



# 2200SZ

INDUSTRIAL ZIG-ZAG SEWING MACHINE

INSTRUCTION MANUAL

## 1.APPLICATION

This Reliable 2200SZ Zigzag Machine is for;

- Zigzag and ornamental stitching in a variety of width and stitch length.
- Perfect straight stitching.
- Superfine control of stitch length insures perfect satin stitching.

Model 2200SZ

This machine is manufactured for atrisan zigzag sewing and is suited for sewing light weight and medium weight materials.

## 2.NOTES ON SAFETY

The machine must only be commissioned in full knowledge of the instruction manual and operated by persons with appropriate training.

Before putting into service, also read the safety notes and the instruction manual of the motor supplier.

The machine must be used only for the purpose intended. Use of the machine without the safety devices belonging to it is not permitted.

When gauge parts are exchanged (e.g.needle,presser foot, needle plate, feed dog and bobbin),during threading, when the workplace is left unattended, and during service work, the machine must be isolated from the mains by switchingoff the main switch of disconnecting the main plug.

On mechanically operated clutch motors without start inhibitor, it is necessary to wait until the motor has stopped.

General servicing work must be carried ou only by appropriately trained persons.

Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.

For service or repair work on pneumatic systems, the machine must be isolated from the compressed air supply system. Exceptions to this are only adjustments and function checks made by appropriately trained technicians.

Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.

Work on parts and systems under electric current is not permitted, except as specified in regulations EN50110.

Conversions or changes to the machine must be made only on adherence to all safety regulations.

For repairs, only replacement parts approved by us must be used.

Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC regulations.

### Meanings of the symbols:



Danger spot!  
Items requiring special attention



Danger of injury to operative or service staff.  
Be sure to observe and adhere to these safety notes!



Earth

## 3.COMMISSIONING



To avoid disturbances or damages, it is absolutely necessary to observe the following instructions:

Before you put the machine into operation for the first time, clean it throughly and oil it well (see page 2).

Have the mechanic check whether the motor can be used with existing mains voltage or not, and that junction box is correctly connected. Do not start the machine if the voltage is not correct!

When the machine runs, the balance wheel must rotate toward the operator. If it does not, have the electrician change the wires on the motor.

#### 4.INSTALLING THE BELT GUARD

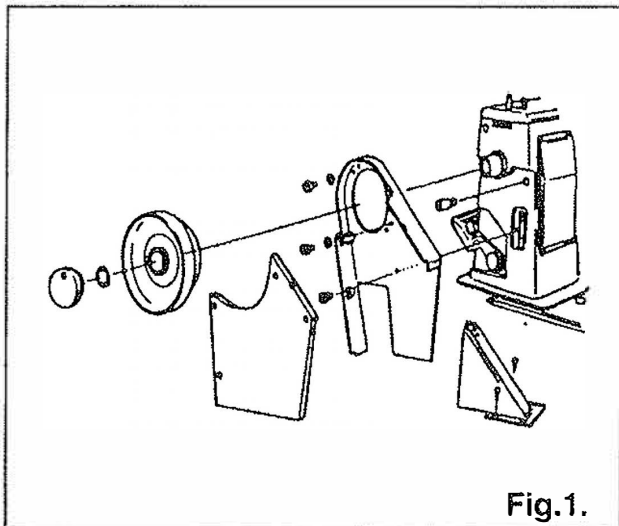


Fig.1.



#### CAUTION

Switch off the machine.  
Set sewing head upright again  
using both hands.  
Danger of crushing between sewing  
head and table top.  
Do not run machine without belt  
guard! Danger of accidents!

##### Above table surface

Align the belt guard so that hand wheel and V-belt move freely, then screw it down in this position (see Fig.1).

##### Below table surface

Install belt guard so that motor pulley and V-belt will rotate freely without interference.

#### 5.LUBRICATION

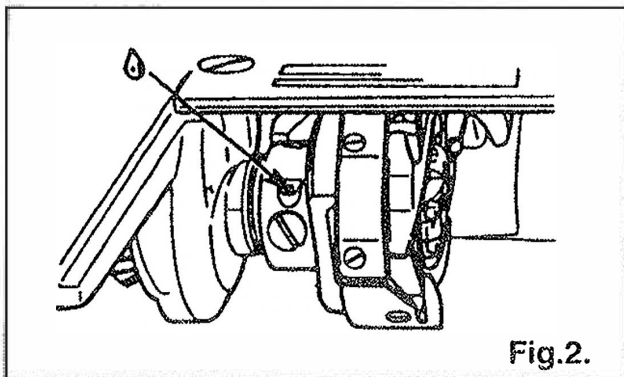


Fig.2.

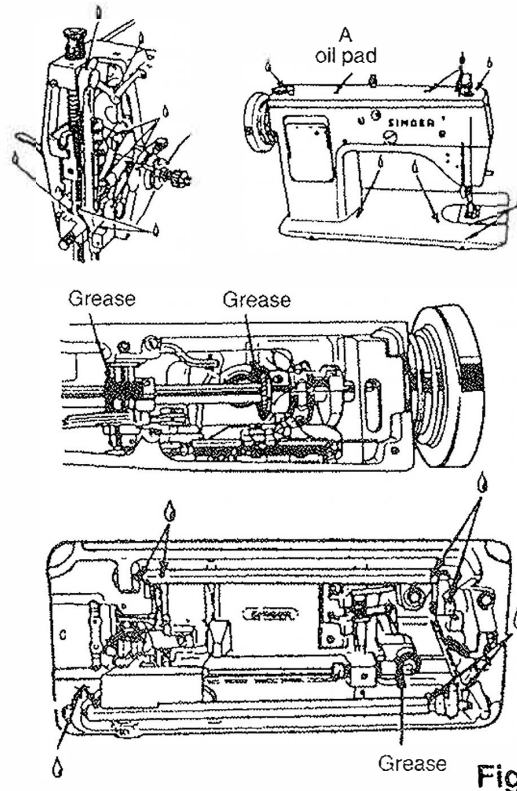


Fig.3.



#### CAUTION

Switch off the machine.  
Set sewing head upright again using  
both hands.  
Danger of crushing between sewing  
head and table top.

△ -Rotating hook and area under throat plate.  
Turn hand wheel over toward you until oil hole in rotating  
hook appear in sight.  
Apply one or two drops of oil to the oil hole (see Fig.2)

Loosen and remove screws and remove face plate by  
sliding it downward.

Remove screws and lift off arm top cover.  
Clean and oil the places indicated.

Apply sufficient oil to all oil felt shown in Fig.3  
Apply a small amount of grease to gear teeth indicated  
with word 'Grease' in Fig.3.

Also apply a drop of oil to all other oiling points shown with  
marks △.

Keep oil pad (A) under arm top cover saturated with oil.

##### CHOICE OF OIL

- (1) For (20U73/73B/83/83B) machines  
Only use oil with a viscosity of 45.0 mm<sup>2</sup>/sec.at 38 °C  
and a density of 0.888 g/cm<sup>3</sup> at 15 °C.

## 6.NEEDLE AND THREAD

Selection of the proper needle depends not only on the machine model, but also on the material and thread used. For selection of proper needle and thread sizes to be used on the various machine models please refer to the table below.

Model	73,73B,83, 83B		
Application of class	For light- weight materials	For medium- weight materials	For medium- heavy weight materials
Max.thread size(Nm)- Synsthetic*	120	60	30
Needle size (1/100mm)	10	12~16 ( 80~100 )	18~19 ( 110~120 )
Needle catalog (Needle system)	1910-05 ( 135x9 )		
*or an equivalent size of other types of thread			

## 7.INSERTING THE NEEDLE

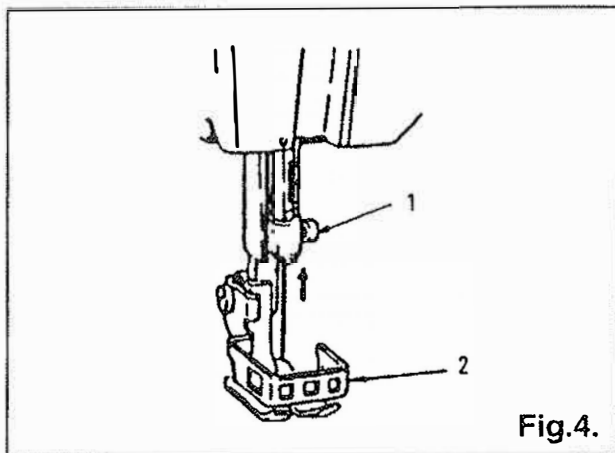
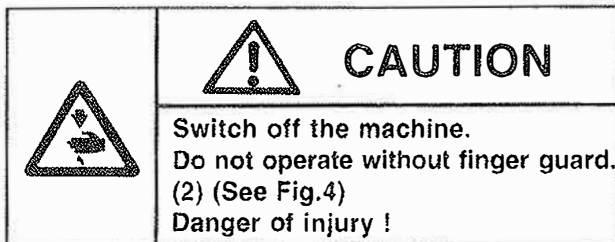


Fig.4.

- 1.Open bed slide.
- 2.Raise latch (1) (see Fig.5).
- 3.Lift out bobbin case (2) (see Fig.5).

## 9.TO WIND THE BOBBIN



Use needle cat. No. 1910-05 needle system (135X9) only.

Raise needle bar to its highest position by turning hand wheel toward you.

Loosen needle set screw (1) (See Fig.4) Insert the needle in the needle bar and push it up as far as it will go.

Make sure its long groove faces toward the front. Tighten needle set screw (1) securely.

## 8.TO REMOVE THE BOBBIN CASE

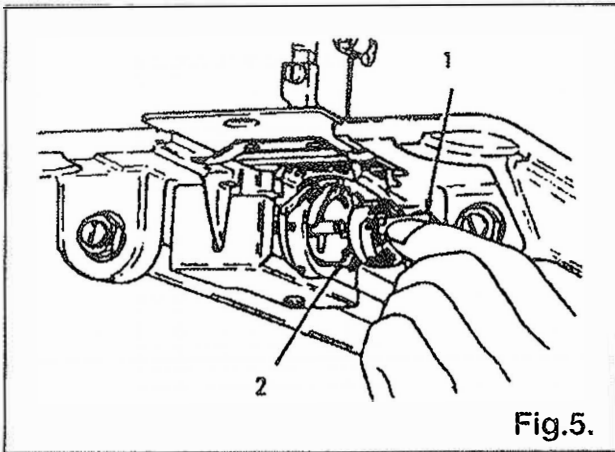


Fig.5.

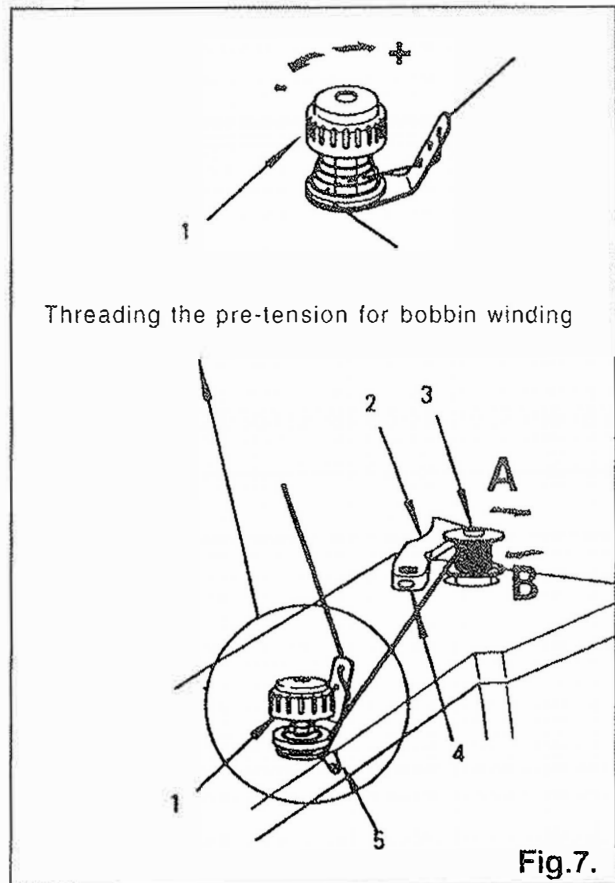
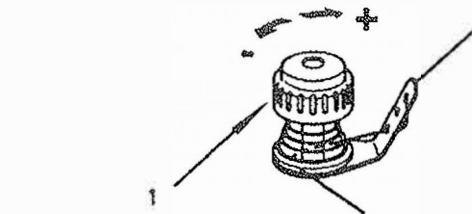
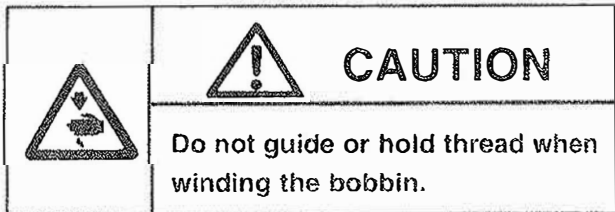
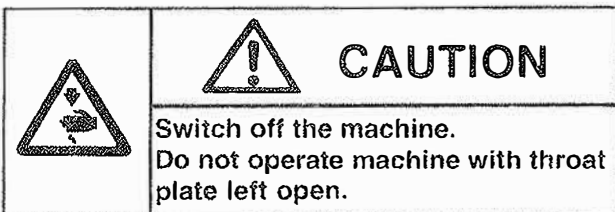


Fig.7.



Threading the pre-tension for bobbin winding



1. Place bobbin on bobbin winder spindle (3), Fig. 7, pushing it on as far as it will go.

Pre-tension (1) (see Fig. 7).

+ ..... More tension.

..... Less tension.

2. Push latch (2) in the direction indicated by arrow (A), then start the machine (see Fig. 7).

Bobbin winder spindle (3), rotate in the direction indicated by arrow (B) (see Fig. 7).

To adjust the amount of thread on bobbin, loosen screw (4) on latch (2) and swing the latch (2) away from you or toward you, as required.

For more thread on bobbin, swing latch (2) away from you.

For less thread on bobbin, swing latch (2) toward you. If thread winds unevenly on bobbin, loosen screw (5) and move pre-tension (1) up or down, as required, and tighten screw (5).

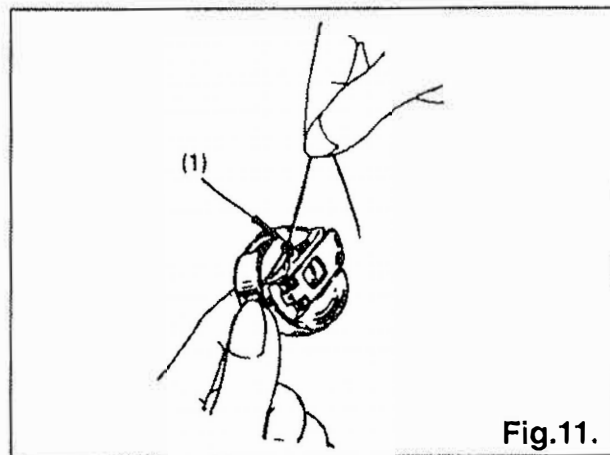


Fig. 11.

