



EstesRockets.com

AGES
10+

RIPLY ROCKET™

0653

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



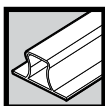
PENCIL



HOBBY KNIFE



FINE
SANDPAPER



SANDING
BLOCK



YELLOW
GLUE



PLASTIC GLUE



WAX PAPER



SCISSORS



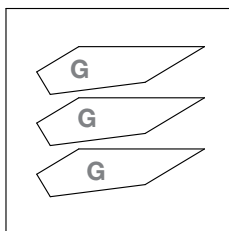
CLEAR TAPE



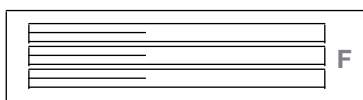
PRIMER



GREEN & BLACK
PAINT



090051-7295B
Laser cut balsa sheet



090051-7295A
Laser cut card stock



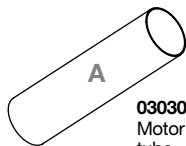
090051-7295
Laser cut card stock



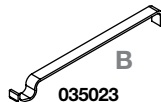
030162-2
Green Ring
X2



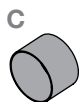
038175
Launch lug



030304
Motor mount
tube

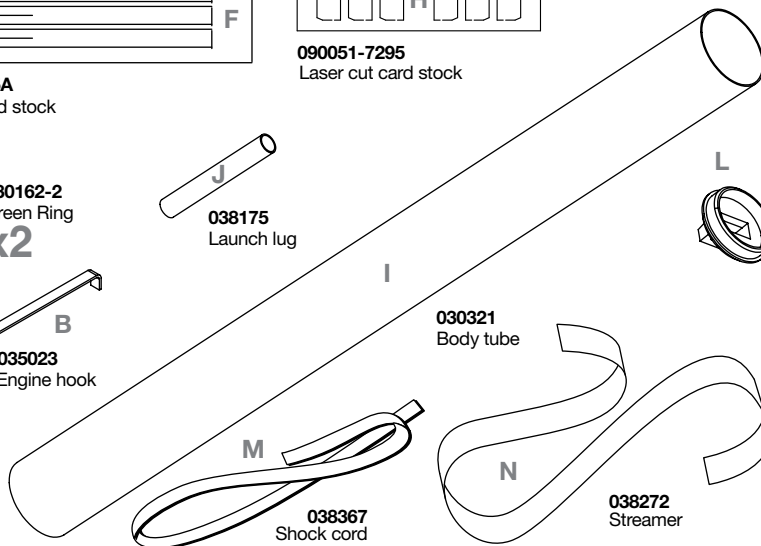


035023
Engine hook



030167
Mylar ring

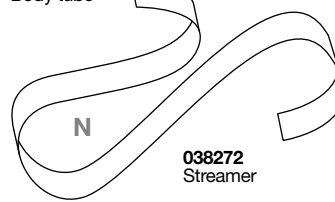
030222-4
Yellow engine
block



030321
Body tube



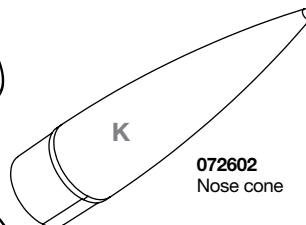
038367
Shock cord



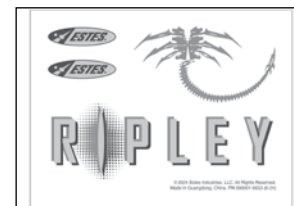
038272
Streamer



072603
Nose cone pin



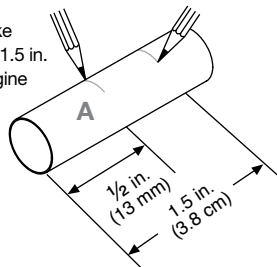
072602
Nose cone



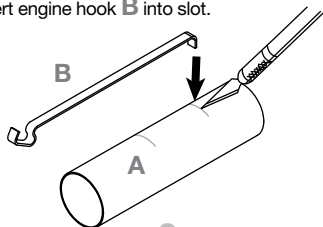
090001-0653
Waterslide decals

ASSEMBLE ENGINE MOUNT

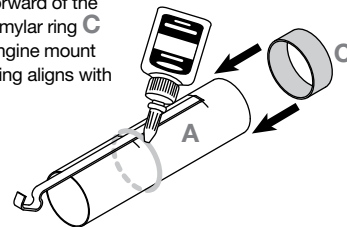
1. Using a pencil, make marks at ½ in. and 1.5 in. from the end of engine mount tube A.



