

Making Big-Game Lures

You Don't Have to Be a
Jeweler to Turn Out Your
Own Priceless Treasures

By Jim Rizzuto



THERE'S NO DOUBT THAT today's professional lure makers produce some of the finest-looking and productive lures our sport has ever seen. Several decades spent refining the art means fellows like Bomboy Llanes, Bart Miller, Steve Coggin, Marlin Parker and the rest put out lures that are sheer perfection. They look good, run well and, most important, get bit.

But when you pull someone else's lures, you lose a little something besides the cash you spent on them — you lose out on the pleasure of fooling a fish with a lure made with your own hands. Remember the first time you caught a blue marlin on a bait that you rigged yourself? If you do, then you know just what I'm talking about.

The sheer beauty of today's lures makes many people wonder if they have the talent to make a nice-looking resin head that will perform as it should. Well, if you can bake a cake, then you can cast and produce your own molded resin trolling lures. The materials might be a bit different, but the procedures are the same. Mix up a "batter" of polyester resin and catalyst; pour the batch of catalyzed-resin into a form (your "cake pan" is a Silastic silicone rubber mold). Let it "cook" — the chemical reaction between resin and catalyst creates heat — until firm, and then give the final product an eye-appealing finish with an "icing" of polish. Add some trimmings and the result is ready to serve in your spread.

Making a Mold

You need a mold to make a lure and a lure to make a mold. Start by choosing a prototype, a lure that you've caught a few fish on and that has a shape and action you like. Once you've picked out your favorite shape, you're ready to make the mold.

We make our molds with Silastic-E RTV (room-temperature vulcanizing) a silicone rubber from Dow Corning. It's especially well-suited for lure making because it resists tearing, stretches enough to help remove lures from molds, is supple without losing shape and provides a two-hour working time (24 hours to full curing). Silastic-E doesn't shrink when cured at room temperature, and Dow Corning recommends it for use with polyester resins, the most common casting material for big-game heads. (To find a source near you, call the Dow Corning Customer Service Department at 989-496-6000

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CASTING BIG-GAME LURES



1. Start by picking a shape that you want to re-create and use a matchstick and a piece of copper tubing to make an extension for molding. 2. Using double-sided tape, tape the base of the lure to the bottom of a cardboard juice can and then pour in Silastic-E to make your mold. 3. After the mold cures, tear away the cardboard and remove the lure from the mold. (You might have to cut the mold a bit with a razor to help get it out.) 4. Make an insert for your new lure and attach it to a leader tube. 5. Place your insert into the mold and pour in your resin. 6. After the resin sets, remove the lure and let it air-cure for 24 hours. Now scrape the rough surface with a utility knife to remove any high spots. 7. Insert the lure tube into the chuck of an electric drill. Polish incrementally with three grades of wet/dry sandpaper and then shine it up with polishing compound.

or visit www.dowcorning.com.)

Prepare your lure for molding by cleaning the surface thoroughly. Use epoxy putty to fill in any nicks or teeth marks — this is especially important if you are duplicating a prototype that has

seen a lot of action. Wax the surface with a light coat of car wax.

Now you need to add an extension piece to the leader tube running down the center of the lure. This holds the leader tube in position during the mold-

ing process. For the extension, use a 1-inch length of the same kind of tubing you will use for your lures. The gold standard is $\frac{1}{8}$ -inch brass tubing; most hobby or train shops stock this material. If you can't find brass, copper tubing works just as well and is more readily available and much less expensive. Copper tubing is less durable than brass; however, some of our copper-tube lures have been catching fish since we started making trolling heads in the 1960s.

Next insert a wooden match into the leader tube to secure the extension to the mold. The matchstick should fit snugly in the tube to maintain the proper alignment. The extension tube now fits snugly over the end of the match sticking out of the lure, and it should follow the line of the leader tube exactly.

Use a cardboard juice can to make the outer form for your mold. Cardboard makes the best form because it peels away easily after the mold cures, and the juice cans are long enough to accommodate most heads. In our illustrations, the side of the can is transparent to show the prototype positioned inside.

Secure the lure head into position by sticking the back of the head to the bottom of the juice can with a piece of double-sided tape. Be sure the back of the head is perfectly flat so that the head rests in a true vertical position. If it is not, file and sand the back of the head until smooth.

A 1-pound can of Silastic-E makes two molds, one medium-sized and one small. Consider getting two prototypes ready at the same time to take full advantage of the extra material.