1. Hold bobbin case so that thread unwinds in the direction shown in Fig. 8, and put bobbin in bobbin case.

2. Pull thread into notch (1), and draw it under tension spring (2) (see Fig. 9).

3. Draw thread out from slot (2) on end of spring (1), (Fig. 10) and pass it through bobbin case thread guide (1), Fig. 11. Allow about 4 inches of thread to hang freely from bobbin.

NOTE: When straight stitching, a better result can be obtained if bobbin thread is not threaded through bobbin case thread guide (1), Fig. 11.

## 10. THREADING THE BOBBIN CASE.

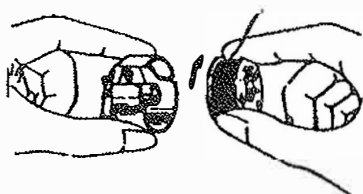


Fig. 8.

## 11. TO REPLACE THE BOBBIN CASE.

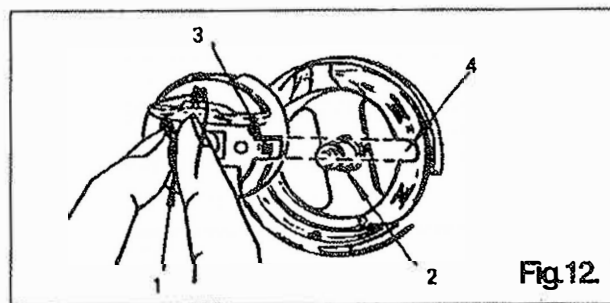


Fig. 12.

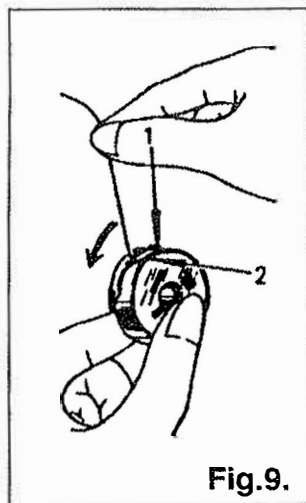


Fig. 9.

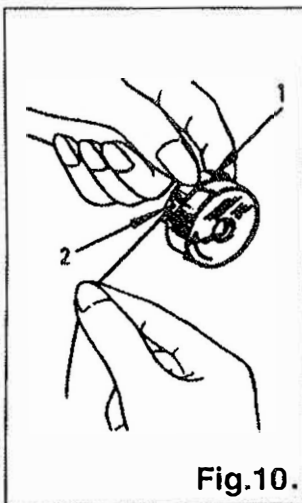


Fig. 10.



### CAUTION

Switch off the machine.  
Do not run machine without closing  
bed slide. Danger of injury!

Hold bobbin case by latch (1) and place it on spindle of bobbin case holder (2) so that position finger (3) enters notch (4) at right of bobbin case holder (see Fig. 12). Release latch and press bobbin case firmly in place to assure proper position. Close bed slide.

## 12.THREADING THE NEEDLE

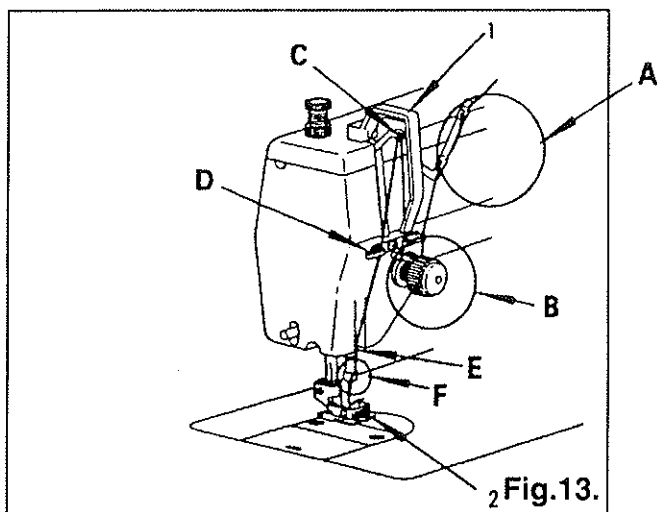


Fig.13.

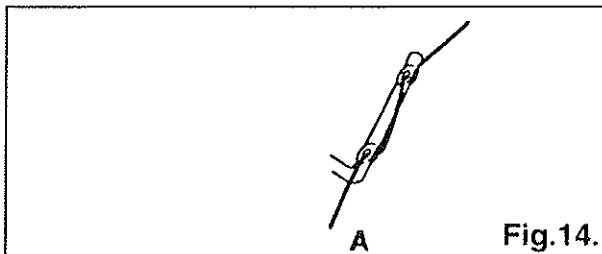


Fig.14.

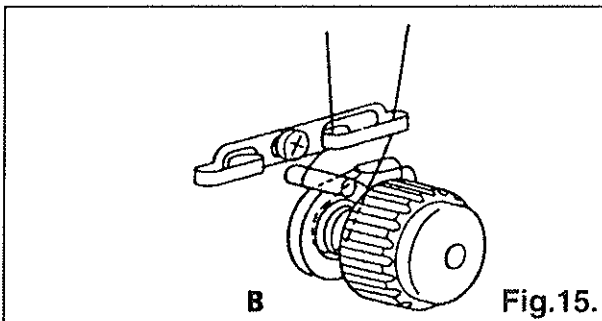


Fig.15.

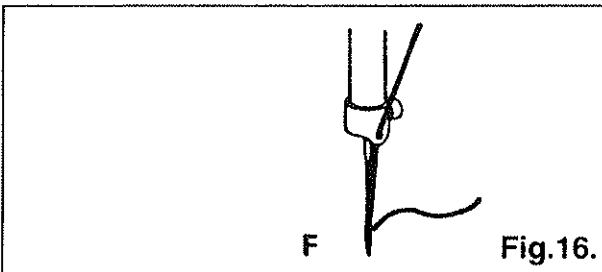
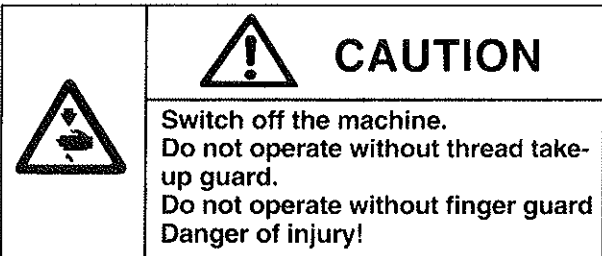


Fig.16.



- 1.Lead thread from the thread unwinder through all the threading points A (Fig.14),B (Fig.15), C (Fig.13), D (Fig.13),E (Fig.13) and F (Fig.16) in the order shown.
- 2.Thread the needle from front to back, as shown in Fig.16.
- 3.Draw about 3 inches of thread through eye of needle.

## 13.TO ADJUST STITCH LENGTH

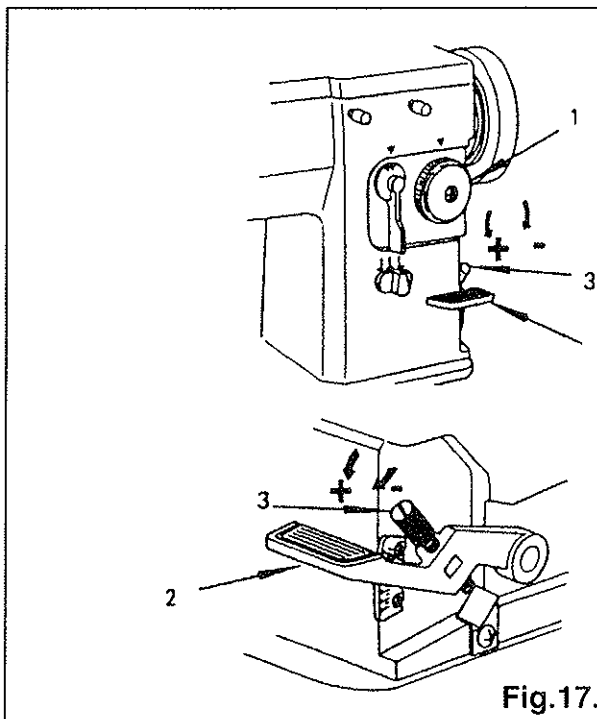


Fig.17.

### Regulating the stitch length:

To regulate the stitch length, turn feed regulating dial (1) Fig.17, toward left or right as required.

- +.....To lengthen
- .....To shorten

### Changing to reverse feed:

Push lever (2),Fig.17,down for reverse feed and release for forward feed.

To regulate the reverse stitch length, turn thumb screw (3)Fig.17, toward left or right as required.

- +.....To lengthen
- .....To shorten

## 14.TO ADJUST PRESSER FOOT PRESSURE

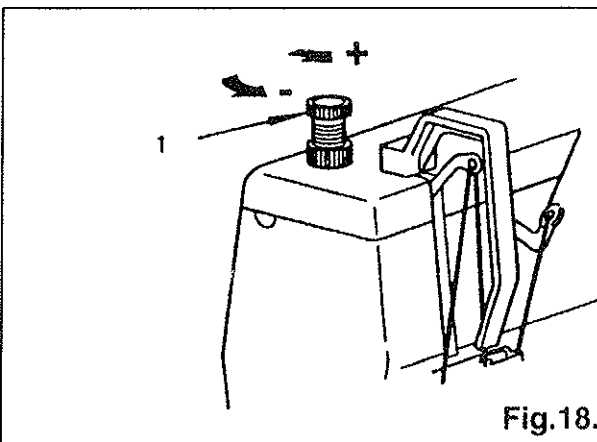
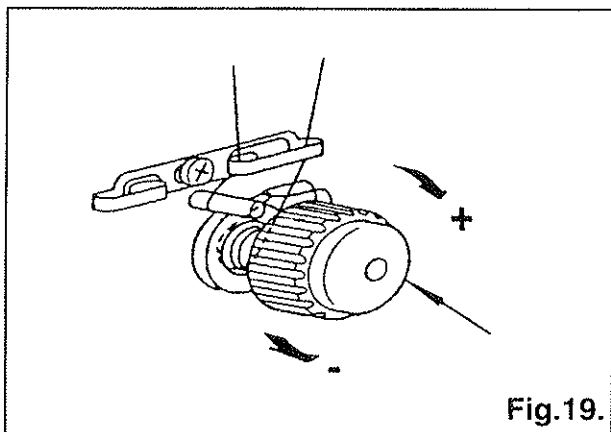


Fig.18.

To regulate the presser foot pressure, turn knurled thumb screw (1), Fig.18, toward left or right as required.

- +.....More pressure
- .....Less pressure

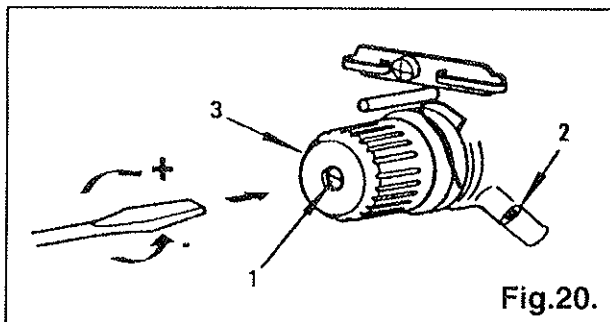
## 15.TO ADJUST NEEDLE THREAD TENSION



Regulate needle thread tension with tension regulating knob (1), Fig.19.

- +.....More tension
- .....Less tension

## 16.REGULATING THE TAKE-UP SPRING

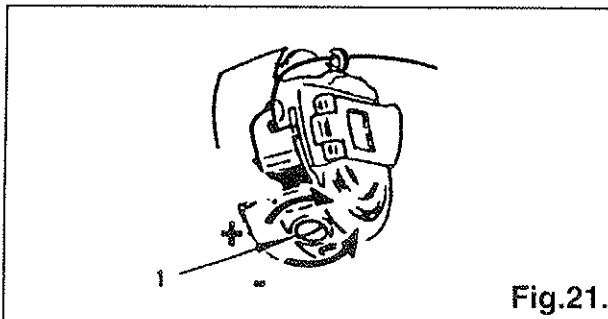


Using a screwdriver in slot of stud (1), Fig.20, regulate take-up spring tension by turning stud (1), as required.

- +.....More tension
- .....Less tension

To adjust the amount of take-up spring movement, loosen screw (2), Fig.20, and set take-up spring height by turning the entire tension assembly (3) toward left or right, as required. Securely tighten screw (2).

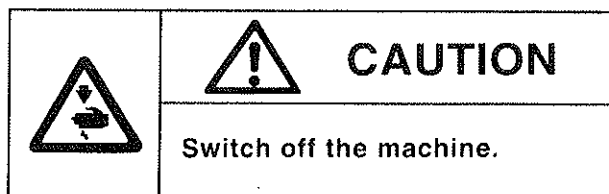
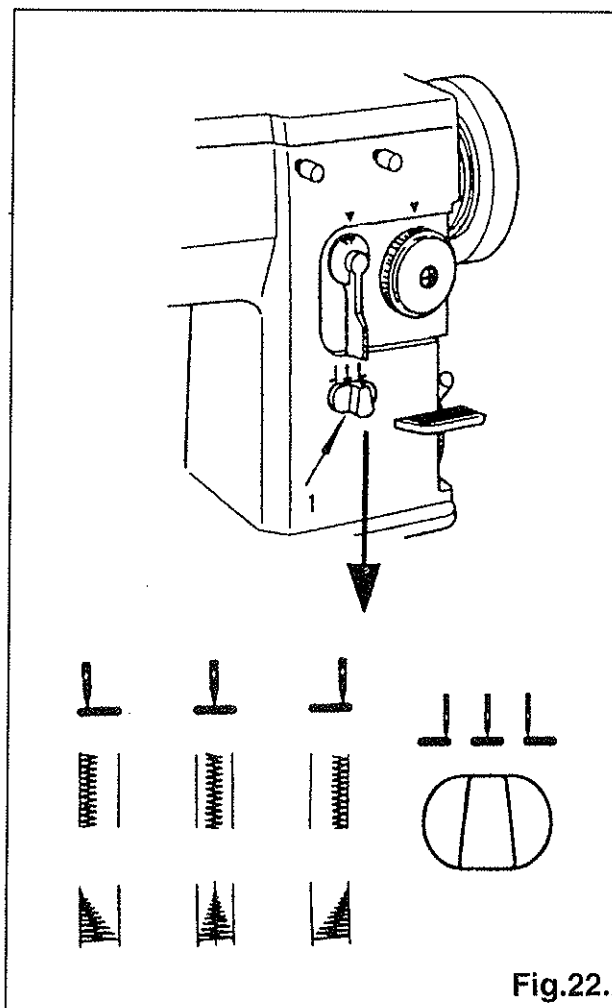
## 17.TO ADJUST BOBBIN THREAD TENSION



Regulate bobbin thread tension with tension regulating screw (1), Fig.21.

