



EstesRockets.com

AGES 10+

# STARLIGHT™

9992

Skill Level

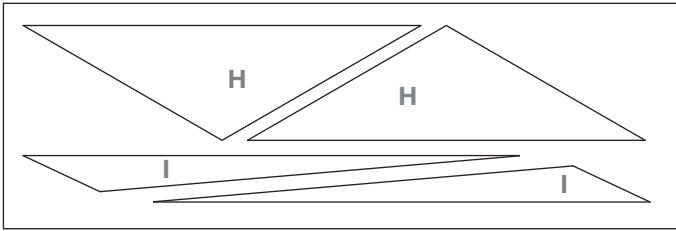
**INTERMEDIATE**

## MODEL ROCKET INSTRUCTIONS

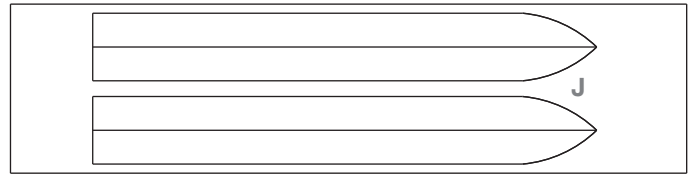
### KEEP FOR FUTURE REFERENCE

**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.

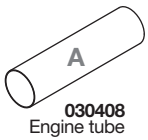
### SUPPLIES



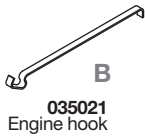
090051-9992A Laser cut balsa x2



090051-9992B Laser cut balsa



030408 Engine tube



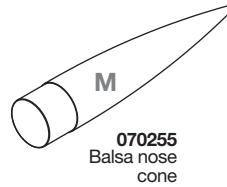
035021 Engine hook



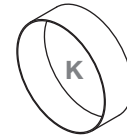
038251 Eye screw



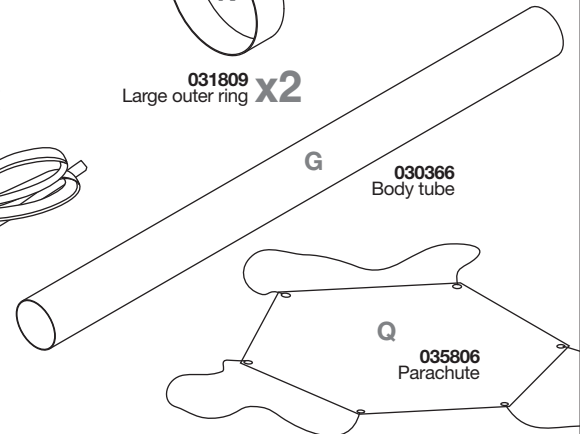
088099 Metal nose weight



070255 Balsa nose cone



031809 Large outer ring x2



030366 Body tube

035806 Parachute



080425 Green split adapter ring



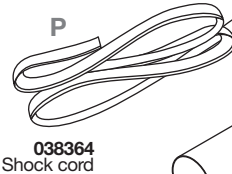
030164-2 Green adapter ring



030168 Mylar retainer ring



038176 Launch lug x2



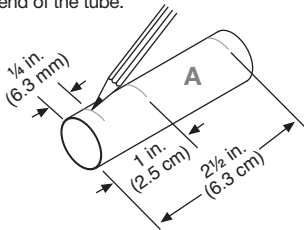
038364 Shock cord



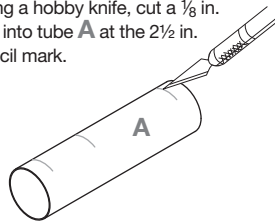
030162-2 Engine block

### ASSEMBLE ENGINE MOUNT

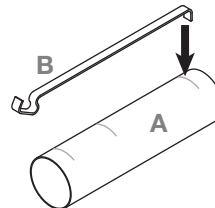
1. Mark engine tube **A** with a pencil at ¼ in., 1 in., and 2½ in. from the end of the tube.



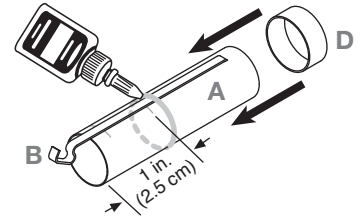
2. Using a hobby knife, cut a ⅛ in. slot into tube **A** at the 2½ in. pencil mark.



