

GOLDEN WHEEL

No. 006048

CS-6210	CYLINDER-BED, 1-NEEDLE, TOP & BOTTOM FEED, LOCKSTITCH MACHINE
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Please read this Instruction Manual carefully before using the unit in order to get the most out of it and to enjoy using it for a long time. Please keep this Instruction Manual at hand taking care not to lose it.

INSTRUCTION MANUAL

BEFORE OPERATION

1. Do not operate the machine even for trial before lubrication it.
2. Confirm that the voltage and phase (single or 3-phase) are correct by checking them against the ratings shown on the motor nameplate.
3. When running your machine for the first time after the set-up, check the rotational direction of the handwheel. ★ Turn on the power switch. Run the machine at a low speed while checking the rotational direction of the handwheel. (The handwheel should turn counterclockwise as observed from the handwheel side.)
4. For the first month, run the machine at speed of 1600s.p.m. or less.

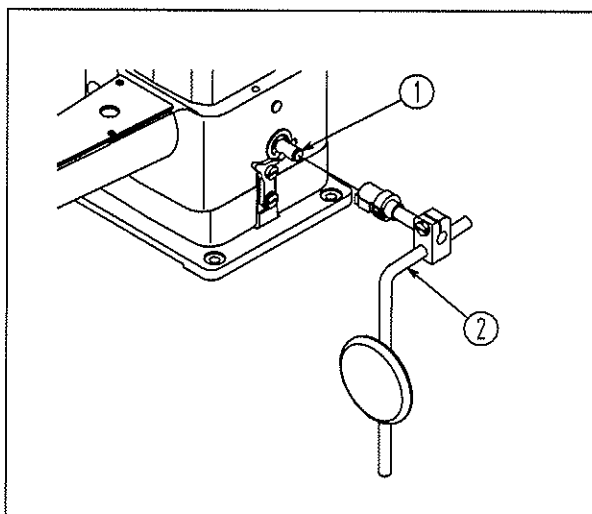
CAUTIONS IN OPERATION

1. Keep your hands away from the needle when you turn on the power switch or while the machine is operating.
2. During operation, be careful not to allow your or any other person's head or fingers to come close to the handwheel, V-belt, bobbin winder or motor. Also, do not place anything close to them.
3. Do not turn the machine with the finger guard, beltcover or any other protectors removed.
4. Be sure to turn off the power switch and confirm that the motor is completely stopped before removing the V-belt.

SPECIFICATIONS

Usage	Bags, Shoes, Medium-weight materials.
Sewing speed	Max. 2000s. p. m
Stitch length	Forward stitch: 7mm, Reverse stitch: 7mm
Needle	DP×17/DB×1 #16-#23 (standard #22)
Lift of presser foot	Hand lifter: 6 mm, Knee lifter: 15 mm
Lubricating oil	Machine oil (white spindle oil)

