K-46 ASTRON SHRIKE

EstesRockets.com



AGES 10+

Skill Level
ADVANCED

MODEL ROCKET INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

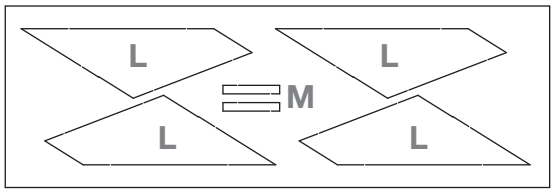
IMPORTANT: Please record date found on decal and keep for future reference. _____

⚠ CAUTION: *May not apply to all kits. For safe handling of plastic cement, epoxy, spray adhesive, CA glue, CA accelerator, paint/finishing materials, see manufacturer's warnings and follow instructions for use. To avoid injury, use extreme caution when using hobby knife, scissors, drills, and any cutting tools.*

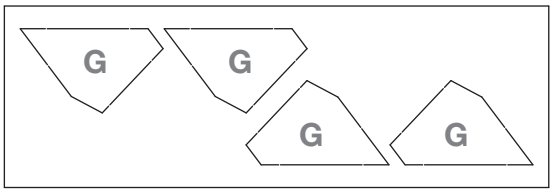
SUPPLIES



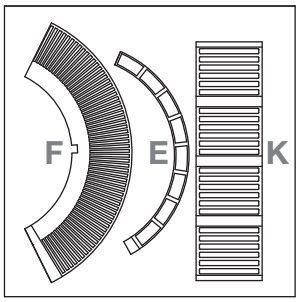
PENCIL | RULER | MASKING TAPE | SCISSORS | HOBBY KNIFE | CARPENTER'S GLUE | FINE SANDPAPER | EXTRA FINE SANDPAPER | PRIMER (WHITE) | PAINT (Listed on pg. 7) | CLEAR COAT (OPTIONAL)



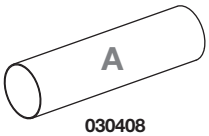
090051A-1246
Laser Cut Wood Sheet



090051B-1246
Laser Cut Wood Sheet



065791
Embossed Index Stock



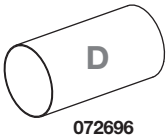
030408
Engine Mount Tube
2.75" Long
x2



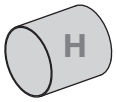
035025
Engine Hook
x2



030164-2
Green Centering Rings
x4



072696
Body Tube
1.875" Long



030174-5
Red Tube Coupler



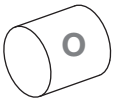
038265
Snap Swivel



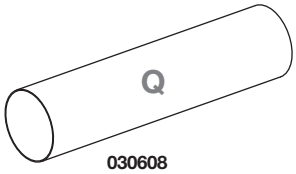
030352
Body Tube 18" Long



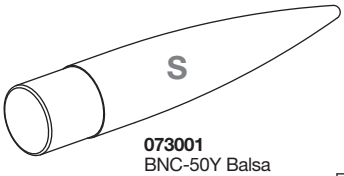
038175
Launch Lug
1.25" Long
x2



070154
NB-50 Balsa
Payload Nose Block



030608
Clear Payload Section
4" Long



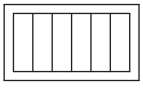
073001
BNC-50Y Balsa
Nose Cone



065197
PSP-50 Payload
Sponge Disks
x2



038251
Screw Eye



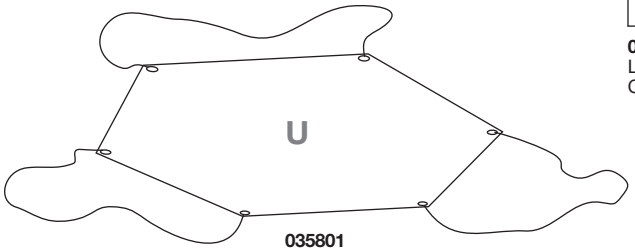
037838
Die Cut Tape Strips



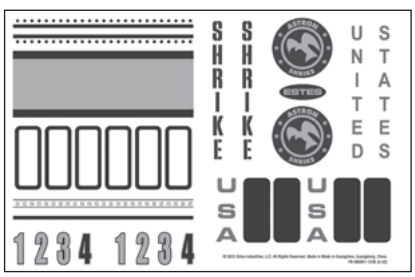
090052-1246
Laser Cut
Card Stock



038369
Shock Cord



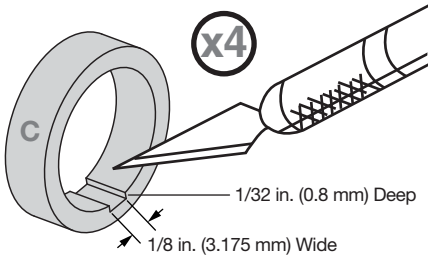
035801
12" Parachute



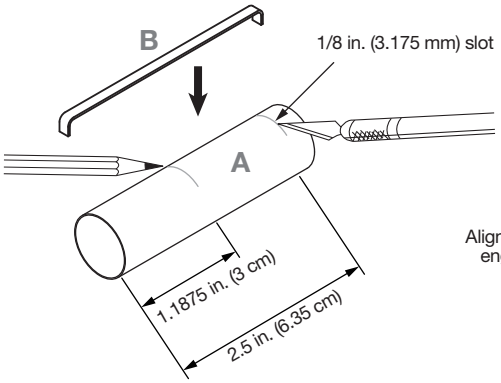
090001-1246
Waterslide Decal

ASSEMBLE ENGINE MOUNT

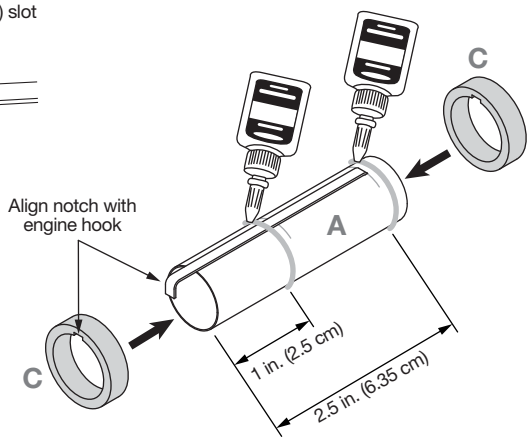
1. Cut a notch on the inside of all **C** centering rings 1/8 inch wide by 1/32 inch deep.



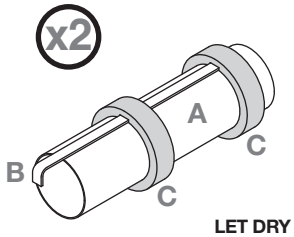
2. Use a pencil to mark engine mount tube **A** as shown. Cut a 1/8 inch slot at the 2.5 inch mark and insert engine hook **B**.



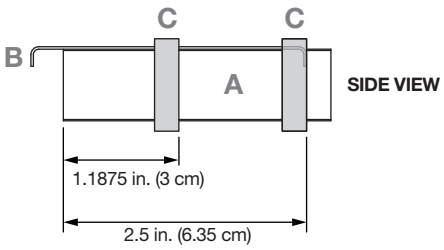
3. Apply glue around engine mount tube **A** as shown. Slide on **C** centering rings.



