



INDUSTRIAL SEWING MACHINE

MODEL

PLK-G4030R

PLK-G6030R

TECHNICAL MANUAL

SEWING MACHINE HEAD BASIC

FOR SAFE USE

Before the installation, operation, and inspection for this product, read the “FOR SAFE USE” and the technical manuals carefully. Also read the other technical manuals, “Control Unit” and “Operation Panel” describing some instructions, which are not in this manual, and use the sewing machine properly.

SAFETY INDICATIONS

	DANGER	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
	CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage. Note that CAUTION level may lead to a serious consequence according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

CAUTION INDICATIONS

No.	Caution indication	Description
1		<p><u>Precaution for sewing machine operation:</u></p> <p>Indicates that removing the safety and operating the sewing machine for some other purposes with power-on are prohibited.</p> <ul style="list-style-type: none"> ● Please do not operate the sewing machine without protective equipment such as a needle guard, an eye guard, a belt cover or the others. ● Please turn off the power switch when threading, changing a needle and a bobbin, cleaning, and lubricating.
2		<p><u>Caution for fingers injury:</u></p> <p>Indicates a possibility of fingers (hands) injury in a certain condition.</p>
3		<p><u>Caution for squeezing fingers:</u></p> <p>Indicates a possibility of squeezing fingers in a certain condition.</p>

SAFETY PRECAUTIONS



DANGER

To prevent from receiving an electric shock, always turn off a power switch and unplug power supply when opening a control box, and then open after ten minutes passes.



CAUTION

USAGE ENVIRONMENT

Please do not operate the sewing machine under the following conditions.

- (1) In the ambient temperature of 35 degrees (95°F) or more than 35 degrees, or the ambient temperature of 5 degrees or less than 5 degrees (41°F).
- (2) In the ambient temperature of 55 degrees (131°F) or more than 55 degrees, or the ambient temperature of -10 degrees or less than -10 degrees (18°F) during transportation.
- (3) In the relative humidity exceeding 85% or less than 45%.
- (4) In the open-air place or the location that receives direct sunlight.
- (5) In the place near heat sources such as heating devices.
- (6) In the atmosphere filled with dust, explosive gas, or corrosive gas.
- (7) In the place where the fluctuation in the power voltage of 10% or more than 10%, or the power voltage of -10% or less than -10% of the fixed power voltage.
- (8) In the place where the power source cannot supply enough voltage to keep the motor running.
- (9) In the place filled with strong electric noises such as high-frequency welders.

INSTALLATION

- (1) Please have some specialists, who have enough experience for the sewing machine installations, install the sewing machine.
- (2) Please have a qualified electrician perform necessary electric wiring.
- (3) Please do not operate until the sewing machine is repaired when any damage or fault is found on the sewing machine at the installation.
- (4) Please do not refurbish the sewing machine.
- (5) The sewing machine is heavy. For the safety, please make sure to install the sewing machine head by more than one person.
- (6) Please make sure to fit the safety protective equipment (the motor cover or the others) and the accessory protective equipment (the eye guard) that removed temporarily for installation.

SEWING

- (1) Please make sure to turn the power switch off before installing or replacing needles.
- (2) Please pay attention for the fingers not to be injured by the needle point.
- (3) Please make sure to turn power switch off before lubricating.
- (4) Please pay attention that oil does not get on your skin or in your eyes as it may cause an inflammation.
- (5) Please make sure to keep oil out of the reach of children who may drink oil by mistake.
- (6) Please make sure to turn the power switch off before threading a needle.
- (7) Before starting the sewing, please make sure the position and the function of the halt switch.
- (8) Please do not touch the operating parts during sewing operation.
- (9) It is very dangerous to operate the sewing machine without safety guards (eye guards, belt covers, link covers, finger guards or the others).
Please make sure to operate the sewing machine with safety guards.
- (10) Please make sure to turn the power switch off when stopping the sewing machine temporarily.

