



PEGASUS®

KH040 Device

Models: EX3200 Series
EX5200 Series

Thank you for purchasing Pegasus' labor saving device.

Study this manual very carefully before beginning any of the procedures and then use the device correctly and safely.

Keep this manual in a convenient place for quick reference when needed.

Flat type vacuum chain cutter

INSTRUCTIONS

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

1. Introduction

- This manual describes the instructions for using this device safely.
- Study this manual very carefully and understand fully how to operate, check, adjust and maintain the labor saving device before beginning any of the procedures.
- You always perform operations close to moving parts such as needles when using industrial sewing machines. Therefore you have to keep in mind you could easily touch them. To prevent accidents, it is essential that you use the safe products supplied by Pegasus correctly.
All the people who will use sewing machines must study this manual and the instruction manual for sewing machines very carefully and then take necessary safety measures before beginning any of the procedures.

2. Indications of dangers, warnings and cautions




To prevent accidents, indications (symbols and/or signs) which show the degree of danger are used on our products and in this manual. Study the contents very carefully and follow the instructions.

Indication labels should be found easily.










Attach new labels when they are stained or removed.

Contact our sales office when new labels are needed.

Symbols, signs and/or 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 you operate the machine and/or labor saving device.
	If you use the machine and/or labor saving device incorrectly, you may get an electrical shock.
	If you use the machine and/or labor saving device incorrectly, your hands and/or fingers may be injured.
	If you use the machine and/or labor saving device incorrectly, you may cause fire.
	Never do this.
	Unplug the machine or shut off the power when checking, adjusting and/or repairing the machine and/or labor saving device, or when lightning may strike.
	Be sure to connect to ground.
	If you use the machine and/or labor saving device incorrectly, your fingers and/or hands may be caught in them or it, causing trouble.
	If you use the machine and/or labor saving device incorrectly, you may burn yourself.

3. Safety precautions


① Applications, purpose

The labor saving device is designed to increase quality and productivity according to you needs.

Therefore never use the device for the applications which may defeat the above purpose.

② Circumstances

Some circumstances when you are using the labor saving device may affect its life, function, performance, and safety.

 For safety, do not use the labor saving device under the circumstances below.

1. Do not use the device near objects which make noise such as a high-frequency welder, etc.
2. Do not use or store the device in the air which has vapor from chemicals, or do not expose the device to chemicals.

3. Do not leave the device outside, in high temperatures or the direct sun.
4. Do not use the device in high humidity or ambient temperatures which may affect them.
5. Do not use the device on the condition that the voltage fluctuation range is more than $\pm 10\%$ of the rated voltage.
6. Do not use the device at the place where the supply voltage specified for the control motor cannot be properly obtained.
7. Do not use the device at the place where the air supply specified for the device cannot be properly obtained.
8. Do not expose the device to the water.

③ Safety measures



(1) Safety precautions when you perform maintenance on the labor saving device.

- When performing maintenance such as when checking, repairing, cleaning the labor saving device, turn off the power, disconnect the power plug from the outlet and press the machine treadle in order to make sure the machine does not run.

If you have to perform maintenance on the machine and/or labor saving device with the power on, always be careful because the machine and/or device could start operating unexpectedly.

To prevent accidents caused by incorrect operation, you should establish your own procedures for safe operation and follow them.

- Only well-trained people should perform routine daily maintenance and/or repair the machine and/or device.



- Do not modify the machine and device yourself.

※ Consult your local Pegasus' sales office or representative for modification.



(2) Before operating the device

- Before operating the device, check the machine head, machine unit and device to make sure they do not have any damage and/or defects.

Repair or replace any defective parts immediately.

- To prevent accidents, always make sure the safety covers and safety guards are properly secured.

Never remove the safety covers and safety guards.



(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



CAUTION

① Unpacking

The machine and device are packed in boxes (and plastic bags) in the factory before shipment. Unpack the boxes and bags properly and sequentially by following the instructions shown on them.

② Installation, preparation




CAUTION

Connecting the air lines


1. Always turn off the power first and then connect the air lines to the joints. Be sure to connect all the air lines before connecting them to the air source.

2. When connecting the air lines to the joints, be sure to insert the joints to the proper depth of the air lines and fasten securely.

3. Do not allow excessive force to be exerted on the air lines while using the device.

4.  Do not bend the air lines too much.


5. If necessary, protect the air lines by positioning them safely and/or using the cover.


6.  Do not use staples to secure the air lines. Otherwise it may cause damage.




WARNING


Connecting the cords

1.  When connecting the power cord, be sure to turn off the power and disconnect the power plug from the outlet.


2.  Check the voltage designation to make sure the power relay cord matches the local supply voltage. The use of wrong cord may cause damage to parts and/or fire.

3. Do not allow excessive force to be exerted on the cords while using the device.

4.  Do not bend the cords too much.


-
5. Confirm that the cord is at least 25mm away from moving part of the machine and/or the device when you connect the cord.
 6. If necessary, protect the cords by positioning them safely and/or using the cover.
 7.  Do not use staples to secure the cords. Otherwise it may cause damage.

Ground

1. Connect each of the ground wires in the sewing machine system to the ground terminal. Do not connect one devices' ground wire to another devices'.
2.  Connect the ground wires securely to the indicated ground points on the machine head.



