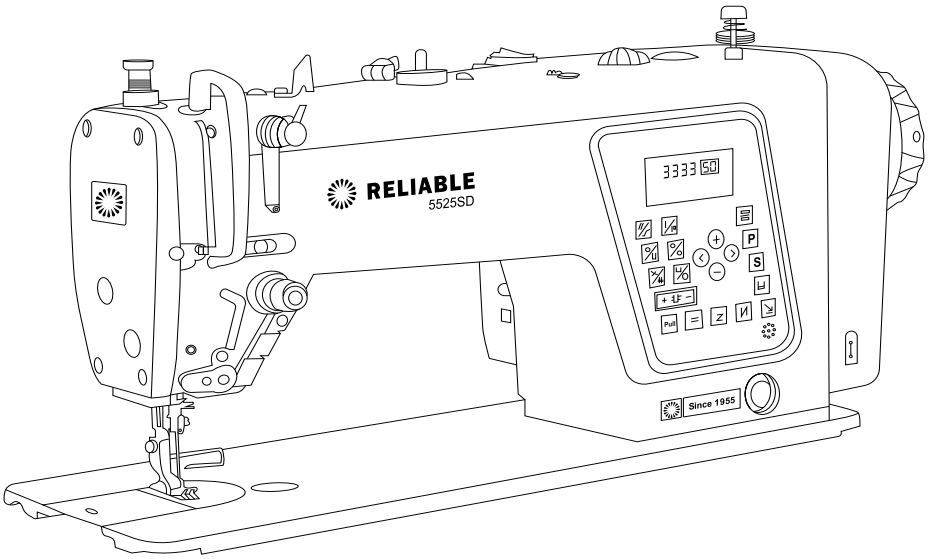
RELIABLE



5525SD

Automatic Thread Trimmer Single Needle
Lockstitch Sewing Machine w/ Dual Direct Drive

Contents

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. Do not operate the machine without filling the reservoir with oil.
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.

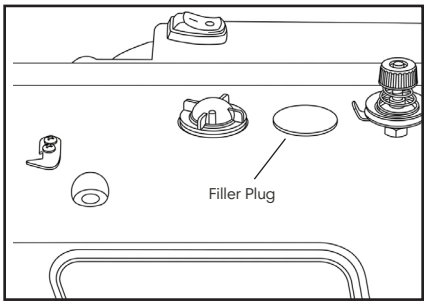
Caution

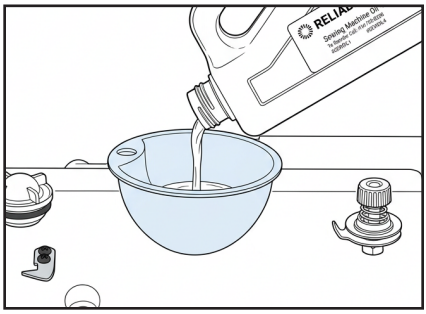
1. To avoid personal injury, never put your fingers into the thread take-up cover while the machine is in operation.
2. To avoid possible accidents because of abrupt start of machine, turn OFF the power of the machine before tilting the sewing machine head.
3. Always turn OFF the power when leaving the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

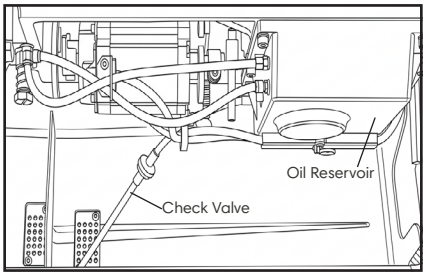
Lubrication

1. Remove the **filler plug** to access the oil reservoir.
2. Pour oil slowly into the filler using a funnel. As you pour, you will see the oil level begin to register at the bottom of the machine.
3. Push the machine head back. The oil is stored in a sealed reservoir. The bottom base is **only** for catching drips.
4. In the accessories, there is a hose with a check (one-way) valve. The hose draws excess oil from the oil pan back into the reservoir.
5. Once finished, securely put the filler plug back in place.

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.

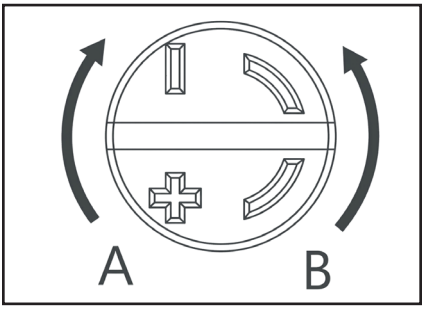






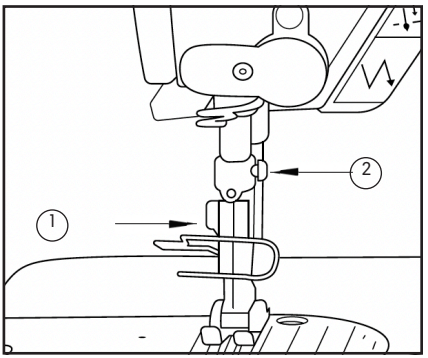
Adjusting Oil Flow for the Rotating Hook

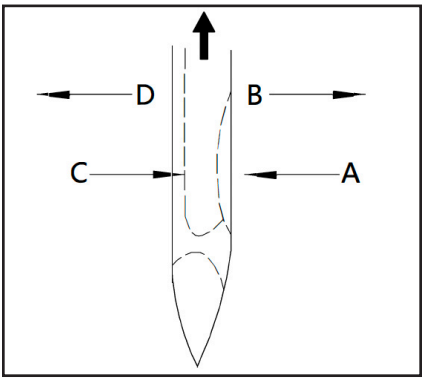
1. Turning the screw clockwise will increase the amount of oil going into the rotating hook. Turning the screw counterclockwise will decrease the amount of oil going into the hook.
2. Check the lubrication amount again after adjusting the flow of the oil to see if the rotating hook has been properly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



Mounting the Needle

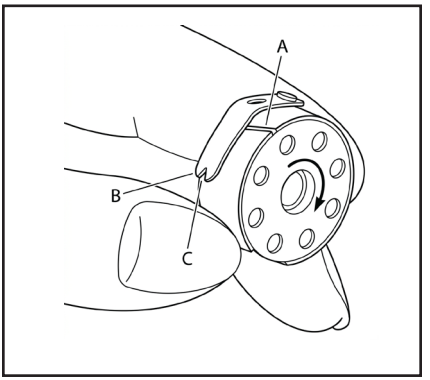
1. Turn the hand wheel counterclockwise until the needle stops at its maximum height.
2. Loosen needle screw (2) using a screwdriver provided with the machine.
3. Insert the needle (1) into the bottom of needle bar in direction of arrow till it reaches the end point.
4. Ensure that the cut out or scarf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





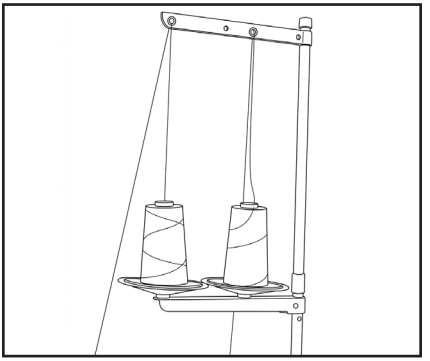
Loading the Bobbin

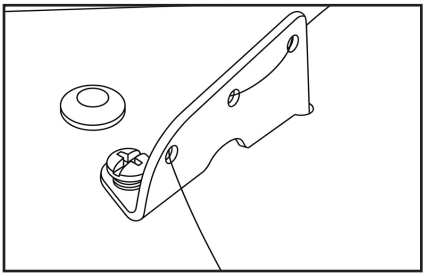
1. Load the bobbin into the bobbin case.
2. Feed the thread through slot A of the bobbin case then securing the thread under the tension spring C. In this way, the thread is led out of hole B through the tension spring.
3. When bobbin thread is drawn, the bobbin will turn clockwise in direction of arrow.



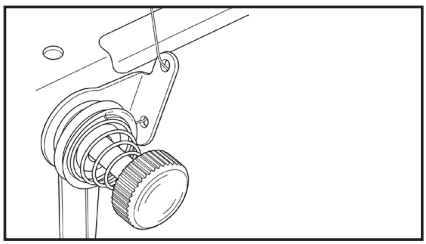
Threading the Needle

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.

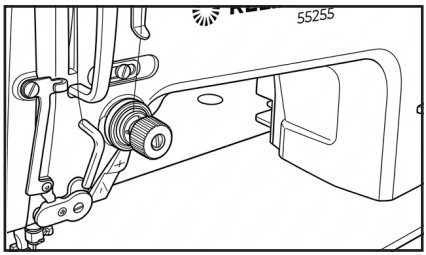




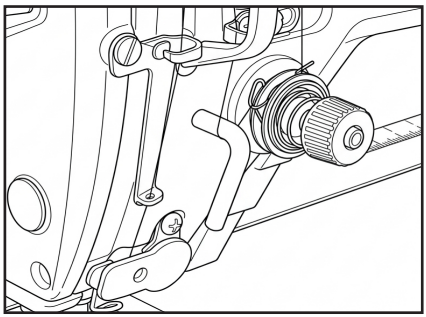
3. Bring the thread to the pre-tension area by guiding it through the top eyelet, then the bottom eyelet, and then through the tension disks. Continue through the lower eyelet to lead it into the check spring assembly.



