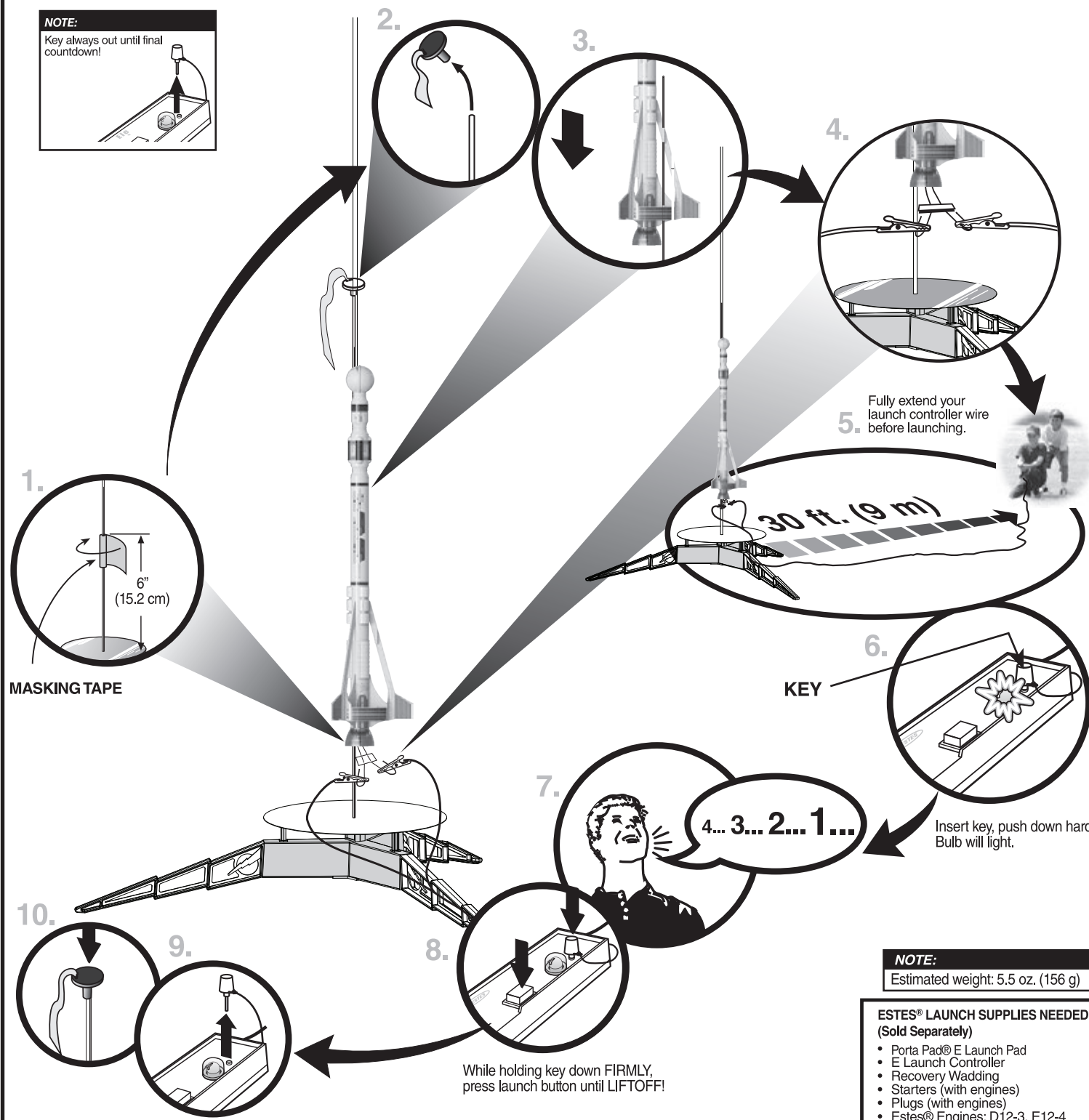


**COUNTDOWN AND LAUNCH**

**NOTE:**  
Key always out until final countdown!



**NOTE:**  
Estimated weight: 5.5 oz. (156 g)

- ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)**
- Porta Pad® E Launch Pad
  - E Launch Controller
  - Recovery Wadding
  - Starters (with engines)
  - Plugs (with engines)
  - Estes® Engines: D12-3, E12-4

**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. Football fields and playgrounds are great. 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.



