



BLUE NINJA™

FLYING MODEL ROCKET KIT INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

EST 1300



www.estesrockets.com
Estes® Industries
1295 H Street
Penrose, CO 81240
Printed in China

ASSEMBLY TIP

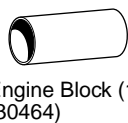
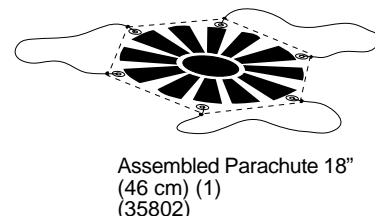
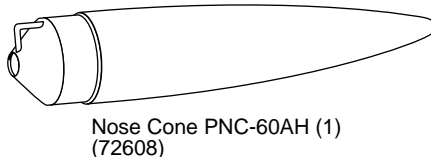
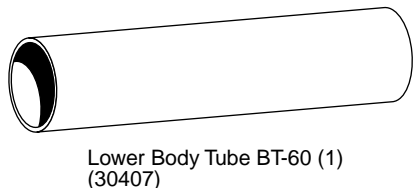
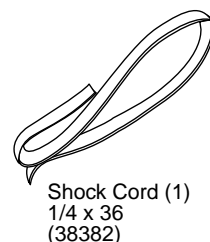
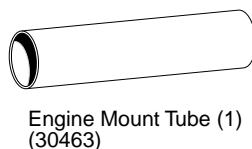
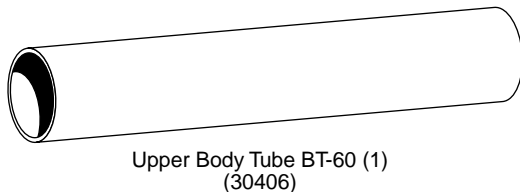
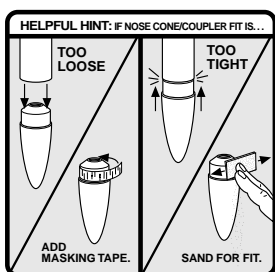
Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

TEST-FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE.

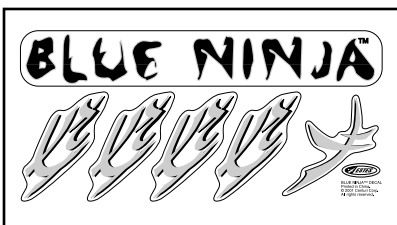
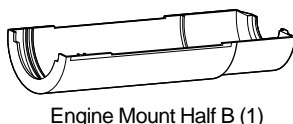
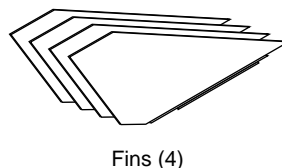
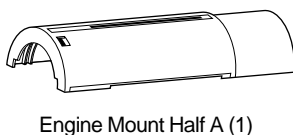
If any parts don't fit properly, sand as required for precision assembly.

PARTS

Locate the parts shown below and lay them out on the table in front of you. DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.



PLASTIC PARTS (SUPPLIED AS A SET) (33108)



Decal Sheet (1) (37714)

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



PENCIL



FINE SAND PAPER (#400-600 GRIT)



CARPENTER'S GLUE



MODELING KNIFE



PLASTIC CEMENT



MASKING TAPE



SPRAY CLEAR COAT (OPTIONAL)



RULER

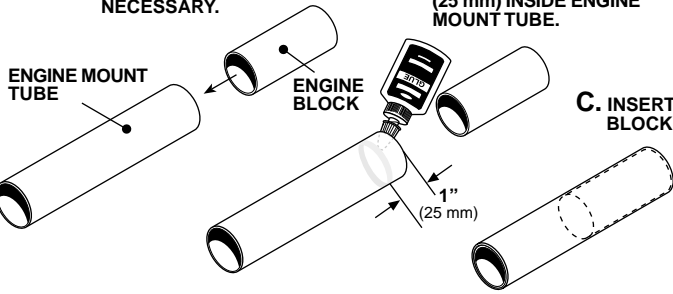
ALL GLUED AREAS ARE SHADED IN GREY.