1. INSTALLING THE KNEE LIFTER



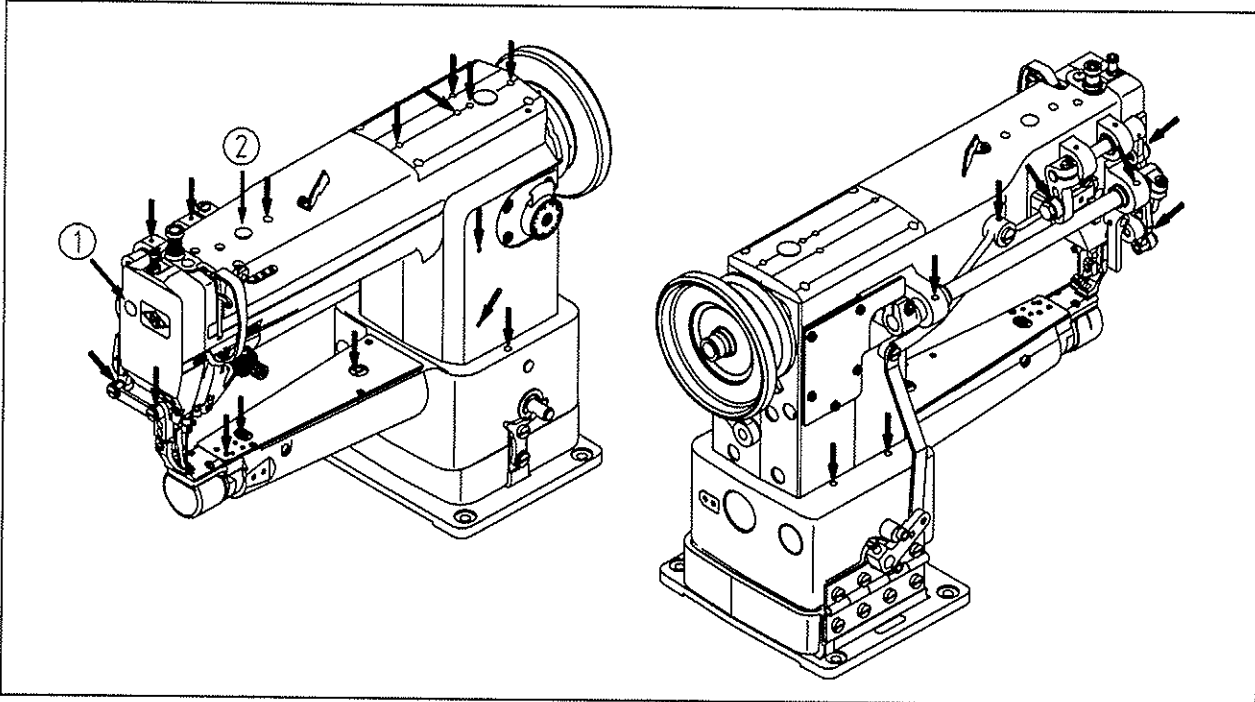
- 1) Install the knee press plate asm. (2) to the shaft (1).

2. LUBRICATION



CAUTION

TURN THE SWITCH OFF THE POWER SUPPLY TO PREVENT FROM UNE-EXPECTED INJURY. BE SURE TO CONFIRM THE STOP OF ROTATION OF THE MOTOR BEFORE OPERATIONS.



Before starting the machine.

- 1) Prior to operation, be sure to properly lubricate the points marked with the arrows.
- 2) At ① and ②, please lubricate the oil braid under the rubber plug
- 3) Supply the oil to the tank of bed
Full oil up to the line when the oil would come bottom level.

When oiling all sections requiring lubrication, after installation of the machine has been completed, wait for a while (approximately 10 minutes) so that oil can penetrate each section sufficiently before starting continuous operation.

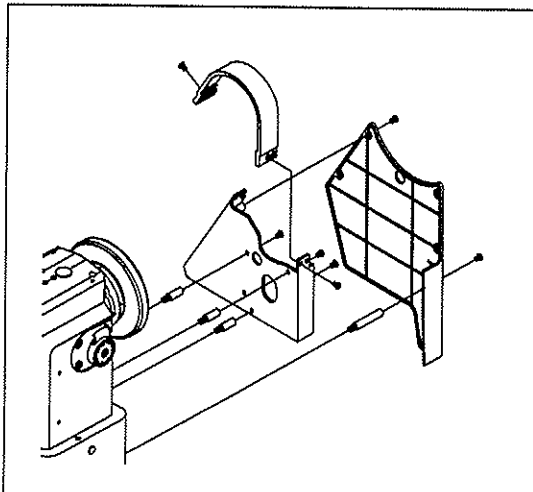
When starting the machine initially and after kept away for a long time without using at all, apply two or three drops of oil each section noted with an arrow mark, and to operate the machine continuously, apply two or three drops of oil each section whenever starting operation in the morning and in the afternoon.

