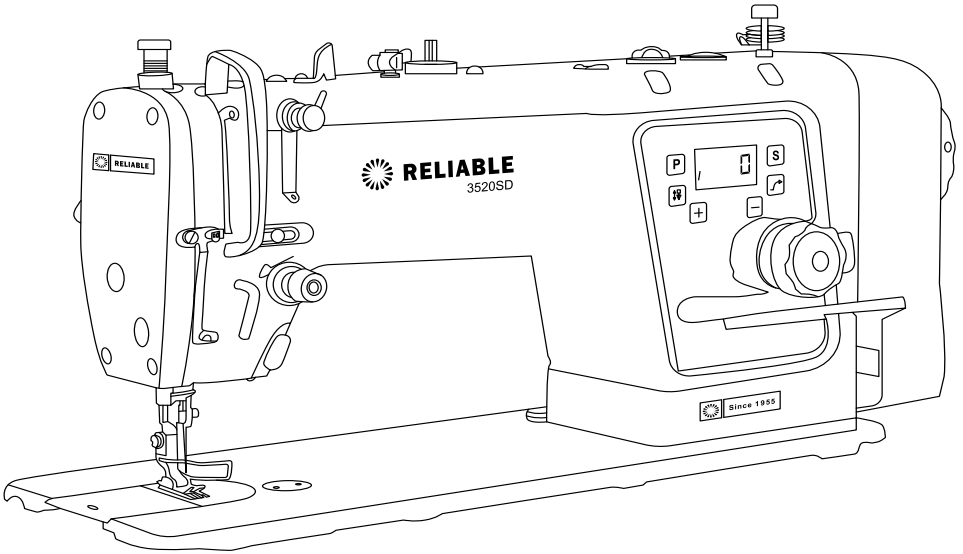




RELIABLE



3520SD

Single Needle Lockstitch Sewing Machine w/
Dual Direct Drive

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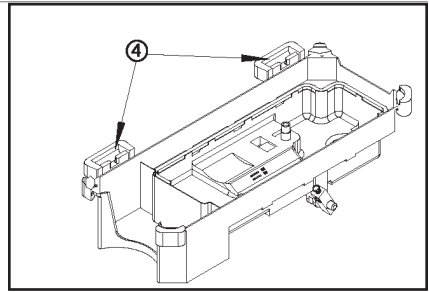
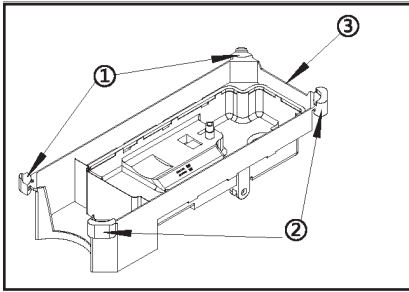
Attention Before Operation

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.

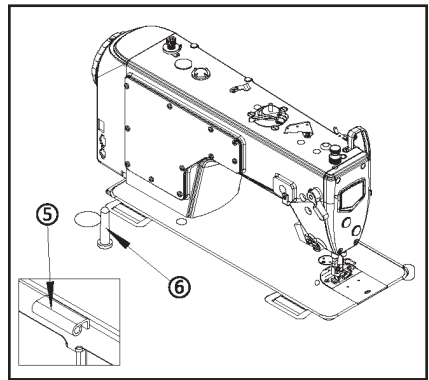
Caution

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.

Installation

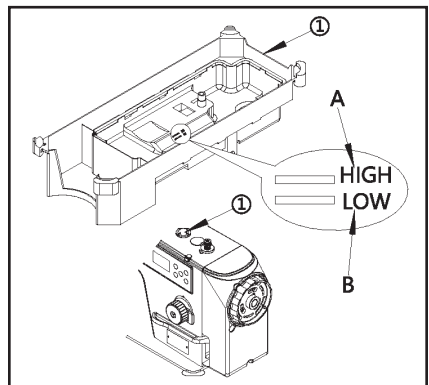


1. Insert the front seat (2) and the back seat (1) of the machine into the relevant angle of under cover (3).
2. Mount the under cover with seat on the grooved table, then fit the rubber hinge (4) with the matched groove.
3. Fit hinge (5) into the opening in the machine bed, and fit the machine head to the table rubber hinge (4) before placing the machine head on cushions on the four corners.



Lubrication

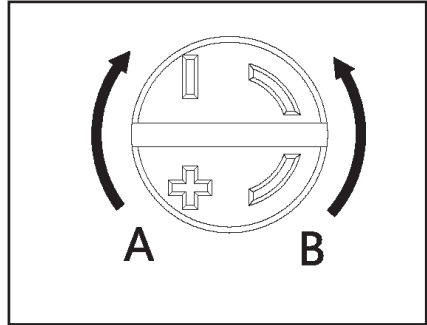
1. Fill oil pan (1) with Machine oil up to HIGH mark A.
2. When the oil level lowers below LOW mark B, refill the oil pan with the specified oil.
3. When you operate the machine after lubrication, you will see splashing oil through oil sight window (2) if the lubrication is adequate.
4. Note that the amount of the splashing oil is unrelated to the amount of the lubrication oil.



Caution: When you first operate your machine after setup or after an extended period of disuse, run your machine at 3000 to 3500 RPM for about 10 minutes for purpose of break-in.

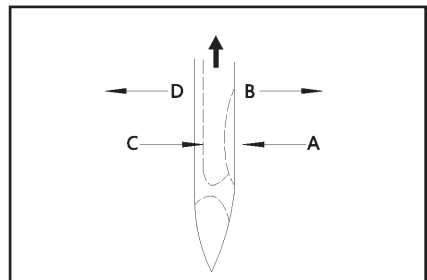
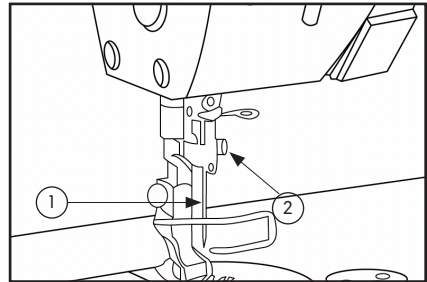
Adjusting Oil Flow for the Rotating Hook

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.



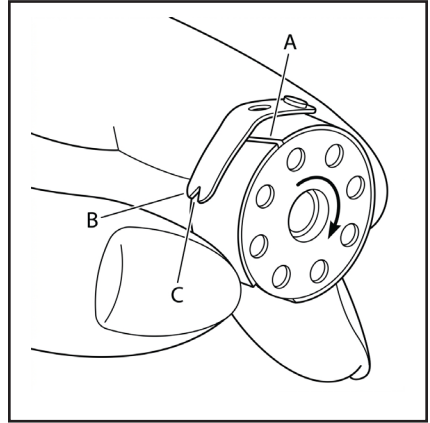
Mounting the Needle

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).



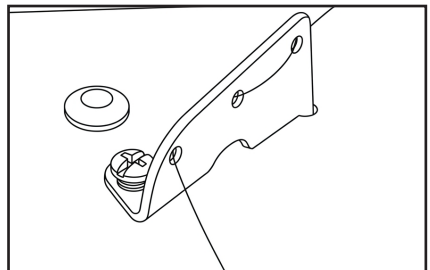
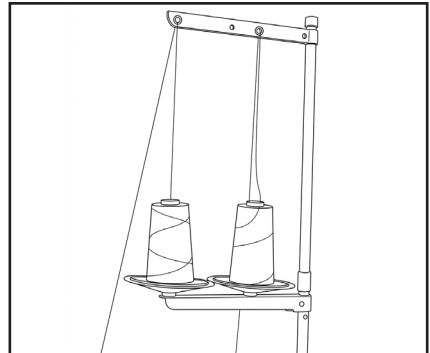
Loading the Bobbin

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.

