

Let's Talk Tension

What is Sewing Machine Tension?

Looking at it in a non-technical way (which I don't totally understand, anyway) devices that control the needle thread and the bobbin thread put varying amounts of tension on the threads they control in order to form a strong, balanced stitch.

Sewing machine tension can be tightened or loosened to affect the needle's thread or the bobbin's thread.

Evaluate Stitches to Determine if They Are Balanced

Machine stitches should look the same on both sides of the seam when you [sew patchwork pieces](#) together (that also includes the stitches made when you [machine quilt through the quilt's top, batting and backing](#)).

When stitches are balanced, they will be evenly spaced on both sides of the project, with thread that lies flat against its side of the fabric. That little knot formed between stitches (at each break in the line) should be invisible -- buried in the layers.

If either thread pulls easily out of the seam when you give it a tug, you know there's a sewing machine tension problem, because the dreaded seam ripper is required to remove a balanced seam.

Bobbin Thread Is Visible on Top of the Piece Being Sewn

Bobbin thread's appearance on top of the piece you are sewing could mean a couple of things:

- The tension that controls the thread coming through the needle is too high, pulling the bobbin thread to the top.
- The tension that controls the thread coming out of the bobbin is too low, allowing the needle thread's tension to take over.

Needle Thread Is Visible on the Bottom Side of the Piece Being Sewn

If the needle thread appears on the bottom side of your patchwork or quilt, it could mean a couple of things:

- The tension that controls the thread coming out of the bobbin is too high, pulling the needle thread to the underside.
- The tension that controls the thread coming through the needle is too low.

The answers to both situations are factual, but they aren't truly helpful, are they? Let's look at one way to troubleshoot the problem before you make changes to the sewing machine's needle or bobbin tension settings.

1. Grab your [sewing machine](#) user's manual (and, if you're like me, a pair of glasses to read the print).
2. Unthread the top thread -- the thread that goes through the needle.
3. Remove the bobbin (and its case) and clean the bobbin area of the machine as directed in your manual.
4. Check pathways for the upper thread, making sure little bits of thread or fuzz aren't stuck in any of the visible mechanisms.
5. Are you using the [best needle](#) for the job? If the needle has seen more than a few projects, or used for one larger project, it's time for a change.
6. How about the [thread](#) -- is it suitable for the fabrics you are sewing?
7. Follow the manual's instructions to rethread the sewing machine (the presser foot should likely be up and so should the needle).
8. Remove the bobbin from its case. Reinsert the bobbin into the case, checking the user's manual to make sure thread is flowing the correct direction. Place the case and bobbin back into the machine (a tail of thread should stick out).
9. Use the hand crank (or follow other instructions) to take the needle downward, where it should catch the bobbin thread and pull it to the top. Pull both threads out just a bit.
10. Sew another seam, holding on to that 2-thread tail as you begin. Are the stitches still unbalanced? If they are, let's troubleshoot a bit more.

Are you using the same thread in the bobbin and through the needle?

A sewing machine *usually* offers the best results at 'normal' or 'automatic' tension settings when the same threads are used through the needle and in the bobbin.

- We typically use the same threads in both places when sewing patchwork. If you are not, switch out one or the other and try again.
- We often do *not* use the same threads on the top and bottom when [we machine quilt](#), so tension adjustments will probably be necessary.

Make Sewing Machine Tension Adjustments

No matter what the problem, start by adjusting the top (needle) tension.

- If you've determined that more tension is required for the needle thread, turn the tension knob (or digital setting) up just a bit (refer to your manual).
- If the bobbin needs a little more pull, lower the needle thread's tension setting.
- Test another seam. Is it better, but maybe not entirely accurate? Change the setting and try again.

Bobbin Tension

Many people are hesitant to change the tension of their bobbin, but you might find that step offers the best results when you're machine quilting.

You should see a small screw on the flat/closed side [of the bobbin case](#). Turning the screw a tiny bit counterclockwise will loosen the bobbin tension; turning it clockwise will tighten the tension.

Some quilters keep two bobbin cases on hand, leaving one as-is from the factory and using the other when they need to make adjustments. If you have just one bobbin, use a permanent marker to draw a fine line directly across from the slot of the screw before you move it -- that step will show you where to set the screw when it's time to return to normal tension.

Be sure to [test your machine quilting stitches on a practice quilt sandwich](#) (with the same basic top/batting/backing) before you stitch through the layers of an actual quilt.