4. Repeat steps 2 and 3.



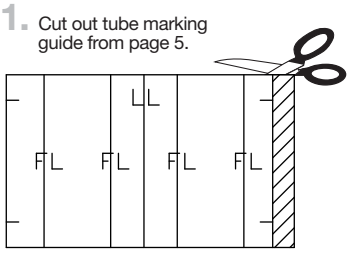
LET DRY



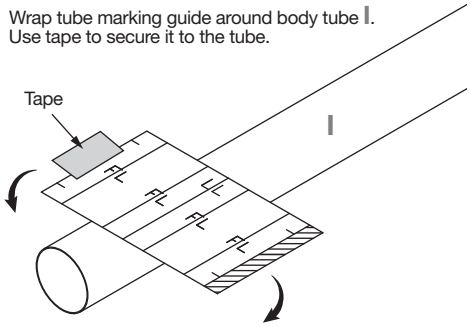
SIDE VIEW

PREPARE BODY TUBES

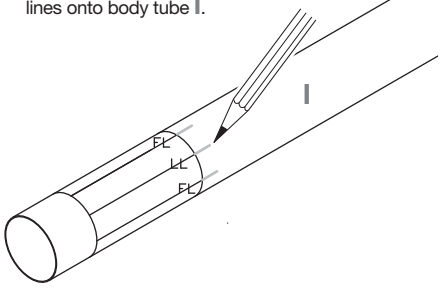
1. Cut out tube marking guide from page 5.



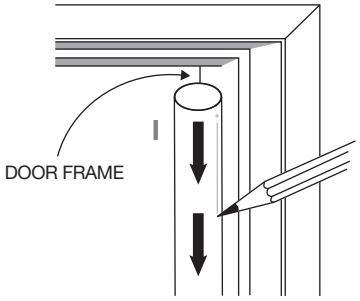
2. Wrap tube marking guide around body tube **I**. Use tape to secure it to the tube.



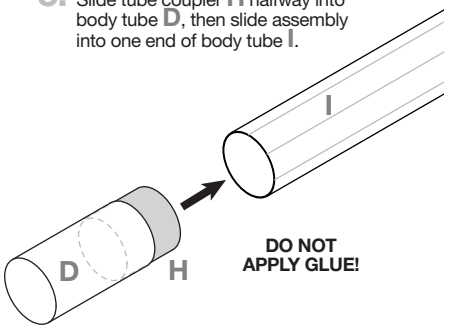
3. Mark all fin lines (FL) and launch lug (LL) lines onto body tube **I**.



4. Remove the tube marking guide and use a door frame to extend all lines down the length of body tube **I**.

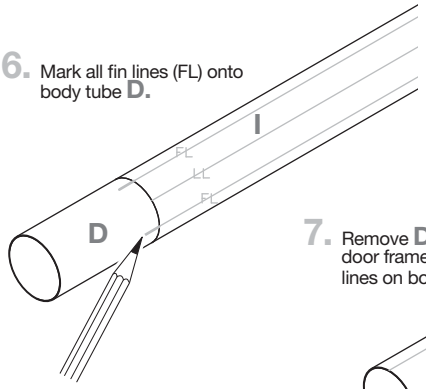


5. Slide tube coupler **H** halfway into body tube **D**, then slide assembly into one end of body tube **I**.

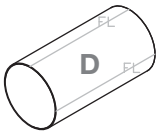


DO NOT APPLY GLUE!

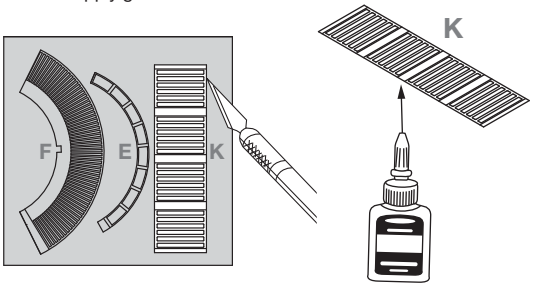
6. Mark all fin lines (FL) onto body tube **D.**



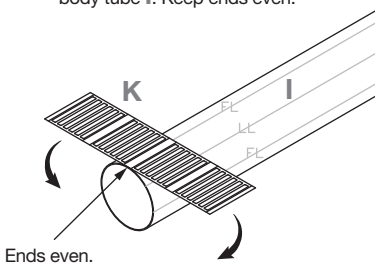
7. Remove **D** from **I**. Use a door frame to extend fin lines on body tube **D**.



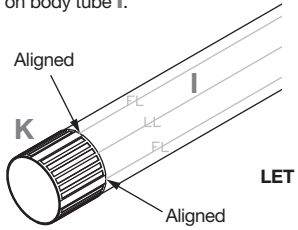
8. Cut out **K** from embossed index stock and apply glue to the bottom of **K**.



9. Wrap **K** around one end of body tube **I**. Keep ends even.



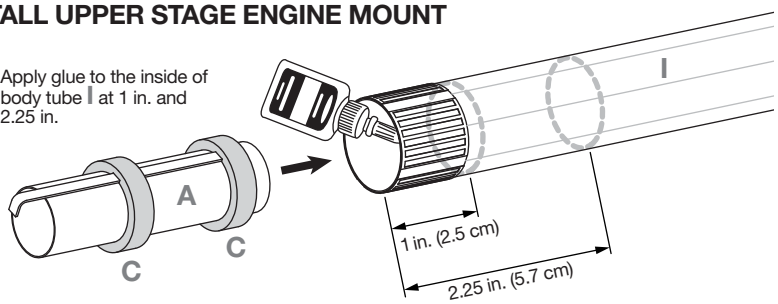
10. Align center of each wide space section of **K** with a fin line (FL) on body tube **I**.



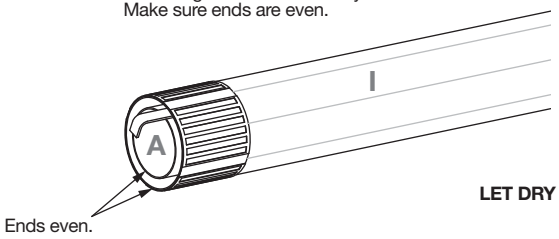
LET DRY

INSTALL UPPER STAGE ENGINE MOUNT

1. Apply glue to the inside of body tube **I** at 1 in. and 2.25 in.

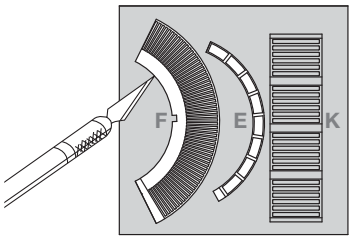


2. Insert engine mount into body tube **I**. Make sure ends are even.

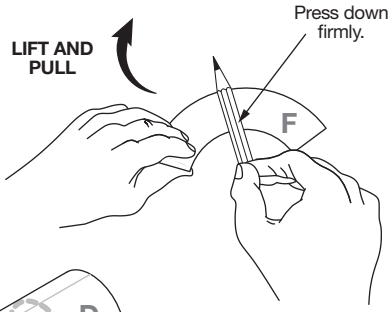


INSTALL BOOSTER ENGINE MOUNT

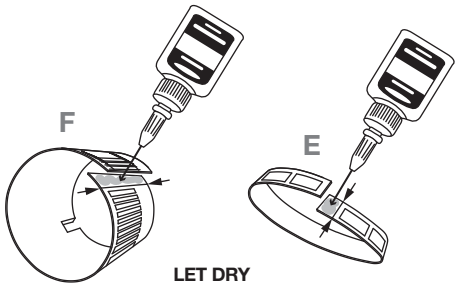
1. Cut out **F** and **E** from the embossed index stock.



