



PEGASUS®

UT Device

Models: W(T)200 Series
W(T)600 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.

Read also the instruction manual supplied with the motor.

Thread trimmer

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

①Applications, 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.

②Circumstances

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 device's ground wire to another device's.

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:


This device is available for flatbed, interlock stitch machines. Needle threads, looper threads and top cover threads are easily trimmed by pressing the treadle with heel. This device eliminates a tedious thread trimming operation, thus dramatically increasing efficiency.

Driving method:

To trim the threads and to lift the presser foot, two types of driving methods, pneumatic and electric are available.

Installing the electric presser foot lift

CAUTION

 Always turn off the power, unplug the machine and then well-qualified technicians should install the electric presser foot lift.

1. Install solenoid **1** to the table with screws **2**, washers **3** and nuts **4**.
2. Adjust nut **8** so that stroke **A** is 28mm (standard).
3. Hook pitman rod **5** onto the hole at the end of presser foot lift lever **7**. Adjust the length of pitman rod **5** by loosening screw **9**. Hook pitman rod **5** onto hole **B** on lever **6**. Give a little play on presser foot lift lever **7**.

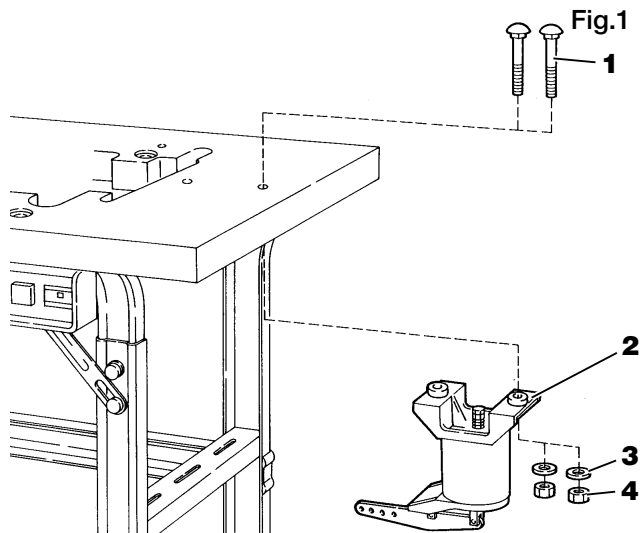


Fig.1

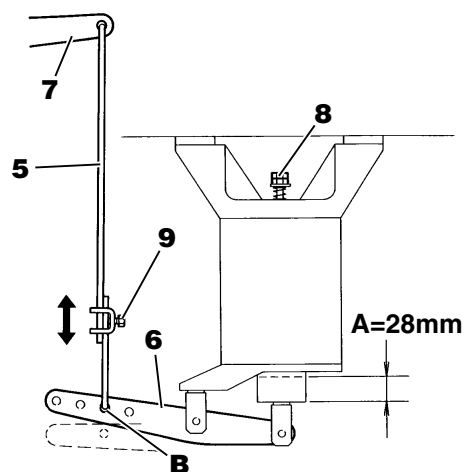



Fig.2

Installing the pneumatic presser foot lift

CAUTION

 Always turn off the power, shut down the air compressor and then well-qualified technicians should install the air cylinder.

Install air cylinder **10** to the machine with screws **11**, spring washers **12** and washers **13**.

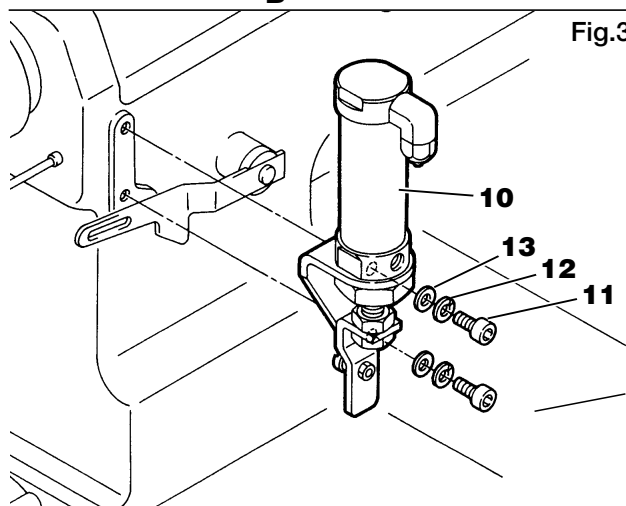


Fig.3

Installing the filter regulator and solenoid valve

(Air lines for the pneumatic UT)

CAUTION



Always turn off the power, shut down the air compressor and then well-qualified technicians should install the filter regulator and solenoid valve.

Install the filter regulator and solenoid valve on the underside of the table board with wood screws (see the illustration).

Fig.4

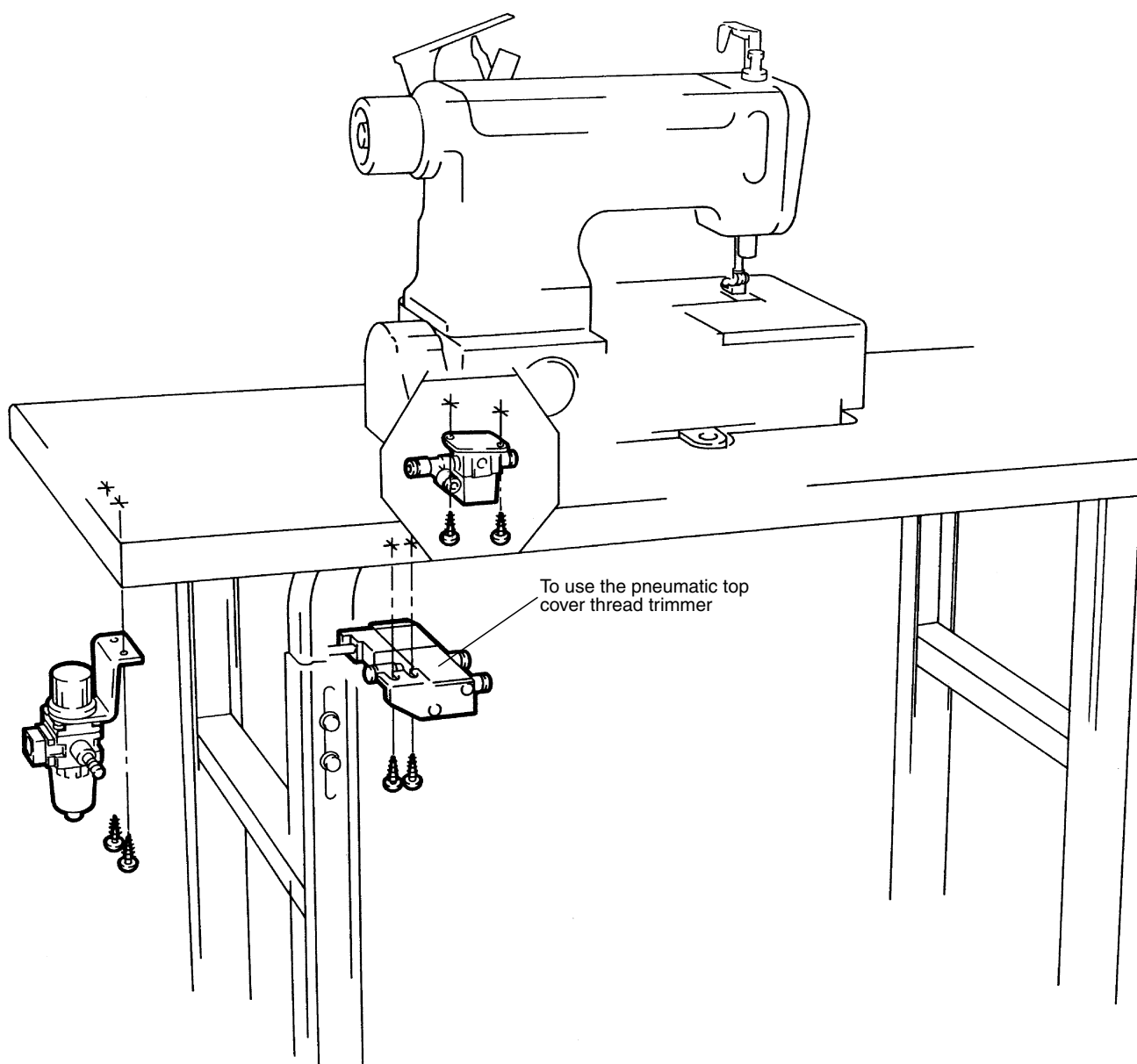
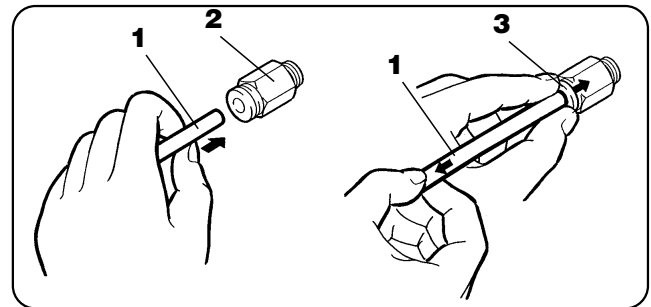
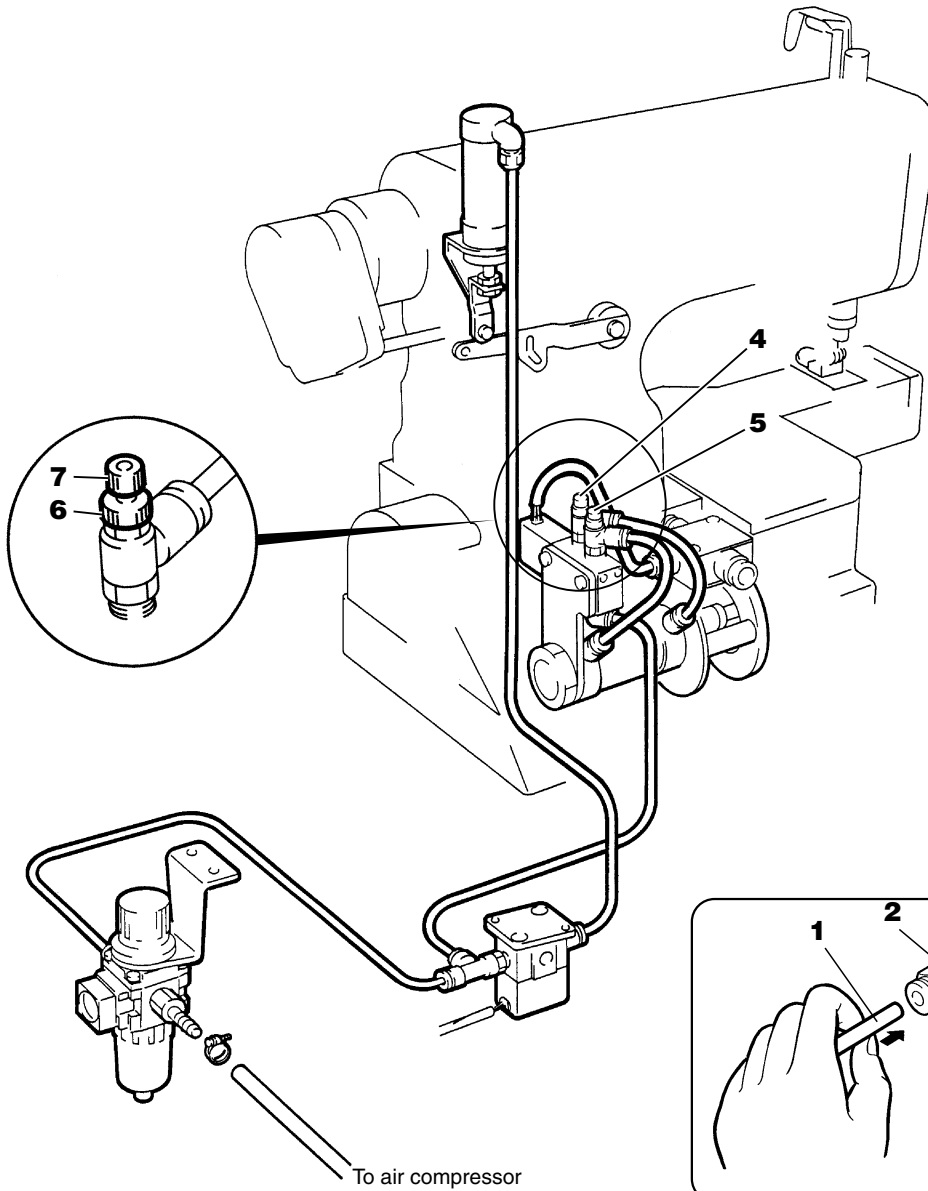


