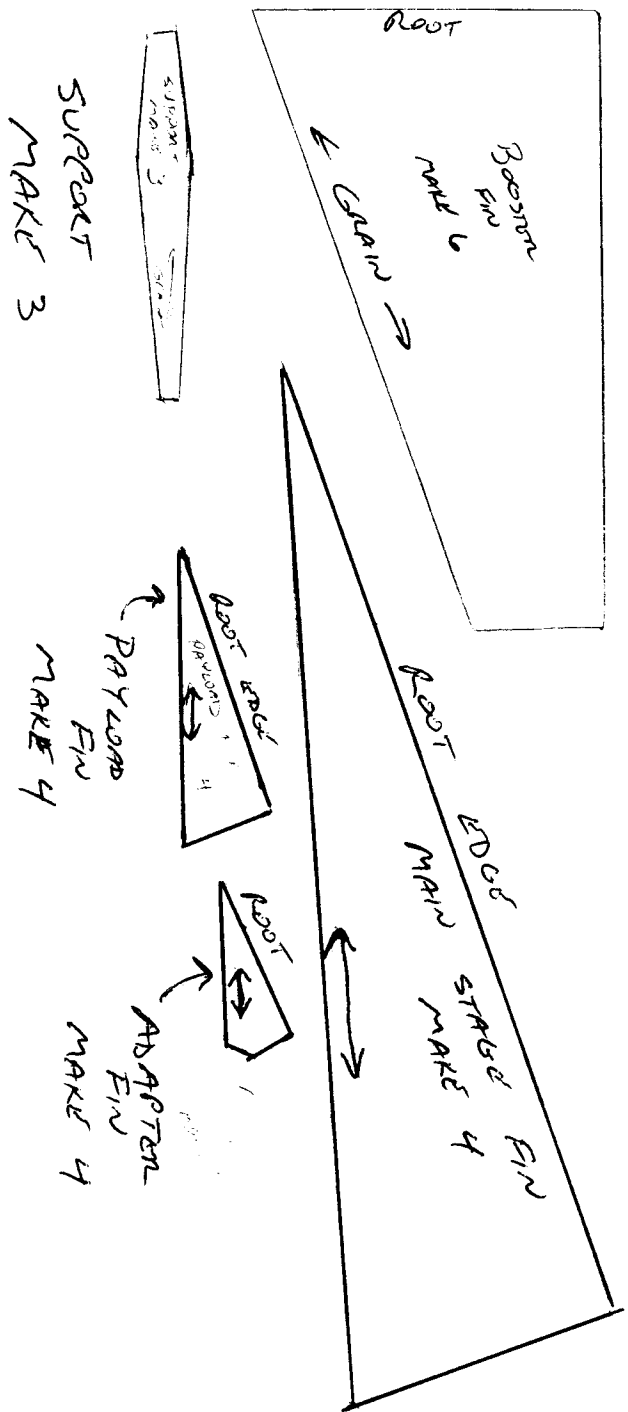


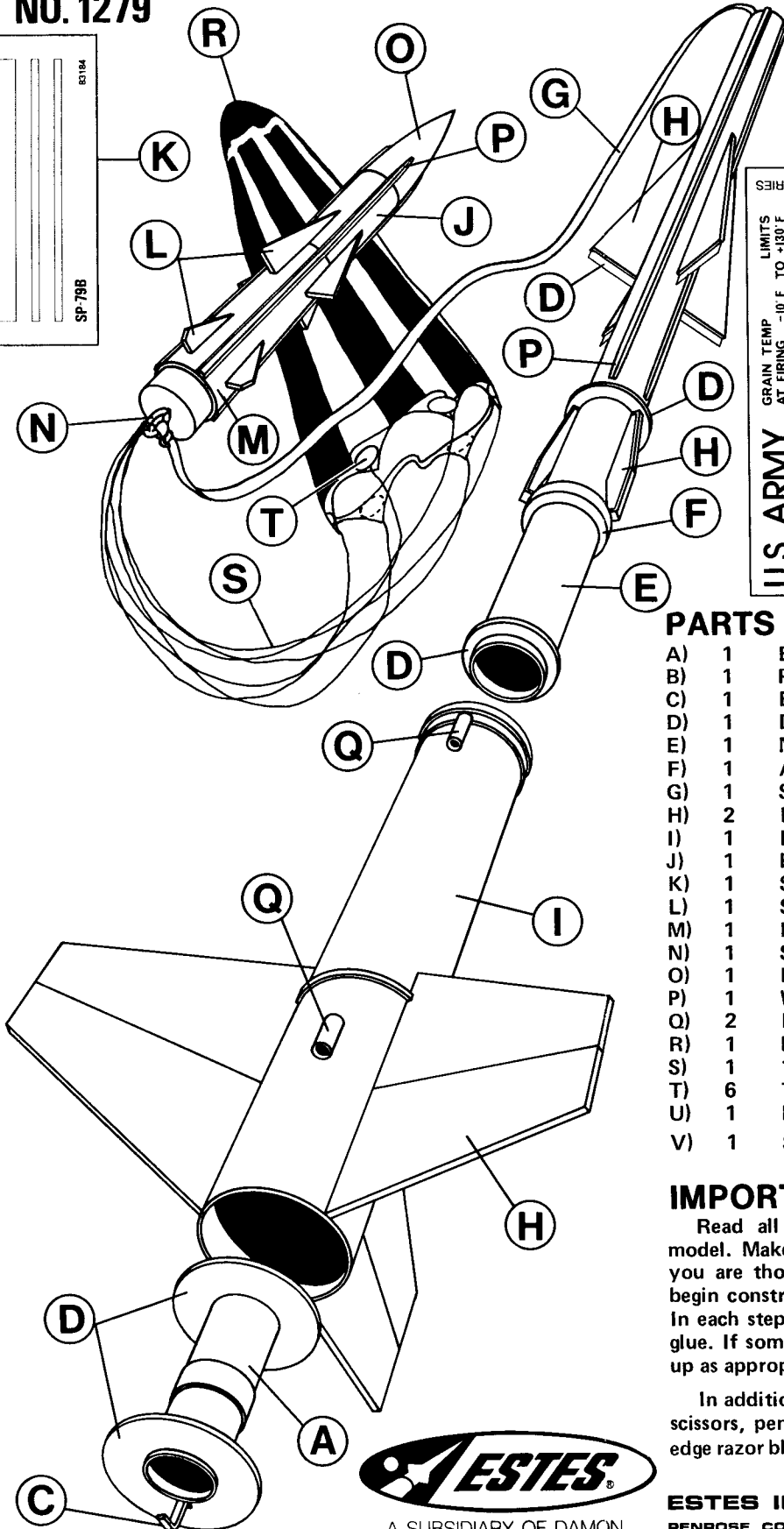
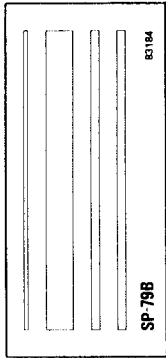


