





EstesRockets.com

65th Anniversary

9986

BLUE SAPPHIRE



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



SCISSORS



PENCIL



RULER



FINE SANDPAPER



YELLOW GLUE



HOBBY KNIFE



MASKING TAPE



PRIMER (WHITE)



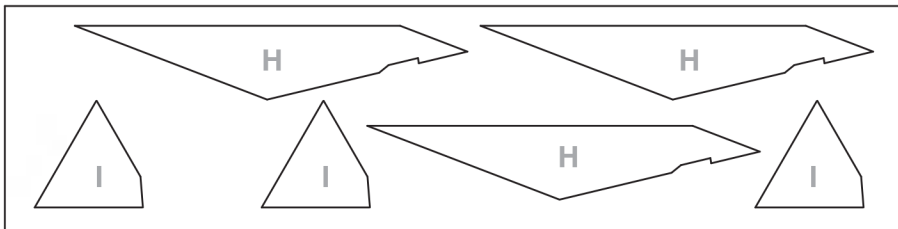
PAINT (WHITE)



PAINT (BLUE)



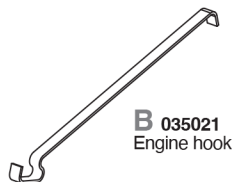
PAINT (BLACK)



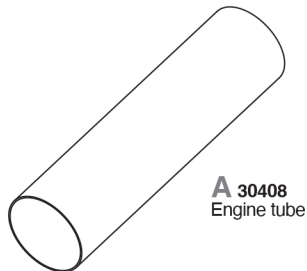
095001-9986
Laser cut balsa sheet



M 038364
Shock cord



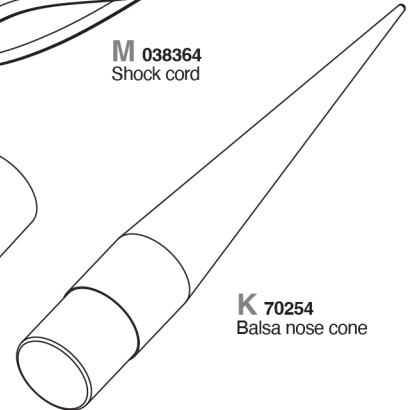
B 035021
Engine hook



A 30408
Engine tube



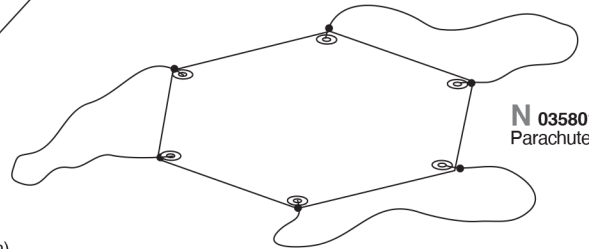
C 030162-2
Engine block



K 70254
Balsa nose cone



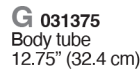
D 030168
Retainer ring 20
(Mylar)



N 035801
Parachute

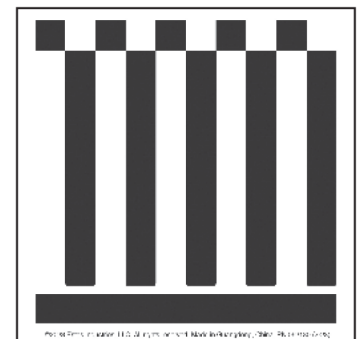


E 080425
Green split
adapter ring



G 031375
Body tube
12.75" (32.4 cm)

