





Estes-Cox Corp.
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Printed in Guangdong, China

PAYLOADER II™

#3022

FLYING MODEL ROCKET KIT INSTRUCTIONS

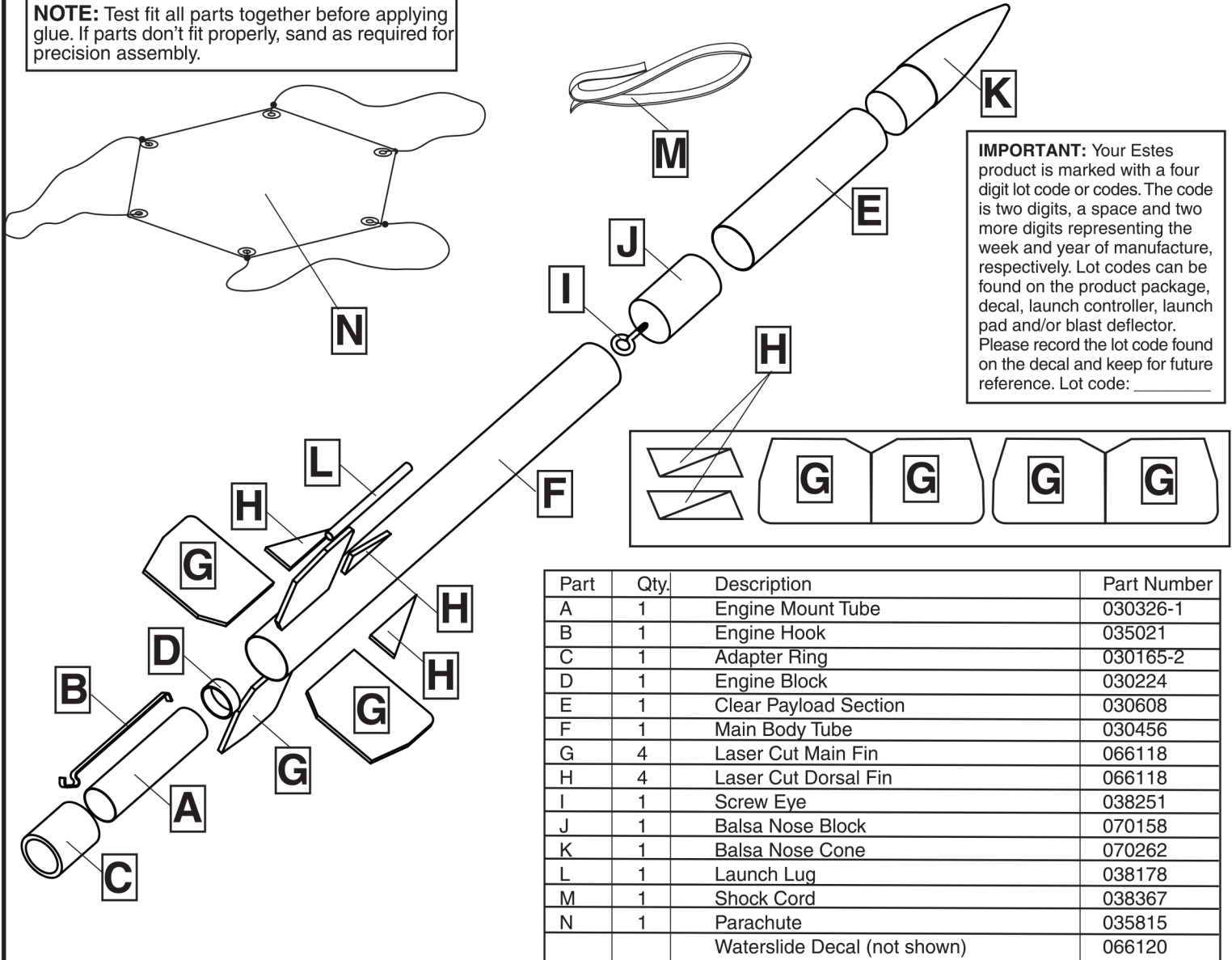
KEEP FOR FUTURE REFERENCE

ASSEMBLY TIP:

Read all instructions before beginning work on your model. Make sure you have all parts and supplies.



NOTE: Test fit all parts together before applying glue. If parts don't fit properly, sand as required for precision assembly.

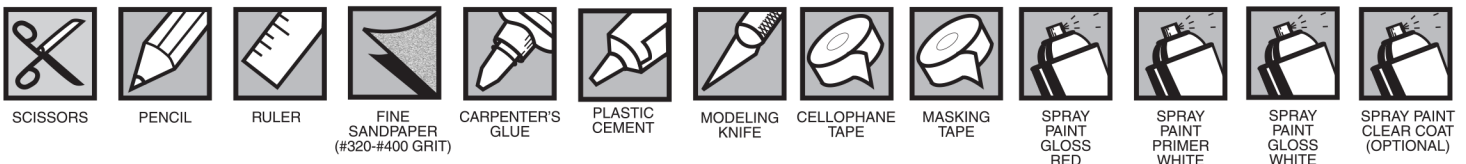


IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please record the lot code found on the decal and keep for future reference. Lot code: _____

Part	Qty.	Description	Part Number
A	1	Engine Mount Tube	030326-1
B	1	Engine Hook	035021
C	1	Adapter Ring	030165-2
D	1	Engine Block	030224
E	1	Clear Payload Section	030608
F	1	Main Body Tube	030456
G	4	Laser Cut Main Fin	066118
H	4	Laser Cut Dorsal Fin	066118
I	1	Screw Eye	038251
J	1	Balsa Nose Block	070158
K	1	Balsa Nose Cone	070262
L	1	Launch Lug	038178
M	1	Shock Cord	038367
N	1	Parachute	035815
		Waterslide Decal (not shown)	066120

