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1. Introduction




- This instruction manual describes how to use our products safety.
- Read this instruction manual and learn very carefully how to operate, adjust and service this sewing machine before beginning any of the procedures.

2. Indications of dangers, warnings and cautions









To prevent accidents and ensure safety, warning indications which show the degree of danger are used on our products and in this manual.

Follow all warnings and instructions, indication labels should be found easily .Attach new labels when they are stained or removed .Contact our sales department when new labels are needed.

Symbols, signs/signal words which attract users' attention

 DANGER	Indicates an immediate hazard to life or limb.
 WARNING	Indicates a potential hazard to life or limb.
 CAUTION	Indicates a possible mistake that could result in injury or damage.

Symbols and messages

	Be sure to follow the instructions when operate the machine.
	It' s dangerous to get an electrical shock.
	It' s dangerous to injury your hands or fingers.
	Indicates a danger of burn injury due to high temperature.
	Never do this.
	Shut off the power when checking, adjusting and repairing the machine or when lightning may strike.
	Be sure to ground the machine and labor saying devicesecurely.
	Denotes the normal rotating direction of the machine pully.

3. Safety precautions

➤ Circumstances

The environment in which our industrial sewing machines are used may seriously affect their lives, functions, performance and/or safety.



For safety, do not use the machine under the circumstances below.

1. Do not use the machine near objects which make noise such as a high-frequency welder, etc.
2. Do not use or store the machine in the air which has vapor from chemicals, or do not expose the device to chemicals.
3. Do not leave the machine outside, in high temperatures or direct sun.
4. Do not use the machine in the places of high ambient temperature and humidity that seriously affects sewing machines.
5. Do not use the machine on the condition that the voltage fluctuation range is more than $\pm 10\%$ of the rated voltage.
6. Do not use the machine in the place where the supply voltage specified for the control motor can't be properly obtained.

➤ Safety measures



(1) Safety precautions when you perform maintenance on the machine.

- Turn off the power switch, unplug the power plug from the socket, and check that the sewing machine pedal is not turned until it is serviced, such as checking, repairing, and cleaning the sewing machine.
However, when it is necessary to turn on the power and work on it, make safety precautions that prevent the machine from turning outside of the sewing machine or from operator errors, and observe all safety precautions.
- Be sure to turn off the power switch and unplug the power plug from the socket when performing the following operations.
 - Add oil
 - Threading
 - Cleaning
 - Replacing the needle
 - Checking/replacing the oil element
 - Replacing the oil
 - When performing the following operations, be sure to turn off the power switch before proceeding
 - Adjusting the stitch length
 - Adjusting the differential feed ratio

Regular maintenance, maintenance work should be limited to fully familiar with the labor-saving devices and responsible for sewing machine repair technicians to carry out.



- Please do not modify or change according to customers' judgment, which will lead to accidents.
※ If the need to transform or change, should first contact the dealer or the company's sales inquiries.



(2) The inspection items before starting the operation.

- Before starting to operate the sewing machine, first check the sewing machine sewing part to see if there is damage, poor function and other issues. Once an abnormal phenomenon is found, the necessary measures should be immediately repaired or taken.

- To check if the ferrule is secure.

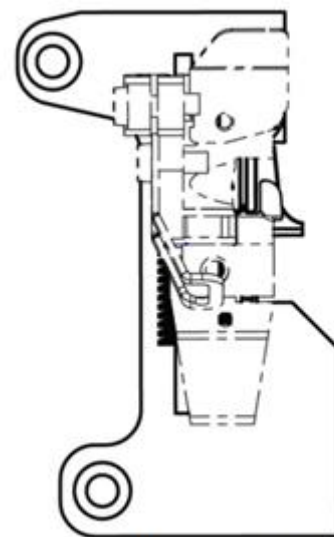
※Please note that the tip is dangerous.

- Before using the sewing machine, make sure that the presser foot is in the correct position. (Gently turn the handwheel to see if the needle falls on the center of the needle hole in the presser foot) (Figure 1)

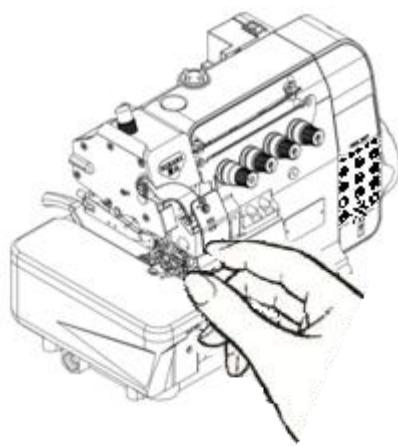
- Check the presser foot is fixed. (Use the lift foot mechanism to lift the presser foot, turn it around with your hands, to check whether the presser foot is loose) (Picture 2)

(3) Training

- In order to prevent accidents, operators and maintenance staff should have proper knowledge and skills for safe operation. To ensure so, managers must design and conduct training for these people.



(Figure 1)+


















(Figure 2)

Safety Instructions,
Please Read Carefully
















4. Specifications

4.1 Production Compilation rules

4.2 Pneumatic series

														
HEBY-04-02C	DCx 27 #11	1	3	0	4mm	0.6-3.8	0.7-1.6	6.0		★			8000	534x430x563mm
HEBY-14-03C	DCx 27 #11	2	4	2	4mm	0.6-3.8	0.7-1.6	6.0			★		7500	534x430x563mm
HEBY-14-03KSC	DCx 27 #11	2	4	2	4mm	0.6-3.8	0.7-1.6	6.0			★		7500	534x430x563mm
HEBY-14-04C	DCx 27 #11	2	4	2	4mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-04B1/C	DCx 27 #11	2	4	2	7mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-04B1/KSC	DCx 27 #11	2	4	2	4mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-04L/C	DCx 27 #11	2	4	2	4mm	1.2-7.0	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-54C	DCx 27 #11	2	4	2	4mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-16-03C	DCx 27 #14	2	5	3	5mm	0.6-3.8	0.7-1.6	5.5			★		7000	534x430x563mm
HEBY-16-03B/C	DCx 27 #14	2	5	5	5mm	0.6-3.8	0.7-1.6	5.5			★		7000	534x430x563mm
HEBY-16-04C	DCx 27 #21	2	5	5	7mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm
HEBY-16-04Q/C	DCx 27 #21	2	5	5	7mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm
HEBY-18-03C	DCx 27 #14	3	6	3x2	4mm	0.6-4.5	0.7-1.6	7.0			★		7000	534x430x563mm
HEBY-18-04C	DCx 27 #21	3	6	3x4	5mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm

4.3 Ordinary series

														
HEBY-04-02	DCx 27 #11	1	3	0	4mm	0.6-3.8	0.7-1.6	6.0		★			8000	534x430x563mm
HEBY-14-03	DCx 27 #11	2	4	2	4mm	0.6-3.8	0.7-1.6	6.0			★		7500	534x430x563mm
HEBY-14-04	DCx 27 #11	2	4	2	4mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-04B1	DCx 27 #11	2	4	2	7mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-04L	DCx 27 #11	2	4	2	4mm	1.2-7.0	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-14-54	DCx 27 #11	2	4	2	4mm	0.6-4.5	0.7-1.6	7.0				★	7500	534x430x563mm
HEBY-16-03	DCx 27 #14	2	5	3	5mm	0.6-3.8	0.7-1.6	5.5			★		7000	534x430x563mm
HEBY-16-03B	DCx 27 #14	2	5	5	5mm	0.6-3.8	0.7-1.6	5.5			★		7000	534x430x563mm
HEBY-16-04	DCx 27 #21	2	5	5	7mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm
HEBY-16-04Q	DCx 27 #21	2	5	5	7mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm
HEBY-18-03	DCx 27 #14	3	6	3x2	4mm	0.6-4.5	0.7-1.6	7.0			★		7000	534x430x563mm
HEBY-18-04	DCx 27 #21	3	6	3x4	5mm	0.6-4.5	0.7-1.6	7.0				★	7000	534x430x563mm

4.4 The oil of over lock series is #21 white oil

5. Notes for each procedure

➤ Unpacking

1. The sewing machine head is shipped packed in a cardboard box and shipped. After confirming the orientation of the sewing machine from the words printed on the carton, unpack the cartons from top to bottom in order.
2. When removing the sewing machine head from the cushioning packing material, do not lift the parts related to the needle part or the thread take-up. Otherwise may cause danger or damage to the machine.
3. When removing the sewing machine head, please pay attention to the position of the center of gravity and carefully remove it.
4. Packaging use the carton if you continue to use latter, please keep it properly.

