

STAR WARS™

R2-D2



FLYING MODEL ROCKET

EST 2142





ESTES INDUSTRIES
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EST 2142



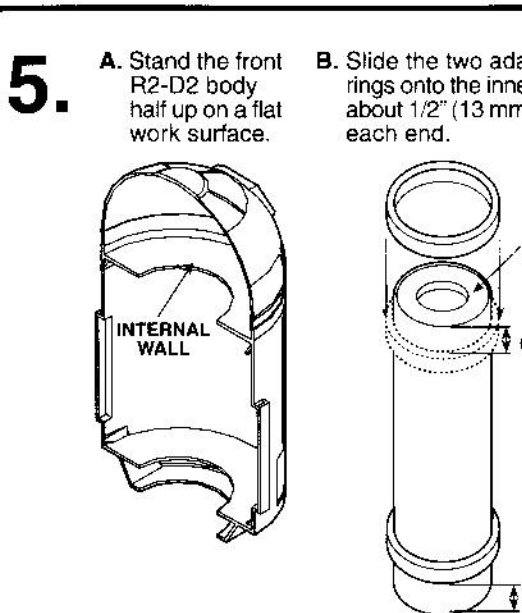
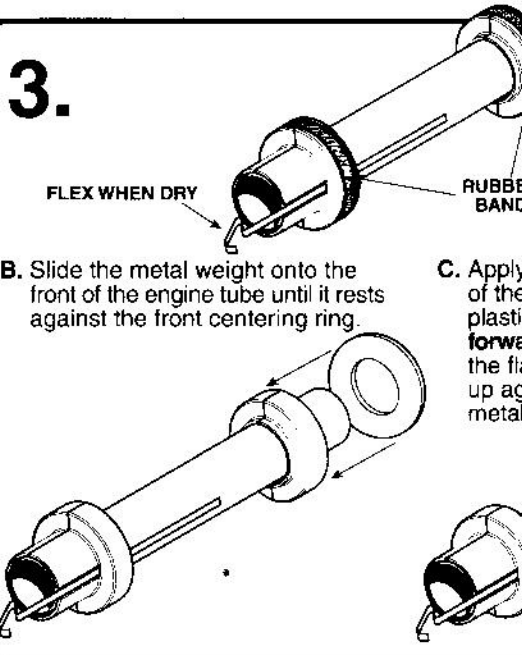
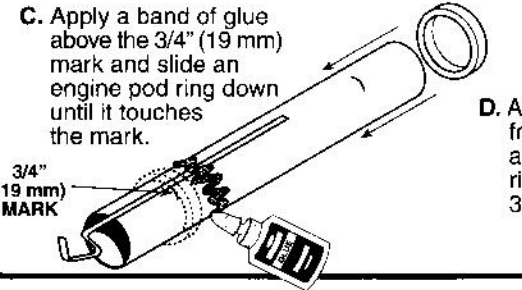
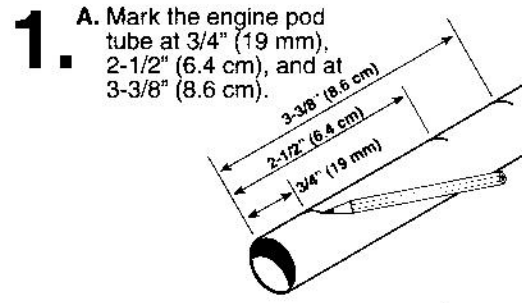
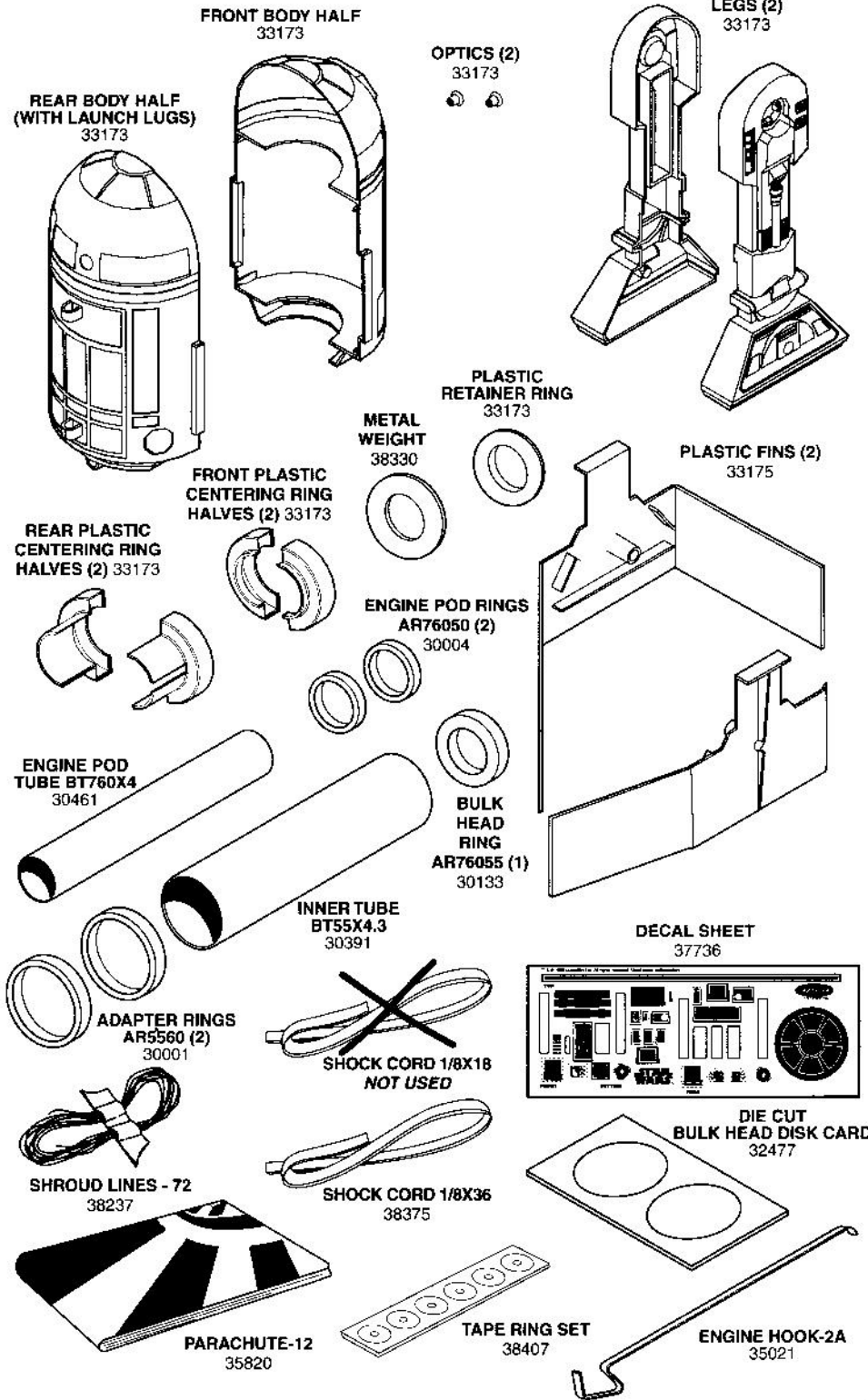
R2-D2

