



TYPICAL

TW1-243/273

**Single Needle Compound Feed / Top and Bottom
Feed Extra Heavy-duty Lockstitch Sewing Machine**

OPERATION INSTRUCTION / PARTS MANUAL

CONTENTS

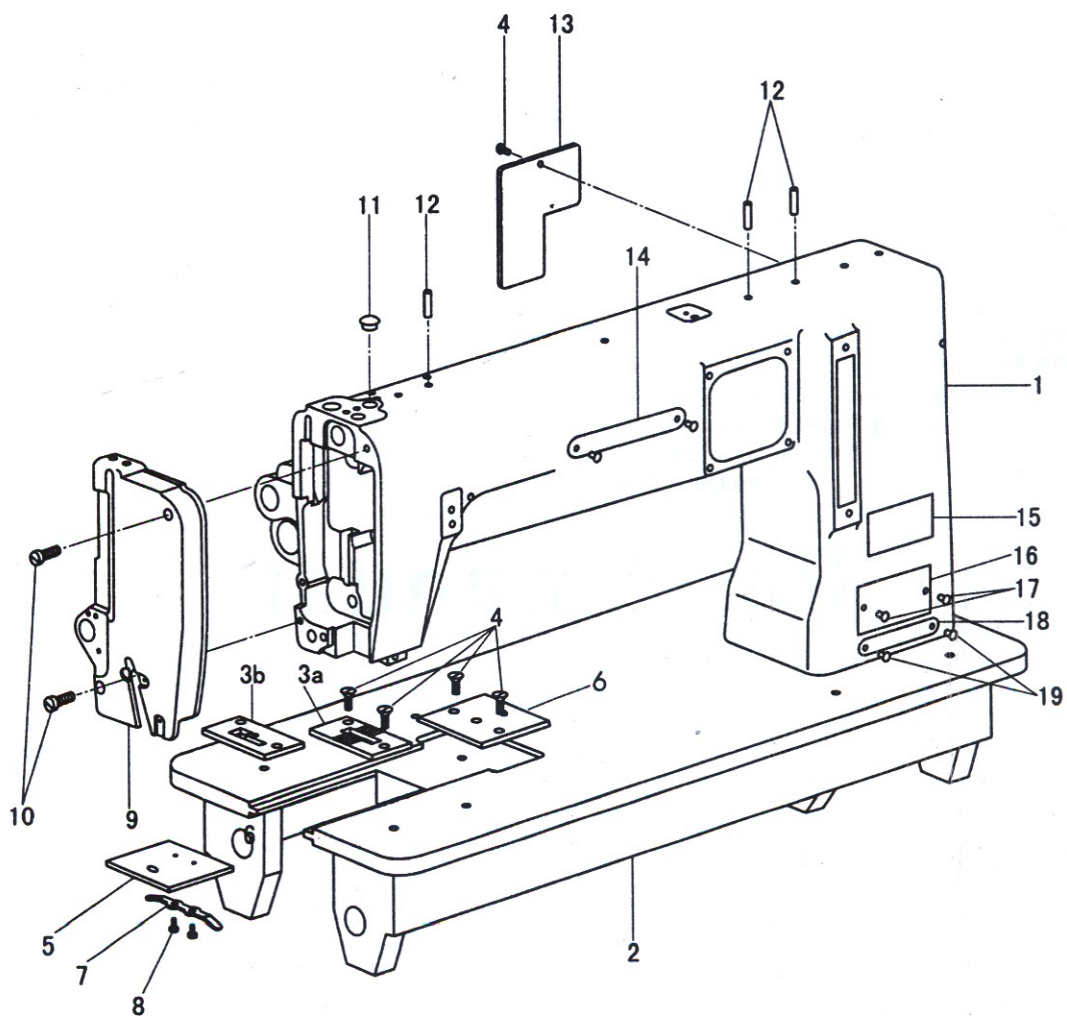
Operation instruction

1. Brief introduction	1
2. Main specifications	1
3. Operation preparation	1
4. Installing the motor	1
5. Installing the belt guard	2
6. Lubrication	2
7. Installing the needle	3
8. Choosing thread	3
9. Winding bobbin thread	3
10. Installing and uninstalling the bobbin	3
11. Threading needle thread	4
12. Adjusting thread tension	4
13. Adjusting stitch length	4
14. Adjusting thread take-up spring	5
15. Adjusting the pressure of presser foot	5
16. Adjusting the height of feed dog	5
17. The relationship between needle and shuttle	6
18. Adjusting the lifting amount of alternating foot	6
19. Adjusting the timing of upper feed	6

Parts manual

1. Machine casting components	7-8
2. Upper shaft components	9-10
3. Needle bar and upper feed components(TW1-243)	11-12
4. Needle bar and upper feed components(TW1-273)	13-14
5. Presser foot lifting components	15-16
6. Presser bar components	17-18
7. Stitch length regulating components	19-20
8. Lower shaft driving components	21-22
9. Threading components	23-24
10. Bobbin thread winding components	25-26
11. Knee lifter components	27-28
12. Accessories	29-30

