



EstesRockets.com

HYPERBAT™

7217

AGES
10+



Skill Level

INTERMEDIATE

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



SCISSORS



PENCIL



RULER



FINE SANDPAPER



CARPENTER'S
GLUE



HOBBY KNIFE



MASKING TAPE



PLASTIC CEMENT



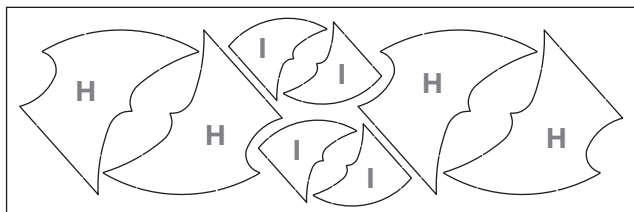
PRIMER (WHITE)



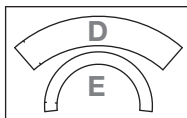
PAINTS
(BLACK)



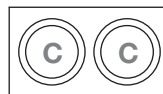
CLEAR COAT
(OPTIONAL)



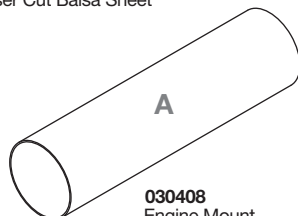
066367
Laser Cut Balsa Sheet



032787
Laser Cut Nozzle
Skirt Set



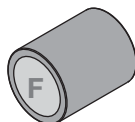
032786
Laser Cut Rings



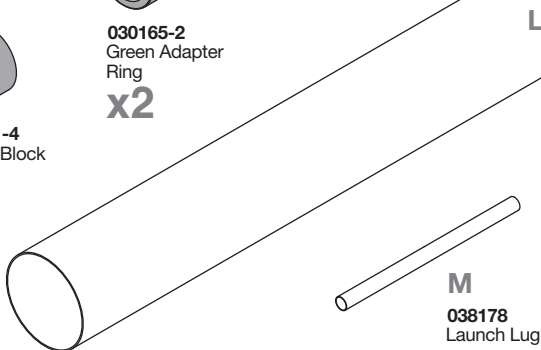
030408
Engine Mount
Tube 2.75"
x2



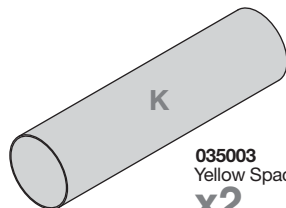
030171-4
Engine Block
x2



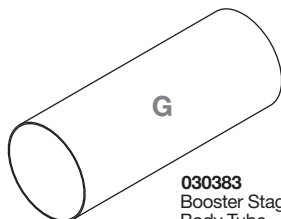
030165-2
Green Adapter
Ring
x2



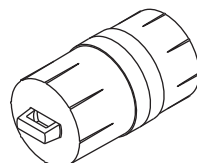
031351
Main Body Tube
12"



