

NV4000

Disassemble Needle Bar Crank and Needle Bar Crank rod

Caution : Please refer to service manual & parts list for each parts name.

1.



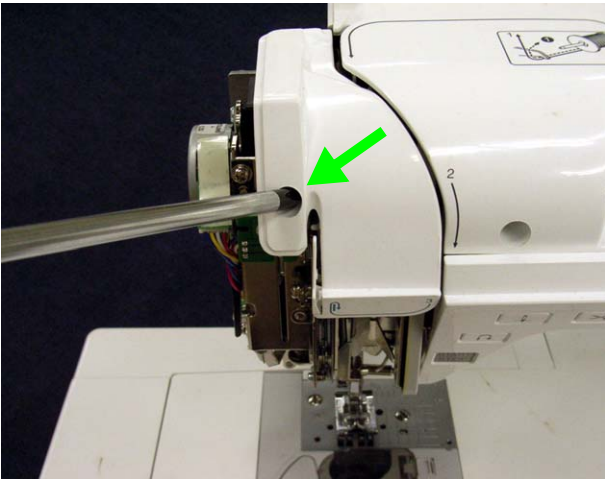
Remove Top Cover.

2.



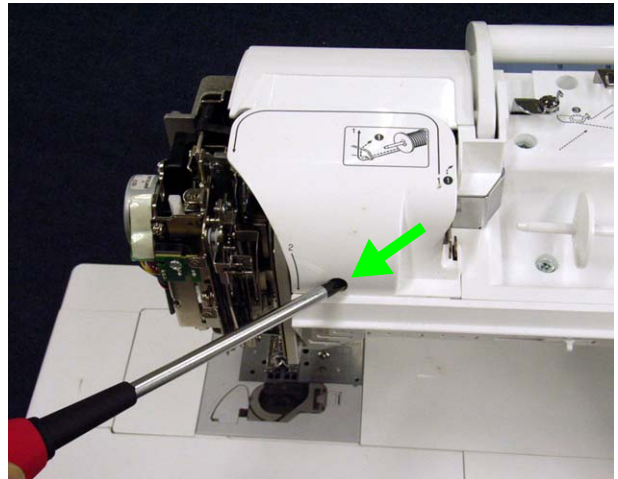
Take off the screw above and remove Face Plate.

3.



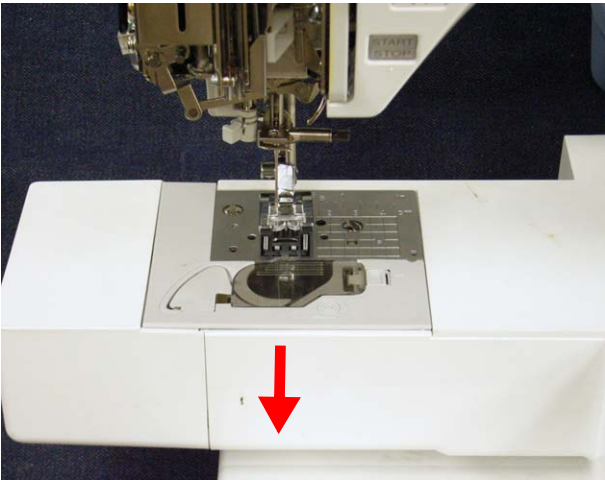
Take off the screw above and remove Thread Guide Cover A.

4.



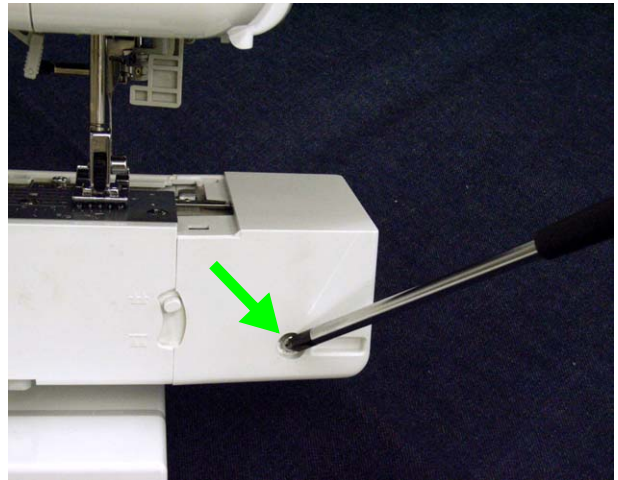
Take off the screw above and remove Front Thread Guide Cover.

5.



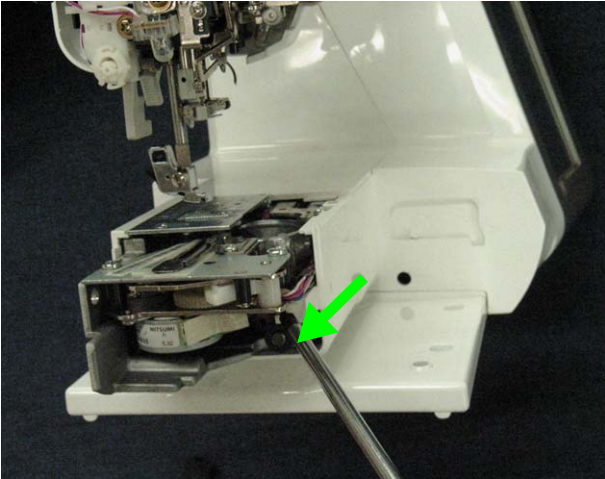
Take out needle from the needle bar.
Remove Needle Plate B and take out Inner Rotary Hook.

6.



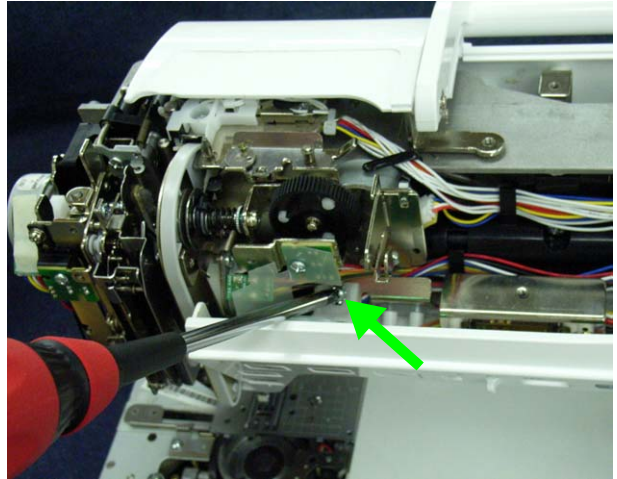
Take off the screw and remove Free Arm Cover.

7.



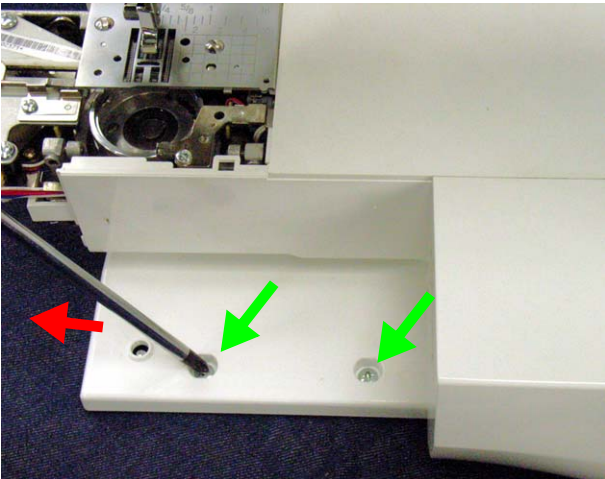
Take off the screw above.

8.



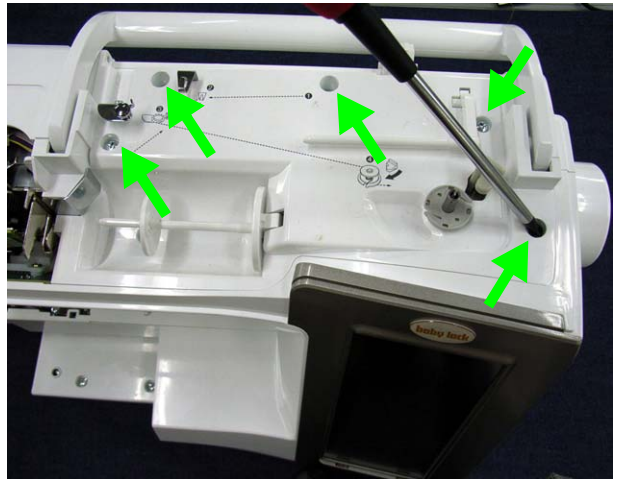
Take off the screw above.

9.



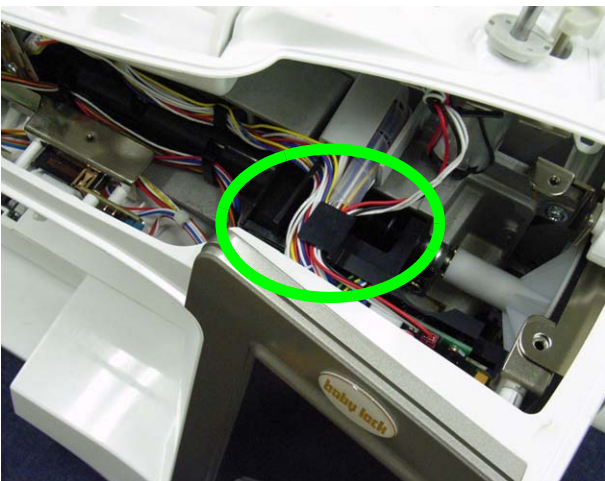
Remove 2 screws above and remove Base Plate Cover.

10.



Remove Upper Cover above 5 screws.

11.



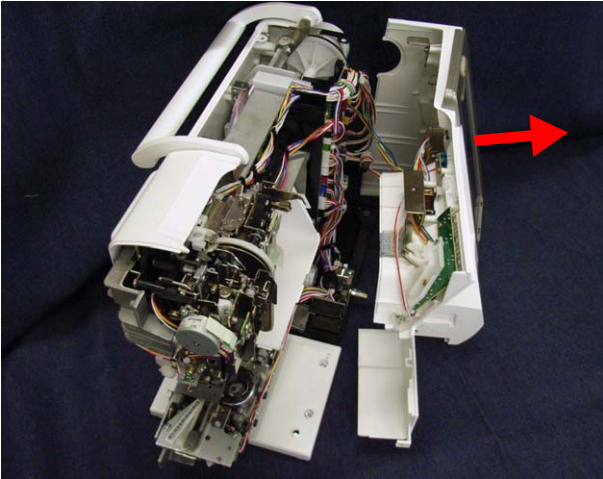
Take off Bobbin Winder Lead Wires from the Guide hook.

12.



