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# **8B/8B-2/8BD**

**CYLINDER BED COMPOUND FEED  
LARGE ROTARY HOOK LARGE STITCH  
LENGTH SEWING MACHINE**

**OPERATION INSTRUCTION / PARTS MANUAL**

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# CONTENT

## Operation Instruction

1. Brief introduction.....	1
2. Main specifications.....	1
3. Installation.....	1
a. Location of the machine.....	1
b. Installing the arm and the oil reservoir.....	1
c. Installing the machine head.....	1
4. Installing the motor.....	2
5. Connecting the clutch lever to the pedal.....	2
6. Installing the presser foot lift control plate.....	2
7. Installing the bobbin winder.....	3
8. Installing the spool stand.....	3
9. Preparation.....	3
a. Cleaning the machine.....	3
b. Examination.....	3
10. Lubrication.....	4
11. Trial run.....	4
12. Installing the needle.....	4
13. Coordination among the needle, the thread and the material.....	5
14. Threading the needle thread.....	5
15. Adjusting the tension of the needle thread and the bobbin thread.....	5
a. Adjusting the bobbin thread tension.....	5
b. Adjusting the needle thread tension.....	5
16. Winding the bobbin thread.....	6
17. Stitch length and forward and backward feed.....	7
18. Adjusting the presser foot pressure.....	7
19. Function of the safety clutch.....	7
20. Adjusting the presser foot lift volume.....	8
21. Adjusting the feed dog height.....	8
22. Adjusting the timing of feed.....	8
23. Adjusting the timing between the needle and the rotating hook.....	9
24. The relationship between the rotating hook and the thread guide.....	9
25. Installing and removing the rotating hook.....	10
26. Adjusting the position of the binder.....	10

## Parts Manual

1. Arm.....	11-12
2. Upper shaft and thread take-up parts.....	13-14
3. Needle bar rock parts.....	15-16
4. Presser bar parts.....	17-18
5. Upper feed parts.....	19-20
6. Feed shaft parts.....	21-22
7. Lower shaft and rotating hook parts.....	23-24
8. Thread-pass parts.....	25-26
9. Stitch length adjustment parts.....	27-28
10. Accessories.....	29-30

# **OPERATION INSTRUCTION**

## 1. Brief Introduction

TW3-8B and TW3-8BV are designed with sliding lever thread take-up, vertical rotating hook to produce double lockstitch, timing teeth belt driving, lever-type stitch length mechanism and safety clutch mechanism.

This series of machine is widely used in sewing bag, luggage suitcase, seat cushion, especially for cylinder and curve articles.

The main difference between TW3-8B and TW3-8BV are:

The feed mechanism of TW3-8B is composed of presser foot, feed dog and needle, which forms the compound feed. It can prevent slippage between the layers of materials.

The feed mechanism of TW3-8BV is composed of needle, presser foot, feed dog and binding apparatus, which can prevent the slippage between the material and the welting cord. It is suitable for edge seaming.

## 3. Installation

### 1. Location of the machine

The machine must be located on rigid and flat floor to ensure its smooth operation and reduce its vibration. A rubber mat should be inserted between the machine stand and the floor to reduce the running noise.

### 2. Installing the arm bed and the oil reservoir (Fig.1)

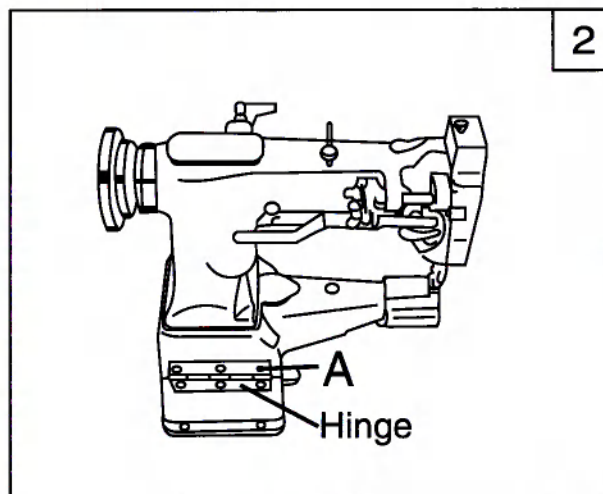
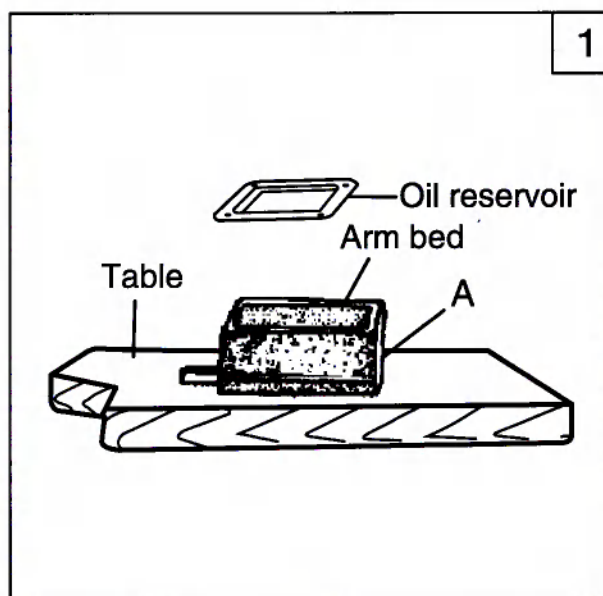
Align the four screw holes of the arm bed with the four holes of the table, plunge them with four bolts A, and tighten the nut, then put the oil reservoir on the arm bed smoothly.

### 3. Installing the machine head (Fig.2)

Install half of the hinges to the arm bed, then put the machine head lightly on the arm bed and move it slightly. The three screw holes of the machine head should be made to align with the three holes of the hinge and the three screws should be tighten and fixed.

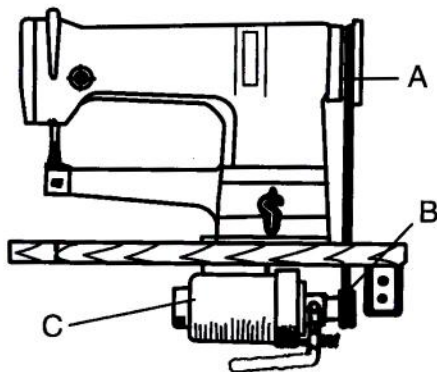
## 2. Main Specification

Type	TW3-8B	TW3-8BV
Application	Medium & heavy duty	
Max.sewing speed	2200s.p.m	
Stitch length	0-5mm	
Needle bar stroke	33.2mm	
Presser foot lift height	By hand 8mm	By hand 6.5mm
	By pedal 14mm	By pedal 12mm
Rotating hook	Standard vertical hook	
Needle	DP×17 18#-23#	
Lubrication	Manual	
Motor	370W	





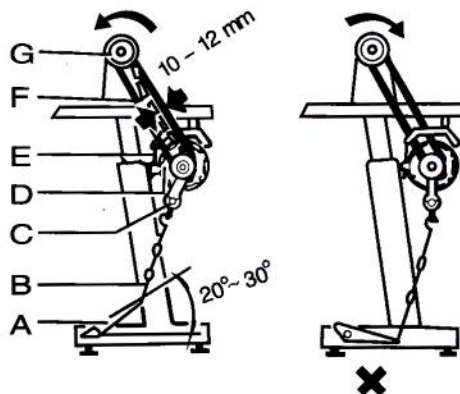
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#### 4. Installing the motor (Fig.3)

Align the balance wheel belt groove A with motor pulley belt groove B by moving motor C leftward and rightward. Be sure the belt is not touched with the table.

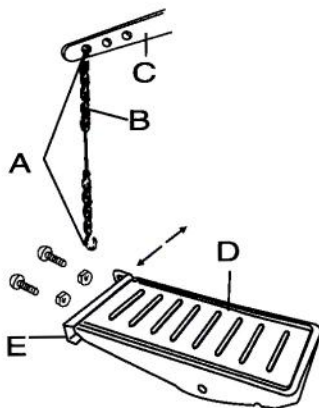
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#### 5. Connecting the clutch lever to the pedal (Fig.4)

1. The optimum tilt angel of the pedal A against the floor is appropriate  $20^{\circ}\sim 30^{\circ}$ .
2. Adjust the E clutch of the motor so that the clutch lever C and the draw bar B run in one line.
3. The machine balance wheel should rotate counter clockwise for normal when observed from the opposite side of the balance wheel. The motor D should rotate in the same direction. The rotation could be reversed by reversing the plug of the motor.
4. Adjust the tension of the V-belt F by moving the motor vertically. The proper tension of the V-belt is a slack of 10-12mm when the belt is depressed by forefinger.

5

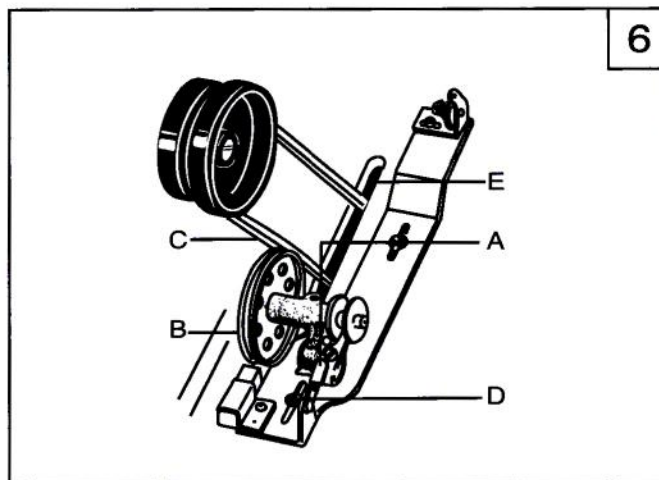


#### 6. Installing the presser foot lift control plate (Fig.5)

At first, the hook A should be connected to the chain B and the presser foot lift lever C, then put the pedal assembly D on the stand. Move the control plate E leftward and rightward until the chain is straight in one line. Tighten the bolts and the nuts, then connect the finger to the control plate.

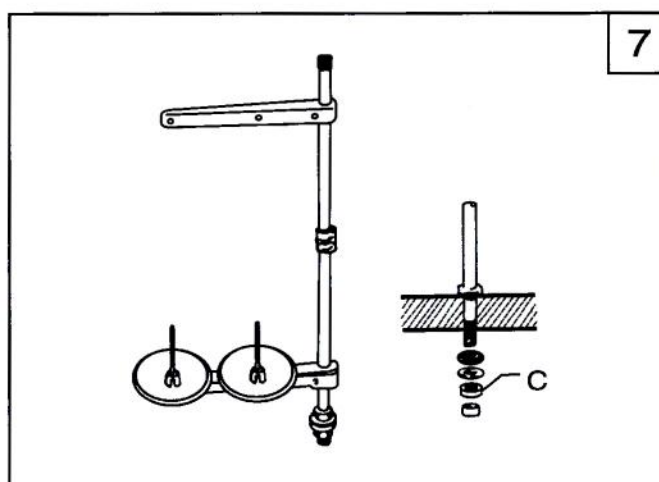
## 7. Installing the bobbin winder(Fig.6)

Align the pulley B of the bobbin winder with the outside of the belt C. And there should be a proper clearance between them so that the pulley B could be contacted with the belt when the thumb lever A is depressed. Thereby, the belt can drive the pulley B while the machine running. The bobbin winder should be parallel with the belt slit E of the table, and then tighten the wood screw D.



## 8. Installing the spool stand (Fig.7)

The spool stand should be located on the right backside of the table. Thread should be smooth when sewing; the spool stand may not be obstructed when the machine head is tilted back. Tighten the wood screw C.



