

## The "Pull Test"

The common cure for large looping on the underside of fabric.

Welcome to my first article in a series we have named From the Bench. I have chosen this topic because it is the most common mistake I see from my customers.

### **Fault:**

There are two forces that set the knot between the top and bobbin thread in your fabric; top tension (value of drag on thread) and the up-stroke of the take-up lever. The classic symptom of a "zero" tension condition is a series of large loops on the underside of fabric. Those loops you see are the top thread. An entire seam can be sewn with this condition without you noticing leaving a long row of stitches that must be pulled out.

### **Diagnosis and Fix:**

The first and most important step is to make sure you thread your machine with the presser foot in the raised position and that your tension dial is turned to the machine's designated value (usually 4-6). Machines are designed to release the tension discs when the foot is raised and clamp the thread when it is lowered. If you thread your machine with the presser foot lowered, the discs are clamped shut and your thread will be unable to get in between the discs and you will get zero tension causing those nasty loops.

Testing for a zero tension condition is easy. I have called this *The Pull Test*. Simply thread your machine correctly (don't forget the take-up lever eyelet). Do not thread the eye of the needle yet. With the presser foot still raised pull on your thread. You should feel very minimal or no resistance. Now lower the presser foot and pull the thread. You should feel a significant drag on the thread. Now thread the needle and sew. Those loops should be gone and you are on your way.

If you still get no tension when you lower your foot and have your dial at the correct value, you have a problem. You may have shredded thread in between your discs preventing them from closing, or your machine's tension release mechanism may be malfunctioning. Either way these repairs are easy for a trained technician.

I hope this article helps you understand the concept of tension and more importantly relieves the tension that has built up in your shoulders from the stress of those dreaded loops.

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