

# Picnic Table Repair Overview

PHOTOS AND TEXT: WILLIAM RAU  
RENDERING: INDRA SISWANTO



I often hear a concerned customer ask, “Why does my wood crack?” Or more accurately, why does the finish on the wood crack? To some people interior wood should be perfect forever.

There are multiple reasons why finishes crack, but from my perspective, a perhaps more interesting question is, “why is the finish on certain trim pieces more likely to crack than on other pieces?” Is there something inherent to their position in the car, or their design or construction that contributes to top coat failure in these pieces? With a large enough sampling, one can begin to see patterns develop in the wood trim of a Rolls-Royce.

A number of years ago, picnic tables under warranty,

were coming through our shop with such regularity that a deeper understanding of the table construction was necessary to properly address the problems manifest at the surface.

Cracks and fissures too numerous to count, populated the surfaces of too many tables. The most common fault lines emanated from the inserted wood handhold buried under the veneer. (Its attachment would prove to be a contributing factor to the problem.)

Merely refinishing the table was an exercise in wishful thinking. The next step would be to at-

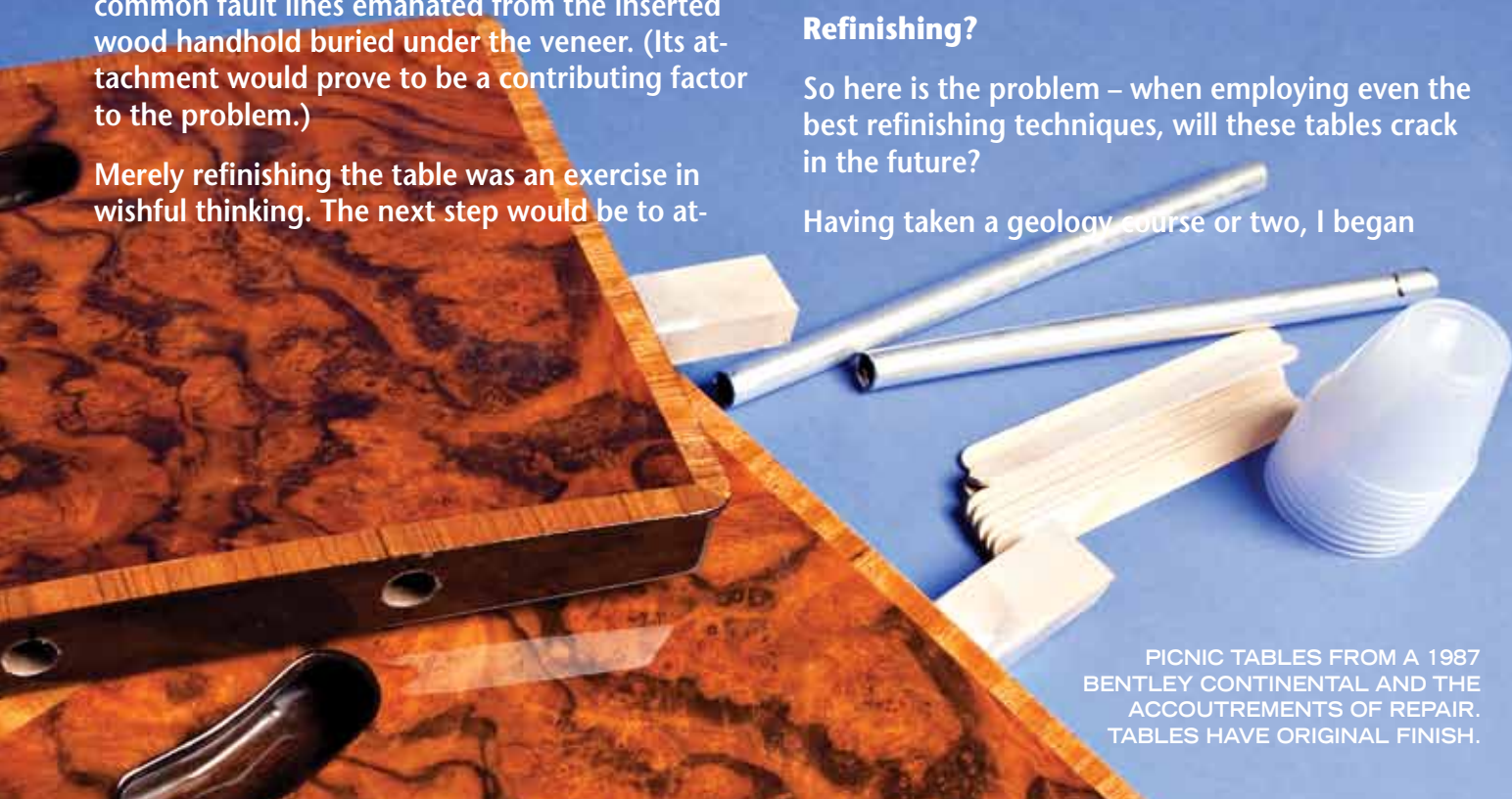
tempt to add glue to the puckered veneer, hoping it gets to the substrate and clamp it.

