0664

ROBERT GODDARD
ROCKET KIT

EstesRockets.com



AGES 10+

Skill Level
INTERMEDIATE

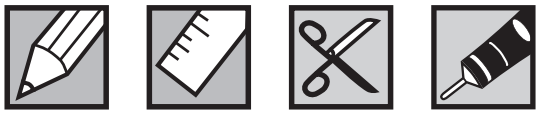
MODEL ROCKET INSTRUCTIONS

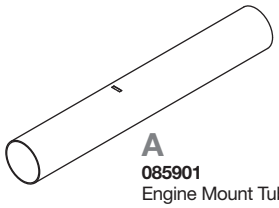
KEEP FOR FUTURE REFERENCE

IMPORTANT: Please record date found on decal and keep for future reference. _____

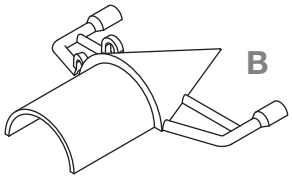
⚠ CAUTION: *May not apply to all kits. For safe handling of plastic cement, epoxy, spray adhesive, CA glue, CA accelerator, paint/finishing materials, see manufacturer's warnings and follow instructions for use. To avoid injury, use extreme caution when using hobby knife, scissors, drills, and any cutting tools.*

SUPPLIES

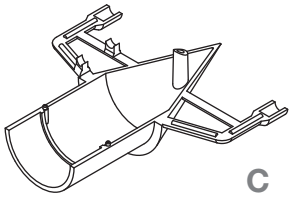




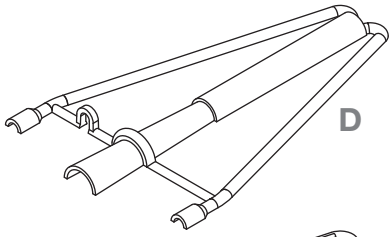
A
085901
Engine Mount Tube



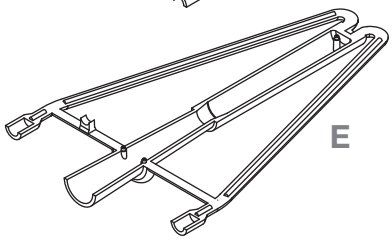
B



C
063329
Lower Rocket Cone



D



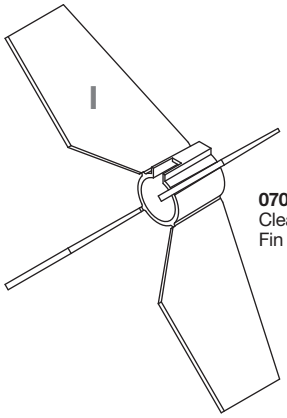
E
063329
Fake Rocket Engine



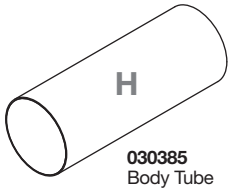
F
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Tube Adapter



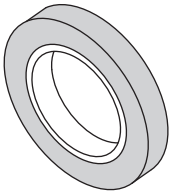
G
035023
Engine Hook



I
070159
Clear Plastic
Fin Unit



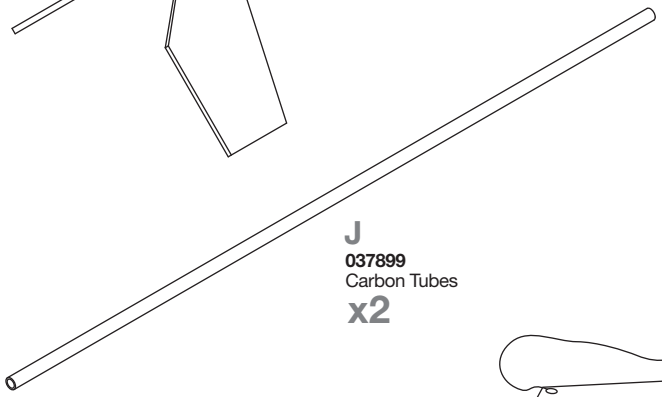
H
030385
Body Tube



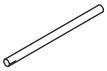
K
036018
Roll of Gray
Colored Tape



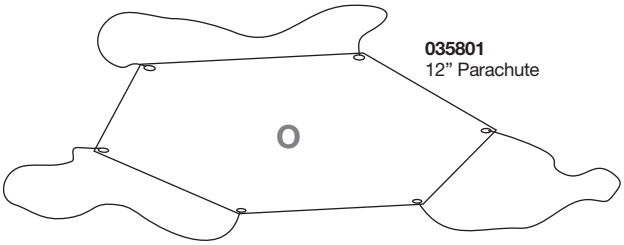
L
073237
Shock Cord
Anchor



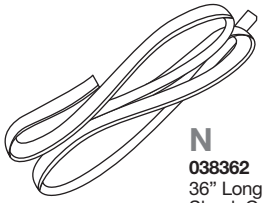
J
037899
Carbon Tubes
x2



M
063329
Upper Rod
(use for display only)



