









INSTRUCTION MANUAL

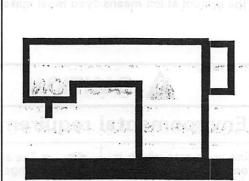
ns which follow this term indicate situations where failure to follow the

H-2BL-AE





This symbol (46) indicates something that you must do. The picture inside the circle indicates the



SEWING MACHINE CO., LTD.

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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 the 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

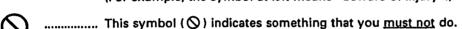


CAUTION

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.

Symbols







2 Notes on safety



CAUTION

Environmental requirements

- 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.
- Any fluctuations in the power supply voltage should be within ±10% of the rated voltage for the machine.
 - Voltage fluctuations which are greater than this may cause problems with correct operation.
- 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.

- The ambient temperature should be within the range of 5°C to 35°C during use.
 - Temperatures which are lower or higher than this may cause problems with correct operation.
- The relative humidity should be within the range of 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.
 - Avoid exposure to direct sunlight during use.
 Exposure to direct sunlight may cause problems with correct operation.
 - In the event of an electrical storm, turn off the power and disconnect the power cord from the wall outlet.

Lightning may cause problems with correct operation.

A 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 sewing machine weighs more than 35 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 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 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 belt covers to the machine head and motor.



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



 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.

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.



 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.

When threading the needle

When replacing the needle and bobbin

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.



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



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



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



 For machines with automatic presser lifter, do not touch the solenoid section, otherwise burns may result.



 If an error occurs in machine, 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.

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.



 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.

A CAUTION

Maintenance and inspection



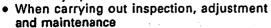
 Maintenance and inspection of the sewing machine should only be carried out by a qualified technician.



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.



· 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 needs to be left on when carrying out some adjustment, be extremely careful to observe all safety precautions.



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 that 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.

A CAUTION



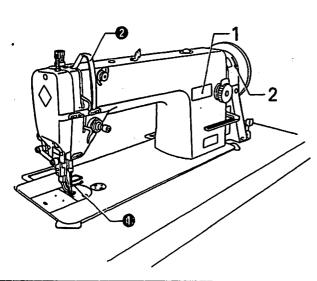
Moving parts may cause injury.

Operate with safety devices. Turn off main switch before threading, changing bobbin and needle, cleaning etc.

Safety devices

Finger guard
Thread take-up cover

Belt cover, etc.

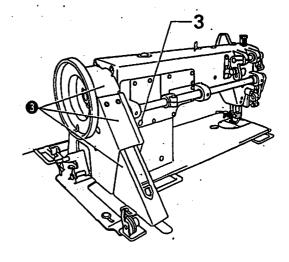




Direction of operation



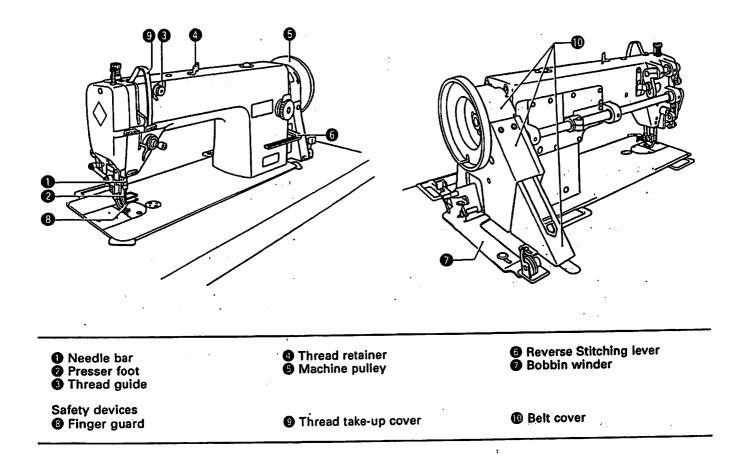
 Be sure to connect the ground. If the ground connection is not secure, you run the risk of receiving a serious electric shock.



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1. NAMES OF MAJOR PARTS



2. MACHINE SPECIFICATIONS

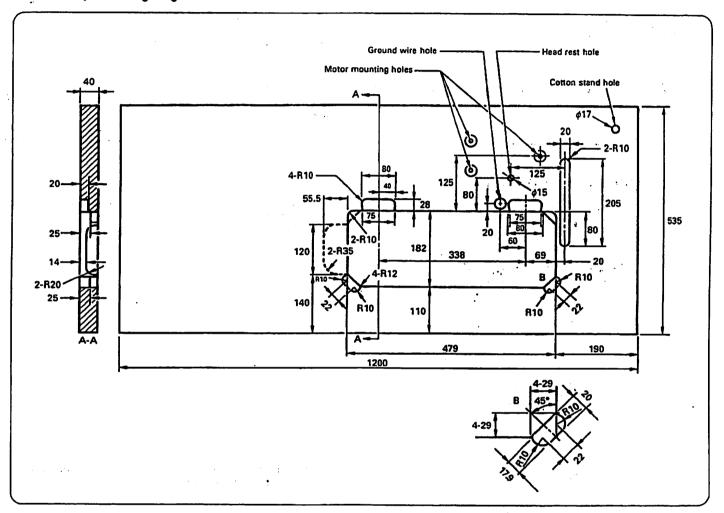
Use		For heavy-weight materials				
Sewing speed Maximum stitch length Needle bar stroke		2,000 rpm 8 mm 37 mm				
					Presser bar lifter	6.5 mm
				Presser foot height	Knee lifter	16 mm
Feed dog height Needle		1.2 mm DP x 17 #23				

3. WORK TABLE AND MOTOR

3-1. Work Table

The top of the table should be 40 mm in thickness and should be strong enough to hold the weight and withstand the vibration of the sewing machine.

Work table processing diagram



3-2. Motor





• 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 cover which corresponds to the motor being used.

<Motor>

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

Power	Motor	
Single-phase	2-pole, 400 W motor	
Three-phase	2-pole, 400 W motor	

<Motor pulley and V-belt>

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

Sewing speed	Frequency	Motor pulley	V-belt
2000 rpm	50 Hz	Motor pulley 60	41 inches
	60 Hz	Motor pulley 50	41 inches

4. INSTALLATION

A CAUTION



 The sewing machine should only be installed by a qualified technician.



 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.



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



 Be sure to connect the ground. If the ground connection is not secure, serious electric shocks will result.