ADJUSTMENT

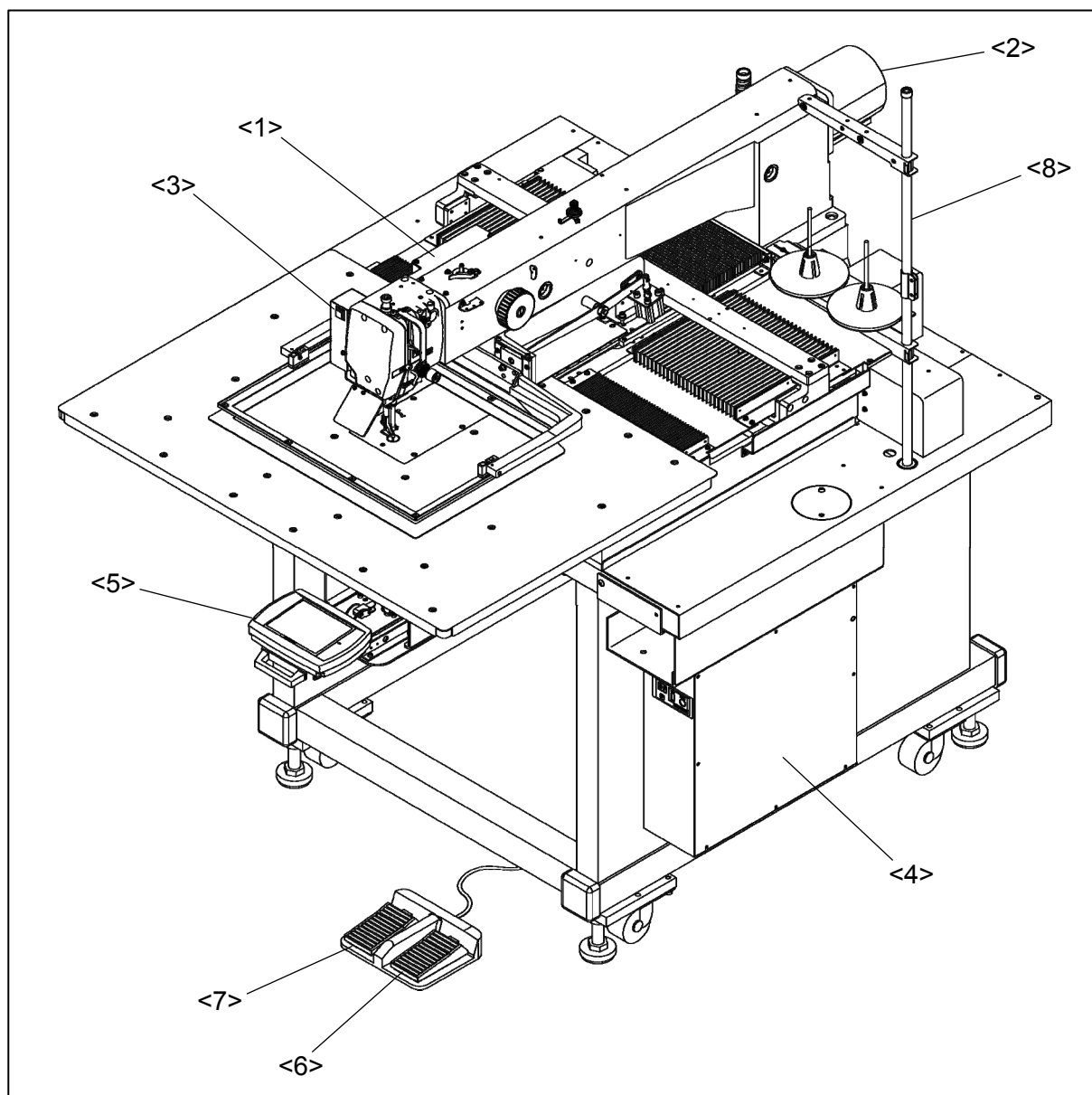
- (1) Please make sure to turn the power switch off before adjusting the sewing machine.
- (2) If the adjustment is required while the power switch on, do not step on the foot switch by mistake.
- (3) Please be careful not to be injured by a sharp part such as the needle and the shuttle hook point.
- (4) Please make sure to put the safety guards (eye guards, belt guards, link covers, and finger guards or the others) back on the initial position after the sewing machine adjustment.

