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'TIRED' HUBBARD TONGUES

Every so often customers will assert that their jacks' tongues are wearing out or becoming tired. The problem that most often presents itself is that some tongues seem reluctant to move and refuse to move reliably back into their forward, ready-to-pluck position. The most attractive assumption is that the spring has become weak and in most cases, in a limited sense, it has. Owners will have noticed that bending the spring to provide more oomph (see photo, next page), a stratagem that might have worked well enough in the past, has ceased to be an effective or reliable fix. But, more often than not, this is a symptom rather than the true cause of the problem. The root cause is much more likely to be a gross increase in the friction associated with the trunnions (the moulded-in studs which serve as the tongue's pivots) and the trunnion boxes (the moulded-in slots at either side of the jack's tongue window that receive the trunnions). There are a few different pathologies we have noticed.

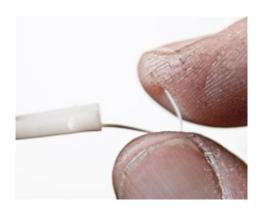
For jacks produced in the mid-late '70's, there were a few runs in which the mould for the tongue was misaligned. The effect of this was that the shape of the trunnion became not a perfect round but a stepped compound of two slightly out-of-sync half-cylinders, which added just enough to the 'diameter' of the resulting solid to make it very susceptible to dragging at the top and bottom of the trunnion box. The fix in this instance is to dismount the tongue and carefully shave the step away from the TOP of the trunnion. If you have ever voiced plectra, this will seem quite familiar. Although it would be possible to use a fine file or very fine abrasive paper to accomplish this sort of task, the use of a knife is far preferable. The point of this task is to eliminate friction and a knife will leave a much smoother, friction-free surface than either file or sandpaper.

For any jacks it is possible over time for thicker damper cloth to distort the jack sufficiently to pinch the tongue window, thus causing the outside wall of the trunnion boxes to drag on the trunnion ends. Here, the fix is to shave a smidgen off one or both of the trunnion ends. Again, this closely resembles voicing plectra. The same observations vis-à-vis choice of tool apply here equally.

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For any jacks it is also possible over time for the plastic to develop a powdery surface. This powder may be a product of the very slow degradation of the acetal resin or other components of the moulding compound. The instrument may also have been exposed to some harsh environmental conditions which either provoked this behavior or caused the jacks to accumulate coatings of very fine environmental dust. In any case, such powder that does accumulate on the surface of the trunnions may be carefully cleaned away and the source of friction thus removed. It may also be useful to clean and burnish the inside faces of the trunnion boxes with a toothpick adapted to the purpose.

Whenever it is possible, it is both simpler and preferable to free the tongue and retain the labor invested in the voicing of its plectrum. The rates at which plectra harden differ as they age. Thus it is relatively more troublesome to integrate new plectra into a well-established set than to keep the old ones going.



Bending a (35 year-old) tongue spring

To date, it has not been possible to fix an average useful life for the current Hubbard jack design. The first samples were produced nearly forty years ago and, with care, may be expected to continue to serve for many more years to come. The photograph (left) shows the bending (in 2011) of the spring of a tongue that came from an instrument delivered in the middle 1970's. It successfully took a too-great set from the bending (the tongue rested

proud of the front face of the jack) and needed to be massaged back into a more wholesome orientation - one that would keep the tongue against its forward stop but still allow the plectrum to escape past a still string on a slow return.

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