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**Safety attention**

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1. When using the machine, please strictly observe the safety measures as the following items
2. Before using the machine, please read all instructions contained in the instruction manual. Please take care of the manual for handle consult.
3. When using this machine, make sure that all the safety devices are installed to the required location.  
Forbid to use the machine if the safety devices are not in the right position.
4. The machine shall be operated by the trained operator.
5. When using the machine, safety glasses are recommended.
6. Please turn off the power or unplug the power plug when the following cases happen.
  - 6-1 When threading the stitch, double stitch, segregator and replacing bobbin.
  - 6-2 When changing replacing the stitch, the presser foot, the throat plate, bend stitch, the feed dog, the stitch guard, the folder and the cloth guider.
  - 6-3 Repairing work
  - 6-4 nobody in the working place or leaving the working place
7. The oil, lubrication used in the machine and the peripheral device flow in eyes or skin, or drinking mistakenly, please wash the correlation parts and go to hospital.
8. Prohibit to touch the power on/off accessory and devices of the machine with oil hand .
9. The repair, alteration, adjustment about the machine should be carried out by professional staff.
10. General repair and maintenance of the machine should be carried out by trained staff.
11. Repair and maintenance about electrical aspects of the machine should be done by professional staff or experts.
12. When repairing, preserving the accessory about the air, compressed air cylinder , the air compressor to supply source should be cut off.
13. The sewing machines should be regular cleaned while using.
14. The machine should be connected to ground wire for safe operation. It should be used against strong noise such an high-frequency welding machine.
15. Electrical power plug should be installed by trained staff. Power plug must be connected to the ground.
16. Sewing machine can not be used other than the designated purpose.
17. Alteration and modification of the machine should be accorded to safety requirements and effective safety measures should be taken. In addition, we assume no responsibility for alteration and modification.
18. The instructions using the following two warning signs.



Dangerous to operators, maintenance staff.



Special attention needed for safety.

## **Precautions for safety use of the machine**



### **Dangerous**

1. To prevent electric shock, please do not open the shell of the control box or touch the control box parts when power on.



### **Notice**

1. Please do not operate the machine when the safety devices ,such as, belt cover, eye guide are unload in order to prevent personal injury.
2. To prevent being involved in accidents of life, please use the motor with motor protection hood.
3. Please do not operate the machine when the power ground is unpacked in order to avoid electric shock.
4. To prevent being involved in personal injury, please do not put your fingers, hair, clothes near the pulley when the machine is running , and do not put anything above the machine.
5. To prevent personal injury, please don't let your fingers near to cloth cutting and stitch after turning on the power or the machine in operation.
6. To prevent personal injury, when the machine is in operation, do not put your finger in the eye shield
7. To prevent electric shock, leakage, fire accident, be sure to turn off the power of the sub-machine before draw or insert the power plug with your hand.
8. To prevent personal injury due to sudden starts, be sure to turn off the power when leaving the machine.
9. To prevent personal injury due to sudden starts, turn off the power after a power outage.
10. In order to prevent personal injury due to a sudden start, when disassembling motor shield, be sure to turn off the power and the foot pedal is firmly fixed.
11. To prevent personal injury due to sudden starts, when repair, adjusting, removing, threading, replacing stitch, be sure to turn off the power , and the foot pedal is firmly fixed.
12. To prevent personal injury due to falling the machine, please do not hand carry shield cover when sewing machine. Take shield cover off, the shield will open, this will result in the falling of the machine.

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## *Be sure to study very carefully **for safety***

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- Positioning the thread guides/Adjusting the amount thread to be supplied from the needle  
thread take-up .....20
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## 1. Introduction




- This instruction manual describes how to use our products safely.
- 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 and/or signal words which attract users`attention

 <b>DANGER</b>	Indicates an immediate hazard to life or limb.
 <b>WARNING</b>	Indicates a potential hazard to life or limb.
 <b>CAUTION</b>	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 injure 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 device securely.
	Denotes the normal rotating direction of the machine pulley.

### 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 the 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 cannot be properly obtained.

#### ➤ Safety measures



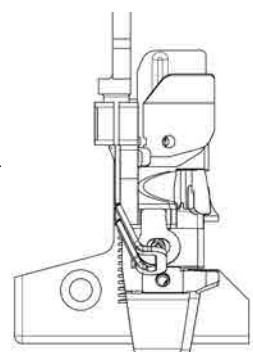
##### (1) Safety precautions when you perform maintenance on the machine.

- Always turn off the power unplug the machine and then make sure that the machine does not run by pressing the treadle before performing any maintenance, such as checking, repairing, cleaning, etc. However, if you need to perform these procedures with the power on, to prevent accidents due to the unexpected start of the machine and users` misoperation, establish your own procedures for safely and follow them.
- Always turn off the power and unplug the machine before performing the procedures shown below
  - Lubrication
  - Threading
  - Cleaning
  - Replacing the needle
  - Checking/replacing the oil element
  - Replacing the oil
- Always turn off the power and unplug the machine before performing the procedures shown below
  - Adjusting the stitch length
  - Adjusting the differential feed ratio
- Only well-trained people should perform routine daily maintenance and/or repair the machine.



- Do not modify the machine yourself

※Consult your local Hikari sales office or representative for modification.





**(2) Before operating the machine**

- Check the machine head and unit for any damage and/or faulty function at the start of each day. If there should be something wrong with the machine, immediately perform repair and/or other necessary procedures
- Check by hand to see if the needle holder is secured.
  - ※ Be careful of the needle point.
- Before starting the machine, make sure that the presser foot is positioned correctly(turn the machine pulley slowly by hand to see if the needle point is centered in the needle drop hole on the presser)(Fig.1)
- Check to see if the presser foot is secured(raise the presser foot by the foot lifter and press it by hand front to back and left to right)(Fig.2)

Fig.1

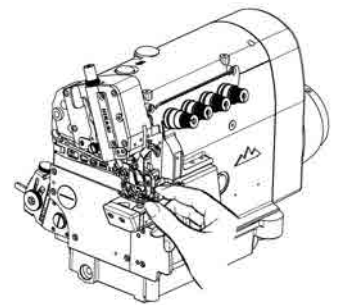


Fig.2



**(3) Training**

- To prevent accidents, operators and service/maintenance personnel should have proper knowledge and skills for safe operation. To ensure so, managers must design and conduct training for these people.

## **4. Notes for each procedure**

### **➤ Unpacking**

1. The machine is packaged in a cardboard box before shipping. Unpack your machine in orderly sequence while checking them right-side up by referring to the indications, such as logo, etc. printed on the boxes.
2. Never hold the area near the needle and/or thread guide related parts when taking out the machine from the cushion. Otherwise it may cause injury and/or damage to the machine.
3. Take out the machine very carefully while checking the position of the center of the gravity.
4. Keep the cardboard box and packing carefully in case secondary transport is needed in the future.

