



Retouch & Adjust

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In this lesson, we're going to look at some of the retouching and adjustment challenges I ran into when working on this service station image. In the process, you will learn techniques for retouching your own images.



We're going to learn some retouching and adjustment techniques that were used in the completion of this image.

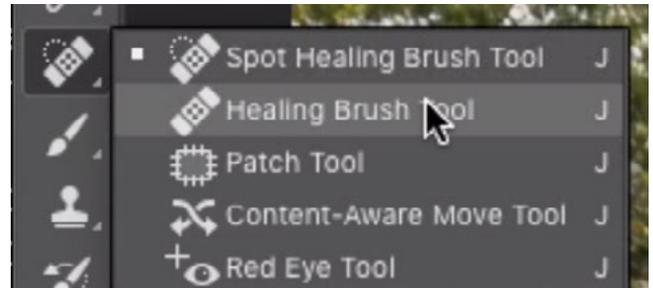
Here are the two challenges we're going to tackle:

1. There is an undesirable sticker covering one of the gas pump toppers. We're going to copy the clean top from the other pump and use that sampled content to cover the obstructed pump. The challenges will be making sure that the brightness and scaling match so that it blends in just right.
2. The large Phillips 66 sign has a dark spot near the top and we'll want to eliminate that. The challenge will be matching the color and tone of the dark shadow area to the surrounding colors on the sign.



Retouch: Removing Sticker on Gas Pump (Timestamp 3:06)

We're going to start by removing the sticker/label from the left gas pump. To do that, the top part of the pump will be copied from the right pump and then applied to the left one. We'll activate the Healing Brush Tool. Any tool with the word "Healing" in the name is going to match the color and brightness of the surrounding area, and this is what we'll need in order to make the retouched part of the pump blend in with the part of the pump that surrounds it.

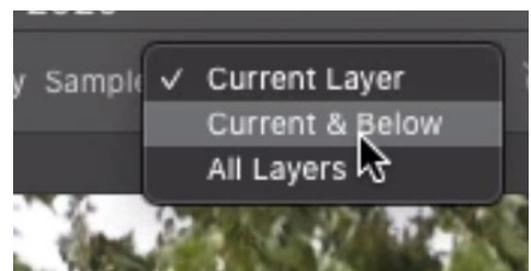


The Healing Brush is grouped with the Spot Healing Brush in the Toolbar.

After activating the Healing Brush Tool, click on the brush settings menu in the Options Bar above the image window. Here, make sure that the Hardness is set to 100% to ensure that the tool has control all the way out to the edge of the brush.

Before using the brush, we're going to create a new, empty layer on which to place our retouch work. This will leave the original background image layer untouched. We'll click on the New Layer icon at the bottom of the Layers Panel and the new layer will appear above the image layer. Make sure this layer remains active.

Whenever you use retouching tools on an empty layer, you'll need to change a setting so that those tools will be allowed to work on an empty layer. With the retouching tool active, click on the Sample menu in the Options Bar and make sure it is set to "Current & Below." This will allow the tool to use the content from that underlying image layer and apply it to the empty retouch layer. With some retouching tools, this setting may be in the form of a "Sample All Layers" check box. In that case, make sure that it's turned on.



When applying retouching work to an empty layer, make sure the Sample menu is set to "Current & Below."

In the Options Bar, we'll also make sure that the "Aligned" check box is turned on. This will cause the tool to remember the relationship between the sample area and the place where we initially click. As we move the brush around in the area we want to retouch, the sample area will move in unison. It will NOT reset its position each time we click to apply retouching. (Note: This is difficult to explain in words. In the lesson video, Ben shows what happens when this setting is NOT turned on and it will make it easier to understand. In general, though, keep this check box turned on and you'll be good for this type of retouch work.)

Using the Healing Brush To use the Healing Brush, hold down the Option key (Alt on Win) and click on the area you want to copy FROM. This will set the sample area. Then, release the Option key and click to paint on the area you want to retouch. As you hover the cursor over the image, you will see a preview of the sample area within the brush tip. This gives you a good idea of what you will be painting into the retouch area. You can change the size of the brush by using the brush settings in the Options Bar or by using the left and right bracket keys ([]) on your keyboard.

In the example image, we'll hold down the Option key (Alt on Win) and click on the bottom point of the Phillips logo within the right-hand pump. This is a good sample area because the point serves as a good reference area when pasting to the other pump. We'll move over to the left-hand pump and click the bottom point of the logo. This applies the sampled area to the retouch area.

