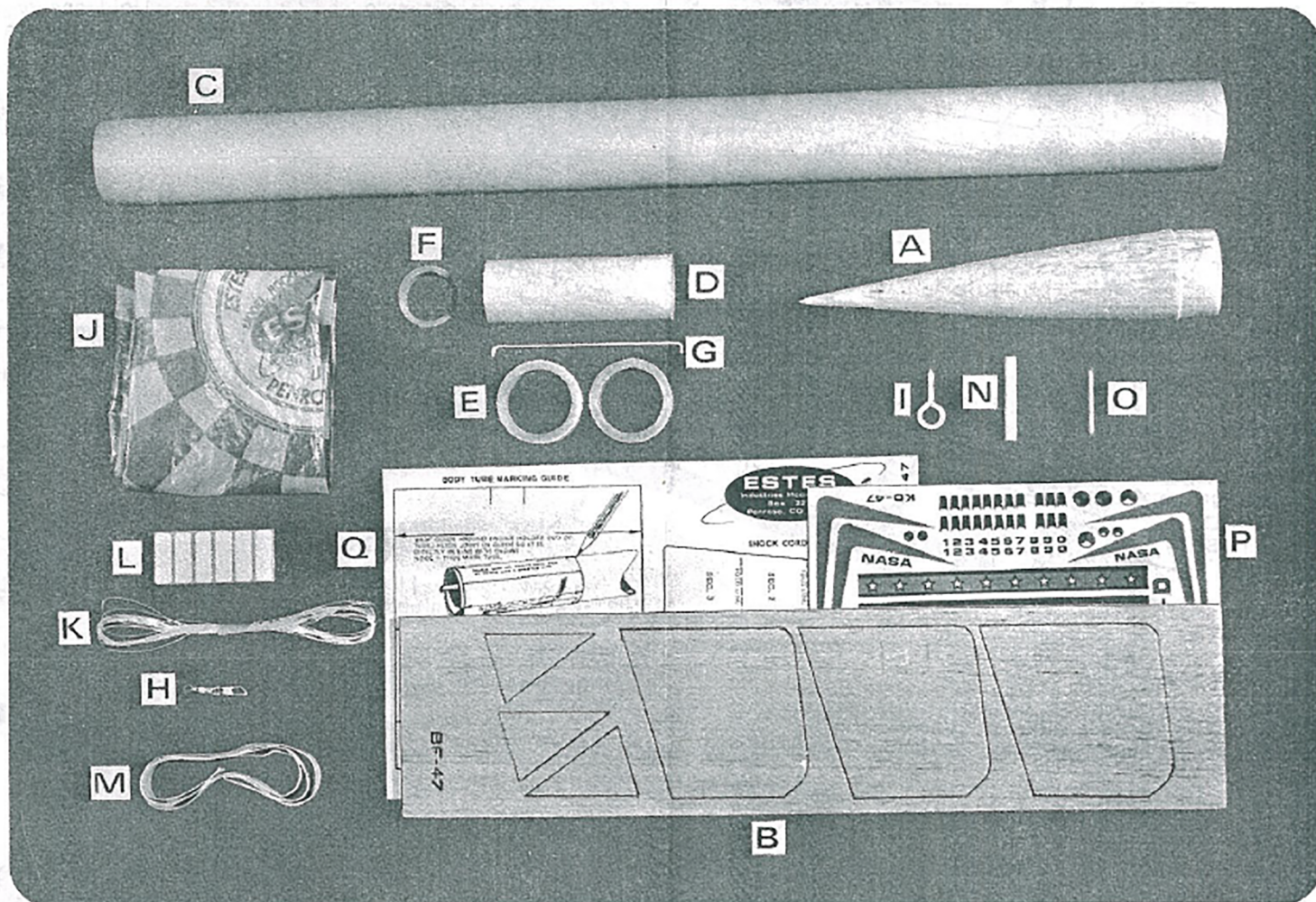




Astron

CHEROKEE-D

"D" POWER FOR LARGE PAYLOAD CAPACITY
FOR HIGH ALTITUDE PERFORMANCE



PARTS LIST

A	1	Nose Cone	Part #BNC-55AC
B	1	Die Cut Fin Set	#BF-47
C	1	Body Tube	#BT-55V
D	1	Body Tube	#BT-50J
E	2	Spacing Rings	#AR-5055
F	1	Spacing Ring	#AR-2050
G	1	Engine Holder	#EH-2
H	1	Snap Swivel	#SV-12
I	1	Screw Eye	#SE-1
J	1	18" Parachute	#PK-18A
K	1	108" Shroud Line	#SLT-108
L	6	Tape Strips	#TD-2F
M	1	1/4" Shock Cord	#SC-2
N	1	Launch Lug	#LL-2A
O	1	Wood Dowel	#WD-2A
P	1	Decal Sheet	#KD-47
Q	1	Pattern Sheet	#SP-47

RECOMMENDED ENGINES D13-5, D13-7 WITH ADAPTER EM-2050: B6-4, C6-5

In addition to the materials included in your kit you will also need the following tools and materials:

- 1) Modeling knife or single edge razor blade
- 2) Scissors
- 3) Extra-strong white glue
- 4) Ball point pen or pencil
- 5) Fine and extra fine grit sandpaper
- 6) Paint or dope

NOTE: Never apply dope over spray enamels as it will ruin the finish.

Read the entire assembly instructions carefully before beginning work on your model rocket. Start construction, following each step, in order, checking off each step as it is completed. **USE THE CHECKLIST ON THE BACK PAGE.**

RAIL LAUNCHERS ARE RECOMMENDED FOR "D" POWER MODELS!

ASSEMBLY CHECKLIST

- 1-ENGINE MOUNT BASIC ASSEMBLY
- 2-INSTALL SPACING RINGS
- 3-INSTALL MOUNT IN BODY TUBE
- 4-SHOCK CORD AND MOUNT
- 5-FIN ATTACHMENT
- 6-GLUE ON LAUNCH LUGS
- 7-PARACHUTE
- 8-ATTACH RECOVERY PARTS
- 9-PAINTING
- 10-APPLY DECALS

COUNTDOWN CHECKLIST

(13) Pack flameproof recovery wadding into the body tube from the top. The wadding should fill the tube for a distance of about 1-1/2" and fit along the sides of the tube (6 or 7 squares of RP-1A are recommended). Hold the parachute between two fingers at its center and pass the other hand down it to form a "spike" shape. Fold the parachute in half after forming the "spike". Push the folded parachute down into the tube on top of the wadding and pack the shroud lines and shock cord in on top of the parachute. Slide the nose cone into place.

(12) Install an electrical igniter in the engine as directed in the instructions which came with the engine.

(11) Insert the engine into the engine holder tube until its forward end rests against the engine hook.

(10) Remove the safety interlock or key from the launch control panel. (If a simple spring switch is used, install the protector on the switch to separate the contacts.) Carry the key or interlock on the person of the launch control officer.

