

### FINAL PAYLOAD ASSEMBLY

1. After paint is dry, apply ring of cement to inside of **L**. Slide **K** into **L**. Let Dry.

2. Insert **M** into **L**. Use clear tape to hold in place. DO NOT GLUE.

### RECOVERY SYSTEM ATTACHMENT

1. Form loop with shroud lines.

2. Insert loop through **O**.

3. Pass **Q** through loop.

4. Pull lines tight.

5. Tie **P** to **O** with double knot.

### PREPARE FLIGHT RECOVERY

NOTE: Only Estes Recovery Wadding (302274) recommended.

1. Pull shock cord taut when inserting wadding.

2. Insert 7 - 8 loosely crumpled squares recovery wadding. Push below shock cord attachment.

3. Spike parachute.

4. Fold.

5. Roll.

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

6. Wrap lines loosely around the parachute. Insert parachute, shock cord and payload assembly into body tube.

### PREPARE D OR E ENGINE

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

1. Separate igniter and igniter plug.

2. Insert igniter.

3. Insert plug.

4. Push down.

5. Gently bend igniter wires back to form leads as shown.

6. If you are using a "D" engine, insert orange spacer, then engine.

7. For an "E" engine, just insert engine.

ORANGE SPACER

### COUNTDOWN AND LAUNCH

1... 2... 3... 4... 5...

KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

Masking Tape

3" (76 mm)

15 FT (4.6 M)

INSERT KEY. PUSH DOWN HARD. BULB WILL LIGHT.

WHILE HOLDING KEY DOWN FIRMLY, PRESS LAUNCH BUTTON UNTIL LIFT-OFF!

LAUNCH BUTTON

LAUNCH SUPPLIES (Sold Separately)

- Porta Pad® II Launch Pad
- Requires 3/16" (5 mm) Maxi™ Rod (302244)
- Electron Beam® Launch Controller
- Recovery Wadding
- Igniters (with Engines)
- Igniter Plugs (with Engines)
- Recommended Estes® Engine: D12-5, E9-6.

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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# MAGICIAN™

## FLYING MODEL ROCKET KIT INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

#2440

www.estesrockets.com

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.

1. Form loop with shroud lines.

2. Insert loop through **O**.

3. Pass **Q** through loop.

4. Pull lines tight.

5. Tie **P** to **O** with double knot.

6. Wrap lines loosely around the parachute. Insert parachute, shock cord and payload assembly into body tube.

Part	Qty.	Description	Part Number
A	1	Engine Mount Tube 4" (102 mm)	030368
B	1	Engine Hook	035022
C	2	Green Centering Rings (5055)	030166-2
D	1	Engine Block	030164-2
E	1	Lower Body Tube 6" (152 mm)	030626
F	1	Red Body Tube Coupler	030175-5
G	1	Upper Body Tube 18" (46 cm)	030382
H	1	Laser Cut Main Fins	032234
I		Laser Cut Fin Guide	
J		Laser Cut Fin Guide	
K	1	Balsa Tube Adapter	070014
L	1	Clear Payload Section	030608
M	1	Balsa Nose Cone	073001
N	1	Launch Lug	038166
O	1	Screw Eye	038251
P	1	Shock Cord 30" (76 cm)	038369
Q	1	Parachute 18" (46 cm)	035816
R	1	Orange D Engine Spacer	035005
S	1	Shock Cord Mount	084445
T	1	Decal (not shown)	065168

