



SEIKO

Operating Instructions

For

CH Series

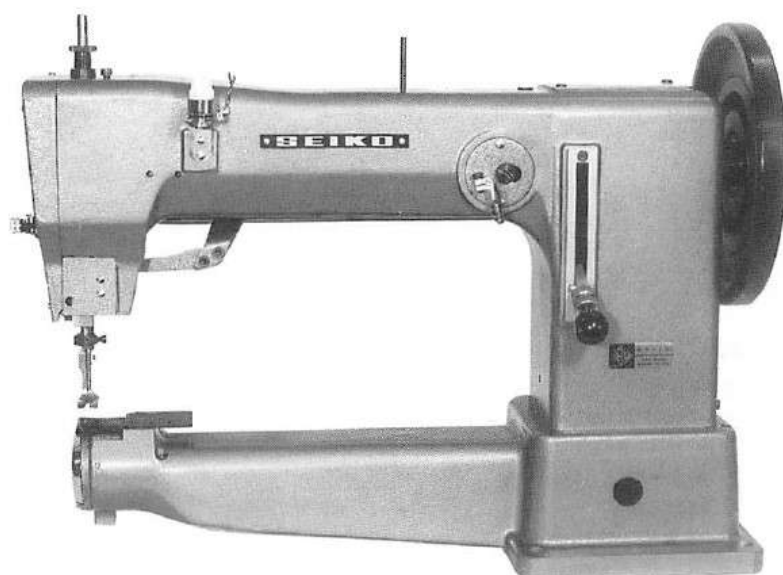
CH-2B CH-2-RF

CH-2B/DF

CH-6B

CH-7B

CH-8B



SEIKO SEWING MACHINE CO., LTD.

TOKYO · JAPAN

Thank you very much for buying a SEIKO sewing machine. Before using your new machine, please read the safety instructions below and the explanations given in the instruction manual.

With industrial sewing machines, it is normal to carry out work while positioned directly in front of moving parts such as the needle and thread take-up lever, and consequently there is always a danger of injury that can be caused by these parts.

Follow the instructions from training personnel and instructors regarding safe and correct operation before operating the machine so that you will know how to use it correctly.


SAFETY INSTRUCTIONS

1. Safety indications and their meanings


This instruction manual and indications and symbols that are used on the machine itself are provided in order to ensure safe operation of this machine and to prevent accidents and injury to yourself or other people.


The meanings of these indications and symbols are given below.


Indications

 CAUTION	The instructions which follow this term indicate situations where failure to follow the instructions could cause injury when using the machine or physical damage to equipment and surroundings.
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Symbols

 This symbol (△) indicates something that should be careful of. The picture inside the triangle indicates the nature of the caution that must be taken.
(For example, the symbol at left means, “beware of injury”.)

 This symbol (⊘) indicates something that you must not do.

 This symbol (●) indicates something that you must do. The picture inside the circle indicates the nature of the thing that must be done.
(For example, the symbol at left means, “You must make the ground connection”.)

2. Notes on safety

<div>  CAUTION </div>	
Environmental requirements	
<div>  <ul style="list-style-type: none"> •Use the sewing machine in an area, which is free from sources of strong electrical noise such as high-frequency welders. Sources of strong electrical noise may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •Any fluctuations in the power supply voltage should be within ±10% of the rated voltage for the machine. Voltage fluctuations that are greater than this may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •The power supply capacity should be greater than the requirements for the sewing machine’s electrical consumption. Insufficient power supply capacity may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •The pneumatic delivery capability should be greater than the requirements for the sewing machine’s total air consumption. Insufficient pneumatic delivery capability may cause problems with correct operation. </div>	<div>  <ul style="list-style-type: none"> •The ambient temperature should be within the range of 5°C to 35°C during use. Temperatures that are lower or higher than this may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •The relative humidity should be within the range 45% to 85% during use, and no dew formation should occur in any devices. Excessively dry or humid environments and dew formation may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •Avoid exposure to direct sunlight during use. Exposure to direct sunlight may cause problems with correct operation. </div> <div>  <ul style="list-style-type: none"> •In the event of an electrical storm, turn off the power and disconnect the power cord from the wall outlet. Lighting may cause problems with correct operation. </div>



CAUTION

Installation



• Machine installation should only be carried out by a qualified technician.



• Contact your SEIKO dealer or a qualified electrician for any electrical work that may need to be done.



• The installation should be carried out by two or more people.



• Do not connect the power cord until installation is complete, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.



• Be sure to connect the ground. If the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct operation may also occur.



• All cords should be secured at least 25mm away from any moving parts. Furthermore, do not excessively bend the cords or secure them too firmly with staples, otherwise there is the danger that fire or electrical shocks could occur.



• Be sure to install the belt guards to the machine head and motor.



• If using a work table that has casters, the casters should be secured in such a way so that they cannot move.



• Use both hands to hold the machine head when tilting it back or returning it to its original position. If only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get caught.



• Be sure to wear protective goggles and gloves when handling the lubricating oil, so that no oil gets into your eyes or onto your skin, otherwise inflammation can result. Furthermore, do not drink the oil under any circumstances, as it can cause vomiting and diarrhea. Keep the oil out of the reach of children.

Sewing



• This sewing machine should only be used by operators who have received the necessary training in safe use beforehand.



• The sewing machine should not be used for any applications other than sewing.



• Be sure to wear protective goggles when using the machine. If goggles are not worn, there is the danger that if a needle breaks, parts of the broken needle may enter your eyes and injury may result.



• Turn off the power switch at the following times, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.

1. When threading the needle

2. When replacing the needle and bobbin

3. When not using the machine and when leaving the machine unattended

* When using a clutch motor, the motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work.



• If using a worktable that has casters, the casters should be secured in such a way so that they cannot move.



• Attach all safety devices before using the sewing machine. If the machine is used without these devices attached, injury may result.



• Do not touch any of moving parts or press any objects against the machine while sewing, as this may result in personal injury or damage to the machine.



• Use both hands to hold the machine head when tilting it back or returning it to its original position. If only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get caught.



• If an error occurs in machine operation, or if abnormal noises or smells are noticed, immediately turn off the power switch. Then contact your nearest SEIKO dealer or a qualified technician.



• If the machine develops a problem, contact your nearest SEIKO dealer or a qualified technician.



CAUTION

Cleaning



• Turn off the power switch before carrying out cleaning, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.

* When using a clutch motor, the motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work.



• Use both hands to hold the machine head when tilting it back or returning it to its original position. If only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get caught.



• Be sure to wear protective goggles and gloves when handling the lubricating oil, so that no oil gets into your eyes or onto your skin, otherwise inflammation can result. Furthermore, do not drink the oil under any circumstances, as they can cause vomiting and diarrhea.

Keep the oil out of the reach of children.

Maintenance and inspection



• Maintenance and inspection of the sewing machine should only be carried out by a qualified technician.



• Ask your SEIKO dealer or a qualified electrician to carry out any maintenance and inspection of the electrical system.



• Turn off the power switch and disconnect the power cord from the wall outlet at the following times, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.

1. When carrying out inspection, adjustment and maintenance

2. When replacing consumable parts such as the rotary hook

* When using a clutch motor, the motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work.



• If the power switch and air need to be left on when carrying out some adjustment, be extremely careful to observe all safety precautions.



