



EstesRockets.com

PRO SERIES II

9729

# CRIMSON FURY™

AGES  
18+



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



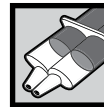
DRILL



FINE SANDPAPER



CARPENTER'S GLUE



EPOXY



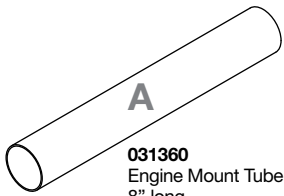
PRIMER (WHITE)



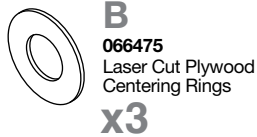
PAINT (Listed on pg. 5)



CLEAR COAT (OPTIONAL)



**A**  
031360  
Engine Mount Tube  
8" long



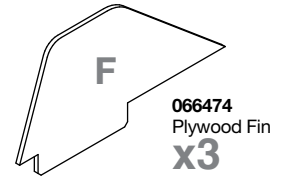
**B**  
066475  
Laser Cut Plywood  
Centering Rings  
**x3**



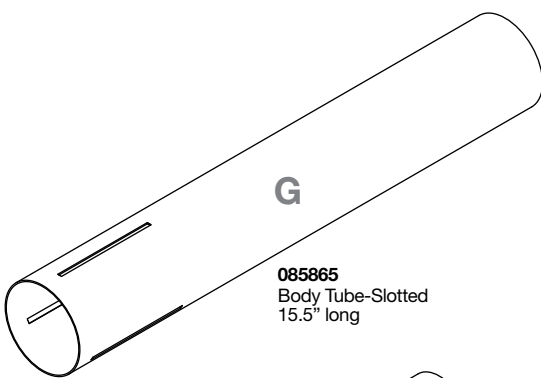
**C**  
031362  
Green Ring



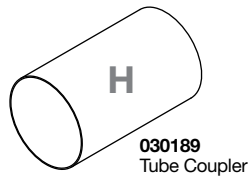
**D/E**  
072412  
29mm Engine  
Retainer Set



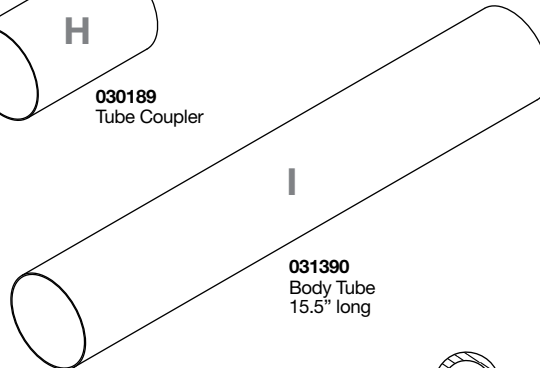
**F**  
066474  
Plywood Fin  
**x3**



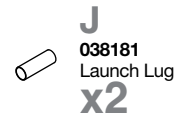
**G**  
085865  
Body Tube-Slotted  
15.5" long



**H**  
030189  
Tube Coupler



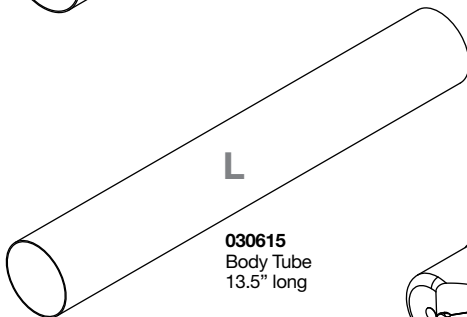
**I**  
031390  
Body Tube  
15.5" long



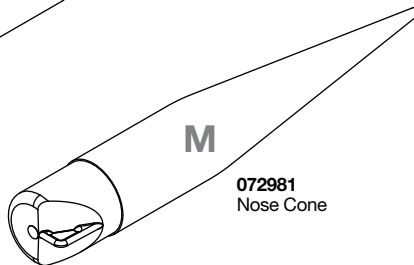
**J**  
038181  
Launch Lug  
**x2**



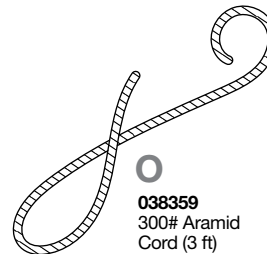
**K**  
072657  
Tube Adapter



**L**  
030615  
Body Tube  
13.5" long



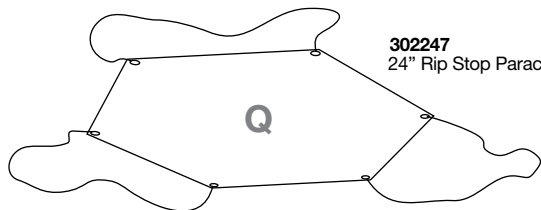
**M**  
072981  
Nose Cone



**O**  
038359  
300# Aramid  
Cord (3 ft)



**P**  
038378  
Elastic  
Shock Cord



**Q**  
302247  
24" Rip Stop Parachute



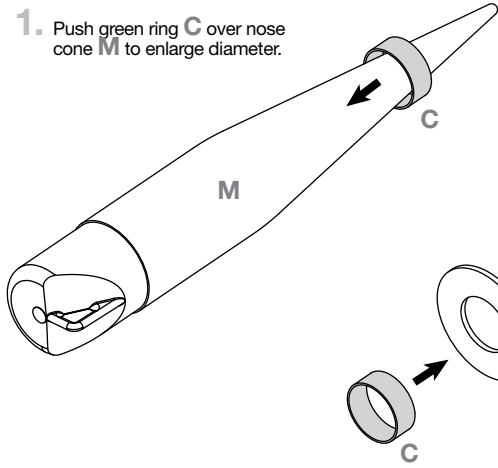
**N**  
085695  
Rail Button  
w/ Screw  
**x2**

