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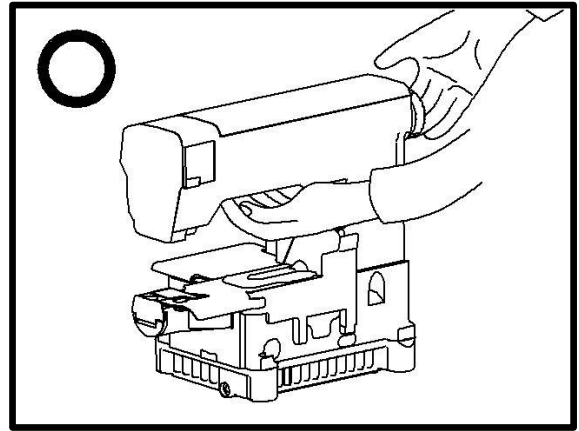
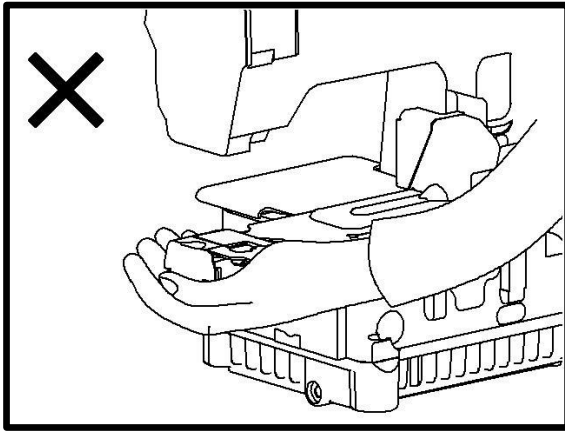
1. Specification

Model	MU 811
Description	High-speed 3-needle 5-thread cylinder thin tube interlock machine
Size	445mm (L) x 270mm (W) x 405mm (H)
Workspace	Circumference 180mm
Weight	39kg
Application	Seaming of textile and hemming of bottom side
Sewing speed	Max. 4500 R.P.M.;
Sewing pitch	1.4mm-4.2mm 6-18 stiches per inch; 7-18 stiches per 30 mm
Needle type	UY x 128GAS(UY128GAS) #65-#90
Stitch pitch	Three-needle: 4.8, 5.6, 6.4mm
Needle stroke	31mm
Presser foot lifter	Max.: 7.0mm (With upper decorative thread: 5.0mm)
Feeding method	Control lever or adjustment knob
Differential ratio	General differential ratio: 1.0:1.4 Negative differential ratio: 1.0:0.8
Differential feed adjustment	Operation with control lever (“New moon eyebrows type”, adjustable with screwdriver)
Lubrication	Automatic lubrication by oil pump (together with splash lubrication)
Lubricant	OIL No.22
Oil canister capacity	800 cc
Installation style	Tabletop or semi-sunken installation

2. Installation

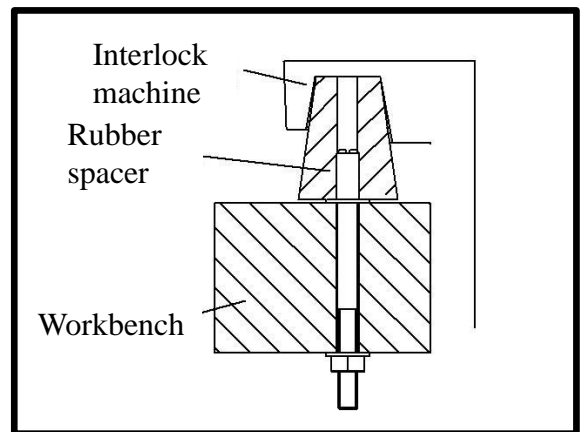
2.1 Notice for transportation

During transportation, please hold the machine arm and handwheel (as shown in the figure). Never hold the cylinder, otherwise the machine may be damaged.



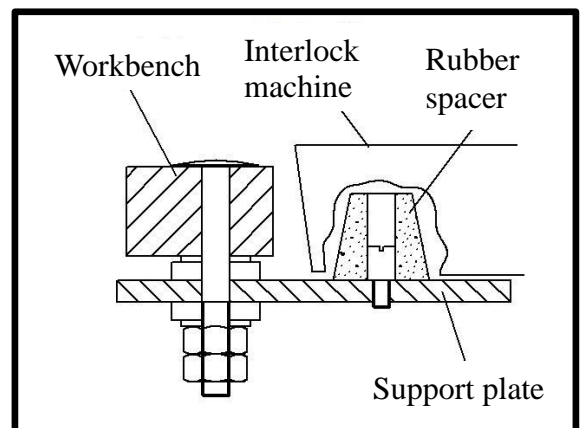
2.2 Desktop installation

- (1) Tighten nuts and bolts under the machine workbench.
- (2) Fix the rubber spacer on the bolt.
- (3) Fix the sewing machine firmly on the machine workbench.



2.3 Sunken installation

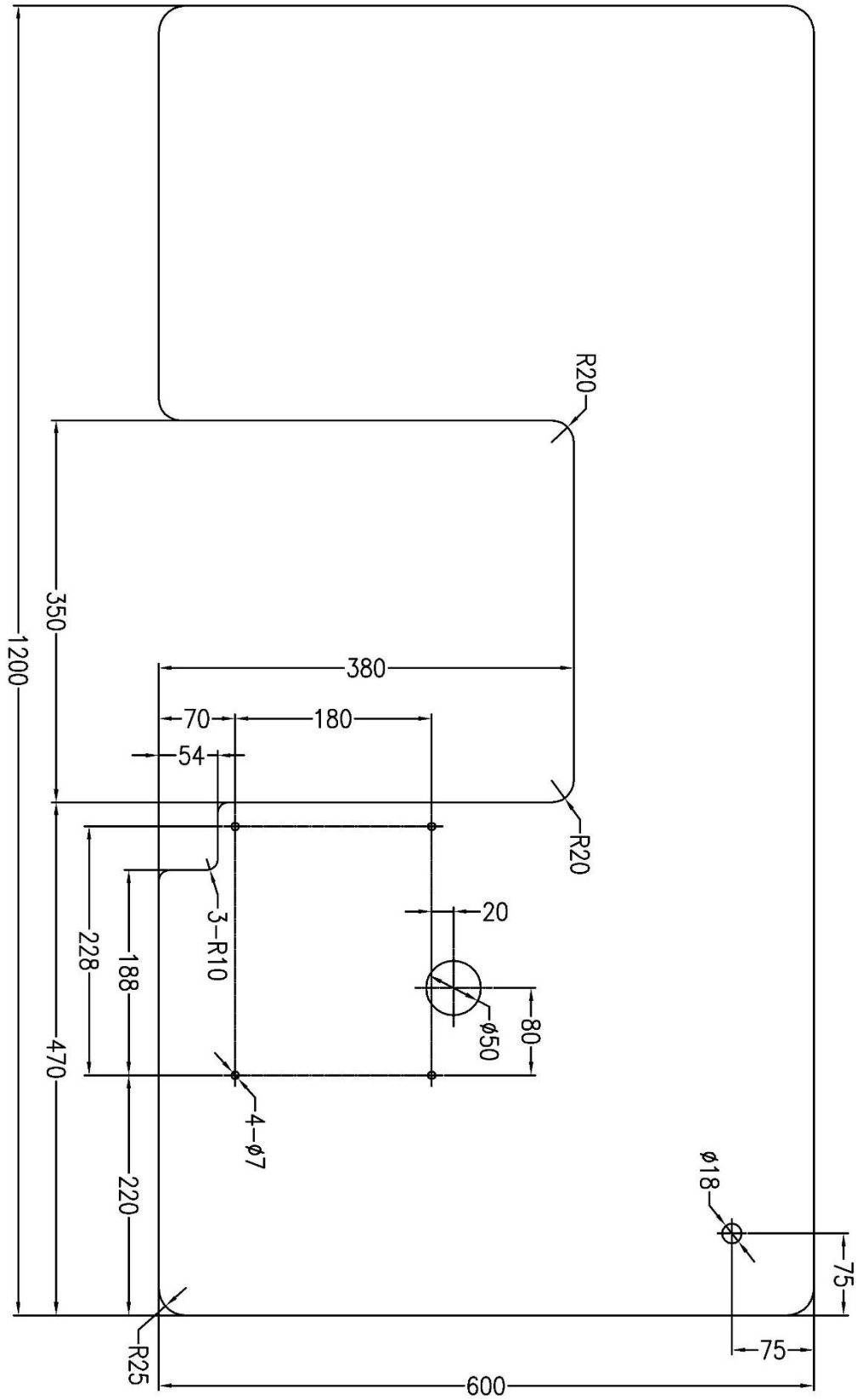
- (1) Tighten the screws on the support plate
- (2) Mount the support plate on the machine workbench.
- (3) Place rubber spacer on the screw.
- (4) Fix the sewing machine firmly on the machine workbench.



