



TYPICAL

GC24660

**Post-bed Single Needle Upper and
Lower Roller Feed Sewing Machine**

GC24680

**Post-bed Twin Needle Upper and
Lower Roller Feed Sewing Machine**

OPERATION INSTRUCTION / PARTS MANUAL

- Please don't adjust and repair the machine by non-professionals,except adjusting stitch.
- Specifications subject to change without notice

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1. Brief introduction

This series sewing machine is the top product among the post bed sewing machines. It adopts the synchronized feed mechanism of wheel driven roller presser and needle feed. It forms two-thread lockstitch with take-up lever and vertical rotating hook. The machine also used high precision of synchronized belt and adjustable button mechanism. Needle bearings or ball bearings are used for most of the machine movement parts. Safety clutch can avoid the damage of the rotating hook.

This series machine is designed with beautiful outlook, accurate stitch length which can be adjusted conveniently and little difference between stitches. This machine is suitable for sewing arched products, such as leather shoes, bags, and gloves.

3. Preparation (Fig.1)

1. Cleaning the machine

Before delivery, the machine is coated with dust preventive grease, which may be hardened and contaminated by dust during storage and shipment.

This grease and dust must be moved by clean cloth with gasoline.

2. Examination

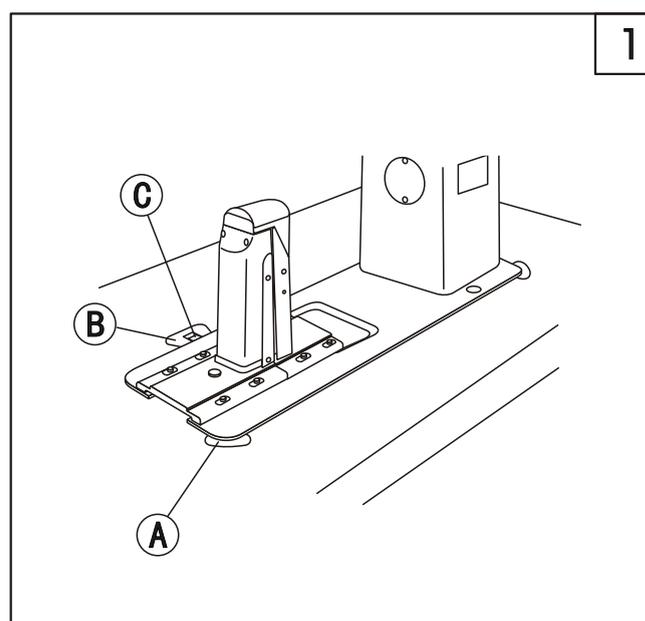
Though every machine is confirmed by strict inspection and test before delivery, the machine parts may be loosened or deformed after long distance transportation with jolt. A thorough examination must be performed after cleaning the machine. Turn the balance wheel to see if there is running obstruction, parts collision, uneven resistance or abnormal noise. If these exist, adjustment must be made accordingly.

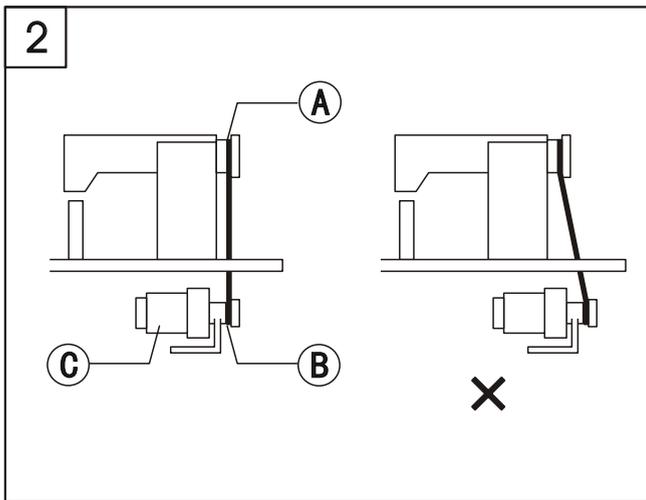
4. Installing the motor (Fig.1)

First, put the cushion A and cushion B into the cutout on the table, and fix the hinge C on the cushion B, then turn the machine head freely till it is seated on the frame of the table cutout.

2. Main technical specification

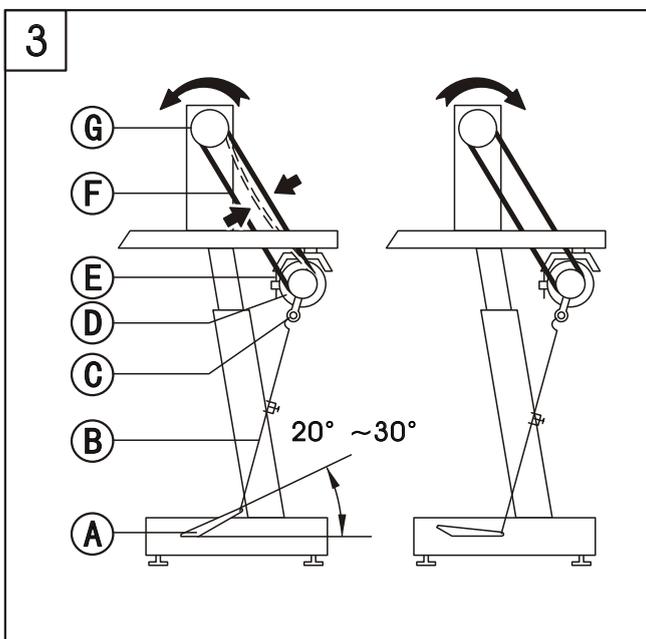
Max. sewing speed	2500r.p.m
Max stitch length	5mm
Presser foot lift height	7mm by hand, 9mm by knee
Needle bar stroke	38mm
Needle	DP×17 14#~20#
Rotating hook	vertical rotating hook
Needle gauge	2.4mm (standard), 1.2mm, 1.6mm, 2mm, 3.2mm, 4mm
Lubrication	oiling by hand
Motor	370W





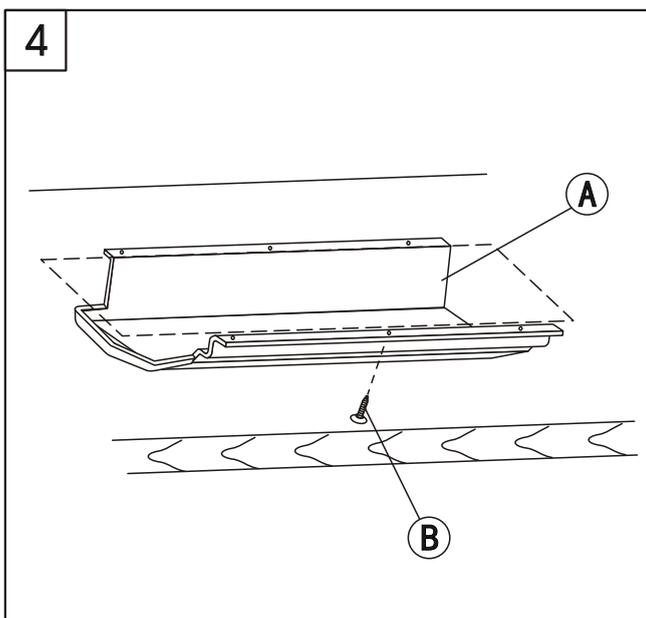
5. Installing the motor (Fig.2)

Align the balance wheel belt groove A with motor pulley belt groove B by moving the motor C leftward and rightward. Make sure the belt does not touch the table.



6. Connecting pedal to the clutch lever (Fig.3)

1. The optimum tilt angle of pedal with floor is approx. 15 degree.
2. Adjust the motor clutch so that the clutch lever C and draw bar B run in line as Fig.3.
3. The machine balance wheel should rotate counter clockwise for normal sewing when view from opposite side of the balance wheel. The motor rotates in the same direction. And the rotation can be reversed by reversing (turn over 180deg.) the plug of the motor.
4. Adjust the tension of the V-belt by moving the motor vertically. The proper tension of the V-belt is a slack of 10-12mm when the belt is depressed (on the belt pan) by finger.

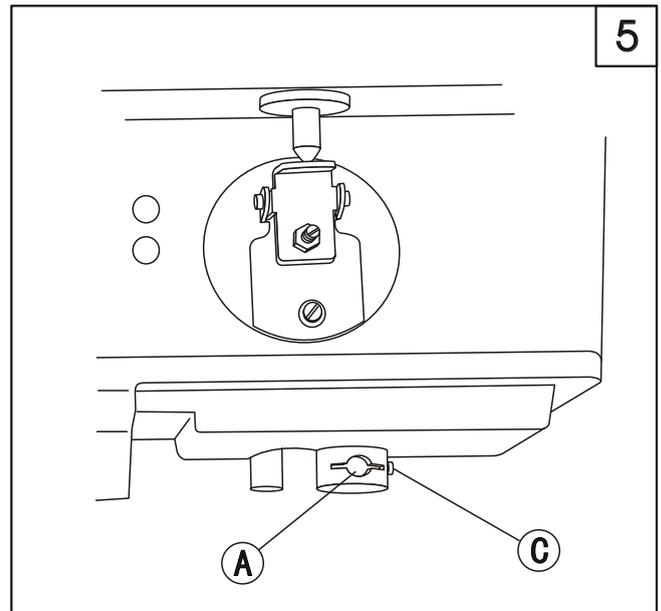


7. Installing the oil reservoir (Fig.4)

Smoothly put the oil reservoir A into the bottom of the table, and tighten the screw B into the both sides of the table cutout to secure the oil reservoir. Please note the position of knee lifter.

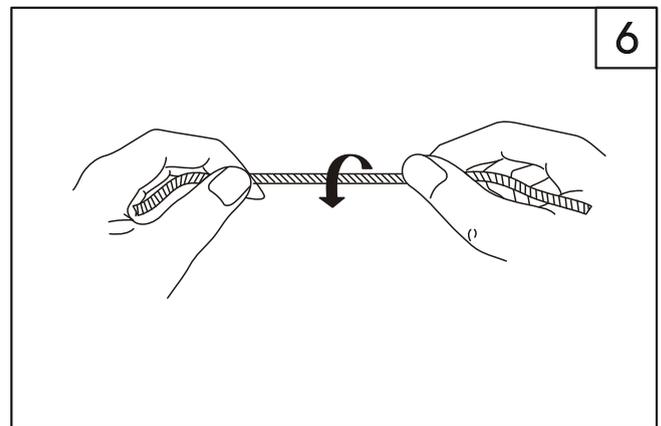
8. Installing the knee lifter device (Fig.5)

Put the knee lifter device into the connector A, then tighten the screw C. The position of knee lifter bell could be adjusted according to the user's position.



9. Selection of the thread (Fig.6)

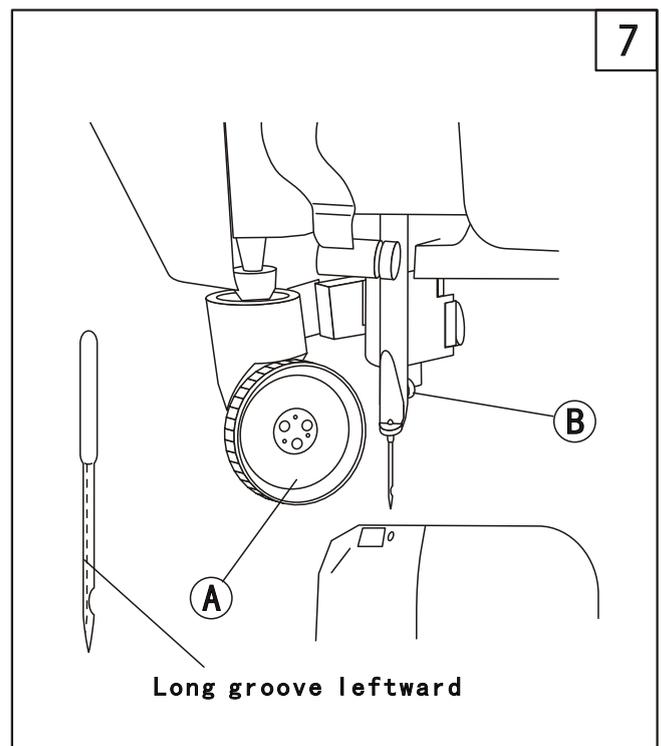
1. Thread must be in good quality.
2. The needle thread must be left-twisted.
3. Hold the thread, and twist it by right hand in the direction of the arrow shown in Fig.6. If the thread becomes tight, then it is left-twisted. On the contrary, it is right-twisted.