090001-9729  
Waterslide Decal

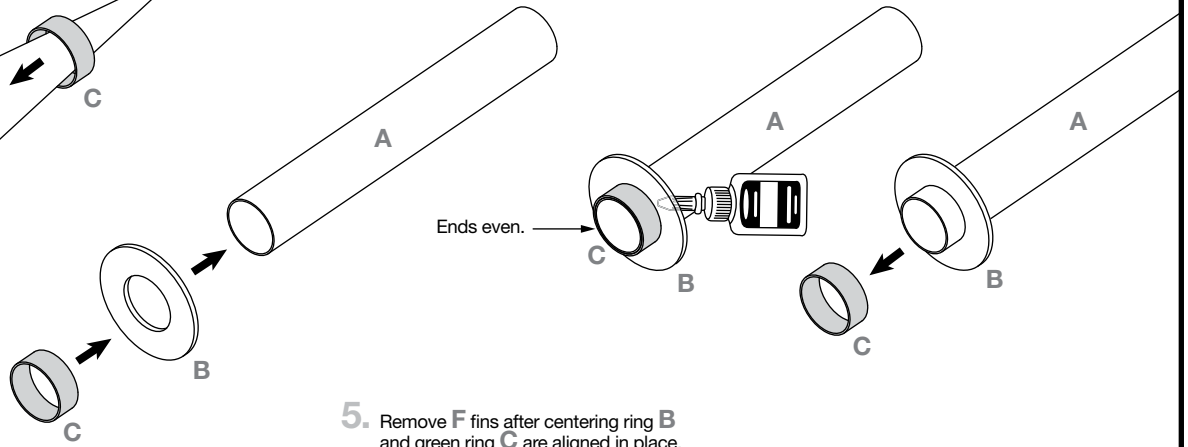


# ASSEMBLE ENGINE MOUNT

1. Push green ring **C** over nose cone **M** to enlarge diameter.



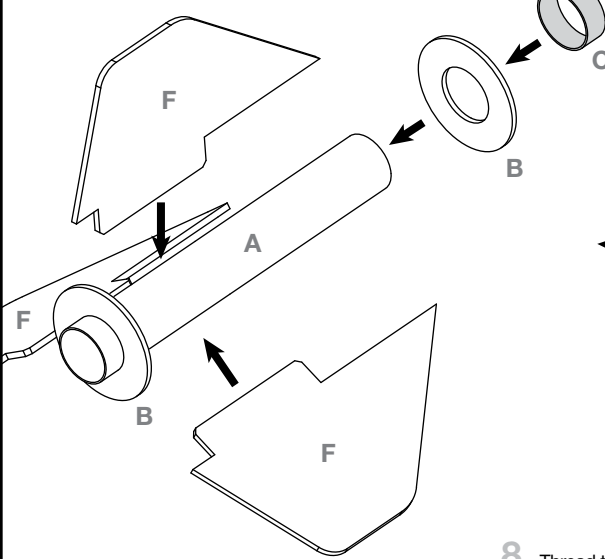
2. Slide centering ring **B** and green ring **C** over engine mount tube **A**.



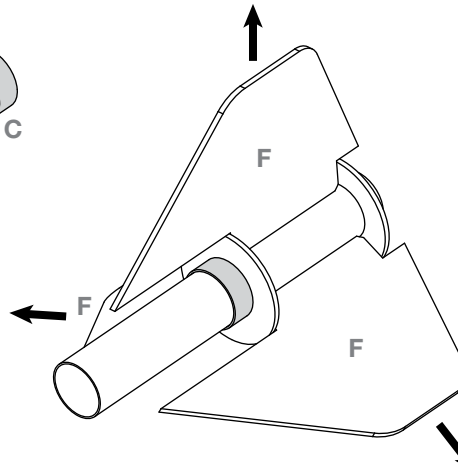
3. Tack glue centering ring **B** to engine mount tube **A**. Remove green ring **C**.

Ends even.

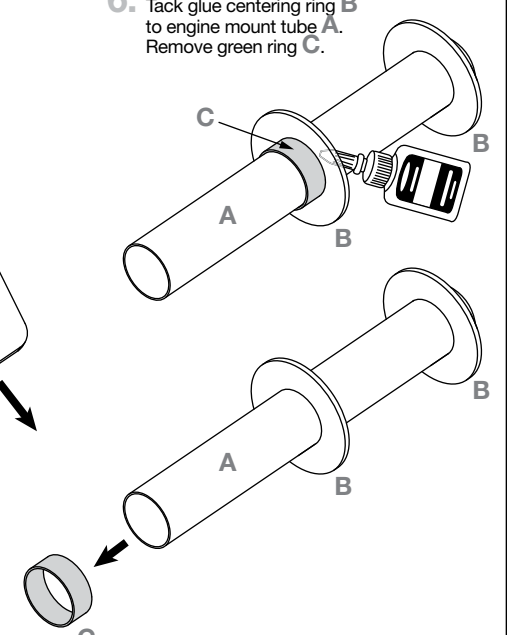
4. Slide centering ring **B** and green ring **C** over engine mount tube **A**. Use **F** fins as spacers between centering rings.



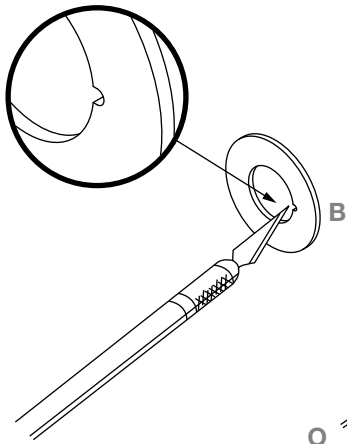
5. Remove **F** fins after centering ring **B** and green ring **C** are aligned in place.



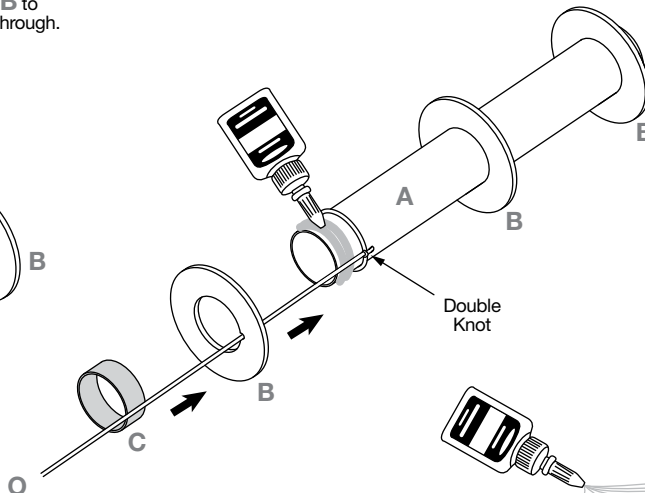
6. Tack glue centering ring **B** to engine mount tube **A**. Remove green ring **C**.



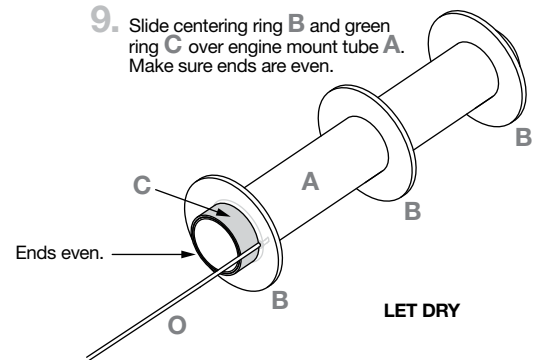
7. Cut a notch into centering ring **B** to allow the aramid cord to pass through.



8. Thread the end of aramid cord **O** through the notch in centering ring **B** and tie it around the end of engine mount tube **A** using a double knot. Apply glue around the end of **A** as shown.

