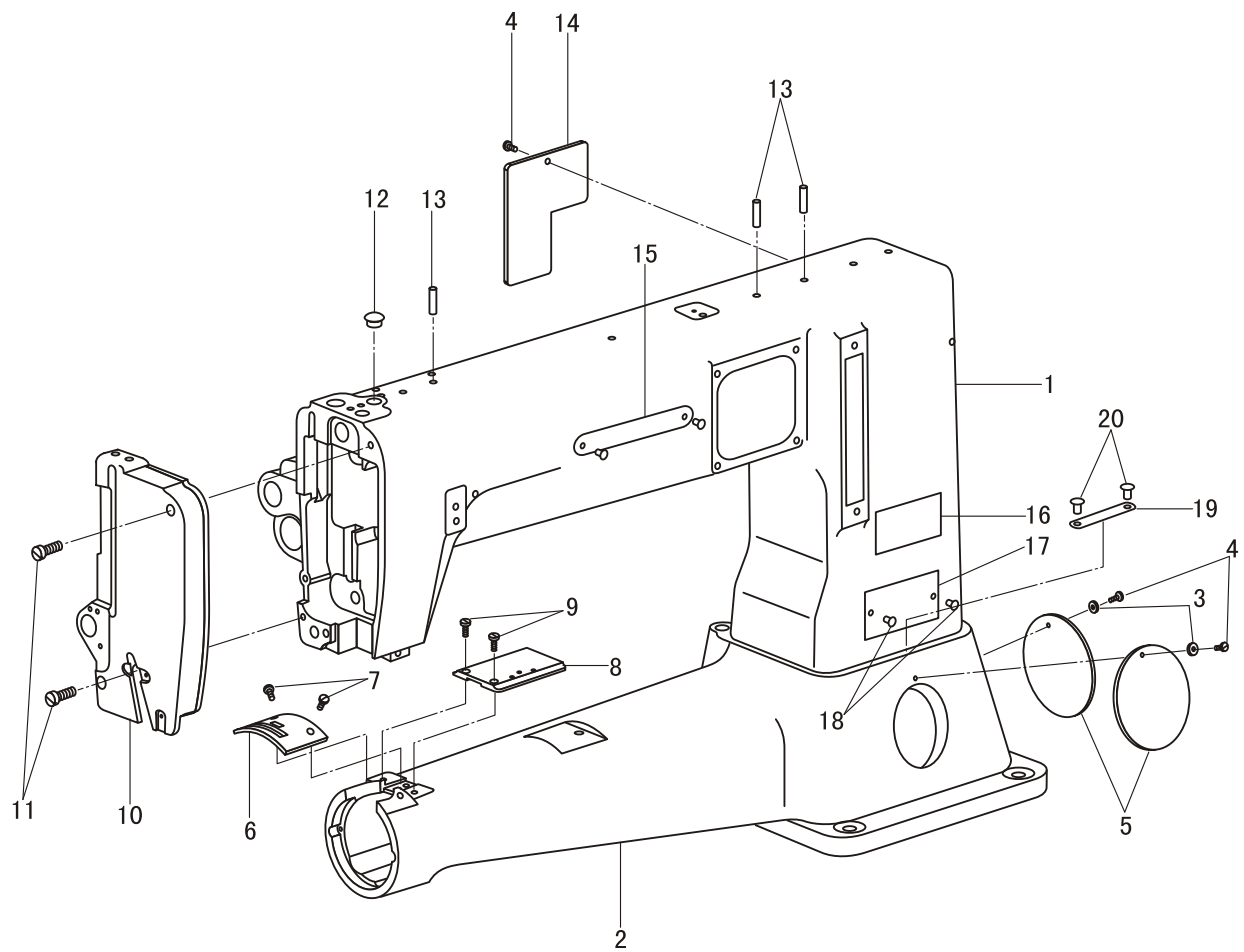


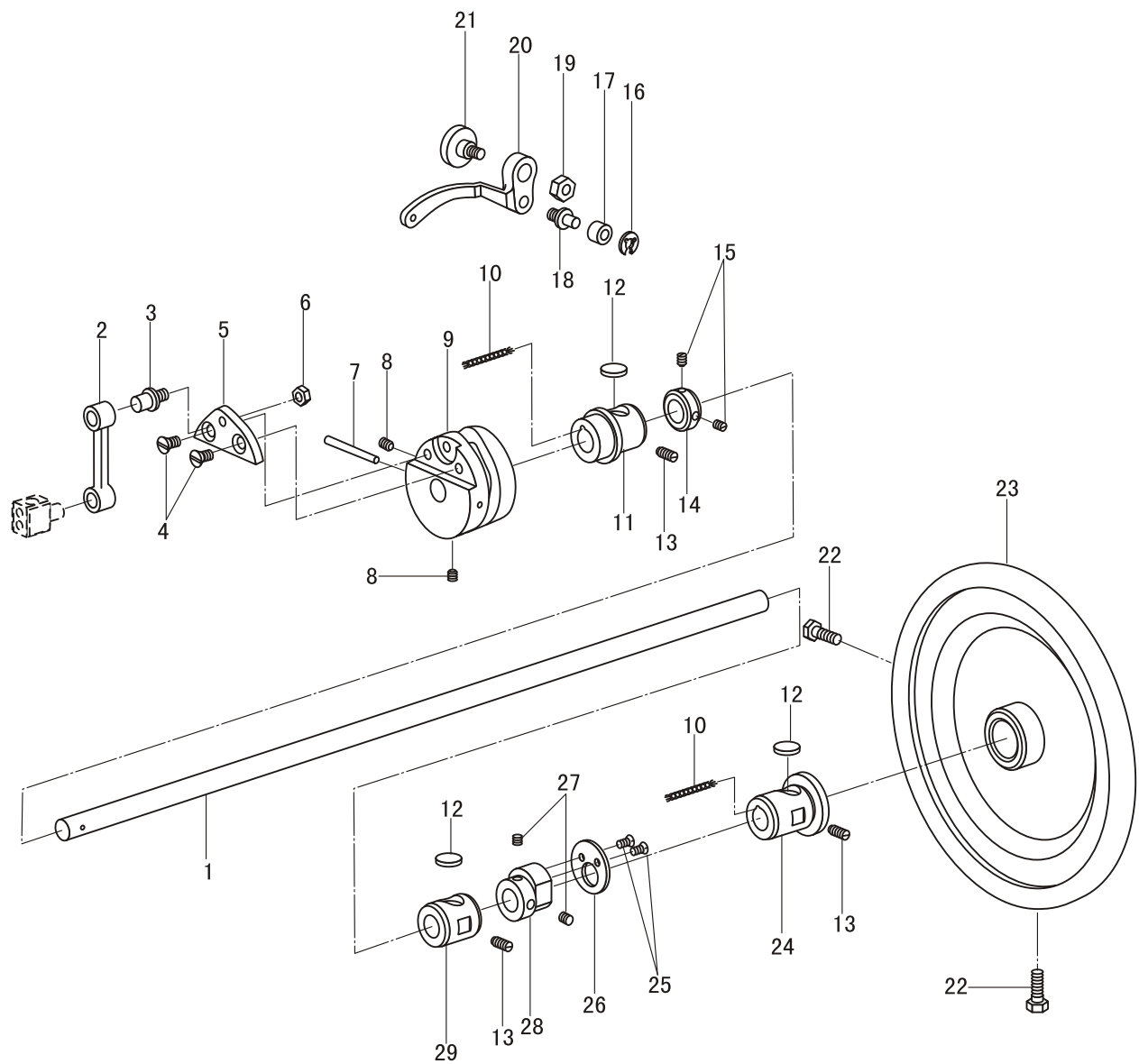
1. Machine casting components



1. Machine casting components

No	Parts No	Name of Parts	Qty.	Remarks
1	52WF2-001	Casting	1	For TW3-471
	58WF2-001	Casting	1	For TW3-441
2	52WF2-002	Cylinder bed	1	
3		Washer	2	GB95-85-4
4	19WF4-002	Screw	3	
5	52WF2-005	Cylinder cover	2	
6	52WF2-006	Needle plate	1	For TW3-471
	52WF2-004	Needle plate	1	For TW3-441
7	52WF2-007	Screw	2	
8	52WF2-008	plate	1	
9	21WF4-055	Screw	2	
10	52WF2-003	Face plate	1	For TW3-471
	58WF2-002	Face plate	1	For TW3-441
11	16WF3-061	Screw	2	
12		Rubber plug	1	
13	52WF2-009	Oil pipe	3	
14	52WF2-004	Back cover	1	For TW3-471
	58WF2-003	Back cover	1	For TW3-441
15	16WF2-053	Brand label	1	
16	1KT1-005	Caution label	1	
17	52WF2-055	Model label	1	ForTW3-471
	58WF2-005	Model label	1	For TW3-441
18		Rivet	4	Standard parts
19	4KT1-005	Serial label	1	
20	35WF1-054	Rivet	2	

