

JUKI

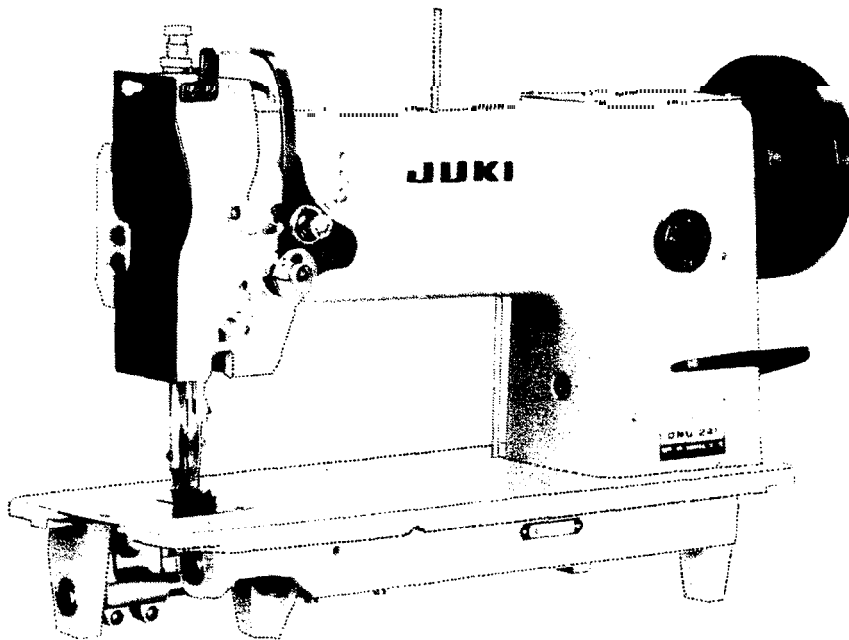
一本針本縫総合送りマシン

1-Needle, Lockstitch, Compound
Walking Foot Needle Feed Industrial
Sewing Machine with a Large Bobbin

DNU-241H

取扱説明書

INSTRUCTION MANUAL



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BE241H20BJA

JUKI 241H NAKAJIMA 280L INSTRUCTION MANUAL

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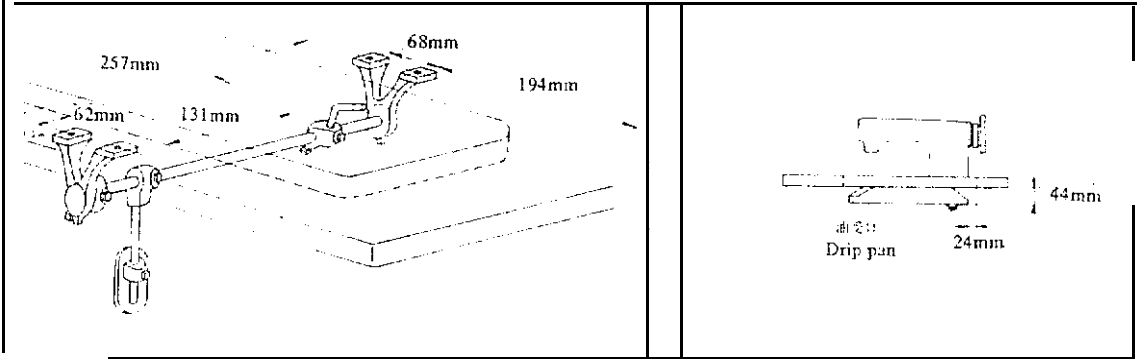
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ご使用上の注意

1. 速度

このミシンの縫い速度は、最高毎分2,000針です。縫製条件に応じて回転数を変える場合には、クラッチモーターのプーリーを取りかえて下さい。プーリーの回転方向は手前側です。

2. ひざ上げ装置、油受けの取付位置



3. 注油

開梱したるよく掃除をしてから注油をして下さい。注油は図の矢印で示された箇所に行います。連続回転するときは1日に少なくとも3回以上注油して下さい。

CAUTIONS ON OPERATION

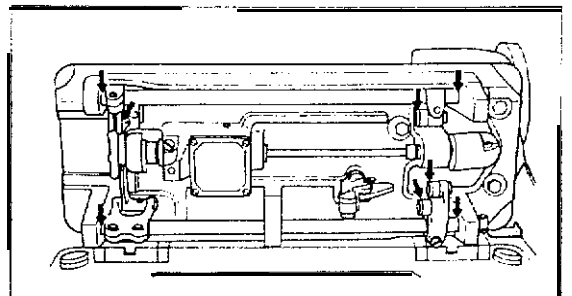
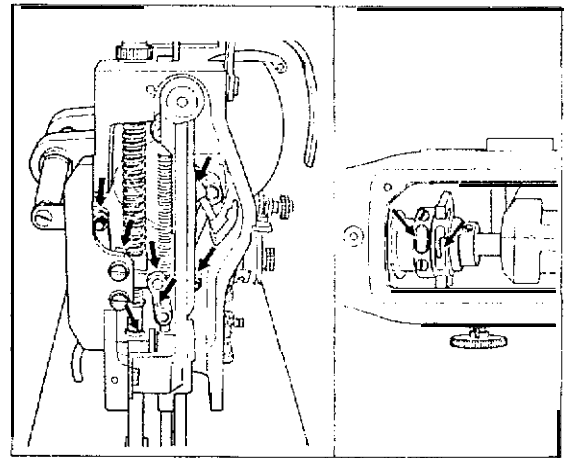
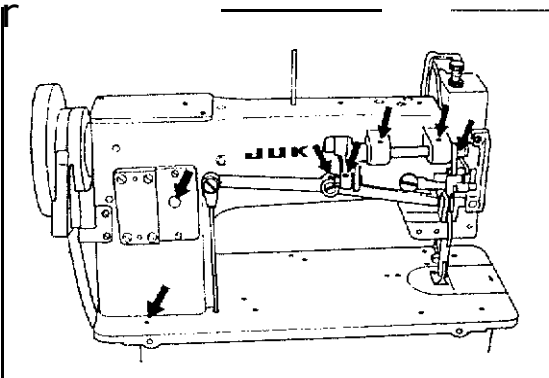
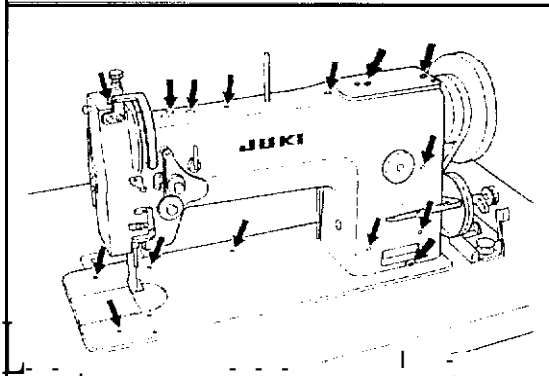
1. SPEED