NILB-ASTA X



NIKE AJAX

KIT NO. 1279



U.S. ARMY
 U.S. ARMY
 U.S. ARMY
 U.S. ARMY

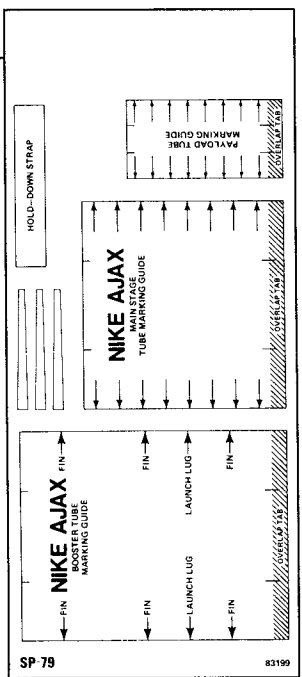
GRAIN TEMP LIMITS
 AT FIRING -10° F TO +180° F

STORAGE TEMP LIMITS
 -20° F TO 130° F

LOT RAD 25-88
 SERIAL NO. 3842
 LOADED 31-88

DWG NO. 8030045
 1336-V190
 ROCKET MOTOR MSEI

KD-79
 FN 37088
 ESTES INDUSTRIES



PARTS LIST		PART NO.
A)	1 Engine Mount Tube (type BT-20J)	30326
B)	1 Pattern Sheet (type SP-79)	83199
C)	1 Engine Hook (type EH-2)	35025
D)	1 Die-Cut Card Sheet (type TA-79)	30060
E)	1 Main Stage Body Tube (type BT-50) . . .	30352
F)	1 Adapter Ring (type AR-5055)	30166
G)	1 Shock Cord (type SC-1)	85730
H)	2 Large Balsa Fin Sheet (type BF-79A) . .	32291
I)	1 Booster Body Tube (type BT-55KA) . . .	30387
J)	1 Payload Body Tube (type BT-20AE) . . .	30318
K)	1 Self-Adhesive Sheet (type SP-79B) . . .	83184
L)	1 Small Balsa Fin Sheet (type BF-79B) . .	32292
M)	1 Balsa Adapter (type TA-2050B)	70009
N)	1 Screw Eye (type SE-2A)	38252
O)	1 Balsa Nose Cone (type BNC-20CB) . . .	70231
P)	1 Wood Strip Sheet (type HS-79)	32079
Q)	2 Launch Lugs (type LL-2AM)	38176
R)	1 Parachute (type PK-18A)	85566
S)	1 108" Shroud Line Cord (type SLT-108) .	38239
T)	6 Tape Discs (type TD-3F)	38406
U)	1 Decal (type KD-79)	37088
V)	1 Shock Cord Mount (type SCM-50)	84444
	(Not Shown)	

IMPORTANT:

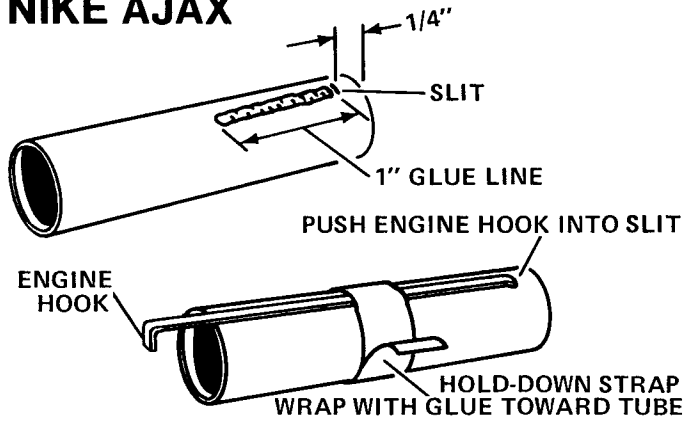
Read all instructions before beginning work on your model. Make sure you have all parts and materials. When you are thoroughly familiar with the assembly procedure, begin construction. Check off each step as you complete it. In each step, test-fit the parts together before applying any glue. If some part doesn't fit properly, sand lightly or build up as appropriate for precision assembly.

In addition to the parts included in this kit you will need scissors, pencil, white glue, a sharp model knife (or single edge razor blade), ruler, sandpaper, sanding sealer, and paint.

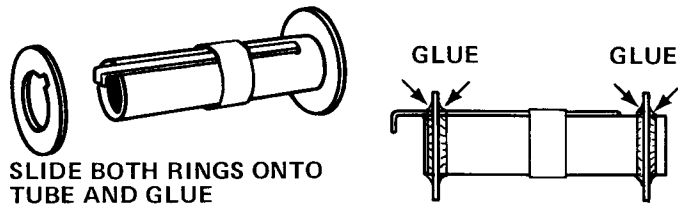


ESTES INDUSTRIES
 PENROSE, COLO. 81240

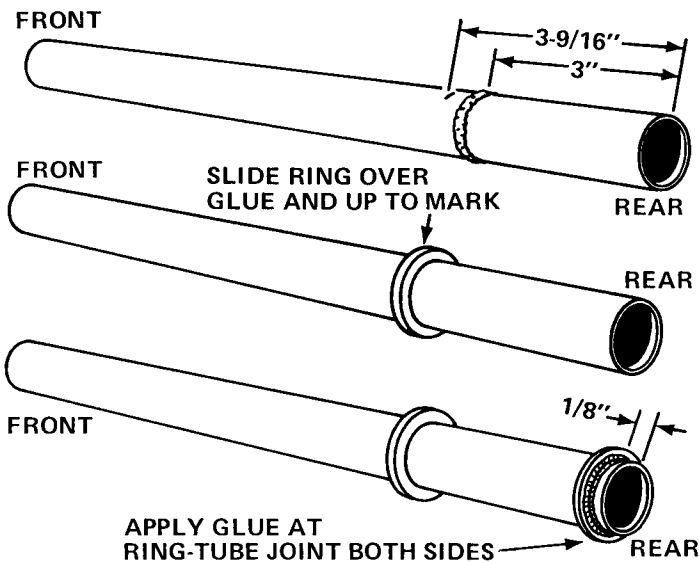
ASSEMBLY INSTRUCTIONS NIKE AJAX



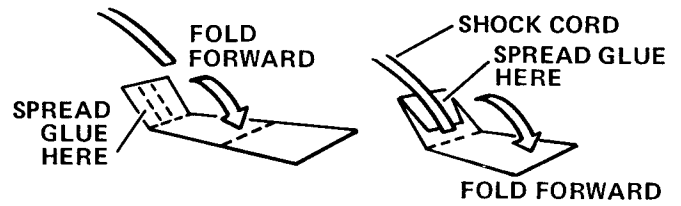
1 Mark the engine mount tube (part A) 1/4" from one end. Cut a 1/8" long slit in the tube at the mark as shown. Cut out the hold-down strap from the pattern sheet (part B). Apply a 1" long line of glue to the tube as shown. Push one end of the engine hook (part C) into the slit and press the main part of the hook into the glue. Apply glue to one side of the hold-down strap and wrap it tightly around the middle of the tube over the engine hook.