O
035801
12" Parachute



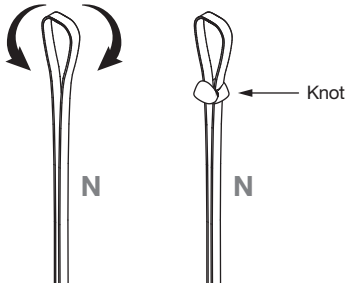
N
038362
36" Long
Shock Cord

090001-1
Self-Stick Decal

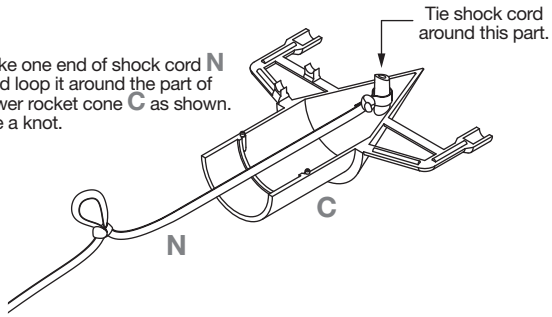
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ASSEMBLE MAIN PARTS

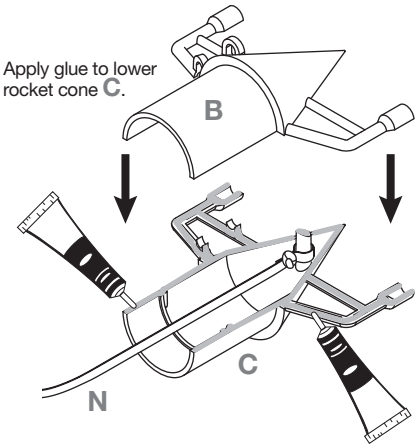
1. Fold shock cord **N** in half and tie a knot to create a small loop.



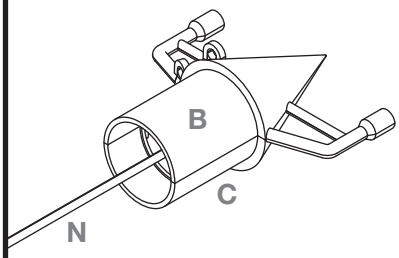
2. Take one end of shock cord **N** and loop it around the part of lower rocket cone **C** as shown. Tie a knot.