Over time there were examples of tables sent to us for "refinishing" under warranty; that displayed a sufficient discontinuity of strata as to be prime examples in Geology 101.

### Refinishing?

So here is the problem – when employing even the best refinishing techniques, will these tables crack in the future?

Having taken a geology course or two, I began



PICNIC TABLES FROM A 1987 BENTLEY CONTINENTAL AND THE ACCOUTREMENTS OF REPAIR. TABLES HAVE ORIGINAL FINISH.



AN EXTREME CASE OF CRAKED FINISH ON A PICNIC TABLE. NOTE THE "LINEAR" CRACK LINE BELOW THE HAND-HOLD.

AN EXTREME CASE OF CRAKED FINISH ON A PICNIC TABLE. NOTE THE "LINEAR" CRACK LINE BELOW THE HAND-HOLD.

to see the question in terms of uniformitarianism and catastrophism, two historic schools in geomorphology. If the cause of the cracks had been a one-time-event (catastrophism), then as long as one can avoid another occurrence of that event (e.g. an accident) the new finish would likely maintain its integrity.

However, picnic tables are the most pampered of all of the interior wood trim, save perhaps the vanities. They sit in the middle of a 5000 lb. rolling fortress and rarely if ever see any direct sun light.

What was occurring to the tables was global and not limited to a series of catastrophic events.

Uniformitarianism says the processes operating in the present are the same processes that operated in the past, and would be the processes that operate in the future.

In table speak this translates into; if you don't correct an underlying problem then the symptom is likely to reappear in the future. The problem was not the finish itself; it was merely an unsightly symptom of the real problem.

If we don't do something to "fix" the structure of the tables they will "act" as they have in the past and crack the new finish.

In some cases it was necessary to re-veneer the tables. This revealed a little more of the construction of a factory table. Below the decorative walnut burl veneer was a sub-ve-



THE RAZOR BLADES AND PENCIL SHOW SOME OF THE AREAS THAT HAD POOR ADHESION BETWEEN THE SUB-VENEER AND PLYWOOD.



neer of straight grain walnut.

Utilizing a sub-veneer is common practice in woodworking, and one that we employ for various operations in construction and repairs. A sub-veneer helps to isolate repairs and seams from the decorative walnut burl above it and provides a smooth and unbroken plenum on which to glue the final veneer. While the concept is sound, if there is a poorly glued layer in the veneer stack, the glue hierarchy is compromised similar to a "weakest link" scenario. This defect affects everything above it including the finish; because if the veneer or sub-veneer is moving then the finish is likely to crack.

Perhaps it was frustration or a fit of lunacy, but the time came to take a look inside one of these tables for further clues.

### Enter the band saw.

(I was able to acquire a used table on which to operate, lest one might think that we used a customer's table for this operation).

The exploratory surgery was revealing. The frame was solid walnut (similar to earlier tables) but the interior was mostly hollow, with thin plywood stringing, trying to support the space between the front and the back of the table. The front and back themselves were thin plywood, designed somewhat like a soundboard that moves and vibrates. Not the most stable sub-

strate for finish

As you can see from the open table, the interior of the tables was effectively hollow with 8 interior chambers.

This type of "semi-hollow" construction for picnic tables was new for Rolls-Royce with the introduction of the Silver Spur model. Prior to this, the tables of the Silver Clouds and early Silver Shadows



INSIDE OF A SPUR PICNIC TABLE WITH 8 CHAMBERS AND INSERTED HAND-HOLD.

were flat across the face from left to right. Their construction consisted of a plywood core framed in solid walnut lumber with a sub-veneer of straight grain walnut to which the burl and crossband were glued.

