Car Dress Woodwork Repair and Finishing

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Introduction

Restoring car woodwork requires time and patience. It may involve short periods of work over many days. As an estimate, think of the time you think the job will take and multiply this by four.

It is assumed the reader has moderate to good handyman skills and that you have had some experience using those skills to prepare timber for finishing and applied a finish.

Stripping the old finish

Type of Stripper

Use a low to medium strength paint stripper from your local hardware shop. Do not use high strength automotive stripper. Follow the instructions on the packaging.

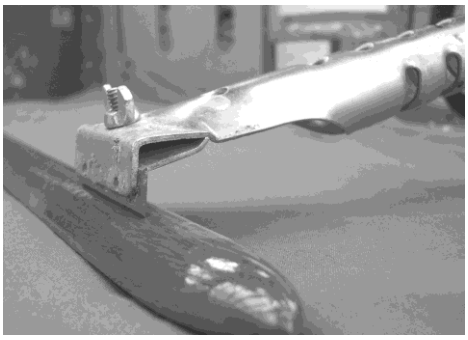
Caution: Paint stripper is a potent corrosive chemical. If exposed to the skin, the pain you feel is the stripper eating into your flesh. Wear protective gloves and ensure there is no possibility of the stripper being splattered into or wiped into your eyes. For safety sake wear eye protection.

Stripping tools

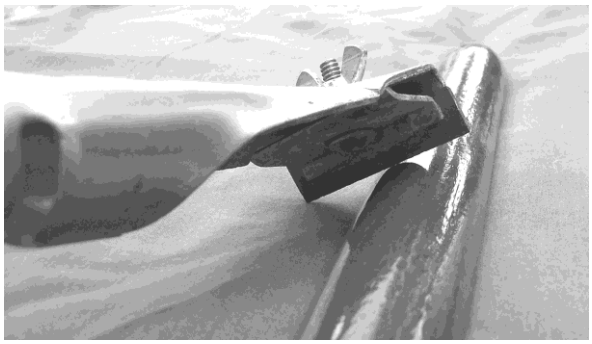
A scraper similar to the one pictured is very effective. Screwdrivers, putty knives, and scrapers with curved edges are also useful. Make sure the scraper is sharp.

Method of stripping

Let the paint stripper do the work. Apply many coats of stripper, gently scraping away blistered finish in between coats. Use a lighter downward pressure on veneered surfaces, chamfered surfaces and narrow edges. To avoid making flat marks on curved surfaces scrape over the curve and no along it as shown in the pictures.



Correct



Incorrect

When **ALL** of the old finish has been removed wash with jets of water and a scrub with a detergent mix followed again by jets of water. For safety sake wear eye protection. Remove excess water with an old chamois and allow it to dry.

At this point you can determine if the veneered surfaces require re-veneering. Inspect the edges of the veneered surface to see if the washing process has caused the top layer of veneer to separate from the base. If it has, gently slide a scalpel or small craft knife into the gap. Hopefully the knife will not penetrate very far, indicating that the damage is local and repairable. If the knife easily separates large areas of veneer from the base wood, re-veneering is required. Re-veneering is outside the scope of this article.

Repairing wood and veneer

Repairing splits

A split can be defined as a fine fracture line, usually along the grain. The timber is still in one piece and gentle pressure will close the split, allowing the surfaces to mate exactly. A glue with good wicking properties (e.g. super glue) is the ideal adhesive. To avoid the glue creeping on to the surface of the timber, apply a little at a time on the back surface. Clamp together while it is drying, taking care not to bruise the front surface with the clamp.

Repairing breaks

When damaged timber has separated into two pieces, perfect alignment of the surfaces cannot be guaranteed. Use bulky glue such as PVA wood glue or 5-minute-Araldite. Again take care not to contaminate the surface with glue. Clamp together while it is drying, taking care not to bruise the front surface with the clamp.

