

3500SD

INDUSTRIAL SEWING MACHINES

INSTRUCTION MANUAL AND PARTS BOOK



In this manual, you'll find instructions on how to use and prepare your machine.

To watch the videos for 3500SD, please visit www.youtube.com/@ReliableCorporation for a complete video playlist.



CONTENTS

1.	Attention before operation	5
2.	Caution in using	5
3.	Lubrication	6
4.	Adjusting oil flow for the rotating hook	6
5.	Mounting the needle	7
6.	Loading the bobbin	7
7.	Threading the needle	8
8.	Winding the bobbin thread	9
9.	Lifting of presser foot	9
10.	Adjusting the stitch length	10
11.	Built-in LED light	10
12.	Adjusting the presser foot pressure	10
13.	Adjusting the tension of stitch thread	11
14.	Adjusting the take-up spring	12
15.	Operating the treadle	12
16.	Adjusting the height of the needle bar	13
17.	Index Stitching	13
18.	Programming	14-16
19.	Parts Book	17-40

1. Attention before operation

1. Before you put the machine into operation for the first time after the set-up, clean it thoroughly.
2. Though every machine is strictly inspected and tested before leaving Reliable, the machine parts may be loose or after long distance transportation due to jolt. A thorough examination must be performed after cleaning the machine. Turn the balance wheel to see if there loose, uneven resistance or abnormal noise. If these exist, adjustment must be made accordingly before the machine is operated.
3. Never operate the machine without lubricating the oil pan.
4. Confirm the power plug has been properly connected to the power supply.
5. The rotation of the sewing machine is counterclockwise as observed from the hand-wheel side.

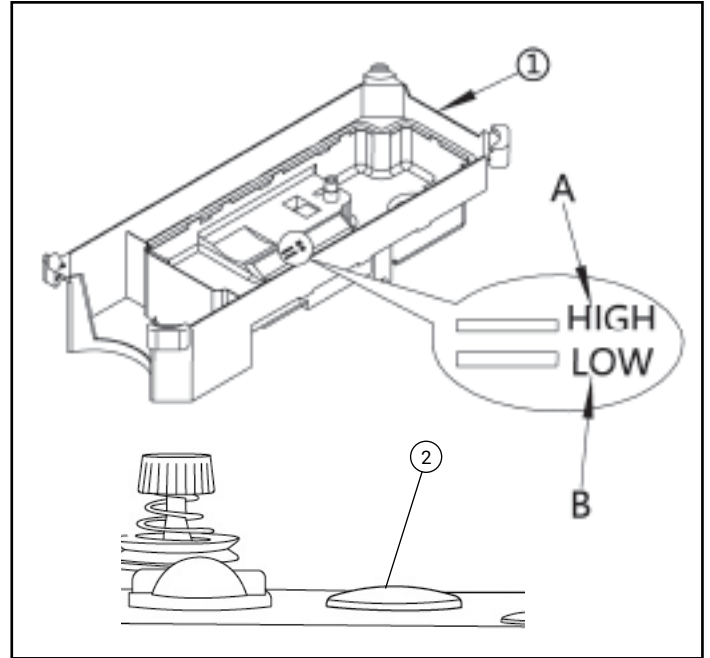
2. Caution

1. To avoid personal injury, never put your hand under the needle when you turn "ON" the power switch or operate the machine.
2. To avoid personal injury, never put your fingers into the thread take-up cover while the machine is in operation.
3. To avoid possible accidents because of abrupt start of machine, turn OFF the power of the machine before tilting the sewing machine head.
4. Always turn OFF the power when leaving the machine.
5. To avoid personal injury, never operate the machine with any of the safety devices removed.
6. Never clean the surface of the machine head with paint thinner or similar chemical.

3. Lubrication

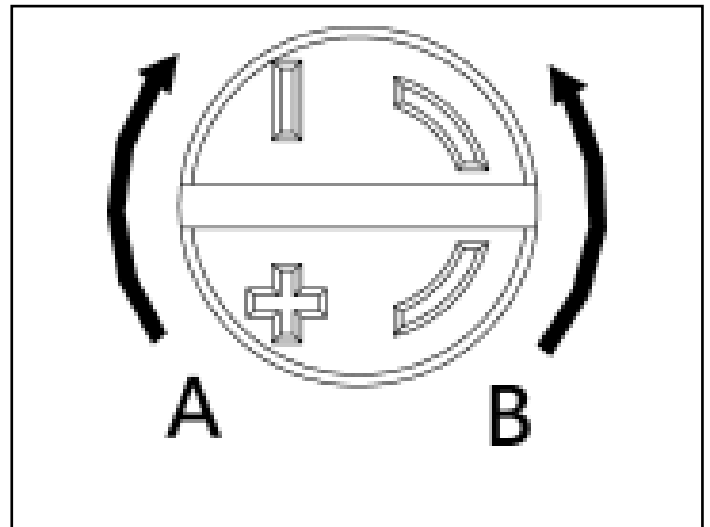
1. Fill oil pan (1) with machine oil up to HIGH mark (A).
2. When the oil level drops below the LOW mark (B), refill the oil pan with the specified oil.
3. When you operate the machine after lubrication, you will see splashing oil through the sight window (2).

Caution: When you first operate your machine after setup, please ensure that you see the oil splashing through the window. Please note that it may take a minute or so for the oil to work its way up from bottom.



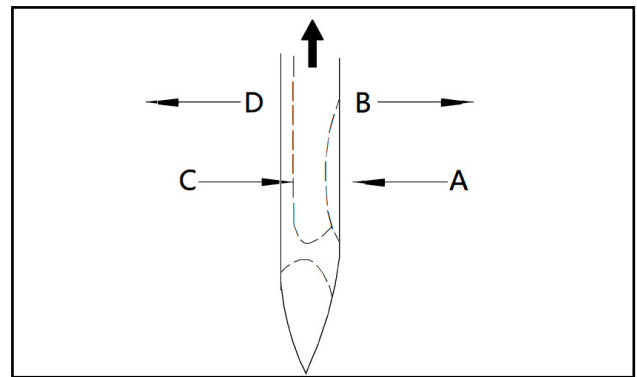
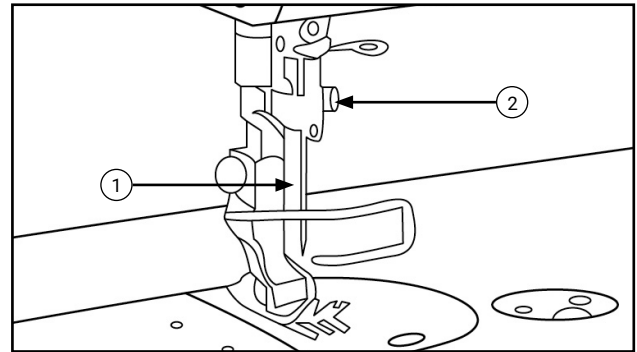
4. Adjusting oil flow for the rotating hook

1. Turning the screw clockwise will increase the amount of oil going into the rotating hook. Turning the screw counterclockwise will decrease the amount of oil going into the hook.
2. Check the lubrication amount again after adjusting the flow of the oil to see if the rotating hook has been properly set.



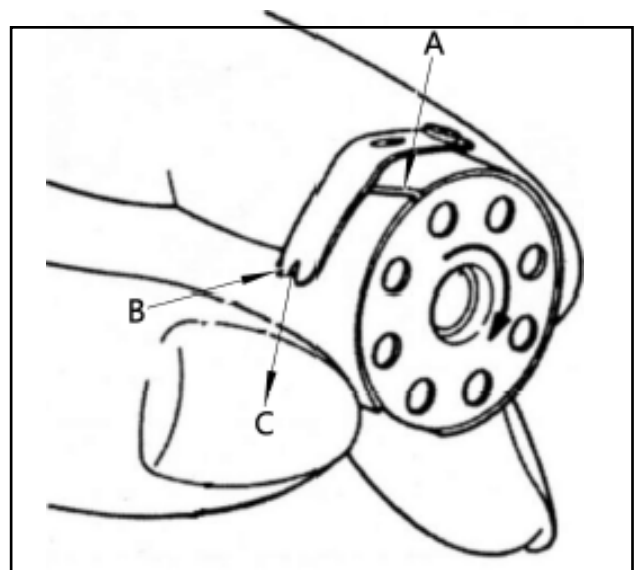
5. Mounting the needle

1. Turn the hand wheel counterclockwise until the needle stops at its maximum height.
2. Loosen needle screw (2) using a screwdriver provided with the machine.
3. Insert the needle (1) into the bottom of needle bar in direction of arrow till it reaches the end point.
4. Ensure that the cut out or scarf (A) is to the right and the long groove (C) to the left.
5. Tighten the needle screw (2).



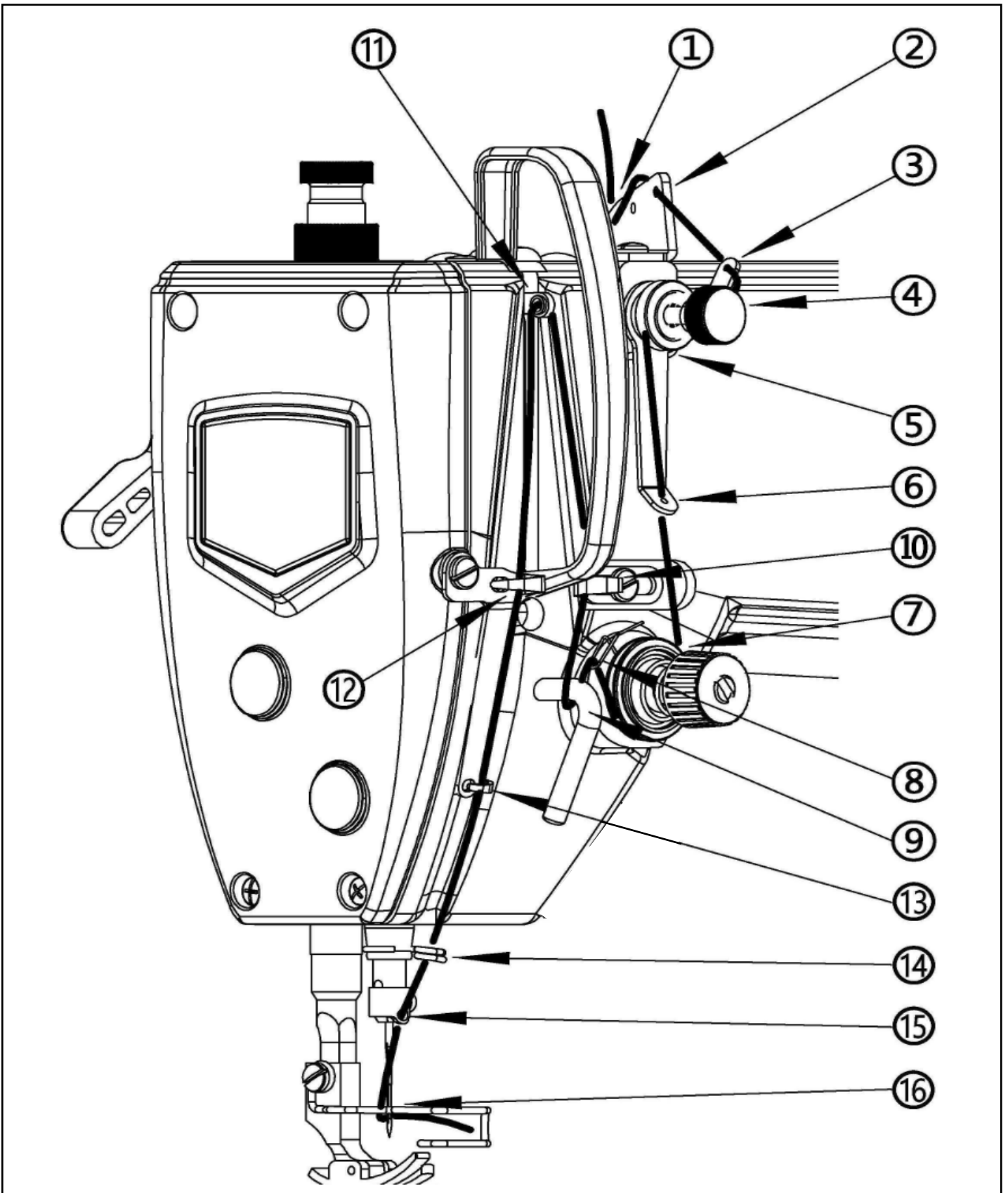
6. Loading the bobbin

1. Load the bobbin into the bobbin case.
2. Feed the thread through slot A of the bobbin case then securing the thread under the tension spring C. In this way, the thread is led out of hole B through the tension spring.
3. When bobbin thread is drawn, the bobbin will turn clockwise in direction of arrow.



