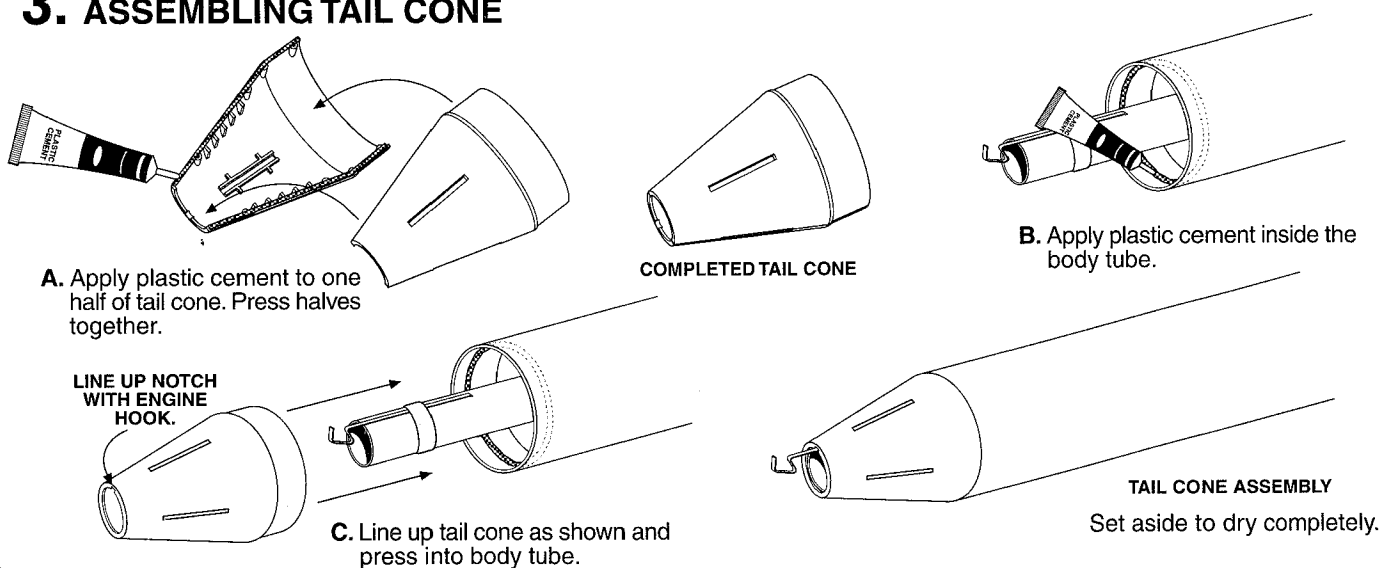


B. Use finger to smear glue ring around inside of tube at pencil mark. Don't cover pencil mark with glue.

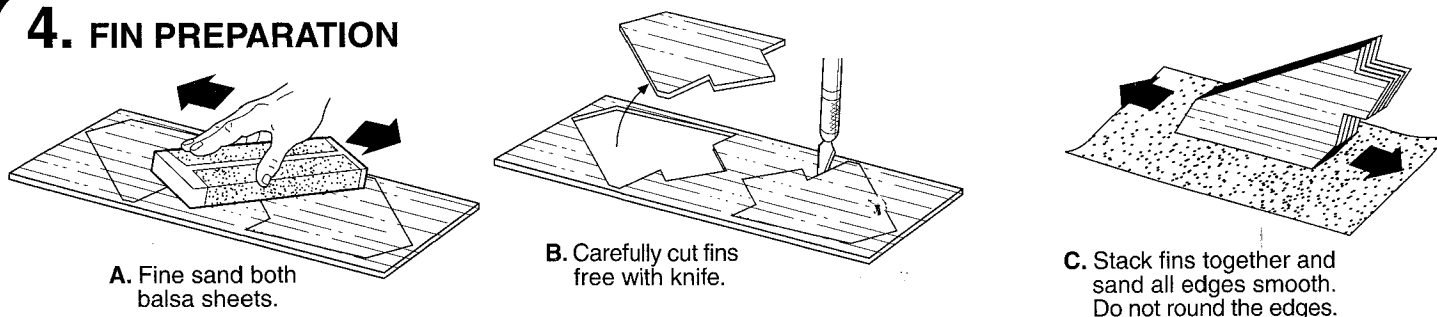
INSERTING ENGINE MOUNT (Continued)