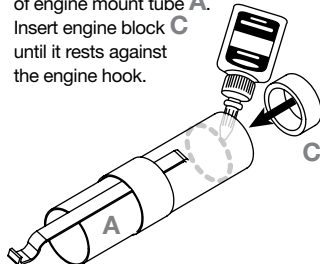
2. Using a sharp hobby knife, make an ⅛ in. cut at the 1.5 in. pencil mark. Insert engine hook B into slot.



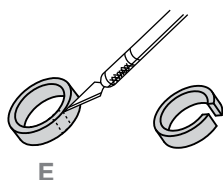
3. Apply glue just forward of the ½ in. mark. Slide mylar ring C over the end of engine mount tube A until the ring aligns with the ½ in. mark.



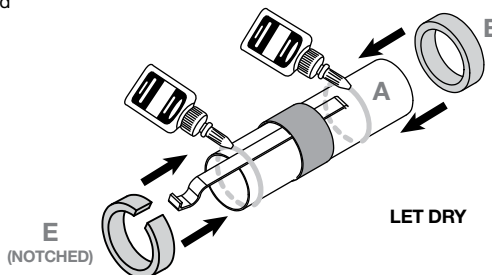
4. Apply glue to the inside of engine mount tube A. Insert engine block C until it rests against the engine hook.



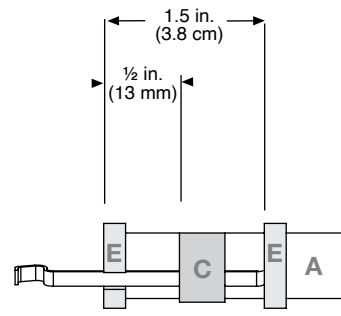
5. Use one of the green rings D and cut a notch at least ⅛ in. wide.



6. Apply glue as shown. Slide the (notched) E ring over A until ends are even. Slide the full E ring over the other end of A until it touches engine hook.



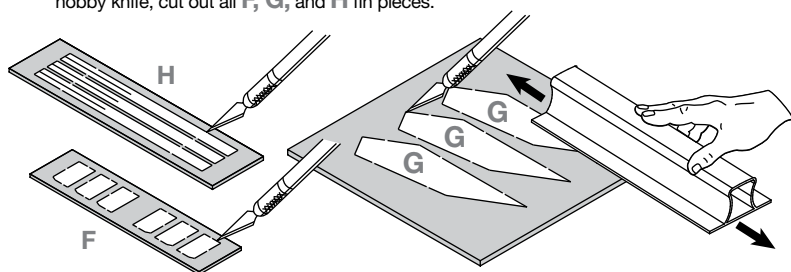
LET DRY



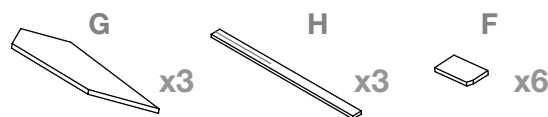
SIDE VIEW

ASSEMBLE FINS

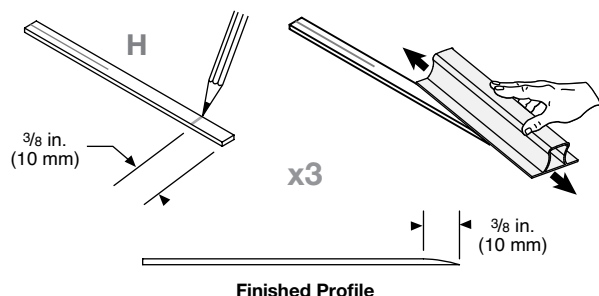
1. Lightly sand both sides of the laser cut balsa sheet **G**. Using a hobby knife, cut out all **F**, **G**, and **H** fin pieces.