• Disconnect the air hoses from the air supply and wait for the needle on the pressure gauge to drop to "0" before carrying out inspection, adjustment and repair of any parts which use the pneumatic equipment.



• Use both hands to hold the machine head when tilting it back or returning it to its original position. If only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get caught.



• When checking the rotary hook lubrication, do not touch moving parts such as the rotary hook, needle and needle bar with your finger or paper nor push them with other objects, otherwise injury or damage to the machine may result.



• Use only the proper replacement parts as specified by SEIKO.



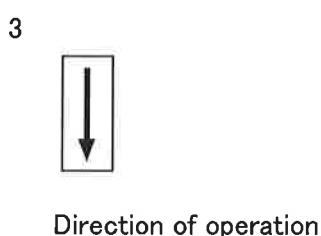
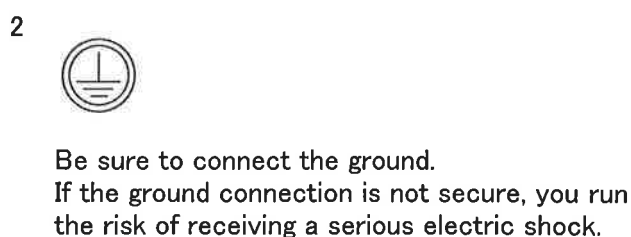
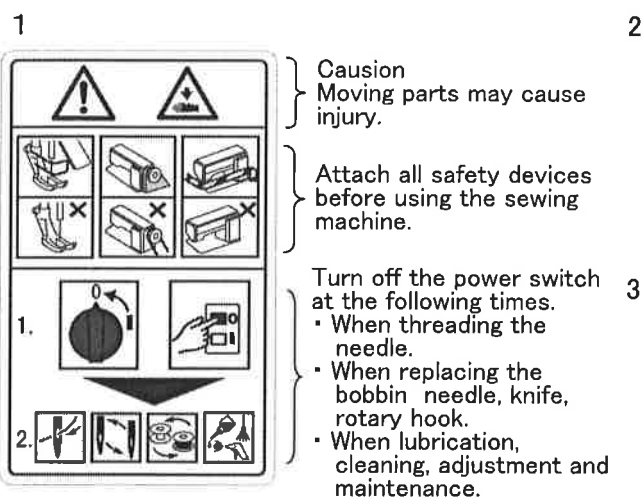
• If any safety devices have been removed, be absolutely sure to re-install them to their original positions and check those they operate correctly before using the machine.



• Any problems in machine operation, which result from unauthorized modifications to the machine, will not be covered by the warranty.

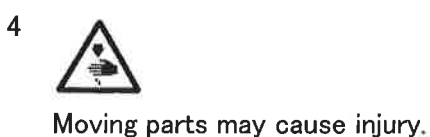
3. Warning labels

- * The following warning labels appear on the sewing machine.
Please follow the instructions on the labels at all times when using the machine.
If the labels have been removed or are difficult to read, please contact your nearest SEIKO dealer.

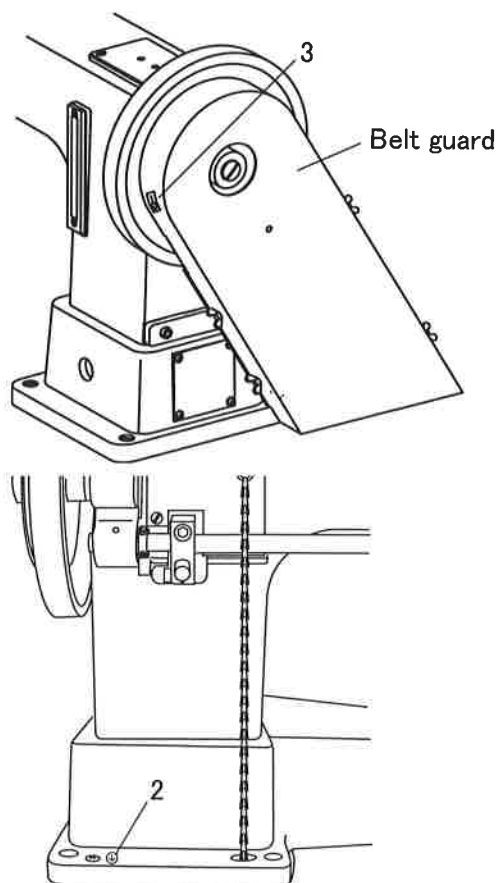
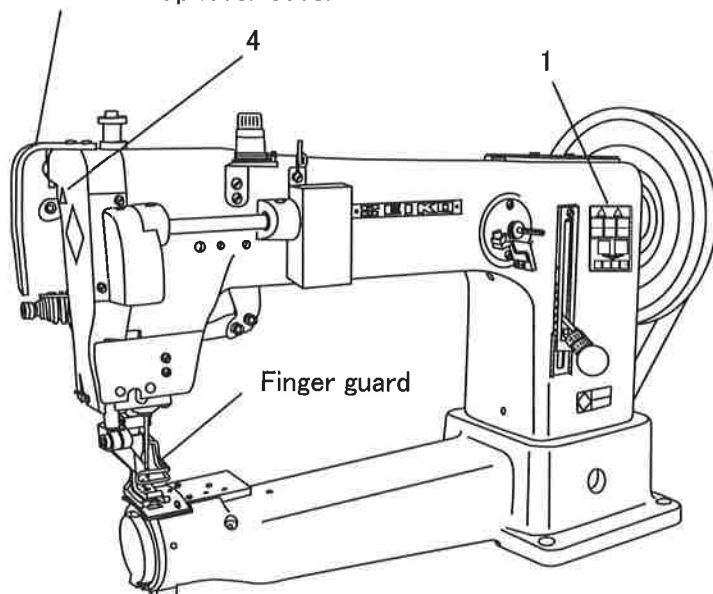


Safety devices

- Finger guard
- Thread take-up lever cover
- Belt guard, etc.