2. Upper shaft components



2. Upper shaft components

No	Parts No	Name of Parts	Qty.	Remarks
1	52WF1-001	Upper shaft	1	
2	52WF1-007	Needle bar link	1	M5×8 GB78-85
	58WF1-001	Needle bar link	1	
3	52WF1-010	Pin	1	M4×4 GB74-85
4	52WF1-009	Screw	2	
5	52WF1-008	Needle bar link base	1	
6	7KT1-007	Nut	1	
7	7KT1-052	Pin	1	M5×6 GB77-85
8	21WF1-022	Screw	2	
9	52WF1-005	Thread take-up cam	1	
10		Oil wick	2	
11	52WF1-002	Bushing (front)	1	
12		Oil felt	3	
13	J0.0.5	Screw	3	SM15/64"×28×8
14	52WF1-041	Collar	1	
15	22WF4-002	Screw	2	
16		Retaining ring	1	GB960-86-5
17	52WF1-013	Rolling ball	1	
18	52WF1-014	Thread take-up pin	1	
19	7KT1-007	Nut	1	
20	52WF1-011	Thread take-up lever	1	M5×6 GB68-85
21	52WF1-012	Screw	1	
22	7KT1-014	Screw	2	
23	52WF1-006	Balance Wheel	1	
24	52WF1-004	Bushing (rear)	1	
25	7KT4-035	Screw	2	
26	52WF4-028	Stopping plate	1	M6×0.75
27	21WF3-010	Screw	2	
28	52WF4-027	Feed Cam	1	
29	52WF1-003	Bushing (middle)	1	

This technical drawing is an exploded view of a mechanical assembly, likely a hydraulic or pneumatic actuator. The components are numbered 1 through 44. The main parts include:

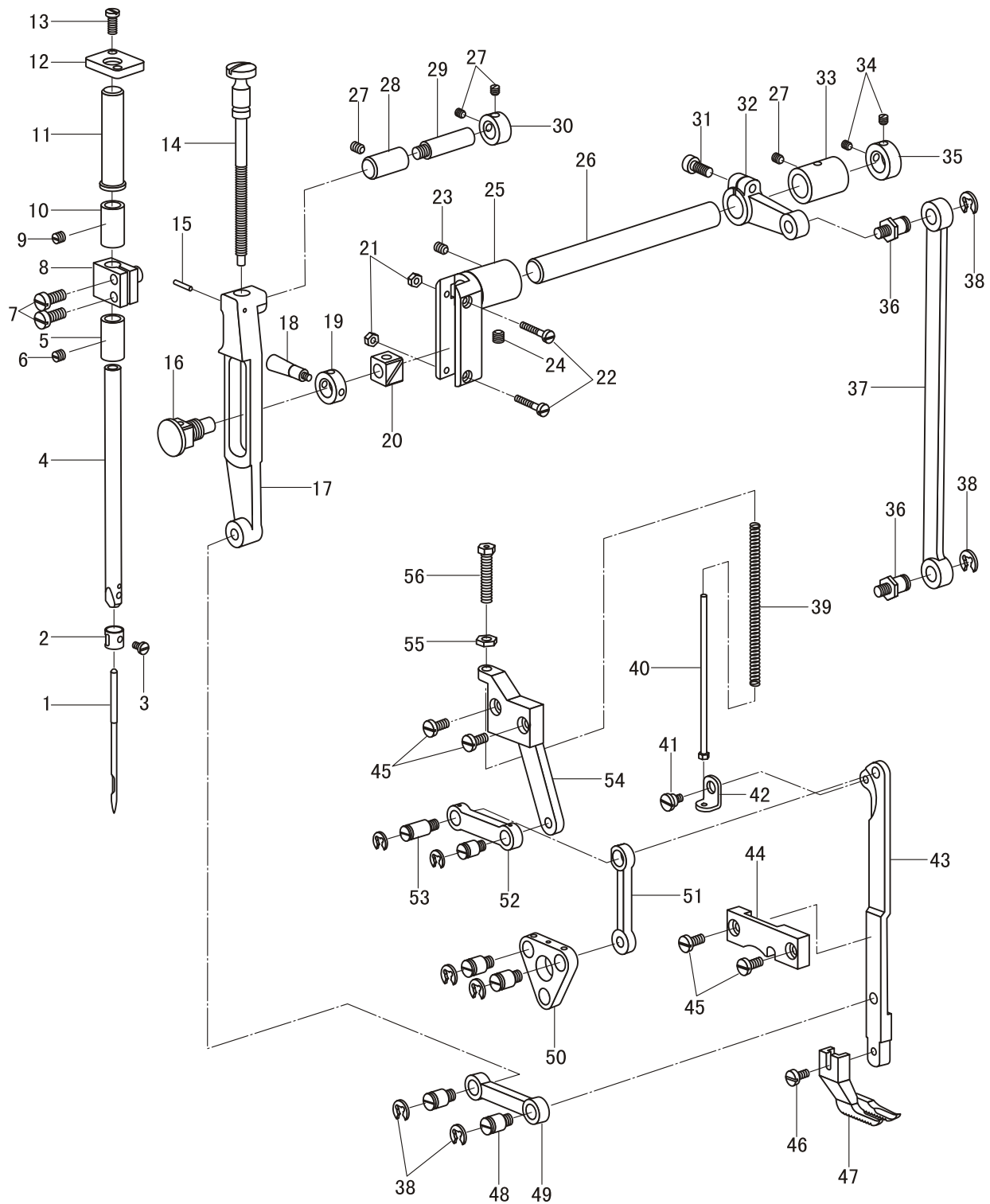
- Actuator Rod (9):** A long, central cylindrical rod.
- End Fittings (13, 14, 15, 16):** Components at the ends of the rod, including seals and mounting brackets.
- Mounting Brackets (11, 18, 20, 26, 36, 37, 40):** Various brackets used to secure the assembly to a structure.
- Seals and O-rings (1, 2, 3, 4, 5, 6, 7, 8, 12, 17, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39, 41, 42, 43):** Numerous seals and O-rings used for fluid containment and smooth movement.
- Internal Components (19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43):** Various internal parts including pins, washers, and structural elements.

The diagram shows the relative positions and assembly sequence of these parts, with dashed lines indicating the path of assembly.