- +.....More tension
- .....Less tension

## 18.NEEDLE POSITION SELECTOR



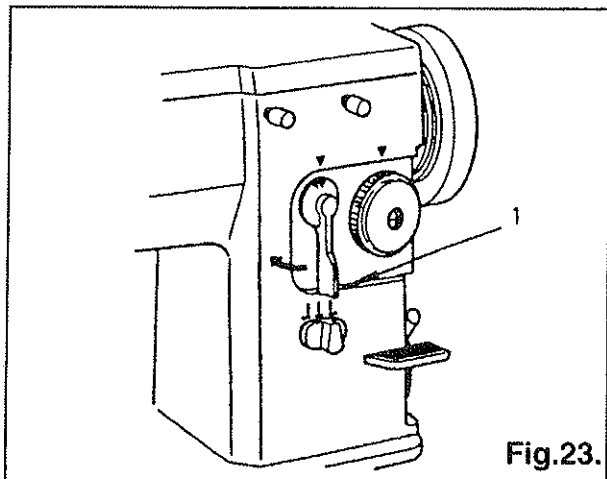
Left, Center and Right needle position settings are available for placement of both straight and zigzag stitching (see Fig.22).

To position, push lever in and move to desired setting.

Do not make any needle position adjustment while the needle is in the fabric.



## 19. STITCH WIDTH REGULATOR



The width of zigzag stitch is controlled with the spring biased stitch width regulating lever(1), Fig.23.

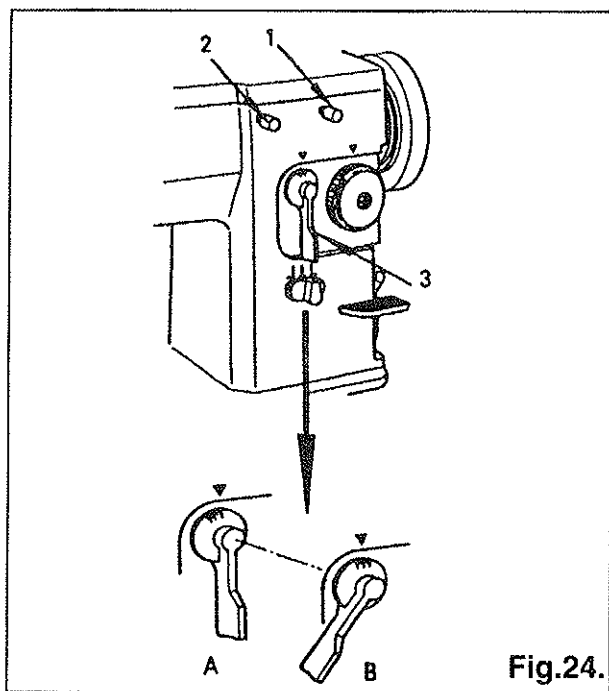
Maximum zigzag width;

20U73/73B 0~9 mm

20U83/83B 0~12 mm

Do not make any needle position adjustment while the needle is in the fabric.

## 20. HOW TO CONTROL THE WIDTH OF ZIGZAG STITCH

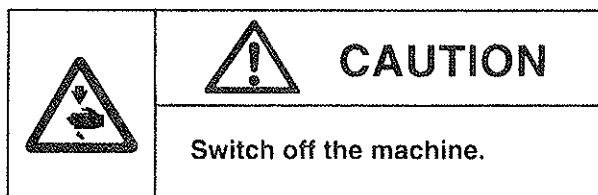
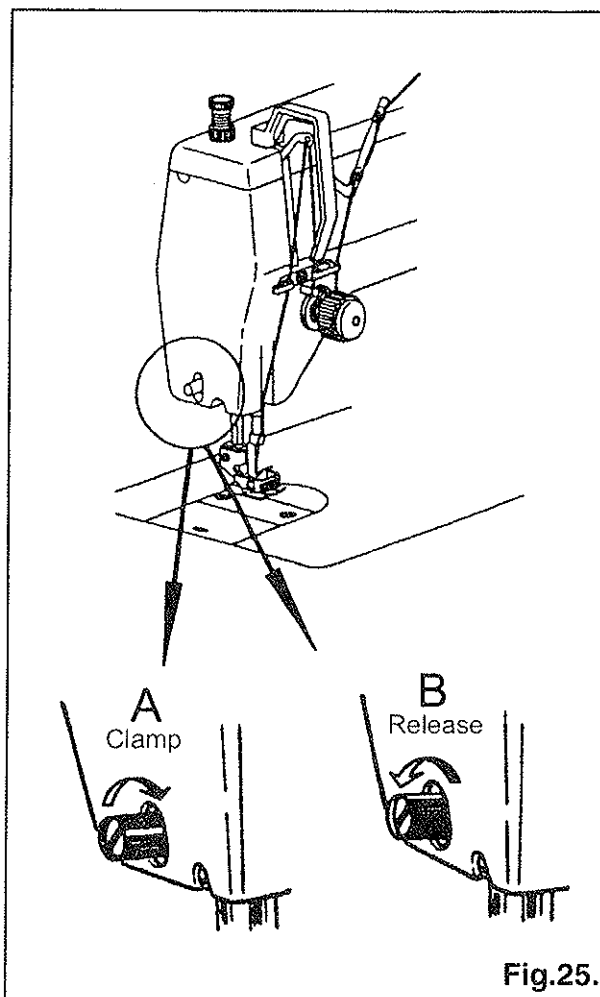


To obtain minimum to maximum width (20U73/73B:9mm. 20U83/83B:12mm) zigzag stitches, first loosen thumb screw (2), Fig.24. to permit the stitch width regulator (3), Fig.24 to return to its zero position (see A, Fig.24) and retighten thumb screw (2).

Then loosen thumb screw (1), Fig.24. turn stitch width regulator (3) clockwise as far as it will go and while holding the regulator (3) in this position (see B, Fig.24), retighten thumb screw (1).

You can now regulate the stitch width regulator within the range of zero to maximum.

## 21. NEEDLE BAR FRAME CLAMPING DEVICE

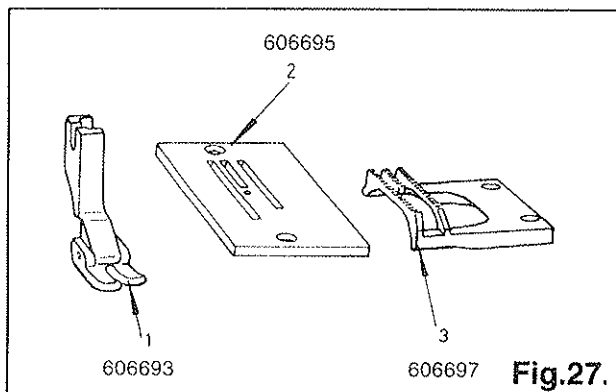
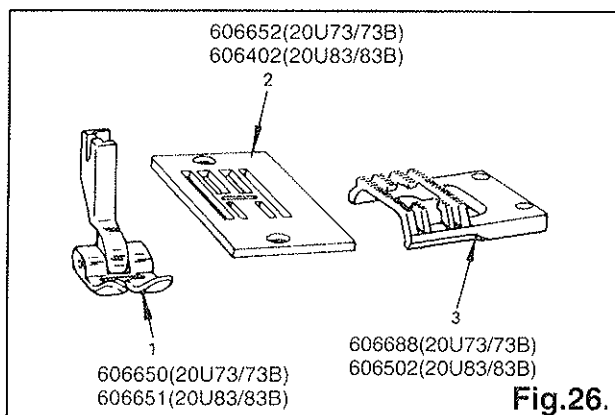


When straight stitching, a better sewing result can be obtained by locking the needle bar frame immovable with the clamping device (see Fig.25).

A: Clamp

B: Release

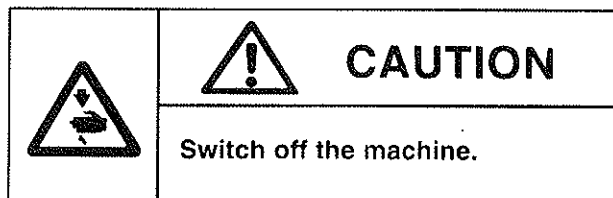
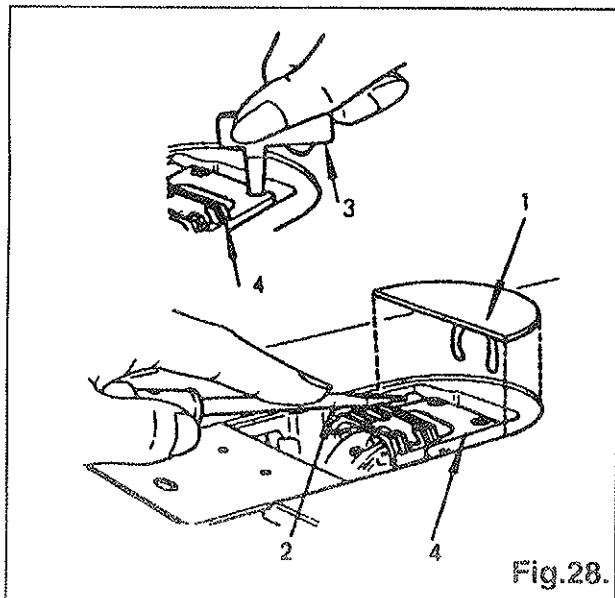
## 22.FITTING FOR STRAIGHT AND ZIGZAG STITCHING



General Purpose Presser Foot (1), Throat Plate (2) and Feed Dog (3) as shown in Fig.26, are used for straight and zigzag stitching.

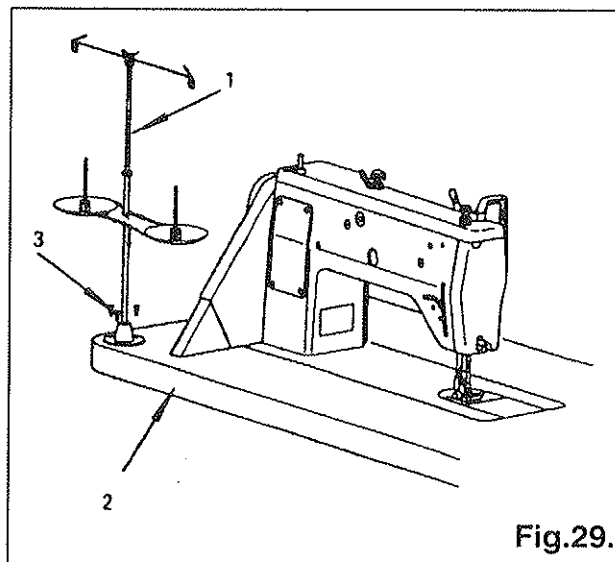
Straight Stitch Presser Foot (1), Throat Plate (2) and Feed Dog (3) as shown in Fig.27, are used for straight stitching only.

## 23.CHANGING THE THROAT PLATE AND FEED DOG



- 1.Open bed slide, then remove throat plate. (Use screwdriver (3) Fig.28, furnished with machine for removal and replacement of throat plate and feed dog.)
- 2.Using a screwdriver (2), remove bed plate (1) and remove feed dog (4) (see Fig.28).
- 3.To replace general purpose or straight stitch feed dog, fasten feed dog to machine temporarily and replace general purpose or straight stitch throat plate. Set feed dog correctly in position so that it will not hit the edges of feed dog slots in the throat plate.
- 4.Replace bed plate and press it firmly in place.

## 24.TO MOUNT THREAD UNWINDER



Fasten thread unwinder (1) to table (2) with wood screws (3) as shown in Fig.29.

## 25.TO USE THE SPOOL CAP

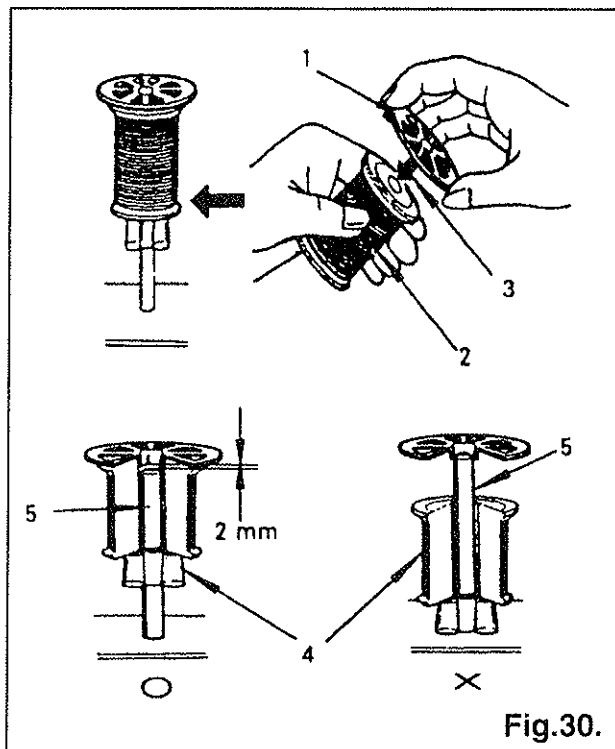


Fig.30.

When using a reel type thread spool, fit the spool cap (1) supplied with the machine onto the thread spool (3) (see Fig.30).

Set height of spool rest so there is approximately 2 mm clearance between top end of spool pin and the tip of the slotted spigot of the spool cap (see Fig.30).

The spool cap should never be fitted on the spool pin (5). Forcing it onto the spool pin may result in breaking the slotted spigot of the spool cap (see Fig.30).

## 26.TO USE THE ANTI-SPILL SLEEVE

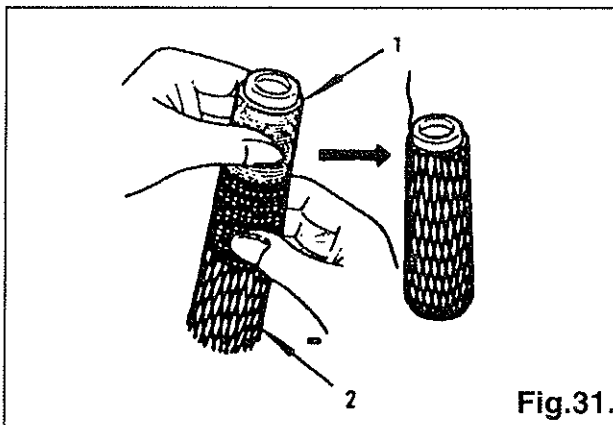


Fig.31.

When using synthetic threads that easily spill off the cone (1), slip the anti-pill sleeve (2) furnished with the machine over the thread from the bottom of cone (1) leaving the thread end to hang free at the top of anti-spill sleeve (2) as shown in Fig.31.

