

MANUAL DE INSTRUCCIONES

ALFA

**Programmable industrial straight stitch machine
with thread trimmer and presser foot lifter**



MODELO A1940

IMPORTANT SAFETY INSTRUCTIONS

To get the most out of the many functions of this machine and operate it safely, it is necessary to use this machine correctly. Please read this Instruction Manual carefully before use. We hope you will enjoy the use of your machine for a long time. Please remember to keep this manual in a safe place.

1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
2. Read all the instructions, including, but not limited to this Instruction Manual before you use the machine, in addition, keep this Instruction Manual so that you may read it at any-time when necessary.
3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.
5. This machine shall be operated by appropriately-trained operators.
6. For your personal protection, we recommend that you wear safety glasses.
7. For the following, turn off the power switch of disconnect the power plug of the machine from the receptacle.
 - 7-1 For threading needle(s) and replacing bobbin.
 - 7-2 For replacing part(s) of needle, presser foot, throat plate, feed dog, cloth guide etc.
 - 7-3 For repair work.
 - 7-4 For when leaving the working place or when the working place is unattended.
8. If you should allow oil, grease, etc. used with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.
9. Tampering with the live parts and devices, regardless of whether the machine is powered, is prohibited.
10. Repairing, reforming and adjustment works must only be done by appropriately trained technicians or specially skilled personnel.
11. General maintenance and inspection works have to be done by appropriately trained personnel.
12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel. Whenever you find a failure of any of electrical components, immediately stop the machine.
13. Periodically clean the machine throughout the period of use.
14. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.
15. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to grounded receptacle.
16. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. We assume no responsibility for damage caused by reforming or modification of the machine.
17. The machine is only allowed to be used for the purpose intended. Other uses are not allowed.
18. Warning hints are marked with the two shown symbols.





Danger of injury to operator or service staff



Items requiring special attention

FOR SAFE OPERATION

	<p>1. To avoid electrical shock hazards, neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.</p>
	<p>1. To avoid personal injury, never operate the machine with any of the belt cover, finger guard or safety devices removed.</p> <p>2. To prevent possible personal injuries caused by being caught in the machine. Keep your fingers, head and clothes away from the handwheel, cover and the motor while the machine is in operation. In addition, place nothing around them.</p> <p>3. To avoid personal injury, never put your hand under the needle when you turn ON the power switch or operate the machine.</p> <p>4. To avoid personal injury, never put your fingers into the thread take-up cover while the machine is in operation.</p> <p>5. The hook rotates at a high speed while the machine is in operation. To prevent possible injury to hands, be sure to keep your hands away from the vicinity of the hook during operation. In addition, be sure to turn OFF the power to the machine when replacing the bobbin.</p> <p>6. To avoid possible personal injuries, be careful not to allow your fingers in the machine when tilting/raising the machine head.</p> <p>7. To avoid possible accidents because of abrupt start of the machine, turn OFF the power to the machine when tilting the machine head.</p> <p>8. If your machine is equipped with a serve-motor, the motor does not produce noise while the machine is at rest. To avoid possible accidents due to abrupt start of the machine, be sure to turn OFF the power to the machine.</p> <p>9. To prevent possible accidents because of electric shock or damaged electrical component(s), turn OFF the power switch in prior to the connection/disconnection of the power plug.</p>

Precautions Prior to Startup

1. The machine head is coated with a thick layer of rust-prevention grease before encasement, and the encased machine head may possibly be subjected to grease hardening and dust buildup on the machine surface in process of long storage and long-haul traffic; therefore, take care to remove the grease and dust from the surface using soft cloth and gasoline.

2. Though the machine was inspected and tested with care before factory leaving, it might be affected by violent vibration resulting in looseness or distortion of the machine parts; therefore the operator shall thoroughly check the machine, turn the upper wheel by hand and check it for difficulty in free rotation, slight impact, and other uneven resisting force or abnormal noises, and make appropriate adjustment if any to restore the machine state before formal trial run.

3. Never start up the machine if the oil liquid level in the oil box falls outside the normal range.

4. The upper wheel shall rotate counterclockwise (when it is viewed from the lateral surface of the upper wheel) when the machine is operating.