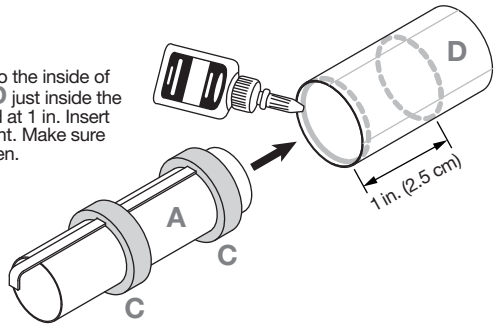
2. Pre-form large nozzle **F** by pulling it under a pencil as shown. Do this several times until the nozzle can be formed into a cone. Repeat steps for **E**.



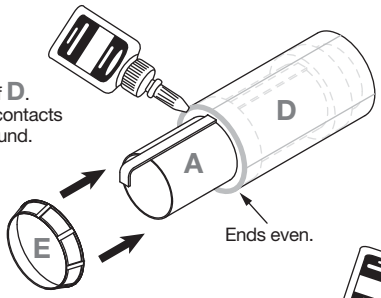
3. Apply glue to the tab on **F**. Overlap and align ends at the arrows shown. Press together and hold until dry. Repeat steps for **E**.



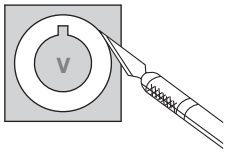
4. Apply glue to the inside of body tube **D** just inside the opening and at 1 in. Insert engine mount. Make sure ends are even.

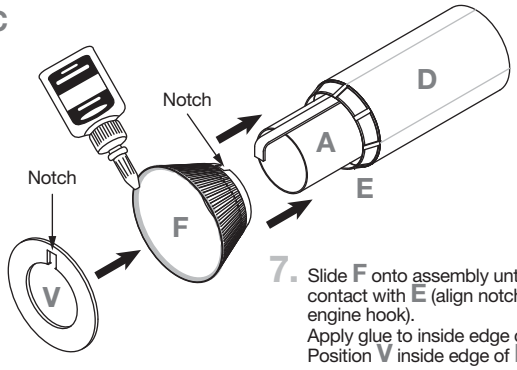


5. Apply glue to edge of **D**. Place **E** so its edge contacts the edge of **D** all around.



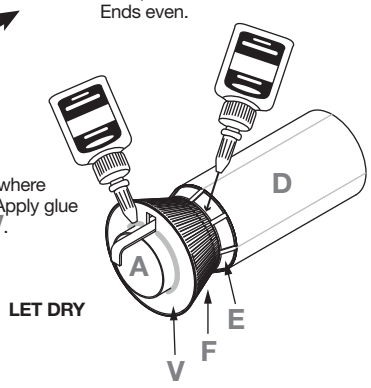
6. Cut out **V** from the laser cut card stock.





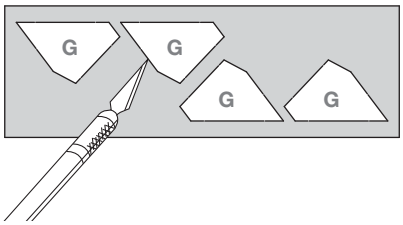
7. Slide **F** onto assembly until it makes contact with **E** (align notch over engine hook). Apply glue to inside edge of **F**. Position **V** inside edge of **F**.

8. Apply a thin coat of glue where **F** and **E** make contact. Apply glue to joint between **A** and **V**.

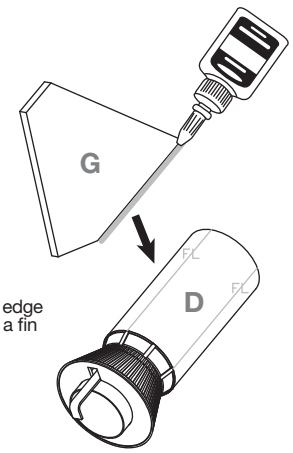


ATTACH BOOSTER FINS

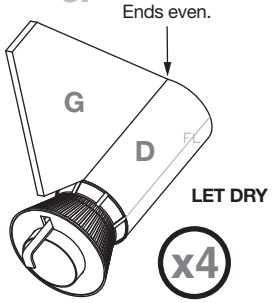
1. Cut out all **G** fins from laser cut wood sheet.



2. Apply glue to the root edge of the fin. Place along a fin line (FL) on **D**.

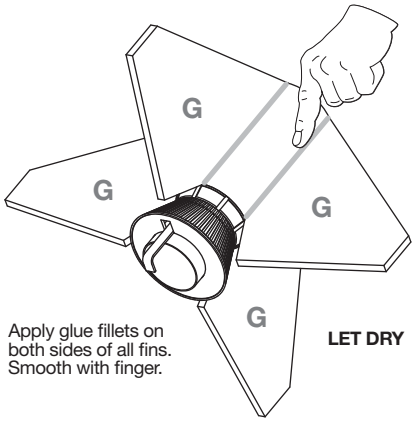


3. Ends even.



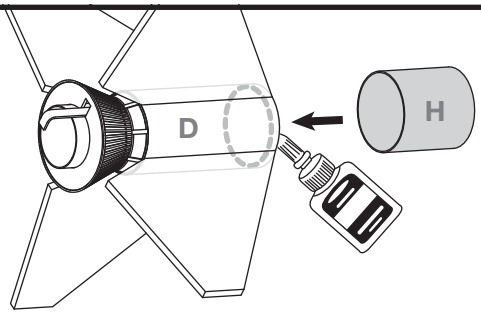
NOTE:
Use fin alignment guide on page 5 to ensure fins are at the correct angle.

4. Apply glue fillets on both sides of all fins. Smooth with finger.

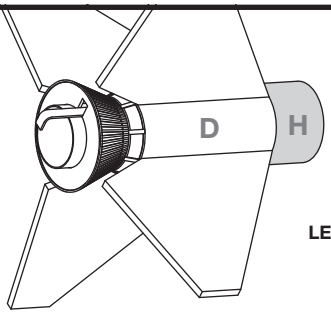


ATTACH TUBE COUPLER

1. Apply glue to the inside of **D**. Slide tube coupler **H** inside **D** until it makes contact with centering ring **C**.



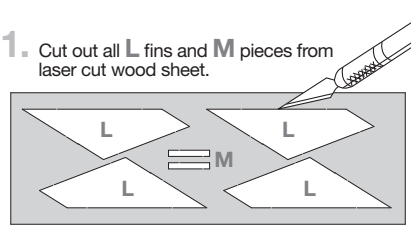
2.



