



The

X-13

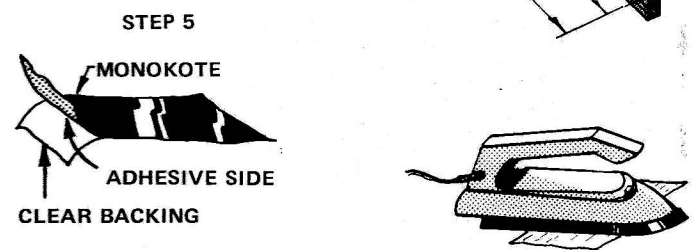
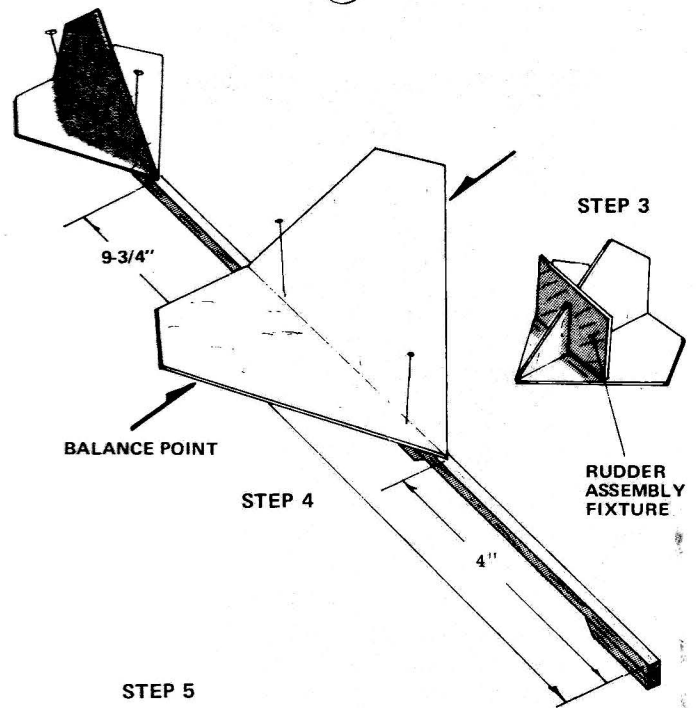
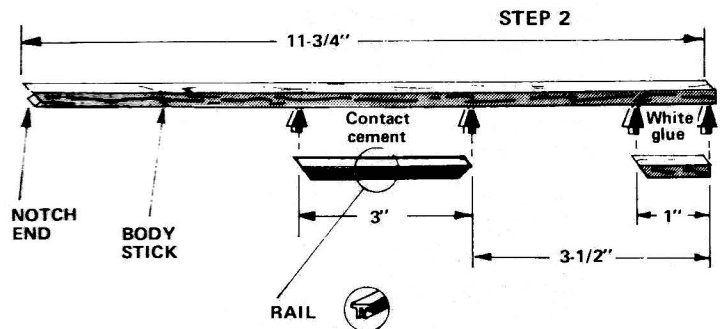
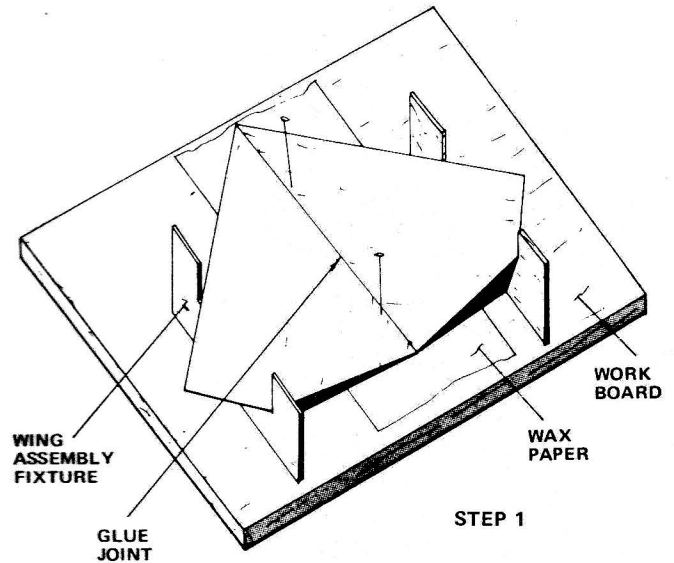
ROCKET PLANE

FOLLOW THESE DIRECTIONS VERY CAREFULLY! Read through them completely first, so you will know the general procedure. Then assemble your rocket plane step by step.

PLANE ASSEMBLY

- Step 1** Cut out and glue the wing sections together. Use Elmers White Glue or equivalent, for all balsa-to-balsa wood joints.
- Step 2** Measure, cut and assemble the balsa body stick with white glue. Cut a 3 inch length of rail, trim both ends, and cement to the body as shown. Use the contact adhesive provided. Apply adhesive to both pieces, allow to dry until very tacky, then press together firmly.
- Step 3** Glue the rudder to the stabilizer using assembly fixture as shown. After the wing and tail assemblies are completely dry sand all surfaces and apply a thin fillet of cement over all joints to provide added strength.
- Step 4** Assemble the wing assembly and tail assembly to the body with white glue. Make sure the assembly is square, then set aside to dry.
- Step 5** To apply Super Monokote: Set an iron just below the melting point of the Monokote (usually "cotton-wool"). Cut a piece of Monokote to match the surface to be covered, leaving a 1/4 inch margin on all sides. Peel Monokote from its clear backing and lay on surface, adhesive side down. (If you forget which side is adhesive, the hot iron will stick only to the adhesive side.) Touch edges with iron to attach, then lightly press Monokote onto surface and around edges. Trim with scissors or knife. Repeat this process on the opposite surface. (If bubbles form, pierce with a pin and re-press.) Apply decals to complete the plane.
- Step 6** The approximate balance point of the X-13 is shown in Step 4. Add weight (wire brads) to nose or tail until the model balances at this point. Test for balance by gently throwing the plane straight out at shoulder level. If the plane noses upward into a stall, add weight to the nose; if it dives, remove weight. Proper balance is essential for a good flight.

ASSEMBLY INSTRUCTIONS No. 5071-1



ROCKET ASSEMBLY

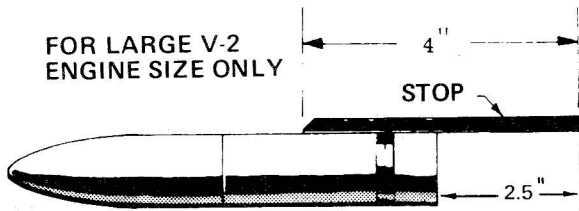
Step 1 Place engine nozzle down in the center of the alignment guide (Figure 1). Locate rubber fill valve in the position shown. Reflection on the wall of the tube shows location and width of the glue joint areas. Scrape these areas thoroughly as shown in Figure 2. Scrape a 4 inch long area for the full length launch guide tube.

Step 2 Cut three 3-inch pieces of rail and one 3 inch length of plastic tube. Slope the front ends of the fin rail, and chamfer the inside of the back ends (so the fins will slide in easily). Apply contact adhesive to scraped areas on engine and to rails and tubes. Allow to dry until very tacky, then press each item firmly in place.

Step 3 Thread a piece of elastic shock cord through the 3 inch catapult tube as shown in Figure 6. Tie a loop and a large knot as illustrated. The upper knot must be large enough not to slip through the hole when the cord is stretched.

Step 4 Remove the black vinyl tape from it's backing and tape the adapter tube to the fibre parachute tube. Cut an inch of tube for a stop, and cement to the parachute tube in the position shown in Figure 6.

If you are converting a Valkyrie-2 rocket (8.5 inch long engine) into a rocket plane, use a 4 inch section of tube for a stop in the position shown below.



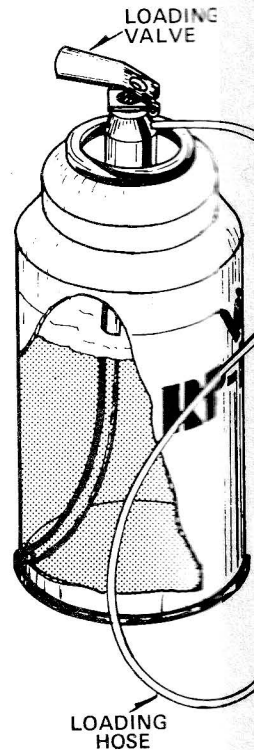
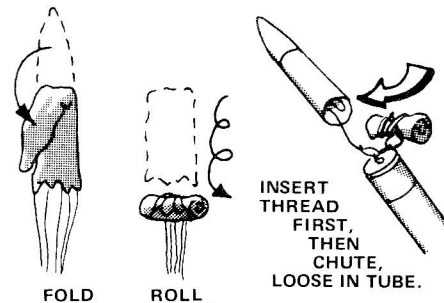
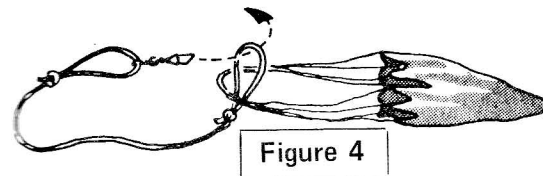
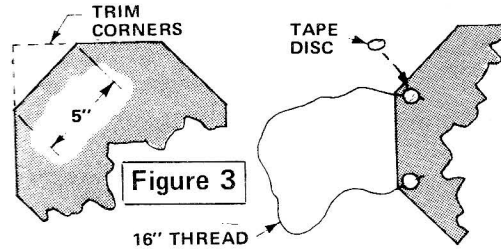
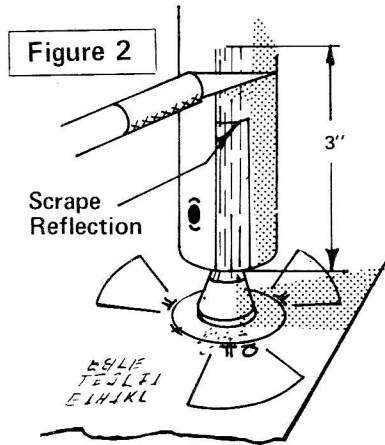
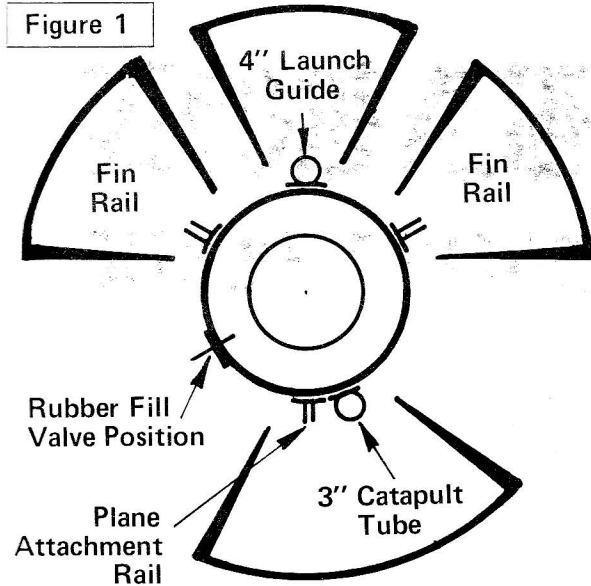
Step 5 Cut a length of thread and tie to nose cone as shown in Figure 6. Tie a loop in the opposite end and thread through the parachute tube.

