

# TYPICAL



## GC6150MD/HD GC6150MD/HD-LD

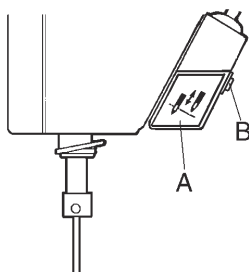
SINGLE NEEDLE DIRECT DRIVE NEEDLE FEED LOCKSTITCH SEWING MACHINE

INSTRUCTION BOOK / PARTS CATALOGUE

### ※ MAIN TECHNICAL DATA

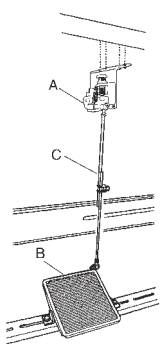
	M	H
Application:	Common materials	Thick materials
Sewing speed :	4500spm	3500spm
Max. Stitch length:	4 mm	7mm
Presser foot lifting height:	13mm	13mm
Rotating shuttle:	Standard automatic oiling	Thick materials automatic oiling
Needle:	DB×1 #9-#16	DP×5 #18-#22

### 2. NEEDLE SWITCH AND LED LAMP



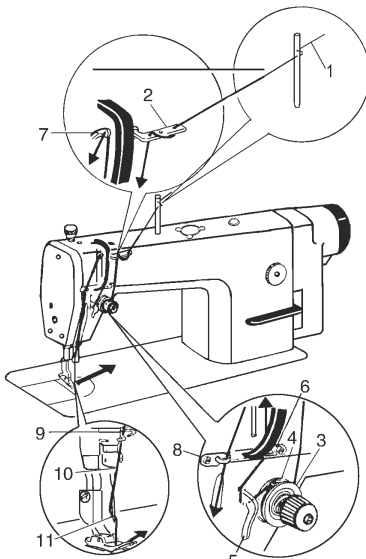
Press switch A could change the needle position to up or do  
Open LED lamp by switch B.

### 4. CONNECTION OF THE CLUTCH LEVER WITH THE PEDAL



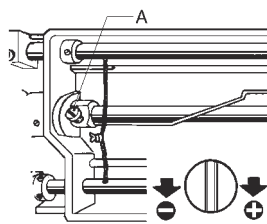
(1) Install speed governor A, link speed governor A and pedal B with tie bar, keep tie bar C vertical.  
(2) The optimum tilt angle of pedal is approximately 15 deg.

### 6. THREADING



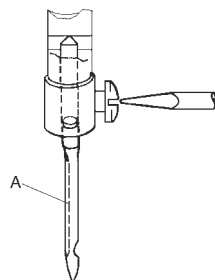
To thread the needle thread, raise the needle bar to the upper end of its stroke, lead the thread from the spool and perform. Threading as shown in To draw the bobbin thread, hold the end of the needle thread and turn the balance wheel to lower the needle bar and then lift it to its highest position. Pull the ends of needle thread and bobbin thread forward under presser foot.

### 1. ROTATING HOOK OIL AMOUNT ADJUSTMENT



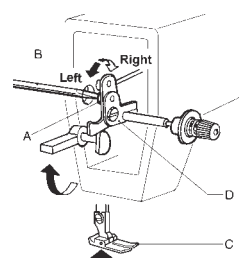
Adjust the oil amount of the rotating hook by turning the oil amount adjusting screw (A). Turn the screw (A) clockwise (in the "+" direction) to increase the oil amount; turn it counter-clockwise (in the "-" direction) to decrease the oil amount.

### 3. NEEDLE INSTALLATION



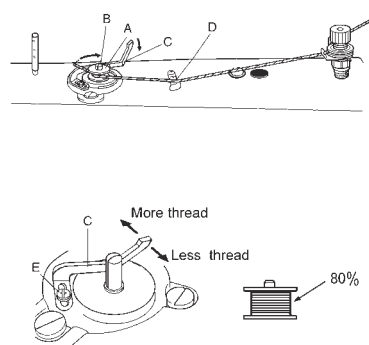
Turning the balance wheel to lift the needle bar to the upper end of its stroke. Loosen the needle clamp screw while keeping the long groove of the needle leftward, fully insert the needle shank up to the bottom of the needle socket, then tighten the needle clamp screw.

