



ESTES INDUSTRIES
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EST 2154

BETATM
SERIES
SKILL LEVEL 1

WILDFIRETM

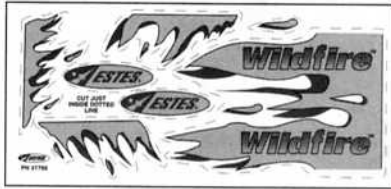
FLYING MODEL ROCKET KIT INSTRUCTIONS

MATERIALS REQUIRED:

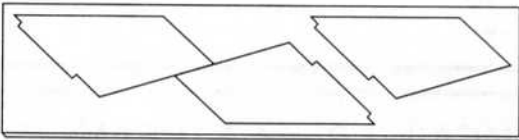
PENCIL, HOBBY SAW, RULER, HOBBY KNIFE, WHITE OR YELLOW GLUE, 3/4" (19 mm) MASKING TAPE, SANDPAPER, AUTOMOTIVE PRIMER, RED AND BLACK GLOSS SPRAY PAINT

ALL GLUED AREAS ARE SHADED IN GRAY

BE SURE TO READ ALL INSTRUCTIONS, TEST FIT ALL PARTS, AND SAND IF NECESSARY BEFORE GLUING.



DECAL (1)
37756



DIE CUT BALSA FIN SHEET (1)
32105

PARTS LAYOUT

NOSE CONE
50BB (1)
71027

TAIL CONE
NOT USED

SLOTTED BODY
TUBE #BT-50 (1)
31168

SHOCK CORD 1/8 x 12
38373

LAUNCH LUG
LL2A (1)
38175

STREAMER 1-3/16 X 18 (1)
38272

GREEN ADAPTER
RINGS #2050 (2)
30164-2

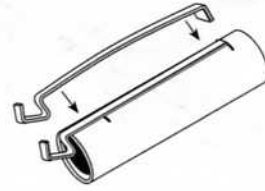
ASSEMBLED PARACHUTE - 12 (1)
35801

BLUE ENGINE
MOUNT TUBE 20J (1)
30326-1

ENGINE HOOK
EH-2A (1)
35021

2.

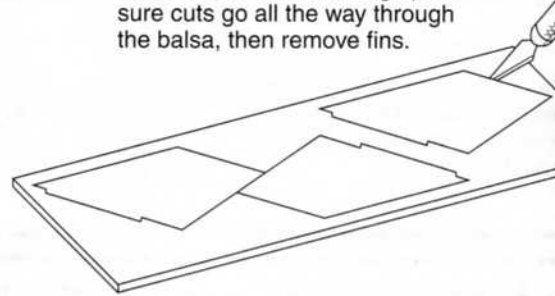
A. Insert the engine hook into the slit as shown.



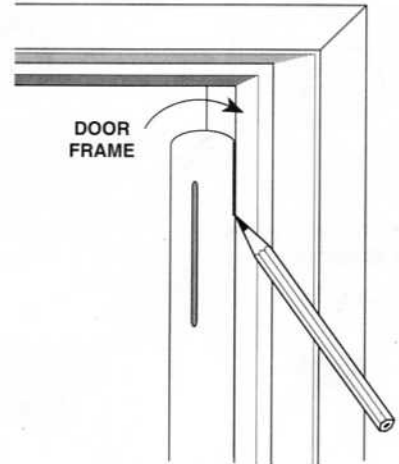
B. Slide one of the tubes down the tube of the 1/2" (13 mm) diameter through the glue as just see th

3.

A. Use a hobby knife to carefully cut fins out of balsa sheets. (Always cut away from other fins to avoid damage.) Be sure cuts go all the way through the balsa, then remove fins.



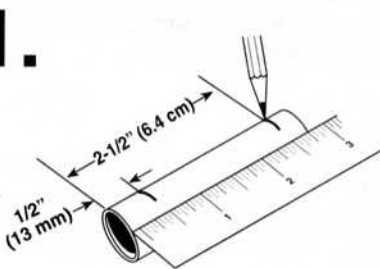
4.



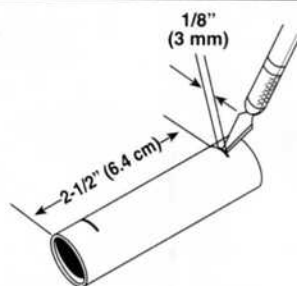
DOOR
FRAME

END VIEW

1.