Step 6 Cut the parachute material and attach parachute shrouds as shown in Figure 3. Attach a length of shock cord to the snap swivel and to the shrouds as shown in Figure 4.

Step 7 Attach the snap swivel to the nose cone thread and to the separator. Screw separator onto engine with coupling and two paper timer discs.

Step 8 Cut out two rocket fins, sand, apply Monokote, and slide into fin rails from one end. If your kit has a styrofoam nose cone, lightly sand to a dull finish, apply Testor's contour putty (or paste wood filler) to nicks, and paint with Pactra'Name! (not spray type), polyurethane, or epoxy enamel. Styrofoam requires special paint; test your paint on a styrofoam drinking cup first. Apply decals to complete the rocket.

ALIGNMENT GUIDE



FIBRE PARAC

VIN

ALUMINUM A

SEP

ROCKET ASSEMBLY

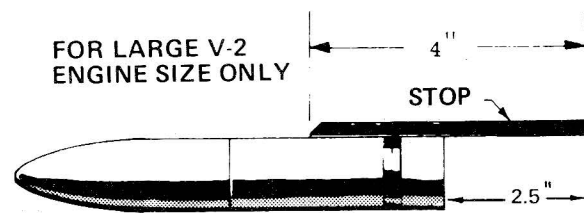
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If you are converting a Valkyrie-2 rocket (8.5 inch long engine) into a rocket plane, use a 4 inch section of tube for a stop in the position shown below.



Step 5 Cut a length of thread and tie to nose cone as shown in Figure 6. Tie a loop in the opposite end and thread through the parachute tube.

Step 6 Cut the parachute material and attach parachute shrouds as shown in Figure 3. Attach a length of shock cord to the snap swivel and to the shrouds as shown in Figure 4.

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ALIGNMENT GUIDE

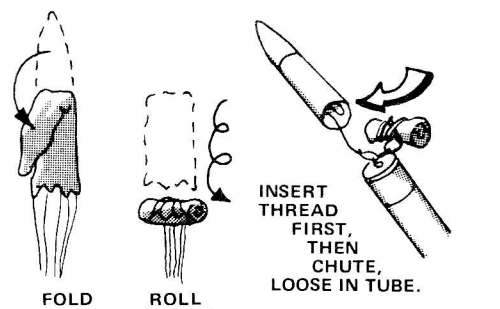
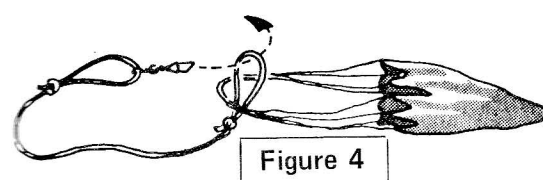
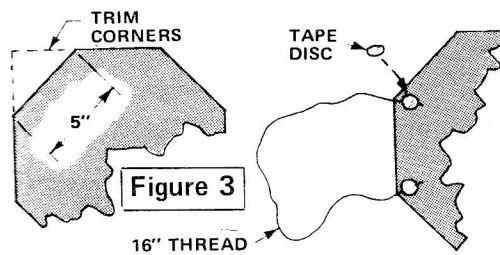
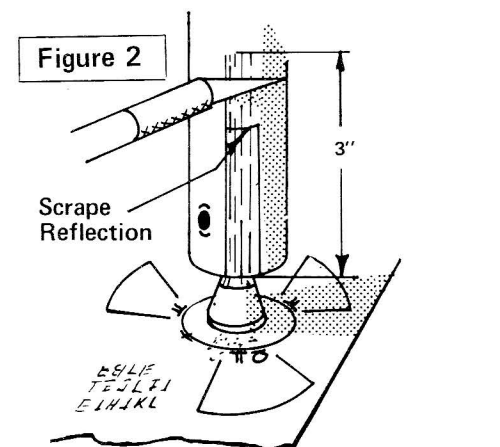
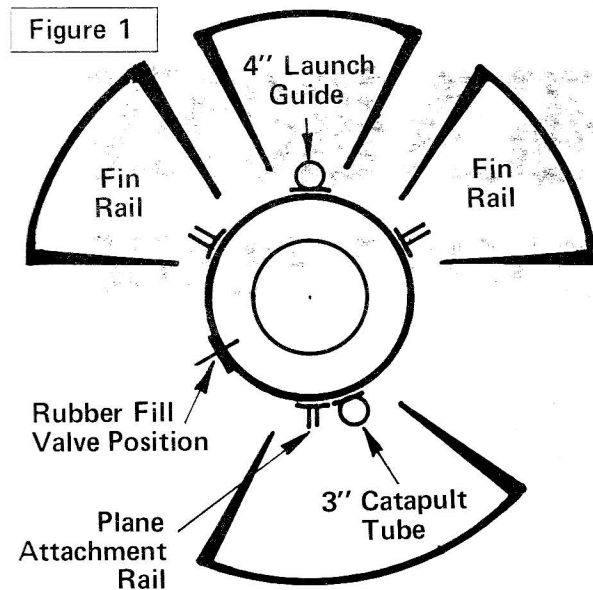
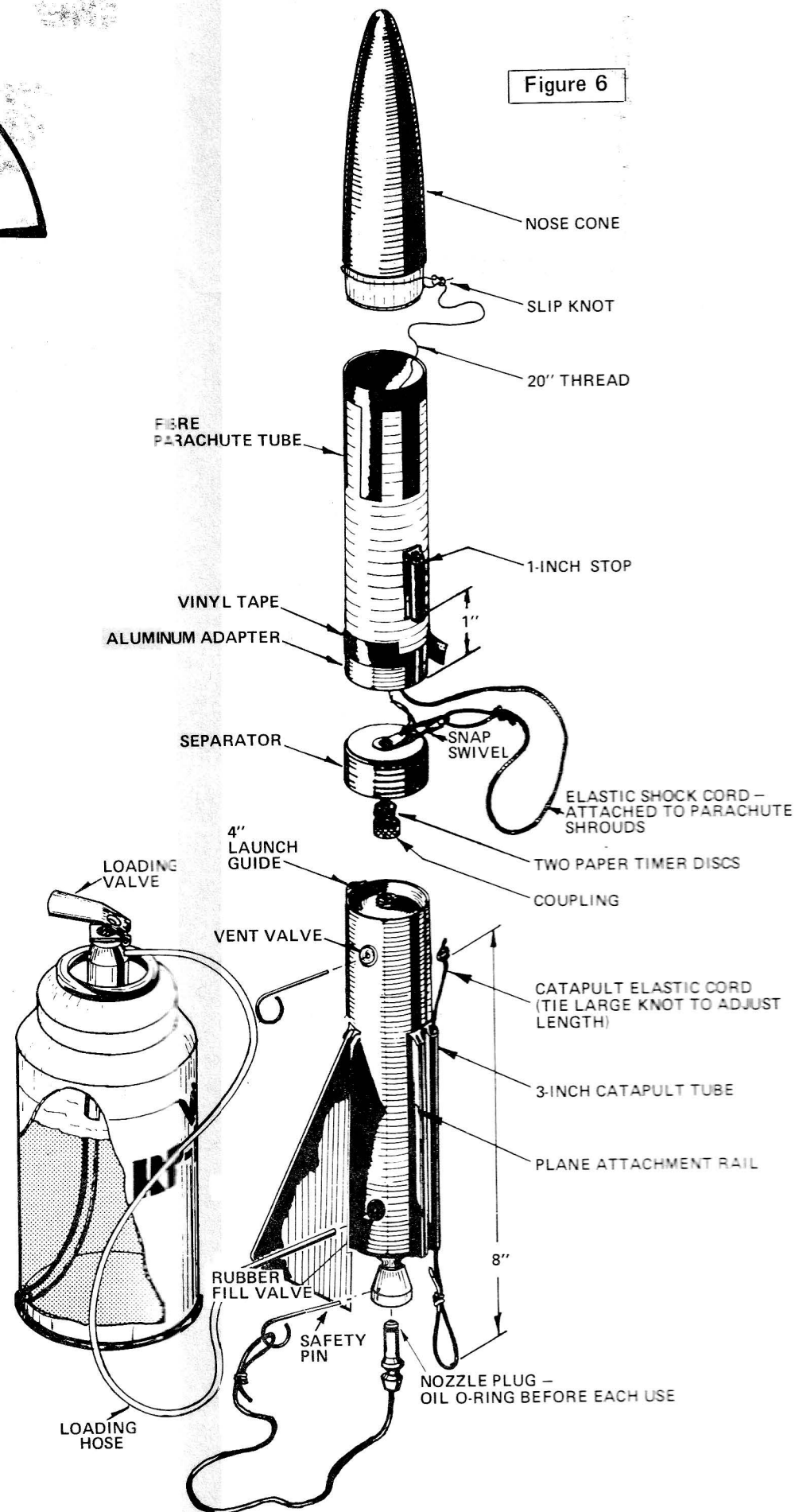


Figure 5



PRE-FLIGHT CHECK OUT

Step 1 Oil and insert the nozzle plug and the safety pin. Smooth off end of pin so it slides freely.

Step 2 Fold and insert the parachute as shown in Figure 5. The thread goes in first. Parachute should be loose and free to fall out of tube.

Step 3 Hold the parachute tube on the separator with the stop aligned with the plane rail. While holding the tube in place, press the loading valve briefly (1/2 second) to pressurize the engine. Nose cone should latch in place.

TROUBLE? Parachute tube must be held squarely to latch in place, and will not latch after engine is pressurized. Release plug to vent engine, and try again. A leak at the timer discs may also prevent latching. Screw separator on more firmly.

Step 4 Slide the plane onto its rail (rails must fully interlock) and up against the stop. Place the loop of the catapult elastic cord onto the tail notch. The plane should be held in place by the cord against the stop.

