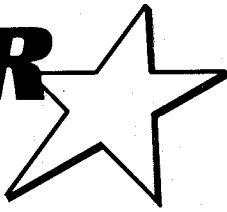




QUASAR

KIT NO.0650



SKILL LEVEL 1

PARTS LIST

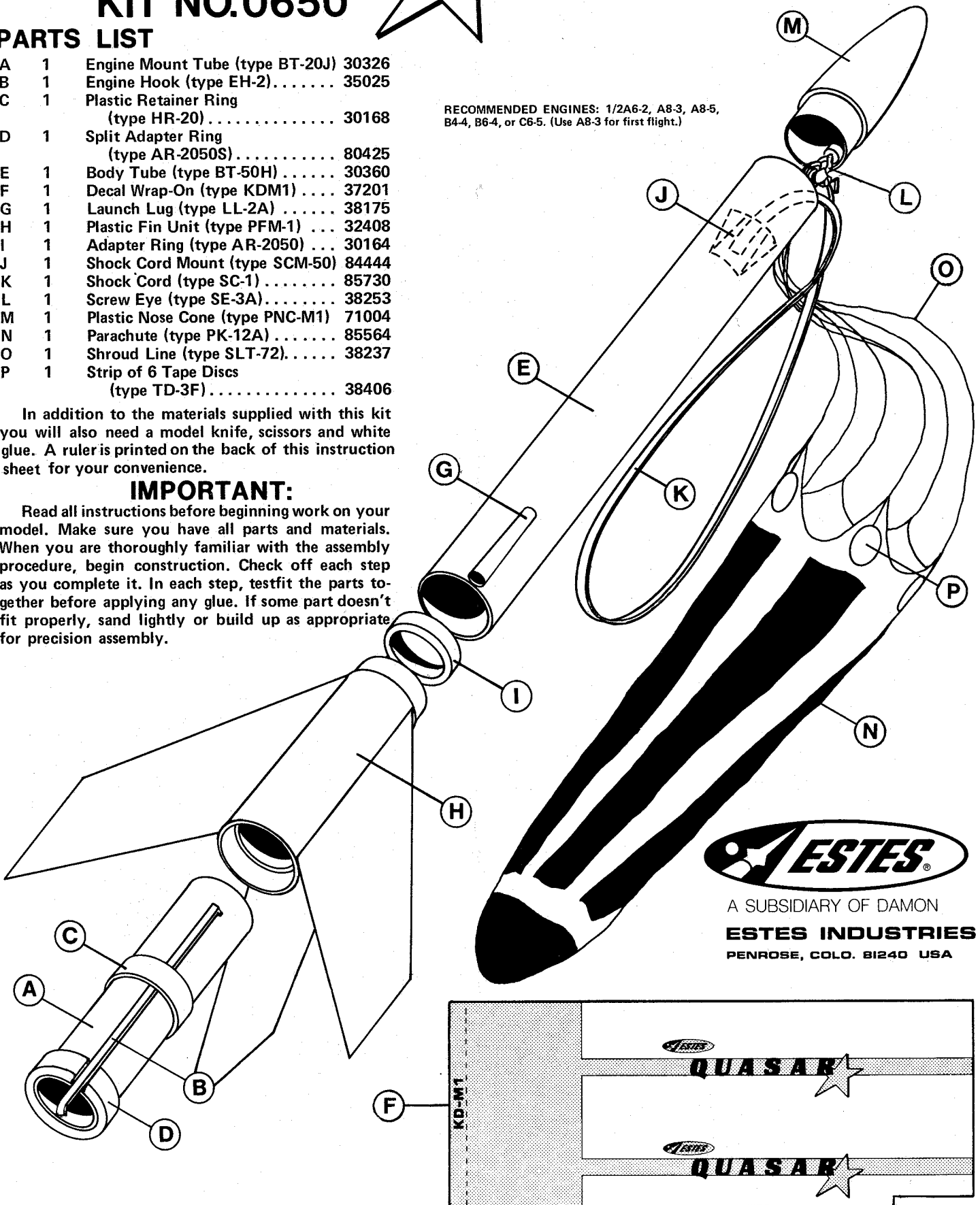
| | | | |
|---|---|---------------------------------------|-------|
| A | 1 | Engine Mount Tube (type BT-20J) | 30326 |
| B | 1 | Engine Hook (type EH-2) | 35025 |
| C | 1 | Plastic Retainer Ring (type HR-20) | 30168 |
| D | 1 | Split Adapter Ring (type AR-2050S) | 80425 |
| E | 1 | Body Tube (type BT-50H) | 30360 |
| F | 1 | Decal Wrap-On (type KDM1) | 37201 |
| G | 1 | Launch Lug (type LL-2A) | 38175 |
| H | 1 | Plastic Fin Unit (type PFM-1) | 32408 |
| I | 1 | Adapter Ring (type AR-2050) | 30164 |
| J | 1 | Shock Cord Mount (type SCM-50) | 84444 |
| K | 1 | Shock Cord (type SC-1) | 85730 |
| L | 1 | Screw Eye (type SE-3A) | 38253 |
| M | 1 | Plastic Nose Cone (type PNC-M1) | 71004 |
| N | 1 | Parachute (type PK-12A) | 85564 |
| O | 1 | Shroud Line (type SLT-72) | 38237 |
| P | 1 | Strip of 6 Tape Discs (type TD-3F) | 38406 |

RECOMMENDED ENGINES: 1/2A6-2, A8-3, A8-5, B4-4, B6-4, or C6-5. (Use A8-3 for first flight.)

In addition to the materials supplied with this kit you will also need a model knife, scissors and white glue. A ruler is printed on the back of this instruction sheet for your convenience.

