



Corporate Flow



Illustration



Image Editing



Automation



Web



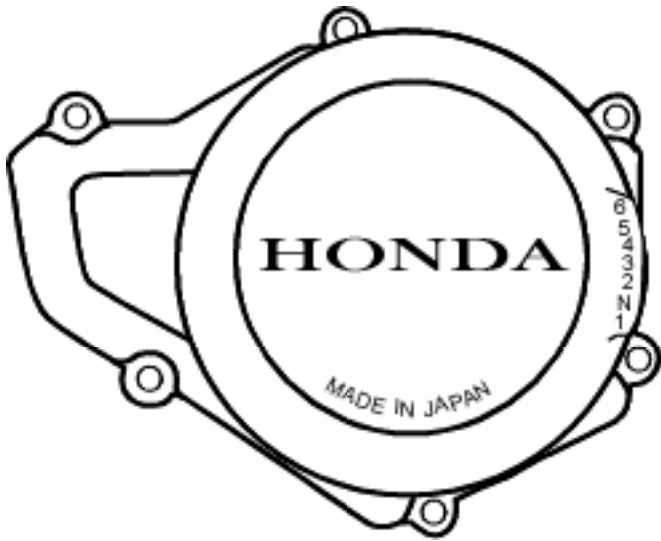
Text Effects

# Canvas Tips and Techniques



**Deneba  
Creative Department**

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## Technical Illustration

Learn how you can quickly learn to use Canvas to create technical illustrations from ordinary images.

Graphic designers have long known that digital photographs, or images that have been scanned or acquired from a photo-CD or an online resource, have several inherent limitations. Due to pixelization, file size, resolution, or other problems, they know that it is generally a good idea to visually communicate by using a vector illustration within a document instead of a pixel-based image. Also, due to the fact that vector illustrations are mathematically created and do not contain pixels, they can be resized at will within any design project without losing image quality or detail. Therefore, if you are aware of these issues, how do you illustrate your document without images?

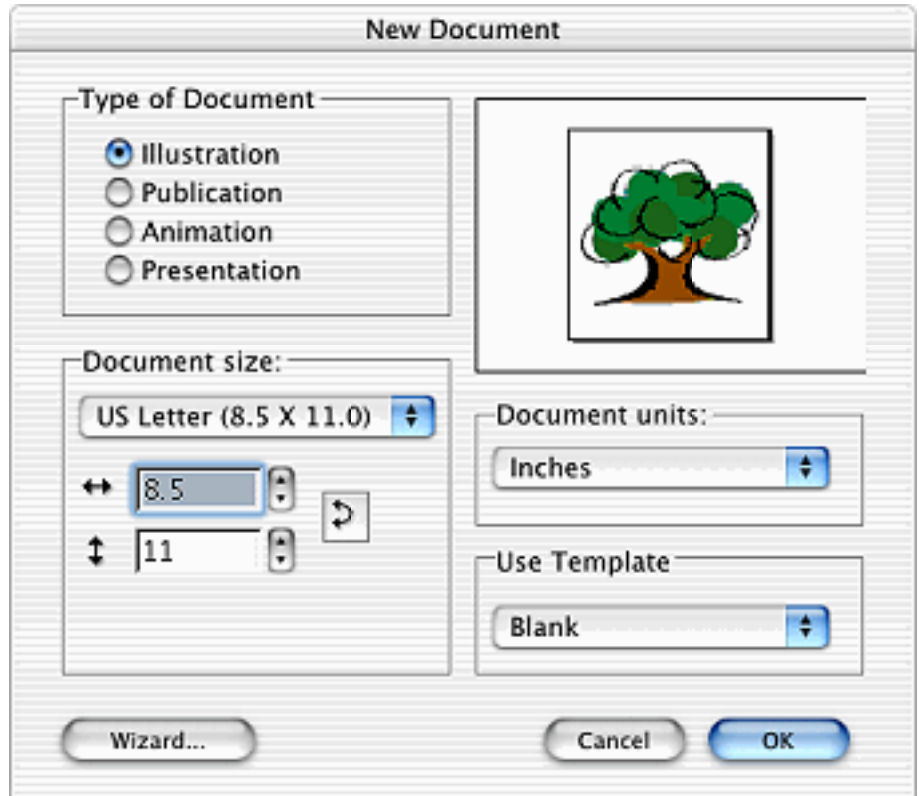
The answer is simple. Create your own illustration by tracing the original image inside Canvas.

In this tutorial, we will show you just how easy it is to create a vector illustration from any digital photograph or scanned image. Follow along and learn how to quickly convert a picture of an engine part, in this case a stator cover from a Honda motorcycle, into a technical illustration.

### Step 1

#### Creating a New Document

As with any design project you will need to set up your work space. Begin by opening a new document (File > New). Then, choose Illustration as the file type and press OK.



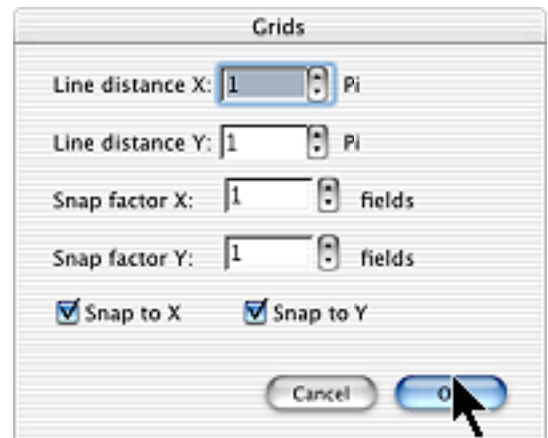
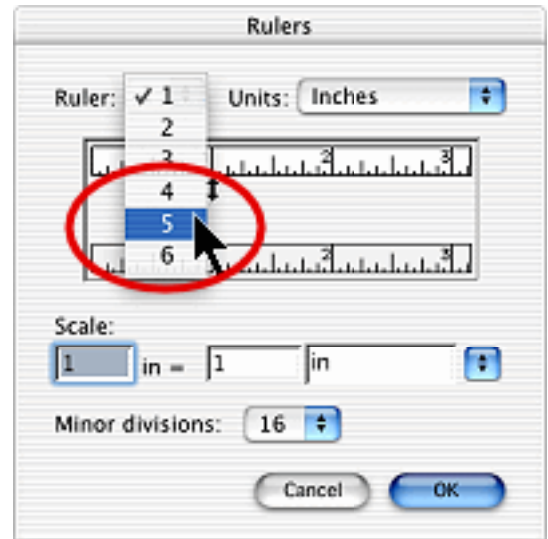
## Preparing the Document

In the previous step you may have noticed that the default Unit of Measurement for a Canvas document is set to Inches. We suggest, that if you anticipate working with an image, that you may want to begin by changing this setting so that your document uses Pixel as the unit of measurement. To do this, choose Layout > Rulers. When the Rulers dialog box opens, pick Ruler 5 from the drop-down menu (see example) and press OK. Ruler 5 is preset to apply Pixels as the unit of measurement.