If the nose cone and parachute tube are bent out of alignment, lengthen the cord to reduce the tension.

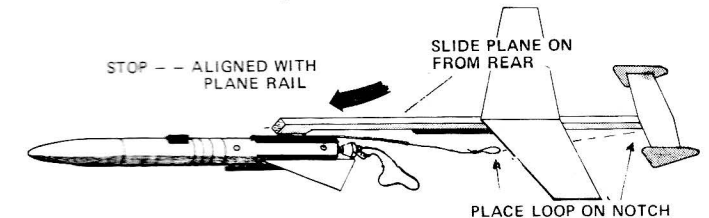
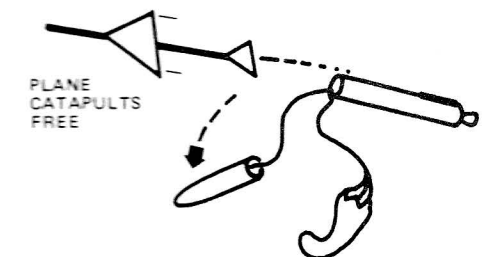
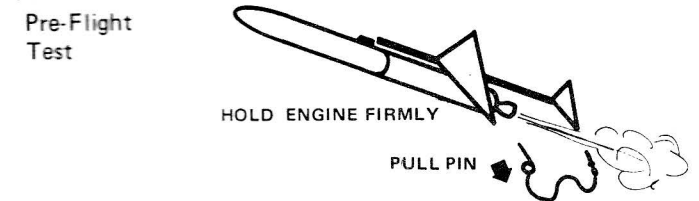


Figure 7

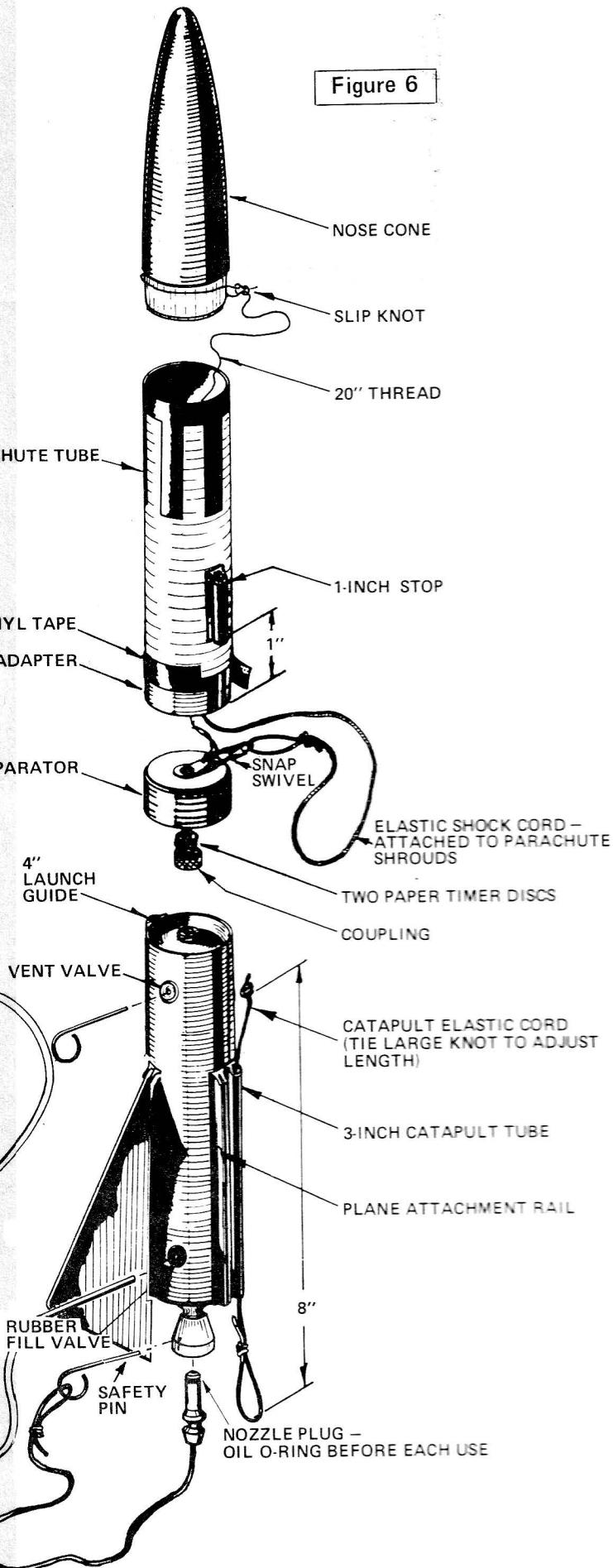
Step 5 Hold the rocket plane firmly by the engine so that the plane will be free to slide forward, and pull the safety pin. After a brief interval, the parachute tube should release, and the plane should catapult free. Smooth off ends of rails so they slide freely, and adjust catapult cord as required to achieve proper plane release.

Figure 8



PARACHUTE UNFOLDS

PRE-FLIGHT CHECK OUT

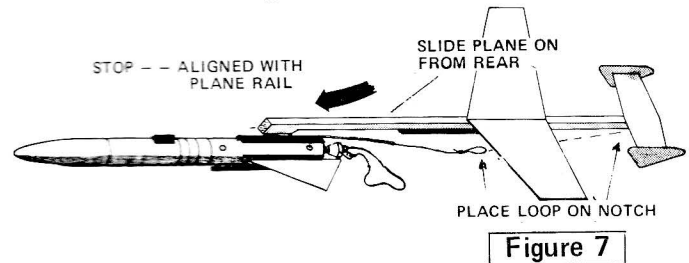


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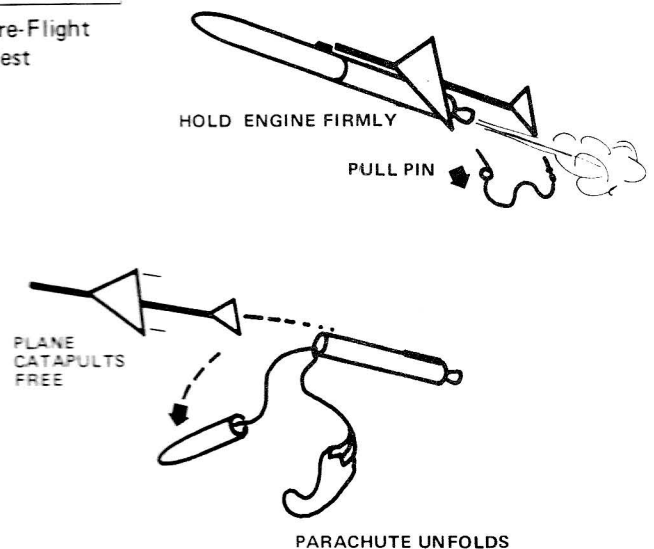
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Figure 8

Pre-Flight Test



LAUNCH PROCEDURE

As a responsible rocketeer, you should take care to observe the following precautions.

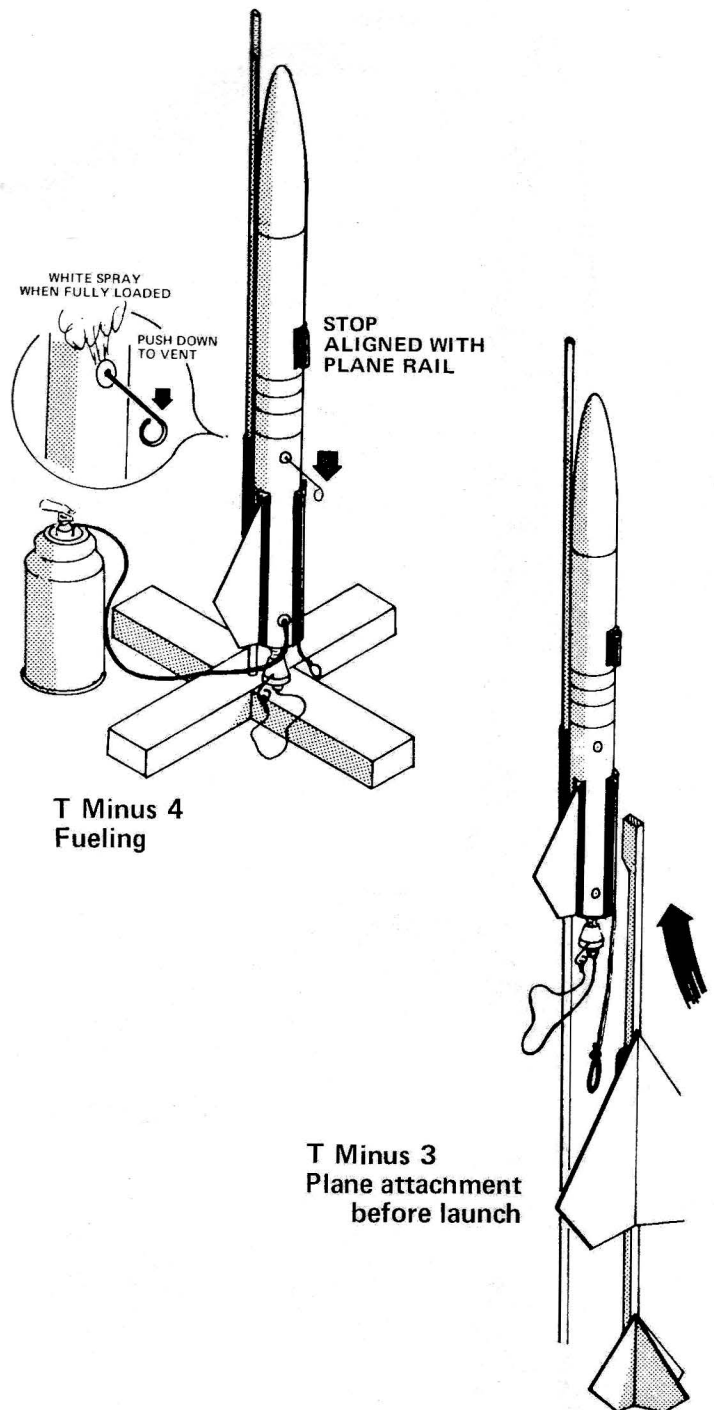
General Precautions

1. Use only RP-100 propellant.
2. Always have the safety pin installed and the nozzle extension firmly pushed in place before loading the rocket.
3. Do not point the nose or nozzle of a loaded rocket at anyone.
4. Never carry or store a loaded rocket.
5. Never fly a rocket without adequate fins.
6. Always use a launcher and launch the rocket vertically.
7. Always have an adult present when you load or launch your Rocket.

