

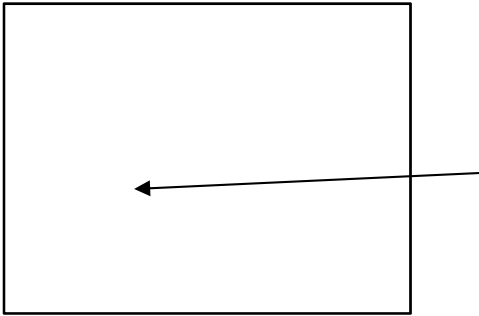
SM 7820 MC Inseam sewing machine



OPERATING INSTRUCTION MANUAL

Rev 201901

Thank you very much for your choice of this double thread side seam sewing machine. Please read the manual carefully before use!



Main Warnings:

- ♥It is extremely important that the electrical device must be soundly earthed!
- ♥It is absolutely forbidden to remove any protection system provided by manufacturer while machine is on!
- ♥All setting and replacement operation must be carried out only by the qualified expert personnel!
- ♥For repairs, all tools and replacement parts must be qualified by manufacturer!
- ♥Whenever, and whatever reason, the machine is to be demolished, certain basic rules must be observed to safeguard public health and the environment in which we live!

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I. Technical Specifications

Sewing Speed:	Stepless speed regulating
Stitch Length:	3 – 18 mm
Stitch:	Double locked
Sewing Thickness:	6 – 20 mm
Needle Bar Stroke:	60 mm
Sewing Needle:	240#
Sewing Thread:	Compound thread, linen thread, cotton thread, nylon thread
Motor Power:	750W/220V Single-phase
Total Weight:	430 kg
Overall Size:	86×76×170 cm (L×W×H)

II. Generals

The present sewing machine is very applicable for the line of shoe making. Such threads as linen, cotton and nylon can be used to sew leather shoes, cloth shoes and sports shoes.

The machine is driven by a special electronic motor and controlled by a computer. The operating speed can be set and changed at random. The needle stopping position can also be set. The mechanically-driven parts include cams and gears, which are simple and reliable. The colophony pot and the shuttle heating device are available and the temperature can be adjusted. There are several types of shoe horns. Therefore, the machine has more uses.

The machine consists of mechanic and electric parts.

The mechanic parts include the upper footstock, upper frame, lower frame, stand and shoe horn. The mechanic drive is done with the help of eight cam gears.

The electric parts include a computer case, an electronic governor motor and a set of heating and lighting devices.

III. Operation

Operators are required to get familiar with the machine. They should know the position as well as the function of each adjusting screw and grasp the essentials before operating the machine.

Refer to the following steps when starting the machine.

Fill the oil cup with 30# lubricant (fill the cover cup with grease) and apply some 30# lubricant to the drive shaft and the mating surface. Make sure that the machine is fully lubricated in operation.

Switch in and press the button. Check whether the driving direction of the belt is the same with the arrow on the guard.

IV. Adjustment

Some parts have to be replaced in the course of operation. Check whether the replaced parts are mounted correctly. So it is necessary for operators to know how to adjust them

1. Cam Gears

The relevant position of the cam gears has been factory-adjusted (fixed with the core pins). Readjustment is unnecessary in operation or maintenance.

2. Adjustment of the Needle Bar

240# sewing needles are applied to the machine. The stroke of the needle bar is fixed. The idle position of the needle bar (the lowest) should be adjusted. When the needle bar is at the lowest of the stroke, it is suitable for the needle hook to be 2 mm below the delivery end of the winding reel. Refer to Fig. 1 about the method of adjustment. Loosen the two socket head screws on the needle bar, and move the needle bar up and down to the right position mentioned above. Then tighten the socket head screws.