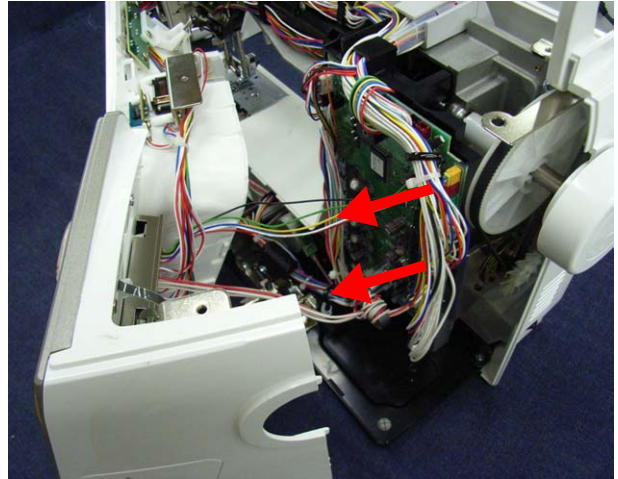
Take off above 2 Bobbin Winder connectors from the Main PCB.

13.



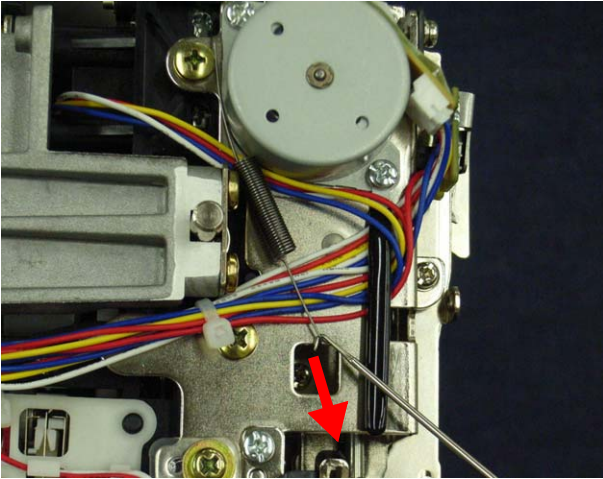
Take off Front Cover Assy from the Machine.

14.



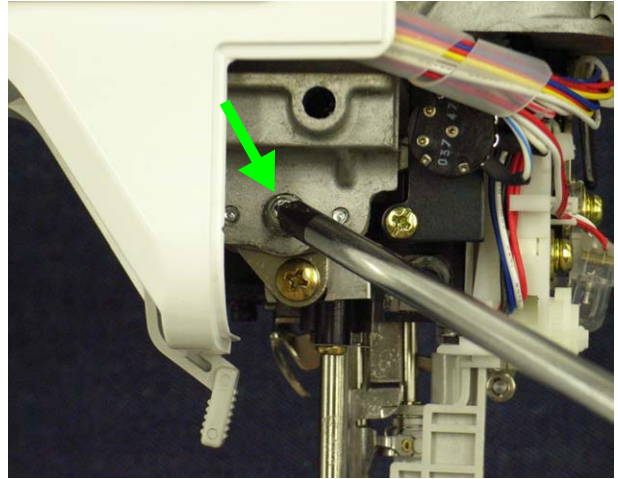
Take off above 2 LCD PCB connectors from the Main PCB.

15.



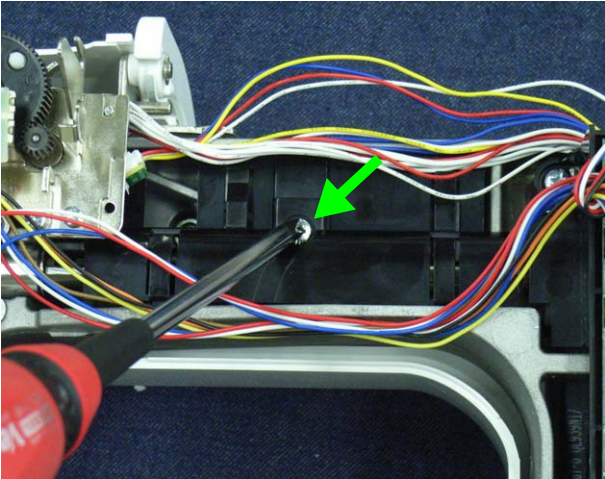
Take off Ground spring form the side of Needle-Presser Module.

16.



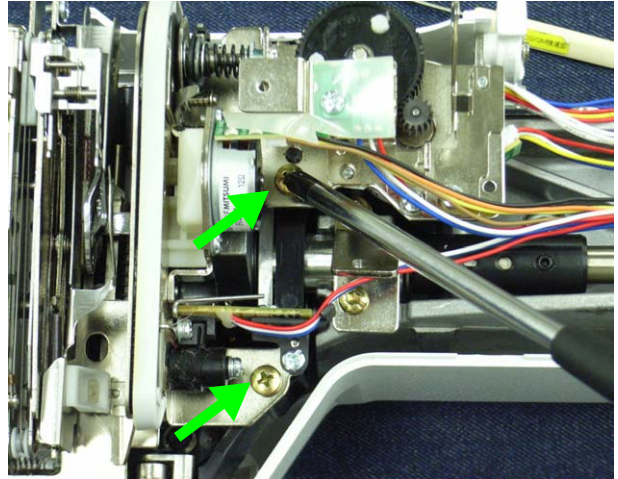
Remove above screw from the side of Needle-Presser Module.

17.



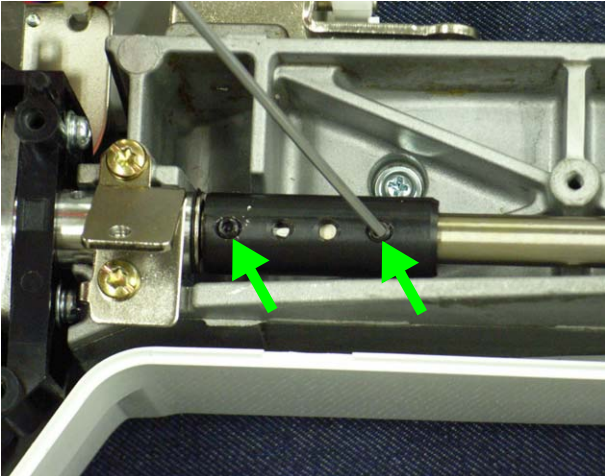
Lay down the machine with front face up Take off all lead wires from the Upper Shaft Cover, then take off screw above and remove Upper Shaft Cover.

18.



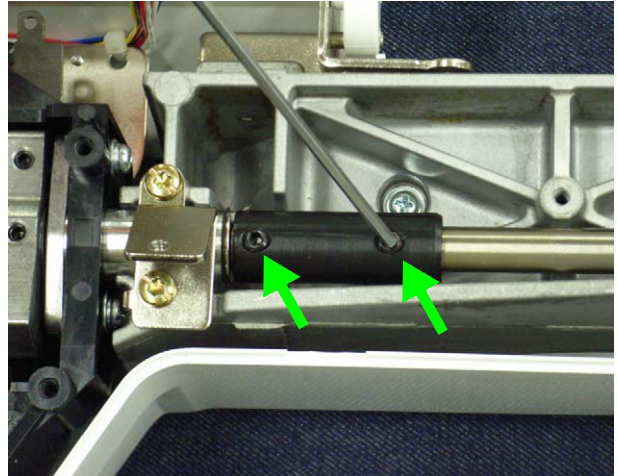
Remove Up Thread PCB Assy connector (CN24) from the Main PCB to avoid breaking lead wires. Then remove above 2 screw and take off Thread Guide Mechanism.

19.



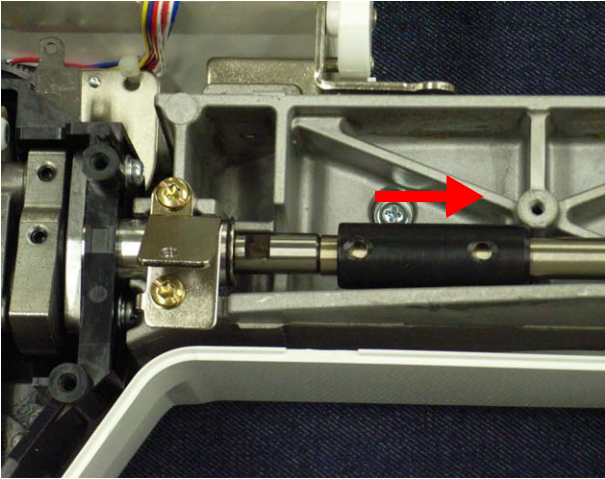
Remove 2 screws and take off Fixed Joint.

20.



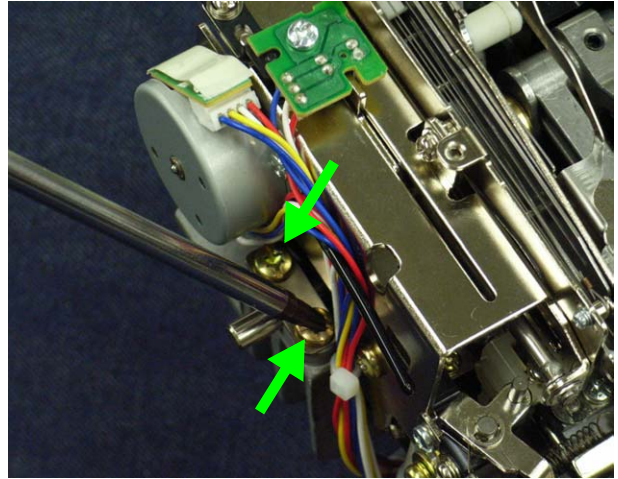
Turn the pulley 180 degree and Take off 2 screws form the fixed joint.

21.



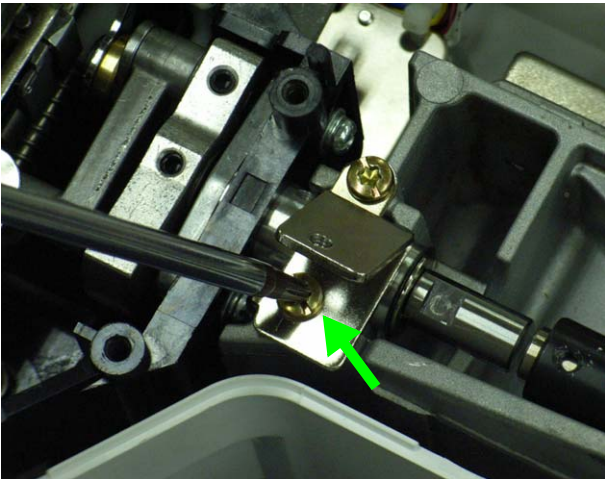
Slide Fixed Joint to the right.

22.



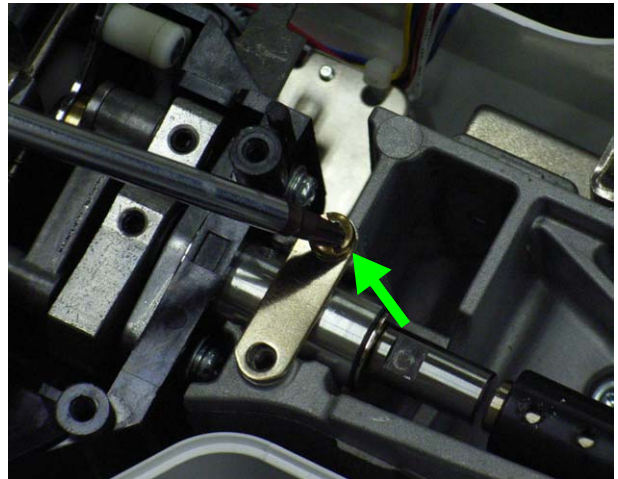
Remove 2 screws from the Needle-Presser Module, then remove Presser Plate B.

