

Repair Procedures

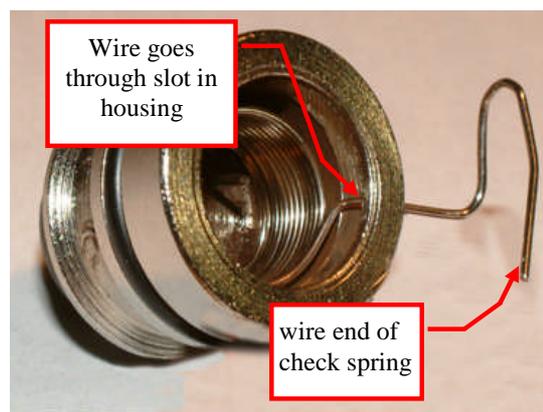
The procedures in this section are not routine maintenance. These are used only if something breaks or you have damaged the setup. For example, the wire in the check spring may break or you may run over a button or pin on your quilt that causes the timing to be off. However, these are repair procedures that any quilting machine operator should be able to do without the assistance of a dealer or technician.

Replace Check Spring

1. Using a 3/32 Allen wrench (hex key) loosen the set screw behind the tension assembly.
2. Pull the tension assembly straight out.
3. Loosen the screw on the tension assembly housing with a small, flat head screwdriver.
4. Remove the broken check spring from the housing. You can probably just turn it over and dump the spring out of the housing. If it won't come out that way, get a small needle nose pliers or tweezers to pull it out.
5. Thread the wire end of the check spring through the slot of the housing starting from the inside and going to the outside. When it is as far as it can go, push the spring down inside the housing.
6. Place the tension shaft into the center of the spring. There is a groove in the bottom of the shaft. Turn the housing until the check spring catches the groove in the shaft bottom. It will then slide together.
7. Rotate the shaft back and forth to be sure the spring arm applies tension on the spring. If it doesn't move and try to spring back, you don't have it

seated in the groove properly. Try again.

8. Turn the shaft clockwise until the spring arm touches the edge of the slot. Rotate $\frac{1}{4}$ turn clockwise. The spring is now under tension so hold onto it and tighten the set screw with



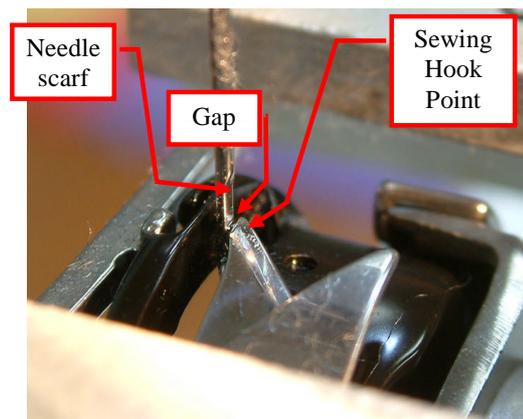
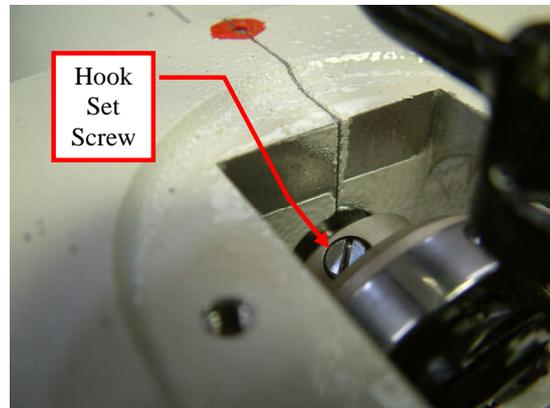
the flat head screwdriver.

9. With your finger, push on the spring to be sure it bounces back. If it does not, it slipped when you tightened the set screw.
10. Put the housing back into the machine with the spring at the 11 o'clock position. Using the hex key, tighten the set screw.

