

## Classical Wood Restoration Process by Dave Wood

This is dedicated to all those who admire the elegance, history and performance characteristics of fine wood golf clubs from the game's classical period. For preservation of these beautiful instruments, I hope to take you through this step-by-step restoration process. Only simple tools are required. However, as with fine crafting, one's most important assets are internal; patience, a light touch and an eye for detail.

### Examination and planning

These 1954 MacGregor M85 Eye-O-Matic Driver and Two woods are in relatively good condition for restoration. The woods have never been worked on, or refinished. The original shafts are amazingly tight, considering the amount of play they've seen since their creation 57 years ago. The original inserts and sole plates have loosened and must be reset, for the heads to be made playable again.



### Removing and resetting soleplate and insert

The first step in the restoration process is to remove all loose parts and reset them securely. There are a few things to consider when removing the club heads original screws. These solid brass, Frearson head screws aren't readily available today and are difficult to find, so its necessary to remove and save with great care. Use appropriate drivers for screw slots to avoid stripping or breaking off the head. If one is advanced with a bench grinder, you can modify numbers 1 and 2 Philips drivers to work.



Saving the screws begins with cleaning out debris and old paint filling from the screw head with the tip of an exacto knife (fig 1).

This insures crisp edges and deep slots for getting a secure grip and avoid stripping or breakage (fig 2).

## Classical Wood Restoration Process by Dave Wood

Running a heat gun (low setting) over the surface of the part to be removed will soften the adhesives that bond the parts and screws into the club head.



If the screws are too tight, rather than taking a chance on stripping or breaking off the head, apply heat to the tip of an old screw driver with a propane torch and insert into the screw for a few seconds to transfer the heat. (fig 3)

This procedure will loosen even the most stubborn screws that have been installed with epoxy.

*Safety note: The edges of original screw heads are razor sharp and will cut your fingers. Completely turn-out with a screw driver until very loose.*

After removing the screws, make sure they are saved for being returned to exactly the same hole locations and orientations as original. (fig 4)



Next

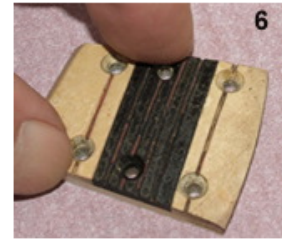
## Classical Wood Restoration Process by Dave Wood



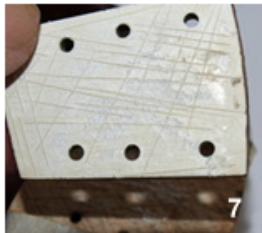
**5** After the face screws have been removed, wrap masking tape on the wood around the inserts perimeter, to protect against chipping or splintering.(fig 5)

Pull your exacto knife along the inside bottom seam of the insert cavity to detect the inserts looseness. To pry the insert from its cavity, form a slight outward wedge pressure, by pressing your exacto blade, or thin flathead screwdriver inside the bottom seam, while gently tapping the top of the insert downward with a tack hammer. (fig 5)

Once the insert has been removed, prepare it for resetting by cleaning off the old glue and debris from its internal sides. To do this, place a square of 180 grit sand paper on a firm flat surface, then slide the back of the insert across it in a level sanding/buffing action. Do the same with its side walls. The goal here is to simply clean up, not to change its dimensional form in anyway. (fig 6)



To create a solid adhesive bonding of the insert to the wood, score the cavity and back of the insert in a cross hatch pattern using the tip of your exacto knife. In this process, take care to stay inside and away from the edges of the exposed surfaces.



This method for abrading the two material surfaces will give the epoxy an excellent foundation for bonding strength. (fig 7)

Using a craft stick, apply a thin coating of slower curing epoxy to both the back of the insert and internal cavity.

With the insert set into the cavity a scoring line below center, push the insert flat to the cavity and upward (towards crown) to align flush to all scoring lines. This will create an epoxy seam around the entire insert. Reset all screws to their original orientations, (flush with surface) while the epoxy is setting up. Using a tooth pick and paper towel, clean up excess epoxy from the scoring lines, or screw slots, but leave a small epoxy seam around the inserts perimeter. (fig 8)



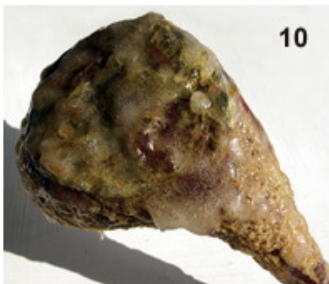
Prior to re-setting the soleplate be sure to make all necessary repairs such as tightening loose weights, filling holes, or making swingweight adjustments.