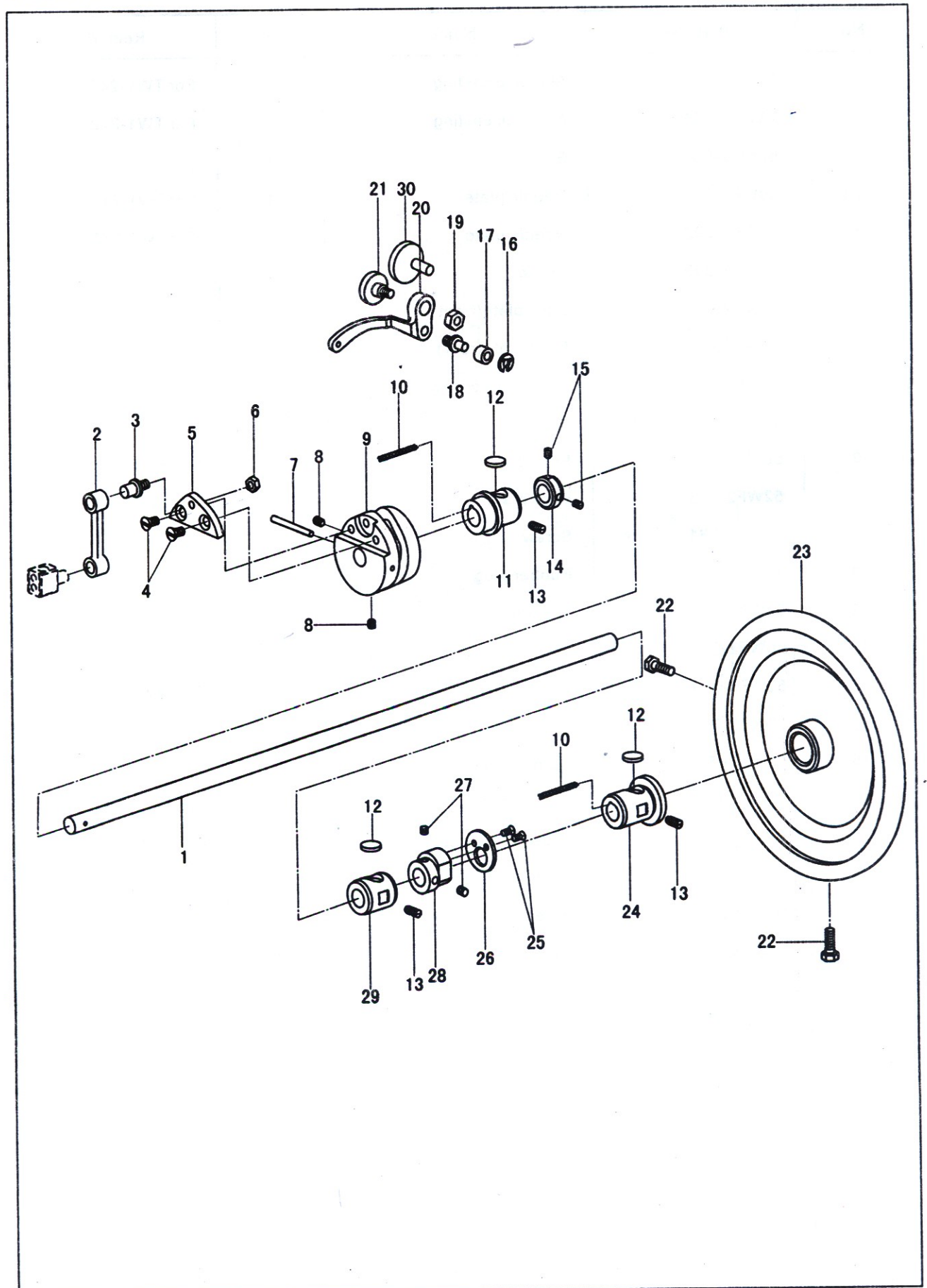
1. Machine casting components



1.Machine casting components

No .	Parts No .	Name	Qty.	Remarks
1	60WF2-008	Machine casting	1	For TW1-243
	73WF2-001	Machine casting	1	For TW1-273
2	60WF2-001	Bed	1	
3a	60WF2-002	Needle plate	1	For TW1-243
3b	73WF2-002	Needle plate	1	For TW1-273
4	49WF2-009	Screw	4	
5	60WF2-003	Slide plate(front)	1	
6	60WF2-004	Slide plate(rear)	1	
7	60WF2-005	Slide plate spring	1	
8	61-04-01/B7/Z103	Screw	2	
9	58WF2-002	Face plate	1	For TW1-243
	52WF2-003	Face plate	1	For TW1-273
10	16WF3-061	Screw	2	
11	22T1-003C4	Rubber plug	1	For TW1-243
12	52WF2-009	Oil pipe	3	
13	60WF2-003	Back cover	1	For TW1-243
	52WF2-004	Back cover	1	For TW1-273
14	16WF2-053	Brand label	1	
15	1KT1-005	Warning label	1	
16	60WF2-006	Model label	1	For TW1-243
		Model label	1	For TW1-273
17		Rivet	4	
18	4KT1-005	Series label	1	
19	35WF1-054	Rivet	2	

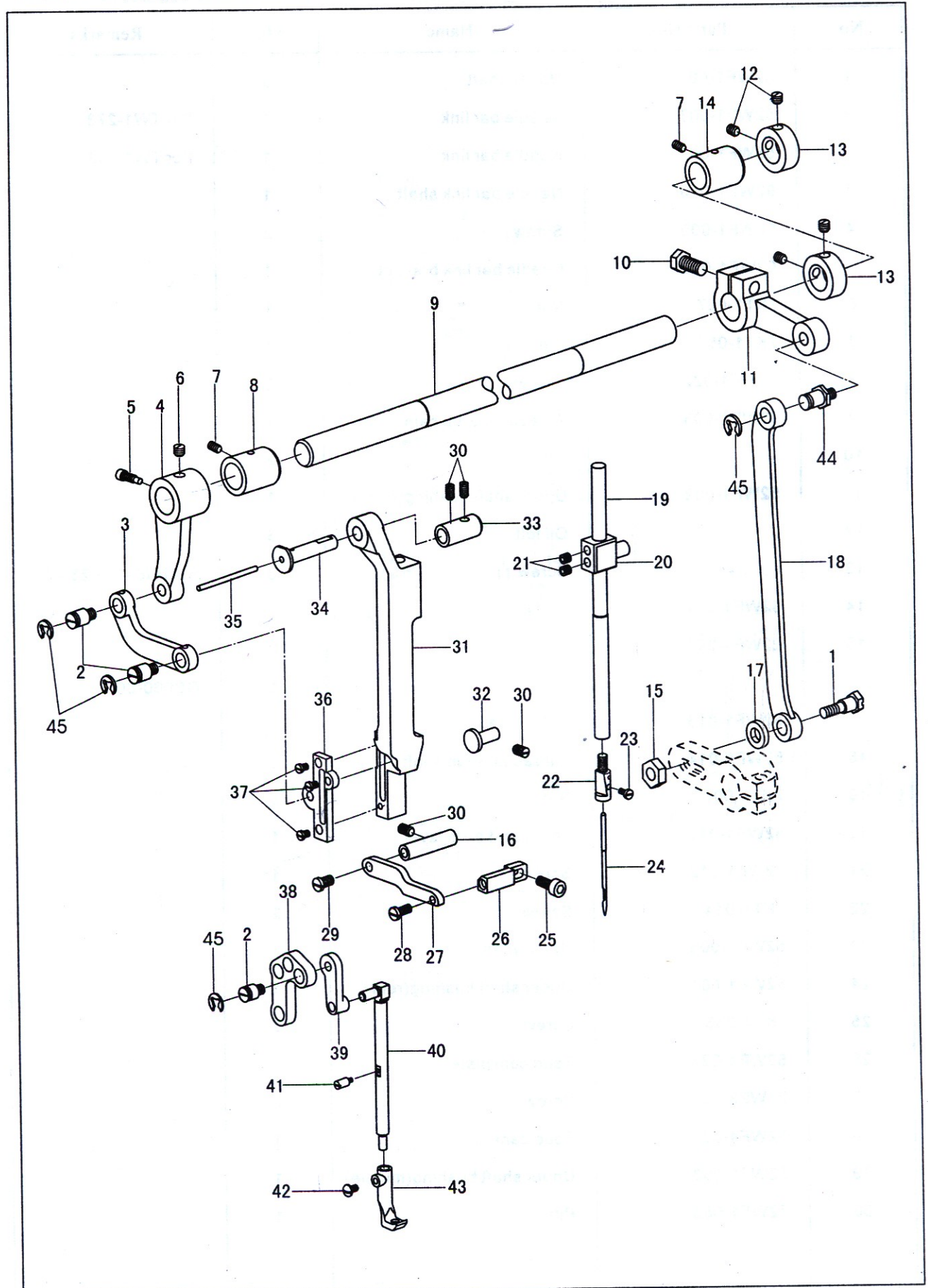
2.Upper shaft components



2.Upper shaft components

No .	Parts No .	Name	Qty.	Remarks
1	52WF1-001	Upper shaft	1	
2	52WF1-007	Needle bar link	1	For TW1-273
	58WF1-001	Needle bar link	1	For TW1-243
3	52WF1-010	Needle bar link shaft	1	
4	52WF1-009	Screw	2	
5	52WF1-008	Needle bar link bracket	1	
6	7KT1-007	Nut	1	
7	7KT1-052	Pin	1	
8	21WF1-022	Screw	2	
9	52WF1-005	Thread take-up cam	1	
10		Oil wick	2	
11	52WF1-002	Upper shaft bushing(front)	1	
12		Oil felt	3	
13	JO.0.40	Screw	3	SM15/64" ×28×8
14	52WF1-041	Collar	1	
15	22WF4-002	Screw	2	
16		Retainer	1	GB960-86-5
17	52WF1-013	Rolling ball	1	
18	52WF1-014	Thread take-up shaft	1	
19	7KT1-007	Nut	1	
20	52WF1-011	Thread take-up lever	1	
21	52WF1-012	Screw	1	
22	7KT1-014	Screw	2	
23	52WF1-006	Hand whell	1	
24	52WF1-004	Upper shaft bushing(rear)	1	
25	7KT4-035	Screw	2	
26	52WF4-028	Feed cam plate	1	
27	21WF3-010	Screw	2	
28	52WF4-027	Feed cam	1	
29	52WF1-003	Upper shaft bushing(middle)	1	
30	52WF1-058	Pin	1	