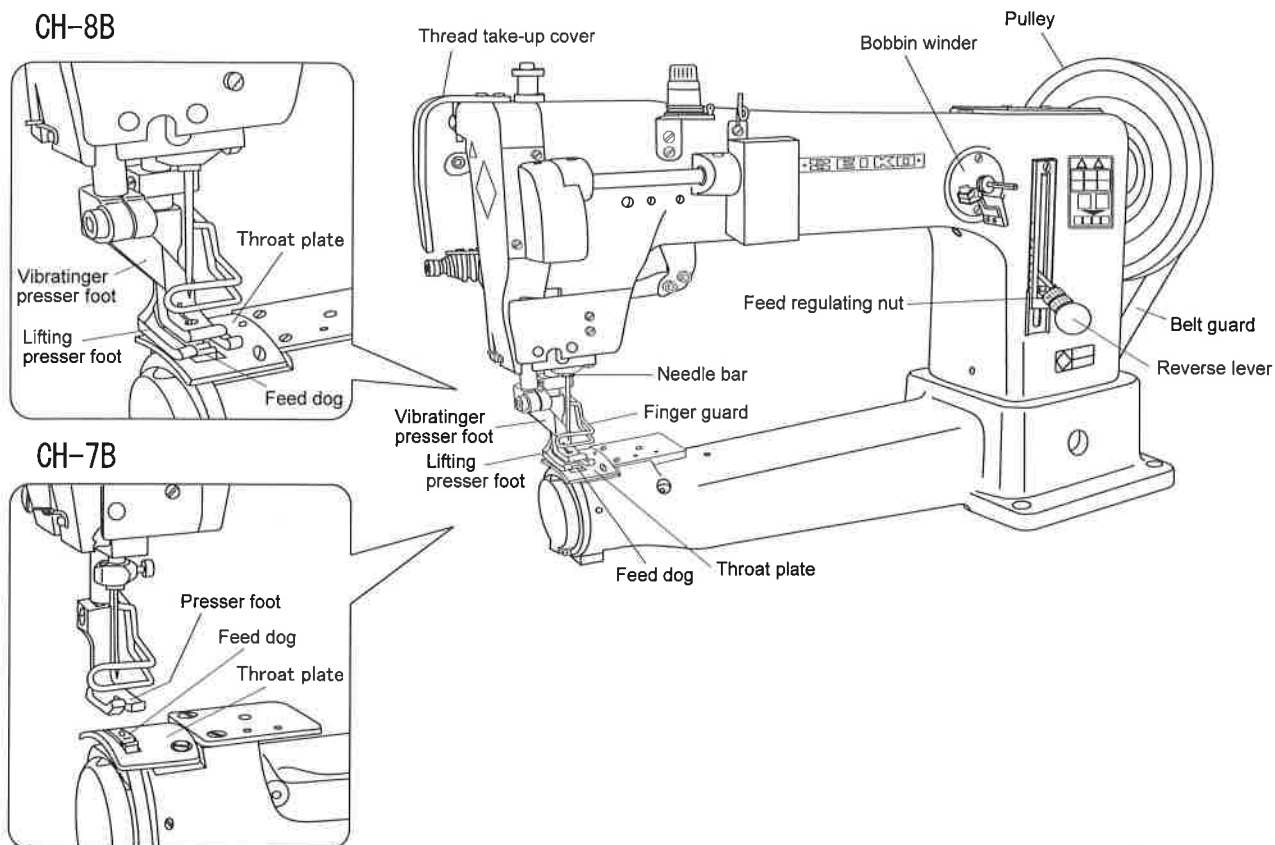
Thread take-up lever cover



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1. MAIN PARTS NAMES



2. SPECIFICATIONS

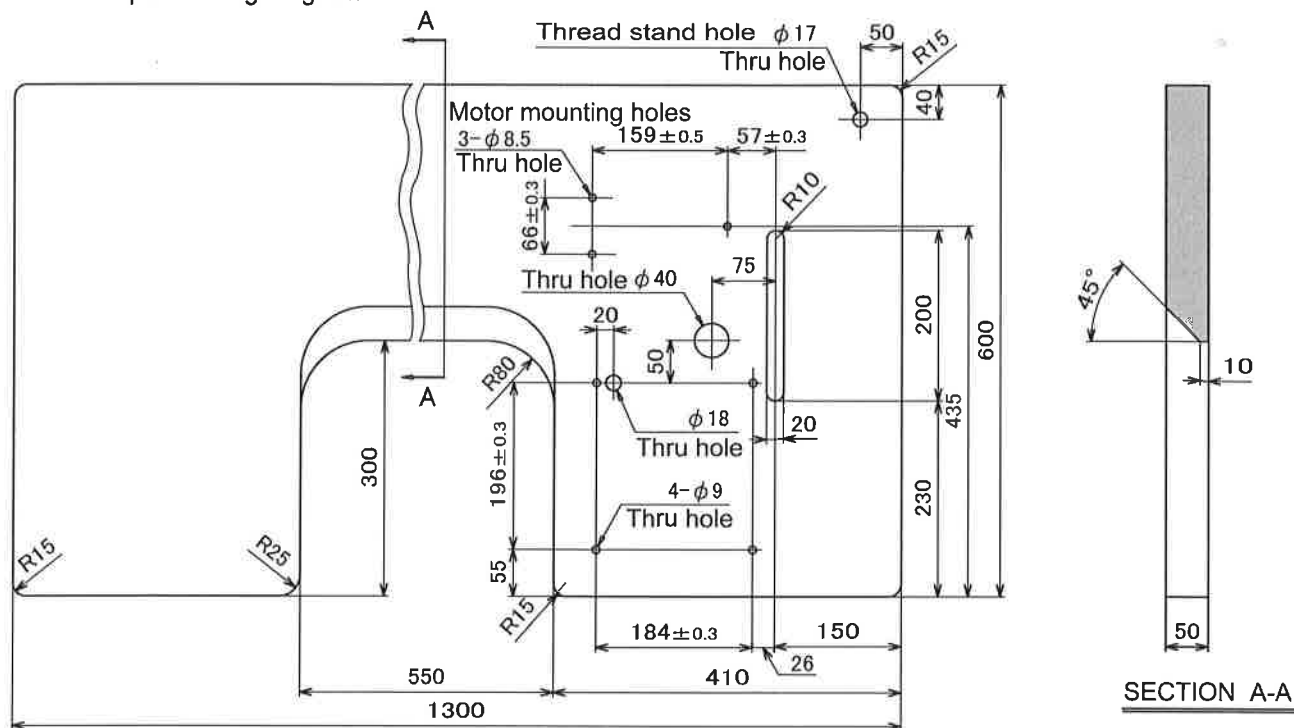
Model	CH-8B	CH-7B
Max. sewing speed	800 s.p.m	
Needles	DY x 3 standard #24	
Thread	#8 ~ #0 (standard #5)	
Hook	Large oscillating shuttle hook	
Max.stitch length	25/64" (10 mm)	
Presser foot typ	Compound feed and walking foot	Compound feed
Amount of lift of walking foot	1/8" - 15/64" standard 5/32" 3 - 6 mm (standard 4mm)	
Presser foot height	10 mm (by hand) 25mm(by pedal)	
Needle bar stroke	2-13/64" (56 mm)	2" (51mm)
Thread take up lever	Cam type	
Cylinder size	3-15/64" (82 mm) dia.	
Working space	15-3/4" x 7-7/8" (400 x 200mm)	
Net weight(Head only)	65 kg	
Motor	Clutch motor	4pole,400w
Motor pulley	φ 75(50HZ)	φ 65(60HZ)
V-belt	M62(50HZ)	M61(60HZ)

3. WORK TABLE AND MOTOR

■ Work Table

- When using a table made by another manufacturer, drill holes in the table as shown in the figure below.
- The top of the table should be 50 mm in thickness and should be strong enough to hold the weight and withstand the vibration of the sewing machine.

Work table processing diagram



■ Motor

⚠ CAUTION

- ⚠ All cords which are connected to the motor should be secured at least 25 mm away from any moving parts. Furthermore, do not excessively bend the cords or secure them too firmly with staples, otherwise there is the danger that fire or electric shocks could occur.
- ⚠ Install the correct belt guard which corresponds to the motor being used.

<Motor>

- Select the correct motor from those listed in the table.
- Refer to the instruction manual for the motor for details on installing and using the motor.

Power	Motor
Single-phase	4 pole, 400W motor
Three-phase	4 pole, 400W motor

<Motor pulley and V-belt>







- Select the correct motor pulley and V-belt by referring to the table to suit the power frequency of your area.