EstesRockets.com

**MARS LONGSHIP™**

7296



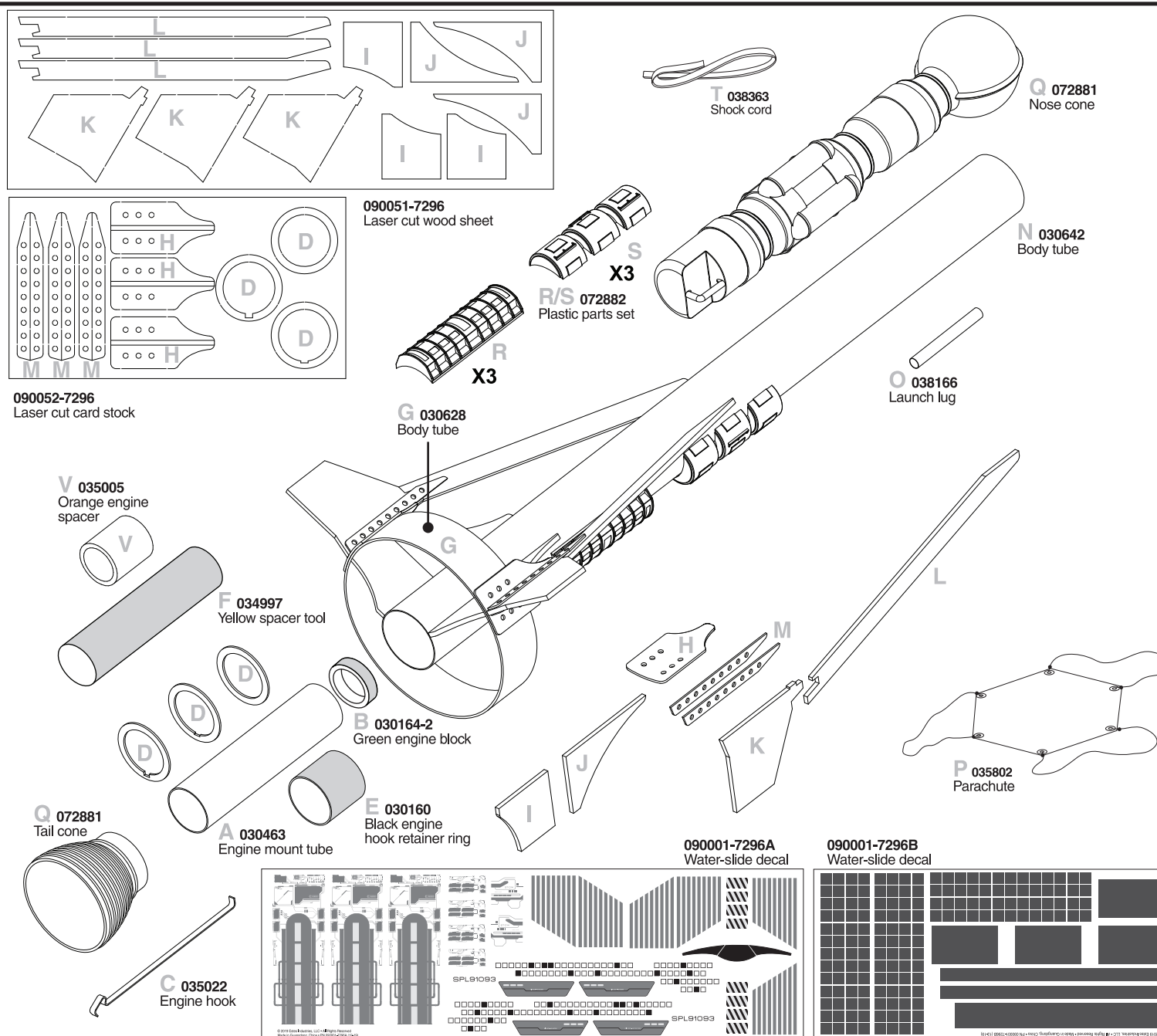
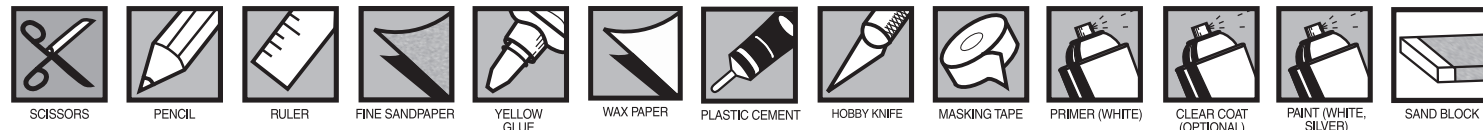
**MODEL ROCKET INSTRUCTIONS**