7. Threading the needle

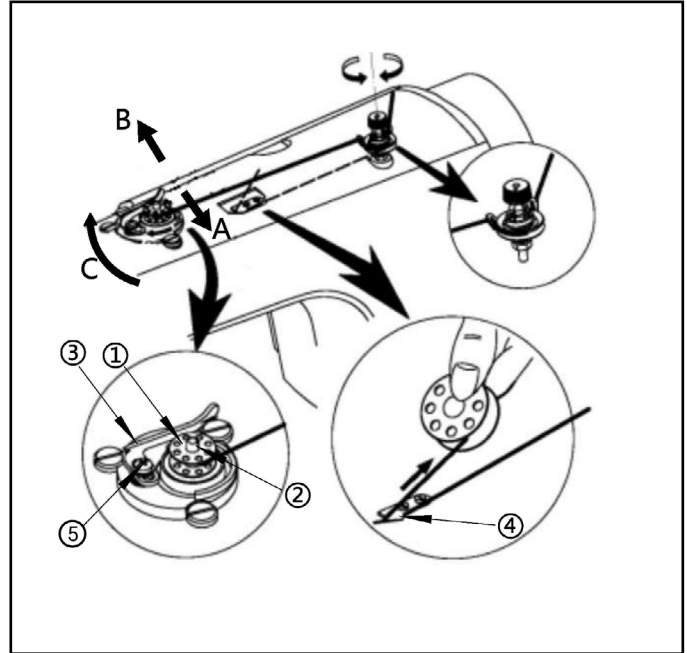
Raise the needle bar so it stays at its highest position and lead the thread from the thread stand in the order as shown in the figure.



8. Winding the bobbin

Bobbin thread winding-up method

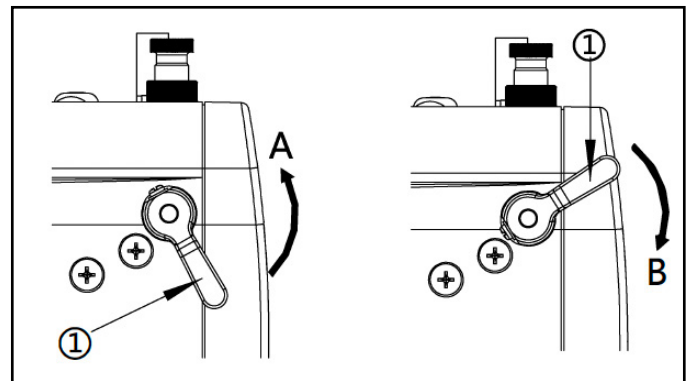
1. Insert bobbin (1) onto the bobbin winder post (2).
2. Feed the thread through the tension assembly. Wind the thread onto the bobbin clockwise for several turns.
3. Push winding lever (3) into the bobbin. The bobbin (1) is rotated in direction C and thread is reeled onto bobbin (1). Once the bobbin is full, winding lever (3) is pushed towards direction B and winding is over.
4. Remove bobbin (1) and trim off the thread using thread cutter (4).



9. Lifting of presser foot

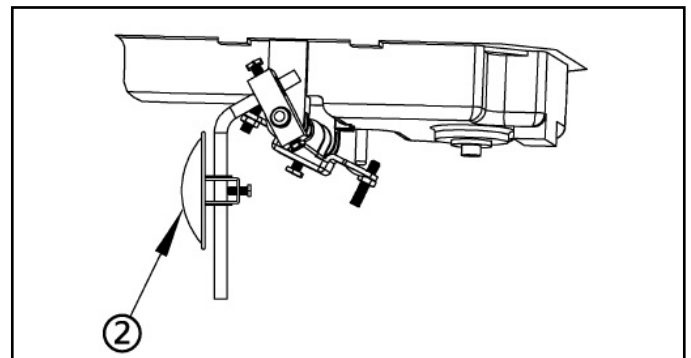
1) Lift presser foot controlled by hands

1. Turn presser foot lever (1) in direction A to lift the presser foot.
2. When presser foot lever (1) is turned in direction B, presser foot will be returned to its original position.



2) Lift presser foot controlled by knees

1. Press knee lever (2) to lift the presser foot (for about 13 mm).

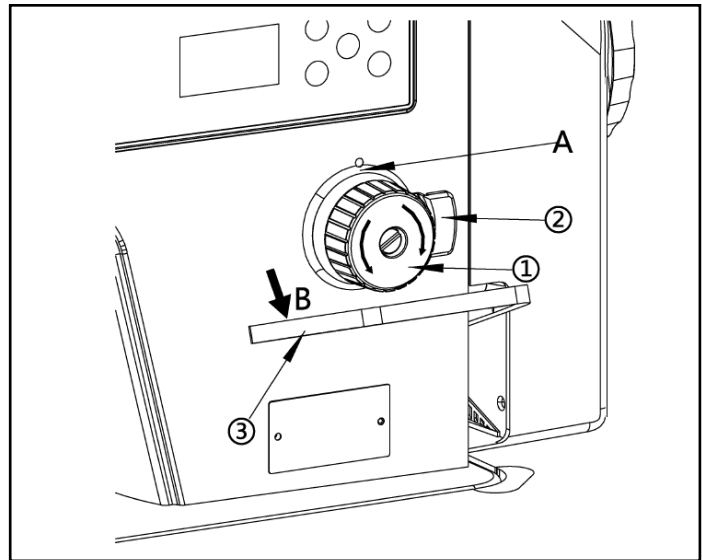


10. Adjusting the stitch length

Press locking lever (2) to rotate the stitch dial (1).

Rotate stitch dial (2) counter-clockwise for a larger stitch and rotate the stitch dial clockwise for a smaller stitch, as per the digits marked on the stitch dial.

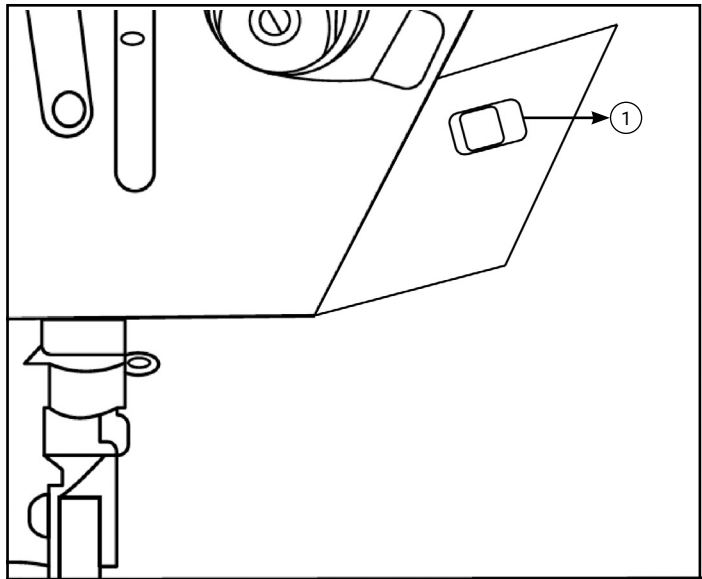
Pushing down on the reverse lever (3) will make it easier to change the stitch length.



11. Built-in LED light

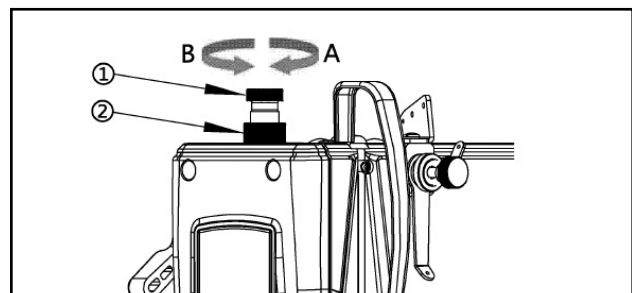
The sewing machine comes with a built-in LED light.

Simply, slide the light button (1) to illuminate and slide it back to turn off.



12. Adjusting the presser foot pressure

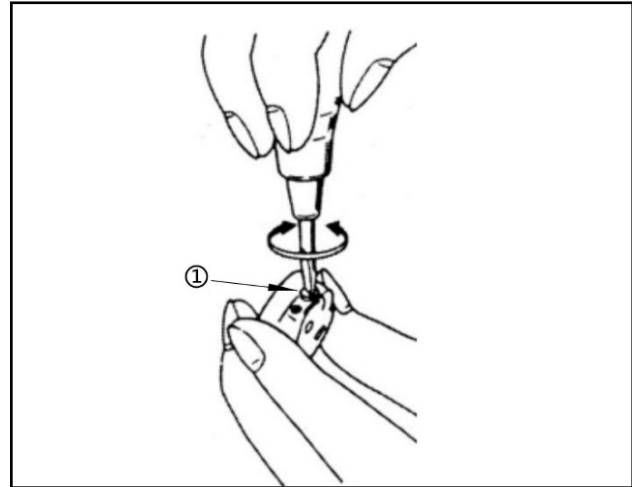
1. Loosen locking nut (2).
2. Turn (1) screw in clockwise direction (A) to increase the pressure on the foot.
3. Turn (1) screw in counterclockwise direction (B) to decrease the pressure on the foot.



13. Adjusting the tension of stitch thread

1) Adjusting the tension of bobbin thread

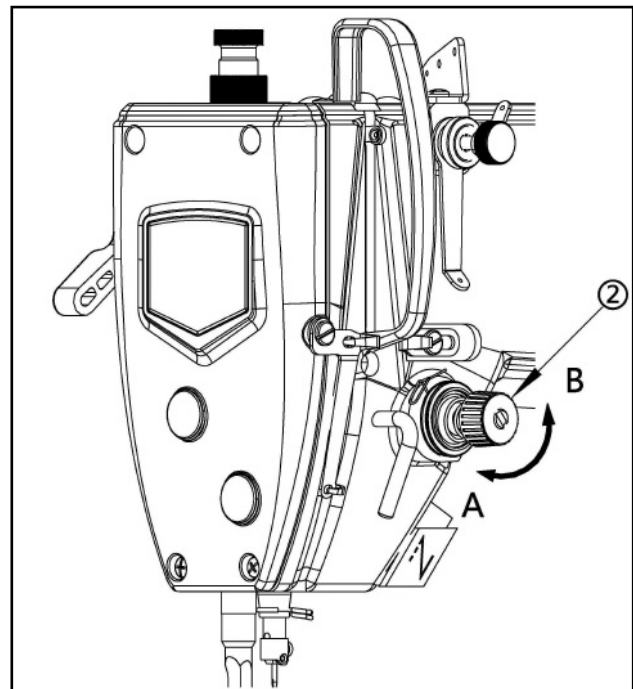
1. Hold the bobbin case and use the adjusting large rotating screw (1) to regulate.
2. Turn the screw in clockwise direction (A) to increase the tension. Turn (1) screw in counterclockwise direction (B) to decrease the tension.