5. Check whether the voltage and phases indicated on the electric-control data plate are correct.

6. The date of manufacture is indicated on the certificate of conformity.

Precautions for Use

1. Never touch the needle by hand when the machine is powered on or while it is operating.

2. Never put your finger into the protection cover of take-up lever during operation of the machine.

3. The operator must not put his finger into the needle guard bracket when he feeds the sewing materials by hand.

4. Operator must trim off the electricity supply before he turns over the machine head or removes the hand cover.

5. The operator must trim off the electricity supply before he gets away from the machine.

6. Prohibit the head, hands and anything to approach the upper wheel and bobbinwinder while the machine is operating.

7. Never remove or mount the protection cover or other protection devices before the machine is stopped.

8. Never wipe up the surface of machine head using paint thinner such as acetone.

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1. MACHINE SPECIFICATIONS

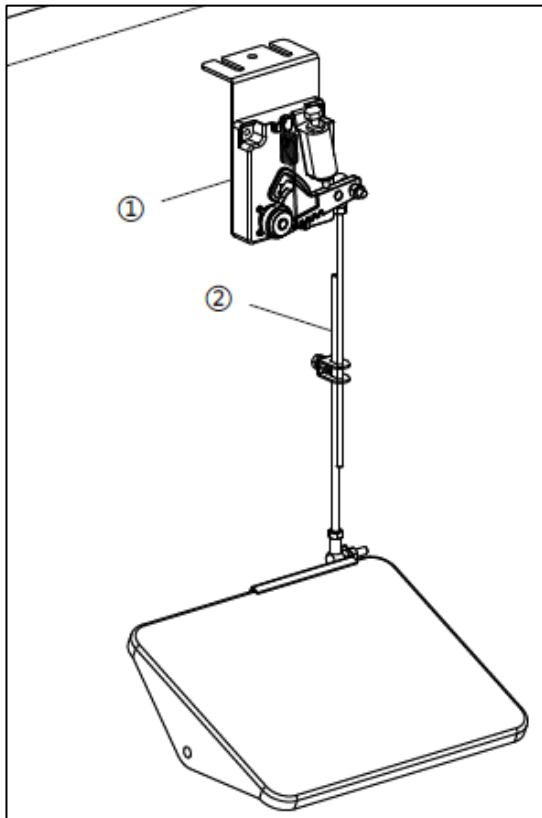
		620	620M	620H
USE		Medium-weight materials		Heavy-weight materials
MAX. Sewing speed		5000sti/min		4000sti/min
MAX.Stitch length		5mm	7mm	7mm
Presser foot height	lifting lever	5.5mm		
	Knee lifter	13mm		
	automatic	9.5mm		
Feed tooth height		1.0mm		1.2mm
Needle		DBx1 9#-18#		DPx5 18#-22#
Lubricant		NO.10 White oil		

2. INSTALLATION

2.1. Installation

①. Speed controler

②. Connecting rod



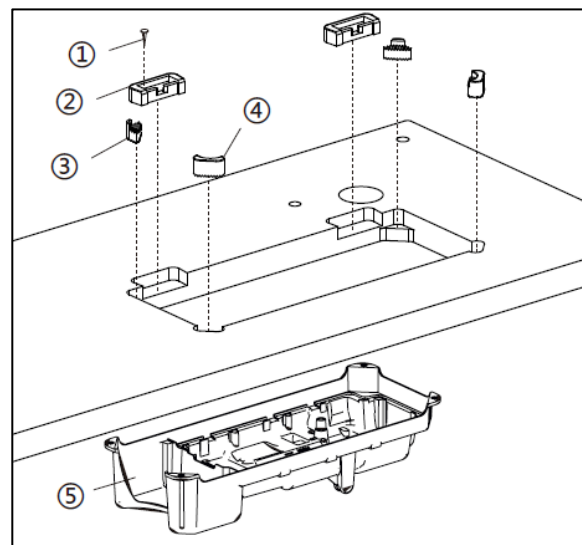
①. Nail (8pcs)

②. Rubber cushions (2pcs)

③. Head cushions(small) (2pcs)

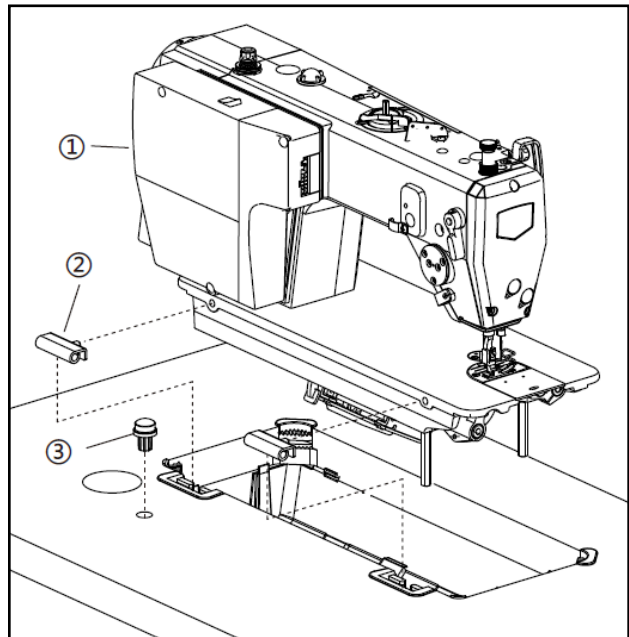
④. Head cushions(big) (2pcs)

⑤. Tray (1pcs)