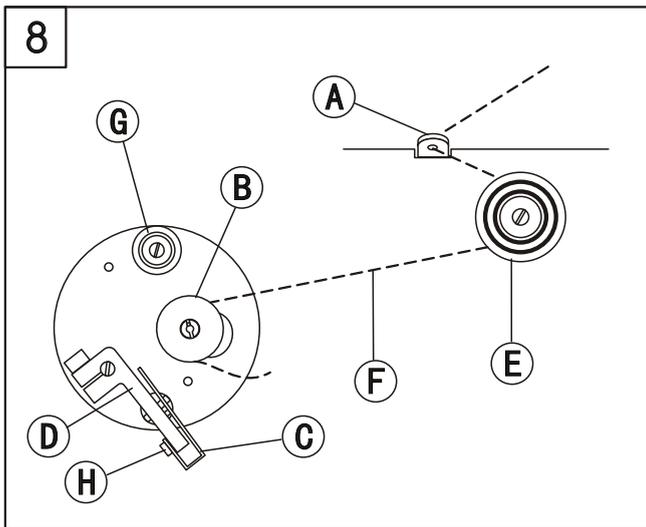


10. Installing the needle (Fig.7)

Please apply to needle DP×17 14#~20#. The selection of needle must be in accordance with the thread and material.

1. Lift the presser foot lift bar; turn the balance wheel to lift the needle bar to its highest position.
2. Open the roller presser foot A.
3. Loosen the needle set screw B.
4. When installing single needle machine, the long groove of the needle should be leftward, then fully insert the needle up to the bottom of the needle socket as Fig.7; when installing double needle machine, the long grooves of the two needles must be opposite to each other, then fully insert the needle up to the bottom of the needle socket.
5. Tighten the needle set screw B.





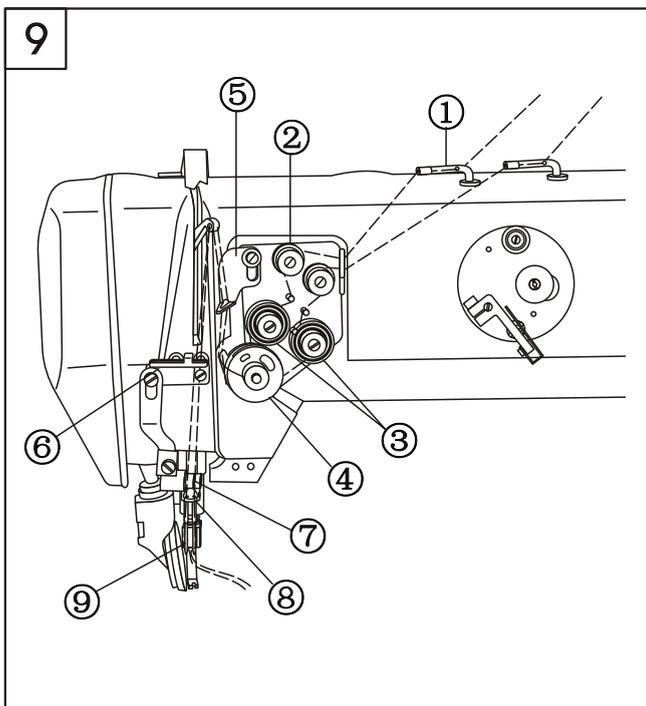
11. Winding the bobbin thread (Fig.8)

Install the bobbin B to the bobbin winder spindle, pass the thread A between the tension disc E, and then wind the thread a few turns around the bobbin.

Lift the lever D to make the latch lever C lock the bobbin B. The machine will automatically wind when sewing. (Lift the presser foot when wind without running the machine.)

Do not overfill the bobbin, as it will make the thread loosen down from the bobbin. The optimum capacity of thread will be about 80% of the outside diameter of the bobbin. The winding amount can be adjusted by screw H.

After the bobbin is filled, the bobbin thread could be cut down with the thread-cutting blade. Wind the bobbin thread A two turns around the blade, then pull it.



12. Threading (Fig.9)

When threading the needle thread, raise the needle bar to its highest position, open the roller foot, then lead the thread from the spool and pass it in the order instructed.

1. Leading the thread down through the two-eye thread guide 1 on the top of the machine.

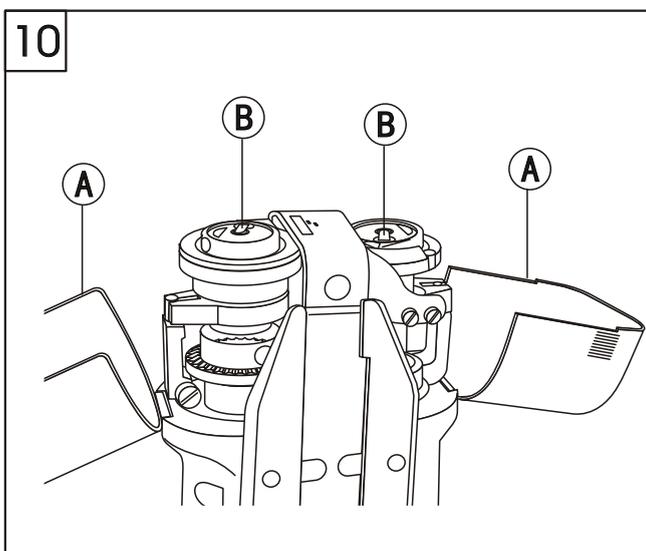
2. To left pass the thread through right hole of thread guide, then pass down it through the thread tension disc 2.

3. Pass down through the thread tension disc 3.

4. To left pass through the thread control assembly 4.

5. Pass up through the upper thread guide 5, then pass through the thread hole of the thread take-up lever from right to left.

6. Pass down through the middle thread guide 6, lower thread guide 7 and needle bar thread guide 8, then pass through the hole of the needle 9 and draw out over 100mm.



13. Installing the bobbin and the bobbin case (Fig.10)

1. Open the rotating hook guard A.

2. Lift the bobbin case latch lever B.

3. Draw out the threads about 50mm from the notch of the bobbin case.

4. Install the bobbin case into the rotating hook.

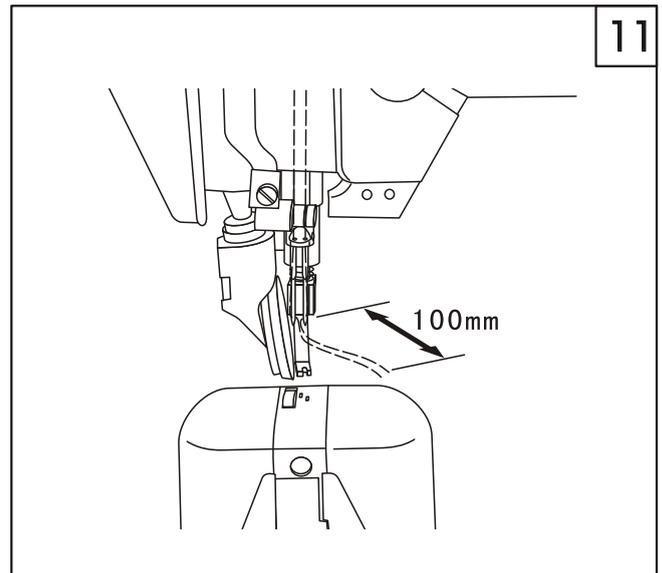
5. Close the bobbin case latch lever B.

6. Hold the needle thread by left hand, and turn the balance wheel by right hand to put aside the bobbin thread.

7. Close the rotating hook guard A.

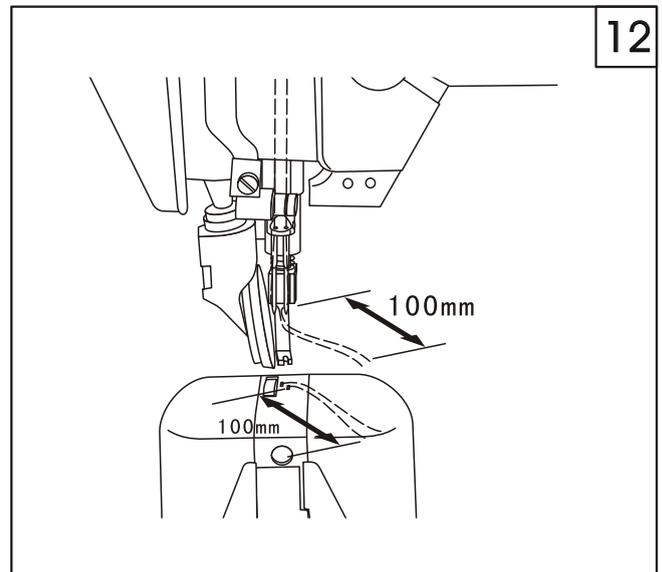
14. First sewing (Fig.11)

1. Lift the presser foot lift lever.
2. Close the roller foot.
3. Lay down the materials.
4. Turn the balance wheel to make the needle pick through the materials.
5. Put down the presser foot lift lever.
6. The thread should be drawn out about 100mm for the first sewing.



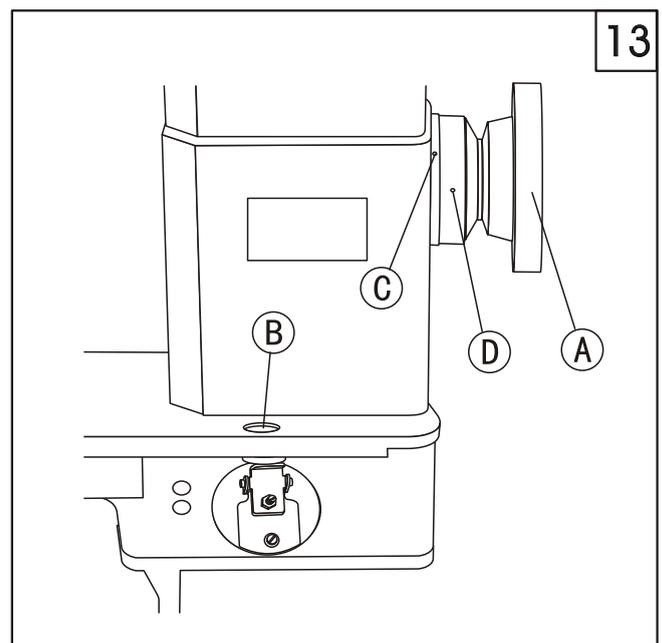
15. End of sewing (Fig.12)

1. Lift the thread take-up lever to its highest position.
2. Lift the presser foot lift lever.
3. Draw out the sewing material slant ways.
4. Cut off the needle thread and bobbin thread. Leave about 100mm needle thread and bobbin thread when drawing out the material for next sewing.

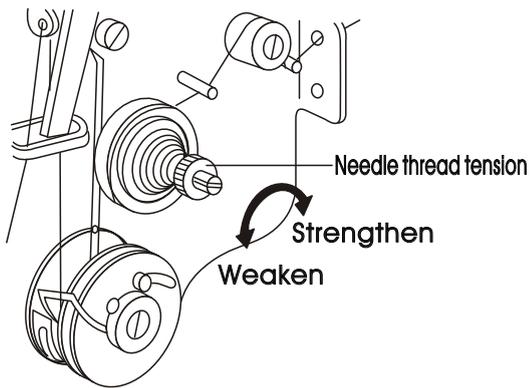
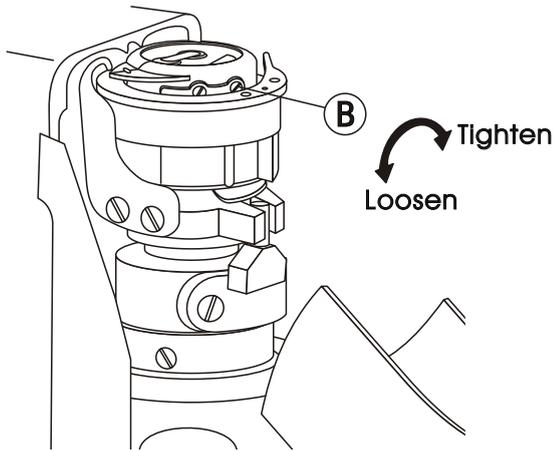
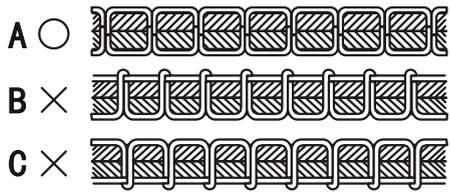


16. Adjusting the stitch length (Fig.13)

1. Push down the stitch length adjusting button B by left forefinger.
2. Turn the balance wheel by right hand.
3. The stitch length could be adjusted when the adjusting button is depressed.
4. The figure is marked on the balance wheel, and the figure indicates the stitch length. Please release the adjusting button when you align the figure with the mark C.