#### **Disposal of the packaging**

- The packaging material of the machine consists of wood, paper, cardboard and VCE fiber. The proper disposal of the packaging is the responsibility of the customer.

#### **Disposal of machine waste**

1. The proper disposal of machine waste is the responsibility of the customer.
  2. The materials used on the machines are steel, aluminum, brass and various plastics.
  3. The machine waste is to be disposed of in accordance with the locally valid environmental protection regulations. A specialist should be commissioned if necessary.
- ※The parts contaminated with lubricants should be disposed off separately according to the locally valid environmental protection regulations.



## **WARNING**

### **➤ Transportation**

1. The machine should be carried by at least more than two people when it is mounted on the table and/or a hand truck. Be sure to use a hand truck for other transportation.
2. To carry the machine, hold the machine pulley tightly with your right hand and the machine arm with your left upper arm. If the machine and/or your hands are stained with oil, the machine may be easy to slip out of your hands and fall to the floor. Therefore, wipe off the oil carefully.(Fig.3)
3. Care should be taken to avoid excessive shock and shake when the machine is mounted on the table and/or transferred using a hand truck. Otherwise the machine may fall down.
4. Wipe off the oil from the machine before packaging it again for secondary transport. Otherwise the machine may easily slip out of your hands or the bottom of the box may come off while in transit.

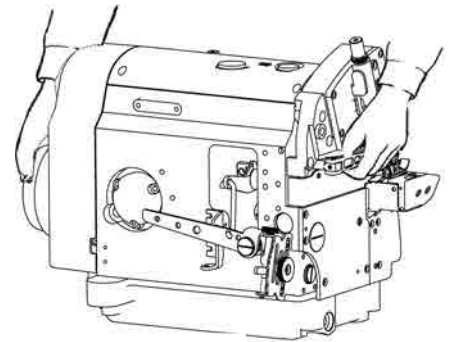


Fig.3

## **⚠ CAUTION**



### **➤ Installation, preparation**

#### **Machine table**

1. Use the machine table(table board, metal legs)that completely carries the machine and is fully resistant to warping while the machine is running.
2. Arrange the working environment for easy operation by consideing where to place the machine and the brightness around the working area. If the illumination is insufficient, control or change lighting as required.
3. Attach a non-slip pad to the treadle(foot switch). Otherwise the operator may slip off the treadle while running the machine, causing trouble.
4. Adjust the height of the table according to a working posture of the operator.

## **⚠ WARNING**

#### **Cables**


1. When connecting the cables between the machine and the motor, be sure to turn off the power and connect each cable connectors securely.
2. Do not strain the cables in use.
3.  Do not bend the cables in use
4. When connecting the cables that are close to the moving parts, such as motor, keep a distance of 25mm at least between them.
5. Protect each cable using a cover or adjusting its position if necessary
6.  Never use staples to fasten the cables. Otherwise it causes a short circuit and/or a fire.





## CAUTION


### Ground

1. Install the machine motor correctly by referring to the instruction manual supplied by the manufacturer.
2.  Connect the ground wires securely to the indicated ground points on the 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 Vg22)
2. If machine oil gets in your eyes,it may cause eye irritation.To prevent the machine oil from getting in your eyes, wear a pair of protective glasses.  
※Should machine oil gets in your eyes, wash them with fresh water for 15 minutes and then go to see a doctor.
3. Avoid skin contact. Immediately wash contacted areas completely with water and soap.
4.  Never swallow machine oil.
5. Keep machine oil out of the reach of children. If swallowed, do not induce vomiting. Immediately go to see a doctor.
6. Dispose of the waste oil and/or containers properly as demanded by law. If you have further questions on its disposal, contact the store or shop at which you purchased it.
7. After opening the oil container, be sure to seal it to prevent dust and water from getting into the oil and keep it in the dark to avoid direct sunlight.



## WARNING

### ➤ Before starting the machine



#### Machine table

1. Before turning the power on, visually check the cables and connectors for defective conditions, such as damage, disconnection and/or loosening.
2. Never bring your hands close to the needle and/or motor when turning on the power.
3. Well trained operators should use the machine after studying these precautions and the instruction manual carefully.
4. Regarding symbols that indicate a danger or a warning, read and study:"2. Warning indications" carefully and give training on safety to the operators as required.
5. Run the machine at the speed less than 3/4 of its maximum for the first one month.



## **WARNING**

### **➤ Precautions while you are running the machine**

1.  Do not run the machine with the safety devices removed, such as eye guard, finger guard, etc.
2.  Never bring your hands under the needle while running the machine.
3. Never bring your fingers, hair and/or clothes close to the machine motor, thread take-up and/or needle bar. Never put scissors, tweezers, tools around the area stated above.
4. Always turn off the power while the machine is not used or before leaving the machine table.
5. In the event of a power failure, be sure to turn off the power
6. While operating the machine , wear clothes that cannot be caught in the machine.
7. Do not put any tools or other unnecessary objects on the machine table while running the machine.



## **CAUTION**

### **➤ Maintenance, Check, Repair**

1. Well trained people should perform maintenance, check and repair of the machine after studying these precautions and instruction manual carefully.
2. If it is necessary to lay the machine backward for maintenance, check and repair, always turn off the power unplug the machine and press the treadle to make sure that the machine dose not operate before beginning any of the procedures.
3. Carry out daily maintenance work and periodical inspections properly by following these precautions and the instruction manual.
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.
5. Do not attempt to modify the machine at your own discretion. We are not responsible for accidents cause by the modification.
6. Be sure to replace the safety devices and/or safety covers that are temporarily removed for maintenance and/or adjustment.
7. After performing maintenance, check and repair , make sure that turning on the power does not pose any danger to you.