## 27.KNEE LIFTER

### TO MOUNT KNEE LIFTER

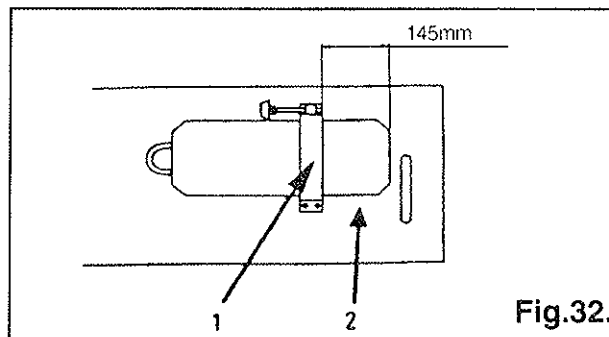


Fig.32.

Fasten knee lifter bracket (1) to underside of table (2) 145 mm from table cut-out as shown in Fig.32.

### KNEE OPERATING PRESSER FOOT LIFT

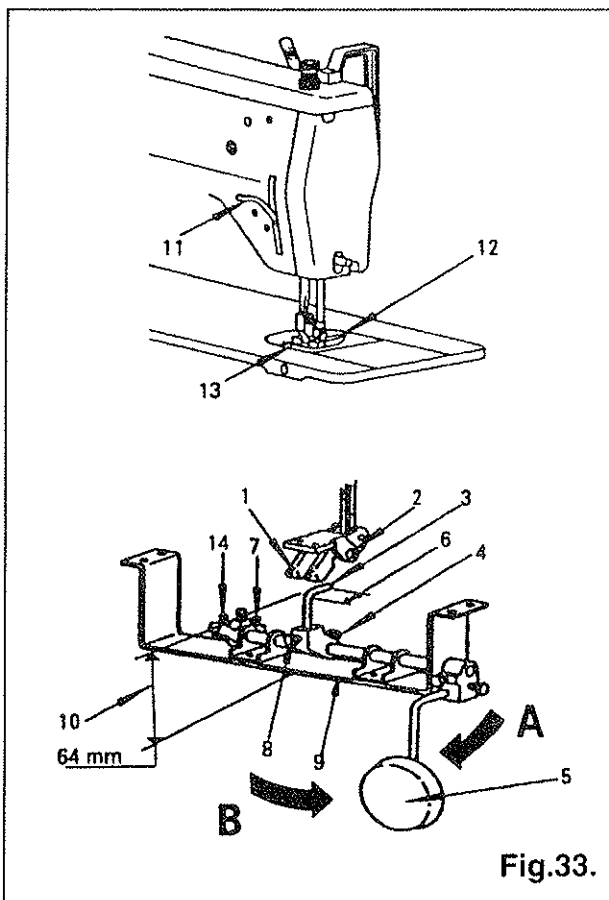


Fig.33.



## CAUTION

Switch off the machine.  
Set sewing head upright again  
using both hands.  
Danger of crushing between sewing  
head and table top.

Bell cranks (1) and (2) shown in Fig.33 are fastened to the underside of the bed. Bell crank (1) is used for lifting and lowering the presser foot with knee, and bell crank (2) is used for controlling the stitch width (see Fig.33).

To raise or lower the presser foot with knee, loosen screw (4) holding the knee lifter shaft arm (3) and move knee lifter shaft arm (3) just under the bell crank (1), and firmly tighten screw (4) (see Fig.33).

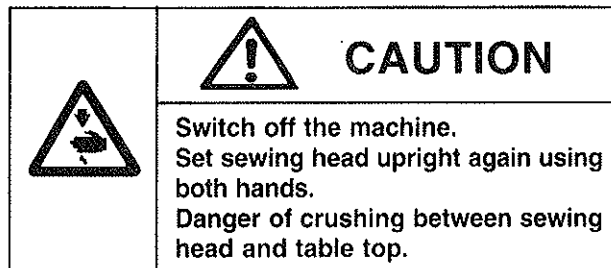
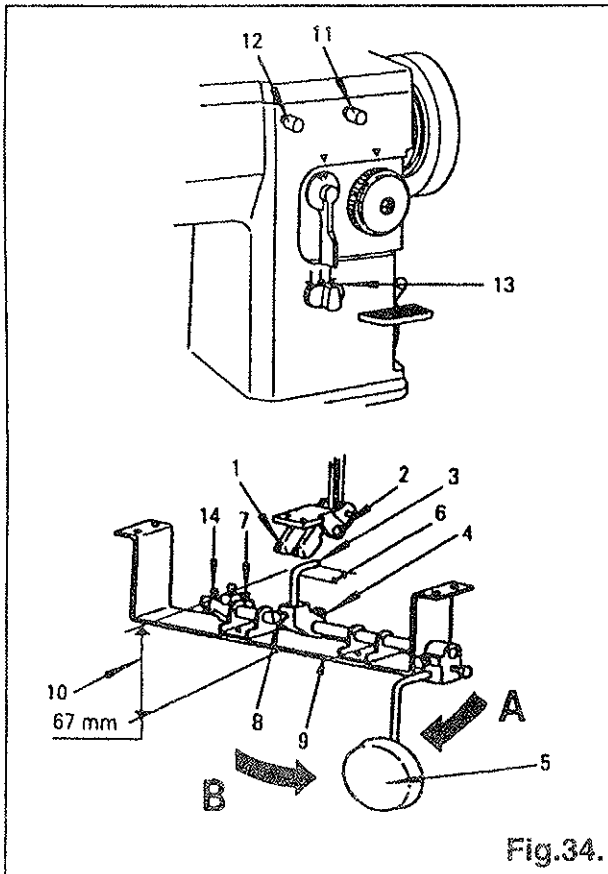
Loosen the lock nut holding screw (7) and turn screw (7) as required, so that the bent end (6) of knee lifter shaft arm (3) will be almost horizontal when knee lifter knee plate (5) is pushed as far as it will go in the direction indicated with arrow (A), then firmly tighten the lock nut (see Fig.33).

With knee lifter shaft arm (3) set in position as described above, loosen screw (8) and move knee lifter shaft arm (3) up or down as required, so that height (10) from its bent end (6) to bracket (9) is 64 mm (see Fig.33).

Raise presser foot (12) with presser foot lifter (11). Then loosen the lock nut holding screw (14) and turn screw (14) as required, so that knee lifter knee plate (5) when pushed in the direction indicated with arrow (B), will stop at a point (presser foot (12) raised approx.9 mm from throat plate (13) surface) where presser bar lifter (11) will drop down from its raised position when presser bar is lifted a little higher than its normal up position. Then firmly tighten the lock nut (see Fig.33).

When knee lifter knee plate (5) is pushed in the direction indicated with arrow (B), the presser foot (12) will rise and when knee plate (5) is released, presser foot (12) will be lowered (see Fig.33).

#### KNEE OPERATING STITCH WIDTH CONTROL



Bell cranks (1) and (2) shown in Fig.34 are fastened to the underside of the bed. Bell crank (1) is used for lifting and lowering the presser foot with knee and bell crank (2) is used for controlling the stitch width.

To control the stitch width with knee, loosen screw (4) holding the knee lifter shaft arm (3) and move knee lifter shaft arm (3) just under the bell crank (2) and firmly tighten screw (4) (see Fig.34).

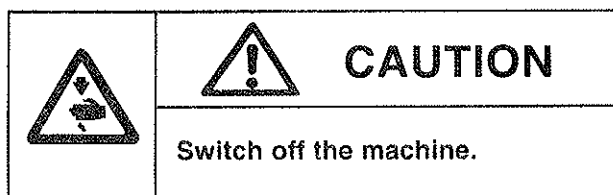
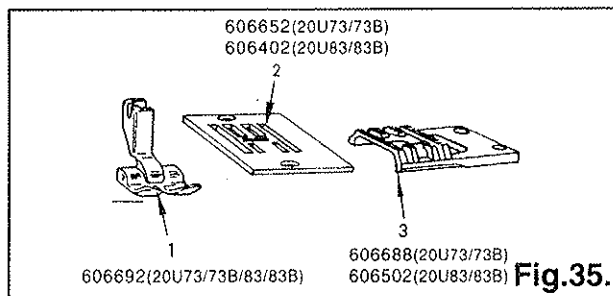
Loosen the lock nut holding screw (7) and turn screw (7) as required, so that the bent end (6) of knee lifter shaft arm (3) will be almost horizontal when knee lifter knee plate (5) is pushed as far as it will go in the direction indicated with arrow (A). Then firmly tighten the lock nut (see Fig.34).

With knee lifter shaft arm (3) set in position as described above, loosen screw (8) and move knee lifter shaft arm (3) up or down as required, so that height (10) from its bent end (6) to bracket is 67 mm (see Fig.34).

Loosen stitch width regulating plate thumb screws (11) and (12) so that stitch width regulator (13) can be moved from zero to maximum stitch width. (20U73/73B: 9mm, 20U83/83B: 12mm) (see Fig.34). Loosen the lock nut holding screw (14) and turn screw (14) as required, so that knee lifter knee plate (5) when pushed in the direction indicated with arrow (B), will stop at the maximum stitch width position of stitch width regulator (13). Then firmly tighten the lock nut (see Fig.34).

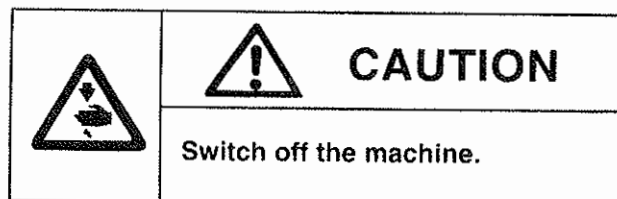
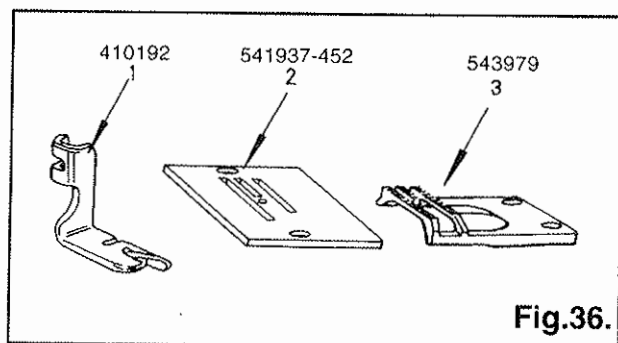
Stitch width will become wider when knee lifter knee plate (5) is pushed in the direction indicated with arrow (B) and will become smaller when knee plate is released (see Fig.34).

#### 28.FITTINGS FOR BUTTONHOLE STITCHING



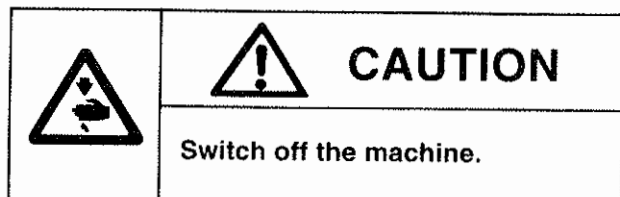
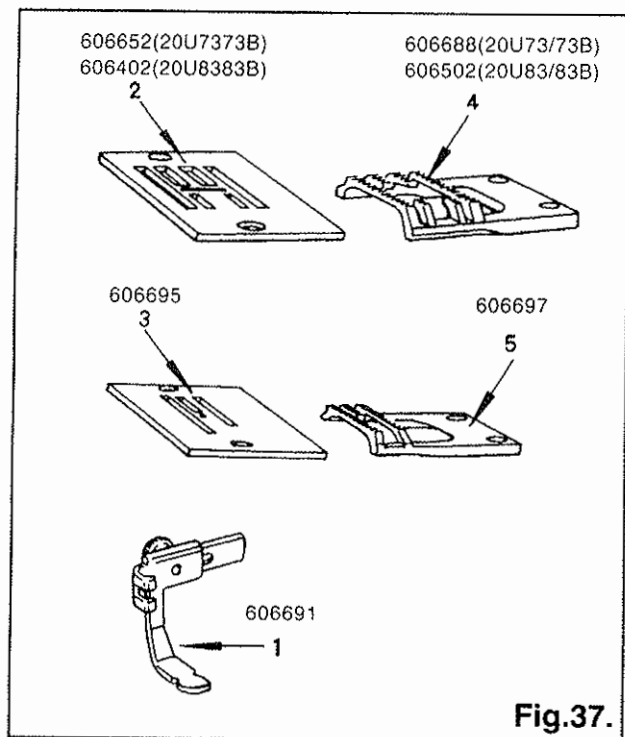
Buttonhole Foot (1), General Purpose Throat Plate (2) and Feed Dog (3) as shown in Fig.35 are used for buttonhole stitching.

## 29.FITTING FOR HEM SEWING



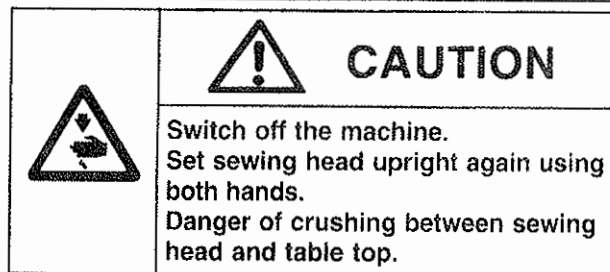
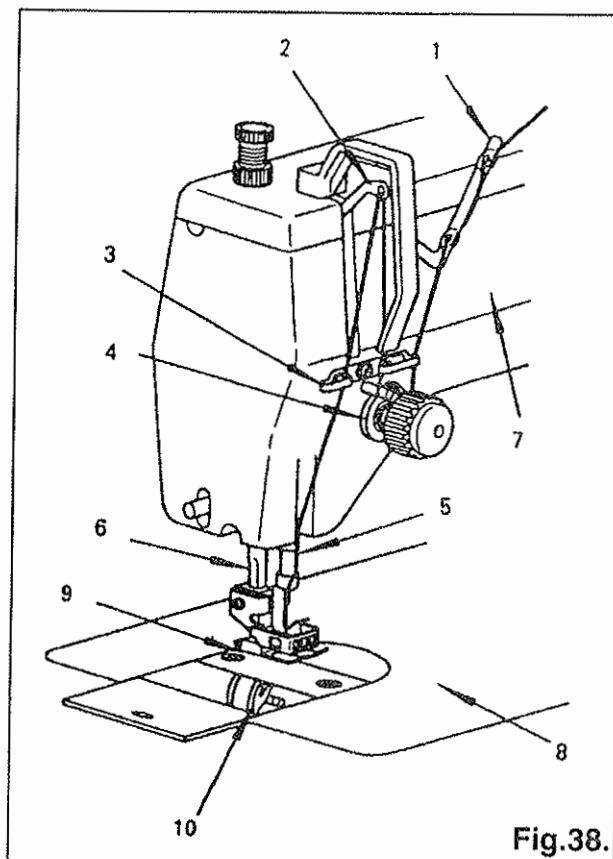
Hemmer Foot (1), Straight Stitch Troat Plate (2) and Feed Dog (3) as shown in Fig.36 are used for hem sewing.

