

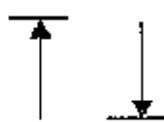


GENERAL INFORMATION

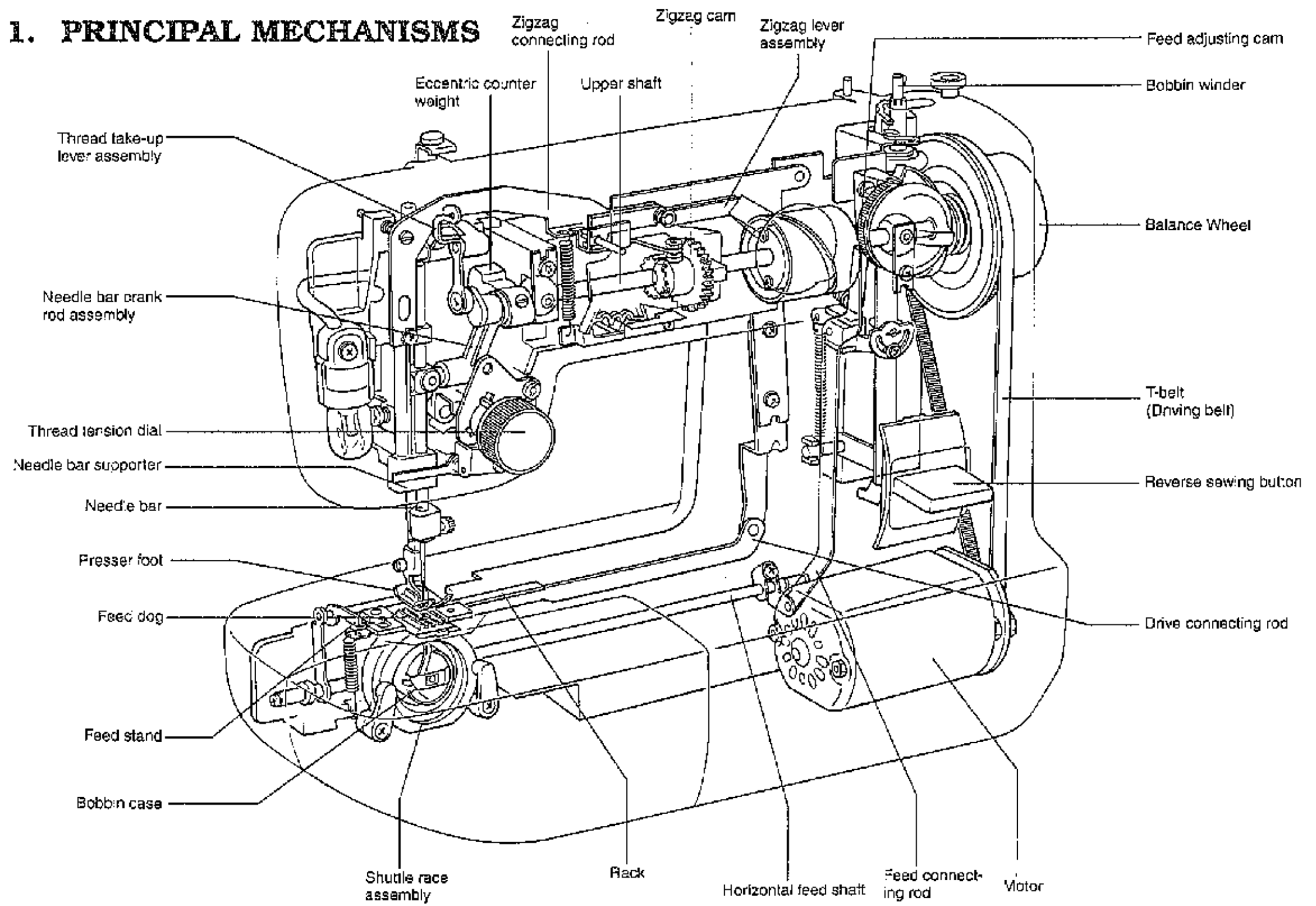
- This service manual was compiled for use when repairing the VX1120, VX1140 and VX1250 Zigzag Stitch Sewing Machines.
- Use this manual, together with the Parts Catalog, when making repairs.
- This manual was written based on the most up-to-date product specifications at the time of printing.
Some machine specifications may have been changed to improve the quality of the product.
Contact the manufacturer or your local sales representative for information on such changes.

Brother Industries, Ltd.
Nagoya, Japan

- Symbols used

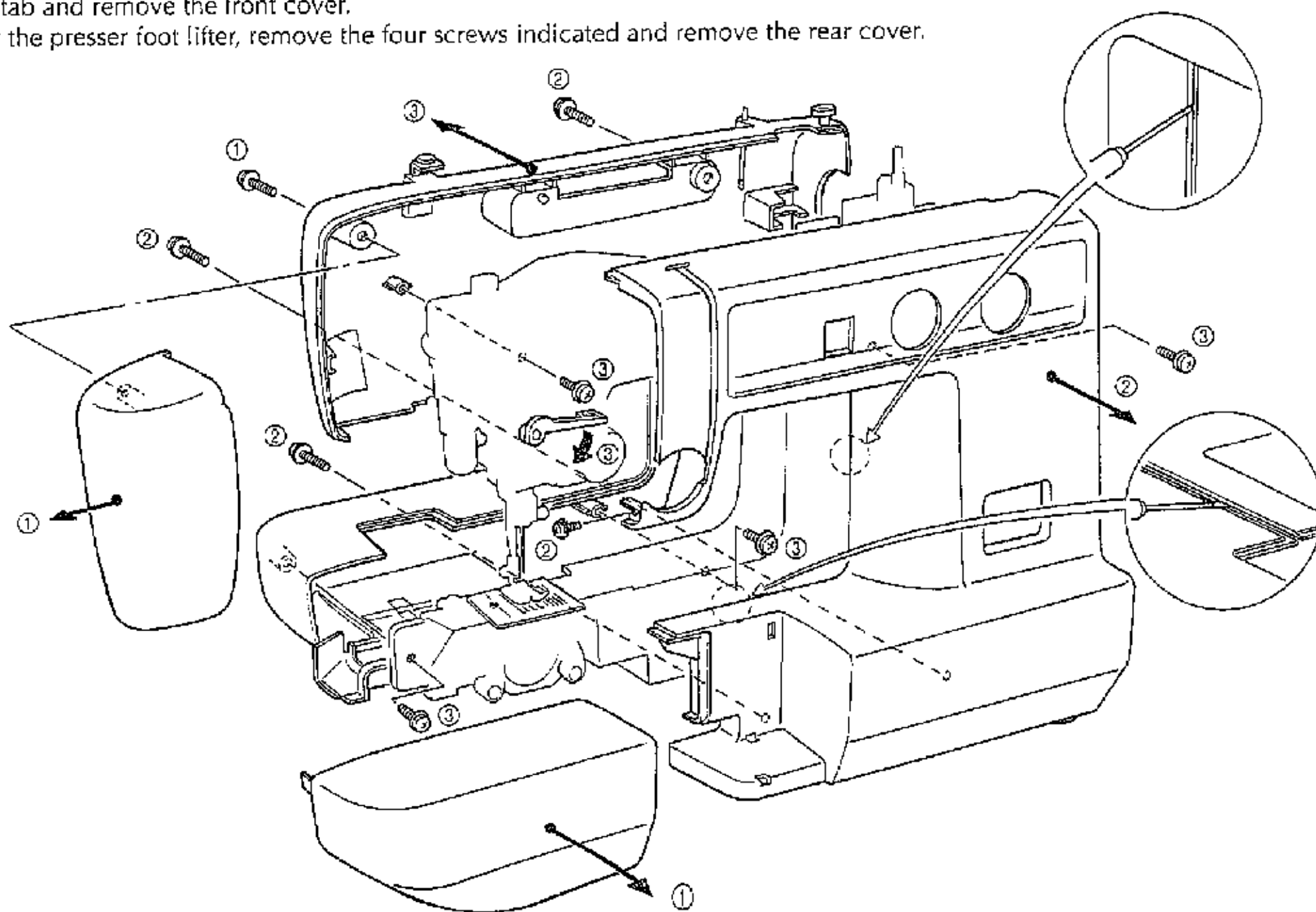
	Move the part in the direction of the arrow.
	Set the clearance as indicated.
	Move the part to its highest or lowest position.

