

Addendum 21
Digitizing Traditional Appliqué and
Appliqué for Precut Shapes
by
Marjorie Busby



**About the Author, Marjorie Busby**

Marjorie began quilting when her first child was born and has been exploring methods of quilting for the past 30 years. Her first love is using technology in the design and completion of all of her quilts and that is apparent in the tools she uses and in her finished quilts and embroidery. Her first quilts were pieced and appliqued with a sewing machine and quilted by hand. In 2004 she purchased her first longarm machine and followed that with an embroidery machine in 2009. Even more recently, she has added a computerized system to her longarm.

Marjorie began digitizing designs for computerized quilting machines in 2007 and for machine embroidery in 2009. That was the same year that she purchased her first die cutting machine from AccuQuilt. Using precut shapes was the impetus for developing new methods for digitizing embroidery as there are significant differences between using precut shapes and traditional machine embroidery for applique. These methods are also used to digitize embroidery designs for the newest cutting method which is the use of craft cutting machines for machine appliqué shapes.

Marjorie has blogged about machine embroidery for Craftsby.com as well as on her own blog at <http://bluefeatherquiltstudio.com/blog> and <http://bluefeatherquiltstudio.com/applique4precuts/>. She uses her blog to share quilting and embroidery tutorials and methods and travels to quilt guilds to speak about quilting and cutting techniques. Her machine embroidery designs can be found at AccuQuilt.com. She also has a Youtube channel demonstrating various quilting and cutting techniques. See <http://www.youtube.com/user/mgbusb/videos>

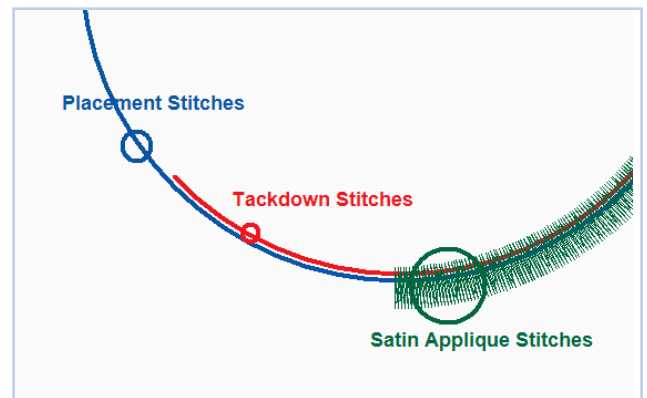


Introduction

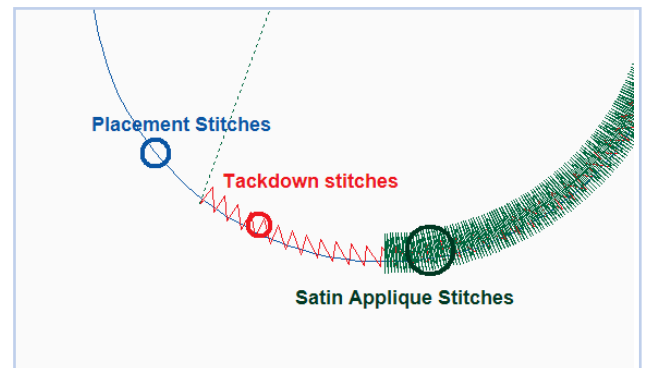
One of the most exciting developments in machine embroidery appliqué (MEA) is the use of precut shapes from die cutters and electronic craft cutters. These machines were originally developed for paper crafts, but they are also a great way to cut appliqué shapes from fabric. This simplifies the process of MEA for both the digitizer and the embroiderer.

It is important for the digitizer to understand the differences in digitizing for traditional machine embroidery appliqué and for machine embroidery appliqué using precut shapes. The difference between the two methods assures that the appliqué patch is completely secured with stitches.

With traditional MEA, the placement line is stitched and the fabric patch is placed on top of the placement stitches. The tackdown line is then stitched onto the fabric. The hoop is positioned or removed from the machine and the fabric patch is trimmed very closely along the outside of the tackdown line. This creates a fabric edge that extends slightly past the placement/tackdown line.



With precut shapes, the placement line is stitched and the shape is then fused or glued just on or just inside the placement line stitches. With the exception of a traditional blanket stitch, a zigzag tackdown line is then stitched that bites into the fabric and just over the fabric edge onto the placement line. Thus, the fabric edge does not extend beyond the placement/tackdown line.





Cutter Basics

There are three kinds of cutters that are most commonly used for creating precut shapes: die cut machines, electronic craft cutter machines, and laser cuts. Die cut and electronic craft cutter machines are available for home use. Laser machines are used commercially, but fabric laser cut shapes may be purchased and digitized for machine embroidery. For the purposes of this discussion, we will talk about die cut machines and electronic cutting machines.

Die cutting machines have blades embedded in foam and the cut is created when fabric is sandwiched between the foam/blades and a mat and manually rolled through a machine that exerts enough pressure to create the cut. Because pressure and foam are used with this type of cut, there is always a possibility of some distortion of the shape. This distortion can be prevented by using good cutting techniques. Each manufacturer provides information for getting accurate cuts.

When digitizing for die cuts, the digitizer assumes that the shape will be cut with the right side of the fabric facing up, unless the design itself dictates otherwise. In that case, written documentation of how shapes are to be cut should be included with the embroidery set. In addition, the best method for cutting is to use a lightweight fusible on the wrong side of the fabric, and make the cut with the backing paper still adhered to the shape. A large pin can be used to score the paper for removal before fusing. Some individuals will use fabric basting glue instead of fusible. In this case, shapes may be cut with layers of paper to assure accurate cuts.

Electronic cutting machines use a single blade. The fabric is adhered to a plastic mat and the shape is cut as the blade traces the shape on the fabric. The cutting line comes from a scalable vector graphics (svg) file which is separate from the machine embroidery file. Some electronic cutters also use a dxf file format while others use a proprietary file format. Success depends upon getting the fabric adhered securely to the mat and adjusting the pressure of the blade so that it cuts cleanly through the fabric. There are even newer electronic cutting machines that use a direct scan of a shape to create the cutting file within the machine itself. With constantly evolving and improving technology, it is important to read the documentation that comes with the machine and to search for information from bloggers who are using these machines.



Digitizing Precut Shapes

When digitizing embroidery designs for precut shapes, you will need to work from an accurate outline of the precut shape. This outline must follow the edges of the shape exactly and the measurements must be the same as the fabric that will be cut from the machine. The Art and Stitch software has many shapes already included in the built-in library. However, you may want to use your own artwork and in that case, you will need to create a Backdrop to be used for tracing.

