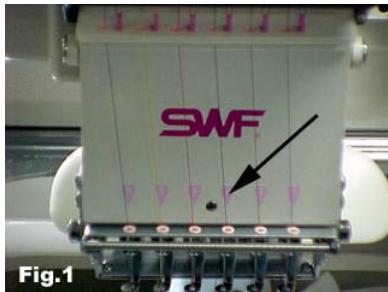


## **Replacing the Reciprocator on the SWF Compact Series Machine (601C and 1201C)**

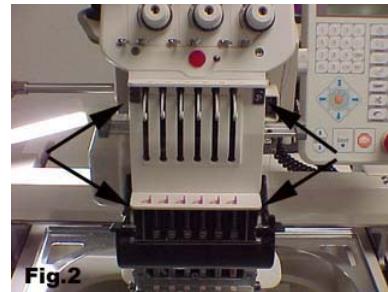
Follow the instructions below to replace the reciprocator in the SWF Compact series machines. The tools required can be found in the tool kit that came with the machine.

### **Preparation**

1. First, place the machine at needle 3 for the 601C, or needle 6 for the 1201C. This will make the removal and replacing of the needle case somewhat easier. **NOTE:** once in place, do not move the manual color change knob at any time during the procedure. Turn the machine off.
2. Begin by removing the SWF face plate on the bottom half of the needle case. This will be one screw on the 601, or two screws on the 1201. (Fig.1)
3. Remove the thread from the needle case only. It is not necessary to remove the thread from the tension base.
4. Now remove the upper face plate where the take up lever arms are located. (Fig.2)
5. Remove the cover from the back of the tension base by lightly pulling down on the top while pulling away from the tension base.



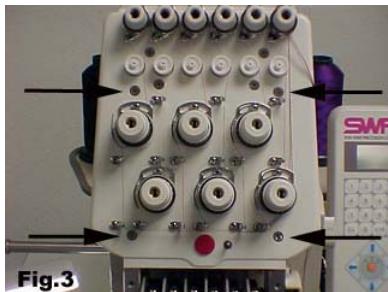
**Fig.1**



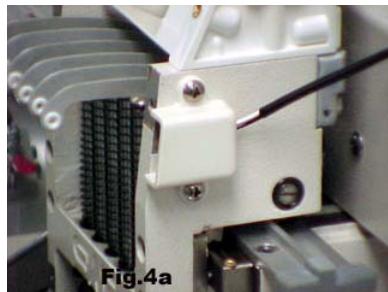
**Fig.2**

### **Removing the Needle Case**

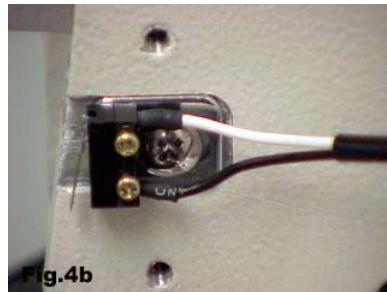
1. Remove the four screws that hold the face of the tension base to the machine. The top two are Phillips head and the bottom two are 3mm socket head screws. (Fig.3)
2. Remove the cover from the cover sensor switch on the right side of the head. Next remove the screw holding the switch to the side of the head. (Fig.4a & 4b)
3. Lift off the tension base face plate and place it behind the color change assembly to keep it out of the way. (Fig.5)
4. Locate and remove the four bolts that secure the needle case to the sewing head. (Fig.6)
5. Carefully lift the needle case slightly and pull the top towards you. It should come loose easily. **Do not force the needle case if it does not come loose.**
6. Set the needle case assembly to the side. You will not need it until reassembly.