WARNING


③ Before operation

1. Check the cords, connector and air lines to make sure they do not have any damage, disconnections or tangles and then turn on the power.
2.  Do not bring your hands and/or any part of your body close to the needle and pulley when turning on the power.
3. Well-trained people who studied this manual and the instruction manual very carefully should use the machine with the labor saving device.
4. Study the contents on "2. Indications of dangers, warnings and cautions" very carefully and then provide users with safety training as required.

WARNING


④ Precautions for work and operation

1.  The area near the presser foot is very dangerous during sewing. Do not bring your hands and/or any part of your body close to the presser foot.
2. To prevent accidents, be careful that any foreign matter such as water, other liquids or metals do not get into the device.
3. Wear clothes that cannot be caught in the machine.
4.  Do not leave tools or other unnecessary objects near the device.
5. To prevent accidents, always make sure the safety cover are properly secured.

6. Drain and clean the filter regulator periodically, if the device is pneumatic. Otherwise drainage will flow into the solenoid valve and/or air cylinder, causing trouble.
7. Always turn off the power before leaving the machine table.
8. If any trouble occurs, stop using the machine and turn off the power. Check, repair and/or perform other necessary procedures immediately.
9.  Pay close attention to the knife edges not to injure your hands and/or fingers.

CAUTION

⑤ Maintenance, check & repair

1. Well-trained people who studied this instructions very carefully should maintain, check and repair the machine and device.
2. Perform routine daily maintenance and periodical maintenance by following this instructions.
3. Use Pegasus' genuine parts when repairing and/or replacing parts.
Pegasus disclaims all responsibility for accidents caused by improper repair/adjustment and/or use of parts which are not genuine.
4.  Do not modify the device yourself.
Pegasus disclaims all responsibility for accidents caused by modification.
5. After maintaining, checking, and/or repairing the machine and device, always make sure that any trouble does not occur when the power is turned on.
6. Before and after operation clean lint and any other foreign from the device not to cause trouble.
7. Make sure to replace the safety covers when you need to remove them for checking and/or maintenance.

Applications and performance

Features:

The KH (flat type vacuum chain cutter) is an air operated device that vacuums a thread chain under the cloth plate at the end of sewing and then cuts it.

The sucking inlet is located just at the rear of the presser foot.

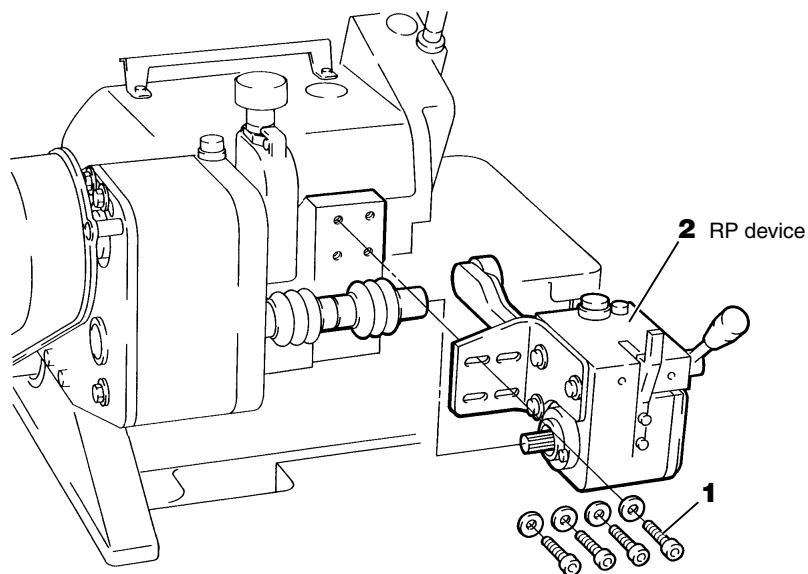
Suction method:

The vacuum device keeps on performing the operation during sewing. Waste collector (Lint collector or T waste collector) is required.

Note) KH040 is the device specified for the EX3200 & EX5200 with RP400 attached.

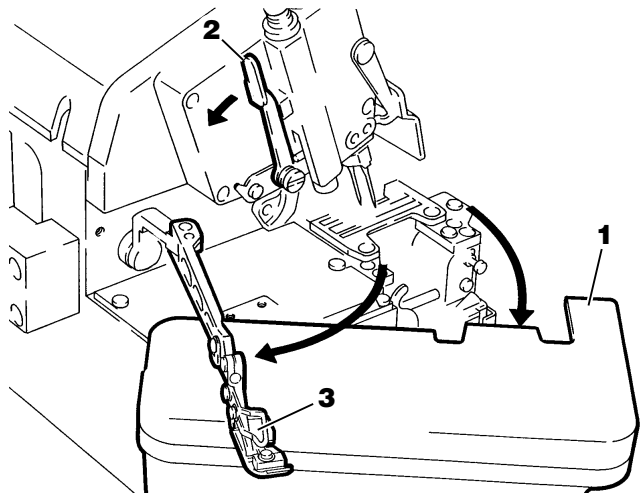
Install the KH040 first, and then RP400. In case the RP400 has been already installed on the machine, mount the KH040 after removing screws **1** and RP device **2**.