A. Mark the blue engine mount tube at 1/2" (13 mm) and at 2-1/2" (6.4 cm).



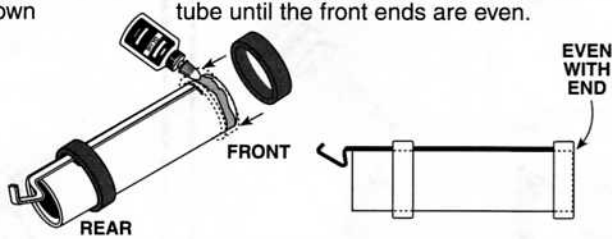
B. Use a hobby knife to make a 1/8" (3 mm) wide slit at the 2-1/2" (6.4 cm) mark only.

A. Lightly draw a straight line down the length of the body tube centered between two fin slots. This is your launch lug line. **NOTE:** A door frame can be used to do this, but we recommend the Estes® Rocket Builder's Marking Guide (EST 302227)

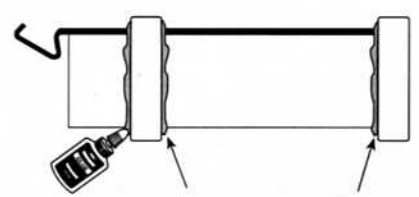
... adapter rings part way
 ... a band of glue just in front
 ... mark, then slide the ring down
 ... until you
 ... ark.



C. Apply glue around front end of tube and slide the remaining adapter ring onto the tube until the front ends are even.



D. Once rings are in place, bead glue where shown and smooth with your finger. Let assembly dry thoroughly.



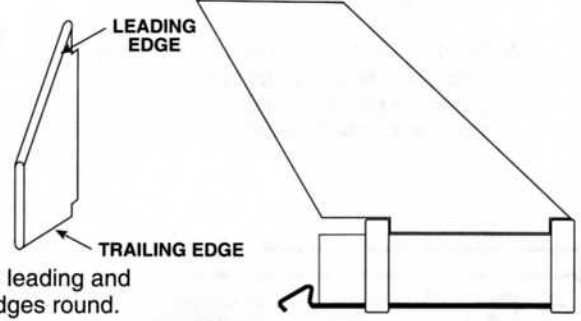
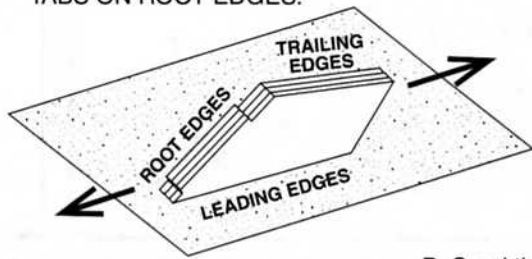
C. Lay sandpaper, rough side up, on table. Stack fins together and lightly sand the edges smooth and flat. **DO NOT SAND AWAY TABS ON ROOT EDGES.**

E. Test fit all the fins to make sure they fit between the centering rings and that the tabs contact the tube. Sand as necessary for a proper fit.



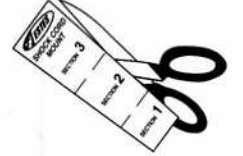
SCRAP BALSA

B. Keep a stick of scrap balsa to use as a glue applicator.



D. Sand the leading and trailing edges round.

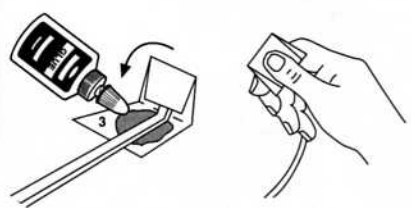
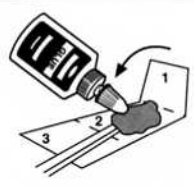
5.