3. Apply glue to lower rocket cone **C**.

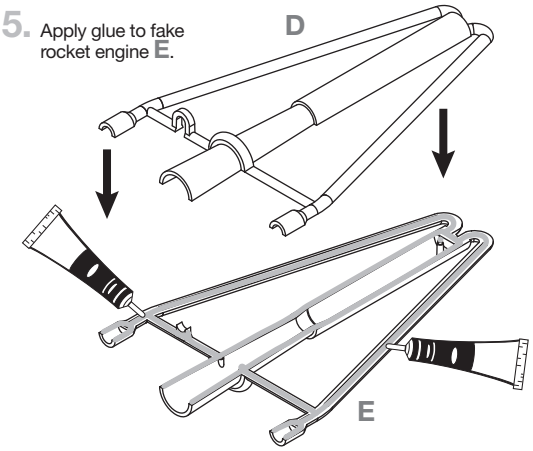


4. Press together **B** and **C** and hold for 30 seconds or until glue sets.

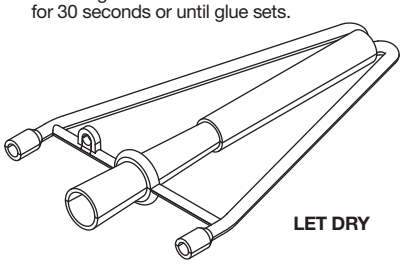


LET DRY

5. Apply glue to fake rocket engine **E**.

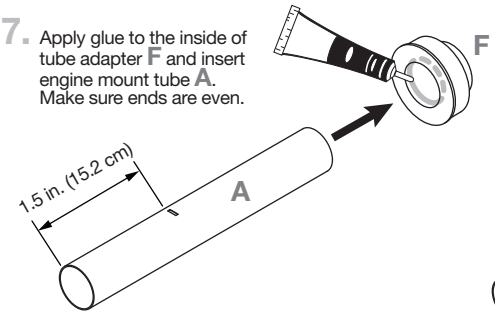


6. Press together **D** and **E** and hold for 30 seconds or until glue sets.

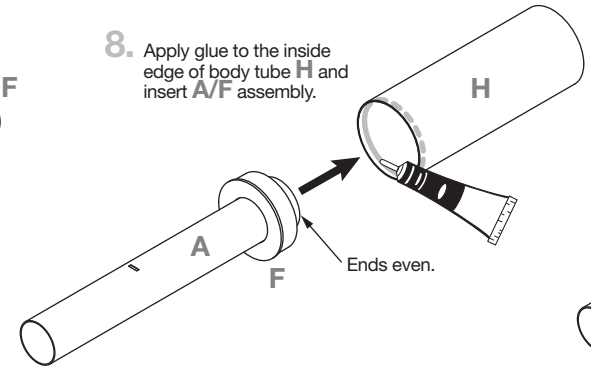


LET DRY

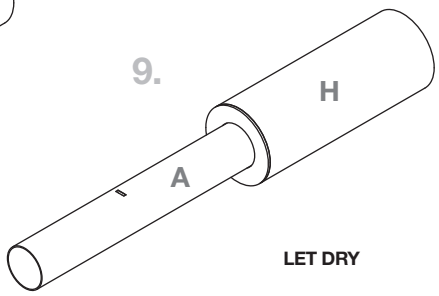
7. Apply glue to the inside of tube adapter **F** and insert engine mount tube **A**. Make sure ends are even.



8. Apply glue to the inside edge of body tube **H** and insert **A/F** assembly.



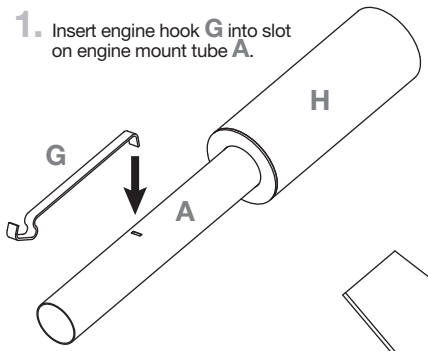
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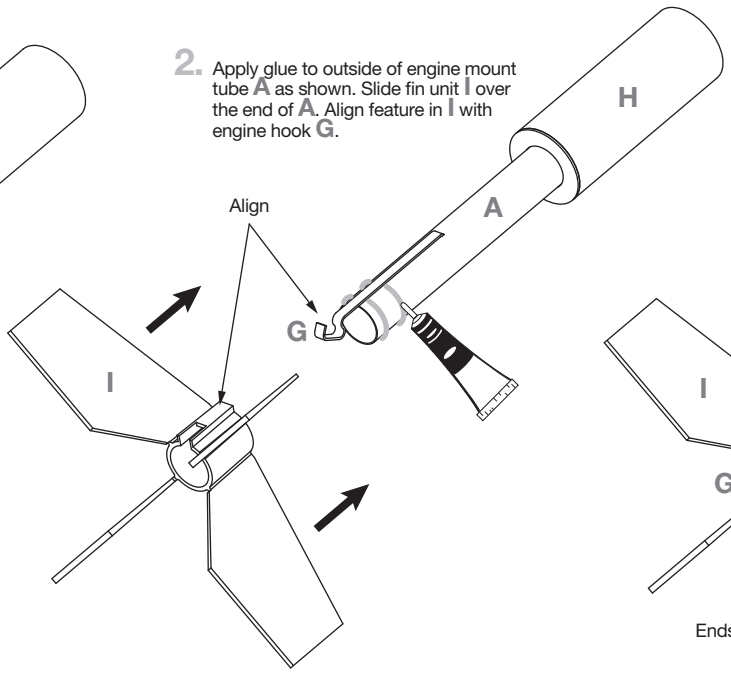
LET DRY

ATTACH FIN UNIT

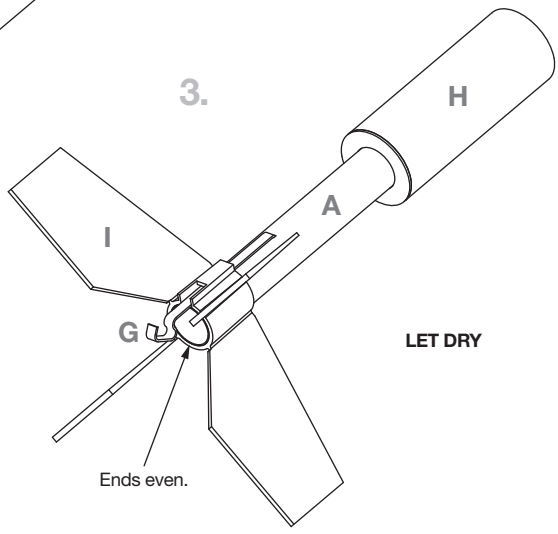
1. Insert engine hook **G** into slot on engine mount tube **A**.



2. Apply glue to outside of engine mount tube **A** as shown. Slide fin unit **I** over the end of **A**. Align feature in **I** with engine hook **G**.



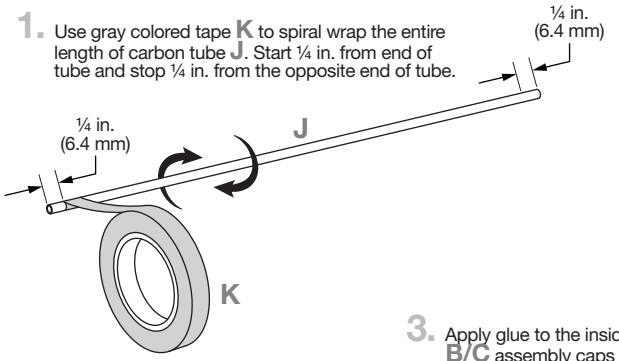
3.



