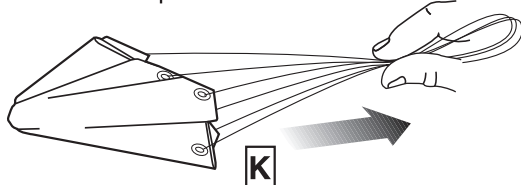
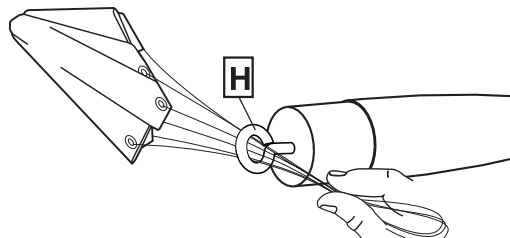


RECOVERY SYSTEM ATTACHMENT

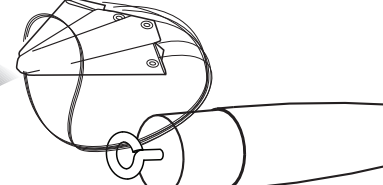
1. Form loop with shroud lines.



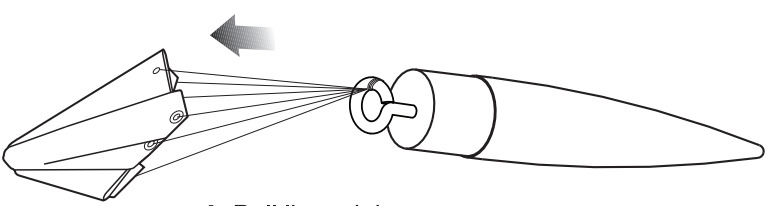
2. Insert loop through H.



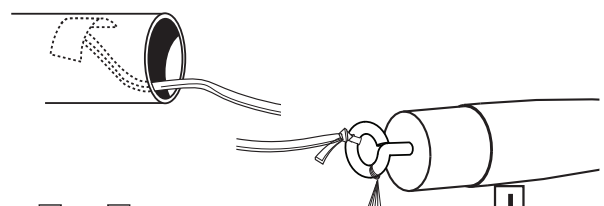
3. Pass parachute through loop.



4. Pull lines tight.



5. Tie J to H with double knot.

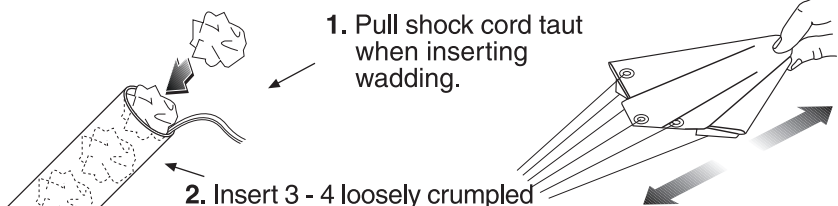


FLIGHT RECOVERY PREPARATION

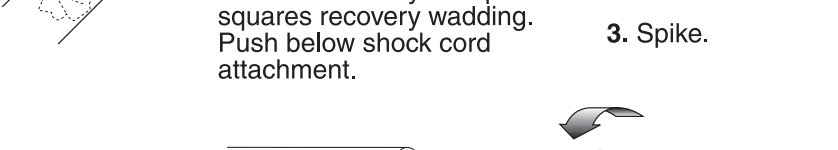
NOTE: Only Estes Recovery Wadding (302274) recommended.

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

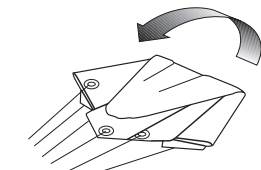
1. Pull shock cord taut when inserting wadding.



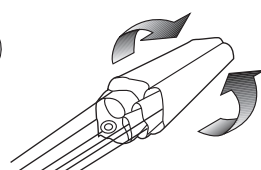
2. Insert 3 - 4 loosely crumpled squares recovery wadding. Push below shock cord attachment.