## **5.Location of warning labels and safety devices**

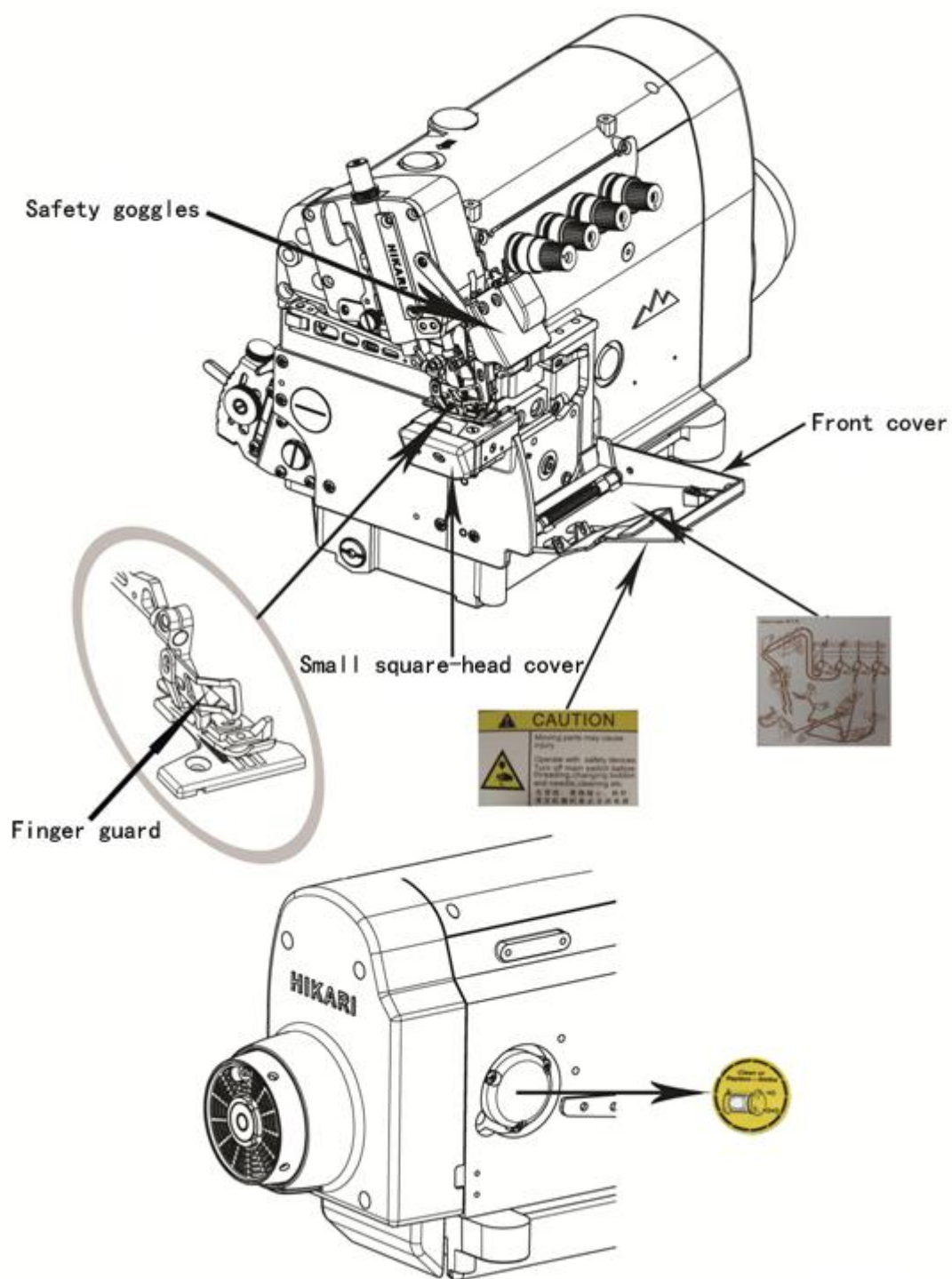


图 4

## 6. Protectors for safely

## ***Be sure to study very carefully for safety***


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This chapter describes each protector for safety. Therefore, read and study the following carefully

### **CAUTION**


#### Protectors for

##### ➤ **Eye guard**

-  Never leave the eye guard open


For the safety of eyes, do not operate the machine with the eye guard open. The eye guard will prevent any pieces of the broken needle from getting into your eyes if the needle should break during sewing.

##### ➤ **Finger guard**

-  Never insert any of your fingers.


To prevent the needle that moves up and down from contacting any of your body, the finger guard is installed close to the needle. However, there is clearance above the finger guard for easy threading. Be careful that the needle may penetrate any of your fingers if you insert it into this clearance.

##### ➤ **Presser foot**

-  Never insert any of your fingers.


There is a clearance of more than 5mm between the top surface of the needle plate and the presser foot. Be careful that none of your fingers are caught in this clearance. Never insert any of your fingers under the presser foot when raising the presser foot with the knee switch or automatically raising it with the treadle.

##### ➤ **Front cover**

-  Never insert any of your fingers.

The looper travels left to right while drawing an arc as seen from the front of the machine. To prevent the looper from contacting any part of your body, be sure to operate the machine with the front cover closed securely.

##### ➤ **Finger protector plate**

-  Never insert any of your fingers.

When switch the power, never put your finger to the finger protector plate in case of danger caused by trimming knife's hurting because of wrong signal movement.

