

## TOTES AND KNOBS

### Instructive Outline with links to associated Instagram posts and sources for related supplies

03-14-22

#### GENERAL

Strip w/ lacquer thinner and maroon Scotch-brite pads... wear gloves

Cracks partial breaks .... finish the breaks, epoxy and clamp closed (usually)

Glues for rosewood

- Oily wood epoxy for areas to receive stress

I am now using West Systems G/Flex Epoxy.

[https://www.amazon.com/gp/product/B07MZFSK61/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B07MZFSK61/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1)

- 2 Ton Epoxy for lower stress like replacing tops
- 5 min for cosmetic repairs  
Mix with rosewood dust if gaps

#### Kinds of damage seen:

Totes

- Tips/sections broken off
- Clean breaks in mid-section
- Breaks at mid-section not clean or damaged
- Breaks at very bottom
- Superficial but significant damage to sides
- Damage to edge of hole for brass nut
- Hole for brass nut too deep or shallow
- Damage to front hole area of larger totes
- Bad previous repairs
- Main center hole not correct angle or has hump from bad repair

Knobs

- Major cracks/splits including mid-section
- Cracks only in the base below the waist
- Holes for brass nut too deep or shallow

#### TOTES

##### **Severely broken tops**

Broken tops pretty common <https://www.instagram.com/p/B7fSDsNHehK/>

Remove tops on table saw

- Base against fence
- Cut at front point

Tops removed <https://www.instagram.com/p/B7fSHChHacc/>

Matching color and grain for tops <https://www.instagram.com/p/B7fSSjczwX/>

Brazilian Rosewood if I have it, also E. Indian, Bolivian and Honduran.

- East Indian is often too red

- Honduran is often too light
- Bolivian seems to be the best substitute in general

Turning blanks is a source 1.5" x 1.5 x 3" increments.

<https://wphardwoods.com/products/categories/turning-stock/10/bolivian-rosewood-pau-ferro>

Rosewoods are toxic.... wear breathing protection.

If you are allergic you can have a reaction like poison oak or ivy.

Gluing/"tape clamping" new tops <https://www.instagram.com/p/B9mZegyD-0m/>

Using patterns & initial shaping tops <https://www.instagram.com/p/B9nhl46g45c/>

Auriou Modeler's Rasp, 7", right hand, Grain 13

<https://www.leevalley.com/en-us/search#q=62W3012&t=product-search-tab&sort=relevancy&layout=card&numberOfResults=25>

Auriou Cabinetmaker's Rasp 9", Right Hand, Grain 10 Broader face

<https://www.leevalley.com/en-us/search#q=62W3016&t=product-search-tab&sort=relevancy&layout=card&numberOfResults=25>

Eye candy lots of patterns <https://www.instagram.com/p/B7hFCvGHtYV/>

Making new hole for brass nut <https://www.instagram.com/p/B9nqUUejHc3/>

Drilling post hole + more shaping <https://www.instagram.com/p/B9nuxwxDE65/>

Sometimes you will get a for the post hole that is not straight and has a hump. An 1/8" chisel can help remove the hump

More shaping sanding and filling <https://www.instagram.com/p/B9o4yHADCUh/>

Blending color and finishing adjusting nut height

wipe lacquer thinner to see if color is going to match

<https://www.instagram.com/p/B9pjKVDAayb/>

Eye candy repaired totes ready for finishing <https://www.instagram.com/p/B7fTSM9Hot8/>

### Clean Middle Breaks

Clean surfaces with lacquer thinner and brush

Glue with oily wood epoxy West Systems as noted earlier

Adding support dowels <https://www.instagram.com/p/CAVsa1jjoCb/>

### Old or Ragged Middle Breaks

*Part 1* of repair.... patterns, removing section on bandsaw and gluing new section

<https://www.instagram.com/p/CCXiSdljwK9/> now using the West Systems epoxy... I would reserve this repair as a last resort... you can end up with pronounced glue lines over time due to different expansion rates between rosewoods. But if you have to .... you have to...