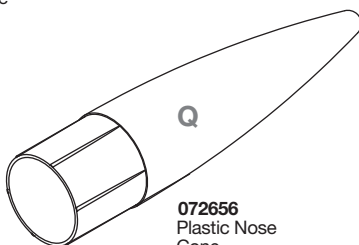
035003
Yellow Spacer Tube
x2



030383
Booster Stage
Body Tube
2.5"



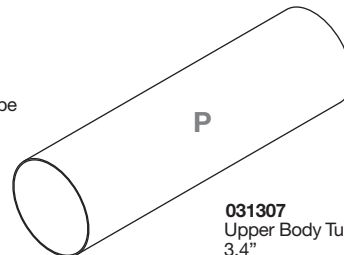
O
068235
Plastic Coupler
Adapter



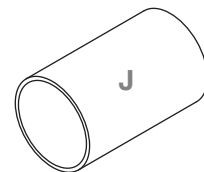
072656
Plastic Nose
Cone



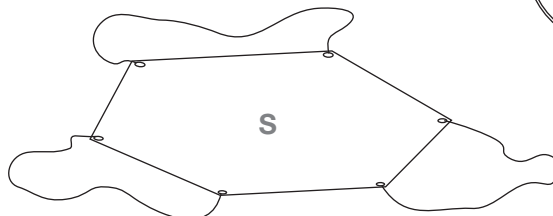
M
038178
Launch Lug



031307
Upper Body Tube
3.4"



030263
Tube Coupler



035801
Parachute
12"



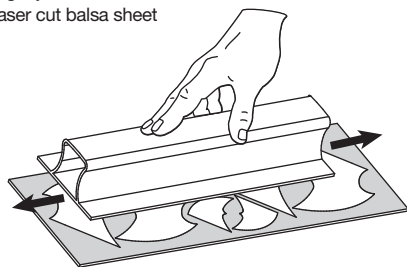
R
038362
Shock Cord

090001-7217
Waterslide Decal

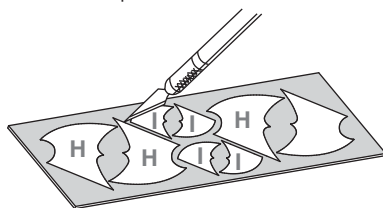


PREPARE FINS

1. Lightly sand both sides of the laser cut balsa sheet

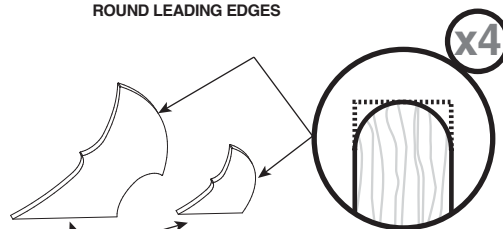


2. Using a hobby knife, cut out all H and I fin pieces.



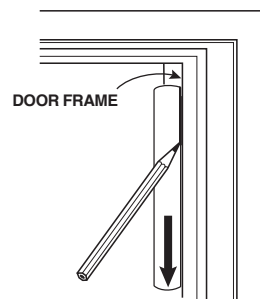
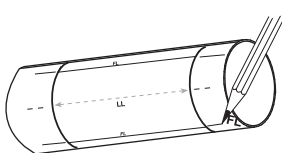
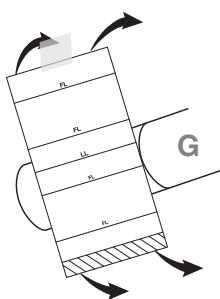
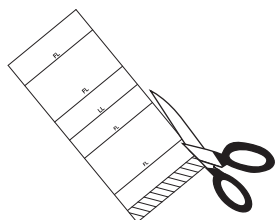
ROUND LEADING EDGES

DO NOT ROUND ROOT EDGES



TUBE MARKING (BOOSTER STAGE)

1. Cut out the tube marking guides on page 5.
2. Wrap booster body tube and secure with clear tape. Mark FL and LL lines on the body tubes.
NOTE: Mark LL lines in different color or pattern.

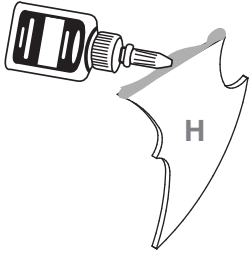


ASSEMBLE ENGINE MOUNT (BOOSTER STAGE)

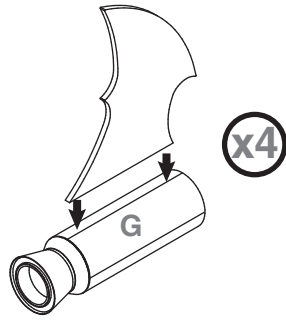
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

ATTACH FINS (BOOSTER STAGE)

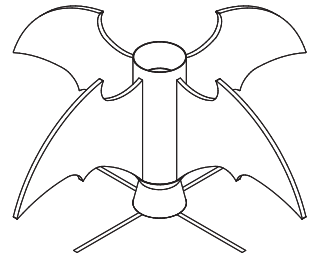
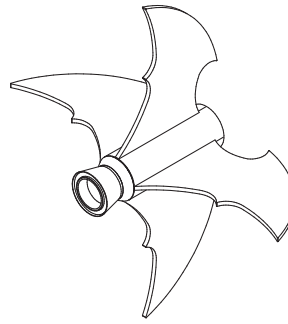
1. Apply yellow glue to inside edge of fin **H**.



2. Apply fin to lines marked FL. Repeat for all fins.



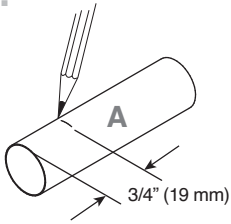
3. Check alignment using Fin Guide on page 5.



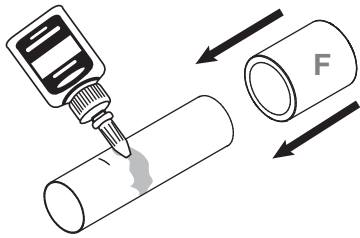
LET DRY

ASSEMBLE ENGINE MOUNT (UPPER STAGE)

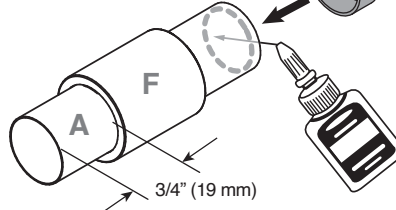
- 1.



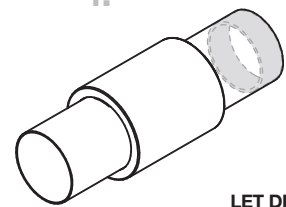
2. Push **F** to mark.



