

# ARTISAN®



## TORO 1320

***Instruction and  
Spare Parts Manual***

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## 1. Introduction to machine

2B/2BL20 upper and lower feed lockstitch for the heavily and most bulky materials is featured with single needle, link take-up lever, high precision screw gear driver and big rotating hook. Besides the capabilities possessed by ordinary upper and lower feed sewing machine, the biggest strongpoint is that it can work smoothly on the heavy sewing material and thick sewing thread due to its special upper feed structure.

This series is suitable for sewing on boxes, bags, leather workpiece, sofa, tent and mat etc.

## 3. Operating preparation

### 1 Machine cleaning

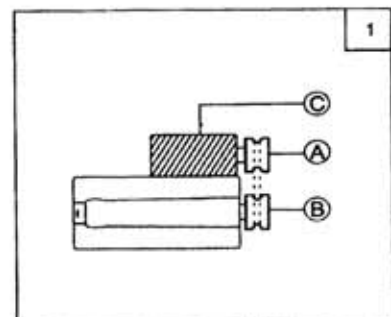
To prevent parts getting rusty, thick antirust grease will be smeared thoroughly on machine head before putting it in box. After that, grease may become sclerous due to long-time storage and long-distance transportation and dirt may also accumulate on the surface of the machine. The grease and dirt on the surface must be cleaned with gasoline and soft cloth.

### 2 Checking

Although thorough checking and testing has been made before machine leave factory, one more careful checking is needed for the parts of the machine might loosened or distorted by strong vibration during long-distance transportation. Turn the driver gently by hand to see whether it has running difficulty among parts, with/without collision or other uneven resistance or abnormal sounds. Adjust must be made if abnormality exists. Trial run cannot start before all become normal on machine.

## 4. Install electromotor (figure 1)

Move the motor (C) left and right, and make the positions of the driver groove (A) sewing machine and the belt wheel groove (B) of the motor in line.



## 2. Main technical specifications

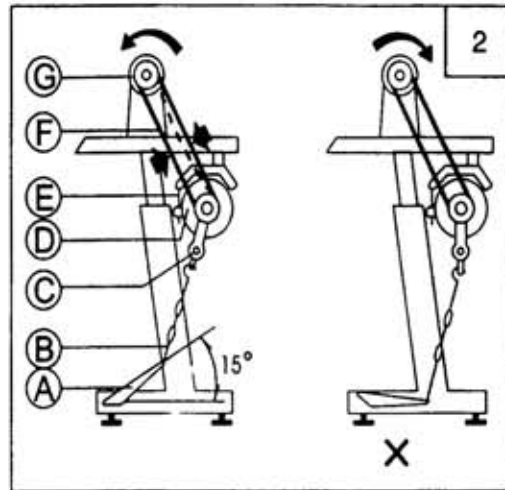
Parameters	model	2B	2BL20
Max. sewing speed		1200s.p.m.	900s.p.m.
Max. stitch length		13mm	
Presser foot lifting height		13mm by hand, 13mm above with pedal	
Alternate presser foot range		4mm-6mm	
Presser foot synchronized with feed dog		Max stroke no less than 13mm	
Rotating hook		Oversize rotating hook	
Needle		DD×1 24#-27#	
Lubricating type		Lubricate by hand	
Electromotor power		0.5kw(only for sewing machine)	

5. Connect pedal with clutch lifting rod (figure 2)

A. The suitable gradient between pedal installed and floor is  $15^{\circ}$

B. Adjust the motor clutch, and make the lifting rod (B) of the sewing machine and hat (C) of the clutch in line (see figure), so as to make motor run smoothly and its life span extended.

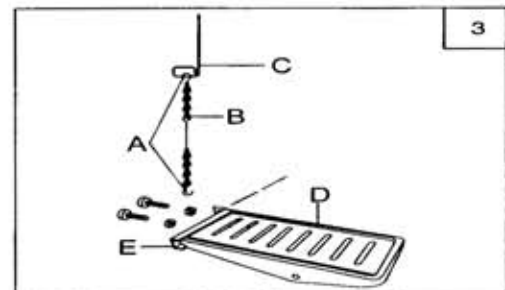
C. Look from the exterior part of the machine head driver, the running direction of the sewing machine is anticlockwise. Its running direction should accord with that of the motor, and can be adjusted with turning  $180^{\circ}$  of the motor plug.



D. Moving the position of motor up and down can make the tension adjustment of the O triangular belt (F). Press the belt with finger to test the tension of the belt, and the belt should bend 10-12mm (see figure).

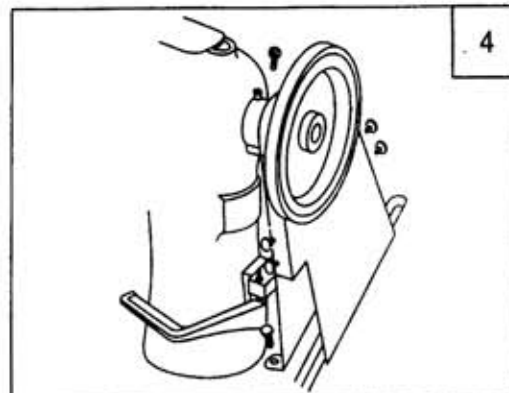
6. Connect presser-lifting pedal (figure 3)

Firstly, connect the presser foot lifting zipper B and presser foot lifting rod C with zipper hook A, then place the pedal subassembly D on the stand, and move the control plate E left and right to make zippers in line. The tie-in is fastened with nut and bolt. Finally, hitch the control plate with zipper hook.



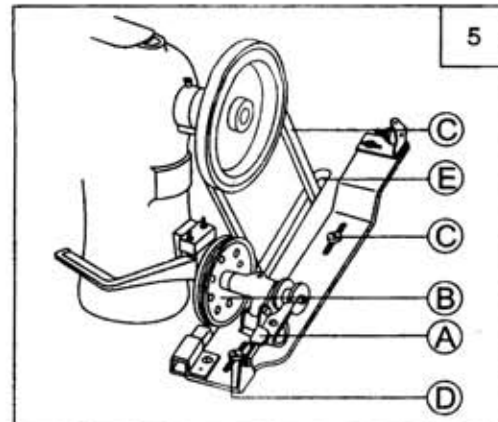
7. Install belt shield (figure 4)

For safety consideration, the belt shield should be installed.



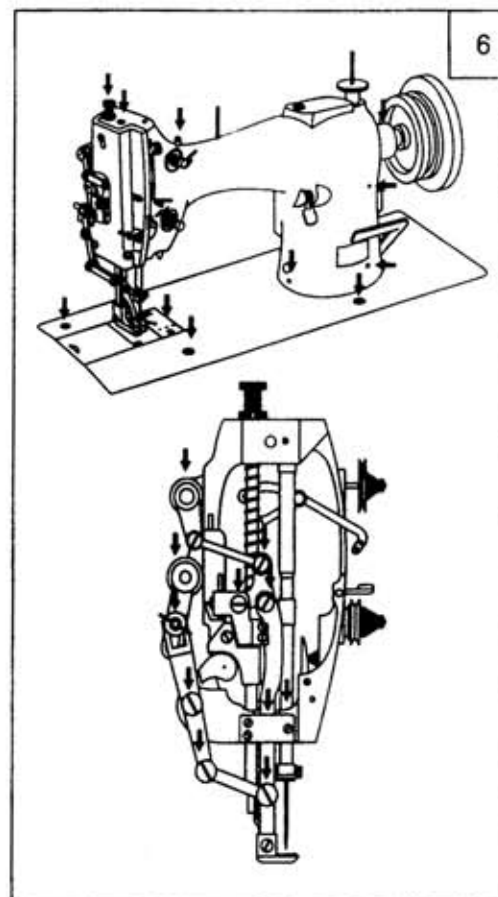
8. Install bobbin winder (figure 5)

Install bobbin winder after installing of the machine head and fixing the belt. When installing bobbin winder, let the winder wheel (B) aim at the exterior fringe of the belt(C), and there should be some clearance between winder wheel and belt, and makes assure that they can contact each other when pressing swing rod (A) of the bobbin winder. Thus, winder wheel will run along with the belt. Attention should be paid to the left and right installing positions of the bobbin winder, which should parallel with the belt hole (E) of the bed. At last, fasten the wood bolt.



9. Lubrication (figure 6)

Add enough lubricating oil at the position of the red marker after finishing work at the end of day, and then run the machine for 1-2minutes.



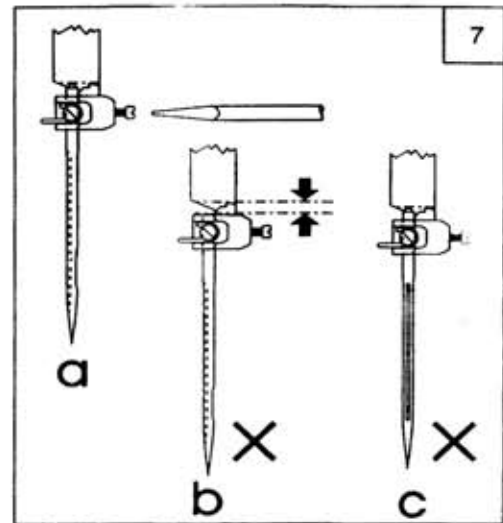
## 10. Trial run

Before using new machine or reusing a machine being laid aside for a long time, please demount the rubber plug and faceplate on the top of machine head, and add enough lubricating oil. After that, lift the presser foot, and let the machine run at a low speed of 300-400s.p.m. Please keep running test for 30 minutes with thorough lubrication, and then increase the sewing speed gradually. Machine will become harmonious after using for about one month. Sewing speed can then increase according to the nature of the work.