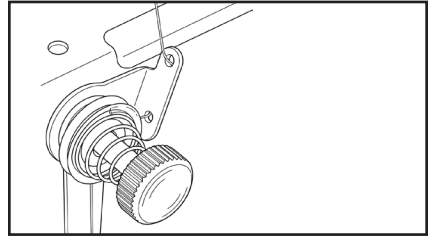


Threading the Needle

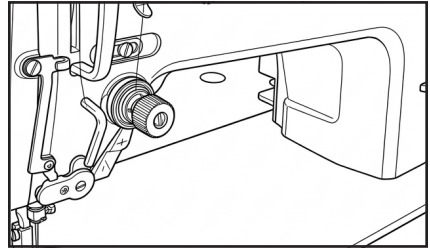
1. Place the thread on the stand and guide it straight up through the thread stand eyelet. Make sure the stand is upright and not on an angle to avoid skipped stitches or uneven tension.
2. Pass the thread through the triple eyelet (uncurling device) on top of the machine. Be careful not to wrap the thread around the eyelet, as this can add unwanted tension.



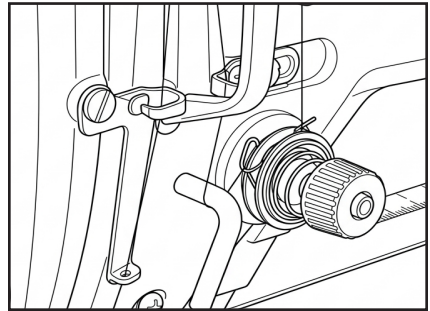
3. Bring the thread to the pre-tension area by guiding it through the top eyelet, then the bottom eyelet, and then through the tension disks. Continue through the lower eyelet to lead it into the check spring assembly.



4. While holding the thread, secure it firmly between the tension disks. Bring the thread from left to right over the top of the check spring and under the thread guide. When you gently pull the thread, the check spring should move up and down.

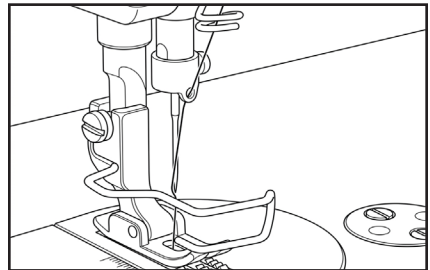


5. Guide the thread through the right-hand guide and then into the needle thread take-up lever. From there, pass it through the upper left thread guide and then the lower left thread guide.



6. Then, guide it around the pigtail guide and through the needle bar thread guide eyelet.

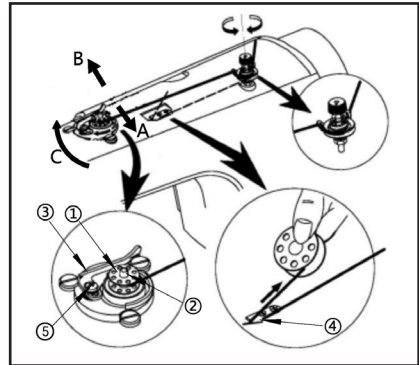
7. From here, thread the needle from left to right.



Winding the Bobbin

Bobbin thread winding-up method

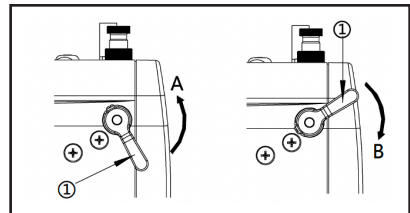
1. Insert bobbin (1) onto the bobbin winder post (2).
2. Feed the thread through the tension assembly. Wind the thread onto the bobbin clockwise for several turns.
3. Push winding lever (3) into the bobbin. The bobbin (1) is rotated in direction C and thread is reeled onto bobbin (1). Once the bobbin 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 trimmer (4).



Lifting of Presser Foot

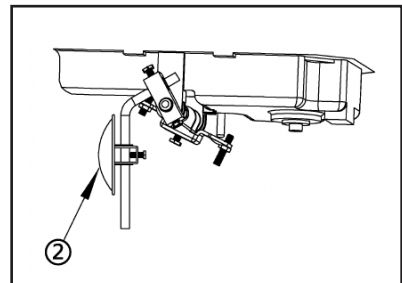
I. Lift presser foot controlled by hands

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.



II. Lift presser foot controlled by knees or foot

1. Press knee lever (2) to lift the presser foot (for about 13 mm).
2. Heel back on the pedal will also lift the presser foot electronically.

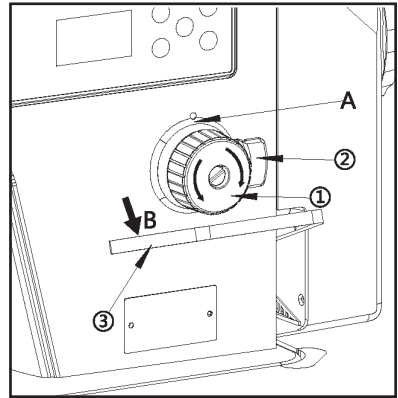


Adjusting the Stitch Length

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.



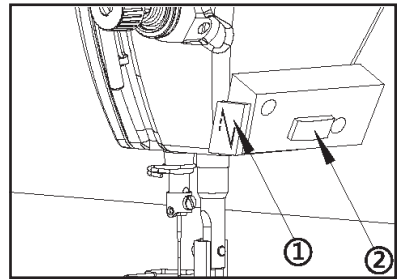
Index Stitching and Built-in LED Light

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

The sewing machine comes with a built-in LED light. The light has three illumination settings.

When the machine is powered on, the LED light is turned on at level three, which is the brightest setting.

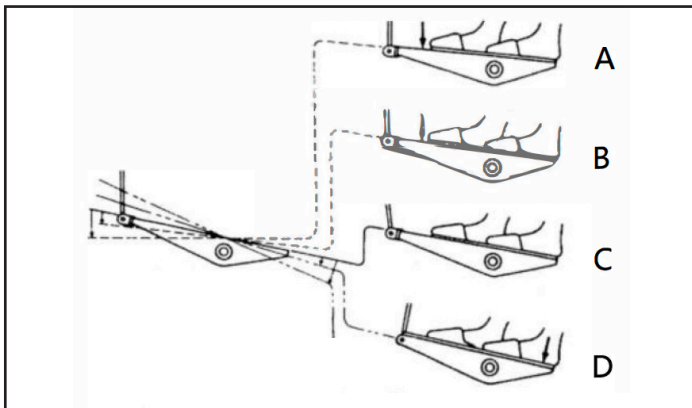
Press the light button (2) in sequence to reduce the brightness until it switches off.



Operating the Treadle

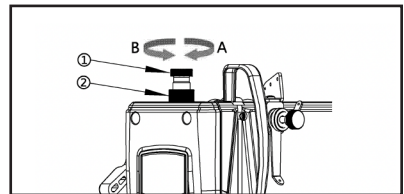
The treadle has 4 operation levels:

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. The machine stops working when you pedal back to home position. Then, when you partially press the back part of the pedal, the foot will lift (C).
4. The machine lifts the foot and trims the threads, when you fully press the back part of pedal (D).



Adjusting the Presser Foot Pressure

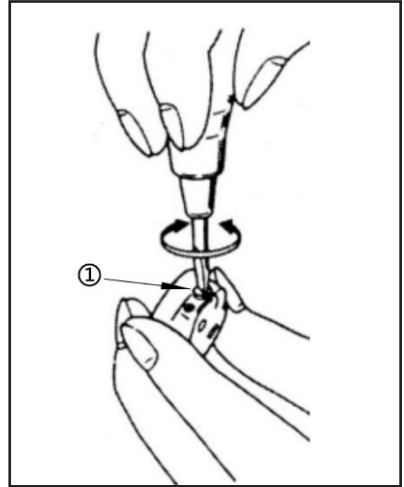
1. Loosen locking nut (2).
2. Turn (1) screw in clockwise direction (A) to increase the pressure on the foot.
3. Turn (1) screw in counterclockwise direction (B) to decrease the pressure on the foot.