3. Needle bar and upper feed components (TW3-441)

No	Parts No	Name of Parts	Qty.	Remarks
1		Lock ring	5	GB896-86-8
2	52WF5-014	Connecting pin	3	
3	58WF5-007	Crank link (front)	1	
4	58WF5-006	Front crank	1	
5	61-04-01/B2	Screw	1	
6	22WF4-002	Screw	1	
7	17T5-016	Screw	2	
8	58WF5-003	Bushing (front)	1	
9	58WF5-001	Presser foot rocking shaft	1	
10	58WF5-009	Screw	1	
11	58WF5-008	Crank	1	
12	22WF4-002	Screw	4	
13	58WF5-002	Collar	2	
14	58WF5-004	Needle bar rocking shaft bushing(rear)	1	
15	58WF5-011	Screw	1	
16	58WF5-010	Connecting pin	1	
17	52WF4-005	Connecting pin	2	
18	58WF5-005	Needle bar rocking link	1	
19	58WF1-002	Needle bar	1	
20	58WF1-004	Needle bar connector	1	
21	21WF3-012	Screw	2	
22	58WF1-003	Needle holder	1	
23	16WF2-020	Screw	1	DY×3 26"
24		Needle	1	
25	266024	Screw	1	
26	58WF5-024	Installing bracket	1	
27	58WF5-025	Pressing plate	1	
28	7WF4-004	Screw	1	
29	37T2-210	Screw	1	
30	58WF5-015	Screw	4	
31	58WF5-012	Needle bar rocking frame	1	
32	58WF5-016	Pin	1	
33	58WF5-014	Pin bushing	1	
34	58WF5-013	Rocking frame shaft	1	
35		Oil wick	1	
36	58WF5-022	Guiding plate	1	
37	6A3-07	Screw	3	
38	58WF5-021	Swing board	1	
39	58WF5-020	Rocking link	1	
40	58WF5-018	Presser bar	1	
41	58WF5-019	Presser bar pin	1	
42	22WF4-014	Screw	1	
43	58WF5-017	Inner presser foot	1	
44	58WF5-023	Regulating pin	1	

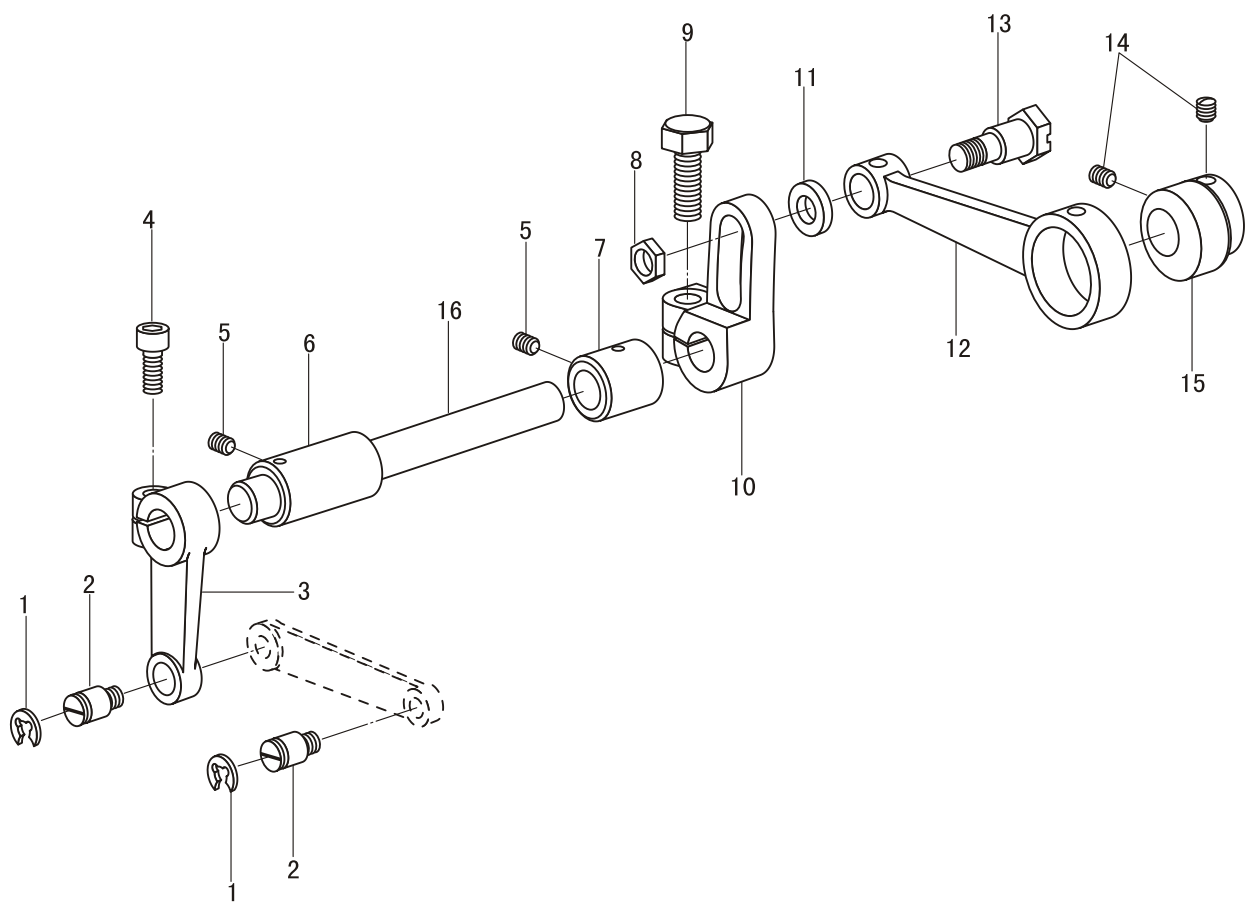
4. Needle bar and upper feed components (TW3-471)



4. Needle bar and upper feed components (TW3-471)

No	Parts No	Name of Parts	Qty.	Remarks
1		Needle	1	DY×3 2 ϕ
2	52WF1-019	Needle bar thread guide	1	
3	16WF2-020	Screw	1	
4	52WF2-015	Needle bar	1	
5	52WF1-017	Needle bar shaft (lower)	1	
6	52WF2-018	Screw	1	
7	21WF3-012	Screw	2	
8	52WF1-020	Needle bar connector	1	
9	17T1-012	Screw	1	
10	52WF1-016	Needle bar bushing (upper)	1	
11	52WF1-021	Needle bar bushing	1	
12	52WF1-022	Needle bar bushing cover	1	
13	1WF5-039	Screw	2	
14	52WF5-024	Presser bar adjusting bar	1	
15		Pin	1	GB879-86-2.5×16
16	52WF5-027	Sliding block	1	
17	52WF5-025	Presser foot adjusting frame	1	
18	52WF5-029	Hand holder	1	
19	52WF5-030	Collar	1	
20	52WF5-021	Sliding block	1	
21	52WF5-023	Nut	2	
22	52WF5-022	Screw	2	
23	52WF5-020	Screw	1	
24	21WF1-020	Screw	1	
25	52WF5-019	Presser foot rocking bracket	1	
26	52WF5-015	Presser foot rocking shaft	1	
27	17T5-016	Screw	3	
28	52WF1-017	Pin bushing	1	
29	52WF5-026	Pin	1	
30	52WF5-030	Collar	1	
31	52WF5-003	Screw	1	
32	52WF5-016	Presser foot rocking crank	1	
33	52WF5-017	Bushing (rear)	1	
34	22WF4-002	Screw	2	
35	52WF1-041	Collar	1	
36	52WF4-005	Pin	2	
37	52WF5-018	Rocking link	2	
38		Lock spring ring	8	GB896-86-8
39	52WF5-035	Spring	1	
40	52WF5-036	Rod	1	
41	52WF5-038	Screw	1	
42	52WF5-037	Rod bracket	1	
43	52WF5-031	Walking foot connecting rod	1	
44	52WF5-034	Pressing plate	1	
45	37T2-210	Screw	4	
46	52WF5-033	Screw	1	
47	52WF5-032	Walking foot	1	
48	52WF5-014	Connecting pin	4	
49	52WF5-041	Rocking link	1	
50	52WF5-042	Triangular swing board	1	
51	52WF5-040	Presser foot lifting lever (2)	1	
52	52WF5-039	Presser foot lifting lever (1)	1	
53	52WF5-043	Long connecting pin	1	
54	52WF5-044	Bracket	1	
55	7KT1-007	Nut	1	
56	52WF5-045	Screw	1	