Fig.5



Connecting air lines for the pneumatic UT

⚠ 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).



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.

Connect air lines by referring to the illustration.

- Insert the air tube **1** completely to the depth of the joint **2** and check if the air tube can not be removed by pulling it by hand.
- To remove the air tube **1** from the joint **2**, push the release ring **3** toward the joint **2** and pull out the air tube **1**.

Adjusting the speed controller

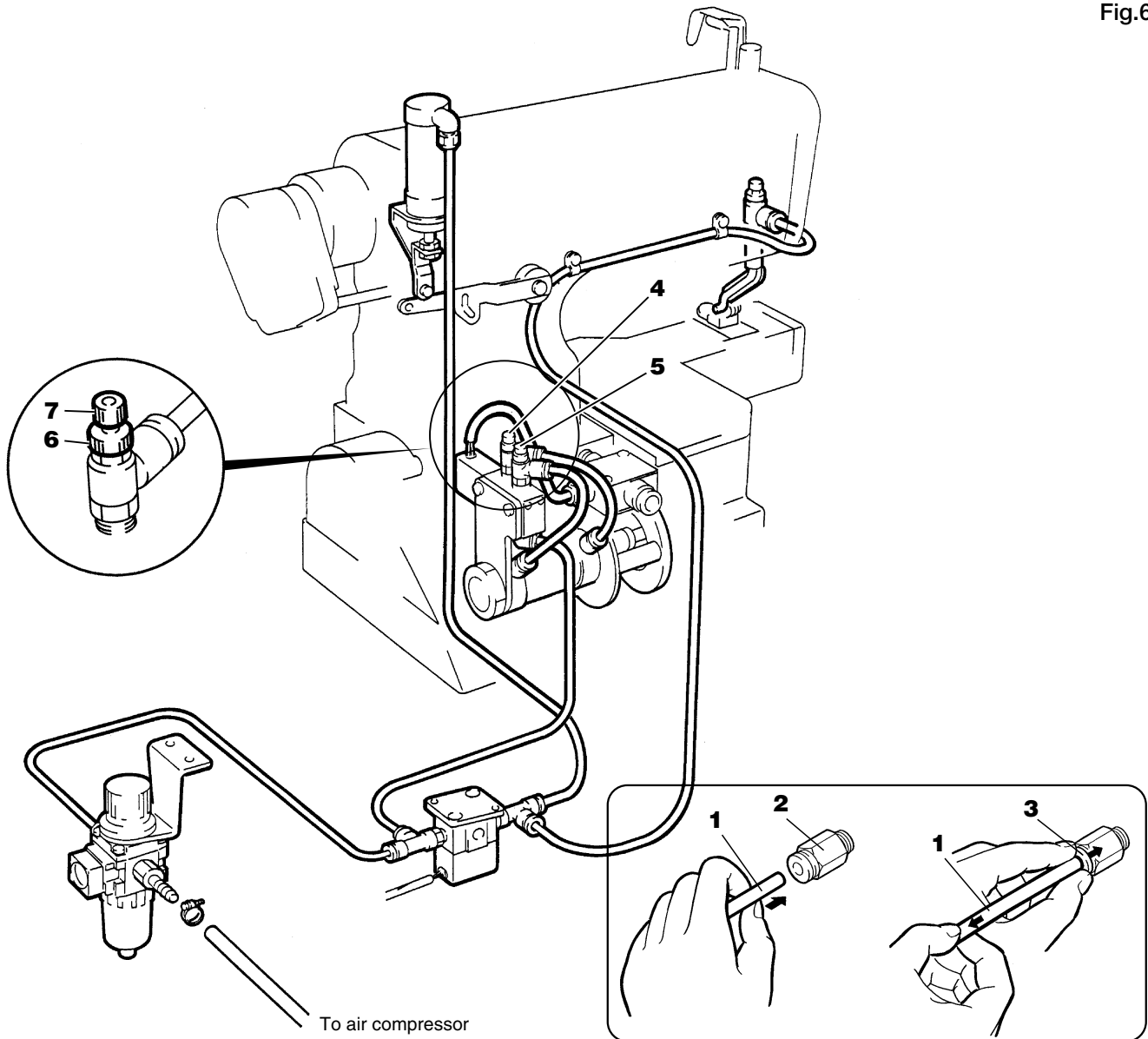
To adjust the speed when the upper and lower knives protrude, adjust speed controller **5**. To adjust the speed when the upper and lower knives retract, adjust speed controller **4**.

If the speed is too fast, the operating sound of the air cylinder may be increased or some types of threads may be broken before the overlap of upper and lower knives occur.

To adjust the speed, loosen nut **6**, turn knob **7** fully counterclockwise (to increase the speed) and then turn knob **7** slowly clockwise (to decrease the speed). After this adjustment, tighten nut **6**.

- When wiring, grounding and installing the position detector, refer to the attached instruction manual for the UT motor.

Fig.6



Connecting air lines for the pneumatic UT (Pneumatic needle thread wiper)

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).

⚠ 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.

Connect air lines by referring to the illustration.

- Insert the air tube **1** completely to the depth of the joint **2** and check if the air tube can not be removed by pulling it by hand.
- To remove the air tube **1** from the joint **2**, push the release ring **3** toward the joint **2** and pull out the air tube **1**.

Adjusting the speed controller

To adjust the speed when the upper and lower knives protrude, adjust speed controller **5**. To adjust the speed when the upper and lower knives retract, adjust speed controller **4**.

If the speed is too fast, the operating sound of the air cylinder may be increased or some types of threads may be broken before the overlap of upper and lower knives occur.

To adjust the speed, loosen nut **6**, turn knob **7** fully counterclockwise (to increase the speed) and then turn knob **7** slowly clockwise (to decrease the speed). After this adjustment, tighten nut **6**.

- When wiring, grounding and installing the position detector, refer to the attached instruction manual for the UT motor.




⚠ CAUTION

Connect air lines by referring to the illustration.

- 10

Adjusting the air pressure

CAUTION


 To adjust the filter regulator, turn off the power and finish air piping completely and then turn on the air compressor.


Pull knob **A** of filter regulator **1** until it clicks.

Then set the filter regulator at 0.5Mpa (5kgf/cm²).

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

Draining the filter regulator

 Be sure to drain the filter regulator and clean the air filter periodically. Otherwise it may cause trouble on the solenoid valve or air cylinder.

 Note that drainage spouts downward with air.

Before drainage level reaches baffle **2**, drain the filter regulator by pressing draining valve **3**.