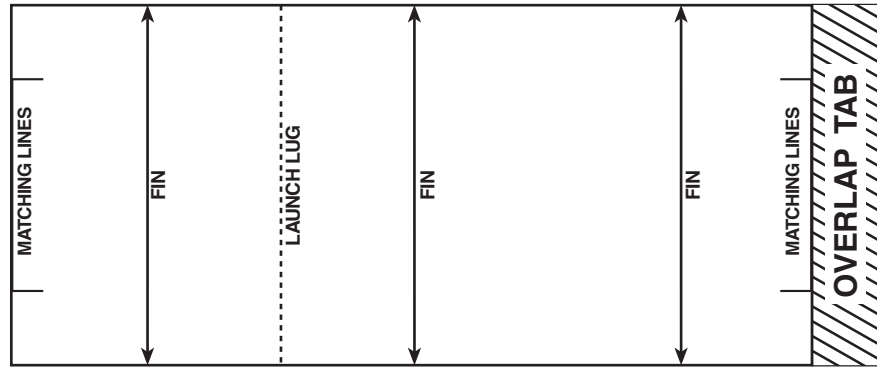
### SUPPLIES

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

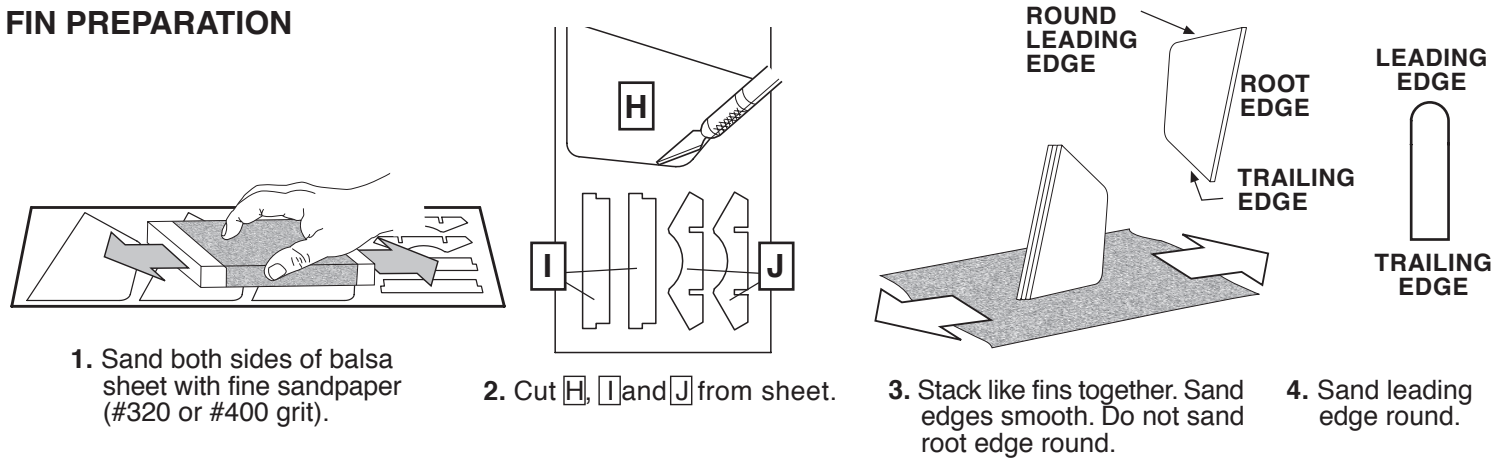
SCISSORS PENCIL RULER FINE SAND PAPER (#320-#400 GRIT) CARPENTER'S GLUE MODELING KNIFE PLASTIC CEMENT MASKING TAPE CLEAR CELLOPHANE TAPE SPRAY PAINT PRIMER WHITE SPRAY PAINT GLOSS WHITE SPRAY PAINT GLOSS SILVER SPRAY PAINT CLEAR COAT (OPTIONAL)