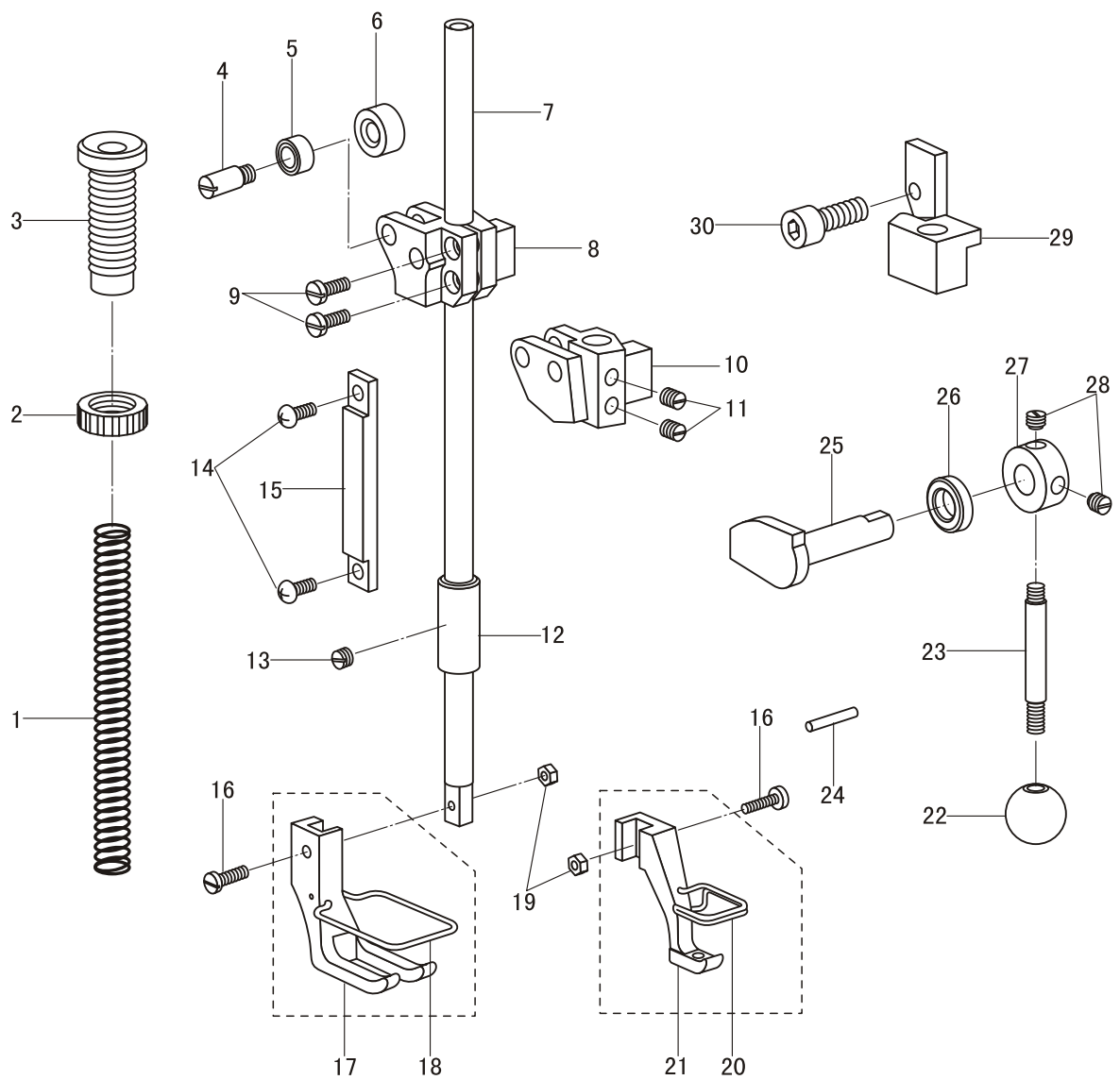
5. Presser foot lifting components



5. Presser foot lifting components

No	Parts No	Name of Parts	Qty.	Remarks
1		Lock spring ring	2	GB896-86-8
2	52WF5-014	Connecting pin	2	
3	52WF5-002	Lifting crank (front)	1	
4	52WF5-003	Screw	1	
5	17T5-016	Screw	2	
6	52WF5-005	Lifting shaft bushing	1	
7	52WF5-006	lifting shaft bushing	1	
8	52WF5-011	Nut	1	
9	52WF5-008	Screw	1	
10	52WF5-007	Lifting adjust crank	1	
11	52WF5-010	Washer	1	
12	52WF5-012	lifting eccentric link	1	
13	52WF5-009	Screw	1	
14	22WF4-002	Screw	2	
15	52WF5-001	Lifting eccentric cam	1	
16	52WF5-004	Presser foot lifting shaft	1	