3. Apply glue to inside edge of **A**.



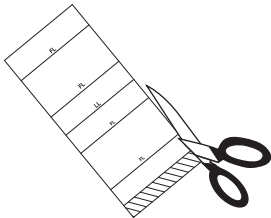
- 4.



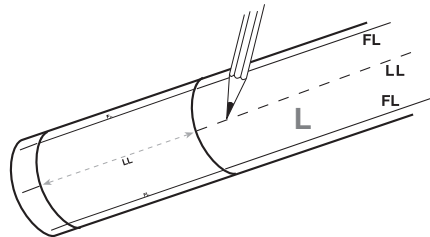
LET DRY

TUBE MARKING (UPPER STAGE)

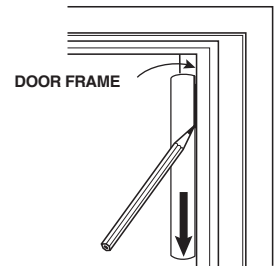
1. Cut out the tube marking guides on page 5.



2. Wrap main body tube and secure with clear tape. Mark FL and LL lines on the body tubes.
NOTE: Mark LL lines in different color or pattern.

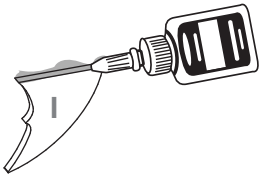


3. Remove all guides and use a door frame as a straight edge to extend all the lines on body tubes.

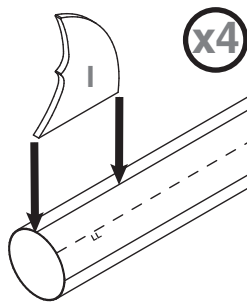


ATTACH FINS (UPPER STAGE)

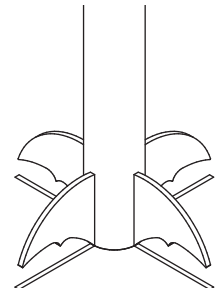
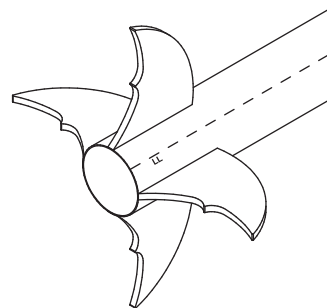
1. Apply yellow glue to inside edge of fin **I**.



2. Apply fin to lines marked FL. Repeat for all fins.



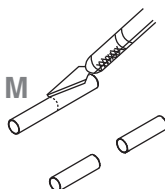
3. Check alignment using Fin Guide on page 5.



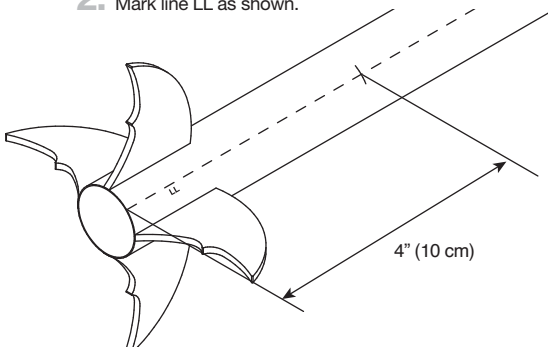
LET DRY

ATTACH LAUNCH LUGS

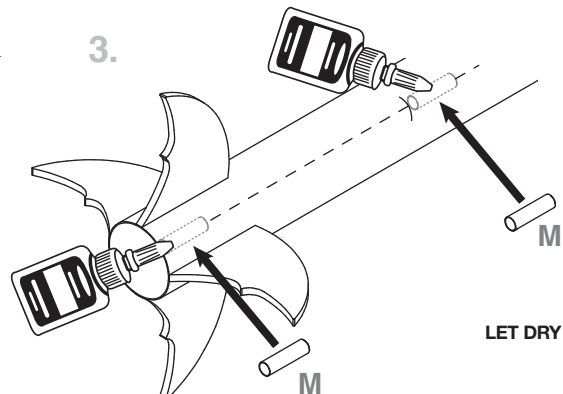
- 1.