1. A. TEST FIT THE ENGINE BLOCK INTO THE ENGINE MOUNT TUBE, REMOVE AND SAND AS NECESSARY.

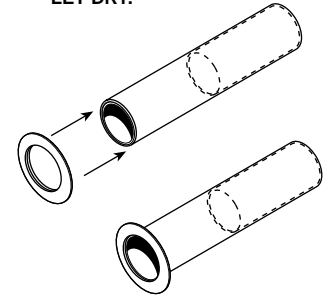
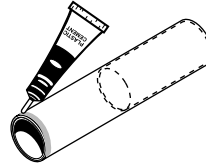
B. APPLY GLUE BAND 1" (25 mm) INSIDE ENGINE MOUNT TUBE.

D. APPLY PLASTIC CEMENT AROUND THE OUTSIDE OF ENGINE MOUNT TUBE.

E. SLIDE ENGINE MOUNT CENTERING RING ONTO ENGINE MOUNT TUBE. LET DRY.



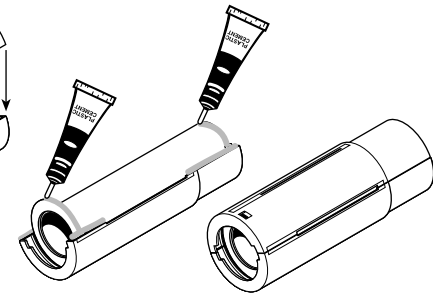
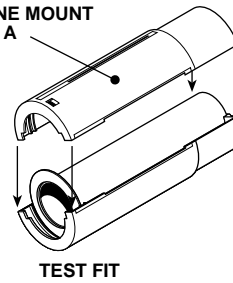
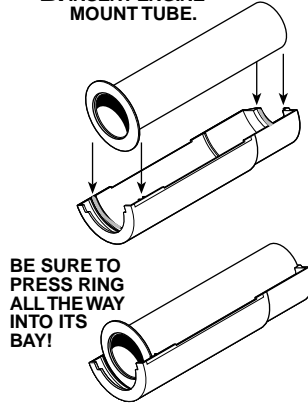
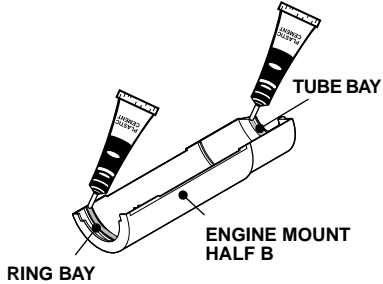
C. INSERT ENGINE BLOCK.



2. A. APPLY PLASTIC CEMENT TO THE RING AND TUBE BAYS.

B. INSERT ENGINE MOUNT TUBE.

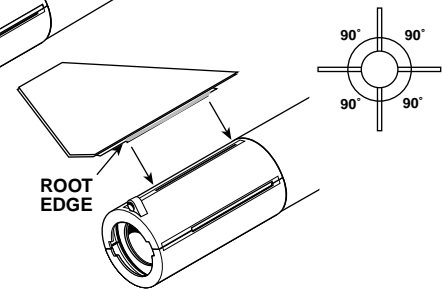
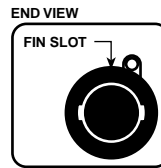
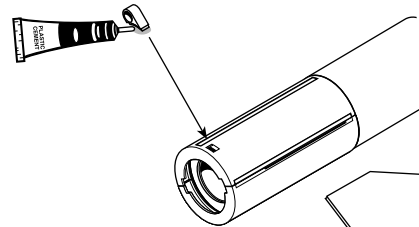
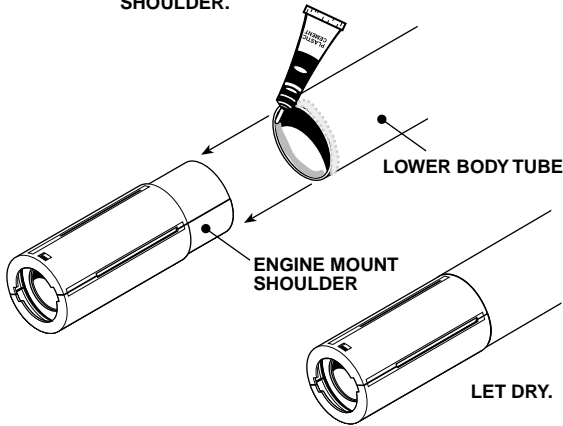
C. TEST FIT THE OTHER ENGINE MOUNT HALF TO ASSEMBLY. SAND UNTIL HALVES FIT TOGETHER PERFECTLY, THEN APPLY PLASTIC CEMENT TO AREAS SHOWN AND PRESS HALVES TOGETHER UNTIL CEMENT SETS.



