



EstesRockets.com

PRO SERIES II VOGEL™

9728/1743

AGES
18+



Skill Level

EXPERT

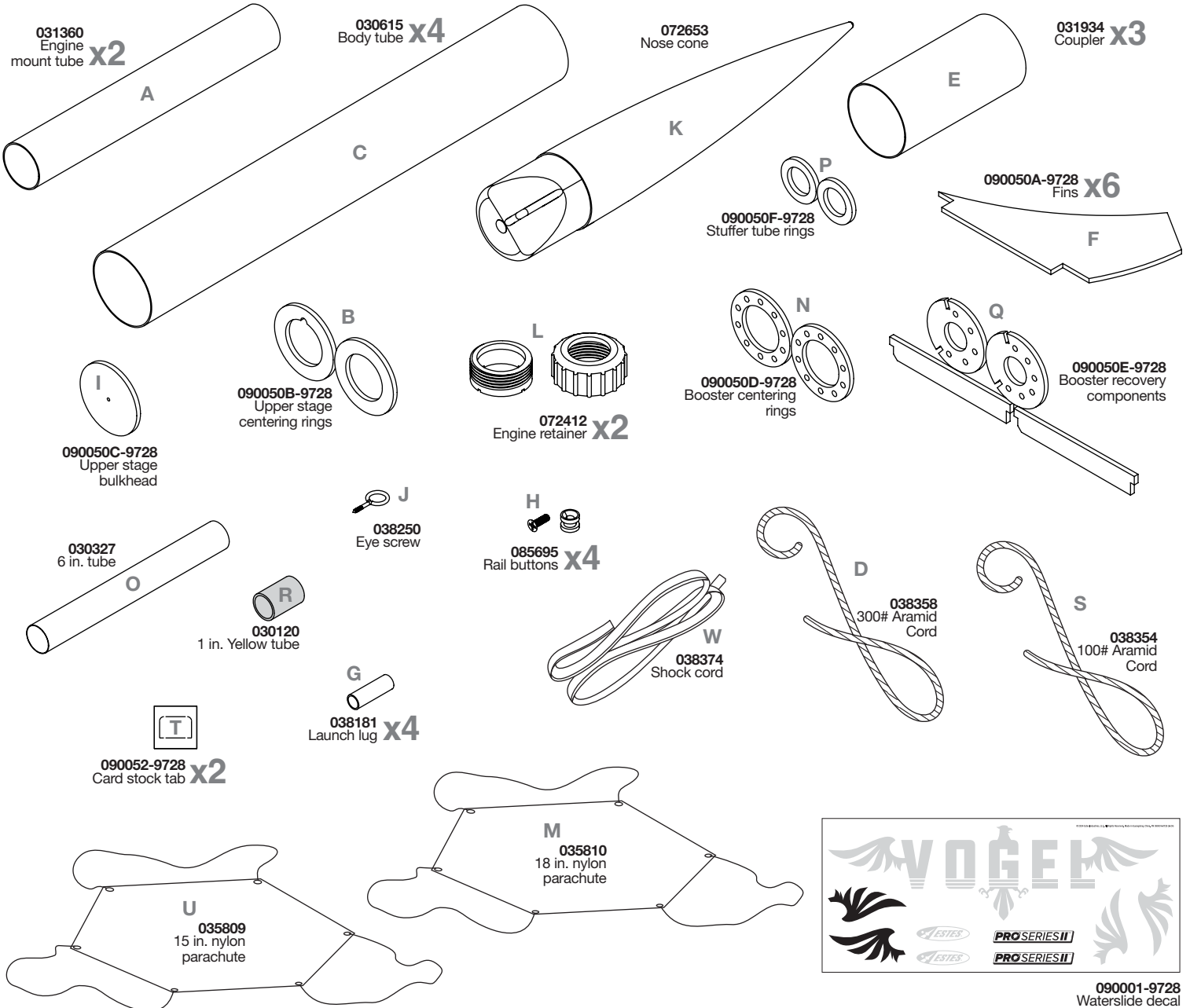
MODEL ROCKET INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

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

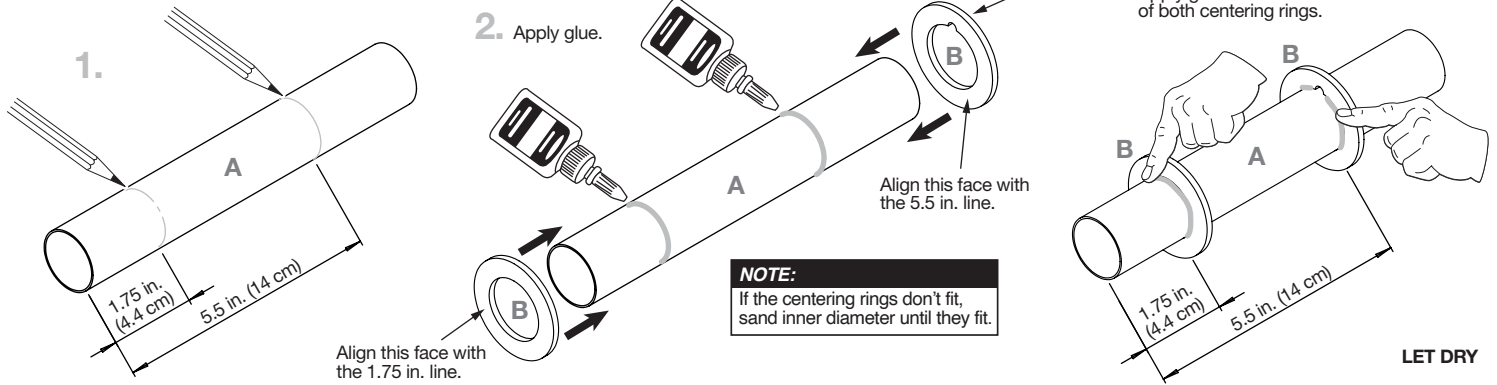
READ ALL INSTRUCTIONS. Make sure you have all parts and supplies. Test fit all parts before applying glue. Refer to your glue manufacturer's dry times during build.