IMPORTANT:

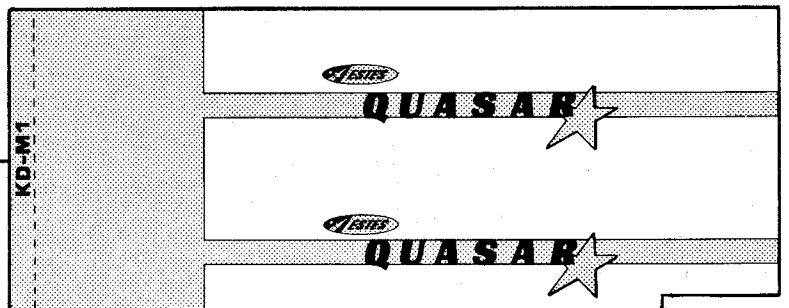
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PREFLIGHT PREPARATION AND RECOVERY TIPS

RECOVERY WADDING

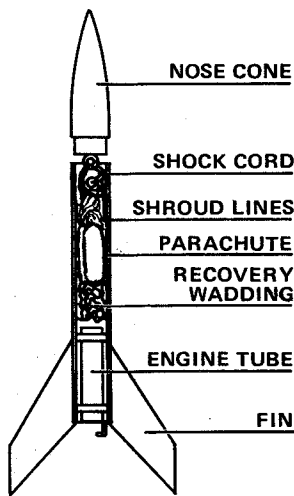
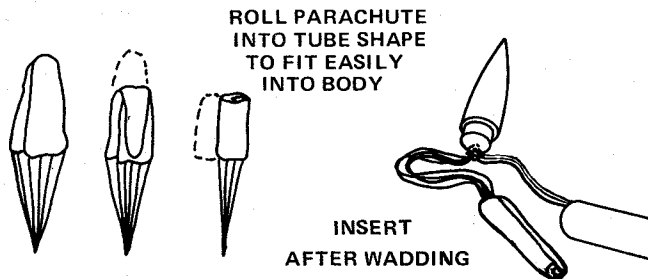
This material is used to protect your parachute from the heat of the engine's ejection charge. Recovery Wadding (Cat. No. 2274) is flame resistant.

For maximum efficiency use enough wadding to fill the rocket body tube for a distance of twice the body diameter. Usually four or five squares will be adequate for this model rocket. When preparing the rocket for flight, crumple the wadding loosely to get the maximum bulk from it and still obtain a good seal against the wall of the tube. Pack the 'chute in over the wadding.

PARACHUTE

Hold the parachute at its center and pass the other hand down it to form a "spike" shape. Fold this spike in two and pack into the tube on top of the wadding. Pack the shroud lines and shock cord in on top of the parachute and slip the nose cone into place.

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



NOSE CONE

Nose cone should separate easily from rocket body tube, but not be extremely loose. If fit is too tight, sand inside of body tube end and shoulder of nose cone with fine sandpaper.

If nose cone is too loose add a wrapping of transparent tape or masking tape to the shoulder of the nose cone.

ENGINE FIT

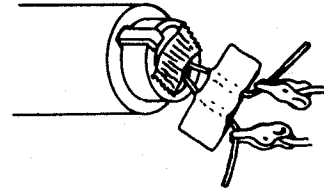
To activate parachute recovery system correctly, the engine MUST be held in place SECURELY.

Make sure the end of the engine hook latches securely over the end of the engine.



COUNTDOWN CHECKLIST

T-10 Select an engine. Use an A8-3 for the first flight. Later flights may be made with 1/2A6-2, A8-5, B4-4, B6-4, and C6-5 engines. Install an igniter in the engine as directed in the instructions which came with it.



T-9 Insert the engine into the engine holder tube, springing the engine holder up enough to admit the front of the engine. Secure end of engine holder over rear of engine.

T-8 Place the rocket on the launcher. Check to be sure the launch controller is disarmed - - remove the safety key. Clean and attach the micro-clips to the igniter leads.

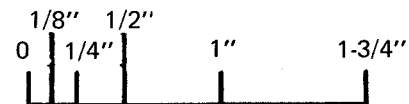
T-7 Clear the launch area, check for low flying aircraft, and alert recovery and tracking crews.

T-6 Arm the launch controller - - insert safety key.

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

MISFIRE PROCEDURE

Occasionally an igniter will heat and burn into two parts 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.



RULER FOR CHECKING DIMENSIONS IN STEPS 2, 5, 8, 10, and 11.

IMPORTANT---IMPORTANT---IMPORTANT

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

*HIAA-NAR - Hobby Industry Association of America
- National Association of Rocketry



PREFLIGHT PREPARATION AND RECOVERY TIPS

RECOVERY WADDING

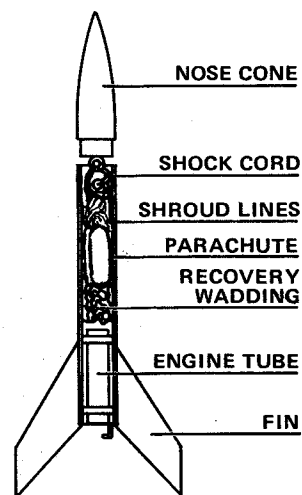
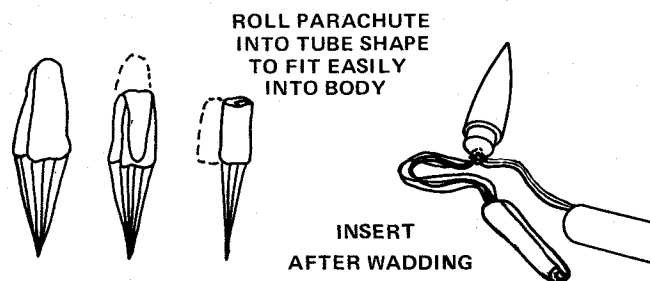
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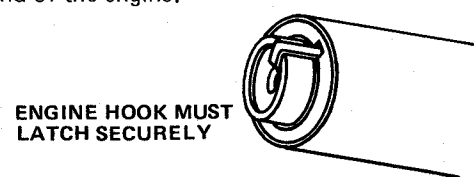
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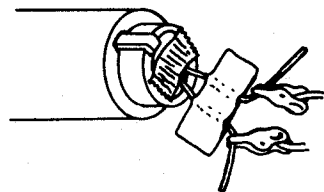
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QUASAR

