

ZOJE

A5300

A5300-D3

Instruction manual

Safety Precautions

Danger



After closing the power switch and unplugging the power plug from the socket, wait for at least 5 minutes before opening the control box cover. Touching areas with high voltage can cause casualties.

Warning



No liquid is allowed to enter the sewing machine, otherwise it will cause fire, electric shock and operation failure.



If any liquid enters the sewing machine (head or control box), turn off the power supply immediately, pull the plug out of the socket, and contact the vendor or senior technicians.

Be Careful

Use Environment



Please don't use in the environment with strong electrical interference sources such as power line interference and electrostatic interference. Strong electrical interference sources may affect the correct operation of sewing machines.



The fluctuation of power supply voltage should be used in the environment of rated voltage less than $\pm 10\%$. The large fluctuation of voltage will affect the correct operation of sewing machine.



The power supply capacity should be greater than the power consumption of the sewing machine. Insufficient power supply capacity will affect the correct operation of sewing machine.



The ambient temperature should be used in the range of 5-35 degrees Celsius. Low or high temperature will affect the correct operation of sewing machine.



Relative humidity should be in the range of 45% - 85%, and the equipment will not form condensation environment. Dry or wet environment and dew will affect the correct operation of sewing machine.



In case of thunderstorm, turn off the power switch and pull the power plug off the socket. Lightning may affect the correct operation of sewing machine.



Do not connect devices other than USB memory to USB connection ports. Otherwise, it may lead to failure.

Installation



Ask trained technicians to install sewing machines.



Please commission the purchase shop or electrical professionals for electrical wiring.



The sewing machine weighs about 38Kg. Installation must be completed by more than two people.



Please do not connect the power supply before the installation is completed. If you step on the pedal by mistake, the sewing machine will cause injury.



Please unplug the plug after cutting off the power supply. Otherwise, it will easily become the cause of the failure of the control box.



It must be grounded.



Insufficient ground connection is the cause of electric shock or misoperation.



When fixing the cable, do not bend the cable excessively or fix it too tightly with clamps, which may cause fire or electric shock.



If a worktable with casters is used, the casters should be fixed so that they cannot move.



When the head of the sewing machine falls down, please make sure that the worktable is fixed and not moved at will. Accidents such as foot clamping have occurred in the movement of worktable, which is the cause of personal accidents.



When the sewing machine head falls down or stands up, please operate with both hands. One-handed operation can easily cause injury if the weight of the sewing machine slips.



When lubricating oil and butter are used, it is necessary to wear protective glasses and gloves to prevent lubricating oil from falling into serious or sticking to the skin, which is the cause of inflammation.

In addition, lubricants or butter should not be drunk, otherwise vomiting and diarrhea will occur. Keep oil out of reach of children.

Be careful

Sewing



This sewing machine is only used by persons trained in safe operation.



This sewing machine cannot be used for any purpose other than sewing.



Protective glasses must be worn when sewing machines are used.

If you don't wear protective glasses, there will be danger when you break the needle. The broken part of the needle may pop into your eyes and cause injury.



When the following happens, please cut off the power supply. Otherwise, when you step on the pedal, the sewing machine will cause injury.

- When the needle goes through the thread
- When changing needle or shuttle core
- When a sewing machine is not in use or when a person leaves the sewing machine



If a worktable with casters is used, the casters should be fixed so that they cannot move.



For the sake of completeness, please install protective device before using this sewing machine. If these safety devices are not installed, use sewing opportunities to cause personal injury and sewing machine damage.



During the sewing process, do not touch any moving parts or place the objects on the moving parts, because this will cause injuries to people or damage to the sewing machine.



When the head of the sewing machine falls down, please make sure that the worktable is fixed and not moved at will. Accidents such as foot clamping have occurred in the movement of worktable, which is the cause of personal accidents.



When the sewing machine head falls down or stands up, please operate with both hands. One-handed operation can easily cause injury if the weight of the sewing machine slips.



If the sewing machine operates incorrectly, or hears abnormal noise or smells abnormal odor, the power supply should be cut off immediately. Then contact the shop or trained technicians.



If the sewing machine breaks down, please contact the shop or trained technicians.

Clean



Please cut off the power supply before starting the cleaning operation.

If you step on the pedal by mistake, the sewing machine will cause injury.



When the head of the sewing machine falls down, please make sure that the worktable is fixed and not moved at will. Accidents such as foot clamping have occurred in the movement of worktable, which is the cause of personal accidents. When the sewing machine head falls down or stands up, please operate with both hands.



One-handed operation can easily cause injury if the weight of the sewing machine slips.



When lubricating oil and butter are used, it is necessary to wear protective glasses and gloves to prevent lubricating oil from falling into serious or sticking to the skin, which is the cause of inflammation. In addition, lubricants or butter should not be drunk, otherwise vomiting and diarrhea will occur. Keep oil out of reach of children

Maintenance And Inspection



Only trained technicians can repair, maintain and inspect sewing machines.



All works linked with electricity should be entrusted to purchasing shops or electrical professionals. Turn off the power supply when the following happens. Pull the plug from the power outlet.



Otherwise, when you step on the pedal, the sewing machine will cause injury.



Maintenance, maintenance and inspection related to electric Inspection, adjustment and maintenance
Replacement of fragile parts such as spindle and cutter
Before opening the motor cover, be sure to turn off the power supply, wait a minute, and then perform the operation. Touching the motor surface can cause burns.



When the power switch must be connected to adjust, be sure to switch to maintenance mode. Be careful to observe all safety precautions



When the head of the sewing machine falls down, please make sure that the worktable is fixed and not moved at will. Accidents such as foot clamping have occurred in the movement of worktable, which is the cause of personal accidents. When the sewing machine head falls down or stands up, please operate with both hands.



One-handed operation can easily cause injury if the weight of the sewing machine slips. When replacing parts or installing optional accessories, be sure to use only genuine parts.



The Company will not be liable for any accident or malfunction caused by the use of non-authentic parts. When removing the safety protection device and installing it again, be sure to install it in situ and check whether it can work properly.



In order to prevent accidents and malfunctions, please do not alter the sewing machine without authorization.

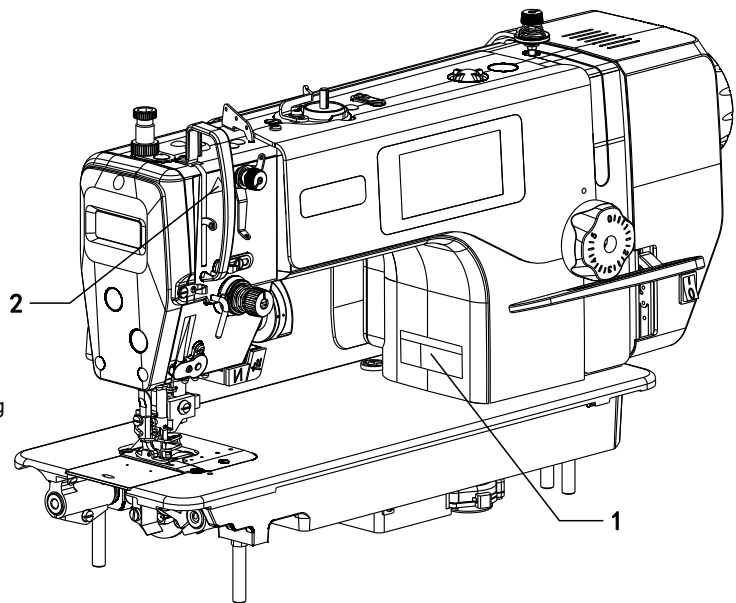
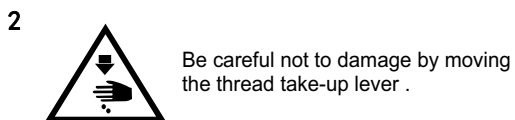
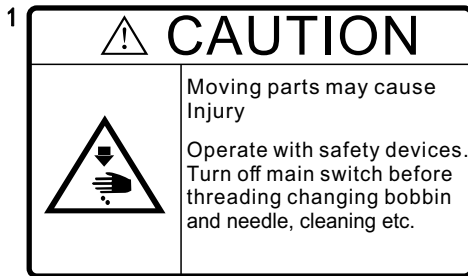


The Company will not be liable for any accident or malfunction caused by the modification of the sewing machine.

Warning Label

The following warning labels are on the sewing machine

When using the sewing machine, please follow the instructions on the label. If the label falls off or is ambiguous, please contact the purchase shop.



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1 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.

2 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 bobbin winder 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.

3 Main Technical Specifications

Specification		Parameter
Application		For medium weight materials
Max sewing speed		4500sti/min
Max stitch length		5-7mm
Needle		DB×1 9# ~ 18#
Presser foot lift height	Hand lifter	5.5mm(Max)
	Knee lifter	13mm(Max)
Lubricating system		Auto
Lubrication oil		10# White oil
Motor power		220V/550W

4 Mounting the Machine (Fig.1, Fig. 2, Fig.3, Fig.4 and Fig. 5)

1. Fixing oil tray

1) Put the oil tray ② on the four groove corners on the sewing table.

2) Fix two arm cushion ① to the A side of oil tray ② (facing the operator). Fix the two stand bases ③ to the B side of oil tray ② (hinge side), then fix the oil tray ②.

3) Insert the pin ⑥ into the oil tray ② as shown in the figure.

4) Insert machine head coupling hook ⑤ into the pin holes in the bottom plate such that it is embedded into the coupling hook seat ④, and put the machine head onto the sewing washer on four corners of the oil tray.

5) As shown in the picture, insert head support ⑦ into the machine table firmly.

1. Installation of plastic rear cover

1) Plug in the connecting wires on the electronic control.

2) Install the plastic rear cover ⑧ on the sewing machine as shown.

