



User's Manual

KM-813

KM-823

High Post Bed, Single/Twin
Needle Lock Stitch Machine



SUNSTAR MACHINERY CO., LTD.

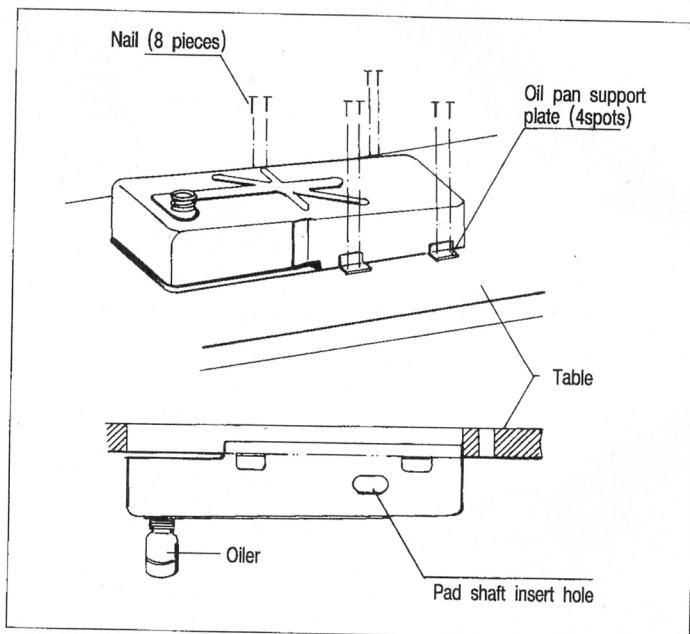
1. For proper use of the machine, thoroughly read this manual before use.
2. Keep this manual in a safe place for future reference in case the machine breaks down.

MME-050509

1

Oil-pan set-up

Stick closely the edge of oil pan to table in order to be inserted, and nail 4 oil pan support plates to set up.

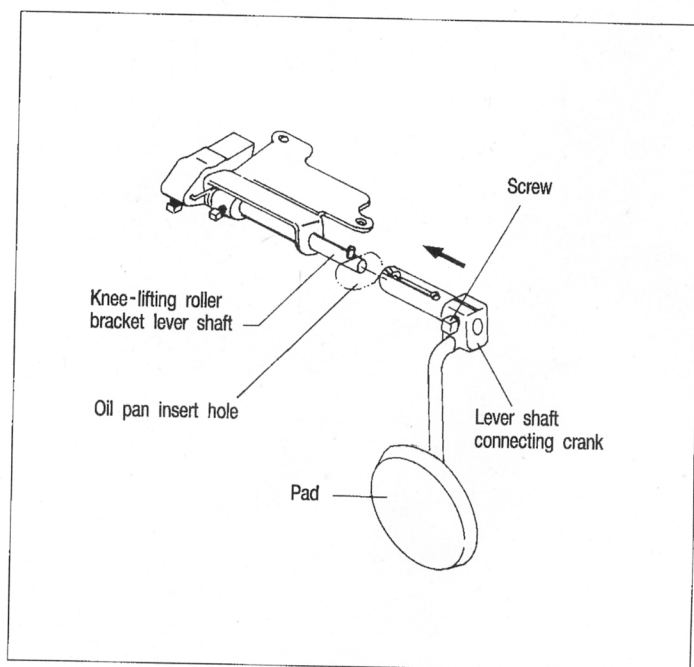


2

Knee-lifter set-up

- 1) Connect the knee-lifting pad shaft to the knee-lifting roller bracket lever shaft through oil pan insert hole.
- 2) Loosen the screw of lever shaft connecting crank and adjust the pad-working angle to operator's knee position. After this, fasten the screw firmly.

