

GOLDEN WHEEL

No. 005033

CS-5150	HIGH SPEED , 1-NEEDLE , LOCKSTITCH MACHINE
INSTRUCTION MANUAL	

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.

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 powerswitch. 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 2000 s. p. m. or less.

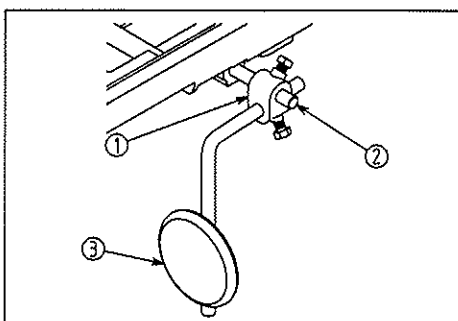
CAUTIONS IN OPERATION

1. Keep your hands away from the needle when you turn on the powerswitch 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, belt cover or any other protectors removed.
4. Be sure to turn off the powerswitch and confirm that the motor is completely stopped before removing the V-belt.

SPECIFICATIONS

Usage	Medium- to Heavy-weight materials.
Sewing speed	Max 3 500s. p. m
Stitch length	Max 7 mm
Needle	DBx1 #16 through #23 (standard: #22)
Thread	#8 through #30
Lift of presser foot	Hand lifter: 6mm, Knee lifter: 13mm
Stitch adjust	By dial
Lubricating oil	Machine oil (white spindle oil)

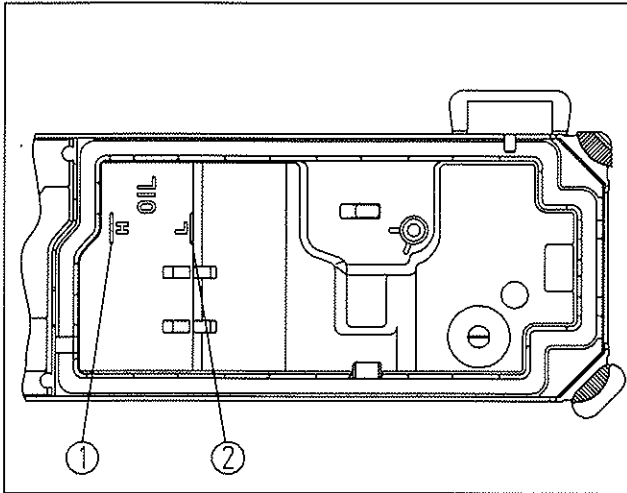
1. MOUNTING POSITION OF THE KNEE LIFTER



- 1) Insert knee lifter crank ① in the knee lifter shaft ②
- 2) Attach knee lifter plate rod asm ③ to the knee lifter crank ①

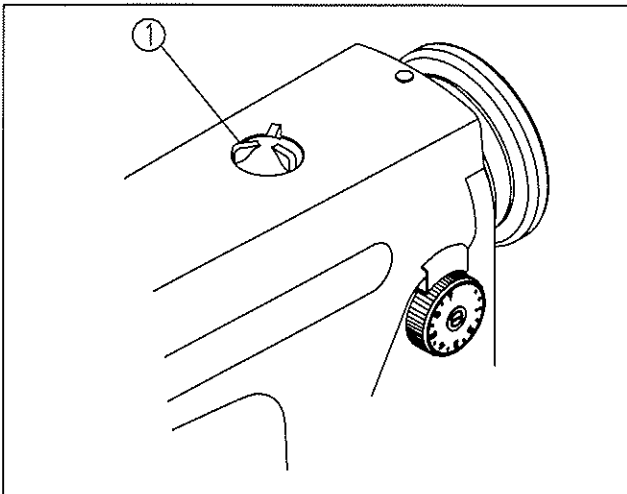
2. LUBRICATION

⚠ 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.



