ENGINE PREPARATION

WARNING FLAMMABLE
To avoid removing any read
instructions & NAR Safety
COOLCAUTIONS included with engine.
PREPARE ENGINE ONLY
WHEN YOU ARE INSIDE
AT THE LAUNCH SITE
PREPARING TO LAUNCH!
If you do not use your
prepared engine, remove the
igniter before starting engine.

A. Separate igniter plug and igniter.
B. Hold engine
upright, drop in
igniter. Igniter
must touch
propellant.
C. Insert
igniter plug.
D. Firmly push all the way in.
E. Fold back and bend tips.
F. Insert engine
into rocket. ENGINE HOOK MUST
LATCH SECURELY
OVER ENGINE!

C. Insert igniter plug.
D. Firmly push all the way in.

LAUNCH SUPPLIES (Sold Separately)
• Fuselage & Igniter Propellor
  Requires 3/8" (9.5 mm) Max* Rod (362246)
• Electronic Round Launch Controller
• Recovery Wadding
• Igniters (with Engines)
• Igniter Plugs (with Engines)
• Recommended Estes Engine: D11-4 (Only)

COUNTDOWN AND LAUNCH

KEY ALWAYS OUT UNTIL
FINAL COUNTDOWN!

1... 
2...
3...
4...
5...

6" (150 mm)

MASKING TAPE

WHILE HOLDING KEY DOWN
FIRMLY, PRESS LAUNCH
BUTTON UNTIL LIFT-OFF!

PRECAUTIONS

NAR Safety Code

The engine can be ignited.

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, 152.4 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 ENCLOSED 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 washer 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.
Place a new igniter all the way inside the engine without bending it. Push the
plug in place. Repeat the steps under Countdown and Launch.

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.

4" (102 mm) ENGINE MOUNT TUBE (1) (36216)

UPPER BODY TUBE 18" (457 mm) (1) (362216)
BEA BODY TUBE 8 7/8" (225.6 mm) (2) (362218)
LOWER BODY TUBE 5 1/2" (139.7 mm) (1) (36216)
SHOCK CORD 1 1/4" X 96" (3.2 cm X 244 cm) (1) (36218)
ENGINE HOOK (1) (36217)
LASER CUT BALSA FIN SHEET A (1) (32217)
LASER CUT BALSA FIN SHEET B (1) (32217)
Laser Cut Centering Rings (2) (32218)
WATERLILY DECAL (1) (36214)
CLAY WEIGHT (1) (36214)
GREEN ADAPTER RING (1) (36214)
ASSEMBLED 18" (45 cm)
PARACHUTE (1) (31216)
PLastic Nose Cone PNC-40CF (1) (36217)
PLastic Nose Cone PNC-40 (1) (36217)

SUPPLIES: In addition to the parts included in the kit you will also need:

SCISSORS PENCIL RULER

ESTES-ROCKETPOTS.COM
1296 N. Sable Blvd. CO 80227
Poncres, CO 4100-0037
PRINTED IN CHINA

#2410
TUBE MARKING GUIDES

1. FIN PREPARATION
A. Sand both sides of balsa sheets with fine sandpaper (620 or 800 grit).
B. Cut fins from sheets.

2. MARK FIN AND LAUNCH LUG LINES
A. Cut marking guides from instructions.
B. Wrap LOWER TUBE MARKING GUIDE around lower tube and tape. Mark at arrow. Label lower fins "LF", engine hook "EH", and large lower fins "LLF". Remove guide.
C. Extend all lines on lower body tube.

