



Multi-Needle Maintenance & Troubleshooting

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Oiling the Hook

You will need to oil the hook every day that you use the machine. You can use the oiler that came with the machine, or you can purchase a fine point/pen oiler like the one shown in the video from www.nancysnotions.com (item number FP02) .

Remove the bobbin case from the machine. When removing the bobbin case from the machine, gently pull the picker back from the side where it is attached, and only pull it toward you until it stops. Do not tug it back or try to pull it further than it wants to go.

In the video, we were working with the Valiant. It has a button in the needle position menu that will put the hook in the correct position for oiling when you touch it.

If you are working with any of the six-needle machines, or the Enterprise you can turn the handwheel (located on the back of the machine) counter-clockwise as you're looking at the back of the machine, until the tip of the hook is beside the opening on the side of the basket.

Put just one drop of oil on the hook. If you working with the Valiant, touch the button once again and the hook will return to the correct position.

If you are working on a six-needle machine and rotate the handwheel, you will get the error message, "Inappropriate Needle Stop" after you touch the Lock>Start/Stop buttons on the machine to begin embroidering. When this occurs, touch the "Close" key in that screen and the hook will return to its correct position.

Replace the bobbin case in the machine. It's a good idea to reset the bobbin before you start embroidering in case it wiggled out of the tension spring when you removed it from the machine. Make sure to keep the latch on the bobbin case closed and that you hear the "snap" sound as it goes in. If not, reset the bobbin case again until you hear the snap.

Oiling the Needle Pads

You will need to oil the needle pads every 40-50 sewing hours. It is suggested that you do use a fine point/pen oiler for this so that you don't have oil running down your arm.

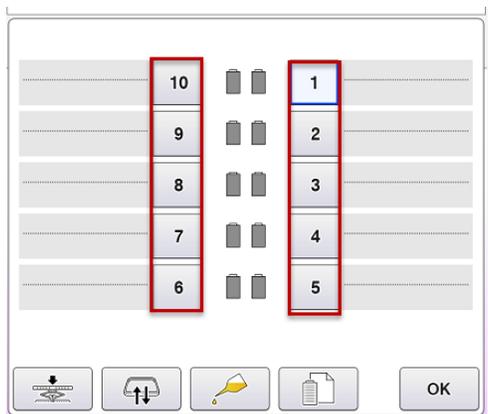
Pull each of the machine feet down so that you can see the felt pad. Apply a few drops of oil to dampen the pad. As you work your way along to each needle, you will find that you won't be able to pull the third

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needle down far enough to oil the pad. On the machine screen, use the Needle bar change key that looks



Use the numbered keys in that menu (shown below) to move the needle case to the proper position so that you can pull down each foot to oil it.



Changing Needles

It's time to change needles when:

You will need the threader tool or needle change tool and the Allen wrench that is included in your machine tool kit.

You only need the following needle for all fabric types: HAX130EBBR size 11. This is a commercial needle that is made for the multi-needle machines.

If you change one needle, then change them all. If you remove all six or ten needles before you replace them, you won't lose your place if you get sidetracked in the middle of the process.

If you use metallic thread, change just the needle(s) that were used for it **BEFORE** you try to thread the needle with Polyester thread. Metallic thread tends to chew up the eye of the needle. If you use the threader before you change to a new needle, the thread can catch on the rough edges of the eye and bend the hook that goes through the needle. That would make you sad because you would probably have to get a new threader.

Cleaning Under the Needle Plate

This should be done as part of regular maintenance, if you get a "thread set motor error," or if your machine acts like it is cutting the thread, but the thread isn't actually being cut.

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You will need three tools for this:

- ❖ Offset screwdriver (included in your machine tool kit)
- ❖ Lint brush (included in your machine tool kit)
- ❖ Small piece of medium weight tear-away stabilizer

1. Remove the two back screws on the needle plate.
2. Remove the needle plate and spacer (continued on next page)

*****DO NOT REMOVE OR LOOSEN either of the blades. It is not necessary for cleaning and may damage your blades.**

Swipe the stabilizer between the two blades a couple of times to ensure that you have removed any stubborn thread tails. Do this even if you do not see any thread tails because those little devils are good at hiding.