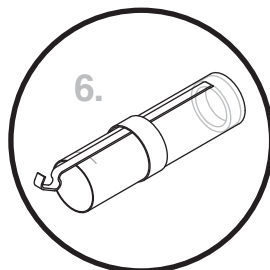
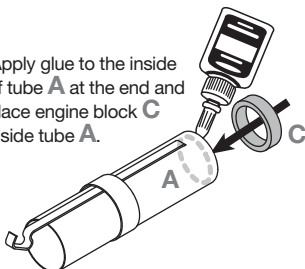
3. Insert engine hook **B** into the slot cut into tube **A**.



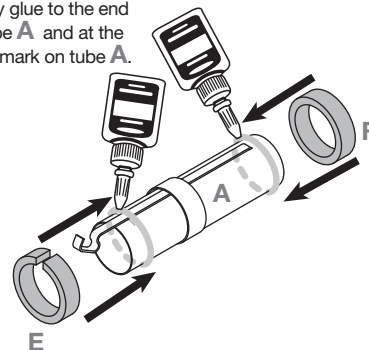
4. Apply glue just past the 1 in. pencil mark on tube **A** and slide mylar retainer ring **D** over engine hook **B** and align with the 1 in. mark.



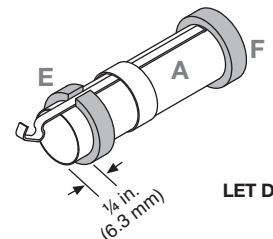
5. Apply glue to the inside of tube **A** at the end and place engine block **C** inside tube **A**.



7. Apply glue to the end of tube **A** and at the ¼ in. mark on tube **A**.



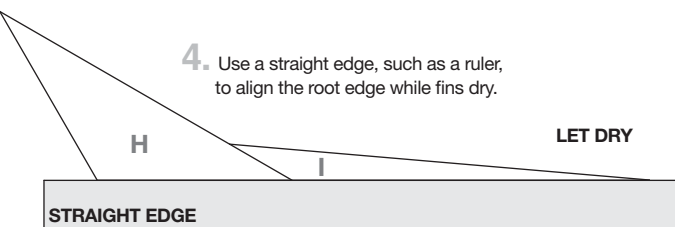
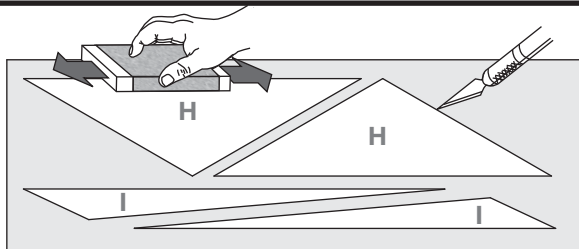
8. Place green split adapter ring **E** over the end of tube **A** around the engine hook and align with ¼ in. mark. Place green adapter ring **F** over the end of tube **A**. Align ends.



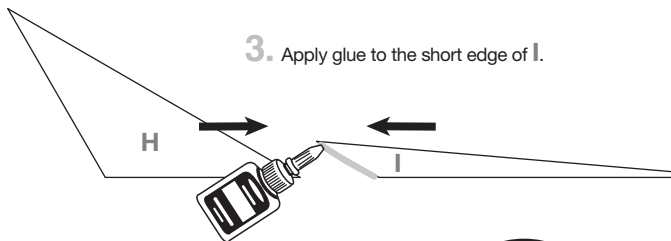
LET DRY

## FIN PREPARATION

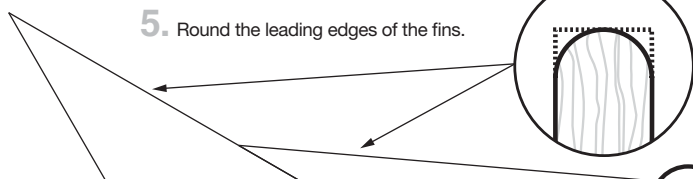
1. Lightly sand both sides of balsa sheet.
2. Using a hobby knife, carefully remove H and I.