Maximum speed of this machine is 2,000 stitches per minute. In case of changing the speed according to different sewing conditions, the motor pulley is required to change. The direction of the pulley rotation is toward you. When the machine is directly connected with the motor, the motor should be of three phase or single phase having 200W - 300W capacity and the clutch type.

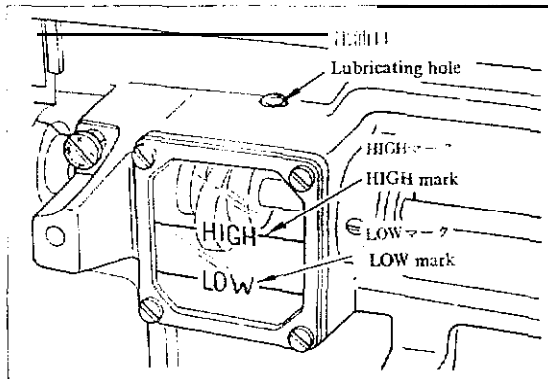
2. POSITION OF KNEE LIFTER AND DRIP PAN

3. LUBRICATION

Lubricate after unpacking the case and cleaning the machine thoroughly. Lubrication should be made in all the oil holes indicated by arrows as illustrated. In case the machine is operated continuously, lubricate the machine at least twice a day.



4. カマ給油について



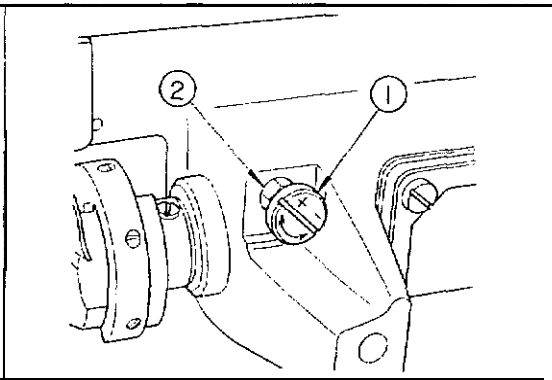
(1) 給油はミシンを倒した状態で、油タンクの注油口からジューキニューデフリックスオイルNo.1をHIGHマーク位置まで給油してください。
1日に1度点検し、LOWマーク以下になっている時再注油してください。

(2) 油量調整は、タンク左横にある油量調整ねじ①で調整してください。
調整ねじナット②をゆるめ、ねじ①を④の方(右)へ回すと油量は多くなり③の方(左)へ回すと油量は少なくなります。調整後はナット②を締めつけてください。

(注意)

1. ミシン据え付け後、全箇所注油するまでは、絶対にミシンを回転しないように願います。
2. ミシンご使用の程度に合わせて、定期的を送り歯、カマの清掃をしてください。

4. LUBRICATION OF THE HOOK COMPONENTS



(1) Tilt the machine head back and fill the oil reservoir with Juki New Defrix Oil No. 1 up to the oil level shown by the HIGH mark line.
This enables the machine to lubricate itself for about an 8 hour period of operation (one working day). Check the oil level every day.
Always keep the oil level at LOW mark by adding the oil before operation.

(2) Amount of the oil fed into the hook components can be adjusted by oil adjusting screw ① located on the left of the tank; loosen locknut ② and turn adjusting screw ① clockwise to increase or counter clockwise to reduce the amount of the oil. After the adjustment, tighten locknut ② firmly.

Note :

1. Do not operate the machine until it has been thoroughly lubricated after the machine was installed.
2. According sewing conditions it is necessary to clean by removing dust on feed dog's slot and hook periodically.

