

INSTRUCTIONS
FOR
ADJUSTING AND OPERATING
“YAMATO” DCZ-361
SAFETY STITCH OVERLOCK MACHINE

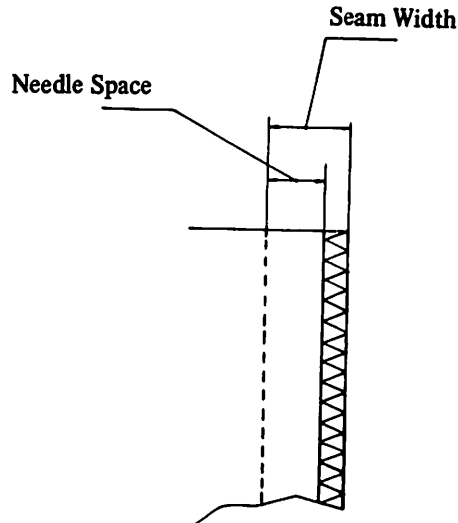
KONDO SEWING MACHINE CO., LTD.

Classes of DCZ type 361 series

- DCZ-361Y – Needle spacing:: 2.4 mm. For safety stitching woven fabrics and knit goods.
- DCZ-361A – Needle spacing : 3.2 mm. Uses same as above.
- DCZ-361C – Needle spacing : 5.0 mm. Uses same as above.
- DCZ-365Y – Needle spacing : 2.4 mm. For safety stitching and ruffling.
- DCZ-365A – Needle spacing : 3.2 mm. Uses same as above.
- DCZ-365C – Needle spacing : 5.0 mm. Uses same as above.
- DCZ-366Y – Needle spacing : 2.4 mm. For safety stitching and ruffling with insert a decorative piping.
- DCZ-366A – Needle spacing : 3.2 mm. Uses same as above.
- DCZ-366C – Needle spacing : 5.0 mm. Uses same as above.
- DCZ-367Y – Needle spacing : 2.4 mm. For safety stitching and ruffling with attached tape.
- DCZ-367A – Needle spacing : 3.2 mm. Uses same as above.
- DCZ-367C – Needle spacing : 5.0 mm. Uses same as above.
- DCZ-368A – Needle spacing : 3.2 mm. For inserting a tape inside the seam for binding pocket lining and safety stitching.

Figures and symbols on Model Number Plate

DCZ - 361 A - D 1						
Type	Class No.	Needle spacing (mm)	Presser Foot	Feed Mechanism	Throat Plate	
					No.	Seam Width (mm)
DCZ	361 Y	2.4	Divided into two sections	P = Plain (differential feed impossible)	1	5.0 ~ 6.5
					2	5.5 ~ 7.0
	361 A	3.2			1	5.5 ~ 7.0
			2		6.0 ~ 8.0	
	361 C	5.0	3		9.0 ~ 11.0	
	365 Y	2.4	Two sections presser foot and ruffling attachment	D = Differential (differential feed possible)	1	5.0 ~ 6.5
					2	5.5 ~ 7.0
	365 A	3.2			1	5.5 ~ 7.0
			2		6.0 ~ 8.0	
	365 C	5.0	3		9.0 ~ 11.0	
366 Y	2.4	Two sections presser foot and ruffling attachment with insert a decorative piping		1	5.0 ~ 6.5	
				2	5.5 ~ 7.0	
366 A	3.2			1	5.5 ~ 7.0	
		2		6.0 ~ 8.0		
366 C	5.0	3		9.0 ~ 11.0		
367 Y	2.4	Two sections presser foot and ruffling attachment with attached tape		1	5.0 ~ 6.5	
				2	5.5 ~ 7.0	
367 A	3.2			1	5.5 ~ 7.0	
		2		6.0 ~ 8.0		
367 C	5.0	3		9.0 ~ 11.0		
368 A	3.2	Two sections presser foot (special)		1	5.5 ~ 7.0	
				2	6.0 ~ 8.0	



Specifications for DCZ-361

Appellation : Super High Speed Safety Stitch Machine

Overall length : 375 mm.

Overall width : 225 mm.

Overall Height : 290 mm.

Net Weight : 25 kg.

Construction : Dust-proof, oil-tight and entirely enclosed.

Seam Specifications : E13, E13A and D12 (Safety Stitch-JIS B9070)

Used : Overseaming and overedging woven and knit fabrics, attaching sleeves and side seaming.

Speed : Maximum : 5500 stitches per minute

Economical : 5000-5200 stitches per minute

Stitch Length : 5-26 stitches per inch

Seam Width : Overall seam width consists of the needle space part and the overedging part.

Needle space : 2.4 mm, 3.2 mm. and 5 mm.

Overedging width : 3-4 mm. (standard)

Note : 2.5 - 5.5 mm. width may be made by changing throat plates and presser foot finger.

Presser Foot Lift : 4 mm. at the maximum

Differential Ratio : 1 : 2.7 at the maximum

Lubrication : Clean oil is constantly force-fed to all parts at a given pressure by means of a gear pump unit and a pressure regulating valve. In addition, splashed oil is also utilized for lubrication.

Principal Bearings : Ball and needle bearings and oilless bearings abundantly used.

Recommended Oil : "Yamato" SF Oil

Needle Bar Stroke : 25 mm.

Needles : DC X 1 for right needle

DM X 13 for left needle

Needle sizes available : Nos. 9, 11 and 14.

Throat Plates : There are several kinds of throat plates with various types of stitch tongues for different uses.

Presser Foot Mechanism : Presser foot may be swung out to the left. Pressure on foot is regulated by two springs - coil and plate. Foot plate is divided into two parts - back and front-and each of which is hinged.

Feed Regulating Mechanism : Feed amount is regulated easily from the outside by pushing down a button and turning the hand wheel by hand.

Differential Feed Mechanism : Differential feed amount is easily adjusted from the outside by manipulating a lever lengthwise.

Feed Dogs : Standard number of teeth is 16 to the inch.
Single (Plain) feed or two feed (Differential) dogs.

Looper Movement : Loopers make a special curve movement best suitable for high speed sewing.

Knives : Flat knives, 8 mm. in breadth and 1.5 mm. in thickness, used. There are two kinds of knives - special steel and Tangsten Carbide alloy.

Capacity of Oil Reservoir : 1000 c.c.

Installation : Submerged. The machine head is settled on rubber cushions fixed to the base plate which is again fastened to the bottom plate with wood screws.

General Instructions for Using DCZ - 361

1. Sewing Speed

The maximum speed for this machine is 5500 stitches per minute but the optimum speed recommended for daily operation is 5000 - 5200 stitches per minute.

In starting a new machine, it is advisable to run it at the optimum speed after operating it at 4500 stitches per minute for about 200 hours (i.e., about one month), as it will greatly help prolong its life.

2. Installation

Fig. 1 shows the measurements for installing this machine. The standard position for installation is a submerged one. But the non-submerged installation is also practised. As we have always the tables and ancillary parts for the submerged installation in stock for customers who wish to have these articles together with the machines, your order for them will be promptly executed.