(9) Place the rocket on the launcher. Check to be sure the panel is disarmed. Clean the micro-clips and attach them to the igniter.

(8) Clear the launch area, alert the recovery crew and the trackers.

(7) Check for low flying aircraft and unauthorized persons in the recovery area.

(6) Arm the launch panel.

(5)

(4)

(3)

(2)

(1)

LAUNCH!

MODEL ROCKETRY

ESTES

Industries Incorporated
Box 227,
Penrose, Colo. 81240

SCIENTIFIC SPACE AGE HOBBY

ASSEMBLY CHECKLIST

- 1-ENGINE MOUNT BASIC ASSEMBLY
- 2-INSTALL SPACING RINGS
- 3-INSTALL MOUNT IN BODY TUBE
- 4-SHOCK CORD AND MOUNT
- 5-FIN ATTACHMENT
- 6-GLUE ON LAUNCH LUGS
- 7-PARACHUTE
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(5)

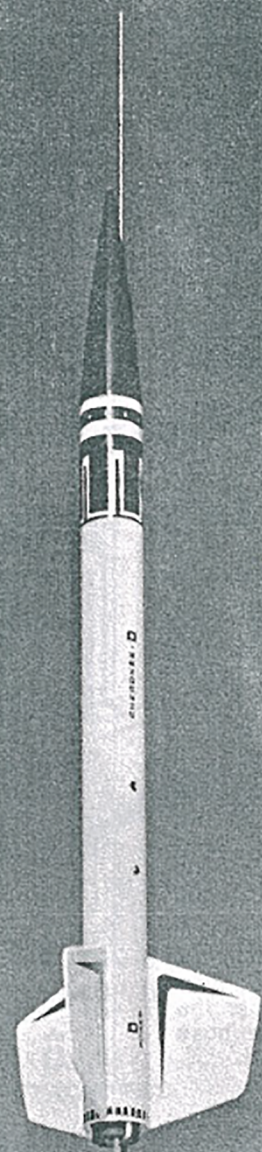
(4)

(3)

(2)

(1)

LAUNCH!

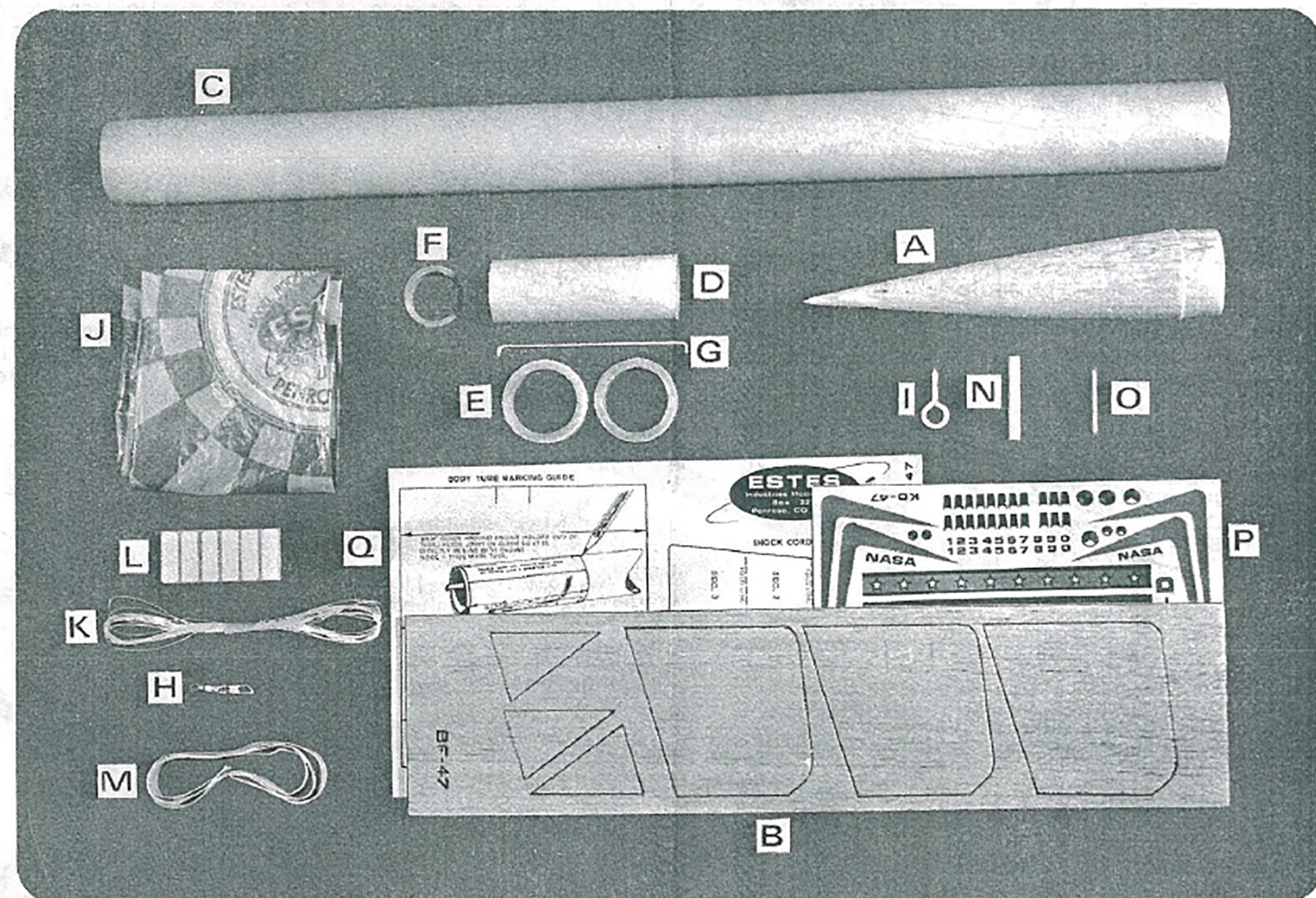


Astron

CHEROKEE-D

ESTES

"D" POWER FOR LARGE PAYLOAD CAPACITY
FOR HIGH ALTITUDE PERFORMANCE



PARTS LIST

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I	1	Screw Eye	#SE-1
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K	1	108" Shroud Line	#SLT-108
L	6	Tape Strips	#TD-2F
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N	1	Launch Lug	#LL-2A
O	1	Wood Dowel	#WD-2A
P	1	Decal Sheet	#KD-47
Q	1	Pattern Sheet	#SP-47

RECOMMENDED ENGINES
D13-5, D13-7

WITH ADAPTER EM-2050:
B6-4, C6-5

In addition to the materials included in your kit you will also need the following tools and materials:

- 1) Modeling knife or single edge razor blade
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- 4) Ball point pen or pencil
- 5) Fine and extra fine grit sandpaper
- 6) Paint or dope

NOTE: Never apply dope over spray enamels as it will ruin the finish.