Noise

Workplace-related noise at sewing speed

$n=1,930 \text{ min}^{-1}$: $L_{PA} 84 \text{ dB(A)}$

Noise measurement according to DIN 45635-48-A-1

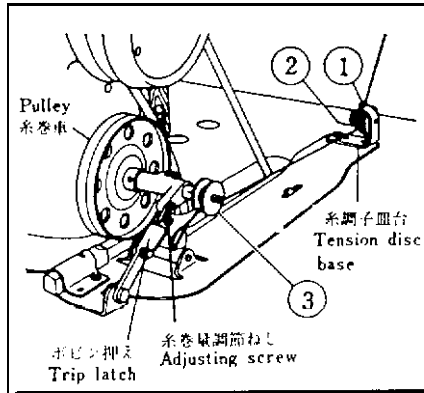
ミシンの使い方

HOW TO OPERATE THE MACHINE

I. BOBBIN THREAD WINDING

1. 下糸の巻き方

- 1) 糸巻き台をテーブルに木ねじで取りつけます。
- 2) 糸を図の順に通し、ボビンに数回巻きつけます。
- 3) ボビン押えを倒して、糸巻車をベルトに接触させます。
- 4) 糸が8分目位巻けるように、糸巻量調節ねじで調節します。
- 5) 糸が片寄って巻ける時は、糸調子皿台を左右に動かして正しく巻ける位置にして下さい。
- 6) 巻き終るとボビン押えが外れて、糸巻車は自動的に止まります。



- 1) Set the bobbin winder to the table with screws.
- 2) Pass the thread in the order shown in figure and wind it around the bobbin several times.
- 3) Place down the trip latch so as to contact the bobbin winder pulley to the belt.
- 4) By the winder adjusting screw the winding amount is adjusted. Proper winding amount will be about 80%.
- 5) In case the thread is wound unevenly, adjust the position of the thread tension disc base by moving it left or right.
- 6) When the winding is completed, the trip latch will be released and the bobbin winder pulley will stop automatically.

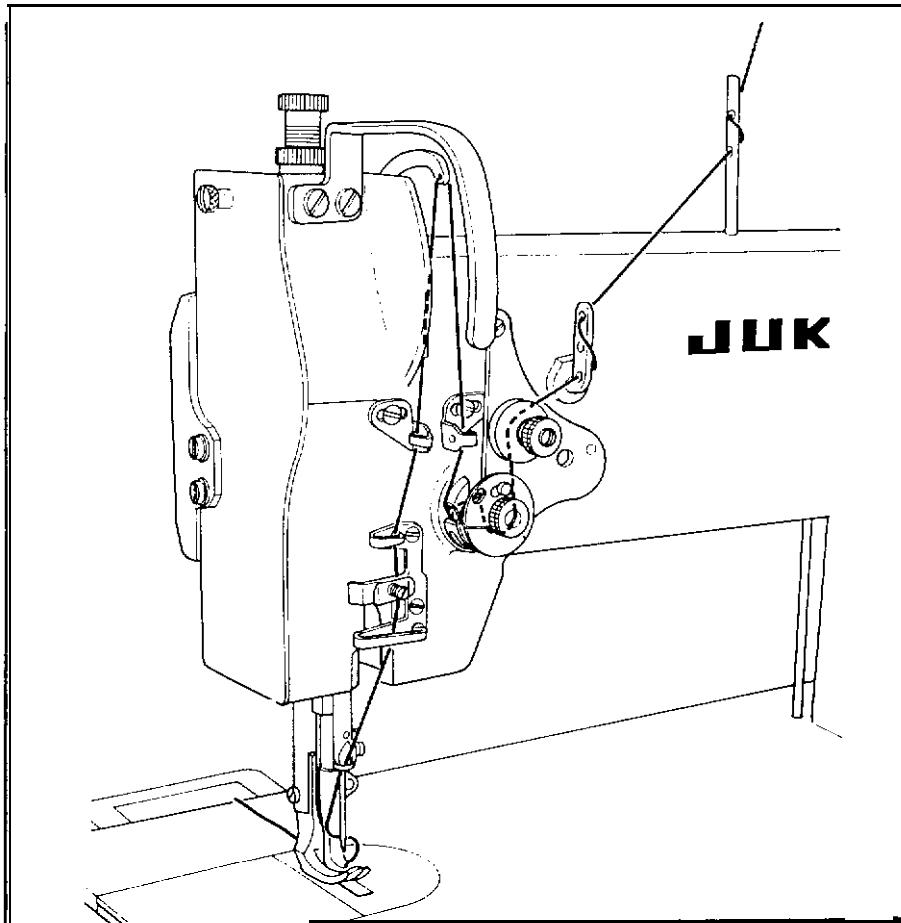
2. 上糸のかけ方

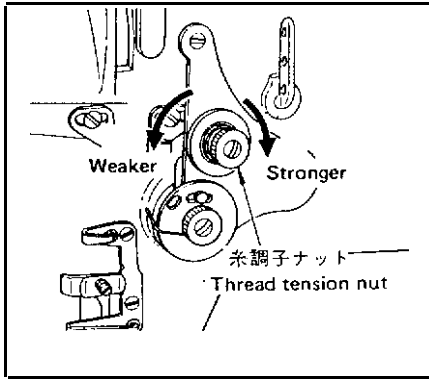
はずみ車を回わして、天ピンを最高の位置にします。

- 1) 上糸は図の順に通します。
- 2) 針には左から右へ糸を通します。
- 3) 針に通した糸を10cm位引き出しておきます。

2. UPPER THREADING

- 1) Turn the balance wheel over toward you until the thread take-up reaches its highest point.
- 2) Pass the needle thread through threading points in the order shown in figure.
- 3) The needle thread should pass through the needle eye from left to right as shown in figure.
- 4) Pull out about 10cm of the thread through the needle eye with which to start sewing.