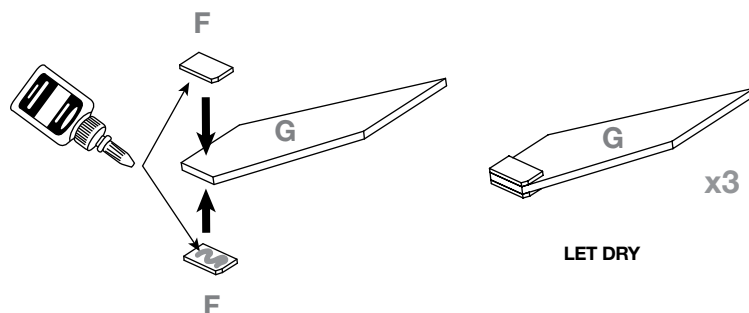
2. Lightly sand all edges of cut out pieces.



3. Using a pencil, make a $\frac{3}{8}$ in. mark at the end of **H**. Sand the edge to a bevel as shown. **Tip:** Use masking tape on the surface you don't intend to sand.

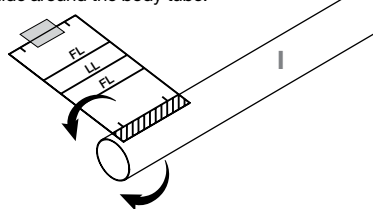


4. Using yellow glue, attached the fin details **F** to the fins **G** as shown.

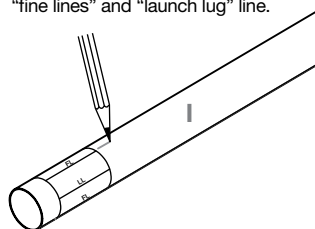


TUBE MARKING

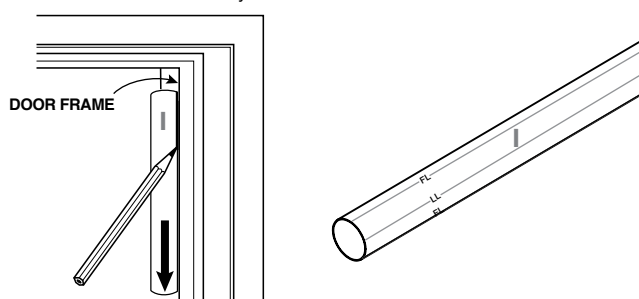
1. Cut out the tube marking guide from page 3. Wrap the guide around body tube **I**. Use a piece of tape to secure the guide around the body tube.



2. Using a pencil mark every line from the tube marking guide onto body tube **I**. Be sure to label the "fine lines" and "launch lug" line.