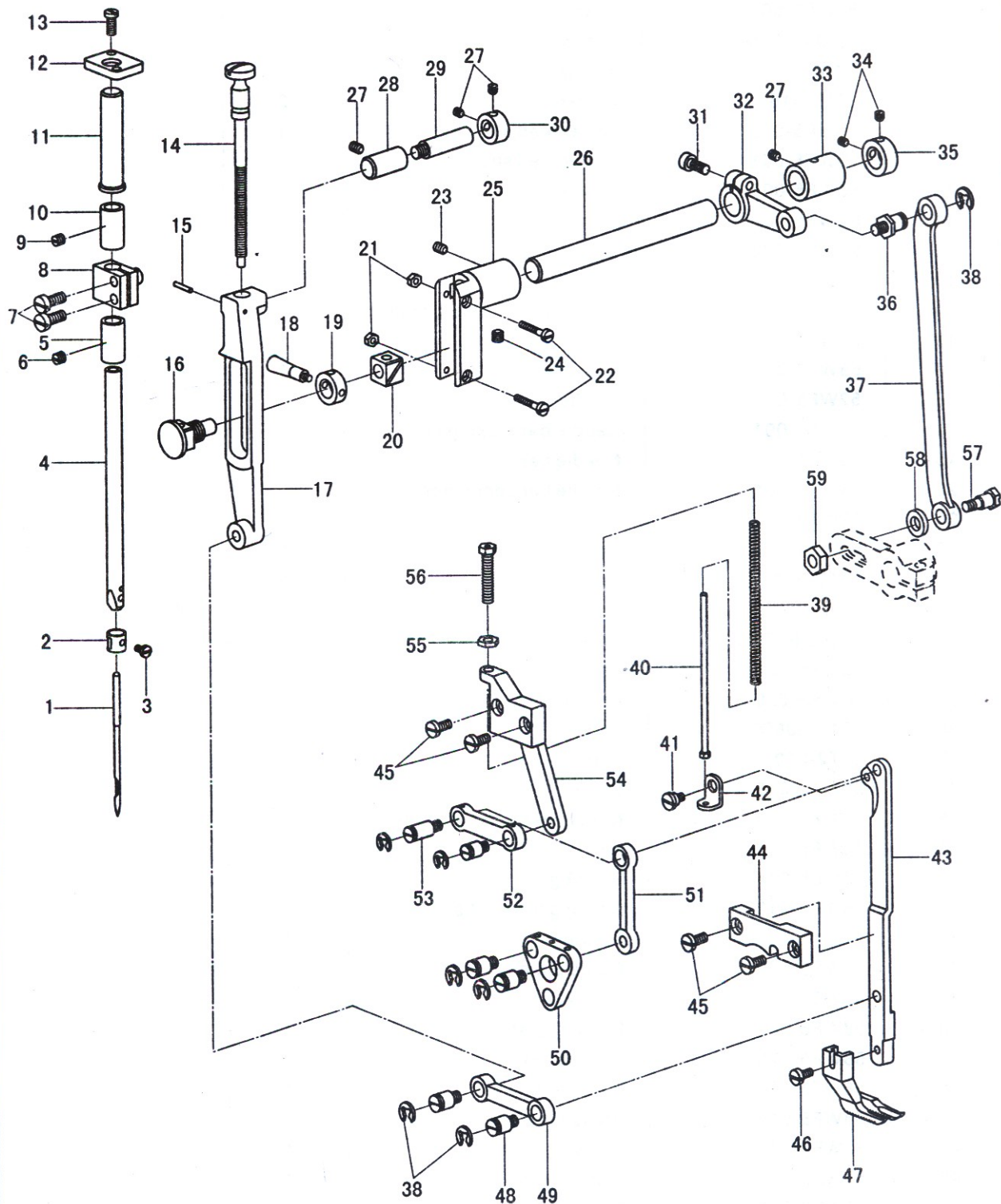
3. Needle bar and upper feed components(TW1-243)



3. Needle bar and upper feed components(TW1-243)

No .	Parts No .	Name	Qty.	Remarks
1	52WF5-009	Screw	1	DY×3 26"
2	52WF5-014	Pin	3	
3	58WF5-007	Crank link(front)	1	
4	58WF5-006	Crank	1	
5	61-04-01/B2	Screw	1	
6	22WF4-002	Screw	1	
7	17T5-016	Screw	2	
8	58WF5-003	Upper feed shaft bushing	1	
9	58WF5-001	Upper feed shaft	1	
10	58WF5-009	Screw	1	
11	60WF5-002	Crank	1	
12	22WF4-002	Screw	4	
13	58WF5-002	Collar	2	
14	58WF5-004	Upper feed shaft bushing	1	
15	58WF5-011	Nut	1	
16	58WF5-023	Adjusting pin	1	
17	52WF5-010	Washer	1	
18	60WF5-001	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	22T2-004	Scrwe	1	
24		Needle	1	
25	266024(STH)	Screw	1	
26	58WF5-024	Driving rod	1	
27	58WF5-025	Pressing plate	1	
28	22T6-008D3	Screw	1	
29	37T2-210	Screw	1	
30	58WF5-015	Screw	4	
31	58WF5-012	Needle bar rocking frame	1	
32	58WF5-016	Pin rod	1	
33	58WF5-014	Bushing	1	
34	58WF5-013	Rocking frame shaft	1	
35		Oil wick	1	
36	58WF5-022	Guide plate	1	
37	6A3-07	Screw	3	
38	58WF5-021	Rocking plate	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	Walking foot	1	
44	52WF2-005	Pin	1	
45		Lock spring	4	

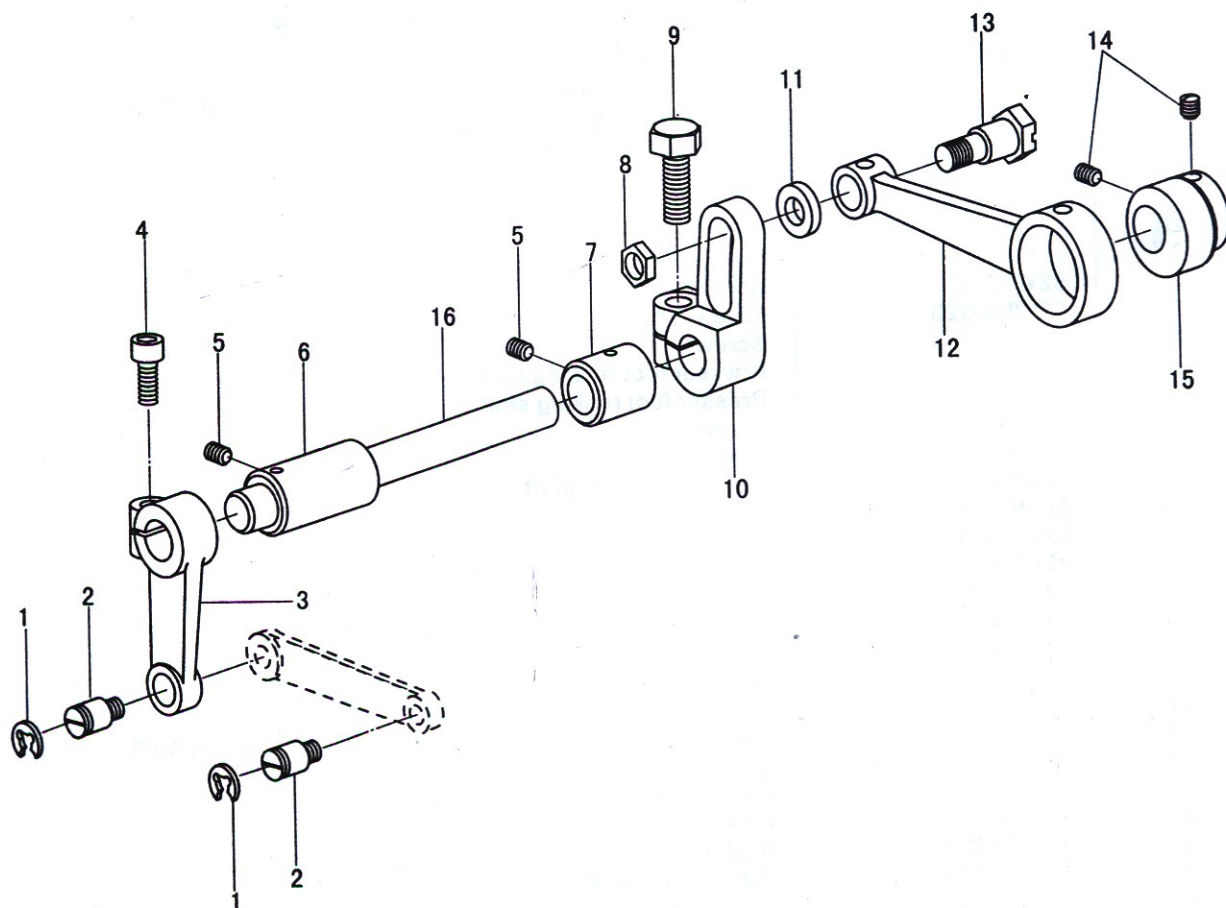
4. Needle bar and upper feed components(TW1-273)



4.Needle bar and upper feed components(TW1-273)