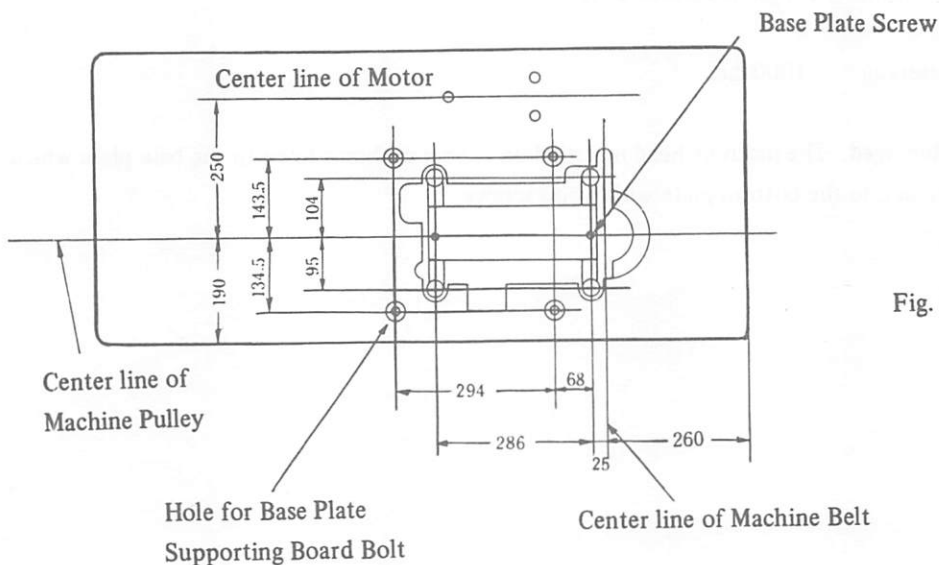
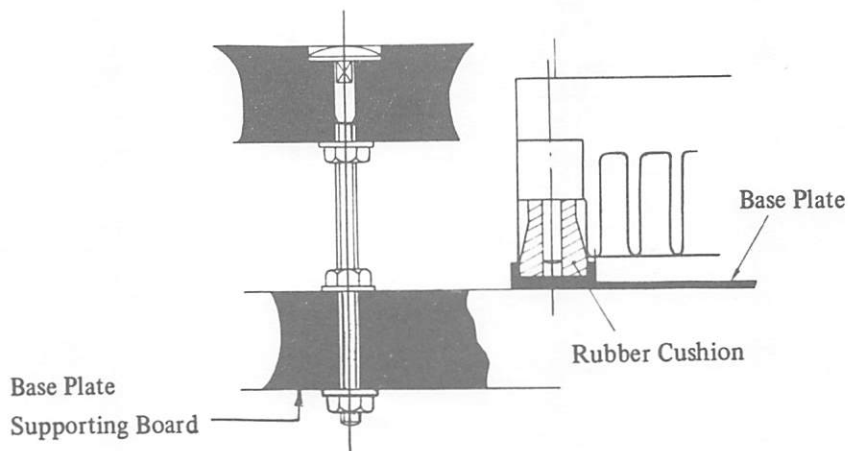


Fig. 1

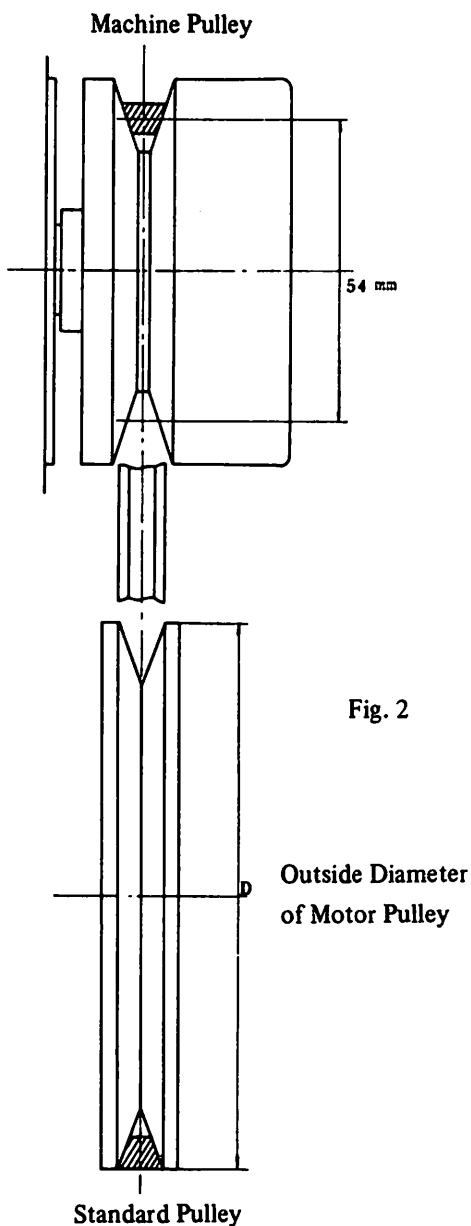


3. Motor and Belt

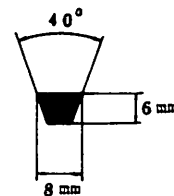
Use 400 W. (1/2 HP) clutch motor and K-type V-belt for driving this machine. The proper size of a motor pulley suitable for the rated R.P.M. may be picked out from Table 1 and Fig. 2.

Table 1

R.P.M. of Machine Head	Outside Diameter of Motor	
	50 cycles	60 cycles
4.500	90 mm.	75 mm.
5.000	100 mm.	85 mm.
5.500	110 mm.	90 mm.



It is most ideal to use a pulley with the outside diameter of the calculated value. But we have specified standardized motor pulleys which are easily procurable in the market and whose outside diameter measures near the calculated value as these pulleys are made generally in steps of 5 mm.



Cross Section of K type V-belt

4. Lubrication

As the oil has been completely drained from the machine before shipment, be sure to fill the oil reservoir before starting operation through the oil hole removing the screw indicated by "OIL" mark. Fill oil until the oil level comes up to the upper line H on the oil gauge shown in Fig. 4.

Be sure to check the oil gauge before starting operation every day. If the oil level is below the lower line L, fresh oil should be replenished. After replenishing, replace the screw.

In order to keep the machine life longer, it is advisable to change oil completely after operating a new machine for 250 hours or so.