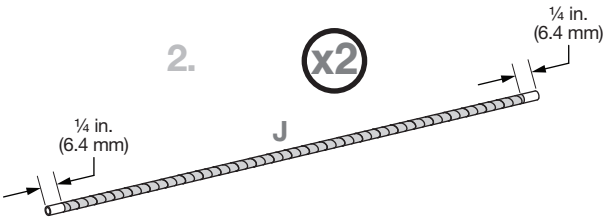
LET DRY

PREPARE AND ATTACH CARBON TUBES

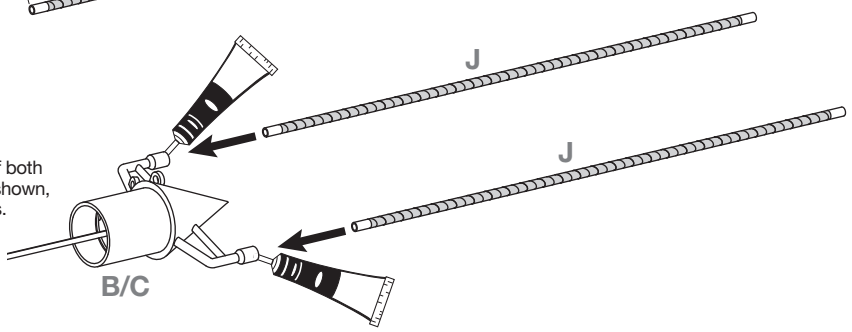
1. Use gray colored tape **K** to spiral wrap the entire length of carbon tube **J**. Start ¼ in. from end of tube and stop ¼ in. from the opposite end of tube.



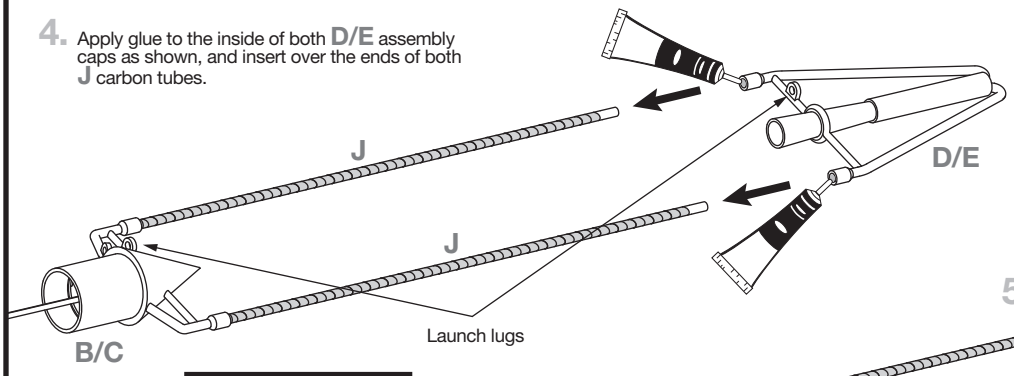
2. x2



3. Apply glue to the inside of both **B/C** assembly caps as shown, and insert **J** carbon tubes.

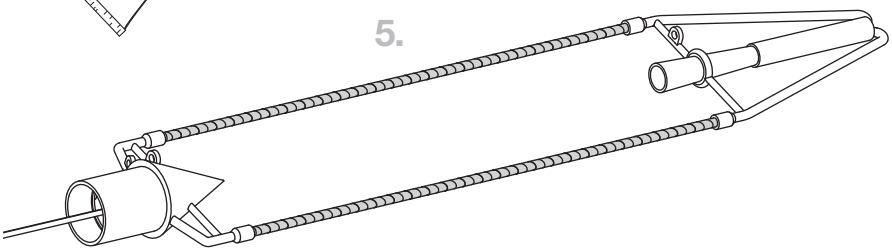


4. Apply glue to the inside of both **D/E** assembly caps as shown, and insert over the ends of both **J** carbon tubes.

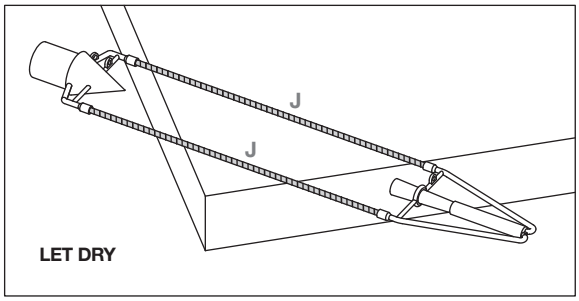


NOTE:
Make sure launch lugs are aligned on the same side.