## **7. General issue of operation**

➤ Schematic diagram of sewing machine table

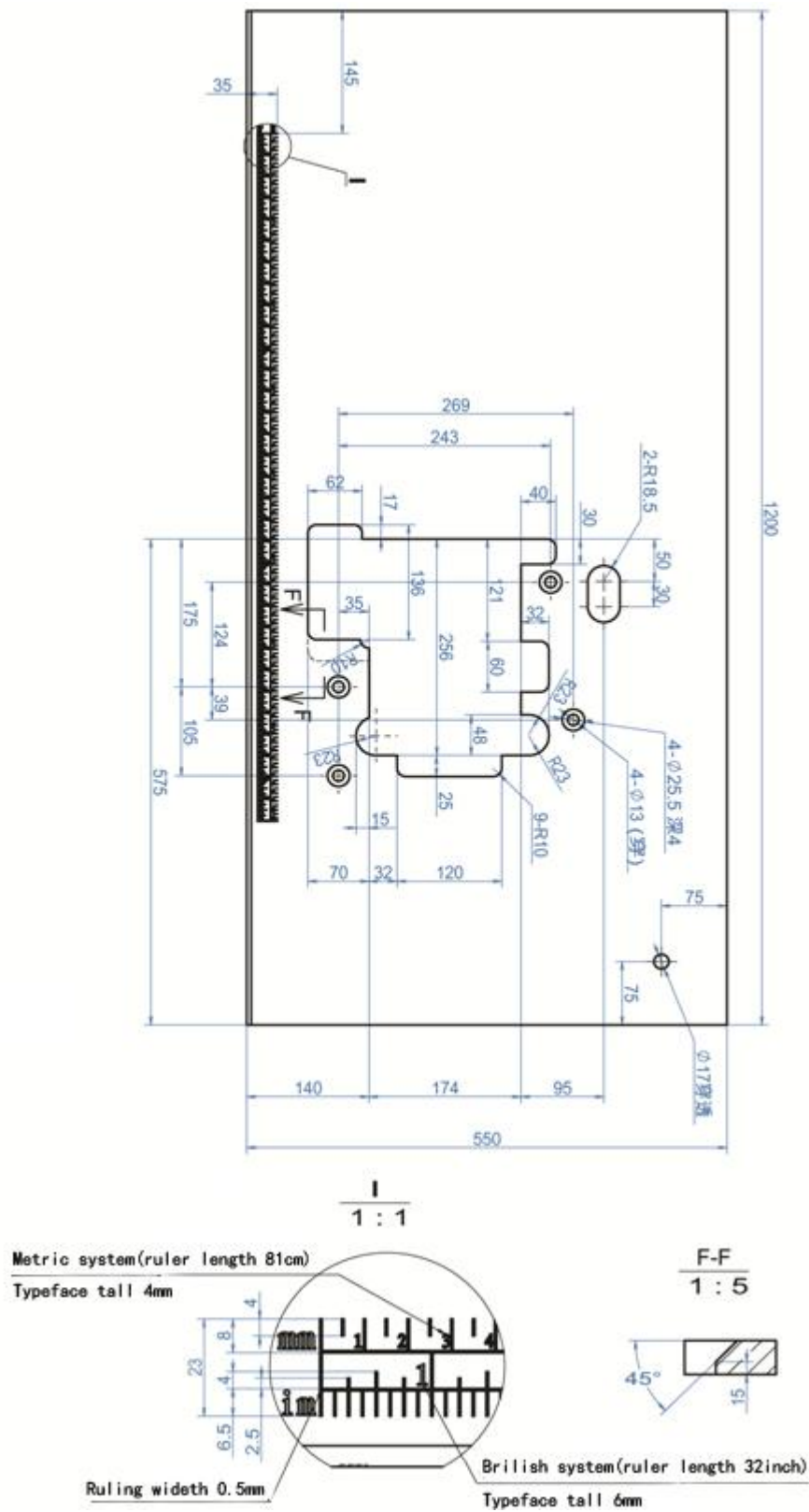


图 5

➤ Lubrication



## CAUTION



When lubrication the machine and/or replacing the oil, company recommended oil. Using other oils may damage machine.

### 1. Oil

Use the oil "HIGH SPEED SEWING MACHINE OIL" specified company (ISO Viscosity Grade 22).

### 2. To fill the machine with oil (Fig.6)

Remove cap 1, add the oil until the oil level (see oil gauge reaches (H).

After filling the tank with oil replace cap 1.

### 3. Required amount of oil (Fig.6)

(H) on oil gauge 2: Upper limit

(L) on oil gauge 2: Lower limit

The oil level should always lie between (H) and (L).

### 4. Manual lubrication (Fig.7)



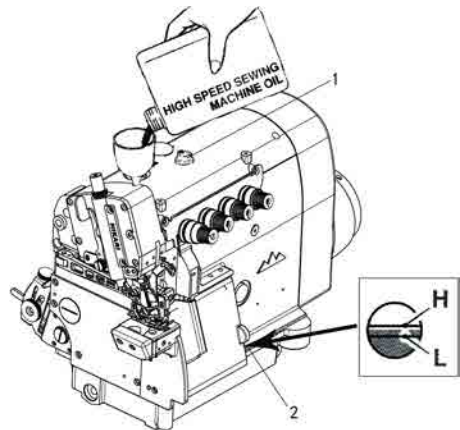
## CAUTION

Always turn off the power and unplug the machine when you apply oil by hand.

Apply 2 or 3 drops of oil to needle bar 3 and upper looper holder 4 by hand when the machine is used for the first time or has been left unused for some time.

### 5. Checking oil circulation (Fig.8)

Once the machine has been properly filled with oil, press the machine treadle to run the machine and check oil gauge window 5 to see if the oil is flowing.

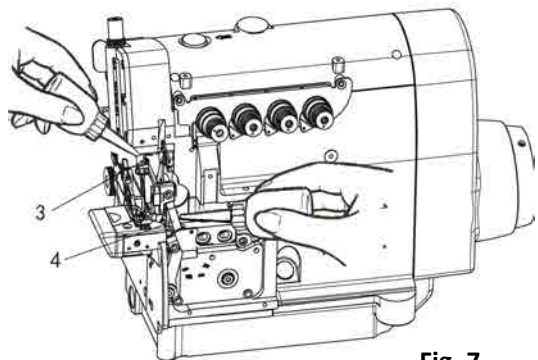


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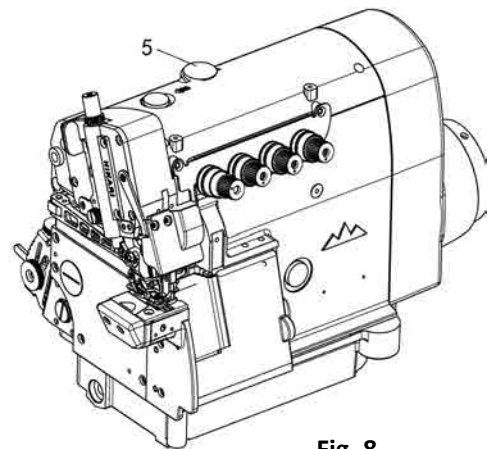
by our

2)

**Fig. 6**

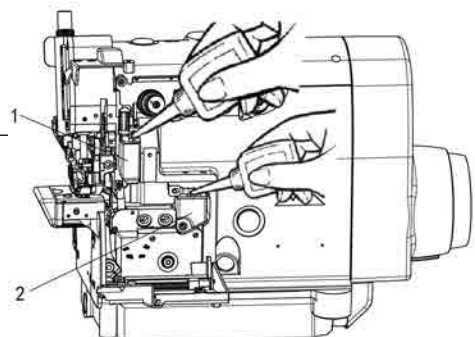


**Fig. 7**



**Fig. 8**

➤ **Silicone oil for H. R. device**





## CAUTION

Always turn off the power and unplug the machine when you fill the H.R. device with silicone oil.

Fill silicone oil tanks 1, 2 with silicone oil.

To prevent thread breakage or fabric damage, add the silicone oil before it is too low. (Fig.9)

Fig. 9

### ➤ Oil replacement



## CAUTION



Well-qualified technicians should replace the oil.

Replace the oil one month after the first use and thereafter every six months. If you keep using the old oil, it may cause the damage to the machine.

### ➤ To drain the oil

1. Drain the oil by removing screw 3 on the left side of the oil pan.
2. Tighten screw 3 after draining (Fig.10)

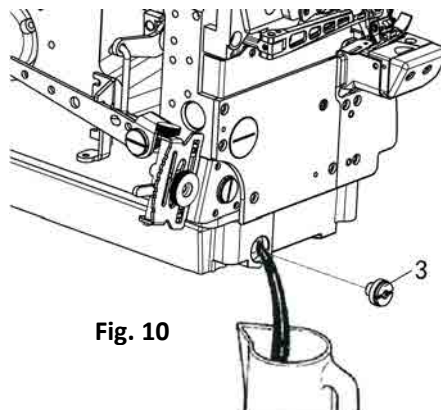


Fig. 10

### ➤ Checking and replacing the filter



## CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should check and replace the filter.

If filter 7 is clogged up with dust and dirt, the machine will not be properly lubricated.