KIT NO.0650



SKILL LEVEL 1

PARTS LIST

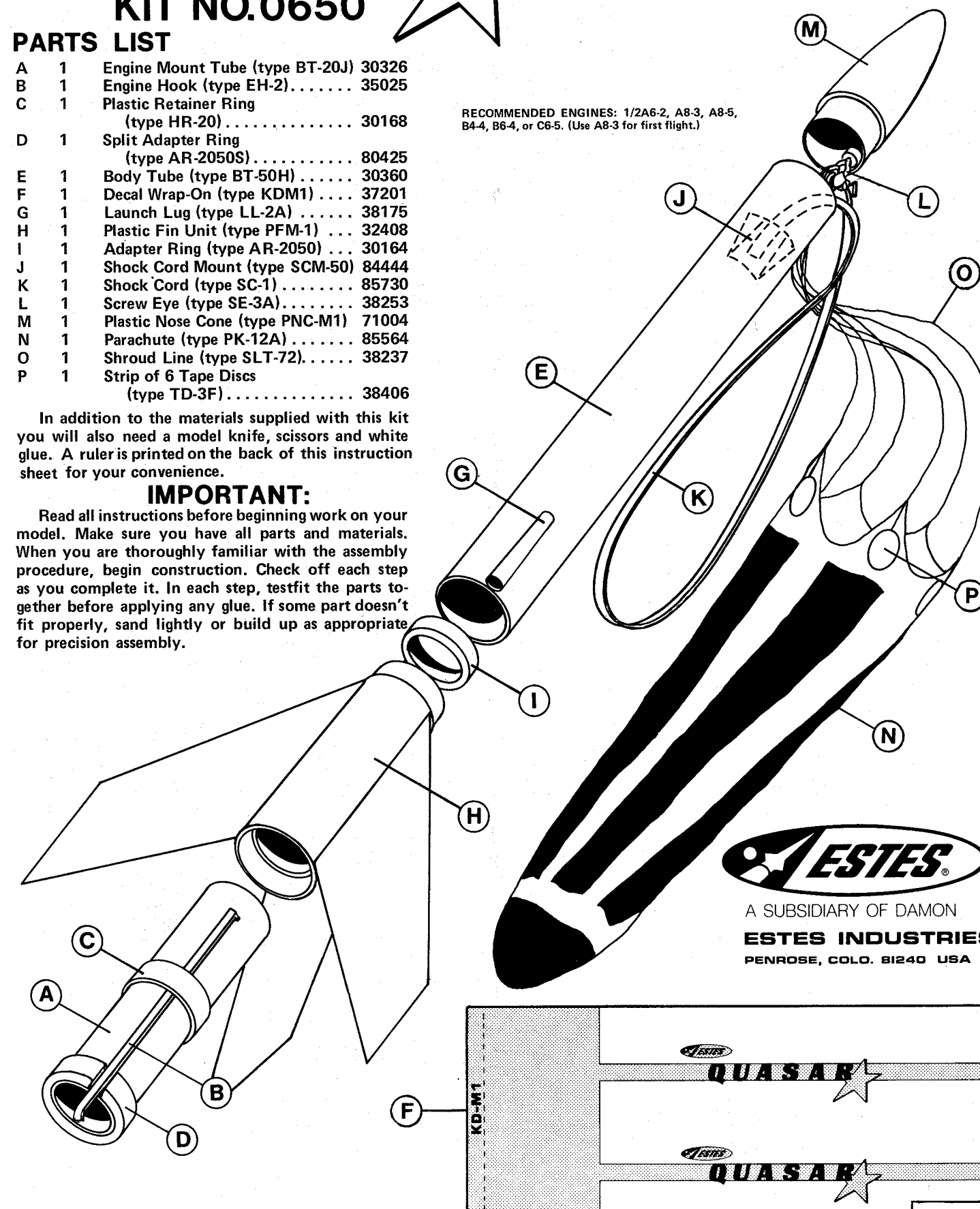
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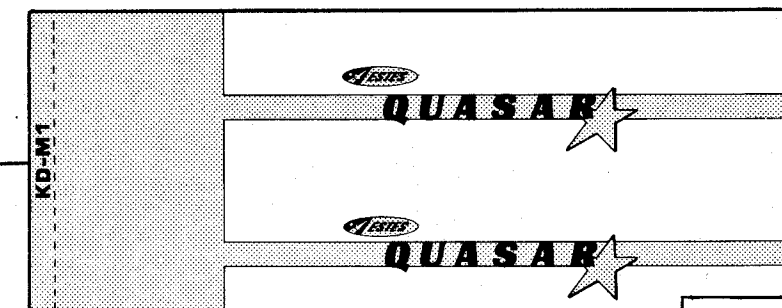
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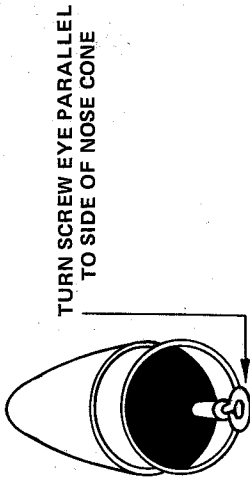
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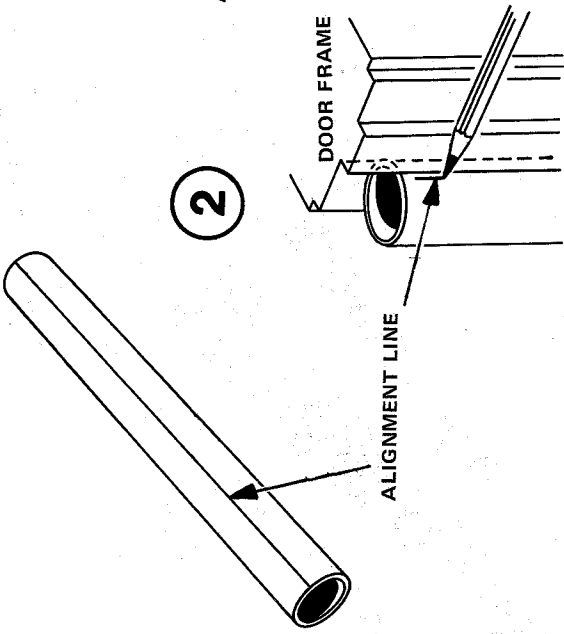
ASSEMBLY INSTRUCTIONS

1



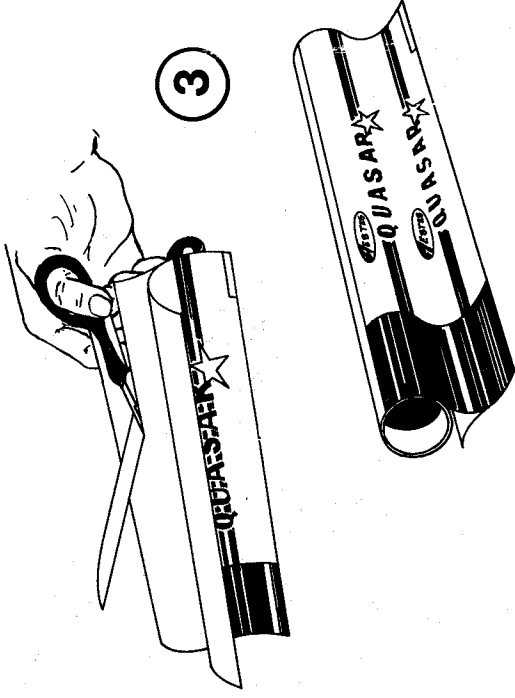
1 Insert the screw eye (part L) into the hole in the base of the nose cone (part M). Turn the eye so it is parallel to the near side of the nose cone.