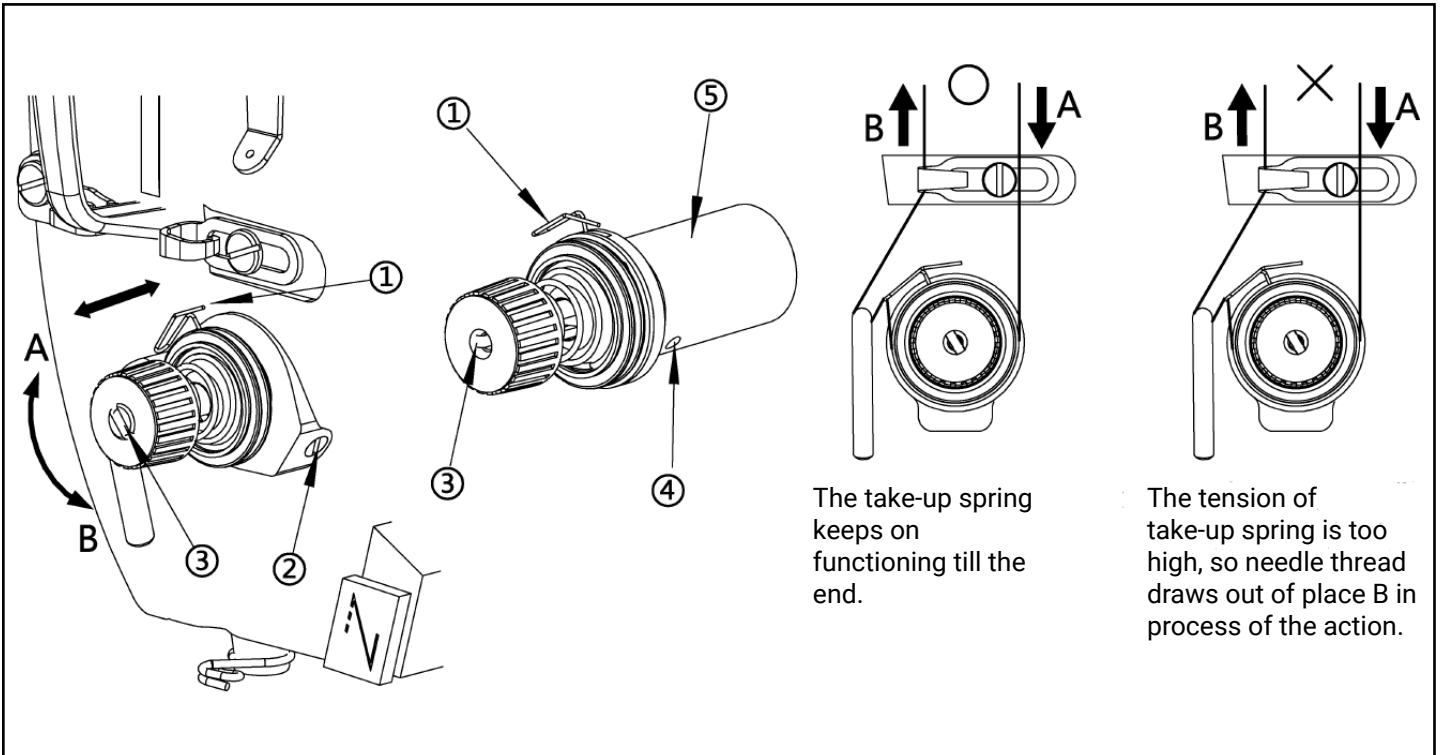
2) Adjusting the tension of needle thread

After the lower thread tension is adjusted, adjust the upper thread tension so that a good, even stitch is obtained.

1. Lower the presser foot.
2. Adjust by turning the tension nut (2): to increase the tension of the upper thread, turn the nut clockwise (A). To decrease the tension of the upper thread, turn the nut counterclockwise (B).



14. Adjusting the take-up spring

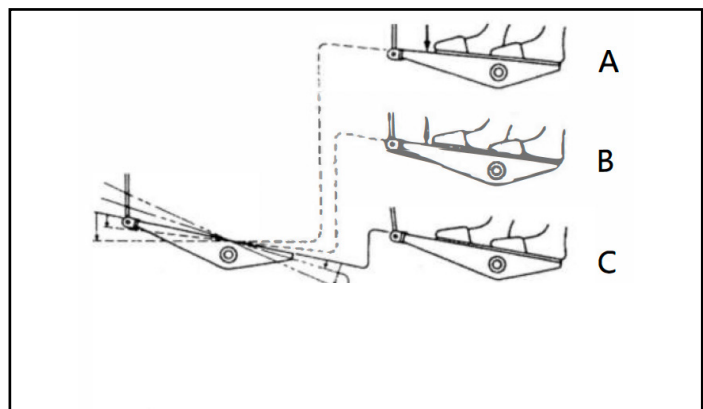


1. Loosen screw (2) and remove the check-spring assembly (5).
2. Loosen screw (4) to adjust the check-spring.
3. Rotate the post (3) clockwise to increase the check-spring tension. Rotate the post (3) counter-clockwise to decrease it.
4. Tighten screw (4) to lock in the check-spring tension.

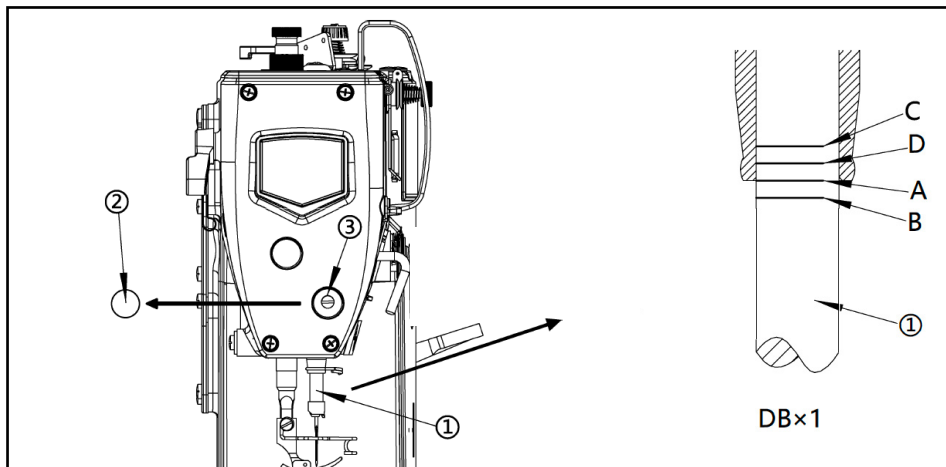
15. Operating the treadle

The treadle has 3 operation levels:

1. The machine runs at low sewing speed when you partially press the front part of the pedal (A).
2. The machine runs at high sewing speed when you fully press the front part of the pedal (B).
3. When you stop sewing and press the pedal back, the machine will go into home position (C).



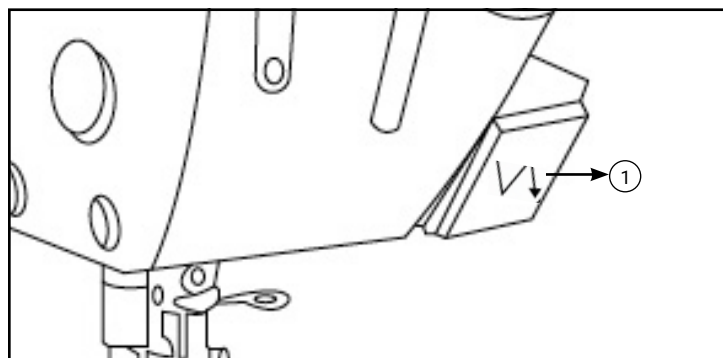
16. Adjusting the height of the needle bar



1. Turn the machine hand wheel to set the needle bar (1) to its lowest position.
2. Remove the rubber cap (2) from the face plate.
3. Loosen the needle bar locking screw (3) of needle bar, through moving the needle bar (1) up and down to adjust, when using needle DBx1, the mark A on the needle bar (1) should match to the bottom of needle bar lower bushing.
4. Tighten the needle bar locking screw (3) after adjusting.

17. Index Stitching

Press the index stitch button (1) to activate a stitch. Hold for continuous sewing.



Programming 3500SD

Safety Precautions

Please read the operation manual and related sewing machine datasheet carefully for correct use.

1. Power voltage and frequency: please refer to motor and control box nameplate.
2. Interference from electromagnetic wave: please keep far away strong magnetic or high radiation environment in order to avoid obstructions and make to misoperation.
3. Grounding: to avoid the noise obstructions or leakage of electricity accident (including sewing machine, motor, control box and positioner).
4. Please make sure power is off for at least 1 min and then open control box cover because of dangerous high voltage.
5. Please turn off the power while repairing or wearing needle in order to protect operator's safety.
6. Product warranty period of one year on condition that this machine is operated correctly and no man-made damage.

Basic Operation

Adjusting the Sewing Speed

1. Press \uparrow or \downarrow to adjust speed.
2. Press S to set.

Note: The maximum speed is 3700 RPM. The recommended speed setting is 2800 RPM.

Setting the Needle Position

Simply, press the \updownarrow key to set up/down position of the needle, which allows for accurate corner stitching.

Setting the Slow Start

1. Switching the slow start on

1. Press P , the programming screen will display P-01.
2. Press the \downarrow key until the programming screen display P-03, which is the parameter for switching on slow start. Press S .
3. The screen will display either '0' or '1'. Use the \uparrow key until the screen displays '1'. Once done, press S . This will switch the slow start on.

2. Setting the speed for slow start

1. Press P , then press the \downarrow key until the programming screen displays P-04. This is the parameter for setting the speed of the slow start.
2. Press S . The screen will display the speed for slow start, which ranges from 200-1500 RPM.
3. Press the \uparrow or \downarrow until the screen displays your desired speed.
4. Press S to save. This will set the speed of the slow start.

3. Setting the number of stitches in slow start

1. Press **(P)**, then press the **(V)** key until the programming screen displays P-05. This is the parameter for setting the number of stitches in the slow start.
2. Press **(S)**. The screen will display the number of stitches you want in the slow start, which ranges from 1 to 15.
3. Press the **(^)** or **(V)** keys until the screen displays your desired number of stitches.
4. Press **(S)** to save.

4. Activating slow start

Press **(R)** to activate slow start. Press again to deactivate it.

Resetting the machine

Turn the machine off. Hold the **(<)>** keys down while turning the machine on. After 3 seconds, release the **(<)>** keys and then, press the **(S)** key to set.

Error Codes

Error code	Fault content	Reason	Inspection items and how to fix
E-01	System voltage is too high	Actual voltage is too high Brake circuit failure Incorrect voltage detection	Whether the incoming line voltage of the system is too high Whether the braking resistor is working properly Whether the system voltage detection circuit works normally
E-02	System voltage is too low	Actual voltage is low Incorrect voltage detection	Whether the incoming line voltage of the system is too low Whether the system voltage detection circuit works normally
E-03	Operation box communication is poor	The communication data of the head operation box is lost	Whether the operation box plug is in good contact Whether the operation box device is damaged Whether the operation box program has been burned
E-05	Pedal ID failure	Pedal recognition failure	Loose pedal joint
E-07	Motor overload	Motor blocked, Motor overload	Whether the motor plug is in good contact Whether the machine head or trimming mechanism is stuck Whether to sew fabrics above the specification thickness Whether the current detection signal is normal
E-09, E11	Motor signal failure	Motor positioning signal failure	Whether the motor encoder interface is in good contact Whether the needle stop substrate is installed in place
E-14	Encoder signal is abnormal	Motor sensor signal failure Motor power cable is damaged	Whether the motor encoder interface is in good contact Whether the motor interface is in good contact
E-15	Motor current is too large	Current detection is abnormal The motor is running abnormally	Whether the system current detection circuit is working normally Whether the motor signal is normal
E-17	Flip switch failure	Flip switch effective	Put down the machine head or check the flip switch
E-22	OZ loop failure	OZ loop detection abnormal	Check whether the OZ circuit is normal

Note: If the above faults cannot be eliminated according to the inspection items, please contact technical support.