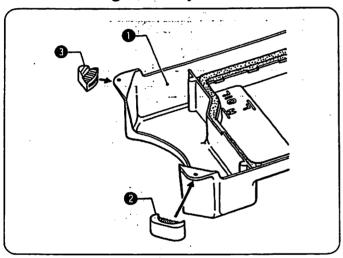


 The sewing machine weights more than 35 kg. The installation should be carried out by two or more people.

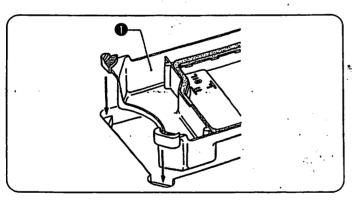


Install the belt cover to the machine head.

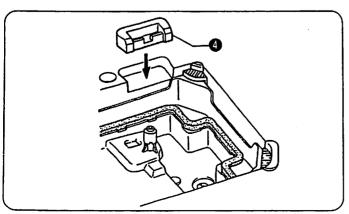
4-1. Installing the oil pan



- 1. Insert the two head cushions F ② into the front corners of the oil pan 0.
- 2. Insert the two head cushions B 1 into the back corners of the oil pan 1.

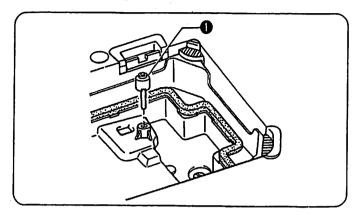


3. Place the oil pan 10 into the groove in the work table so that corners are aligned.

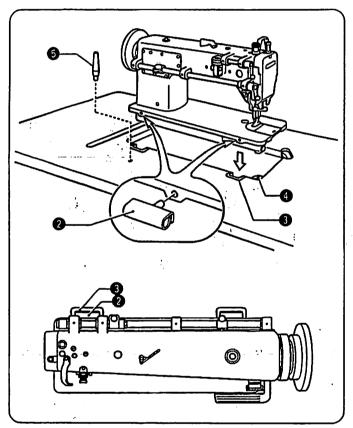


4. Insert the two rubber cushions • into the notches in the work table.

4-2. Installing the machine head

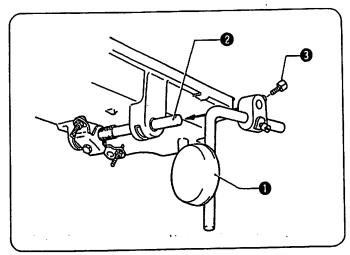


1. Insert the knee lifter complying bar 1.



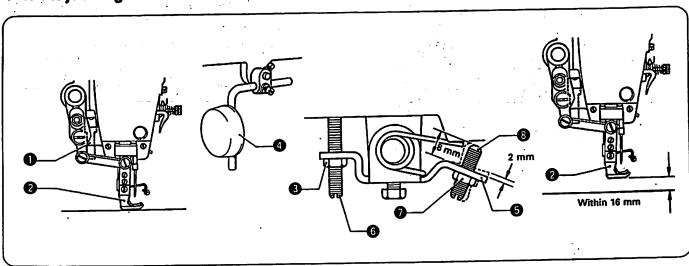
- 2. Insert the two hinges 2 into the holes in the machine bed.
- 3. Clamp the hinges onto the rubber cushions in the work table, and then place the machine head onto the head cushions which are on top of the oil pan corners.
- 4. Tap the pillow into the table hole. NOTE: Tap the pillow securely into the table hole. If the pillow is not pushed in as far as it will go, the machine head will not be sufficiently stable when it is tilted back.

4-3. Installing the knee lifter assembly



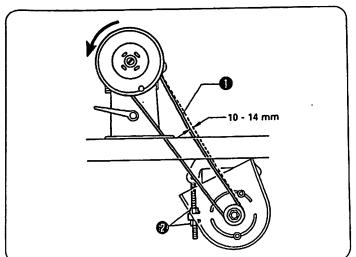
Place the knee lifter assembly • onto the knee lifter bar • on the oil pan, and then secure it by tightening the bolt 6.

4-4. Adjusting the knee lifter



- Lower the presser foot ② by using the presser bar lifter ①.
- 2. Loosen the nut 6. 3. Turn the screw 6 to adjust so that the amount of play in the knee lifter 5 is approximately 2 mm when the knee lifter plate • is gently pressed.
 4. Securely tighten the nut •.
- 5. Loosen the nut 0.
- 6. Turn the screw 3 until the distance between the end of the screw 3 and the knee lifter 5 is approximately 8 mm.
- 7. Turn the adjusting screw (a) to adjust so that the presser foot (a) is at the desired position within a distance of 16 mm of the needle plate when the knee lifter plate (a) is fully pressed.
- 8. After adjustment is completed, securely tighten the nut 0.

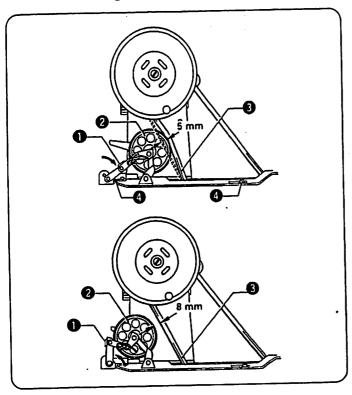
4-5. Installing the belt



- 1. Tilt back the machine head, and then place the belt $oldsymbol{0}$ onto the motor pulley and the machine pulley.
- 2. Turn the nut 2 to adjust so that there is 10 14 mm of deflection in the belt • when it is pressed with a finger.