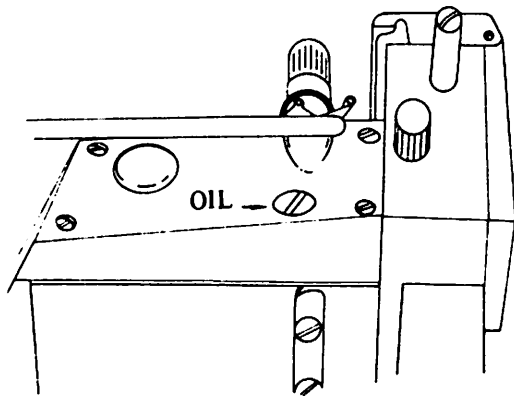


Fig. 3

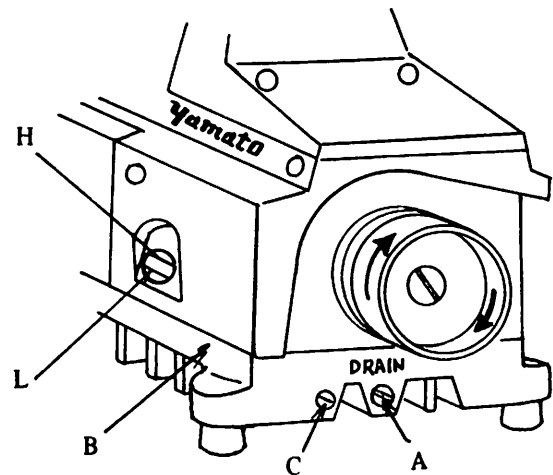


Fig. 4

To change oil, drain the used oil out of the reservoir by removing the drain screw (A, Fig. 4) situated below the balance wheel. The drain hole is indicated by the mark "DRAIN".

An oil filter net is fixed to the pump F inside the machine. Clean this net and the inside of the base two or three times a year. To do this, the base must be separated from the machine frame. To remove the base, drain the oil completely out of the reservoir, tip the machine backwards and remove the set screws. When the cleaning has been finished, fix the base together with the packings to the machine securely. When the oil stay the space between the machine base and the machine, these oil can be drained by removing the screw C. (Fig. 4)

5. Rotating Direction of Balance Wheel

The balance wheel should turn to the right or clockwise when facing the balance wheel.

6. Needles

DC X 1 needle is used for the right needle and DM X 13 for the left needle. There are many sizes for them and proper size needles should be selected according to the kind of work to be undertaken. Generally speaking, #9 is the standard size for sewing light weight fabrics, #11 for medium weight and #14 for heavy weight.

7. Setting Needles

Turn the balance wheel away from you until the needle bar reaches the highest position, pull the presser bar lifter A in the arrow direction and swing out the presser foot B to the left as shown in Fig. 5. Loosen the needle set screw C, insert the needle in the holder as far as it will go with it scarfed side (not a long groove) at the back and then tighten the screw.

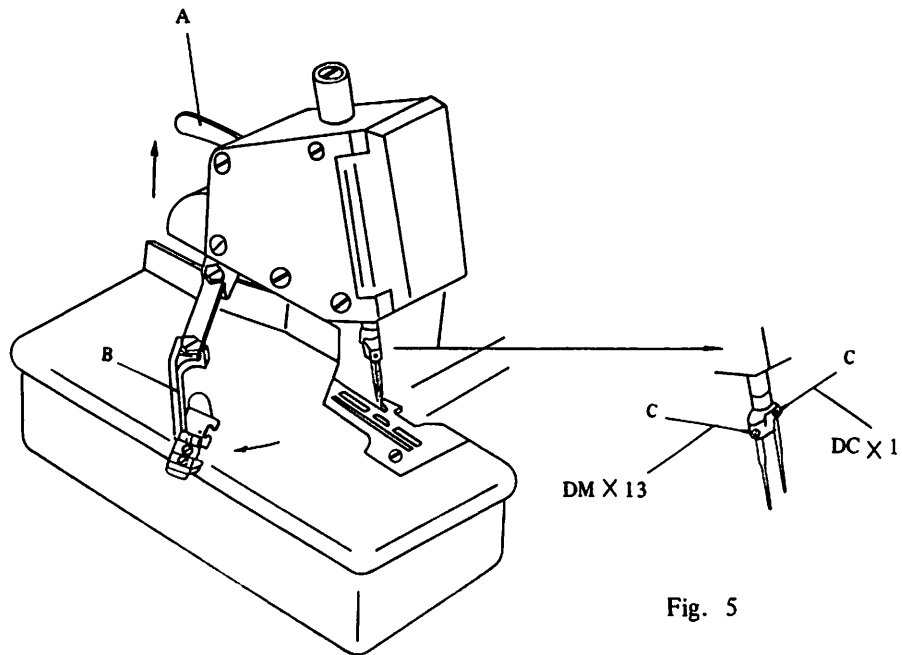
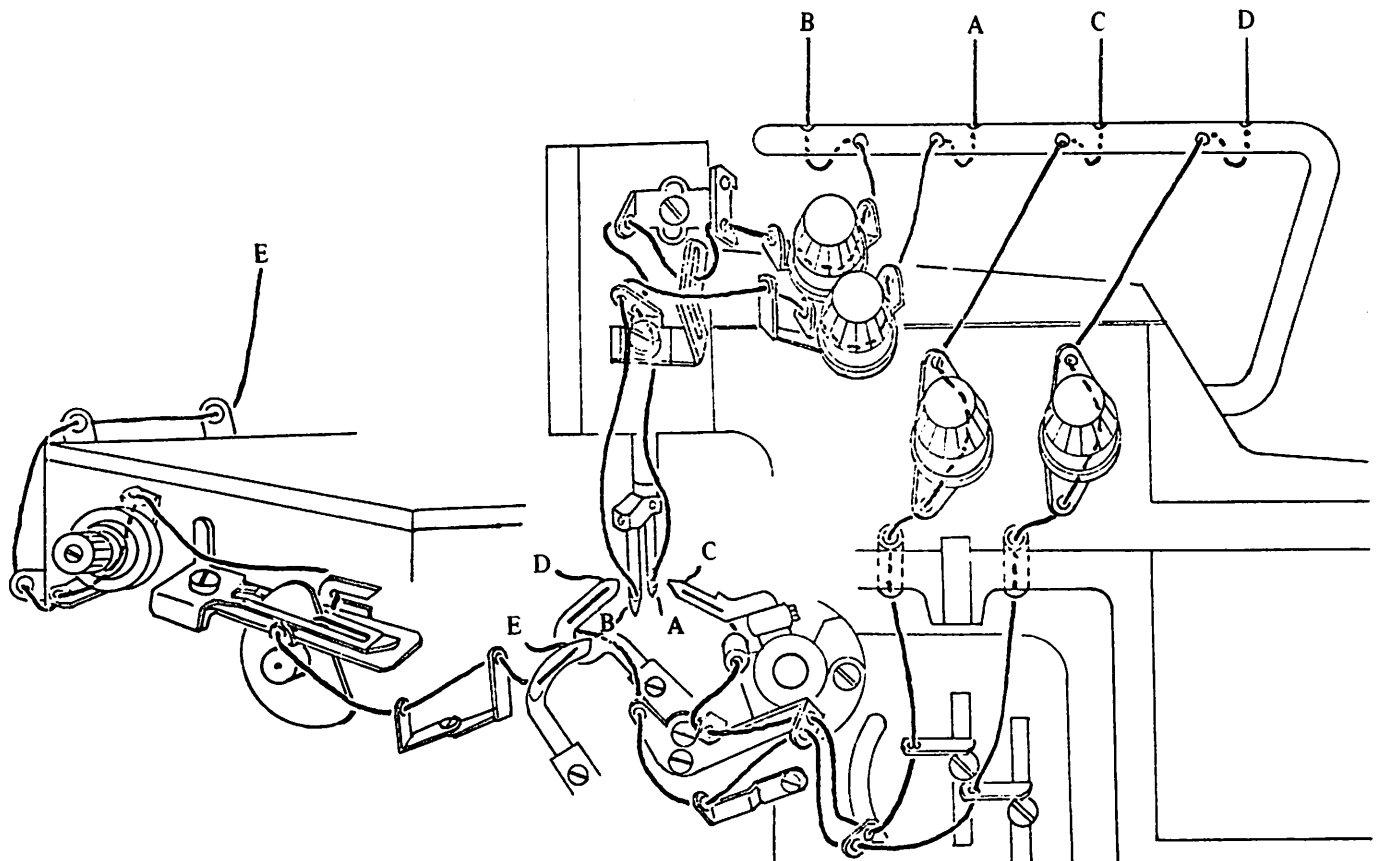


Fig. 5

8. Threading

Thread the machine as shown in Fig. 6.