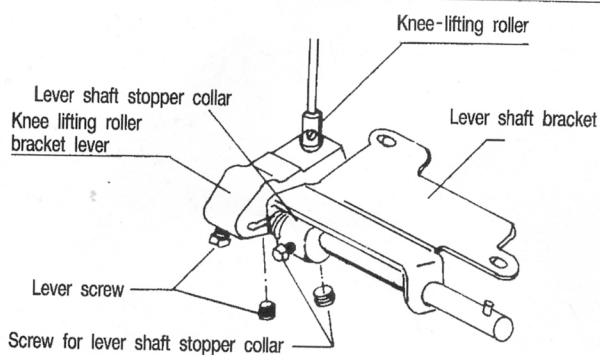
(Notice) Separate the knee-lifting pad shaft from knee-lifting roller bracket lever shaft when you lay down the M/C.



Directly-Bed-Connecting knee-lifter Adjusting

When you adjust directly-bed-connecting knee-lifter, follow as directed below.

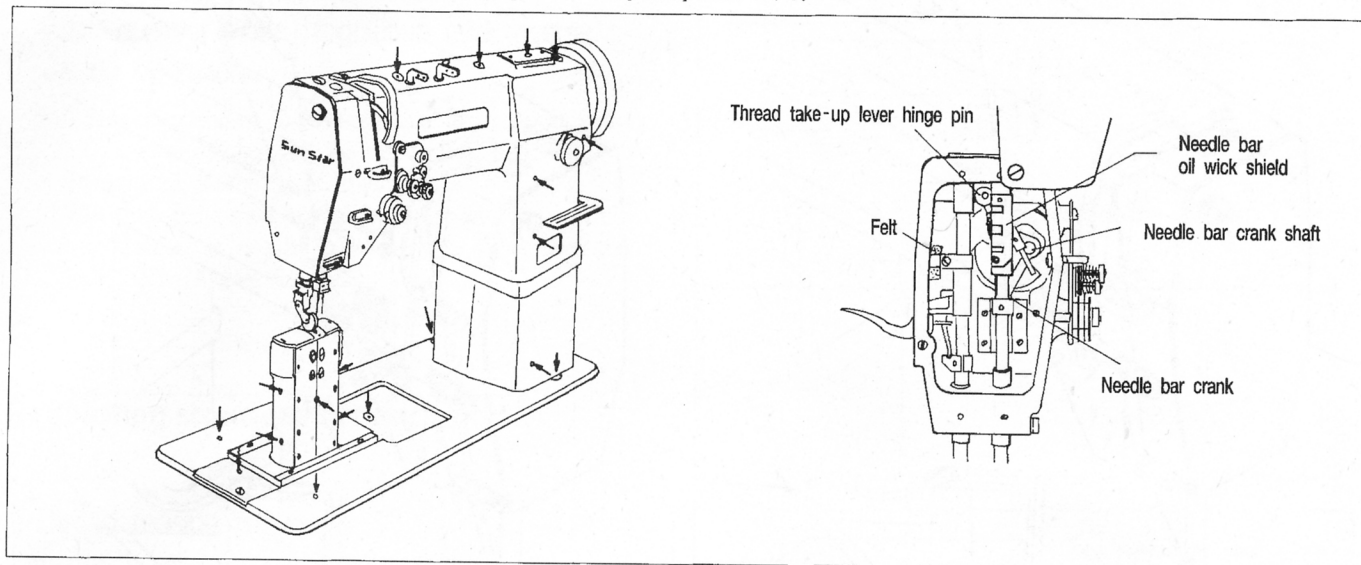
- a) Loosen the lever screw and adjust it in order that knee-lifting roller and the bracket lever should be stuck fast each other under the condition that presser foot is on a level with needle plate's upper side.
- b) Unfasten the screw for lever shaft stopper collar and regulate it for upper point of the collar to be in contact with lever shaft bracket.