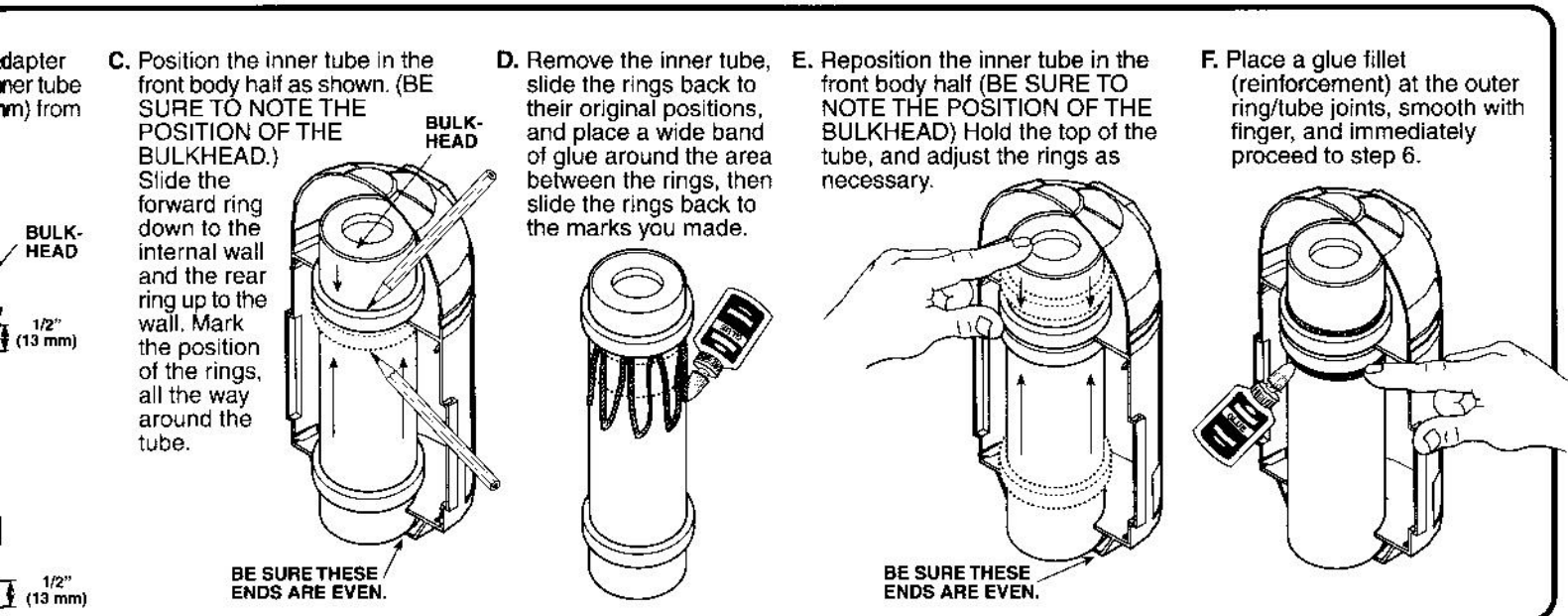
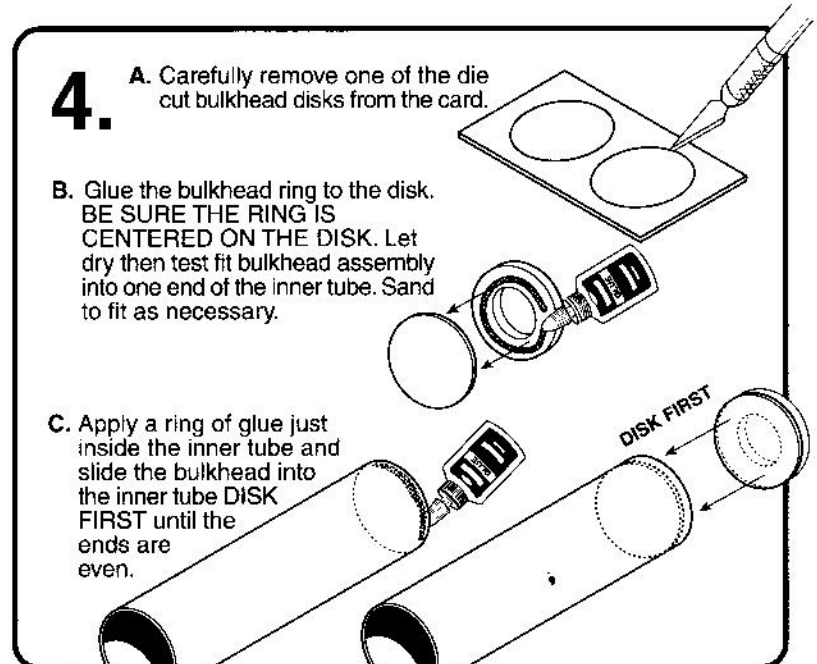
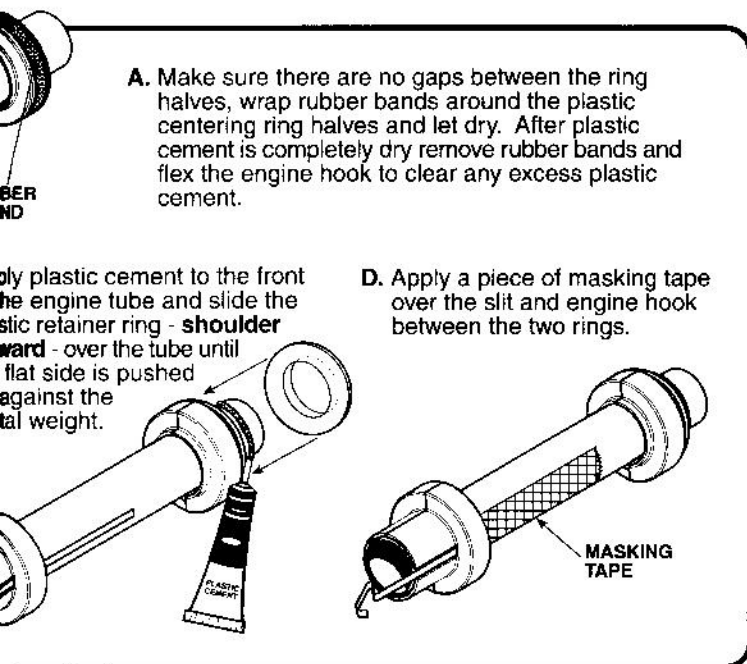
