



Challenge Images: Retouching

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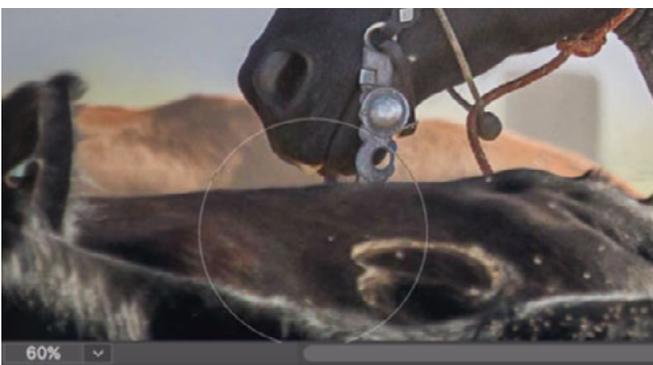
In this lesson, we're going to work on a couple of challenge images sent in by Masters Academy members and we'll use them to learn some retouching skills.

The first image features a man on a horse, herding some cows. The bottom of the horse's mouth is somewhat intersecting with the back of a cow, and it would look better if there were some separation there. That's the first retouch job we're going to tackle.



In this image, we want to create some separation between the horse's mouth and the back of the cow. We'll use the Liquify filter to achieve this,

We're going to use the Liquify filter to move the cow's back away from the horse's mouth, but before we use this filter, we're going to convert the image layer into a smart object. By doing this, we will be able to go back at any later time and make changes to the filter settings. To convert a layer into a smart object, we'll go to the Filter menu and choose Convert for Smart Filters.



The Forward Warp Tool (in the Liquify Filter) is used to nudge the cow's back downward.

We'll now click on the Filter menu and choose Liquify. The large Liquify window will take over the interface and a Tool-bar will be located on the left side of the image window. The top-most tool is the Forward Warp Tool and it should be active by default. We'll use this tool to click and drag on the image to move specific areas. We want to move the cow's back

downward, so we'll position the round cursor over the line of the back and use the left and right bracket keys ([]) to tweak the size of the tool tip. We'll click and drag downward, moving the content within the tool tip down. Now the horse's mouth is moving down too, and that's not the result we want. This is ok, however, because we will fix that later.

We can start to fix the horse's mouth by using the Reconstruct Tool (the second tool in the Tool Bar on the left). This tool will attempt to bring the image back to normal in the specific areas that we paint. We'll use a small brush in order to be very precise and then carefully paint over the bottom part of the horse's mouth where it intersects with the cow. We need to be careful that we don't use this too extensively because it will eventually start to undo the change that we wanted, which is the cow's back moving down. We'll use the Reconstruct Tool as much as is practical and then move on to retouch the gap between the horse and the cow.



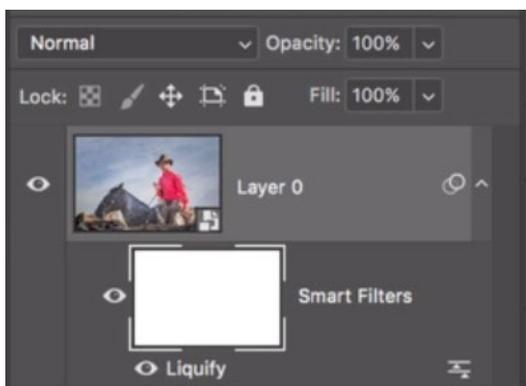
The Reconstruct Tool is being used to undo the liquify effect in very specific areas. We're painting over the bottom of the horse's mouth in an attempt to remove any unwanted distortion there.

The Liquify filter also includes another option for keeping one area of the image in place while warping the areas around it. The Freeze Mask Tool can be found in the Tool Bar on the left side of the interface and when we activate this tool, we can paint on the image in the areas we want to stay in place. We'll be painting a red overlay onto the image, which gives us a visual representation of what areas will remain frozen. We'll use the Freeze



The Freeze Mask Tool will allow us to paint a red overlay onto the image. The areas covered by this overlay will remain unchanged when we use the other Liquify tools.