No .	Parts No .	Name	Qty.	Remarks
1		Needle	1	DY×3 26°
2	52WF1-019	Needle bar thread guide	1	
3	16WF2-020	Screw	1	
4	52WF2-015	Needle bar	1	
5	52WF1-017	Needle bar bushing(lower)	1	
6	52WF2-018	Screw	1	
7	22T3-007C2	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 covre	1	
12	52WF1-022	Fixing plate	1	
13	1WF5-039	Screw	2	
14	52WF5-024	Adjusting bar	1	
15		Adjusting bar retainer	2	GB879-86-2.5×16
16	52WF5-027	Adjusting block	1	
17	52WF5-025	Presser foot adjusting frame	1	
18	52WF5-029	Hand screw	1	
19	52WF5-030	Collar	1	
20	52WF5-021	Slide 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	Prwsser foot rocking lever	1	
26	52WF5-015	Presser foot rocking shaft	1	
27	17T5-016	Screw	3	
28	52WF1-017	Bushing	1	
29	52WF5-026	Adjusting frame shaft	1	
30	52WF5-030	Collar	1	
31	52WF5-003	Screw	1	
32	52WF5-016	Presser foot rocking crank	1	
33	52WF5-017	Bushing	1	
34	52WF4-002	Screw	2	
35	52WF1-041	Collar	1	
36	52WF4-005	Pin	1	
37	60WF5-005	Rocking link	2	
38		Lock spring	7	GB896-86-8
39	52WF5-035	Spring	1	
40	52WF5-036	Pressure adjusting rod	1	
41	52WF5-038	Screw	1	
42	52WF5-037	Bracket	1	
43	52WF5-031	Walking foot plate	1	
44	52WF5-034	Presser plate	1	
45	37T2-210	Screw	4	
46	52WF5-033	Screw	1	
47	52WF5-032	Presser foot	1	
48	52WF5-014	Connecting pin	4	
49	52WF5-041	Presser foot rocking link	1	
50	52WF5-042	Swing plate	1	
51	52WF5-040	Presser foot lifting link(2)	1	
52	52WF5-039	Presser foot lifting link(1)	1	
53	52WF5-043	Pin	1	
54	52WF5-044	Supporter	1	
55	7KT1-007	Nut	1	
56	52WF5-045	Screw	1	
57	52WF5-009	Screw	1	
58	52WF5-010	Washer	1	
59	52WF5-011	Nut	1	

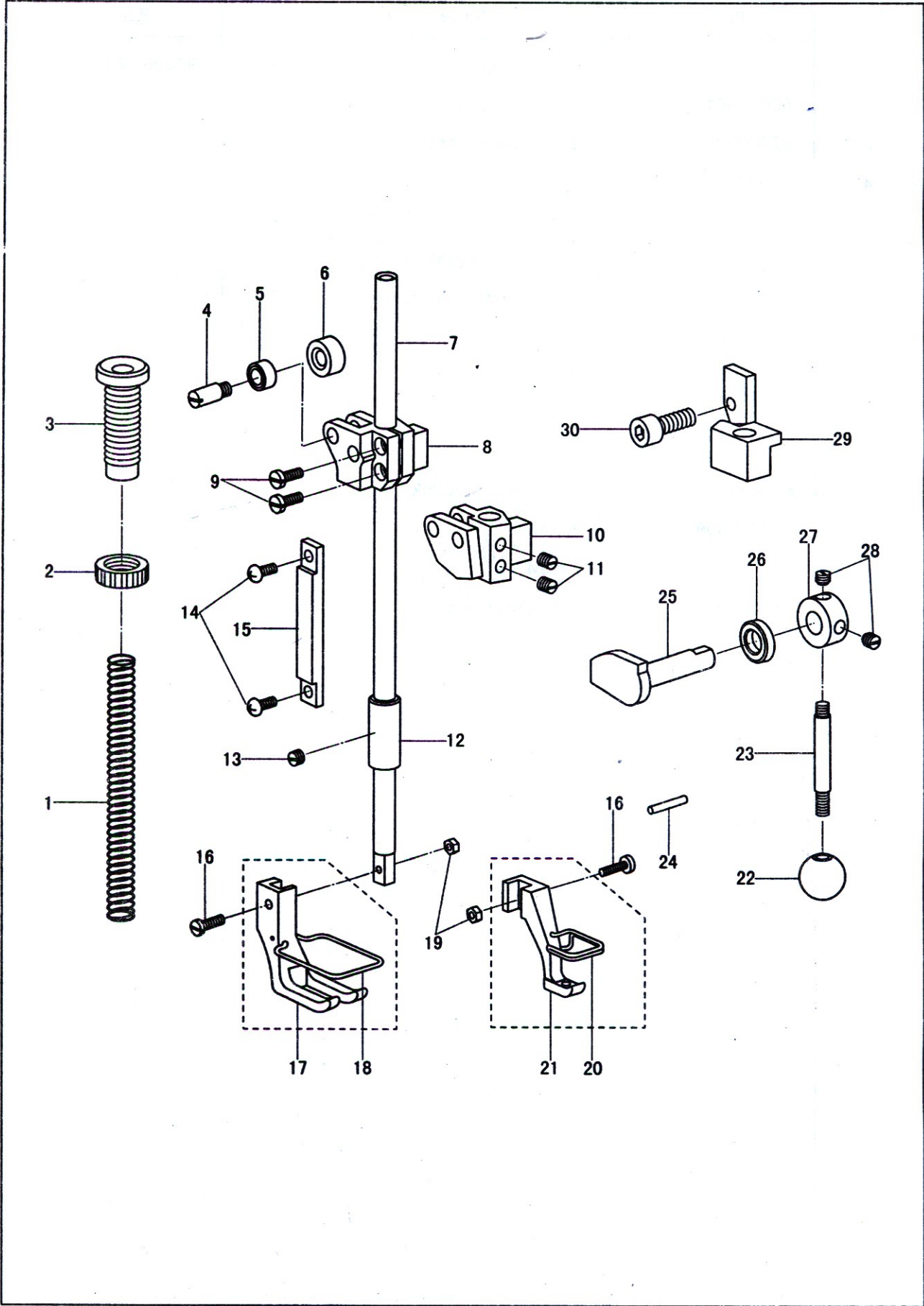
5. Presser foot lifting components



5.Presser foot lifting components

No .	Parts No .	Name	Qty.	Remarks
1		Lock spring	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(front)	1	
7	52WF5-006	Lifting shaft bushing(rear)	1	
8	52WF5-011	Nut	1	
9	52WF5-008	Screw	1	
10	52WF5-007	Lifting sdjuating 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	1	
16	52WF5-004	Lifting shaft	1	