3. 糸調子について

上糸張力の調節

糸調子は布地の中心で、上糸と下糸がからみ合う形が正常です。

上糸張力は糸調子ナットで調節します。

- 1) 右へ回わすと上糸張力は強くなります
- 2) 左へ回わすと上糸張力は弱くなります。

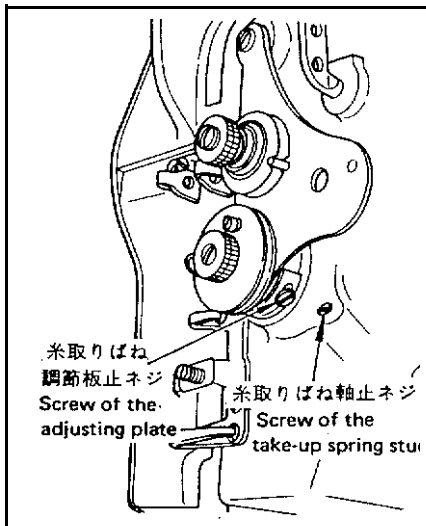
3. ADJUSTING THE THREAD TENSION

The needle thread tension

To obtain ideal stitches, the needle thread and the bobbin thread should be perfectly linked at the center of the cloth. The thread tension nut adjusts the tension of the needle thread as shown in figure.

- 1) To turn the nut right for more tension
- 2) To turn the nut left for less tension.

Note: The presser foot should be down during the tension adjustment.



糸取りばね

糸取りばねの作動範囲を変えるときは、糸取りばね調節板を移動して行います。

- 1) 糸取りばね調節板止ネジをゆるめ
- 2) 糸取りばねの作動を大きくする時は、調節板を右に、小さくする時は左へ回します。

厚い布地を縫う時は、作動量を少なく、薄い布地の時は作動量を大きくします。

糸取りばねの強さを変えるときは

- 1) 糸取りばね軸止ねじをゆるめ
- 2) 糸取りばね軸の先端の割溝にドライバーを入れ、強くする時は左に、弱くする時には右に回します。

太い糸の時は強く、細い糸の時は弱くします。

Thread take-up spring

To move thread take-up spring adjusting plate in order to regulate the movement of the thread take-up spring.

- 1) Loosen the screw of the adjusting plate.
- 2) To increase the movement of the thread take-up spring, move this adjusting plate toward right, and toward left for less movement.

After adjusting, be sure to tighten the screw.

For thick material—Move the plate toward left.

For thin material—Move the plate toward right.

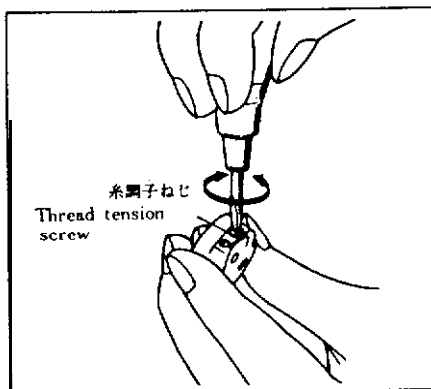
To change the thread take-up spring tension.

- 1) Loosen the screw of the take-up spring stud, in the arm under the thread controller disc.
- 2) To strengthen the tension, insert a screw driver to the tip of the groove of the take-up spring stud and turn slowly to left. To weaken the tension, turn the screw driver to right.

After the adjustment re-tighten the screw.

For thick threads—Make the tension strong.

For thin threads—Make the tension weak.



下糸張力の調節

下糸張力は、ボビンケースの糸調子ねじを回して調節します。

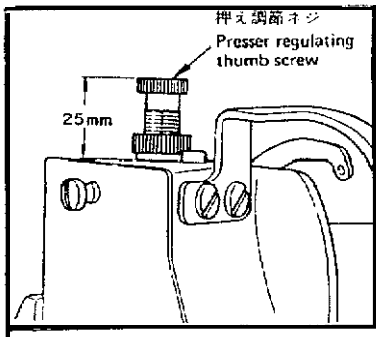
- 1) 糸調子ねじを右へ回わせれば、下糸張力は強くなります。
- 2) 糸調子ねじを左へ回わせれば、下糸張力は弱くなります。

※ボビンケースから糸を引き出す場合の糸の張力は30~50g位が適当です。

The bobbin thread tension

The thread tension screw of the bobbin case adjusts the bobbin thread tension as shown in figure. Turn it toward right to obtain more tension and toward left to obtain less tension.

Note: Proper tension when the bobbin thread is pulled out from the bobbin case should be about 30-50g.



4. 押え圧力の調節

押え調節ねじを、

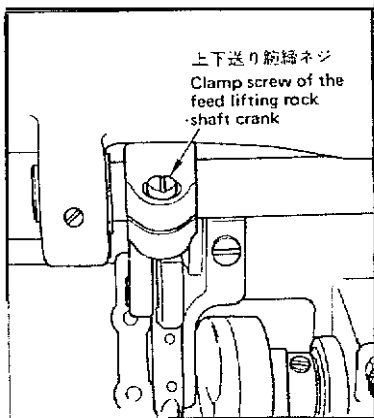
- 1) 右へ回すと強くなり、
- 2) 左へ回すと弱くなります。

押え調節ねじは25mmの位置にセットして使用して下さい。

4. PRESSER FOOT PRESSURE

Adjustment is made by the presser regulating thumb screw as shown in figure, with presser foot down. Toward right for more pressure and toward left for less pressure.

As a normal usage, the clearance between the top of the thumb screw and the arm surface is about 25 mm.

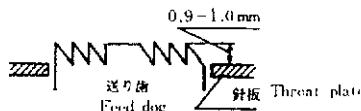


5. 送り歯の高さ

送り歯の針板からの突出量は0.9～1.0mmに合わせてあります。

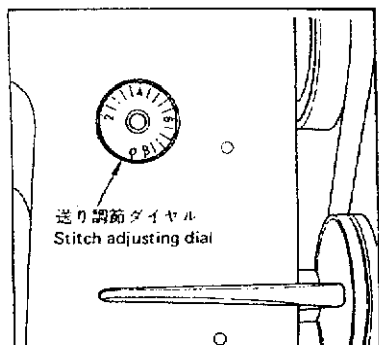
送り歯の高さを調節するには、

- 1) 上下送り腕の締めねじをゆるめ
- 2) 送り台を上下に動かして調節し、締めねじを固く締めます。



5. FEED DOG HEIGHT

The feed dog height above the throat plate is set from 0.9- 1.0 mm. To adjust the feed dog height, loosen the clamping screw of the feed lifting rock shaft crank and move the feed bar up and down to obtain necessary height. Tighten firmly the clamping screw after the adjustment.