**KEEP FOR FUTURE REFERENCE**

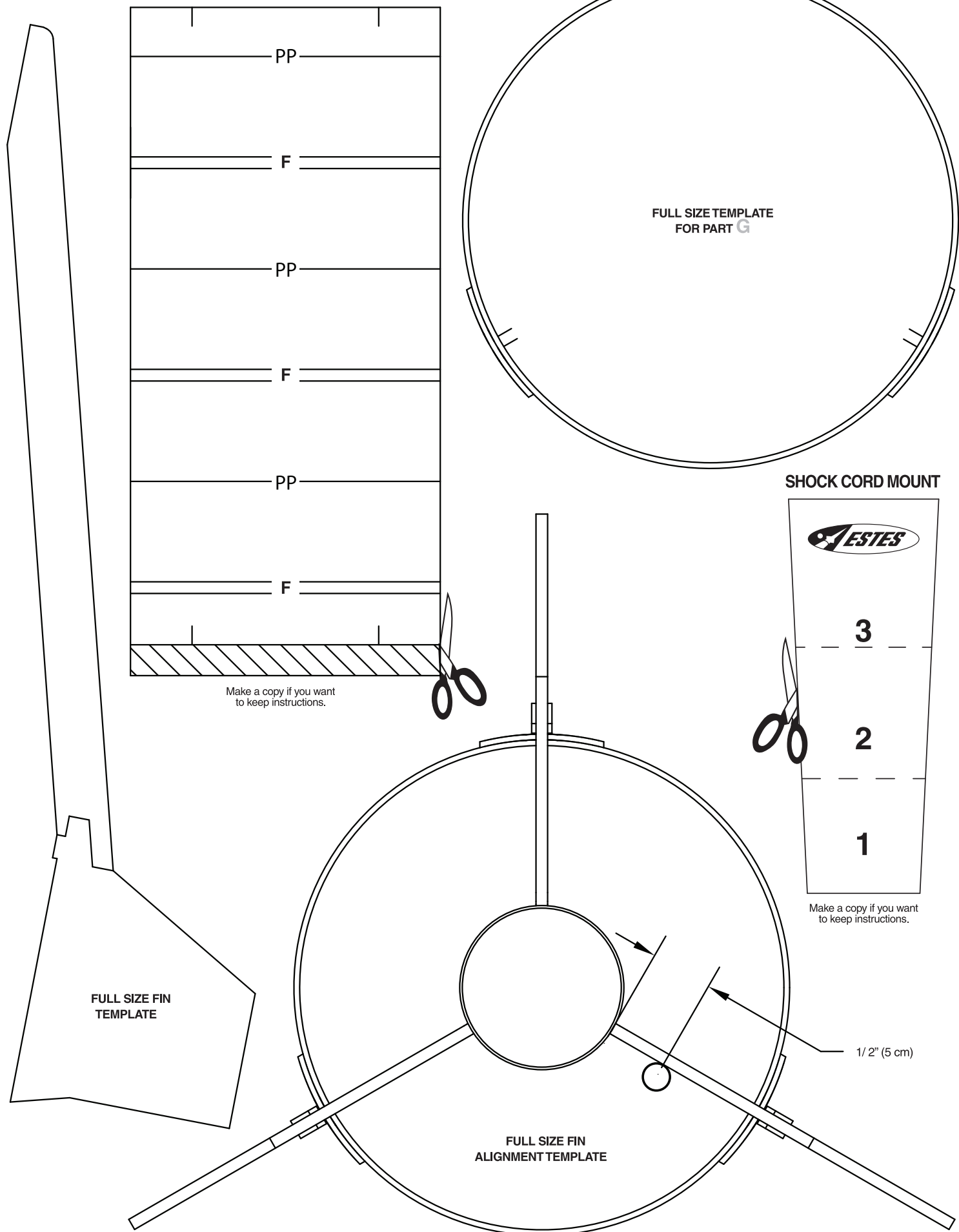
**IMPORTANT:** Please record date found on decal and keep for future reference. \_\_\_\_\_