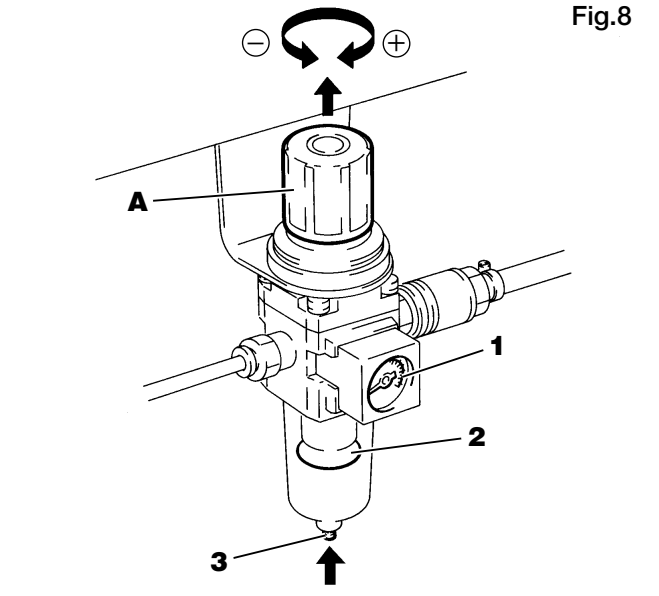
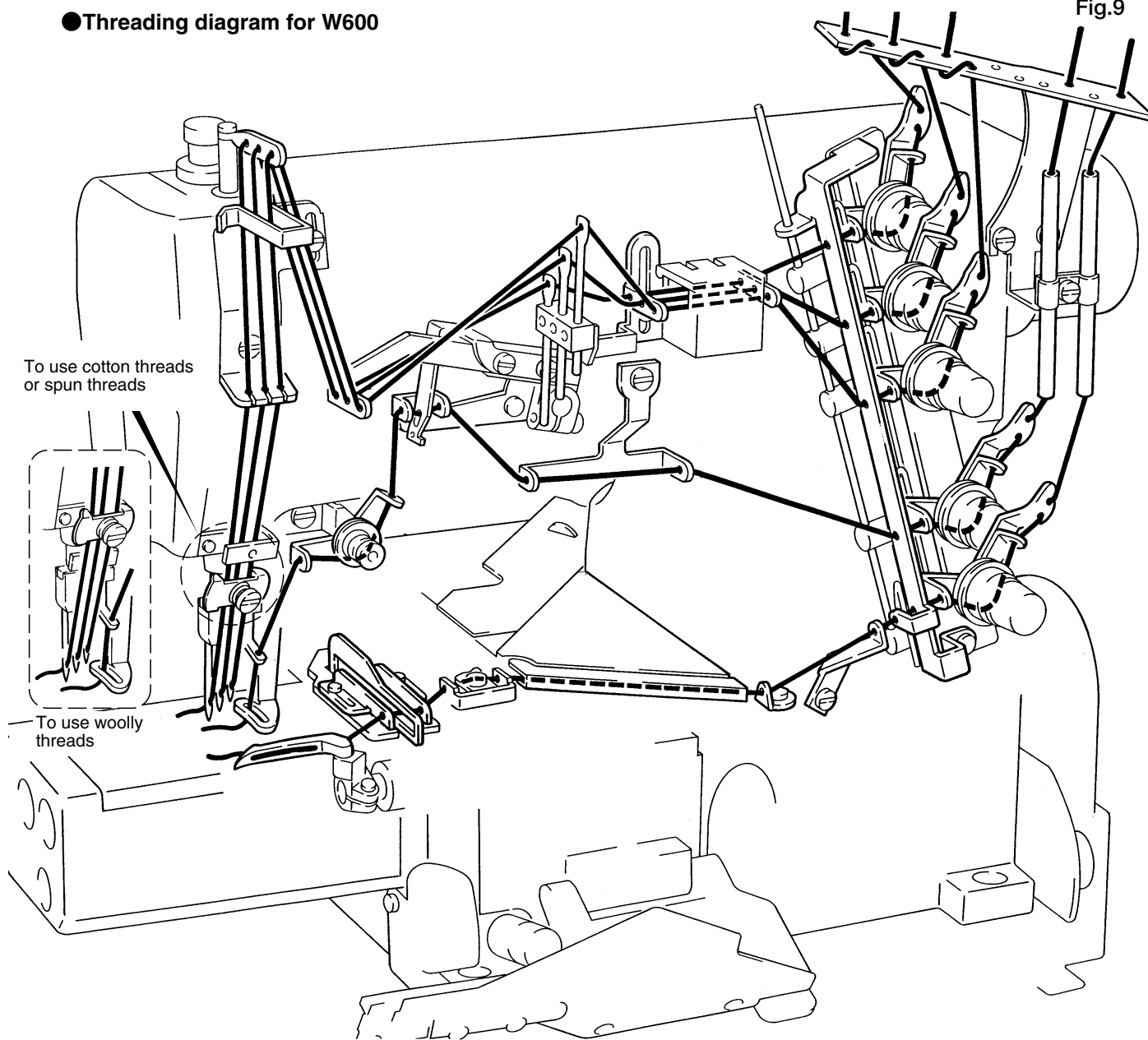


Fig.8

●Threading diagram for W600

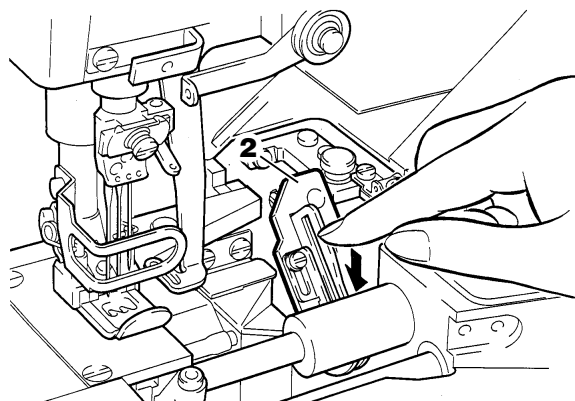
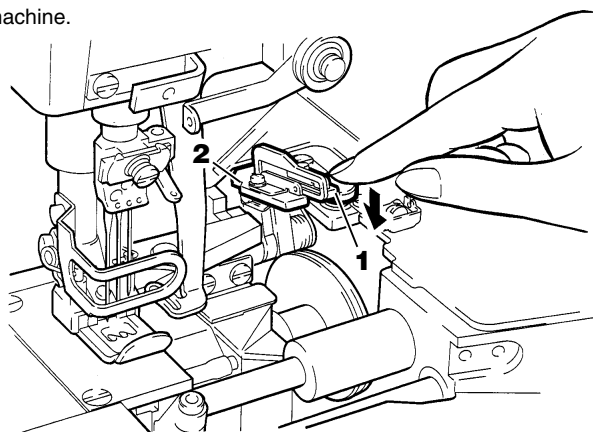
Fig.9

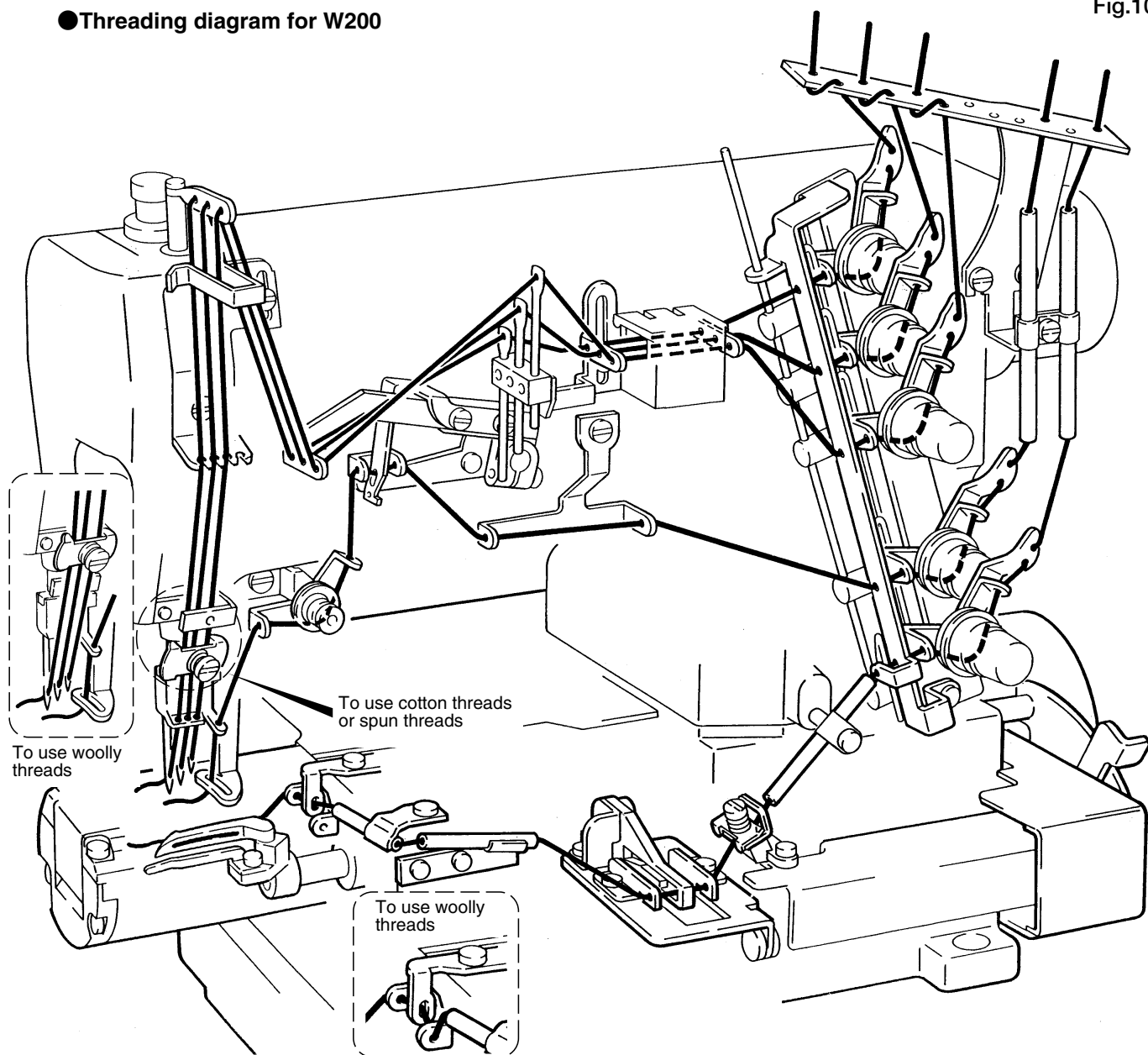


Taking the thread take-up bracket in and out

Press push button **1** and lift looper thread take-up **2** to thread the machine easily.