A. Cut out shock cord mount below along solid lines. Crease on dotted lines.

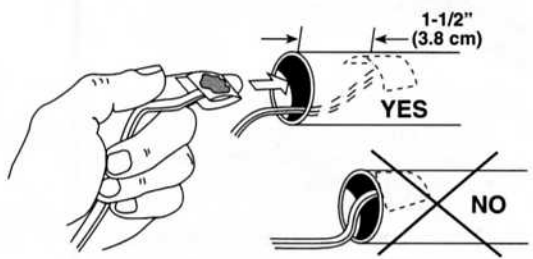
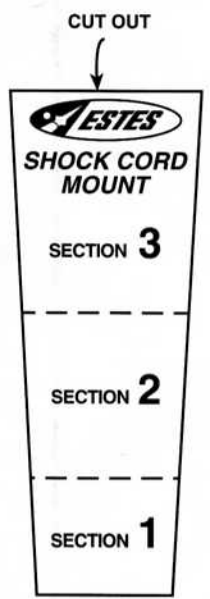


B. Spread glue on section 2 and lay shock cord into glue at a slight angle as shown. Fold forward.



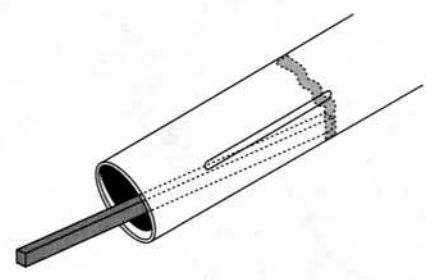
C. Apply glue to section 3. Fold forward again. Clamp firmly until glue sets.

D. Glue the shock cord mount about 1-1/2" (3.8 cm) down inside the front end (without slots) of the body tube, and press firmly into place. Let dry.

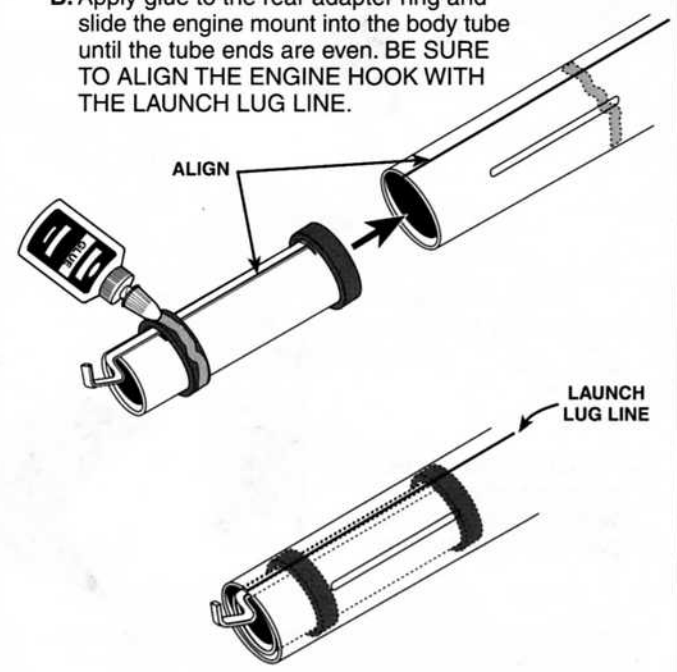


6.

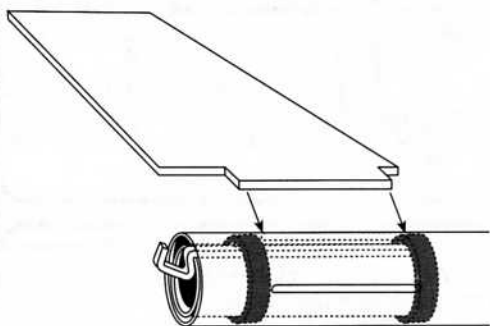
A. Using your wood stick, apply glue inside the body tube near the front of the slots as shown.



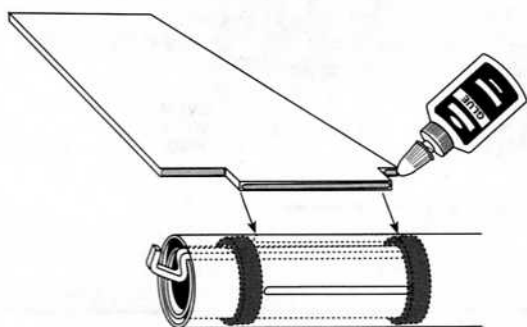
B. Apply glue to the rear adapter ring and slide the engine mount into the body tube until the tube ends are even. **BE SURE TO ALIGN THE ENGINE HOOK WITH THE LAUNCH LUG LINE.**



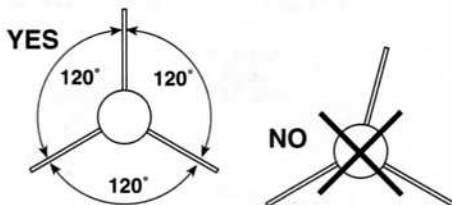
7.