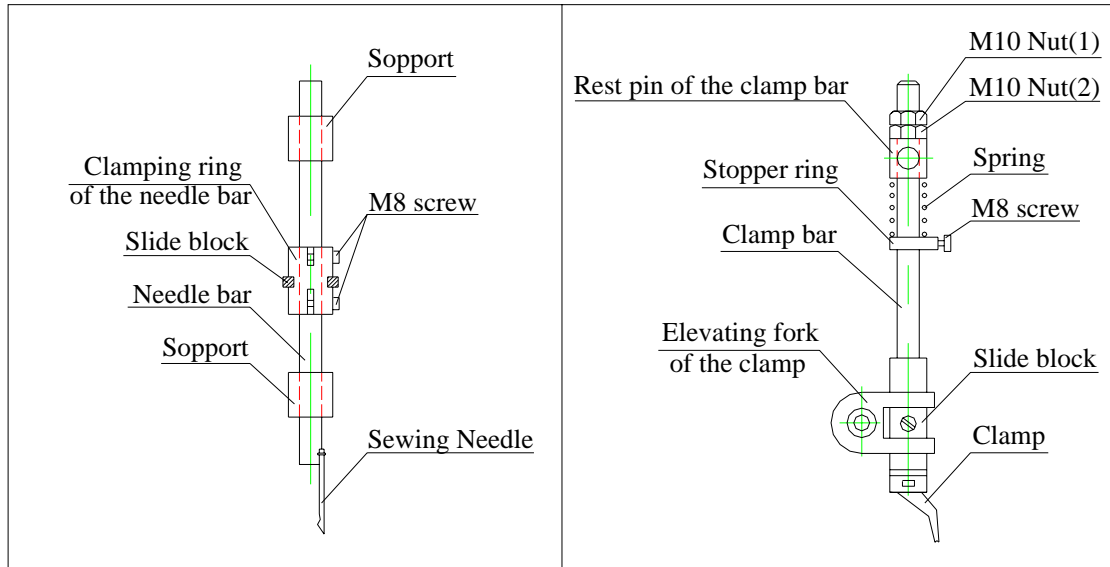


Fig.1

Fig.2

3.Adjustment of the Clamp

Due to leather, lining and soles of different thickness, the clamp needs adjusting so that various kinds of shoes can be sewn. Refer to Fig. 2 about the method of adjustment. Loosen the M10 Nut(1) , then adjusting the M10 Nut(2)and the clamp is raised by rotating down clockwise, but lowered by rotating up counterclockwise. Tighten the screw after adjustment.

4.Adjustment of the Needle Pitch

In the course of sewing, operators can adjust the needle pitch to meet the requirements. Refer to Fig. 3 about the method of adjustment. Loosen the nut and move it up to have larger needle pitches while move it down to have smaller needle pitches. Tighten the nut after adjustment.

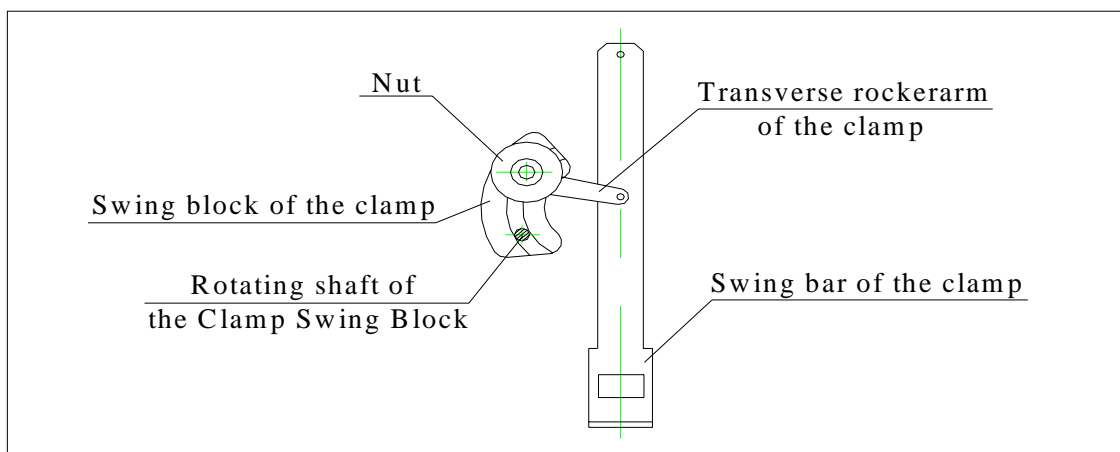


Fig.3

5.Setting of the Needle Stopping Position

The needle stopping position can be decided at random since the machine is driven by the electronic motor and controlled by the computer. When adjusting, loosen the set screw on the signal indicator. Then turn the handle slowly to let the needle bar to the required position. Tighten the screw after adjustment.

6.Adjustment of the Tensioning Wire

The tension device is a necessary part of the machine, with the help of which the stitches become densified. Loosen the nut on the tensioning wire and adjust the screw bolt downwards so as to tighten the tensioning wire. When adjusting the screw bolt upwards, loosen the tensioning wire. Then tighten the nut.

7.Adjustment of the Wiring Reel

When replacing the wiring reel, loosen the socket head screw on the camshaft gear of the shoe horn at the lowest of the needle. Rotate the camshaft to let the elbow of the wiring reel be in the straight line of the tip. Lock the socket head screw of the cylindrical wheel.