1. PRINCIPAL MECHANISMS



2. DISASSEMBLING THE SEWING MACHINE

1. Remove the screw and the face plate from the left side of the machine.
2. Loosen the three screws attaching the front and rear covers and the screw on the left side. Use a screwdriver to disengage the front cover tab and remove the front cover.
3. Lower the presser foot lifter, remove the four screws indicated and remove the rear cover.



3. ADJUSTING THE CLEARANCE BETWEEN THE NEEDLE AND THE SHUTTLE HOOK (SHUTTLE RACE POSITION)

STANDARD

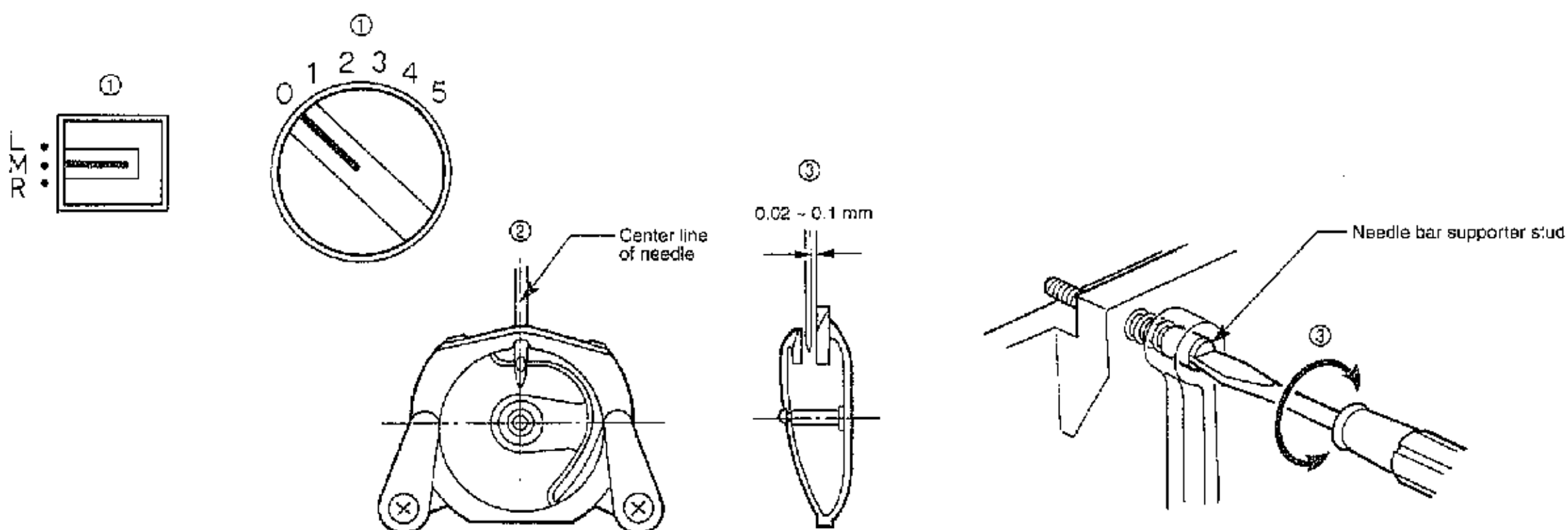
1. The clearance between the needle and the shuttle hook should be between 0.02 and 0.1 mm.
2. The shuttle race should be positioned correctly with respect to the turning direction of the shuttle race.

ADJUSTMENT

1. Set the needle position selector to "M" and the stitch width knob to "0".
2. Turn the balance wheel to set the needle and the shuttle hook to the correct timing position.
3. Use a screwdriver to turn the needle bar supporter stud slightly to either the right or left and adjust the clearance between the needle and the shuttle hook.

NOTE

A line through the center of the needle should pass through the center of the shuttle hook shaft.