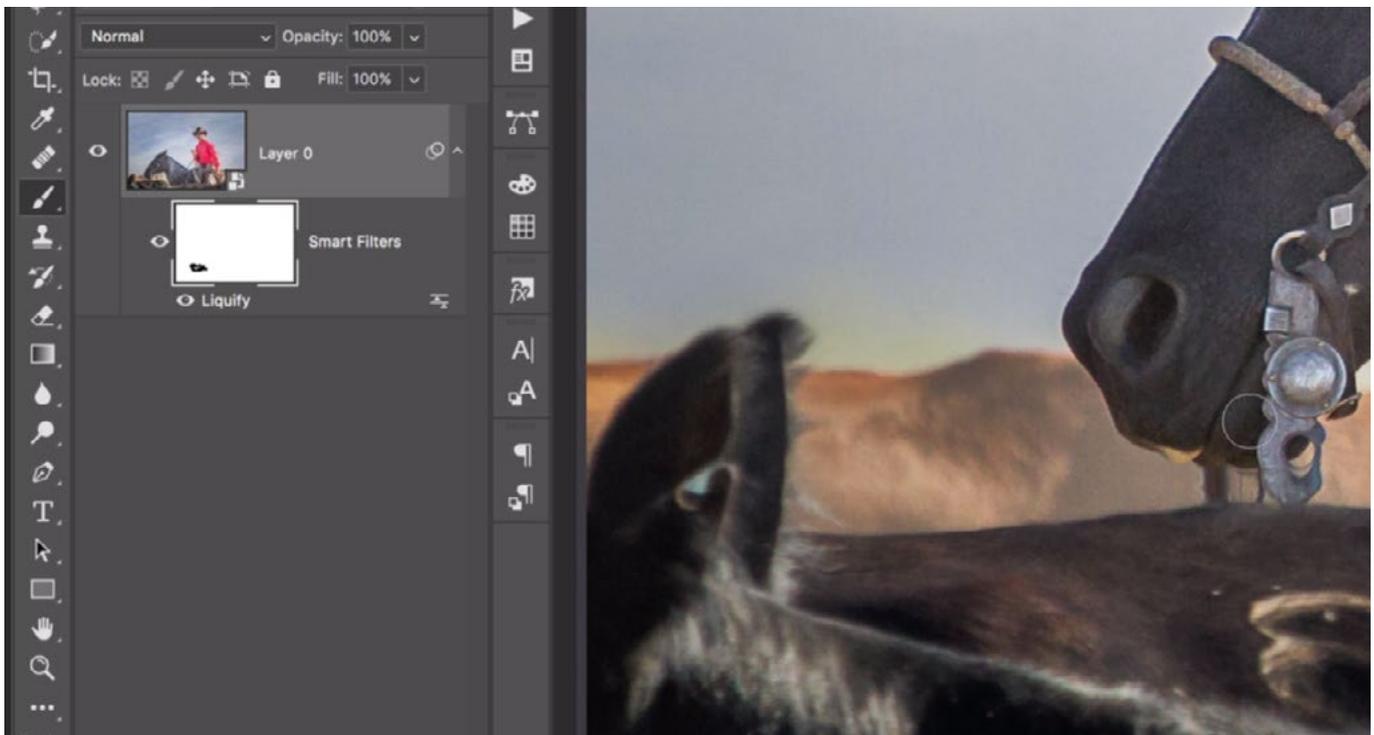
Mask Tool to paint over the muzzle of the horse. If we accidentally paint in a place that we didn't want frozen, we can use the Thaw Mask Tool (directly below the Freeze Mask Tool) to paint away the red overlay. Any area not covered by the red overlay will be able to be warped using the Liquify tools.



The Liquify smart filter appears below the image layer in the Layers panel.

We'll click the OK button on the right side of the Liquify dialog in order to go back to the main Photoshop interface. In the Layers panel, you can see that Liquify Filter is listed as a smart filter below the smart object image layer. We can click the eyeball icon to the left of the filter name in order to toggle the visibility of the liquify effect. We can also paint with black on the layer mask attached to the smart filter in order to hide the liquify effect in specific areas.

The horse's mouth was merging with the cow's back in the original image, so the warping effect created some distortion on the bottom part of the mouth and the metal bit that is descending from the horse's mouth. We want to get that area back to normal and we'll do that by painting on the layer mask for the Liquify filter. We'll make sure that the mask is active and then we'll use the Brush Tool, with the foreground color set to black, to carefully paint over the distorted area. This will make it so the effect created by the Liquify filter (that's causing the distortion) will be hidden from view in the area where the mask is black. We'll paint as much as we can without re-introducing part of the cow's back into the image.



Here, we are painting on the layer mask attached to the Liquify smart filter. We're painting with black to remove the warping effect from the horse's mouth.

Now that the circular metal piece is intact, there is just a small amount of distorted artifact between the horse's mouth and the cow's back. We'll do some retouch work to clean this area up. The retouching tools can not be used on a smart object because a smart object's contents is protected from being changed. We will instead do the retouch work on an empty layer. We'll click on the New Layer icon at the bottom of the Layers panel to place a new, empty layer at the top of the layer stack. Then, we'll activate the Clone Stamp Tool and make sure that the Sample menu (in the Options Bar) is set to Current & Below. Using a small, semi-soft brush, we'll hold down the Option key (Alt on Win) and click on a clean area near the distorted area to set the cloning source content. Then, we'll release the Option key and carefully paint over the distorted area, replacing it with the clone source content. We'll need to re-sample an area along the cow's back in order to cleanly clone the area where the cow's back used to intersect with the horse's mouth.



The use of the Liquify filter resulted in some distortion on the bottom edge of the horse's mouth and the metal bit.

Note that if the cloned content is rotated or scaled improperly, it's because there are some settings dialed in within the Clone Source panel. To fix this, simply click on the little U-turn icon within the Clone Source panel to set all of the settings back to default.