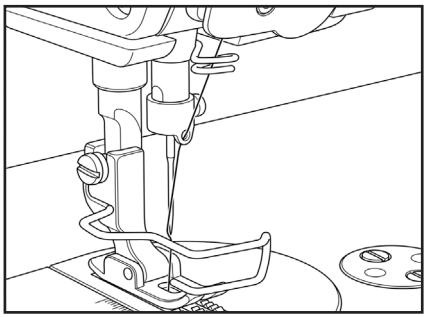
4. While holding the thread, secure it firmly between the tension disks. Bring the thread from left to right over the top of the check spring and under the thread guide. When you gently pull the thread, the check spring should move up and down.



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.



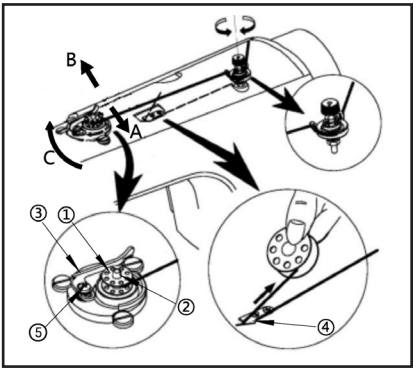
6. Lead the thread through the thread pincher, ensuring the thread is positioned behind the disk. Then guide it around the pigtail guide and through the needle bar thread guide eyelet.
7. From here, thread the needle from left to right.



Winding the Bobbin

Bobbin thread winding-up method

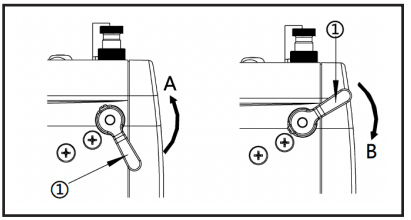
1. Insert bobbin (1) onto the bobbin winder post (2).
2. Feed the thread through the tension assembly. Wind the thread onto the bobbin clockwise for several turns.
3. Push winding lever (3) into the bobbin. The bobbin (1) is rotated in direction C and thread is reeled onto bobbin (1). Once the bobbin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

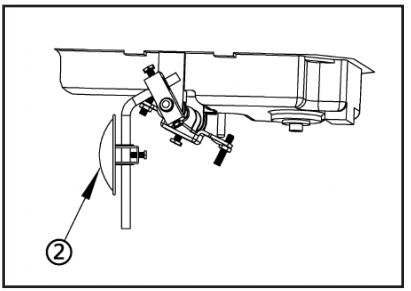
I. Lift presser foot controlled by hands

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

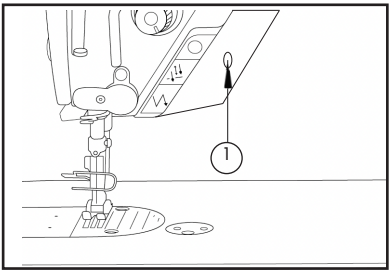
1. Press knee lever (2) to lift the presser foot (for about 13 mm).
2. Heel back on the pedal will also lift the presser foot electronically.



Note: The 5525SD has an automaticl knee lever. The knee lever triggers a solenoid, which lifts the presser foot automatically with minimal effort.

Built-in LED Light

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



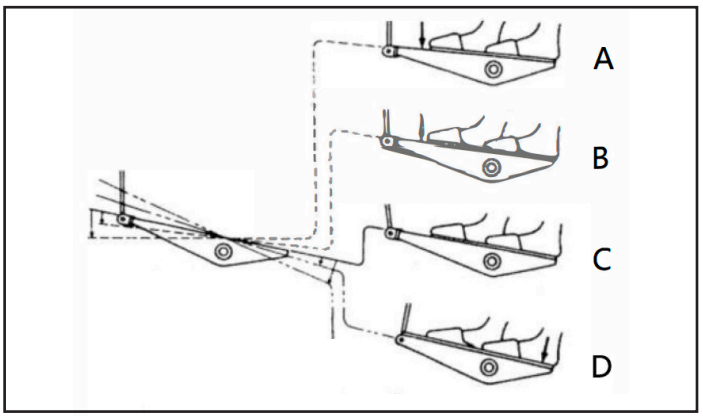
When the machine is powered on, the LED light is turned on at level three, which is the brightest setting.

Press the light button (1) in sequence to reduce the brightness until it switches off.

Operating the Treadle

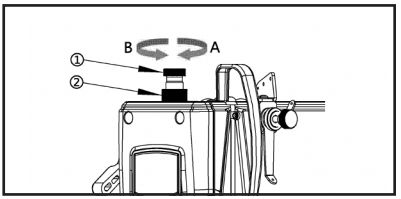
The treadle has 4 operation levels:

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 release the pressure on the pedal. 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

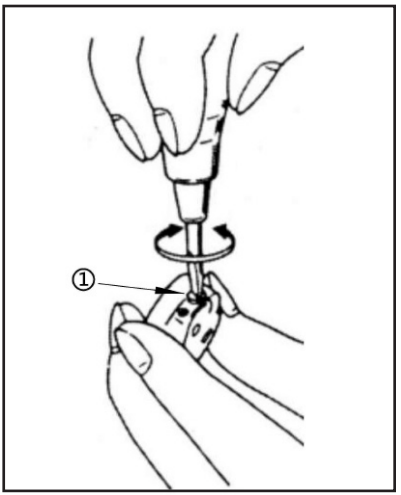
1. Loosen locking nut (2).
2. Turn (1) screw in clockwise direction (A) to increase the pressure on the foot.
3. Turn (1) screw in counterclockwise direction (B) to decrease the pressure on the foot.



Adjusting the Tension of Stitch Thread

I. Adjusting the tension of bobbin thread

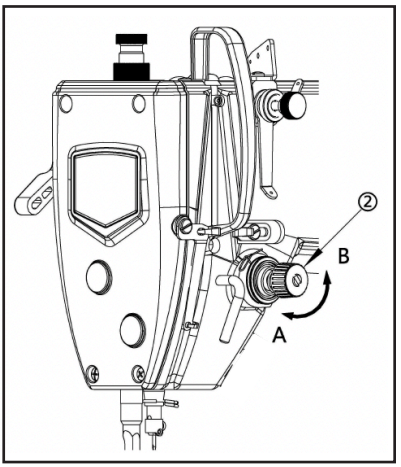
1. Hold the bobbin case and use the adjusting large rotating screw (1) to regulate.
2. Turn the screw in clockwise direction (A) to increase the tension. Turn (1) screw in counterclockwise direction (B) to decrease the tension.



II. Adjusting the tension of needle thread

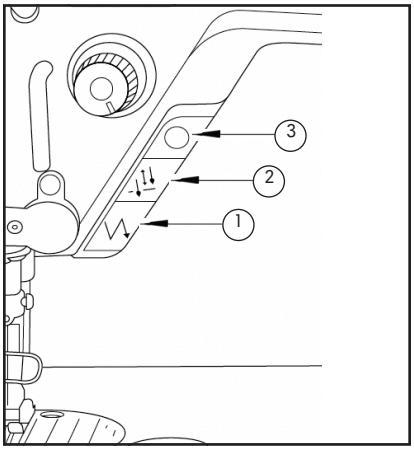
After the lower thread tension is set, adjust the upper thread tension so that a good, even stitch is obtained.

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).

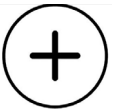
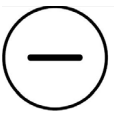
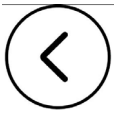
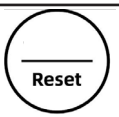


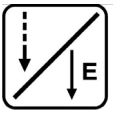
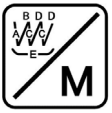
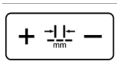
Reverse Stitching and Index Stitching

- Press the reverse button (1) to activate reverse sewing.
- Press the half stitch/index stitch button (2) to activate a half stitch. Hold for continuous sewing.
- Press the condensed half stitch/ index stitch button (3) to activate a condensed half stitch. Hold for continuous sewing.