V. Troubleshooting and Maintenance

If the machine is overloaded or mechanic parts get stuck in operation, the indicator (a small green light) on the computer panel will flash continuously. Switch off the motor and remedy the troubles mentioned above. Then restart the machine and it will return to normal.

Caution! The power lines must be connected correctly with good grounding.

Clean the clamp and the shuttle regularly. Always keep clean the machine and the control units of computer and motor. Avoid knocking in transit.

Lubricate the machine now and then. Check the machine carefully when it is reused after a long time. Test run and slow running are required.

Parts Drawings

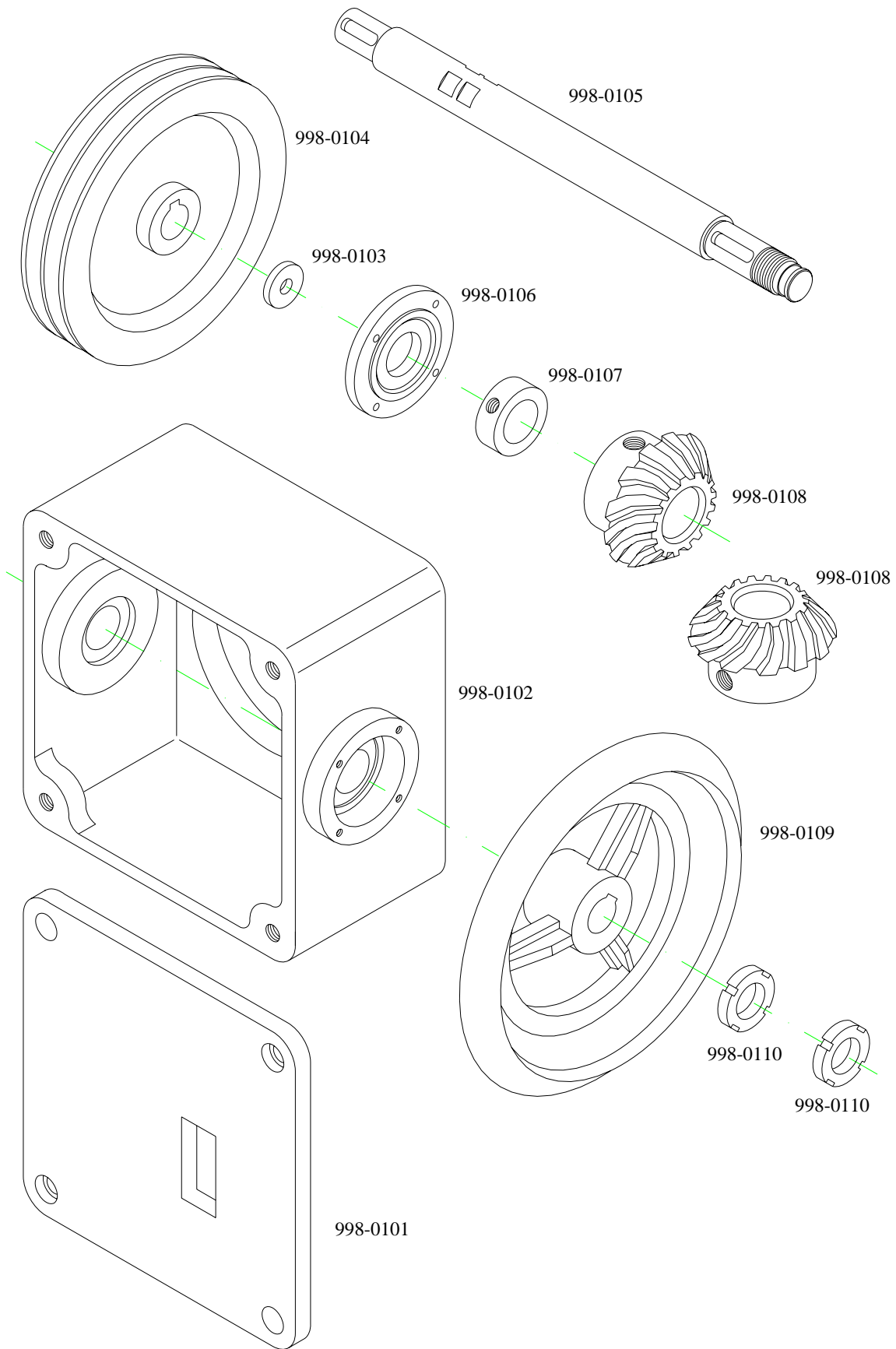


Fig.No	Part's name	Quantity
998-0101	Cap	1
998-0102	Upper cap	1
998-0103	Pulley gasket	1
998-0104	Belt pulley	1
998-0105	Main shaft	1
998-0106	Enclosing cover	2
998-0107	Straining ring of the main shaft	1
998-0108	Bevel gear	2
998-0109	Handle wheel	1
998-0110	Round net of the main shaft	2