- A – Right-hand needle thread for overlock seam
- B – Left-hand needle thread for double chainstitch seam
- C – Upper looper thread for overlock seam
- D – Lower looper thread for overlock seam
- E – Looper thread for double chainstitch seam



9. Thread Tension for Double Chainstitch Seam

Figs. 7 and 7-1 show the relation between the needle thread guides A and B. The position of B is right when it is at the height below the highest point of the guide A by 1/4 of its stroke (same as the needle bar stroke). To make the tension on the needle thread lighter, move this thread guide B upwards a little and to make heavier, move B downwards a little. But it should be noted that too much raising or lowering of this guide often causes thread breakage.

In almost all cases, the needle tension may be satisfactorily adjusted by turning the tension adjusting cap.

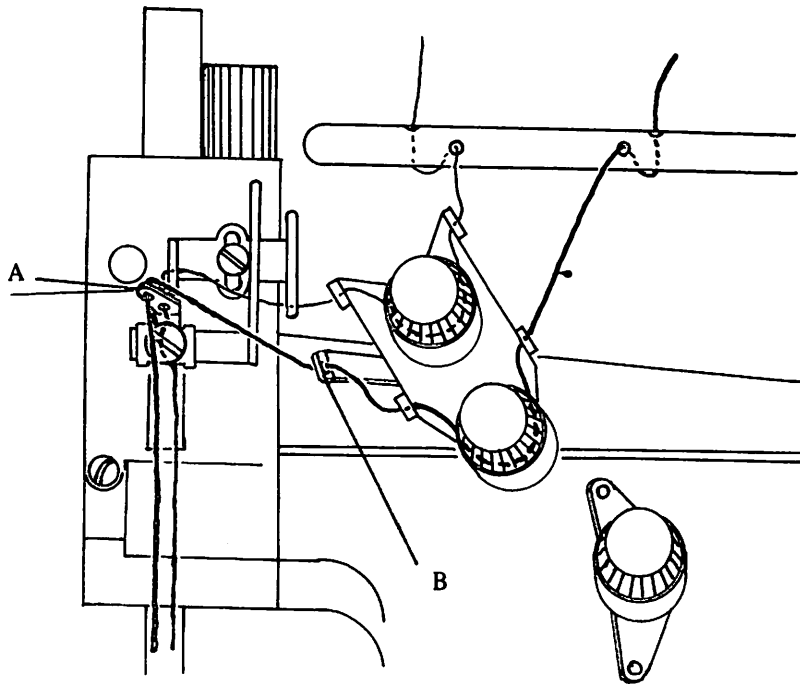


Fig. 7

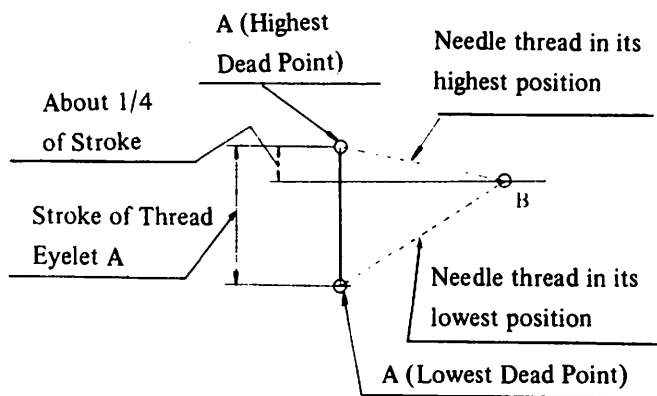


Fig. 7-1

10. To Thread the Upper Looper

To begin with, open the front cover towards you. Move the upper looper to the lowest position, thread the looper at A from under as shown in Fig. 8. Turn the balance wheel until the looper moves up to the highest position as shown in Fig. 9 and then thread the looper at B.

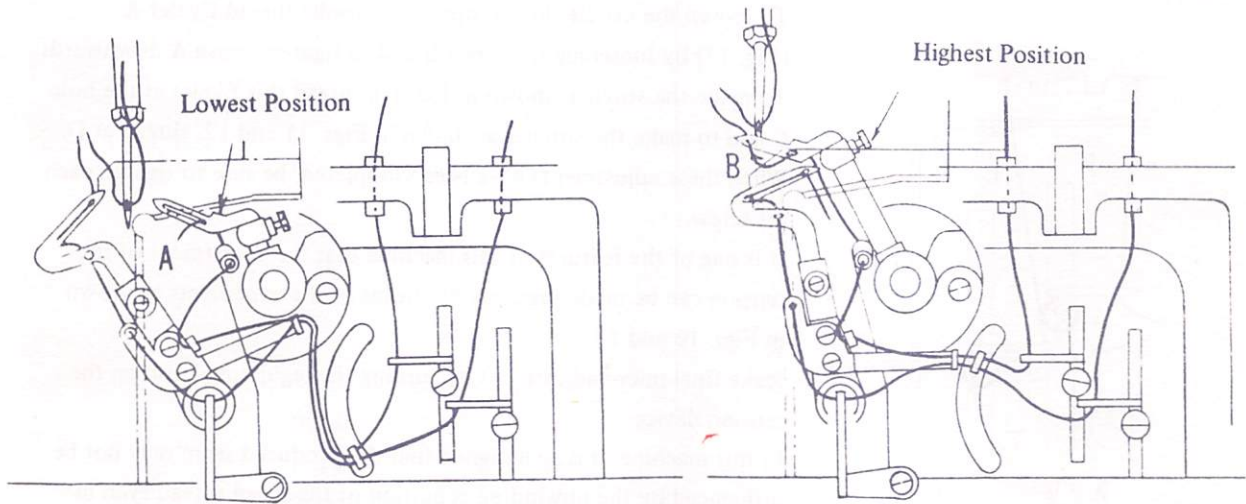


Fig. 8

Fig. 9

11. Various Stitch Formations

Fig. 10 - Stitch formation in ordinary overedging seam (with three threads)

