

Digital Restoration from Start to Finish

Ctein



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Fig. 8-37 This negative has a tear at the bottom that makes it impossible to print conventionally without a lot of print retouching.

You can run this kind of mask and filter cycle repeatedly until you fill in the cracks. After the second or third pass, you'll have filtered all the small cracks and only have the remnants of the largest ones left. If you do this for too many cycles, you'll start to degrade the photograph because the mask doesn't perfectly distinguish between the photograph and the damage; the filtering will "leak" into the photograph a little bit with each pass. To prevent that, I use the History Brush to paint in the later filtering passes just where I want them. Since I've already eliminated 99% of the defects, this isn't too onerous and time consuming.

Paving Over Tears and Holes

Tears and small holes, while catastrophic to original photographs, are really not all that hard to repair. Clean tears, especially, produce damage that is localized and well defined. In principle, you can repair it with nothing more than judicious use of the Clone tool, but there are lots of ways to make the job go faster.

Figure 8-37 shows a negative with a tear along its lower edge. The first tool I used to attack it was Image Doctor's Smart Fill function. (Note: Image Doctor only works on 8-bit files.) I circled the crack with the Lasso tool (Figure 8-38) and brought up Image Doctor. Image Doctor's default settings filled in the tear with detail extracted from neighboring undamaged areas (Figure 8-39).

If you look closely, you'll see that Image Doctor didn't get it quite right in some places, but it did a good enough job that a little spot-cloning would wipe out those artifacts. In fact, the proper way to use Image

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TORN NEGATIVE



Fig. 8-38 This screenshot shows an enlargement of the tear in Figure 8-37. I've lassoed it for correction by Image Doctor.

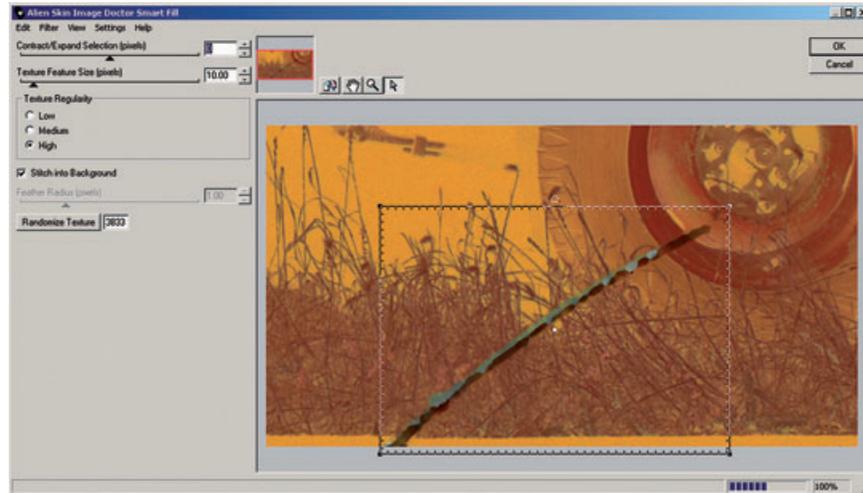
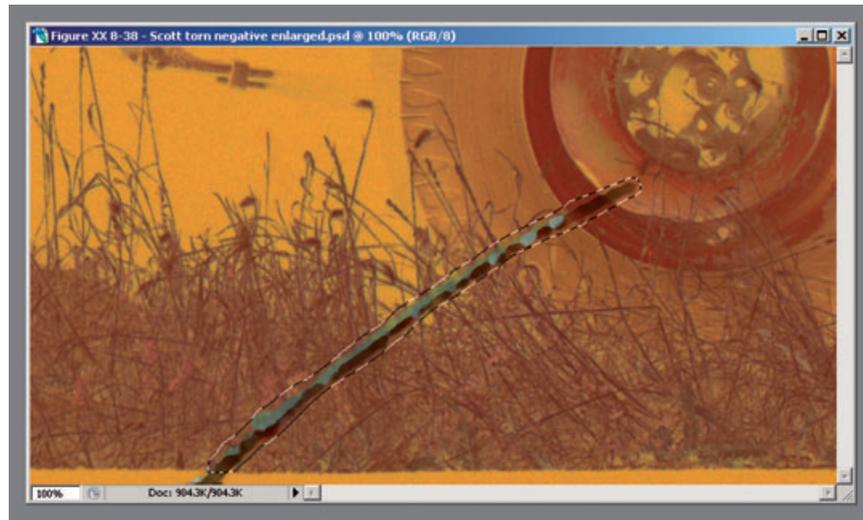


Fig. 8-39 Image Doctor's Smart Fill function samples the area around the selected crack (hatched rectangle in the top figure) and computes new detail to fill in the selection (bottom). A small amount of cloning will clean up the patches that Image Doctor got wrong.