### 5. ADJUST THE OPENING TIME OF THE TENSION DISCS



Within the presser foot lift range, the opening time of the tension discs can be adjusted as follows:  
(1) Remove the rubber plug from the back of the arm and Loosen the screw (A) of the knee lift level (left).  
(2) Move the tension releasing cam (D) leftward for earlier opening or rightward for later opening. It will facilitate the adjustment if putting a lifting high block under the presser foot lift.

### 7. WINDING THE LOWER THREAD

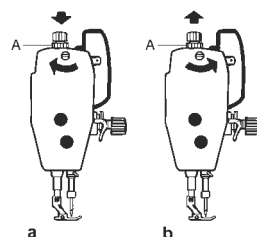


Turn on the power switch. Place the bobbin (A) onto the bobbin winder shaft (B). Wind the thread several times around the bobbin (A) in the direction indicated by the arrow. Push the bobbin presser arm (C) toward the bobbin (A). Raise the presser foot with the lifting lever. Depress the treadle. Lower thread winding will then start. Once winding of the lower thread is completed, the bobbin presser arm (C) will return automatically. After the thread has been wound on, remove the bobbin and cut the thread with the knife (D).

NOTE:

- Loosen the screw (E) and move the bobbin presser (C) to adjust the amount of thread wound onto the bobbin.
- The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.

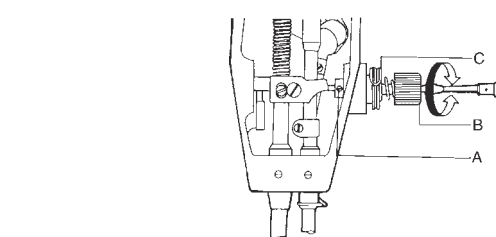
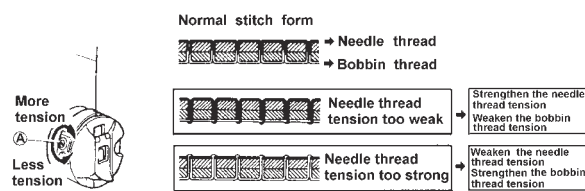
### 8. ADJUST THE PRESSURE OF PRESSER FOOT



Pressure of the presser foot is adjusted in accordance with thickness of materials to be sewn.

First loosen the lock nut (A), for heavy materials, turn the pressure regulating thumb screw as shown in Fig. (a) to increase the pressure, while for light materials, turn the pressure regulating thumb screw as shown in Fig. (b) to decrease the pressure, then tighten the lock nut (A). The pressure of the presser foot is recommended to be less as long as normal feeding is ensured.

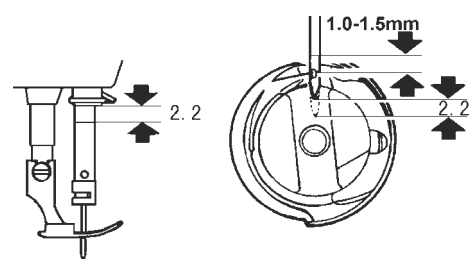
### 10. THREAD TENSION ADJUSTMENT



The stroke of the thread take-up spring runs from 6mm to 10mm, when sewing very thin fabrics, reduce the thread take-up spring tension and increase the thread take-up spring stroke, where as increase the thread take-up spring tension and reduce the thread take-up stroke when sewing very thick fabrics.

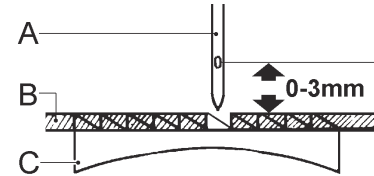
Adjusting the thread take-up spring tension: First loosen the set screw (A). Turn the tension stud (B) counter-clockwise to decrease the tension of the thread take-up spring (C) to zero. Then turn the tension stud (B) clockwise till the spring (C) comes to the notch of the tension regulating bushing, and again turn the tension stud (B) halfway back (counter clockwise). After the adjustment, tighten the set screw (A).  
Adjusting the thread take-up spring stroke: Loosen the set screw (B) turn the stud (C) clockwise to increase the stroke or turn stud (C) counter-clockwise to decrease the stroke after the adjustment. Tighten the set screw (B).