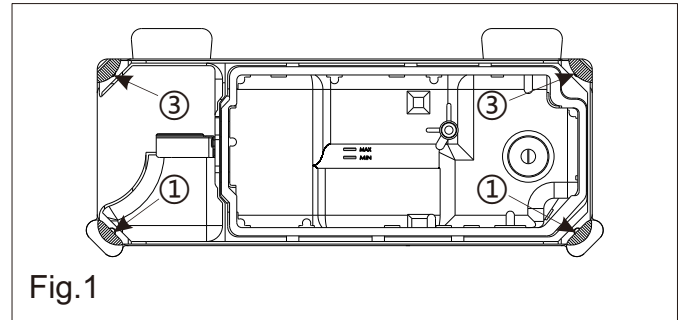


Fig.1

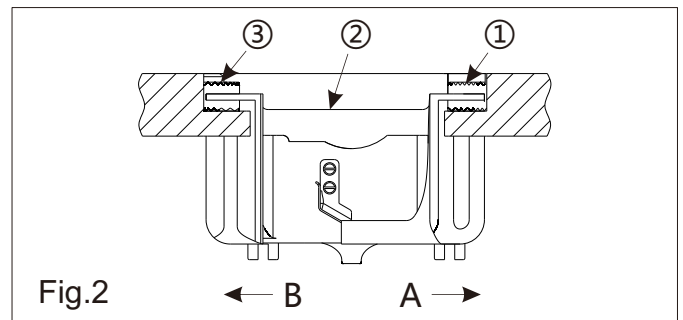


Fig.2

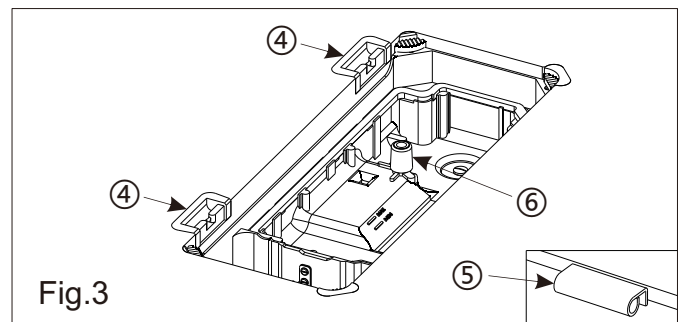


Fig.3

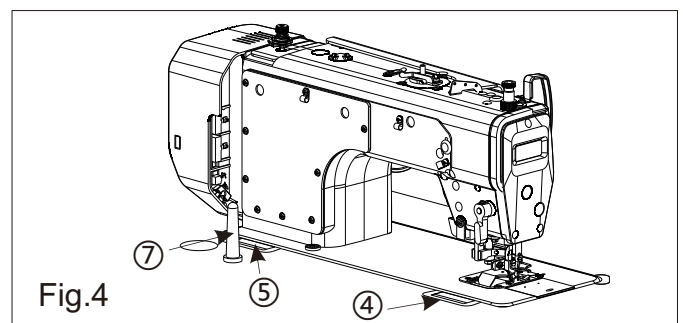


Fig.4

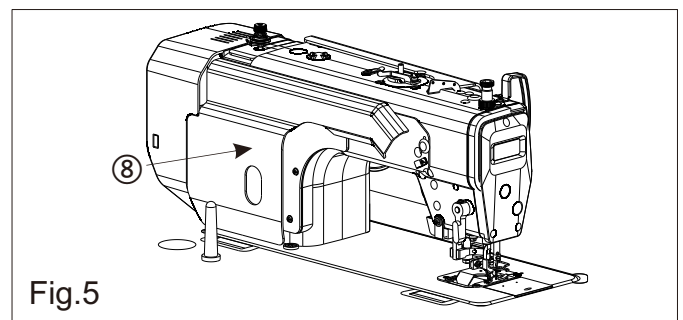


Fig.5

5 Lubrication of machine(Fig.6)

1.Information on lubrication

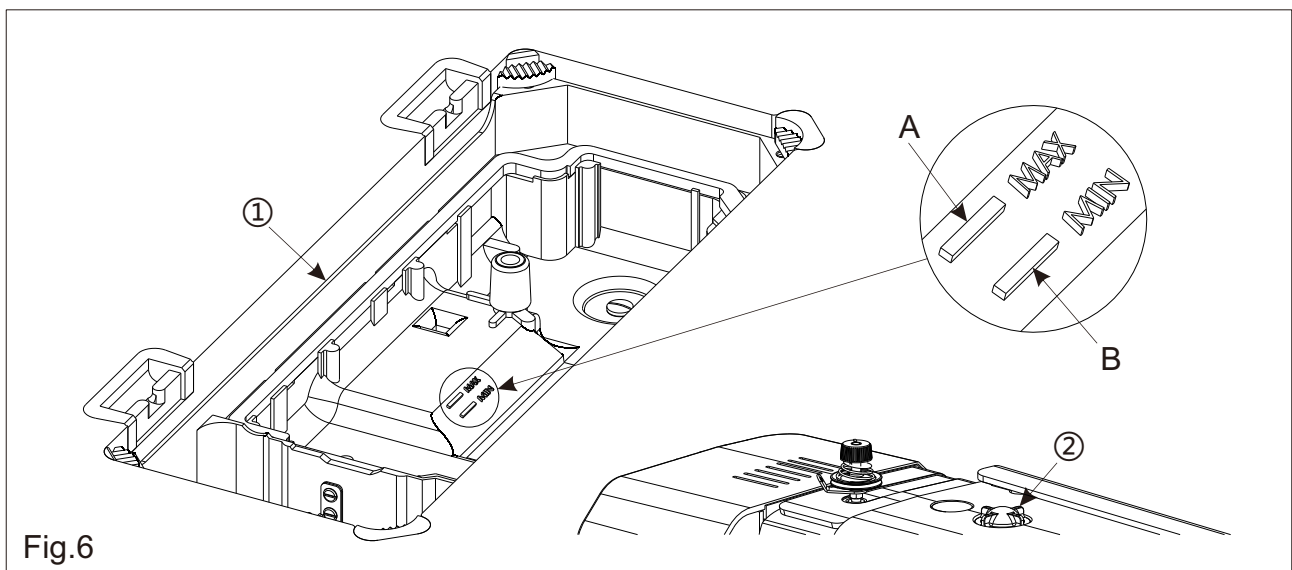
- 1) Fill oil pan ① with sewing machine oil (10 while oil)up to MAX mark A.
- 2)When the oil level lowers below MIN mark B, refill the oil pan with the specified oil.
- 3)When you operate the machine after lubrication, you will see splashing oil through oil sight window ② if the lubrication is adequate.
- 4)Note that the amount of the splash oil is unrelated to the amount of the lubricating oil.



Caution:



- 1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



6 Mounting the Thread Stand (Fig.7)

- 1.As shown in right-hand figure, mount the thread stand component onto the mounting hole for thread stand on the sewing machine table.
- 2.Screw down retaining nut ① for lower segment of thread stand lever to fix the thread stand.

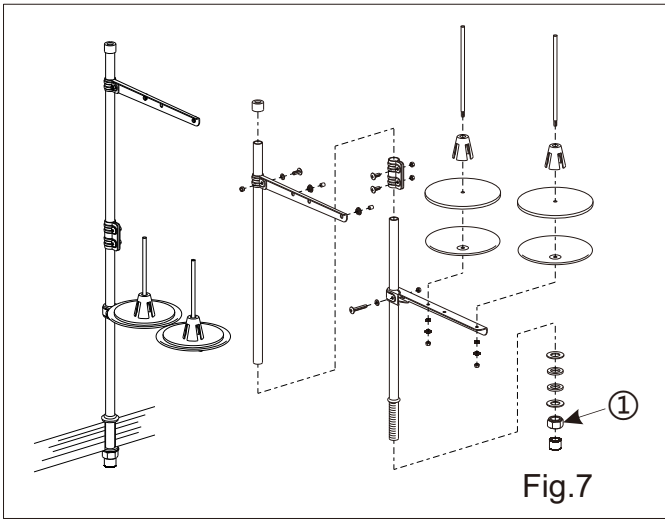


Fig.7

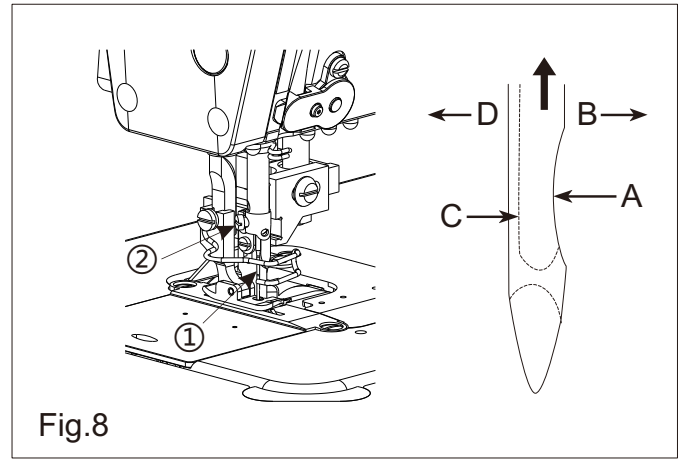


Fig.8

7 Mounting the Needle (Fig.8)

1. Turn the upper wheel to allow the needle to reach its maximum height.
2. Unscrew needle carrying screw ②, hold needle ① by hand, and align the indentation A of needle to right direction B.
3. Insert the needle into the bottom of needle hole in direction of arrow till it reaches the end point.
4. Screw down the needle carrying screw ②.
5. Take care to ensure that the elongated slot C on the needle is aligned to the left direction D.



Caution:



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2. Needles are available in different sizes. Please select appropriate needle as per the thickness of threads and the sewing materials.

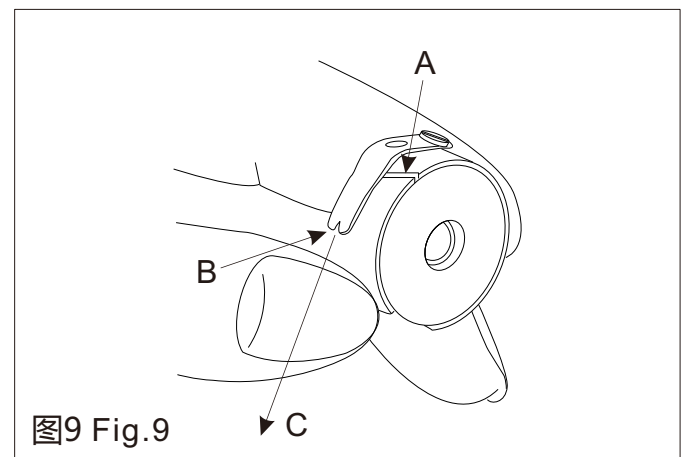


图9 Fig.9

1. Hold the rotating hook by hand, and fit the bobbin into the rotating hook.
2. Thread the thread through the thread groove A in the rotating hook, and draw out the thread in direction C. In this way, the thread is led out of hole B through the tension spring.
3. When bobbin thread is drawn, the bobbin shall turn clockwise in direction of arrow.

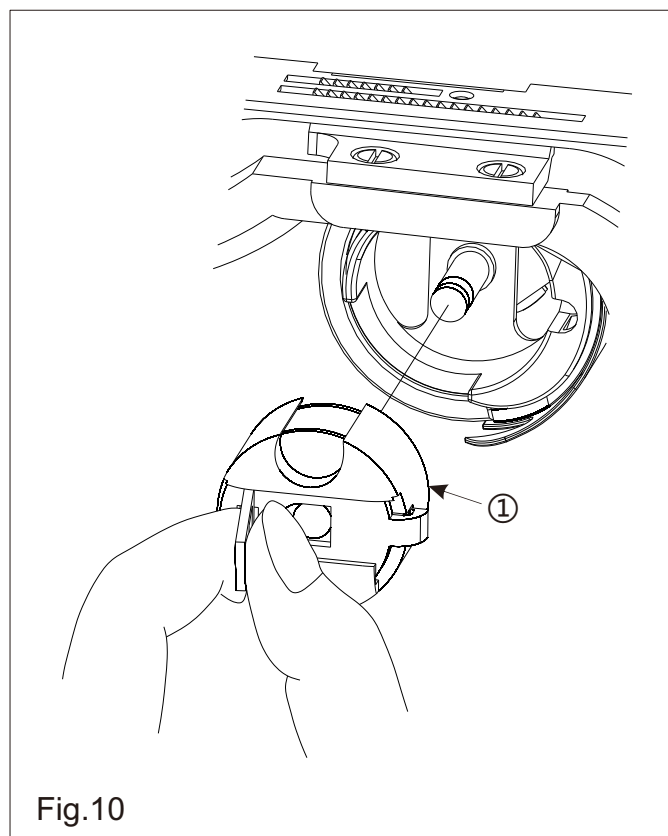


Fig.10

9 Installation of bobbin case (Fig. 10)

1. Turn the machine pulley to raise the needle until it is above the needle plate.
2. Hold the bobbin case ① (with bobbin) with one hand, then install the bobbin case into the hook.



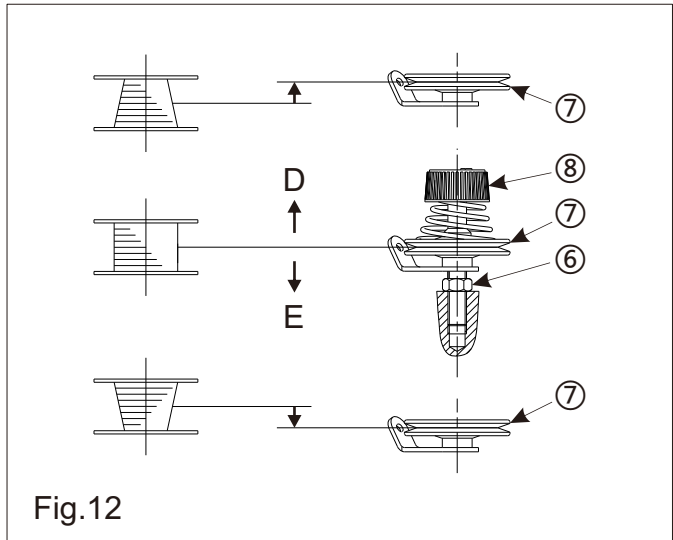
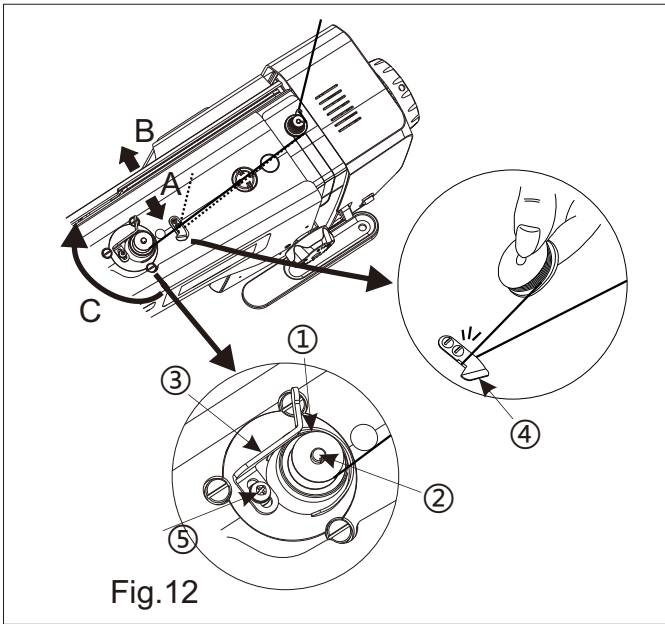
Caution:



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10 Winding up the Bobbin Thread (Fig. 11, Fig. 12)

1. Bobbin thread winding-up method
 - 1) Fit bobbin ① onto spool ②.
 - 2) Thread the right-hand thread coiling on thread stand as shown in right-hand figure, and reel the thread end rightwards onto the bobbin for several turns.
 - 3) Push winding lever ③ over to direction A, and run the sewing machine. Bobbin ① is rotated in direction C, and thread is reeled onto bobbin ①. Once the reel is full, winding lever ③ is pushed toward direction B, and winding is over.
 - 4) Remove bobbin ①, and trim off the thread using winding trimmer ④.