COUNTDOWN

- T-8 Set up launcher in middle of field. Allow 100 yards in all directions for recovery. Make sure launcher is stable.
- T-7 Oil and install the firing assembly plug and safety pin and slide the engine onto the launcher.
- T-6 Fold and pack the parachute into the parachute tube.
- T-5 While holding the parachute tube in place and in line insert the loading hose and pressurize the engine. Verify that the tube is latched in place. If tube is latched the engine is ready to load.
- T-4 **Fueling:** Insert a safety pin in the vent valve at the top of the engine, and while holding the loading valve lever down, vent SLIGHTLY by pushing down on the vent valve pin. Vent only enough to allow propellant to flow into the engine. Repeat venting until engine is full (white mist sprays out of vent valve). Carefully remove hose.
- NOTE: If engine grows cold you are venting too fast. VENT SLOWLY.
- T-3 Slide plane onto its rail and attach shock cord.
- T-2 Alert everyone within range that you are ready to launch.
- T-1 Make sure that airspace above launching area is clear and no airplanes are near.
- ZERO: BLAST OFF! While bracing the nozzle with your finger, pull the safety pin quickly from the nozzle extension to launch the rocket plane.

NOTE: The user must exercise care in the use of Vashon Industries products and strictly comply with the precautions stated above and the instructions provided. The user assumes all risk of use or handling. Vashon Industries makes no warranty of any kind, express or implied, and assumes no liability beyond the replacement of parts which, in the judgment of Vashon Industries, are defective.



FLIGHT TIPS

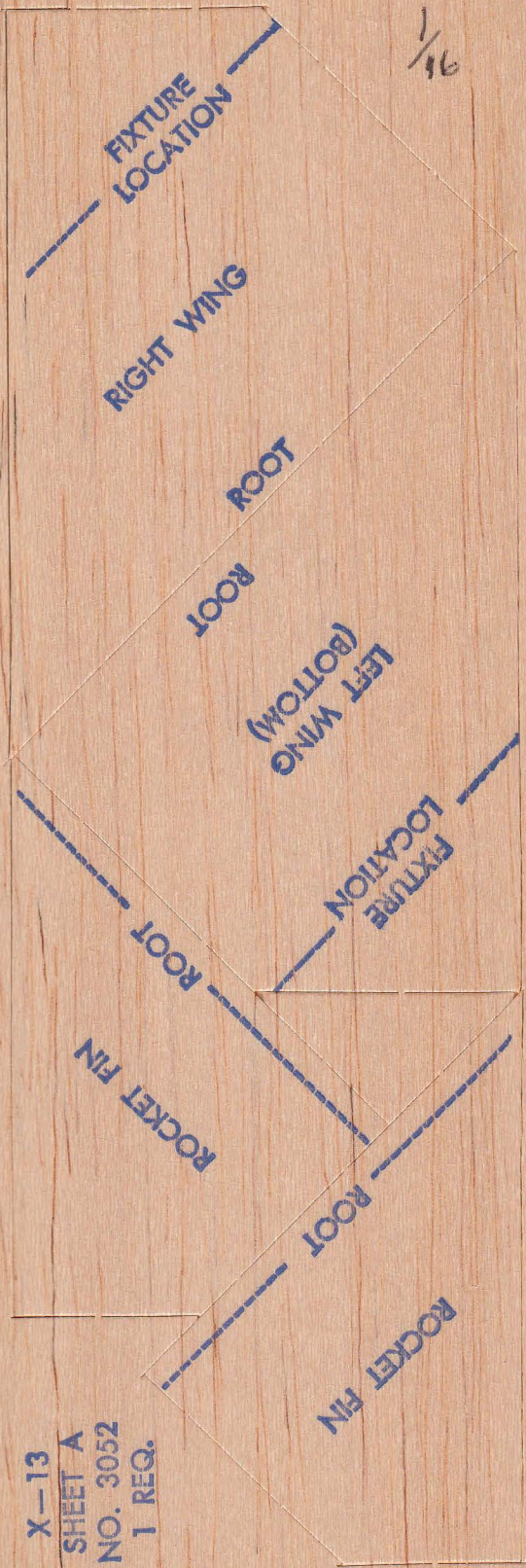
1. For best launch performance, keep propellant warm.
2. Plane should separate on the way up, not on the way down. Adjust timer discs (pierce one with a pin if necessary) to cause separation before peak altitude.
3. If your plane turns sharply into a vertical dive, yet is balanced, warped wings may be the cause. Use a hot iron to heat the wing surfaces while twisting to straighten wings. Or, add a small weight to the wing that lifts in the turn, to counteract the turn. The body stick may also be warped downward at the tail. Bend the tail slightly upwards. Moistening the body stick may help.





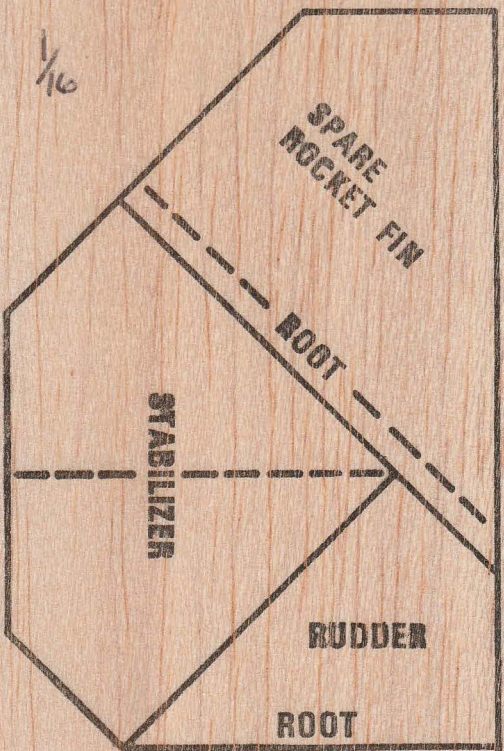
X-13
SHEET A
NO. 3052
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ASSEMBLY
FIGURE RUDDER

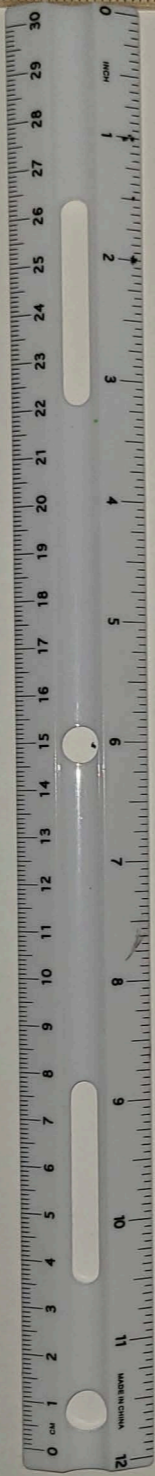
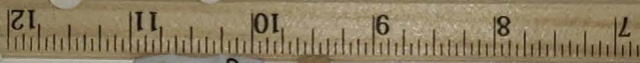
ASSEMBLY FIXTURE-WING

ASSEMBLY FIXTURE-WING

SHEET B
X-13 NO. 3053

A SUBSIDIARY OF DAMON





15" x 1/4" x 1/4"
Balsa



NO. 3303 ESTES INDUSTRIES

USAF

U.S. AIR FORCE

U.S. AIR FORCE

5069



X-13



USAF



X-13



1

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FISKARS® 4

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18 19 20 21 22 23 24 25 26 27 28 29 30

X-13

Rocket Launched Plane Kit

Sleek delta-wing design streaks skyward, catapults from liquid propelled rocket hundreds of feet in the air, and peels off into exciting acrobatic flight, while rocket parachutes to earth.

LAUNCH ON ANY VASHON ROCKET

VASHON INDUSTRIES, INC. 5069-165

X-13

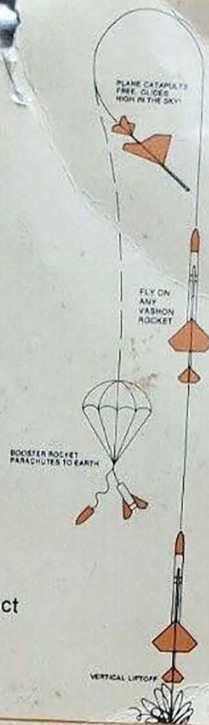
Rocket Launched Plane Kit

Complete with all accessories to adapt to any Vashon Rocket.

Kit includes:

- Balsa Plane Parts
- Monokote
- Coupling Rail
- Elastic catapult cord
- Cement
- Decals
- Instructions
- Brad balancing weights
- Launch guide

Featuring MONOKOTE for superior strength and perfect finish — in half the time!



VASHON INDUSTRIES, INC. BOX 309, VASHON, WASHINGTON 98070

X-13

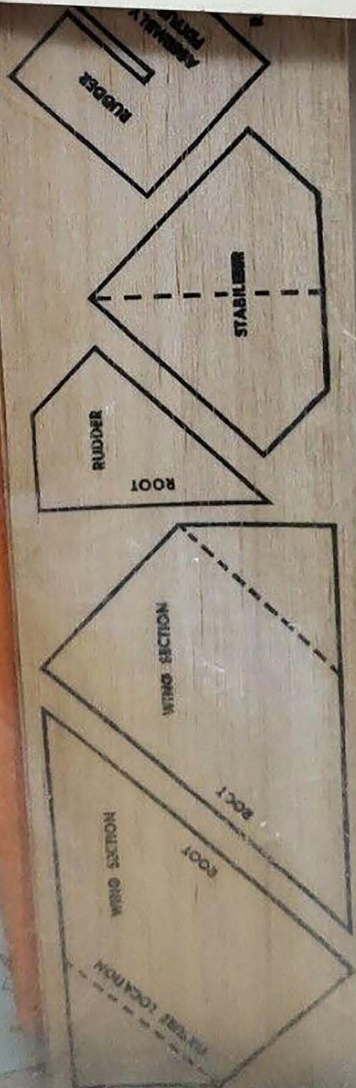
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The approximate balance point of the X-13 is shown in view 4. Add weight (wire brads) in case of tail balance to equal balance at this point. Also balance by weight showing the plane straight out as shown in view 4. At the plane nose upward view 4, add weight to the nose if it dips when the plane is held in a vertical position for a long time.



ROCKET POWERED
FLYING MODEL

X-13 Rocket Plane

Manufactured
By



A Division of
Pamlico, Corp.
81240

\$1.95



SAFE
Clean-Cool Aerosol Propellant

COMPLETE
Everything required for exciting flights!