062180
Waterslide decal



L 038251
Metal screw eye

062179
2x2 Self-stick decal

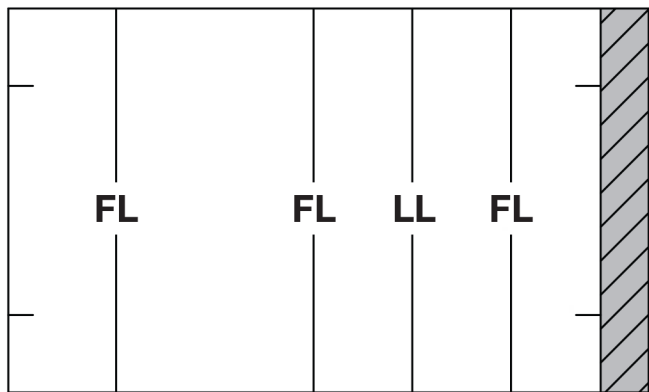


F 030164-2
Adapter ring 2050
bright green

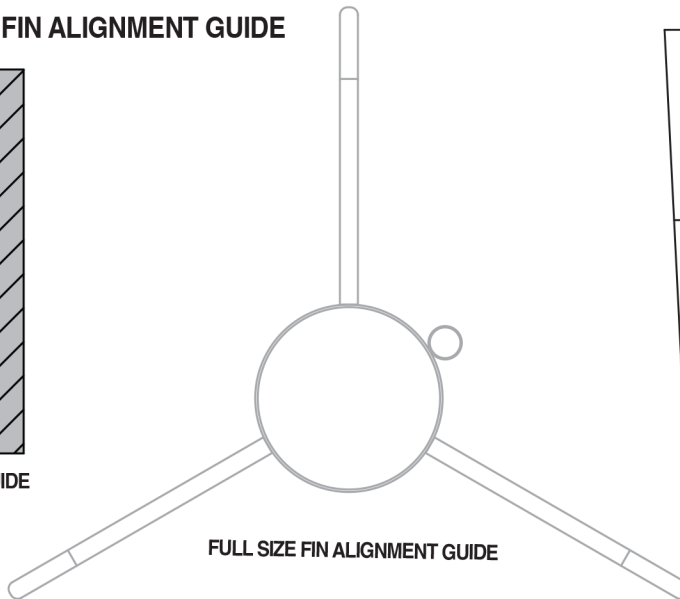


J 38175
Launch lug

TUBE MARKING GUIDE | SHOCK CORD MOUNT | FIN ALIGNMENT GUIDE