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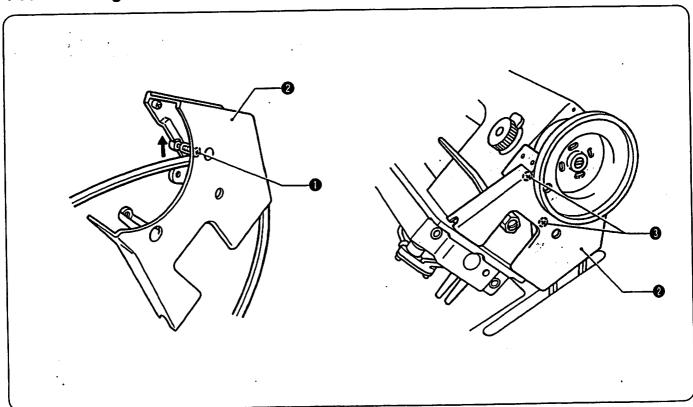
4-6. Installing the bobbin winder



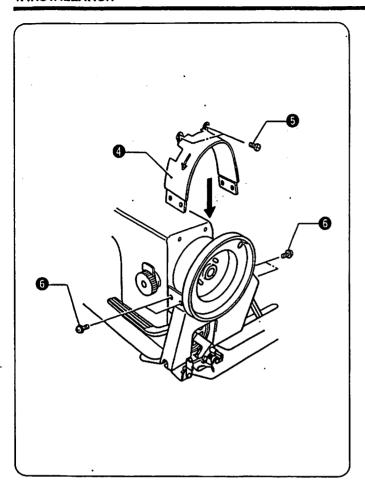
- 1. Push down the bobbin presser arm as far as it will
- 2. Place the bobbin winder wheel 3 so that it pushes the belt 10 by approximately 5 mm, and then place the bobbin winder so that it is parallel with the belt hole in the work table.
- 3. Install the bobbin winder to the work table with the two screws 0.
- 4. Pull the bobbin presser arm

 back and check that there is approximately 8 mm of clearance between the bobbin winder wheel @ and the belt @.

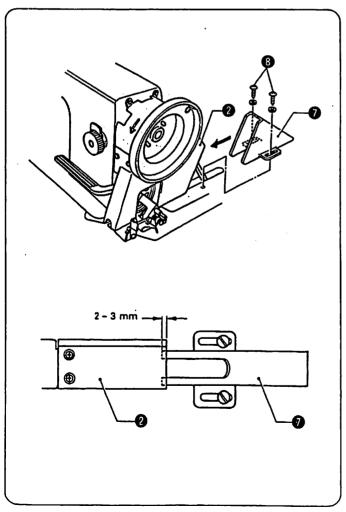
4-7. Installing the belt cover



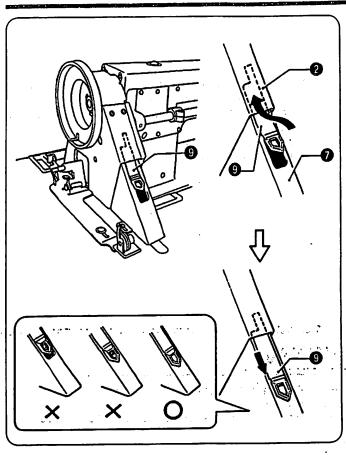
- 1. Tilt back the machine head, and then loosen the screw 1 of the belt cover 2.
- 2. Open the tip of the boss on the belt cover 2, pass the V-belt through, and then tighten the screw 1.
- 3. Secure the belt cover 2 by tightening the two screws 3. Pass the screwdriver through the hole in the machine pulley to tighten the screw at the left.



- 4. Return the machine head to the upright position, and then place belt cover U over the machine pulley.
- 5. Tighten the two screws 6 and the four screws 6 to secure belt cover U 6.

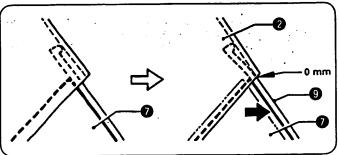


6. Place belt cover D ② so that it overlaps the belt cover ② by 2 − 3 mm, and then provisionally tighten the two screws ③.



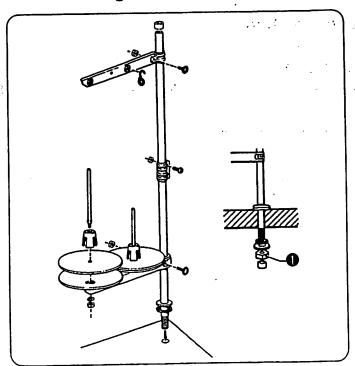
- 7. Insert the cover ① of belt cover D ② in between the belt cover ② and belt cover D ②, and then place it into the groove of belt cover D ②.
- groove of belt cover D .

 8. Slide the cover odwn along the groove of belt cover D of as far as it will go.



- 9. Pull belt cover D 1 toward you until there is no clearance between the belt cover 2 and the cover 6 of belt cover D 1.
- 10. Fully tighten the two screws 10. (Refer to step 6.)

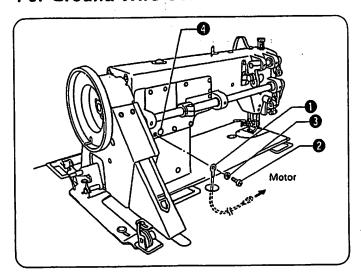




Assemble the cotton stand as shown in the illustration, and then install it to the work table.

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

4-9. Ground Wire Connections



Connect the ground wire to the sewing machine head and motor.

(Use the correct type of ground wire.)

 Secure the ground wire 1 to the sewing machine head with screw 2 and washer 5.
 (The attachment location is indicated by a ground sym-

bol 4.

- 2. Pass the ground wire 10 through the hole in the table.
- Connect the ground wire 1 to the motor in accordance with the instructions in the instruction manual for the motor.

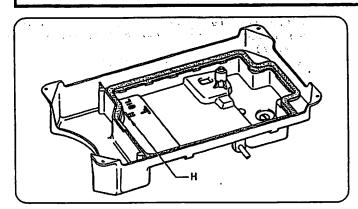
4-10. Lubrication



CAUTION



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.



★ Use only the lubricating oil.

Tilt back the machine head and slowly pour in lubricating oil until the oil level reaches the H mark.

* If the oil level drops below the L mark, add more lubricating oil.

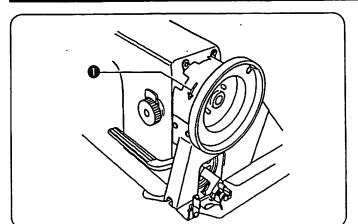
4-11. Checking the machine pulley rotating direction



CAUTION

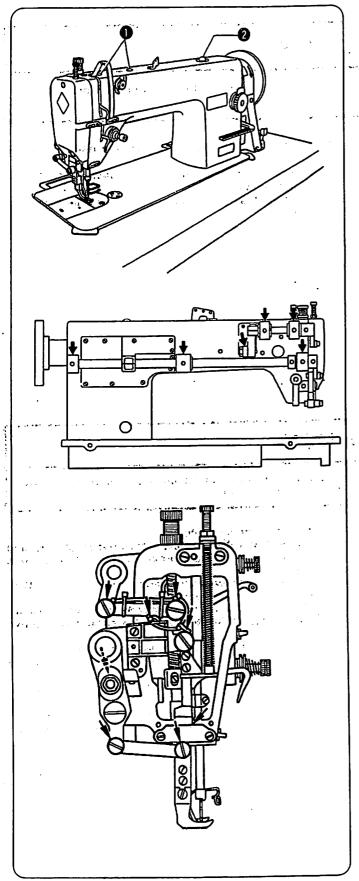


• Do not touch any of the moving parts or place any objects against the machine while sewing, as this may result in personal injury or damage to the machine.