After your technical illustration is complete, you can change the Unit of Measurement to another setting that may be more appropriate to your needs.

Next, so that our drawing efforts will be more precise, we will set our grids to automatically snap to pixels. This setting will prevent a vector object from falling between pixels while it is being created.

To activate this feature, choose Layout > Grids. In the Grids dialog box, change the Line Distance X and Y to 1 pixel. Then, check Snap to X and Snap to Y. Finally, click OK to save your choices and close the dialog box.



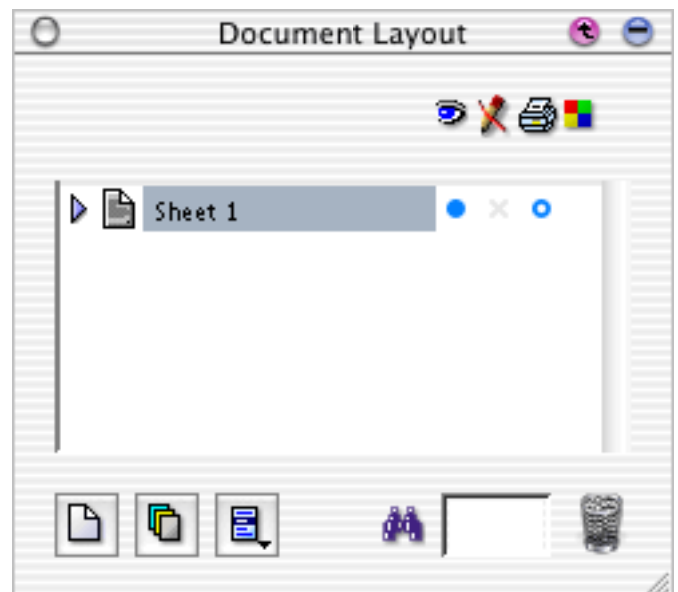
## Step 2

### Preparing the Document Layers

Now that our page is set up, we are going to add some additional layers to the page. Adding additional layers within a page allows you to easily organize the various parts of an illustration so that they can be easily selected and edited during the design process.

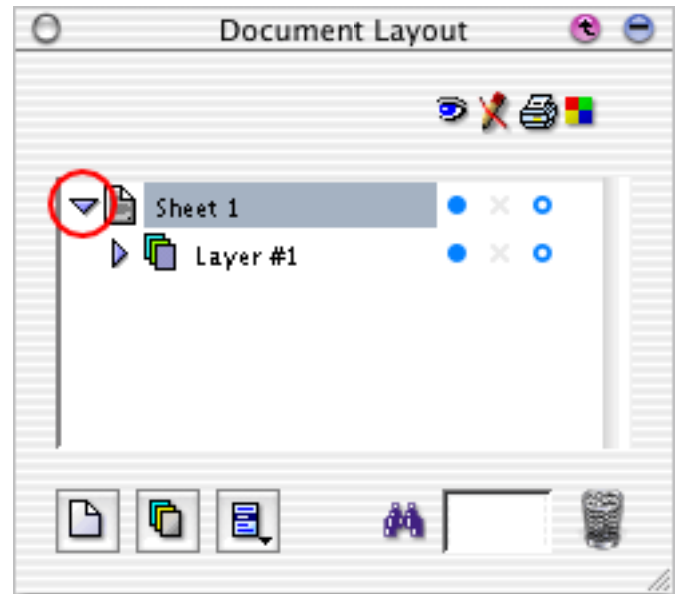
Since this is going to be a relatively simple illustration, we are only going to create two layers. One layer will be used to contain the image that we are going to trace. The other will function as a container and drawing area for the illustration that we will be creating.

To prepare the layer, first open the Document layout palette by choosing Layout > Document Layout. Your palette will look like the palette on the right.

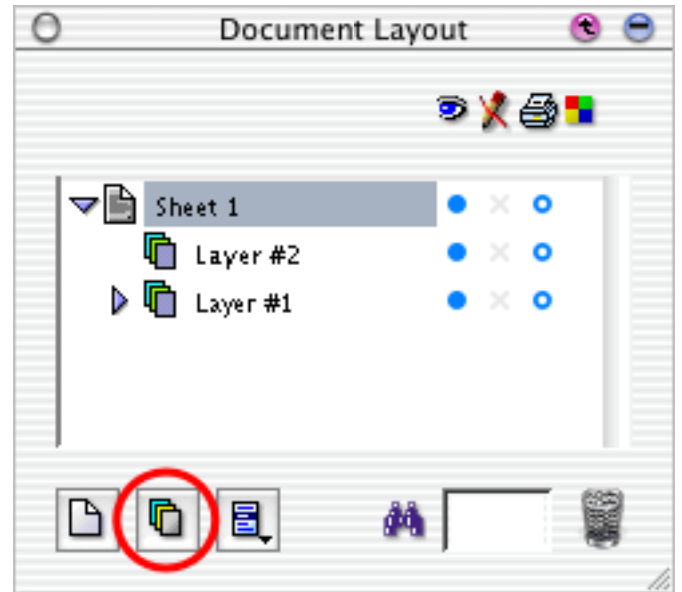


### Technical Illustration (Continued)

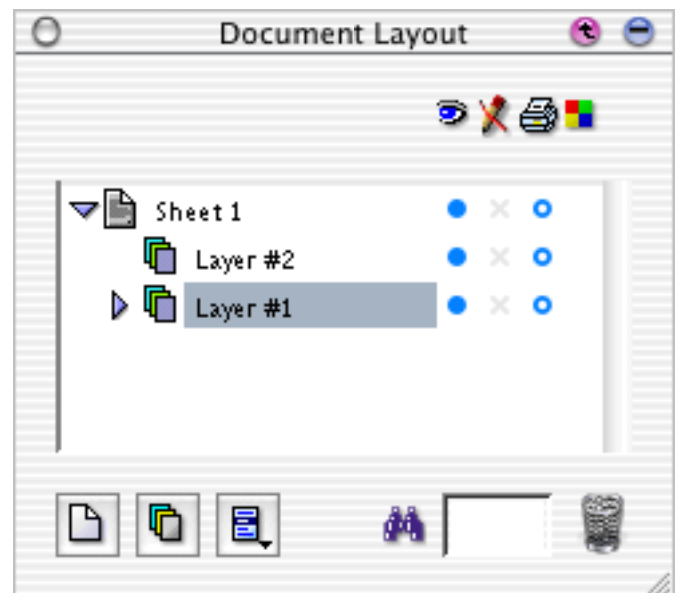
Next select the "+" sign (Windows) or the arrow (Mac OS) next to Sheet 1 to expand the view and reveal the layers inside. At this point, you should only have one layer named Layer #1 inside.