2. Installation

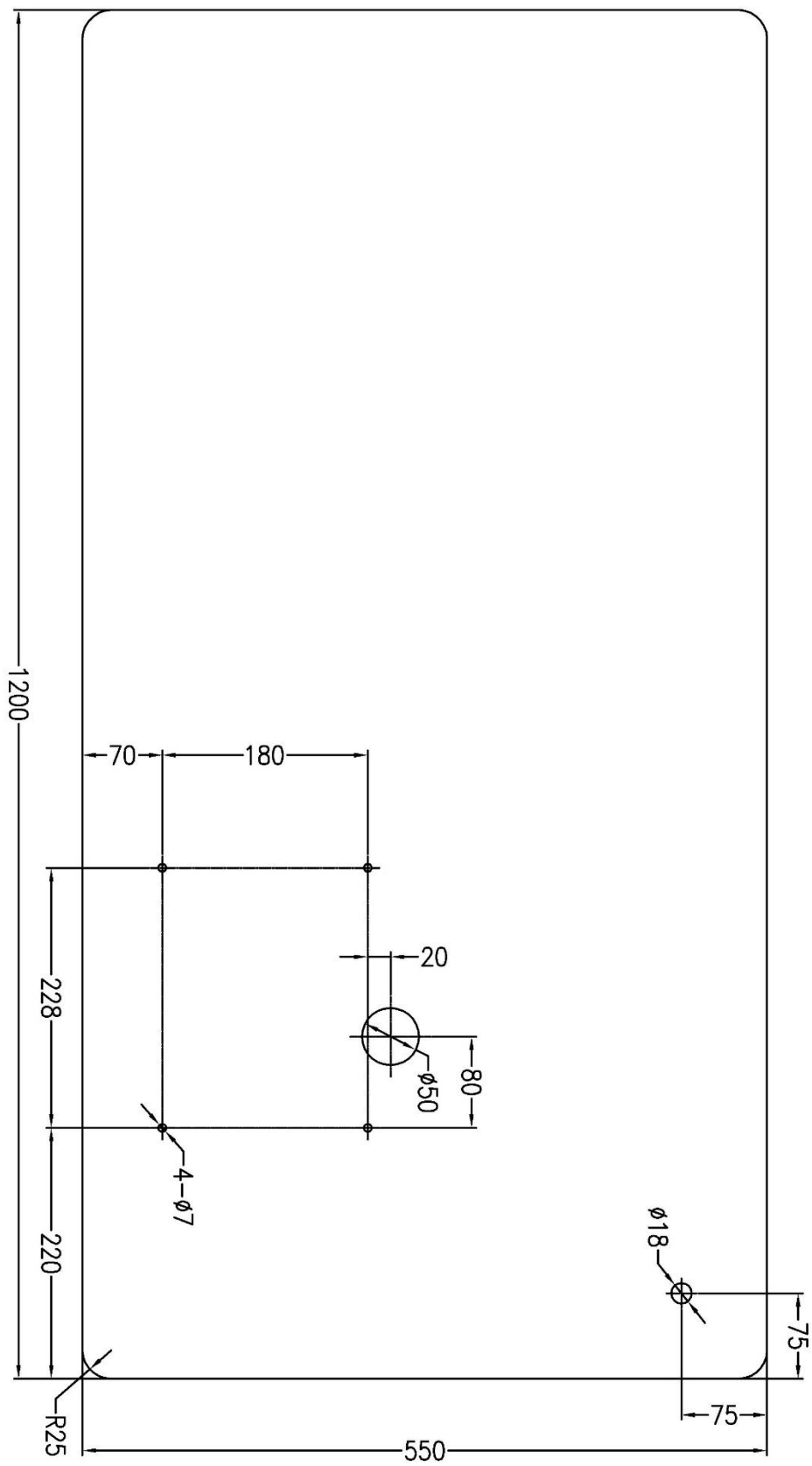
2.4 Tabletop Diagram

☆ Desktop Type A



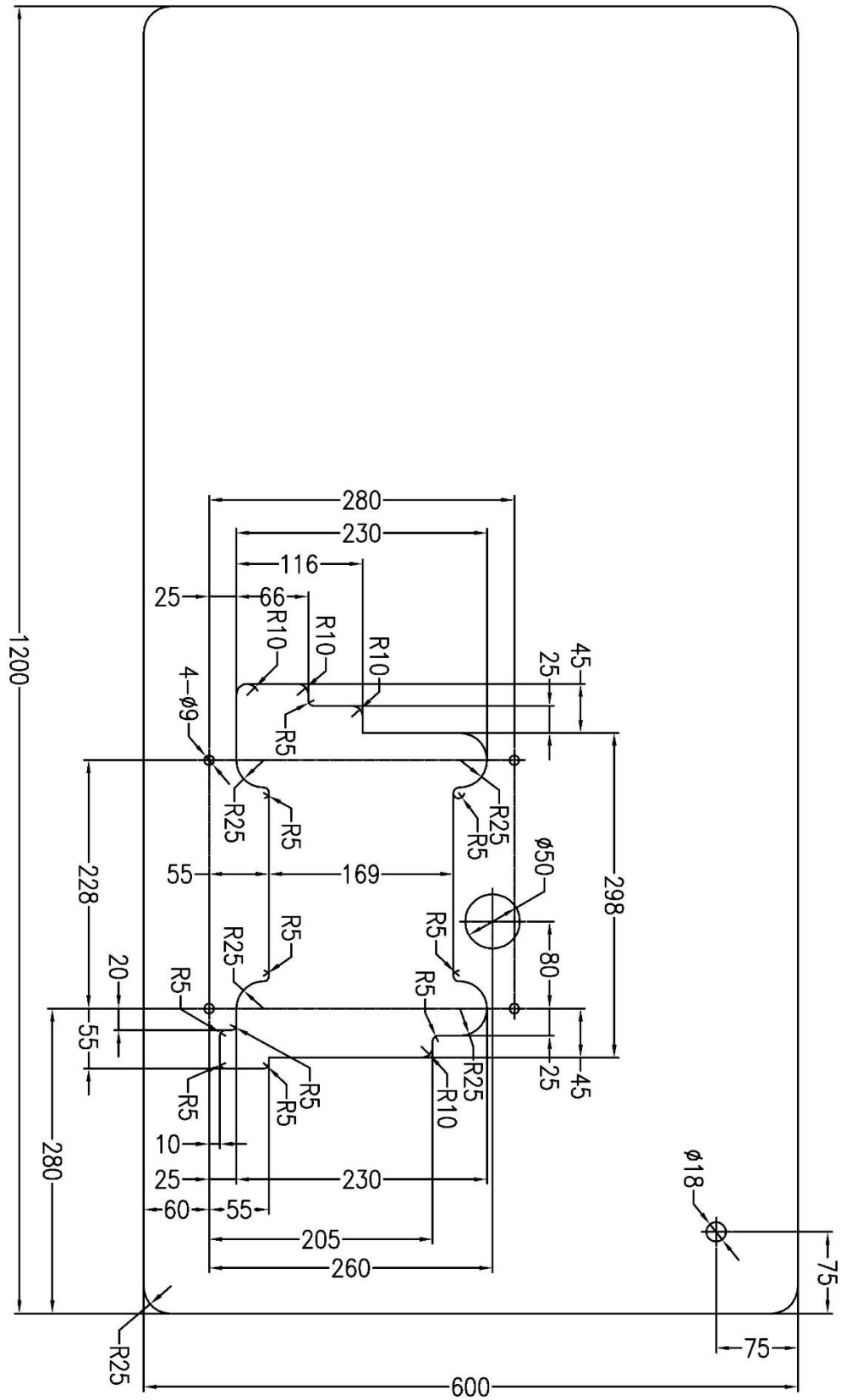
2. Installation

☆ Desktop Type B



2. Installation

☆ Sunken Type



3. Lubrication

3.1 Lubricant

Use OIL No.22.

! Warning !

DO NOT add additive into the lubricant which could cause oil degradation and damage to the machine.

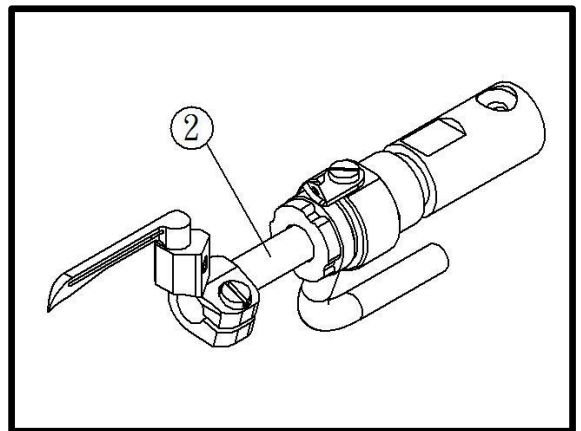
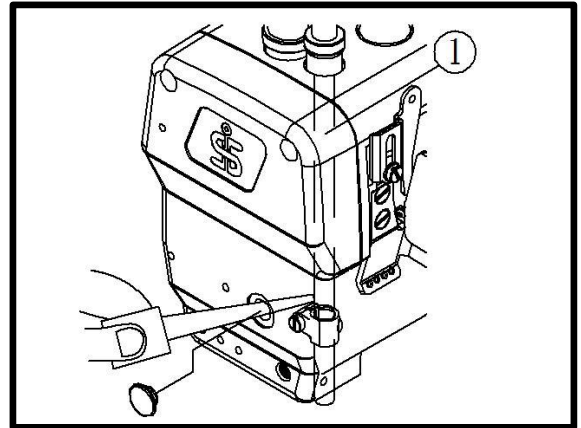
3.2 Lubrication

When using a new machine or a machine which is idle for a period of time, please add a few drops of oil to the needle bar ① and looper bar ②.

Remove the sealing plug marked with “OIL” ③ and pour lubricant until it reaches the upper line of the oil lens ④.