1. Adjusting the bobbin thread winding

1) To adjust the winding capacity of bobbin thread, unscrew fixing screw ⑤, set winding lever ③ in direction A or direction B, and fix screw ⑤ again. Direction A is intended for reduction, and direction B is intended for increase (Caution: The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity).

2) If thread cannot be wound onto the bobbin flatly, unscrew nut ⑥, turn the winding tension disco, and adjust the height of height of thread gripper plate ⑦.

a. The standard position is reached once the center heights of rotating hook ① and thread gripper plate ⑦ are identical.

b. If the winding amount on the lower part is bigger, move the winding tension disco in direction D indicated in the right-hand figure. If the winding amount on upper part is bigger, move the winding tension disco in direction E indicated in the right-hand figure.

c. When the winding tension disco reaches its suitable position, screw down fixing screw ⑥.

3) Adjust the winding tension of bobbin thread by turning thread tension nut ⑧.

Caution:

1. To reel bobbin thread onto bobbin ① when no sewing is performed, draw the needle thread out of hole in the take-up lever, remove bobbin ① out of rotating hook.

2. Do not touch or lean anything to any running components when rolling the bottom line, in order to avoid the safety accident.

11 Threading the Needle Thread (Fig. 13, Fig. 14)

Thread the needle thread when needle bar stays in its highest position, lead out the thread end from the thread stand, and conduct the threading as per the serial numbers indicated in the figure.



Caution:
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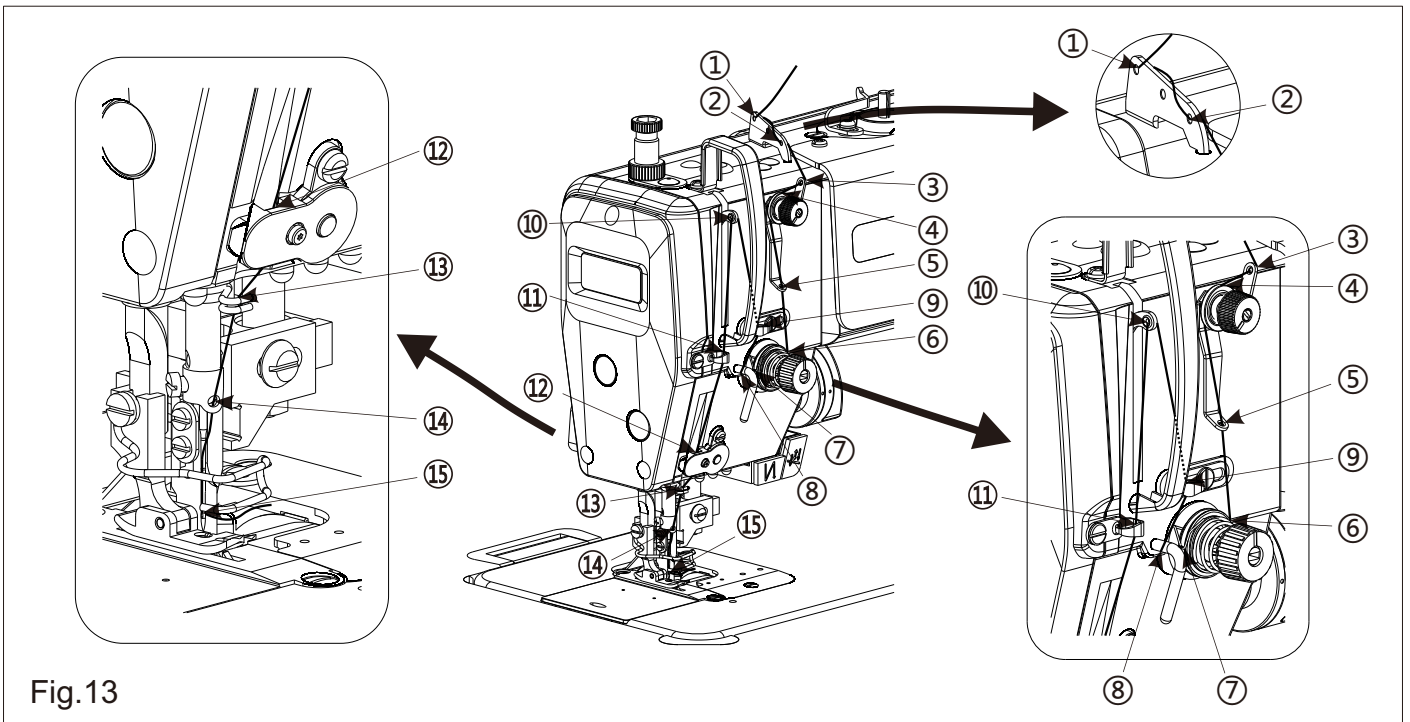


Fig.13

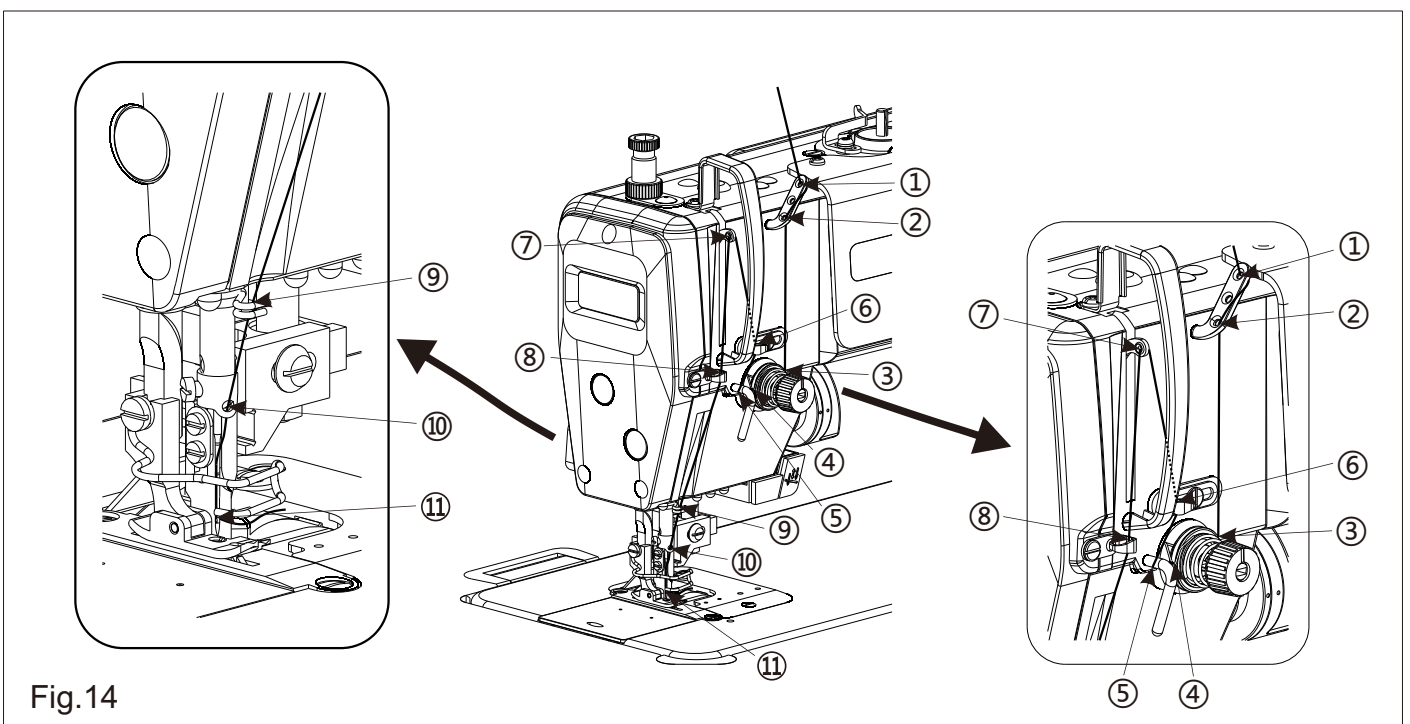


Fig.14

12 Lifting of presser foot(Fig. 15, Fig. 16)

1. Lift presser foot controlled by hands

1) Shut down the machine, turn presser foot lever ① in direction A to uplift the presser foot (for about 5.5 mm).

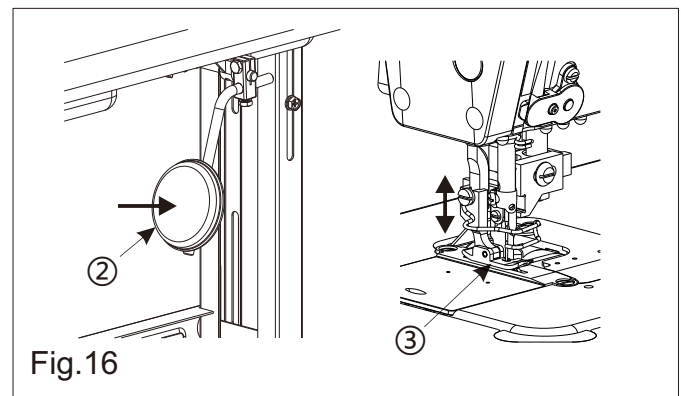
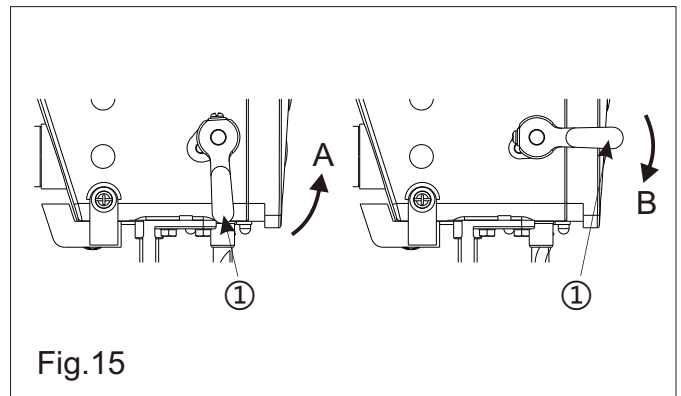
2) When presser foot lever ① is turned in direction B, presser foot will be returned to its original position.

2. Lift presser foot controlled by knees

1) The presser foot ③ can be raised by pressing the knee lifter plate ②. (Height of presser lifting is relate to the degree of knees pressing)

Caution: standard and maximal lifting height of presser foot are respectively about 10mm and 13mm when pressing knees fully.

2) The lifting presser foot ③ lowers as soon as losing the knee lifter plate ② release.



13 Adjusting the Stitch Length(Fig. 17)

Press needle gauge knob ① and rotate it according to arrows, do not release it until the number you require aim at A direction right above machine head, Loose needle gauge knob ①.



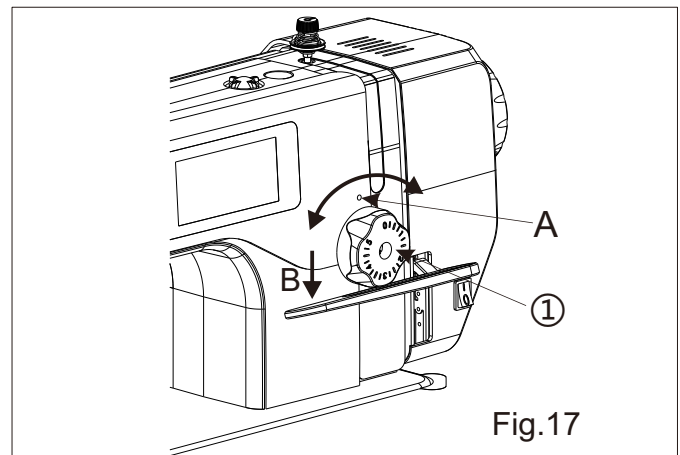
Caution:

1. Scale mark digits are expressed on the knob in millimeters.

2. Press the reverse feeding wrench ② towards B direction and rotate needle gauge knob ① when changing the scale of it from largest to smallest.

14 Use of back Feeding Wrench(Fig. 17)

1. Press the reverse feeding wrench ① towards B direction.
2. Press towards B direction can realize back feeding.
3. Recover to forth feeding when release hands.



15 Hand-touch Backstitch Device (Fig. 18)

1. Use of back sewing push-button:
 - 1) Push the backstitch switching push-button ① to allow the sewing machine to start backstitch immediately.
 - 2) Backstitch is implemented only while the push-button is held down.
 - 3) It is changed to forward stitch once the push-button is released.

2. Use of reinforce sewing:

- 1) Press the reinforce sewing button ② one time the sewing machine reinforce forth with half stitch, press all the time, and it continues sewing with forth reinforce.

Caution::in addition to continue back reinforce sewing, the reinforce sewing button can be as stop button ② during an sewing condition (before trimming).