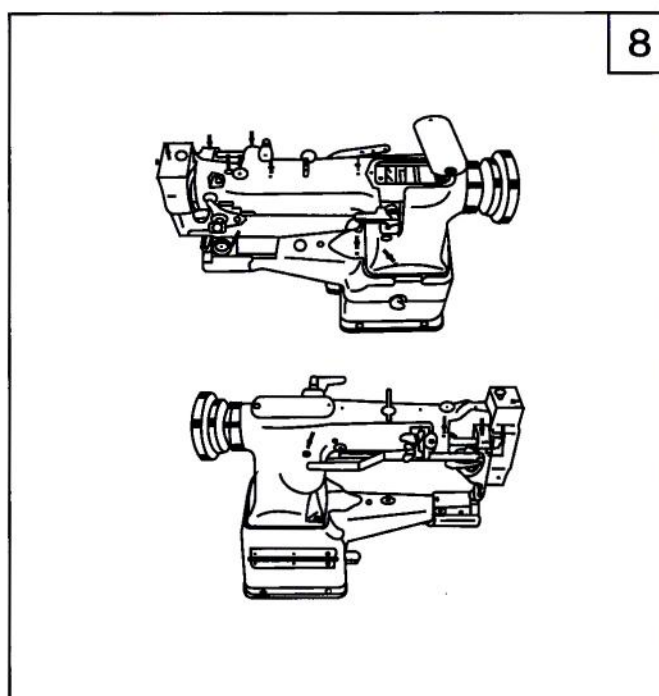
## 9. Preparation

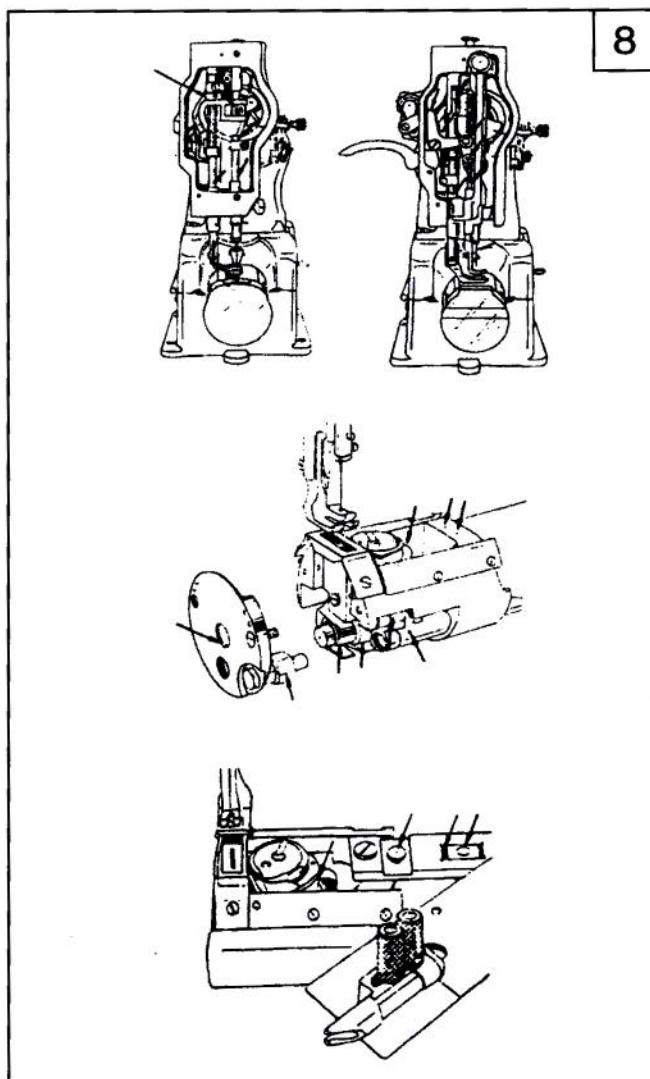
### 1. Cleaning the machine

Before the machine head is packed, all the parts of the machine are coated with preventive grease. Meanwhile, the hardened grease and the converged dust on the machine surface during long storage and shipment must be removed by clean cloth with gasoline.

### 2. Examination

The parts of the machine may be loose and deformed after the long distance transportation with jolt though every machine is confirmed by strict inspection and test before delivery. So a thorough examination must be performed after cleaning the machine. Turn the machine balance to check if there are running obstructions, parts collision, uneven resistance or abnormal noise. If any of these exists, adjustment must be made accordingly before running.



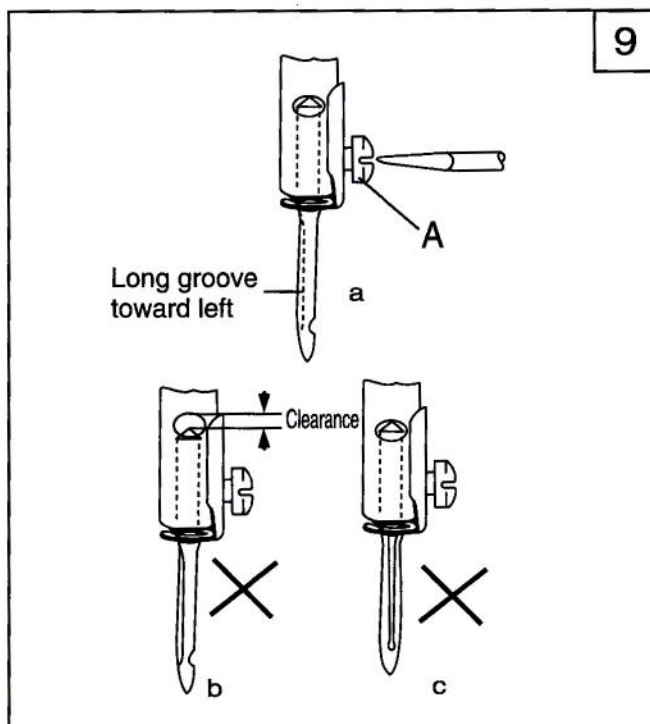


## 10. Lubrication (Fig.8)

Before running, the machine must be oiled at the places as the arrow shows in the Fig.8 if the machine continues in operation, it should be oiled not less than twice per shift. Please use HA-8 sewing machine oil or TJ-7 machine oil.

## 11. Trial run

Trial run is required when new machine is put into use or the machine is used again after operation for quite a long time. Lift the presser foot and run the machine at the low speed of 1000-1500spm for 30 minutes, then increase the speed gradually.



## 12. Installing the needle (Fig.9)

Turn the balance wheel to lift the needle bar to its highest position, loosen the needle set screw A to make the needle groove turn to the needle shank to the operator, then fully insert the needle shank to the bottom of the needle socket, finally tighten the set screw A.

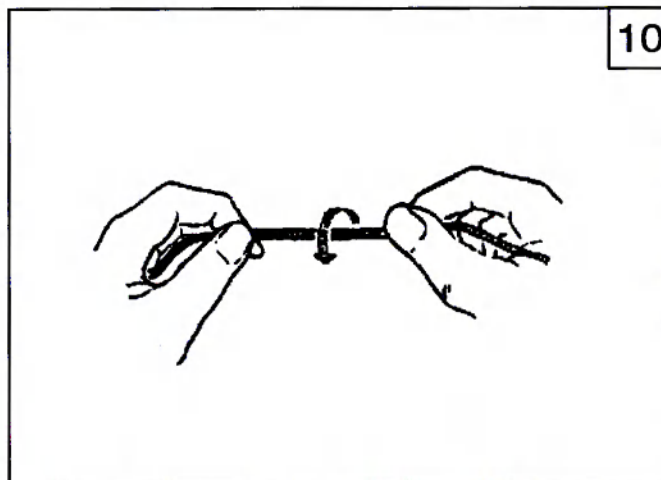
Note: Fig.9 b, insufficient insertion.

Fig.9, wrong direction of groove.



### 13. Coordination among the needle, the thread and the material (Fig.10)

The thread should be left-twisted. Holding the thread (shown as Fig.10), Twist it upward by right hand, if the thread changes into twice, it is right-twisted; on the contrary, it is left-twisted. Needle number is  $DP \times 17, 18\# \sim 23\#$ . The needle size should depend on the materials to be sewn. If the thin needle is used for sewing heavy material, the needle will be broken easily, and will cause skip and thread broken as well. On the contrary, the material will be destroyed for the big needle hole. Therefore, select proper needle according to the material.



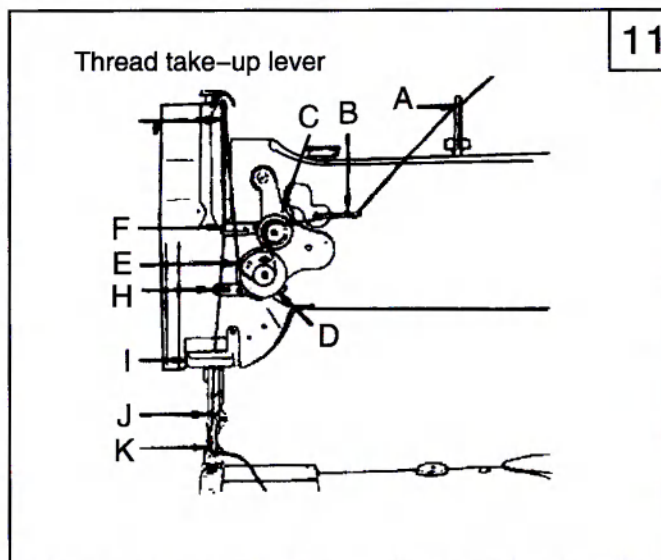
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### 14. Threading the needle thread (Fig.11)

Turn the balance wheel to lift the needle bar to its highest position.

The order as Fig.11: thread pass-by pin A - three-eye thread guide B - thread tension C - thread control plate D - thread take-up spring E - upper thread guide F - thread take-up spring H - lower thread guide I - needle bar thread guide J - needle K.

When drawing the bobbin thread, hold the tip of the needle thread by hand, turn the balance to lower the needle bar, and then lift it to its highest position. Pull the needle thread and draw the bobbin thread. Then make the tips of the needle thread and the bobbin thread in the front beneath the presser foot.



11

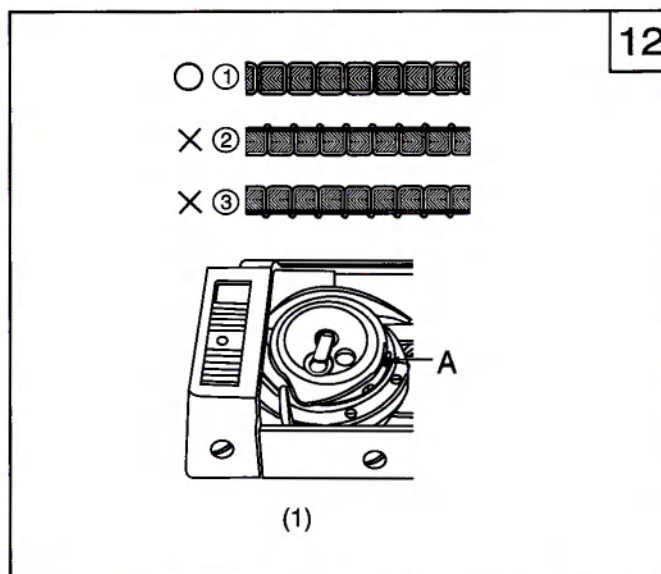
### 15. Adjusting the tension of the needle thread and the bobbin thread (Fig.12)

The tension of the needle thread and the bobbin thread should be suitable. The stitch form shown as (1) is the best. The abnormal stitch forms shown as (2), (3) will occur when the tension is extra tightened or extra loosened.

1. Adjusting the tension of the bobbin thread.

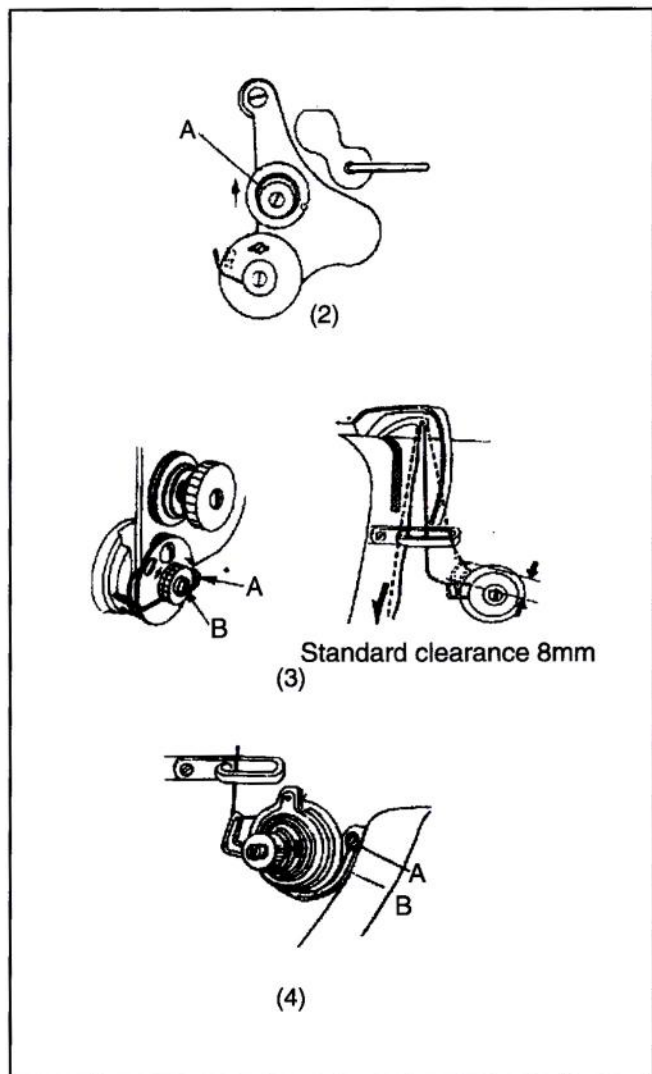
The tension of the bobbin thread could be adjusted according to the nature of the material:

- (1) Turn the balance wheel by hand to lift the thread take-up lever to its highest position;
- (2) Remove the sliding plate, the adjusting screw A is shown;
- (3) Turn the adjusting screw A clockwise with the



12





Screwdriver to increase the tension;

(4) Turn the adjusting screw A counter clockwise to decrease the tension;

2. Adjusting the tension of the needle thread

(1) Adjust the pressure on the thread tension disc: Generally, the tension of the needle thread is adjusted by adjusting the pressure of the thread tension disc. As Fig.2, turn the nut A clockwise to increase the pressure, on the contrary, to decrease the pressure.