Preparations before sewing

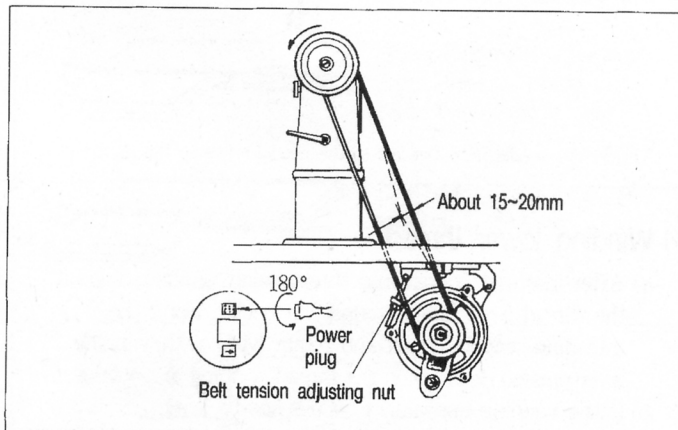
1) Oil supply

You must refuel each oil opening and folding spots before you operate M/C.



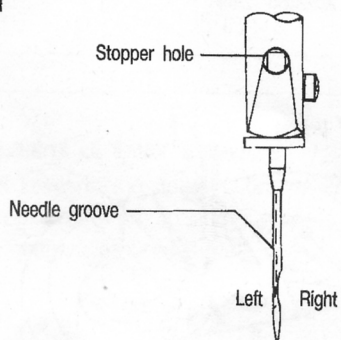
2) Belt tension adjustment and confirming of M/C rotation direction

- Control belt tension using the tension adjusting bolt and nut in clutch motor with the result that the belt would be pressed down about 15~20mm by hand.
- M/C revolving way is anticlockwise when you see it in the pulley side. If it is not that way, switch off the power source without delay, pull out the power plug of motor and connect it 180° opposite way.



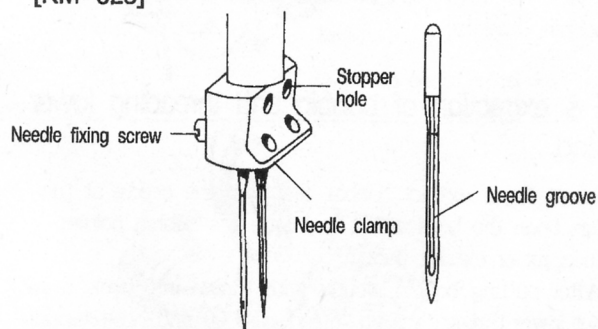
3) Needle inserting

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Stick needle end fast to the end of stopper hole in needle bar with the long groove of needle placed in the left, and then, fix needle with fixing screw.

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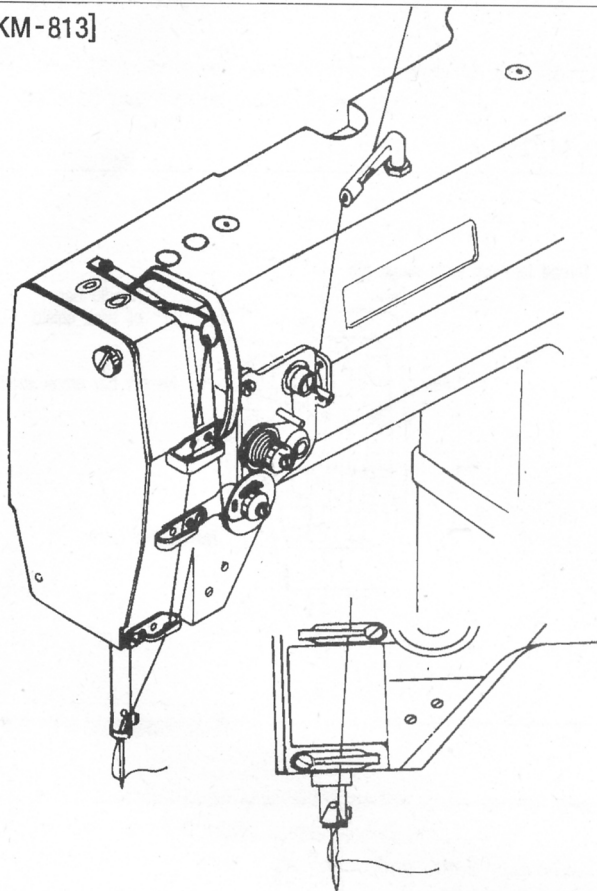


With the long groove of needle faced each other, stick needle end fast to the top of stopper hole in needle clamp, and fix needle with fixing screw.