**READ ALL INSTRUCTIONS.** Make sure you have all parts and supplies. Test fit all parts before applying glue.

**SUPPLIES**

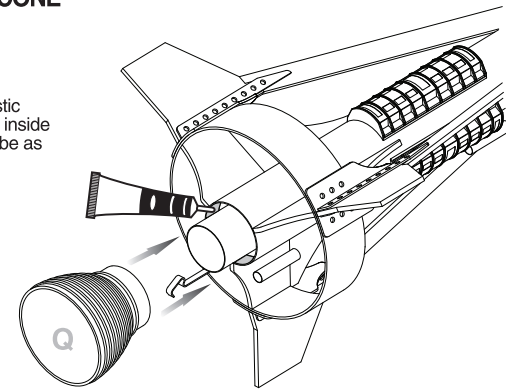


TUBE MARKING GUIDE, SHOCK CORD MOUNT AND FULL SIZE TEMPLATES

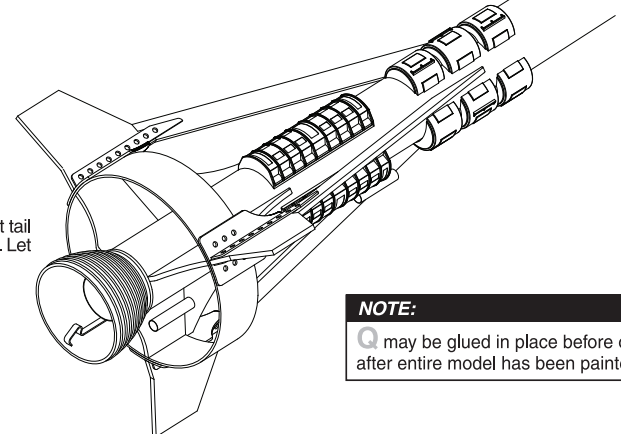


ATTACH TAIL CONE

1. Apply plastic cement to inside of body tube as indicated.

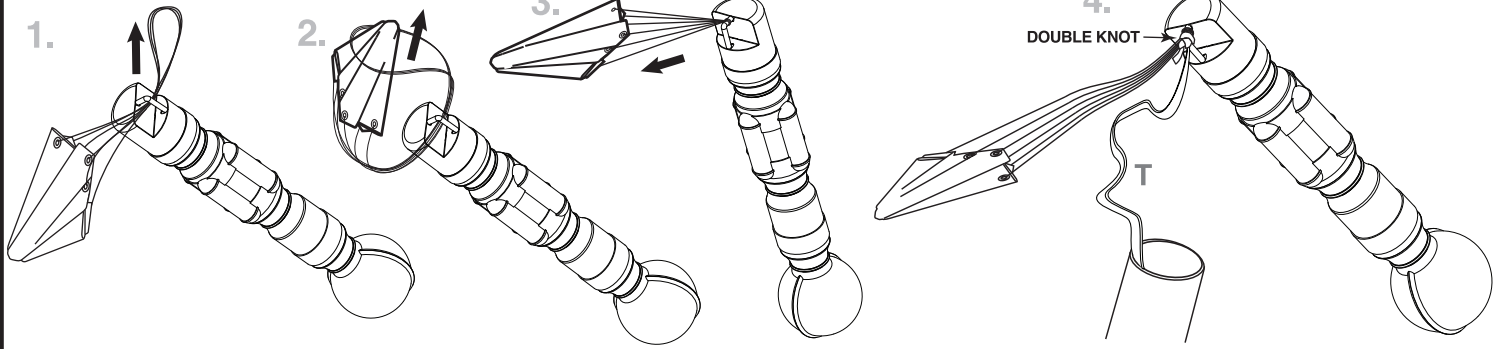


2. Insert tail cone. Let dry.

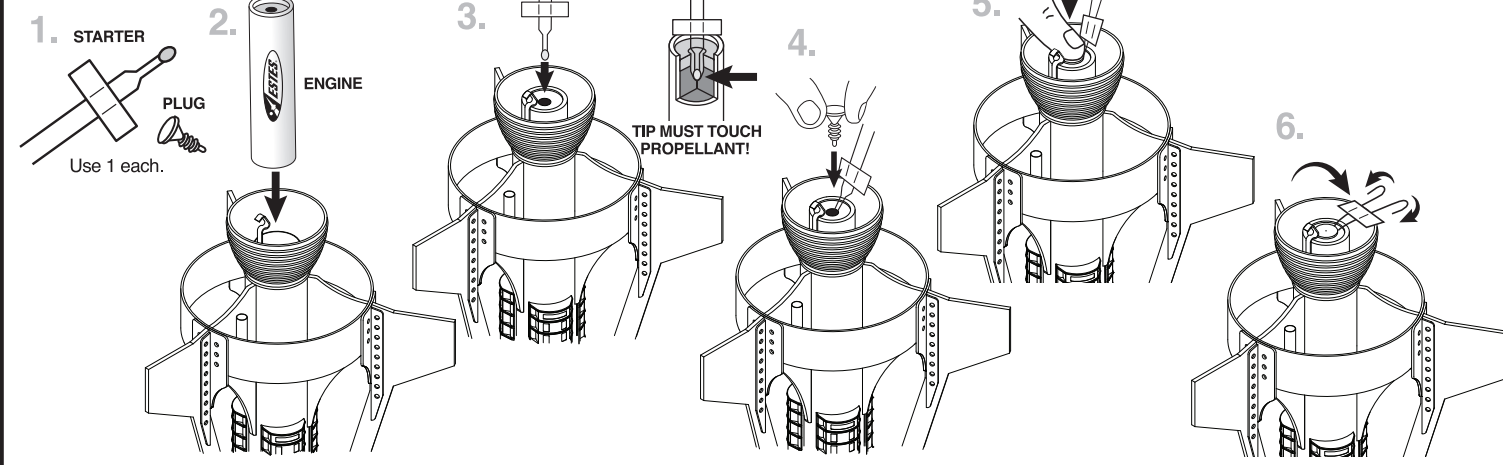


**NOTE:**  
Q may be glued in place before or after entire model has been painted.

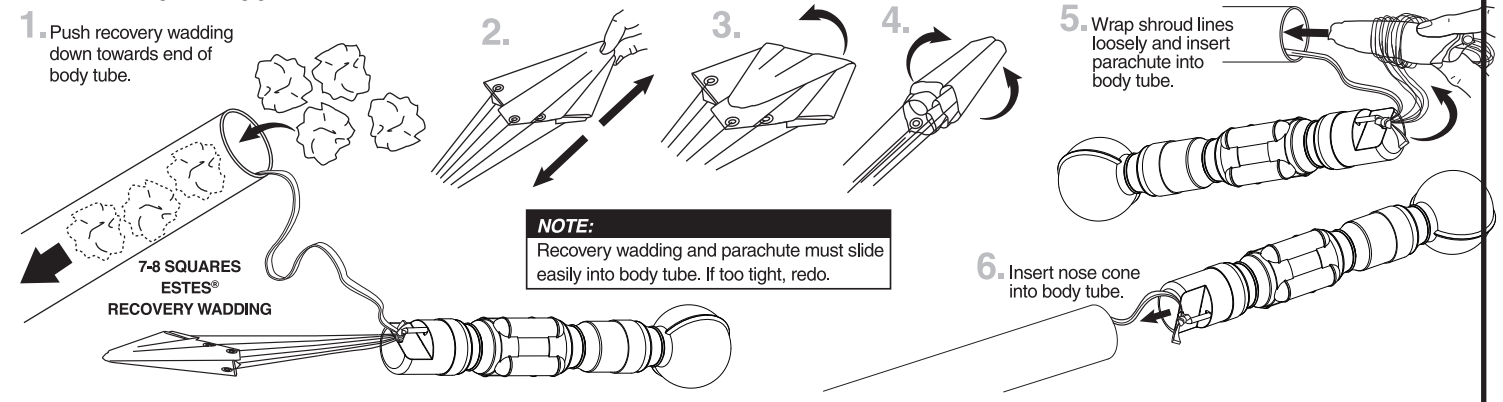
ATTACH PARACHUTE AND SHOCK CORD



PREPARE ENGINE



PREPARE FLIGHT RECOVERY



### ATTACH PLASTIC DETAIL PARTS

1. Mark **N** as indicated. Apply plastic cement to bottom of **R** and **S**. Attach **R** and **S** to **N** on marks.
2. Center **R** and **S** on pencil line.

