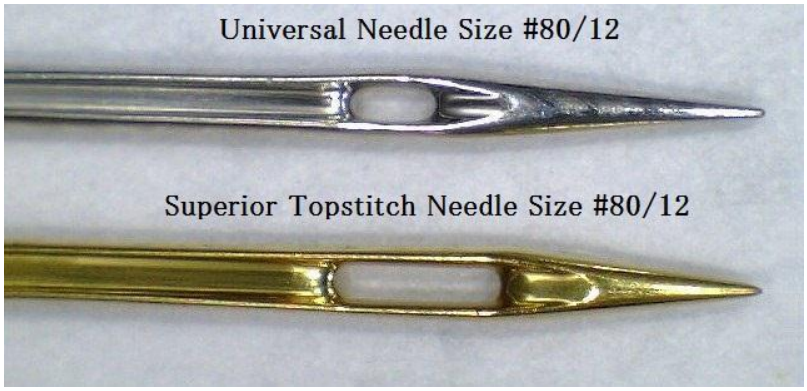
- **Superior's Titanium-coated Topstitch Needle**



The titanium-coated Topstitch needle is a powerful tool to have in your quilting & sewing supplies. Topstitch needles are the standard needle used by professionals in the quilting and sewing industry. Taking the technology that commercial needles have with a thin coating of titanium-nitride and combining this coating with the topstitch style needle gives us a "best of both worlds" revolutionary needle for the quilting and sewing industry.

Compared below is - **Superior's #80/12 titanium-coated Topstitch** needle and another brand's Universal 80/12 needle under 40x magnification.

Universal Needle- Size 80/12

Superior's Topstitch Needle - Size 80/12

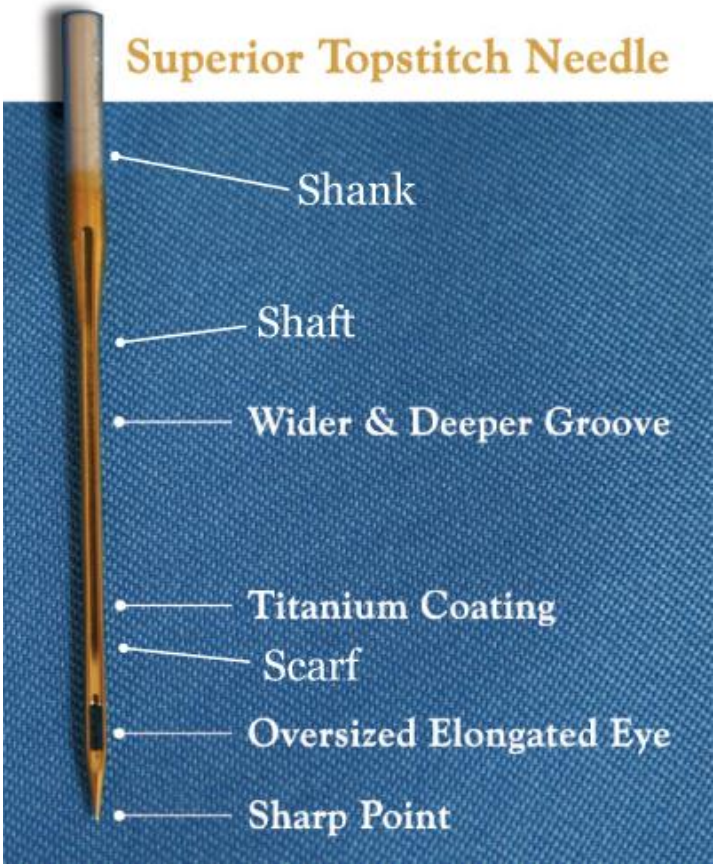
Universal Needle- Size 80/12

Superior's titanium-coated Topstitch Needle - Size 80/12

We can see that the eye on Superior's Topstitch needle is more than twice as long as the universal's. Why is this important? The elongated eye allows for the top thread to move much more freely when being stitched. Less stress is put onto the thread at the point where the stitch is created which in turn puts less friction on the thread.