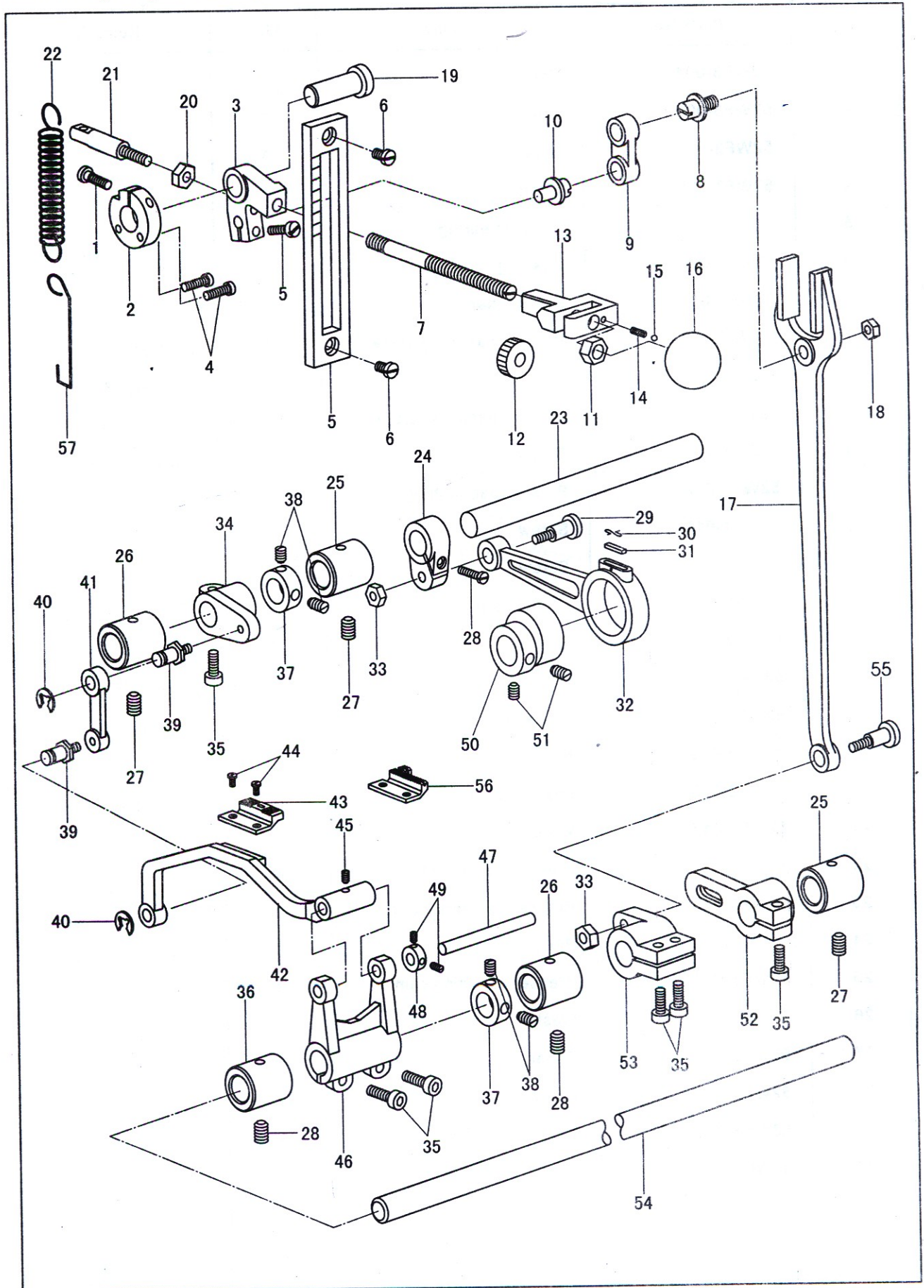
6.Presser bar components



6.Presser bar components

No .	Parts No .	Name	Qty.	Remarks
1	52WF3-004	Spring	1	
2	52WF3-006	Nut	1	
3	52WF3-005	Screw	1	
4	52WF3-014	Shaft	1	
5		Needle bearing	1	$\Phi 10 \times \Phi 7 \times 7.7$
6	52WF3-031	Bushing	1	
7	52WF3-001	Presser bar	1	
8	58WF3-003	Presser bar lifting crank	1	For TW1-243
9	1WF4-034	Screw	2	For TW1-243
10	52WF3-013	Presser bar lifting crank	1	For TW1-273
11	6A6-08A	Screw	2	For TW1-273
12	52WF3-002	Presser bar bushing	1	
13	52WF1-018	Screw	1	
14	52WF2-017	Screw	2	
15	52WF3-012	Guide plate	1	
16	52WF3-018	Screw	1	
17	52WF3-004	Presser foot	1	For TW1-243
18	52WF3-001	Finger guard	1	For TW1-243
19	52WF3-009	Nut	1	
20	52WF3-003	Finger guard	1	For TW1-273
21	52WF3-017	Walking foot	1	For TW1-273
22	52WF3-011	Presser bar lifting bar	1	
23	52WF3-009	Presser bar lifting shaft	1	
24		Pin	1	GB879-86 3×20
25	52WF3-007	Presser bar lifting cam	1	
26	52WF3-008	Washer	1	
27	52WF3-010	Collar	1	
28	52WF1-043	Screw	2	
29	52WF3-015	Bracket	1	
30	52WF3-016	Screw	1	