Key Displays and Operating Instuctions

Function parameter edit		**Single Click:** Enter or exit the user parameter setting interface. **Long Press:** Switch to the password input interface. • Enter the correct password and press the **S** key to confirm. • Once confirmed, you can access the advanced parameter setting interface.
Setting parameter check and save		• After selecting a parameter, press this key to check or modify its value. • Once the parameter value has been modified, press this key again to exit and save the changes.
Parameter increase		**Single Click:** Increase the parameter **Long Press:** Continuously increase the parameter
Parameter decrease		**Single Click:** Decrease the parameter **Long Press:** Continuously decrease the parameter
Left selection		**Single Click:** Move to the previous parameter. **Long Press:** Scroll continuously through previous parameters.
Right selection		**Single Click:** Move to the next parameter. **Long Press:** Scroll continuously through next parameters.
Reset		**Long Press:** Restore factory setting
Start back-tacking selection / Soft start setting		**Single Click:** Switch AB start back-tacking → ABAB start back-tacking → function off → B start back-tacking successively. **Long Press:** Set used or cancelled soft start function.

End back-tacking selection / Needle stop position selection		**Single Click:** switch CD end back-tacking → CDCD end back-tacking → function off → C end back-tacking successively. **Long Press:** The needle stop position after shift the sewing mode (upper position / lower position).
Free sewing / Constant stitch sewing		**Single Click:** Set to free sewing mode. **Long Press:** Set to constant stitch sewing mode
Consecutive reverse sewing / Multi-segment sewing		**Single Click:** Set to consecutive reverse sewing mode. **Long Press:** Set to multi- segment sewing mode (switch to four-segment sewing, seven-segment sewing, eight-segment sewing, and fifteen-segment sewing in sequence).
Presser foot lifting setting / Auto function		**Single Click:** Switch function off →automatic presser foot lifting after trimming →automatic presser foot lifting after pause → full function successively. **Long Press:** Set used or cancelled auto function
Trimming setting / Clamp function setting		**Single Click:** Set used or cancelled trimming function **Long Press:** Set used or cancelled clamp function
Stitch length setting		**Single Click:** Increase or decrease stitch length **Long Press:** Continuously increase or decrease stitch length

User Parameter

No.	Items	Range	Default	Description
P03	Needle UP/ DOWN	UP/DN	DN	UP: Upper needle stop position DN: Lower needle stop position
P04	Start back-tacking speed	200-3200	2000	
P05	End back-tacking speed	200-3200	2000	
P06	Bar-tacking Speed	200-3200	2000	
P07	Soft start speed after second stitch (RPM)	200-1500	1500	
P08	Stitch numbers for soft start	1-15	2	
P09	Automatic constant stitch sewing speed (RPM)	200-4000	3700	Speed adjustment for automatic constant stitch sewing
P-17-N04	Language Setting	0-9	1	0. Off 1. Chinese 2. English 3. Vietnamese 4. Portuguese 5. Turkish 6. Spanish 7. Russian 8. Arabic

Error Codes

Error Code	Problem Description	Solutions
E01	High voltage	1. Check if the power supply voltage exceeds AC 260V. 2. If using a generator, reduce the generator's output power. 3. If the machine still does not operate normally, replace the control box and contact after-sales service for support.
E02	Low voltage	1. Check if the machine is connected to a low-voltage power supply. 2. Reset. 3. If the machine still does not operate normally, replace the control box and contact after-sales service for support.
E03	CPU communication abnormal	1. Turn off the machine and check whether the display screen connection is loose or disconnected. Reconnect if necessary, then restart the machine 2. Turn off the machine, disconnect the control box, and power the machine using only the power cord: • If Error Code E03 still appears, replace the control box and contact after-sales service. • If a different error (E05) appears, this may indicate a separate issue. Reconnect components and investigate accordingly.
E05	Pedal signal abnormal	1. Turn off the machine and check whether the pedal connector is loose or disconnected. Reconnect it securely, then restart the machine. 2. If the machine still does not operate normally, replace the control box or speed controller and contact after-sales service for support.

E07	Main shaft motor locked-rotor	1. Turn off the machine and check whether the handwheel rotates smoothly by turning it manually. If it does not turn freely, inspect the machine for mechanical issues. 2. Turn off the machine and check whether the motor power connector is loose. Reconnect it securely, then restart the machine. 3. Check whether the needle stop position (upper position) is set correctly. Adjust it if necessary. 4. If the machine still does not operate normally, replace the control box or spindle motor and contact after-sales service for support.
E10	Electromagnet overcurrent	1. Unplug the solenoid connector and power on the machine. If Error Code E10 still appears, replace the control box and contact after-sales service. 2. If the error does not appear after unplugging the solenoid connector, reconnect it and proceed with the following checks: i. Press the front pedal to perform thread clamping and back-tacking. If an error occurs: • Disable the start and end back-tacking functions, restart the control box, and test again. • If the error persists, disable the thread clamping function, restart the control system, and test again. • If the error no longer appears, replace the thread clamper. ii. Press the front pedal to perform thread clamping, back-tacking, and partial presser foot lifting. • If no error occurs, press the back pedal to perform thread trimming. • If an error occurs during thread trimming, replace the thread tension release solenoid.

E09 E11	The positioning signal of main shaft motor encoder is abnormal	1. Turn off the machine and check whether the main shaft motor encoder connector is loose or disconnected. Reconnect it securely, then restart the machine. 2. Check whether the motor zero-point calibration is set correctly. Reset the motor zero-point calibration if necessary. Inspect the encoder code disk for oil or contamination. Clean it carefully if needed 3. If the machine still does not operate normally, replace the control box or main shaft motor and contact after-sales service for support.
E14	Main shaft motor encoder signal is abnormal	1. Turn off the machine and check whether the main shaft motor encoder connector is loose or disconnected. Reconnect it securely, then restart the machine. 2. Check whether the encoder grating is installed correctly: • Ensure the mounting screws are tightened. • Ensure the grating is properly centered within the encoder. 3. Inspect the encoder code disk for oil or contamination. Clean it if necessary, then restart the machine. 4. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service.
E15	Main shaft motor drive overcurrent	1. Check whether the motor power cord has a poor connection. Reconnect it securely if needed. 2. Inspect the motor power cord for crushing, damage, or wear. Replace if necessary. 3. If the machine still does not operate normally, replace the control box or main shaft motor and contact after-sales service for support.

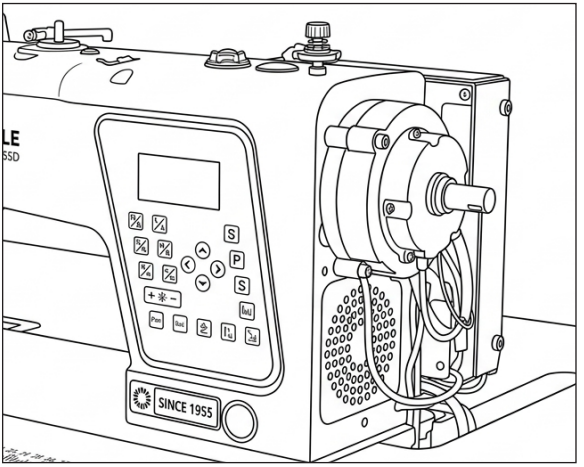
E17	Machine overturned	1. Turn off the machine and check whether it has tilted or overturned. Correct its position if necessary. 2. Verify that the machine protection switch settings are correct. Adjust if needed. 3. If the machine still does not operate normally, replace the control box or panel and contact after-sales service for support.
E20	Main shaft motor failed to start	1. Turn off the system power, check whether main shaft motor power cord connector and encoder connector are loose or fall off, restore them to normal and restart the system. 2. Check whether the motor zero point correction setting is correct, reset the motor zero point correction. 3. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service.
E28	Maintenance warning	Please perform maintenance. (When an alarm occurs, press the S key to clear and re-count.)
E51	Insufficient bobbin thread warning	Insufficient bobbin thread
E80	Abnormal communication between main chip and drive chip	Please replace the control box and notify the after-sales service.
E82	Back-tacking stepping motor overcurrent	1. Turn off the system power and observe whether back-tacking stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine first. If it is normal, check whether connector of back-tacking stepping motor is loose or fall off, restore it to normal and restart the system.