3. INSTALLING THE BELT COVER



CAUTION

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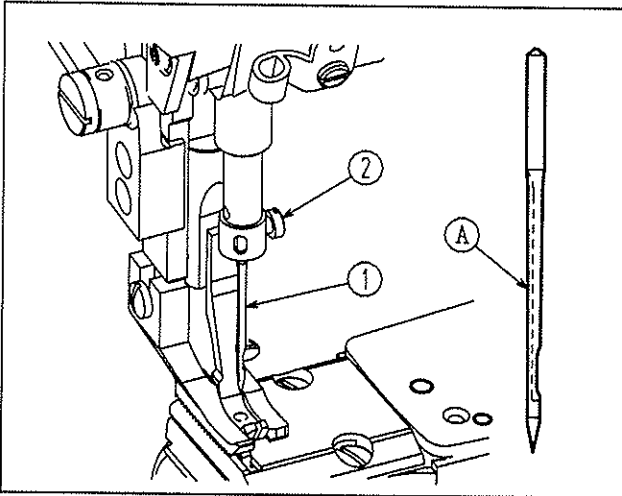


Attach the belt cover with screws as shown in the figure.

4. ATTACHING THE NEEDLE

CAUTION

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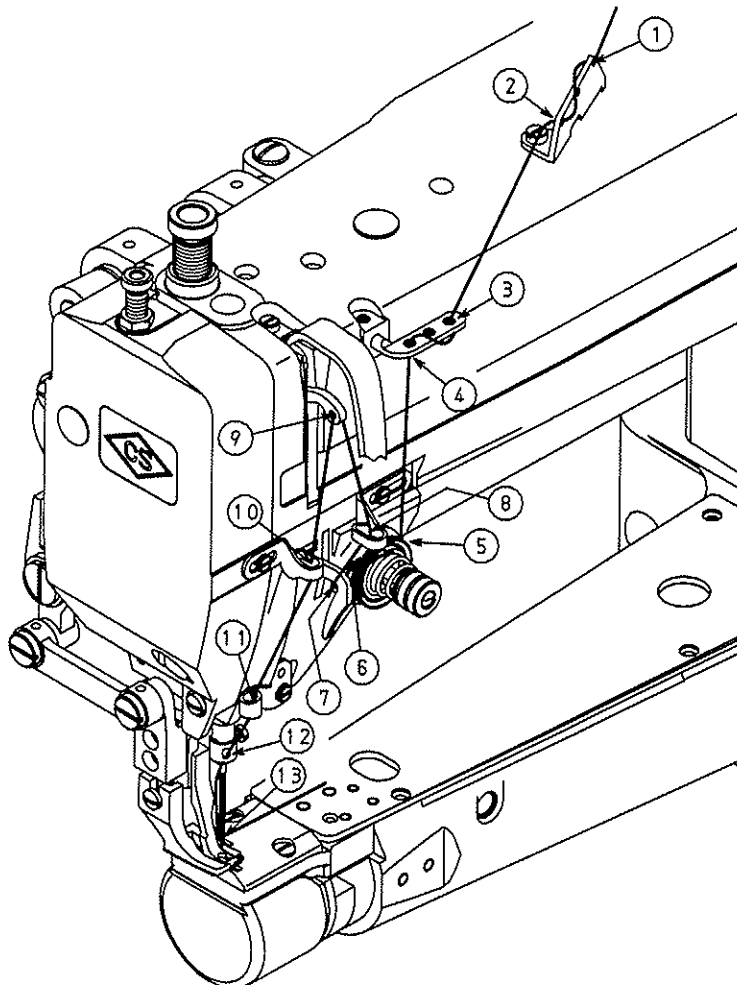
★ The standard needle is a DP×17, however, a DB×1 may also be used.

- 1) Turn the handwheel to move the needle bar up to its highest position.
- 2) Loosen needle setscrew ②, and hold needle ① so that long groove ④ faces exactly to the left.
- 3) Insert the needle into the needle bar until it will go no further.
- 4) Securely tighten the needle setscrew ②.