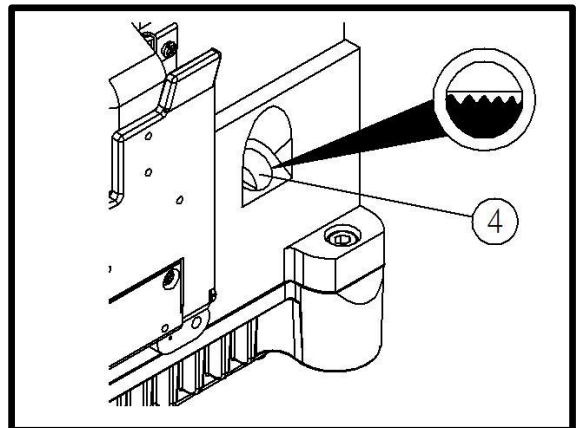
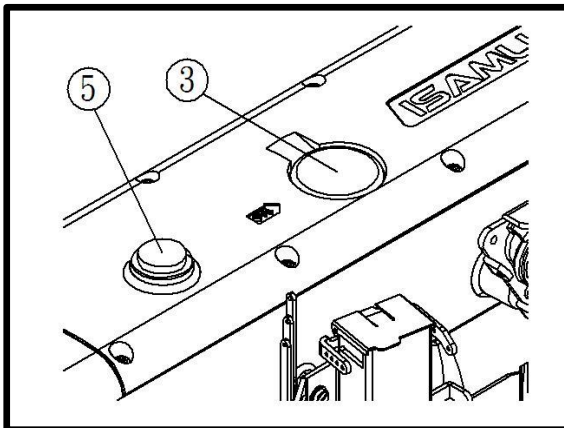
When the machine is under operation, check whether there is oil splashed from the nozzle within the oil lens ⑤.

If there is no oil splashed from the nozzle, please refer to “3.4 Check and replace oil filter”.



! Warning !

Either excessive oil or insufficient oil will cause oil leakage and machine failure. Be sure to keep the oil level between the lines. Excessive lubrication may also lead to oil splash and material contamination.

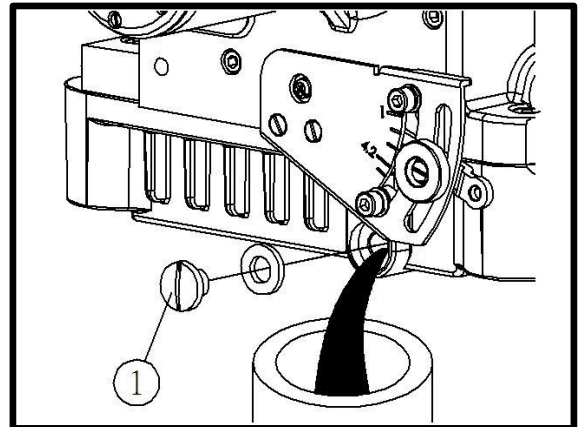


3. Lubrication

3.3 Oil change

For a new machine, change oil after running for 200 hours (about one month). Change oil once or twice a year afterwards.

- (1) Loosen the screw ① and drain the oil.
- (2) Tighten the screw ①.
- (3) Mount the sewing machine back to the workbench.
- (4) Pour in new Oil No.22.

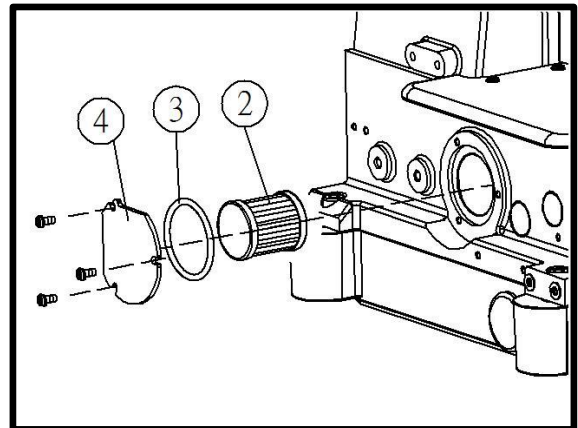


3.4 Check and replace oil filter

If the oil filter ② is blocked by dust, it will not be able to perform lubrication properly.

Remove the oil filter cover ③ and the oil filter ② every six months for inspection. If it is blocked or broken, please clean or replace the oil filter.

If the oil splashed from the nozzle is insufficient or has many bubbles when the oil is fully retained, please check or replace the oil filter.



Note: When loosening the screw ④, please check and replace it carefully, do not let the oil in the filter ② splash out.

4. Operation method

4.1 Needle series

Use needles of UY x 128GAS(UY128GAS).
Select proper needle based on the thickness
and types of fabric.

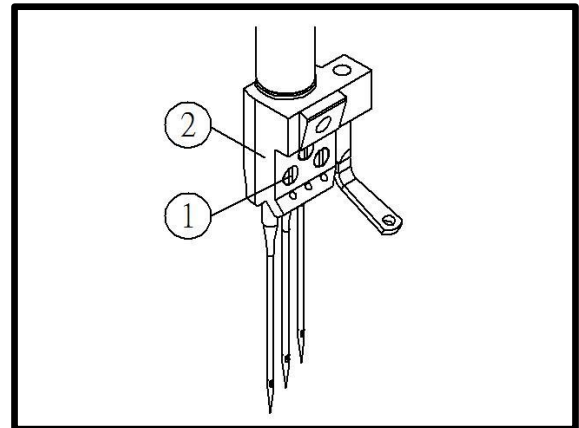
Japanese spec.	9	10	11	12	13	14
Metric spec.	65	70	75	80	85	90

4.2 Needle installation

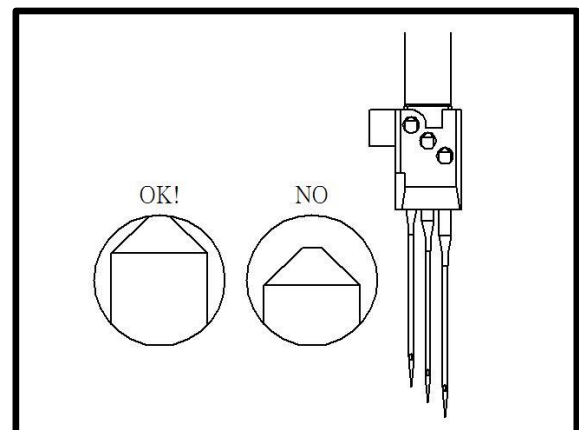
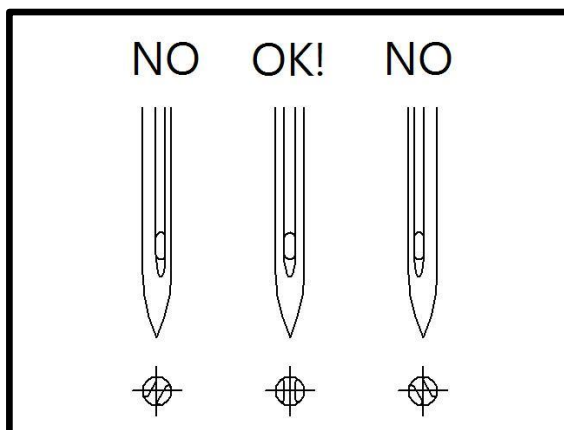
! Warning !

Always turn off the power and check
whether the machine stops before the
installation.

- (1) Use screwdriver to loosen the screw ①.
- (2) Use tweezers to take out the old needle.
- (3) Insert a new needle into the needle clamp ②,
let the groove face toward the rear direction.
- (4) Use screwdriver to tighten the screw ①.



Note: Use the torque of 0.6N-m (6kgf-cm)
to tighten the screw ①.



