

Pre-Quilting Checklist

This checklist is filled with best practices that you can use to prepare your machine to care for your machine and to ensure you have the best quilting experience.

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Select Materials

Before you start quilting it is important that you select the right materials for your project. As you experiment with different kinds of materials and tools, you will need to understand how these materials will affect your machines tension.

Quilt sandwich

Have a full quilt sandwich of quilt-backing, batting, and quilt-top.

Thread

It is important to use a good quality thread for quilting projects. Use a cone-style thread unless you have the thread spool accessory for your machine.

Test the strength of older thread with the “yank test.” Hold the cone in one hand and the end of thread in the other. Tug on the thread. If the thread snaps easily, it may be too brittle to use for quilting.

Bobbins: Fill bobbins with a thread that is similar to the thread you will use for the top. Also, ensure that your bobbin is wound tight and even.

When using pre-wound bobbins, remove 1-3 yards of thread. Pre-wound bobbins often have a coating of glue on the outer layer of thread. Pre-wound bobbins may also be overfilled. Removing the top layer of the prewound thread can help ensure good tension.

Needle

Select a needle based on the thread. The chart below shows recommended needles for different thread types.

Needle Size	Thread Size and Type
14 / 90	<ul style="list-style-type: none">• mono-filament• 100 wt. silk• 60 wt. polyester
16 / 100	<ul style="list-style-type: none">• mono-filament• 60 wt. polyester or cotton• 50 wt. cotton
18 / 110	<ul style="list-style-type: none">• 50 wt. polyester• 40 wt. cottons and polyester• 30 wt. cotton and polyester
20 / 125	<ul style="list-style-type: none">• 30 wt. or heavier of any thread

Clean Your Machine and Frame

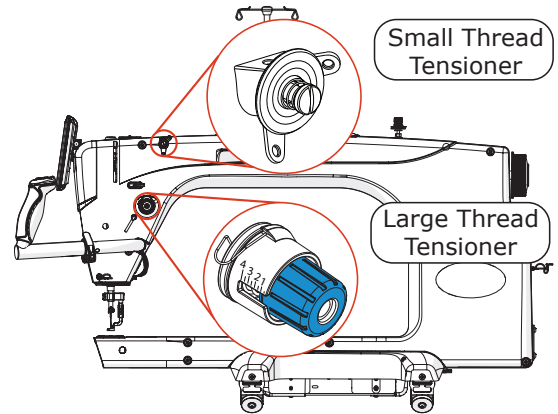
It's crucial to keep your machine and the space around your machine clean and free from debris. Even a thread or small piece of lint could disrupt your machine's movement along your frames tracks and throw off your machines stitching.

Lint build-up between the tensioner discs can prevent proper thread tensioning. Start by clearing the lint debris from your thread tensioners with a soft cloth.

Wipe off your frame and carriage tracks and wheels.

You can use water to make the cloth slightly damp, but don't use any soap or chemicals on your machine or frame.

Use a lint brush to clean your bobbin case. Make sure your hook assembly is clear of lint, cloth, and thread remnants.



Oil Your Hook Assembly

Like a car, it is important to oil your machine regularly. Oil your hook assembly (near your bobbin case) at the start of each project; and after every other bobbin change.

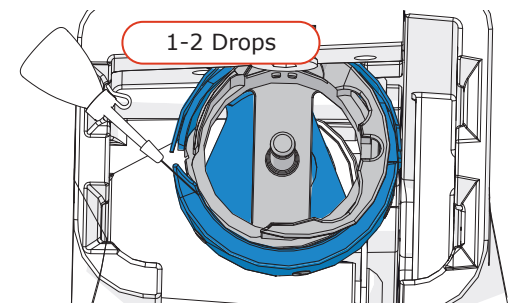
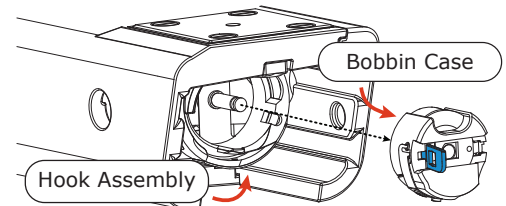
To oil your machine, remove your bobbin case from the hook assembly. Rotate the hand wheel until the needle is halfway down. This will put the hook in the best position for oiling.

Place one to two drops of oil into the hook assembly between the inner part (shown in gray) and outer part (shown in blue).

Power up the machine and sew a few stitches without any thread into some scrap quilt sandwich. This will ensure the machine is running smoothly and will clear away any excess oil before you start to quilt.

Reload the bobbin case and return it to the machine.

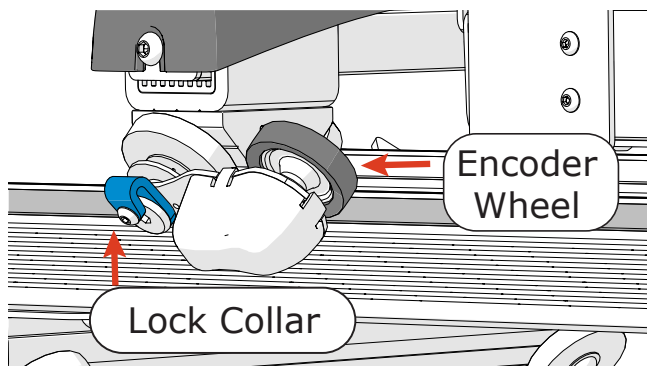
Regularly wipe down the needle bar to prevent the accumulation of oil that can stain your fabric.