SUPPLIES

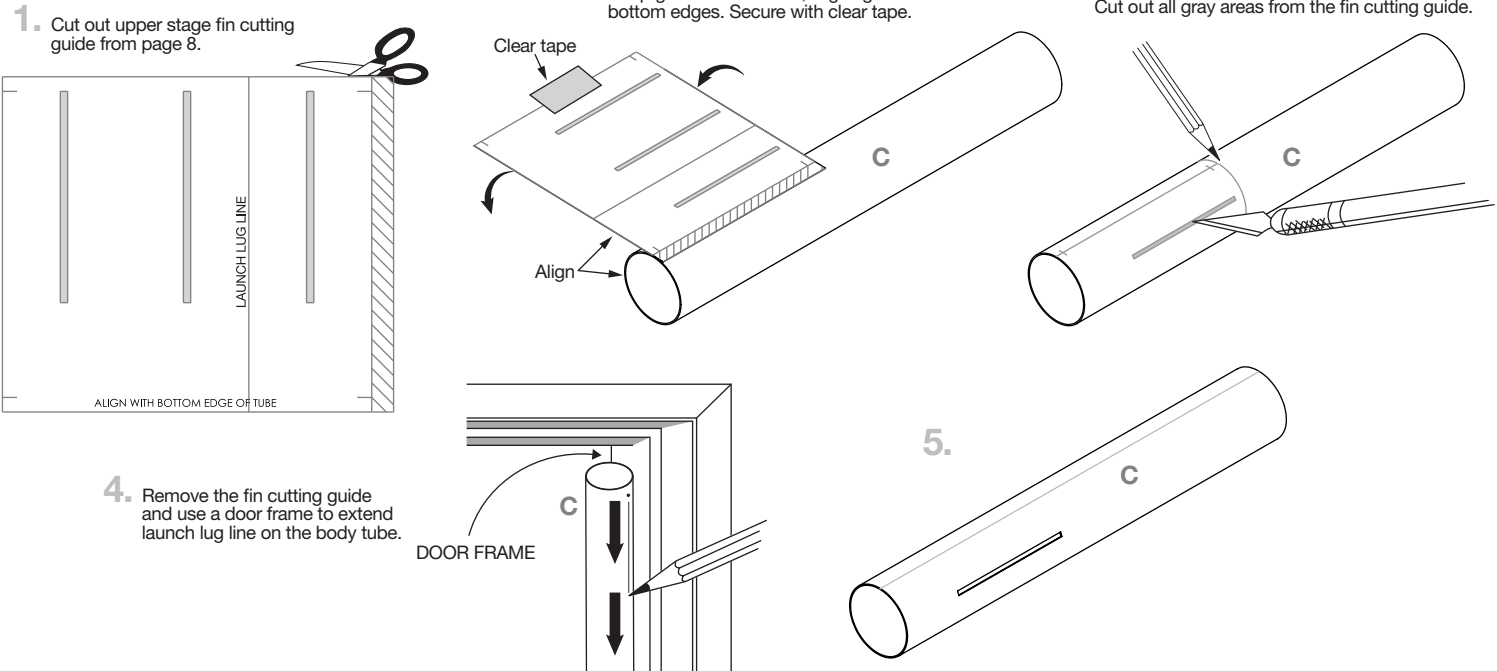


090001-9728 Waterslide decal

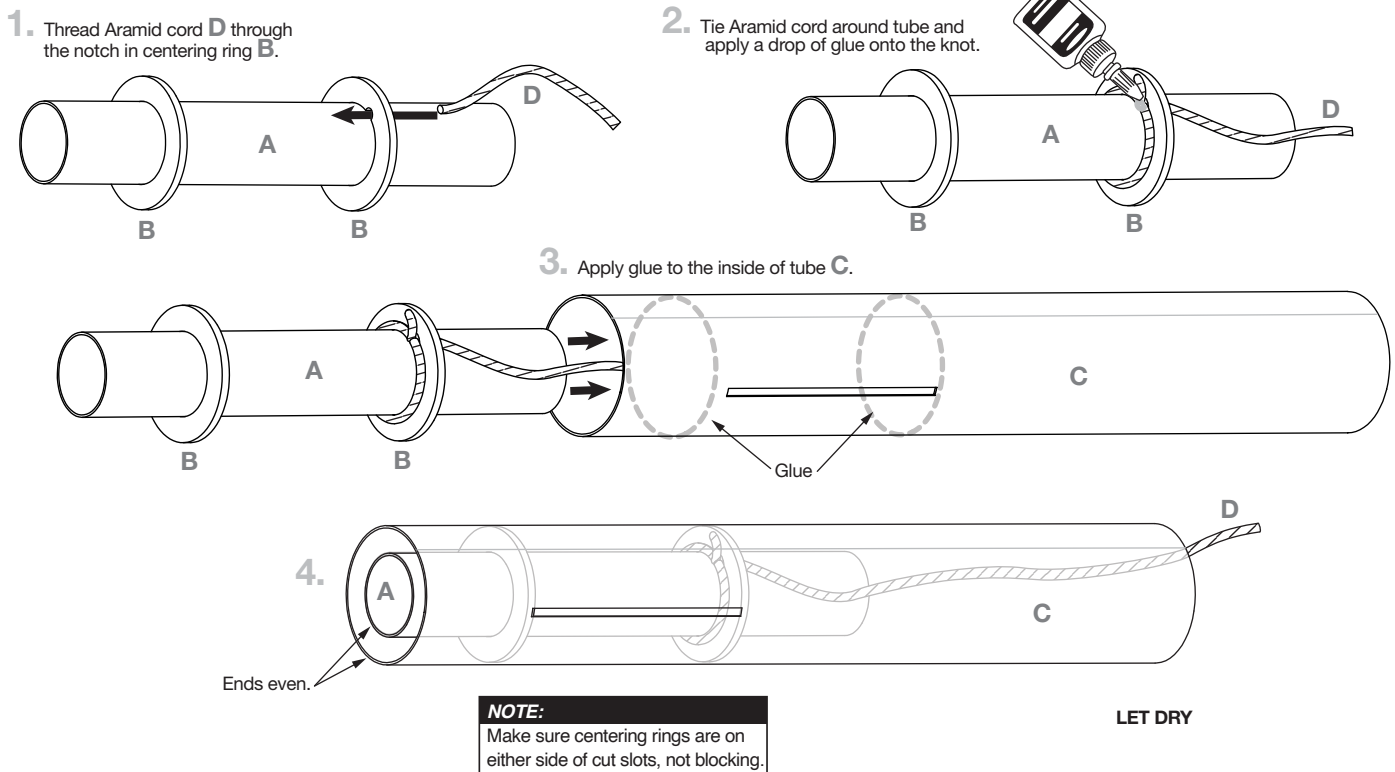
UPPER STAGE ENGINE MOUNT ASSEMBLY



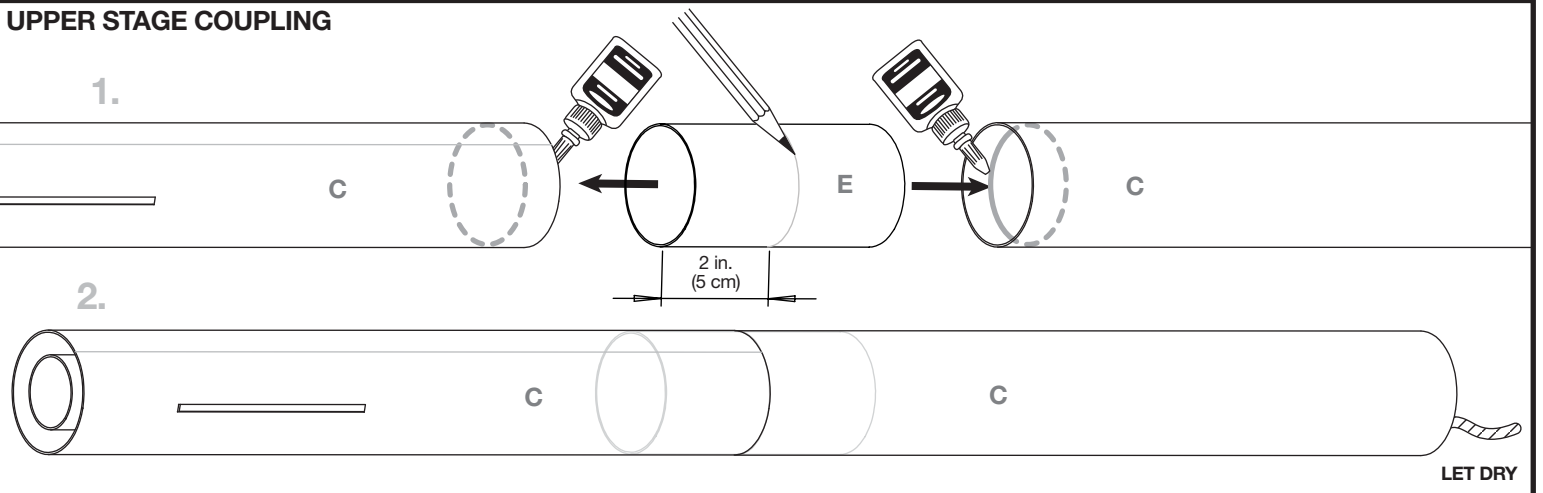
CUTTING UPPER STAGE FIN SLOTS



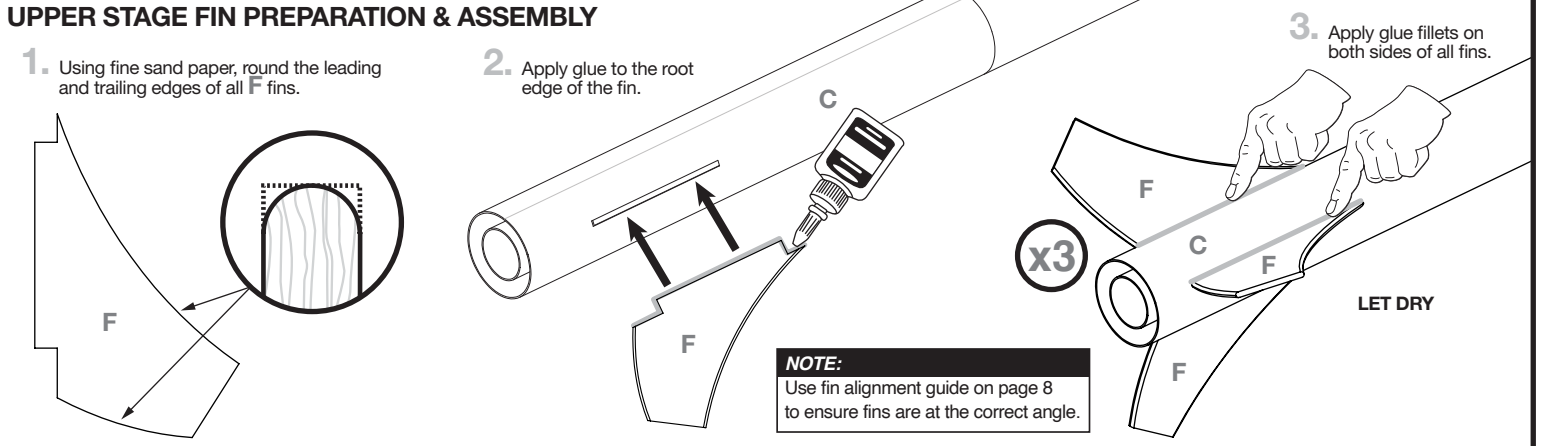
INSTALL ARAMID CORD & UPPER STAGE ENGINE MOUNT



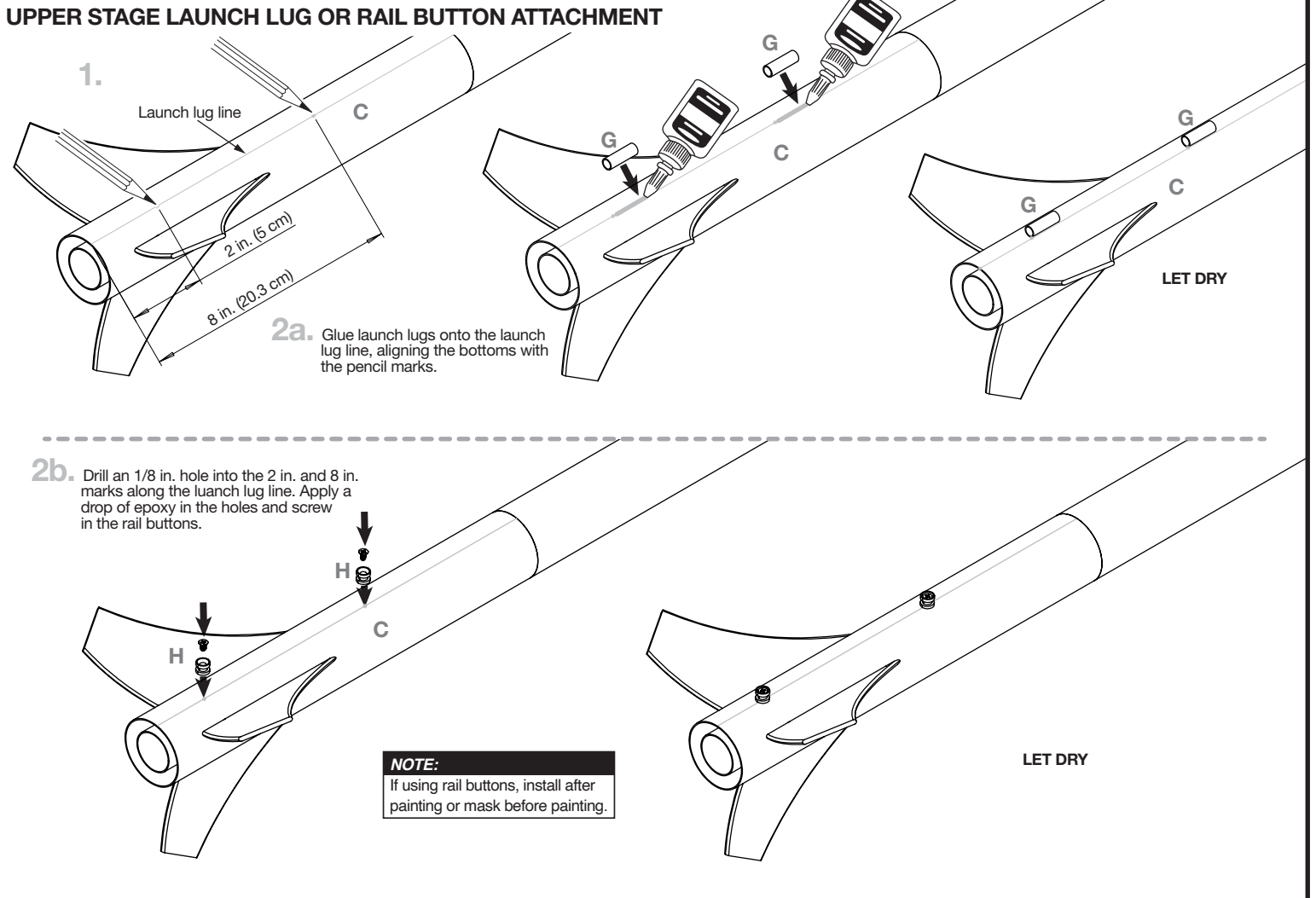
UPPER STAGE COUPLING



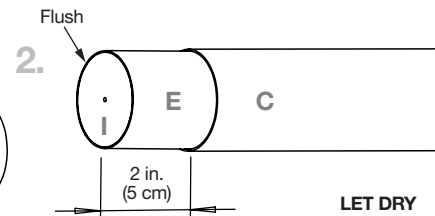
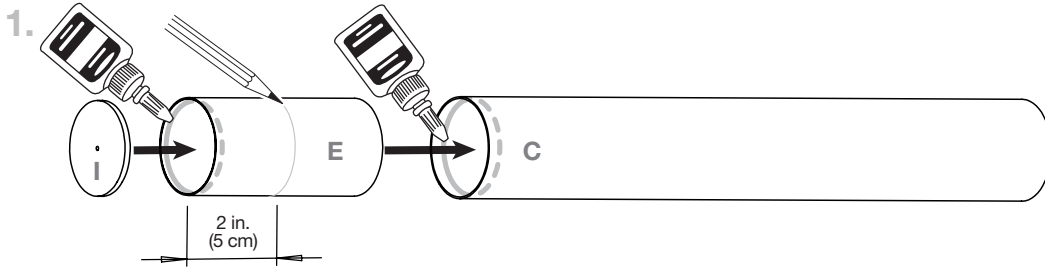
UPPER STAGE FIN PREPARATION & ASSEMBLY



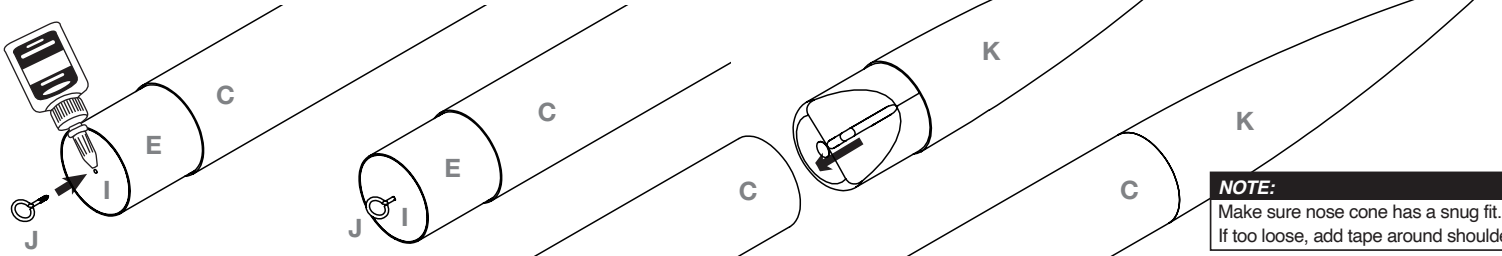
UPPER STAGE LAUNCH LUG OR RAIL BUTTON ATTACHMENT



ASSEMBLE PAYLOAD SECTION

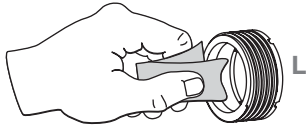


3. Apply a drop of glue into the bulkhead hole and screw in eye screw.

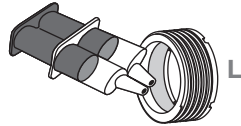


INSTALL UPPER STAGE ENGINE RETAINER

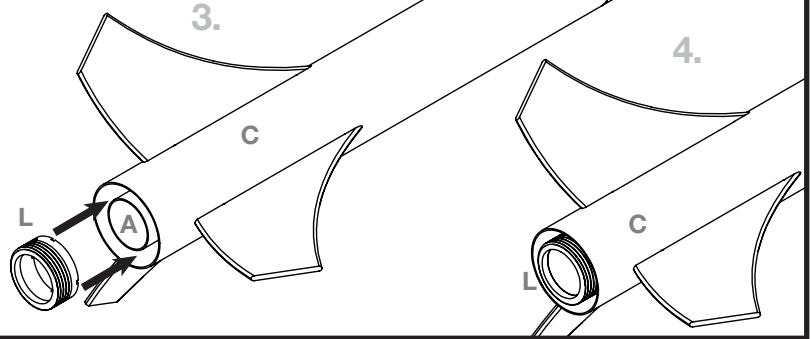
1. Roughen inside of engine retainer with sandpaper.



2. Apply epoxy to inside of engine retainer.



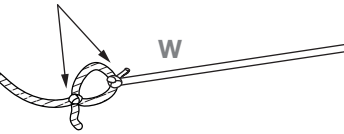
CAUTION:
For safe handling of epoxy, see manufacturer's warnings and follow instructions for use.