2.2. Machine head

- ①. Machine head
- ②. Hinges (2pcs)
- ③. Frame support bar

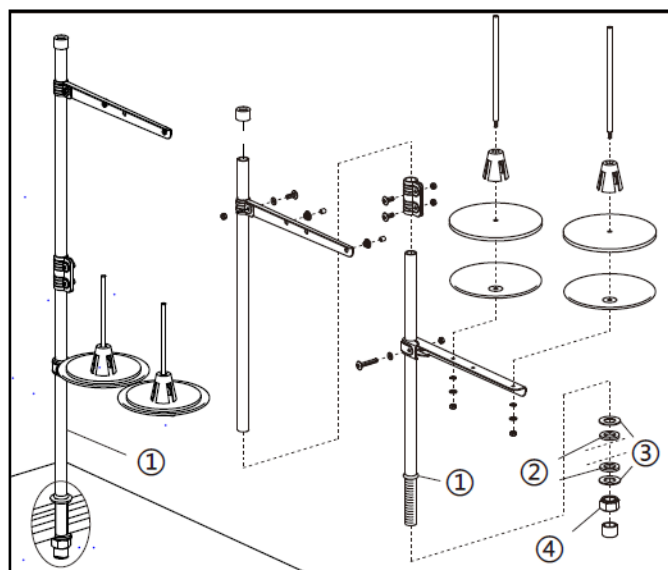


2.3. Cotton stand

- ① Cotton stand

NOTE:

Securely tighten the nut ④, so that the two rubber cushions ② and the washer ③ are securely clamped and so that the cotton stand ① does not move.

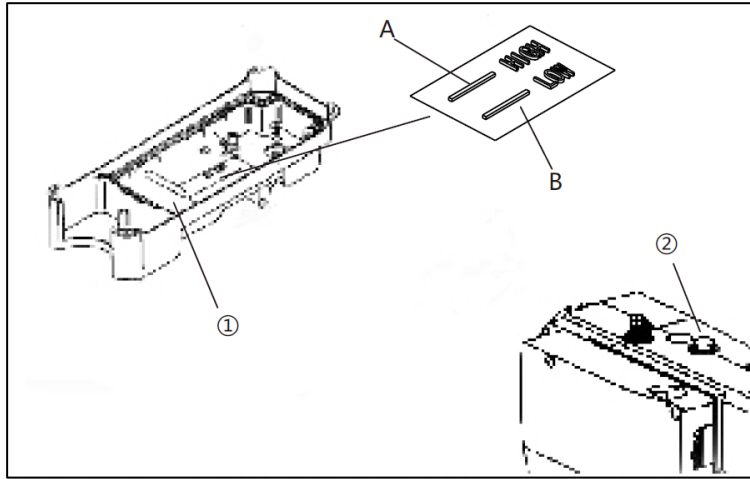


3. LUBRICATION



WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

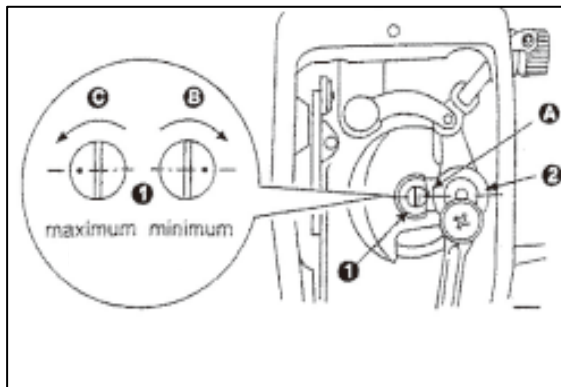


- 1) Fill oil pan ① with Machine Oil up to HIGH mark A.
- 2) When the oil level lowers below LOW mark B, refill the oil pan with the specified oil.
- 3) When you operate the machine after lubrication, you will see splashing oil through oil sight window ② if the lubrication is adequate.
- 4) Note that the amount of the splashing oil is unrelated to the amount of the lubricating oil.



When you first operate your machine after setup or after an extended period of disuse, run your machine at 3,000 to 3,500 rpm. for about 10 minutes for the purpose of break-in.

Adjusting the amount of oil supplied to the face plate parts.



- 1) Adjust the amount of oil supplied to the thread take-up and needle bar crank ② by turning adjust pin ①.
- 2) The minimum amount of oil is reached when marker dot A is brought close to needle bar crank ② by turning the adjust pin in direction B.
- 3) The maximum amount of oil is reached when marker dot A is brought to the position just opposite from the needle bar crank by turning the adjust pin in direction C.

4. THREADING THE UPPER THREAD



CAUTION

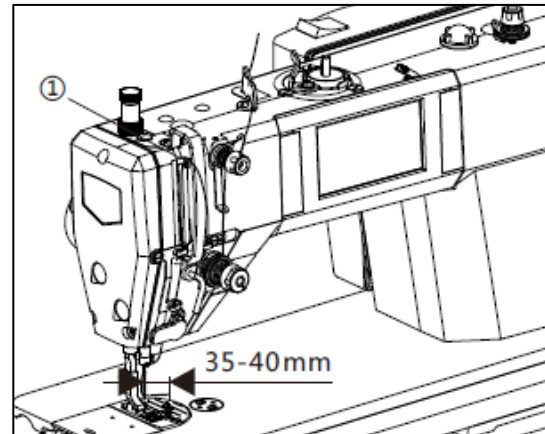


Turn off the power switch before threading the upper thread.

