**technically speaking: learn to stitch on difficult fabrics**

By Deborah Jones

**The Direction of Stretch**

Knit fabrics stretch horizontally and vertically, so that presents challenges when you’re set to sew. Learn how to make that stretch work for you.

Before you even start embroidery on a stretchy material, you need to see which direction it stretches. This will help you determine your hooping procedure and possibly the direction that you’ll stitch your design.

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**Digitizing Pointers**

The underlay on patterns for stretch fabrics should tack the face fabric to the stabilizer securely to help avoid shifting. When you’re placing a large design on a knit fabric, consider slightly lengthening fill stitches for softer, loftier embroidery. Avoid overly long satin stitches, which can cause a soft knit to be pulled inward.

**STEP 1 Test for stretch.** To test a garment for stretch, gently pull on the fabric to see if it gives most in the horizontal or vertical direction. The majority of sportswear garments, such as golf shirts and sweatshirts, stretch most horizontally. At least one well-known supplier manufacturers a sweatshirt that’s cut on the cross-grain of the fabric, placing the stretch in the opposite direction. These sweatshirts have a knit gusset inset on each side to accommodate the need for additional stretch. These shirts were made this way to reduce the lengthwise shrinkage factor. So, always test first if you haven’t previously worked with a particular stretch garment type.

If one direction is particularly stretchy, consider hooping or rotating the design so that the predominant fill stitches stitch in the opposite direction. In other words, avoid having the fill stitches running in the same direction as the stretch, which could cause pooching. Of course, your underlay should also tack the stretch fabric to the stable base of stabilizer to help minimize this tendency.
STEP 2  Get ready to hoop. When hooping standard stretch fabrics, I pull gently in the direction of the least stretch, which is generally the vertical direction (see Figure 1). This puts a slight tension on the fabric, which helps prevent the stretchy fabric from being pushed around by the presser foot.

It’s imperative that you hoop a continuous piece of stabilizer completely in the hoop, extending from all edges. Avoid placing two pieces of stabilizer in the hoop to cover the needed area, although two pieces of stabilizer may be layered (see Figure 2). Proper support for an unstable fabric depends on the stabilizer being hooped securely and completely. If it isn’t, you’ll likely experience undesirable stitching, including outlines that are off-track and fabric that bubbles. If it helps, imagine that you’re actually embroidering the stabilizer and that the top fabric is just in the way.

▲ Figure 1. The vertical direction usually offers the least amount of stretch on knit garments.

▲ Figure 2. Don’t place two pieces of stabilizer in the hoop to cover the needed area.
**STEP 3**

**It’s time to stabilize.** You should almost always use a cutaway stabilizer with stretch fabrics. Rare exceptions could include a light stitch count on a smooth knit that has substantial body, such as a sweatshirt. If you choose to embroider a sweatshirt with a cutaway, select one that has a soft, rather than crisp, hand. A soft tearaway variety won’t perforate as completely as a more paper-like crisp tearaway.

Many stretchy fabrics are lightweight and most have a supple hand. While a heavy cutaway stabilizer will likely support the embroidery, it’ll detract from the qualities that make knits soft and comfortable to wear. For this reason, I prefer to use a no-show mesh stabilizer variety, sometimes called Polymesh, for most of my knit embroidery.

One exception is when I embroider on bulky knits. Bulky knits have a tendency to allow the stabilizer to show through the knit. In this instance, I like to use matching polyester organza. A favorite of old-time manual machine embroidery artists, this material is very soft yet stable and any show-through isn’t noticeable because of its matching color (see Figure 3). I keep several basic colors on hand.

I use water-soluble topping with many types of stretchy fabrics. It can be helpful even on lightweight knits, such as the popular tissue knits. With textured knits, the topping creates a smooth stitching surface, helping to achieve clear lettering and detail. When used in combination with lightweight knits, the topping helps avoid the fabric being pushed around during the stitching process.

The topping can also avoid hoop marks on delicate knits. When hooping a delicate knit, avoid pulling on the fabric after it’s in the hoop because holes can appear easily in lightweight knit fabrics. Consider wrapping the hoop or using a tissue-paper buffer. This is helpful to avoid hoop marks on dark-colored knits and knits with a distressed finish.

**STEP 4**

**Set your embroidery speed.** Your stitching speed should be kept to a reasonable level when stitching on stretchy fabrics. The fabric needs time to recover from the last needle penetration before the next one is applied. You might find that you can stitch faster on large fill-stitched areas, but get better result with a lower speed on satin stitches and outlines.
**SWATCH WATCH:**

**Eucalyptus**

Eucalyptus is a hot new neutral color in knits for 2010 that keeps cool as a fashion-forward and environmentally friendly color trend. A little bit of green meets a touch of gray and just a hint of khaki to create eucalyptus, a color that evokes the eco-friendly movement with its earthy, leafy tones and excels in practicality as a neutral that can be paired with any other shade for a corporate or casual look. Decorators can emulate the popularity of this signature shade with khaki, olive or other muted, neutral green-brown shades.

**STEP 5**

**Choose your needle.** Use a ballpoint needle with stretchy fabrics to avoid cutting the yarn and destroying the interlocking structure of the knit. Keep in mind that the size of the ballpoint is designed to correlate to the size of the yarn that it’s pushing aside. For this reason, when you’re embroidering stretchy fabrics made with bulky yarn, you may consider using a medium ballpoint, often designated by the letters “SUK” (see Figure 4).

- Figure 4. Consider using a medium ballpoint when you’re embroidering stretchy fabrics made with bulky yarn.