3. A. APPLY PLASTIC CEMENT JUST INSIDE LOWER BODY TUBE AND SLIDE TUBE COMPLETELY OVER ENGINE MOUNT SHOULDER.

B. APPLY PLASTIC CEMENT TO THE BASE OF THE LAUNCH LUG AND INSERT AS SHOWN. BE SURE LAUNCH LUG SLANTS TOWARD FIN SLOT! (SEE END VIEW).

C. TEST FIT EACH FIN INTO THE FIN SLOTS ON THE ENGINE MOUNT TUBE. WHEN SATISFIED WITH FIT, APPLY PLASTIC CEMENT ALONG THE ROOT EDGE OF EACH FIN AND REINSERT. BE SURE FINS ARE STRAIGHT. LET DRY.

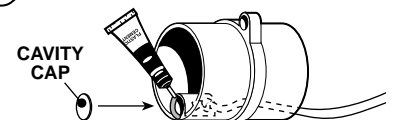
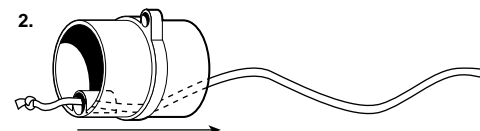


NOTE: FINS MUST BE ATTACHED CORRECTLY FOR A STABLE FLIGHT.

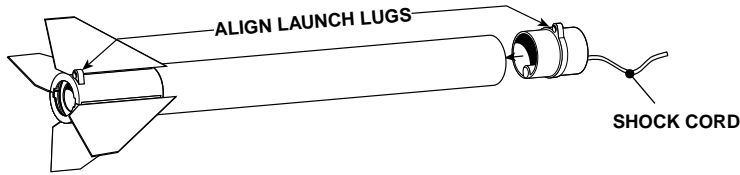
4. A. TIE A DOUBLE KNOT IN ONE END OF THE SHOCK CORD AND TRIM THE FREE END TO A POINT AS SHOWN.

B. FEED THE FREE END OF THE SHOCK CORD THROUGH THE REAR OF THE TUBE COUPLER RING UNTIL THE KNOT SITS INSIDE THE SHOCK CORD CAVITY.

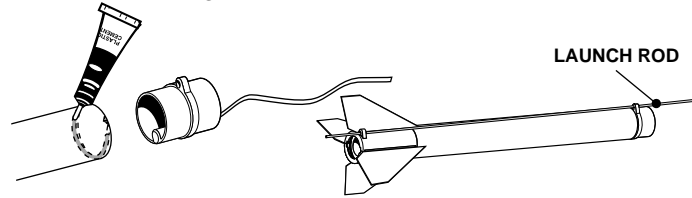
C. CAREFULLY APPLY A SMALL AMOUNT OF PLASTIC CEMENT AROUND THE REAR OUTSIDE EDGE OF THE CAVITY AND FIT THE CAVITY CAP INTO PLACE. DO NOT GET PLASTIC CEMENT ON THE SHOCK CORD! LET DRY.