After the installation, attach the RP400 **2** with screws **1** by referring to the RP400 instructions.

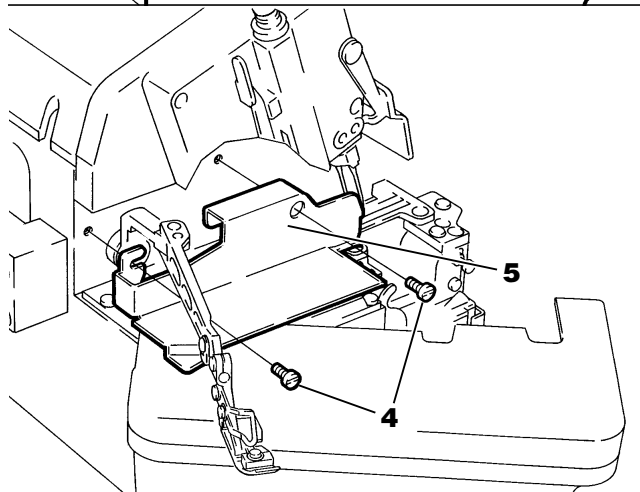


Installation

1. Open cloth plate **1**. Bring the needle to its utmost position by turning the hand pulley. Press down lever **2** and swing aside presser foot **3**.

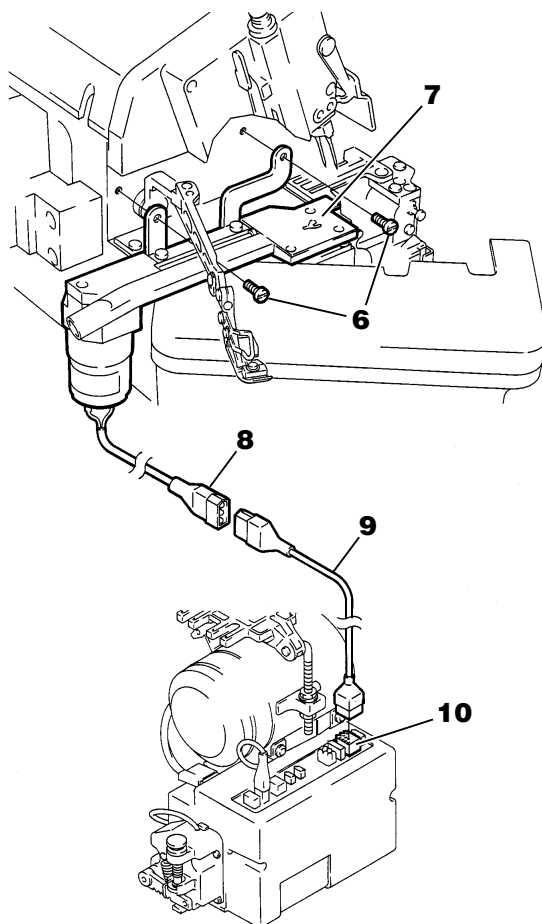


2. Remove screws **4** and fabric guide **5**.



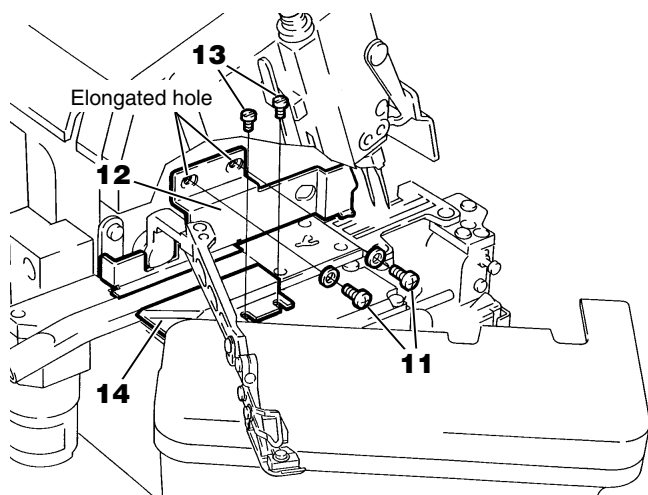
3. Install KH device **7** with screws **6**.

