ESTES®

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PRO SERIES II

9738

MEGA DER RED MAX™

AGES 18+

Skill Level

ADVANCED

MODEL ROCKET INSTRUCTIONS

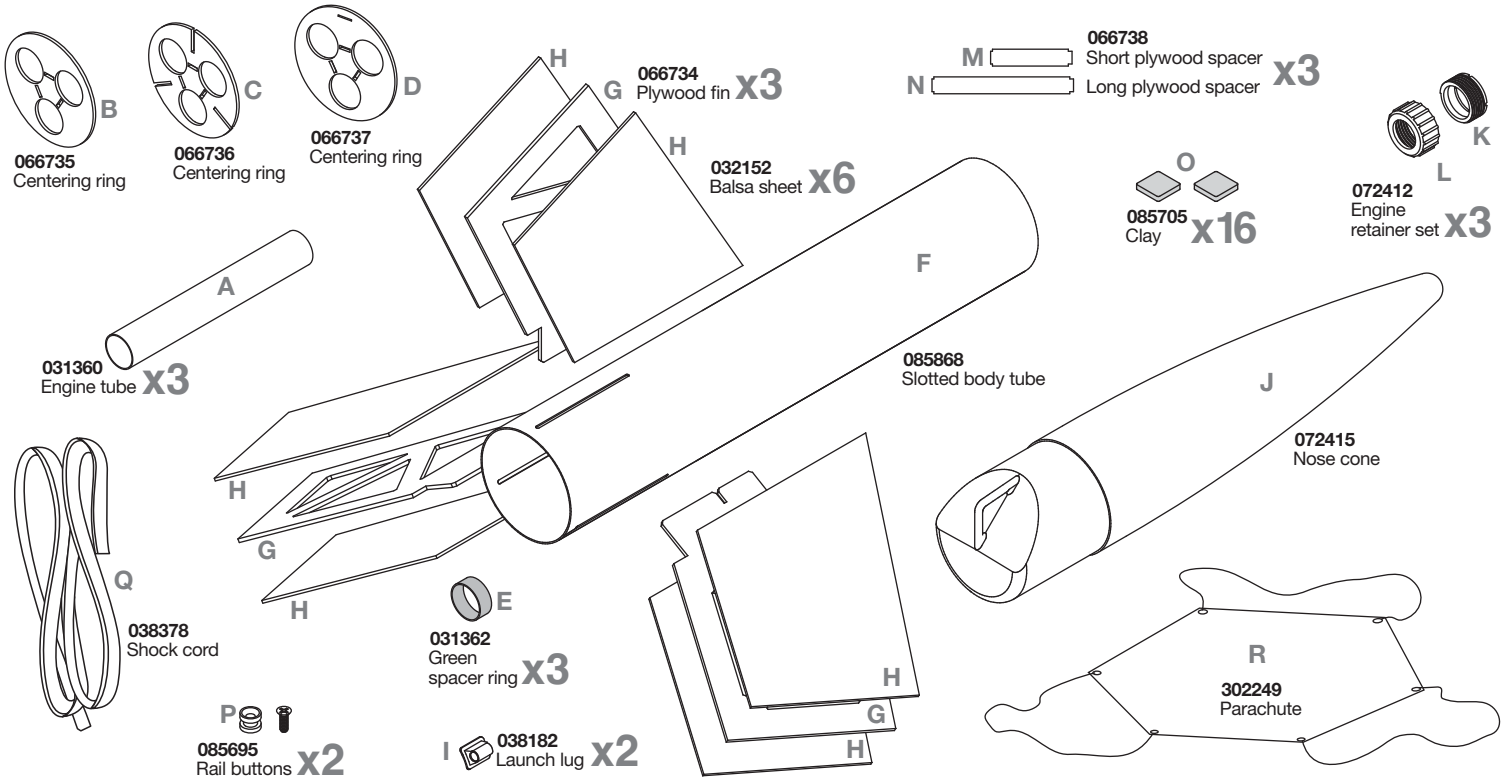
KEEP FOR FUTURE REFERENCE

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.*

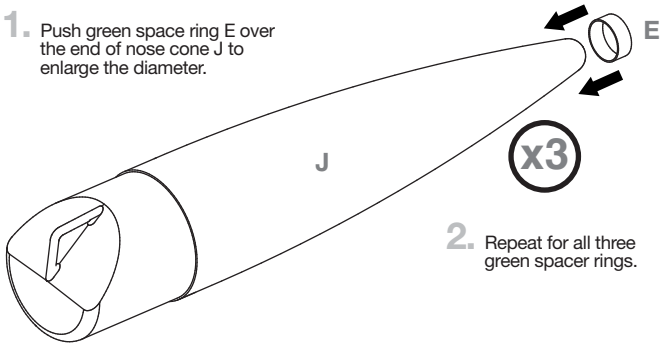
SUPPLIES

SCISSORS | PENCIL | HOBBY KNIFE | RULER | FINE SANDPAPER | SANDING BLOCK | DRILL | PHILLIPS SCREWDRIVER | YELLOW GLUE | EPOXY | MASKING TAPE | WHITE PRIMER | RED & BLACK PAINT



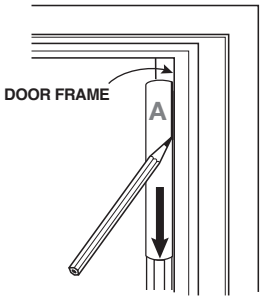
ASSEMBLE ENGINE MOUNT

1. Push green space ring E over the end of nose cone J to enlarge the diameter.

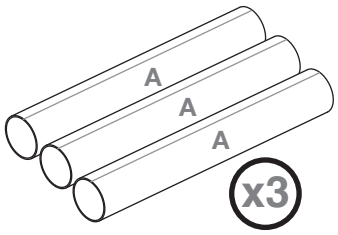


2. Repeat for all three green spacer rings.

3. Use a door frame as a straight edge draw a line down engine tube A.



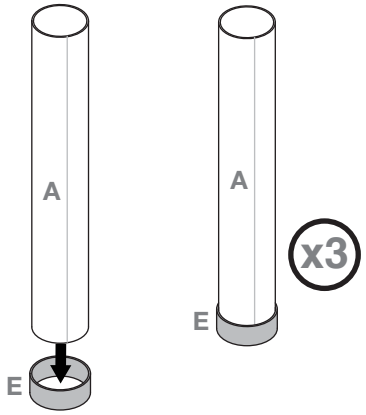
4. Repeat for all three engine tubes.