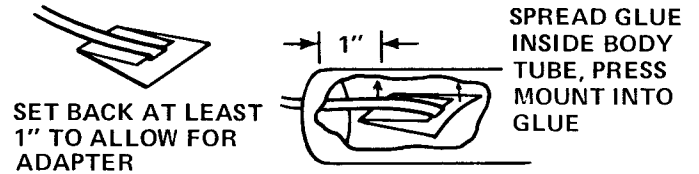
2 Separate the two rings with the smaller center holes from the die-cut card sheet (part D). Slide the notched ring onto the end of the engine mount tube from which the hook projects. Slide the other ring onto the opposite end of the tube. Apply a line of glue at the ring-tube joint on both sides of each ring. Let this assembly dry.



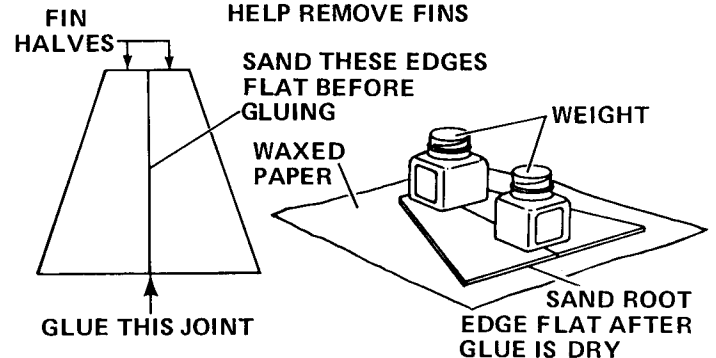
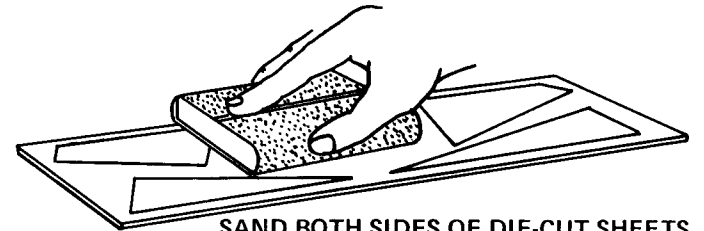
3 Mark the main stage body tube (part E) 3-9/16" from one end. Apply a line of glue around the tube about 3" from this end. Slide the main adapter ring (part F) onto this end of the tube, over the glue, and up to the mark. Do not pause while positioning the ring. Wipe excess glue away. Separate the remaining large ring from the die-cut card sheet. Slide this onto the tube at the same end as the main adapter ring and position it 1/8" from the end. Apply a line of glue at the ring-tube joint on both sides. Let this assembly dry.



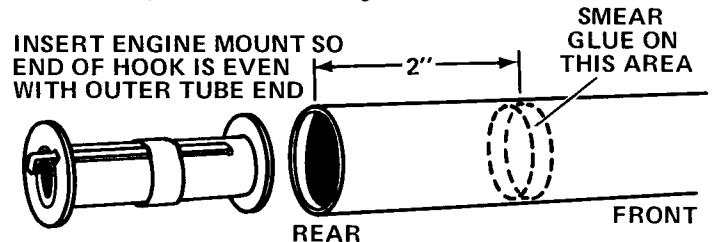
4 Cut out the shock cord mount (part V). Crease it on the dotted lines by folding. Spread glue on the first section (1) and lay the end of the shock cord (part G) into the glue. Fold over and apply glue to the back of the first section and the exposed part of section 2. Clamp the unit together with your fingers until the glue sets.



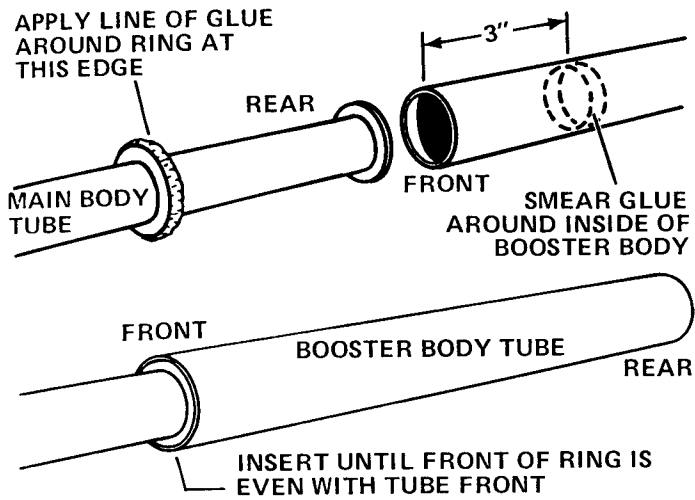
5 Apply glue to the inside of the main stage body tube (part E) at the end opposite the rings over an area about 1" to 2" from the end. The glued area should be the same size as the shock cord mount. Press the mount into the glue as shown and hold it until the glue sets.



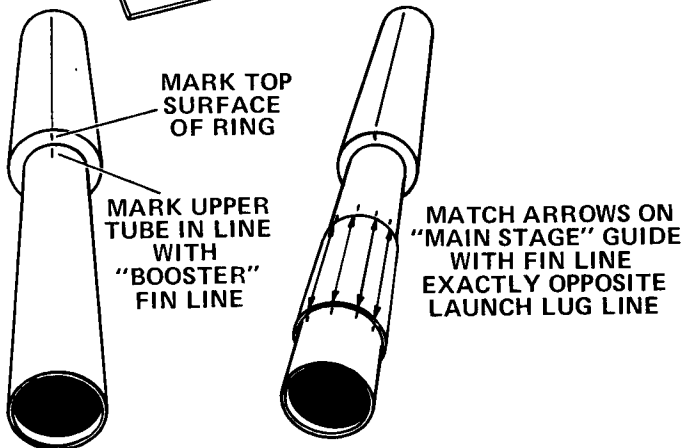
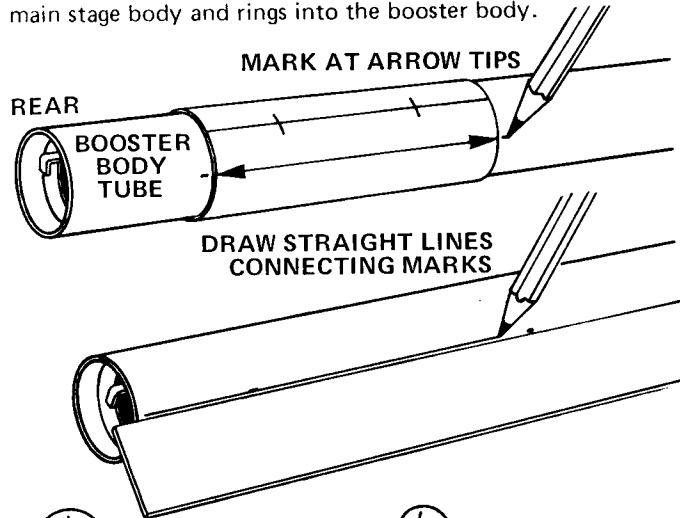
6 Sand both sides of the two large balsa sheets (part H) until smooth. Carefully remove the booster fin pieces, using a sharp knife or single edge razor blade to free the edges of the parts. Glue the booster fins together as shown. Lay the fin assemblies flat on a piece of waxed paper and weigh down to hold in position while the glue dries.