4. Connect relay cord **9** to KH motor cord **8** and motor connector **10**.



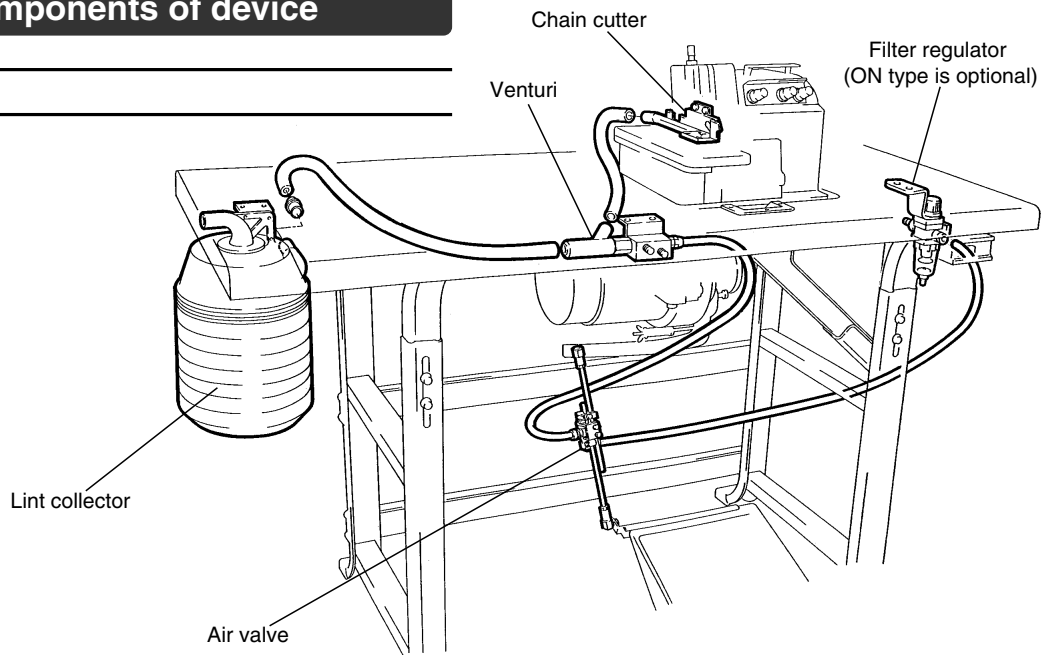
5. Position screws **11** in the center of elongated hole of fabric guide **12** and fix them onto the machine.

6. Attach auxiliary plate **14** with screw **13**.

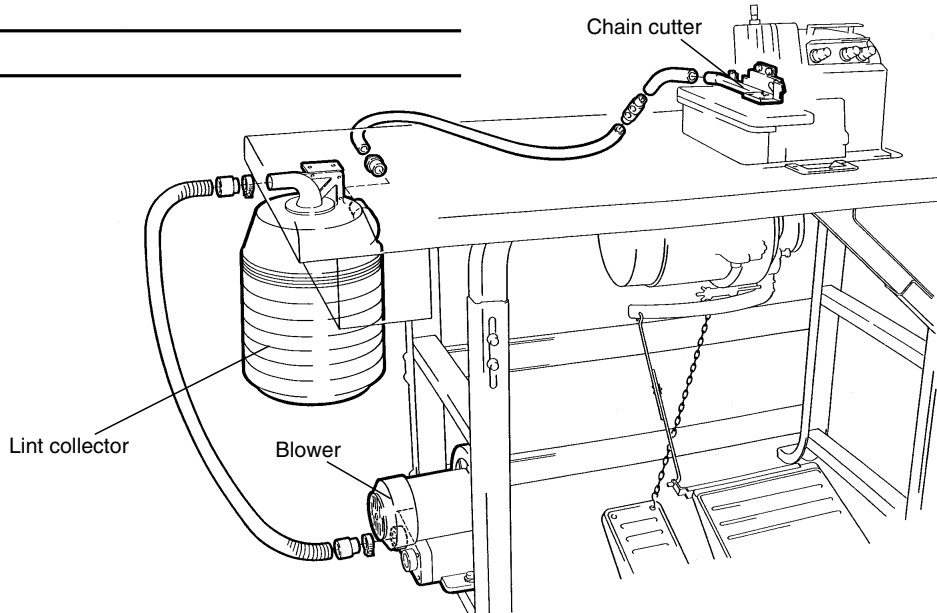


Components of device

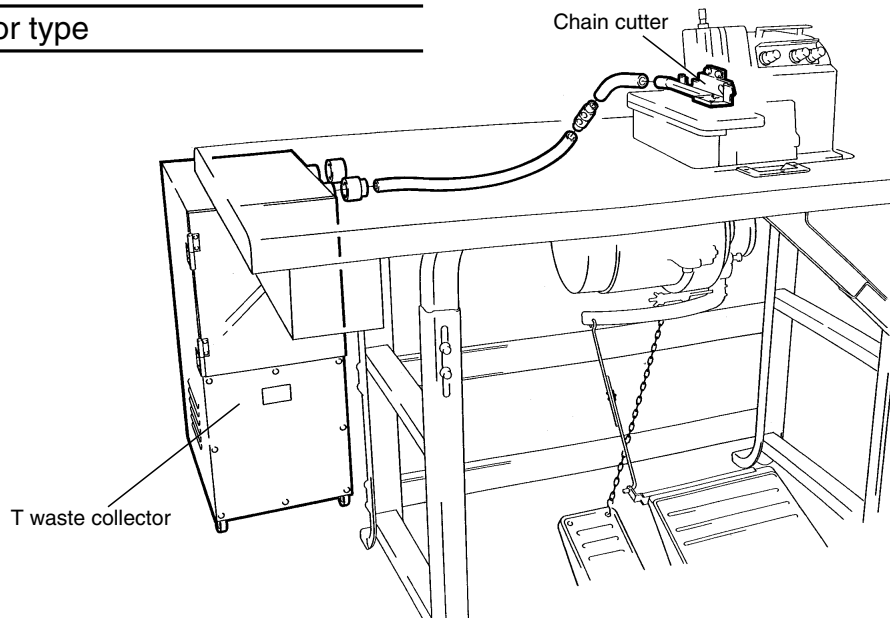
Venturi type



Blower type



T waste collector type



Connecting air lines

CAUTION

Always turn off the power and air compressor first and then well-qualified technicians should connect the air line.