**X3**  
LET DRY

### ATTACH LAUNCH LUGS

1. Cut **O** in half.
2. Glue both **O** in place as indicated.

**NOTE:**  
Use full size template on bottom of page 2 for proper alignment of launch lugs. A launch rod can be used to ensure alignment.

### ATTACH SHOCK CORD

1. **NOTE:** Cut from page 2.
- 2.
- 3.
4. Hold until set.
5. Apply glue to shock cord mount.
6. Glue shock cord mount to the inside of body tube.
7. 2" (5 cm). Hold until set, let dry.

### INSTALL ENGINE MOUNT

1. Apply glue to inside of body tube as indicated.
2. Use **Q** to set distance of engine mount assembly.
3. Insert **Q** until it stops. Remove **Q**. Let dry.

**SCRAP Balsa**

### ASSEMBLE ENGINE MOUNT

1. Mark and make slit in **A** as indicated. Dimensions: 3 1/4" (8.3 cm), 2 1/2" (6.4 cm), 1" (25 mm), 1/8" (3 mm) slit.
2. Mark **F** as indicated. Dimension: 1/2" (13 mm).
3. Use **F** (yellow spacer tool) to insert **B** (green engine block) into position. Insert **F** to mark.
4. REMOVE **F** IMMEDIATELY.
5. **C**
6. Carefully remove **D** from laser-cut card stock.
7. DEEP NOTCH.
- 8.
9. SHALLOW NOTCH. Let dry.

### MARK AND ASSEMBLE BODY TUBE RING

1. Align **G** with full size marking template on top of Page 2.
2. Mark inside and outside of tube as indicated.
3. Carefully remove **H** from laser-cut card stock.
4. Press **H** down over a round cylinder (such as a broom stick handle) to form a slight curve in part.
5. **NOTE:** Glue goes on the outside of **G**.
6. Ends even. **X3** LET DRY.

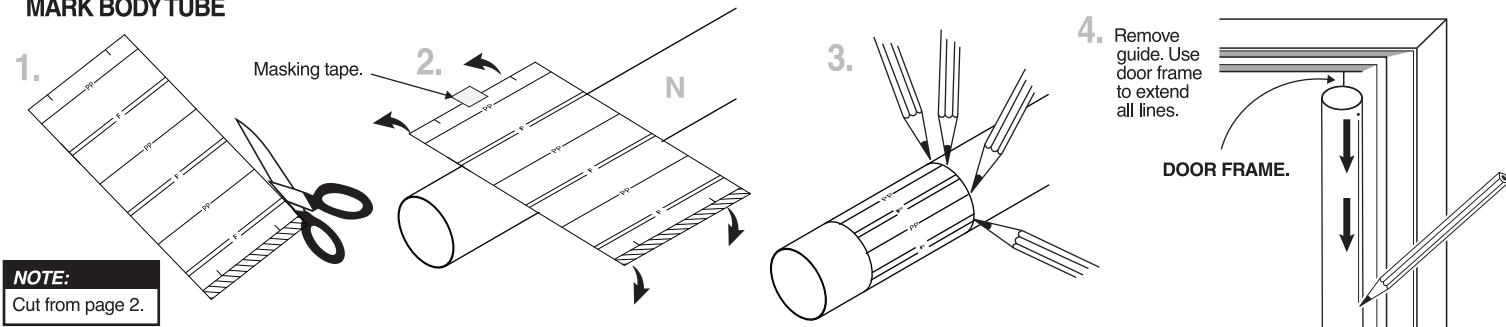
**NOTE:**  
Glue goes on the outside of **G**.