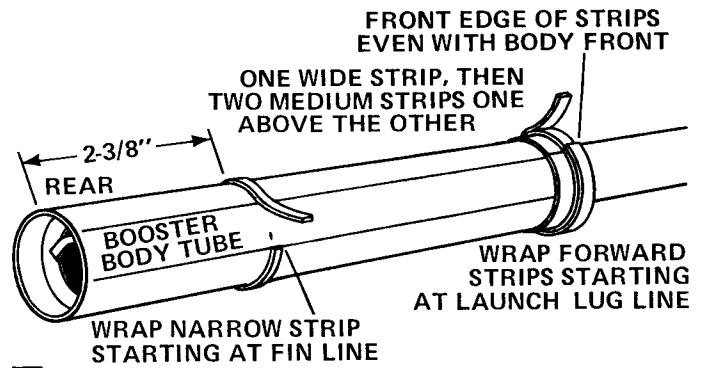
7 Apply a line of glue around the inside of the booster body tube (part I), 2" from one end. Insert the engine mount assembly, unnotched ring first, until the projecting end of the engine hook is even with the end of the body tube. Apply a line of glue to the joint between the rear ring and the body. Set the tube on its forward end while the glue dries.



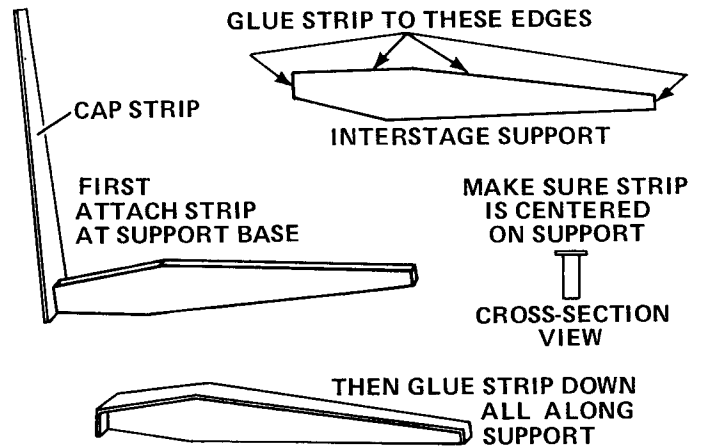
8 Smear glue around the inside of the booster body tube about 3" from the front end. Apply a small line of glue around the rear edge of the thick ring on the main stage body as shown. Working quickly, insert the rings into the booster body until the front surface of the forward (thick) ring is even with the front of the booster body. Do not pause while inserting the main stage body and rings into the booster body.



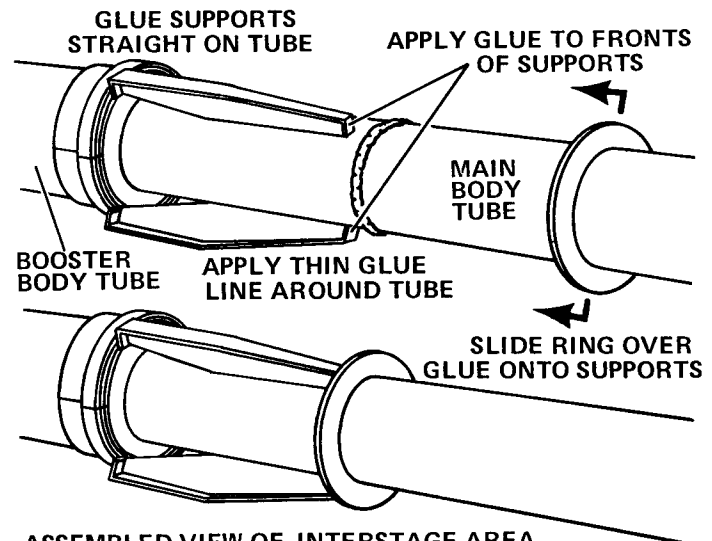
9 Cut out the three tube marking guides from the pattern sheet. Wrap the booster guide around the booster tube and mark the tube at each arrow, front and rear. Draw a straight line connecting each matching front and rear mark (Use a ruler when drawing lines.) and extending the length of the tube. Mark the top of the adapter ring and the main stage body exactly in line with all three fin lines on the booster. Locate the fin line opposite the launch lug line. Wrap the main stage marking guide around the main stage body with one arrow exactly in line with this fin line (opposite the launch lug). Mark the main stage body at each arrow and draw lines the length of the tube through each pair of marks. Finally, mark the payload body tube (part J) in the same way as the other tubes.



10 Carefully cut out the printed strips from the self-adhesive sheet (part K). Mark the "booster" body 2-3/8" from the rear. Wrap the narrowest strip around the body at this point, starting and ending at a fin line. Trim the length of the strip so it fits exactly around the tube. Wrap the widest strip around the front of the "booster" body, starting at the launch lug line. Trim it to length, and follow with the two remaining strips, one over the other, even with the front. Start and end each at the launch lug line.

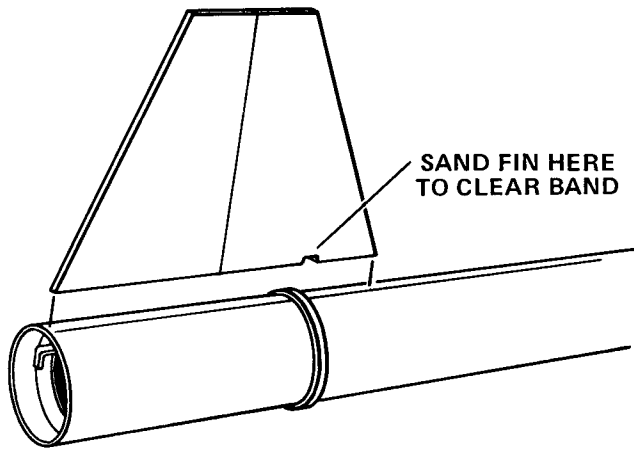


11 Separate three interstage supports from the die-cut balsa. (The 4th piece is extra.) Cut out the three cap strips from the pattern sheet. Glue a cap strip to each support piece, starting with the wide edge at the base of the support as shown.

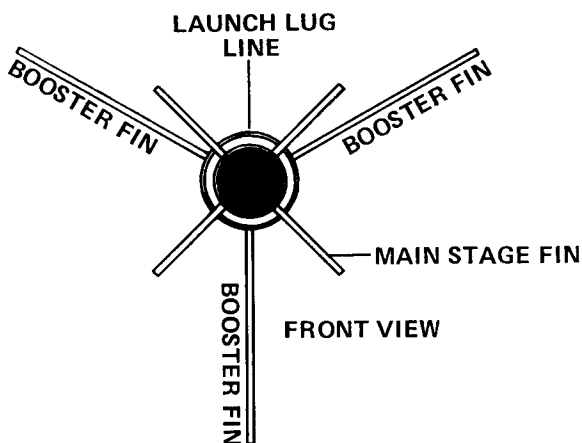
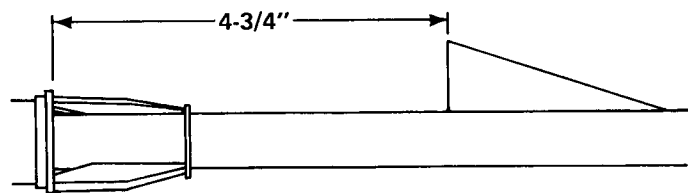
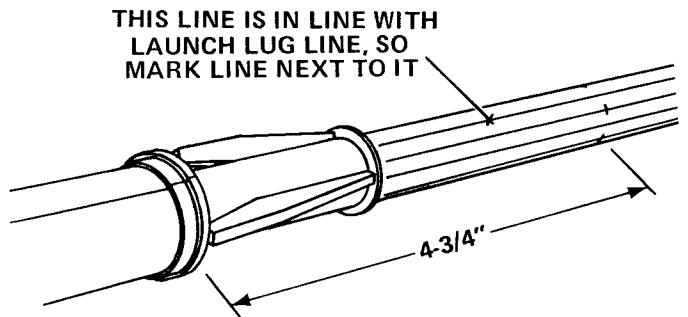