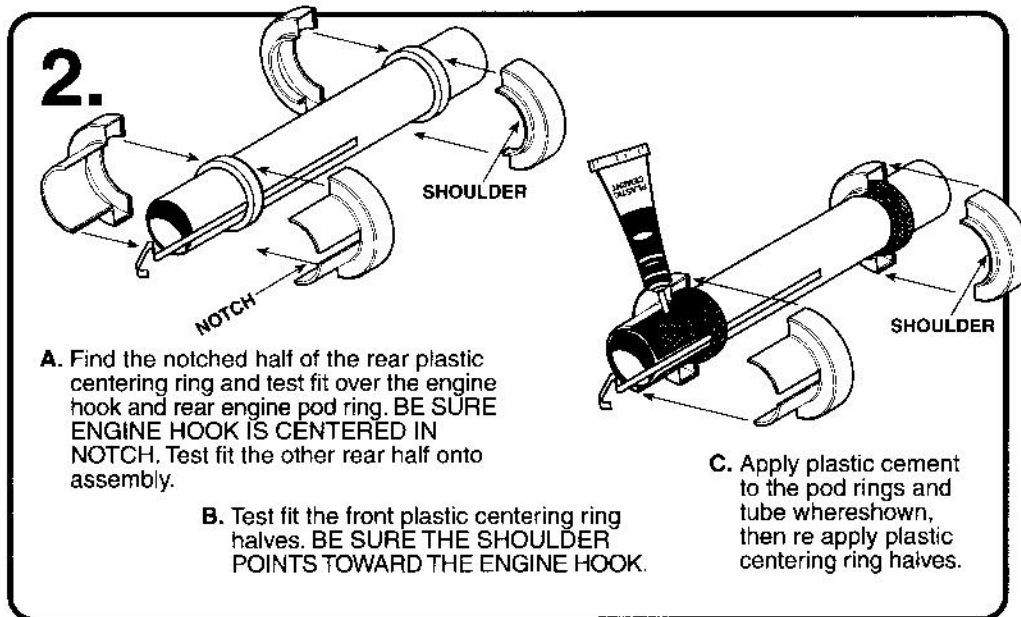
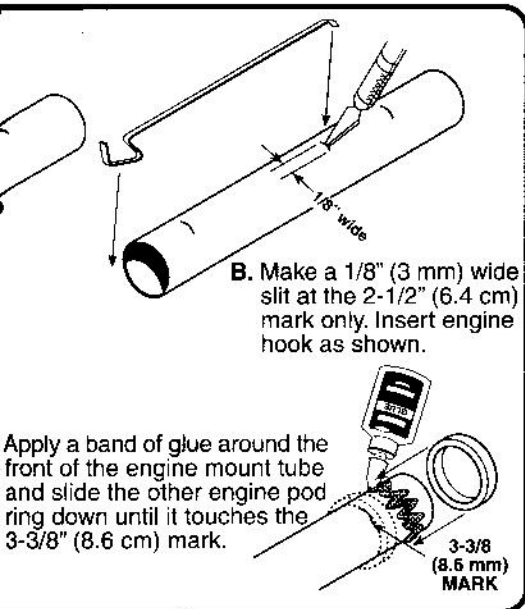
FLYING MODEL ROCKET KIT INSTRUCTIONS