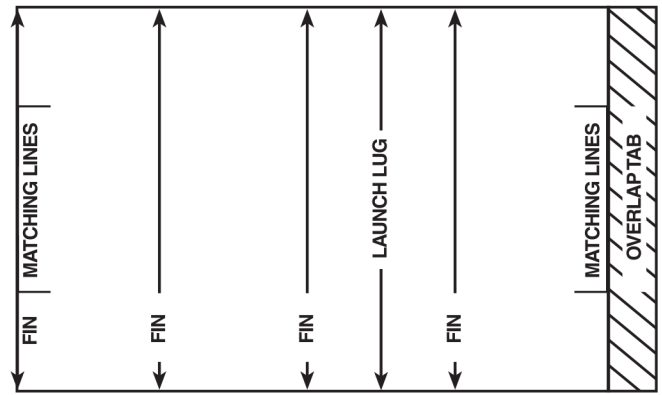
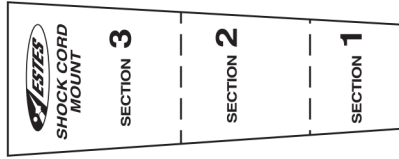
SUPPLIES

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

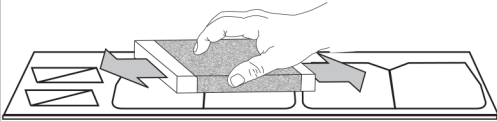


TUBE MARKING GUIDE

(Make a copy if you want to keep instructions.)



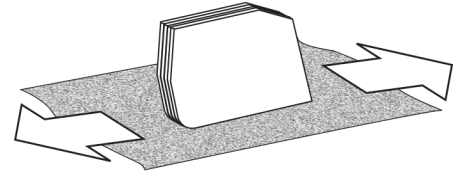
FIN PREPARATION



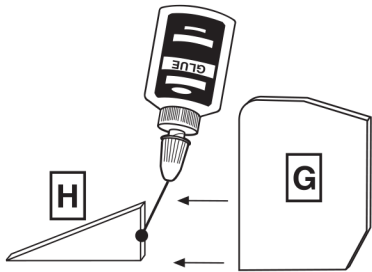
1. Sand both sides of balsa sheet with fine sandpaper (#320 or #400 grit).



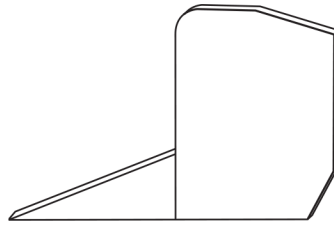
2. Cut **G** and **H** from sheet.



3. Stack like fins together. Sand edges smooth.



4. Apply glue to short side of **H** and position next to **G**. Let dry.

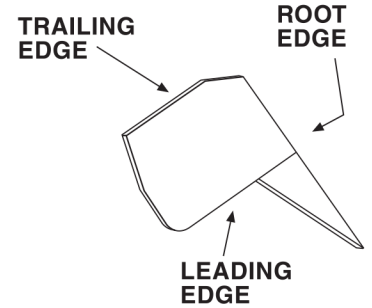


5. Repeat for remaining **G** and **H**. Let dry.

LEADING
EDGE



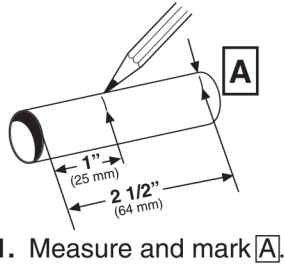
TRAILING
EDGE



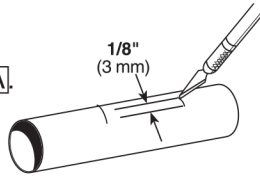
6. When dry, sand both sides of completed fins smooth.

7. Round leading edges. **DO NOT** round root edges.

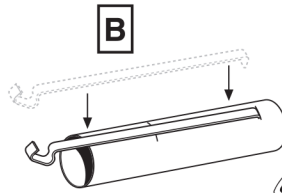
ENGINE MOUNT ASSEMBLY



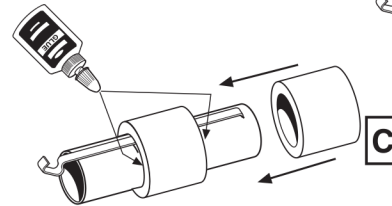
1. Measure and mark **A**.



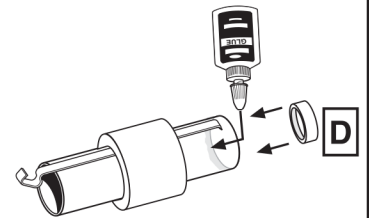
2. Cut small slit at mark.



3. Insert **B** in slit.

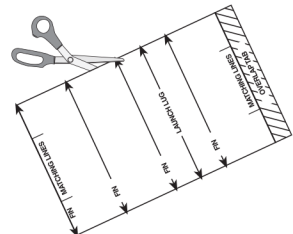


4. Slide **C** to mark. Apply ring of glue to both sides of **C**.

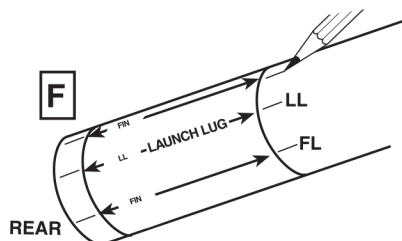


5. Apply ring of glue in end of **A**, insert **D** until it stops. Let dry.

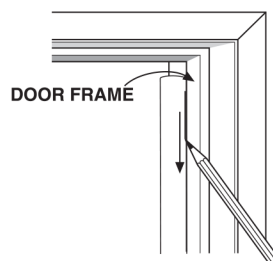
TUBE MARKING



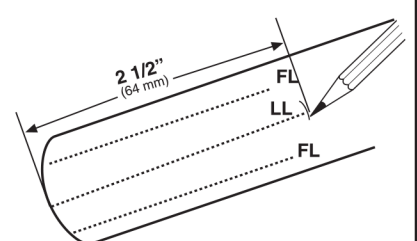
1. Cut tube marking guide from instructions.