(2) Adjust the tension of the thread take-up spring:

Light material 20g

Common material 25g

Heavy material 30g

Adjusting method:

Loosen the screw A, turn the thread take-up spring shaft B counter clockwise to increase the tension; turn it clockwise to decrease the tension.

(3) The swing range of the thread take-up spring: The thread take-up spring must be able to swing when the thread take-up lever is at its highest position.

The normal swing range of the thread take-up spring should be :

Light material more than 8mm

Common material about 8mm

Heavy material less than 8mm

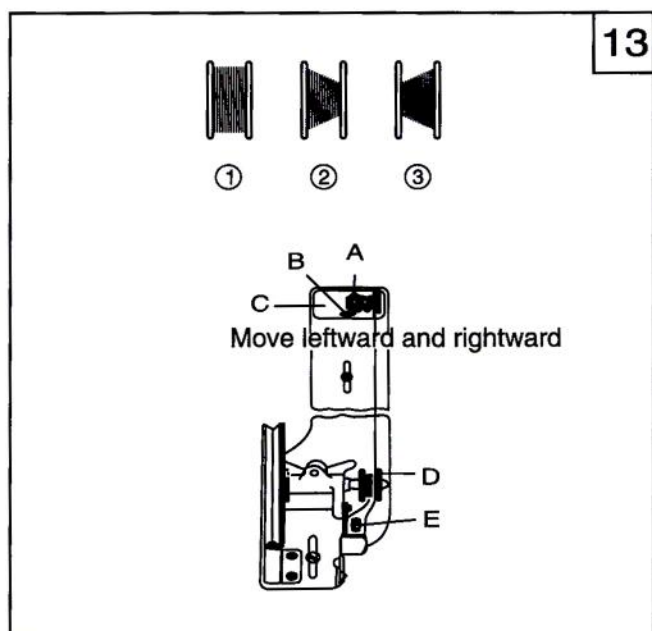
The method of adjusting the swing range:

(1) Loosen the presser foot lever;

(2) Loosen the screw A;

(3) Turn the thread take-up spring position disc B counter clockwise to increase the swing range; on the contrary, to decrease the swing range.

(4) Tighten the screw A.



13

## 16. Winding the bobbin thread (Fig.13)

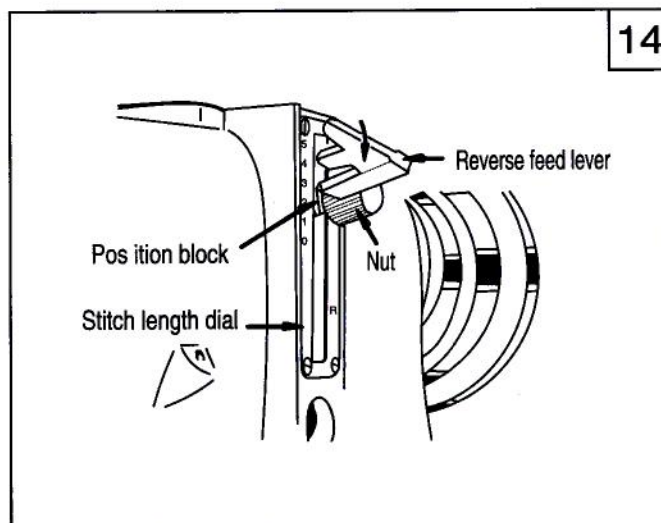
The bobbin thread should be neat and tight. If the thread is weak, please enlarge the pressure of the big thread tension disc A. If the thread is not neat, please move the thread bracket C to adjust it. Firstly, loosen the screw B, if the thread is wound to one side as Fig.(2), please move the bracket rightward; if it is as Fig.(3), please move the bracket leftward. Move the bracket until the thread is wound neatly as Fig.(1), then tighten the screw.

Note: Nylon or polyester thread should be wound with light tension in particular; otherwise the bobbin D might be broken or deformed. Don't overfill the bobbin thread as it makes thread loosen down from the bobbin.

The optimum capacity of the bobbin thread is about 80% of the bobbin outside diameter, which can be adjusted by the screw E.

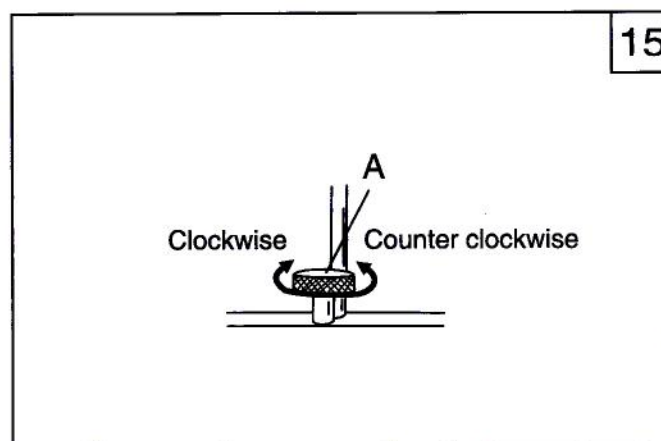
## 17. Stitch length and forward and backward feed (Fig.14)

Turn the stitch length regulating nut to adjust the stitch length. When the graduation on the stitch length regulating position block is aligned with the figure on the stitch length dial, the figure is the stitch length. Press the reverse feed lever, the feed is reverse. Release the lever, the machine recovers normal feed again.



## 18. Adjusting the presser foot pressure (Fig.15)

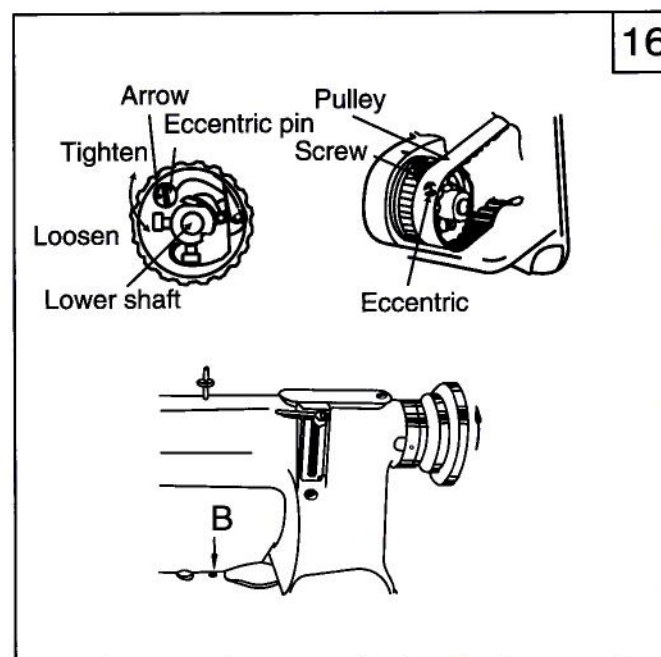
Adjust the presser foot pressure according to the nature of the material. Please increase the pressure when sewing with heavy material. Turn the regulating screw clockwise to increase the pressure, on the contrary, to decrease the pressure.

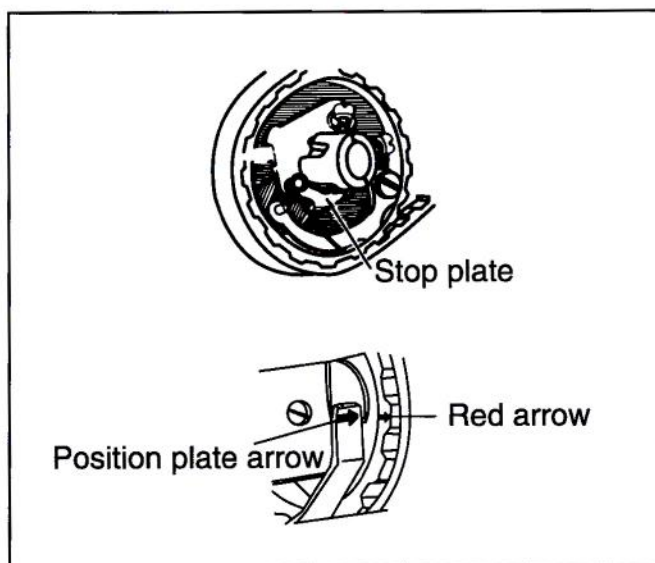


## 19. Function of the safety clutch (Fig.16)

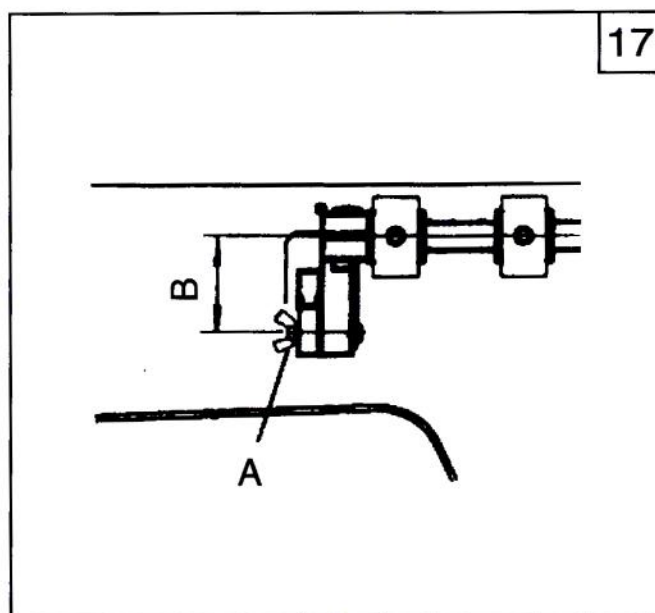
The function of the safety clutch is preventing the hook and synchro belt from destroys when the needle or the thread is drawn into the hook for abnormal load during operation.

When the eccentric pin arrow is aligned with the lower shaft center, the load on the safety clutch is at the minimum. The load will be increased accordingly when the arrow turns outside. When resetting the safety clutch: please press the button B by left hand. and turn the balance wheel clockwise by right hand. When the stop plate stops the balance wheel, please turn the balance wheel to make the safety clutch to the correct position, and then release the button.





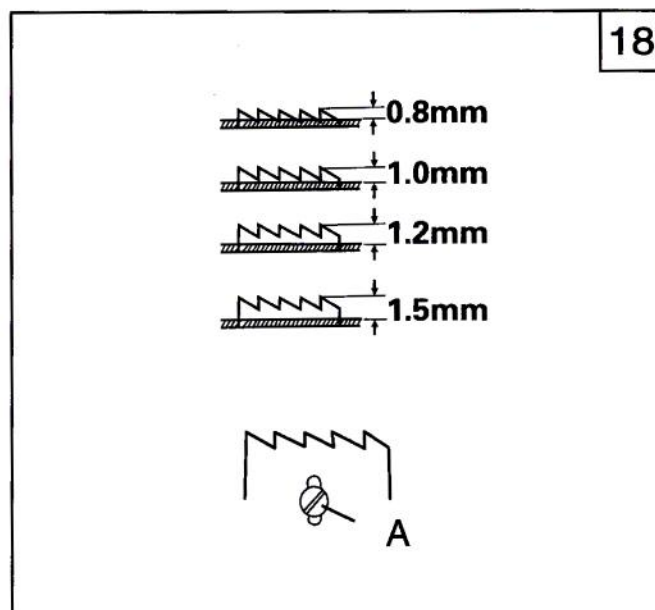
And the synchro belt should be installed again. At first, turn the balance wheel counter-clockwise, and when the thread take-up lever is at its highest position, and the red arrow is aligned with the arrow on the position plate, then install the synchro belt on the wheel.



## 20. Adjusting the presser foot lift volume (Fig.17)

The method of adjusting the presser foot lift volume during sewing is as follows:

Loosen the nut A, adjust the center distance B between screw and shaft; adjust the distance B short to increase the presser foot lift volume, on the contrary, decrease the presser foot lift volume. Then tighten the screw after adjustment. Turn the upper shaft slightly to check if there is any collision. Start to work when everything goes well.



## 21. Adjusting the feed dog height (Fig.18)

When lifting the feed dog to its highest position, the feed dog height should be determined by the material. The feed dog height is 1.2mm for sewing leather or other heavy material; 0.8mm for sewing light material; 1mm for sewing common material; 1.5mm for extra heavy material. When adjusting the feed dog height, firstly loosen the screw A, and move the feed dog to a proper height, then tighten the screw.



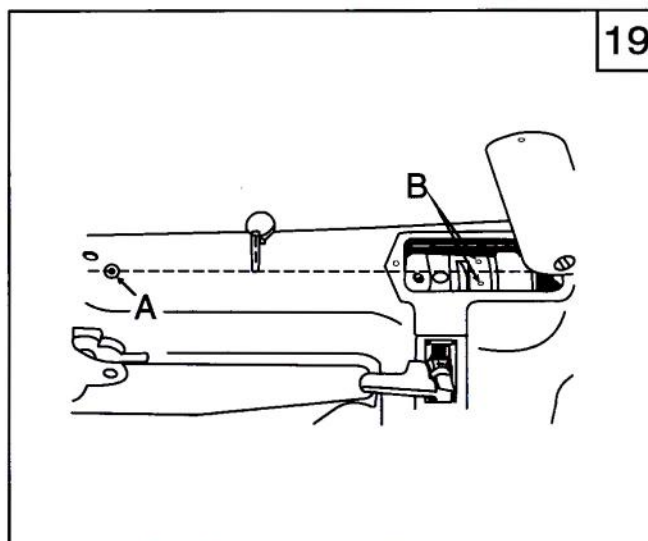
## 22. Adjusting the timing of feed(Fig.19)

### 1. Standard position

When the feed dog appears from the needle plate and start to feed, the needle should move downward, and it should be close to the needle plate and aligns with the hole on the plate. Please adjust the position of the feed cam and rock shaft crank to adjust the timing of the feed.