4) Threading upper thread

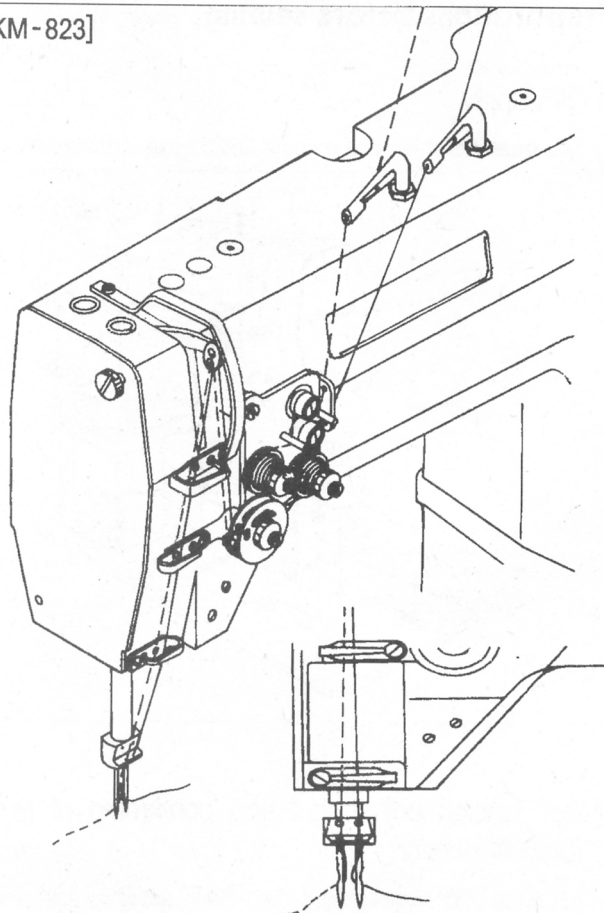
After placing the thread take-up lever to the highest position, thread the upper thread as following figure.
About 50mm length of upper thread out of the needle's eye would be profitable for initial sewing.

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Thread the needle from the left of the needle's eye to the right.

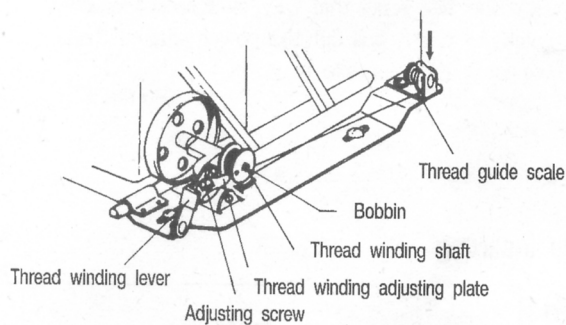
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Thread the needle from the inside of the needle's eye to the outside.

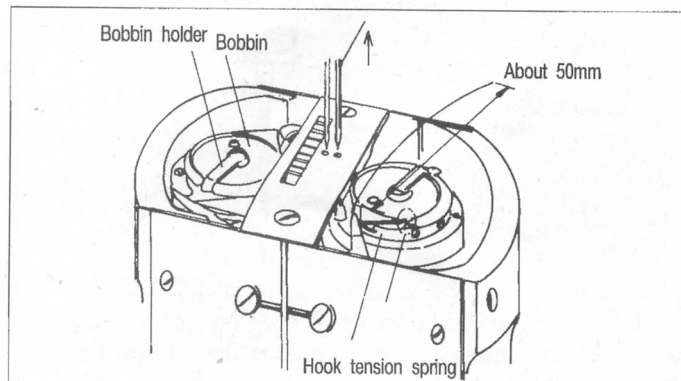
5) Winding lower thread

- After inserting bobbin into thread winding shaft, wind the thread 5~6 times around the bobbin along the threading way by hand and rotate M/C with winding lever pressed down, then the thread winding just works.
- If the winding appearance would not be level, manipulate the thread guide scale from right to left.
- Regulate thread winding volume(length) with adjusting screw in thread winder control plate. It is recommendable that lower thread should be regulated to wind 80% of bobbin capacity.