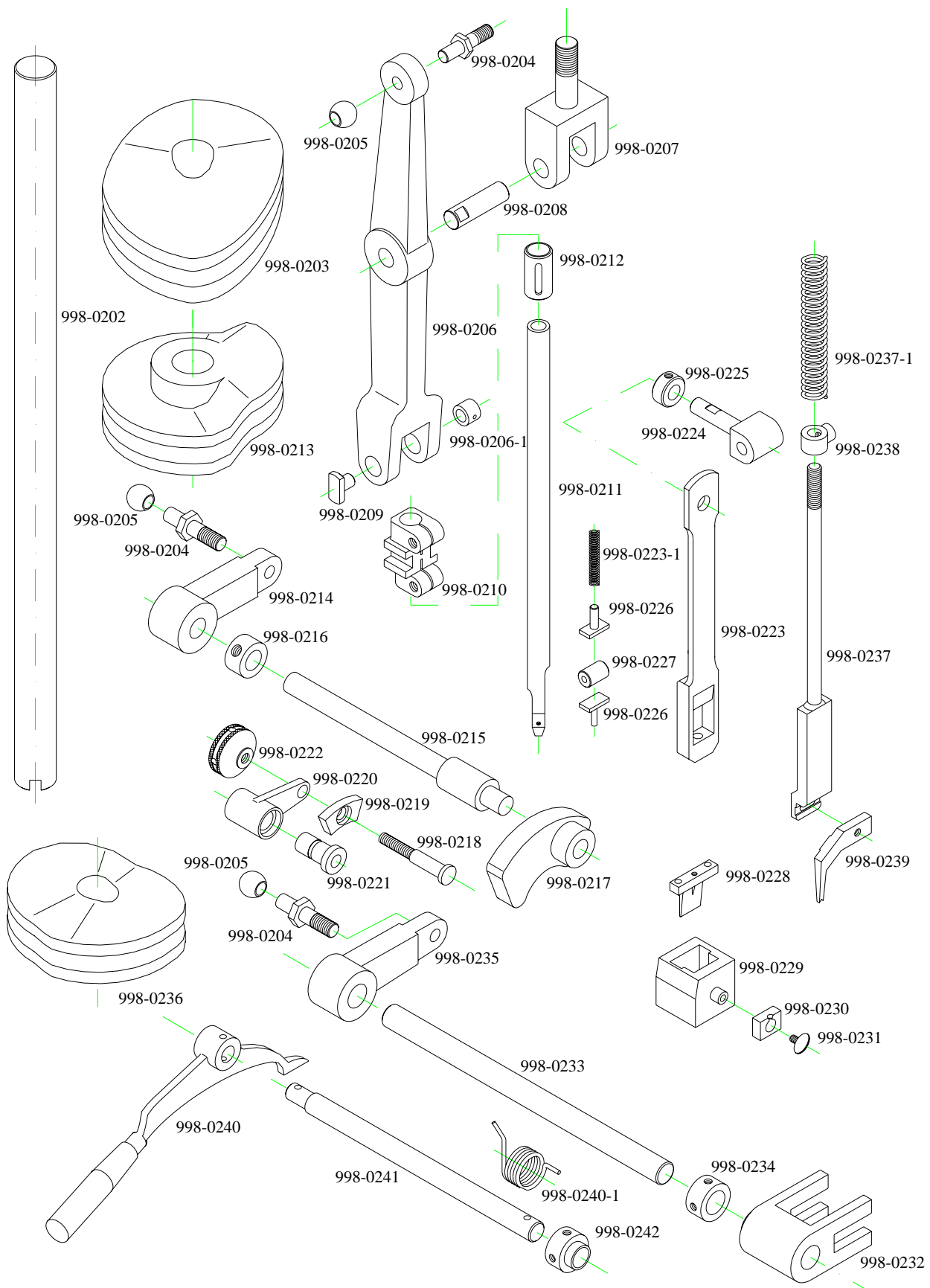


Fig.No	Part's name	Quantity
998-0202	Upper vertical axle	1
998-0203	No.1 cam	1
998-0204	Pin for the drum roller	5
998-0205	Drum roller	7
998-0206	Elevating rocker arm of the needle bar	1
998-0206-1	Bush for the elevating rocker arm	2
998-0207	Forked standard	1
998-0208	Pin for the elevating rocker arm	1
998-0209	Slide block	2
998-0210	Clamping ring of the needle bar	1
998-0211	Needle bar	1
998-0212	Copper ring of the needle bar	2
998-0213	No.2 cam	1
998-0214	Transverse rocker arm of the clamp	1
998-0215	Swing shaft of the clamp	1
998-0216	Straining ring	3
998-0217	Swing block of the clamp	1
998-0218	Screw bolt	1
998-0219	Sector	1
998-0220	Single rocker arm	1
998-0221	Hollow shaft	1
998-0222	Nut	1
998-0223	Swing bar of the clamp	1
998-0223-1	Spreader spring	1
998-0224	Rest pin of the clamp bar	1
998-0225	Straining ring of the rest pin	1
998-0226	Roller holder	2
998-0227	Roller	1
998-0228	Insertor	1
998-0229	Slide block	1
998-0230	Elevating slide block of the clamp	2
998-0231	Screw	2
998-0232	Elevating fork of the clamp	1
998-0233	Elevating axle of the clamp	1
998-0234	Straining ring of the elevating axle	1
998-0235	Upper-lower rocker arms of the clamp	1
998-0236	No.3 cam	1
998-0237	Clamp bar	1
998-0237-1	Spreader spring	1
998-0238	Stopper ring	2
998-0239A	Clamp	1
998-0239B	Clamp	1
998-0240	Clamp lifting rocker arm	1
998-0240-1	Twisting spring	1
998-0241	Clamp lifting axle	1
998-0242	Straining ring for the twisting spring	1

