



EstesRockets.com

AGES
10+

MINI BERTHA™

2099/2469/5332



Skill Level

BEGINNER

MODEL ROCKET INSTRUCTIONS

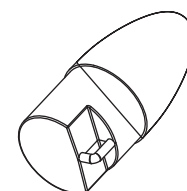
KEEP FOR FUTURE REFERENCE

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

Read all instructions. Make sure you have all parts and supplies.

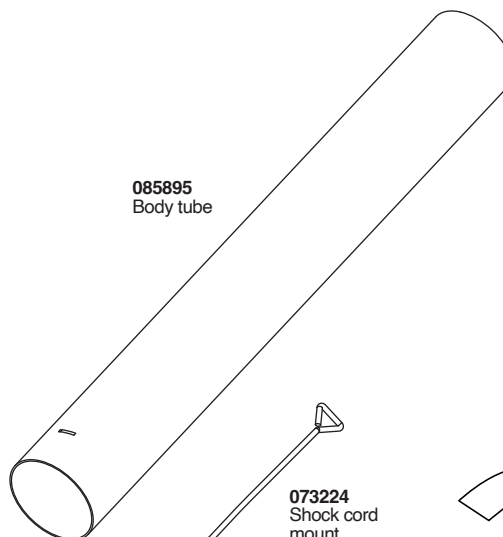


090001-2469
Self-stick decal



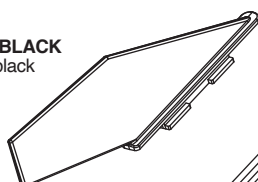
073229-BLACK
Nose cone

085895
Body tube



032409-YELLOW
Engine mount fin
can unit

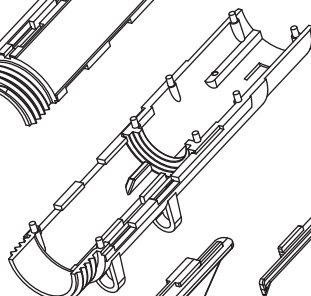
072031-BLACK
Mini fin black



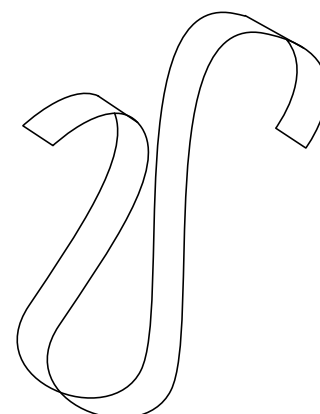
073224
Shock cord
mount



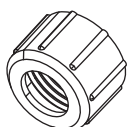
032410-YELLOW
Engine mount fin
can unit



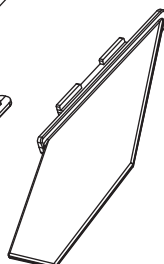
038272
Streamer



073223-YELLOW
Engine retainer
cap



072031-YELLOW
Mini fin yellow
x3

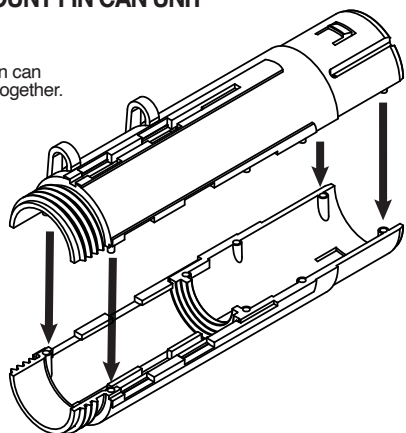


038366
Shock cord

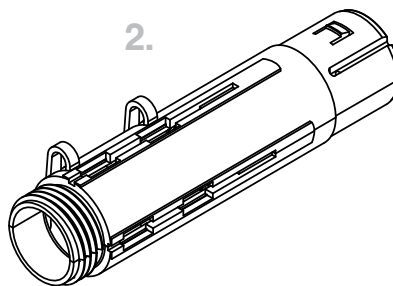


ASSEMBLE ENGINE MOUNT FIN CAN UNIT

1. Press fin can halves together.



2.