### 2. Install the feed cam

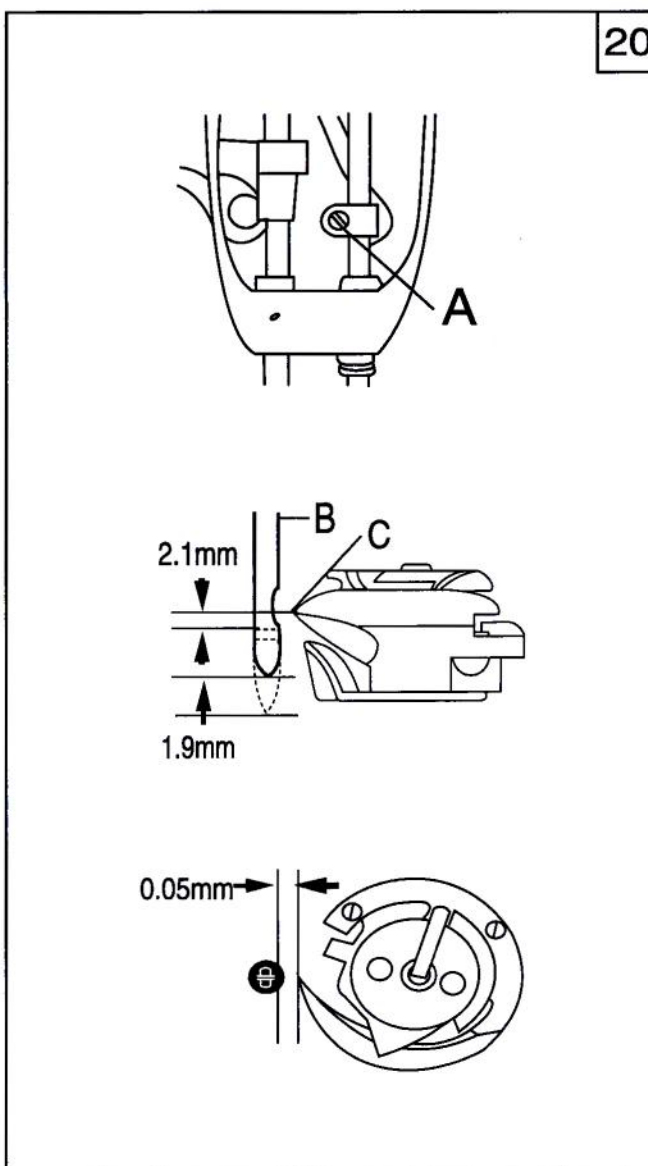
At first, adjust the stitch length to 0, and open the upper cover, turn the balance wheel counter clockwise by right hand; the oil hole A should divide the two screws B of the feed cam equally as bisector.



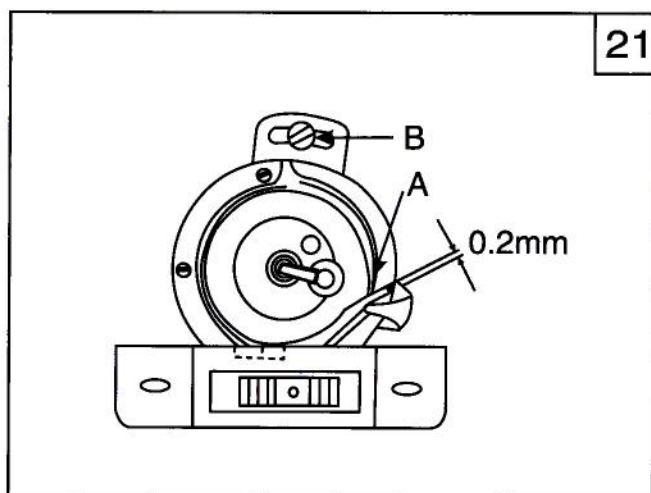
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## 23. Adjusting the timing between the needle and the rotating hook (Fig.20)

The position relationship between the rotating hook and the needle could be adjusted as follows: Lift the needle up to 1.9mm from its lowest position; the tip of the hook should be straight to the needle center; there is about a distance of 2.1mm between the tip of the hook and the upside of the needle hole. Move the needle bar upward and downward to its proper position, then tighten the screw A. The distance between the tip of the hook and the needle should be 0-0.05mm.

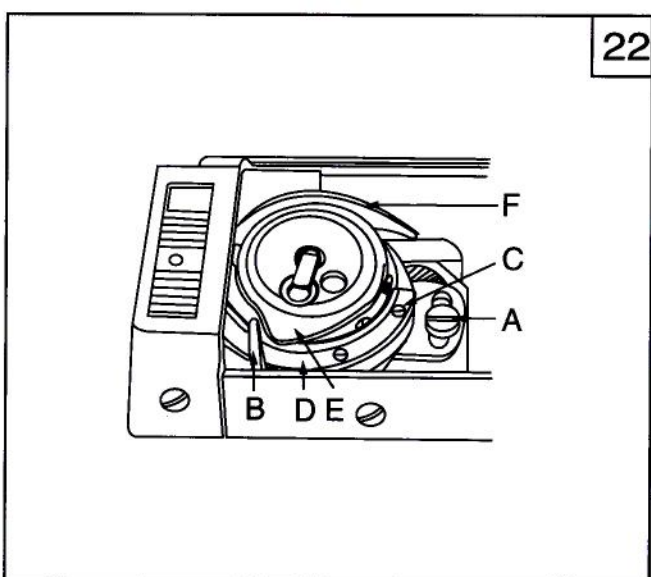


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## 24. The relationship between the rotating hook and the thread guide (Fig.21)

1. Remove the sliding plate;
2. Turn the balance wheel by hand until the largest clearance between the hook and the thread guide appears;
3. Loosen the screw B to make a clearance of 0.2mm between the hook and the thread guide. (The clearance should be adjusted according to the thread.)
4. Tighten the screw B.



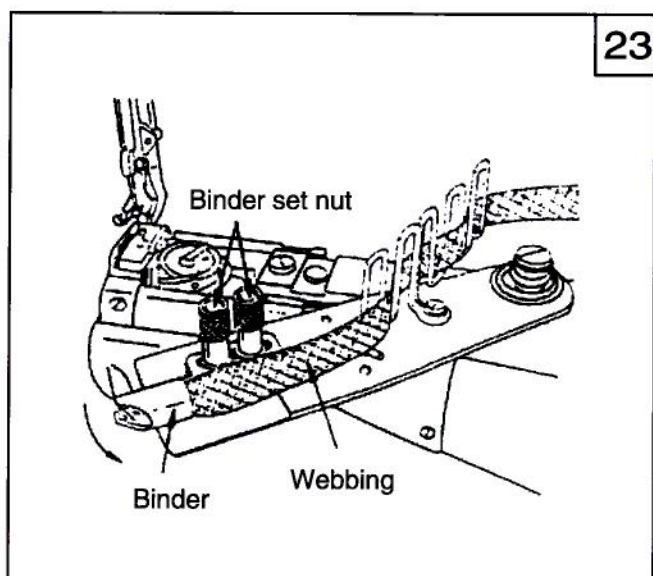
## 25. Installing and removing the rotating hook (Fig.22)

Replace the hook when it is damaged.

1. Turn the balance wheel to lift the needle bar to its highest position, then take down the needle;
2. Remove the sliding plate, needle plate, front and rear presser cover, and bobbin;
3. Loosen the regulating screw A, and remove the thread guide B;
4. Loosen the screw C, and remove the cover D;
5. Slightly move the hook head and take it out;
6. Loosen the screw and remove the rotating hook F.

Installing the rotating hook:

Install the hook in the reverse order that the hook is taken down;



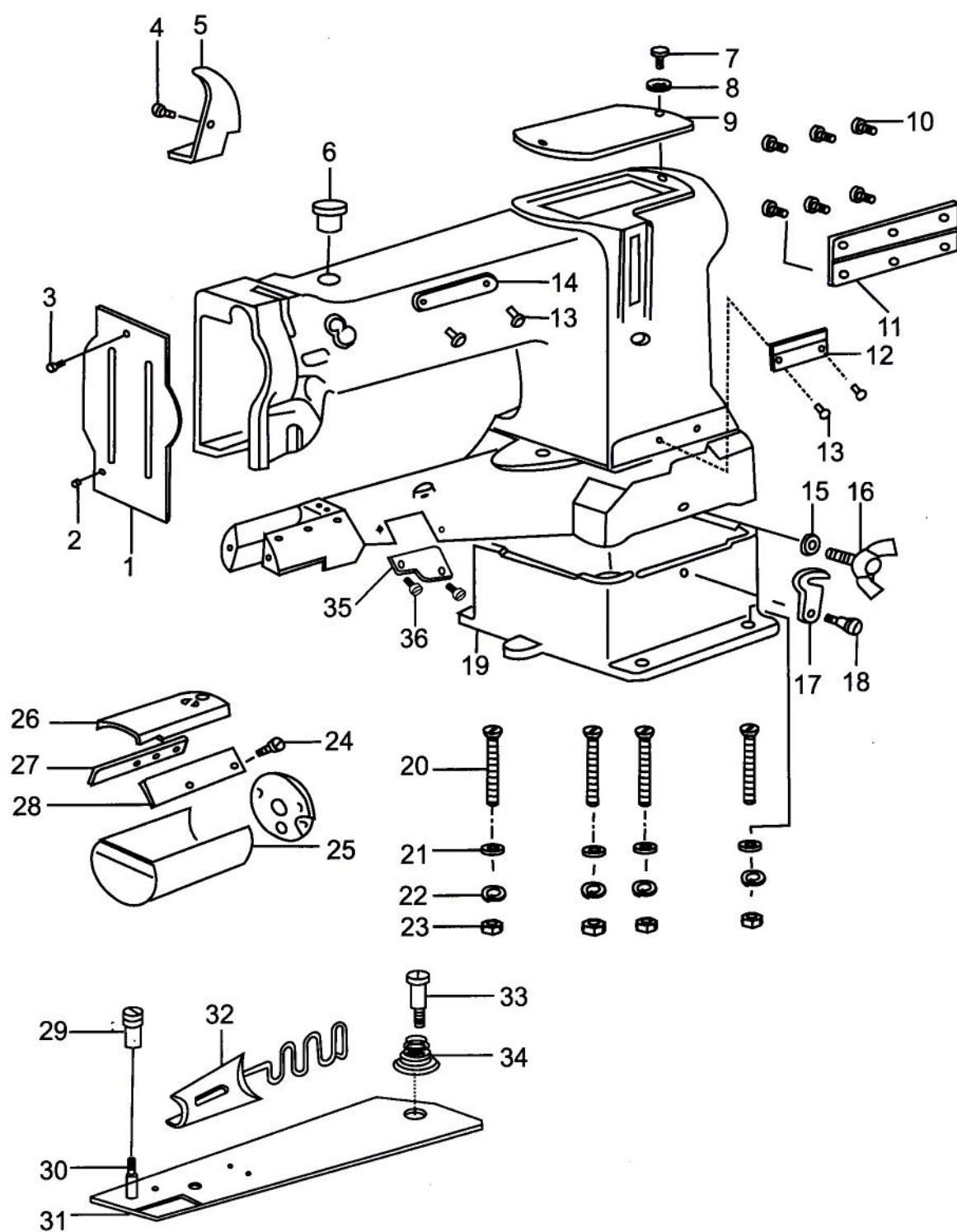
## 26. Adjusting the position of the binder (Model 8BV)

Loosen the set nut, move the binder forward and backward until it reaches the proper position, then tighten the set screw.