Sewing speed	Frequency	Motor pulley	V-belt
670 spm	50 Hz	Motor pulley75	62 inches
700 spm	60 Hz	Motor pulley65	61 inches

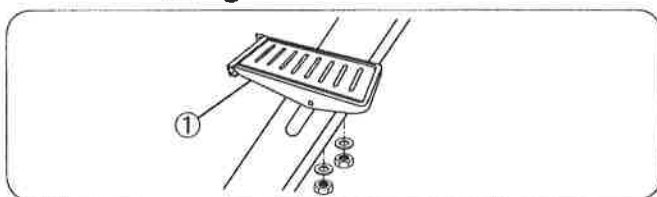
4. INSTALLATION



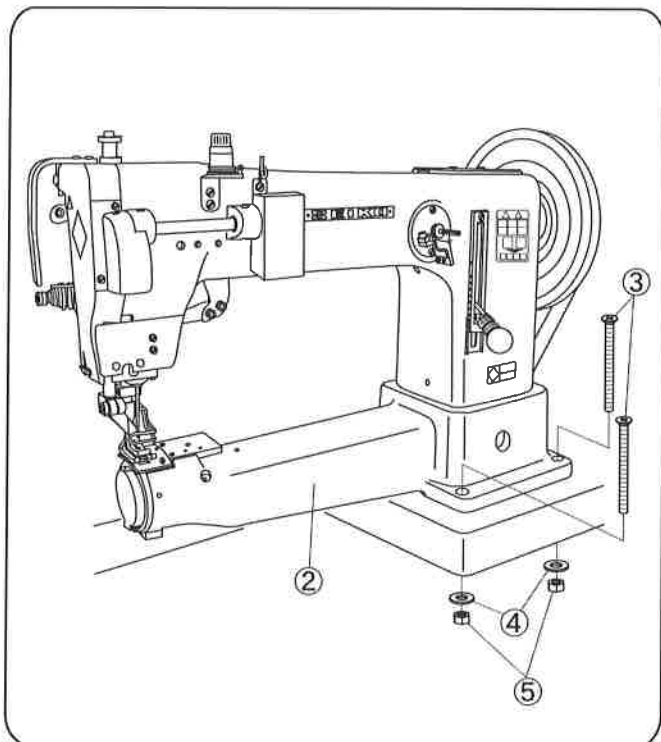
CAUTION

-  The sewing machine should only be installed by a qualified technician.
-  Ask your SEIKO dealer or a qualified electrician for any electrical work that may need to be done.
-  The sewing machine weighs more than 65 kg. The installation should be carried out by two or more people.
-  Do not connect the power cord until installation is complete, otherwise the machine will operate if the treadle is pressed by mistake, which could result in injury.
-  Be sure to connect the ground. If the ground connection is not secure, serious electric shocks will result.
-  Install the belt guard to the machine head.

4-1. Installing the machine head

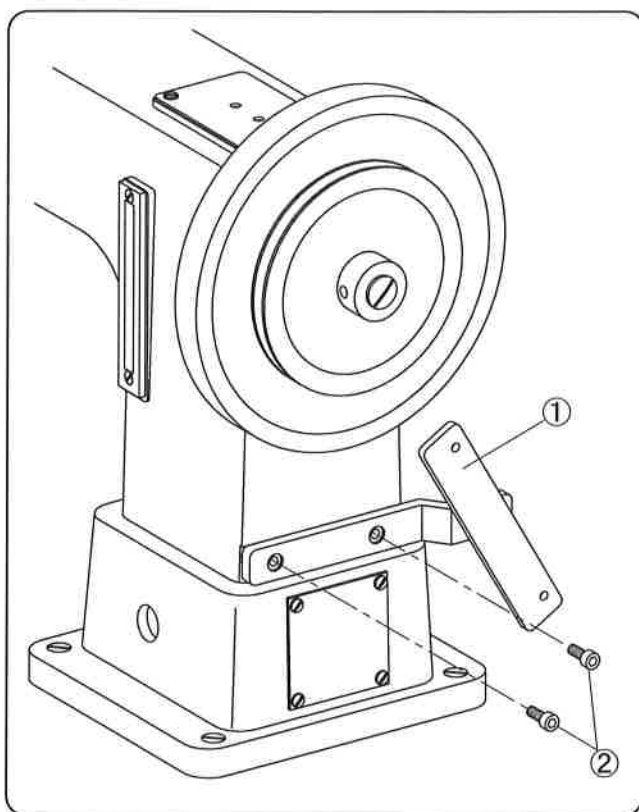


1. Provisionally install the presser lifter pedal ① with washer and nut to the stand of the work table before installing the machine head.