Repairing holes, chipping and scratches

Large dents/holes can be filled with coloured Plastibond. Before adding the hardener, colour with a small amount of brown oxide powder (available from the masonry section of your hardware store) into the Plastibond. Sand flat using a block and 240 grade (white: for paint)

sand paper. Different colours of oxide powder (Yellow, black) can be mixed together to achieve the desired colour.
Chips and scratches can be filled with water based wood putty. Small scratches can be filled by painting extra finish over the damage.

Repairing damaged veneer

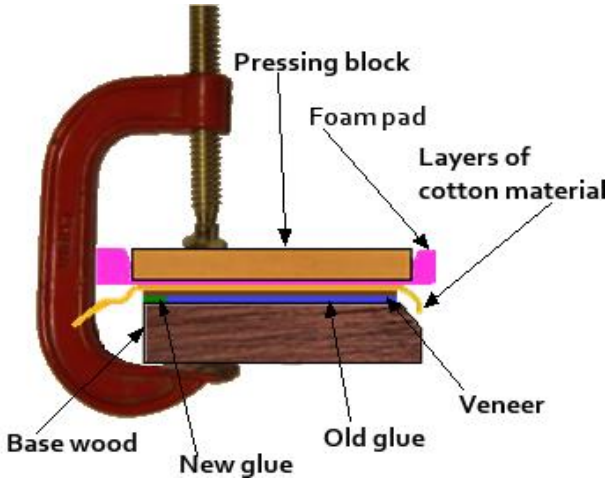
The washing process may expose small areas where veneer is about to break away from the base timber. Use a scalpel or craft knife to remove and fill with coloured Plastibond or wood putty. Sand gently with 240 grade (white: for paint) sand paper.

Repairing lifted veneer

Lifted edges and small chips in the veneer can be repaired by cutting or breaking it away from the base wood and filling with a coloured putty (see above for the method). Alternatively, lifted edges can be repaired as follows.

Older cars (typically before 1960) used horsehide glue to stick veneers to the wooden base. Many modern glues are not compatible with horsehide glue and cannot be used to re-glue veneer that has separated from its base.

Horsehide glue will reactivate with heat and moisture. If you are brave, try wetting under the lifted veneer. Cover the veneer with an oven bag followed by several layers of cotton cloth. Use an iron to heat the area of concern. After about 20 seconds replace the iron with a bock of wood and hold until things have cooled. Carefully peel away the oven bag barrier.

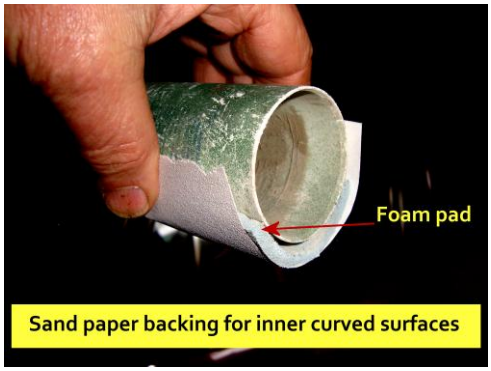


Alternately use a scalpel to scrape old glue from the gap formed by the lifted veneer. Work 5-minute-Araldite into the gap with a scalpel. If a slower drying time is required, use high strength Araldite. PVA wood glue is not recommended. Clamp as follows: Lay several layers of cotton cloth over the repair, followed by a foam pad, then a block of wood. Clamp together with a ‘G’ clamp; not too much pressure.

Preparing for finishing

Sanding un-veneered wood

Use 120 and 200 grade (yellow: for wood) sandpaper to remove excess filler, minor marks and defects. Use a cork or rubber block on flat surfaces. Take care near the edges ensuring that you do not to round them with too much pressure.
For curved surfaces use a soft sanding block. It can be purchased from your local automotive paint supplier.
For inside curved surfaces (Gauge & switch holes), use a piece of dowling, plastic pipe etc that is close to the diameter of the curve and faced with a 4mm foam pad as a backing for sandpaper. Carefully sand the surface of the curve, taking care not to round any straight edges.



