



estesrockets.com

D-Region Tomahawk

2037

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.

SUPPLIES



SCISSORS



PENCIL



RULER



HOBBY KNIFE



YELLOW GLUE



PLASTIC CEMENT



FINE SANDPAPER



MASKING TAPE



WHITE PRIMER



FLAT WHITE PAINT



FLAT BLACK PAINT



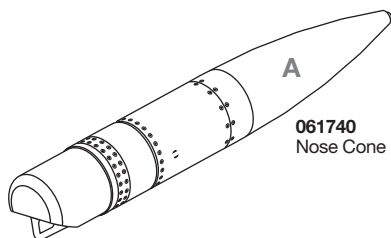
FLAT RED PAINT



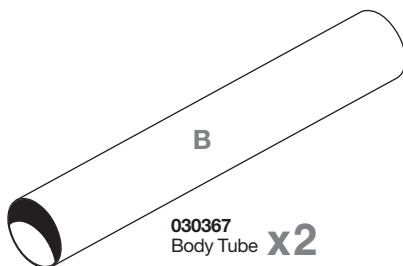
FLAT BROWN PAINT



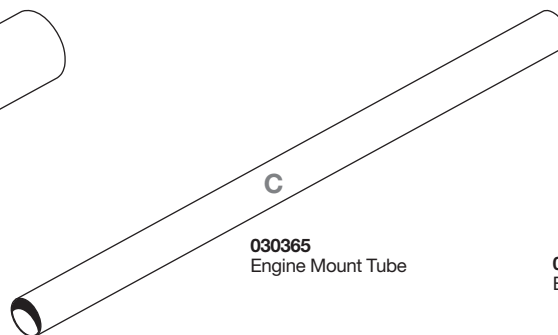
BRUSH/SILVER & GOLD PAINT



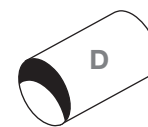
061740
Nose Cone



030367
Body Tube **x2**



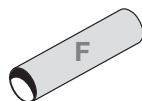
030365
Engine Mount Tube



030369
Body Tube Adapter



061747
Launch Lug **x2**



034997
Yellow Engine Spacer



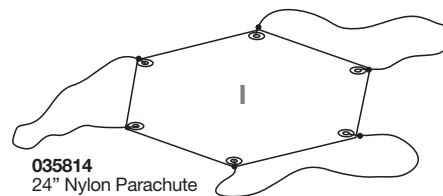
038369
Shock Cord



035005
Orange E to D Engine Spacer

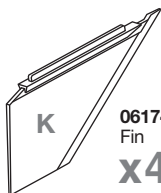
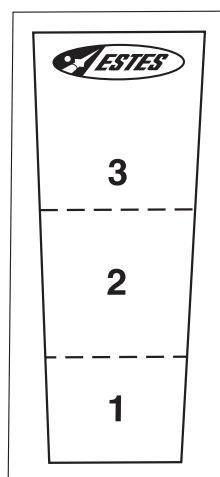