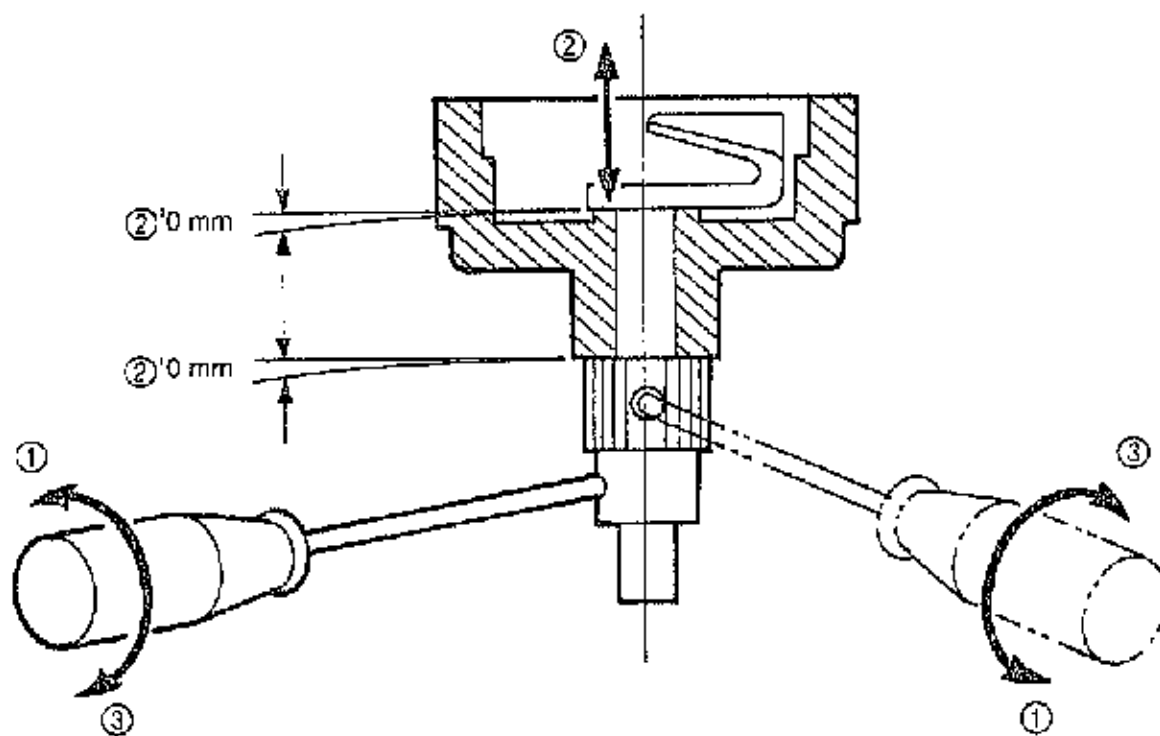
4. ADJUSTING THE CLEARANCE BETWEEN THE SHUTTLE DRIVER AND THE RACE WAY

STANDARD

There should be no clearance between the shuttle driver and the race way and the shuttle driver should rotate smoothly.

ADJUSTMENT

1. Loosen the two driver shaft gear screws.
2. Adjust the clearance of the driver shaft.
3. Tighten the two driver shaft gear screws.



5. ADJUSTING THE NEEDLE SWING

STANDARD

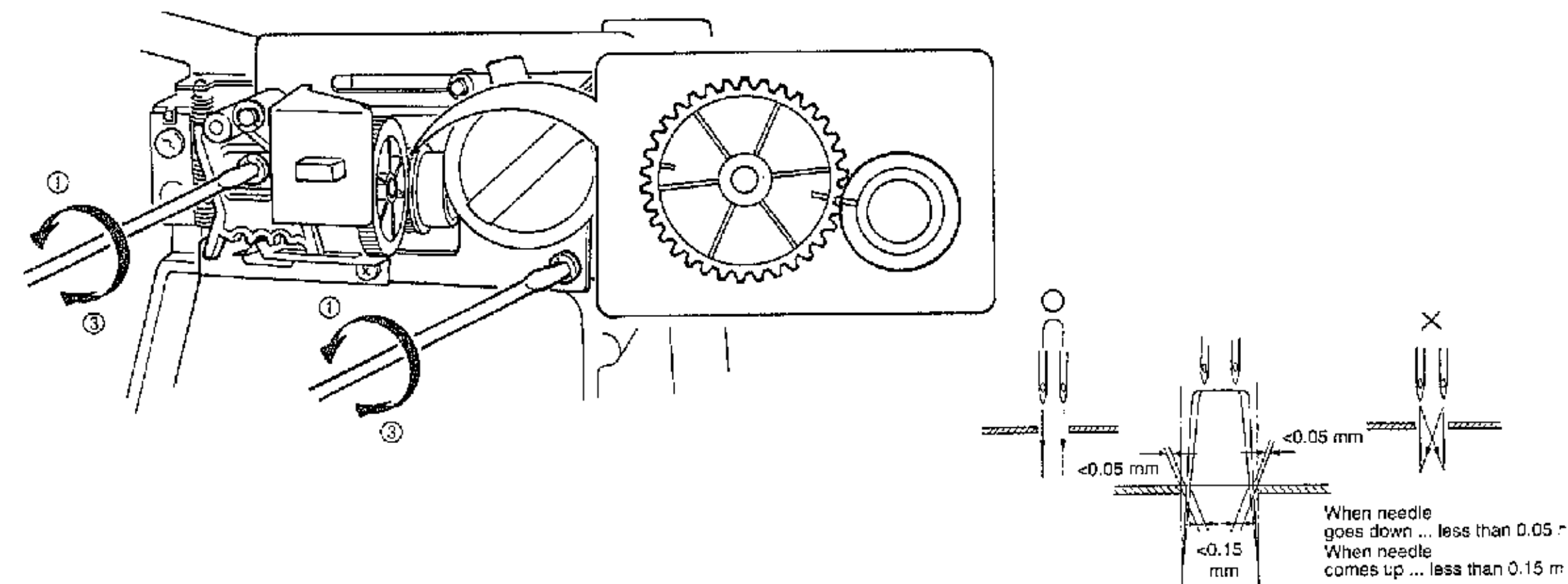
When the stitch width knob is set at "5", the needle swing should be 0.05 mm or less when the needle is moving down from the needle plate to its lowest position. When the needle is moving up from its lowest position to the needle plate, the needle swing should be 0.15 mm or less. Both sides of the needle plate hole should have these clearances.

ADJUSTMENT

1. Loosen the two zigzag base assembly screws.
2. Align the upper shaft gear and the zigzag cam gear.
3. Tighten the two zigzag base assembly screws.

NOTE

To correct the needle swing, align the upper shaft gear and the zigzag cam gear at any two points.