- 1. Insert the power cord plug into the wall outlet, and then turn on the power switch.
- 2. Depress the treadle slightly and check that the machine pulley starts to turn in 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.

4-12. Test operation



Carry out test operation when starting up a new sewing machine for the first time, or when restarting the sewing machine after a long period of non-use.

- 1. Remove the rubber caps ① on the top of the arm and the face plate, and apply an ample amount of oil to the arm and to the rear of the machine in the places indicated by the arrows.
- 2. Install the face plate.
- 3. Lift up the presser foot and presser bar lifter.
- 4. Run the sewing machine at normal sewing speed (2,000 rpm), and look through the oil gauge window ② to check that the oil is being circulated.

5. PREPARATION BEFORE SEWING

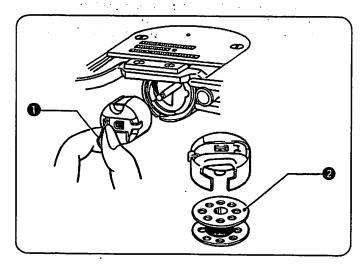
5-1. Removing the bobbin case

A

CAUTION



 Turn off the power switch before removing the bobbin case, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.



- Turn the machine pulley to raise the needle until it is above the needle plate.
- 2. Pull the latch of the bobbin case upward and then remove the bobbin case.
- The bobbin will come out when the latch is released.

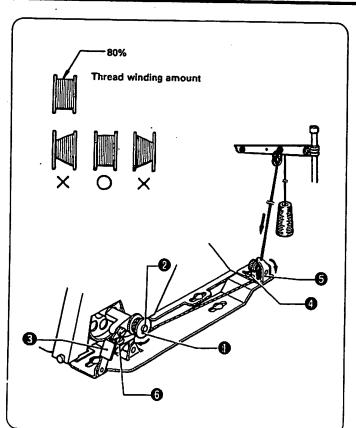
5-2. Winding the lower thread

A

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 switch.
- 2. Place the bobbin 1 onto the bobbin winder shaft 1, and then push down the bobbin presser arm 1 as far as it will go.
- will go.

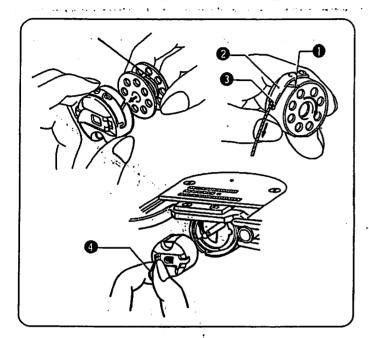
 3. Wind the thread several times around the bobbin in the direction indicated by the arrow.
- 4. Depress the treadle. Lower thread winding will then start.
- Once winding of the lower thread is completed, remove the bobbin.
- * If the thread cannot be wound on evenly, loosen the screw and move the bobbin winder guide to the left or right.
- * To wind more thread onto the bobbin •, tighten the adjusting screw •.
 - Note: The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.

5-3. Threading the lower thread

A CAUTION

A

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



- 1. While holding the bobbin so that the thread winds to the right, insert the bobbin into the bobbin case.
- Pass the thread through the slot

 and under the tension spring
 and then pull it out from the thread guide
- 3. Check that the bobbin turns clockwise when the thread is pulled.
- 4. Hold the latch 6 on the bobbin case and insert the bobbin case into the rotary hook.

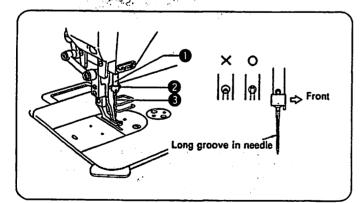
5-4. Installing the needle

Λ

CAUTION



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



- 1. Turn the machine pulley to move the needle bar to its highest position.
- 2. Loosen the screw 2.
- 3. Insert the needle 1 in a straight line as far as it will go, making sure that the long groove on the needle is at the left, and then securely tighten the screw 2.

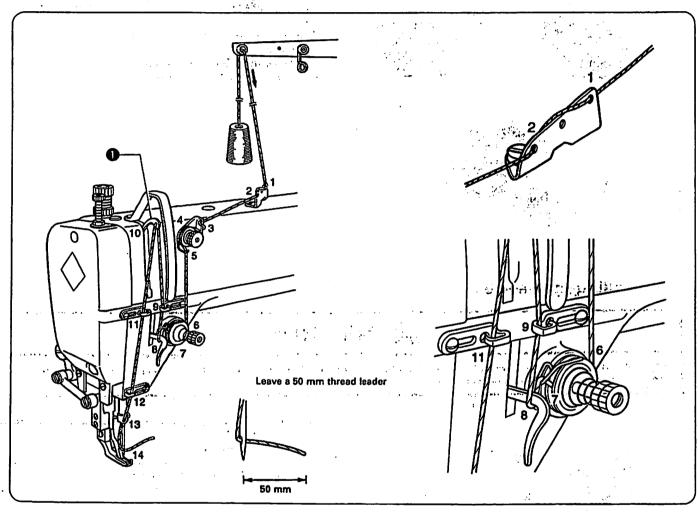
5-5. Threading the upper thread

A CAUTION

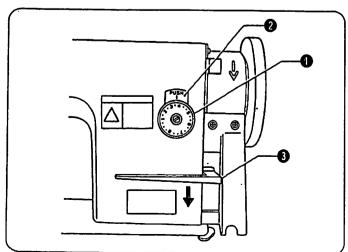
A

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

Raise the thread take-up lever • before threading the upper thread. This will make threading easier and it will prevent the thread from coming out at the sewing start.



5-6. Adjusting the stitch length



While pressing the stopper ②, turn the stitch length dial ① to the left and right to align the stitch length number with the reference line on the stopper ②.

- * The larger the number, the longer the stitch length will be.
- * When turning the stitch length dial from a larger setting to a smaller setting, it will be easier to turn the dial if the reverse stitching lever is pushed to the halfwaydown position.