## TUBE MARKING GUIDE

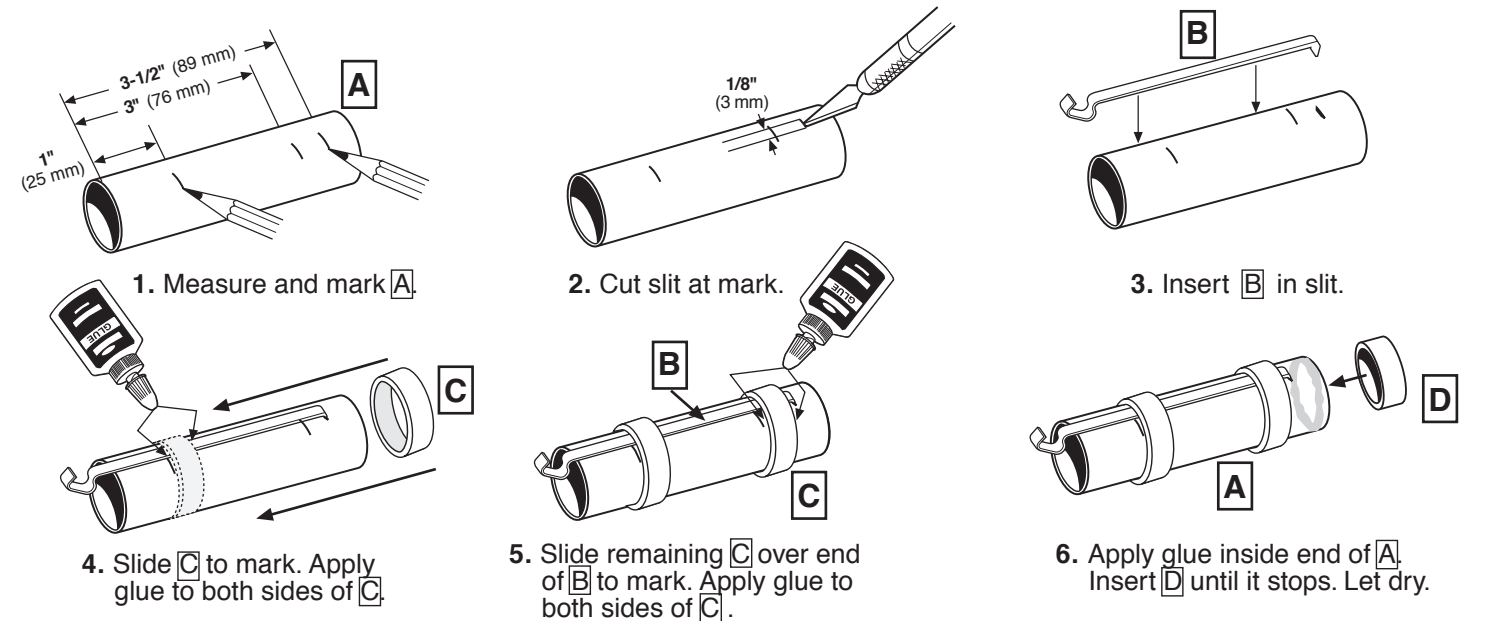
(Make a copy if you want to keep instructions.)