Check Encoders and Cords

The encoders are essential to your machine's stitch regulation. Before quilting, you will need to check the encoders to make sure that they are in good working condition.

Verify that the lock collars on the springs are facing up, that the encoder wheels are placed securely on the tracks and that the encoders move back and forth easily.



Look under the encoders to see that there is no thread or lint under or on the encoders. Check each of the encoders to make sure that they are plugged into the correct ports. Be sure to also check that all cords are plugged into the correct ports and are attached to the machine in a way that they won't get in the way.

Check Your Carriage Mobility

Check the carriage, wheels, and cords to ensure that the machine can move freely. Move the machine's carriage side to side and front to back. The wheels should move smoothly on the track, the carriage should have a full range of motion, and there should be nothing that can get caught in the wheels.

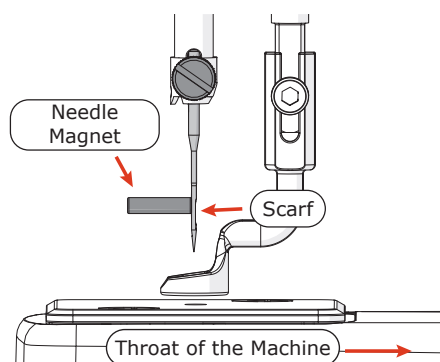
Replace Your Needle

It is essential to use a new needle for each project. Having a new needle ensures the needle is straight and the point is sharp to penetrate through the quilt layers.

To replace the needle, power off the machine and raise the needle to the highest position with the hand wheel.

Loosen the needle thumb screw and pull down the needle. If needed, use a flat-head screwdriver.

Insert the new needle all the way into the needle bar. Check the needle bar sight hole above the thumb screw to make sure the needle is inserted all the way.

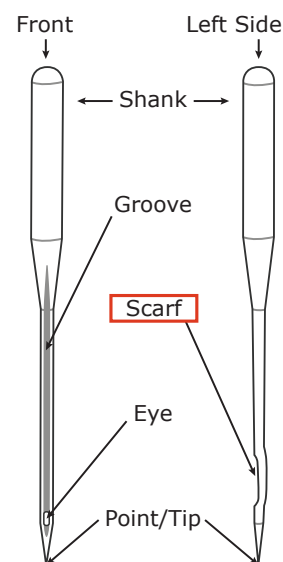


The scarf, a cut-out on the back of the needle, should face the throat of the machine. Place the needle magnet on the opposite side of the scarf.

Use the needle magnet as a visual guide. Twist the needle until the magnet points as straight out from the machine as possible.

Note: Do not move the magnet directly to adjust the needle.

Hand-tighten the thumb screw. Do not over-tighten if using the flat-head screwdriver.



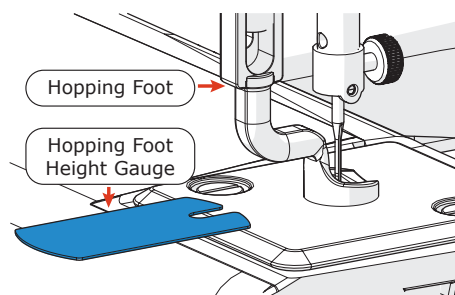
Check Your Machine's Foot

When quilting with thick fabric or batting layers, the hopping foot may press down on the quilt too tightly and begin to drag. Alternatively, having the hopping foot too high can result in skipped stitches. The hopping foot can be raised or lowered to correct these problems. To ensure that the hopping foot is at the correct height, take the following steps:

Move the machine so it is not over fabric. Then use the hand wheel to drop the needle bar to the lowest position.

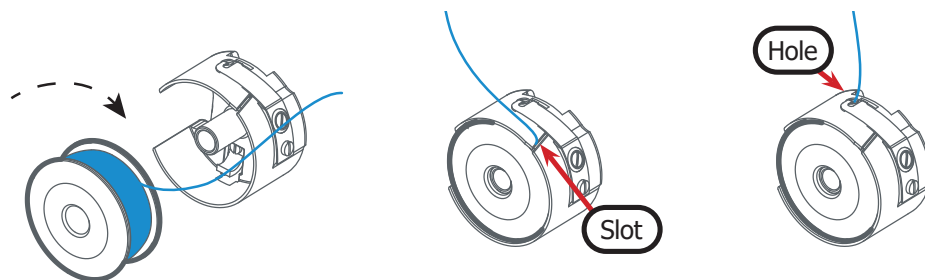
With the 3 mm Allen wrench, loosen the hopping foot screw. Slide the hopping foot height tool (shown in blue) underneath the hopping foot, around the needle.

Lower the hopping foot until it rests on the height tool. Re-tighten the hopping foot screw.

