

ENGINE PREPARATION

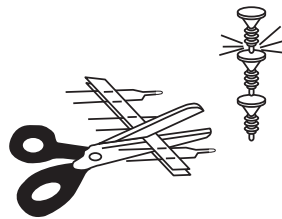
⚠ WARNING: FLAMMABLE

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!

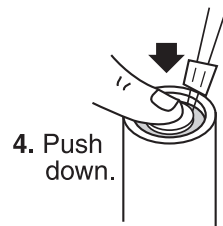
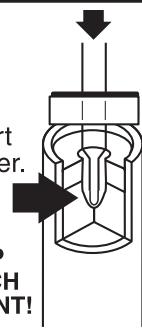
If you do not use your prepared engine, remove the igniter before storing engine.

1. Separate igniter and igniter plug.

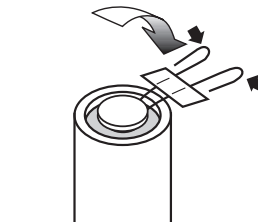


2. Insert igniter.

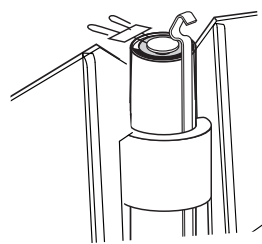
IGNITER TIP MUST TOUCH PROPELLANT!



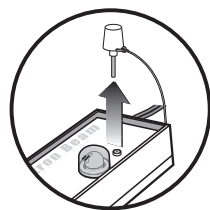
5. Gently bend igniters to form leads as shown.



6. Insert engine into rocket.

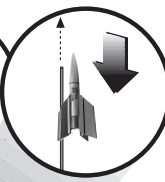


COUNTDOWN AND LAUNCH

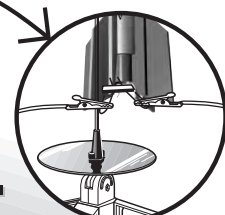


KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

2...



3...



4...



5...

4... 3... 2... 1...



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

LAUNCH BUTTON

LAUNCH SUPPLIES (Sold Separately)

- Porta Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Igniters (with Engines)
- Igniter Plugs (with Engines)
- Recommended Estes® Engines: A8-3 (First Flight), 1/2A6-2, B4-2, B4-4, B6-2, B6-4,

PRECAUTIONS



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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FLUTTER-BY™