Now this might seem a little counter-intuitive, but we're immediately going to undo that application by using the keyboard shortcut Command+Z (Ctrl+Z on Win). We just want that initial click to lock in the relationship between the sample area and the retouch area. Now, the next time we click, it will remember that point and we don't need to sample again.

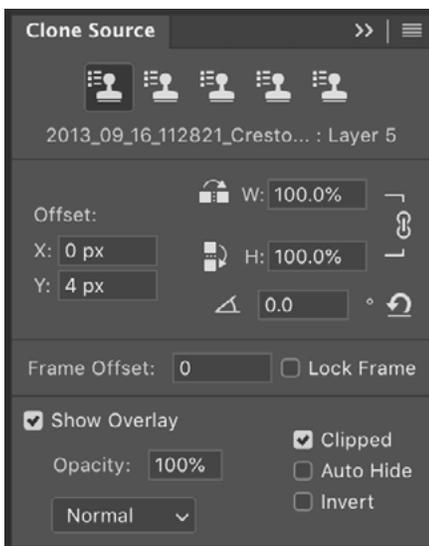


The Healing Brush is being used to sample an area from the unobstructed gas pump logo.

We'll make the brush tip larger so that we can better see the preview of what's going to be pasted. Immediately, we can see a problem. The bottom point of the logo does line up, but the circle that encases the logo does not line up. That's because the pump we sampled from was closer to the camera and is therefore larger. If we move the cursor to the top of the pump, we can see that the alignment is off even more. To correct for this, we're going to need to scale the retouching content.



As we hover the cursor over the retouch area, we can see a preview of the sample area that is going to be pasted. The bottom tip of the logo lines up, but the circle surrounding the logo is NOT in alignment.



The settings in the Clone Source Panel allow you to manipulate the sampled content.

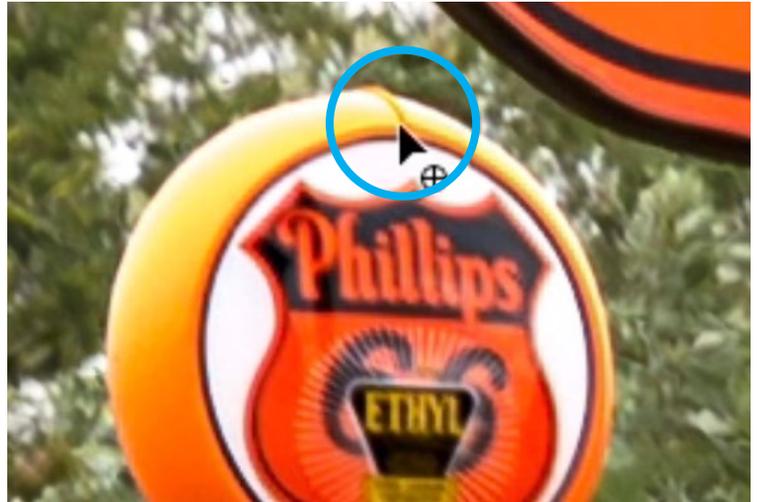
Clone Source Settings The settings in the Clone Source Panel can be used to manipulate the content that we sampled using the retouching tool. If it is not already open in your interface, you can access it by clicking on the Window menu and choosing Clone Source.

In the Clone Source Panel, the W (width) and H (height) fields will allow you to scale the sampled content. That's what we're going to need to do in order to make the size of the logo match. If you look at those W and H fields, you'll notice that there is a little link icon between them. That is telling you that the width and height will be locked proportionally. If you scale the content vertically, it will also be scaled horizontally. If that's not what you need, then you can click that icon to unlink these two fields.

We need to scale the content so that the logo that we sampled from the right-hand pump matches the size of the logo on the left-hand pump. When we scale the retouch content, it should scale from the point where we had originally clicked. This is the point at the bottom of the logo.

There are keyboard shortcuts that allow you to more quickly change the clone source settings and we'll use those here. To scale the sampled content, hold down Shift+Option (Shift+Alt on Win) and use the left and right bracket keys ([]).

We will hover the brush tip over the top part of the pump (to better see the alignment) and use the left bracket key to make the sampled content smaller, tapping until the preview inside the brush tip matches the surrounding area.



We are scaling the source content down so that it aligns with the retouch area. (The brush tip is highlighted so you can see it better.)