2. Mark line LL as shown.

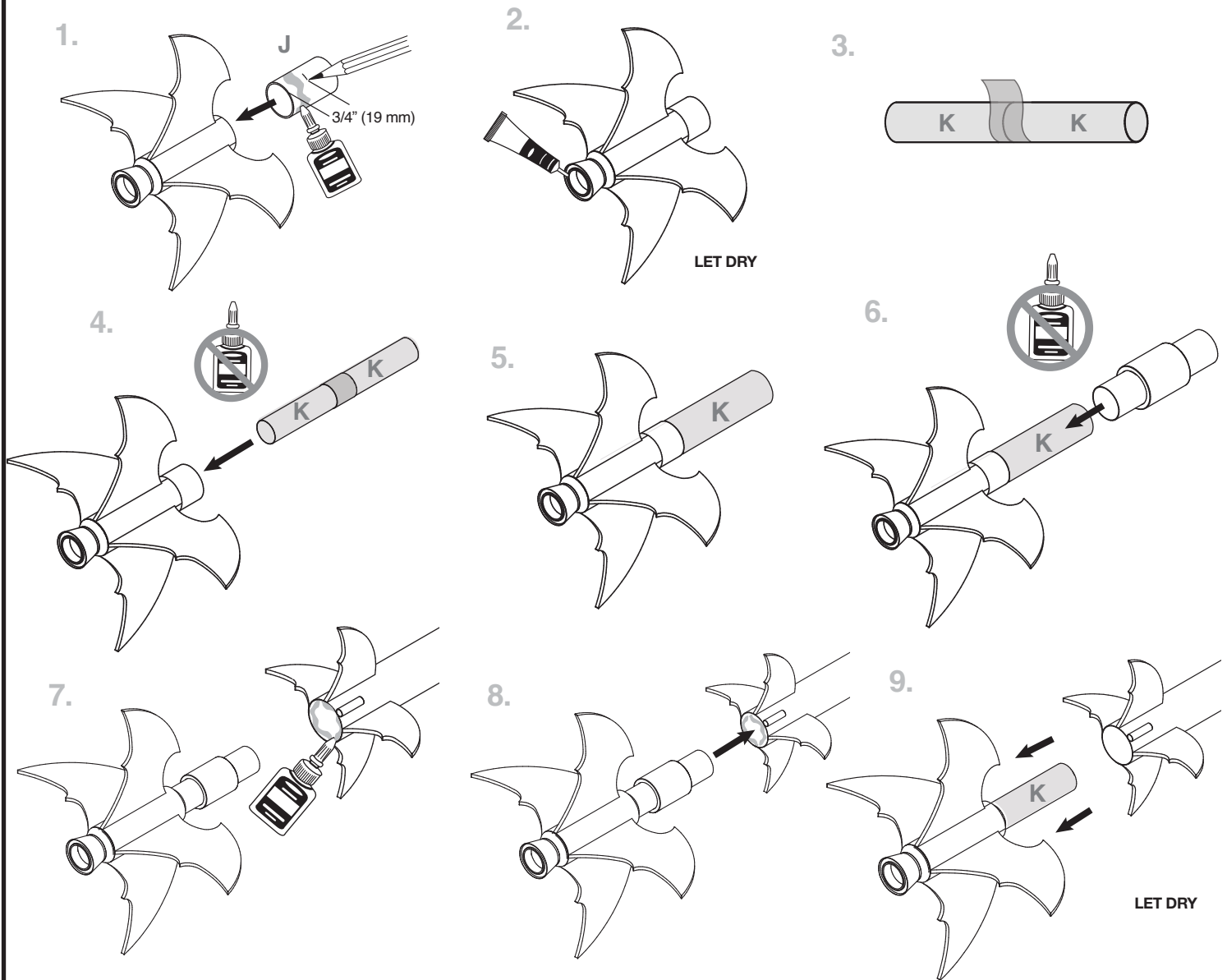


- 3.



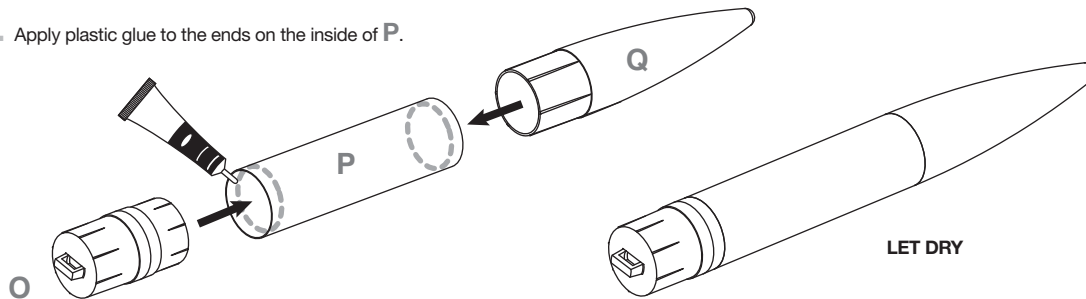
LET DRY

INSTALL ENGINE MOUNT (UPPER STAGE)



