## ESTES
www.estesrockets.com

ESTES® INDUSTRIES
1295 H Street
Penrose, CO 81240
PRINTED IN CHINA

# NO.2 ESTES Sky Writer ™

## FLYING MODEL ROCKET KIT INSTRUCTIONS
### KEEP FOR FUTURE REFERENCE.

FOR KITS:
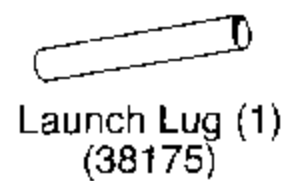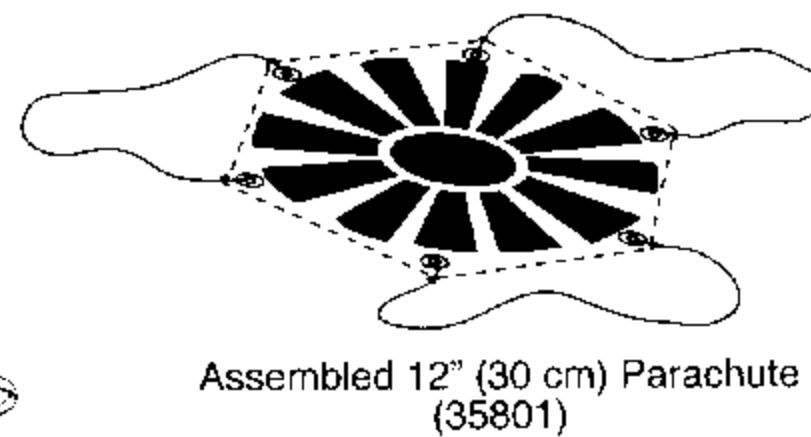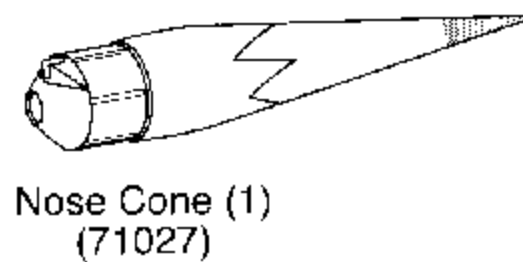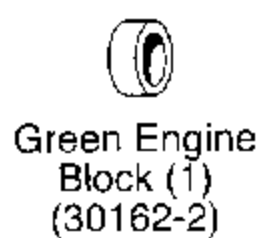**EST 1235**
**EST 1260**

NO. 2 ESTES Sky Writer

**ESTES**
**SHOCK CORD MOUNT**
SECTION **3**
SECTION **2**
SECTION **1**

## ASSEMBLY TIP

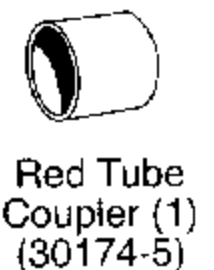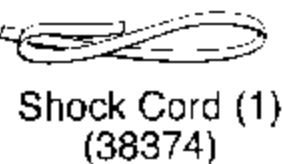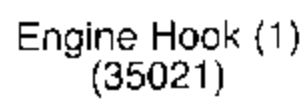Read all instructions before beginning work on your model. Make sure you have all parts and supplies. TEST-FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE. If any parts don't fit properly, sand as required for precision assembly.

## 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.

HELPFUL HINT: IF NOSE CONE/COUPLER FIT IS...

TOO LOOSE — ADD MASKING TAPE.

TOO TIGHT — SAND FOR FIT.

Fin Unit (1)
72614

Lower Body Tube - BT-50 (1)
(60158)

Upper Body Tube - BT-50 (1)
(30349)

Green Adaptor Ring (1)
(30165-2)

Blue Engine Mount Tube (1)
(30326-1)

Green Engine Block (1)
(30162-2)

Black Engine Holder Ring (1)
(30170-3)

Nose Cone (1)
(71027)

Launch Lug (1)
(38175)

NO. 2 ESTES Sky Writer

Decal Sheet (1)
(60160)

Engine Hook (1)
(35021)

Shock Cord (1)
(38374)

Assembled 12" (30 cm) Parachute
(35801)

Red Tube Coupler (1)
(30174-5)

## SUPPLIES REQUIRED:

HOBBY KNIFE

PLASTIC CEMENT
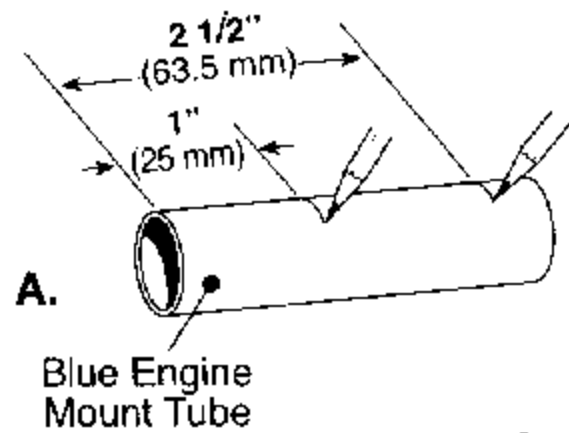
CARPENTER'S GLUE

SPRAY CLEAR COAT (OPTIONAL)