The Clone Stamp Tool is being used to reconstruct the metal bit.

We'll continue to use the Clone Stamp Tool to reconstruct the area beneath the horse's mouth. It's hard to tell what the metal bit originally looked like because it was partially obstructed, so we'll need to take a guess at what it looked like and then clone from other areas of the bit in order to reconstruct it.

After using the Clone Stamp Tool, it's common to see repeating shapes/textures in the retouch area. We'll use Spot Healing Brush to remove any repeated shapes so that it's not obvious that we did any retouching.

The next challenge image is a scan of an old photo that had been folded in half for fifty years, leaving a drastic crease right through the middle. We'll start to fix the problem by tackling the easy areas first. These are the areas where the crease covers the simple backdrop and not the woman's face.

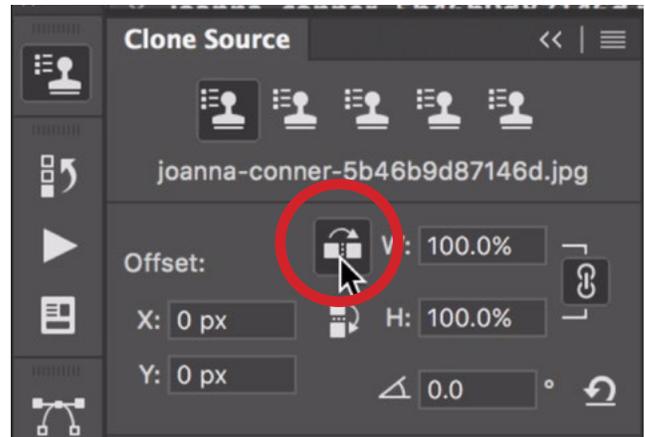


TOP: The Clone Stamp Tool was used to separate the crease from the woman's face and the edge of the photo. **MIDDLE:** The Spot Healing Brush is being used to paint over the crease. **BOTTOM:** The result of the Spot Healing Brush.

We'll start by using the Clone Stamp Tool to create some separation between the problem area and the face. We want to surround the problem area (the crease) with the proper brightness and color so that we can use the healing tools to quickly remove the crease. It can also be useful to create a gap between the crease and the edge of the photograph. We'll then activate the Spot Healing Brush and make sure that we're using a hard-edged brush that is sized just slightly larger than the width of the crease. We'll paint over the crease, making sure to cover it entirely. When we release the mouse button, the tool will fill in the area based on the surrounding content. In the video example, it did a pretty good job, but you may have to make more than one pass with the Spot Healing Brush in order to completely remove an unwanted object.

We can repeat the process with the seam on the other side of the woman's face, or we can use the Healing Brush in order to copy from the right side of the photograph and paste onto the left side, hiding the crease. With the Healing Brush active, we'll make sure that we're using a hard-edged brush, we'll hold down the Option key (Alt on Win) and click on the area we want to copy, which is the far right edge of the photograph. Then we'll use the tool to paint over the seam on the left side of the image, but we'll need to flip the source content horizontally. To do that, we'll open the Clone Source panel and click on the flip horizontal icon. Now, we can use the Healing Brush to line up the edge and then paint in toward the center, covering up the crease. We'll also use this brush to paint over some of the dirt spots on the left side of the image.

At this point, we can use the Spot Healing Brush to click on some of the other unwanted age spots in the image, in an attempt to remove them. We'll just need to be careful in the areas where the spots overlap the seams in the woman's clothing.



TOP: After using the Healing Brush to sample from the right edge of the photo, we are clicking the “flip horizontal” icon so we can paste the content onto the left side of the image. **MIDDLE:** We're lining up the source content with the retouch area. **BOTTOM:** The result of the Healing Brush.