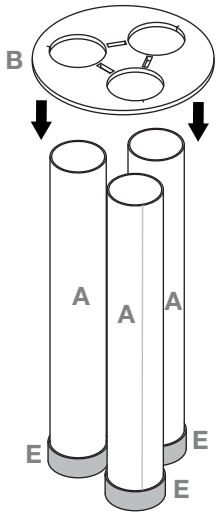
ASSEMBLE ENGINE MOUNT (CONTINUED)

NOTE:
Dry assemble engine mount first, do not glue. Assemble on a flat surface.

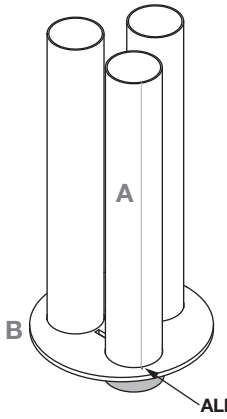
5. Slide tube A into green spacer ring E. Use a flat surface to press it in.



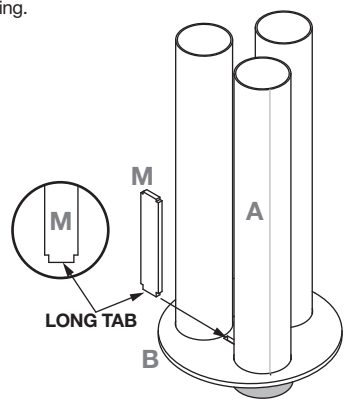
6. Arrange the three engine tubes with lines facing out as shown. Slide centering ring B over tubes.



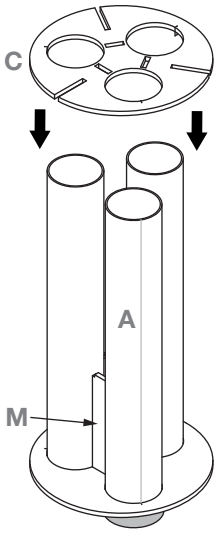
7. Align the lines marked on all engine tubes with the laser cut notch on the centering ring.



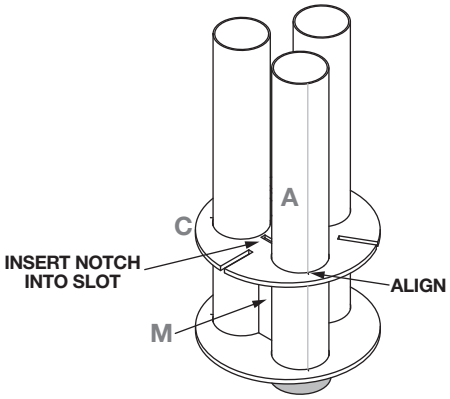
8. Place all three M plywood spacers into the slots in centering ring B between the engine tubes. Place the longer tabs into the slots.



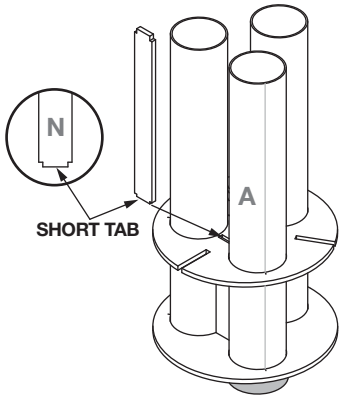
9. Slide centering ring C over engine tubes.



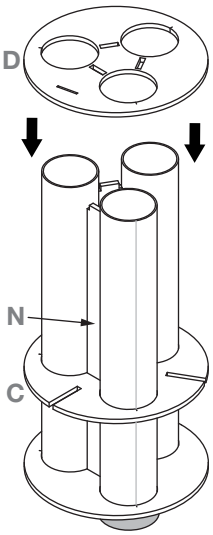
10. Push C down until top tabs of M go into the slots in C. Ensure the laser cut notch on C is aligned with the lines on the engine tubes.



11. Place all three N plywood spacers into the slots in centering ring C between the engine tubes. Place the shorter tabs into the slots.

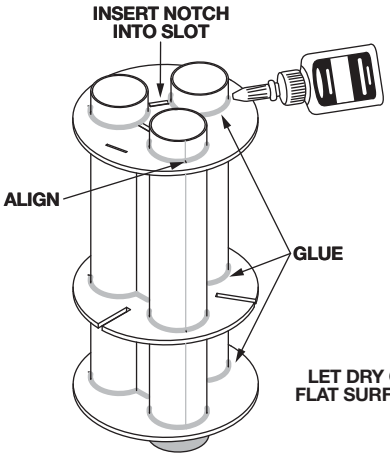


12. Slide centering ring D over engine tubes.



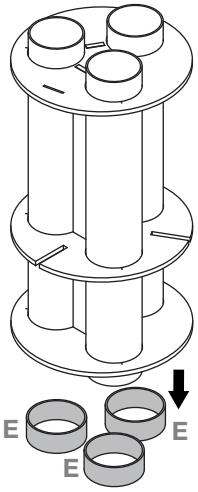
13. Push D down until top tabs of N go into the slots in D. Ensure the laser cut notch on D is aligned with the lines on the engine tubes.

Apply glue to all top connecting surfaces only, as shown.



14. Once glue is dry, remove all E rings.

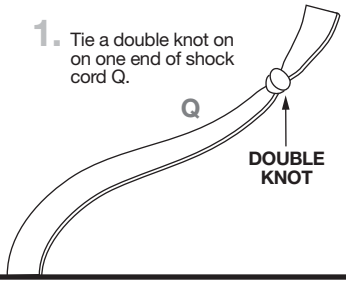
Apply glue to all connecting surfaces.



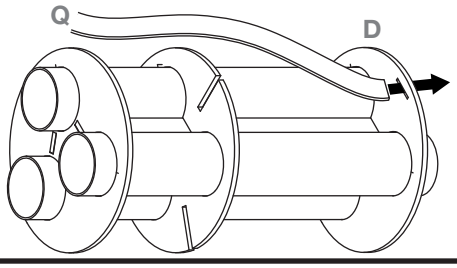
LET DRY

MOUNT SHOCK CORD

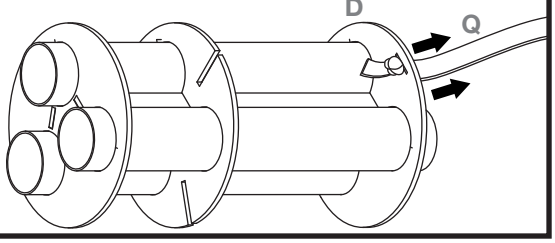
1. Tie a double knot on on one end of shock cord Q.