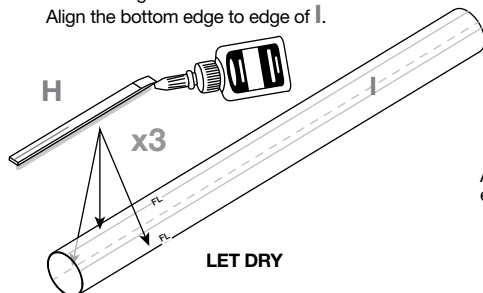


3. Use a door frame as a straight edge to extend all the lines on body tube **I**.

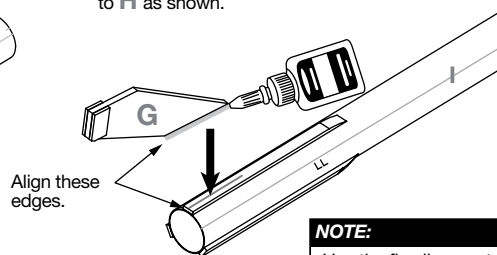


ATTACH FINS

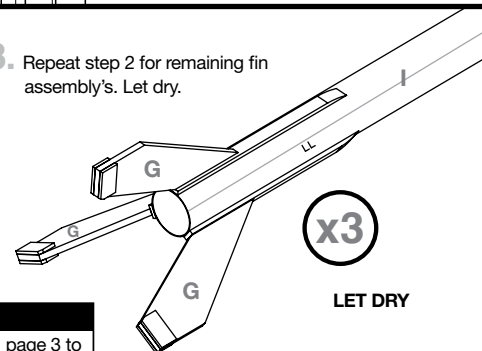
1. Use Yellow glue to attach **H** to marked fin lines. Align the bottom edge to edge of **I**.



2. Use Yellow glue to attach **G/F** fin assembly to **H** as shown.



3. Repeat step 2 for remaining fin assembly's. Let dry.

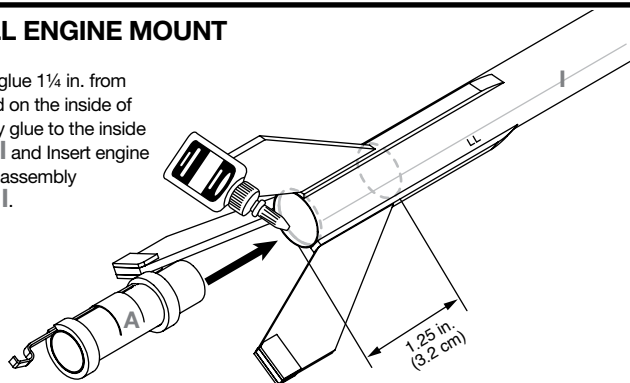


NOTE:

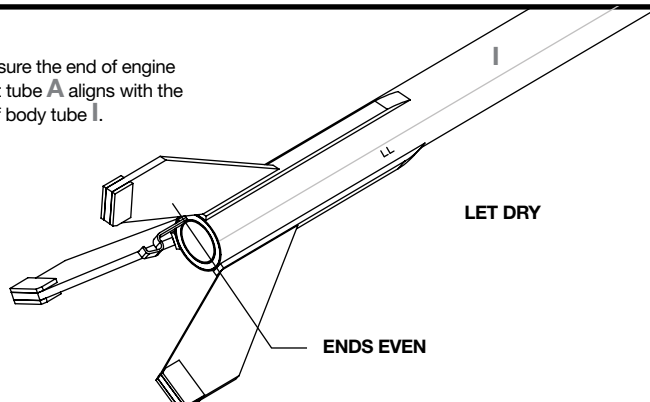
Use the fin alignment guide on page 3 to ensure the fins are at the correct angle.

INSTALL ENGINE MOUNT

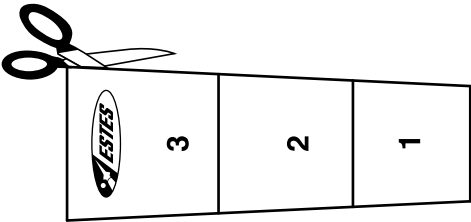
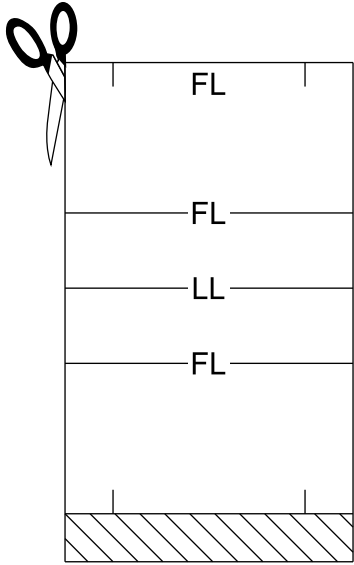
1. Apply glue $1\frac{1}{4}$ in. from the end on the inside of **I**. Apply glue to the inside end of **I** and Insert engine mount assembly **A** into **I**.