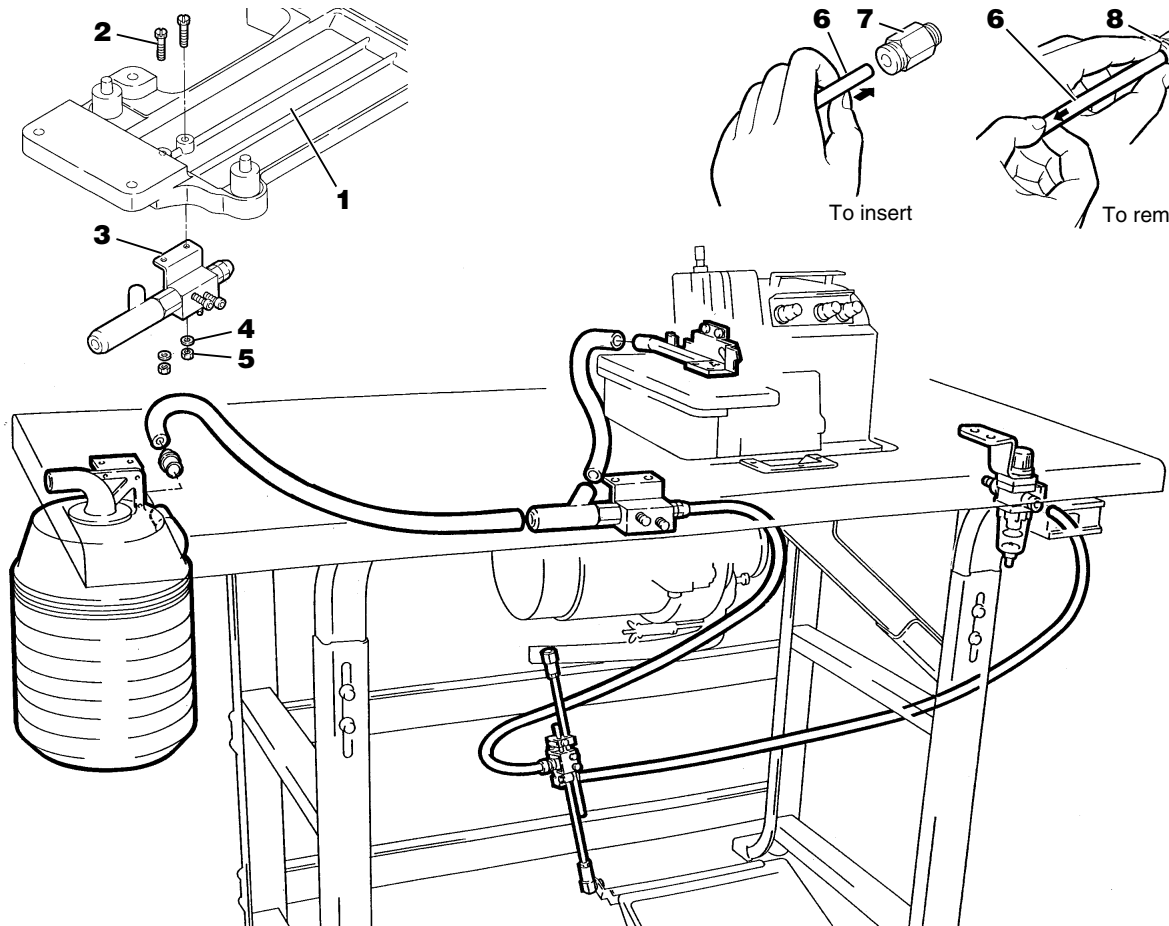
After connecting all air lines completely, join them to the air compressor (air source).

Venturi type

Connect air tubes and air hoses by referring to the illustration below.

[Installing venturi]

Install the venturi onto the machine rest board **1** by referring to sequence **2 - 5** in the illustration below.



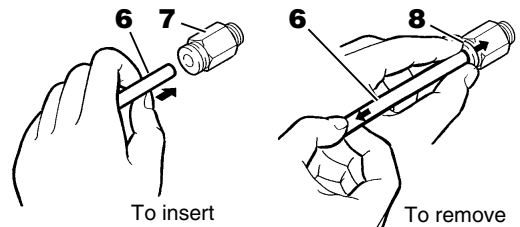
The wrong connection of air line may cause machine malfunction and accidents. Be sure to make proper connections in order to prevent any damage to the machine.

When adjusting the filter regulator, turn off the power and connect all air lines, then start supplying compressed air from the air compressor.

Be sure to drain periodically before drainage level reaches the baffle. Otherwise the drainage will flow into the solenoid valve or air cylinder and may cause trouble. Note that drainage spouts downward with air.

Note

- Insert the air tube **6** completely to the depth of the joint **7**. And check if the air tube can not be removed by pulling it by hand.
- To remove the air tube **6** from the joint **7**, push the release ring **8** toward the joint **7** and pull out the air tube **6**.