INSTALL UPPER STAGE RECOVERY SYSTEM

1. Tie a loop in the end of the Aramid cord. Tie the shock cord to the loop in the Aramid cord.

Double knot

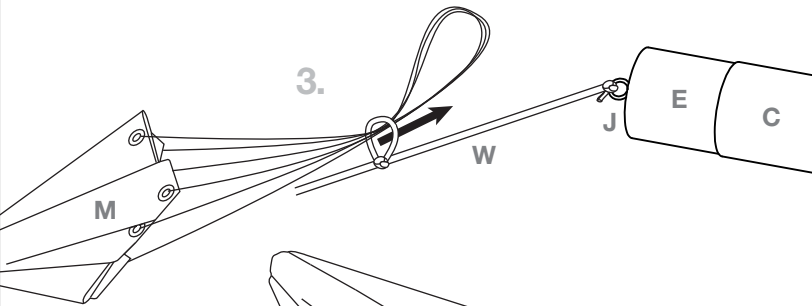


2. Tie a loop 6 in. from the free end of the shock cord. Tie the free end of the shock cord to the eye screw.

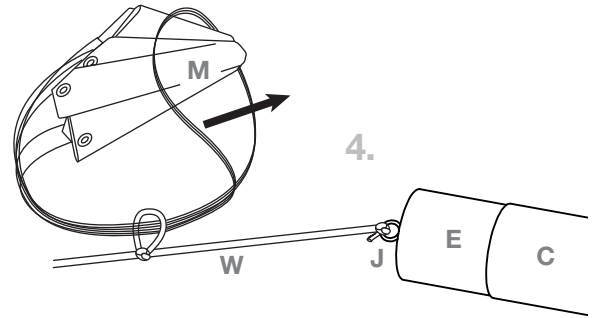
6 in. (15.2 cm)



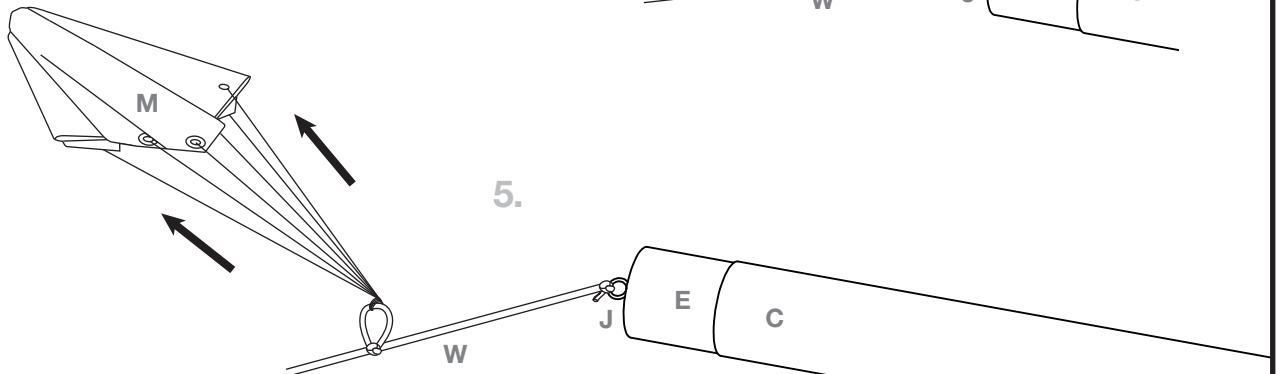
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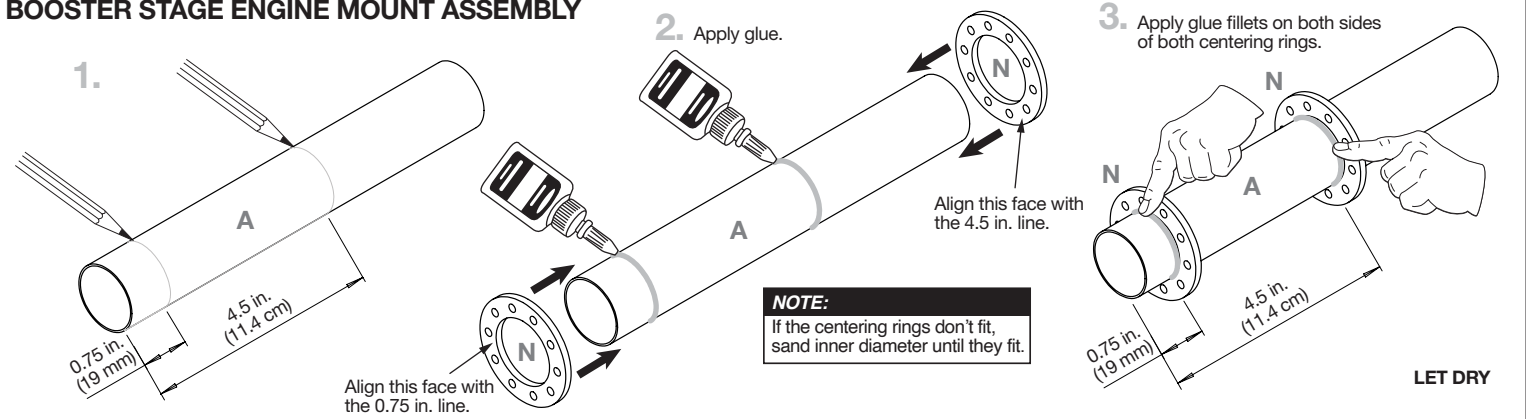
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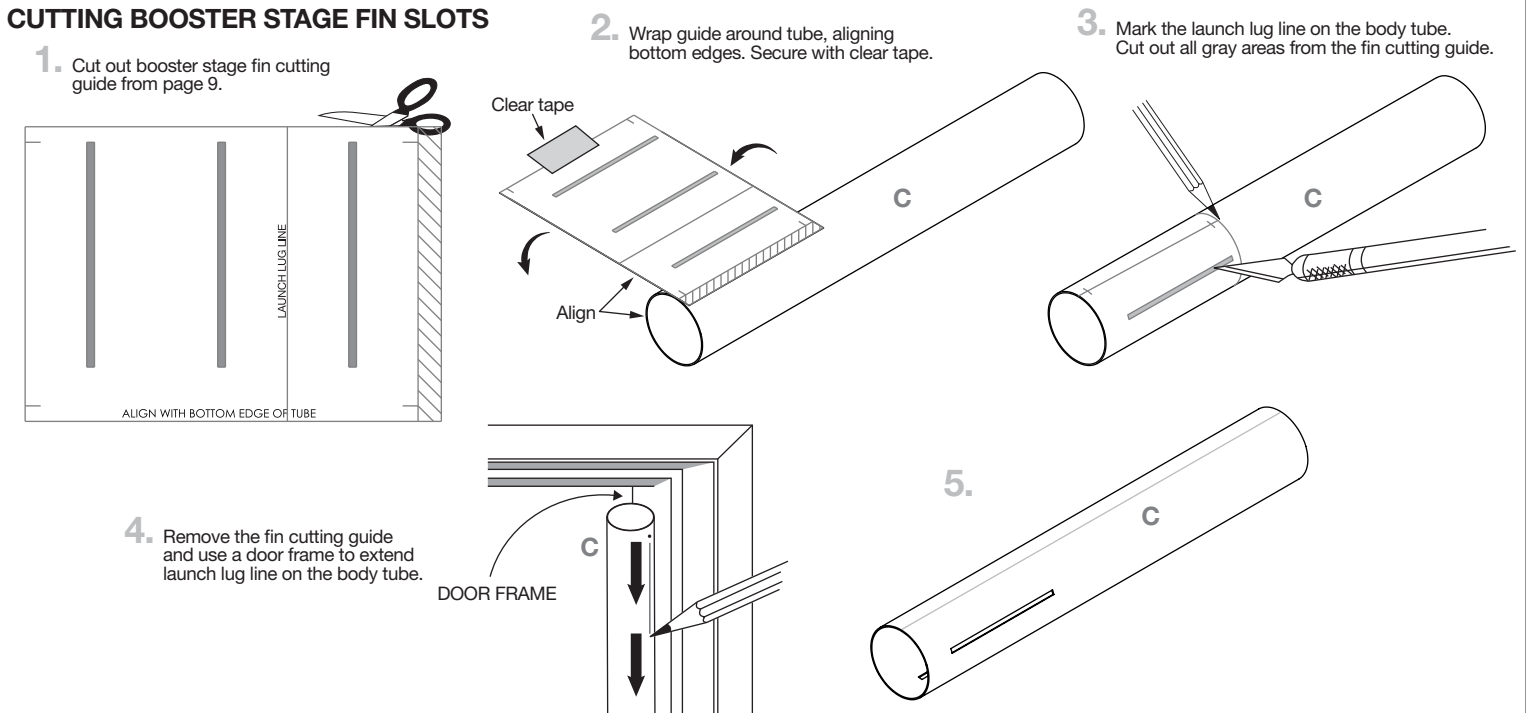
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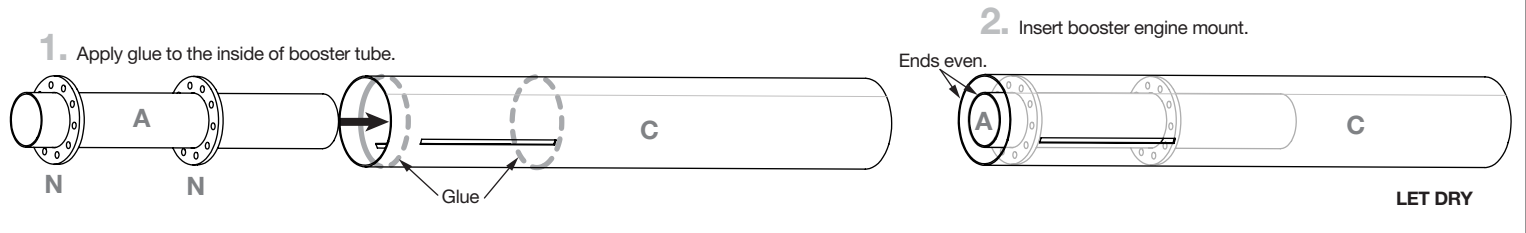
BOOSTER STAGE ENGINE MOUNT ASSEMBLY



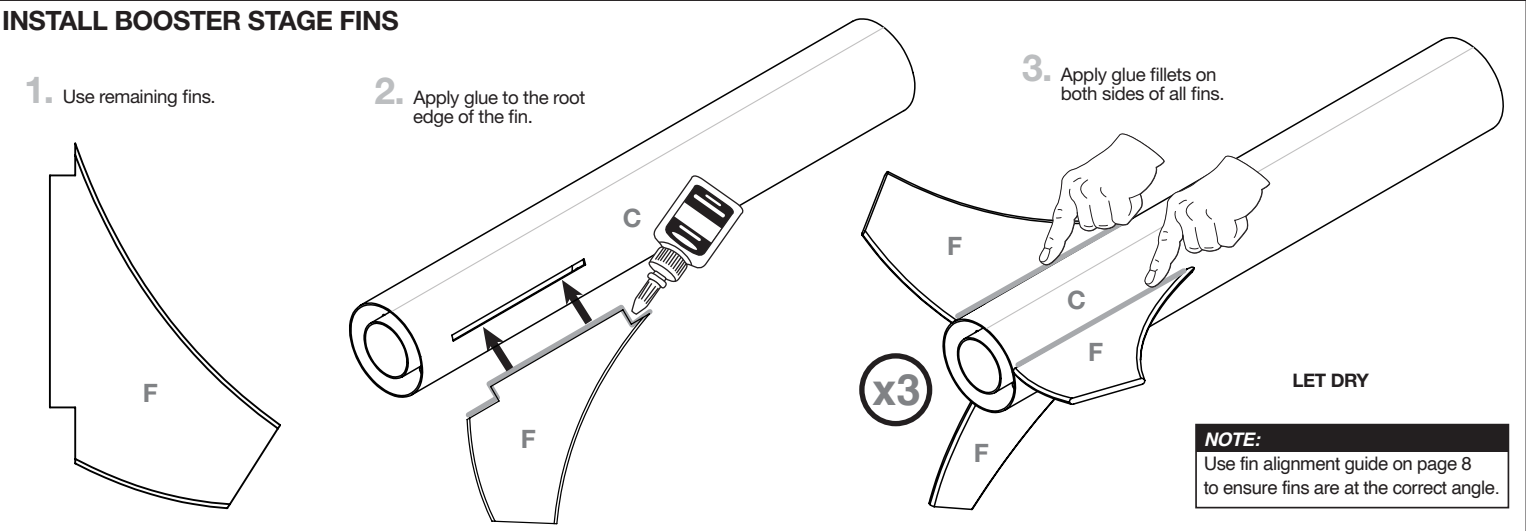
CUTTING BOOSTER STAGE FIN SLOTS



INSTALL BOOSTER STAGE ENGINE MOUNT

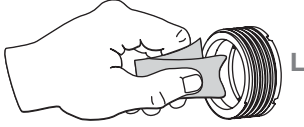


INSTALL BOOSTER STAGE FINS

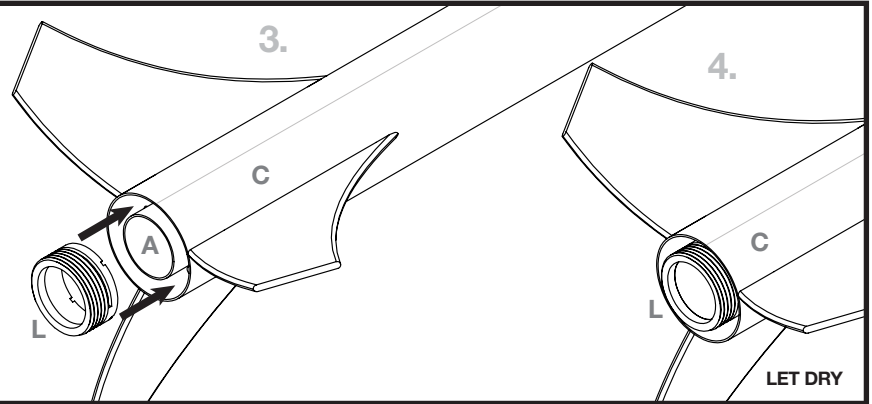
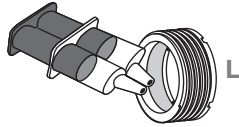


INSTALL BOOSTER STAGE ENGINE RETAINER

1. Roughen inside of engine retainer with sandpaper.

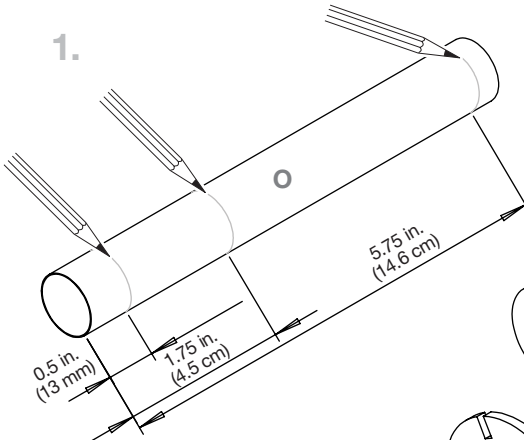


2. Apply epoxy to inside of engine retainer.

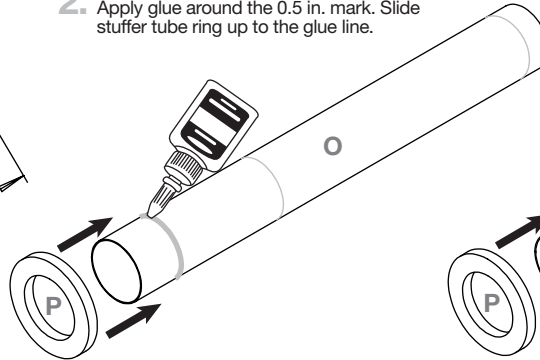


ASSEMBLE BOOSTER RECOVERY COMPARTMENT

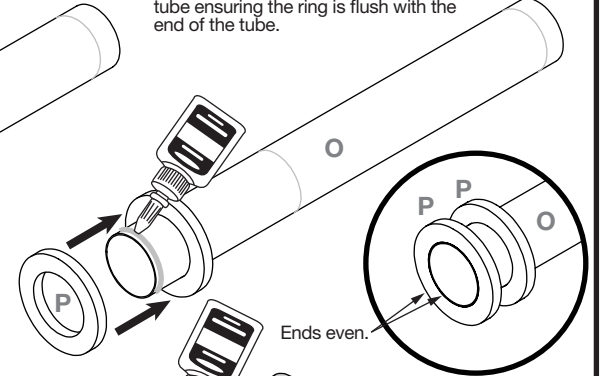
1.