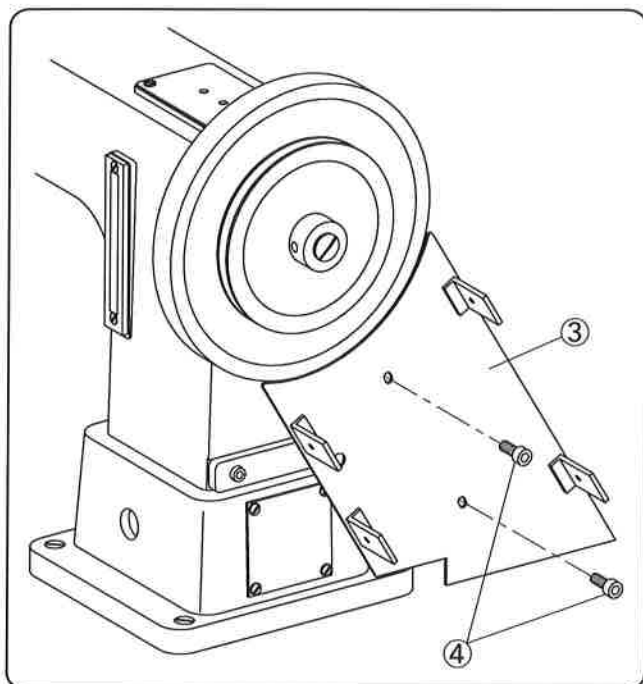


2. Install the machine head ② on the table with 4 screws ③ washer ④ nut ⑤.

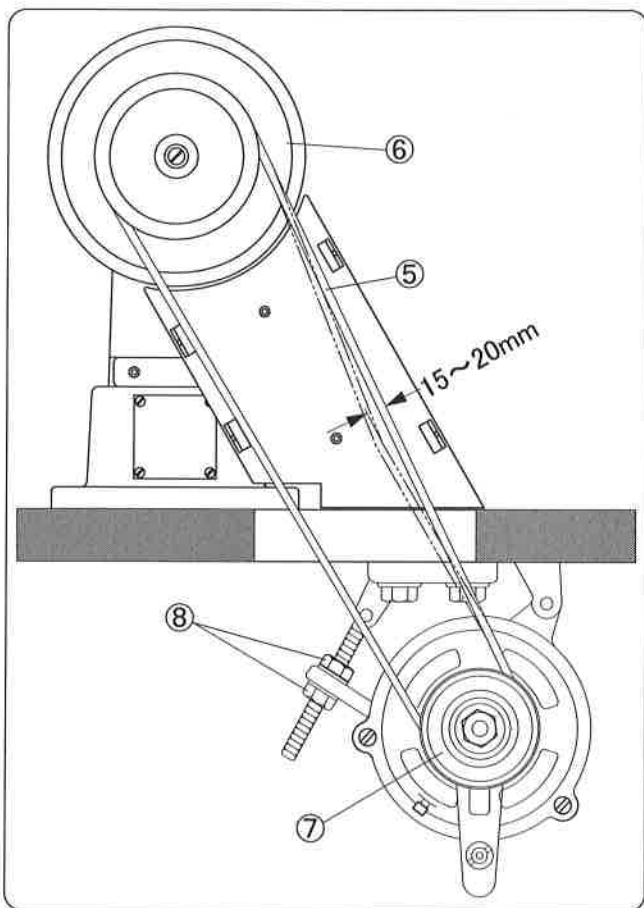
4-2. Installing the belt guard and belt



1. Install the machine head to the belt guard bar ① with the two screws ②.

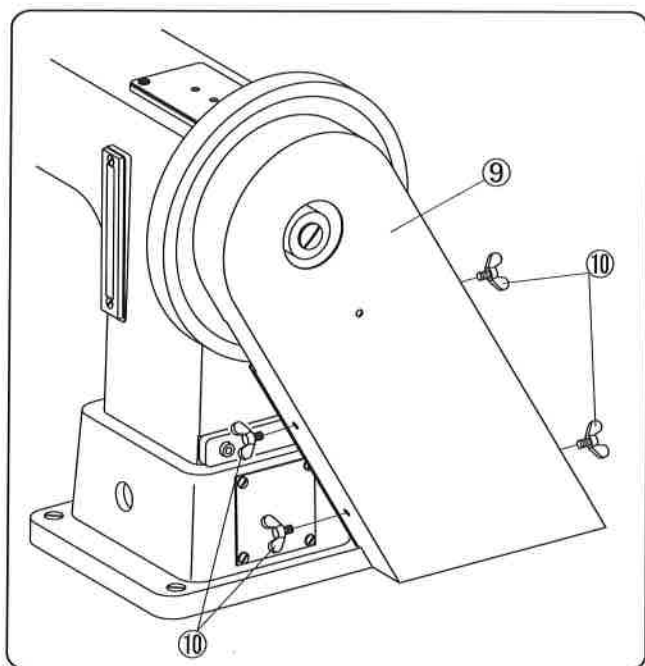


2. Install the belt guard plate ③ with the two screws ④.



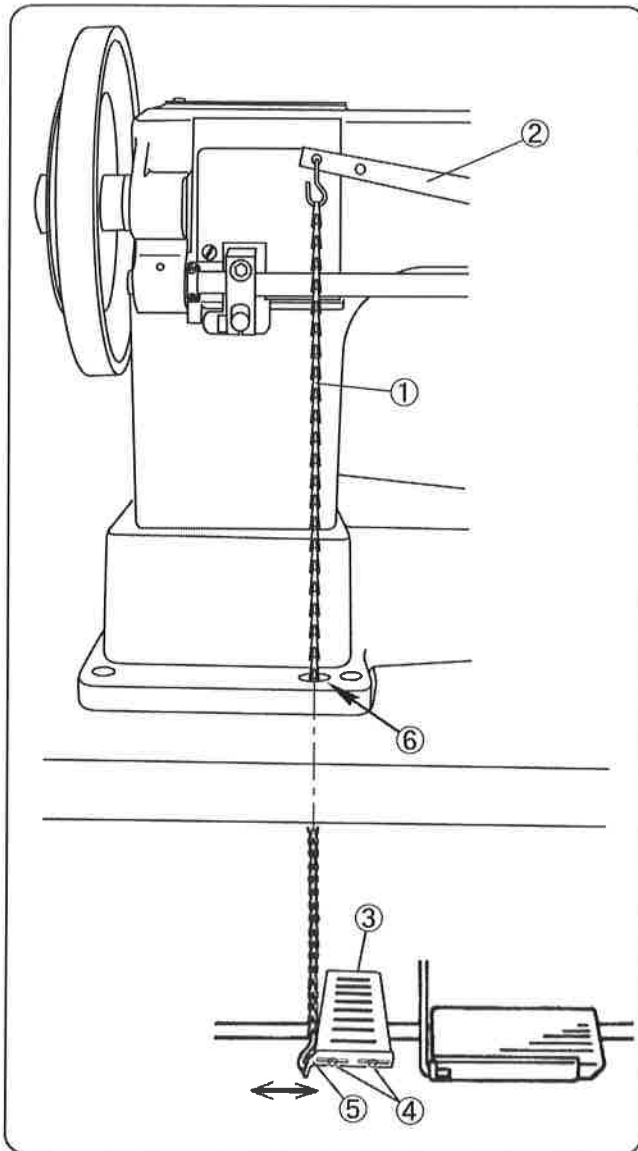
3. Place the belt ⑤ onto the machine pulley ⑥ and motor pulley ⑦ .

4. Turn the nut ⑧ to adjust so that there is 15-20mm of deflection in the belt ⑤ when it is pressed with a finger with a force of 9.8N(1kgf).



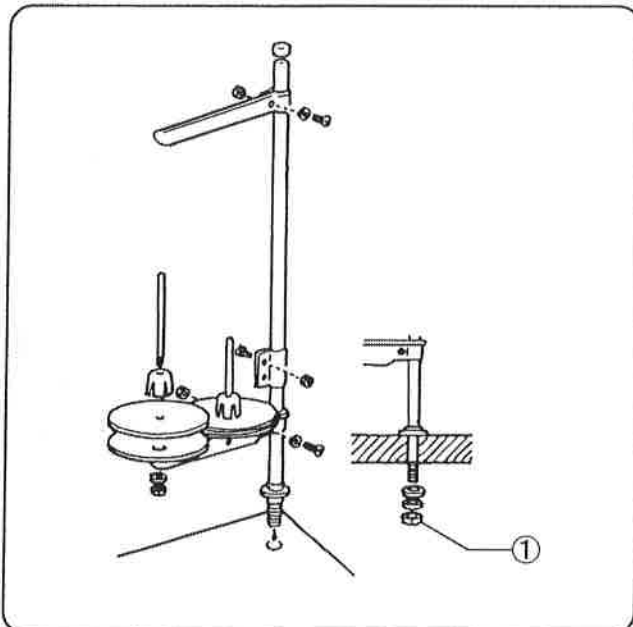
5. Install the belt guard body ⑨ with the 4 screws ⑩.

4-3. Installing the presser lifter pedal



1. Install the foot lifting lever ② and presser lifter pedal ③ with the chain ①.
2. Fix the position of the presser lifter pedal ③ with the pedal blocks ⑤ so that the chain ① is straight and place the chain at center of the hole ⑥ of work table by adjusting bolts ④.

4-4. Installing the thread stand



Assemble the thread stand as shown in the illustration, and then install it to the work table.

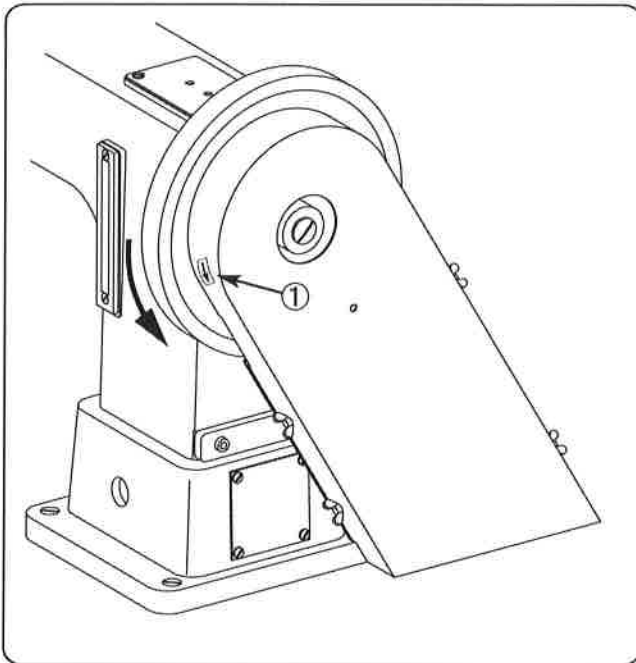
* Securely tighten the nut ① so that the thread stand does not move.