**9** Reset the plate in the same process as the insert, by cleaning and abrading the sole cavity and sanding the inside surface of the plate, before bonding with epoxy. (fig 9)

When resetting the soleplate, take extra care to not get any epoxy into the markings, or screw slots. Cover the toe

stamping area (Oil Hardened etc) with a strip of masking tape for additional protection against epoxy seepage into the stampings.



**10**

With all of the parts having been reset securely, this wood has a great foundation for which a beautiful and durable finish can now be produced. Its time to strip away the old finish using a paste formula stripper.

*Note: Be extra careful when handling chemical strippers. Follow all manufacturers warnings and safety precautions. Also, do not to get any of the stripper onto plastic parts such as the ferrule or cycloc inserts used by some manufacturers.*

Pour stripper into a shallow ceramic bowl, or plate. Use enough to completely coat the club head two times. With a 1" glue brush, apply the stripper onto the club head with thick and even strokes. Wait 10-15 minutes for the stripper to melt away the old finish. (fig 10)



## Classical Wood Restoration Process by Dave Wood

Following in the direction of the wood grain, scrape away the bulk of the dissolved finish with a craft stick. Wipe off the residue with heavy paper towels.

Repeat the stripping process with special focus on wood stampings, sole plate markings and scoring lines. This second layer of stripper will remove any of the coatings that remain, while reducing the woods stain saturation and dissolving the recessed paint fillings buried within the markings.

After removing the second layer of stripper, use a firm bristle toothbrush and water to scrub away all residual paint fillings that remain within the markings, scoring lines and wood stamping. For additional detail, use acetone and the toothbrush for a third level of stripping focused on the stamp cavities.

### Sole Area

With all finish removed from the wood, its time to begin the first stages of the sanding and polishing processes. Start with cleaning up the soleplate by using a fine file to level the screw heads and remove minor nicks and dents from the plate.

Once you are satisfied with the plates levelness and appearance, begin sanding from heel-to-toe using long strokes with 180 grit paper.

(I prefer black "wet-or-dry" sand papers)



This is to blend and create a uniform scratch pattern to the metal plate. Take care when sanding on the sole to avoid the wood stampings above the soleplate.

Filing and sanding the plate and sole area completely by hand allows for very precise control when preserving the depth and clarity of the stampings.

Tools for etching, preserving, or enhancing original stampings (fig 11) include; strong reading glasses, acetone, pencil, round file with tip ground to a soft point, vibrating engraver with tip modified into a small rounded point.



### Face Area

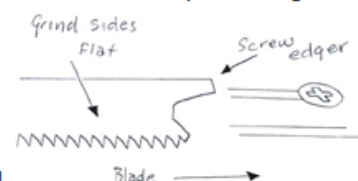
The chemical stripping process from the previous stage should have removed most of the paint filling from the scoring lines and screws (fiber inserts). For scoring line re-work and cleanup, make your own tool by cutting a fine tooth hack saw blade to 7", then grind its tooth width (sides) to 1/32".

12



Be patient, this detail work comes to life one groove at a time. With the club clamped securely in a vice, I begin working from the toe side, with a focus of keeping the blade carefully aligned to the scoring line.

You may note in the above drawing, the saw teeth on my scoring tool are oriented to cut the line with a pulling stroke. As with drawing, I find it much easier to maintain a smooth, straight line by pulling the pencil, or, in this case- the cutting edge, rather than pushing it.



Whenever filing and sanding on the face surface, always check your progress using radius gauges, to maintain even levelness of the radial surface (fig 12).

Using a fine file, begin leveling and blending the face screws to be flush with the inserts surface. Once this has been accomplished, smooth and blend the entire face surface and its perimeter areas with 220 grit sand paper.

## Classical Wood Restoration Process by Dave Wood

If you intend to alter, or modify the face geometry to new specifications, or to an optical preference, this is the appropriate time to make the shape adjustments.

With any physical alteration to the face, other adjustments and blends connected to the face profile, such as crown, top-line, toe and hosel, must be made to accommodate and compliment the clubs appearance.

