

A 1960s Gibson Country Western model came in for repair. It had fallen off a stage and suffered quite a lot of damage.



There was quite extensive visible damage to the back and looking into the soundhole I could see that internally there were some broken braces. The binding around the back also looked as though it had been burned and had melted in places.

Using an inspection mirror & light through the soundhole it was possible to see that someone had attempted a d-i-y repair by smothering epoxy (?) adhesive all over the inside to try and hold all the breaks together.

Before the adhesive had set it became covered in dirt and dust which made it look even more of a mess.



To assess the damage properly I needed to remove the back. The back binding was not in good condition so I removed that first so that I could get access to back/ribs joint.

A hot seam knife opened most of the joint pretty quickly, until I got to the area where the epoxy adhesive had been lathered on the inside. This short section took me 3-times longer to undo than the remainder. The hot seam knife had no effect on the adhesive nor did my steam nozzle. I eventually used a razor-saw blade soaked with acetone which allowed me to clean out the joint.



With the back finally off I could see the extent of the damage. There were 8 splits & cracks in the back and 3 broken back braces.

There were also 2 broken braces & 1 detached tone bar on the top.

Some of the kerfed linings were detached & a 200mm section was broken in many pieces.



One of the worst aspects of the job was cleaning out the epoxy adhesive from the previous repair attempt. It had been smothered over, and into, most of the breaks and was holding them apart rather than together.

Before I could close up and re-glue the splits I had to spend a lot of time melting the epoxy with acetone and carefully scraping it out back to clean wood.



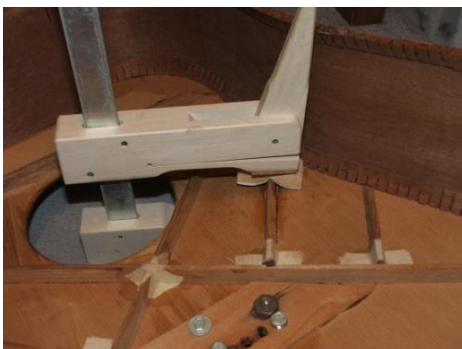
Some of the splits on the guitar back were quite long and spanned across the brace locations. So to ease the repair I actually removed these braces. This allowed me to flex most of the splits open enough to get new adhesive inside and get a secure tight fitting joint. There were 2 splits which were too wide to glue up in this fashion and so I had to splice in a new piece of mahogany. The longer of these two also needed to be splinted on the inside for reinforcement.



Whilst the braces were off I cleaned them up and glued the split ones before re-attaching them in the correct locations.



The mahogany spliced splits will be unnoticeable once the back has been re-finished.



Now it was time to tackle the loose and broken top braces. Usually these are a pain. Access is normally through the soundhole and you are working blind by feel only.



In this case though, with the back off it was very straightforward. It was easy to get a decent clamping arrangement and have good visibility for gluing.



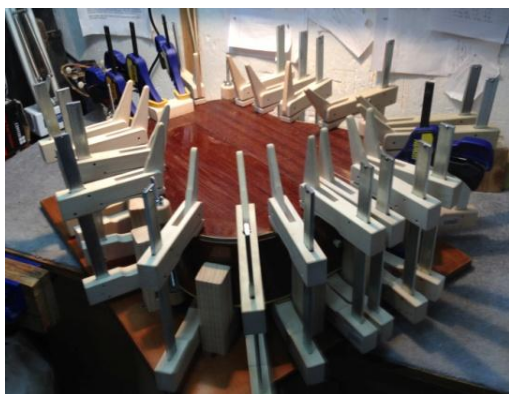
Some of the kerfed linings (which support the back to the sides) had detached and required gluing back in place. One section had broken up too badly to be re-used. This required a new piece to be inserted.



The bridge plate had been damaged around the bridge pin holes and so whilst I had the chance I decided to repair it too.

The bridge plate was made from 3-piece ply and the damage was contained to the top ply only.

I cut out the damaged area and inset a maple insert into the ply. The maple being quite hard should give a better resistance to future wear and tear.



The next step was to glue the back onto the instrument.

It is crucial to get everything positioned correctly before applying the adhesive.

Everything is quite flimsy without the back on and it requires careful holding and clamping to ensure everything fits back in place precisely. It is especially important to get the neck to bridge angle correct and for the guitar sides to be firmly held in position so that they match up to the back. Any slight misalignment will be obvious when the binding is fitted.

I had measured the height of the fretboard to the bridge top at the start before I disassembled anything. So to hold it at the correct orientation I clamped a straightedge to the fretboard and rested it on a shim on the bridge. A clamp through the soundhole then held it rigidly in place.

The guitar was then placed top down into my holding fixture. This has adjustable side supports which were manoeuvred to hold the body profile in the correct position ready to accept the back. After a couple of dry clamping runs I was happy with the way it all fitted together and applied the adhesive and left it clamped up for 24 hours to set.



After removing it from the clamping fixture I then prepared the purfling and binding channels. The original channels were in reasonable condition but needed adhesive cleaning out and then all the faces smoothing ready to accept the new binding.

The original purfling was a 4-ply black/white/black/white plastic strip. I procured some new strips which were 0.020" thick and laminated it myself using acetone solvent. It was then glued in place, held in situ by approximately 200 map pins!

Once that was dry I then cleaned up the binding channel.



The new binding was pretty much the correct size to match the original. It was applied in one complete strip with a butt joint at the heel end and taped in place whilst it dried. Being a good match for size it then only required minimal work with a scraper to get the edges flush.



For once I didn't have to worry about applying any finish. The owner is a skilled French polisher and will be applying that himself.



And finally a fret dress, set-up and new strings had it playing with that fantastic Gibson tone.



And here is the finished instrument with 15 coats of French polish on the back.
Looking and sounding exquisite, just like a Gibson Country Western should !

John Walker

JW Luthier Services

Hand Crafted Acoustic Guitars & Mandolins
Repairs, Refrets, Maintenance and Set-ups