Creating a Backdrop for Tracing a Precut Shape:

1. Make a cut of the shape exactly as it will be cut from fabric for stitching.
2. Scan the shape using the image scanner on your printer. Set the scanning option on your scanner to 200 dpi or in that range. While you can scan at a higher resolution, you do not need the higher number of pixels. The higher dpi will create a file that may be so large that the software has difficulty processing it.
3. Save the scan as an image (jpg, gif, png).
4. In Art and Stitch, select the backdrop tool and browse to the image location. Open the image as a backdrop.
5. Trace the shape using any of the tracing tools that work best for the shape. The Outline Wizard or the Magic Wand will work for tracing. I prefer to use the Outline Wizard for scans of precut shapes.(refer to chapter on tracing).
6. When tracing is complete, make any adjustments needed to the outline. In the properties panel, in the Transform tab, check the measurements of the outline compared with the measurements of the precut shape. Make any adjustments needed so that your outline has the same measurements as the precut shape.



Digitizing the Cute Car using the Appliqué tool



Be sure that your Design Page is set to EMBROIDERY (via menu File > New, or for a permanent change, via menu Tools > Format).

Step 1. Select and arrange shapes for digitizing.



Open the Library, folder “Emb AccuQuilt Go Shapes”, scroll down and select “55354 Cute Car”.

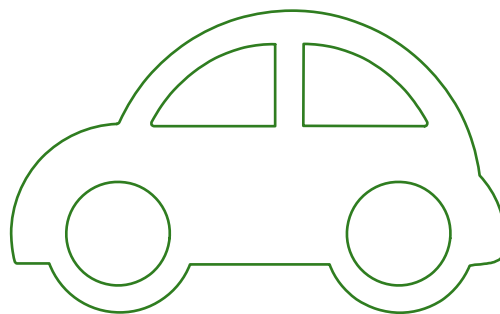
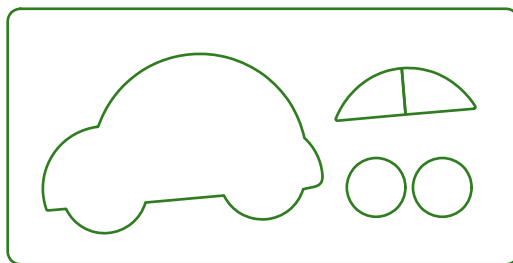
Note: For non-AccuQuilt shapes, start with an outline of the shape to be digitized. This may be a shape from the Library or a shape that you have created from a backdrop using the Outline Wizard or Magic Wand. When the shape is complete and ready to digitize, confirm that the measurements of the outline are the same as the shape to be stitched.

Select and delete the frame around the objects and arrange the shapes using the alignment tools and grid. Select all and bring to center.

Note: This is a good time to Save the file as an ans file. One can save the file with different names throughout the digitizing process so that a step can be retrieved if needed. When the process is complete, all process files may be deleted.



While the shapes are still in Artwork format, use the Reshape tool to check all outlines and delete any nodes that are not needed. A smoother line creates the nicest appliqué. Be sure that while deleting nodes the shape itself stays the same.



Arrange Shapes: move, align, rotate a bit, but do NOT resize.

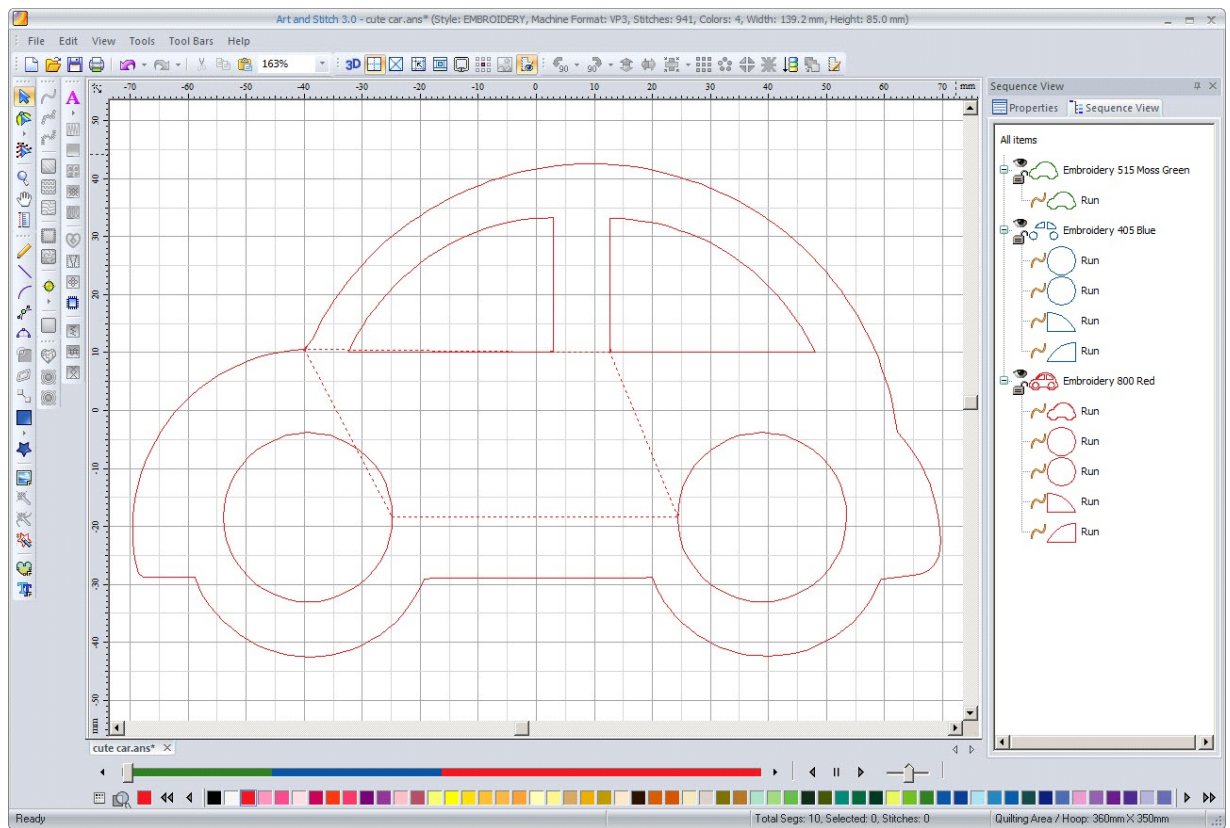


Digitizing the Cute Car using the Appliqué tool - Cont'd

**Step 2. Create the placement stitches for the appliqué shapes.**

Convert the first set of shapes to run stitches. Check the start/stop points on each shape to be sure thread jumps will move from shape to shape without having thread trapped under the next set of stitches. The car appliqué is done in two layers. The first layer is the car and the second layer has the windows and wheels. Change the color of the car so that the stop/thread change will tell the machine to stop before stitching the placement lines for the second layer.

When you are satisfied with the order of the placement stitches, make a copy of all the shapes and change this second set of shapes to a single color. This second set of shapes will be used to create the appliqué stitches. They are shown in red below.

