



Paint Perfection Part 3

Painting the Canoe—Primer to the Final Coats

by Pam Wedd

I have often said that wooden canoe building is not really woodworking, but sanding and painting. I guess that's not entirely true, but in April in my shop that is certainly the case. The new hulls are built and old canoes restored. With luck, all are canvassed, and filler is drying. Finally, the painting begins. The sanding, painting, varnishing cycle for a canoe easily takes as long as all the woodworking combined, and it is what makes a canoe stand out from the crowd.

In this article, I'll go through my painting sequence for a canvas canoe, and along the way throw in some tips and tricks that I have discovered over time. Like everything in life, there is no one way to paint a canoe, but this has worked for me. However, I find that I am continually learning from trial and error, and picking up tips from other builders and restorers, so it is a constantly evolving process. I hope you will be able to use some ideas from here.

I use Epifanes® Yacht Enamel in the shop pretty much exclusively. It's a single-compound topside finish, which is just fine for canoes that don't sit in water for long periods. I certainly don't want what's called a "bottom" paint, which is designed for sail and motor boats that are moored for months on end. I have used Petite/ZSpar and Interlux in the past, and they are all good paints. I know builders up here in Ontario who swear by Benjamin Moore Floor and Porch Enamel. Each paint has its own qualities and quirks, and you pretty much have to persevere with a particular brand to get its feel. I switched to Epifanes about ten years ago when I was having a bit of trouble with another brand. I find the Epifanes gloss and flow outstanding, but it can be tricky stuff to put on well. In fact, all painting seems to be tricky, and if I am ever to get grey hair, it will be over getting a good final paint coat.

As with varnishing, the first thing to do is sanding. I sand the filled canvas with a half sheet of 100-grit paper, folded into thirds. This is a good size that just fits the palm of my hand. This half sheet will normally last me as I work down one side of the canoe, and then I switch over to the other half sheet. The trick here is to make sure you sand lengthwise, straight back and forth parallel to the keel line. No circles, no arcs, no diagonals. It may be hard to believe, but you will see these off angle scratches through the next paint coat, whereas the eye

won't pick up the straight-line scratches to the same extent. This first sand of the filler is usually fairly quick, mostly to knock off the fuzz. The silica in the filler is very hard on the sandpaper as well, and I won't work long before the grit is all gone on my paper anyway. And I always make sure to wear my dust mask as the silica is also hard on the lungs. I give the canoe a good vacuuming and I am ready.

First, the Primer

I always start my paint coats with an enamel primer. There seems to be a school of thought that primer might lead to the dreaded "canoe blisters," but I haven't found that to be the case. (Paint blistering and canoe fillers are subjects for another whole article. Perhaps there will be room in a winter issue for that, and I am sure it will spark a lively debate.) Primer is an easy sanding base coat that helps fill up all those filler imperfections that weren't visible until painting started. It doesn't seem to matter how careful I am with my filler application, nor how many coats I put on, nor how much I rub it in, there is still some weaviness there. If you want a smooth finish on your canoe, the only way I have found to accomplish it is to put on enough paint with lots of hard sanding between coats. The primer is just an easier sanding paint than the waterproof, glossy finish paint. My normal paint schedule is two coats of primer and three color coats. This usually gets the canoe to a smooth and shiny finish that will look good, yet not add on an exorbitant amount of weight.

My primer comes in both grey and white, and I choose a color depending on the finish color of the canoe, using



Figure 1. It's time to paint. The author takes the brushes from storage, filters the paint, and puts on her respirator before heading to the paint room.

the white under white, yellow, and red canoes, and the grey under all the other darker colors. I mix it well and pour it into a paint can (I use a 28-ounce bean can), filling it a good two-thirds full. If the shop is cold, I will set it on the radiator for a half hour or so beforehand and then will probably add a chug or two of paint thinner—no more than 5 percent. Paint isn't like varnish, which is soaking into bare wood and is mixed 40 or 50 percent. I add just enough to make the primer easy to brush on. And I don't know what that will be until I start brushing and get the feel of it. So, I keep the thinner and stir-stick handy.

