

TYPICAL



GC6710MD/HD SERIES

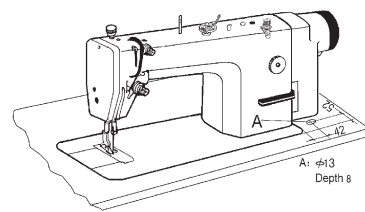
SINGLE NEEDLE DIRECT DRIVE LOCKSTITCH SEWING MACHINE

INSTRUCTION BOOK / PARTS CATALOGUE

※MAIN TECHNICAL DATA

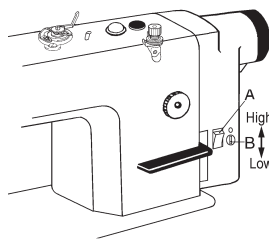
	M	H
Application:	Common materials	Thick materials
Sewing speed :	4500spm	3500spm
Max. Stitch length:	4 mm	7mm
Presser foot lifting height:	13mm	13mm
Rotating shuttle:	Standard automatic oiling	Thick materials automatic oiling
Needle:	DBx1 #9-#16	DPx5 #18-#22

※INSTALL THE MAGNET



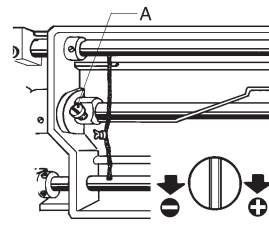
For safety, pedal should be no response when machine overturned. To realize it, a magnet with rubber cover installed into hole A. Note that S-plates must be upward.

1. MAXIMUM SPEED ADJUSTMENT



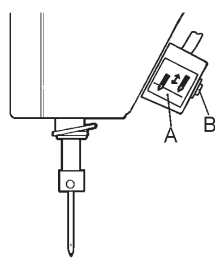
Push switch A, lighting lamp indicate power on. Turn the knob B to adjust the maximum speed, upwards to high and downwards to low.

2. ROTATING HOOK OIL AMOUNT ADJUSTMENT



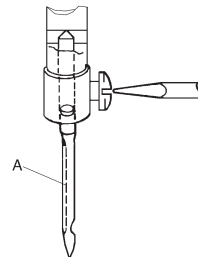
Adjust the oil amount of the rotating hook by turning the oil amount adjusting screw (A). Turn the screw (A) clockwise (in the "+" direction) to increase the oil amount; turn it counter-clockwise (in the "-" direction) to decrease the oil amount.

3. NEEDLE SWITCH AND LED LAMP



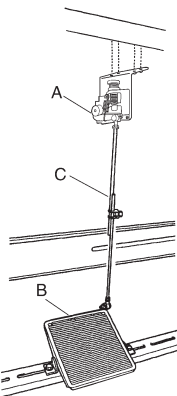
Press switch A could change the needle position to up or down. Brightness of LED lamp could be adjusted by switch B.

4. NEEDLE INSTALLATION



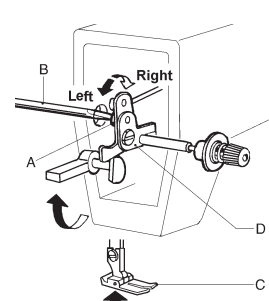
Turning the balance wheel to lift the needle bar to the upper end of its stroke. Loosen the needle clamp screw while keeping the long groove of the needle leftward, fully insert the needle shank up to the bottom of the needle socket, then tighten the needle clamp screw. Note: please take the drive in our motor cover accessory bag to operate.

5. CONNECTION OF THE CLUTCH LEVER WITH THE PEDAL



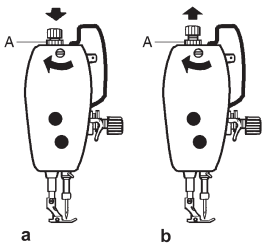
(1) Install speed governor A, link speed governor A and pedal B with tie bar, keep tie bar C vertical.
(2) The optimum tilt angle of pedal is approximately 15 deg.

6. ADJUST THE OPENING TIME OF THE TENSION DISCS



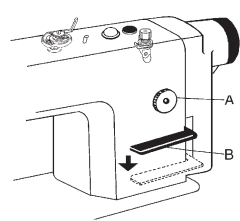
Within the presser foot lift range, the opening time of the tension discs can be adjusted as follows:
(1) Remove the rubber plug from the back of the arm and Loosen the screw (A) of the knee lift level (left).
(2) Move the tension releasing cam (D) leftward for earlier opening or rightward for later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

7. ADJUST THE PRESSURE OF PRESSER FOOT



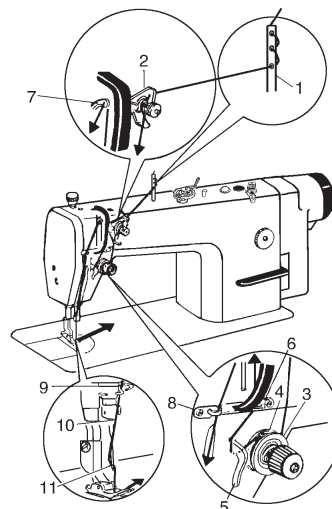
Pressure of the presser foot is adjusted in accordance with thickness of materials to be sewn.
First loosen the lock nut (A), for heavy materials, turn the pressure regulating thumb screw as shown in Fig.(a) to increase the pressure, while for light materials, turn the pressure regulating thumb screw 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.