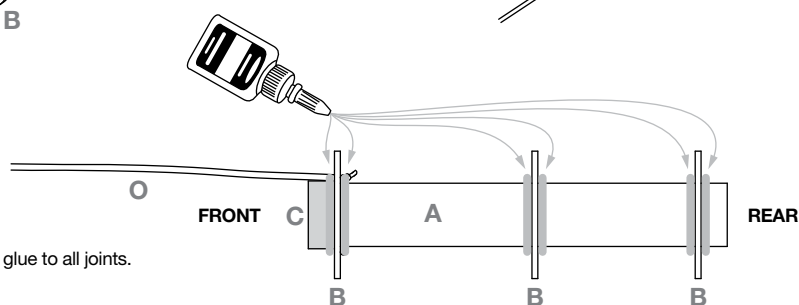


9. Slide centering ring **B** and green ring **C** over engine mount tube **A**. Make sure ends are even.



LET DRY

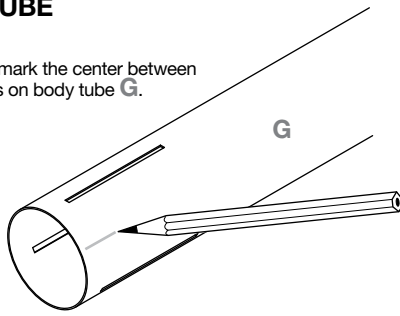
10. Apply glue to all joints.



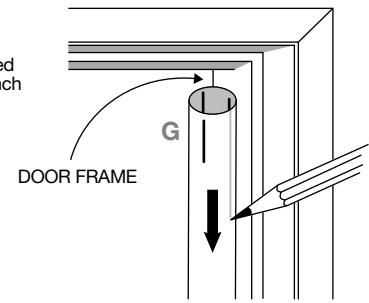
LET DRY

## MARK BODY TUBE

1. Use a pencil to mark the center between the pre-cut slots on body tube **G**.

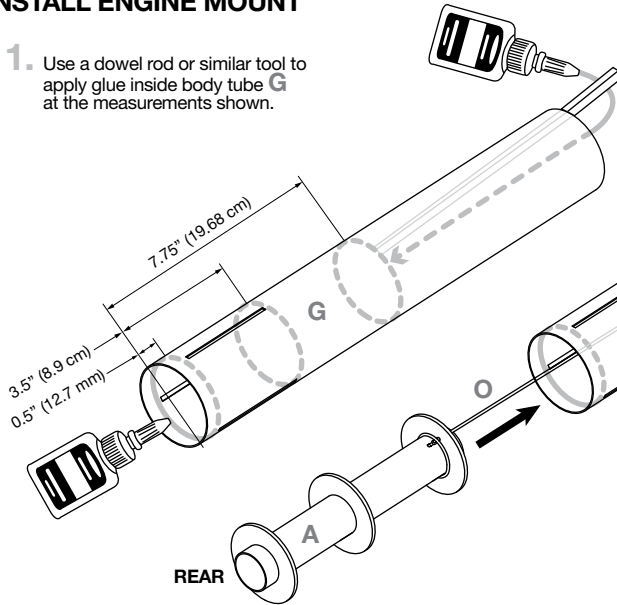


2. Use a door frame to extend the marked line to the end of tube. This is the launch lug line (LL).

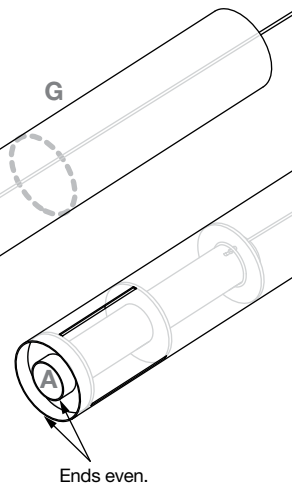


## INSTALL ENGINE MOUNT

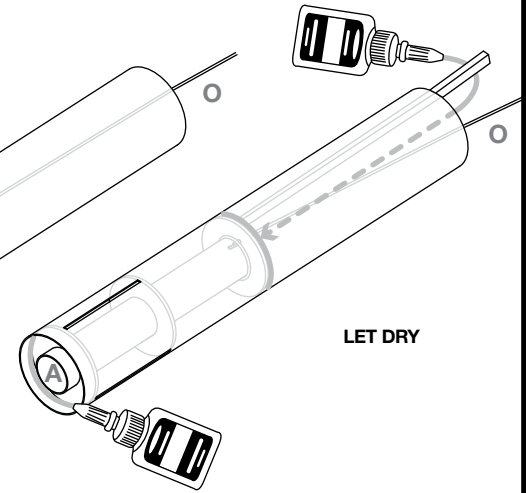
1. Use a dowel rod or similar tool to apply glue inside body tube **G** at the measurements shown.



2. Thread aramid cord **O** through body tube **G** and insert engine mount into body tube until ends are even.

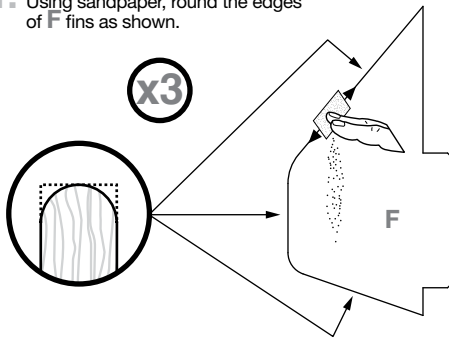


3. Use a dowel rod or similar tool to apply glue to edges of engine mount as shown.

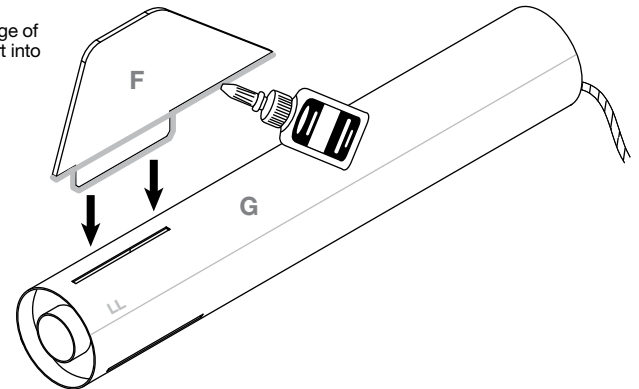


## PREPARE & ATTACH FINS

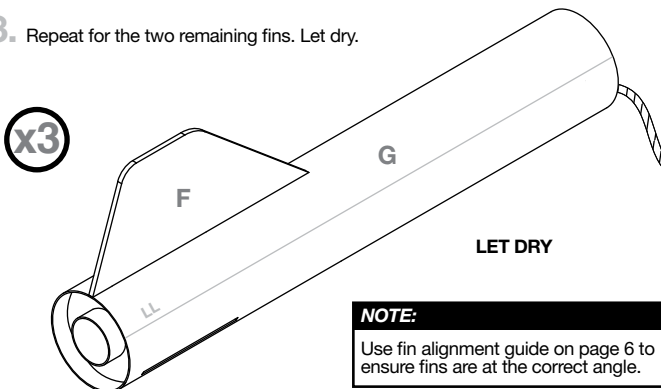
1. Using sandpaper, round the edges of **F** fins as shown.