5. THREADING THE MACHINE HEAD

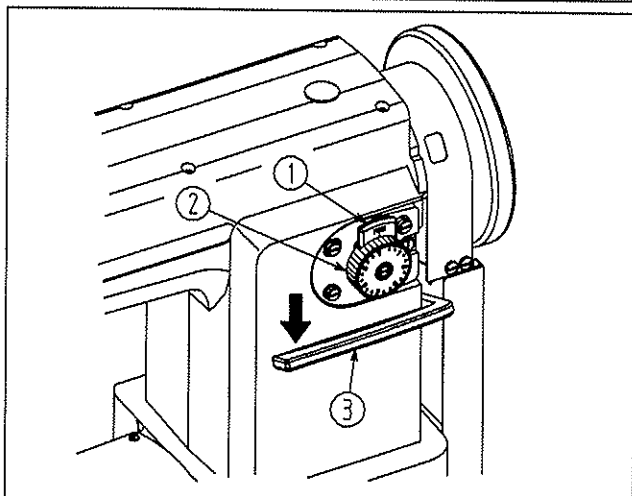
CAUTION

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Thread the machine head as illustrated.

6. ADJUSTING THE STITCH LENGTH



- 1) Push the stopper plate ①, and turn the dial ②.

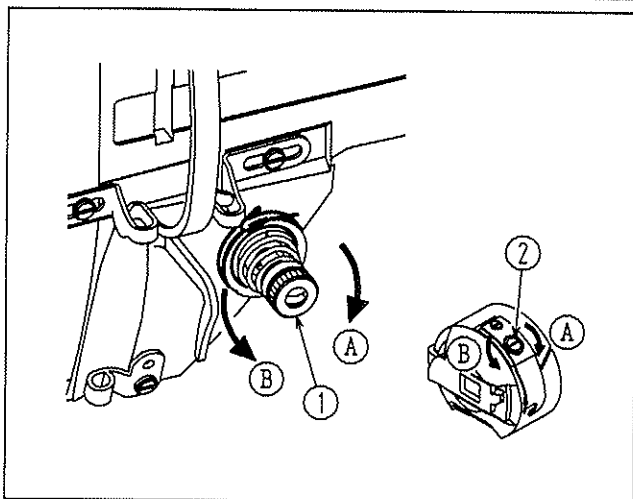
○ How to engage the reverse feed stitching.

- 1) Push feed lever ③ down.
- 2) The machine performs reverse feed stitching as long as the lever is held depressed.
- 3) The moment you release the lever, the machine resumes the normal stitching mode.

7. THREAD TENSION



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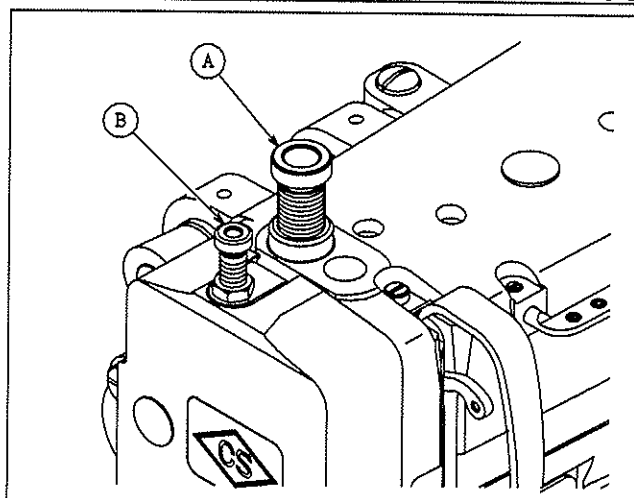
○ Adjusting the needle thread tension.

- 1) Turn tension nut ① clockwise (toward A) increases the needle thread tension. Turning it counterclockwise (toward B) decreases the tension.

○ Adjusting the bobbin thread tension.

- 1) Turning tension screw ② clockwise (toward A) increases the bobbin thread tension. Turning it counterclockwise (toward B) decreases the tension.