Sanding veneered wood

If upon inspection you find a few small areas where the old finish remains, DO NOT be tempted to sand it off. Go back to section on paint stripping and spot the affected areas with paint stripper.

The purpose of sanding at this point is to flatten any furry areas of the old veneer caused by the washing process. Veneers are only about 1 mm thick. Once you rub through an edge the damage is done. If this occurs, your options are: to put up with it, re-veneer or use a lot of stain in the finish. Sand lightly with 240 grade (white: for paint) sandpaper using your fingers as a backing. Keep away from edges and corners.

Pore- filling

I do not recommend pore-filling and prefer to use more coats of clear finish instead. Filling the pores in timber reduces the amount of finish clear required. Depending on the colour chosen, it can change the look of the finished job.

Thinned water-based wood putty does this job well. Apply in a circular rubbing motion with an open weave cloth (hessian). When the filler is almost dry, remove excess with an open weave cloth rubbing along the grain. Sand lightly with 240 grade (white: for paint) sandpaper.

A sanding spray sealer can be used if desired, particularly if you intend to spray with a low bulk finish such as automotive acrylic clear.

Staining

How much stain to use

By this time in the process your timber will look lifeless and powdery. It is therefore tempting to heavily stain the timber to bring back some colour and life. In most cases staining is not required and one or two coats of clear finish will reveal the original timber full of colour, life and natural beauty.

It is best to under-stain and add a little to the clear finish later if required. Heavy staining will have its greatest effect on the lighter colours and will effectively hide the natural pattern of the timber.

Read the directions on the can before starting. Thin stain by reducing 1 part stain to 6 parts of the correct thinner. This will allow you to apply a wet, even spread of preparation, while not applying too much stain. Use a cotton cloth to apply the stain, ensuring it is rubbed well into the pores of the timber. The process can be repeated if a darker colour is required.

Types of stain

Traditional (spirit or dye) stain is preferred for most timbers used in cars. It hides the pattern in timber less than other types. Read the instructions on the can to determine the correct thinners.

Most turps based stains (Colourwood) are semi-transparent and are better for timbers with patches of dense non-absorbent grain.

Choice of colours for stain

Different colours of stain can be mixed to achieve the desired colour. Always test on a spare piece of wood. You will need to apply at least one clear coat to the test piece to determine how it will look.

Applying clear finish

Types of finish to use

The chosen finish needs to be able to survive in a car where the temperature inside is up to 50 degrees C and the windscreen magnifies one spot to around 100 degrees C. Remaining plastic and not becoming brittle under these conditions is also very important. UV resistance is an important consideration.

Beware aware of "super-duper" finishes recommended by a mate in the trade. They can have impressive specifications and work well in their chosen application. However, they have the potential to be unsuitable for automotive wood when many coats, e.g.10 to 20 of finish, are applied. In some circumstances this may make many of the publicised specifications redundant.

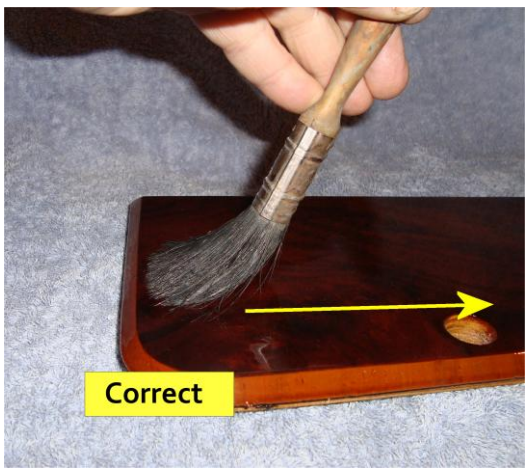
If you are brushing on the finish, polyurethane (Estapol) or a version that is UV resistant (Marine Polyurethane) can be bought in economical quantities and is very effective.

