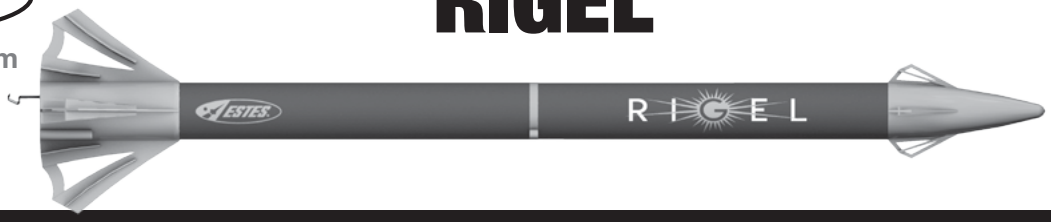
1113/1868

RIGEL

EstesRockets.com



AGES 10+

Skill Level
INTERMEDIATE

MODEL ROCKET INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

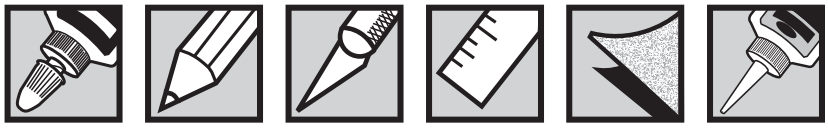
IMPORTANT: Please record date found on decal and keep for future reference. _____

READ ALL INSTRUCTIONS. *Make sure you have all parts and supplies. Test fit all parts before applying glue. Refer to your glue manufacturer's dry times during build.*

DESIGNER RECOMMENDATIONS:

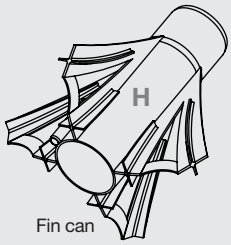
- Wall line count 2-3.
- Infill density 7-10%.
- Position all parts with the top pointed up.
- For the Bellatrix and Rigel rockets, turn on supports from print bed only
- Filament Type: PLA, PETG, or ABS