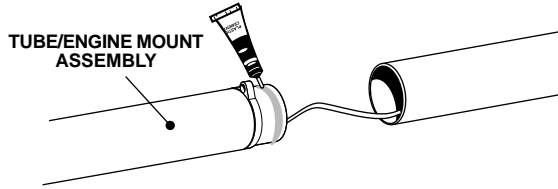
- 5. A.** TEST FIT TUBE COUPLER INTO THE FRONT END OF THE TUBE/ENGINE MOUNT ASSEMBLY. NOTE THAT THE SHOCK CORD EXITS THE FRONT OF THE COUPLER.



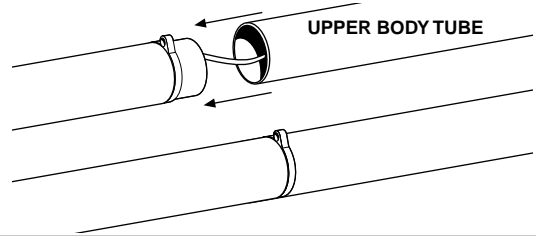
- B.** APPLY A SMALL AMOUNT OF PLASTIC CEMENT JUST INSIDE THE FRONT OF THE LOWER BODY TUBE, LINE UP THE LUGS, SLIDE COUPLER INTO PLACE AND IMMEDIATELY CHECK LUG ALIGNMENT. LET DRY. A LAUNCH ROD MAY BE INSERTED TO ASSURE ALIGNMENT.



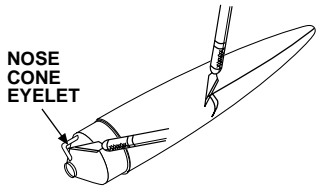
- 6. A.** FEED SHOCK CORD THROUGH UPPER BODY TUBE AND APPLY PLASTIC CEMENT AROUND TUBE COUPLER AS SHOWN. DO NOT GET GLUE ON SHOCK CORD.



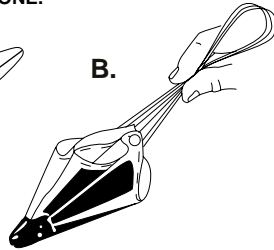
- B.** SLIDE UPPER BODY TUBE ONTO TUBE COUPLER. LET DRY.



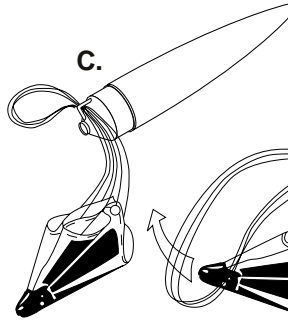
- 7. A.** REMOVE EXCESS FLASH FROM NOSE CONE AND CLEAN THE EYELET OF THE NOSE CONE.



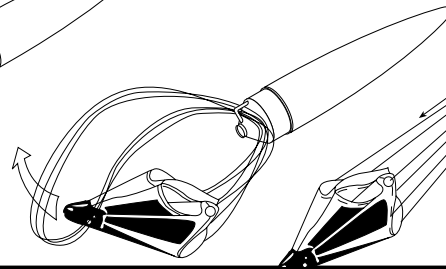
B.



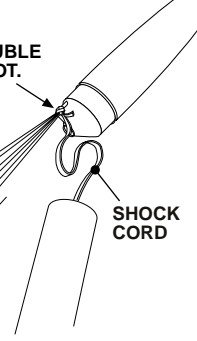
C.



D.



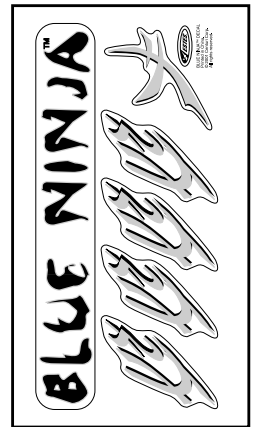
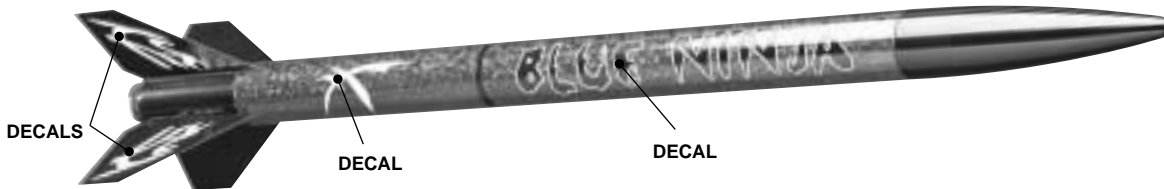
E. DOUBLE KNOT.