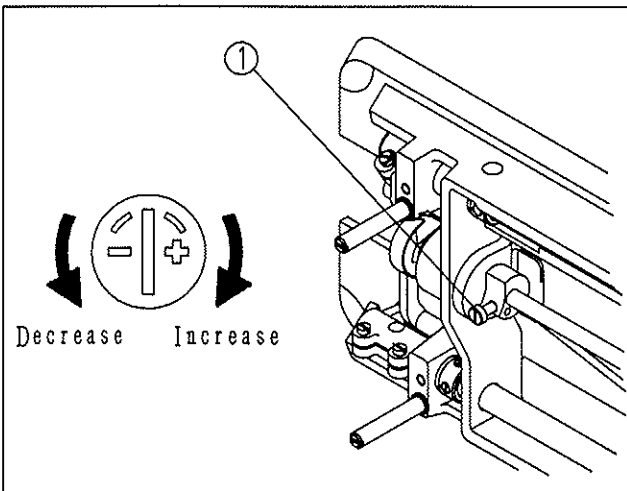
- 1) Fill oil up to marker line 'H' ①.
- 2) When the oil level drops under marker line 'L' ②, refill it.
(Using oil is white spindle oil.)

3. LUBRICATION CONDITION



- 1) Operate the sewing machine, and confirm the scattering oil at an oily window ①.

4. REFUELING ADJUSTMENT OF THE HOOK

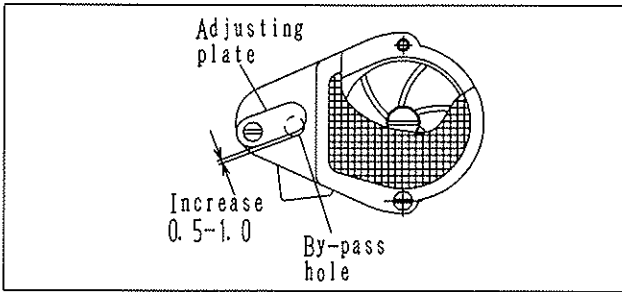


If it is necessary to change the amount of oil supplied to the hook, adjust it using knob ①.

- 1) Turn the knob clockwise (in direction '+') to increase the oil supplied, or turn it counterclockwise (in direction '-') to decrease it.

Attention : After adjusting the knob and no-load running more than 30 seconds, confirm oil which scatters from the hook.

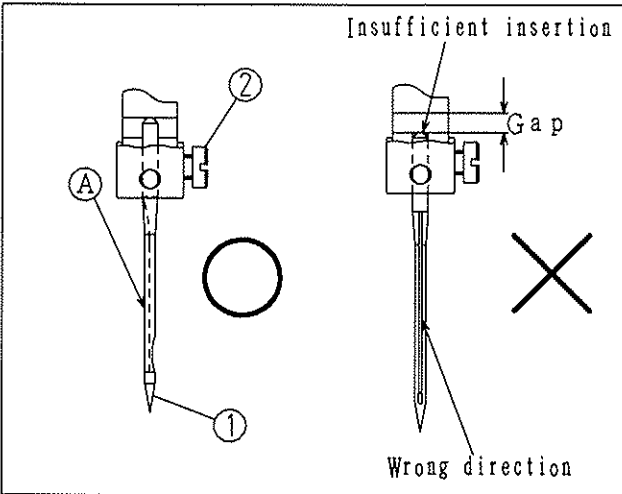
5. REFUELING ADJUSTMENT OF THE PUMP



- 1) The standard adjustment is as shown below. (0.5~1.0mm)
- 2) If oil splash is not observed through the oil check window, close the by-pass hole.

6. INSTALLATION OF NEEDLES

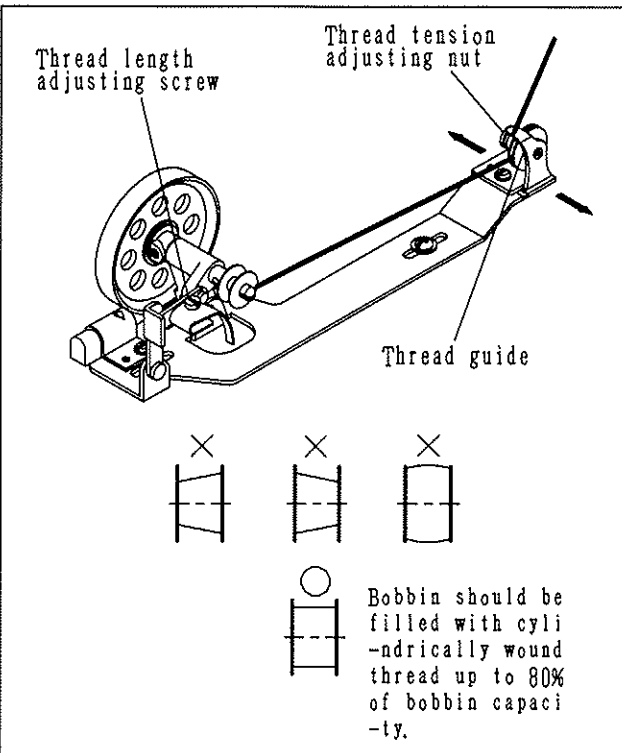
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- 1) Turn the handwheel to move the needle bar up to its highest position.
- 2) Loosen needle setscrew (2), and hold needle (1) so that long groove (A) faces exactly to the left.
- 3) Insert the needle into the needle bar until it will go no further.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