6. 縫目長さの調節

縫目長さの調節は、送りレバーの上にある送り調節ダイヤルを回しておこないます。

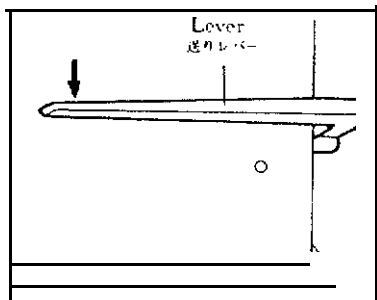
目盛の数字はmmで示してあります。

- 1) 送り調節ダイヤルを左(右)に回して
- 2) 希望する数字とアームから出ているピンとを合わせます。
- 3) 縫目長さは最大8mmです。

6. ADJUSTMENT OF THE STITCH LENGTH

Adjustment is made by the stitch adjusting dial, by turning it left or right. Match the desired figure with the pin which is coming out from the arm.

- Note:**
- 1) The maximum stitch length is 8mm.
 - 2) Do not change the stitch length while the machine is running.

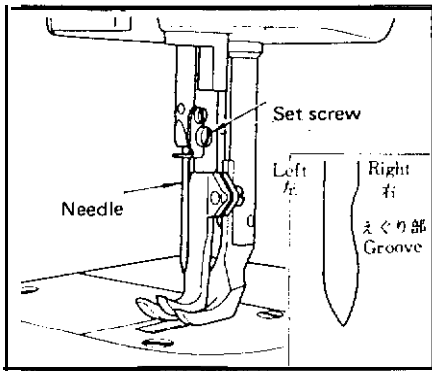


7. 返し縫について

- 1) 返し縫をするときには、送りレバーを下に押します。押し続けている間は、返し縫が出来ます。
- 2) 手を離せば、送りレバーは元にもどり、正送りになります。

7. REVERSE STITCHING

By only pushing the reverse feed control lever downward, you can obtain the reverse stitching work and while you keep the lever down, the reverse stitching is performed. By releasing the lever it will return automatically to its original position being the normal forward stitching.



8. 針の取り付け方

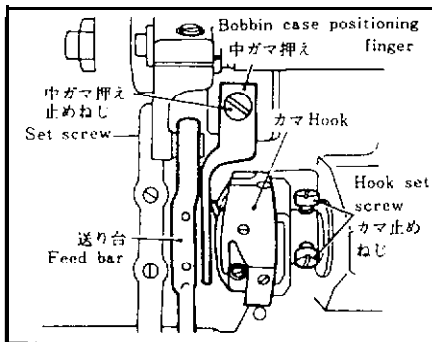
針はDP×17の針を御使用下さい。針の番手は種々ありますが、使用する糸の太さや生地の種類により異なりますので、適当に選んで下さい。

- 1) はずみ車を回して、針棒を最高に上げて、
- 2) 針止めねじをゆるめ
- 3) 針のえぐり部が右真横にくるように持ち、針を穴の奥につき当るまで深くさし込み、
- 4) 針止めねじを固く締めます。

8. SETTING THE NEEDLE

Use DP×17 (135×17) type needles, but select correct size and number of it that meets the material and the needle thread to be used.

- 1) Turn the balance wheel over toward you until the needle bar reaches its highest point.
- 2) Loosen the needle clamp screw.
- 3) Hold and insert the needle into the needle bar hole as deeply as it will go, keeping the long groove of the needle to the left and the eye of the needle in line with the machine arm directly.
- 4) Securely tighten it with the needle clamp screw.



9. カマの取り外しと取り付け方

ミシンを使用中にカマに糸がからんだり、その他の原因でカマの位置が変わった時や、新しいカマと交換するときには次の順序でカマを取り外します。

- 1) はずみ車を回して天秤を最高の位置に上げます。
- 2) ボビンケース、針を取り外します。
- 3) 中ガマ押え止めねじを外し、中ガマ押えを取り外します。
- 4) 2本のカマ止めねじをゆるめます。
- 5) はずみ車を回して、送り台を最高に上げます。
- 6) カマを手で回して、図のような位置にします。
- 7) カマを左へ引いて取り出します。

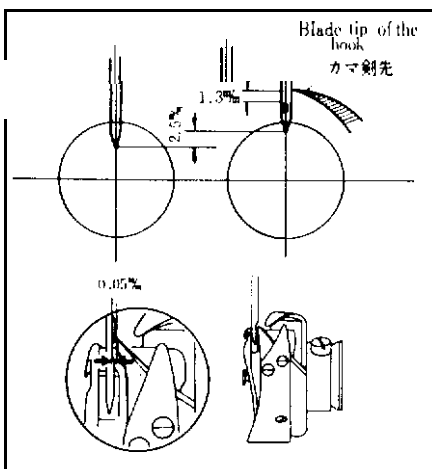
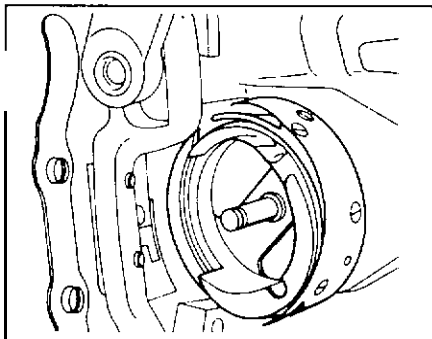
○カマを取りつける時は、この逆の順序で取りつけて下さい。

9. INSTALLING AND REMOVING THE SEWING HOOK

In case of removing the sewing hook, the following procedure is necessary.