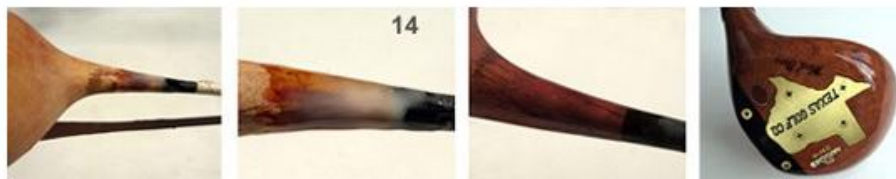
The remodeled 1953 MacGregor M43T (fig 13) is an example of facial alterations. It's face angle has been opened, while its progression, loft and horizontal bulge were reduced. Softening and blending the top-line and toe profiles were required to give the wood a balanced and refined look in the address position.



### Neck and Bore Alignment

Another example repair one may consider prior to final finishing, deals with the bore and hosel alignment on reshafted woods. Pictured in fig 14 is a rare Wood Bros DM16 Texan that had been originally built for a PGA Tour player. At some point, its original taper tip shaft had been replaced with a larger diameter parallel tip, causing for its bore to be enlarged to accommodate the new shaft.

During the reshafting process, probably in ferrule blending, some of the front and right side of the hosel had been ground away. This caused for the neck to appear bent, with the shaft on an odd upright angle. Even with its great looking face and profile, the odd alignment of the shaft to neck blend confuses the eye and sends a mixed visual. To correct this, build-up the distorted area of the neck with epoxy, then sculpt and re-blend to the correct look and taper.



The wood has now reached the point of final finishing. All club head details related to function and aesthetics have been accomplished. We'll now blend all the surfaces together harmoniously.



## Classical Wood Restoration Process by Dave Wood



15

Begin the first layer of finish sanding with 180 grit wet-or-dry paper. The level of abrasiveness in this paper will reduce scratches and blemishes on the woods surface.

Its not necessary to be aggressive with this sanding layer, its simply intended to smooth and blend by removing a thin layer of the woods surface skin.

As with all previous stages, take extra care when sanding around stampings in the wood.

For this second level of finish sanding, use 220 grit. The fine abrasive quality of this paper promotes smoothness and clarity to the woods grain. It is also ideal for blending and softening the transitions between surfaces, such as top-line, toe, profile and skirt edges.

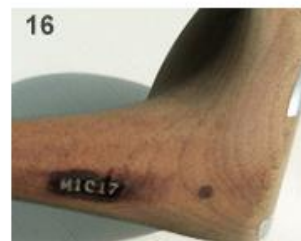
The photos in figure 15 show the wood completely sanded with 180 (smooth) and 220 (fine) papers.

The M85 sample club used to illustrate this process, had never been refinished. Its original factory code on the neck remained intact (fig 16).

Preserving the registration, (like a birth certificate) was a finishing goal for this classical driver. Extra care with this area had to be taken through all stages of preparation.

### Wood Stamp Detail

From the beginning of this guide, much attention has been paid to the careful preservation of the markings, as original identity and authenticity are vital details to a classical wood's interest value.

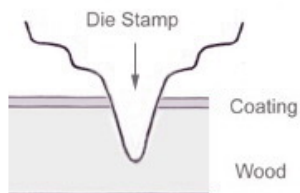


16

### Factory Process

When originally built, the wood stamps were pressed through the finish coating and filled with paint, just before its final coat was applied. The foil stamp registration marking on the back of the neck, was performed after the club had been completed and is only within the surface of the finish coating.

In original condition, markings will appear to be wider and deeper than they actually are, as the stamping die also expanded the surface of the finish coating. The illustration on the left, shows a cut-away view of the marking tool's v shape as it indents into the wood and leaves behind the cavity to be filled with paint.



The tip of the V is the deepest point in the marking and the top is the widest. When the finish coating is removed, the stamping will lose a fraction of its depth and width. Sanding the wood's surface further reduces the marking's volume and clarity.

Understanding the original marking process helps one to appreciate the need for taking care through all stages of restoration. As every collector must know, finding a prized classic model in mint original condition, is far from the norm. Most wood's have been refinished at least once since their manufacture. Hopefully, the previous craftsman handled the markings very well and the golf clubs new restoration, won't require much more than stripping paint from the stamps and detail etching with a fine metal point.