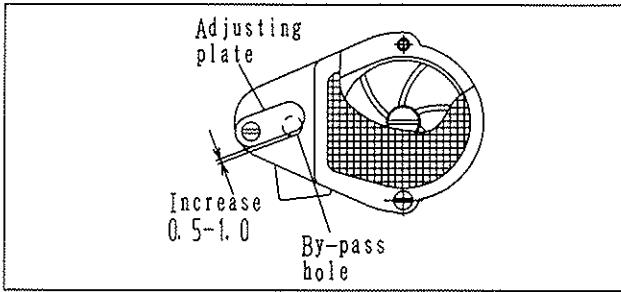
7. WINDING OF BOBBIN THREAD

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.



- Tension of wound thread
Slack winding is recommended for polyester thread and nylon thread
- Conically wound thread
Move the thread guide toward smaller diameter of wound thread layer.
- Length of wound thread
Loosen the thread length adjusting screw to increase length of thread and tighten the screw to decrease length of thread

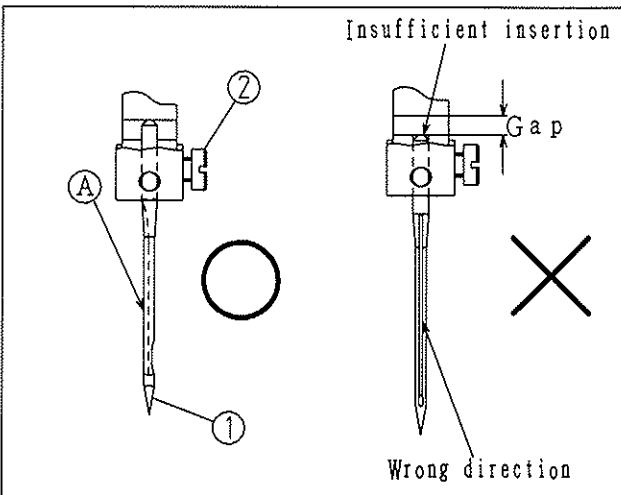
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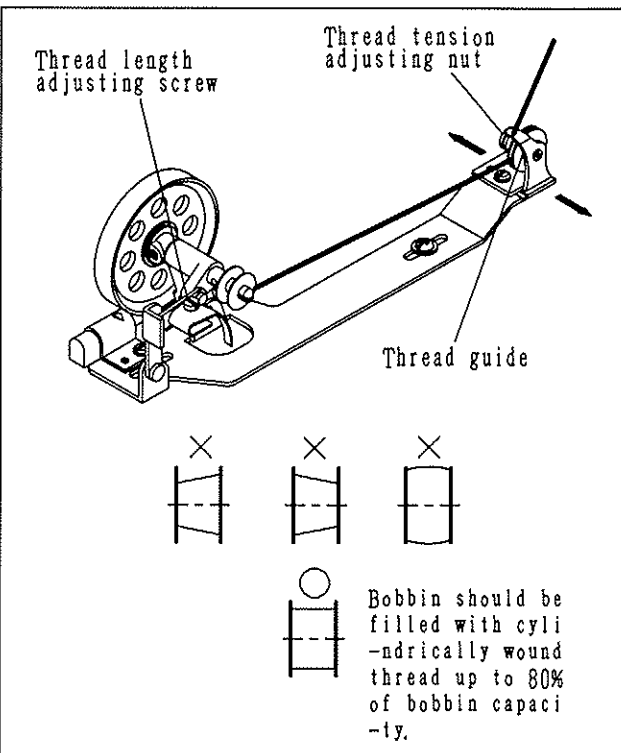
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- 1) Turn the handwheel to move the needle bar up to its highest position.
- 2) Loosen needle setscrew ②, and hold needle ① so that long groove ③ faces exactly to the left.
- 3) Insert the needle into the needle bar until it will go no further.
- 4)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