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RAIL LAUNCHERS ARE RECOMMENDED FOR "D" POWER MODELS!

MODEL ROCKETRY

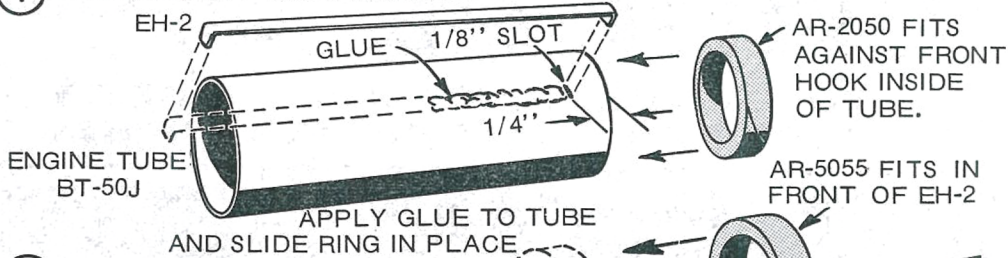
ESTES

Industries Incorporated
Box 227
Penrose, Colo. 81240

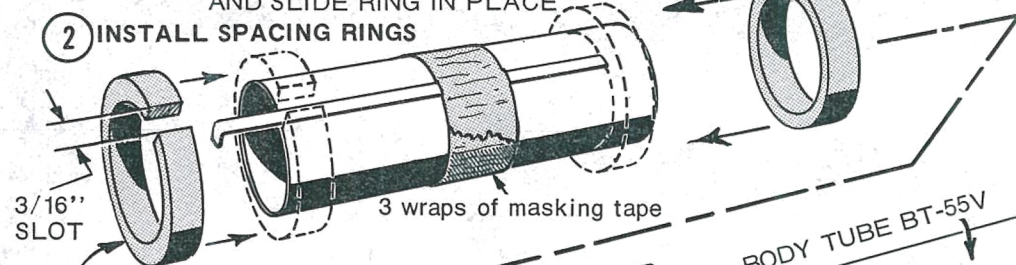
SCIENTIFIC SPACE AGE HOBBY

ASSEMBLY INSTRUCTIONS

1 ENGINE MOUNT BASIC ASSEMBLY

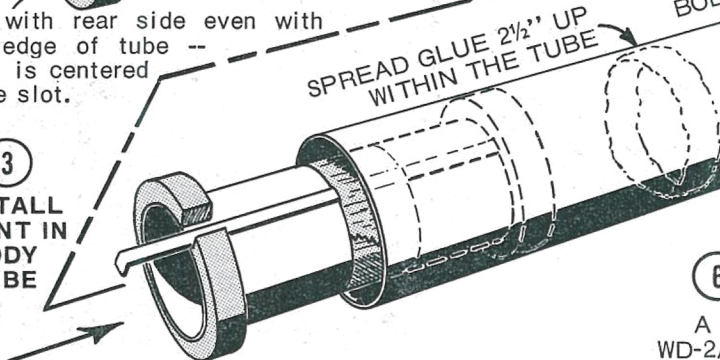


2 INSTALL SPACING RINGS



Fits with rear side even with rear edge of tube -- EH-2 is centered in the slot.

3 INSTALL MOUNT IN BODY TUBE



Insert engine mount into the body tube until the rear edge of the slotted ring rests 1/16" inside the end of the body tube. Apply a good fillet of glue around the ring/tube joint.

5 FIN ATTACHMENT

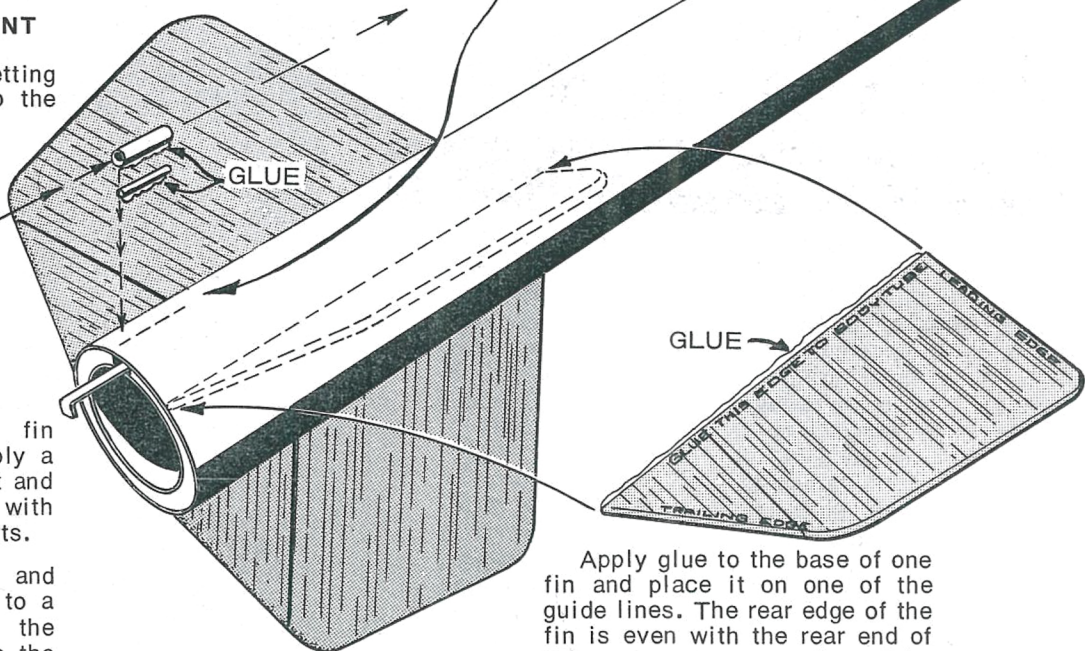
See the marking guide for setting fin guide lines relative to the engine hook.

NOTE:

Sight through the rear lug to be sure front lug is properly aligned on body.

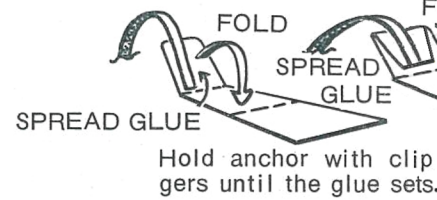
Carefully remove the fin pieces from the stock. Apply a line of glue to the front part and add the rear edge. Repeat with the other two sets of fin parts.

Sand the leading, tip and trailing edges of each fin to a rounded shape. Sand flat the edges which are to glue to the body tube. Both sides of each fin are sanded smooth as a first preparation for step 9.



Apply glue to the base of one fin and place it on one of the guide lines. The rear edge of the fin is even with the rear end of the body tube. The fin sticks straight out from the body tube. Repeat this action with the other two fins.