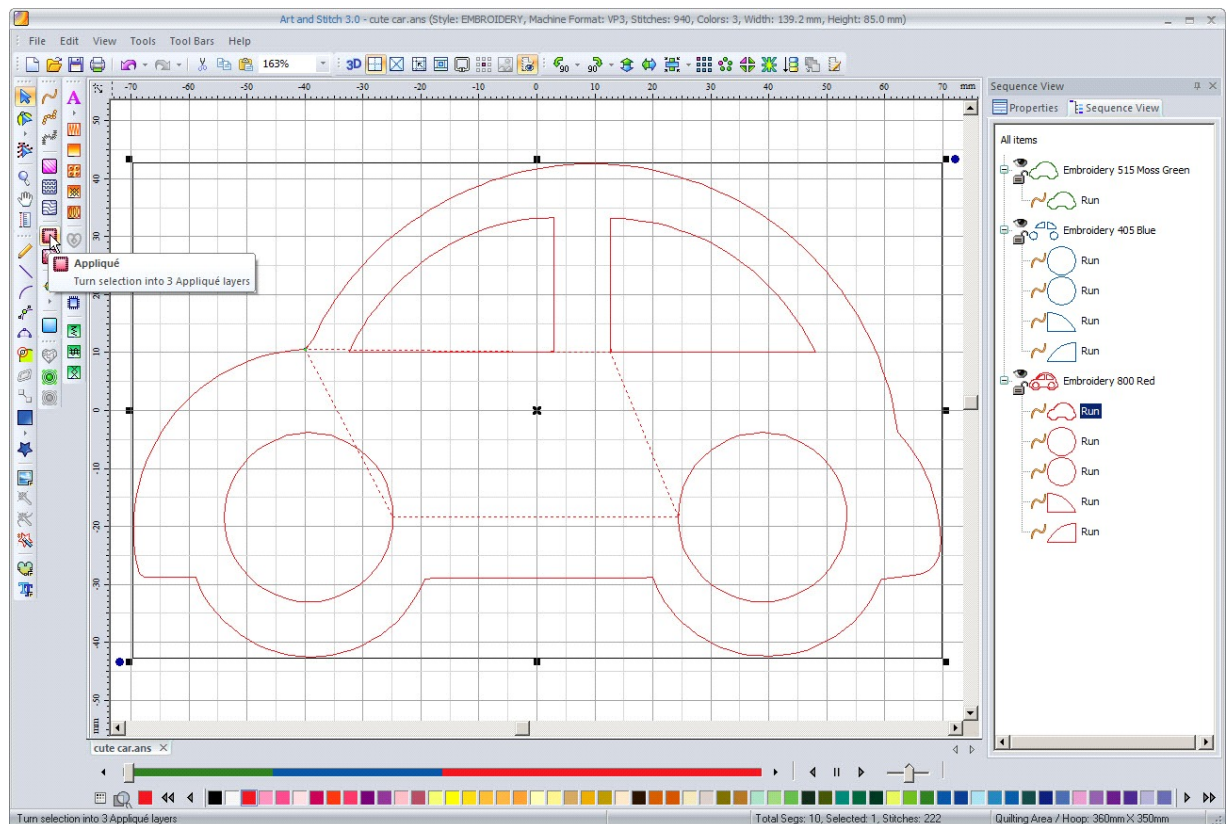
*Outline of Car to appliqué*



Digitizing the Cute Car using the Appliqué tool - Cont'd

Step 3. Create appliqué stitches for each of the shapes.

Using the Appliqué tool, select each of the red shapes and convert each shape to three layers of appliqué.



Create tackdown-appliqué stitches for car

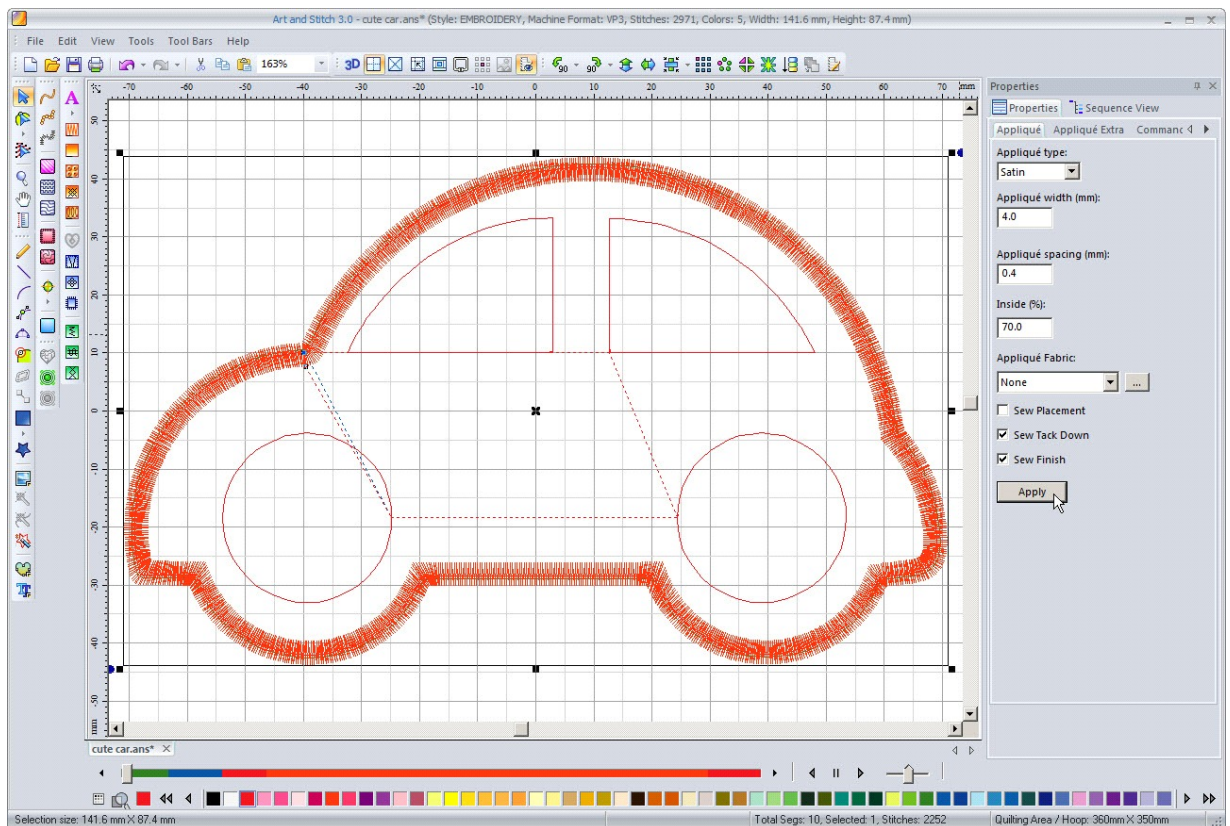


Digitizing the Cute Car using the Appliqué tool - Cont'd

**Appliqué tab:**

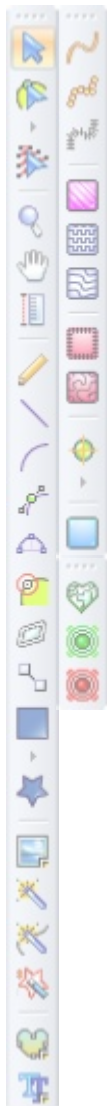
With the appliqué shape selected, open the Appliqué tab in the Properties Panel. Uncheck Sew Placement. Set the appliqué width and spacing as desired. The Inside setting for precut shapes should be 70% so that the stitches cover the zigzag tackdown and stitch into the fabric so that it is held securely.