PENCIL

RULER

SCISSORS

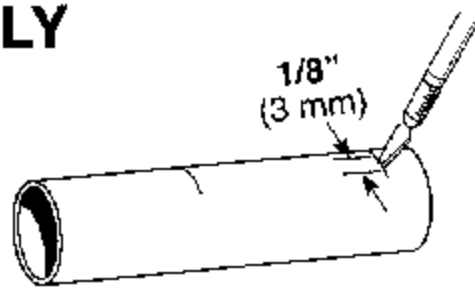FINE SAND PAPER (#400-600 GRIT)

MASKING TAPE

ALL GLUED AREAS ARE SHADED IN GRAY
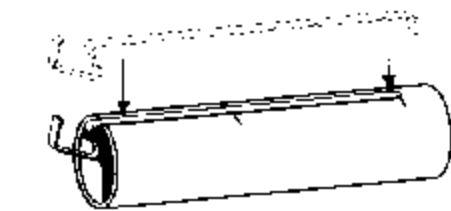
# 1. ENGINE MOUNT ASSEMBLY

**A.**
2 1/2" (63.5 mm)
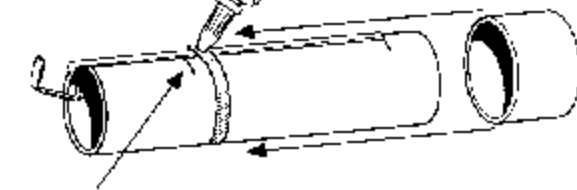1" (25 mm)
Blue Engine Mount Tube

**B.** Cut a 1/8" (3 mm) wide slit with Hobby Knife at the 2 1/2" (63.5 mm) mark.
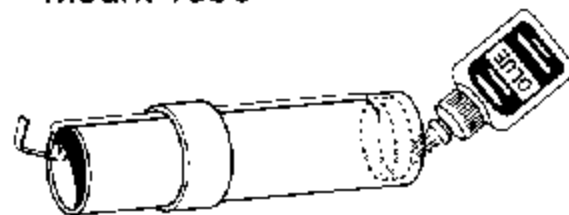1/8" (3 mm)

**C.** Position Engine Hook.

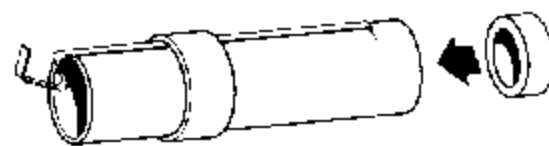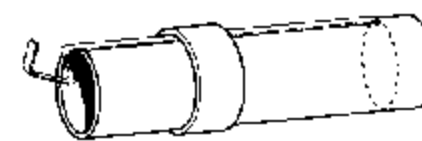**D.** Apply glue just in front of 1" (25 mm) mark.
MARK

**E.** Slide Black Retainer Ring onto Engine Mount Tube to the 1" (25 mm) mark.

**F.** Apply glue inside front of Engine Mount Tube.
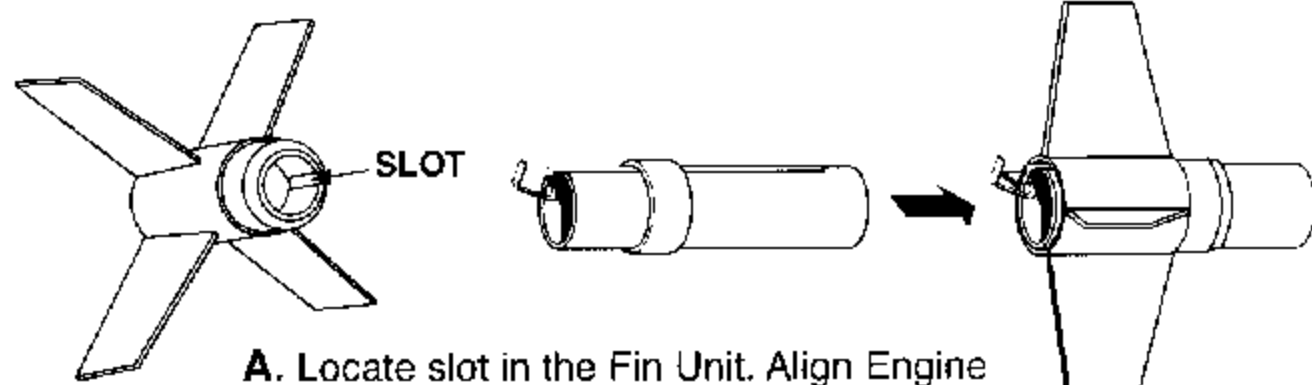
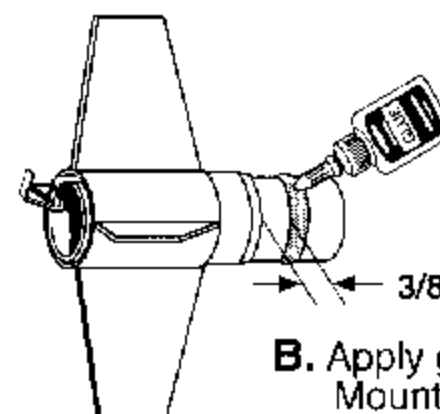**G.** Insert Green Engine Block inside Engine Mount Tube until it contacts Engine Hook. Let Dry.
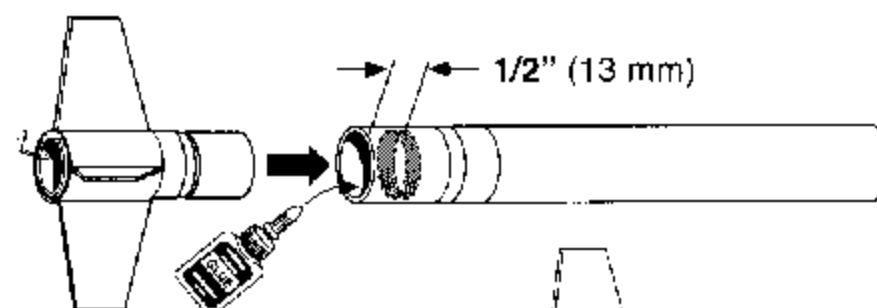
Finished Assembly

# 2. FIN UNIT ASSEMBLY

SLOT

**A.** Locate slot in the Fin Unit. Align Engine Hook of Engine Mount Assembly with slot in Fin Unit and slide in place until it stops.