## Classical Wood Restoration Process by Dave Wood

**Pointillist Engraving** is a method my brother Charlie and I employed for restoring lost, or ghost markings in classic woods. This process takes a lot of time and requires very good lighting, strong reading/magnifying glasses and patience. (Practice this technique on a piece of scrap hardwood to get the feel for it, before attempting on your classic club project)

1. With the finish removed and fine sanded, wet the stamp area with water to create contrast and bring out ghost image details of the marking.
2. While area is damp, carefully trace over the visible image/marking details using a sharpened HB pencil.
3. Trace over your pencil marking with an ultra fine felt tip, or art marker.
4. Begin making tiny dot impressions within the inked marking with the point of your etching/engraving tool.
5. With a light touch, connect all the small dots together, section-by-section, using a vibrating engraving tool on its lowest setting.
6. Once it appears that most of your ink marking has disappeared, wet the engraved area to check your progress. Touch-up and blend markings with etching/engraving tool and softly smooth over the marking surface with 400-600 grit sandpaper.



**Pointillist** engraving technique used to create the sculptural effect in this Driver featuring "The Last Supper". I stained and tinted areas within the image with graphite powders to enhance its dramatic 3-D scene. Made for Bernhard Langer as a gift for his 1993 Master's win with a WB Texan driver. (Last Major Championship won with a persimmon Driver)

### Face Masking

Use clear fingernail polish to mask and define the shape of the entire face and insert top-line. This operation seals and protects the face against any absorption from the wood stain and grain filling processes that follow. (fig 17).

This water clear fluid is very viscous and applies smoothly. It dries quickly, is very inexpensive and comes with a small applicator brush for controlled detail. When defining the face shape, remember that scoring lines extend a little outside of its perimeter and into the stained areas of the heel and toe.

After you have painted on your face mask and it has dried, angle the coated surface about 30 degrees to a light source for reflection to see if you have missed any areas or spots. If so, touch-up those areas before applying stain to the wood. You do not want to have to remove stain from the defined face area, or insert.



### Stain and Tint

Some observations for consideration and contemplation, prior to staining the wood.

- A. The bare wood itself, with its natural light or dark colors, grain pattern and density, mineral marks or carbon deposits within the block.
- B. Previous stain saturation or paint colors.
- C. The desired contrast to other color/optical components, such as scoring, stampings and definition of the hitting area.

## Classical Wood Restoration Process by Dave Wood

Every block of wood is unique and possesses its own characteristics. In a set of three, we can stain each club identically and the set will appear familial. However, identical matching requires opacity, toners, or saturated dye's, especially with oil hardened woods. This is why MacGregor and other brands used opaque or glazed coatings to achieve production model uniformity.

If a player wants to see strong finish contrast between the profile and strike surface to perform a defined optical, utilitarian function, opaque, or very dark finishes work well. Think... Mr. Hogan.

The Cleveland TC15 driver pictured in fig. 18, is a wood I got during the 88' US Open. The model was Roger's take on a SS1W Velocitized. This club was built by Cleveland's John Gonzales for a Tour player who ordered the wood finished black for face alignment optics and strong profile definition.



18

My personal preference is to see the wood. But removing an opaque finish is a bit like Forrest Gump's box of chocolates, "You never know what your going to get"...

After stripping away the finish, I discovered the driver had a tight grain structure that ran into its face. The problem was that the wood had been dyed a deep black.

Sanding through its black stain layer was not an option.

As doing this would change its form and greatly reduce its weight.

The solution was to bleach the wood to significantly reduce the intensity of its saturated stain. Even with the bleaching process, the woods color remained dark with traces of black within its pores. A red walnut stain blended very well to maintain a high level of contrast, while enhancing the richness of its grain. Its final finish color reminds me of "Root Beer".

### Water Based Stain

There are a variety of stains available for tinting and coloring wood, from oil pigmented stains, to solvents and water based dyes. Each has its merits and can enhance the beauty and interest of wood. However, for golf club staining, I prefer to use water-soluble dyes. With these, you can tint the club head gradually and evenly with great clarity.

Dye stains penetrate deeply into the wood to enhance its grain, while producing rich and vibrant colors that are resistant to fade. The swatch color sample in fig 19, shows various color and shade possibilities.

Colors can be combined to achieve almost unlimited custom variations, without hiding the naturally unique features of the wood.

The dye can be applied through spraying, dipping, or wiping on with a soft cloth. Personally, I prefer to dip the club head into the stain and smooth afterward with a soft cloth. If the stained wood appears too dark, its saturation can be reduced with water, or with an ammonia window cleaner.