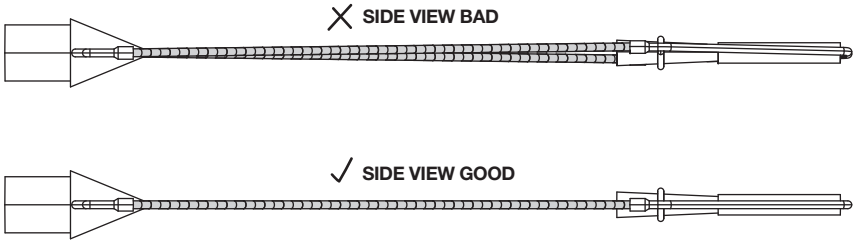
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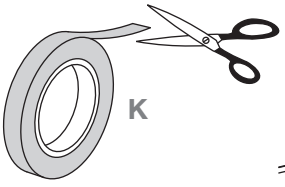
6. Before glue dries, place assembly on the corner of a desk or table. Press down on **J** carbon tubes to align them with the flat surface.

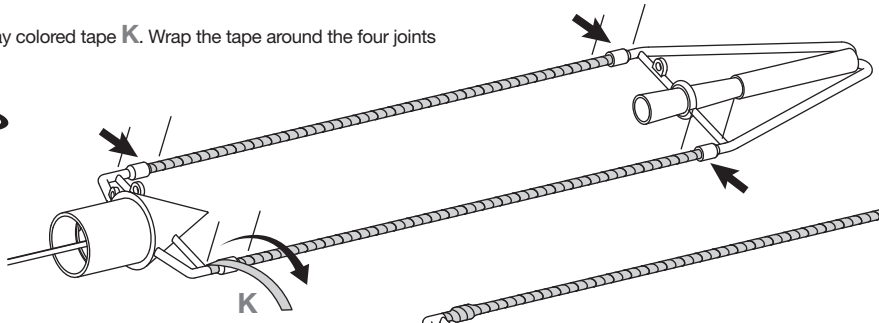


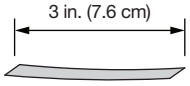
7. Confirm the **J** carbon tubes are aligned with each other by looking from the side.



8. Cut four 3 in. long strips of gray colored tape **K**. Wrap the tape around the four joints between the indicated lines.

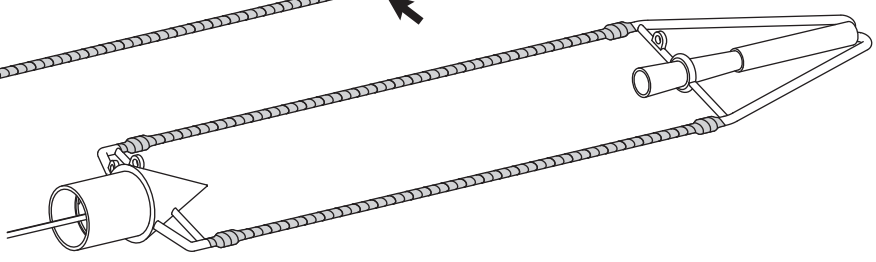






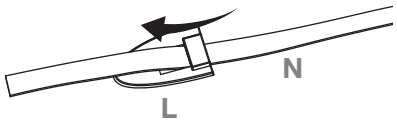
x4

9.

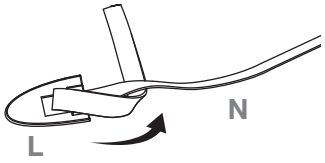


ATTACH SHOCK CORD MOUNT

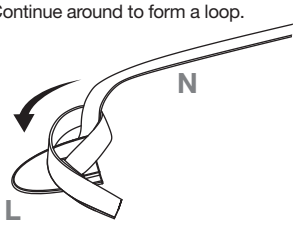
1. Thread the loose end of shock cord **N** through shock cord anchor **L**.



2. Fold shock cord **N** backward and wrap under main length of cord.



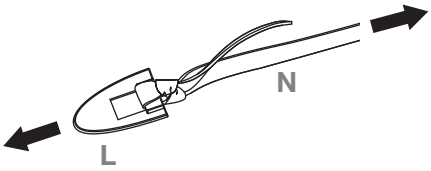
3. Continue around to form a loop.



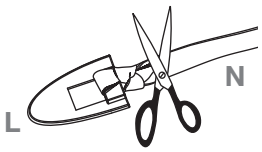
4. Tuck the end through the loop and pull tight.



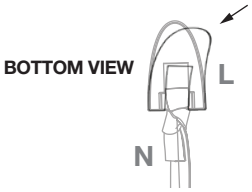
5. Pull from anchor end and main length until a tight knot is formed.



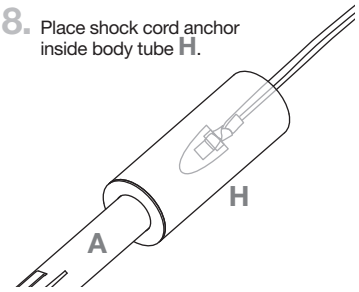
6. Trim off excess if needed.