For traditional appliqué where the fabric is tacked down with a straight stitch, the Inside setting should be 50%.





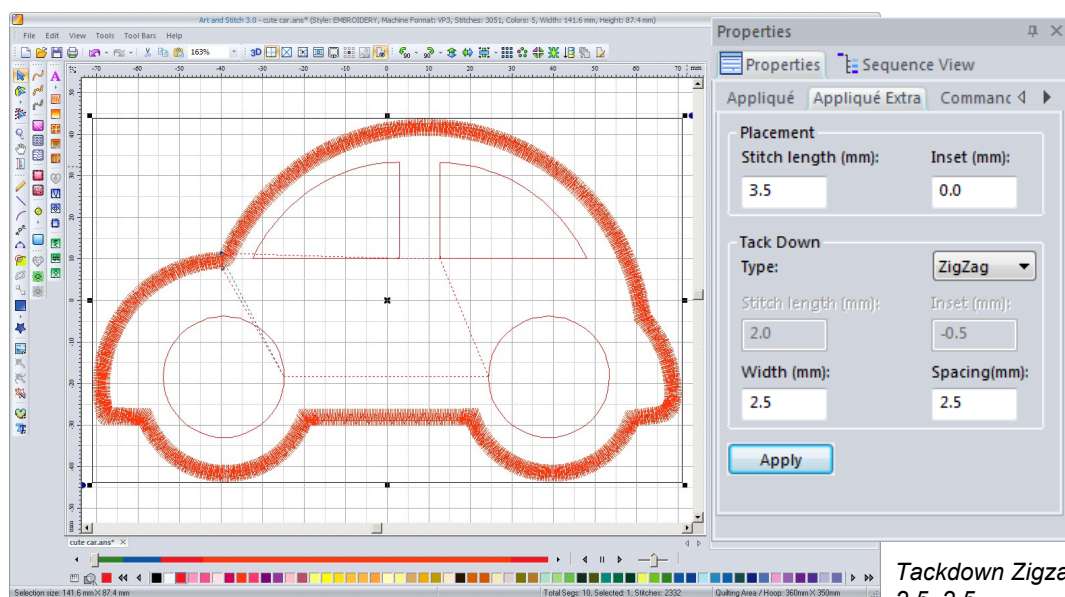
Digitizing the Cute Car using the Appliqué tool - Cont'd

**Appliqué Extra tab:**

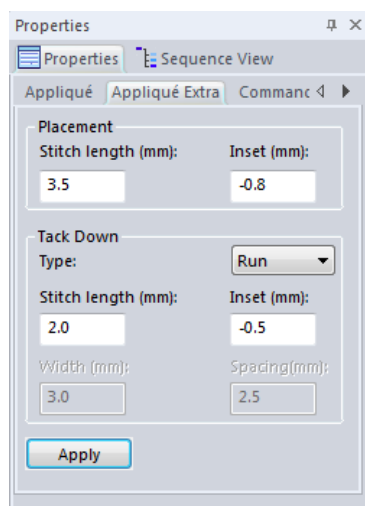
Select each appliqué shape and open the appliqué Extra tab in the Properties panel. This is where the parameters for the Placement and Tackdown stitches are set. Because the placement stitch is unchecked on this layered appliqué, we are only concerned with the parameters for the Tackdown stitches. In the Tackdown box, select ZigZag from the dropdown menu and set the stitch width to 2.5. Click on Apply. This stitch width will cover the edge of the appliqué shape nicely but will not show underneath the satin stitch.

When the parameters for all the appliqué shapes have been set, change the color of both the tackdown and the satin/motif stitch to the same color.

Note: When creating single layer appliqué, the parameters for the Placement stitches will also be set here. For precut shapes, the setting for the Inset(mm) should be 0.0 so that the Placement line fits the precut shape exactly.



Tackdown Zigzag
2.5, 2.5



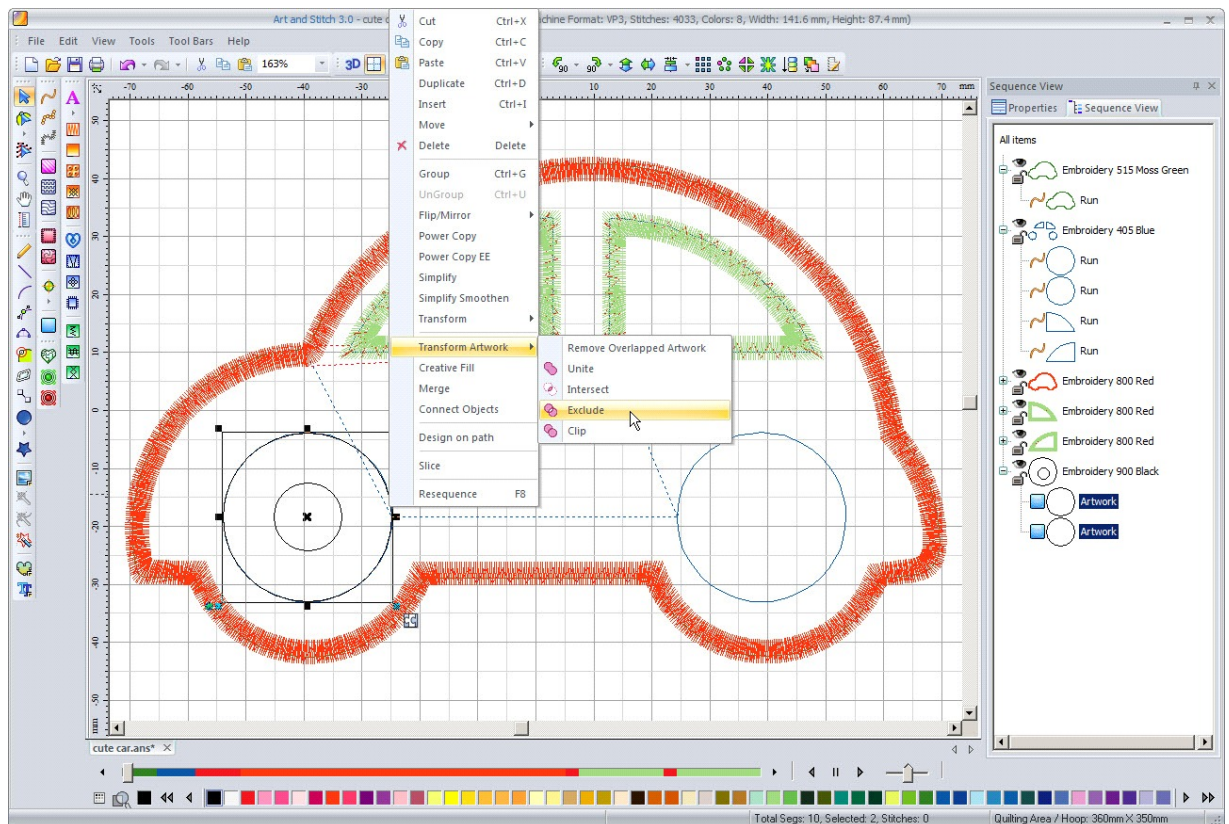
For traditional appliqué where the tackdown is a run stitch, the following settings should be used: Stitch Length (mm) 2.0, and a small Inset of -0.5 mm.



