

Restoration report

Instrument: Hofner Jumbo (Western??)

Model : not determined but presumed to be a derivative of Hofner 491 (Selmer 5154)
courtesy of Hofner GmB

Serial Nbr: none

Label details: no label

Date: Was bought in Scotland around 1968.

Owner provided background

The instrument was purchased in Motherwell Scotland from the sales agent of Selmer. The owner subsequently moved to Canada in June 1974. Upon the arrival of personal belongings the guitar was found to have suffered severe damage that was at first presumed irreparable. It was then held in various storage facilities for a further 42 years before again being evaluated for possible restoration.

Preliminary investigation.

The finish was in poor condition with multiple cracks throughout and on all surfaces. This was a clear indication of improper storage conditions and the ravages of time.

The treble sidewall was massively damaged by two enormous cracks and was embedded into the body with a penetration measuring approximately 2.5" to 3". It was very clear that something had pushed hard against the instrument to the effect that the sidewall gave way allowing penetration. The damage presented as two tears running in parallel from just short of the end block to just short of the neck block. It was rather obvious that complimentary internal damage was also suffered.

The bridge and saddle had been worked on previously obviously with an attempt to correct the action and had been lowered.

The neck was a typical five piece with the main construction being three-piece sandwich with an Indian Rosewood finger board. The three piece portion of the neck had separated in the area of transition between the neck and the machine head. It was clear that the truss rod may have had something to do with this separation.

Of particular note was that the scale length was 660mm which is either unique or at a least very rare for such a guitar from Hofner signifying the probability that this was a one-off sample that somehow or other finished up being sold.

The sound board was undamaged other than cracks to the finish. The back was also undamaged other than cracks in the finish.

The scratch protector was original, as was the van Ghent tuners.

The decision was made to proceed with a total restoration as the only practical course of action.

Restoration work.

The first part was to determine if the damaged sidewall could be pushed back out to a more normal condition. This proved rather easy and the side wall basically sprang out as soon as it was pushed from the inside. The instability of the structure no doubt helped.

It was decided that the only practical way to have any chance of success was to remove the back to gain access to the internal structure. This was achieved with no particular problem being encountered.

The removal of the back destroyed any minimal structural integrity that remained. This had to be stabilised temporarily to allow and assessment of the full damage and subsequently to maintain integrity until the damage could be repaired. To achieve this end, the truss rod was backed off until the finger board could be dialled in as flat. A steel bar was now clamped in place on the finger board and extended to the bridge where again it was clamped. Careful attention was given to make sure the correct geometry between, neck, body, bridge and saddle was attained. This then allowed the restoration to proceed.

It should be mentioned that early on in this process, replacing the whole damage side wall was considered. For several reasons, mainly authenticity, it was eventually decided to proceed with a repair by rebuilding of the damaged area rather than replacing.

Once inside the guitar the following was noted and received attention;

1. The kerfing on the lower bout was damaged and no longer effective. This was made much worse as the lower (close to the sound board) of the two massive cracks ran through this area. Thin bamboo strips were soaked and preformed to reinforce the whole bout and also to hold the crack in a proper alignment. Bamboo was chosen in this case as, even in a small thin section, it is immensely strong but remains flexible. In addition to this Bamboo has a much higher natural frequency than the tone wood of the guitar and as such would not affect the tonal responses of the instrument
2. The upper of the two cracks (close to the back) also ran close to rear kerfing. The rear kerfing was also damaged in several areas but thankfully most of this was separation rather than destructive damage.
3. It was decided to attack each crack separately as they both presented different challenges. The obvious place to start was the crack closest to the sound board as this had the sound board to help in restoring structural integrity and geometry. Prior to repair, several vertical braces were made, again from bamboo, and these were clamped in parallel to the existing braces. It was decided not to remove the originals as they were the only thing holding the damaged area in anything close to the original set.
4. The crack closest to the sound board was now prepared for repair and aligning. This was more difficult than expected. Several test methods of crack stabilisation were employed included cleats and different clamping. One may appreciate the difficulties when it is borne in mind that the cracks were around 25" long and they circumnavigated the both bouts and the waist of the guitar. This was compounded by the fact that the whole crack had to be stabilised, clamped and glued all in one shot. Several mock up dummy runs were had until an acceptable process was established.