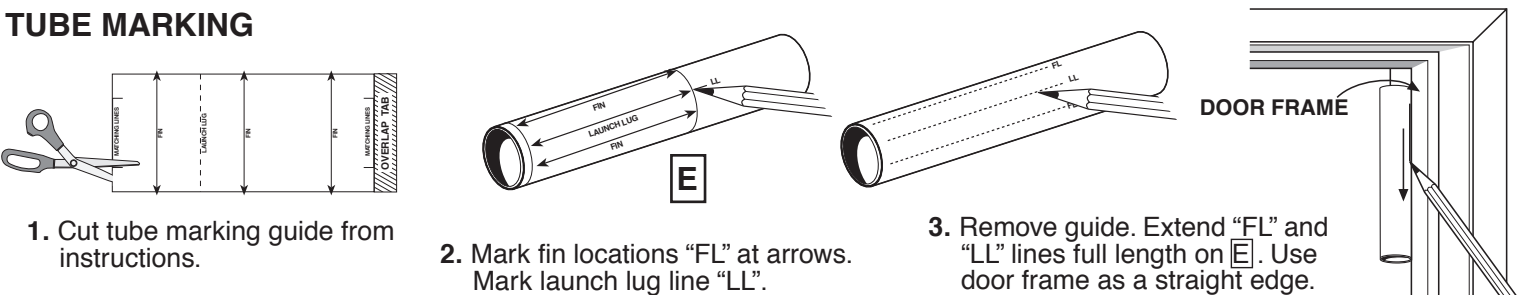
## FIN PREPARATION



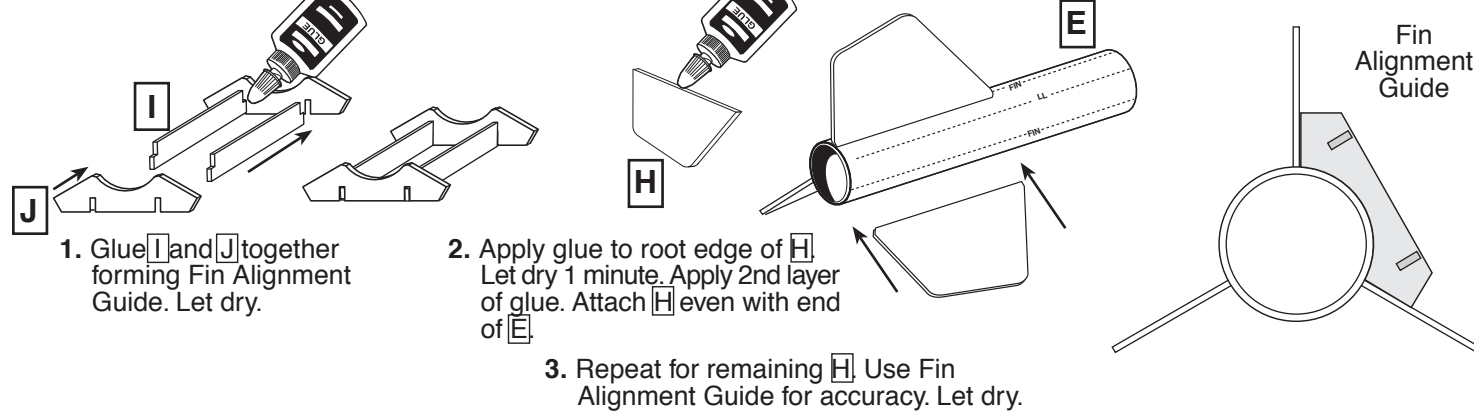
## ENGINE MOUNT ASSEMBLY



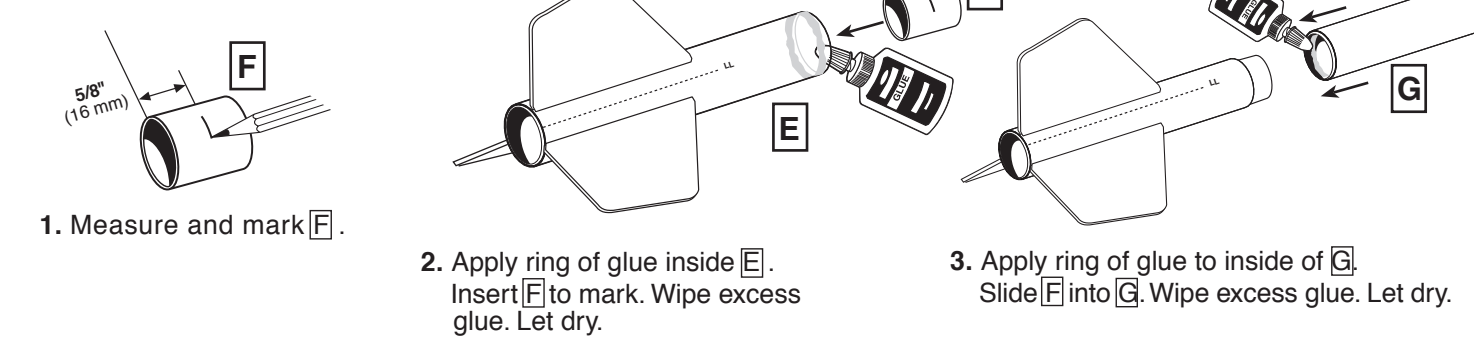
## TUBE MARKING



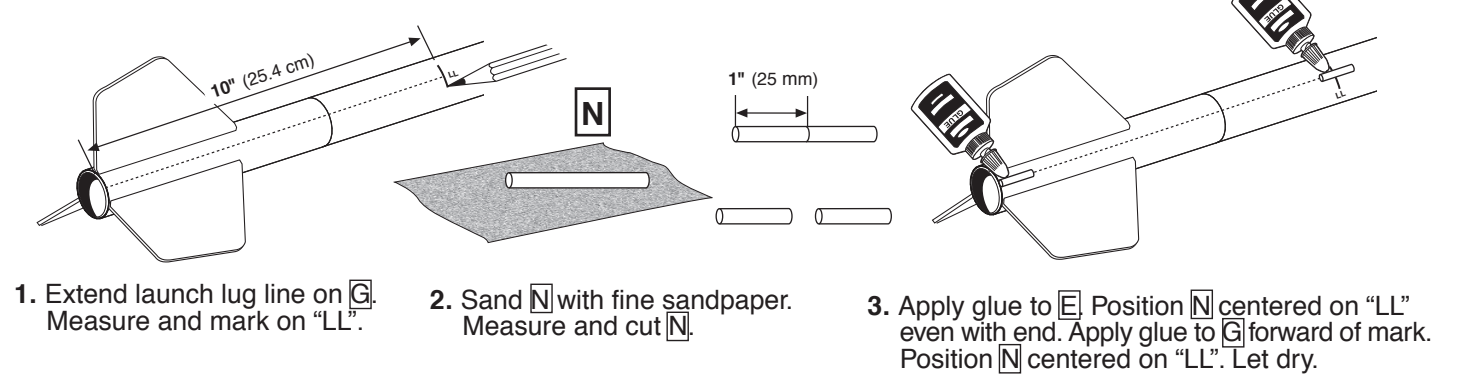
## FIN ATTACHMENT



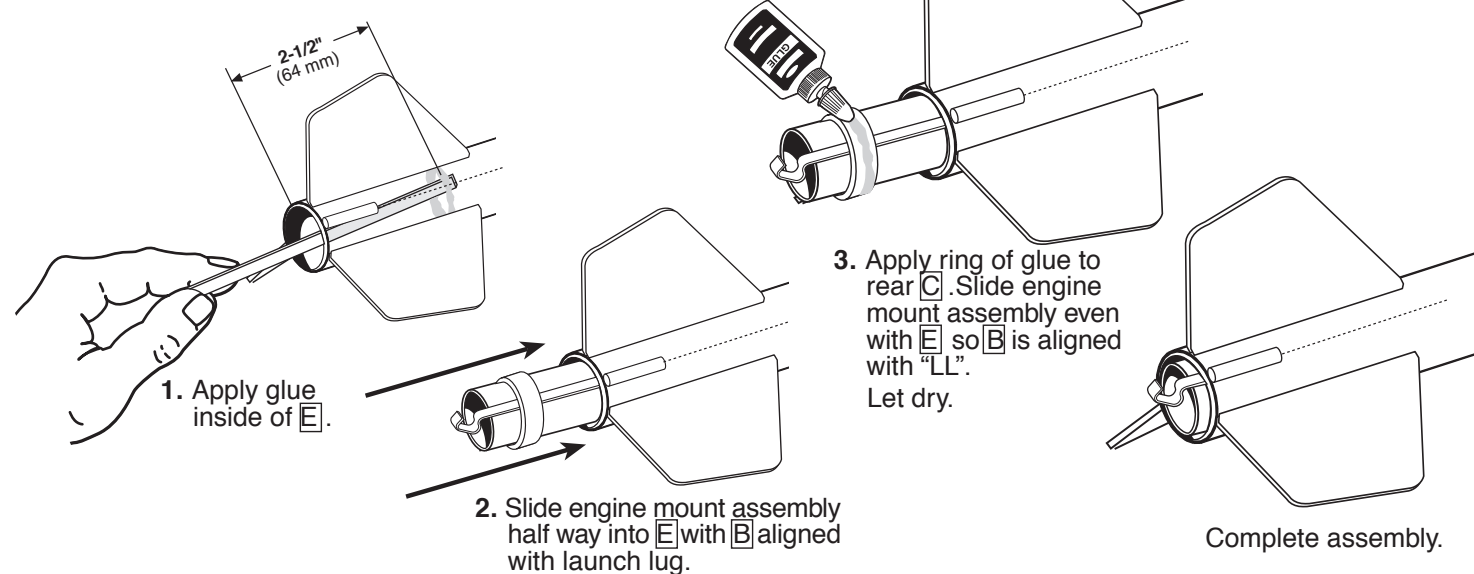
## JOIN BODY TUBES



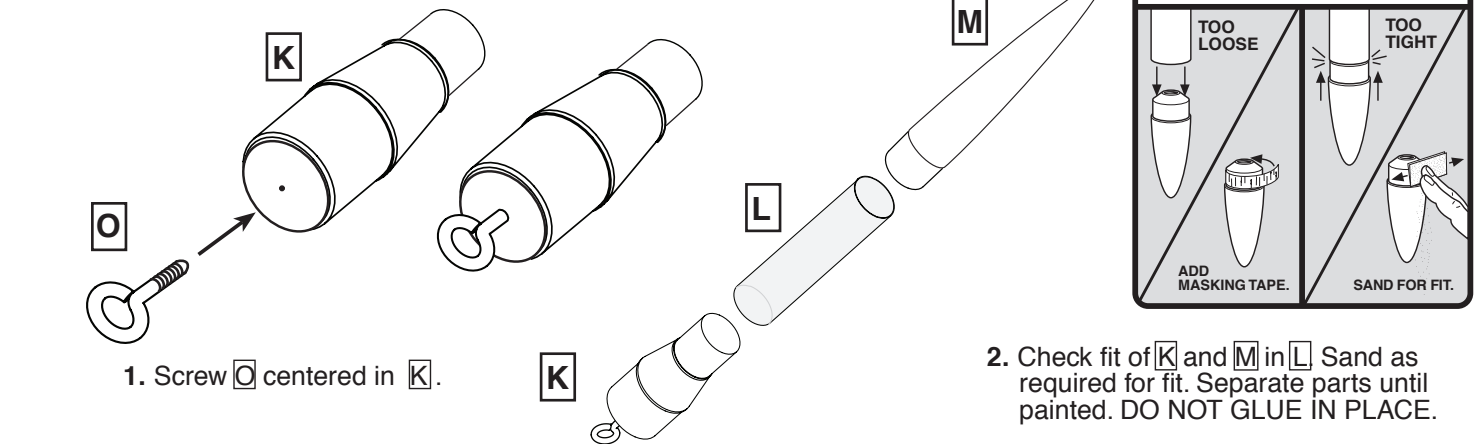
## LAUNCH LUG ATTACHMENT



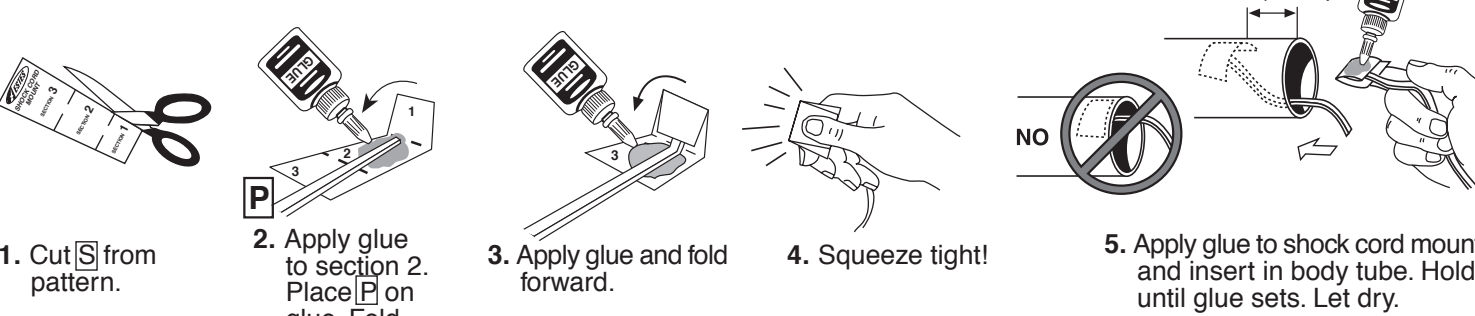
## ENGINE MOUNT ATTACHMENT



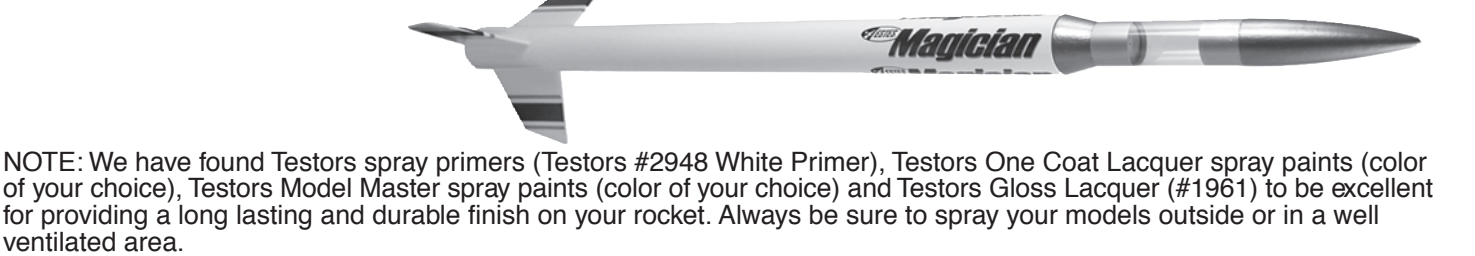
