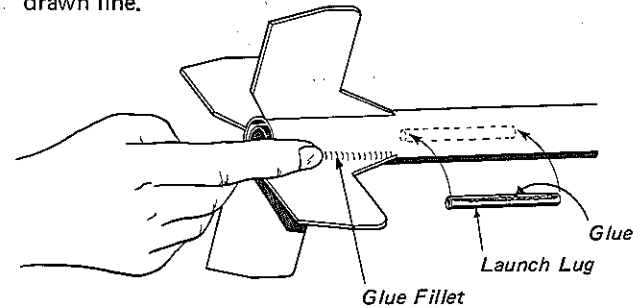
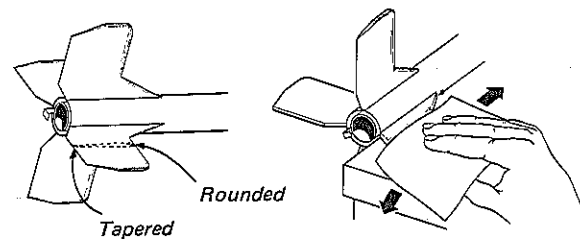


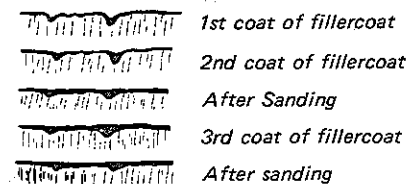
- 17 After the fin assembly has completely dried, run a bead of glue along both sides of each fin/body tube joint. Using the forefinger, smooth the glue into even "fillets". Glue the launch lug on, parallel with the body and centered between two of the fins, along its drawn line.



- 18 When the glue fillets are dry, sand the sides of the fins lightly, round the leading edges and taper the trailing edges. Lay the rocket on your work table edge to achieve this "airfoiled" shape.



- 19 Prepare balsa surface for a smooth and realistic finish. Fill the wood grain with Centuri fillercoat or sanding sealer. When dry, sand with fine sandpaper. Repeat until smooth.

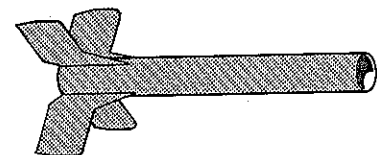


- 20 When painting plastic parts, never use dope or lacquer!

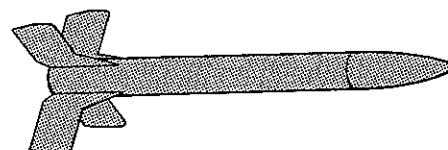
Spray painting your finished model with a fast-drying enamel will produce the best results . . . IF IT IS DONE PROPERLY!!! Most important is the number of coats of paint. DO NOT try to paint your model with one heavy coat! Instead, give it a couple of quick, light coats first and THEN a finish coat. Let each coat dry before applying the next.

- 21 There are several different ways to paint your PAY-LOADER II.

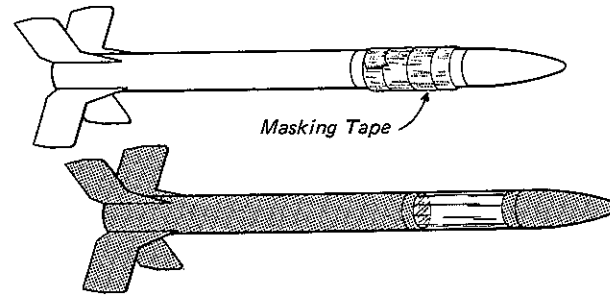
You may paint only the body, and leave the nose cone natural.



Or you may insert the nose cone directly into the body tube for painting, temporarily leaving out the payload section.

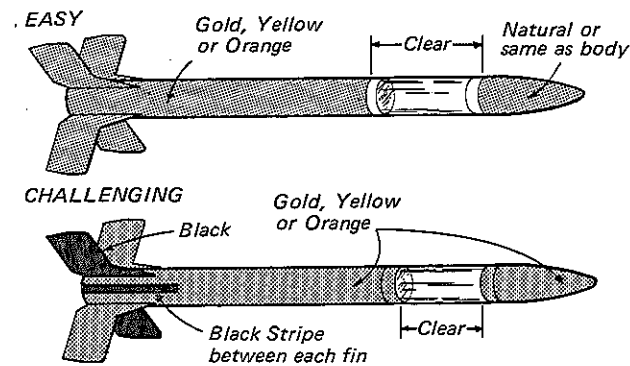


Or you may paint the rocket with all parts socketed together, but protect the clear plastic with masking tape. This is the best technique because the paint hides the visible parts of the connector and insert.