6. SEWING

A CAUTION

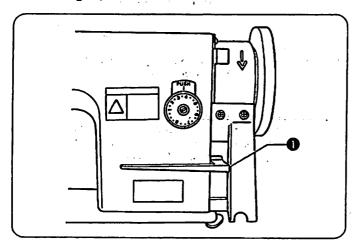


- Turn off the power switch at the following times, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.
 - When threading the needle
 - When replacing the needle and bobbin
 - When not using the machine and when leaving the machine unattended



- 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.
- 1. Turn on the power switch.
- 2. Depress the treadle to start sewing.

Backtacking



When the reverse stitching lever **①** is pushed, the cloth feed direction will be reversed, and when it is returned to its original position, the feed direction will change back to normal.

7. THREAD TENSION

7-1. Adjusting the thread tension



CAUTION



• Turn off the power switch before removing or inserting the bobbin case, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.

Correct seam





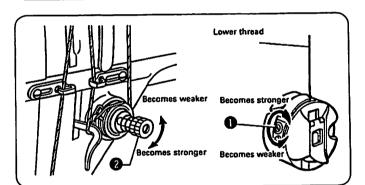
Appearance of seam when upper thread tension is too weak

- Increase the upper thread tension.
- Decrease the lower thread tension.



Appearance of seam when upper thread tension is too strong

- Decrease the upper thread tension.
- Increase the lower thread tension.



<Lower thread tension>

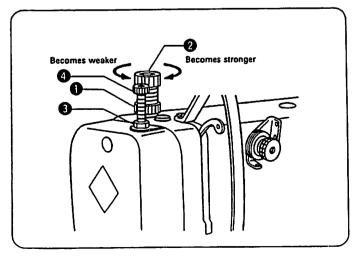
Adjust by turning the adjustment screw 1 until the bobbin case drops gently by its own weight while the thread end coming out of the bobbin case is held.

<Upper thread tension>

After the lower thread tension has been adjusted, adjust the upper thread tension so that a good, even stitch is obtained.

- 1. Lower the presser foot.
- 2. Adjust by turning the thread tension nut 2.

7-2. Adjusting the presser foot pressure



<Adjusting the presser foot pressure>

- 1. Loosen the adjustment nut 0.
- 2. Turn the adjustment screw @ to adjust the presser foot
- The presser foot pressure should be as weak as possible, but strong enough so that the material does not slip.
- 3. Tighten the adjustment nut 0.

<Adjusting the walking foot pressure>

- 4. Loosen the adjustment nut 6.
- 5. Turn the adjustment screw 0 to adjust the walking foot pressure.

The walking foot pressure can be increased by turning the adjustment screw 10 to the right, and can be decreased by turning it to the left.

- 6. Tighten the adjustment nut 1.
- For easily damaged material, the walking foot pressure and holding pressure should be decreased.

8. STANDARD ADJUSTMENTS

A

CAUTION



 Maintenance and inspection of the sewing machine should only be carried out by qualified personnel.



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



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



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

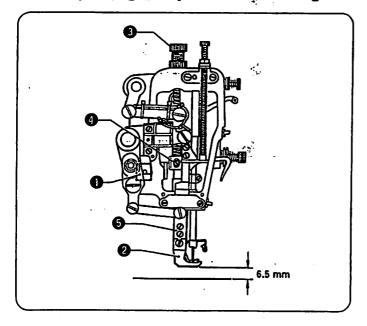


• Turn off the power switch and disconnect the power cord from the wall outlet at the following times, otherwise the machine may operate if the treadle is pressed by mistake, which could result in injury.
However, the motor will keep turning even af-

However, 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.

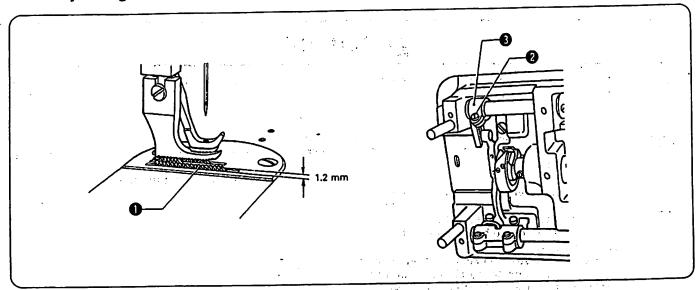
- When carrying out inspection, adjustment and maintenance
- When replacing consumable parts such as the rotary hook

8-1. Adjusting the presser foot height



- ★ The standard height of the presser foot ② is 6.5 mm when the presser foot is raised with the presser bar lifter lever ①.
- The height of the presser foot ② can be adjusted by turning the pressure regulating thumb screw ③ and raising the presser bar lifter lever ① without applying pressure.
- Remove the oil cap and loosen the screw \(\textit{\textit{9}}\); adjust the presser foot height by raising or lowering the presser bar \(\textit{\textit{9}}\).

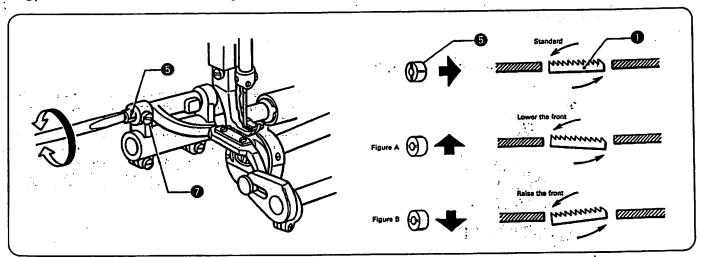
8-2. Adjusting the feed dog height and angle



Adjusting the feed dog height

★ When the feed dog • is at its highest position above the needle plate, the standard height is 1.2 mm.

★ To adjust the height of the feed dog 10, move it to the highest position above the needle plate, loosen the set screw ②, and raise or lower the feed lifting arm ③.



Adjusting the feed dog angle

★ The standard angle of the feed dog • when it is at its highest position above the needle plate is obtained when the embossed mark on the feed bracket shaft 6 is horizontal.

