TYPICAL

GC20616

Single Needle Upper and Lower Roller Feed Needle Feed Lockstitch Sewing Machine

OPERATION INSTRUCTION / PARTS MANUAL

TYPICAL SEWING MACHINE WANPING MACHINERY CO., LTD.

☐ 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

GC20616 adopts link thread take-up,driven roller poresser foot, and timing feed of roller and needle. Vertical hooks for threading looping forms lockstitch seam. The upper shaft and rock shaft are driven by teeth-type synchronic belt. In addition, the main working parts adopt needle or ball bearing. Knob - type stitch length regulator makes the operation easy.
This model is widely used in manufacturing arc products as high-quality leather shoes, packing and gloves.

2. Main technical specifications

Application	Medium and heavy duty materials
Max. sewing speed	2500r. p. m
Presser foot lift volume	7mm by hand, 9mm by knee
Max. stitch length	5mm
Needle bar stroke	38mm
Needle	DP 5 14#～20#
Rotating hook	Horizontal hook
Lubrication	Oiling by hand
Motor power	370W

3. Preparation (Fig.1)

1. Cleaning the machine
Before delivery, the machine parts are coated with rust preventive gerase, which may be hardened and contaminated by dust during storage and shipment. The grease must be removed by clean cloth with gasoline.

2. Inspection
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 before running.

4. Installing the machine head (Fig.1)

Put the cushion A and B into the table cutout, and set the connecting hook C on the cushion B, then turn the machine head freely till it is seated on the frame of table cutout.

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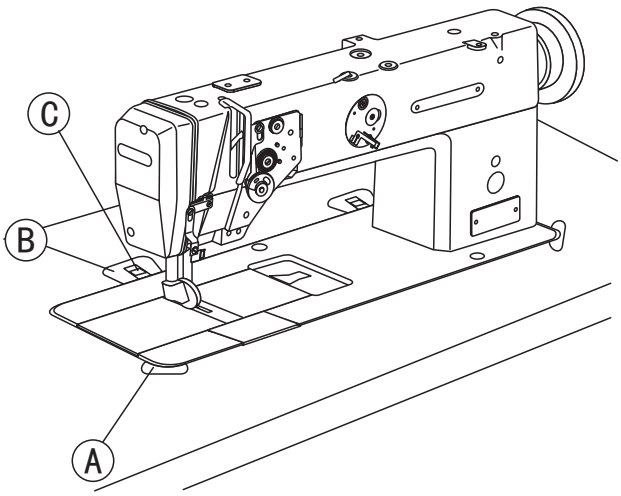

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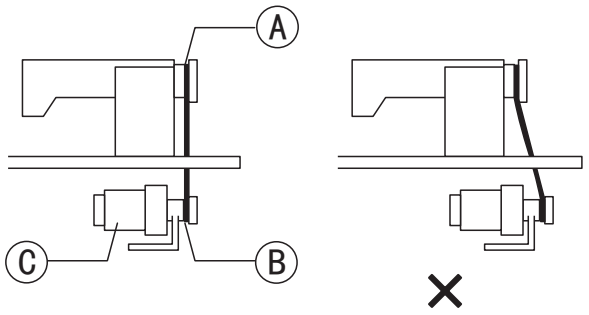

5. Installing the motor (Fig.2)

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

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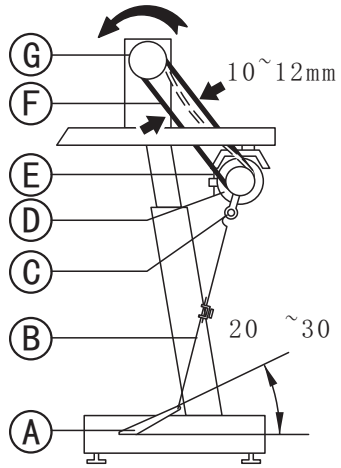

6. Connecting the clutch lever to the pedal(Fig.3)

1. The optimum tilt angle of the pedal with floor is approx. 20-30 degree;
2. Adjust the clutch of the motor so that the clutch lever C and draw bar B run in line as Fig3, which could assure smooth running and long using of the machine.
3. The machine balance wheel should rotate counter clockwise for normal sewing when viewing from opposite side of the balance wheel. The rotation can be reversed by reversing the plug of the motor.(turn over 180deg)
4. Adjust the tension of the V-belt F by moving the motor vertically. The proper tension of V - belt is a slack of 10-12mm when the belt is depressed (at the belt pan) by finger.

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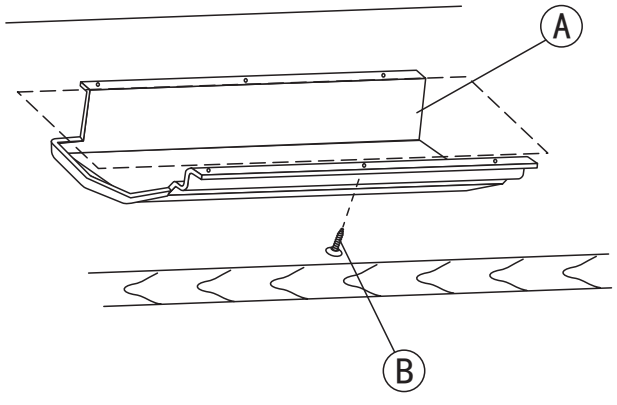

7. Installing the oil reservoir(Fig.4)

Put the oil reservoir A into the table cutout evenly, and adjust the position of the right knee control lifter, then tighten the two wood screws on both sides of the oil reservoir.

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

Insert the assembled knee control lifter mechanism into the bottom connector A of the machine head, then tighten the stud screw C. Position of the bell could be adjusted by the operator to ensure easy operation,slight tension and proper swing range.

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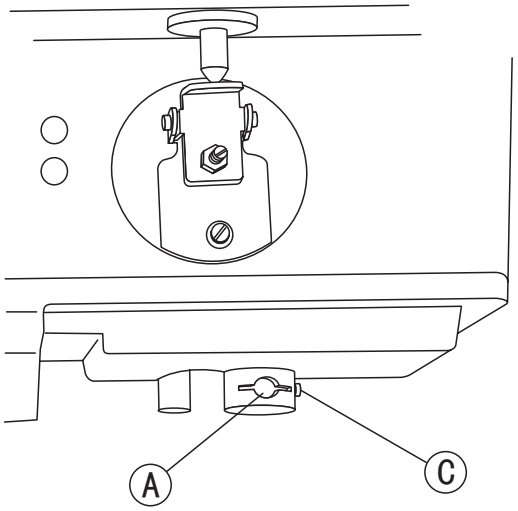

9. Selection of sewing thread (Fig.6)

1. High-quality sewing thread must be applied;
2. Thread must be left-twisted;
3. Hold the thread, twist the thread by right hand in the direction as the arrow shows, if the thread becomes tighter, it is left-twisted thread; on the contrary, it will be right-twisted thread.

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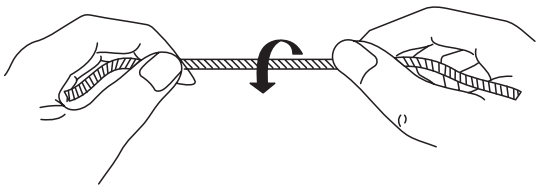

10.Installing the needle(Fig.7)

Needle DP 5 14#-20# should be applied. The selection of htread should be in accordance with the nature of the material.

1. Lift the presser foot lever and turn the balance wheel to lift the needle bar to its highest position;
2. Press down as shown in the Fig to open the roller foot A;
3. Loosen the needle screw B;
4. As the Fig shows, turn the long groove of the needle to left, and then insert the needle into needle bar as far as it goes.
5. Tighten the needle screw.

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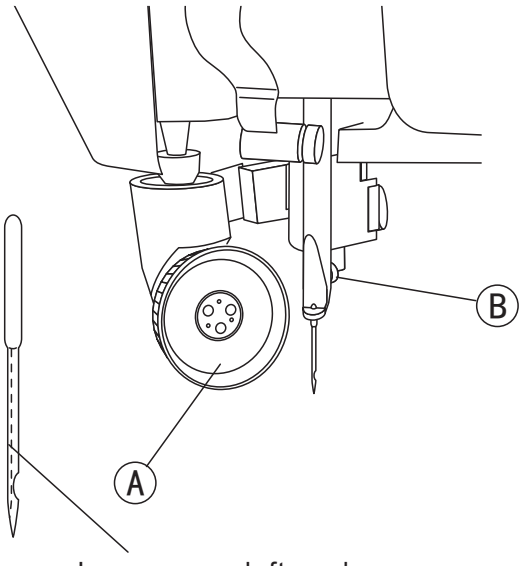

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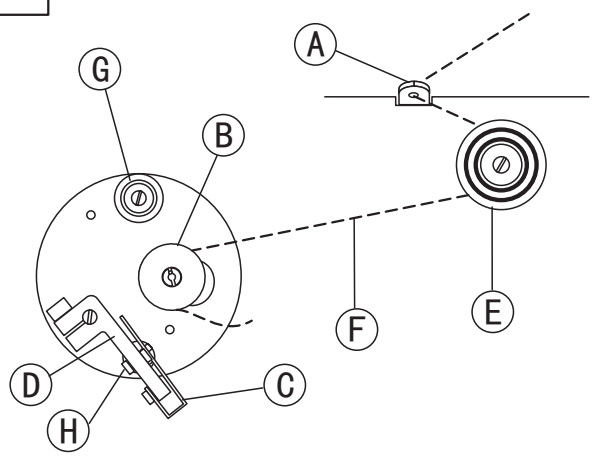

11. Winding the bobbin thread (Fig.8)

Install the bobbin B to the winder shaft. Thread A should pass through the center of the two tension discs E, then wind the tip of the thread a few turns around the bobbin B. Open the stop latch thumb lever D vertically so that the spring plate C is pressing upon the bobbin B. Thus when sewing, the machine is able to wind automatically. (The presser foot must be lifted when winding without sewing.) The bobbin should not be overfilled.The thread capacity is an optimum 80% of the outside diameter. The thread capacity can be adjusted by spring tension plate adjusting screw H.

When the bobbin is full, the bobbin thread could be cut by trimming blade as shown in the Fig. Wind the bobbin thread F two turns around the blade G, then pull it with a sudden force. Thus the trimming is finished.

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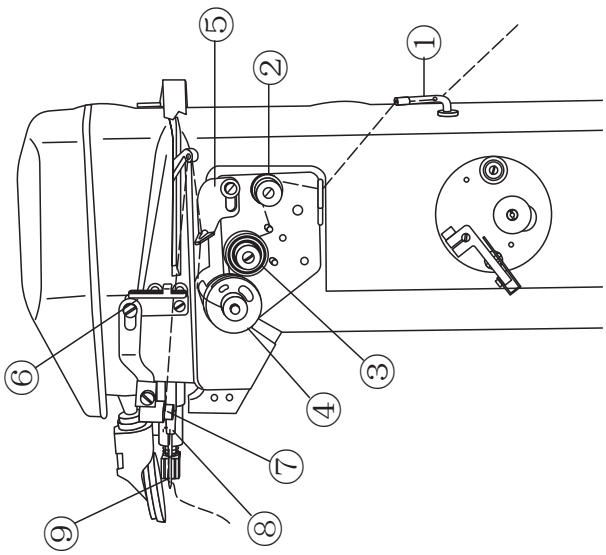

12. Threading (Fig.9)

When threading the needle thread, the needle bar should be lifted to its highest position. Lift the presser foot, open the roller foot, and then thread the tip from the spool stand in the following numerical order.

1. Pass through the two holes of the upper thread guide 1;
2. To left pass through the tension adjusting set plate right thread guide hole, then ip through between the small tension plate 2;
3. Down through the separating pin, and pass through between the tension plate 3;
4. To left pass through the thread control complete 4;
5. Up through the upper thread guide 5, then to left through the thread take-up lever threading hole;
6. Down through the middle thread guide 6, lower thread guide 7 and needle bar threading hole 8, then pass through the needle hole 9 and draw out the thread approx 100mm from the needle hole.