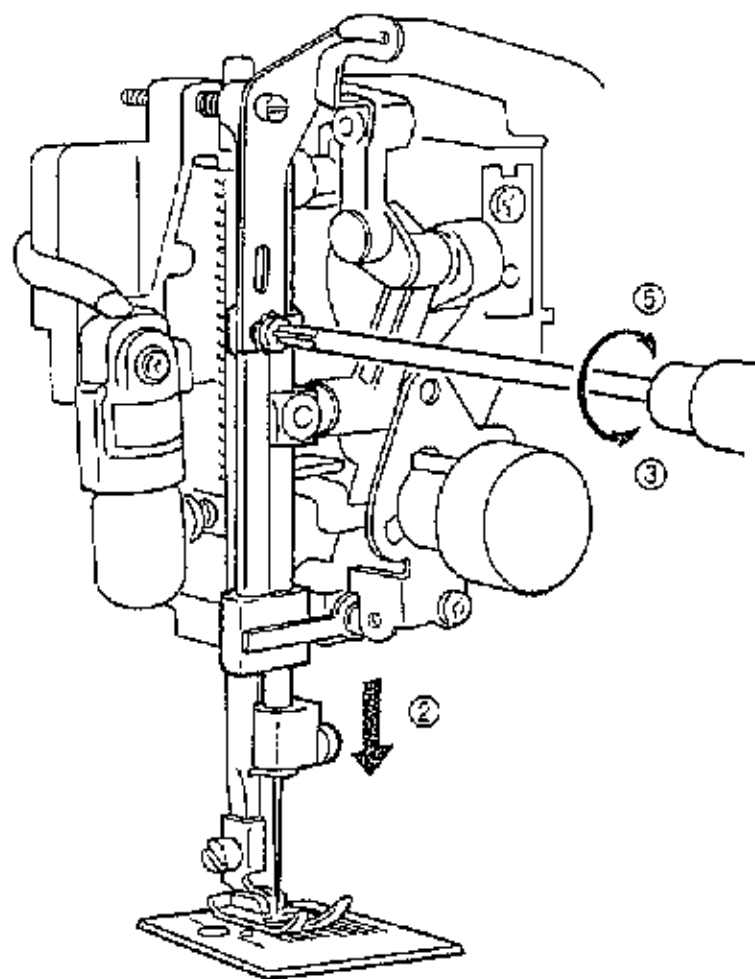
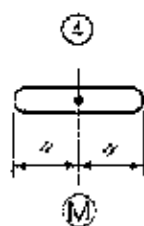
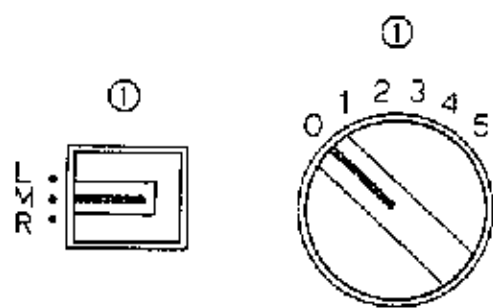
6. CENTERING THE NEEDLE

STANDARD

When the needle position selector is set at "M" and the stitch width knob is set at "0", the needle should be centered in the needle plate hole.

ADJUSTMENT

1. Set the needle position selector to "M" and the stitch width knob to "0".
2. Turn the balance wheel to lower the needle until it is just above the needle plate.
3. Loosen the screw on the zigzag connecting rod assembly.
4. Center the needle in the needle plate hole.
5. Tighten the screw.



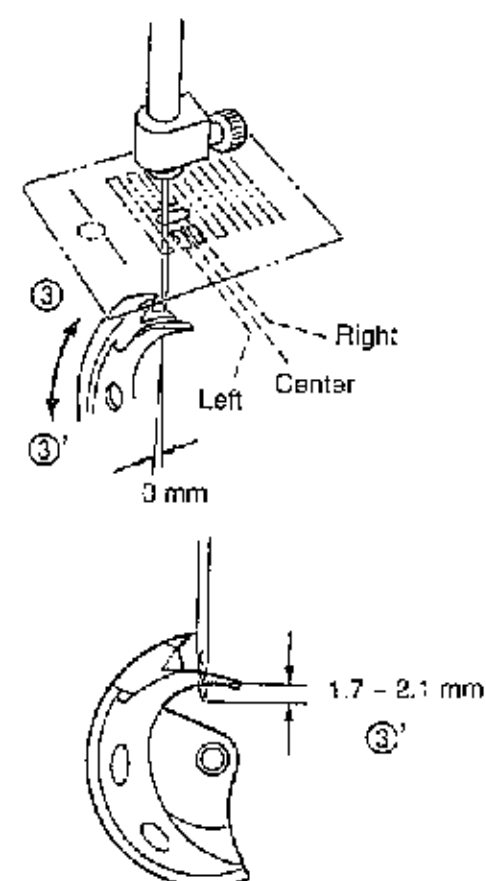
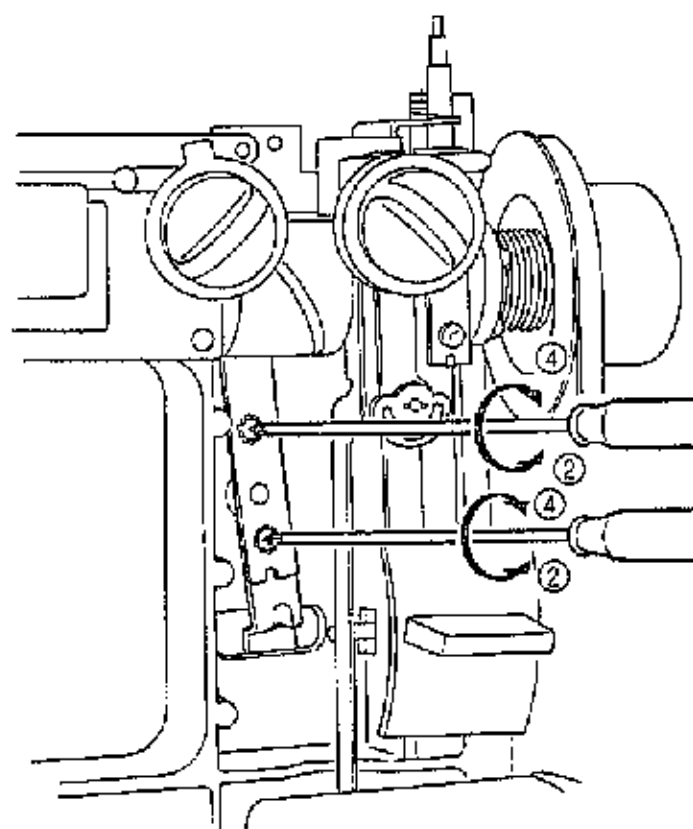
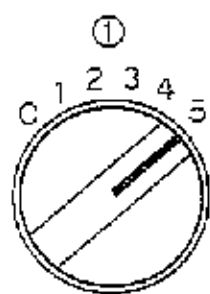
8. ADJUSTING THE TIMING OF THE NEEDLE AND THE SHUTTLE HOOK (SHUTTLE HOOK POSITION)

STANDARD

When the stitch width knob is set at "5" and the needle is raised on the left side by 1.7 to 2.1 mm from its lowest position, the shuttle hook point should align with the side of the needle.