TUBE MARKING GUIDE



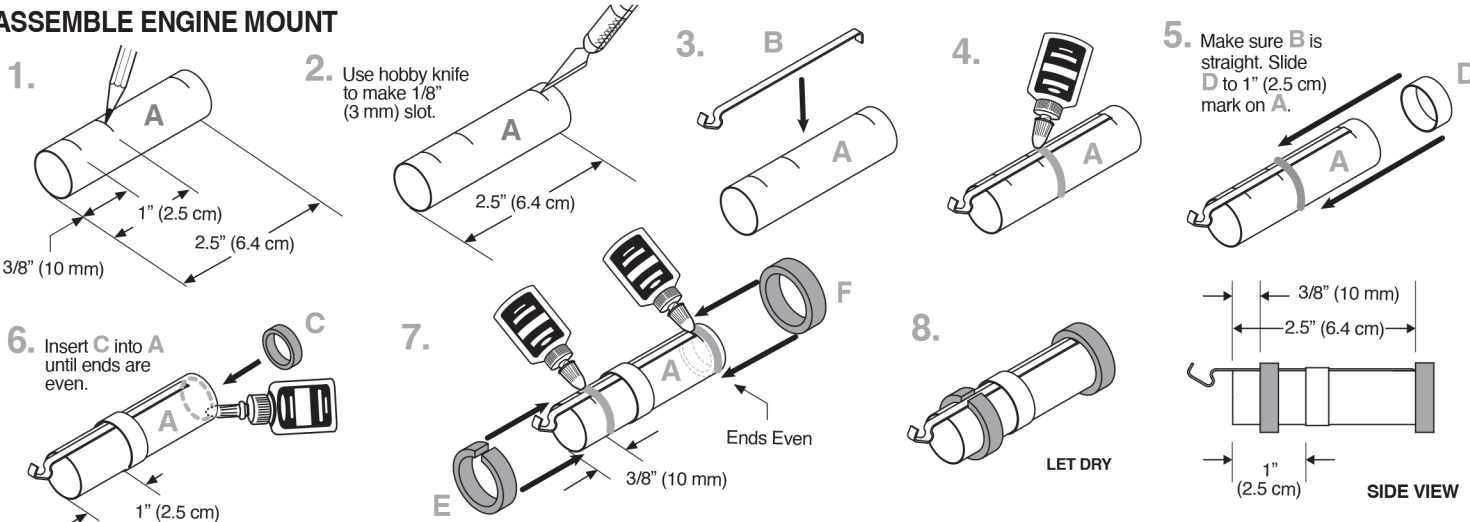
FULL SIZE FIN ALIGNMENT GUIDE



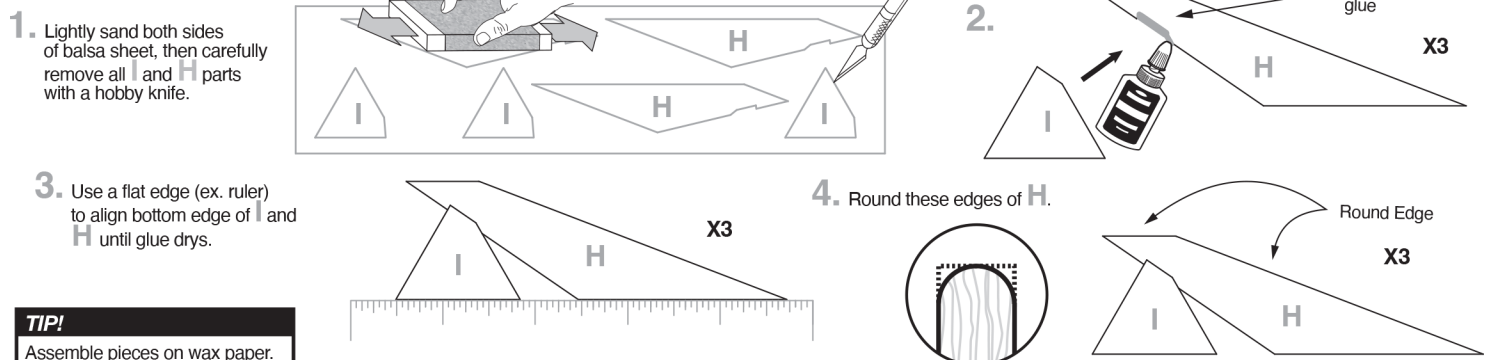
NOTE

These pieces will be cut out during assembly. Make a copy if you want to keep the instructions.