061746
Stuffer Bulkhead

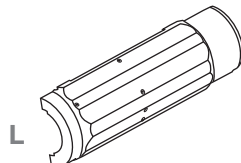


035814
24" Nylon Parachute

084445
Paper Shock Cord Mount



061742
Fin **x4**



061743
Fin Body Half **x2**



061748
Engine Cap



061745
Fin Body Bulkhead

090001-2037
Waterslide Decal



030164-2
Engine Block Ring

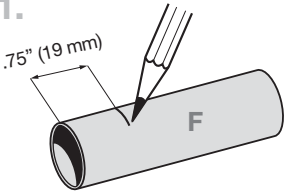
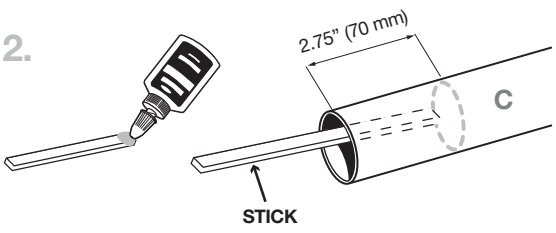
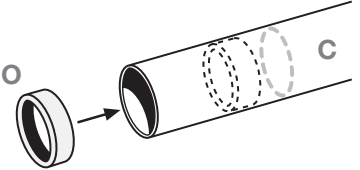
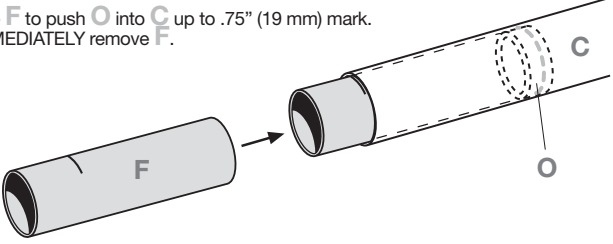
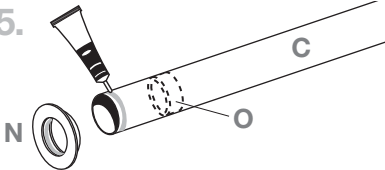
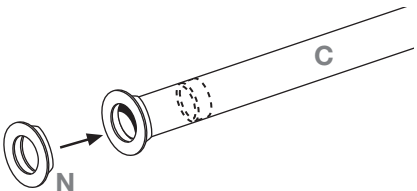
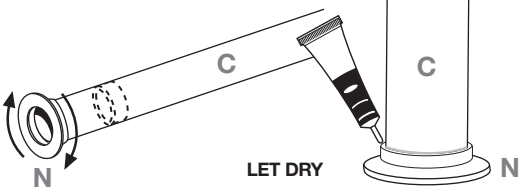


061744
Scale Fin Launch Lug



061741
Nose Cone Tip

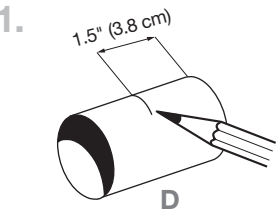
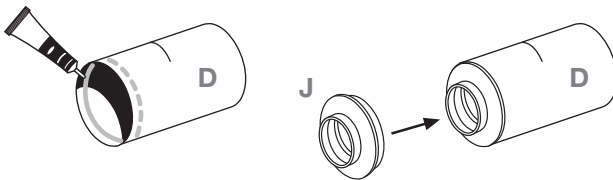
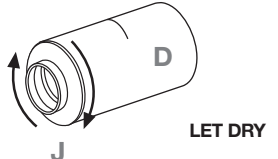
ASSEMBLE ENGINE MOUNT

1. 
2. 
3. 
4. Use F to push O into C up to .75" (19 mm) mark. IMMEDIATELY remove F. 
5. 
6. Push N all the way onto end of C and over plastic cement. 
7. Twist N back and forth to help evenly spread plastic cement between two parts. For added strength apply a fillet of cement around N and C. Let glue dry. 

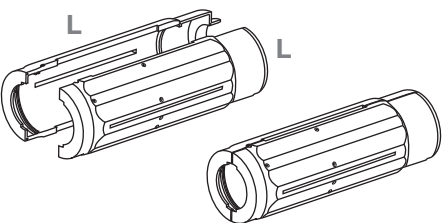
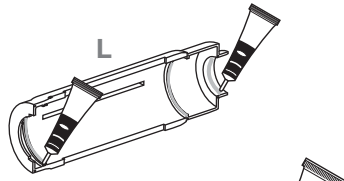
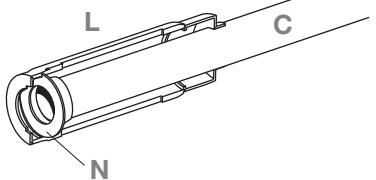
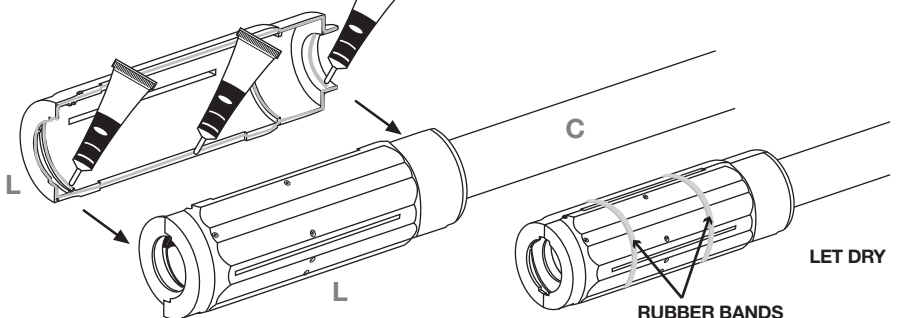
CAUTION:

For safe handling of plastic cement, see manufacturer's warnings and follow instructions for use.