4-5. Checking the machine pulley rotating direction

CAUTION



- Do not touch any of the moving parts or place any objects against the machine while sewing, as this may result in personal injury or damage to the machine.



1. Insert the power cord plug into the wall outlet, and then turn on the power switch.
 2. Depress the treadle and check that the direction of rotation of the machine pulley matches the direction of the arrow ①.
- * If the direction of rotation is reversed, change the direction of rotation to the correct direction while referring to the instruction manual for the motor.

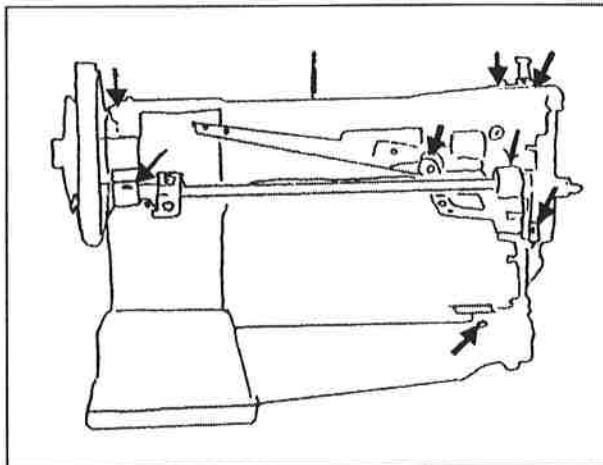
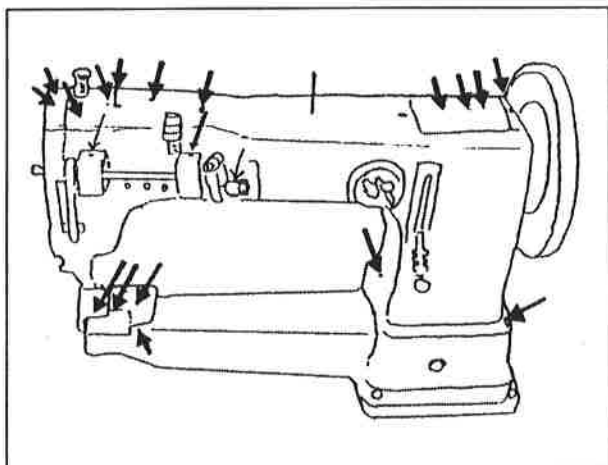
4-6. Lubrication

CAUTION



- Do not connect the power cord until lubrication has been completed, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.
- Be sure to wear protective goggles and gloves when handling the lubricating oil, so that no oil gets into your eyes or onto your skin, otherwise inflammation can result. Furthermore, do not drink the oil under any circumstances, as it can cause vomiting and diarrhoea. Keep the oil out of the reach of children.

- The sewing machine should always be lubricated and the oil supply replenished before it is used for the first time, and also after long periods of non-use.
- Oiling must be done at least once daily in continuous use.
- Add 1-2 drops of oil in the places indicated by the arrows.
Add oil to other sliding parts also, while being careful to avoid oil leaks.



5. PREPARATION BEFORE SEWING

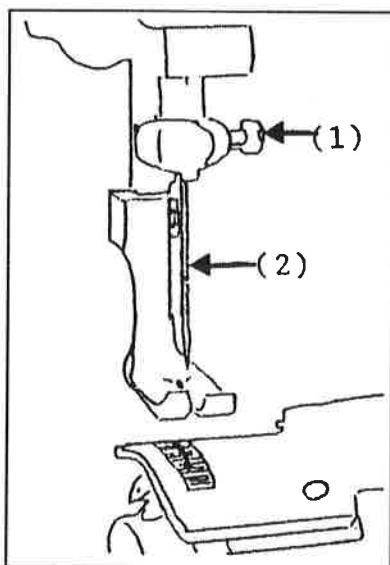
5-1. Installing the needle

CAUTION



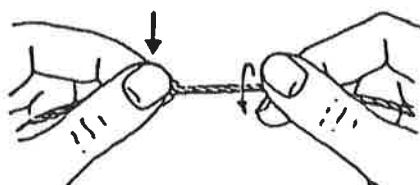
- Turn off the power switch before installing the needle. The motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.

Turn the balance wheel over toward you until the needle bar reaches its highest point. Loosen the needle clamp screw (1). Hold and insert the needle (2) into the needle bar hole up as deeply as it will go, keeping the long groove of the needle to the left and eye of the needle in line with machine arm directly. Securely tighten it with needle clamp screw (1).



5-2. Thread

For needle (Upper thread) use left-twisted thread only, and for bobbin (Lower thread) use either left or right twisted thread. To find out thread twist, hold the thread as shown by illustration, and turn the thread over toward you between the thumb and forefinger of right hand, and then left-twisted thread will wind tighter strands, and right-twisted thread will unwind.



5-3. Removal and insertion of bobbin

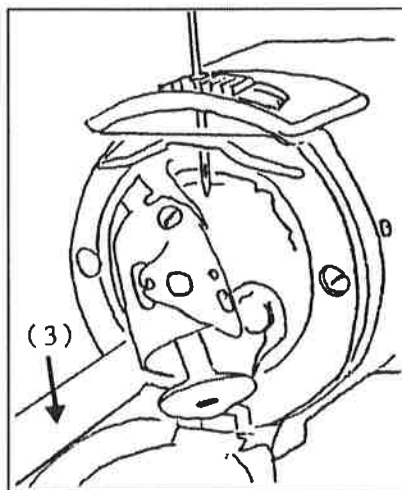
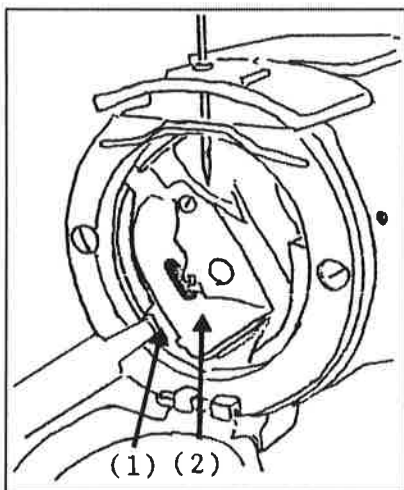
CAUTION



- Turn off the power supply before removing the bobbin. The motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.