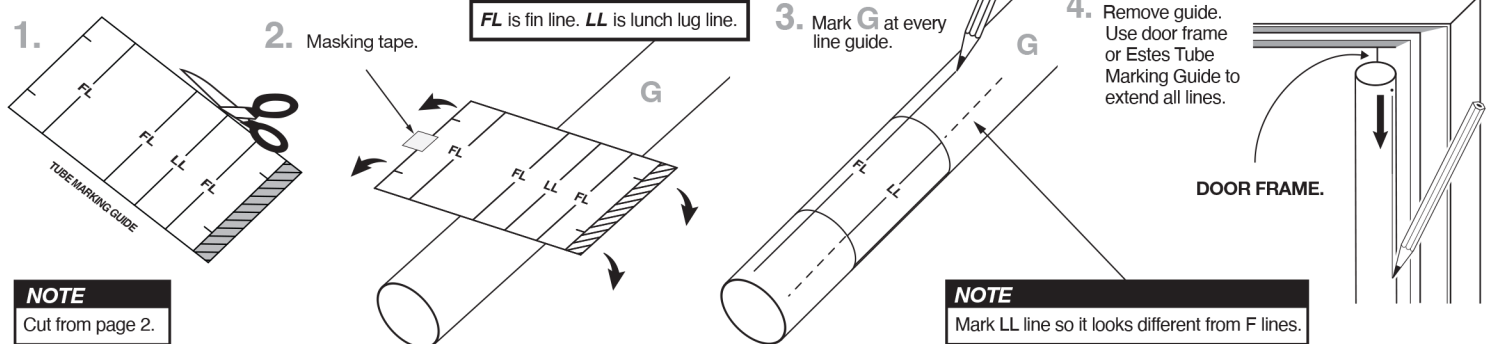
ASSEMBLE ENGINE MOUNT



PREPARE FINS

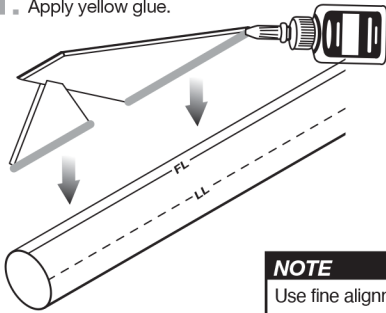


MARK BODY TUBE

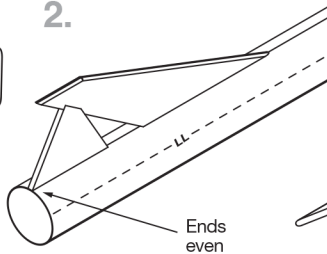


ATTACH FINS & LAUNCH LUG

1. Apply yellow glue.

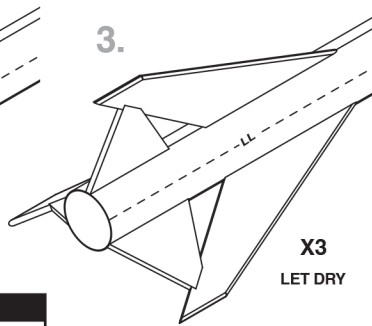


2.



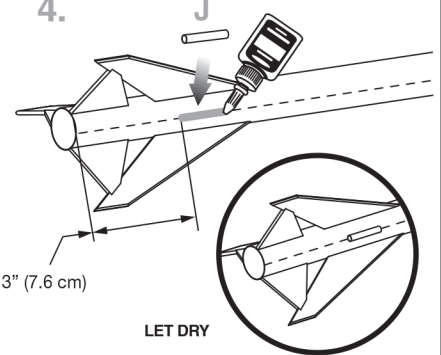
Ends even

3.



X3
LET DRY

4.



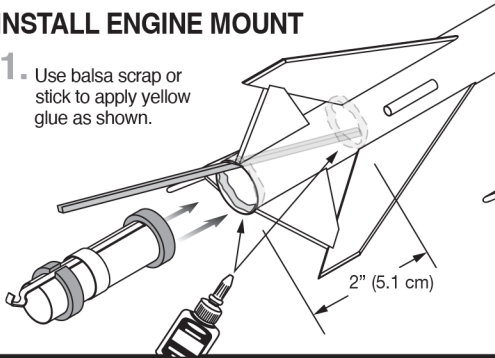
LET DRY

NOTE

Use fine alignment guide on page 2 to check alignment.

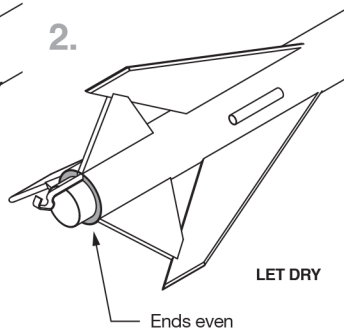
INSTALL ENGINE MOUNT

1. Use balsa scrap or stick to apply yellow glue as shown.



2" (5.1 cm)

2.

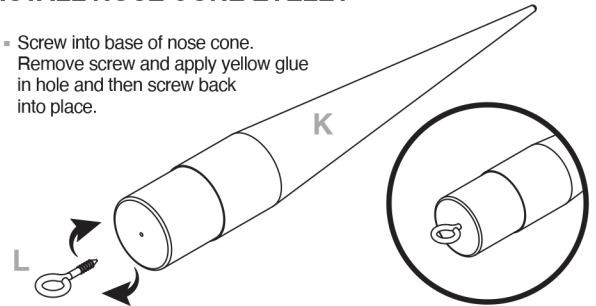


Ends even

LET DRY

INSTALL NOSE CONE EYELET

1. Screw into base of nose cone. Remove screw and apply yellow glue in hole and then screw back into place.



INSTALL SHOCK CORD

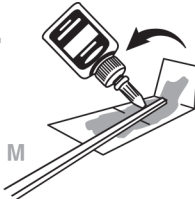
1.