ASSEMBLE STUFFER BULKHEAD

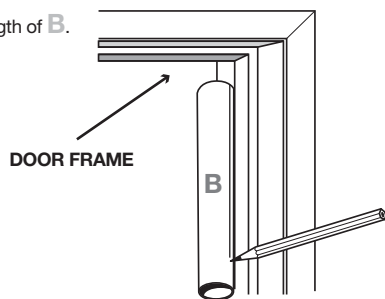
1. 
2. Apply a ring of tube-type plastic cement around inside of one end of D. Insert J into end of D. 
3. Twist J back and forth to help evenly spread cement between two parts. Let dry. 

ASSEMBLE FIN BODY

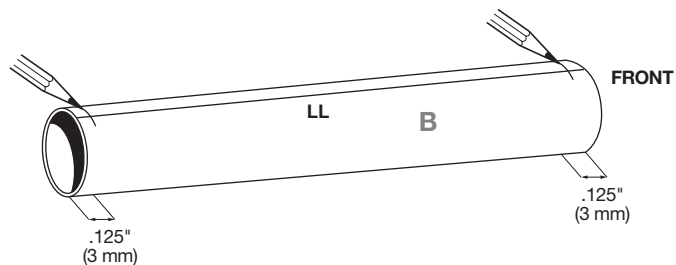
1. Test-fit Ls together. There should be no gaps along assembly joint. 
2. Select one L to begin assembly. Apply plastic cement in groove where N is to fit. Apply a line of plastic cement along forward area where C will lay as shown. 
3. Lay C into L so that edge of N fits into groove, and C contacts forward section. 
4. Apply plastic cement around the outside edge and into groove and forward area of other L. Align and join Ls together. Secure with tape or rubber bands until glue dries. 

ASSEMBLE LOWER BODY TUBE

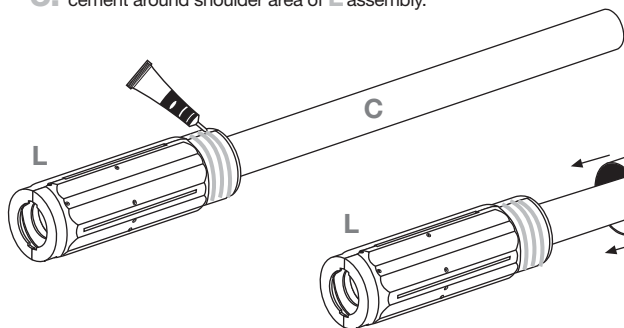
1. Draw line entire length of B.



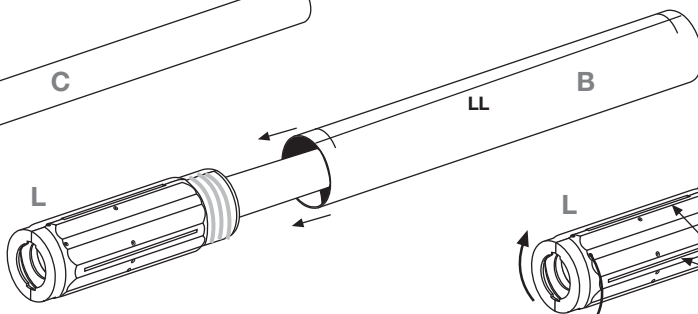
- 2.



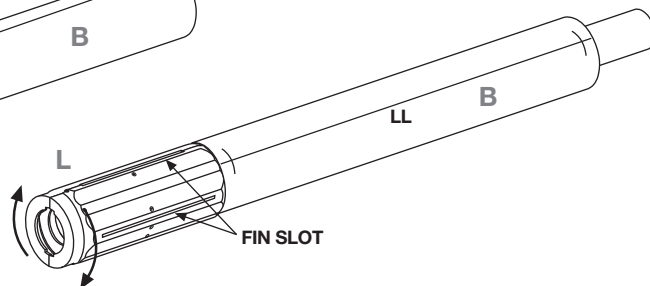
3. Apply three or four bands of tube-type plastic cement around shoulder area of L assembly.



4. Slide B into place as shown.



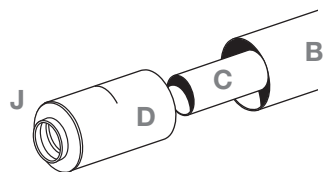
5. Twist B back and forth to evenly spread the plastic cement between parts. Position B so LL line is centered between two fin slots as shown. Wipe excess cement away.



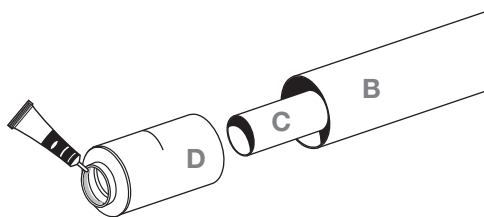
NOTE:

Flip the B Assembly around. For steps 6-10, the use of two different types of glue are required at the same time. Follow directions carefully.