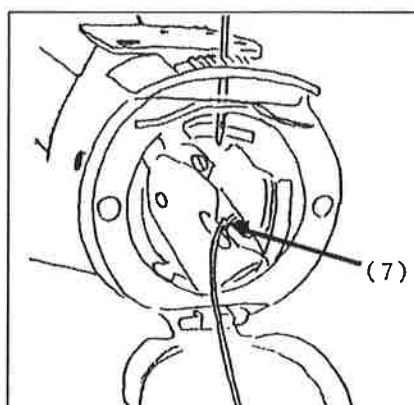
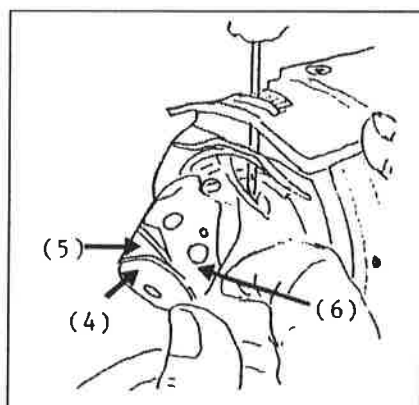
■ Removal of bobbin

Open the hook cover and drop-down the needle bar at lowest point, then insert the opener (3) between the snap spring (1) and bobbin case (2) and depress the snap spring and pull up the bobbin case outward, then take the bobbin out of the bobbin case.



■ Insertion of bobbin

When inserting, pull out the thread and depress it, then insert the bobbin (4) in the bobbin case (5). Pull the thread upward passing through the thread slit (7) of the bobbin case. You can pull out the thread through the thread passing hole through underneath the tension spring (6). Make sure that the snap spring in the shuttle is clicked after pressing bobbin case into the shuttle.



5-4. Winding the lower thread

CAUTION

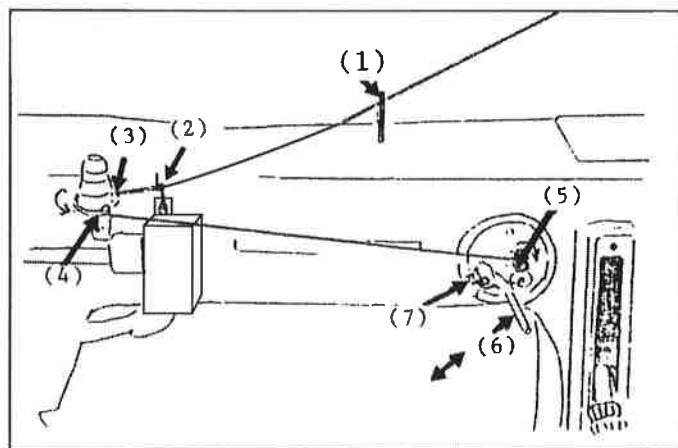
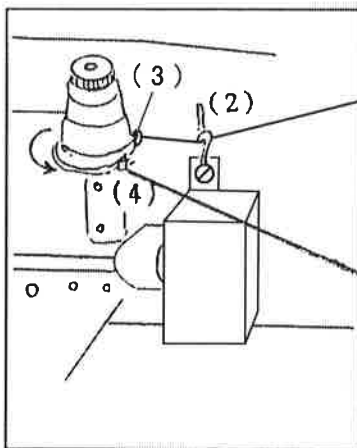


- Do not touch any of the moving parts or place any objects against the machine while winding the lower thread, as this may result in personal injury or damage to the machine.

1. Turn on the power supply.
2. Push the bobbin (5) on the bobbin winder shaft .
3. Bobbin winding should be made by the following order.
4. Wind the thread end several times around the bobbin (5) in the direction indicated by the arrow.
5. Push the bobbin winder lever (6) toward the bobbin.
6. Depress the treadle. Lower thread winding will then start.
7. Once winding of the lower thread is completed, the bobbin winder lever (6) will return automatically.

NOTE: The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.

- * Loosen the screw (7) and adjust the amount of thread wound onto the bobbin approximately by moving the bobbin winder lever (6) .



5-5. Threading the upper thread

CAUTION



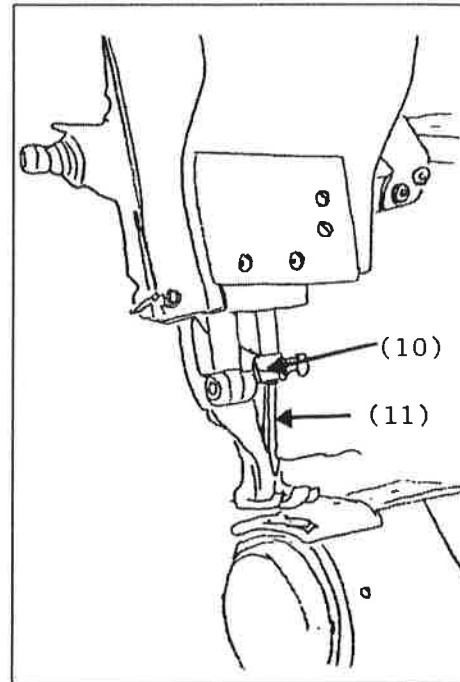
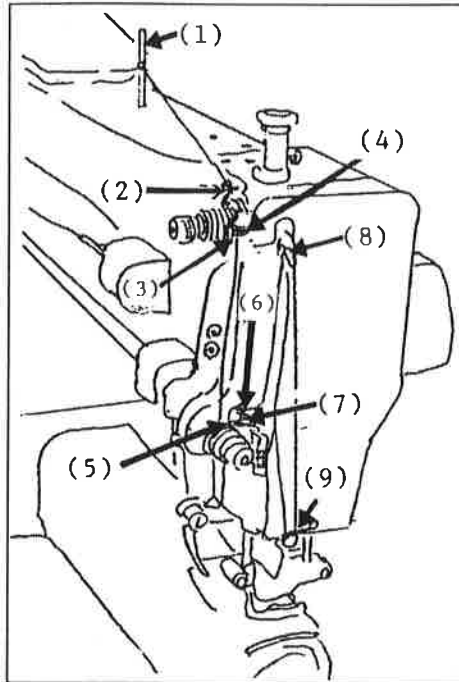
- Turn off the power switch before threading the upper thread. The motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.

- Turn the machine pulley and raise the thread take-up lever (8) to its highest point before threading the upper thread. This will make threading easier and it will prevent the thread from coming out at the sewing start.

Upper threading should be made by the following order.

(1) Spool pin — (2) Thread guide of thread tension — (3) Clearance of two tension discs — (4) thread guide of thread tension — (5) Thread controller — disc wind a time — (6) Thread guide (7) Tension spring — (8) Thread take-up — (9) Thread guide, face plat — (10) Needle cramp (11) Needle

Put the upper thread through needle hole from left hand side, then pull out it approx.

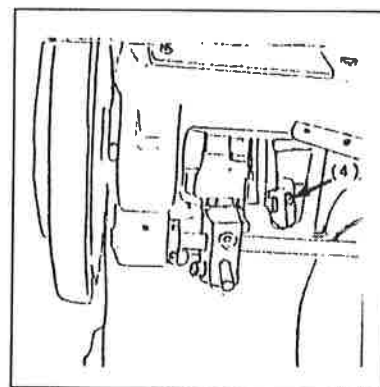
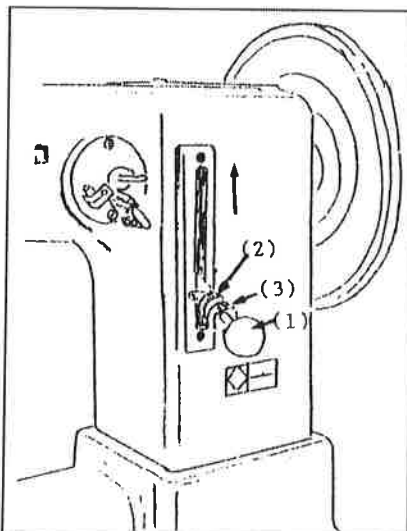


5-6. Adjusting the stitch length

By pull-up ↑ feed regulating lever (1), reverse stitch is performed, and push-down feed ↓ regulating lever (1), forward stitch is performed.