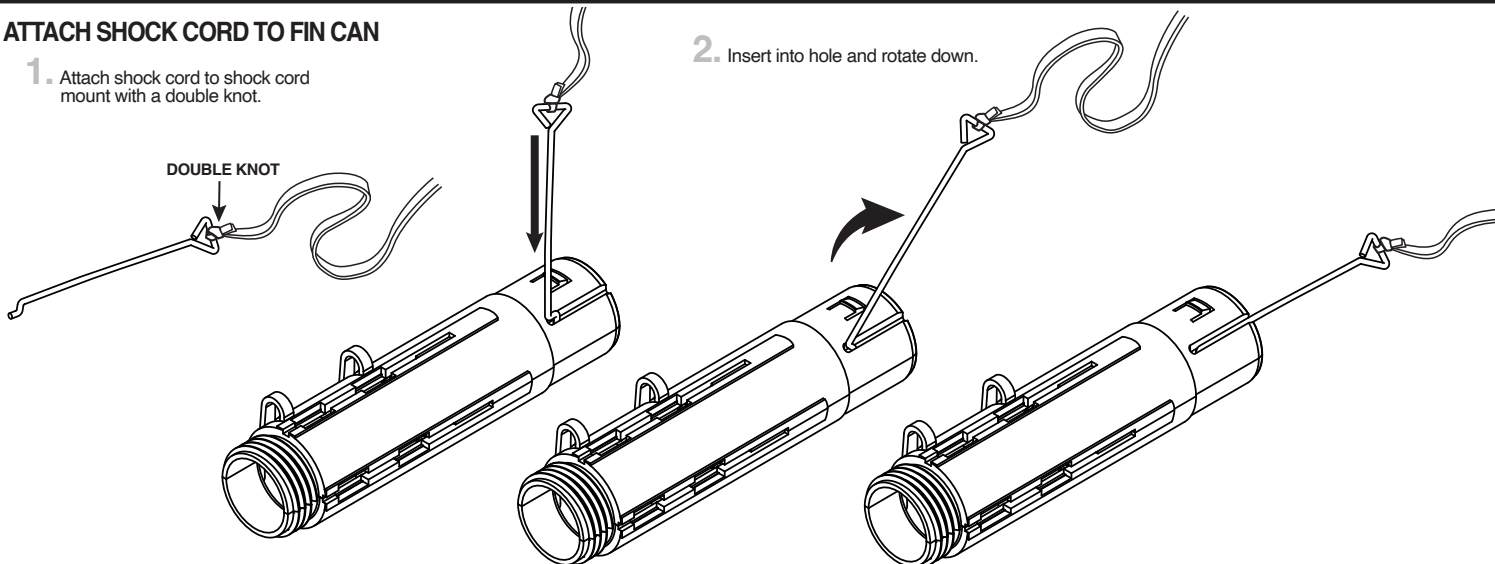


ATTACH SHOCK CORD TO FIN CAN

1. Attach shock cord to shock cord mount with a double knot.

DOUBLE KNOT

2. Insert into hole and rotate down.



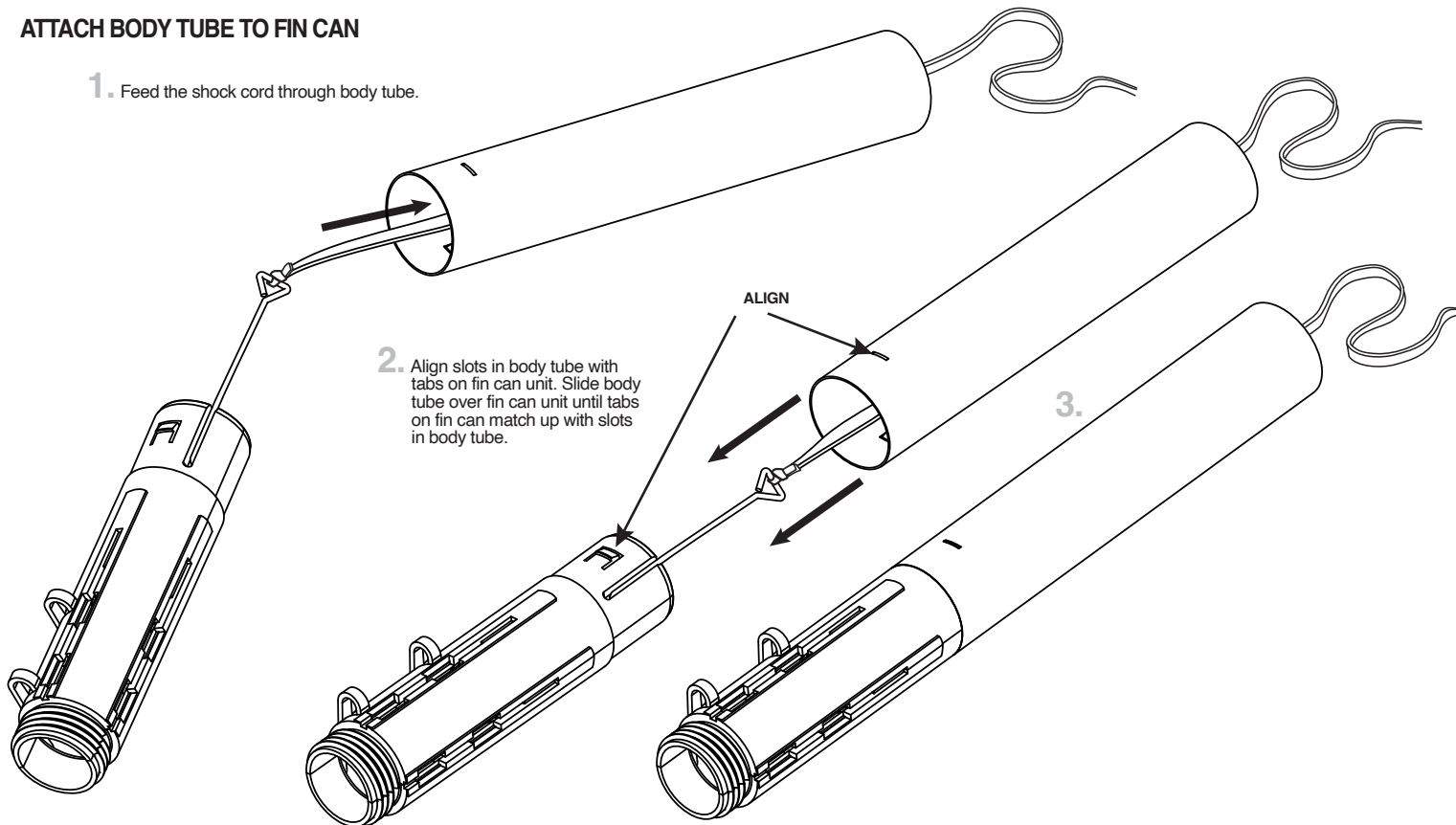
ATTACH BODY TUBE TO FIN CAN

1. Feed the shock cord through body tube.

2. Align slots in body tube with tabs on fin can unit. Slide body tube over fin can unit until tabs on fin can match up with slots in body tube.

ALIGN

3.



ATTACH FINS

1. Insert fin into slot.

2.