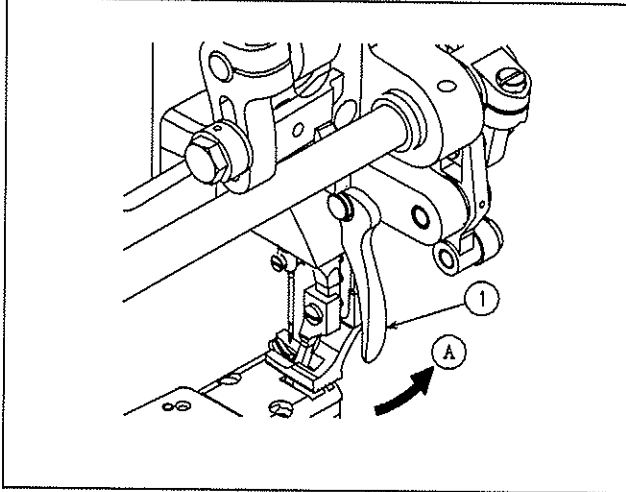
8. PRESSURES OF THE PRESSER FOOT AND WALKING FOOT



- 1) The pressures of presser foot ① and walking foot ② can be adjusted according to the type of materials.

※ It is advisable to minimize the pressures of both feet.

9. LIFTING THE PRESSER FOOT

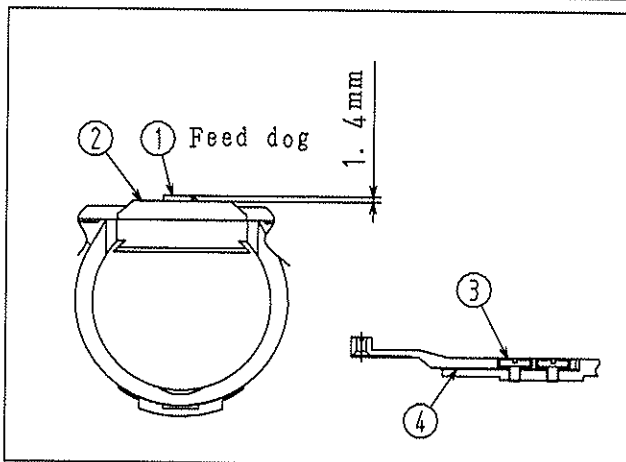


- 1) Turn the hand lifter lever ① counter-clockwise (toward A), the presser foot up.

10. HEIGHT OF THE FEED DOG

CAUTION

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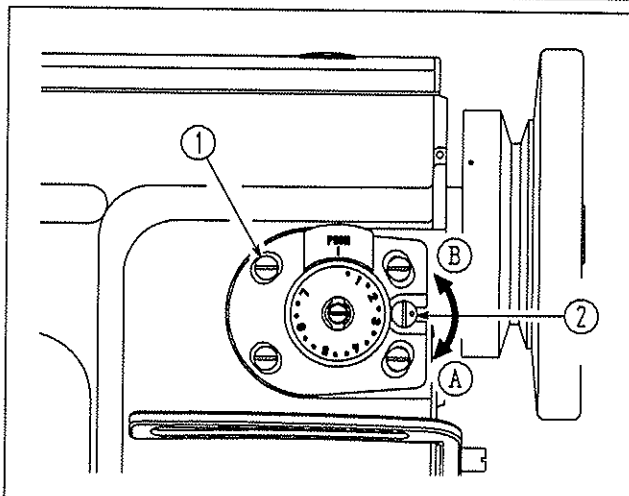
- ◇ Standard height of the feed dog is 1.4mm from the surface of throat plate ②. When the feed dog height needs to be adjusted according to the sewing conditions or after the feed dog is replaced, follow the procedure described below.

- 1) Loosen screws ③ in the feed dog.
- 2) Adjust the feed dog height comparatively higher than the standard height with the spacer ④.
- 3) Now, adjust the height of the feed dog appropriately, and securely tighten the screws ③ in the feed dog.