**B.** Apply glue around Engine Mount Assembly as shown.
3/8" (10 mm)

**C.** Hold Engine Mount Assembly in place with thumb. In one continuous movement slide Green Adapter Ring onto Engine Mount until it touches Fin Unit. Let glue dry.
GREEN ADAPTER RING
ENDS EVEN
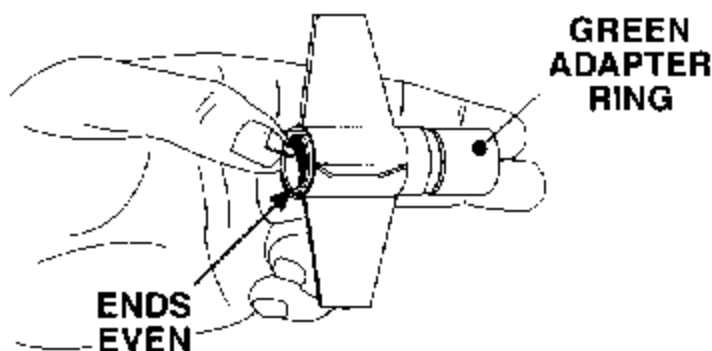
**D.** Apply glue inside Lower Body Tube as shown. Push Body Tube over Green Adaptor Ring in one continuous motion, until Body Tube touches Fin Unit.
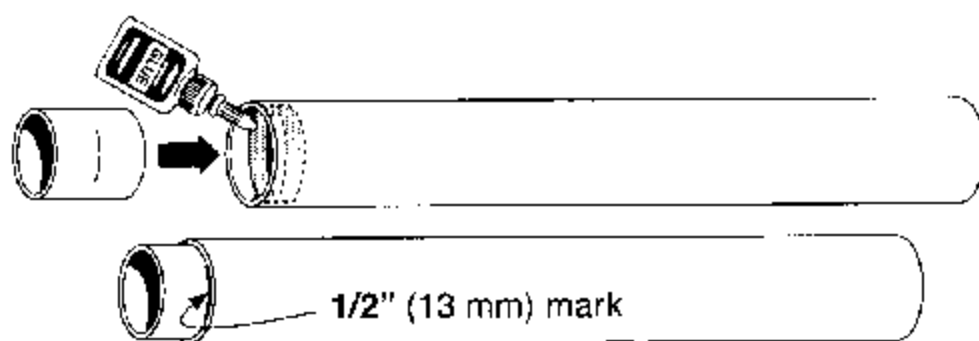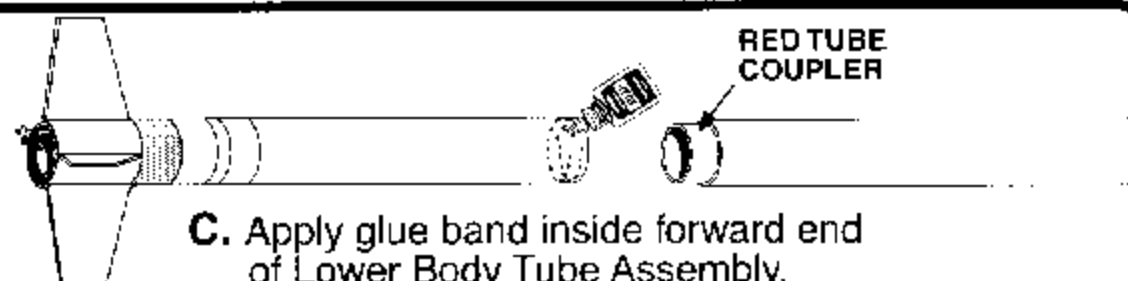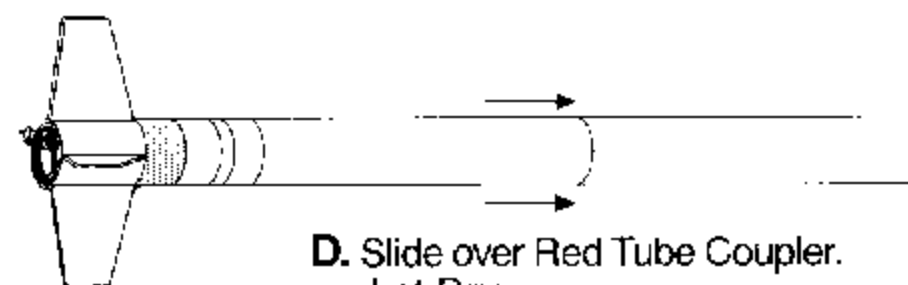1/2" (13 mm)
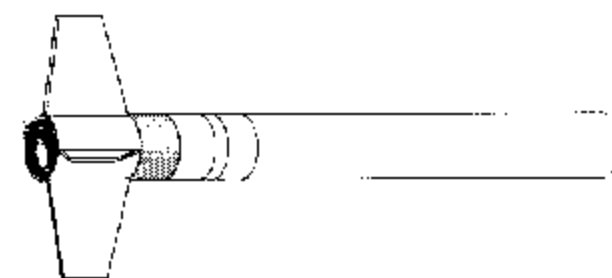
# 3. BODY TUBE ASSEMBLY
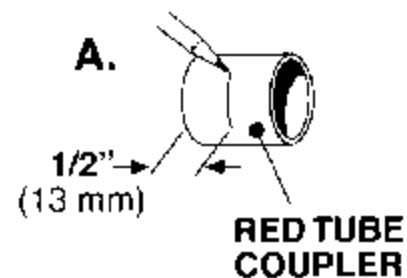
**A.**
1/2" (13 mm)
RED TUBE COUPLER