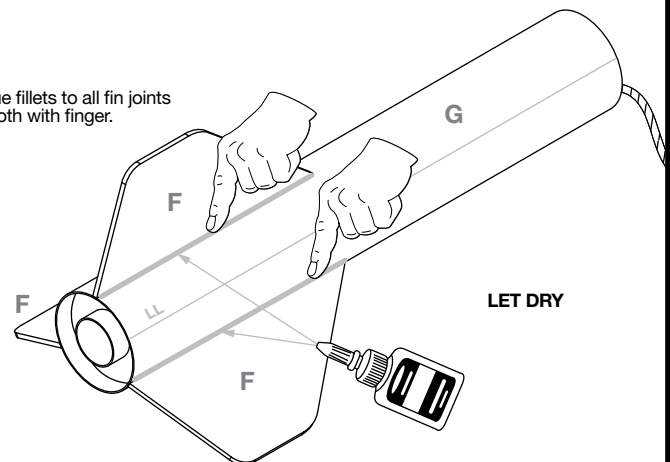
2. Apply glue to the root edge of fin **F** as shown and insert into body tube slot.



3. Repeat for the two remaining fins. Let dry.



4. Apply glue fillets to all fin joints and smooth with finger.

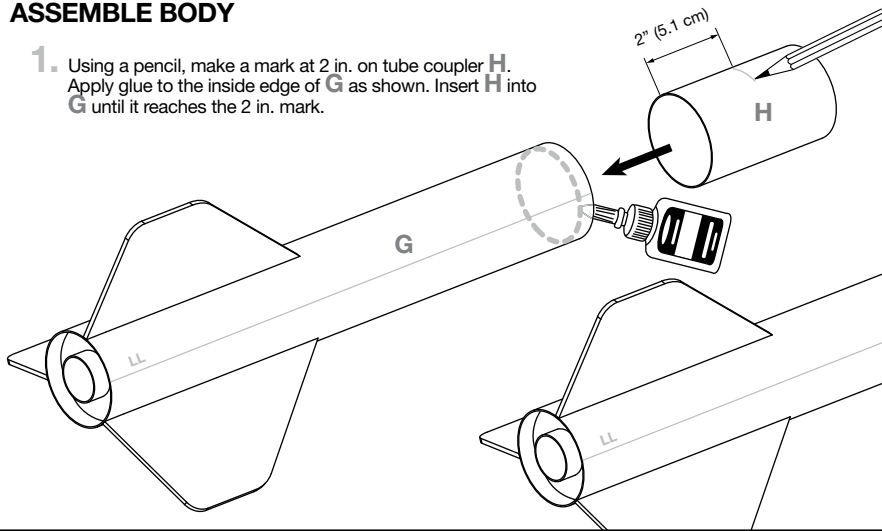


### NOTE:

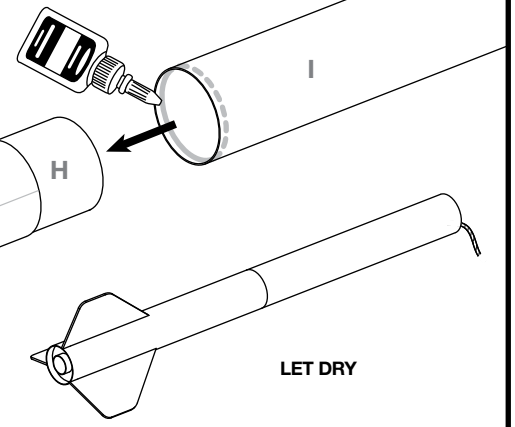
Use fin alignment guide on page 6 to ensure fins are at the correct angle.

## ASSEMBLE BODY

- Using a pencil, make a mark at 2 in. on tube coupler **H**. Apply glue to the inside edge of **G** as shown. Insert **H** into **G** until it reaches the 2 in. mark.



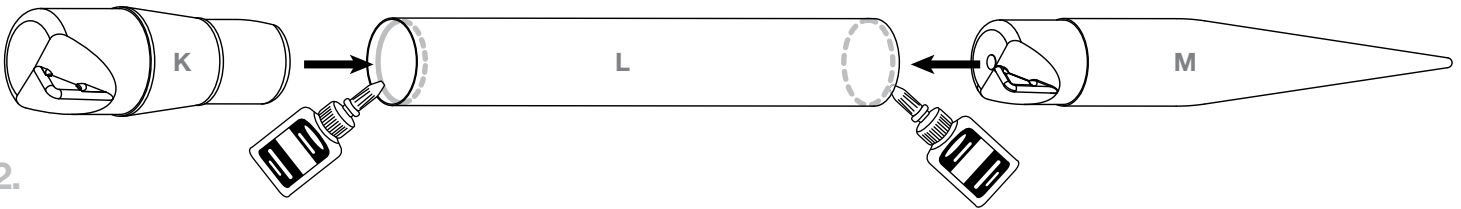
- Apply glue to the inside edge of **I**. Push **I** onto **H** until it connects with **G**.



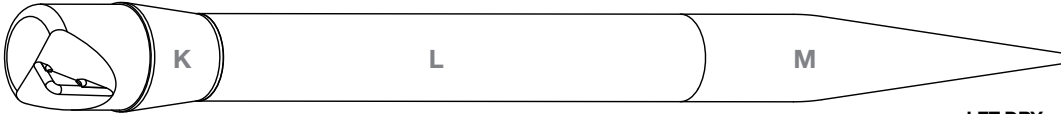
LET DRY

## ASSEMBLE PAYLOAD SECTION

- Apply glue to the inside edges of body tube **L**. Insert tube adapter **K** inside one end of body tube **L**. Insert nose cone **M** into the other end of body tube **L**.



2.