Since I discussed paint brushes in an earlier article, I won't go into details here, but now is the time to get my Epifanes 2½-inch full oval brush—the one I use for my build-up coat, not my “final” brush—out of its storage can and clean and spin it out. Then, I don my charcoal cartridge respirator and head into the paint room (Figure 1).

Primer coats are great for gaining confidence and practicing brush technique, as a bit of unevenness isn't too much of a worry. All this paint is going to be sanded off anyway! I start at one end, dip my brush in about a third of its bristle length, tap the sides gently to get off the excess, and start painting. I do a swath about two-feet wide, starting at the keel line and working my way down to the gunwale or sheer line. This will take four or five re-dippings into the paint can. I usually start in the middle of the area I am working on, and brush left and right, re-dip, and then drop down a couple of brush widths, and start again, working left and right and blending the new paint into the paint above.

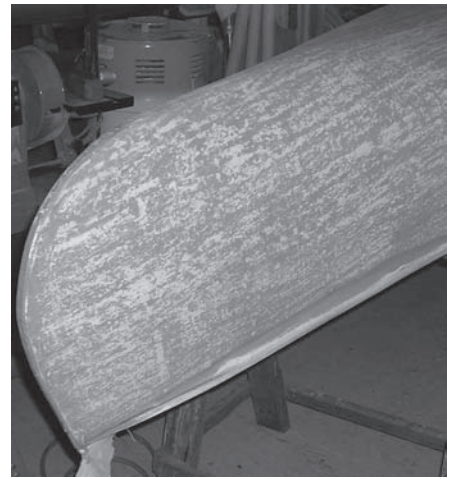
Once this whole two-foot wide area has been painted, I do the smoothing, or “tipping,” starting at the bottom and ending at the top. Tipping is the secret to getting a smooth coat of paint, with no runs or misses. I need to “feel” the paint through the brush as I go back and forth, side to side, landing and taking off my brush like an airplane. Slippery spots mean too much paint, and I just continue to tip over that area until the paint is spread away evenly. A sticky spot means not enough paint, and again I work it a bit to spread paint into that spot. I tip in both directions, but some people like to just tip from the unpainted edge in towards the painted area, thus avoiding some of the “landing” dips that can happen as the brush touches down. I then only have to worry about a smooth “takeoff.”

As soon as I have finished tipping the first side, I walk around to the other side and paint and tip the corresponding area. Then it's back to the first side to do the next two-foot swath. At this point when tipping, I make sure that I work right back through the overlap and that it is well leveled out. In this way, I leapfrog back and forth, from side to side, keeping the paint wet enough to allow the blending of the paint at the overlaps both along the keel line and as each

Figure 2 (right). A hard sanding of the primer removes much of the first coat and starts the smoothing process.

Figure 3 (below). Applying the first layer of color over the primer.

Figure 4 (bottom). Tipping the paint.



new area is painted. When I get to the end of the canoe, walk away. I resist the urge to finish off the last bit of paint in my can, or to go back and touch up spots because the paint will already be setting up and additional monkeying around will leave lumpy, uneven areas that won't dry well and be harder to sand out.

Usually, this primer coat can be sanded the next day, but often it is better to give the paint a day's rest between sanding and painting. I sand again with 100-grit paper, and sand pretty hard. The aim here is to take off all the paint except

that which is filling the dips in the weave. If the filler is white and the primer grey, I will end up with a white boat with grey flecks everywhere. It may seem counterproductive, putting on a coat of paint and then sanding it off, but this is what will eventually lead to that smooth finish coat. Again I vacuum well and get ready for primer coat number two. I might try not thinning this coat, but I am ready to add a bit of thinner if I find the overlaps are sticky and hard to even out.

The sanding after this second coat is with 150 grit paper and again is quite thorough. After this coat, the canoe will now be a grey boat with some white spots showing through after the sanding. I am careful to not be too hard on the high spots, which are the result of bad plank joints, knots or flaws in the canvas, or proud tack heads. I hope I have minimized these problems before the canvassing, but there will always be spots that can cause problems. If during the sanding, the top of the canvas weave is starting to show through, it's time to stop!