**B.** Apply glue band around inside of Upper Body Tube and insert Red Tube Coupler up to 1/2" (13 mm) mark Let glue set.
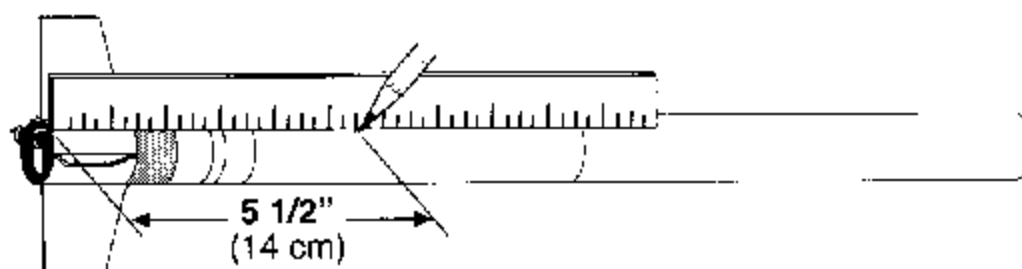1/2" (13 mm) mark

**C.** Apply glue band inside forward end of Lower Body Tube Assembly.
RED TUBE COUPLER

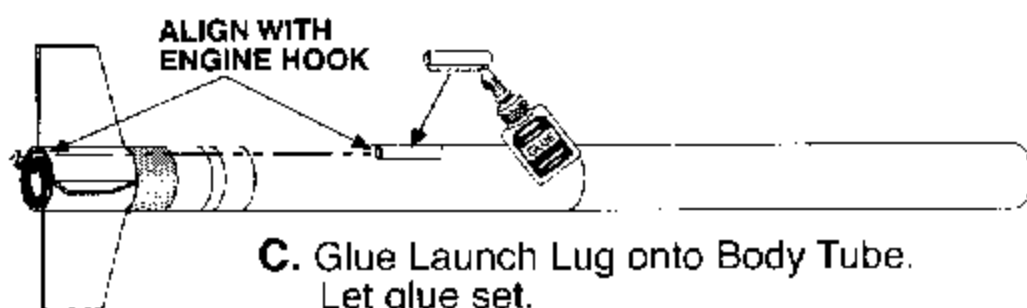**D.** Slide over Red Tube Coupler. Let Dry.

# 4. ATTACHING LAUNCH LUG

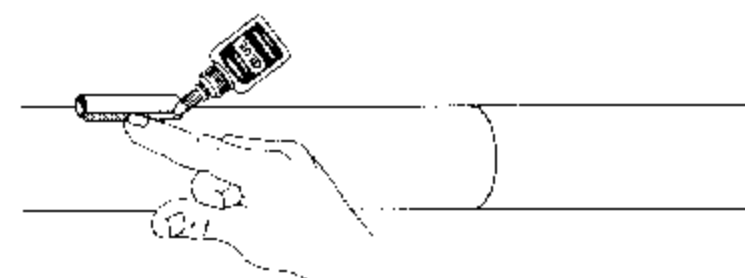**A.** Use a ruler to reference a straight line up from the Engine Hook. Make a small mark on body tube 5-1/2" (14 cm) up from end of Fin Unit.
5 1/2" (14 cm)

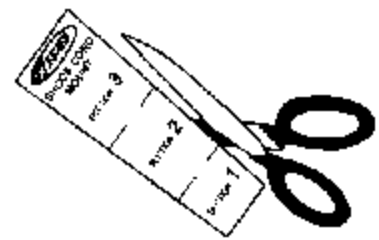**B.** Lightly scratch a 1" x 1/8" (25 mm x 3 mm) area of the Body Tube with a hobby knife.