- 1) Turn the balance wheel over toward you until the thread take-up lever reaches its highest point.
- 2) Remove the bobbin case and the needle.
- 3) Remove the bobbin case holder positioning finger.
- 4) Loosen two screws of the sewing hook.
- 5) Turn the balance wheel so as to raise the feed bar to its highest position.
- 6) Turn the sewing hook by hand and place it in the position as shown in the figure.
- 7) Pull the hook to the left side and take it out.

Note: To install the hook, follow reversely this procedure in order.



10. 針とカマの関係

カマ合わせの標準は次の通りです。針が最下点から 2.5mm 上ったところで、

- 1) カマの剣先が針の中心線と一致し、
- 2) このときカマの剣先と針穴上端との距離が 1.3mm あることです。
- 3) 針の側面と釜剣先の隙間は 0.05mm 以内になるよう取り付けして下さい。

[注意] カマ合わせを行う時は縫目量を 0 にして行って下さい。

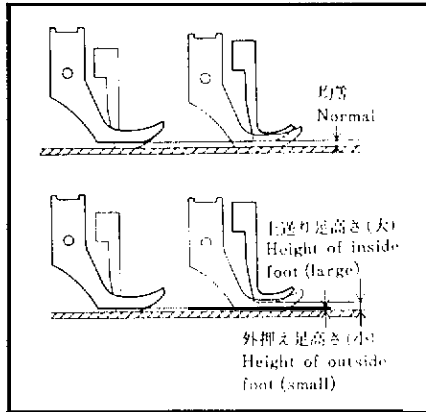
10. TIMING THE SEWING HOOK AND NEEDLE

For the standard method of the sewing hook timing, please follow as under;

- 1) Turn the balance wheel over toward you until the needle reaches to the position of 2.5 mm from its lowest point.
- 2) At this position, the blade tip of the hook should be at the center line of the needle.
- 3) At this instant, the clearance between the blade tip of the hook and the upper part of the needle hole should be 1.3mm.
- 4) Install the hook so as to obtain 0.05mm clearance between the blade tip point of hook and the side part of needle.

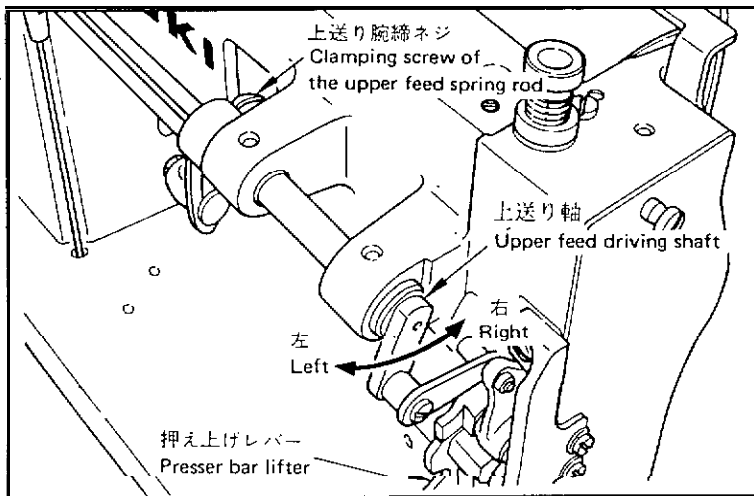
Note: When setting the timing of the needle and the hook, be sure to set the stitch adjusting dial to "0".

11. 上送り足と中押え足の 交互上下運動量

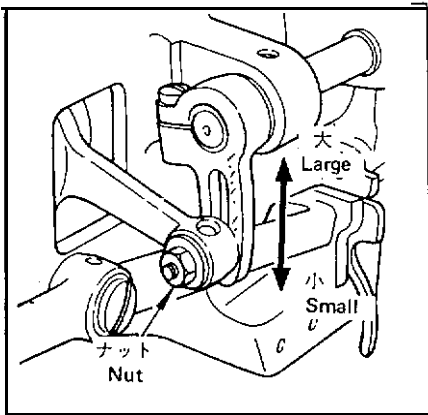


上送り足と外押え足の交互上下運動量は均等になるように調節してありますが、縫うものによっては上送り足と外押え足の上下運動量を変えるとよい送り調子が得られます。たとえば、すべりやすいものや段差の多いものを縫うときに上送り足の上下運動量を外押え足より多くすると効果的などときがあります。

- 1) はずみ車を手で回わして天秤最下点の位置で止めます。
- 2) 押上げレバーを降ろします。
- 3) 上送り腕の締めねじをゆるめます。
- 4) 上送り軸を左へ寄せるにつれて外押え足の上下量は小さくなり、上送り足の上下量が大きくなります。
- 5) 反対に右へ寄せるにつれて上送り足が針板に着いた位置では上送り足と外押え足の上下運動量がほぼ均等になります。
- 6) 調節後は上送り腕締めねじをきつく締めて下さい。



12. 中押え足と上送り足の作動高さ



弾力性の大きいものや段差の大きい縫い物を縫うときは中押え足と上送り足の作動高さを変えると有効です。

- 1) カムロッド連結軸のナットをゆるめます。
- 2) 長孔の上部で固定すれば作動高さは大きくなり、
- 3) 下部にセットすれば小さくなります。
- 4) 調節後はナットは固く締付けて下さい。