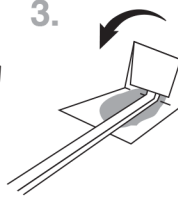
NOTE

Cut from page 2.

2.



3.



4. Hold until set.



5.

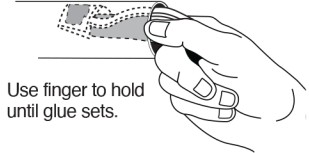
Apply glue to shock cord mount.



6.

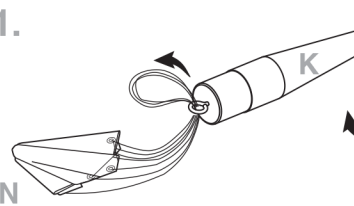
1.5" (3.8 cm)

Use finger to hold until glue sets.

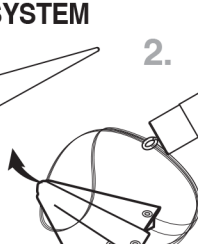


PREPARE THE RECOVERY SYSTEM

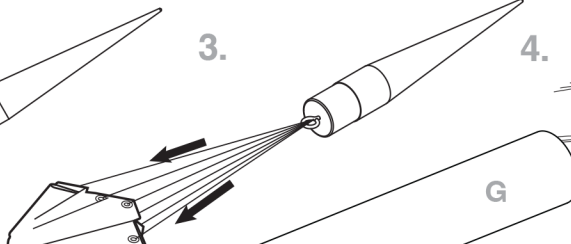
1.



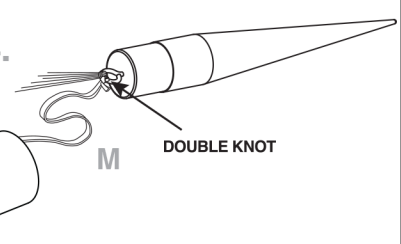
2.



3.



4.



DOUBLE KNOT

ROCKET FINISHING

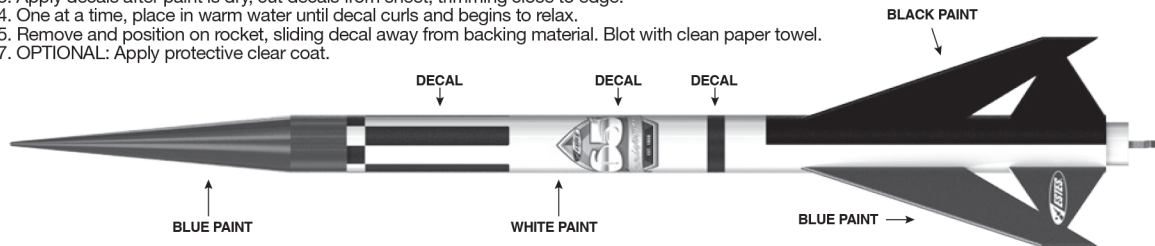
1. Spray rocket with white or gray primer, let dry. Lightly sand as needed. Paint rocket white and let dry completely.
2. Use masking or painters tape to mask body tube. Paint fins and nose cone, let dry completely.
3. Apply decals after paint is dry, cut decals from sheet, trimming close to edge.
4. One at a time, place in warm water until decal curls and begins to relax.
5. Remove and position on rocket, sliding decal away from backing material. Blot with clean paper towel.
7. OPTIONAL: Apply protective clear coat.

NOTE

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

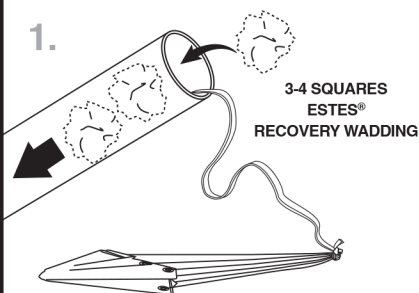
NOTE

Anniversary decal is self-stick. It does not need to be trimmed or soaked in water.