19





## Classical Wood Restoration Process by Dave Wood

Water dye mixtures should not be stored in metal containers... This gives new purpose for the large plastic, won-ton soup container, left-over from the Chinese take-out.

The dye mixture will not stain metals, making for easy soleplate clean-up. The water dyes can be purchased as pre-mixtures, or in ready to mix powder form (fig 20).



When blending your stain from the powder, carefully measure the amount of powders to water ratio and write it down. Just in case you need to repeat the formula.

### Filling the Wood Grain

The water based dye used to color the wood will have raised its grain and opened its tiny pores. The open grain will need to be filled-in with a paste grain filler to prime and level the surface, achieving the classically polished "Piano Finish" that most enthusiast admire. Paste grain fillers are produced in both waterborne and oil based.

They are available in natural and colored pigments that are compatible, complimentary, or contrasting, to the stain color for rendering the look you are trying to achieve in the woods surface.

Water soluble, or Oil based? When I was growing up, oil based solutions were widely available. Today, oil paste fillers are not as easy to locate. The water based variety are most common. Both accomplish the same goals. The water based cures very quickly, while oil based requires 24 hours. I still prefer the oil base. A little more linseed oil in the wood can't be a bad thing.

The viscosity of the filler should be somewhere between a heavy cream and peanut butter. To apply the paste filler, simply brush, or wipe completely into all of the stained wood areas, using a circular motion to completely fill in all of the tiny pores in the grain. Rather than brushing on, I wear a disposable latex glove, as I prefer to hand rub the paste into the grain pores.



The grain filler has a glossy sheen when its first applied. Wait a few minutes for the filler to dull and lose its sheen before wiping it totally away from the woods surface. Removal, wiping off and surface polishing, can be done using burlap, coarse rags, or shop towel's found at local auto parts, or big box hardware stores.

Handle with care. Do not touch the club head with bare hands, especially the sole plate, as the natural oils in your skin will leave a marks that will not be immediately visible, but will appear/tarnish when the coatings begin to cure.

Once you have wiped off all of the filler from the club head, the wood color will take on a somewhat dampened appearance. With your etching tool, remove the filler from the markings and stamp cavities, while in its soft condition. Use a lint free tack cloth to dust off the remnants.

Allow 24 hours for the filler to dry. Wipe away the face masking film with a paper towel wetted with acetone. Detail the top of the insert and face profile edging with your exact knife to remove any residue of stain or masking film.

The stained wood is now ready to receive its first clear coating.

### Opaque, Tone and Glaze surface coats

If the wood is to be finished with a solid opaque color, semi-transparent glaze, or special effect applied to the finish, apply this layer over the stain and filled surface prior to clear coating. Begin this process by masking off the soleplate and face areas, including the insert top-line, with a transparent, low-stick tape.

## Classical Wood Restoration Process by Dave Wood

Carefully trim the tape following the outlines of the plate and face profile using an exacto knife with a sharp tip, so as to cut through the masking film, but not into the underlying surface. I often use lacquers, acrylics and fixatives for these coats, depending on the desired cosmetic effect. Spray lightly around the masked areas to protect against building up a paint ridge. Once the coating has dried to the touch, carefully remove the mask. Clean up any glue residue from the surface of the plate, or face, leftover from the masking procedure.



Fancy combinations of multiple stain types, paints and surface effects, from opaque to transparent, are evident on this Wood Bros Driver made for a Hawaiian Governor. (fig 22)

### Clear Coatings

The transparent surface coating, which brings the finish to life and provides its Jewell like appearance, functions primarily as the woods protective shield. Bare wood is always in various stages of expansion and contraction. Its either absorbing moisture, or drying out. The surface coating seals and protects the wood from the elements.

Unlike wood furniture coatings, where aesthetics are as critical as function, with durability not being a vital concern... A wood golf club is an instrument whose primary function is to control the flight and shot characteristics of a golf ball. Its coatings must be very durable and flexible, protecting the surfaces that make high speed contact with the abrasiveness of the ground and ball impact. The coating must also sustain through a variety of environmental changes, from garage storage and automobile trunk, to wet grass etc.

**Sam Snead**, one of the greatest natural athletes to ever swing a golf club... Is said to have wept when his trusty old Wilson persimmon driver split in half. He grieved the loss of his gallant companion, of whom he depended on through many tension filled battles against The Hawk and Lord Byron.