## 11. Install machine needle (figure 7)

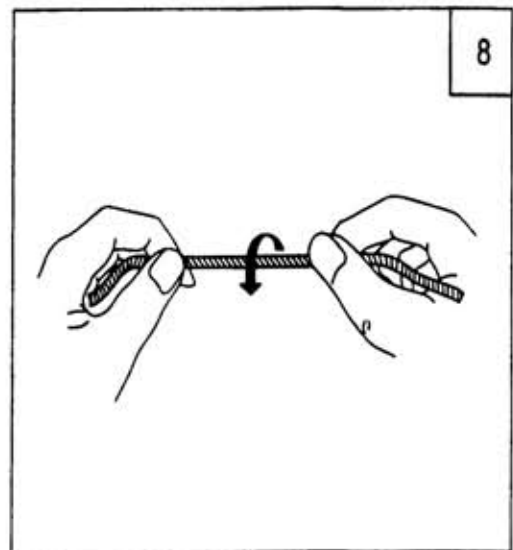
Turn the upper wheel, and make the machine needle move up to the top position. Loosen the needle clamp bolt 1, and let the long groove of the machine needle face the left side of the operator, and then insert the needle bar in the needle hole at the lower part of the needle rod. Fasten the needle clamp bolt 1 and fix the machine needle when the needle bar touches the bottom of the needle rod hole.

Notice: as figure (b) showing, machine needle does not touch the bottom of the needle rod hole. As figure (c) showing, the direction of the needle groove is facing the operator, both are wrong.



## 12. Match the machine needle with sewing thread and sewing materials (figure 8)

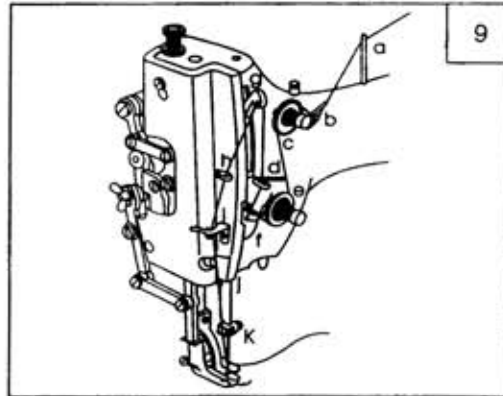
Upper thread should be left-twisted thread, and the bottom thread can be left twist thread or right-twisted thread. As figure 10 showing, we can determine the twist direction of the sewing thread. Twist the sewing thread in arrow direction showed in figure, and if the thread gets tightened, it should be the left -twisted thread; otherwise it should be the right-twisted thread. Please use 24#-27# machine needle, and thickness of the needle should match the nature of the sewing material. If use too thin needle to sewing thick textile, the needle can easily get broken, and needle skipping and stitches breaking can also arise from it. On the contrary, if use too thick needle to sew thick textile, the textile can also get damaged due to too big needle hole. Therefore, the machine needle and the thickness of the sewing thread should be chosen according to the nature of the sewing materials.



### 13. Upper threading (figure 9)

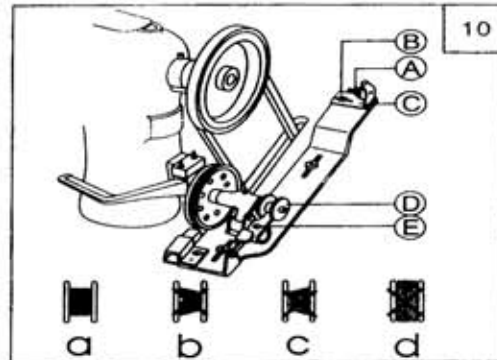
Needle bar should be put at the highest position when crossing the upper thread, and then cross thread ends on the thread frame in order.

- (a) Long thread crossing nail
- (b) Small thread crossing hook
- (c) Small thread tension plate
- (d) Big thread hook
- (e) Big thread tension plate and thread take-up spring
- (f) Big thread hook
- (g) Thread take-up bar
- (h) Small thread hook
- (i) Thread hook
- (j) Spring thread crossing frame
- (k) Thread crossing ring



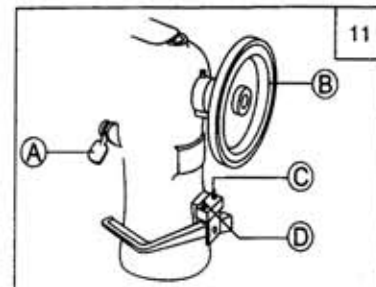
### 14. Bobbin adjustment (figure 10)

Bobbin thread should be ranged orderly and tightly. If it seems lax, augment the pressure to the thread tension plate A on the thread-crossing frame. If it is not ranged orderly, please adjust it by moving the thread-crossing frame C. To adjust it, you should firstly loosen the thread-crossing bolt B. If the thread rolled by single side as figure (b) shows, then move the thread-crossing frame to the right; if the thread rolled by single side as figure (c) shows, then move the thread-crossing frame to the left. Rang it orderly as figure (a) shows, and then fasten it.



Notice: Loosen the winding pressure especially when rolling the terylene and nylon thread, otherwise, the bobbin D will get deformed or broken. You should not roll the bobbin thread too full. Otherwise, it may disperse easily. The suitable thread quantity rolled should be 80% of the distance from the parallel thread rolled to the exterior diameter of the bobbin. The thread quantity rolled can be adjusted by full thread adjusting bolt E on the full thread springboard.

### 15. Stitch length, forward and backward stitching error adjustment (figure 11)

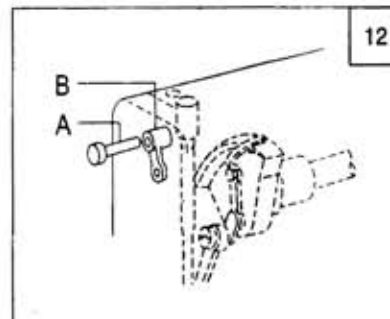


The stitch length can be adjusted by stitch length adjusting spanner A. Press the stitch length adjusting spanner with your left hand, and turn the belt wheel B with your right hand. The stitch length will be shortened when you turn the wheel clockwise; and it will become extended when you turn the wheel anticlockwise. After adjustment, test the stitch length with a piece of paper to get satisfactory results. Then take a look whether the length of the forward and backward stitch is the same. If the backward stitch is shorter, loosen the bolt C anticlockwise, and then fasten the bolt; if the backward stitch is longer than forward stitch, adjust it oppositely. You may achieve the same goal with adjusting bolt D.

16. Lubricating at thread take-up position (figure 12)

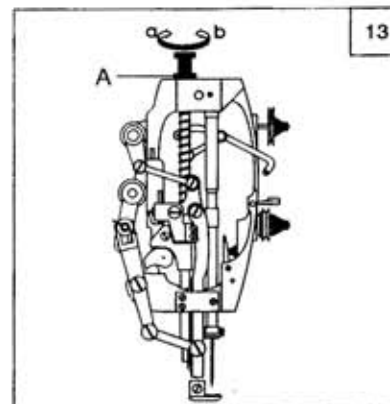
Take-up thread and needle bar should be lubricated with soft wool oil thread. If the soft (oil) thread was polluted or became sclerous and lost the normal lubricating function after long-time use, it should be replaced with a new soft wool oil thread. The replacing method is as following:

1. Open the face plate of the machine head, take down the adjusting bolt, locking nut of the pressure-adjusting bolt and adjusting bar etc.
2. Take down the connecting bar pin A of the take-up thread, and then pull out the soft oil thread.
3. Pull out the soft oil thread in B.
4. Replace a new oil thread.
5. The installing process is opposite from above process.



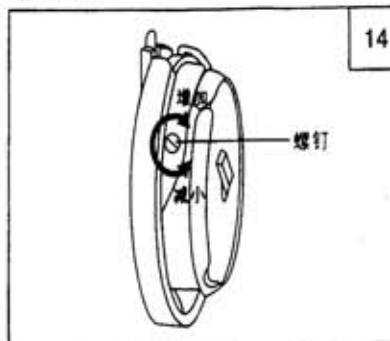
17. Adjust the pressure of the presser foot (figure 13)

Considering the thickness of the sewing material, the pressure of the presser foot can be adjusted by loosening the locking nut A of the pressure-adjusting bolt. If the sewing material is thick, turn the pressure-adjusting bolt at the top of the machine head in the direction as a shows in figure so as to increase the pressure of the presser foot, or turn the pressure-adjusting bolt in the direction as b shows in figure so as to decrease the pressure of the presser foot when the sewing material is thin. Finally, you should fasten the pressure-adjusting nut A. If it can normally push the sewing material, the pressure of the presser foot can be judged as suitable.



18. Install bobbin and adjust the tension of the sewing thread (figure 14)

The tension of the sewing thread should be adjusted according to the difference of the sewing material, the thickness of the sewing thread and other factors. In the real sewing





operation, we can adjust the tension of the lower and upper thread with the sewing stitch so as to obtain a normal stitch.