Parameter List

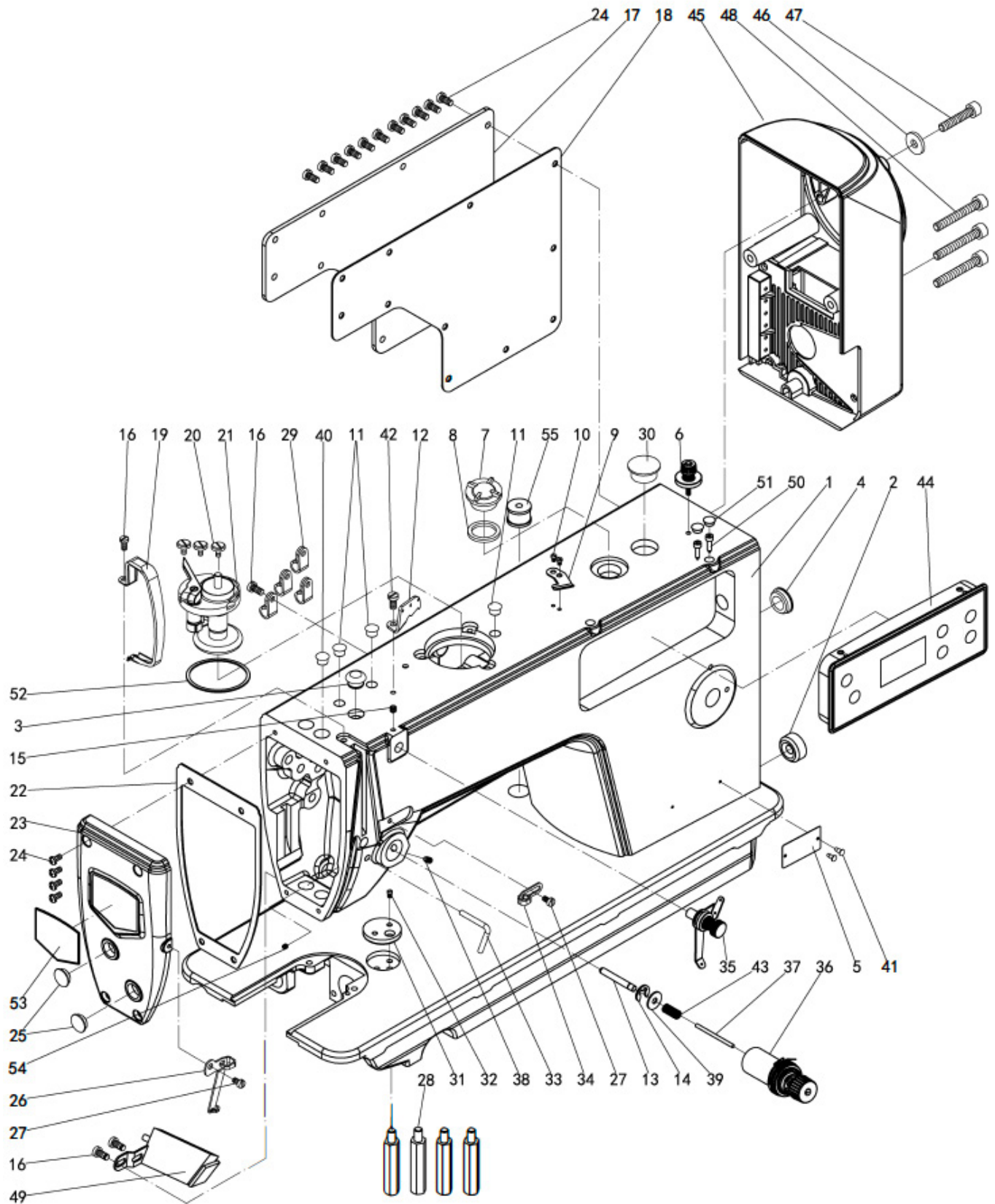
Parameter item	Description	Range	Initial value	Content value name description and remarks
P01	Maximum speed	200-3700 RPM	3700 RPM	Maximum speed setting during sewing
P02	Synchronizer selection	0-2	1	"0" mean Needle up,"1" mean Needle down ,"2" mean without signal
P03	Soft start switch	0-1	0	"0" mean open, "1" mean turn off
P04	Soft start Speed	200-1500 RPM	400	Soft start speed function setting
P05	Number of soft start pins	1-15	1	1-15 Number of soft start pins
P06	Minimum speed	200-500 RPM	200	Minimum speed setting during sewing
P07	Upper needle position adjustment	0-23	0	machine head position adjustment
P08	Down needle position adjustment	0-23	12	Position adjustment of lower needle stop
P09	Automatically find the needle position when starting up	0-1	1	"0" mean can't find upper needle position adjustment,"1" mean find upper needle position adjustment
P10	Machine head protection switch detection	0-2	1	"0" mean no detection,"1"Detect zero signal,"2" mean Detect positive signal
P11	Acceleration curve adjustment	1-100	32	Speed controller acceleration and climb slope setting
P15	Needle supplement method	0-3	3	"0" mean Half stitch,"1" mean One stitch,"2" mean Continuous half stitch,"3"Continuous one stitch
P21	Motor running direction	0-1	1	"0" mean Clockwise,"1" mean Counterclockwise
P22	Automatically running speed	200-3700 RPM	3500 RPM	Setting automatically check speed
P23	Automatic running time	1-250	20	Automatic running-in time setting
P24	Automatic stop time	1-250	20	Automatic running-in pause time setting
P25	Continuous running test	0-1	0	Speed continuous operation "0" mean turn off,"1" open
P26	Intermittent running and testing	0-1	0	Perform positioning cycle operation, "0" mean turn off,"1" open
P36	Model selection	1	1	Model replacement

Note: If the above parameters do not match the actual parameters, please work according to the machine's parameters.

PARTS BOOK

Please confirm the relative applications, reference number and part number when buying the parts.

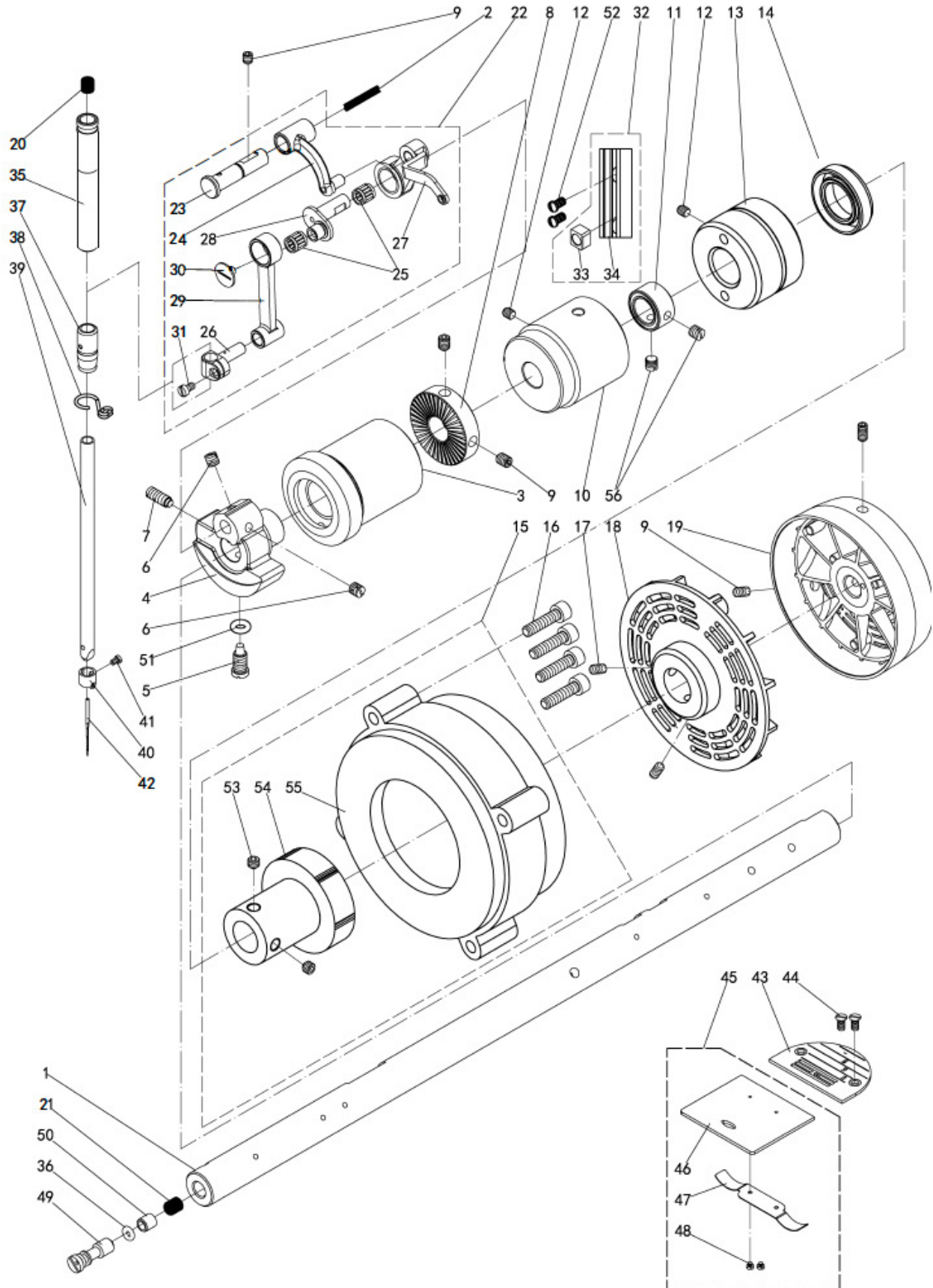
1. Machine frame mechanism



1. Machine frame mechanism

No.	Part No.	Qty.	Description
1	312110001	1	Frame
	312110010	1	Frame
2	307010014	1	Plug
3	306010008	1	Plug
4	302010048	1	Plug
5	402020047	1	Type plate
6	306020003	1	Thread tension asm.
7	306010009	1	Oil window
8	306010010	1	Rubber ring
9	502070009	1	Thread Cutter
10	404450033	2	Screw SM9/64×40 L=5
11	306010026	3	Plug
12	306010029	1	Thread guide
13	306010012	1	Pin
14	404610001	1	E-ring
15	404440005	1	Screw SM11/64×40 L=5
16	404420008	4	Screw SM3/16×28 L=6
17	302910110	1	Side plate
18	307010018	1	Side plate gasket
19	302010128	1	Thread take-up lever cover
20	404450023	3	Screw M5 L=10
21	302010023	1	Bobbin wider asm.
22	312010003	1	Face plate gasket
23	312010002	1	Face plate
24	404420009	15	Screw SM3/16×28 L=9
25	306010028	2	plug
26	306010149	1	Thread guide
27	404450021	2	Screw SM11/64×40 L=6
28	306010030	4	Frame leg
29	206115	4	Clip
30	306010027	1	Plug
31	307010007	1	Ruler plate
32	404450024	1	Screw SM11/64×40 L=5
33	306010002	1	Thread guide
34	306010031	1	Thread guide
35	306020004	1	Upper thread take-up device asm.
36	306020032	1	Thread tension asm.
	302010068	1	Thread tension asm.
37	306010033	1	Pin
38	404440007	1	Screw SM15/64×28 L=10.5
39	302010074	1	Oil pad
40	404130001	1	Plug
41	401040041	2	Rivet
42	404420024	1	Screw SM11/64×40 L=8
43	306010055	1	Spring
44	312020004	1	Display operation panel component
45	312020005	1	Electronic control box asm.
46	404210011	1	Washer ø5.5×ø10×1
47	404430023	1	Screw M5 L=20
48	404430032	3	Screw M5 L=35
49	302030003	1	Automatic reverse seam switch asm.
50	404430036	2	Screw M3 L=12
51	404130007	2	Plug
52	306010132	1	Oil gasket
53	402020052	1	Type plate
54	4543	1	Screw M4 L=4
55	307010011	1	Plug