2. Tape guide around **F**. Mark **FL** and **LL** at arrows. Remove guide.

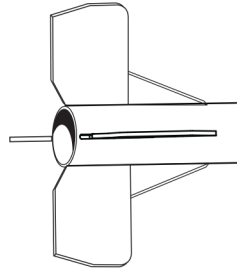
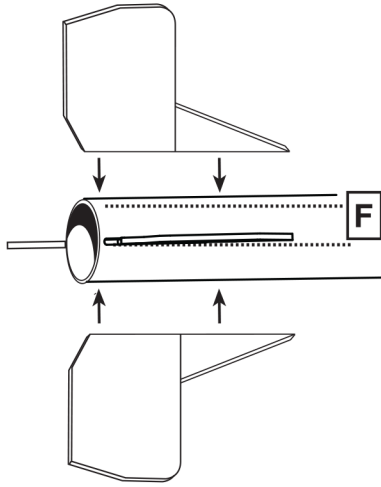
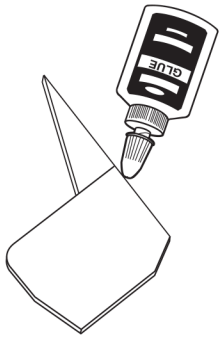


3. Connect **FL** and **LL** on **F**. Use door frame as a straight edge.



4. Measure and mark on **LL**.

FIN ATTACHMENT



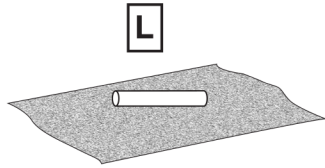
2. Repeat for other fin assemblies.



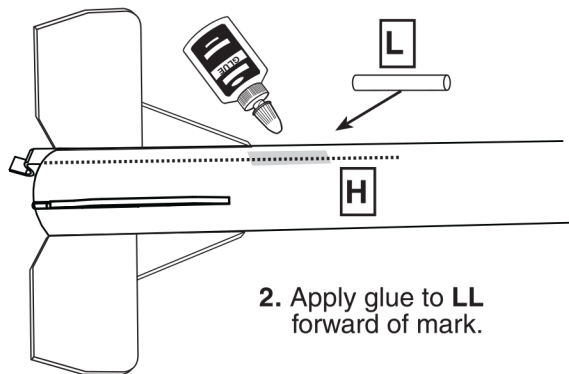
Use fin alignment guide for fin attachment accuracy.

1. Apply glue to root edge of fin assembly. Let dry 1 minute. Apply 2nd layer of glue. Position fin assembly centered over FL even with end of F. Let dry.

LAUNCH LUG ATTACHMENT



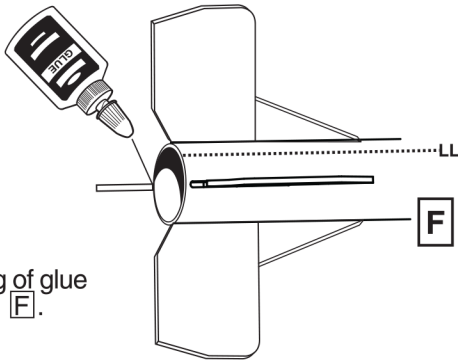
1. Sand L with fine sandpaper.



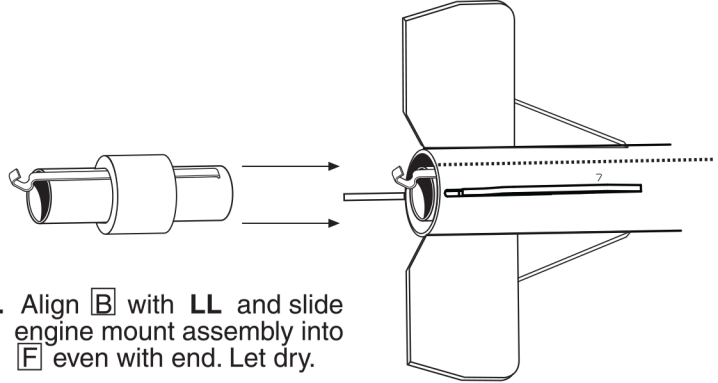
2. Apply glue to LL forward of mark.