Plane rides rocket hundreds of feet up, flies back while
rocket parachutes down.



VASHON 



3 Easy to Build

All parts are included. Just assemble, paint, and add decals. Durable polished aluminum rocket construction is factory assembled, completely tested.



2 Fascinating to Test

Make pre-launch check-out, even indoors. Non-flammable aerosol propellant is safe, yet realistic. Tests of the engine and parachute release are as fascinating as flights themselves.



1 Fun to Fuel

Suspense builds as rocket is fueled on the pad. Excess fuel vents overboard through realistic engine valve.



BLASTOFF !!!

The X-13 lifts skyward on a cloud of exhaust, soaring up hundreds of feet! A breath-taking moment later, the plane springs into free flight. Meanwhile the parachute pops open and floats the rocket safely to earth for another exciting flight.

Swoop it up with

X-13

ROCKET PLANE

VASHON INDUSTRIES, INC. BOX 309, VASHON, WASHINGTON 98070



Complete in this box

This kit includes propellant, launcher, and all rocket parts — everything you'll need to assemble and fly the X-13.

SAFE Propellant

The rocket is powered by RP-100, Vashon's safe, clean, cool aerosol propellant. RP-100 is non-flammable — can't burn — cannot start a fire.

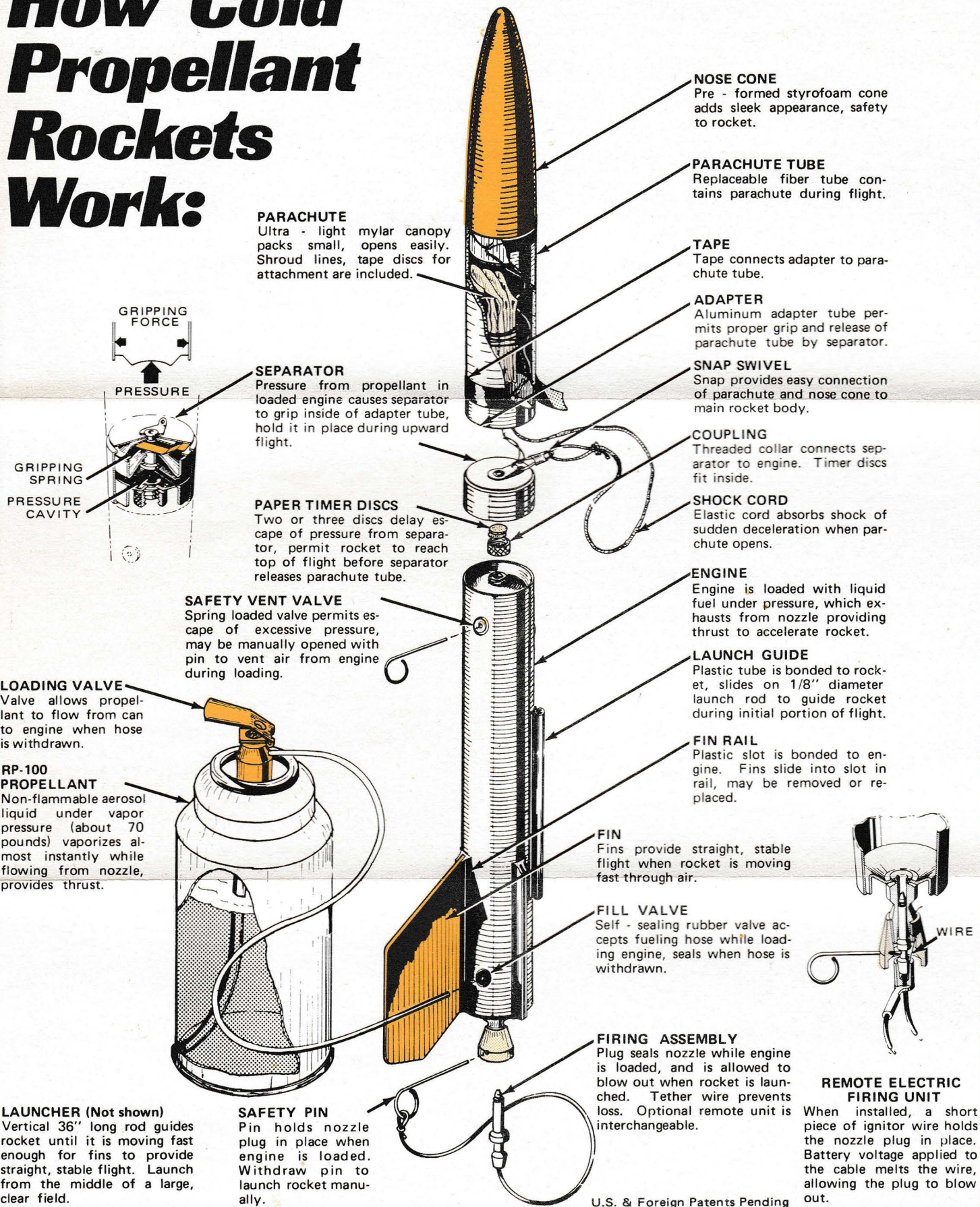
CAUTION:

Aerosol propellant is under pressure. Do not incinerate aerosol can or store kit or can above 120 degrees F. Carefully read all enclosed instructions and precautions before use.

Made in USA

US and Foreign Patents Pending

How Cold Propellant Rockets Work:



NOSE CONE
Pre - formed styrofoam cone adds sleek appearance, safety to rocket.

PARACHUTE TUBE
Replaceable fiber tube contains parachute during flight.

PARACHUTE
Ultra - light mylar canopy packs small, opens easily. Shroud lines, tape discs for attachment are included.

TAPE
Tape connects adapter to parachute tube.

ADAPTER
Aluminum adapter tube permits proper grip and release of parachute tube by separator.

SNAP SWIVEL
Snap provides easy connection of parachute and nose cone to main rocket body.

COUPLING
Threaded collar connects separator to engine. Timer discs fit inside.

SHOCK CORD
Elastic cord absorbs shock of sudden deceleration when parachute opens.

ENGINE
Engine is loaded with liquid fuel under pressure, which exhausts from nozzle providing thrust to accelerate rocket.

LAUNCH GUIDE
Plastic tube is bonded to rocket, slides on 1/8" diameter launch rod to guide rocket during initial portion of flight.

FIN RAIL
Plastic slot is bonded to engine. Fins slide into slot in rail, may be removed or replaced.

FIN
Fins provide straight, stable flight when rocket is moving fast through air.

FILL VALVE
Self - sealing rubber valve accepts fueling hose while loading engine, seals when hose is withdrawn.

FIRING ASSEMBLY
Plug seals nozzle while engine is loaded, and is allowed to blow out when rocket is launched. Tether wire prevents loss. Optional remote unit is interchangeable.

REMOTE ELECTRIC FIRING UNIT
When installed, a short piece of ignitor wire holds the nozzle plug in place. Battery voltage applied to the cable melts the wire, allowing the plug to blow out.



SEPARATOR
Pressure from propellant in loaded engine causes separator to grip inside of adapter tube, hold it in place during upward flight.

PAPER TIMER DISCS
Two or three discs delay escape of pressure from separator, permit rocket to reach top of flight before separator releases parachute tube.

SAFETY VENT VALVE
Spring loaded valve permits escape of excessive pressure, may be manually opened with pin to vent air from engine during loading.

LOADING VALVE
Valve allows propellant to flow from can to engine when hose is withdrawn.

RP-100 PROPELLANT
Non-flammable aerosol liquid under vapor pressure (about 70 pounds) vaporizes almost instantly while flowing from nozzle, provides thrust.

LAUNCHER (Not shown)
Vertical 36" long rod guides rocket until it is moving fast enough for fins to provide straight, stable flight. Launch from the middle of a large, clear field.

SAFETY PIN
Pin holds nozzle plug in place when engine is loaded. Withdraw pin to launch rocket manually.

U.S. & Foreign Patents Pending

ROCKET PLANE KIT

PARTS LIST

5075	V-1 Engine	\$3.95
	With trade-in*	1.50
5002	Separator	2.95
	With trade-in*	1.00
5118	Payload Compartment Kit (Aluminum adapter tube, parachute tube, nose cone, tape)	.50
5120	Fin Rail and Launch Guide (Rails, guides, and glue)	.50
5119	Parachute Kit (Parachute, shroud thread, shock cord, tape discs, snap swivel)	.50
5027	Loading Valve and Hose	.50
5055-19	Manual Firing Unit	.75
5058	Small Parts Kit (Coupling, timer discs, safety pins, nozzle extension)	.50
5080-3	Decal	.15
5059	X-13 Plane (Body, wing & tail material, Monokote, attachments, weights)	1.65

ACCESSORIES

Rocket Launched Planes

5067	Astro-Gnat Plane	\$1.65
5068	Baron Plane	2.25
5069	X-13 Plane	1.65

Load-"n"-Launch Equipment

5095	36" Tripod Launcher	1.29
5039	RP-100 Propellant, 15 oz.	1.95
5094	RP-100 Propellant, 7-1/2 oz.	1.25
5113	Remote Electrical Firing Unit (With ignitor wire)	1.95
5057	Ignitor Wire, 6" piece	.25

Multi-Stage Equipment

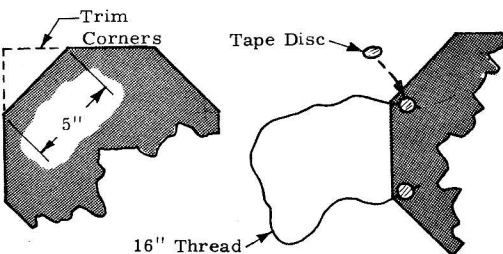
5060	Staging Adapter Kit (Staging adapter tube, staging plug, tape, thread, safety pin, Multi-Stage Booklet)	.99
5105	Multi-Stage Booklet	.25
5001	V-2 Engine (Large)	4.95
5075	V-1 Engine (Small)	3.95
5002	Separator (With coupling and timer discs)	2.95

Special Features in THIS KIT:

MANUAL FIRING ASSEMBLY, with a single short tether wire. You will find it handy to tie this wire to the safety pin to prevent loss of either part. (For Cape Kennedy realism, get the Remote Electrical Firing Unit to launch your rocket from a distance).