4 SHOCK CORD AND MOUNTING



Spread a film of glue on the inside of the tube wall in the area shown. . .

After the unit has been in place and is dry, cut lug at an angle as shown.

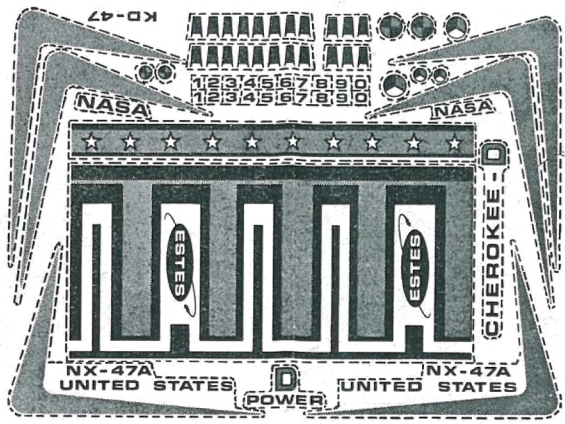
6 GLUE ON LAUNCH LUGS

A 5/8" long piece of the WD-2A dowel is glued to a 5/8" long piece of launch lug, then assembly is glued in place. This procedure is repeated for the front lug.

Tie on

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10 APPLY DECALS



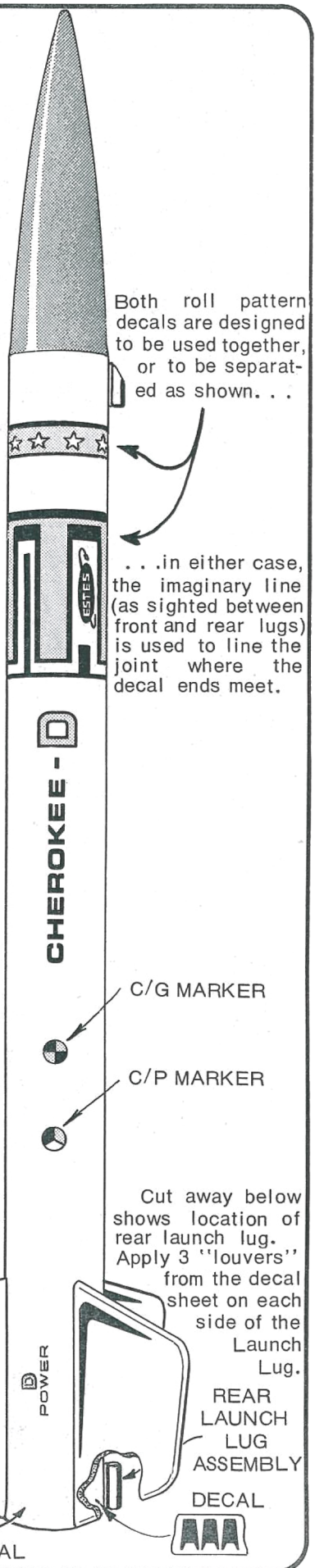
Dotted lines on the reproduction of this kit decal sheet (above) show the maximum area to allow around each individual decal when cutting them from the sheet.

Drawing to the right shows positions of each of the decals used on the original model.

9 PAINTING

Apply sanding sealer to the fins and the nose cone. Sand each until smooth to the touch. Repeat as necessary to fill all grain marks.

Paint work consists of a white base coat over everything, then a finish coat of white over the body tube and fins. The nose cone is painted a solid red.



Both roll pattern decals are designed to be used together, or to be separated as shown...

...in either case, the imaginary line (as sighted between front and rear lugs) is used to line the joint where the decal ends meet.

C/G MARKER

C/P MARKER

Cut away below shows location of rear launch lug.

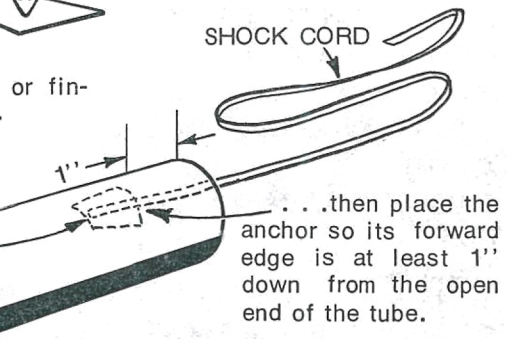
Apply 3 "louvers" from the decal sheet on each side of the Launch Lug.

REAR LAUNCH LUG ASSEMBLY
DECAL

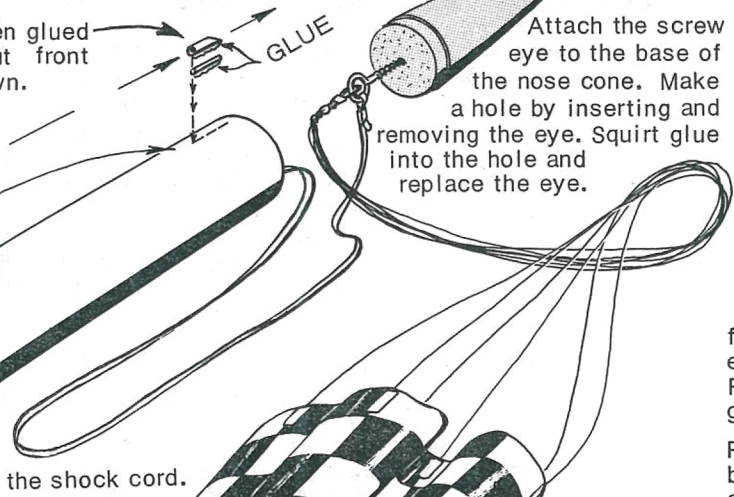
AAAAAAA
DECAL

AAA
DECAL

7 MOUNT Preassemble the shock cord and its anchor. (Anchor is clipped from Pattern sheet SP-47.) See technical section of current catalog.



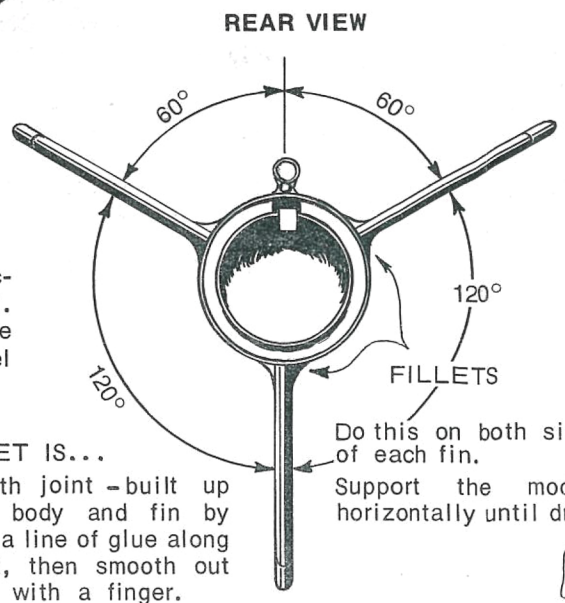
8 ATTACH RECOVERY PARTS



Attach the screw eye to the base of the nose cone. Make a hole by inserting and removing the eye. Squirt glue into the hole and replace the eye.