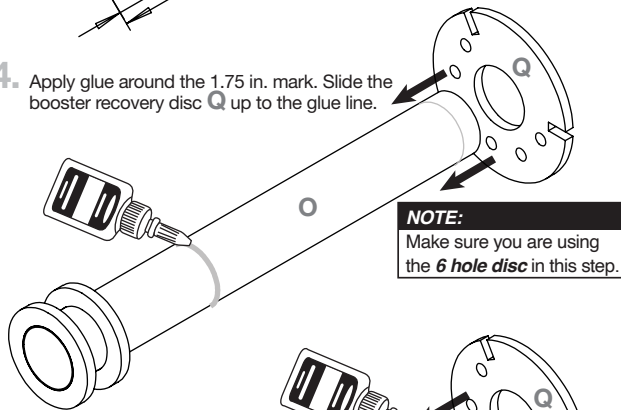
2. Apply glue around the 0.5 in. mark. Slide stuffer tube ring up to the glue line.



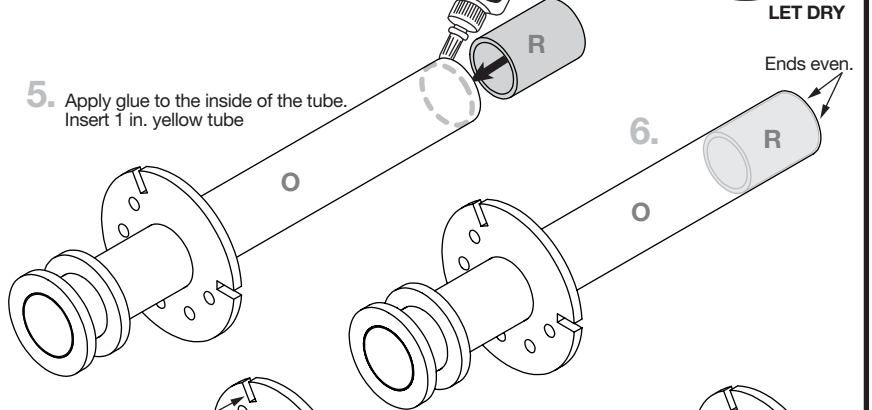
3. Apply glue around the end of the tube. Slide second stuffer tube ring over the tube ensuring the ring is flush with the end of the tube.



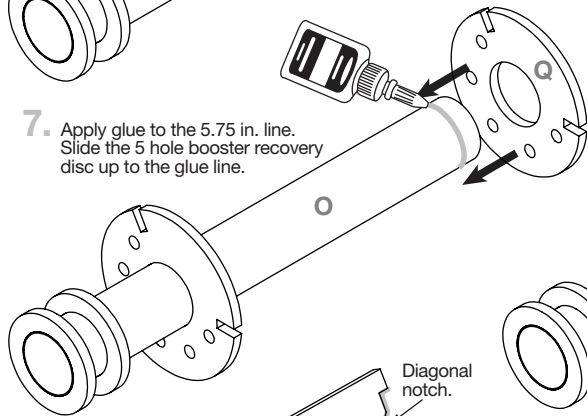
4. Apply glue around the 1.75 in. mark. Slide the booster recovery disc Q up to the glue line.



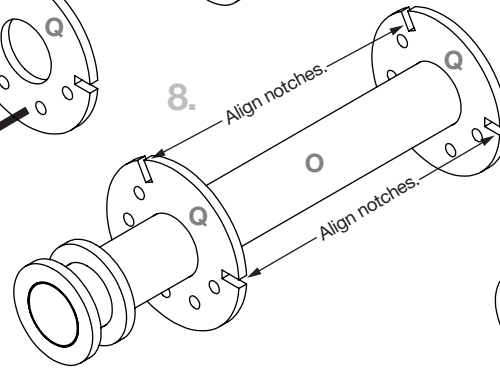
5. Apply glue to the inside of the tube. Insert 1 in. yellow tube



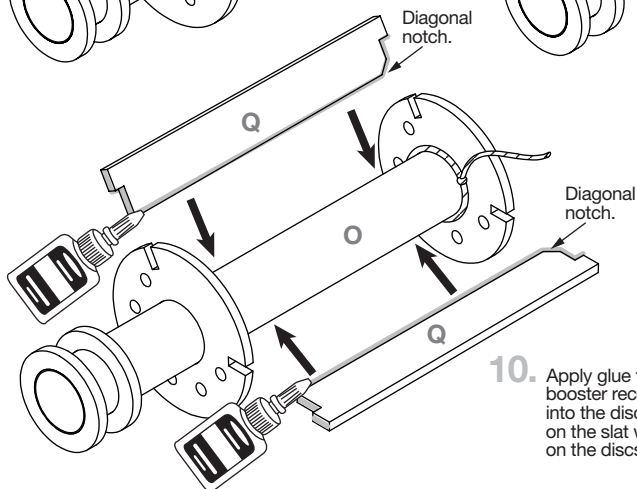
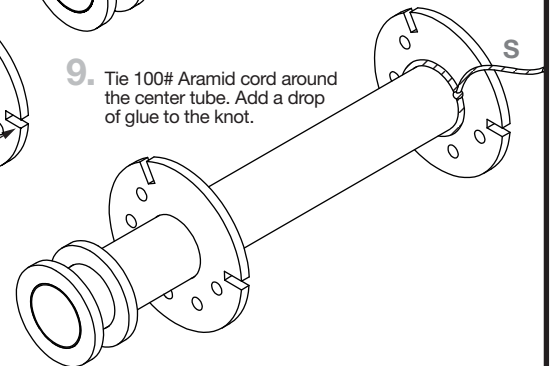
7. Apply glue to the 5.75 in. line. Slide the 5 hole booster recovery disc up to the glue line.



8. Align notches.

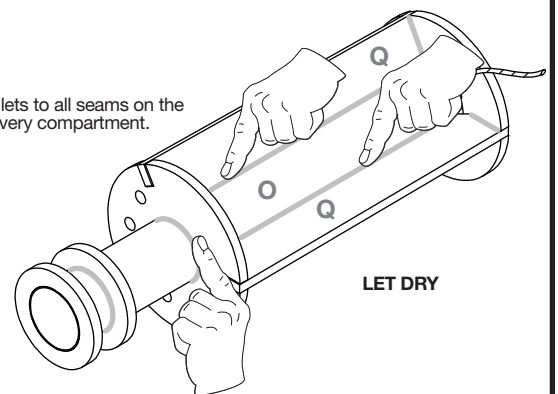


9. Tie 100# Aramid cord around the center tube. Add a drop of glue to the knot.

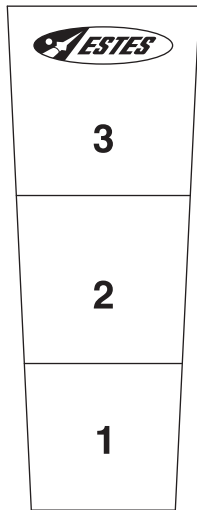


10. Apply glue to the root edges of booster recovery slat walls. Insert into the discs aligning the tabs on the slat walls with the notches on the discs.

11. Apply glue fillets to all seams on the booster recovery compartment.

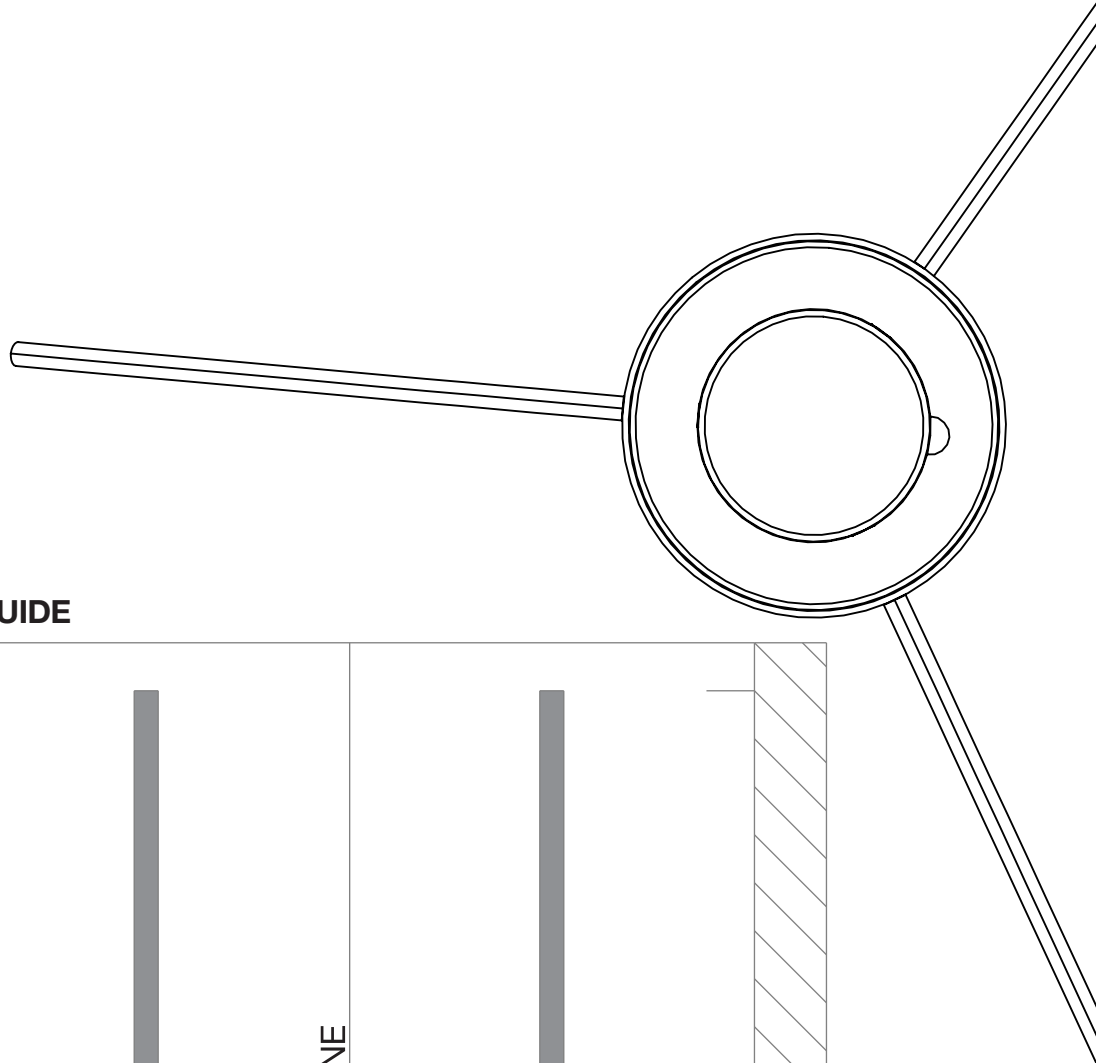


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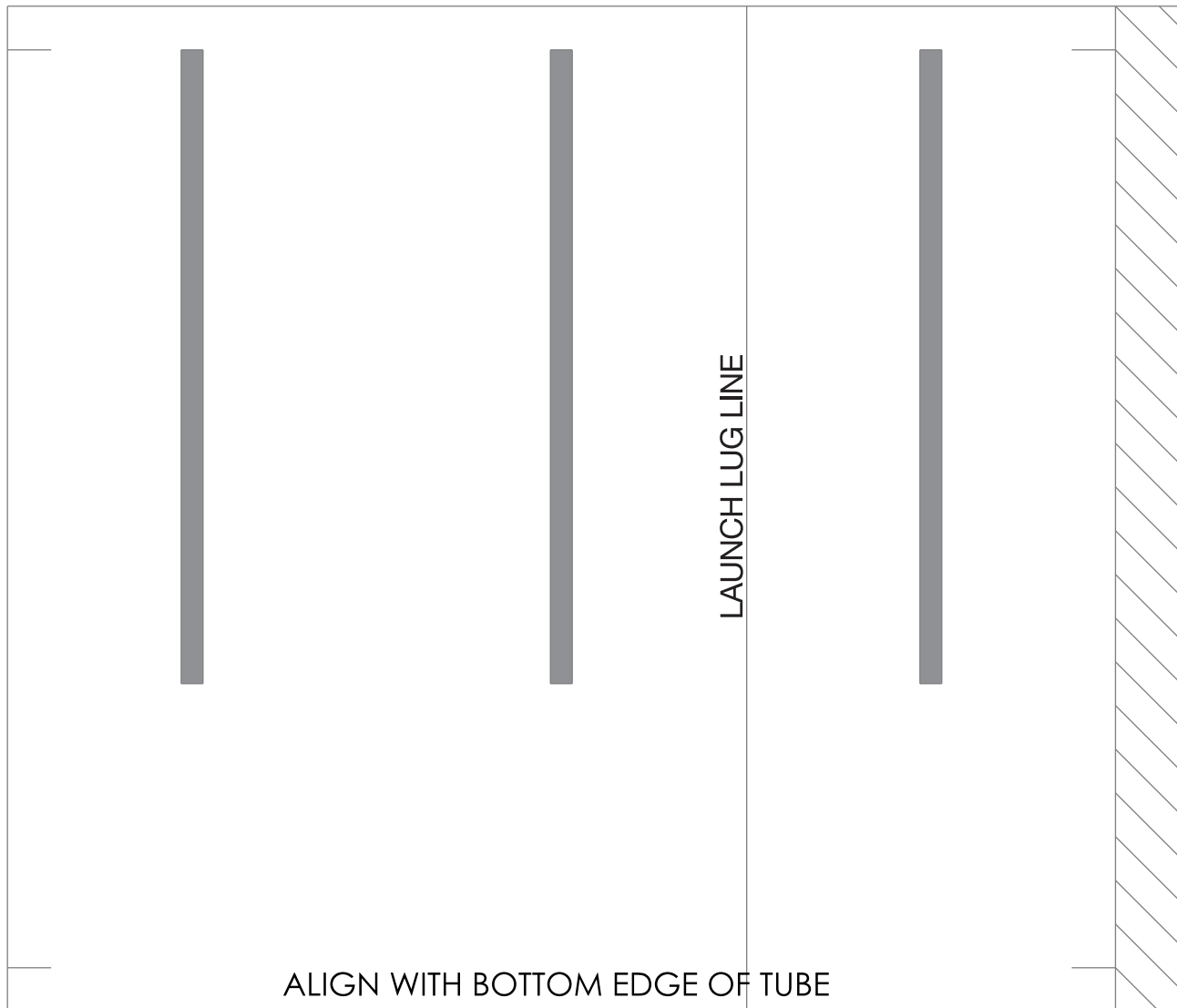