Automotive Acrylic Clear is an excellent spray finish. Seeing it is a low bulk product, many coats will be required.

Avoid equal parts, A and B, epoxy-type finishes as they dry extremely hard and have the potential to crack and make future servicing and restoration very difficult. A marine grade *Iso free two pack catalysed acrylic* finish is also a good spray product.

How to apply

If brushing use a high quality, soft bristle brush. Apply a generous quantity but not so much that will cause runs to develop. When the finish has been evenly spread over the surface, finish off with light overlapping strokes the full length of the timber.



If the job has been under-stained, a small amount of stain can be added to most clear finishes. Always mix a small test batch to evaluate compatibility and depth of colour. It should be applied after the second coat. Mix up a separate batch so you can go back to the un-coloured finish for the final coats. Apply another 3 clear coats before you start sanding back.

For both brushing and spraying, read the instructions on the can.

If spraying acrylic clear; apply five generous coats one every hour. Temperatures should be in the range of 20 to 30 degrees C. Allow to dry for two days, sand and repeat the process until the desired thickness is achieved.

Filling large depressions by spotting with an artist's brush is good economy for all types of finish. Make sure you brush out any air bubbles.

Sanding in-between coats

Always make sure the finish is completely dry before sanding. Sand off after the first 3 or 4 coats (about the 6th coat if a colour coat is applied) with 180 grade (white: for paint) sand paper. Take care not to sand through the colour coats. See the above section on **Sanding un-veneered wood** to determine the correct backing for sand paper.
Sand back subsequent coats with 240 grade (white: for paint) sand paper every second coat.

Control of dust

Reducing dust contamination during the finishing of your wood is important if you want a quality professional looking job. Thoroughly clean the area you will be working in, including: floors, bench tops, nearby shelves, tools to be used etc. Lining the bench top with news paper is good. Avoid wearing fluffy clothes. Wet the floor of the work area if it is practical to do so.

If using a paint brush, make sure it is thoroughly clean to start with. Avoid laying it on the bench by standing it in a tin of thinners. Remove excess thinners before dipping the brush into the finish when re-coating. Then dip the tip into the finish a number of times to disperse the remaining


Reducing dust contamination by raising items

thinners onto the finish. The tin of thinners may need to be changed a number of times during the finishing process. If the paint brush becomes contaminated with dust & other particles, it should be washed in water and detergent.

If spraying, raise the wooden items above the bench by laying them lengths of angle iron raised on blocks of wood or bricks etc. After cleaning the area, blow dust away with the compressor; brushing the items at the same time.

Final finishing

The fewer coats the better. For car dress woodwork the only reason 10-20 coats are used is to replicate the flat shiny surfaces employed typically by the British car industry.
After about the 10th coat most grain and minor dents should be gone. The trick now is to get a good non-streaky (or no orange peel if spraying) coat with minimum dust during coats 9 to 15. Use 400 grade (white: for paint) sand paper before the final coats. The backing block should be replaced by a foam pad.

Automotive acrylic clear will require sanding with 600 - 800 (black for wet) sand paper. Use a mild detergent solution to wash away the sanding slurry.

When a coat looks good, stop. This can be the last step if you choose.
Once fully dry you can rub with car polish (typically a swirl remover not a wax) to soften small traces of dust. Steel wool (000 grade) can be used to dull the gloss if the finish is too shiny. Polishing this surface will give a great effect.

Painting ends of timber

Many cars have exposed plywood on the edges and inside instrument cut-outs. Mix a small amount of brown oxide powder (available from the masonry section of your hardware store) into a small amount of clear finish. With a medium artist's brush, carefully apply two coats. For Estapol and two pack only, have a clean rag and some thinners handy to wipe away paint that gets where it should not be.
Alternatively, paint edges with brown acrylic. A test should be performed to ensure there is no reaction with the clear finish.

Good luck