*Part 2* of repair to completion <https://www.instagram.com/p/CCXi6KCjal4/>

Finished repair <https://www.instagram.com/p/CCXmwIKDi2H/>

### Misc. Tote repairs

Chunk repair <https://www.instagram.com/p/CDsYAPGjKYm/>

Side damage repair <https://www.instagram.com/p/Ca0n1tnPIs5/>

Another side damage repair <https://www.instagram.com/p/CUO0eDNr3-v/>

Tote brass nut hole edge repair <https://www.instagram.com/p/CNBNbd0j2qF/>

Technique to **reinforce** area around **front screw** of totes with a brass ring

<https://www.instagram.com/p/B9FoQXZj8DF/>

Another repair is to cut slot out and insert wood

## **KNOBS**

Eye Candy Knobs completed <https://www.instagram.com/p/B7fR790nLjN/>

Shows **splits** in knobs <https://www.instagram.com/p/B7hCH2tHL16/>

Shows punch to split <https://www.instagram.com/p/B7hCQAVnBAD/>

Also spreading plyers



Shows result of punch <https://www.instagram.com/p/B7hCYN2nvHC/>

Shows **multiple** splits <https://www.instagram.com/p/B7hCdZlnllq/>

Shows trimming acid brush <https://www.instagram.com/p/B7hCk7XnAsl/>

Shows **taping** multiple break <https://www.instagram.com/p/B7hC6tUHqgZ/>

Glue in a series of steps, break glue...break at next crack glue and so on

Shows using **zip tie** on multiple breaks. <https://www.instagram.com/p/CCuFI2Pi7DM/>

## Wood Stabilizing

I considered trying the wood stabilizing techniques using vacuum and resin as used with mallets and pens... I was advised by one of the companies that sells the stabilizing products that this technique does not work well with oily woods like rosewood.... I decided not to try it

I have stopped trying to open cracks that are just at the bottom. They tend to blow out at the lower waist of the knob as a horizontal break. I now use spreading plyers to open the break slightly if possible and force epoxy (w/rosewood dust if gaps) into cracks. Clamp if possible and cure. Then using one or both of the following repairs

Shows Hub fill method

<https://www.instagram.com/p/Ca0pd9wJgjs/>

Shows Kevlar method

[https://www.instagram.com/p/Ca0q\\_lvpHNj/](https://www.instagram.com/p/Ca0q_lvpHNj/)

Shows clamping single break <https://www.instagram.com/p/B7hDCmvnqjP/>

Shows Knob **side repair** [https://www.instagram.com/p/B7\\_ivl1gVQU/](https://www.instagram.com/p/B7_ivl1gVQU/) I use a lathe now, safer to use the rasp to shape (on lathe) than lathe tools  
Eye candy knobs using paper with numbers to keep track of which plane each knob belonged to  
<https://www.instagram.com/p/B7hDaeqHUly/>  
"Jig" for sanding knob <https://www.instagram.com/p/B7hEHwKnZNJ/>  
Lath set up for knob <https://www.instagram.com/p/B7wS32nABAd/>  
Video knob sawdust "Black Hole Dust Catcher" [https://www.instagram.com/p/B7wSsb\\_AaBC/](https://www.instagram.com/p/B7wSsb_AaBC/)  
<https://www.woodturnerscatalog.com/p/89/6387/hc-Black-Hole-Dust-Catcher-System>  
Eye candy finished knobs <https://www.instagram.com/p/B7hEvH1HB4v/>

### **Nut height (Tote and knob)**

controlled with washer

Problem with deep nut holes

<https://www.instagram.com/p/B7r8x0tHnmZ/>

After adding washers

<https://www.instagram.com/p/B7r8epCHIt3/>

Washers that fit

<https://www.instagram.com/p/B7r8XbxHuf2/>

You have to drill out the hole in washer a little

<https://www.instagram.com/p/B7r8Rbwn9Ft/>

If hole too deep make a plug

<https://www.instagram.com/p/CC-L8NsDWzN/>

<https://www.instagram.com/p/CWYt3xVv0UT/>

<https://www.instagram.com/p/CWYsiY2P66Z/>

### **FINISHING THE WOOD**

Totes are sanded to 220G w/ grain

Knobs I use the lathe and go up to (220) then maroon scotch-brite and ultra-fine gray scotch-brite