7. Remove backer from double sided tape.



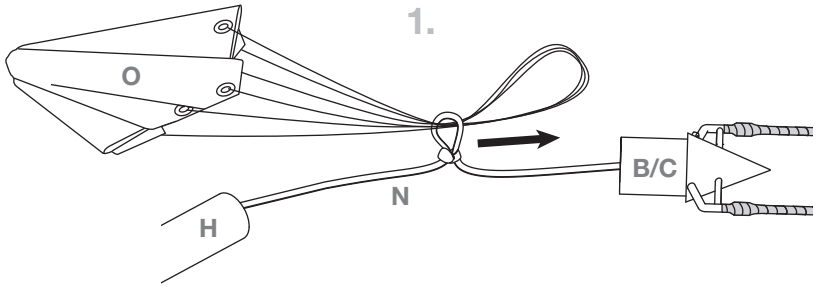
8. Place shock cord anchor inside body tube **H**.



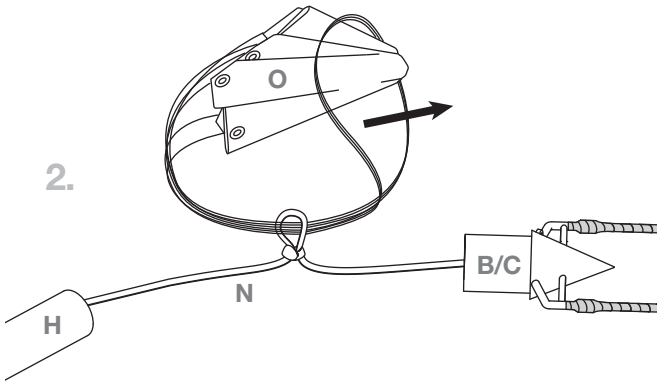
RECOVERY SYSTEM ATTACHMENT

NOTE:
Do not reduce the length of the shock cord.

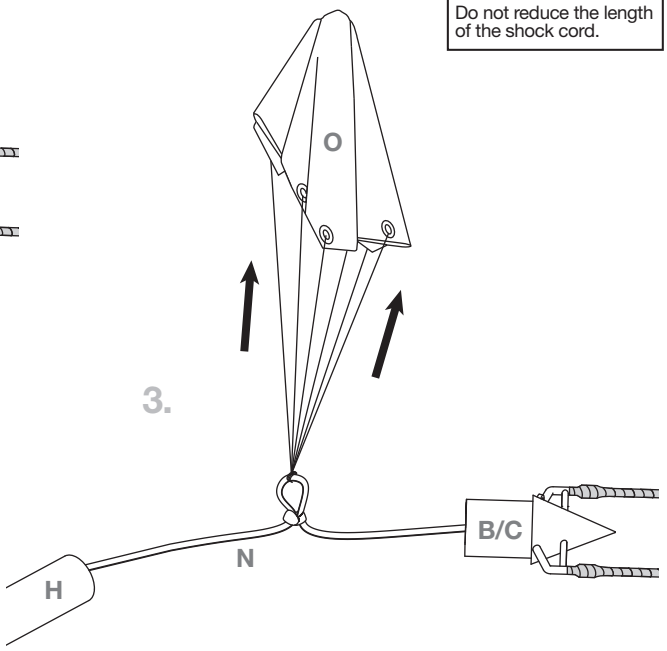
1.



2.

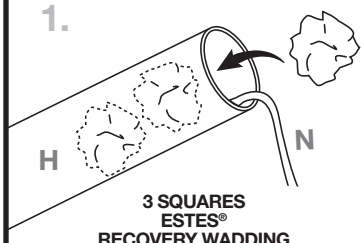


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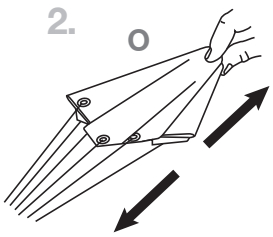
PREPARE FLIGHT RECOVERY

1.

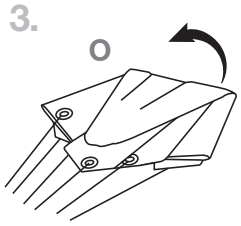


3 SQUARES
ESTES®
RECOVERY WADDING

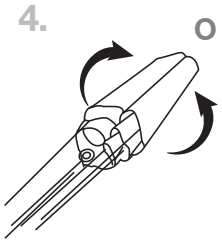
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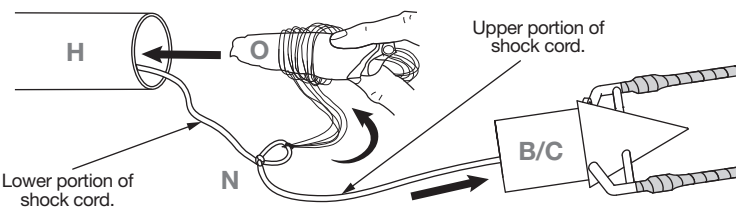
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4.