Check filter 7 every six months, and clean or replace it if necessary.

### To remove the filter (Fig.11)

Remove parts 4 to 7, and check the filter by referring to the illustration. If filter 7 is completely damaged, replace it with a new one.

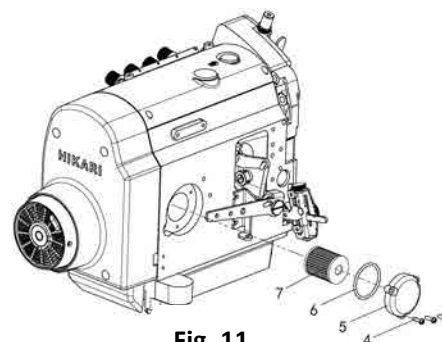


Fig. 11

### ➤ Cleaning the machine



## CAUTION

Always turn off the power and unplug the machine when you clean the machine.

Clean the grooves of the needle plate and the area around the feed dogs (Fig.12)

### ➤ Threading

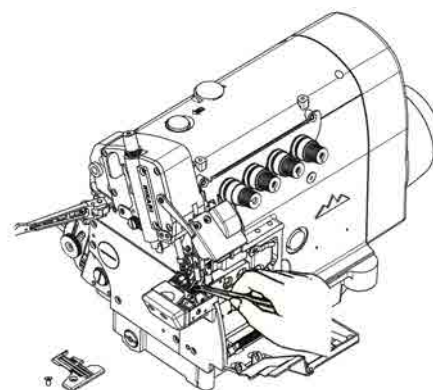


Fig. 12

## CAUTION

Always turn off the power and unplug the machine when you thread the machine.

1. Open cloth plate 1, eye guard 2, front cover 3, and presser bar 4. Put each part back after threading the machine (Fig.13).

2. In case the machine is threaded previously (Fig.14)

A: Knot the preset thread and the thread being used together to thread the machine.

B: Needle thread

Pull the knot toward the needle, trim the knot off and then thread the needle.

C: Looper thread

Trim the knots off neatly after passing through the eye of the looper.

3. If the machine is not threaded

Thread the machine properly by referring to the label attached to the machine.

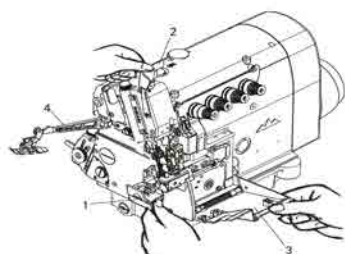


Fig. 13

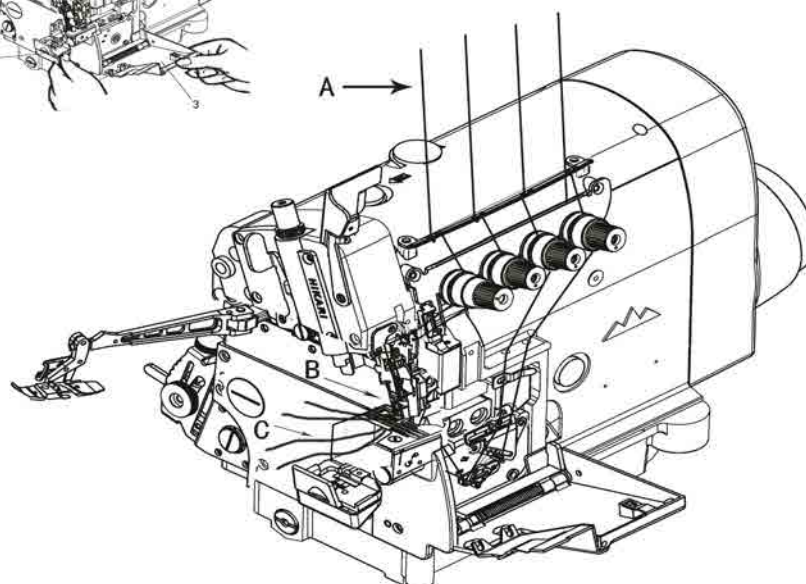


Fig. 14

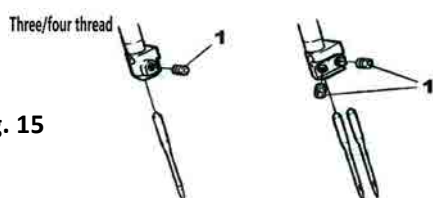


Fig. 15

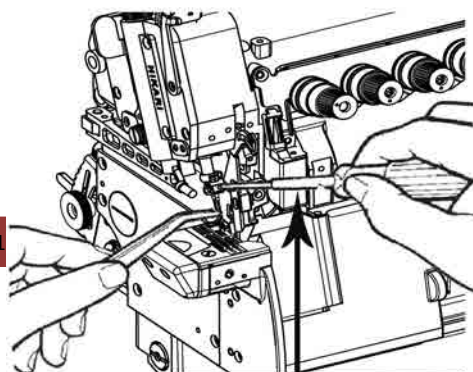


## CAUTION

Always turn off the power and unplug the machine when you replace the needle(s).

To

Turn  
the

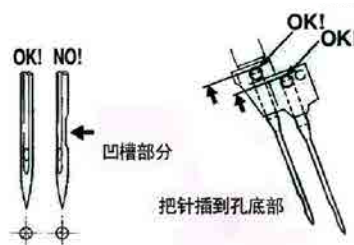


1

请使用红柄的扳手（附件）。

## Replacing the needle

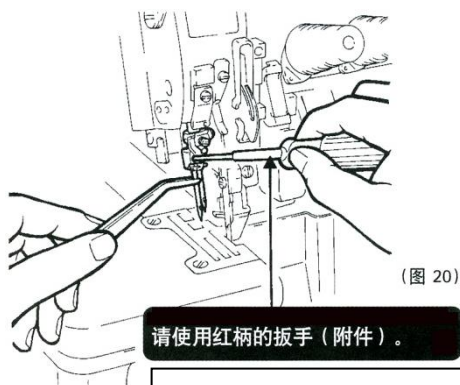
replace the needle, loosen screw 1 firstly by referring to the illustration below (Fig.15, 16)



the scarf to  
rear of the  
machine as



seen from the front of the machine, insert the needle to the proper depth, and fasten screws 1 securely (Fig.17).