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1. STRUCTURE OF THE SEWING MACHINE

PLK-G4030R/G6030R electronic pattern sewing machine consists of the following main parts.



<1>: Sewing machine head <2>: Main shaft motor <3>: Halt switch <4>: Control box
<5>: Operation panel <6>: Work holder foot switch <7>: Start foot switch <8>: Thread stand

2. INSTALLATION



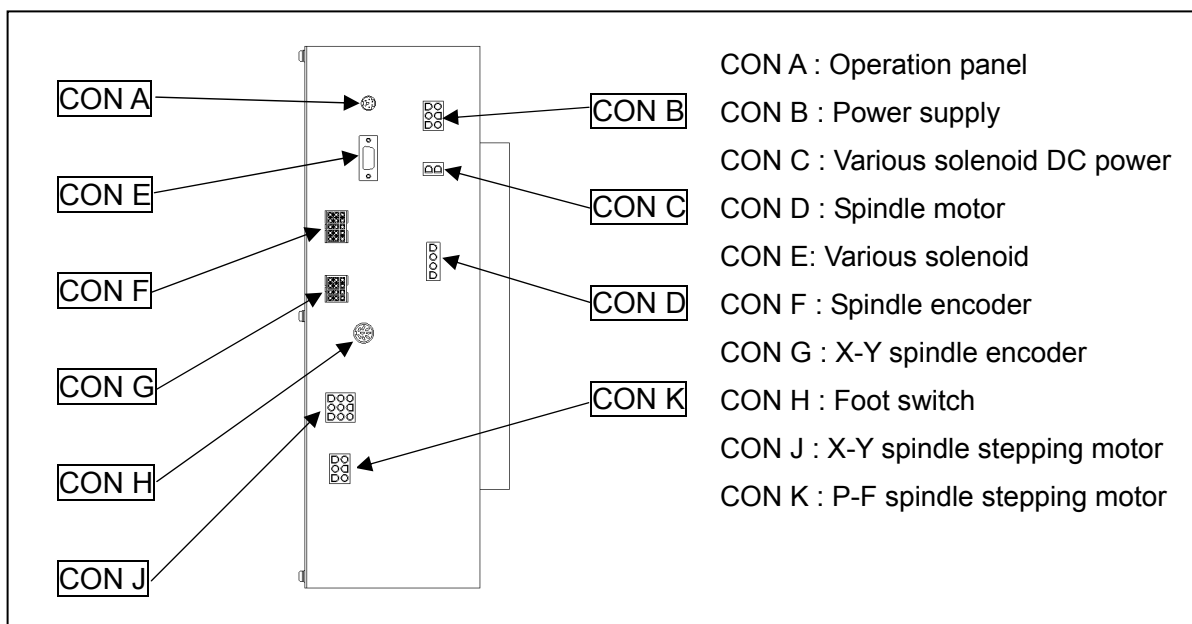
CAUTION

- (1) Please have some specialists, who have enough experience for the sewing machine installations, install the sewing machine.
- (2) Please have a Qualified Electrician perform necessary electric wiring.
- (3) Please do not operate until the sewing machine is repaired when any damage or fault is found on the sewing machine at the installation.
- (4) Please do not refurbish the sewing machine.

2-1. Installation of the foot switch

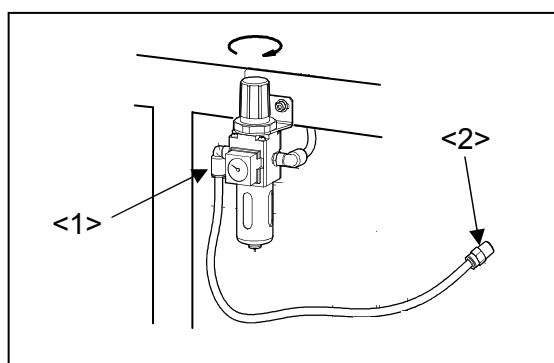
Connect the foot switch to the connector CON H.

The foot switch is enclosed in the accessory box.