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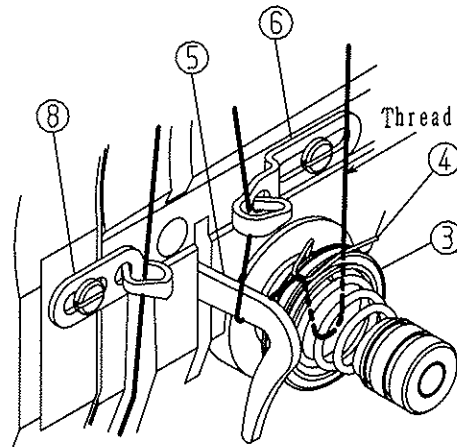
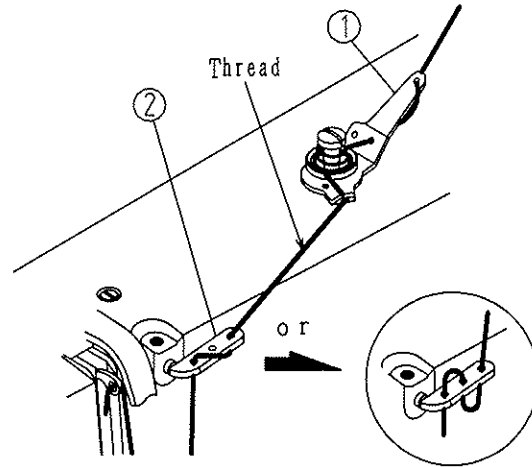
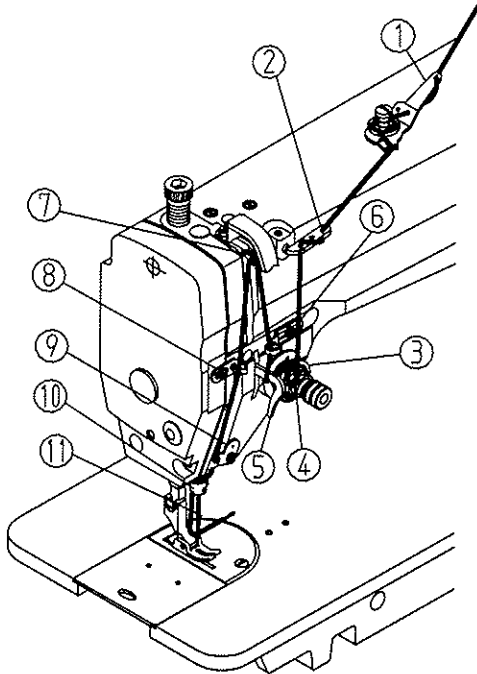
8. THREADING THE MACHINE HEAD



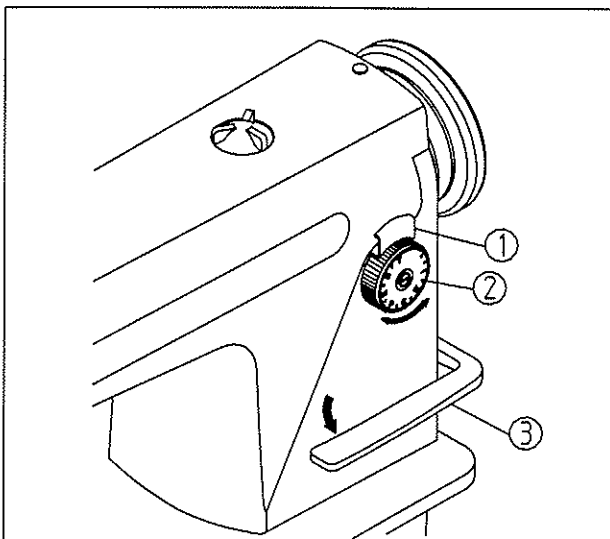
CAUTION

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.

Raise the thread take-up lever to its highest position and thread the upper thread in the following order.



9. ADJUSTING THE STITCH LENGTH



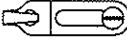
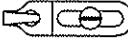
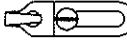
1) Push the stopper plate ①, and turn the dial ②

○ 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.