2



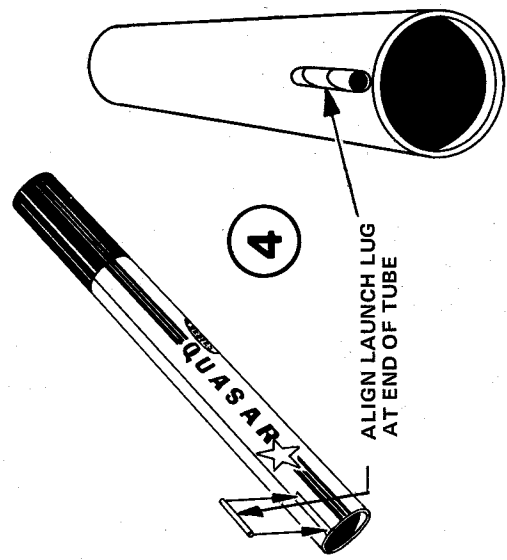
2 Draw a line, parallel to the body tube (part E) along its entire length (a drawer sill or doorframe provides an excellent guide). This becomes the decal wrap-on (part F) alignment line.

3



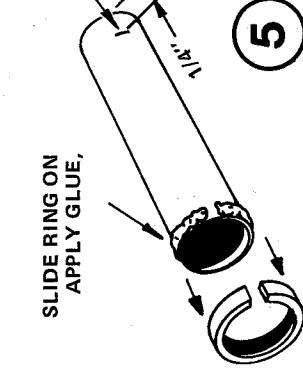
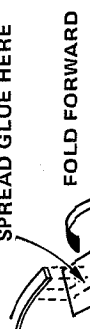
3 Carefully peel the backing paper part way from the decal and cut away approximately 1/2" from the backing edge as shown. Allow the remaining backing to return to the decal. Place the decal edge CAREFULLY along the alignment line and smooth into place. Slowly peel away the backing and wrap the decal around the body tube, smoothing away any bubbles or wrinkles as you go.

4



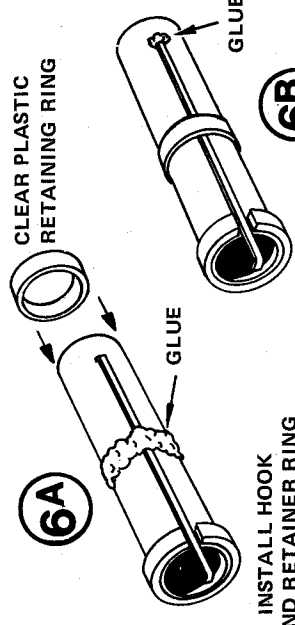
4 Glue the launch lug (part G) onto the body tube in the bare slot left by the decal wrap-on. Align it straight along the body tube.

7



5 Glue the split adapter ring (part D) to one end of the engine mount tube (part A) by spreading a line of glue around the end of the tube and sliding the split adapter ring over the tube so the ends are even. Press the split ends of the ring snugly on the tube.
Cut a 1/8" wide slit in the engine mount tube, directly in line with the gap in the split ring and 1/4" from the opposite end of the engine mount tube.

6A

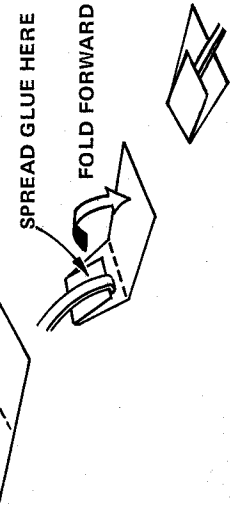


INSTALL HOOK AND RETAINER RING

6B

6 Insert one end of the engine hook (part B) into the slit. Lay the engine hook along the tube so the other end passes through the gap in the split adapter ring. Holding the engine hook in place, apply a line of glue around the middle of the tube and slide the plastic retainer ring (part C) over the tube and engine hook onto the glue. Apply another drop of glue over the forward end of the engine hook. Set this sub-assembly aside to dry.

SET BACK AT LEAST 1" TO ALLOW FOR NOSE CONE



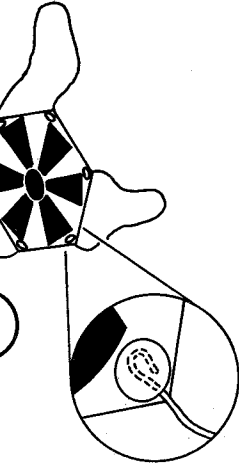
- 7** Cut out the shock cord mount (part J). Pre-fold it on the dotted lines. Apply glue to section 1 and lay the shock cord (part K) end into the glue. Fold this first section over. Spread glue over the back of the first section and the exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp the unit together with your fingers until the glue sets.