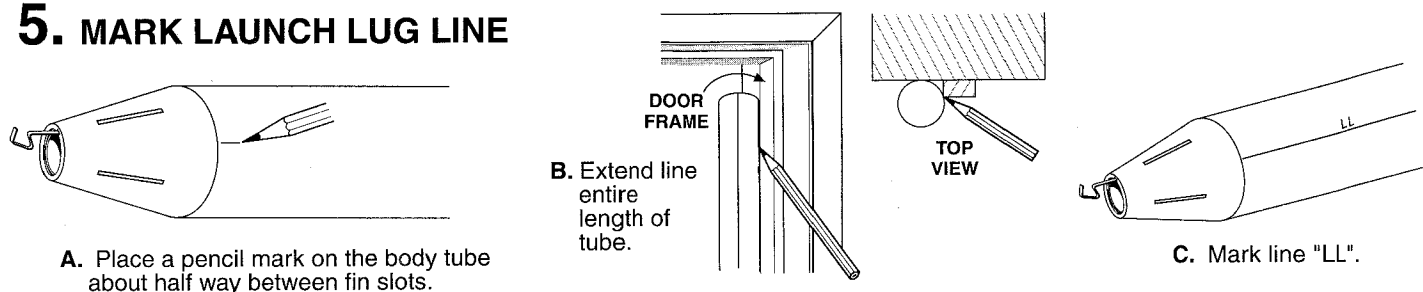
3. ASSEMBLING TAIL CONE



4. FIN PREPARATION

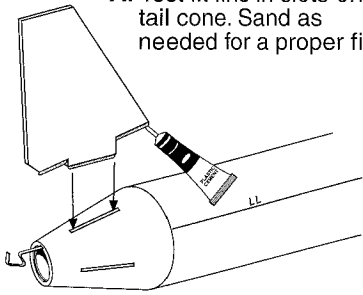


5. MARK LAUNCH LUG LINE

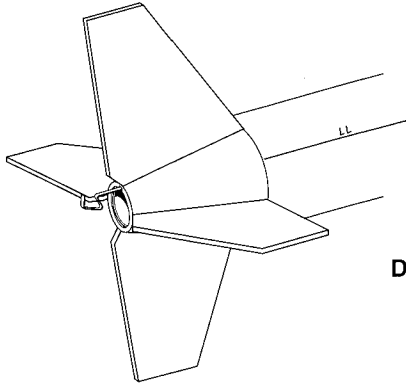


6. ATTACHING FINS

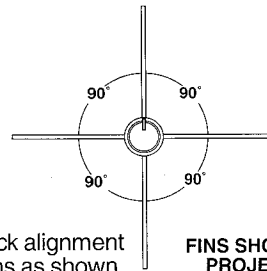
A. Test fit fins in slots on tail cone. Sand as needed for a proper fit.



B. Apply plastic cement to root edge of fin and tab. Insert into slot.

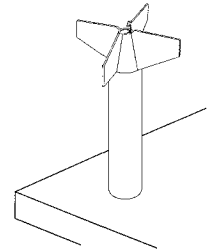


C. Repeat for remaining fins.



D. Check alignment of fins as shown. Allow glue to set.

FINS SHOULD PROJECT STRAIGHT OUT.

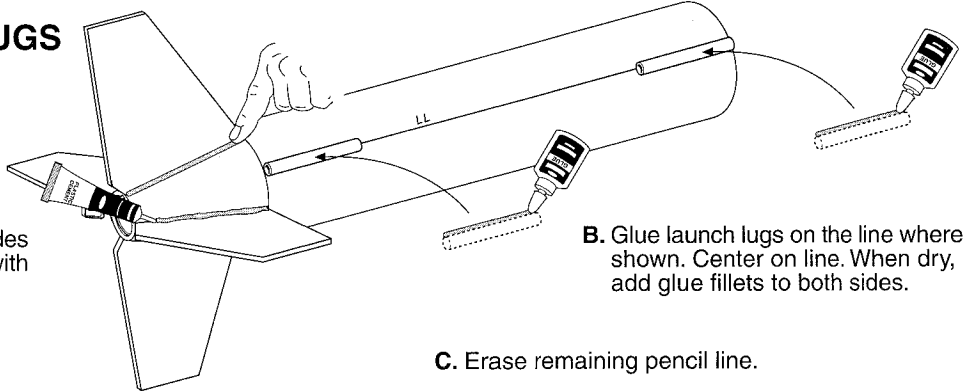


E. Stand rocket on flat tabletop until glue dries completely.

NOTE: Fins must be attached correctly for stable flight.

