

Reciprocator Protection System (RPS) Stud Replacement Guide

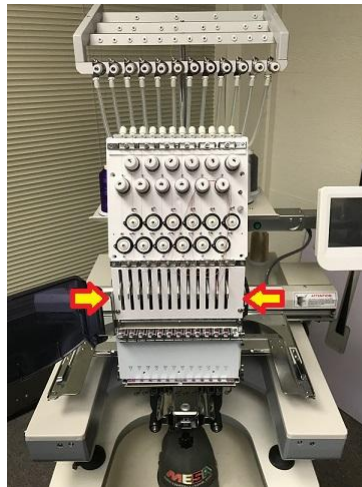
Note to Operator: Please follow these instructions carefully as missing a step could result in more issues with your machine. For immediate assistance and/or help performing these tasks, please contact MESA Support at 800-330-3867 Option 2.

What you will need:

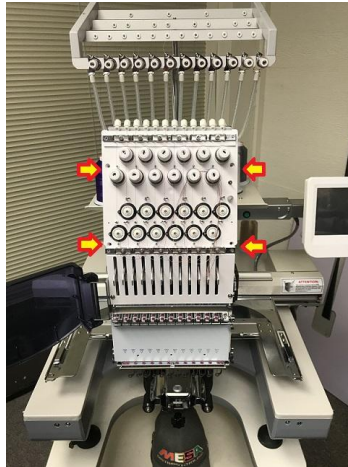
- New RPS Stud
- Phillips head screwdriver
- Flat head screwdriver (for larger screws)
- Small flat head screwdriver (for needle replacement)
- #3 Allen Wrench
- Needle Nose Pliers

Step-By-Step Instructions:

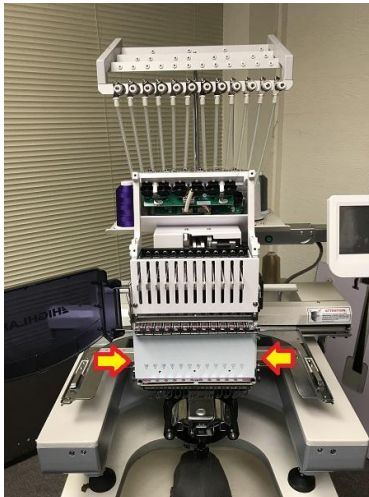
1. Determine which stud(s) need to be replaced by looking behind the needle case at the line of black studs
2. Once you know which stud you are replacing, move your needle case using the control panel to make sure that particular needle is not aligned in the sewing position.
3. Remove the thread from everything starting at the take up levers moving down your machine.



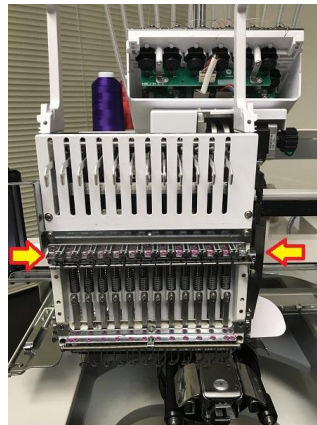
4. Take off your tension base by removing four #3 allen screws that are in each corner (illustrated below)



- a. Once you have those out, gently lift up and tilt the tension base back so that it is no longer resting on the sewing head
5. Remove the metal plate (illustrated below)



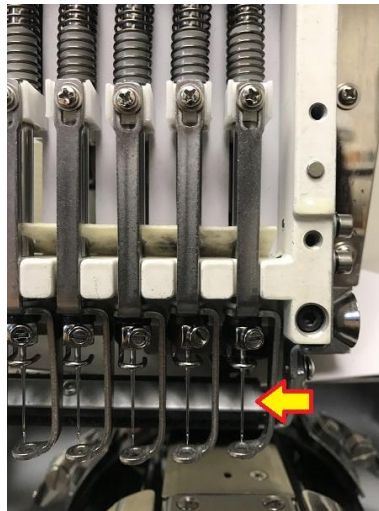
6. Remove the check spring bar by removing the two Phillips head screws on each side (illustrated below)