14



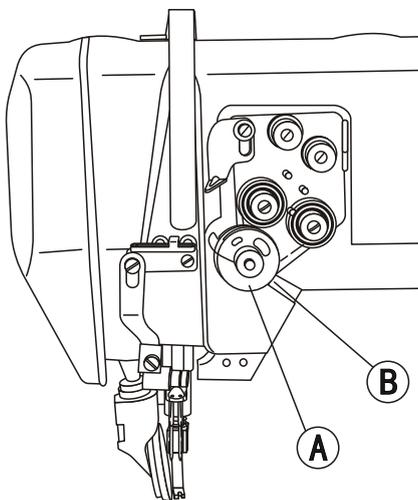
17. Adjusting the bobbin thread and the needle thread (Fig.14)

Normal stitch form should be as shown in Fig.14. When abnormal stitches occur with puckering or thread breakage, the tension of needle thread and bobbin thread must be adjusted accordingly.

1.If the stitch form is the same with B,it indicates that the needle thread is too strong and the bobbin thread is too weak. Turn the tension regulating thumb nut counter clockwise to weaken the needle thread tension or tighten the screw B to strengthen the bobbin thread tension.

2.If the stitch form is the same with C,it indicates that the needle thread tension is too weak and the bobbin thread tension is too strong. Turn the tension regulating thumb nut clockwise to strengthen the needle thread tension or loosen the screw B to weaken the bobbin thread tension.

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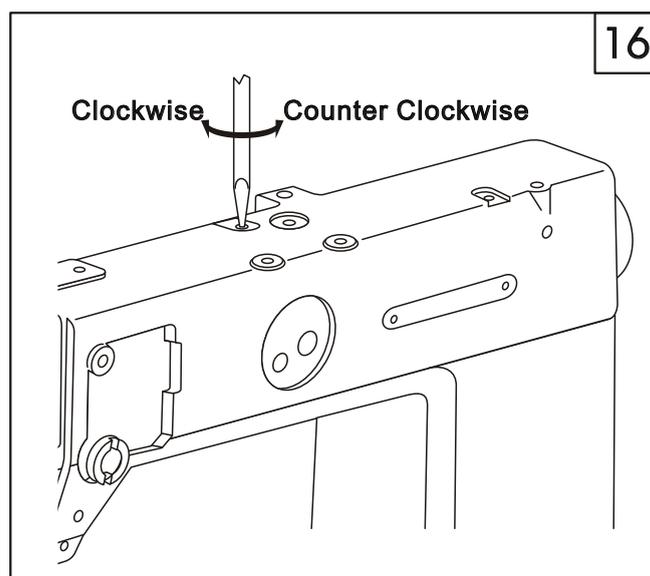
18. Adjusting the range and the tension of thread take-up spring (Fig.15)

Before delivery, the thread take-up spring is properly adjusted. Readjustment is only needed in the case of sewing special material or with special thread.

Loosen the screw B, turn the tension spring A clockwise to decrease the sewing range, or to turn the tension spring A counter clockwise to increase the sewing range. Then tighten the screw B after finishing the adjustment.

19. Adjusting the pressure of the roller foot (Fig.16)

Please adjust the roller foot according to the material to be sewn. When sewing heavy material, please increase the pressure by turning screw A clockwise. Or turn the screw A counter clockwise to decrease the pressure.



20. Installing and removing the rotating hook (Fig.17)

Replace the rotating hook when it is deformed or damaged.

1. Replacing the rotating hook.

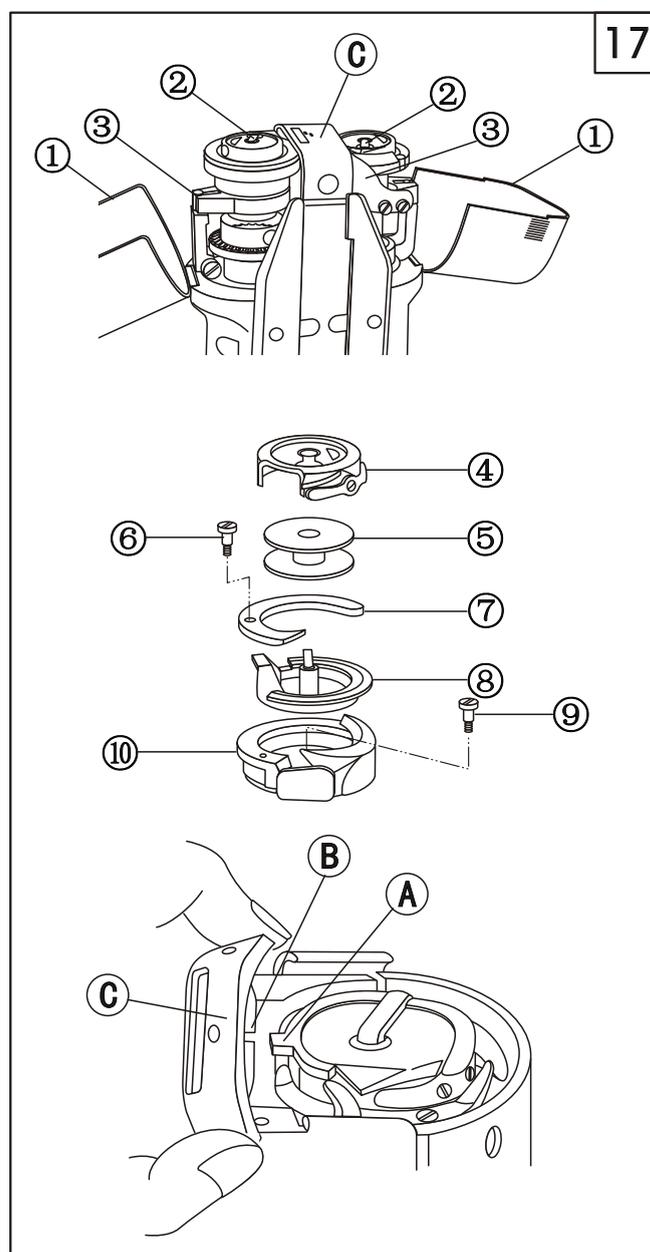
- a. Turn the balance wheel by hand to lift the needle bar to its highest position and then replace the needle plate C.
- b. Open the hook cover 1, lift the lever 2, and take out the bobbin case 4 and bobbin 5.
- c. Take down the thread separator 3.
- d. Take down the screw 6 and gib 7.
- e. Take out the hook head 8.
- f. Tighten the set screw 9 and take out the hook cover 10.

2. Installing the rotating hook

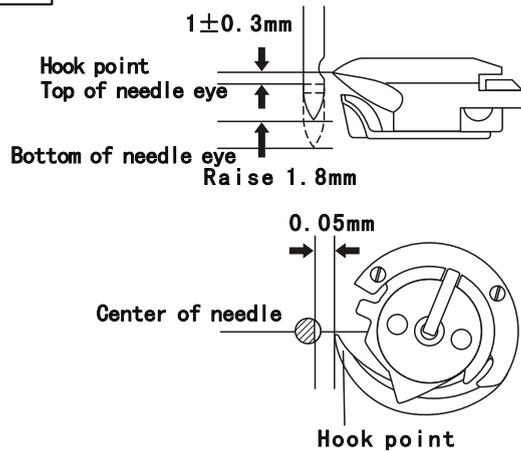
Install the rotating hook in the reverse order of replacing it.

When inserting the bobbin case, please align the position point on the bobbin case with the position groove on the rotating hook shaft.

When installing the needle plate C, please put the convex part A of the rotating hook into the needle plate groove B, then tighten the screw.



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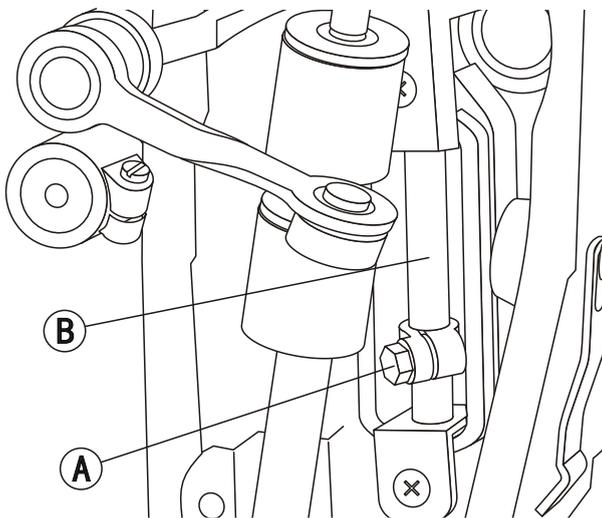


21. Adjusting the position of the rotating hook and needle (Fig.18)

When the tip of the needle is raised by 1.8mm from its lowest position, the position of the rotating hook and the needle should be set as shown in Fig.18.

1. The top of needle eye should be $1 \pm 0.3\text{mm}$ lower than the hook point.
2. Hook point is aligned with the tip of the needle.
3. The clearance between the hook point and the needle groove should be $0 \sim 0.05\text{mm}$.

19

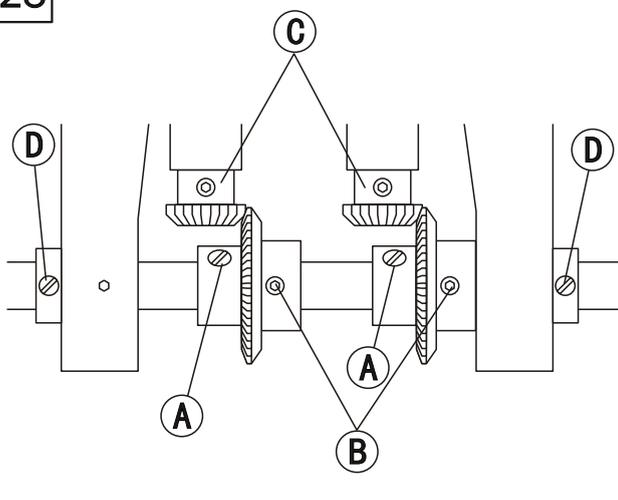


22. Adjusting the position of the needle bar (Fig.19)

When the needle bar is lifted by 1.8mm from its lowest position, adjust its position to make the needle eye $1 \pm 0.3\text{mm}$ lower than the hook point.

1. Turn the balance wheel to lift the needle bar by 1.8mm from its lowest position.
2. Move the needle bar B upward and downward to meet the request.
3. Tighten the screw A.

20



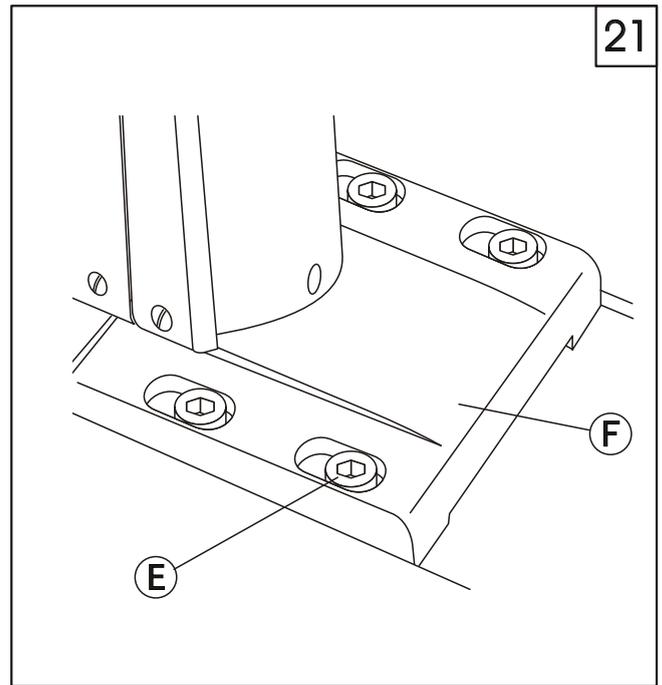
23. Adjusting the position of the hook point (Fig.20)

1. Open the hook cover.
2. Put down the machine head.
3. Take off the bevel gear oil case (upper).
4. Loosen the screw B, A and D.
5. Turn the balance wheel to lift the needle by 1.8mm from its lowest position.
6. Turn the bevel gear C to align the hook point with the center of the needle groove.
7. Tighten the screw B and screw A.
8. Install the bevel gear oil case (upper).

24. Adjusting the clearance between the hook point and the needle (Fig.21)

The clearance between the hook point and needle is about 0.05mm, which has been adjusted before delivery. The readjustment is needed only when the needle is changed.

1. Take out the hook cover.
2. Put down the machine head.
3. Take off the bevel gear oil case (upper).
4. Loosen the screw B, A and B.
5. Turn the balance wheel to lift the needle by 1.8mm from its lowest position.
6. Turn the rotating hook to align the hook point with the center of needle groove.
7. Loosen the screw E, and move the post-bed F leftward and rightward to assure 0.05mm clearance between the hook point and the needle.
8. Tighten all the screws.
9. Install the bevel gear oil case (upper).