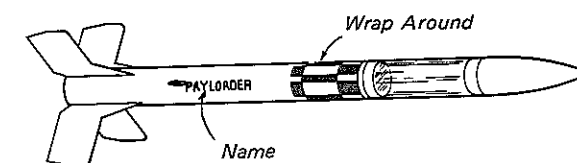


22 RECOMMENDED COLOR SCHEMES

These are only suggestions . . . be sure to choose colors which go well with the color of your particular nose cone and decals.

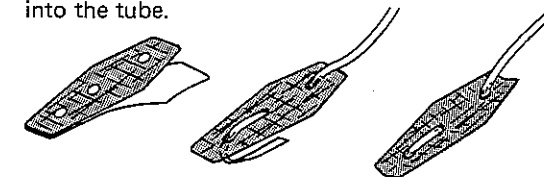


- 23 Apply the decals, one at a time, according to the instructions printed on the decal backing paper. Keep checking the warp-around as it dries, and smooth any bubbles.



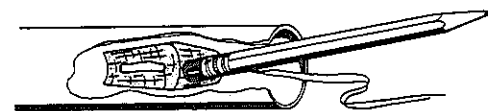
24 DON'T FORGET TO INSTALL THE SHOCK CORD!

Peel the backing from the shock cord fastener. Thread the other end of the elastic shock cord through the fastener as shown. Take care not to touch the adhesive backing any more than absolutely necessary. Slightly crease the fastener length wise to allow easy insertion into the tube.



Press end of shock cord against adhesive back of fastener.

- 25 Insert the fastener 1" past the top of the body tube. Press firmly against the inside wall of the tube with a finger or eraser end of a pencil. NOTE: All edges of the fastener must be firmly contacted to the tube to insure a permanent bond.



Press fastener FIRMLY into place.

ENGINES:

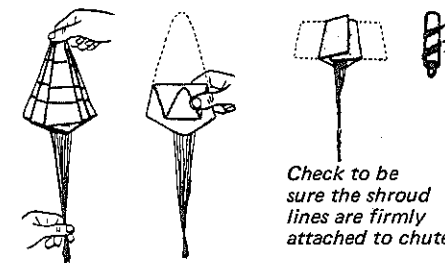
Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri engines.

The PAYLOADER II can be launched with the following engines:

ENGINE	ALTITUDE	PURPOSE
A8-3	200 - 300 ft.	LOW ALTITUDE - for first flights and small launch area.
B4-4 B6-4	350 - 500 ft.	MEDIUM ALTITUDE - for general flying and medium size launch areas.
B14-5	300 - 400 ft.	MEDIUM ALTITUDE - for carrying payloads of one ounce or more. (Maximum payload; 3 ounces.)
C6-5	800 - 1250 ft.	HIGH ALTITUDE - for extremely high flights and large launch areas.

FLIGHT PREPPING:

1. Prepare a recommended engine with an igniter.
2. Insert engine, securing with lock.
3. Inspect shock cord fastener for firm bond.
4. Insert Flameproof Parachute Wadding according to its directions.
5. Tuck in shock cord.
6. Roll chute neatly as shown and insert.

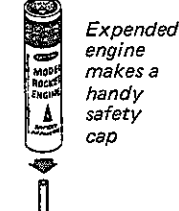


7. Socket nose cone and payload section in place.

Launch the PAYLOADER II from any standard model rocket launcher having a 1/8" diameter x 36" long steel launch rod.

Do not leave the rocket sitting in the sun for long periods as this may soften the adhesives.