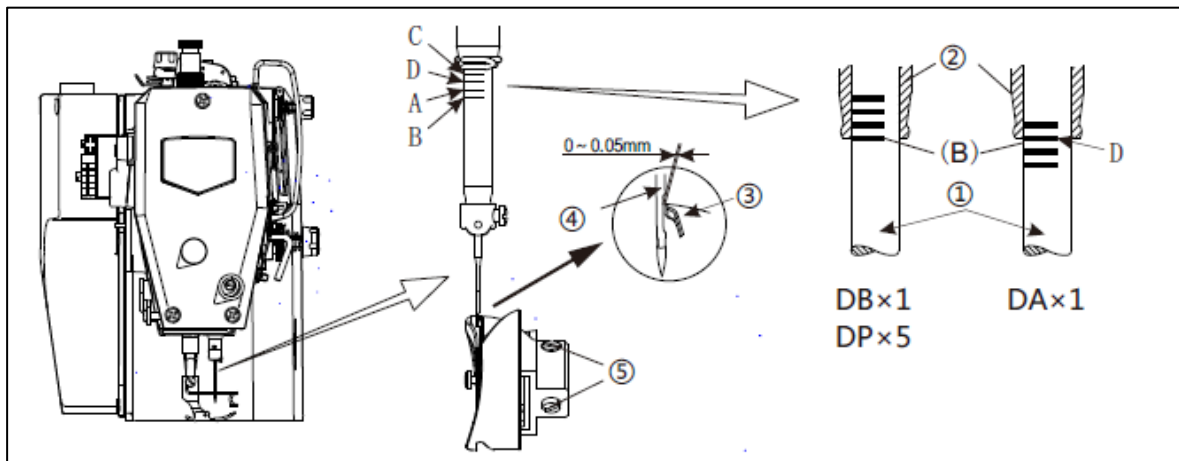
The machine may operate if the treadle is depressed by mistake, which could result in injury.

Turn the machine pulley and raise the thread take-up ① before threading the upper thread.

This will make threading easier and it will prevent the thread from coming out at the sewing start.



5. ADJUSTING THE NEEDLE AND ROTARY HOOK TIMING



The tip of the rotary hook ③ should be aligned with the center of the needle ④ when the needle bar ① moves up 1.8mm (2.2mm for -M and -H specifications) from its lowest position to the position where reference ling B is aligned with the lower edge of the needle bar bush ② as shown in the illustration. (the distance from the upper edge of the needle hole to the rotary hook tip will be 0.5 to 0.7mm at this time).

1. Turn the machine pulley to raise the needle bar ① from its lowest position until reference line B is aligned with the lower edge of the needle bar bush D ② as shown in the illustration.
2. Loosen the set screws ⑤, and then align the tip of the rotary hook ③ with the center of the needle ④. The distance between the tip of the rotary hook ③ and the needle ④ should be approximately 0-0.05mm.
3. Securely tighten the set screws ⑤.

6. ADJUSTMENT OF THE PEDAL



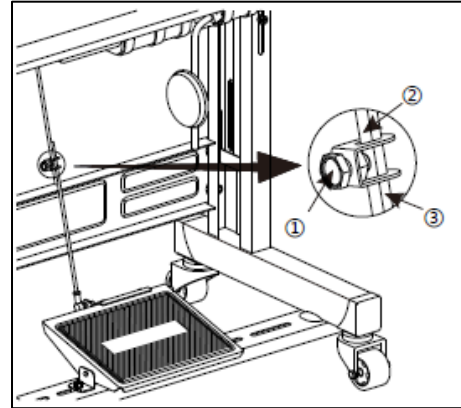
CAUTION



Turn off the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

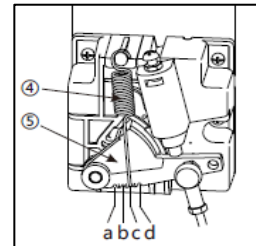
1. Adjusting the angle of treadle

- 1) Adjust the angle of treadle only by adjusting the length of treadle connecting rod: unscrew screw ①, and adjust the length of treadle connecting rod by moving upward/downward the upper connecting rod ② and lower connecting rod ③.
- 2) Screw down screw ① when adjustment is over.



2. Adjustment of the strength of pedal

The sewing machine run at a low speed when step forth on the panel slightly. If the strength is insufficient, hang the stepping adjustment spring ④ on the panel spiral arm driving lever ⑤ in order to adjust strength.(a is the minimum stepping strength ,b,c,d increase gradually)



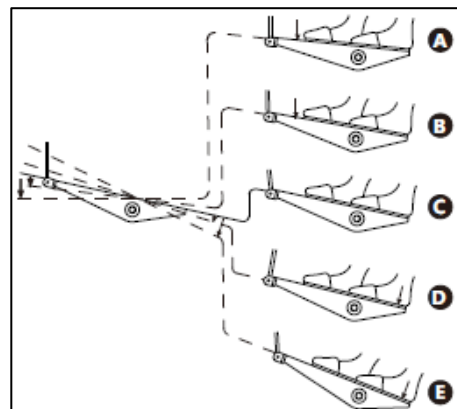
3. Adjustment of stepping return strength

- 1) Loosing nut ⑥ and turn bolt ⑦ to adjust stepping return strength : tighten bolt ⑦, the strength increases;loosen bolt ⑦, the strength decreases.
- 2) Tighten nut ⑥ after adjusting stepping return strength.