3. Apply glue to the short edge of I.



5. Round the leading edges of the fins.

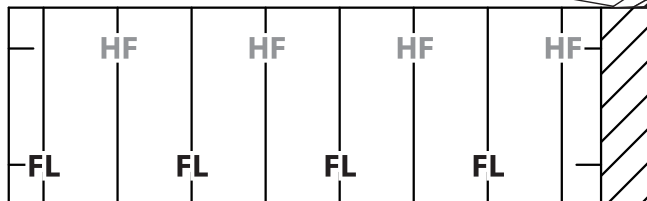


**NOTE:**

Repeat steps 1-5 for all four fins.

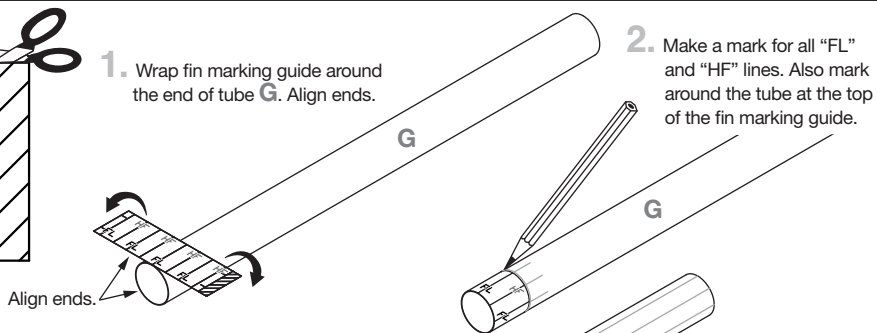
x4

## MARK BODY TUBE FOR FINS



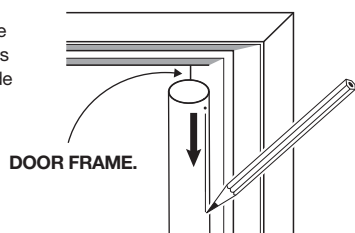
FIN MARKING GUIDE

1. Wrap fin marking guide around the end of tube G. Align ends.



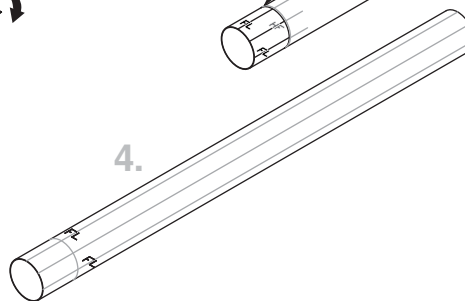
2. Make a mark for all "FL" and "HF" lines. Also mark around the tube at the top of the fin marking guide.

3. Remove guide. Use door frame or Estes Tube Marking Guide to extend all lines.



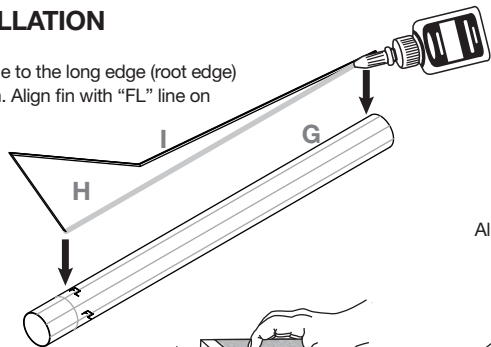
Align ends.

- 4.



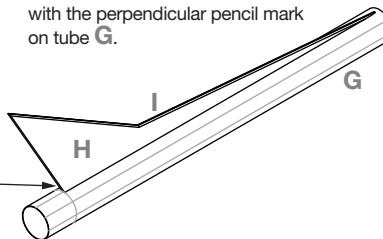
## FIN INSTALLATION

1. Apply glue to the long edge (root edge) of H/I fin. Align fin with "FL" line on tube G.

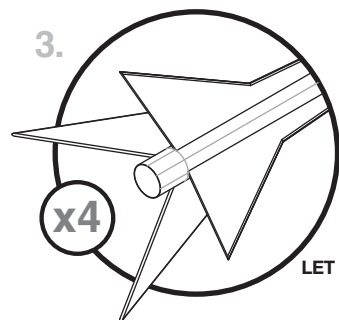


2. Be sure the root edge of H aligns with the perpendicular pencil mark on tube G.

Align



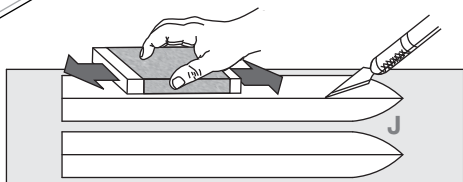
- 3.