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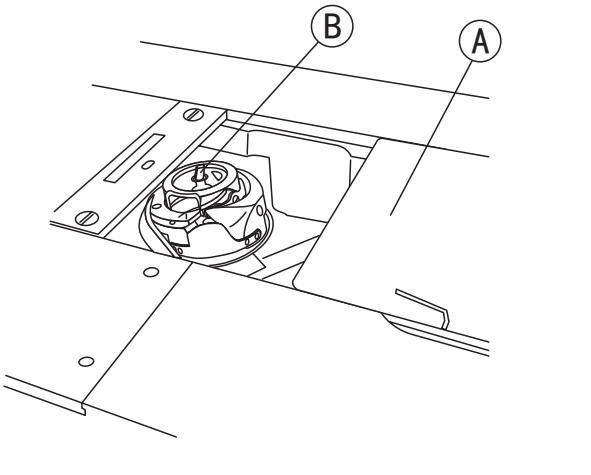

13. Installing the bobbin and the bobbin case(Fig.10)

1. Open the right slide plate A;
2. Open the stop latch thumb lever B;
3. Draw out the bobbin thread 50mm from the bobbin case, insert the tip of the bobbin thread into the slit of the bobbin , and then pull the bobbin thread so that the bobbin will rotate clockwise.
4. Put the bobbin case into the bobbin;
5. Close the stop latch thumb lever B;
6. Hold the needle thread by left hand, and turn the balance wheel by right hand to put the bobbin thread aside;
7. Close the right slide plate A.

14. First sewing (Fig.11)

1. Lift the presser foot lever;
2. Close the rooler foot;
3. Lay down the material;
4. Turn the balance wheel to make the needle pass through the material to be sewn;
5. Lower the presser foot lever.
   When first sewing, the needle must be drawn out approx 100mm.

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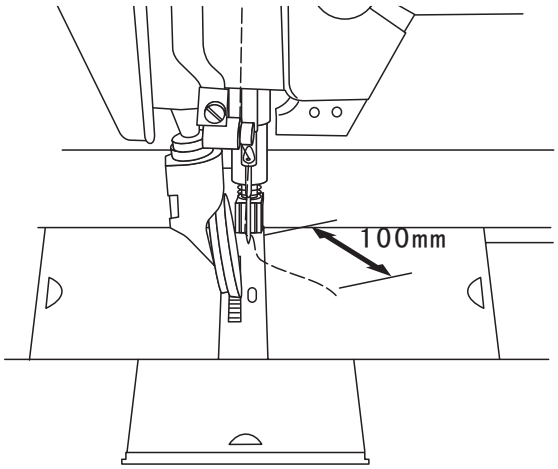

15. Sewing ending(Fig.12)

1. When the sewing is finished, lift the thread take-up lever to its highest position;
2. Lift the presser foot lever;
3. Pull out the material slantingly;
4. Cut off the needle thread and the bobbin thread. When pulling out the material, the needle thread and the bobbin thread should be left about 100mm for the convenience of next sewing operation.

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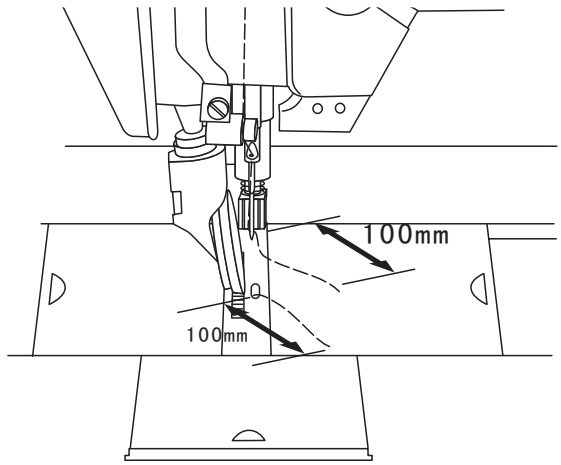

16. Adjusting the stitch length(Fig.13)

Press down the stitch length regulating button B slightly by left forefinger, meanwhile turning the balance wheel A by right hand until the button pin is imbedded into the groove of the nether parts.

Keep on pressing the botton B and turning the balance wheel, when the stitch length required on the regulating scale ring D aligns with the white mark C on the arm, release the button. Thus the adjustment is finished.

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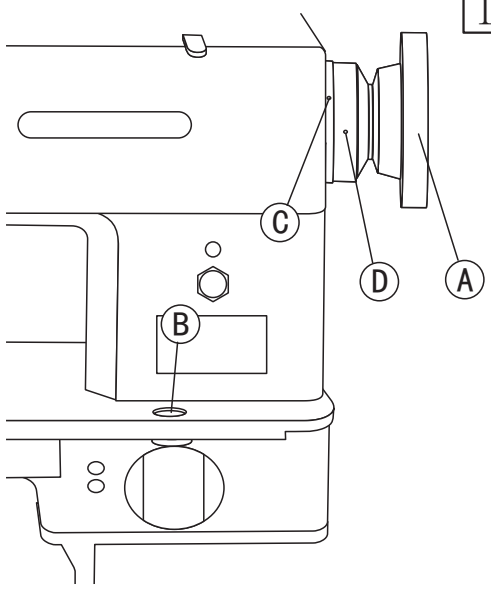

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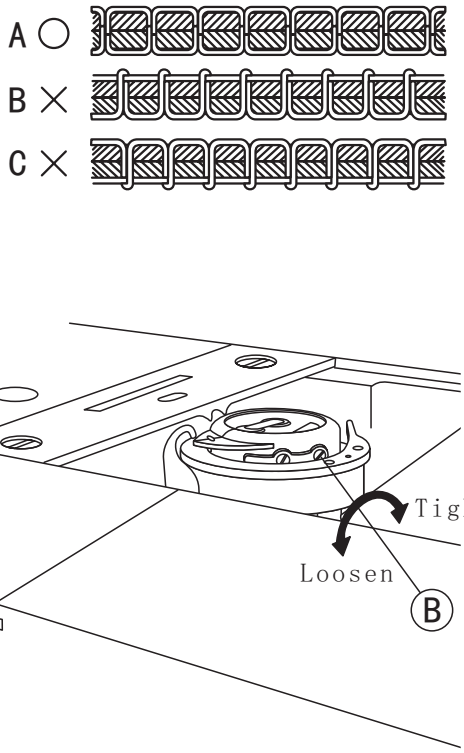

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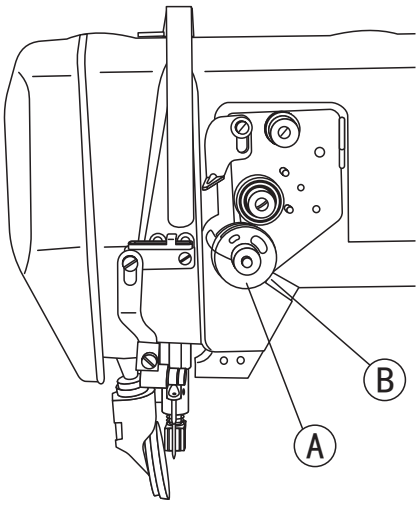

17.Adjusting the tension of bobbin thread and needle thread(Fig.14)

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

1.If the stiches are as shown I Fig.14 B,which means that the tension of the needle thread is too strong or the tension of the bobbin thread is too weak,turn the tension regulating thumb nut counter clockwise to weaken the tension of the needle thread, or tighten the bobbin case tension regulating screw with small screwdriver to strengthen the tension of the bobbin thread.

2.If the tension of the needle thread is too weak or the tension of the bobbin thread is too strong as shown in Fig.C,turn the tension regulating thumb nut clockwise to strengthen the tension of the needle thread,or loosen the bobbin case regulating screw with small screwdriver to weaken the tension of the bobbin thread.

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

Generally,before delivery,the thread take-up spring should have been adjusted properly. Therefore, it should be re-adjusted only when sewing with special material or special thread.

Loosen the thread take-up spring shaft adjusting nut B, then turn the thread take-up spring shaft A to adjust its tension. Turn the thread take-up spring shaft couter clockwise to strengthen the tension of the thread take-up; on the contrary,to weaken the tension of the thread take-up. Tighten the adjusting nut B.

Loosen the position plate screw, turn the thread take-up position plate counter clockwise to widen the range of the thread take-up spring;on the contrary,to narrow the range of the thread take-up spring. After adjustment,tighten the position plate screw.

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

The tension of the roller foot should be adjusted according to the thickness of the material. If sewing heavy material, strengthen the tension of the roller foot by turning the adjusting screw on the back of the machine head clockwise as shown in Fig.16; on the contrary, weaken the tension of the roller foot.

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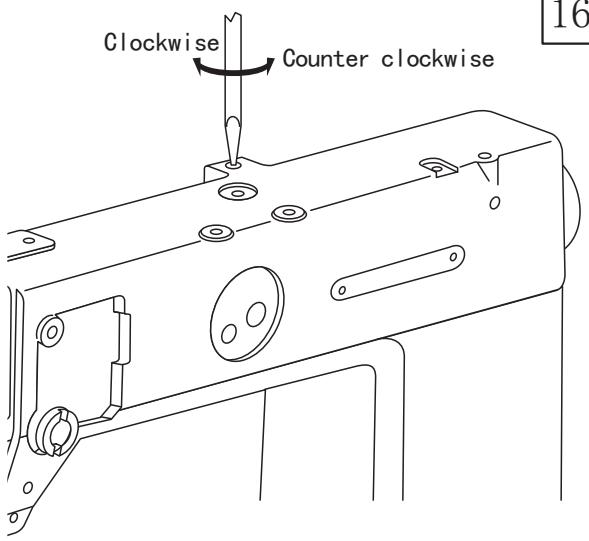

20.Removing and installing the rotating hook(Fig.17)

The rotating hook must be adjusted or removed when it is deformed or damaged.

1.Remove the rotating hook;

a.Turn the balance wheel by hand to lift the needle bar to its highest position and remove the needle plate C;

b.Open the right slide plate 1, open the stop latch thumb lever2, then take out the bobbin case 4 and bobbin 3.

c.Remove the thread guide 3;

d.Remove the rotating hook gib screw 6 and gib 7;

e.Turn the hook base and bobbin case base 8 slightly and take it out;

f.Loosen the set screw 9 and take out the hook body 10.

2.Installing the rotating hook

a.Install the rotating hook in reverse process;

b.When in stalling the needle plate C, put the part A into the groove B, then tighten the needle plate screw.

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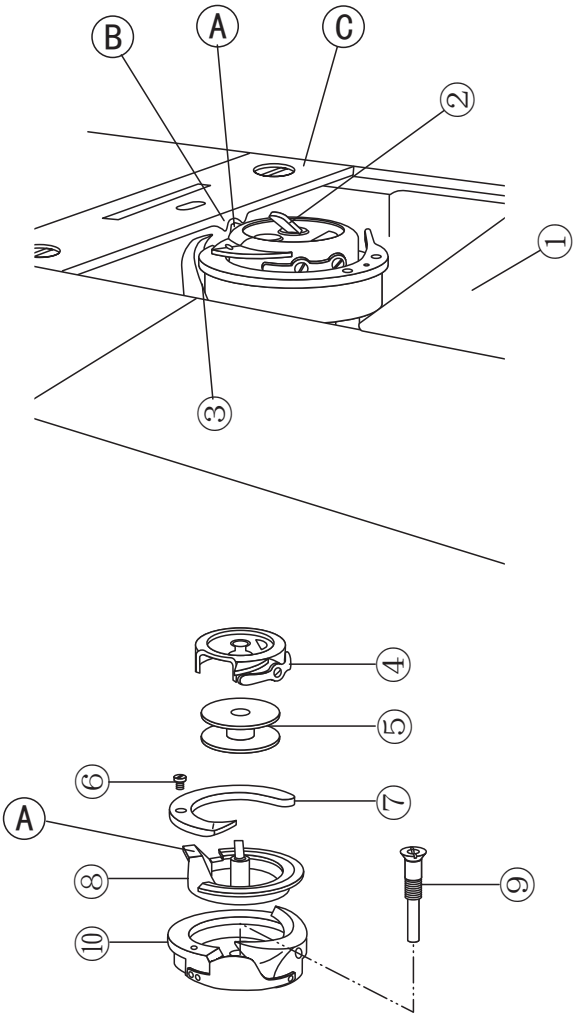

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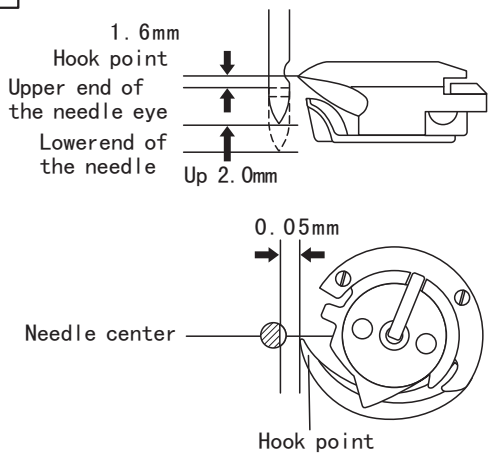

21.Position between the rotating hook and the needle (Fig.18)

When the hook point is lifted by 1.8mm from its lowest position, the position of the needle and the rotating hook is as shown in Fig.18:

1.The upper end of the needle eye is 0.3mm lower than the hook point 1;
2.The hook point aligns with the point hook groove directly;
3.The clearance between the hook point and the needle groove is approx 0-0.05mm.