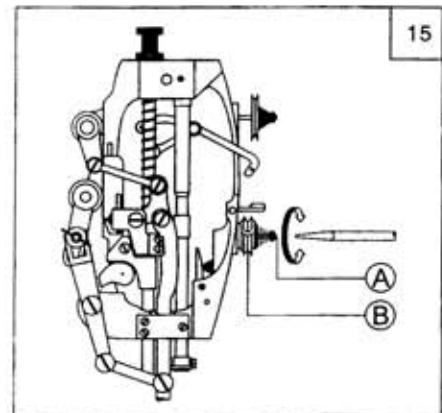
The tension of the lower thread can be adjusted by increasing or decreasing the pressure of the it with a small screwdriver.

Upper thread tension is on the basis of the lower thread tension. You may adjust the upper thread tension mainly by changing the tension of the take-up thread spring in thread tension subassembly, swing range of the take-up thread spring, tension of the thread tension spring, thread tension plate and the position of the thread hook etc.

19. Adjust the thread take-up tension spring (figure 15)

The swing range of the thread take-up tension spring is 5-8mm. The tension of the take-up spring should be decreased and the swing range increased when sewing thin material (short stitch length); act it opposite when sewing the most thick material.

1. Turn the thread tension bolt A. The tension will increase when turning it clockwise; otherwise, the tension will decrease.
2. Adjust the swing range of the thread take-up tension spring



Loosen the set bolt A on the adjusting frame of tension thread, turn the tension device B and adjust its swing range. The swing range will increase when turning it clockwise; otherwise, the range will decrease.

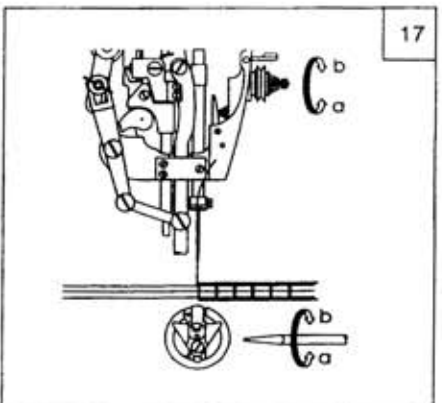
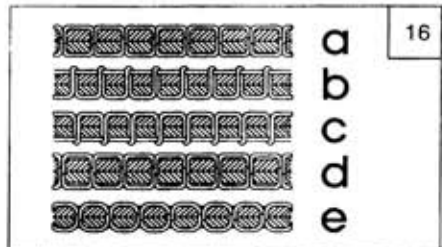
Usually, the thread take-up tension spring had been adjusted well before the machine left the factory. It is necessary to adjust it only when sewing special material or sewing with special thread.

20. Adjust the tension of the lower thread (figure 16,17)

The normal stitch of the sewing machine should looks like as figure a shows. If the stitch is not normal, sewing material will pucker or the stitch will break; meanwhile, you should adjust the tension of the lower thread to obtain normal stitch.

A. If the upper thread is too tight and the lower thread too loose, turn the thread tension nut anticlockwise to decrease the pressure of the upper thread, or fasten the bobbin bolt with a small screwdriver to increase the pressure of the lower thread.

B. If the upper thread is too loose and the lower thread too tight, turn the thread



tension nut clockwise to increase the pressure of the upper thread, or loosen the bobbin bolt with a small screwdriver to decrease the pressure of the lower thread.

C. If the stitch appears like as figure d or e shows, you may adjust it referring the above methods.

21. Synchronous adjustment to the needle and the rotary hook (figure 18,19)

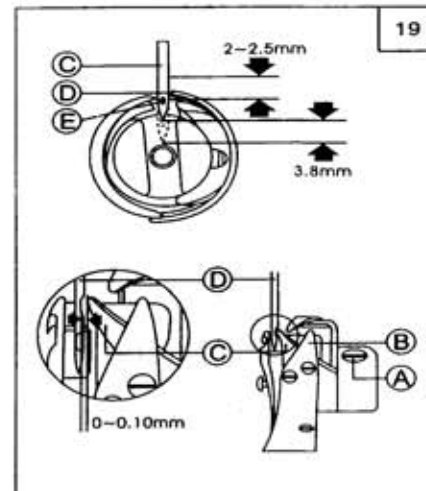
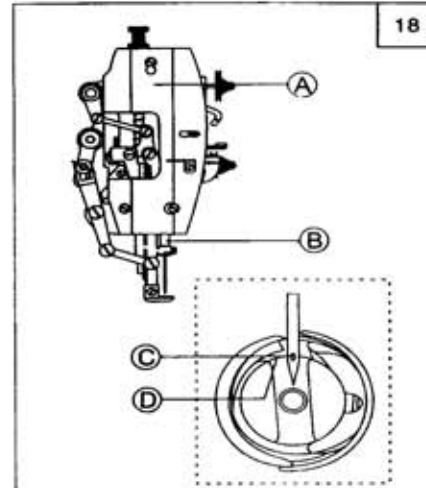
1. Adjust the needle position

Turn the driver with your hand, and make the needle bar (B) drop to its lowest position. Then, take down the faceplate (A), move the needle bar up and down to set the original synchronous position (synchronous position of the needle bar). When the needle bar drops to its lowest position, the center of the needle hole (C) should be at the same position of the interior circle surface.

2. Synchronous adjustment to the rotary hook

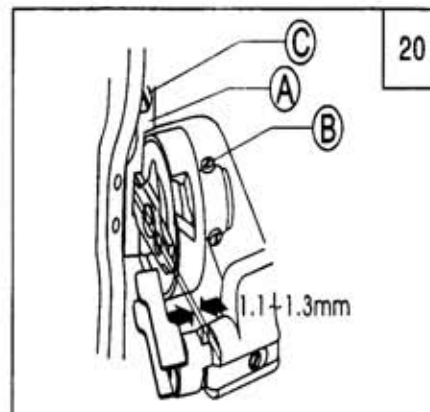
The interacting relation between the rotary hook and machine needle has great influence to the sewing performance. The standard synchronization is: turn the driver with your hand. Make the needle move downward to the lowest position, and then return upward for 3.8mm; meanwhile, the rotary hook thread tine (D) should be consistent with the central line of the needle (C). At this position, hook thread tine (D) should be higher than machine needle hole (E) for 2-2.5mm.

The clearance between the rotary hook tine and the side of the needle should be noticed when adjusting the synchronous relations of the rotary hook. The clearance between the bottom of the needle (D) indentation and the hook thread tine of the rotary hook is 0-0.1mm.



22. Assemble and unassemble rotary hook (figure 20)

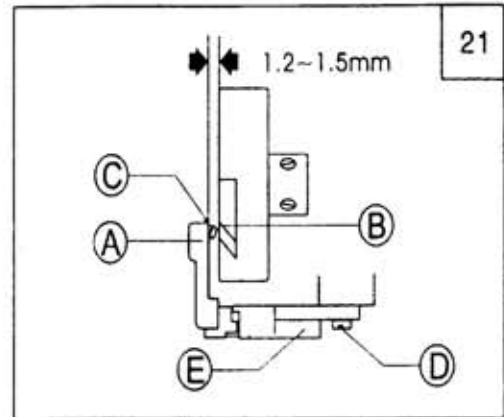
Firstly, lift the needle bar to the highest position; take down the needle plate, machine needle and bobbin cover. Unscrew the set hook bolt (C) of the rotary hook, and take down the set hook of the rotary hook. Then, loosen the rotary hook bolt (B), so as to make the rotary hook move freely on its driving shaft. Turn the upper shaft with your hand to make the feed frame move higher. Now, turn the rotary hook with your hand and take it out slowly. The installing process of the rotary hook is opposite to the above process.



The installing position of the set hook of the rotary hook is to make the groove side of the set hook (A) consistent with the side of the bobbin cover. Furthermore, the clearance between those two sides is 1.1-1.3mm.

23. Install the spacing stop of the rotary hook (figure 21)

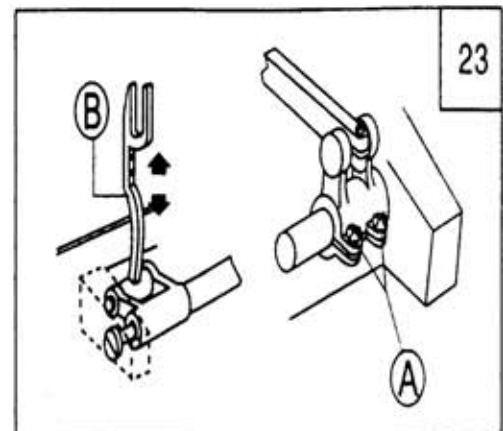
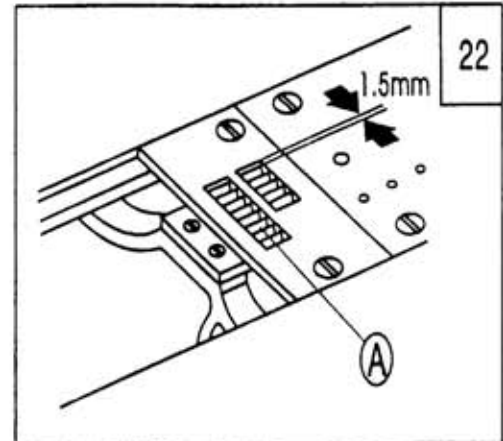
Fasten the bolt D firstly when installing the spacing stop of the rotary hook. Adjust and keep the distance between the spacing frame and the rotary hook 1.2-1.5mm, and the distance between the spacing spring C and the bobbin cover 1-1.2mm, thus make C limit the bobbin cover elastically without falling off. Furthermore, you can not allow C contact the rotary hook tine B. If they contact each other, you may adjust the spacing stop of the rotary hook. Finally, fasten the bolt D.