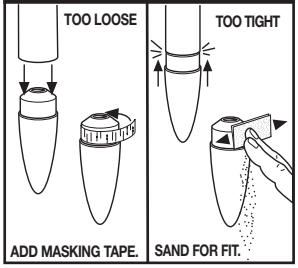
5. Place the lower portion of shock cord **N** and the parachute **O** into body tube **H**. Place the upper portion of shock cord **N** into lower rocket cone **B/C**.



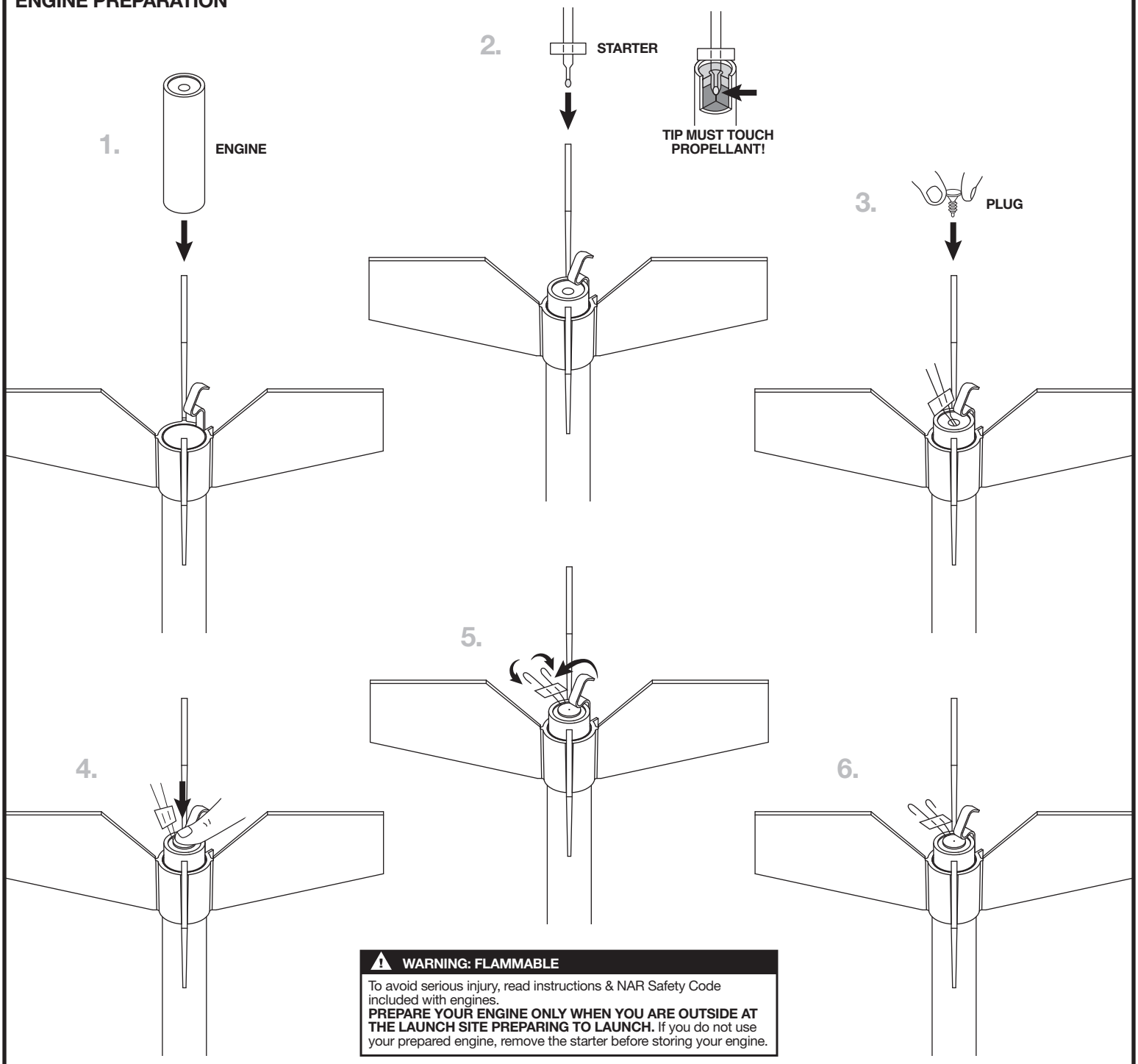
NOTE:
Do not reduce the length of the shock cord.