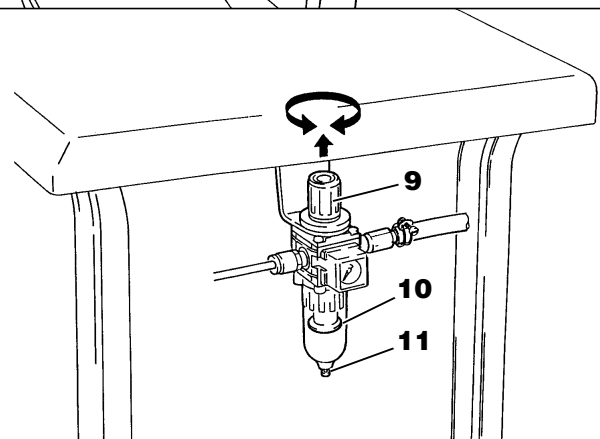
[Adjusting air pressure]

Pull up the knob **9** on the filter regulator until it clicks. Then set the air pressure at 0.4-0.5 Mpa (4-5 kgf/cm²).

- To increase the air pressure, turn the knob **9** clockwise.
- To decrease the air pressure, turn the knob **9** counterclockwise.

[Draining filter regulator]

Press the draining button **11** to drain the filter regulator before collected drainage level reaches the baffle **10**.



Connecting air lines

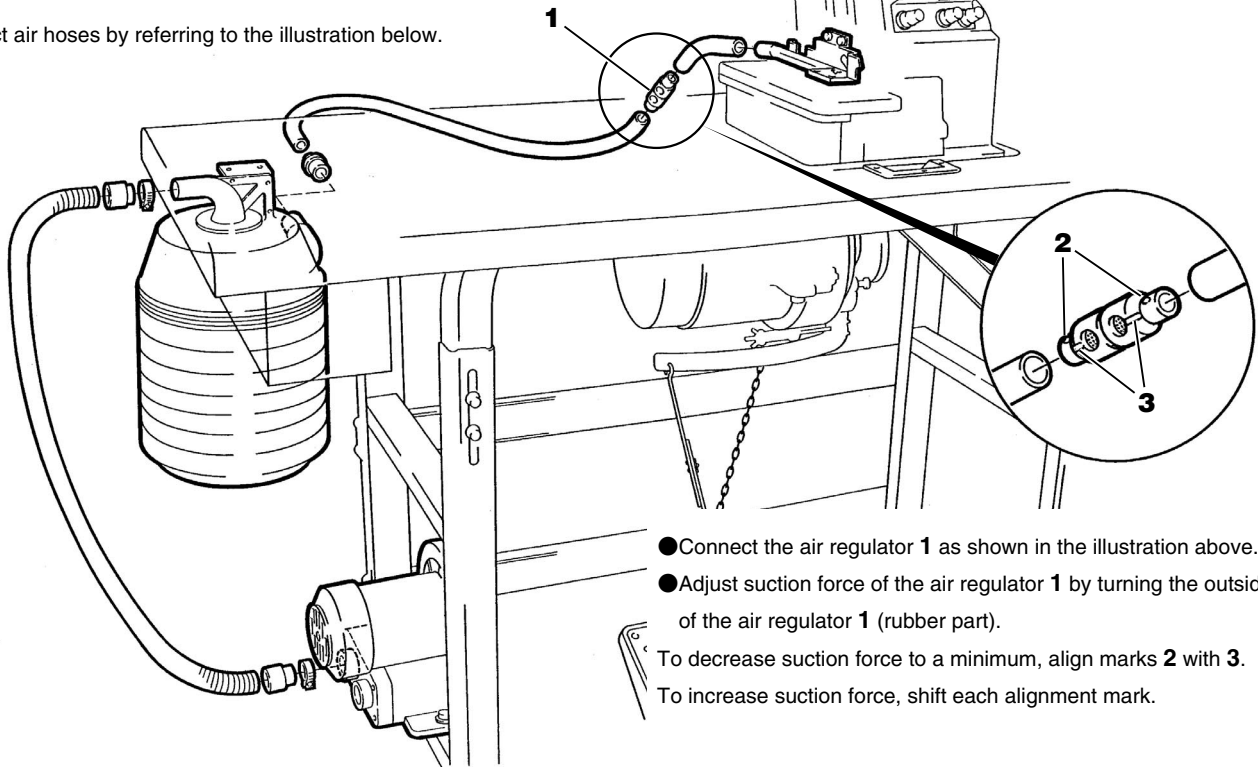
⚠ CAUTION

⚠ Always turn off the power, disconnect the power cord and then well-qualified technicians should connect the air line.

⚠ The wrong connection of air line may cause machine malfunction and accidents. Be sure to make proper connections in order to prevent any damage to the machine.

