

Sewing Machine 101  
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**Note: Every sewing machine comes with a manual that explains the parts of the machine, threading instructions, how to choose and adjust stitches, proper foot selection, etc. Many also contain sewing techniques. Make sure you read your manual thoroughly and keep it handy for reference. If something doesn't make sense, ask your dealer for clarification – it will save you a lot of frustration later!**

### 1. Bobbins

- a/ Always use the correct bobbin, which would be identical to the ones that came with your machine. Do not assume that the bobbin from your old Kenmore will fit your new Pfaff! If in doubt, check with your sewing machine dealer (Quilty Pleasures!) for advice;
- b/ Wind your bobbin according to your manual's instructions – wind it evenly, with uniform tension (no squishy bobbins!), and do not over-fill;
- c/ Do not wind thread onto a partially-filled bobbin – start fresh;
- d/ If your bobbins are plastic, check them periodically for nicks and rough spots that could catch your thread; if your bobbins are metal, discard any that are accidentally dropped or stepped on and consequently bent;
- e/ Insert the bobbin according to your manual's instructions. Make sure that the thread is coming off the bobbin in the right direction and that it is inserted into the bobbin case properly.

### 2. Threading

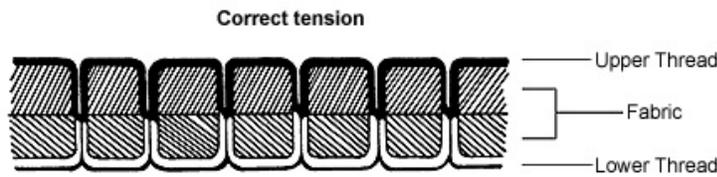
- a/ Always use a good quality thread – take a close look at it for fuzzies and nubbies which will cause tension problems and lint build-up. Do not use thread from the dollar store, and do not use serger thread in your sewing machine!
- b/ **Before threading, make sure that your presser foot lever is UP!** This allows your thread to get in between the open tension discs, which close together when the foot is down;
- c/ Follow the exact threading path indicated in your manual;
- d/ Before threading the needle, lower your presser foot and check for resistance;
- e/ Make sure your needle is inserted correctly (curved side to the front) and thread the needle from front to back;
- f/ Bring up the bobbin thread before sewing (hold onto the end of the top thread, turn your handwheel towards you (if you have a mechanical machine) to lower and then raise the needle – the upper thread will pull the bobbin thread up through the stitch plate. If you have an electronic machine, use the needle up/down button or the foot control to lower and raise the needle.

### 3. Tension

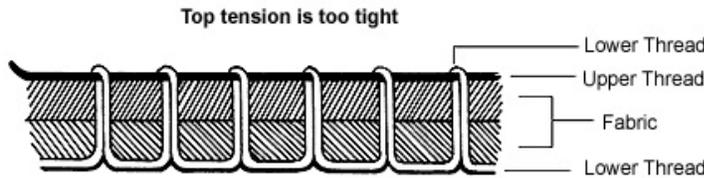
When talking about tension, it helps to think of how a sewing machine works (relax – this is a

really basic explanation): The needle brings the upper thread down to the bobbin area, where it forms a loop when the needle rises. The rotary shuttle that surrounds the bobbin grabs the loop of upper thread and pulls it around the thread coming from the bobbin. The result is called a locking stitch, and it is very sturdy if the two threads are balanced in terms of tension.

It helps to bear in mind that when we talk about sewing machine “tension”, we’re really discussing the relationship between the pull being exerted on the two threads. When making a basic straight stitch, we’re aiming for balance, amount of exerted by bobbin threads knot that is locking stitch to sit between the two layers of fabric, where it will not be seen and where it will give the most strength to the stitch. See the following diagram\* and note how the two threads meet between the two layers of fabric:

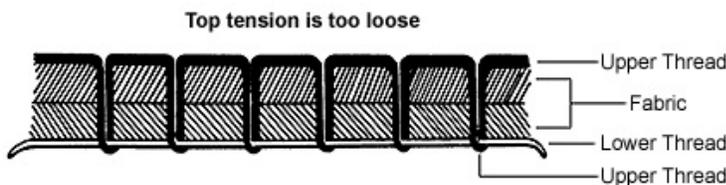


If the top thread is exerting more pull than the bobbin thread, it looks like this\*:



When the top thread tension is too high, or tight, it can cause thread breakage, fabric puckering, and decreased stitch strength. Remedy? **Loosen** your upper thread tension by moving your tension dial to a **lower** number.

If the top thread tension is exerting less pull than the bobbin thread, it looks like this\*:



\* Special thanks to RMIT University in Melbourne, Australia for the diagrams.

When the top thread tension is too low, or loose, the bobbin thread lies along the surface of the fabric and there is absolutely no strength in the stitch. Remedy? **Tighten** your upper thread tension by moving your tension dial to a **higher** number.

Your manual will give recommended tension settings for various stitches. This will give you a good starting point, but always test the tension settings with the fabrics and threads you'll be using in any given project.

Generally speaking, most tension adjustments can be successfully made by altering the upper tension only. There is a tension spring on your bobbin case, but it is not recommended that you play with it for normal sewing since it has been set in the factory for optimum tension for day-to-day sewing. If you want to try some specialty techniques (thread painting, free-motion embroidery, bobbin work, quilting with very heavy threads, etc), buy a second bobbin case that you can fiddle with all you want.

### Needles

- a/ Choose the correct needle for the fabric/task you are working on;
- b/ Change your needle with every project (the exception: titanium needles are coated with a special ceramic that lasts three times as long as conventional needles);
- c/ Don't use a bent or burred needle;
- d/ Clean any adhesive (from fusible appliqué, spray basting products, etc) from needles;
- e/ Dispose of used and broken needles safely (make sure you get all the pieces of broken needles out of your machine!)

### Troubleshooting

TNT: Threading, Needle, Tension – it's amazing how many problems stem from these three causes.

- a/ If your stitches look OK from the top but are nesty and messy on the bottom, re-thread completely (with the presser foot up, remember) – you probably don't have your thread in between the tension discs;
- b/ If you hear a “pop, pop, pop” sound while sewing, change your needle – that usually means the needle is dull and has to punch through the fabric;
- c/ If your machine is skipping stitches, change your needle (maybe to a different type) – this often means that the needle isn't penetrating the fabric so that the loop of thread can be formed;
- d/ If your tension is off and isn't responding to adjustment, make sure that the bobbin case/hook area is clean, that the bobbin is inserted correctly, and that there isn't any thread caught in the take-up lever or tension discs.

Keep your machine clean and lubricated (as indicated in your manual). Canned air is not recommended for blowing out dust, since it can force lint and dust further into the machine, but vacuuming is a good way to deep clean periodically – there are special mini vacs for just that

purpose.

Depending on how much you sew, bring your machine in for a tune-up every year or two.

Have fun!

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