5. The same process was performed on the second crack (closest to the back) but on this occasion having already completed the first crack, the structure was much more stable. It should be mentioned that strategic vertical braces were employed during the gluing of the second crack. Once both cracks were complete, the final parallel vertical bamboo braces were added.
6. Having completed the reconstruction, including several damaged internal braces and miscellaneous damages, the back and original bindings were reattached.
7. During the course of the restoration, the bridge had been removed as it was partially separated. The original intention was to make a new bridge but this was abandoned as it would not be original. The original bridge was reworked and reattached.
8. Attention now turned to the neck where the seized truss rod nut had already been removed at an earlier stage. A special trepanning boring bit was now inserted over the truss rod and damaged old wood removed. This allowed the separated neck portion to be clamped back into the original position and re-glued. Thereafter, a hard Honduras Mahogany tapered plug was made and glued into position restoring the function of the truss rod and also reinforcing the part of the neck that had separated previously. Structurally this was better than new.
9. And finally, the tuners were refurbished before being reinstalled.
10. Having completed all the structural work of restoration, the old finish was removed and the body of the instrument was refinished as close as possible to the original as it came from Hofner so many years before. The neck was deliberately not refinished and the repair to the neck was left as testament to the work and authenticity of this lovely instrument. Not refinishing the neck may well meet with disagreement but that is the way it was done. This does not preclude refinishing in the future.
11. A full set up with a new bone saddle and nut were made and installed to complete the work.
12. The beauty and tone of this unique Hofner has been more than restored and she has been played and admired by many.



The process begins. Shown here is the crack under the sound board after the section was sprung outwards back into its original position. Both cracks were individually more than 25 inches long.



The cracks viewed from the inside



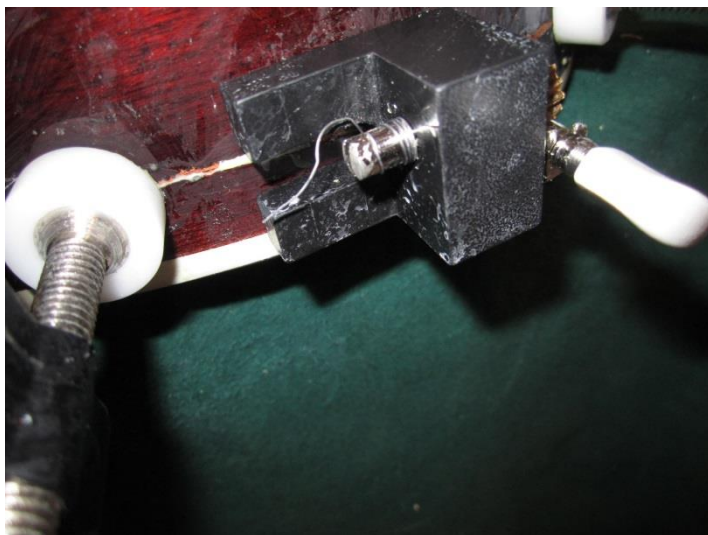
A further view of the crack close to the back. Basically only a narrow strip of wood / kerfing was all that remained to hold the side in place after the damaging incident.



The steel bar was used to stabilise the structure after the back was removed. This stayed in place until the back was reattached.



The thin bamboo strip, preformed and used to bring the edges of the crack into a perfect alignment. This strip is only 1/16" thick and was preformed wet to fit perfectly above the kerfing and across the worst damage to the side.



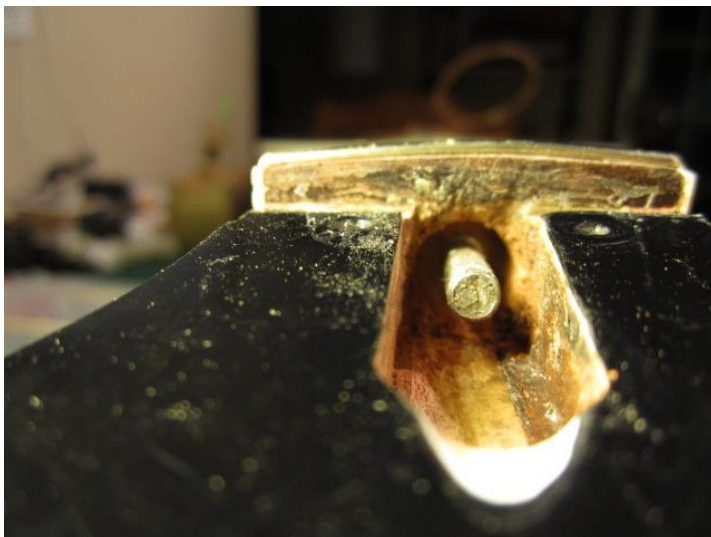
Typical clamping to ensure the body curve was maintained and the crack properly aligned. Many clamps of various types were utilised to get it all in perfect alignment.



Now you see them now you don't. the cracks after repair and ready for refinishing. The final result certainly justified the care taken to get it right.



This is how the same area looks now.



The truss rod after the damaged wood was removed. by a special trepanning cutter.



The mahogany plug in position ready to finish.



She now looks like new with new nut, saddle and reworked bridge.



Tuners completely rebuilt just like new.



Everlasting beauty as when she was new.



A long time in coming but this old lady was patient and deserved to be reborn. She has a very pleasing tonal response reminiscent of old wood. The longer scale adds to the nuance of the sound she gives out. Volume is not a problem but she has a wide range from very soft to downright heavy digging in. She almost appears to be really enjoying being brought back to what she was designed to do and never refuses to tell all who want to listen.

**Thomas Sommerville
10 June 2020**