23.



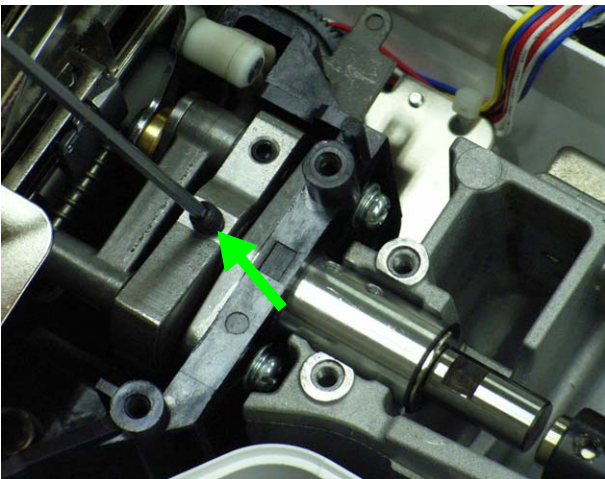
Remove Lower screw from Needle Presser Module and remove Adjust Plate.

24.



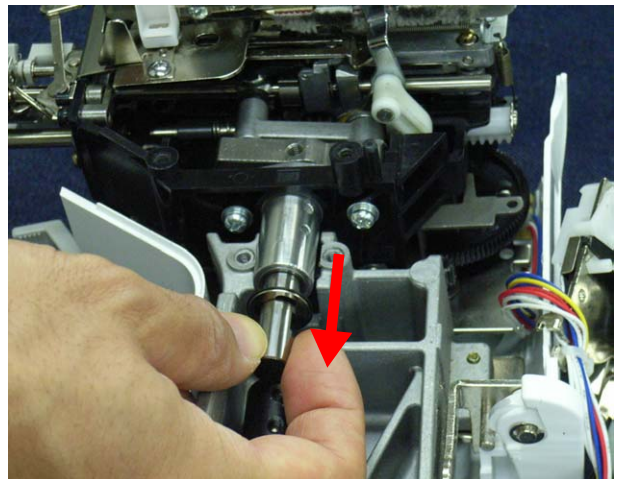
Remove Upper screw from Needle Presser Module then remove Presser Plate A.

25.



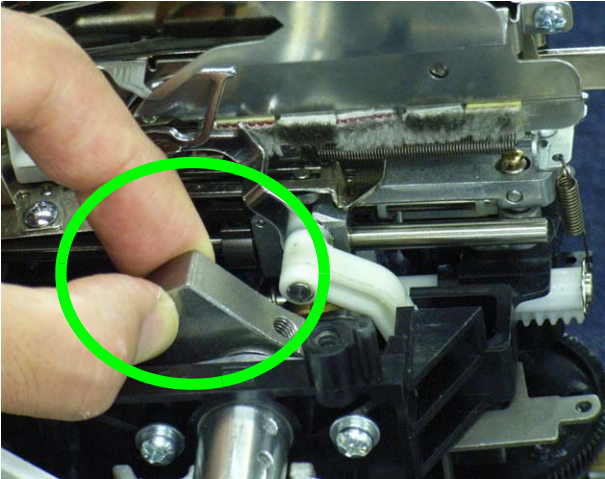
Remove Thread Take-Up Counter Weight Screw, reverse it then remove the other Screw.

26.



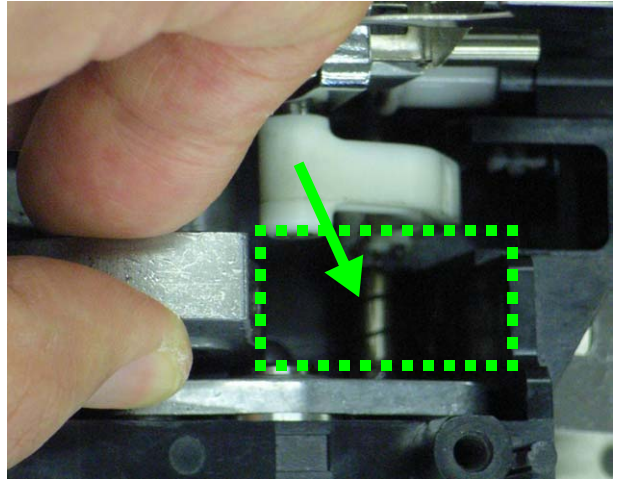
Slightly pull up right side of Needle-Presser Module then pull the Unit shaft to the out side approx. 1cm.

27.



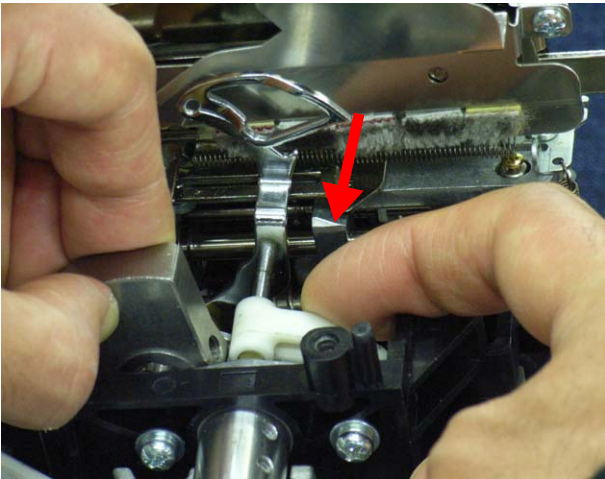
Pick top of Thread Take-up Counter Weight.

28.



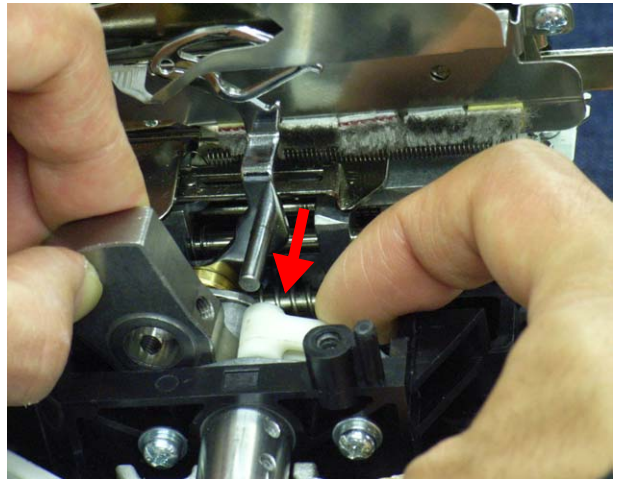
Push down Take-Up Counter Weight to make enough space for Thread Take-Up Lever Link moves left and right.

29.



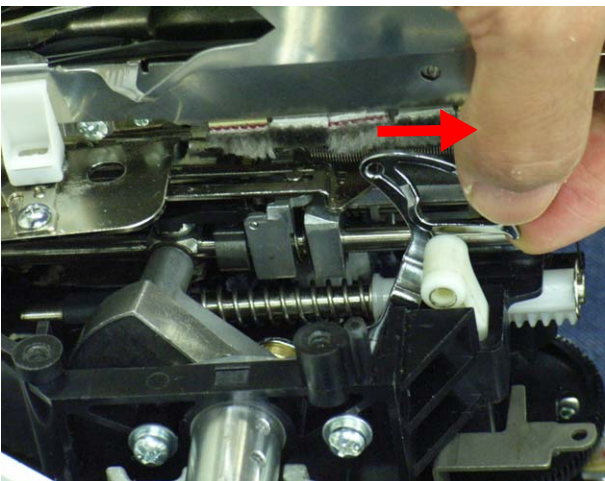
Slightly move Thread Take-Up Lever Link to the right.

30.



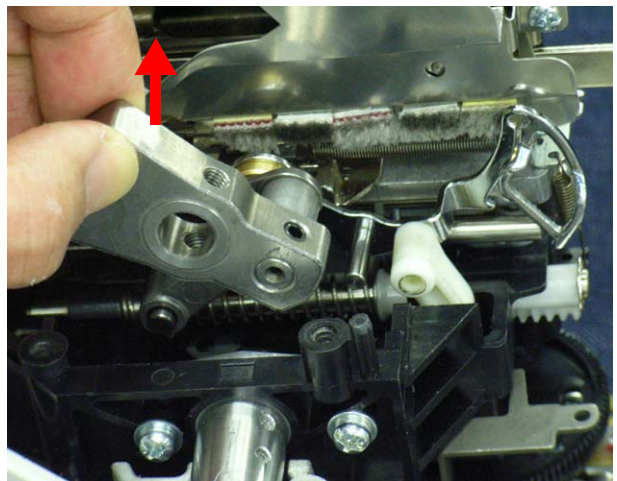
Pull Thread Take-up link from the Needle Bar Block Shaft.

31.



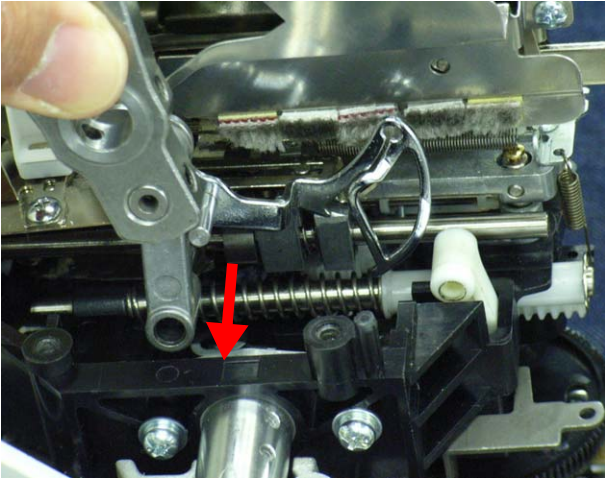
Take out Thread Take-Up Lever from the Thread Guide Base Assy.

32.



Hold Thread Take-up Counter Weight and pull it up.

33.

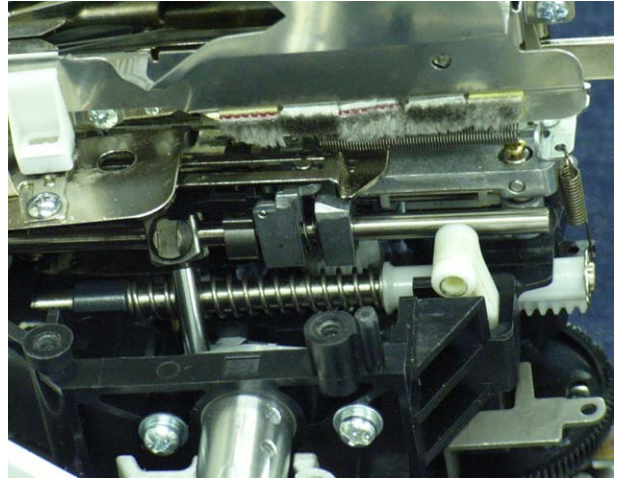


Pull out Needle Bar Crank Rod from the Needle Bar Block Shaft.

