



INDUSTRIAL SEWING MACHINE

MODEL

PLK-G3040R

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



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.



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, motor 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

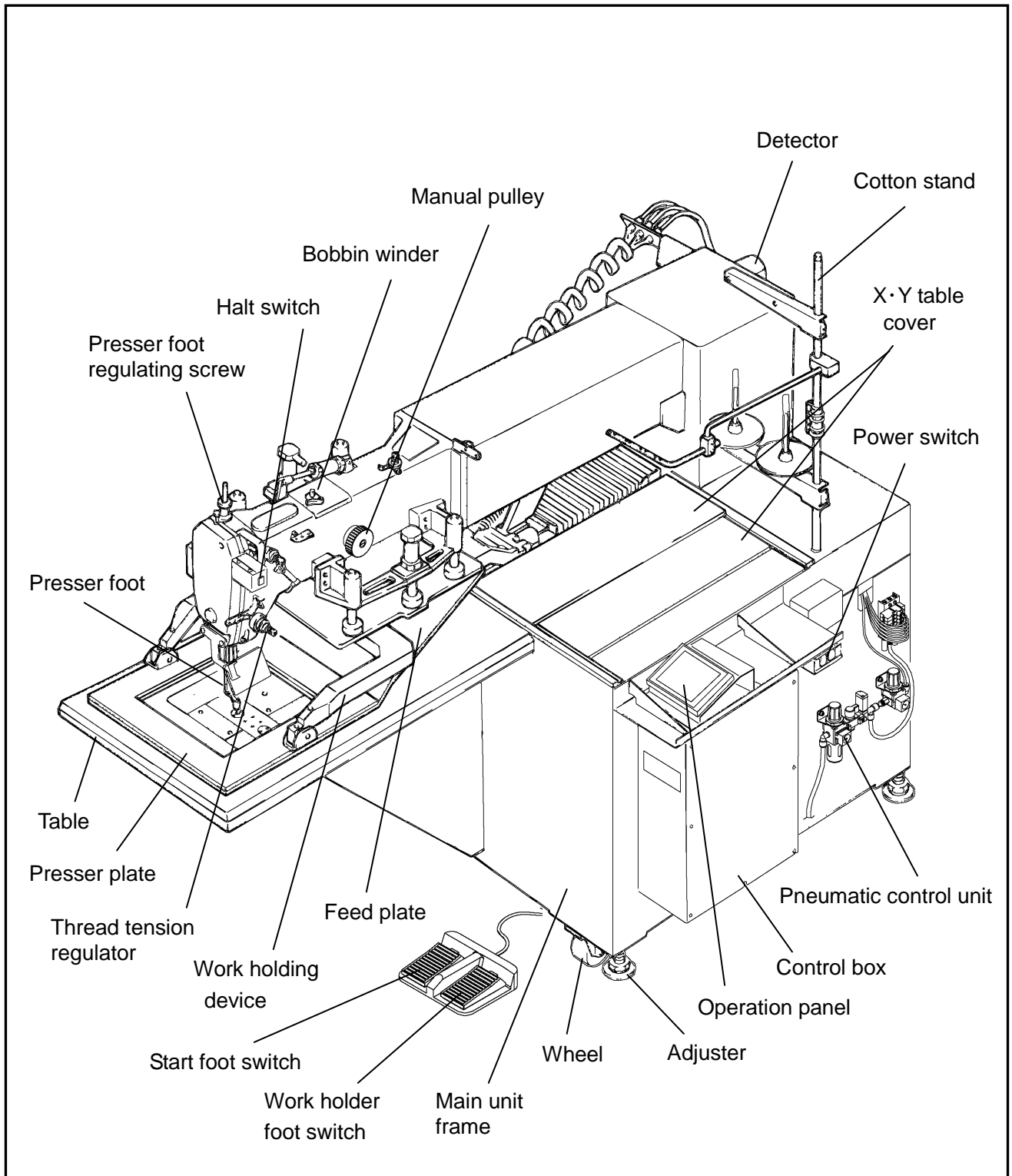
- (1) Please make sure to turn the power switch off before adjusting the sewing machine.
- (2) If the adjustment is required while the power switch on, do not step on the foot switch by mistake.
- (3) Please be careful not to be injured by a sharp part such as the needle and the shuttle hook point.
- (4) Please make sure to put the safety guards (eye guards, motor covers, 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-G3040R electronic pattern sewing machine consists of the following main parts.



