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.
CONTENTS

1. Introduction ................................................. 1

2. Indications of dangers, warnings & cautions · 1-2

3. Safety precautions ....................................... 2-3

4. Notes for each procedure ................................. 3-4

Applications and functions of the UT device ........... 5

Installation
Installing the electric presser foot lift .................. 6
Installing the pneumatic presser foot lift ................. 6
Installing the filter regulator and solenoid valve ...... 7

Connecting air lines for the pneumatic UT
Connecting air lines for the pneumatic UT·
Adjusting the speed controller ............................. 8

Connecting air lines for the pneumatic UT
(Pneumatic needle thread wiper)·
Adjusting the speed controller ............................. 9

Connecting air lines for the pneumatic UT
(Pneumatic top cover thread wiper)
(W562-82 for angled stitching does not use this air piping.)·
Adjusting the speed controller ............................. 10

Connecting air lines of the pneumatic UT for W562-82
for angled stitching·
Adjusting the speed controller ............................. 11

Adjusting the air pressur .................................. 12

Installing and adjusting UT device
Threading diagram for W500/UT·
Taking the thread take-up bracket in and out .......... 13

Threading diagram for W700/UT·
Taking the thread take-up bracket in and out .......... 14

Sewing ....................................................... 15

Adjusting the upper knife and flat spring ............... 16

Adjusting the looper thread clamping spring .......... 16

Adjusting the lower knife .................................. 17

Checking for cutting action ............................... 18

Adjusting the electric needle thread wiper ............. 18

Adjusting the pneumatic needle thread wiper (air wiper) 19

Adjusting the pneumatic top cover thread trimmer .. 20

Adjusting the thread releaserr ............................ 21

Adjusting the operation detector ........................ 21
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

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="danger.png" alt="DANGER" /></td>
<td>Indicates an immediate hazard to life or limb.</td>
</tr>
<tr>
<td><img src="warning.png" alt="WARNING" /></td>
<td>Indicates a potential hazard to life or limb.</td>
</tr>
<tr>
<td><img src="caution.png" alt="CAUTION" /></td>
<td>Indicates a possible mistake that could result in injury or damage.</td>
</tr>
</tbody>
</table>
3. Safety precautions

1. Applications, purpose

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

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.

Do not bend the air lines too much.

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

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 devices’.
2. Connect the ground wires securely to the indicated ground points on the machine head.

⚠️ WARNING

สBefore 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

ภPrecautions 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

ภMaintenance, 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).


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.
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).
To air compressor

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 cannot 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.
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.
Connecting air lines for the pneumatic UT
(Pneumatic top cover thread wiper)
(W562-82 for angled stitching does not use this air piping.)

⚠️ 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.

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

Connecting air lines of the pneumatic UT for W562-82 for angled stitching

Connecting air lines of the pneumatic UT for W562-82 for angled stitching

Adjusting the speed controller

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 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.
Taking the thread take-up bracket in and out

To thread the machine, press lever 1. Then the bracket comes out to the operator.

To return the thread take-up bracket, press bracket 2 into place.
Taking the thread take-up bracket in and out

To thread the machine, press lever 1. Then the bracket comes out to the operator.

To return the thread take-up holder, press push button 2 into place.
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.

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 upper knife and flat spring

**CAUTION**

Always turn off the power, shut down the air compressor and then well-qualified technicians should adjust the upper knife and flat spring.

1. To adjust the upper knife

There should be 165mm between the rear end of bracket 2 and the point of the cutting edge on upper knife 3. The side of upper knife holder 4 should be aligned with that of upper knife 3 at A. Adjustment is made by loosening screws 1.

![Fig.14](image)

2. To adjust the flat spring

Move flat spring 5 all the way to the right.

![Fig.15](image)

3. To adjust the bracket

Create a clearance of 0.5mm between bracket 6 and upper knife holder 4 while maintaining the proper relation described above. Tighten screws 1.