		2. If it still does not work normally, please replace the control box or back-tacking stepping motor and notify the after-sales service.
E84	The positioning signal of back-tacking stepping motor encoder is abnormal	1. Turn off the system power and observe whether back-tacking stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine first. If it is normal, check whether the encoder connector of back-tacking stepping motor is loose or fall off, and restart the system after returning it to normal. 2. Check whether the grating is installed correctly (whether the grating screws are fastened and whether the grating is in the center of the encoder); 3. Check if there is oil on the grating code plate, if so, please clean it up, and restart the system after restoration; 4. If it still does not work normally, please replace the control box or back-tacking stepping motor and notify the after-sales service.
E85	Back-tacking motor encoder signal is abnormal	1. Turn off the power of the system, check whether the encoder connector of back-tacking stepping motor is loose or fall off, restore it to normal and restart the system. 2. Check whether the grating is installed correctly (whether the grating screws are fastened and whether the grating is in the center of the encoder); 3. Check if there is oil on the grating code plate, if so, please clean it up, and restart the system after restoration;

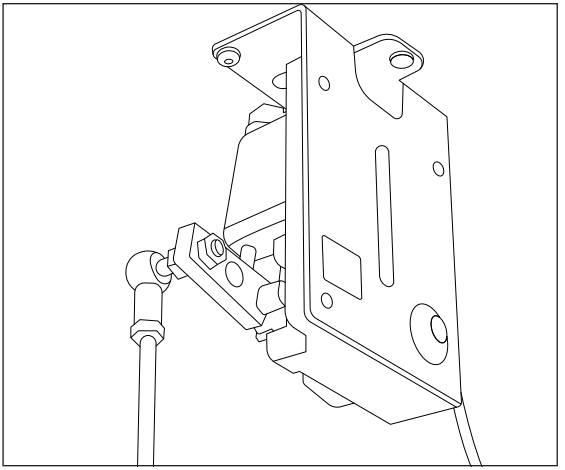
		4. If it still does not work normally, please replace the control box or back-tacking stepping motor and notify the after-sales service.
E86	Back-tacking stepping motor failed to start	1. Turn off the power of the system, check whether the power cord connector of back-tacking stepping motor and the encoder connector are loose or fall off, restore them to normal and restart the system. 2. Check whether the grating is installed correctly (whether the grating screws are fastened and whether the grating is in the center of the encoder); 3. Check if there is oil on the grating code plate, if so, please clean it up, and restart the system after restoration; 4. If it still does not work normally, please replace the control box or back-tacking stepping motor and notify the after-sales service.
E87	Back-tacking stepping motor locked-rotor	1. Turn off the system power and observe whether back-tacking stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine first. If it is normal, check whether the power cord connector of back-tacking motor and the encoder connector are loose or fall off, restore them to normal and restart the system. 2. If it still does not work normally, please replace the control box or back-tacking stepping motor and notify the after-sales service.