7. ATTACHING LAUNCH LUGS

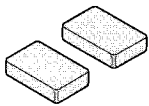
A. Using plastic cement, apply fillets to both sides of fin, smooth with finger. Let dry. Proceed to remaining fins.



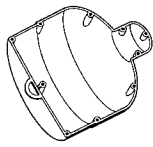
B. Glue launch lugs on the line where shown. Center on line. When dry, add glue fillets to both sides.

C. Erase remaining pencil line.

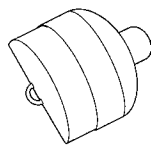
8. ASSEMBLING NOSE CONE AND CLAY WEIGHTS



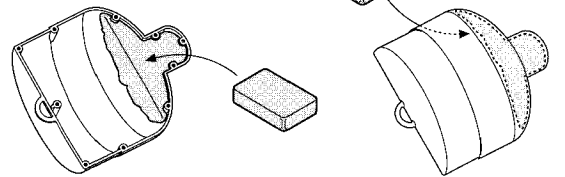
CLAY WEIGHTS



HALF A

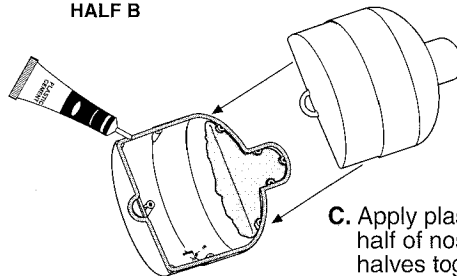


HALF B



B. Press one clay weight firmly and evenly into each half of nose cone as indicated. NOTE: Clay weights must be installed prior to gluing halves together.

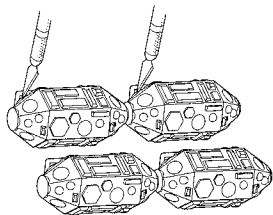
A. Clay weights must be added to nose cone for stability. The weights must be added prior to assembling nose cone halves together.



C. Apply plastic cement to one half of nose cone. Press halves together. Let dry.

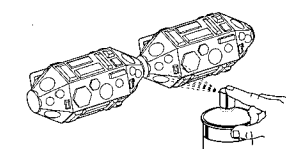
COMPLETED NOSE CONE

9. PREPARE CLUSTER BOMBS

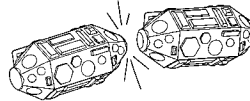


A. Remove excess flash and clean eyelets.

CAUTION: Do not cut off eyelet.

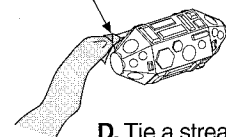


B. Spray paint cluster bombs light gray. Let dry.

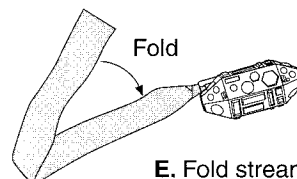


C. Snap cluster bombs in half.

DOUBLE KNOT.

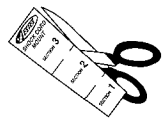


D. Tie a streamer to each cluster bomb.

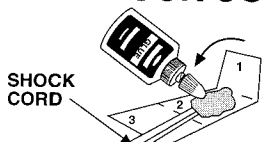


E. Fold streamer in half. Roll the remainder.

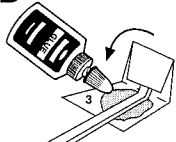
10. ATTACHING SHOCK CORD



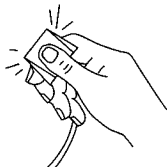
A. Cut out shock cord mount from front page.



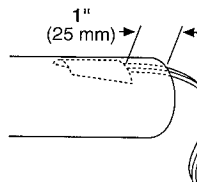
B. Smear glue. Fold forward. (Shock cord slightly angled as shown.)



C. Smear glue. Fold forward.



D. Squeeze tightly. Hold for 1 minute.

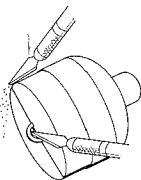


E. Glue shock cord mount 1" (25 mm) inside front of body tube. Let dry completely.

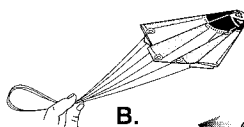


11. ATTACHING PARACHUTE & SHOCK CORD

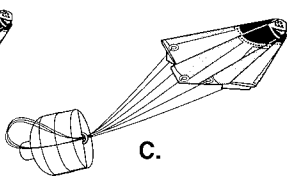
A. Scrape excess flash from the nose cone and clean eyelet.