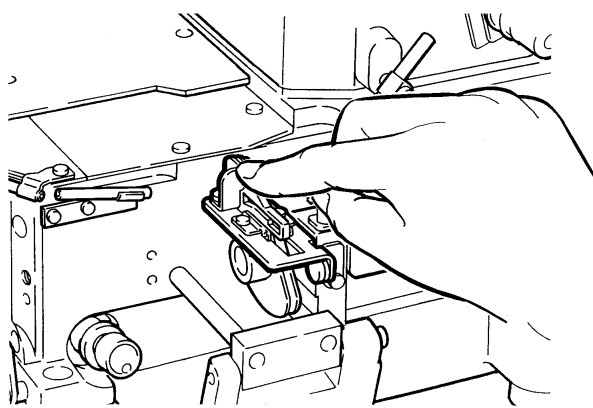
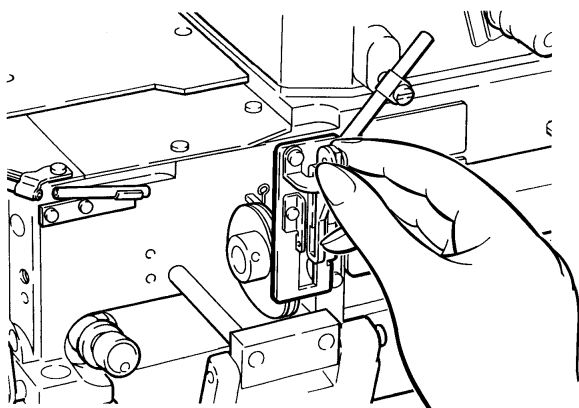
Press the looper thread take-up down and replace it after threading the machine.





Taking the thread take-up bracket in and out

Lift looper thread take-up to thread the machine easily.
Press the looper thread take-up down and replace it after threading the machine.



Sewing

1. Raise the presser foot by pressing the treadle with heel.
Position the fabric under the presser foot.

●The UT does not work at this time.

2. Start the machine by pressing the treadle with toe.

●Machine speed can be adjusted freely by the amount of pressing when you press the treadle with toe.

●The machine pulley can be turned easily with hand while the machine is not running.

3. Press the machine treadle with heel again.
The UT gets actuated. Then the presser foot is lifted.
Remove the fabric from under the presser foot.

●After the threads have been trimmed, the presser foot can be easily lifted or lowered by pressing the treadle with heel.

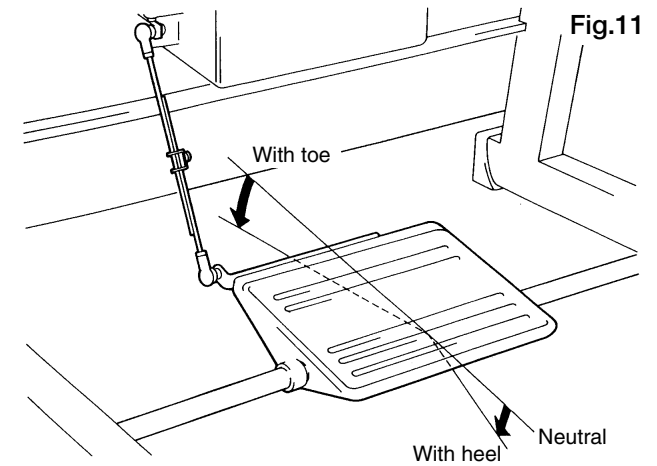


Fig.11

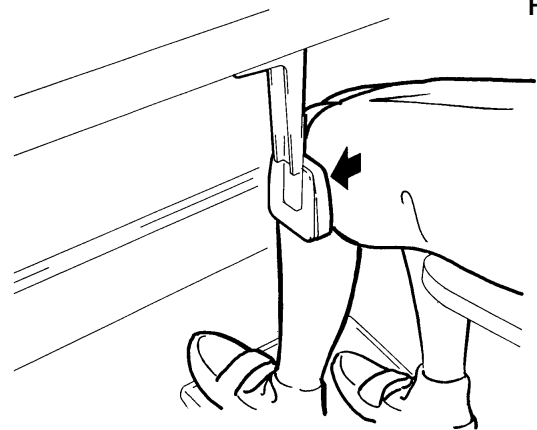


Fig.12

Presser foot lift knee switch

If you want to lift the presser foot without trimming the threads during a sewing operation, press the presser foot lift knee switch.

●This switch is optional.

Adjusting the driving system

To adjust the solenoid assembly for the electric UT

CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should adjust the solenoid assembly.

1. To adjust the movement amount of solenoid
Remove cover **1** and loosen nut **2**.
Set the amount at 17.9mm with stopper **3**.

●When loosening nut **2**, fit the round bar (diameter: approximately 3mm) onto stopper **3** to prevent it from moving.

2. To install crank **4**. There should be a distance of 66.5mm from the left end of bracket **5** to the right end of crank **4** with the solenoid not in operation (see the illustration).
Adjustment is made by loosening nut **6** and screw **11**.
3. There must be a 36mm distance between the center of screw **8** and that of screw **9** in order to mount connecting rod **7**.
Since fine adjustment is made when adjusting the lower knife, fix the connecting rod temporarily with nut **10**.

To adjust the air cylinder for pneumatic UT device

CAUTION

Always turn off the power, shut down the air compressor and then well-qualified technicians should adjust the air cylinder assembly.

1. To install crank **12**. There should be a distance of 100mm from the right end of bracket **13** to that of crank **12** with the air cylinder not in operation (see the illustration). Adjustment is made by loosening nut **14** and screw **19**.
2. Position connecting rod **15** so that there is a distance of 36mm from the center of screw **16** to that of screw **17**.
To make a fine adjustment on the lower knife, tighten nuts **18** temporarily.

Fig.13

Electric UT device

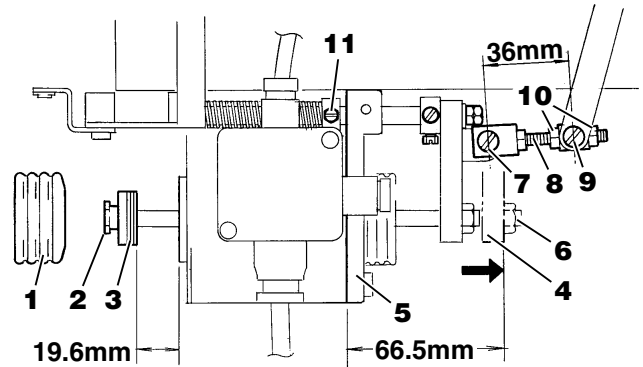
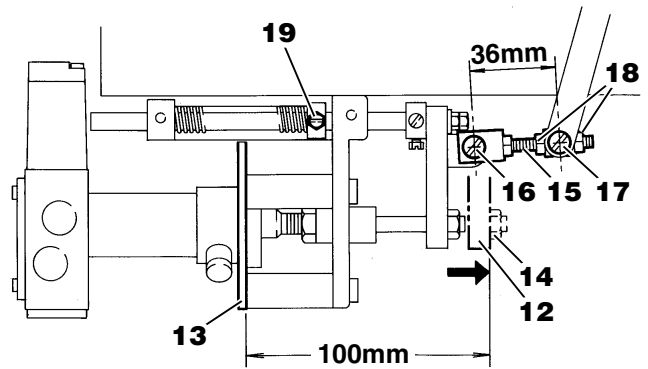


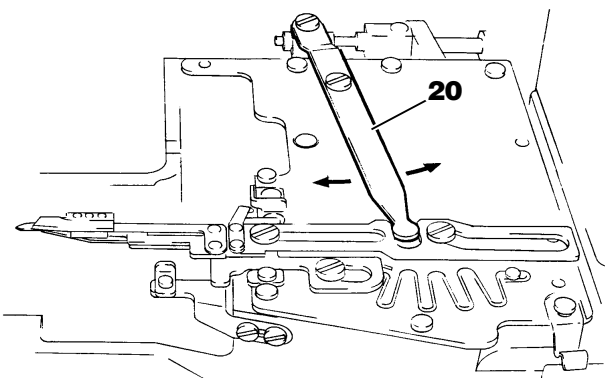
Fig.14

Pneumatic UT device



●To make a fine adjustment on the knife, loosen screw **11** (on electric UT device) or screw **19** (on pneumatic UT device) so that driving lever **20** can be moved easily by hand.
When moving driving lever **20**, be sure to bring the needle to the top of its stroke.

W600 Series



W200 Series

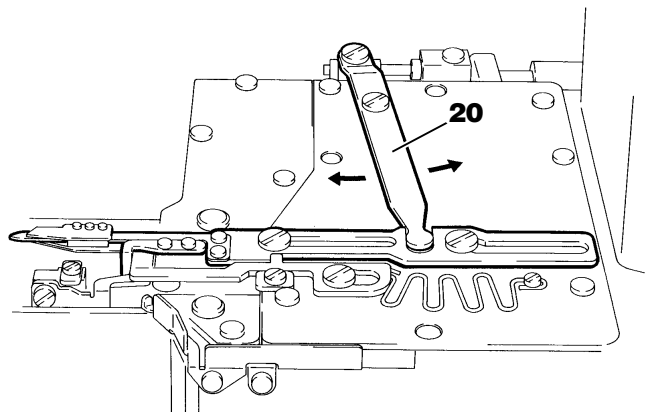





Fig.15

Lower knife adjustment

CAUTION

 Always turn off the power and shut down the air compressor first and then well-qualified technicians should adjust the lower knife.

 To prevent injury to your hands and/or fingers by the cutting edge of the lower knife, great care should be taken when you perform these procedures.

 The lower knife and the needle may touch with each other. Be sure to bring the needle to its highest position when adjusting the lower knife.

1. To position the lower knife left to right

W600 Series

Position lower knife **1** so that there is a distance of 65.5mm from the center of screws **2** to point **A** of the lower knife. Adjustment is made by loosening screws **2**.

- Loosen screws **6** and install thread guide **5**. Check to make sure bracket **4** does not contact thread guide **5** when the looper thread take-up is raised by pressing push button **3**.

W200 Series

Horizontal positioning adjustment of the lower knife.