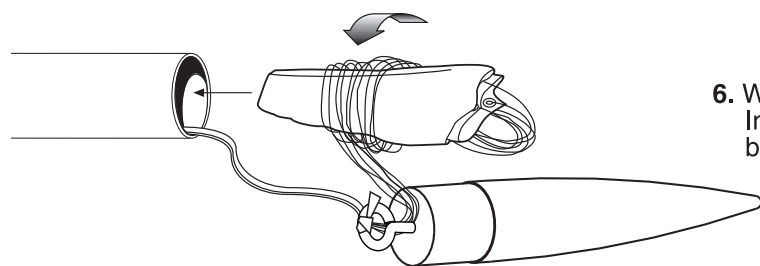
3. Spike.



4. Fold.



5. Roll.



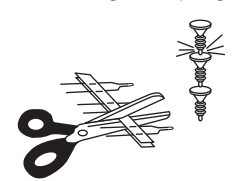
6. Wrap lines loosely around parachute. Insert parachute and shock cord into body tube.

ENGINE PREPARATION

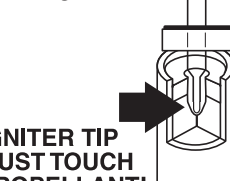
WARNING: FLAMMABLE

To avoid serious injury, read instructions & NAR Safety Code included with engines. **PREPARE ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!** If you do not use your prepared engine, remove the igniter before storing engine.

1. Separate igniter and igniter plug.



2. Insert igniter.



IGNITER TIP MUST TOUCH PROPELLANT!

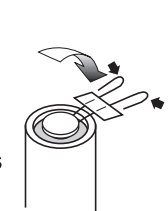
3. Insert plug.



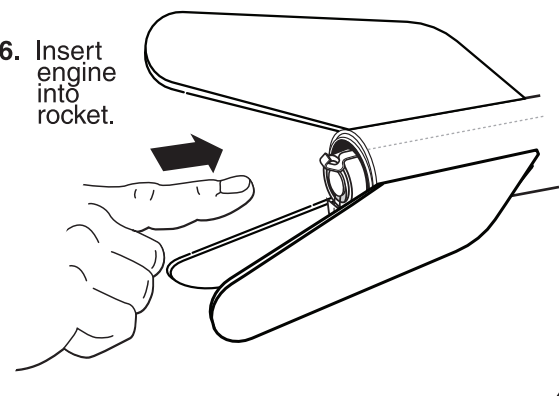
4. Push down.



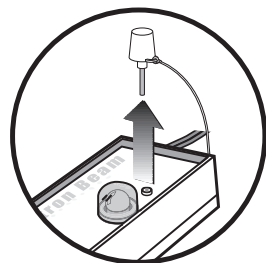
5. Gently bend igniters to form leads as shown.



6. Insert engine into rocket.



COUNTDOWN AND LAUNCH

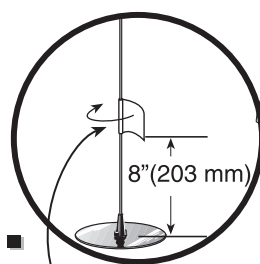


KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

2...

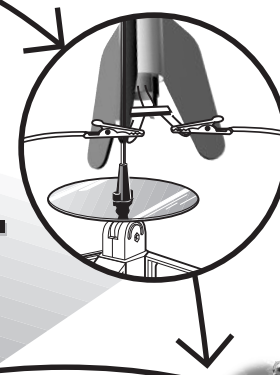


1...

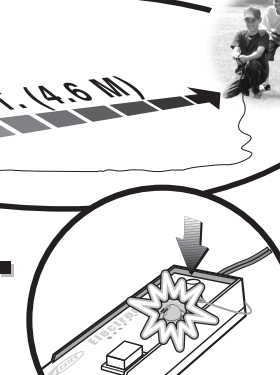


Masking Tape

3...



4...



5...



INSERT KEY. PUSH DOWN HARD. BULB WILL LIGHT.

WHILE HOLDING KEY DOWN FIRMLY, PRESS LAUNCH BUTTON UNTIL LIFTOFF!

LAUNCH BUTTON

PRECAUTIONS



NAR Safety Code



This Paper Can Be Recycled



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. 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 enclosed National Association of Rocketry (NAR) SAFETY CODE.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the igniter clips and remove the engine. Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.