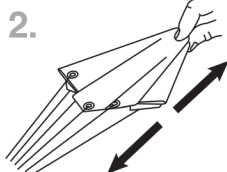
PREPARE FLIGHT RECOVERY

1.

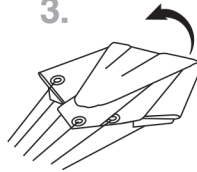


3-4 SQUARES
ESTES®
RECOVERY WADDING

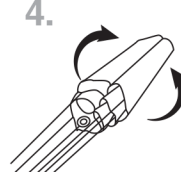
2.



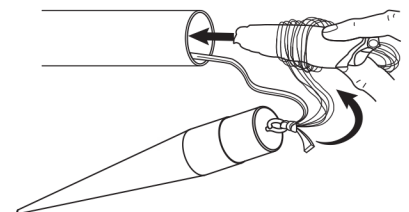
3.



4.



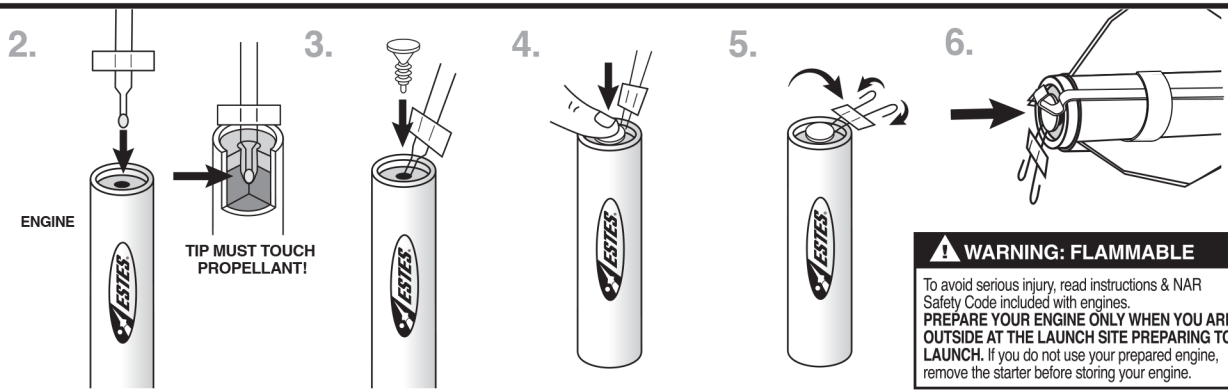
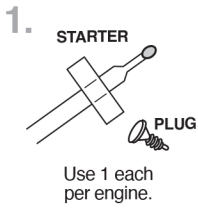
5. Wrap shroud lines loosely and insert parachute into body tube.