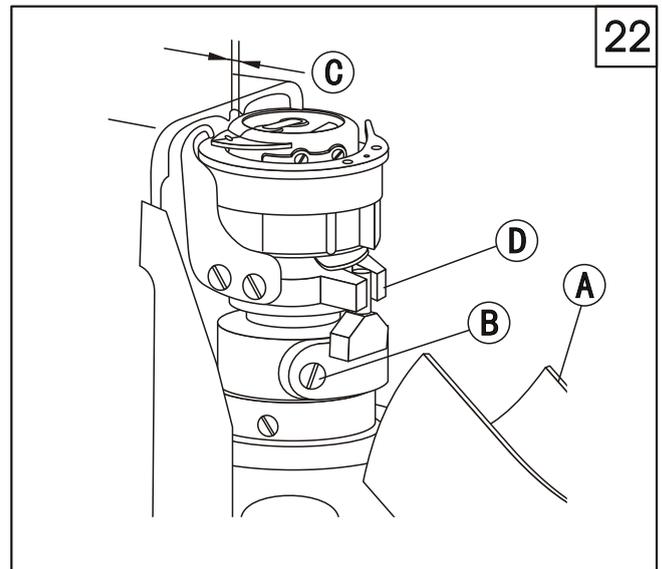


25. Relationship between rotating hook and hook set bracket (Fig.22)

Turn the balance wheel to lift the thread take-up lever to its highest position, then check whether there is a distance C between the hook and the hook set bracket. C is usually 0.1~0.3mm.

Adjusting method:

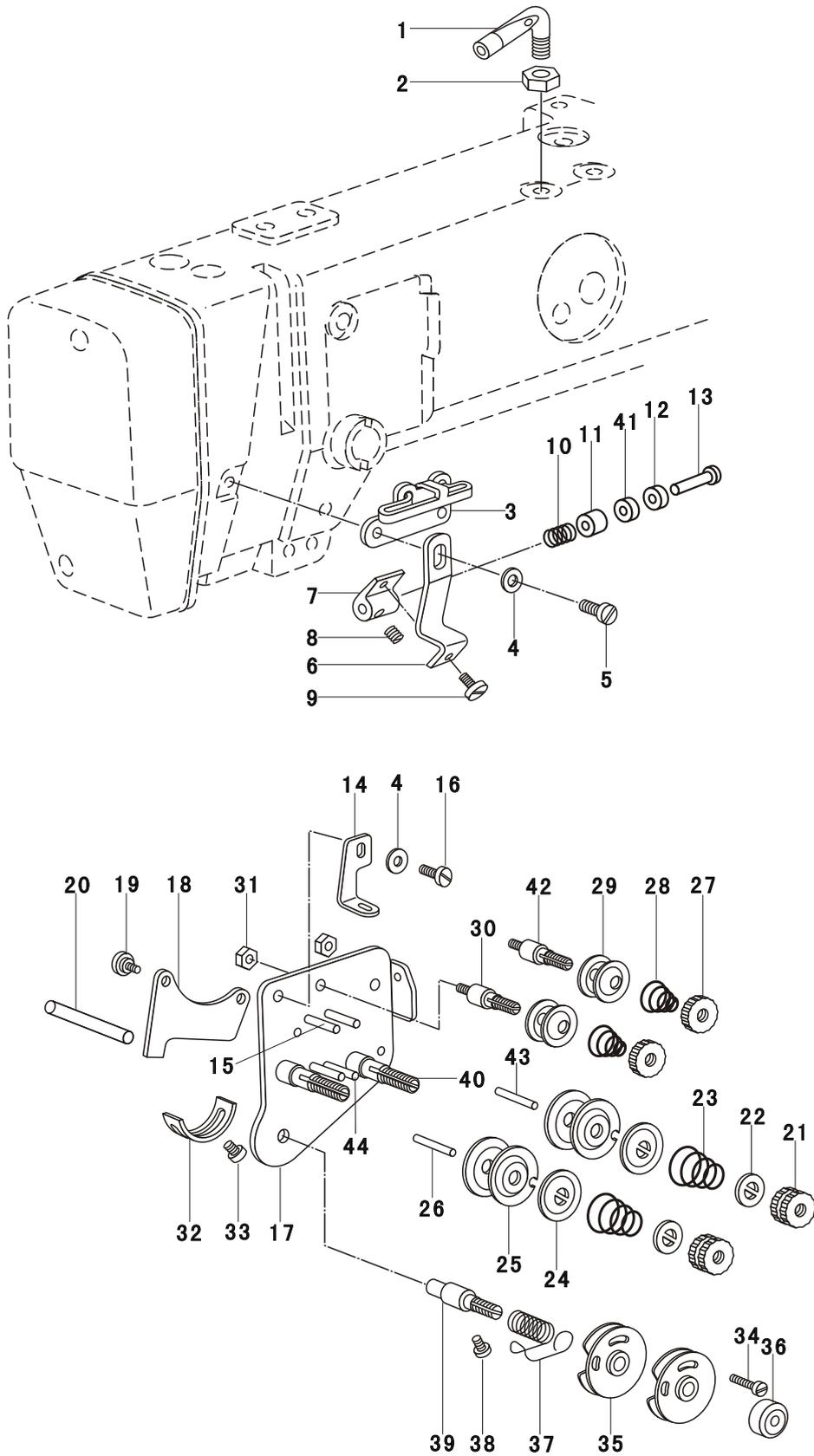
1. Open the hook cover A.
2. When the distance is bigger or smaller, please loosen the screw B.
3. Turn the set ring D slightly, then tighten the screw B after adjustment.



1. Arm and bed

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF2-004	Face plate	1	1	
2	13WF2-005	Screw (long)	1	1	
3	13WF2-006	Screw (short)	1	1	
4	13WF2-013	Rear cover	1	1	
5	13WF2-014	Screw	2	2	
6	13WF2-007	Rear cover	2	2	
7	13WF2-008	Screw	4	4	
8	13WF2-002	Arm	1	1	
9	13WF2-012	Screw	1	1	
10	13WF2-044	Support bracket	1	1	
11	13WF2-045	Screw	2	2	
12	13WF2-065	Bed support	1	1	
13	13WF2-068	Rubber plug	1	1	
14	13WF1-045	Screw	5	5	
15	13WF2-011	Safety guard	1	1	
16	13WF2-003	Connecting arm	1	1	
17	13WF2-073	Model plate	1		
	19WF2-008	Model plate		1	
18		Rivet	4	4	Φ 2.5×5 GB827-86
19	13WF2-001	Bed	1	1	
20	16WF2-053	Trade mark	1	1	
21	13WF2-041	Safety guard	1	1	
22	13WF2-010	Screw	3	3	

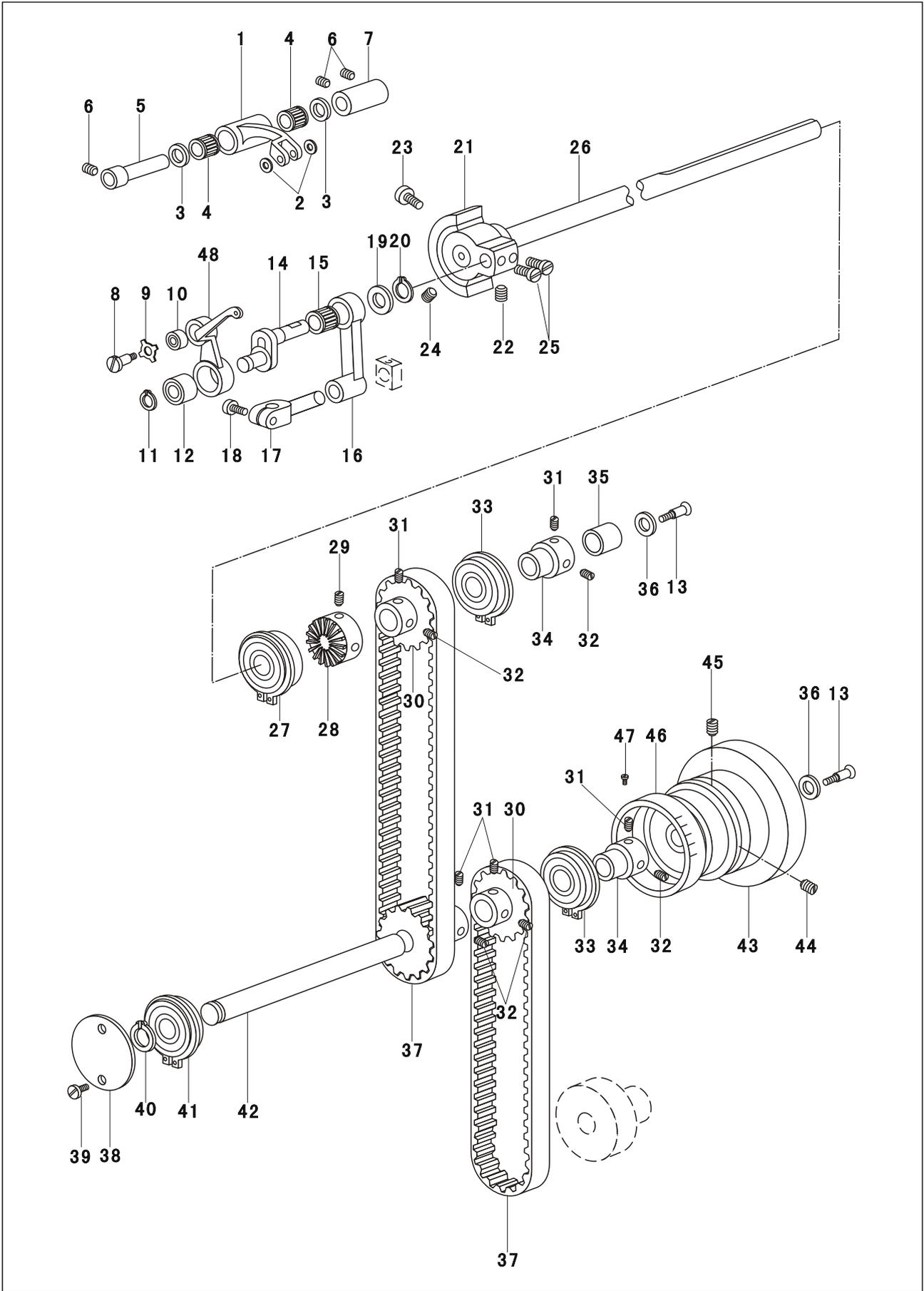
2. Thread tension parts



2. Thread tension parts

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF2-066	Thread guide stud	1	2	Washer GB95-85
2	13WF2-067	Nut	1	2	
3	13WF2-016	Middle thread guide	1	1	
4		Washer	2	2	
5	13WF2-006	Screw	1	1	
6	13WF2-017	Lower thread guide plate	1	1	
7	13WF2-023	Lower thread guide holder	1	1	
8	13WF2-024	Screw	1	1	
9	13WF2-018	Screw	1	1	
10	13WF2-022	Spring	1	1	
11	13WF2-021	Bushing	1	1	
12	13WF2-020	Pad	1	1	
13	13WF2-019	Pin	1		
	19WF2-004	Pin		1	
14	13WF1-015	Upper thread guide	1	1	
15	13WF2-053	Pin	2	2	
16	13WF2-047	Screw	1	1	
17	13WF2-046	Set plate	1		
	19WF2-009	Set plate		1	
18	13WF2-049	Thread erecting plate	1	1	
19	13WF2-050	Screw	2	2	
20	13WF2-048	Pin	1	1	
21	13WF2-070	Nut	1	2	
22	153209	Stop plate	1	2	
23	33T4-008C1	Spring	1	2	
24	13WF2-055	Thread erecting plate	1	2	
25	13WF2-054	Thread tension disc	2	4	
26	13WF2-056	Thread releasing pin	1		
	19WF2-012	Thread releasing pin (short)		1	
27	36T2-006D4	Nut	1	2	
28	13WF2-009	Spring	1	2	
29	22T1-009E3	Thread tension disc	2	4	
30	13WF2-051	Screw	1	2	
31	13WF2-052	Nut	1	2	
32	103693	Stopper plate	1	1	
33	1WF1-026	Screw	1	1	
34	13WF2-062	Screw	1		
	1WF1-010R	Screw		1	
35	1WF1-010J	Thread control assembly	1	2	
36	13WF2-061	Nut	1	1	
37	16WF2-046A7	Thread take-up spring	1		
	19WF2-014	Thread take-up spring		1	
38	13WF2-063	Screw	1	1	
39	13WF2-060	Thread take-up spring shaft	1		
	19WF2-015	Thread take-up spring shaft		1	
40	13WF2-057	Screw	1	2	
41	19WF2-005	Pad		1	
42	19WF2-010	Screw (long)		1	
43	19WF2-013	Thread releasing pin (long)		1	
44	19WF2-011	Pin (long)		2	