A. Test fit each fin into a slot on the body tube and **sand tabs** as necessary to achieve a proper fit. **REMEMBER:** Fins must be attached correctly for stable flight.

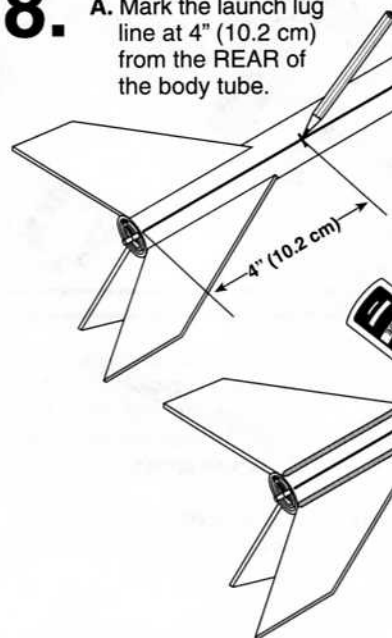


B. Apply glue to the tabs on the fins and along the fin root edges as shown. Insert the fins into slots, checking alignment to make sure fins are straight.



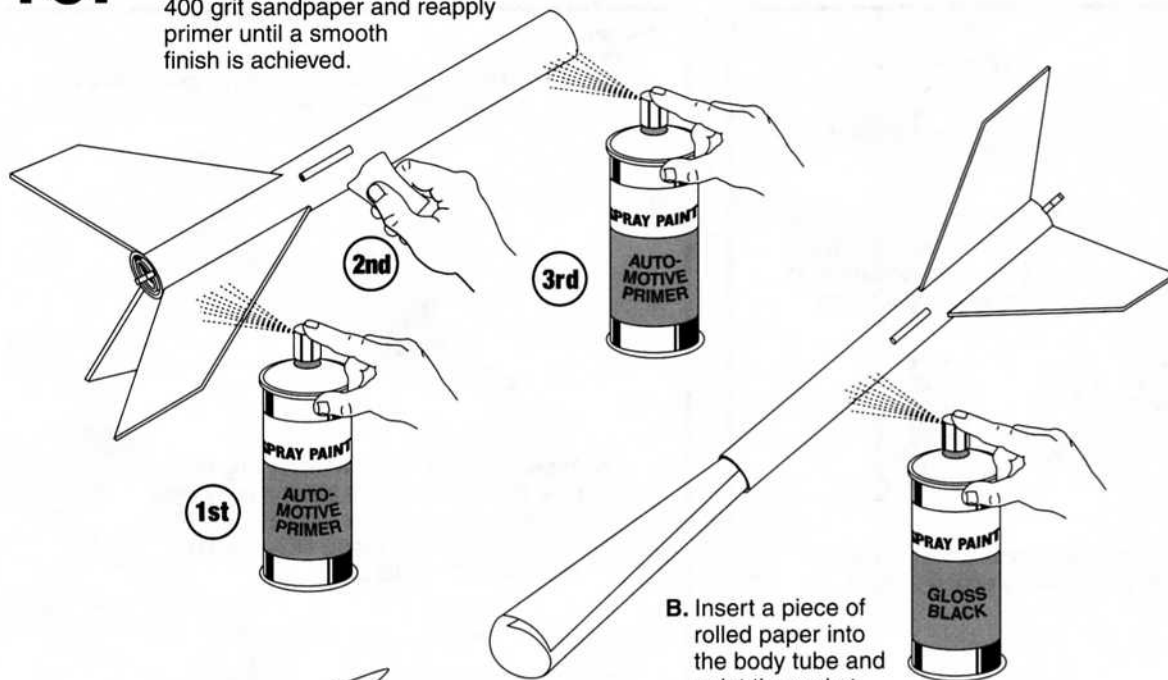
8.

A. Mark the launch lug line at 4" (10.2 cm) from the REAR of the body tube.



10.

A. Use automotive primer to smooth and fill balsa fins and body tube. If necessary, sand with 400 grit sandpaper and reapply primer until a smooth finish is achieved.