By turning knurling nut (2) & (3) clockwise ↻, feed length decreases, and turning knurling nut (2) & (3) counter-clockwise ↻, feed length increases.

Knurling nut (2) & (3) should be tightened each other after desired stitch length was determined.






(Note)

When upward & downward moving of the feed regulating lever is loosened, feed adjustin screw (4) should be tightened.

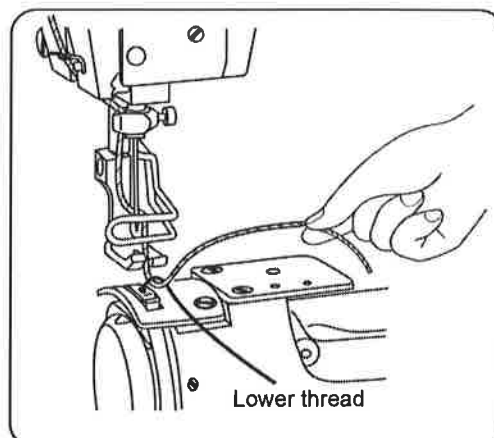
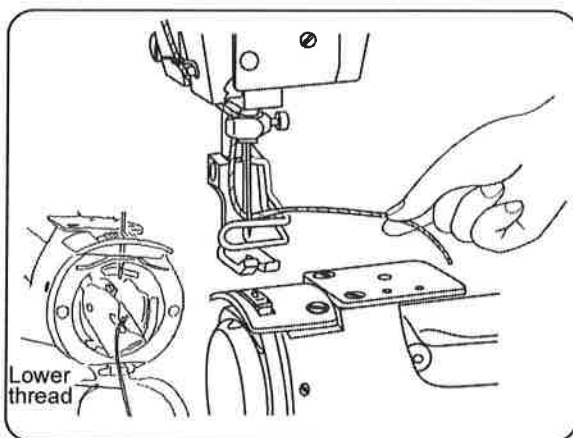
6. SEWING

CAUTION

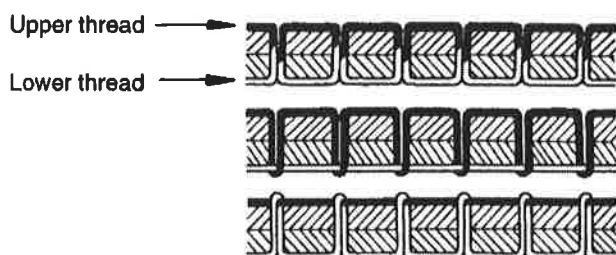
-  • Attach all safety devices before using the sewing machine. If the machine is used without these devices attached, injury may result.
-  • Turn off the power switch at the following times. The motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.
 - When threading the needle
 - When replacing the needle and bobbin
 - When not using the machine and when leaving the machine unattended
-  • Do not touch any of the moving parts or place any objects against the machine while sewing, as this may result in personal injury or damage to the machine.

6-1. Sewing

1. While holding the upper thread with your fingers, turn the machine pulley by hand toward you until the lower thread comes out onto the feed dog.
2. Pull the lower thread toward you and check that it pulls out smoothly.
3. Turn on the power switch.
4. Depress the treadle to start sewing.



6-2. Adjusting the thread tension

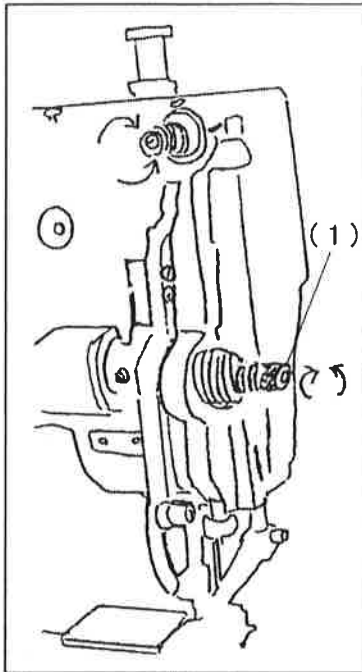


Good even stitches

Upper thread tension too weak or lower thread tension too strong

Upper thread tension too strong or lower thread tension too weak

■ Upper thread tension



The tension of the upper thread is adjusted using the tension thumb nut (1).

To increase the tension of the upper thread, turn the tension thumb nut (1) to the right. To decrease tension, turn the tension thumb nut (1) to the left.

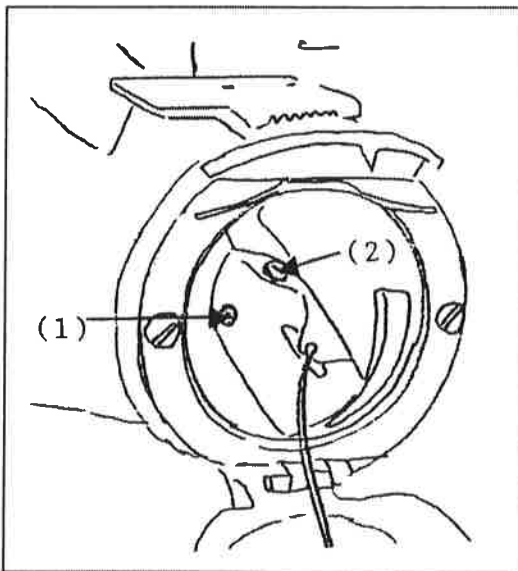
! CAUTION



- Turn off the power supply before adjusting the lower thread tension.

The motor will keep turning even after the power is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.

■ Lower thread tension

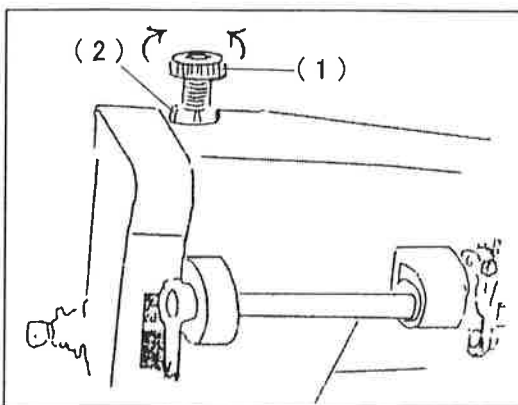


To adjust tension of the bobbin thread, turn Tension Regulating Screw.

By loosen set screw (1) and adjusting tension regulating screw (2). The set screw (1) should exactly be tightened after tension of the bobbin thread was adjusted.

By turning the set screw clockwise ↻, bobbin thread tension increases, and turning the set screw counter-clockwise ↻, bobbin thread tension decreases.

6-3. Adjusting the presser foot pressure



The presser foot pressure should be as weak as possible, but strong enough so that the material does not slip.

1. Loosen the nut ②.
2. Adjust by turning the thumb screw ①.

If the thumb screw ① is turned clockwise, the presser foot pressure will become stronger, and if it is turned counter-clockwise, the presser foot pressure will become weaker.

3. Tighten the nut ②.

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