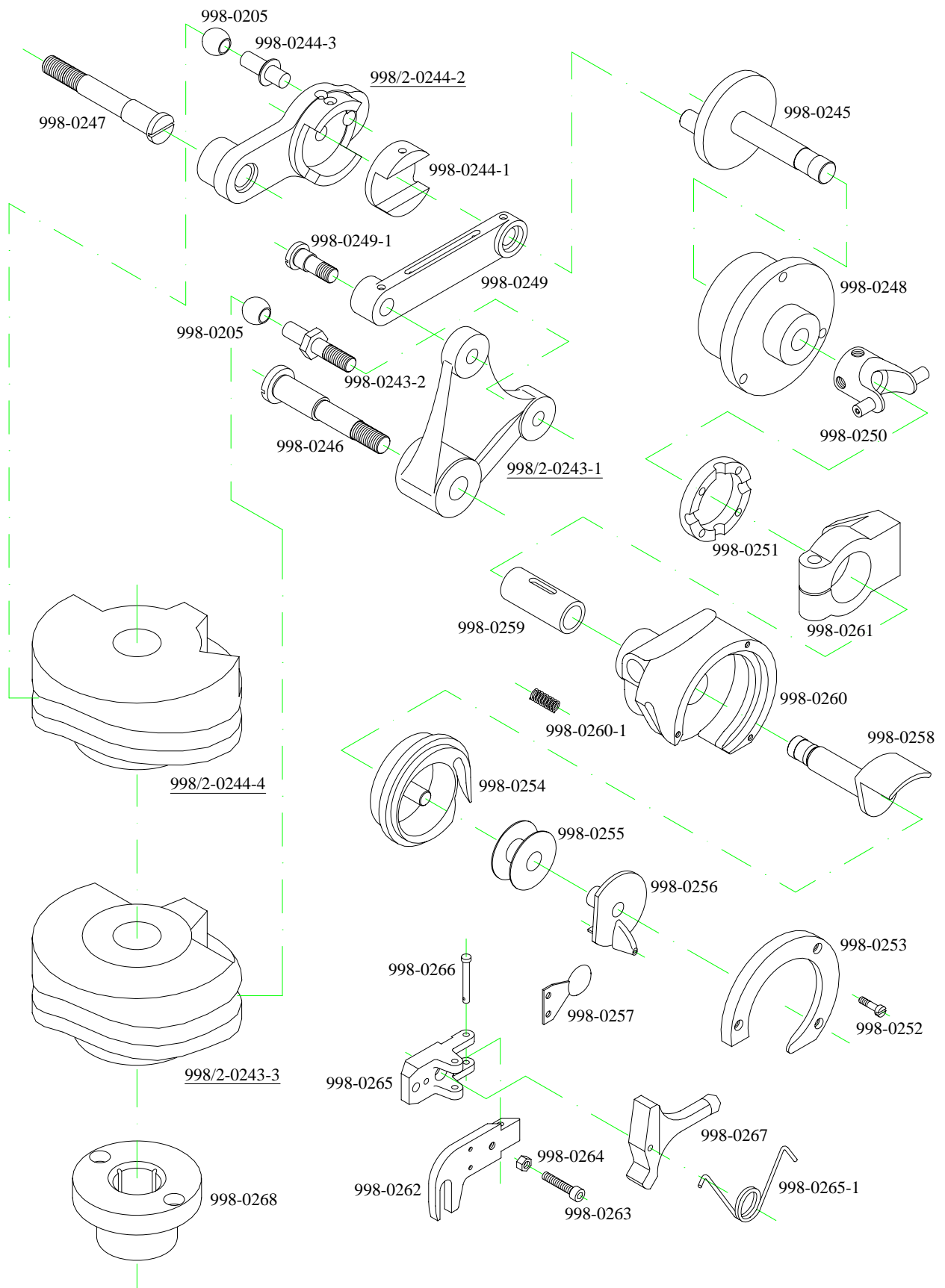


Fig.No	Part's name	Quantity
998/2-0243-1	Rocker arm	1
998-0243-2	Pin for the drum roller	1
998/2-0243-3	No.5 cam	1
998-0244-1	Sliding way chute	1
998/2-0244-2	Slide carriage	1
998-0244-3	Pin for the roller	1
998/2-0244-4	No.4 cam	1
998-0245	Crank	1
998-0246	Pin axle	1
998-0247	Pin	1
998-0248	Axle seat	1
998-0249	Connecting rod	1
998-0249-1	Screw	1
998-0250	Universal joint	2
998-0251	Clamping ring for the universal joint	2
998-0252	Shuttle cover screw	3
998-0253	Shuttle cover	1
998-0254	Big shuttle	1
998-0255	Shuttle peg	1
998-0256	Shuttle peg cover	1
998-0257	Slide wire plate	1
998-0258	Shuttle support	1
998-0259	Bush	1
998-0260	Shuttle seat	1
998-0260-1	Shuttle seat spring	3
998-0261	Shuttle seat clamping chuck	1
998-0262	Shuttle lid	1
998-0263	Adjuster screw	1
998-0264	Nut	1
998-0265	Seat	1
998-0265-1	Twisting spring	1
998-0266	Pin	2
998-0267	Brake	1
998-0268	Axle sleeve	1