PLACE ON FLAT SURFACE TO ALIGN ENDS OF PARTS

### PREPARE OUTER FINS

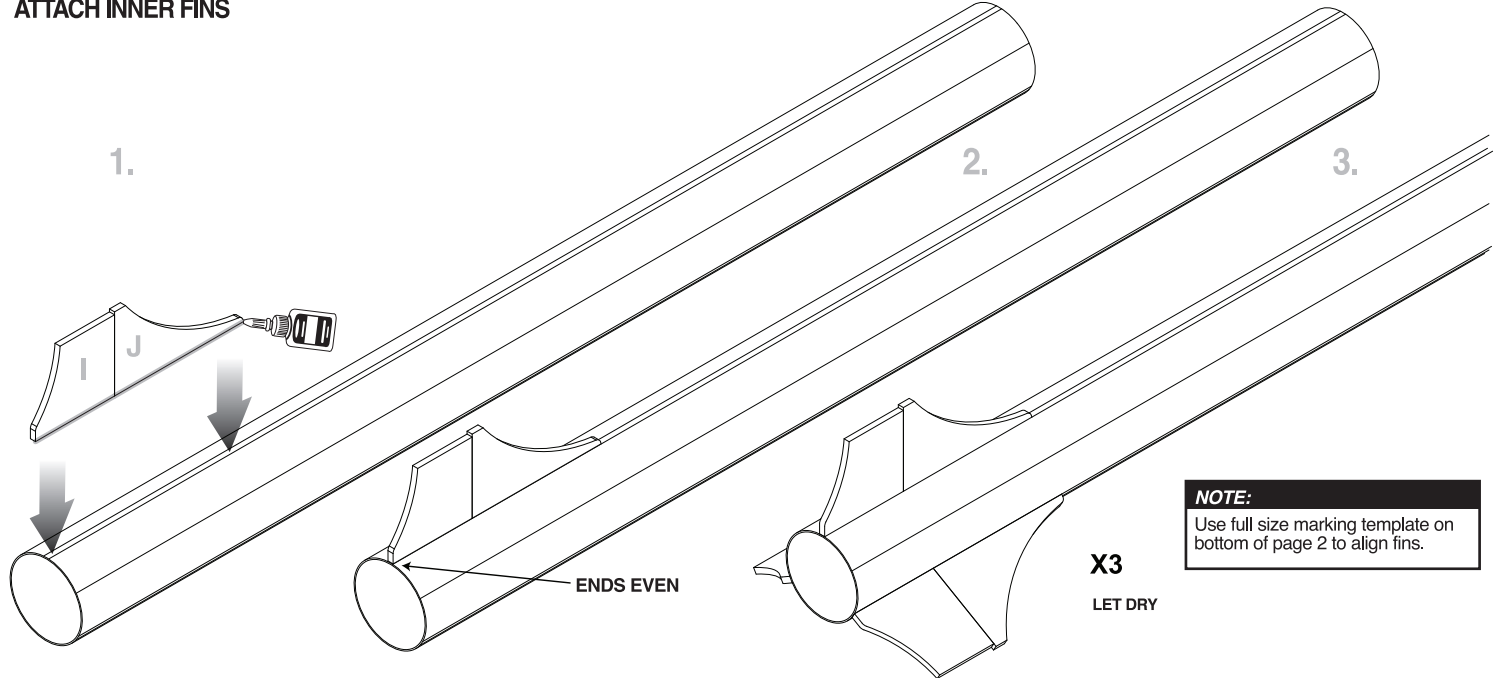
1. Sand both sides.
2. Carefully remove with hobby knife.
3. **NOTE:** Assemble and glue on flat surface covered with wax paper.
4. **X3** LET DRY.
5. Use full size fin template on Page 2 to align **K** and **L**.
6. **X3** LET DRY.

**MARK BODY TUBE**



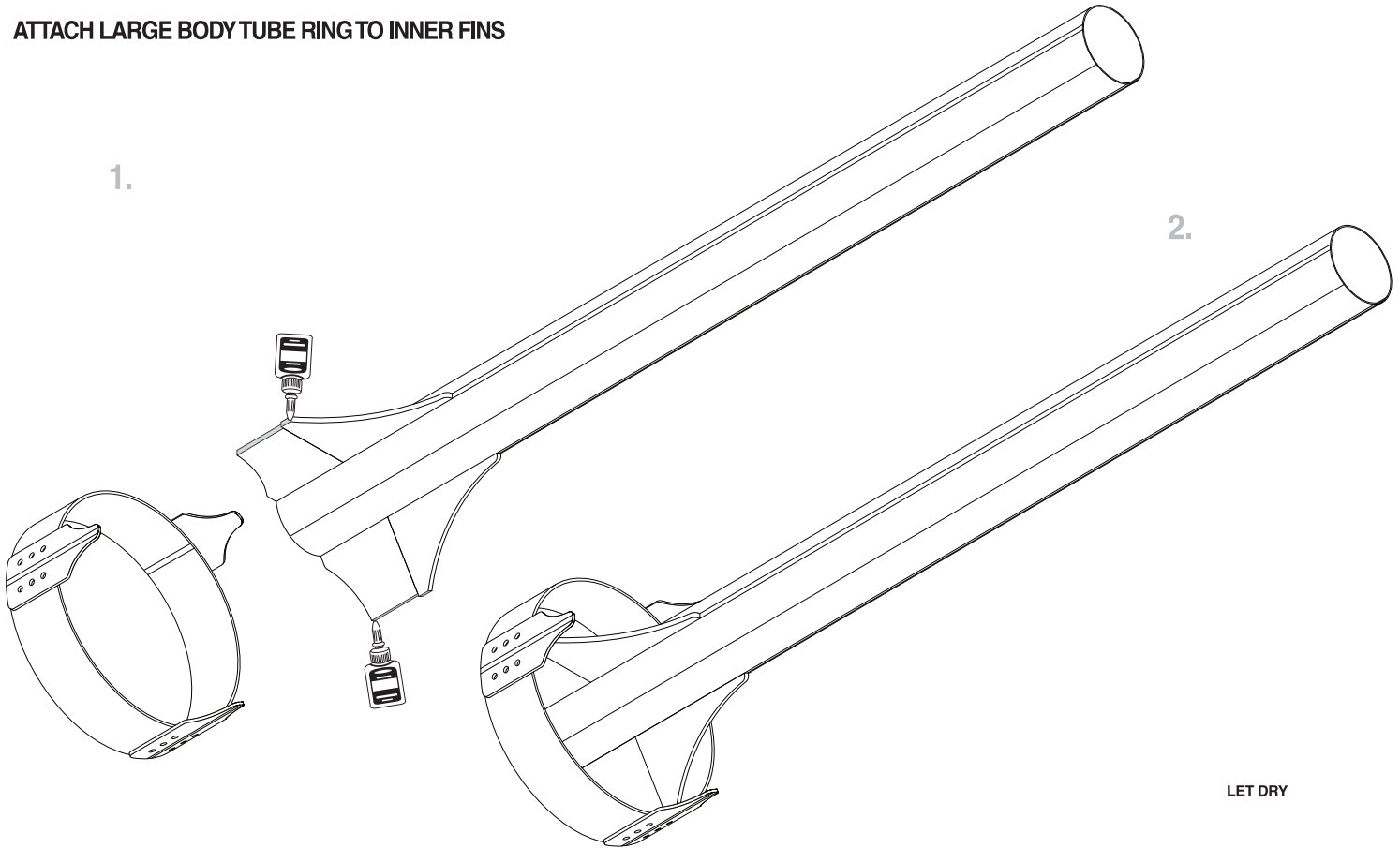
**NOTE:**  
Cut from page 2.