CAUTION

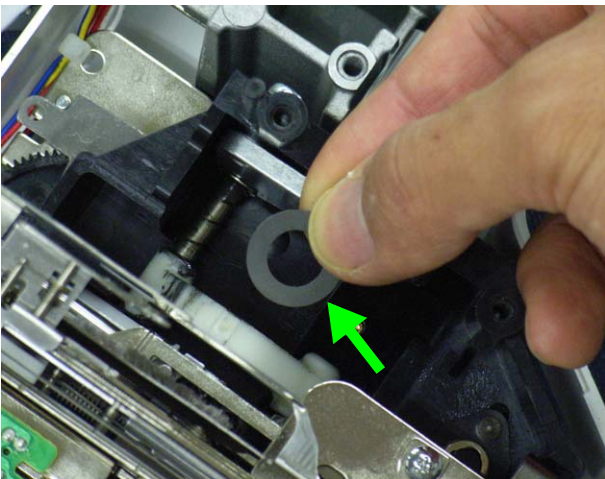
- When you remove Needle Bar Crank Rod, Tip of Thread Take-Up Lever should not touch Thread Guide Base Assy to avoid Thread Guide Base Assy trouble.

34.



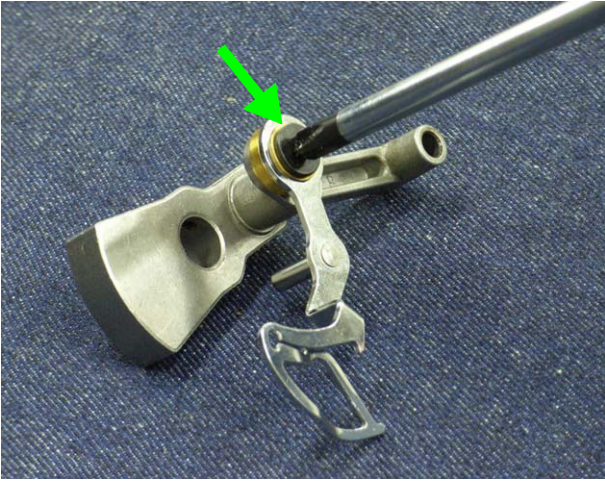
Complete remove Needle bar Crank Rod.

35.



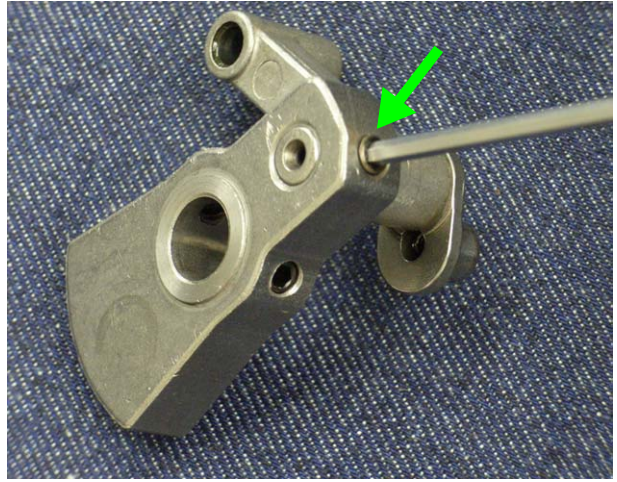
Take the washer from the inside unit.

36.



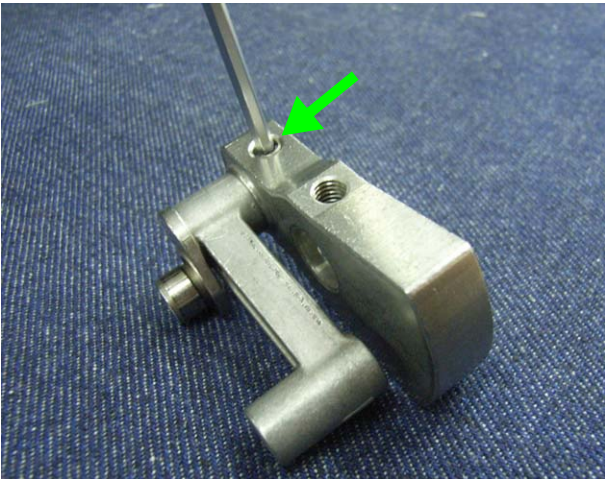
Remove above reversed screw and remove Thread Take-Up Lever.

37.



Remove above screw from the Thread Take-Up Counter Weight.

38.



Remove the other side screw.

39.



Remove Needle Bar Crank from the Thread Take-Up Counter Weight.

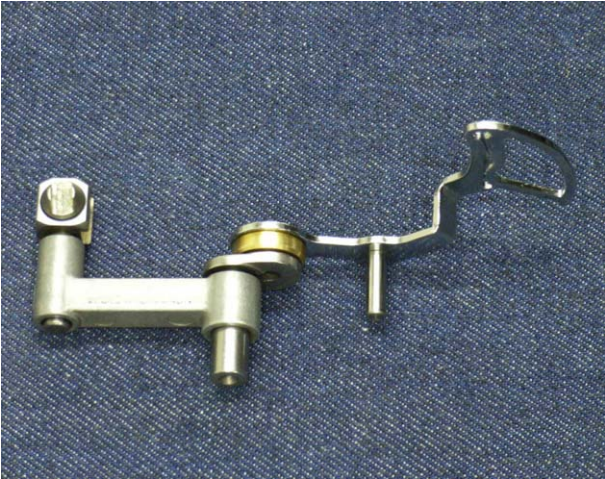
Completed Disassemble

NV4000

Assemble Needle Bar Crank and Needle Bar Crank rod

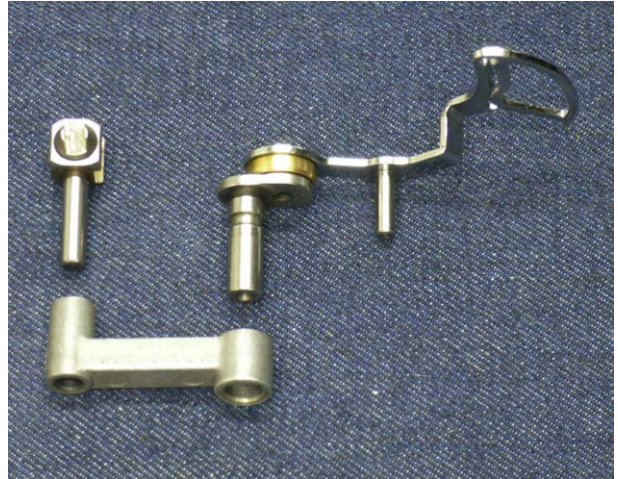
Caution : Please refer to service manual & parts list for each parts name and type of screw.

1.



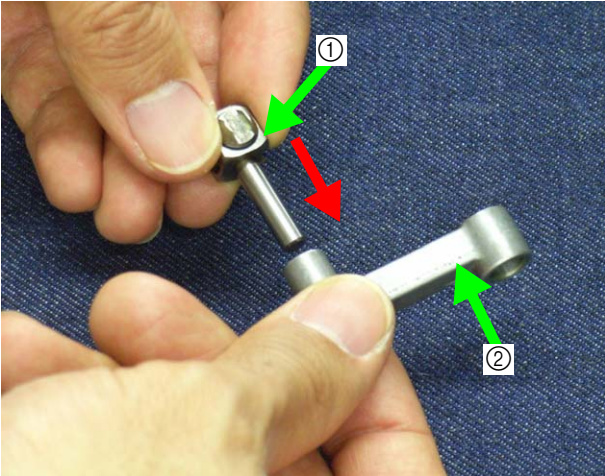
Needle Bar Crank Rod Assy for the Replace (Brand New).

2.



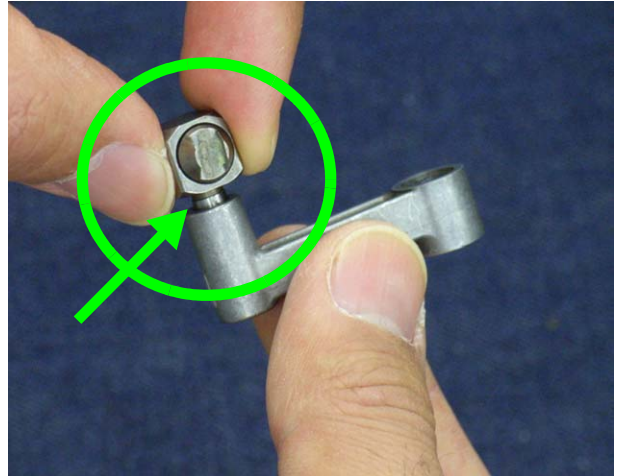
Remove above 3 parts and take off whole Grease from the all parts.

3.



Insert Brand New Needle Bar Block Shaft ① To the Needle Bar Crank Rod ② originally from the machine.

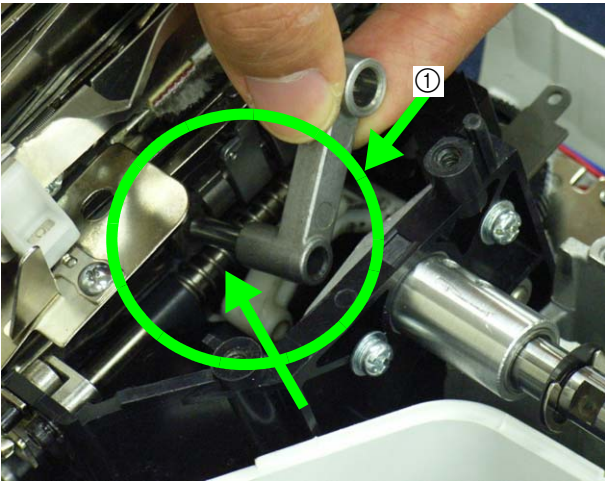
4.



CHECK POINT (1)

Please inspect There are no play and turn Needle Bar Block Shaft in the Needle Bar Crank Rod smoothly
Take out Needle Bar Block Shaft after Inspection.

5.



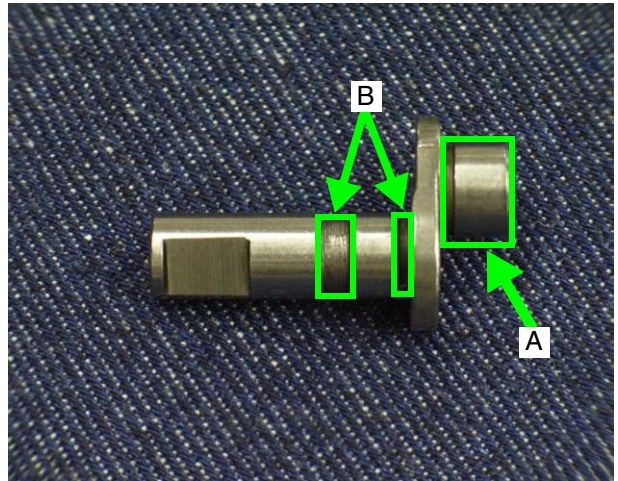
CHECK POINT (2)

Take off the grease from the Needle Bar Block Shaft on origin machine side, then insert brand new Needle Bar Crank Rod ① to the Needle Bar Block Shaft. Turn the Needle Bar Block Shaft and inspect make sure there are no play and move smoothly. Take out Needle Bar Crank after inspection.

CAUTION

- If you see the some problem with Check point (1) or (2). Please use the other brand new Needle Bar Crank Rod Assy and inspect again to avoid abnormal.