24. Install feed dog (figure 22,23)

A. When the feeding quantity is set the biggest, and the front end of the feed dog (A) is close to the front of the needle plate groove, the space between the front end of the feed dog and the front of the needle plate groove is 1.5mm-this is the standard installing position of the feed dog.

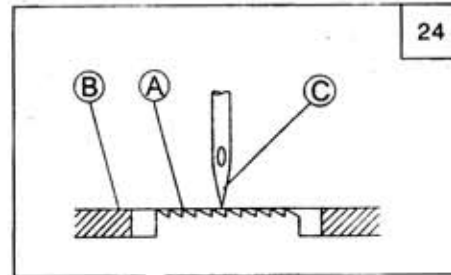
B. When adjusting the position of the feed dog, move firstly the feed dog to the forefront of the needle plate, and then loosen the crank bolt (A) of the cloth-feeding shaft (see figure 29b). Move the teeth rest (B) in arrow direction shown in figure 29a to adjust the position. Fasten the bolt (A) after adjusting well.



## 25. Synchronous adjustment to the cloth feeding (figure 24, 25, 26)

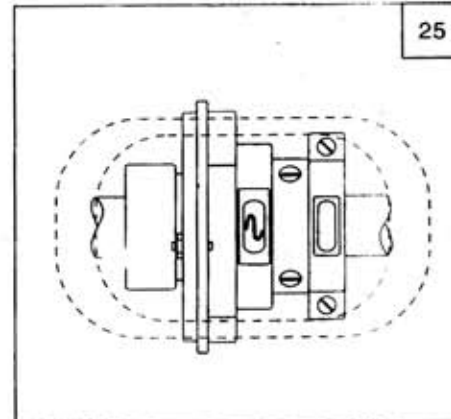
### 1. Standard position

Turn the upper shaft and lower the feed dog (A). The needlepoint of the machine needle (C) should be at the same level with the needle plate (B) and the feed dog surface when the feed dog flatly placed on the surface of the needle plate. Changing the installing position of the cloth-feeding cam can make the adjustment.



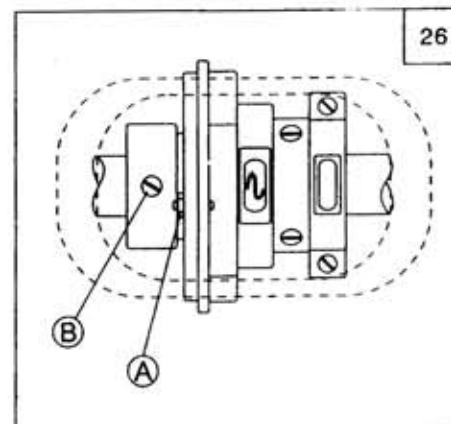
### 2. Install the feed lifting cam

Open the upper cover board, and turn the upper shaft anticlockwise with your hand to make the needle move up to its highest position; meanwhile, turn the first bolt (the first bolt anticlockwise) of the feed lifting cam  $45^\circ$  anticlockwise, and fasten the bolt at this position.



### 3. Install the cloth feeding cam

Install the cloth-feeding cam after finishing the installation of the feed lifting cam. Referring to the feed-lifting cam, turn the bolt (A)  $30^\circ$  anticlockwise when the needle moving to its highest position. That is to say, turn the first bolt of the feed lifting cam  $15^\circ$  clockwise. Finally, fasten the binding bolt (B). Notice: The bolt (A) should be distinguished from the other bolt. The difference between them is that the other bolt has a spring cushion.



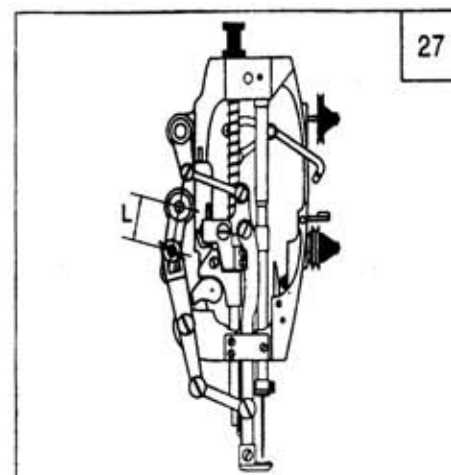
## 26. Adjust the upper feed mechanism (figure 27)

Upper and lower feeding synchronously is one of the most important capabilities of the machine. In sewing operation, adjust the center distance (L) between the sliding blocks and the shaft of the swing presser-foot in upper feed mechanism.

Adjusting methods:

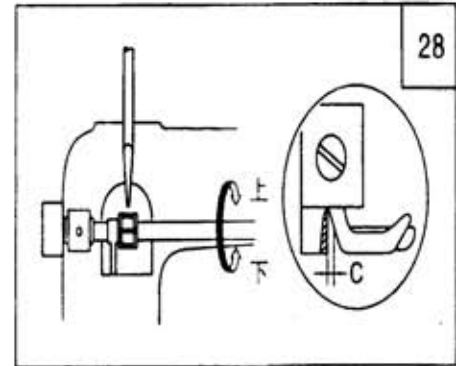
Increase the center distance L-increase the quantity of the upper feeding.

Decrease the center distance L-decrease the quantity of the upper feeding.



As to special sewing requirements for some products (e.g. the upper feeding quantity required is bigger/smaller than the lower feeding quantity), you may adjust in a certain scope according to the theory mentioned above.

27. Adjust the swing presser-foot and the clearance of the presser foot in front and back directions (figure 28)



In sewing operation, you may sew with big stitch or small stitch sometimes. When sewing with big stitch, the fore-and-aft distance of the swing presser-foot will be big, otherwise, it is small. When sewing with small stitch, the swing presser-foot should be close up to the needle bar to prevent the collision between the front end of the swing presser-foot groove and the back end of the small presser foot and keep a clearance C between them (usually keep about 1.5mm). The adjusting methods: loosen firstly the back crank bolt of the swing presser-foot, and turn upward the swing shaft of the presser foot, so as to make the presser foot close to the needle bar. Attention should be paid to the value requirement of the clearance C when make adjustment.

28. Cleaning termly (figure 29)

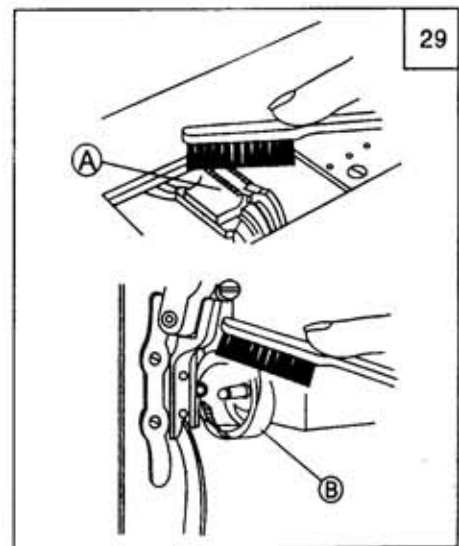
Please clean the feed dog, rotary hook and bobbin cover termly according to the using conditions.