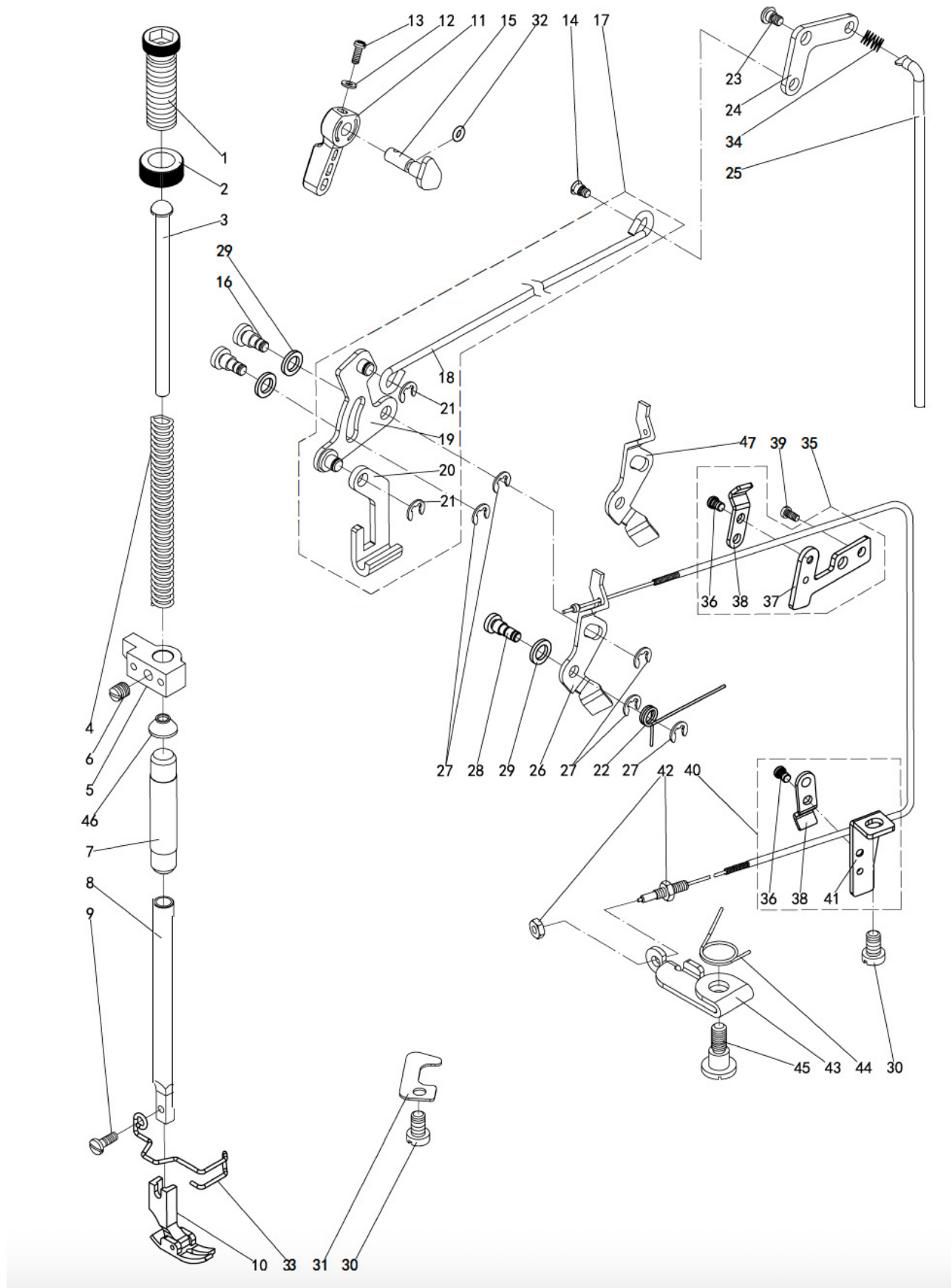
2. Main shaft and thread take-up & needle bar mechanism



2. Main shaft and thread take-up & needle bar mechanism

No.	Part No.	Qty.	Description
1	302020026	1	Main shaft
2	109010519	1	oil line
3	307010015	1	Sleeve
4	301010036	1	Needle bar crank
	306010021	1	Needle bar crank
5	306010042	1	Screw SM9/32×28
6	404440008	2	Screw SM1/4×40 L=6
7	306010043	1	Screw SM9/32×28 L=16
8	302010024	1	Winder drive wheel
9	4572	5	Screw M5 L=10
10	302010038	1	Sleeve
11	306010035	1	Collar
12	404440006	2	Screw SM15/64×28 L=10.5
13	307010016	1	Shaft sleeve
14	307010041	1	Oil seal $\phi 15 \times \phi 27 \times 7$
15	307010005	1	Motor
16	404430014	4	Screw M5 L=30
17	4522	2	Screw M6 L=6
18	307010006	1	Blades
19	307910004	1	Head wheel
20	302010077	1	Felt
21	302010076	1	Flet
22	301010048	1	Thread take-up lever asm.
	307020030	1	Thread take-up lever asm.
23	-	1	Connecting rod pin
24	-	1	Connecting rod
25	-	2	Needle bearing
26	-	1	Needle bar holder
27	-	1	Thread take-up lever unit
28	-	1	Thread take-up crank
	-	1	Thread take-up crank
29	-	1	Connecting rod
30	-	1	Screw 9/64×40 L=6
31	-	1	Screw SM9/64×40 L=7
32	301010047	1	Slider
33	-	1	Slider
34	-	1	Slider
35	301010018	1	Sleeve
36	404110008	1	O-ring
37	301010019	1	Sleeve
	302010064	1	Sleeve
38	302010065	1	Thread guide
39	301010303	1	Needle bar
40	301010020	1	Thread guide
41	404450049	1	Screw SM1/8×44 L=4
42	502020016	1	Needle-DBX1/14
	502020015	1	Needle-DBX1/18
43	307010012	1	Needle plate
44	5484	2	Screw SM11/64×40 L=9
45	306020005	1	Push plate asm.
46	-	1	Push plate
47	-	1	Push plate spring
48	-	2	Screw SM3/32×56 L=2
49	306010076	1	Oil amount adjusting pin
50	306010077	1	Rubber ring
51	404110009	1	O-ring
52	404450011	2	Screw SM9/64×40 L=7.5
53	-	2	Screw M6 L=6
54	-	1	Motor rotor
55	-	1	Motor stator
56	302010616	2	Screw SM1/4×40 L=6

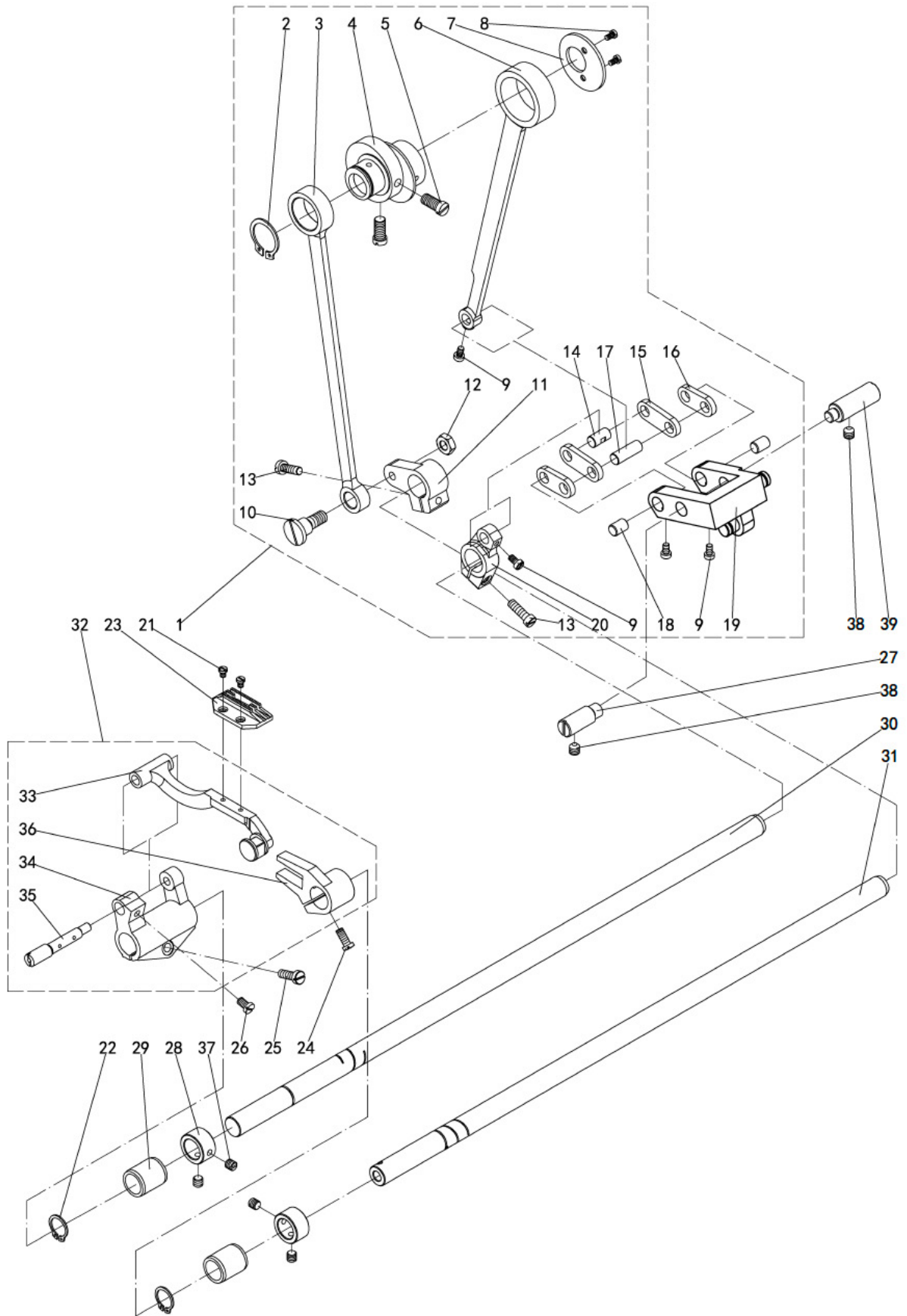
3. Hang lifter mechanism



3. Hang lifter mechanism

No.	Part No.	Qty.	Description
1	307010010	1	Pressure adjusting screw
2	307010019	1	Pressure adjusting nut
3	306010046	1	Pressure guide bar
4	306010047	1	Spring
	306010093	1	Spring H
5	301010045	1	Pressure guide bar bracket
6	404440010	1	Screw SM1/4×40 L=8
7	301010046	1	Sleeve
8	301010044	1	Presser bar
9	404450025	1	Screw SM9/64×40 L=10.5
10	302010049	1	Presser food asm.
	302010063	1	Presser food asm.H
11	301010028	1	Hand lifter
12	301010031	1	Washer $\phi 3.7 \times \phi 8 \times 0.8$
13	404420010	1	Screw SM9/64×40 L=10
14	306010049	1	Screw
15	306010011	1	Hand lifter CAM
16	306010051	2	Screw
17	301010014	1	Lifting cross rod asm.
18	-	1	Lifting lever connecting rod
19	-	1	Hand lift link
20	-	1	Lifting lever
21	-	2	E-ring
22	306010052	1	Spring
23	404410005	1	Screw
24	301010015	1	Lifting lever link
25	301010016	1	Mandril
26	306020053	1	Thread tension release wire asm.
27	404610003	5	E-ring
28	306010050	1	Screw
29	306010056	3	Seal ring
30	404420011	2	Screw SM15/64×28 L=8
31	306010057	1	Wire cable holder
32	301010030	1	O-ring
33	302010071	1	Hand guard
34	306010448	1	Spring
35	306020006	1	Thread tension release wire holder
36	-	2	Screw SM11/64×40 L=7
37	-	1	Wire holder bracket
38	-	2	Wire holder
39	404420008	1	Screw SM3/16×28 L=6
40	306020007	1	Thread tension release wire holder
41	-	1	Wire holder bracket
42	404510006	2	Nut SM3/16×32
43	306010094	1	Thread loose seat
44	306010095	1	Spring
45	404410009	1	Screw
46	306010143	1	Oil seal
47	306010053	1	Thread tension release wire asm.