Once the top line matches, we'll move the cursor around the circle that contains the logo so we can see how everything else aligns. Again, we see a problem. The top and bottom curves of the circle match nicely, but the left and right sides do not. This means that the sample area should not be scaled proportionally. We will need to click the link icon between the W and H fields in the Clone Source Panel to unlink the two fields. Now we can adjust the width independently of the height.

Whenever we use the keyboard shortcuts, it's going to scale the width and height proportionally. We don't want that, so we'll need to manually use the settings in the Clone Source Panel. We'll click within the W field to highlight the text. Then, we'll hover the cursor over the left side of the circle containing the logo. We'll use the down arrow key to gradually lower the number until the line comes close to matching up. Then, we'll move the cursor to the right side of the logo, doing the same thing.



We clicked the link icon (circled) so that we can adjust the width independently from the height. You can see by looking at the brush tip that the left side of the circle aligns.

We are unable to achieve perfect alignment on the left and right sides simultaneously, which means that we will need to use an additional setting: Offset. This will allow us to change the position of where the sample area is going to be pasted. The X and Y fields in the Clone Source Panel represent the offset, but we're going to use another keyboard shortcut to change the setting.

In order for this keyboard shortcut to work, we need to make sure that there are no fields currently highlighted in the panel. This would cause the shortcut to change the wrong setting. If there are any highlighted fields, we can simply click the Return/Enter key to lock in that setting so that the field is no longer active. Then, we can hold down Shift+Option (Shift+Alt on Win) and use the arrow keys to reposition the content. In this example, the circle containing the logo needs to be nudged to the left a bit. We'll hover the cursor over the side of the circle so that we can see the preview inside the brush tip. Then we'll hold down Shift+Option and then tap the left arrow key until the edge aligns.

Up to this point, we have not yet even painted with the Healing Brush! We have just been setting up the clone source settings so that there is proper alignment when we DO paint. We'll use a small brush so that we have a lot of control. We'll start on the bottom tip of the logo, clicking and painting around the edge of the logo. As we do this, we need to be extremely careful that the brush does not touch the outer black outline of the circle. This could cause the Healing Brush to mess up, attempting to match the retouch area to something that's black. We need to keep the brush contained within the white circle and the logo. After carefully going around the perimeter of the circle, we'll paint over the interior. You'll see that the content we're pasting lines up perfectly and the logo from the right pump is successfully used to cover the logo on the left pump.



LEFT: We're using the Healing Brush to carefully paint around the logo, making sure that we don't hit the black outline. **RIGHT:** Without releasing the mouse button, we're continuing that same stroke, covering the logo completely.

What's nice about the settings in the Clone Source Panel is that you can switch between different retouching tools and the settings will remain the same. This means that you can use different tools, using the same alignment, to retouch the image.

After applying such specific settings in the Clone Source Panel, you have the option of saving those settings in case you need to come back to the same retouch area. The icons at the top of the panel allow you to save clone source settings. By default, the left-most icon is highlighted, which means that the current settings are being associated with that icon. If you were to click on the next icon, you'll see the settings return to their defaults, ready to be manipulated for a different retouch area. If you wanted to return to the first retouch area, you could click on that first icon and it will have remembered all of the settings you had dialed in. You have the option of creating five different clone source setups.

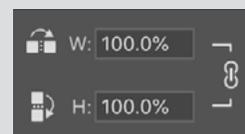


These icons allow you to save sets of Clone Source settings.

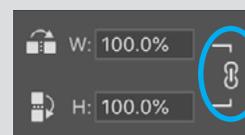
NOTE: If you ever see a warning symbol (!) on top of one of the clone source icons, it means that the layer you were working on when creating that group of settings no longer exists.

Clone Source Panel Settings: The Basics

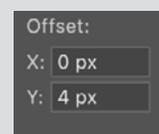
W & H: Scale the sampled content to make it larger or smaller. Keyboard shortcuts can be used by holding down Shift+Option (Shift+Alt on Win) and using the left and right bracket keys ([]). Use the left bracket to scale down and the right bracket to scale up.



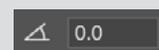
The Link icon: This icon is located between the W and H fields and it causes the content to be scaled proportionally. Click the icon to unlink the fields, allowing the width and height to be adjusted independently of one another.