Mix the silicone rubber with its catalyst (follow the package directions carefully), and pour the mixture into the juice can until it reaches the end of your leader-tube extension. Leave just a bit of the extension showing so you'll have some flexibility when you position your leader tube during casting. Wait 24 hours until the mold is completely cured, and then cut away the cardboard juice can to remove your mold.

The next step, removing the lure from your new mold, can be a bit tricky. Sometimes you won't be able to remove the lure without cutting the mold partway down one side. If cutting becomes necessary, use a box cutter, utility knife or other sharp blade. Start at the open end (the end at the back of the lure) and cut down only as far as necessary. You may not have to go much farther



than the ridged tailpiece section, but most likely you'll need to cut about another half-inch or so beyond.

After removing your prototype head, set the mold aside for another 24 hours to allow the inside to cure completely.

Making Inserts

The look of your new lure depends on what you choose to embed in the resin. The plainest lures are simply solid-color heads with nothing more than color pigments mixed into the resin. Resin pigments come in a variety of colors, which you can find at hobby stores, boat shops or businesses that sell casting resin or supplies for fiberglass projects. Pearl is the most popular and most expensive pigment.

Early Hawaiians believed that shell lures held special magical powers to attract fish, and the original heads made in Kona in the 1950s used pieces of pearl shell to help capture that magic. Today's lure makers get the same look by using thin shell laminates. Instead of working for hours to saw natural shell into slices and file the pieces into shape, you can create beautiful shell inserts of any shape in seconds with a sharp pair of scissors. The mother-of-pearl laminates I use most often come from AQUA BLUE MAUI (www.aquabluemaui.com; e-mail

Since different resin batches don't mix well, it's usually best to make more than one head to avoid wasting material.

aquablue@maui.net; 808-876-0217).

The two most popular types of "inserts" consist of shell laminates attached to either a brass plate or a plastic "box" tube. Hardware stores and hobby shops sell brass sheet material that can be cut to shape easily with metal-shaping shears. Look for square plastic "box" tubing at plastic-supply stores. I purchased some clear acrylic box tubing at Industrial Plastics Supply Co. in New York City, a mail-order source for a wide variety of materials, including resins and mold-making rubber. (Contact them at www.yourplasticsupermarket.com; 309 Canal St., New York, NY 10013; 212-226-2010.) I also use some metal box tubing that was once a towel rod purchased at a hardware store.

To make the flat, two-sided inserts, cut the brass sheeting to the right shape and size with metal-cutting shears. Mark the shape on the back side of your shell laminate, and then

Because of the magnification of the resin, even small inserts look like they fill the entire lure head.

cut the laminate to the right shape. Attach the laminate to the brass with double-sided tape or glue, and then glue on some eyes. Movable doll eyes are very popular and readily available at hobby shops. Glue the brass sheeting to the leader tube with any glue that does not dissolve in acetone, a component of polyester resin.

The box tubing gives you four reflective surfaces rather than the two that flat sheets create. Before sticking the laminate to the box, prepare two pieces of tape to hold the box in place on the leader tube. We use reflective Mylar tape in a suitable color. Cut a strip slightly smaller





When choosing the materials you want to use to dress up your lure inserts, your imagination is the only limit. This maker applies his shiny material directly to lead inserts.

than the width of the box tubing and twice as long as the length of the tubing. Cut a small X at the exact center of the strip, and position the X at the center of the end of the box. Press the reflective tape in place along the sides of the box. Prepare your leader tube by wrapping several turns of tape around the tube to make a stop at the spot where you want the box insert to be. Insert the leader tube through the X, slide the tube into the correct position and press the X points against the stop to hold it in place. Make another strip with an X-cut, and use it to secure the other end of the box to the leader tube. Finish decorating your insert with laminate, reflective tape or any other material you choose.

Make sure your insert is narrow enough to be surrounded by at least a quarter-inch of cured resin so it can withstand the impact of a marlin bill. Even a narrow insert will look large once the lure is finished. The resin magnifies the insert and makes it look as though it completely fills the head.

Also, be sure there are no sharp edges or corners on any of your embedded materials — these can cause cracks in the resin as it hardens.

The Molding Process

Always work with resin in a well-ventilated area, preferably outdoors. Lure making is not a project for a basement or an enclosed workshop.

Insert your leader tube into the mold and position it in the receptacle you created at the front end with the tube extension. Make sure you line up the insert with the top and bottom of the lure. Be careful to center the leader tube at the back of the lure head (the back

The author uses either plastic boxes or flat brass plates to construct his lure inserts. The box style offers a three-dimensional look, while the flat style is a little easier to make.

of the head will be at the top of the mold). If necessary, hold the tube in place with tape.