1. Turn the machine pulley to move the feed dog to its highest position above the needle plate.

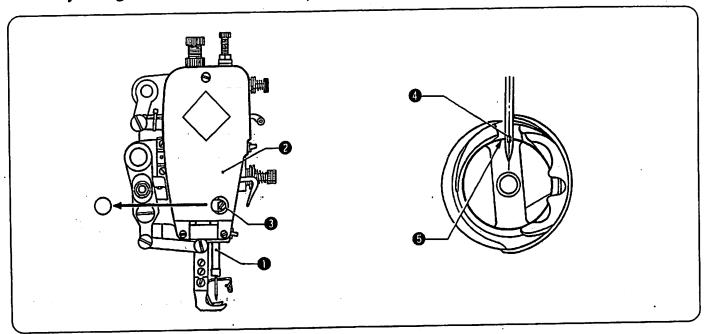
2. Loosen the set screw 0.

3. Turn the feed bracket shaft 6 in the direction of the arrow within a range of 90° with respect to the standard position. In order to prevent puckering, lower the front of the feed dog (Figure A).

• In order to prevent the material from slipping, raise the front of the feed dog (Figure B).

4. Securely tighten the set screw 0. The height of the feed dog • will change after the angle has been adjusted, so it will be necessary to re-adjust the height of the feed dog 0.

8-3. Adjusting the needle bar height

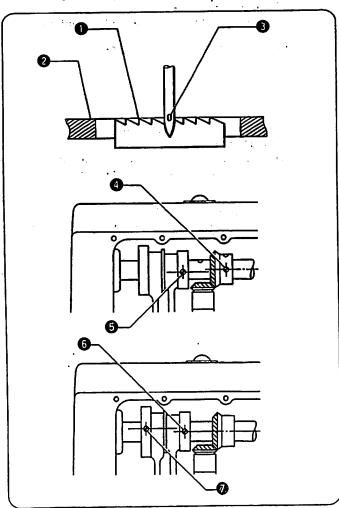


1. Drop the needle bar 10 to its lowest position.

2. Remove the rubber cap from the face plate 2. 3. Loosen the screw 19 on the needle bar 10 until the required position is obtained.

4. Align the center of the needle eye 9 with the inner surface 9 of the high-speed rotary hook when the needle bar 0 is at its lowest position.

8-4. Adjusting the needle and feed mechanism timing

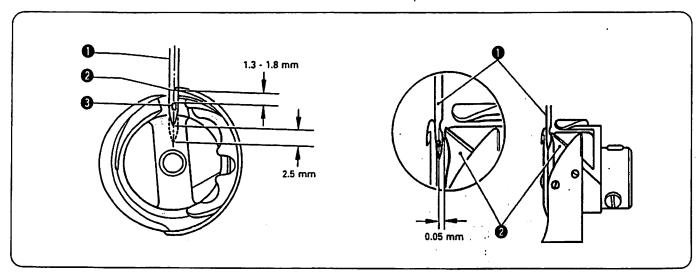


The standard timing is obtained when the feed dog • is lowered from its highest position until it is flush with the top of the needle plate 0, and the needle eye 0 is also aligned horizontally with these flush surfaces.

Adjust by changing the phases of eccentric wheel UD and the level feed eccentric wheel.

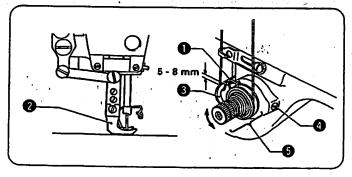
- 1. Remove the side plate.
- 2. Remove the oil cover.
- 3. Position the third set screw 6 on eccentric wheel UD so that its center is slightly lower than the second set screw on the upper shaft bevel gear.
- 4. Position the third set screw on the level feed eccentric wheel so that its center is slightly higher than the second set screw 6 on eccentric wheel UD.

8-5. Adjusting the needle and rotary hook timing



- 1. The hook point @ must be aligned with the center of the needle when the needle is raised 2.5 mm from its lowest position.
- 2. Raise the hook point 2 1.3 1.8 mm above the top edge of the needle eye 1.3 1.8 mm above 1.3 -
- 3. Set the clearance between the groove of the needle 1 and the hook point 2 to 0.05 mm.

8-6. Adjusting the thread tension spring

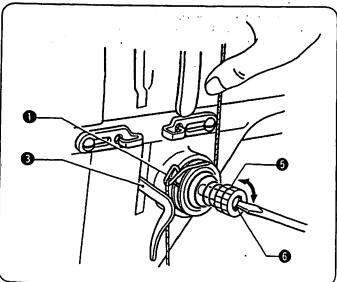


★ The standard position of the thread tension spring ① is 5 - 8 mm above the surface of the thread guide ② when the presser foot ② is lowered.

- 1. Lower the presser foot 2.
- 2. Loosen the set screw 9.

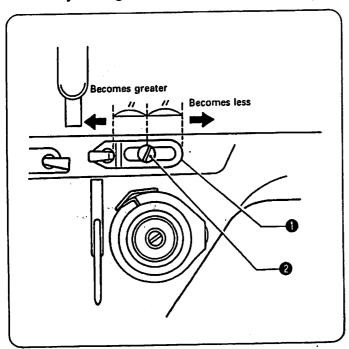
11.

- 3. Turn the thread tension bracket 9 to adjust the spring position.
- 4. Securely tighten the set screw 1.



- ★ The standard tension of the thread tension spring is 0.29 0.59 N (30 60 gf).
- 1. Push the needle thread with your finger until it is slightly higher than the thread tension bracket (a) and so that the upper thread is not pulled out.
- 2. Pull the upper thread down until the thread tension spring 1 is at the same height as the base of the thread guide 1, and then measure the tension of the thread tension spring 1.
- 3. Insert a screwdriver into the slot of the thread tension stud 3, and turn the screwdriver to adjust the tension of the thread tension spring 1.

8-7. Adjusting arm thread guide R



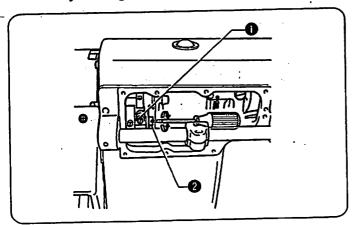
The standard position of arm thread guide R 10 is the position where the screw @ is in the center of the adjustable range for arm thread guide R 0.

To adjust the position, loosen the screw 2 and then move arm thread guide R 0.

 When sewing thick material, move arm thread guide R 1 to the left. (The thread take-up amount will become greater.)