11. FORWARD/REVERSE SEAM RATIO

CAUTION

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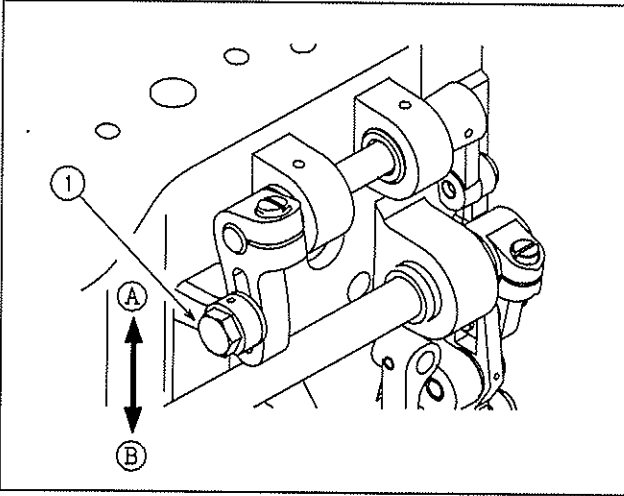
- 1) Loosen four screws ①.
- 2) When increasing the forward stitch length, turn the eccentric pin ② clockwise (toward A) using a screwdriver.
- 3) When decreasing the forward stitch length, turn the eccentric pin ② counter-clockwise (toward B) using a screwdriver.
- 4) Then securely tighten the screws.

12. ADJUSTING THE WALKING FOOT AND THE PRESSER FOOT



TURN THE SWITCH OFF THE POWER SUPPLY TO PREVENT FROM UNEXPECTED INJURY. BE SURE TO CONFIRM THE STOP OF ROTATION OF THE MOTOR BEFORE OPERATIONS.

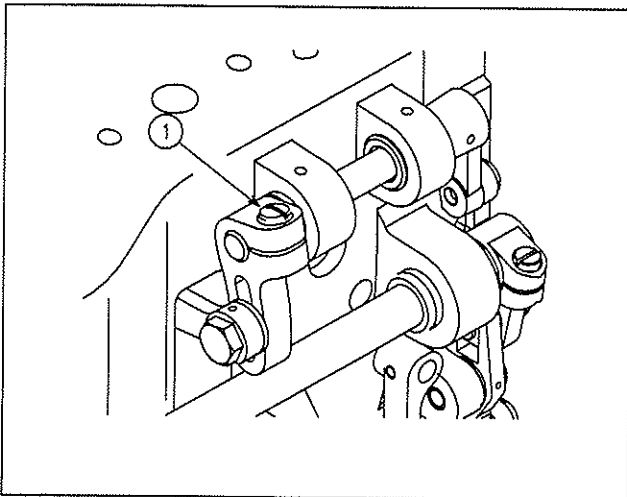
(1). HEIGHT OF THE WALKING FOOT AND PRESSER FOOT



When sewing a thin fabric, the up and down movement should be adjusted at minimum. To adjust, loosen the nut ①, and shift the position of crank rod boss.

- upward ①the up and down movement will increase. (max 5 mm)
- downward ②the up and down movement will decrease. (min 2 mm)

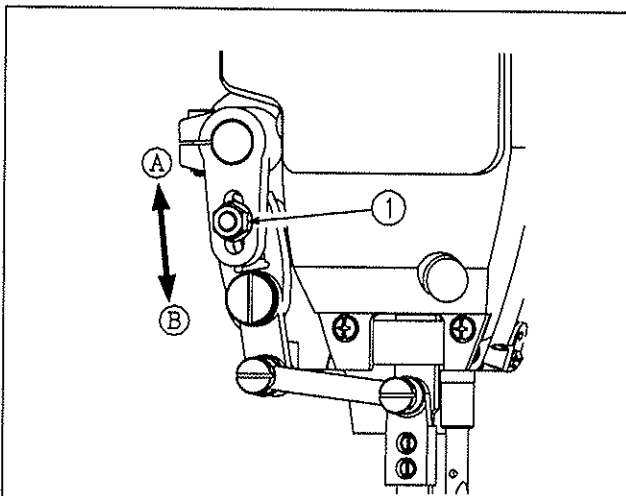
(2). ALTERNATE VERTICAL MOTIONS OF THE WALKING FOOT AND THE PRESSER FOOT



The alternate vertical strokes of walking foot and presser foot are normally equal. Depending on the type of materials, however the vertical stroke of the presser foot may be set smaller than of walking foot. Do as follows:

- 1) Turn the handwheel, raise the presser foot from throat plate a little.
- 2) Loosen screw ①.
- 3) The presser foot falls to the throat plate by power of the spring. Then tighten screw ① in its position.