Adjusting the Tension of Stitch Thread

I. Adjusting the tension of bobbin thread

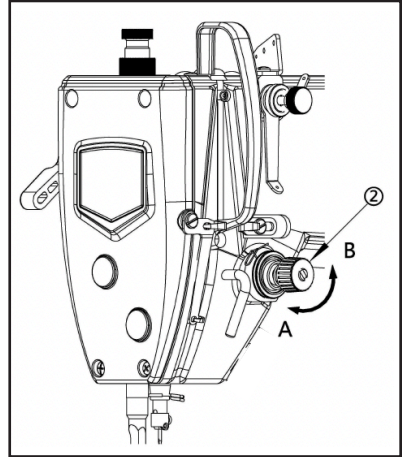
1. Hold the bobbin case and use the adjusting large rotating screw (1) to regulate.
2. Turn the screw in clockwise direction (A) to increase the tension. Turn (1) screw in counterclockwise direction (B) to decrease the tension.



II. Adjusting the tension of needle thread

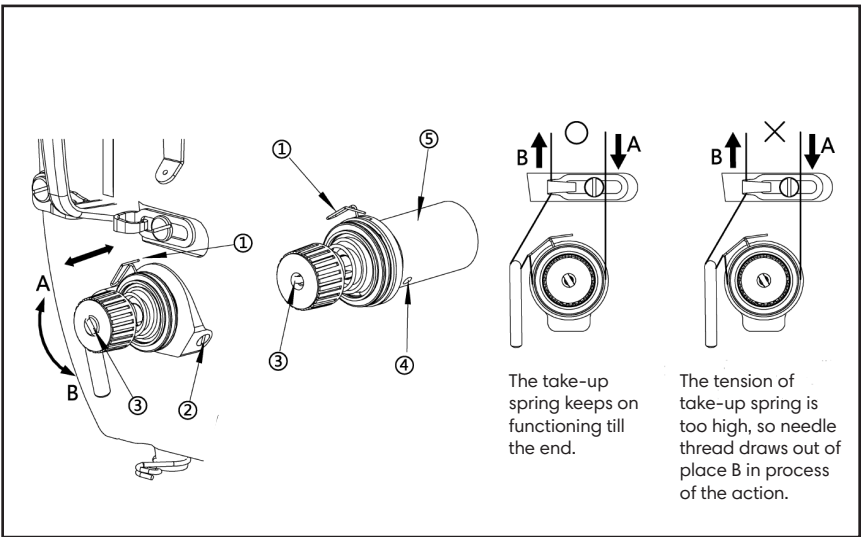
After the lower thread tension is adjusted, adjust the upper thread tension so that a good, even stitch is obtained.

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).

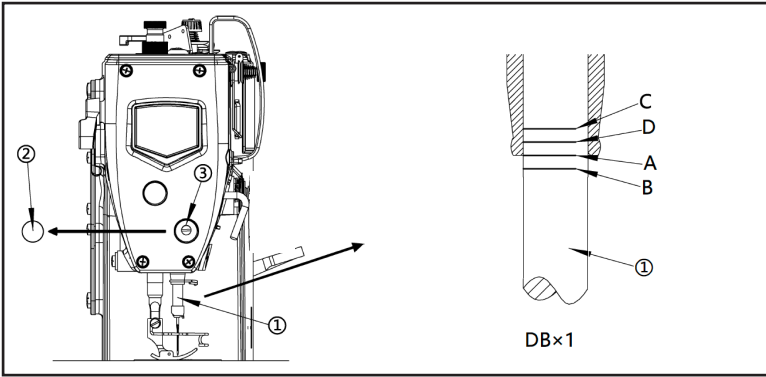


Adjusting the Take-up Spring

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.




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.

Safety Instructions

1. Users are required to read the operation manual completely and carefully before installation or operation
2. The product should be installed and pre-operated by well-trained persons. All power supplies must be turned off during the installation work, remember not to operate with power on.
3. All the instruction marked with sign  must be observed or executed; otherwise, bodily injuries might occur.
4. For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection.
5. When connecting the power cord, it must be determined that the operating voltage conforms to the rated voltage value specified in the product identification.
6. Don't operate in direct sun light outdoors area and where the room temperature is over 45°C or below 0°C.
7. Please avoid operating near the heater at dew area or at the humidity below 10% or above 90%.
8. Don't operate in area with heavy dust, corrosive substance or volatile gas.
9. Avoid power cord being applied by heavy objects or excessive force, or over bend.
10. The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
11. All the moving portions must be prevented to be exposed by the parts provided.
12. Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
13. Turn off the power before the following operation:
 - Connecting or disconnecting any connectors on the control box or motor
 - Threading needle
 - Raising the machine head
 - Repairing or doing any mechanical adjustment
 - Machines idling
14. Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
15. All the spare parts for repair must be provided or approved by the manufacturer.
16. Don't use any objects or force to hit or ram the product.

16. Don't use any objects or force to hit or ram the product.

Guarantee Time

Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.





Warranty Detail

Any trouble found within warranty period under normal operation, it will be repaired free of charge. However, maintenance cost will be charged in the following cases even if within warranty period:

- Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.
- Damage by fire, Earth quake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.
- Dropping after purchasing or damage in transportation by customer himself or by customer's shipping agency

* We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate area must guarantee the good earth and it's also recommended to install a failsafe device (Such as residual current breaker).

Key Displays and Operating Instructions

Function parameter edit		<p>Press key P to enter into user parameter setting mode.</p> <p>Long press key P, in the same time turn on the power switch from off to enter into system parameter setting mode.</p>
Setting parameter check and save		<p>After setting the function code, press this key to check the preset parameter and then can edit the parameter accordingly;</p> <p>When the parameter is fixed, press key to save the setting and quit.</p>
On the adjustment key/ Select the shortcut needle position		<ol style="list-style-type: none"> 1. Choose the region parameter items incrementing key 2. Parameter setting value incrementing key 3. Select the shortcut needle position
Under the adjustment key/ Slow play seam selection shortcuts		<ol style="list-style-type: none"> 1. Choose the region parameter items of diminishing key 2. Is decremented key parameter settings 3. Slow play seam selection shortcuts

User Parameter

Parameters	Parameter Function	Range	Default	Description
P01	Maximum speed	010-500	450	Set the max sewing speed (show the actual number *10= speed)
P02	Needle stop position selection	000-001	000	Set the needle stop position (0: needle up 1: needle down)
P03	Soft start switch	000-001	000	Soft start switch setting (0: OFF 1: ON)
P04	Soft start sewing speed	010-150	040	Soft start sewing speed setting(show the actual number *10= speed)
P05	Stitches number of soft start	001-099	004	set the stitches number of soft start, each unit is half stitch
P06	Minimum speed	020-600	500	Set the minimum speed (show the actual number *10= speed)

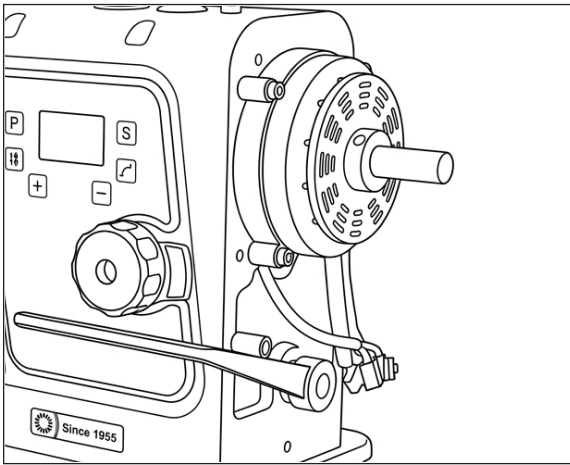
Error Codes

Error Code	Problem Description	Solutions
E01	<ol style="list-style-type: none"> 1. When power on, detected main voltage too high. 2. When the supply voltage is too high 	<p>Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage.)</p> <p>If correct, please replace the control box and inform the factory</p>
E07	<ol style="list-style-type: none"> 1. Bad connection at the motor connector. 2. Machine locked or object stuck in the motor pulley 3. Sewing material is too thick. 4. Module output is abnormal. 	<p>Please check the machine head to see if objects stuck in the motor pulley. If stuck it is not the machine head machinery fault.</p> <p>If normal running, please check the encoder connector and motor power cord connector if loose. If loose please tight connection.</p> <p>If connection well, please check supply voltage whether abnormal or setting speed too high. If have please modify.</p> <p>If normal, please replace the control box and notify the manufacturer.</p>
E09 E11	Synchronizer signal error	<p>Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacture.</p>
E12	Power is turned on without the synchronizer signal	<p>Motor still can run, but it automatically starts the clutch mode. All constant-stitch sewing pattern and trimmer /wiper function is invalid. Please check the synchronizer.</p>