Packaging materials processing

- Packaging materials, including wood, paper, cardboard boxes, VCE fiber, customers should appropriate packaging materials for processing.

Sewing machine waste disposal

1. Sewing machine generated waste, customer is responsible for processing.
2. The manufacture of sewing machine materials used are iron, aluminum, zinc and various materials.
3. Sewing machine waste should be in accordance with the relevant provisions of the local environmental protection for processing. If necessary, commissioned a special factory for processing.

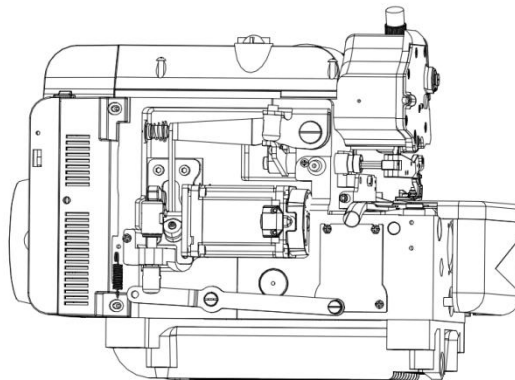
※The parts contaminated with lubricants should be disposed off separately according to be the locally valid environmental protection regulations.



WARNING

➤ **Transportation**

1. The sewing machine head transport must be carried by more than two people. In addition, the direct handling of personnel should be limited to moving to the sewing machine table or small trolley.
2. When moving the sewing machine head, grasp the hand wheel and motor cover with your right hand, the left hand collapse in the machine head, solid and firm move. (image 3)
Stained oil on the sewing machine easy to slip off during handling, handling, please carefully clean the head of the oil.
3. When moving to the sewing machine table or small trolley, be careful not to over-shock or vibration to avoid danger of the sewing machine being tilted.
4. If you are going to transport the sewing machine for the second time and want to pack, be sure to clean the oil on the machine head. Otherwise, the handle will slip off the head or wear the end (oil pollution will spoil the packaging materials).



Note CAUTION

(Figure 3)



➤ **Installation , preparation**

Machine table

1. Use a sewing machine table (table board, iron frame) that can fully withstand the reaction force generated by the sewing machine head and handling.
2. Careful consideration should be given to the space required for assembly of the sewing machine and the light required for its operation, placed in a workable environment. If there is insufficient light, install the lights as required.
3. To prevent accidental slipping of the foot when the operator steps on the machine, be sure to attach a slip-preventing mat to the sewing machine pedal.
4. Adjust the height of the deck (the working height) according to the operator's posture.


 **WARNING**

Cables

1. Please firmly plug the sewing machine head and motor cable plug.
When connecting the sewing machine head to the motor connector, be sure to operate the power switch with the power switch off.
2. Do not strain the cables in use.
3.  Do not bend the cables in use.
4. The cables around the moving parts should be mounted at a minimum distance of 25mm.
5. If necessary, consider the connection position or add a protective cover to protect the cable.
6.  Never use staples to fasten the cables. Otherwise it causes a short circuit and/or a fire.


 **Note CAUTION**

About grounding

1. Grounding wire is installed according to each sewing machine dedicated grounding wire, should not be shared with other machines.
2.  Install the grounding wire exactly at the specified place of sewing machine head.

 **WARNING**

➤ **Handling machine oil**

1. Never start the machine with no oil in the reservoir Use **HIGH SPEED SEWING MACHINE OIL** (Equivalent of ISO requirements :Viscosity Index of Vg 22).
2. Oil into the eyes will make the eye inflammation, so wear protective glasses when in use to avoid oil into the eyes.
※ If oil into the eyes, please rinse with clean water for 15 minutes, then go to see a doctor.
3. After touching the skin, wash immediately with water and soap.
4.  Never allow oil to enter the mouth.
5. Please keep the oil in the area of children's inaccessibility, in case of entering the mouth, do not rigid vomiting, please consult a doctor immediately for treatment.
6. Waste oil and waste container disposal methods must be in accordance with the relevant laws and regulations of the Environmental Protection Act properly handle, if do not know, please contact with the dealer before proceeding.
7. In order to prevent dust and moisture from mixing, please tighten the fuel cap when storing the oil after use and place it in the shade without direct sunlight.

 **WARNING**

➤ **Before starting the machine**

Machine table

1. Before turning on the power, check the wiring or connectors for any abnormalities in appearance such as damage, disconnection, looseness, etc.
2. ⓧ When turning on the power, do not place your hand near the needle or near the automatic thread trimmer scissors.
3. Operators of sewing machines should be trained to fully understand the contents of this book and instruction manual before using it.
4. Regarding the danger of the head of the sewing machine, the warning signs should be read and understood [2.Warnings]. Safety education should be given to the users when necessary.
5. ⓧ The first month of use should be reduced speed, please use the maximum speed of 3/4 below the speed.



WARNING

➤ Precautions while using machine

1. ⓧ Do not operate the sewing machine while removing safety devices such as eye shields, finger guards and drive shields.
2. ⓧ The sewing machine is very dangerous in operation, never put your hand under the needle.
3. The sewing machine is dangerous in operation. Do not use your fingers, hair or clothes near the needle bar and the automatic thread trimming device. At the same time, in these places, do not place scissors, tweezers, tools and so on.
4. When the sewing machine is not in use or when the operator leaves the sewing machine, be sure to turn off the power switch.
5. In the event of a power failure, be sure to turn off the power.
6. When operating the sewing machine, wear garments that are not easily caught by the machine.
7. When the sewing machine is running, do not place tools and other items not related to sewing on the sewing machine table.



Note CAUTION

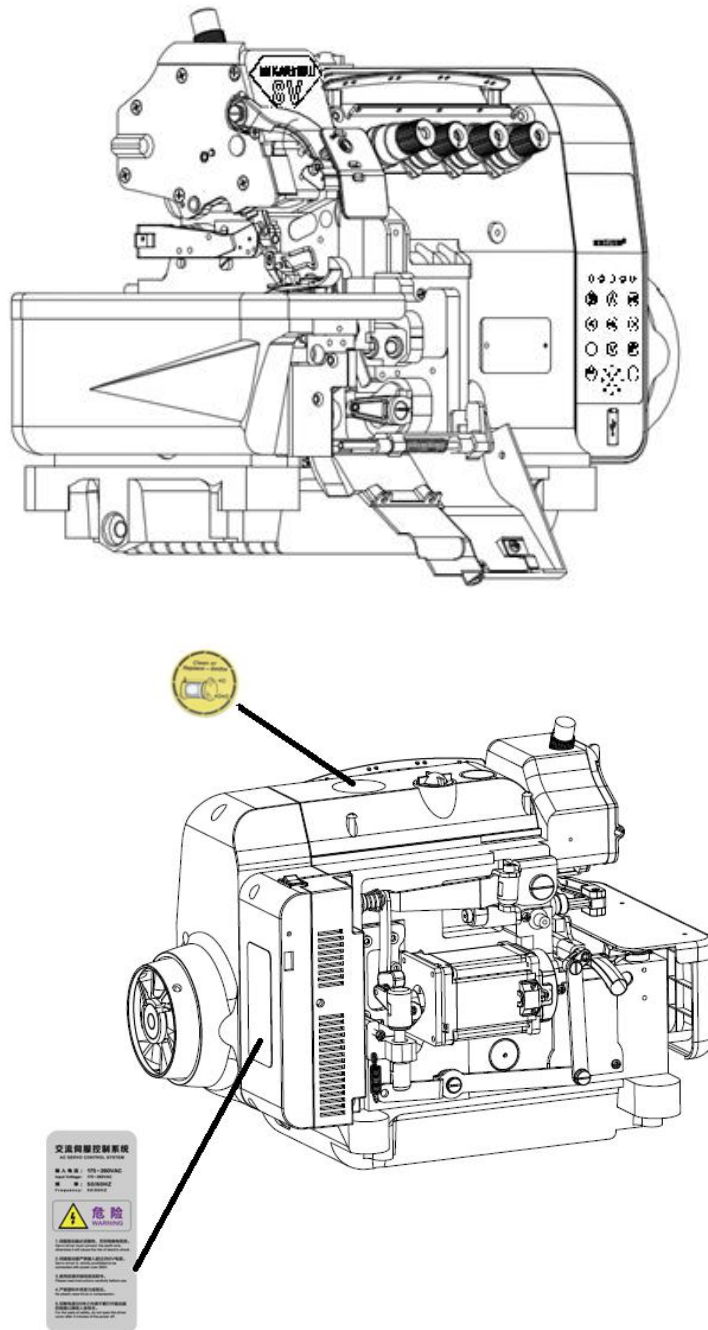
➤ Maintenance、Check、Repair

1. Maintenance, inspection and repair operations should be carried out by specially trained people and fully understand the contents of this manual before operating.
2. To maintain, inspect and repair the machine, turn off the power switch and unplug the power cord from the socket, and confirm that the sewing machine does not rotate even after the sewing machine treads, and then perform the operation.
3. The daily inspection of the sewing machine head or periodic inspection, should be in accordance with the instructions in this book and instruction manual, conscientiously carried out.
4. Employ HIKARI genuine parts when repairing the machine and/or replacing the parts. We are not responsible for accidents cause by any improper repair/adjustment and substituting other parts for those manufactured by HIKARI.