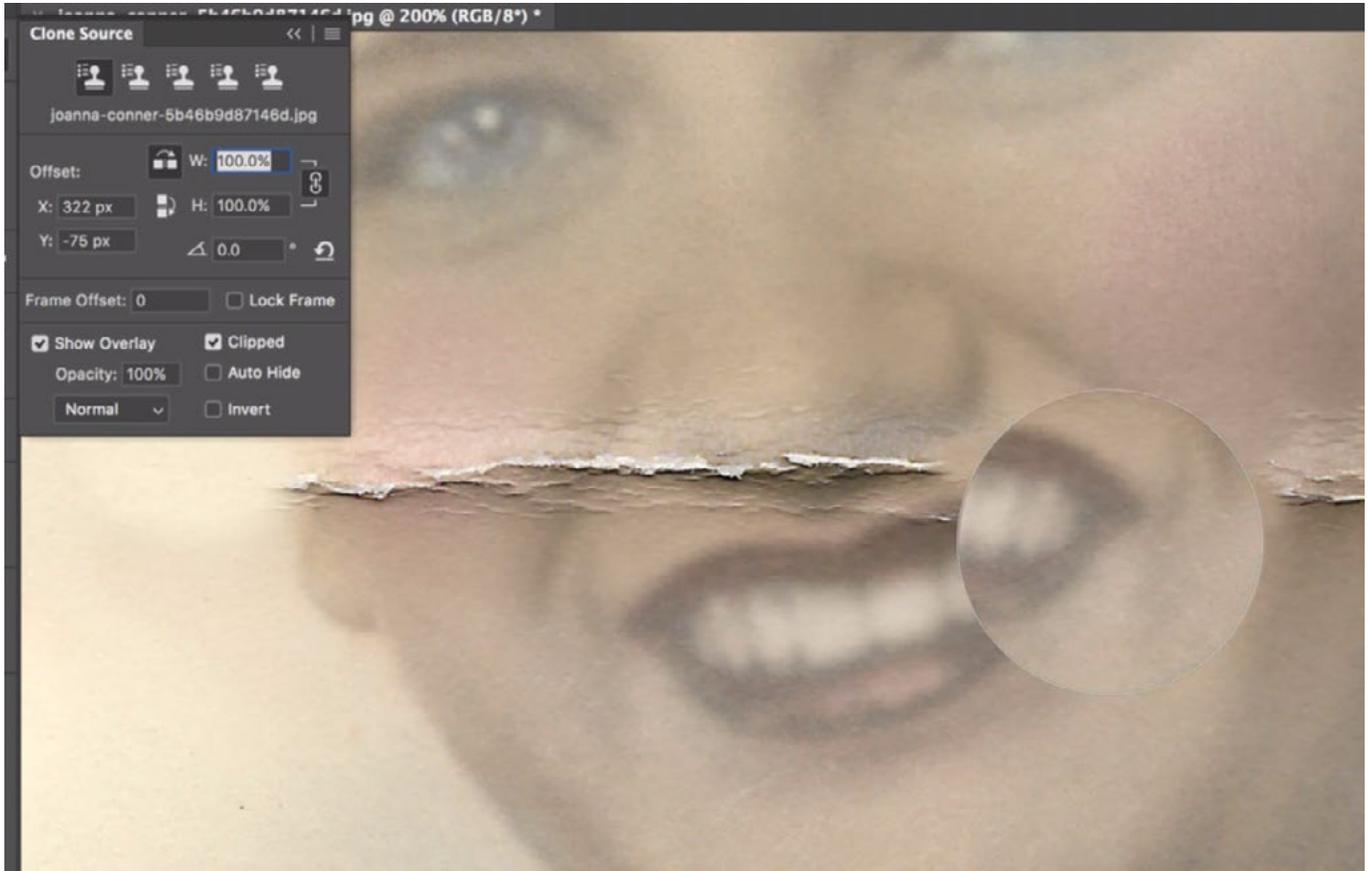
Now let's tackle the hard part: the crease over the woman's face. The Clone Source panel will help us a lot here because it will allow us to scale and rotate things. In the Clone Source panel, we'll click the reset button in order to set everything in the panel back to its default setting. We'll start with the mouth, zooming in on that area. We need to surround the area with content of the proper brightness and color so that we can use one of the healing tools to remove the crease. Any tool with the word "healing" is going to precisely try to match the surroundings.

We'll use the Clone Stamp Tool to sample areas near the mouth and paint over the parts of the crease that go over the skin, but not the mouth. This includes her cheek and the area just above her upper lip. Note that you can always lower the opacity of the Clone Stamp Tool if you find the effect is not subtle enough. The Opacity setting can be found in the Options Bar above the main image window.



The Clone Stamp Tool is being used to remove the parts of the crease surrounding the mouth.

Next, we'll try to fix the lip area. It's mainly the right side of her top lip that has the crease going over it so we'll sample from the left side of her top lip in order to paste the content onto the right side. We'll activate the Healing Brush and use a small brush so it's easier to tell where we're copying from. We'll hold down the Option key (Alt on Win) and click on the left corner of the mouth. In order to use this sampled content on the other side, we'll need to flip it horizontally. Within the Clone Source panel, we'll click on the flip horizontal icon and we'll be able to see the preview within the circular tool tip. We'll position the tool tip over the right side of the mouth and then click once to establish alignment. We can then use the Undo command (Command+Z; Ctrl+Z). This simply makes the tool aware of the relationship between the sampled area and the target area without actually applying any retouching yet. We'll now make the brush larger so that we can see how things are lining up and we'll use the settings in the Clone Source panel in order to scale/rotate the sampled content so that it lines up perfectly.