SUPPLIES

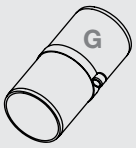


YELLOW GLUE | PENCIL | HOBBY KNIFE | RULER | FINE SANDPAPER | CA GLUE

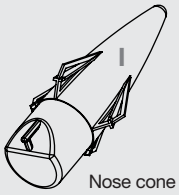
Parts to be 3D printed



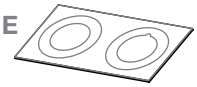
Fin can



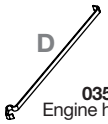
Coupler



Nose cone



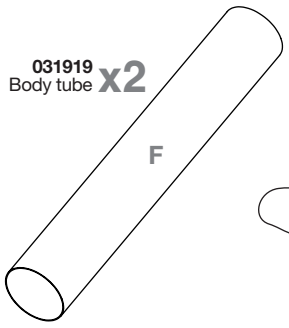
030132
Laser cut centering rings



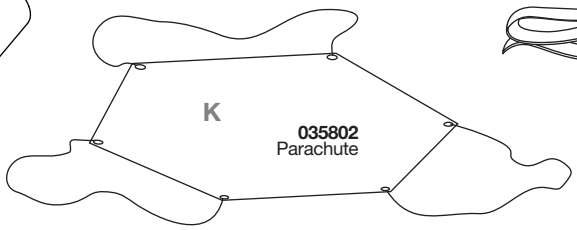
035022
Engine hook

030480
Black retainer ring

034997
Yellow space tube



031919 Body tube **x2**

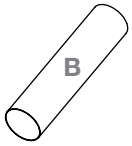


035802
Parachute

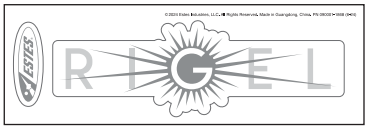
038389
Shock cord

030162-2
Engine block

035005
E to D engine spacer



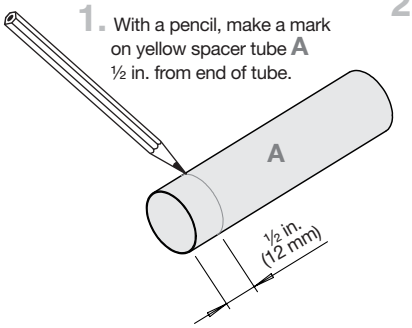
030368
Engine mount



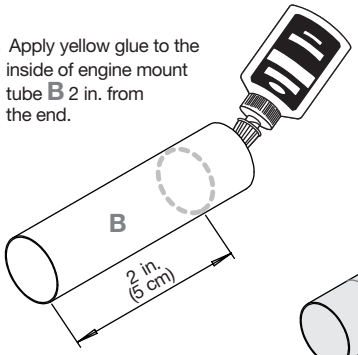
090001-1868
Self stick decals

ASSEMBLE ENGINE MOUNT

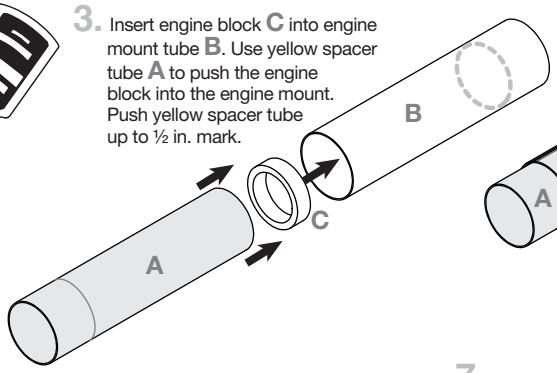
1. With a pencil, make a mark on yellow spacer tube **A** ½ in. from end of tube.

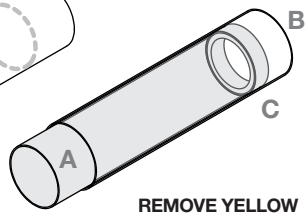


2. Apply yellow glue to the inside of engine mount tube **B** 2 in. from the end.



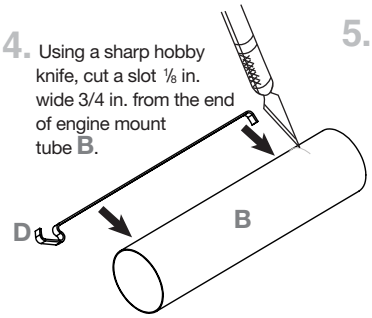
3. Insert engine block **C** into engine mount tube **B**. Use yellow spacer tube **A** to push the engine block into the engine mount. Push yellow spacer tube up to ½ in. mark.



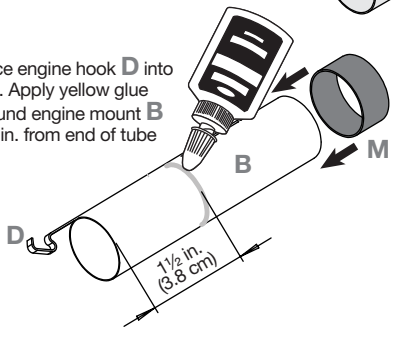


REMOVE YELLOW SPACER TUBE. LET DRY.

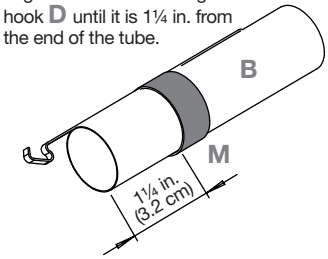
4. Using a sharp hobby knife, cut a slot ⅛ in. wide 3/4 in. from the end of engine mount tube **B**.



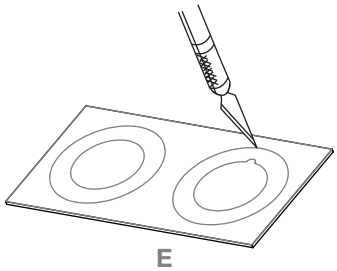
5. Place engine hook **D** into slot. Apply yellow glue around engine mount **B** 1½ in. from end of tube



6. Slide black retainer ring **M** over engine mount **B** and engine hook **D** until it is 1¼ in. from the end of the tube.