MATERIALS REQUIRED: WHITE OR YELLOW GLUE, TUBE-TYPE PLASTIC CEMENT, SCISSORS, RUBBER BANDS, PENCIL, HOBBY KNIFE, #320 GRIT SANDPAPER, MASKING TAPE, BLUE, BLACK, AND SILVER MODEL PAINT PENS, BRIGHT SILVER SPRAY PAINT.

**ALL GLUED AREAS ARE SHADED IN GRAY
TEST FIT ALL PARTS BEFORE GLUING**

PARTS LAYOUT

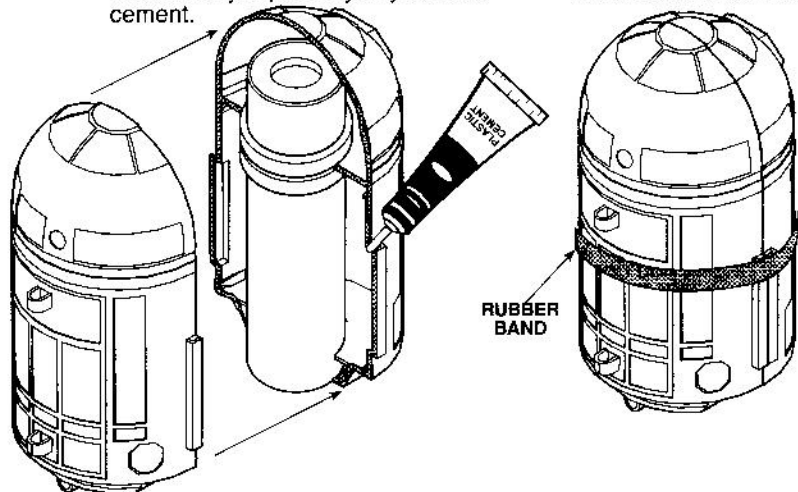




6.

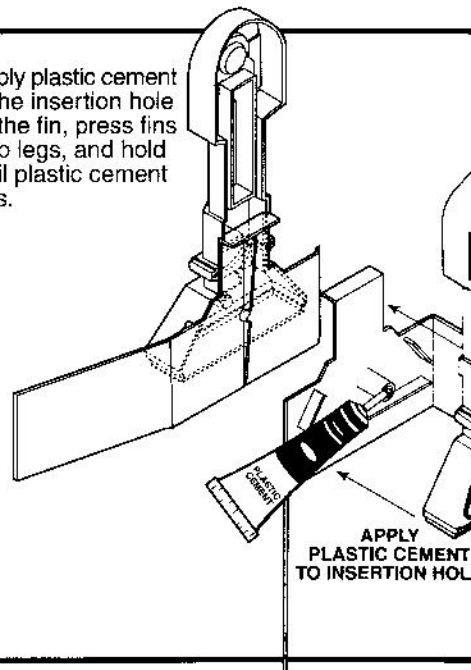
A. Apply plastic cement to the contact areas on the front R2-D2 body half and apply back half (half with launch lugs). Immediately wipe away any excess cement.

B. Use a rubber band to secure the two halves while drying. Once dry, remove the rubber band.



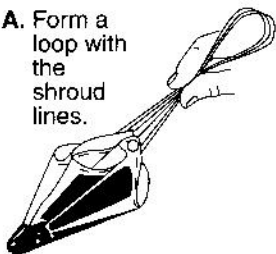
7.

A. Apply plastic cement to the insertion hole on the fin, press fins onto legs, and hold until plastic cement sets.

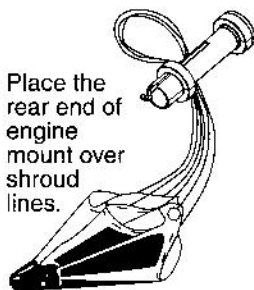


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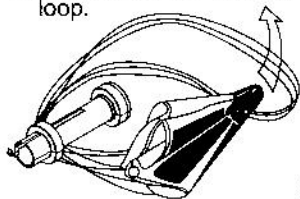
A. Form a loop with the shroud lines.



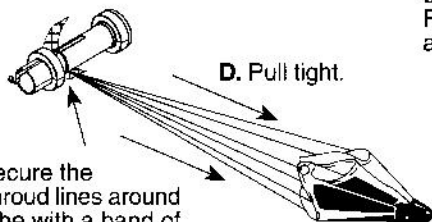
B. Place the rear end of engine mount over shroud lines.