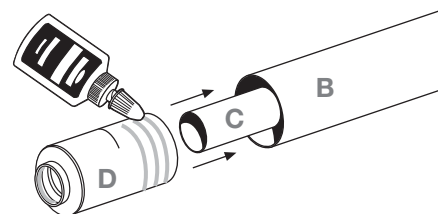
6. Test fit D assembly to B assembly.



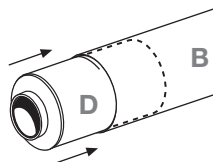
7. Apply plastic cement around inside end of D assembly as shown.



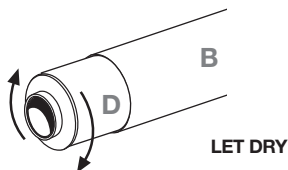
8. Quickly apply rings of carpenter's glue around outside of D assembly up to mark as shown.



9. Slide D assembly into B and down over end of C.

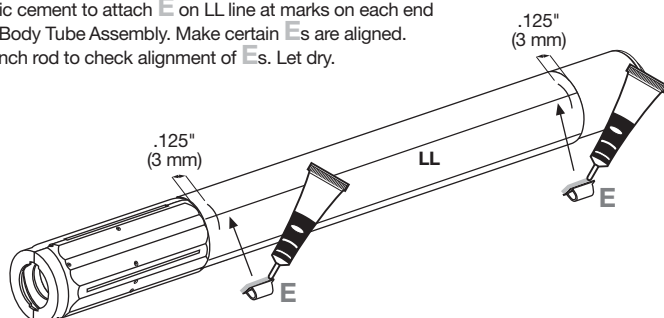


10. Twist back and forth to evenly spread both carpenter's glue and plastic cement. Wipe any excess glue away and let dry.

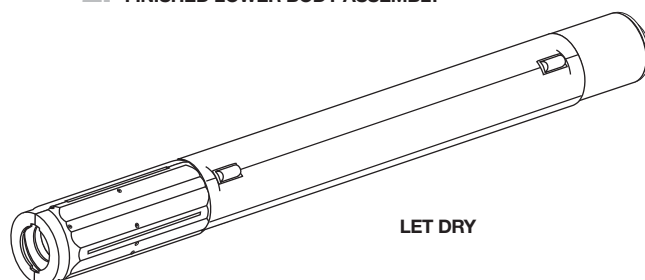


ATTACH LAUNCH LUG

1. Use plastic cement to attach E on LL line at marks on each end of Lower Body Tube Assembly. Make certain Es are aligned. Use a launch rod to check alignment of Es. Let dry.