FLYING MODEL ROCKET KIT INSTRUCTIONS
KEEP FOR FUTURE REFERENCE

#3013

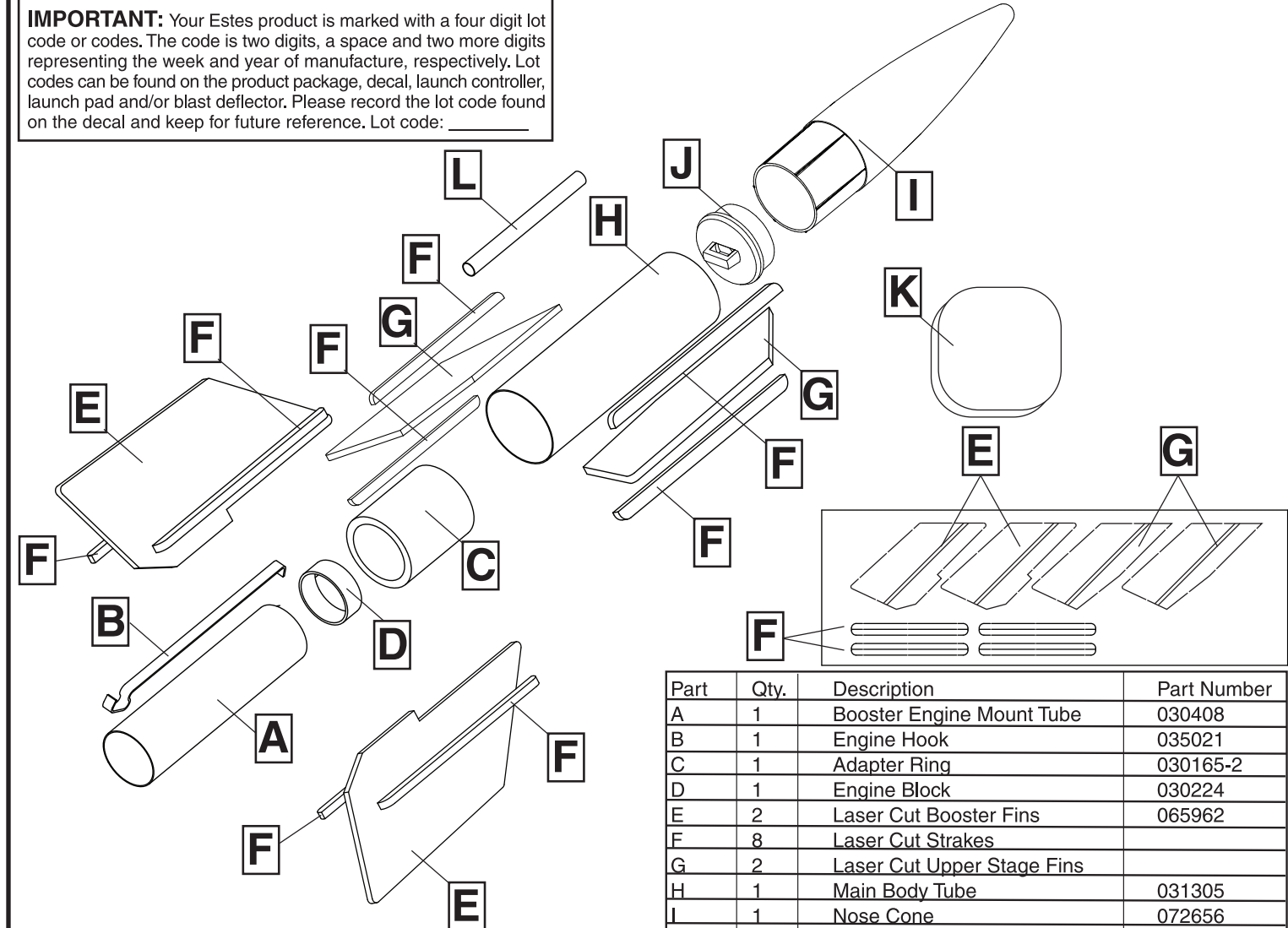
ASSEMBLY TIP:
Read all instructions before beginning work on your model. Make sure you have all parts and supplies.



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

www.estesrockets.com

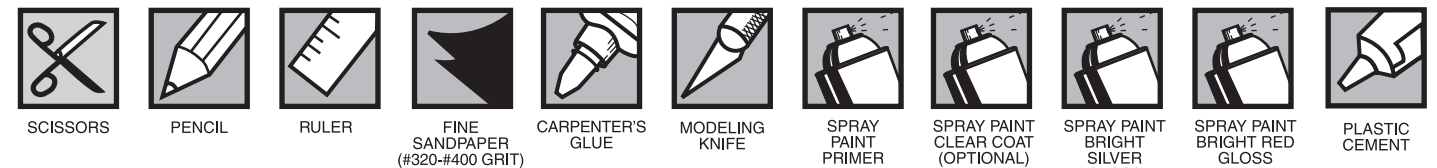
IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please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