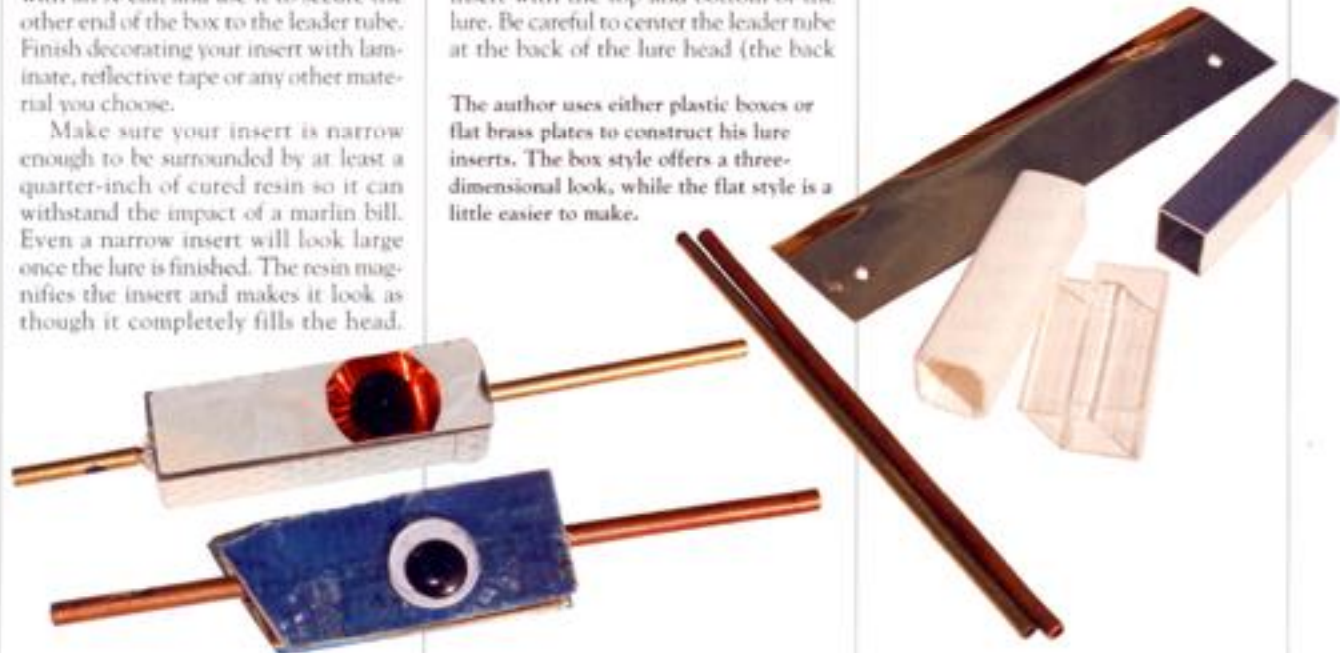
Tape the mold to close the crack that you cut in its side. The tape should be tight enough to prevent resin from escaping but not so tight that it deforms the mold.

Pour polyester casting resin into a waxed-paper cup. Make sure you have enough resin to fill the mold. You can't add more of a new mixture later if the first batch doesn't completely fill the mold. Batches with two different amounts of catalyst don't set up well together. Too much catalyst will cause the resin to get too hot and crack during hardening. Too little will slow down the hardening process to days rather than hours.

To determine how many drops of catalyst to use, follow the directions on the can of resin. Note that the temperature and humidity of your surroundings can affect the formula. A mixture that works for me on an 80-degree day at an elevation of 2,500 feet on an island in the middle of the Pacific Ocean may not do the job for you on a cold day 6,000 miles away.

Polish the Head

A good mix should take six to 12 hours to harden and be ready to remove from the mold in 24 hours. Once the resin is completely set, peel away the tape, open the side crack and gently work the lure out of the mold.





By damming your mold and letting the resin dry between several pours, you can make fancy two- or three-tone lures. By tinting the different layers, you come out with multicolored lures.

The first time you mold a lure, be prepared for disappointment. The surface will feel rough and probably a bit sticky. Don't be dismayed. You'll find a hard, polishable surface right under the sticky skin. Be patient for another 24

hours and let the surface air cure the head just a bit. Then scrape away the stickiness with the edge of a sharp blade. We use the blade of a utility knife and hold it nearly at right angles to the surface. Scraping away the soft

surface skin takes only a minute or two.