2. Insert the opposite end of the shock cord through the slot in centering ring D.

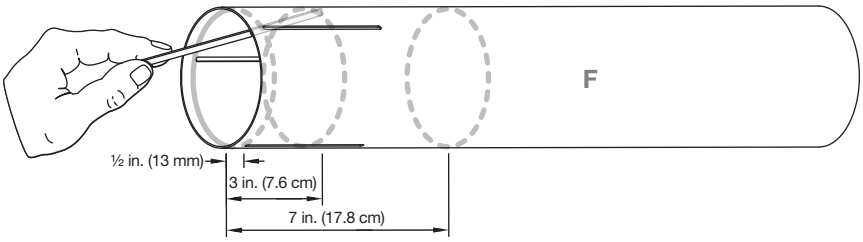


3. Pull shock cord all the way through the slot in D until the knot rests against the under side of D.

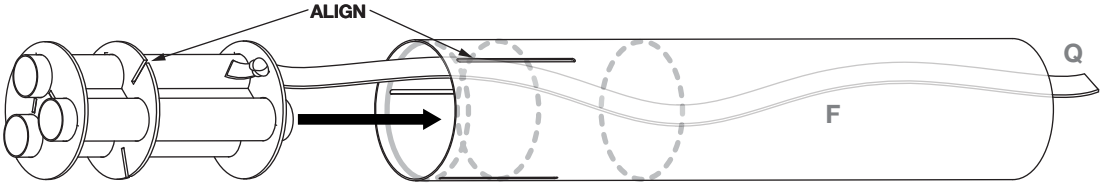


INSTALL ENGINE MOUNT

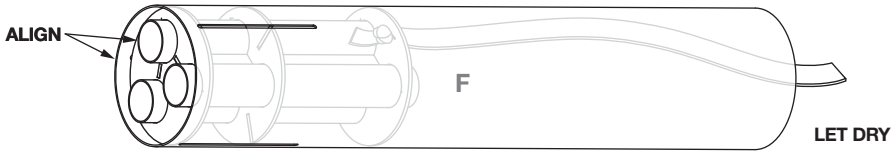
1. Apply glue to the inside of tube F.



2. Carefully thread the shock cord through body tube F. Insert the engine mount. Align the slots in the centering ring with the slots in the body tube.

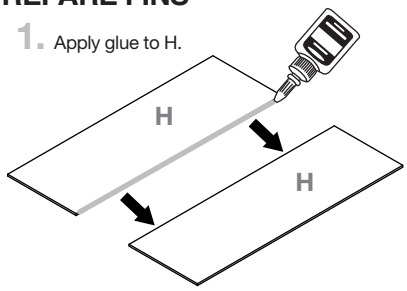


3. Push engine mount in until the engine tubes align with the body tube.

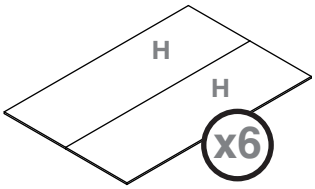


PREPARE FINS

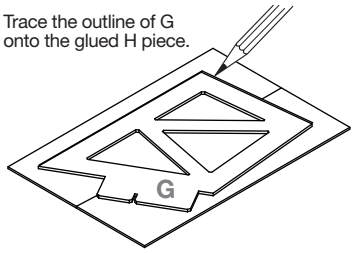
1. Apply glue to H.



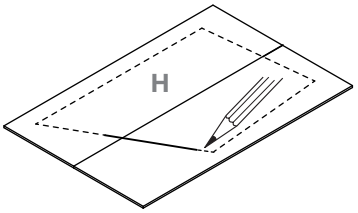
2. Let dry.



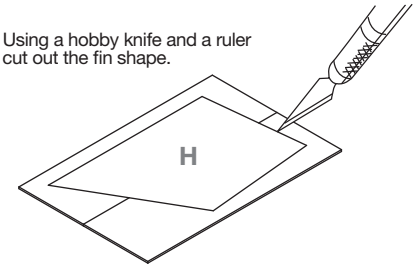
3. Trace the outline of G onto the glued H piece.



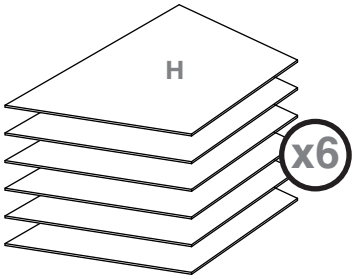
4. Remove G and complete the shape.



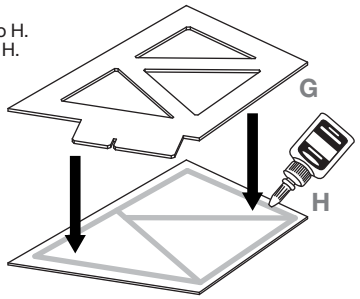
5. Using a hobby knife and a ruler cut out the fin shape.



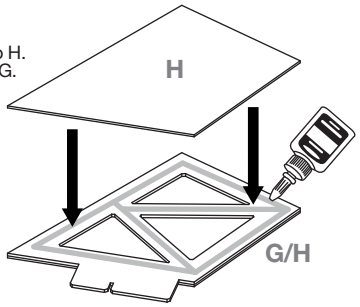
6. Repeat for all fins.



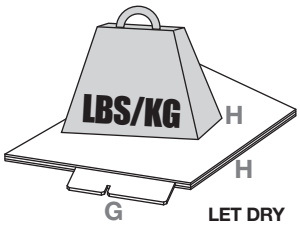
7. Apply glue to H. Align G with H.



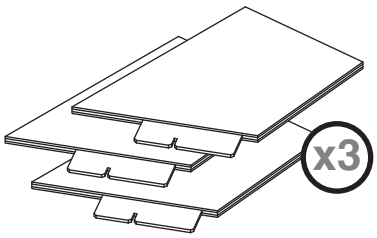
8. Apply glue to H. Align H with G.