7 PARACHUTE

Assemble the 'chute as instructed on the parachute material. Attach the snap swivel to the bud lines and clip the swivel to the screw eye.



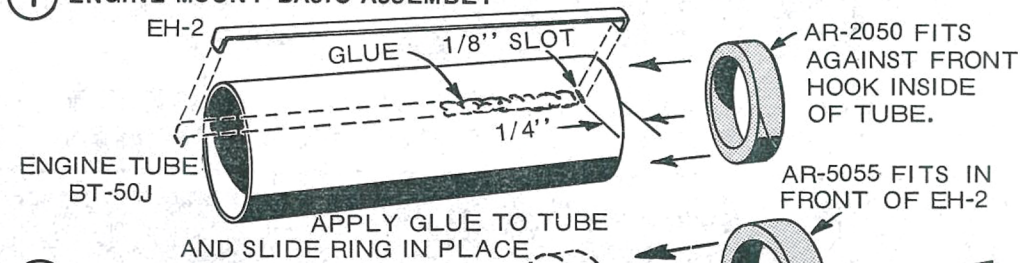
A FILLET IS...

A smooth joint - built up between body and fin by applying a line of glue along the joint, then smooth out the glue with a finger.

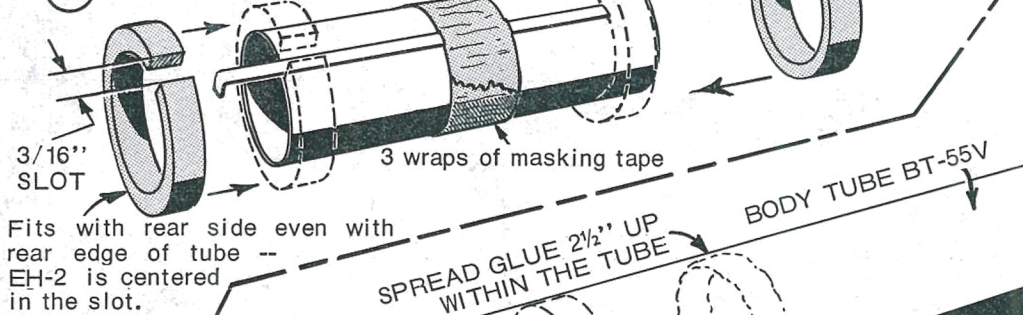
Do this on both sides of each fin. Support the model horizontally until dry.

ASSEMBLY INSTRUCTIONS

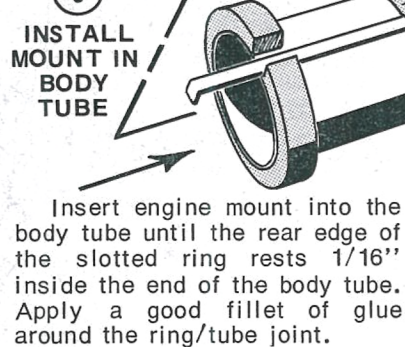
1 ENGINE MOUNT BASIC ASSEMBLY



2 INSTALL SPACING RINGS



3 INSTALL MOUNT IN BODY TUBE



5 FIN ATTACHMENT

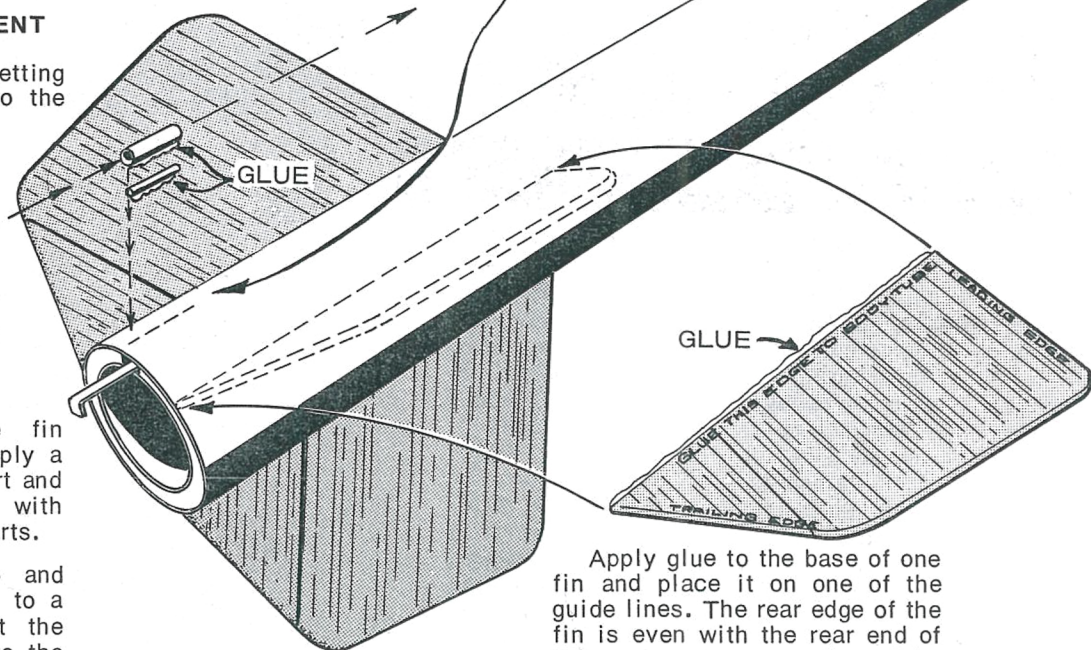
See the marking guide for setting fin guide lines relative to the engine hook.

NOTE:

Sight through the rear lug to be sure front lug is properly aligned on body.

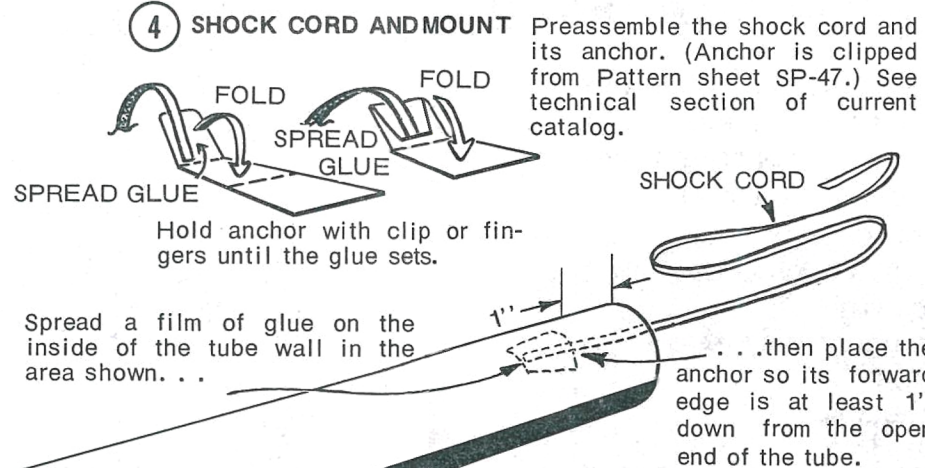
Carefully remove the fin pieces from the stock. Apply a line of glue to the front part and add the rear edge. Repeat with the other two sets of fin parts.