6) Fix & extraction of bobbin and threading lower thread.

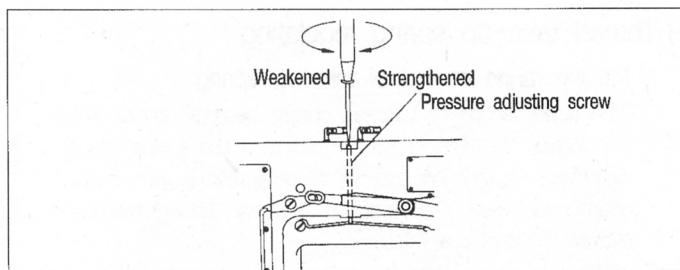
- When fix or extract bobbin, first stop the needle at the top, open the hook cover, and raise the bobbin holder, then fix or extract bobbin.
- After putting bobbin wound with thread into hook, draw out lower thread through thread pass ① and hook tension spring as in figure, then extract it out via the gap between hook and opener.
At this time, the preferable length of lower thread above from hook cover is about 50mm.



7) Adjusting pressure of presser foot

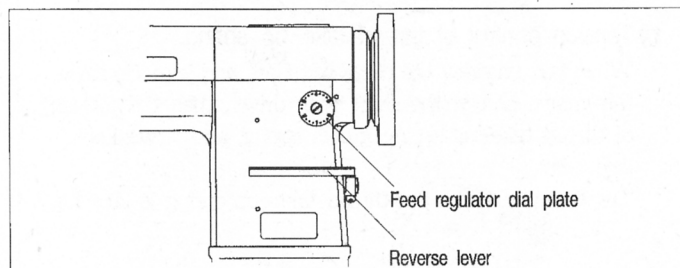
As seen in figure, the pressure of presser foot grows strong when you turn pressure adjusting screw clockwise, and it becomes weak on the contrary turning.

- *Thin material : 4~5kg
- *Medium material : 7kg
- *Heavy material : 8kg



8) Stitch number (Feed) regulation and reverse sewing operation.

- a) The number shown in feed regulator dial plate indicates the range of stitches. Set the dial to your need with manipulating it from right to left.
- b) When you press reverse lever while sewing, the operation becomes reverse, and by removing your finger from the lever the work goes forward.

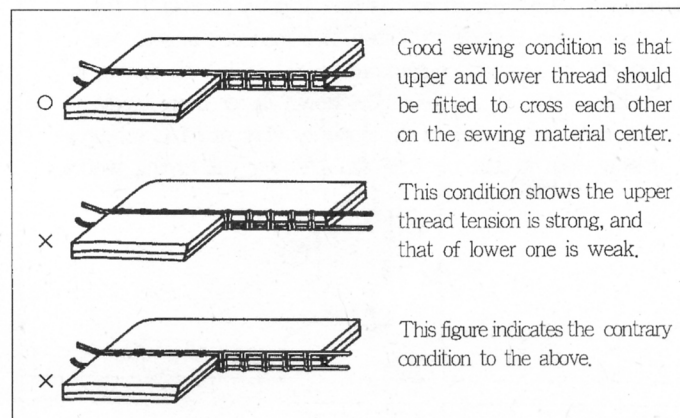


4

Regulating standard for each part

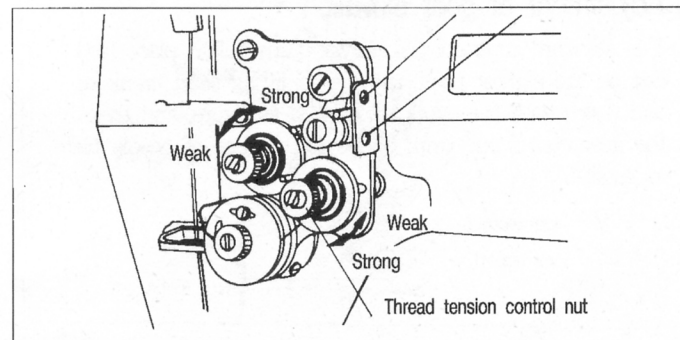
1) Thread tension regulating

Regulate thread tension according to sewing condition as it changes along with material, thread, stitch number and sewing condition.