x4

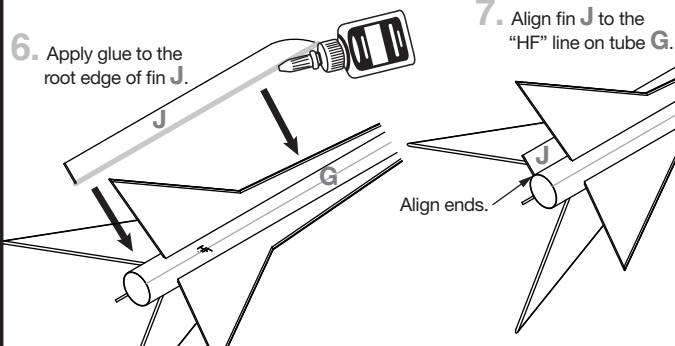
LET DRY

4. Lightly sand both sides of balsa sheet.



5. Using a hobby knife, carefully remove all J pieces.

6. Apply glue to the root edge of fin J.



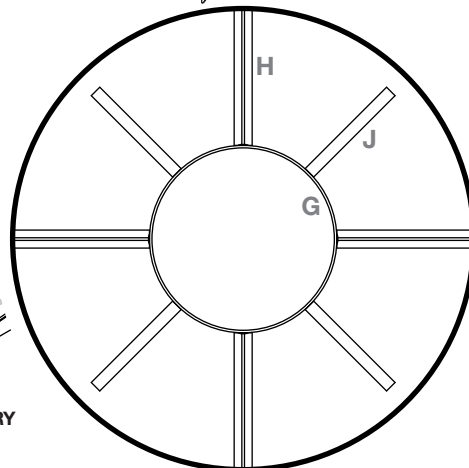
7. Align fin J to the "HF" line on tube G.

Align ends.

8. Apply glue fillets to all fin/body tube joints.

x4

LET DRY



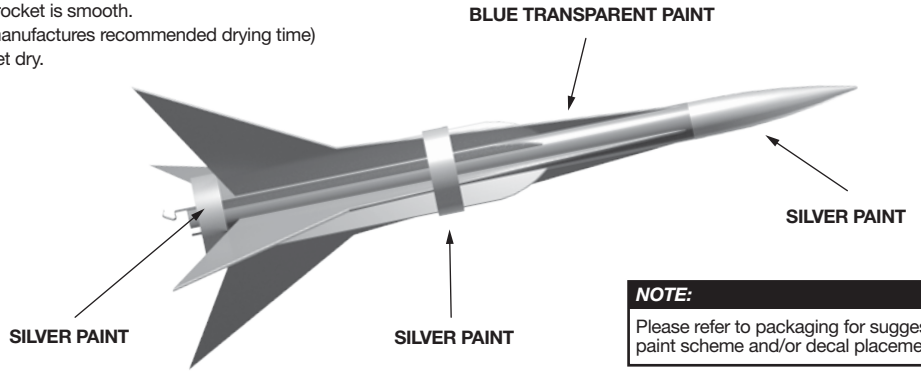
**NOTE:**

Use this template for fin placement.



## PAINTING

1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Spray entire rocket with white paint and let dry. (Follow paint manufactures recommended drying time)
3. Spray entire rocket with two coats of silver/metallic paint and let dry.
4. Mask the upper and lower rings and remove nose cone.
5. Apply two light coats of transparent blue and let dry.
6. Carefully remove masking tape on rings, replace nose cone.
7. OPTIONAL: Apply protective clear coat.