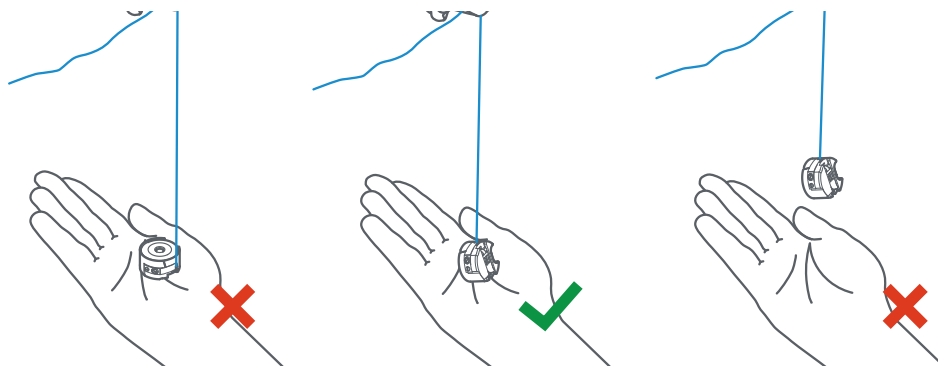


Load Your Bobbin

Remove your bobbin case from your machine and remove the old bobbin. Place a new bobbin wound with the thread for this project into the bobbin case so that the thread turns clockwise. Slip a few inches of thread through the slot and out of the hole.

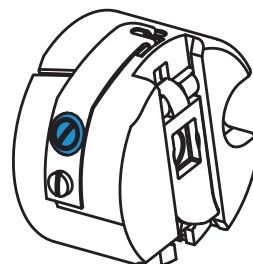


Then check your bobbin tension. Lay your bobbin case in your hand and pull on the thread. You should be able to lift your bobbin upright but not out of your hand.



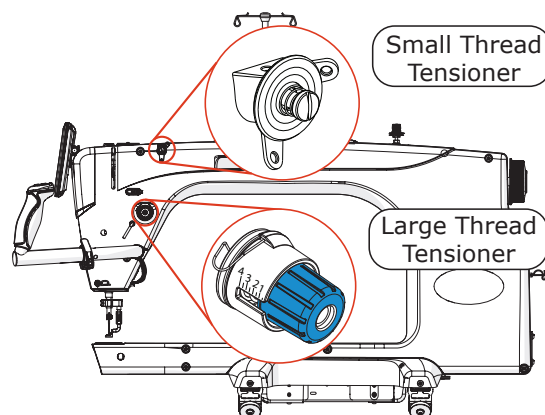
If the bobbin case remains on its side, there is too little tension. Turn the large screw (shown below in blue) clockwise. If the case lifts into the air, there is too much tension. Turn the large screw (shown below in blue) counter-clockwise.

Reinsert your bobbin case and make sure it is securely in place, listen for it to snap



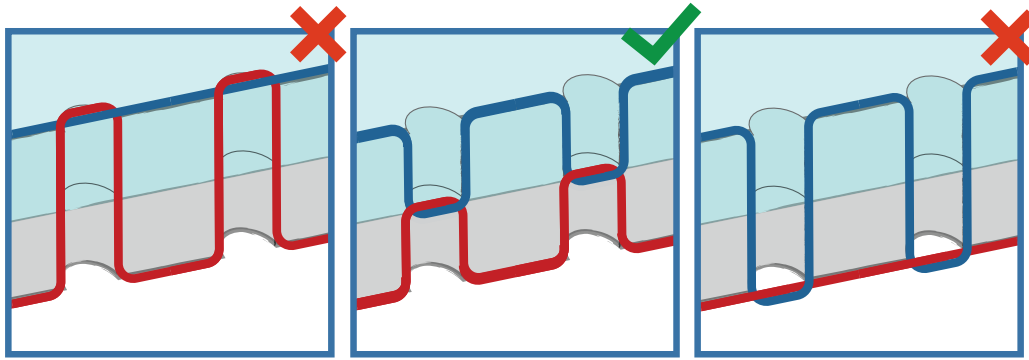
Thread Your Machine

Check your machine's owner's manual to ensure that your machine has been threaded correctly and flows properly through the tensioners.



Test Your Tension

Test your tension on the side of your quilt or using the same fabric you will be quilting on. Start quilting some straight lines in various directions and some curved lines and loops. Check your stitches. See if the top thread and the bottom thread are being pulled evenly. If anything appears to be off with your stitches, check out the tension troubleshooting guide.



Adjust Your Rail Height

It is important that all of the rails of your frame are at the correct height. Having the frame's rails too high or too low can affect the machine's movement and its tension.

The take-up rail should be about 1/4" (about the size of your index finger) above the bottom of the machine's throat.

The height of the rails will also need to be adjusted as the quilt is rolled onto the take-up rail.

Tips and Tricks

While there are many ways to have a great set up here are some tips and tricks that you can try and see if it is something you want to include in your quilting practice.

- Thicker batting makes tension more even. In order to achieve the best tension, consider using a double layer of batting.
- Keep an extra bobbin on hand so that you can switch out the case if something goes wrong.