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Please Read Carefully*

5. Please do not according to the customer's judgment on the transformation of the sewing machine, or due to the transformation of the accident, the Company will take full responsibility.
6. Temporarily removed due to repair, adjustment safety devices, safety guards, after the completion of the operation must be installed according to the original state.
After the maintenance, inspection and repair work is completed, please check if there is no danger after turning on the power.
7. After performing maintenance, check and repair, make sure that turning on the power does not pose any danger to you.

6. Location of warning labels and safety devices (Figure 4)



(Figure 4)

7. Protectors for safety

This chapter describes each protector for safety



Note CAUTION

Protectors for safety

➤ Eye guard

- ⊘ Do not open it

For eye safety, never operate the sewing machine with the eye shield open. Eye shields are eye shields that are installed so that the broken needles do not fly into the eyes when the needle is broken during sewing.

➤ Finger guard

- ⊘ Do not reach into your hands

In order to prevent the needle moving up and down and people in contact with the resulting danger, the needle in the vicinity of the installation of the guardrail. However, there is a gap above the guardrail to facilitate threading. If the finger is inserted through the gap, the needle may cause a danger of stabbing your finger.

➤ PrPresser foot

- ⊘ Do not reach into your hands

The amount of the presser foot rising from the surface of the throat plate is 5 mm or more. There is a risk of fingers being caught in this gap. Do not put your fingers over the presser foot when lifting the presser foot with the knee switch or when automatically raising the presser foot with the pedal.

➤ Front cover

- ⊘ Never leave the front cover open

Looper movement When viewed from the front of the sewing machine, circular motion is performed reciprocatingly. In order to avoid contact with the looper with circular motion, be sure to operate the sewing machine with the front cover closed.

➤ Cloth plate

- ⊘ Do not open it

In order to avoid thermal contact between the thread looper thread cam and the looper while the sewing machine is operating, be sure to operate the sewing machine with the lid closed.

➤ Conservation piece

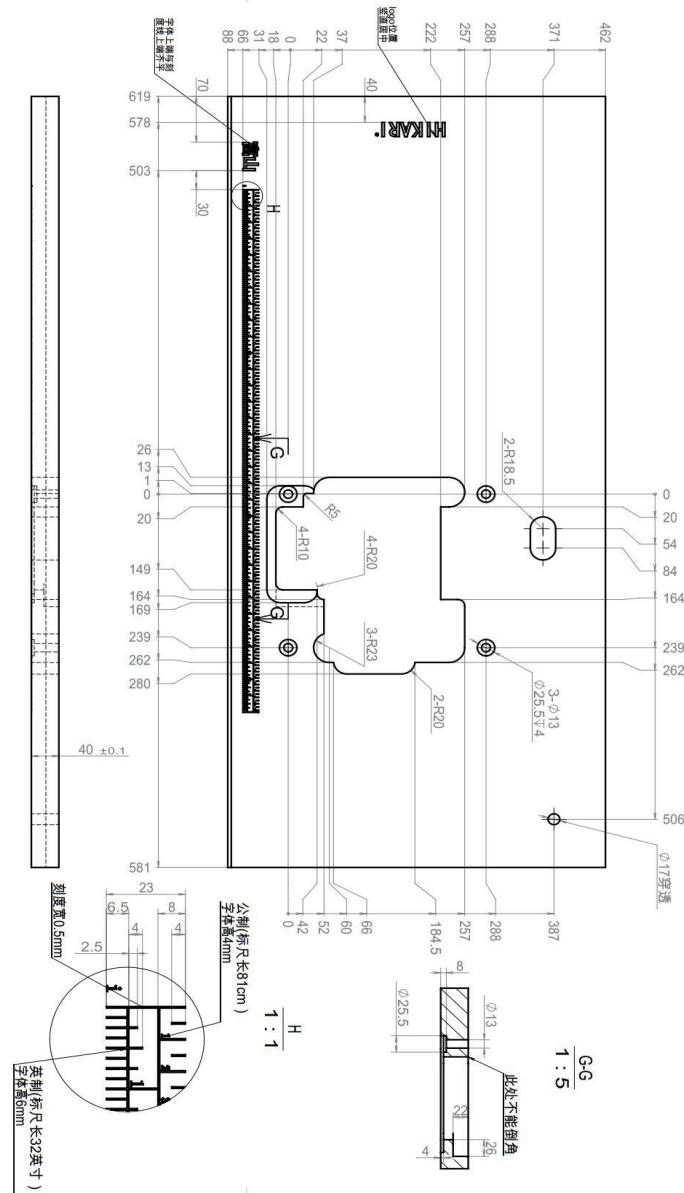
- ⊘ Do not reach into your hands

When the power switch is turned on, never put your finger into the finger protector to prevent

the machine from generating a wrong signal, which will result in the danger of the finger cutting the knife.

8. General issue of operation

➤ Schematic diagram of the sewing machine table



(Figure 5)

Note: This drawing is one of two general-purpose machine board universal drawings. (With suction device and without suction device) (Figure 5)

➤ Lubrication



Note CAUTION

⚠ Be sure to use the oil supplied by our company when adding or replacing oil, and may damage

the sewing machine if oil other than that supplied is used.

1. The type of oil

Please use "HIGH SPEED SEWING MACHINE OIL" (ISO Sticky Grade / VG22) supplied by our company.

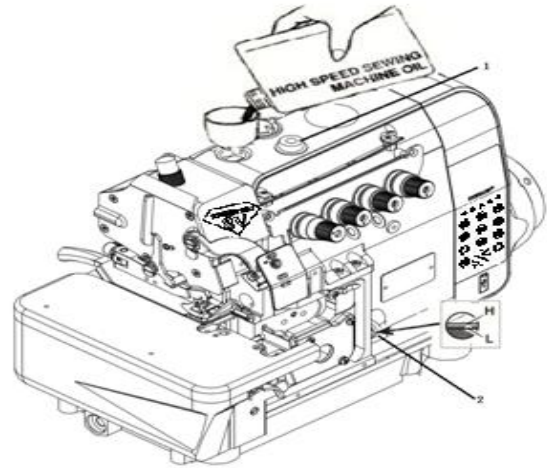
2. Oil supply method (Figure 6)

Open the fuel supply port cover, refueling to the oil level reached the rod and H line L middle. After adding oil, please cover the fuel filler cap.

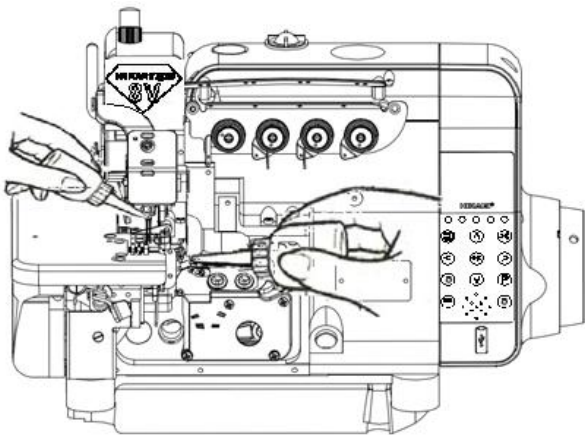
3. The amount of oil (Figure 6)

The H and L lines of the oil dipstick 2 indicate the upper and lower limits of fuel quantity. In order to maintain the oil level between the H line and the L line, please check and refuel often.