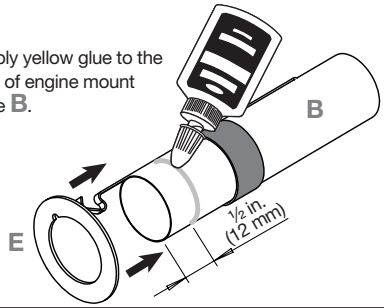


7. Cut out laser cut centering rings **E**.

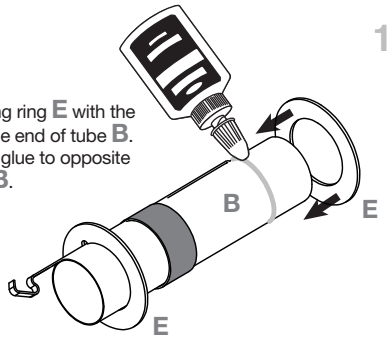


ASSEMBLE ENGINE MOUNT (CONTINUED)

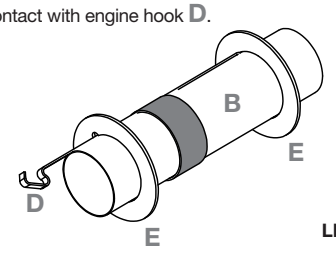
8. Apply yellow glue to the end of engine mount tube **B**.



9. Slide centering ring **E** with the notch over the end of tube **B**. Apply yellow glue to opposite end of tube **B**.



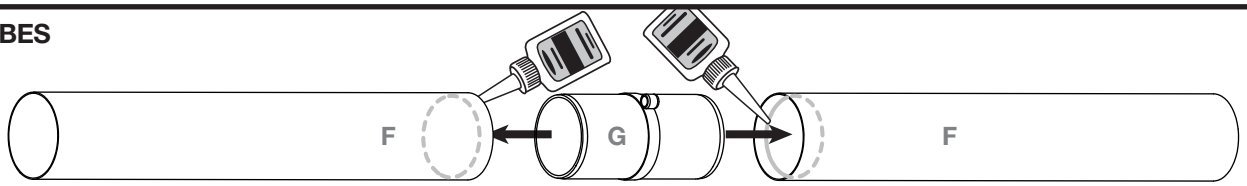
10. Slide centering ring **E** over the end of tube **B** until it makes contact with engine hook **D**.



LET DRY

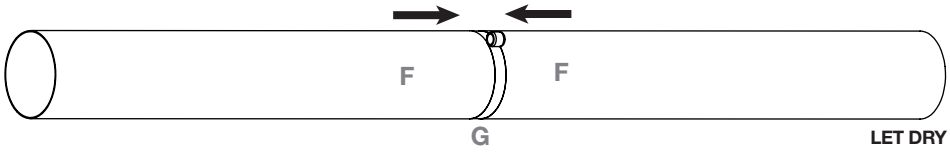
ASSEMBLE BODY TUBES

1. Apply CA glue to the inside of one end of both body tubes **F**.



⚠ CAUTION:
For safe handling of CA glue, see manufacturer's warnings and follow instructions for use.

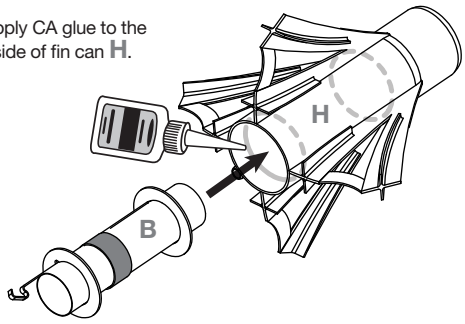
2. Insert coupler **G** into glued ends of body tubes **F**.



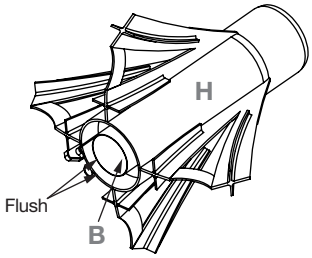
LET DRY

INSTALL ENGINE MOUNT

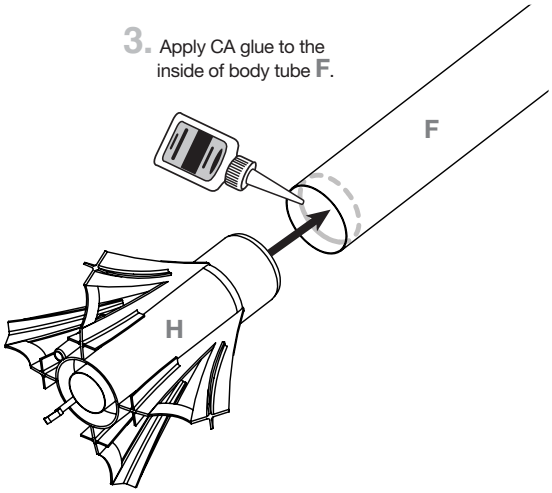
1. Apply CA glue to the inside of fin can **H**.