10. ADJUSTING OF THREAD GUIDE

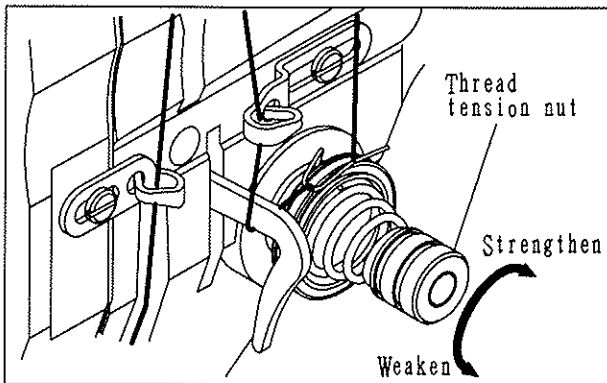
CAUTION TURN THE SWITCH OFF THE POWER SUPPLY TO PREVENT FROM UNE-EXPECTED INJURY. BE SURE TO CONFIRM THE STOP OF ROTATION OF THE MOTOR BEFORE OPERATIONS.

	1	2	3
Thread guide position	Left 	Middle 	Right 
Materials	Heavy	Medium	Light
Thread (Ref.)	Polyester #30 Cotton #30 Vinylon #30	Polyester #50~60 Cotton #50~80 Vinylon #50~80	Polyester #50~80

Adjusting the thread guide as shown below.

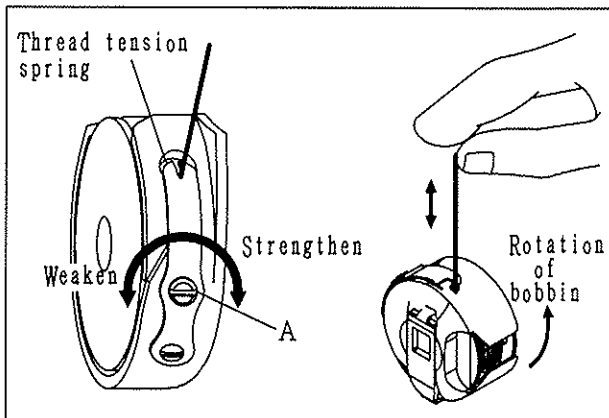
11. THREAD TENSION

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- Adjusting the needle thread tension
 - 1) Needle thread tension can be adjusted by tension regulating thumb nut.
 - 2) Needle thread is to be adjusted according to the bobbin thread tension.

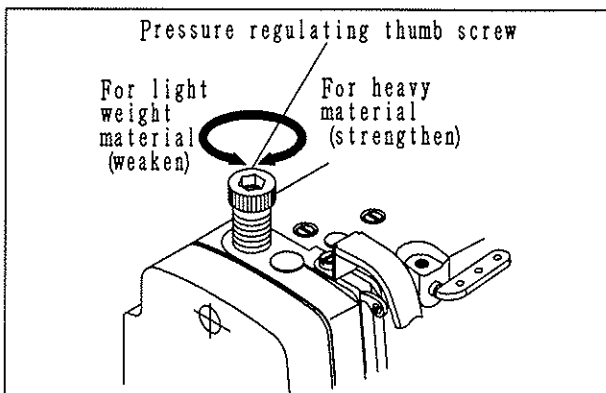
For special fabric sewing with special thread, the desired tension can be obtained by adjusting the strength and operating range of thread take-up spring.



- Adjusting the bobbin thread tension
 - 1) Bobbin thread tension can be adjusted by screw A.

In the case of cotton thread #60, the thread tension can be checked as the following. Hold the end of pulled out thread and if the bobbin case fall slowly, the tension is proper.