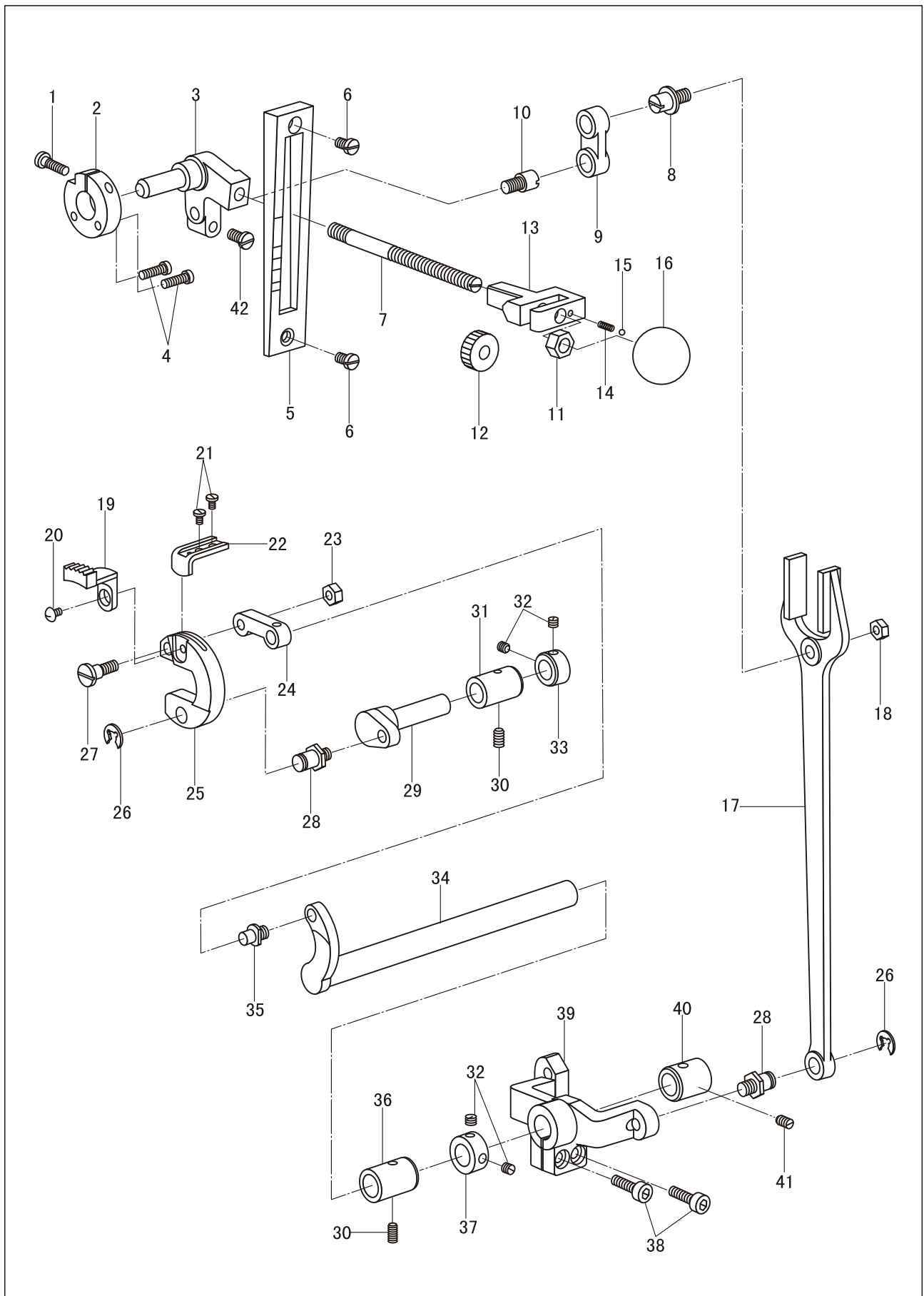
6. Presser bar components



6. Presser bar components

Nor	Parts No	Name of Parts	Qty.	Remarks
1	52WF3-004	Pressure adjusting spring	1	$\phi 10 \times \phi 7 \times 7.7$
2	52WF3-006	Pressure adjusting nut	1	
3	52WF3-005	Pressure adjusting screw	1	
4	52WF3-014	Rolling column shaft	1	
5		Rolling column bearing	1	
6	52WF3-031	Bearing cover	1	
7	52WF3-001	Presser bar	1	
8	58WF3-003	Presser bar lifting bracket	1	For 441
9	1WF4-034	Screw	2	For 441
10	52WF3-013	Presser bar lifting bracket	1	For 471
11	6A6-08A	Screw	2	For 471
12	52WF3-002	Presser bar bushing	1	
13	52WF1-018	Screw	1	
14	22WF2-017	Screw	2	
15	52WF3-012	Guiding board	1	
16	52WF3-018	Nut	1	
17	58WF3-004	Outer presser foot	1	For 441
18	58WF3-001	Finger guard	1	For 441
19	52WF3-019	Nut	1	
20	52WF3-003	Finger guard	1	For 471
21	52WF3-017	Inner presser foot	1	For 471
22	52WF3-011	Presser bar lifting bar holder	1	
23	52WF3-009	Presser bar lifting bar shaft	1	
24		Retainer pin	1	GB879-86 3×20
25	52WF3-007	Lifting cam	1	
26	52WF3-008	Washer	1	
27	52WF3-010	Collar	1	
28	21WF1-043	Screw	2	
29	52WF3-015	Presser bar bracket	1	
30	52WF3-016	Screw	1	

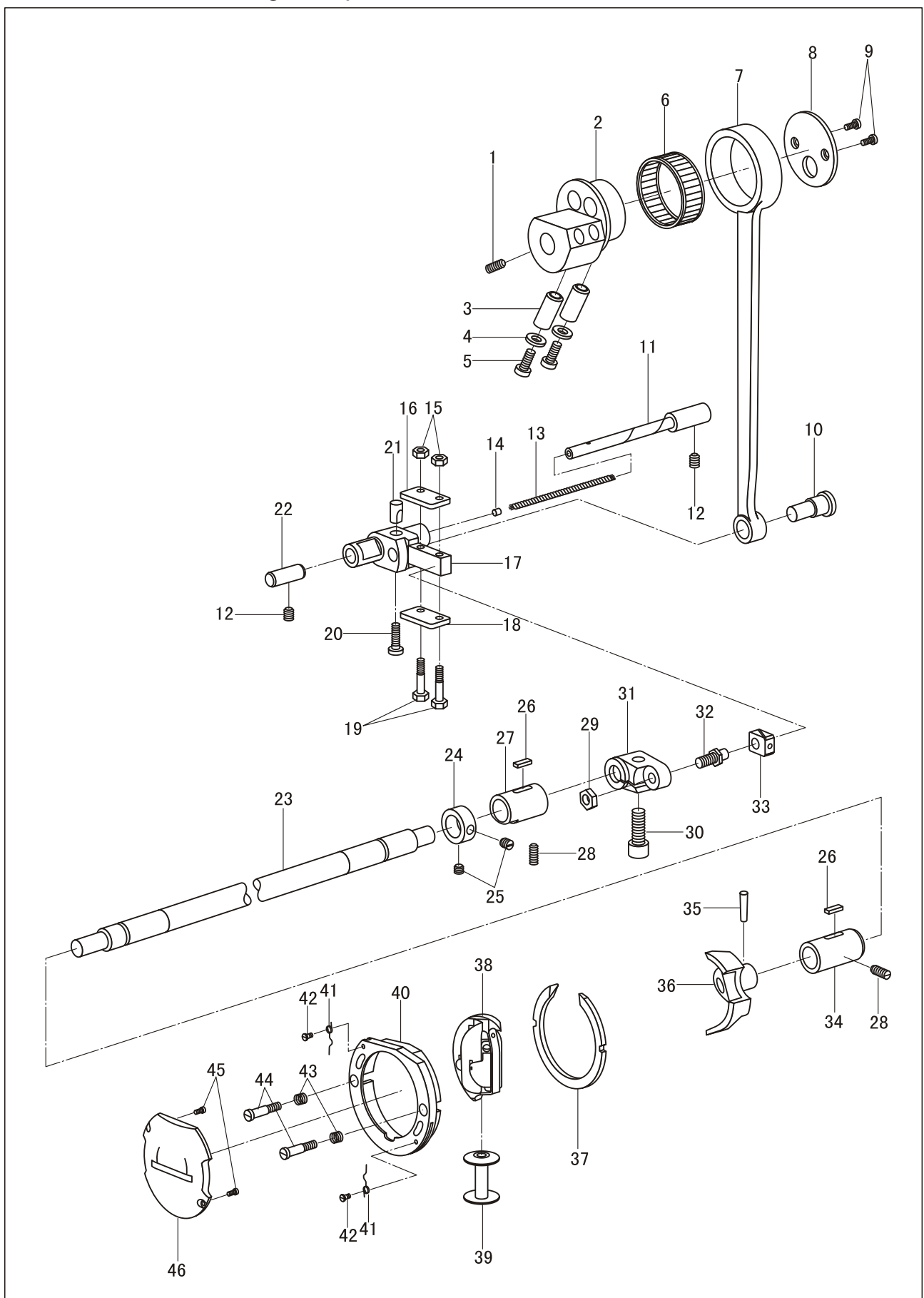
7. Stitch length adjusting components



7. Stitch length adjusting components

No	Parts No	Name of Parts		Qty.	Remarks
1	52WF4-020	Adjusting screw		1	Φ3.7
2	52WF4-019	Adjusting disc		1	
3	52WF4-018	Stitch length rocking bracket		1	
4	1WF4-034	Screw		2	
5	52WF4-022	Stitch length graduation plate		1	
6	7KT4-030	Screw		2	
7	52WF4-023	Screw bar		1	
8	58WF4-021	Pin screw		1	
9	52WF4-016	Link		1	
10	52WF4-021	Pin screw		1	
11	52WF4-025	Nut		1	
12	52WF4-024	Nut		1	
13	52WF4-026	Stitch length fixing base		1	
14	22WF4-030	Spring		1	
15		Steel ball		1	
16	7KT4-034	Hand holder		1	
17	52WF4-015	Feed fork		1	
18	7KT1-007	Nut		1	
19	58WF4-001	Feed dog		1	For 441
	52WF4-012	Feed dog		1	For 471
20	20T2-019	Screw		1	171031
21	40T2-202	Screw		2	
22	52WF4-013	Stopping plate		1	
23	7WF5-003	Nut		1	
24	52WF4-002	Link		1	
25	52WF4-001	Feed bed		1	
26		Lock spring ring		2	GB896-86-8
27	52WF4-003	Feed bed link		1	
28	52WF4-005	Connecting pin		2	
29	52WF4-004	Feed dog lifting crank shaft		1	
30	J0.0.40	Screw		2	16306
31	52WF4-006	Bushing		1	
32	22T3-002B2	Screw		4	191787
33	52WF4-007	Collar		1	
34	52WF4-008	Feed shaft		1	
35	52WF4-009	Pin		1	
36	52WF4-010	Feed shaft bushing(front)		1	
37	22T3-002B1	Collar		1	18306
38	7KT1-003	Screw		2	
39	52WF4-014	Feed Crank		1	
40	52WF4-011	Feed shaft bushing (rear)		1	
41	01/B602	Screw		1	16003
42	49WF4-003	Screw		1	