**Fig.3**



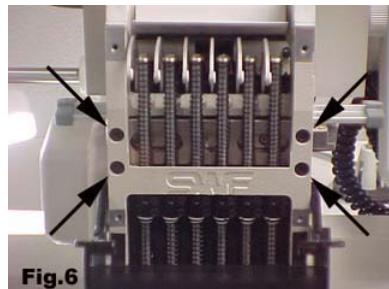
**Fig.4a**



**Fig.4b**

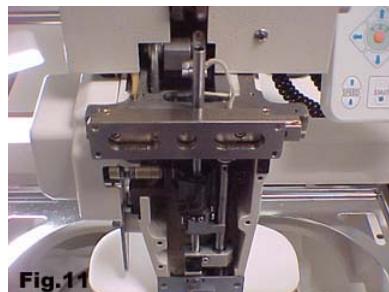
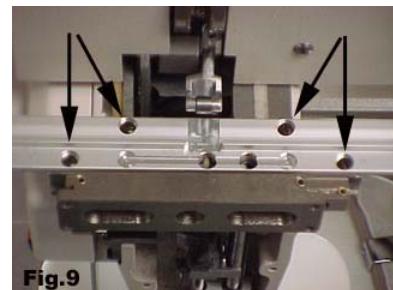
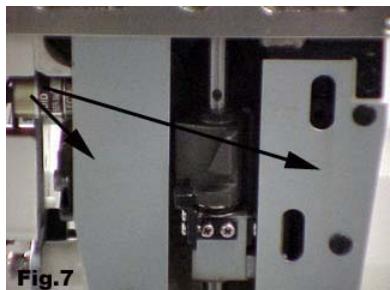
## **Replacing the Reciprocator on the SWF Compact Series Machine (601C and 1201C)**

### Removing the Needle Case(cont.)



### Removing the broken reciprocator

1. Remove the left and right cover plates. There are 2 screws for each side. (Fig.7)
2. Locate the hole to the lower left side of the head. (Fig.8) There is a 2mm allen screw in this hole. You can not see the screw, so you will have to "feel" the allen wrench fit into the screw head. Loosen, but do not remove this screw.
3. Now remove the take up lever guide rail on the top of the head. (Fig.9)
4. Using a small screwdriver or similar tool, gently pull the wicks up out of the needle bar driving shaft. (Fig.10)
5. Carefully slide the shaft up through the top of the head until the reciprocator assembly is free of the shaft. (Fig.11) Use a twisting, pulling motion upward for best results.
6. Pull the reciprocator assembly forward until it comes loose from the connecting rod inside the head.



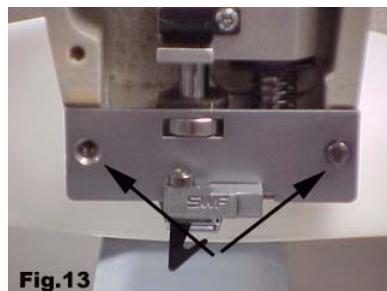
## **Replacing the Reciprocator on the SWF Compact Series Machine (601C and 1201C)**

### **Installing the new reciprocator**

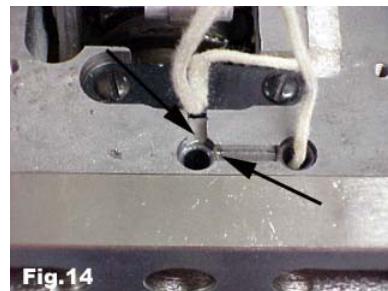
1. Holding the reciprocator upright, guide the pin on the back side into the hole at the bottom of the connecting rod.
2. Move the assembly slightly to align the guides around the presser foot driving shaft located to the right.
3. Before inserting the driving shaft back down through the top of the head, notice that the bottom end has a flat side. (Fig.12) As you insert the shaft, align this side to the left and keep it facing that direction at all times.
4. Slide the shaft down through the reciprocator, continuing all the way down through the felt gasket and round bearing at the bottom of the head. It may be necessary to remove the plate holding the bearing in place to get the shaft to slide easily through the bearing. (Fig.13)
5. The shaft should slide completely down until the top is flush with the bottom of the channels cut for the wicks. (Fig.14)
6. Once the shaft is in place, tighten the 2mm screw in the hole at the bottom left of the head that you loosened in step 2 of removing the broken reciprocator.
7. If you removed the bearing guide plate in step 4 above, replace it now.
8. Using a small screwdriver, press the wicks back down into the driving shaft.
9. Replace the take up lever guide rail. Center the screws in the holes of the rail as close as possible before tightening.
10. Replace the left and right cover plates. The plates should sit flush on top of the bearing guide plate you replaced earlier.



**Fig.12**



**Fig.13**



**Fig.14**

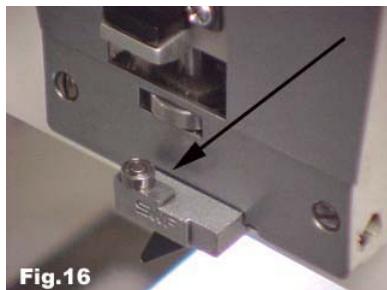
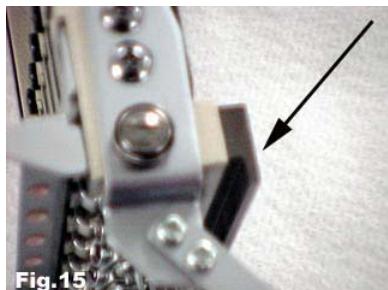
### **Remounting the Needle Case**

1. Holding the needle case upright, line up the wiper hook under the head to fit into the thread holding bracket at the bottom of the needle case. This bracket is just behind the presser feet on the needle case and lined with a soft, Velcro-like material. The hook end of the wiper should pass between two pieces of material.
2. Set the lower lip of the needle case (Fig.15) into, or behind the small bearing at the bottom of the head (Fig.16). Tilt the needle case up, and with light upward pressure, set the top of the case down onto the take up lever guide rail. If mounted properly, there should be virtually no movement of the needle case. It may take two or more attempts to get the needle case to seat properly on top of the head. **Tip:** use a rubber band to hold all the take up levers level as you put the needle case back on the head. This will help to keep them all at the same position during the remount procedure.