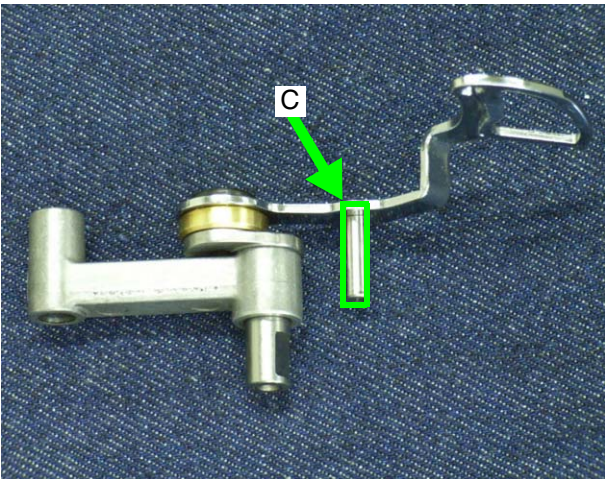
6.



Apply the grease to the Needle Bar Crank Rod.

- A : Apply Oil (MOLYKOTE M DISPERSION) to the shaft Groove portion (1-2 drops)
- B : Apply Grease (MOLYKOTE EM-30L) (Small Bead)

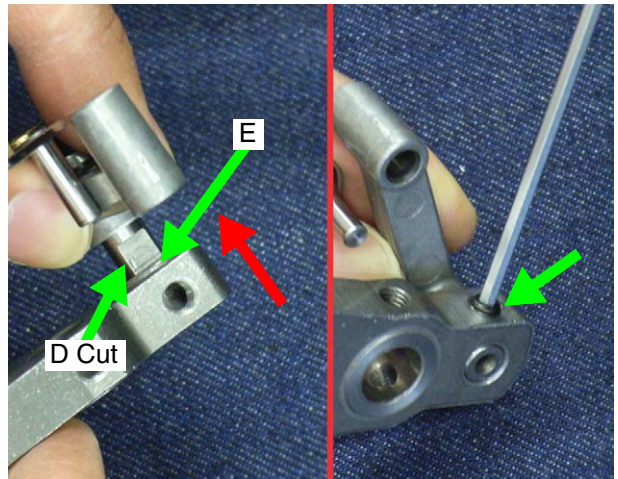
7.



Apply the grease to the Thread take-Up Lever shaft.

- C : Apply Grease (MOLYKOTE EM-30L) (Bead)

8.

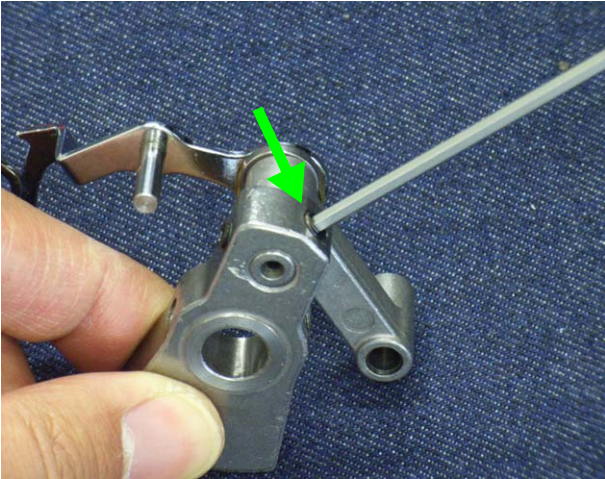


Insert Needle Bar Crank Rod shaft to the Thread Take-Up Counter Weight by referring Below 2 points.

POINT

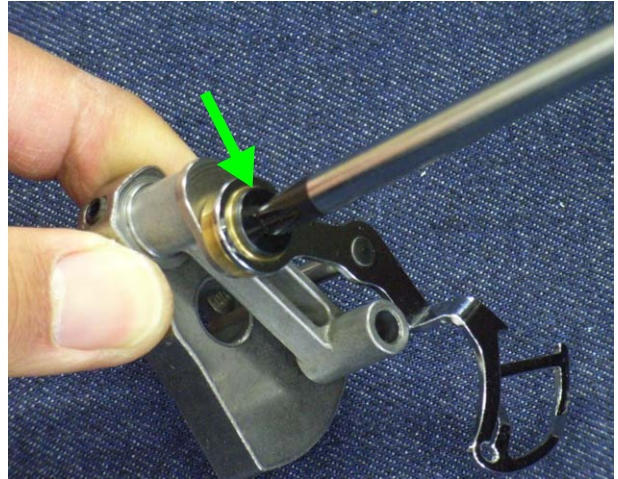
- Above bulge side E must be Needle Bar Crank Rod side.
- Above Thread Take-Up Counter Weight side screw spot and Needle Bar Crank Rod shaft D cut face must be aligned.

9.



Tighten above screw by pushing Take-Up Counter Weight softly.

10.

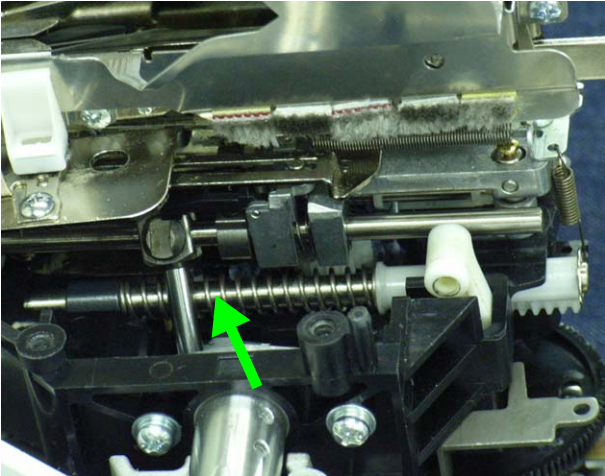


Tighten the other side screw.

POINT

- Please inspect make sure there are no play and move smoothly.

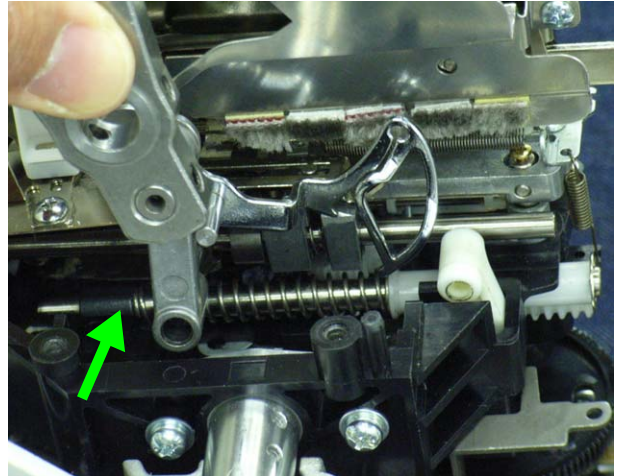
11.



Apply grease* to the Needle Bar Block Shaft.

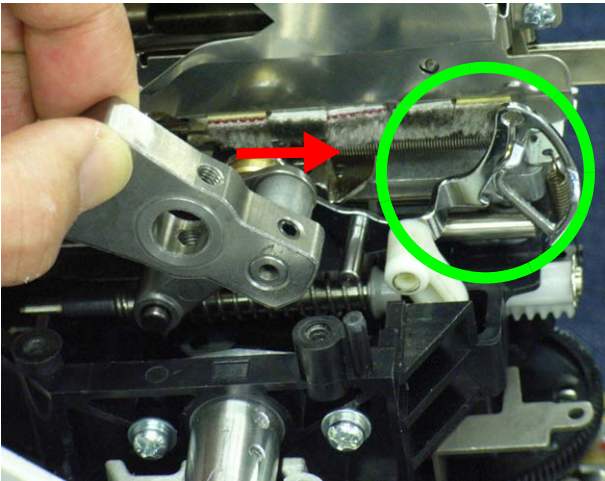
* : MOLYKOTE M DISPERSION 10%
+ OILER B ASSY 90%

12.



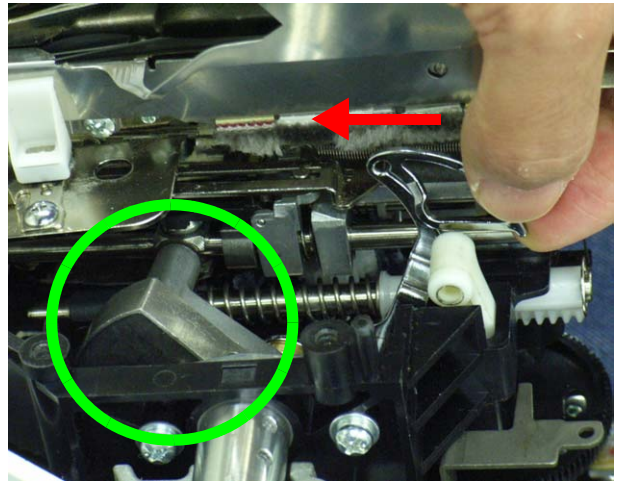
Pick top of Take-Up Counter Weight and then, Insert Needle Bar Crank shaft to the Needle Bar Crank Rod.

13.



Push up Thread take-Up Counter Weight to the top side (See above arrow side) and move top side of Thread Take-Up Lever to the Thread Guide Base Assy side.

14.

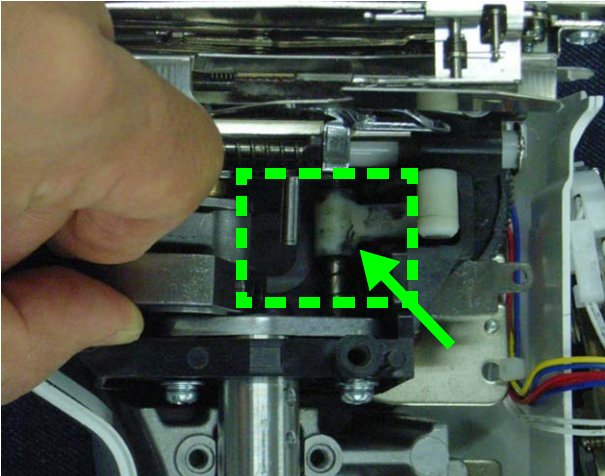


Allocate Thread take-Up Counter Weight and Thread Take-Up Lever by referring above picture.

CAUTION

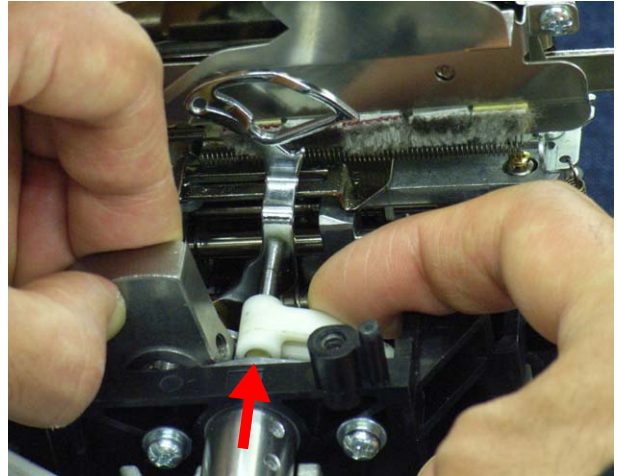
- When you assemble Thread Take Up Lever, Tip of Thread Take-Up Lever should not touch Thread Guide Base Assy to avoid Thread Guide Base Assy trouble.