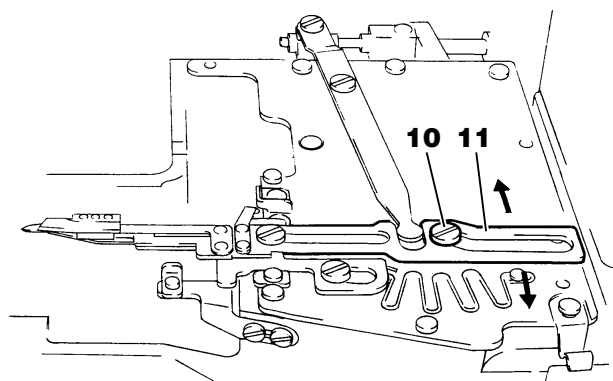
The distance between the center of lower knife set screw **8** and tip **A** of the lower knife should be 65.5mm.

To make this adjustment, loosen lower knife set screw **8**.

2. To position the lower knife front to back

Position lower knife **1** or **7** so that point **A** of the lower knife is 9mm past the right end of looper **9** and centered front to back over looper **9**. Adjustment is made by loosening screw **10** and moving lower knife holder **11** front or back as required.

W600 Series



W600 Series

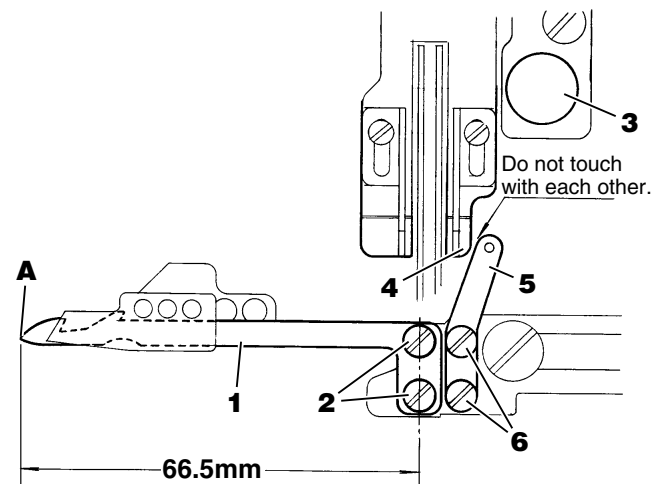


Fig.16

W200 Series

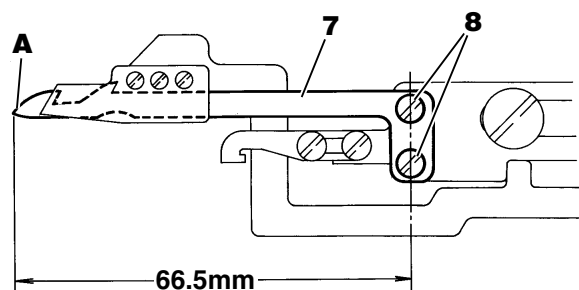
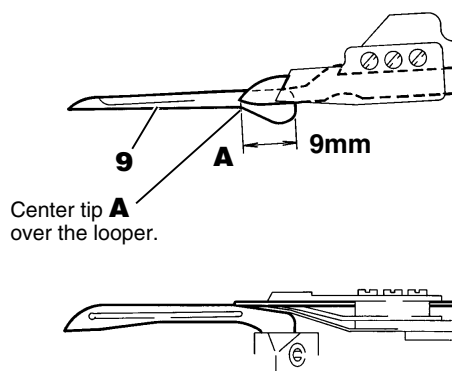
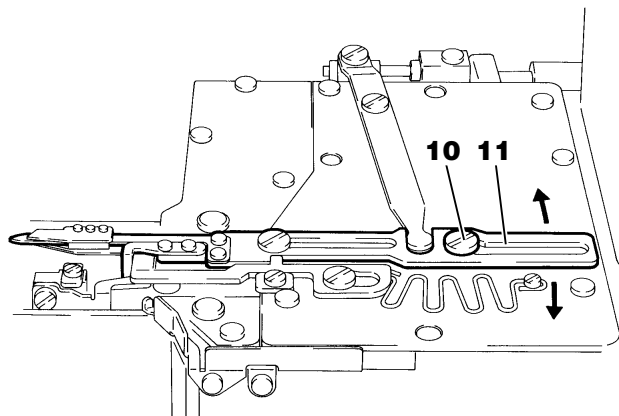


Fig.17



W200 Series



3. Positioning the knife holder

W600 Series

With the point of the lower knife 9mm past the right end of the looper, knife holder guide **2** should slightly contact the end of lower knife holder **1**. Adjustment is made by loosening screw **3**.

W200 Series

With the point of the lower knife at the extreme left end of its travel, knife holder guide **5** should slightly contact the end of lower knife holder **4**. Adjustment is made by loosening screw **6**.

W600 Series

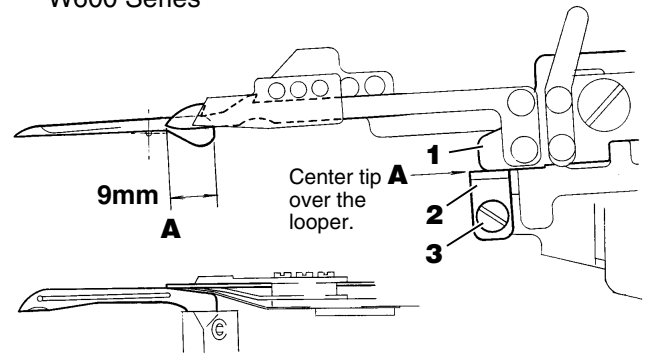
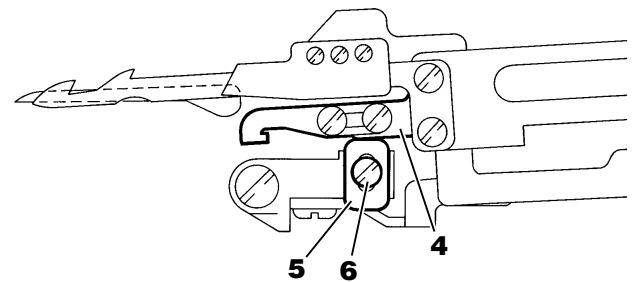


Fig.18

W200 Series



4. Positioning the lower knife up and down

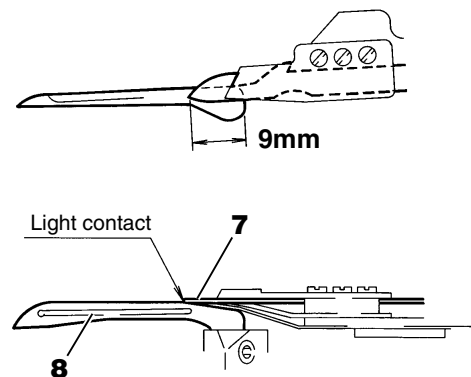
W600 Series

With the point of the lower knife 9mm past the right end of the looper, the bottom surface of lower knife **7** should slightly contact the top surface of looper **8**. Adjustment is made by loosening screws **10** on bracket **9** and moving bracket **9** up or down as required.

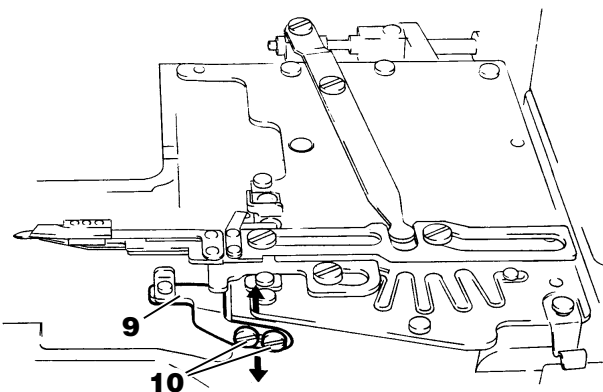
W200 Series

With the point of the lower knife 9mm past the right end of the looper, the bottom surface of lower knife **7** should slightly contact the top surface of looper **8**. Adjustment is made by loosening screws **12** on bracket **11** and moving bracket **11** up or down as required.

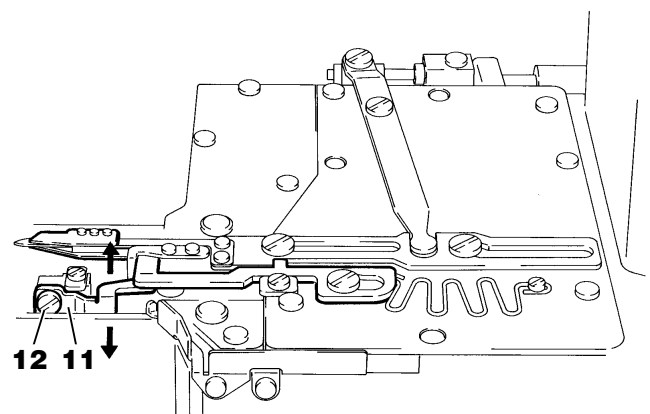
Fig.19



W600 Series



W200 Series



5. Positioning the lower knife at the extreme left end of its travel

With lower knife **1** at the extreme left end of its travel, point **A** of the lower knife is positioned 22mm from the center of the needle bar. Adjustment is made by loosening screws **3**.

- To check the above easily, make sure the left end of the looper's eye is aligned with point **A** of lower knife **1**.

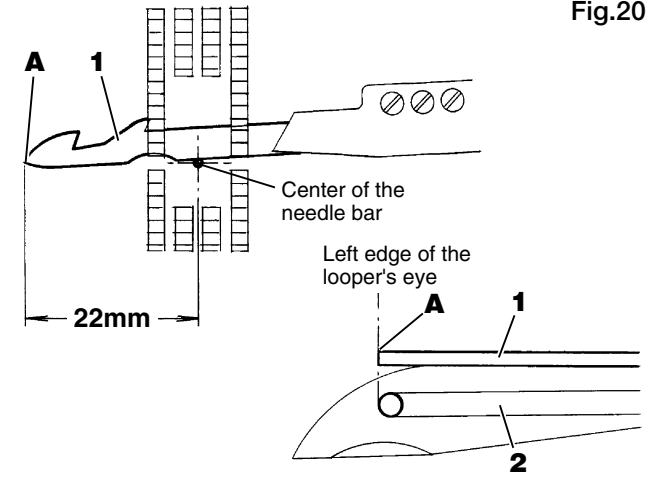


Fig.20

6. Checking

After the above adjustment has been made, check the following.