ADJUSTMENT

1. Set the stitch width knob to "5", then lower the needle to its lowest position at the left side of the needle plate.
2. Loosen the set screw on the drive connecting rod.
3. Raise the needle between 1.7 and 2.1 mm and align the shuttle hook point with the side of the needle.
4. Tighten the set screw.



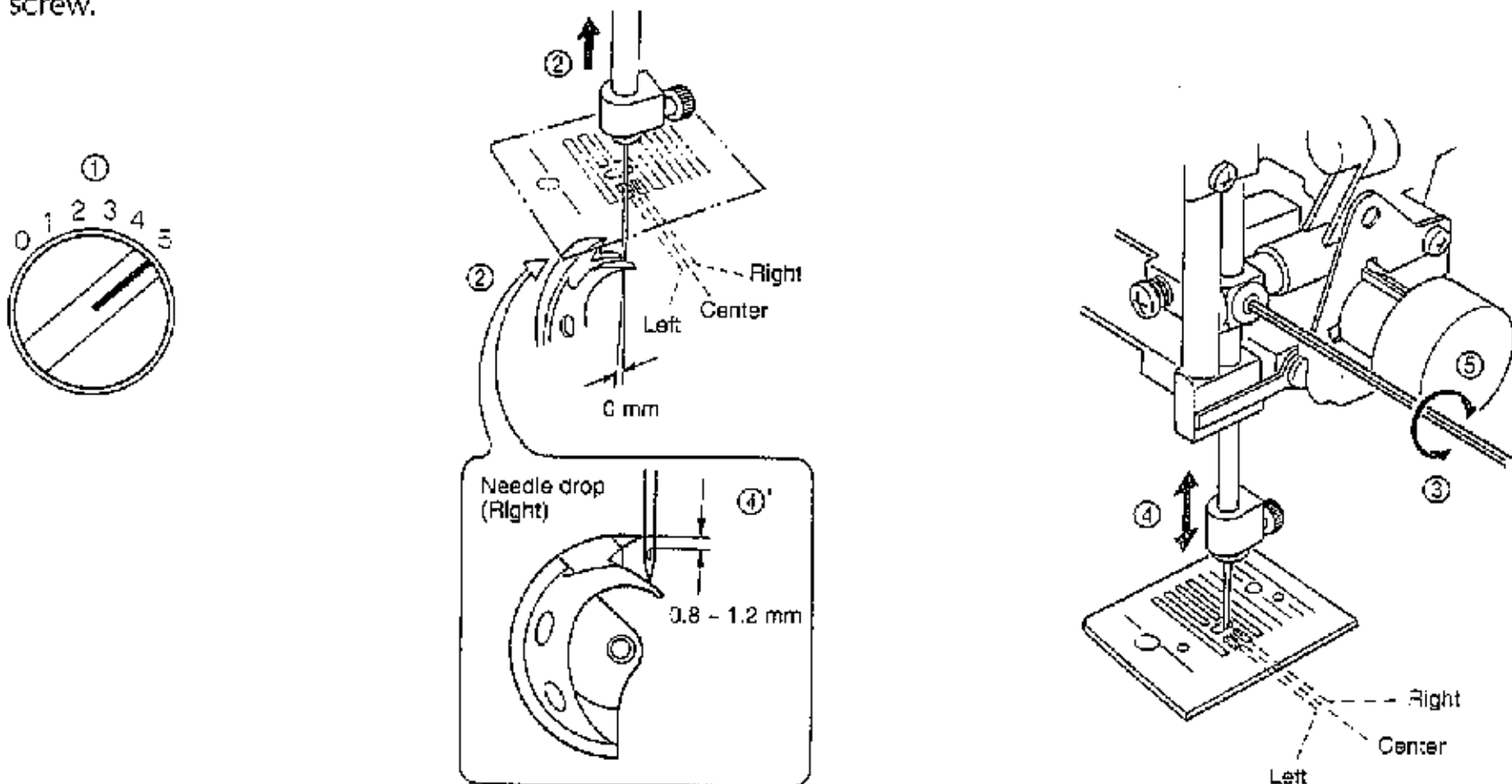
9. ADJUSTING THE HEIGHT OF THE NEEDLE BAR

STANDARD

When the stitch width knob is set at "5" and the needle contacts the shuttle hook when the needle is on the right side, the clearance between the top of the needle eye and the shuttle hook point should be between 0.8 and 1.2 mm.

ADJUSTMENT

1. Set the stitch width knob to "5", then lower the needle to its lowest position at the right side of the needle plate.
2. Turn the balance wheel until the needle contacts the shuttle hook.
3. Loosen the set screw on the needle bar.
4. Move the needle bar either up or down until the clearance between the top of the needle eye and the shuttle hook point is within 0.8 and 1.2 mm.
5. Tighten the set screw.