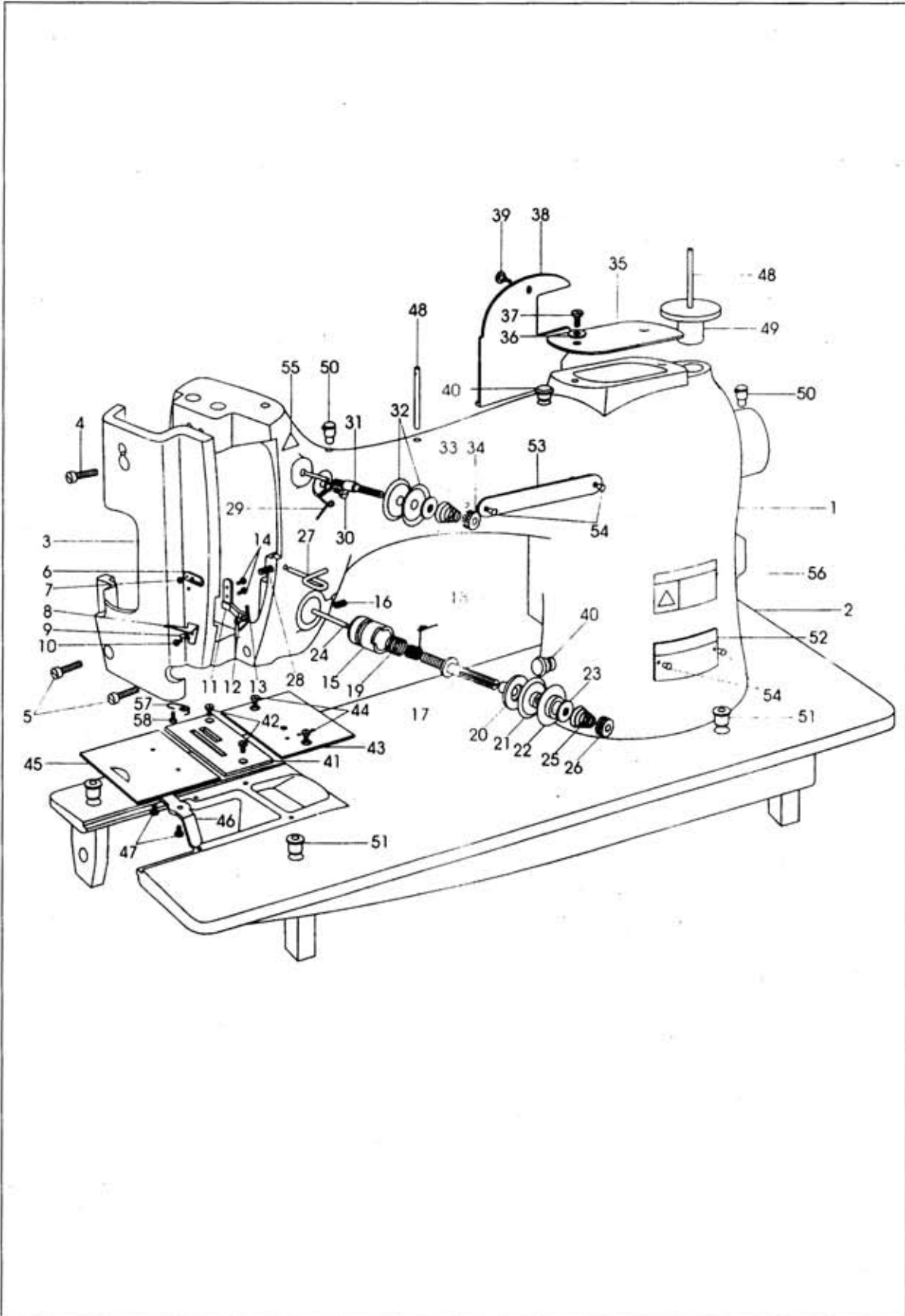
1. Clean the feed dog

Disassemble firstly the needle plate, and then clean the dirt in feed dog (A) crevice (tooth groove), and finally reassemble the needle plate.

2. Clean the rotary hook

Clean the dust and dirt around the rotary hook (B) shown in figure, and wipe the bobbin cover with a soft cloth at the same time.

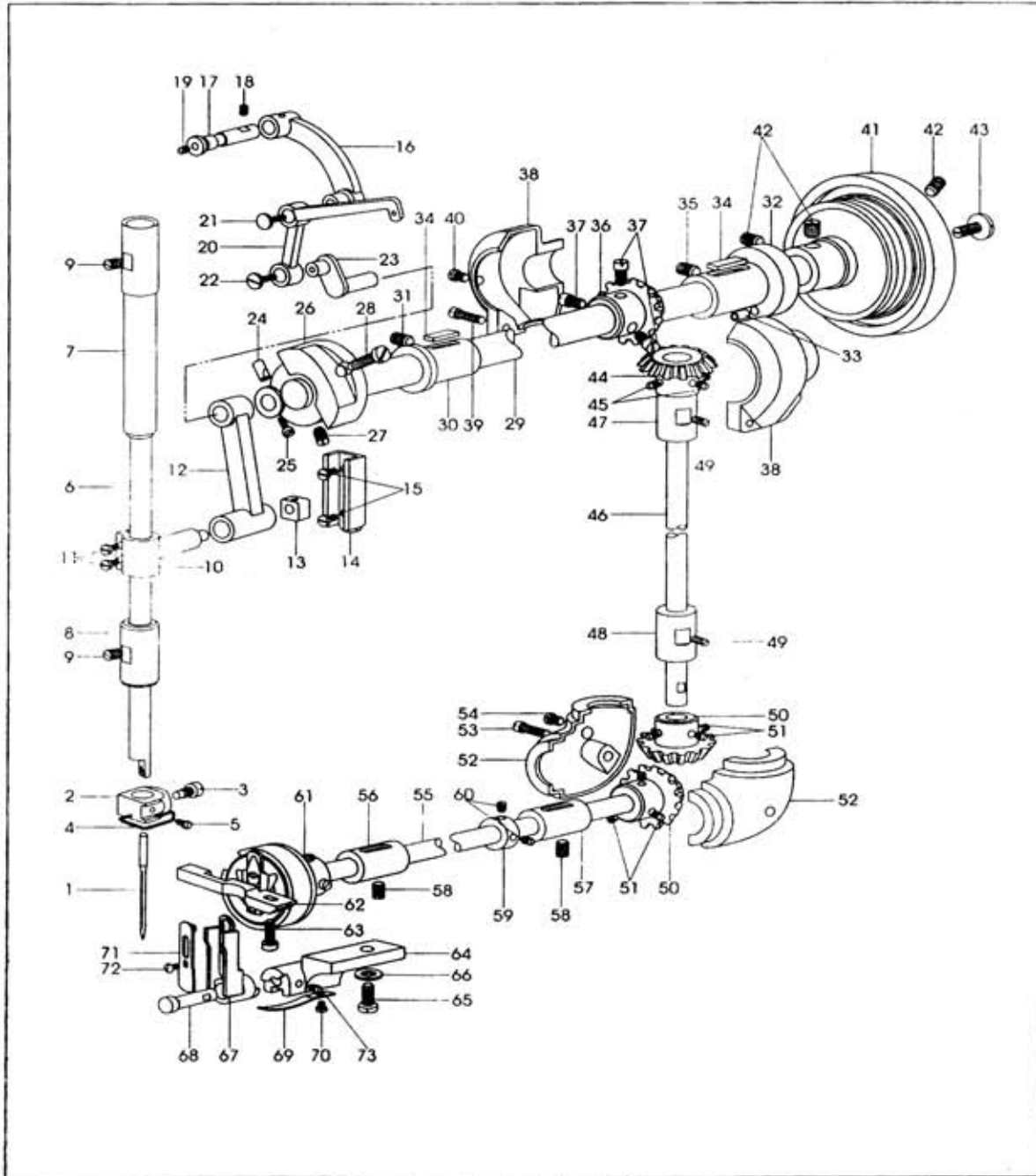




## Machine hull parts

Serial number	Figure number	Name	Quantity	Remarks
1	2531301	Hull	1	2B
	253A1301	Hull	1	2BL20
2	2531302	Flat plate	1	2B
	253A1302	Flat plate	1	2BL20
3	2531303	Face plate	1	
4	2531304	Big face plate bolt	1	
5	2531305	Small face plate bolt	2	
6	2531306	Face plate upper thread hook	1	
7	2531307	Upper thread hook bol	1	
8	2531308	Face plate lower thread hook	1	
9	2531309	Thread ring	1	
10	2531310	Lower thread hook bolt	1	
11	2531311	Thread take-up eyelet holder	1	
12	2531312	Thread take-up eyelet cover	1	
13	2531313	Fastening bolt	1	
14	2531314	Thread take-up eyelet holder bolt	2	
15	2531315	Thread course tension jack	1	
16	2531316	Fastening bolt of thread course tension jack	1	
17	2531317	Thread course tension screw	1	
18	2531318	Thread take-up spring	1	
19	2531319	Adjusting spring	1	
20	2531320	Adjusting disk	1	
21	2531321	Thread course tension disk (inner)	1	
22	2531322	Thread course tension disk (outer)	1	
23	2531323	Thread course loosen disk	1	
24	2531324	Thread course loosen screw	1	
25	2531325	Thread course tension spring	2	
26	2531326	Thread course tension nut	1	
27	2531327	Lower thread hook	1	
28	2531328	Fastening bolt of lower thread hook	1	
29	2531329	Upper thread hook	1	
30	2531330	Fastening bolt of upper thread hook	1	
31	2531331	Thread course tension screw	1	
32	2531332	Thread course tension disk	2	
33	2531333	Thread course tension spring	1	
34	2531334	Thread course tension nut	1	
35	2531335	Upper cover board	1	
36	2531336	Cushion	1	
37	2531337	Upper cover board bolt	1	
38	2531338	Back cover board	1	
39	2531339	Back cover board bolt	1	
40	2531340	Rubber plug	2	
41	2531341	Needle plate	1	
42	2531342	Needle plate bolt	2	
43	2531343	Right pushing board	1	
44	2531344	Right pushing board bolt	2	
45	2531345	Left pushing board	1	
46	2531346	Board spring	1	
47	2531347	Left pushing board bolt	2	
48	2531348	Thread take-up screw	2	
49	2531349	Thread take-up screw jack	1	
50		Oil cup	2	
51		Oil cup	4	
52	2531352	Machine serial number nameplate	1	2B
	253A1352	Machine serial number nameplate	1	2BL20
53	2531353	Brand nameplate	1	
54		Scutcheon rivet	4	
55	2531355	Triangle symbol DANGER	1	
56		Caution signs	1	
57	2531357	Spring thread take-up eyelet holder	1	
58	2531358	Bolt	1	