4. Refueling by hand (Figure 7)



(Figure 6)



(Figure 7)



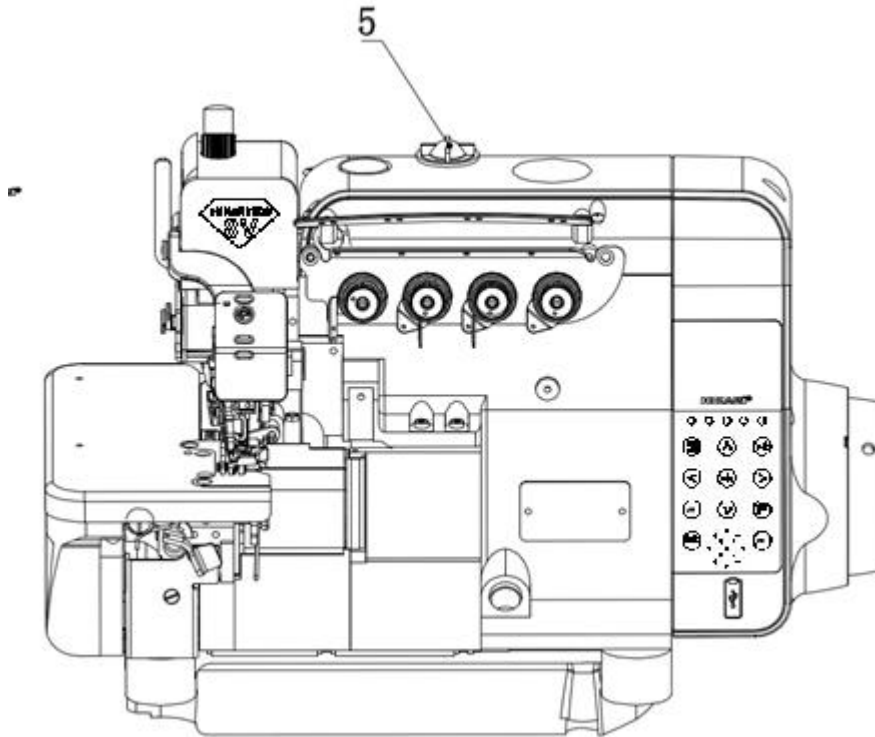
Note CAUTION

When refueling by hand, be sure to turn off the power of the sewing machine and unplug the plug from the power plug.

When using the sewing machine for the first time and when the sewing machine is left unused for a while, apply 2 to 3 drops of oil to the needle bar 3 and the upper looper 4 respectively.

5. Check the oil circulation (Figure 8)

After adding the oil, depress the sewing machine pedal to operate the sewing machine and check if the circulation of oil is good through the oil window 5.



(Figure 8)

➤ **Silicone oil for H. R. devece**



Note CAUTION

When supplying oil to the HR unit, be sure to turn the sewing machine off and unplug it from the power plug.

In the case of the silicone oil boxes 1 and 2 of the HR unit, always check the silicone oil in order to prevent the needle from being disconnected. Replace the silicone oil as soon as possible. (Figure 9)

➤ **Oil replacement**



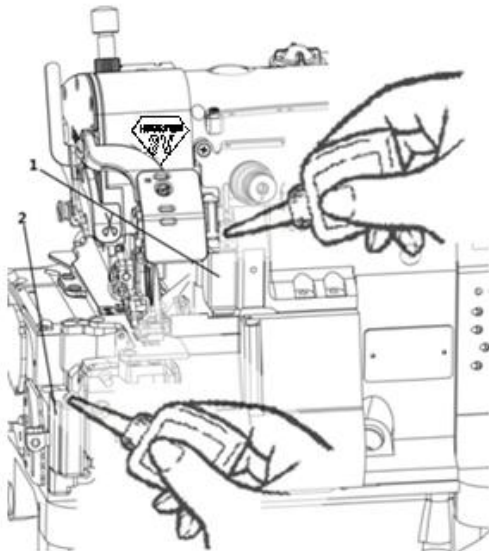
Note CAUTION

➤ **When changing oil, please professional technical personnel to operate**

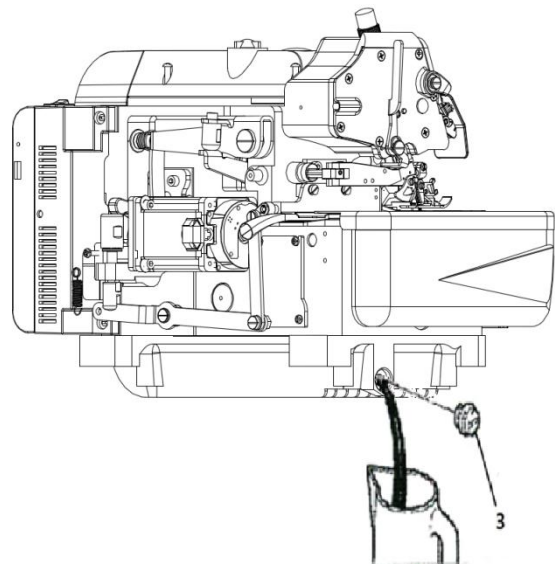
The sewing machine needs to be changed once a month after it starts to be used. Then please change the oil 6 months, if you do not change the oil to continue using, the sewing machine may have failure.

➤ **To drain the oil**

1. Please uninstall the fuel tank base drain hole screws 3, discharge the old oil.
2. After draining the oil, tighten the drain hole screws 3. (Figure 10)



(Figure 10)



➤ **Checking and replacing the filter**



Note CAUTION

Maintenance and replacement of filters, be sure to turn off the power of the sewing machine, unplug the plug from the power plug, the professional and technical personnel to operate when the filter 8 is clogged with clogs, you can not normally oil, please 6 months Remove the filter 8, to clean or replace.

Filter removal method (Figure 11)

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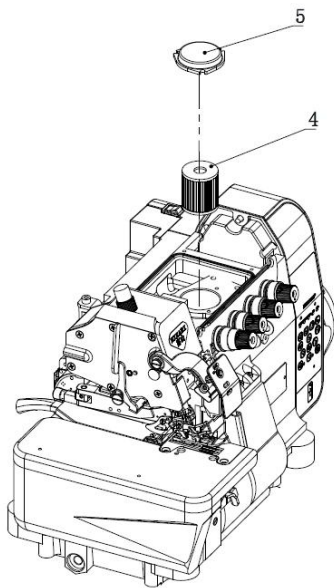
Please refer to the figure, remove the 4~8, check the filter. When the filter 8 serious injury can' t be found .Please replace the new filter.

➤ **Cleaning the machine**

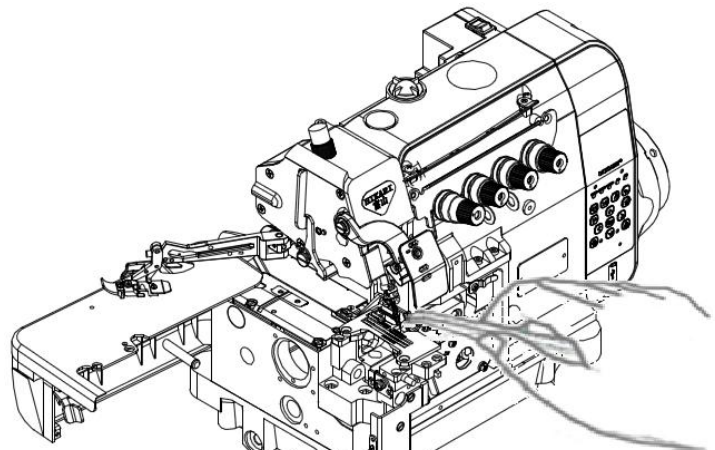


Note CAUTION

When cleaning the sewing machine, be sure to turn off the power of the sewing machine and unplug it from the power plug. Clean the empty area on the throat plate and around the feed dog. (Figure 12)



(Figure 11)



(Figure 12)

➤ **Threading**



Note CAUTION

When threading, be sure to turn off the power of the sewing machine and unplug it from the power plug.

1. Open the cover 1, the eye shield 2, the front cover 3, lift the pressure arm 4, after passing through the line please return to the original position. (Figure 13)
2. When the line is ready (Figure 14)

Part A: Connect the thread to the sewing machine's.

Part B: Needlework

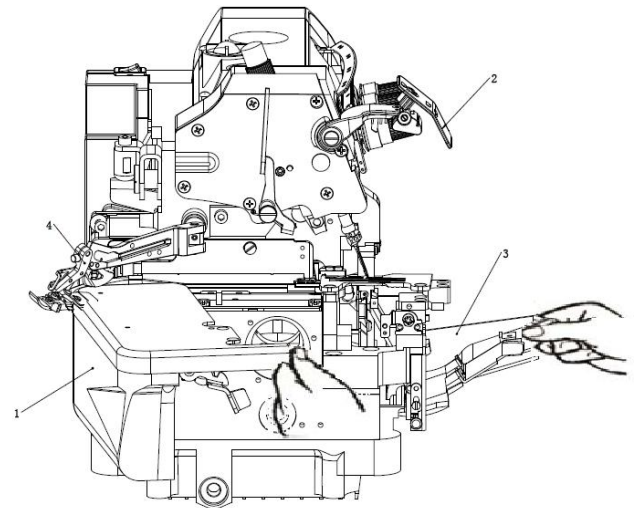
Pull the connector of the cord to the front of the needle, cut the connector first, and then thread the needle through it.