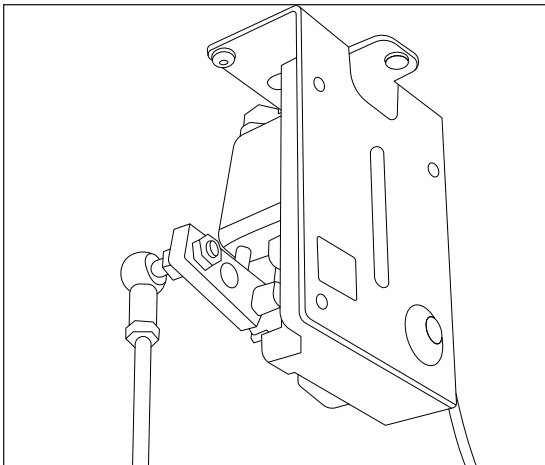
E14	Encoder signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacture.
E15	Power module abnormal over current protection	Module driver output and head output will close all. Waiting for the power to open / reset. (please carefully check power supply board each function)
E17	The sewing table safety switch is not in the correct position	Please check sewing table is open or not, the sewing table safety switch is damage or not, the socket is abnormal or not.

Parts Book

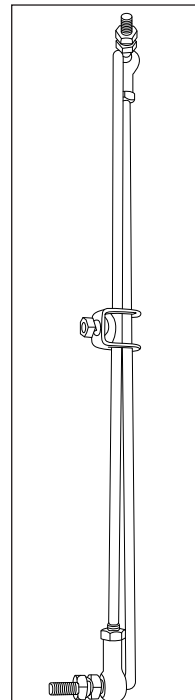
MOTOR - Direct Drive Motor



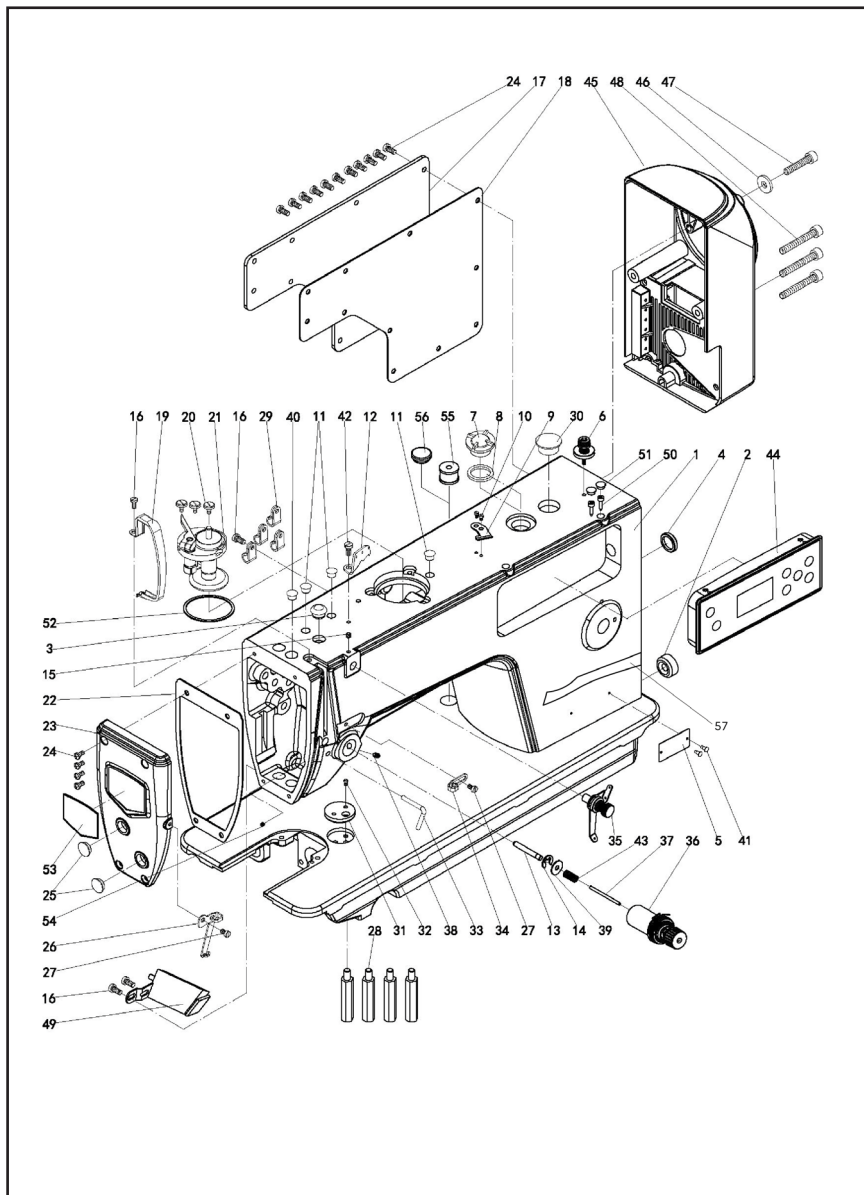
Actuator- 3520ZWACTUATOR



Treadle Rods- GEN143UOS



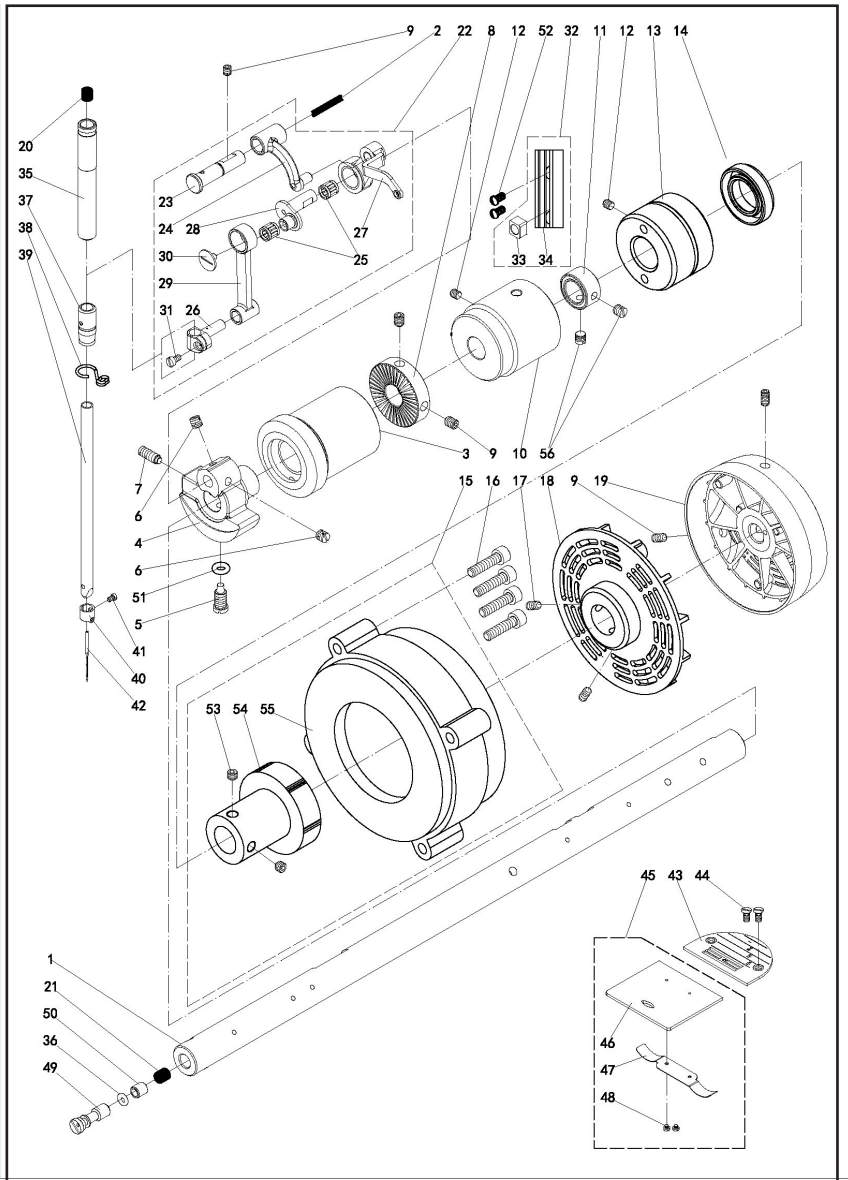
1. Machine frame mechanism



1. Machine frame mechanism

No.	Part No.	Qty.	Description
1	312110010	1	Frame
2	307010014	1	Plug
3	306010008	1	Plug