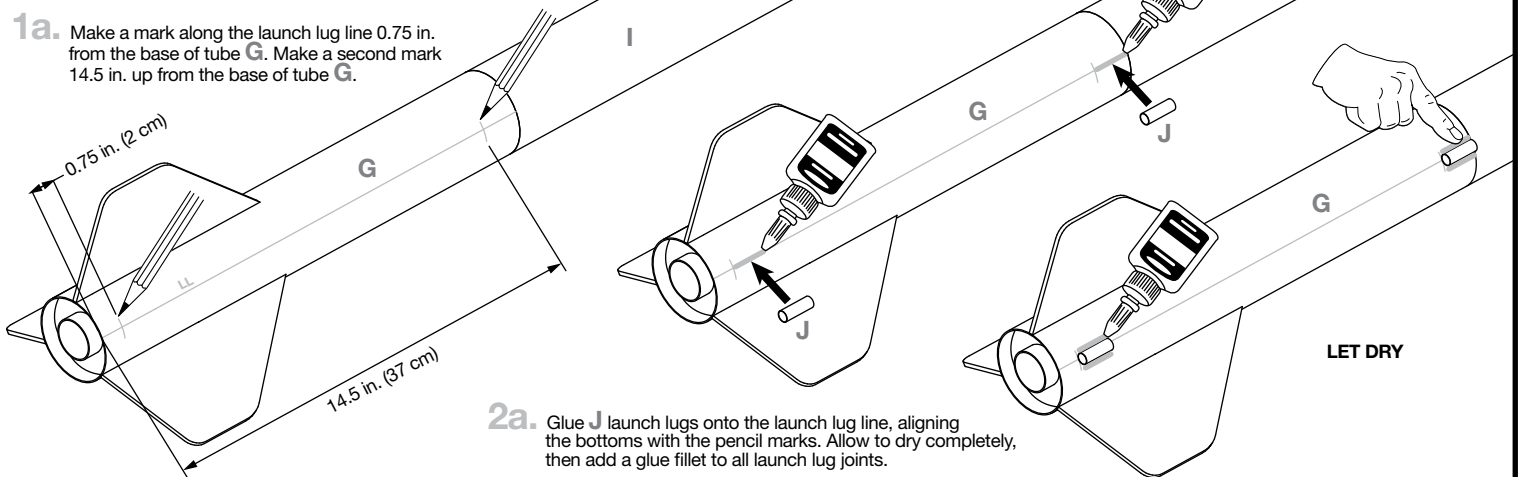
LET DRY

### NOTE:

If you wish to use the nose section area as a payload bay, do not use glue. Instead, wrap base of nose cone with tape for a snug fit.

## LAUNCH LUG OR RAIL BUTTON ATTACHMENT

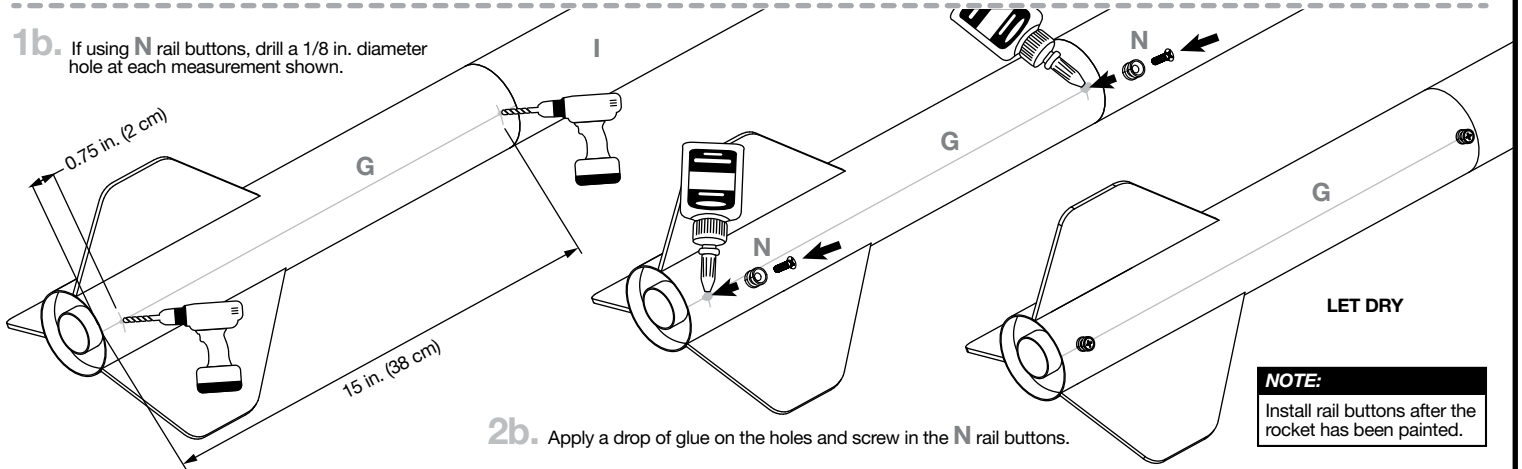
- Make a mark along the launch lug line 0.75 in. from the base of tube **G**. Make a second mark 14.5 in. up from the base of tube **G**.



LET DRY

- Glue **J** launch lugs onto the launch lug line, aligning the bottoms with the pencil marks. Allow to dry completely, then add a glue fillet to all launch lug joints.

- If using **N** rail buttons, drill a 1/8 in. diameter hole at each measurement shown.



LET DRY

- Apply a drop of glue on the holes and screw in the **N** rail buttons.

### NOTE:

Install rail buttons after the rocket has been painted.

## PAINT AND APPLY DECALS

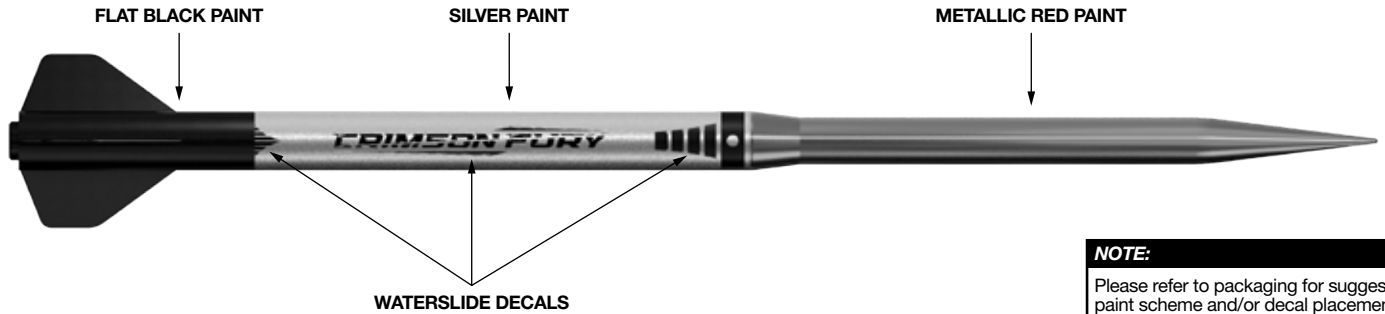
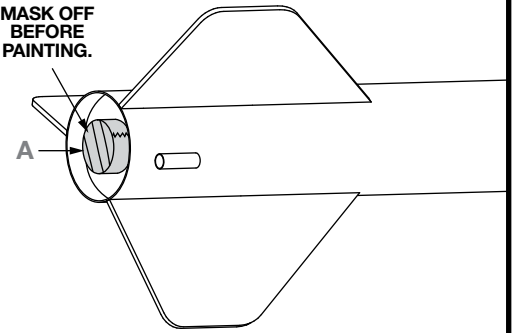
### PAINT COLORS

Metallic Red Paint  
 Silver Paint  
 Flat Black Paint

**Note:** Use tape to mask off the end of **A** before painting steps begin.

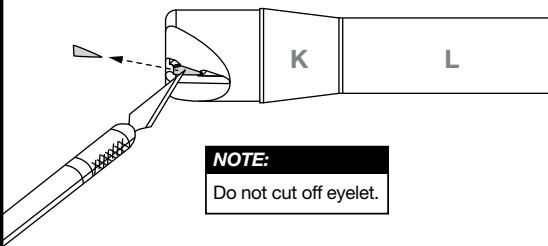
1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Paint entire nose cone/payload section metallic red.
3. Mask off a portion of lower body tube and all fins. Paint exposed portion of body tube silver.
4. Mask off silver portion of body tube, and paint the lower body tube and all fins flat 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.