ASSEMBLE NOSE CONE

1. Apply plastic glue to the ends on the inside of P.



INSTALL SHOCK CORD

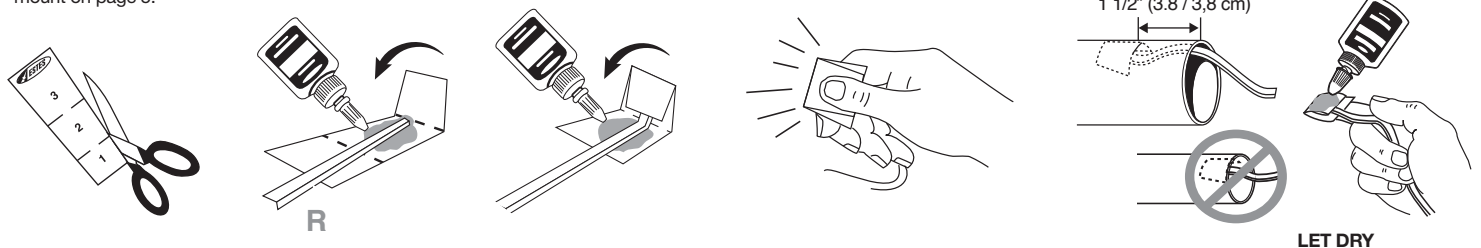
1. Cut out shock cord mount on page 5.

2.

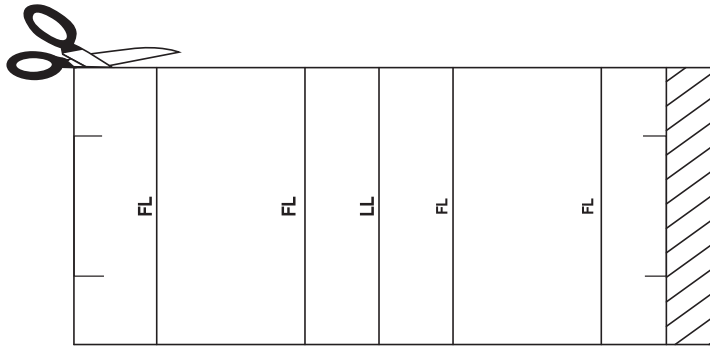
3.

4. Hold until set.

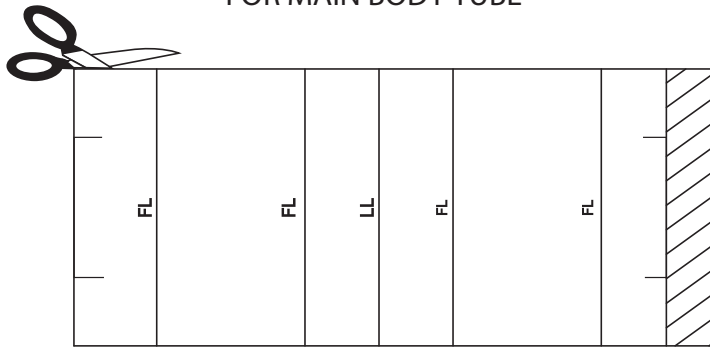
5. Apply glue to tab and insert into body as shown.



TUBE MARKING GUIDE

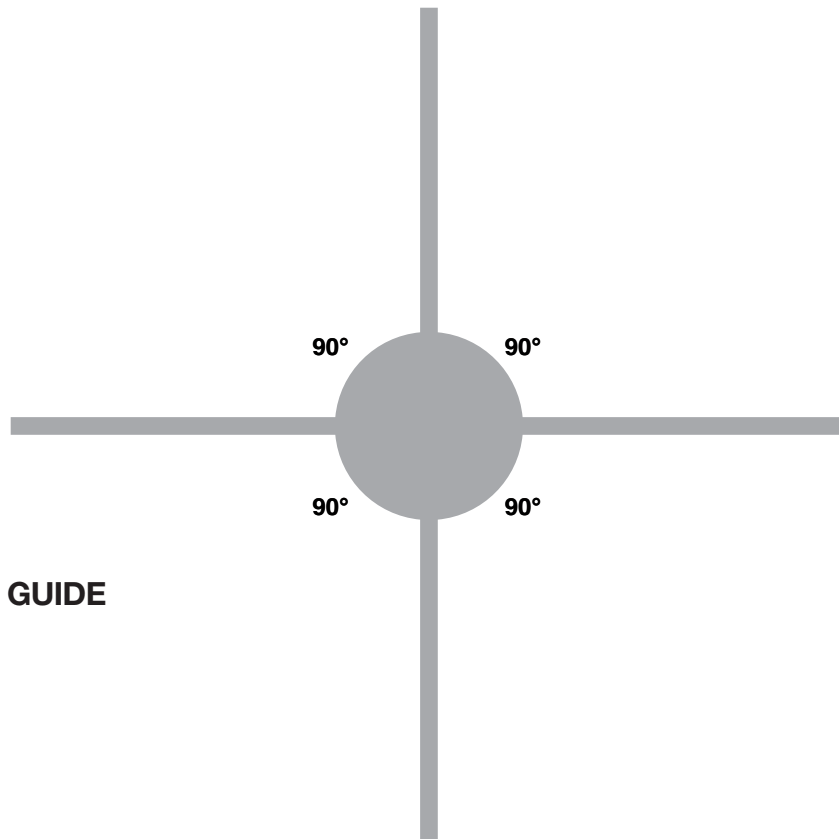
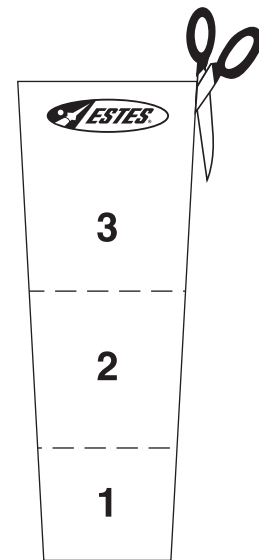