### 11. ADJUST THE SYNCHRONIZATION OF THE NEEDLE WITH ROTATING HOOK



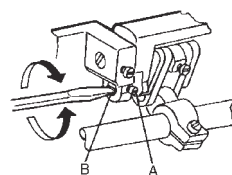
When lifting the needle bar from its lowest position of the stroke to the distance A, the hook point D of the bobbin should align with the center line of the needle and be 1.0-1.5 mm above upper end of the needle eye.

### 12. ADJUSTING THE POSITION OF FEED DOG AND NEEDLE



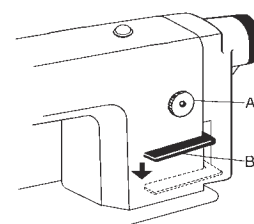
Needle A tip down to needle board face B, send the teeth and needle tip C cloth panels B height consistent, this is the standard synchronous relationship.

### 13. STITCH LENGTH ERROR ADJUSTMENT



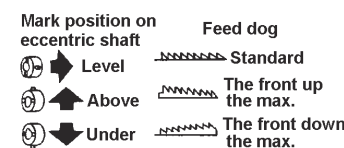
Loosen screw (A) to adjust the stitch length adjusting cam (B). Turn it rightward to narrow the stitch length as forward sewing, and widen it as reverse sewing; turn it leftward to widen the stitch length as forward sewing, and narrow it as reverse sewing.

### 9. ADJUSTMENT OF STITCH LENGTH AND REVERSE FEEDING

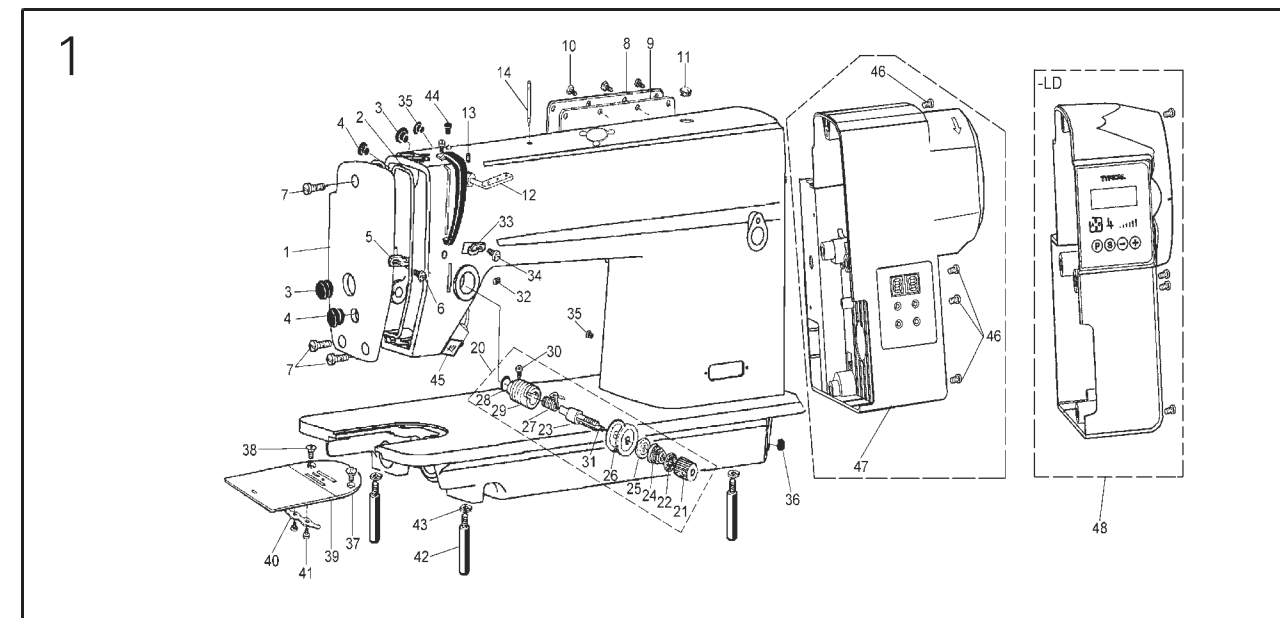


The stitch length can be adjusted by turning the dial knob (A). The figures on the face (B) of the dial show the stitch length in mm. The reverse feed level must be depressed by another hand while adjusting the stitch length (B). The reverse feeding start when the reverse feed lever (B) is depressed, the machine will feed forward again if the reverse feed level is released.