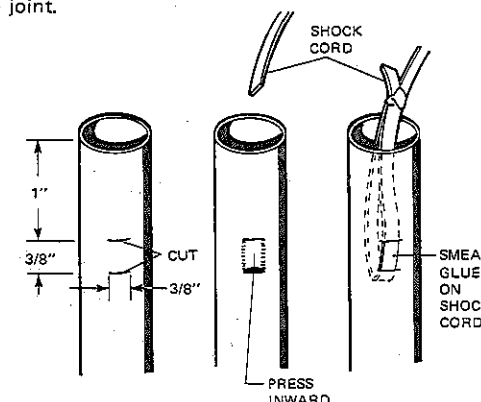
Referring to the specific instructions that accompany CENTURI launchers and firing panels, mount the rocket on the launcher and prepare for ignition. Avoid eye injury by capping the exposed tip of the launch rod when not actually launching.



SPECIAL TIP:

Shock cords and their fasteners sometimes blow out of small rockets. This can easily happen when they are not properly installed or if the rocket sits in the warm sunlight too long. If this happens to you, do not attempt to reglue the fastener in place. After a few flights the inside of the body tube will be too gritty for a good glue bond. Instead, try this simple repair technique.

Cut two slits near the top of the body tube. Press the indicated area of the tube toward and drop the shock cord down thru the top and tie in a firm knot. Press the depressed portion of the body tube back into place and smear glue over the joint.



Payloader II

CATALOG NO. KC-20

The Payloader II Carrier Rocket is designed to carry payloads such as crickets, beetles, ants, and other insects to high altitudes and return them safely by parachute. The plastic see-thru capsule permits you to observe the payload before and after flight without removing the capsule from the rocket.

The primary objective in flying a live payload is to study the effects of acceleration, pressure changes, and sudden shock on living organisms. There is little pressure change effect at relatively low altitudes achieved by model rockets. However, with the large sounding rockets used by scientific organizations, these effects would be an important object of study.

This rocket is designed to be launched only from standard remote-controlled electrical launch systems. Always use the recommended engines, and parachute wadding. Comply with all Federal, State and local laws.



MODEL ROCKETEER'S SAFETY CODE

CONSTRUCTION

My model rockets will be made of only lightweight materials such as paper, wood, plastic, and thin metallic foils, with the exception of payloads and engine holders made of wirelike material.

ENGINES

I will use only pre-loaded factory made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.

RECOVERY

I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.

WEIGHT LIMITS

My model rocket will weigh no more than 453 grams (16 oz.) at liftoff, and the engines will contain no more than 113 (4 oz.) of propellant, as prescribed by Federal Regulations.

STABILITY

I will check the stability of my model rockets before their first flight except when launching models of already proven stability.

LAUNCHING SYSTEM

The system I use to launch my rockets will be remotely controlled and electrically operated, and will contain a switch that will return to "off" when released. I will remain at least 10 feet away from any rocket that is being launched.

LAUNCH SAFETY

I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.

LAUNCH AREA

My model rockets will always be launched from a cleared area, free of any easy-to-burn materials, and I will only use non-flammable recovery wadding in my rockets.

BLAST DEFLECTOR

My launcher will have a blast deflector device to prevent the engine exhaust from hitting the ground directly.

LAUNCH ROD

To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is not in an upright position.

POWER LINES

I will never attempt to recover my rocket from a power line or other dangerous places.

LAUNCH TARGETS AND ANGLE

I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.

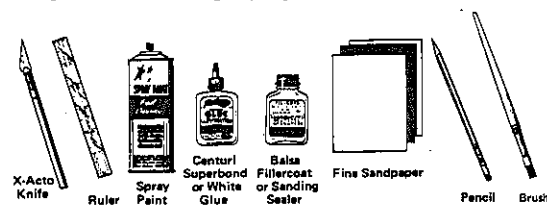
PRE-LAUNCH TEST

When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

FLYING CONDITIONS

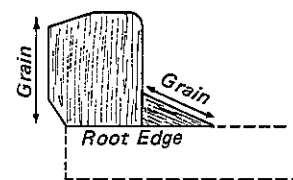
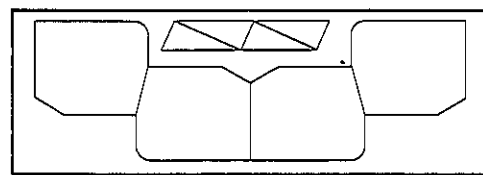
I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.

TOOLS: In addition to the parts supplied, you will need the following standard model rocket materials to build and finish this kit. DO NOT use model airplane glue for building flying model rockets.