## 30. FITTINGS FOR ZIPPER AND CORD SEWING



Zipper Foot (1), General Purpose (2) or Straight Stitch (3) Thorat Plate and General Purpose (4) or Stright Stitch (5) Feed Dog as shown in Fig.37 are used for zipper and cord sewing.

## 31.CARING FOR YOUR MACHINE



Your SINGER machine will serve you perfectly for many years if you take a few moments of your time to keep it clean. How often you will need to clean and lubricate the machine will depend on how often you will use it. When in regular use, the machine should be cleaned periodically to remove lint and fluff which may have accumulated around the working parts. A machine in continuous use should be oiled frequently, especially when the machine is operated at maximum recommended speed.

With a soft cloth, clean; (See Fig.38)

- (1)Thread retainer
- (2)Take-up lever
- (3)Thread guard
- (4)Tension discs
- (5)Needle bar
- (6)Presser bar
- (7)Machine arm and bed

With a lint brush, clean; (See Fig.38)

- (9)Feed dog
- (10)Rotating hook and area under throat plate.

Turn hand wheel over toward you until oil hole in rotating hook appears in sight.

Apply one or two drops of oil to the oil hole.

## 32.TROUBLESHOOTING CHART

Whenever sewing difficulty is encountered, check and make adjustments as follows.

Problem	Cause	Solution
Needle thread breaks	1.Is machine properly threaded? 2.Are thread guides or tension disc area lint-free? 3.Is needle-thread tension too tight? 4.Is needle bent or have a blunt point? 5.Is needle inserted correctly? 6.Is needle the correct size for thread and fabric? 7.Is thread free of slubs and knots?	1. Correct needle threading 2. Remove lint and fluff in bobbin case and hook 3. Adjust needle thread tension 4. Insert new needle 5. Insert needle correctly 6. Select proper needle size and thread 7. Remove slubs and knots
Bobbin thread breaks	8.Is bobbin threading correct? 9.Is thread tangled or caught? 10.Is thread tension correct? 11.Does bobbin rotate smoothly?	8. correct bobbin threading 9. Untangle thread from bobbin case and hook 10. Adjust needle and bobbin case thread tension 11. Check whether bobbin thread is wound correctly
Stitches skip	12.Is needle inserted correctly? 13.Is needle bent or have blunt needle point? 14.Is size of needle and thread suitable for fabric? 15.Is threading correct?	12. Insert needle correctly 13. Insert new needle 14. Select proper needle size and thread 15. Correct needle threading
Needle breaks	16.Is needle properly inserted? 17.Is needle bent? 18.Is needle the correct size for the fabric? 19.Is needle clamping screw loose? 20.Is the fabric pulled while sewing?	16. Insert needle correctly 17. Insert new needle 18. Select proper needle and thread for fabric 19. Tighten needle set screw 20. Do not pull fabric while sewing
Fabric fails to feed	21.Is feed regulating dial properly adjusted? 22.Is presser foot pressure adjusted properly?	21. Lengthen stitch length by feed regulating dial 22. Adjust correct presser foot pressure
Fabric puckers	23.Is needle threading correct? 24.Is needle point blunt? 25.Is thread tension too tight?	23. Correct needle threading 24. Insert new needle 25. Adjust needle tension properly
Rotating heavy Noisy	26.Is there any lint or fluff on feed dog? 27.Is there any lint in rotating hook?	26. Remove lint and fluff from feed dog 27. Remove lint and fluff from rotating hook
Machine fails to start	28.Are electrical plugs properly eonnected? 29.Is power and light switch turned on?	28. Turn on power switch 29. Connect plug to power source

If you still have difficulty in sewing even after making adjustments, contact your nearest Service Center.

### 33.SPECIFICATIONS

Machine class	73/73B	83/83B
For sewing	Light to medium	
Stitch type	301 (lock stitch), 304 (Zigzag lock stitch)	
Max. speed*	2,500 r.p.m.	2,000 r.p.m.
Max.stitch bight	9.0mm	12.0mm
Max.stitch length	5.0mm	5.0mm
Needle bar stroke	34.8mm	
Presser bar lift (manual)	6.35mm	
Presser bar lift (knee lifter)	9.0mm	
Needle catalog (needle system)	CAT.1910-05 (135X9)	
Needle size	See page 3 table "NEEDLE AND THREAD"	
Machine pulley	74mm effective dia. for V-belt	
Oil	"B" Oil	
Workspace width	211mm	
Workspace height	130mm	
Bedplate dimensions	399mmX178mm	
Net weight (head only)	19.5Kg	20.0Kg
Gross weight (with accessories)	21Kg	21.5Kg
Noise**	n=1,600 r.p.m. <76 dBA	

\* Mzximum speed will vary depending on fabric, threads and sewing condition.

\*\* Noise mesurment according to DIN 4563-45-A-1.

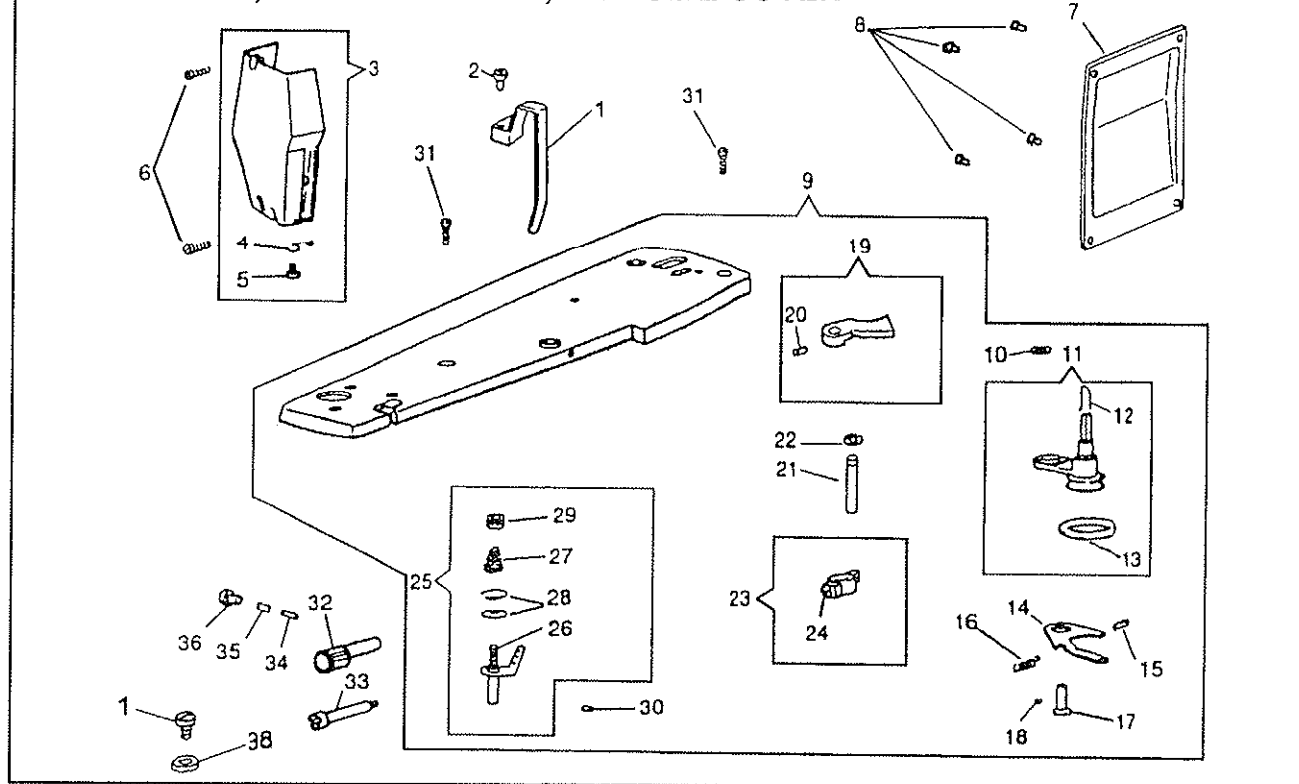
#### Relationship between zigzag bight and maximum speed

Machine class	73/73B		83/83B	
Zigzag bright	0mm~5mm	5mm~9mm	0mm~5mm	5mm~12mm
Max. speed	2,500 r.p.m	2,000 r.p.m	2,000 r.p.m	1,800 r.p.m

Part No. 606625(1100)

Printed in China

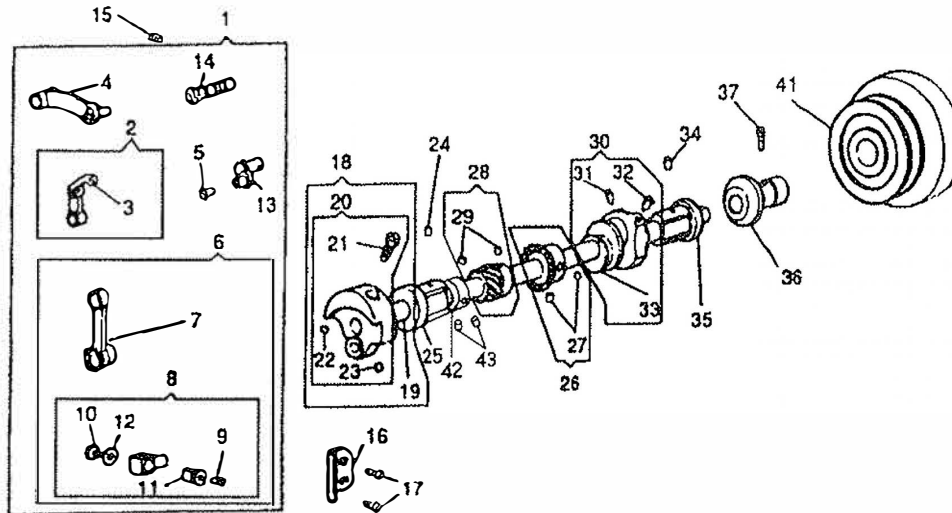
# FACE PLATE, ARM TOP COVER, ARM SIDE COVER



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	554113-383	*	*	*	*	1	Thread Take-up Guard
2	606407	*	*	*	*	1	Take-up Guard Screw
3	606395	*	*	*	*	1	Face Plate Comp.
4	606632	*	*	*	*	1	Thread Guide
5	606633	*	*	*	*	1	Thread Guide Screw
6	606634	*	*	*	*	2	Screw
7	554118-385	*	*	*	*	1	Back Cover
8	554118-362	*	*	*	*	1	
9	606635	*	*	*	*	4	Screw
10	606433	*	*	*	*	1	Arm Top Cover Comp.
11	606433-460	*	*	*	*	1	
12	606636	*	*	*	*	1	Thrust Washer
13	606454	*	*	*	*	1	B/W Bracket Comp.
14	606637	*	*	*	*	1	Spring
15	606638	*	*	*	*	1	Friction O-ring
16	606452	*	*	*	*	1	B/W Regulating Plate
17	606453	*	*	*	*	1	Spring
18	606449	*	*	*	*	1	Spring
19	606451	*	*	*	*	1	Hinge Stud
20	606439	*	*	*	*	1	Set Screw
21	550032	*	*	*	*	1	B/W Lever Comp.
22	544208-005	*	*	*	*	1	B/W Lever Set Screw
23	606447	*	*	*	*	1	B/W Lever Stud
24	606448	*	*	*	*	1	B/W Lever Stud Ring
25	606446	*	*	*	*	1	B/W Regulator Comp.
26	544208-005	*	*	*	*	1	B/W Regulator Screw
27	606639	*	*	*	*	1	B/W Tension Comp.
28	606440	*	*	*	*	1	Bobbin Winder Tension Stud
29	606442	*	*	*	*	1	Bobbin Winder Tension Spring
30	606441	*	*	*	*	2	Bobbin Winder Tension Disc
31	606443	*	*	*	*	1	Tension Nut
32	606439	*	*	*	*	1	Screw
33	606602	*	*	*	*	2	Arm Top Cover Screw
34	606398	*	*	*	*	1	Eccentric Lock
35	606397	*	*	*	*	1	Eccentric Screw
36	554128	*	*	*	*	1	Stopper pin
37	554144	*	*	*	*	1	Stopper Spring
38	544212-001	*	*	*	*	1	Stopper Screw
39	606555	*	*	*	*	1	Screw (Earth)
40	606571	*	*	*	*	1	Washer (Earth)