7. Remove the take-up lever cover by removing the two Phillips head screws on each side (illustrated below)

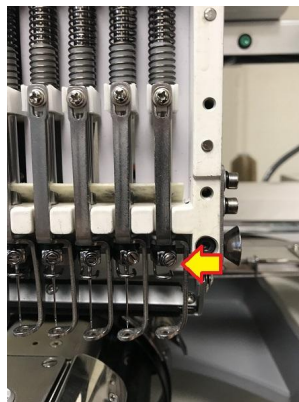


8. Take your needle out of the needle clamp (illustrated below)

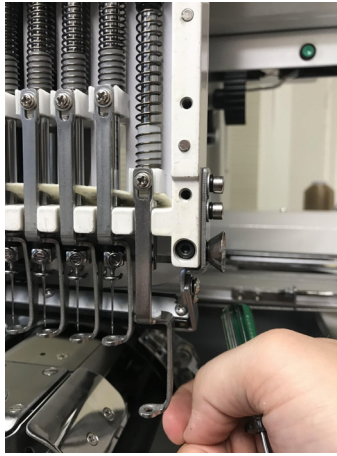


9. Gently loosen the needle clamp until it comes off with the black O-ring (illustrated below)
- a. Be careful not to lose any parts during this as the assembly is spring loaded and will pop off the minute it comes loose

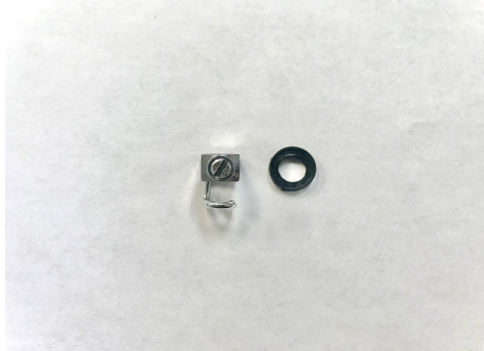
Before



After

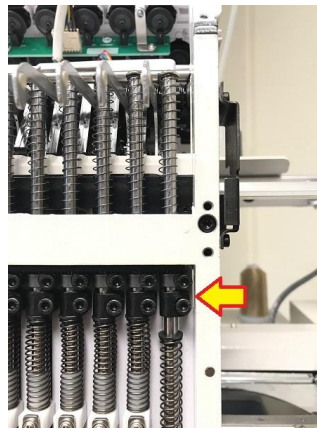


Parts you should have:



Note: At this time, it may be helpful to have a second person on hand to help with the remainder of the process.

1. Loosen both clamps on your needle bar using your #3 allen wrench (illustrated below)

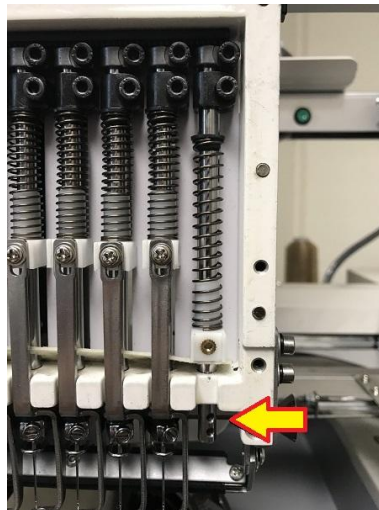


2. Slowly and carefully lift your needle bar up until it comes out of the old RPS Stud
 - a. Be careful not to lose any parts during this process

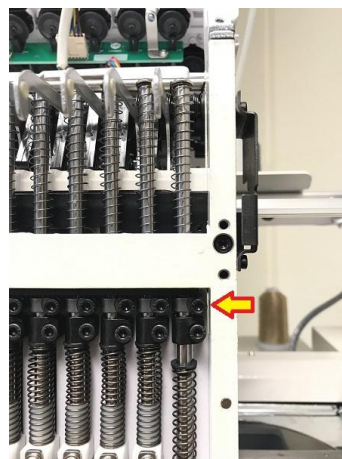
3. Once the needle bar is out of the old RPS Stud, remove it and put the new one in its place
 - a. A new RPS Stud will look like this:



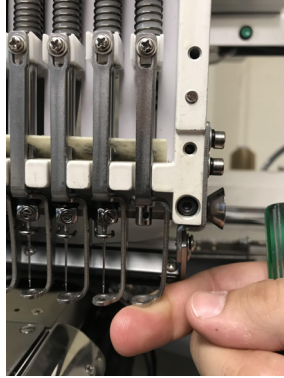
4. Slide the needle bar back down through all springs and holes until it is even with the rest of them
5. Looking at the holes on the bottom of your needle bar, position them about 30 degrees to the right