Offset: The Offset refers to the position of the sampled content. You can nudge the content left or right by changing the X field and you can nudge the content up and down by using the Y field. To use keyboard shortcuts, hold down Shift+Option (Shift+Alt on Win) and use the arrow keys to reposition the content. (Note: Make sure there are no fields highlighted in the Clone Source Panel as this will prevent the keyboard shortcut from working.)



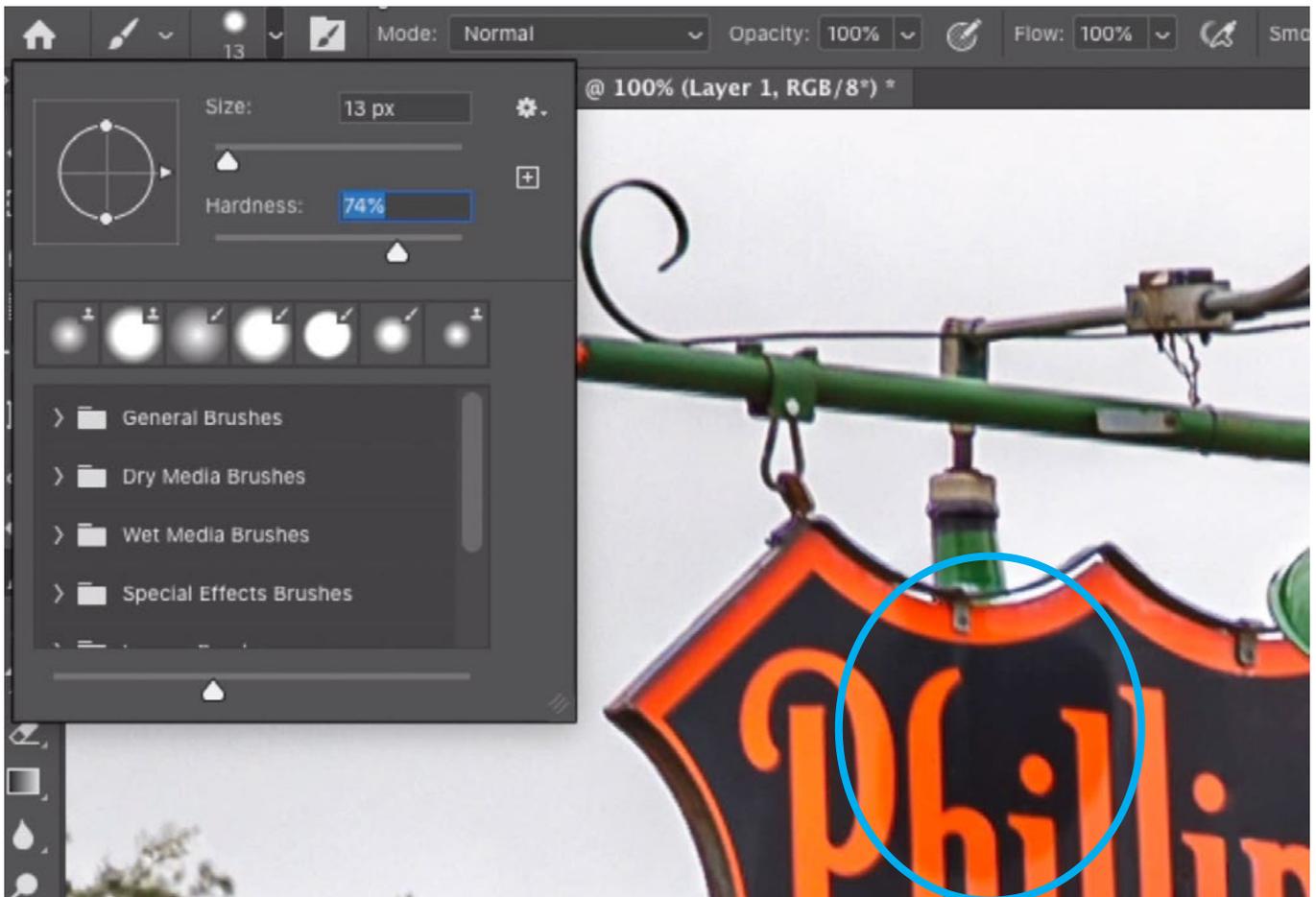
Angle: The angle field allows you to change the rotation of the sampled content. To use keyboard shortcuts, hold down Shift+Option (Shift+Alt on Win) and then use the greater than, less than keys (> <).