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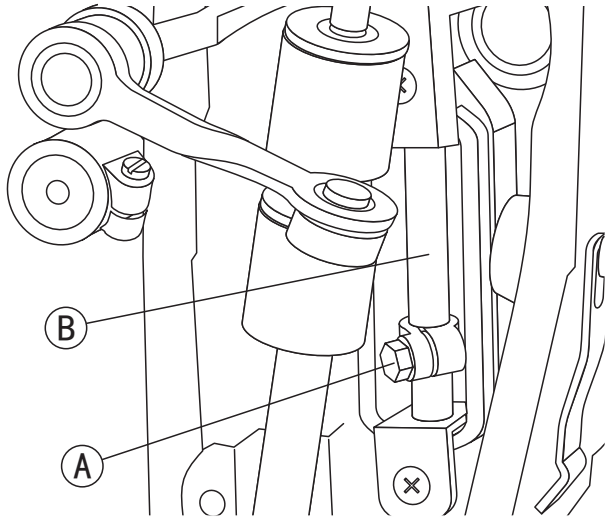

22.Adjusting the position of the needle bar(Fig.19)

When the needle bar is 1.8mm lifted from its lowest position,adjust the position of the needle bar to make the needle eye 0.3mm lower than the hook point 1.

1.Turn the balance wheel by hand until the needle bar is 1.8mm lifted form its lowest position;
2.Move the needle bar B up ward and downward as required;
3.After adjustment, tighten the needle bar connecting screw A.

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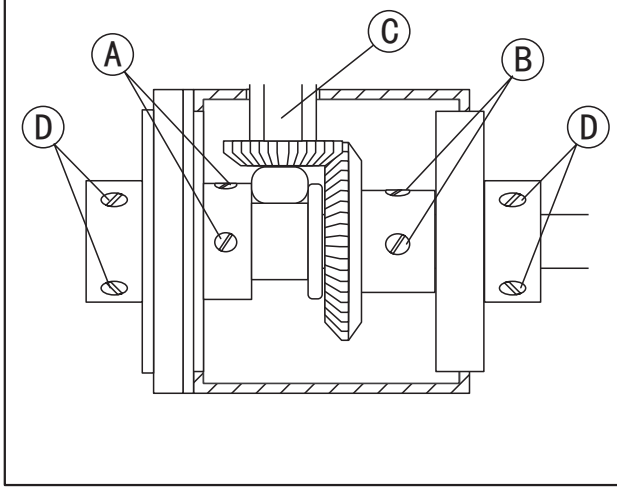

33.Adjusting the position of the hook point(Fig.20)

1.Lay down the machine head;
2.Remove the front retaining plate of the bobbin case bracket;
3.Loosen the bevel gear two screws B and the two set screws A and D of the lower shaft;
4.Turn the balance wheel by hand until the needle is 1.8mm lifted from its lowest position;
5.Turn the hook shaft bevel gear C until the hook point aligns with the center of the needle groove;
6.After adjustment, tighten the lower shaft bevel gear screw B,and tighten the screw A and D until screw A,B, and D run in one line;
7.Install the front retaining plate of the bobbin case bracket.

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

The clearance between the hook point and the needle should be approx 0.05mm.The clearance has been adjusted before delivery and it can only be re-adjusted when the needle is changed.

1.Lay down the machine head;
2.Remove the retaining plate of the bobbin case bracket;
3.Loosen the bevel gear screw B and set screws A and D of the lower shaft;(Fig.20)
4.Turn the balance wheel by hand until the needle is 1.8mm lifted front its lowest position;
5.Turn the rotating hook until the bobbin aligns with the center of the needle groove;
6.Loosen the set screw E,move the bobbin case bracket F leftward and rightward so that the clearance between the hook point and the needle remains around 0.05mm;
7.After adjustment, tighten the set screw E, gear and set screw;
8.Install the retaining plate of the bobbin case bracket.

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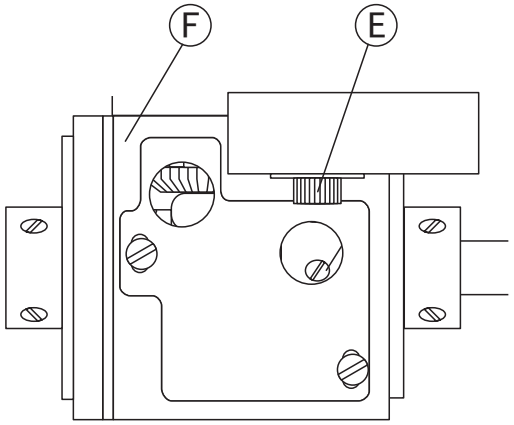

25.Relationship between the rotating hood and the hook position stud(Fig.22)

Turn the balance wheel,and make a stop when the thread take-up lever is lifted to its highest position.Check that there is a certain amount of clearance C between the rotating hook holder and the thread guide.In general, the amount of C should be between 0.1mm and 0.3mm (according to the thickness of the material).

Adjusting method:

1.Open the right slide plate A;
2.Lay down the machine head;
3.Loosen the eccentric shaft screw B;
4.Rotate the eccentric shaft D to adjust the clearance;
5.After adjustment,tighten the screw B.

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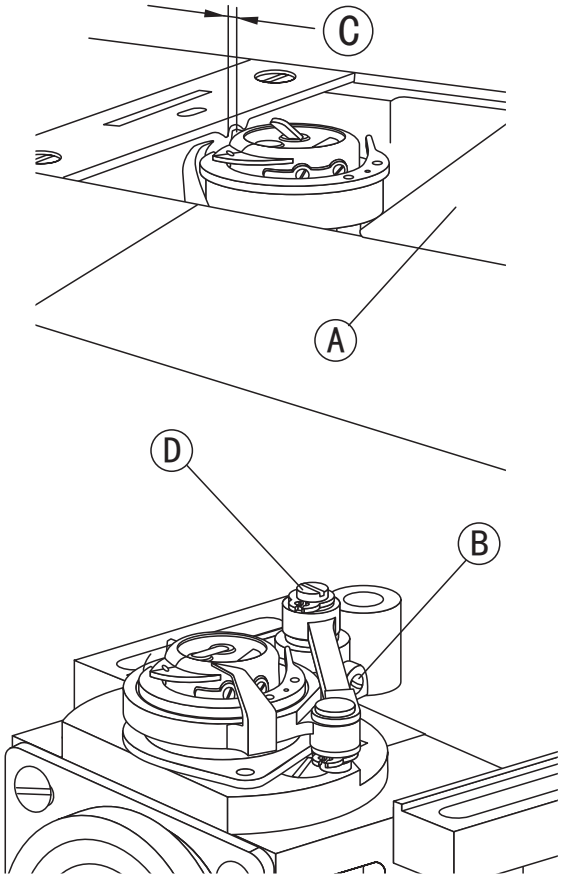
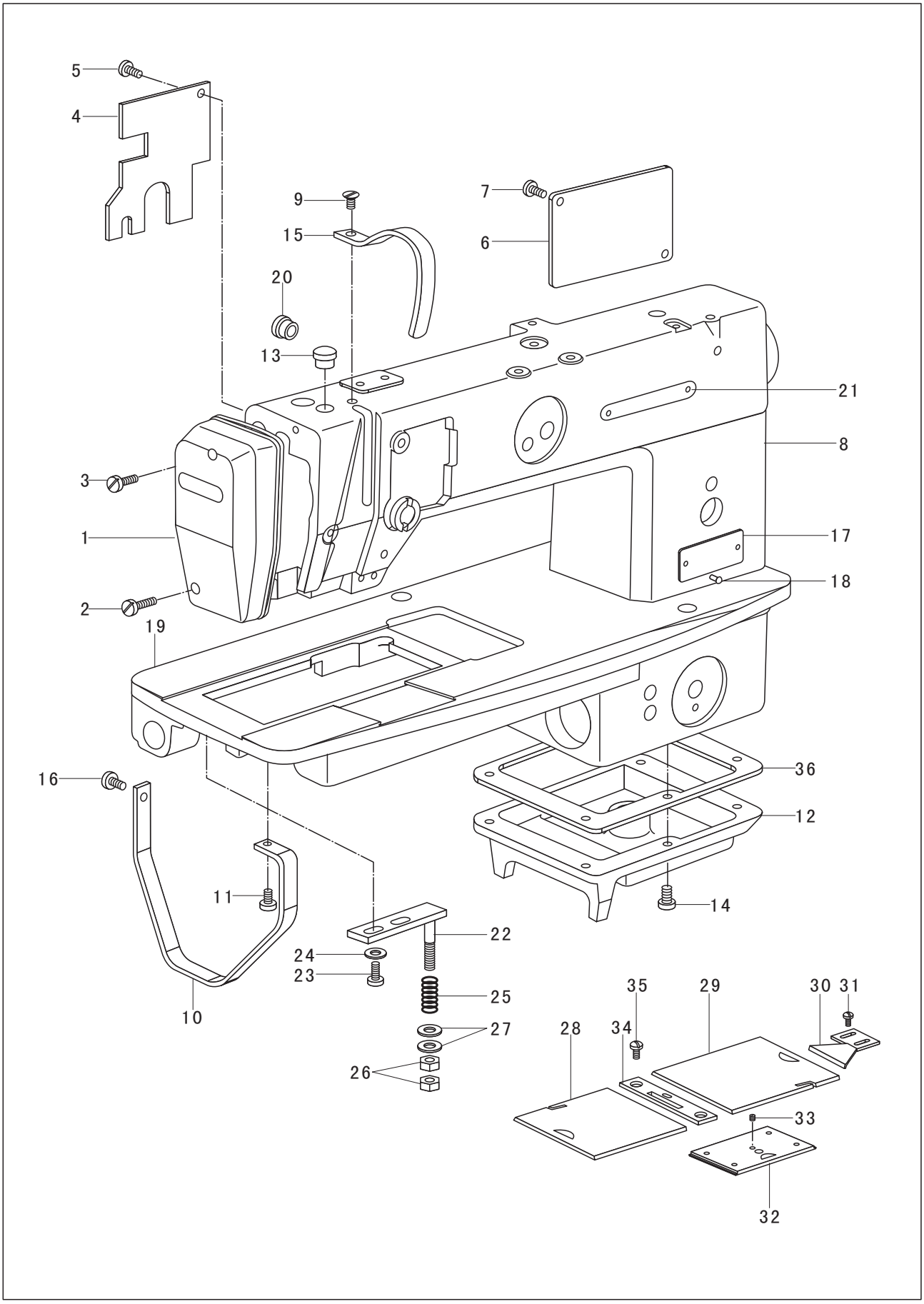