## Thread take-up and thread hooking parts



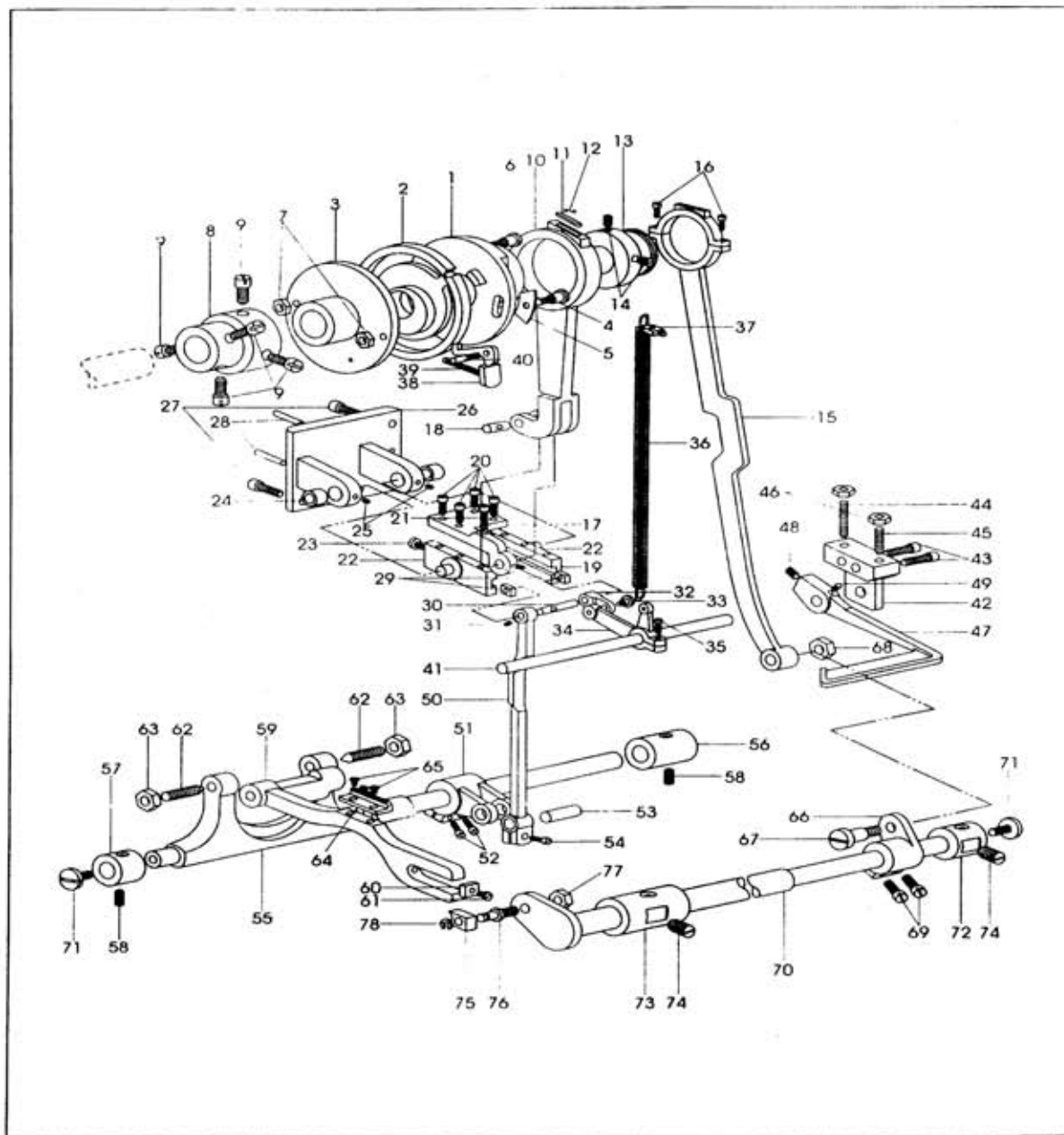
## 2. Thread take-up and thread hooking parts

Serial number	Figure number	Name	Quantity	Remarks
1		Machine needle	1	
2	2531502	Needle clamp	1	
3	2531503	Needle clamp bolt	1	
4	2531504	Needle clamp thread hook	1	
5	2531505	Thread hook bolt	1	
6	2531506	Needle bar	1	
7	2531507	Needle bar upper cover	1	
8	2531508	Needle bar lower cover	1	
9	2531509	Needle bar sleeve bolt	2	
10	2531510	Needle bar tie-in	1	



11	2531511	Fastening bolt for iron bar tie-in	2	
12	2531512	Iron bar connecting bar	1	
13	2531513	Slider	1	
14	2531514	Slider groove	1	
15	2531515	Slider groove bolt	2	
16	2531516	Take-up thread connecting bar	1	
17	2531517	Connecting bar pin of take-up thread	1	
18	2531518	Fastening bolt for take-up thread bar pin	1	
19	2531519	Bolt of connecting bar pin	1	
20	2531520	Thread take-up lever	1	
21	2531521	Connecting bolt	1	
22	2531522	Thread take-up lever bolt	1	
23	2531523	Take-up thread crank	1	
24	2531524	Directional pillar of take-up thread crank	1	
25	2531525	Bolt of take-up thread crank	1	
26	2531526	Needle bar crank	1	
27	2531527	Fastening bolt for needle bar crank	1	
28	2531528	Set bolt for needle bar crank	1	
29	2531529	Upper shaft	1	2B
	253A1529	Lower shaft	1	2BL20
30	2531530	Front axle sleeve for upper shaft	1	
31	2531531	Front axle sleeve bolt	1	
32	2531532	Back axle sleeve for upper shaft	1	
33	2531533	Oil tube of back axle sleeve	1	
34	2531534	Woolfelt	2	
35	2531535	Bolt	1	
36	2531536	Upper shaft bevel gear	1	
37	2531537	Bolt of upper shaft bevel gear	3	
38	2531538	Oil shield of upper shaft bevel gear	1	
39	2531539	Fastening bolt	1	
40	2531540	Bolt	1	
41	2531541	Upper wheel	1	
42	2531542	Upper wheel bolt	3	
43	2531543	Set bolt for upper wheel	1	
44	2531544	Vertical axis upper bevel gear	1	
45	2531545	Bevel gear bolt	3	
46	2531546	Vertical axis	1	
47	2531547	Vertical axis upper cover	1	
48	2531548	Vertical axis lower cover	1	
49	2531549	Sleeve fastening bolt	2	
50	2531550	Lower bevel gear	2	
51	2531551	Bolt	6	
52	2531552	Oil shield for lower bevel gear	1	
53	2531553	Fastening bolt	1	
54	2531554	Bolt	1	
55	2531555	Lower shaft	1	2B
	253A1555	Lower shaft	1	2BL20
56	2531556	Lower shaft front axle cover	1	
57	2531557	Lower shaft back axle cover	2	
58	2531558	Bolt	1	
59	2531559	Packing ring	2	
60	2531560	Packing ring bolt	1	
61	2531561	Rotating hook subassembly	1	
62	2531562	Directional hook of rotating hook	1	
63	2531563	Directional hook bolt of rotating hook	1	
64	2531564	Spacer assembly	1	
65	2531565	Spacer assembly bolt	1	
66		Washer	1	
67	2531567	Spacer	1	
68	2531568	Spacer shaft	1	
69	2531569	Plate spring	1	
70	2531570	Plate spring bolt	1	
71	2531571	Spacer spring	1	
72	2531572	Spacer spring bolt	1	
73	2531573	Spacer shaft bolt	1	