Digitizing the Cute Car using the Appliqué tool - Cont'd

Step 4. Create decorative stitching for the wheels.

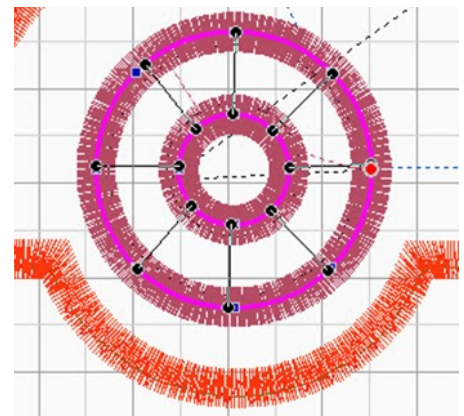
The decorative stitching for the wheels is created using the Magic Cutwork tool. Delete one of the wheels and change the remaining wheel to Artwork using the Back to Artwork tool. Using the Shape tool, make a small circle inside the wheel. Using the adjust tools, adjust the circles so the small circle is exactly inside the outer circle. Using the Transform Artwork tool, select the Exclude option and make a single circle object that is a circle within a circle.



Reduce the size of the new circle object to 97% with the Transform tool in the Properties panel.



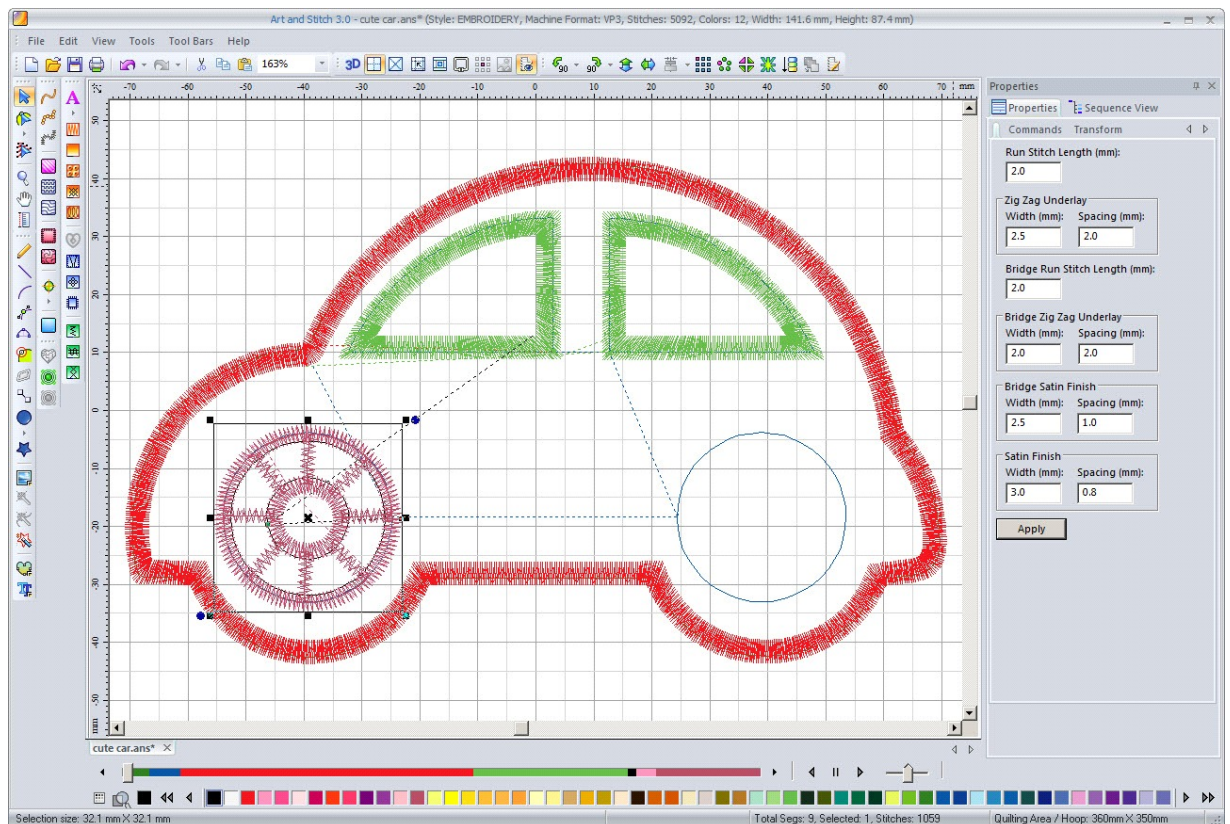
Select the Magic Cutwork tool and apply to the circle object. Set bridges between the two circles to make spokes for the wheel.