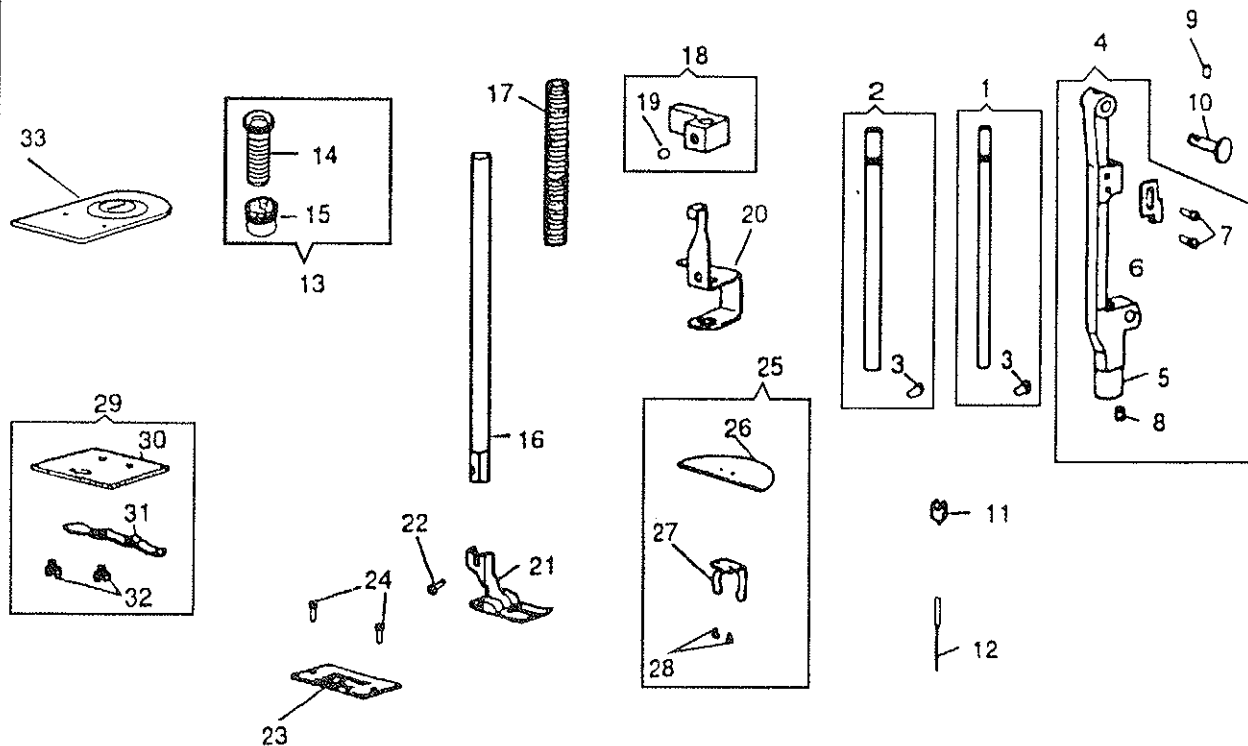


# THREAD TAKE-UP, ARM SHAFT, HAND WHEEL



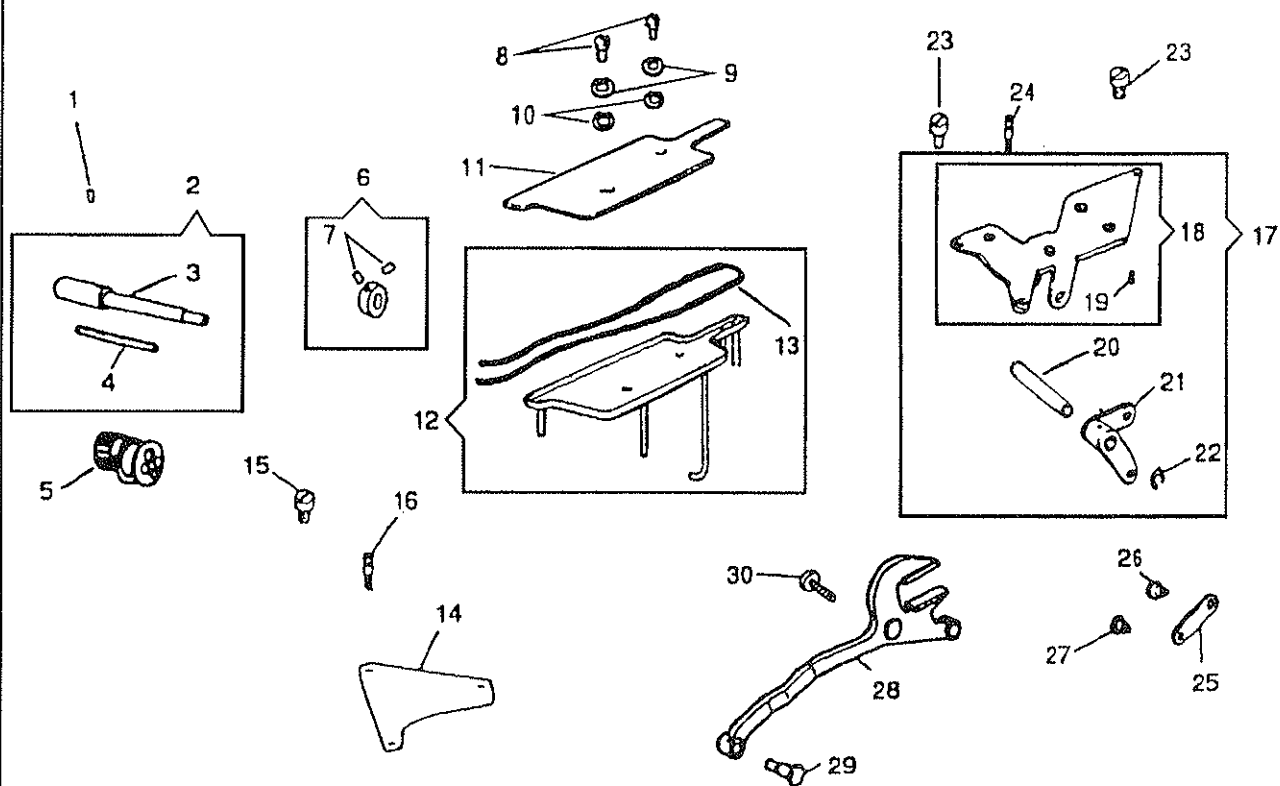
NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606640	*	*	*	*	1	Take-up Comp.
2	606475	*	*	*	*	1	Take-up
3	606474	*	*	*	*	1	Take-up Eyelet
4	606641	*	*	*	*	1	Take-up Lever Link
5	606471	*	*	*	*	1	Conn.Link Cap Screw
6	606642	*	*	*	*	1	N/B. Connecting Link Comp.
7	606472	*	*	*	*	1	N/B. Connecting Link
8	606466	*	*	*	*	1	Connecting Stud Comp.
9	606468	*	*	*	*	1	Set Screw
10	606464	*	*	*	*	1	Hinge Pin Screw
11	606467	*	*	*	*	1	Hinge Pin
12	606465	*	*	*	*	1	Pin Washer
13	606473	*	*	*	*	1	Take-up Crank
14	606643	*	*	*	*	1	Hinge Stud
15	606420	*	*	*	*	1	Set Screw
16	606469	*	*	*	*	1	Guide
17	606444	*	*	*	*	2	Screw
18	606644	*	*	*	*	1	Arm Shaft and N/B Crank Comp.
19	606484	*	*	*	*	1	Arm Shaft
20	606478	*	*	*	*	1	N/B. Crank Comp.
21	606477	*	*	*	*	1	N/B Crank Posn.Screw
22	504066	*	*	*	*	1	Position Screw
23	504101	*	*	*	*	1	Crank Posn. Screw
24	606480	*	*	*	*	1	Bushing Set Screw
25	606481	*	*	*	*	1	Front Bush
26	541606	*	*	*	*	1	Bevel Gear Comp.
27	504066	*	*	*	*	2	Bevel Gear Set Screw
28	541607	*	*	*	*	1	Worm Gear Comp.
29	504028	*	*	*	*	2	Worm Gear Screw
30	606483	*	*	*	*	1	Feed Eccentric Comp.
31	606482	*	*	*	*	1	Feed Eccentric Screw
32	606482	*	*	*	*	1	Feed Eccentric Screw
33	606645	*	*	*	*	1	Retaining Ring
34	606480	*	*	*	*	1	Arm Shaft Bushing Screw
35	606485	*	*	*	*	1	Arm Shaft Bushing, back
36	606487	*	*	*	*	1	CSM Flanged Bushing
37	606488	*	*	*	*	1	CSM Bushing Set Screw
38					*	1	
39					*	1	
40					*	1	
41	606489	*	*	*	*	1	Handwheel
42	606712	*	*	*	*	1	Retaining Collar comp.
43	606713	*	*	*	*	2	Rectaining Collar screw

# NEEDLE BAR, PRESSER BAR, THROAT PLATE



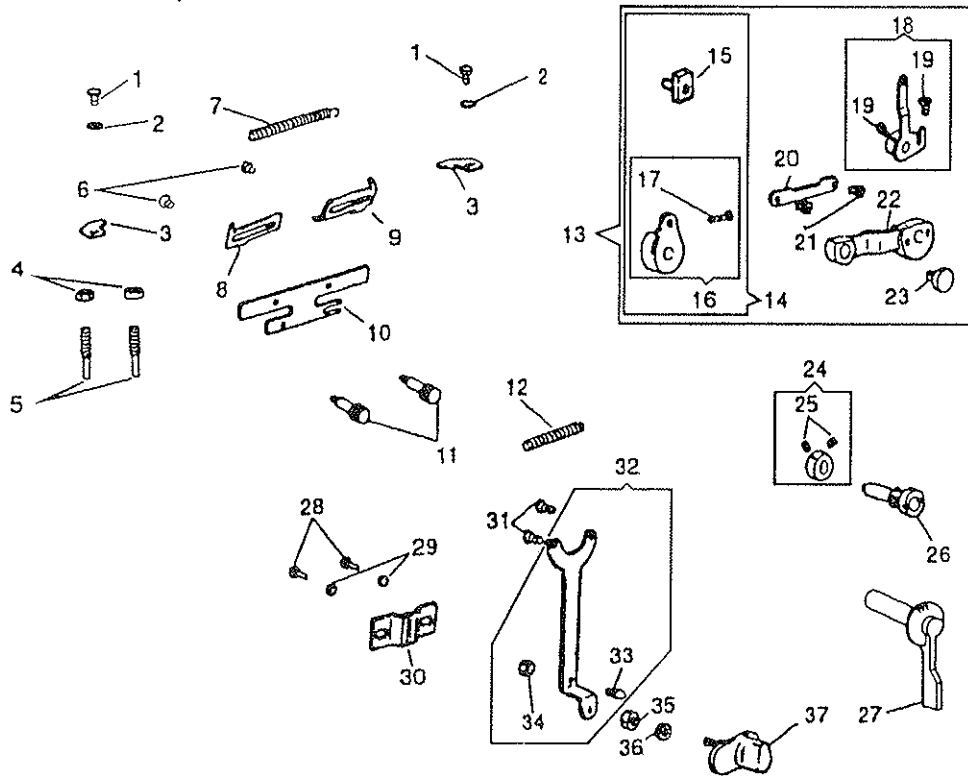
NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606646	*	*			1	Needle Bar
2	606461			*	*	1	Needle Bar
3	606463	*	*	*	*	1	Needle Clamp Screw
4	606647	*	*	*	*	1	Needle Bar Frame Comp.
5	606456	*	*	*	*	1	Needle Bar Frame
6	606458	*	*	*	*	1	Indicator Plate
7	606459	*	*	*	*	2	Indicator Plate Screw
8	606457	*	*	*	*	1	Ecc. Pin Set Screw
9	606516	*	*	*	*	1	Set Screw
10	606460	*	*	*	*	1	N/B Frame Pin
11	606462	*	*	*	*	1	Needle Bar Tread Guard
12	N1910-0514	*	*	*	*	1	Needle(size #14)
13	606648	*	*	*	*	1	P/B Thumb Screw & Nut Comp.
14	606592	*	*	*	*	1	Presser Bar Thumb Screw
15	606649	*	*	*	*	1	Presser Bar Thumb Screw Nut
16	606594	*	*	*	*	1	Presser Bar
17	606593	*	*	*	*	1	Presser Bar Spring
18	606600	*	*	*	*	1	Presser Bar Bracket Comp.
19	606599	*	*	*	*	1	Screw
20	606601	*	*	*	*	1	Presser Bar Lifting Bracket
21	606650	*	*			1	Presser Foot Comp.
22	606651			*	*	1	Presser Foot Comp.
23	606444	*	*	*	*	1	Presser Foot Screw
24	606652	*	*			1	Needle Plate
25	606402			*	*	1	Needle Plate
26	606403	*	*	*	*	2	Needle Plate Screw
27	606653	*	*	*	*	1	Bed Plate Comp.
28	606404	*	*	*	*	1	Bed Plate
29	606405	*	*	*	*	1	Bed Plate Spring
30	606401	*	*	*	*	2	Bed Plate Screw
31	606654	*	*	*	*	1	Slide Plate Comp.
32	606399	*	*	*	*	1	Slide Plate
33	606400	*	*	*	*	1	Slide Plate Spring
34	606401	*	*	*	*	2	Slide Plate Spring Screw

# ZIGZAG TRIANGULAR CAM, HOOK ADVANCING CRANK



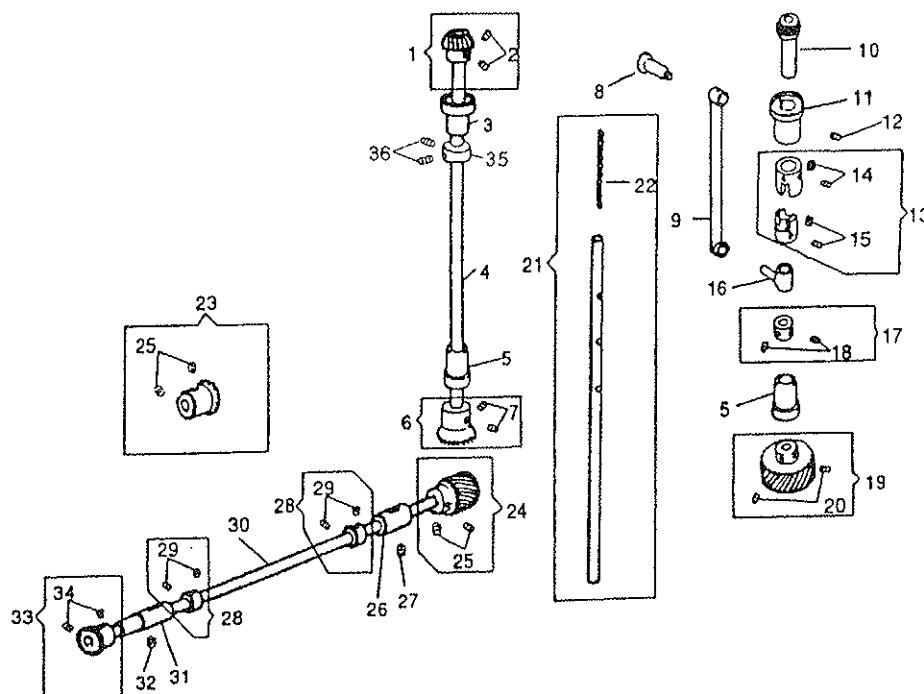
NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606420	*	*	*	*	1	Set Screw
2	606539	*	*	*	*	1	Cam Shaft Comp.
3	606655	*	*	*	*	1	Cam Shaft
4	606656	*	*	*	*	1	Cam Shaft Oil Wick
5	410031	*	*	*	*	1	Zig Zag Cam and Gear Comp.
	410056	*	*	*	*	1	Zig Zag Cam and Gear Comp.
6	606542	*	*	*	*	1	Cam Shaft Collar Comp.
7	606541	*	*	*	*	2	Collar Set Screw
8	606444	*	*	*	*	2	Screw
9	606590	*	*	*	*	2	Spring Washer
10	606589	*	*	*	*	2	Washer
11	606588	*	*	*	*	1	Oil Felt
12	606657	*	*	*	*	1	Oil Reservoir Comp.
	606586	*	*	*	*	1	Oil Reservoir Comp.
13	606658	*	*	*	*	1	Oil Wick
	606587	*	*	*	*	1	Oil Wick
14	606659	*	*	*	*	1	Oil Reservoir Bracket
15	606660	*	*	*	*	1	Set Screw
16	606584	*	*	*	*	1	Set Screw(Front)
17	606661	*	*	*	*	1	Hook Advancing Bracket Comp.
18	606581	*	*	*	*	1	Hook Advancing Crank Bracket
19	606559	*	*	*	*	1	Set Screw
20	606580	*	*	*	*	1	Hook Advancing Crank Shaft
21	606579	*	*	*	*	1	Hook Advancing Crank
22	606578	*	*	*	*	1	Snap Ring
23	606662	*	*	*	*	2	Set Screw
24	606584	*	*	*	*	1	Spring Support
25	606544	*	*	*	*	1	Hook Advancing Crank Link
26	606550	*	*	*	*	1	Hinge Screw
27	606543	*	*	*	*	1	Hinge Screw
28	606663	*	*	*	*	1	Zig Zag Stitch Reg. Fork
	606538	*	*	*	*	1	Zig Zag Stitch Reg. Fork
29	606545	*	*	*	*	1	Fork Eccentric Connection Pin
30	606664	*	*	*	*	1	Slide Block Cap Screw