9. Place weight on fin and let dry.

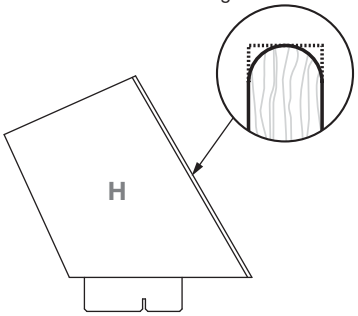


10. Repeat steps 7-9 for all three fins.

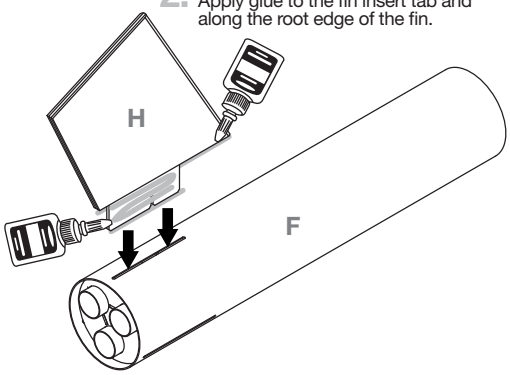


INSTALL FINS

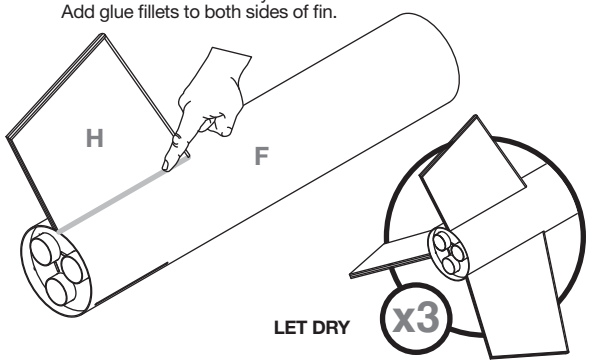
1. Sand the leading edge of all fins to a rounded edge.



2. Apply glue to the fin insert tab and along the root edge of the fin.

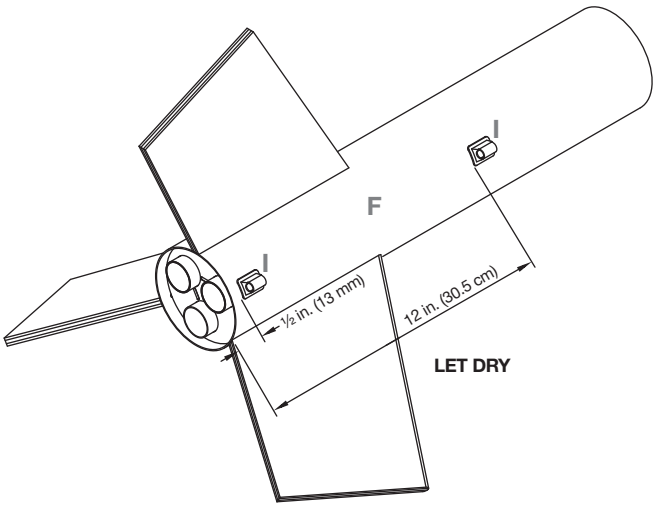


3. Insert fin into slotted body tube. Add glue fillets to both sides of fin.



ATTACH LAUNCH LUGS OR RAIL BUTTONS

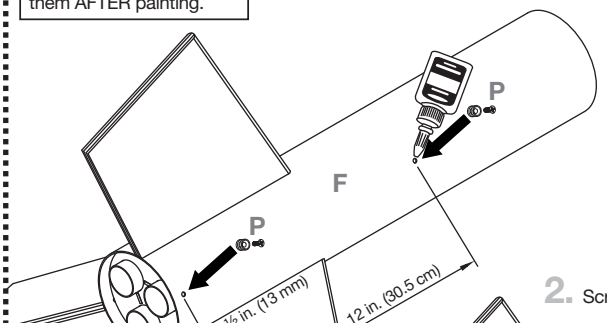
1. Apply glue to the back of the launch lugs. Place as shown below. Add glue fillets around launch lugs.



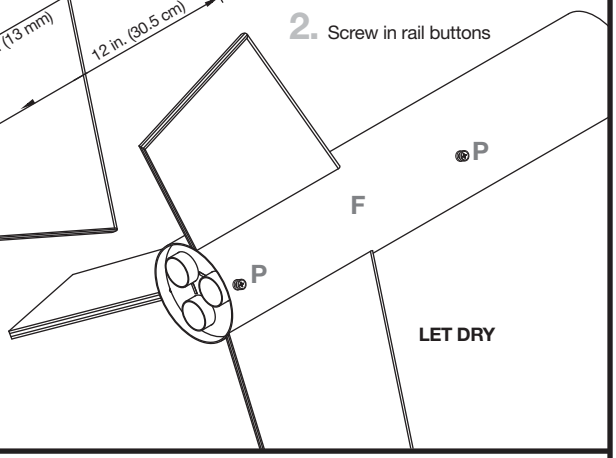
NOTE:

If using rail buttons, attach them AFTER painting.

1. Drill 1/8 in. holes at the measurement shown below. Put a drop of glue in each hole.

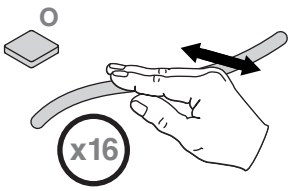


2. Screw in rail buttons

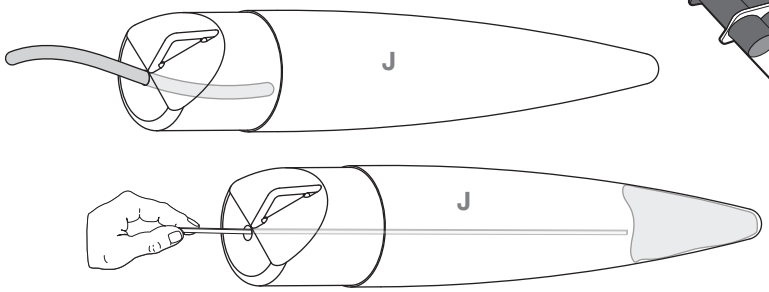


PREPARE NOSE CONE

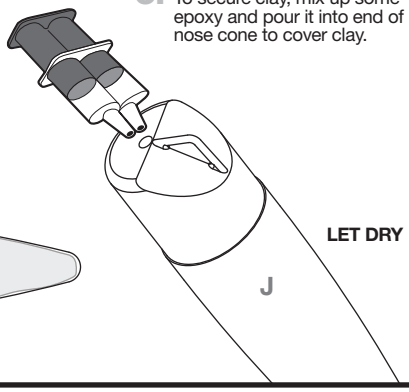
1. Roll clay into thin strips.