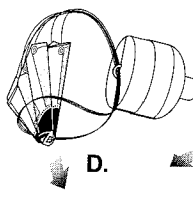
CAUTION: Do not cut off eyelet.



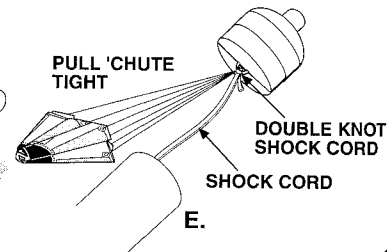
B.



C.



D.



PULL 'CHUTE TIGHT

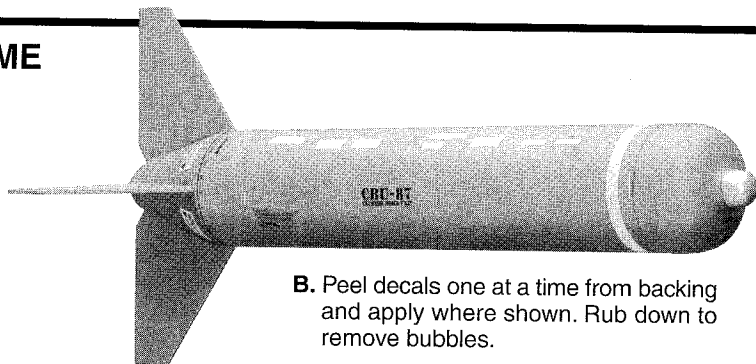
DOUBLE KNOT SHOCK CORD

SHOCK CORD

E.

PAINT SCHEME

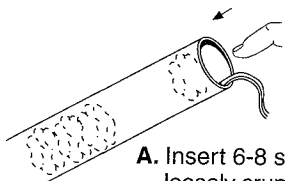
A. First spray the rocket with primer, let dry and sand. Repeat until the rocket is smooth. Follow the paint scheme on the package.



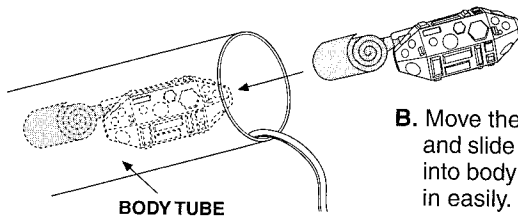
B. Peel decals one at a time from backing and apply where shown. Rub down to remove bubbles.

OPTIONAL: Spray a dull coat over the entire rocket when completed.

PREPARE FOR FLIGHT



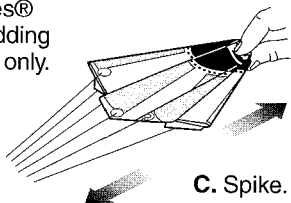
A. Insert 6-8 squares of loosely crumpled recovery wadding into body tube.



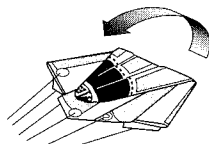
BODY TUBE

B. Move the shock cord out of the way and slide streamers then cluster bombs into body tube. (Streamers should slide in easily. If fit is too tight, repack.)

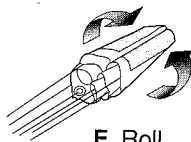
NOTE: Use Estes® Recovery Wadding (EST 302274) only.



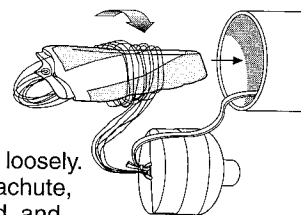
C. Spike.



D. Fold.



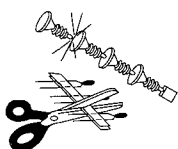
E. Roll.



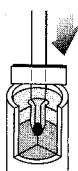
F. Wrap lines loosely. Insert parachute, shock cord, and nose cone.

PREPARE ENGINE

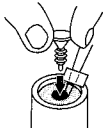
⚠ WARNING: FLAMMABLE
To avoid serious injury, read instructions & NAR Safety Code included with engines. **PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!** If you do not use your prepared engine, remove the igniter before storing your engine.



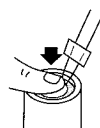
A.



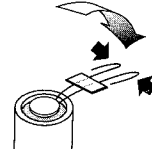
B. Tip must touch propellant.