Pedal operation

1. The treadle has 4 operation levels:

- 1) The machine runs at low sewing speed when you lightly depress the front part of the pedal. (as show in the picture B)
- 2) The machine runs at high sewing speed when you further depress the front part of the pedal.(as show in the picture A)
- 3) Penal back to the initial position when stop stepping on it and the machine stop working.(needle in the upper or down position)(as show in the picture C)
- 4) The machine trims threads when you fully depress the back part of the pedal.(as show in the picture A)
- 5) When the auto-lifer is used,one more operating switch is provided between the sewing machine stop switch and thread trimming switch. The presser foot goes up when you lightly depress the back part of the pedal(D), and if you further depres the back part,the thread trimmer is actuated.



6.1. Standard adjustment



CAUTION



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



Ask your 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 origin positions and check that they operate correctly before using the machine.



Use both hands 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.



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 depressed by mistake, which could result in injury.

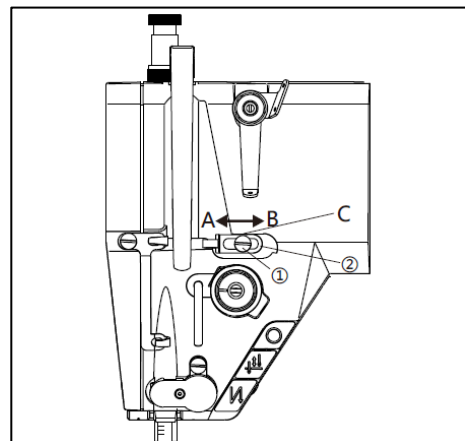
- When carrying out inspection, adjustment and maintenance.
- When replacing consumable parts such as the rotary hook and knife.

6.2. Adjustment of the amount of wire transfer

1. Unscrewing the screw ①.

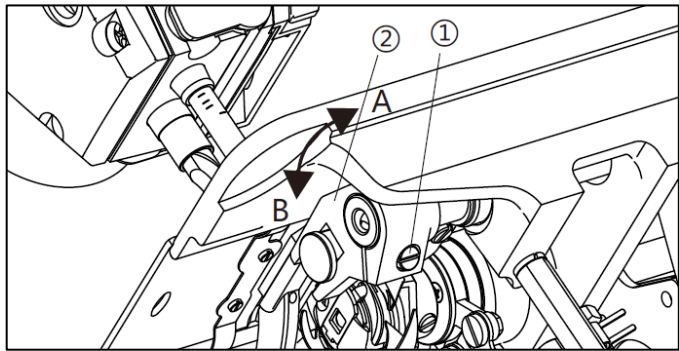
2. Move the right thread hook ② to adjust : the thread amount of thread take-up lever will increase if turned it towards left (A direction), while turning it to the right (direction B) and the thread amount of thread take-up lever will decrease accordingly.(The standard position is obtained when graduation line C on right thread hook is aligned to screw center.)

3. Remember to tight the screw ① after adjusting.



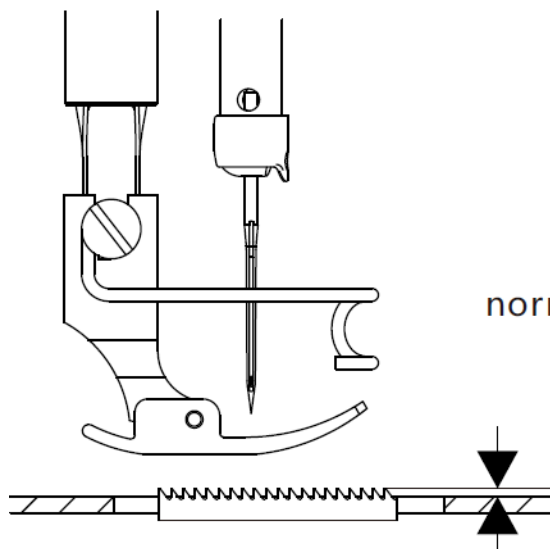
6.3. Adjustment of the Height of feed dog

1. Turn the pulley until the feed dog rises to the highest position.
2. Turn over the sewing machine head on the supporting bar.
3. Unscrewing the tightened screw ① in the feed lifting crank ②.
4. Rotating the feed lifting crank ② to make adjustment: the feed dog will



be higher when the feed lifting crank ② is turn towards A direction; turn towards B direction the feed dog will be lower. (When the feed dog in the highest position, the standard height of the type of medium-heavy machine is 0.8~1.0mm and standard height of the heavy duty machine is 1.1~1.3mm) .