## **Replacing the Reciprocator on the SWF Compact Series Machine (601C and 1201C)**

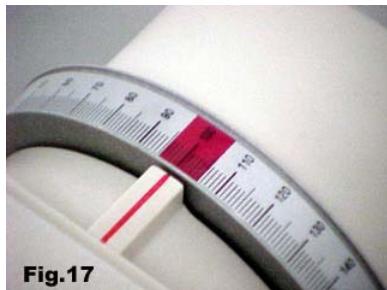
### **Remounting the Needle Case(cont.)**

3. If the needle case is mounted correctly, the 4 bolts that hold it on should automatically line up. If they do not, redo step 2 again. If they do, insert the 4 bolts and tighten them. Insert all 4 before tightening any of them.
4. Replace the tension base using the 2 phillips and 2 allen screws. Again, start all screws before tightening any of them all the way.
5. Replace the cover switch sensor to the right side of the head. Do not put the cover on yet. You may have to readjust it later.
6. Replace the back cover of the tension base. It should snap closed when seated correctly.



### **Check Needle Bars**

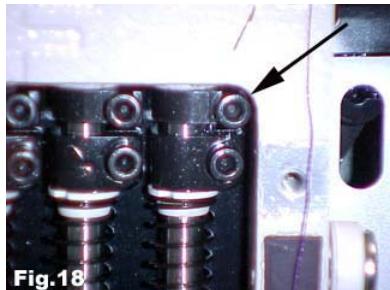
Before replacing the face covers of the needle case, you should check to see that each needle bar will "start". Sometimes when a reciprocator is replaced, it may be necessary to adjust the upper stop point of each needle bar. This is the point at which the reciprocator will "catch" the needle bar and start sewing. If this point is not set correct, the needle bar will not engage when the machine starts. To test this, turn the machine on and move to needle 1. If you get an Error 100, reset the timing wheel to 100 degrees, or the red zone marked on the wheel (Fig.17). The main shaft may have shifted during the replacement procedure. Press the Trim Button on the control panel, then press Start. The machine should cycle about 2 stitches and making a trimming motion. If it did, change to needle 2 and repeat the test. Repeat for each needle bar. If all needle bars work properly, proceed to Final Assembly. If some or all of the needle bars did not engage, follow the steps below to adjust the upper dead point stop position.



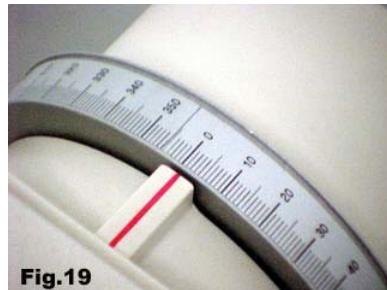
## **Replacing the Reciprocator on the SWF Compact Series Machine (601C and 1201C)**

### **Adjusting the Needle Bars**

1. Start with needle #1 (or whichever needle bar needs adjusting). Pull the needle bar down by pushing down the presser foot until it locks in place.
2. Loosen the upper clamp on the needle bar (Fig.18). **Do not loosen the lower clamp.** This will throw off the timing for that needle bar.
3. Allow the clamp to freely move on the needle bar and slide it down a little.
4. Rotate the main shaft to 0 degrees on the timing wheel. (Fig.19)
5. Slide the loosened clamp up as far as it will go. Keeping light pressure, tighten the screw on the clamp. Make sure to keep the screw head facing out. Look at the other clamps to be sure of direction.
6. Return the main shaft to 100 degrees. The needle bar will still be down, this is normal.
7. Perform a manual trim as in the steps above. Repeat it 2-3 times to make sure needle bar is engaging each time.
8. If the needle bar is engaging each time, move on to the next needle bar. If not, repeat the steps again. **Note:** make sure the head is turned on during this adjustment. If the head is off, the needle bar will never engage.



**Fig.18**



**Fig.19**

### **Final Assembly**

1. Replace the cover over the take up levers.
2. Replace the SWF face plate.
3. Rethread the needle case.
4. Test sew the machine on all needles.