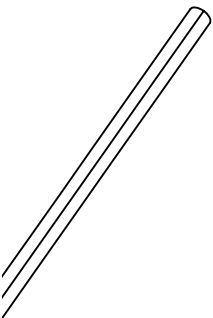
SHOCK CORD MOUNT

FIN ALIGNMENT GUIDE

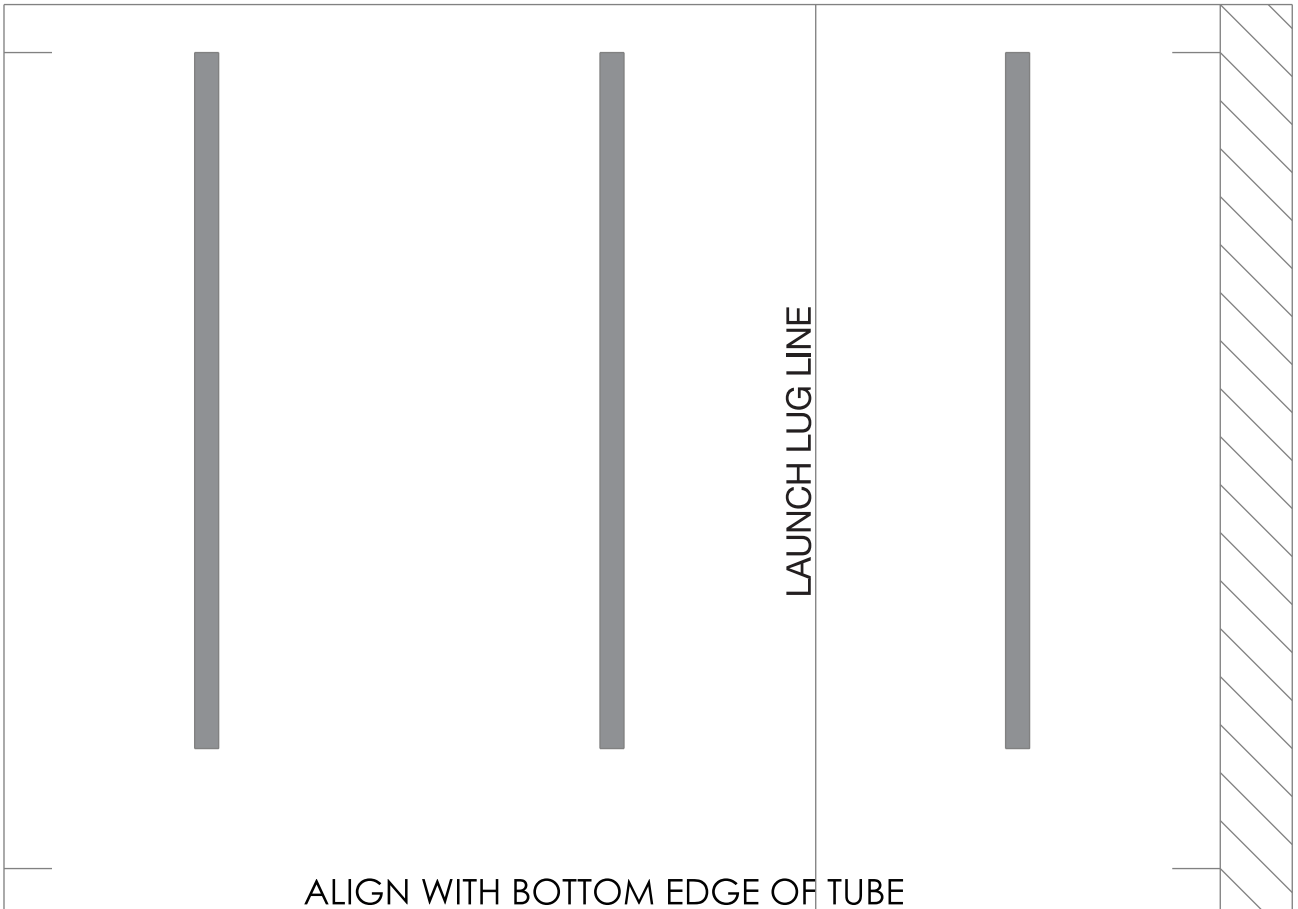


UPPER STAGE FIN CUTTING GUIDE





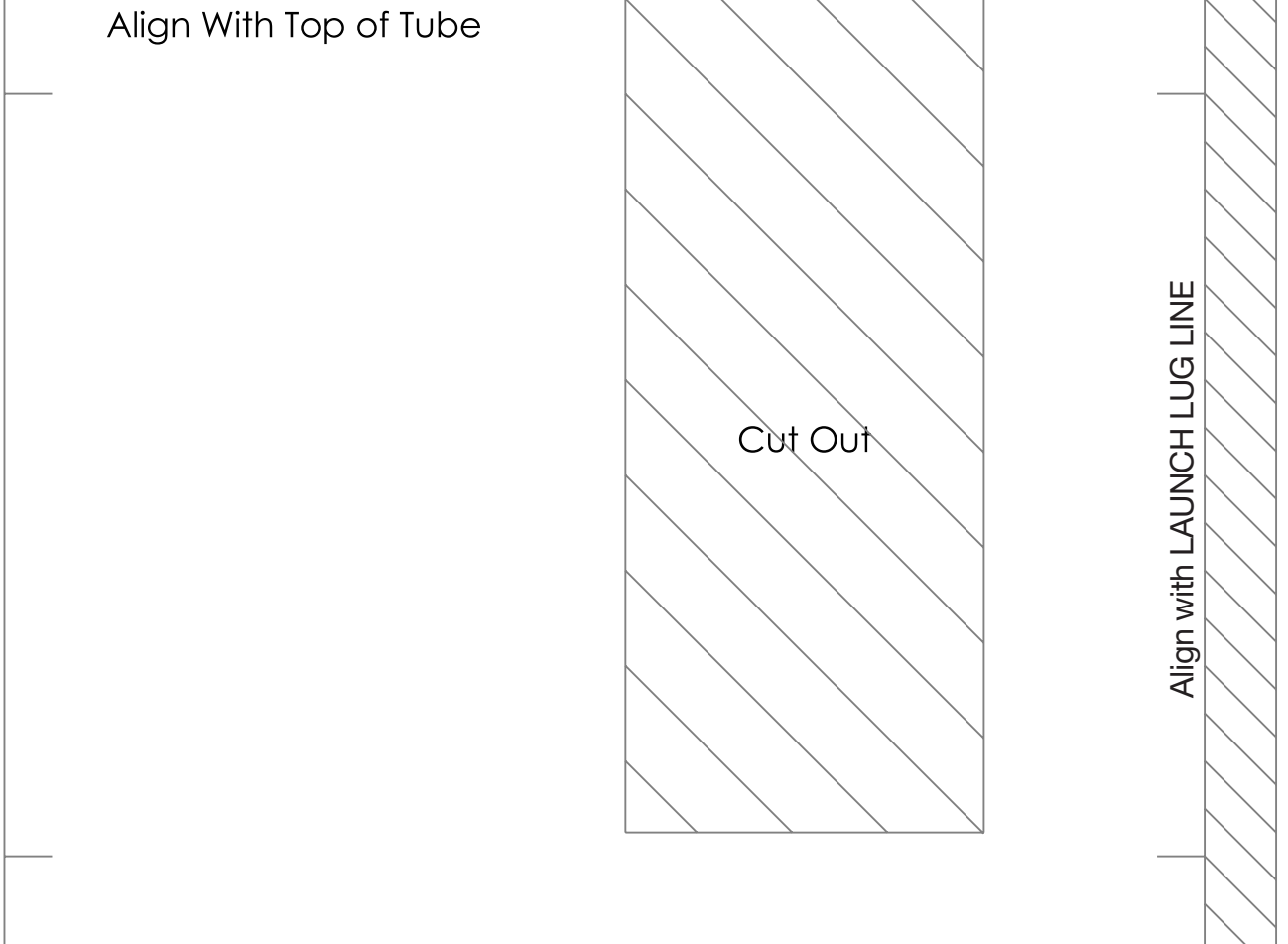
BOOSTER FIN CUTTING GUIDE



ALIGN WITH BOTTOM EDGE OF TUBE



HATCH CUTTING GUIDE



Align With Top of Tube

Cut Out

Align with LAUNCH LUG LINE

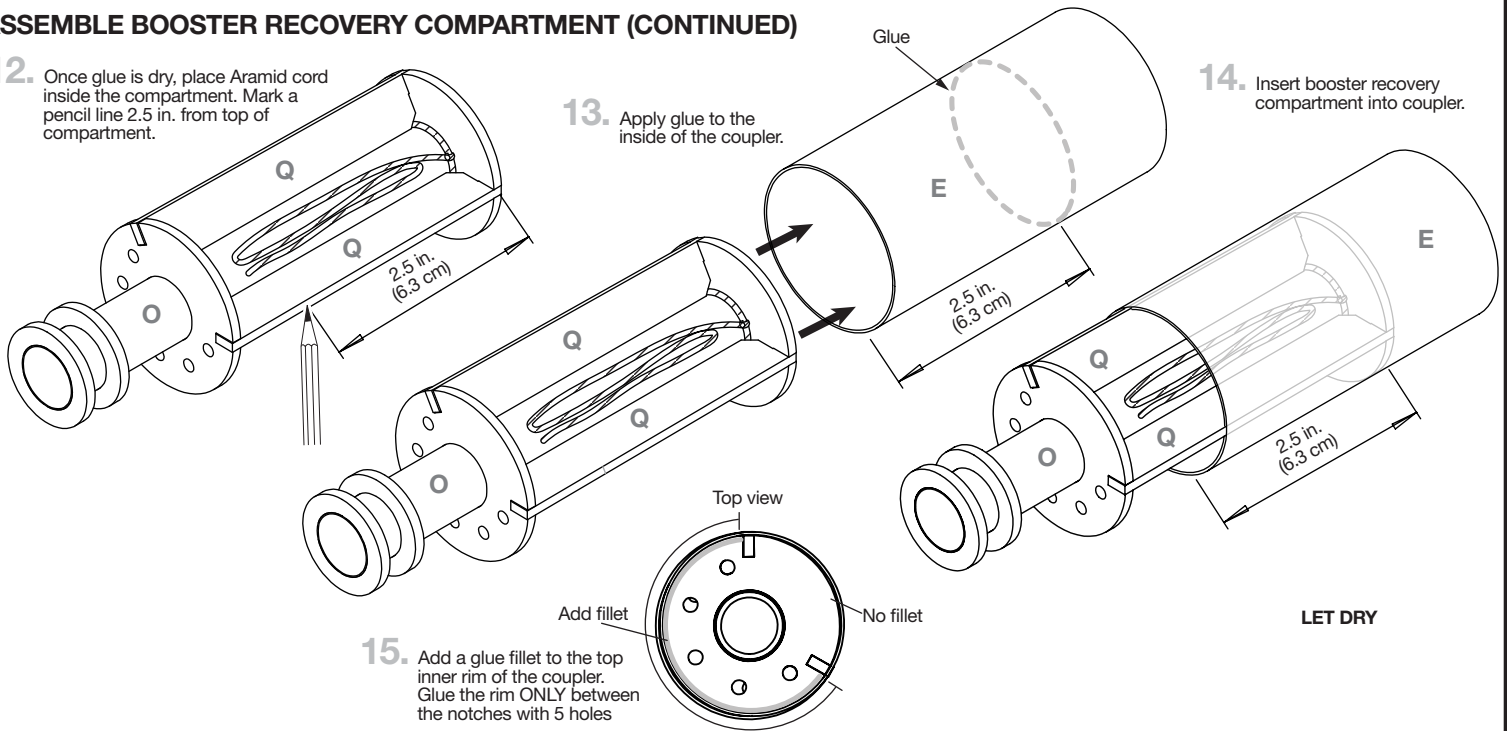
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ASSEMBLE BOOSTER RECOVERY COMPARTMENT (CONTINUED)