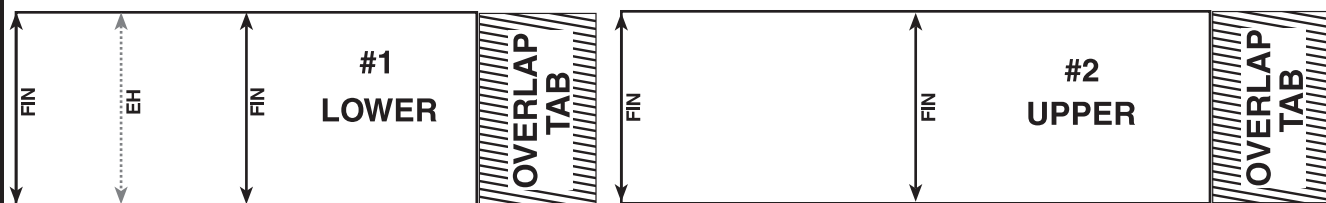
Part	Qty.	Description	Part Number
A	1	Booster Engine Mount Tube	030408
B	1	Engine Hook	035021
C	1	Adapter Ring	030165-2
D	1	Engine Block	030224
E	2	Laser Cut Booster Fins	065962
F	8	Laser Cut Strakes	
G	2	Laser Cut Upper Stage Fins	
H	1	Main Body Tube	031305
I	1	Nose Cone	072656
J	1	Nose Cone Pin	072654
K	1	Clay	085704
L	1	Launch Lug	038190
	1	Waterslide Decal (not shown)	065964

SUPPLIES

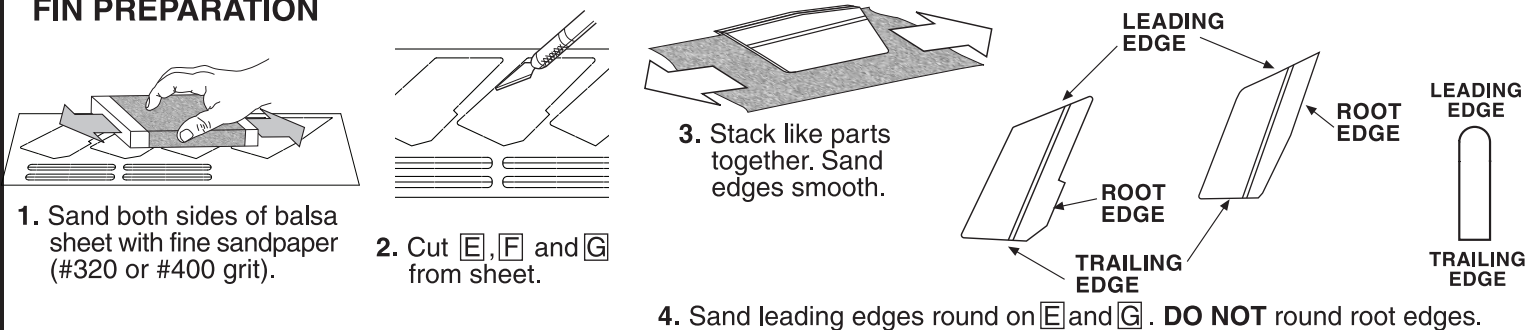
In addition to the parts included in the kit you will also need:



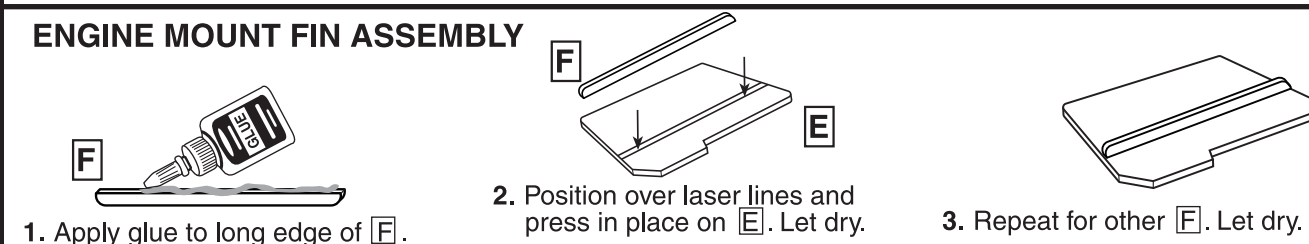
TUBE MARKING GUIDES (Make a copy if you want to keep instructions.)