B. Insert a piece of rolled paper into the body tube and paint the rocket body black. Let dry completely.

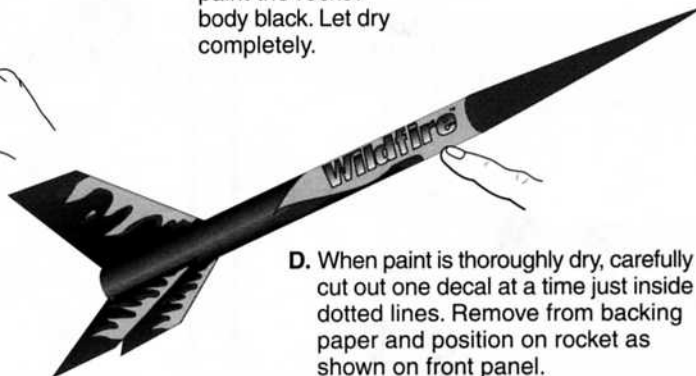


C. Attach a rolled up piece of paper to the nose cone with masking tape, and paint the nose cone red.

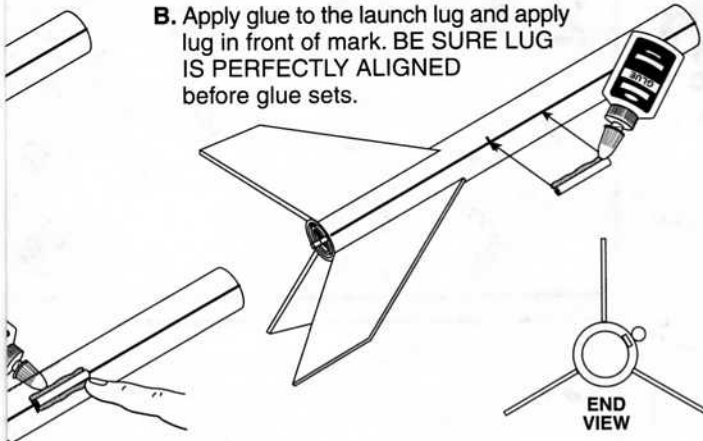


D. When paint is thoroughly dry, carefully cut out one decal at a time just inside dotted lines. Remove from backing paper and position on rocket as shown on front panel.

E. Once in position, rub decal with finger to remove air bubbles and secure decal to rocket.

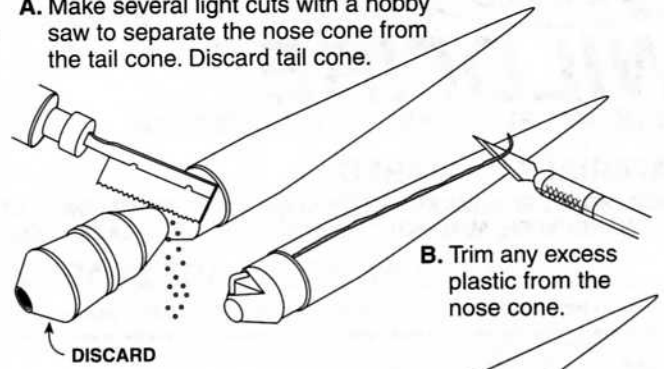


B. Apply glue to the launch lug and apply glue in front of mark. **BE SURE LUG IS PERFECTLY ALIGNED** before glue sets.



C. After glue is dry, apply a glue reinforcement (fillet) to both sides of the launch lug and fins. Smooth with finger.

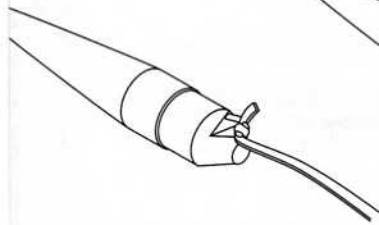
9. **A.** Make several light cuts with a hobby saw to separate the nose cone from the tail cone. Discard tail cone.



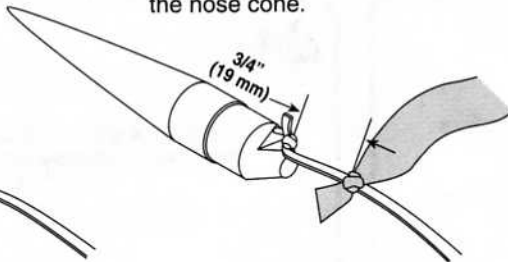
B. Trim any excess plastic from the nose cone.