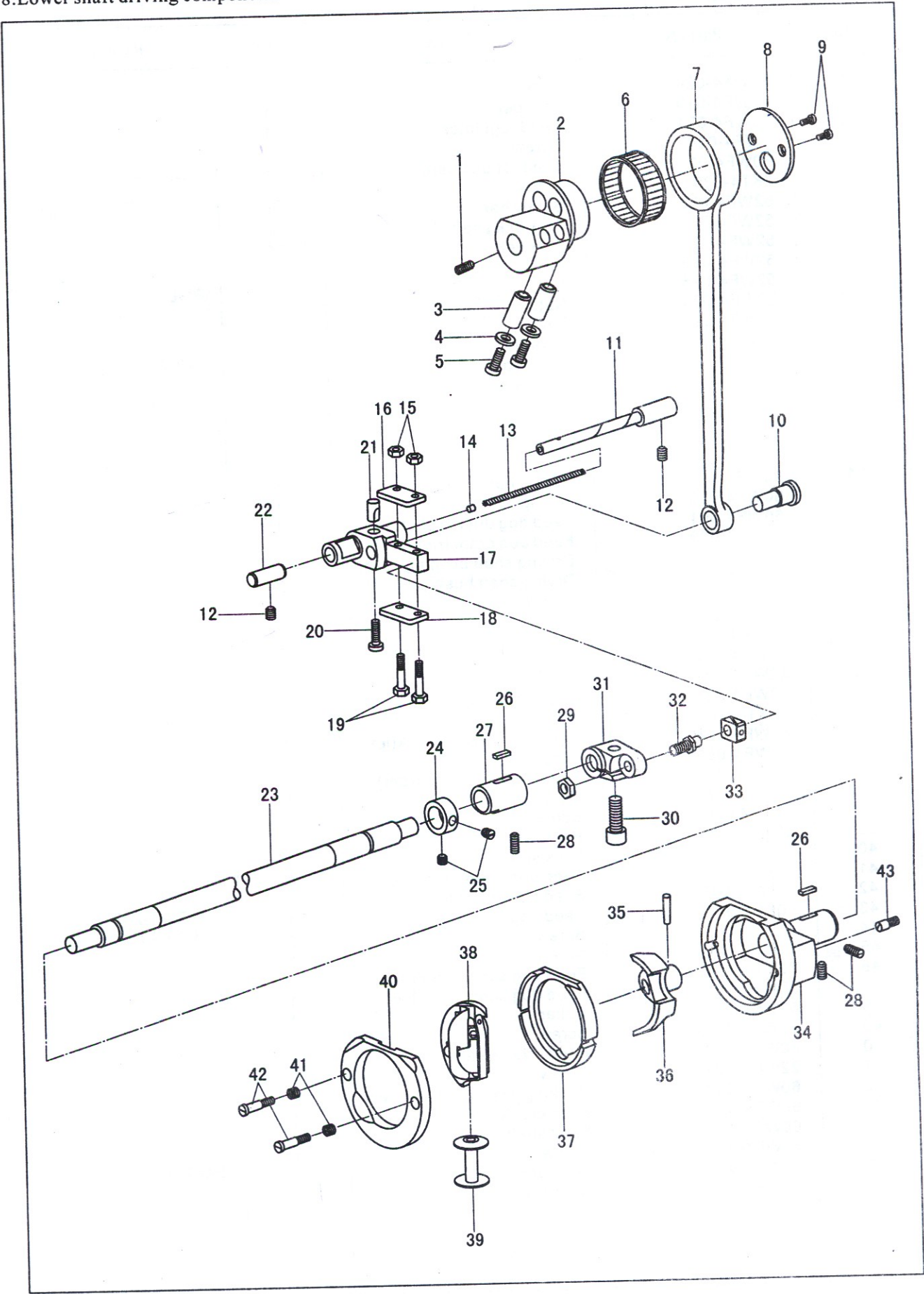
7. Stitch length regulating components



7.Stitch length regulating components

No .	Parts No .	Name	Qty.	Remarks
1	52WF4-020	Screw	1	
2	52WF4-019	Stopper	1	
3	60WF4-021	Feed regulator	1	
4	1WF4-034	Screw	2	
5	60WF4-022	Graduation board	1	
6	7KT4-030	Screw	2	
7	52WF4-023	Screw bar	1	
8	52WF4-021	Fork link shaft	1	
9	52WF4-016	Fork link	1	
10	52WF4-029	Pin	1	
11	52WF4-025	Nut	1	
12	52WF4-024	Nut	1	
13	52WF4-026	Lever	1	
X 14	22WF4-030	Spring	1	
X 15		Steel ball	1	φ 3.7
16	7KT4-034	Lever grip	1	
17	60WF4-020	Feed fork	1	
18	7KT1-007	Nut	1	
19	7KT4-023	Crank	1	
20	60WF4-025	Nut	1	
21	60WF4-024	Spring bar	1	
22	60WF4-023	Spring	1	
23	60WF4-001	Feed dog driving shaft	1	
24	60WF4-002	Feed dog crank(right)	1	
25	60WF4-011	Driving shaft bushing(rear)	2	
26	60WF4-010	Drving shaft bushing(front)	2	
27	JO.0.40	Screw	5	
28	60WF4-003	Screw	1	
29	60WF4-007	Screw	1	
30	22WF4-040	Lock spring	1	
31	22WF4-039	Oil filt	1	
32	60WF4-066	Feed dog driving link	1	
33	7KT1-007	Nut	2	
34	60WF4-004	Feed dog driving crank(left)	1	
35	60WF4-005	Screw	6	
36	60WF4-013	Feed shaft bushing(front)	1	
37	22T3-002B1	Collar	2	
38	22T3-002B2	Screw	4	
39	60WF4-014	Pin shaft	2	
40		Lock spring	2	
41	60WF4-016	Feed dog supporter link	1	
42	60WF4-018	Feed dog supporter	1	
43	60EF4-014	Feed dog	1	For TW1-243
44		Screw	2	9/64"×40
45	21WF4-045	Screw	1	
46	60WF4-015	Feed dog supporter crank	1	
47	60WF4-016	Feed dog supporter shaft	1	
48	60WF4-017	Collar	1	
49	20T2-032C3	Screw	2	
50	60WF4-008	Feed driving cam	1	
51	22WF4-002	Screw	1	
52	60WF5-003	Rocking link adjusting crank	1	
53	60WF4-026	Feed crank(middle)	1	
54	60WF4-012	Feed shaft	1	
55	60WF4-027	Screw	1	
56	73WF2-001	Feed dog	1	For TW1-273
57	60WF4-028	Spring hook	1	

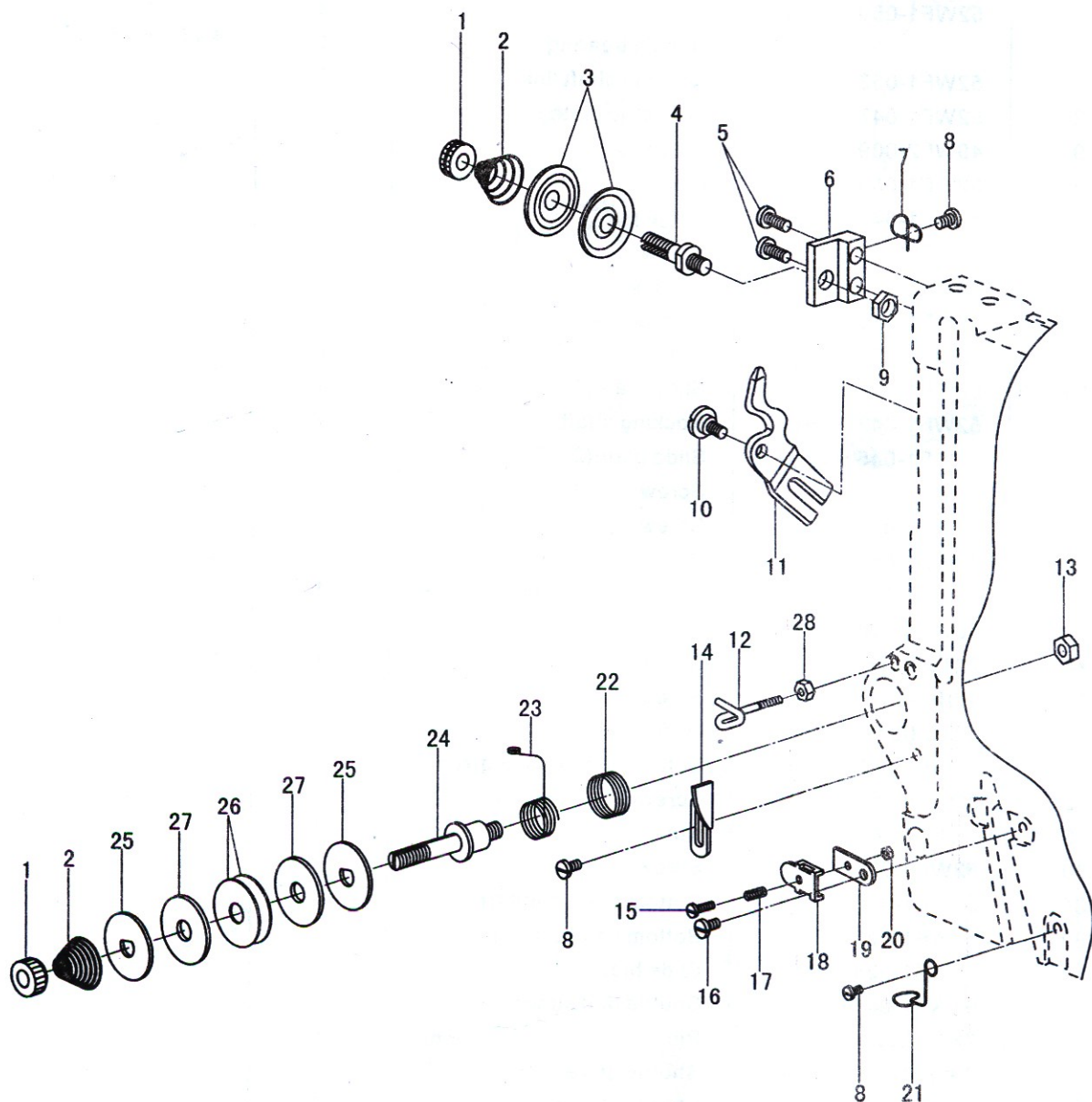
8.Lower shaft driving components



8.Lower shaft driving components

No .	Parts No .	Name	Qty.	Remarks
1	1WF4-010	Screw	1	φ48× φ43×17
2	52WF1-048	Rocking shaft 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	Rocking shaft link	1	
8	52WF1-047	Eccentric plate	1	
9	49WF2-009	Screw	2	
10	52WF1-053	Pin	1	
11	52WF1-043	Hinge pin	1	KSP204-N
12	01/B602	Screw	2	
13	22T1-013	Oil sick	1	
14	52WF1-057	Oil seal	1	
15	52WF1-023	Nut	2	
16	52WF1-044	Slide plate(1)	1	
17	52WF1-042	Rocking shaft	1	
18	52WF1-045	Slide plate(2)	1	
19	52WF1-046	Screw	2	
20	52WF1-056	Screw	1	
21	52WF1-055	Pin	1	
22	52WF1-054	Hinge pin bushing	1	
23	60WF1-004	Bottom shaft	1	
24	22T3-002B1	Collar	1	
25	1WF2-052	Screw	2	
26	22T3-007C2	Oil felt	2	
27	52WF1-029	Bottom shaft bushing(rear)	1	
28	JO.O.5	Screw	2	
29	7KT1-007	Nut	1	
30	52WF1-026	Screw	1	
31	52WF1-023	Bottom shaft crank(rear)	1	
32	52WF1-025	Bottom shaft crank pin(rear)	1	
33	52WF1-024	Slide block	1	
34	60WF1-001	Shuttle bed supporter	1	
35	7KT5-055	Pin	1	
36	60WF1-005	Shuttle driver	1	
37	60WF1-003	Shuttle race body	1	
38		Shuttle	1	
39	52WF1-033	Bobbin	1	
40	52WF1-002	Hook cover	1	
41	52WF1-038	Spring	1	
42	52WF1-039	Screw	2	
43	52WF1-006	Pin	1	