### 14. FEED DOG HORI ONTALTY ADJUSTMENT

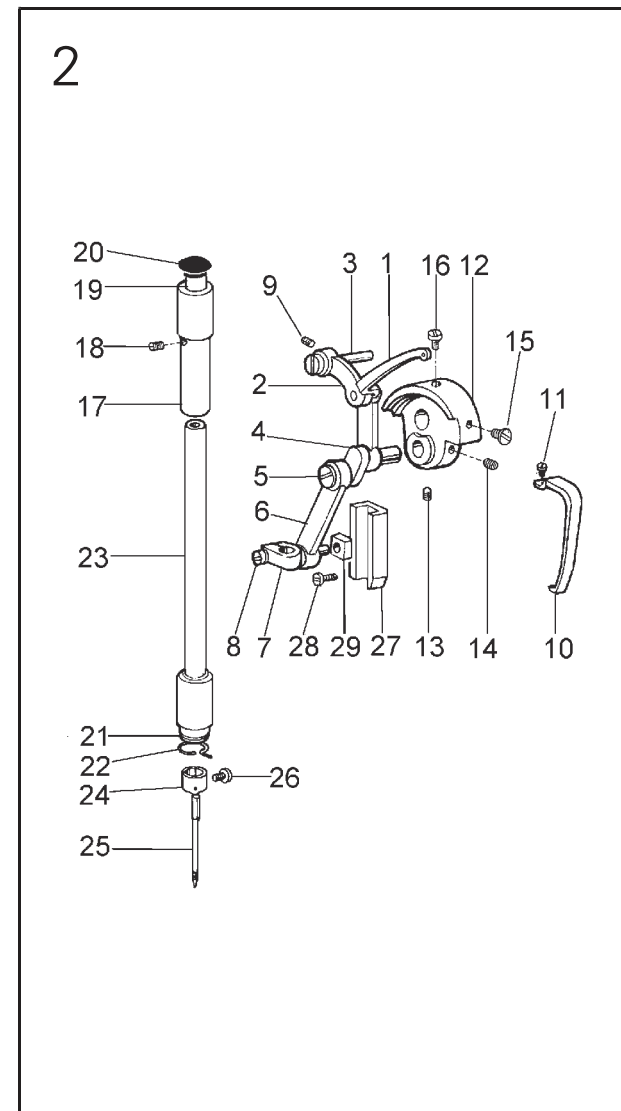


Heighten the front of feed dog to prevent fabric from wrinkling, lower the front of feed dog to prevent fabric from deflection, breaking of hook thread.



### 1. ARM AND CONTROLLER MECHANISM

No.	Ref.No.	Description	Qt.					
			M	H				
					048120002	Thread take-up spring	1	
					048120001	Rubber ring	1	
1	124120001	Face plate	1	1	29	022160007	Thread tension regulating bushing	1
2	124120002	Rubber ring	1	1	30	022160008	Set screw	1
3	022130003--V	Rubber plug(Φ19)	2	2	31	022160009	Thread tension releasing pin	1
4	022130004--V	Rubber plug(Φ11.8)	2	2	32	022100013	Set screw	1
5	022130005	Thread guide on face plate	1	1	33	022100014	Thread guide for arm center	1
6	B040750494	Screw M3.5X6	1	1	34	022130006	Set screw	1
7	022100004	Face plate screw	3	3	35	022100015--V	Rubber plug(Φ8.8)	2
8	022140001	Arm Side cover	1	1	36	022100016--V	Runner plug(Φ27)	1
9	022140002	Gasket for arm side cover	1	1	37	124100005	Needle plate(B1.8)	1
10	022100006	Arm side cover screw	8	8		048100001	Needle plate(B2.6)	1
11	022180001--V	Oil check Window	1	1		153100002	Needle plate	1
12	022100010	Three hole thread guide	1	1		153100004	Needle plate	1
13	124100006	Set screw	1	1	38	022100020	Needle plate screw	2
14	108200009	Over the line column	1	1	39	022170001	Slide plate	1
20	124130000--W	Thread tension knob	1		40	022170002	Spring for slide plate	1
	124100007--W	Thread tension knob	1		41	022170003	Screw	2
21	124130001--W	Thread tension nut	1	1	42	048100005	Leg	3
22	022160010	Stop disc	1	1	43	S150601004	Spring washer 6	3
23	022160001	Thread tension stud	1	1	44	022100017--V	Red rubber plug(Φ5.7)	1
24	124130002	Thread tension spring	1		45	263820000	Single key with lamp fill needle switch	1
	048110001	Thread tension spring	1		46	B048509294	Screw M5 × 18	4
25	022160004	Thread tension releasing disc	1	1	47	263910000	Controller assy	1
26	022160005	Thread tension disc	2	2	48	263C71000	Controller assy	1
27	022160006	Thread take-up spring	1			263C81000	Controller assy	1