**MASK OFF BEFORE PAINTING.**

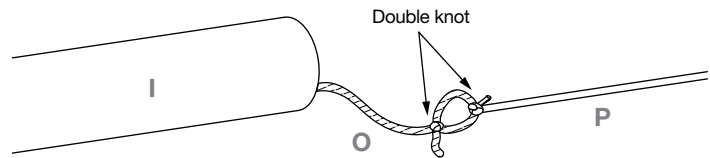


## RECOVERY SYSTEM ATTACHMENT

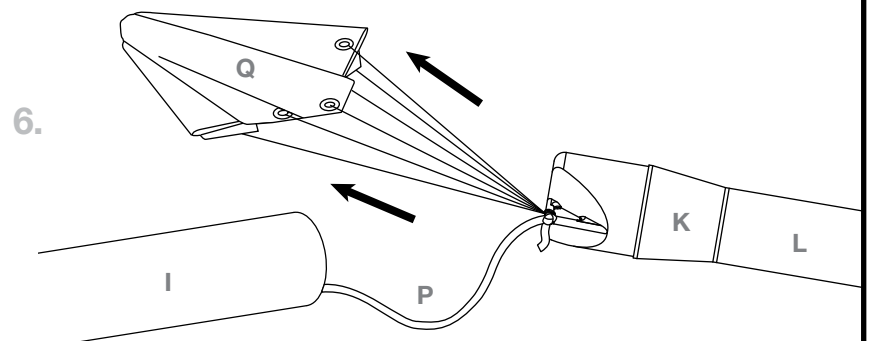
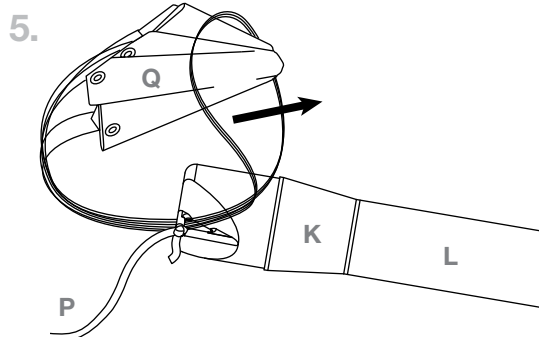
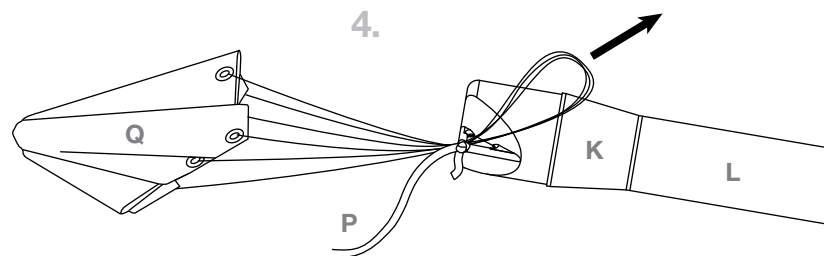
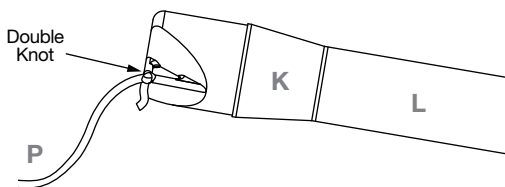
1. Cut out the small inner section of the eyelet in tube adapter **K**.



2. Tie a loop in the end of aramid cord **O**. Tie shock cord **P** to the loop in aramid cord **O**.

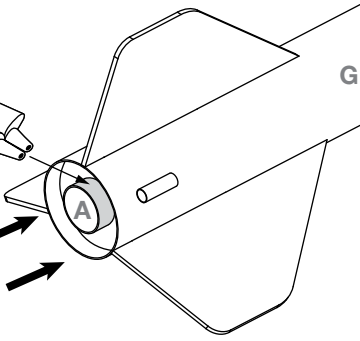
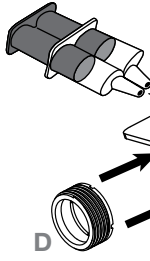
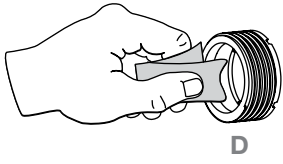