Digitizing the Cute Car using the Appliqué tool - Cont'd

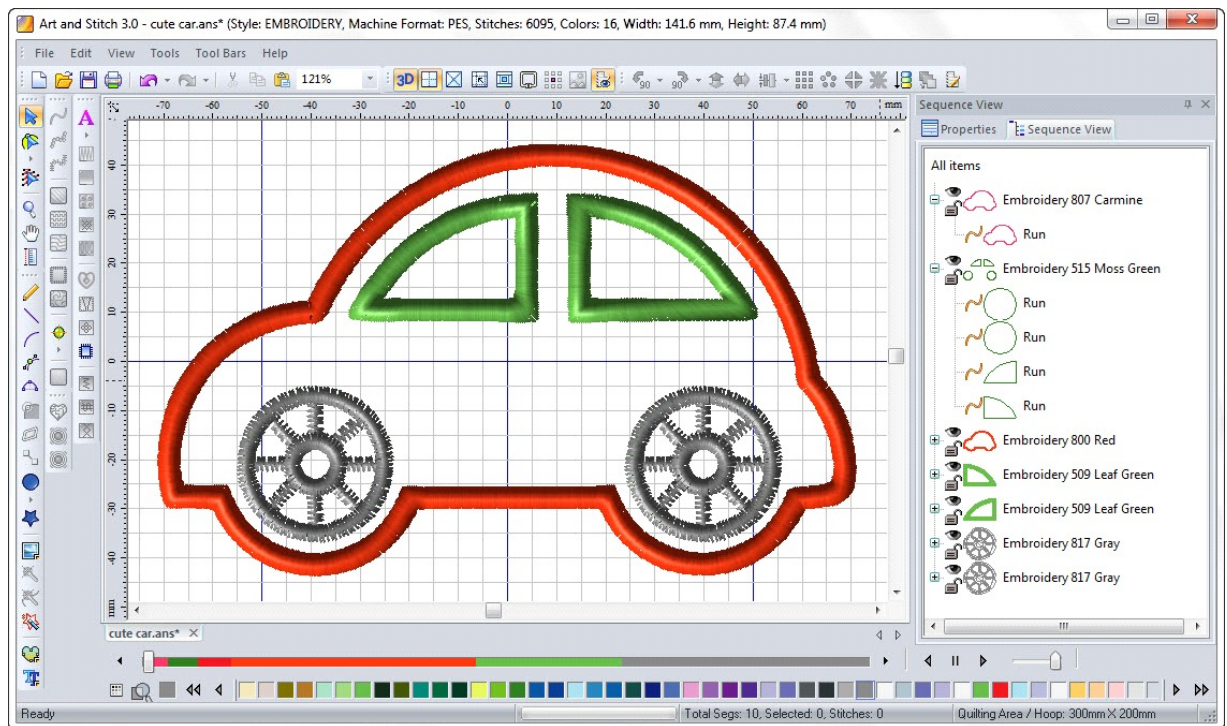
In the Properties Panel, adjust the satin and bridge stitches to a width that is pleasing to you. When the wheel is adjusted as you like, make a copy of the wheel and move to the second position aligning so that the wheels are properly spaced and the stitching is centered inside the placement lines.





Digitizing the Cute Car using the Appliqué tool - Cont'd

The final result shows a very Cute Car with spoke wheels and opportunities for creating many other variations. Using the Appliqué tool provides the most streamlined process of digitizing for both traditional and precut appliqué methods. To create the car for traditional appliqué using the tackdown and trim method requires only minor adjustments and everyone who enjoys appliqué will have the method of their liking.



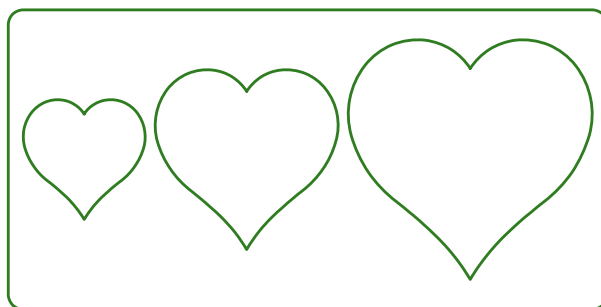
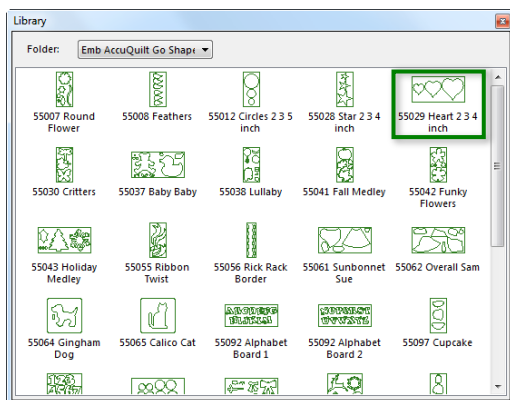


Using the Merge command with the Appliqué tool

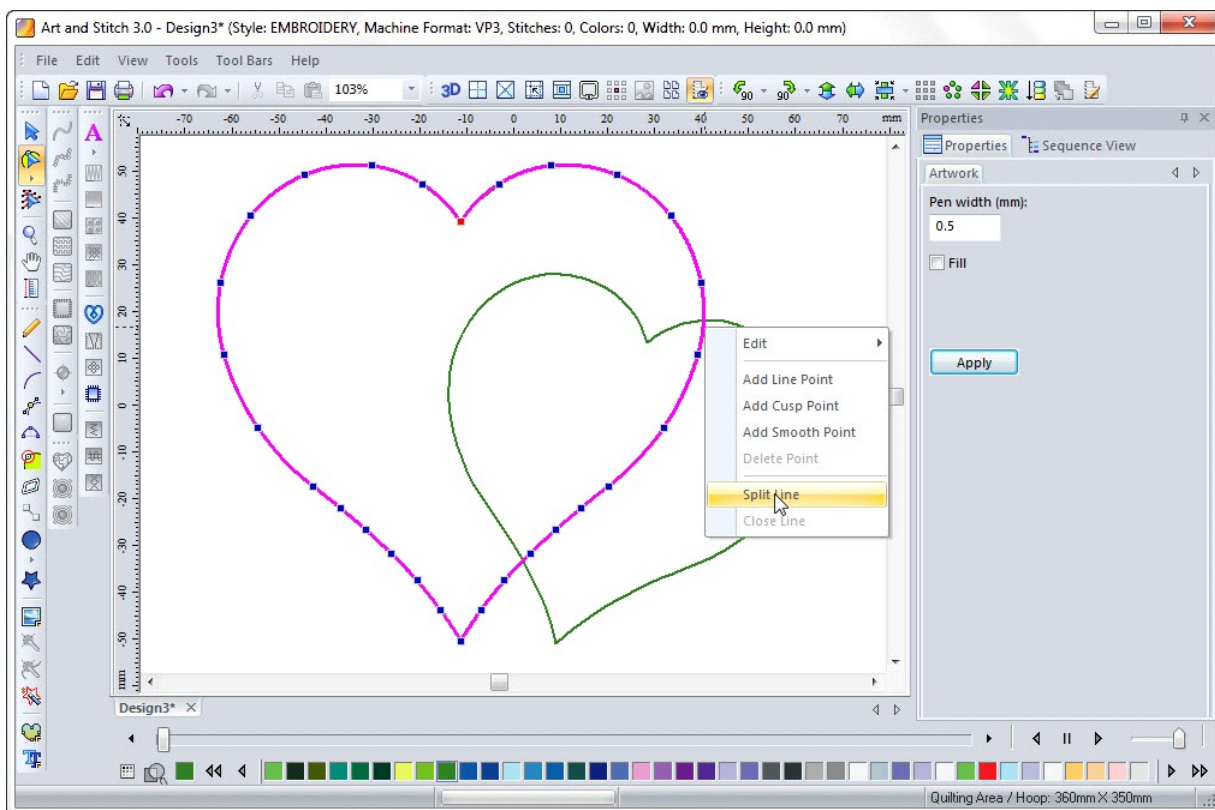
One very helpful feature of the Applique tool is that it can be used with the merge function to sort the layers of applique of multiple objects into three layers.