4. Operation method

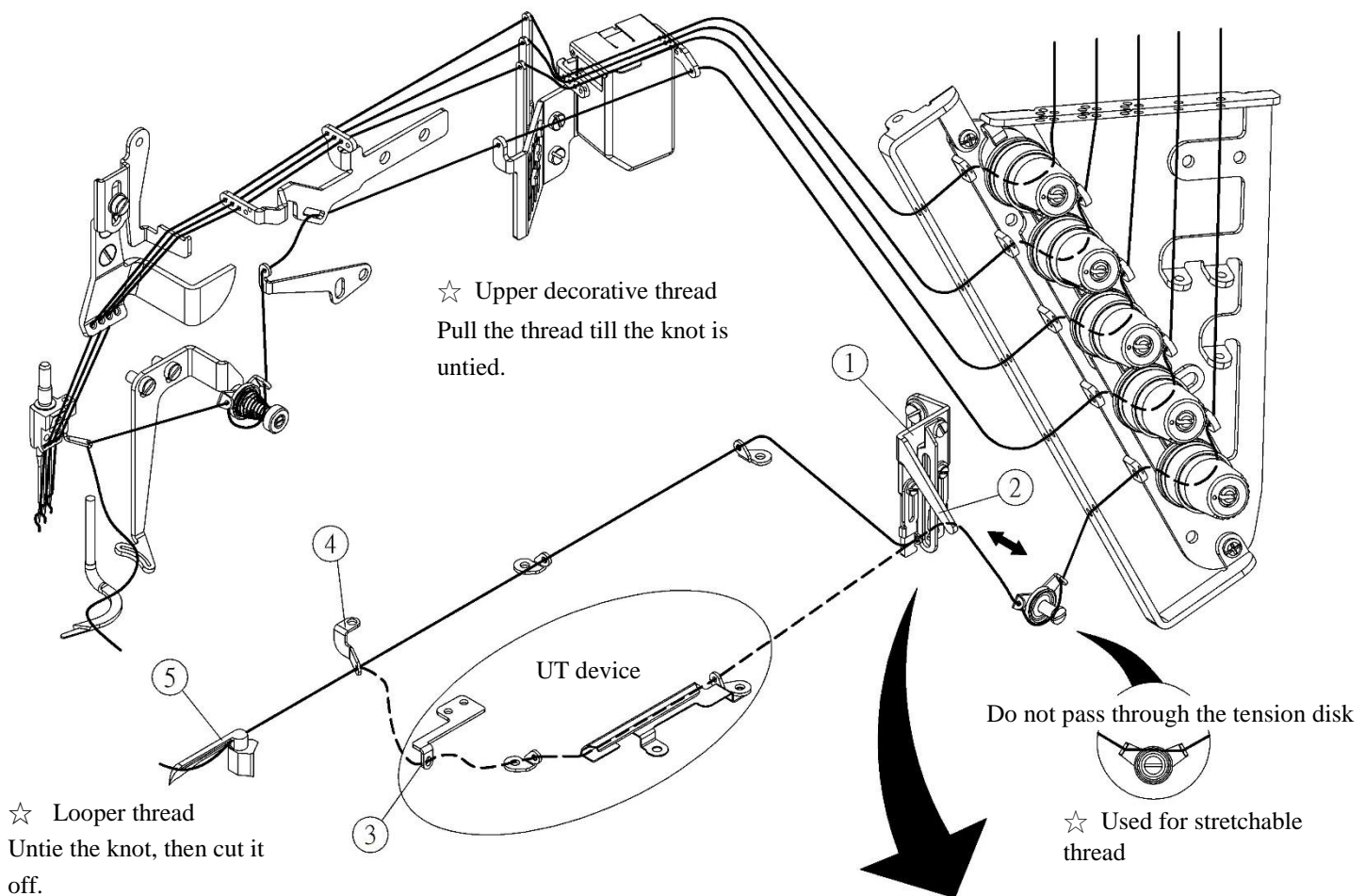
4.3 Threading

When the needle is not threaded, follow the figure below to thread.

When the needle is already threaded, bind a new thread and tie a dead knot, then rethread.

☆ Thread: Pull the thread to the front of the needle, then cut off the knot in front of the needle hole and rethread.

As shown in the figure, the correct threading operation is to thread the left needle in the innermost position.



Note: Threading for the sewing machine with the UT device
Pass through the threading release plate ③, then pass through the crochet threading hole ④, pass through the looper thread ⑤ at last.

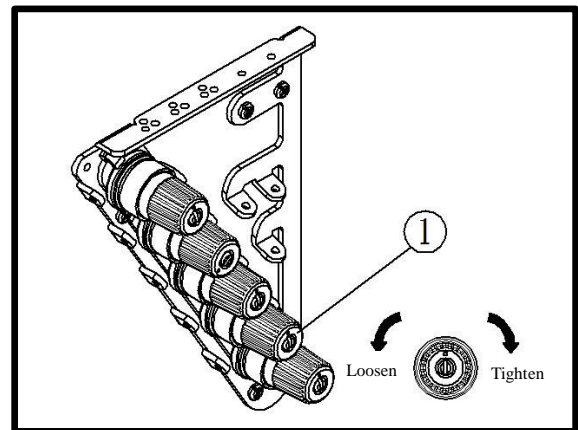
Note: To facilitate threading, please pull the rod ① of the thread guide bracket ②.
After threading, push the rod ② to reset the thread guide bracket ① to its original position.

4. Operation method

4.4 Thread tension adjustment

According to the fabric type, thread type, seam width, stitch length and other sewing conditions, use the thread tension spring cap ① to adjust the thread tension.

- Turn the cap clockwise to tighten the tension.
- Turn the cap counterclockwise to loosen the tension.

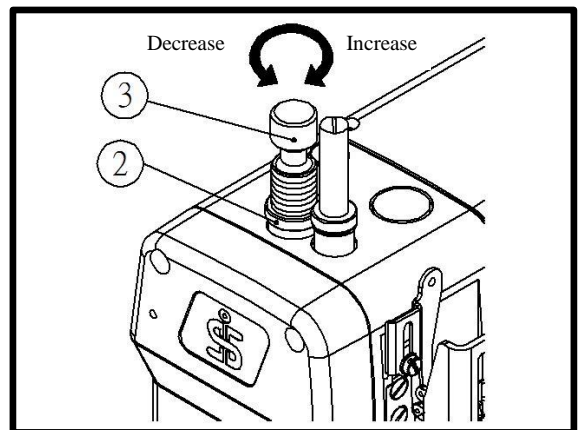


4.5 Presser foot pressure

Loosen the nut ②, then turn the adjusting screw ③ to adjust the pressure.

- Turn it clockwise to increase the presser foot pressure.
- Turn it counterclockwise to decrease the presser foot pressure.

Keep the pressure at the lowest level to ensure stable sewing performance.



Reminder: when the presser foot is actuated, do not use the adjusting screw ③ to adjust the pressure.

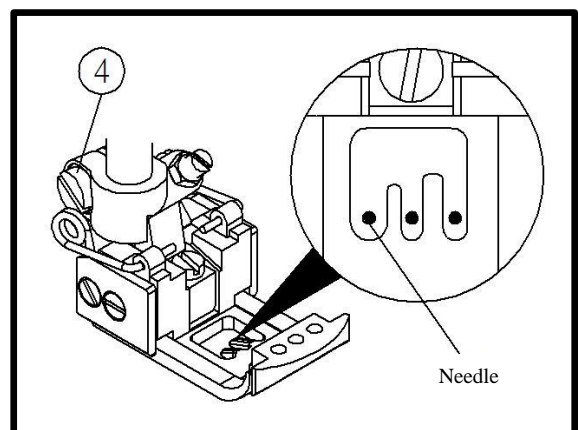
4.6 Presser foot position adjustment

! Warning !

Before the adjustment, always turn off the power switch and check whether the machine has already stopped.

Adjust the left and right positions of the presser foot's needle hole

- (1) Loosen the screw ④.
- (2) Move the edge of the presser foot left and right so that every needle falls to the center of the needle hole.
- (3) Tighten the screw ④.



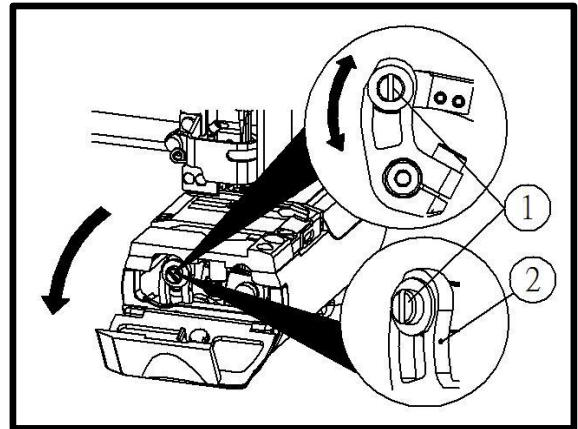
4. Operation method

4.7 Differential adjustment

When the center of the screw ① is aligned with the point ②, the differential ratio is 1:1.

- (1) Loosen the screw ①.
- (2) During tight sewing, move the screw ① up (max. positive differential ratio is 1: 1.4).
During stretchable sewing, move the screw ① down (max. negative differential ratio 1:0.8).
- (3) Tighten the screw ①.

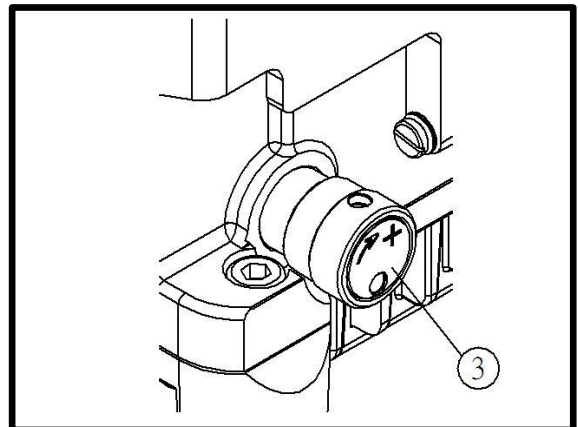
Note: At the stitch pitch of 4.2mm, max. positive differential ratio is 1:1.2.



4.8 Stitch pitch adjustment

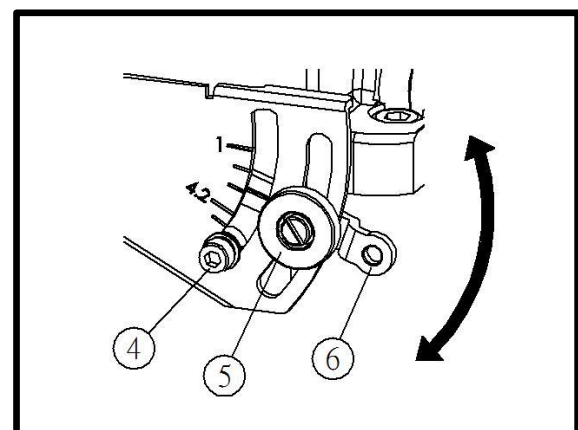
The range of the adjustable stitch pitch is from 1.4mm to 4.2mm.

- For increasing the stitch pitch, turn the adjustment knob ③ clockwise, the feeding lever ⑥ will move down.
- For decreasing the stitch pitch, turn the adjustment knob ③ counterclockwise, the feeding lever ⑥ will move up.