Superior's Topstitch needles also have a shorter eye-to-point length than the Universal needle. This again means less friction on the thread and needle itself.

- **Anatomy of a Topstitch Needle**



Shank - The shank is the part of the needle that is inserted into the sewing machine. The shank is the heaviest part of the needle and is designed so to minimize needle movement by attaching it firmly to the needle bar.

Shaft - The shaft is the narrow portion of the needle that supports the functional parts of the needle. Needle sizes refer to the diameter of the shaft. (Example - A #90/14 needle refers to the diameter of the needle shaft in hundredths of a millimeter measured above the scarf. "90" is the European/Metric measurement with "14" being the American measurement.)

Groove - The groove protects the thread by hiding it as it passes through the fabric on its way to join with the bobbin thread. Some needles have exaggerated groves to protect the thread when sewing on particularly dense fabric. A needle that is too fine for the size of thread used will result in inconsistent stitches and broken threads.

Titanium Coating - Titanium nitride is an extremely hard, inert, thin film coating that is applied primarily to precision metal parts. Titanium nitride (TiN) has an ideal combination of hardness, toughness, adhesion and inertness.

Scarf - The scarf is the cut away portion on the back of the needle just above the eye. This area accommodates the hook mechanism as it rotates past the needle to engage the thread loop formed by the lifting needle. The shape and position of the scarf increases the consistency of stitching with various threads and fabrics.

Eye - The eye of the needle is the hole through which the thread passes. As the size of the eye increases, the size of the shaft increases to support it. Superior's Topstitch needles have an elongated eye, almost double the size of a standard universal needle.

Point - The point of the needle is a primary distinguishing feature in needles. Points can be sharp or ball, or a hybrid of both. The angle of the point can be slender or acute. The point can be centered or eccentric. All are designed for a specific purpose and all give the operator unique applications.

- **Tips on using Metallic Thread**

Choose the best quality thread available. The quality of metallic threads ranges as wide as that of cars. There is the Yugo and there is the Rolls Royce. Quite surprisingly, when compared yard for yard, the price of metallic thread does not vary much regardless of the quality you choose. In the metallic thread world, you will pay the same price, yard for yard, for a Yugo as you will for a Rolls Royce. The main difference is in the spool size. As a general rule, quality metallic threads are not put on small 100 or 200-yard spools. The smallest size is usually a 500-yard spool.

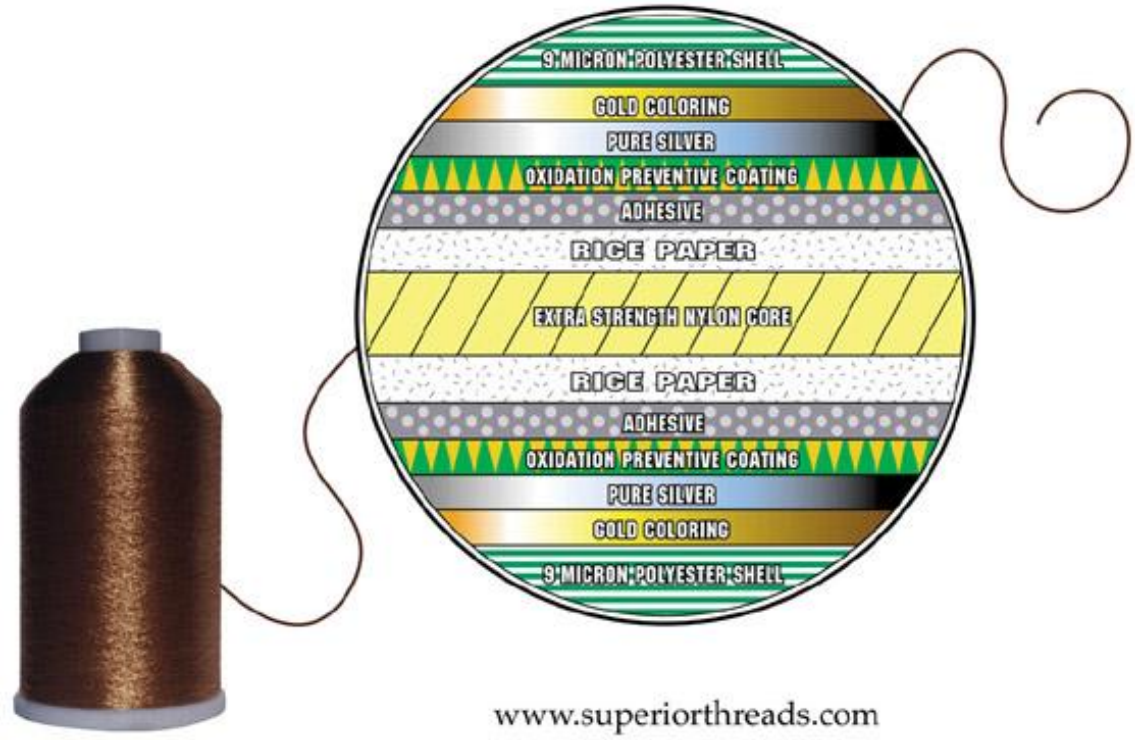
Numerous notions and techniques have been developed to try to make a poor quality thread work. We've heard them all, including, use silicon spray, put the thread in the freezer, position the spool of thread across the room, turn the spool upside down. If you start with a good quality thread, you will not need all the gimmicks.