Use the lint brush provided to clean out any other fuzz and thread tails.

Put the spacer back into place.

Replace the needle plate and screws and tighten securely.

Remove the bobbin case. Use a corner of the stabilizer and run it gently under the tension spring on the bobbin case as shown in the video.

Cleaning Tension Assembly

This should be done each time you oil the needle pads to remove dust and build-up.

You only need a lint brush for this cleaning.

1. Remove the thread
2. Unscrew the tension nut and set it aside.
3. Remove the tension spring, line spacer (small plastic ring), and collar, and place them on a flat surface so they don't roll away.
4. Remove both felt pads and the tension disk.
5. Use a brush to clean the area.

*******When reassembling this, I often switch the felt pads so that the one that was on top is now on the bottom.

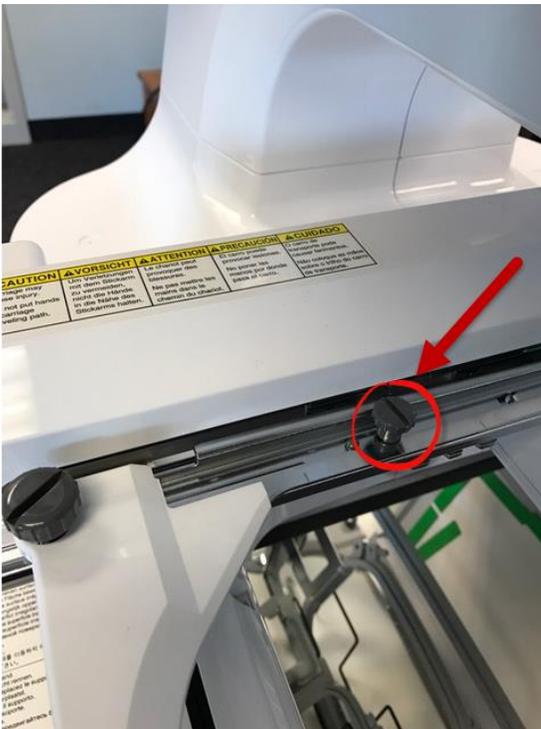
1. Place a felt pad over the post.
2. Next, place the tension disk over the post, **magnet side down**.
3. Place the second felt pad on top.
4. Place the collar on the post with the flat side down.
5. Place the tension spring on the post with the narrow side up, and put the line spacer into the top of the tension spring with the bumpy side up.
6. The tension nut goes on last. Turn it to the right to attach and secure it. Continue to turn it to the right until (on a 10-needle machine) three stripes show above the collar as you look at it from eye level. For a six needle machine, there should be about 2-3 stripes showing.

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Sew out a test pattern, on properly stabilized fabric to check tensions and adjust as needed. Look on the underside of the test pattern. The center ½ of each satin column should be bobbin thread and there should be about ¼ of the top thread on each side of the bobbin thread. If there is too much bobbin thread on the bottom, which means that the top tension is too tight. You will need to turn the tension nut to the left to loosen it.

If there is too little bobbin thread showing on the underside of the test pattern, that means that the top tension is too loose, so turn the top tension nut to the right to adjust.

Hoop Calibration (A/D Test)



When the machine is not “recognizing” the hoop you have on the machine, **the first thing to do before you recalibrate is to check to make sure that the smaller screw shown in the photo below is tight.** You might also want to make sure that you haven’t accidentally put a large screw there instead of a small one because a large screw will not properly activate the hoop sensor. A larger screw does go into the slot on the far left of the carriage arm.