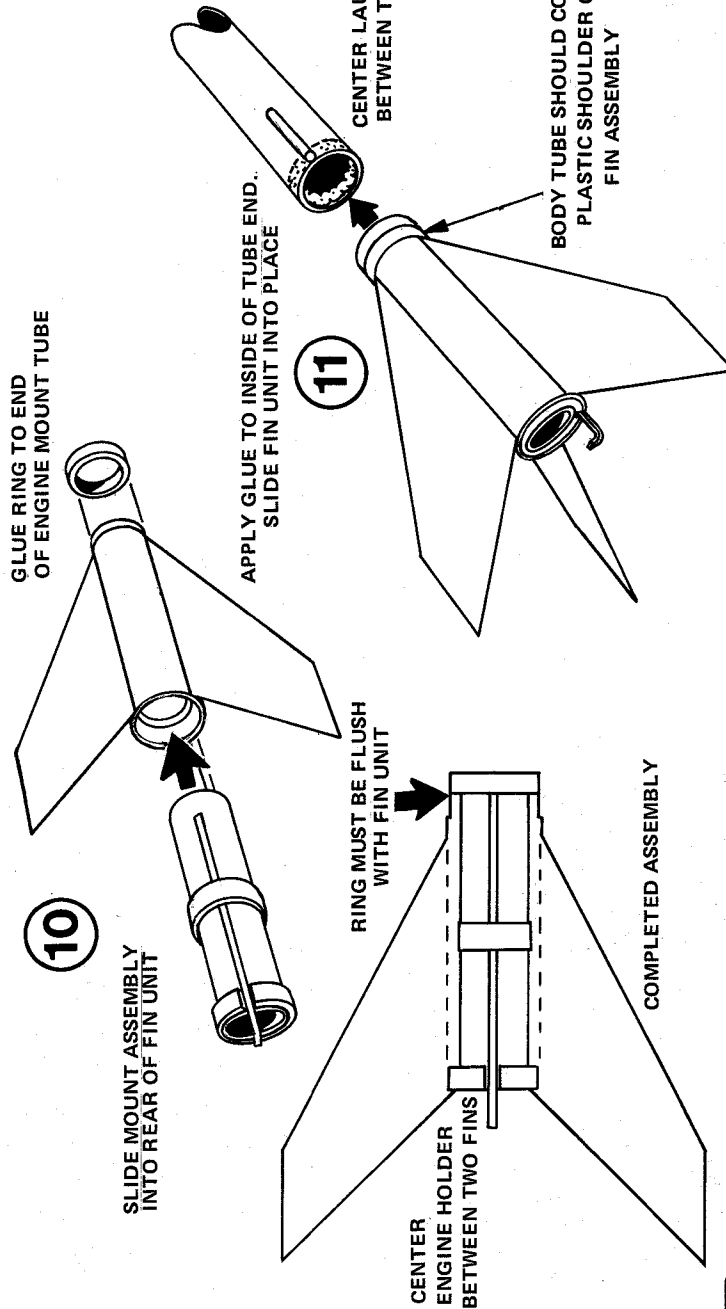
8

PLACE GLUE INSIDE BODY TUBE,
THEN PRESS MOUNT ONTO GLUE

- 8** Apply glue to the inside of the body tube over an area approximately 1" to 1-3/4" from the end opposite the launch lug. The glue should cover a shape approximately the same as the shock cord mount. Press the mount into the glue and hold it until the glue sets.



- 9** Cut out the parachute (part N) along the edge lines marked on the plastic. Cut three 24" lengths of shroud line (part O) and attach one to each point of the parachute with a tape disc (part P) as shown.

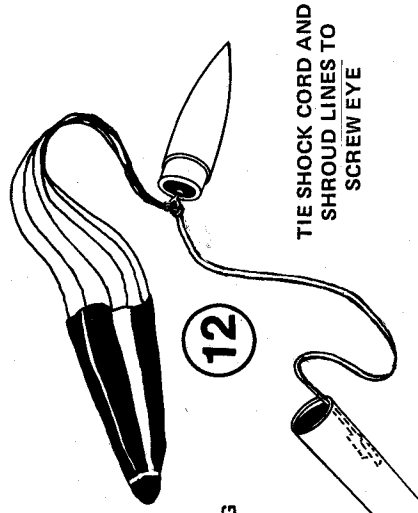


- 10** Insert the engine mount assembly into the fin unit (part H) from the rear. The split adapter ring should fit all the way into the tube portion of the fin unit, the engine hook should be centered between two fins, and the front of the engine mount tube should project 1/4" from the front of the fin unit. Apply glue around the projecting portion of the engine mount tube and slide the remaining adapter ring over the tube until it fits tightly against the front of the fin unit.

- 11** Spread glue around the inside of the main body tube at the same end as the launch lug. The glue should cover an area extending 1/2" into the tube. Line up the tube and fin unit so the launch lug is between two of the fins and insert the front of the fin unit into the rear of the body tube.

- 12** Tie the free end of the shock cord and shroud lines securely to the screw eye on the nose cone.

NOTE: If a fin should become warped it may be easily straightened. Bend it in the direction opposite the warp and hold it in that position for a few seconds. Repeat as needed until the fin is straight.



12

CENTER LAUNCH LUG
BETWEEN TWO FIN'S

TIE SHOCK CORD AND
SHROUD LINES TO
SCREW EYE

BODY TUBE SHOULD COVER
PLASTIC SHOULDER OF
FIN ASSEMBLY

APPLY GLUE TO INSIDE OF TUBE END.
SLIDE FIN UNIT INTO PLACE

11

GLUE RING TO END
OF ENGINE MOUNT TUBE

SLIDE MOUNT ASSEMBLY
INTO REAR OF FIN UNIT

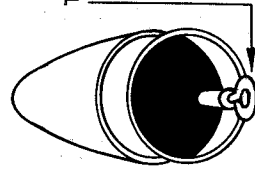
RING MUST BE FLUSH
WITH FIN UNIT

CENTER
ENGINE HOLDER
BETWEEN TWO FIN'S

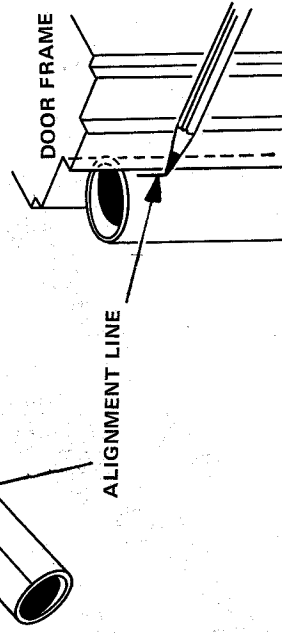
COMPLETED ASSEMBLY

ASSEMBLY INSTRUCTIONS

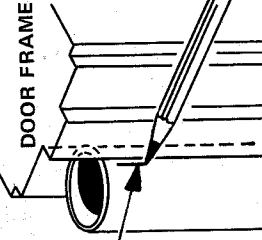
1



TURN SCREW EYE PARALLEL TO SIDE OF NOSE CONE



ALIGNMENT LINE

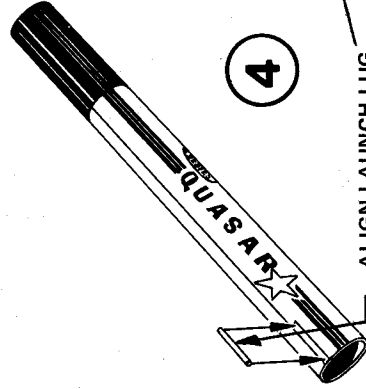


2

- 2 Draw a line, parallel to the body tube (part E) along its entire length (a drawer sill or doorframe provides an excellent guide). This becomes the decal wrap-on (part F) alignment line.