The following tips will be sufficient to allow you to fall in love again with metallics:

1. Choose the best quality thread. Select a spool with a large spool core diameter. Avoid the skinny-core spools.
2. Use either a Topstitch needle size 90/14 or a metallic needle size 90/14. **A size 80/12 needle is too small.**
3. Loosen the upper tension setting to "one."
4. Use a smooth, lint-free bobbin thread.

- **How Superior's Metallic Thread is Made**

Superior Metallic is a #40 gorgeous thread created from proprietary layered materials. This thread stands out in any embroidery, quilting, or sewing project and is guaranteed to run on any well-maintained home/longarm machine.

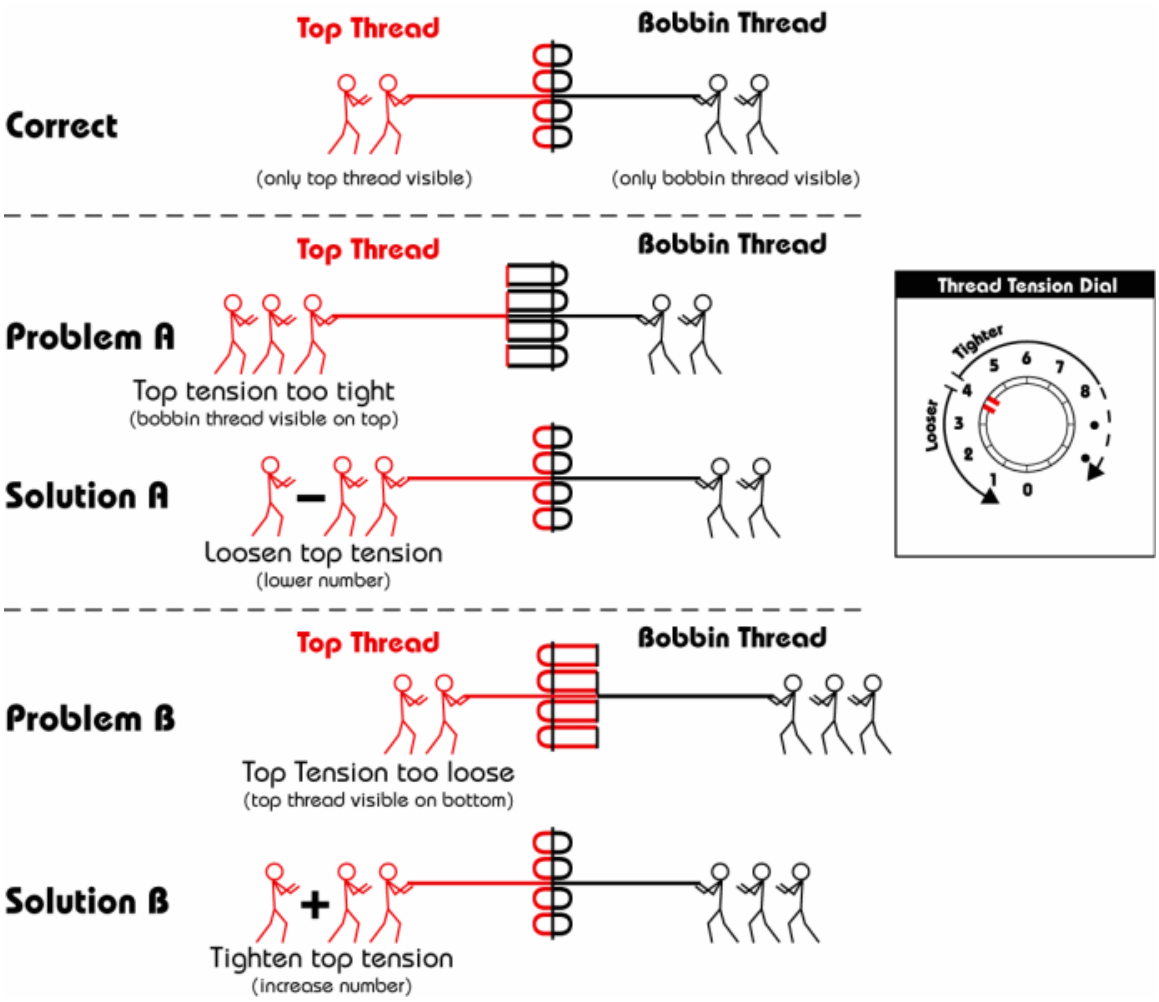


• Find the Perfect Balance with Tension Adjustment

Imagine walking into your house one day and in the middle of your living room is a brand new 60-inch plasma screen TV. Your husband just spent $3,000 on the biggest and best. And then he says, "This is the best ever! Great picture, stereo surround sound, and it gets only one channel all the time . . . ESPN!! Sports, all day every day." $3,000 for a one-channel TV sounds crazy. **But, that is what you are doing when you use only the preset automatic tension settings on your expensive sewing machine**. If you never change the auto tension settings, you are stuck on only the channels your machine likes. You are prohibiting yourself from enjoying the other channels available, such as the heavy cottons, the fine holograms, the sensitive Metallics, and other specialty threads. By overriding the auto tension settings, you can use different threads in the top and bottom. Many decorative threads require a looser upper tension setting than the auto setting provides.

By adding to or taking away from the top tension, you can equalize the strength of the two tug of war teams and create a perfect stitch. The fiber content does not need to match. The weights or sizes of the threads do not need to match, but they should be reasonably close (for example, don't use an ultra-fine 60 wt. bobbin thread with a heavy 17 wt. top thread). Some educators teach that you should always use the same thread on the top and bottom. That's OK, but you're limiting your channels. It is much more fun to get all the channels and be able to use all those fancy threads. 90% of all sewing frustrations can be eliminated by using quality thread, choosing the right needle (the Topstitch 90/14 is the needle of choice for many professionals and educators) and by adjusting the upper tension (usually loosening it). Tension adjustments allow threads of different textures or weights to freely pass through the tension disks. And don't forget to clean out the tension disk area. *Lint can accumulate and affect your stitches.*

Learning to override your machine's automatic tension system will allow you freedom of choice in selecting those different thread channels. Don't worry about getting so far into the computer settings that you will really mess up the computer. The factory preset settings will reset themselves every time you turn off and on the machine.