2. INSTALLATION

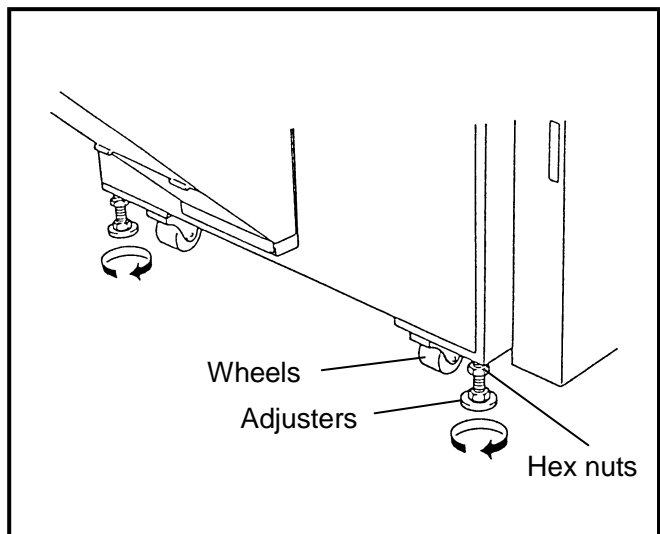


CAUTION

- (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.

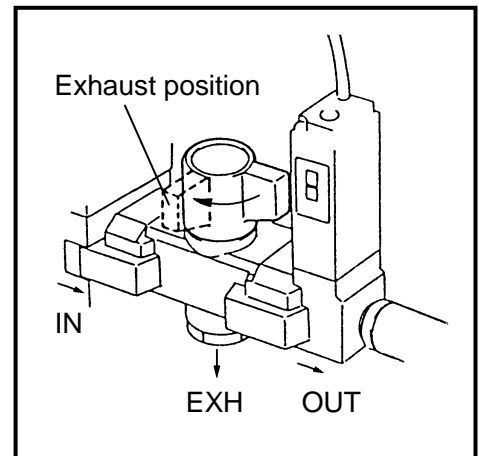
2-1. Securing the Sewing Machine Table

- (1) Install the table at a rigid and flat floor to avoid the chatter.
- (2) When the table was placed in position, lift a little wheels using the adjuster provided at the bottom of table and fix the table. After the fixing, lock it in position with hex nuts attached to the adjusters. (see the right fig.)
- (3) When the sling hooks at 4 corners of table is obstructing the work, remove and keep for the future use.