2-2. Connection of the air tube

Insert the one end of the air tube (8mm Diameter) into the intake air fitting of the filter regulator (No.1) then, join the other end of the air tube with the suitable air coupling to be adopted with the air supply source provided in your factory. One of the air couplings (No.2) is enclosed in the accessory box.

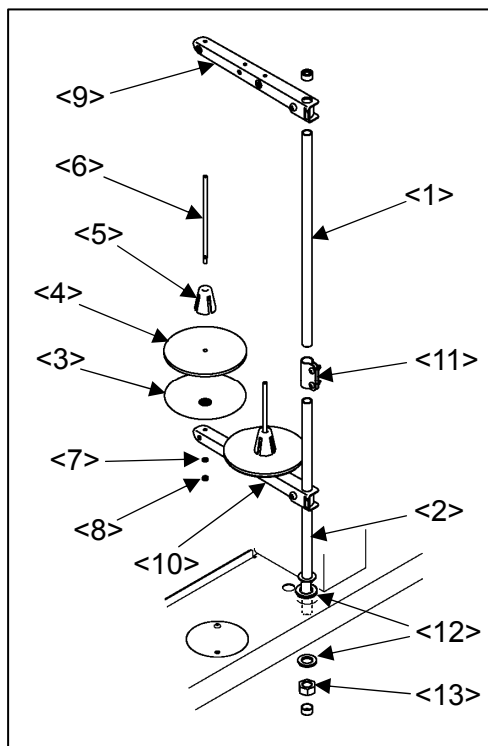


<1>: Intake air fitting

<2>: Air coupling

2-3. Installation of the thread stand

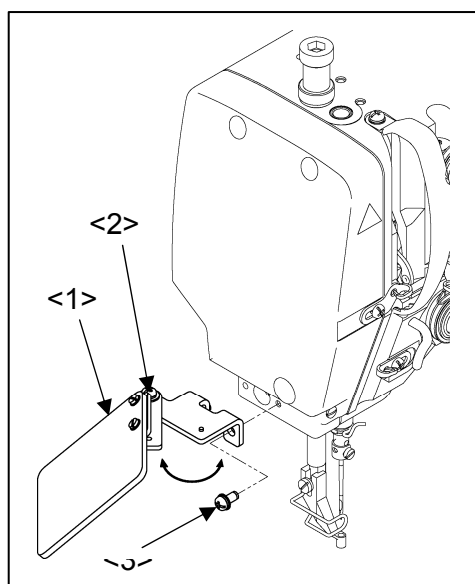
- (1) Assemble the parts (No.1 to No.11) of the thread stand as shown on the figure.
- (2) Fit the thread stand into the hole at the far right on the table stand with the nut (No.13) and the washers (No.12).



- <1>: Upper column pipe
- <2>: Lower column pipe
- <3>: Spool stand base (two stand bases)
- <4>: Spool mat (two mats)
- <5>: Spool holder (two holders)
- <6>: Spool shaft (two shafts)
- <7>: Spring washer (two washers)
- <8>: Nut (four nuts)
- <9>: Thread hunger
- <10>: Spool holder
- <11>: Column joint
- <12>: Washer (two washers)
- <13>: Nut