ASSEMBLED VIEW OF INTERSTAGE AREA

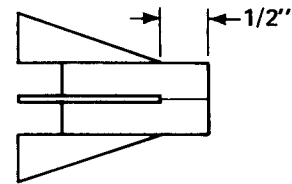
12 Glue the three support pieces to the front of the "booster" and the body of the "main stage." The rear of each support should be centered on a booster fin line, and the support should be perfectly straight on the tube. Apply a thin line of glue around the tube just ahead of the supports and apply a spot of glue to the front of each support. Separate the remaining ring from the die-cut card sheet and slide it over the body and down in place on the supports.



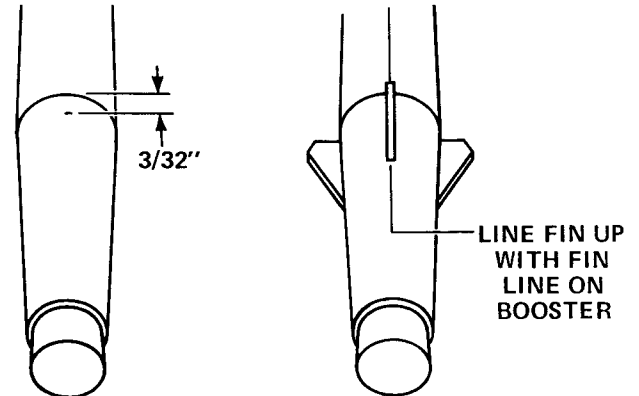
□ **13** Install the fins on the booster. Sand a small notch in the root edge of each booster fin to fit over the self-adhesive band. Glue the booster fins in place, centered on the fin lines, with their rear edges even with the rear of the tube.



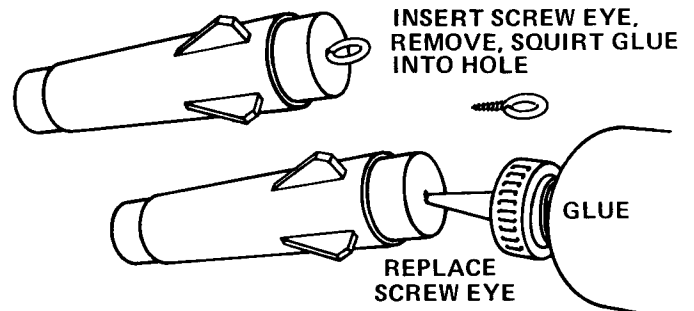
□ **14** Before installing main stage fins, locate the main stage alignment line which is directly in line with the launch lug line. Now move over one line to the right and mark this line 4-3/4" from the front of the booster. Mark every other line around the main stage at the same distance. Glue the main stage fins to the marked lines so the rear of each fin is on the mark and the fin is centered on its alignment line.



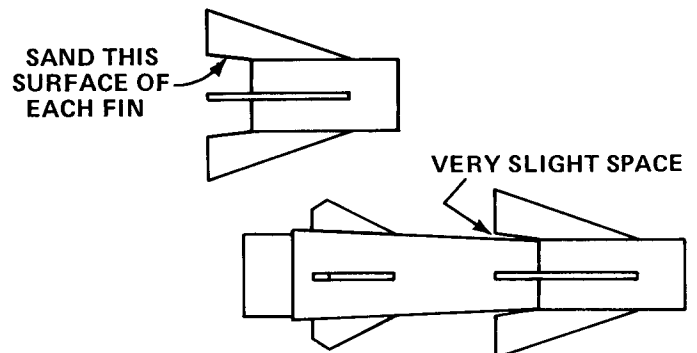
□ **15** Mark every other line on the payload tube 1/2" from one end. Separate the larger (upper) fins from the small die-cut balsa sheet (part L). Glue the fins to the marked lines so the front of each fin is on the mark and the rear of the fin extends about 5/16" beyond the tube end.



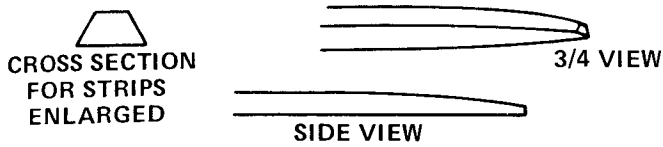
□ **16** Slide the balsa adapter (part M) onto the front of the main body. Mark the adapter 3-32" from the tube front exactly in line with each fin line on the tube. Glue the remaining small fins to the adapter so their back edges are on the marks. Sight along the body to be sure the fins are straight.



□ **17** Insert the screw eye (part N) into the base of the balsa adapter. Remove screw eye and squirt a small amount of glue into the hole. Re-insert the screw eye.

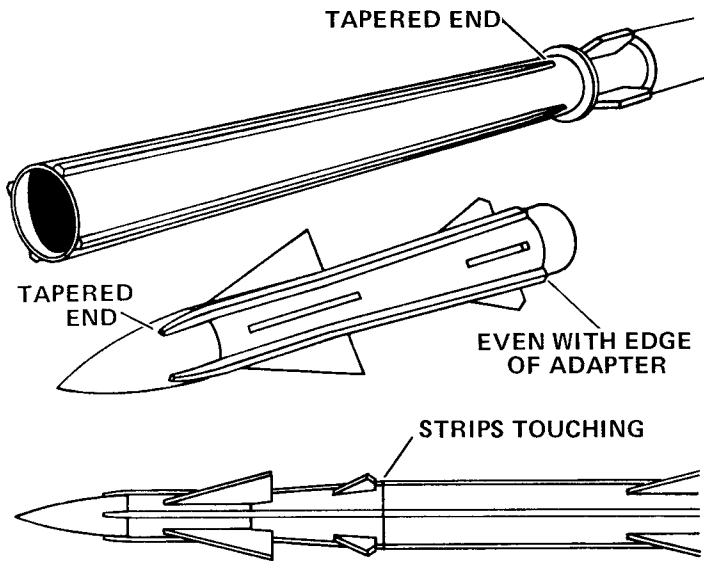


□ **18** Sand slightly the inner surfaces of the forward fins where they project from the payload tube until they will fit over the balsa adapter without quite touching. Place the payload tube on the adapter, turning the tube so all fins line up. Glue the nose cone (part O) into the front of the payload tube. Install this assembly on the front of the main body, again making sure all fins are in line.