**C.** Glue Launch Lug onto Body Tube. Let glue set.
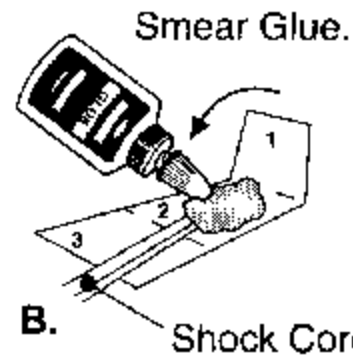ALIGN WITH ENGINE HOOK

**D.** Apply glue fillet on each side of Launch Lug. Smooth with finger and let dry.
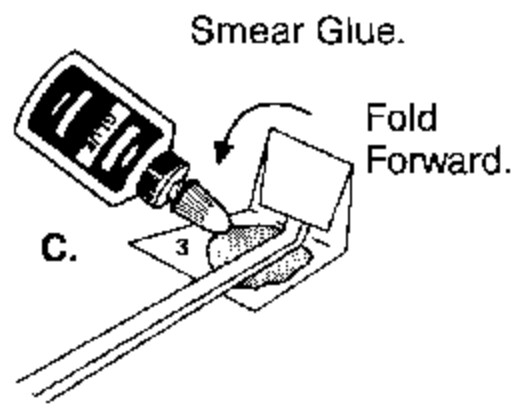
# 5. ATTACHING SHOCK CORD
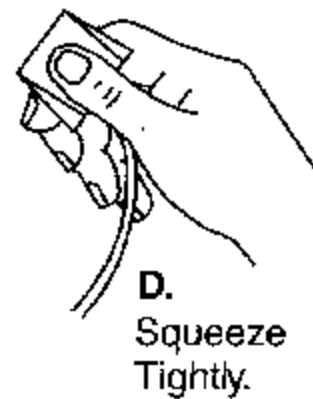
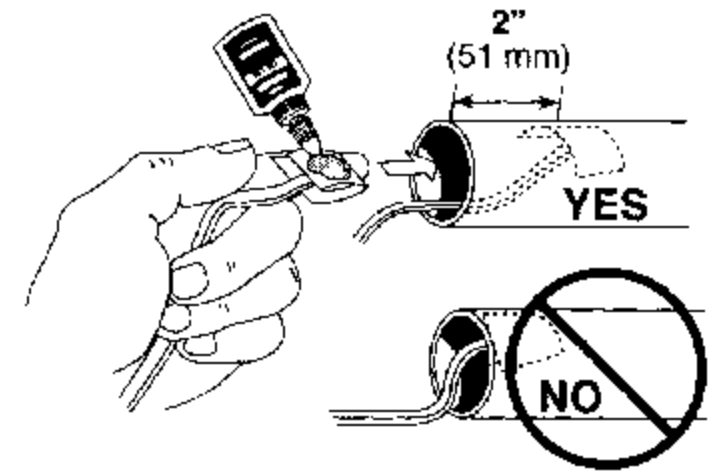**A.** Cut out Shock Cord Mount from front page.

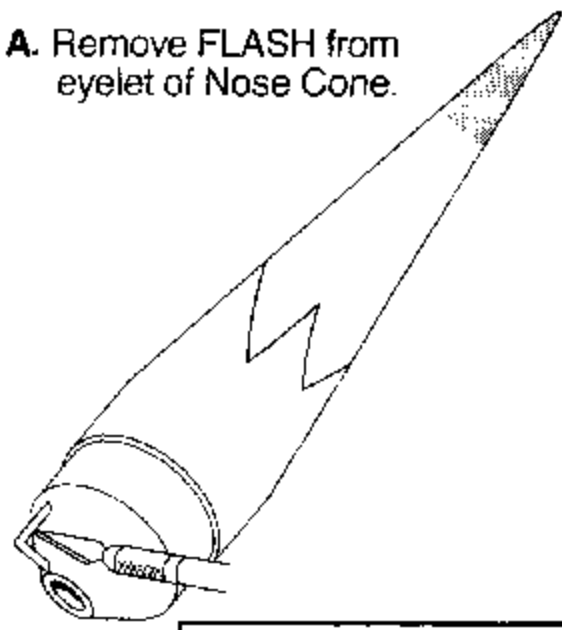**B.** Smear Glue. Shock Cord

**C.** Smear Glue. Fold Forward.

**D.** Squeeze Tightly.

**E.** Glue Mount inside Body Tube. Hold until glue sets. Let glue dry completely.

2" (51 mm)
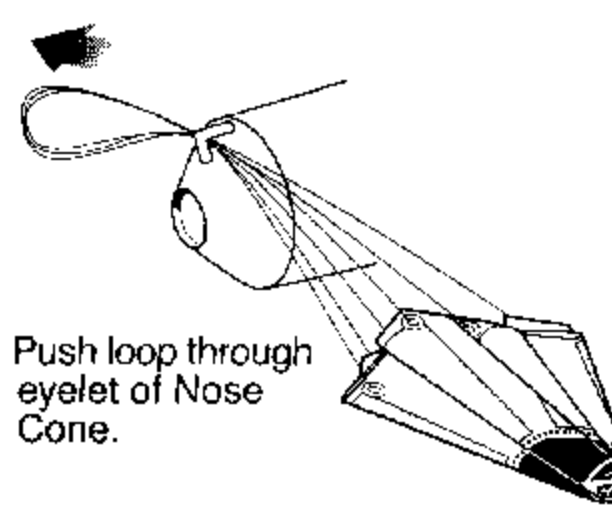
YES

NO

# 6. ATTACHING PARACHUTE & SHOCK CORD

**A.** Remove FLASH from eyelet of Nose Cone.

**CAUTION:**
DO NOT CUT OFF
EYELET OF NOSE CONE.
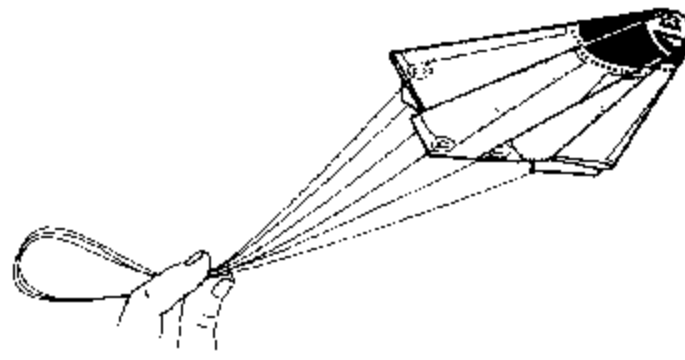
**B.** Form loop with Shroud Lines.