12. Once glue is dry, place Aramid cord inside the compartment. Mark a pencil line 2.5 in. from top of compartment.

13. Apply glue to the inside of the coupler.

14. Insert booster recovery compartment into coupler.



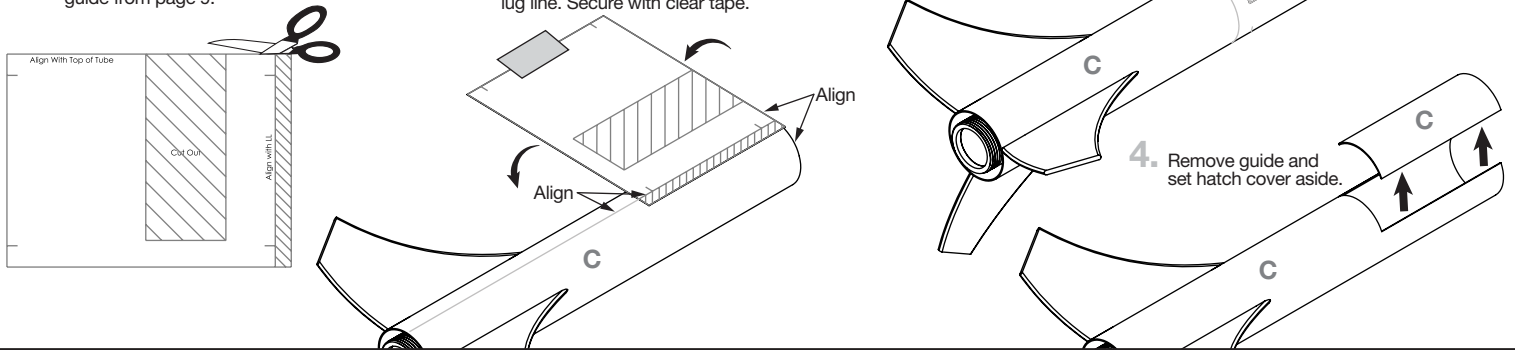
BOOSTER RECOVERY HATCH MARKING AND CUTTING

1. Cut out hatch cutting guide from page 9.

2. Wrap guide around tube, aligning top edges and along the launch lug line. Secure with clear tape.

3. Cut out area marked on guide.

4. Remove guide and set hatch cover aside.



BOOSTER RECOVERY ASSEMBLY

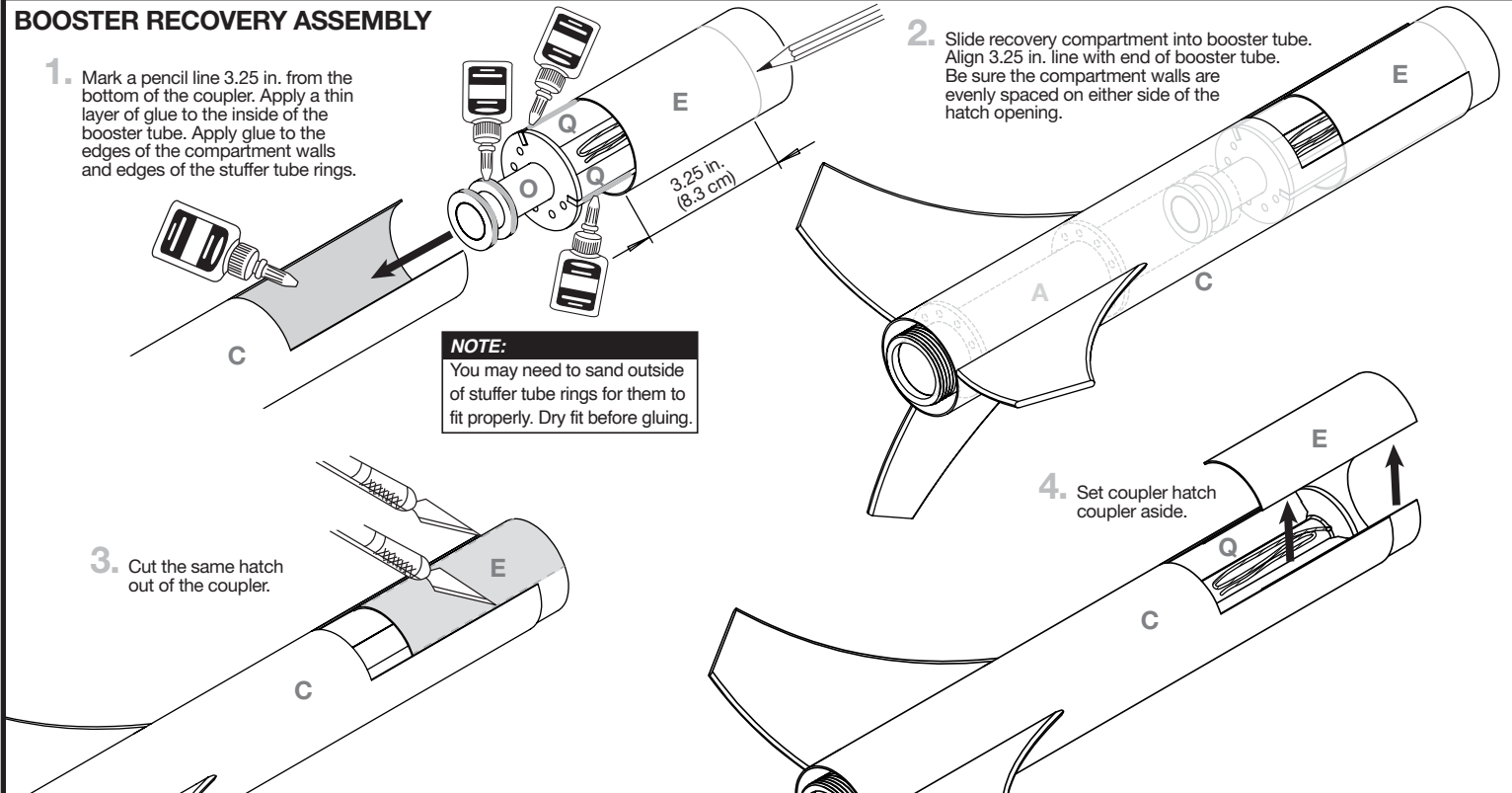
1. Mark a pencil line 3.25 in. from the bottom of the coupler. Apply a thin layer of glue to the inside of the booster tube. Apply glue to the edges of the compartment walls and edges of the stuffer tube rings.

2. Slide recovery compartment into booster tube. Align 3.25 in. line with end of booster tube. Be sure the compartment walls are evenly spaced on either side of the hatch opening.

NOTE:
You may need to sand outside of stuffer tube rings for them to fit properly. Dry fit before gluing.

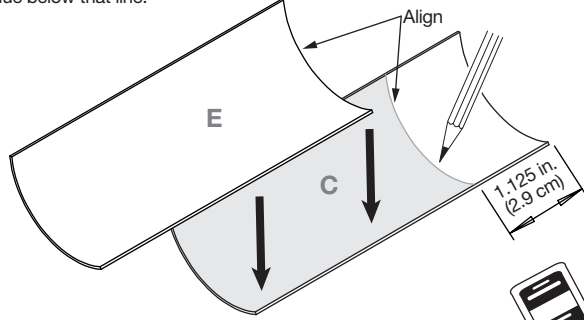
3. Cut the same hatch out of the coupler.

4. Set coupler hatch coupler aside.

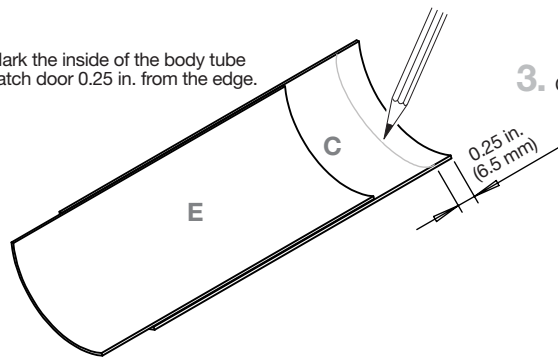


HATCH DOOR ASSEMBLY

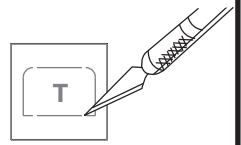
1. Mark the inside of the body tube hatch door 1.125 in. from the edge. Apply a thin layer of glue below that line.



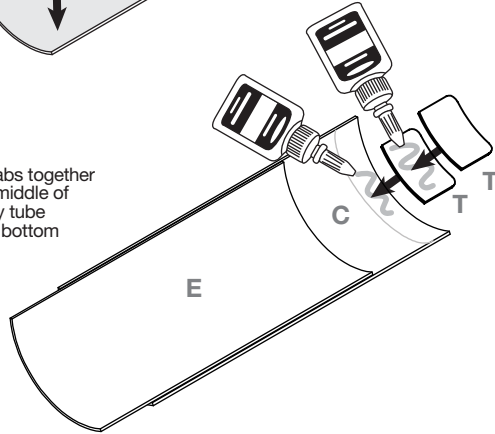
2. Mark the inside of the body tube hatch door 0.25 in. from the edge.



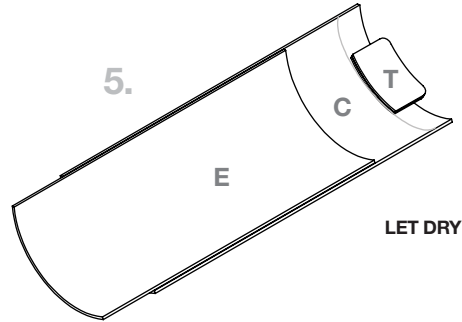
3. Cut out both cardstock tabs.



4. Glue the cardstock tabs together. Glue the tabs to the middle of the inside of the body tube hatch door. Align the bottom of the tabs with the 0.25 in. line.



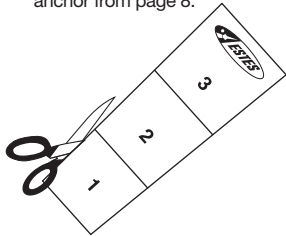
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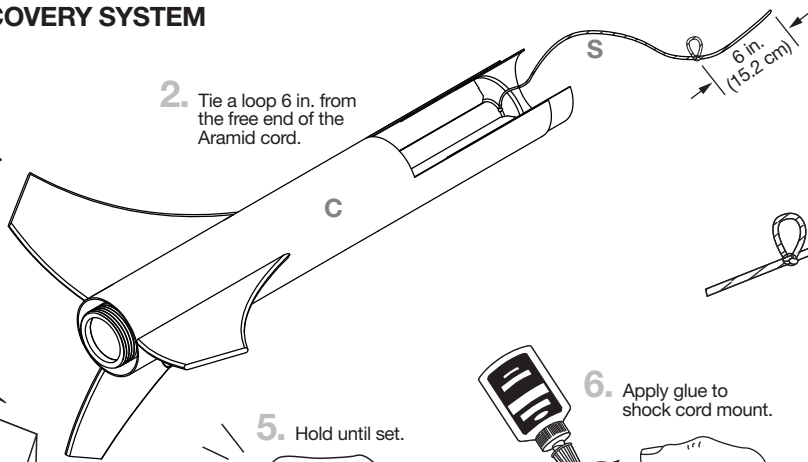
LET DRY

INSTALL BOOSTER RECOVERY SYSTEM

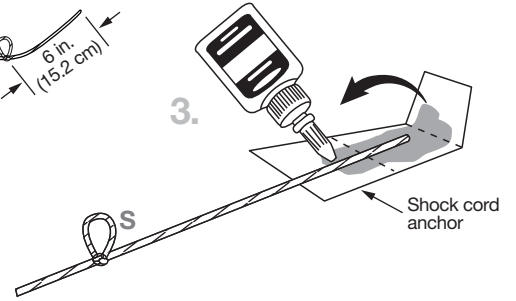
1. Cut out shock cord anchor from page 8.



2. Tie a loop 6 in. from the free end of the Aramid cord.

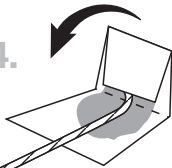


3.

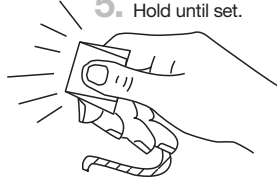


Shock cord anchor

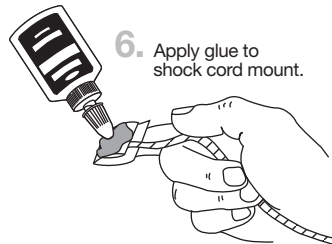
4.



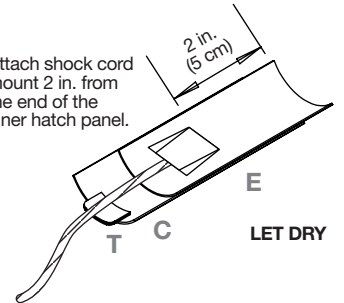
5. Hold until set.



6. Apply glue to shock cord mount.

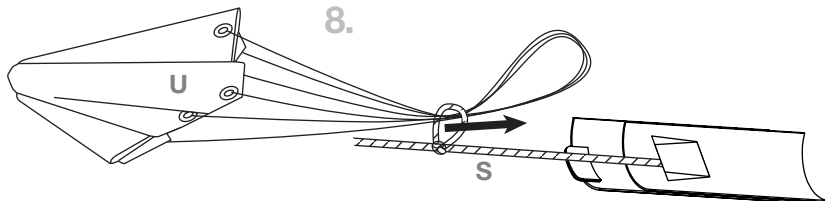


7. Attach shock cord mount 2 in. from the end of the inner hatch panel.

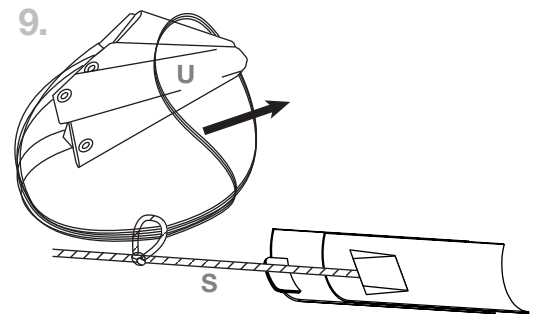


LET DRY

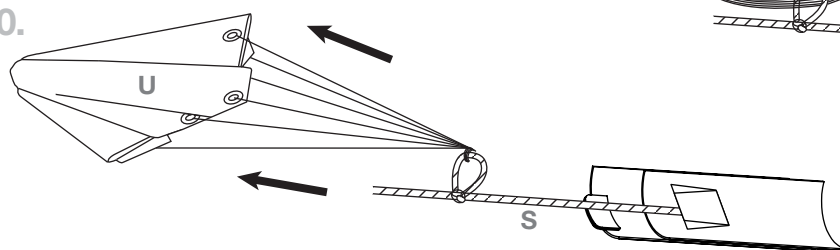
8.