11. AMOUNT OF THE ALTERNATING UPPER AND LOWER MOVEMENT OF THE OUTSIDE FOOT AND INSIDE FOOT

The machine is equally set as to the amount of the alternating movement of the outside foot and inside foot. However, in some materials to be sewn, by changing the amount of upper and lower movement of the outside foot and inside foot, you can get better feeding condition. As example, in case of slippery materials, more increased amount of upper and lower movement of the inside foot than that of the outside foot will effectively results in feeding materials

How to adjust:

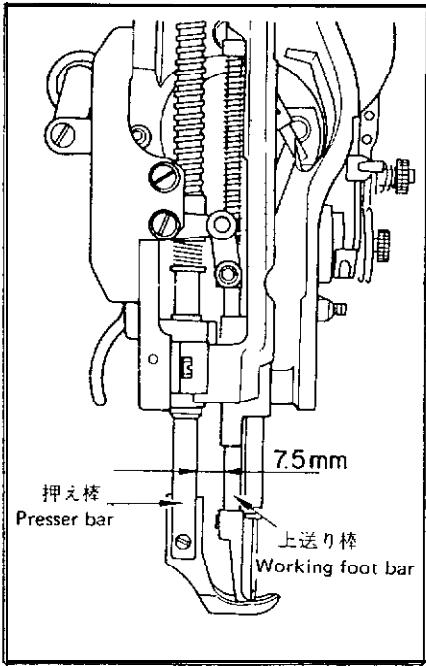
- 1) Turn the balance wheel by hand until the thread take-up reaches its lowest point.
- 2) Lower the presser bar lifter
- 3) Loosen the clamping screw of the upper feed spring rod.
- 4) The amount of upper and lower movement of the inside foot is increased proportionally by moving the upper feed driving shaft toward left and the outside foot movement is decreased.
- 5) By moving the upper feed driving shaft toward right, the inside foot movement is decreased and the outside foot movement is increased, also proportionally.
- 6) Tighten firmly the clamping screw of the upper feed spring rod after the proper adjustment was made.

12. THE MOVING HEIGHT OF THE INSIDE FOOT AND OUTSIDE FOOT

In case of sewing the materials with large elasticity or the materials with not even surface, it is effective to change the moving height of the inside foot and outside foot.

How to adjust:

- 1) Loosen the nut of the lifting eccentric connection stud screw.
- 2) Height movement of the outside foot and inside foot can be increased by fixing the lifting eccentric connection stud with the nut at top part of the long groove of the adjusting crank.
- 3) And it can be reduced by fixing the lifting eccentric connection stud at bottom part of the long groove.
- 4) Tighten the nut firmly after the adjustment.



13. 針棒揺動台の前後位置の調整

針棒揺動台と押え棒の関係位置は、縫目長さを0としたとき、押え棒と上送り棒の間隔が7.5mmあるのが正しい位置です。また、針棒と送りの関係位置は、送りの運動のどの位置でも針が送りの針穴の中心にあるのが正しい位置です。針棒揺動台の位置を合わせるには、

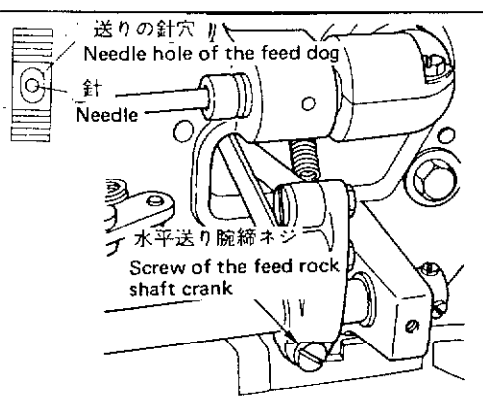
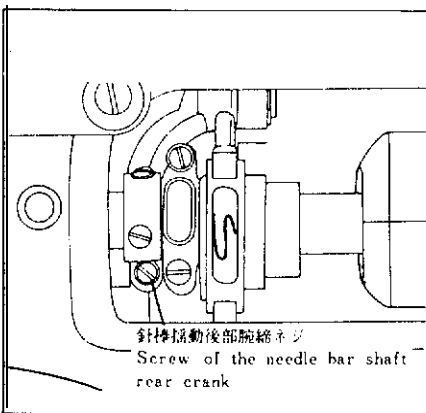
- 1) 針棒揺動後部腕締めねじをゆるめ、
- 2) 押え棒と上送り棒の間隔を7.5mmに合わせて、締めねじを締めつけます。
- 3) 次に針棒を下降して送りの針穴に針が入る位置にし、
- 4) 水平送り腕締めねじをゆるめ、
- 5) 針が送りの針穴中心になるよう、送りの位置を合わせ、締めねじを締めつけます。

13. ADJUSTING THE RELATIVE POSITION OF THE NEEDLE BAR FRAME

The correct relative position of the needle bar frame with that of the presser bar is when, with the stitch length at "0", the clearance between the presser bar and the working foot bar comes to 7.5 mm.