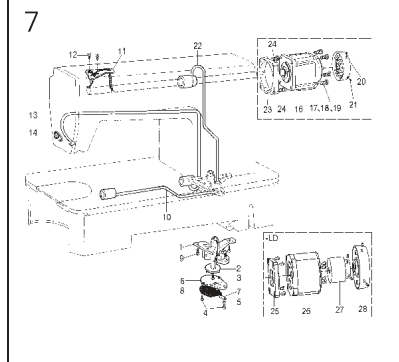
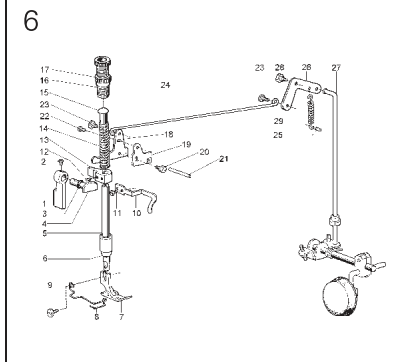
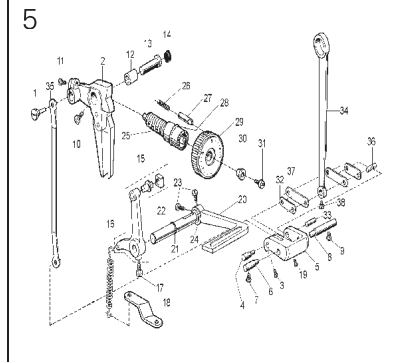
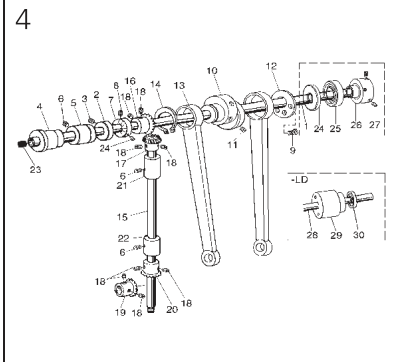
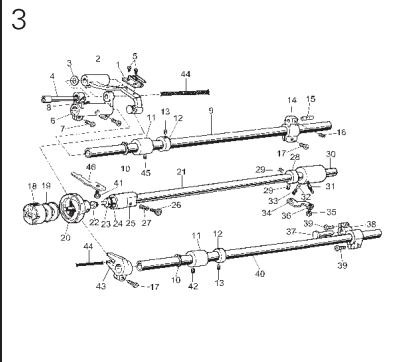
### 2. NEEDLE BAR AND THREAD-UP MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	02221	Thread take-up lever	1	1
	04821	Thread take-up lever	1	1
2	022210002	Thread take-up link	1	1
3	022210003	Thread take-up lever hinge pin	1	1
4	022210004	Thread take-up crank	1	1
5	022210006	Set screw (left hand thread)	1	1
6	022200000	Needle bar link assy	1	1
	048210002	Needle bar link assy	1	1
7	022210008	Needle bar connecting bar joint	1	1
8	022210009	Screw	1	1
9	022200002	Screw	1	1
10	BXF9768001	Take-up lever guard	1	1
11	022200004	Screw	1	1
12	022220001	Needle bar crank	1	1
	048220001	Needle bar crank	1	1
13	022220002	Screw	1	1
14	022220003	Screw	1	1
15	022200006	Screw	1	1
16	022200007	Needle bar position screw	1	1
	153200004	Needle bar bushing (upper)	1	1
	124200001	Needle bar bushing (upper)	1	1
18	022200009	Set screw	1	1
19	022200010	Felt plug	1	1
20	022200011--V	Red rubber plug(Φ8.8)	1	1
21	153200005	Needle bar bushing (lower)	1	1
	124200006	Needle bar bushing (lower)	1	1
22	022230002	Thread guide	1	1
23	153200003	Needle bar	1	1
	078200004	Needle bar	1	1
24	048200004	Thread guide for needle bar	1	1
25	S150901001	Needle DB × 1 14#	1	1
	S150901002	Needle DP × 5 18#	1	1
26	022200017	Needle clamp screw	1	1
27	022200018	Needle bar connecting link guide	1	1
28	022200019	Set screw	2	2
29	022200020	Slide block	1	1