4	404130004	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	Secant 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
56	240162	1	Plug
57		1	Reverse Lever

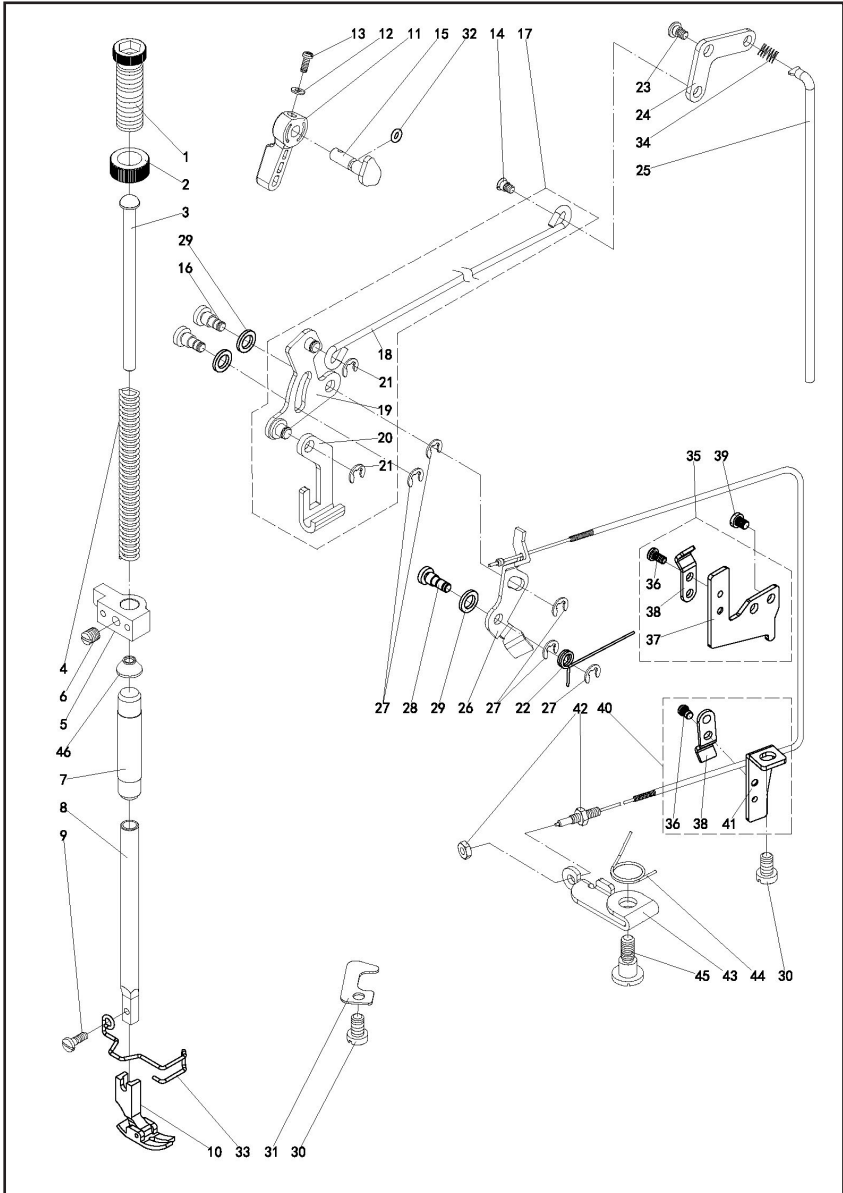
2. Main shaft & thread take-up & needle bar mechanism



2. Main shaft & 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 ø15×ø27×7
15	401010136	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	302010077	1	Felt
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

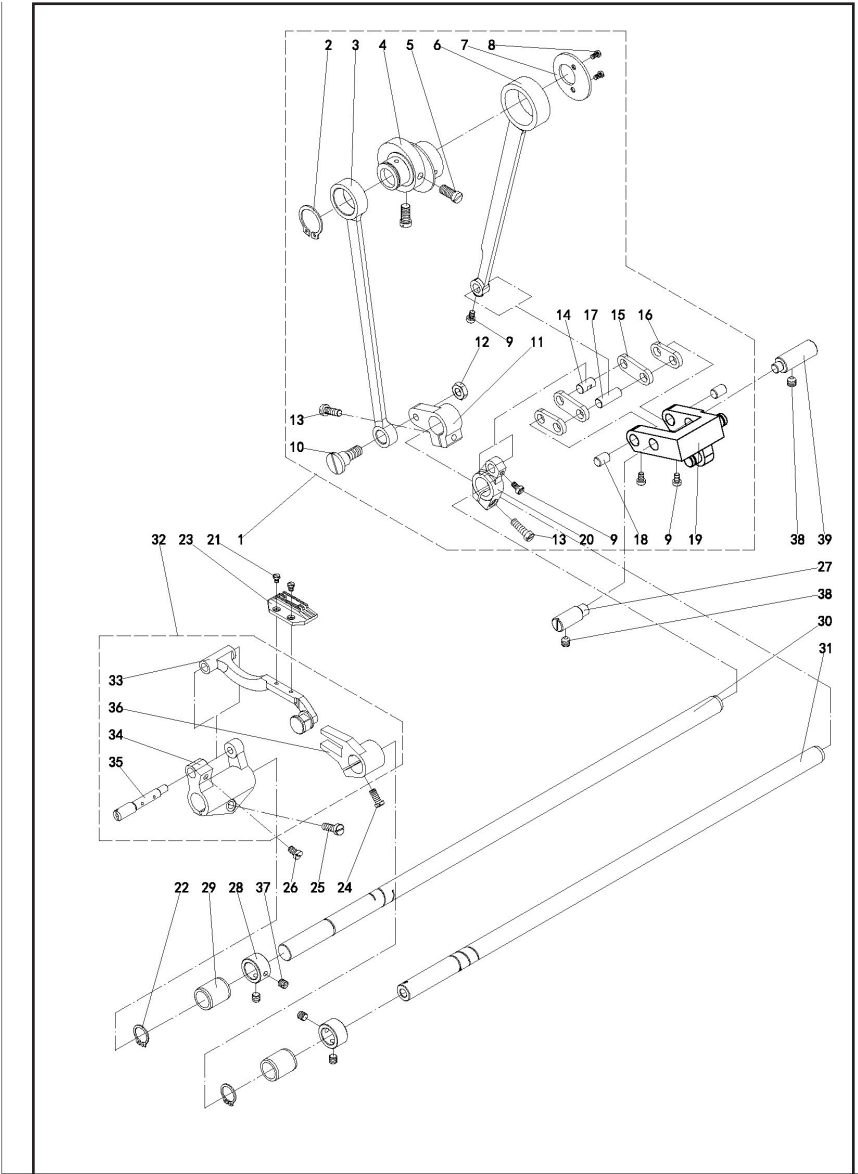
3. Hang lifter mechanism



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	306010310	1	Presser food asm.
	302010063	1	Presser food asm.H
11	301010028	1	Hand lifter
12	301010031	1	Washer $\varnothing 3.7 \times \varnothing 8 \times 0.8$
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	306010171	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	310020023	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