**C.** Push loop through eyelet of Nose Cone.
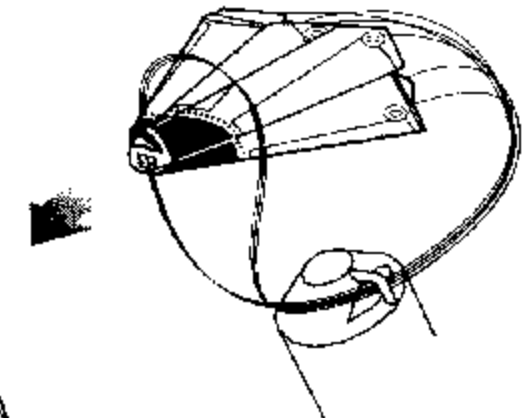
**D.** Pass Parachute through loop.
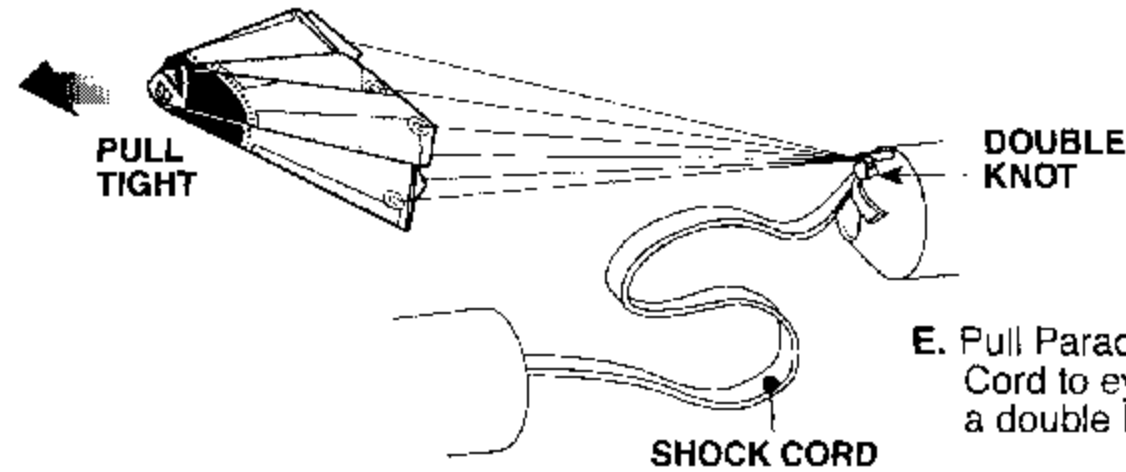
PULL TIGHT

DOUBLE KNOT

**E.** Pull Parachute tight. Tie Shock Cord to eyelet of Nose Cone with a double knot.

SHOCK CORD

# 7. DECAL APPLICATION

DECAL

Carefully remove Decal from sheet and apply where shown. Rub down to remove bubbles.

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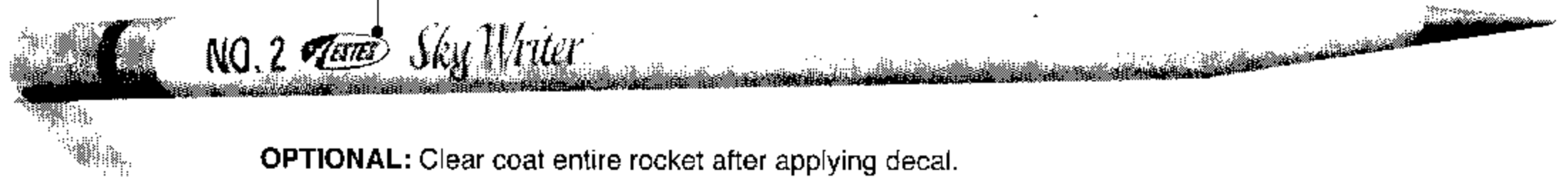
**OPTIONAL:** Clear coat entire rocket after applying decal.

# ROCKET PREFLIGHT
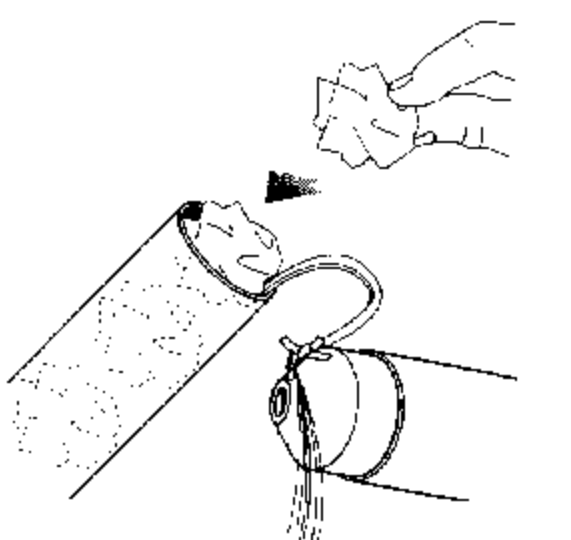
**A.** Insert 3-4 loosely crumpled squares of Recovery Wadding.