Sand the leading, tip and trailing edges of each fin to a rounded shape. Sand flat the edges which are to glue to the body tube. Both sides of each fin are sanded smooth as a first preparation for step 9.



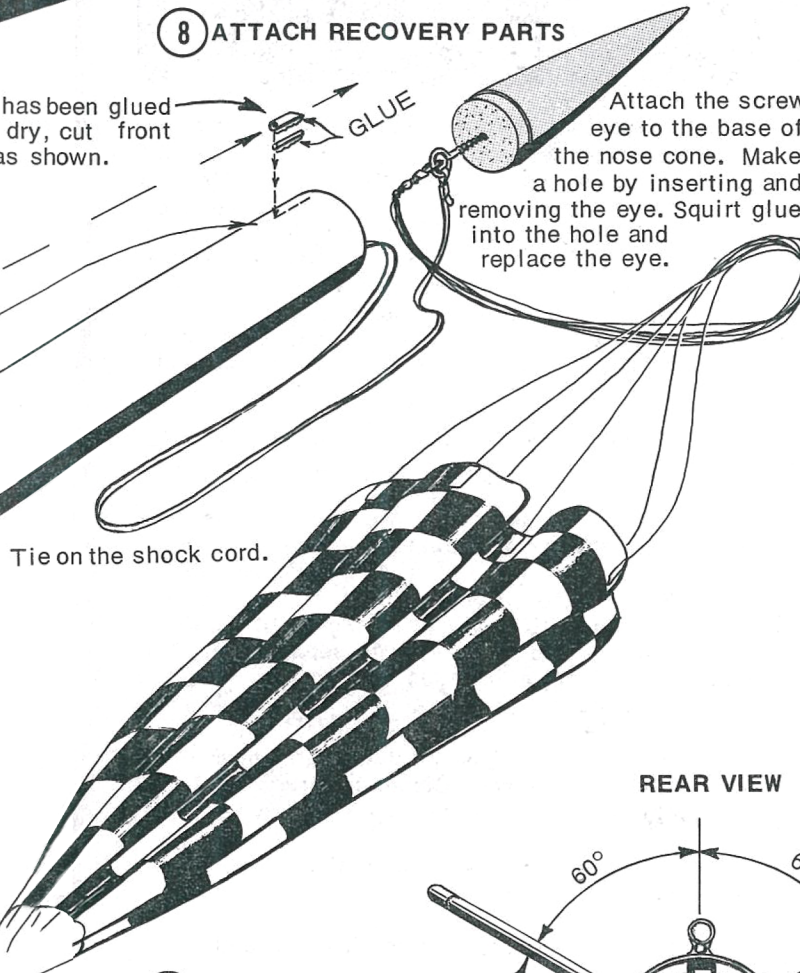
Apply glue to the base of one fin and place it on one of the guide lines. The rear edge of the fin is even with the rear end of the body tube. The fin sticks straight out from the body tube. Repeat this action with the other two fins.

4 SHOCK CORD AND MOUNT



8 ATTACH RECOVERY PARTS

After the unit has been glued in place and is dry, cut front lug at an angle as shown.

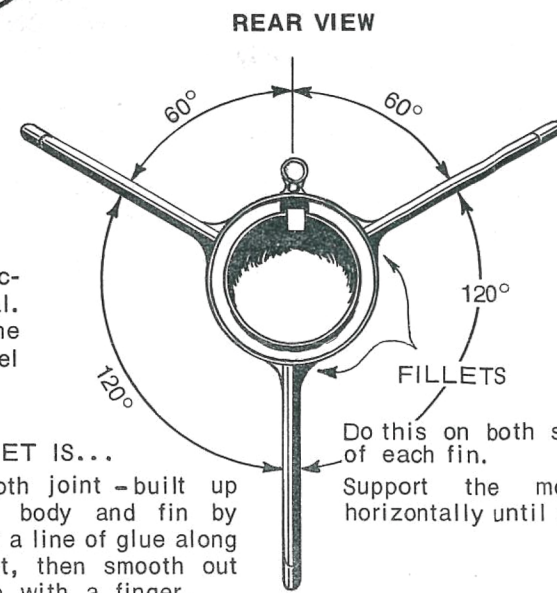


7 PARACHUTE

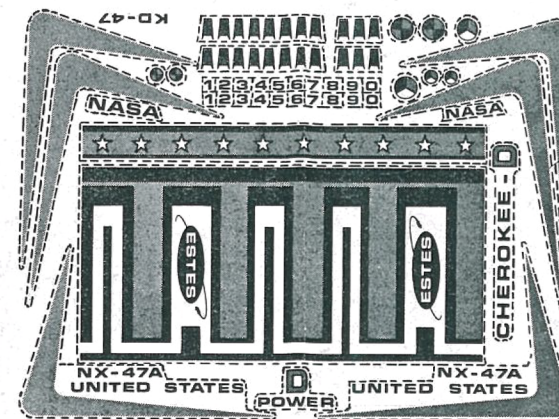
Assemble the 'chute as instructed on the parachute material. Attach the snap swivel to the shroud lines and clip the swivel onto the screw eye.

A FILLET IS...

A smooth joint - built up between body and fin by applying a line of glue along the joint, then smooth out the glue with a finger.



10 APPLY DECALS



Dotted lines on the reproduction of this kit decal sheet (above) show the maximum area to allow around each individual decal when cutting them from the sheet.

Drawing to the right shows positions of each of the decals used on the original model.