# BIGHT AMPLITUDE, BIGHT AND L-C-R POSITION



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606511	*	*	*	*	2	Screw
2	606571	*	*	*	*	2	Washer
3	606569	*	*	*	*	2	Stop Plate
4	606554	*	*	*	*	2	Lever Arm Reg.Screw Nut
5	606553	*	*	*	*	2	Lever Arm Reg.Screw
6	606572	*	*	*	*	2	Screw
7	606577	*	*	*	*	1	Spring
8	606575	*	*	*	*	1	Regulating Plate, left
9	606576	*	*	*	*	1	Regulating Plate, right
10	606574	*	*	*	*	1	Reg. Plate Holder
11	606573	*	*	*	*	2	Thumb Screw
12	606556	*	*	*	*	1	Spring
13	606665	*	*	*	*	1	Bight Amplitude Control Mech. Comp.
14	606666	*	*	*	*	1	Bight Amplitude Control Mech. Comp.
15	606667	*	*	*	*	1	Slide Block & Guide Comp.
16	606668	*	*	*	*	1	Slide Block & Guide Comp.
17	606546	*	*	*	*	1	Slide Block
18	606669	*	*	*	*	1	Slide Block Guide Comp.
19	606547	*	*	*	*	1	Slide Block Guide Comp.
20	606670	*	*	*	*	1	Guide Stud Set Screw
21	606557	*	*	*	*	1	Slide Block Crank Comp.
22	606555	*	*	*	*	2	Slide Block Crank Set Screw
23	606549	*	*	*	*	1	Slide Block Crank Link
24	606671	*	*	*	*	2	Hinge Screw
25	606551	*	*	*	*	1	Position Lever Arm
26	606552	*	*	*	*	1	Guide Stud
27	606560	*	*	*	*	1	Collar Comp.
28	606518	*	*	*	*	2	Collar Set Screw
29	606562	*	*	*	*	1	Crank Shaft Bushing
30	554139-383	*	*	*	*	1	Crank Shaft Knob Comp.
31	606564	*	*	*	*	2	Position Block Screw
32	606568	*	*	*	*	2	Position Block Screw Washer
33	606673	*	*	*	*	1	Position Block
34	606563	*	*	*	*	1	Position Block
35	606674	*	*	*	*	2	Position Lever Screw
36	606566	*	*	*	*	1	Position Lever Comp.
37	606565	*	*	*	*	1	Position Lever Screw Pin
38	606675	*	*	*	*	1	Position Lever Screw Pin Nut
39	606675	*	*	*	*	1	Thumb Stud Nut
40	606676	*	*	*	*	1	Thumb Stud Spring Washer
41	554140-383	*	*	*	*	1	Thumb Stud

# ARM SHAFT (UPRIGHT), ROTATING HOOK DRIVE SHAFT



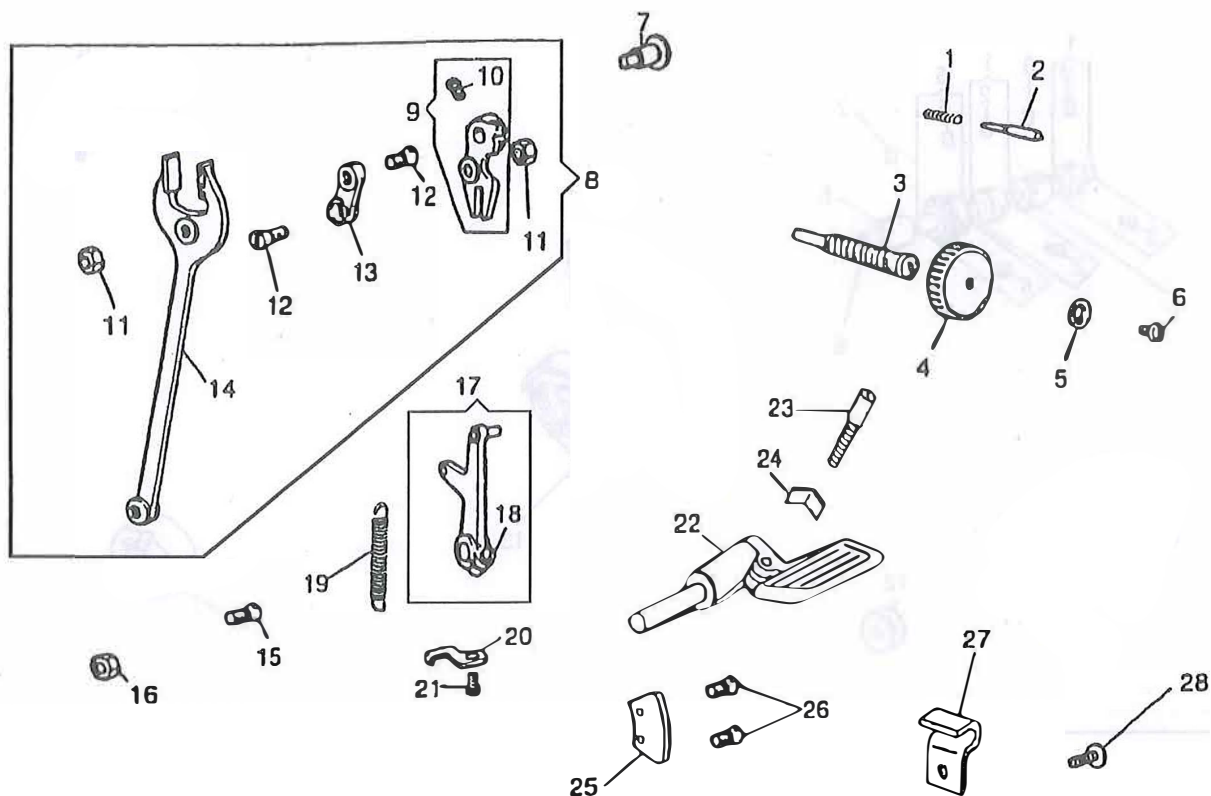
NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	541610	*	*			1	Bevel Gear Comp.
2	504101	*	*			2	Bevel Gear Set Screw
3	606677	*	*			1	Arm Shaft Bushing, upper
4	606678	*	*			1	Arm Shaft (Upright)
5	606527	*	*	*	*	1	Upright Bushing, lower
6	541609	*	*			1	Bevel Gear Comp.
7	504101	*	*			2	Bevel Gear Set Screw
8	606585			*	*	1	Connection Screw
9	606536			*	*	1	Hook Advance Crank Connecting Rod
10	606535			*	*	1	Bevel Gear
11	606533			*	*	1	Upright Bushing, upper
12	606534	*	*	*	*	1	Bushing Set Screw
13	606679			*	*	1	Clutch Sleeve Comp.
14	504101			*	*	2	Clutch Sleeve Screw
15	504101			*	*	2	Clutch Sleeve Screw
16	606528			*	*	1	Connecting Stud
17	606523			*	*	1	Retaining Collar Comp.
18	504101			*	*	2	Retaining Collar Screw
19	543914			*	*	1	Screw Gear Comp.
20	504101			*	*	2	Gear Set Screw
21	606537			*	*	1	Arm Shaft (Upright) Comp.
22	606680			*	*	2	Arm Shaft Oil Wick
23	541684	*	*			1	Bevel Gear Comp.
24	543944			*	*	1	Screw Gear Comp.
25	504101	*	*	*	*	2	Screw Gear Set Screw
26	606681	*	*			1	Hook Drive Shaft Bushing
27	606525			*	*	1	Hook Drive Shaft Bushing
28	606420	*	*	*	*	1	Set Screw
29	606523	*	*			1	Retaining Collar Comp.
30	606523			*	*	2	Retaining Collar Comp.
31	504101	*	*			2	Retaining Collar Screw
32	504101			*	*	4	Retaining Collar Screw
33	606682	*	*			1	Hook Drive Shaft
34	606526			*	*	1	Hook Drive Shaft
35	606522	*	*	*	*	1	Hook Drive Shaft Bush
36	606420	*	*	*	*	1	Set Screw
37	541685	*	*	*	*	1	Bevel Gear Comp.
38	504101	*	*	*	*	2	Bevel Gear Screw
39	606523	*	*			1	Arm Shaft (Upright) Collar Comp.
40	504101	*	*			2	Arm Shaft (Upright) Collar Screw

This exploded view diagram illustrates the assembly of a mechanical component. The parts are numbered as follows:

- 1:** Four vertical plates, each with a central hole and a smaller hole below it.
- 2:** Two small rectangular plates, each with a central hole.
- 3:** Two small rectangular plates, each with a central hole.
- 4:** A long horizontal plate with two holes.
- 5:** A long horizontal plate with two holes.
- 6:** A small rectangular plate with a central hole.
- 7:** A small rectangular plate with a central hole.
- 8:** A small rectangular plate with a central hole.
- 9:** A small rectangular plate with a central hole.
- 10:** A U-shaped bracket with a central hole.
- 11:** A small rectangular plate with a central hole.
- 12:** A small circular component with a central hole.
- 13:** A circular component with a central hole and a flange.
- 14:** A long horizontal plate with two holes.
- 15:** A small rectangular plate with a central hole.
- 16:** A small rectangular plate with a central hole.
- 17:** A small rectangular plate with a central hole.

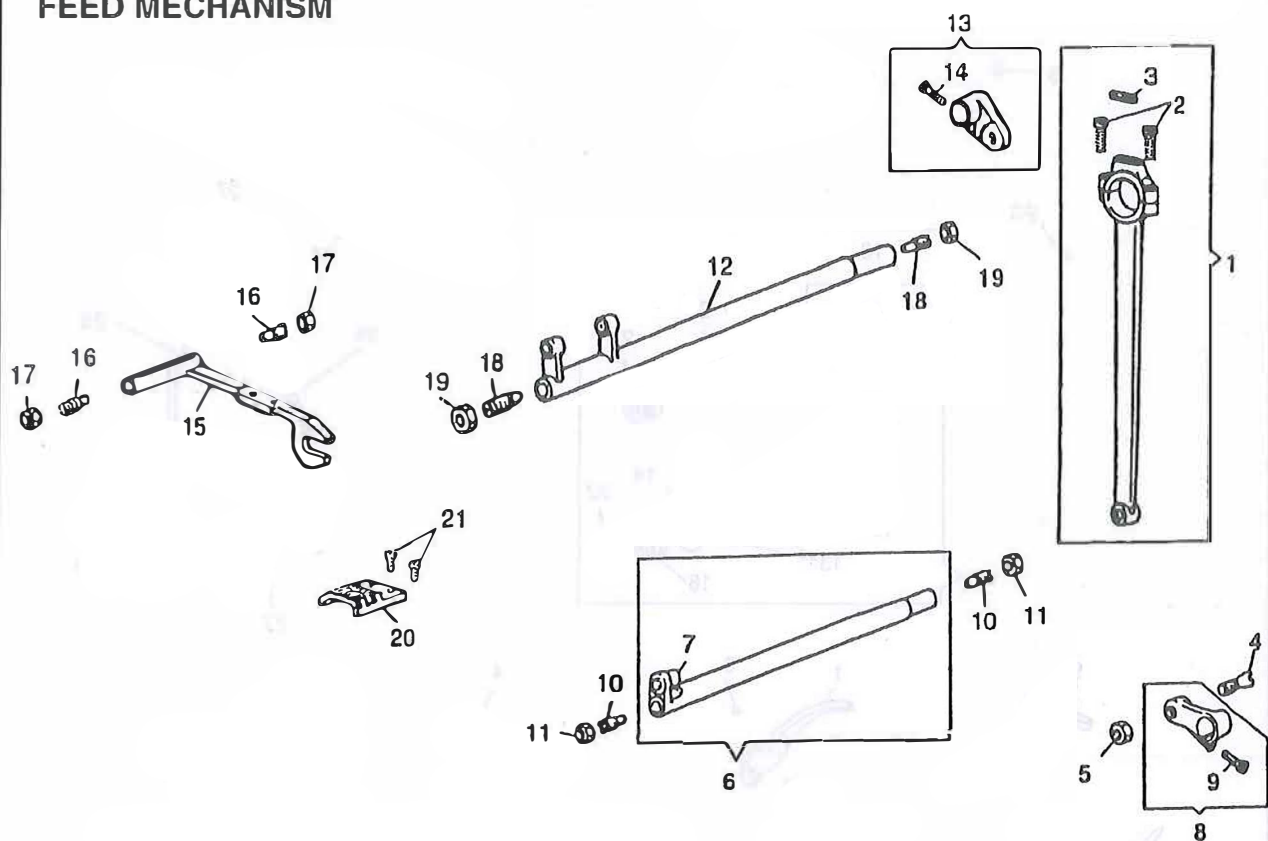
.7.