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Penrose, CO 81240-0227
Printed in Guangdong, China

TWISTER™

FLYING MODEL ROCKET KIT INSTRUCTIONS
KEEP FOR FUTURE REFERENCE.

#3033

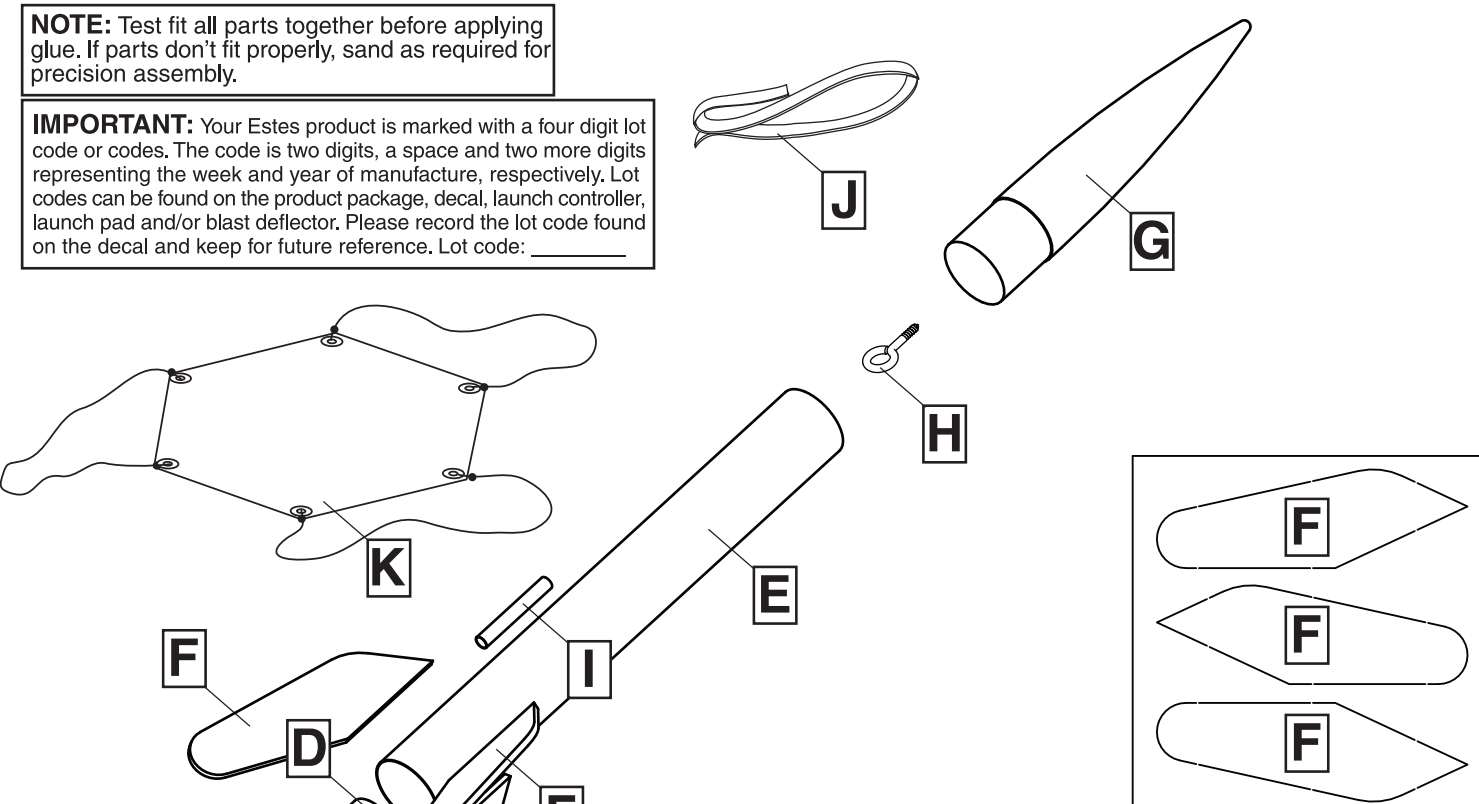
ASSEMBLY TIP:
Read all instructions before beginning work on your model. Make sure you have all parts and supplies.



www.estesrockets.com

NOTE: Test fit all parts together before applying glue. If parts don't fit properly, sand as required for precision assembly.

IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please record the lot code found on the decal and keep for future reference. Lot code: _____



Part	Qty.	Description	Part Number
A	1	Engine Mount Tube 2.75" (70 mm)	030326-1
B	1	Engine Hook	035021
C	1	Adapter Ring	030165-2
D	1	Engine Block	030224
E	1	Body Tube	030360
F	3	Laser Cut Fins	066125
G	1	Balsa Nose Cone	073001
H	1	Screw Eye	038251
I	1	Launch Lug	038175
J	1	Shock Cord	038367
K	1	Parachute	035815
	1	Waterslide Decal (not shown)	066127

SUPPLIES

In addition to the parts included in the kit you will also need:



SCISSORS



PENCIL



RULER



FINE SANDPAPER (#320-#400 GRIT)



CARPENTER'S GLUE



MODELING KNIFE



MASKING TAPE



SPRAY PAINT GLOSS ORANGE



SPRAY PAINT PRIMER WHITE



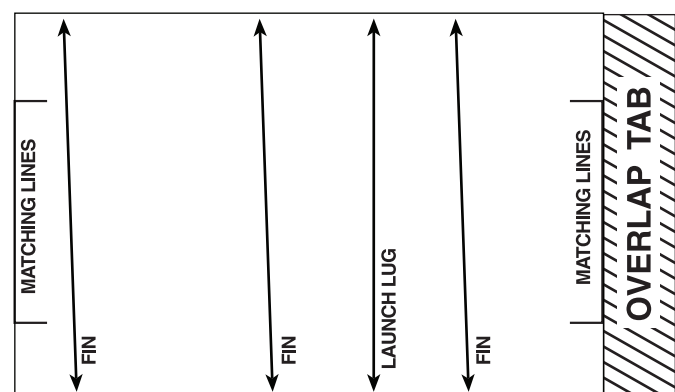
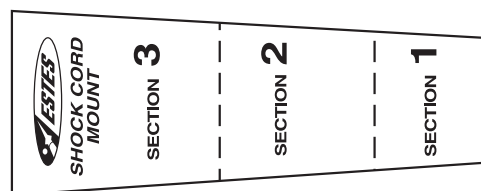
SPRAY PAINT GLOSS WHITE



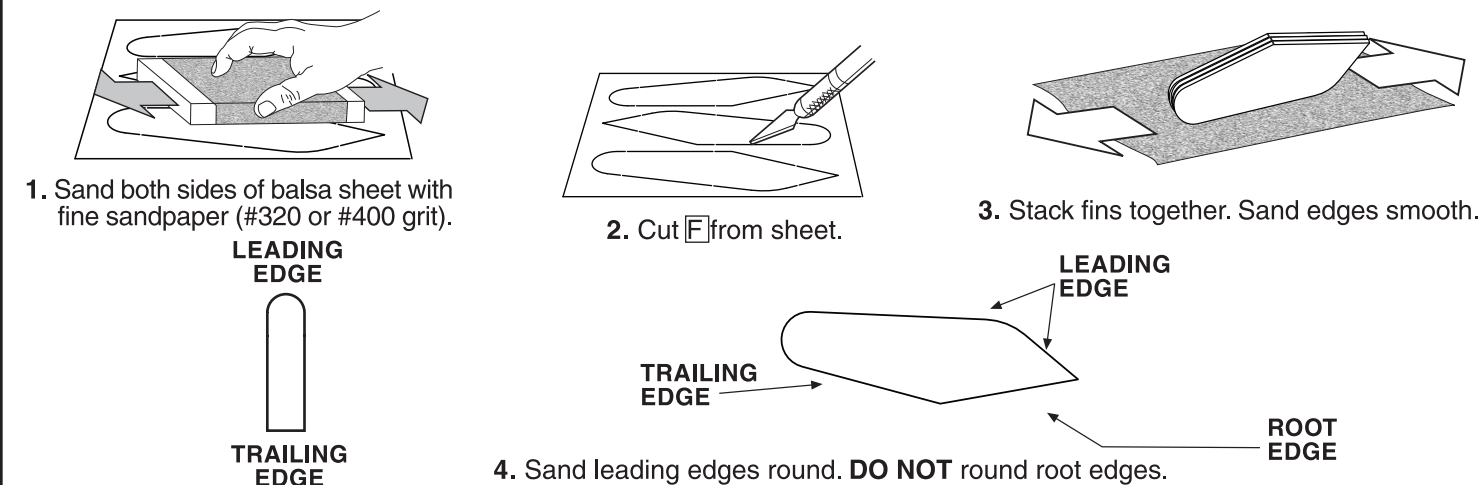
SPRAY PAINT CLEAR COAT (OPTIONAL)