8. ADJUSTMENT OF STITCH LENGTH AND REVERSE FEEDING



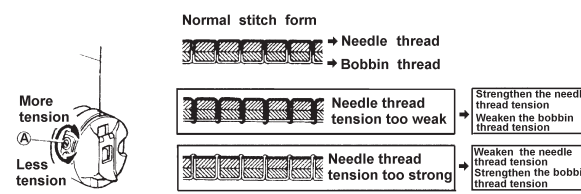
The stitch length can be adjusted by turning the dial knob (A). The figures on the face (B) of the dial show the stitch length in mm. The reverse feed level must be depressed by another hand while adjusting the stitch length (B). The reverse feeding start when the reverse feed lever (B) is depressed,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

9. 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.

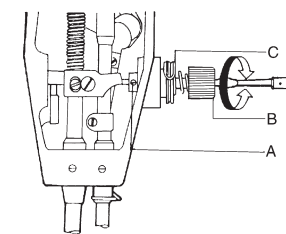
11. THREAD TENSION ADJUSTMENT



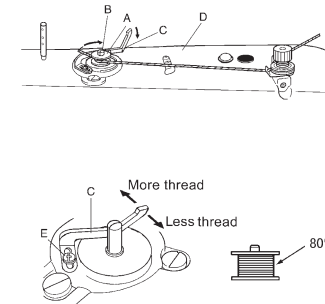
Normal stitch form
Needle thread
Bobbin thread

More tension
Needle thread tension too weak
Strengthen the needle thread tension
Weaken the bobbin thread tension

Less tension
Needle thread tension too strong
Weaken the needle thread tension
Strengthen the bobbin thread tension



10. WINDING THE LOWER THREAD



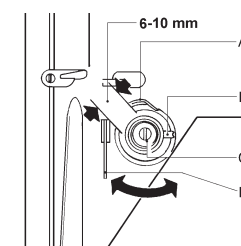
Turn on the power switch. Place the bobbin (A) onto the bobbin winder shaft (B). Wind the thread several times around the bobbin (A) in the direction indicated by the arrow. Push the bobbin presser arm (C) toward the bobbin (A). Raise the presser foot with the lifting lever. Depress the treadle. Lower 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:
1. Loosen the screw (E) and move the bobbin presser (C) to adjust the amount of thread wound onto the bobbin.
2. The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.

Thread tension should be determined in accordance with the stitch obtained by adjusting the tension of the bobbin thread and needle thread.

The tension of the bobbin thread to be adjusted by turning the tension spring regulating screw of the bobbin case. After adjusting, insert the bobbin into the bobbin case and hold the end of the thread from the bobbin case to hang the bobbin case. If the bobbin case falls slowly and evenly, the proper tension of the bobbin thread is obtained.

The tension of needle thread to be adjusted by turning the thumb nut.

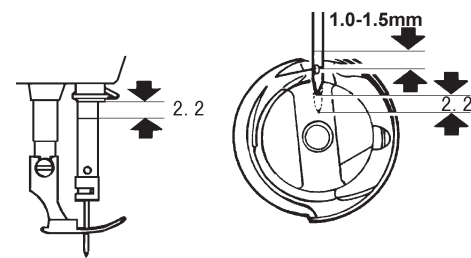


12. ADJUST THE SYNCHRONIZATION OF THE NEEDLE WITH ROTATING HOOK

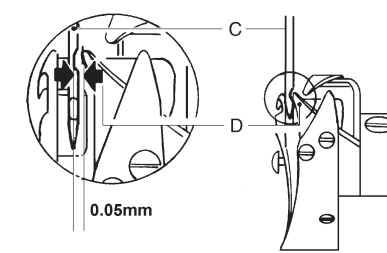
The stroke of the thread take-up spring runs from 6mm to 10mm, when sewing very thin fabrics, reduce the thread take-up spring tension and increase the thread take-up spring stroke, where as increase the thread take-up spring tension and reduce the thread take-up stroke when sewing very thick fabrics.

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) half way 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).