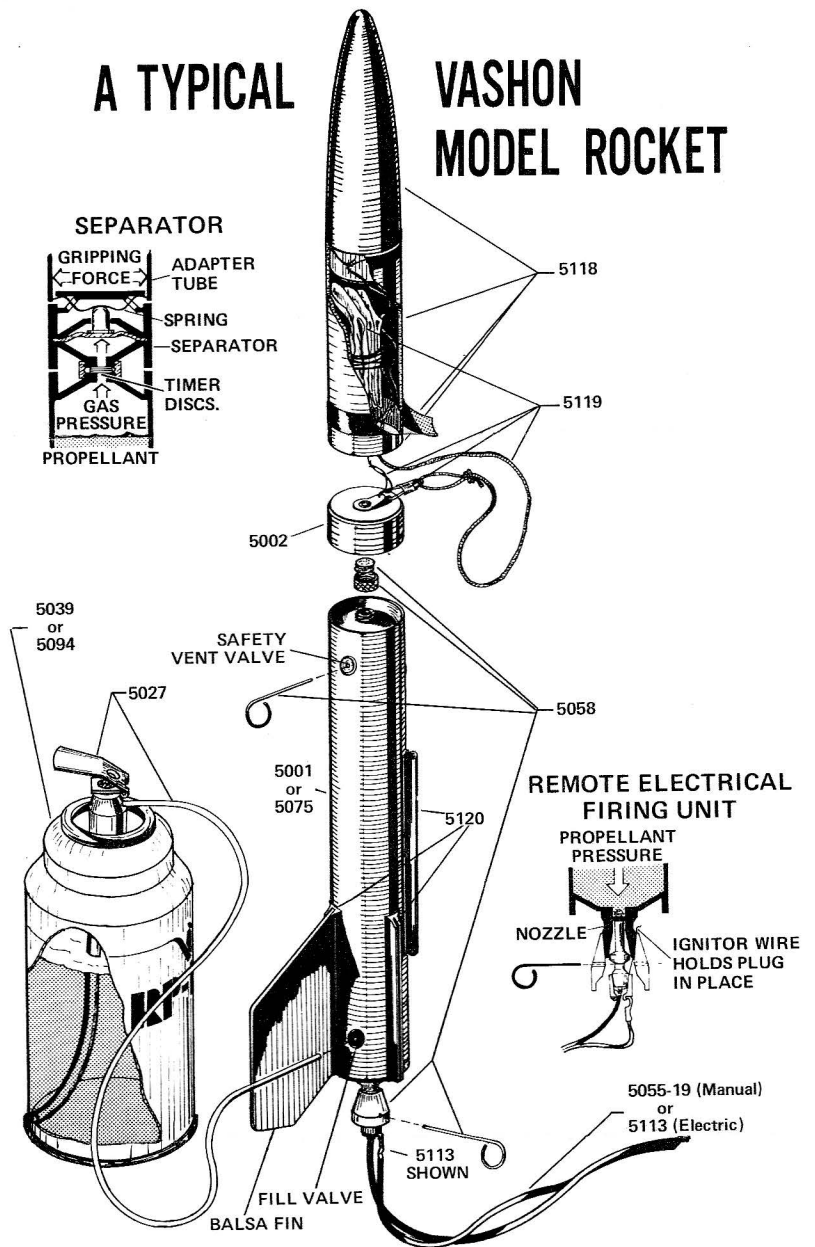
LARGE TWO-PIECE PARACHUTE TUBE, which makes parachute packing easier. Tape the aluminum adapter to the fiber tube with the tape provided.

COMPLETE PARACHUTE - Shroud line and tape discs are provided for the parachute in this kit. Assemble as shown.



A TYPICAL

VASHON MODEL ROCKET



Styrofoam requires special paint. If your kit has a styrofoam nose cone, try Pactra 'Namel (NOT the spray type), or polyurethane enamels. Test your paint on a styrofoam drinking cup before using on the nose cone. Nicks may be filled with Testor's Contour Putty or most paste wood fillers.

*Trade-ins accepted ONLY at the factory. Engines and separators are repaired or replaced at nominal trade-in cost, regardless of cause of damage. Defective parts are replaced at no cost.

See your dealer for parts and accessories. If he doesn't have them, you may order direct from the factory. Please use part numbers when ordering and send remittance with order. No C. O. D. 's are accepted. Washington residents add 4.5% sales tax.