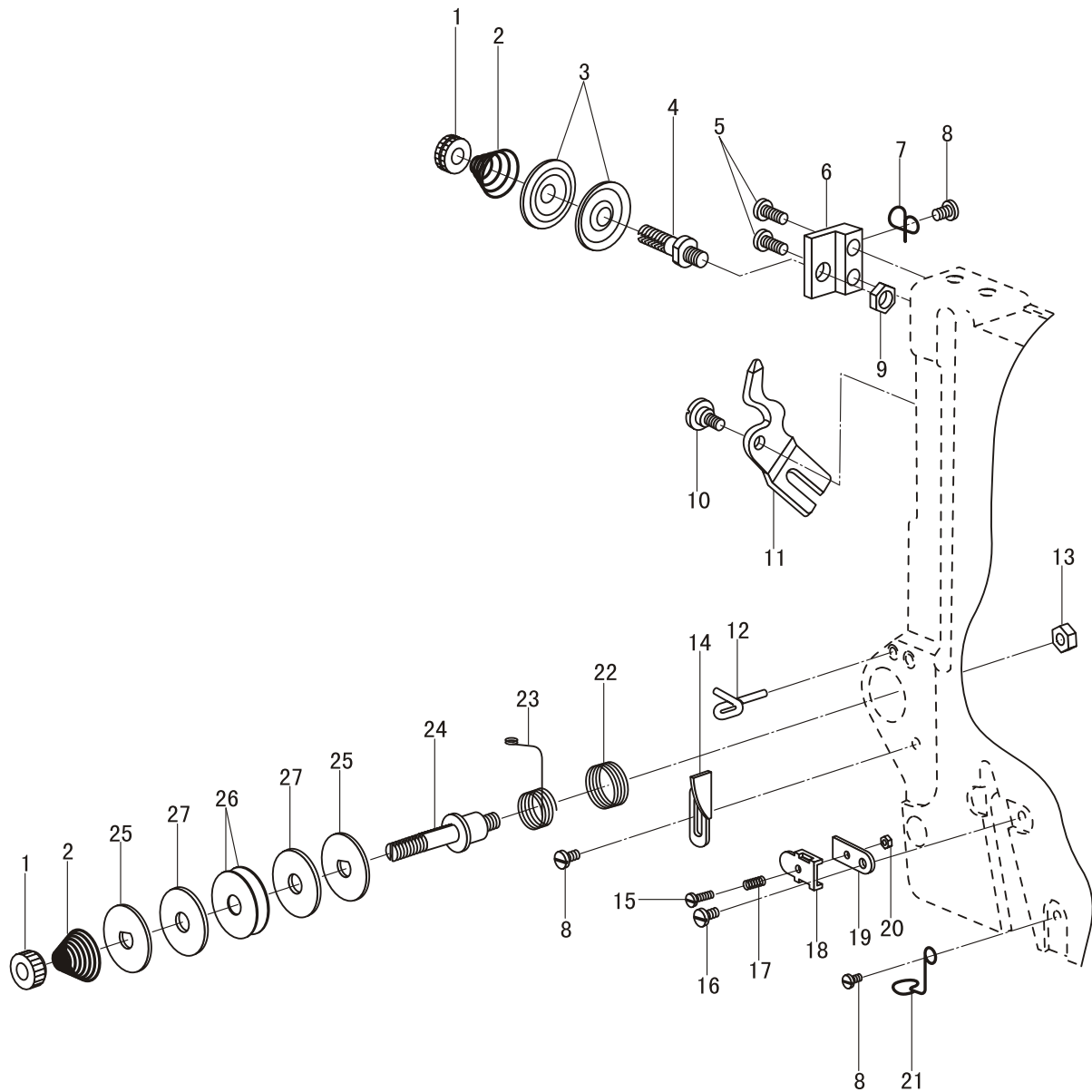
8. Lower shaft driving components



8. Lower shaft driving components

No	Parts No	Name of Parts	Qty.	Remarks
1	1WF4-010	Screw	1	$\phi 48 \times \phi 43 \times 17$
2	52WF1-048	Cam	1	
3	52WF1-049	Cam pin	2	
4	52WF1-051	Washer	2	
5	52WF1-050	Screw	2	
6		Needle bearing	1	
7	52WF1-052	Link	1	
8	52WF1-047	Eccentric disc	1	
9	49WF2-009	Screw	2	
10	52WF1-053	Connecting pin	1	
11	52WF1-043	Shaft	1	
12	01/B602	Screw	2	
13		Oil wick	1	18306
14	52WF1-057	Oil seal	1	
15	52WF5-023	Nut	2	
16	52WF1-044	Holding plate (1)	1	
17	52WF1-042	Rocking shaft	1	
18	52WF1-045	Holding plate (2)	1	
19	52WF1-046	Screw	2	
20	52WF1-056	Screw	1	
21	52WF1-055	Pin	1	
22	52WF1-054	Shaft bushing	1	
23	52WF1-027	Lower shaft	1	
24	22T3-002B1	Lower shaft collar	1	KSP204-N
25	1WF2-052	Screw	2	
26		Oil felt	2	
27	52WF1-029	Lower shaft bushing (rear)	1	
28	J0.0.5	Screw	2	
29	7KT1-007	Nut	1	
30	52WF1-026	Screw	1	
31	52WF1-023	Lower shaft crank	1	
32	52WF1-025	Crank pin	1	
33	52WF1-024	Sliding block	1	
34	52WF1-028	Lower shaft bushing (front)	1	
35	7KT5-055	Pin	1	
36	52WF1-040	Shuttle driving bracket	1	
37	52WF1-032	shuttle ring	1	
38		Oscillating shuttle	1	
39	52WF1-033	Bibbin	1	
40	52WF1-031	Shuttle lace	1	
41	52WF1-036	Spring	2	
42	52WF1-037	Screw	2	
43	52WF1-038	Screw	2	
44	52WF1-039	Screw	2	
45	52WF1-035	Screw	2	
46	52WF1-034	Shuttle cover	1	