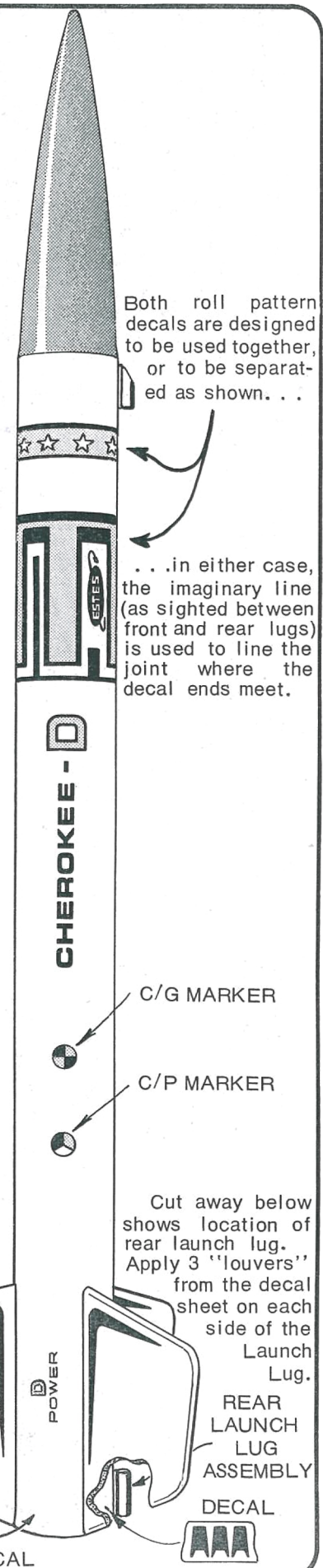
9 PAINTING

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...in either case, the imaginary line (as sighted between front and rear lugs) is used to line the joint where the decal ends meet.



Cut away below shows location of rear launch lug. Apply 3 "louvers" from the decal sheet on each side of the Launch Lug.

BODY TUBE MARKING GUIDE

WRAP GUIDE AROUND ENGINE HOLDER END OF TUBE. ALIGN JOINT IN GUIDE SO IT IS DIRECTLY IN LINE WITH ENGINE HOOK — THEN MARK TUBE.



MARK BODY TUBE AT EACH ARROW POINT

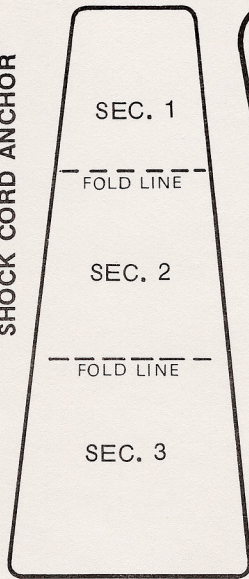
REMOVE GUIDE AND CONNECT EACH PAIR OF MARKS WITH A STRAIGHT LINE

15K24C151

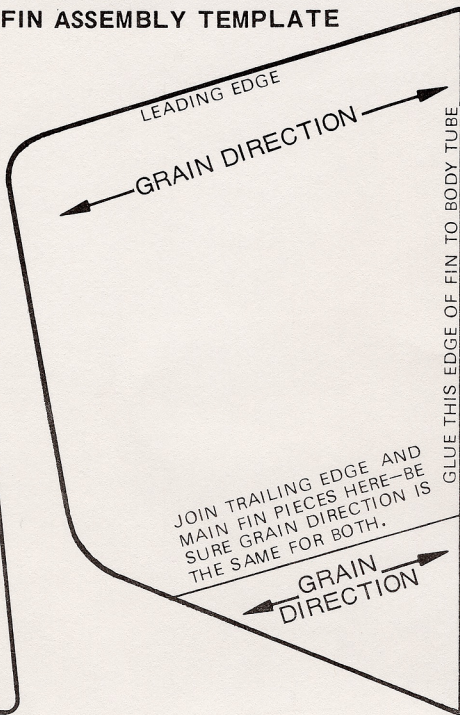
SP - 47

ESTES
Industries Incorporated
Box 227
Penrose, CO 81240

SHOCK CORD ANCHOR



FIN ASSEMBLY TEMPLATE



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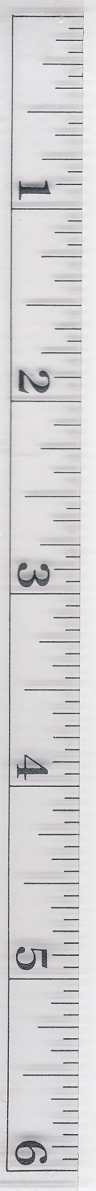
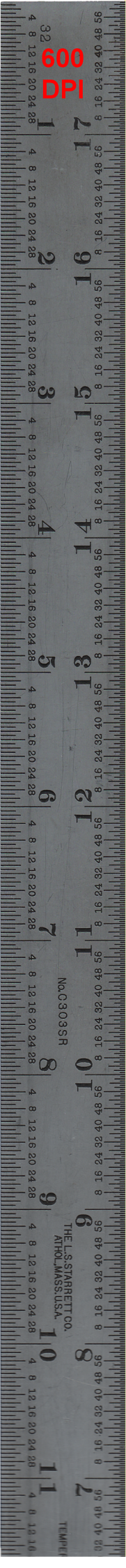
Original (ca. 1970), Estes Astron Cherokee-D (K-47)
Die Cut, Two-Piece Fins

3/32" thick Balsa (Make 3 each)

Scan by Earl L. Cagel Jr.



1 2 3 4 5



Original, ca. 1970, Estes Astron Cherokee-D (K-47), Die Cut Fin
Sheet (Part # BF-47)(Two-Piece Fin Version)
3/32" thick

Scan by: Earl L. Cagel Jr.

600
DPI

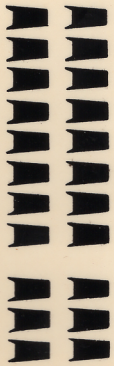


7D-47

NASA



1234567890
1234567890



NASA



ESTES

ESTES

CHEROKEE -

NX-47A
UNITED STATES

POWER

NX-47A
UNITED STATES

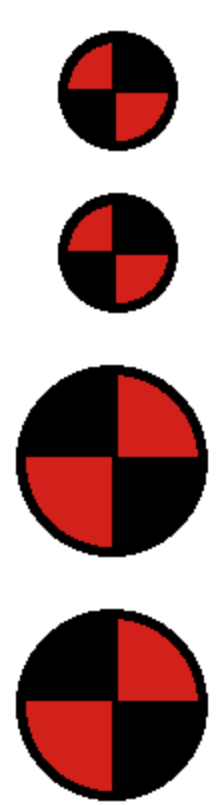




1 inch x 1 inch
(400 pixels to the inch)
From outside edge to outside edge
Renders based on
measurements taken from
scans of actual decals.
Scan by Earl L. Cagel Jr.
Rendered by Jim Parsons