3. Position L centered on LL. Let dry.

ENGINE MOUNT INSTALLATION

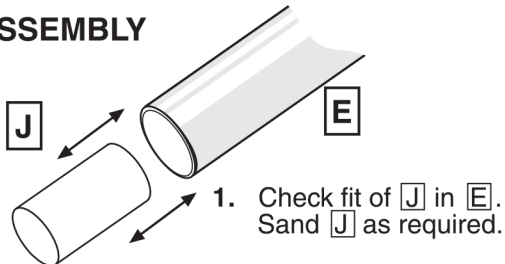


1. Apply ring of glue inside of F.

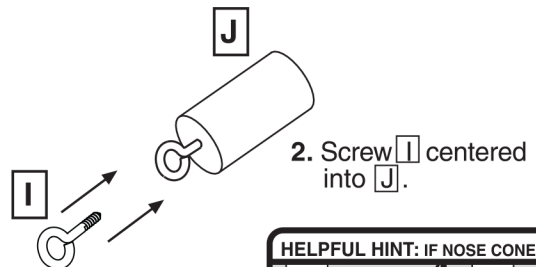


2. Align B with LL and slide engine mount assembly into F even with end. Let dry.

PAYLOAD ASSEMBLY

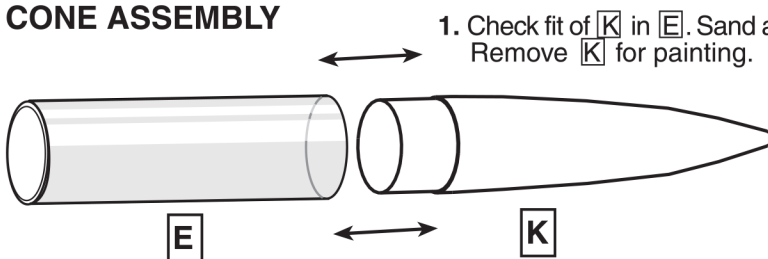


1. Check fit of J in E. Sand J as required.

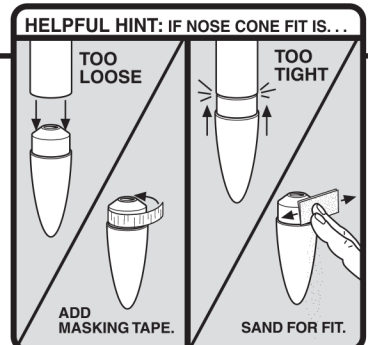


2. Screw I centered into J.

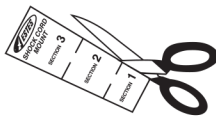
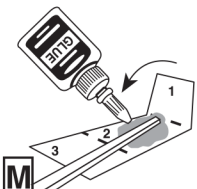
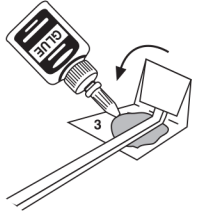
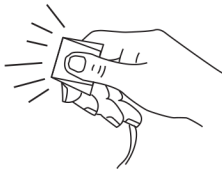

NOSE CONE ASSEMBLY



1. Check fit of K in E. Sand as required. Remove K for painting.



SHOCK CORD INSTALLATION

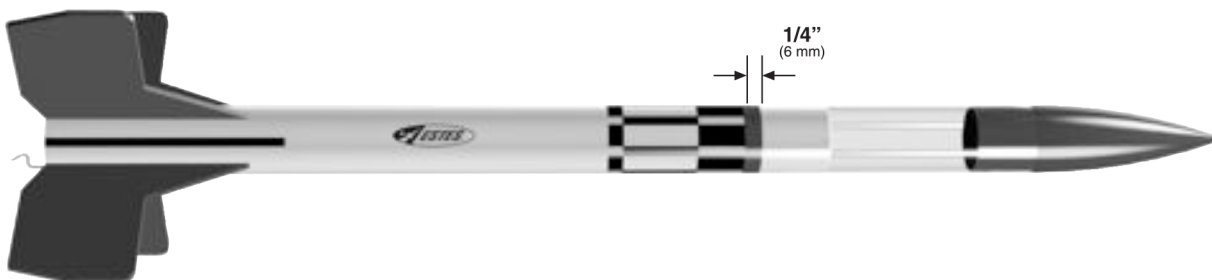
- 1. Cut shock cord mount from instructions.
- 2. Apply glue to section 2. Place **M** on glue. Fold forward.
- 3. Apply glue and fold forward.
- 4. Squeeze tight!
- 5. Apply glue to shock cord mount and insert in body tube. Hold until glue sets. Let dry.

ROCKET FINISHING

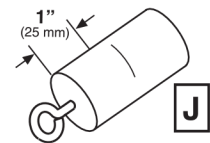
NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints (color of your choice) and Testors Gloss Lacquer (#1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

STEPS TO A QUALITY FINISH

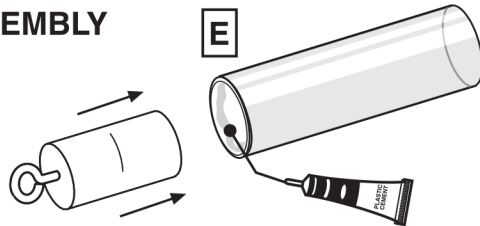
1. Insert shock cord into body tube and hold in place with paper.
2. Lightly sand body tube, fins and nose cone with fine sandpaper (#320 or #400 grit).
3. Apply glue fillets to fins and launch lug joints.
 - a. Allow glue to dry overnight.
4. Paint the rocket body, nose block and nose cone separately. Assemble after painting is complete.
5. Use a stick inserted into the engine mount end of the rocket body for painting.
6. Hold the nose block by the screw eye with a clip or pliers for painting.
7. Insert a hobby knife in the end of the nose cone for painting.
8. We recommend a good filler/primer to be applied to the balsa fins and nose cone before painting.
9. Apply 1-2 light coats of white primer to rocket body, nose block and nose cone, lightly sanding with fine sandpaper (#320 or #400 grit) between coats.
 - a. Allow to dry between each coat.
10. Spray paint nose cone gloss bright red.
11. Spray nose block gloss white.
 - a. Let paint dry overnight (24 hours is best).
12. Spray rocket body gloss white.
 - a. Let paint dry overnight (24 hours is best).
13. Apply masking tape between fins.
14. Apply masking tape to end of body tube (1/4" (6 mm)).
15. Apply protective cover over rocket body exposing fins and ring at end of body tube.
16. Spray fins and end of body tube bright red.
 - a. Let paint dry overnight (24 hours is best). Remove masking tape and cover.
17. Apply waterslide decals where shown.
 - 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.
18. When decals are dry, spray entire rocket (body, nose block and nose cone separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your PAYLOADER II™ rocket!



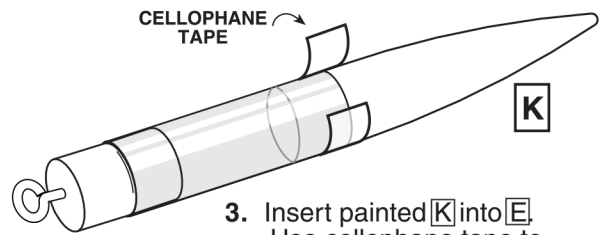
FINAL PAYLOAD ASSEMBLY



1. Measure and mark **J**.



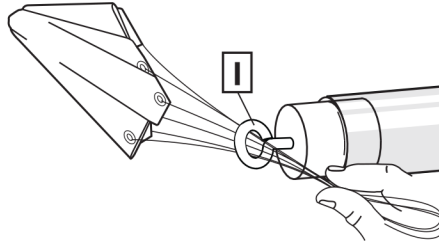
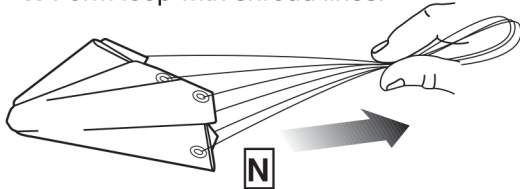
2. Apply ring of plastic cement in **E** and insert **J** to mark.