NOTE

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

PREPARE ENGINE

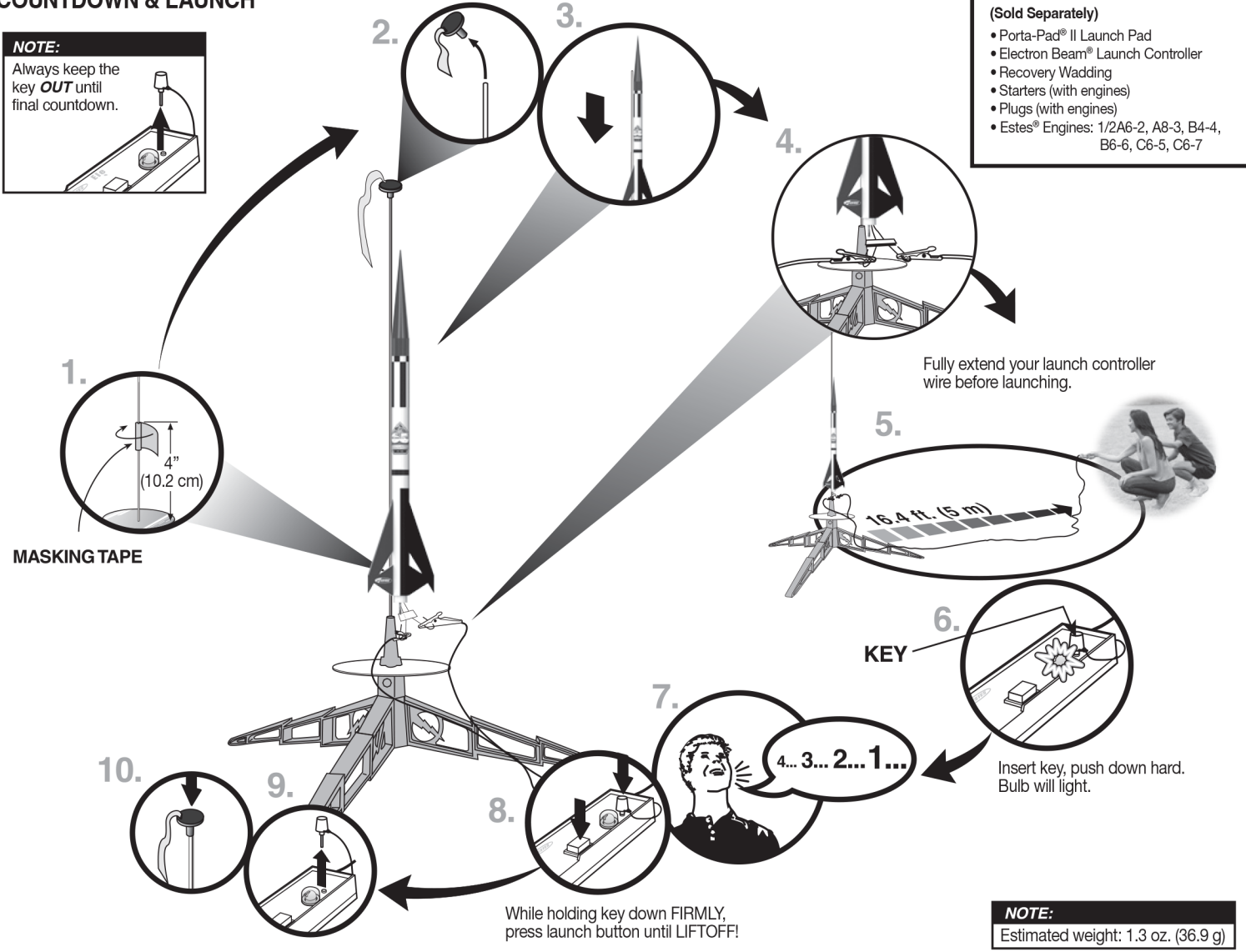


⚠ WARNING: FLAMMABLE
 To avoid serious injury, read instructions & NAR Safety Code included with engines.
PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH. If you do not use your prepared engine, remove the starter before storing your engine.

COUNTDOWN & LAUNCH

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

- 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: 1/2A6-2, A8-3, B4-4, B6-6, C6-5, C6-7



NOTE:
 Estimated weight: 1.3 oz. (36.9 g)

PRECAUTIONS



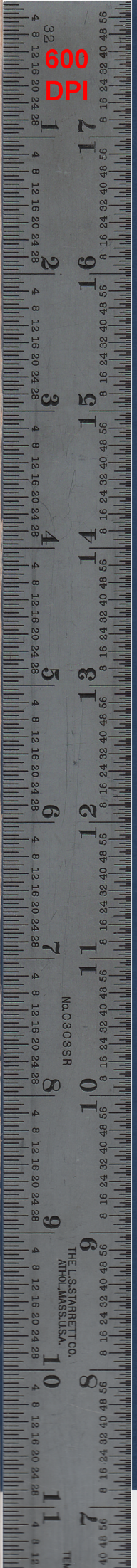
PRE-LAUNCH CHECK For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

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. Football fields and open park areas 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 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.



3/32"



600
DPI

No. C9303SR

THE U.S. STARETT CO.
ATHOL, MASS. U.S.A.