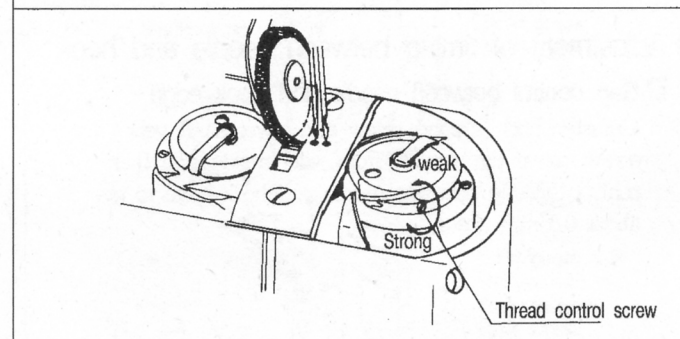
a) Tension control of upper thread

When you turn control nut of thread tension regulator clockwise, the tension of upper thread grows strong, but it becomes weak if anticlockwise.



b) Tension control of lower thread

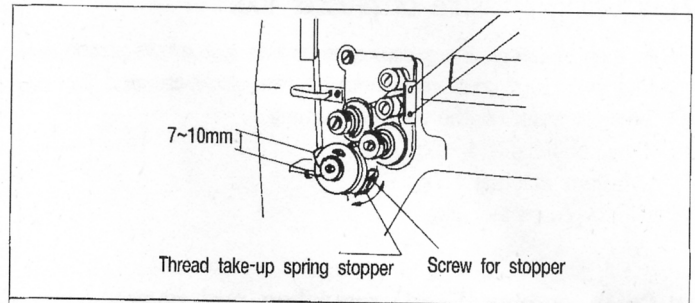
Tension of lower thread grows strong when you turn tension control screw of hook clockwise, and it weakens in case of counterclockwise turning.



2) Thread take-up spring regulating

a) Moving range control of take-up spring

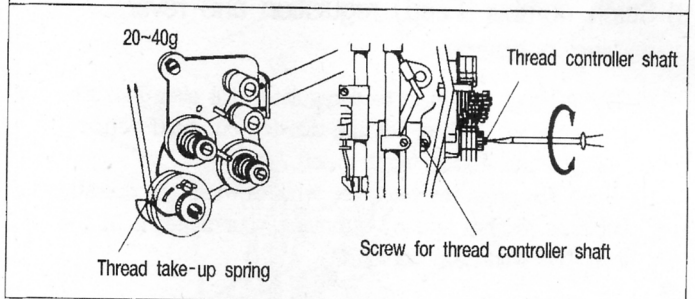
The action scope of take-up spring becomes small when you loosen the stopper screw and turn the spring stopper clockwise. On the contrary, the scope grows large when counterclockwise. The standard of thread take-up spring's movement range is 7~10mm.



b) Tension control of thread take-up spring.

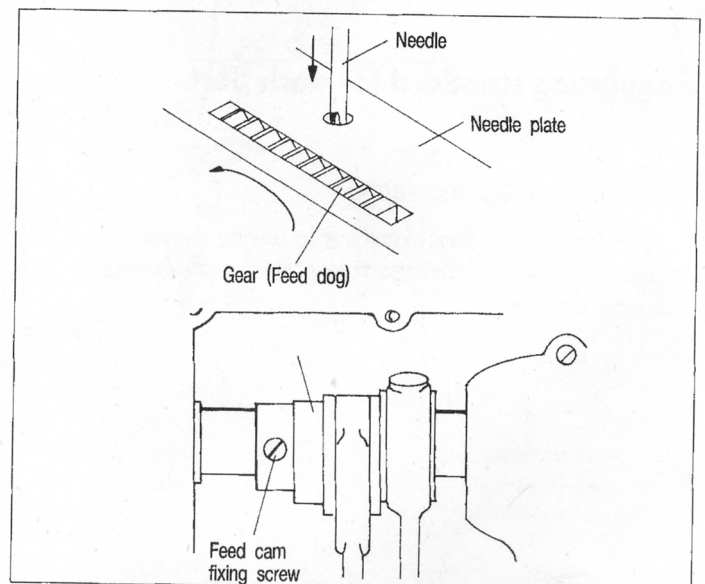
When you unscrew the controller shaft, and turn clockwise the groove end of the shaft with driver, then the tension of thread take-up spring grows strong, and it weakens vice versa.