C. Pass parachute through loop.

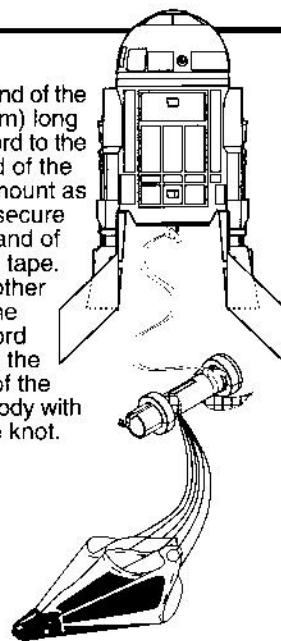


D. Pull tight.



E. Secure the shroud lines around tube with a band of masking tape.

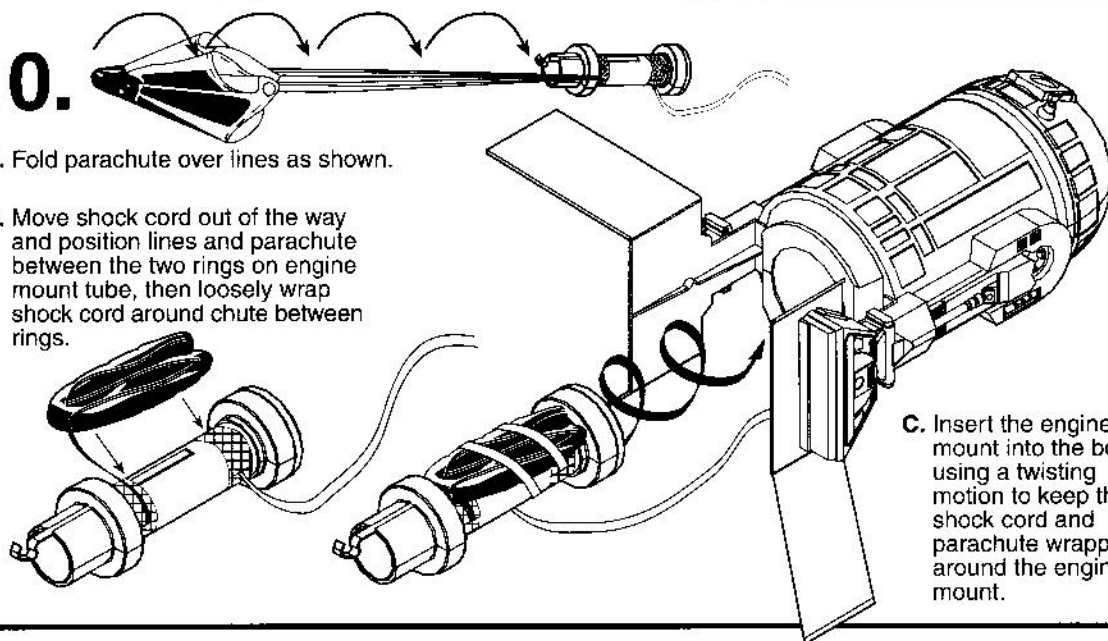
F. Tie one end of the 36" (91cm) long shock cord to the front end of the engine mount as shown; secure with a band of masking tape. Tie the other end to the shock cord eyelet at the bottom of the R2-D2 body with a double knot.



10.

A. Fold parachute over lines as shown.

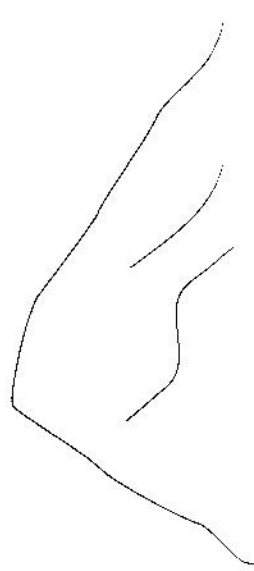
B. Move shock cord out of the way and position lines and parachute between the two rings on engine mount tube, then loosely wrap shock cord around chute between rings.



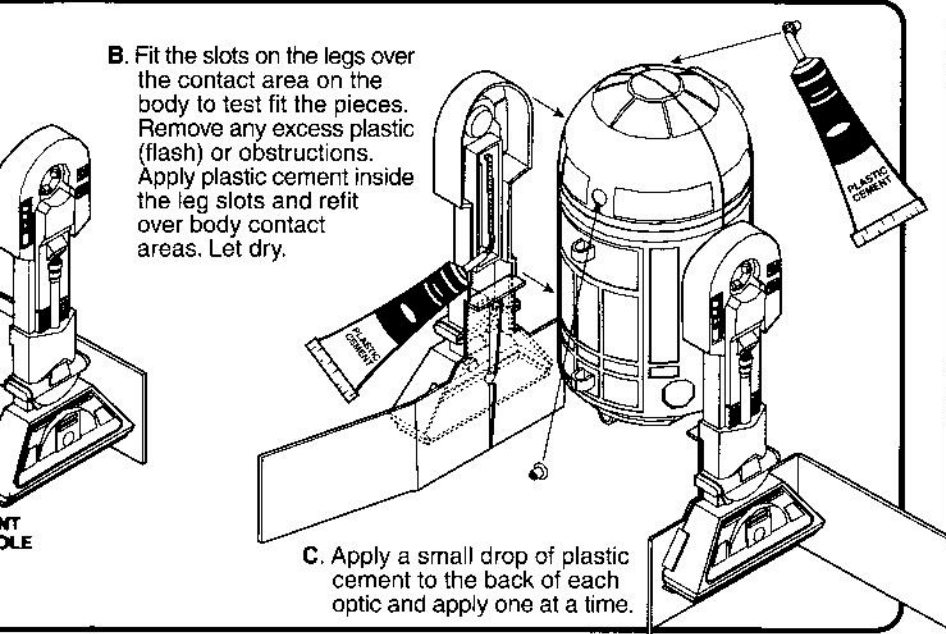
C. Insert the engine mount into the body using a twisting motion to keep the shock cord and parachute wrapped around the engine mount.

11.

A. Mask off the... that only the... the dome with... Let dry comp...



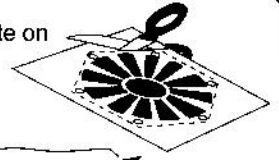
B. Fit the slots on the legs over the contact area on the body to test fit the pieces. Remove any excess plastic (flash) or obstructions. Apply plastic cement inside the leg slots and refit over body contact areas. Let dry.



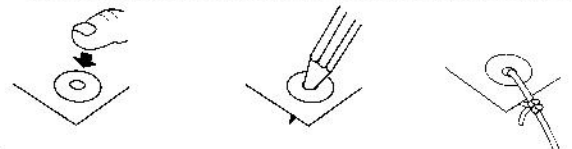
C. Apply a small drop of plastic cement to the back of each optic and apply one at a time.

8.