6. Push the top clamp all the way up until it touches the rubber stopper and tighten it down (illustrated below)
 - a. This will hold the needle bar in place so you do not have to push down on it any longer



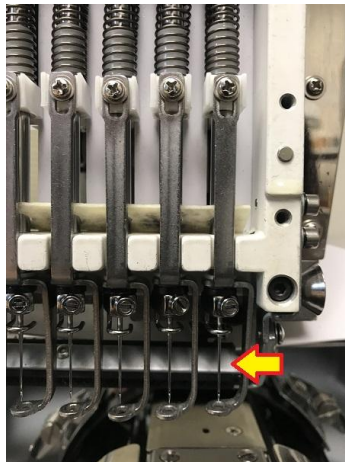
7. Tighten the RPS Stud clamp on your needle bar
8. Push the presser foot up so that it is through the needle bar (illustrated below)



9. As you are holding this in place, place the O-ring and the needle clamp back on your needle bar and tighten the set screw to hold it in place (illustrated below)



10. Place your needle back in the needle clamp (illustrated below)



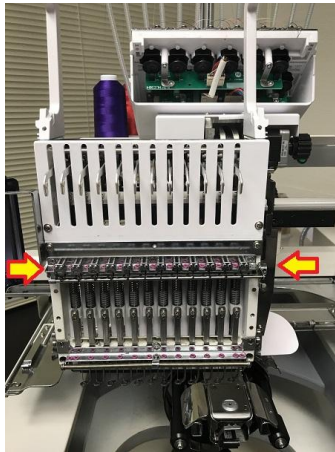
At this time, you need to adjust the needle depth on that needle to ensure that it is the same as the others. To do this, watch the following video to ensure that you set it properly.

Link: https://www.mesatraining.com/single-head-embroidery-d/needle_depth.php

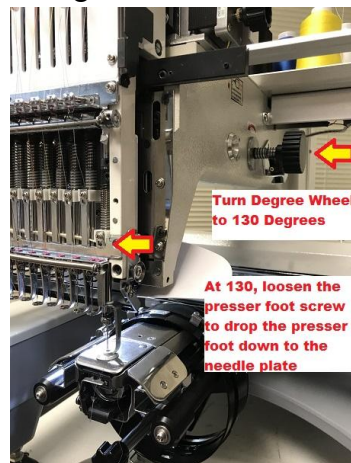
1. Place the take up lever cover back on your machine (illustrated below)



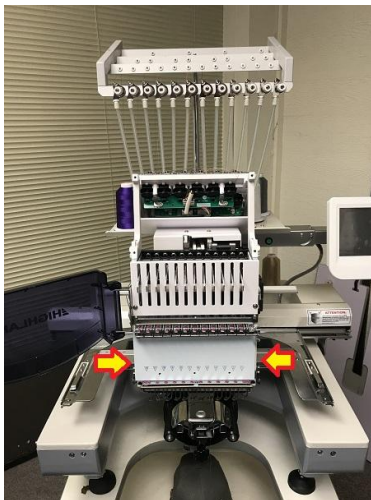
2. Place the check spring bar back on your machine (illustrated below)



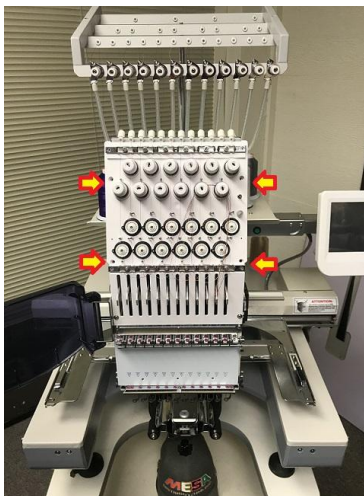
3. Set your presser foot height by first bringing your degree wheel and needle down to 130 degrees. Next, loosen the Phillips head screw on your presser foot to drop the presser foot down until it touches the needle plate. Finally, tighten the screw to secure it and hit the 100 button on your control panel to bring the needle back to its home position



4. Slide the metal cover back over your needle bars (illustrated below)



5. Place your tension base back on the head of your machine by carefully bringing it up and over the top of the side brackets. Be careful to not damage your thread break sensors in the process
6. Tighten the four #3 allen screws on your tension base to secure it (illustrated below)



At this time your RPS Stud has been replaced and you are free to use your machine like normal. If you have any questions about these instructions or would like to speak with a technician, please call us at 800-330-3867 Option 2