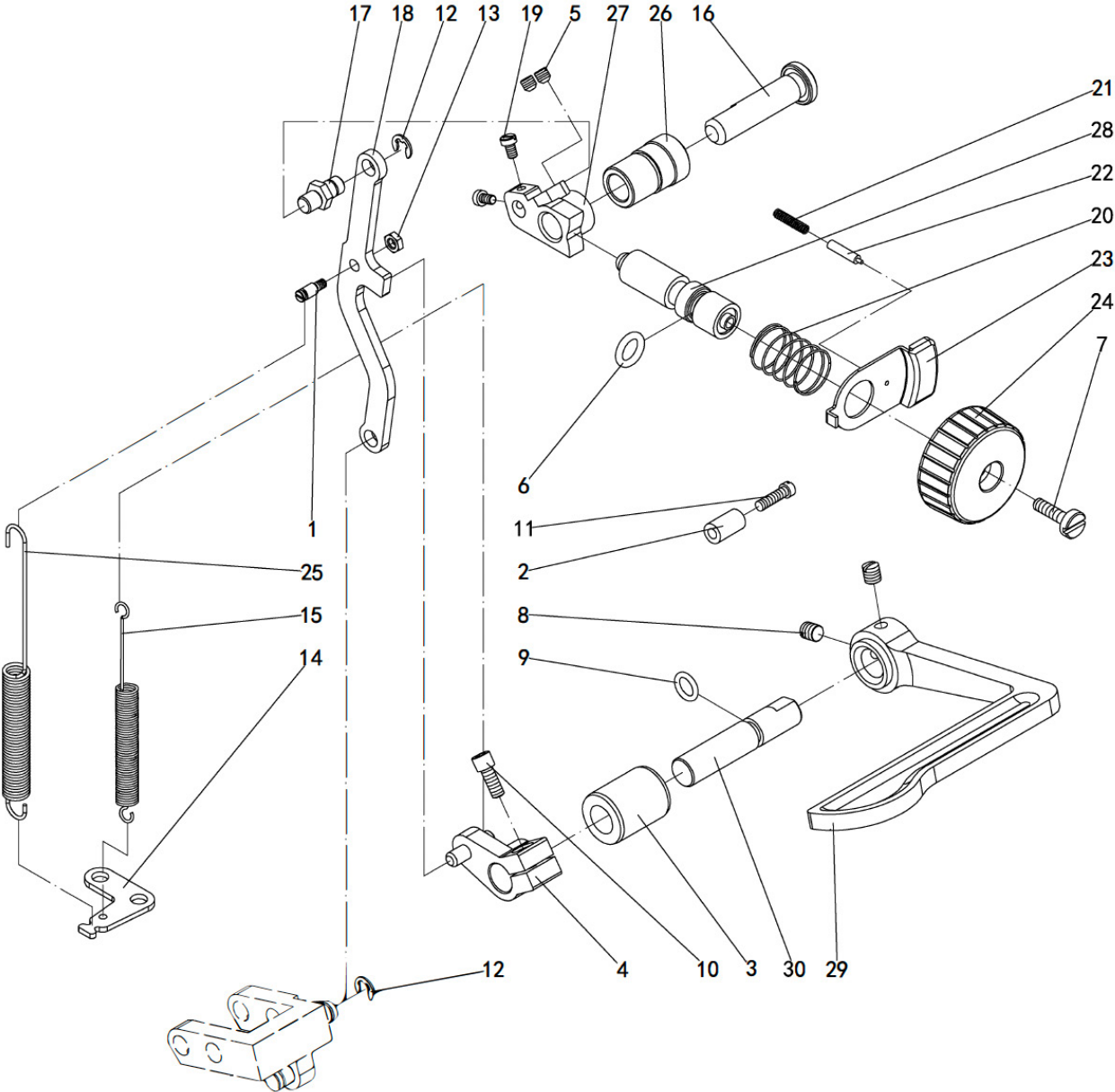
4. Feed mechanism



4. Feed mechanism

No.	Part No.	Qty.	Description
1	302010052	1	Feeding assembly
	302110052	1	Feeding assembly H
2	-	1	External Circlips $d_0=20$
3	-	1	Lifting link
4	-	1	Feeding eccentric CAM
	-	1	Feeding eccentric CAM H
5	-	2	Screw SM1/4×40 L=13
6	-	1	Feeding link
7	-	1	Feeding eccentric CAM cover
8	-	2	Screw SM9/64×40 L=6
9	404450014	4	Screw SM9/64×40 L=6
10	-	1	Axial screw
11	-	1	Lift link crank
12	-	1	Screw SM9/32×28
13	404450026	2	Screw SM3/16×28 L=14
14	-	1	Feeding rod crank pin
15	-	2	Feeding long swing plate
16	-	2	Feeding short swing plate
17	-	1	Feeding rod pin
18	-	2	Feed short swing plate connecting pin
19	-	1	Feed swing plate seat unit
20	-	1	Feed rod crank
21	404450036	2	Screw SM1/8×44 L=6
22	404620003	2	External Circlips $d_0=15$
23	307010013	1	Feeding dog
	306010161	1	Feeding dog
24	404450027	1	Screw SM11/64×40 L=10.5
25	404450026	1	Screw SM3/16×28 L=14
26	404450028	1	Screw SM11/64×40 L=8
27	306010060	1	Feeding swing base pin
28	301010011	2	Collar
29	302010036	2	Sleeve
30	302010030	1	Feed shaft
31	301010013	1	Lifting shaft
32	302010051	1	Feed bar asm.
	302010062	1	Feed bar asm. H
33	-	1	Feed bar unit
34	-	1	Feed bar driving crank
35	-	1	Pin
36	-	1	Lift fork crank
	-	1	Lift fork crank H
37	302010616	4	Screw SM1/4×40 L=6
38	404440006	2	Screw SM15/64×28 L=10.5
39	306010066	1	Feeding swing base pin

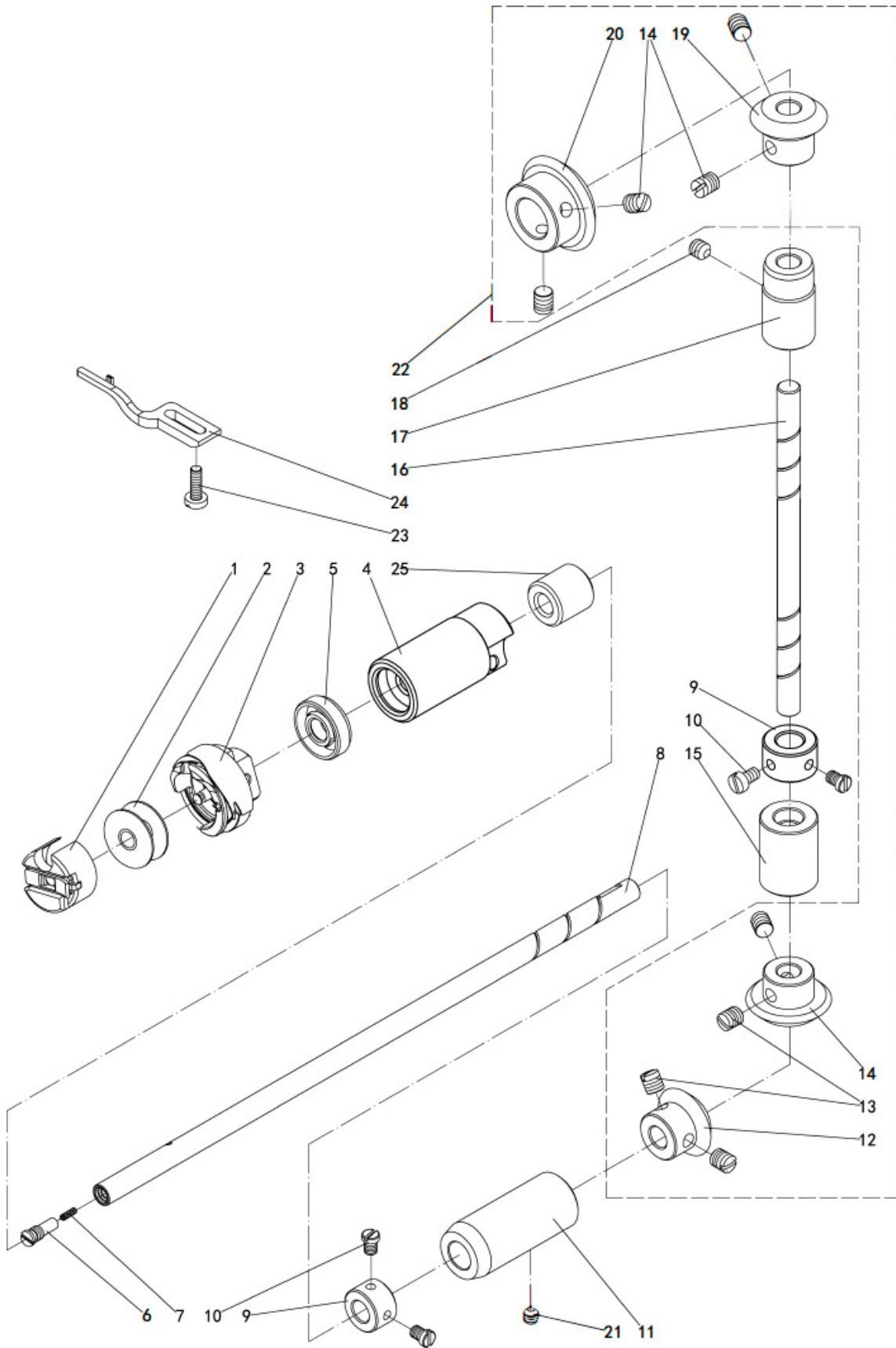
5. Feed adjusting mechanism



5. Feed adjusting mechanism

No.	Part No.	Qty.	Description
1	306010424	1	Rocker plate reset pin
2	306010065	1	Rubber sleeve
3	302010035	1	Sleeve
4	301010038	1	Reverse feed crank
5	4514	2	Screw M5 L=5
6	404110006	1	O-ring
7	404450029	1	Screw SM3/16×28 L=18
8	404440007	2	Scrc SM15/64×28 L=7
9	404110007	1	O-ring
10	404430024	1	Screw SM3/16×28 L=15.5
11	404450031	1	Screw SM3/16×28 L=18
12	404610003	2	E-ring
13	404510005	1	Nut SM11/64×40
14	306010058	1	Tension spring fixing plate
15	306010059	1	Spring
16	307010008	1	Feed regulator shaft
17	302010054	1	Reverse feed rod eccentric pin
18	306010430	1	Feed adjusting rod
	306010150	1	Feed adjusting rod
19	404450030	2	Screw SM9/64×40 L=6
20	302010044	1	Spring
21	10127010	1	Spring
22	306010062	1	Pin
23	306010063	1	Feed pitch adjustment button
24	306010064	1	Feed pitch adjustment knob
25	306010444	1	Spring
26	307010009	1	Sleeve
27	302010045	1	Feed regulator
	306010096	1	Feed regulator H
28	306010061	1	Feed adjusting bolt
29	302010565	1	Reverse feed wrench
30	302010028	1	Reverse feed shaft