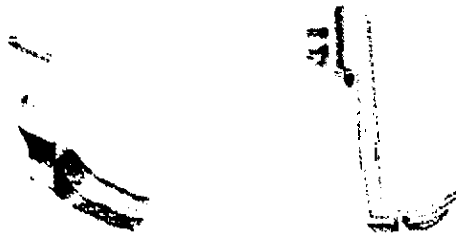
Also, the correct relative position of the needle bar frame with that of the feed dog is when, no matter what the cycle of the feed motion, the needle should be around the center of the needle hole of the feed dog. When the stitch length is set at "0" and if the relative position of the walking foot bar with that of the presser bar is not right,

- 1) Loosen the clamp screw of the needle bar shaft rear crank.
- 2) Adjust the clearance between the presser bar and the working foot bar at 7.5 mm.
- 3) Turn the balance wheel over toward you, until the needle bar reaches its lowest point.
- 4) Loosen the clamp screw of the feed rock shaft crank.
- 5) Adjust the feed bar, so the needle comes near the center of the needle hole of the feed dog, and tighten the clamp screw.



DNU-24 I H 仕様		DNU-24 I H SPECIFICATIONS	
縫い速度	最高毎分 2,000 針	Sewing speed	Up to 2,000 spm
天秤	スライド天秤	Thread take-up	Slider type
針棒ストローク	33.36mm	Needle bar stroke	33.36 mm
使用針	DP×17 #18~#24(標準#23)	Needle	DP×17 #18~24(Standard#23)
押え上げ量	押え上げレバー 9mm 膝上げ 12mm	Presser feet lift	With presser bar lifter 9 mm With knee lifter 12 mm
縫目長さ	8mm	Stitch length	8 mm
釜	垂直全回転2倍釜(給油タイプ)	Sewing hook	Rotary double sized hook
送り機構	下送り、中押え送り、針送りの総合送り	Feed system	Compound feed
返し縫い	レバー式	Reverse sewing	Lever system
給油	手差し 給油タンク式釜給油	Lubrication	Hand oiling

**WELTING FEET (TOP STITCH, SECOND OPERATION)
IN SETS: (SET CONSISTS OF INSIDE & OUTSIDE FOOT)**



- S32-1/8" Set Welting Feet, Gauge Size: 1/8"
- S32-5/32" Set Welting Feet, Gauge Size: 5/32"
- S32-3/15" Set Welting Feet, Gauge Size: 3/15"
- S32-1/4" Set Welting Feet, Gauge Size: 1/4"
- S32-5/16" Set Welting Feet, Gauge Size: 5/16"
- S32-3/8" Set Welting Feet, Gauge Size: 3/8"
- S32-1/2" Set Welting Feet, Gauge Size: 1/2"

**NEW STYLE DOUBLE WELTING FEET
IN SETS: (SET CONSISTS OF INSIDE & OUTSIDE FOOT)**

- S95-1/8" Set, New Style Double Welting Feet 1/8"
 - S95-3/16" Set, New Style Double Welting Feet 3/16"
 - S95-1/4" Set, New Style Double Welting Feet 1/4"
 - S95-5/16" Set, New Style Double Welting Feet 5/16"
 - S95-3/8" Set, New Style Double Welting Feet 3/8"
- AVAILABLE SEPARATELY:



**WALKING FEET WITH
TEETH & TOE ON LEFT
SIDE**



240517
Outside Foot (7/8" Wide)



240518
Inside Foot (7/8" Wide, Ndl. Hole)



237174

Thread 7/11 (Check Spring (111W))
ALSO AVAILABLE

221175 Thread 7/11 (Check Spring
(-Heavy))

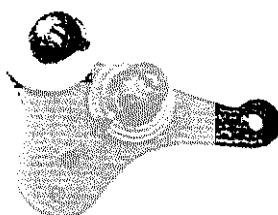
REGULAR WALKING FEET



240148
Outside Foot



240149
Inside Foot



240446 (240024)

**WELTING FEET WITH BACK CUT-OUT (IDEAL FOR
SEWING AROUND CORNERS)**

IN SETS: (SET CONSISTS OF INSIDE & OUTSIDE FOOT)

- S68-1/8" Set Welting Feet with Back Cut-Out Gauge Size 1/8"
 - S68-3/16" Set Welting Feet with Back Cut-Out Gauge Size 3/16"
 - S68-1/4" Set Welting Feet with Back Cut-Out Gauge Size 1/4"
 - S68-5/16" Set Welting Feet with Back Cut-Out Gauge Size 5/16"
 - S68-3/8" Set Welting Feet with Back Cut-Out Gauge Size 3/8"
 - S68-1/2" Set Welting Feet with Back Cut-Out Gauge Size 1/2"
- AVAILABLE SEPARATELY:



WALKING FEET WITH TEETH & TOE ON RIGHT SIDE



240135
Outside Foot (With Coarse Teeth)

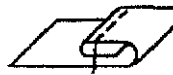
240158
Inside Foot (Ndl. Hole Left Side)

PLAIN BRAID OR TAPE BINDERS (RAW EDGE)



- 100-3/8" 100LS-7/8"
- 100-1/2" 100LS-1"
- 100-5/8" 100LS-1-1/4"
- 100-3/4"

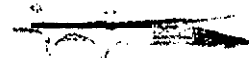
**STAINLESS STEEL SWING HEMMER
FOR BLINDSTITCH MACHINES (CLEAN FINISH)**



For hemming all kinds of wearing apparel, also curtains and draperies. Operator can swing hemmer away from the foot for finishing the bottom hem of a closed garment.

- S72B-1/4" S72B-1-3/4"
- S72B-3/8" S72B-2"
- S72B-1/2" S72B-2-1/2"
- S72B-5/8" S72B-3"
- S72B-3/4" S72B-3-1/2"
- S72B-7/8" S72B-4"
- S72B-1" S72B-5"
- S72B-1-1/4" S72B-6"
- S72B-1-1/2"

GOLD SEAL "KNIFE EDGE" THREAD NIPPERS



Gold Seal "KNIFE EDGE" Grind Is Highly Recommended For Superior Performance When Using Heavier Thread Or Material.