And Now—the Color

Finally, I am on to the color coats (Figures 3 and 4). The canoe surface should be relatively smooth now, and each subsequent layer needs to be applied as smoothly as possible so that sanding need not be as hard between coats. In this way, I get a build up of the color paint for protection. The color paint seems a little trickier than the primer to put on, so I work to ensure that there are no runs and sags (or “curtains”) and no misses (or “holidays”). It is with the color coats that I really must feel the paint, and only experience helps here.

I routinely filter the paint after giving it a thorough stir in the can. This is especially important once the can has been opened for a previous paint coat. And I will usually thin it by perhaps 5 percent with the Epifanes thinner to make it more brushable. Epifanes also makes a “retarder” called “Easy-Flow” that slows the drying time of the paint, giving you more time for application and allowing the paint to flow and the brush marks to disappear. One ounce seems to be the right amount in my 28-ounce paint can. There is a commercial product called Penetrol, which seems very similar and can be purchased at most paint stores. The good things about these additives are that they make the paint much easier to apply and help the paint to flow. The downside seems to be that they do slow the drying of the paint, and although the canoe will be dry to touch by the next day as normal, the paint seems to stay tender for a long while after. Even after a week the paint will certainly show a tie down rope or strap mark, or even the imprint of the carpet fuzz from your padded sawhorse. If you aren't in a rush to get on the lake, and there is lots of drying time left before the ice and snow have left, by all means try the additives and make your painting a whole lot easier.

When applying the color coats, I continue to go back and forth, from side to side, applying and tipping. But now I have to work quickly and tip a bit more firmly on the overlaps, as this paint is not as forgiving and sets up more quickly than the primer. I often find that by the middle of the boat, the paint is starting to get a bit draggy, and I will put in another shot of thinner or Easy-Flow, stirring

Tag Team Painting—Is That a Foam Roller?

As you know, I have sung the virtues of good-quality paint brushes and the Zen of paint application—getting the “feel” of the paint. Well, I must be mellowing in my old age, as I have been recently teaching the “roll and tip” method to



The author—who normally scorns foam brushes—does think a foam roller can be useful. If you have a friend to help you paint, a tag team approach can make the job go faster and give great results. While the first person (left) applies the paint with a roller in an up-and-down stroke, the second person “tips” the paint.

my canoe building students. So much for the mystique of brushing! These rookies get great results using a roller to apply the paint and then tipping it off to remove the bubbles. This method is easiest as a tag team event, with one person applying the paint up and down with a four-inch thin foam roller, and the partner following along with a good brush—I use my good bristle brush—to paint along the keel and the bit right down to the gunwale, and then tip off. While one is rolling on one side of the canoe, the other is tipping on the opposite side, leapfrogging back and forth. The painting goes very quickly, and so draggy overlaps are usually not an issue. And for a novice, the roller seems to apply the paint more evenly than a brush. While I can roll and tip all by myself, it is tricky to hold roller, tray, and brush all at the same time—but it is possible. I like the foam rollers (I know, I know, it is *foam*.) as they are much cleaner than the “lint free” low-pile rollers that leave all sorts of fuzz in your paint.



Figure 5 (left) Wet sanding.
Figure 6 (above). Sponging dry after wet sanding.

Figure 7 (below). Sometimes only dry sanding will do. That's the time to take the canoe—and all the dust the sanding will make—out of the shop.



well. This invariably helps, and I can continue right on to the end. Each time I walk around the end of the canoe, going from side to side, I look at where I have painted, getting the light at just the right angle to see if I have any sags developing, or any holidays. If it is in the area that I have just finished, I will go back and try to work it out by brushing up and down and then tipping again. If the sag is several swatches back, I resist the urge to fiddle and trust that it will flow out without my intervention. Usually if there is a sag, it will be much less visible if I leave it alone rather than going and mucking around trying to fix it. Besides, I have a couple more coats to go, so it's not time to panic. Once I get to the end, I admire my beautiful coat, resist the urge to go back and touch up spots, and leave the paint to do its thing. I am always amazed at how the quality paints flow, despite my efforts, and all those sags and brush marks disappear overnight. Cheaper enamels

never seem to lose their brush marks, no matter how much thinning, or additives used. This seems to be a prime example of “you get what you pay for.”