Part C: looper thread, hook thread

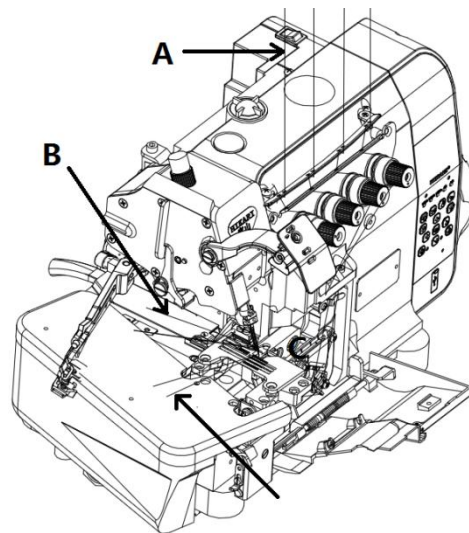
You can always connect the connector to wear, and then use scissors to cut the thread and the whole good.

3. When there is no thread on the sewing machine,

look at the threading pattern attached to the sewing machine and pass the thread through it.



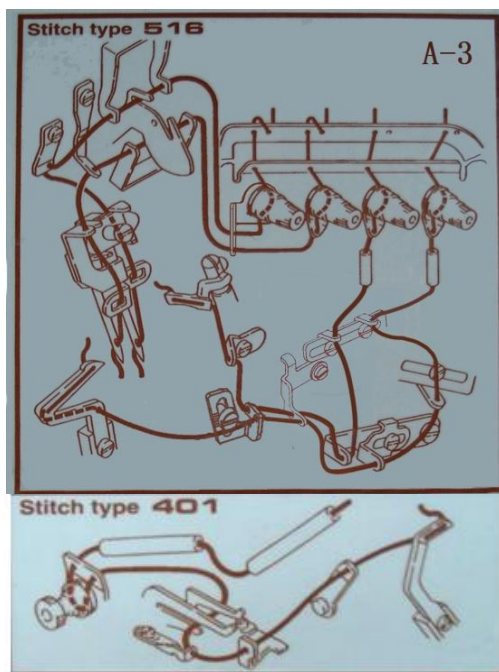
(Figure 13)



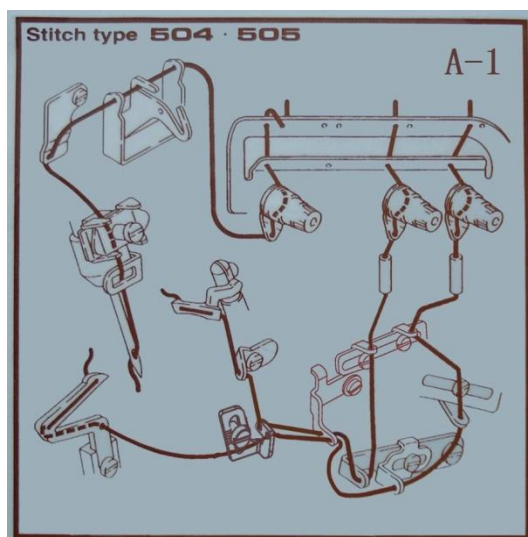
(Figure 14)

4. Threading logo

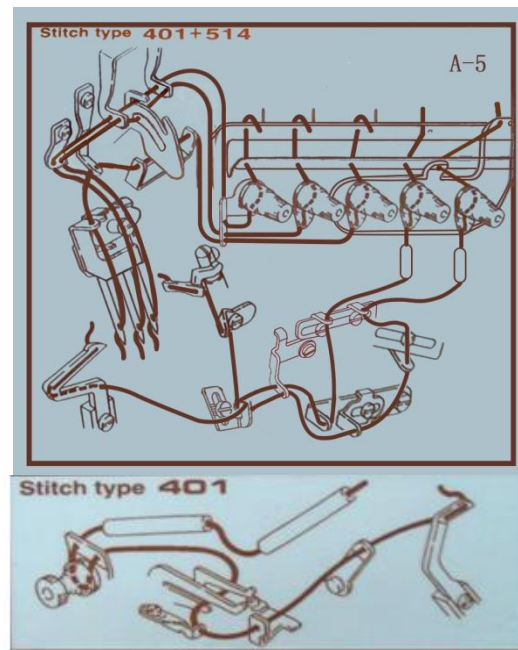
Five-wire threading logo



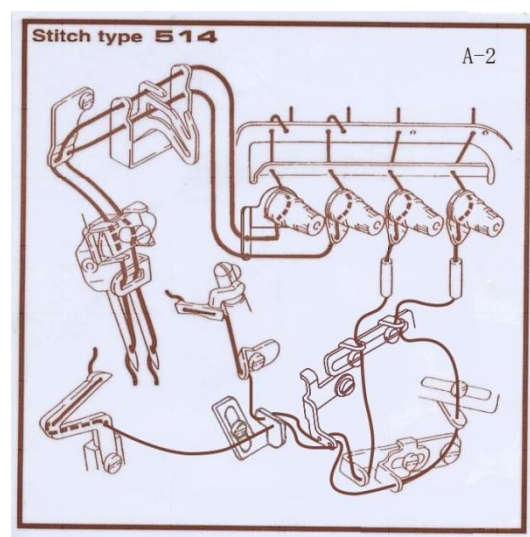
Three-wire threading logo



Six-wire threading logo



Four-wire threading logo



➤ Replacing the needle

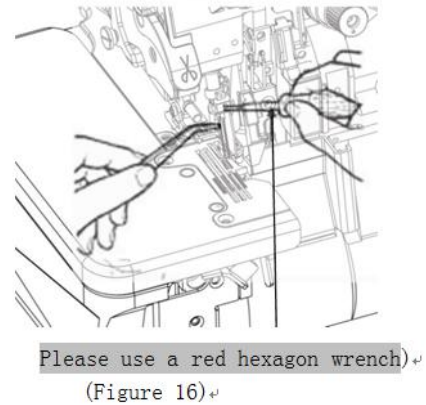
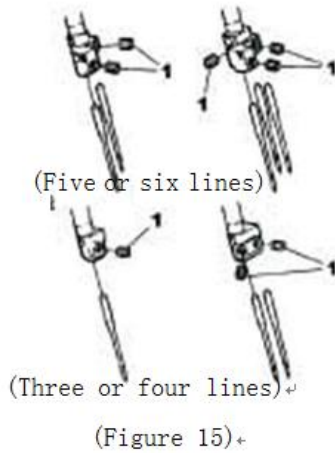


Note CAUTION

Always turn off the power and unplug the machine when you replace the needles. (Figure 15)

Loosen the screw 1 (but do not remove the screw) and change the needle. (Figure 15, Figure 16)

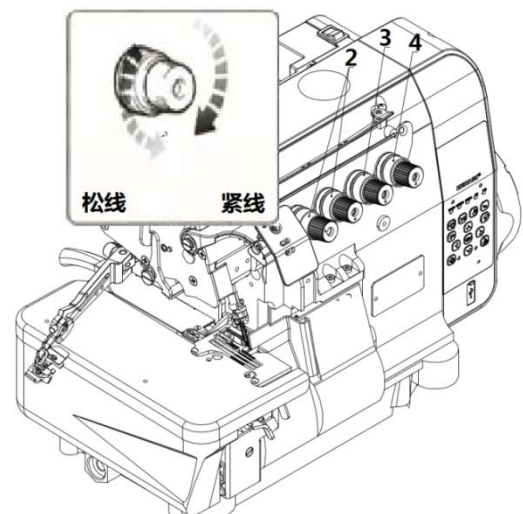
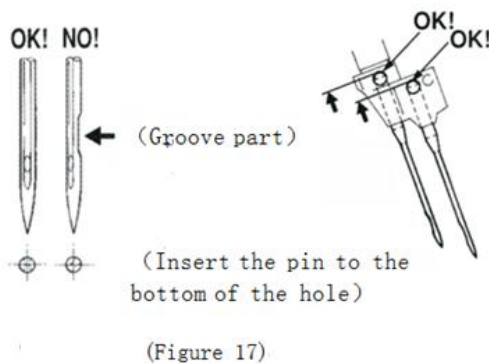
When installing, insert the pin groove in the pin hole of the needle ferrule to the bottom right position and tighten the screw 1. (Figure 17)



➤ Adjusting the thread tension

Adjusting the thread status use the thread adjustment knobs 2, the upper looper thread adjustment knobs 3, and the lower looper thread adjustment knobs 4 for adjustment. (Figure 18)

When you want to tighten the thread a little bit, turn the knobs to the right, turn to the left when you want to relax. If you can ensure that the sewing effect is uniform and beautiful, try to keep a loose clamp state.