C. Carefully remove any excess plastic from the nose cone eyelet. **BE CAREFUL NOT TO CUT OFF EYELET!**

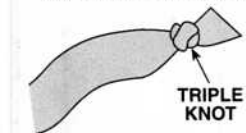
1. **A.** Tie shock cord to nose cone eyelet with a double knot.



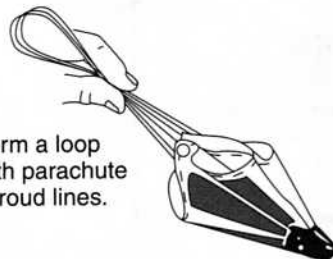
B. Tie one end of the streamer to the shock cord about 3/4" (19 mm) from the nose cone.



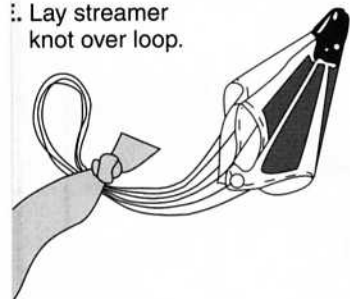
C. Tie a triple knot at the free end of the streamer.



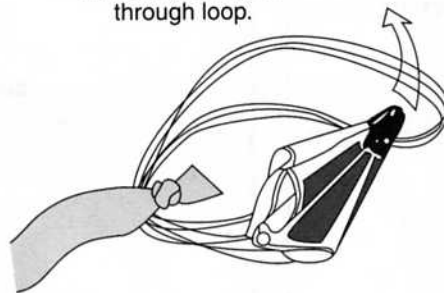
D. Form a loop with parachute shroud lines.



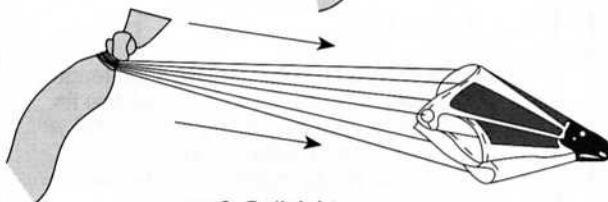
E. Lay streamer knot over loop.



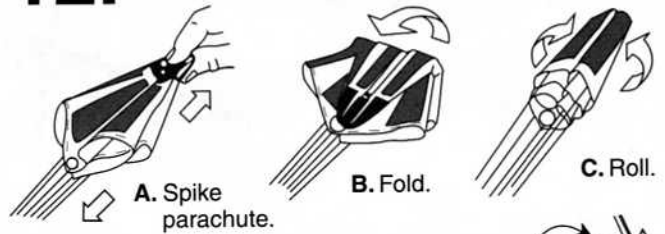
F. Pass parachute through loop.



G. Pull tight.



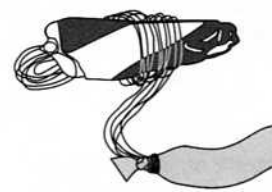
12. PACKING PARA-STREAM



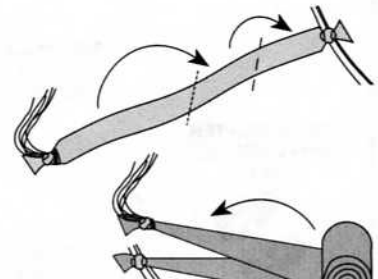
A. Spike parachute.

B. Fold.

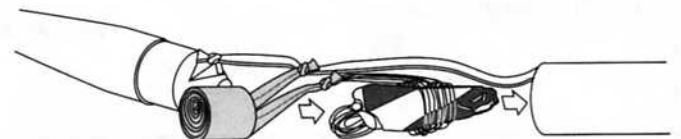
C. Roll.



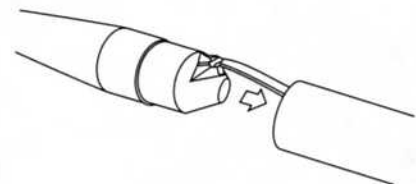
D. Wrap shroud lines loosely around 'chute.



E. Fold streamer in half twice, then roll up.



F. Insert parachute then streamer. Para-stream should slide in easily, if not repack again.



G. Slide shock cord and nose cone into place.

DO NOT FORGET TO PACK RECOVERY WADDING IN THE ROCKET BEFORE FLYING - SEE STEP 13

Wildfire™

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CUT JUST
INSIDE DOTTED
LINE



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