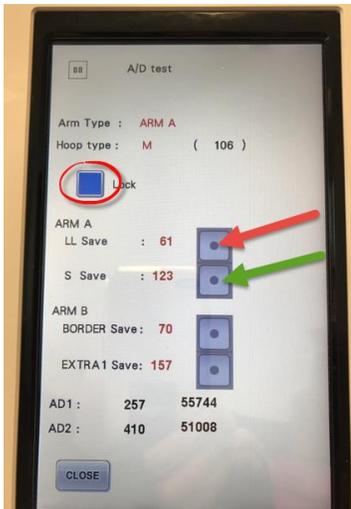
Make sure that you are completing the entire calibration process, no matter which hoop it is not recognizing or it will not work. The Enterprise and Valiant both use four different hoop positions for the calibration- two of them on Carriage Arm A and two of them on Carriage Arm B. The procedure for hoop calibration for the 10-needle machines is thoroughly covered in the video. If you have a 6-needle machine, don’t worry! We haven’t forgotten about you! Follow the procedure outlined below to recalibrate you hoops.

If you are working with a six needle machine, the adjustment process is as follows.

1. Attach the carriage arm to the machine
2. Begin with the machine turned OFF.
3. Simultaneously, hold down the **Start/Stop** button and the **Threader** button and continue to hold them down as you turn on the machine and it boots up. It will look like the machine is turning on the regular way, but keep the Start/Stop and Threader buttons pressed in until the screen looks like the one in the photo on the next page.

Please note that the numbers on your screen may not be the same as the numbers on the screen in the photo. It’s OK! They do not have to match up when you are finished either.

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4. Touch the blue square beside the word Lock (circled in the photo to the left) to unlock the feature.

5. Place Carriage Arm A on the machine according to normal procedure. Set the hoop size for the largest hoop. It may help to get the largest hoop and place it in the carriage arm holder as if you were going to be embroidering to make sure that the carriage arm is in the proper position. Tighten the small screw on the carriage arm. Touch the blue square to the right of LL Save

6. (shown here with the RED arrow). The red number will change but nothing else will happen which is **normal**.

7. Remove the large frame from the carriage arm. Move the carriage arm position to the very smallest hoop size. The very small (2x3) frame is the one that will fit at this position, so go ahead and put that on the carriage arm to make sure you have the correct size. Tighten the small screw again. Touch the blue square beside S Save (shown in the photo above with a green arrow). Again, the number

beside the square will change but nothing else will happen.

8. Almost done! Go back to the blue square beside the word “unlock” now (it’s the same one you touched as we started the procedure), circled in the photo above.
9. You can either touch the Close key then turn off the machine, or just turn off the machine with the on/off button. Now, when you turn on the machine, do it the regular way without holding down any buttons and you will be back in business. Woot!

Tension Test

Do this if:

- ✚ You’ve cleaned out the top tension assemblies
- ✚ You are getting the error message “Check upper and lower thread” on the machine screen.
- ✚ Your stitching shows too much bobbin thread on top
- ✚ Your finished design shows little or no bobbin thread on the bottom.

Supplies needed:

5x7 frame

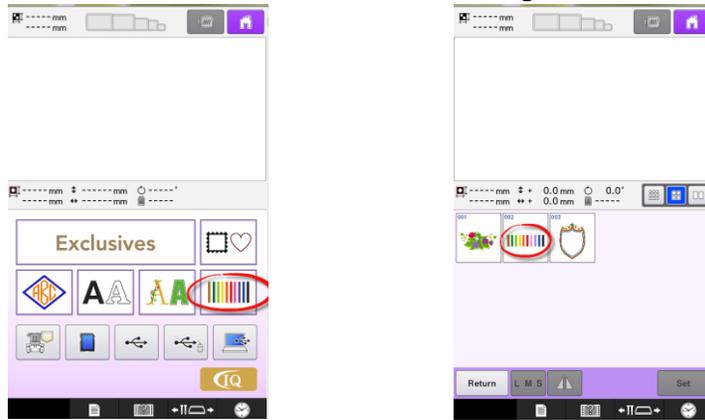
Stabilizer & fabric *only*. Do NOT use: felt, stabilizer alone, or any other weird thing you might dream up.