(Figure 18)

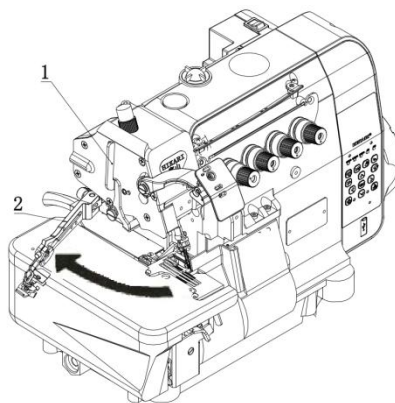
➤ **Opening/closing the presser foot**

When opening and closing the presser foot, be sure to turn off the power of the sewing machine and pull the plug from the power plug.

When opening the presser foot: 1. Turn the handwheel to place the needle on the uppermost position;
2. Depress the presser foot switch knob 1. Open the presser foot arm 2.

When closing the presser foot: 1. Turn the handwheel to move the needle placed on the top position;
2. Depress the presser foot switch handle 1. The presser foot lift arm 2. Return to the original position.

(Figure 19)



(Figure 19)

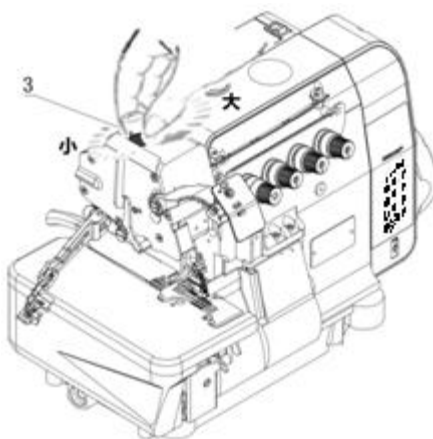
➤ **Adjusting the press foot switch**

Pressure on the foot can be carried out correctly, and can sew a stable stitch, please use the smaller pressure as appropriate.

➤ **Adjusting the differential feed ratio**

1. When the nut 4 is loosened, the differential ratio becomes larger when the handle 5 is depressed. Sew a good fabric will shrink. When lifting the handle, the differential ratio becomes smaller, the stitched fabric will stretch.

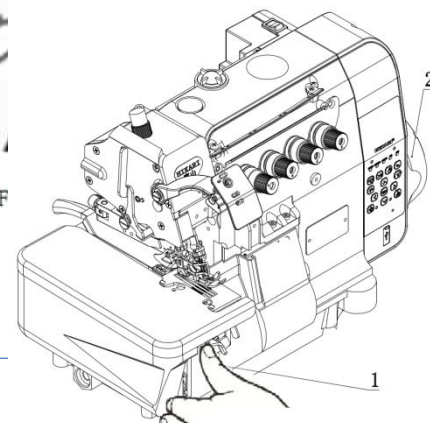
2. After adjustment, tighten the nut 4. (Figure 21)



(Figure 20)



(F)




➤ **Adjusting stitch length**

 **Attention**

When adjusting the stitch length, be sure to turn off the power of the sewing machine and unplug it from the power plug.

1. While holding down button 1, turn hand wheel 2 to place the button deeper. (Figure 22)
2. Turn the handwheel clockwise to increase the stitch pitch. Turn the handwheel counterclockwise to make the stitch pitch smaller.

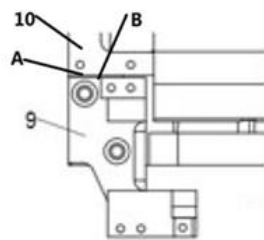
Adjust the length of stitch. Make sure to follow the differential ratio.

 **Attention**(Figure22)

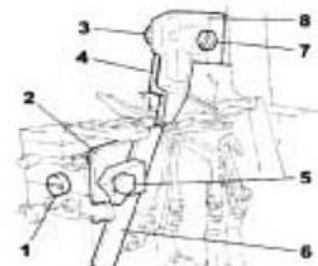
When adjusting the blade, make sure to turn off the power of the sewing machine and pull the plug from the power plug.

➤ **Replacing the upper knife**

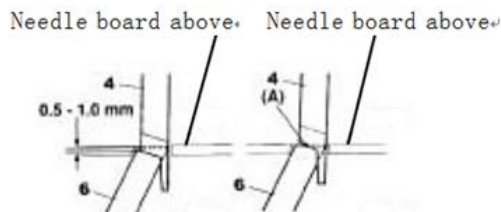
1. Note: When adjusting the knife, please note that the side B of the throat plate holder 9 and the side A of the casing 10 should be aligned, otherwise, the effect of adjusting knife will be affected. (Figure 23)
2. Please loosen screw 1 so that the lower knife rack 2 depends on the leftmost position and use screw 1 for temporary fixing.
3. Pull out the screw 3, remove the upper knife 4, temporarily fix the new upper knife with the screw 3, rotate the hand wheel, place the upper knife holder on the lowermost position, and move the upper knife up and down to adjust the upper knife and the lower knife Knife bite 0.5~1.0mm depth, tighten the screw 3. (Figure 25)
4. Align the knife center (A) of upper knife 4 with the knife center (refer to Fig. 26) of lower knife 6. Loosen screw 1 and check that there is no gap between upper knife and lower knife. Tighten the screws 1.
5. Insert the thread between the upper knives and turn the handwheel to confirm.
6. That the thread can be cut off smoothly. (Figure 24)



(Figure23)

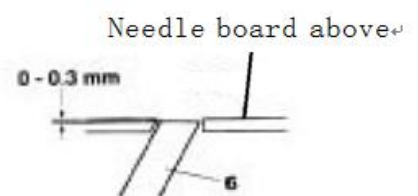


(Figure24)



(Figure 25)

(Figure 26)



(Figure27)

➤ Replacing the lower knife

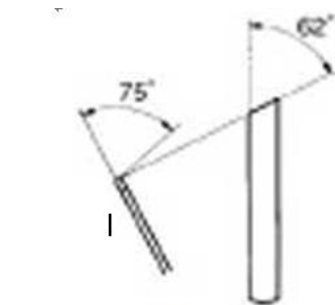
1. Loosen the screw 1, place the lower knife holder 2 in the leftmost position, and temporarily fix it with the screw 1.
2. Loosen the screw 5, remove the lower knife 6, replace the new lower knife, adjust the lower knife, so that under the blade and the needle plate clearance above the size of 0~0.3mm, tighten the screws 5. (Figure 27)
3. According to the replacement knife on the project 3~4 to operate.

➤ Adjusting overedge width

1. Loosen screw 1, place the row knife rack 2 in the left position, and use screw 1 to fix it temporarily.
2. Loosen the screw 7, move up the blade 8, adjust the chain width.
3. According to the replacement of knife project 3~4 to operate.

➤ Sharpening the knives

1. The material of the upper knife is cemented carbide, which can't be grinded for a long time. When the cutting of the knife is dull, grind the knife. Under the knife grinding method (Figure 28).



(Figure 28)

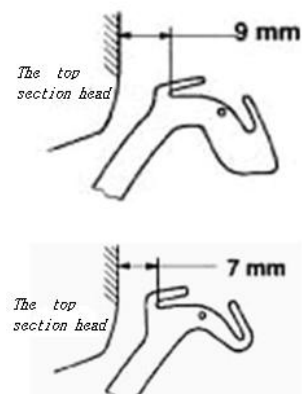
Please refer to the diagram for grinding correctly.

2. On the knife, when grinding on the knife, you need to use a special grinding machine, the best way to select a boutique or entrust our company to grind it. In order to improve work efficiency, please prepare spare knife.