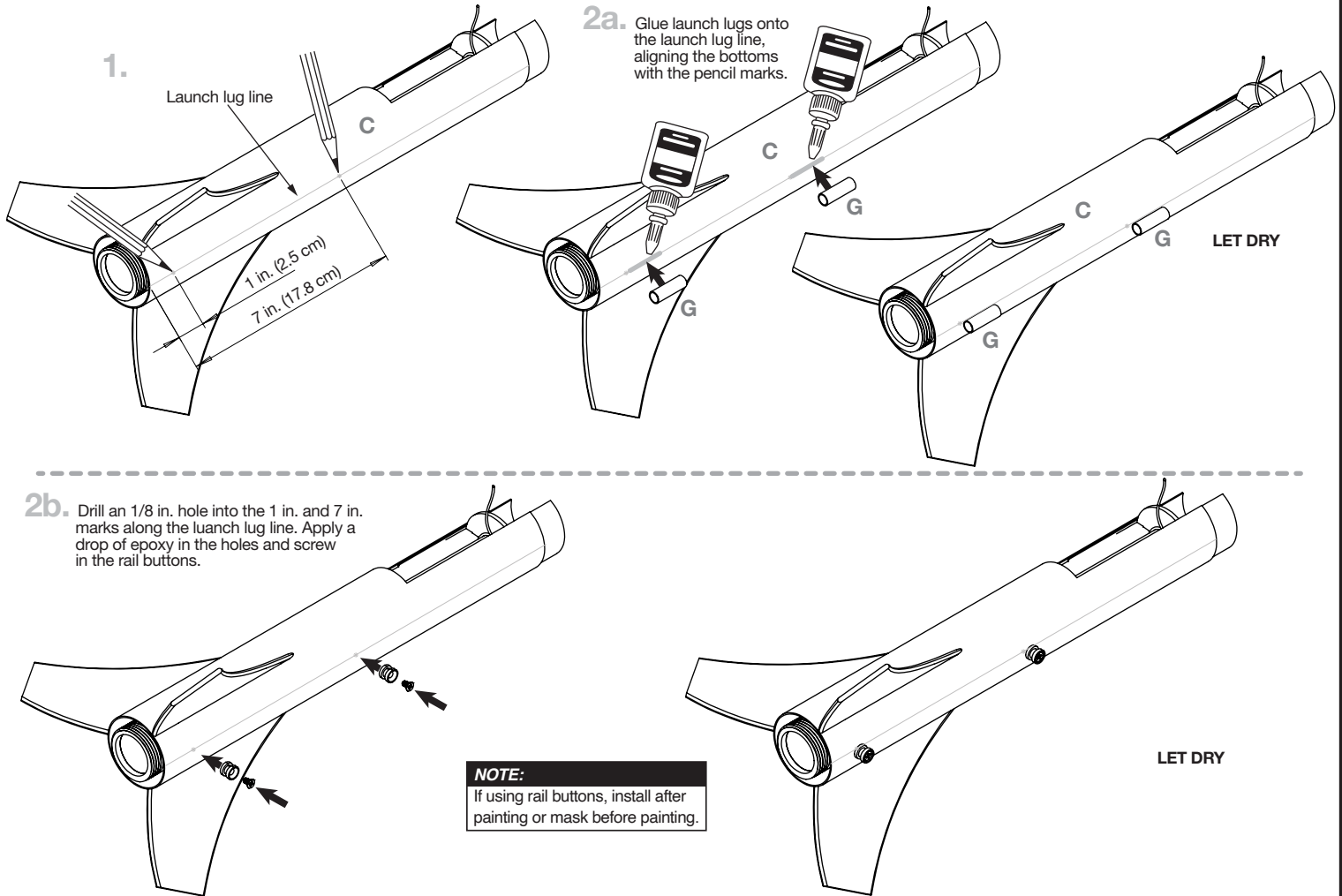
9.



10.



BOOSTER STAGE LAUNCH LUG OR RAIL BUTTON ATTACHMENT



PAINT AND APPLY DECALS

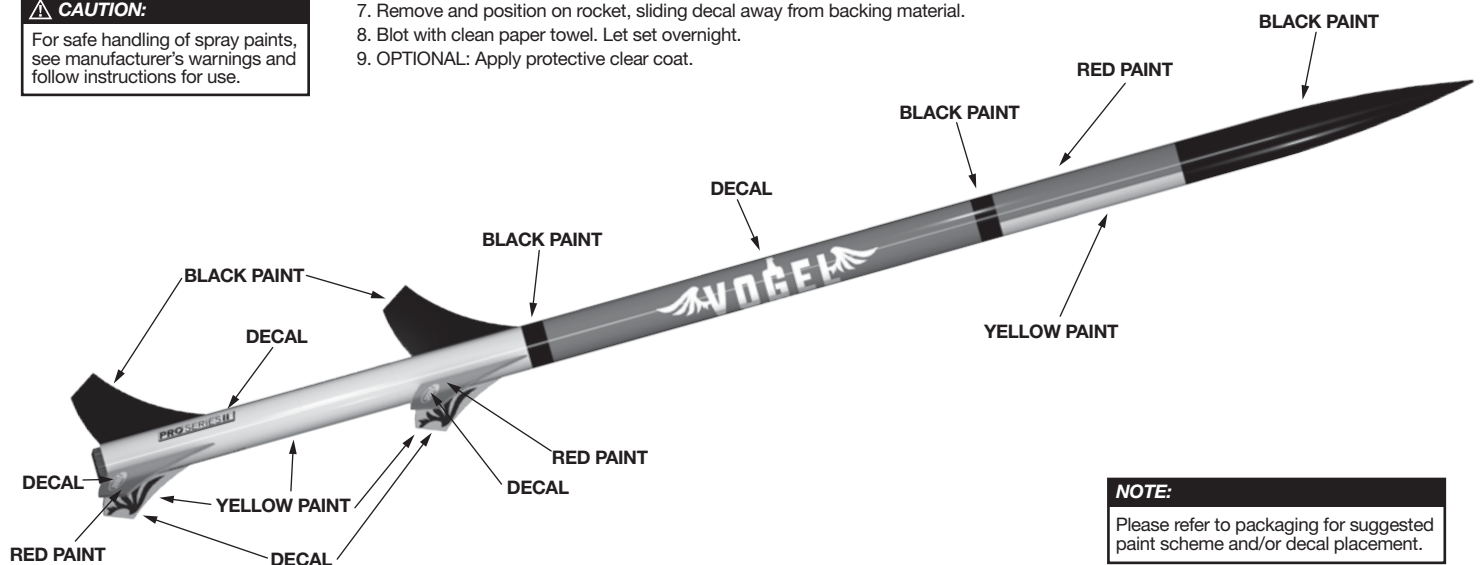
PAINT COLORS

Black Paint
Red Paint
Yellow Paint

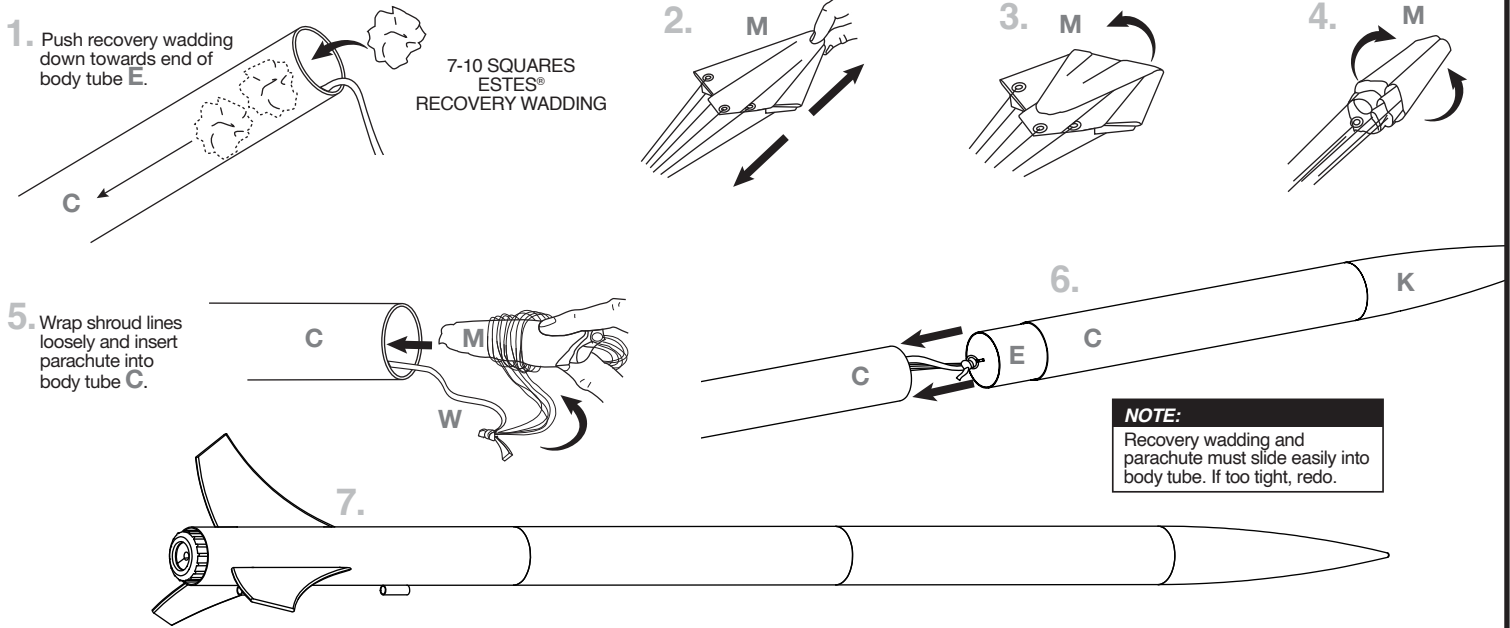
CAUTION:

For safe handling of spray paints, see manufacturer's warnings and follow instructions for use.

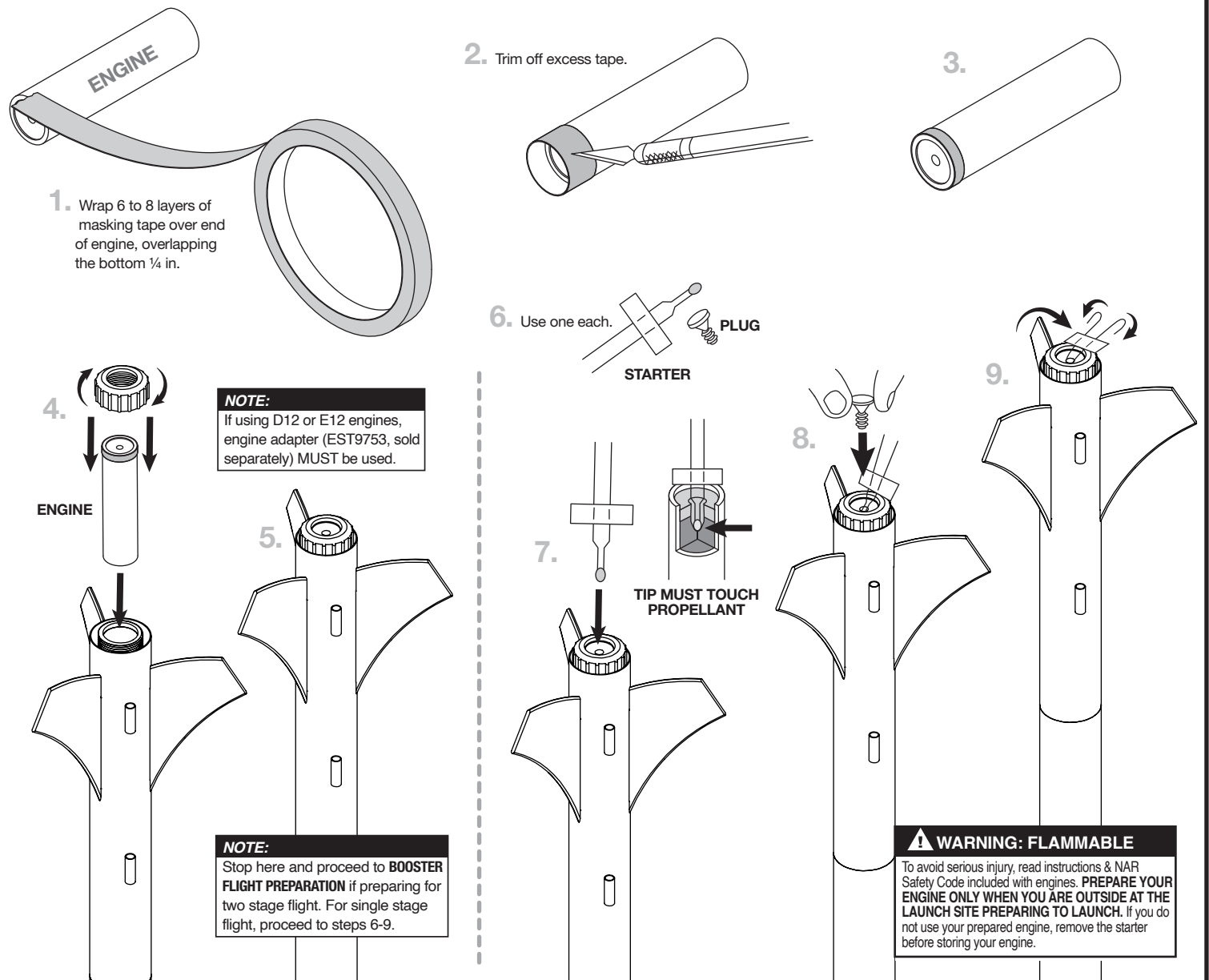
1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Paint entire rocket yellow.
3. Mask off rocket as needed for red and black paint application.
4. Apply decals only after paint is dry.
5. Cut decals from sheet, trimming close to edge.
6. One at a time, place in warm water until decal curls and begins to relax.
7. Remove and position on rocket, sliding decal away from backing material.
8. Blot with clean paper towel. Let set overnight.
9. OPTIONAL: Apply protective clear coat.