To create the second layer that your project will need, simply click once on the New Layer icon. Doing so will automatically create your new layer, which will be given the default name of "Layer #2."



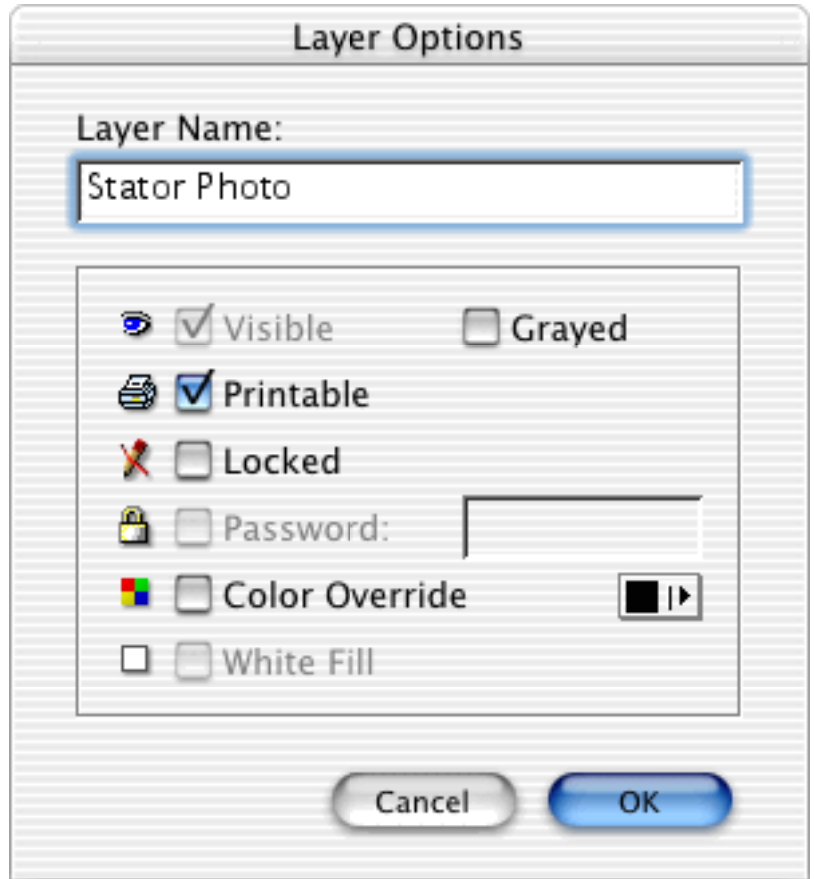
Select Layer #1 within the Document Layout palette and double-click.



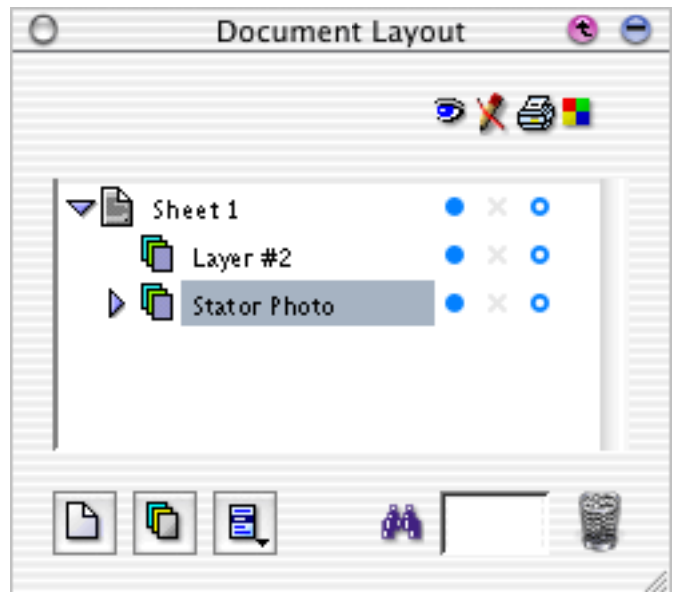
## Technical Illustration (Continued)

This will bring up the Layer Options dialog box. Select the text within the Layer Name field and enter "Stator Photo." Press OK.

This feature allows you to name, or rename, any layer that is contained within the Canvas document. Therefore, each layer that is within a complex design project can be quickly located and selected for editing.

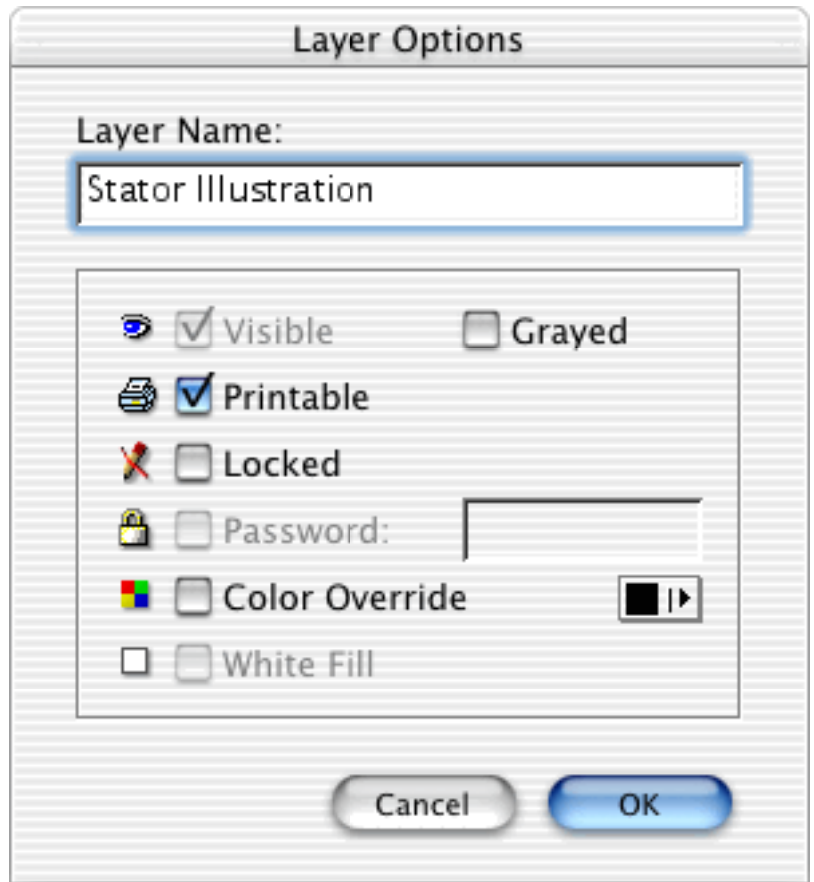


As you can see, the layer name that you entered during the previous step has been successfully applied and is now visible from within the Document Layout palette.