- Distance **B** is approximately 2mm with lower knife **1** at the extreme left end of its travel.
- Clearance between the right end of the lower knife holder and the arm bed is approximately 1mm with lower knife **1** at the extreme right end of its travel.

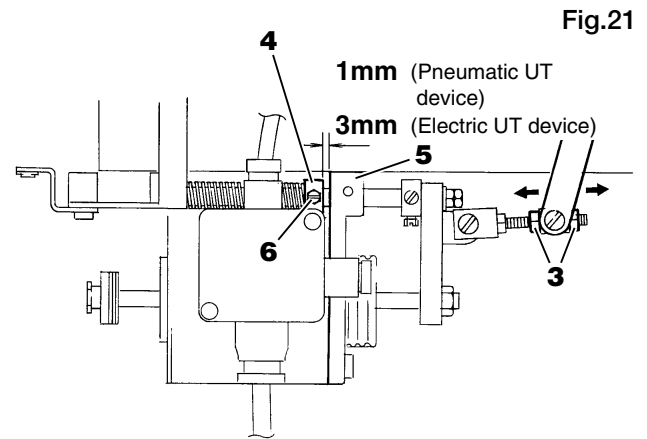


Fig.21

7. Positioning the collar

When the solenoid (air cylinder) is not in operation, there should be a distance of 3mm (on electric UT device) or 1mm (on pneumatic UT device) from the left end of bracket **5** to the right end of collar **4**. Adjustment is made by loosening screw **6**.

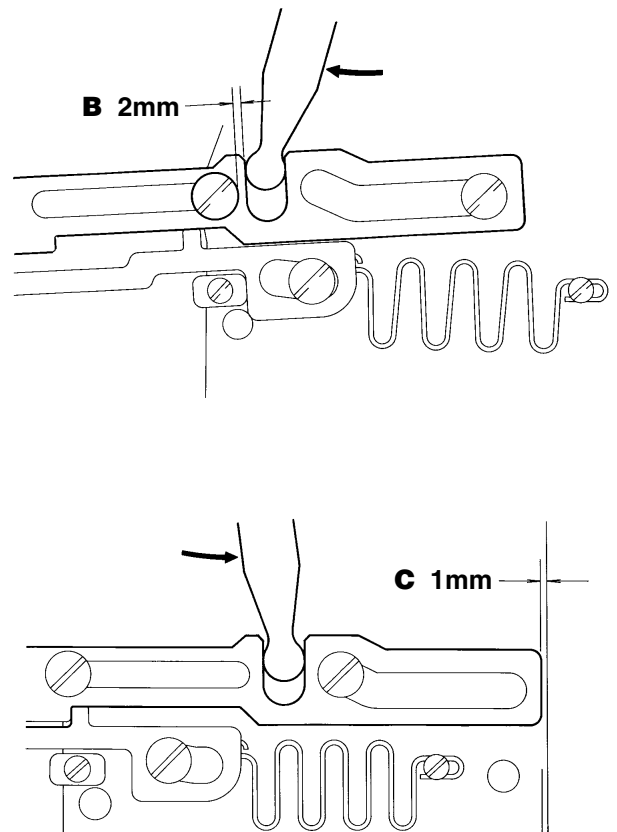


Fig.22

Upper knife adjustment

CAUTION

Always turn off the power first and well-qualified technicians should adjust the upper knife.

Pay close attention to the knife edges not to injure your hands and/or finger.

Overlap and front-to-back positioning adjustments of the upper and lower knives

This adjustment achieves the correct overlap of upper knife **1** and lower knife **2**. There should be 0.5mm when the lower knife is at the farthest position to the right. To adjust the upper knife front to back, align tip **A** of the upper knife with the front edge of the lower knife by loosening set screw **3**. When making the above adjustment, the lower knife clamp spring can be loosened, adjust the lower knife clamp spring simultaneously. (See the following .)

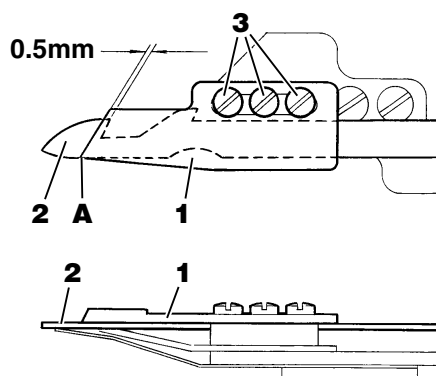


Fig.23

Lower knife clamp spring adjustment

CAUTION

Always turn off the power first and well-qualified technicians should adjust the lower knife clamp spring.

Pay close attention to the knife edges not to injure your hands and/or finger.

Position lower knife clamp spring **4** 2mm to the right from the tip of the upper knife as shown in the right illustration. Adjust the lower knife clamp spring front to back by loosening set screws **3**. Be sure that the lower knife clamp spring is parallel with the lower knife.

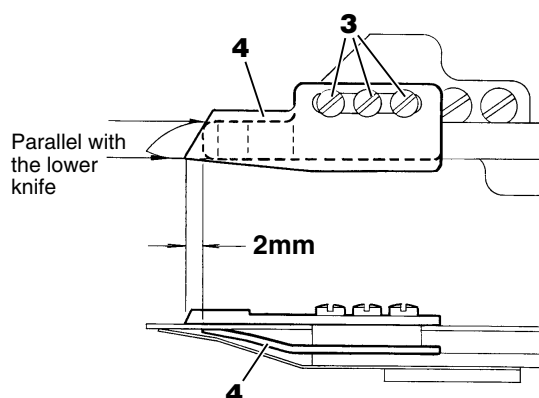


Fig.24

Under thread holder adjustment

CAUTION

Always turn off the power first and well-qualified technicians should adjust the under thread holder.

Pay close attention to the knife edges not to injure your hands and/or finger.

1. Position under thread holder **5** 2mm to the left from the tip of the upper knife as shown in the right illustration. Adjust the under thread holder front to back by loosening set screws **6**. Be sure that the loop thread holder is parallel with the lower knife.
2. Under thread holder **5** holds the under threads at the knife portion after the under threads have been cut. Adjust the loop thread holder with screw **B**.

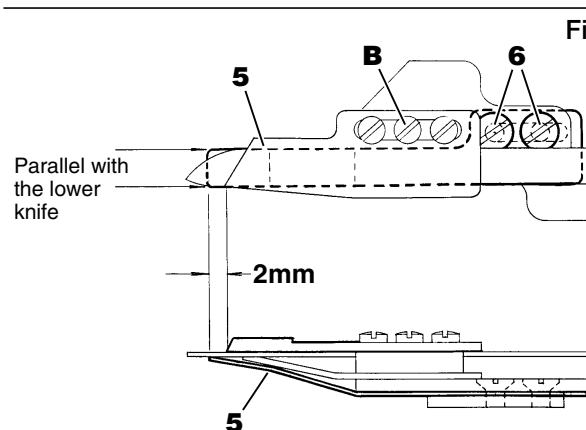


Fig.25

●To increase the under thread holder spring pressure, turn screw **B** counterclockwise.

Upper knife stopper adjustment

CAUTION

Always turn off the power first and well-qualified technicians should adjust the upper knife.

Pay close attention to the knife edges not to injure your hands and/or finger.

Position upper knife stopper **1** to provide a 7-7.5mm clearance between knife holder guide **2** and upper knife stopper **1** when knife holder guide is all the way to the right. Loosen set screw **3** to make this adjustment.

- Increasing the clearance reduces the needle thread length.
- Decreasing the clearance increases the needle thread length.

Knife holder guide clamp spring adjustment

CAUTION

Always turn off the power first and well-qualified technicians should adjust the upper knife.

Knife holder guide clamp spring **4** presses knife holder guide **5** to keep the upper knife in the position when the upper and lower knives overlap. In the standard setting, screw **6** should be centered in the set slot for spring **4**.

If the upper knife and lower knives are not activated properly in the standard setting, adjust the spring pressure by loosening screw **6**.

If the spring pressure is too heavy, the upper and lower knives will not return home correctly.

Fig.26

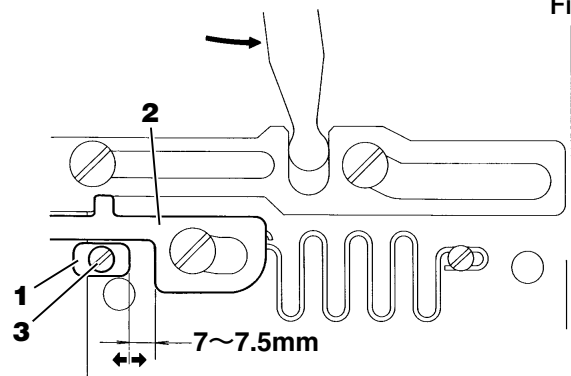
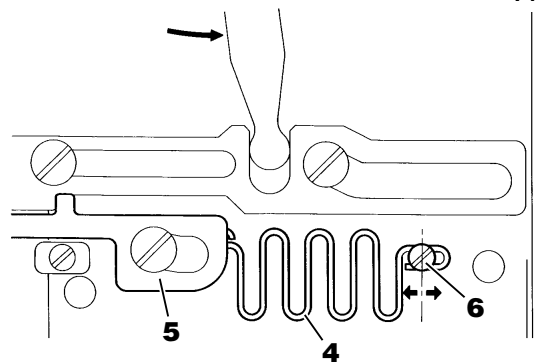


Fig.27



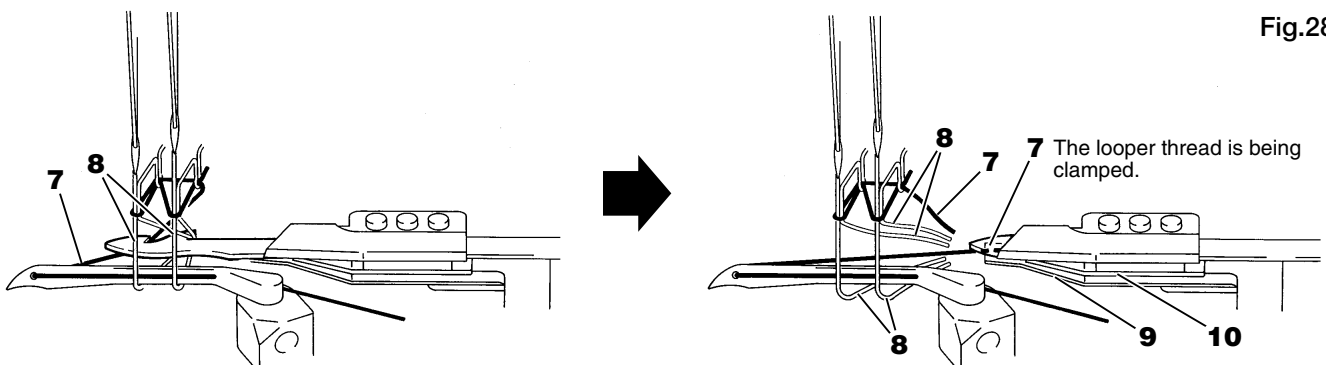
To position the knives

Check for proper cutting action using woolly threads.