TUBE MARKING GUIDE

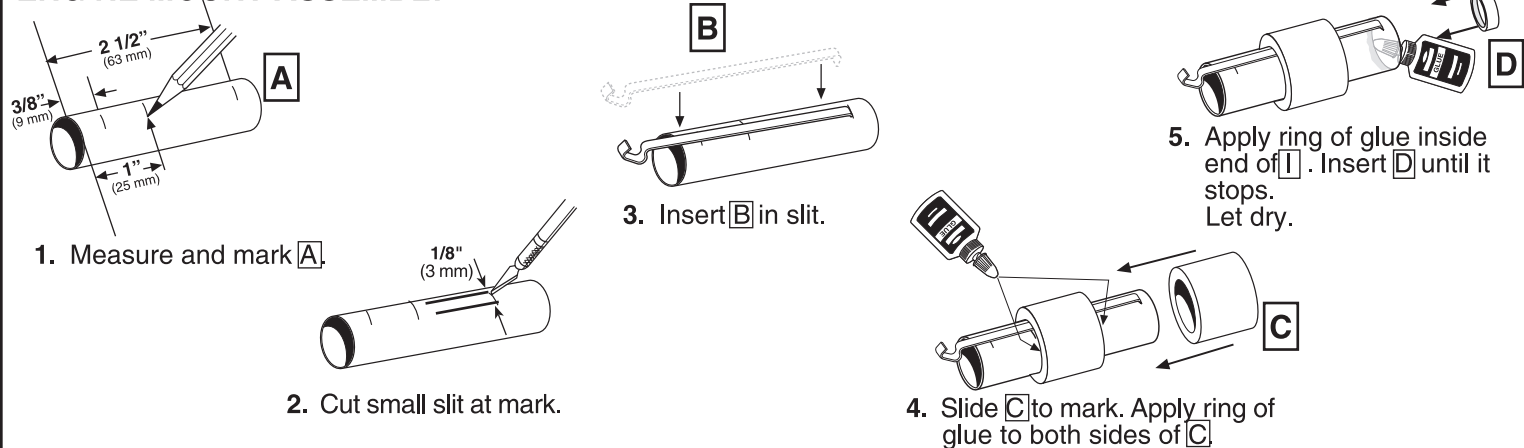
(Make a copy if you want to keep instructions.)