Adjust: Fix the Dark Spot on the Sign (28:32)

Now let's move on to adjust the large, Phillips 66 sign. There is a spot near the top of the sign that is darker and we want to lighten it so that it matches the rest of the sign.

Start with a selection The first thing we're going to do is make a selection to isolate that area. We'll use Quick Mask Mode to do that. In Quick Mask Mode, we can use the Brush Tool to paint in the selection. We'll activate the Brush Tool and click on the brush settings icon in the Options Bar. This will expand a little panel of settings. Here, we're going to adjust the Hardness slider so that the hardness of the brush matches the hardness of the dark spot. In this case, we set the Hardness to around 80%.



We're going to correct the dark spot in the sign (circled). Before painting in Quick Mask Mode, we activated the Brush Tool and are setting the Hardness slider so that the hardness of the brush matches the hardness of the spot.

We'll enter Quick Mask Mode by tapping the Q key on the keyboard. We'll make sure that the foreground color is set to black. This is the color we'll be painting with. When you paint with black while in Quick Mask Mode, you are adding a colored overlay, which will define the selection. By default, the color of the overlay is red, but you can change it by double-clicking on the Quick Mask icon, which is directly below the foreground/background swatches at the bottom of the Toolbar.

We'll use the brush to paint with black over the dark spot on the sign. This will cover the dark spot with the overlay. In Quick Mask Mode, the area with the red overlay is the area that is NOT selected, so we'll need to invert the selection by clicking on the Image menu and choosing Adjustments > Invert. Now the rest of the image has the red overlay but the dark spot does not. We'll tap the Q key again to exit Quick Mask Mode and we'll be left with a "marching ants" selection around the spot.



LEFT: We painted with black over the spot while in Quick Mask Mode. This added the red overlay. **CENTER:** We inverted the mask so that the spot is the only area selected.

RIGHT: We exited Quick Mask Mode and ended up with the "marching ants" selection.

Create a Curves Adjustment Layer Now that we have an active selection of the spot, we'll create a Curves Adjustment Layer by clicking on the Adjustment Layer icon at the bottom of the Layers Panel and choosing Curves from the pop-up menu. Because there was a selection active, that selection will be applied to the layer mask that is attached to the adjustment layer. The selection will become the white part of the mask, which represents the area of the layer that's visible.

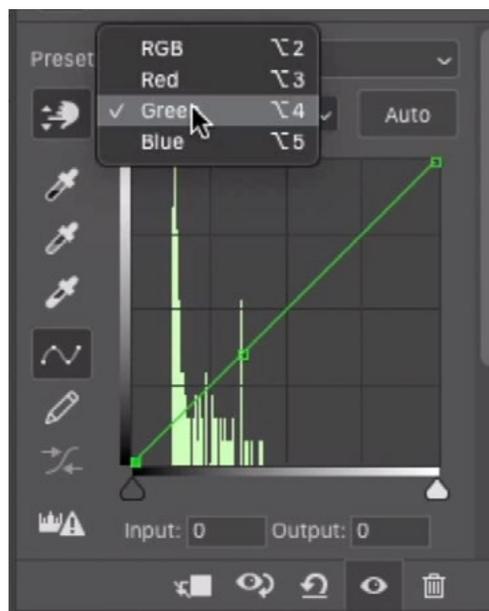
Now, we start by focusing on the orange “Phillips” text. We want the orange text that’s covered by the spot to match the orange text that looks good. We’ll activate the Targeted Adjustment Tool, which is the little hand icon on the left side of the Curves Properties Panel. In many cases, we could use this tool to click and drag up or down in the image, lightening or darkening that targeted tone. That doesn’t work in this case because the color needs to be shifting as well. We will need to use a technique that adjusts the points on the individual color curves (red, green and blue).

Before setting the sample area, we’ll set the Sample Size menu (in the Options Bar) to “3 by 3 Average.” It’s set to Point Size by default, which will sample a single pixel. This can be a problem if there is any noise in the area.



The Sample Size menu is being changed to 3x3 average. That means that the Targeted Adjustment tool will take the average of a 3x3-pixel area.

With the Targeted Adjustment Tool active, we’ll hold down the Shift and Command keys (Shift and Ctrl on Win) and we’ll click within the orange text that’s part of the dark spot. This will place a point on the individual red, green and blue curves. You can see these if you change the color menu above the curve chart to one of these colors.