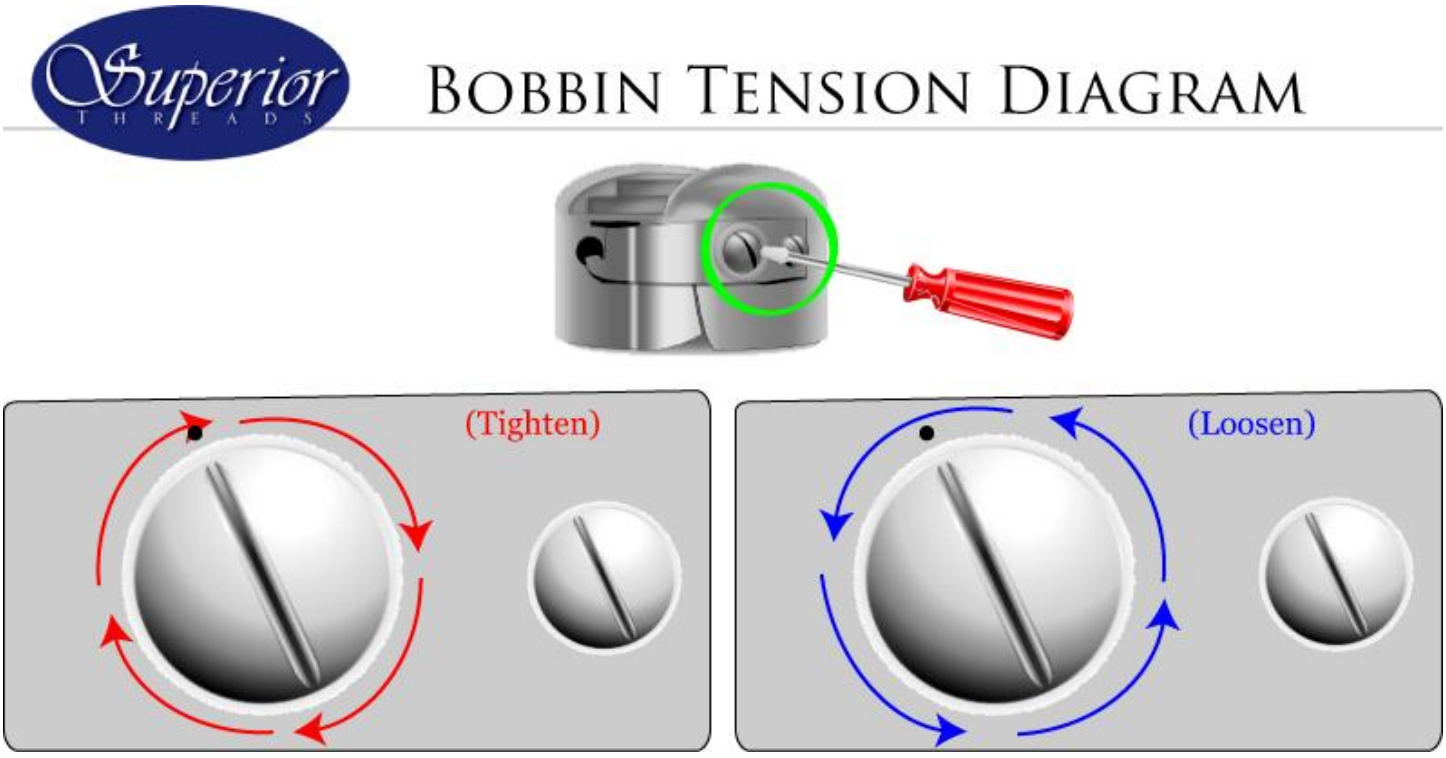
- # Adjusting the Bobbin Tension

We talk a lot about tension settings and tension adjustments on machines. 90% of the time, we adjust the top tension to achieve the perfect stitch. This time, we will discuss **the other 10%, the bobbin tension**. Many have been told to never touch the bobbin tension. It isn't as difficult as we have been led to believe. If you are one who has been told to never touch it, by the end of this page, hopefully you will realize that is perfectly safe and easy to adjust the bobbin case. Of course you could buy a second bobbin case, one to never adjust and the other to experiment with, but why not save $30 to $40 and learn how easy and safe it really is. Over time, tensions can change with regular use. Even though you haven't physically changed the settings, they can work themselves either tighter or looser. Thread, lint, and even temperature can affect them. There are three times when adjusting the bobbin tension might be necessary. Number one and two are obvious. Number three is the "I never thought of that before" alternative.