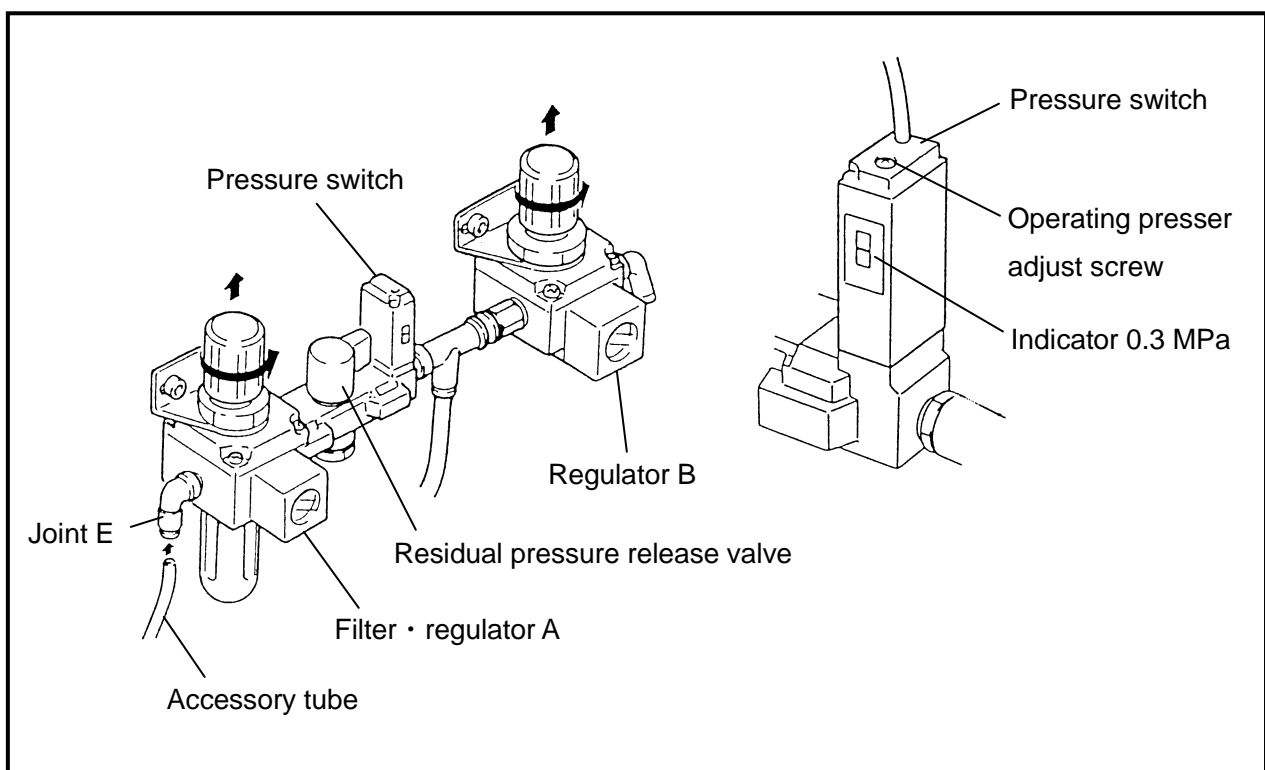
2-2. Connection of Air Tube

- (1) Connect the attached tube between the joint E of air pressure control unit (see the lower fig.) and the compressor.
- (2) Turn the residual pressure exhaust valve lever to right. Compressed air is fed from IN to OUT and supplied to the air cylinder through a solenoid valve. Be careful because this operation starts synchronously all units driven via the air cylinder. By the way, the residual pressure exhaust valve is installed for the safety at the inspection or repair and it releases compressed air from the pipe and prevents unexpected operation of air cylinder. If the residual pressure exhaust valve lever is turned to this side (position indicated with broken line in the right fig.), valve at IN side closes and, synchronously with the compressed air supply interruption, compressed air in the air cylinder is reversed from OUT to EXH and released to the atmosphere.
- (3) Set the air pressure of main circuit at 0.4 MPa with the filter regulator A. Set the pressure to the slider air circuit at 0.2 ± 0.05 MPa with the regulator B.