2. Feed clay into nose cone. Use a stick to push into front of nose cone.



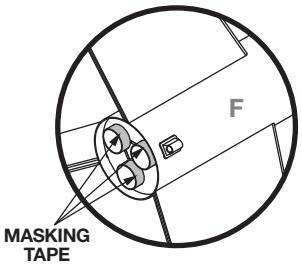
3. To secure clay, mix up some epoxy and pour it into end of nose cone to cover clay.



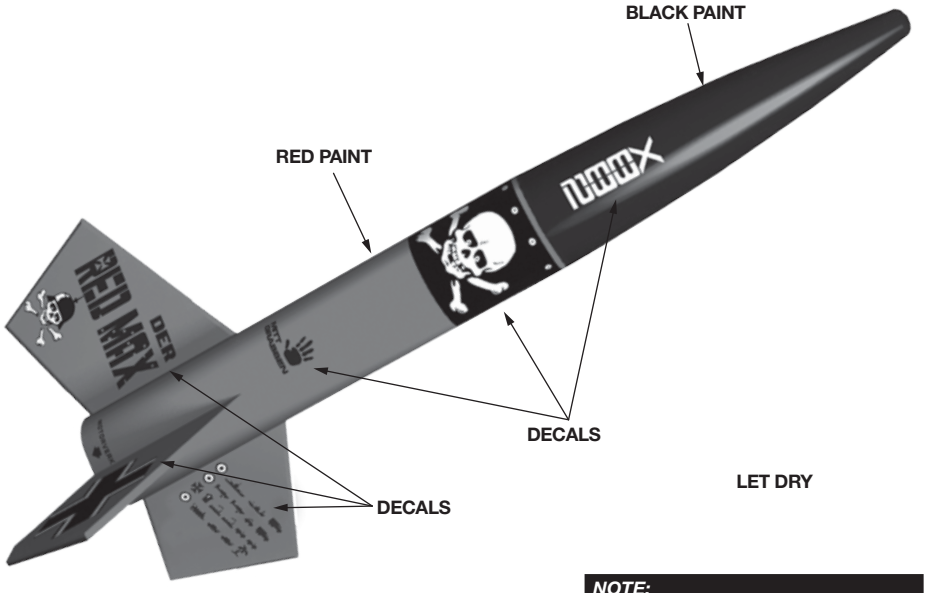
PAINT & DECALS

NOTE:

Before starting, mask off engine mount tubes.



PAINT COLORS
Black paint
Red paint



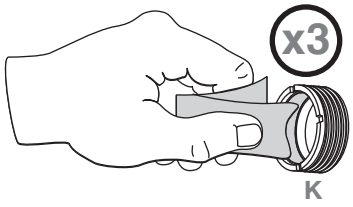
1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Paint rocket body red.
3. Paint nose cone black.
4. Apply decals only after paint is dry.
5. Use a spray bottle full of warm water and add a few drops of dish soap to it, just enough to get some suds. The soap\water mixture allows the decal to be moved a little.
6. Spray the surface where the Vinyl decal will be placed.
7. Use a plastic card to squeegee the surface of the decal in place. Small bubbles can be popped with a sharp hobby knife, while most small ones will go away by themselves.
8. OPTIONAL: Apply protective clear coat.

NOTE:

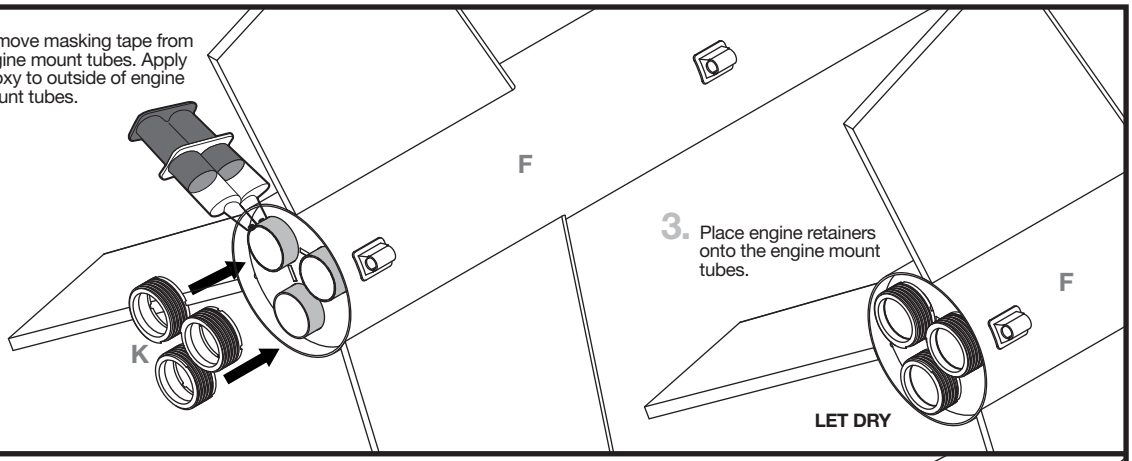
Please refer to packaging for suggested paint scheme and/or decal placement.