3. Tie the open end of shock cord **P** to the eyelet in tube adapter **K** using a double knot.



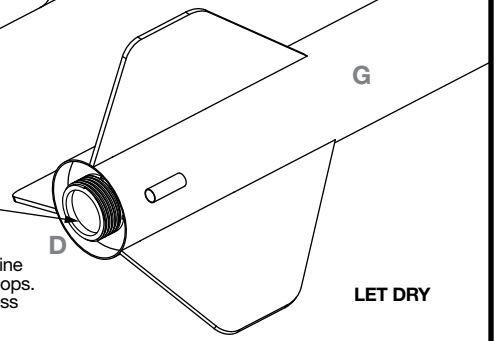
## ENGINE RETAINER ATTACHMENT

1. Sand the inner surface of engine retainer **D** and apply epoxy to the outside of engine mount tube **A**.



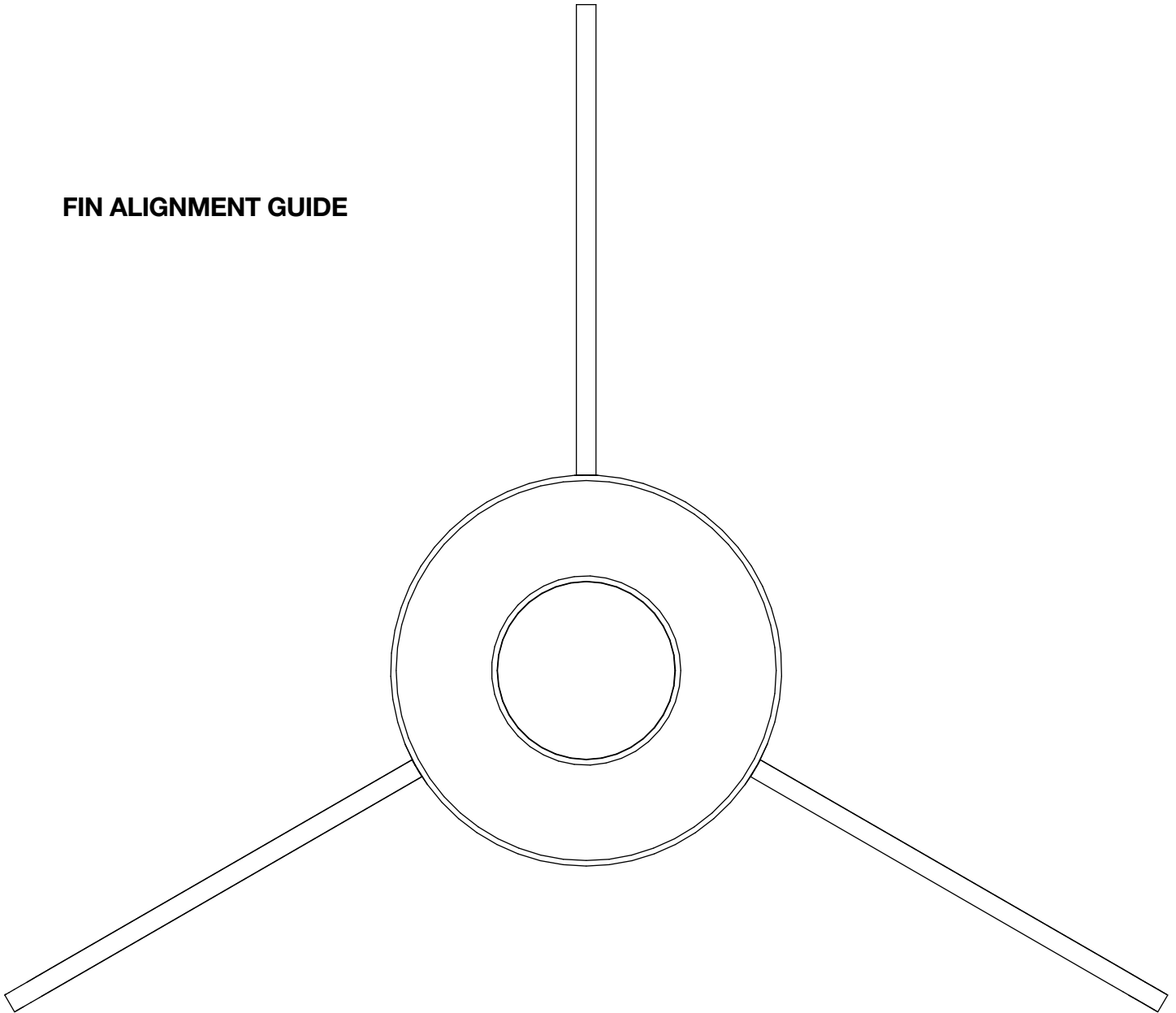
2. Slide on the engine retainer until it stops. Wipe away excess glue. Let Dry.

Flush



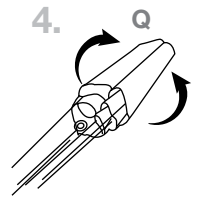
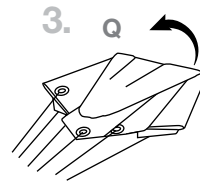
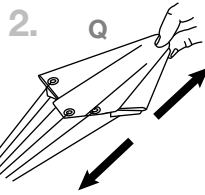
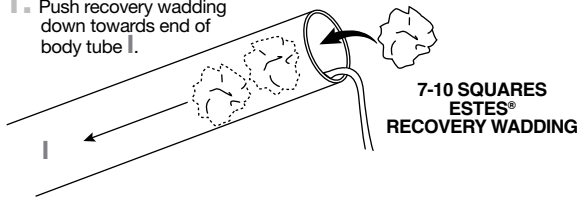
LET DRY

## FIN ALIGNMENT GUIDE

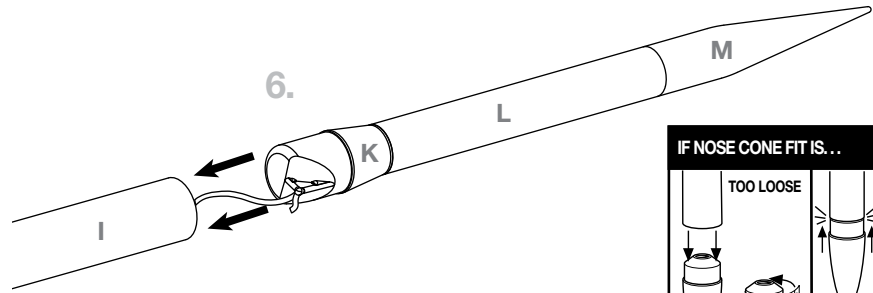
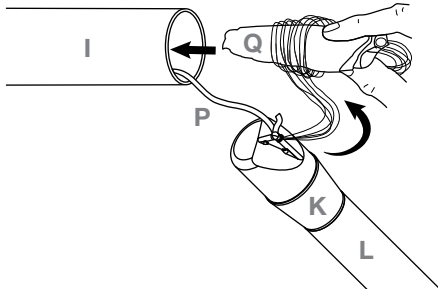


## FLIGHT PREPARATION

1. Push recovery wadding down towards end of body tube I.



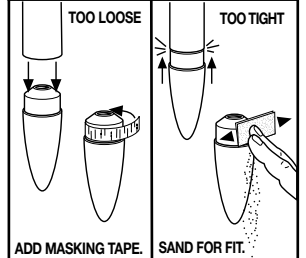
5. Wrap shroud lines loosely and insert parachute into body tube I.



### NOTE:

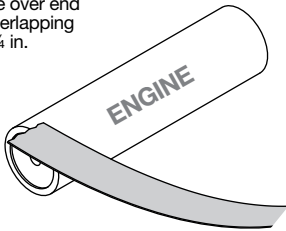
Recovery wadding and parachute must slide easily into body tube. If too tight, redo.

### IF NOSE CONE FIT IS...

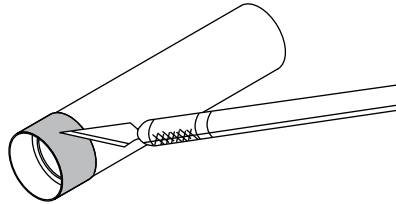


## PREPARE ENGINE RETENTION

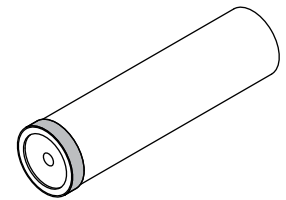
1. Wrap 6 to 8 layers of masking tape over end of engine, overlapping the bottom 1/4 in.



2. Trim off excess tape.

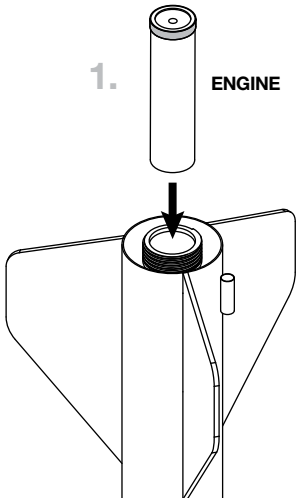


- 3.