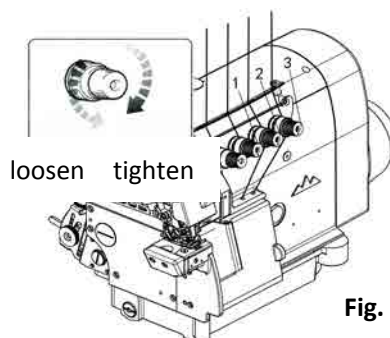
**Fig. 16**

please use the red handle  
of the wrench(attachment)

Groove  
section

Taking the needle inserted  
into the bottom of the hole

**Fig. 17**



**Fig. 18**

### ➤ **Adjusting the thread tension**

To obtain the proper thread tension, adjust needle thread tension knobs 1, top cover thread tension knobs 2 and looper thread tension knob 3 (Fig.18) . To tighten the thread, turn each knob clockwise. To loosen the thread, turn each knob counter clockwise. Each thread tension should be as light as possible, yet sufficient to produce balanced and beautiful stitches.

### ➤ **Opening/closing the presser bar**



## **CAUTION**

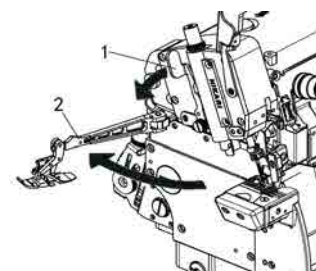
Always turn off the power and unplug the machine before opening/closing the presser bar.

To open the presser bar (Fig.19)

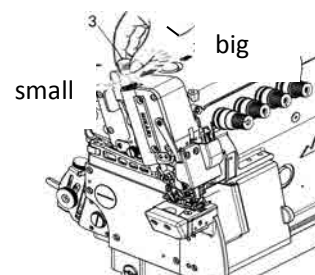
1. Rotate the handwheel until the needle is at the top of its stroke.
2. Bring lever 1 down to open presser bar 2.

To close the presser bar (Fig.19)

1. Rotate the handwheel until the needle is at the top of its stroke.
2. Bring lever 1 down to put presser bar 2 back.



**Fig. 19**



**Fig. 20**

### ➤ **Adjusting presser foot pressure**

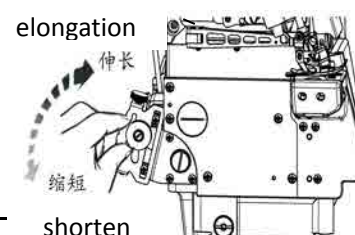
The presser foot pressure should be as light as possible, yet sufficient to feed the fabric correctly and provide the uniform stitch formation.

Adjust presser foot pressure by turning adjustment screw 3. (Fig.20)

### ➤ **Adjusting the differential feed ratio**

1. Loosen nut, to increase the differential feed ratio, bring lever down. The finished fabric is shrunk. To decrease the differential feed ratio, bring lever up. The finished fabric is stretched.

2. After this adjustment is made, tighten nut. (Fig.21)



**Fig. 21**

➤ **Adjusting stitch length**



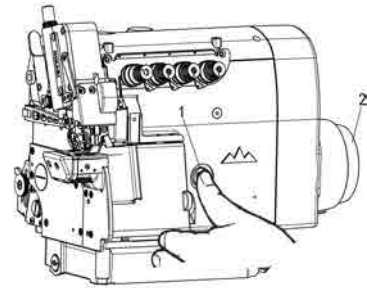
**CAUTION**

Always turn off the power and unplug the machine when adjusting the stitch length.

1. With push button 1 depressed, turn handwheel 2 so that the push button 1 goes further into the depth (Fig.22).
2. With the push button in the place stated in 1. Turning handwheel 2 counterclockwise produces coarse stitches. Turning handwheel 2 clockwise produces fine stitches (Fig.22).

NOTE:

Stitch length adjustment must only be made after the differential feed ratio has been



**Fig. 22**

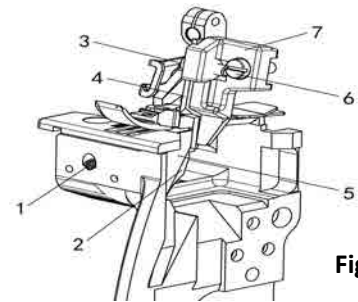


**CAUTION**

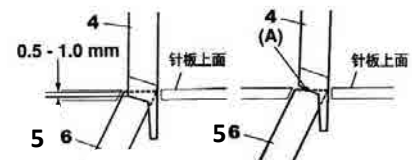
Always turn off the power, disconnect the power cord and then only well-qualified technicians should replace and adjust the knife. Pay attention to the knife edges not to injure your hands and fingers.

➤ **Replacing the upper knife**

1. Loosen screw 1. Bring lower knife holder 2 to its farthest position to left. Tighten screw 1 temporarily.
2. Remove screw 3 and upper knife 4. Replace the upper knife with a new one. Tighten screw 3 temporarily. Turn the handwheel until the upper knife holder is at its lowest position. There should be 0.5-1.0mm overlap of the upper and lower knives. Adjustment is made by moving the upper knife up or down. Tighten screw 3.
3. Cross upper knife 4 and lower knife 6 with each other at the center (A) of their cutting edges (Fig.26). Loosen screw 1. Then check to make sure that the upper knife tightly touches the lower knife. Tighten screw 1.
4. To check proper cutting, place a thread between the upper and lower knives and turn the handwheel.

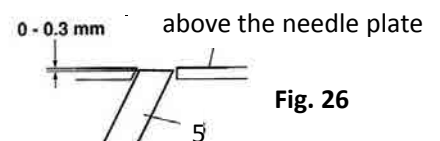


**Fig. 23**



**Fig. 24**

**Fig. 25**



**Fig. 26**

➤ **Replacing the lower knife**

1. Loosen screw 1. Bring lower knife holder 2 to its farthest position to the left. Tighten screw 1 temporarily.
2. Loosen screw, remove lower knife, replace it with a new knife. Adjust the lower knife so that the cutting edge is 0-0.3mm below the top surface of the needle plate. Tighten screw 5.
3. Follow procedures 3 and 4 in "Replacing the upper knife".

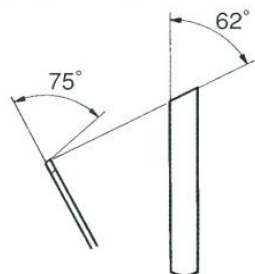
➤ **Adjusting overedge width**

1. Loosen screw 1. Bring lower knife holder 2 to the farthest position to the left. Tighten screw 1 temporarily.
2. Loosen screw 6, Adjusting overedge width by moving upper knife clamp 8 to the left or right.

3. Follow procedures 3 and 4 in "Replacing the upper knife".

### ➤ **Sharpening the knives**

The upper knife is need to resharpen is for some time. Resharpen the lower knife for the proper cutting action.