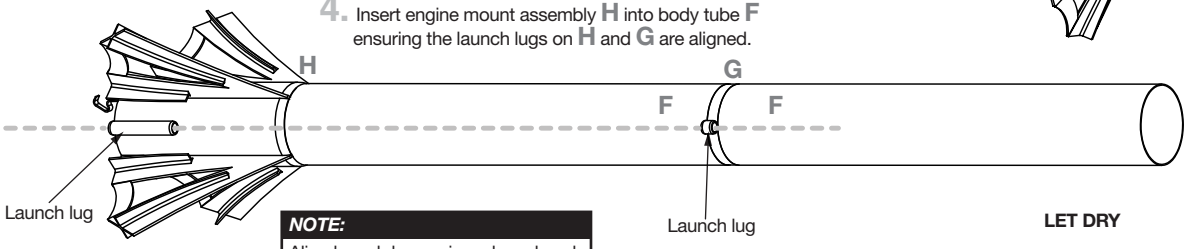
2. Insert engine mount **B** into fin can **H** ensuring the ends are flush.



3. Apply CA glue to the inside of body tube **F**.



4. Insert engine mount assembly **H** into body tube **F** ensuring the launch lugs on **H** and **G** are aligned.

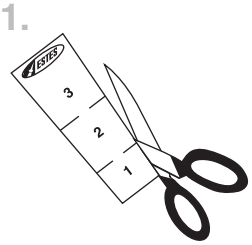


NOTE:
Align launch lugs using a launch rod.

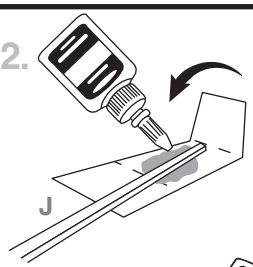
LET DRY

INSTALL SHOCK CORD

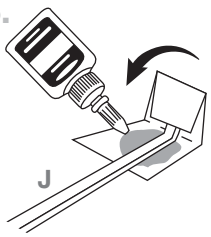
1.



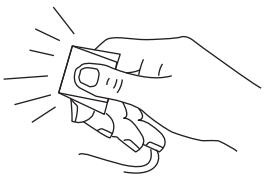
2.



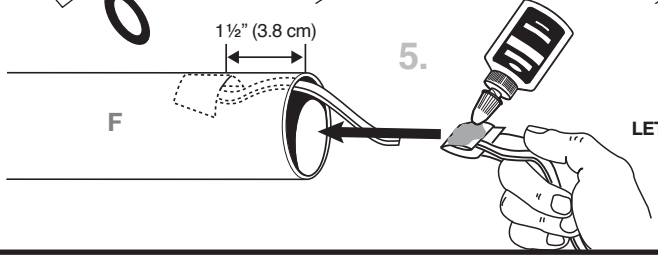
3.



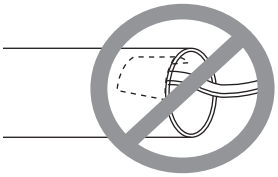
4. Hold until set.

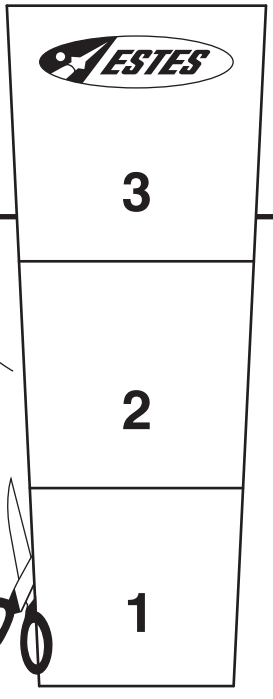


5.