NASA

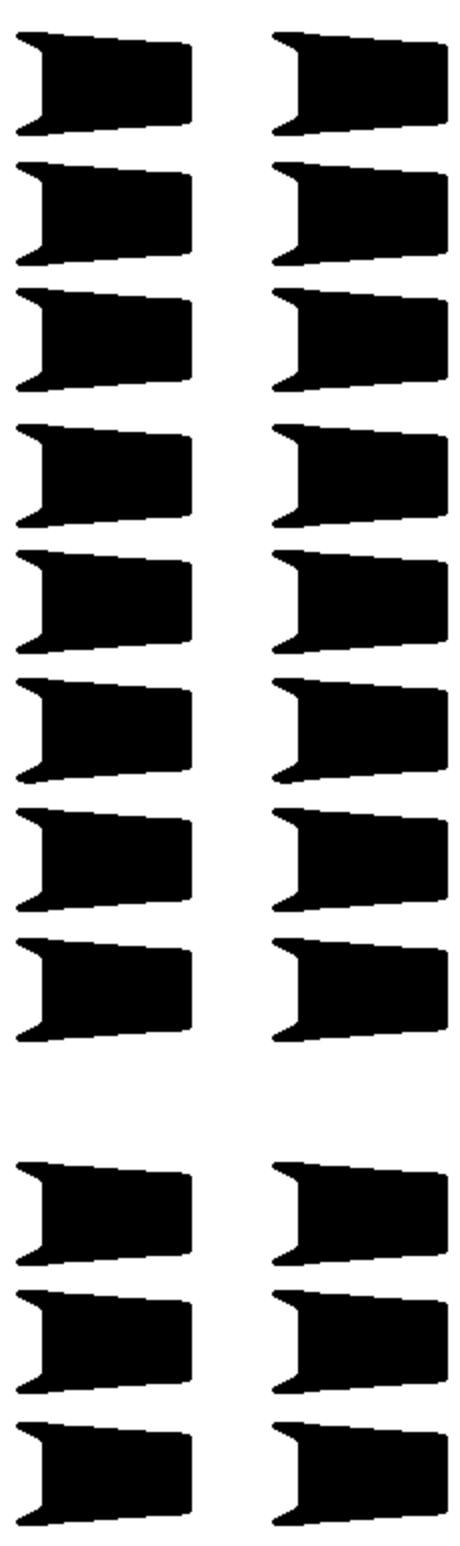
**NX-47A
UNITED STATES**



POWER



CHEROKEE - D



**1 2 3 4 5 6 7 8 9 0
1 2 3 4 5 6 7 8 9 0**

NASA

KD-47

**NX-47A
UNITED STATES**

Estes K-47/1247 Cherokee-D notes

This kit has gone through many changes over the years. Current as of this writing, the Cherokee-E #2408, available at Hobby Lobby, is the same as the later version of the Cherokee-D with an upgraded motor mount to allow it to use the longer 24mm 'E' motors and a longer airframe.

There are 3 versions of this kit included in this post. The Pre-Damon "Astron", the early "Damon", and the later "Damon". I believe there was a version prior to the "Astron" version posted here due to the fact that it came with a cardstock pattern for the fins. This would indicate the builder was to cut the fins out from blank balsa stock yet the version I have also includes a die-cut fin sheet. If anyone has the earlier version please consider sending scans to update this posting.

- Nose cone
 - All versions prior to the later Damon used the balsa BNC-55AC, the later version changed to the plastic PNC-55AC, (71070).
- Body tube
 - All versions prior to the later Damon used the 16.35" long BT-55V, the later version changed to the 18" long BT-55. The stock photo was never updated so they all show the short version.
- Fins
 - The Astron version had 2 piece fins and were die-cut on 3" wide balsa stock. All Damon versions were die-cut on 4" wide balsa stock. All were 3/32" thick. The die has a small error where one of the fins, center, appears to have a slight concave at the tip. This is not consistent with the other 2 fins. This can be clearly seen on the scan with the outline overlay.
- Recovery system
 - All versions call out the PK-18A. As seen in the parts layouts, the Astron checkerboard switched over to the Damon logo parachute even though the early Damon package found on line shows the Astron chute in the Damon package.
- Decals
 - The pre-Damon version has the Astron orbit logo and the later Damon version have the Damon logo. The Damon version replaced the KD-47 with part number 37045.
- Other
 - All balsa nose cone versions came with a screw eye that is absent on the plastic nose cone versions.
 - The pre-Damon version came with a snap swivel missing on all later versions.
 - The pre-Damon version came with a wood dowel lug standoff missing on all later versions.
 - The pre-Damon and early-Damon versions used tape for the hook retainer; the later Damon version came with a hold down strap on the pattern sheet.
 - The early-Damon parts layout shows the pre-Damon decal yet it came with the Damon logo decal.
 - The early-Damon packaging still had the Astron orbit logo on the face card but had the Damon logo on the hang tag.

PARTS LIST KIT NO. K-47 - Cherokee-D (Pre-Damon)

Quantity	Description	Type	Number	Detail1	Detail2	Detail3	Detail4	Comment
	BALSA NOSE CONE	BNC-55AC	70274	5.375" long	1.325" dia.	.375" shoulder		
	Die Cut Fin Set	*BF-47	N/A	3" wide	12" long	3/32" thick		Scan
	PAPER BODY TUBE	BT-55V	30392	16.35" long	1.283" ID	1.325" OD	0.021" wall	Glassine
	PAPER BODY TUBE	BT-50J	30362	2.75" long	0.950" ID	0.976" OD	0.013" wall	Glassine
	CENTERING RINGS	AR-5055	30166	.977" ID	1.27" OD	0.25" long	BT-50 in BT-55	Set of 2
	CENTERING RINGS	AR-2050	30164	0.25" long	0.737" ID	0.949" OD	0.106" wall	Green
	ENGINE HOLDER	EH-2	35025	2.8" long	.100" wide	.025" thick		Reg. & D
	Snap Swivels	SV-12	2291	1" long				fishing supply
	Screw Eye (Large)	SE-1	38251	1" long				
	Parachute	PK-18A	35802	18" dia.	18" x 6 Shrouds	LDPE plastic	Red/Yel	Astron Logo
	Shroud Line	SLT-108	38239	108"	.020" diameter	Twisted cotton		For 18" to 24"
	Tape Strip	TD-2F	2297	1/4" wide	3/4" long	Paper	Self-Stick	6x
	Shock Cord	SC-2	85736	18" long	1/4" wide			Rubber
	LAUNCH LUG	LL-2A	38175	5/32" ID	1/8" rod	1.25" long		Mylar
	WOOD DOWEL	WD-2A	85909	1/8" dia.	1" long	`		Wood
	Decal Sheet	KD-47	N/A	4.5" wide	6" long	Red/Blk	Waterslide	Scan
	Pattern Sheet	SP-47	N/A	5.5" wide	8.5" long	Cardstock		Scan
*	BALSA FIN STOCK	BFS-30L	3170	3" wide	12" long	3/32" thick	0.09375	



Astron

CHEROKEE-D

"D"
ENGINE POWER



DIE CUT FINS

COLORFUL DECAL

\$2.75

Design by Gene Street

CHEROKEE-D

KIT NO. K-47 \$2.75

SPECIFICATIONS

Length: 16.6 in.
Body Dia: 1.325 in.
Weight: 2.75 oz.
Fin Span: 6 in.

RECOMMENDED ENGINES

D13-5 D13-7

WITH ADAPTER EM-2050

B6-4 C6-5

PARACHUTE RECOVERY