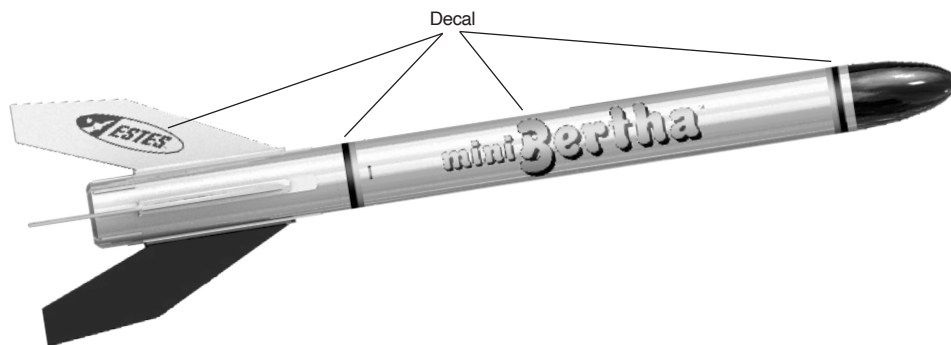
3. Slide fin forward until it stops.

4. Screw engine retainer cap onto fin can unit.

x4

Repeat for remaining fins.

APPLY DECAL



ATTACH THE NOSE CONE AND STREAMER

1. Attach nose cone to shock cord with a double knot.

DOUBLE KNOT

2. Tie the streamer to the shock cord.

3" (7.6 cm)

PREPARE FLIGHT RECOVERY

1. Push recovery wadding down towards end of body tube.

2-3 SQUARES
ESTES®
RECOVERY WADDING

NOTE:

Recovery wadding and streamer must slide easily into body tube. If too tight, redo.

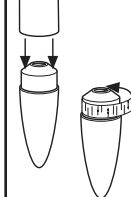
NOTE:

Fold then roll.

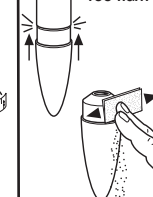
IF NOSE CONE FIT IS ...

TOO LOOSE

TOO TIGHT

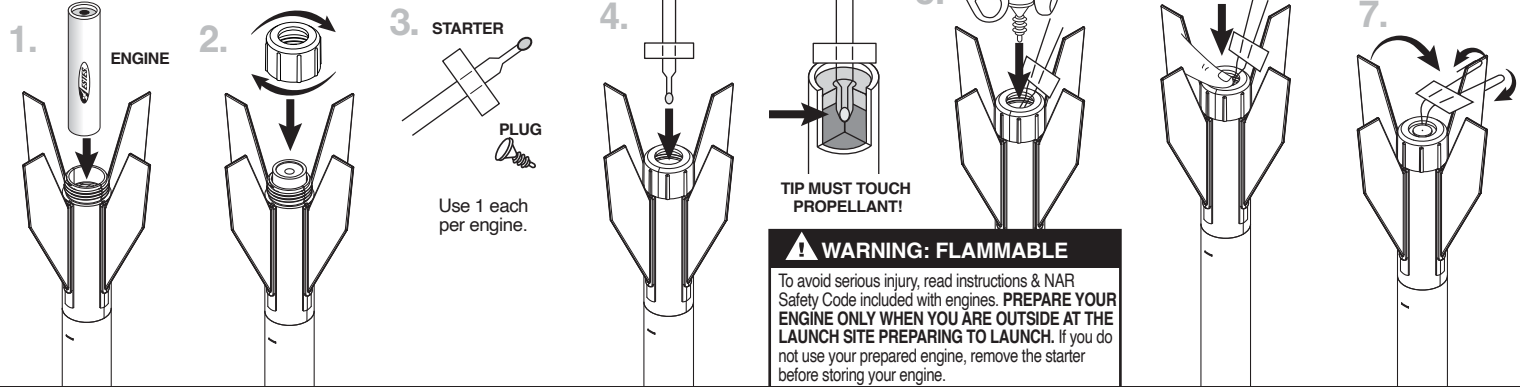


ADD MASKING TAPE.



SAND FOR FIT.