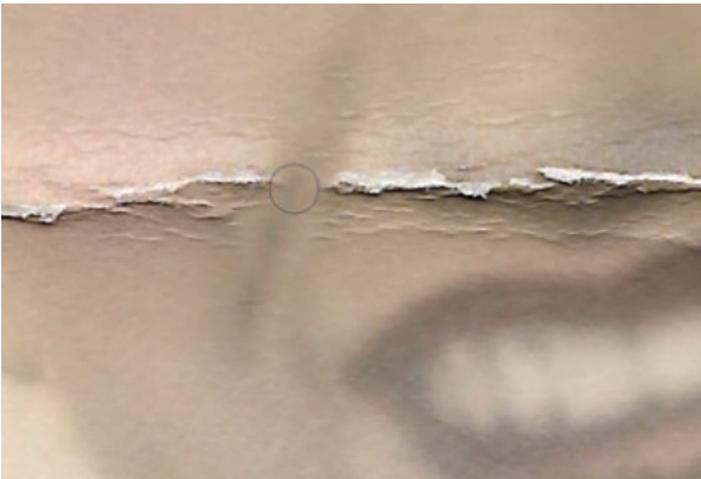
Using the Clone Stamp Tool, we sampled from the left side of the mouth and are using the Clone Source Panel settings to flip, scale and rotate the source content so it aligns with the right side of the mouth.

We need to rotate the sampled content a little so that the angle of the mouth is correct. To rotate the sampled content, hold down Shift+Option (Shift+Alt on Win) and then use the greater-than and less-than keys (> <) to rotate right and left.

It also looks like the sampled content is too large. To change the scale of the sampled area, hold down Shift+Option (Shift+Alt on Win) and then use the left and right bracket keys ([]) to make the source content smaller or larger. We'll make it a little smaller. We can now make the brush smaller again (so that we can paint with more precision) and paint over the right side of the mouth, starting in the right corner and painting inward as far as is practical. This will paint the sampled content from the left side of the mouth over the right side of the mouth, hiding the crease.



The Clone Stamp Tool is being used to paint the source content (the left side of the mouth) on the right side of the mouth, hiding the paper crease.



The Clone Stamp Tool is being used sample from clean areas of the face and paint over the paper crease. The brush is set to a lower opacity to prevent harsh transitions.

The mouth is starting to look pretty good, so we'll move on to the next area: the nose. We'll use the Clone Stamp Tool to sample from clean areas of the skin crease on the left side of the nose and clone over the areas of the crease covered by the paper fold. We'll also use the Clone Stamp Tool to remove the paper crease over the left cheek, sampling from areas of the cheek just above and below the crease. We're using the Clone Stamp Tool at a lower opacity (40%) so that the effect is gradual and we don't get any hard transitions into the area we're cloning.

We'll then use the Spot Healing Brush, set to a very small brush, to paint over the most drastic areas of the paper crease that run along the bottom of the nose. This will not fix the nose, but it will clean things up a bit and serve as a good starting point.



The Spot Healing Brush is being used to carefully clean up the most drastic parts of the paper crease over the nose. A very small brush is being used to maintain precision.

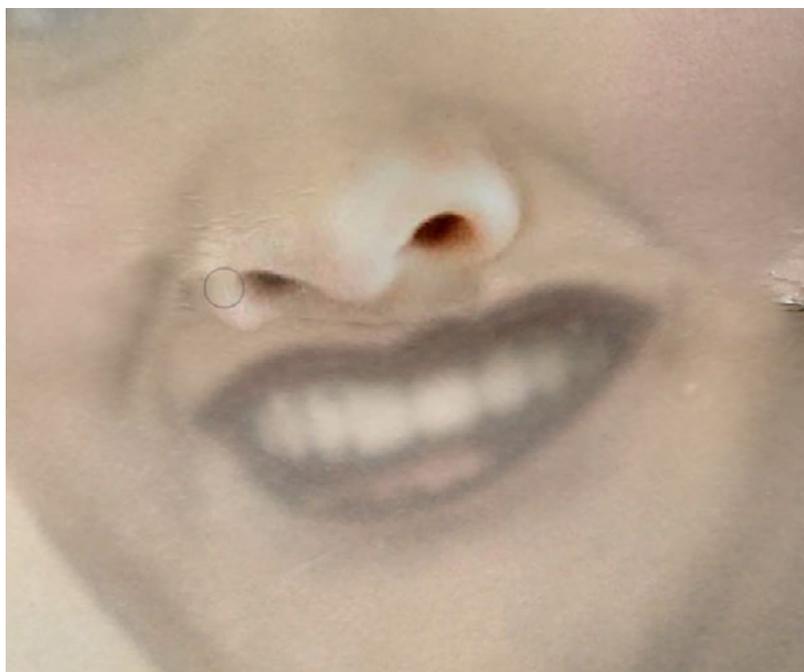
The bottom of the nose is the biggest challenge in this image because we don't have anything to copy from in order to recreate it. Normally, I would try to find another picture of the person so that I can see what their nose looks like. In the video example, however, I don't have another photo of the person, and I don't know her personally. I will instead find some photos of other people, looking closely at the nose tips to see if I might find a nose that looks like it might be similar to the one we're trying to retouch. I'll open that second image in a separate Photoshop window and then use the Healing Brush to sample from the tip of other nose. (To sample, we hold down the Option key [Alt on Win] and click on the area we want to copy.) We can now switch back to the document we're retouching and the Healing Brush will still be displaying the sampled content from the other image. We'll click on the tip of the nose just to establish the correct alignment between images. Then we'll use the undo command (Command+Z; Ctrl+Z).