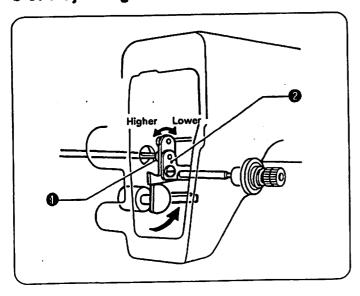
 When sewing thin material, move arm thread guide R • to the right. (The thread take-up amount will become

8-8. Adjusting the difference between the forward and backtack stitch lengths



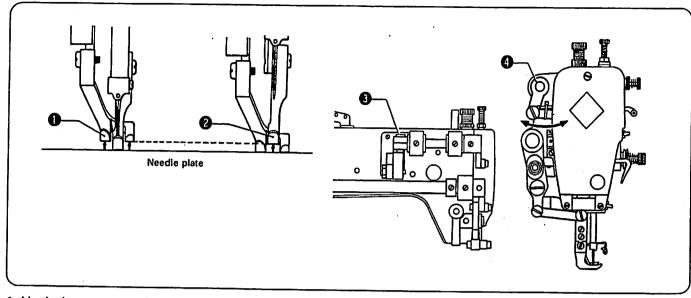
- ★ Loosen the screw and turn the connecting stud •.
- 1. If the connecting stud @ is turned clockwise, the forward stitch length will increase, and the backtack stitch length will decrease.
- 2. If the connecting stud @ is turned counterclockwise, the forward stitch length will decrease, and the backtack stitch length will increase.

8-9. Adjusting the tension release



- ★ The opening time for the thread tension discs can be adjusted by adjusting the position of the presser foot stroke.
- 1. Loosen the screw 0.
- 2. Move the guide 2 to the right to loosen the thread tension when the presser foot is lowered.
- 3. Move the guide 2 to the left to loosen the thread tension when the presser foot is raised.

8-10. Adjusting the walking foot and presser foot



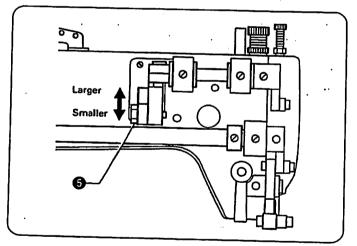
1. Vertical movement of walking foot and presser foot.

★ The walking foot • and presser foot • move vertically one after another.

* Adjust the height of walking foot • and presser foot • so that they are equal or the presser foot • is a little lower, when walking foot • and presser foot • are each in the up position.

Place the thread take-up lever at the object position, and lower the presser bar lifter.

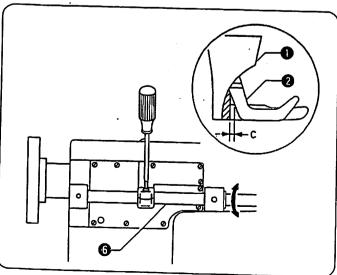
Move clockwise The presser foot will rise less.



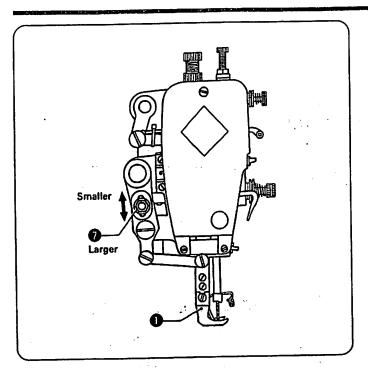
2. Heights of walking foot and presser foot

* Adjust the height of the walking foot and presser foot to match the material being sewn.

Loosen the shoulder screw 3 and move the walking foot and presser foot up and down to adjust.



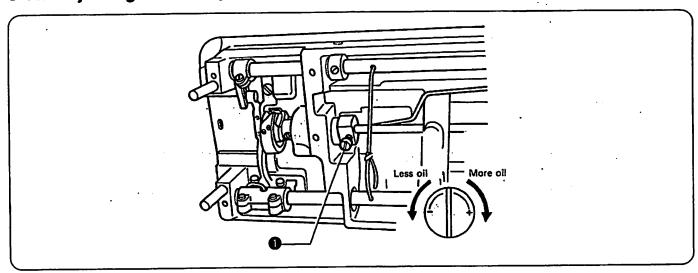
- 3. Adjusting the forward/back clearance of the walking foot and presser foot
- ★ Maintain a constant clearance (approximately 3 mm) so that the front of the groove in the walking foot ① does not strike the rear of the presser foot ②. Loosen the screw of feed arm R, and then turn the feed rock shaft ⑥ to adjust.



- 4 Walking foot feed amount
- ★ The standard ratio between the feed amount for the feed dog and the feed amount for the walking foot ① is 1:1. The feed amount for the walking foot ① can be changed to suit the material being sewn.

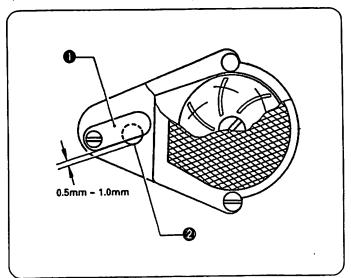
 Loosen the nut ② and move the roller shaft up or down to adjust.

8-11. Adjusting the rotary hook lubrication amount



Tilt back the machine head, and then turn the oil adjusting screw • to adjust the lubricating amount.

8-12. Adjusting the oil pump



If you cannot see the oil being circulated by looking through the oil gauge window when the sewing machine is running at low speed, turn the oil adjusting plate • so that the oil hole • is covered.

9. CLEANING

The following cleaning operations should be carried out each day in order to maintain the performance of this machine and to ensure a long service life.

A CAUTION

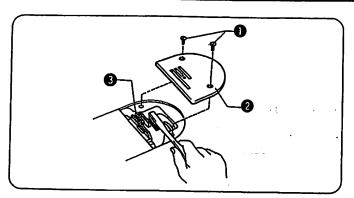


Turn off the power switch before carrying out cleaning. The motor will keep turning even after the power
is switched off as a result of the motor's inertia. Wait until the motor stops fully before starting work.
 The machine may operate if the treadle is pressed by mistake, which could result in injury.



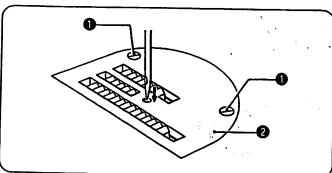
• Be sure to wear protective goggles and gloves when handling the lubricating oil, so that no oil gets into your eyes or onto your skin, otherwise inflammation can result.

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.