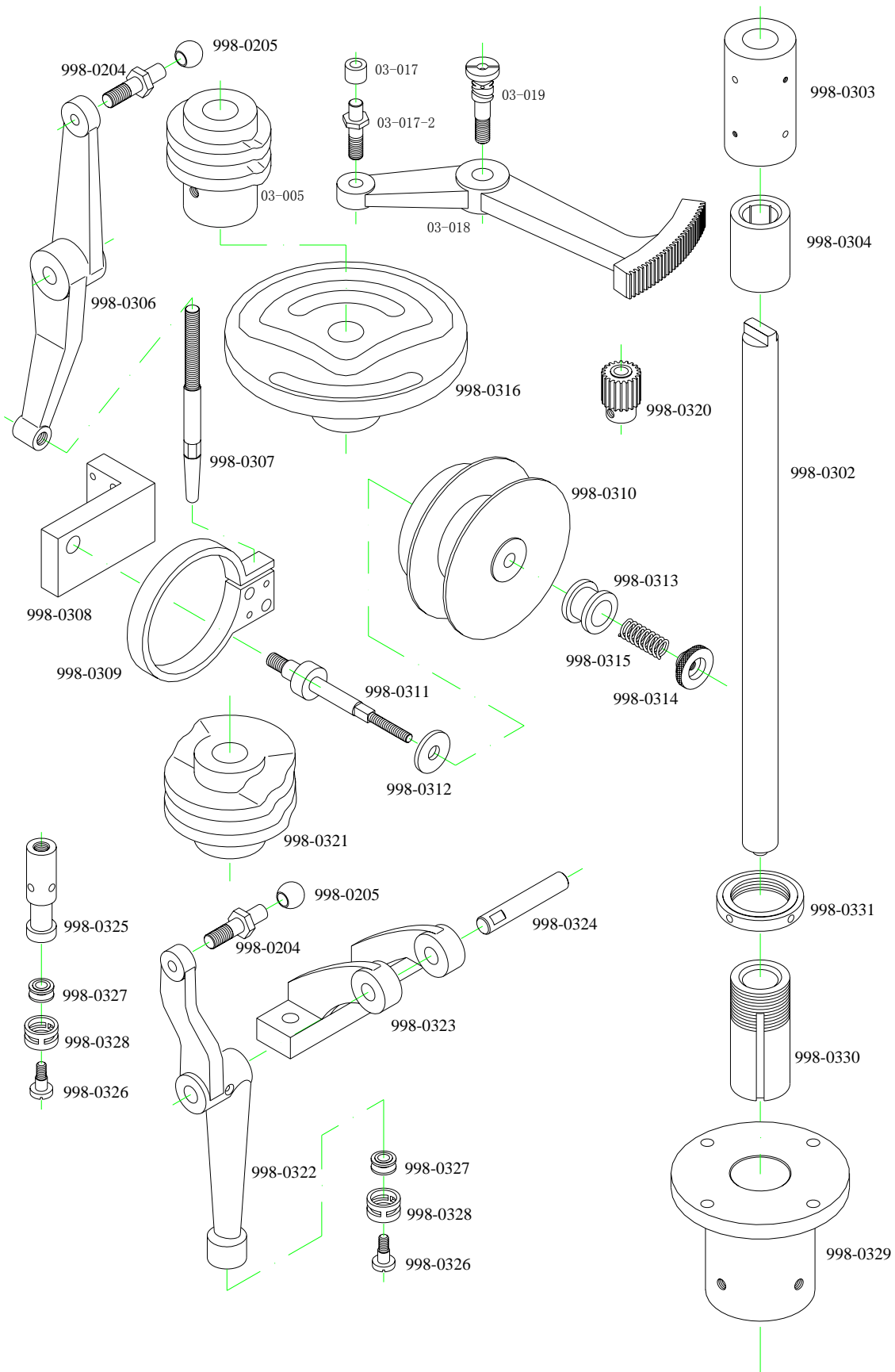


Fig.No	Part's name	Quantity
998-0302	Lower vertical axle	1
998-0303	Connecting ring	1
998-0304	Sleeve	1
998-0305	No.6 cam	1
998-0306	Rocker arm for the tensioning wire	1
998-0307	Screw bolt	1
998-0308	Support	1
998-0309	Trig loop	1
998-0310	Thread coil	2
998-0311	Thread coil axle	1
998-0312	Packing ring	1
998-0313	Spring seat for the thread coil	1
998-0314	Nut	1
998-0315	Spring	1
998-0316	No.7 cam	1
998-0317	Roller	1
998-0317-2	Pin for the roller	1
998-0318	Toothed sector	1
998-0319	Sector pin	1
998-0320	Cylindrical gear	1
998-0321	No.8 cam	1
998-0322	Marking out rocker arm	1
998-0323	Support of the marking out rocker arm	1
998-0324	Pin axle of the marking out rocker arm	2
998-0325	Thread wheel axle	1
998-0326	Thread wheel screw	2
998-0327	Thread wheel	2
998-0328	Guard ring for the thread wheel	2
998-0329	Supporting seat	1
998-0330	Supporting sleeve	1
998-0331	Round nut	1
998-0332	Support for the shoe horn seat	1