Left: The Healing Brush is being used to sample a nose from a different image in a separate Photoshop document. Right: The sampled content is being lined up with the nose on the image we're retouching.

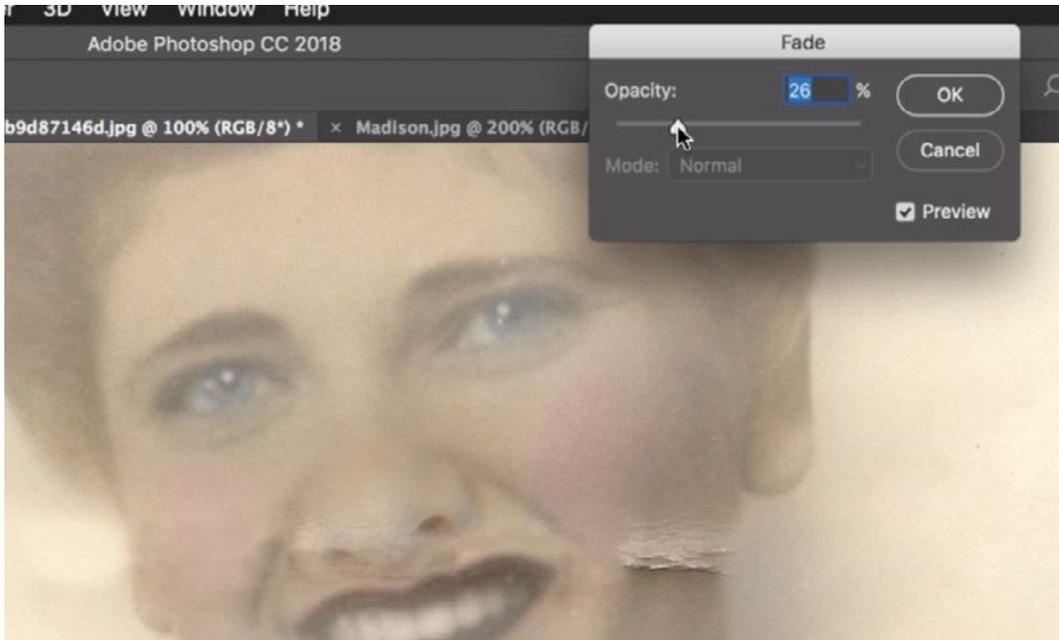
We'll now make the brush much bigger so that we can see how the nose we sampled lines up with the image we're retouching. The nose appears to be too small, so we'll need to scale it up and rotate it a bit. We'll hold down the Shift+Option keys (Shift+Alt on Win) while using the bracket keys to scale the content or the greater-than and less-than keys to rotate the content. We're trying to make the nose we sampled match up with the face we're retouching.

Once things appear to be scaled and lined up as closely as possible, we'll switch back to a much smaller brush so that we have more precision when painting. We will carefully start to paint with the Healing Brush, making sure to cover just the part of the nose that we need to fill in, making sure to include the brightness and texture from the areas immediately surrounding the retouch area. This will educate the Healing Brush so it can use the right brightness and texture when filling in the area.



The Healing Brush is being used to paint the sample content (the other nose) onto the part of the nose that was covered by the paper crease.

When we release the mouse button, we can see that there is a bit too much contrast in the retouch area. To tone this down, we'll use the Fade command, which will take the very last adjustment you made and allow you to fade the effect using a slider. We'll go to the Edit menu and choose Fade. In the Fade dialog box, we'll use the Opacity slider to tone down the effect of the Healing Brush. Next, we'll use the Spot Healing Brush to further clean up the area around the tip of the nose. We'll use a very tiny brush size so that we can be as precise as possible.



The Fade command is being used to tone down the effect of the Healing Brush on the nose. This makes the “nose replacement” look more natural.

Color adjustments While working on a retouch job like this, you might find that you’ll need to adjust the color. In our example, copying the nose from one image to another resulted in a somewhat greenish color on the nose that did not match the rest of the image. The following is an easy way to get rid of a color issue like this. We’ll create a new, empty layer above the image layer and we’ll activate the Brush Tool. With the Brush Tool active, we’ll hold down the Option key (Alt on Win) to temporarily access the Eyedropper Tool. You’ll see the cursor change from the brush tip to the eyedropper. We’ll



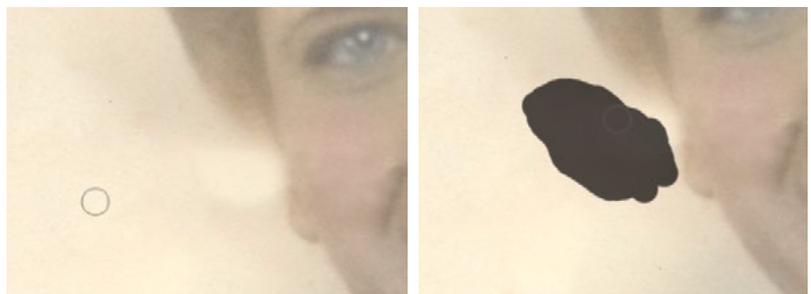
The Brush Tool is being used to paint the color sampled from the skin over the tip of the nose.