3. Insert painted **K** into **E**. Use cellophane tape to hold **K** to **E**.

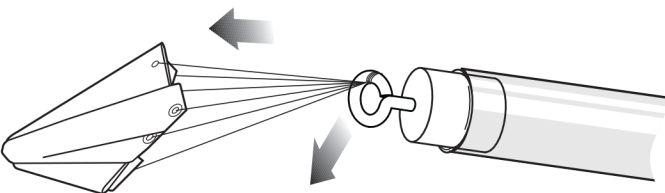
RECOVERY SYSTEM ATTACHMENT

1. Form loop with shroud lines.

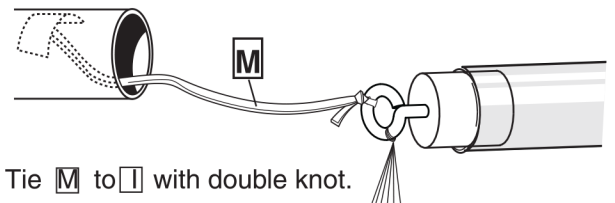


2. Insert loop through **I**.

3. Pass parachute through loop.



4. Pull lines tight.

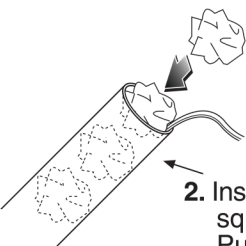


5. Tie **M** to **I** with double knot.

PREPARE FLIGHT RECOVERY

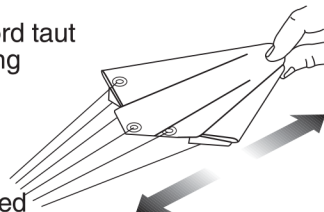
NOTE: Only Estes Recovery Wadding (302274) recommended.

NOTE: Recovery wadding and parachute must slide easily into body tube. If too tight, redo.

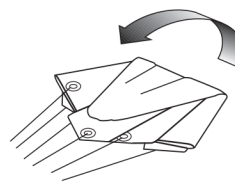


1. Pull shock cord taut when inserting wadding.

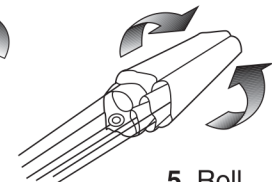
2. Insert 3 - 4 loosely crumpled squares recovery wadding. Push below shock cord attachment.



3. Spike.

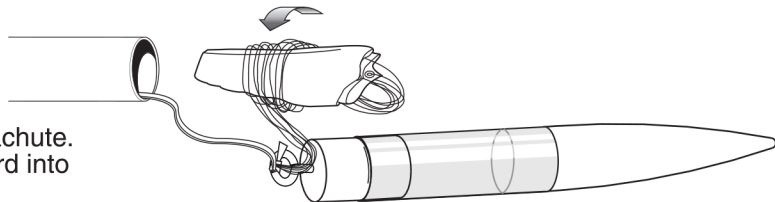


4. Fold.



5. Roll.

6. Wrap lines loosely around parachute. Insert parachute and shock cord into body tube.



PREPARE ENGINE

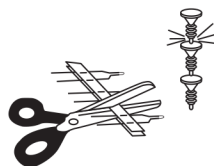
⚠ WARNING: FLAMMABLE

To avoid serious injury, read instructions & NAR Safety Code included with engines.

PREPARE ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!

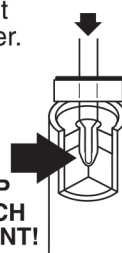
If you do not use your prepared engine, remove the igniter before storing engine.

1. Separate igniter and igniter plug.

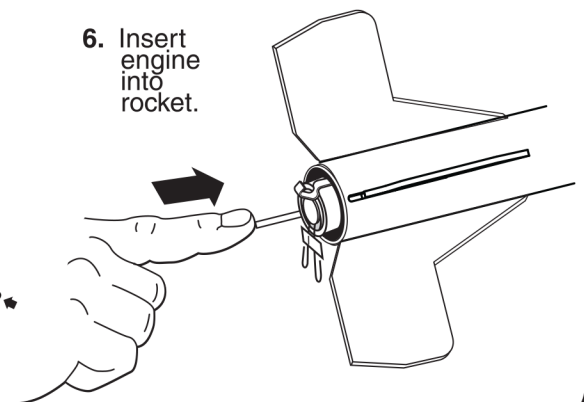


2. Insert igniter.

IGNITER TIP MUST TOUCH PROPELLANT!



6. Insert engine into rocket.



3. Insert plug.



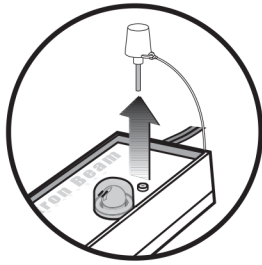
4. Push down.



5. Gently bend igniters to form leads as shown.

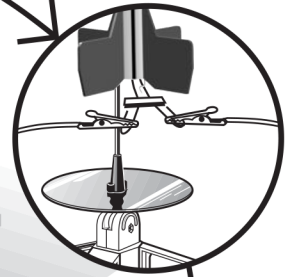


COUNTDOWN AND LAUNCH

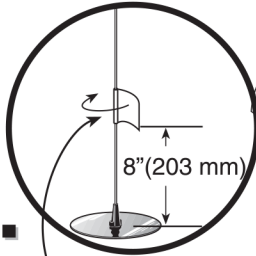


KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

2...



3...

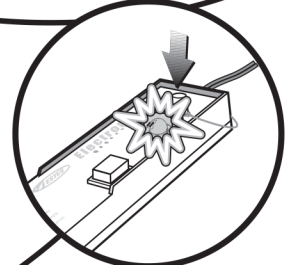


1...

Masking Tape



4...



INSERT KEY. PUSH DOWN HARD. BULB WILL LIGHT.

5...