**Fig. 27**

Resharpen the lower knife (**Fig. 27**)

If you resharpen the lower knife improperly, insufficient cutting will be obtain or the lower knife will become immediately dull. Be careful.

Upper knife

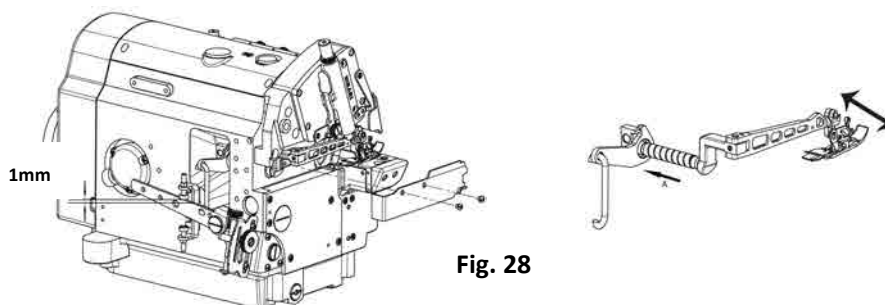
A special knife grinder is needed to resharpen the upper knife. It is recommended when resharpening the upper knife that you ask Hikari direct distributors or our agents. To increase efficiency, always prepare a spare upper knife.

### ➤ **Changing the fulcrum on the presser arm**

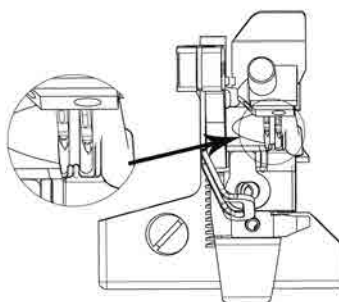
#### **CAUTION**

Always turn off the power, unplug the machine and then well-qualified technicians should change the fulcrum on the presser arm.

1. Set the presser foot, and then bring down the feed dog to the bottom of its travel.
2. Move collar to the right while pressing presser foot shaft in the direction of A, tighten screw. (There should be a clearance of 1mm between presser foot lift lever and upper limit screw.)
3. Check to see if the slot(s) of the needle(s) on the presser foot is (are) aligned with that (those) on the needle plate. If not, loosen fixed presser foot bushings screw, and adjust presser arm by moving it left or right. After this adjustment, tighten screw. (**Fig. 28, Fig. 29**)



**Fig. 28**



**Fig. 29**

### ➤ **Positioning and adjusting the needle thread take-up**



## CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should adjust the needle thread take-up.

When needle thread take-up 1 is at the bottom of its travel, adjust the distance from the front of the arm head to the needle thread take-up. To make this adjustment, loosen screws 2. (Fig. 30, 31)

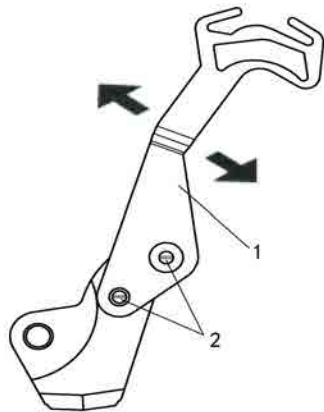
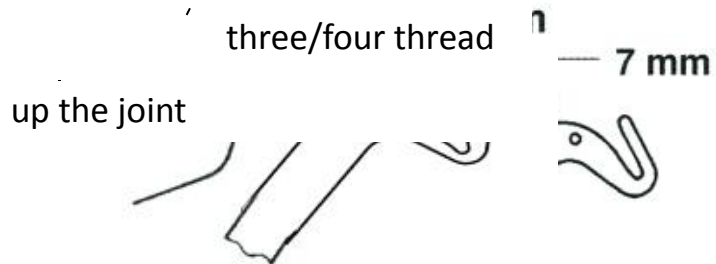


Fig. 30

三、四线



(图 37)

Fig. 31

### ➤ Positioning the thread guides/Adjusting the amount thread to be supplied from the needle thread take - up

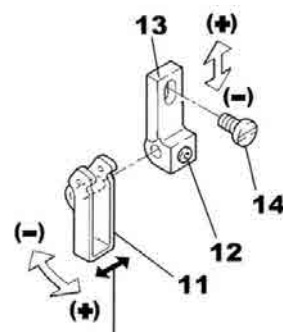
The location of each needle thread guide varies with types of machine. When the needle thread take-up is at the bottom and the top of its travel, position each needle thread guide according to the machine being used.

3, 4 thread series Adjusting the needle thread guides (Fig. 32)

Loosen screws 12 and 14. Adjust thread guides 11 and needle thread bracket 13 by moving them in the direction of the arrows.

To increase the amount of thread to be supplied, move each thread guide, and needle thread bracket in the direction of (+). To decrease the amount of thread to be supplied, moving each thread guide, and needle thread bracket in the direction of (-).

After this adjustment, tighten screws 12 to 14.



(Fig. 32)

Adjust the left-right position of through thread piece No.11, made the line up piece of needle in the centre of two-ply.