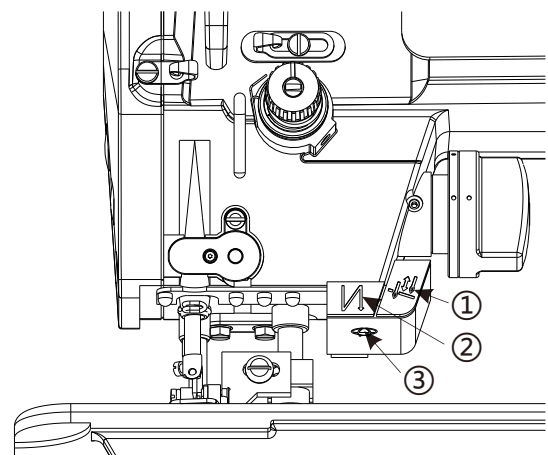
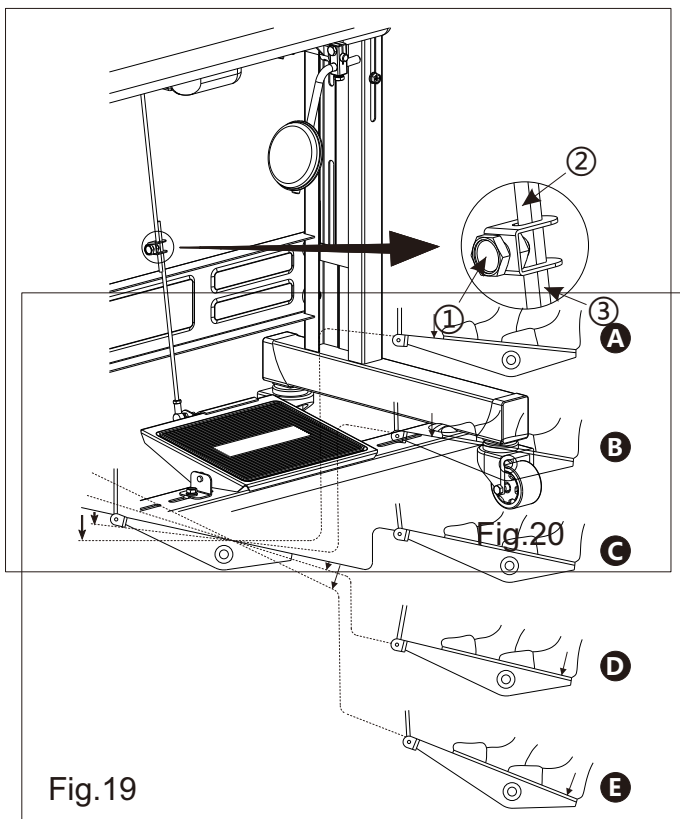


Fig.18

3. Use of the light push-button

The illuminating lamp goes on at full brightness once the machine is powered on. Push illuminating lamp control button ③ to reduce in sequence the brightness till turn off.

16 Operating the Treadle(Fig. 19)



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-lifter 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 depress the back part, the thread trimmer is actuated.

17 Adjusting the Treadle(Fig. 20, Fig. 21, Fig. 22)

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.

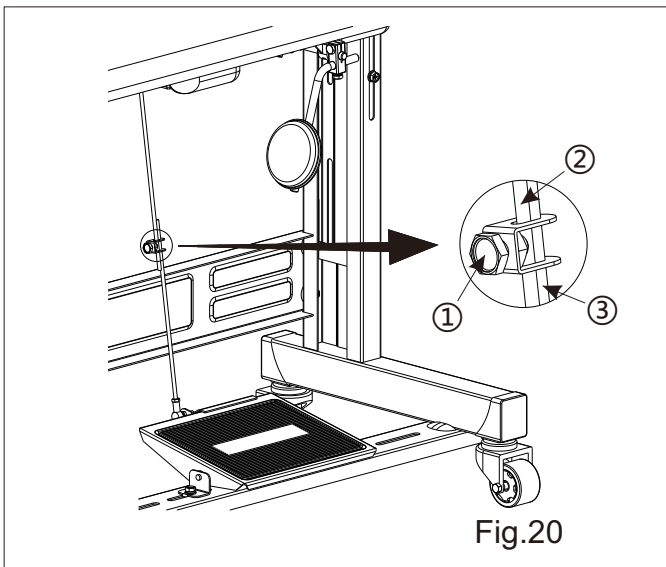


Fig.20



Caution:

1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

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)

Caution:



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3.Adjustment of stepping return strength

1)Loosening 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.

Caution:



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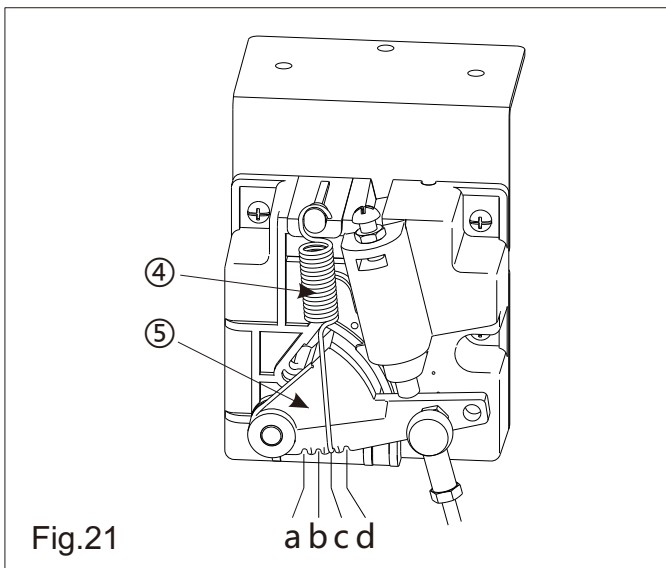
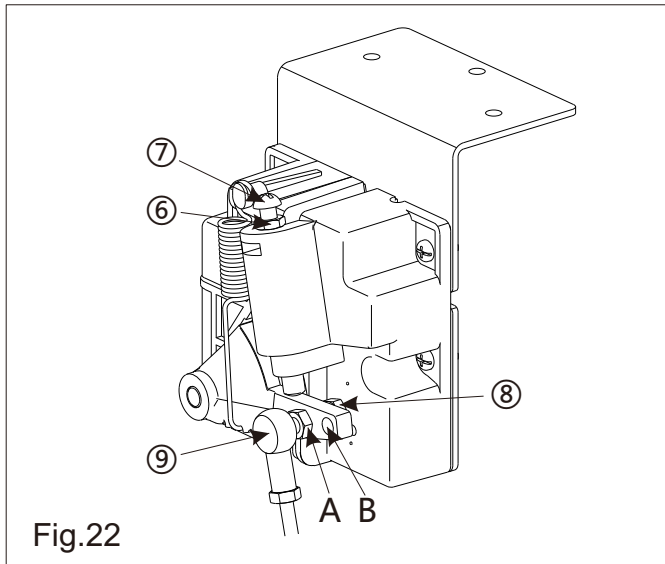


Fig.21



4. Adjustment of panel moving distance

1) Remove nut ⑧.

2) Move connecting rod joint ⑨ from A to B, panel moving distance is 1.3 times than original one. Move reversely the distance is 0.8 times as original one.

3) Assemble the nut ⑧ after adjusting panel moving distance.



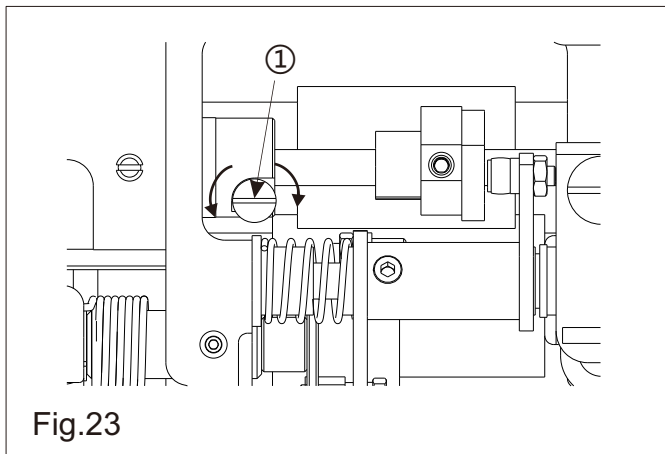
Caution:

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2. Stepping strength and stepping return strength both change after adjusting panel movement, follow the steps above to have adjustments again.

18 Oil mass Adjustment of Rotating Hook (Fig. 23, Fig. 24 , Fig. 25)



1. Adjustment method

1) Adjust the oil mass of rotating hook using adjusting screw ①: Screw down (turn it to the right) adjusting screw ① to raise the oil mass, or unscrew (turn it to the left) the adjusting screw to lower the oil mass. Amount repeatedly until the lubrication amount is correct.

2) Check the lubrication amount again after the sewing machine has been used for approximately two hours.



Caution:

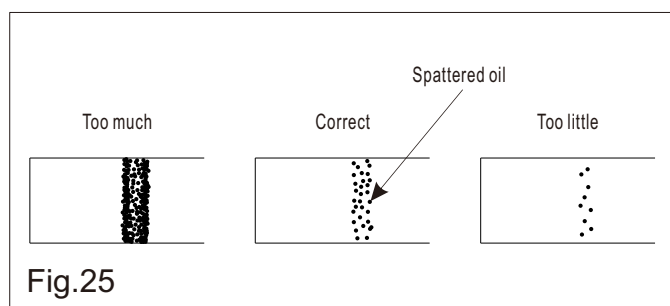
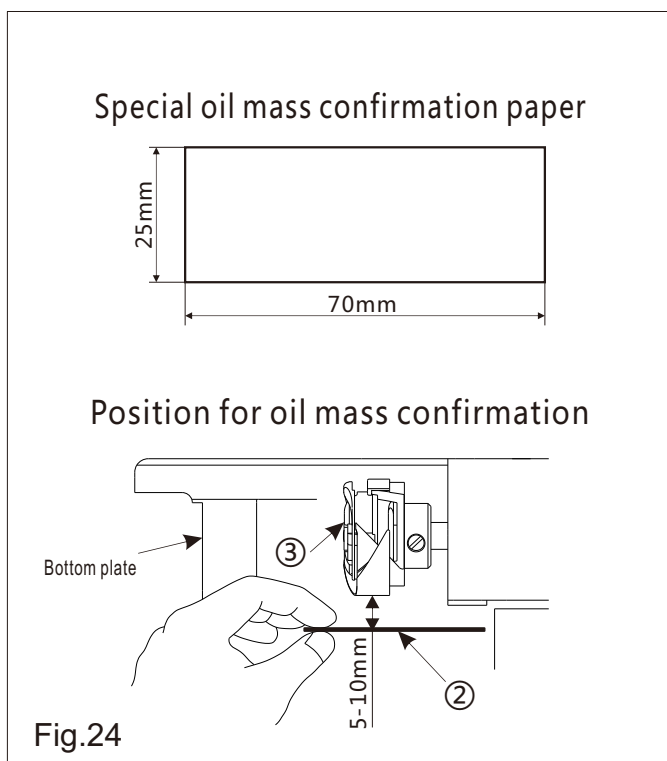
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



2. Confirming the Oil Mass

1) Remove the thread from all points from the thread take-up to the needle.

2) Use the lifting lever to lift the presser foot.



3) Run the machine at the normal sewing speed for approximately 3 minutes without sewing any material (following the same start/stop pattern as when actually sewing)

4) Place the lubrication amount check sheet ② underneath the rotary hook ③ and hold it there. Then run the sewing machine at the normal sewing speed for 10 seconds. (Any type of paper can be used as the lubrication amount check sheet ②)

5) Check the amount of oil which has spattered onto the sheet ②.



Caution:



1. Prior to the above-mentioned operation, remove the knockout plate and check whether there is oil in the oil box.

2. Do not use fingers to touch the hook or other running components of feeding mechanism when checking the amount of oil for the hook to avoid the accident.

3. Use the following procedure to check the amount of oil being supplied to the rotary hook when replacing the rotary hook or when changing the sewing speed.

3. Guide sample of oil mass adequacy

1) The guide sample shown in the right-hand figure (see Fig. 10) may be finely adjusted (increased or reduced) as per different sewing processes; however, excessive increase or reduction shall be avoided. Too little oil mass may lead to rotating hook heating, and over much oil mass may lead to contamination of the sewing materials.

2) Test the oil mass 3 times using special oil mass confirmation paper till the oil traces indicated by the special paper show no changes.

19 Adjusting the Presser Foot Pressure(Fig. 26)

1. Unscrew pressure adjusting nut ②.
2. Presser foot pressure is increased if pressure adjusting screw ① is turned clockwise (namely in direction A); the pressure is reduced if the screw is turned counterclockwise (namely in direction B).
3. Screw down pressure adjusting nut ② when adjustment is over.