A SUBSIDIARY OF DAMON

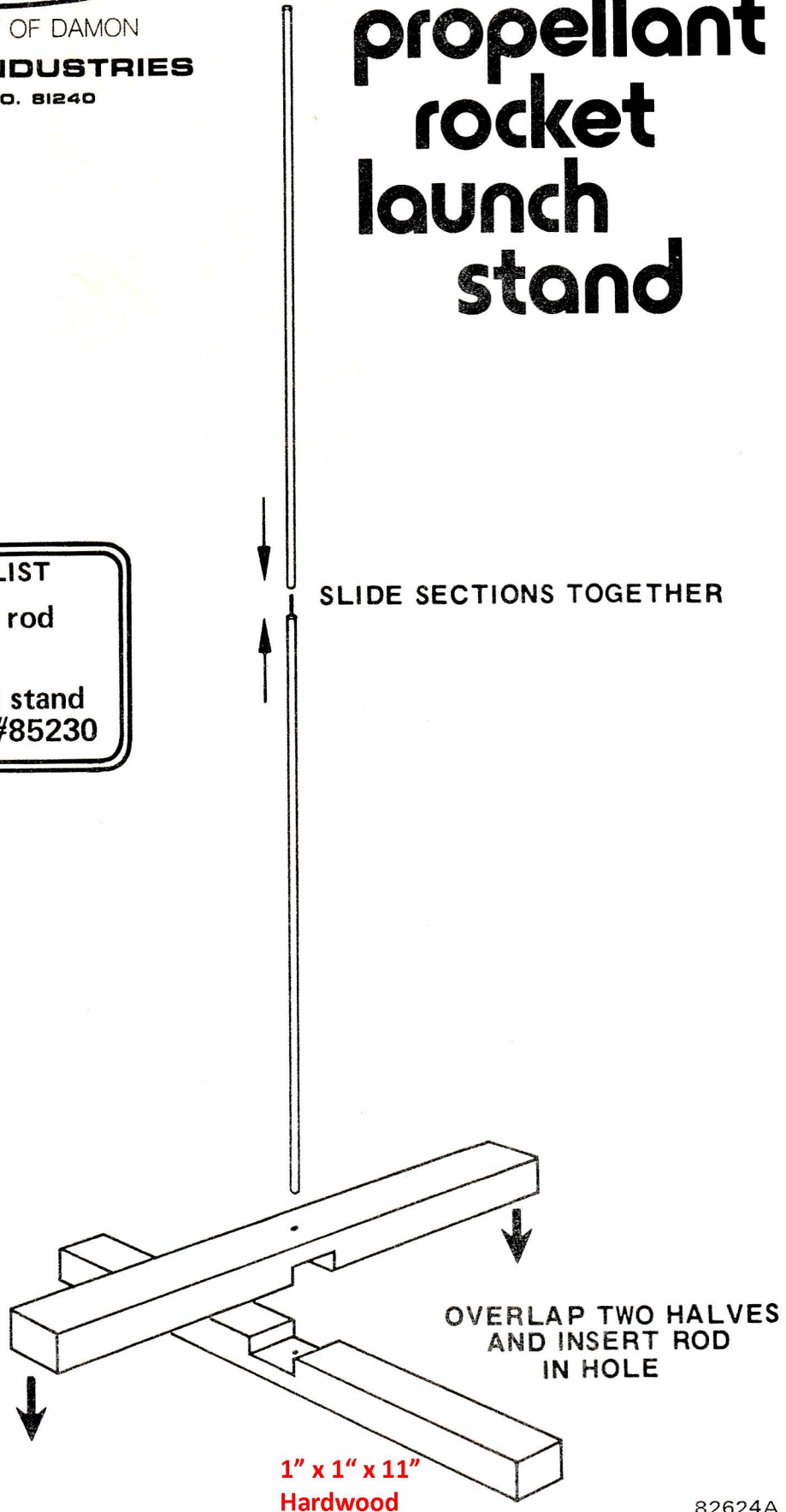
ESTES INDUSTRIES
PENROSE, COLO. 81240

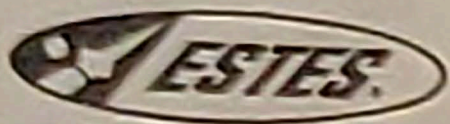


A SUBSIDIARY OF DAMON
ESTES INDUSTRIES
PENROSE, COLO. 81240

cold propellant rocket launch stand

- PARTS LIST**
- 1 - 2 piece rod #2235
 - 2 - Launch stand halves #85230

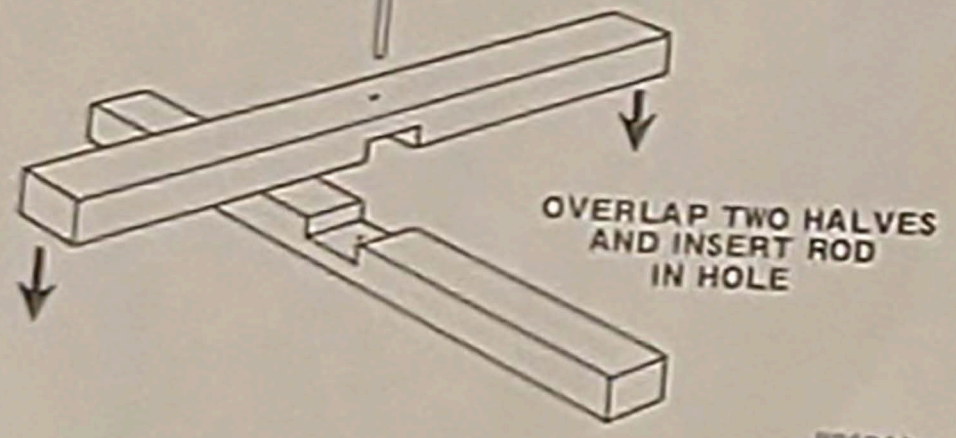




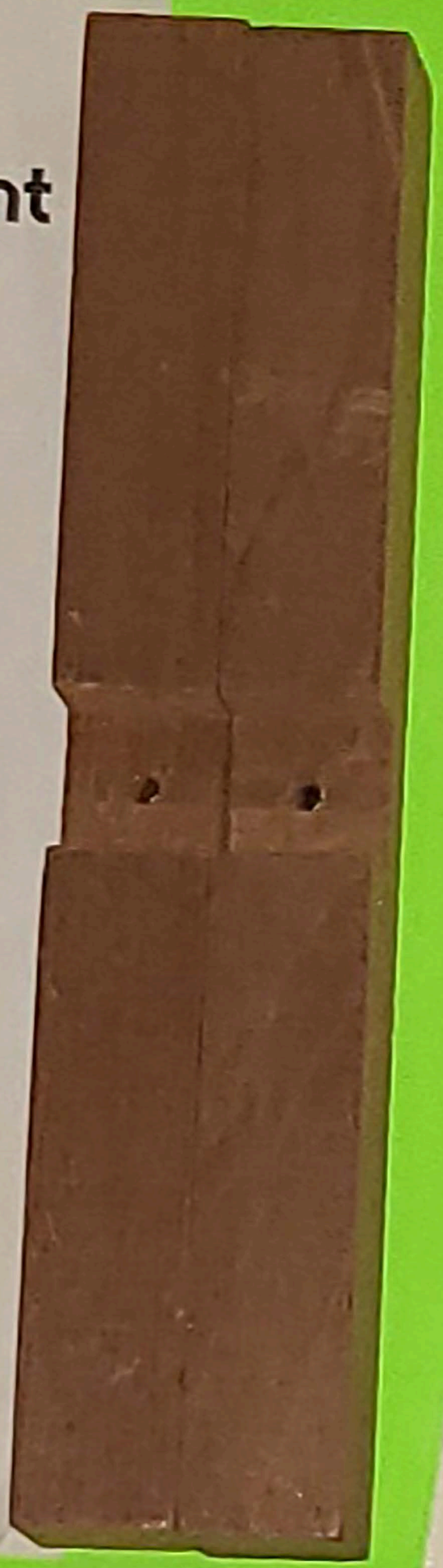
A SUBSIDIARY OF DAIKON
ESTES INDUSTRIES
 PENNCOKE, COLO. 80640

cold propellant rocket launch stand

- PARTS LIST**
- 1 - 2 piece rod #2235
 - 2 - Launch stand halves #85230



E2624A



18" X 2pc

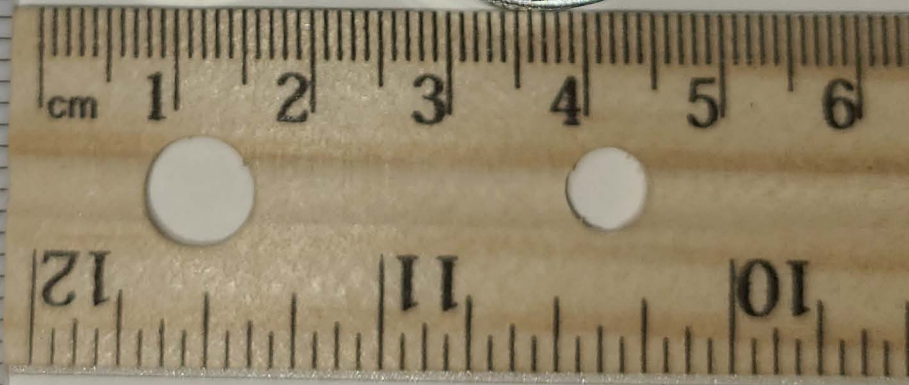










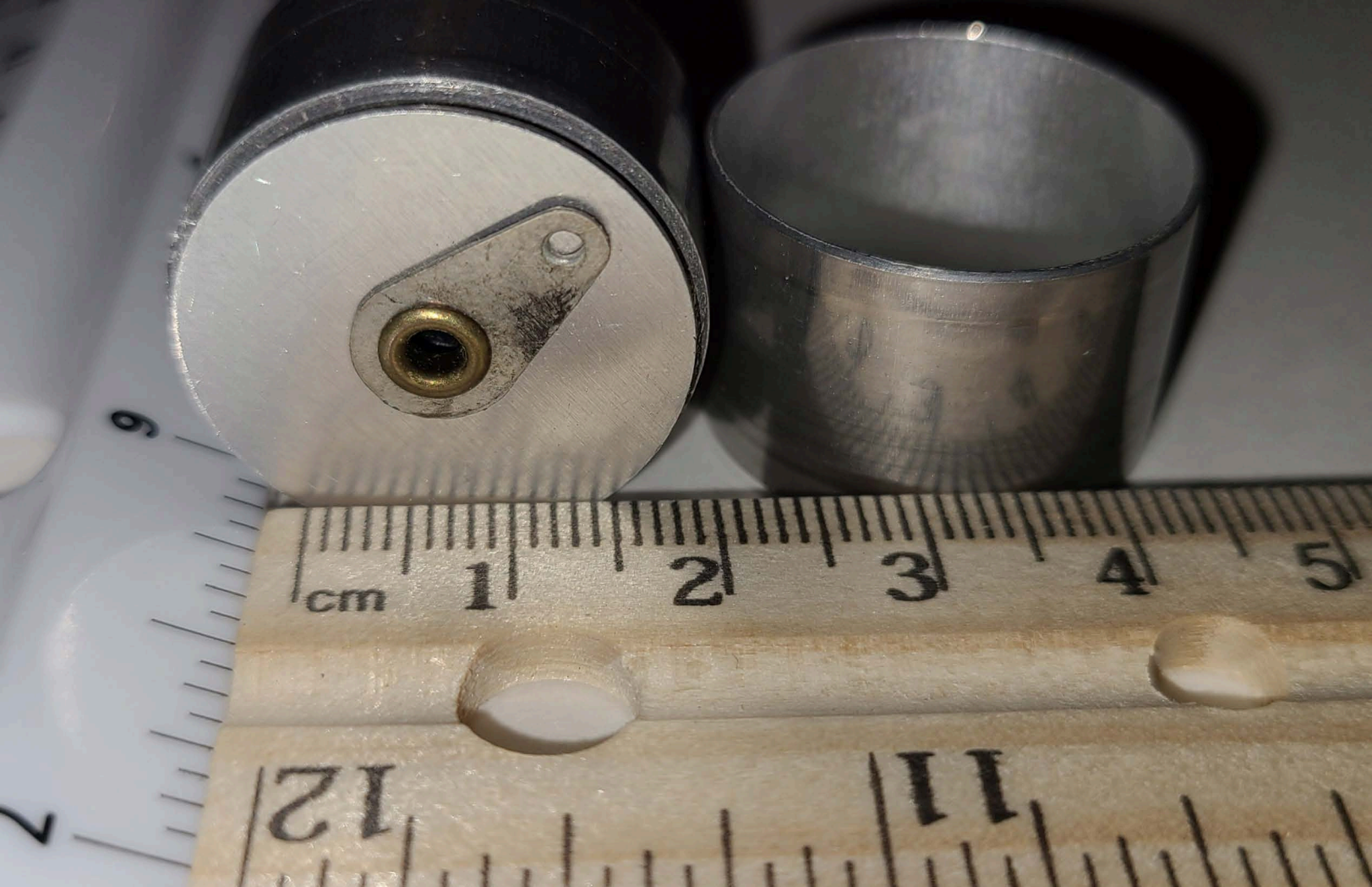


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11

10





ESTES
ROCKETRY DIVISION
ESTES INDUSTRIES
MILWAUKEE, WISCONSIN 53001

cold propellant rocket launch stand

SLIDE SECTIONS TOGETHER

OVERLAP TWO HALVES AND INSERT ROD IN HOLE

PARTS LIST
1 - 2 piece rod #2230
2 - Launch stand halves #83230

103244

Engine Service Policy

If this document does not apply to your situation, the manufacturer, the Engine Manufacturer, is not making any warranty claim. The engine manufacturer is not making any claim for the engine motor and the rest of all parts are covered under the standard warranty. The engine manufacturer is not making any claim for the engine motor and the rest of all parts are covered under the standard warranty. The engine manufacturer is not making any claim for the engine motor and the rest of all parts are covered under the standard warranty.

Customer Service
ESTES ROCKETRY DIVISION
MILWAUKEE, WISCONSIN 53001

Warranty

All parts of this product are guaranteed by Estes Industries. Replacement of components of released units will occur upon receipt of completed repair request. Replacement will be required in full for repaired components for which replacement parts are not available. For details contact the Customer Service Dept., Phoenix, AZ 85004.

For details contact the Customer Service Dept. Phoenix, AZ 85004.

ESTES ROCKETRY DIVISION
MILWAUKEE, WISCONSIN 53001

How Cold Propellant Rockets Work:

NOSE CONE
The nose cone protects the motor and parachute during flight.

PARACHUTE TUBE
The parachute tube is attached to the motor and parachute during flight.

TAPE
The tape is used to attach the motor and parachute to the adapter.

ADAPTER
The adapter is used to attach the motor and parachute to the launch stand.

SNAP BRIDGES
The snap bridges are used to attach the motor and parachute to the launch stand.

PARACHUTE
The parachute is used to slow the rocket down during flight.

IGNITER
The igniter is used to start the motor.

LAUNCH STAND
The launch stand is used to hold the rocket during launch.

1234567890

ZZ-TWO ST-AT-WS

Z<L>K

VSN

NASA

VALKYRIE

INSTRUMENTATION

RECOVERY

INTERSTAGE

103244

VALKYRIE ROCKET

ASSEMBLY INSTRUCTIONS

Follow directions carefully; read through them completely first. Then proceed to assemble your rocket step by step.

REPLACEMENT PARTS

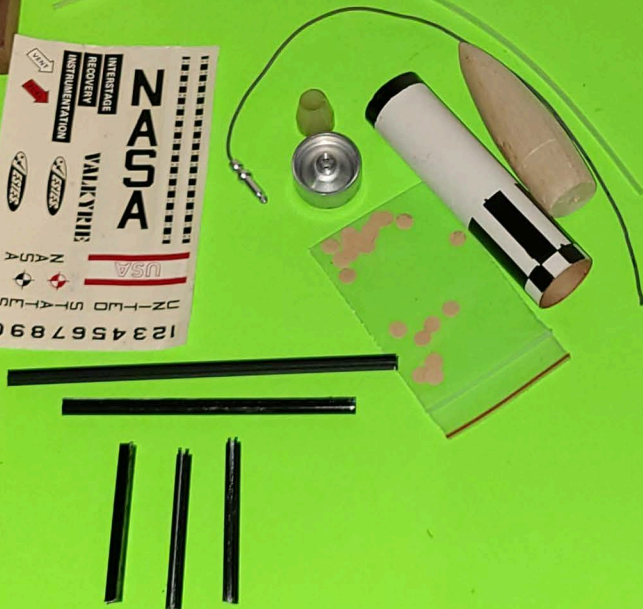
PART NO.	Description
3400	1/2" Igniter (8.0" long, not included in kit)
3410	1/4" Igniter (10.0" long, not included in kit)
3420	Parachute
3430	Parachute compartment kit (including adapter tube, parachute tube, nose cone, tape)
3436	Fin Ball and Launch Guide (Ball, guide, and glue)
2263	Parachute Kit (Parachute, shock line, eye discs)
3405	Manual Firing Unit
3407	Small Parts Kit (Timing, timer disc, safety pins, snail extension)
37573	Insert Card

ACCESSORIES

Launch-It™ Launch Equipment

3408	HP-100 Propellant, 15 oz.
3434	Remote Electrical Firing Unit (with igniter wire)
3406	Igniter Wire, 0" piece

04-802

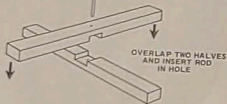


ESTESA DIVISION OF
ESTES INDUSTRIES
POMONA, CALIF. 92666

cold propellant rocket launch stand

- PARTS LIST**
- 2 piece rod #2235
 - Launch stand halves #85220

SLIDE SECTIONS TOGETHER



#8244

Engine Service Policy

If you damage your engine for any reason, you may return it to Estes Industries for repair or replacement. The total charge is \$1.50, which covers the repair service and the cost of all parts needed. Return only the damaged engine with check or money order for \$1.50. California residents add 9% state sales tax. No C.O.D.'s!