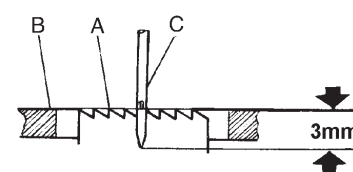


When lifting the needle bar from its lowest position of the stroke to the distance A, the hook point D of the bobbin should align with the center line of the needle and be 1.0-1.5 mm above upper end of the needle eye.

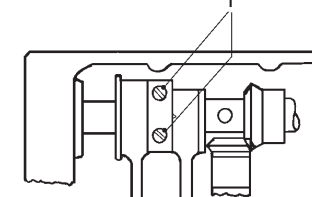


The clearance between the bottom of the needle notch and the hook tip should be 0.05 mm.

13. ADJUSTING THE POSITION OF FEED DOG AND NEEDLE

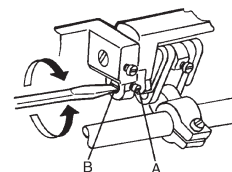


Turn the balance wheel, and lower Feed Dog (A). When the top of the feed dog is flush with needle Plate Surface (B), Needle Point (C) should be 3mm below the needle plate surface.



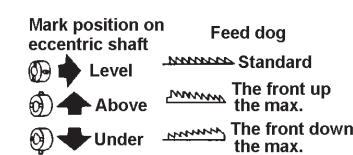
Loosen eccentric wheel screw, turn eccentric wheel and balance wheel separately to adjust the position of needle and feed dog. Then tighten the screw.

14. STITCH LENGTH ERROR ADJUSTMENT

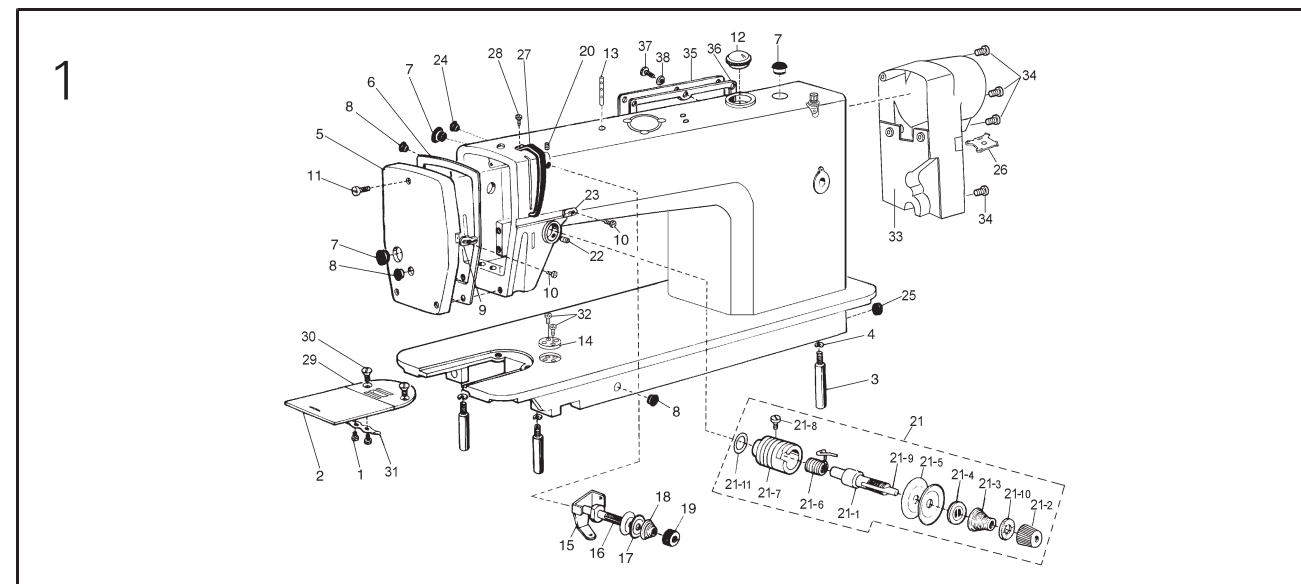


Loosen screw (A) to adjust the stitch length adjusting cam (B). Turn it rightward to narrow the stitch length as forward sewing, and widen it as reverse sewing; turn it leftward to widen the stitch length as forward sewing, and narrow it as reverse sewing.