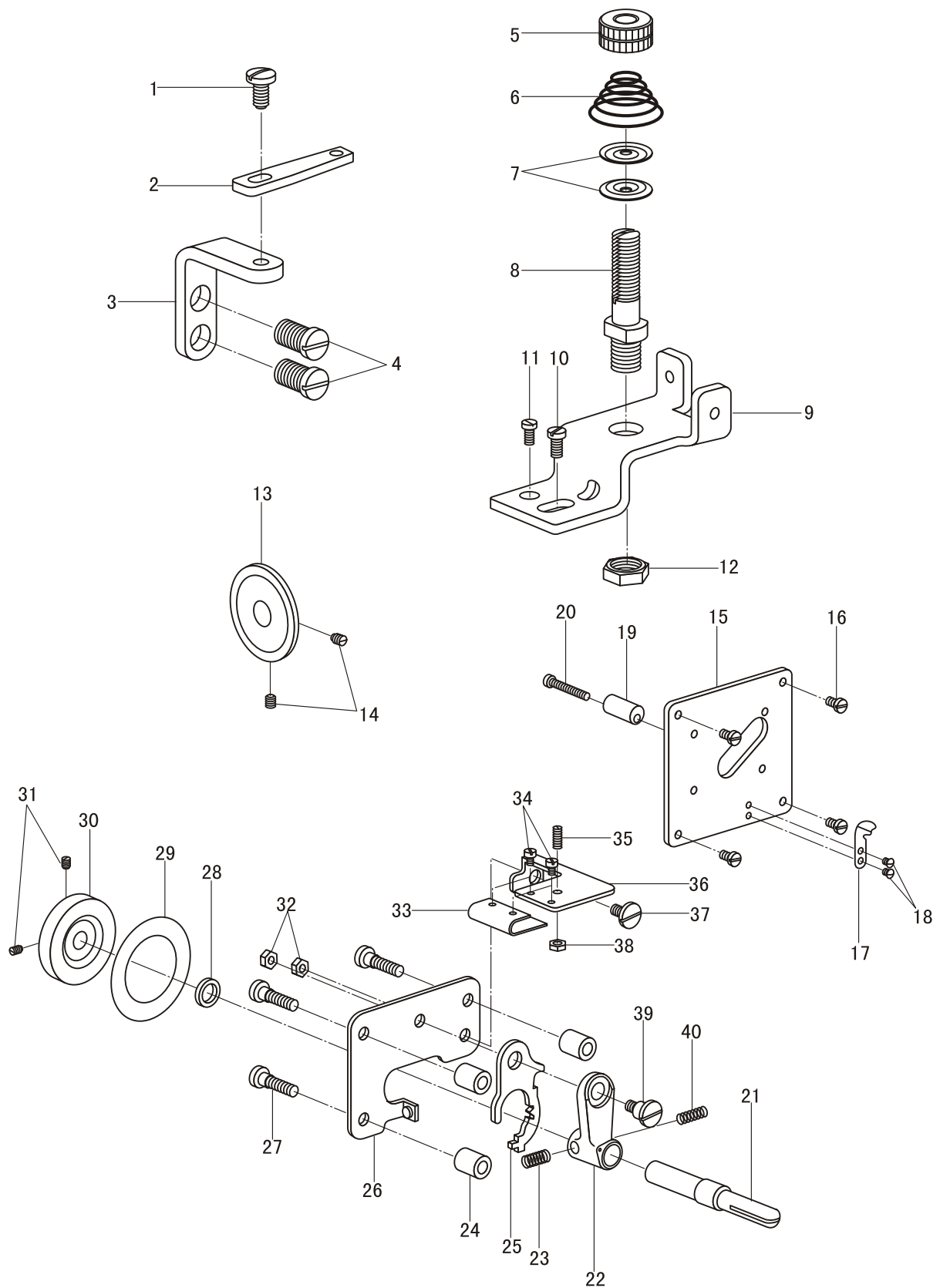
9. Threading components



9. Threading components

No	Parts No	Name of Parts	Qty.	Remarks
1	6K4-022	Thread tension nut	1	18141
2	6K4-027	Thread tension spring	1	
3	22T1-012F5	Thread tension disc	2	
4	52WF2-010	Screw bar	1	
5	1WF5-039	Screw	2	
6	52WF2-011	Thread tension bracket	1	
7	52WF2-012	Upper thread guide	1	
8	16WF1-059	Screw	3	
9	7KT1-007	Nut	1	
10	52WF2-014	Screw	1	
11	52WF2-013	Thread tension releasing plate	1	15/64"×28
12	7KT2-003	Thread guide (middle)	1	
13	6K2-040	Nut	1	
14	52WF2-016	Adjusting plate	1	
15	52WF2-058	Screw	1	
16	52WF2-022	Screw	1	
17	52WF2-024	Spring	1	
18	52WF2-021	Thread guide plate	1	
19	52WF2-025	Installing plate	1	
20	52WF2-023	Nut	1	
21	52WF2-026	Lower thread guide	1	1/8"×44
22	6K4-015	Adjusting spring	1	
23	52WF2-015	Thread take-up spring	1	
24	52WF2-017	Screw bar	1	
25	52WF2-019	Wool felt	3	
26	52WF2-018	Assistant thread disc	1	
27	52WF2-020	Washer	2	