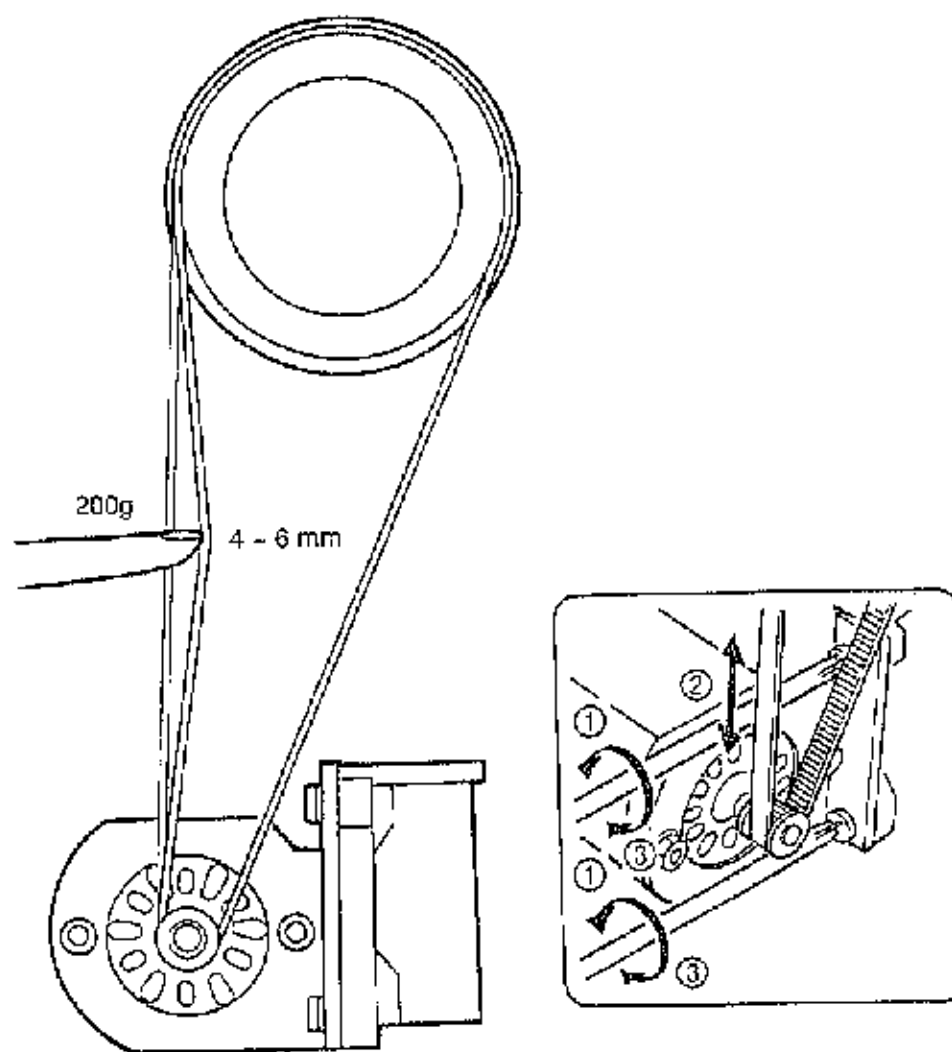
10. ADJUSTING THE TENSION OF THE TIMING BELT

STANDARD

There should be between 4.0 and 6.0 mm of slack in the timing belt when the center of the belt is pushed with approximately 200 g of pressure.

ADJUSTMENT

1. Loosen the two screws on the motor holder.
2. Move the motor holder to adjust the belt tension so it meets the above standard.
3. Tighten the two screws.



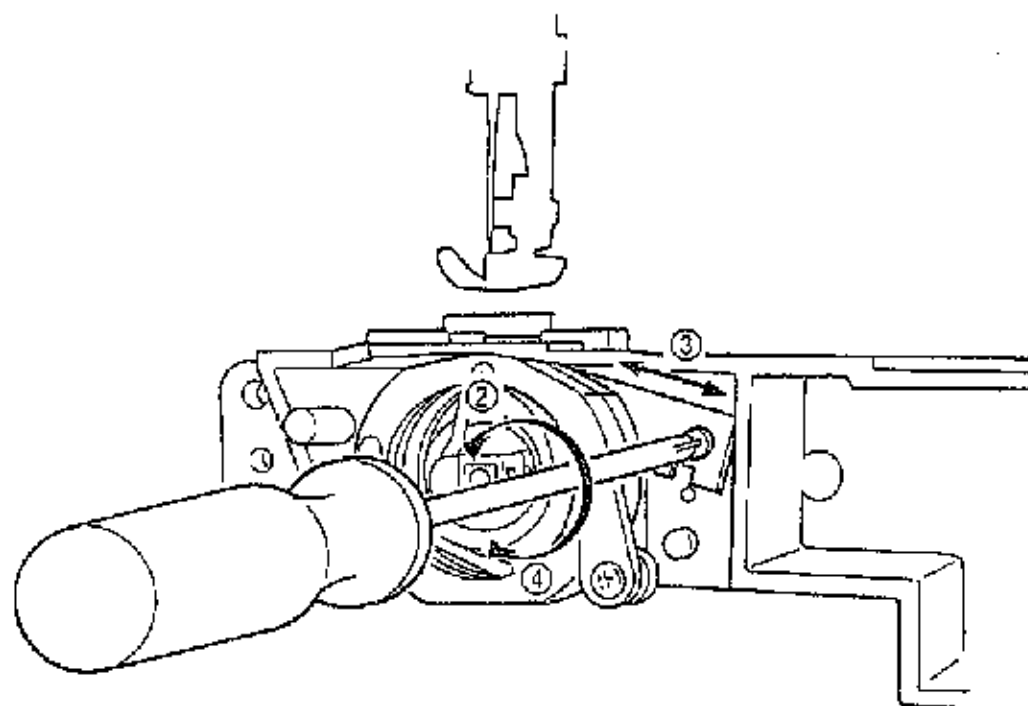
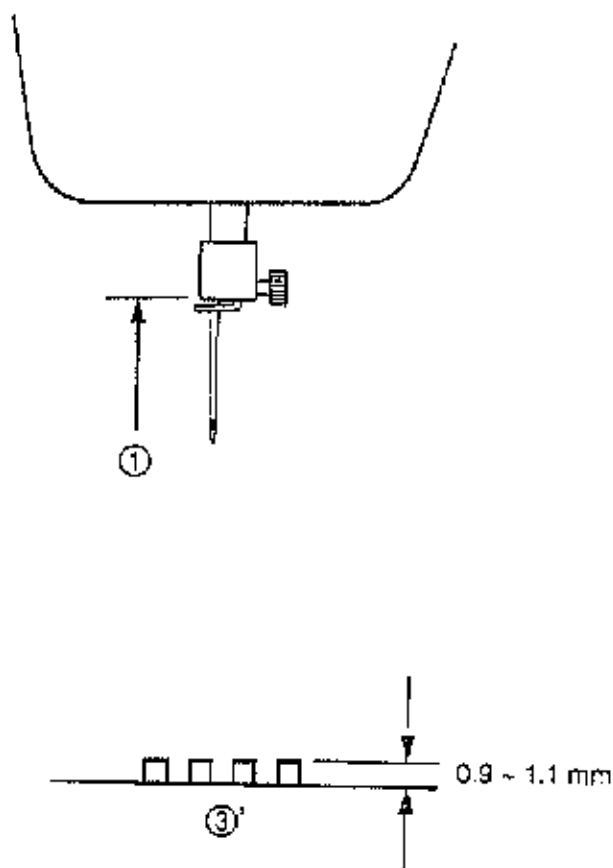
11. ADJUSTING THE HEIGHT OF THE FEED DOGS

STANDARD

When the feed dogs are raised to their highest position, they should be between 0.9 and 1.1 mm higher than the needle plate.