Sanding—Wet and Dry

I usually wet sand my color coats. The shiny paints tend to clog up sandpaper more than the primer paints do, and besides, by this time I am tired of all that sanding dust. That's the beauty of wet sanding—no dust! Instead, I get a wet, colored slurry that develops as I sand and that can be rinsed off as I go. This can be mess in its own right, but at least I don't need to wear a dust mask, and I won't get a fine layer of green or red dust throughout the shop. The job calls for rubber boots and some old clothes, and is best done either outside or in a paint room with a cement floor and drain.

With a pail of water containing a touch of dish soap to help the slurry rinse off cleanly, a clean rag, and a half sheet of 220 grit wet/dry paper folded into thirds, I am all set (Figure 5). I wet the first bit of the canoe by dunking the cloth in the pail and then slopping it on the boat. I also wet the sandpaper and then get to it. Again, I am careful to sand in a straight back and forth motion—no arc and circles (Figure 6). I dip the cloth in the bucket, and with plenty of water (which is why I wear rubber boots) rinse off the sanding slurry as it builds up, so that I can see what I am doing. I dunk the sandpaper to clean it up, too. When the water sheets uniformly off the canoe, then I know I have sanded that area well and move on to the next. After I have been all around the canoe, I take a fresh bucket of water, again adding with a bit of soap, and wipe down from one end to the other with the rag, loosening up any dried slurry and rinsing it off. Finally, I either take a hose or several pails of clean water for a good rinse.

The downside of wet sanding is that it is harder to see what I am sanding, as everything just looks wet and mucky once I get started. With dry sanding, I can keep brushing away the dust and see the places that I have missed and go back over them. Often with wet sanding, I will take a bit of regular 220 paper and go around after the hull has dried and touch up those missed spots. I pay special attention to any sags (What? Me! Sags?) and sand them smooth. It is still a lot less dusty than dry sanding the whole boat, and a lot cleaner besides. I often find after I dry sand a boat, despite careful vacuuming and perhaps even a wipe with a solvent dipped cloth, the hull seems dirty and invariably my brush will pick up something and drag it, while tipping, leaving

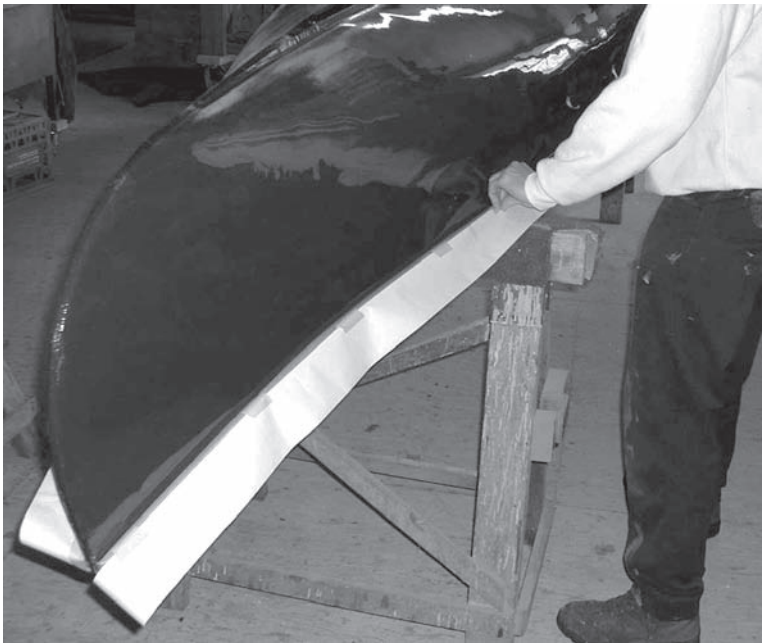


Figure 8 (above). Putting on the wet sanding skirt.