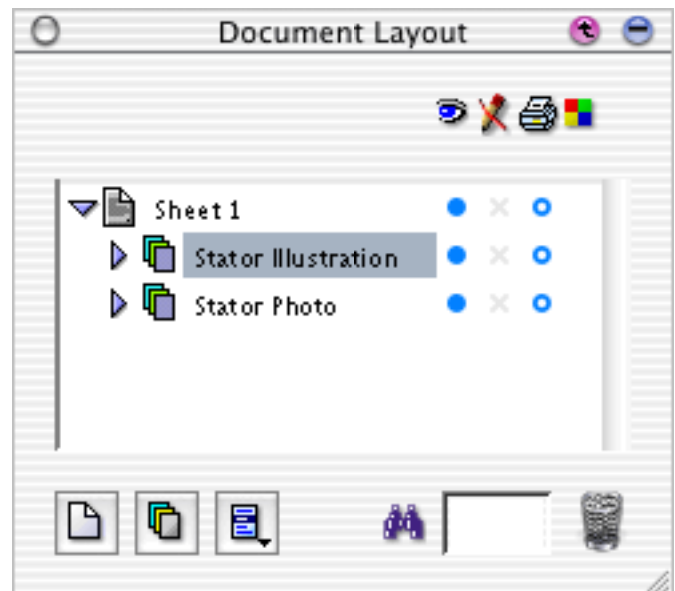
## Technical Illustration (Continued)

Repeat the same steps to rename Layer #2. Only this time enter Stator Illustration as this layer will contain the vector illustration that we will be creating. When you're finished, press OK.



Notice that both names appear within the Document Layout palette.

At this point, if you are unfamiliar with this palette, you might want to experiment with some of the other controls. If you have other questions, you might want to review the Canvas User's Guide for further information.



## Step 3

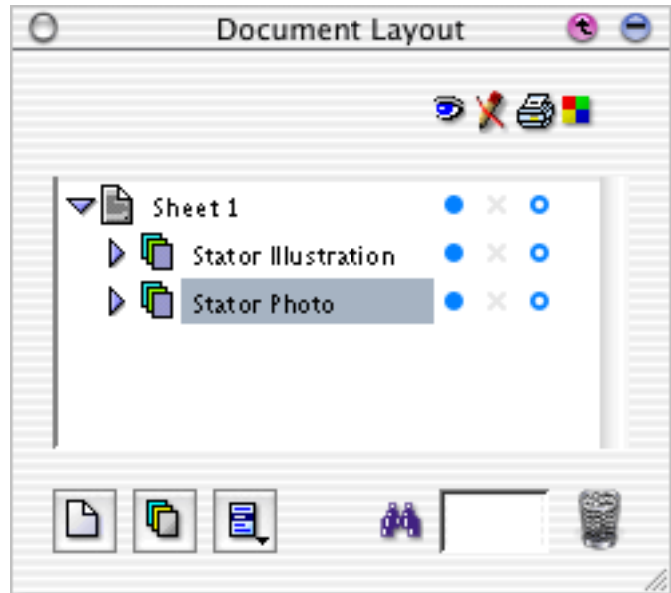
### Placing the Image

We are now ready to place the image that we will need to trace.

With the Document Layout palette open you will begin by selecting the layer named "Stator Photo". This will tell Canvas that this is the location that we have chosen for the photo of the Stator cover.

#### There are two additional reasons for placing the photo on a different layer:

1. When using the drawing tools, placing the photo on a different layer will prevent accidental changes to the original image.
2. Also, when your illustration is complete, you could simply click on the "eye" icon and "turn off," or make the Stator Photo layer invisible. Therefore, you can instantly see and compare your illustration efforts with the original image. Additionally, you are given the option to retain the source image, without editing and the illustration together, just in case you need to make any modifications at a later date.



With the Stator Photo layer selected we are ready to place our image. Now, choose File > Place. From within the Place dialog window you will need to locate the image in your hard drive, network, or wherever it may be and press Place.

When you complete this step, you will be presented with the image that we will be tracing (see right).

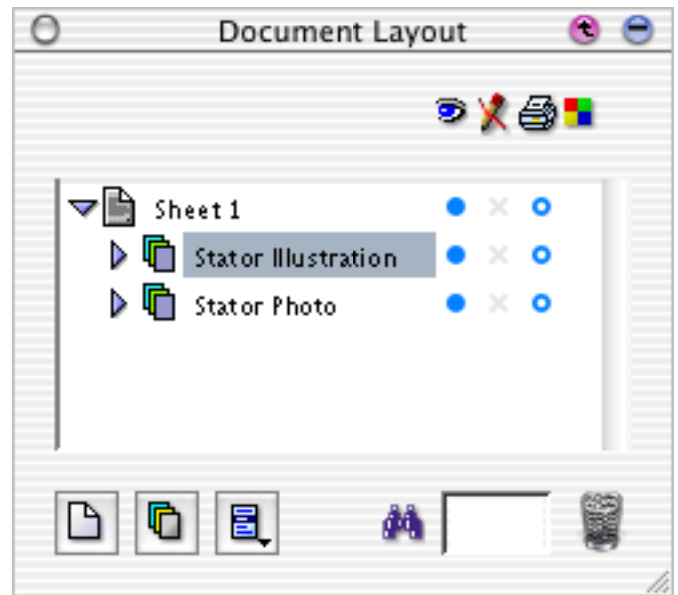


## Step 4

### Drawing

If closed, reopen the Document Layout palette (Layout > Document Layout) and choose the Stator Illustration layer.

Remember, you previously created two separate layers for this document. Therefore you will need to switch to (select) the Stator Illustration layer prior to beginning the illustration. As you will see working on separate layers guarantees that you will not inadvertently move or alter the main image during the drawing phase of your project.



With the Stator Illustration layer selected, we are ready to begin drawing.

To enhance the accuracy of the tracing procedure it would be a good idea to set the Pen Ink color so that it will dramatically contrast with the original image. Since our original image is mostly black and white, let's select a lime green color as our Pen Ink so that it will stand out and be easy to see.