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

IF NOSE CONE FIT IS…



ENGINE PREPARATION

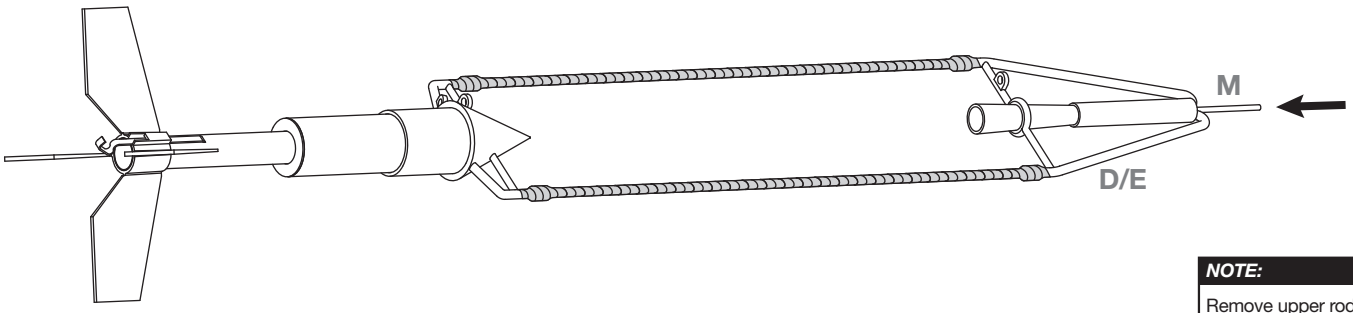


⚠ WARNING: FLAMMABLE

To avoid serious injury, 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 starter before storing your engine.

FOR DISPLAY OF MODEL

1. Push upper rod **M** into top of fake rocket engine **D/E** when model is being displayed.



NOTE:

Remove upper rod **M** before launching rocket.

COUNTDOWN AND LAUNCH

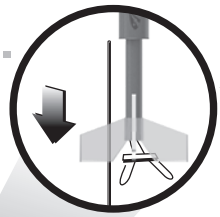
NOTE:
Always keep the key ***OUT*** until final countdown.



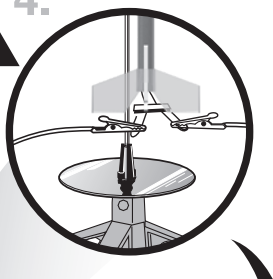
2.



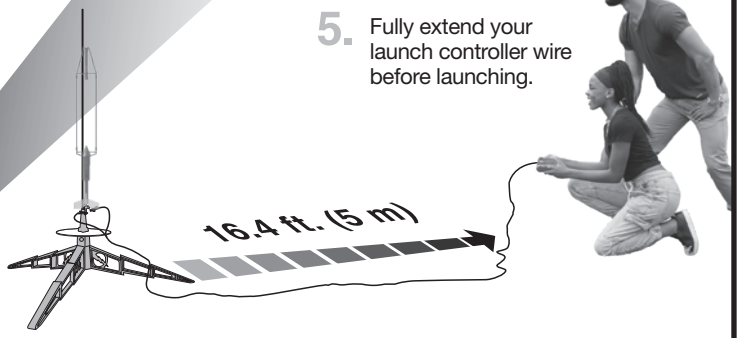
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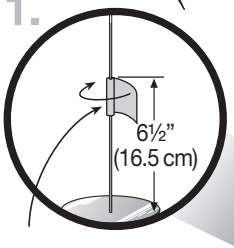
4.



5. Fully extend your launch controller wire before launching.

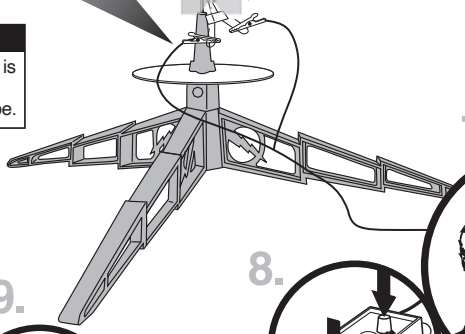


1.



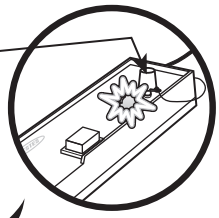
MASKING TAPE

NOTE:
It is important that enough tape is wrapped around launch rod so launch lug does not go over tape.



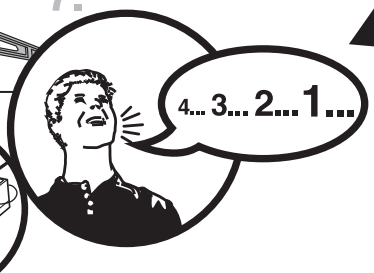
KEY

6.

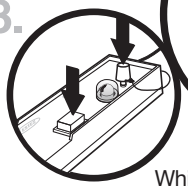


Insert key, push down hard. Bulb will light.

7.

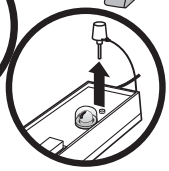


8.

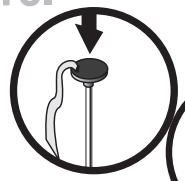


While holding key down FIRMLY, press launch button until LIFTOFF!

9.



10.



NOTE:
Estimated weight: 1.7 oz. (48.2 g)

ESTES® LAUNCH SUPPLIES NEEDED
(Sold Separately)
- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Recommended Estes® Engines: A10-3T, A3-2T

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.

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