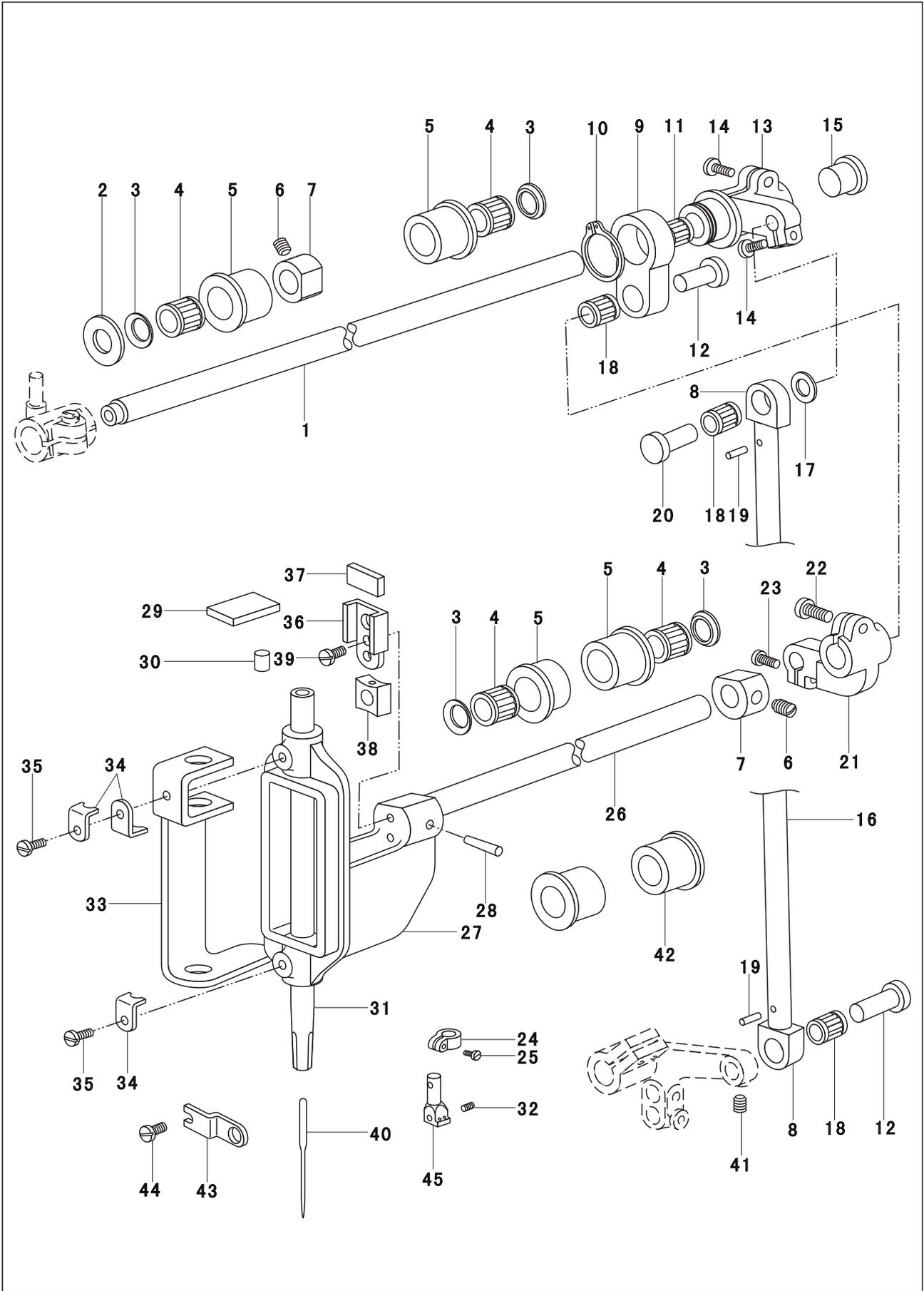
3. Upper shaft thread take-up parts



3. Upper shaft thread take-up parts

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF1-030	Thread take-up lever	1	1	
2		Washer	2	2	WasherGB97.1-85
3	13WF1-031	Retainer	2	2	
4		Bearing	2	2	29241/7 7×10×8
5	13WF1-032	Thread take-up lever pin	1	1	
6	7WF5-048	Screw	3	3	
7	13WF1-033	Bushing	1	1	
8	13WF1-075	Screw	1	1	
9	13WF1-035	Position ring	1	1	
10		Bearing (small)	1	1	80024 4×13×5
11		Retainer	1	1	Washer894.1-84
12		Bearing (big)	1	1	80018 8×22×7
13	13WF1-051	Screw	2	2	
14	13WF1-037	Thread take-up crank	1	1	
15		Needle bearing	1	1	57941/10 10×14×10
16	13WF1-039	Needle bar link	1	1	
17	13WF1-041	Needle bar adapter	1	1	
18	13WF1-042	Screw	1	1	
19	13WF1-040	Seal ring	1	1	
20	13WF1-038	Retainer	1	1	
21	13WF1-044	Needle bar crank	1	1	
22	13WF1-018	Screw	1	1	
23	33T1-006C2	Screw	1	1	
24	61-04-01/B2	Screw	1	1	
25	13WF1-045	Screw	2	2	
26	13WF1-046	Upper shaft	1	1	
27		Front bearing complete	1	1	150204 20×47×14
28	13WF6-026	Driven wheel	1	1	
29	JO. O. 40	Screw	2	2	
30	13WF1-054	Synchronic wheel	3	3	
31	13WF1-004	Screw	5	5	
32	13WF1-048	Screw	5	5	
33		Rear bearing complete	2	2	20×42×12
34	13WF1-047	Bushing	2	2	
35	13WF1-049	Rear bearing ring	1	1	
36	13WF1-050	Washer	2	2	
37	13WF1-055	Synchronic belt	2	2	
38	13WF2-037	Cover	1	1	
39	13WF2-010	Screw	2	2	
40		Retainer	1	1	Retainer17GB894.1-86
41		Front bearing complete	1	1	150203Z 17×40×12
42	13WF1-053	Shaft	1	1	
43	13WF1-052	Balance wheel	1	1	
44	13WF1-077	Screw	1	1	
45	13WF1-078	Screw	1	1	
46	13WF1-056	Feed regulating graduation ring	1		
	19WF1-008	Feed regulating graduation ring		1	
47	13WF1-036	Thread take-up lever complete	1	1	
48		Rivet	3	3	Bronze φ1.8

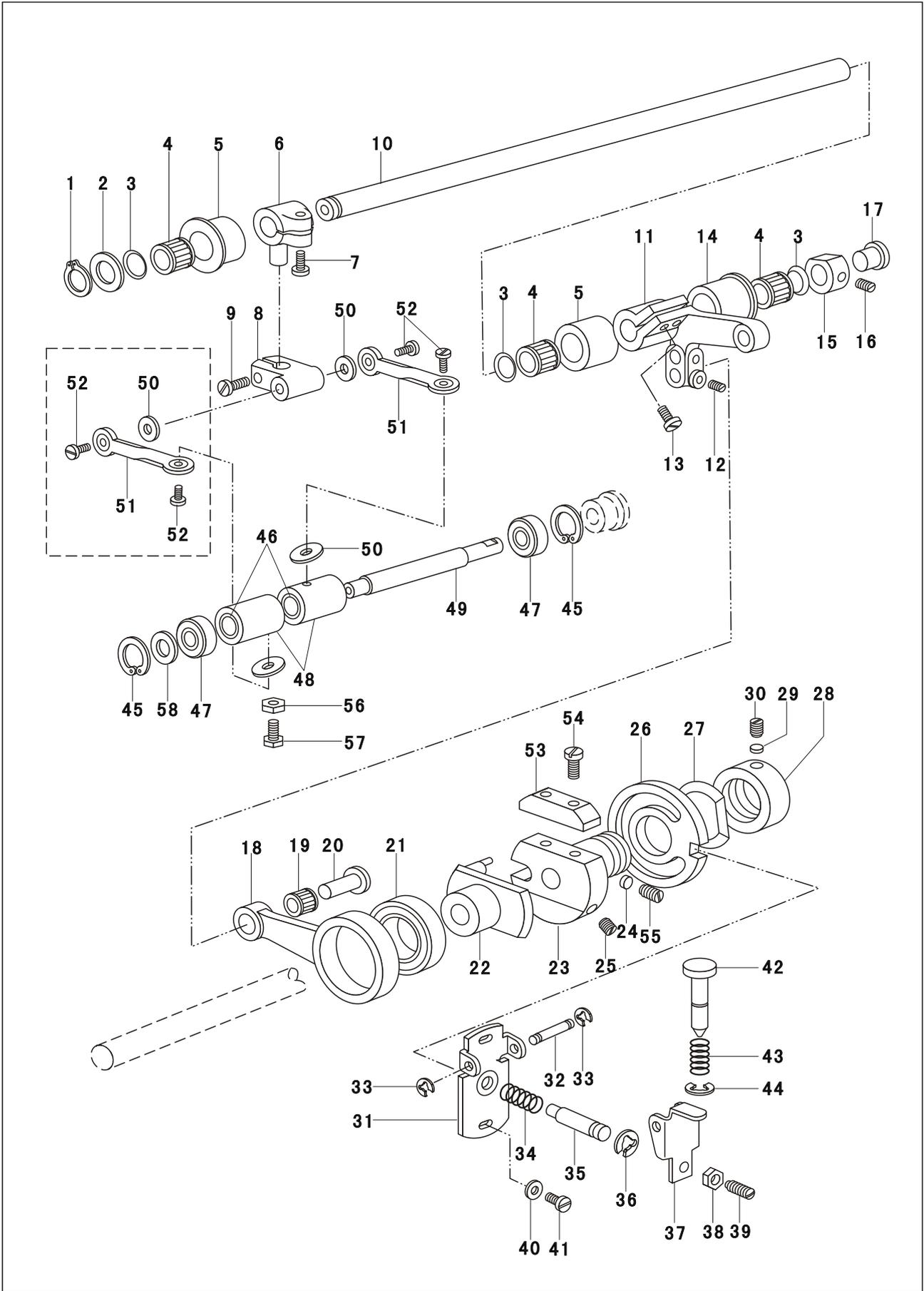
4. Needle bar parts



4. Needle bar parts

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF3-001	Upper feed shaft	1	1	
2	13WF3-002	Spacer	1	1	
3	13WF1-073	Retainer	8	4	
4		Rear bearing	4	2	59241/15 15×19×17
5	13WF1-072	Bushing	4	2	
6	13WF1-009	Screw	2	2	
7	13WF1-059	Collar	2	2	
8	13WF3-004	Connector	2	2	
9	13WF3-007	Needle vibrating link	1		
10		Retainer	1		RetainerGB89.1-86-24
11		Bearing	1		9241/24 24×28×10
12	13WF3-005	Connecting pin	2	1	
13	13WF3-008	Vibrating cam	1	1	
14	13WF1-045	Screw	2	2	
15	13WF2-035	Rubber plug	1	1	
16	13WF3-003	Connecting shaft	1	1	
17	13WF3-009	Spacer	1	1	
18		Needle bearing	2	2	39241/8 8×11×10
19		Pin	2	2	Pin2.5×12 GB117-86
20	13WF3-006	Pin	1	1	
21	13WF1-062	Crank	1		
22	13WF1-063	Screw	1		
23	13WF1-045	Screw	1		
24	19WF1-013A	Collar	1	2	
25	19WF1-013B	Screw	1	2	
26	13WF1-058	Needle bar rock shaft	1	1	
27	13WF1-060	Needle bar rock frame	1	1	
28		Pin	1	1	Pin3×25 GB117-86
29	13WF1-069	Oil felt	1	1	
30	13WF1-076	Rubber plug	1	1	
31	13WF1-028	Needle bar	1		
	19WF1-011	Needle bar		1	
32	13WF1-029	Screw	1	2	
33	13WF1-061	Felt	1	1	
34	13WF1-066	Bracket for felt	3	3	
35	13WF1-067	Screw	2	2	
36	13WF1-064	Rail	1	1	
37	13WF1-068	Felt	1	1	
38	13WF1-043	Sliding block	1	1	
39	13WF1-065	Screw	2	2	
40	13F1-001	Needle	1		Single needleGC24660 DP×5 14#
	19F-002	Needle		2	Double needleGC24680 DP×17 14#
41	13WF1-048	Screw	1	1	
42	19WF1-014	Bushing		2	
43	19WF1-009	Stop plate		1	
44	19WF1-010	Screw		1	
45	19WF1-012A	Needle clamp		1	