# **PARTS CHART**



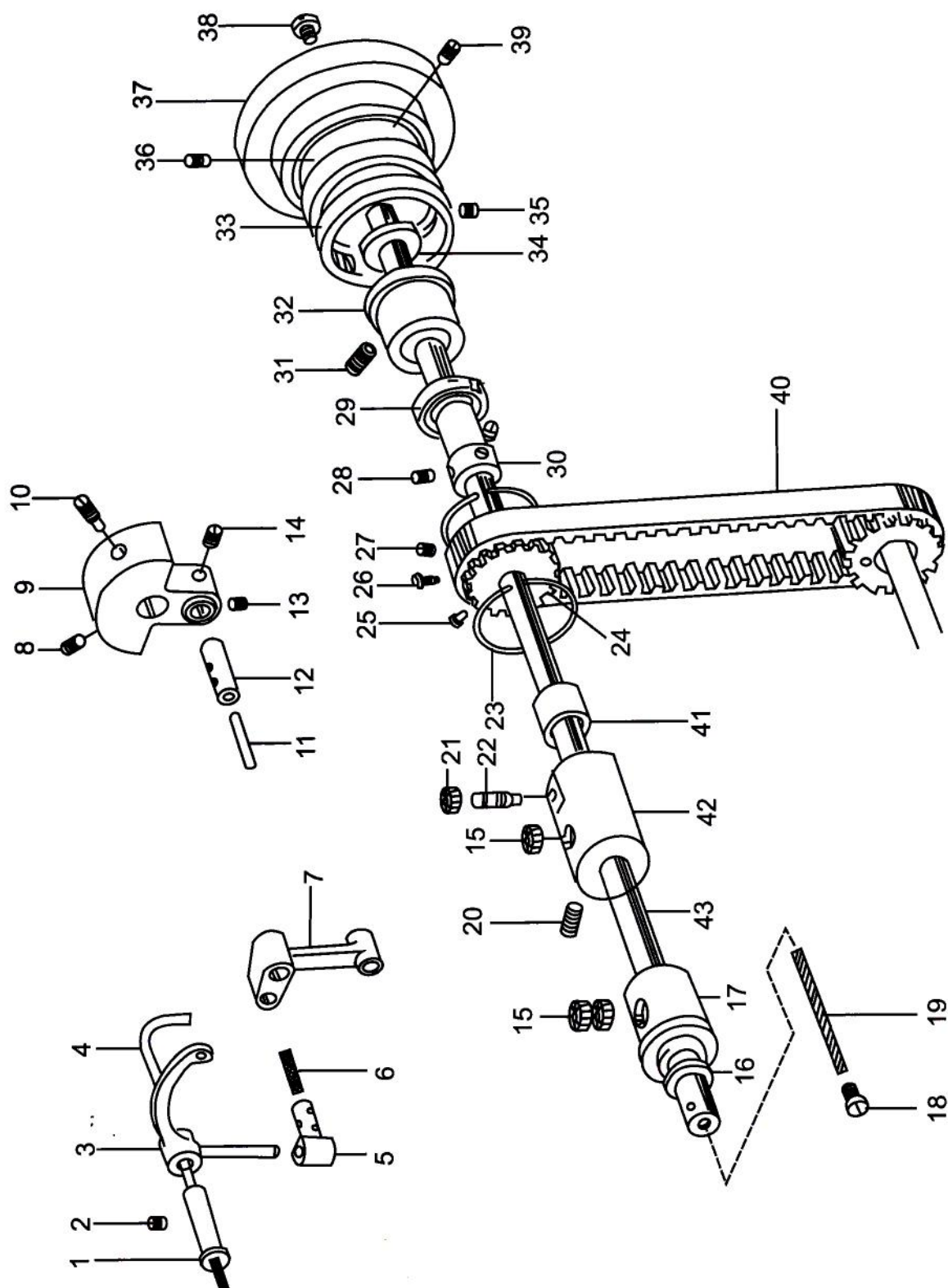
# 1. Arm



# 1.Arm

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	16WF2-008	Face plate	1	1	
2	16WF2-010	Pin	1	1	
3	16WF2-009	Screw	1	1	SM9/64"X40
4	16WF1-059	Screw	1	1	SM9/64"X40
5	16WF2-038	Oil retainer	1	1	
6	16WF2-003	Rubber plug	1	1	
7	16WF2-022	Screw	1	1	SM3/16"X28
8	16WF2-023	Washer	1	1	
9	16WF2-021	Upper cover	1	1	
10	22WF2-004	Screw	6	6	M6X1
11	37T4-407	Hinge	1	1	
12	22WF2-005	Trade mark	1		
	28WF2-002	Rivet		1	
13		Trade mark	4	4	GB827-86
14	16WF2-053	Washer	1	1	
15	37T4-411	Connecting hook screw assembly	1	1	
16	22WF2-006	Connecting hook	1	1	M6X1
17	37T4-409	Screw	1	1	
18	22WF2-020	Bed	1	1	SM1/4"X28
19	22WF2-003	Screw	1	1	
20		Washer	4	4	M8X75 GB68-85
21		Washer	4	4	GB96-85-8
22		Washer	4	4	GB93-87-8
23		Nut	4	4	GB41-86-8
24	22WF2-013	Screw	4	4	SM9/65"X40
25	22WF2-014	Safety guard	1	1	
26	22WF2-010	Sliding plate assembly	1		
27	22WF2-011	Front plate for sliding plate	1	1	
28	22WF2-012	Rear plate for sliding plate	1	1	
29	28WF2-008	Nut		2	
30	28WF2-006	Screw		2	SM11/64"X40
31	28WF2-005	Bed cover		1	
32	28WF2-007	Binder		1	
33	28WF2-010	Screw		1	SM5/16"X24
34	28WF2-009	Spring		1	
35	28WF2-004	Side cover		1	
36	7WF5-007	Screw		2	

## 2. Upper shaft and thread take-up parts

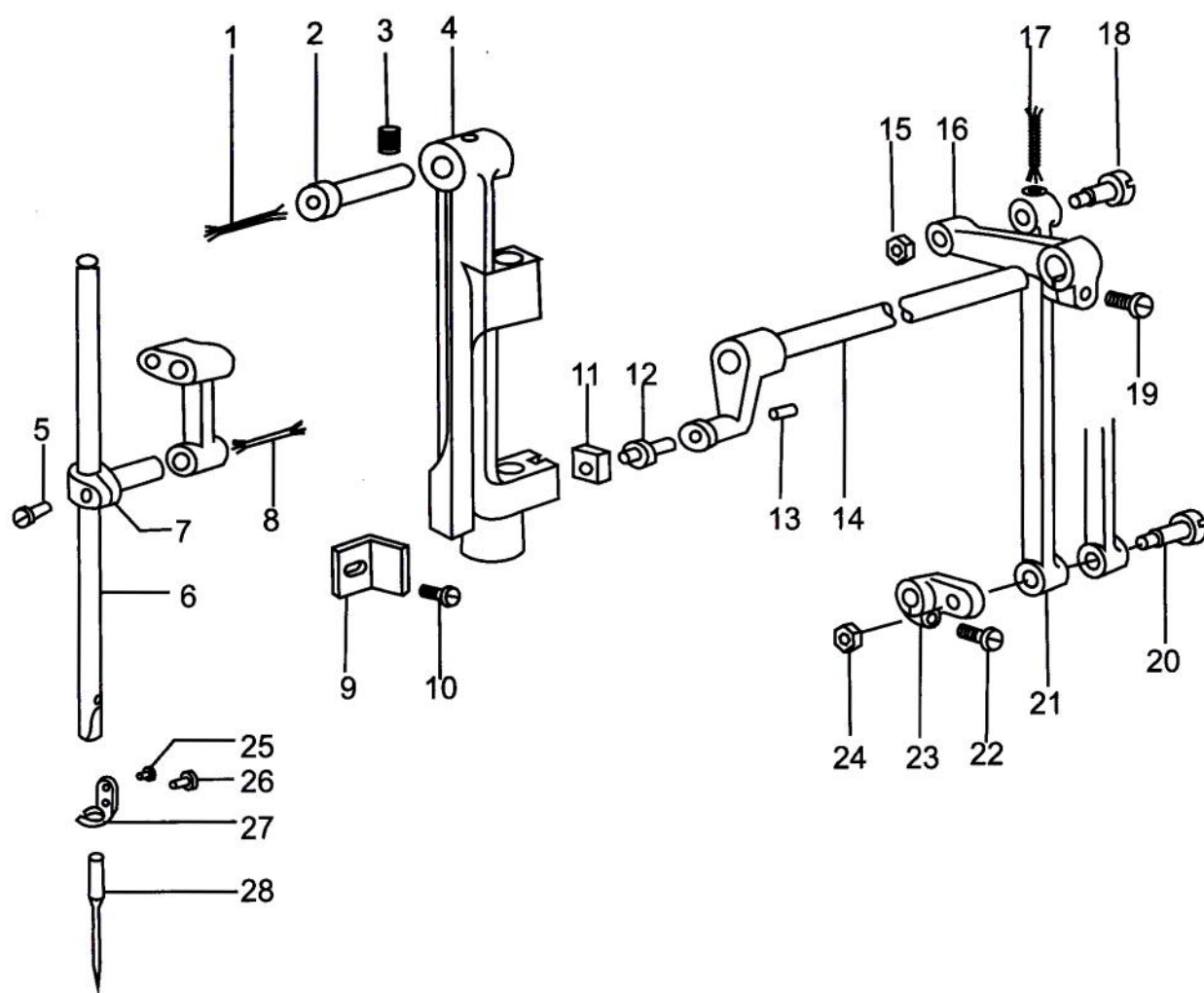




## 2.Upper shaft and thread take-up parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	16WF1-010	Thread take-up lever pin shaft	1	1	SM17/64"×32
2	16WF1-011	Screw	1	1	
3	16WF1-012	Thread take-up lever	1	1	
4		Oil wick	1	1	SM1/4"×28
5	16WF1-013	Sliding block	1	1	
6		Oil wick	1	1	
7	16WF1-014	Needle bar link	1	1	SM1/4"×28
8	16WF1-020	Screw	1	1	
9	16WF1-018	Needle bar crank	1		
	28WF1-002	Screw		1	SM1/4"×28
10	16WF1-019	Oil wick	1	1	
11		Crank pin	1	1	
12	16WF1-015	Screw	1	1	SM1/4"×28
13	16WF1-017	Screw	1	1	
14	16WF1-016	Oil felt	1	1	
15	16WF1-025	Spacer	3	3	SM1/4"×28
16	16WF1-021	Front bushing	1	1	
17	22WF1-053	Screw	1	1	
18	22WF1-049	Oil wick	1	1	SM5/16"×28
19		Screw	1	1	
20	16WF1-004	Nut	1	1	
21	22WF1-042	Screw	1	1	SM17/64"×32
22	16WF1-019	Nut	1	1	
23	16WF1-043	Screw	1	1	
24	22WF1-043	Retainer	2	2	SM1/4"×28
25	22WF1-044	Synchro pulley	1	1	
26	22WF1-046	Screw	1	1	
27	22WF1-045	Screw	1	1	SM1/4"×28
28	22WF1-048	Screw	1	1	
29		Screw	2	2	
30		Bearing	1	1	202 15×35×11
31	22WF1-047	Bushing	1	1	
32	16WF1-004	Screw	1	1	
33	16WF1-026	Rear bushing	1	1	SM17/64"×32
34	22WF1-008	Ring for balance wheel	1	1	
35	16WF1-029	Retainer	1	1	
36	16WF1-056	Screw	1	1	SM1/4"×32
37	13WF1-078	Screw	1	1	
38	16WF1-035	Balance wheel	1	1	
39	16WF1-040	Screw	1	1	SM11/32"×28
40	13WF1-077	Screw	1	1	
41	22WF1-007	Synchro belt	1	1	
42	22WF1-041	Bushing	1	1	SM15/64"×28
43	22WF1-006	Middle bushing	1	1	
	22WF1-005	Upper shaft	1	1	