Number of stitches per inch/30 mm as shown in the table below

Stitch pitch (mm)	Per stitch	
	inch	mm
4.2	6	7.5
3.6	7	8
2.4	10.5	12.5
1.4	18	21



4. Operation method

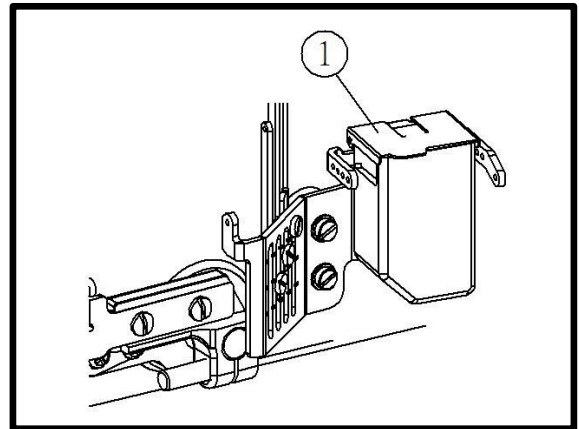
4.9 SP device

For high-speed machine operation or using synthetic threads and synthetic fibers, please use the standard SP device (oiled needle and thread) to prevent thread breakage and skipped stitches.

Use dimethyl silicone oil.

Note:

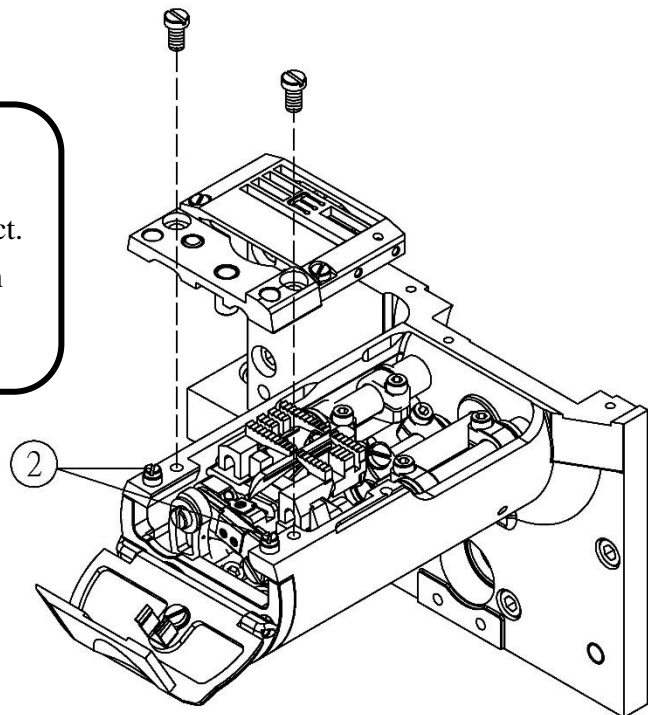
- (1) Open the lid ① of the SP device occasionally to check the oil level. Add oil if the oil level is low.
- (2) Never supply silicone oil into the machine. If silicone oil is splashed into the machine, please use a rag to wipe it clean thoroughly, otherwise it may damage the machine.



4.10 Cleaning sewing machine

Scrap threads and dust inside of the sewing machine will cause mess. Sewing machine should be cleaned regularly. The groove of the throat plate and the area around the feed dog should be particularly cleaned.

Note: If air gun is used, please be careful to remove dust and scrap threads on the product. Never loosen the locating bush screws ② on the throat plate holder.



5. Adjusting device

! Warning !

Before adjustment, always turn off the power and check whether the machine has already stopped.

5.1 Thread tension

Positions of thread holes:

The standard position of each thread hole is shown in the figure.

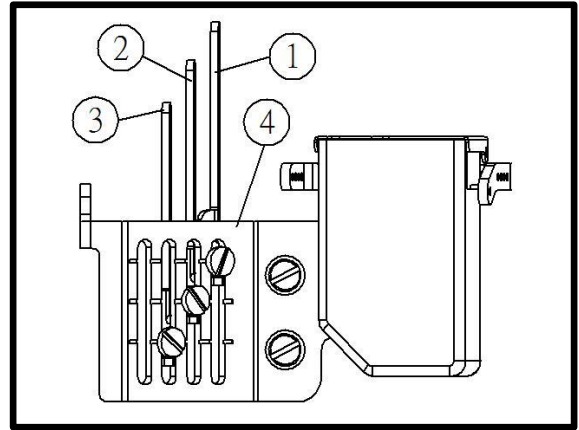
Be sure to align the center of the screw with the thread hole bracket ④.

Right thread hole ①: upper thread.

Middle thread hole ②: middle thread.

Left thread hole ③: lower thread.

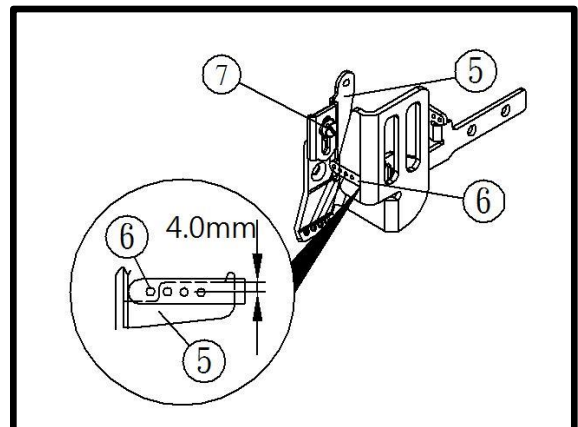
- To tighten the thread, raise the thread hole.
- To loosen the thread, lower the thread hole.



Thread thimble plate:

When the thread take-up lever ⑥ is at the bottom, its standard position is that the thread hole center of the take-up lever ⑥ is 4.0mm away from the top of the thread thimble plate ⑤.

- To enlarge the thread loop or use a stretchable thread, please loosen the screw ⑦ and raise the thread thimble plate ⑤.
- To shrink the thread loop, please loosen the screw ⑦ and lower the thread thimble plate ⑤.



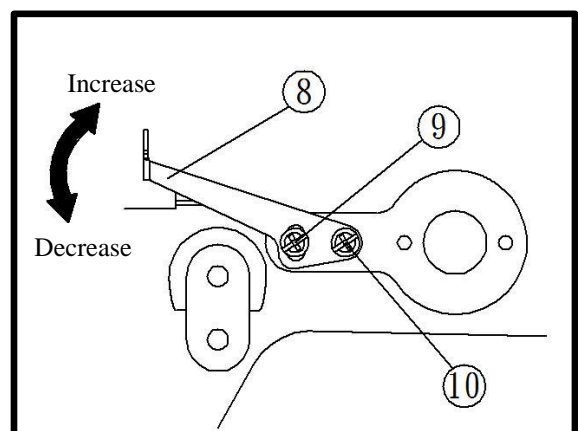
5.2 Upper decorative thread tension

Align the center of the groove of the eyelet lever for the upper decorative thread (upper) ⑧ with the center of the screw ⑨.

Loosen the screws ⑨, ⑩ for adjustment.

- To increase the thread feeding, raise the eyelet lever for the upper decorative thread (upper) ⑧.
- To decrease the thread feeding, lower the eyelet lever for the upper decorative thread (upper) ⑧.

Note: When using stretchable thread such as wool, adjust the eyelet lever for the upper decorative thread (upper) ⑧ until it is higher than the standard value.



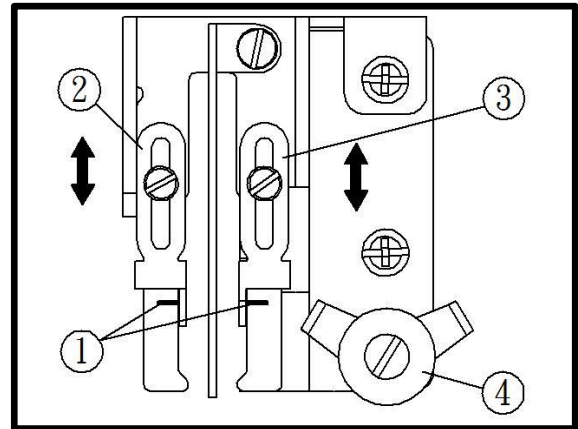
5. Adjusting device

5.3 Looper thread tension

Align the thread guide holes (left) ② and (right) ③ with the marking line ① on the thread guide bracket as the benchmark.

Loosen two screws for the thread guide holes for adjustment.

- To tighten the looper thread tension, raise the thread guide holes (left) ② and (right) ③.
- To loosen the looper thread tension, lower the thread guide holes (left) ② and (right) ③.

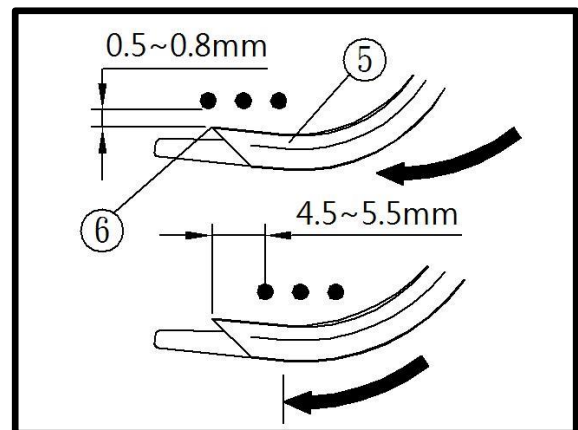


Note: When using stretchable threads, move the thread guide holes ② and ③ to the lowest point. Do not lead the thread through the top cover tension disk ④.