Positioning the thread guides

● HX6904T-03

stitch from 504

the needle under  
the lowest

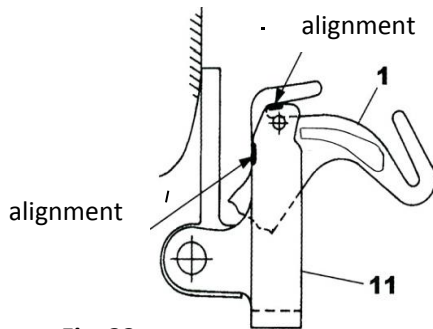


Fig. 33

● HX6905T-03

stitch from 505

the needle under  
the lowest

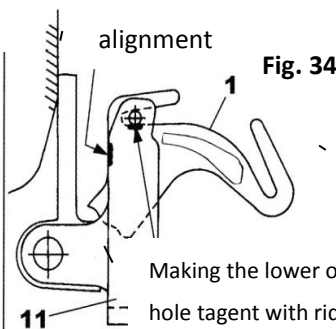


Fig. 34

● HX6914T-03

stitch from 514

the needle under  
the lowest

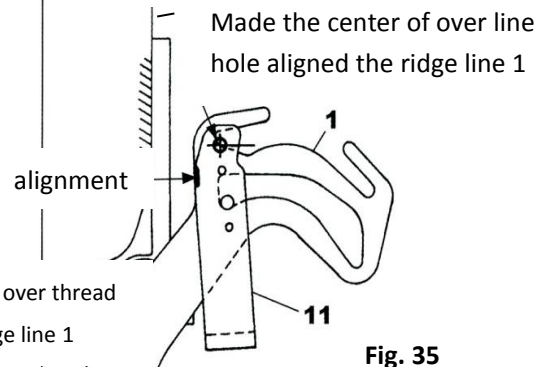


Fig. 35

● HX6904T-03

**Stitch type: 504 (soft thread chain)**

the needle under the lowest position, the topest position of shelt

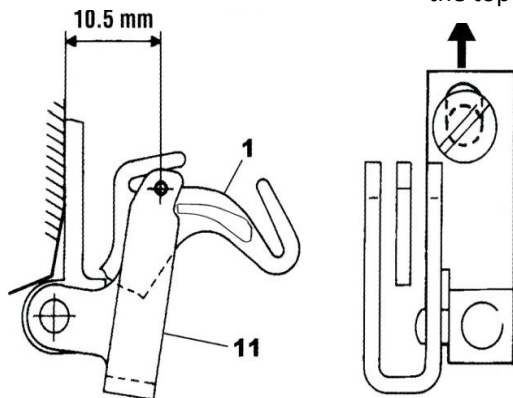


Fig. 36

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



## CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should adjust the thread take-up. .

1. Adjust looper thread take-up 9 and 11 with the lower looper at the extreme right end of it  
Position looper thread take-up 9 and 11 by referring to the table below. Loosen screws 10 and 12, and adjust looper thread take-up 9 and 11.

To increase the amount of thread, move looper thread take-up 9 and 11 in the direction of (+).

To decrease the amount of thread, move looper thread take-up 9 and 11 in the direction of (-).

The standard location of looper thread guides

2. 13, 15 and 17 is shown on the next page. Loosen screws 14, 16 and 18, and adjust each looper thread guide (see the illustration).

To increase the amount of thread to be supplied, move each looper thread guide in the direction of (+).

To decrease the amount of thread to be supplied, move each looper thread guide in the direction of (-).

(-). (Fig. 37)

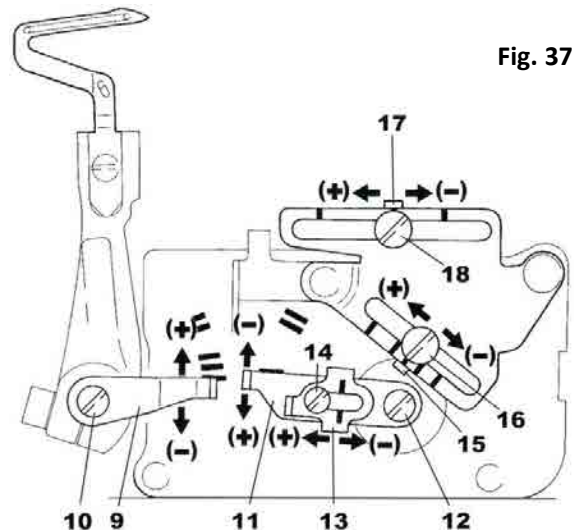


Fig. 37



The standard position of thread looper and thread guides (Fig. 38)

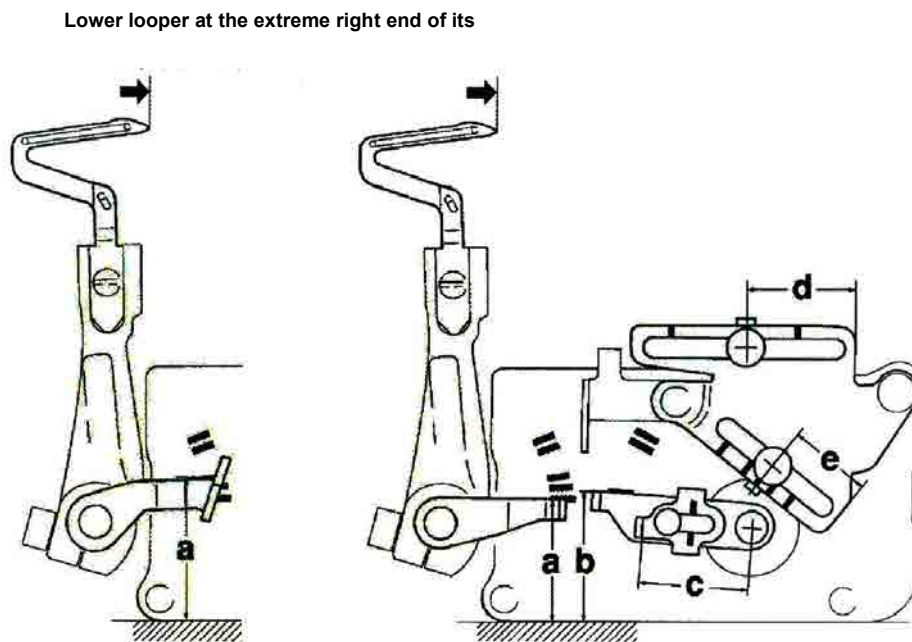


Fig. 38








HX6900T	(a)	(b)	(c)	(d)	(e)
HX6904T-03	26	29	28	21.5	14.5
HX6914T-03	26	29	28	21.5	14.5
HX6904T-04	26	29	28	21.5	14.5
HX6914T-04	26	29	28	21.5	14.5

(mm)

## Adjusting the reference table

three/four thread series

(mm)

 子型号									
			(a)	(b)	(c)	(a)	(b)		
HX6904T-03	10.4 - 10.6	3.7 - 3.9	13.5	5.4 - 5.7	10.5	0.5	0.2	0.7 - 0.9	5.5
HX6914T-03	10.4 - 10.6	3.7 - 3.9	13.5	5.4 - 5.7	10.5	0.5	0.2	0.7 - 0.9	5.5
HX6904T-04	11.8 - 12.0	4.1 - 4.3	13.5	5.4 - 5.7	11	0.5	0.2	1.0 - 1.2	7
HX6914T-04	11.8 - 12.0	4.1 - 4.3	13.5	5.4 - 5.7	11	0.5	0.2	1.0 - 1.2	7

**standard needle(three/four thread series)**

Subtypes	DCX27
HX6904T-03	#11
HX6914T-03	#11
HX6904T-04	#11
HX6914T-04	#11

## HX6900T series type form

### three/four thread series



the thickness of fabric	Subclass	Number of needle	Number of thread	Needle space	width of stitch	the length of stitch	Diff.feed rate	Presser foot lift	maxium speed
Medium-heavy	HX6904T-03	1	3		4	0.8-3.8	0.8-1.8	5.5	7500
Medium-heavy	HX6914T-03	2	4	2	4	0.8-3.8	0.8-1.8	5.5	7500
Extra heavy	HX6904T-04	1	3		4	0.8-3.8	0.8-1.8	6.5	6500
Extra heavy	HX6914T-04	2	4	2	4	0.8-3.8	0.8-1.8	6.5	6500