We sampled an area from the orange text and a point was placed on each of the three color curves.

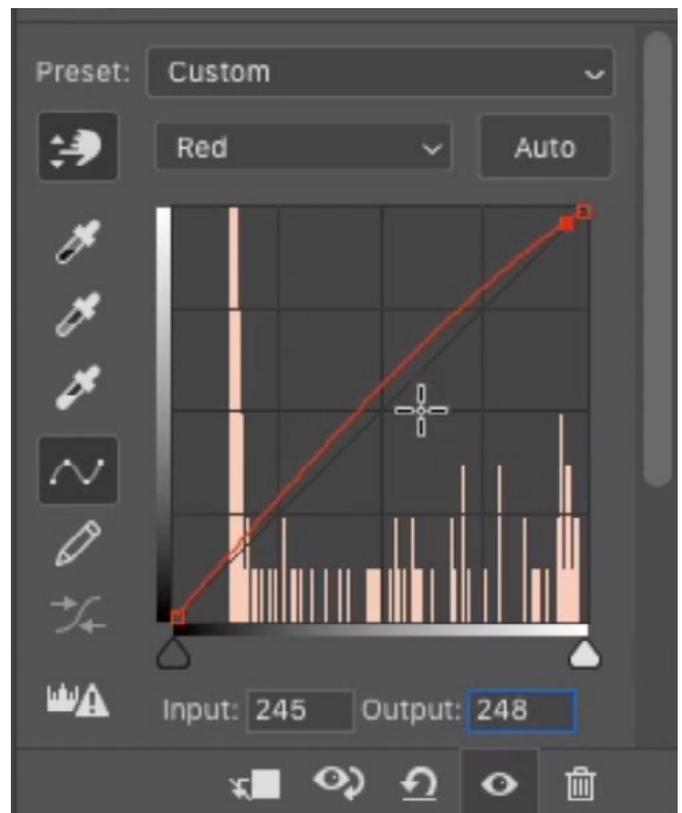
We'll need to reposition these curve points in order to match the color to the surrounding text. We'll start with the red curve so we'll choose "Red" from the color menu above the Curve chart. Below the chart, there are two numbers: Input and Output. When the cursor is not hovering above the image, those numbers define the value for the point on the curve. When the cursor is hovering over the image, those numbers define the red value for the area that the mouse is pointing to.

We'll hover the cursor over the part of the text that looks good and we'll make note of the number that appears below the curve. We'll enter that number into the Output field beneath the red curve. This will adjust the point on the curve.



ABOVE: We're hovering the cursor over the part of the text that looks ideal, making note of the number values in the Curves dialog.

RIGHT: We entered that number into the Output field and the curve point was repositioned.



We'll then switch the color menu to Green and do the same thing, noting the green value when we hover over the ideal text and then entering that number into the Output field. Finally, we'll do the same thing on the blue curve.

Looking at the result, the orange text from the spot area now matches the surrounding orange text, but there are two issues: 1) Our initial selection was not spot on because you can see a dark outline around the spot. 2) The rest of the spot area shifted color in a way that does not look good.



After the initial Curves adjustment, there is a dark outline around the spot and the black part of the sign has turned blue.