FINAL ASSEMBLY

1. Use sandpaper to roughen up inside of engine retainer K. Repeat for all engine retainers.

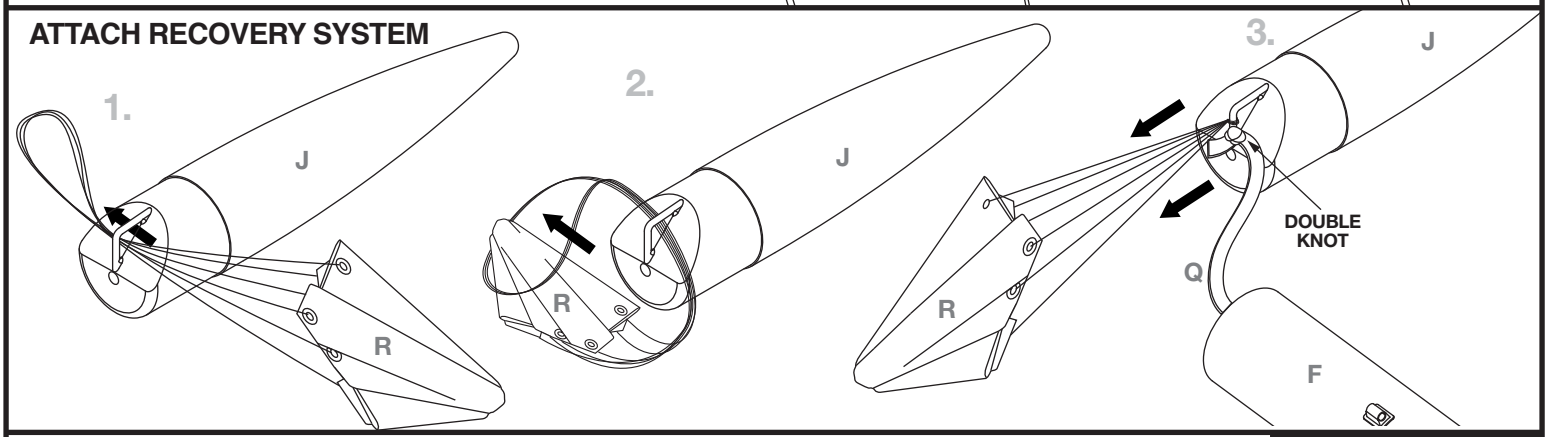


2. Remove masking tape from engine mount tubes. Apply epoxy to outside of engine mount tubes.

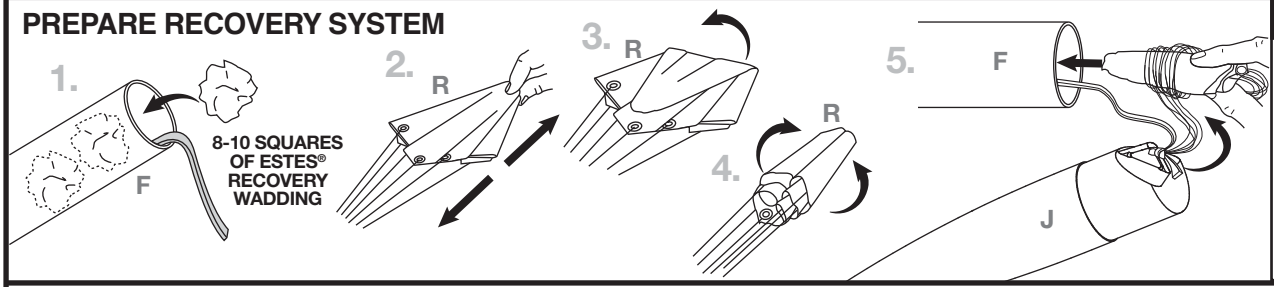


3. Place engine retainers onto the engine mount tubes.

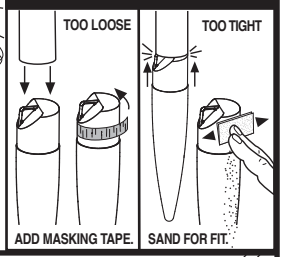
ATTACH RECOVERY SYSTEM



PREPARE RECOVERY SYSTEM

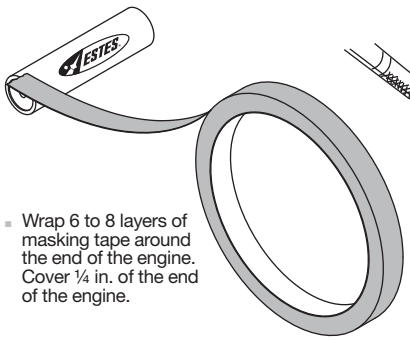


IF NOSE CONE FIT IS...

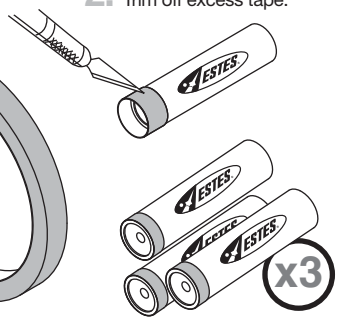


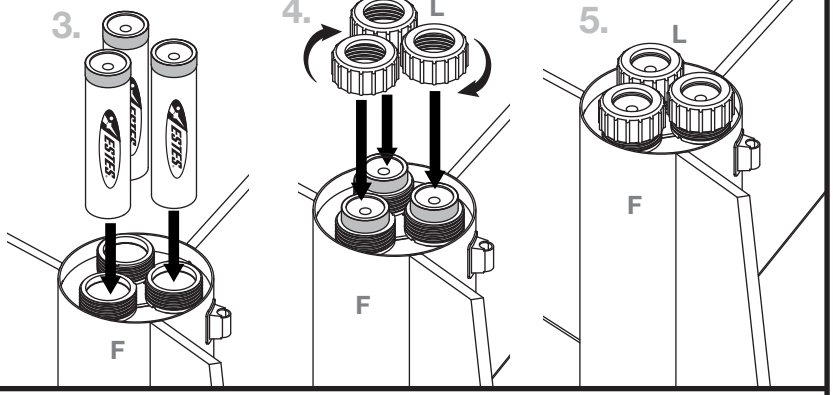
PREPARE ENGINE FOR ROCKET BALANCE

1. Wrap 6 to 8 layers of masking tape around the end of the engine. Cover ¼ in. of the end of the engine.



2. Trim off excess tape.



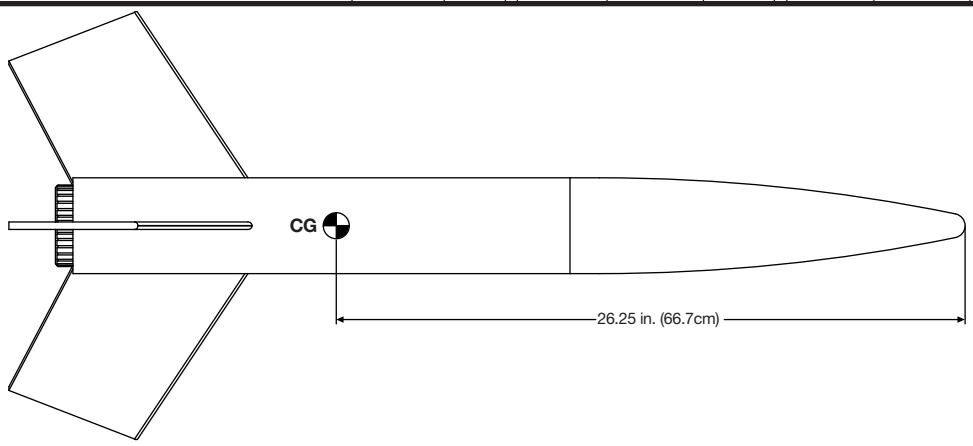


BALANCE ROCKET

1. With engines installed, perform final balance check.

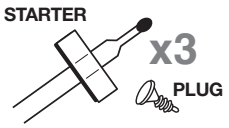
NOTE:

Add more weight to the nose cone until you get the correct center of gravity.