- 1 Insert the screw eye (part L) into the hole in the base of the nose cone (part M). Turn the eye so it is parallel to the rear side of the nose cone.

4



ALIGN LAUNCH LUG AT END OF TUBE

- 4 Glue the launch lug (part G) onto the body tube in the bare slot left by the decal wrap-on. Align it straight along the body tube.

SPREAD GLUE HERE



7

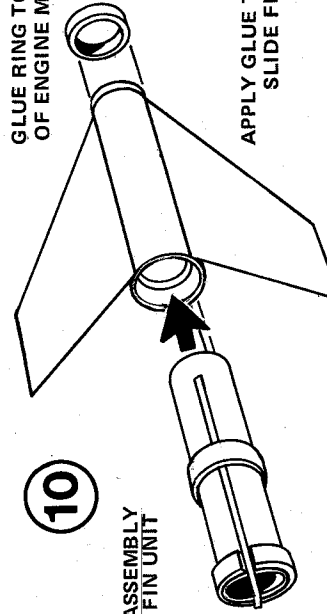
SPREAD GLUE HERE
FOLD FORWARD



- 7 Cut out the shock cord mount (part J). Pre-fold it on the dotted lines. Apply glue to section 1 and lay the shock cord (part K) end into the glue. Fold this first section over. Spread glue over the back of the first section and the exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp the unit together with your fingers until the glue sets.

10

SLIDE MOUNT ASSEMBLY INTO REAR OF FIN UNIT

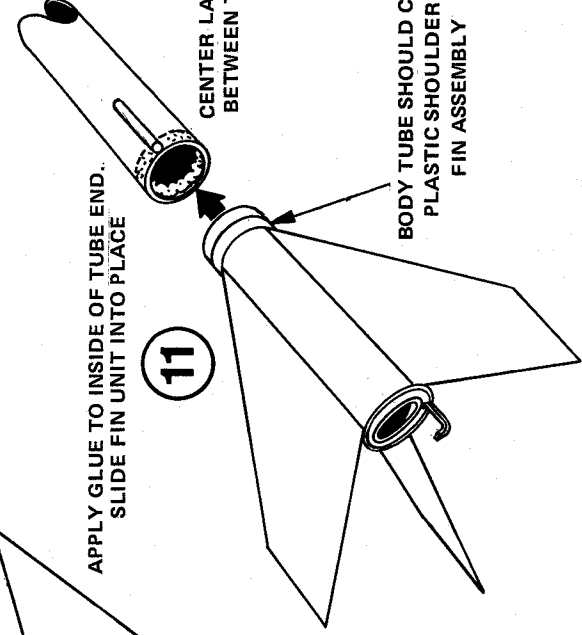


RING MUST BE FLUSH WITH FIN UNIT

CENTER ENGINE HOLDER BETWEEN TWO FINS

APPLY GLUE TO INSIDE OF TUBE END. SLIDE FIN UNIT INTO PLACE

11

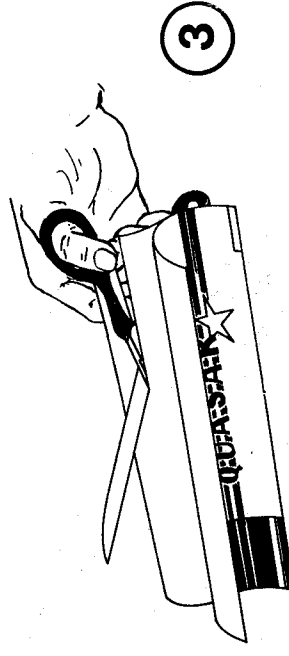


BODY TUBE SHOULD COVER PLASTIC SHOULDER OF FIN ASSEMBLY

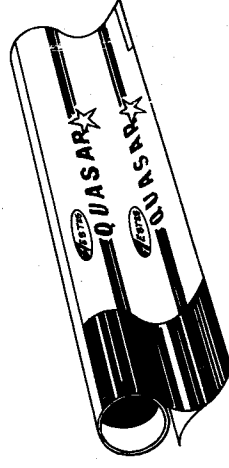
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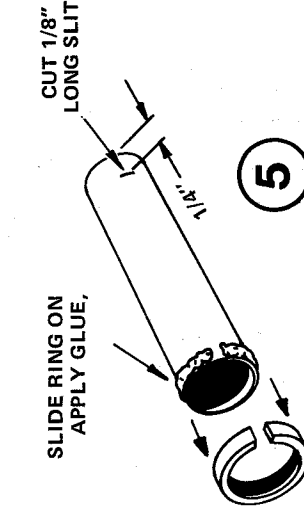


3



- 3 Carefully peel the backing paper part way from the decal and cut away approximately 1/2" from the backing edge as shown. Allow the remaining backing to return to the decal. Place the decal edge CAREFULLY along the alignment line and smooth into place. Slowly peel away the backing and wrap the decal around the body tube, smoothing away any bubbles or wrinkles as you go.

6A



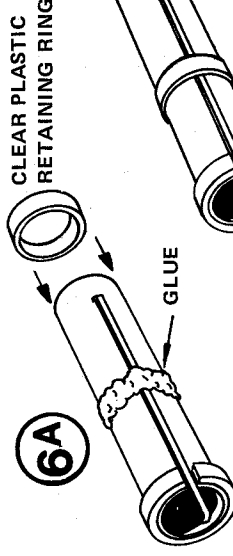
SLIDE RING ON APPLY GLUE. CUT 1/8" LONG SLIT

5

- 5 Glue the split adapter ring (part D) to one end of the engine mount tube (part A) by spreading a line of glue around the end of the tube and sliding the split adapter ring over the tube so the ends are even. Press the split ends of the ring snugly on the tube.

Cut a 1/8" wide slit in the engine mount tube, directly in line with the gap in the split ring and 1/4" from the opposite end of the engine mount tube.

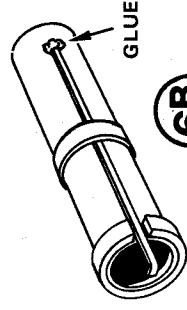
6A



GLUE

INSTALL HOOK AND RETAINER RING

6B



GLUE

- 6 Insert one end of the engine hook (part B) into the slit. Lay the engine hook along the tube so the other end passes through the gap in the split adapter ring. Holding the engine hook in place, apply a line of glue around the middle of the tube and slide the plastic retainer ring (part C) over the tube and the engine hook onto the glue. Apply another drop of glue over the forward end of the engine hook. Set this sub-assembly aside to dry.