3. Lower feed parts



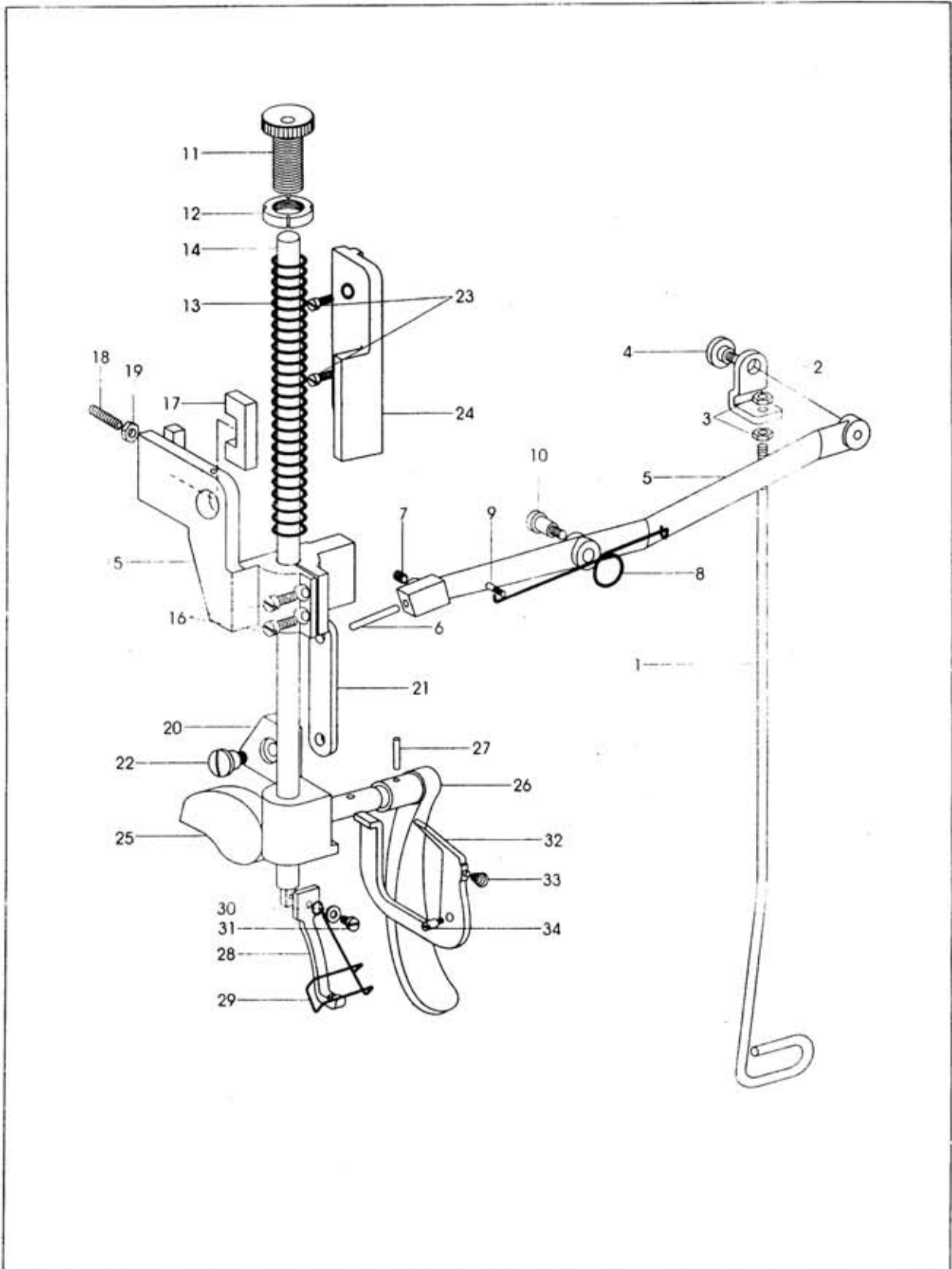
3. Lower feed parts

Serial number	Figure number	Name	Quantity	Remarks
1	2531701	Cloth feeding cam	1	
2	2531702	Eccentric adjusting disk	1	
3	2531703	Eccentric spacer disk	1	
4	2531704	Bolt	1	
5	2531705	Cushion	1	
6	2531706	Bolt	1	
7	2531707	Nut	2	
8	2531708	Spacer cover of cloth feeding cam	1	
9	2531709	Spacer cover bolt	5	
10	2531710	Cloth feeding big end	1	
11	2531711	Tarred felt	1	
12	2531712	Spacer spring	1	
13	2531713	Tooth lifting cam	1	
14	2531714	Tooth lifting cam bolt	2	

15	2531715	Tooth-lift big end	1	
16	2531716	Big end bolt	2	
17	2531717	Connecting block of cloth feeding	1	
18	2531718	Connecting pin	1	
19	2531719	Connecting pin bolt	1	
20	2531720	Fastening bolt of connecting block (short)	4	
21	2531721	Fastening bolt of connecting block (long)	1	
22	2531722	Slider swing plate	2	
23	2531723	Slider spacing bolt	2	
24		Needle roller bearing	2	
25	2531725	Bearing fastening bolt	2	
26	2531726	Swing plate assembly	1	
27	2531727	Swing plate assembly bolt	3	
28		Cone pin	2	
29	2531729	Slider	2	
30	2531730	Slider bearing pin	1	
31	2531731	Fastening bolt of bearing pin	1	
32	2531732	Small forward-reverse connecting bar	1	
33	2531733	Connecting bar bolt	1	
34	2531734	Big forward-reverse connecting bar	1	
35	2531735	Fastening bolt	1	
36	2531736	Forward-reverse spring	1	
37	2531737	Spring spacing pin	1	
38	2531738	Stitch space adjusting spanner	1	
39	2531739	Spring	1	
40	2531740	Spanner spacing bolt	1	
41	2531741	Forward-reverse axle	1	
42	2531742	Forward-reverse spanner spacing frame	1	
43	2531743	Spacing frame bolt	2	
44	2531744	Space adjusting bolt (long)	1	
45	2531745	Space adjusting bolt (short)	1	
46	2531746	Nut	2	
47	2531747	Spanner	1	
48	2531748	Bolt	1	
49	2531749	Bolt	1	
50	2531750	Cloth-feed connecting bar	1	
51	2531751	Cloth-feed crank	1	
52	2531752	Crank fastening bolt	2	
53	2531753	Bearing pin	1	
54	2531754	Fastening bolt	1	
55	2531755	Cloth-feed axle	1	2B
	253A1755	Cloth-feed axle	1	2BL20
56	2531756	Back cover of cloth-feed axle	1	
57	2531757	Front cover of cloth-feed axle	1	
58	2531758	Bolt	2	
59	2531759	Feed bar	1	
60		Woolfelt	1	
61	2531761	Bolt	1	
62	2531762	Pointed bolt at the top of feed bar	2	
63	2531763	Pointed nut at the top of feed bar	2	
64	2531764	Throat plate	1	
65	2531765	Throat plate bolt	2	
66	2531766	Tooth lifting crank	1	
67	2531767	Connecting bolt	1	
68	2531768	Nut	1	
69	2531769	Crank fastening bolt	2	
70	2531770	Tooth-lift axle	1	2B
	253A1770	Tooth-lift axle	1	2BL20
71	2531771	Set bolt of tooth-lift axle	2	
72	2531772	Tooth-lift axle back cover	1	
73	2531773	Tooth-lift axle front cover	1	
74	2531774	Sleeve bolt	2	
75	2531775	Tooth-lift slider	1	
76	2531776	Slider bolt	1	
77	2531777	Nut	1	
78		Open-end gasket	1	

4.

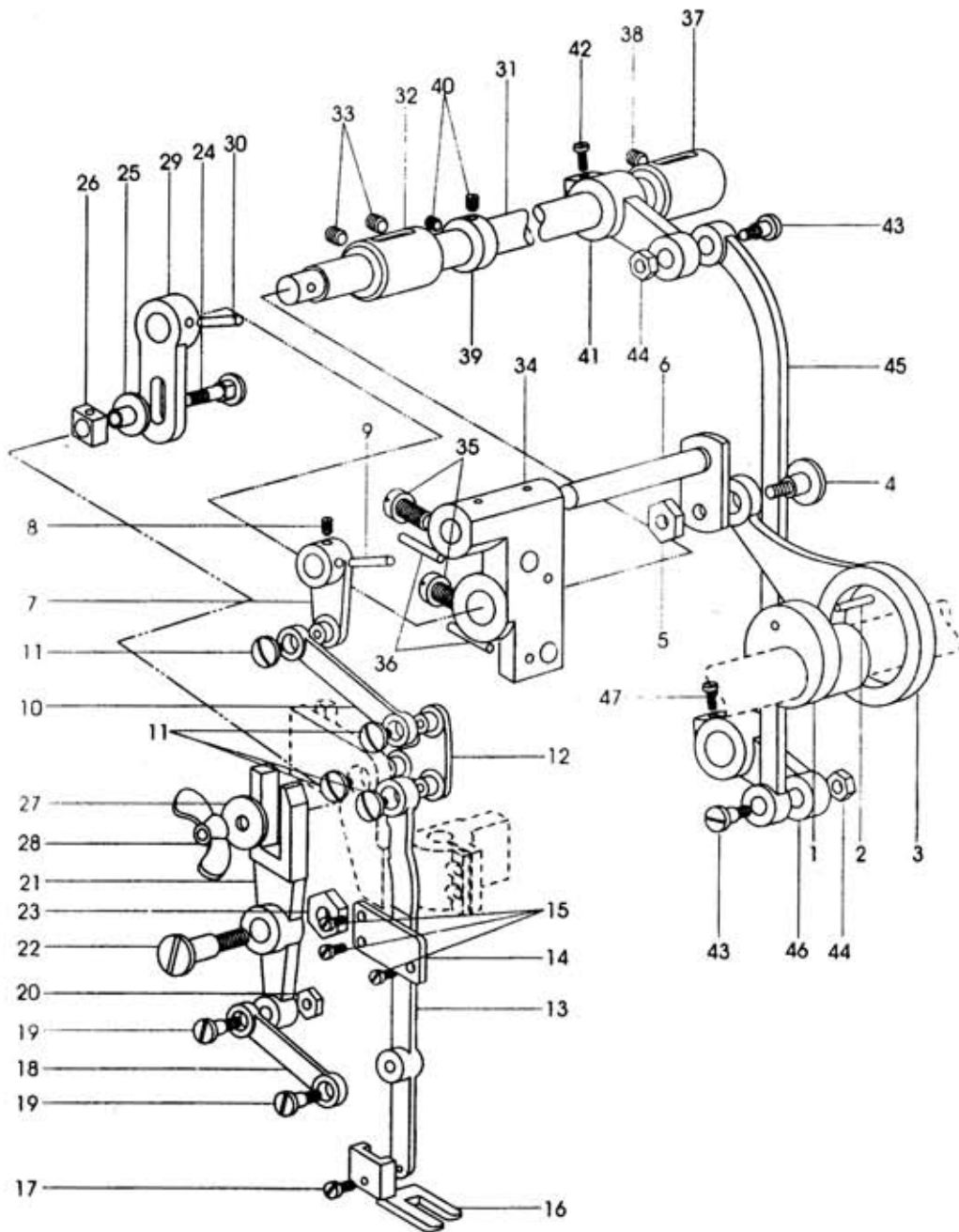
### Tie rod and press rod parts



4.