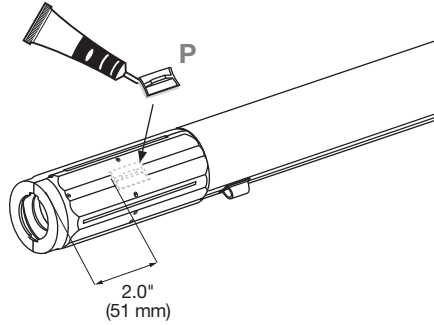


2. FINISHED LOWER BODY ASSEMBLY

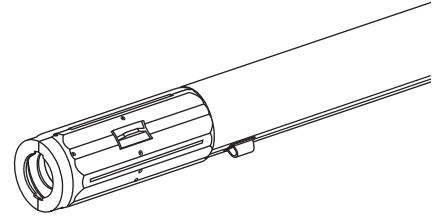


ADD SCALE LAUNCH LUG DETAIL

1. Use tube-type plastic cement to glue **P** onto assembled fin mount unit. Do not align with other launch lugs.

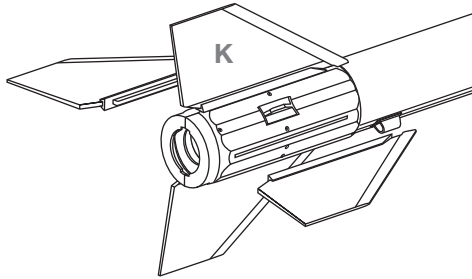


2. FINISHED ASSEMBLY

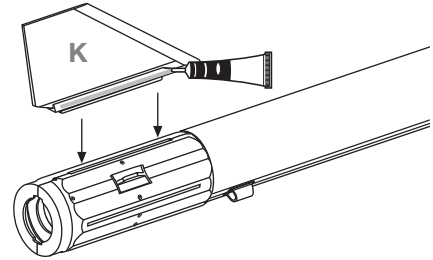


ATTACH FINS

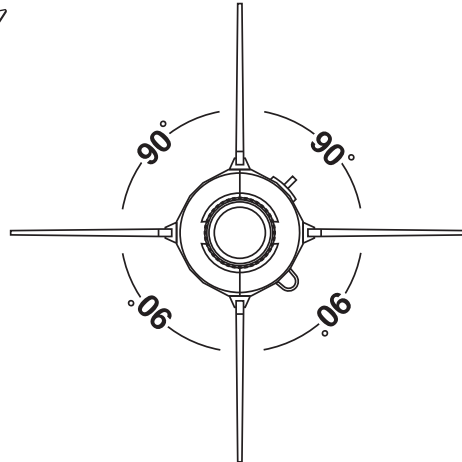
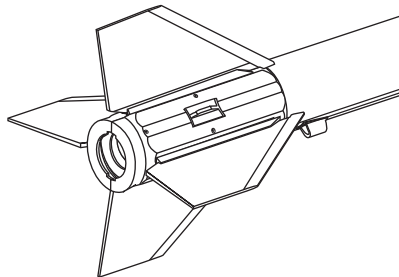
1. Test fit all **K**s in assembled **L**. Each **K** can be located at any of molded slots in **L**. If required, trim any excess plastic to ensure fins seat properly in slots.



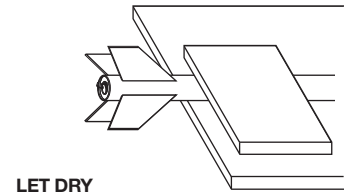
2. One **K** at a time, apply a bead of tube-type plastic cement along both sides of **K** root edge where it meets **L**'s surface. Insert **K** into place.



3. Repeat for all fins. Check alignment.

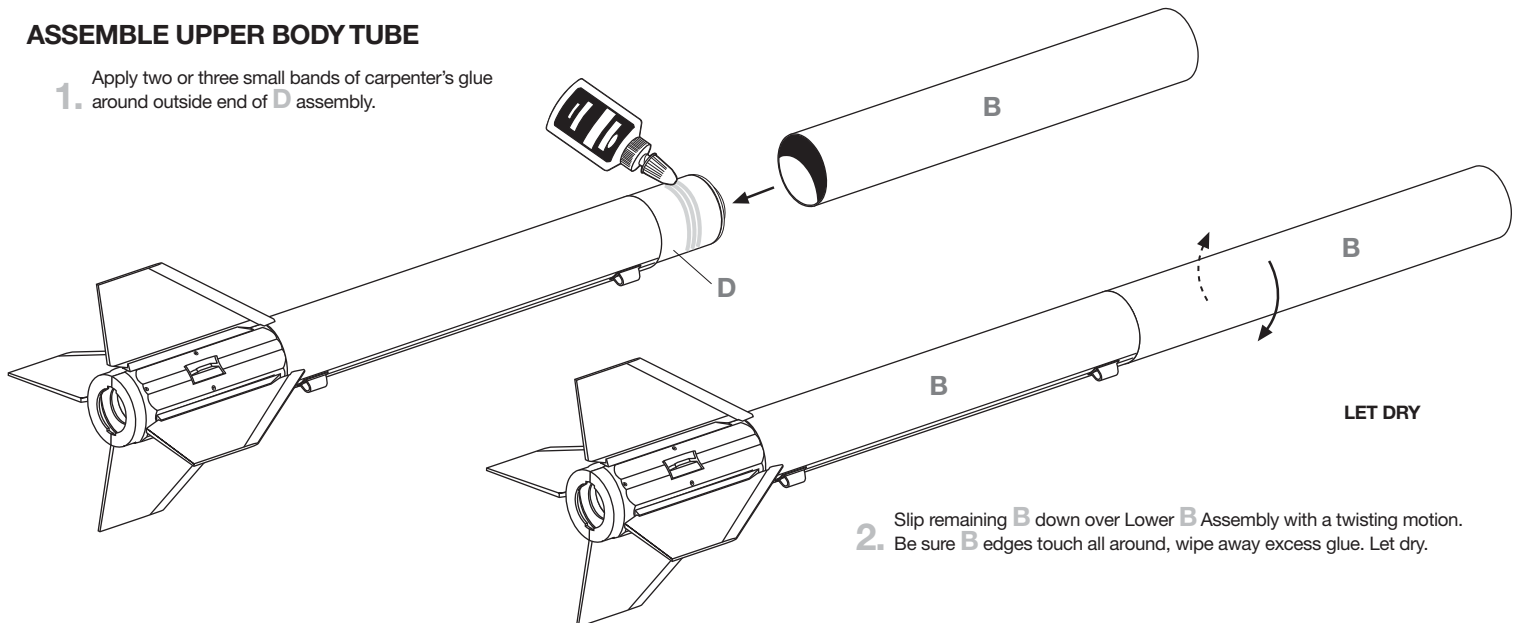


- 4.