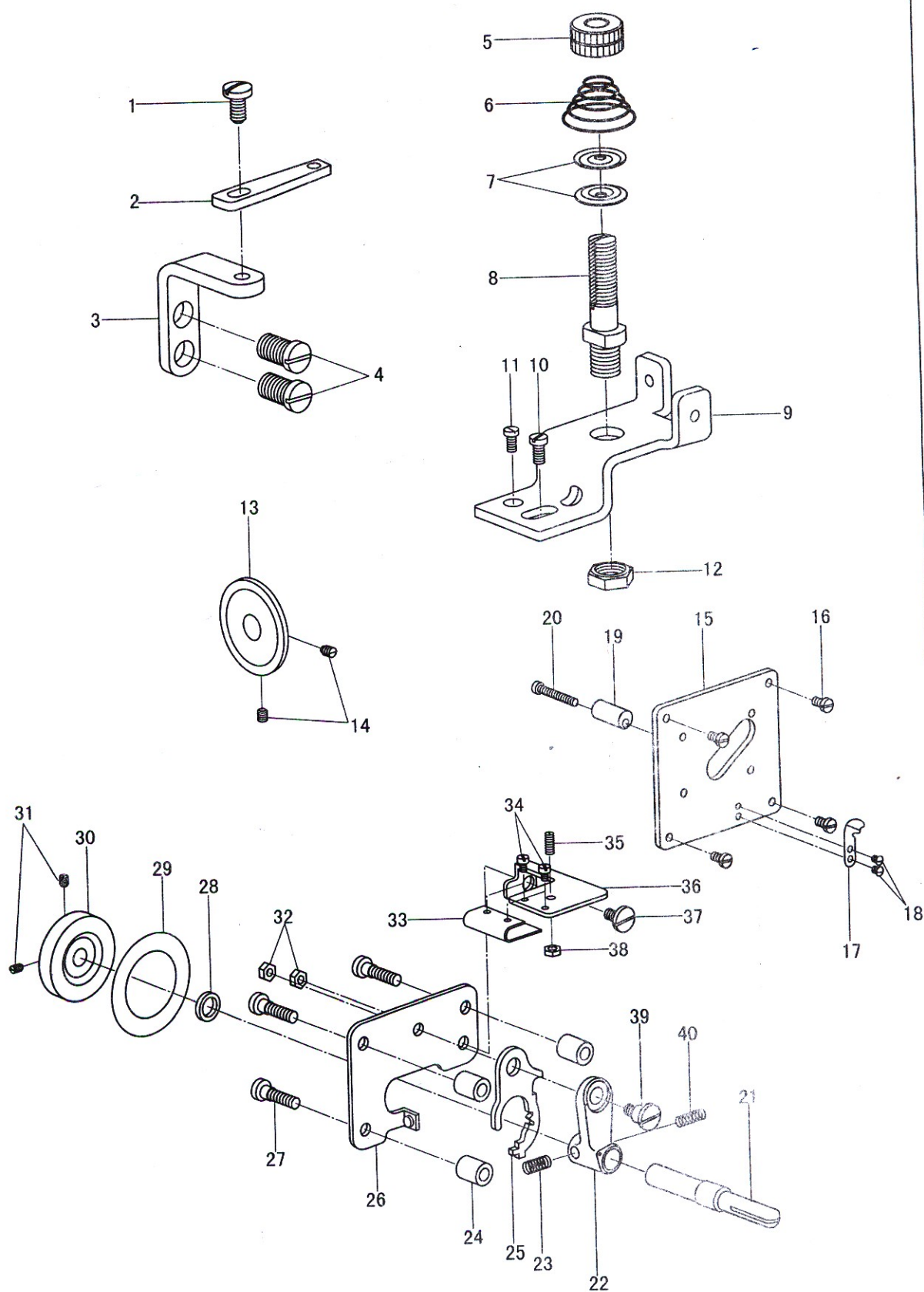
9. Threading components



9. Threading components

No .	Parts No .	Name	Qty.	Remarks
1	6K4-022	Nut	1	
2	6K4-027	Thread tension spring	1	
3	22T1-012F5	Thread tension disc	2	
4	52WF2-010	Thread tension post	1	
5	1WF2-039	Screw	2	
6	52WF2-011	Thread tension post bracket	1	
7	52WF2-012	Thread tension guide	1	
8	16WF12-059	Screw	3	
9	7KT1-007	Nut	1	
10	52WF2-014	Screw	1	
11	52WF2-013	Thread releasing plate	1	
12	52WF2-052	Thread guide	1	
13	6K2-040	Nut	1	
14	52WF2-016	Spring support plate	1	15/64"×28
15	52WF2-058	Screw	1	
16	16WF2-015	Screw	1	
17	52WF2-024	Arm thread guide spring	1	1/8"×44
18	52WF2-021	Arm thread guide	1	
19	52WF2-025	Arm thread guide plate	1	
20	52WF2-023	Nut	1	
21	52WF2-026	Lower thread guide	1	
22	6K4-015	Spring	1	
23	52WF2-015	Thread take-up spring	1	
24	52WF2-017	Thread tension wheel post	1	
25	52WF2-019	Wheel felt	3	
26	52WF2-018	Thread tension disc	1	
27	52WF2-020	Felt support plate	2	
28	52WF2-053	Nut	1	