Slammin Sammy's loss could have been prevented, if he'd paid closer attention and maintained his trusty mates- finish coatings.

**Sequential Destruction...** Deterioration of Snead's finish coating was caused by the friction and abrasion of continuous high-speed contact with the turf, sand, tee and ball, over a very prolonged period of time.

The decay of the clubs varnish coating, exposed its bare wood to the elements. This caused for expanding and contracting of the wood. The dynamic changes in the wood's structure, caused for adhesives to separate, forcing critical head components, such as internal weights, soleplate, insert and screws to loosen.

The detached parts within the wood produced vibrations and extreme stresses. Loose parts combined with high speed ball impact, resulted in the inevitable stress fractures and splitting of the wood head... *Adios mi amigo*



## Classical Wood Restoration Process by Dave Wood

### Durability

In the 1970's, with the exploding popularity of hard surlyn covered balls, golf club manufacturers began switching from lacquer and varnish compositions, to the more durable, mar resistant polyurethane and urethane solutions.

Technology always moves forward and today there are a wide variety of beautiful and durable clear coatings available, many compositions that are presently used in the golf industry... From two-component epoxies, urethanes, enamels and acrylics to oil, solvents and water base formulations.

For the purpose of this guide, lets look at formulations, which don't require mixing, or special spray equipment... Polyurethane coatings are readily available in aerosol cans at the consumer level, provide an outstanding finish surface for your wood.

### Oil vs. Water Based

Oil-based poly generally dries to a tougher and glossier finish than a water-based, and with fewer coats. However, there are some drawbacks. Oil-based polyurethane is more susceptible to ambering over time than its water-based counterpart. It will have more fumes and VOCs (volatile organic compounds), which may be a consideration if you have limited ventilation. With benign weather, spraying outdoors may be an option.

Water-based polyurethanes offer crystal clear transparency, great for white inserts and stampings. Though they are not quite as durable and may require more work to apply (sandpaper abraiding) to get an equivalent glossy finish to oil-based versions. There are some oil-modified, water-based products on the market that will work over oil stains and fillers.

Oil based poly can be applied over water based, as long as the water based has fully cured. This can be an attractive combination for woods with white inserts and markings. Water based coatings will not work over oil based.

### Dry Times

For some finishers, a potential advantage for using a water-based polyurethane is its very quick dry time. Another coat of water-based can be applied within a few hours, making it possible to add multiple coats within a single day. Oil-based polyurethane, depending on manufacturers formulation, may take one, or more days to apply additional coats. Re-coating too quickly may cause for wrinkling of the surface.

### Application

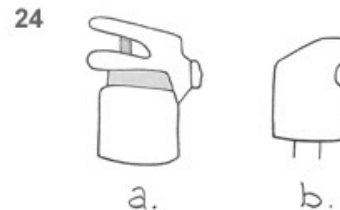
The best practice for coating golf clubs, is performed using a spray gun or aerosol spray can. The club head is a very small part made up of multiple, complex and curvilinear surfaces. Applying a smooth, thin and even coating, is a bit of a dancing action of the hands. With practice... touch, rotation and rhythm can be mastered using spray.

When purchasing an aerosol spray coating, take a close look at the spray head/nozzle. The drawing in fig 24 shows the two types of nozzles that are commonly provided with aerosol products.

Purchase only the aerosols with nozzle type **a** as this produces a superior fan, and is far more sensitive to the touch than type **b**.

### Aerosol Basics

There are a few basic rules to follow to achieve good results when applying finish coats using an aerosol spray.





## Classical Wood Restoration Process by Dave Wood

1. Aerosol spraying should be done in warm temperatures between 70-85° F. The can and piece being finished, should be stored in a warm room to insure good results. When taking a can from a cold area for use, run it under hot water (no more than 120° F.) for 5 to 10 minutes. If the aerosol can is too cold; A. The can pressure will be low and will not spray properly. B. The coating material will be too thick, causing it to not flow well on the surface.
2. Never spray in a drafty area, as air currents may deflect the spray and cause for over-spray, or contaminants in the air (dust) to mix in the coating.
3. Performance of aerosol coating depends on thorough mixing of the contents before and during use. Shake the can vigorously until its internal agitator balls have loosened.
4. Depress the spray head completely for proper atomization. Partially depressing the head can result in droplets forming (spitting) and ending up on the finish surface.
5. Hold spray can 10 to 12 inches from surface being coated. Holding the can too close to the finishing surface could trap the propellant, causing for bubbles to appear within the finish. Spraying from too long a distance, may cause for overspray, orange peel or sandpaper like texture, because solvents might evaporate before the complete spray hits the surface.
6. Begin spray stroke from off the piece, moving onto the area being finished. This eliminates overspray or puddling of the coating. All aerosol spraying calls for short bursts, stop at the end of each stroke. Never spray continuously.
7. As the club head is a part made up of multiple curved surfaces and radii. It is not always easy to see our spray progress, having a good light source for surface reflection is very important.