We’ll use the Eyedropper Tool to click on an area that contains the color we WANT. We’ll click on a clean skin tone somewhere next to her nose. This will set the foreground color to the hue we just sampled. We’ll release the Option key to return to the regular Brush Tool. We’ll use a soft brush and paint over the part of the nose that contained the unwanted color cast. The Brush Tool

will be painting with the foreground color, which is the color we just sampled. This will just blatantly add paint, which won't look good at first. To make this color change look good, we'll need to change the blending mode of this layer to Color.

Final retouch tweaks We now have most of the major problem areas fixed, so we'll scan the image for other tweaks that need to be made. There is still a small amount of paper crease on the right side of the woman's face. Because it's on her cheek, an area with little detail, we can use the Spot Healing Brush to remove it and then the Clone Stamp Tool (set at a lower opacity) to blend in any abrupt color transitions.

There is an overly bright spot on the backdrop to the left of the woman's head and we will use the Spot Healing Brush to remove that as well. When removing a spot like this, make sure to completely cover the spot and make sure that your painting extends just a small amount into the surrounding

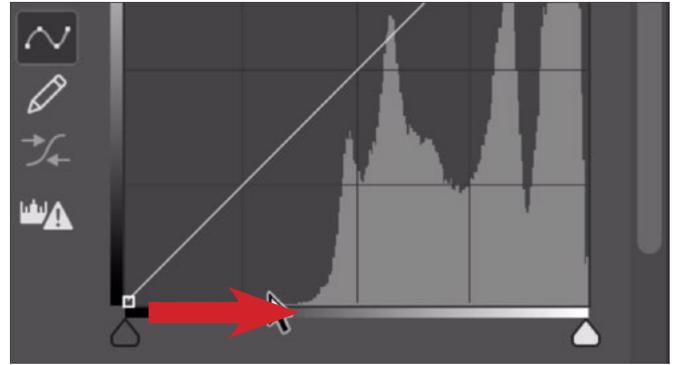


There is an area that is too bright directly to the left of the woman's face and we are using the Spot Healing Brush to remove it.

color/texture that should be used to fill in the area. If you're working on a smooth area like this (one with little detail) and can't seem to get a smooth result, you might want to consider temporarily switching the image from 8-bit mode to 16-bit mode. When an image is in 16-bit mode, it's easier to achieve smooth transitions. You can always return to 8-bit mode once you're done with the retouch job. To change the mode of an image, go to the Edit menu and choose Mode.

Curves adjustments The retouch work on this image is complete and we now want to adjust the contrast in certain areas. The image is a bit faded and we can improve this by using a Curves adjustment. We'll click on the Adjustment Layer icon at the bottom of the Layers panel and choose Curves from the pop-up menu. The Curves Properties panel will appear and it will display the histogram. The left edge of the histogram bars represents the darkest portion of the picture and you

can see that it is nowhere near black. This is very common with faded images. In order to have an image with good contrast, there needs to be a black point. The black slider on the left side of the curves chart will force areas to black. We'll take that black slider and drag it to the right until it meets the end of the histogram bars. If, at this point, the image needs to be brightened or darkened as a whole, we can click and drag up or down on the curves line in order to lighten or darken as needed.



Above, we have the Properties panel for the Curves adjustment layer. You can see that the histogram bars do not extend to the left side, indicating there is no black point. We'll drag the black slider to the right, forcing more areas to black.

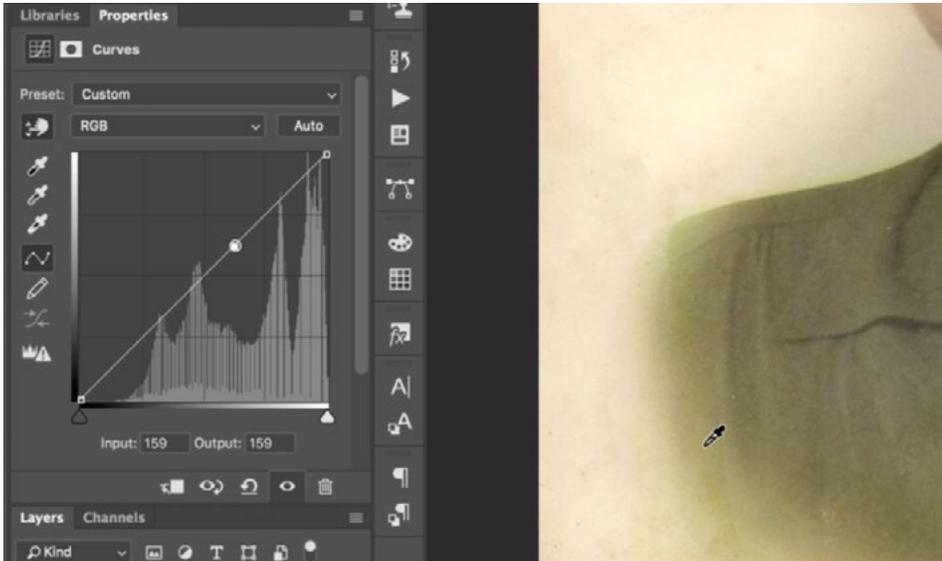
I will also use Curves adjustments to make improvements to specific areas. In the example image, I think the hair area should have more contrast. We'll create a new Curves adjustment layer and make sure that the targeted adjustment tool is active within the Properties panel (It looks like a little hand icon.). Then, we'll click once on the brightest area of the hair and again on the darkest area of the hair. This will add two points on the Curves chart that represent the two targeted brightness levels. The dot on the left represents the dark tone. We'll drag this dot straight down a bit, making the shade darker. The dot on the right represents the bright tone. We'll drag this dot up a bit, making this tone brighter. This has increased the contrast in the entire image and we only want the change to affect the hair. We'll use the Layer mask attached to the Curves adjustment layer to hide the effect in all areas except for the hair. With the layer mask active, we'll go to the Image menu and choose Adjustments > Invert. This will make the entire mask black, instead of white, so it will be hiding the effect across the entire image. We can now activate the Brush Tool, set the foreground color to white and make sure we're using a soft brush. We'll paint over the hair area, revealing the high-contrast effect.