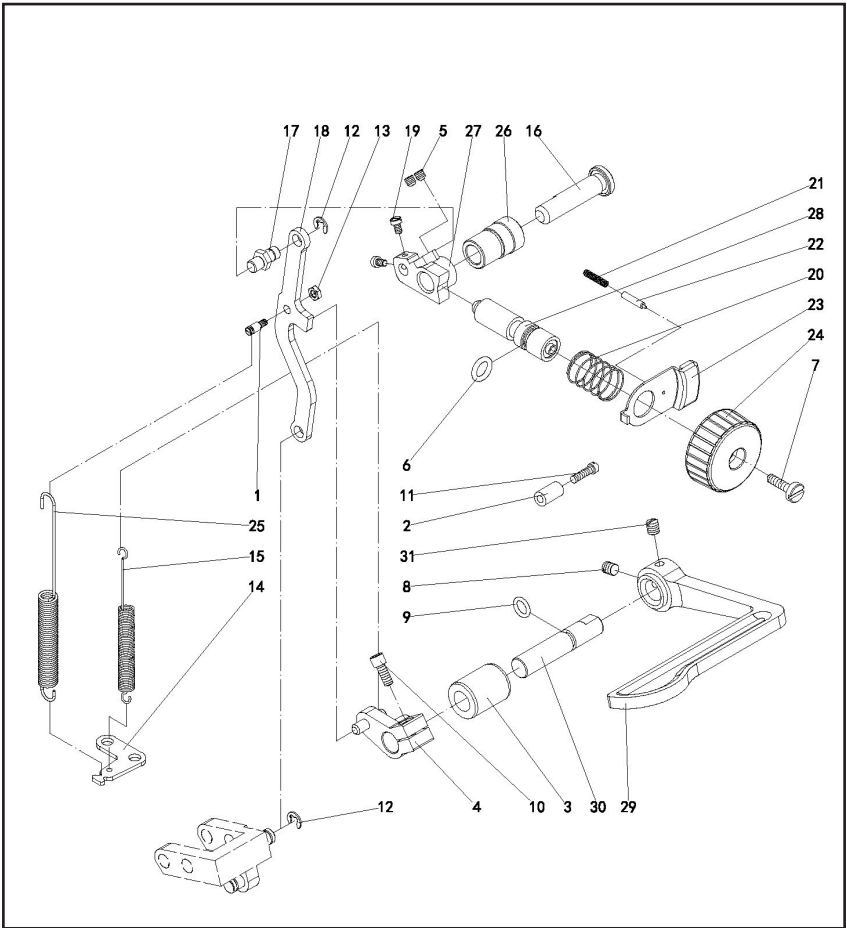
4. Feed mechanism



4. Feed mechanism

No.	Part No.	Qty.	Description
1	302010052	1	Feeding assembly
	302110052	1	Feeding assembly H
2	-	1	External Circlips d _o =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 _o =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	302010062	1	Feed bar asm.
33	-	1	Feed bar unit
34	-	1	Feed bar driving crank
35	-	1	Pin
36	-	1	Lift fork crank
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

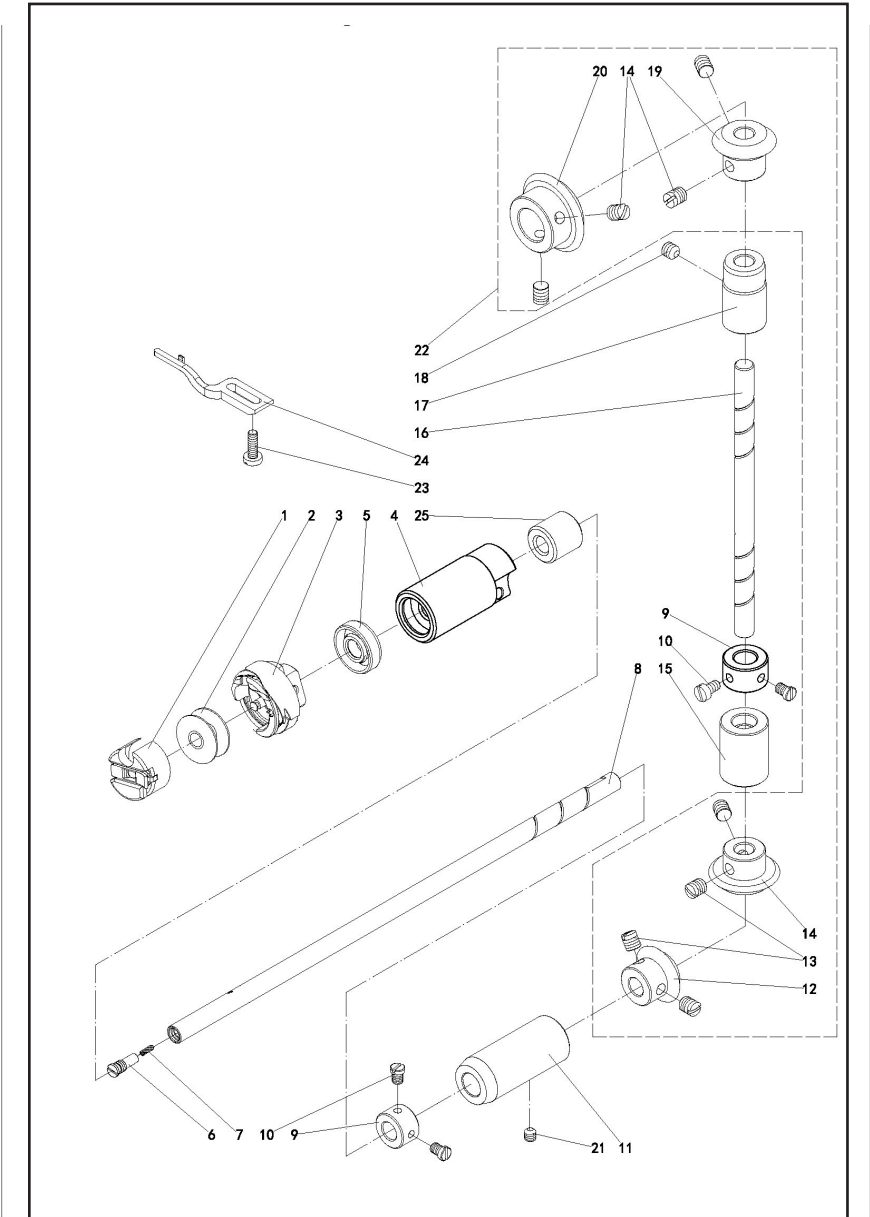
5. Feed adjusting mechanism



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	1	Scre 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
31	404440006	1	Scre SM15/64×28 L=10.5