2-4. Installation of the eye guard

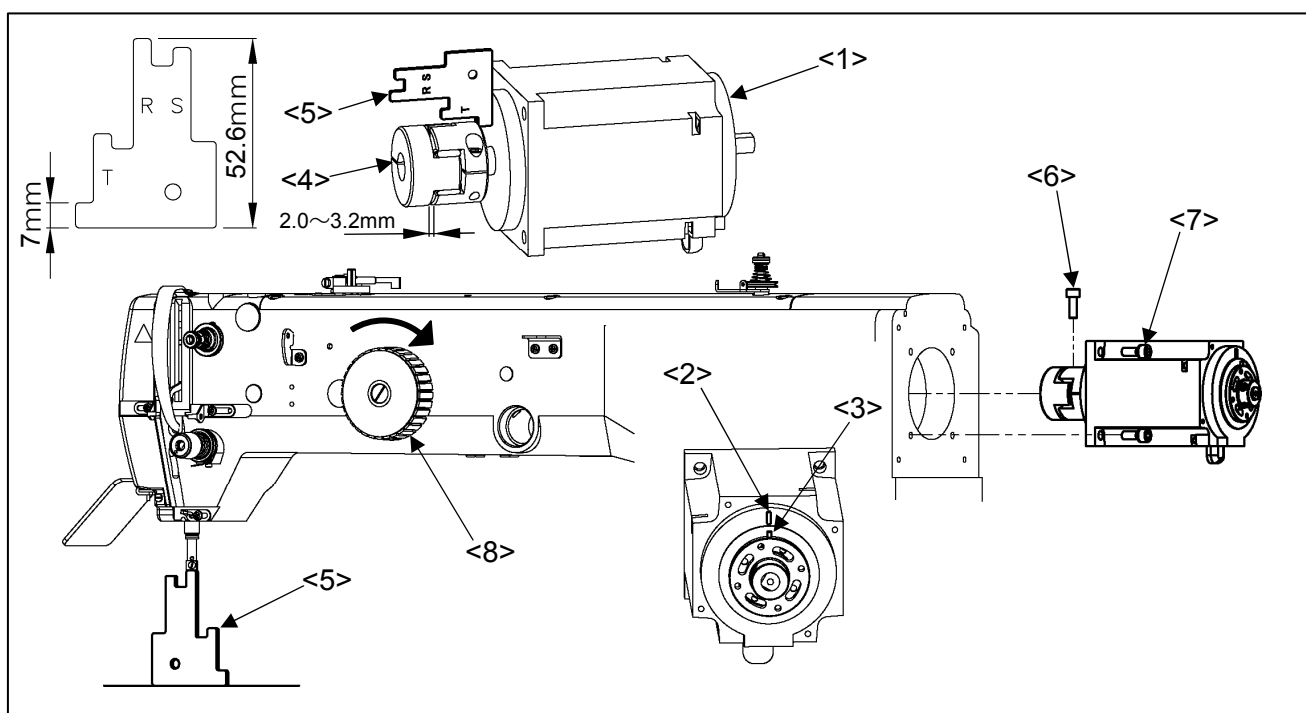
- (1) Loosen the screws (No.2) on the eye guard unit (No.1) then, mount the screws (No.3) to the flat place of the sewing machine with the open guard.
- (2) Return the open guard to the initial position then, tighten the screws (No.2).



- <1>: Eye guard unit
- <2>: SW-MW screw
- <3>: SW-PW screw (two screws)

2-5. Installation of the spindle motor

- (1) If the spindle motor (No.1) has been removed from the machine for the adjustment or the like, fix the spindle motor as the procedure described below.
- (2) Set the pin (No.3) position of the bushing to the motor mark (No.2).
- (3) Adjust the clearance between the motor and the coupling (No.4). Use the part measuring 7mm on the gauge (No.5). Position Bolt "A" (No.6) in the below described position when reinstalling the coupling to the machine top shaft. Make sure the clearance of the coupling is from 2.0 to 3.2mm.
- (4) When the thread take up lever at top position, turn the pulley (No.8) in the direction of the arrow then, slip the gauge (No.5) in between the needle bar and the needle plate. Use the part of R side (52.6mm) on the gauge.
- (5) Be careful not to make the motor turn and fit the coupling to the upper shaft, and then tighten the bolt A (No.6) first and the bolt B (No.7) second.



<1>: Spindle motor <2>: Motor mark <3>: Pin <4>: Coupling <5>: Gauge <6>: Bolt A
<7>: Bolt B <8>: Pulley

3. LUBRICATION



CAUTION

- (1) Please make sure to turn power switch off before lubricating.
- (2) Please pay attention that oil does not get on your skin or in your eyes as it may cause an inflammation.
- (3) Please make sure to keep oil out of the reach of children who may drink oil by mistake.