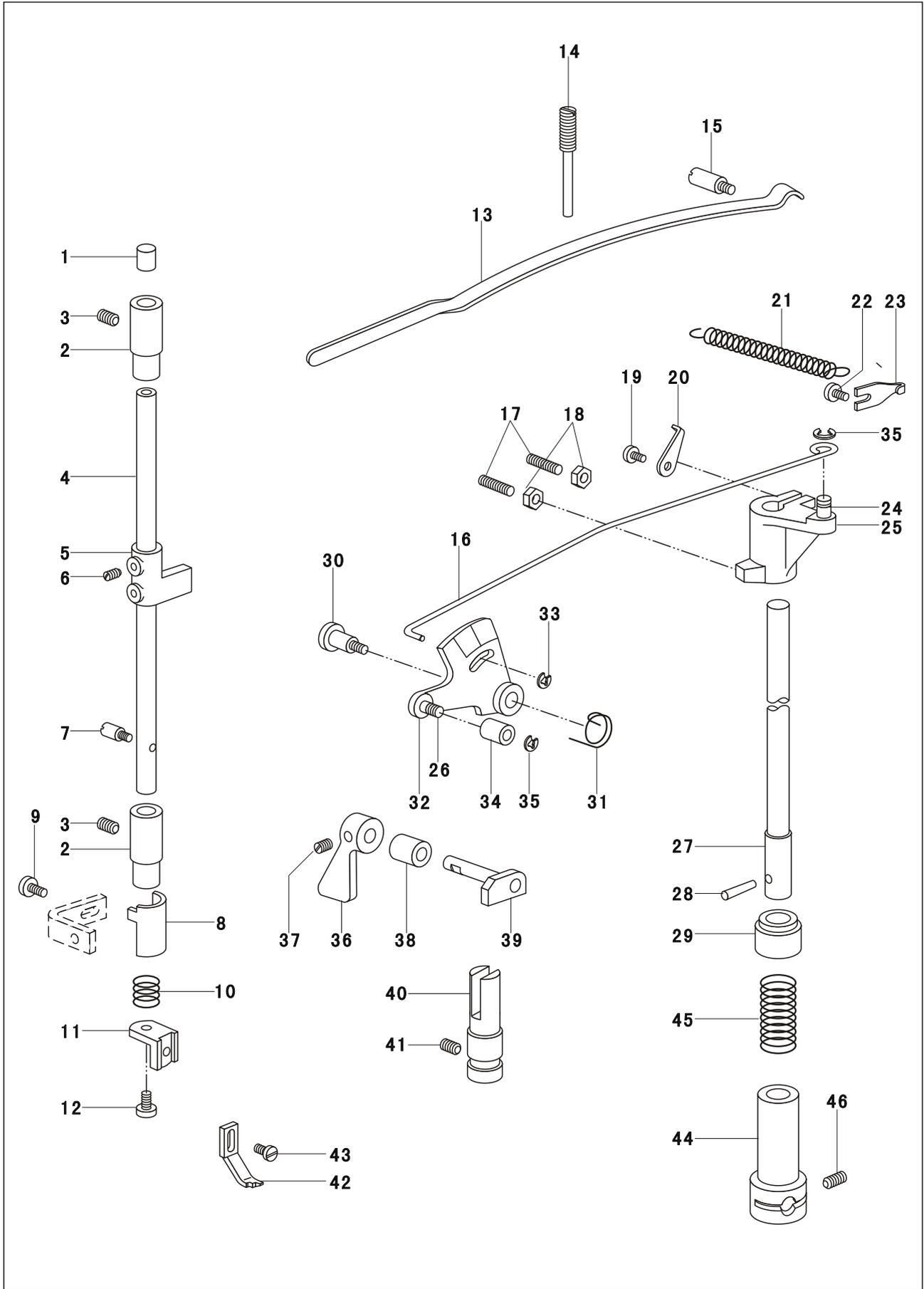
5. Feed mechanism



5. Feed mechanism

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1		Retainer	1	1	RetainerGB894. 1-86
2	13WF3-002	Spacer	1	1	
3	13WF1-073	Retainer	6	6	
4		Bearing	3	3	59241/15 15×19×17
5	13WF1-072	Bushing	2	2	
6	13WF3-035	Crank	1	1	
7	13WF1-045	Screw	1	1	
8	13WF3-036	Clamp	1	1	
9	13WF3-018	Screw	1	1	
10	13WF3-011	Feed shaft	1	1	
11	13WF3-010	Crank	1	1	
12	13WF1-048	Screw	1	1	
13	13WF2-006	Screw	2	2	
14	13WF3-012	Bushing	1	1	
15	13WF1-059	Collar	1	1	
16	13WF1-009	Screw	1	1	
17	13WF2-071	Rubber plug	1	1	
18	13WF3-043	Eccentric link	1	1	
19		Bearing (small)	1	1	39241/8 8×11×10
20	13WF3-005	Connecting pin	1	1	
21		Bearing (big)	1	1	1000806 30×42×7
22	13WF3-044	Feed cam	1	1	
23	13WF3-045	Adjusting pad	1	1	
24	13WF3-047	Washer	2	2	
25	13WF3-046	Screw	2	2	
26	13WF3-050	Eccentric adjusting disc	1	1	
27		Washer	1	1	Washer24 GB955-87
28	13WF3-051	Nut	1	1	
29	13WF3-052	Block	1	1	
30	13WF1-027	Screw	1	1	
31	13WF3-017	Adjusting bracket for stitch length	1	1	
32	13WF3-016	Hinge pin	1	1	
33		Retainer	2	2	Retainer3.5 GB896-86
34	13WF3-020	Spring	1	1	
35	13WF3-019	Position pin	1	1	
36		Retainer	1	1	Retainer6 GB896-86
37	13WF3-015	Adjusting lever	1	1	
38	13WF3-074	Nut	1	1	
39	13WF3-073	Screw	1	1	
40		Washer	2	2	Washer4 GB97. 1-85
41	13WF3-018	Screw	2	2	
42	13WF3-013	Stitch length button	1	1	
43	13WF3-014	Spring	1	1	
44		Retainer	1	1	Retainer8 GB896-86
45		Retainer	2	2	Retainer22
46		Needle bearing clutch	2	2	
47		Bearing	2	2	80018 8×22×7
48	13WF3-041	Bushing	2	2	
49	13WF3-040	Driven shaft	1	1	
50	13WF3-037	Felt	4	2	
51	13WF3-034	Driven link assembly	2	1	Bearing GE6E
52	13WF3-038	Screw	4	2	
53	13WF3-048	Connector	1	1	
54	13WF3-049	Screw	2	2	
55	22T1-011	Screw	2	2	
56	19WF3-003	Nut		1	
57	19WF3-002	Screw		1	
58	13WF3-077	Spacer	1	1	

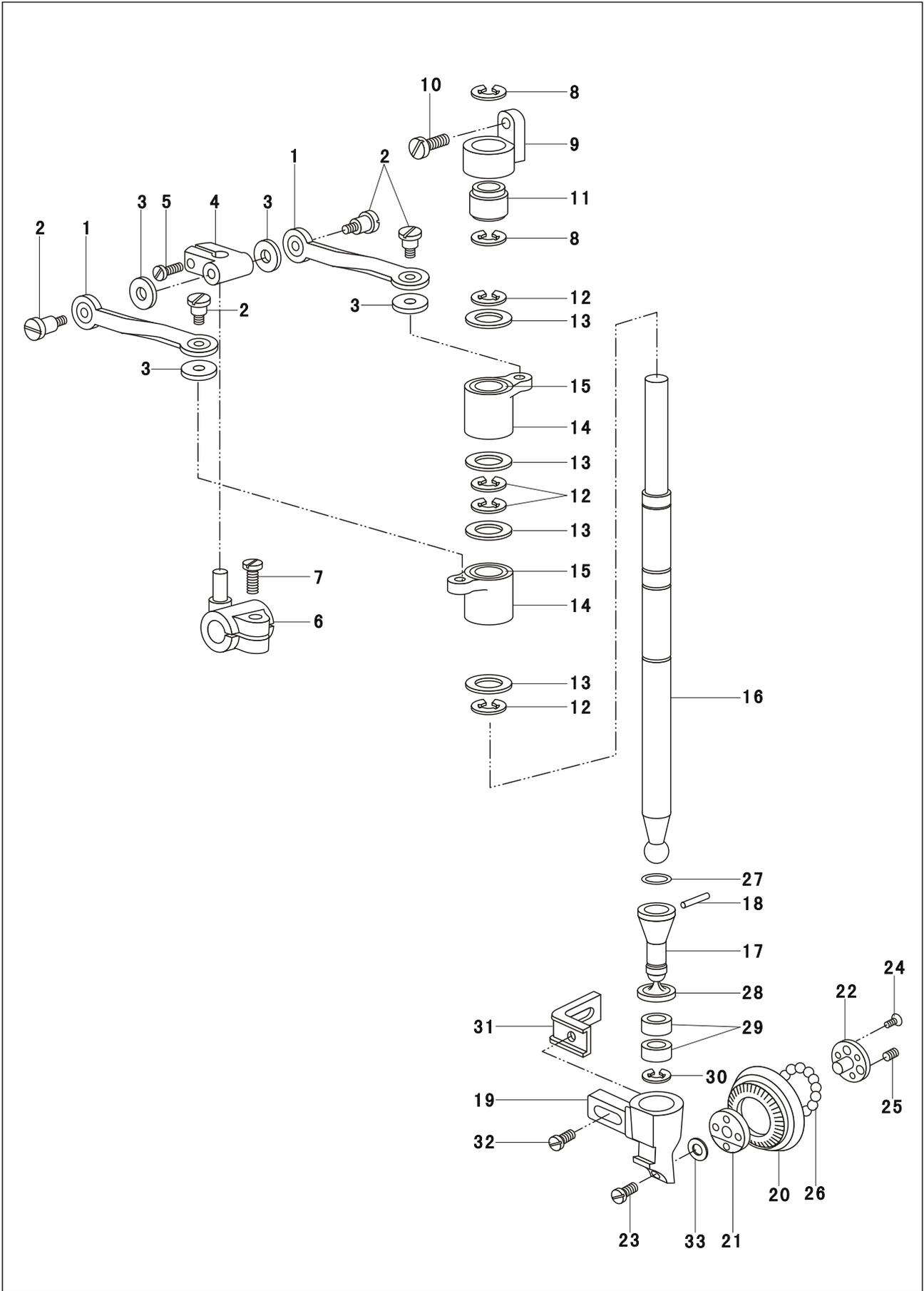
6. Presser bar lifter parts



6. Presser bar lifter parts

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF1-076	Rubber plug	1	1	
2	13WF4-032	Presser bar bushing	2	2	
3	13WF3-060	Screw	2	2	
4	13WF4-017	Presser bar	1	1	
5	13WF4-018	Presser bar guide bracket	1	1	
6	13WF1-018	Screw	2	2	
7	13WF4-019	Position pin	1	1	
8	13WF4-020	Position bushing	1	1	
9	13WF4-022	Screw	1	1	
10	13WF4-023	Spring	1	1	
11	13WF4-024	Presser foot rail	1	1	
12	13WF4-025	Screw	1	1	
13	13WF4-015	Presser bar lifting rod	1	1	
14	13WF4-030	Screw	1	1	
15	13WF4-029	Pin	1	1	
16	13WF4-012	Draw bar	1	1	
17	13WF4-031	Screw	2	2	
18	22T9-001A10	Nut	2	2	
19	13WF2-006	Screw	2	2	
20	13WF4-011	Hook	1	1	
21	13WF4-013	Spring	1	1	
22	13WF2-045	Screw	1	1	
23	13WF4-014	Spring plate	1	1	
24	13WF4-010	Crank pin	1	1	
25	13WF4-009	Crank	1	1	
26	13WF4-005	Pin	1	1	
27	13WF4-001	Shaft	1	1	
28	13WF4-002	Pin	1	1	
29	13WF4-003	Cover	1	1	
30	13WF4-008	Screw	1	1	
31	13WF4-006	Spring	1	1	
32	13WF4-004	Rock plate	1	1	
33		Retainer	1	1	Retainer2 GB896-86
34	13WF4-007	Roller	1	1	
35		Retainer	2	2	Retainer3.5 GB896-86
36	13WF4-026	Presser bar lifter lever	1	1	
37	13WF4-027	Screw	1	1	
38	13WF4-033	Bushing	1	1	
39	13WF4-028	Cam	1	1	
40	13WF4-016	Guide shaft	1	1	
41	13WF1-048	Screw	1	1	
42	19WF4-001	Presser foot		1	
43	19WF4-002	Screw		1	
44	13WF5-001	Connector	1	1	
45	13WF5-002	Spring	1	1	
46	13WF5-003	Screw	1	1	