➤ Standard installation position and adjustment of needle wire

 Attention

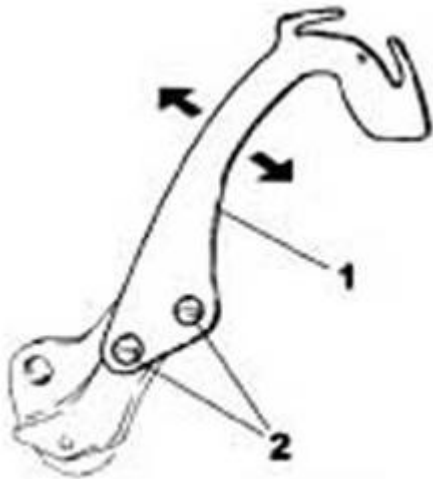
When adjusting the needle thread, be sure to turn off the power of the sewing machine and ask the technician to operate after removing the plug from the power plug. Turn the handwheel, When pin 1 is in the lowermost position, adjust the size of the front of the upper section head to the pins. When adjusting, loosen screw 2 to adjust. (Figure



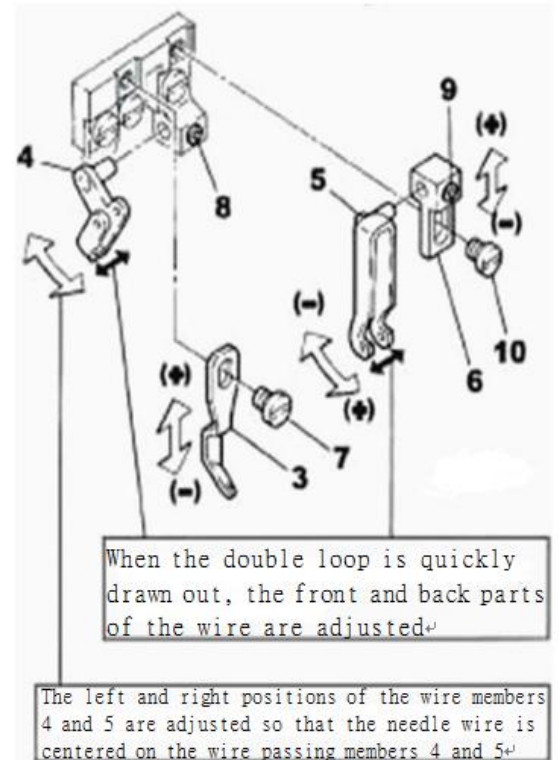
(Figure 29)

29,30)2 to adjust. (Figure 29, 30)

➤ Standard installation position and adjustment of needle wire



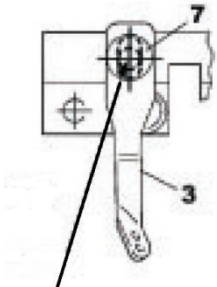
(Figure30) ↵



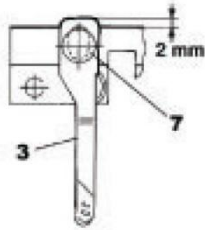
(Figure31) ↵

Fivethread series

Standard installation position of threadwire



Center the threaded center on the long hole center
(Figure32)

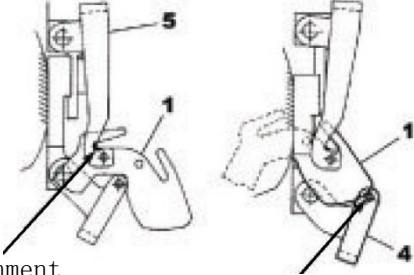


(Figure35)

- HX8V-16-03

Stitches form: 516

The needle is at the bottom

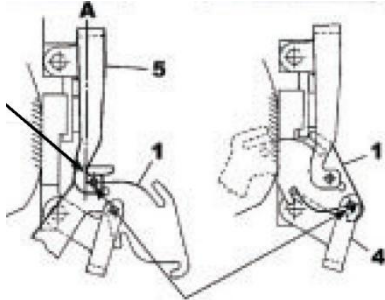


alignment
Make the thread hole tangent to piece 1
(Figure33)

- HX8X-16-04

Stitches form: 516 (canvas with denim)

The needle is at the bottom

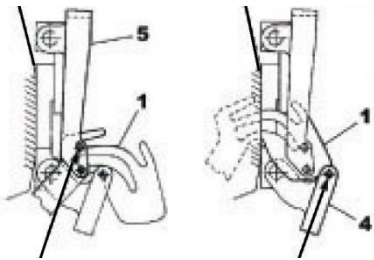


Make the thread hole tangent to piece 1
(Figure36)

- HX8V-18-03

Stitches form: 514+401

The needle is at the bottom



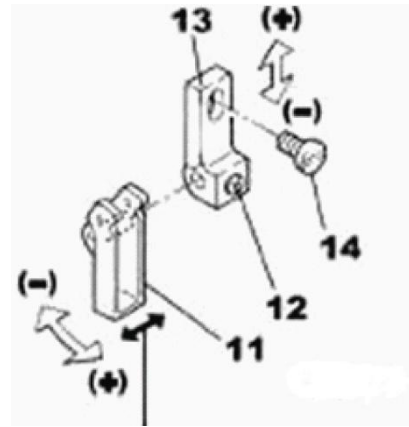
Make the thread hole tangent to piece 1
Make the thread hole tangent to piece 1
(Figure34)

Safety Instructions,
Please Read Carefully

三、Four thread series

The needle cross thread adjustment standard
(Figure37)

Loose screws 12 and 14, move needle thread and needle thread bracket 13 to adjust along the arrow direction. When the direction of the symbol (+) in the graph is adjusted, the amount of the line is increased, and the line is reduced when the direction of the symbol (-) is adjusted. After adjusting, tighten the screws 12 and 14.



(Figure37)

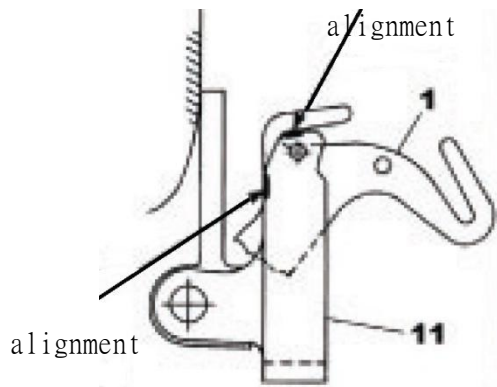
HX6814T、HX6804T

The standard mounting position of the needle thread guide

HX8V-04-02
HX8V-04--32

Stitches form: **504**

The needle is at the bottom



(Figure38)

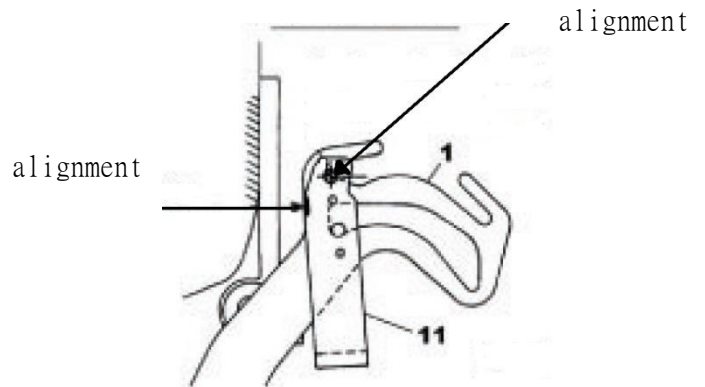
Stitches form: **504 Cord chain**

Adjust the left and right positions of the thread guide 11 so that the needle thread is in the center of the double rubber part

HX8V-14-03
HX8V-14-53
HX8V-14-83

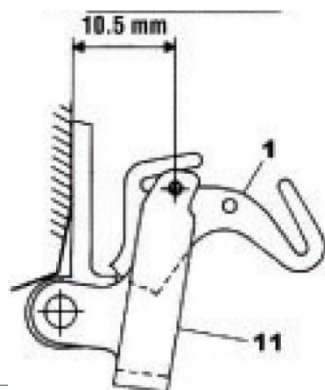
Stitches form: **514**

The needle is at the bottom

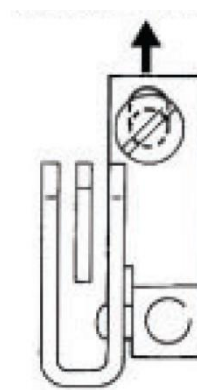


(Figure40)

The needle is at the bottom



The top position of the frame



(Figure41)

*Safety Instructions,
Please Read Carefully*

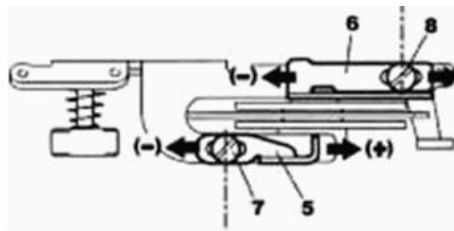
The standard installation position and the adjustment of the line of the line CAM



Note CAUTION

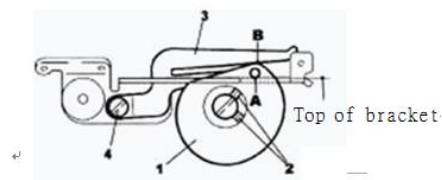
When adjusting the line CAM, make sure to turn off the power of the sewing machine and pull the plug from the power plug.