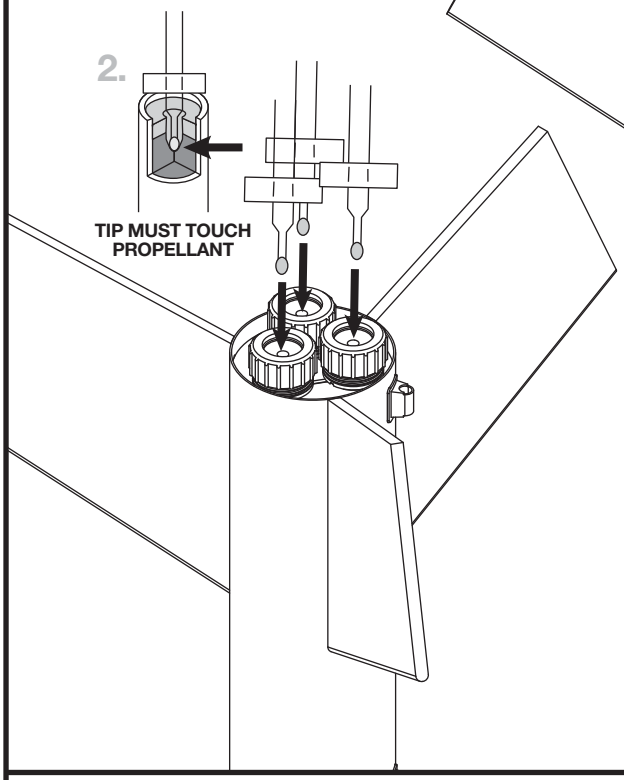
COMPLETE FLIGHT PREPARATION

1.

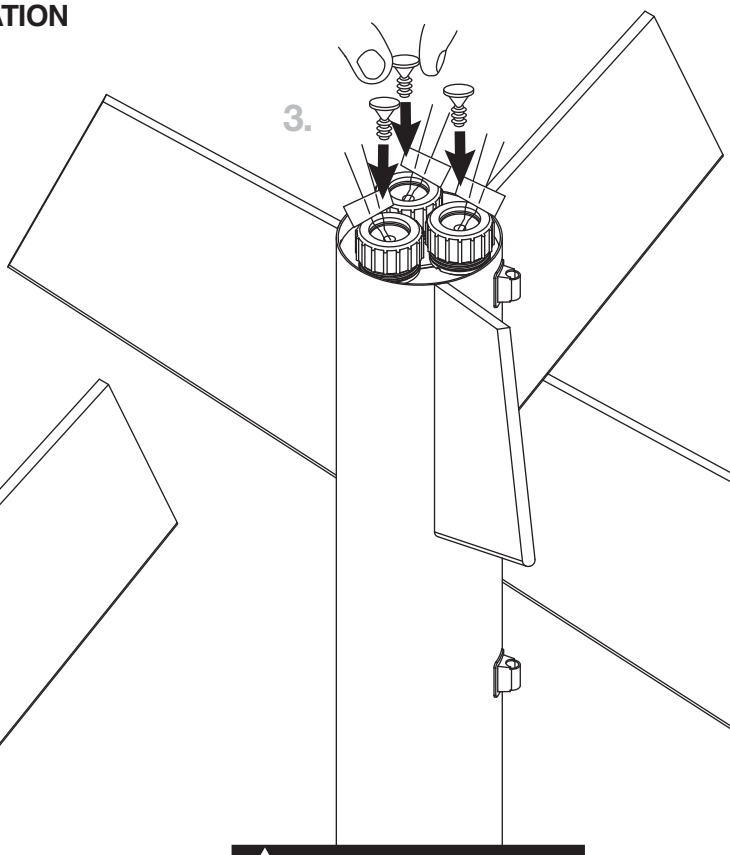


Use 1 each per engine.

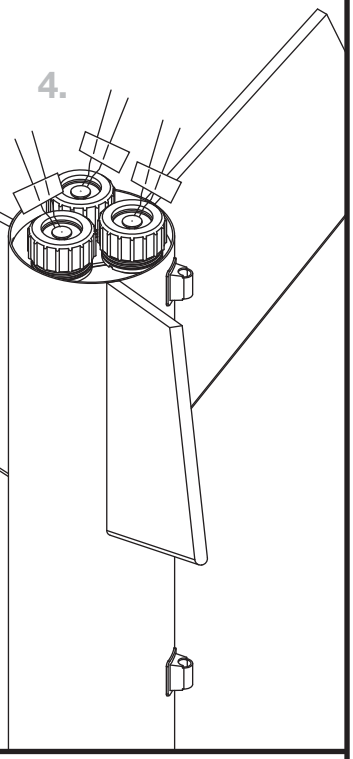
2.



3.



4.