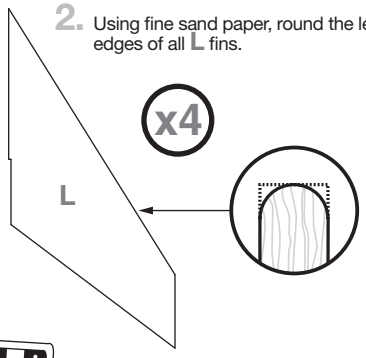
LET DRY

INSTALL UPPER STAGE FINS

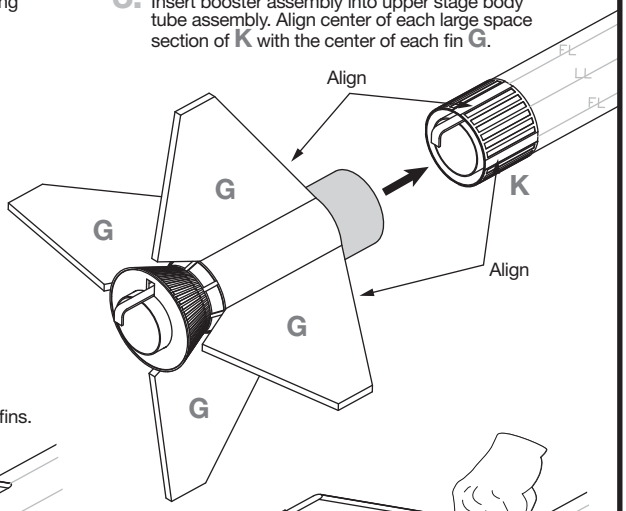
1. Cut out all **L** fins and **M** pieces from laser cut wood sheet.



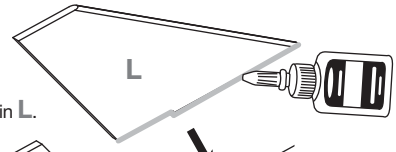
2. Using fine sand paper, round the leading edges of all **L** fins.

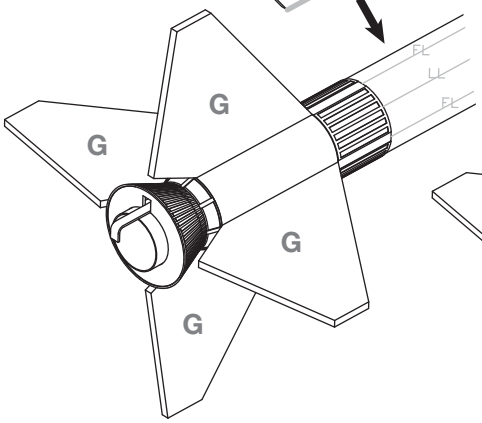


3. Insert booster assembly into upper stage body tube assembly. Align center of each large space section of **K** with the center of each fin **G**.

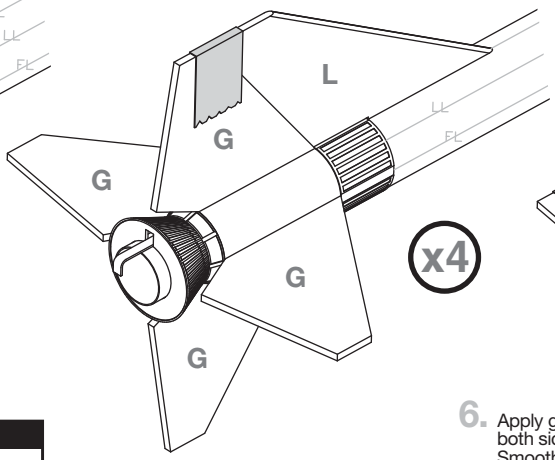


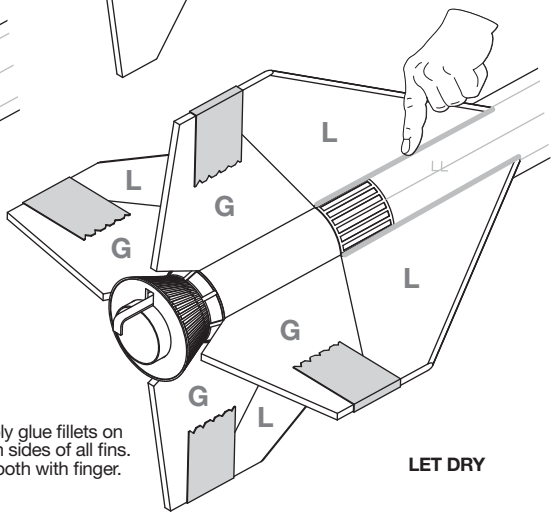
4. Apply glue to root edge of fin **L**.





5. Use masking tape to tape fin joints together. Repeat for all fins.





6. Apply glue fillets on both sides of all fins. Smooth with finger.

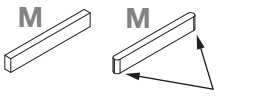
LET DRY

NOTE:

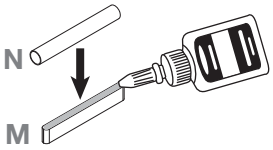
Be very careful to not get any glue between the upper stage and booster stage when gluing fins in place.

ATTACH LAUNCH LUGS

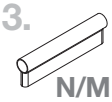
1. Using sandpaper, round the front and back edges of **M** pieces.



2. Apply glue to **M** and attach launch lug **N**.

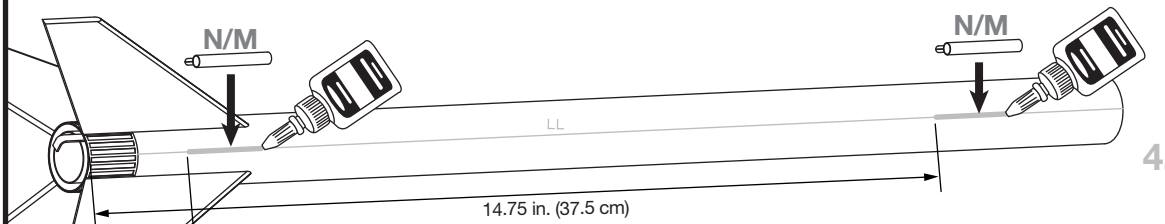


3.