SHOCK CORD MOUNT

16. FINISHING ROCKET
NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints (color of your choice) and Testors Gloss Lacquer (1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

Steps to a quality finish:
1. Insert shock cord into body tube and hold in place with paper.
2. Lightly sand body tube and fins with fine sandpaper (620 or 800 grit).
3. Use a stick inserted into the engine mount end of the rocket for painting.
4. Insert a stick into the open end of the nose cone to hold while painting.
5. We recommend a good filler/primer to be applied to the balsa fins before painting.
6. After priming the rocket and nose cone, sand smooth in preparation for color.
7. Spray paint main rocket and nose cone glossy black.
8. Let paint dry overnight (24 hours is best).
9. Apply masking tape around the center of the pods and protective cover to the fins below the pods. Cover entire rocket prior to painting to protect against overspray.
10. Spray pods bright silver.
11. Let paint dry overnight (24 hours is best). Remove tape and protective cover.
12. Apply masking tape to top side of fins along main rocket body. Cover rocket to protect from overspray on fins.
13. Spray the top half of the fins silver (refer to image above for paint application).
14. Let paint dry overnight (24 hours is best). Remove tape and protective cover.
15. Apply waterslide decals.
A. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.
B. Hold the decal in warm water until decal begins to curl.
C. Remove the entire decal, position in place and slide the decal backing material from under the decal and onto the model as close to final position as possible.
D. Gently blot out excess water with a clean paper towel.
E. Allow decals to set overnight before applying protective clear coat.
16. When decals are dry, spray entire rocket (body and nose cone) with a light coat of Testors Gloss Lacquer (1961). This will provide added protection and shine to your Renegade-O™ rocket!

17. ATTACH NOSE CONE
A. Ferm loop.
B. Loop through.
C. Double knot

18. PREPARE PARACHUTE FOR FLIGHT
A. Insert 7.5 squares of nylon crumpled recovery wadding into rocket.
B. Spike parachute.
C. Fold.
D. Rip.
E. Wrap lines loosely. Insert parachute, shock cord and nose cone into body tube.
12. APPLY GLUE FILLETS

A. Apply glue to all joints.
B. Smooth with finger. Let dry.

13. INSTALL NOSE WEIGHT

PARTS
- CLAY WEIGHT
- NOSE CONE

A. Remove excess flash and clean inside of nose cone. CAUTION: Do not cut off cyclets.
B. Pick up weight and thread into hole in base of nose cone. Use all clay.
C. Use a long skinny object to tamp clay as far as possible into front of nose cone. Use all clay.

14. INSTALL SHOCK CORD MOUNT

A. Cut out shock cord mount from instructions.
B. Apply glue to shock cord mount and insert in body tube. Hold until glue sets.
C. Shock cord mount must be at least 1 1/2" (38 mm) inside tube.
D. Let dry.

15. ATTACH UPPER BODY TUBE

A. Apply ring of glue to inside of upper body tube.
B. Align "EH" with the "EH" line and insert lower assembly into upper assembly as shown. Let dry.
NOTE: MAKE SURE "EH" AND "LL" ARE ALIGNED.

3. ENGINE MOUNT ASSEMBLY

PARTS
- ENGINE HOOK
- 2" (51 mm) ENGINE MOUNT TUBE (DB-55)
- GREEN ADAPTER RING (RING 2)

A. Remove centering rings. Save center discs for Step 4.
B. Measure and mark engine mount tube.
C. Cut small slit at 2 1/2" (63 mm) mark.
D. Insert engine hook in slit.
E. Slide centering ring with notch centered over end of engine hook.
F. Slide centering ring with notch centered over engine hook to mark.
G. Apply glue 116A to both sides of centering rings. Let dry.
H. Apply ring of glue in end, insert green adapter ring until it stops against engine hook. Let dry.

4. SIDE TUBE ASSEMBLIES

A. Remove flash from nose cones.
B. Apply a ring of glue inside tube. Insert green adapter ring evenly with end. Let dry.
C. Repeat for 2nd tube.
D. Apply a ring of cement inside tube. Insert nose cone. Let dry.
E. Repeat for second tube.
F. Apply glue to end of tube. Position disc over end. Let dry.
G. Repeat for other tube. Let dry.
H. Sand edge of disc even with tube.