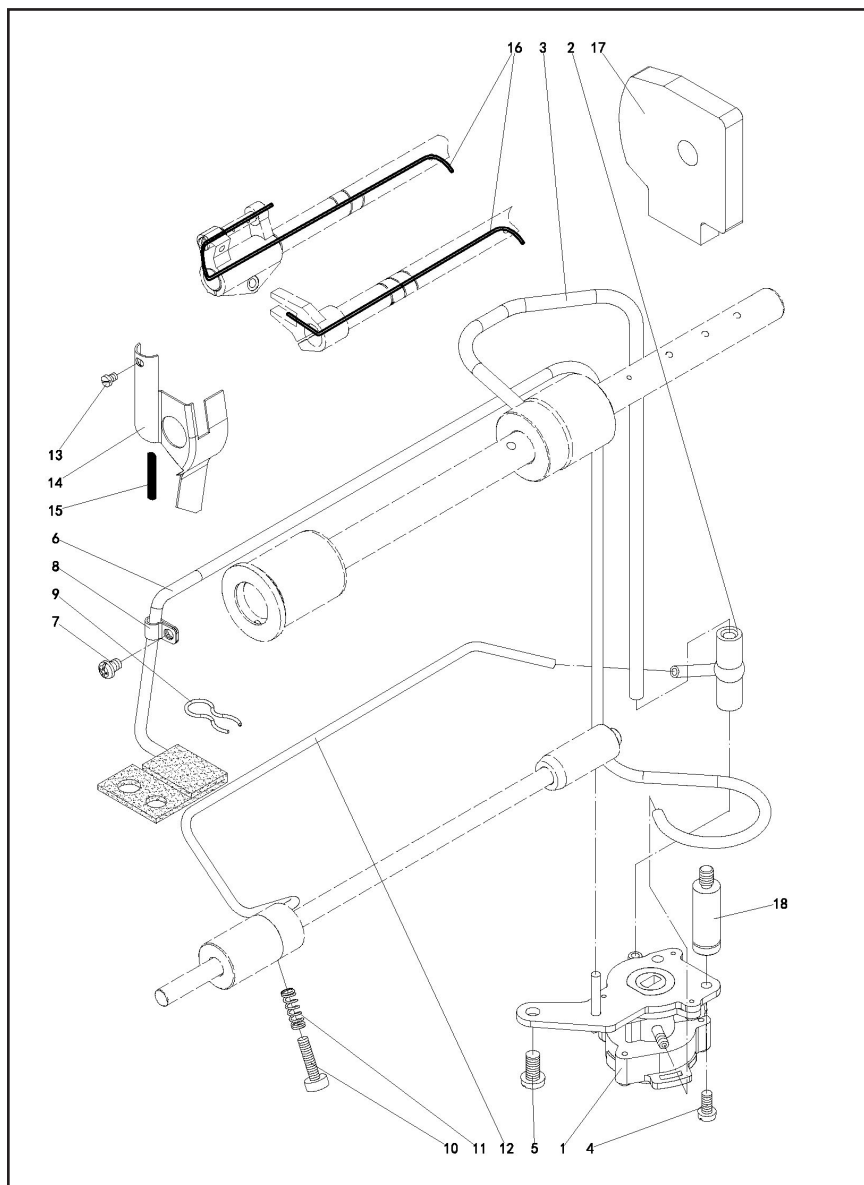
6. Hook of driving shaft mechanism



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	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	307010038	1	Bevel gear
13	404440010	8	Screw SM1/4×40 L=8
14	307010037	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	307010036	1	Bevel gear
20	307010035	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

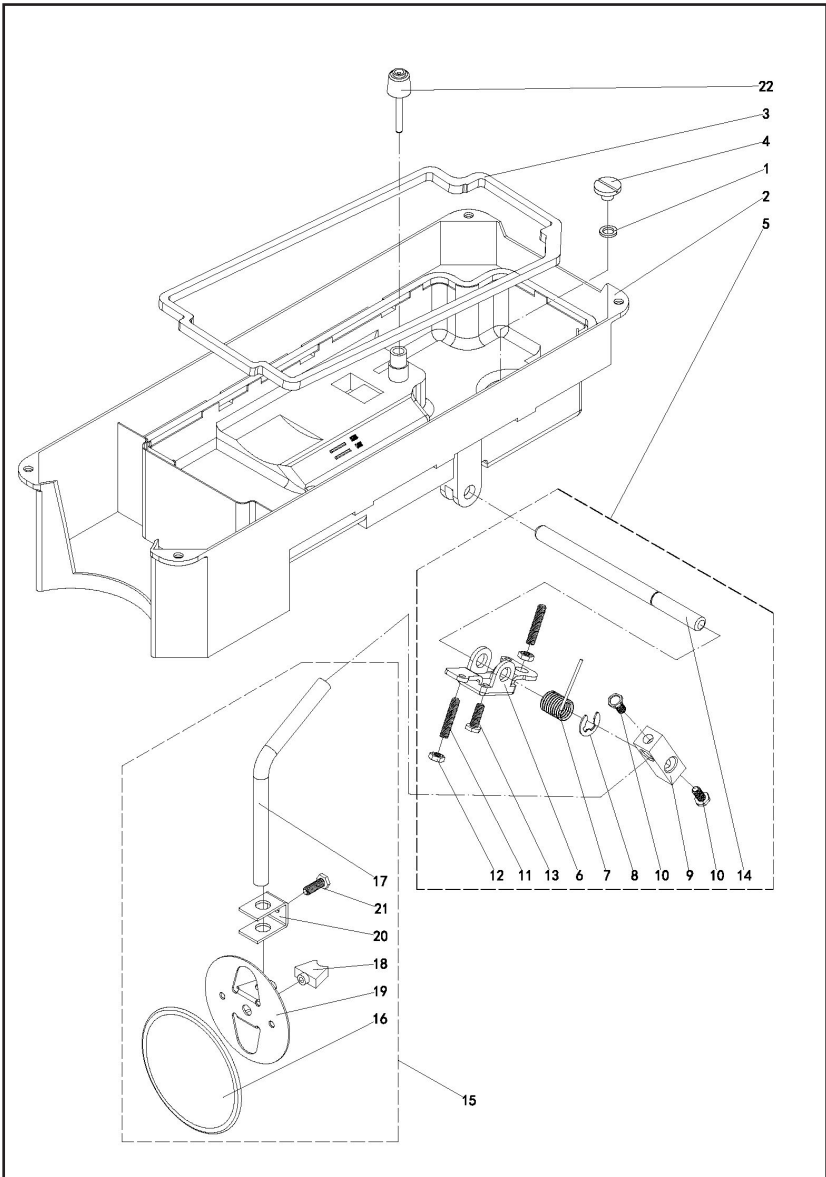
7. Lubrication mechanism



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
	306010225	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	311010058	1	Screw

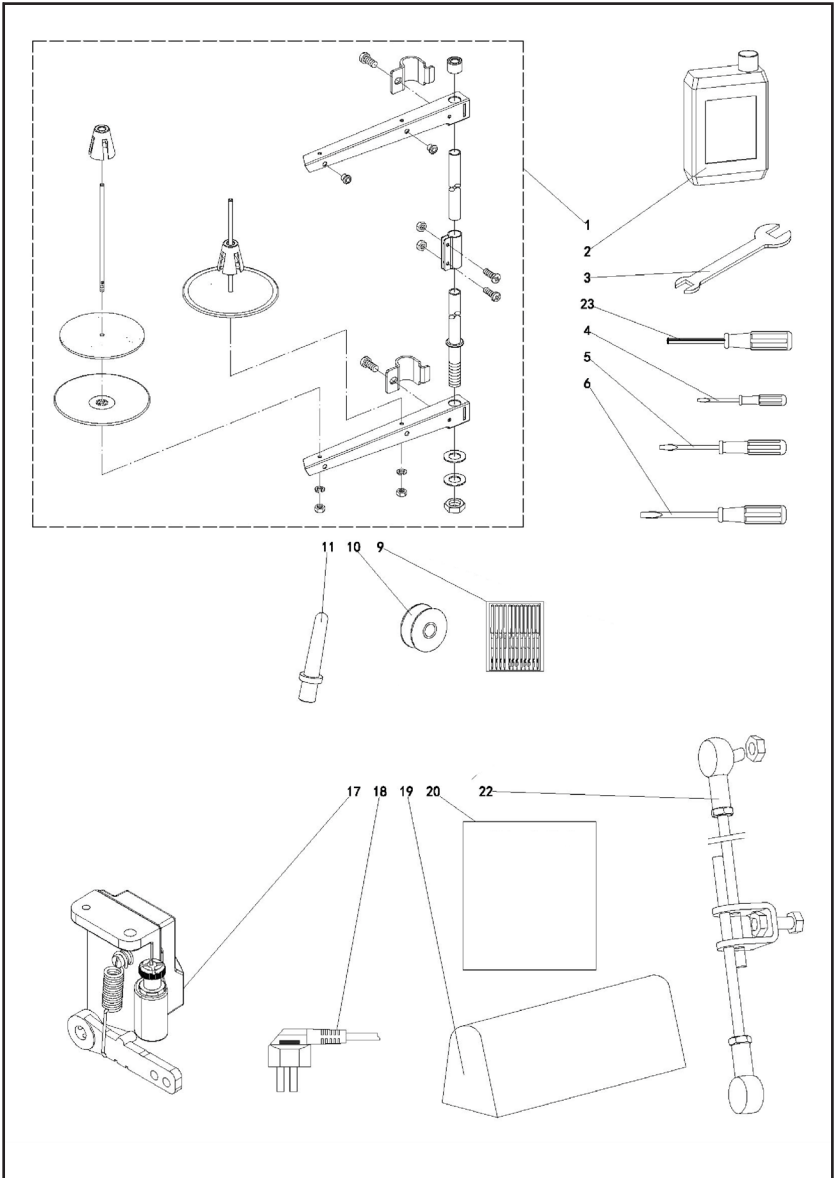
8. Oil reservoir and knee pan plate mechanism