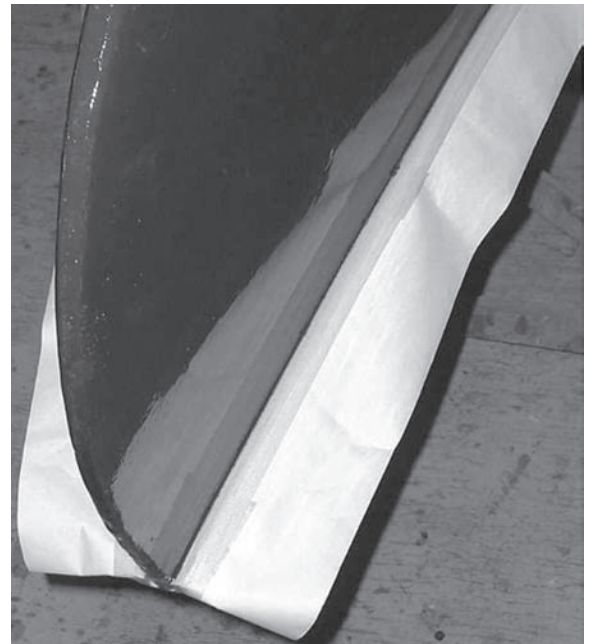


Figure 9 (right) Applying the masking tape

Figure 10 (bottom, right) Pushing down with the squeegee. Apply the tape a bit away from the hull.



deep gouges. Of course, these don't really show up until I have worked my way too far down the hull to go back and do a good job of evening them all up. Yikes (and other expletives)! A paint coat ruined.

The Final Stages

It is at this stage that I put on the outwales and keel. I bed the keel with Sikaflex LOT 291, which needs four or five days to dry before painting. I also give the outwales three coats of varnish after installation, so it is usually about a week before I get back to my painting. By having three coats of varnish on the gunwales, there is a good, smooth surface, and I don't have to worry about paint being absorbed into the raw wood.

I mask the outwales with a good automotive tape. I can get away with $\frac{3}{4}$ -inch, but you might like to use 1-inch tape, if you are a messy painter. Regular hardware store tape tends to leave behind gummy stuff when you take it off, and I find the usual light green painter's tape doesn't stick well enough to do the job. I use 3M's Scotch® 233+ tape that is also green but is much stickier, yet won't leave a residue after many days on the boat. I like to mask about $\frac{1}{16}$ inch out from the hull onto the outwale, so that the paint can flow over the hull/gunwale joint, and help seal it up. When I have masked all round and made sure that I have covered over the ends of the outwale at the stems, I run a plastic squeegee right along the edge of the tape alongside the hull to make sure that it is pushed well down. It is hard to get my fingers in tight enough to push it firmly down, so the squeegee does the trick. This step ensures that the paint won't seep under the tape, making for extra cleanup work.

The second color paint coat goes on like the previous one, smoothly I hope, with the added challenge of dealing with keel and gunwales. I continue to go back and forth from side to side, although I know of some builders who tape off the keel and go all the way down one side and back the other. I never have quite figured out where to mask the keel to not get sags on one of the edges, so I just carry on as before, being careful to tip the sides of the keel as I go. And I get my head right down level with the gunwale when I paint there to make sure that I get my brush right into the corner, with no misses. Along the edge of both the gunwale and the keel are places where I sometimes get holidays. I am careful to check these as I walk from side to side. I remember to remove the masking tape as soon as I am finished painting, carefully pulling it away from the hull at about a 45-degree angle. This lets the paint flow

slightly down onto the outwale, leaving a nice clean edge.

The next stages on the canoe are a fourth gunwale varnish, a final interior varnish, installation of the seats and thwarts, pre-installation of stembands and their removal, and a final varnish of the gunwales and seats. I usually leave the canoe upright for a week then, to let the gunwale varnish harden up before I turn it over for its final sanding and painting.