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SPREAD GLUE HERE
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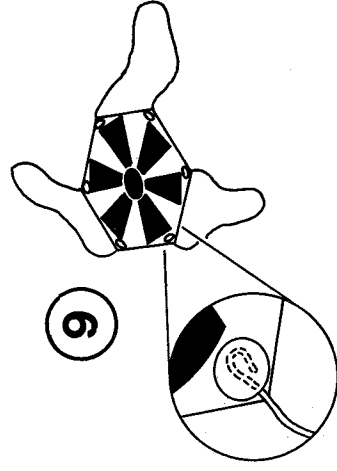
SET BACK AT LEAST 1" TO ALLOW FOR NOSE CONE



8

PLACE GLUE INSIDE BODY TUBE, THEN PRESS MOUNT ONTO GLUE

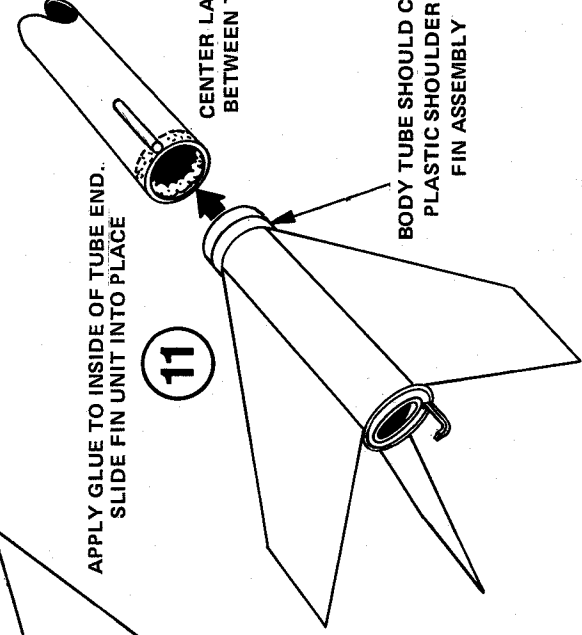
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- 9 Cut out the parachute (part N) along the edge lines marked on the plastic. Cut three 24" lengths of shroud line (part O) and attach one to each point of the parachute with a tape disc (part P) as shown.

CENTER ENGINE HOLDER BETWEEN TWO FINS



RING MUST BE FLUSH WITH FIN UNIT

CENTER ENGINE HOLDER BETWEEN TWO FINS

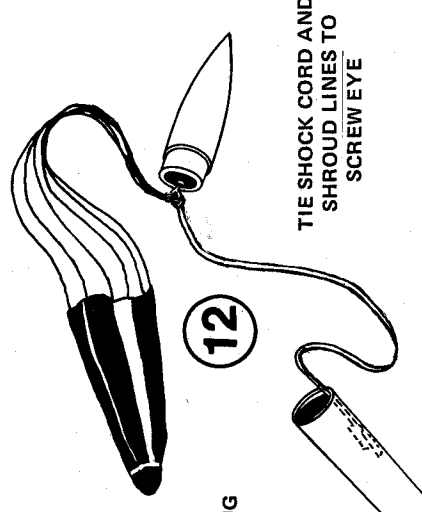
APPLY GLUE TO INSIDE OF TUBE END. SLIDE FIN UNIT INTO PLACE

11

APPLY GLUE TO INSIDE OF TUBE END. SLIDE FIN UNIT INTO PLACE

APPLY GLUE TO INSIDE OF TUBE END. SLIDE FIN UNIT INTO PLACE

12

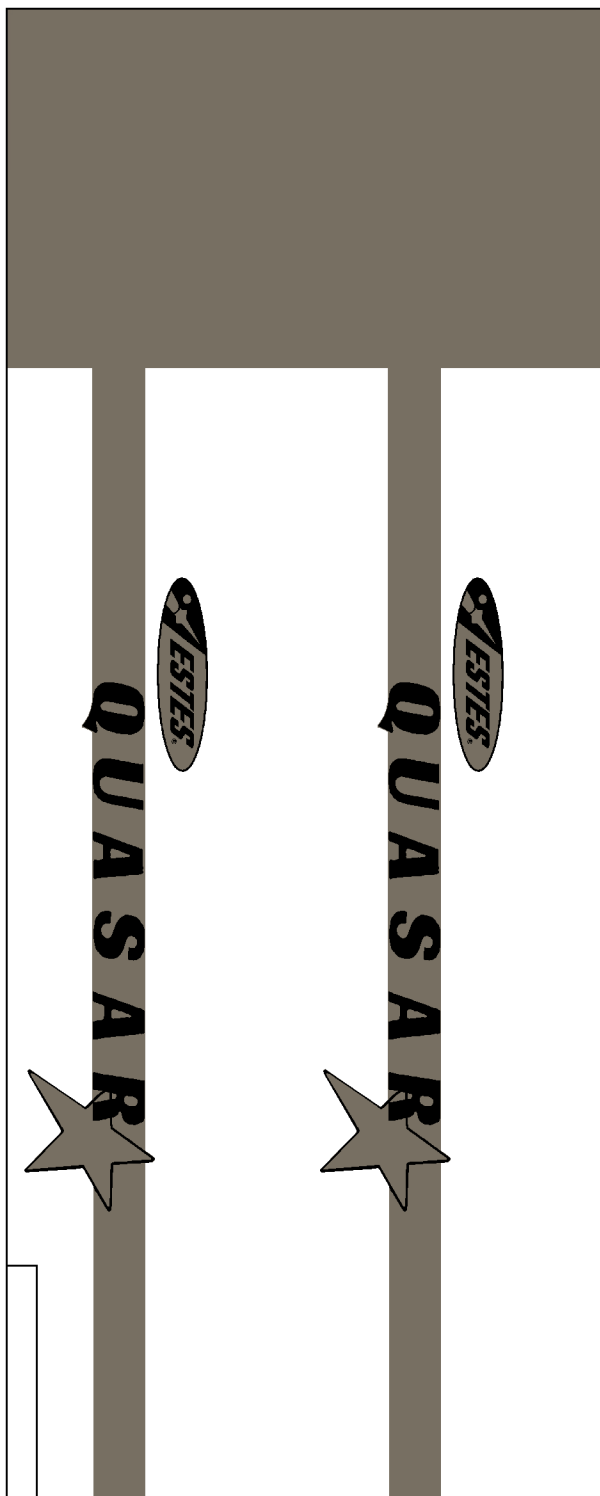


TIE SHOCK CORD AND SHROUD LINES TO SCREW EYE

- 12 Tie the free end of the shock cord and shroud lines securely to the screw eye on the nose cone.