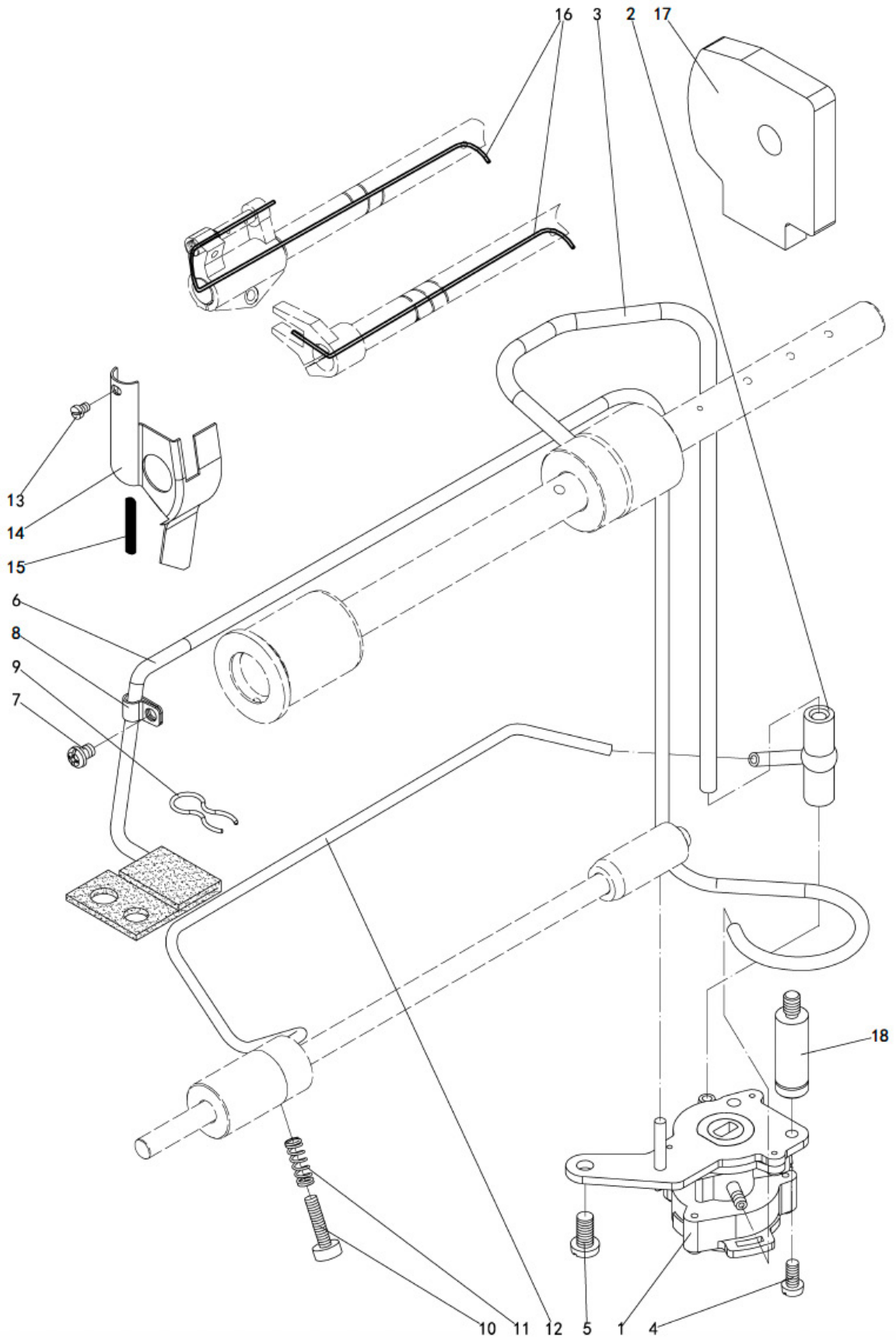
6. Hook of driving shaft mechanism



6. Hook of driving shaft mechanism

No.	Part No.	Qty.	Description
1	306010067	1	Bobbin case
2	306010069	1	Bobbin
3	302010079	1	Hook
	302010078	1	Hook H
4	307010022	1	Sleeve
	302010039	1	Sleeve
5	404120008	1	Oil seal
6	306010074	1	Hook driving shaft oil limit screw
7	306010075	1	Hook driving shaft oil limit wick
8	302010027	1	Hook driving shaft
9	306010073	2	Collar
10	404450032	4	Screw SM11/64×40 L=5
11	302010041	1	Sleeve
12	-	1	Bevel gear
13	404440010	8	Screw SM1/4×40 L=8
14	-	1	Bevel gear
15	302010034	1	Sleeve
16	302010029	1	Upright shaft
17	301010005	1	Sleeve
18	404440007	1	Screw SM15/64×28 L=7
19	-	1	Bevel gear
20	-	1	Bevel gear
21	404440006	1	-
22	307010142	1	Bevel gear group
23	5118	1	Screw SM11/64×40 L=12
24	306010082	1	Positioning finger
	306010097	1	Positioning finger H
25	302010040	1	Sleeve

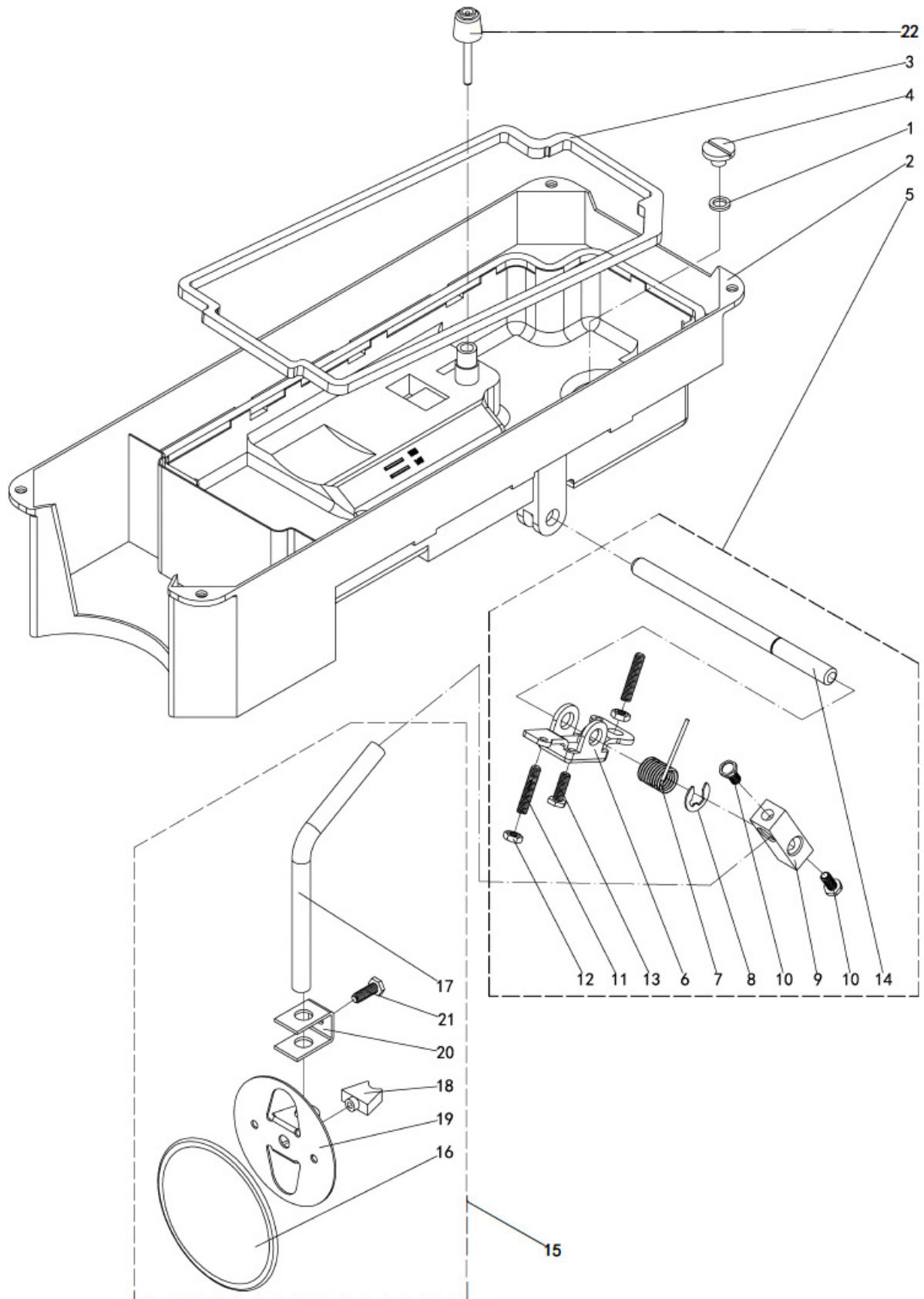
7. Lubrication mechanism



7. Lubrication mechanism

No.	Part No.	Qty.	Description
1	301010041	1	Lubricating oil pump asm
2	306010083	1	Rubber joint
3	306010086	1	Main shaft oil tube
4	5118	1	Screw SM11/64×40 L=12
5	404420011	1	Screw SM15/64×28 L=8
6	302010075	1	Oil felt
7	404420008	1	Screw MSM3/16×28 L=6
8	306010089	1	Oil return tube Holder
9	306010084	1	Oil felt presser
10	307010020	1	Oil adjusting screw SM15/64×28 L=24
	306010090	1	Oil adjusting screw SM11/64×40 L=19
11	307010021	1	Oil djusting spring
	306010085	1	Oil djusting spring
12	307010033	1	Oil tube
	306010088	1	Oil tube
13	404450022	1	Screw SM1/8×44 L=4
14	306010034	1	Arm oil shifld
15	202175	1	Oil line
16	202175	2	Oil line
17	306010092	1	Sponge
18	306010091	1	Screw

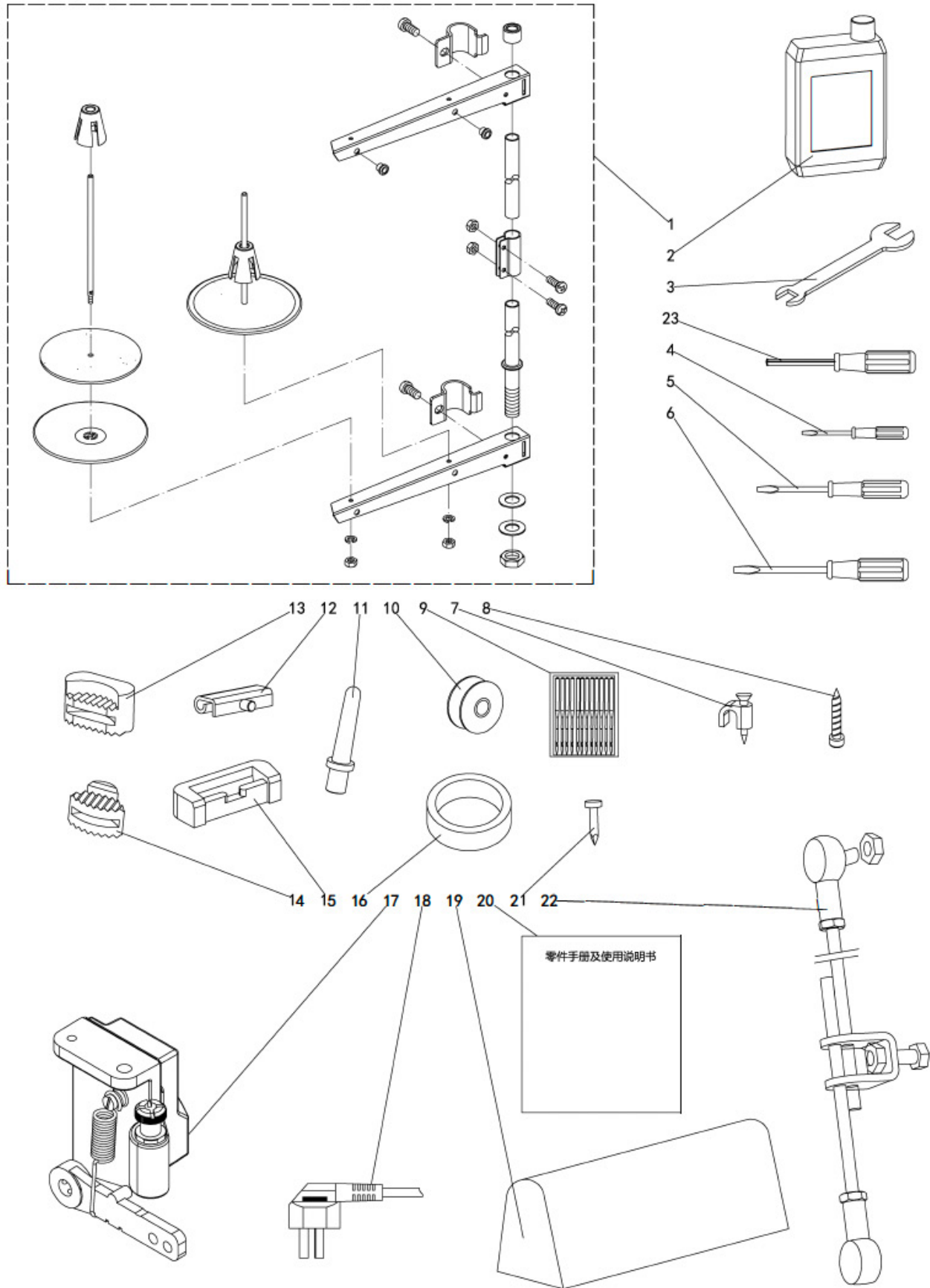
8. Oil reservoir and knee pan plate mechanism