CAUTION:
DO NOT CUT EYELET OF NOSE CONE OFF.

8. DECAL APPLICATION

CAREFULLY REMOVE ONE DECAL AT A TIME AND APPLY WHERE SHOWN. RUB DOWN TO REMOVE BUBBLES.

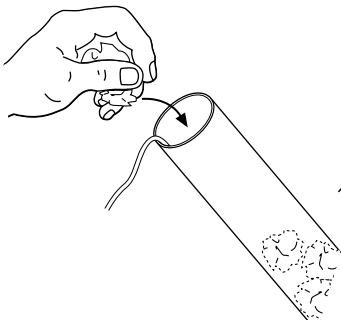


OPTIONAL: CLEAR COAT ENTIRE ROCKET AFTER APPLYING DECALS.

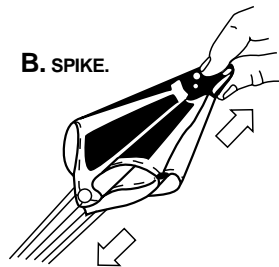
Decal Sheet

ROCKET PREFLIGHT

- A.** INSERT 5 OR 6 LOOSELY CRUMPLED SQUARES OF RECOVERY WADDING.



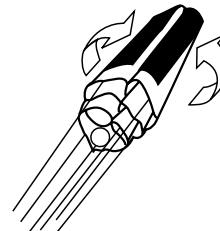
B. SPIKE.



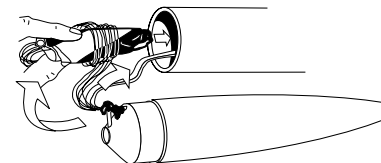
C. FOLD.



D. ROLL.



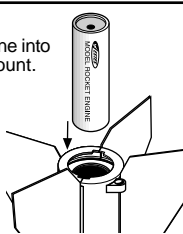
- E.** WRAP LINES LOOSELY. INSERT 'CHUTE, SHOCK CORD AND NOSE CONE INTO BODY TUBE.



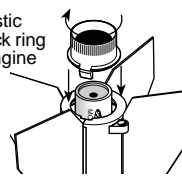
ENGINE PREP

WARNING: FLAMMABLE
Before proceeding read instructions & NAR Safety Code included with engines.
PREPARE YOUR 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 your engine.

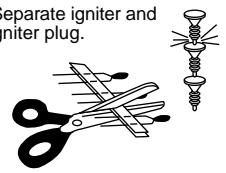
A. Slide engine into engine mount.



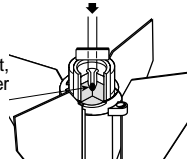
B. Twist plastic engine lock ring to hold engine in place.



C. Separate igniter and igniter plug.



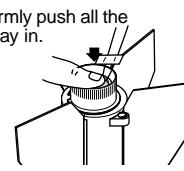
D. Hold rocket upright, drop in igniter. Igniter must touch propellant.



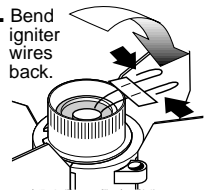
E. Insert igniter plug.



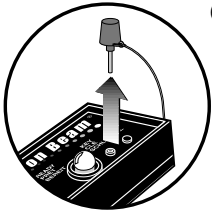
F. Firmly push all the way in.