1.Arm and bed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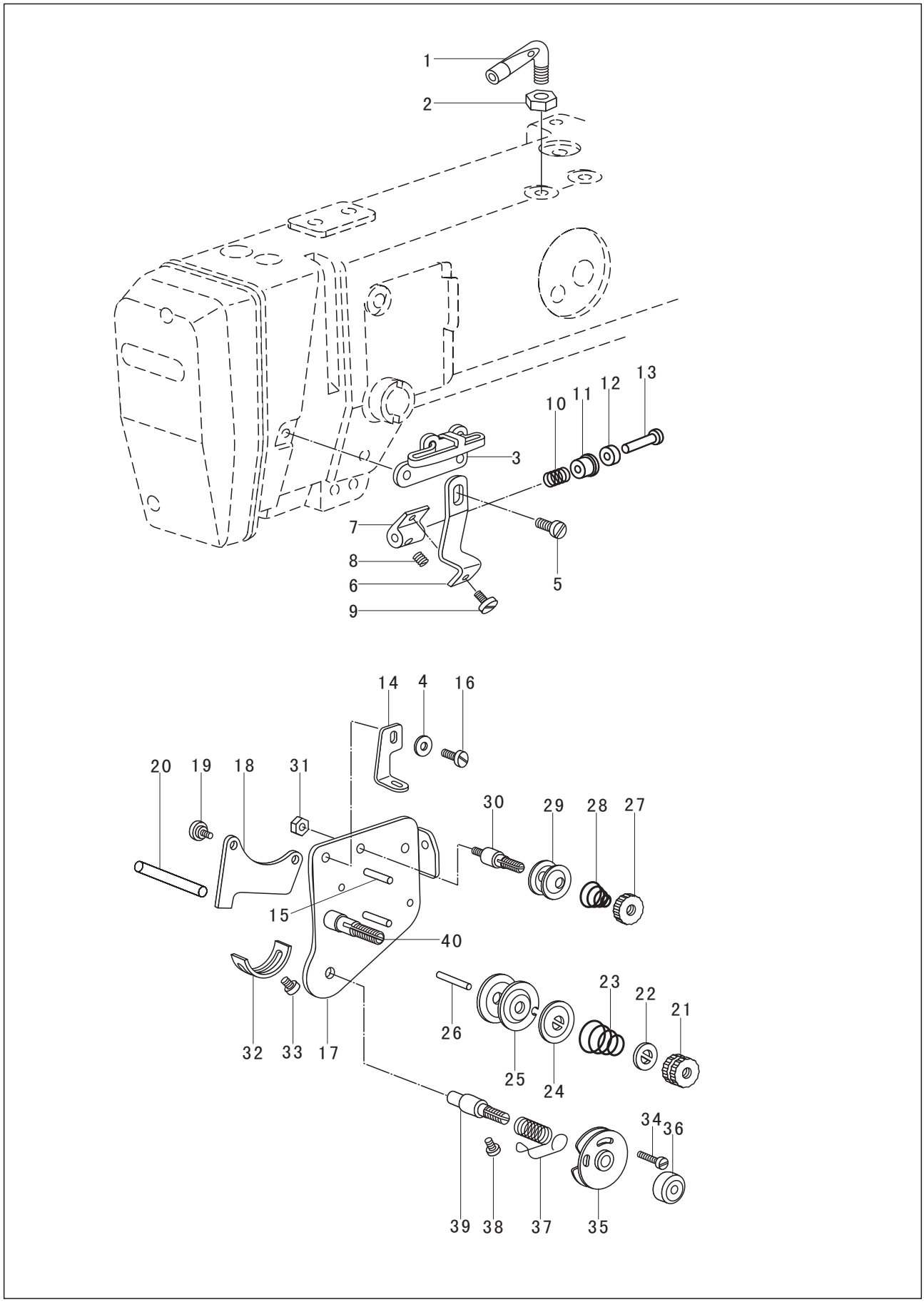
1.Arm and bed

No.	Part Number	Name	Qt.	Remark
1	13WF2-004	Face plate	1	
2	13WF2-005	Screw(big)	1	
3	13WF2-006	Screw(small)	1	
4	13WF2-013	Rear fitting cover	1	
5	13WF2-014	Screw	2	
6	13WF2-007	Rear cover	1	
7	13WF2-008	Screw	2	
8	72WF2-001	Arm	1	
9	13WF2-012	Screw	1	
10	72WF2-005	Support	1	
11	22WF2-004	Screw(big)	1	
12	13WF2-065	Base holder	1	
13	13WF2-068	Rubber plug	1	
14	13WF1-045	Screw	5	
15	13WF2-011	Safety guard	1	
16	72WF1-017	Screw (small)	1	
17	72WF2-006	Trade mark plate	1	
	72WF2-007	Trade mark plate(English)		
18		Rivet	4	
19	72WF2-002	Base	1	
20	13WF2-069	Rubber plug	1	
21	16WF2-053	Trade plate	1	
22	72WF2-016	Adjusting plate	1	
23	72WF5-019	Screw	2	
24	72WF2-010	Spacer	2	
25	72WF2-017	Spring	1	Φ2.5 5 GB827-86
26	72WF2-018	Nut	2	
27	72WF2-010	Spacer	2	
28	72WF2019	Left slide plate	1	
29	72WF2-020	Right slide plate	1	
30	72WF2-021	Right slide plate retaining plate	1	
31	7WF5-007	Screw	2	
32	72WF2-022	Front slide plate	1	
33	13WF2-024	Screw	1	
34	72WF2-003	Needle plate	1	
35	72WF2-004	Screw	2	
36	72WF2-024	Seal ring	1	

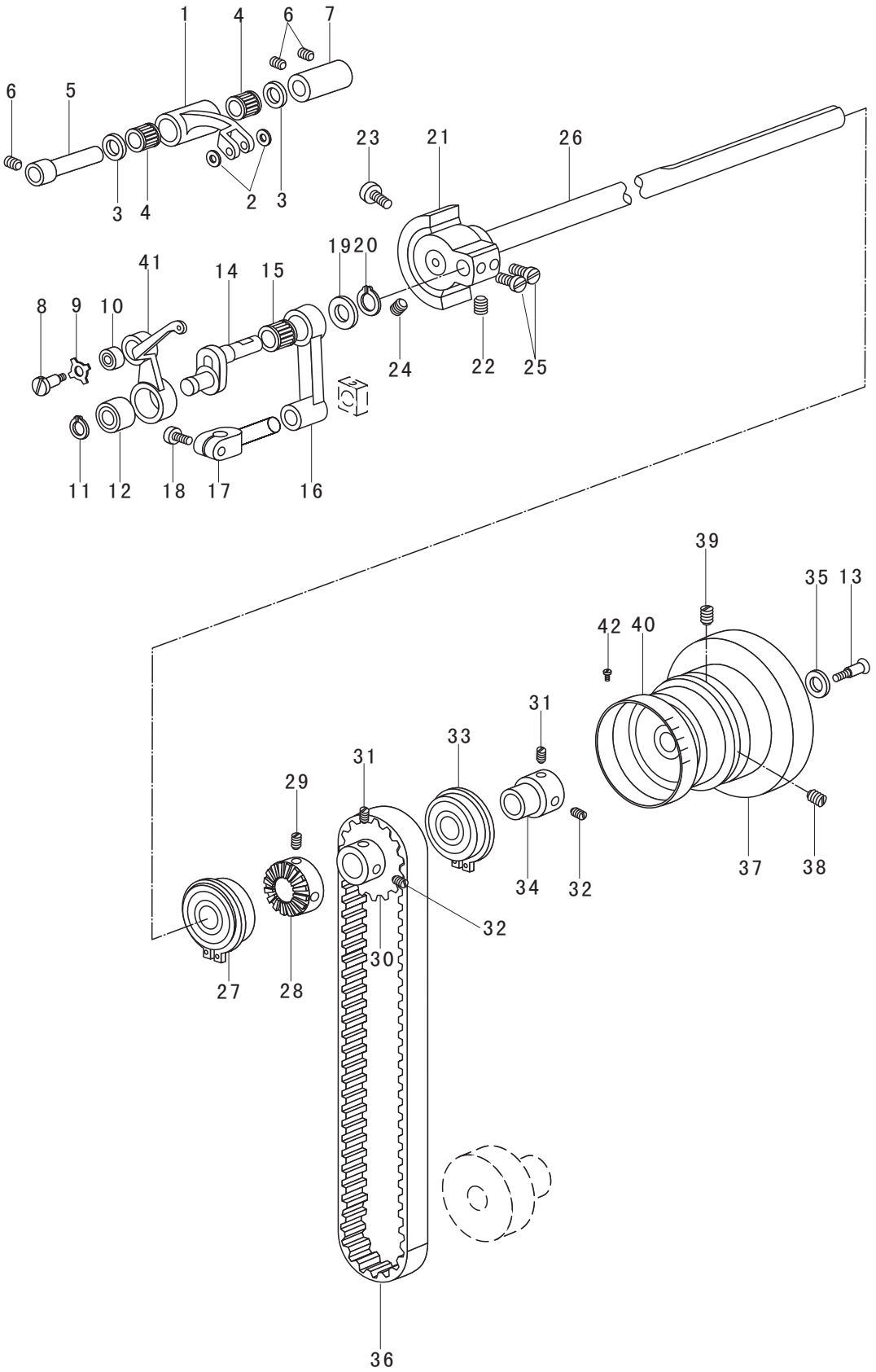
2.Thread tension parts



2.Thread tension parts

No.	Part Number	Name	Qt.	Remark
1	13WF2-066	Thread guide pin	1	
2	13WF2-067	Nut	1	
3	13WF2-016	Middle thread guide	1	
4		Washer	1	
5	13WF2-006	Screw	1	
6	13WF2-017	Connecting plate	1	
7	13WF2-023	Screw	1	
8	13WF2-024	Connecting screw	1	
9	13WF2-018	Spring	1	
10	13WF2-022	Guide bushing	1	
11	13WF2-021	Spacer	1	washer5 GB95-85
12	13WF2-020	Lower thread guide shaft	1	
13	13WF2-019	Upper thread guide	1	
14	13WF2-015	Position pin	1	
15	13WF2-053	Screw	2	
16	13WF2-047	Set plate	1	
17	13WF2-046	Erecting plate	1	
18	13WF2-049	Screw	1	
19	13WF2-050	Erecting pin	2	
20	13WF2-048	Nut	1	
21	13WF2-070	Stop plate	1	
22	153209	Spring	1	
23	33T4-008C1	Erecting plate	1	
24	13WF2-055	Thread tension plate	1	
25	13WF2-054	Tension releasing pin	2	
26	13WF2-056	Nut	1	
27	36T2-006D4	Spring	1	
28	13WF2-009	Thread tension disc	1	
29	22T1-009E3	Screw	2	
30	13WF2-051	Nut	1	
31	13WF2-052	Position plate	1	
32	103693	Screw	1	
33	1WF1-026	Adjusting screw	1	
34	13WF2-062	Thread control complete	1	
35	1WF1-010J	Nut	1	
36	13WF2-061	Thread take-up spring	1	
37	13WF2-059	Screw	1	
38	13WF2-063	Thread take-up spring shaft	1	
39	13WF2-060	Screw	1	
40	13WF2-057		1	

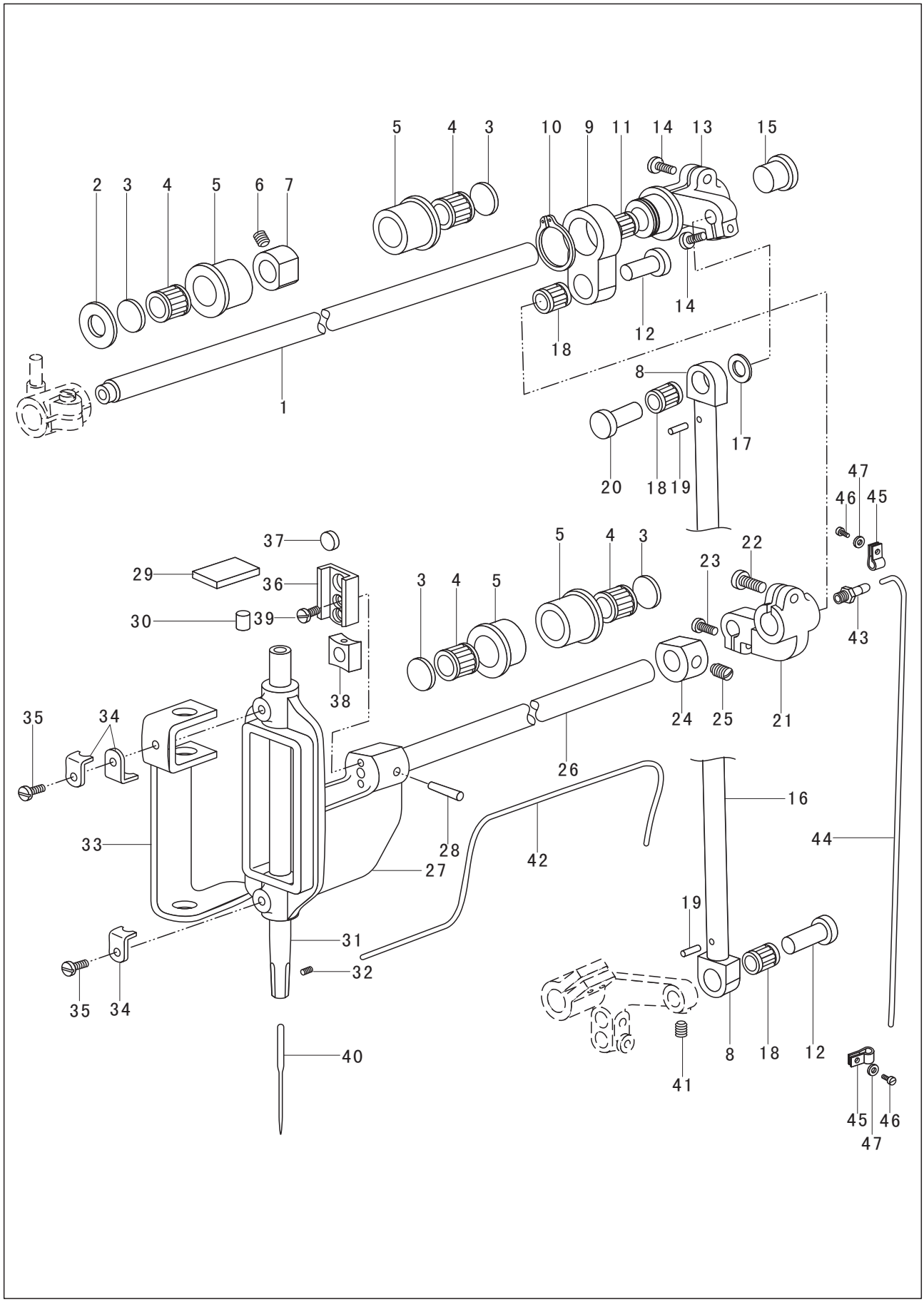
3.Upper shaft and thread take-up lever parts