8. Oil reservoir and knee pan plate mechanism

No.	Part No.	Qty.	Description
1	306010056	1	Rubber ring
2	301010024	1	Oil reservoir
3	301010025	1	Oil reservoir gasket
4	306010098	1	Screw SM5/16×24 L=7
5	306020099	1	knee lifting parts group
6	-	1	Knee lifting rotating arm
7	-	1	Spring
8	-	1	E-ring
9	-	1	Vertical shaft fitting arm
10	-	2	Screw M6 L=13
11	-	2	Screw M6 L=30
12	-	2	Nut M6
13	-	1	Screw M6 L=17.5
14	-	1	Knee press cross shaft
15	306010156	1	Knee pan plate asm
16	-	1	Knee pan plate cover
17	-	1	Knee pan upring shaft
18	-	1	Knee pan plate rubber
19	-	1	Knee pan plate
20	-	1	Knee pan plate support
21	-	1	Screw M6 L=12
22	306010103	1	Knee lifter push rod

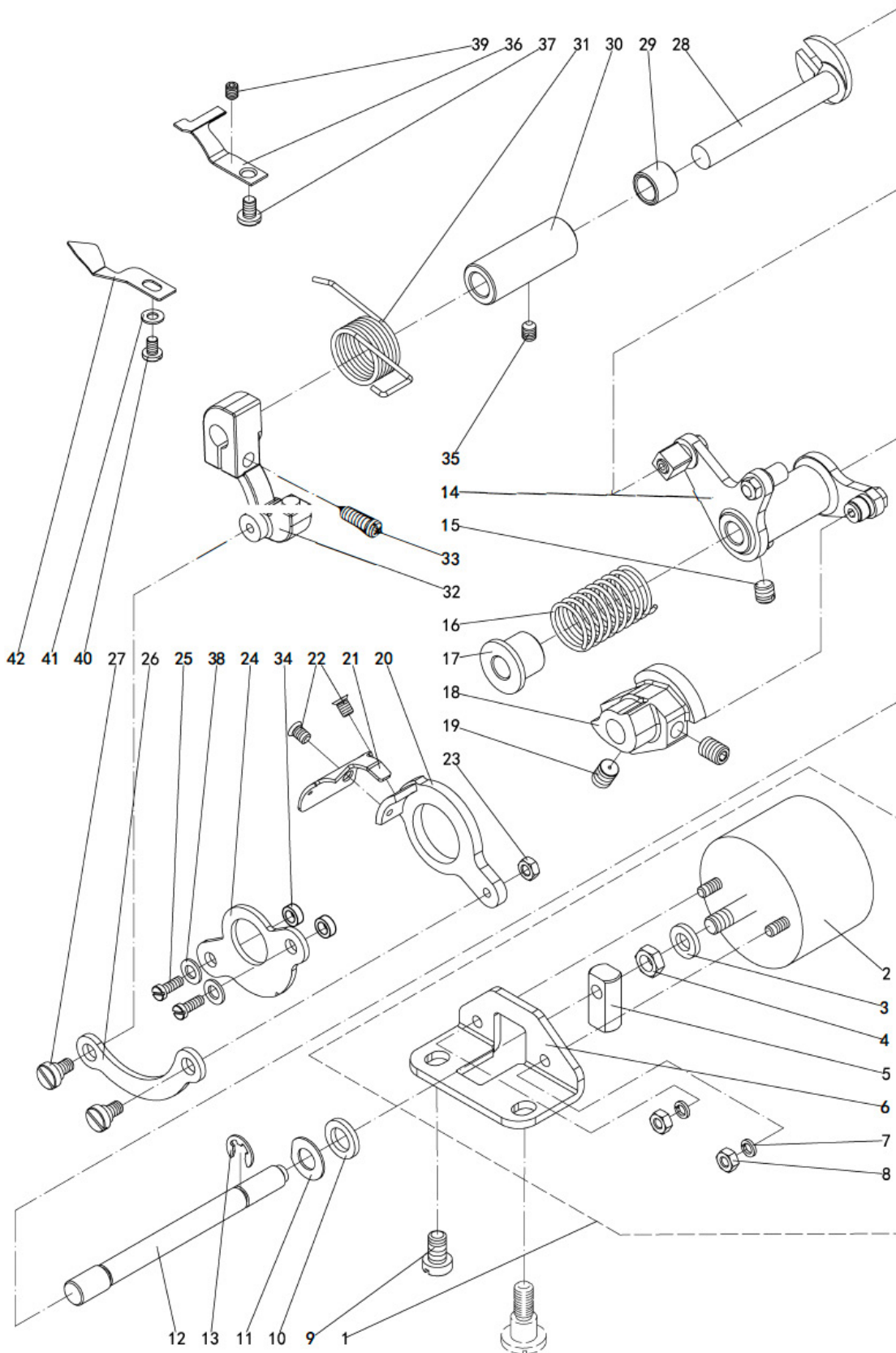
9. Accessories part mechanism



9. Accessories part mechanism

No.	Part No.	Qty.	Description
1	402020023	1	Thread stand asm.
2	402020005	1	Oil box
3	402020140	1	Wrench 8-9
4	402020067	1	Screw driver
5	402020066	1	Screw driver
6	402020065	1	Screw driver
7	-	4	Clips
8	404490008	4	Wood screw
9	405120011	10	Needle-DBX1/14
	502020015	10	Needle-DBX1/18
10	306010068	2	Bobbin
11	306010017	1	Head pole
12	306010104	2	Head connecting hook
13	306010105	2	Shockproof pad
14	306010106	2	Shockproof pad
15	306010107	2	Head connecting hook socket
16	306010108	1	Oil reservoir magnet
17	401030025	1	Pedal unit asm.
18	-	1	Power line
19	402020084	1	Dust cover
20	312010006	1	Instruction Book & Parts Book
21	306010109	6	Screw
22	401070002	1	Pedal control rod asm.
23	402020078	1	2mm Allen wrench

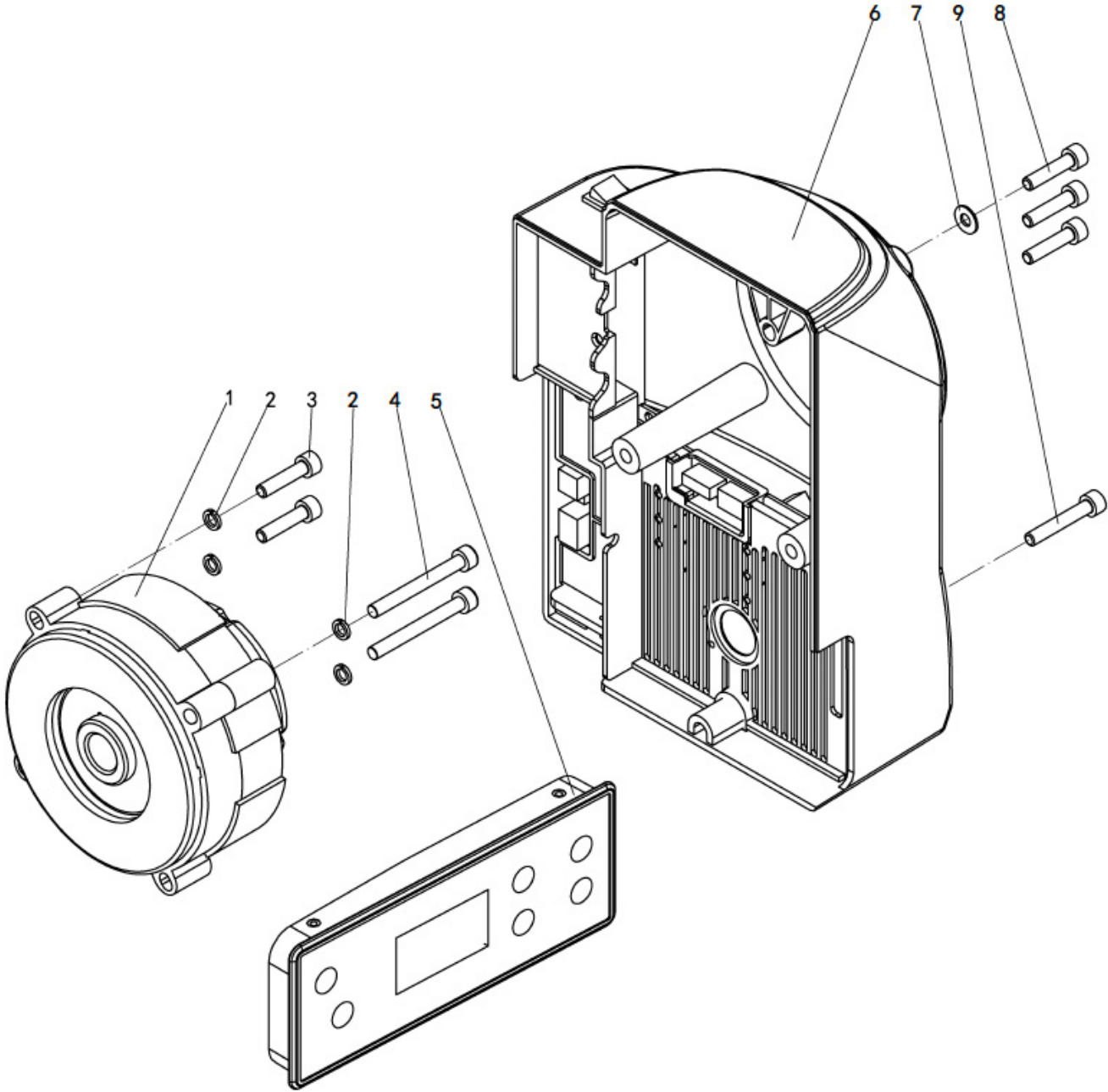
10. Thread trimmer mechanism



10. Thread trimmer mechanism

No.	Part No.	Qty.	Description
1	302010010	1	Thread trimmer electromagnet asm.
2	-	1	Thread trimmer electromagnet unit
3	-	1	Cushion
4	-	1	Nut SM1/4×40
5	-	1	Pin
6	-	1	Thread trimmer electromagnet bracket
7	4802	2	Nut M4
8	201252	2	Spring washer M4
9	404420011	1	Screw SM15/64×28 L=8
10	302010012	1	Cushion
11	301010039	1	Washer $\varnothing 8 \times \varnothing 15.5 \times 0.8$
12	302010017	1	Trimming shaft
13	YP288	1	E-ring
14	302010055	1	Trimming cam crank asm.
15	302010616	1	Screw SM1/4×40 L=6
16	306010080	1	Spring
17	306010078	1	Spring cover
18	306010079	1	Thread trimmer cam
19	404440011	2	Screw SM1/4×40 L=10
20	302010019	1	Round knife bracket
21	302010059	1	Round knife
	302020059	1	Round knife H
22	404460004	2	Screw SM11/64×40 L=5.5
23	404510005	1	Nut SM11/64×40
24	302010021	1	Partiality shank
25	404420012	2	Screw SM11/64×40 L=12
26	302010020	1	Link
27	404410008	2	Axial screw
28	302010018	1	Trimming crank shaft
29	302010080	1	Shaft sleeve
30	301010002	1	Sleeve
31	306010022	1	Spring
	308010061	1	Spring H
32	302010013	1	Trimming crank
33	404430025	1	Screw SM3/16×28 L=14
34	302010022	1	Spacer
35	404440006	1	Screw SM15/64×28 L=10.5
36	302010015	1	Fixed knife
37	404460005	1	Screw SM9/64×40 L=6
38	201185	2	Washer $\varnothing 4.6 \times \varnothing 9.8 \times 0.8$
39	404440027	1	Screw SM9/64×40 L=9
40	404450033	1	Screw SM9/64×40 L=5
41	301010031	1	Washer $\varnothing 3.7 \times \varnothing 8 \times 0.8$
42	302010016	1	Dispart

11. D2 Component



11. D2 Component

No.	Part No.	Qty.	Description
1	401010093	1	Motor
2	303067	4	Spring washer M5
3	404430032	2	Screw M5 L=25
4	404430038	2	Screw M5 L=45
5	312020008	1	Display operation panel component
6	312020009	1	Electronic control box asm.
7	404210011	1	Washer $\varnothing 6.7 \times \varnothing 19 \times 1$
8	404430023	3	Screw M5 L=20
9	404430014	1	Screw M5 L=30