## Tie rod and press rod parts

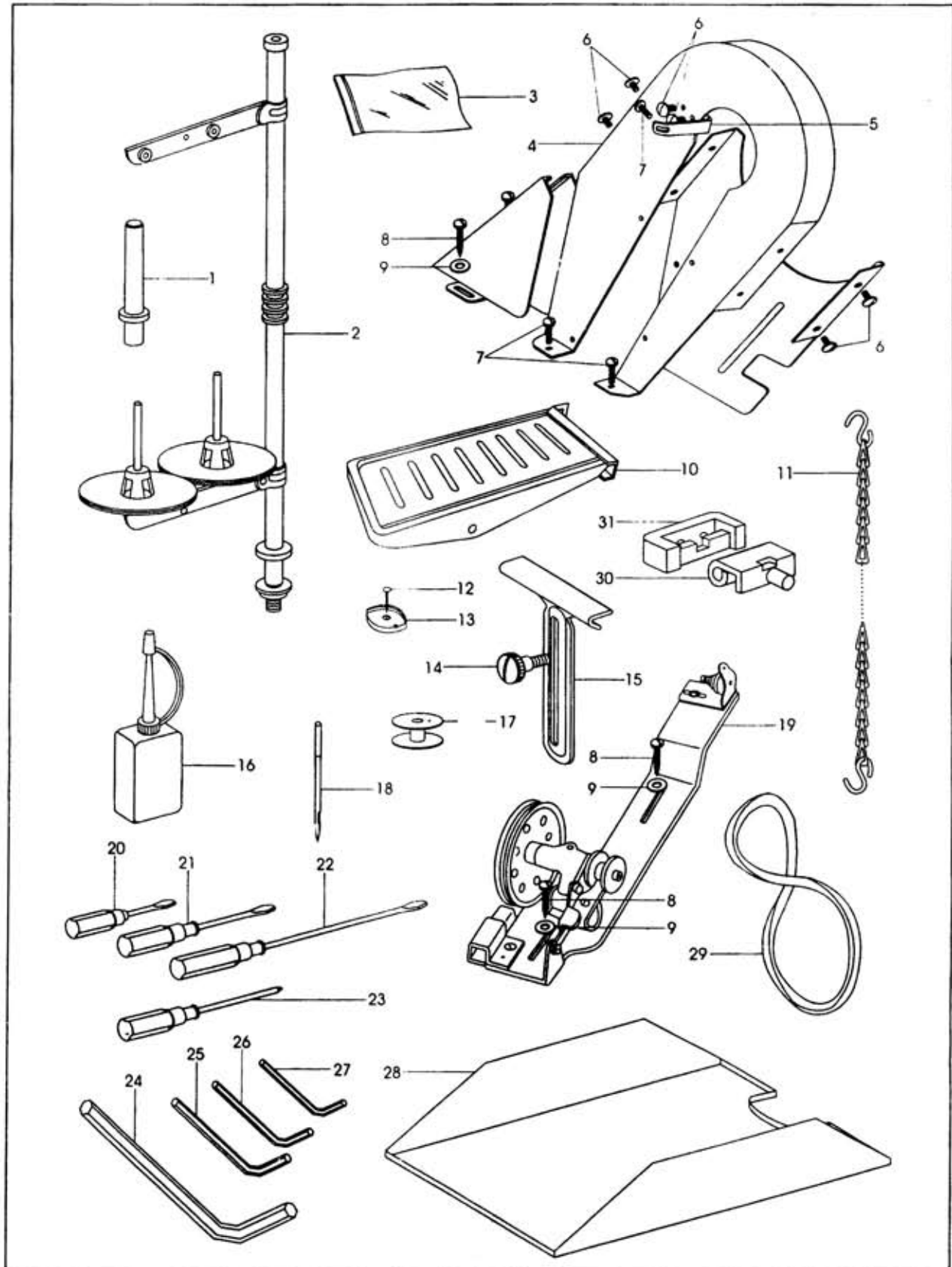
Serial number	Figure number	Name	Quantity	Remarks
1	2531901	Tie rod	1	
2	2531902	Tie rod end	1	
3	2531903	Tie-in nut	2	
4	2531904	Tie-in bolt	1	
5	2531905	Lever tie rod	1	2B
	253A1905	Lever tie rod	1	2BL20
6	2531906	Lever lifting pin	1	
7	2531907	Bolt	1	
8	2531908	Lever spring	1	
9	2531909	Spring register pin	1	
10	2531910	Lever bolt	1	
11	2531911	Pressure adjusting bolt	1	
12	2531912	Pressure adjusting nut	1	
13	2531913	Pressure adjusting spring	1	
14	2531914	Compressor arm	1	
15	2531915	Press rod flat-guide stand	1	
16	2531916	Flat-guide stand bolt	2	
17	2531917	Flat-guide stand stop block	1	
18	2531918	Bolt	1	
19	2531919	Lock nut	1	
20	2531920	Press rod curly-guide stand	1	
21	2531921	Pothead	1	
22	2531922	Bolt	1	
23	2531923	Guided register	1	
24	2531924	Register bolt	2	
25	2531925	Presser-lifting cam	1	
26	2531926	Presser-lifting spanner	1	
27		Cone pin	1	GB117-86 A3×12
28	2531928	Small presser foot	1	
29	2531929	Guard stand	1	
30		Washer	1	GB97.1-85-5
31	2531931	Small presser foot bolt	1	
32	2531932	Erect thread hook	1	
33	2531933	Erect thread spring	1	
34	2531934	Register bolt of erect thread	1	



5. Upper feed parts

Serial number	Figure number	Name	Quantity	Remarks
1	2532101	Presser foot lift cam	1	
2	2532102	Pin	1	
3	2532103	Presser foot lift big end	1	
4	2532104	Big end bolt	1	
5	2532105	Nut	1	
6	2532106	Presser foot lift bearing	1	
7	2532107	Presser foot lift crank	1	
8	2532108	Crank bolt	1	
9		Cone pin	1	GB117-86 A4×25
10	2532110	Small connecting rod	1	
11	2532111	Bolt	4	
12	2532112	Presser foot lift rocking plate	1	
13	2532113	Swing presser foot rod	1	
14	2532114	Presser foot rod guide plate	1	
15	2532115	Guide plate bolt	3	
16	2532116	Big presser foot	1	
17	2532117	Big presser foot bolt	1	
18	2532118	Swing presser foot connecting rod	1	
19	2532119	Connecting rod bolt	2	
20	2532120	Connecting rod nut	1	
21	2532121	Swing presser foot furcated rod	1	
22	2532122	Furcated rod set bolt	1	
23	2532123	Nut	1	
24	2532124	Furcated rod connecting bolt	1	
25	2532125	Bush	1	
26	2532126	Sliding block	1	
27	2532127	Washer	1	
28	2532128	Butterfly nut	1	
29	2532129	wing axle front crank	1	G B117-86 A4×27
30		Cone pin	1	2B
31	2532131	Swing axle	1	2BL20
	253A2131	Swing axle	1	
32	2532132	Swing axle front cover	1	
33	2532133	Bolt	2	
34	2532134	Feed guide assembly	1	
35	2532135	Fastening bolt	2	G B117-86 A4×25
36		Cone pin	2	
37	2532137	Swing axle back cover	1	
38	2532138	Bolt	1	
39	2532139	Swing axle set collar	1	
40	2532140	Bolt	2	
41	2532141	Swing axle back crank	1	
42	2532142	Bolt	1	
43	2532143	Connecting bolt	2	
44	2532144	Connecting nut	2	
45	2532145	Swing big end	1	
46	2532146	Swing axle lower crank	1	
47	2532147	Fastening bolt	1	

6. Accessories





## 6. Accessories

Serial number	Figure number	Name	Quantity	Remarks
1		Machine head strut bar	1	
2	2532301	Line frame subassembly	1	
3	2532303	Parts bag	2	
4	2532304	Shield	1	
5	2532305	Shield spacer	1	
6	2532306	Shield bolt	6	
7	2532307	Shield set bolt	3	
8		Tapping screw	4	GB5282-85ST4.8×19
9		Tapping screw washer	4	GB848-85-6
10		Pedal subassembly	1	
11		"S" hook, zipper	1	Zipper length1000mm
12		Oil tray set nail	8	Nail length22mm
13	2532313	Head quakeproof cushion	4	
14	2532314	Model frame bolt	1	
15	2532315	Model frame	1	
16	2532316	Oil can	1	
17	2532317	Bobbin core	6	
18		Machine needle	3	DD×1 25#-27#
19	2532319	Bobbin winder subassembly	1	
20	2312320	"-"Groove screwdriver (small)	1	
21	2532321	"-"Groove screwdriver (middle)	1	
22	2532322	"-"Groove screwdriver (big)	1	
23	2532323	"+"Groove screwdriver	1	
24		Inner-hexagon spanner	1	S=5
25		Inner-hexagon spanner	1	S=3
26		Inner-hexagon spanner	1	S=2.5
27	2532327	Inner-hexagon spanner	1	S=2
28	2532328	Oil can	1	2B
		Oil can	1	2BL20
29	2532329	Vbelt	1	Otype 1270
30	2532330	Machine hull gemel	2	
31		Machine hull gemel cover	2	