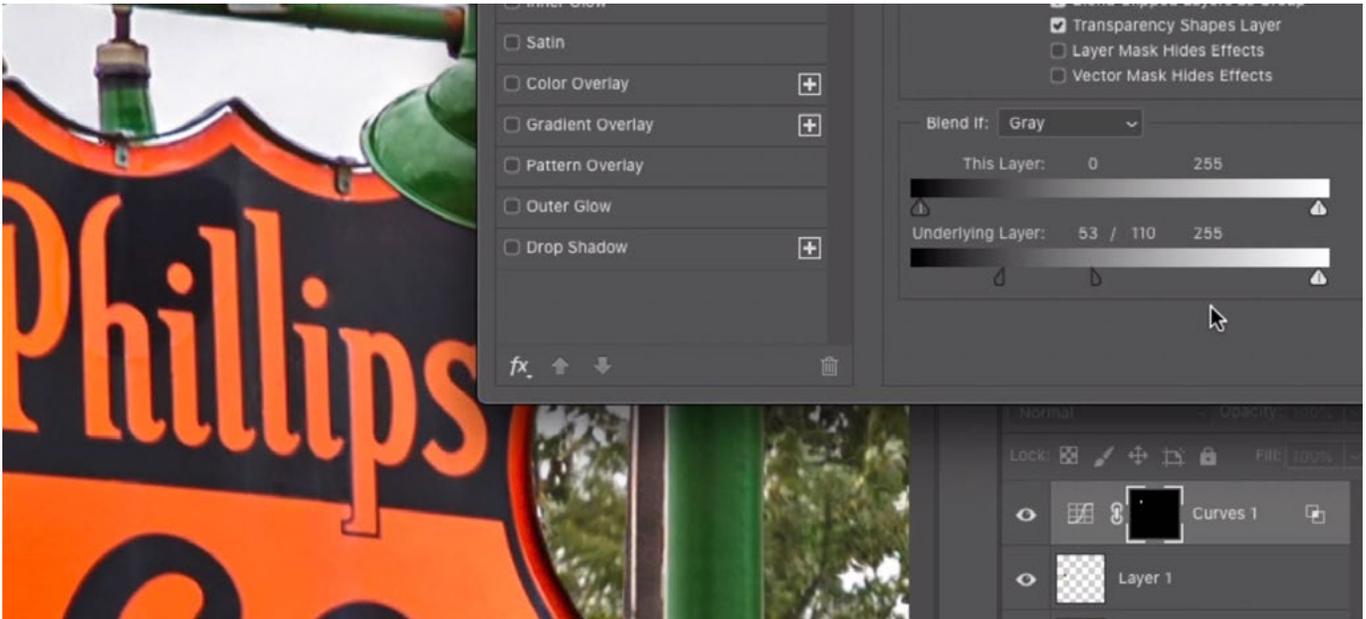
Let's refine the layer mask to eliminate the dark outline around the spot. We'll make sure that the layer mask is active and we'll activate the Brush Tool. We'll use a small brush to paint with white over the dark outline that should be included with the selection. By painting with white, we are allowing the adjustment to be visible in this area.



We are using a soft brush to paint with white on the mask in order to expand the mask to eliminate the dark outline.

The color problem lies in the fact that the part of the spot that used to be black now looks blue. We'll correct this using the Blending sliders. With the Curves adjustment layer active, we'll click on the FX icon at the bottom of the Layers Panel and choose Blending Options from the pop-up menu. The Layer Style dialog will appear and we want to focus on the "Blend If" sliders at the bottom of the dialog. We'll use the "Underlying Layer" sliders. If we move the black slider to the right, we will be revealing the underlying layers in the dark parts of the layer. Therefore, the layer we're currently working on can not affect the dark areas. We'll move this slider to the right (while watching the effect on the sign) until the effect is removed from the dark spot. The transition will look abrupt, and we can fix that by splitting that little black slider in half. By moving the two halves independently, we will be controlling the transition. We'll split the slider by holding down the Option key (Alt

on Win) and dragging one of the halves. With the slider split, we'll drag the right slider just enough so that the transition becomes smooth but not so much that we start to lose the correction that was applied to the orange text. We'll click OK to exit the Layer Style dialog.



In the Blending Options of the Layer Style dialog, the black handle under the “Underlying Layer” slider is being used to remove the effect from the dark parts of the picture. You can see that the spot no longer looks blue.

Now let's create a second adjustment to further fix the dark spot. We fixed the text part of the spot, but the area surrounding the text is still too dark. We'll click on the Select menu and choose Reselect. This will bring back that original selection that we made of the spot. (If this menu option is ever grayed out, you will need to manually recreate the selection.)