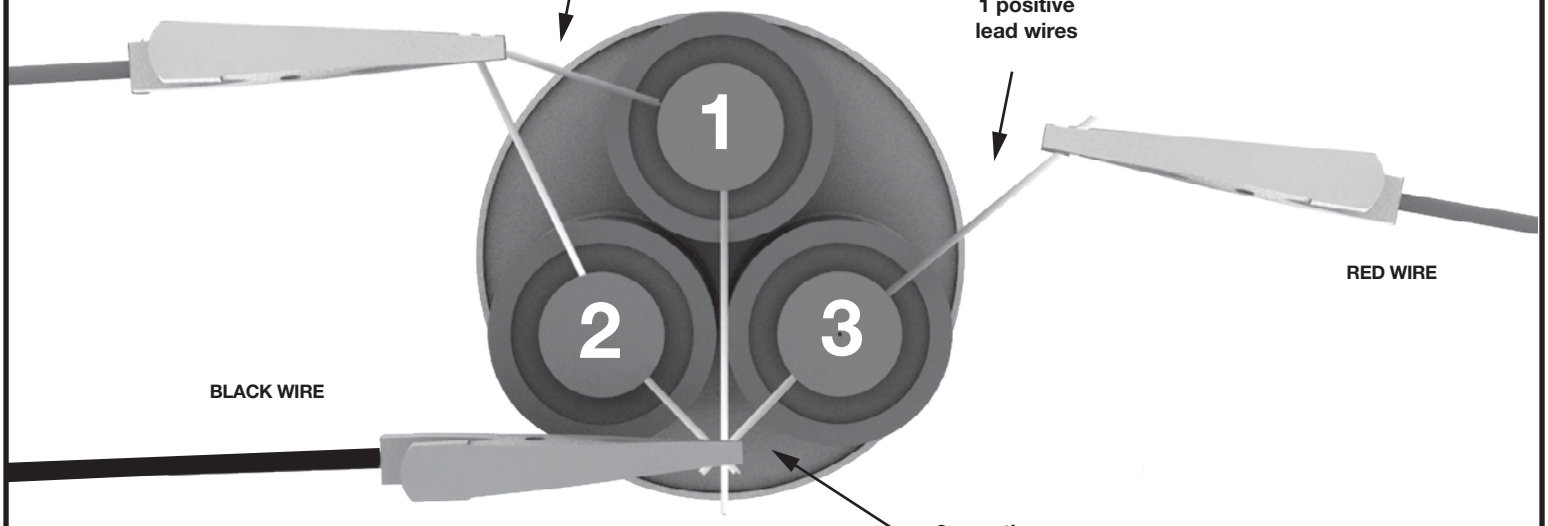
⚠ WARNING: FLAMMABLE

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.

3 ENGINE CLUSTER WIRING

NOTE:

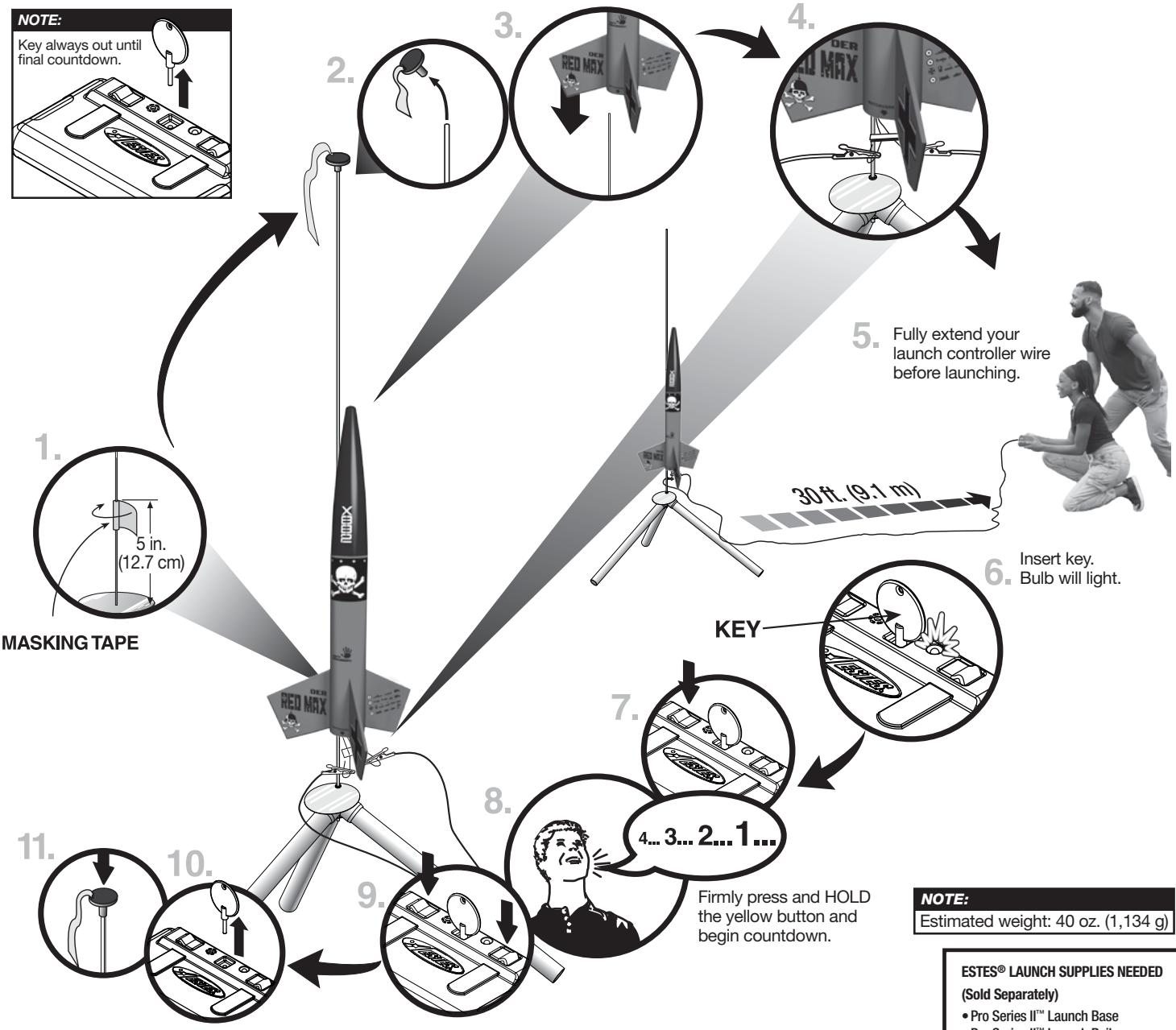
Three engine cluster configuration requires a (2240) Pro Series II Launch controller & *3 cell LiPo (11.1 V) battery. Sold Separately.*



⚠ CAUTION:

DO NOT MIX ENGINE TYPES. Doing so can create uneven thrust causing instability in the rockets flight.

COUNTDOWN AND LAUNCH



NOTE:
Estimated weight: 40 oz. (1,134 g)

ESTES® LAUNCH SUPPLIES NEEDED
(Sold Separately)

- Pro Series II™ Launch Base
- Pro Series II™ Launch Rail
- Pro Series II™ Launch Controller with 3 Cell LiPo (11.1v) battery
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Required Estes® Engines: E16-4 (Qty. 3) E16-6 (Qty. 3)

⚠ DISCLAIMER:

This kit has the capability to be fitted with engine power that may exceed Class 1—Model Rocket as defined by 14 CFR Part 101 Subpart C. The user is responsible for considering the engines used for launch. If combined engine propellant or total impulse is in excess of Class 1 limits then the user is responsible to adhere to regulations applicable to High Power.

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 • Assembled in Penrose, CO
22 PAP
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