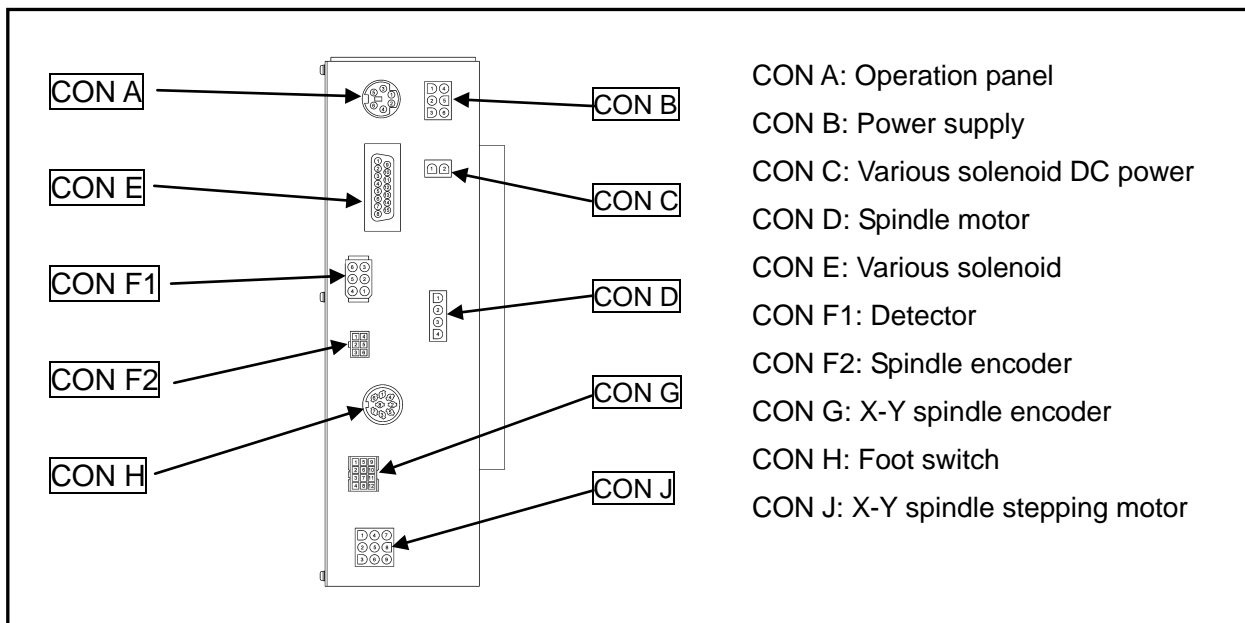
[Notice] Since the pressure of slider air circuit (regulator B) is related to the stitching tension, do not adjust it below 0.15 MPa or beyond 0.25 MPa.

- (4) Confirm that the operating pressure of pressure switch is set at 0.3 MPa. If it is not correct, turn the operating pressure adjust screw with a flat head screwdriver and set the needle at 0.3 MPa. This value is the pressure drop detecting pressure.



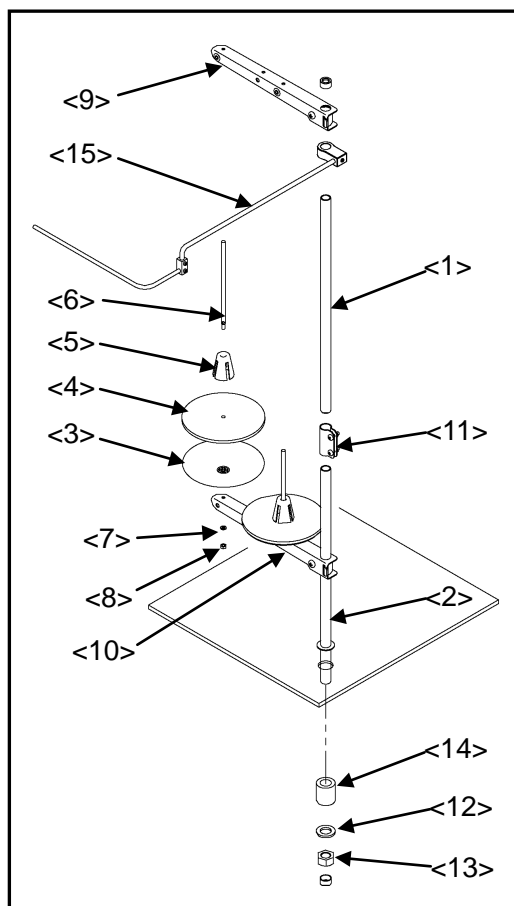
2-3. Installation of the foot switch, and connection of the control cables

Connect the foot switch to the connector CON H. The foot switch is enclosed in the accessory box. Control cable to connect to already be connected as shown on the figure below.



2-4. Installation of the thread stand

- (1) Assemble the parts (No.1 to No.11 , and No.15) 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) , the washer (No.12) and the collar (No.14).