Also, take a moment and set the fill color to "no ink," so that you can trace without adding a fill color to your drawing. Remember, you are free to go back and add a fill color after you have finished your illustration.

Press the Esc key several times to deselect all objects.

Now, open the Pen Inks palette and change the ink color to a bright green color. Next, open the Fill Inks palette and choose "no ink", represented by the white box with a slash through it.

Your ink settings should look like the example on the right.

When your color selections have been made, choose the Auto Curve tool from the Toolbox.



## Technical Illustration (Continued)

Now with the Auto Curve tool selected, begin by clicking on a point on the image to start your curve. The anchor point will appear as a small blue square.



Next, click on the object to create a second anchor point near the outer edge of the stator cover.



Continue to click around the stator cover to create a complete outline of the outer edge. Be certain to complete the path by clicking on the original starting anchor point.

You may notice your lines are not perfectly smooth. Don't worry about it. We will show you some easy-to-follow steps that you can take to correct this first effort.

[Click here to learn more about curves and paths.](#)



## Step 5

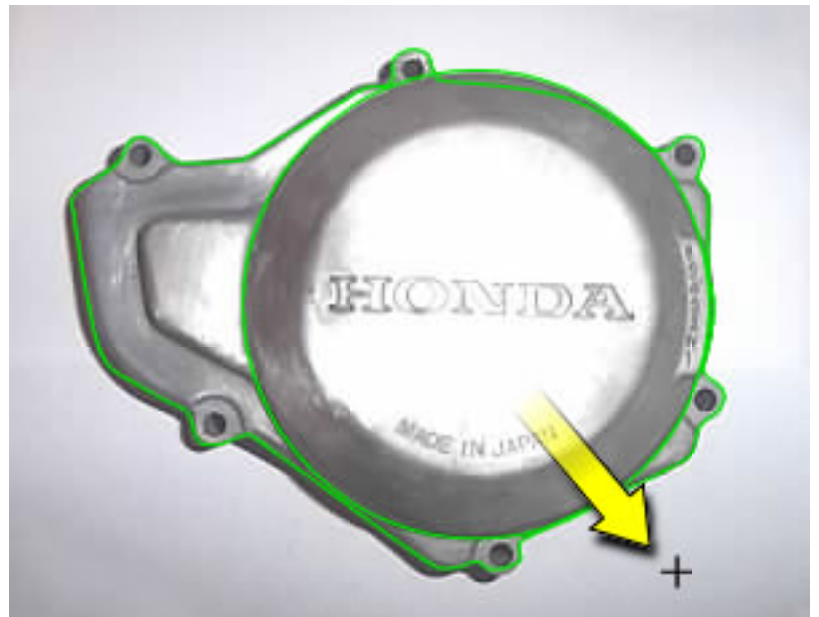
### Using the Combine tool to smooth curves

One way to smooth curves or alter the shape of an existing path is to combine it with another. In this step, we will show you how to use a circle to smooth out the rounded upper right hand corner of the illustration. The idea is to make certain that our efforts will match the much smoother outer corner of the stator cover.

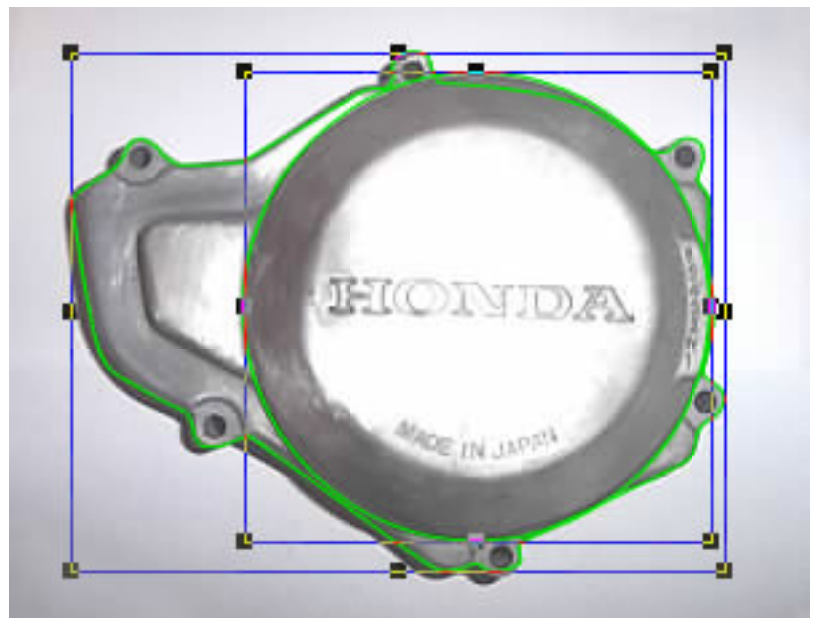
Begin by selecting the Oval tool from within the Toolbox.



Next, drag the Oval tool diagonally while simultaneously holding down the Shift key. This procedure will create a perfectly symmetrical circle. The resulting circle should be the exact size and shape of the raised portion of the stator cover.



Now drag the cursor diagonally over the objects you just created to select them both.

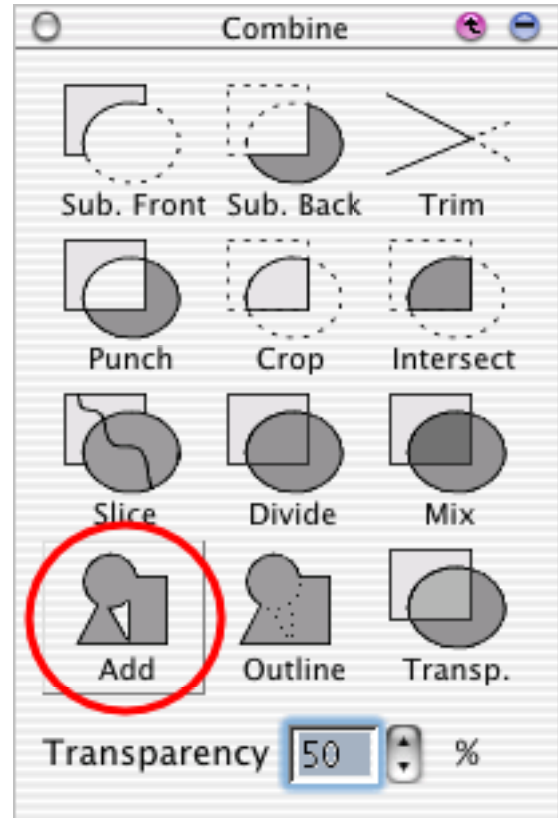


## Technical Illustration (Continued)

Now open the Combine palette (Effects > Combine) and choose the Add function. This command will combine both of the selected objects and automatically create a new vector object that will have a smooth rounded corner.