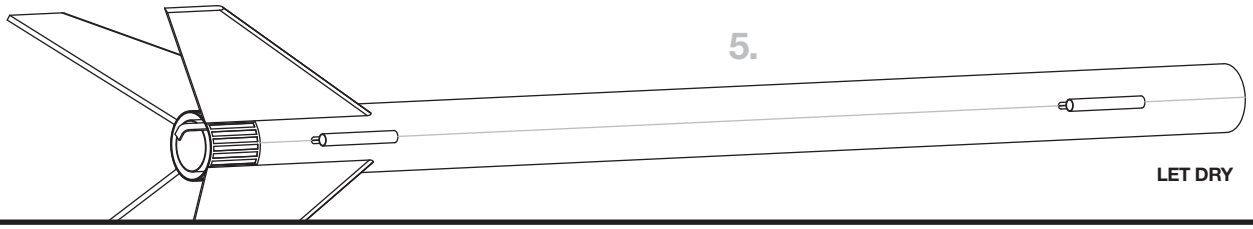
x2

LET DRY



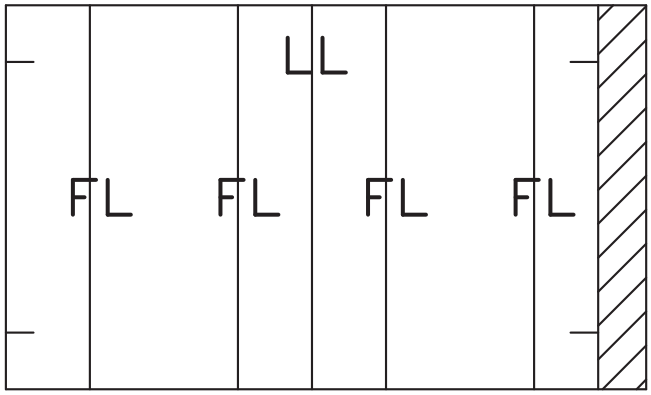
4. Glue **N/M** launch lugs onto the launch lug line at the measurements shown.

5.