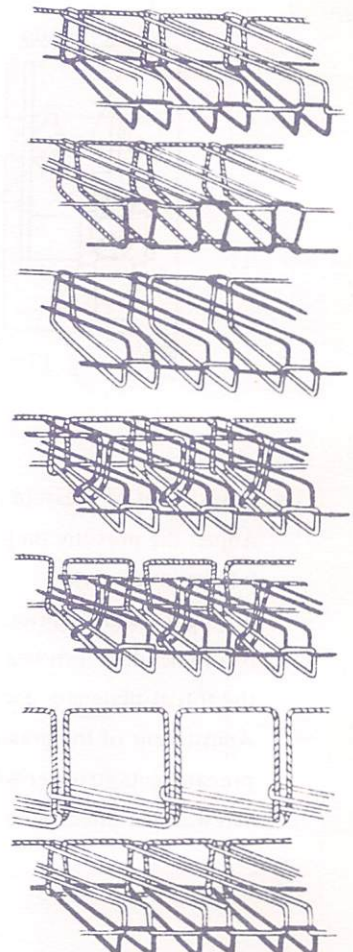
Fig. 11 - Stitch formation in blindstitch hemming seam (with two threads)

Fig. 12 - Stitch formation when a spreader is substituted for the upper looper (with two threads)

Fig. 13 - Stitch formation in two needle, four thread, safety stitch overedging (the upper looper thread is caught by both needles - DCZ-220)

Fig. 14 - Stitch formation in two needle, four thread, safety stitch overedging (the upper looper thread is caught by the right needle only - DCZ-221)

Fig. 15 - Stitch formation in two needle, five thread, double safety stitch overedging (DCZ-361)

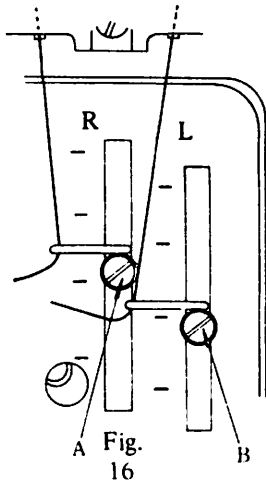


12. Thread Tension

The thread tension should be adjusted in accordance with the difference in fabrics, threads, width of bight, stitch length, etc. in order to obtain a proper stitch formation each time when the above-mentioned factors have been altered.

To tighten the upper looper thread lower the thread guide marked R a little by loosening the screw A.

To tighten the lower looper thread, lower the thread guide marked L a little by loosening the screw B. (See Fig. 16) To loosen the upper or lower looper thread, raise the respective guide.



To loosen the needle thread, upper the needle thread Eyelet A (Fig. 17) by loosening the screw B and to tighten, move A downwards.

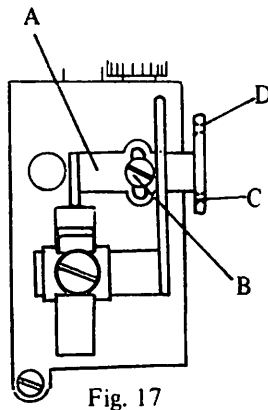
To make the stitch as shown in Fig. 10, thread this Eyelet at the hole C and to make the stitches as shown in Figs. 11 and 12, thread at D.

When these adjustments have been completed, be sure to tighten each set screw.

It is one of the features of this machine that the adjustment of the tension can be made precisely by means of the expedients as shown in Figs. 16 and 17.

Make final micro-adjustment by turning the regulating knob on the tension device.

In this machine, it is so designed that the produced seam may not be influenced by the unwinding condition of the spool thread even in high speed sewing operation. Therefore do not adjust tension only by pressing down or releasing the tension spring to the extreme degree.



13. Adjustment of Pressure on Presser Foot and Height of Feed Dogs.

Adjust the pressure on presser foot and the height of feed dogs in accordance with the thickness and kind of fabrics to be sewn.

For light weight fabrics, weaker pressure on foot and small protrusion of feed dogs above the throat plate are recommended. For heavy weight fabrics, stronger pressure on foot and greater protrusion of feed dogs above the throat plate are recommended.

Adjustment of the pressure on presser foot is made by turning the adjusting screw shown in Fig. 18 : the pressure gets stronger when you turn this screw in the direction of A and it gets weaker when you turn this screw in the direction of B.

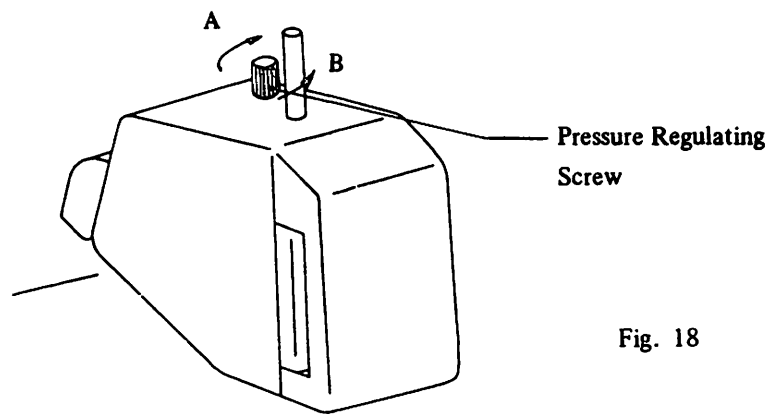


Fig. 18

The standard setting of the height of feed dogs is obtained when the bottom of the teeth is level with the upper surface of the throat plate at its highest position. Almost all fabrics may be satisfactorily sewn in this condition.

14. Adjustment of Bight Width

- (1) To increase the bight width (See Fig. 19)

Loosen the upper knife holder screw B, move the holder in the direction of the arrow O as desired and tighten the screw B. Loosen the lower knife holder screw A and move the holder in the direction of O until the lower knife D is closely pressed against the upper knife F with an appropriate pressure by the action of the spring in the lower knife holder.

- (2) To decrease Bight Width (See Fig. 19)

Loosen the lower knife screw A, move the holder towards P as desired and tighten the screw A. Then loosen the upper knife holder screw B, move the holder towards P until the upper knife F gets in close touch with the lower knife D and then tighten the screw B. Loosen the lower knife holder screw A again and let the lower knife D come into close contact with the spring-pressed upper knife F. The sharpness of the knives is easily checked by cutting a piece of thread inserted between the upper and lower knives turning the balance wheel by hand.

To replace the upper knife, loosen the screw G and to replace the lower knife, loosen the screw H.

Of course, besides the distance between the left needle and the cut edge, the size of the stitch tongue of the throat plate has much to do with the bight width.

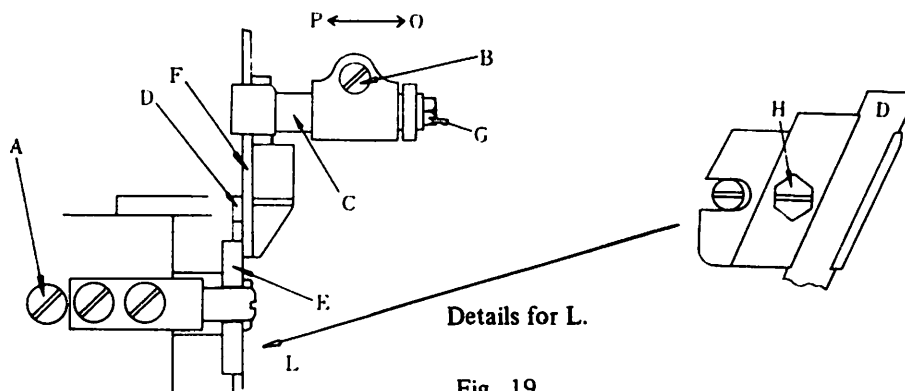


Fig. 19

15. To Regulate Stitch Length

The stitch length may be regulated from 5 to 22 stitches per inch (25.4 mm.) freely.