A. Cut out parachute on dotted line.



B. Find shroud line material. Remove tape. Using all of the shroud line, fold and cut into three equal lengths.

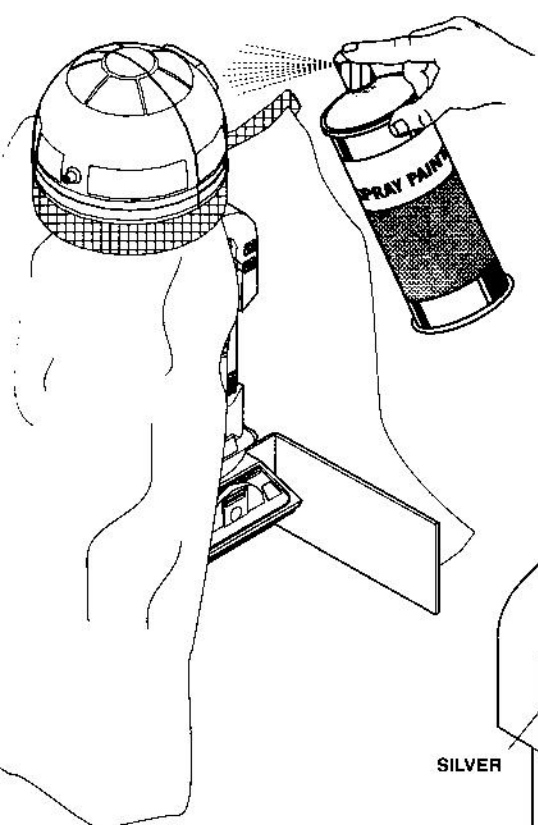


C. Press tape rings onto marks on corners.

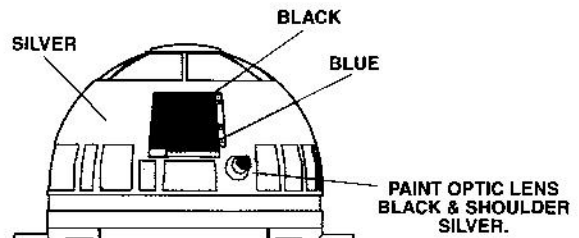
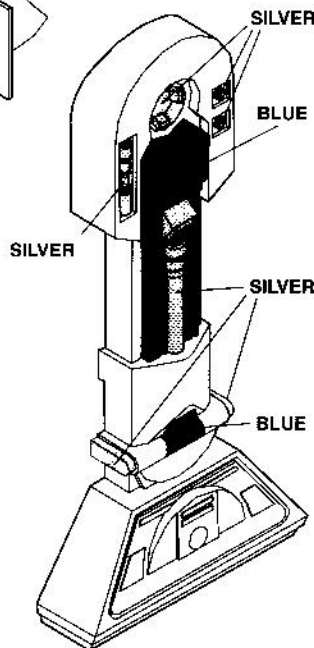
D. Punch holes with sharp pencil.

E. Tie lines off with double knots.

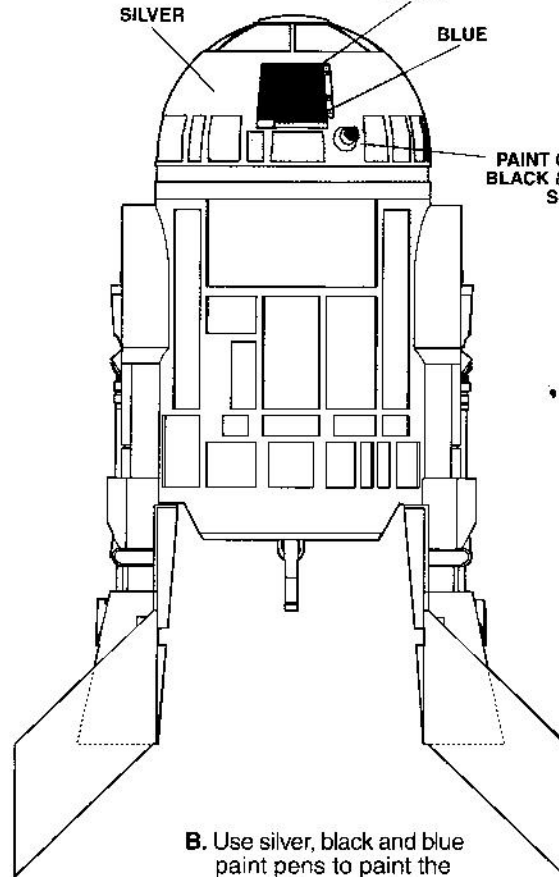
COMPLETED PARACHUTE



Paint the body at the shoulder so the dome is exposed, then paint with Bright Silver spray paint completely.