**Tip:** The Combine tool is extremely helpful in creating different objects. Take time to experiment with other objects and see what else you can do.



On the right you can see the result of our efforts. Notice that the top right corner is very close to the original object. However, our illustration still needs a little more work before we are done.



## Step 6

### Using the Handle and Tangent Lines

Using the handles and tangent lines is another option that you can use to edit vector curves within Canvas.

However, at this point it might be a good idea to do a little review before we proceed. Let's take a minute to familiarize ourselves with some basic vector drawing terms.

**Anchor Points:** The Anchor Point determines where a path begins and ends. During the vector editing process they will appear as small blue squares. However, they automatically turn into empty blue square outlines when they are selected for use.

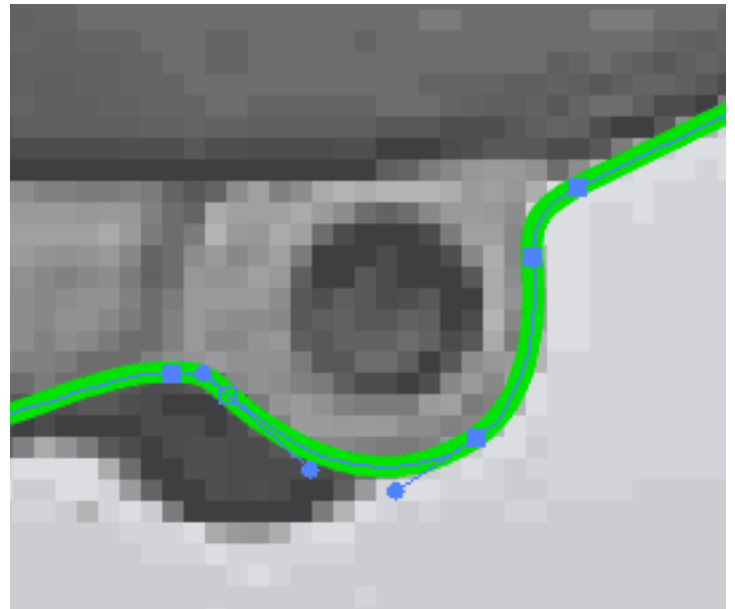
**Tangent Lines:** Tangent Lines provide a visual reference during the editing process. They allow you to view how the shape of curved segments are affected or controlled during editing. Also note that a Tangent Line will affect the adjacent segment.


**Handles:** A Handle is the control point that you use to move and therefore edit the Tangent Line.



Now let's take a close look at our previous work. Zoom into a section so that you can view a close-up of a section of the work area. Set the viewing so that it appears similar to the example on the right. Next, double-click on the path to place the object into vector-edit mode.

When you are in edit-mode, the anchor points will appear as small blue squares. The handles (control points) will appear as small blue circles. Remember that clicking on an anchor point will reveal the tangent line of the selected anchor point and those of its neighbors. Use the pointer and select the handles to reshape the path so that it matches the contour of the stator cover. If this is your first vector editing project, you might want to take a few minutes and experiment with this procedure.



 **Tip:** To edit a path, it is advisable to first zoom in to the object to get a better view.

[Click here to learn more about handles and tangent lines.](#)

## Technical Illustration (Continued)

Let's finish up this step and go back to the Oval tool and recreate the raised sections of the stator cover.

First select the Oval tool from the Toolbox.



Then using the same techniques we used in step five, create two circles and place them on the stator cover (see example).



## Step 7

### Adding Text

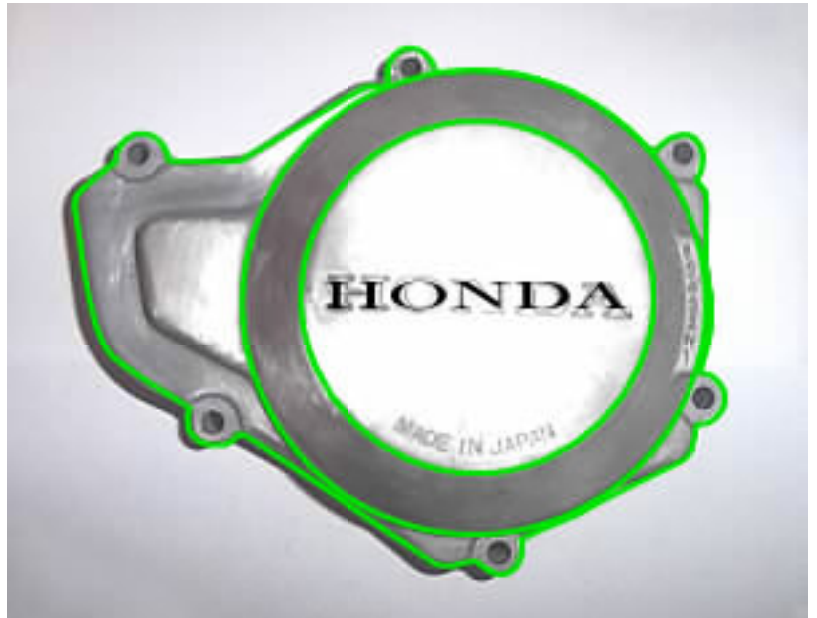
Notice the "Made In Japan" and "Honda" lettering on the cover? Let us show you how easy it is to recreate this text and place it on a path within Canvas.

Now that our cover outline completed, we are ready to add the needed text. Begin by first selecting the Text tool from the Toolbox.

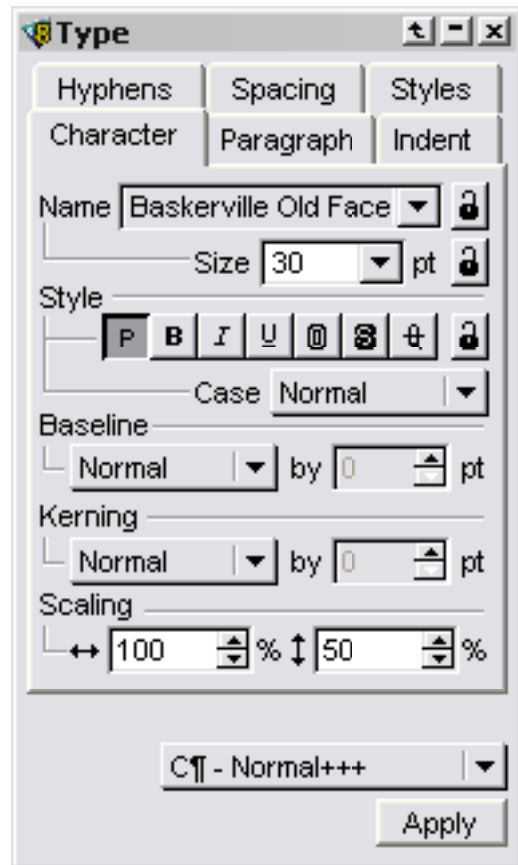


## Technical Illustration (Continued)

Now click on the area where you want to enter the "HONDA" text and type.