The hearts (55029 Heart 2 3 4 inch.ans) from the AccuQuilt GO!® shape library are used in this example. The large and medium sized hearts are selected and the remaining shapes are deleted.



The shapes are arranged into the desired design and overlapping lines are deleted by using the Split Line command (right-click with Reshape Tool) to separate the line underneath the smaller heart.

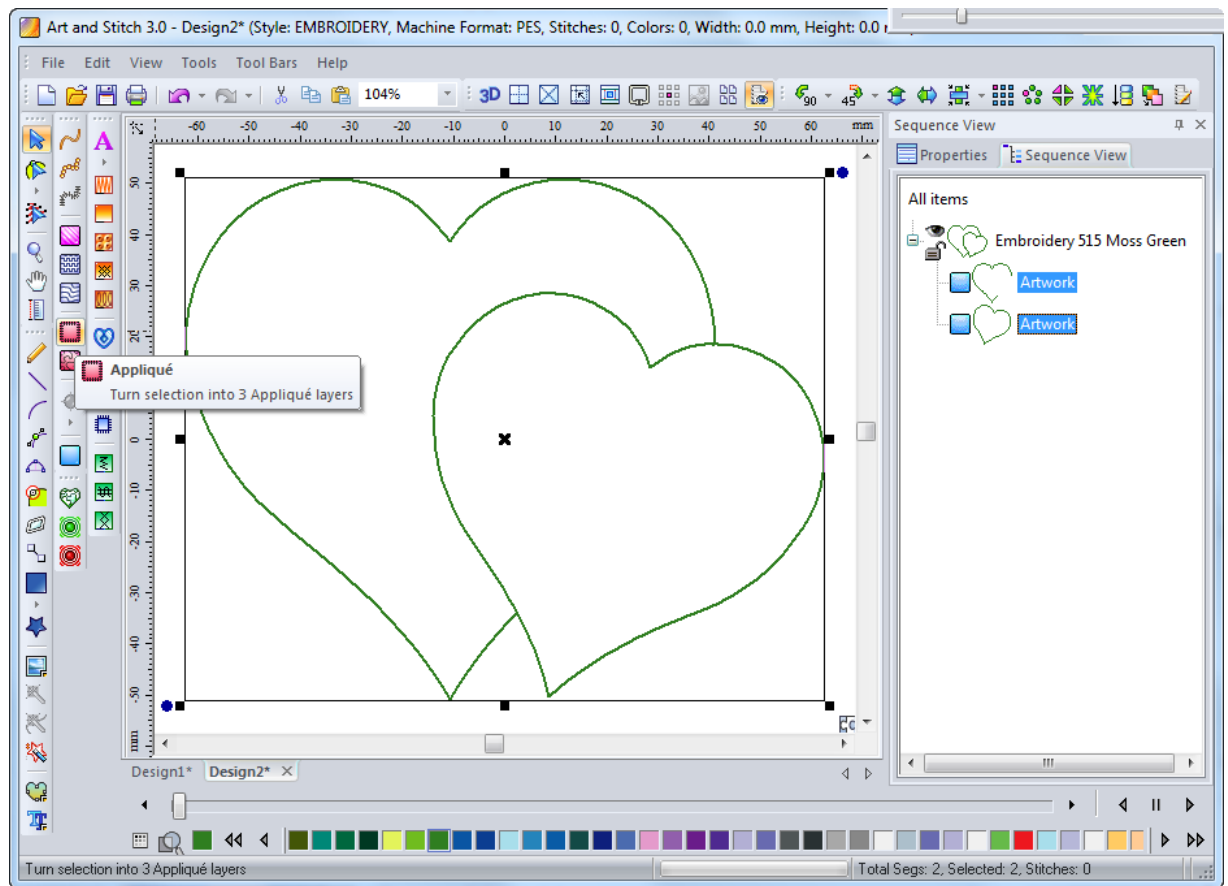
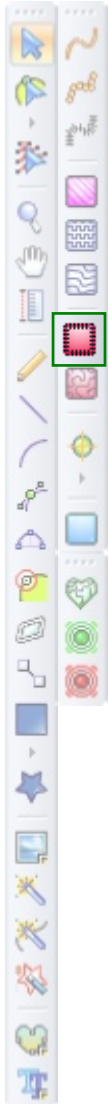