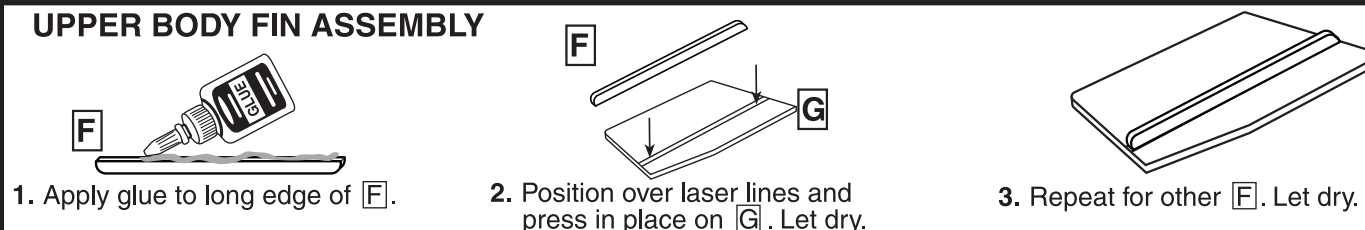
FIN PREPARATION



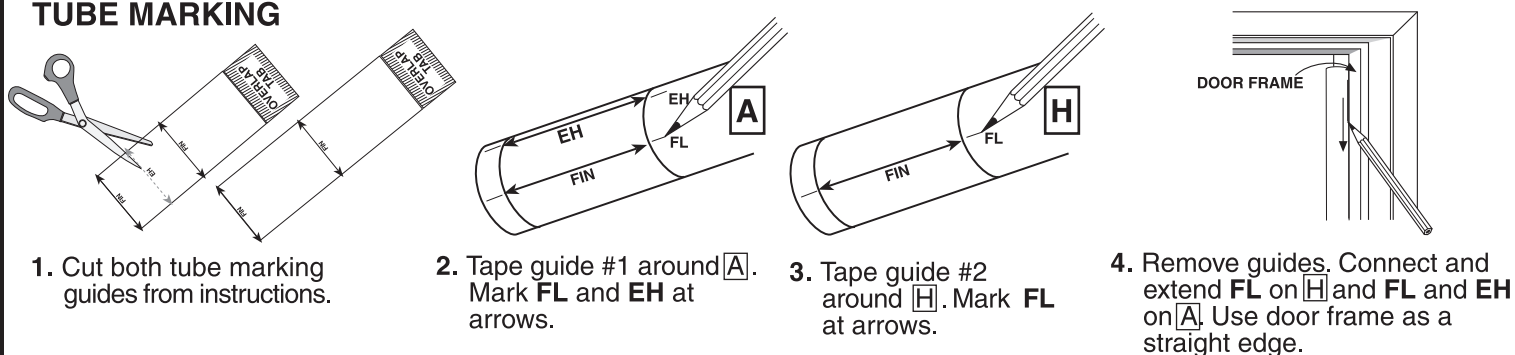
ENGINE MOUNT FIN ASSEMBLY



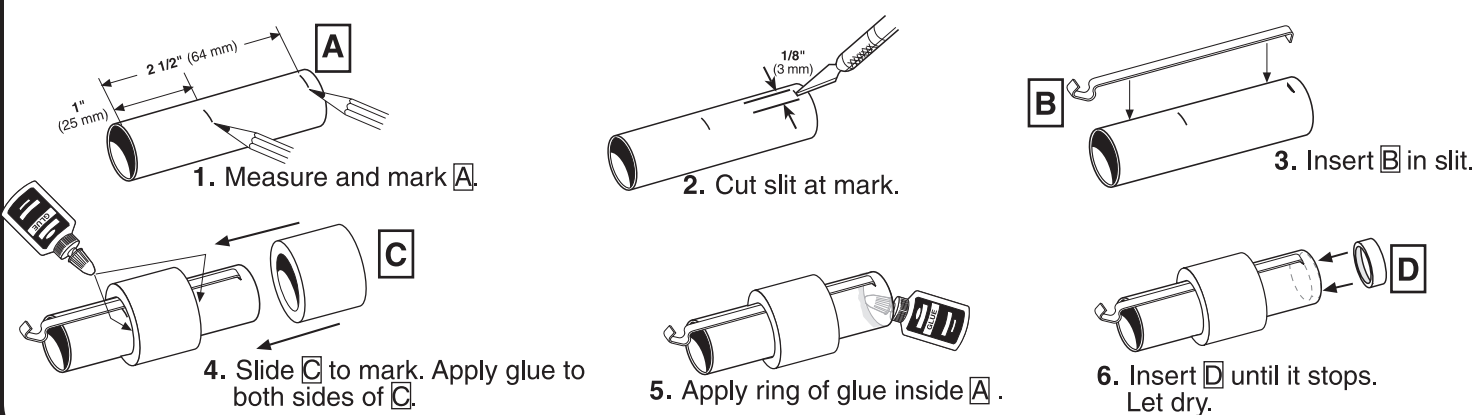
UPPER BODY FIN ASSEMBLY



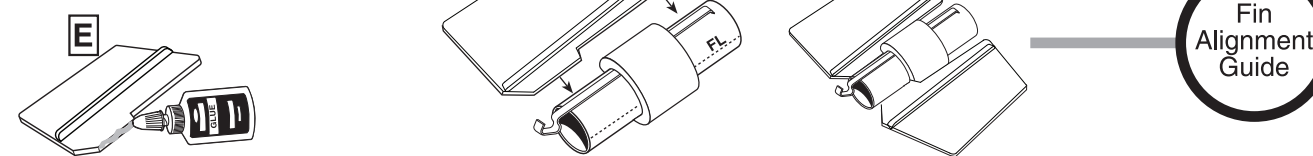
TUBE MARKING



ENGINE MOUNT ASSEMBLY



ENGINE MOUNT FIN ATTACHMENT

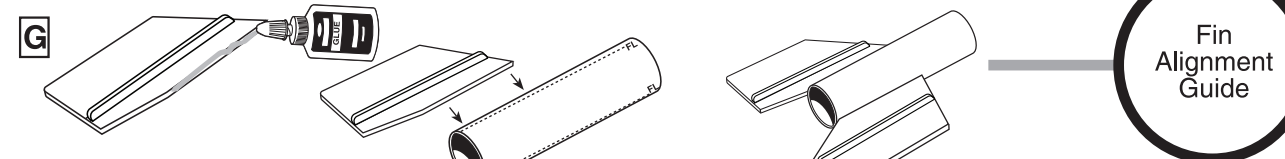


1. Apply glue to root edge of **E**. Allow to dry 1 minute. Apply 2nd layer of glue.
2. Position **E** centered over fin line. Check alignment using guide. Let dry.
3. Repeat for other **E**.

DO NOT APPLY GLUE TO GREEN ADAPTER RING!

NOTE: Use fin alignment guide to check fin attachment accuracy.