Remember that Canvas gives you the ability to go back at any time during the editing process and recreate or change the text that you have entered. Begin by selecting the text with the Selection tool and then double-clicking the Text tool. This action will open the Type palette. This palette allows you access to all the text font, size, paragraph style, and other text-related options.



## Step 8

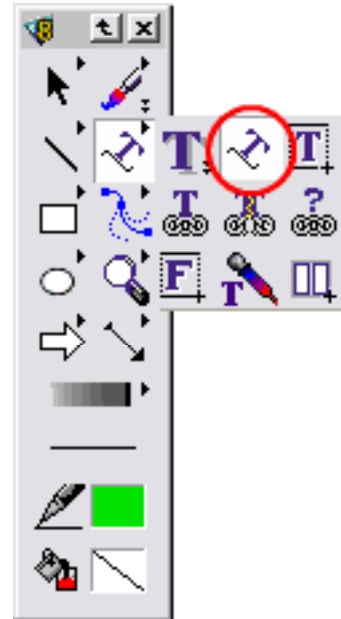
### Text on a Path

In this first text-related editing procedure, we are going to recreate the small text reading "MADE IN JAPAN" that you see on the bottom of the rounded section of the cover.

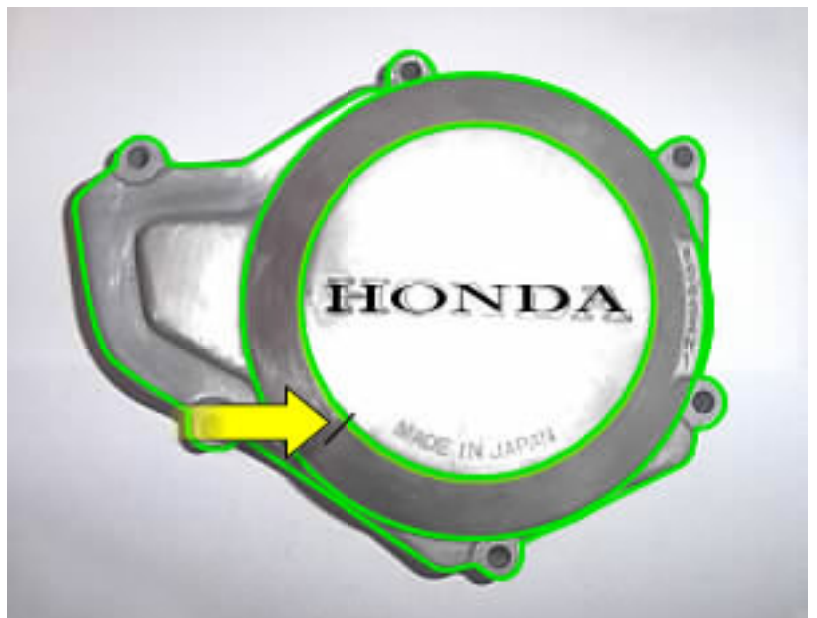


Since we need to enter text so that it will follow the rounded contour of the bottom of the cover, we will need to use the Path Text tool. This tool allows you to type text on an existing path.

Begin by selecting the Path Text tool from the Toolbox.

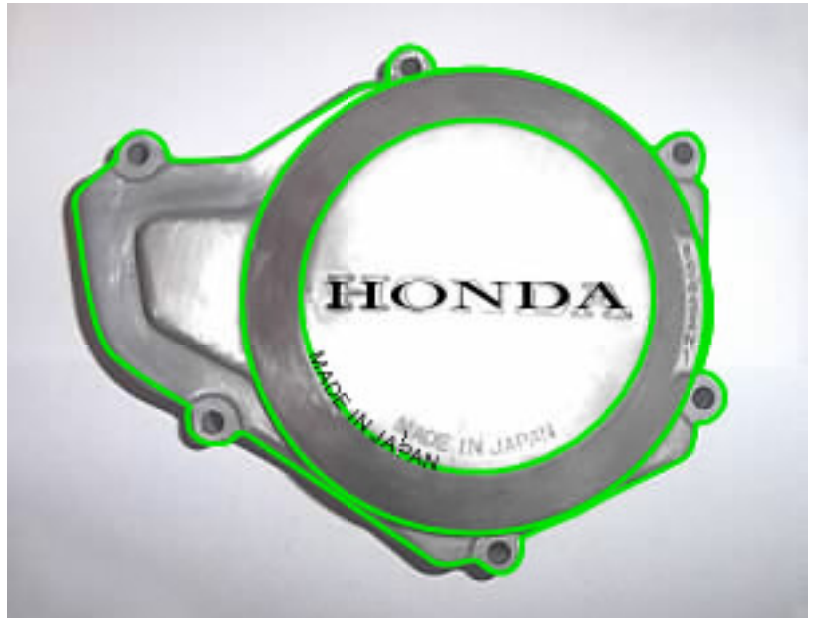


Then, click on the object or path on which you want to place the text. When you do this, the text insertion point will automatically appear. You can now start typing "Made In Japan." Remember, if you wish, you can Zoom in for a closer view.

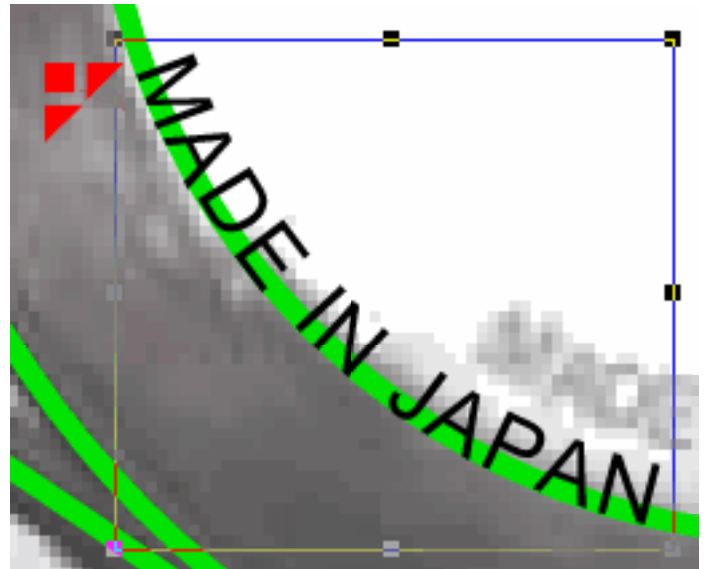


## Technical Illustration (Continued)

Your text may not be positioned exactly where you want it; however, you can easily fix that.