NOTE: If a fin should become warped it may be easily straightened. Bend it in the direction opposite the warp and hold it in that position for a few seconds. Repeat as needed until the fin is straight.

KD-M1
037201



| PARTS LIST KIT NO. 0650 - Quasar | | | | | | | | |
|----------------------------------|-------------------------|----------|--------|-------------|----------------|------------------|-----------------|------------------|
| Quantity | Description | Type | Number | Detail1 | Detail2 | Detail3 | Detail4 | Comment |
| 1 | PAPER BODY TUBE | BT-20J | 30326 | 2.75" long | 0.710" ID | 0.736" OD | 0.013" wall | Glassine |
| 1 | ENGINE HOLDER | EH-2 | 35025 | 2.8" long | .100" wide | .025" thick | | Reg. & D |
| 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 | PAPER BODY TUBE | BT-50H | 30360 | 7.75" long | 0.950" ID | 0.976" OD | 0.013" wall | Glassine |
| 1 | Decal Wrap-On | KD-M1 | 37201 | 9" long | 4" wide | Chrome, Wht,Blk | Self Stick | Scan |
| 1 | LAUNCH LUG | LL-2A | 38175 | 5/32" ID | 1/8" rod | 1.25" long | | Mylar |
| 1 | PLASTIC FIN UNIT | PFM-1 | 32408 | 3 5/8" long | BT-50 | 3 fins | Chrome | Clipped fin tips |
| 1 | CENTERING RING | AR-2050 | 30164 | 1" long | .737" ID | .949" OD | 0.106" wall | Green |
| 1 | Shock Cord Mount | SCM-50 | 84444 | 1.5" wide | 3" long | 67 lb. Cardstock | BT-50 & larger | Scan |
| 1 | Shock Cord | SC-1 | 85730 | 18" long | 1/8" wide | | | Rubber |
| 1 | Screw Eye (Extra Small) | SE-3A | 38253 | 1/2" long | | | | |
| 1 | PLASTIC NOSE CONE | PNC-M1 | 71004 | 2 5/8" long | 0.974" dia. | 0.5" shoulder | Chrome | Injection Molded |
| 1 | Parachute | PK-12A | 85564 | 12" hexagon | 1.25 mil thick | LDPE plastic | Org/Wht | Damon Logo |
| 1 | Shroud Line | SLT-72 | 38237 | 72" | .020" diameter | Twisted cotton | 3 x 24" shrouds | |
| 6 | Tape Disc | TD-3F | 38406 | 1/2" dia. | Paper | Self-Stick | WO/Center Hole | Set of 6 |

The Quasar was issued in multiple versions. Of these, there is a Citation box version and a hang bag version. The contents differ and may even be different for the same version. The main differences are noted here. Both versions are based off the Alpha III. The major differences are the nose cone, fin unit, and main body tube.

The main body tube for the Alpha III is a BT-50EE which is 5.5" long. The main tube for the Quasar it a BT-50H which is 7.75" long. All the images I have found show the finish as glassine.

The nose cone on all versions came from the same mold. Most notably, the box version was chrome plated. The underlying plastic color was either white or black. The bag version was white but reports have confirmed that there are some bag versions that were chrome plated as well. I have never actually seen one though. The bag version face card shows white.

Just like the nose cone, all versions of the fin unit came from the same mold. The box version was always chrome plated and the fin tips were clipped. The underlying plastic color was either white or black. The bag version was white and just like the nose cone, some have reported a chrome plated unit in the bag version. My assumption is the bag version received part elimination of the box parts and subsequent production produced only white parts without the chrome plating to save money. All the catalog and box/face card images show clipped fins. The instructions for the bag version and images of the actual bagged parts show them unclipped. I'm assuming the Alpha III plans were leveraged for the bag version and the clipped fins were overlooked.

The 1974 parts catalog shows the chrome fin unit as 3 5/8" overall length. The standard Alpha III fin unit is 3 15/16". Simple math shows that 5/16" needs to be clipped off each fin to make the Alpha III fin unit into the Quasar fin unit.

The body tube wrap for the box version shows the "Q" facing forward towards the nose. This is consistent with the 1974 parts catalog, images on the instructions, and actual images of the wrap. The bag version face card shows the "Q" facing down towards the fins but the chrome forward wrap is still up front so it's not just that it was applied backwards. The bag version plans clearly show the "Q" pointing forward. The face card image must have been of a non-production prototype.

Recommended for ages 12 and up
ESTES
Aeromodelling
MODEL ROCKETS

QUASAR

FLYING MODEL ROCKET

OVER 100 FEET

It's time to take your rocketry to the next level with the Quasar Flying Model Rocket. This exciting new rocket is designed for high performance, and is packed with some great assembly features. The Quasar Flying Model Rocket is a great choice for the hobbyist. Quick to assemble, it's a great choice for the hobbyist. Quick to assemble, it's a great choice for the hobbyist. Quick to assemble, it's a great choice for the hobbyist.

Specifications

Length
Diameter
Weight

18.5" (46.7 cm)
1.75" (44 mm)
1.5 or 1.2 g

Recommended

Engines:
A6-3 (First Flight)
B4-2 C6-5

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Hobby, For Ages 10 to Adult

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CITATION



QUASAR

FLYING MODEL ROCKET

SKILL LEVEL 1

1—Beginner 2—Intermediate 3—Craftsman
4—Advanced 5—Expert

Dramatic, easy-to-build model rocket especially designed for beginners. Features bright, white plastic nose cone and fin assembly with pre-printed metalized-mylar wrap or decal for the body tube. Quick finish decor requires no painting. Includes quick-release engine mount and 12" parachute recovery. Ready-to-fly in less than an hour for exciting flight-after-flight enjoyment.

This is a hobby kit requiring construction. Recommended for ages 10 to 18 and adults. Engines, launch system, and glue are not included with this kit.

Specifications:

| | |
|----------|-----------------|
| Length | 14" (35.6cm) |
| Diameter | 0.976" (24.8mm) |
| Weight | 1.5 oz. (42 g) |

Recommended

| | |
|----------|---------------------|
| Engines: | A8-3 (First flight) |
| | B4-2 C6-5 |



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