Parts Book

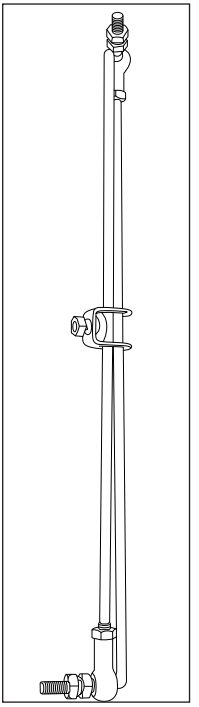
MOTOR - Direct Drive Motor



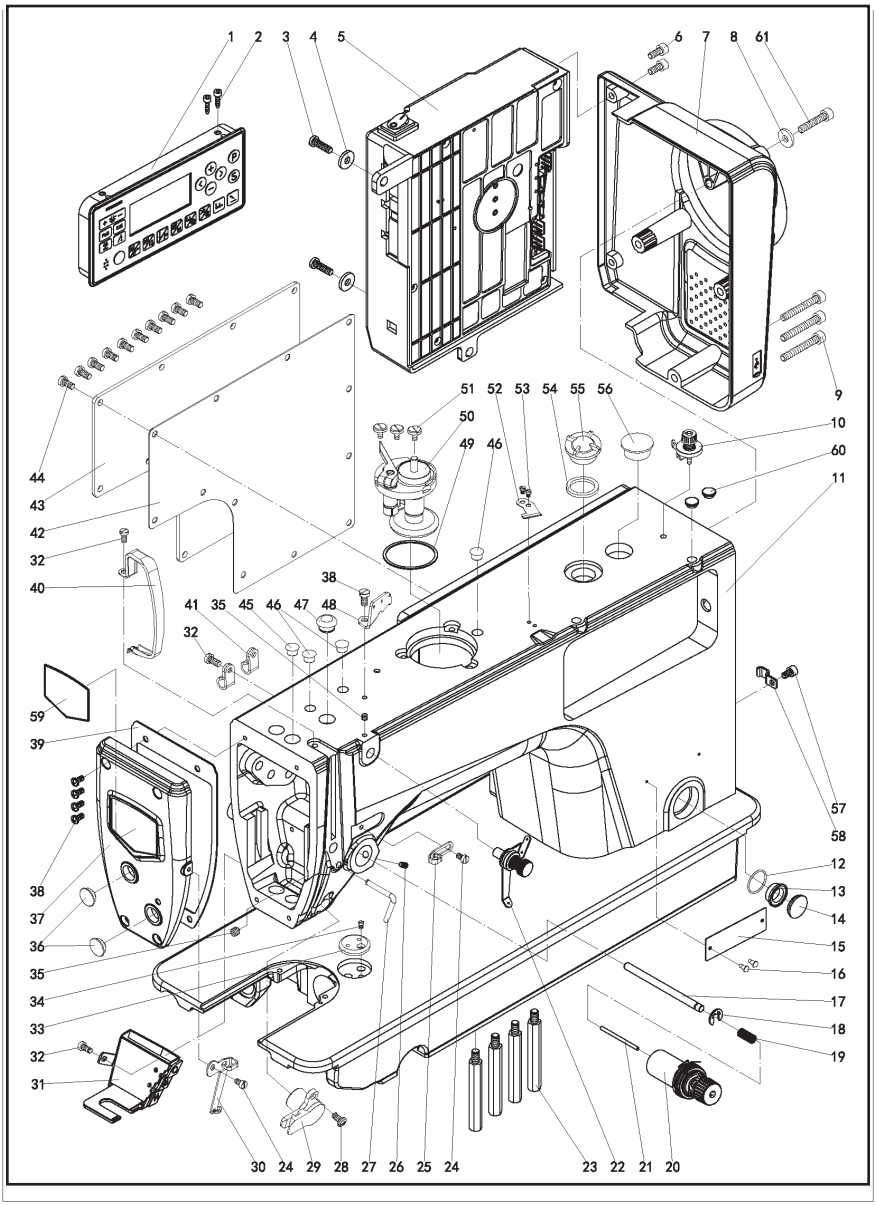
Actuator- 5525ZWACTUATOR



Treadle Rods- GEN143UOS



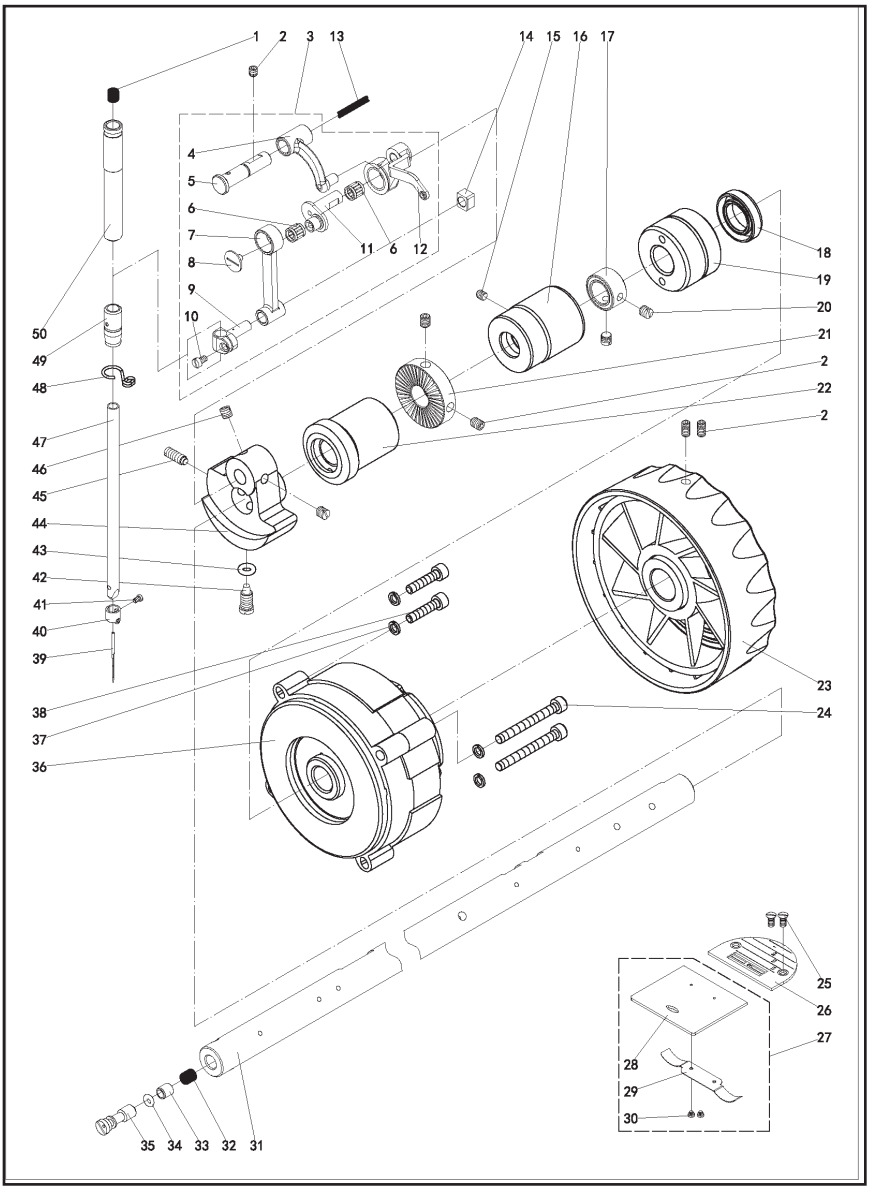
1. Machine frame mechanism



1. Machine frame mechanism

No.	Part No.	Qty.	Description
1	401070317	1	Display operation panel component
2	404430036	2	Screw M3 L=12
3	404420013	2	Screw SM3/16×28 L=16
4	303011553	2	Washer ø5.5×ø14.2×2
5	401070318	1	Electronic control box asm.
6	-	2	Screw M4 L=6
7	401070319	1	Motor cover
8	404210011	1	Washer ø4.9×ø11×1
9	109010155	3	Screw M5 L=22
10	306020003	1	Thread tension asm.
11	316920003	1	Frame
12	230043	1	O-ring
13	308010054	1	Oil window
14	308010053	1	Oil window
15	402020051	1	Type plate
16	401040041	2	Rivet
17	311010004	1	Pin
18	404610001	1	E-ring
19	306010055	1	Spring
20	306020032	1	Thread tension asm.
	302010068	1	Thread tension asm.
21	306010033	1	Pin
22	306020004	1	Upper thread take-up device asm.
23	311010005	1	Frame leg
24	404450021	2	Screw SM11/64×40 L=6
25	306010031	1	Thread guide
26	404440007	1	Screw SM15/64×28 L=7
27	306010002	1	Thread guide
28	7018A	1	Screw M4 L=7
29	306010129	1	Electronic clamp asm.
30	306010149	1	Thread guide
31	316010006	1	Automatic reverse seam switch asm.
32	404420008	3	Screw SM3/16×28 L=6
33	307010007	1	Ruler plate
34	404450024	1	Screw SM11/64×40 L=5
35	4543	2	Screw M4 L=4
36	306010028	2	Plug
37	312010002	1	Face plate
38	7019A	2	Screw M4 L=8
39	312010003	1	Face plate gasket
40	302010128	1	Thread take-up lever cover
41	206115	2	Clip
42	306010146	1	Side plate gasket
43	306010145	1	Side plate
44	404420009	10	Screw SM3/16×28 L=9
45	404130001	1	Plug
46	306010026	3	Plug
47	306010008	1	Plug
48	306010029	1	Thread guide
49	306010132	1	Oil gasket
50	302010023	1	Bobbin wider asm.
51	404450023	3	Screw M5 L=10
52	502070009	1	Secant cutter
53	1227	2	Screw M3 L=4
54	306010010	1	Rubber ring
55	306010009	1	Oil window
56	306010027	1	Plug
57	404430040	1	Screw M5 L=8
58	109010164	1	Plate
59	402020052	1	Type plate
60	404130007	2	Plug
61	40430013	1	Screw M5 L=16
62	-	-	-
63	-	-	-
64	-	-	-

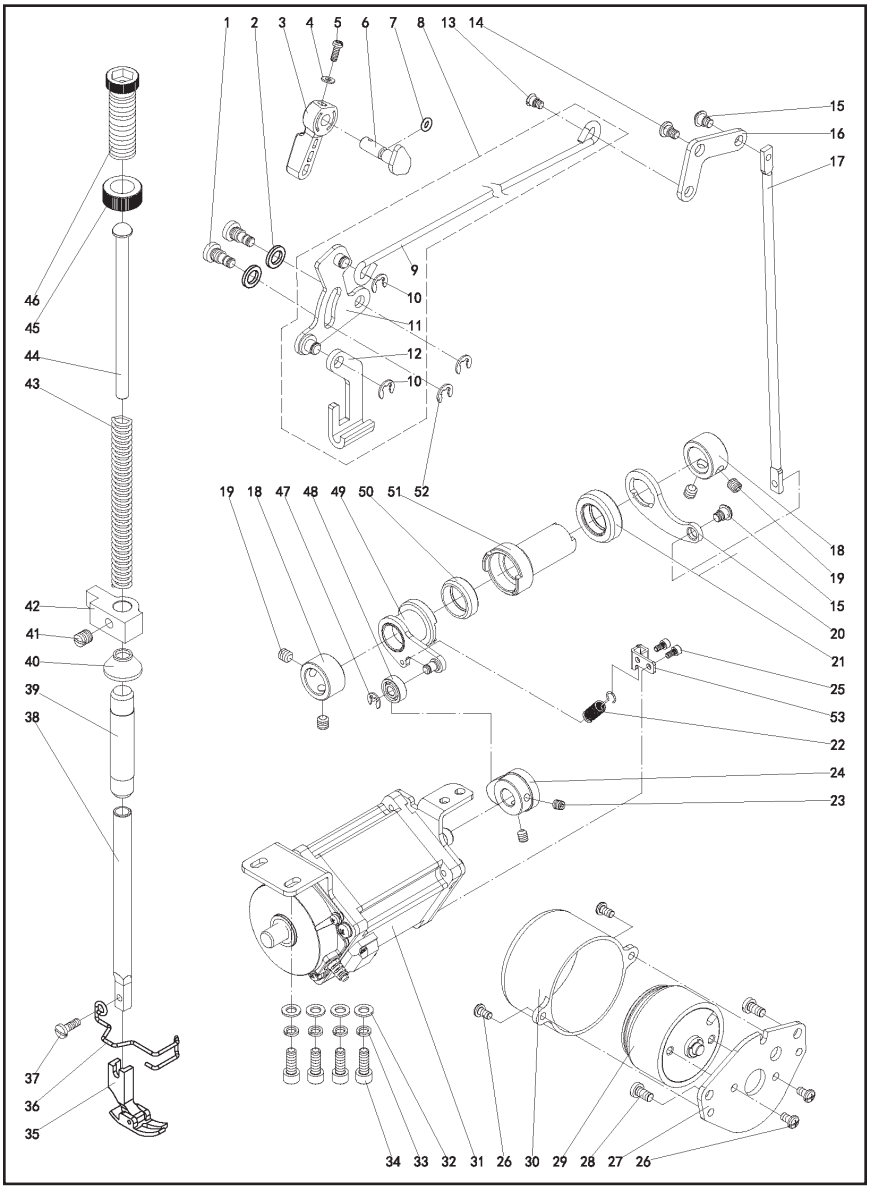
2. Main shaft & thread take-up & needle bar mechanism



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

No.	Part No.	Qty.	Description
1	302010077	1	Felt
2	4572	5	Screw M5 L=10
3	302010081	1	Thread take-up lever asm.
	301110048	1	Thread take-up lever asm.
4	-	1	Connecting rod
5	-	1	Connecting rod pin
6	-	2	Needle bearing
7	-	1	Connecting rod
8	-	1	Screw 9/64×40 L=6
9	-	1	Needle bar holder
10	-	1	Screw SM9/64×40 L=7
11	-	1	Thread take-up crank
	-	1	Thread take-up crank
12	-	1	Thread take-up lever unit
13	109010519	1	Oil line
14	306010235	1	Slider
	306010133	1	Slider
15	404440006	1	Screw SM15/64×28 L=10.5
16	302010038	1	Sleeve
17	306010035	1	Collar
18	307010041	1	Oil seal
19	307010016	1	Sleeve
20	302010616	2	Screw SM1/4×40 L=6
21	302010024	1	Winder drive wheel
22	302010037	1	Sleeve
23	307010039	1	Hand wheel
24	404430038	2	Screw M5 L=45
25	5484	2	Screw SM11/64×40 L=9
26	306010245	1	Needle plate
	306010162	1	Needle plate
27	306020005	1	Push plate asm.
28	-	1	Push plate
29	-	1	Push plate spring
30	-	1	Screw SM3/32×56 L=2
31	302020026	1	Main shaft
32	302010077	1	Flet
33	306010077	1	Rubber ring
34	404110008	1	O-ring
35	306010076	1	Oil amount adjusting pin
36	401010110	1	Motor
37	303067	4	Spring washer M5
38	404430032	2	Screw M5 L=25
39	502020016	1	Needle-DBX1/14
	502020015	1	Needle-DBX1/16
40	301010020	1	Thread guide
41	404450049	1	Screw SM1/8×44 L=5
42	306010042	1	Screw SM9/32×28
43	404110009	1	O-ring
44	311010047	1	Needle bar crank
45	306010043	1	Screw SM9/32×28 L=16
46	404440008	2	Screw SM1/4×40 L=6
47	306010111	1	Needle bar
	306010134	1	Needle bar
48	302010065	1	Thread guide
49	301010019	1	Sleeve
	302010064	1	Sleeve
50	301010018	1	Sleeve