### 3. Needle bar rock parts

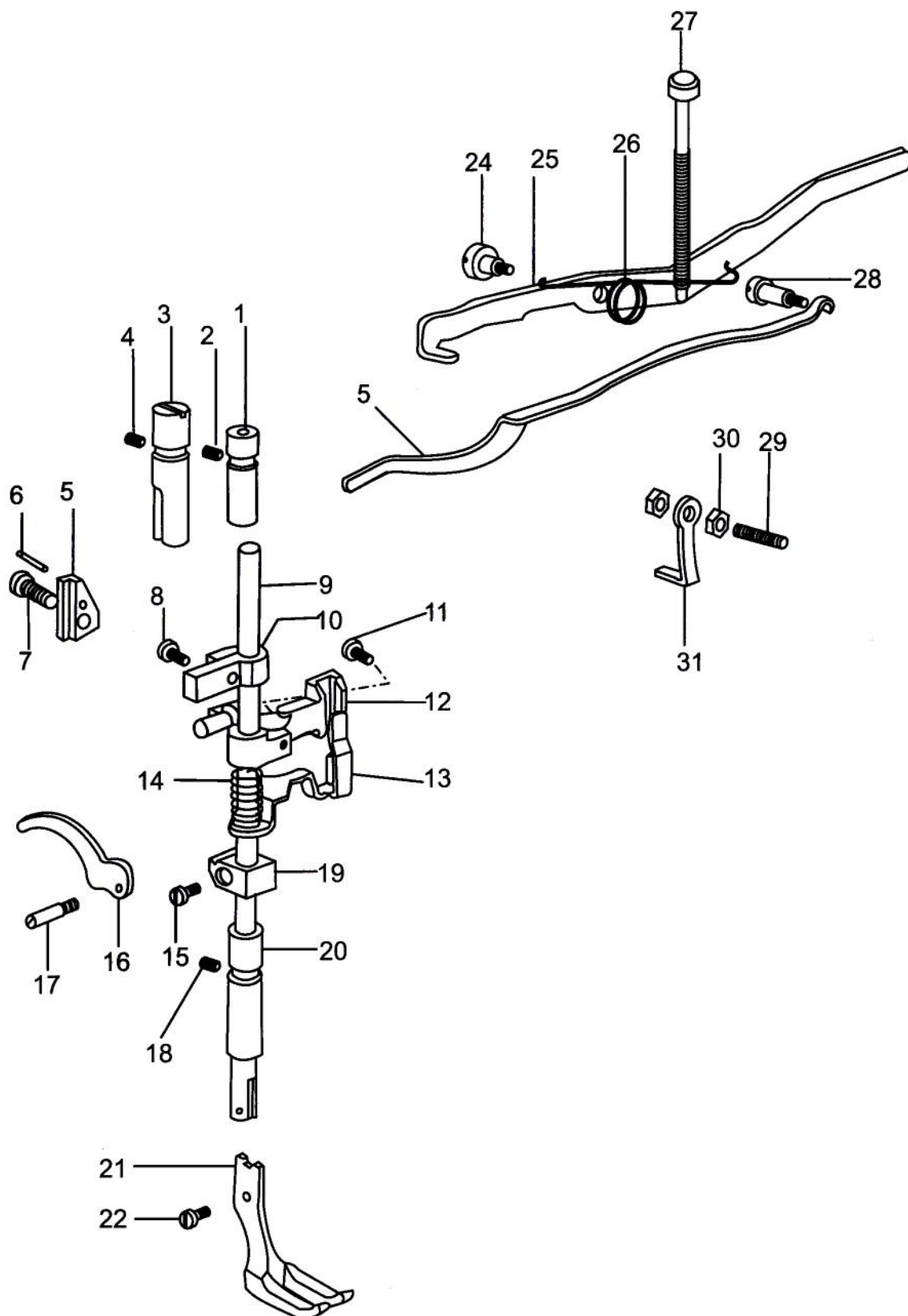


### 3.Needle bar rock parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1		Oil wick	1	1	
2	22WF5-002	Pin for needle bar rock holder	1	1	
3	16WF1-011	Screw	1	1	SM17/64"×32
4	22WF5-001	Needle bar rock holder	1	1	
5	16WF1-009	Screw	1	1	M4×0.7
6	22WF1-001	Needle bar	1	1	
7	22WF1-004	Needle bar adaptor	1	1	
8		Oil wick	1	1	
9	1WF5-009	Guide plate	1	1	
10	1WF5-010	Screw	1	1	SM11/64"×40
11	22WF5-005	Sliding block	1	1	
12	22WF5-006	Sliding block shaft	1	1	
13	22WF1-020	Screw	1	1	SM7/32"×32
14	22WF5-004	Needle bar rock shaft	1	1	
15	22WF5-016	Nut	1	1	
16	22WF5-008	Crank	1	1	
17		Oil wick	1	1	
18	22WF5-011	Screw	1	1	SM1/4"×28
19	22WF3-011	Screw	1	1	SM1/4"×28
20	22WF4-008	Screw	1	1	M8×1.25
21	22WF5-010	Needle bar rock link	1	1	
22	22WF4-007	Screw	1	1	SM7/32"×32
23	22WF4-006	Feed dog crank	1	1	
24	22WF4-009	Nut	1	1	
25	16WF1-006	Screw	1	1	SM3/32"×56
26	22WF4-003	Screw	1	1	SM1/8"×40
27	22WF4-002	Needle bar finger	1	1	
28		Needle	1	1	DP×17 22#



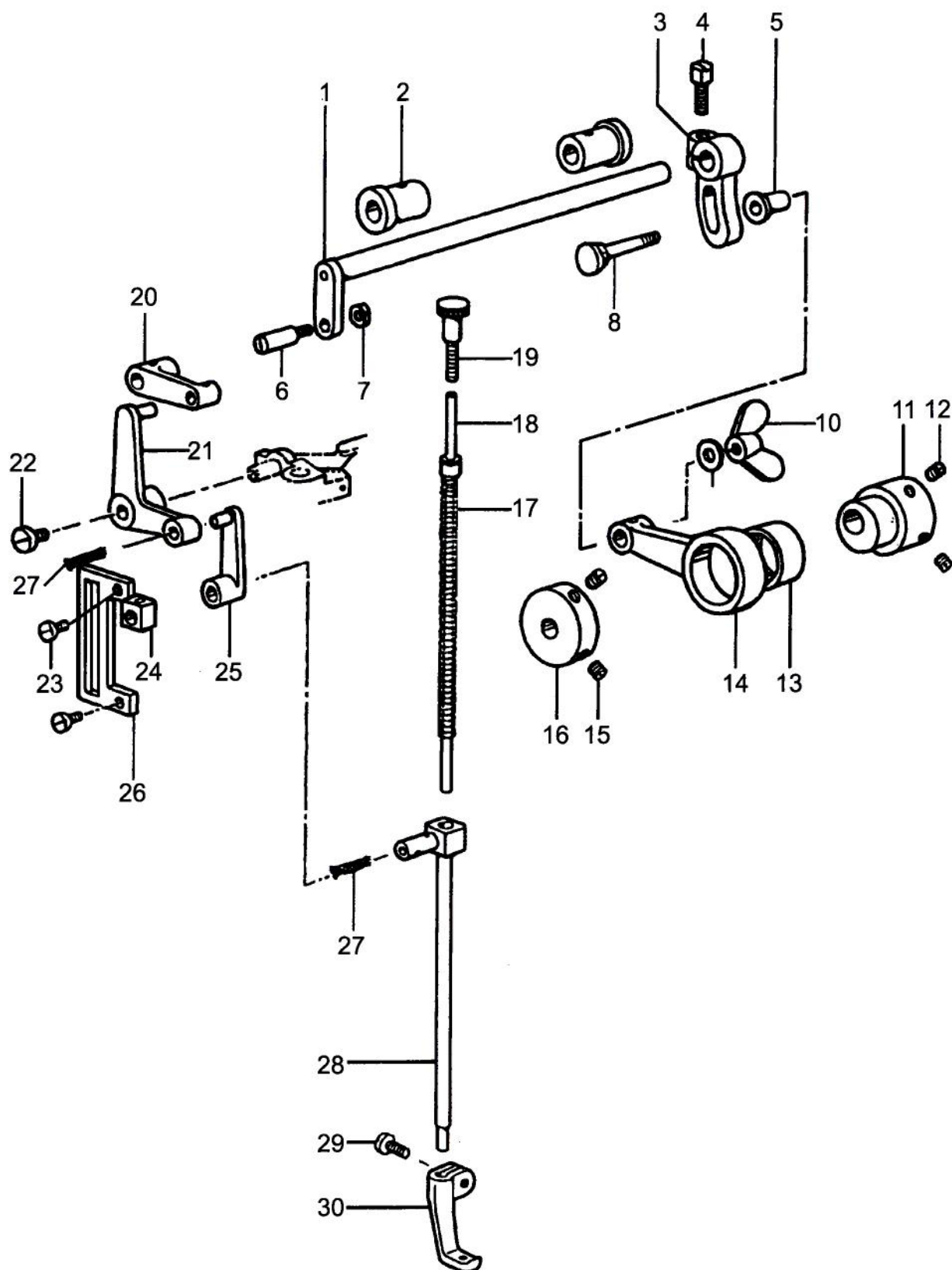
#### 4. Presser bar parts



## 4.Presser bar parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	16WF4-027	Upper shaft bushing for presser bar	1	1	
2	16WF3-025	Screw	1	1	SM17/64"×32
3	16WF4-020	Guide shaft	1	1	
4	16WF3-025	Screw	1	1	SM17/64"×32
5	22WF3-010	Pressure plate	1	1	
6	22WF3-012	Pressure plate pin	1	1	
7	22WF3-011	Screw	1	1	SM1/4"×28
8	16WF4-022	Screw	1	1	SM9/64"×40
9	22WF3-005	Presser bar	1	1	
10	16WF4-021	Presser bar guide	1	1	
11	16WF2-033	Screw	1	1	SM11/64"×40
12	22WF3-007	Thread releasing guide bracket	1	1	
13	22WF3-009	Thread releasing plate	1	1	
14	22WF3-008	Spring	1	1	M4×0.7
15	16WF1-009	Screw	1	1	
16	16WF4-002	Presser foot lifter	1	1	
17	16WF3-001	Presser foot lifter shaft	1	1	SM17/64"×32
18	16WF3-025	Screw	1	1	
19	16WF4-023	Presser bar plate spring bracket	1	1	
20	22WF3-006	Lower shaft bushing	1	1	
21	22WF3-013	Presser foot	1		
	22WF3-001	Presser foot			
22	22WF3-014	Screw	1	1	SM9/64"×40
23	16WF4-009	Presser bar plate spring	1	1	
24	16WF3-059	Screw	1	1	SM1/4"×28
25	22WF3-002	Presser foot lifter lever	1	1	
26	22WF3-001	Spring	1	1	
27	16WF4-016	Regulating screw	1	1	SM17/64"×32
28	16WF4-008	Screw	1	1	SM1/4"×28
29	22WF3-003	Screw	1	1	SM15/64"×28
30	22WF3-004	Nut	2	2	
31	22WF3-015	Position plate	1	1	

## 5. Upper feed parts

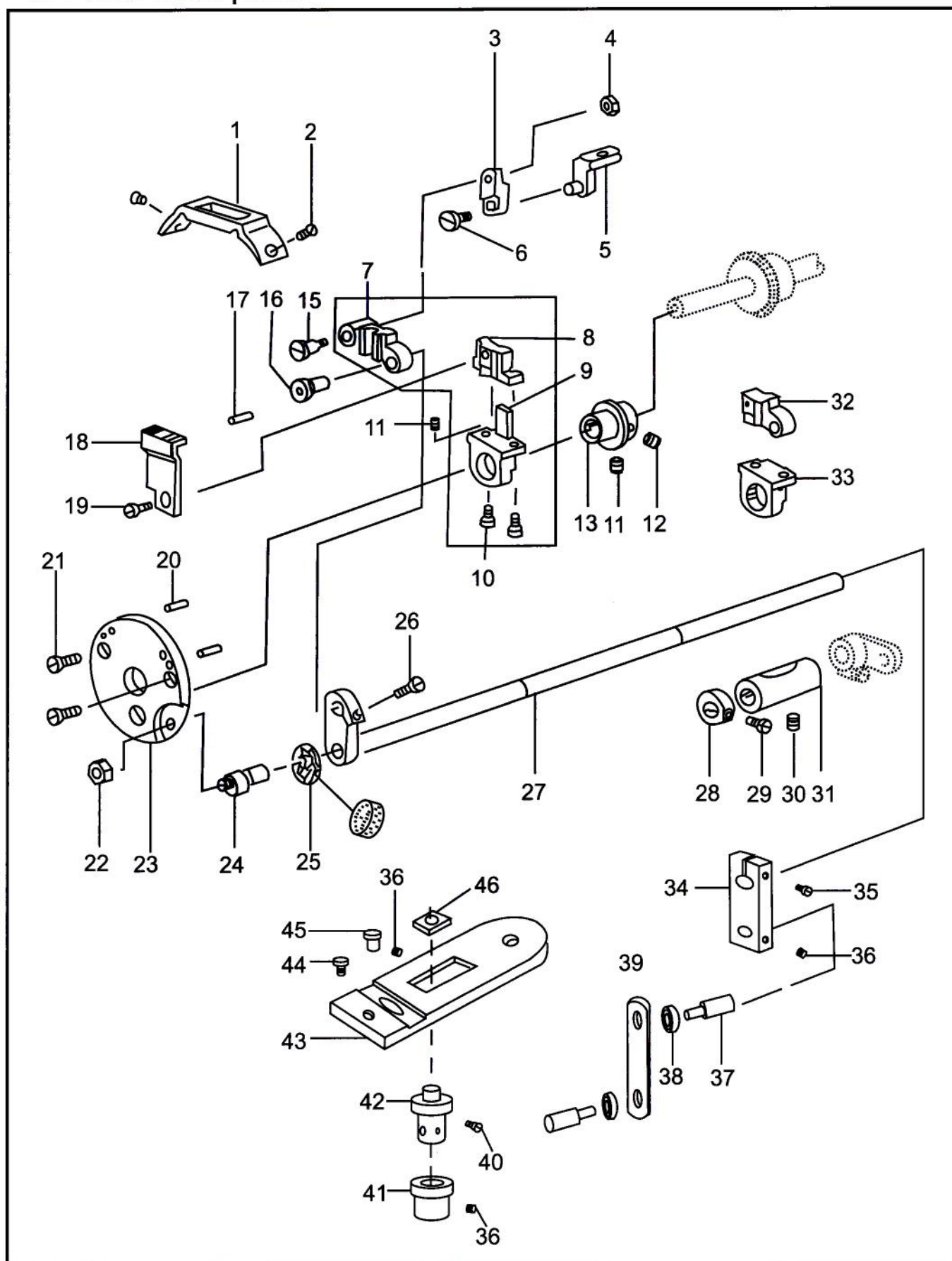




## 5.Upper feed parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	22WF5-012	Presser foot lifter shaft	1	1	
2	22WF5-013	Bushing	2	2	
3	22WF5-017	Crank	1	1	
4	16WF3-030	Screw	1	1	SM1/4"×28
5	22WF5-019	Collar	1	1	
6	22WF5-015	Screw	1	1	SM11/4"×28
7	22WF5-016	Nut	1	1	
8	22WF5-018	Screw	1	1	SM7/32"×32
9	16WF2-023	Washer	1	1	
10	22WF5-020	Nut	1	1	
11	22WF5-022	Eccentric wheel	1	1	
12	22WF4-002	Screw	2	2	SM1/4"×40
13		Bearing	1	1	
14	22WF5-021	Eccentric link	1	1	
15	22WF5-025	Screw	2	2	SM7/32"×32
16	22WF5-024	Collar	1	1	
17	22WF5-030	Spring	1	1	
18	22WF5-031	Spring lever	1	1	
19	22WF5-034	Screw	1	1	SM9/32"×32
20	22WF5-014	Link	1	1	
21	22WF5-026	Rocking plate	2	2	
22	22WF5-027	Screw	1	1	SM11/64"×40
23	16WF1-059	Screw	2	2	SM9/64"×40
24	22WF5-009	Sliding block	1	1	
25	22WF5-028	Link	1	1	
26	22WF5-003	Guide rail	1	1	
27		Oil wick	2	2	
28	22WF5-029	Rocking presser lever	1	1	
29	22WF5-033	Screw	1	1	SM5/32"×40
30	22WF5-032	Small presser foot	1		
	28WF5-001			1	