1. Cut both the fabric and the stabilizer to at least an 8”x 10” rectangle. Put the stabilizer and fabric in the hoop (do not float this on top), so that all four sides of both the fabric and the stabilizer are caught in the hoop with at least a little bit hanging out past the hoop. Place the hoop on the machine.

(continued on the next page)

2. From the Home screen touch the key with the ten rainbow colored bars circled in the graphic below left. When that menu opens, touch the same key in that menu to set the tension test design (shown in the graphic below right).

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3. Touch the Edit End key to go to the sewing screen. It doesn't matter that the colors you have threaded on the machine don't match the ones in the design. Leave it threaded with the colors you have.
4. Make sure to embroider all ten of the bars, even if you are having issues with only one or two needles. You need to see the result on all of the needles to properly trouble-shoot.
5. Once the tension test design is finished sewing, remove the hoop from the machine. Flip it over to reveal the underside of the design.
6. The center $\frac{1}{2}$ of each satin column should be bobbin thread and there should be about $\frac{1}{4}$ of the top thread on each side of the bobbin thread. If there is too much bobbin thread on the bottom, which means that the top tension is too tight. You will need to turn the tension nut to the left to loosen it.
7. If there is too little bobbin thread showing on the underside of the test pattern, it means that the top tension is too loose, so turn the top tension nut to the right to adjust.

Common Issues

Change to a Larger Hoop

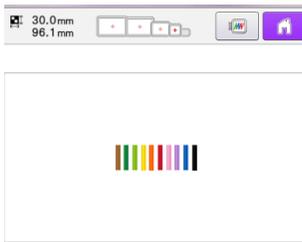
This error message can appear when you have a design on the page that is larger than the hoop size that the carriage arm is set to. Simple move the carriage arm to the correct position and tighten both screws.

If you get the message when you know that the design is small enough for the hoop that is set on the machine, first tighten the smaller screw. This is the one that activates the hoop sensor, so if the carriage arm is in the correct position, there is a chance that you didn't tighten the smaller screw enough to activate the sensor correctly. If tightening the screw doesn't help. Go to the Hoop Calibration section of the video.

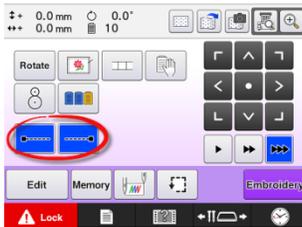
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Stitching is pulling out easily on lettering

This is an easy fix! At the final editing screen that looks like this:



Make sure that the two keys circled in the graphic to the left are both blue and not gray. Those are your “tie-on” and “tie-off” keys that control the knots at the beginning and at the end of each area. When these are gray, the machine will act like it is tying a knot (taking a few slow stitches) but the knot will not be formed. You think that it’s tying but...’fraid not! Hahahahaha (pun definitely intended).



If one or both of those keys is gray, simply touch it once to activate the tie-on/tie-off.

THREAD NEST!

1. Cut the thread between the hoop and the needle plate so that you can take off the hoop and access the hook area, and underneath the needle plate.
2. Remove the bobbin case (if it was even in there to begin with).
3. Clean all of the thread out of the hook area.
4. Remove the needle plate and clean thoroughly.
5. Check bobbin by putting it in one hand as you gently pull the tail of the bobbin thread with the other hand. If the bobbin thread is catching or sticking, try pulling off a few yards of thread and check again. If it is still not pulling off smoothly, then toss the bobbin and get a new one.

Check Upper and Lower Thread Error Message

1. Check to see if the bobbin has run out. If it hasn't, reseal the bobbin anyway, and listen for the “snap” as you put the bobbin case back into the machine.
2. Check the upper thread path to make sure that the machine is threaded correctly, and that it hasn't scootched out from under a guide or over the tension disk.
3. Replace the needles
4. Clean under needle plate.