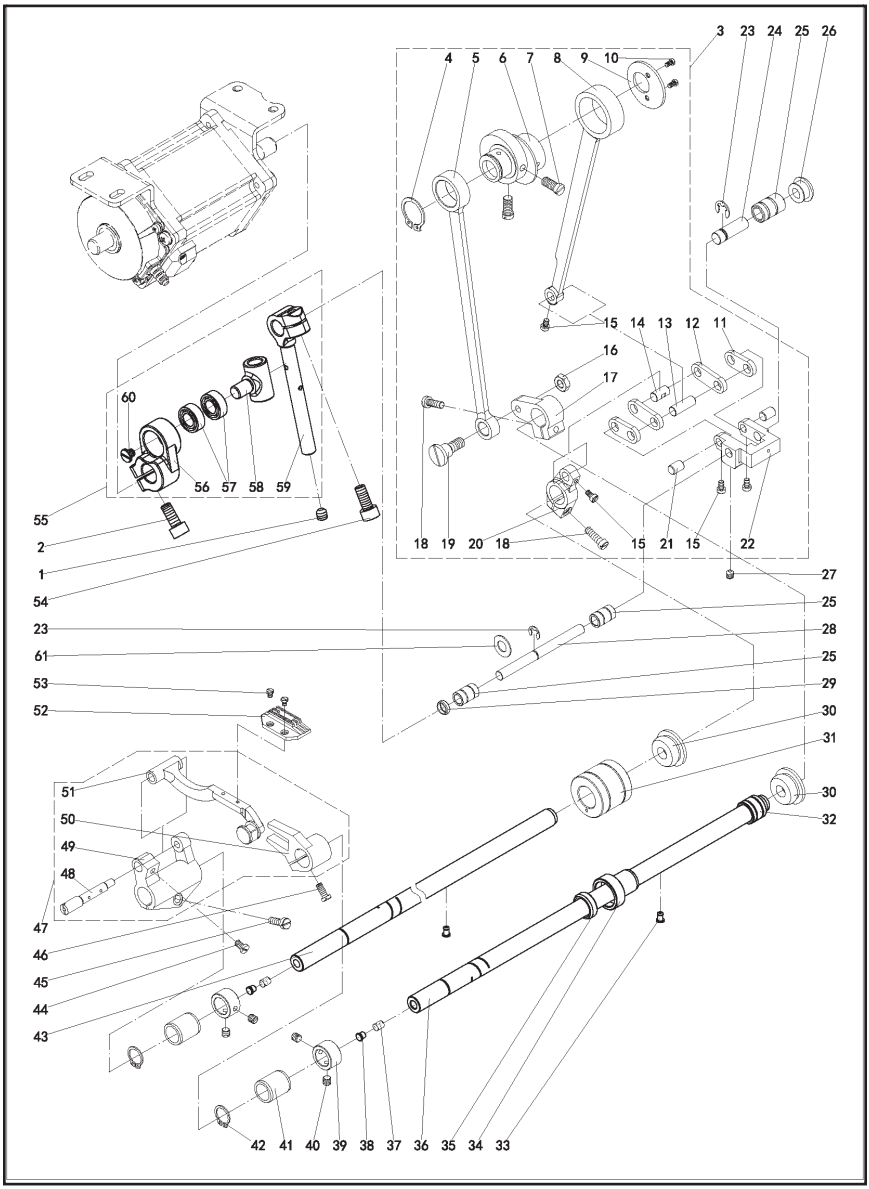
3. Hang lifter mechanism



3. Hang lifter mechanism

No.	Part No.	Qty.	Description
1	306010051	2	Screw
2	306010056	1	Seal ring
3	301010028	1	Hand lifter
4	301010031	1	Washer ø3.7×ø8×0.8
5	404420010	1	Screw SM9/64×40 L=10
6	306010011	1	Hand lifter CAM
7	301010030	1	O-ring
8	301010014	1	Lifting cross rod asm.
9	-	1	Lifting lever connecting rod
10	404610003	2	E-ring
11	-	1	Hand lift link
12	-	1	Lifting lever
13	306010049	1	Screw
14	404410005	1	Screw
15	310010057	2	Screw
16	301010015	1	Lifting lever link
17	311010006	1	Mandril
18	301010011	2	Collar
19	302010616	4	Screw M1/4×40 L=6
20	311010007	1	Crank
21	404120022	1	Oil seal
22	311010008	1	Spring
23	4539	2	Screw M5 L=6
24	311010009	1	Lifting CAM
25	4527	1	Screw M4 L=8
26	7018A	4	Screw M4 L=7
27	311010011	1	Plate
28	404420009	2	Screw SM3/16×28 L=9
29	311010012	1	Thread tension release electromagnet
30	311010013	1	Cover
31	401010107	1	Stepper motor
32	204585	4	Washer ø5.5×ø10×1
33	303067	4	Spring washer
34	4501	4	Screw M5 L=14
35	306010310	1	Presser food
	302010063	1	Presser food
36	302010071	1	Hand guard
37	404450025	1	Screw SM9/64×40 L=10.5
38	301010044	1	Presser bar
39	301010046	1	Sleeve
40	306010143	1	Oil seal
41	404440010	1	Screw SM1/4×40 L=8
42	301010045	1	Pressure guide bar bracket
43	306010047	1	Spring
44	306010046	1	Pressure guide bar
45	306010045	1	Pressure adjusting nut
46	306010044	1	Pressure adjusting screw
47	404610001	1	E-ring
48	305010010	1	Bearing
49	311010014	1	Crank
50	304010446	1	Oil seal
51	311010015	1	Sleeve
52	404610003	2	E-ring
53	311010038	1	Spring plate
54	-	-	-