Using the Merge command with the Appliqué tool - Cont'd



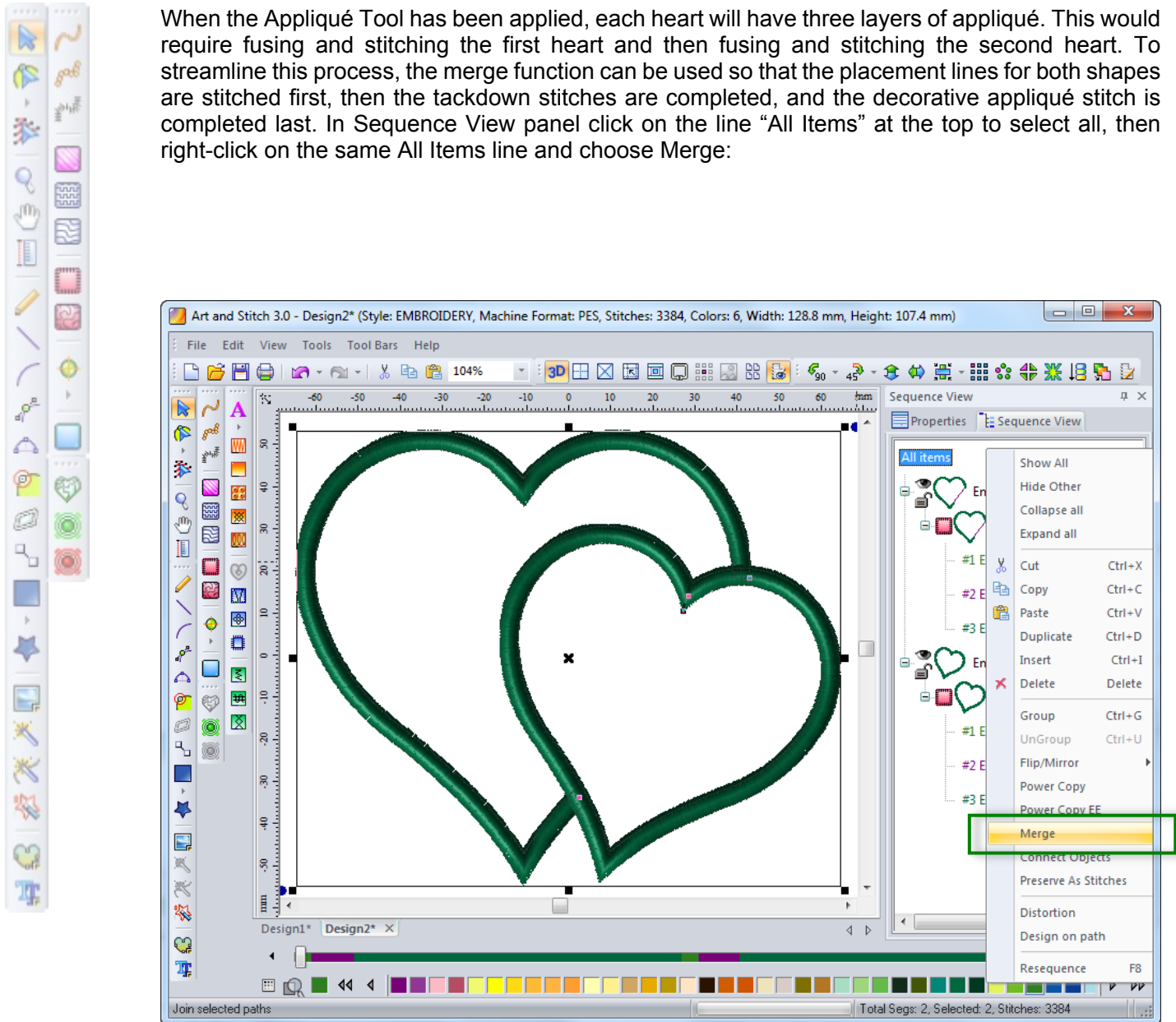
Both shapes are selected and the Appliqué Tool is applied to the shapes. The settings for the appliqué are described in the tutorial for the Cute Car. To review: The placement line has an inset value of 0.0. The tackdown line is a zigzag with a width of 2.5 and stitch spacing of 2.5. The satin stitch has a width of 4.0 and stitch spacing of 0.4.





Using the Merge command with the Appliqué tool - Cont'd

When the Appliqué Tool has been applied, each heart will have three layers of appliqué. This would require fusing and stitching the first heart and then fusing and stitching the second heart. To streamline this process, the merge function can be used so that the placement lines for both shapes are stitched first, then the tackdown stitches are completed, and the decorative appliqué stitch is completed last. In Sequence View panel click on the line "All Items" at the top to select all, then right-click on the same All Items line and choose Merge:

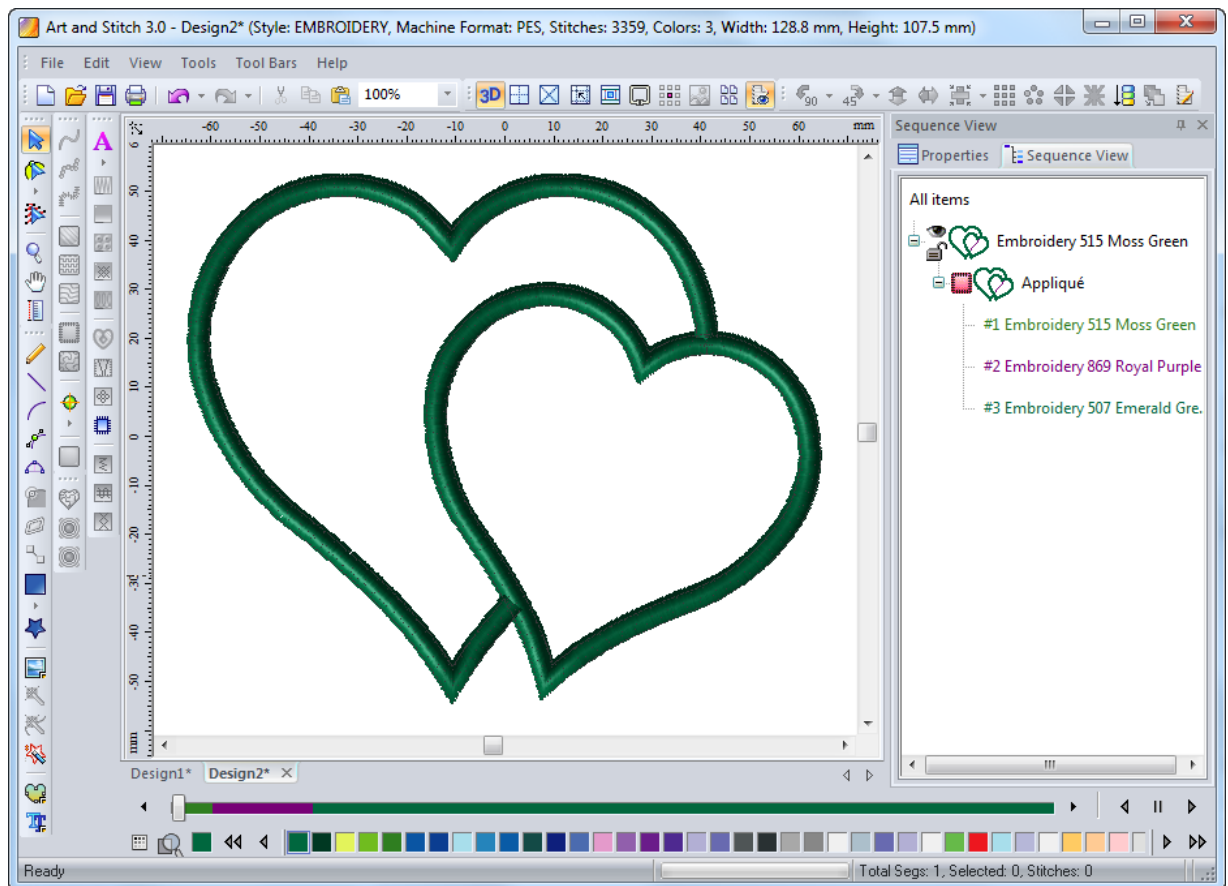




Using the Merge command with the Appliqué tool - Cont'd



Isn't this beautiful? and it stitches in the most efficient manner possible. The merge function can be used to sort colors on any appliqué where all the shapes are on the same layer and have the same color thread. Thus, one can add a second layer of shapes and use the merge function again.





Using the Merge command with the Appliqué tool - Cont'd

This example shows a heart motif where the merge function was used on the first set of appliqué hearts, the larger hearts. The merge function was used a second time on the second set, the smaller appliqué hearts.

Use the merge function to experiment with your appliqué designs to discover more possibilities.