Check to see if looper thread **7** and needle threads **8** are smoothly cut, and looper thread **7** is clamped by looper thread clamp spring **9**. If the threads are not smoothly cut, adjust flat spring **10** again by referring to page 19.

If the looper thread is not clamped, adjust looper thread clamp spring **9** again by referring to page 19.

Fig.28



Adjusting the electric needle thread wiper

CAUTION

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

Adjust the thread wiper with the needles at the top of their stroke. Otherwise the needles may contact the thread wiper.

1. Place bracket **1** horizontally so that screws **2** are centered in the slots. Tighten screws **2** temporarily.
2. Place lever **3** horizontally with 0~0.3mm clearance between bracket **1** and ring **4**. Under this condition distance **A** should be 10mm. After this adjustment, tighten screw **5**.
3. Place shaft **6** so that distance **B** is 2mm. Tighten screw **7**.
4. Bring thread wiper **8** to the extreme left end of its travel. To do so, turn lever **3** in the direction of arrow **D** while pulling lever **3** in the direction of arrow **C**.
5. With thread wiper **8** at the extreme left end of its travel, the distance from the end of thread wiper **8** to the center line of the needle bar (at the top of its stroke) should be approximately 19mm. Under this condition, the clearance between thread wiper **8** and the left needle should be approximately 0.7mm. After this adjustment, tighten screws **9** and **2**.
6. Place flat spring **10** so that flat spring **10** is parallel with thread wiper **8**. Tighten screw **11**.

Fig.29

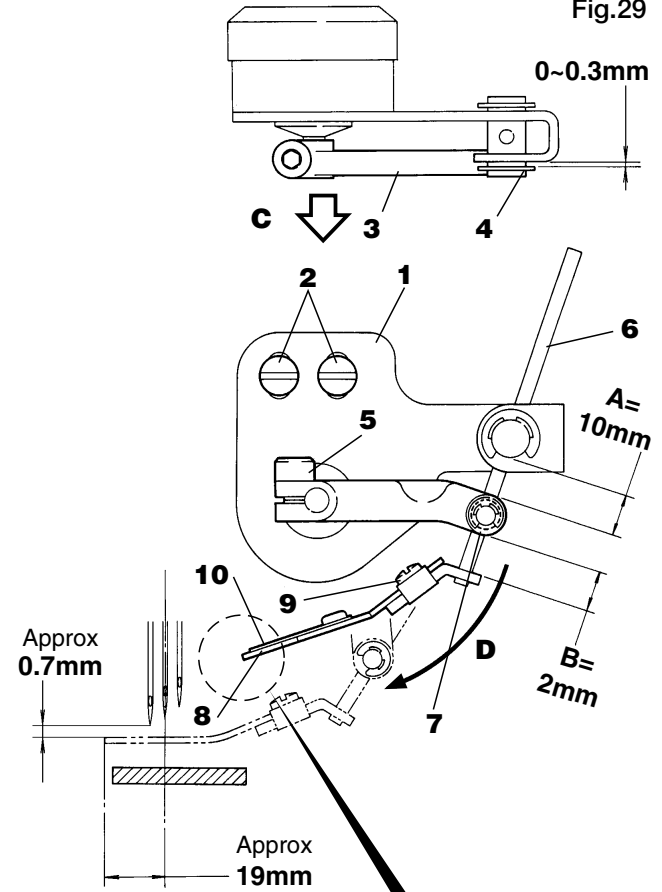


Fig.30

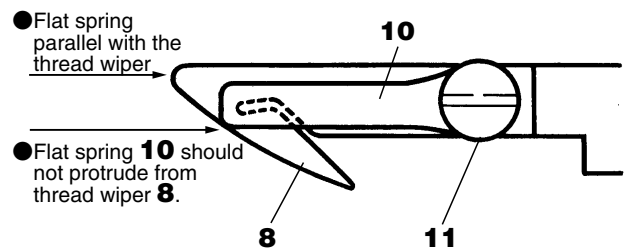


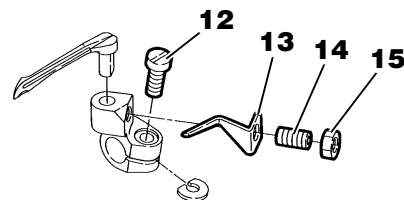
Fig.31

Installing the looper thread clamp (accessory) for W600 Series

CAUTION


Always turn off the power and shut down the air compressor first and then well-qualified technicians should install the looper thread clamp.

Looper thread clamp **13** is an accessory that prevents stretchable threads, such as woolly thread from coming off from the looper. Install looper thread clamp **13** by referring to the illustration. Replace the screws being used with screws **12** and **14**.



Adjusting the pneumatic needle thread wiper (air wiper)

CAUTION

 Be careful when you perform the procedures with the power on. To prevent accidents due to the unexpected start of the machine and users' misoperation, consider the procedures for safety and follow them.

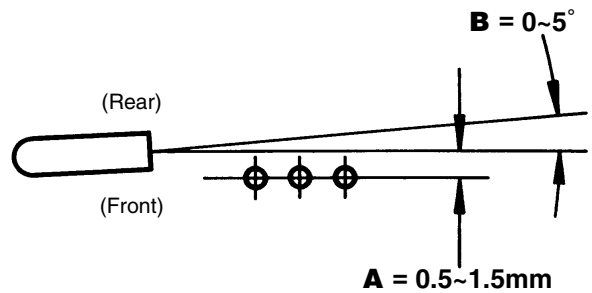
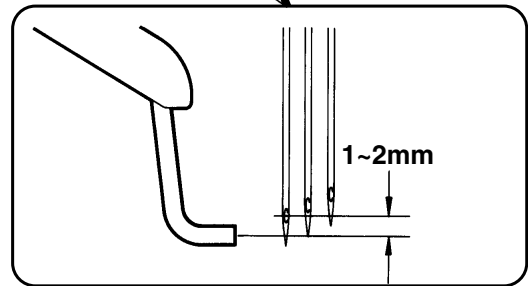
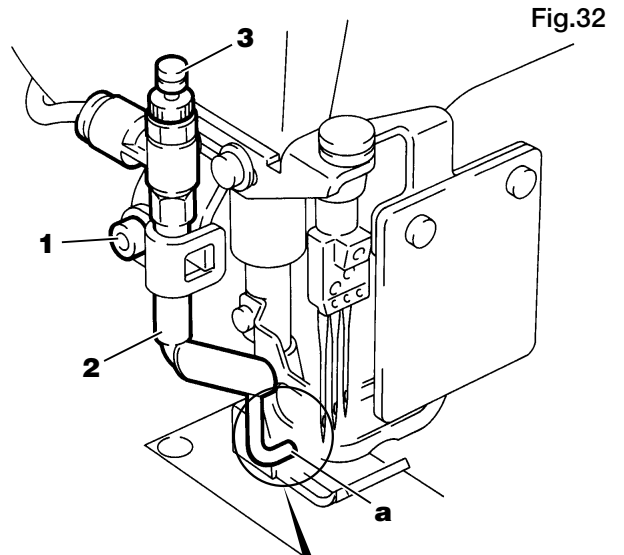
When the needle is at the highest position, set opening **a** of the air wiper 1 ~ 2mm below the eye of the left needle. Distance **A** from the center of the left needle to the air wiper on the backside of the needle should be 0.5 ~ 1.5mm. Blowing angle **B** should be 0 ~ 5°.

Adjustment is made by loosening screw **1** and moving air wiper **2**.

To adjust the amount of air from the air wiper

The air should be the extent to which the trailing end of trimmed needle threads can be removed from the next fabric. Loosen nut **3**. Adjustment is made by turning adjusting screw **4** as required. After this adjustment, tighten nut **3**.

- To decrease the amount of air, turn screw **4** clockwise.
- To increase the amount of air, turn screw **4** counterclockwise.



Adjusting the pneumatic top cover thread trimmer

⚠ CAUTION

⚠ Always turn off the power, shut down the air compressor and then well-qualified technicians should adjust the pneumatic top cover thread trimmer.

⚠ Great care should be taken not to injure your fingers and/or hands by the knives.

1. When hook **1** protrudes, point **A** should be positioned above top cover thread **2** (see the illustration). Adjustment is made by front-to-back positioning screws **3**.
2. Adjust hook **1**, spreader **4** and left needle **5** by referring to the illustration below. Adjustment is made by turning front-to-back positioning screws **3**, left-to-right positioning screws **6** and up-and-down positioning screws **7**.