The added contrast from the Curves adjustment made the hair area much more colorful. This is something that can happen when we darken something. To correct for this, we can change the blending mode of the Curves adjustment layer to Luminosity. The Luminosity blending mode will make it so the layer can only affect brightness and not color.

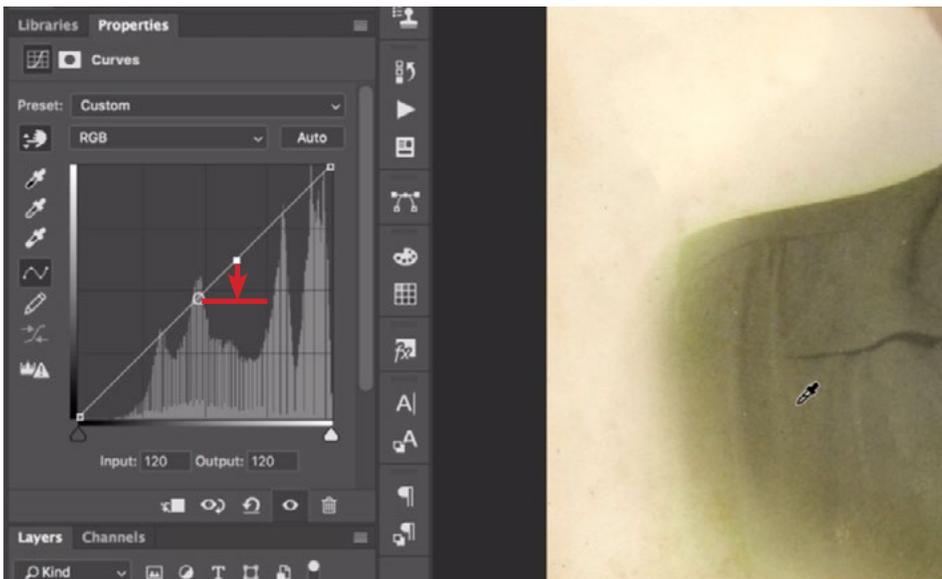


A Curves adjustment layer was used to add contrast to the image and then we painted on the layer mask (for the adjustment layer) to that the added contrast only affected the hair. The blending mode of the adjustment layer was also set to Luminosity so the adjustment could only affect the brightness (and not the color).

Now we will use another Curves adjustment to correct for some of the fading that occurred in the bottom corners of the photo. We'll add a new Curves adjustment layer at the top of the layer stack and we'll make sure that the targeted adjustment tool (the hand icon) is active. We'll use the targeted adjustment tool to click on part of the faded area of the woman's shirt. This will place a point on the curve. To get an idea of how much darker the area needs to become, we'll hover the cursor over part of the shirt that is not faded and look at the Curves chart. There will be a circle on the line that represents the area where the cursor is hovering. This will show us how far down we need to drag that initial curve point. We'll click and drag straight down on the dot until it is the same height as the circle. This will darken the entire image, which we don't want.



Using the targeted adjustment tool for the Curves adjustment layer, we are clicking on a faded area of the shirt in the bottom corner of the image in order to place a point on the curve.



Now, with the targeted adjustment tool still active, we are hovering the cursor over an area that is NOT faded. Looking at the Curves chart, a circle appears on the line, representing the tone we want. We need to move the initial curve point straight down to the same level as the circle.

We only want the darkening effect to occur near the bottom where the image was faded, so we'll use the layer mask that is attached to the Curves adjustment layer. Making sure the mask is active, we'll go to the Image menu and choose Adjustments > Invert. This will make the entire layer mask black, therefore hiding the effect across the entire image. We'll make sure the foreground color is set to white and then use the Brush Tool, set to a soft brush, and paint over the area we wanted to correct.