5. Remember to tighten the tightening screw ① in the feed lifting crank ② after adjusting.

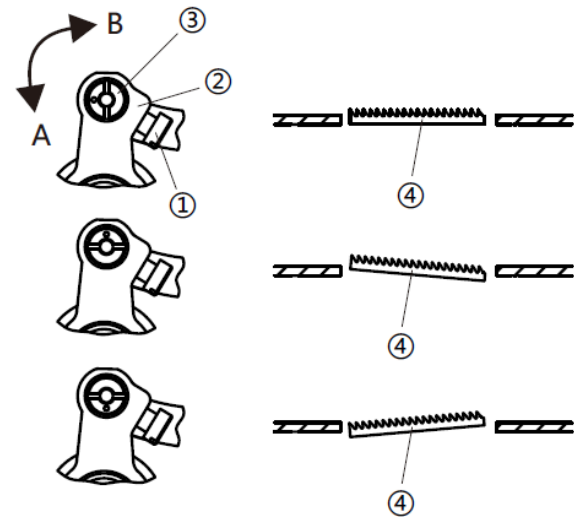
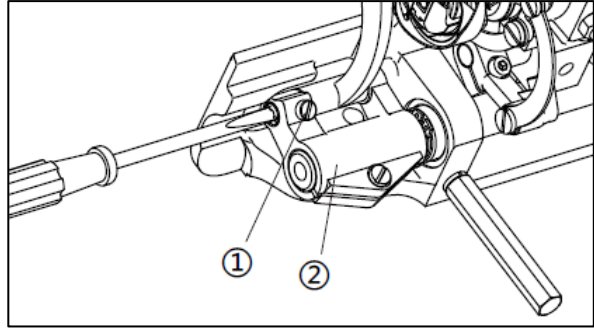


normal : 0.8-1.0mm

H: 1.1-1.3mm

6.4. Adjust the lean of feed dog

1. Turn the pulley until the feed dog ④ rises to the highest position.
2. Turn over the sewing machine head on the supporting bar.
3. Unscrewing the tightening screw ① in the teeth pedestal ②.
4. Adjust the eccentric pin ③ by screw driver:
Fall front site of tooth feed when moving the eccentric pin ③ towards A, and raising it when move towards B.(When raising the tooth feed to the highest position, The standard lean position of feed dog is that mark C on eccentric pin ③ should be at the same level D with mark on the teeth pedestal ② and the feed dog should be parallel with needle plate.).
5. Remember to tighten the tightening screw ① in the teeth pedestal ② after adjusting.



- In order to prevent puckering, lower the front of the feed dog.
- In order to prevent the material from slipping, raise the front of the feed dog.
- The height of the feed dog will change after the angle has been adjusted, so it will be necessary to readjust the height of the feed dog.

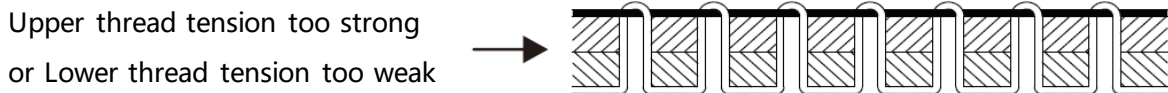
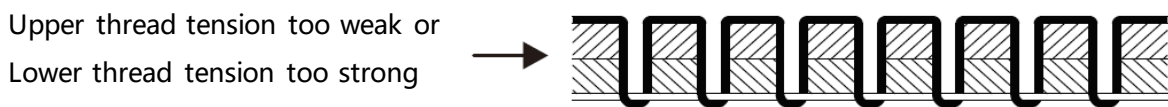
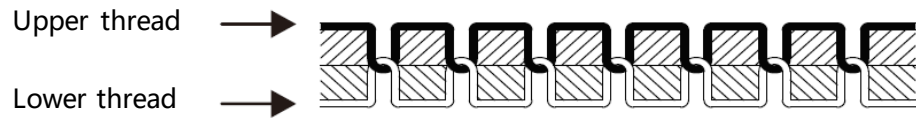
7. ADJUSTING THE TENSION OF STITCH THREAD



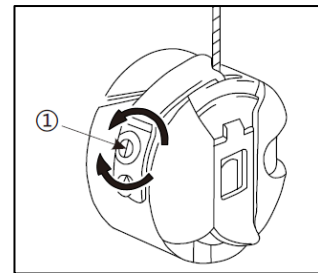
CAUTION



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



1. Adjusting the tension of bobbin thread Hold the end of a thread which hanging from the bobbin case and use the adjusting rotating screw ① to regulate. The tension of the bottom thread is become strong by tight the screw ①, loose the screw to make it weak.