2. Make sure the end of engine mount tube **A** aligns with the end of body tube **I**.



TEMPLATES

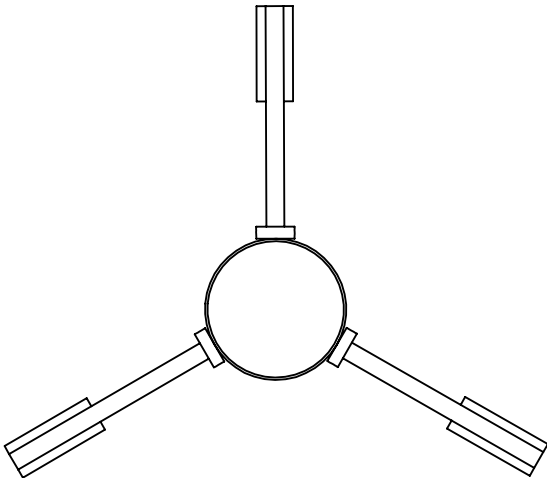


SHOCK CORD ANCHOR

FIN MARKING GUIDE



Save this section for fin alignment



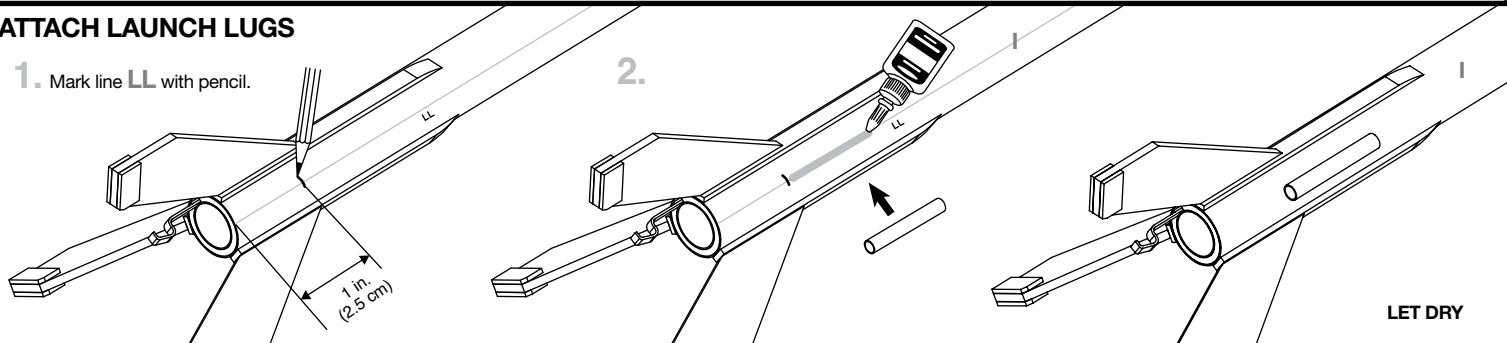
FIN ALIGNMENT GUIDE 1:1

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

ATTACH LAUNCH LUGS

1. Mark line LL with pencil.

2.

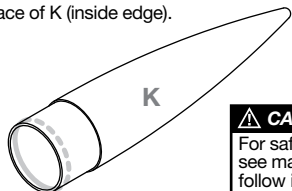


PREPARE NOSE CONE

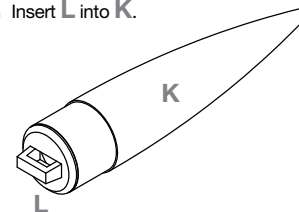
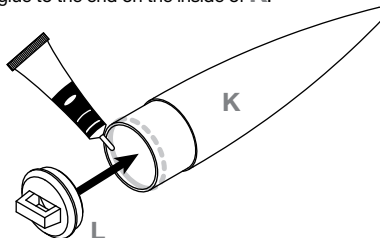
1. Lightly sand the bonding surface of K (inside edge).

2. Apply plastic glue to the end on the inside of K.

3. Insert L into K.



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



LET DRY

ATTACH SHOCK CORD

1.

2.