Adjusting the looper thread clamping spring

**CAUTION**

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

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

The distance from the end of looper thread clamping spring 8 to that of the cutting edge on upper knife 3 should be 0.3mm. Adjustment is made by loosening screws 7 and moving looper thread clamping spring 8. After this adjustment is made tighten screws 7.

Adjust the clamping pressure of looper thread clamping spring 8 so that it can keep clamping the looper thread even after the lower knife cuts the looper thread. Adjustment is made by loosening screws 7 and moving looper thread clamping spring 8 in the direction of the arrows. After this adjustment is made tighten screws 7.
Adjusting the lower knife

**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 adjust the knife overlap**

Move lever 1 until the lower knife holder is at its farthest position to the right. Loosen screws 2. Adjust the upper and lower knives to obtain 0.5mm overlap of the left cutting edge (the first hook) on lower knife 3 and the cutting edge of upper knife 4. Align point A of lower knife 3 with the center of clamping spring 5. After this adjustment tighten screws 2.

- The distance from the point of lower knife 3 and the center line of the needle bar should be 17mm.

2. **To adjust the lower knife front to back**

Center the point of lower knife 3 in the thickness of looper 6 by referring to the illustration on the right. Adjustment is made by loosening screws 7.

<table>
<thead>
<tr>
<th>Needle space (mm)</th>
<th>A (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2~5.6</td>
<td>10.4</td>
</tr>
<tr>
<td>6.4</td>
<td>9.6</td>
</tr>
</tbody>
</table>
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.

Check for proper cutting action using woolly threads. Check to see if looper thread 1 and needle threads 2 are smoothly cut, and looper thread 1 is clamped by looper thread clamp spring 3. If the threads are not smoothly cut, adjust flat spring 4 again by referring to page 16. If the looper thread is not clamped, adjust looper thread clamp spring 3 again by referring to page 16.

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. Center screws 6 in the slots on bracket 5. Tighten screws 6 temporarily.
2. Position lever 7 so that the clearance between the bracket and ring 8 is 0 ~ 0.3mm, and distance C is 10mm. Adjustment is made by loosening screw 9. After this adjustment tighten screw 9.
3. Position shaft 10 so that distance D is 2mm. Adjustment is made by loosening screw 11. After this adjustment tighten screw 11.
4. Position thread wiper 12 at the extreme left end of its travel. To do so, turn lever 7 in the direction of arrow B while pulling lever 7 in the direction of arrow A.
5. With thread wiper 12 at the extreme left end of its travel, the distance between the center line of the needle bar and the end of the thread wiper should be approximately 19mm, and the clearance between the thread wiper and the point of the left needle approximately 0.7mm. Adjustment is made by loosening screws 13 and 6. After this adjustment tighten screws 13 and 6.
6. Flat spring 14 should be parallel with thread wiper 12. Adjustment is made by loosening screw 15. After this adjustment tighten screw 15.
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 B 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 C 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.

Turn the machine pulley until the needle is at the top of its stroke. Adjust hook 1, spreader 2 and left needle 3 by referring to the illustration below. Adjustment is made by turning front-to-back positioning screws 4, left-to-right positioning screws 5 and up-and-down positioning screws 6.

Speed controller 7 adjusts the speed at which hook 1 protrudes.
Speed controller 8 adjusts the speed at which hook 1 returns home.

To adjust the speed loosen nut 10 and turn knob 9.
- Turning the knob clockwise decreases the speed.
- Turning the knob counterclockwise increases the speed.
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. Clearance between the thread tension disc and the finger on thread releaser 3 should be 0.2 – 0.5mm. Adjustment is made by loosening screw 1 and turning eccentric 2. After this adjustment 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.

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. After this adjustment tighten screws 9. (For left-to-right adjustment, refer to “Positioning the operation detector” in the instruction manual for UT motor.)
The description in this INSTRUCTIONS is subject to change without prior notice for improvement.