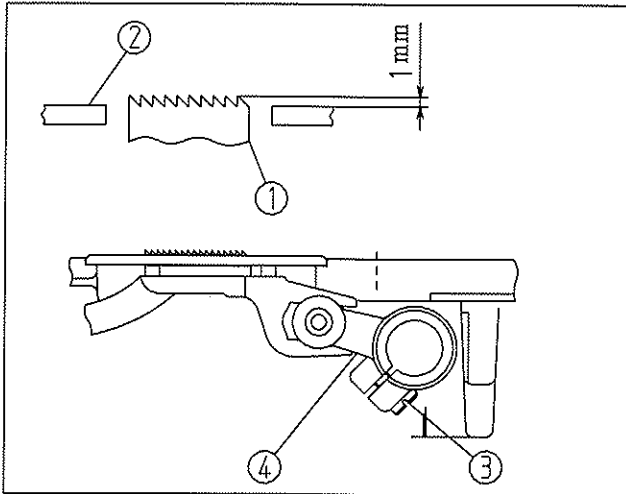
12. ADJUSTING THE PRESSER FOOT PRESSURE



Pressure of the presser foot can be adjusted by turning the pressure regulating thumb screw.

13. HEIGHT OF THE FEED DOG

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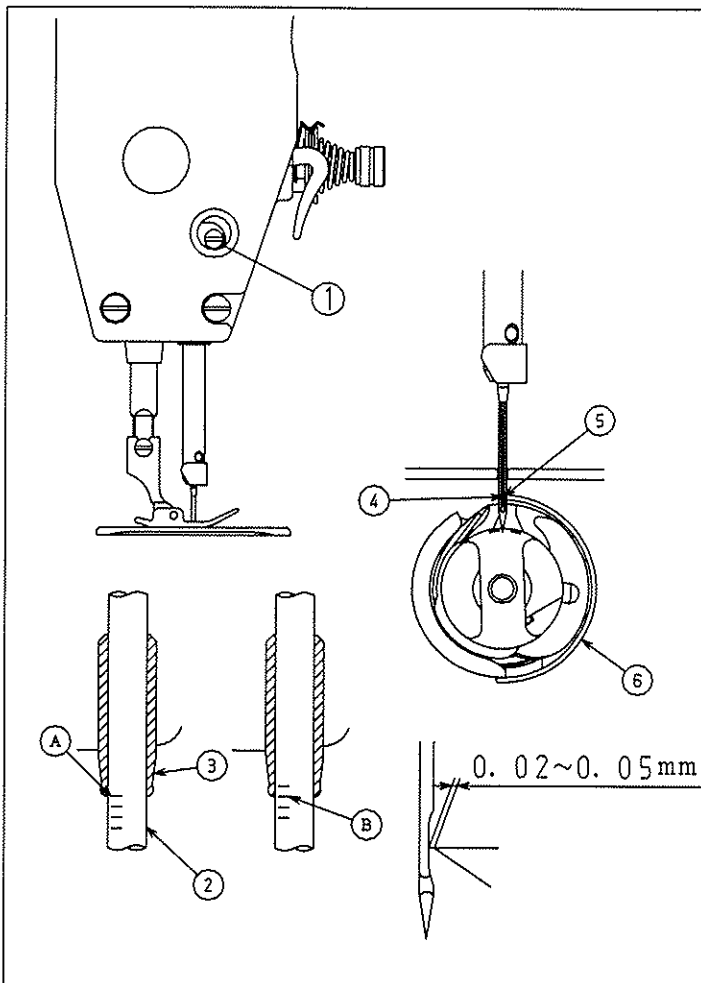


Feed dog ① is factory-adjusted to jut out 1.0mm from the surface of throat plate ②. When the feed dog height needs to be adjusted according to the sewing specifications or after the feed dog is replaced, do as follows:

- 1) Loosen the screw ③.
- 2) Move the feed bar ④ up or down to perform adjustment, then securely tighten the screw.