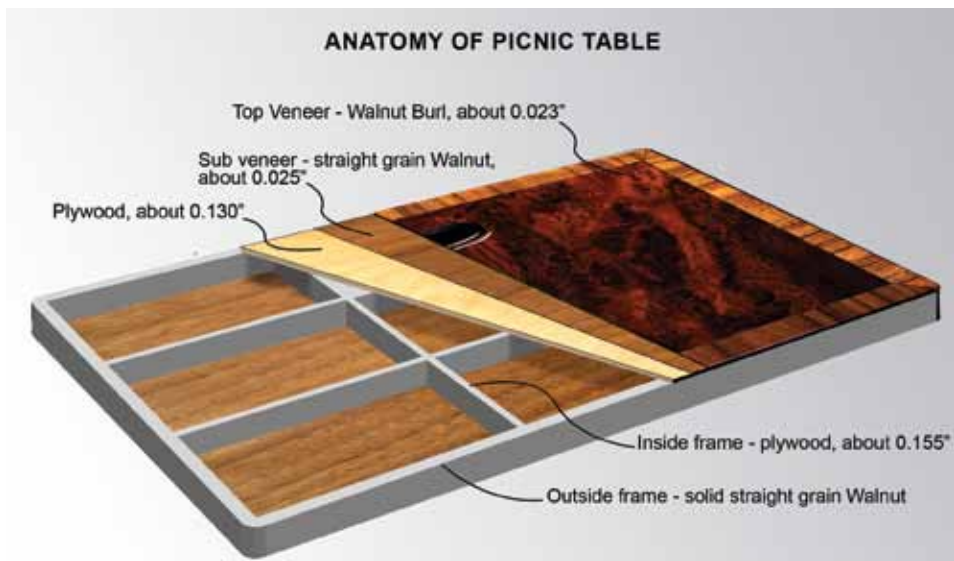
The Cloud seat backs were nearly flat across the back and so a flat picnic table fit the need. Styles

change and with the Silver Spur came a more contoured back to the front seats; and therefore, a need for the face of the picnic tables to follow the curvature of the seat back. Of course the inside of the table needed to be flat to balance your glass of Dom. The construction follows this styling and the table is thicker in the middle and thinner on the sides.

Stability is absolutely critical to the longevity of modern catalyzed finishes. There are many factors that can affect these high build topcoats but a stable base is essential. To minimize the movement in these tables and to improve the stability of the faces; we developed a core treatment program that involves a number of proprietary steps and materials to achieve these goals. The treatment anchors the various components of the interior into a single stable element.

Going a little further, injecting high density foam into the tables has the benefit of tying the skins together, and having them work effectively as a tension member

on the bottom side and a compression member on the top surface of the panel. The foam core will support the compression skin and keep it in plane and therefore add to the total stiffness of the table. The foam core also helps distribute the load more uniformly throughout the table, rather than relying on just the narrow partitions and



plied, and the part is placed under vacuum pressure for the duration.

First, this process saturates the pores of the veneer not with a finishing primer but with a premium industrial adhesive and, secondly, renews the all important bond of the veneer to the substrate. It's impossible to determine all of the minute areas where the veneer has weak or no adhesion to the substrate, so the beauty of this process is that it addresses the entire face of the tables (or other parts) under vacuum pressure.

frame to distribute the load and keep the faces in column.

The core stabilization treatment addresses the stability problems of the tables from the inside but the veneer faces still have the cracks and puckers to remedy.

For a time our solution to the veneer side of the tables was to treat each crack in the veneer that we could see with glue and clamps; then finish as usual. This seemed to be effective. But what of the prob-

lems one can't see at the time of repair? And, can you get glue into a puckered seam and under the veneer where it is needed?

Our solutions to problems continue to evolve until we are completely satisfied with all phases of an issue.

After working with many industrial adhesives, we started using a special version for wood reinforcement. The part is heated to an optimum temperature, the adhesive is ap-

Combined, these two procedures demonstrably improve the technical stability of the tables and help to improve the basic construction of the tables producing a more stable part for the final finish.



*Editor's Note— William Rau is our National Technical Advisor on Automotive Woodworking. His expertise was recently featured on the Science/Discovery Channel's series, **How Its Made.***

**THE END RESULT: SILVER SPUR PICNIC TABLES: REBUILD, NEW VENEER, FINISH**