**B.** Spike.

**C.** Fold.

**D.** Roll.

**E.** Wrap lines loosely, insert Parachute, Shock Cord and Nose Cone.

# 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.
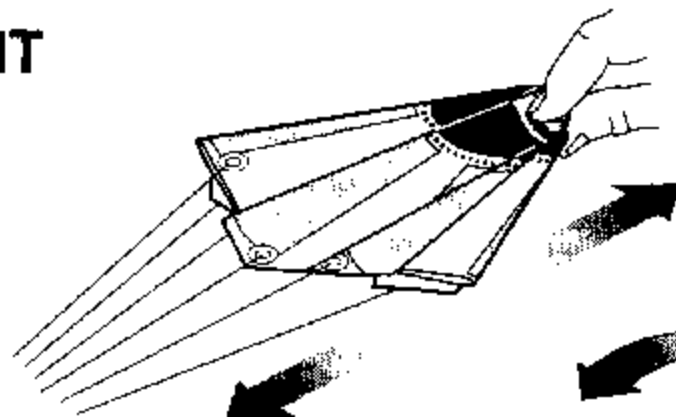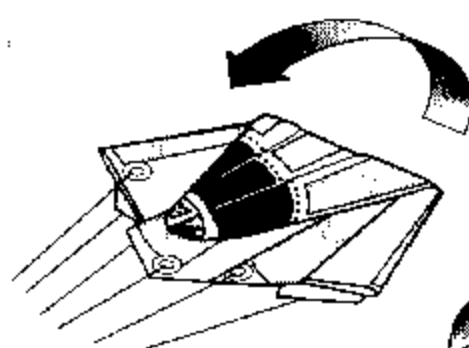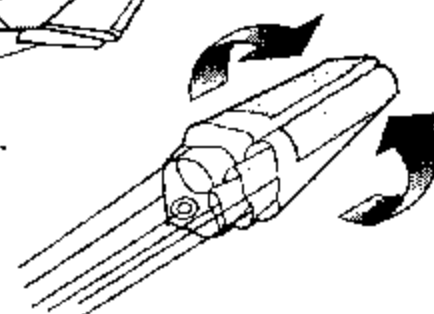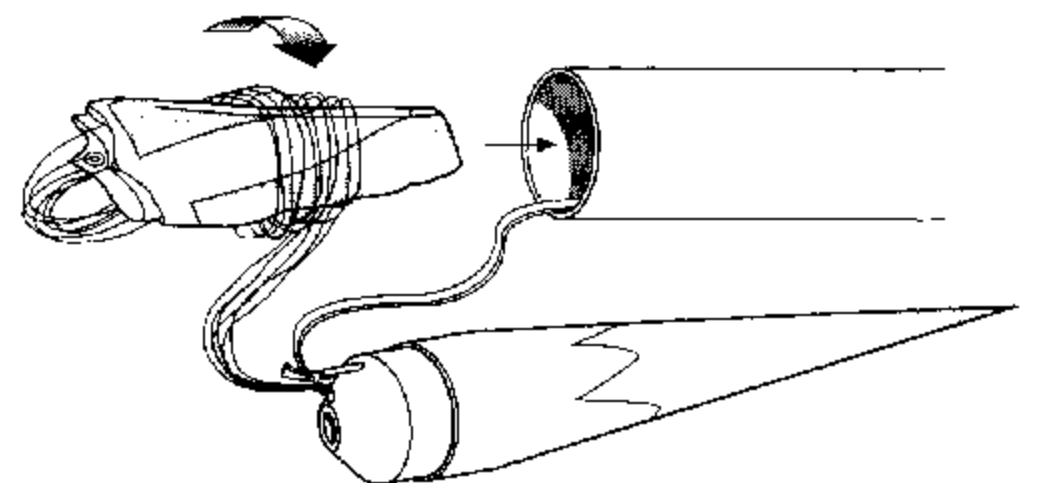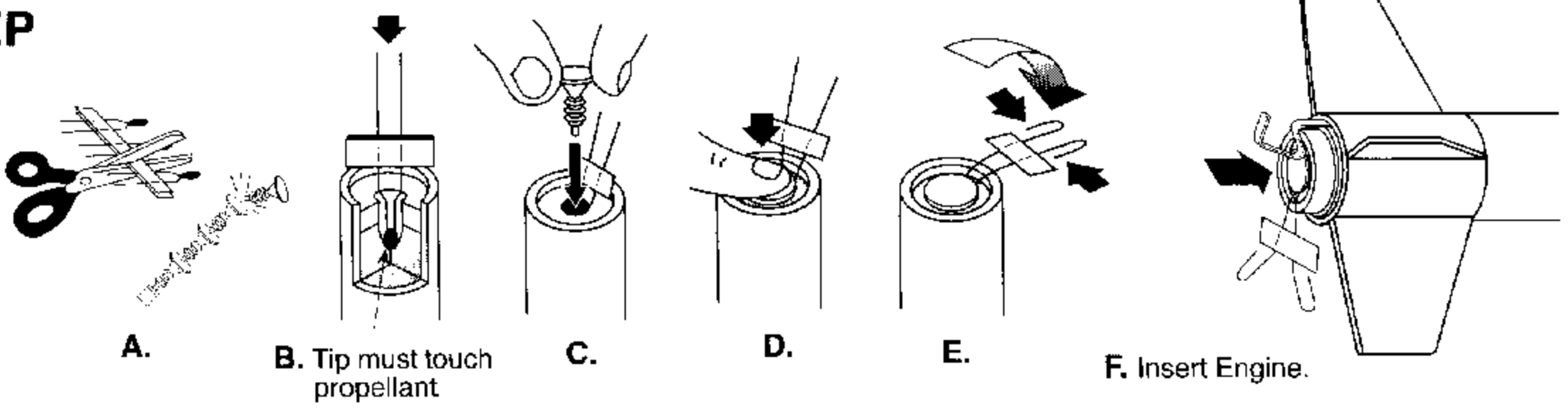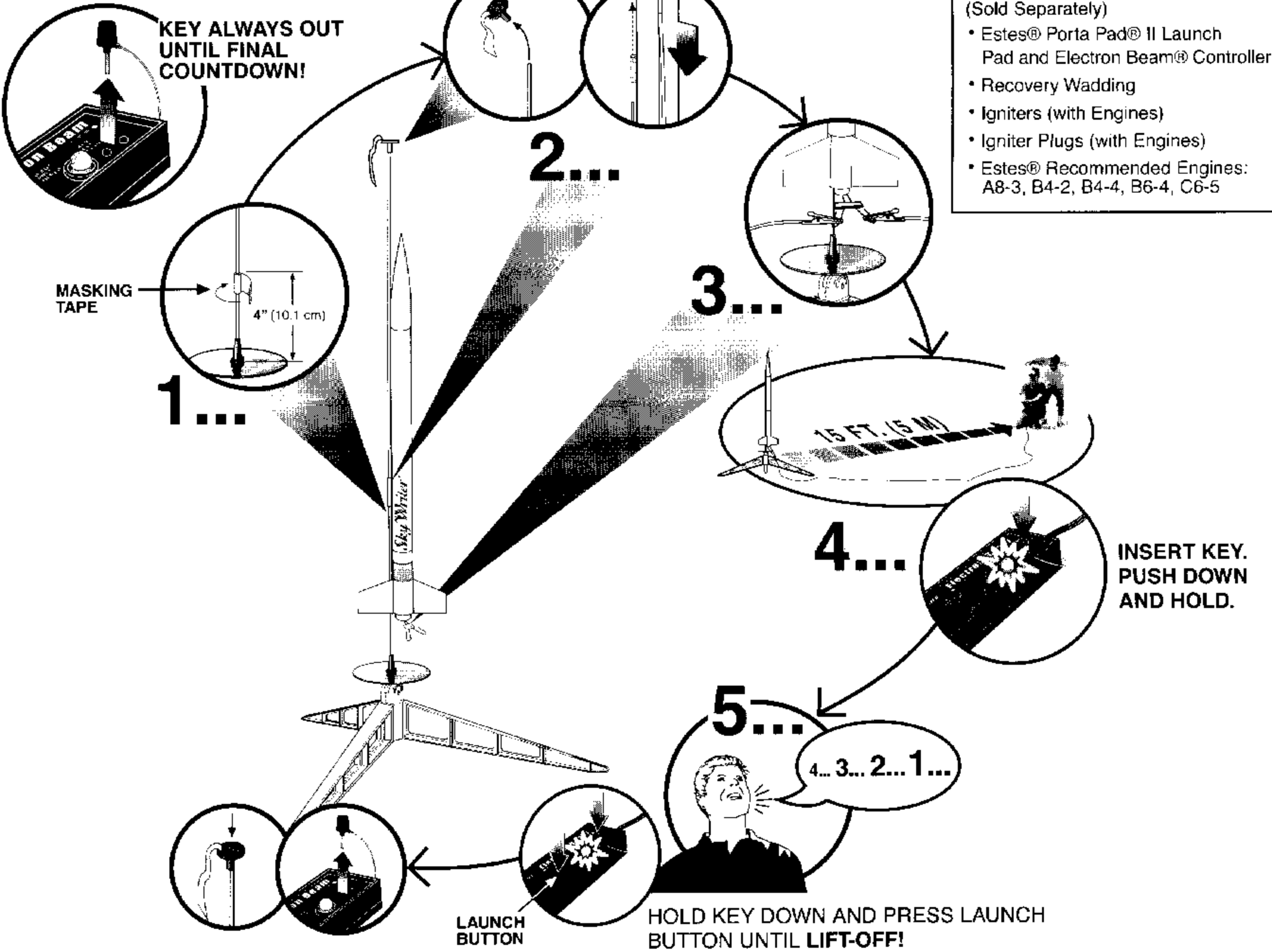
**A.**

**B.** Tip must touch propellant

**C.**

**D.**

**E.**

**F.** Insert Engine.

# COUNTDOWN AND LAUNCH

**KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!**

MASKING TAPE

4" (10.1 cm)

**1...**

**2...**

**3...**

**4...**

INSERT KEY. PUSH DOWN AND HOLD.

15 FT. (5 M)

**5...**

4... 3... 2... 1...

LAUNCH BUTTON

HOLD KEY DOWN AND PRESS LAUNCH BUTTON UNTIL **LIFT-OFF!**

## LAUNCH SUPPLIES
(Sold Separately)
• Estes® Porta Pad® II Launch Pad and Electron Beam® Controller
• Recovery Wadding
• Igniters (with Engines)
• Igniter Plugs (with Engines)
• Estes® Recommended Engines: A8-3, B4-2, B4-4, B6-4, C6-5

# 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! Disconnect the igniter clips and remove the engine. 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.