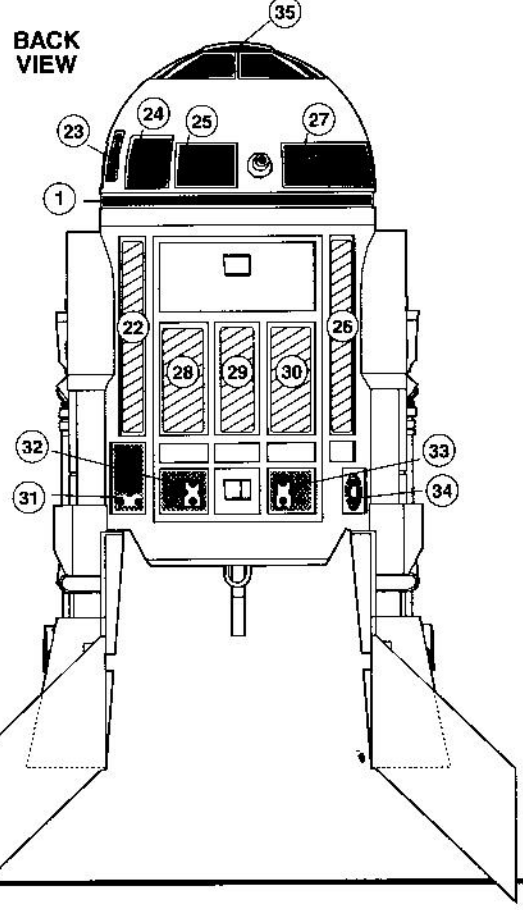
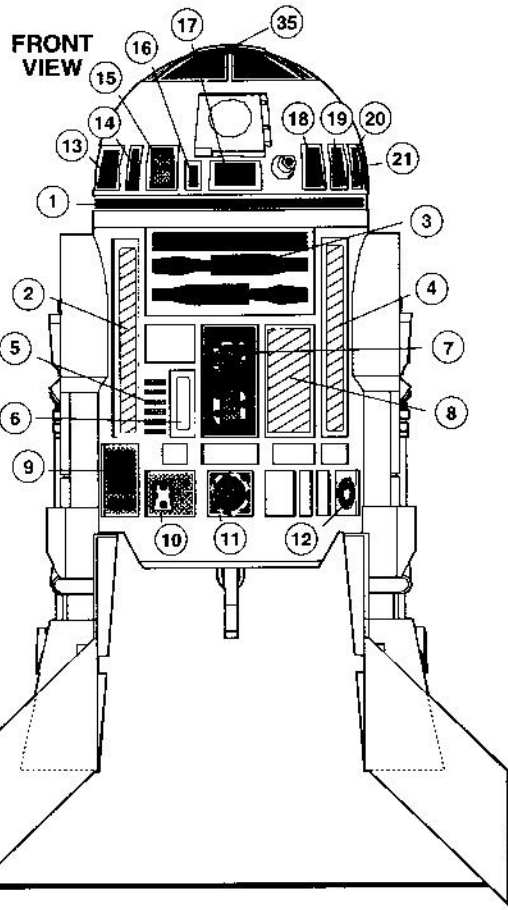
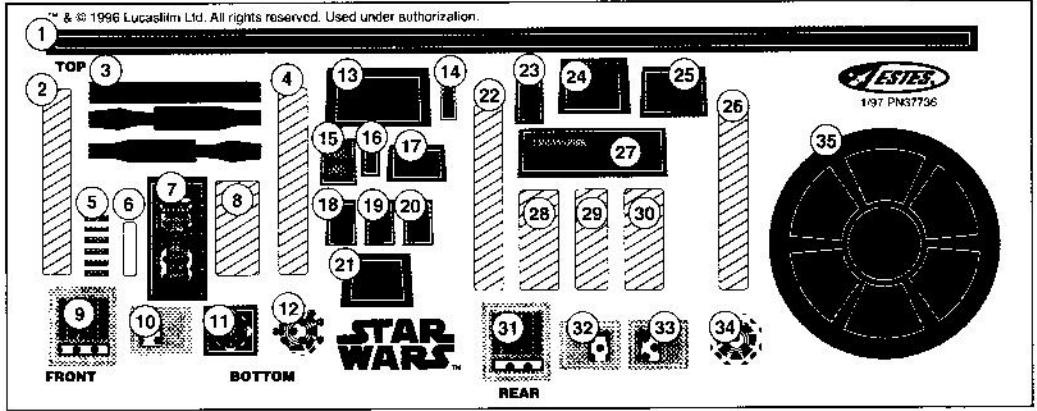


B. Use silver, black and blue paint pens to paint the areas shown. Let dry completely.



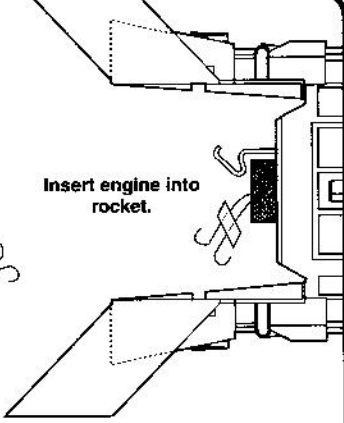
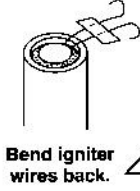
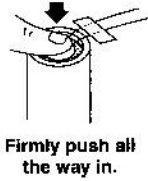
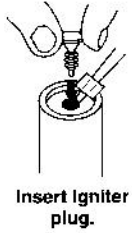
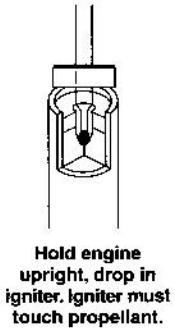
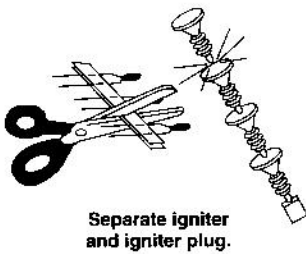
12.

- A. Remove decals from backing sheet one at a time and position according to the diagram.
- B. When position is correct, rub decal down with your finger to remove bubbles and to secure decal to rocket.



13. FLYING YOUR R2-D2 ROCKET

ENGINE PREPARATION



Your R2-D2 rocket features rear ejection of the recovery system and power pod. Recovery wadding is not required for this rocket. See step 10 for parachute packing instructions. Be sure to pack parachute immediately before launching to help insure it will open easily.

NOTE: If engine pod is too loose, apply a small amount of masking tape to the rear plastic centering ring for a friction fit. Do not tape pod in place or recovery system will fail.

LAUNCH SUPPLIES

To launch your rocket, you will need the following:

- Launch Pad (Estes Porta-Pad® II)
 - Launch Controller (Estes Electron Beam®)
 - Recommended Estes Engines: B4-2, B6-2, C5-3, C6-3.
- For your first flight, use a B6-2 engine.
- Igniters and Igniter Plugs (included with Estes engines)
- Use only Estes products to launch this rocket.