I have a different technique for masking off the gunwales for this final wet sanding of the hull. If I just use the $\frac{3}{4}$ -inch tape, then all that colored wet sanding slurry makes its way into gunwale screw heads, and around underneath to the top of the gunwales, rib tops, and every nook and cranny that you can imagine. Not an easy thing to clean up afterwards. So I make a little skirt using some old adding machine paper tape that I inherited, and tack the paper tape on with small bits of masking tape, at intervals along the outwale, just $\frac{3}{8}$ -to $\frac{1}{2}$ -inch away from the hull, and then go along and mask as I normally would with my green 3M tape, sticking it down over the paper tape (Figures 8, 9, and 10). This time I leave about $\frac{1}{8}$ inch of gunwale showing next to the hull when I put on this final tape, so that the paint will flow down and on to the outwale, filling the outwale/hull seam.

My final wet sanding is with 320 wet paper, and I take care to stay away from the sharp edge along the keel and the stem, as very little paint ever sticks here, and I don't want to go through to the underneath primer coat. After wet sanding, and a thorough hosing down of the canoe, the paint room floor is wet and as clean as it ever will be. I then take a good-quality sponge and wipe up the excess water to help the canoe dry more quickly as droplets will often stay alongside the keel and the outwales for hours. I turn the heat on low, close up the doors to keep the dust out and leave the canoe for at least a half day. I usually do my final paint coats at night when I know I won't have any visitors wandering in to interrupt.

For a final paint coat, I try to open a fresh can of paint, and always filter it. I use my "final" paint brush, which I hope is cleaner than my normal build-up one. If I am not in a rush, I will flick it for a few minutes, or longer if I am really in a meditative mood, to get out any unwanted loose bristles and dirt. I have already showered to make sure that I have gotten rid of my day's dust and dirt, and donned clean clothes. No long-sleeve, fuzzy sweatshirts!



The pay-off for hard work and good prep—beautiful canoes in the shop.

For the final coat, I also wipe the hull with a new tack rag, always wiping in one direction, in hopes of pushing any dust ahead and into the cloth. With respirator, paint, and brush in hand, and extra thinner or Easy-Flow and stir stick as well, I enter the paint room quickly (particularly in mosquito season—nothing ruins a final paint coat more than a few imbedded mosquitoes). I usually turn off the heat, so that the paint won't dry too quickly, and I do add a bit more thinner to make sure the paint is really brushable. This is no time for lumpy overlaps or thick heavy paint that will end in sags. As with the previous coats, I work quickly and really concentrate on the feel of the paint as it

goes on. The masking tape and paper skirt are a bit trickier to remove, but I just go carefully and make sure the paper doesn't crumple up and touch the freshly painted side.

Whew, a huge sigh of relief as I leave the paint room to tidy up.

Oops. Back in to turn on the heat. With no heat on, the dampness in the paint room might decide to condense on the new paint as the temperature drops overnight, leaving a dull finish. I take an extra minute or two to admire my handiwork. Gleaming paint, no mosquitoes that I can see, and very little dust as well, thanks to careful preparations with tack rag and paint filter. I am sure my customer will be as pleased as I am.

I have often thought that there must be a quicker, more efficient way to paint a canoe, and have toyed with the idea of spray painting. One evening as Assembly several years ago, I asked Tom MacKenzie of Loonworks, if he had ever sprayed his canoes. He had a typical Tom reply, "Oh yes, but I have gone back to hand painting. I like to see the look of astonishment when I correct someone's erroneous assumption about a spray finish when I say that it is hand-brushed."✂

WCHA Board Member Pam Wedd owns Bearwood Canoe Company in Parry Sound, Ontario. This article is the third in a series by Pam on painting canoes. The previous ones were in issues 132 (December 2005) and 133 (February 2006).

Epifanes paints are available through Jamestown Distributors by special order. Call 800-497-0010. For further information on the product, visit the company's Web site, jamestowndistributors.com