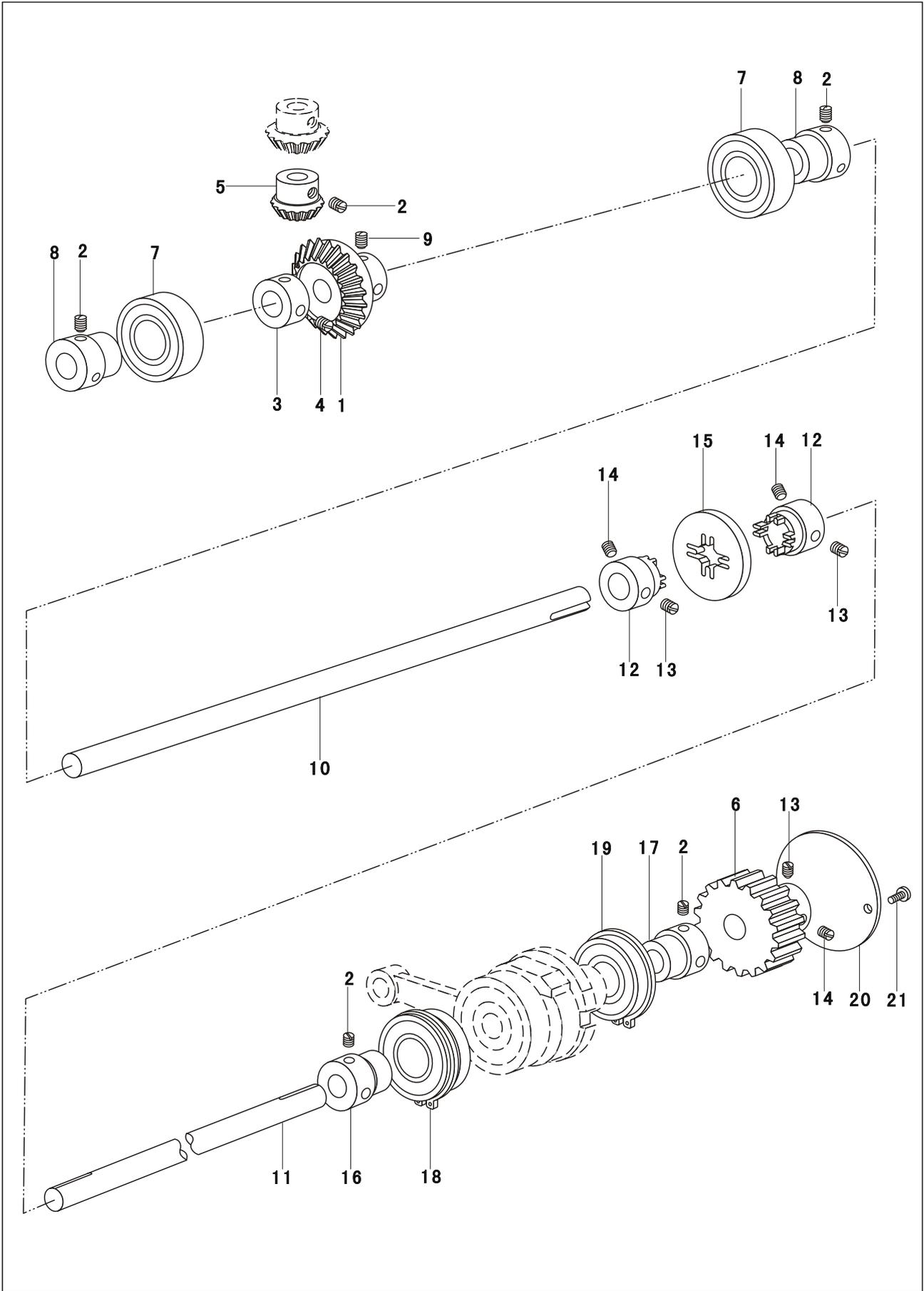
7. Upper roller feed parts



7. Upper roller feed parts

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF3-034	Driven link assembly	2	2	Bearing GE6E
2	13WF3-038	Screw	4	4	
3	13WF3-037	Felt	4	4	
4	13WF3-036	Clamp	1	1	
5	13WF3-018	Screw	1	1	
6	13WF3-035	Driven crank	1	1	
7	13WF1-045	Screw	1	1	
8		Retainer	2	2	
9	13WF3-039	Position block	1	1	
10	13WF1-063	Screw	1	1	
11		Bearing	1	1	GE8E
12		Retainer	4	4	Retainer8 GB896-86
13	13WF3-023	Spacer	4	4	
14	13WF3-022	Clutch bearing holder	2	2	
15		Clutch	2	2	
16	13WF3-021	Driven shaft	1	1	
17	13WF3-024	Bevel gear	1	1	
18	13WF3-025	Bevel gear pin	1	1	
19	13WF3-026	Position bracket	1	1	
20	13WF3-027	Roller	1	1	
21	13WF3-028	Roller ball gasket	1	1	
22	13WF3-029	Adjusting block	1	1	
23	13WF3-030	Screw	1	1	
24	13WF3-031	Screw	3	3	
25	13WF3-032	Screw	3	3	
26		Ball	24	24	φ2 GB308-77
27		Retainer	1	1	Retainer8 GB895.1-86
28		Retainer	1	1	Retainer16
29		Bearing	2	2	1060088 8×16×6
30	13WF3-033	Retainer	1	1	
31	13WF4-021	Presser bar roller bracket	1	1	
32	13WF4-022	Screw	1	1	
33	13WF3-076	Spacer	1	1	

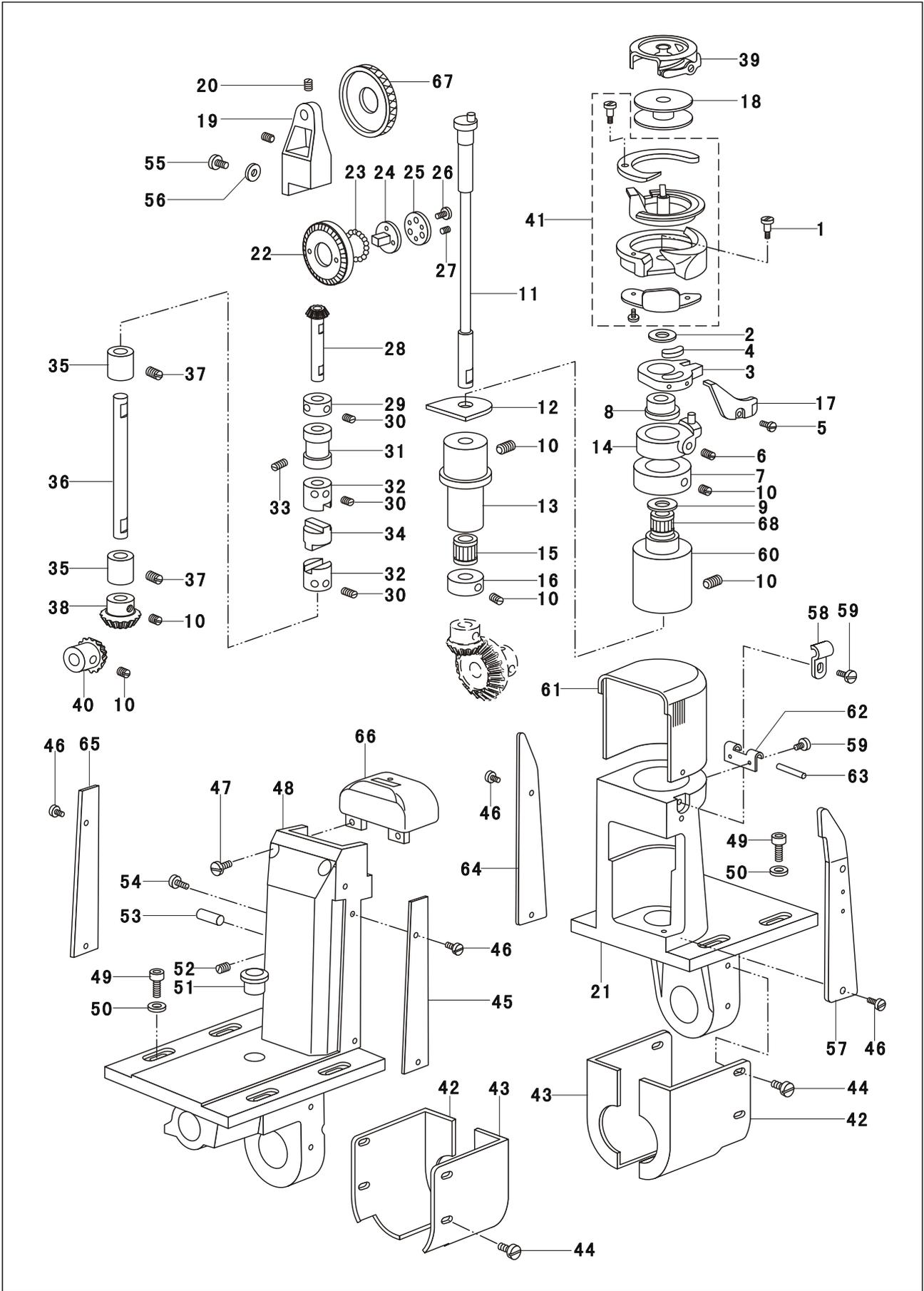
8. Lower shaft



8. Lower shaft

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF1-008	Bevel gear	1	2	
2	13WF1-027	Screw	10	12	
3	13WF1-006	Collar	1	2	
4	13WF1-007	Screw	2	4	
5	13WF1-024	Bevel gear	1	2	3G80102 15×32×9
6	13WF1-074	Synchronic wheel	1	1	
7		Bearing	2	2	
8	13WF1-026	Bushing	2	2	
9	13WF1-009	Screw	2	4	
10	13WF1-001	Lower shaft (front)	1		
	19WF1-007	Lower shaft (front)		1	
11	13WF1-002	Lower shaft (rear)	1	1	
12	13WF1-003	Shaft connector	2	2	
13	13WF1-004	Screw	3	3	
14	13WF1-048	Screw	3	3	
15	13WF1-005	Connecting plate	1	1	
16	13WF1-071	Rear bushing of lower shaft	1	1	
17	13WF1-070	Front bushing of lower shaft	1	1	
18		Front bearing of lower shaft	1	1	150202 15×35×11
19		Rear bearing of lower shaft	1	1	150203Z 17×40×12
20	13WF2-037	Cover	1	1	
21	13WF2-010	Screw	2	2	