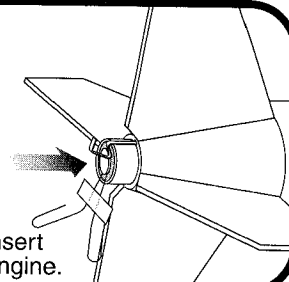
C.



D.



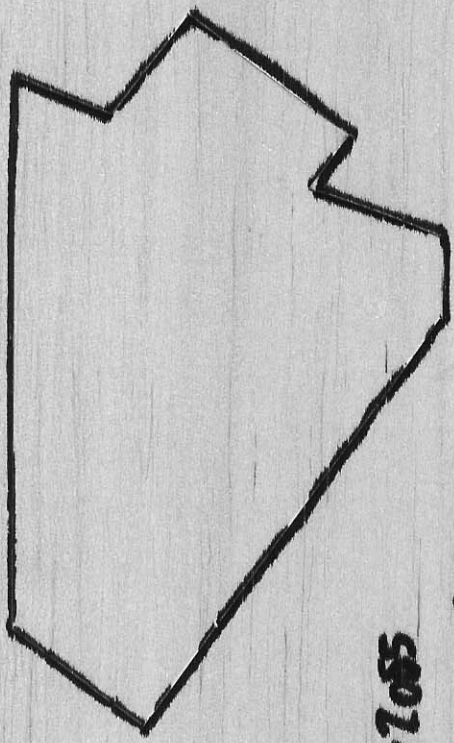
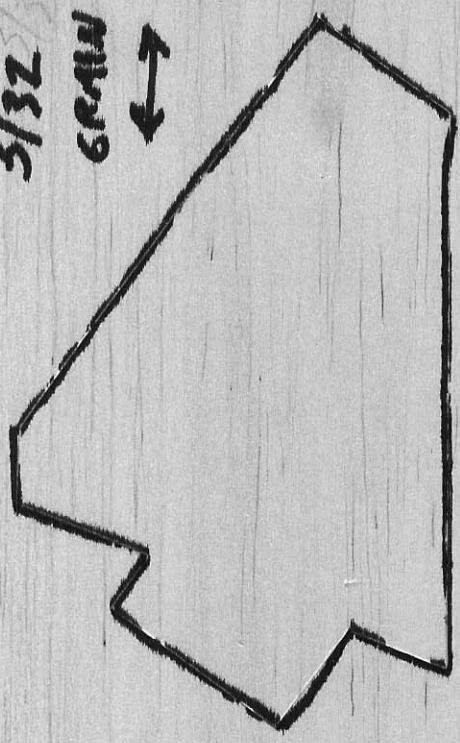
E.



F. Insert engine.

3/32"

68414



980153

PLU-9718

LIFT HERE

LIFT HERE

FZU-54/6
ARMAMENT SECTION
82577-599100-223-11
SERNO 30087

FZU-54/6
ARMAMENT SECTION
82577-599100-223-11
SERNO 30087

NO LIFT

NO LIFT

NO LIFT

NO LIFT

CBU-87
CLUSTER BOMB UNIT

CBU-87
CLUSTER BOMB UNIT

PRINTED IN CHINA
© 2003 Estes-Cox Corp.
All rights reserved.
PN 60563 (3-03)

CONTRACTOR:AEROJET/HONEYWELL
WEIGHT: 950 LBS LENGTH: 92 IN.
WARHEAD:SHAPED-CHARGE
FRAGMENTATION & INCENDIARY

CONTRACTOR:AEROJET/HONEYWELL
WEIGHT: 950 LBS LENGTH: 92 IN.
WARHEAD:SHAPED-CHARGE
FRAGMENTATION & INCENDIARY

▼ FUSE: FZU-39/B
PROXIMITY SENSOR ▼

▼ FUSE: FZU-39/B
PROXIMITY SENSOR ▼

CONTRACTOR:AEROJET/HONEYWELL
WEIGHT: 950 LBS LENGTH: 92 IN.
WARHEAD:SHAPED-CHARGE
FRAGMENTATION & INCENDIARY

CONTRACTOR:AEROJET/HONEYWELL
WEIGHT: 950 LBS LENGTH: 92 IN.
WARHEAD:SHAPED-CHARGE
FRAGMENTATION & INCENDIARY

▼ FUSE: FZU-39/B
PROXIMITY SENSOR ▼

▼ FUSE: FZU-39/B
PROXIMITY SENSOR ▼



OPERATION
ENDURING FREEDOM