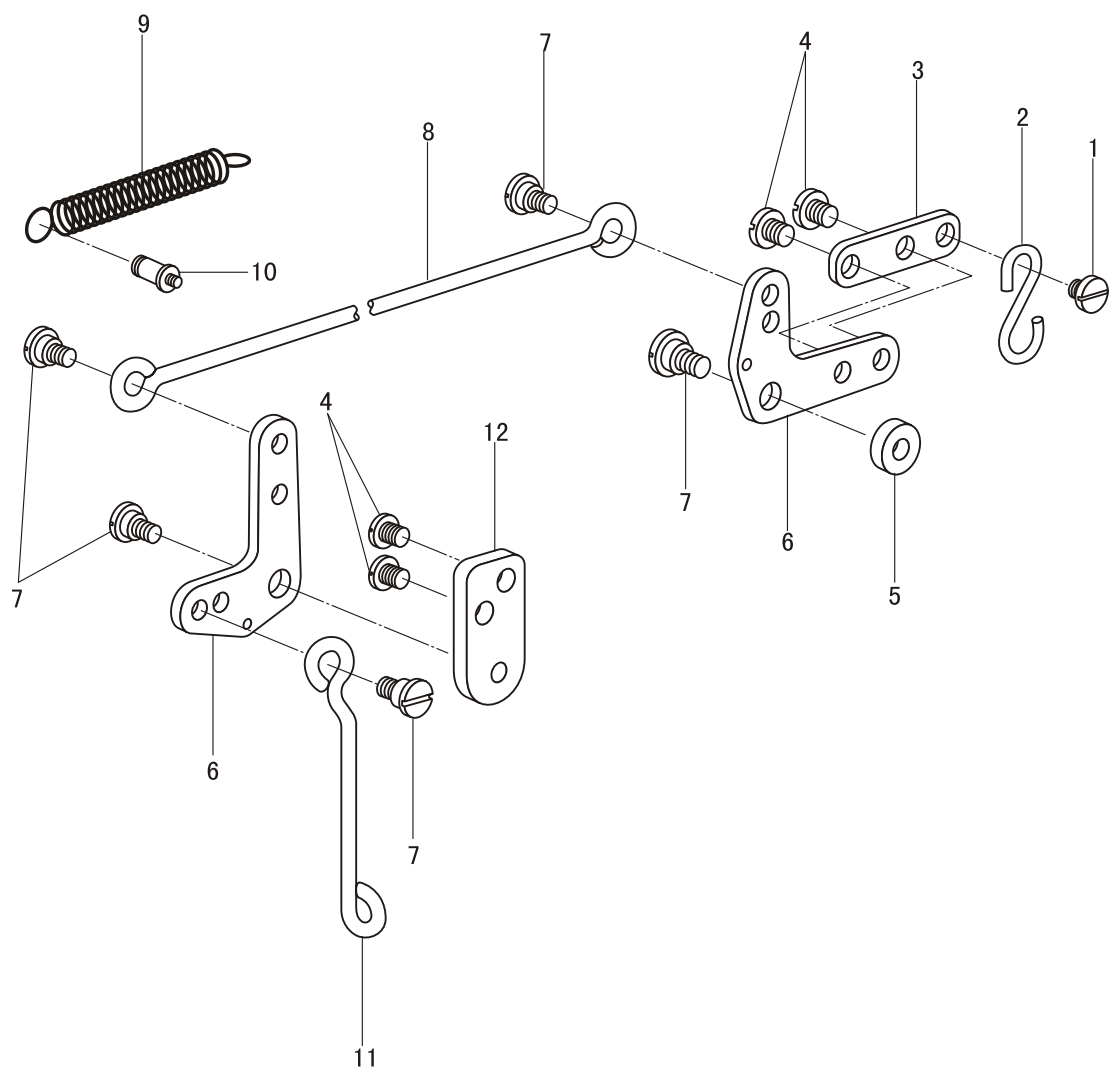
10. Bobbin thread winding components



10. Bobbin thread winding components

No	Parts No	Name of Parts	Qty.	Remarks
1	13WF6-024	Screw	1	18141
2	52WF2-048	Thread guide plate	1	
3	52WF2-049	Bracket	1	
4	13WF2-045	Screw	2	
5	6K4-022	Nut	1	
6	52WF2-047	Thread tension spring	1	
7	22T1-012F5	Thread tension disc	2	
8	52WF2-010	Screw bar	1	
9	52WF2-046	Bracket	1	
10	22T2-019	Screw	1	171031
11	J0.0.50	Screw	1	
12	7KT1-007	Nut	1	
13	52WF2-045	Friction roller	1	
14	17T5-016	Screw	2	
15	52WF2-027	supporting bracket	1	
16	21WF3-026	Screw	4	
17	52WF2-043	Bobbin thread cutter	1	
18	6A6-28	Screw	2	
19	52WF2-041	Bushing	1	
20	52WF2-042	Screw	1	17076
21	52WF2-029	Bobbin thread winding shaft	1	
22	52WF2-037	Winding crank	1	
23	52WF2-039	Spring (1)	1	
24	52WF2-031	Screw bushing	3	
25	52WF2-044	Locking plate	1	
26	52WF2-028	Thread winder plate	1	
27	52WF2-030	Screw	3	
28	52WF2-036	Washer	1	
29	13WF6-019	Rubber ring	1	
30	52WF2-035	Driving roller	1	
31		Screw	2	
32	52WF5-023	Nut	2	
33	52WF2-034	Thread winding stopper	1	
34	21WF2-012	Screw	2	
35	52WF2-033	Screw	1	
36	52WF2-032	Supporting bracket	1	
37	52WF2-057	Screw	1	
38	52WF2-023	Nut	1	
39	52WF5-038	Screw	1	
40	52WF2-040	Spring (2)	1	

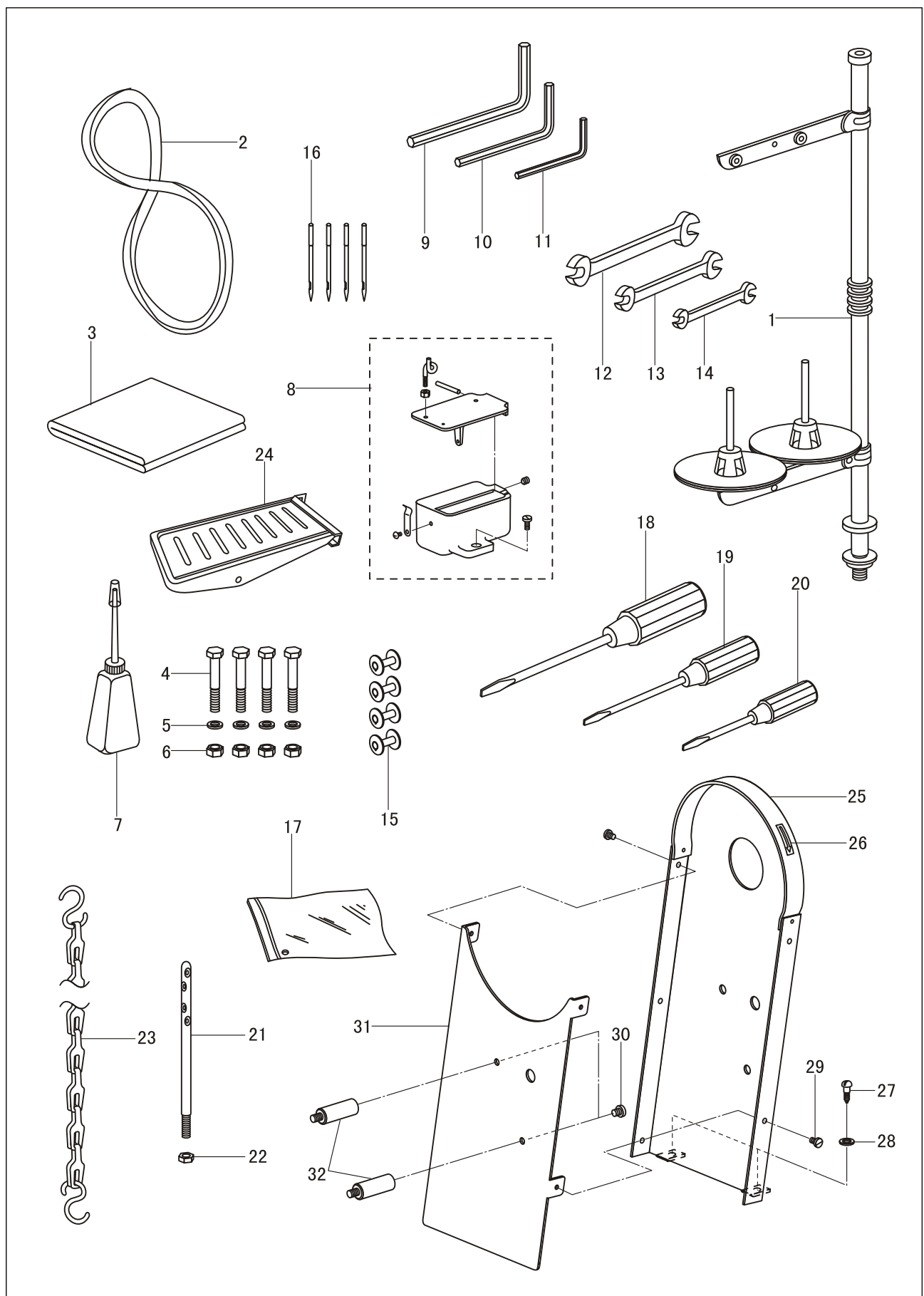
11. Lifting components



11. Lifting components

No	Parts No	Name of Parts	Qty.	Remarks
1	52WF3-030	Screw	1	
2	18WF1-016	' S" hook	1	
3	52WF3-026	Connecting plate	1	
4	52WF3-027	Screw	3	
5	52WF3-021	Washer	1	
6	52WF3-020	Lifting lever	2	
7	52WF3-025	Screw	5	
8	52WF3-024	Lifting rod	1	
9	52WF3-022	reset spring	1	
10	52WF3-023	Screw	1	
11	52WF3-028	Lifting rod	1	
12	52WF3-029	Supporting plate	1	

12. Accessories



12. Accessories

No	Parts No	Name of Parts	Qty.	Remarks
1	4F-007	Thread stand assembly	1	M58
2		V-belt	1	
3	52WF6-001	machine head cover	1	
4		Screw	4	GB5780-86
5		washer	4	GB97.1-85-10
6		Nut	4	GB41-86-M10
7	33TF-010	Oil pot	1	
8		Silicon oil box assembly	1	
9		Hexagon wrench (big)	1	S=5MM
10		Hexagon wrench (middle)	1	S=4MM
11		Hexagon wrench (small)	1	S=3MM
12		Wrench (big)	1	12×14
13		Wrench (middle)	1	11×13
14		Wrench (small)	1	10×9
15	52WF1-033	Bobbin	4	
16		Needle	4	DY×3 #26
17	33TF-010	Parts bag	1	
18	33TF-012	Screwdriver (big)	1	
19	33TF-013	Screwdriver (middle)	1	
20	33TF-014	Screwdriver (small)	1	
21	52WF2-054	Thread guide pin	1	
22	52WF5-023	Nut	1	
23	18WF1-016	Chain	1	
24	18WF8-013	Pedal assembly	1	
25	52WF6-002	Safety coverA	1	
26	50WF5-012	Rotary direction	1	
27	33TF-017	Screw	2	
28	33TF-018	Washer	2	
29	33T3-006	Screw1	6	
30	N3-7-27	Screw2	2	
31	52WF6-003	Safety coverB	1	
32	52WF6-004	Screw	2	