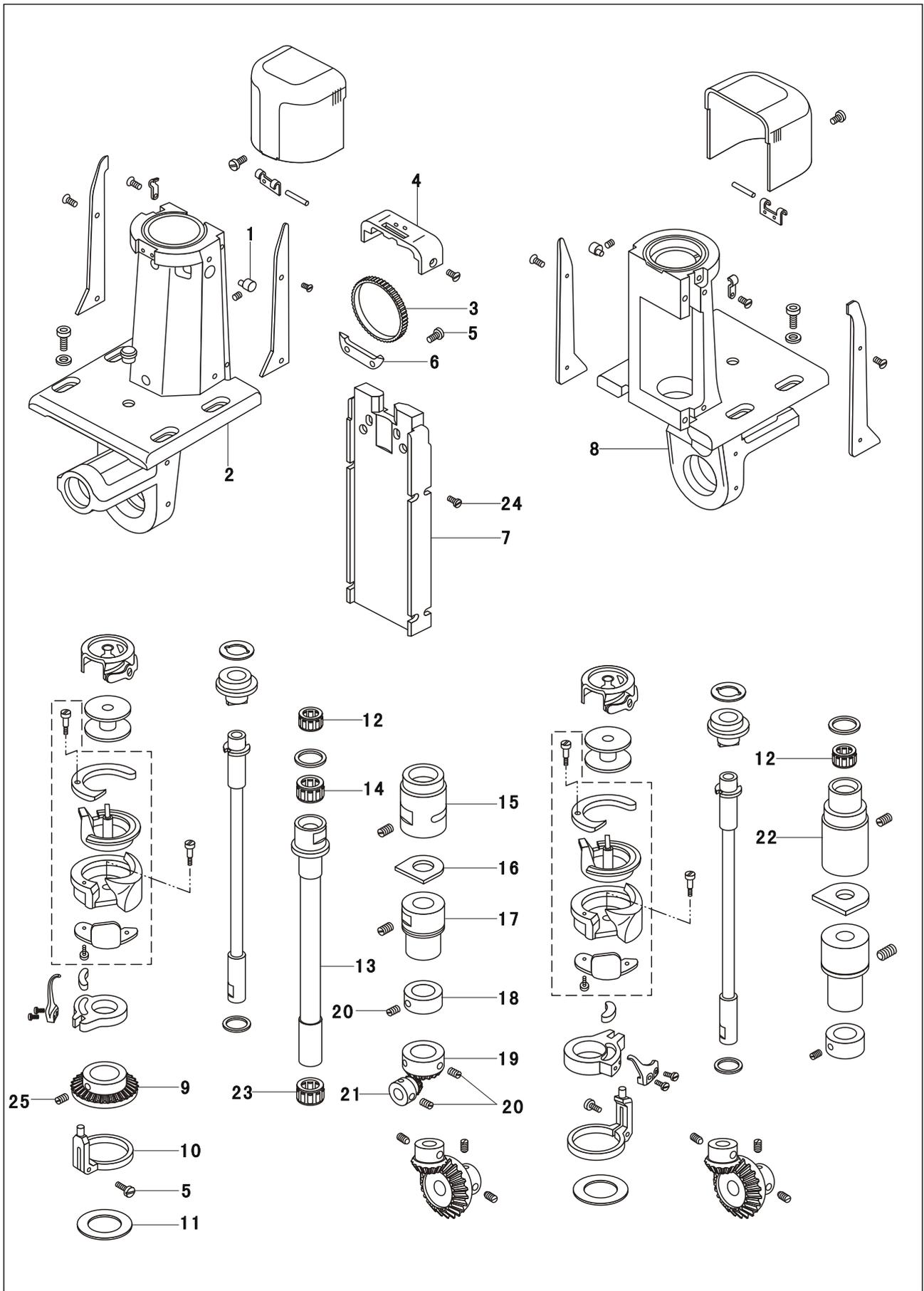
9. Postbed



9. Post bed

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF1-010	Screw	1	2	
2	13WF1-025	Spacer	1	2	
3	13WF1-016	Thread distributor	1	2	
4	13WF1-013	Felt	1	2	
5	13WF1-015	Screw	2	4	
6	13WF1-018	Screw	1		
7	13WF1-020	Collar	1		
8	13WF1-012	Cam	1	2	
9		Bearing	1	2	10800
10	13WF1-009	Screw	10	6	
11	13WF1-011	Rotating hook shaft	1	2	
12	13WF1-021	Felt	1	1	
13	13WF1-022	Bushing	1	1	
14	13WF1-017	Position ring	1		
15		Needle bearing	1	2	39241/8 8×11×10
16	13WF1-023	Collar	1	1	
17	13WF1-014	Thread separator	1	2	
18	13WF1-034	Bobbin	1	2	
19	13WF3-053	Lower roller bracket	1		
20	13WF3-055	Screw	2		
21	13WF2-033	Post-bed for rotating hook	1		
22	13WF3-057	Driven gear	1		
23		Ball	24		φ2 GB308-77
24	13WF3-054	Ball bracket	1		
25	13WF3-029	Adjusting block	1		
26	13WF3-031	Screw	3		
27	13WF3-032	Screw	3		
28	13WF3-058	Bevel gear	1		
29	13WF3-059	Collar	1		
30	13WF3-060	Screw	6		
31	13WF3-061	Bushing	1		
32	13WF3-063	Connector	2		
33	13WF3-062	Screw	1		
34	13WF3-064	Connecting block	1		
35	13WF3-071	Bushing	2		
36	13WF3-066	Shaft	1		
37	13WF3-072	Screw	2		
38	13WF3-065	Bevel gear	1		
39		Bobbin case	1	2	SCPF15 imported
40	13WF3-042	Bevel gear	1		
41		Rotating hook	1	2	KRT470-S imported
42	13WF2-038	Bevel gear case (left)	2	2	
43	13WF2-039	Bevel gear case (right)	2	2	
44	13WF2-040	Screw	8	8	
45	13WF2-031	Cover	1		
46	13WF2-032	Screw	8	8	
47	13WF2-043	Screw	2	2	
48	13WF2-034	Post-bed for feed shaft	1		
49		Screw	8	8	
50	13WF2-074	Spacer	8	8	
51	13WF2-069	Rubber plug	1	1	
52	13WF3-068	Screw	1		
53	13WF3-067	Adjusting cam	1		
54	13WF3-070	Screw	1		
55	13WF3-069	Screw	2		
56	13WF3-075	Washer	2		
57	13WF2-028	Cover	1	2	
58	13WF2-036	Spring plate	1	2	
59	13WF1-015	Screw	3	6	
60	13WF1-019	Bushing	1		
61	13WF2-025	Rotating hook case	1	2	
62	13WF2-026	Hinge	1	2	
63	13WF2-027	Hinge pin	1	2	
64	13WF2-029	Cover	1	2	
65	13WF2-030	Cover	1	2	
66	13WF2-042	Needle plate	1		
67	13WF3-056	Roller	1		
68		Bearing	1		8×10. 6×10

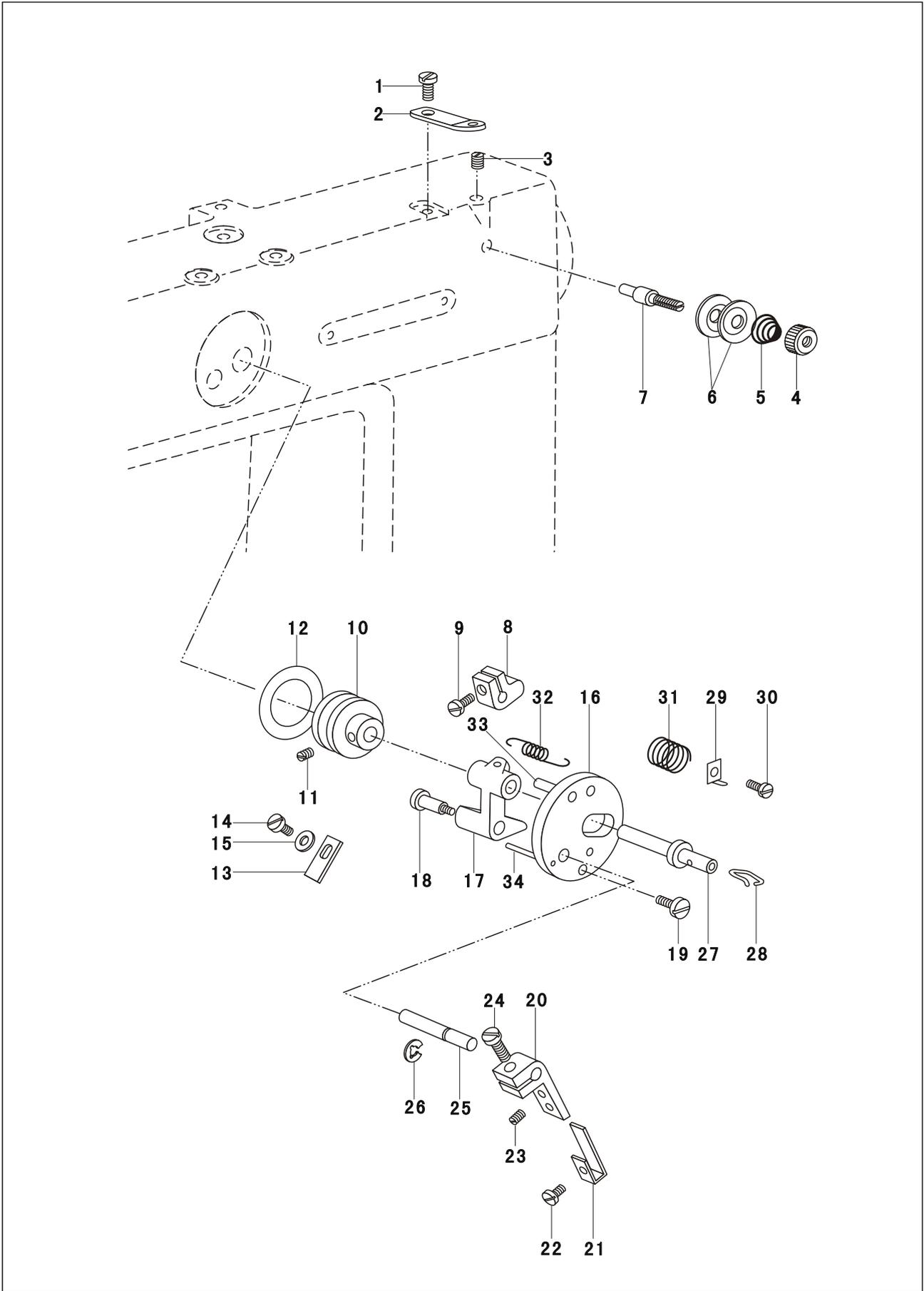
10. Post bed (parts only for double needle machine)



10. Post bed (parts only for double needle machine)

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	19WF1-005	Adjusting cam		2	
2	19WF2-002	Left hook post-bed		1	
3	19WF3-012	Lower roller feed		1	
4	19WF2-007	Needle bar		1	
5	13WF3-018	Screw		4	
6	19WF3-013	Adjusting block		1	
7	19WF3-011	Set plate		1	
8	19WF2-003	Right hook post-bed		1	
9	19WF3-010	Upper bevel gear		1	
10	19WF1-001	Position ring		2	
11	19WF1-002	Spacer		2	
12		Bearing		2	8×10. 6×10
13	19WF3-006	Vertical shaft		1	
14		Needle bearing		1	14×16. 5×8
15	19WF1-003	Upper bushing of left hook post-bed		1	
16	19WF3-009	Felt		1	
17	19WF1-006	Lower bushing of left hook post-bed		1	
18	19WF3-008	Collar		1	
19	19WF3-007	Lower bevel gear		1	
20	19WF3-005	Screw		6	
21	19WF3-004	Bevel gear		1	
22	19WF1-004	Upper bushing of right hook post-bed		1	
23		Bearing		1	9240/00 14×17×10
24	13WF2-040	Screw		8	
25	13WF1-027	Screw		2	

11. Thread winder



11. Thread winder

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	13WF6-027	Thread pass plate	1	1	
2	13WF2-008	Screw	1	1	
3	13WF4-027	Screw	1	1	
4	13WF6-029	Nut	1	1	
5	33T4-008C1	Spring	1	1	
6	22T1-012F5	Thread tension disc	2	2	
7	13WF6-028	Thread tension shaft	1	1	
8	13WF6-012	Crank	1	1	
9	13WF6-014	Screw	1	1	
10	13WF6-017	Thread winder wheel	1	1	
11	13WF6-018	Screw	2	2	
12	13WF6-019	Ring	1	1	
13	13WF6-023	Spring slice	1	1	
14	13WF6-024	Screw	1	1	
15		Washer	1	1	Washer4 GB861.1-87
16	13WF6-001	Thread base	1	1	
17	13WF6-021	Crank	1	1	
18	13WF6-022	Pin	1	1	
19	13WF6-002	Screw	1	1	
20	13WF6-006	Thread spanner	1	1	
21	13WF6-007	Spring plate	1	1	
22	13WF6-008	Screw	1	1	
23	13WF6-009	Screw	1	1	
24	13WF6-010	Screw	1	1	
25	13WF6-011	Spanner shaft	1	1	
26		Retainer	1	1	Retainer3.5 GB896-86
27	13WF6-015	Thread spool	1	1	
28	13WF6-016	Spring	1	1	
29	13WF6-005	Blade	1	1	
30	13WF6-003	Screw	1	1	
31	13WF6-004	Spring	1	1	
32	13WF6-025	Spring	1	1	
33	13WF6-020	Position pin	1	1	
34	13WF6-013	Position pin	1	1	

12. Accessory

No.	Part number	Name	Qt.		Remark
			Single needle	Double needle	
1	33TF-011	Oil pot	1	1	
2	4F-007	Spool stand assembly	1		
	1F-014	Spool stand assembly		1	
3	16WF5-007	Bed leg	1	1	
4	13WF7-003	Pin shaft	2	2	
5		Pin shaft	2	2	GB99-86 4×12
6	13WF5-004	Wood screw	1	1	
7	13WF5-005	Knee control shaft	1	1	
8	13WF5-006	Pin	1	1	
9	22T9-003B4	Connector	2	2	
10	22T9-003B2	Screw	1	1	
11	1KT5-006	Bent rod	1	1	
12	1KT5-005	Pat	1	1	
13	22T9-003B6	Bell	1	1	
14	22T9-003B7	Bell bracket	1	1	
15	13WF7-006	Screw	1	1	
16		Oil reservoir	6	6	GB100-1 3.5×12
17	13F-011	Wood screw	1	1	5mm
18	13F-010	Spanner	1	1	4mm
19	13F-005	Two-head spanner	1	1	6×7
20	13WF7-004	Hinge	2	2	
21	13WF7-002	Hinge case	2	2	
22	13WF7-005	Cushion	2	2	
23		Needle	3		Single needle Dp×5 14#
		Needle		6	Double needle DP×17 14#
24	13WF1-034	Bobbin	5	10	
25	13F-017	Belt	1	1	“V” 型 M43
26	13TF-010	Parts bag	1	1	
27	13TF-012	Screw driver (big)	1	1	
28	13TF-013	Screw driver (medium)	1	1	
29	13TF-014	Screw driver (small)	1	1	
30	13WF7-009	Safety guard (I)	1	1	
31	13WF7-009	Safety guard (II)	1	1	
32	13WF7-010	Pat (long)	2	2	
33	13WF7-011	Pat (short)	1	1	
34	13WF7-013	Screw	3	3	
35	13WF7-014	Screw	1	1	
36		Washer	5	5	Washer6 GB848-85
37	13WF7-012	Screw	1	1	
38	21WF7-015	Small screw	1	1	
39		Small washer	3	3	Washer4 GB848-85
40	13WF7-015	Big screw	1	1	