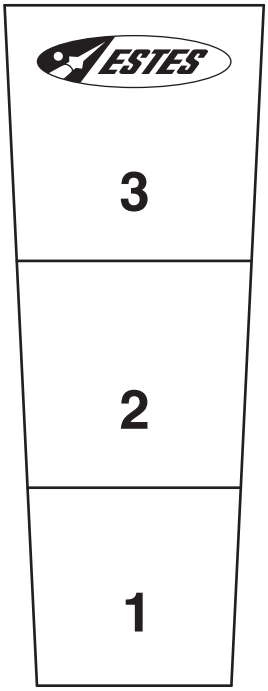


LET DRY

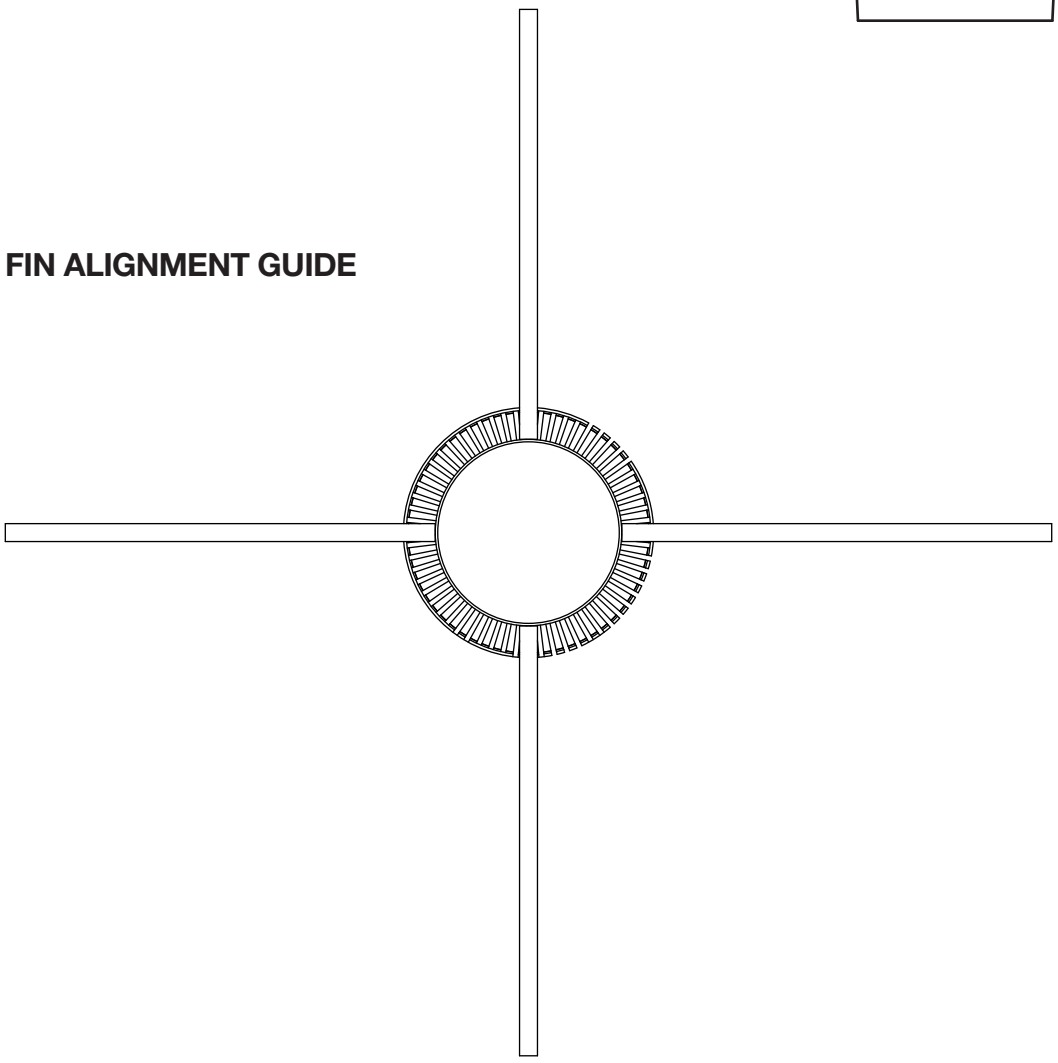
TUBE MARKING GUIDE



SHOCK CORD MOUNT



FIN ALIGNMENT GUIDE



THIS PAGE
INTENTIONALLY
LEFT BLANK

PAINT AND APPLY DECALS

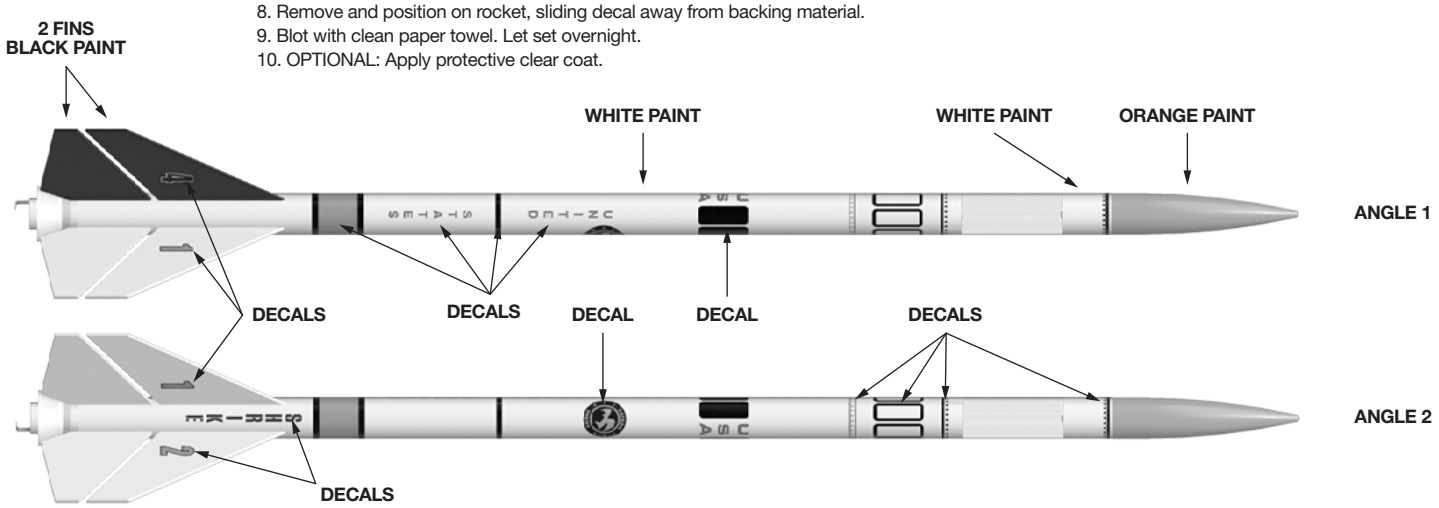
PAINT COLORS

White Paint
Orange Paint
Black Paint

1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Paint entire rocket white.
3. Mask off shoulder of nose cone; paint cone orange.
4. Paint one set of matching booster and upper stage fins black.
5. Apply decals only after paint is dry.
6. Cut decals from sheet, trimming close to edge.
7. One at a time, place in warm water until decal curls and begins to relax.
8. Remove and position on rocket, sliding decal away from backing material.
9. Blot with clean paper towel. Let set overnight.
10. OPTIONAL: Apply protective clear coat.

NOTE:

Please refer to packaging for suggested paint scheme and/or decal placement.

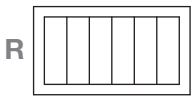


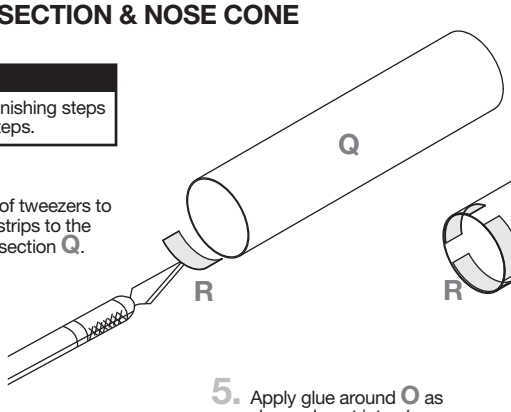
ASSEMBLE PAYLOAD SECTION & NOSE CONE

NOTE:

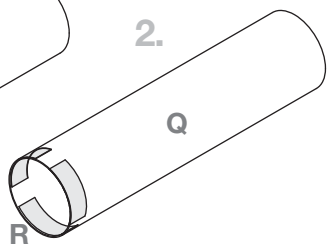
Complete model painting and finishing steps before proceeding with these steps.

1. Use a hobby knife or a pair of tweezers to apply three **R** die cut tape strips to the inside end of clear payload section **Q**.

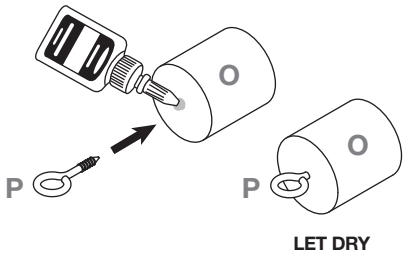




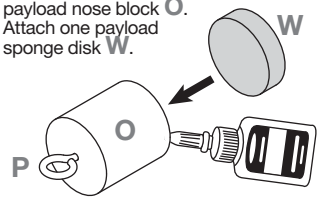
2.



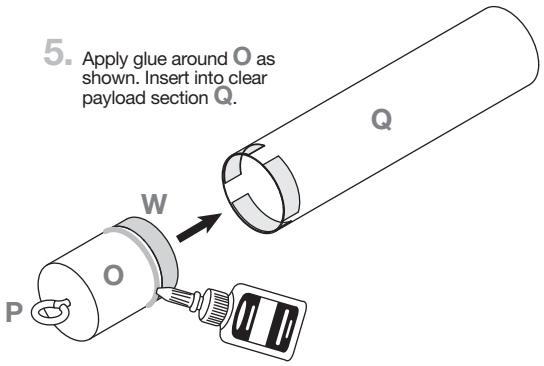
3. Twist screw eye **P** into base of payload nose block **O**. Remove. Apply glue in the hole and then screw **P** back into place.



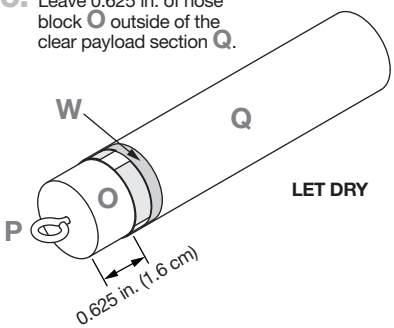
4. Apply glue to the back of payload nose block **O**. Attach one payload sponge disk **W**.



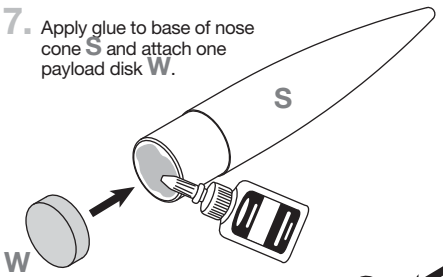
5. Apply glue around **O** as shown. Insert into clear payload section **Q**.



6. Leave 0.625 in. of nose block **O** outside of the clear payload section **Q**.

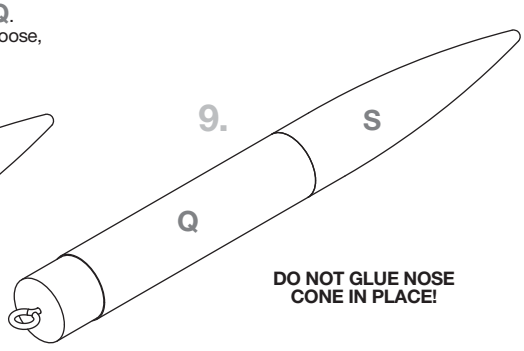


7. Apply glue to base of nose cone **S** and attach one payload disk **W**.



8a. Insert nose cone **S** into clear payload section **Q**. Nose cone **S** should fit snugly inside **Q**. If too loose, add tape strips as shown in step 8b.

9.

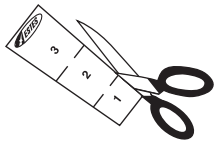


DO NOT GLUE NOSE CONE IN PLACE!

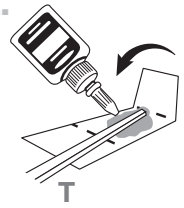
8b. Apply three **R** die cut tape strips to nose cone shoulder before inserting into clear payload section **Q**.

ASSEMBLE RECOVERY SYSTEM

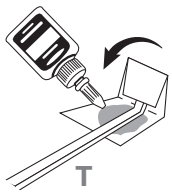
1. Cut out shock cord mount from page 5.