ASSEMBLE UPPER BODY TUBE

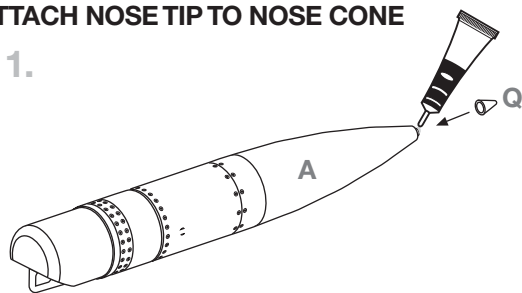
1. Apply two or three small bands of carpenter's glue around outside end of **D** assembly.



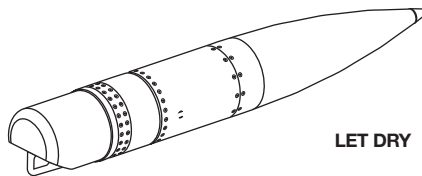
2. Slip remaining **B** down over Lower **B** Assembly with a twisting motion. Be sure **B** edges touch all around, wipe away excess glue. Let dry.

ATTACH NOSE TIP TO NOSE CONE

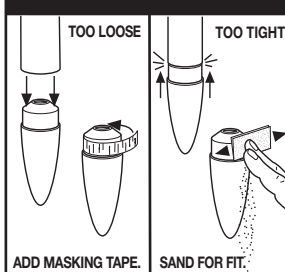
1.



2. Make certain **Q** is centered and straight. Let dry.

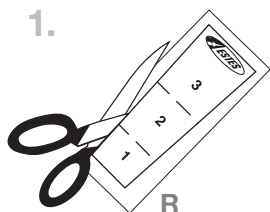


IF NOSE CONE FIT IS...

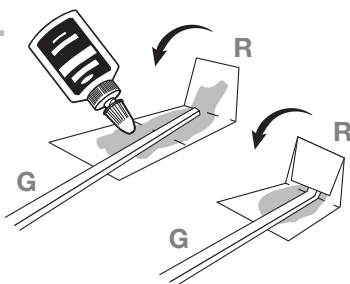


INSTALL SHOCK CORD

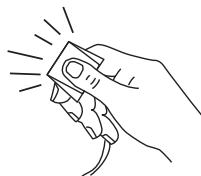
1.



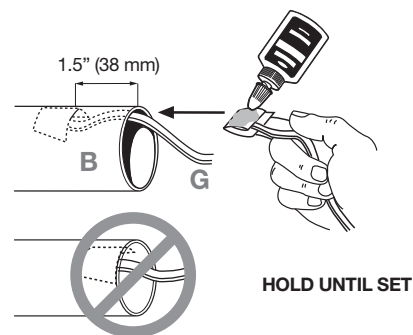
2.



3. Hold until set.

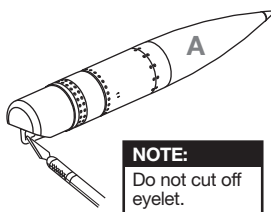


4.



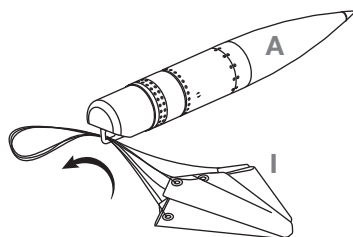
PREPARE RECOVERY SYSTEM

1.

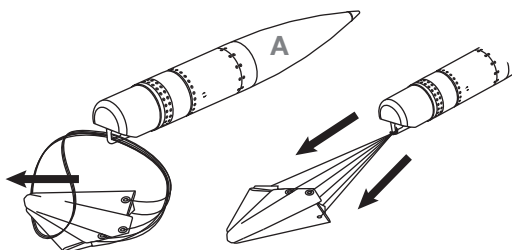


NOTE:
Do not cut off eyelet.