(3). FEED PITCH OF THE WALKING FOOT

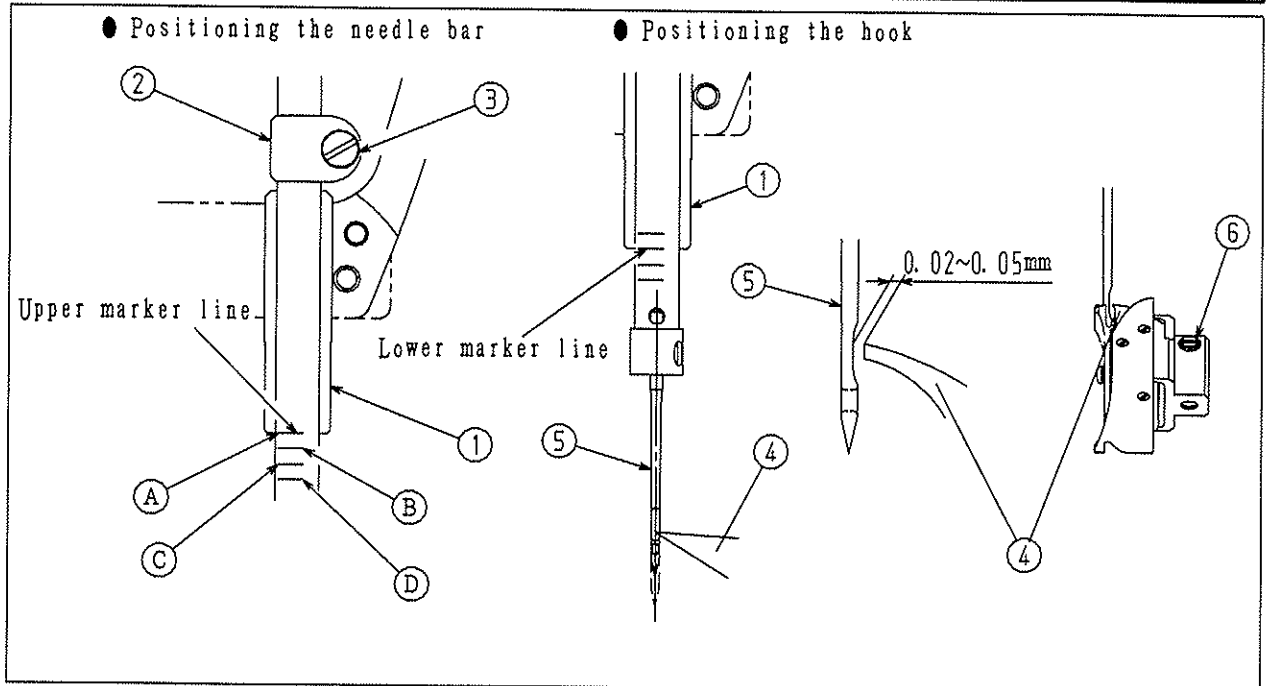


The ratio of the bottom feed to the top feed is factory-adjusted to 1:1. If necessary, the top feed amount may be changed as follows:

- 1) Loosen nut ①, and move the slide block up (toward ①) to decrease the feed pitch, or move it down (toward ②) to increase the feed pitch.

13. NEEDLE-TO-HOOK RELATIONSHIP

CAUTION TURN THE SWITCH OFF THE POWER SUPPLY TO PREVENT FROM UNEXPECTED INJURY. BE SURE TO CONFIRM THE STOP OF ROTATION OF THE MOTOR BEFORE OPERATIONS.