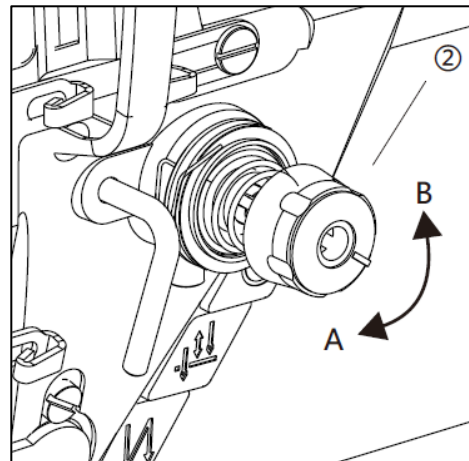


The adjust standard of the bottom thread tension: Rotating the adjusting screw ① till the bobbin case can falling slowly by it' s own weight.

2. Adjusting the tension of needle thread

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 by using the lifting lever.
- 2) Adjust by turning the tension nut ②: The tension of the upper thread will become strong when turning toward the clockwise (A), otherwise weak when toward anti-clockwise (B).



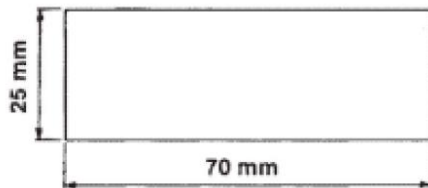
8. ADJUSTING THE AMOUNT OF OIL (OIL SPLASHES) IN THE HOOK



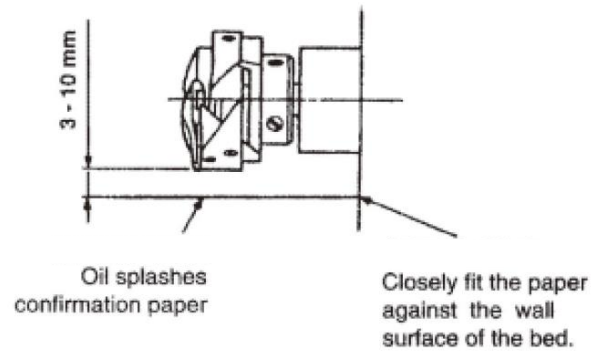
WARNING

Be extremely careful about the operation of the machine since the amount of oil has to be checked by turning the hook at a high speed.

- ① Amount of oil (oil splashes) confirmation paper



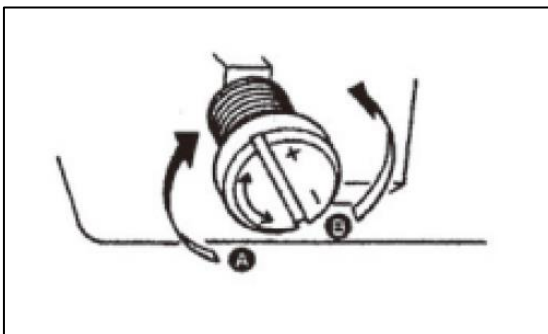
- ② Position to confirm the amount of oil (oil splashes)



* When carrying out the procedure described below in 2, remove the slide plate and take extreme caution not to allow your fingers to come in contact with the hook.

- 1) If the machine has not been sufficiently warmed up for operation, make the machine run idle for approximately three minutes. (Moderate intermittent operation)
- 2) Place the amount of oil (oil splashes) confirmation paper under the hook while the sewing machine is in operation.
- 3) Confirm the height of the oil surface in the oil reservoir is within the range between "HIGH" and "LOW".
- 4) Confirmation of the amount of oil should be completed in five seconds. (Check the period of time with a watch).

• Adjusting the amount of oil



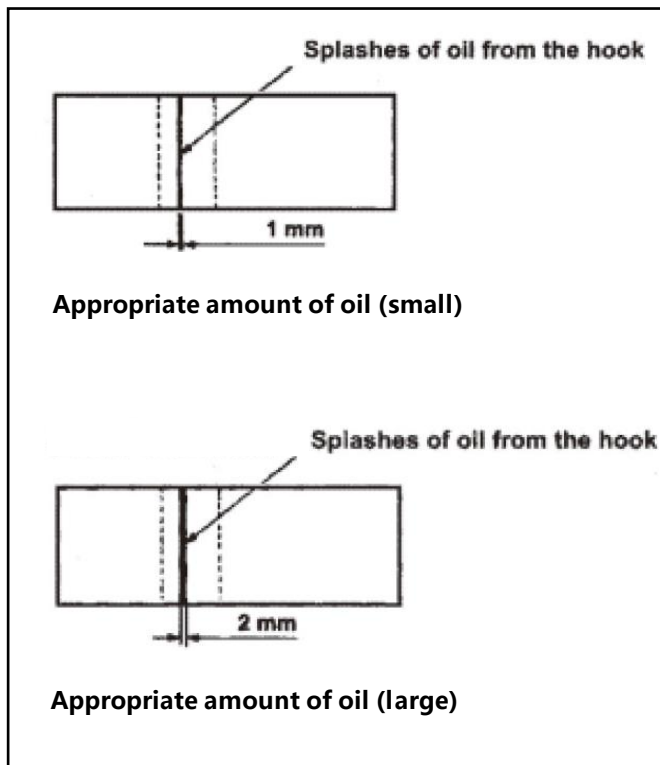
- 1) Turning the oil amount adjustment screw attached on the hook driving shaft front bushing in the "+" direction (in direction **A**) will increase the amount of oil (oil sports) in the hook, or in "-" direction (in direction **B**) will decrease it.