3.Upper shaft and thread take-up lever parts

No.	Part Number	Name	Qt.	Remark
1	13WF1-030	Thread take-up link	1	
2		Washer	2	
3	13WF1-031	Needle bearing retainer	2	
4		Thread take-up link needle bearing	2	
5	13WF1-032	Thread take-up pin	1	
6	7WF5-048	Screw	3	
7	13WF1-033	Bushing for thread take-up pin	1	
8	13WF1-075	Screw	1	
9	13WF1-035	Position ring	1	Washer GB97.1-85
10		Thread take-up bearing(small)	1	
11		Thread take-up crank retainer	1	29241/7 7 1 0 8
12		Thread take-up bearing(big)	1	
13	72WF1-034	Screw	1	
14	13WF1-037	Thread take-up crank	1	
15		Needle bar link needle bearing	1	
16	13WF1-039	Needle bar link	1	
17	13WF1-041	Needle bar connector	1	80024 4 1 3 5
18	13WF1-042	Screw	1	Retainer8 894.1-84
19	13WF1-040	Seal ring	1	80018 8 2 2 7
20	13WF1-038	Needle bar link retainer	1	
21	13WF1-044	Needle bar crank	1	
22	13WF1-018	Screw	1	57941/10 10 14 10
23	33T1-006C2	Screw	1	
24	61-04-01/B2	Screw	1	
25	13WF1-045	Screw	2	
26	72WF1-033	Upper shaft	1	
27		Upper shaft front bearing complete	1	
28	13WF6-026	Driving wheel	1	
29	J0.0.40	Screw	2	
30	72WF1-035	Synchro pulley	1	
31	13WF1-004	Set screw	2	
32	13WF1-048	Screw	2	
33		Upper shaft rear bearing complete	1	
34	13WF1-047	Bushing for upper shaft rear bearing	1	150204 20 47 14
35	13WF1-050	Spacer	1	
36	72WF1-036	Timing belt	1	
37	13WF1-052	Balance wheel	1	
38	13WF1-077	Screw	1	
39	13WF1-078	Set screw	1	
40	13WF1-056	Stitch length regulating scale ring	1	20 4 2 1 2
41	13WF1-036	Thread take-up complete	1	
42		Rivet	3	

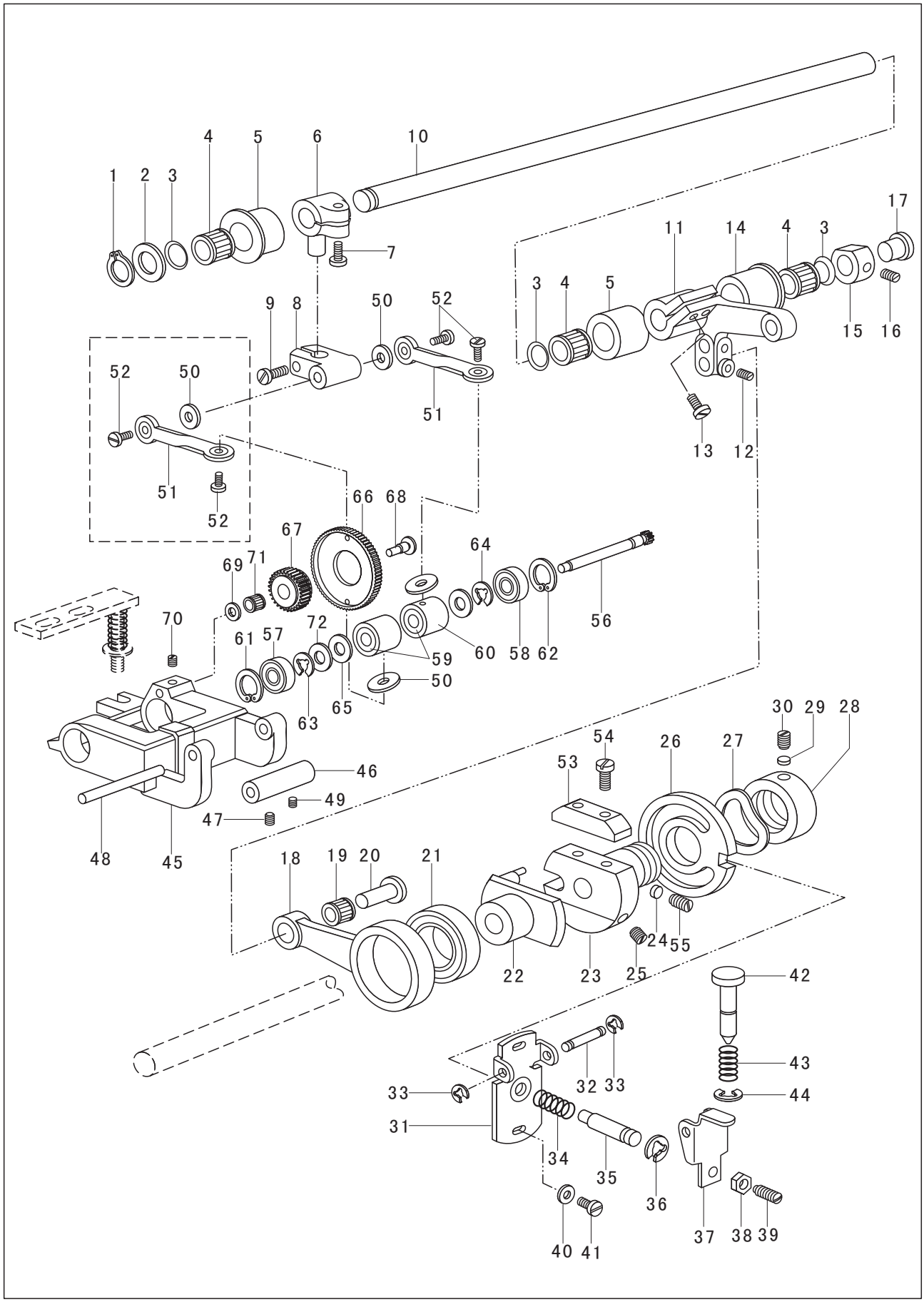
4.Needle bar vibrating parts



4.Needle bar vibrating parts

No.	Part Number	Name	Qt.	Remark
1	13WF3-001	Upper feed shaft	1	
2	13WF3-002	Spacer	1	
3	13WF1-073	Needle bearing retainer	8	
4		Upper feed shaft bearing	4	
5	13WF1-072	Needle bearing bushing	4	
6	13WF1-009	Screw	1	
7	13WF1-059	Collar	1	
8	13WF3-004	Connector	2	
9	13WF3-007	Needle vibrating link	1	
10		Retainer	1	Retainer GB89.1-86-24
11		Bearing	1	9241/24 24 28 10
12	13WF3-005	Connecting pin	2	
13	13WF3-008	Needle vibrating cam	1	
14	13WF1-045	Set screw	2	
15	13WF2-035	Rubber plug	1	
16	72WF3-001	Connecting shaft	1	
17	13WF3-009	Spacer	1	
18		Bearing	3	39241/8 8 11 10
19		Pin	2	Pin2.5 12 GB117-86
20	13WF3-006	Connecting pin	2	
21	13WF1-062	Needle vibrating crank	1	
22	13WF1-063	Screw(big)	1	
23	13WF1-045	Screw	1	
24	13WF1-059	Collar	1	
25	13WF1-009	Screw	1	
26	72WF1-037	Needle bar vibrating shaft	1	
27	13WF1-060	Needle bar vibrating bracket	1	
28		Pin	1	Pin3 15 GB117-86
29	13WF1-069	Oil felt	1	
30	13WF1-076	Rubber plug	1	
31	13WF1-028	Needle bar	1	
32	13WF1-029	Screw	1	
33	13WF1-061	Felt	1	
34	13WF1-066	Set bracket	3	
35	13WF1-067	Screw	2	
36	13WF1-064	Slide block groove	1	
37	13WF1-068	Felt	1	
38	13WF1-043	Slide block	1	
39	13WF1-065	Screw	2	
40	13F1-001	Needle	1	Single needleDP 5 14#
41	13WF1-048	Screw	1	
42		Oil wick	1	Φ4 Length360mm
43	72WF1-038	Oil nozzle	1	
44		Oil wick	1	Φ6 Length450mm
45	72WF1-039	Clamp	2	
46	13WF2-008	Screw	2	
47		Washer	2	GB848-85-4