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### 3. FEEDING AND FEED LIFTING AND ROTATING HOOK MECHANISM

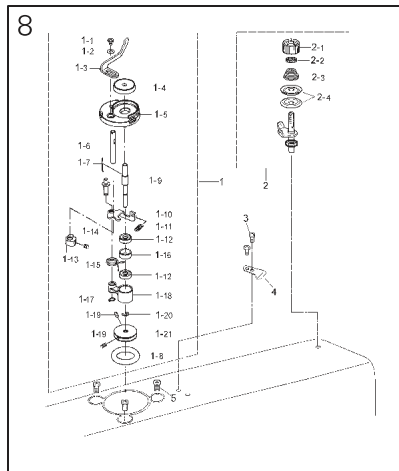
No.	Ref.No.	Description	Qt.	
			M	H
1	022610003	Feed dog	1	1
	048610002	Feed dog		
2	036411	Feed bar assy	1	1
3	022610006	Washer	1	1
4	036410002	Feed bracket shaft	1	1
5	022610004	Screw	2	2
6	022611001	Feed rock bracket arm	1	1
7	022612001	Screw	2	2
8	022200019	Screw	1	1
9	124600002	Feed rock shaft	1	1
10	S150617006	C - type stop ring	2	2
11	022600004	Feed rock shaft bushing	2	2
12	022620001	Collar	2	2
13	022320002	Set screw	4	4
14	036400003	Feed rock shaft crank (right)	1	1
	114400001	Feed rock shaft crank (right)		
15	036400204	Pin	1	1
16	036550005	Screw	1	1
17	022640003	Screw	1	1
18	02246	Bobbin case assy	1	1
19	036400006	Bobbin	1	1
	048400003	Bobbin		
20	02247	Rotating hook	1	1
	04842	Rotating hook		
21	036400001	Rotating hook shaft	1	1
22	022411001	Filter screw	1	1
23	022411002	Filter	1	1
24	022400109	Oil seal for rotatin hook shaft	1	1
25	022400004	Hook shaft bushing (left)	1	1
26	022400005	Oil adjusting screw	1	1
27	022400006	Spring for oil adjuster	1	1
28	022420001	Collar for rotating shaft	1	1
29	022200009	Set screw	2	2
30	036460001	Rotating hook shaft bushing (right)	1	1
31	022430002	Oil pipe for hook shaft bushing	1	1
32	036400015	Plunger	1	1
33	036400016	Plunger spring	1	1
34	022400010	Guide Plate	1	1
35	022510004	Screw	1	1
36	S150601004	Washer	1	1
37	022600007	Hinge	1	1
38	036400017	Feed lifting rock shaft crank (right)	1	1
39	022600016	Screw	2	2
40	124600003	Reed lifting rock shaft	1	1
41	022400015	Screw	1	1
42	022200002	Set screw	1	1
43	036484001	Feed lifting fork	1	1
44	036410003	Wick	2	1
45	022200009	Screw	1	1
46	022400013	Rotating hook positioner	1	1
	048400002	Rotating hook positioner		

### 4. SHAFT AND VERTICAL SHAFT MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	274200001	Arm shaft	1	1
2	022320001	Collar for arm shaft	1	1
3	022320002	Set screw	2	2
4	022320003	Arm shaft bushing (left)	1	1
5	022320004	Arm shaft bushing (Middle)	1	1
6	022200002	Set screw	3	3
7	207302001	Friction wheel	1	1
8	S150224011	Screw M5x6	2	2
9	165330001	Screw M5x6	2	2
10	036300003	Eccentric wheel	1	1
	114300001	Eccentric wheel		
11	022200002	Screw M5x6	2	2
12	036300004	Spacer	1	1
13	022343001	Crank rod for lifting rock shaft	1	1
14	022342001	Spacer	1	1
15	022350001	Vertical shaft	1	1
16	Z0A180891	Bevel gear for arm shaft	1	1
17	Z0A180892	Shaft (upper)	1	1
18	022220003	Set screw	8	8
19	Z0A180886	Bevel gear for hook shaft	1	1
20	Z0A180885	Shaft (lower)	1	1
21	022300011	Vertical shaft bushing (upper)	1	1
22	022300012	Vertical shaft bushing (lower)	1	1
23	022310002	Rubber plug	1	1
24	274200003	Oil seal	1	1
25	BX85876009	Bearing 6004 2Z	1	1
26	274210000	Couplings assy	1	1
27	263C20001	Arm shaft	1	1
28	238L20002	Arm shaft bushing (right)	1	1
29	124330002	Oil seal	1	1