FOR MAIN BODY TUBE



FOR BOOSTER BODY TUBE

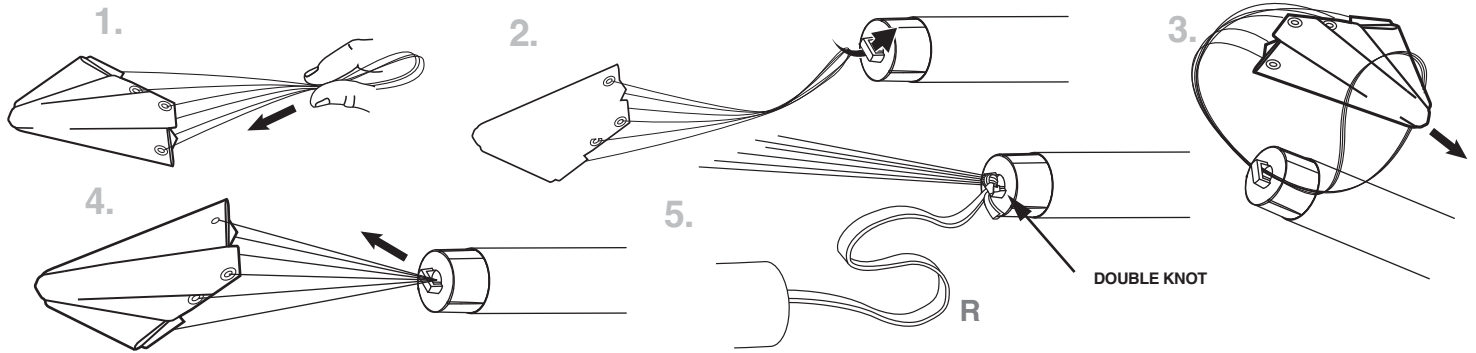
SHOCK CORD MOUNT



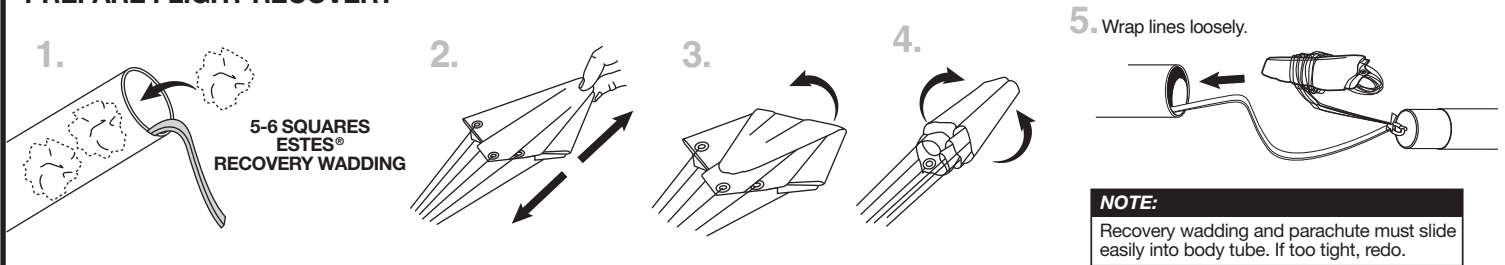
FIN ALIGNMENT GUIDE

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PREPARE RECOVERY SYSTEM



PREPARE FLIGHT RECOVERY



PAINT AND APPLY DECALS

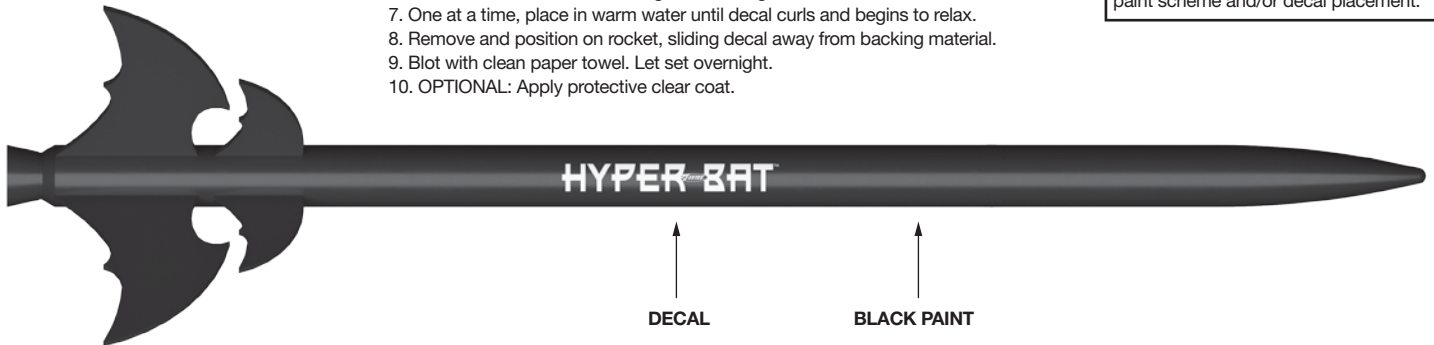
PAINT COLORS

Black Paint