However, on this machine, our standard feed dogs are fitted with. Therefore, in case of any stitch length longer than 8 stitches per inch is required, refer to our Instruction for adjusting machine, paragraph 8.

To regulate the stitch length, follow the next procedure. To begin with, push the button A (Fig. 20) lightly until it touches the regulator. Keep pushing the button lightly with the left hand and turn balance wheel away from you with the right hand until this button falls into a dent on the regulator. Then push in the button A strongly and continue to turn the balance wheel with stronger hand. The balance wheel has the graduations indicating the stitch numbers per inch on its periphery. Turn the balance wheel until you can find the graduation showing the desired number of stitches per inch to coincide with the arrow-shaped feed regulator pointer and then release the left hand.

It should be noted that sometimes a given graduation actually gives somewhat different number of stitches per inch from the graduated figure according to the sewing condition - kind and thickness of the fabrics, differential ratio, etc. In such cases, check the actual number of stitches per inch and set the balance wheel to a proper graduation.

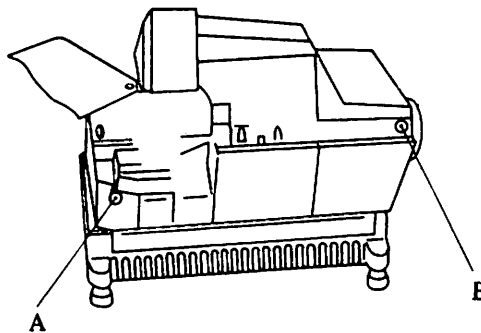


Fig. 20

16. To adjust Differential Ratio

Loosen the milled screw A (Fig. 21), move the lever B lengthwise to a desirable position and tighten the screw A. The differential ratio between the main feed dog (rear feed dog) and the differential feed dog (front feed dog) may be freely selected from 1 : 1 to 1 : 2.2.

To adjust the differential ratio while stitching, connect the lever B with the pedal or the knee lifter at C with a chain.

In gathering operation, a special presser foot and feed dogs are to be used.

The differential ratio may be safely increased to 1 : 2.2 when the machine is adjusted to make 12, 14 and 18 stitches per inch. But when the machine is adjusted to make 6, 8 and 10 stitches per inch, care must be taken not to raise the lever B near the graduation 3 because it will be apt to cause the feed dogs strike against the throat plate.

<u>Graduation on Pulley</u>	<u>Differential Ratio</u>
22, 20.....12	1 : 2.2
10, 8, 6, 5	Max. 1 : 1.6

In case of Reversed (Stretch) Differential Feeding is necessary depending upon the sewing conditions, the lever B should be set the position between "O" and "S" (lowest) graduated on the indication plate D. (Fig. 21)

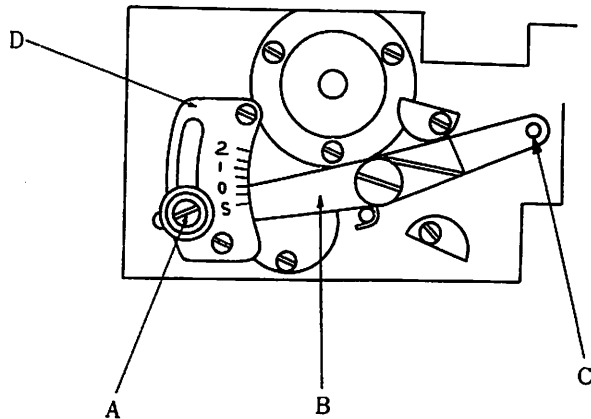


Fig. 21

Instructions for Adjusting the Machine

1. Interrelation between Needle and Lower Looter

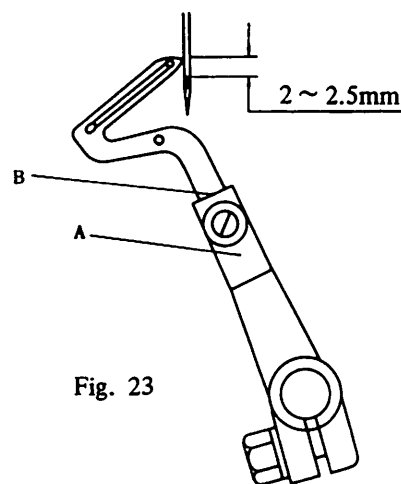
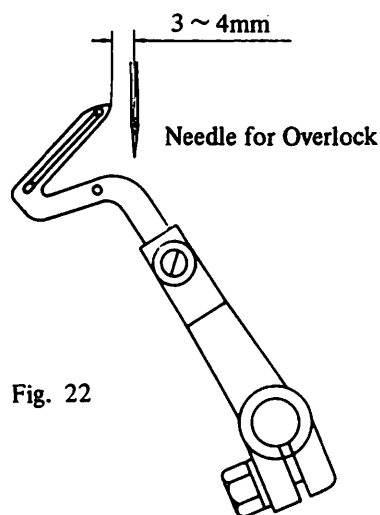
When the lower looper is at its extreme left position, there should be 3-4 mm space between the point of the lower looper and the center of the needle. (Fig. 22)

Set the height of the needle so that there is a space of 2- 2.5 mm between the point of the looper and the upper edge of the eye of the needle when the lower looper has started to move rightwards from its extreme left position and the point of the looper has reached the center of the needle. (Fig. 23)

When the lower looper moves to the right, the looper point should pass the rear side of the needle as close as possible without touching each other.

The lower looper being fixed to the lower looper holder.

A with its seat closely against the top surface B of the holder, the height of the looper, is kept always identical and, accordingly, there is no need of adjustment.



2. Height of Right Needle

The height of the right needle is determined of itself from the relative position of the needle and the lower looper as explained above. To state more precisely for your reference, the distance between the point of the needle and the upper surface of the throat plate should measure 10 m/m. (In the case of the left needle, it measures 8 m/m).