Blower type

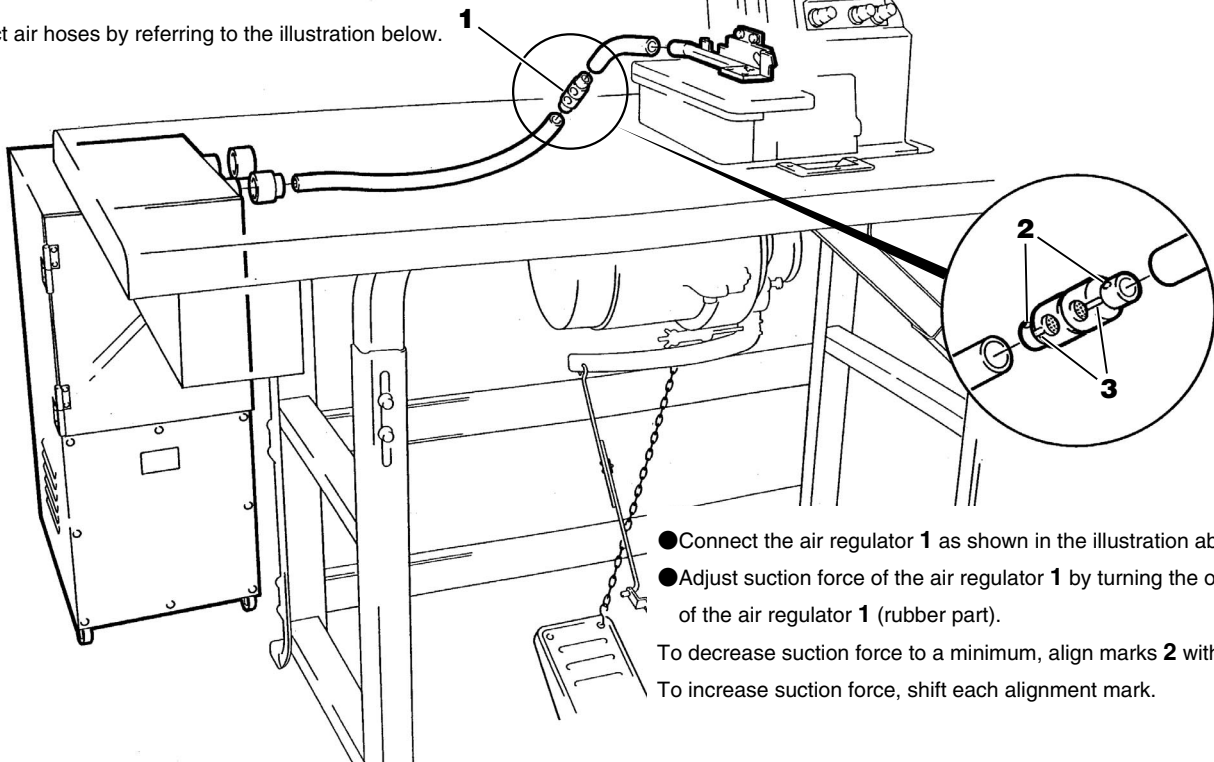
Connect air hoses by referring to the illustration below.



- Connect the air regulator **1** as shown in the illustration above.
- Adjust suction force of the air regulator **1** by turning the outside of the air regulator **1** (rubber part).
To decrease suction force to a minimum, align marks **2** with **3**.
To increase suction force, shift each alignment mark.

T waste collector type

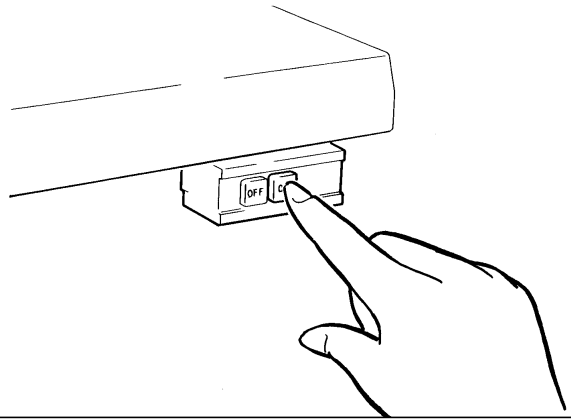
Connect air hoses by referring to the illustration below.



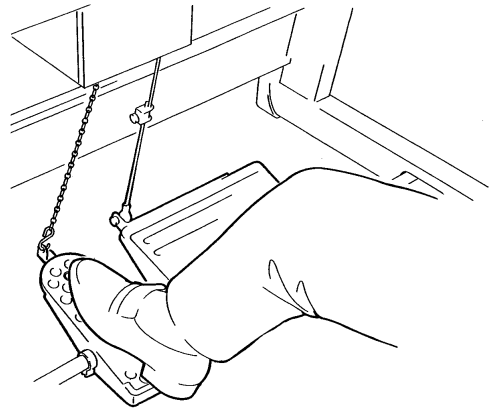
- Connect the air regulator **1** as shown in the illustration above.
- Adjust suction force of the air regulator **1** by turning the outside of the air regulator **1** (rubber part).
To decrease suction force to a minimum, align marks **2** with **3**.
To increase suction force, shift each alignment mark.

Sewing

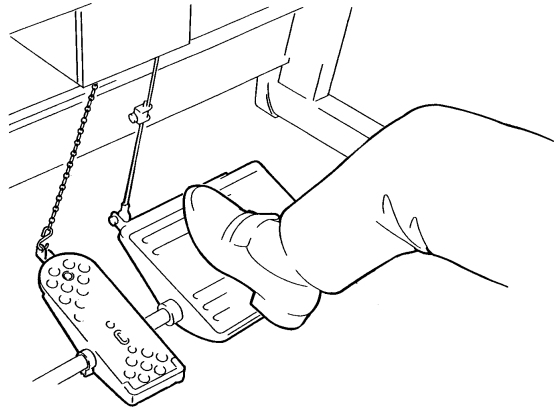
1. Turn on the machine.