### CAUTION:

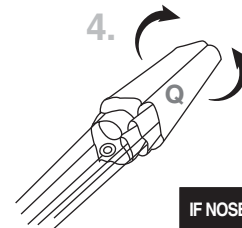
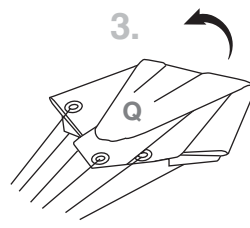
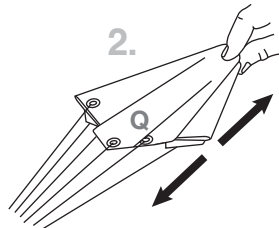
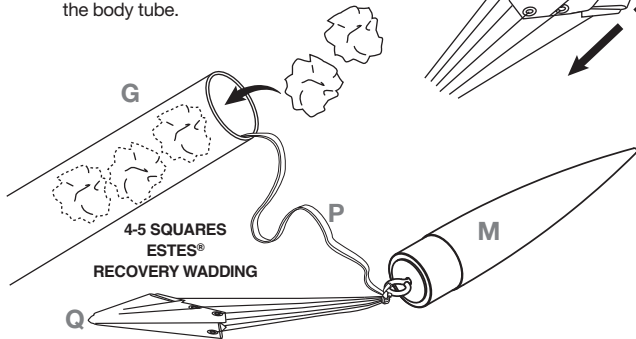
See manufacturer's warnings and instructions before using spray finishing products.

### NOTE:

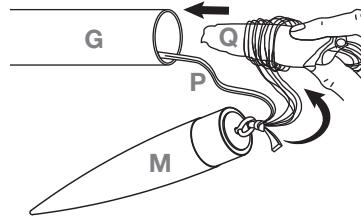
Please refer to packaging for suggested paint scheme and/or decal placement.

## PREPARE FLIGHT RECOVERY

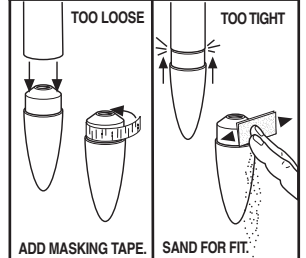
1. Push recovery wadding down towards end of the body tube.