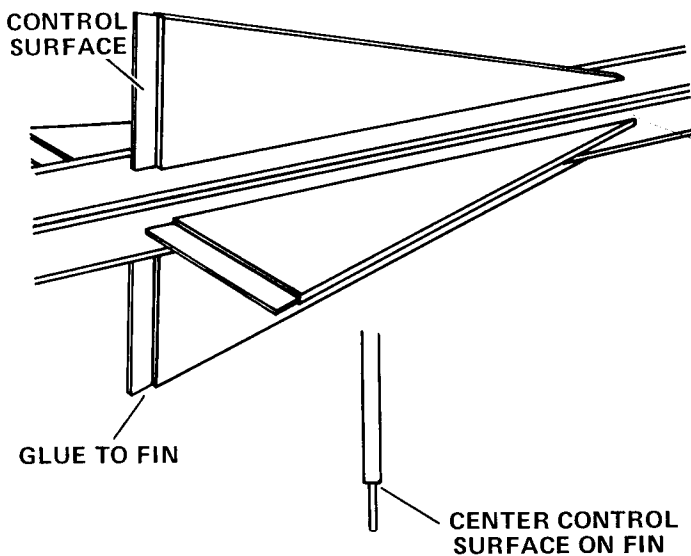


TOP VIEW

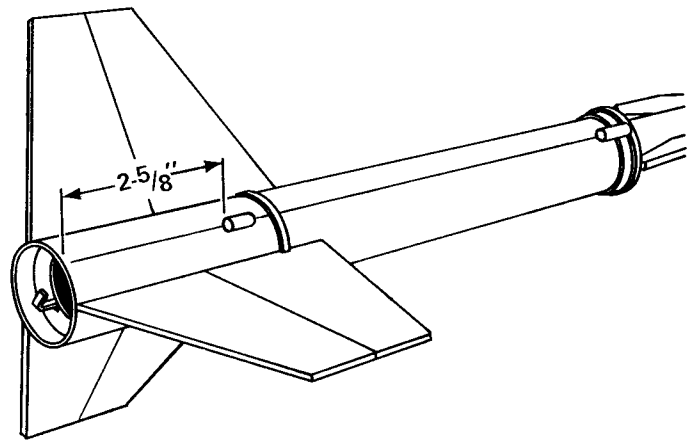
TAPER STRIP ENDS TO THIS SHAPE



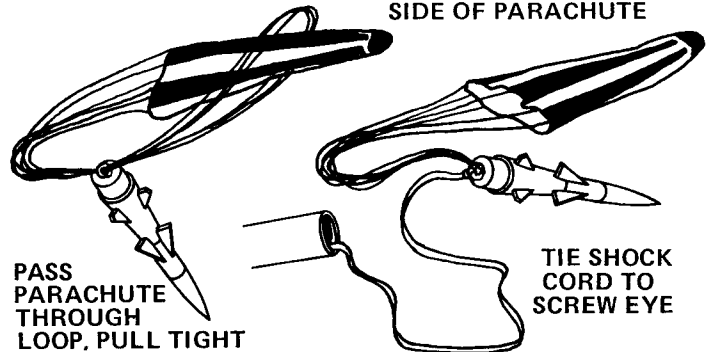
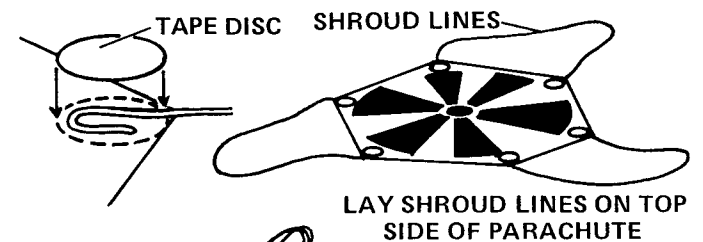
19 Separate the wood strips from the narrow die-cut sheet (part P). Do this by extending the cut through the end of the sheet. Shape all strips to the cross section shown by sanding carefully with fine sandpaper. Taper one end only on each of four strips. Glue these four strips to the main body, even with the tube front and centered on the alignment lines between the fins. The tapered end of each strip must be towards the rear of the rocket. Cut four pieces each 4-7/16" long from the two remaining strips. Taper one end of each piece. Glue these strips to the upper section of the rocket with the tapered end forward, centered on the alignment lines between the fins so they line up with and touch the lower strips.



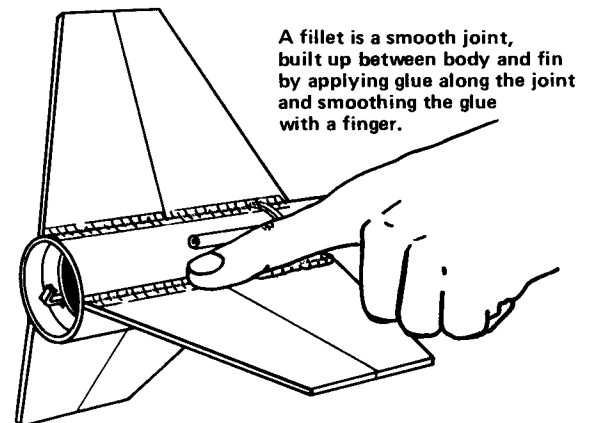
20 Separate the control surfaces from the die-cut card sheet. Glue one to the trailing edge of each main stage fin. The outer edges of each fin and its control surface should match. Center each control surface under the fin so an equal thickness of the balsa is exposed on each side at the rear.



21 Glue the launch lugs (part Q) to the booster body. Position the rear lug, centered on the lug alignment line, 2-5/8" from the rear of the rocket. The forward lug should also be centered on the alignment line with its front edge even with the rear of the top forward band.