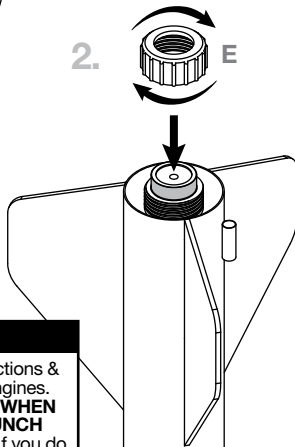


## ENGINE PREPARATION

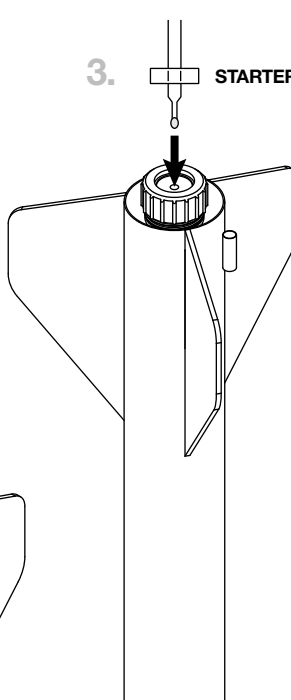
1. ENGINE



2. E

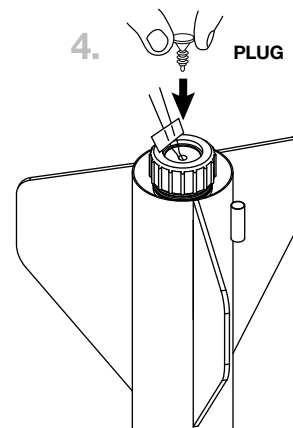


3. STARTER

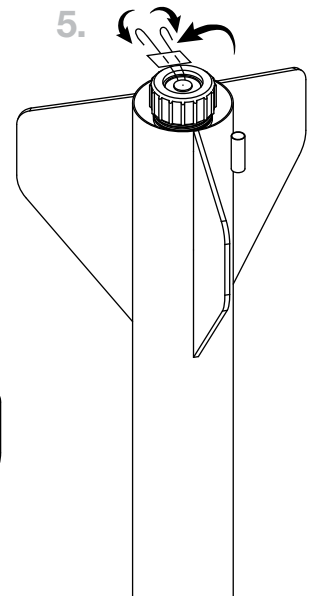


TIP MUST TOUCH PROPELLANT!

4. PLUG



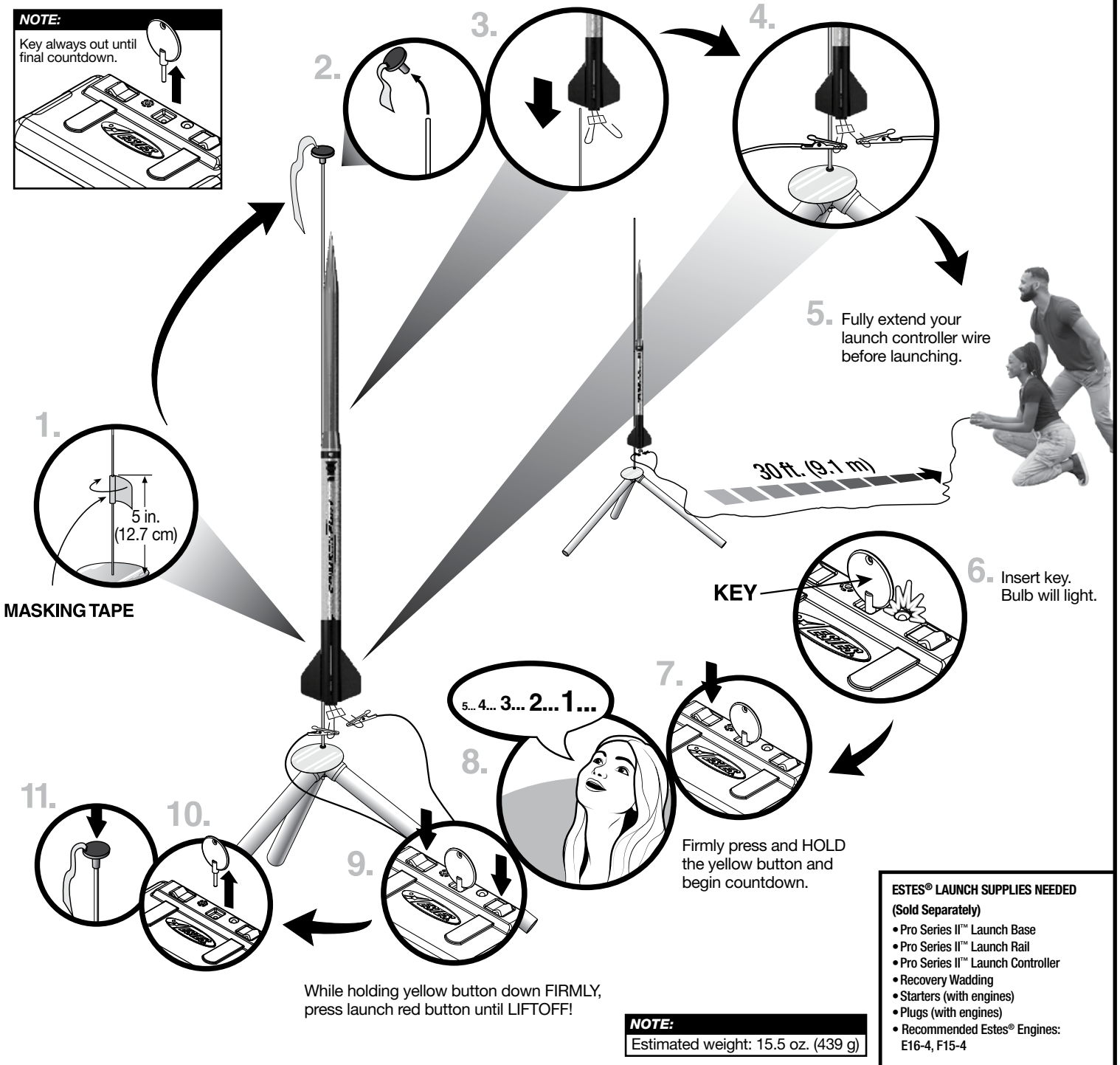
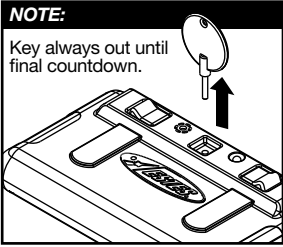
- 5.



### ⚠ 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.

# COUNTDOWN AND LAUNCH



**MASKING TAPE**

**KEY**

- ESTES® LAUNCH SUPPLIES NEEDED**  
(Sold Separately)
- Pro Series II™ Launch Base
  - Pro Series II™ Launch Rail
  - Pro Series II™ Launch Controller
  - Recovery Wadding
  - Starters (with engines)
  - Plugs (with engines)
  - Recommended Estes® Engines: E16-4, F15-4

**NOTE:**  
Estimated weight: 15.5 oz. (439 g)

## 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.