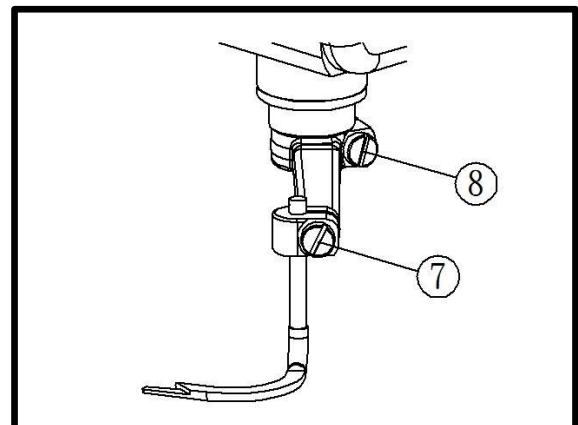
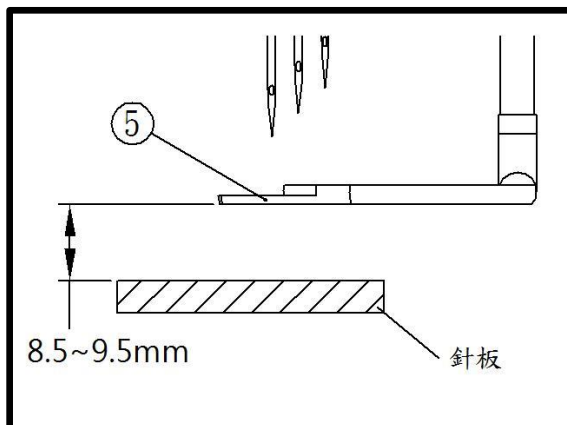
5.4 Needle and the crochet needle for the upper decorative thread

5.4.1 Installation of the crochet needle for the upper decorative thread

- (1) Loosen the screws ⑦, ⑧ on the crochet needle bracket.
- (2) Set the distance between the left needle and the needle tip ⑥ on the crochet needle ⑤ to be from 0.5mm to 0.8mm.
- (3) When the crochet needle ⑤ is at the leftmost end, set the distance between the center of the left needle and the crochet needle tip ⑥ to be from 4.5mm to 5.5mm, then tighten the screw ⑧.
- (4) Set the distance of the throat plate surface and the bottom of the crochet needle ⑤ to be from 8.5mm to 9.5mm. Then tighten the screw ⑦.



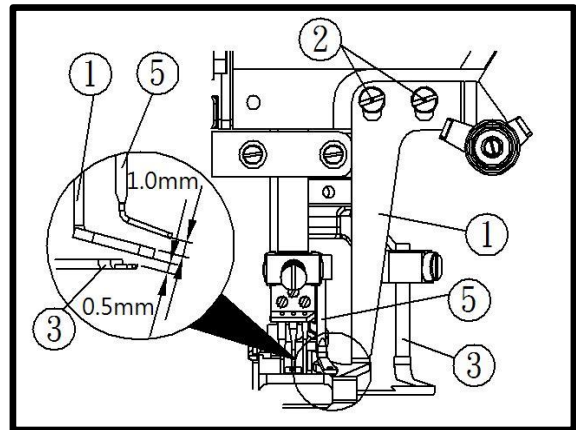
Note: Adjust the height of the crochet needle for the upper decorative thread, based on the stitch pitch within the adjustable range, let the upper decorative thread pass through the rear side of the right needle and hooked by the left needle.



5. Adjusting device

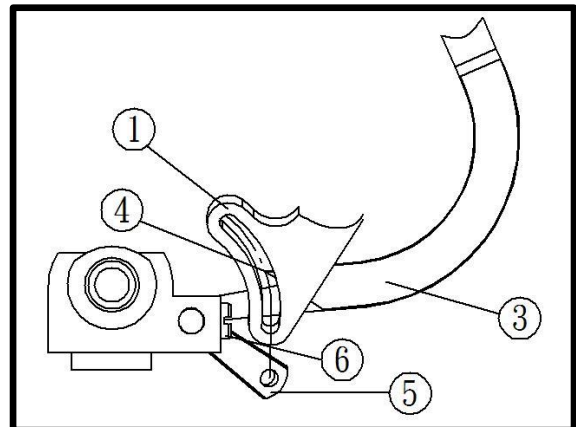
5.4.2 Installation of the thread guide plate for the upper decorative thread

- (1) Loosen the screw ② on the guide hole plate for the upper decorative thread ①.
- (2) Set the distance between the top of crochet needle for the upper decorative thread ③ and the bottom of the thread guide plate for the upper decorative thread ① to be 0.5mm
- (3) When the crochet needle for the upper decorative thread ③ is at the rightmost end, place the crochet needle tip ④ in the middle of the thread groove of the thread guide plate for the upper decorative thread ①, then tighten the screw ②.



5.4.3 Installation of the guide hole for the upper decorative thread

- (1) Loosen the screw ⑥ on the guide hole for the upper decorative thread ⑤.
- (2) When the needle bar is at the lowest point, set the distance between the top of the thread guide plate ① and the bottom of the guide hole for the upper decorative thread ⑤ to be 1.0mm.
- (3) Set the guide hole for the upper decorative thread ⑤ along the thread extending from the groove of the guide plate for the upper decorative thread ①.
- (4) Tighten the screw ⑥.



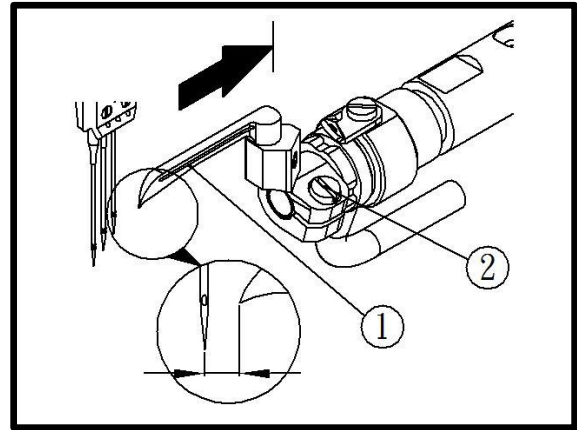
5. Adjusting device

5.5 Distance between needle and looper

The distance between the looper tip and the center of the right needle depends on the distance between the needle at its lowest point and the looper ① at the rightmost end.

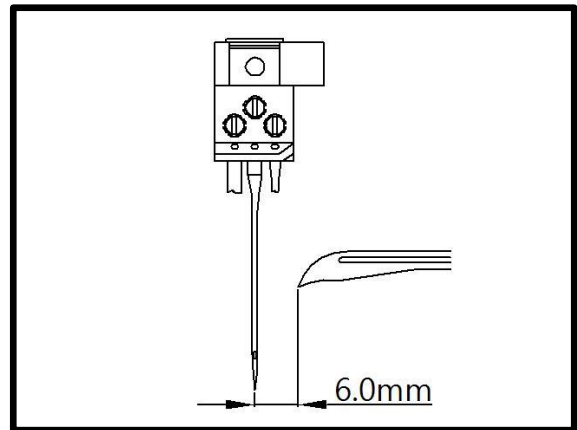
After referring to the table, loosen the screw ② of the looper bracket to adjust the distance.

Note: Even if the stitch pitch changes, the distance between the center of the needle bar and the looper tip ① is still 6.0mm.



Stitch pitch (mark)	Measurement mark	Looper distance
3.2mm (32)	A	4.4mm
4.0mm (40)	B	4.0mm
4.8mm (48)	C	3.6mm
5.6mm (56)	D	3.2mm
6.4mm (64)	E	2.8mm

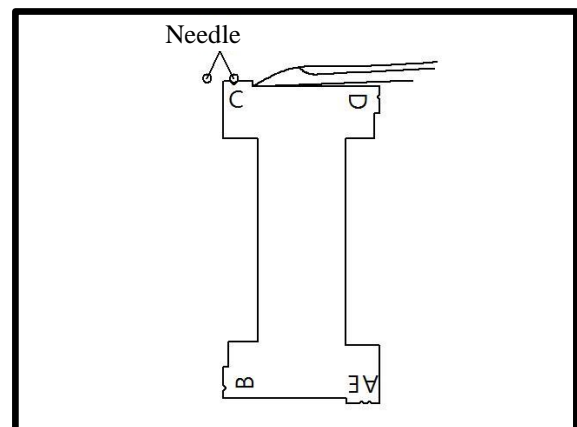
Use a gauge to ease the distance adjustment.



5.6 Use of gauge

The gauge has marks (A, B, C, D, E) of different specifications for each stitch pitch, which is applicable for the adjustment of different stitch pitch.