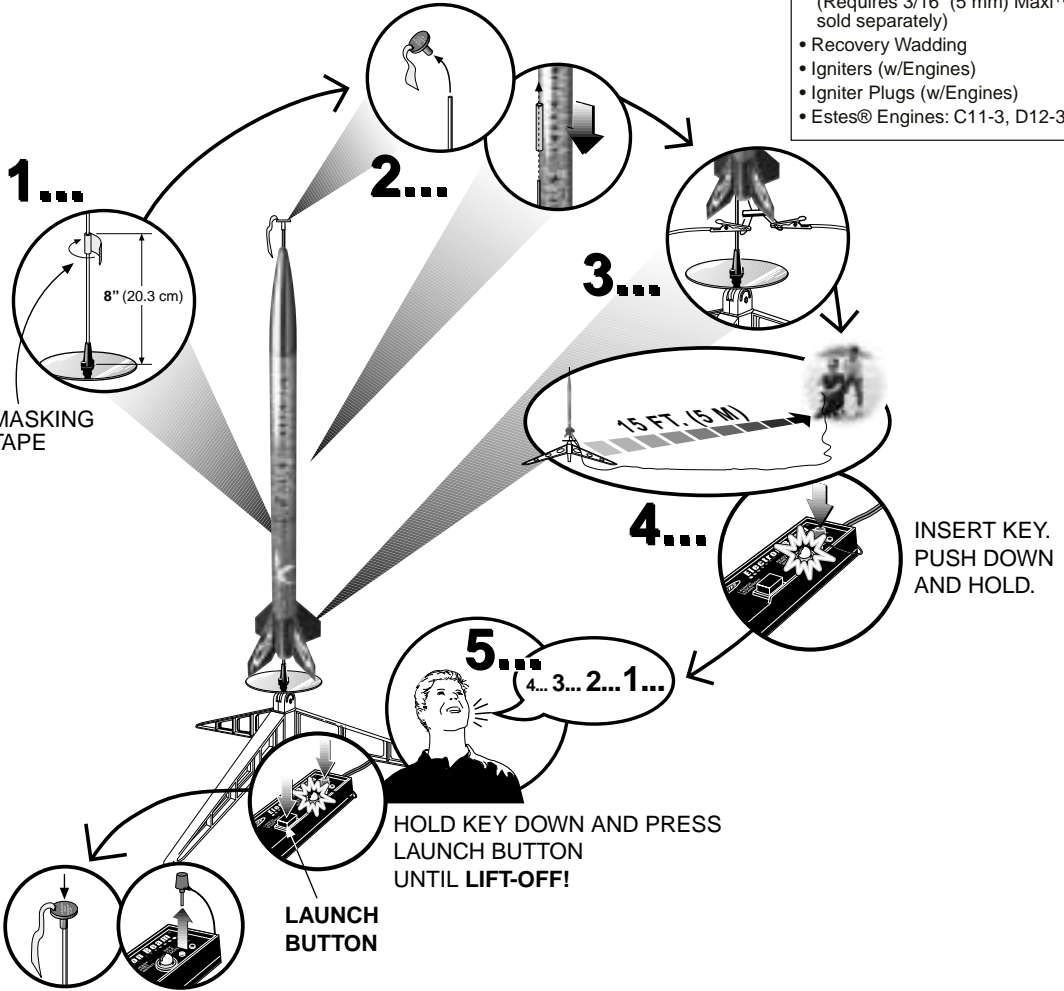
H. Bend igniter wires back.



COUNTDOWN AND LAUNCH



KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

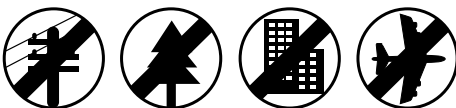


LAUNCH SUPPLIES

- (Sold Separately)
- Estes® Electron Beam® Launch Controller
 - Porta-Pad®II Launch Pad (Requires 3/16" (5 mm) Maxi™ Rod - sold separately)
 - Recovery Wadding
 - Igniters (w/Engines)
 - Igniter Plugs (w/Engines)
 - Estes® Engines: C11-3, D12-3

PRECAUTIONS

NAR Safety Code



NO DRY GRASS OR WEEDS

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.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! 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.