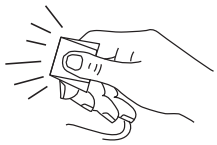
2.



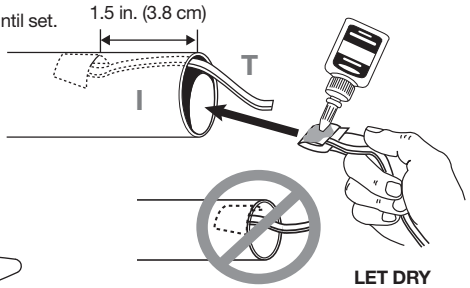
3.



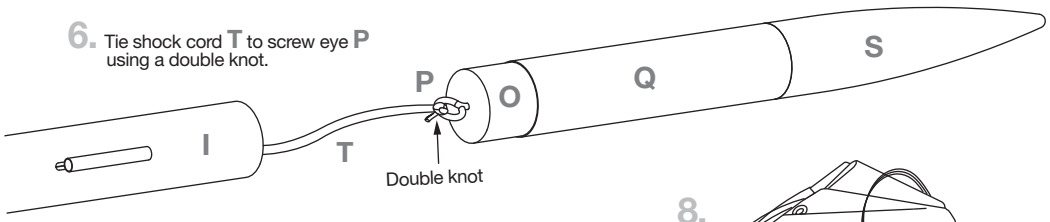
4. Hold until set.



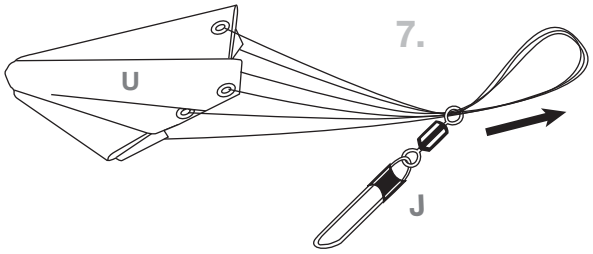
5. Hold until set.



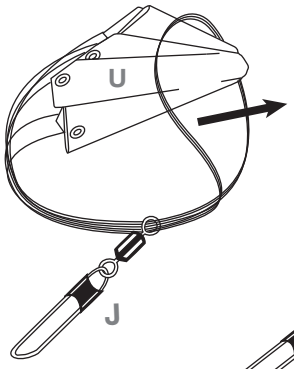
6. Tie shock cord **T** to screw eye **P** using a double knot.



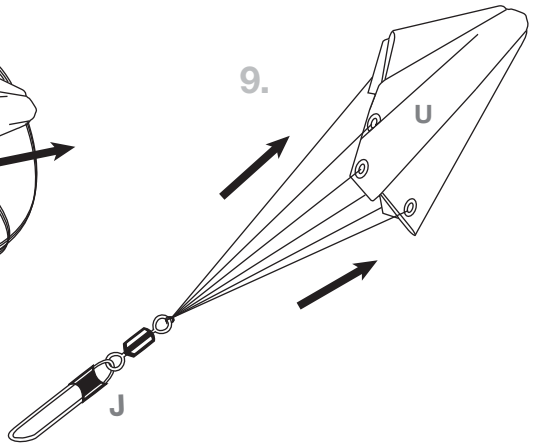
7.



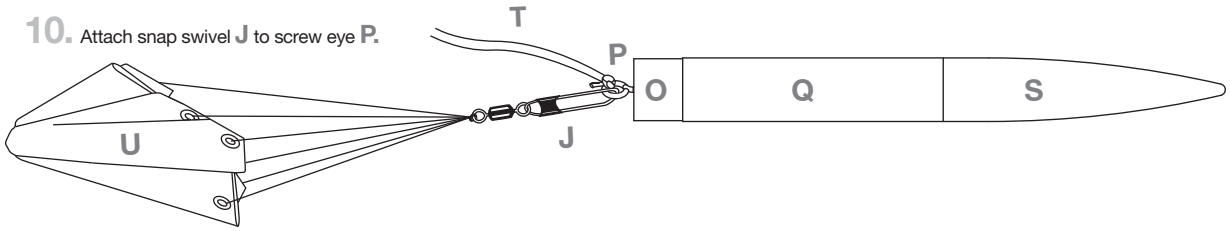
8.



9.

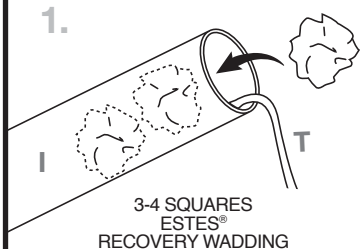


10. Attach snap swivel **J** to screw eye **P.**



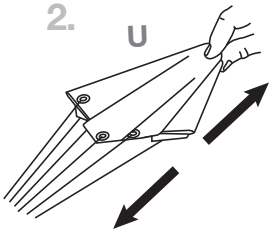
PREPARE FLIGHT RECOVERY

1.

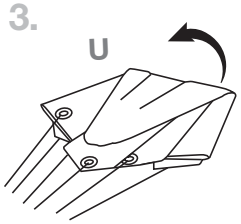


3-4 SQUARES ESTES® RECOVERY WADDING

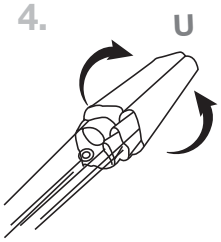
2.



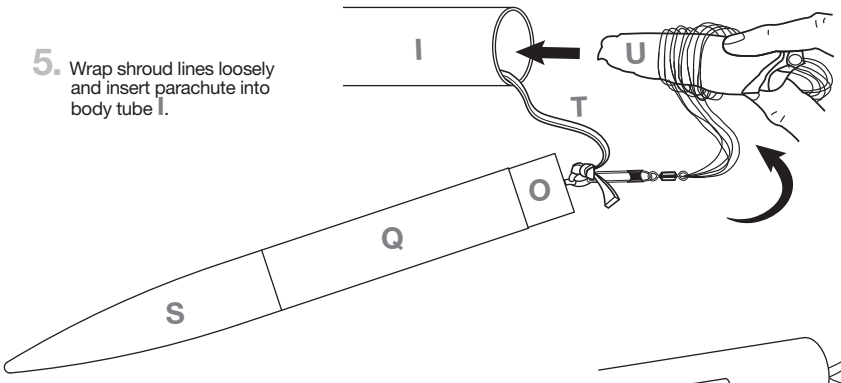
3.



4.



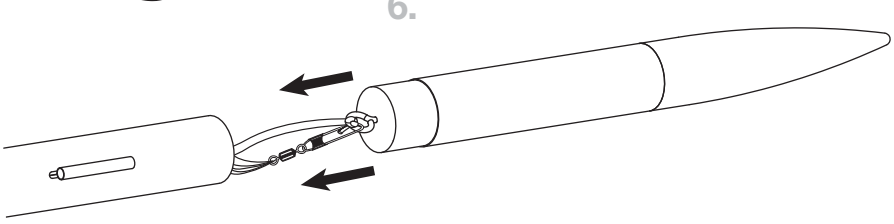
5. Wrap shroud lines loosely and insert parachute into body tube **I**.