5.Feed mechanism parts

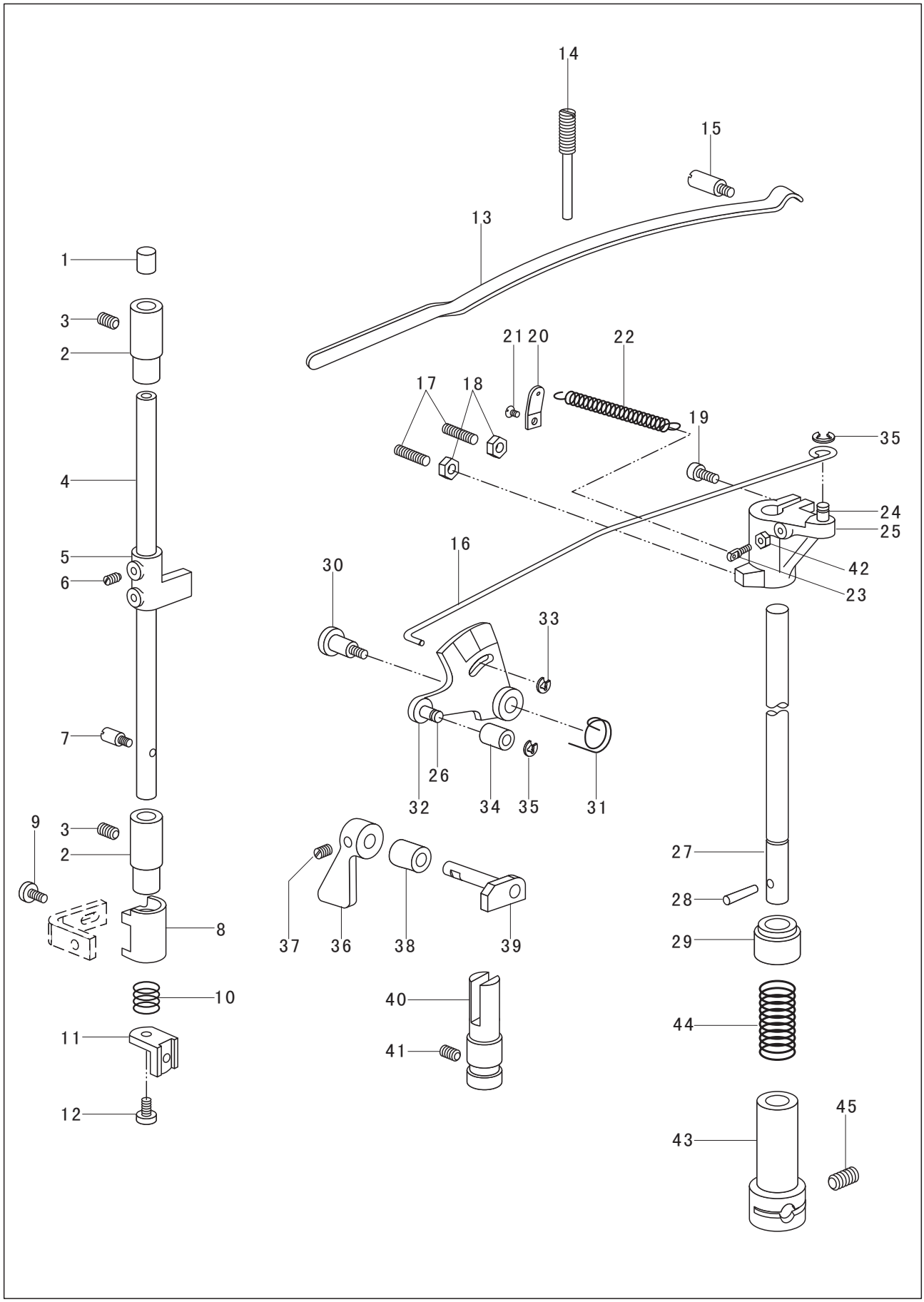


5.Feed mechanism parts

No.	Part Number	Name	Qt.	Remark
1		Retainer	1	
2	13WF3-002	Spacer	1	
3	13WF1-073	Retainer	6	
4		Lower feed shaft bearing	3	
5	13WF1-072	Bushing for lower shaft bearing	2	
6	13WF3-035	Driving crank	1	
7	13WF1-045	Screw	1	
8	13WF3-036	Driving dog	1	
9	13WF3-018	Screw	1	
10	13WF3-011	Lower feed shaft	1	Retainer15 GB894.1-86
11	13WF3-010	Lower feed shaft crank	1	
12	13WF1-048	Screw	1	
13	13WF2-006	Screw	2	59241/15 15 19 17
14	13WF3-012	Bushing for feed shaft rear needle bearing	1	
15	13WF1-059	Collar	1	
16	13WF1-009	Screw	1	
17	13WF2-071	Rubber plug	1	
18	13WF3-043	Eccentric link	1	
19		Bearing for eccentric link(small)	1	
20	13WF3-005	Connecting pin	1	
21		Bearing for eccentric link(big)	1	
22	13WF3-044	Feed cam	1	
23	13WF3-045	Adjusting block	1	
24	13WF3-047	Spacer	2	
25	13WF3-046	Screw	2	
26	13WF3-050	Eccentric adjusting plate	1	
27		Elastic washer	1	
28	13WF3-051	Lock nut	1	39241/8 8 11 10
29	13WF3-052	Prop block	1	
30	13WF1-027	Screw	1	1000806 30 42 7
31	13WF3-017	Stitch length adjusting bracket	1	
32	13WF3-016	Hinge shaft	1	
33		Retainer	2	
34	13WF3-020	Spring	1	
35	13WF3-019	Position pin	1	
36		Retainer	1	Washer24 GB955-87
37	13WF3-015	Stitch length adjusting lever	1	
38	13WF3-074	Nut	1	
39	13WF3-073	Lock screw	1	
40		Washer	2	
41	13WF3-018	Screw	2	
42	13WF3-013	Stitch length button	1	Retainer3.5 GB896-86
43	13WF3-014	Spring	1	
44		Retainer	1	
45	72WF2-012	Lower shaft driving gear shaft bracket	1	Retainer6 GB896-86
46	72WF2-013	Bushing for set bracket shaft	1	
47	72WF2-014	Screw	1	
48	72WF2-015	Pin	1	
49	13WF3-060	Screw	1	
50	13WF3-037	Felt	4	Washer4 GB97.1-85
51	13WF3-034	Driving link assembly	2	
52	13WF3-038	Screw	4	
53	13WF3-048	Connecting block	1	
54	13WF3-049	Screw	2	Retainer8 GB896-86
55	22T1-011	Lock screw	2	
56	72WF3-002	Lower feed driving shaft	1	
57		Bearing for lower feed driving shaft(small)	1	
58		Bearing for lower feed driving shaft(big)	1	
59		Unilateral needle clutch	2	
60	13WF3-041	Bushing for lower feed clutch	2	BearingGE6E
61		Retainer(small)	1	
62		Retainer(big)	1	
63		Retainer(small)	1	
64		Retainer(big)	1	
65	13WF3-023	Spacer	2	
66	72WF3-004	Lower feed roller	1	180018 8 22 7
67	72WF3-005	Gear for lower feed roller	1	180018 10 26 8
68	72WF3-006	Eccentric pin	1	
69	72WF3-007	Spacer	1	
70	13WF1-018	Screw	1	
71		Lower feed roller needle bearing	1	
72	72WF3-003	Spacer	1	GB896-86-6 GB896-86-8

39241/8 8 11 10

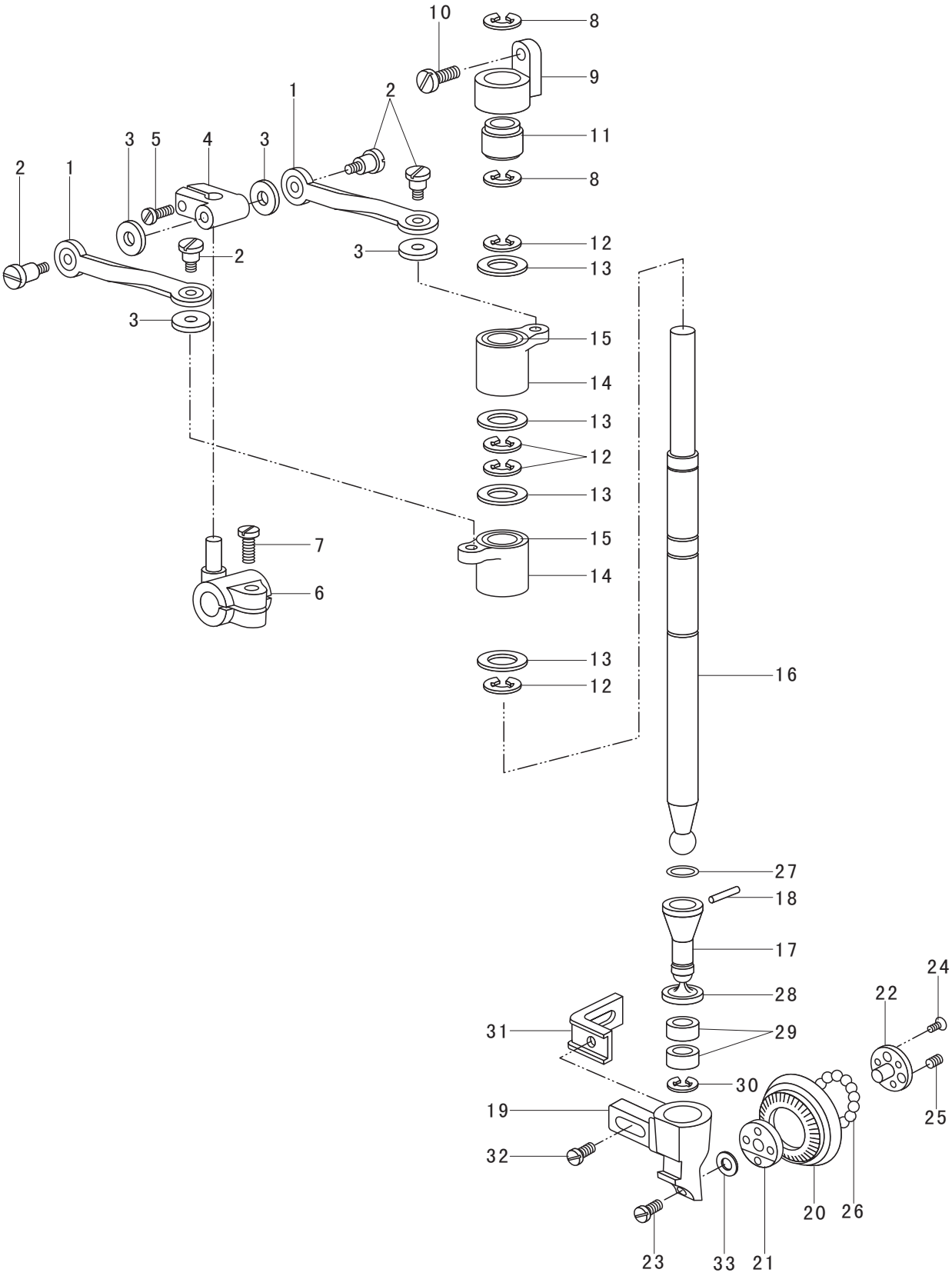
6.Presser bar lift parts



6.Presser bar lift parts

No.	Part Number	Name	Qt.	Remark
1	13WF1-076	Rubber plug	1	
2	13WF4-032	Bushing for presser bar	2	
3	13WF3-060	Screw	2	
4	13WF4-017	Presser bar	1	
5	13WF4-018	Guide bracket	1	
6	13WF1-018	Screw	2	
7	13WF4-019	Position pin	1	
8	13WF4-020	Position bushing	1	
9	13WF4-022	Screw	1	
10	13WF4-023	Spring	1	
11	13WF4-024	Presser foot guide rail	1	
12	13WF4-025	Set screw	1	
13	13WF4-015	Presser bar lift lever	1	
14	13WF4-030	Adjusting screw	1	
15	13WF4-029	Pin	1	
16	13WF4-012	Drawing bar	1	
17	13WF4-031	Screw	2	
18	22T9-001A10	Nut	2	
19	13WF2-006	Set screw	2	
20	72WF4-003	Spring bracket	1	
21	72WF1-017	Screw	1	
22	72WF4-004	Spring	1	
23	72WF4-005	Spring pin	1	
24	13WF4-010	Crank pin	1	
25	72WF4-002	Crank	1	
26	13WF4-005	Pin	1	
27	72WF4-001	Presser bar turning shaft	1	
28	13WF4-002	Pin	1	
29	13WF4-003	Cover	1	
30	13WF4-008	Screw	1	
31	13WF4-006	Spring	1	
32	13WF4-004	Movable plate	1	
33		Retainer	1	
34	13WF4-007	Roller	1	
35		Retainer	2	
36	13WF4-026	Presser bar lever	1	
37	13WF4-027	Screw	1	
38	13WF4-033	Bushing for presser bar lifting cam	1	
39	13WF4-028	Presser bar lifting cam	1	
40	13WF4-016	Guide shaft for presser bar guide rail	1	
41	13WF1-048	Screw	1	
42	72WF4-006	Nut	1	Retainer2 GB896-86
43	13WF5-001	Knee lifter connector	1	
44	13WF5-002	Spring	1	Retainer3.5 GB896-86
45	13WF5-003	Screw	1	