Needle bar stroke is 25 m/m and the throat plate is 3.3 m/m in thickness. (See Fig. 24)

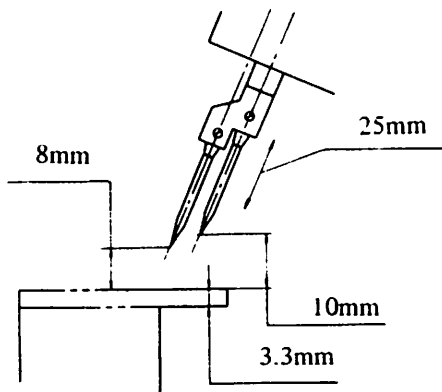


Fig. 24

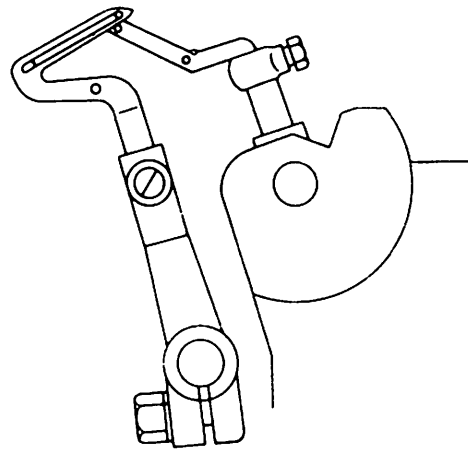


Fig. 25

3. Interrelation between Lower Looper and Upper Looper

When the lower looper moves towards right from left, the upper looper passes over the cavity situated just under the swelling on the back side of the lower looper point.

Fix the upper looper so that its point may pass the rear side of the lower looper as close as possible without touching it. (See Fig. 25)

4. Interrelation between Right Needle and Upper Looper

The upper looper C being fixed closely upon the platform B of the upper looper holder A, the height and the horizontal position of the upper looper are determined of itself. Therefore no adjustment is necessary for the position and the height of the upper looper.

Adjust the upper looper so that the needle passes its rear side with the smallest possible clearance between them without touching each other when the needle is on its downward stroke. But, as this adjustment may sometimes affect the timing of the needle to the lower looper, you must be very careful in making this adjustment.

The distance between the center of the needle and the upper looper point should be 5-6 m/m when the upper looper is at its extreme left position. (See Fig. 26)

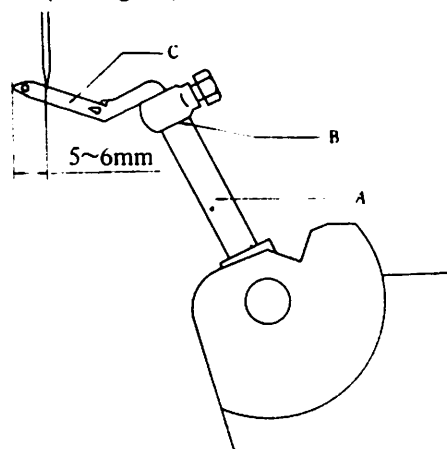


Fig. 26

5. Interrelation between Front Looper (for making double chainstitch) and Left Needle

The height of the left needle has been determined from its relative position with the right needle, the adjustment of this looper should be made taking the height of the left needle as a definite factor.

Adjust the height of the looper first. Set this looper as high as possible so that the highest point of the looper may scarcely touch the underside of the throat plate as shown in Fig. 27.

Then adjust the lateral position of the looper. This looper should pass the rear side of the needle in its travel from left to right and pass the front side of the needle in its travel from right to left as shown in Fig. 28.

There should be 2-2.5 mm distance between the looper point and the center of the needle when the looper comes to the extreme left.

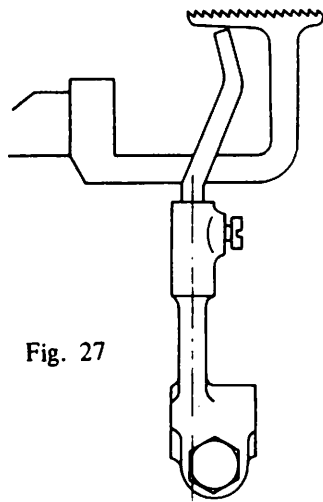


Fig. 27

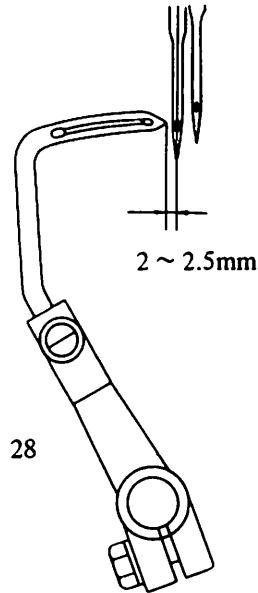


Fig. 28

6. To Set Feed Dogs and Adjust their Height

- (1) The front feed dog A is adjusted by means of the screw D.
- (2) The rear feed dog B and the auxiliary feed dog C are adjusted by means of the screw E.
- (3) The auxiliary feed dog C is fixed on the rear feed dog B with the set screw F. Therefore, even when the rear feed dog B has been taken off by removing screw E, the auxiliary feed dog C remains fixed on the rear feed dog B with the screw F.
- (4) To vary the height of the rear feed dog B from that of the auxiliary feed dog C, loosen the screw F and make adjustment as desired. When both feed dogs are fixed on the rear feed dog holder H, loosen the screws E and F to make this adjustment.
- (5) Normally the auxiliary feed dog C is set so that its upper surface may come 1-1.5 mm below that of the rear feed dog B. (See Fig. 29)

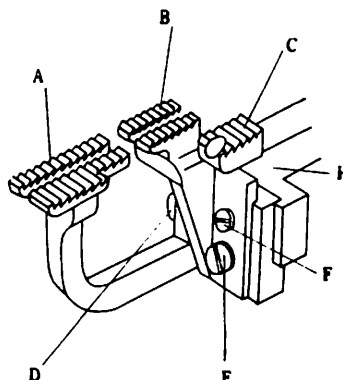


Fig. 29

7. Alignment of Feed Dogs and Throat plate

The top surface of the feed dogs A and B should be in alignment with that of the throat plate when the former comes up to the latter.

To make this adjustment, remove the rear cover A and the upper cover B, loosen the screw C with a hexagonal socket wrench and then adjust the inclination of the feed dogs so as to satisfy the above condition by turning the eccentric feed regulating stud with a screw driver D.

Care must be taken so that there may be no opening between the stud E and the feed bar F after this adjustment.

When this adjustment has been finished, tighten the screw C securely, replace the covers A and B.

As this alignment has been thoroughly examined and properly corrected on shipment, it is rather advisable not to tamper with this setting. (See Fig. 30)

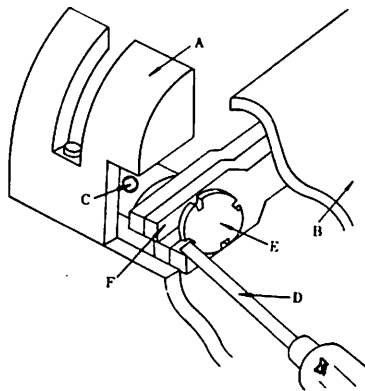


Fig. 30

8. How to obtain the stitch length longer than 8 stitches per inch. All of standard feed dogs which machine is equipped with should be replaced with special feed dogs for longer stitch purpose.

The followings are the respective special feed dogs to be placed.