Set Rotary Hook Timing

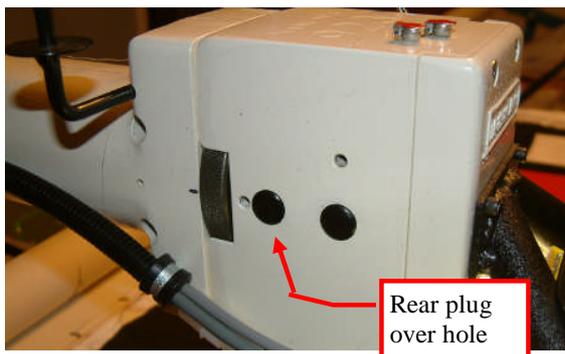
You should only need to set the rotary hook timing if you have hit something while sewing such as a button or a pin.

1. Remove two Phillips head screws holding the throat plate.
2. Remove throat plate.
3. There are three hook set screws on a shaft. Loosen, but do not remove, all of the hook set screws.
4. Finger tighten one set screw so that the hook will not rotate on the shaft while making adjustments.
5. While looking at the point of the Sewing Hook, make sure it passes through the center of the needle scarf or slightly below.
6. Check to be sure needle doesn't touch the hook assembly. There should be a slight gap between the needle and the hook point. If it is too far away or too close, push or pull the hook assembly in or out to adjust it.
7. Tighten set screws.
8. Replace the throat plate using the two screws, making sure the needle is centered in the needle hole.



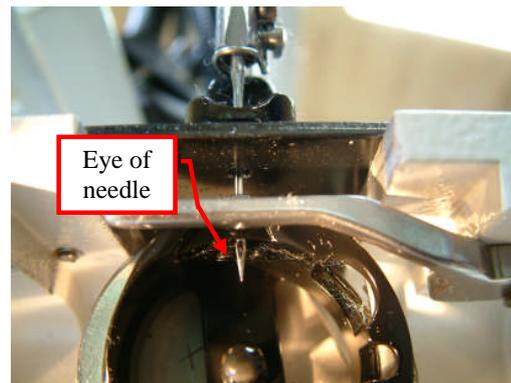
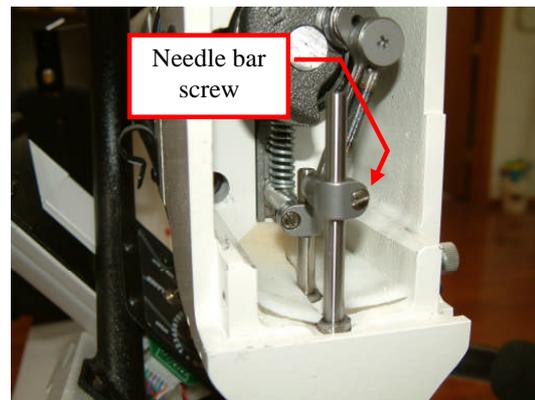
Set Hopping Foot Timing

1. Remove throat plate by removing the two screws that hold it in place.
2. Remove plug over rear hole in machine head.
3. Rotate thumb wheel until you can see a set screw inside the hole.
4. Using a 1/8" hex key, loosen the set screw.
5. Keep the hex key in the screw head and use it to hold it still while you rotate the thumb wheel. This will keep the drive wheel from turning so that you are changing the location of it on the shaft.
6. Adjust so that the hopping foot is in its lowest position when the needle is in its lowest position. As you turn the thumb wheel, the needle will begin to come back up just before the hopping foot begins to come back up.
7. Tighten set screw.
8. Replace the plug over the hole and the throat plate.



Adjust Needle Bar

1. Remove bobbin case.
2. Remove three Phillips head screws from the front handlebars.
3. Using the hand wheel, place the needle bar into the lowest position.
4. Loosen the needle bar screw with a small screwdriver.
5. Raise or lower the bar until the full needle eye is visible while looking at the Sewing hook. None of the needle above the eye should be visible.
6. Make sure the bar has not pivoted from its original position.
7. Tighten the screw.



Set Hopping Foot Height

1. Remove three Phillips head screws from the front handlebars
2. Using the hand wheel, place the needle bar into the lowest position.
3. Loosen the hopping foot screw with a small screwdriver.
4. Raise or lower the hopping foot bar until the distance from the bottom of the hopping foot is approximately the thickness of a dime minimum or a nickel maximum.
5. Tighten the screw keeping the needle in the center of the hopping foot.