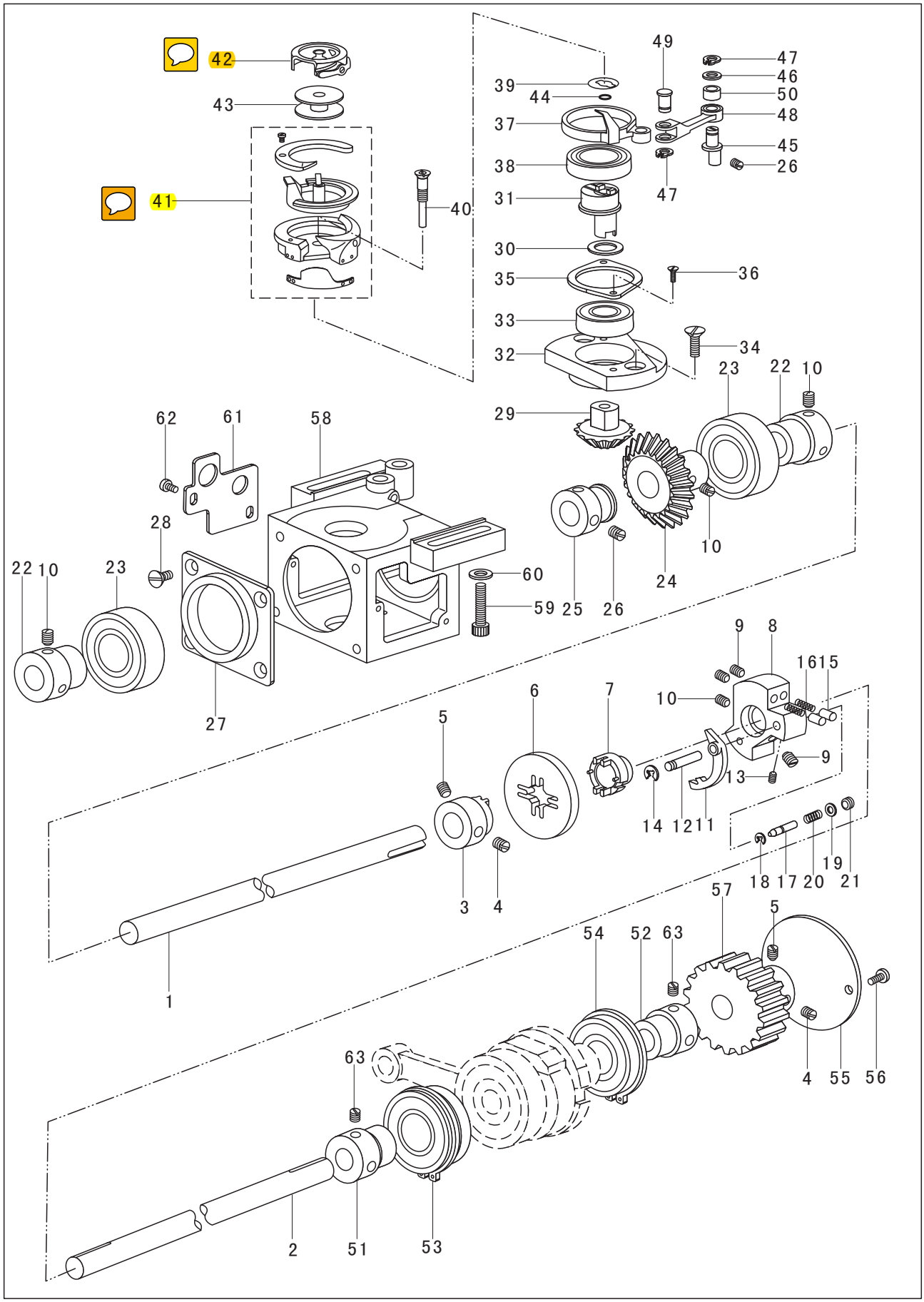
7.Upper roller feed parts



7.Upper roller feed parts

No.	Part Number	Name	Qt.	Remark
1	13WF3-034	Driving link assembly	2	
2	13WF3-038	Screw	4	
3	13WF3-037	Felt	4	
4	13WF3-036	Driving dog	1	
5	13WF3-018	Screw	1	
6	13WF3-035	Driving crank	1	
7	13WF1-045	Screw	1	
8		Retainer	2	
9	13WF3-039	Position block	1	
10	13WF1-063	Screw	1	Bearing GE6E
11		Position block joint bearing	1	
12		Retainer	4	
13	13WF3-023	Spacer	4	
14	13WF3-022	Clutch bushing	2	
15		Unilateral needle-type clutch	2	
16	13WF3-021	Upper feed roller driving shaft	1	
17	13WF3-024	Upper feed driving gear	1	RA200160
18	13WF3-025	Pin for driving gear	1	
19	13WF3-026	Set bracket	1	
20	13WF3-027	Upper feed roller	1	GE8E
21	13WF3-028	Ball bearing support	1	Retainer8 GB896-86
22	13WF3-029	Roller adjusting block	1	
23	13WF3-030	Screw	1	
24	13WF3-031	Screw	3	
25	13WF3-032	Screw	3	
26		Ball bearing	24	
27		Retainer	1	
28		Retainer	1	
29		Driving gear bearing	2	
30	13WF3-033	Retainer	1	
31	13WF4-021	Presser bar roller bracket	1	
32	13WF4-022	Screw	1	
33	13WF3-076	Adjusting spacer	1	
				Φ2 GB308-77
				Retainer8 GB895.1-86
				Retainer16 GB893.1-86
				1060088 8 16 6

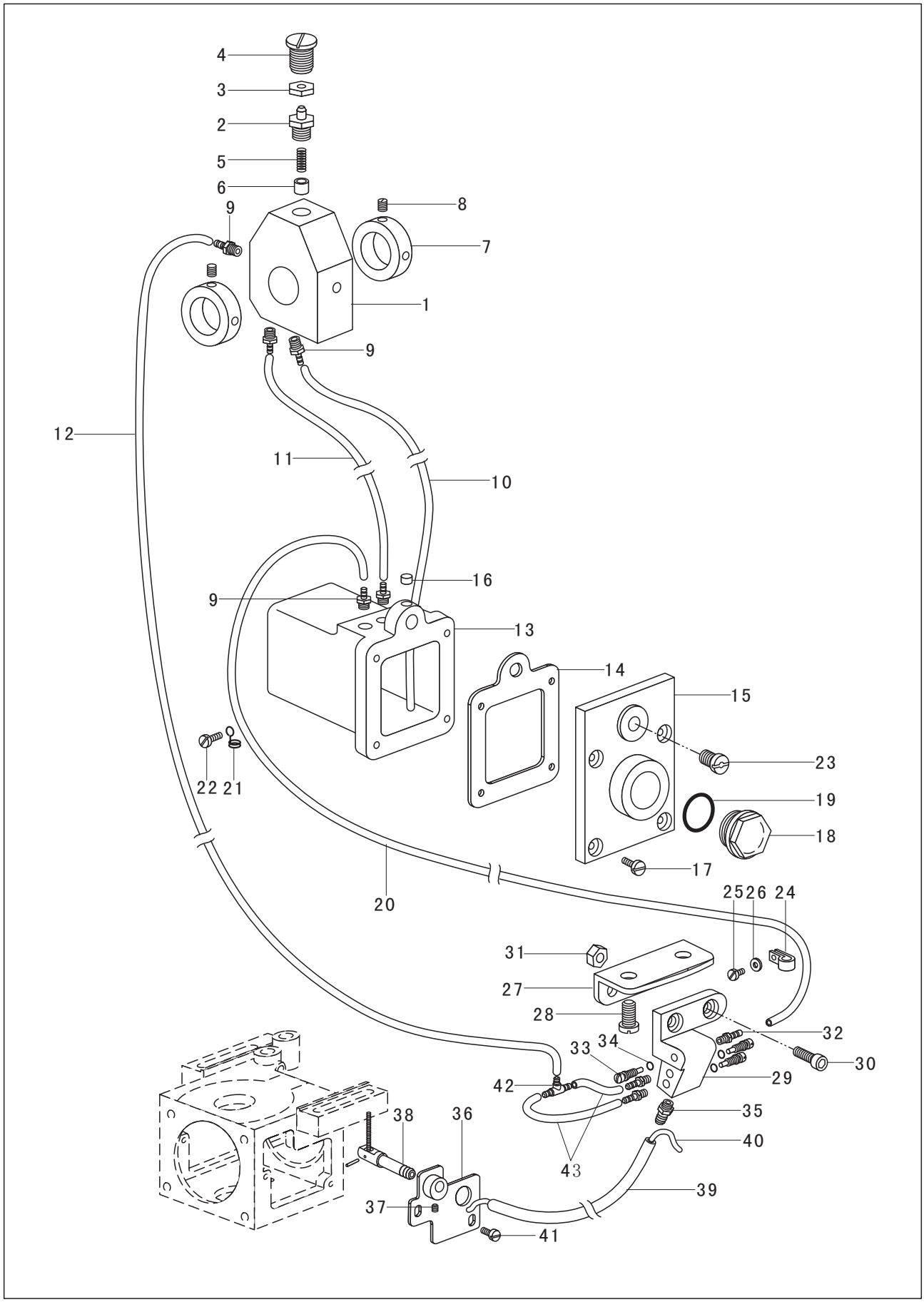
8.Rock shaft and thread looping parts



8.Rock shaft and thread looping parts

No.	Part Number	Name	Qt.	Remark
1	72WF1-001	Rock shaft(front)	1	
2	72WF1-002	Rock shaft(rear)	1	
3	13WF1-003	Rock shaft connector	1	
4	13WF1-004	Screw	1	
5	13WF1-048	Screw	2	
6	13WF1-005	Connecting plate	2	
7	72WF1-003	Rock shaft connector(right)	1	
8	72WF1-004	Safety clutch	1	
9	13WF1-048	Screw	3	
10	13WF1-009	Screw	7	
11	72WF1-005	Clutch lever	1	
12	72WF1-006	Pin	1	
13	42WF2-010	Screw	2	
14		Retainer	1	
15	72WF1-007	Pin	2	
16	71WF1-058	Spring	2	
17	72WF1-009	Pin	1	
18		Retainer	1	
19	72WF1-010	Spacer	1	
20	72WF1-011	Spring	1	
21	71WF1-057	Screw	1	
22	72WF1-013	Bushing for rock shaft(front)bearing	2	
23		Bearing for rock shaft(front)	2	GB896-86-4
24	72WF1-014	Rock shaft gear	1	
25	72WF1-015	Collar for rock shaft(front)	1	
26	13WF1-018	Screw	3	
27	72WF1-016	Bearing holder for rock shaft(front)	1	GB896-86-3
28	72WF1-017	Screw	4	
29	72WF1-018	Gear for hook shaft	1	
30	72WF1-019	Spacer	1	
31	72WF1-020	Cam	1	
32	72WF1-021	Bearing holder	1	150202 15 35 111
33		Bearing	2	
34	72WF1-022	Screw	2	
35	72WF1-023	Bearing pressure plate	1	
36	72WF1-024	Screw	2	
37	72WF1-025	Thread guide	1	
38		Bearing for thread guide	1	
39	72WF1-026	Spacer	1	
40	72WF1-027	Set screw	1	
41		Rotating hook assembly	1	
42		Bobbin case body	1	60019 9 2447 7
43	13WF1-034	Bobbin	1	
44	72WF1-028	O-type ring	1	
45	72WF1-029	Thread guide adjusting eccentric shaft	1	
46	72WF1-030	Spacer	1	
47		Retainer	2	180102 15 3229 9
48	72WF1-031	Fork-type link	1	
49	72WF1-032	Connecting pin	1	
50		Bearing	2	KRT455-S
51	13WF1-071	Bushing for rock shaft(rear)front bearing	1	SCPF 15
52	13WF1-070	Bushing for rock shaft(rear)rear bearing	1	
53		Front bearing for rock shaft(rear)	1	
54		Rear bearing for rock shaft(rear)	1	
55	13WF2-037	Cover for rock shaft	1	
56	13WF2-010	Screw	2	GB894.1-86-7
57	72WF1-040	Synchro pulley	1	
58	72WF2-008	Hook base	1	
59	72WF2-009	Set screw	2	9240/00 7 10 8 8
60	72WF2-010	Spacer	2	
61	72WF2-011	Retaining plate	1	
62	13WF1-067	Screw	2	150202 15 35 11
63	13WF1-027	Screw	4	150203Z 17 40 12