## FEED REGULATING DIAL, FEED REVERSE LEVER



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606618	*	*	*	*	1	Spring
2	606617	*	*	*	*	1	Stud Lock Pin
3	606609	*	*	*	*	1	Feed Regulating Stud
4	554138-383	*	*	*	*	1	Feed Regulation Dial
5	543803-004	*	*	*	*	1	Dial Screw Washer
6	544218-053	*	*	*	*	1	Dial Screw
7	606610	*	*	*	*	1	Hinge Stud
8	606685	*	*	*	*	1	Feed Regulator & Fork Comp.
9	606611	*	*	*	*	1	Feed Regulator Comp.
10	606686	*	*	*	*	1	Screw
11	606494	*	*	*	*	2	Hinge Screw Nut
12	606496	*	*	*	*	2	Hinge Screw
13	606495	*	*	*	*	1	Feed Connecting Link
14	606509	*	*	*	*	1	Feed Fork Connection.
15	606496	*	*	*	*	1	Hinge Screw
16	606494	*	*	*	*	1	Hinge Screw Nut
17	606615	*	*	*	*	1	Reverse Lever Link Comp.
18	606434	*	*	*	*	1	Clamp Screw
19	606612	*	*	*	*	1	Spring
20	606614	*	*	*	*	1	Spring Bracket
21	606602	*	*	*	*	1	Screw
22	554131-467	*	*	*	*	1	Reverse Lever Comp.
23	374564	*	*	*	*	1	Adjusting Screw
24	554134	*	*	*	*	1	Adjusting Screw Friction
25	554136	*	*	*	*	1	Indicator Plate
26	504010-453	*	*	*	*	2	Indicator Plate Screw
27	554135	*	*	*	*	1	Adjusting Screw Stopper
28	544213-001	*	*	*	*	1	Stopper Set Screw

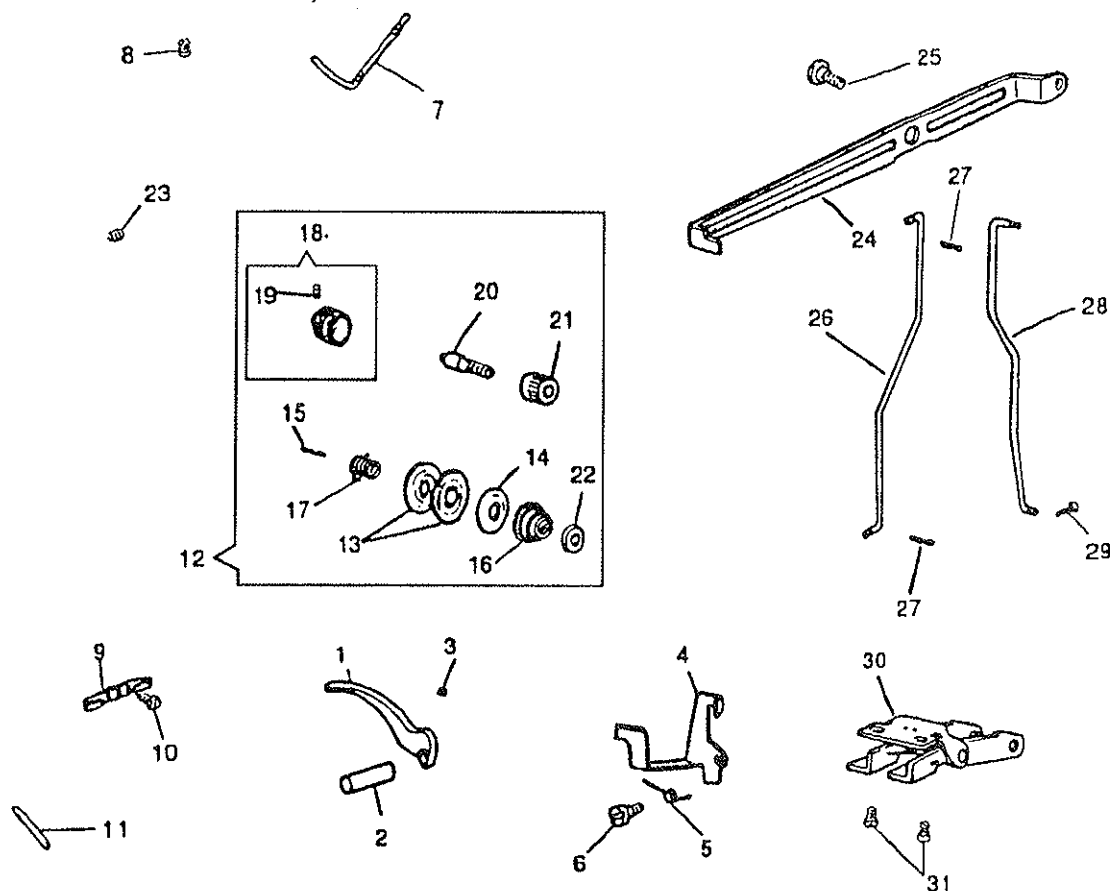
## FEED MECHANISM



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606493	*	*	*	*	1	Connecting Rod Comp.
2	606434	*	*	*	*	2	Connecting Rod Cap Screw
3	606492	*	*	*	*	1	Oil Felt
4	606496	*	*	*	*	1	Hinge Screw
5	606494	*	*	*	*	1	Hinge Screw Nut
6	606507	*	*	*	*	1	Feed Lifting Rock Shaft Comp.
7	606687	*	*	*	*	1	Roller and Stud
8	606508	*	*	*	*	1	Lifting Rock Shaft Crank Comp.
9	606500	*	*	*	*	1	Crank Clamping Screw
10	606497	*	*	*	*	2	Screw Center
11	606498	*	*	*	*	2	Screw Center Nut
12	606505	*	*	*	*	1	Feed Rock Shaft
13	606499	*	*	*	*	1	Feed Rock Shaft Crank Comp.
14	606500	*	*	*	*	1	Crank Clamping Screw
15	606506	*	*	*	*	1	Feed Bar
16	606503	*	*	*	*	2	Screw Center
17	606504	*	*	*	*	2	Screw Center Nut
18	606497	*	*	*	*	2	Screw Center
19	606498	*	*	*	*	2	Screw Center Nut
20	606688	*	*	*	*	1	Feed Dog
21	606502	*	*	*	*	1	Feed Dog
	606501	*	*	*	*	2	Feed Dog Screw

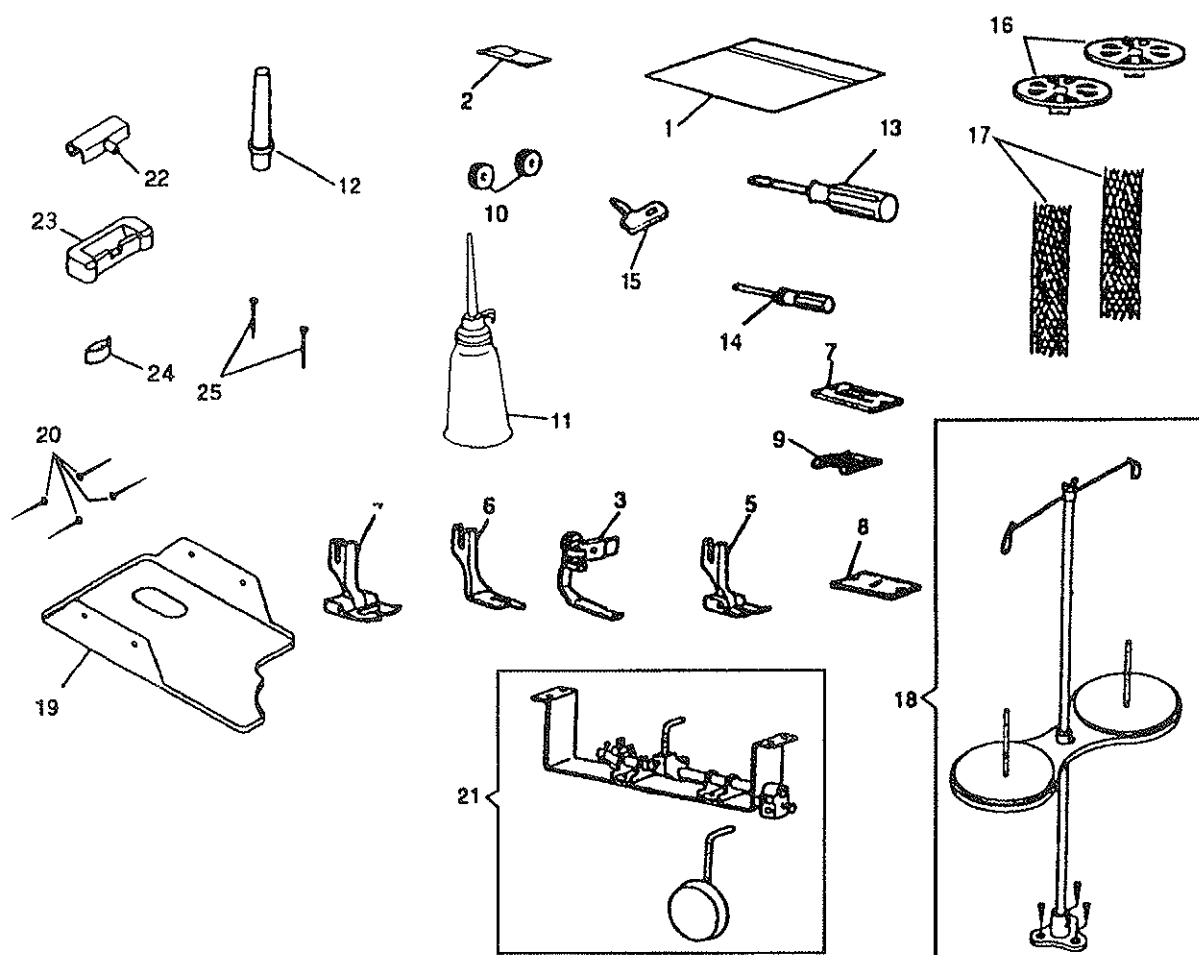


# PRESSER BAR LIFTER, TENSION



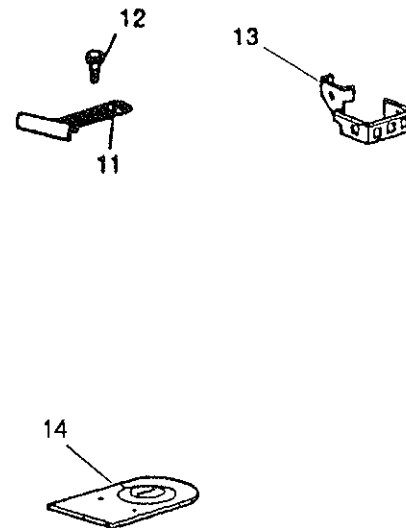
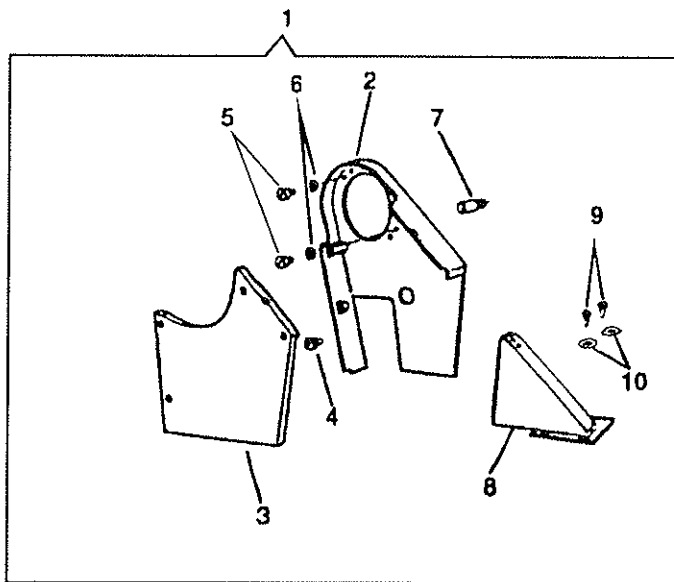
NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606598	*	*	*	*	1	Hand Lifter Lever
2	606597	*	*	*	*	1	Hand Lifter Lever Pin
3	606599	*	*	*	*	1	Screw
4	606413	*	*	*	*	1	Tension Release Lever
5	606412	*	*	*	*	1	Tension Release Lever Screw Spring
6	606411	*	*	*	*	1	Tension Release Lever Screw
7	410413	*	*	*	*	1	Thread Retainer
8	606518	*	*	*	*	1	Thread Retainer Screw
9	606416	*	*	*	*	1	Thread Guide
10	606444	*	*	*	*	1	Thread Guide Screw
11	606414	*	*	*	*	1	Thread Guard Pin
12	606689	*	*	*	*	1	Tension Comp.
13	606425	*	*	*	*	2	Tension Disc
14	606426	*	*	*	*	1	Tension Releasing Disc
15	606418	*	*	*	*	1	Tension Release Pin
16	606427	*	*	*	*	1	Tension Spring
17	606422	*	*	*	*	1	Thread Take-up Spring
18	606419	*	*	*	*	1	Tension Base Comp.
19	606421	*	*	*	*	1	Tension Securing Screw
20	606424	*	*	*	*	1	Tension Stud
21	606429	*	*	*	*	1	Thumb Nut
22	606428	*	*	*	*	1	Thumb Nut Washer
23	600420	*	*	*	*	1	Set Screw
24	606607	*	*	*	*	1	Lifting Lever
25	606608	*	*	*	*	1	Hinge Screw
26	606605	*	*	*	*	1	Connecting Rod
27	606604	*	*	*	*	2	Connecting Rod Pin
28	606606	*	*	*	*	1	Connecting Rod
29	606604	*	*	*	*	1	Connecting Rod Pin
30	606603	*	*	*	*	1	Bell Crank Comp.
31	606602	*	*	*	*	2	Screw

## ACCESSORIES AND ATTACHMENT 1



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	606690	*	*	*	*	1	Accessory Box
2	N1910-0514	*	*	*	*	3	Needle (Size #14)
3	606691	*	*	*	*	1	Zipper Foot
4	606692	*	*	*	*	1	Presser Foot Comp. (for Button Holing)
5	606693	*	*	*	*	1	Presser Foot Comp. (for Straight Stitching)
6	606694	*	*	*	*	1	Hemmer Foot Comp.
7	606695	*	*	*	*	1	Needle Plate (for Straight Stitching)
8	606696	*	*	*	*	1	Needle Plate (for Embroidery)
9	606697	*	*	*	*	1	Feed Dog (for Straight Stitching)
10	606513	*	*	*	*	2	Bobbin
11	606698	*	*	*	*	1	Oiler
12	606699	*	*	*	*	1	Machine Rest Pin
13	606700	*	*	*	*	1	Screw Driver (large)
14	606701	*	*	*	*	1	Screw Driver (small)
15	606702	*	*	*	*	1	Screw Driver (for Needle Plate)
16	606703	*	*	*	*	2	Thread Unwinder Spool Cap
17	606704	*	*	*	*	2	Thread Unwinder Spool Net
18	606705	*	*	*	*	1	Thread Unwinder Comp.
19	606706	*	*	*	*	1	Drip Pan
20	606707	*	*	*	*	4	Drip Pan Nail
21	606708	*	*	*	*	1	Knee Lifter Comp.
22	606709	*	*	*	*	2	Machine Hinge
23	606710	*	*	*	*	2	Machine Hinge Cushion
24	606711	*	*	*	*	4	Machine Cushion
25	606707	*	*	*	*	6	Nail

# PARTS AVAILABLE AT EXTRA CHARGE



NO.	PART NO.	U73	U73B	U83	U83B	QTY.	DESCRIPTION
1	281840-383	*	*	*	*	1	Belt Guard Comp.
2	281833-383	*	*	*	*	1	Belt Guard (Upper)
3	281834-383	*	*	*	*	1	Belt Guard (Upper) Cover
4	549116	*	*	*	*	1	Belt Guard (Upper) Screw
5	504063-451	*	*	*	*	2	Belt Guard (Upper) Screw Washer
6	543875-104	*	*	*	*	2	Belt Guard (Upper) Screw Stud
7	544241	*	*	*	*	1	Belt Guard (Lower)
8	281835-383	*	*	*	*	1	Belt Guard (Lower) Wood Screw
9	549398	*	*	*	*	2	Belt Guard (Lower) Wood Screw Washer
10	543803-003	*	*	*	*	2	Belt Guard (Lower) Wood Screw Washer
11	541515-001	*	*	*	*	1	Cloth Guide
12	504030	*	*	*	*	1	Cloth Guide Thumb Screw
13	281822	*	*	*	*	1	Finger Guard
14	410076			*	*	1	Needle Plate Comp. (for Embroidery)



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