14. NEEDLE-TO-HOOK RELATIONSHIP

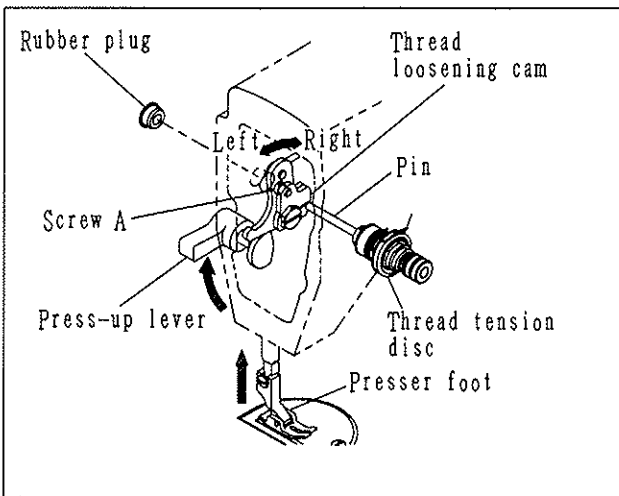
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- (1) Adjust the timing between the needle and the hook as follows:
- 1) Turn the handwheel to bring the needle bar down to the lowest point of its stroke, and loosen screw ①.
- (Adjusting the needle bar height)
- 2) Align marker line (A) on needle bar ② with the bottom end of needle bar lower bushing ③, then tighten screw ①.
- (Adjusting position of the hook ⑥)
- 3) Loosen the three hook setscrews, turn the handwheel and align marker line (B) on ascending needle bar ② with the bottom end of needle bar bushing ③.
 - 4) After making the adjustments mentioned in the above steps, align hook blade point ⑤ with the center of needle ④. Provide a clearance of 0.02mm to 0.05mm (reference value) between the needle and the hook, then securely tighten screws in the hook.

15. METHOD OF ADJUSTING THE THREAD TENSION DISC

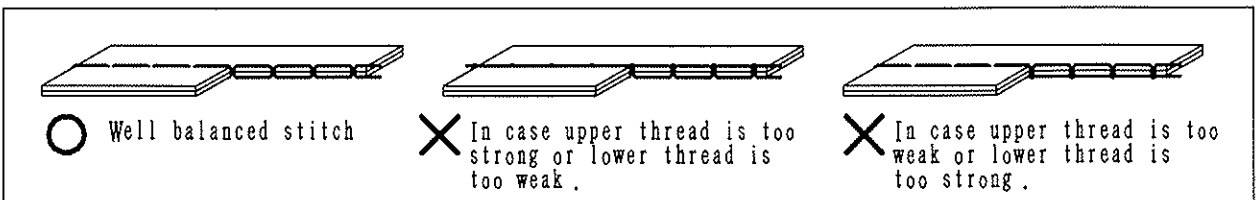
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It is to be practiced according to the following procedure, as the open-timing for thread tension disc can be adjusted against the lift of the presser foot (within a range of 2-7 mm).

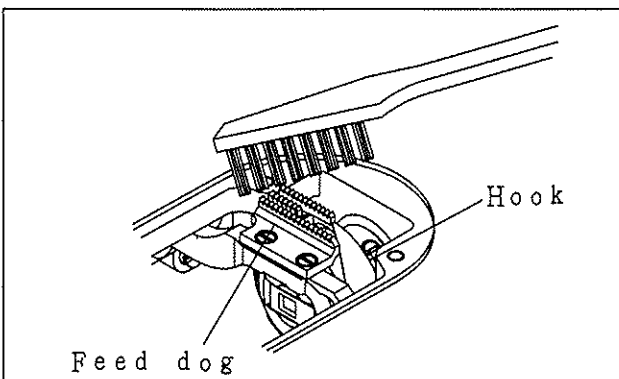
1. Loosen screw A after removing the rubber plug.
2. Move the thread loosening cam towards right or left.
 - Right side position : hasten open-timing
 - Left side position : delay open-timing
3. Tighten screw A after making sure of opening condition of the thread tension disc.