As with most spray finishes, its best to apply several thin light coats, as opposed to one heavy coat.

25



Since polyurethanes are hard and glossy, they will show surface imperfections, so starting with a smooth, clean surface is essential, as is abrading between each coat with 0000 steel wool for oil based and very fine 400-600 sandpaper for water base.

The surface abrasion smooths the surface, while providing each new coating with a very firm grip to the previous one. Pay careful attention when abrading the surface. Use a light touch. We want it to appear smooth and dull, without breaking through the coating to the previous layer.



### Paint Filling

Once the **second** clear coat has dried and the pores in the wood appear to be level and smooth, fill-in the stampings using acrylic paint. (Liquitex is a good brand and is available at most arts and crafts stores)

Rub the paint into the stamp cavities, then wipe the excess from the surface using a folded paper towel for firm flatness. Gently wipe across the stamp diagonally to its line depressions to avoid pulling paint out from the marking.

### Face Paint

Since the face area had not been filled with paste filler, the layers of clear coating with surface abrasion between the coats, will have filled the open grain after the **third** coat and should be ready to accept scoring line paint.



## Classical Wood Restoration Process by Dave Wood

### Final Coating

The paint filling is now complete and three coats have been applied. At this point, the finish is beginning to look very rich, but perhaps a little thin...

Before applying the **fourth** coating, if you detect any bumpiness to the surface, abrade and smooth it with 400-600 sandpaper, followed with 0000 steel wool for surface polishing (oil base coating only). Once this surface has dried, apply your fifth and perhaps- **final** clear coat.

### Final Details

**Graffiti** . . . You may want to leave your cleek mark, sign, or initials on the upper neck. Although we may not have created these classical woods, we've given them new purpose and life.



Perhaps generations from today, long after most metal clubs have been melted and recycled, or have found their way to the land fill... Many of these hand-made, Jewell like instruments, will still be speaking their poetry, and luring the discriminating eye.

I often use a metallic enamel paint pen to mark on the upper hosel. Within this area, the marking can be discretely covered over by the whipping thread.

### Whipping

The image on the left side of fig 29, illustrates the starting tie. To do this; apply a bead of clear fingernail polish around the top of the ferrule where it joins the shaft. Place about 5/8" of the whipping thread, vertically down the back of the ferrule.

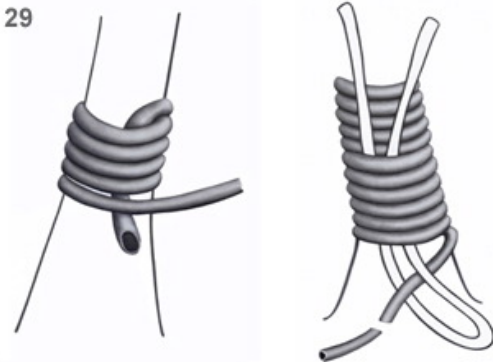
Maintain firm tension on the whipping thread but not aggressively so, while looping around the ferrule and over the vertical thread, about 7 rotations.

Trim off the extra vertical thread with nail clipper and continue looping for a few inches down the neck.

Tie off the base of the whipping by placing a separate loop of the thread down the neck. Then whip over the loop about 7 rotations. (right side of drawing)

Run the whipping thread through the loop. Pull the tie loop upward and below the overlapping loops. Trim the excess thread off with exacto knife.

29



### Finished woods

With the completion of the whipping, the club head restoration is complete. Its best to not play the clubs for at least a few weeks, as the coatings, although dry to the touch, are still in the curing process.

## Classical Wood Restoration Process by Dave Wood



*Fly-Me-To-The-Moon... And Let Me... Play Among The Stars*

## Workshop Graduation

Click on any thumbnail for slide show view





## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood





## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood





## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood





## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood



## Classical Wood Restoration Process by Dave Wood