Maroon

[https://www.amazon.com/3M-07447-Scotch-Brite-General-Purpose/dp/B0002SQYF0/ref=sr\\_1\\_16?dchild=1&keywords=scotch+bright+very+fine&qid=1594329157&sr=8-16](https://www.amazon.com/3M-07447-Scotch-Brite-General-Purpose/dp/B0002SQYF0/ref=sr_1_16?dchild=1&keywords=scotch+bright+very+fine&qid=1594329157&sr=8-16)

[https://www.amazon.com/3M-07447-Scotch-Brite-General-Purpose/dp/B0002SQYF0/ref=sr\\_1\\_16?dchild=1&keywords=scotch+bright+very+fine&qid=1594329157&sr=8-16](https://www.amazon.com/3M-07447-Scotch-Brite-General-Purpose/dp/B0002SQYF0/ref=sr_1_16?dchild=1&keywords=scotch+bright+very+fine&qid=1594329157&sr=8-16)

Ultra fine

[https://www.amazon.com/gp/product/B000CQ6I7G/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B000CQ6I7G/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1)

Blend repairs (if needed) with General Finishes Water Based Dyes. Med and Dark Brown.

For the Union Mahogany totes and knobs ...

I have been using a 3 Step stain method

[https://www.instagram.com/p/CaXz1weP\\_zK/](https://www.instagram.com/p/CaXz1weP_zK/)

To get the color about right, I did a 3-step stain event... Minwax Stains wiped on the Red Chestnut, wiped off excess, wiped on English Chestnut, wiped off excess, wiped on Dark Walnut, wiped off excess.... let dry overnight.

I use Deft described below

- Lacquer base finishes are nice because they come right off if needed. Deft is softer than other lacquers
- Tung oil, Boiled linseed oil, oil finishes, even wax generally turn rosewood too dark
- Others prefer shellac, for me it is harder to sand between coats. I am not a shellac expert
- Water based polyurethane like General Finishes may darken less but removal is a problem later, also setup for spray equipment takes time
- Rosewood will also just polish up on its own without a coating. One concern is it could cause an allergic reaction if you are sensitive to Dalbergia species

After finish sanding

Apply 1 coat of Deft to seal the wood

I have used several methods to try to fill the grain. None are perfect... so far....

- Thin coat of 5 min epoxy... sand back to bare wood... this is not perfect and a lot of work
- Have used thickened Deft (in a can) by letting evaporate. Spot apply
- Apply very thin coat of Aquacoat Clear Pore and Grain Filler  
[https://aquacoatstore.com/products/pgf-wood-grain-filler?\\_pos=1&\\_sid=491a0604d&\\_ss=r](https://aquacoatstore.com/products/pgf-wood-grain-filler?_pos=1&_sid=491a0604d&_ss=r) to specific areas with open grain trying to remove as much excess as possible.  
Let dry... lightly sanding back to level with 320  
Apply another light coat, sand apply sand until filled.
- If open grain is deep and very open, sometimes you will get a light residue in pores with Aquacoat. Sometimes on rosewood it works better to use a dark filler like  
[https://www.goodfilla.com/store/p7/Gork%27s\\_GoodFilla\\_-\\_Ebony.html](https://www.goodfilla.com/store/p7/Gork%27s_GoodFilla_-_Ebony.html)
- 



Very open grain here



White residue left with AquaCoat



After removing AquaCoat and applying Goodfilla Ebony... wiping excess with damp cloth to prevent unwanted staining of the rosewood.

Once grain is filled

Apply 3-4 coats of Deft Clear Wood Finish Satin (lacquer thinner based) Lightly sand between coats with gray Scotch-brite pad. Steel wood sheds

[https://www.amazon.com/017-13-Lacquer-Finish-Sealer-7976293/dp/B06XF6HZ9H/ref=sr\\_1\\_14?dchild=1&keywords=deft+clear+wood+finish+satin&qid=1617120494&s=hi&sr=1-14](https://www.amazon.com/017-13-Lacquer-Finish-Sealer-7976293/dp/B06XF6HZ9H/ref=sr_1_14?dchild=1&keywords=deft+clear+wood+finish+satin&qid=1617120494&s=hi&sr=1-14)



¼" dowel and blue tape to hold parts while spraying



Showing dismount of totes and knobs when wet after spraying

### Hand Rub

If finish is too shiny, you can use 0000 steel wool with the grain after the final coat to burnish for a hand rubbed result