NOTE:

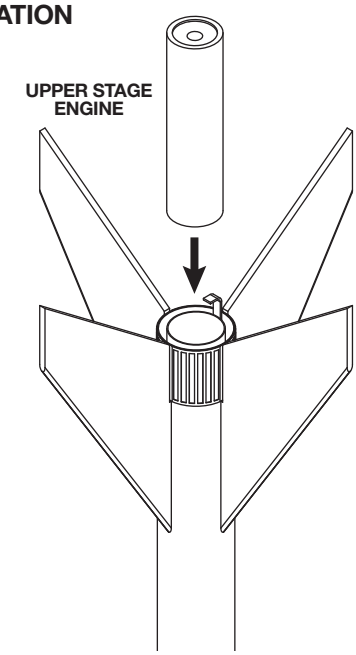
Recovery wadding and parachute must slide easily into body tube. If too tight, redo.

6.

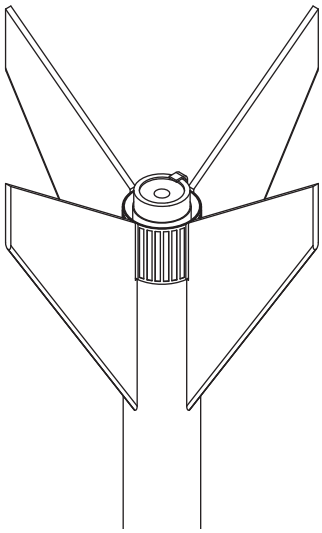


ENGINE PREPARATION

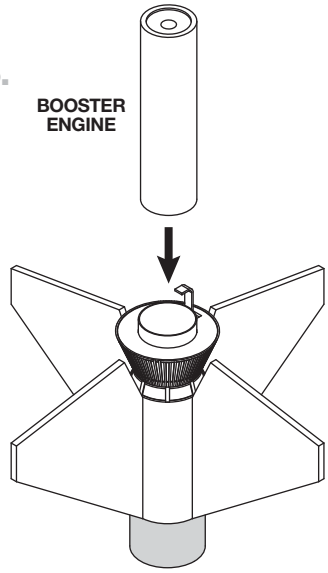
1.



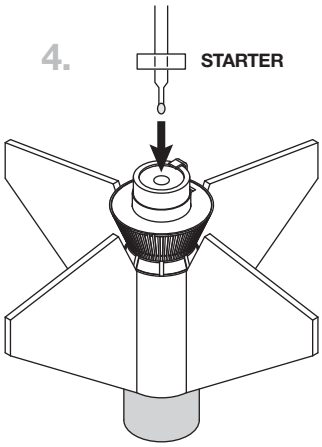
2.

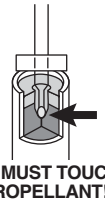


3.

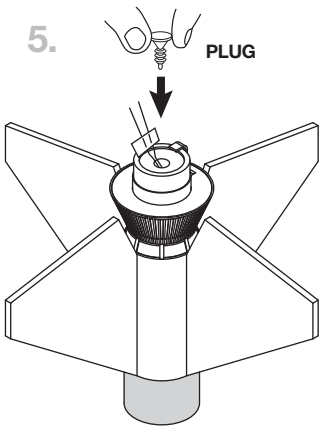


4.

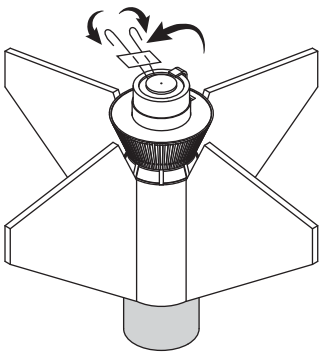




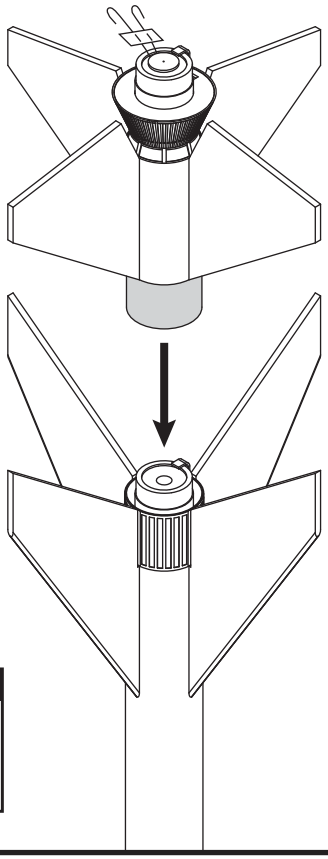
5.



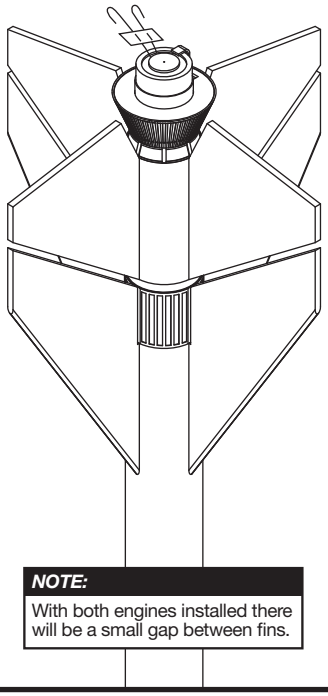
6.



7.



8.



⚠ 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 starter before storing your engine.

NOTE:

With both engines installed there will be a small gap between fins.

COUNTDOWN AND LAUNCH

NOTE:
Always keep the key ***OUT*** until final countdown.



MASKING TAPE

NOTE:
It is important that enough tape is wrapped around launch rod so launch lug does not go over tape.

5. Fully extend your launch controller wire before launching.

Insert key, push down hard. Bulb will light.

While holding key down FIRMLY, press launch button until LIFTOFF!

NOTE:
Estimated weight: 2.25 oz. (63.8 g)

ESTES® LAUNCH SUPPLIES NEEDED
(Sold Separately)

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Recommended Estes® Engines:
  Upper Stage: A8-3, A8-5, B6-6, C6-5, C6-7
  Booster: A8-0, B6-0, C6-0

PRECAUTIONS



NAR SAFETY CODE

NO DRY GRASS OR WEEDS

PRE-LAUNCH CHECK For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

FLYING YOUR ROCKET Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Launch only with little or no wind and good visibility. Always follow the National Association of Rocketry (NAR) SAFETY CODE (enclosed).

MISFIRES TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET. Disconnect the micro-clips and remove the engine. Take the plug and starter out of the engine. A burned starter means the starter tip was not touching engine propellant. Install a new starter; be sure the tip is touching propellant inside the engine. Push the plug in place. Repeat steps under Countdown and Launch.

© 2025 Estes Industries, LLC • All Rights Reserved
Estes Industries, LLC • 1295 H Street, Penrose, CO 81240-9698 • Made in Guangzhou, Guangdong, China
22 PAP
PN 090004-1246 (9-25)