15.



Lower the Thread take-Up Counter Weight Above position (Refer above picture) to Make a space for assembling Thread Take-Up Lever Link.

16.

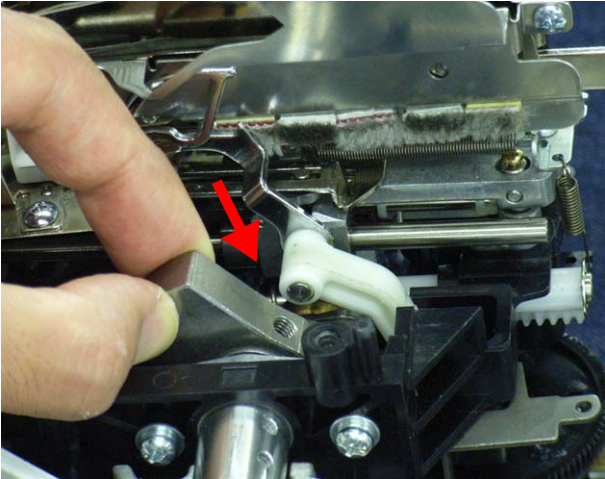


Insert Thread Take-Up Lever Shaft to the Thread Take-Up Lever Link hole.

POINT

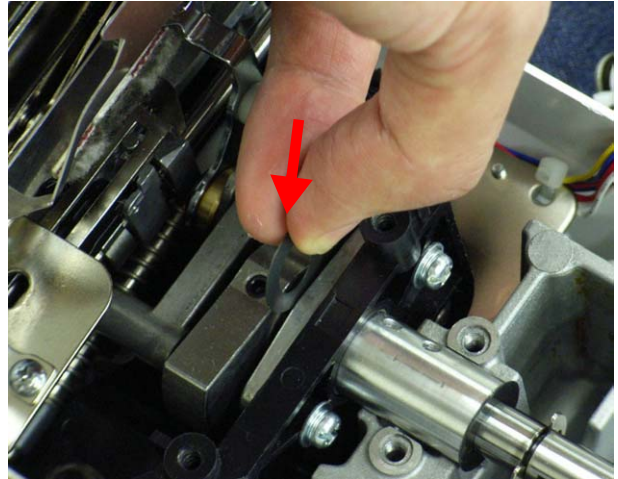
- It would be easier to insert Thread Take-Up Lever Shaft and Thread Take-Up Lever Link hole by parallel.

17.



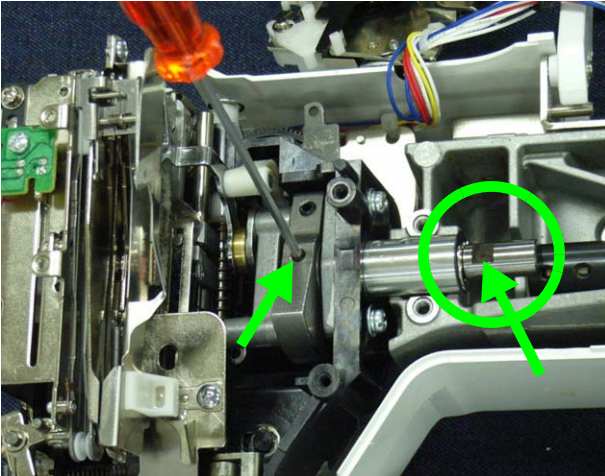
Slantingly insert Thread Take-Up Counter Weight.

18.



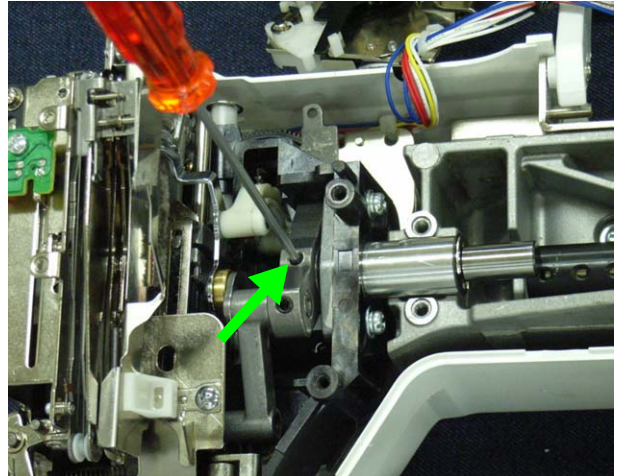
Insert the Unit Shaft till you will see the 1 to 2 mm from right hand side, then Insert washer to the Unit Shaft.

19.



Set the Unit Shaft Position D cut face must be front side, then Tighten Take-Up Counter Weight screws by slightly push it from Right hand side (See the above arrow).

20.

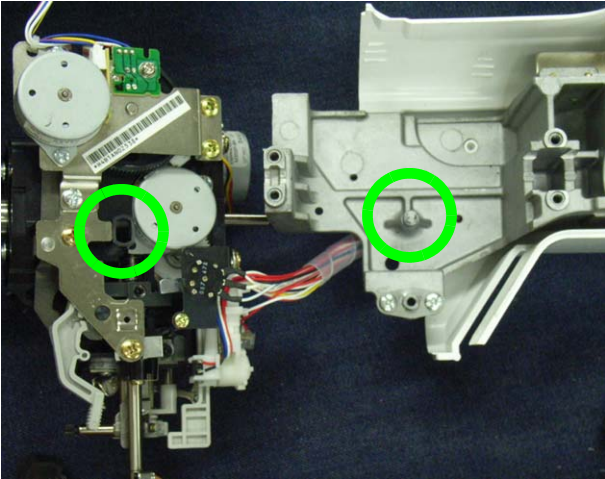


Turn the Thread Take-Up Counter Weight and tighten the other screw.

CHECK POINT

Thread Take-Up Counter Weight should not have any play between left and right and rotating smoothly.

21.

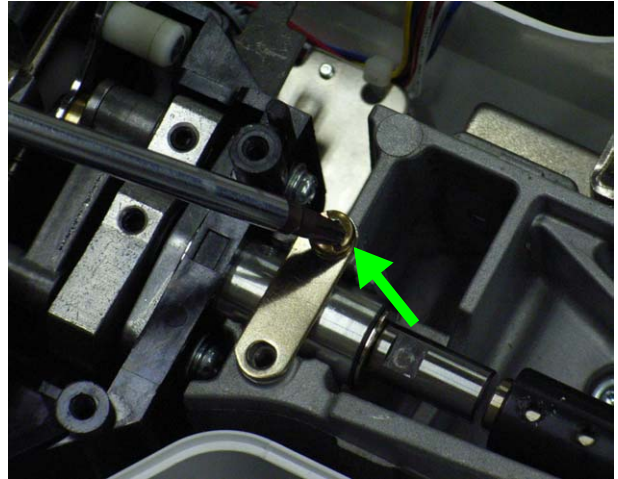


Assemble Needle-Presser Module to the machine base.

CAUTION

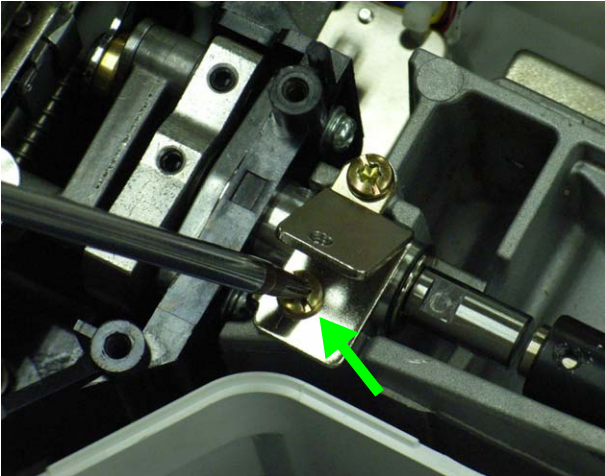
- Make sure insert arm side positioning pin and Needle-Presser Module side positioning hole otherwise you can not assemble it.

22.



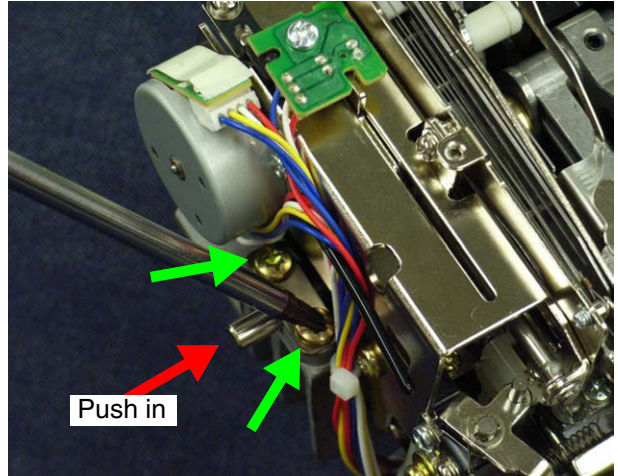
Set Presser Plate A to the right side of Needle-Presser Module and tighten screw.

23.



Set Adjust Plate to the right side of Needle-Presser Module and tighten screw.

24.

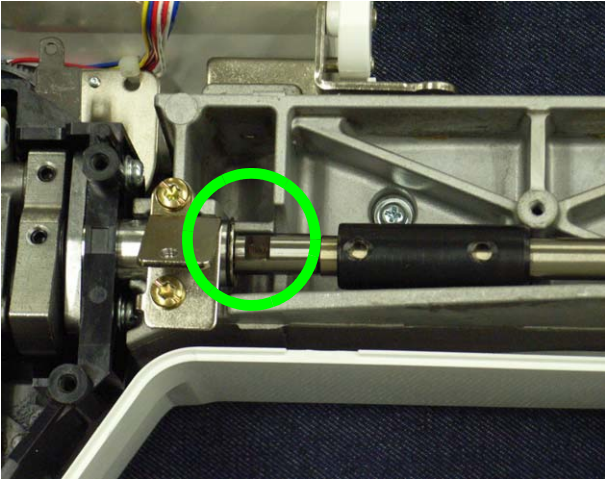


Set the Presser Plate B to the left side of Needle-Presser Module and tighten 2 screws.

CAUTION

- Please push in the Unit Support Shaft to the right while tighten 2 screws.

25.



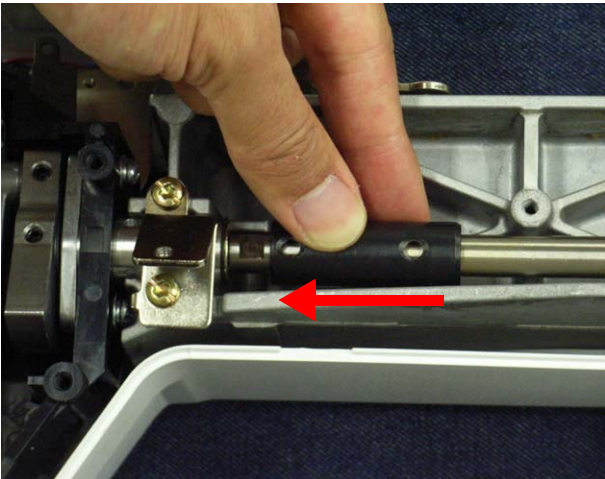
Slide Fixed Joint to the right. Set the Unit Shaft D cut face to the front And line up Unit Shaft and Upper Shaft.