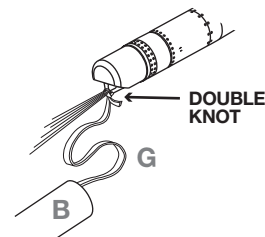
2. Thread parachute strings through nose cone eyelet.



3. Bring parachute through loop in strings and pull tight.

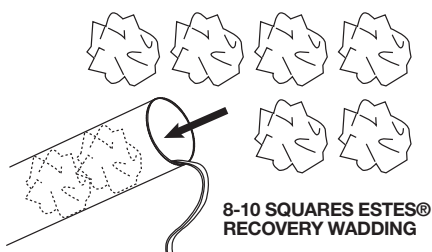


4. Tie shock cord to nose cone eyelet.



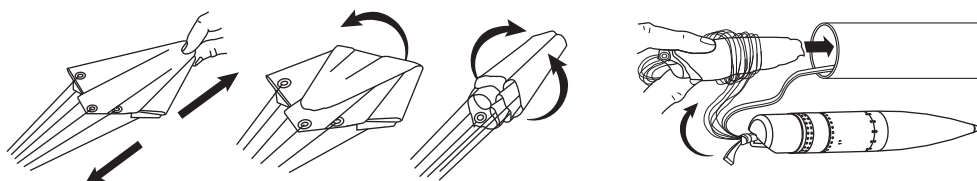
PREPARE FLIGHT RECOVERY

1. Push recovery wadding to bottom of body tube.



8-10 SQUARES ESTES® RECOVERY WADDING

2. Fold parachute as shown. Wrap parachute lines loosely and insert into body tube. Recovery wadding and parachute must slide easily into body tube; redo if too tight.



ROCKET FINISHING

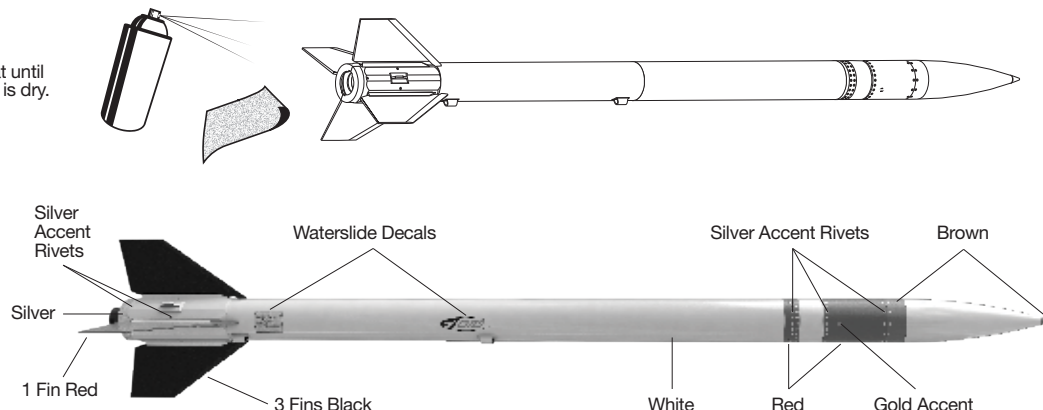
Spray rocket with white primer, let dry & sand. Repeat until rocket is smooth, then paint. Apply decals after paint is dry.

1. Cut decals from sheet, trimming close to edge.
2. One at a time, place in warm water until decal curls and begins to relax.
3. Remove and position on rocket, sliding decal away from backing material.
4. Blot with clean paper towel. Let set overnight.
5. Optional: apply protective clear coat.

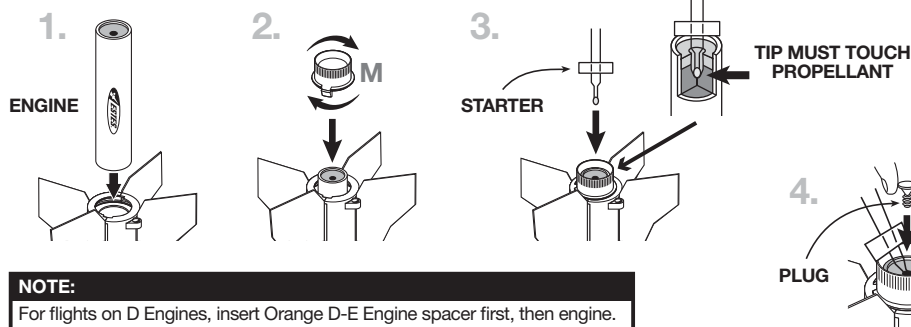
Please refer to packaging image for suggested paint scheme and/or decal placement.