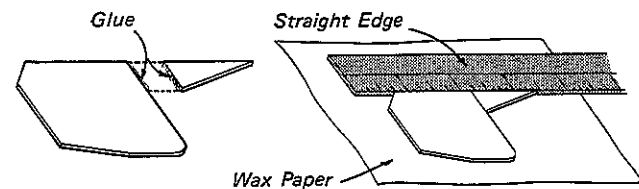


ASSEMBLY INSTRUCTIONS

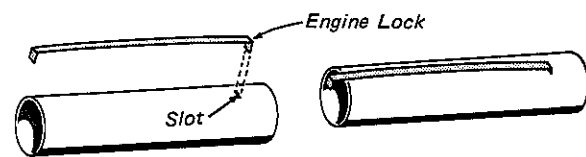
1 Remove the pre-cut fin parts from their sheet carefully. Use a modeling knife, if necessary, to avoid tearing the balsa. Please notice how the parts fit together, and which edge is the root edge (part that glues to the body tube).



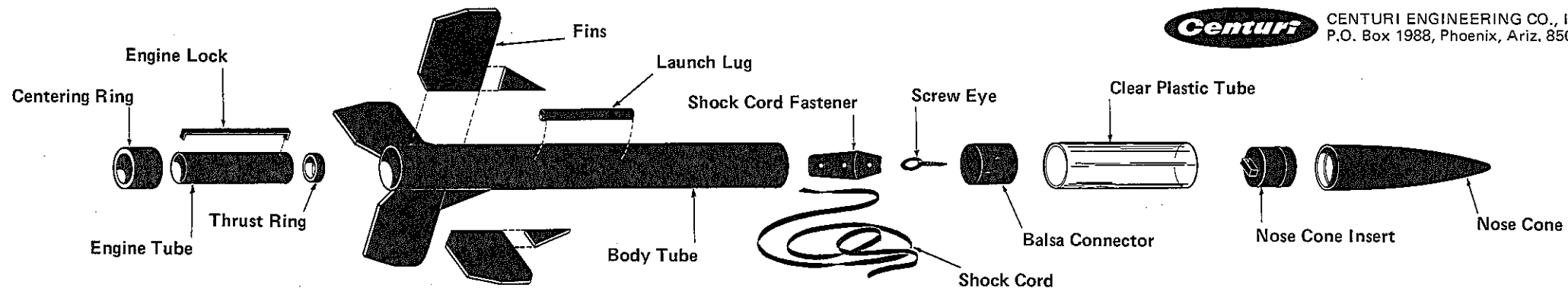
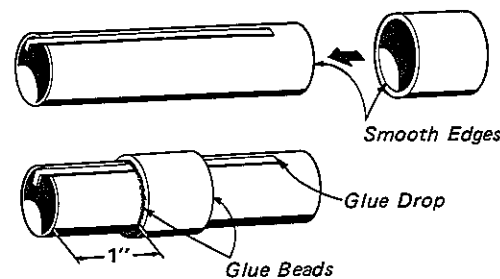
2 Glue each main fin and leading section together as shown, preferably on wax paper to avoid the parts sticking to your work table. Line the root edges up against a straightedge, such as a ruler. Allow to dry.



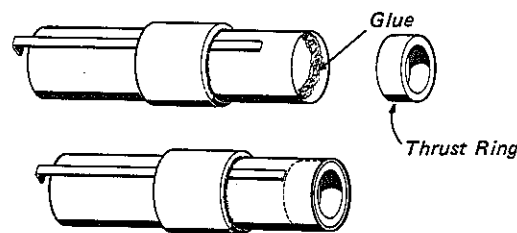
3 Bend the engine lock gently into a slightly curved shape. Now insert one end of the lock into the engine tube slot. This assembly is called an engine mount.



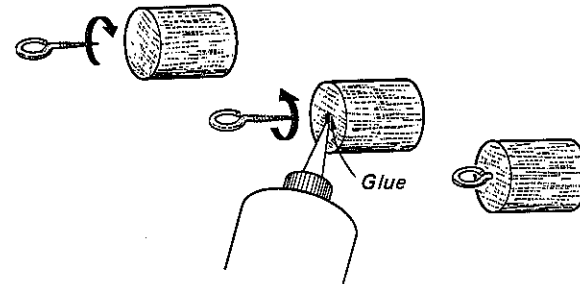
4 Slide the centering ring over the engine tube as shown. NOTE: Because these parts are precision-fit, smooth any rough edges before joining. Apply glue beads (front and back) as shown, and on the engine lock in its slit.