ADJUSTMENT

1. Turn the balance wheel to raise the needle bar to its highest position.
2. Loosen the screw.
3. Move the vertical feed arm to the left or right to adjust the height of the feed dogs.
4. Tighten the screw.



12. ADJUSTING THE HEIGHT OF THE PRESSER BAR

STANDARD

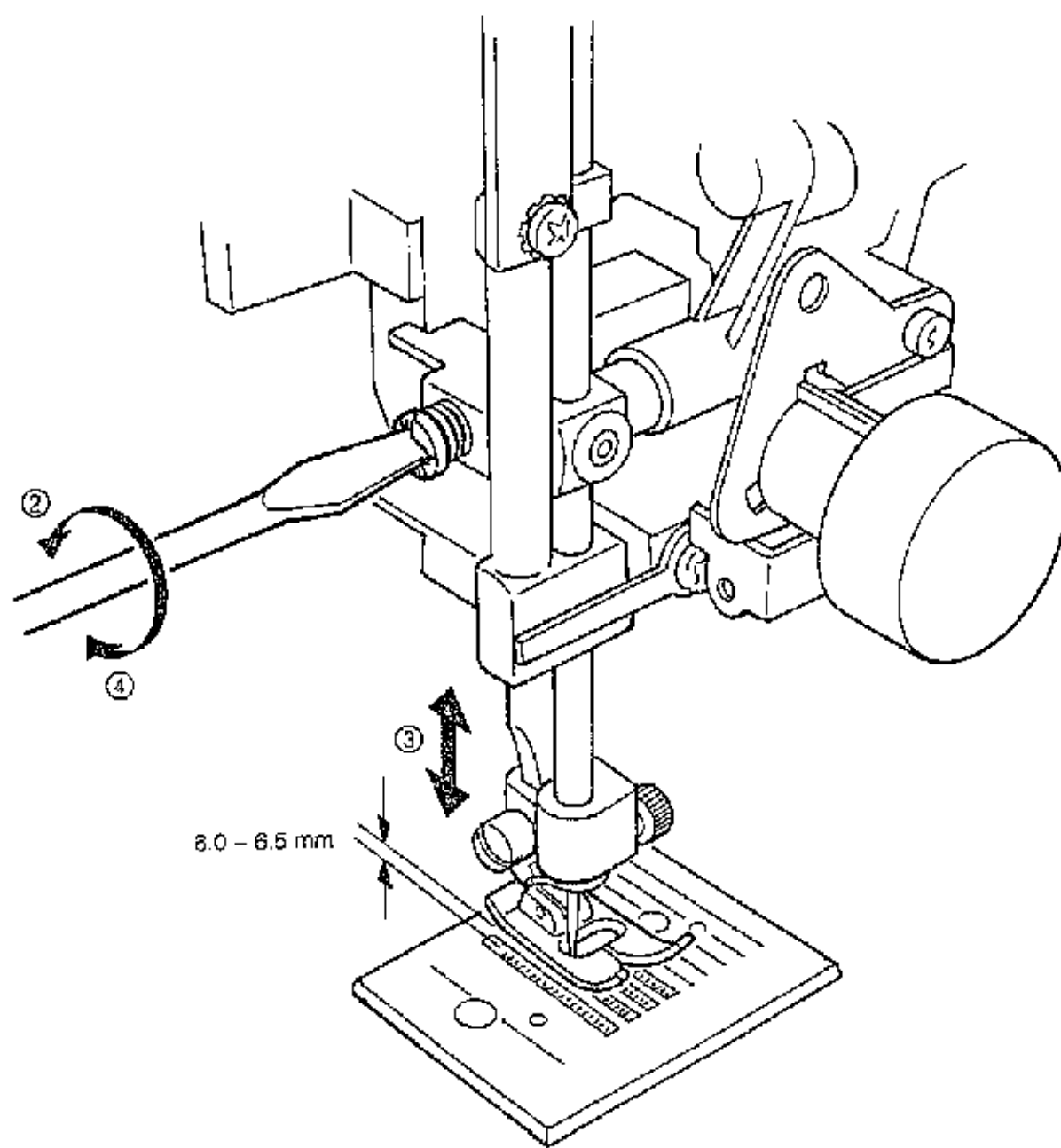
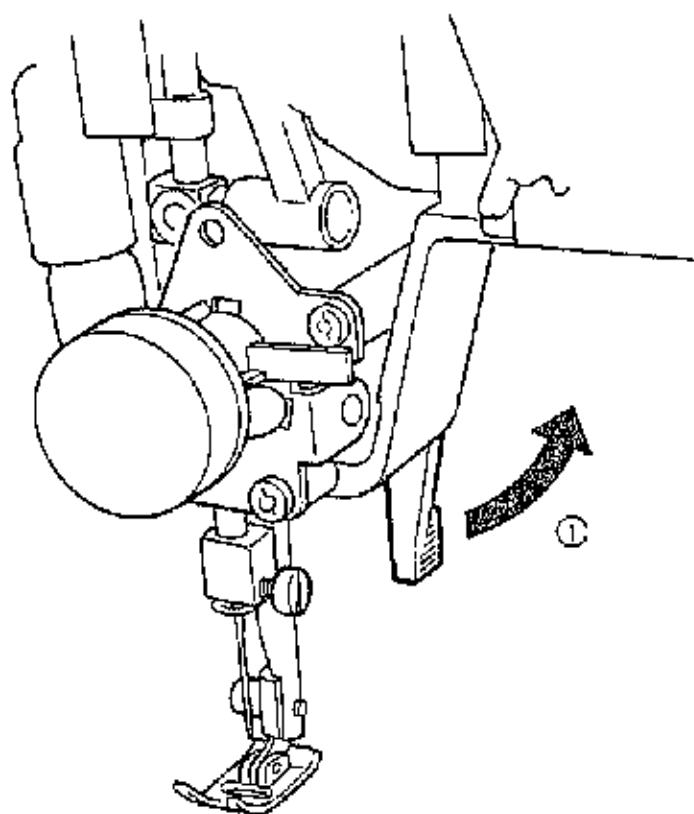
The clearance between the presser foot and the needle plate should be between 6.0 and 6.5 mm.

ADJUSTMENT

1. Raise the presser foot.
2. Loosen the screw on the presser bar guide bracket.
3. Adjust the height of the presser bar.
4. Tighten the screw.