26.



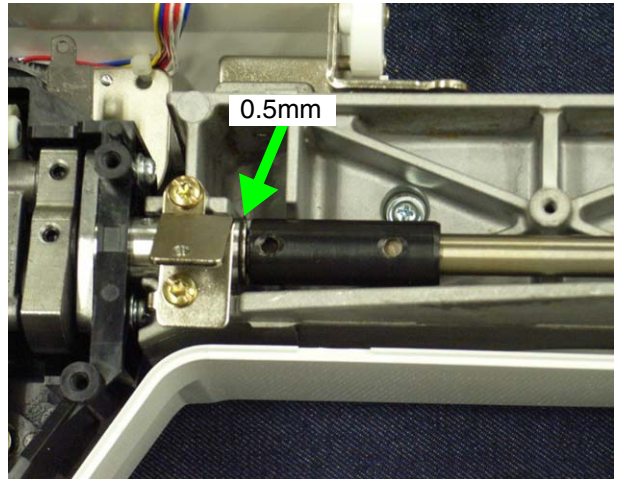
Turn the Pulley and set the Pulley line to the above position.

27.



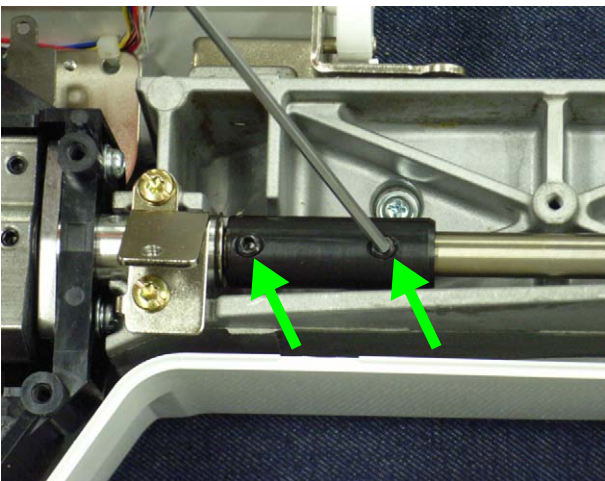
Slide Fixed Joint to the left.

28.



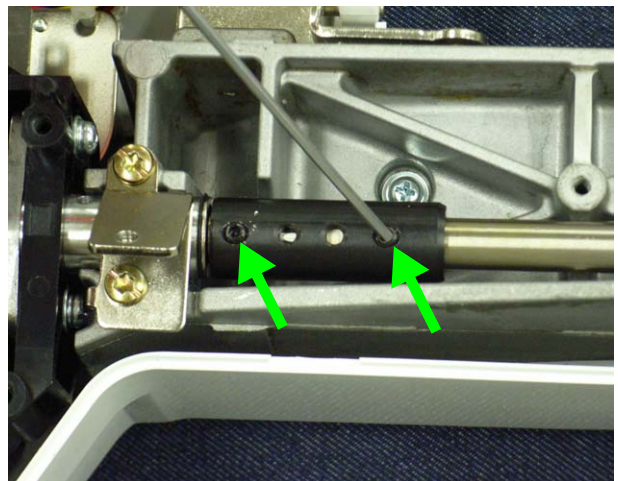
Create clearance 0.5mm between fixed Joint and Retaining Ring.

29.



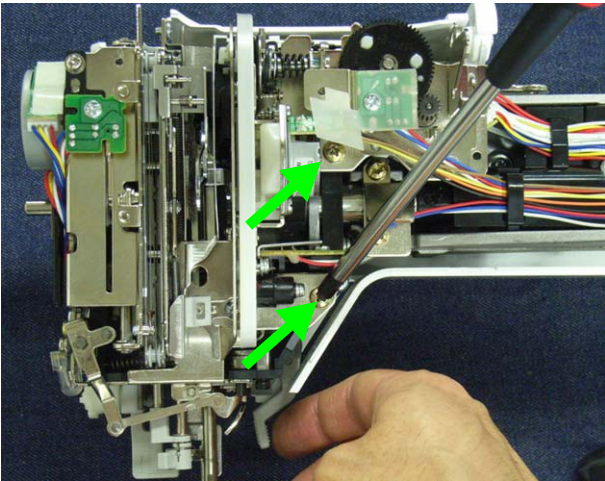
Tighten Fixed Joint 2 screws.

30.



Turn the Upper Shaft 180 degree and Tighten Fixed Joint 2 screws.

31.

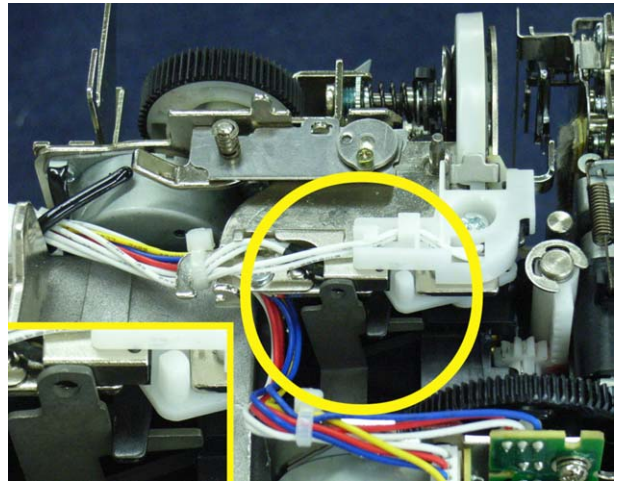


Lower the Presser Foot Lever then set the Thread Guide Module and tighten 2 screws.

CHECK POINT

After attaching Thread Guide Module, please move Presser Foot up And down to check Tension Disk is open.

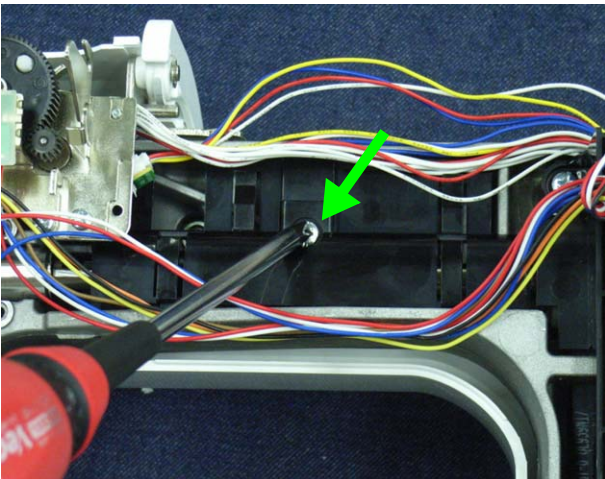
32.



POINT

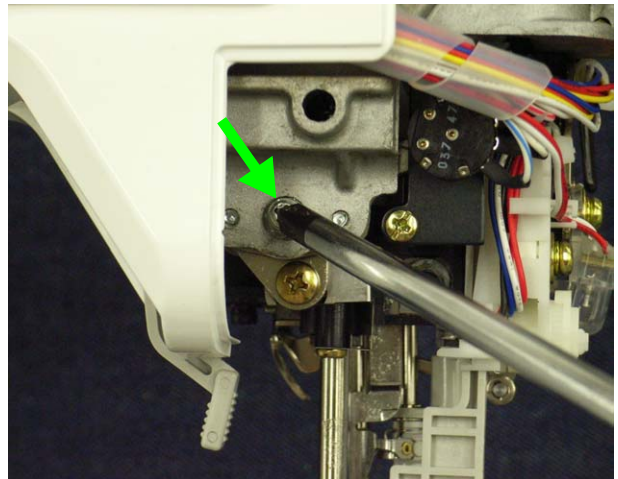
- Please refer above picture about Thread Guide Module and Needle Presser Module.

33.



Set the Upper Shaft Cover and tighten Screw.
Set Lead Wires to the Upper Shaft Cover clip.
Set Up Thread PCB Assy connector (CN24) to the Main PCB.

34.

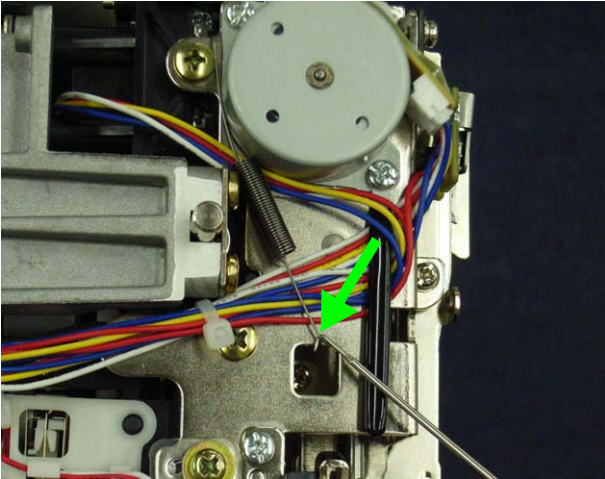


Tighten behind of Needle Presser Module screw.

CAUTION

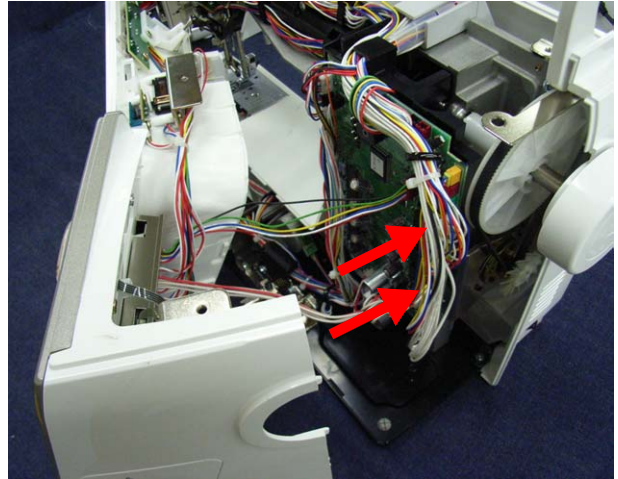
- Please refer the service manual to check Needle Bar height and hook gap adjustment.

35.



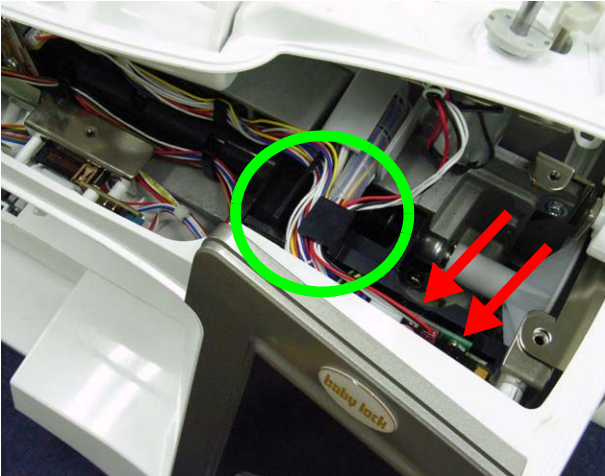
Hook the Ground Spring to the Needle Presser Module.

36.