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

WHILE HOLDING KEY DOWN FIRMLY, PRESS LAUNCH BUTTON UNTIL LIFTOFF!

LAUNCH BUTTON

LAUNCH SUPPLIES (Sold Separately)

- Porta Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Igniters (with Engines)
- Igniter Plugs (with Engines)
- Recommended Estes® Engine: A8-3, B6-4, C6-5

PRECAUTIONS



NAR Safety Code

This Paper



Can Be Recycled



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. Repair any damage before launching the rocket.

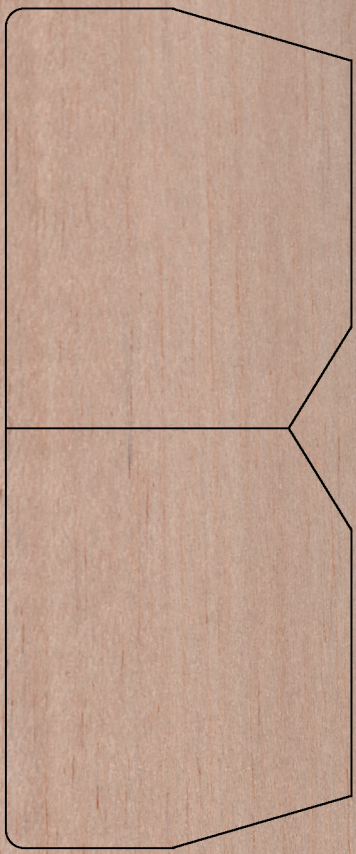
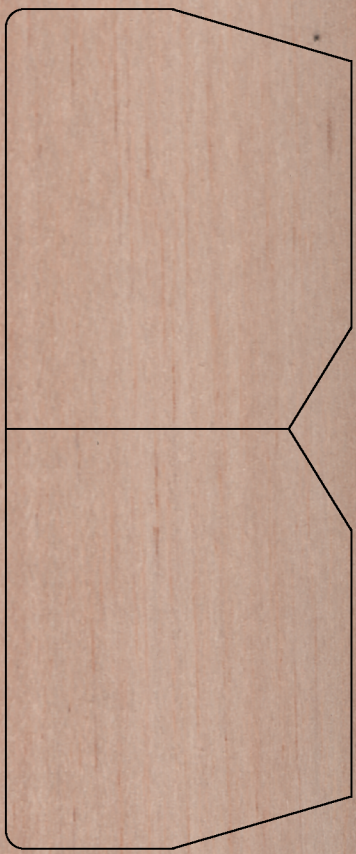
FLYING YOUR ROCKET

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. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

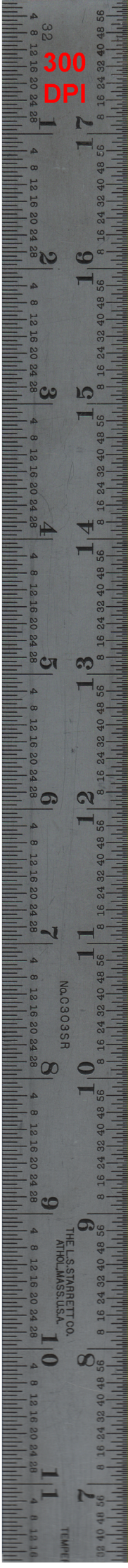
Always follow the enclosed National Association of Rocketry (NAR) SAFETY CODE.

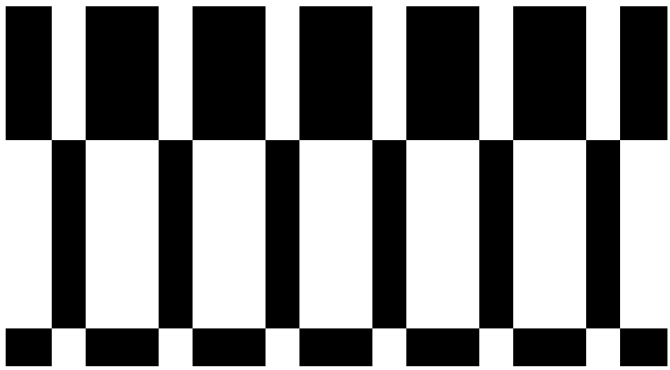
MISFIRES

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 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.

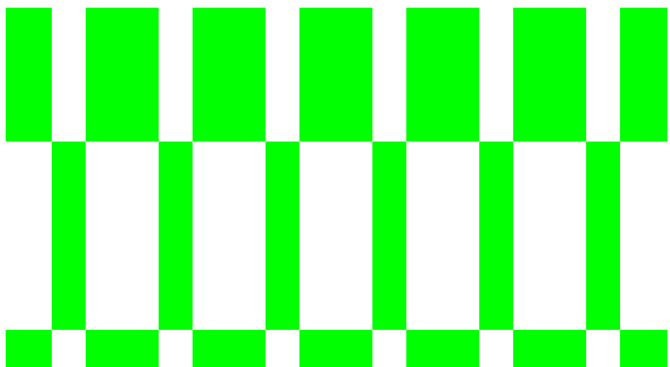
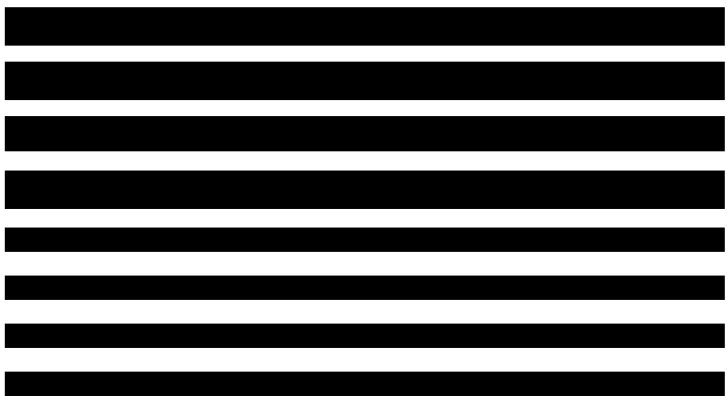


3/32"