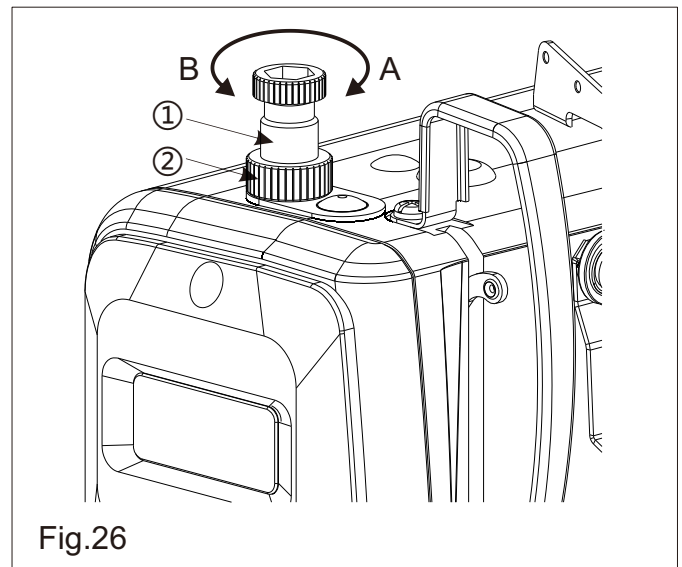


Caution:



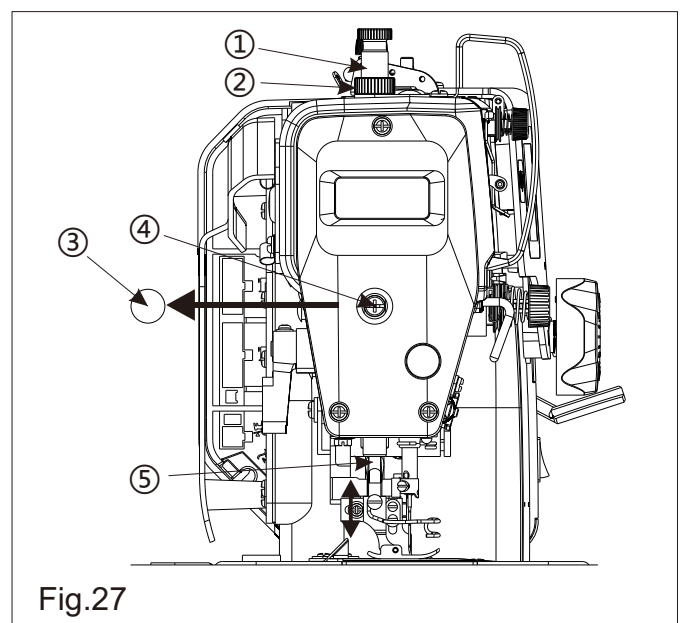
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

2. For ordinary materials, the standard height of pressure adjusting screw ① ranges from 32 to 34mm (4.5 kilogram force) approximately.



20 Adjusting the height and angle of presser foot(Fig. 27)

1. Loosen pressure adjusting nut ② and screw ①, free the pressure of presser foot.
2. Open rubber plug ③ in panel.
3. Loosen screw ④ in compression rod guide frame, move mobile compression rod ⑤ from up and down to adjust the height and angle of presser foot. (height of presser foot is the distance from needle plate surface to the bottom of it, the standard height of lifting presser foot by hand is 5.5mm)
4. Tighten the screw ④ in compression rod guide frame and assemble the rubber plug ③ after adjusting.
5. Adjust pressure of presser foot through pressure adjusting screw ①, tighten the nut ② after adjusting.





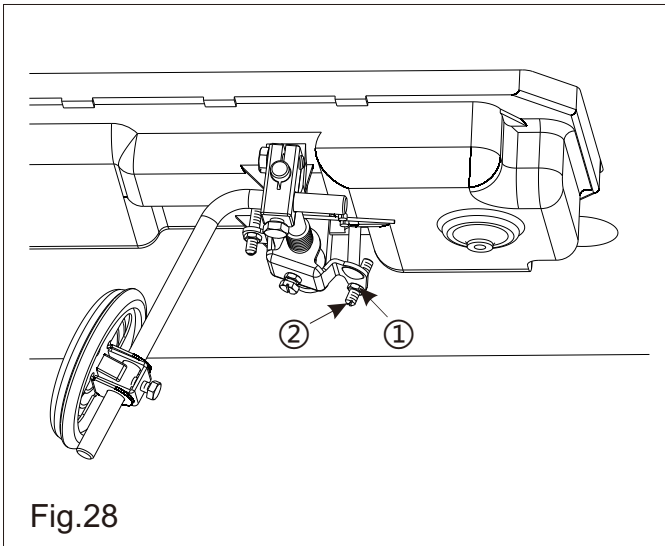
Caution:

1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



2.After adjusting,check that the needle moves down into the center of the groove in the presser foot.

21 Adjustment of The Knee Lift Height(Fig. 28)



1.Turn the machine pulley so that the feed dog is below the top of the needle plate.

2.Lower the presser foot by using the lifting lever.

3.Unscrew the nut ① and rotating the screw ② are the purpose to adjust the height of presser foot when the knee totally pushed to the touch point (by knee, the standard height:10 mm , the maximum height :13mm)

4.Securely tighten the nut ①.

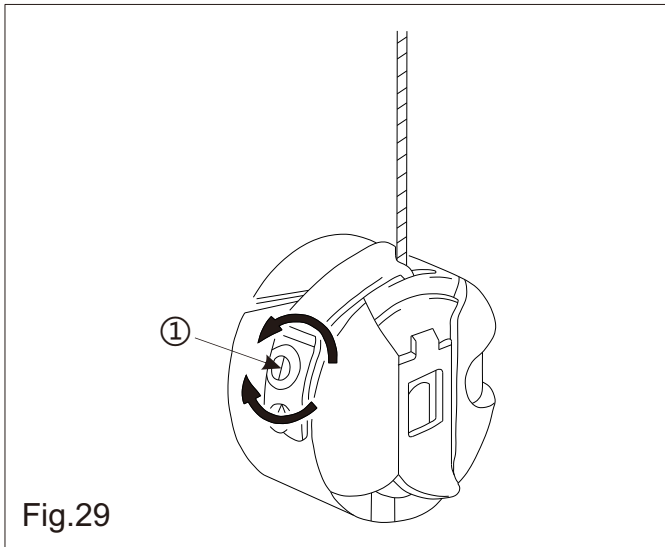


Caution:

1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



22 Adjusting the Tension of Stitch Thread(Fig. 29, Fig. 30)



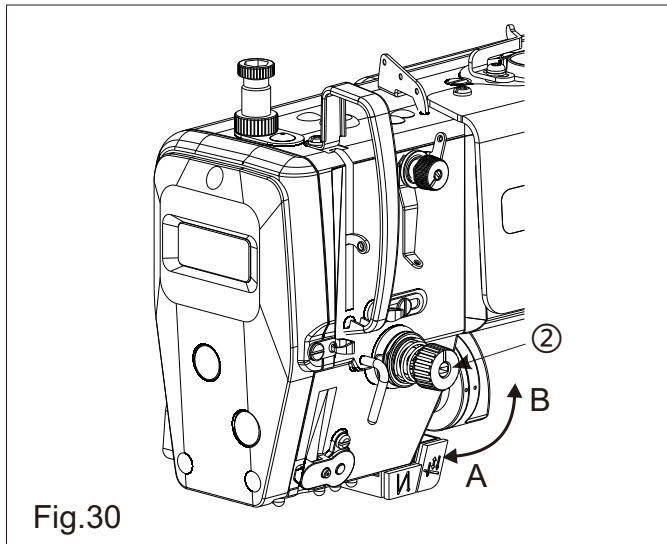
1. Adjusting the tension of bobbin thread
Hold the end of a thread which hanging from the bobbin case and use the adjusting rotating screw ① to regulate. The tension of the bottom thread is become strong by tight the screw ①, loose the screw to make it weak.

Caution : 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).

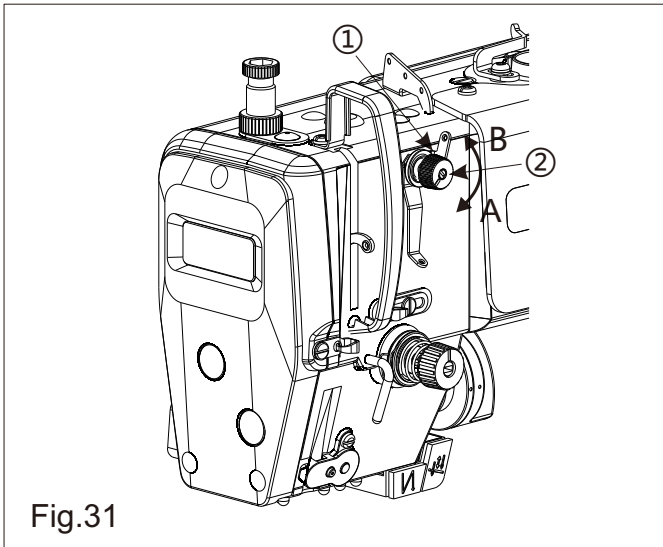


Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

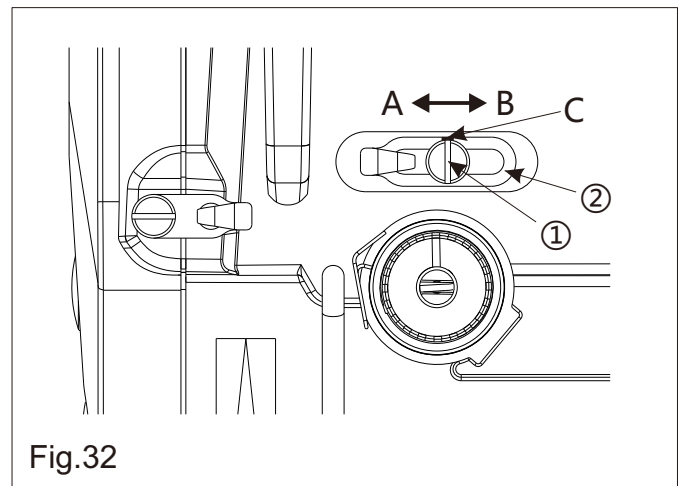
23 Adjustment of the Upper Thread Length after Trimming(Fig. 31)



At the time of thread trimming, the thread tension is loosened and tension is applied by the thread clamp ① only. If added the tension in the thread clamp ①, the upper thread length that left in the pinhole will be shorter, and vice versa.

1. The length of upper thread which left in the pinhole will decrease when turning the adjusting nut ② in the thread clamp ① towards the clockwise (A), otherwise it will increase when turn toward anti-clockwise (B). (The standard length of the upper thread which left in the pinhole is 25~30mm)

24 Adjusting the Take-up Amount of Take-up Lever(Fig. 32)



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.



Caution:

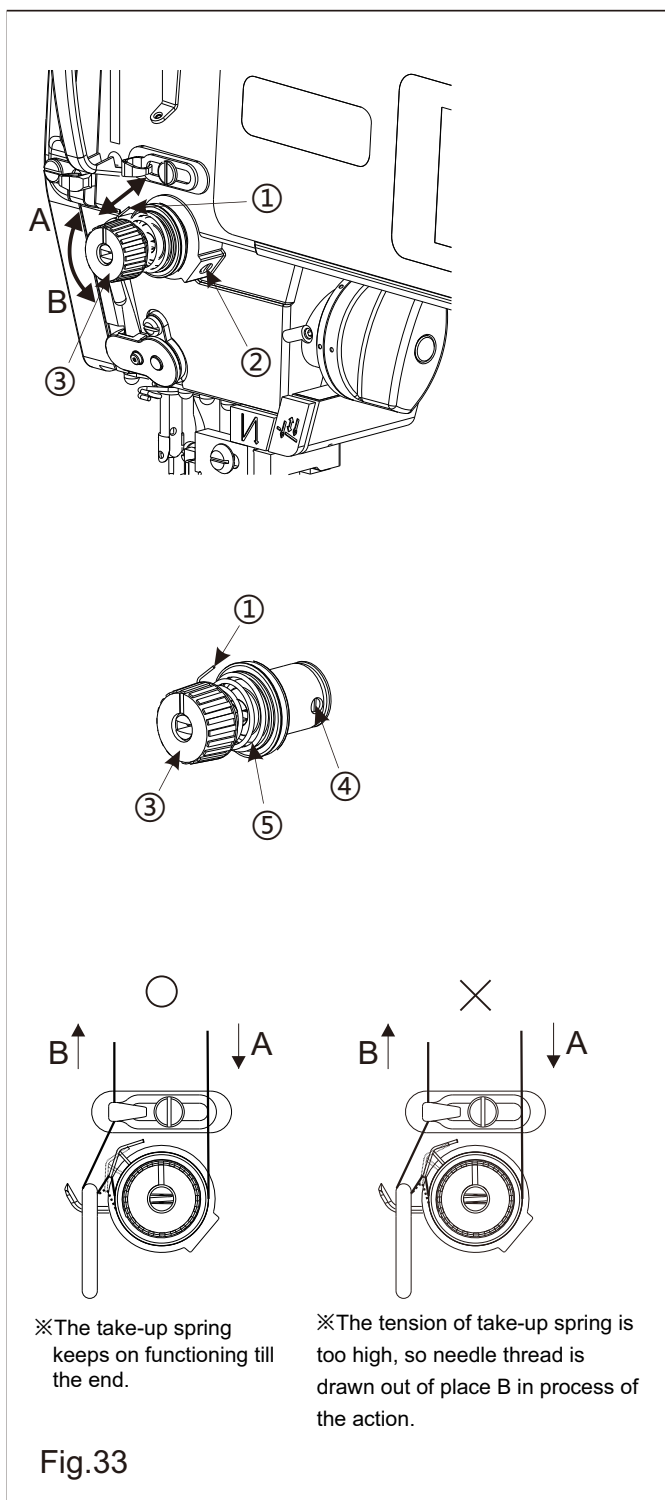
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



2. For heavy duty , move the right thread hook ② to left to add amount of thread.

3. For light material , move the right thread hook ② to right to reduce amount of the thread.

25 Adjusting the Take-up Spring (Fig. 33)



1. Adjusting the tension of take-up spring

1) Unscrew screw ②, and take out thread clamp ⑤ (assembly).