1. Turn the handwheel to place the needle in the uppermost position.
2. Align point A on double chain stitch.
3. Loosen the screw 4 and move the thread guide 3 up and down to adjust point B of the thread guide 3 to the point B of the chain looper thread CAM 1. (Figure 42)
4. With reference to the figures, the screws 7, 8 are loosened and moved left and right over the wires 5, 6 for adjustment. When the thread guide 5 and 6 are adjusted to the (+) sign direction in the figure, the thread amount increases: When the direction of the (-) sign is adjusted, the thread amount becomes smaller. (Figure 43)



Standard: Center location

(Figure43)



(Figure 42)

- Positioning the looper thread take-up and thread guides .Adjusting the amount of thread to be supplied from the looper thread take-up

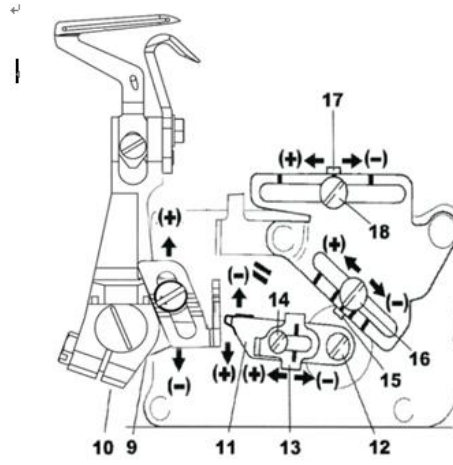


Note CAUTION

When adjusting the line CAM, make sure to turn off the power of the sewing machine and pull the plug from the power plug.

1. Looper Threads 9 and 11 use the lowermost looper to adjust the rightmost position. The standard installation location is shown below. To join the illustration, loosen the screws 10 and 12 and adjust the looper blades 9 and 11. When the looper threads 9 and 11 are adjusted to the direction of the (+) sign in the figure, the thread amount increases: When the direction of the sign is adjusted to (-), the thread amount becomes smaller.
2. The standard installation position of the looper thread guide 13, 15, 17 is shown in the figure below. For reference, loosen the screws 14, 16 and 18 and adjust the looper thread guide.

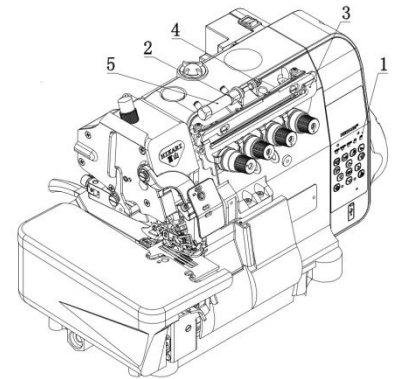
When each looper thread guide is adjusted to the (+) sign in the figure, the amount of the thread is increased, and when the (-) sign is adjusted, the amount of thread play decreases. (Figure 44)



(Figure 44)

(1). The movement direction of the loose line plate 2 is shown in figure 52. When the line is cut, a loose line action is completed. (Figure51)

(2). Check before work loose line board components: cylinder components, cylinder bracket (loose) 3, 5 loose line board 2 equal to (or so it moves, clearance) and Taiwan screw 4 (tight), hand touch loose 2 free telescopic line board, if you don't need to adjust the flexible cylinder components, cylinder bracket (line) and loose line board assembly.



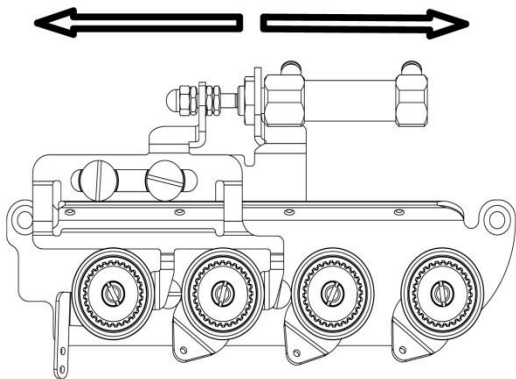
3.Side suction cutter (figure 53)

When the side suction knife component 7 shear line, the baffle board component 6 auxiliary blowing, has a better shear line effect.

4.Maintenance of side suction knife group

On the upper side of FIG. 54, the suction knife component A is regularly added with knife oil to maintain the knife component and maintain A better shear effect.

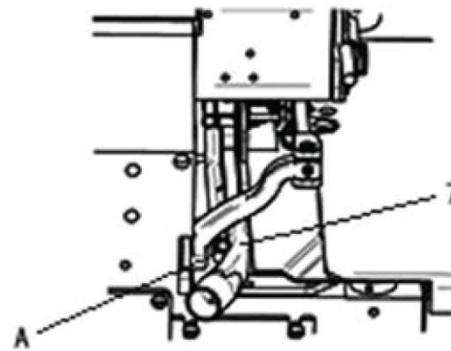
Loose line direction original state



(Figure 52)



(Figure53)



(Figure 54)

Remarks:This manual is only for reference.

If there is any modification,we apologize for the changing hence caused.

➤ Note for step adjustment



Note CAUTION

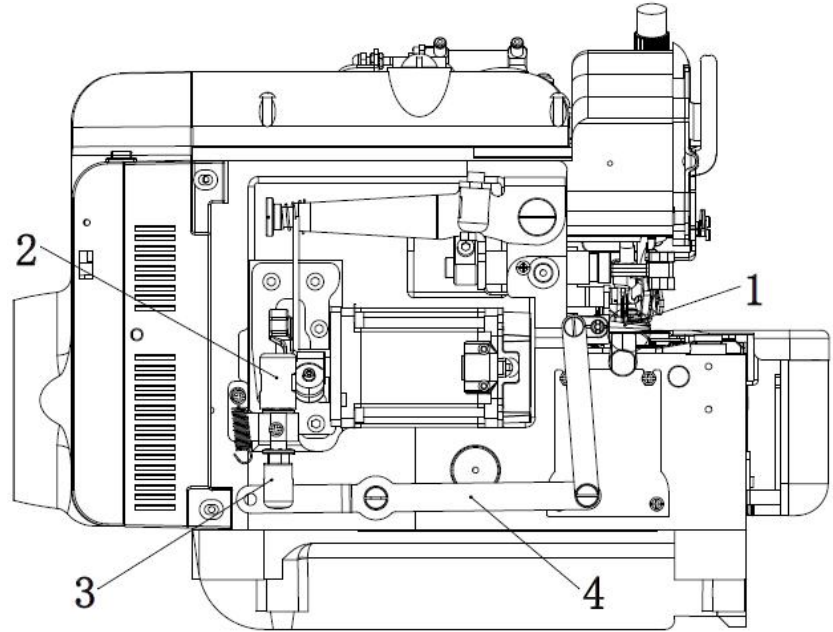
1. Spare part #2 & 3 sealed in drive shaft, the set assembling

keep moving up and down smoothly in copper set.

1. Spare part #4 couldn't squeeze and collide,

The rotational movement around shaft should be smooth and no lag.

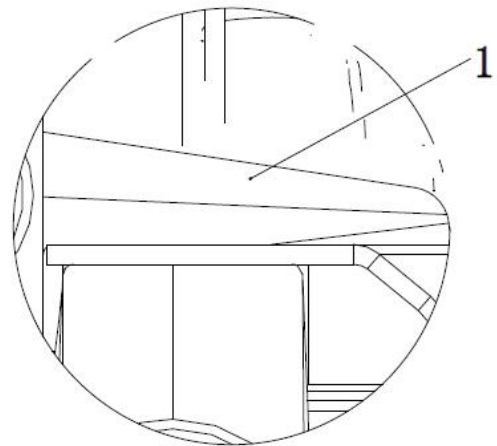
2. Regarding presser foot lift and trimming assemble parts, it should be added a certain lubricating oil per month



➤ Knife assembling adjust method

Press spare part #2 by hand, move spare part #4 to top point, and turn around the moving knife #1, make the bite angle as 3-5° with fixed knife, please refer the following picture.

At final, lock it by link rod. Turn spare part #4 by hand, and check whether trim smoothly. If the trimming is not smoothly, please adjust these parts operation connection.



(Figure 55)