The standard tension of thread take-up spring is 20~40g



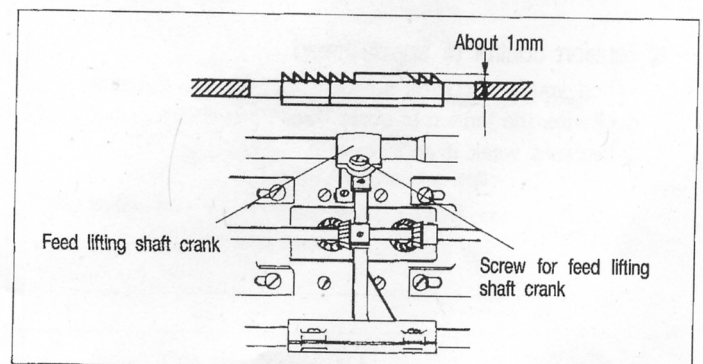
3) Timing adjustment between needle and feed dog

As seen in figure, the standard is that when the top side of feed dog goes down to the level of needle plate, the needle comes down in the while and the edge of needle's eye becomes same leveled as the needle plate surface. If the timing doesn't work, unfasten two feedcam screws, and turn the fit position of cam from right to left till timing is in due course. When gear goes down faster than needle, turn feed cam round to the opposite way of M/C rotation, if slow, spin it little by little as M/C way till timing works.



4) Adjustment of gear elevation

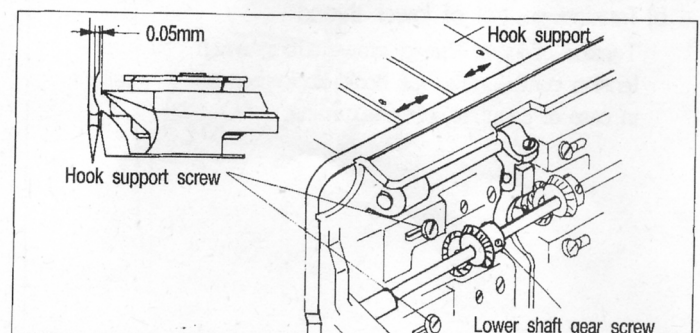
The standard control is as follows. Turn pulley, place feed dog on the highest point, move feed lifting shaft crank up and down with the crank unscrewed as figure, and then the gear comes out 1mm above the surface of needle plate in parallel.



5) Adjustment of timing between needle and hook

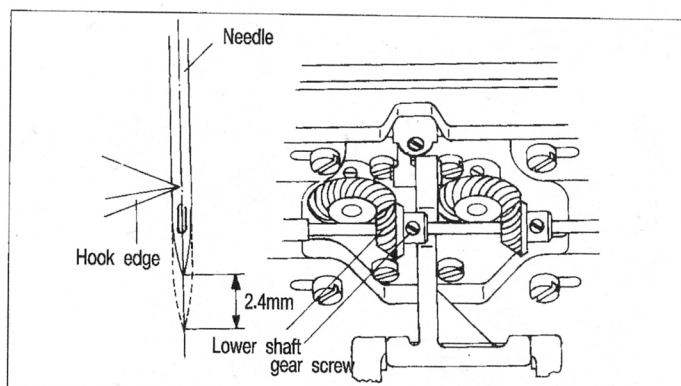
a) Gap control between needle and hook edge

Unfasten hook support screw and lower shaft gear screw, move the support from side to side, and then control the gap between needle and hook edge to get about 0.05mm space.