## PAYLOAD AND NOSE CONE ASSEMBLY



## SHOCK CORD INSTALLATION



## FINISHING ROCKET



- NOTE: We have found Testors spray primers (Testors #2948 White Primer), Testors One Coat Lacquer spray paints (color of your choice), 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 body tube, fins and nose cone with fine sandpaper (#320 or #400 grit).
  3. Apply glue fillets to fins, joints and launch lugs.
    - a. Allow glue to dry overnight.
  4. Insert a dowel into the engine tube end of the rocket for painting.
  5. Insert small nail in nose cone base and hold with pliers or clip for painting.
  6. Hold screw eye with pliers for painting.
  7. We recommend a good filler/primer to be applied to the balsa fins, tube adapter and nose cone before painting.
  8. Apply 1-2 light coats of white primer to rocket body, tube adapter and nose cone, lightly sanding with fine sandpaper (#320 or #400 grit) between coats.
    - a. Allow to dry between each coat.
  9. Apply gloss white to rocket body.
    - a. Let dry overnight (24 hours is best).
  10. Paint nose cone and tube adapter silver or platinum.
    - a. Allow paint to dry overnight (24 hours is best).
  11. Apply water slide decals where shown. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.
    - a. Hold the decal in warm water until decal begins to curl.
    - b. Remove the entire decal, position in place and slide the decal from the backing material and onto the model as close to final position as possible.
    - c. Gently blot out excess water with a clean paper towel.
    - d. Allow decals to set overnight before applying protective clear coat. Allow to set overnight.
  12. When decals are dry, spray entire rocket (main body, tube adapter and nose cone separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your Magiclan™ rocket!