TEMP



©2023 Estes Industries, LLC. All rights reserved. Made in Guangdong, China. PN 062180 (2-23)

32
600
DPI



©2023 Estes Industries, LLC. All rights reserved.
Made in Guangdong, China. PN 062179 (2-23)



©2023 Estes Industries, LLC. All rights reserved.
Made in Guangdong, China. PN 062179 (2-23)

32 600
DPI

21

4 8 12 16 20 24 28

4 8 12 16 20 24 28

2

95 87 07 26 72 91 8

95 87 07 26 72 91 8

9



ESTES

65th

Anniversary

EST. 1958

32
1200

DPI

1

2 1

2

9 1

4 8 12 16 20 24 28

95 85 40 26 12 22

4 8 12 16 20 24 28

95 85 40 26 12 22 8

4 8 12 16 20 24 28

95 85 40 26 12 22 8





32
1200
DPI

1
2
7
9

EST. 1958

PARTS LIST KIT NO. 9986 - Blue Sapphire								
Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PAPER BODY TUBE	BT-50	31375	12.75" long	0.950" ID	0.976" OD	0.013" wall	Glassine
1	BALSA NOSE CONE	BNC-50AR	70254	5.5" long	.976" dia.	.75" shoulder		
1	PAPER BODY TUBE	WBT-20J	30408	2.75" long	0.710" ID	0.736" OD	0.013" wall	White
1	ENGINE HOLDER	EH-2	35021	2.8" long	.100" wide	.025" thick	18/24mm	Thumb Saver
1	ENGINE BLOCK	EB-20-2	30162-2	.69" OD	.542" ID	0.19" long	BT-5 in BT-20	Green
1	MYLAR RETAINER RING	HR-20	30168	0.3" long	0.74" ID	0.76" OD	0.01" wall	BT-20
1	SPLIT ADAPTER RING	AR-2050S	80425	1/4" long	.737" ID	.949" OD	0.106" wall	Green
1	ADAPTER RING	AR-2050	30164-2	1/4" long	.737" ID	.949" OD	0.106" wall	Green
1	LAUNCH LUG	LL-2A	38175	5/32" ID	1/8" rod	1.25" long		Mylar
1	Screw Eye (Large)	SE-1	38251	1" long				
1	BALSA FIN STOCK	*BFS-30		4" wide	12" long	3/32" thick	0.09375	
1	Parachute	PK-12	35801	12" dia.	12" x 6 Shrouds	LDPE plastic	Org/Wht	Preassembled
1	Decal	KDS-65A	62179	2" wide	2" long	Photo Multi	Self-Stick	Scan
1	Decal	KDS-9986	62180	3" wide	3" long	Blk	Waterslide	Scan
* Dicut Balsa Sheet is 95001-9986								

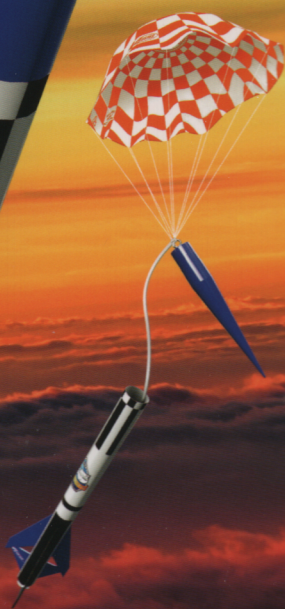


BLUE SAPPHIRE™

— FLYING MODEL ROCKET KIT —



SOARS UP TO
1200 ft
366 m
On a C6-7 Engine
Other engines you can use:
½A6-2, A8-3, B4-4,
B6-4, B6-6, C6-5



Length: 18.8 in.
47.7 cm

Diameter: 0.98 in.
24 mm

Recovery: Parachute

EstesRockets.com



PN 090002-9986 (2-23)
© 2023 Estes Industries, LLC.
All Rights Reserved.

ROCKET ONLY | ASSEMBLY REQUIRED

QTY: 1

BEGINNER

INTERMEDIATE

ADVANCED

EXPERT

MASTER