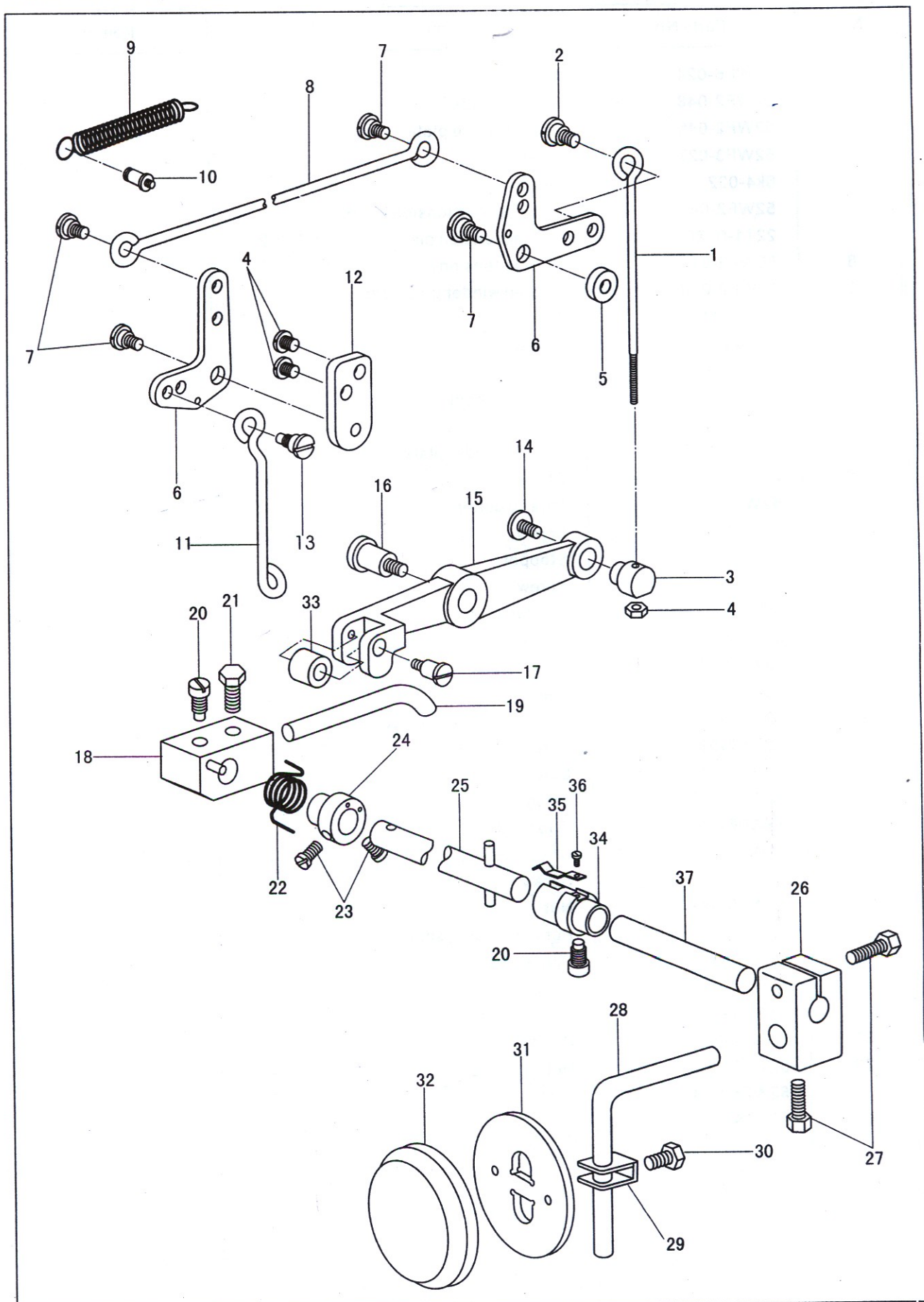
10.Bobbin thread winding components



10. Bobbin thread winding components

No .	Parts No .	Name	Qty.	Remarks
1	13WF6-024	Screw	1	
2	52WF2-048	Thread guide	1	
3	52WF2-049	Thread guide plate	1	
4	52WF3-027	Screw	2	
5	6k4-022	Nut	1	
6	52WF2-047	Bobin thread tension spring	1	
7*	22T1-012F5	Thread tension disc	2	
8	52WF2-010	Thread tension post	1	
9	52WF2-046	Thread winder guide base	1	
10	22T2-019	Screw	1	
11	JO.O.50	Screw	1	
12	7KT1-007	Nut	1	
13	52WF2-045	Friction wheel	1	
14	17T5-016	Screw	2	
15	52WF2-027	Thread winder plate	1	
16	21WF3-026	Screw	4	
17	52WF2-043	Thread cutter	1	
18	6A6-28	Screw	2	
19	52WF2-041	Stopper	1	
20	52WF2-042	Screw	1	
21	52WF2-029	Winder shaft	1	
22	52WF2-037	Winder crank	1	
23	52WF2-039	Spring(1)	1	
24	52WF2-031	Washer	3	
25	52WF2-044	Thread winder bracket	1	
26	52WF2-028	Thread winder base	1	
27	52WF2-030	Screw	3	
28	52WF2-036	Washer	1	
29	13WF6-019	Rubber disc	1	
30	52WF2-035	Driving wheel	1	
31		Screw	2	
32	52WF5-023	Nut	2	
33	52WF2-034	Bobbin presser spring	1	
34	21WF2-012	Screw	2	
35	52WF2-033	Screw	1	
36	52WF2-032	Bobbin presser	1	
37	52WF2-057	Screw	1	
38	52WF2-023	Nut	1	
39	52WF5-038	Screw	1	
40	52WF2-040	Spring(2)	1	

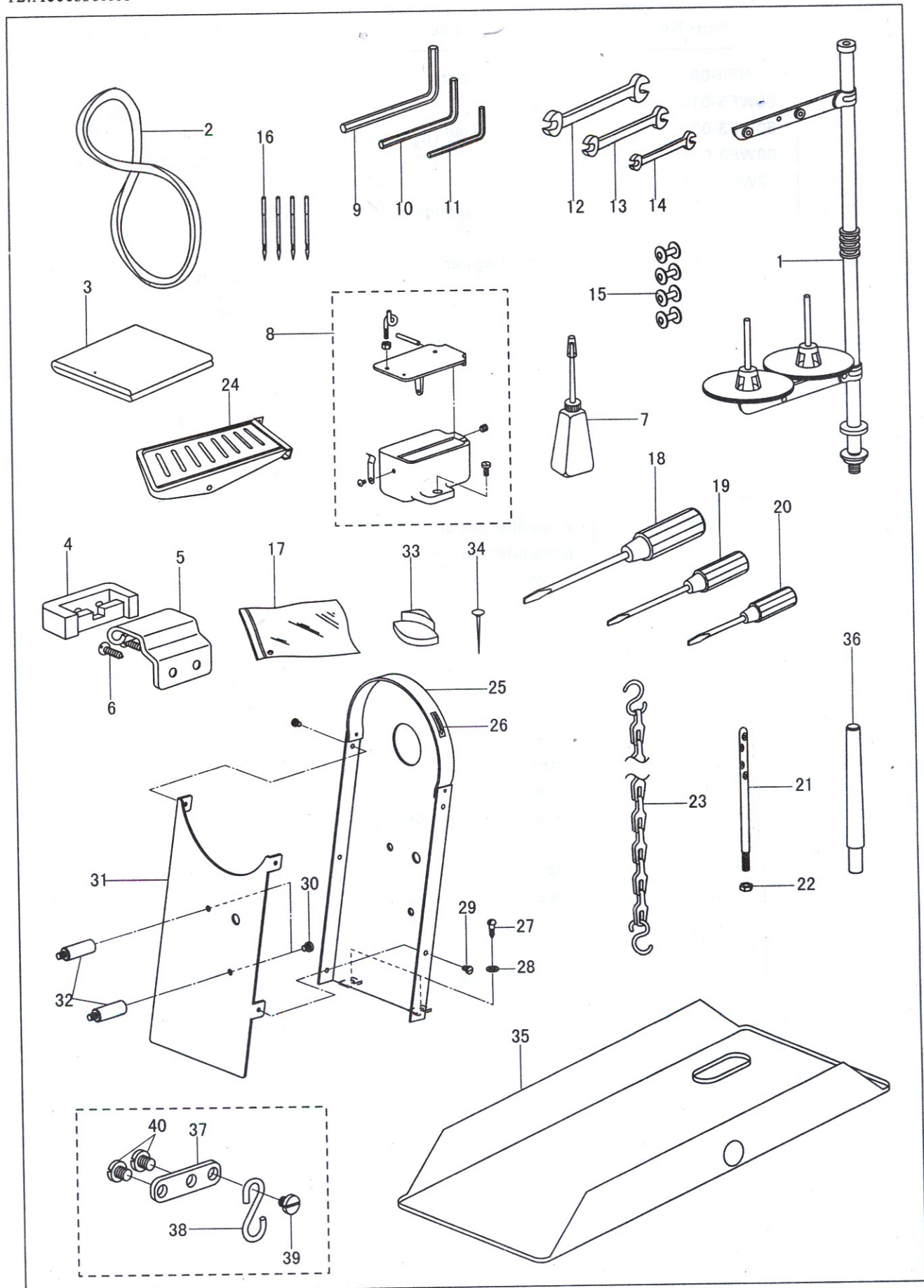
11.Knee lifter components



11.Knee lifter components

No .	Parts No .	Name	Qty.	Remarks
1	60WF3-001	Connecting bar	1	
2	60WF3-016	Screw	1	
3	60WF3-003	Connecting pin	1	
4	60WF3-002	Nut	1	
5	52WF3-021	Washer	1	
6	52WF3-020	Presser bar lifting link	2	
7	52WF3-025	Screw	4	
8	52WF3-024	Connecting bar	1	
9	52WF3-022	Spring	1	
10	52WF3-023	Screw	1	
11	52WF3-028	Presser bar lifting bar	1	
12	52WF3-029	Link basè	1	
13	52WF3-032	Screw	1	
14	60WF3-004	Screw	1	
15	60WF3-011	Knee lifter lever	1	
16	60WF3-012	Screw	1	
17	60WF3-014	Screw	1	
18	60WF3-006	Knee lifter bar block	1	
19	60WF3-015	Knee lifter bar	1	
20	60WF3-007	Screw	2	
21	60WF3-005	Screw	1	
22	60WF3-009	Spring	1	
23	22T2-019	Screw	2	
24	60WF3-010	Collar bushing	1	
25	60WF3-008	Knee lifter shaft	1	
26	60WF6-008	Knee press rod mounting arm	1	
27	60WF6-007	Screw	2	
28	22T9-003B4	Knee press rod	1	
29	22T9-003B6	Knee press rod bracket	1	
30	22T9-003B7	Screw	1	
31	22T9-003B5	Knee press plate	1	
32	22T9-003B8	Knee press plate pad	1	
33	60WF3-013	Knee lifter lever roller	1	
34	60WF6-010	Knee press joint	1	
35	60WF6-011	Presser spring	1	
36	19WF4-002	Screw	1	
37	60WF3-009	Shaft	1	

12. Accessories



12.Accessories

No .	Parts No .	Name	Qty.	Remarks
1	4F-007	Thread stand assembly	1	M58
2		V-belt	1	
3	52WF6-001	Machine head cover	1	
4	22T9-007F2	Hinge cushion	2	
5	60WF6-006	Hinge	2	
6	52WF1-009	Screw	4	
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	Knee lifter pedal assembly	1	
25	60WF6-012	Belt guard A	1	
26	50WF5-012	Indicator	1	
27	33TF-017	Screw	2	
28	33TF-018	Washer	2	
29	33T3-006	Screw1	5	
30	N3-7-27	Screw2	2	
31	60WF6-013	Belt guardB	1	
32	52WF6-004	Screw	2	
33	3KT2-004	Cushion	4	
34	33TF-004	Bolt	12	
35	60WF6-001	Oil pan	1	
36	3KT2-001	Machine head supporter	1	
37	52WF3-026	Link plate	1	
38	18WF1-016	S-hook	1	
39	53WF3-030	Screw	1	
40	52WF3-027	Screw	2	