9.Lurication parts

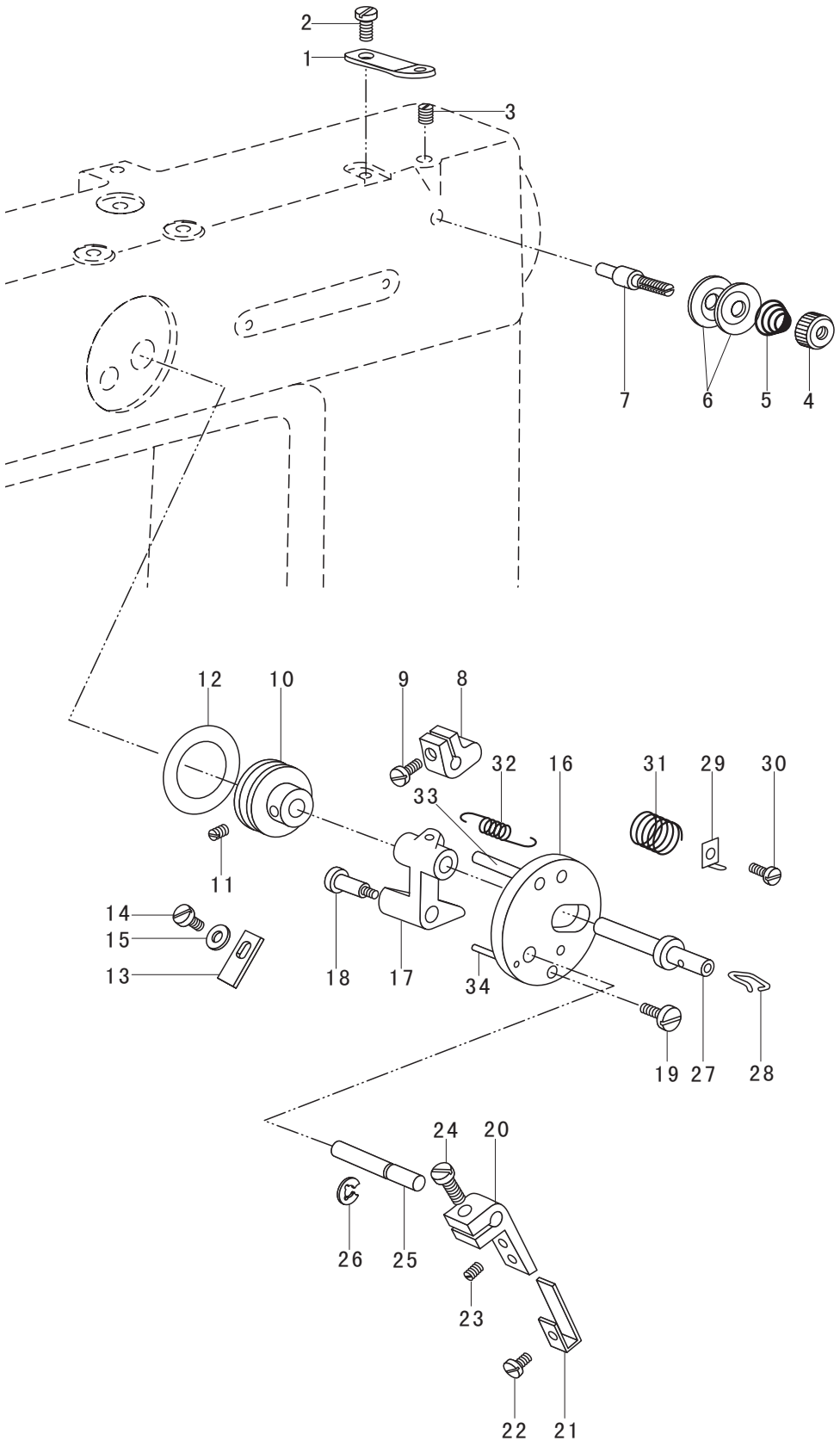


9.Lubrication parts

No.	Part Number	Name	Qt.	Remark
1	72WF5-001	Oil pump	1	
2	72WF5-002	Screw	1	
3	72WF5-003	Felt	1	
4	72WF5-004	Position screw	1	
5	72WF5-005	Spring	1	
6	72WF5-006	Plunger	1	
7	72WF5-007	Oil pump retainer	2	
8	20T1-004	Screw	4	
9	72WF5-008	Oil nozzle	5	
10		Oil sucking tube	1	
11		Oil return tube	1	
12		Oil supply tube	1	
13	72WF5-009	Oil box	1	
14	72WF5-010	Seal ring	1	
15	72WF5-011	Oil box cover	1	
16	72WF5-012	Oil plug	1	
17	13WF2-008	Screw	4	
18	72WF5-013	Oil flow window	1	
19	72WF5-014	O-type ring	1	Φ5 120
20		Oil return pipe for oil tube bracket	1	Φ5 75
21	72WF5-015	Oil pipe clamp	1	Φ5 600
22	13WF2-008	Screw	1	
23	72WF5-016	Screw	1	
24	72WF5-017	Plastic oil pipe clamp	2	
25	13WF2-008	Screw	2	
26		Washer	2	
27	72WF5-018	Set plate	1	
28	72WF5-019	Screw	2	
29	72WF5-020	Oil tube bracket	1	Φ5 310
30	72WF5-021	Connecting screw	2	
31	72WF5-022	Connecting nut	2	
32	72WF5-023	Small oil nozzle	3	
33	72WF5-024	Adjusting screw	3	
34	72WF1-028	O-type ring	3	
35	72WF5-025	Oil nozzle(II)for big oil tube	2	GB848-85-4
36	72WF5-026	Set plate	1	
37	13WF4-027	Screw	1	
38	72WF5-027	Oil nozzle(I) assembly for big oil nozzle	1	
39		Big oil tube	1	
40		Oil wick	1	
41	13WF1-067	Set screw	2	
42	1WF6-029	Three-hole oil nozzle	1	
43		Short oil tube	2	

Φ10 170
Φ7.5 150

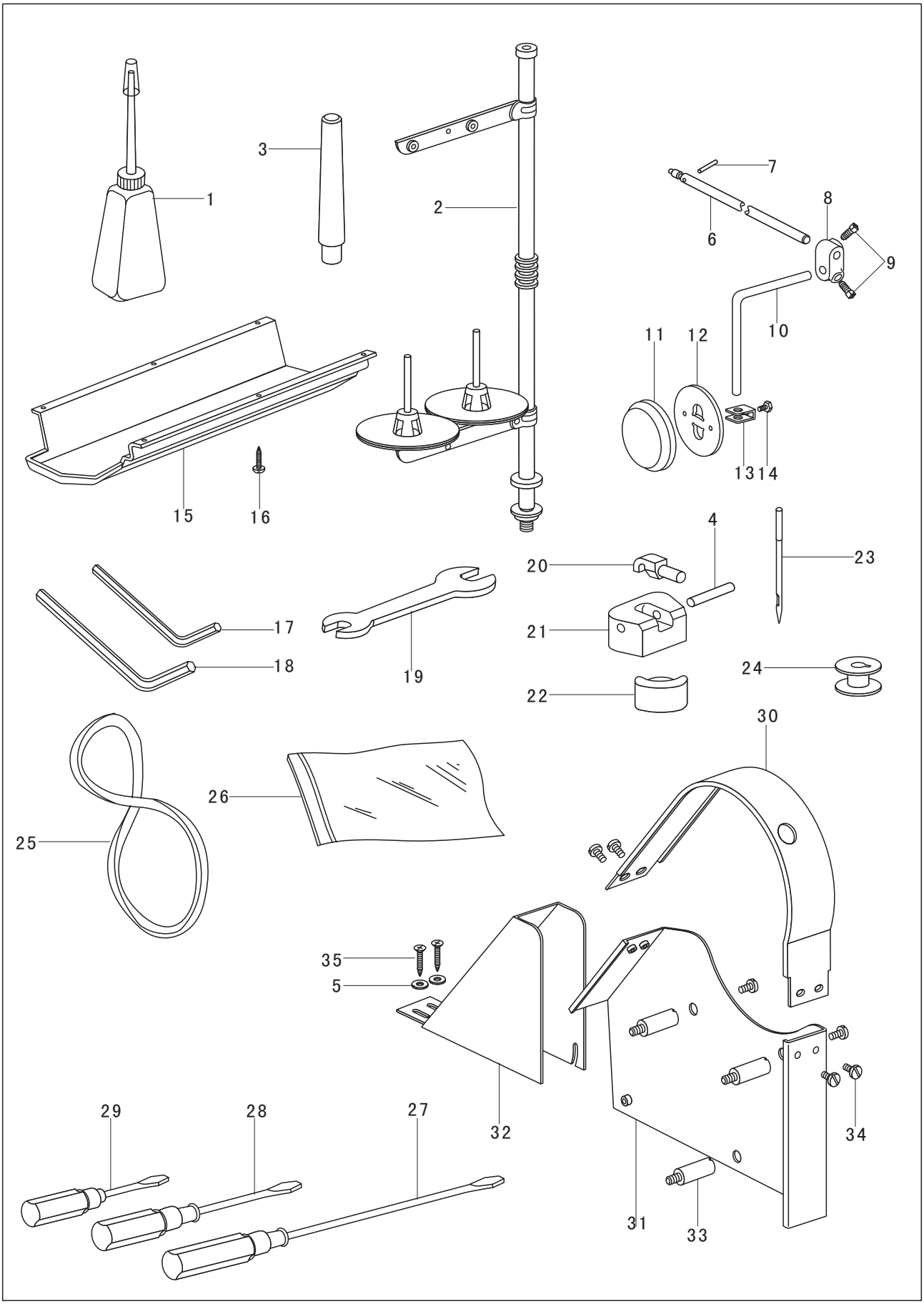
10. Thread winding parts



10. Thread winding parts

No.	Part Number	Name	Qt.	Remark
1	13WF6-027	Tension thread guide plate	1	
2	13WF2-008	Screw	1	
3	13WF4-027	Screw	1	
4	13WF6-029	Nut	1	
5	33T4-008C1	Spring	1	
6	33T1-012F5	Thread tension disc	2	
7	13WF6-028	Thread tension shaft	1	
8	13WF6-012	Thread winding lever crank	1	
9	13WF6-014	Screw	1	
10	13WF6-017	Thread winding wheel	1	
11	13WF6-018	Set screw	2	
12	13WF6-019	Friction ring	1	
13	13WF6-023	Spring	1	
14	13WF6-024	Set screw	1	
15		Washer	1	
16	13WF6-001	Thread winding holder	1	
17	13WF6-021	Thread winding crank	1	
18	13WF6-022	Pin	1	
19	13WF6-002	Screw(down)	1	
20	13WF6-006	Thread winding lever	1	
21	13WF6-007	Spring	1	
22	13WF6-008	Set screw	1	
23	13WF6-009	Screw	1	
24	13WF6-010	Set screw	1	Washer 4 GB861.1-87
25	13WF6-011	Shaft for thread winding lever	1	
26		Retainer	1	
27	13WF6-015	Thread winding shaft	1	
28	13WF6-016	Spring	1	
29	13WF6-005	Trimming blade	1	
30	13WF6-003	Screw(up)	1	
31	13WF6-004	Spring	1	
32	13WF6-025	Spring	1	
33	13WF6-020	Position pin	1	
34	13WF6-013	Position pin	1	
				washer 3.5 GB896-86

11. Accessories



11. Accessories

No.	Part Number	Name	Qt.	Remark
1	33TF-011	Oil pot	1	
2	4F-007	Spool stand complete	1	
3	16WF5-007	Bed leg	1	
4	13WF7-003	Pin shaft for hinge cover	2	
5		Spacer	2	
6	13WF5-004	Knee lifter shaft	1	
7	13WF5-005	Pin for knee lifter shaft	1	
8	13WF5-006	Connector	1	
9	22T9-003B4	Screw	2	
10	22T9-003B2	Bent rod	1	
11	1KT5-006	Pat	1	
12	1KT5-005	Bell	1	
13	22T9-003B6	Bell bracket	1	
14	22T9-003B7	Screw	1	GB848-85-4
15	13WF7-006	Oil reserboir	1	
16		Set screw	6	
17	13F-011	Hexagonal spanner	1	
18	13F-010	Hexagonal spanner	1	
19	13F-005	Two-head spanner	1	
20	13WF7-004	Connector	2	
21	13WF7-002	Hinge cover	2	
22	13WF7-005	Cushion	2	
23	13F-001	Needle	4	
24	13WF1-034	Bobbin	5	
25	13F-017	Belt	1	GB100-1 3.5 12
26	13TF-010	Accessory bag	1	5mm
27	13TF-012	Screw driver(big)	1	4mm
28	13TF-013	Screw drier(medium)	1	6 7
29	13TF-014	Screw driver(small)	1	
30	72WF6-003A	Safety guard arm(up)	1	
31	72WF6-003B	Safety guard arm(down)	1	
32	72WF6-003C	Safety guard movable plate complete	1	DP 5 14#
33	72WF6-003D	Srew	3	
34	33T3-006	Screw	8	“0” Type M43
35		Wood screw	2	