○ Set the needle bar at the proper height first as follows:

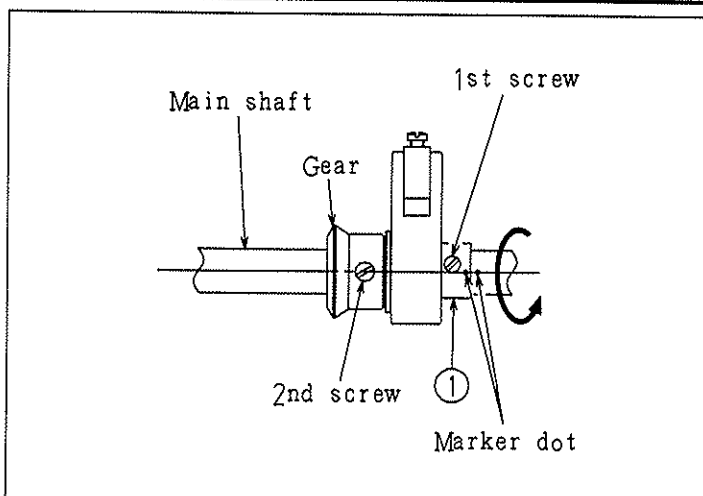
- 1) Bring the needle bar down to its lowest position, and adjust so that specified marker line (the 4th line ④ from the bottom for a DBX1 needle, or the 2nd line ③ from the bottom for a DPX17 needle) on the needle bar aligns with the bottom end of needle bar lower bushing ①, then tighten screw ③ of needle bar clamp ②

○ Adjust the timing between the needle and the hook as follows:

- 2) Adjust so that the specified marker line (the 3rd line ③ from the bottom for a DBX1 needle, or line ② at the bottom for a DPX17 needle) on the ascending needle bar aligns with the bottom end of lower bushing ①. Further adjust to make hook point ④ nearly meet the center of needle ⑤, then tighten hook setscrews ⑥.
- 3) Adjust the clearance between needle ⑤ and hook point ④ to 0.02 to 0.05mm
- 4) To adjust the hook, remove the throat plate, and loosen hook setscrews ⑥ from the throat plate side, using a screwdriver.

14. FEED TIMING

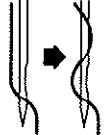
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It is the standard position of feed cam and driving cam as illustrated

- 1) Remove a top cover, and change the position of feed cam ①.

15. TROUBLE AND CORRECTIVE MEASURES

Trouble	Causes	Corrective measures
1. Thread breakage (Thread frays or wears out.) Needle thread remains 2 to 3 cm on the wrong side of the cloth)	① The thread path, needle point, hook point or bobbin case positioning finger has scratches. ② The needle thread tension is too high. ③ The needle hits the hook point. ④ The needle thread tension is too low. ⑤ The thread take-up spring has an excessively high tension while it has an excessively small stroke. ⑥ The timing between the needle and hook is too early or late.	○ Remove the scratches on the hook point using a fine sand paper. Buff the bobbin case positioning finger. ○ Properly adjust the needle thread tension. ○ See '13 NEEDLE-TO-HOOK RELATIONSHIP'. ○ Properly adjust the needle thread tension. ○ Decrease the tension, and increase the stroke. ○ See '13 NEEDLE-TO-HOOK RELATIONSHIP'.
2. Stitch skipping	① The clearance between the needle and the hook point is too large. ② The timing between the needle and the hook is too early or late. ③ The presser foot pressure is too low. ④ The clearance between the top edge of the needle eyelet and the hook point is not correct. ⑤ The size of the needle is wrong. ⑥ A synthetic fiber thread or thin thread is used.	○ See '13 NEEDLE-TO-HOOK RELATIONSHIP'. ○ See '13 NEEDLE-TO-HOOK RELATIONSHIP'. ○ Increase the presser foot pressure. ○ See '13 NEEDLE-TO-HOOK RELATIONSHIP'. ○ Replace the needle by one which one grade thicker. ○ Wind the thread round the needle as illustrated. 
3. Loose stitches	① The thread has not been passed through notch of the bobbin case tension spring. ② The thread path is poorly finished. ③ The bobbin does not rotate smoothly. ④ The bobbin thread tension is too low. ⑤ The bobbin thread has been wound too tight.	○ Properly thread the bobbin case. ○ Grind it using a fine sand paper or a buff. ○ Replace the bobbin or hook. ○ Properly adjust the tension. ○ Decrease the bobbin thread winding tension.

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*Appear and specification listed in this instruction manual are subjected to change without notice.