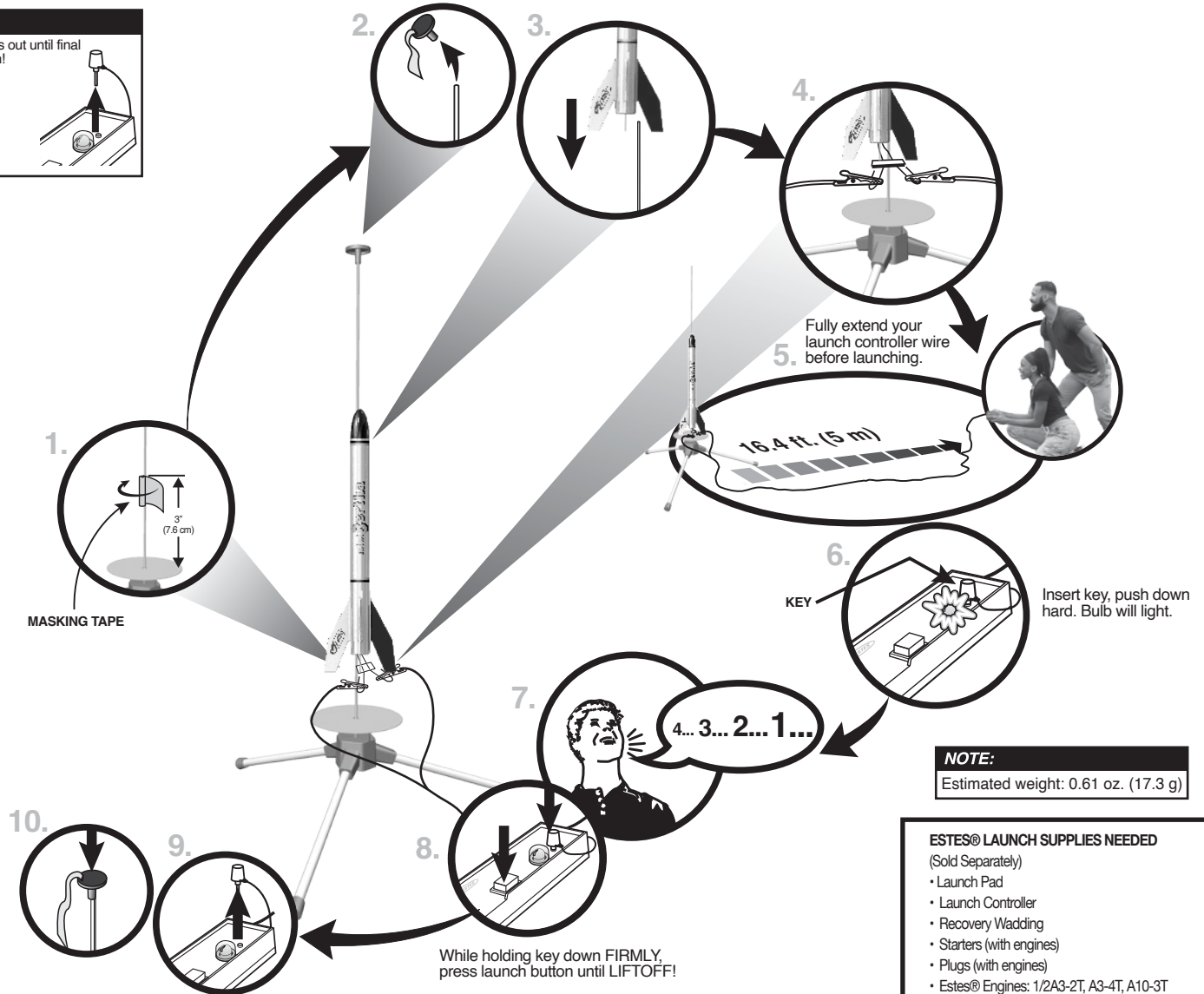
PREPARE ENGINE



COUNTDOWN AND LAUNCH

NOTE:

Key always out until final countdown!



NOTE:

Estimated weight: 0.61 oz. (17.3 g)

ESTES® LAUNCH SUPPLIES NEEDED

(Sold Separately)

- Launch Pad
- Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: 1/2A3-2T, A3-4T, A10-3T

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.