Machine	Special Feed Dogs (22 - 5 stitches)	Standard Feed Dogs (to be removed)
DCZ-361C	Differential (front) No. 33245	No. 33547
	Main (back) 33546	33548
	Auxiliary 33549	33328
DCZ-361A,Y	Differential (front) No. 33093	No. 33171
	Main (back) 33172	33173
	Auxiliary 33559	33544

After replacing with special feed dogs, take off screw C, so that stitch length regulation can be released to longer than 8 stitches, up to 5 stitches per inch. To take off screw C, remove temporarily the feed mechanism front shield D and the feed mechanism cover A. (Fig. 31)

Screw C is fitted for the purpose to suspended the feed dogs from touching with the throat plate in operation and to secure the stitch length not to become longer than 8 stitch per inch. Therefore, screw C should be kept for the use of restoration to standard feeding again.

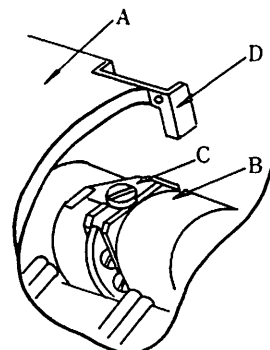


Fig. 31

9. To Sharpen Knives

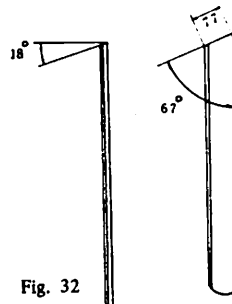
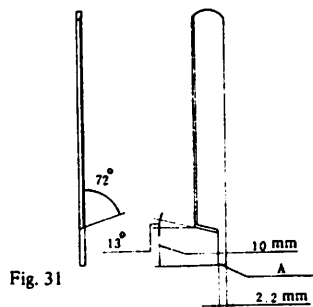
In case the upper or lower knives have got dull, they must be sharpened.

Fig. 32 shows the sharpening angles for upper knives and Fig. 33 for lower knives.

Note: When resharpening upper knives, position A measuring 10 m/m in length should also be ground.

This prescribed 10 m/m length must not be otherwise.

By the way, we can offer you our "YG-10" Sewing Machine Knife Grinder which can sharpen easily and precisely various kinds of sewing machine knives at a desirable angle in a jiffy. We are sure you can greatly promote your efficiency by the use of this apparatus. We recommend you to pair an upper knife made of Tangsten Carbide alloy with a lower knife made of special steel.



Further Suggestions for Adjusting DCZ Machines

A. Skip-stitches

1. See if the needle, upper and lower loopers are regularly threaded.
2. See if the needle is bent. If it is bent, replace a new one.
3. Check if dust gathers in the needle hole of the needle holder and, accordingly, the height of the needle gets irregular.
4. Check the interrelation among the needle, upper and lower loopers.
5. Wrong choice of the needle often causes skip stitching.
6. As nylon thread is much stretchier than cotton thread, formation of the needle thread loop becomes difficult. In such case, set the needle a little lower than the standard position.

B. Thread Breaking

1. Check the presser foot chaining-off finger, loopers and thread guides to see if there are some hitches and burrs on these parts over which the thread passes.
2. Wrong relation among the needle and loopers also causes thread breakage.
3. Inferior thread is the biggest cause of thread breakage.
4. Being susceptible to heat, nylon thread is apt to break through frictional heat in high speed operation. In this case, apply "Yamato" SP Oil on the thread. ("Yamato" SP Oil is a lubricant developed for preventing skip stitches in synthetic threads.)

C. Loose Stitches

1. Foreign matters entered between the tension discs obstruct the close contact of the frictional surface of the discs and, accordingly, a proper tension on thread can not be obtained. Thus loose stitches often

occur.

2. Wrong relation among the needle and loopers causes loose stitches.
3. Wrong positional relation between the thread guides also causes this trouble.

D. Uneven Stitches

1. Uneven stitches may be remedied by adjusting the position of the looper thread take-up so that more thread is sent into the looper and tightening the tension spring.
2. When the work cannot be fed smoothly by some hitches and burrs on the throat plate surface, uneven stitches will be apt to occur.
3. When the upper edge of the lower knife is set higher than the upper surface of the throat plate, the work cannot be fed smoothly and thus it causes uneven stitches.
4. Dull edges of the knives also cause this trouble.
5. The use of the thread of improper twist often causes uneven stitches.

E. Undulated Seams

1. Improper adjustment of the differential ratio.
2. Improper adjustment of the pressure on tension spring-too strong or too weak.
3. Misalignment of the surfaces of presser foot, throat plate and feed dogs.
4. When the feed dogs are tilting forwards, seams are apt to stretch, and when tilting backwards, apt to shrink.
5. Inappropriate height of the feed dogs.

F. Uncommonly Large Punctures Caused by the Needle Penetration

1. Blunt needle point. Replace a new needle.
2. A little smoothing out of the area around the needle hole of the throat plate often produces a good result.
3. In stitching synthetic fabrics, the frictional heat of the needle often causes large punctures. In this case, use "Yamato" SP Oil.

G. Damages to the Work Caused by Feed Dogs

1. Feed dogs with tips too sharp are apt to injure the work. Grind off sharp tips a little with oil stone.
2. When the upper surface of the feed dog is tilting sidewise and the work is carried forward with either corner of the feed tips, oil stone is profitably used to level off the feed surface.

Note: We have given general instructions for using and adjusting DCZ Machines in this Instructions. But there may occur some cases in which you must make adjustment somewhat different from the standard methods stated herein, depending upon kind of work, thread and other various conditions. In such case, make proper adjustment to satisfy these special conditions, referring to the informations given herein.

CAUTION (Lubrication)

- 1) To begin with, the oil reservoir should be filled with quality high speed oil up to the upper red line on the oil sight gauge window at the right front of the machine base before starting the machine.
- 2) Be careful replenish with oil immediately when it has dwindled below the lower red line on the oil sight gauge window.

ATTENTION (Graissage)

- 1) Le reservoir d'huile doit d'abord etre rempli, avant la mise en service de la machine, d'une huile pour marche rapide de bonne qualite jusqu'a la ligne rouge superieure de l'indicateur de niveau d'huile au cote avant droit du carter de la machine.
- 2) Veiller a remplir immediatement de l'huile des que le niveau d'huile tombe a la ligne inferieure de l'indicateur de niveau.

VORSICHT (Schmierung)

- 1) Vor Inbetriebnahme der Maschine ist zuerst der Olbehälter bis zur oberen roten Linie des Olschauglases mit Schnellauföl einer guten Qualität zu füllen.
- 2) Es ist darauf zu achten, dass sofort Öl nachgefüllt wird wenn der Ölstand bis unter die untere Linie des Olschauglases gefallen ist.

ATENCION (engrase)

- 1) Antes de poner en servicio la maquina se debe llenar primeramente el recipiente de aceite hasta la linea roja superior del cristal de observacion que se encuentra en el lado delantero derecho de la caja de maquina, con aceite para alta velocidad de reconocida buena calidad.
- 2) Hay que cuidar que sea rellenado inmediatamente aceite, cuando el nivel de aceite se haya bajado por debajo de la linea inferior del cristal de observacion.

Oil recommended:

Sortes d'huile recommandees:

Empfohlene Olsorten:

Calidades de aceite que se recomiendan:

- a) ESSO — TERESSO 47
- b) Shell — Shell TERAS 29