### 8. BOBBIN WINDER MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	263140000	Bobbin winder assy	1	1
1-1	S150237046	Screw M4X5	1	1
1-2	S150633007	Washer 4	1	1
1-3	207107015	Wrench	1	1
1-4	207107003	Bobbin support	1	1
1-5	263140002	Bobbin winder support	1	1
1-6	263140005	Bobbin winder cam shaft	1	1
1-7	207107002	Spring	1	1
1-8	263140004	Rubber ring	1	1
1-9	263140001	Bobbin winder shaft	1	1
1-10	207107014	Bobbin winder lever	1	1
1-11	207107005	Spring	1	1
1-12	S150866067	Bear 625ZZNR	2	2
1-13	207107011	Bobbin winder cam	1	1
1-14	S150212013	Screw M5X5	1	1
1-15	207107013	Spring	1	1
1-16	263140006	Bear bushing	1	1
1-17	S150617001	Split washer C6GB894 M6	1	1
1-18	207107006	Bobbin winder crank	1	1
1-19	S150224009	Screw M4x6	2	2
1-20	B062060768	Retaining ting E4	1	1
1-21	263140003	Bobbin winder wheel	1	1
2	263130000	Clip line assy (Small)	1	1
2-1	BX79078009	Nut	1	1
2-2	BX98690009	Washer	1	1
2-3	B900690989	Spring	1	1
2-4	B96564009	Tension disc	2	2
3	022830004	Screw SM3.57	2	2
4	001100009	Knife	1	1
5	BXF9118909	Screw M5x6	3	3

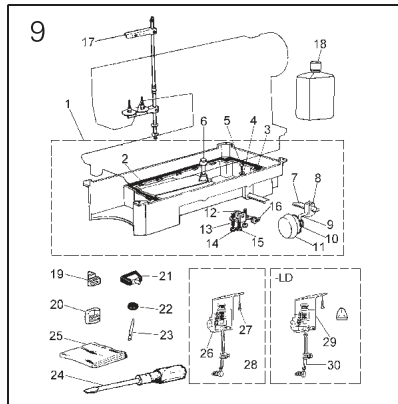


### 5. STITCH LENGTH REGULATING MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	036500001	Connecting stud	1	1
2	057500001	Feed regulator	1	1
	124500003	Feed regulator		
3	036550008	Screw	1	1
4	036550009	Lever link eccentric shaft	1	1
5	036550010	Lever regulator	1	1
6	036580002	Pin(right)	1	1
7	022640003	Pin(right)	1	1
8	036580001	Screw	1	1
9	022640003	Screw	1	1
10	022540004	Screw of feed regulator	1	1
11	022200019	Screw	1	1
12	022500003	Feed regulator bushing	1	1
13	022500004	Feed regulator shaft	1	1
14	238300002	Rubber plug (Φ 16)	1	1
15	022550001	Back tacking crank	1	1
16	022551001	Slide tacking pin	1	1
17	057520001	Lever spring	1	1
18	022500013	Set screw	1	1
19	057500005	Bracket for spring	1	1
20	036550007	Screw	1	1
21	022750002--W	Backtacking lever	1	1
22	022541001	Backtacking lever shaft	1	1
23	S150651007	O-ring 6.3 x 1.8G	1	1
24	022540004	Screw	2	2
25	022500011	O - ring	1	1
26	124510002	Feed regulator screw	1	1
27	022500009	Spring for stopper pin	1	1
28	022500008	Stopper pin	1	1
29	124510003	O - ring for feed regulating screw	1	1
30	036540004	Knob	1	1
31	036540005	Knob	1	1
32	036550001	Bush	1	1
33	036550006	Screw	1	1
34	036550002	Lever feed connecting rod	1	1
35	036550003	Feed regulator link	1	1
36	036400104	Sink shaft	1	1
37	036558002	Feed rock arm link	2	2
38	114500003	Feed rock arm link	1	1
	036550005	Screw	1	1