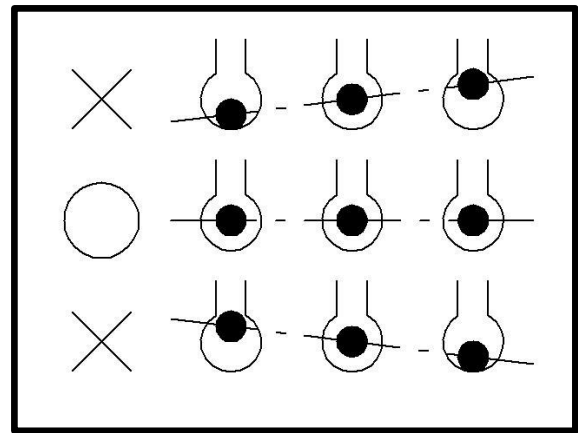
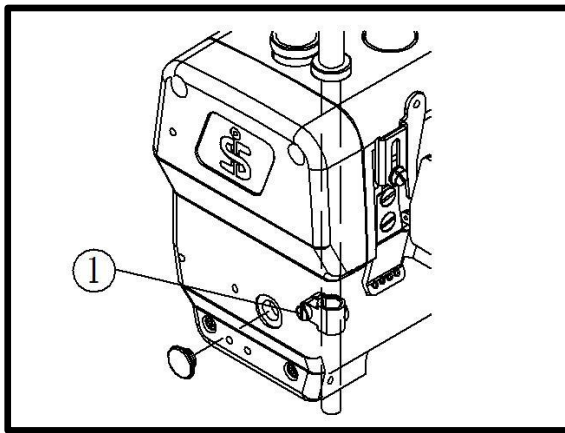
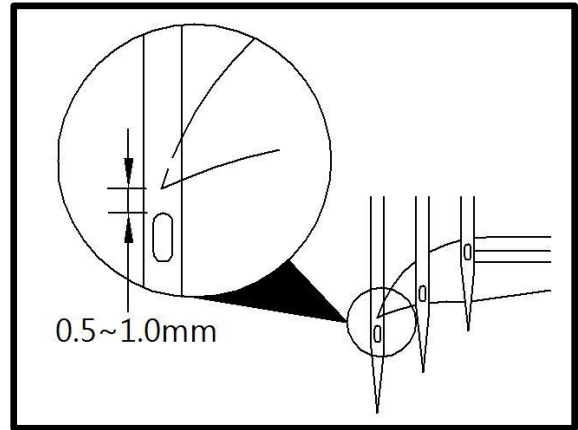
Move the looper to the rightmost end, place the right needle in the V-groove of the corresponding stitch pitch and move the looper tip to the edge of the gauge.



5. Adjusting device

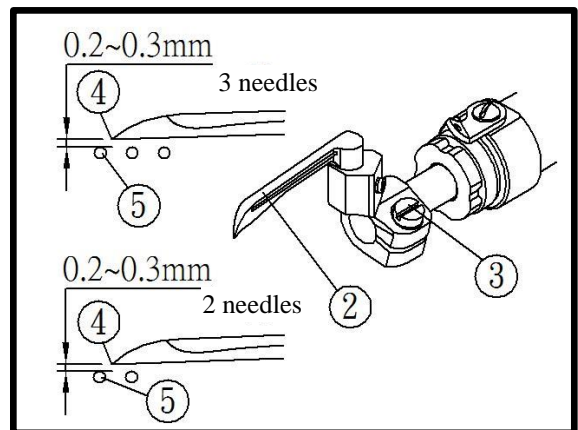
5.7 Needle height

- (1) Install the needle into the left hole of the needle clamp.
- (2) Check whether the looper is fully inserted into the looper bracket.
- (3) Turn the handwheel, until the looper tip meets the center of the left needle.
- (4) Loosen the screw ① of the needle bar bracket, then move the needle bar up and down to keep the looper tip away from the top of the needle eye for 0.8mm to 1.3mm.
- (5) Tighten the screw ①, and check whether the needles are in the middle of the holes on the throat plate respectively.



5.8 Front and rear positions of the needle and looper

- (1) Turn the handwheel, until the looper tip ④ moves to the center of the left needle ⑤.
- (2) Loosen the screw ③, and move the looper holder to keep the distance between the back side of the left needle ⑤ and the looper tip to be from 0.2mm to 0.3mm, then tighten the screw ③.



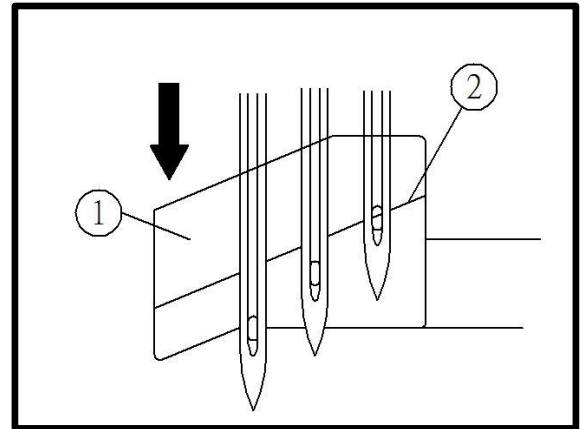
Note: After tightening the screw ③, the looper position in the front/rear direction may shift. Check its position after tightening.

5. Adjusting device

5.9 Needle and thimble plate (rear)

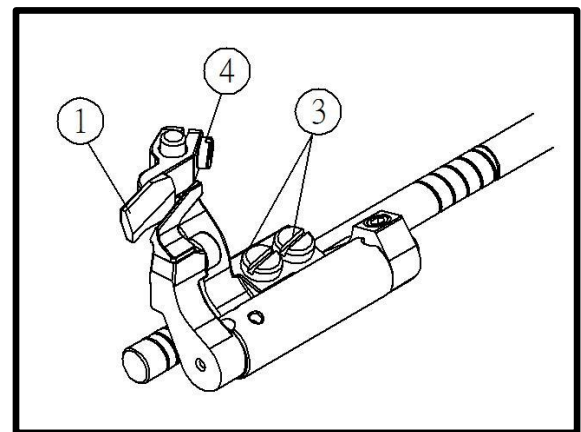
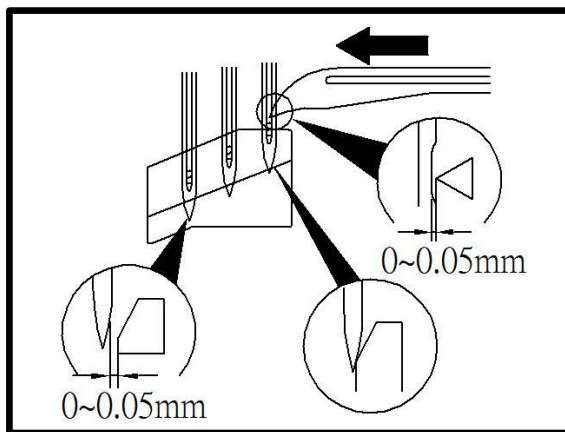
☆ Height of the thimble plate (rear)

- (1) Turn the handwheel, until the needle reaches its lowest point.
- (2) Loosen the screw ④.
- (3) Adjust the thimble plate (rear) ① to align the line behind the thimble plate ② with the center of the thread hole for the rightmost needle.
- (4) Tighten the screw ④ temporarily.



☆ The positions in front/rear direction and angle between the thimble plate (rear) and needle.

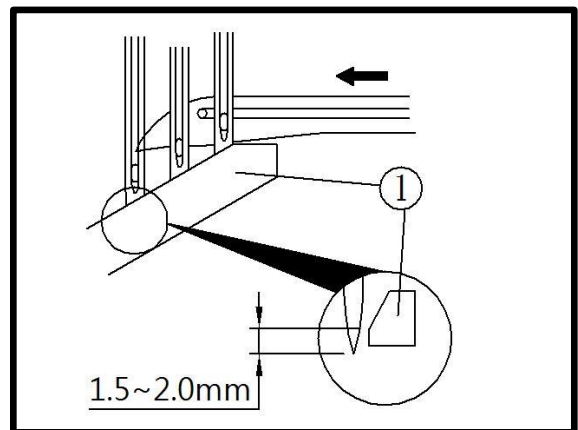
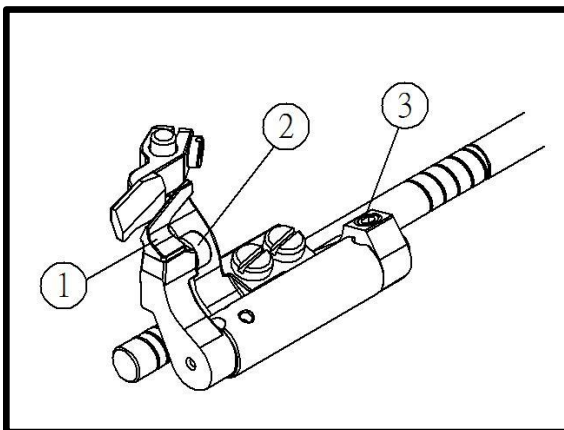
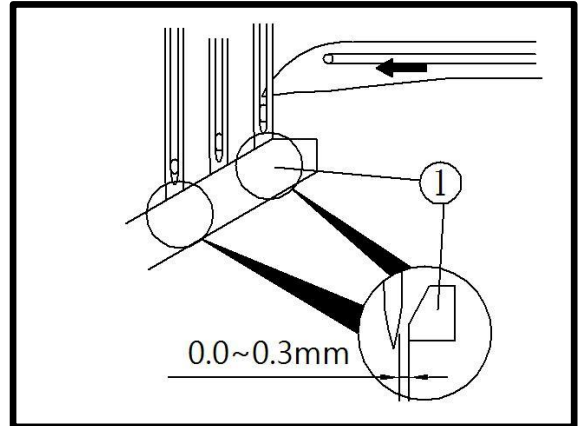
- (1) Loosen the screws ③, ④.
- (2) When the looper tip meets the center of the right needle, let the thimble plate (rear) contact with the needle to keep the distance between the needle and the looper to be from 0mm to 0.05mm.
- (3) Set the distance between the left needle and the thimble plate (rear) to be from 0mm to 0.05mm.
- (4) Tighten the screws ③, ④.