FIN PREPARATION

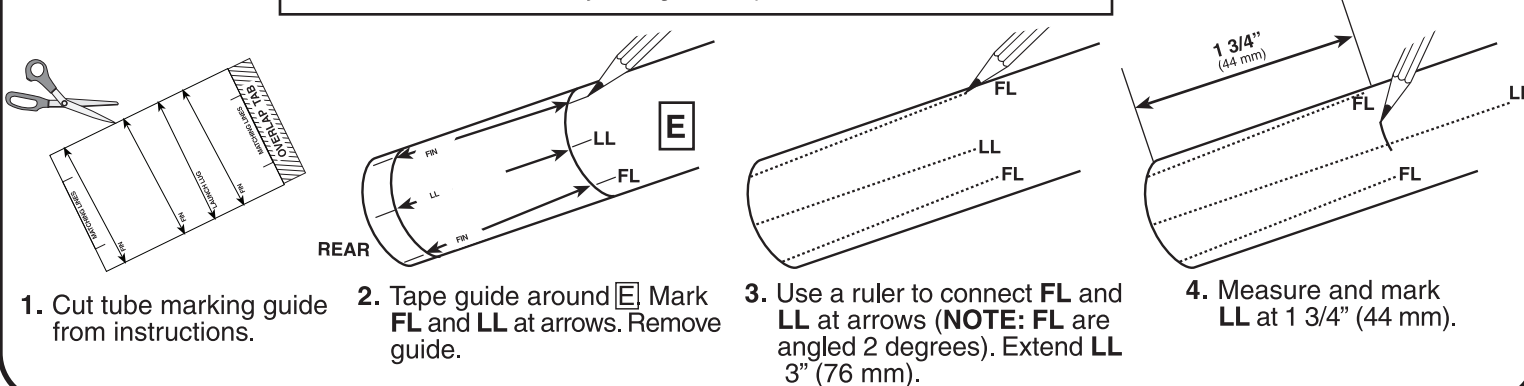


ENGINE MOUNT ASSEMBLY

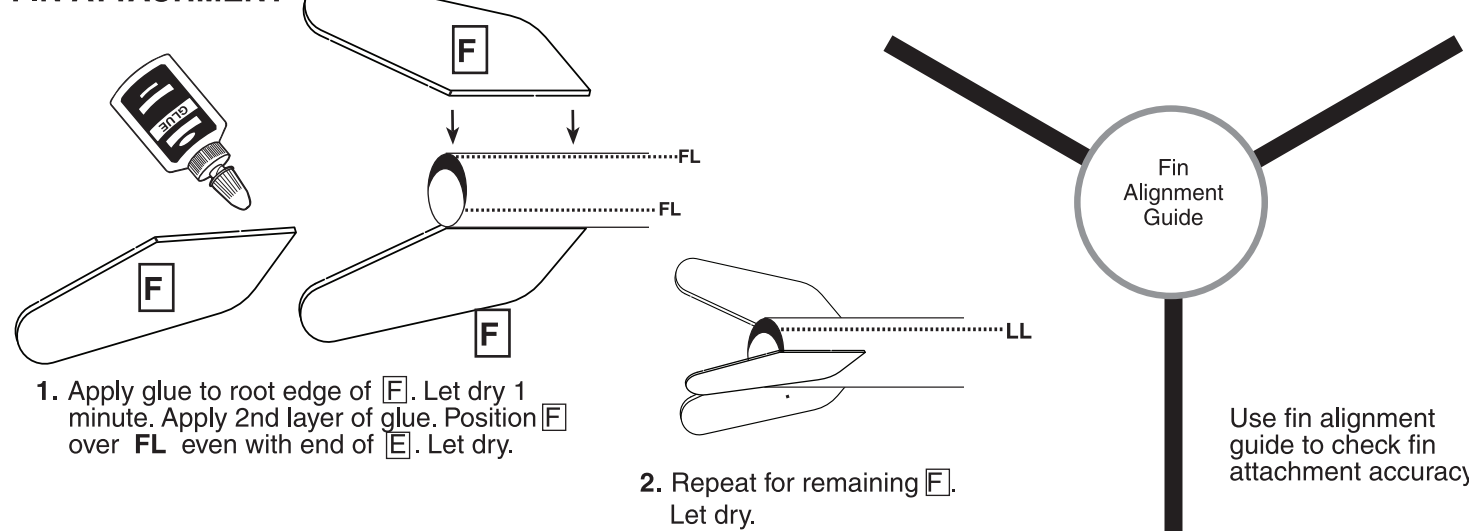


TUBE MARKING

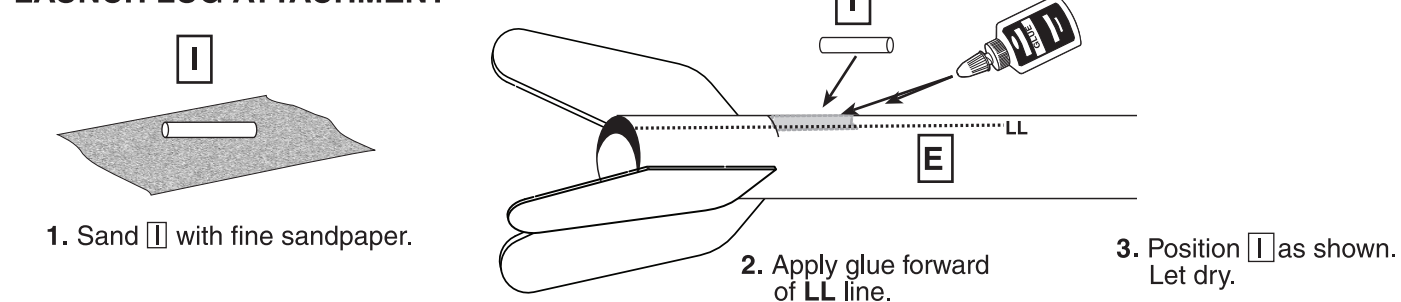
NOTE: Since the major feature of the Twister™ rocket is its spinning ability, it will be necessary to angle the fins slightly during assembly. Please mark **FL** and **LL** carefully during this step.