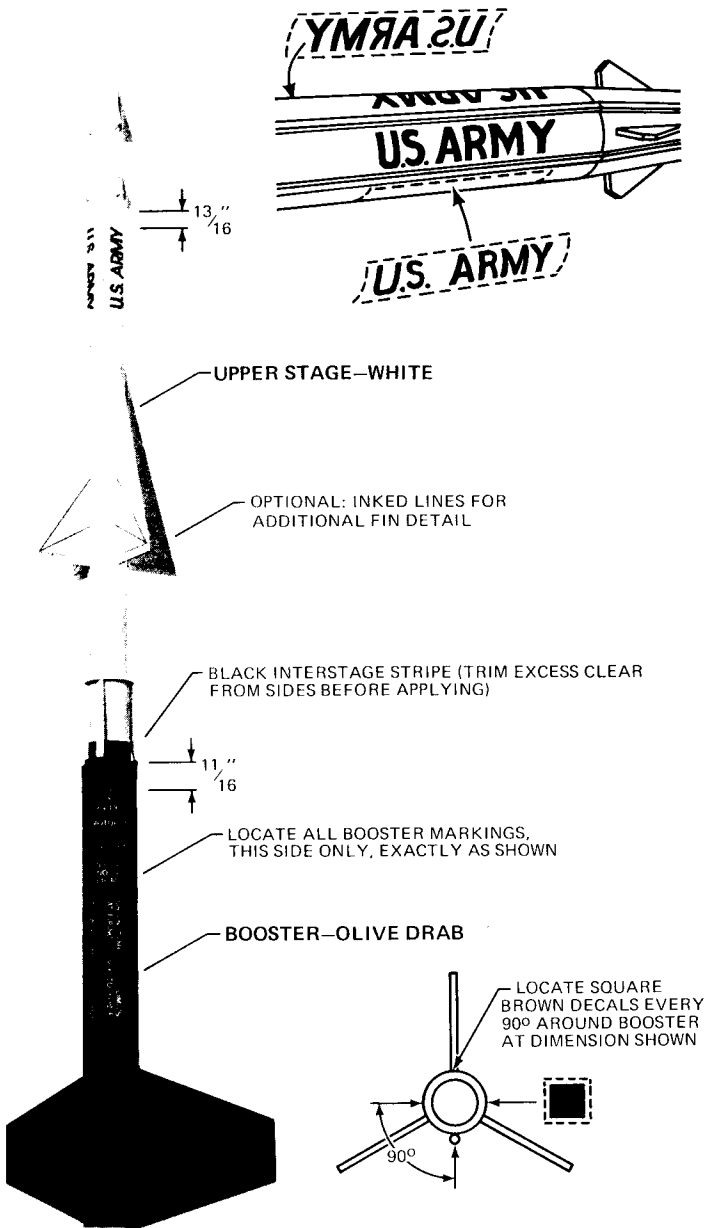
22 Cut out the parachute (part R) on its edge lines. Cut three 36" lengths of shroud line (part S). Attach line ends to top of parachute with tape discs (part T) as shown. Pass shroud line loops through screw eye. Pass parachute through loop ends and draw lines tight against screw eye. Set knot with a drop of glue. Tie free end of shock cord to screw eye.



23 Apply a glue "fillet" to each fin joint. Holding the rocket horizontally (level), apply a line of glue to both sides of each joint. Smooth out the glue with your finger. Keep the rocket level until the glue dries.

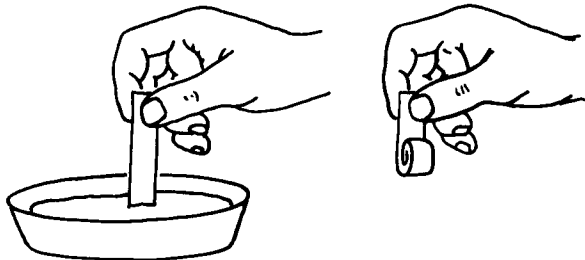
SEE BACK OF PARTS LIST FOR FINISHING INSTRUCTIONS

FINISHING YOUR NIKE AJAX



24 When all glue on the outside of the body is dry, prepare the model for painting. Apply at least two coats of sanding sealer to all wood parts. Let dry and sand lightly between coats. Do this until the tiny holes in the wood are filled and everything looks and feels smooth. Paint the entire rocket white. Follow with a coat of olive drab on the booster only.

Optional: Paint the rear 1/2" of the main stage body tube (but not the interstage support) black.

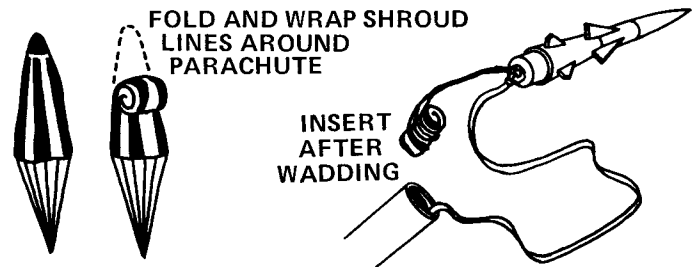


25 When all paint is dry (allow at least overnight for drying), apply decals (part U). Cut out a decal section, dip it in lukewarm water for 10 seconds, and hold it until it uncurls. Slip the decal off the backing sheet and onto the model. Blot away excess water. For best results, let the model dry overnight and apply a coat of clear spray to protect the decals.

COUNTDOWN CHECKLIST

Be sure to follow the HIAA - NAR Model Rocketry Safety Code when carrying out all your model rocketry activities.

T-14 Pack four squares of loosely crumpled recovery wadding into body tube.



T-13 Fold the parachute into a triangular shape. Roll 'chute tightly as shown and wrap shroud lines around it. If 'chute is too large, unroll and repack until it slides easily into rocket. A fit that is too tight may prevent parachute from ejecting properly.

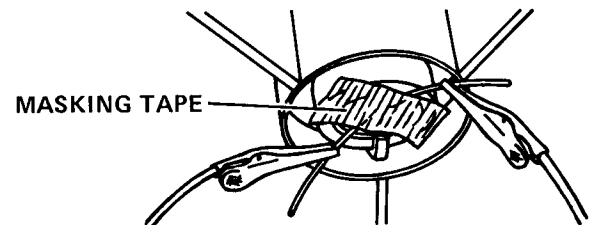
NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust 'chute with ordinary talcum powder, especially in cold weather.

T-12 Pack shock cord neatly into rocket, then slide payload section into place. Payload section should separate easily from rocket body tube, but should not be extremely loose. If it is too tight, sand inside of body tube and shoulder of adapter with extra fine sandpaper.

If payload section is too loose, add a wrapping of transparent tape or masking tape to the shoulder of the adapter.

T-11 Select an engine and install an igniter as directed in the engine instructions. Engines recommended for use with this rocket are A8-3, B4-4, B6-4, and C6-5.

Use a B6-4 engine for your first flight.



T-10 Insert engine into rocket. Engine hook must latch securely over end of engine.

T-9 Disarm launch panel---remove safety key.

T-8 Place rocket on launch pad making sure rocket slides freely on launch rod. Clean micro-clips and attach them to igniter leads.