**ATTACH INNER FINS**



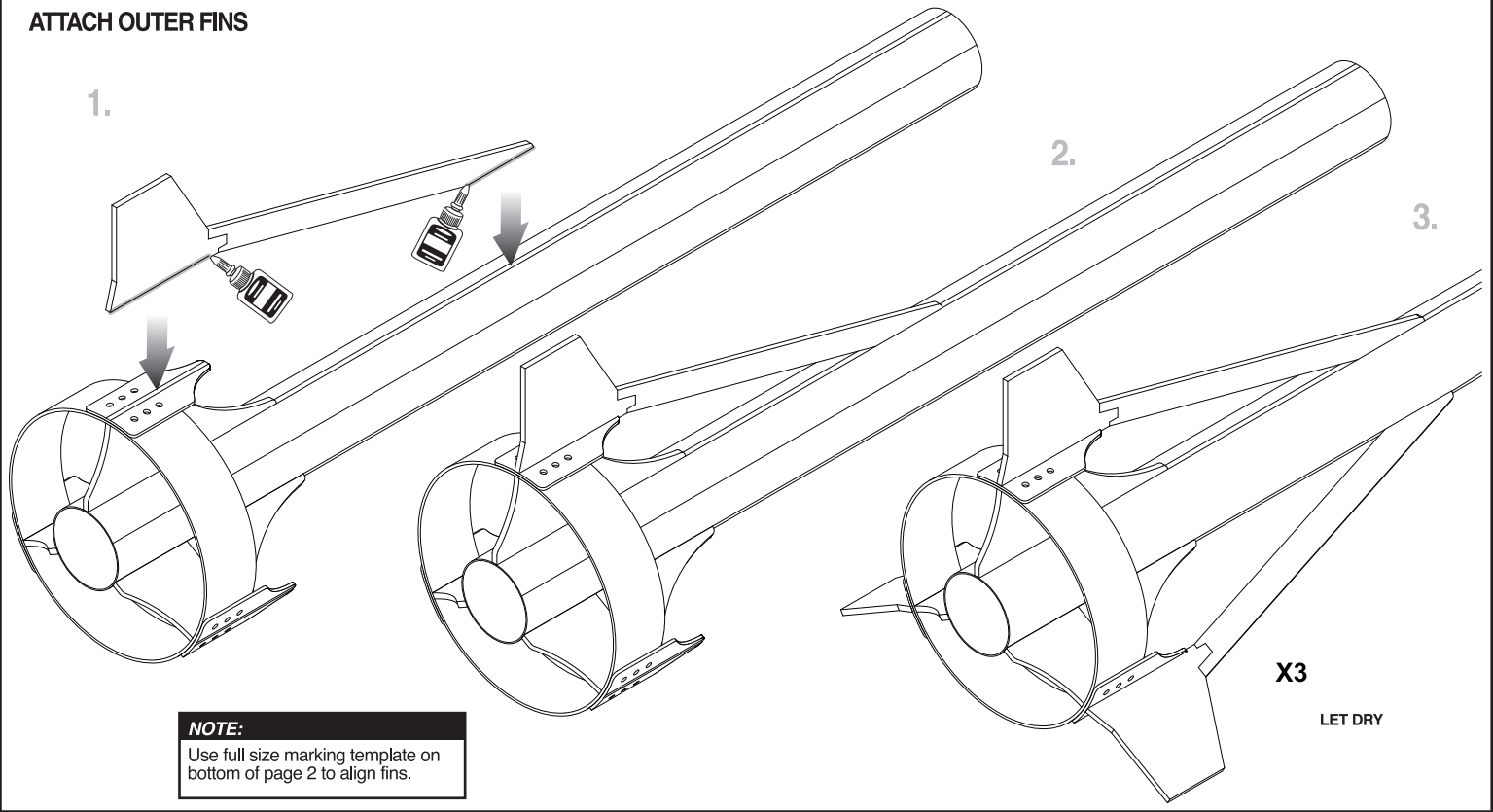
**X3**  
LET DRY

**ATTACH LARGE BODY TUBE RING TO INNER FINS**



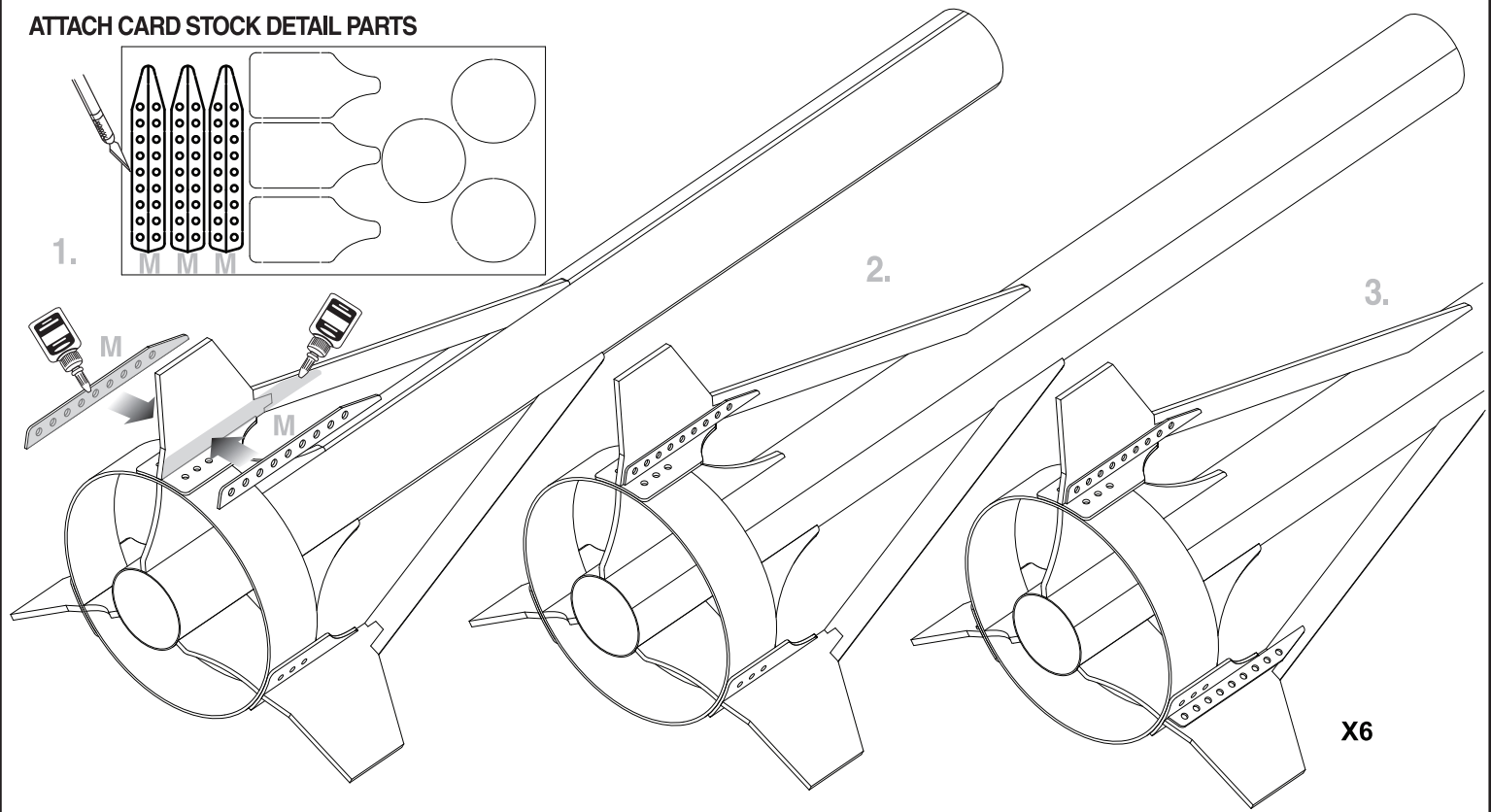
LET DRY