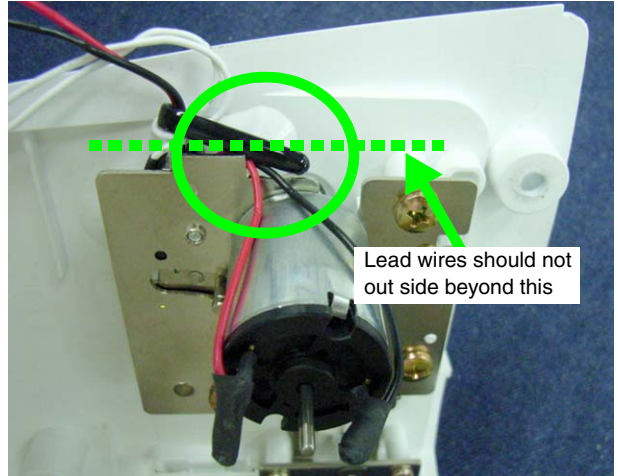
Set to 2 LCD PCB Lead Wires to the Main PCB then, put back Front Cover Assy.

37.



Set Bobbin winder 2 connectors to the Main PCB then set Lead Wires to the Bobbin Winder Guide hook.

38.

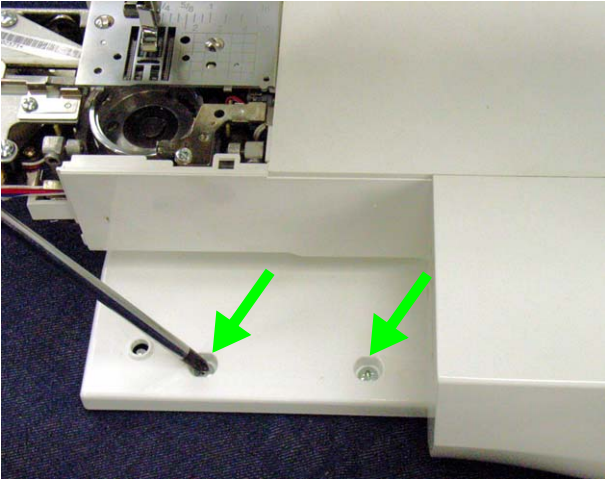


Just for reference with Bobbin winder view from the behind.

CAUTION

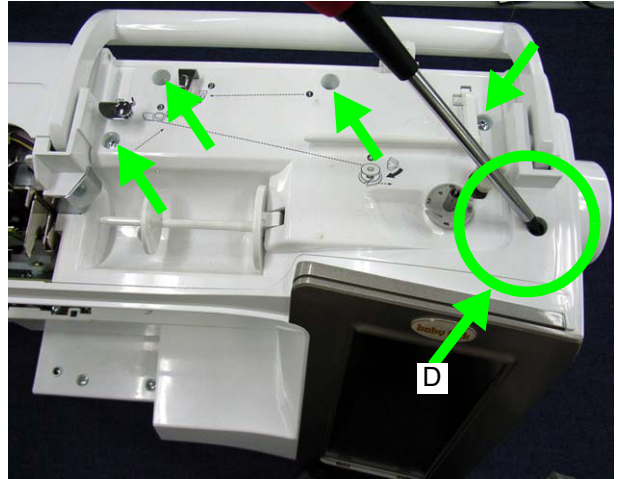
- Fixed above 2 Lead Wires by couching clip to avoid pinching Lead Wire between covers.

39.



Set Base Plate Cover and tighten 2 screws.

40.

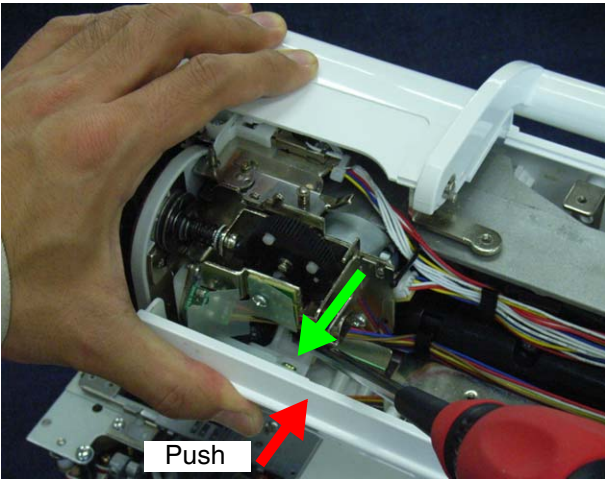


Attach Upper Cover and tighten 5 screws above.

POINT

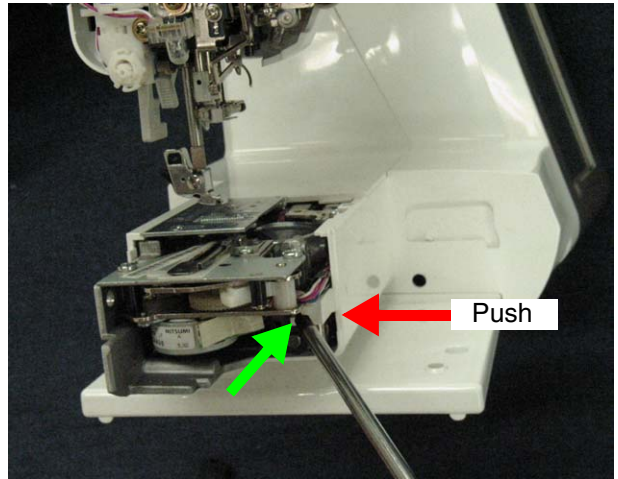
- Above D position has been using longer screw (6mm).

41.



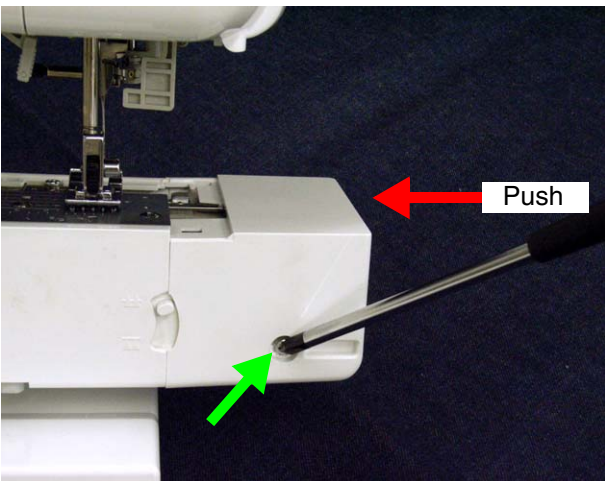
Tighten above screw by pushing cover to above big arrow side.

42.



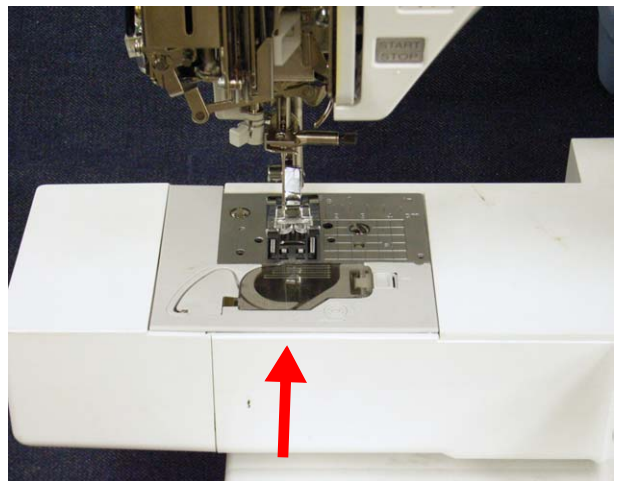
Tighten above screw by pushing cover to above big arrow side.

43.



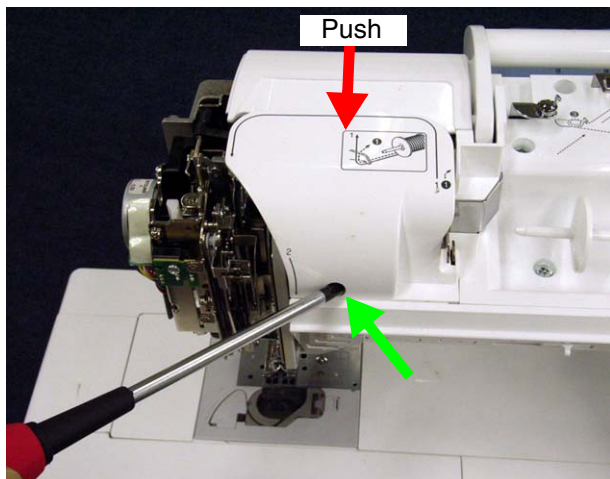
Attach Free Arm Cover and tighten screw.

44.



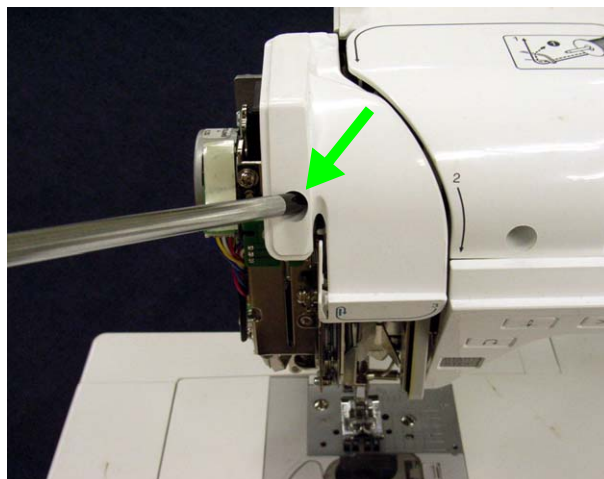
Attach Inner Rotary Hook and Needle Plate B.
Set the needle to the needle bar.

45.



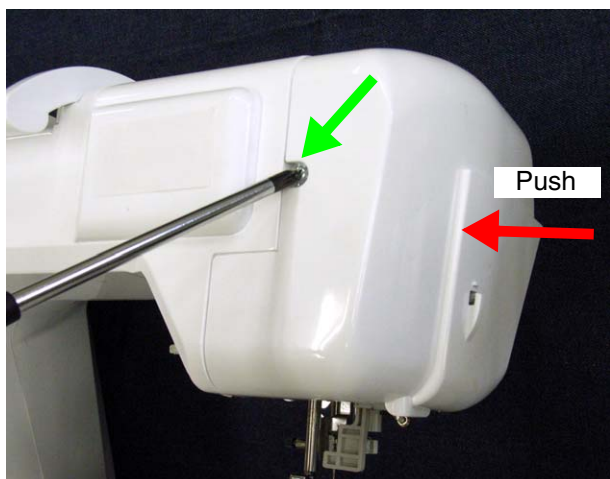
Attach Front Thread Guide Cover and tighten screw.

46.



Attach Thread Guide Cover A and tighten screw.

47.



Attach Face Plate and tighten screw.

48.



Attach Top Cover.

49.

After assemble whole parts, please check below Adjustment

- 1 : Needle bar height
- 2 : Thread Threader
- 3 : Clearance between needle and rotary hook point
- 4 : Actual sewing test

Checkpoint with high-speed sewing

Please sets the machine speed at maximum and check actual sewing also please check there is no abnormal noise form the machine.

* Please refer the service manual as need it.

Complete Assemble