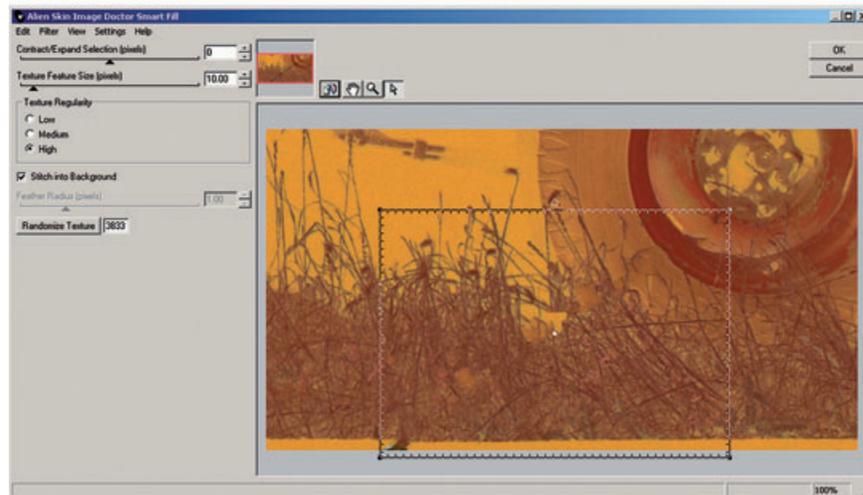




Fig. 8-40 I used Photoshop's Healing Brush to accomplish the repair in the top figure. I repaired the bottom figure with the Patch tool. Each tool has its strengths and weaknesses.

Doctor would've been to select different parts of the tear for individual correction, depending on the kind of background it was against. I did this with a single selection to show how powerful this filter is.

Some of Photoshop's built-in tools can do good jobs, too. This is not a place to use the Spot Healing Brush because it doesn't know which background textures to use to replace the tear. When there are lots of different nearby textures, as in this photograph, the brush will frequently guess wrong. The regular Healing Brush is a much better choice because you tell it what area to sample to fill in the tear. Picking a sample point adjacent to the tear worked well everywhere except along the tire, where the smooth curves were hard to reproduce. The result is shown in Figure 8-40, top.

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**HOW TO REPAIR A
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(continued)

The Patch tool will also work well on tears. Much like the Healing Brush, it lets you select what part of the photograph is going to be blended over the area you want to repair. Because the tool previews the results as you drag the selection around, it's easy to find which area and alignment work the best. For my taste, the Patch tool behaves a little too much like the Clone tool; it reproduces the sampled detail a bit too faithfully, and sharp-eyed viewers may notice repeated detail. You'll want to follow up with tools like the Clone tool and the Spot Healing Brush to "randomize" the results a bit, but the Patch tool doesn't leave too many artifacts to clean up (Figure 8-40, bottom).

Using the Spot Healing Brush

The Spot Healing Brush does come in handy when I'm trying to clean up isolated holes or spots. Take its name at face value; it works a lot better when you "dab" it on a bad spot than when you try to paint an extended line with it. Figure 8-41 shows a film scan of a photograph that has a bunch of chemical or water spots in the middle of it (enlargement, lower left). I removed 90% of them easily with the Spot Healing Brush.

Every so often the brush introduced an odd or inappropriate element into the photograph. Usually clicking again on the same spot or near its edge would get rid of the blemish the brush had introduced with the first click. Occasionally it made it worse. Don't sweat it; just plan on making a second pass with the cloning tool to manually repair the few blemishes that the brush couldn't take care of or created. Don't forget that you can make a history snapshot of the photo before you start in with the Spot Healing Brush, so you can use the History Brush to paint out any really bad mistakes the Spot Healing Brush makes.

Clearing the Debris***Eliminating Tarnish***

Old silver photographs are prone to tarnish and bronzing—shiny or iridescent metallic-looking spots on the surface of the print, especially in the shadows. Tarnish is a vexing problem in restoration because it casts a veil over everything, but with the right techniques it is very easy to fix.

Figure 8-42, left, shows a B&W photograph that's tarnishing out. There's a bluish sheen to the blacks, and much of the print has a low-contrast, milky haze over it. The reduced contrast was easy to fix with a good scan (middle photograph); I got rid of some of the yellow in the highlights and improved the density in the shadows. It didn't get rid of the tarnish, but it did make it clearer.

The way to attack tarnish is to isolate it with a mask. I applied the Hue/Saturation settings in Figure 8-43 to exaggerate the color of the