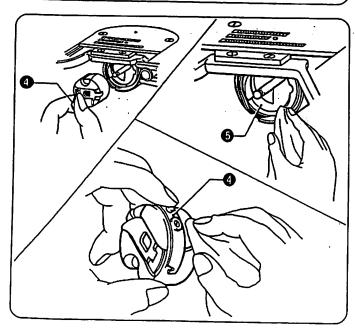


- 1. Raise the presser foot,
- Remove the two screws ①, and then remove the needle plate ②.
- 3. Use a soft wire brush to clean any dust from the feed dog 3.
- 4. Install the needle plate 2 with the two screws 0.

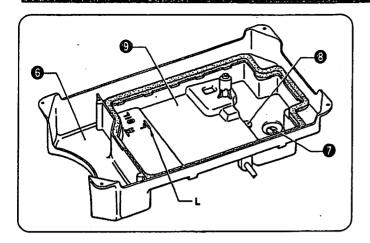
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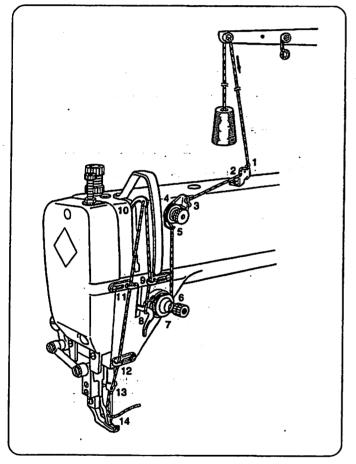
- Turn the machine pulley slowly and check that the needle is lowered through the center of the hole in the needle plate ?...
 - * If the needle does not go through the center:
 - Check that the needle is not bent.
 - Loosen the two screws
 and then re-seat the needle plate
 and the nee
- 6. Turn the machine pulley to raise the needle above the needle plate ②, and then check that the tip of the needle is not blunt.



- 7. Tilt back the machine head.
- 8. Remove the bobbin case 9.
- Wipe off any dust from the rotary hook with a soft cloth, and check that there is no damage to the rotary hook .
- Remove the bobbin from the bobbin case and clean the bobbin case • with a cloth.
- 11. Insert the bobbin into the bobbin case ①, and then place the bobbin case ② back into the machine.



- 12. Clean the oil sump 6 with a cloth.
- 13. If the oil level drops below the L mark, add more lubricating oil.
 - * Use only the lubricating oil.
 - ★ If the lubricating oil is contaminated, remove the oil cap screw and drain the oil.
 Clean off any dirt on the collection magnet and in the oil pan

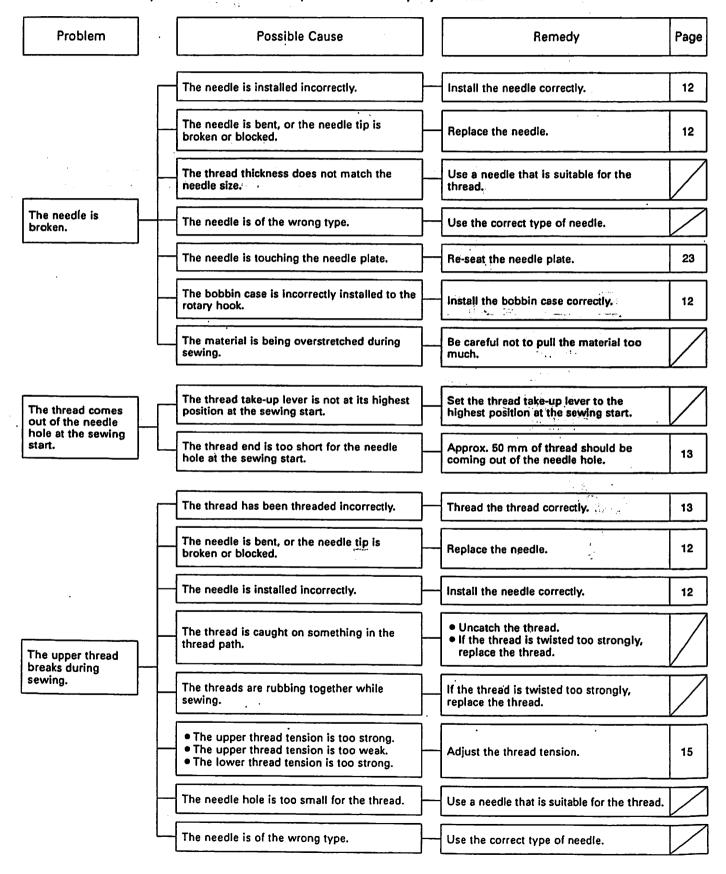


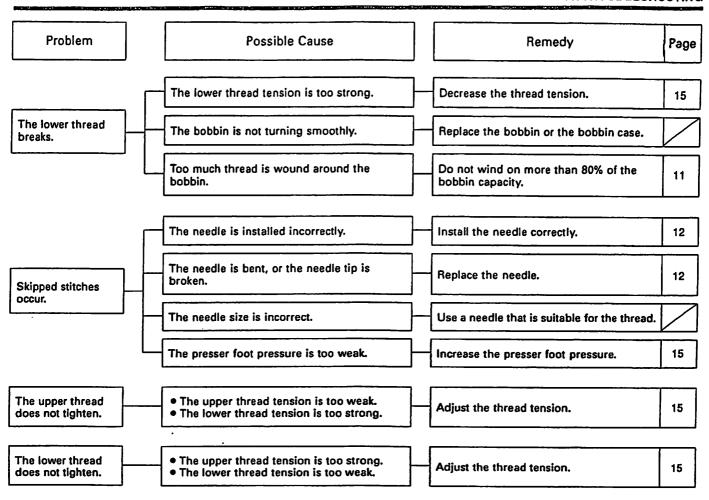
- 14. Return the machine head to its original position.
- 15. When carrying out a test sewing, apply 2—3 drops of oil to the lubrication points. (Refer to page 16.)
- 16. Check that the upper thread is threaded correctly.
- 17. Carry out a test sewing.

10. TROUBLESHOOTING

If you notice any of the problems listed below, refer to the "Remedy" column for instructions on how to solve the problem.

* If this does not solve the problem, or if the problem you are experiencing is not listed below, contact your nearest SEIKO dealer or a qualified technician to carry out the necessary adjustment.





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11-3, Imado 1-chome, Taito-ku, Tokyo 111-8534, Japan TEL:+81-3-3872-6173,4(Overseas group) FAX:+81-3-3873-6596 E-Mail:seik0001@tctv.ne.jp www.tctv.ne.jp/seik0001/