2) Unscrew screw ④ in thread clamp ⑤.

3) Rotating the screw ③ in the thread clamp ⑤ to adjust, The tension of the thread take-up spring will become larger when turning toward the clockwise (A), otherwise smaller when turning anti-clockwise (B).

4) Screw down screw ④ when adjustment is over, fit thread clamp ⑤ (assembly) into the machine, and screw down screw ②.

Judgment basis for adjustment adequacy of take-up spring: Confirm that the tension of take-up spring is properly adjusted, draw out the needle thread in direction B. If place B of needle thread is drawn before take-up spring reaches its lowest position, reduce the tension of take-up spring.



Caution:

1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

2. The take-up spring is already adjusted properly before the machine leaves the factory as a rule, and it requires readjustment only for sewing of special materials or usage of special stitch threads.

2. Adjustment of the Stroke to the Thread take-up Spring

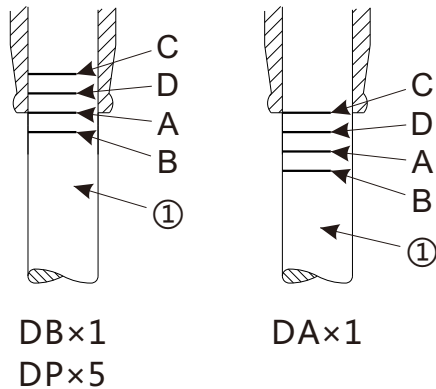
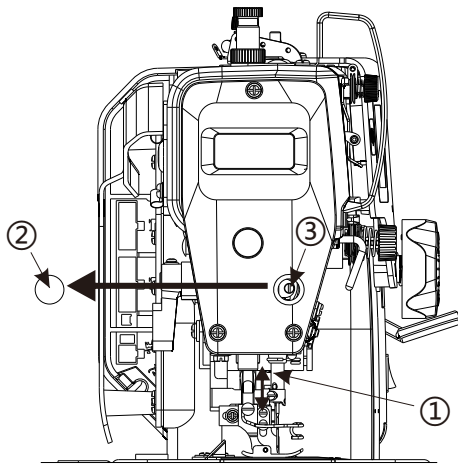


Fig.34

1) Lower the presser foot by using the lifting lever.

2) Loosen the set screw ②.

3) Rotating the screw ③ in the clamp to adjust, the stroke to the Thread take-up Spring ① will increase when turning toward the clockwise (A), otherwise decrease when toward anti-clockwise (B). (The standard stroke, under the state of presser foot was put down is around 6~7mm higher than the slow hook)

4) Securely tighten the screw ②.



Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

2. The take-up spring is already adjusted properly before the machine leaves the factory as a rule, and it requires readjustment only for sewing of special materials or usage of special stitch threads.

26 Adjust the Height of the Needle Bar(Fig. 34)

1. Turn the machine pulley to set the needle bar ① to its lowest position.

2. Remove the rubber cap ② from the face plate.

3. Unscrewing the connecting screw ③ of needle bar, through moving the needle bar ① up and down to adjust, when using needle DB X1 and DPX5, the mark A on the needle bar ① should be match to the bottom of needle bar lower bushing; When using needle DAX1, the mark C

on needle bar ① should match to the bottom of needle bar lower bushing.

4. Tighten the screw ③ in compression rod guide frame and assembly the rubber plug ② after adjusting.



Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

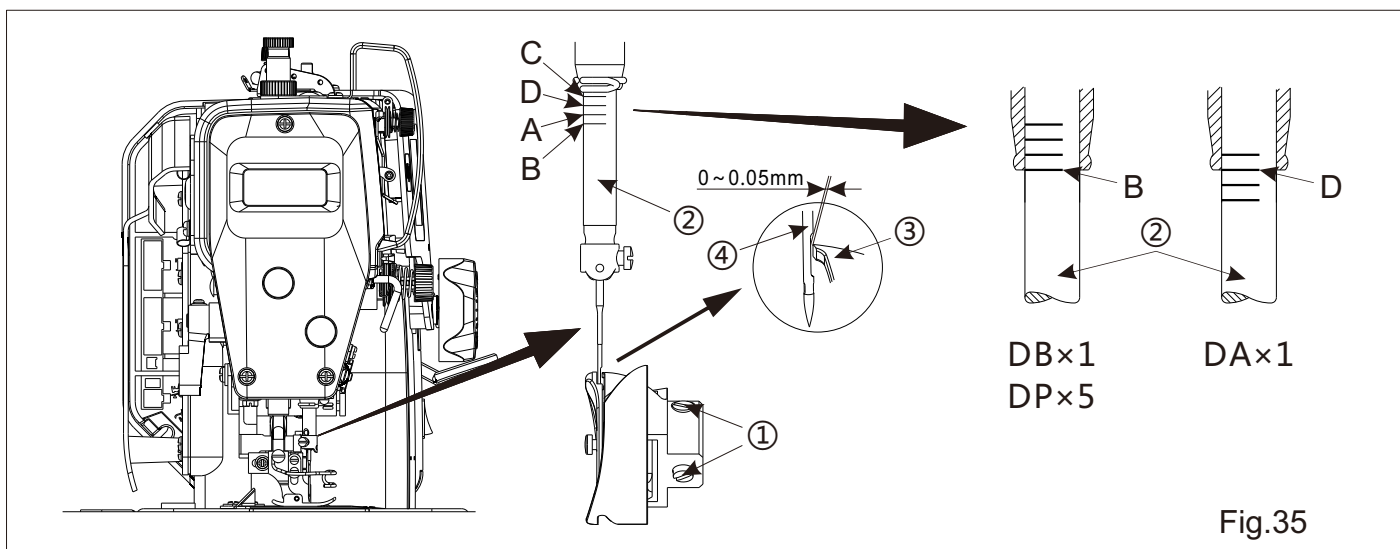


Fig.35

27 Adjust the Synchronization of the needle and hook(Fig. 35)

1. Unscrewing the two positioning screw ① of hook.

2. Rotating the hand wheel to make needle bar ② lift from the lowest place, when using needle DBX1 and DPX5, the mark B on needle bar ② should match to the bottom of lower needle bar ② bushing, when using needle DAX1, the mark D on needle bar ② should match to the bottom of lower needle bar ② bushing.

3. Moving the hook to match the hook point ③ with center of needle ④. Meantime, make the space between the hook point ③ and needle ④ 0~0.05mm.

4. Tightening two positioning screw ① of hook.



Caution:

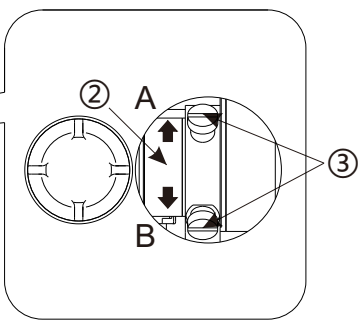
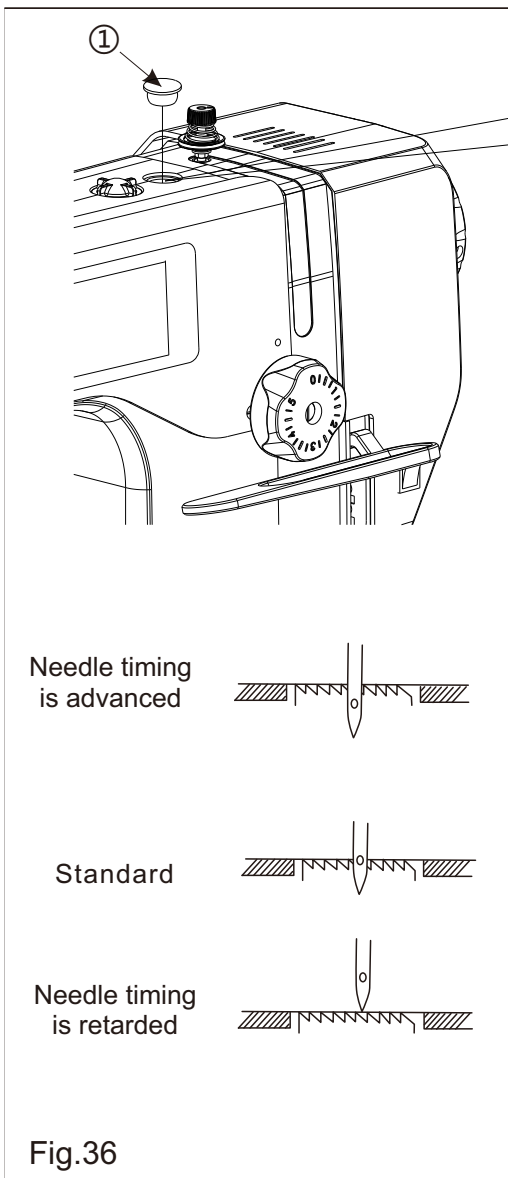
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



2. If the clearance between notch on needle and thread hooking tip of rotating hook is too small, rotating hook tip may be worn; if the clearance is excessive, skipped stitch may take place.

3. It may lead to needle breakage if over-rotating the eccentric wheel towards A direction.

28 Adjust the Synchronization of the Needle and Feed(Fig. 36)



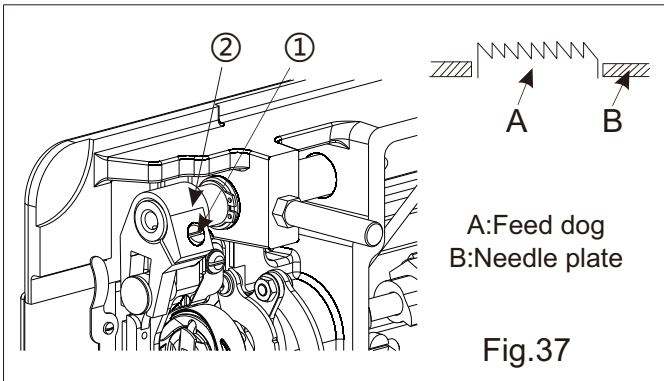
1. Remove the rubber plug ①.
2. Loosen the two set screws ③ of the feed eccentric cam ②, and then turn the feed eccentric cam ② slightly to adjust the timing : If make the needle sooner than material feeding, rotate toward A direction. If make the needle later than material feeding, rotate toward B direction. (The standard of adjustment is when the feed dog falling from the highest to the surface of needle plate, the top of the needle and needle plate should at the same level).
3. Tightening two positioning screw ③ and assembly the rubber plug ① after adjusting.



- Caution:**
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.
 2. If the feed lifting eccentric cam ② is turned too far in the direction A, it may cause the needle to break.
 3. To prevent material slippage from occurring, retard the needle timing.
 4. To improve thread tightening, advance the needle timing.

Fig.36

29 Adjustment of the Height of feed dog(Fig. 37)



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 turned towards A direction; turn towards B direction the feed dog will be lower. (When the feed dog is 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.