FIN ATTACHMENT

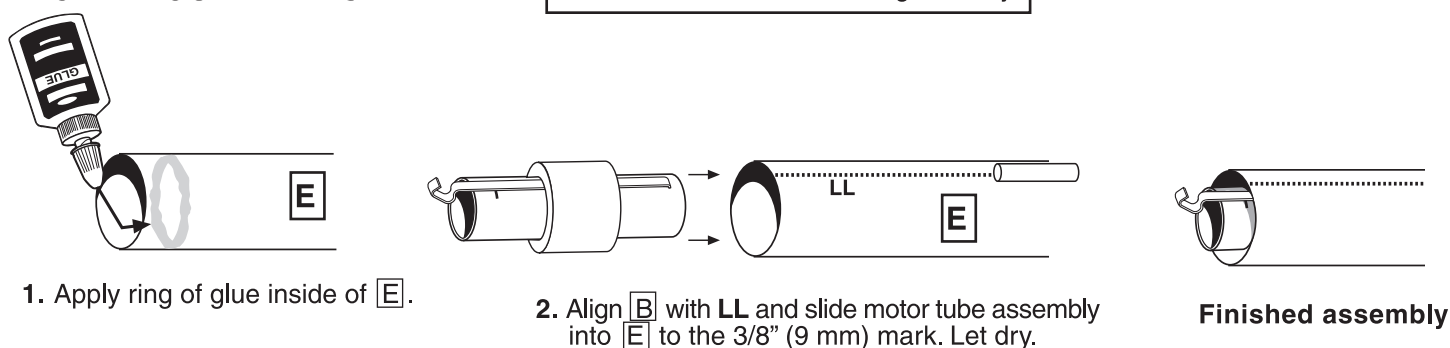


LAUNCH LUG ATTACHMENT

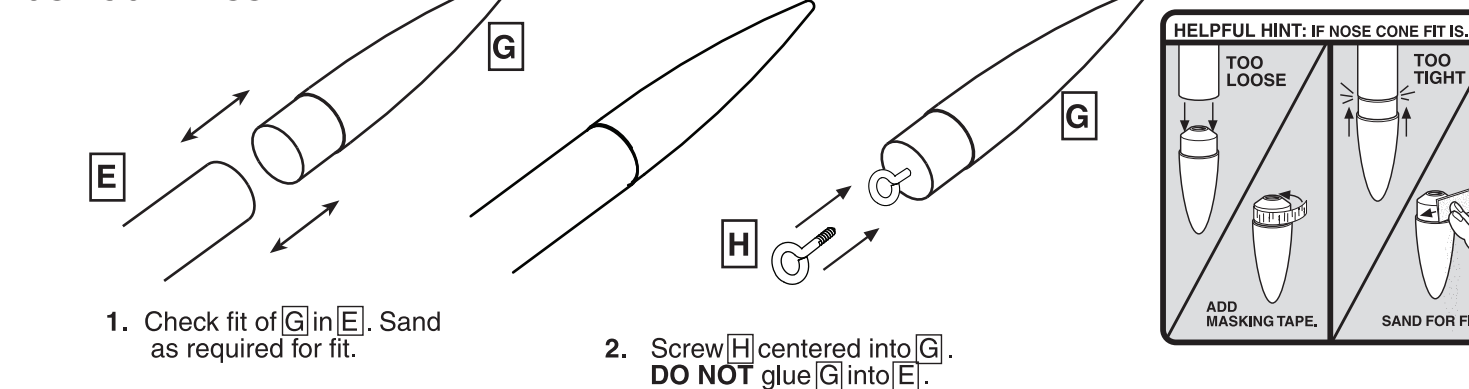


ENGINE MOUNT ATTACHMENT

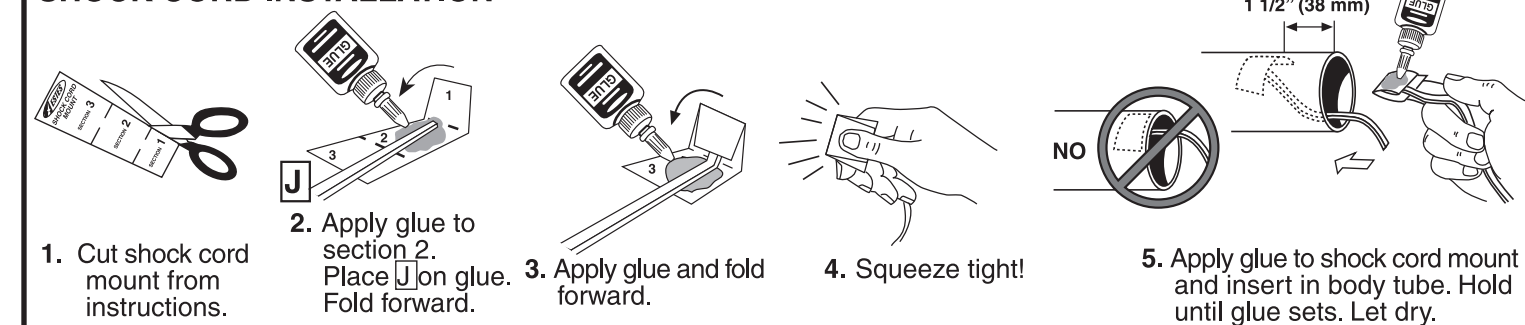
NOTE: Fins removed from drawing for clarity.



NOSE CONE ASSEMBLY



SHOCK CORD INSTALLATION



ROCKET FINISHING

NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints (color of your choice) and Testors Gloss Lacquer (#1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

STEPS TO A QUALITY FINISH

1. Insert shock cord into body tube and hold in place with paper.
2. Lightly sand entire rocket with fine sandpaper (#320 or #400 grit).
3. Apply glue fillet to fins and launch lug joint.
 - a. Allow glue to dry overnight.
4. Paint the main rocket body and nose cone separately.
5. Use a stick inserted into the motor tube end of the rocket body for painting.
6. Hold the nose cone by the screw eye with a clip or pliers for painting. We recommend a good filler/primer to be applied to the balsa fins and nose cone before painting.
7. Sand after each application for a smooth finish.
8. Apply 1-2 light coats of white primer.
9. Lightly sand with fine sandpaper (#320 or #400 grit) between coats.
 - a. Allow to dry between each coat.
10. Spray paint body tube and nose cone gloss white.
 - a. Let paint dry overnight (24 hours is best).
11. Apply 1/8" (3 mm) wide striping tape 1/4" (6 mm) from end of body tube.
12. Measure 5/8" (15 mm) from end of body tube and apply ring of masking tape. This step will create the orange stripes.
13. Apply masking tape between fins and protective cover over all white sections of the main body tube.
14. Spray fins and upper body tube bright orange.
 - a. Let paint dry overnight (24 hours is best). Remove tape and cover.
15. Apply waterslide decal where shown.
 - a. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.
 - b. Place the decal in bowl of warm water until decal begins to curl.
 - c. Remove the entire decal, position in place and slide the decal backing material from under the decal and onto the model as close to final position as possible.
 - d. Gently blot out excess water with a clean paper towel.
 - e. Allow decals to set overnight before applying protective clear coat.
16. When decals are dry, spray entire rocket (body and nose cone separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your Twister™ rocket!