5. Wrap parachute shroud lines loosely around the parachute Q and insert into body tube G.



### IF NOSE CONE FIT IS ...

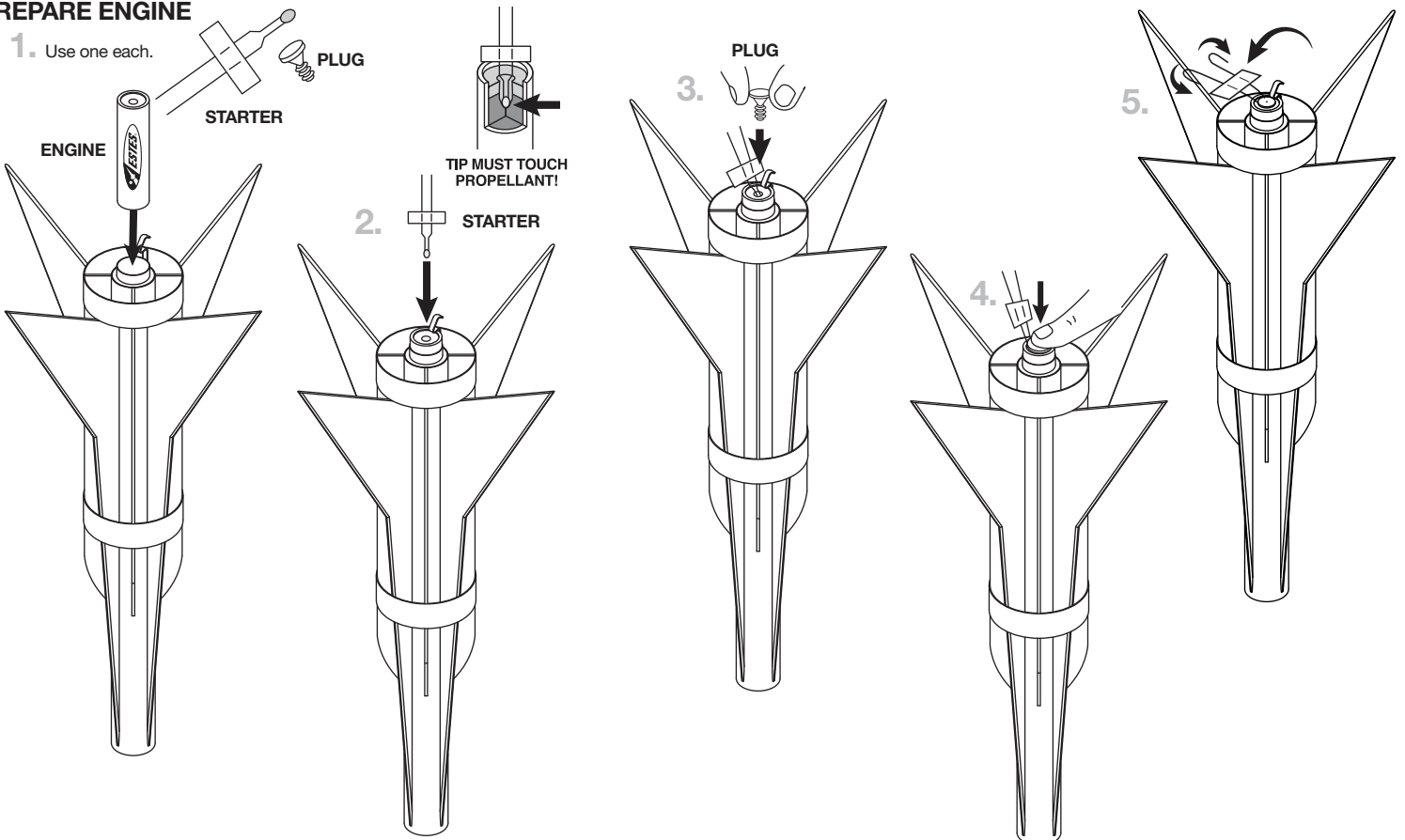


### NOTE:

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

## PREPARE ENGINE

1. Use one each.



**NOTE:**

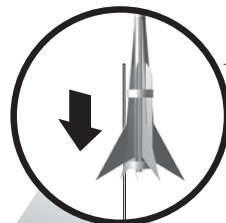
Always keep the key **OUT** until final countdown.



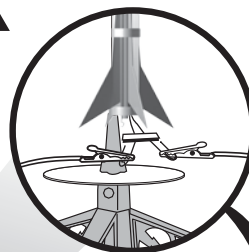
2.



3.



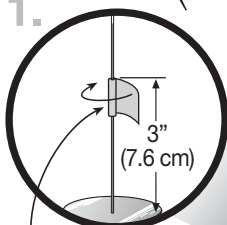
4.



5.

Fully extend your launch controller wire before launching.

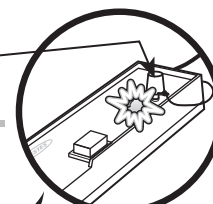
1.



**MASKING TAPE**

**KEY**

6.



Insert key, push down hard. Bulb will light.

7.



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

**NOTE:**

Estimated weight: 1.5 oz. (42.5 g)

**ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)**

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: B6-4 (first flight), A8-3, B4-4, C6-5

**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.



## PLASTIC NOSE CONE PREPARATION (OPTIONAL)

### NOTE:

If you prefer to use the OPTIONAL plastic nose cone, use this preparation step.

## SUPPLIES



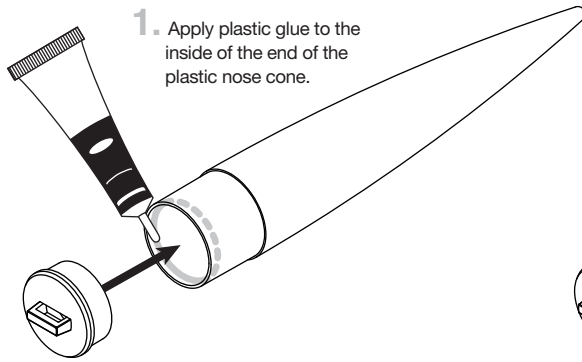
072703  
Plastic  
nose cone



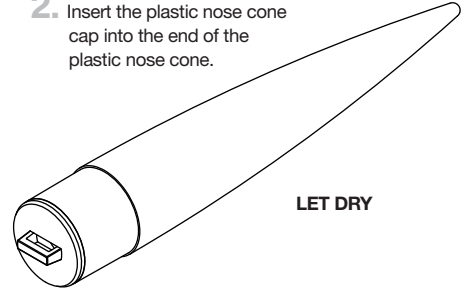
072654  
Plastic nose  
cone cap



1. Apply plastic glue to the inside of the end of the plastic nose cone.



2. Insert the plastic nose cone cap into the end of the plastic nose cone.



LET DRY