You'll need three grades of wet/dry sandpaper (120-, 220- and 400-grit) and a polishing compound to get your lure's rough surface to a final polish. You can do the polishing tediously by hand or quickly with the help of a power drill. Chuck the leader tube extension in the drill. (To prevent the chuck from crushing the tube, insert a $\frac{1}{8}$ -inch-diameter finishing nail into the tube before tightening the chuck down onto it.)

Wet your 120-grit sandpaper thoroughly. Spin the drill in one hand and hold the sandpaper against the lure head with the other. The sandpaper will help true the lure a bit as it grinds away a tiny amount of surface. Remember that you want to remove as little of the surface as possible during the sanding process because you want your replica to be as close to the original as you can make it. Keep rinsing the sandpaper to remove the resin you've sanded away. Five or 10 seconds with each of the three grits should do the job nicely. For the final polish, apply some polishing compound to a rag and spin the lure against the rag.

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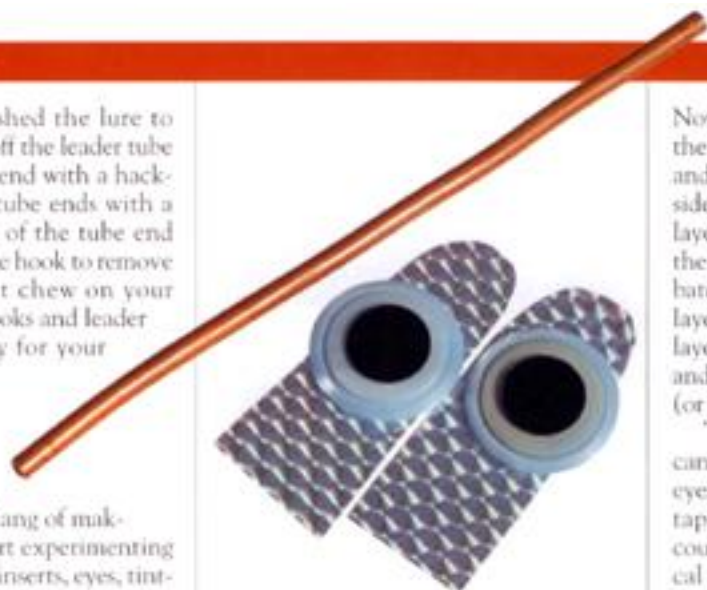
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Once you've polished the lure to your satisfaction, cut off the leader tube extensions from each end with a hacksaw and smooth the tube ends with a file. Ream the inside of the tube end with the point of a large hook to remove any burrs that might chew on your leader. Add a skirt, hooks and leader and the lure is ready for your wake.

More Advanced Ideas

After you get the hang of making molds, you can start experimenting with different types of inserts, eyes, tinted resins and layered colors.

Adding tints is easy. Transparent resin dyes (as opposed to solid-color resin pigments) come in a rainbow of popular colors. I like tinted lures because the head becomes fully colored, which projects a larger presence in the water than you can achieve by using a narrow insert surrounded by colorless resin. Of course, tints reduce the beauty of the pearl shell inserts. I use only tints with bright, reflective materials like Mylar.




Large coat buttons make great eyes and add the definitive finishing touch to any lure.

Layering resins for a multitone effect is a bit more complicated because it requires two or more pours (the number depends on how many colors you want). Prepare your mold for layering by damming half the open end with tape. Be sure you apply the tape to the half where you want the colored layer.

Now mix a small batch of resin and add the desired color. Pour it into the mold, and then lay the mold on its side, dam side down. The resin will then form a layer along that side of the lure. Once the colored layer hardens, mix another batch with a second color and add that layer. After you have all the hardened layers you wish, turn the mold upright and fill it with the last color you want (or with clear resin if you prefer.)

To add to the lure's appearance, you can easily use coat buttons as oversize eyes. Before we used doll eyes or plain taped circles, we hunted the button counter of sewing stores and got quizzical stares for our rather bizarre choices. Fortunately, bright yellow, powder blue, chartreuse, orange and pink are not often in style, so we usually found some perfect choices in the bins marked "reduced for quick sale." Pair big bright buttons with small black ones and you have just the pair of bright eyes you need to stare back at a big game fish.

Master all this and you've earned your credit in Lure Making 101. After you've done a half-dozen lures, you'll invent enough ideas of your own to teach the advanced course. 

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