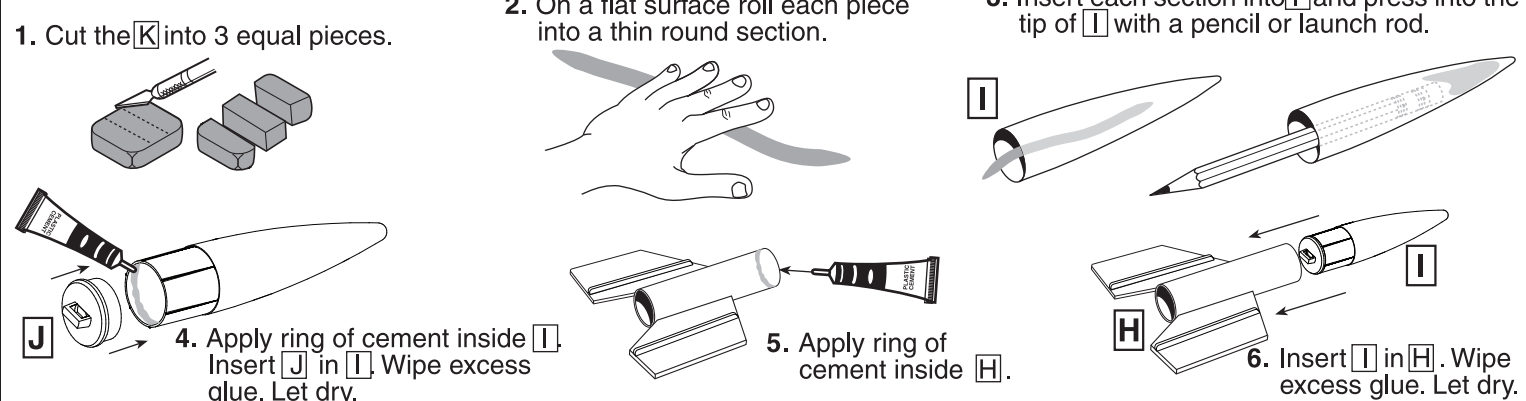
UPPER BODY FIN ATTACHMENT



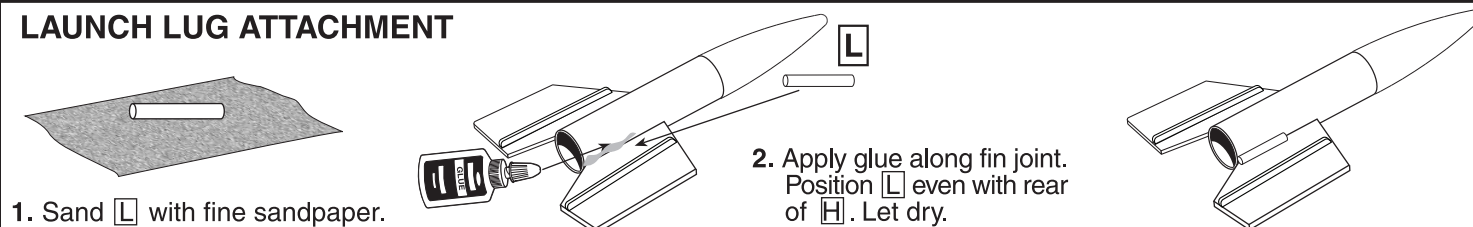
1. Apply glue to root edge of **G**. Let dry 1 minute. Apply 2nd layer of glue.
2. Position **G** centered over **FL**. Let dry.
3. Repeat for other **G**.

NOTE: Use fin alignment guide to check fin attachment accuracy.

NOSE CONE ASSEMBLY



LAUNCH LUG ATTACHMENT



ROCKET FINISHING

NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints 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. Lightly sand entire rocket smooth with fine sandpaper (#320 or #400 grit).
2. Apply glue fillet to fins and launch lug joints.
 - a. Allow glue to dry overnight.
3. Use a stick inserted into the engine tube end of the booster and upper stage for painting.
4. Apply 1-2 light coats of white primer to booster and upper stage.
5. Lightly sand between coats with fine sandpaper (#320 or #400 grit).
6. Spray engine mount assembly bright red.
 - a. Let paint dry overnight (24 hours is best).
7. Spray upper section bright silver.
 - a. Let paint dry overnight (24 hours is best).
8. Apply waterslide decal.
 - a. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.
 - b. Place decal in bowl of warm water until decal begins to curl.
 - c. Remove 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.
9. When decals are dry, spray entire rocket (each piece separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your Flutter-By™ rocket!