To make a final adjustment, Zoom in for a closer view and click on the text using the Selection tool. You will notice that 3 red Bind Position handles automatically appear. Use your pointer to select and move these position handles and align the text on the path.



If your new to this procedure, it might be a good idea to review some of the alignment options of the Bind Position handles:

### Reverse Flow Handle

Use the Reverse Flow handle (top left square) to switch the vertical orientation of the type relative to the object path and reverse the flow direction.



## Technical Illustration (Continued)

### Alignment Handle


The Alignment handle (far right triangle) is used to drag and adjust the text to a specific point along the path.



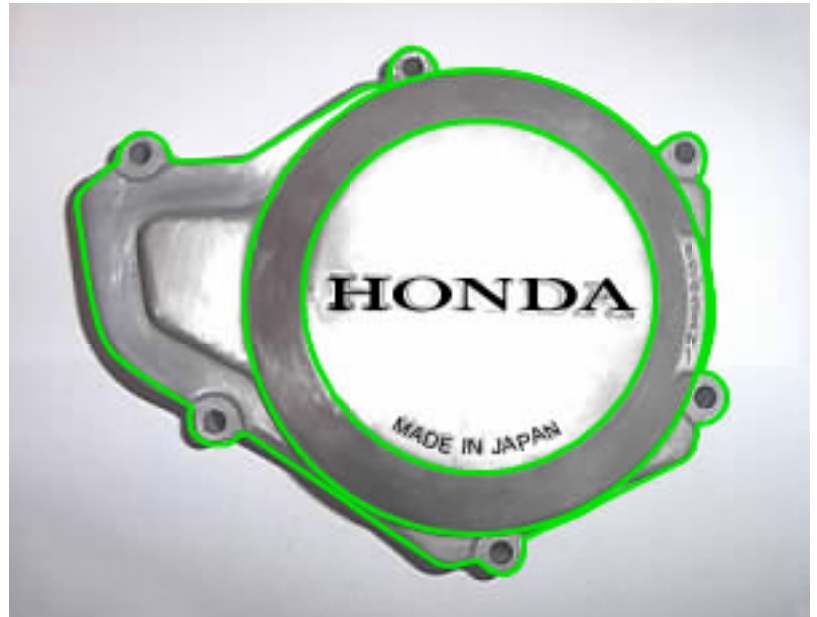
### Baseline Shift Handle

Use the Baseline Shift (bottom triangle) handle to change the elevation of the baseline relative to the path. It works in both directions so you could push the text away from the oval or pull it toward the center.



 **Tip:** Baseline is defined as the line on which most characters sit.

The Bind Position handles give you the ability to place the text with professional precision and accuracy.



## Step 9

### Adding the Final Touches

By using some of the previous steps that we covered earlier in this tutorial we are going to show you how to finish our project.

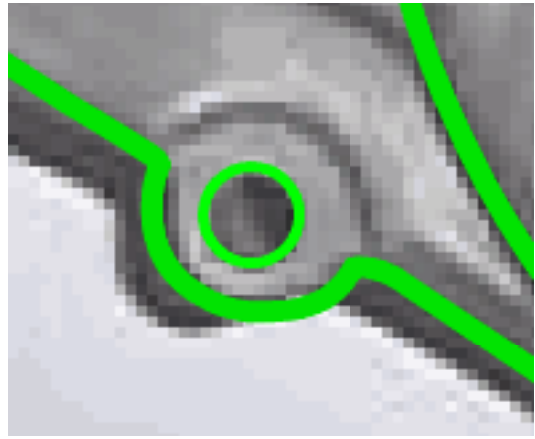
In this next step, we will add the smaller holes for that are used to hold the bolts for the cover. We will also demonstrate how to add the other less noticeable items.

First, select the Oval Tool so that we can create the bolt holes that you see on the cover.



## Technical Illustration (Continued)

Then, place the pointer over the bolt hole and drag diagonally to create a hole. Remember to hold down the Shift key while dragging to create a perfect circle. If your first effort is slightly off center, you need only select the circle and "nudge" it into place. Do this by selecting the object and pressing on the arrow keys (up, down, left, or right) which will move the circle one pixel at a time.



Notice that the image on the right shows the stator cover with the bolt holes added.



Using the Auto Curve tool, we will finish the illustration by adding some of the small details. Also, finish up and use the Text tool to add the small numbers on the right side of the cover.



## Step 10

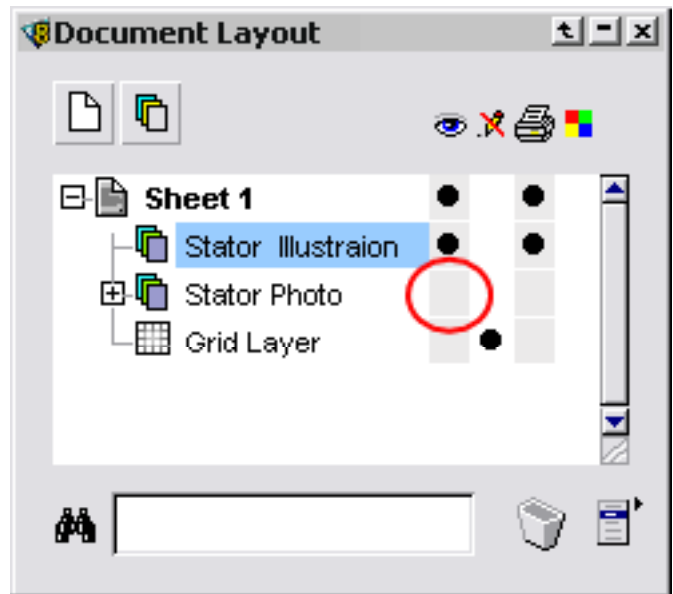
### Completing your Illustration

Now, to complete the illustration, select all of the curves as well as text objects and change the Pen Ink color to black.

We discussed how to change ink colors in Step 4 on page 2.



Now if closed, open the Document Layout palette. Click on the black dot under the "Eye" icon that is adjacent to the Stator Photo layer. This will hide the image of the Stator Photo. Remember that you must have the Stator Illustration layer selected to make the Stator Photo layer invisible.



Congratulations! You've successfully completed the illustration of the stator cover. If you found this project of interest, you might want to take a second and review our other illustration tutorials.