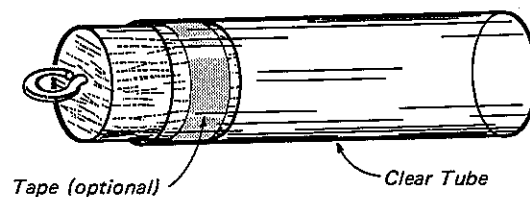
5 Run a bead of glue inside the front end of the engine tube. Insert the thrust ring, flush with the tube's end. Set aside to dry.



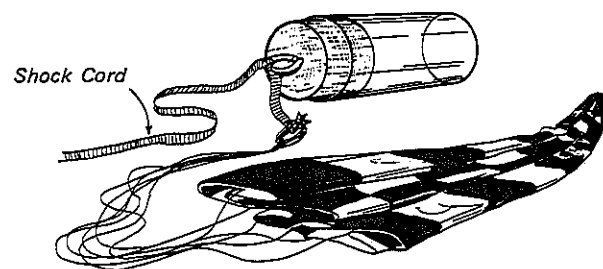
6 Screw the metal screw eye into the center of the balsa connector. Unscrew it and squirt a drop of glue into the hole. Rescrew the eye in place.



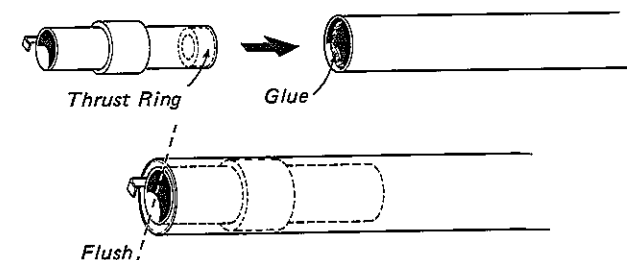
7 Insert the connector about halfway into the clear plastic payload tube. It should be a tight fit . . . if it is loose, build up it's size slightly by carefully wrapping tape around it.



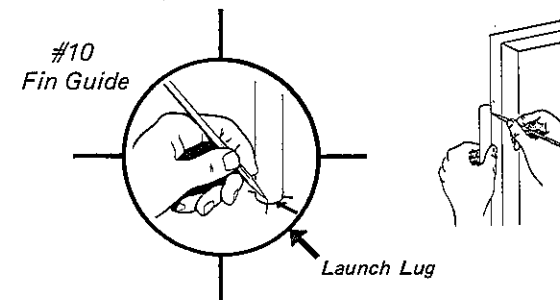
8 Tie one end of the shock cord thru the screw eye . . . use a double knot. Tie the assembled parachute shroud lines onto the free end of shock cord. Do not try to attach the other end of the shock cord to the body yet . . . leaving it unattached for now will simplify the painting steps later.



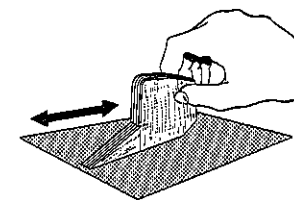
9 Run a generous glue bead around the inside of one end of the mainbody tube. Insert the engine mount (thrust ring forward) until the two tubes are "flush" (even with each other).



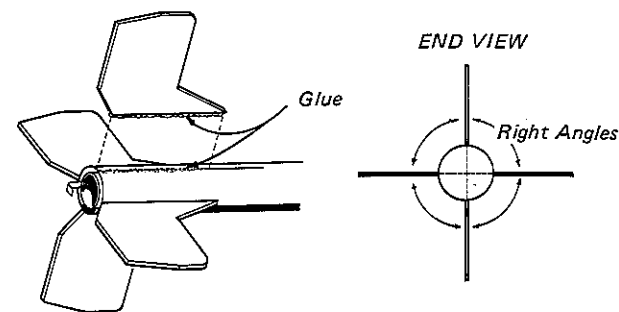
10 Stand the body tube on the fin guide to mark fin and launch lug locations. Find a convenient channel or groove, such as a door jamb, partially open drawer, or molding. Extend the marks the full length of the tube.



