

Norfolk Island Pine Finishing Information

Norfolk Island Pine, Sometimes called 'star pine' or 'cook pine' is endemic to Norfolk Island, a small island in the Pacific Ocean between Australia, New Zealand and New Caledonia. One unique feature of Norfolk Island Pine is the symmetrical radial limb pattern around the tree. This is what creates the interesting star/ spoke knot pattern around a bowl or hollow vessel when the log is turned in the end grain orientation (grain of the wood running parallel with the lathe bed).

Ron Kent from Hawaii was one of the early pioneers in turning Norfolk Island Pine. Ron was gracious enough to talk with me numerous times early in my turning career giving me guidance and information on turning and finishing NIP. I was lucky enough to meet Ron before he passed in 2018. He developed his method of finishing NIP allowing it to become the rich translucent amber color which he was known for. Below is his process that I follow.

Norfolk Island pine is a beige color and the spalting streaks are grey before finishing.

The finishing process involves repeated Danish-type oil (I use Watco - natural color) applications daily over a period of approximately 20 days or more, this allows the oil/resins time to penetrate the wood fully. This is what gives it the deep rich translucent amber quality.

I cut my pieces to approximately 1/16" to 3/32" thick, it can be left thicker but it will be less translucent and the finishing will take proportionately longer as it has to absorb more finish. I sand carefully on the lathe to 1200 grit. As soon as the piece is completed I begin to soak it with Wacto Danish oil, I let it soak up as much of the oil as it will then wipe it dry. It can be submerged as Ron did but this takes a large container and a large amount of oil. This is easier as you can submerge several pieces while you go do something else then just remove them and dry them off. Not having a vat or wanting to invest in that much oil you will need to find a way to soak the pieces. Wiping the oil on with a rag takes way too long and soaks up expensive oil each time. I use an aluminum roaster pan or shallow plastic storage bin and (wearing plastic gloves) hold the pieces in the pan then pour the oil (Watco) all over the piece and roll it around in the extra oil that is caught in the pan. You will need to keep pouring on oil and rolling the piece as long as it continues to soak up oil, this will take a while. After it has soaked up as much oil as it can, set it on a cake rack in the pan and let it drip off for a while (but not so long that the oil begins to dry and get tacky). Then dry off any excess oil. It is important to wipe it dry because you do not want any of the oil to dry on the surface as this will prevent the subsequent oilings from penetrating the next day the oiling is repeated. At this time the piece will look rich in color and be somewhat translucent but the solvent will dry out and the next day it will look dull and dry again. The drying time is important to let the solvents evaporate so more resins can be absorbed by the wood.

If you do allow the oil to dry on the surface you will need to use mineral spirits and a rag or possibly 0000 steel wool to remove the cured surface oil.

Watco Danish Oil is mostly solvent which allows it to penetrate deep into the wood fibers carrying the resins with it. The process consists of multiple cycles of oil-soak/dry/wait. The first 6 or so cycles do not seem to have much of a lasting effect. After 3 to 4 oilings I will sand the piece with 1200 grit while it is wet with oil (I wear gloves). This cleans off the surface and opens the pores of the wood to help let the oil soak in better. About every other time or two I will sand while I'm oiling working to about 1500-2000 grit. You need to handle your pieces with care while sanding because they are relatively fragile. After about 10 cycles of oiling the rich coloration and translucent quality will start to remain. I continue oiling until the piece does not absorb any more oil.

Note: Do not pour the remaining unabsorbed oil back into the can of new oil. The used oil has absorbed oxygen and will prematurely cause the fresh oil to thicken and go bad. You can put it in a separate sealed container and use it the next day with fresh oil. Watco oil tends to thicken and polymerize if left in the can too long, I use Bloxygen to keep it from going bad as quickly.

Note: The important part of this finishing process: Danish-type oils are about 80% solvent (mineral spirits) this carries the Tung oils and urethane resins into the wood but then evaporates. The **important** thing to remember is that it is not **how long** the wood is soaked with oil but **how many times** it is soaked (because it will be saturated with solvent in the first 5-10 minutes or so and this will evaporate). The solvent carries the oil/resins into the wood fibers where they will remain and begin to polymerize (harden). After allowing the oil to dry for a couple of weeks to a month the piece can be buffed and waxed if a higher gloss is desired.

Over the years I have been told by other turners about many other quicker easier finishing methods and early on tried some, but none have given me the translucency that Ron's slow process does. Thanks Ron.

Have fun turning,
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