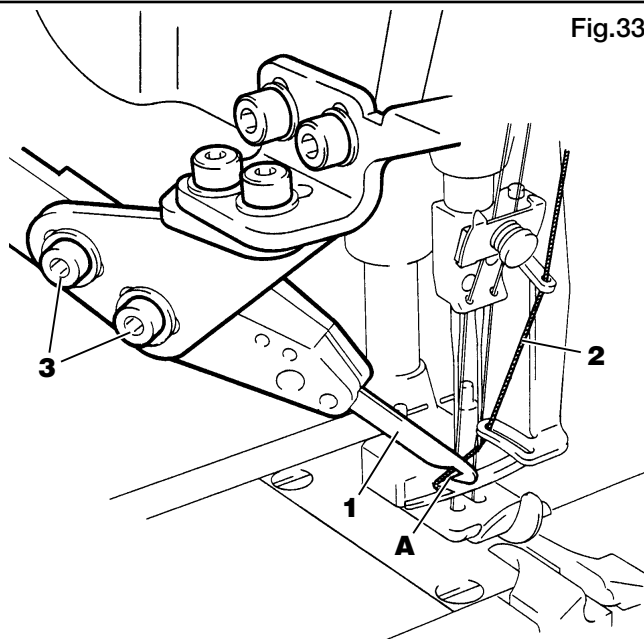
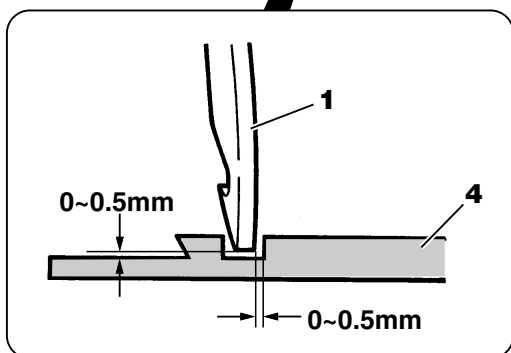
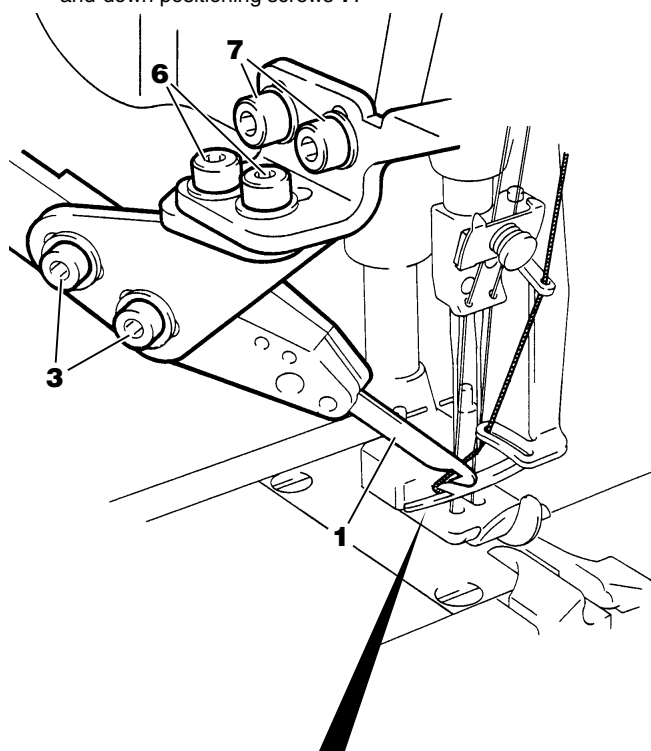


Fig.33

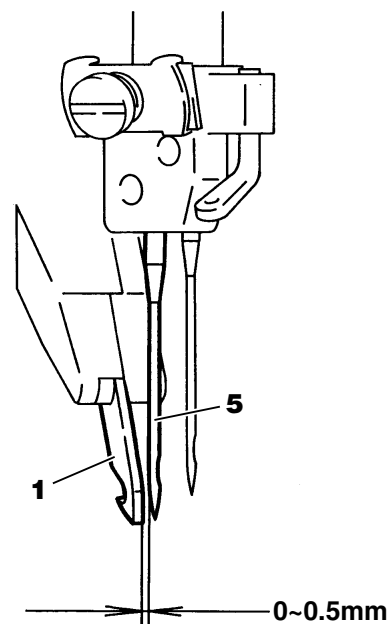


Fig.34

Adjusting the thread releaser

CAUTION

Always turn off the power, shut down the air compressor and then well-qualified technicians should adjust the thread releaser.

1. Loosen screw **1**. Adjust bar shaft **3** to set a clearance of 0.2 ~ 0.5mm between the thread tension disks and fingers on thread releaser **2**. Then tighten screw **1**.
2. Adjust shaft **4** to obtain distance **A** (=30mm). Then tighten screw **5**.

●The releasing amount of each thread is made by the relationship between thread guides **6** and thread releasers **7**.
Cotton threads: **B**=6mm, **C**=7mm, **D**=8.5mm, **E**=6.5mm, **F**=9mm

For stretchable threads, such as woolly threads, all the distances above from **B** to **F** should be slightly shortened.

●Without top cover thread trimmer

Position thread releaser **8** (for top cover thread) so that the top cover thread will not be affected if needle and looper threads are loosened.

●With top cover thread trimmer

Set **G** at 15mm.

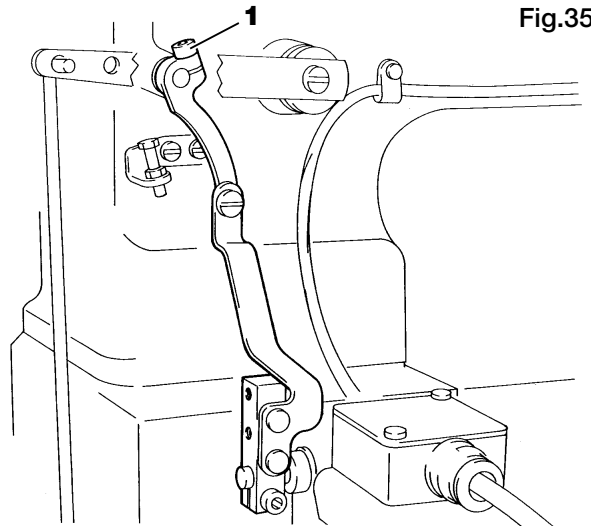


Fig.35

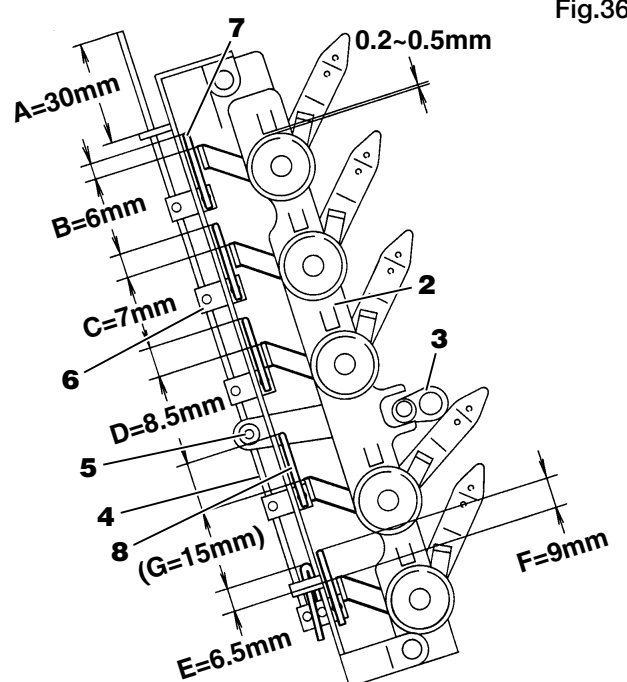
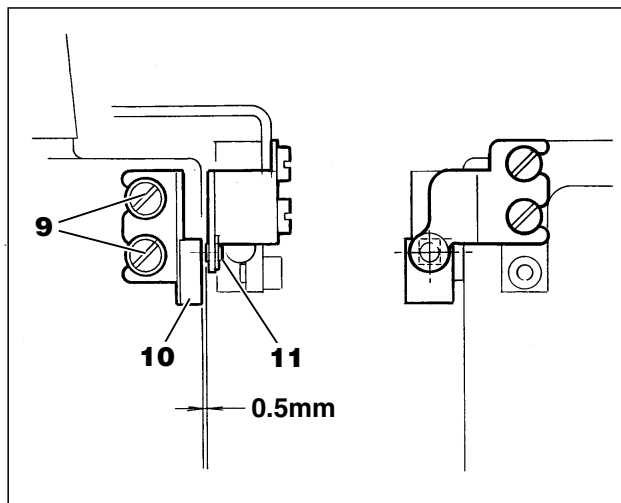


Fig.36

Adjusting the operation detector

CAUTION

Always turn off the power, shut down the air compressor and then well-qualified technicians should adjust the operation detector.



Loosen screws **9**. Set a clearance of 0.5mm between operation detector **10** and magnet **11**. (For left-to-right adjustment, refer to "Positioning the operation detector" in the instruction manual for UT motor.)

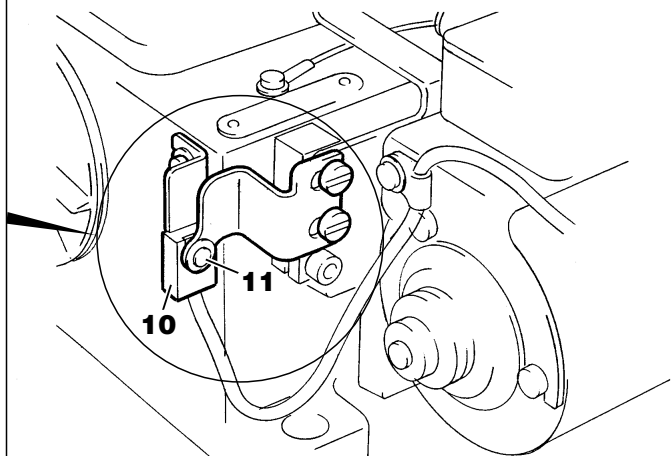


Fig.37

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