5. Adjusting device

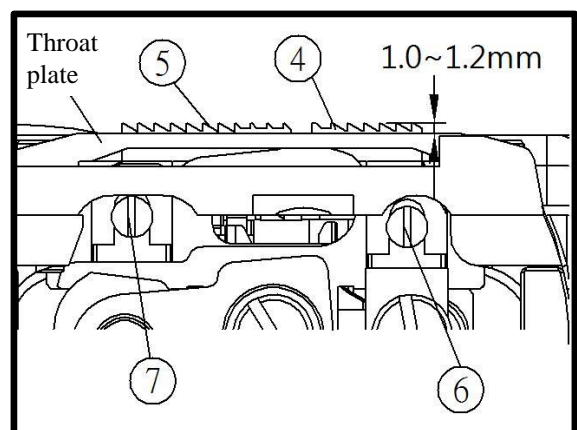
5.10 Needle and thimble plate (front)

- (1) When the looper tip enters the center of the right needle, loosen the screw ③. View from the top, place the thimble plate (front) ① parallel to the needle alignment line ②, then tighten the screw ③ temporarily.
- (2) Turn the handwheel clockwise, until the looper tip enters the center of the left needle.
- (3) Loosen the screw ③ to adjust the thimble plate (front) ①, so that the needle tip is at 1.5~2.0mm below the cutting edge of the thimble plate (front) ①.
- (4) Tighten the screw ③.
- (5) Loosen the screw ③, so that the gap between the thimble plate (front) ① and the right and left needle is 0.3~0.4mm.
- (6) Tighten the screw ③.



5.11 Feed dog height

When the feed dog moves to the highest position, the distance of the differential tooth ④ and the main tooth ⑤ from the throat plate plane is 1.0~1.2mm. They are also parallel to the throat plate plane. The screws ⑥, ⑦ can be loosened for adjustment.



6. Structure of adjusting drag roller set

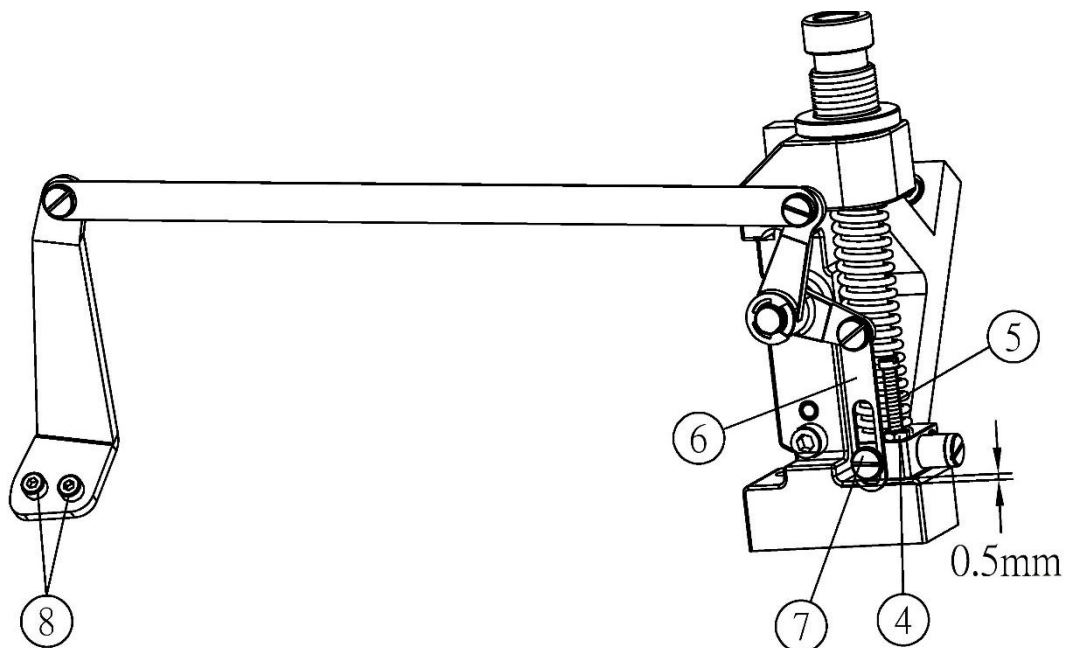
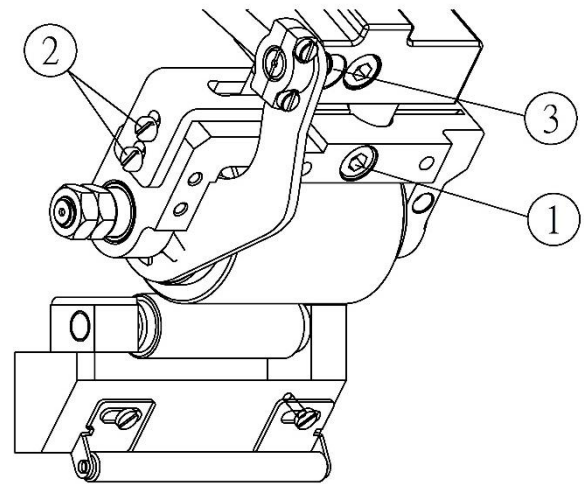
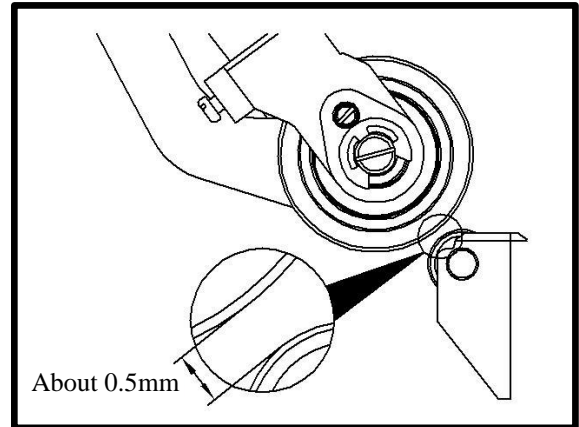
6.1 Position of upper feed roller

The teeth of the upper feed roller must be parallel to the teeth of the lower feed roller. After loosening the upper feed roller, the gap between the upper feed roller and the lower feed roller must be 0.5mm. This is the standard value.

* Adjust the teeth of the upper/lower feed roller to be parallel to each other. Loosen the screw of the upper feed roller bracket ①, the screw of the guider ②, the screw of the pin ③ for adjustment. Locate the screws ①, ② to ensure that it can move up and down slowly, then tighten the screw ③.

* Leave a gap of 0.5mm between the upper feed roller and the lower feed roller. Loosen the upper feed roller, loosen the nut ④, and use the adjusting screw ⑤ for adjustment. Adjust the gap based on the thickness of fabrics.

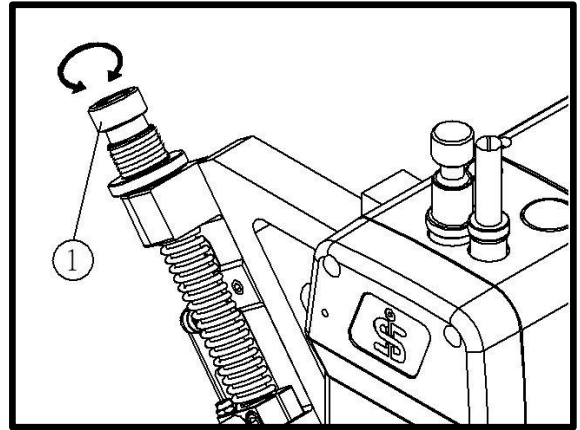
* When the presser foot is placed on the surface of the throat plate, Leave a gap of 0.5mm between the bottom of the lifter connection groove ⑥ and the screw ⑦. Loosen the screw ⑧ of the upper feed roller lifter (right) for adjustment.



6. Structure of adjusting drag roller set

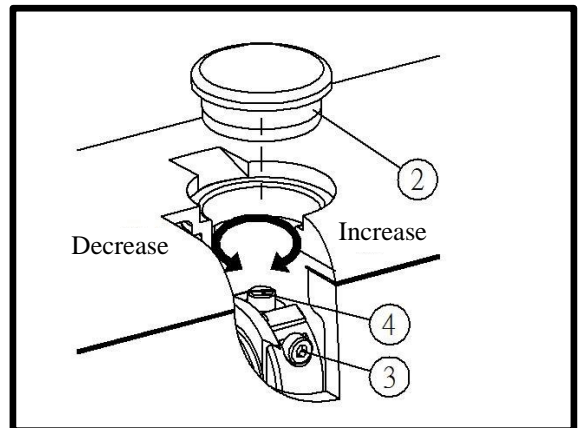
6.2 Pressure of upper feed roller

Fix fabrics between the upper/lower feed rollers, set the pressure to its minimum. Turn the adjusting screw ① clockwise to increase the pressure, turn the adjusting screw ① counterclockwise to decrease the pressure.



6.3 Adjusting feed of the feed roller mechanism

- (1) Remove the top cover sealing plug ②.
- (2) Turn the handwheel until the screw of the upper drag roller adjuster ③ is at the top. Loosen the screw ③.
- (3) Turn the handwheel, so that the adjusting screw ④ is on the top.
- (4) Turn the adjusting screw ④ to adjust the feed.
 - Turn clockwise to decrease the feed.
 - Turn counterclockwise to decrease the feed.
- (5) Tighten the screw ③ with the torque of 2.5N-m.



For fine adjustment, please loosen the screw ⑦ on the swing arm ⑤ and the linkage bar ⑥. Move the screw ⑦ up and down for adjustment.

- Move up to decrease the feed.
- Move down to increase the feed.