## 6. Feed shaft parts

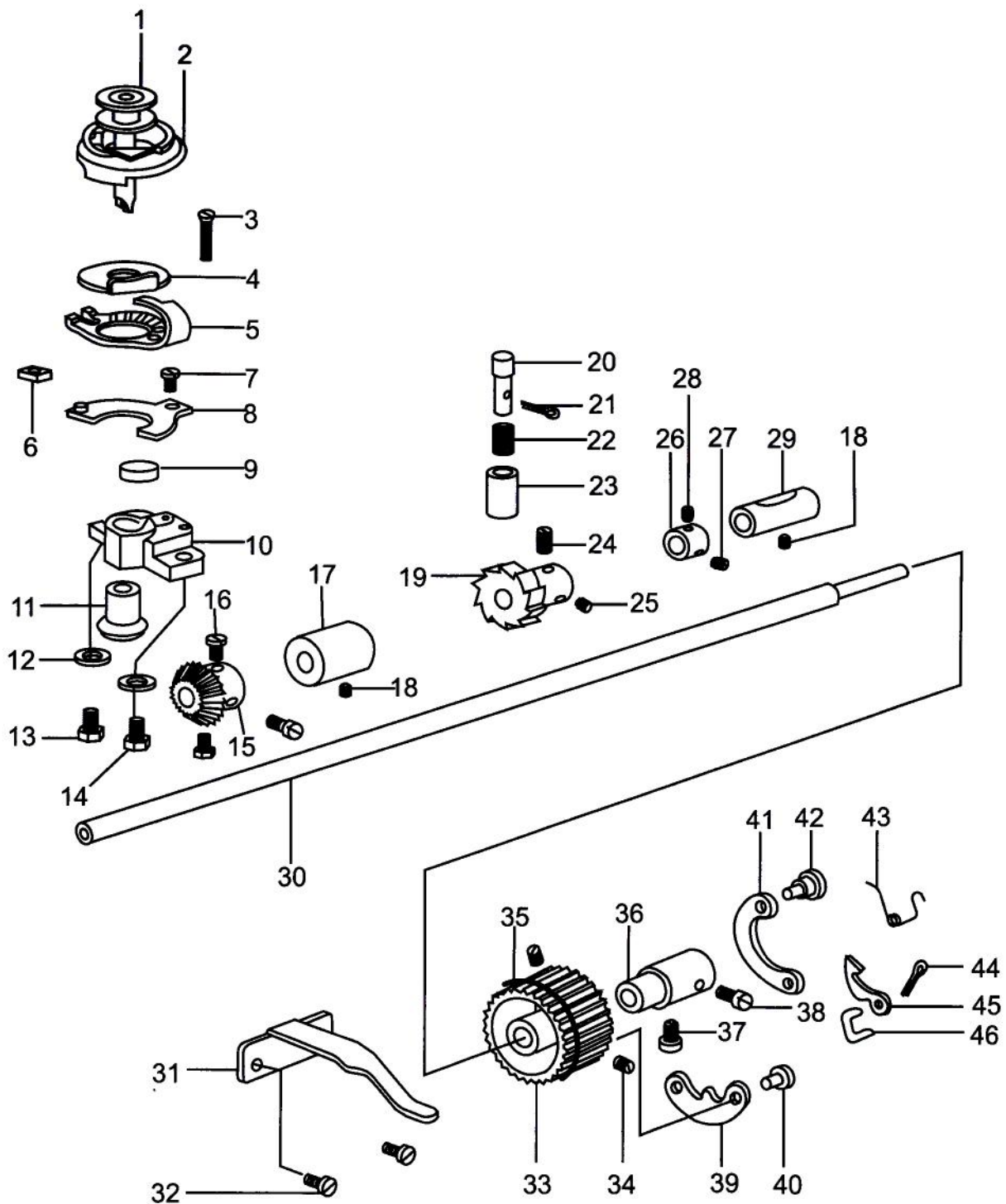


## 6.Feed shaft parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	22WF2-009	Needle plate	1		
	28WF2-003	Needle plate		1	SM9/64"×40
2	22WF2-007	Screw	2	2	
3	22WF4-017	Link	1		
4	22WF4-044	Nut	1		
5	22WF4-016	Connecting holder	1		
6	22WF4-019	Screw	1		SM9/64"×40
7	22WF4-015A2	Feed dog guide	1		
8	22WF4-015A1	Feed dog holder	1		
9	22WF4-015A3	Feed dog carrier bracket	1		
10	22WF4-015A4	Screw	2	2	SM9/64"×40
11	22WF4-005	Screw	1	1	M5×0.8
12	22WF4-004	Screw	1	1	M5×0.8
13	22WF4-003	Feed lifter cam	1		
	28WF4-001	Screw		1	
14	22WF4-018	Screw	1	1	M2.5×.45
15	22WF4-043	Connecting pin	1		SM11/64"×40
16	22WF4-042	Oil wick	1	1	
17		Feed dog	1	1	
18	22WF4-013	Feed dog	1		
	28WF4-002	Screw		1	
19	22WF4-014	Pin	1	1	SM11/64"×40
20	22WF2-018	Screw	2	2	
21	22WF2-017	Nut	2	2	SM3/16"×32
22	22WF4-011	Cover	1	1	
23	22WF2-016	Screw	1	1	
24	614471	Oil felt	1	1	
25	22WF4-012	Screw	1	1	
26	22WF4-020	Feed shaft	1	1	
27	22WF4-041	Collar	1	1	M4×0.7
28	22WF4-045	Screw	1	1	
29	22WF1-007	Screw	1	1	
30	661012	Bushing	1	1	
31	22WF4-046	Feed dog support	1	1	M5×0.8
32	22WF4-003	Feed dog support bracket		1	SM15/64"×28
33	28WF4-016	Feed connector		1	
34	28WF4-004	Screw			
35	28WF4-005	Screw		1	
36	21T1-001	Connecting pin		1	
37	28WF4-006	Bearing		1	SM11/64"×40
38	28WF4-015	Link		3	SM11/64"×40
39	28WF4-007	Screw		2	
40	28WF4-010	Cover		2	
41	28WF4-011	Eccentric pin		1	
42	28WF4-009	Rocking plate		1	
43	28WF4-012	Screw		1	
44	28WF4-013	Pin		1	
45	28WF4-014	Sliding block		1	
46	28WF4-008	Washer		1	
47	28WF4-017			1	



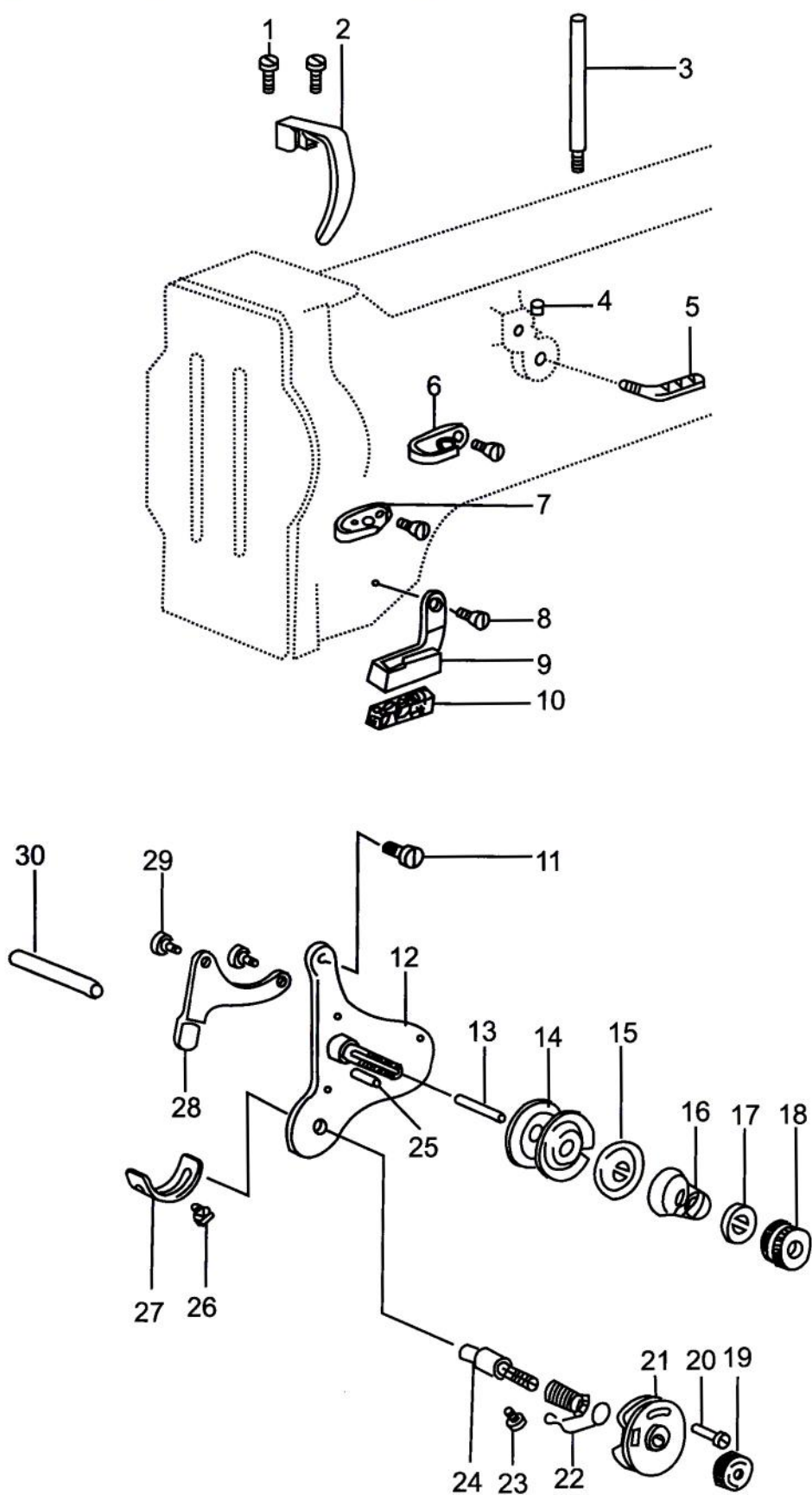
## 7. Lower shaft and rotating hook parts



## 7.Lower shaft and rotating hook parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	16WF1-063	Bobbin	1	1	Koban KRT31-11S SM9/64"×40
2		Bobbin	1	1	
3	22WF1-029	Rotating hook	1	1	
4	22WF1-033	Screw	1	1	
5	22WF1-030	Eccentric plate	1	1	
6	22WF1-031	Thread separator	1	1	
7	13WF2-008	Sliding block	1	1	
8	22WF1-032	Screw	1	1	
9	22WF1-037	Set plate	1	1	
10	22WF1-034	Oil felt	1	1	
	9KT1-006	Rotating hook bracket			
11	22WF1-028	Hook bevel gear	1	1	
12	22WF1-036	Washer	2	1	
13	22WF1-035	Screw(big)	1	2	M5×0.8
14	22WF1-050	Screw(small)	1	2	M5×0.8
15	22WF1-024	Lower shaft bevel gear	1	1	
16	22WF1-025	Screw	3	1	M5×0.8
17	22WF1-021	Bushing	1	3	
	28WF1-001	Bushing		1	
18	22WF1-022	Screw	2	2	SM15/64"×28
19	22WF1-039	Stop wheel	1	1	
20	22WF1-038	Button	1	1	
21		Split ring	1	1	
22	16WF3-046	Spring	1	1	GB91-86 1.6×10
23	22WF1-040	Collar	1	1	
24	380637	Screw	1	1	
25	380640	Screw	1	1	SM1/4"×32 Length 8
26	22WF1-026	Collar	1	1	SM1/4"×32 Length 7
27	13WF3-072	Screw	1	1	
28	13WF3-027	Screw	1	1	M5×0.8
29	22WF1-023	Lower shaft rear bushing	1	1	
30	22WF1-009	Lower shaft	1	1	
31	22WF2-015	Position plate	1	1	
32	13WF6-008	Screw	2	1	SM1/8"×40
33	22WF1-010	Synchro pulley	1	2	
34	22WF1-020	Screw	2	1	SM7/32"×32
35	16WF1-043	Retainer	1	2	
36	22WF1-011	Bushing	1	1	
37	22WF1-012	Screw	1	1	SM1/4"×32
38	22WF1-052	Screw	1	1	
39	22WF1-018	Stop plate	1	1	
40	22WF1-019	Screw	1	1	
41	22WF1-013	Spring plate	1	1	
42	22WF1-015	Pin	1	1	
43	22WF1-014	Spring	1	1	
44		Split pin	1	1	GB91-86 1.2×8
45	22WF1-016	Stop plate	1	1	
46	22WF1-017	Connecting part	1	1	