2. Raise the presser foot by pressing the presser foot lift treadle. Then position the fabric.



3. Start sewing by pressing the machine treadle.

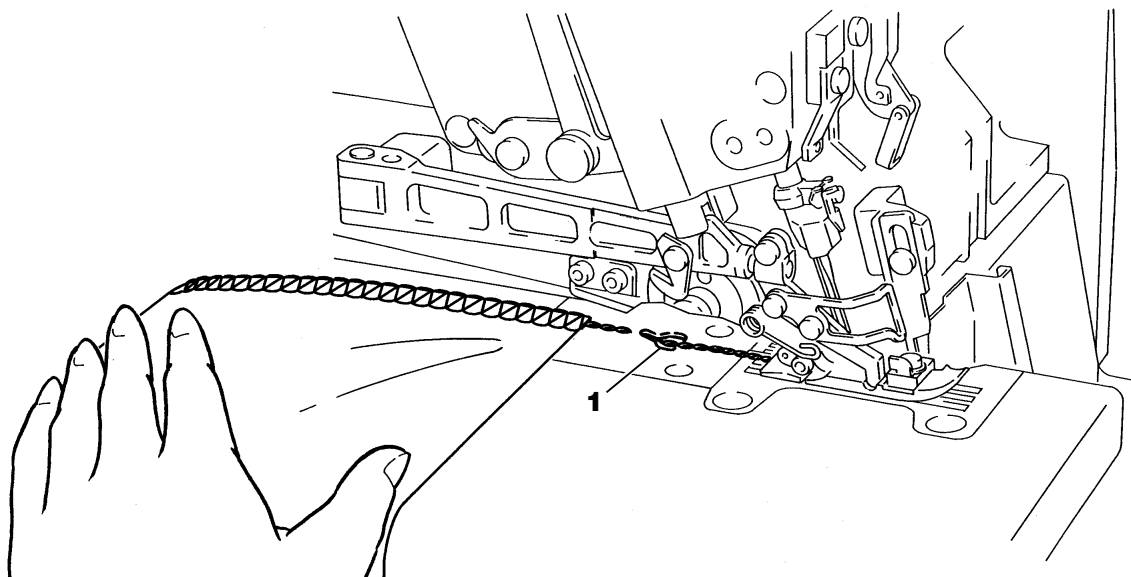


4. Complete sewing.

In order to cut thread chain smoothly, stop feeding a fabric when the thread chain is sucked into the suction inlet 1.

(See the illustrations below).

After cutting it, stop the machine.



Rotation and replacement of movable knife

1. Remove screws **1** and fabric guide **2**.
2. Remove screws **3** and stationary knife **4**.
3. Detach movable knife **5**, shift the hole to next one and fix it (i.e. rotation of knife).
Add some grease around pins **A** & **B**.

Note

When removing movable knife **5**, be careful not to misplace steel ball **6** and spring **7** that may drop down easily.

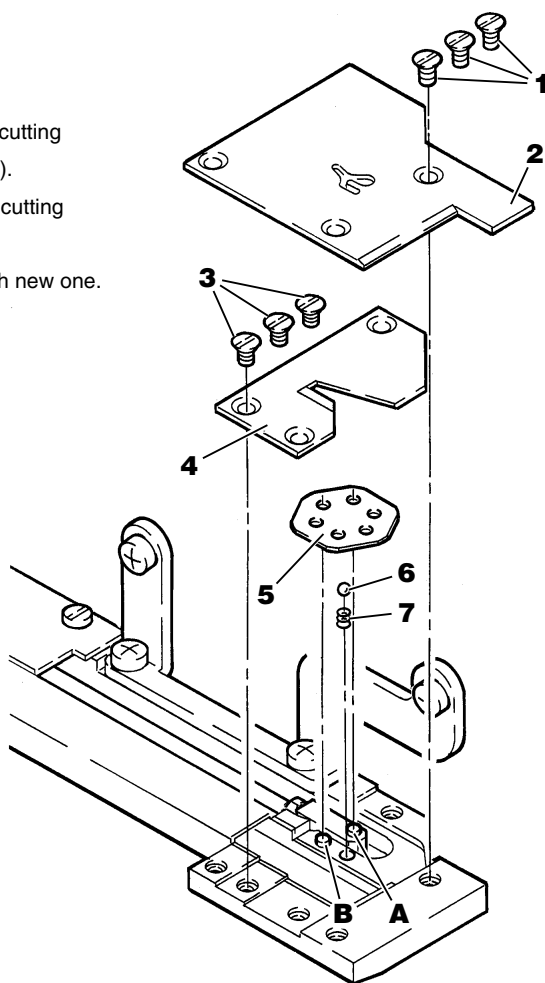
CAUTION

The knives are expendable parts.

When cutting is not well, shift the cutting edge to next one (rotation of knife).

All 6 sides of hexagonal knife are cutting edge.

After using all sides, replace it with new one.



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Printed in Japan

The description in this INSTRUCTIONS is subject to change without prior notice for improvement.