Send to

Customer Service

ESTESESTES INDUSTRIES
POMONA, CALIF. 92666GIVE FOR DETAILS FOR REPAIR SERVICE
810/237-972

Warranty

All parts of this product are guaranteed by Estes Industries against defects of manufacture. Any part found defective will be repaired or replaced without charge provided the defective part is returned postpaid to Estes Industries, Customer Service Dept., Pomona, California 92666.

For better service, please send only the defective part.

ESTESESTES INDUSTRIES
POMONA, CALIF. 92666

How Cold Propellant Rockets Work:



NOZZLE CONE
Grain
Propellant (propellant)

PARACHUTE
Lite - light mylar canopy
pencil shaft, open end
Shut line, tape disk for
attachment as indicated.



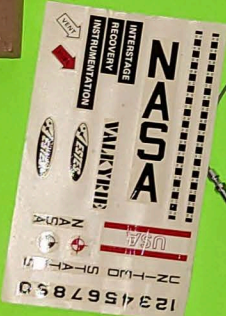
NOSE CONE
The 1/2" formed distribution cone
which sheet appearance, safety
is correct.

PARACHUTE TUBE
Pneumatically fitted tube con-
tains parachute during flight.

TUBE
Tube connects adapter to par-
achute tube.

ADAPTER
Customized adapter tube con-
tains trigger spring and release of
parachute tube to separator.

SNAP BRIVEL
Snap releases the connector
and separating the adapter from



VALKYRIE ROCKET

ASSEMBLY INSTRUCTIONS

Follow directions carefully; read through them completely first. Then proceed to assemble your rocket step by step.

REPLACEMENT PARTS

PART NO.	Description
3400	V-2 Engine (6.3" long, not included in kit)
3410	V-1 Engine (included in kit)
3403	Separator
3435	Painted Compartment Kit (Aluminum adapter tube, parachute tube, nose cone, tape)
3436	Fan Mail and Launch Guide (Balls, guides, and film)
2263	Parachute Kit (Parachute, thread line, tape disks)
3405	Manual Firing Unit
3407	Small Parts Kit (Coupling, timer discs, safety pins, nozzle extension)
3775	Decal Card

ACCESSORIES

Estes "Estes" Launch Equipment	
3408	BP-100 Propellant, 15 oz.
3434	Remote Electrical Firing Unit (With Igniter Wire)
3400	Igniter Wire, 6" piece

84.800

VENT
FUEL

INTERSTAGE
RECOVERY
INSTRUMENTATION

NASA

WALKYRIE

ESTES

ESTES

USA

USA

1234567890

02-1-100 ST-AH-15



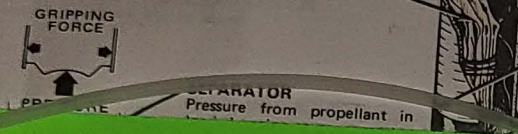
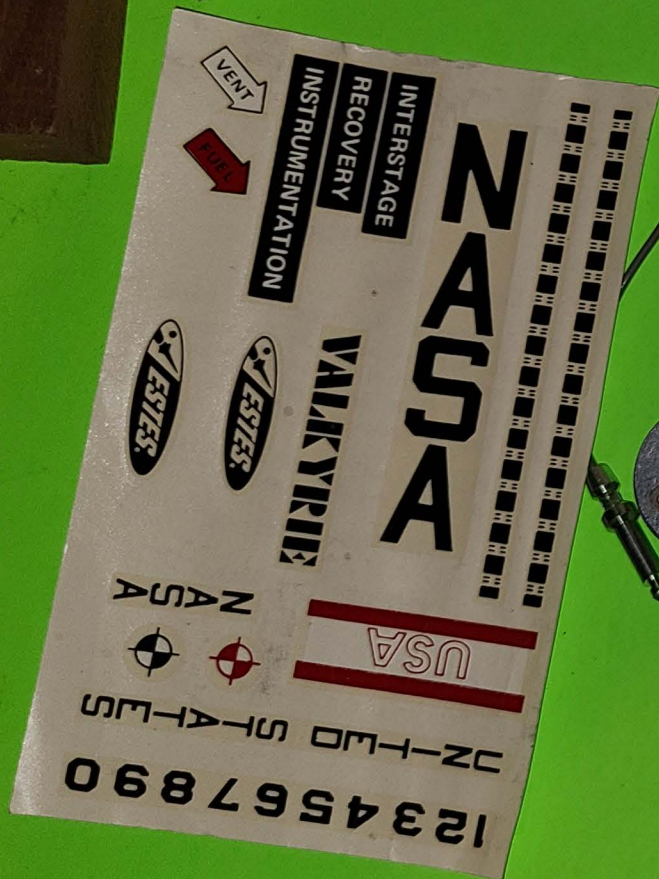
ROCKET

ASSEMBLY

Follow directions carefully first. Then proceed to

REPLACEMENT PARTS

PART NO.	DESCRIPTION
3400	V-2 Engine (8.5)
3416	V-1 Engine (inc)
3401	Separator
3435	Payload Compartment, parachute
3436	Fin Rail and Launcher (glue)
2263	Parachute Kit (discs)
3405	Manual Firing
3407	Small Parts Kit (safety pins, etc)
37575	Decal Card



ADAPTER
Aluminum adapter tube permits proper grip and release of parachute tube by separator.

SNAP SWIVEL
Snap provides easy connection of parachute and nose cone to



VALKYRIE ROCKET

ASSEMBLY INSTRUCTION

Follow directions carefully; read through them first. Then proceed to assemble your rocket step

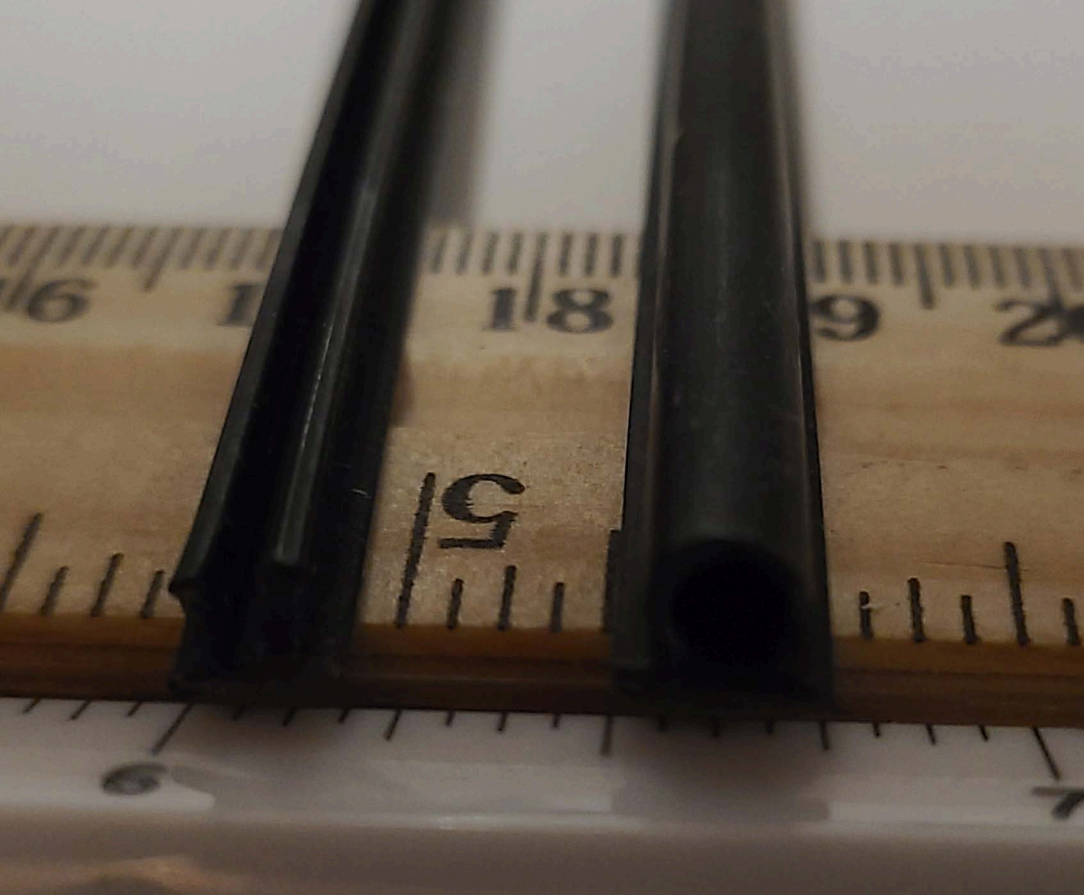
REPLACEMENT PARTS

- | PART NO. | |
|----------|--|
| 3400 | V-2 Engine (8.5" long, not included in kit) |
| 3416 | V-1 Engine (included in kit) |
| 3401 | Separator |
| 3435 | Payload Compartment Kit (Aluminum adapter tube, parachute tube, nose cone, tape) |
| 3436 | Fin Rail and Launch Guide (Rails, guides, glue) |
| 2263 | Parachute Kit (Parachute, shroud line, t discs) |
| 3405 | Manual Firing Unit |
| 3407 | Small Parts Kit (Coupling, timer discs, safety pins, nozzle extension) |
| 37575 | Decal Card |





10 ³/₄ "





13" Total
3.5mm plug