3.

4. Hold until set.

5. Apply glue to shock cord mount.

6. Glue shock cord mount to the inside of F.

7. Use finger to hold until glue sets.

2" (5.1 cm)

LET DRY

NOTE:

Cut from page 3.

ATTACH NOSE CONE & STREAMER

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

2. Tie the streamer to the shock cord.

← 3" (7.6 cm) →

3. Fold Streamer 3 times as shown

NOTE:
Fold then roll.

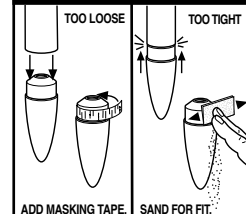
4.

5.

NOTE:

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

IF NOSE CONE FIT IS...

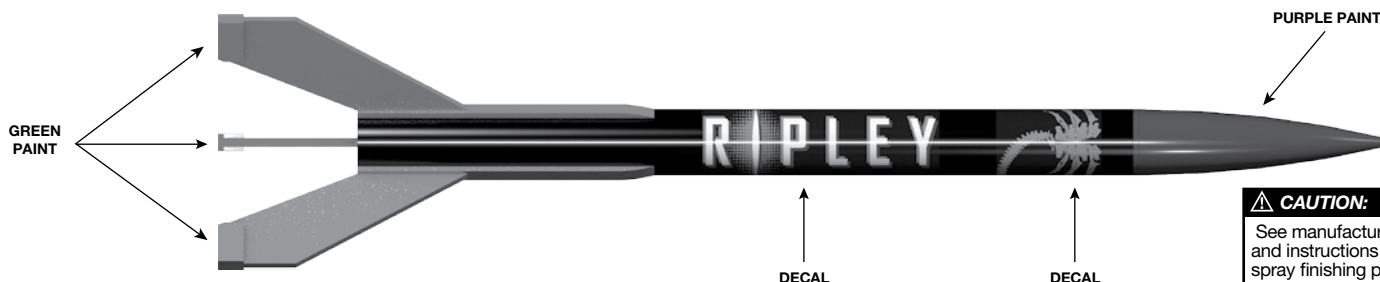


ROCKET FINISHING

1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Mask the fin areas and remove nose cone. Paint body tube with black paint. Let dry completely.
3. Remove mask on fins and mask body tube area. Paint fins and nose cone green. Let dry completely.
2. Cut decals from sheet, trimming close to edge. Apply decals only after paint is dry.
3. One at a time, place in warm water until decal curls and begins to relax.
4. Remove and position on rocket, sliding decal away from backing material.
5. Blot with clean paper towel. Let set overnight.
6. OPTIONAL: Apply protective clear coat.

NOTE:

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

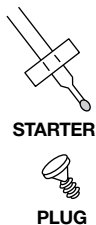


CAUTION:

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

PREPARE ENGINE

1. Use one each.



ENGINE

2.

TIP MUST TOUCH PROPELLANT!

3.

4.

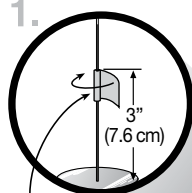
WARNING: FLAMMABLE

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.

NOTE:

Always keep the key **OUT** until final countdown.

1.

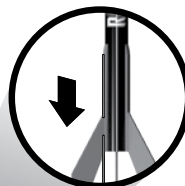


MASKING TAPE

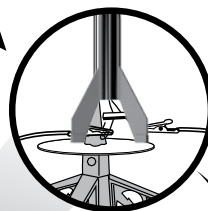
2.



3.



4.

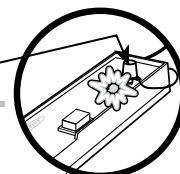


5. Fully extend your launch controller wire before launching.

16.4 ft. (5 m)

KEY

6.



Insert key, push down hard. Bulb will light.

7.



While holding key down **FIRMLY**, press launch button until **LIFTOFF!**

NOTE:

Estimated weight: 1 oz. (28.3 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: 1/2 A3-2T, A3-4T, A3-6T, 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.