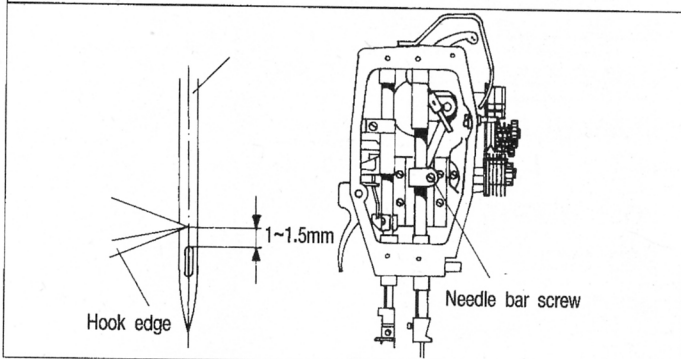
b) Regulating of needle bar rise span

Unscrew lower shaft gear, raise needle 2.4mm high from the lowest point, then move the shaft gear right and left for hook edge to be in line with needle center.



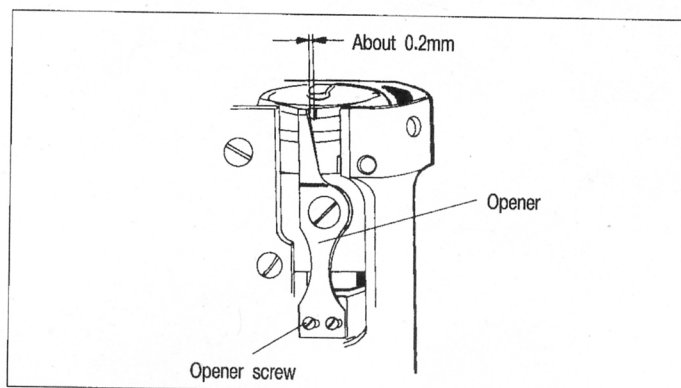
c) Control of needle bar elevation

After regulating the rise span of needle bar, loosen the needle bar screw, move the needle bar, adjust the gap to become about 1~1.5mm between top of needle's eye and hook edge, lastly fasten screw of needle bar tightly.



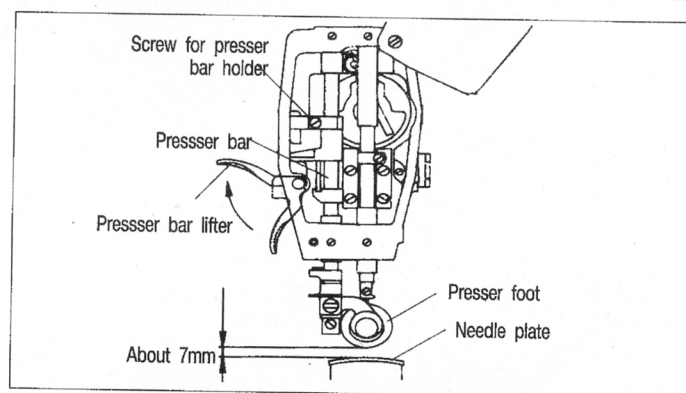
6) Adjusting of the interval between hook and opener

The standard interval between hook and opener is as follows. Loosen opener screw, and move it to right and left for the gap to become about 0.2mm while opener is pulled at maximum to the arrow direction as in figure.



7) Adjusting of presser foot elevation

Raise presser bar lifter, unfasten the presser bar screw and control the interval between presser foot and needle plate to be about 7mm while you move presser bar up and down, then fasten the screw of presser bar closely.



8) Exchange of needle gauge spec. (KM-823)

- At first, loosen post cover screw and hook support screw, second, move two hook supports from right to left, and then exchange feed dog and needle plate.
- Exchange needle clamp and presser foot (Needle guide in case of roller presser attached type)
- After completing the above exchanges, adjust them to the standard controlling (See page 6).