### 6. PRESSER FOOT MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	022710001--W	Presser bar lifter	1	1
2	B040600294	Set screw	1	1
3	S150651010	Oil seal	1	1
4	022700002	Presser bar lifting cam	1	1
5	022700010	Presser bar	1	1
6	022700009	Presser bar bushing	1	1
7	02276	Presser foot complet	1	1
	04871	Presser foot complet		
8	022701100	Presser foot complet	1	1
9	057700002	Presser foot spring	1	1
10	022700015	Set screw	1	1
11	022700016	Slack thread regulator	1	1
12	022700004	Screw	1	1
13	0227100013	Set screw	1	1
14	022740001	Presser bar lifting bracket	1	1
15	022700013	Presser spring	1	1
	048700002	Presser spring		
16	022700012	Presser bar guide	1	1
17	022750001--W	presser regulating thumb screw	1	1
18	B082050864	Lock nut	1	1
19	022721001	Knee lifter lever(left)	1	1
20	022722001	Tension releasing cam	1	1
21	022700005	Bolt for tension releasing cam	1	1
22	022700006	Tension releasing pin	1	1
23	022723001	Screw	1	1
24	022720002	Hinge screw	2	2
25	022720003	Knee lifter rod	1	1
26	022730001	Knee lifter lever(right)	1	1
27	022730003	Knee lifter connecting rod	1	1
28	022730004	Screw	1	1
29	022730002	Spring for knee lift lever	1	1



Parts choosing list

No.	Ref.No.	Description	Qt.	
			M	H
1	153100002	Needle plate B1.8		
2	153100004	Needle plate	1	1
3	022600002	Feed dog	1	1
4	153600001	Feed dog	1	1
5	022701100	Presser foot assy	1	1

### 7. OIL PUMP AND MOTOR MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	022800001	Oil pump body	1	1
2	022800002	Oil pump impeller	1	1
3	022800003	Screw	1	1
4	022800004	Screw	3	3
5	S150601003	Spring washer	1	1
6	022800006	Oil pump fitting plate	1	1
7	022800007	Oil adjusting plate	1	1
8	022810000	Oil pump screen assy	1	1
9	022800009	Screw	3	3
10	0228200	Oil pipe for hook shaft	1	1
11	022831	Oil braid fitting plate	1	1
12	022700015	Screw	2	2
13	022800014	Oil returning pipe	1	1
14	036A00002	Spring for oil felt	1	1
15	263900001	Motor	1	1
16	S150209177	Screw M5 x 35	4	4
17	B082050864	Spring washer	4	4
18	B084050974	Flat Washer S5	4	4
19	263200007	Tension releasing cam	1	1
20	263200000	Hand wheel	1	1
21	S150215001	Screw M5 x 8	2	2
22	022840N	Oil pipe for arm shaft	1	1
23	263800001	Cushion block	1	1
24	B048592984	Screw M5 x 18	2	2
25	263C70001	Pin for spring	1	1
26	263C70003	Rotor	1	1
27	263C70002	Stator	1	1
28	263C21000	Hand wheel	1	1

### 9. OIL RESERVOIR AND ACCESSORIES

No.	Ref.No.	Description	Qt.	
			M	H
1	036C10001	Oil reservoir	1	1
2	022910005	Oil pan pad (B)	1	1
3	022910004	Oil pan pad (S)	1	1
4	022910003	Washer	1	1
5	022910002	Oil drain screw	1	1
6	022920001	Knee lifter lifting rod	1	1
7	022910006	Hinge pin for knee lifter lever	1	1
8	022920003	Knee lifter bell crank joint	1	1
9	022920002	Knee lifter bell crank	1	1
10	022920006	Bracket for knee lifter plate	1	1
11	022920008	Pat for knee lifter plate	1	1
12	022910008	Knee lifter stop bracket	1	1
13	022910009	Adjusting screw	2	2
14	022910010	Lock nut	2	2
15	022900036	Screw	1	1
16	022910007	Back spring for knee lifter</		