NOTE

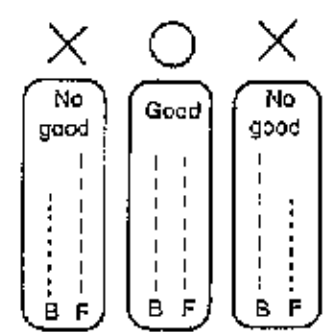
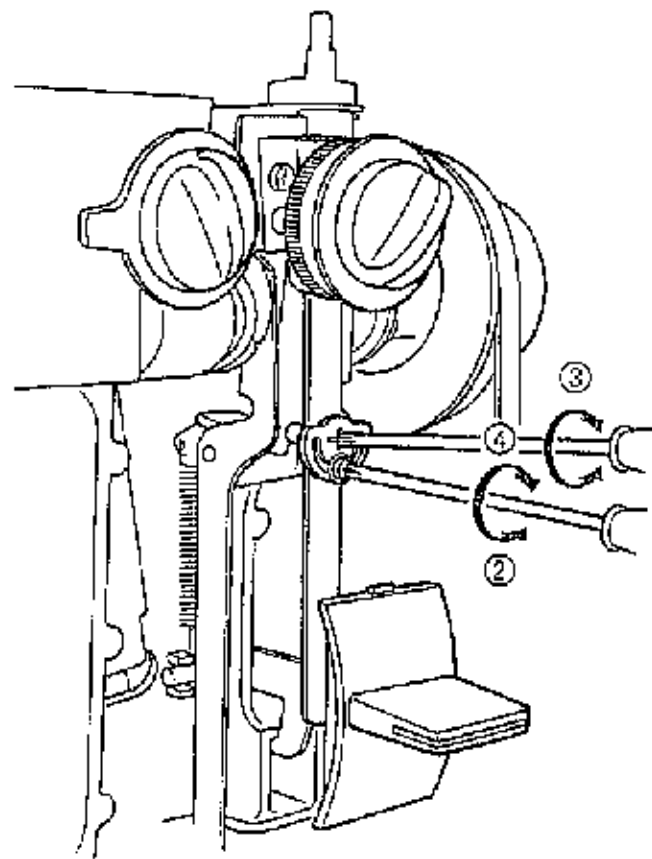
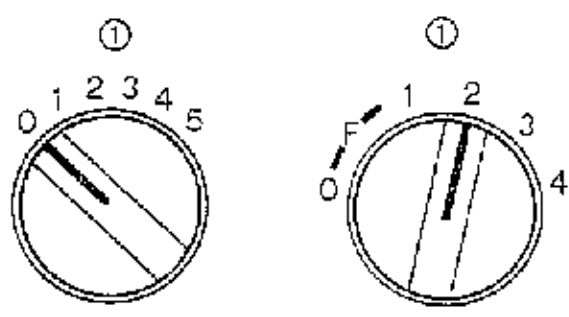
Check that the presser foot and feed dogs are aligned.



13. ADJUSTING THE STITCH LENGTH FOR FORWARD STITCHING AND BACK-STITCHING

STANDARD
When the stitch length knob is set at "2", there should be a difference of $\pm 10\%$ in the length of the forward stitch and the backstitch.

- ADJUSTMENT**
1. Set the stitch width knob to "0" and the stitch length knob to "2".
 2. Loosen the screw.
 3. Turn the reverse sewing regulator shaft with a screwdriver to adjust the feed. (The feed should be about the same.)
 4. Tighten the screw.



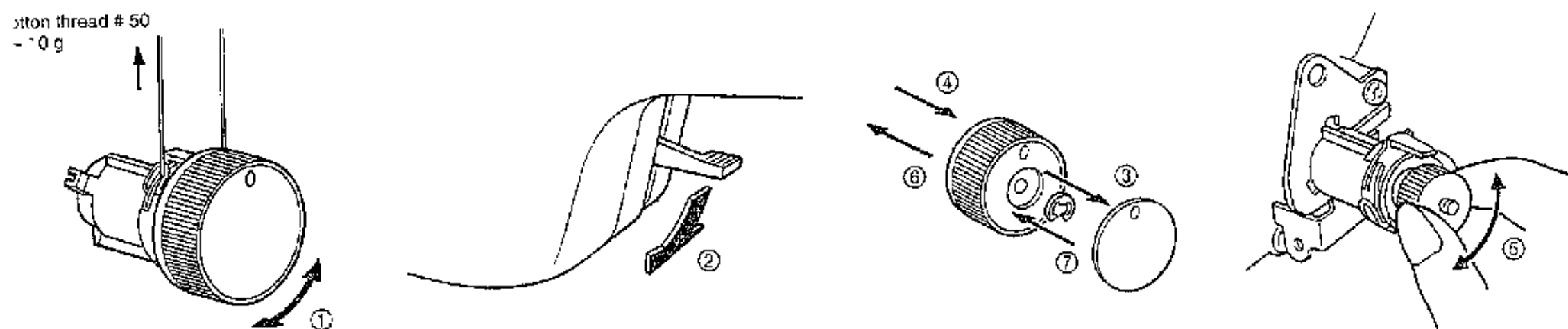
14. ADJUSTING THE UPPER TENSION CONTROL DIAL

STANDARD

When the upper tension control dial is set at "0" and the presser foot is lowered, the upper thread tension should be between 5 and 10 g when cotton thread #50 is used.

ADJUSTMENT

1. Set the upper tension control dial to "0" and pass cotton thread between the tension discs.
2. Lower the presser foot.
3. Remove the upper tension disc and the stop ring.
4. Remove the upper tension control dial.
5. Measure the thread tension using a tension gauge and turn the screw to adjust the tension so it is between 5 and 10 g.
6. Insert the upper tension control dial onto the upper tension disc in the "0" position and secure it with the stop ring.
7. Align the upper tension disc with the "0".



15. ADJUSTMENT OF BOBBIN WINDING

STANDARD

The thread should be wound evenly around the bobbin and should fill 75 to 85% of the bobbin.

ADJUSTMENT

1. If the thread does not wind evenly around the bobbin, slightly loosen the screw on the thread guide/bobbin winding tension disc.
2. Move the thread guide/bobbin winding tension disc vertically so that the thread evenly winds around the bobbin.
3. Tighten the screw on the thread guide/bobbin winding tension disc.
4. Slightly loosen the screw on the bobbin presser.
5. Move the screw on the bobbin presser to adjust the amount of thread that winds around the bobbin.
6. Tighten the screw on the bobbin presser.