11 Your fins should be dry enough to handle by now. Hold all four fins together, and rub across fine sandpaper (laid on a flat surface) to insure straight root edges.

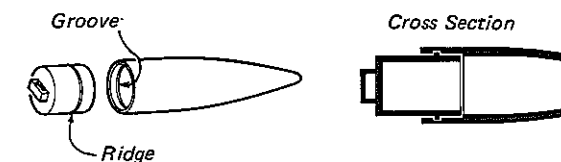


12 Apply a bead of glue to one fin's root edge and press onto the body tube along a drawn line. Remove, allow it to become tacky. Add fresh glue to fin, and reposition. Repeat with the other fins. Allow assembly to dry standing upside down.



13 This kit contains a plastic nose cone for the forward end of your rocket. While a few other kits still use balsa cones, plastic is now the preferred choice of many rocketeers. It requires no sanding, sealing or painting to have a smooth attractive finish. Plastic is also more durable than balsa . . . it does not dent or "crunch" as easily.

The Snap-Type nose cone assembles by pushing the insert into the cone until the ridge snaps into the groove.

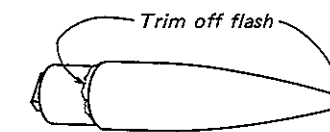


14 IMPORTANT: The snap-type cones should be assembled with care and good judgement, to avoid breaking the cone . . . Your insert may seem to be too tight a fit as you try to snap it in place. If so, play it safe by gluing the insert in place with plastic cement. (The ridge or ledge of the insert butts up against the base of the cone.)

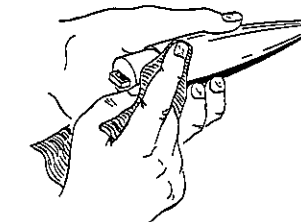
OPTIONAL GLUING TECHNIQUE



15 For best appearance, trim away any plastic "flash" that may be on your cone.



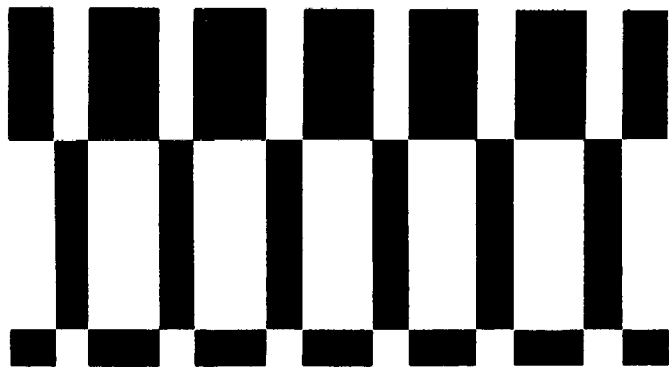
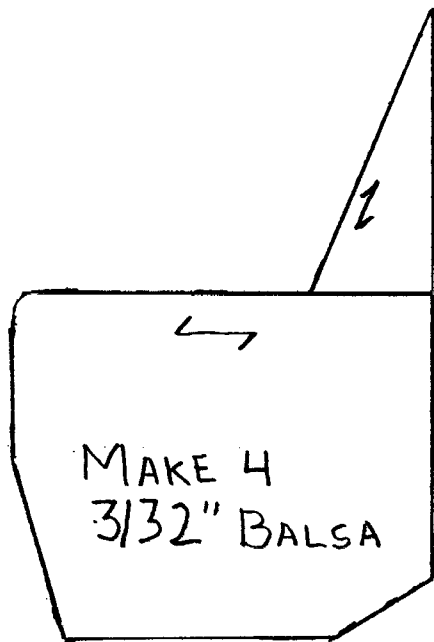
16 Rub the cone briskly with a soft cloth to remove manufacturing oils, and produce a shiny finish.



CENTURI KE-20 PAYLOADER II

BODY TUBES: ST-1010 (10.5")
CPT-102 (2.5") CLEAR PAYLOAD TUBE
ST-72 (3.0") MOTOR TUBE

NOSE CONE: PNE-103 (4.1")



Centuri

PAYLOADER

M-345