- <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
- <13>: Nut
- <14>: Collar
- <15>: Thread tension guide

3. LUBRICATION

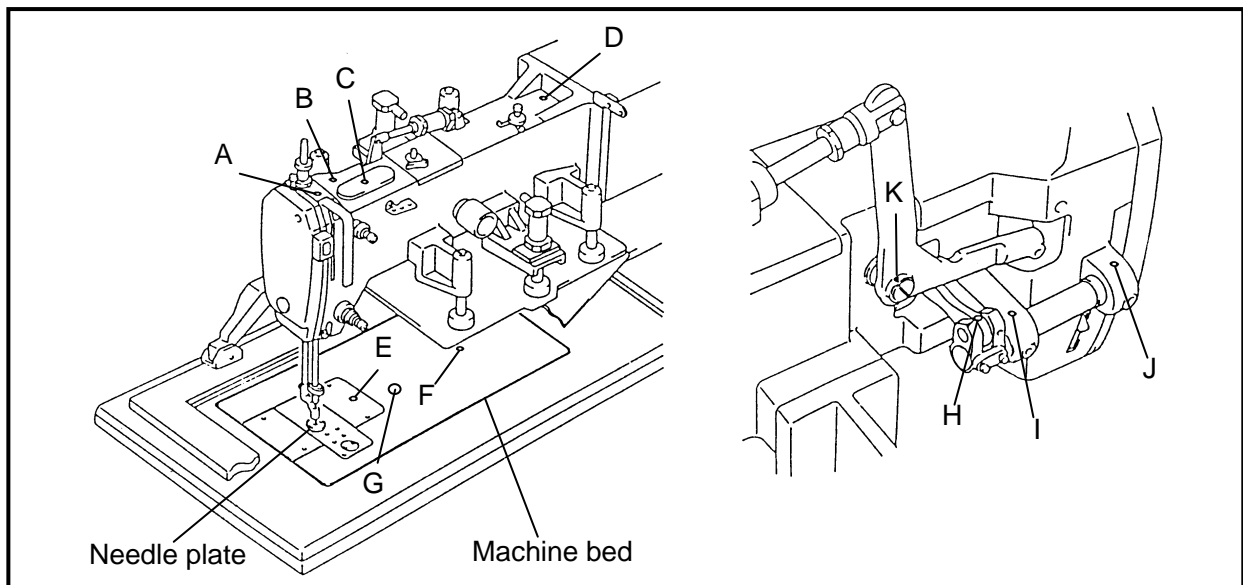


- (1) Please make sure to turn power switch off before lubricating.
- (2) Please pay attention that oil does not get on your skin or in your eyes as it may cause an inflammation.
- (3) Please make sure to keep oil out of the reach of children who may drink oil by mistake.
- (4) Please make sure to lubricate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

[Notice] Please use a pulley oil SF oil.

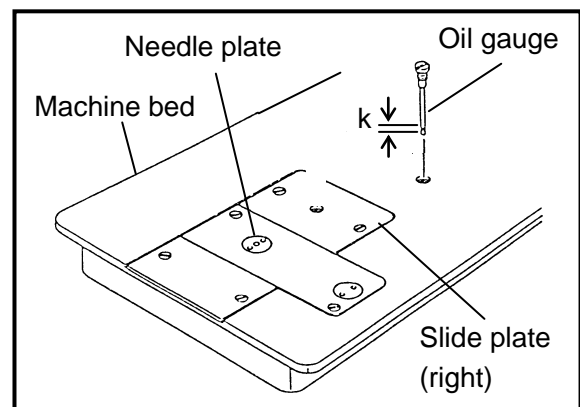
3-1. Oiling

Before proceeding with operation, be sure to lubricate, as necessary, parts A to K indicated by the arrows in the figure.



3-2. Filling the oil tank

Draw out the oil gauge at top face of machine bed, supply oil up to the depth k. Insufficient oil reservation may induce the burning due to interrupted oil supply to the hook, each section of bed. Make sure to check the indication on the oil gauge so as to replenish oil timely.



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

Lined writing area for notes.

MITSUBISHI ELECTRIC CORPORATION

Printed in Japan

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