- 2) After the amount of oil in the hook has been properly adjusted with the oil amount

adjustment screw, make the sewing machine run idle for approximately 30 seconds to check the amount of oil in the hook.

8. ADJUSTING THE AMOUNT OF OIL (OIL SPLASHES) IN THE HOOK

- Sample showing the appropriate amount of oil

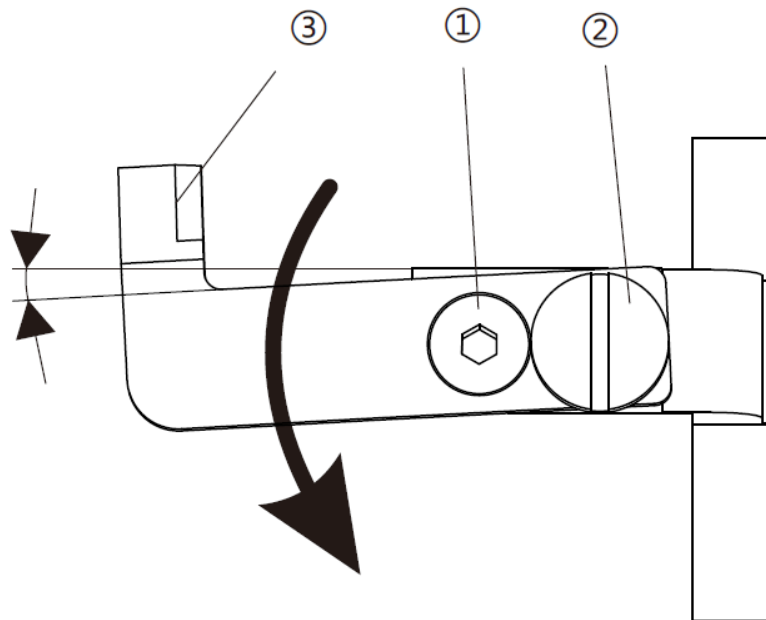
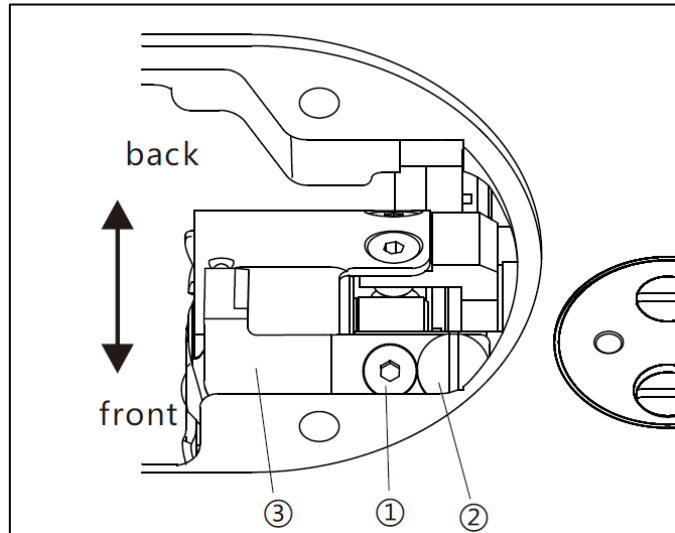


1) The amount of oil shown in the samples of the left should be finely adjusted in accordance with sewing processes. Be careful not to excessively increase/decrease the amount of oil in the hook. (If the amount of oil is too small, the hook will be seized (the hook will be hot). If the amount of oil is too much, the sewing product may be stained with oil).

2) Adjust the amount of oil in the hook so that the oil amount (oil splashes) should not change while checking the oil amount three times (on the three sheets of paper)

9. THREAD TRIMMING

1. When use thick thread or not trim, loosen the screw ① and ②, adjustment the moving knife ③ angle.
2. Knife ③ tilted to the inside, the knife surface presser drop.
3. Adjust the knife ③ anger, then retighten the screw ① and screw ②.
4. After adjustment, manually move up and down the knife holder to confirm whether the machine can trim thread normally or not.



10. PEDAL PRESSURE AND PEDAL STROKE

Warning

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

1. Adjusting the pressure required to depress the front part of pedal
 - (1). This pressure can be changed by changing the mounting position of pedaling pressure adjust spring ①.
 - (2). The pressure decreases when you hook the spring on the left side.
 - (3). The pressure increases when you hook the spring on the right side.
2. Adjusting the pressure required to depress the back part of the pedal
 - (1). This pressure can be adjusted using regulator screw ②.
 - (2). The pressure increases as you turn the regulator screw in.
 - (3). The pressure decreases as you turn the screw out.
3. Adjusting the pedal stroke
 - (1). The pedal stroke increases when you insert connecting rod ③ in to the right hole.