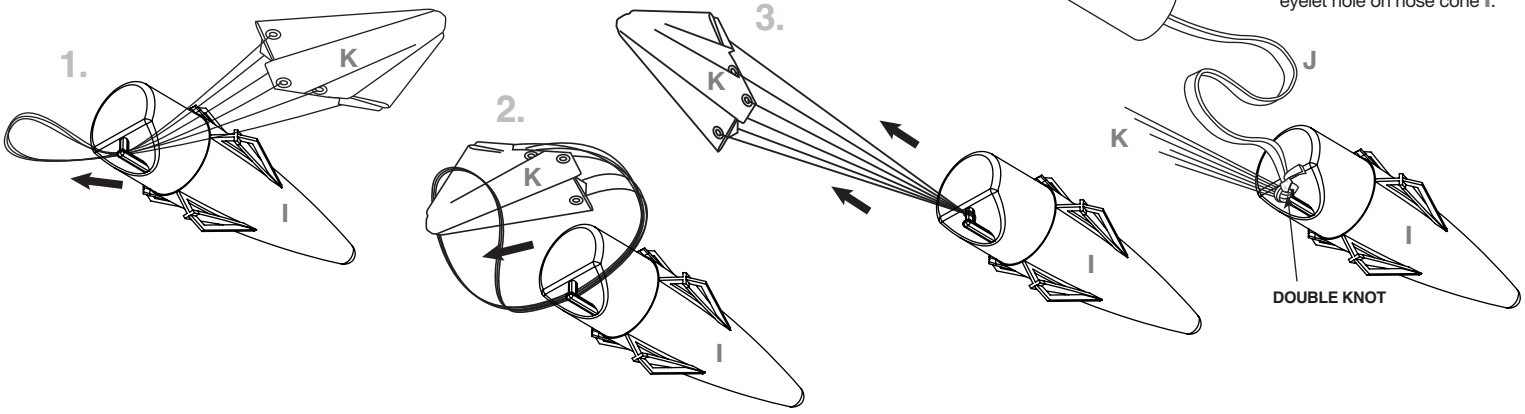


LET DRY

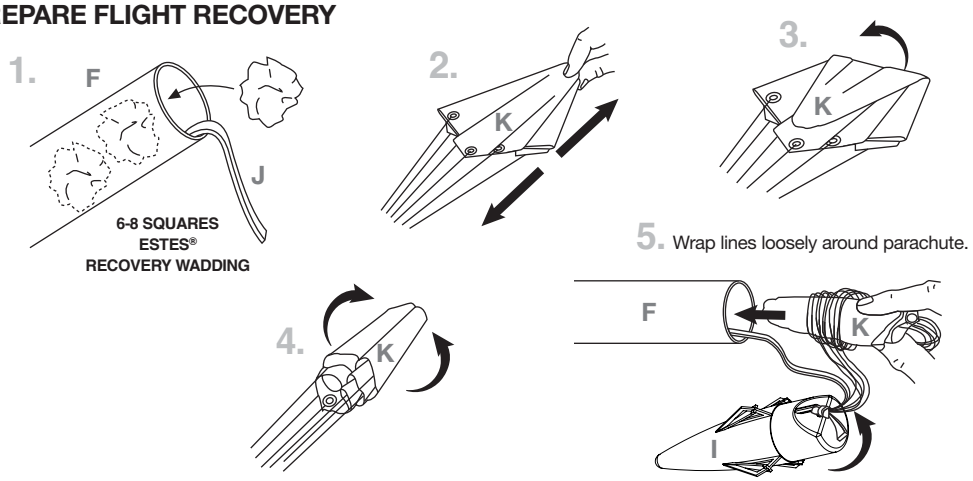




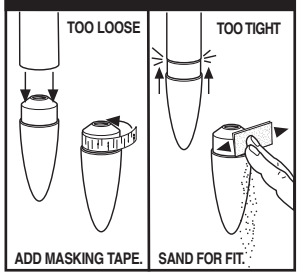
ATTACH PARACHUTE AND SHOCK CORD TO NOSE CONE



PREPARE FLIGHT RECOVERY



IF NOSE CONE FIT IS…



NOTE:

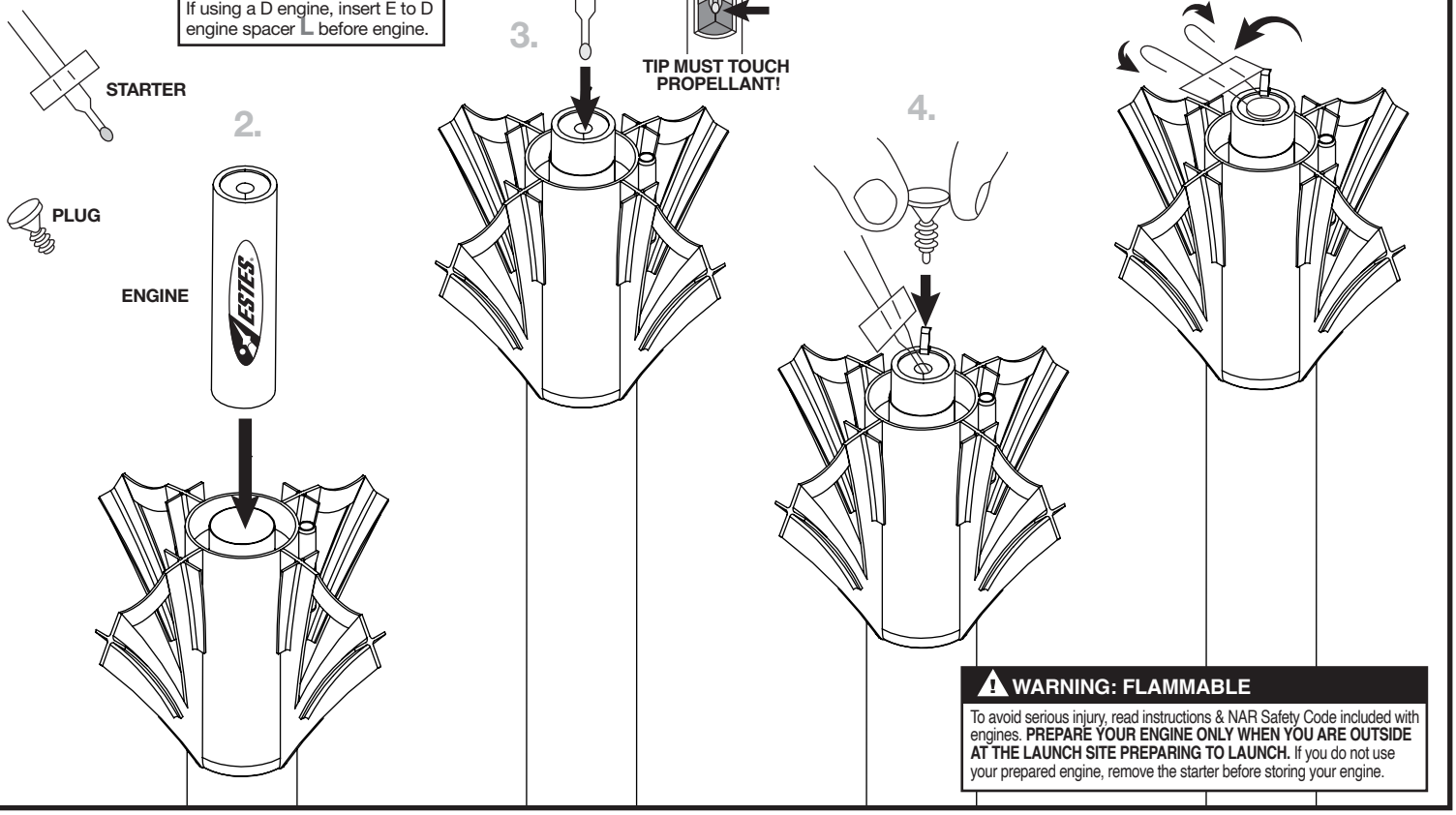
Recovery wadding and parachute must slide easily into body tube. If it's too tight, redo.