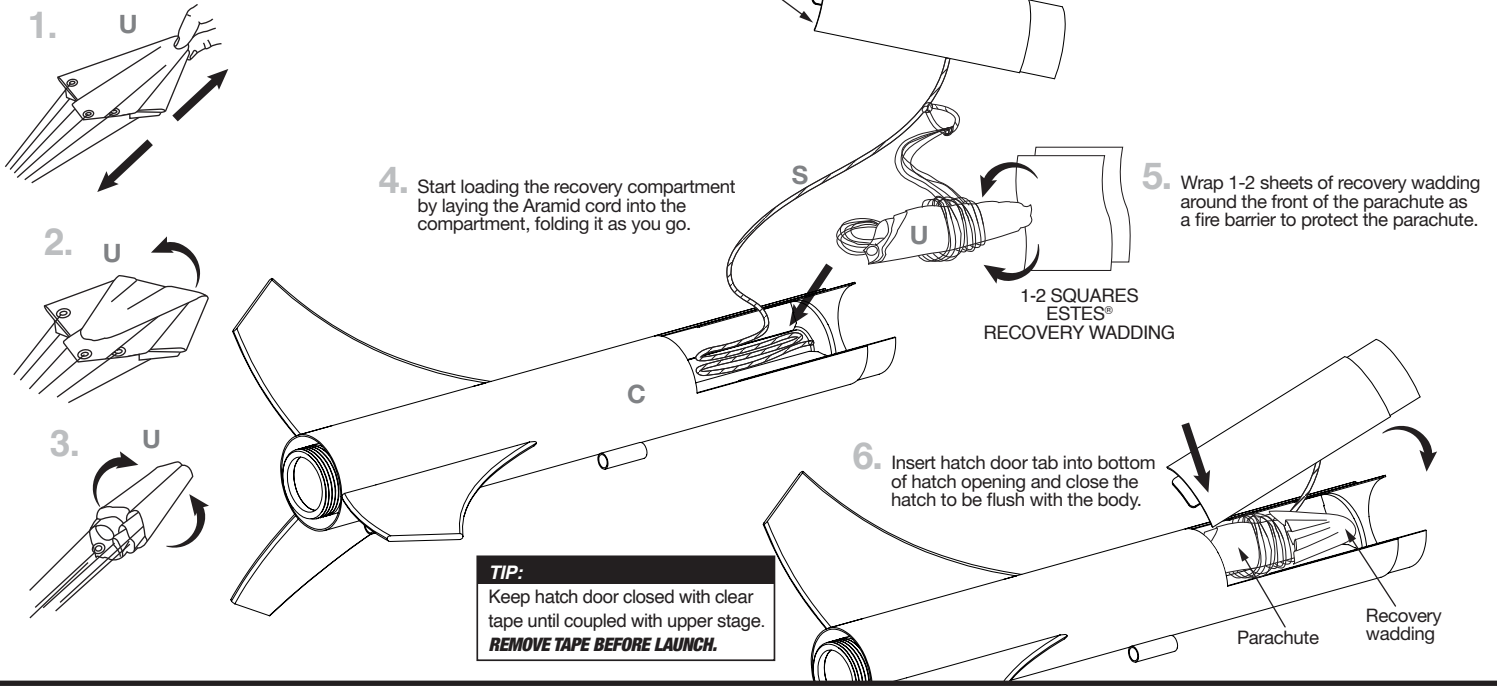
UPPER STAGE FLIGHT PREPARATION



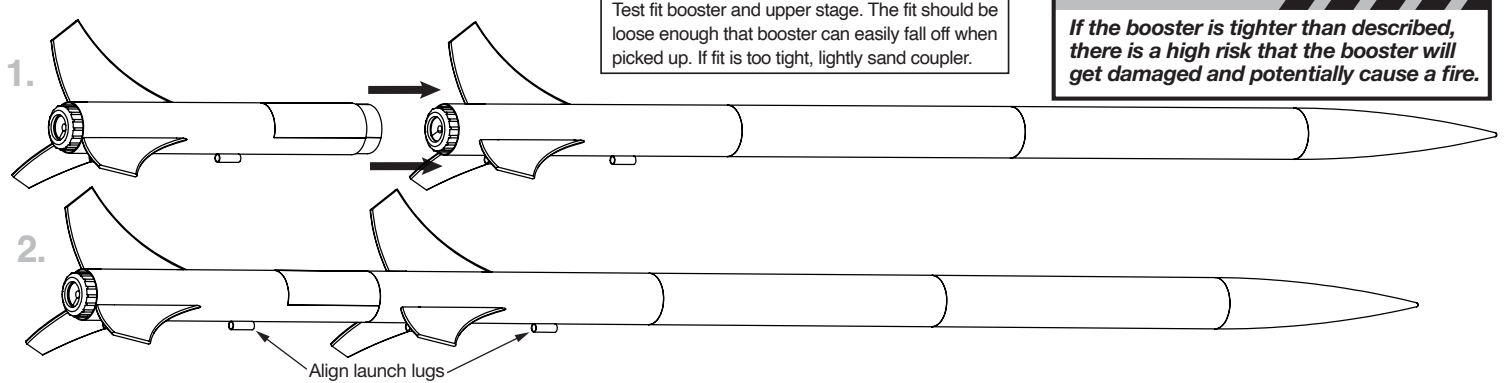
UPPER STAGE ENGINE PREPARATION



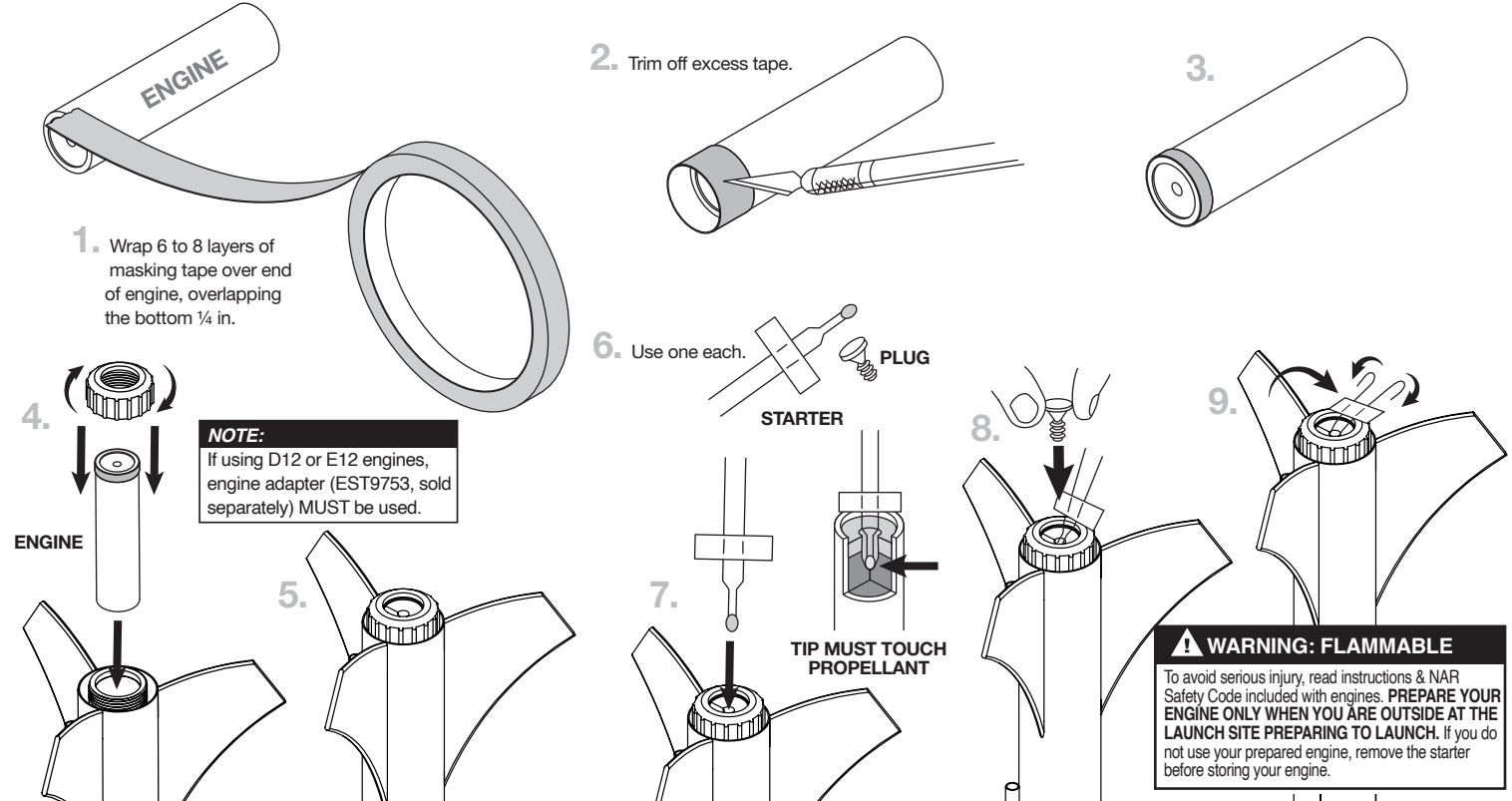
BOOSTER FLIGHT PREPARATION



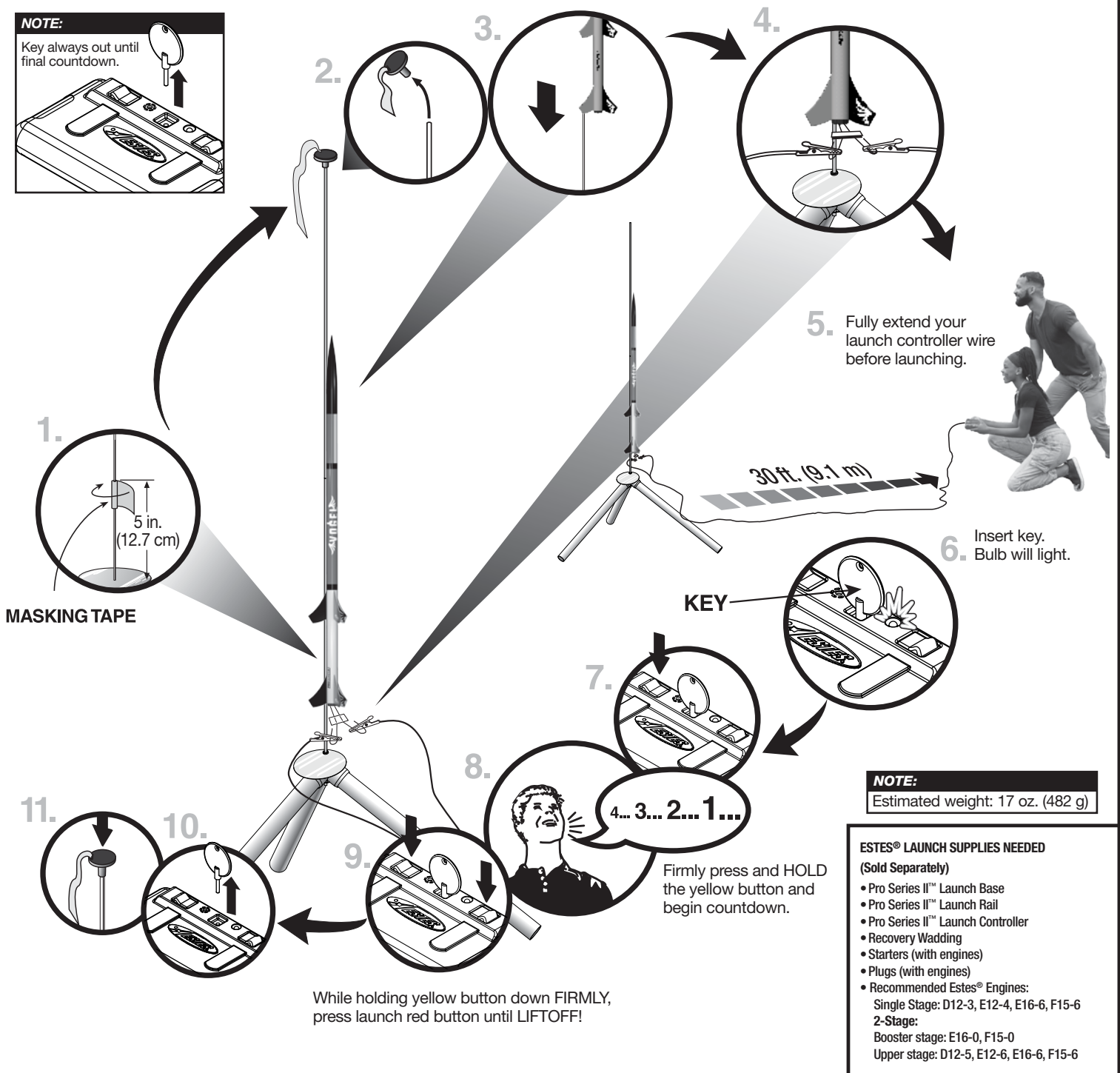
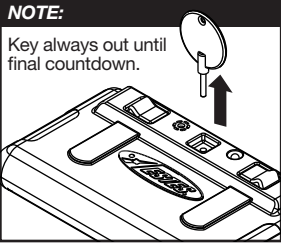
ASSEMBLE BOOSTER AND UPPER STAGES



BOOSTER ENGINE PREPARATION



COUNTDOWN AND LAUNCH



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 (1000 ft. [305 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.