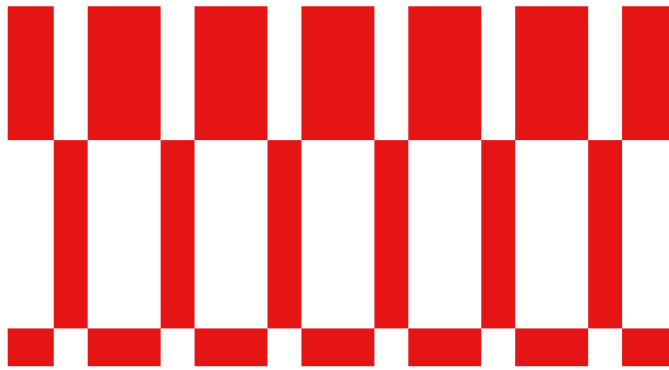
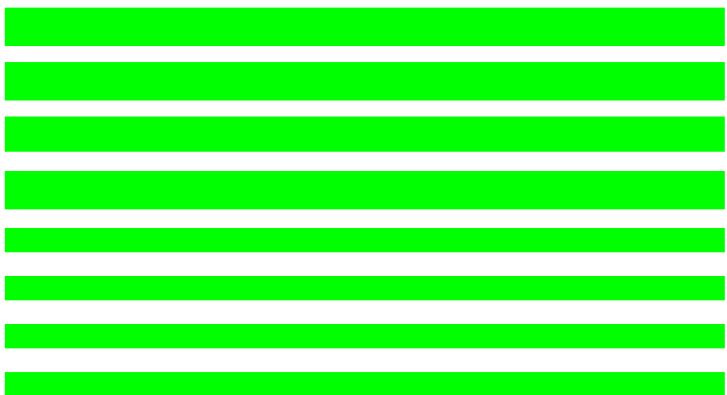




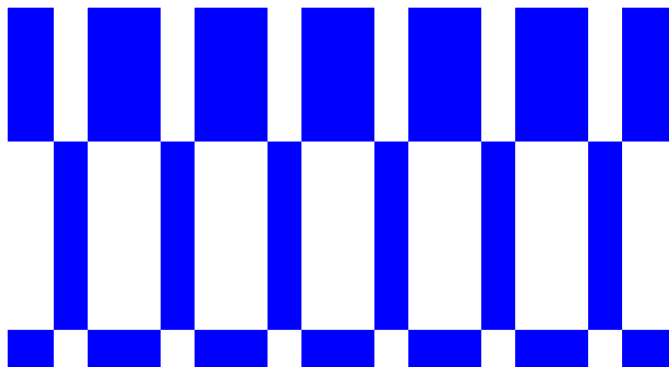
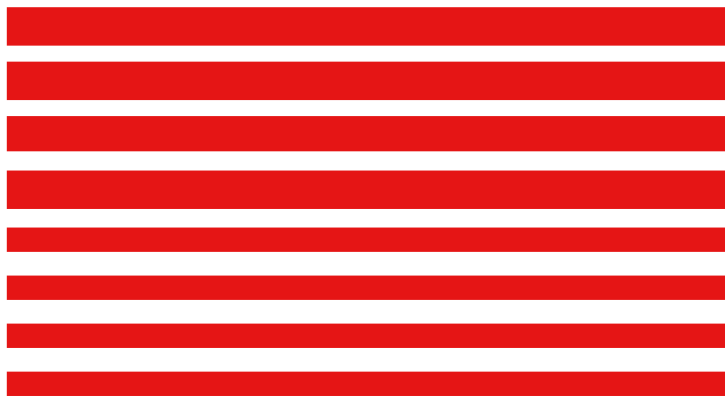
 **PAYLOADER II**



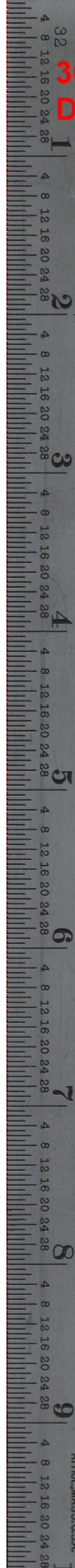
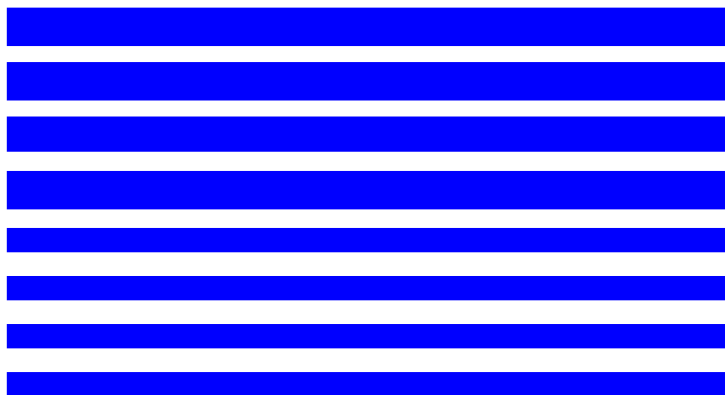
 **PAYLOADER II**