PREPARE ENGINE

1. Use one each.

NOTE:

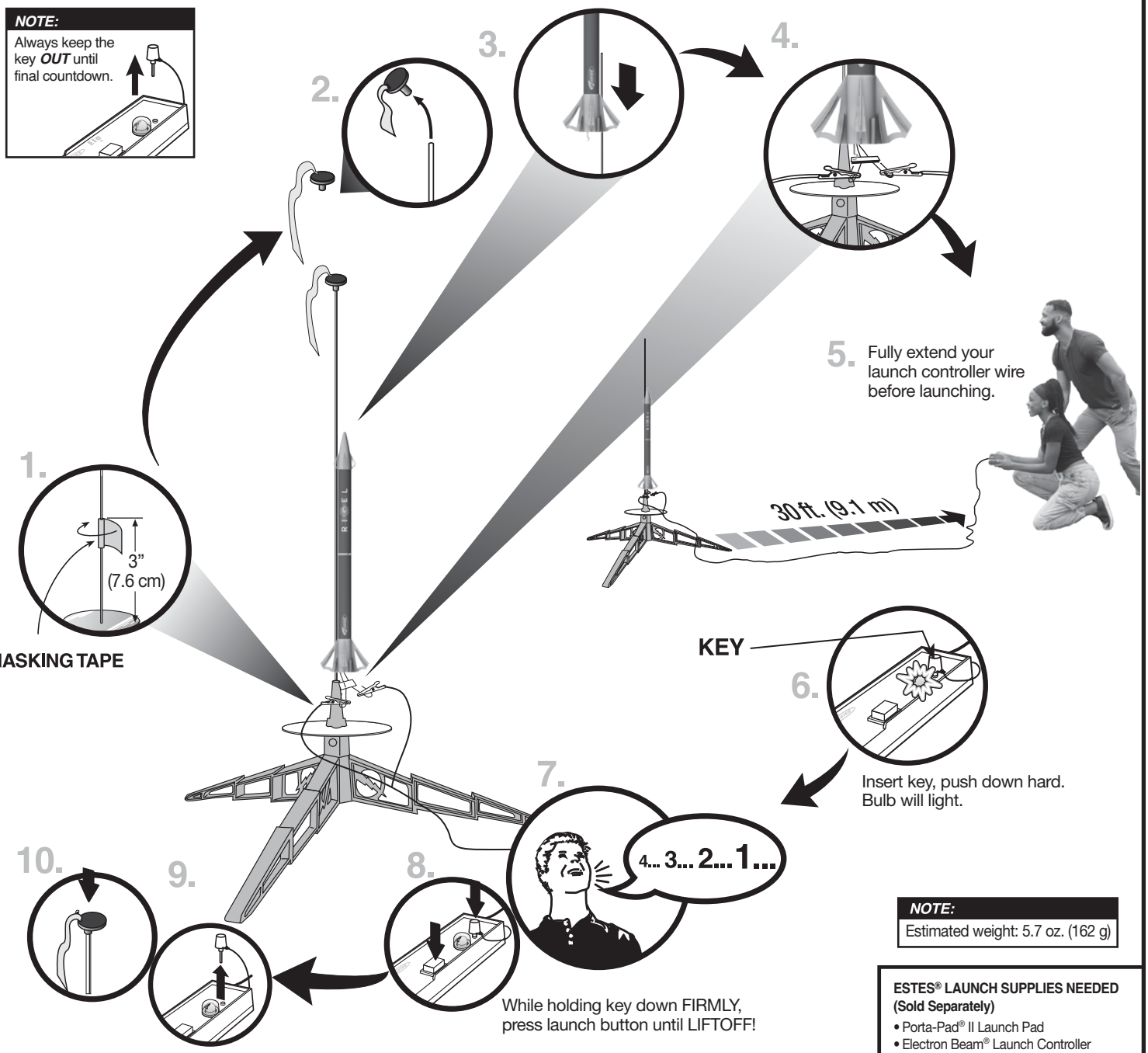
If using a D engine, insert E to D engine spacer L before engine.



⚠ 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.

COUNTDOWN AND LAUNCH



NOTE:
Estimated weight: 5.7 oz. (162 g)

ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: D12-3, E12-4

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(s). Repair any damage before launching the rocket.

FLYING YOUR ROCKET Choose a large field (1000 ft. [305 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.

Estes Industries, LLC • 1295 H Street, Penrose, CO 81240-9698

22 PAP

PN 090004-1868 (8-24)