**ATTACH OUTER FINS**



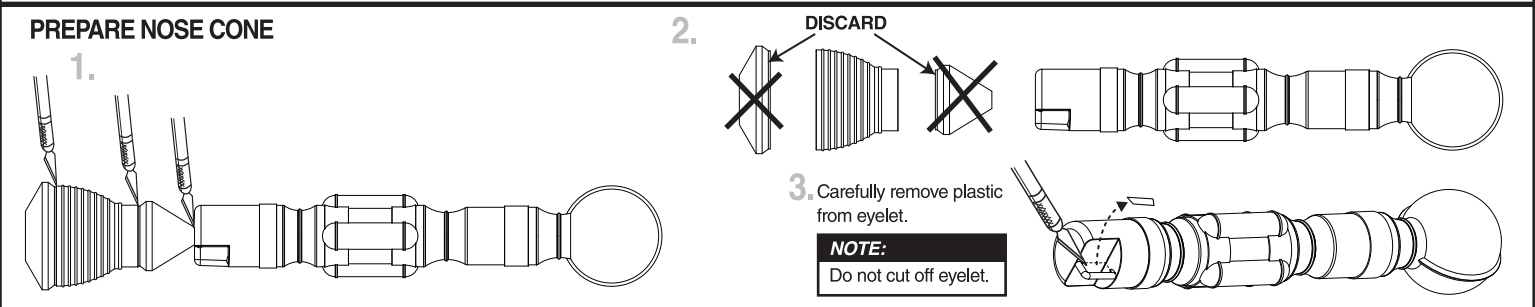
**X3**  
LET DRY

**ATTACH CARD STOCK DETAIL PARTS**



**X6**

**PREPARE NOSE CONE**



**NOTE:**  
Do not cut off eyelet.