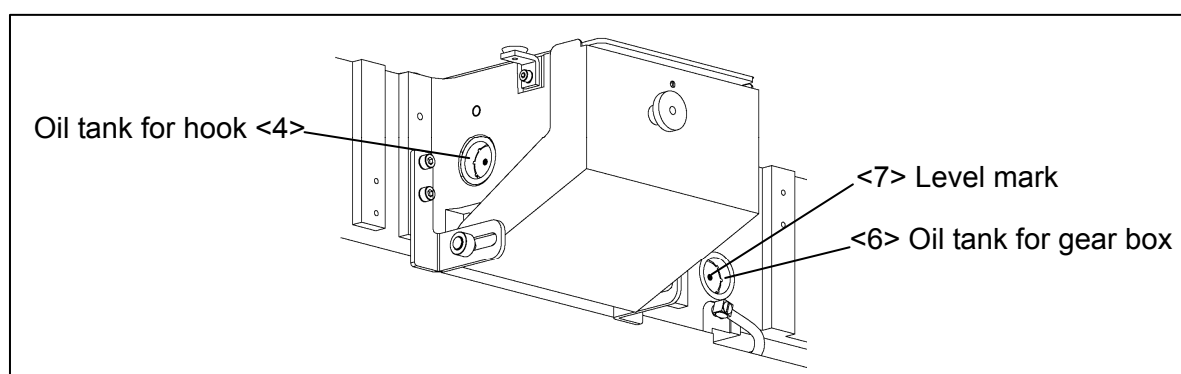
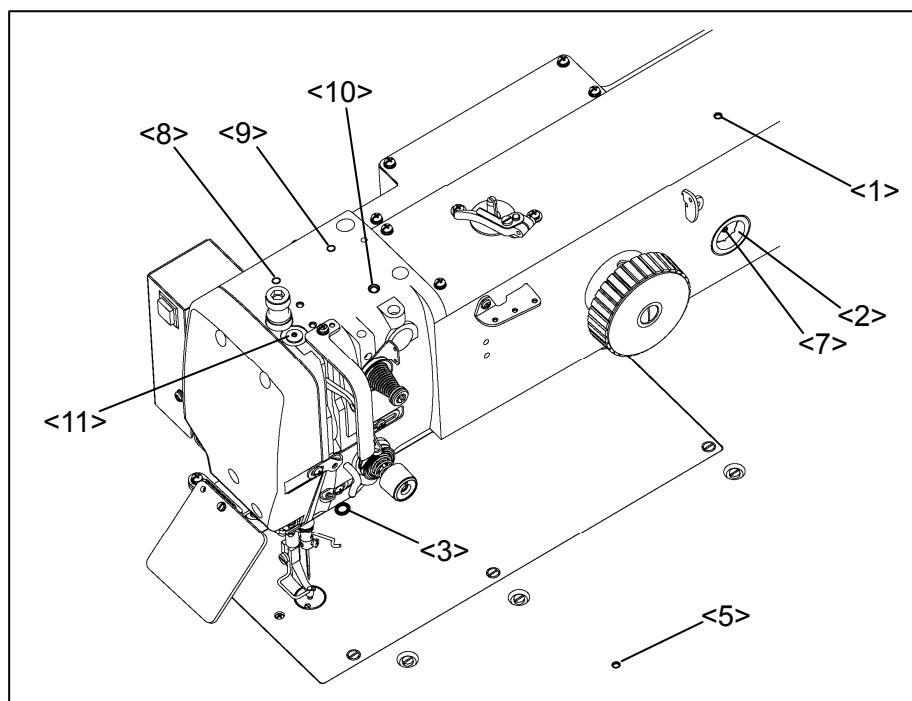
[Notice] Please make sure to lubricate when operating for the first time after the installation. Also, please make sure to check the amount of oil when the machine has not been used for a long time.

3-1. Filling the oil tank

Pour the oil through the oil hole (No.1) to the oil tank (No.2) on the machine arm. Pour the oil hole (No.3) to the oil tank for hook (No.4) on the machine bed. Pour the oil hole (No.5) to the oil tank for gear box (No.6) on the machine bed. Please fill with the oil over level mark (No.7) of the oil tank.

3-2. Oiling

Put some oil to the red marked oil holes (No.8 ~ 11).



4. Initial setting of the control box

When using the sewing machine for the first time, the model and the language of the sewing machine in use have to be set.

Refer to the instructions in the paragraph "[6] Initial Setting of System (Model/language Setting)" in the CONTROL UNIT technical manual.

MEMO

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