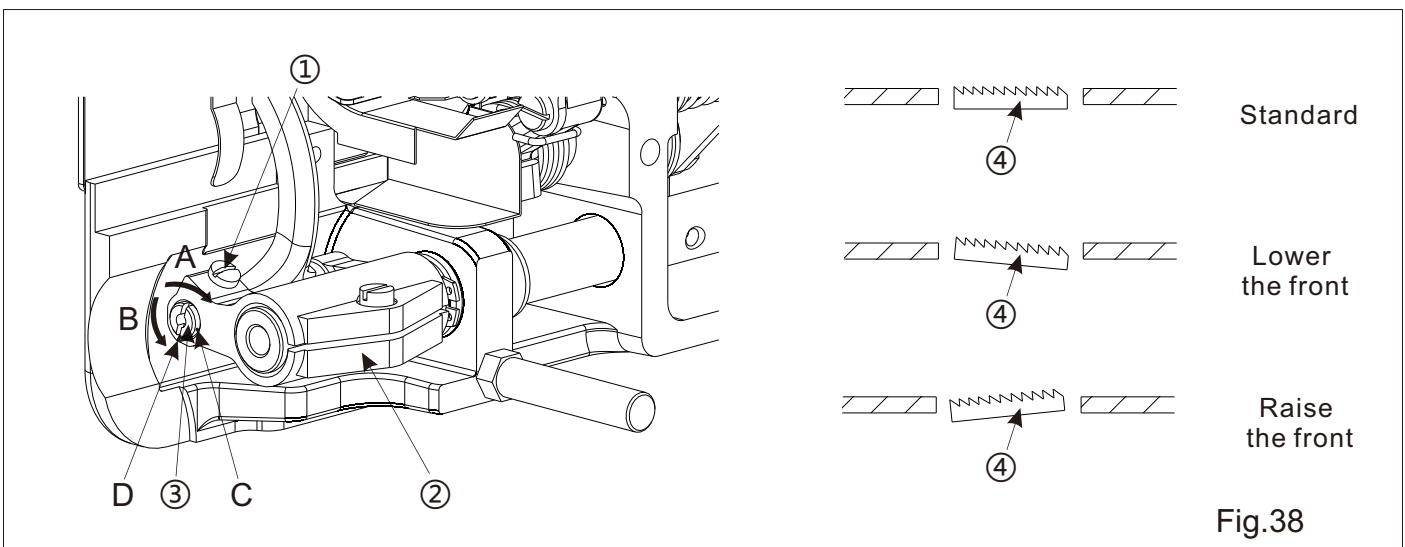


Caution:

1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



30 Adjust the lean of feed dog(Fig. 38)



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. Unscrew 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

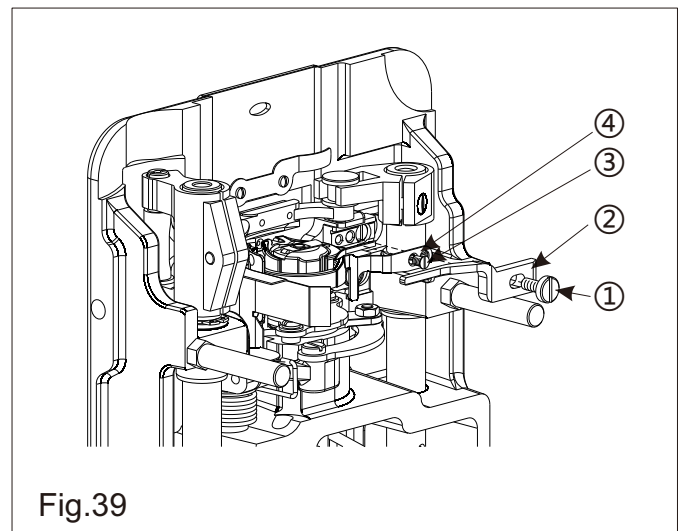


Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.
2. In order to prevent puckering, lower the front of the feed dog.
3. In order to prevent the material from slipping, raise the front of the feed dog.
4. 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.

31 Replacing the fixed knife and movable knife (Fig. 39, Fig. 40, Fig. 41)



1. Removing the stationary trimmer

- 1) Lay down the sewing machine head.
- 2) Screw off screw ①, and remove positionin-g hook ② of rotating hook.
- 3) Screw off screw ③, and take out stationa-ry trimmer ④.



Caution:

1. To prevent the unexpected startup of sewing machine, trim off the pow-er supply before the operation is co-nducted.



2. Carry out the above steps in rever-se to install the fixed knife.

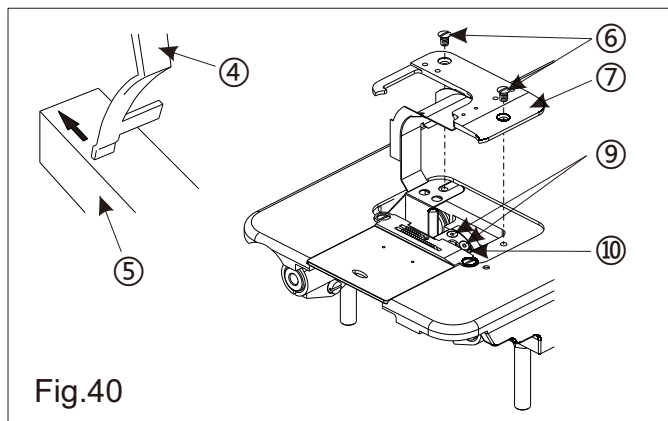


Fig.40

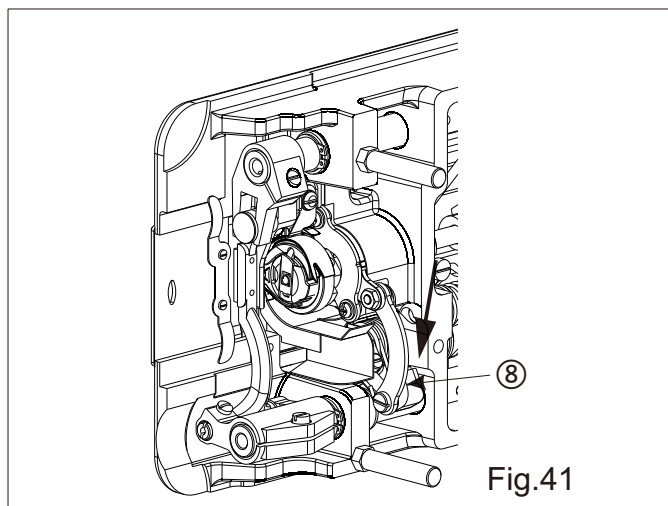


Fig.41

2. Grinding the stationary trimmer

If the cutting performance deteriorates, Sh-arpnen the fixed knife ④ on a whetstone as Sh-own in the illustration ⑤.

3. Removing the movable trimmer

- 1) Remove the needle.
- 2) Uplift the presser foot using foot lifting le-ver.
- 3) Screw off screw ⑥ (2 pieces) , and take o-ut Clearance hole plate ASM.⑦.
- 4) Turn the handwheel to allow the needle b-ar to reach its highest position.
- 5) Lay down the sewing machine head.
- 6) Push thread-trimming driving crank lever ⑧ in direction of arrow till the position of scre-w ⑨ is exposed.
- 7) Screw off screw ⑨ (2 pieces), and take o-ut movable trimmer ⑩.

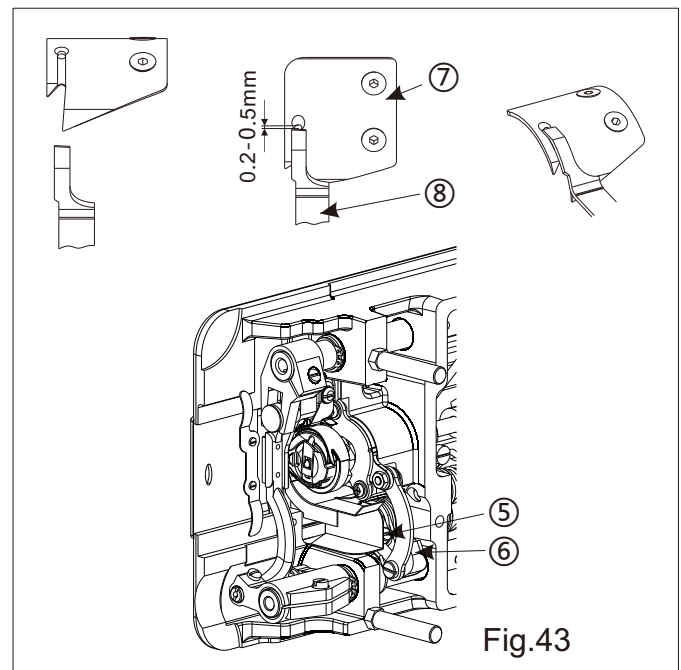
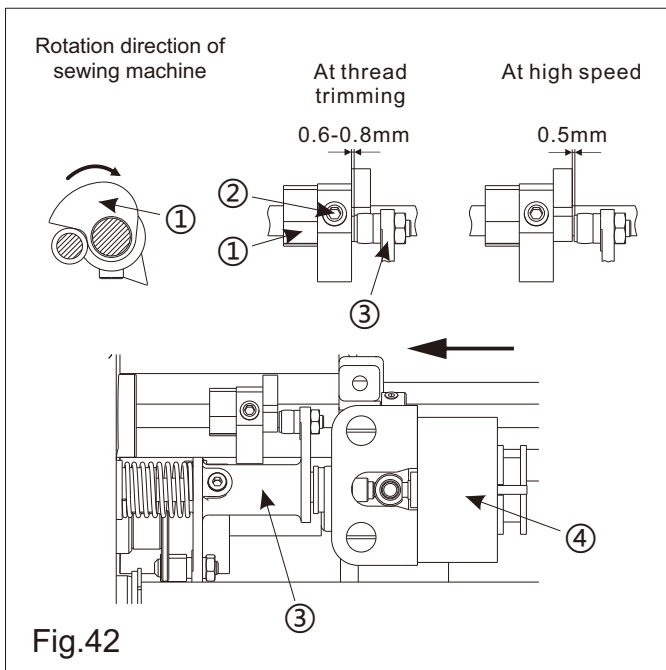


Caution:

1. To prevent the unexpected startup of sewing machine, trim off the pow-er supply before the operation is co-nducted.



2. Carry out the above steps in rever-se to install the movable knife.



32 Adjusting the Thread-trimming Device(Fig. 42, Fig. 43)

1. Adjusting the position of thread-trimming cam
 - 1) Rotating the hand wheel to raise the needle bar 5mm from the lowest place.
 - 2) To press the core in trimming electromagnet ④ with your hands by arrow direction, allowing the ball of the trimming cam crank ③ to press into the cavity in trimming cam ①. And the place of trimming cam ① remains the gap which between the end face of trimming cam ① and the left side on the ball is 0.6~0.8mm.
 - 3) With the 25kgf.cm force to tighten the two screws ② from trimming cam .
 - 4) When the trimming cam crank ③ back to its original place, please confirm that the gap between the right side on the trimming cam ① and the left side on the ball of the trimming cam crank ③ is 0.5mm.



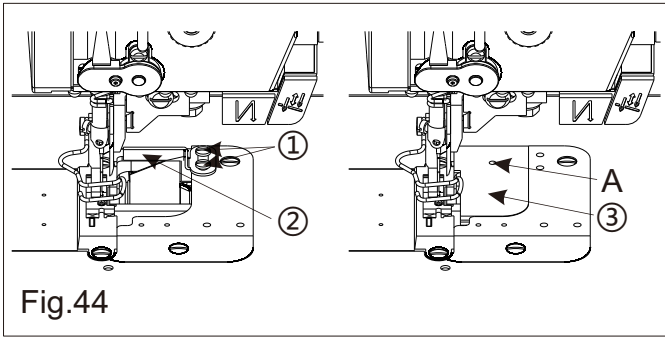
Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

3. Adjusting the positions of movable trimmer and stationary trimmer

Hold down electromagnet core so that the balls in slide block assembly ③ is pressed into the recess on thread-trimming cam ①. Turn th



-e upper wheel, and the front end stationary trimmer ⑧ and cutting edge of movable trimmer ⑦ shall be engaged for 0.2~0.5mm when thread-trimming driving crank lever ⑥ drives movable trimmer ⑦ to perform thread-trimming action. If no engagement is achieved, unscrew screw ⑤ and move thread-trimming driving crank lever ⑥ to engage the front end stationary trimmer ⑧ and cutting edge of movable trimmer ⑦. The adjusted positions of movable trimmer ⑦ and stationary trimmer ⑧ must ensure that cotton thread 203 can be snipped when manual thread-trimming is conducted.



Caution:
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

33 The use of clearance hole cover (Fig.44)

1. When not in use the cutting knife, please unload the two cloth scraps guides screws ① and cloth scraps guides ② first, then put the clearance hole cover onto the plate ③, press the A section from above.

2. After clearance hole cover firmly covered, you can make an ordinary sewing machine use.



Caution:
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

34 Cutting knife (Fig.45, Fig. 46)

1. The operation of cutting knife

1) When cutting knife moves, turn cutting knife switch knob ① down, then make cutting knife switch knob with red engraved point A align red marker dot B knob, The cutter ⑤ is gone down and the machine is driven at the same time.

2) Let cutting knife stop the action, convert

-ed to ordinary sewing machine, Please then make cutting knife switch knob with red engraved point A align blue mark point C knob, cutting knife ⑤ is gone on, then stop.



Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

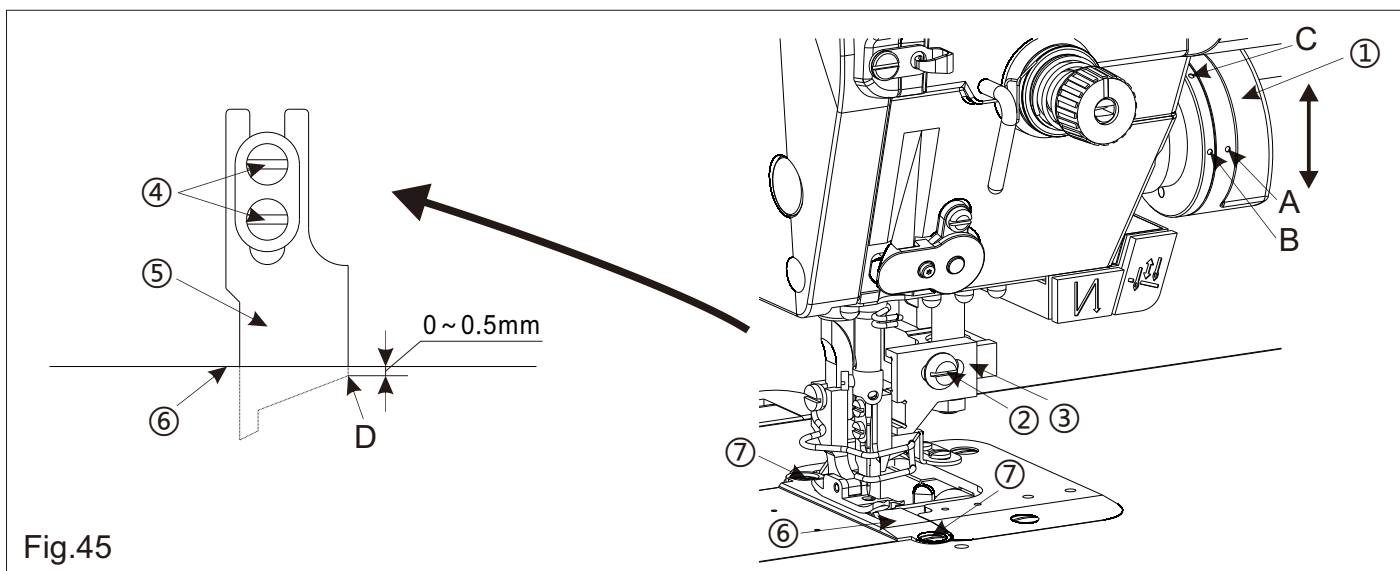


Fig.45

2. The installation method of cutting knife

1) Loosen the screw ② of knife holder , move the knife holder ③.

2) Loosen the two screws ④ of cutting knife , install the cutting knife ⑤ as shown in Figure .

3) Turn the cutter switch knob ① down, turn the hand wheel , move cutting knife ⑤ up and down when the cutting knife ⑤ dropped to the lowest point , let the D portion of cutting knife ⑤ lower than the needle plate ⑥ 0-0.5mm , then tighten the two screws ④ of cutting knife alternately .

4) Move the knife holder ③ , let the blade of cutting knife ⑤ contact the blade of needle plate ⑥ assembly , then tighten the screws ② of knife holder.



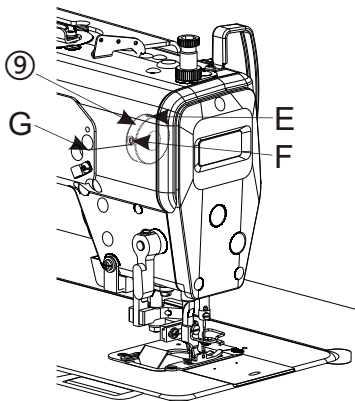
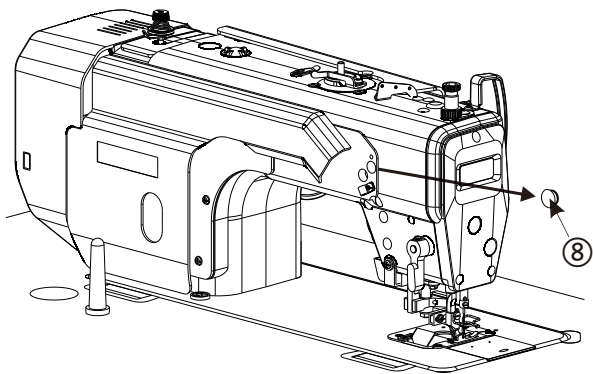
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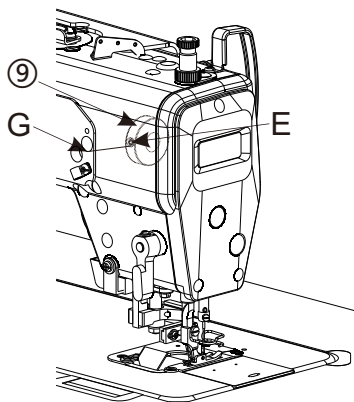
1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

3. The change of cutting width

The cutting width is decided By changing the needle plate assembly .



The adjustment of cutter with synchronous



The adjustment of cutter with asynchronous

Fig.46

1) Replacement of the needle plate assembly.

a. Loosen the screw ② of knife holder, move the knife holder ③.

b. Remove the two screws ⑦ of needle plate, remove the needle plate ⑥ as shown in Figure, Replace the needle plate that is needed to replace, then install the two needle plate screws ⑦.

c. Move the knife holder ③, let the blade of cutting knife ⑤ contact the blade of needle plate ⑥ assembly, then tighten the screws ② of knife holder.



Caution:



1. To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.

4. The adjustment of cutter with synchronous and asynchronous.

1) The adjustment of cutter with synchronous.

a. Remove the rubber plug ⑧.

b. Loosen the two screws on the arbor cam ⑨.

c. Turn the handwheel, turn the needle down to the lowest point. Turn the arbor cam ⑨ clockwise, make the second screw F align along the lower edge of the cabinet hole.

d. After the adjustment is completed, tighten the cabinet hole corresponding to the arbor cam screw F, And then turn the handwheel to tighten the other screw E and install the rubber plug ⑧.



Caution:

1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



2) The adjustment of cutter with asynchronous.

a.Remove the rubber plug ⑧.

b.Loosen the two screws on the arbor cam ⑨.

c.Turn the handwheel, turn the needle down to the lowest point.Turn the arbor cam ⑨ clockwise,make the first screw E align along the lower edge of the cabinet hole G.

d.After the adjustment is completed, tighten the cabinet hole corresponding to the arbor cam screw E, And then turn the handwheel to tighten the other screw F and install the rubber plug ⑧.



Caution:

1.To prevent the unexpected startup of sewing machine, trim off the power supply before the operation is conducted.



The standard cutting width of the wrapper configuration is 1/8 in(3.2mm) .The standard cutting width of the non-wrapper configuration is 3/16 in(4.8mm) . According to user needs , we also additionally equipped with other specifications of the cutting width, see the following table to replace parts if you need to replace.

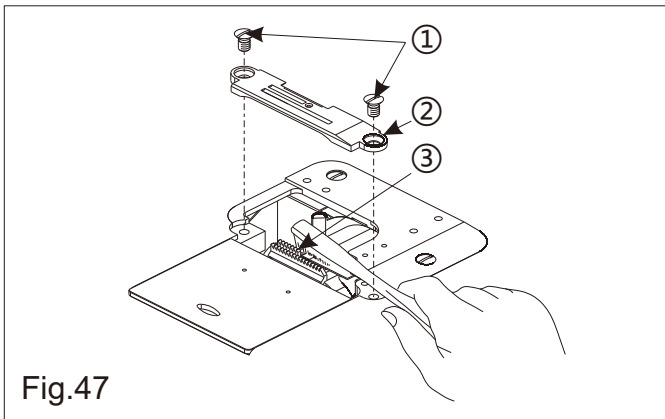
Non-binding configuration

Cutting width	Part NO.		
	Needle plate	Feed dog	Presser foot
1/8in(3.2mm)	10045639	10044601	10044596
3/16in(4.8mm)	10046026	10044601	10044596
1/4in(6.4mm)	10046025	10046027	10046028

Binding configuration

Cutting width	Part NO.		
	Needle plate	Feed dog	Presser foot
3/16in(4.8mm)	10053014	10053013	10045871
1/4in(6.4mm)	10053015	10053013	10045887

36 Maintenance(Fig. 47, Fig. 48, Fig. 49)



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.

3.Ensuring the oil amount in gear case
Confirm that the top of oil amount indicating rod is between the upper engraved marker line and the lower engraved marker line of the oil amount indicating window.(For the details, refer to “6 Lubrication of machine”)

2. Cleaning:

1)Raise the presser foot.

2)Remove the two screws ①, and then remove the needle plate ②.

3)Remove dust adhered to feed dog ③ and thread trimmer unit with a soft brush or cloth.

4)Install the needle plate ② with the two screws ①.

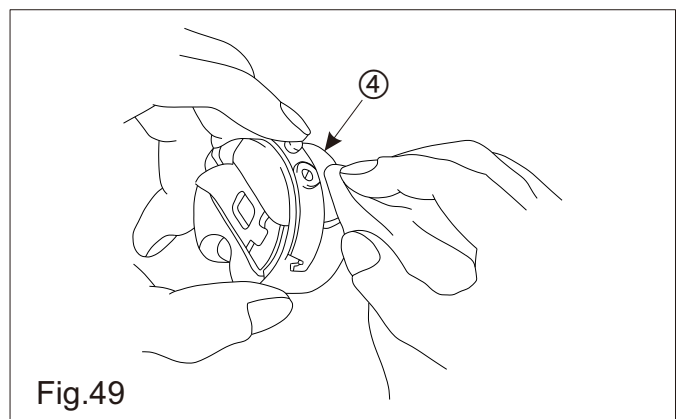
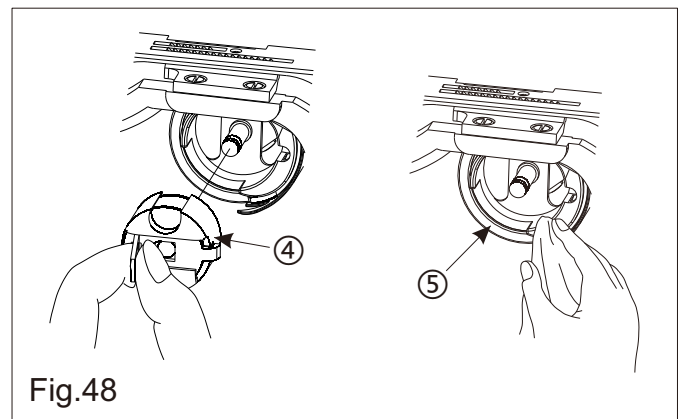
5)Turn over the sewing machine down on the supporting bar of head.

6)Remove the bobbin case ④.

7)Wipe off any dust from the rotary hook ⑤ with a soft cloth, and check that there is no damage to the rotary hook ⑤. Wipe out with the cloth dust and hook oil drained in the under cover near the hook.

8)Remove the bobbin from the bobbin case ④ and clean the bobbin case ④ with a cloth.

9)Insert the bobbin into the bobbin case ④, and then place the bobbin case ④ back into the machine.



37 Carrying and Placing of the Sewing Machine(Fig. 50, Fig. 51)

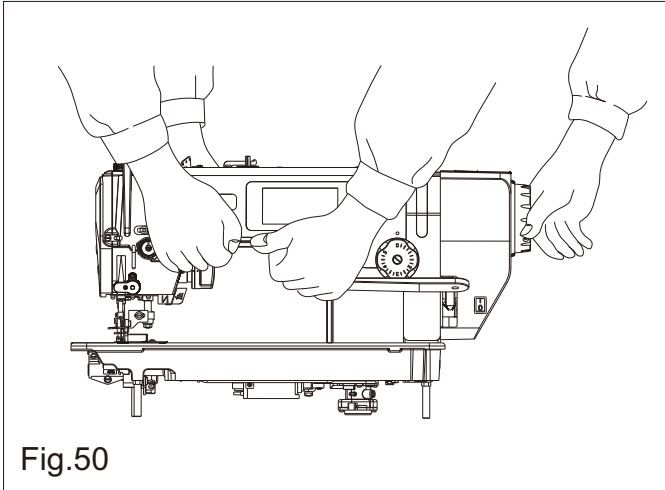


Fig.50

1. Carrying of the machine
It needs to hold tight frame body of the sewing machine by two people as the picture shows.

2. Attention for placing
Must be put in the plain site. Clear the screwdriver or something embossment out of the placing site.

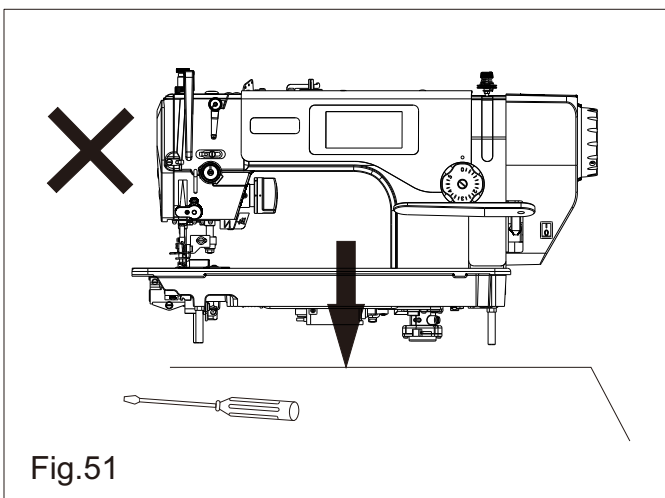


Fig.51