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

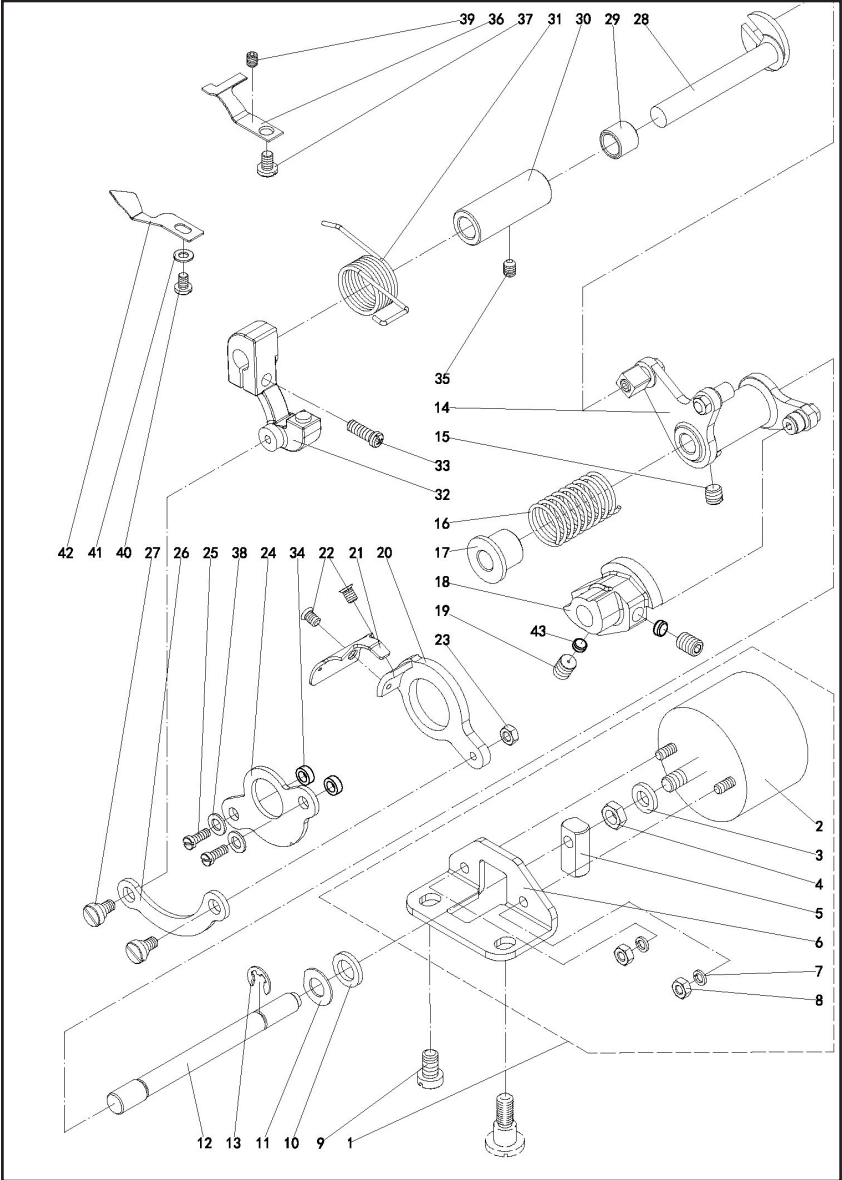
9. Accessories part mechanism



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
9	405120011	10	Needle-DBX1/14
	502020015	10	Needle-DBX1/18
10	306010068	2	Bobbin
11	306010017	1	Head pole
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
22	401070002	1	Pedal control rod asm.
23	402020078	1	2mm Allen wrench

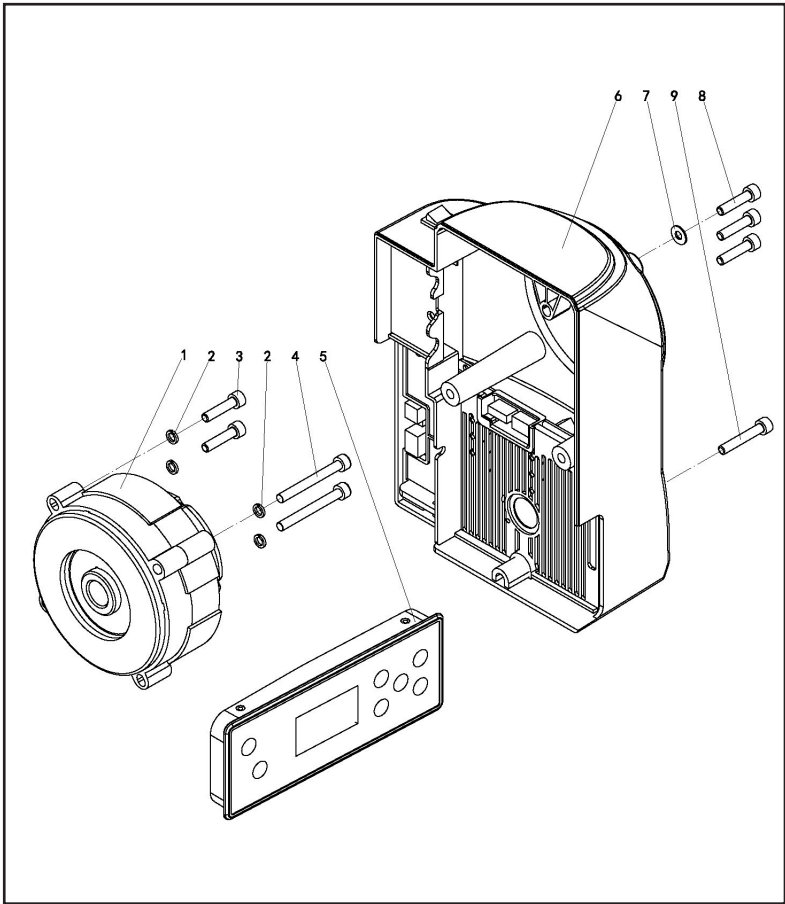
10.Thread trimmer mechanism



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 ø8×ø15.5×0.8
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
	306010244	1	Thread trimmer cam H
19	404440040	2	Screw SM1/4×40 L=8
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	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 ø4.6×ø9.8×0.8
39	404440027	1	Screw SM9/64×40 L=9
40	404450033	1	Screw SM9/64×40 L=5
41	301010031	1	Washer ø3.7×ø8×0.8
42	302010016	1	Dispart
43	306010234	2	Spacer

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



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