ENGINE	PROJECTED ALTITUDE	
	Feet	Meters
B4-2	127	39
B6-2	133	41
C6-3	262	80
C5-3	277	84

TIPS FOR FLYING YOUR ROCKET

- Choose a large field away from power lines, buildings, tall trees, and low flying aircraft. Try to find a field at least 250 feet (76 meters) square. The larger the launch area, the better your chance of recovering your rocket.
- Launch area must be free of dry weeds and brown grass.
- Launch only during calm weather with little or no wind and good visibility.
- Don't leave parachute packed more than a minute or so before launch during cold weather (colder than 40° Fahrenheit [4° Celsius]). Parachute may be dusted with talcum or baby powder to avoid sticking.
- Always follow the National Association of Rocketry (NAR) MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities. The safety code is enclosed with this kit.

COUNTDOWN AND LAUNCH

10... Safety key must not be in launch controller. The safety cap with safety key attached should already be on the launch rod.

9... Remove safety cap from launch rod, slide launch lugs over rod. Make sure rocket slides freely and micro-clips are clean for good electrical contact.

8... Attach micro-clips to the igniter wires. Arrange the micro-clips so they do not touch each other or the metal blast deflector. Attach micro-clips as close to protective tape on igniter as possible.

7... Move everyone back from your rocket as far as launch wire will permit (at least 15 feet - 5 meters).

6... Insert safety key to arm the launch controller.

5... Start audible countdown.

4...3...2...1...

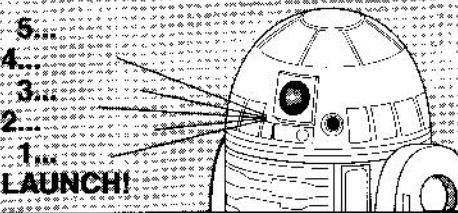
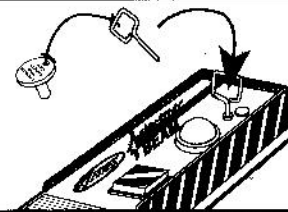
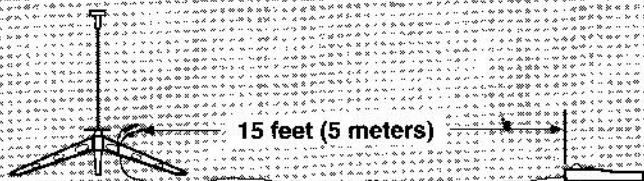
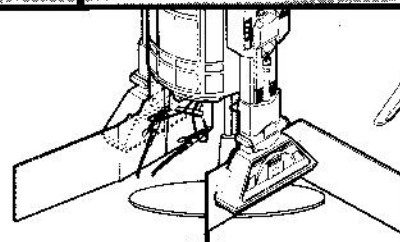
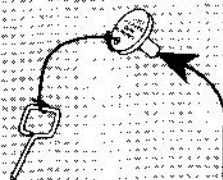
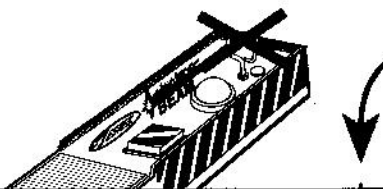
LAUNCH!

Push and hold button until engine ignites.

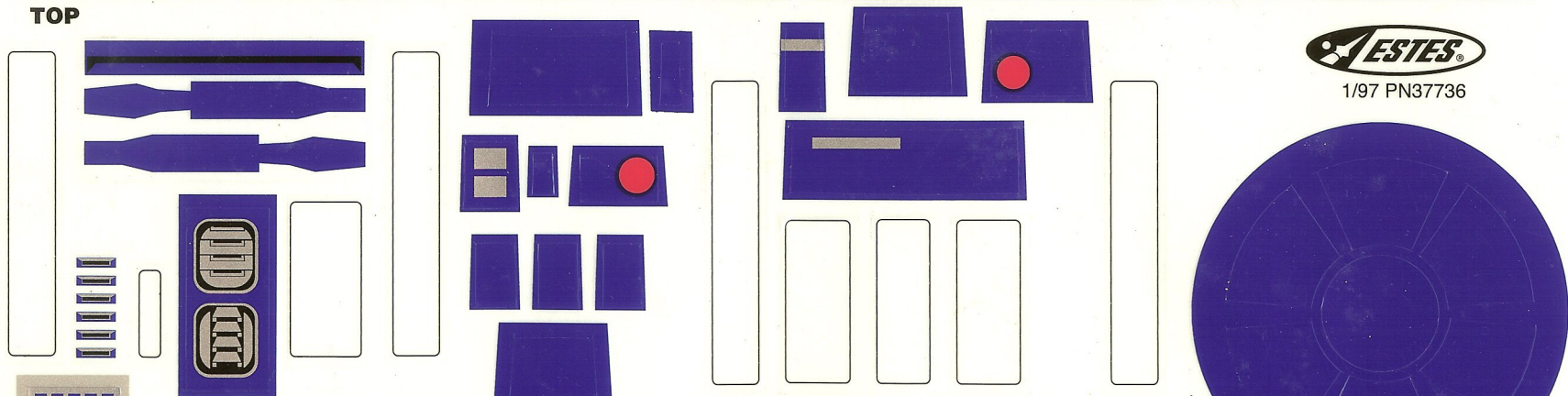
For safety, immediately remove safety key from launch controller and replace safety cap on launch rod.

MISFIRES

When an ignition failure occurs, **remove the safety key from the launch control system and wait one minute before approaching the rocket.** Remove the expended igniter from the engine and install a new one. Be certain the coated tip is in direct contact with the engine propellant. Broken or chipped coating will not affect the performance of the igniter. Reinstall the igniter plug as illustrated previously. Repeat the countdown and launch procedure.



TOP



1/97 PN37736

FRONT

BOTTOM

**STAR
WARS™**

REAR