1. When using a very smooth, fine bobbin thread. If the thread is very smooth and fine, the preset setting may not apply the necessary brakes to stop it when you stop sewing. In this case, the bobbin thread continues to unwind, potentially causing backlash, and upon start up again, the thread will break. Tightening the tension will fix this. Think of a clock as you turn the screw on the bobbin case, turning the screw equivalent to a 5 or 10 minute movement. Right is tight. Left is loose.

2. When using a very heavy bobbin thread. The preset tension might be too tight for a heavy thread, preventing the bobbin thread from unwinding freely. Loosening the bobbin tension will solve this. (Be sure to turn the tension screw in small increments whether you are tightening or loosening the screw.)

3. There are times when the bobbin adjustment is correct but no matter what I do to the top tension, I still can't get a perfect stitch or the thread breaks. When I loosen the top tension adequately low to run a sensitive or heavier thread, I get loops on the back. When I tighten up the top tension to get rid of the looping, the thread breaks. Looping on the back means the top tension is too loose compared to the bobbin tension so the bobbin thread is pulling too much top thread underneath. By tightening the top tension, the loops will stop, but the added tension may cause breakage, especially with sensitive threads. In this case, it might be necessary to loosen both the bobbin tension AND the upper tension. By loosening both the top and bobbin tensions, both sides of the tug-of-war give in, allowing a good stitch without breaking or looping.



- **Fiber Shape and Sheen**

Most of the threads we use are round and smooth, as a result of twisting multiple strands together. We often think of thread consisting of only two or three strands (2-ply or 3-ply) twisted together. In the case of spun threads such as cotton or spun poly, it may be that simple, but with multi-filament threads such as polyester, silk, or rayon, it gets a little more complicated. A #50/3-ply polyester thread such as So Fine has three strands twisted together, but each of those three strands or plies are made up of many micro-strands twisted together. Less expensive threads may have a low number of micro-strands. High quality threads have as many as 48 micro-strands in a single ply.

Smooth fibers such as silk, multi-filament polyester, and rayon have a higher sheen than non-smooth fibers (such as cotton and spun polyester). However, even within the smooth fiber category, there is a wide range of sheen or luster. High sheen is the result of each individual micro-strand of fiber reflecting light, and the shape of the individual fibers determine how light is reflected.

Round fibers Regular multi-filament polyester threads such as So Fine, Lava, and Bottom Line fit into this category. As light hits the fibers, it is reflected away from our eyes, which results in a medium sheen appearance.

Trilobal fibers Rainbows, Nature Colors, Living Colors, Highlights, Art Studio Colors, and Magnifico threads are made from trilobal polyester fibers. Silk is a natural trilobal fiber. Trilobal fibers have three distinct sides('tri' = three and 'lobal' = sides), so when light hits them, they reflect back the light in a direct path, giving a high-sheen appearance. Although the individual micro-fibers are trilobal in shape, when multiple strands are twisted together to make the final thread, the end result is a smooth, round, high-sheen thread. Until recently, trilobal polyester fibers were weaker than regular round polyester fibers, so we had to choose between strength and high sheen. We now have both. A new high strength, high sheen trilobal polyester (Magnifico) is now available. It consists of 192 micro-strands of high tenacity (strength) trilobal polyester twisted into a smooth, round #40 thread.

Irregular fibers Most rayon threads are irregular. We don't use or recommend rayon threads because they are weak and usually do not hold up to common standards of colorfastness.

How Light reflects off of three major shapes of fibers (Cross-section diagram)