

BACK GLASS REPAIR

Before anything clear coat the back glass with crystal clear acrylic to prevent any further damage while working on it.

First Stage

Replacing flaked or scratched image

The image to be replaced needs to be created in Photoshop so it can be printed onto the decal paper, the trick here is to get it to the exact size as the image on the glass. Take a photo of the image required of the backglass as best and as straight as you can then transfer it to Photoshop. then you need to trace the outline of the image on the backglass onto tracing paper, it can be done before scratching away the old paint but I found I got more accurate results once I remove the paint and traced that area.

What you have now is an outline of the tracing paper scanned into Photoshop at 300 DPI.

Using the traced image as your first layer in Photoshop add the photo you took in as another layer adjust the contrast to make the traced image outline stronger then reduce the opacity of the photo layer so you can see the traced outline layer through it, now you can adjust your image by using transforms to skew and resize the photo layer to meet the outline layer below.

Now you need to redraw the image completely which isn't easy with just the mouse, I used a Wacom Cintiq pen tablet which I found invaluable for this task, use whatever skills you have to create your image or have someone do it for you.

Whether you remove the paint before or after tracing it, it needs to be done using a hot knife so that the paint edges do not chip and shatter, I used an exacto knife and a cheap small gas blowtorch to heat the blade, I also found I went through a couple of blades during this step. Then you need to clean the cleared area of all paint, I used the small chisel blade exacto knife to do this, be careful not to accidentally chip paint you do not want removed, then get the cleared area as clean as possible.

Now back to the image you created in Photoshop, once you have your image drawn and sized right and happy with colours etc reverse it so it is mirrored on the screen then save it as a PDF from Photoshop using laser waterslide decal paper, print the image on a laser printer to a piece of transparent decal paper and another on a white backed decal paper, write on the back of each page in pencil white or transparent then make sure when you print you select actual size in the printer settings, Acrobat can default to best fit which is not suitable here.

Using crystal clear acrylic spray, spray both sheets (image side) with a thin coat of clear and let it set.

I also printed out the image on plain paper and used it to line up the decal by having it taped to the front side of the glass with the image showing through on the backside, also a light box setup works well here. I used two pieces of wood to set the glass on with a light underneath showing up through the printed paper image.

Cut out your transparent decal image to be applied and soak it in water for a minute then carefully place one end as close to where it needs to be at gradually slide the backing off and adjust accordingly, this is where it gets tricky as you need to squeegee out using a cloth on a credit card, I suggest practising this on a spare glass with test images first as this is where it sticks firm to the glass and no more movement can take place so you must make sure it is positioned perfectly at this point. Also this is where the coating of clear does its job by protecting the ink when squeegeeing.

Once it is dry and set you can give it another light spray with crystal clear acrylic and let it set, now you are ready to apply the second white backed image following the same procedure as before but being extra careful to keep it aligned especially at the squeegee out moment.

When all done let it dry overnight then a final coat of crystal-clear acrylic to lock it all in, note the decal might wrinkle slightly after being sprayed with the clear but it seems to settle once dried.

Key Points

- Clear backside of glass with acrylic before anything
- Coat images with crystal clear acrylic
- Use hot knife to score paint
- One image must be transparent and the other must be white backed
- Critical point is keeping images straight and aligned at the squeegee moment
- Save image as PDF and print at actual size from Acrobat, reverse images for printing

Second Stage

Replacing The Score Window

To do this I used a vinyl cutter to create a stencil, (using similar methods as the image replacement guide) the white area around the score window was traced onto tracing paper and scanned into Photoshop. Using the scanned outline, I created the score window outline and individual clear reel windows, then cut out two stencils on a vinyl cutter using low tack vinyl (stencil vinyl).

The trick here was to apply the clear reel window (where the numbers show) stickers to the front of the glass using the original white area as a guide for placement before scraping away paint on the other side, this then provided a way to position the reel windows stickers on the backside after scraping the paint away. Using the stencil outline I painted the black with a brush then masked it up and sprayed with white primer.

After this is done remove the stencil stickers and you should have a nice new score window. The key to achieving translucency is using white undercoat spray paint, it is basically a flat/matt white paint when it is applied in this situation it resembles the original with the same amount of light transfer. Do not use gloss enamel. Also make sure that you clear coat the backside first otherwise the stencil and tape will no doubt lift paint from your backglass. Do not spray clear over the score window section, mask this first by placing a piece of paper cut to shape over it and weight it down, then spray the clear to protect the back.

Key Points

Place squared window stickers on the front of the glass and use them as a guide to place stickers on the back after scraping away the paint.

Use White Undercoat Spray Paint to paint the white back in, only 2 light coats are required.

Spray the back with Crystal Clear Acrylic first to protect the artwork, but don't spray the score window.