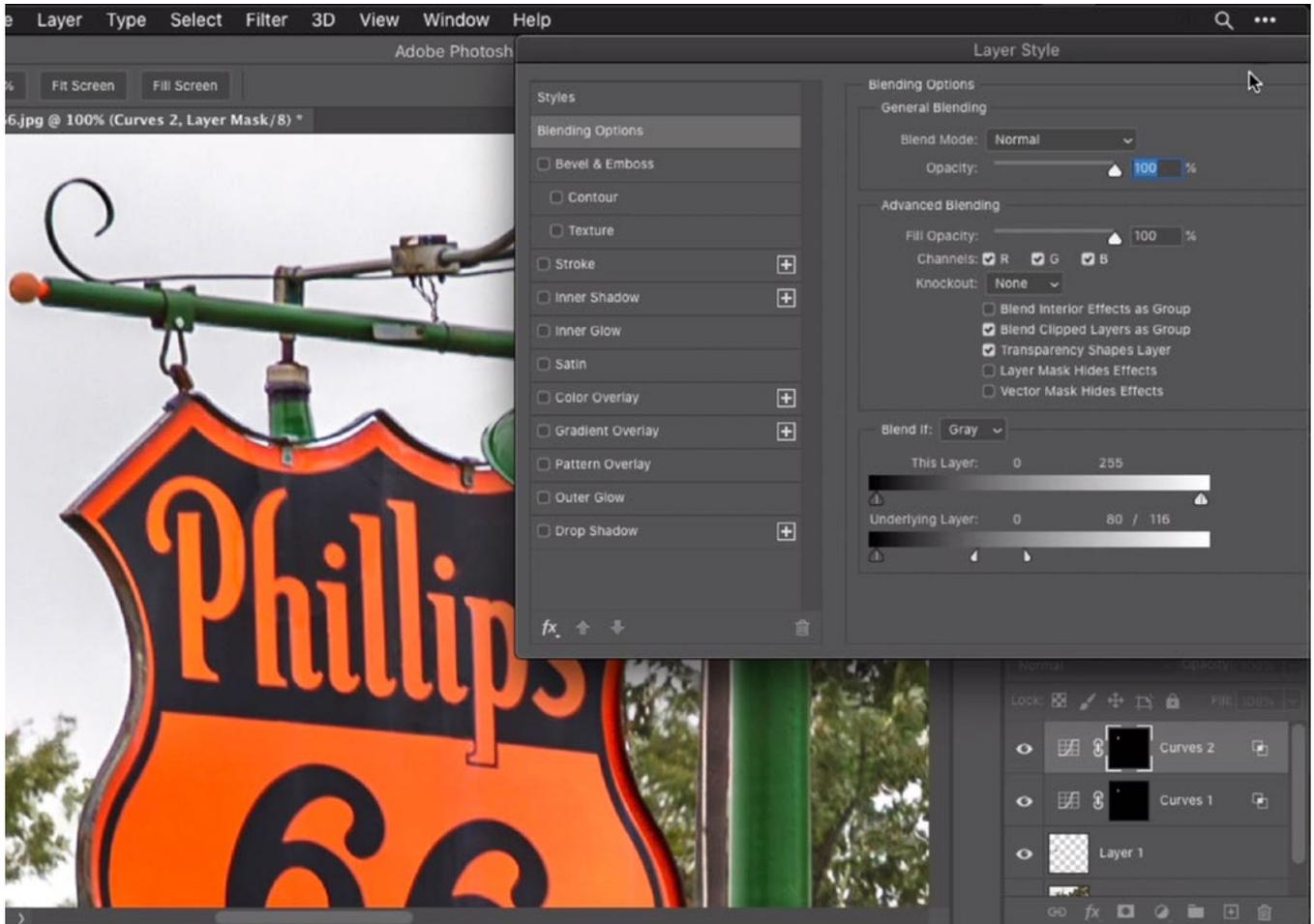
With the selection active, we'll click on the Adjustment Layer icon at the bottom of the Layers Panel and choose Curves from the pop-up menu. A second Curves adjustment layer will be created and, again, the active selection is applied to the layer's mask.

We'll make sure that the Targeted Adjustment Tool is active and we'll click and drag up on the dark spot. This will place a point on the curve and move it up, lightening that targeted area so that it matches the surrounding area. This does a nice job, but of course now the orange letters become too light. They had already been adjusted to look ideal.



With the Curves adjustment active, the Targeted Adjustment Tool is being used to click and drag up on the dark part of the spot, lightening the area so that it better matches the surrounding area.

We'll again use those blending sliders to correct the text. We'll click on the FX icon at the bottom of the Layers Panel and choose Blending Options from the pop-up menu. The Layer Style dialog will appear and we'll use the "Underlying Layer" sliders near the bottom of the dialog. In this case, we want to make the bright areas go back to normal, so we'll use the white handle on the right side of the slider. We'll move this handle to the left until the orange text goes back to normal. Again, we'll smooth the transition by holding down the Option key (Alt on Win) while dragging one half of the slider away from the other half. We'll click OK to exit the Layer Style dialog.



The white “Underlying Layer” slider is being used to hide the adjustment in the bright areas. This allows the orange text to go back to normal.

If any part of the effect looks too extreme, we can use the Brush Tool, set at a low opacity to paint on the mas