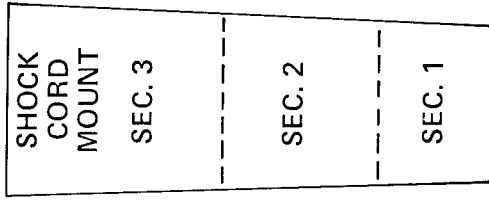
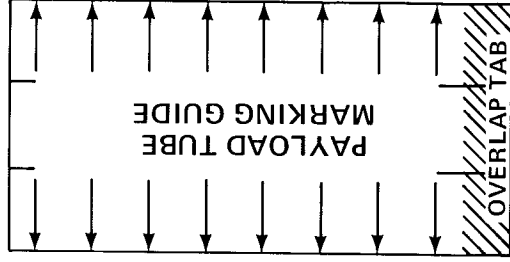
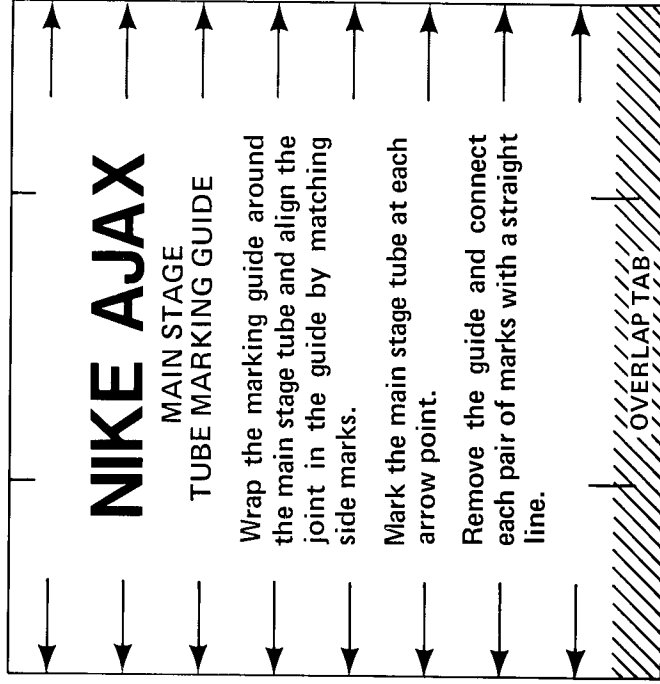
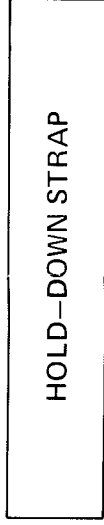
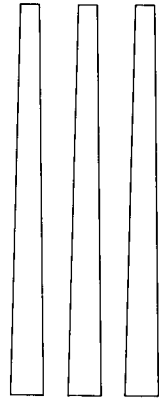
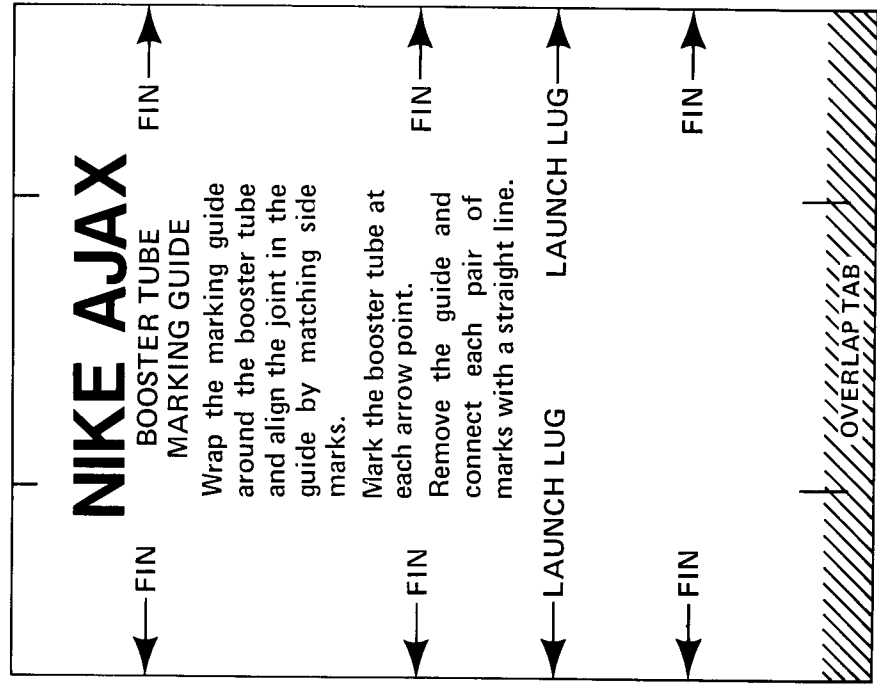
T-7 Clear the launch area, alert recovery crew and trackers. Check for low flying aircraft and unauthorized persons in recovery area.

T-6 Arm launch panel---insert safety key.

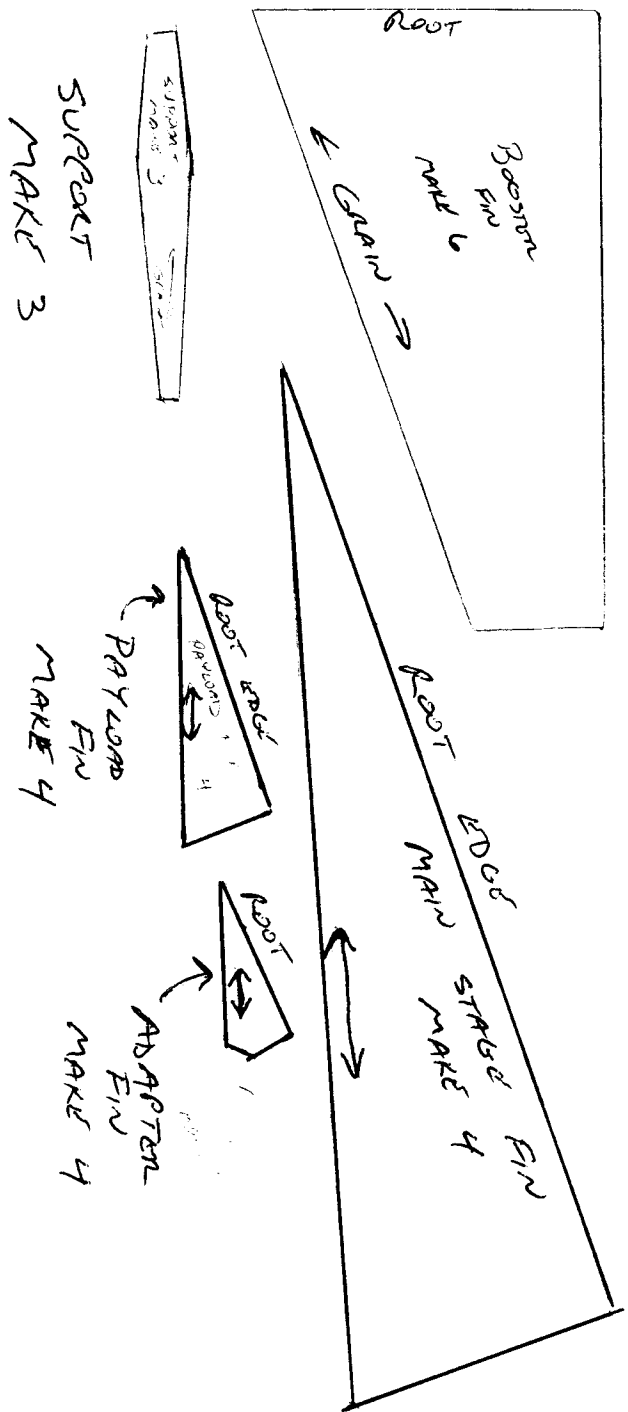
5-4-3-2-1 LAUNCH!!

MISFIRE PROCEDURE

Occasionally an igniter will heat and burn in two without igniting the engine. This is almost always caused by a failure to install it correctly. Disarm launch panel, remove the model, clean igniter residue from nozzle, and install a new igniter. Follow launching procedure again.



NILB-ASTA X



U.S. ARMY

GRAIN TEMP LIMITS
AT FIRING -10 F TO +130 F

U.S. ARMY

STORAGE TEMP LIMITS
-20 F TO 130 F

U.S. ARMY

LOT RAD 25-68
SERIAL NO. 3642
LOADED 31-68

U.S. ARMY

DWG NO. 8030045

1336-V190



ROCKET MOTOR M5E1