CAUTION:

See manufacturer's warnings and instructions before using spray finishing products.



PREPARE ENGINE



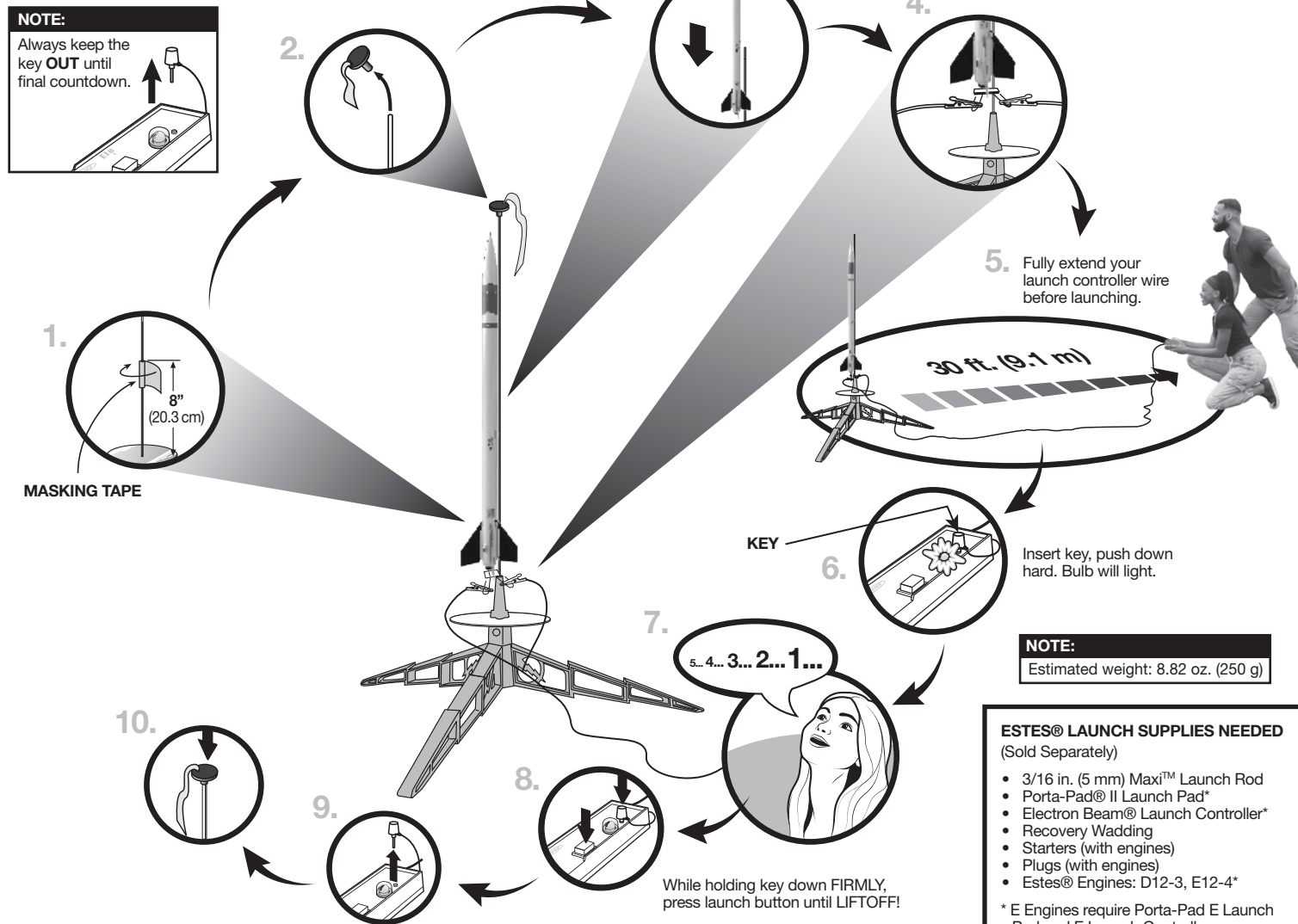
⚠ WARNING: FLAMMABLE

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.

NOTE:

For flights on D Engines, insert Orange D-E Engine spacer first, then engine.

COUNTDOWN AND LAUNCH



ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)

- 3/16 in. (5 mm) Maxi™ Launch Rod
- Porta-Pad® II Launch Pad*
- Electron Beam® Launch Controller*
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: D12-3, E12-4*

* E Engines require Porta-Pad E Launch Pad and E Launch Controller.

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 (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.