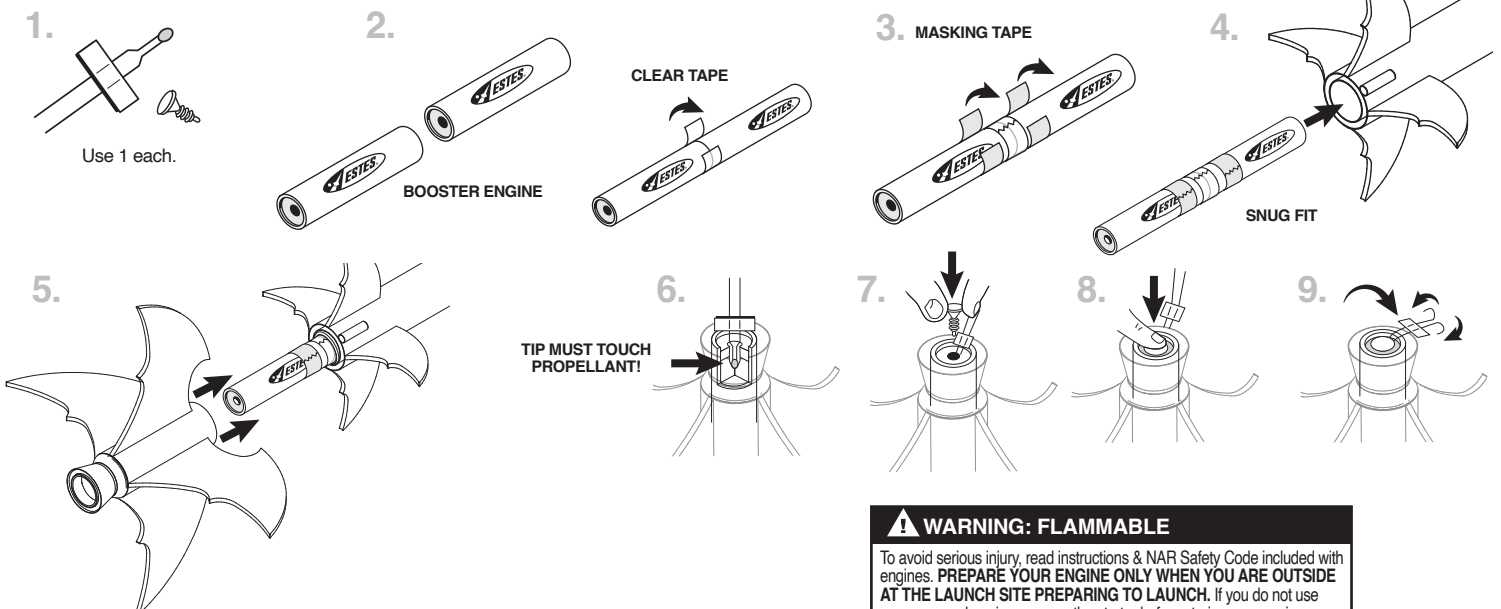
1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Paint entire rocket white.
3. Paint nose cone and transition black.
4. Mask off rocket and paint back fins red.
5. Apply decals only after paint is dry.
6. Cut decals from sheet, trimming close to edge.
7. One at 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:

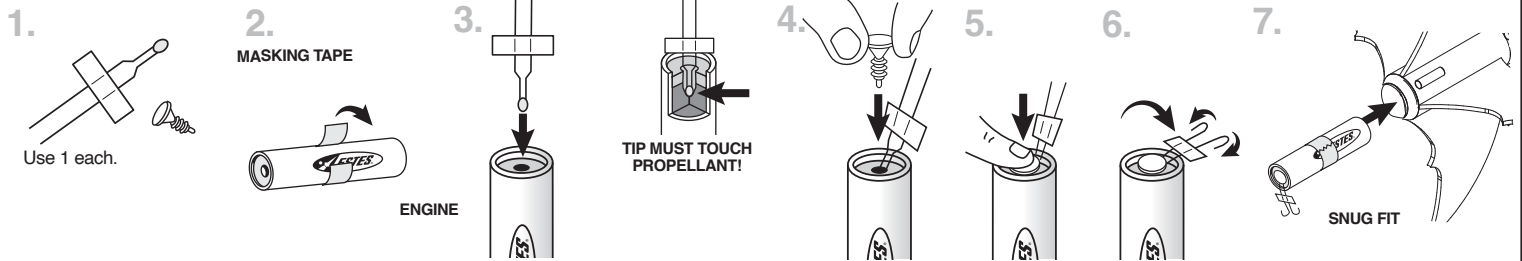
Please refer to packaging for suggested paint scheme and/or decal placement.



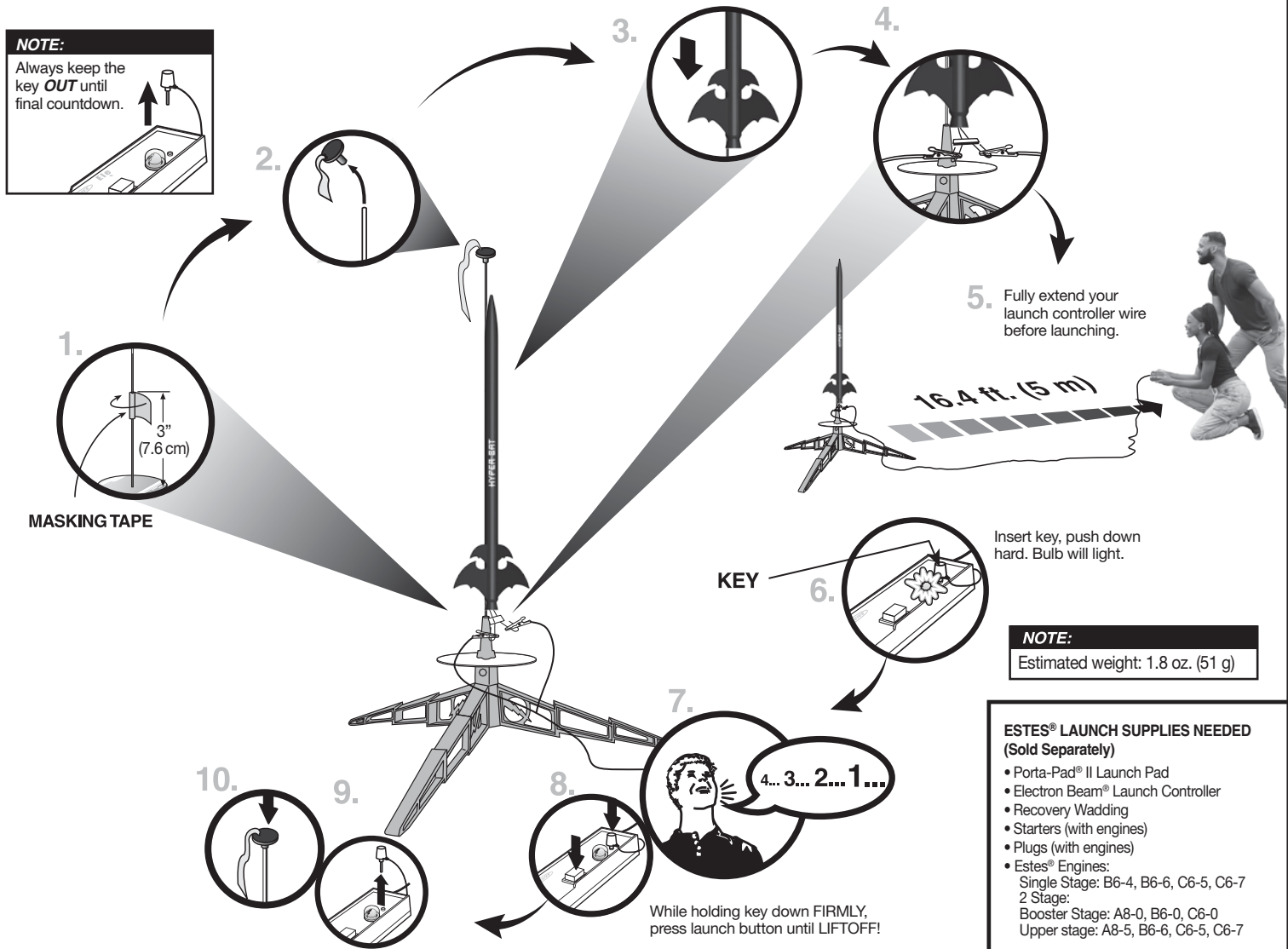
PREPARE TWO-STAGE ENGINE



PREPARE SINGLE STAGE ENGINE



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 (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.