 **PAYLOADER II**

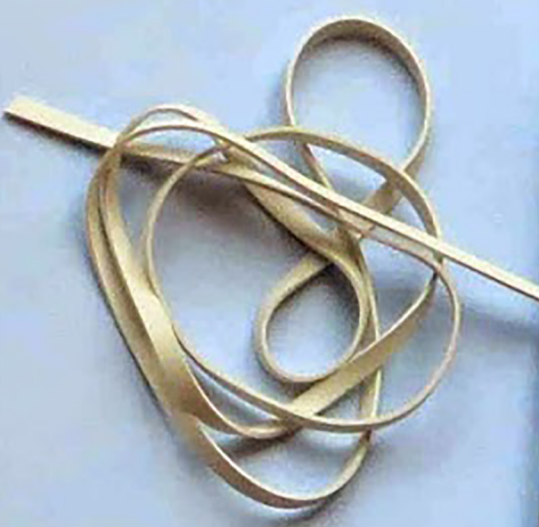


 **PAYLOADER II**



PARTS LIST KIT NO. 3022 - Payloader II								
Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PAPER BODY TUBE	BT-20J	30326-1	2.75" long	0.710" ID	0.736" OD	0.013" wall	Blue
1	ENGINE HOLDER	EH-2	35021	2.8" long	.100" wide	.025" thick	18/24mm	Thumb Saver
1	CENTERING RING	AR-2050L	30165-2	1" long	.737" ID	.949" OD	0.106" wall	Green
1	ENGINE BLOCK	EB-20A	30224	.708" OD	.65" ID	.25" thick	0.058" wall	Black
1	PLASTIC BODY TUBE	PST-50S	30608	4" long	0.950" ID	0.976" OD	0.013" wall	Clear
1	PAPER BODY TUBE	BT-50A	30456	10" long	0.950" ID	0.976" OD	0.013" wall	white
1	Laser Cut Balsa	*BFS-3022	66118	3" wide	12" long	3/32" thick		Scan
4	Laser Cut Main Fin							
4	Laser Cut Dorsal Fin							
1	Screw Eye (Large)	SE-1	38251	1" long				
1	BALSA NOSE BLOCK	NB-50	70158	1.0" long	0.950" dia.			BT-50
1	BALSA NOSE CONE	BNC-50K	70262	2.75" long	.976" dia.	.5" shoulder		
1	LAUNCH LUG	LL-2B	38178	5/32" ID	1/8" rod	2-3/8" long		Mylar
1	Shock Cord	SC-1	38367	18" long	1/8" wide			Rubber
1	Parachute	PK-12A	35815	12" dia.	12" x 6 Shrouds	LDPE plastic	Org/Wht	Preassembled
1	Decal	KD-3022	66120	4" wide	4.5" long	Blk	Waterslide	Re-Draw Scan
*	BALSA FIN STOCK	BFS-30L	3170	3" wide	12" long	3/32" thick	0.09375	

Estes re-issued this kit using Estes parts. This is a BT-50 version of the Centuri kit which used ST-10 tubes.



ADAPTER II™ #3022

ROCKET KIT INSTRUCTIONS
PICTURE REFERENCE

www.estesrockets.com

IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please record the lot code found on the decal and keep for future reference. Lot code: _____

Part Number

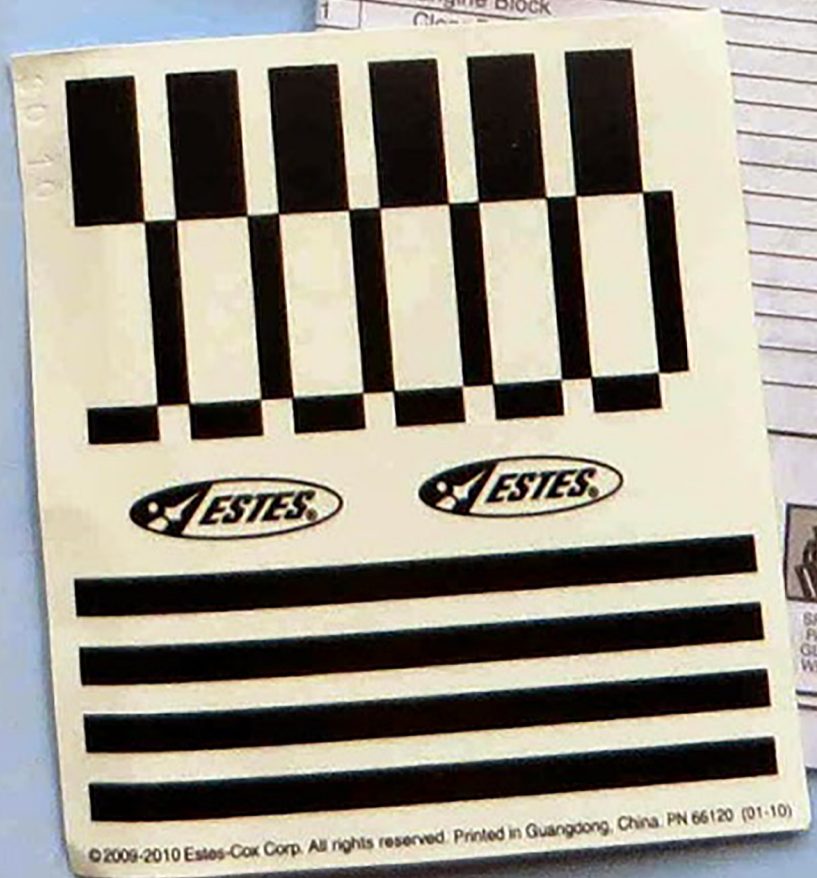
1	Engine Hook	030326-1
1	Adapter Ring	035021
1	Engine Block	030165-2
1	...	030224
		030608
		030456
		066118
		066118
		038251
		070158
		070262
		038178
		038367
		035815
		066120

SPRAY PAINT GLOSS WHITE

SPRAY PAINT CLEAR COAT (OPTIONAL)

Page 1

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Payloader II

FLYING MODEL ROCKET KIT

Skill Level 1

Classic Series

Based on an original Centuri design.

- Clear Payload Section!
- Laser Cut Balsa Fins!
- 12" (30.5 cm) Parachute Recovery!

FLIES UP TO **1000** FEET (305 m)

17 INCHES TALL!

SEE BACK OF PACKAGE FOR DETAILS.

www.estesrockets.com

3022



Payloader II™ ROCKET POCKET CARD

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1 MODEL KIT 1 MODÈLE RÉDUIT





Payloader II™

LIVING MODEL ROCKET KIT

Classic Series

Based on a proven design

- Clear Payload Section!
- Laser Cut Balsa Fins!
- 12" (30 cm) Parachute Recovery!

FLIES UP TO
1000
 FEET
(305 m)

17 INCHES
(43 cm)
 TALL!

SEE PAGE 111

3022



ROCKET POWER CLUB