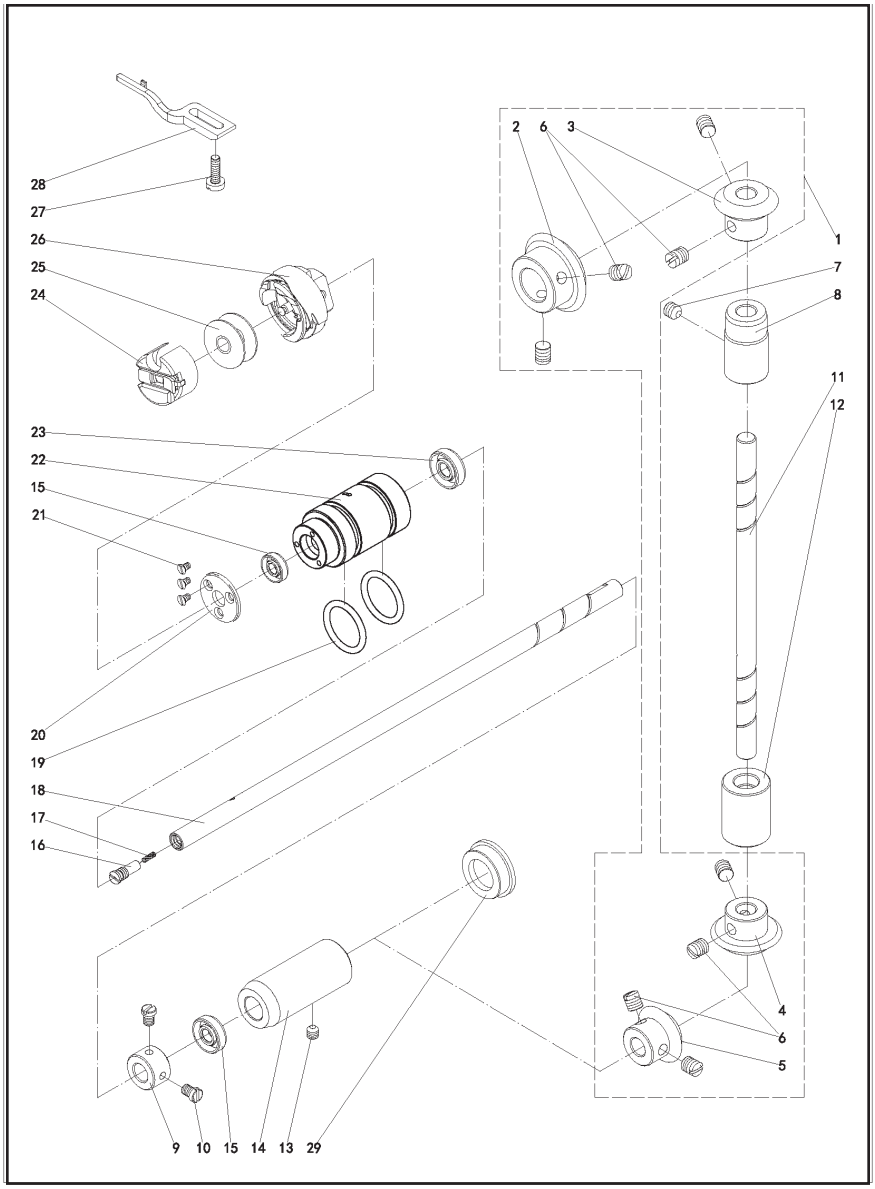
4. Feed mechanism



4. Feed mechanism

No.	Part No.	Qty.	Description
1	4514	1	Screw M5 L=5
2	4501	1	Screw M5 L=14
3	311010048	1	Feeding assembly
4	-	1	External Circlips d=20
5	-	1	Lifting link
6	-	1	Feeding eccentric CAM
7	-	2	Screw SM1/4×40 L=13
8	-	1	Feeding link
9	-	1	Feeding eccentric CAM cover
10	-	2	Screw SM9/64×40 L=6
11	-	2	Feeding short swing plate
12	-	2	Feeding long swing plate
13	-	1	Feeding rod pin
14	-	1	Feeding rod crank pin
15	404450014	4	Screw SM9/64×40 L=6
16	-	1	Nut SM9/32×28
17	-	1	Lift link crank
18	404450026	2	Screw SM3/16×28 L=14
19	-	1	Axial screw
20	-	1	Feed rod crank
21	-	2	Feed short swing plate connecting pin
22	-	1	Feed swing plate seat unit
23	404610008	2	E-ring
24	305010471	1	Pin
25	305010488	3	Sleeve
26	306010008	1	Plug
27	404440002	1	Screw SM15/64×28 L=8
28	305010473	1	Shaft
29	304010476	1	Oil seal
30	240110	2	Plug
31	311010016	1	Sleeve
32	305010012	1	Sleeve
33	308010060	2	Plug
34	308010038	1	Sleeve
35	304010446	1	Oil seal
36	305010025	1	Lifting shaft
37	302010077	2	Flet
38	308010048	2	Plug
39	301010011	2	Collar
40	302010616	4	Screw SM1/4×40 L=6
41	305010042	2	Sleeve
42	404620003	2	External Circlips d=15
43	311010017	1	Feed shaft
44	404450028	1	Screw SM11/64×40 L=8
45	404450026	1	Screw SM3/16×28 L=14
46	404450027	1	Screw SM11/64×40 L=10.5
47	302010062	1	Feed bar asm.
48	-	1	Pin
49	-	1	Feed bar driving crank
50	-	1	Lift fork crank
51	-	1	Feed bar unit
52	306010423	1	Feeding dog
53	404450036	2	Screw SM1/8×44 L=6
54	4531	1	Screw M5 L=12
55	311010045	1	Stitch adjusting ass.
56	311010043	1	Stitch adjusting crank
57	404710019	2	Bearing
58	311010037	1	Stitch adjusting block
59	311010036	1	Stitch adjusting bar
60	404450113	1	Screw SM11/64×40 L=4.3
61	301010039	1	Washer ø8×ø15.5×0.8

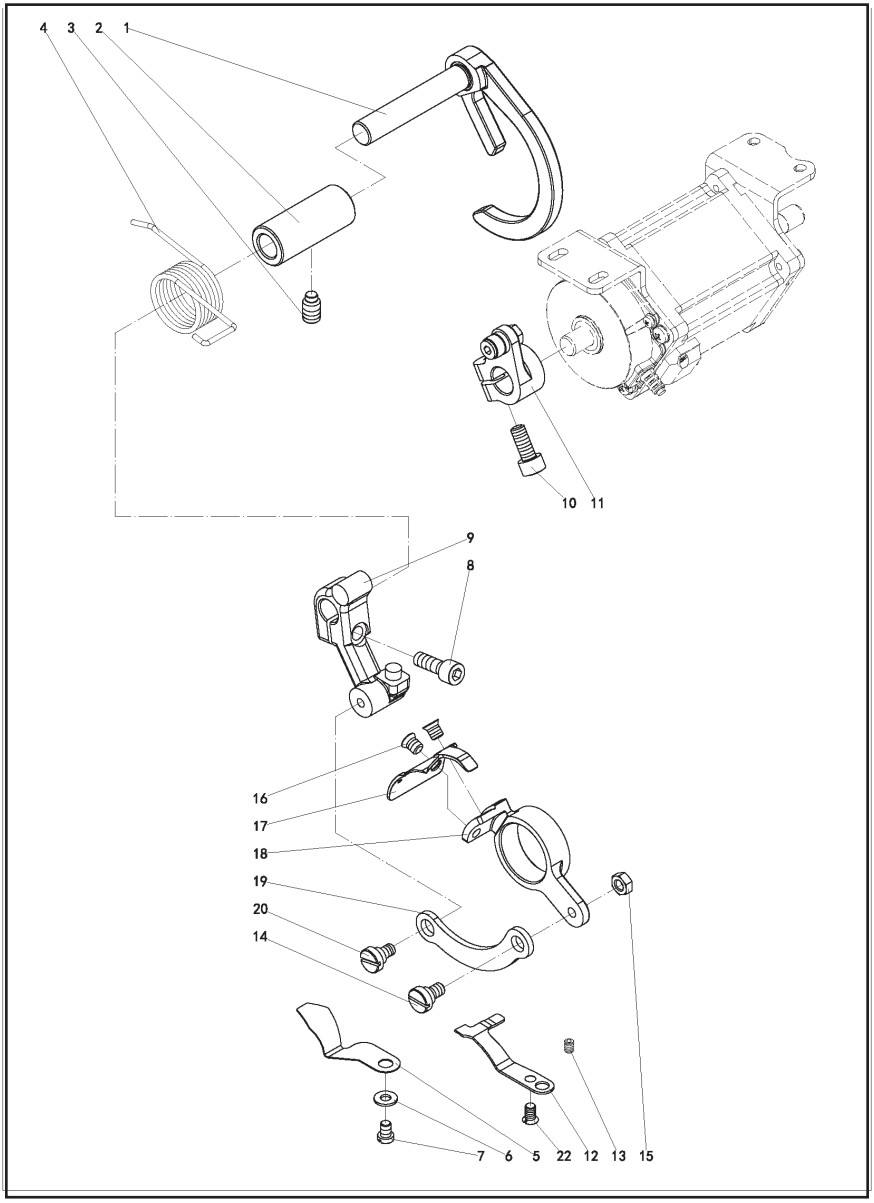
5. Hook of driving shaft mechanism



5. Hook of driving shaft mechanism

No.	Part No.	Qty.	Description
1	302010312	1	Bevel gear group
2	306010172	1	Bevel gear
3	306010173	1	Bevel gear
4	306010174	1	Bevel gear
5	306010175	1	Bevel gear
6	404440010	8	Screw SM1/4×40 L=8
7	404440007	1	Screw SM15/64×28 L=7
8	302010033	1	Sleeve
9	306010073	1	Collar
10	404450032	2	Screw SM11/64×40 L=5
11	302010029	1	Upright shaft
12	302010034	1	Sleeve
13	404440006	1	Screw SM15/64×28 L=10.5
14	305010028	1	Sleeve
15	304010476	2	Oil seal
16	306010074	1	Hook driving shaft oil limit screw
17	306010075	1	Hook driving shaft oil limit wick
18	302010027	1	Hook driving shaft
19	404110005	2	O-ring
20	308010625	1	Partiaiity shank
21	7041	3	Screw M3 L=6
22	308010011	1	Sleeve
23	404120006	1	Oil seal
24	306010207	1	Bobbin case
25	306010069	1	Bobbin
26	302010079	1	Hook
	302010078	1	Hook
27	5118	1	Screw SM11/64×40 L=12
28	306010082	1	Positioning finger
	306010097	1	Positioning finger
29	404130012	1	Plug