16. ADJUSTING OF THREAD TENSION



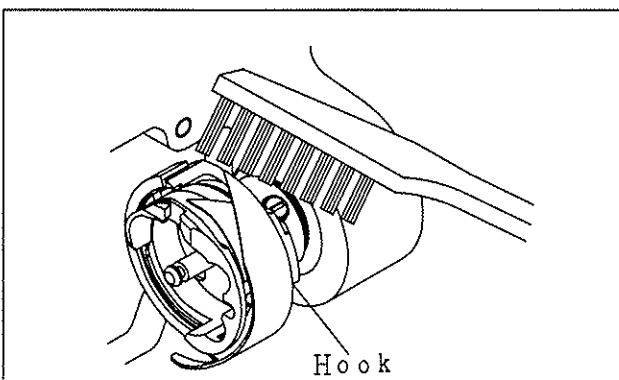
17. PERIODICAL CLEANING

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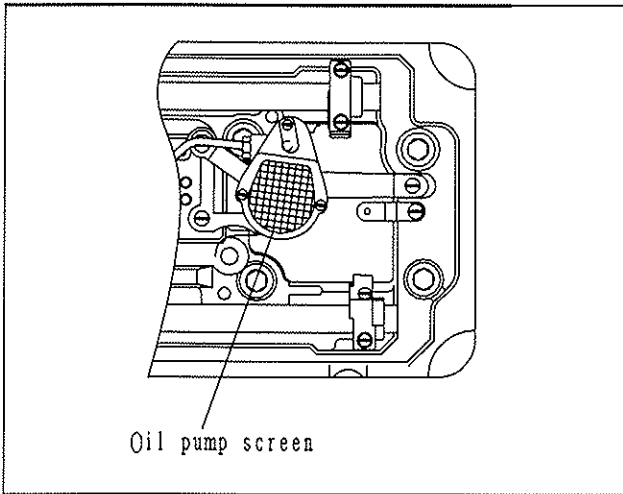
1) Feed dog

Remove the throat plate and clean the feed dog.



2) Hook

Lay down the machine head and clean the hook and inner bobbin case.

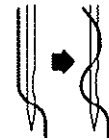


3) Oil pump screen

Lay down the machine head and clean the oil pump screen

18. TROUBLE AND CORRECTIVE MEASURES

Trouble	Causes	Corrective measures
<p>1. Thread breakage (Thread frays or wears out.)</p> <p>Needle thread remains 2 to 3 cm on the wrong side of the cloth.)</p>	<p>① The thread path, needle point, hook point or bobbin case positioning finger has scratches.</p> <p>② The needle thread tension is too high.</p> <p>③ The needle hits the hook point.</p> <p>④ Lubrication to hook is inadequate.</p> <p>⑤ The needle thread tension is too low.</p> <p>⑥ The thread take-up spring has an excessively high tension while it has an excessively small stroke.</p> <p>⑦ The timing between the needle and hook is too early or late.</p>	<p>○ Remove the scratches on the hook point using a fine sand paper. Buff the bobbin case positioning finger.</p> <p>○ Properly adjust the needle thread tension.</p> <p>○ See '14. NEEDLE-TO-HOOK RELATIONSHIP'.</p> <p>○ Properly adjust the lubrication.</p> <p>○ See '4. REFUELING ADJUSTMENT OF THE HOOK'.</p> <p>○ Properly adjust the needle thread tension.</p> <p>○ Decrease the tension, and increase the stroke.</p> <p>○ See '14. NEEDLE-TO-HOOK RELATIONSHIP'.</p>
<p>2. Stitch skipping</p>	<p>① The clearance between the needle and the hook point is too large.</p> <p>② The timing between the needle and hook is too early or late.</p> <p>③ The presser foot pressure is too low.</p> <p>④ The clearance between the top edge of the needle eyelet and the hook point is not correct.</p> <p>⑤ The size of the needle is wrong.</p> <p>⑥ A synthetic fiber thread or thin thread is used.</p>	<p>○ See '14. NEEDLE-TO-HOOK RELATIONSHIP'.</p> <p>○ See '14. NEEDLE-TO-HOOK RELATIONSHIP'.</p> <p>○ Increase the presser foot pressure.</p> <p>○ See '14. NEEDLE-TO-HOOK RELATIONSHIP'.</p> <p>○ Replace the needle by one which one grade thicker.</p> <p>○ Wind the thread round the needle as illustrated.</p>
<p>3. Loose stitches</p>	<p>① The thread has not been passed through the notch of the bobbin case tension spring.</p> <p>② The thread path is poorly finished.</p> <p>③ The bobbin does not rotate smoothly.</p> <p>④ The bobbin thread tension is too low.</p> <p>⑤ The bobbin thread has been wound too tight.</p>	<p>○ Properly thread the bobbin case.</p> <p>○ Grind it using a fine sand paper or a buff.</p> <p>○ Replace the bobbin or hook.</p> <p>○ Properly adjust the tension.</p> <p>○ Decrease the bobbin thread winding tension.</p>



GOLDEN WHEEL
啓翔股份有限公司

CHEE SIANG INDUSTRIAL CO., LTD
No. 32, Wu Chuan 7th Road, Wu Ku Industrial Area,
Wu Ku Hsiang 24248, Taipei Hsien, Taiwan
Tel:886-2-22999518 Fax:886-2-22999519

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