## 8. Thread-pass parts

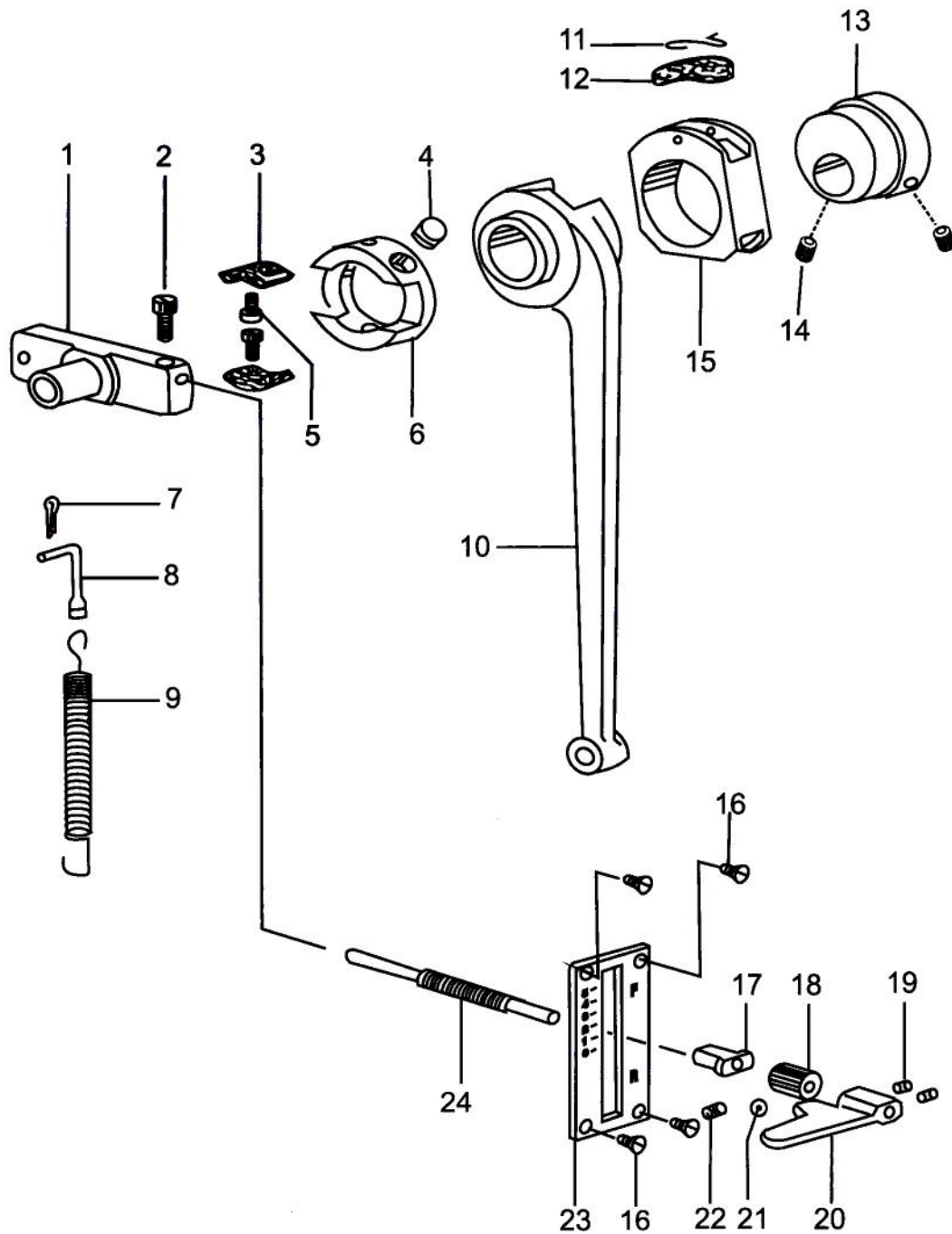




## 8.Thread-pass parts

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	16WF2-017	Screw	2	2	SM9/64"×40
2	16WF2-016	Safety guard	1	1	
3	16WF2-048	Thread retaining pin	1	1	
4	16WF2-025	Screw	1	1	SM9/64"×40
5	16WF2-024	Three-eye thread finger	1	1	
6	16WF2-011	Upper thread finger	1	1	
7	16WF2-012	Middle thread finger	1	1	
8	16WF2-015	Screw	3	3	SM9/64"×40
9	16WF2-013	Lower thread finger	1	1	
10	16WF2-014	Felt	1	1	
11	16WF2-020	Screw	1	1	SM11/64"×32
12	16WF2-046A1	Set plate	1	1	
13	16WF2-046A13	Thread releasing pin	1	1	
14	16WF2-046A6	Thread tension plate	2	2	
15	16WF2-046A5	Thread releasing plate	1	1	
16	16WF2-045A4	Spring	1	1	
17	153029	Stop plate	1	1	
18	16WF2-046A3	Nut	1	1	
19	16WF2-046A11	Nut	1	1	
20	16WF2-046A9	Screw	1	1	SM3/32"×56
21	1WF1-010J	Thread control plate assembly	1	1	
22	16WF2-046A7	Thread take-up spring	1	1	
23	16WF2-033	Screw	1	1	SM11/64"×32
24	16WF2-046A10	Thread take-up spring shaft	1	1	
25	16WF2-046A12	Pin	1	1	
26	16WF2-050	Screw	1	1	SM9/64"×40
27	16WF2-049	Position plate	1	1	
28	16WF2-046A14	Thread tension releasing disc	1	1	
29	16WF2-046A15	Screw	2	2	SM9/64"×40
30	103723	Thread tension releasing lever	1	1	

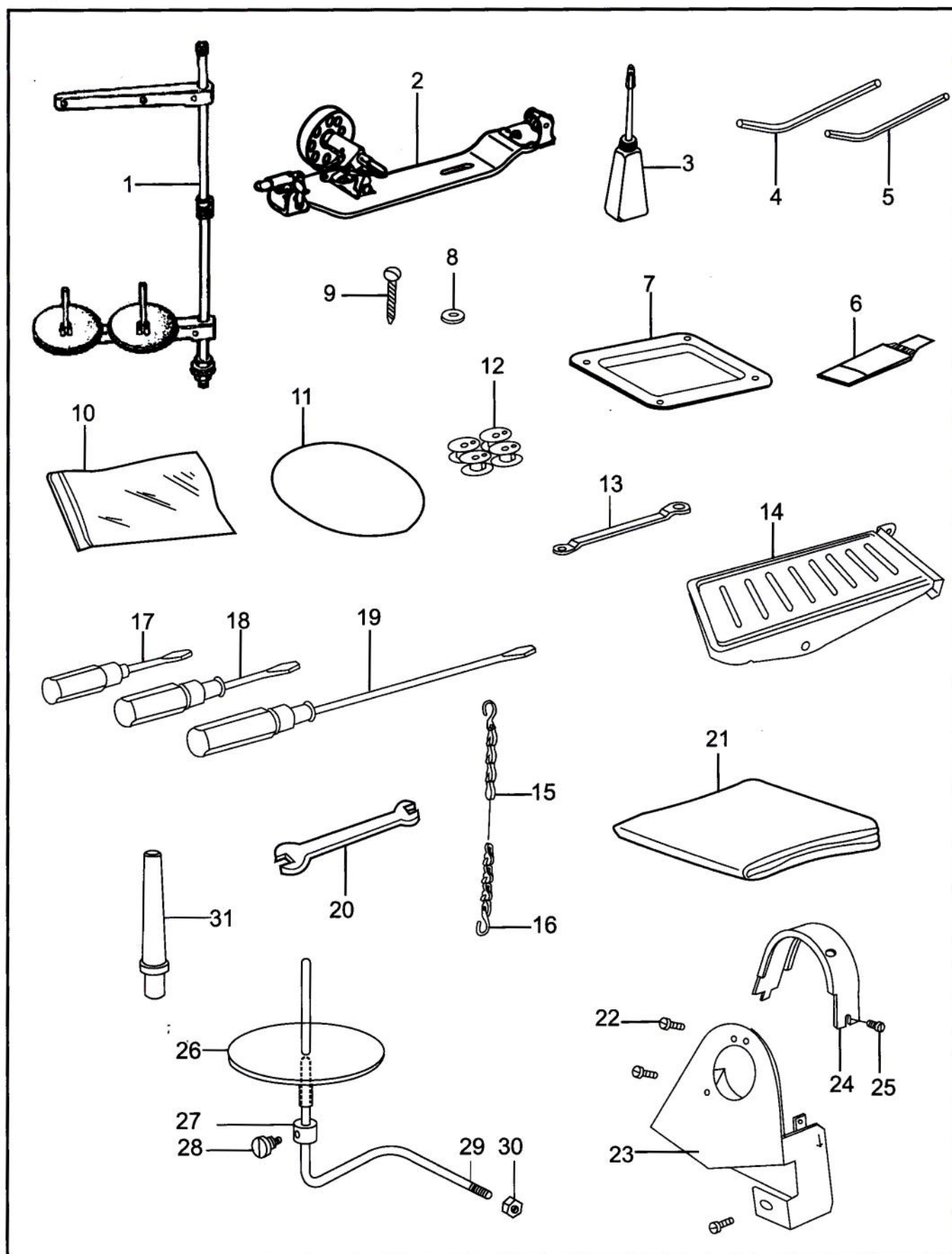
## 9. Stitch length adjustment



## 9. Stitch length adjustment

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	22WF4-023	Reverse stitch plate	1	1	
2	22WF4-025	Screw	1	1	M5×0.8
3	22WF4-035	Oil felt	2	2	
4	22WF4-037	Oil felt	1	1	
5	J0.0.50	Screw	1	1	SM1/8"×40
6	22WF4-034	Adjusting block	1	1	
7		Split pin	1	1	GB91.86 1.6×12
8	22WF4-022	Spring finger	1	1	
9	22WF4-021	Spring	1	1	
10	22WF4-033	Feed link	1	1	
11	22WF4-040	Spring	1	1	
12	22WF4-039	Oil felt	1	1	
13	22WF4-001	Eccentric wheel	1	1	
14	22WF4-002	Screw	2	2	SM1/4"×40
15	22WF4-038	Sliding block	1	1	
16	22WF4-032	Screw	4	4	SM1/8"×40
17	22WF4-026	Position block	1	1	
18	22WF4-027	Nut	1	1	SM9/32"×28
19	13WF4-027	Screw	2	2	M5×0.8
20	22WF4-028	Reverse feed lever	1	1	
21		Spring ball	1	1	Φ 3.17
22	22WF4-030	Spring	1	1	
23	22WF4-031	Stitch length dial	1	1	
24	22WF4-024	Adjusting bolt	1	1	

## 10.Accessories





## 10.Accessories

NO.	Part Number	Name	Qt.		Remark
			8 B	8 B V	
1	4F-007	Spool stand assembly	1	1	
2	S14420020	Thread winder assembly	1	1	
3	33TF-011	Oil pot	1	1	
4	1F-010	Hexagonal screwdriver	1	1	Standard2.5mm
5	1F-011	Hexagonal screwdriver	1	1	Standard3mm
6	1F-019	Needle	1Pack	1Pack	DP×17 22#
7	22WF2-008	Oil reservoir	1	1	
8	33TF-018	Washer	2	2	Washer6 GB848-85
9	33TF-017	Wood screw	2	2	5×20 GB99-86
10	33TF-010	Accessory bag	1	1	
11	33TF-005	V-belt	1	1	O-Type 1380mm
12	16WF1-063	Bobbin	4	4	
13		Spanner	1	1	Standard11-12
14	18WF1-013	Pedal assembly	1	1	
15	18WF1-017	Chain	1	1	Length1000mm
16	18WF1-016	Chain finger	2	2	
17	33TF-014	Screwdriver (small)	1	1	
18	33TF-013	Screwdriver (medium)	1	1	
19	33TF-012	Screwdriver (big)	1	1	
20		Two head wench	1	1	
21		Cover	1	1	
22	37T4-416	Screw	2	2	SM9/64"×40
23	22WF6-006	Safety guard (II)	1	1	
24	22WF6-005	Safety guard (I)	1	1	
25	22WF3-007	Screw	2	2	SM13/64"×32
26	28WF2-011	Webbing disc	1	1	
27	28WF2-014	Collar		1	
28	28WF2-013	Screw		1	GB841-86-M8
29	28WF2-012	Shaft for webbing disc		1	
30		Hexagonal nut		1	
31	16WF5-007	Machine head support	1	1	

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