TYPE:C2

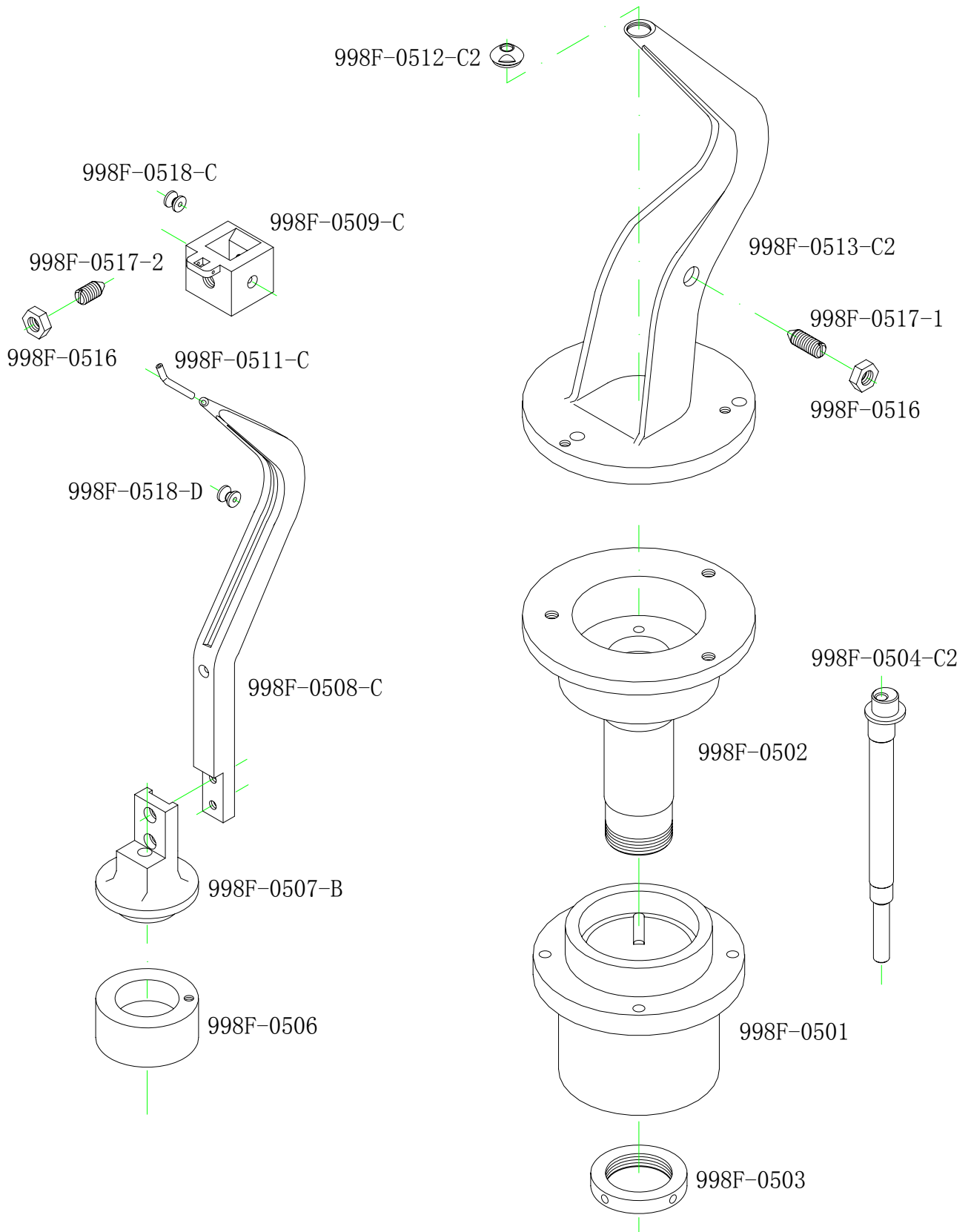


Fig.No	Part's name	Quantity
998F-0501	Flanged seat	1
998F-0502	Axle housing	1
998F-0503	Round net	1
998F-0504-C2	Camshaft of the shod horn	1
998F-0506	Sleeve of the small shoe horn	1
998F-0507-B	Horn seat (for small shoe horn)	1
998F-0508-C	Small shoe horn	1
998F-0509-C	Way block of the small shoe horn	1
998F-0511-C	Winding reel	1
998F-0512-C2	Needle plate	1
998F-0513-C2	Big shoe horn	1
998F-0516	Fine thread nut	4
998F-0517-1	Pointed screw (long)	2
998F-0517-2	Pointed screw (short)	2
998F-0518-C	Thread wheel (short)	1
998F-0518-D	Thread wheel (long)	1

Parameter Setting of the Motor (HVP-70 for SM 7820 MC)

Parameter Mode A: Press 'P' key to enter Parameter Mode A

PARAMETER CODE	DEFAULT	DESCRIPTION
[001.H]	600	Maximum sewing speed, Recommended speed less than 1000RPM.
[002.PSL]	25	Setting acceleration curve , don't adjust is recommended.
[046.DIR]	CCW	Direction of motor rotation.

Parameter Mode B: Turn off the motor, press and hold the 'P' key, then turn on the power to enter Parameter Mode B.

PARAMETER CODE	DEFAULT	DESCRIPTION
[060.L]	200	Speed adjustment for low speed.
[072]	ON	
[078.TRM]	LK	Type selection for motor braked.

Parameter Mode C: Turn off the motor, press and hold the 'S' key, then turn on the power to enter Parameter Mode C.

PARAMETER CODE	DEFAULT	DESCRIPTION
122.HL	800	The motor's maximum speed setting.
[168.HKP]	130	Setting needle stop torsion, recommended value less than 150.
[175.HV]	ON	The heavy load mode

Reset to the motor's factory defaults:

Turn off the motor, press and hold the key 'A' and 'B' together, and then turn on the main switch to reset the motor.

SM 7820 MC Electrical Block Diagram