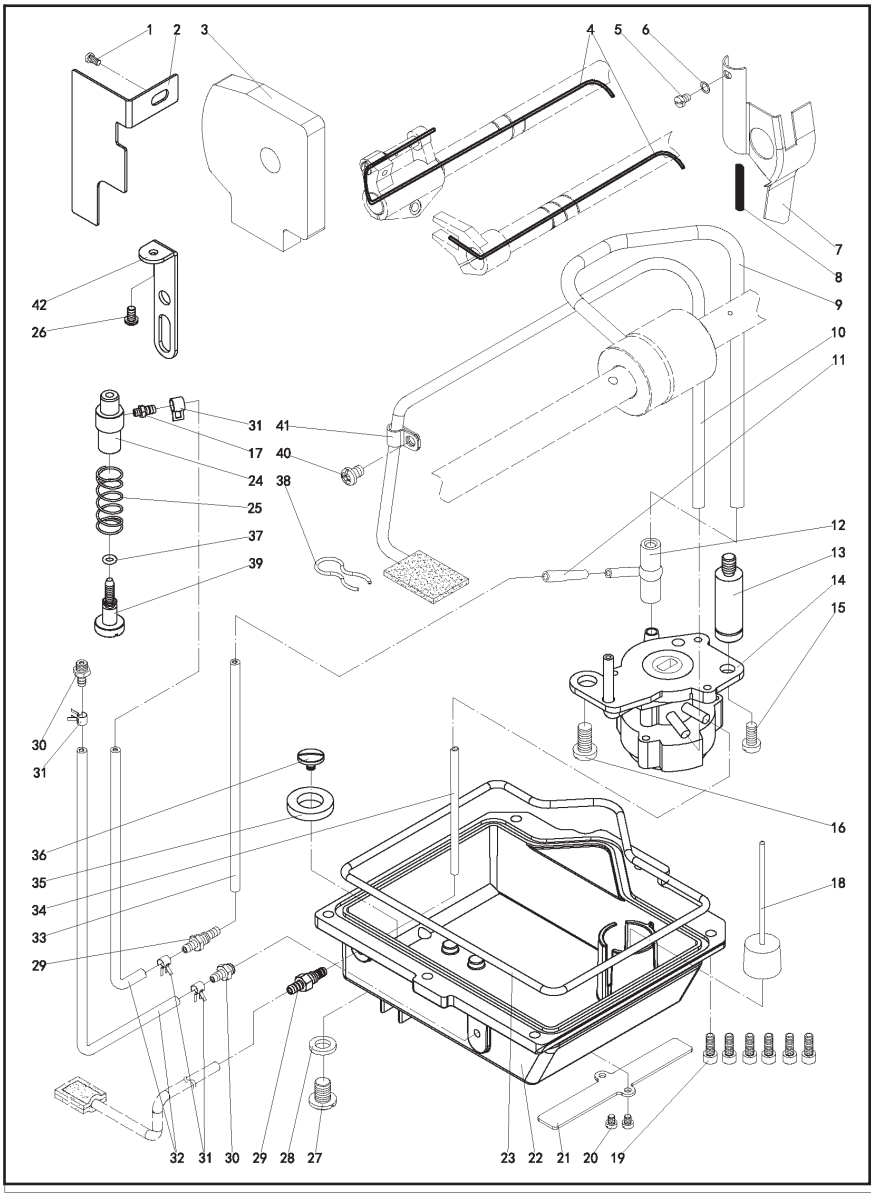
6. Thread trimmer mechanism



6. Thread trimmer mechanism

No.	Part No.	Qty.	Description
1	311010023	1	Trimming crank shaft
2	308010057	1	Sleeve
3	404440006	1	Screw SM15/64×28 L=10.5
4	308010061	1	Spring
5	302010016	1	Dispart
6	301010031	1	Washer ø3.7×ø8×0.8
7	404450033	1	Screw SM9/64×40 L=5
8	404430025	1	Screw SM3/16×32 L=14
9	311010003	1	Crank
10	4501	1	Screw M5 L=14
11	311010024	1	Crank
12	302010015	1	Knife
13	404440027	1	Screw SM9/64×40 L=9
14	404410008	1	Axial screw
15	404510005	1	Nut SM11/64×40
16	404460004	2	Screw SM11/64×40 L=5.5
17	302010059	1	Knife
	302020059	1	Knife
18	311010025	1	Knife bracket
19	311010026	1	Link
20	404410007	1	Axial screw

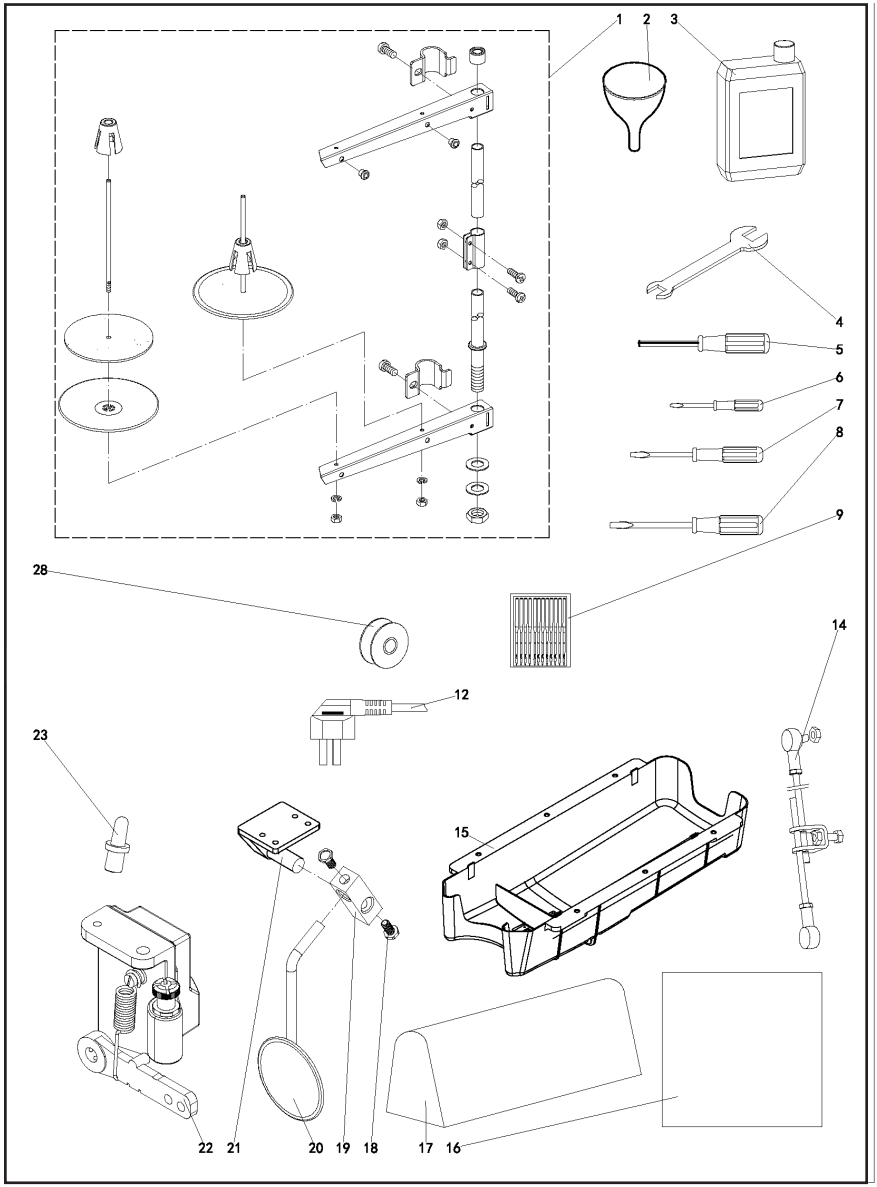
7. Lubrication mechanism



7. Lubrication mechanism

No.	Part No.	Qty.	Description
1	404420008	1	Screw SM3/16×28 L=6
2	306010170	1	Oil proof
3	306010092	1	Sponge
4	202175	2	Oil line
5	404450022	1	Screw SM1/8×44 L=4
6	301010031	1	Washer ø3.7×ø8×0.8
7	306010034	1	Arm oil shifld
8	202175	1	Oil line
9	306010086	1	Main shaft oil tube
10	302010075	1	Oil felt
11	20T010922	1	Oil tube
12	306010083	1	Rubber joint
13	311010058	1	Screw
14	311010035	1	Lubricating oil pump asm
15	5118	1	Screw SM11/64×40 L=12
16	404420011	1	Screw SM15/64×28 L=8
17	311010042	1	Oil joint
18	311010027	1	Oil mark
19	404430005	6	Screw M5 L=18
20	7012	2	Screw M3.5 L=6
21	305010136	1	Wire Holder
22	311010049	1	Oil tank
23	305010037	1	Oil seal
24	311010039	1	Oil joint
25	311010041	1	Spring
26	404450028	1	Screw SM11/64×40 L=8
27	308010047	1	Screw M8
28	306010056	1	Oil seal
29	308010026	2	Oil joint
30	308010025	2	Oil joint
31	308010058	4	Oil tube clip
32	401060023	2	Oil tube
33	401060023	1	Oil tube
34	109011209	1	Oil tube
35	306010108	1	Magnet
36	308010050	1	Screw SM3/16×28
37	404110014	1	O-ring
38	306010084	1	Oil felt presser
39	311010040	1	Screw
40	7018A	1	Screw M4 L=7
41	306010089	1	Oil return tube Holder
42	305010818	1	Bracket

8. Accessories part mechanism



8. Accessories part mechanism

No.	Part No.	Qty.	Description
1	402020023	1	Thread stand asm.
2	402020115	1	Funnel
3	402020005	1	Oil box
4	402020140	1	Wrench 8-9
5	402020078	1	2mm Allen wrench
6	402020067	1	Screw driver
7	402020066	1	Screw driver
8	402020065	1	Screw driver
9	405120011	10	Needle-DBX1/14
	502020015	10	Needle-DBX1/16
12	-	1	Power line
14	401070002	1	Pedal control rod asm.
15	305010056	1	Tray
16	316010004	1	Instruction Book & Parts Book
17	402020084	1	Dust cover
18	-	2	Screw M6 L=13
19	306010137	1	Vertical shaft fitting arm
20	306010156	1	Knee pan plate asm
21	305020035	1	Knee lift component
22	401030025	1	Pedal unit asm.
23	306010121	1	Head pole
28	306010068	2	Bobbin

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