15. FEED DOG HORI ONTALLY ADJUSTMENT

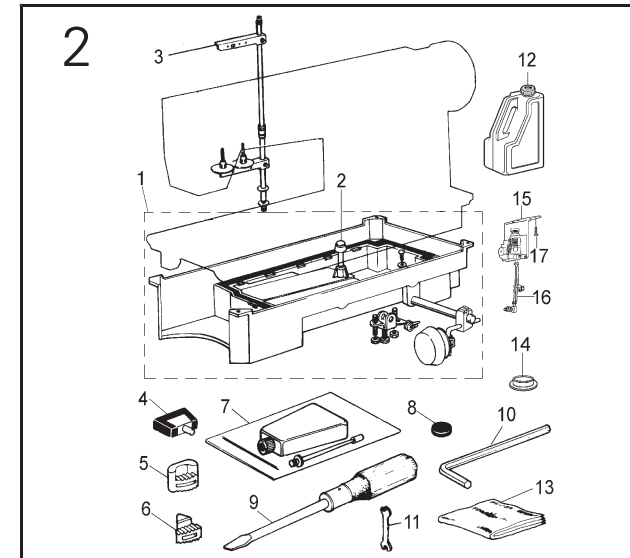


Heighten the front of feed dog to prevent fabric from wrinkling, lower the front of feed dog to prevent fabric from defection, breaking of hook thread.



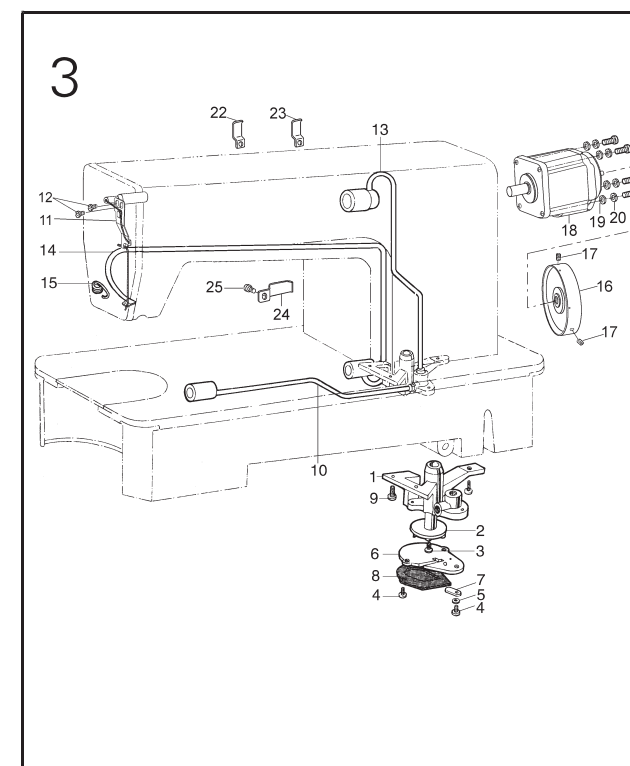
1. ARM AND BED MECHANISM

No.	Ref.No.	Description	Qt.		No.	Ref.No.	Description	Qt.	
			M	H				M	H
1	022170003	Screw	2	2	21-5	022160005	Thread tension disc	2	2
2	022170001	Slide plate	1	1	21-6	022160006	Thread take-up spring	1	2
3	048100005	Leg	3	3	048110002	048110002	Thread take-up spring	1	1
4	S4A0400011	Spring washer	3	3	21-7	022160007	Thread tension regulator bushing	1	1
5	238100001	Face plate	1	1	21-8	022160008	Screw	1	1
6	238100002	Face plate gasket	1	1	21-9	238100004	Thread tension (leasing pin)	1	1
7	022130003--V	Rubber plug (Φ19)	3	3	21-10	022160010	Stop disc	1	1
8	022130004--V	Rubber plug (Φ11.8)	3	3	21-11	022160011	O-type ring	1	1
9	022130005	Thread guide on face plate	1	1	22	022100013	Set screw	1	1
10	022130006	Screw	2	2	23	022100014	Thread guide	1	1
11	022100004	Screw	1	1	24	022100015--V	Rubber plug (Φ8.8)	2	2
12	022180001--V	Oil check window	1	1	25	022100016	Rubber plug (Φ21)	1	1
13	108200009	Thread guide plate	1	1	26	238100009	All purpose screwdriver	1	1
14	057100008	Ruler plate	1	1	27	BXF9768001--W	Thread take-up lever guard	1	1
15	036240001	Pretension thread guide	1	1	28	022200004	Screw	1	1
16	036240002	Thread tension stud	1	1	29	124100005	Needle plate (B1.8)	1	1
17	022150003	Thread tension disc	2	2	048100004	048100004	Needle plate (B2.0)	1	1
18	036240003	Tension spring for pretension	1	1	30	022100020	Screw	2	2
19	036240004--W	Thread tension nut	1	1	31	022170002	Slide plate (B2.0)	1	1
20	022100011	Set screw	1	1	32	124100004	Screw	2	2
21	124130000--W	Thread tension bracket assy	1	1	33	238C12000	Motor cover	1	1
21-1	022160001	Thread tension stud	1	1	34	B048509294	Screw M5X18	4	4
21-2	124130001--W	Thread tension nut	1	1	35	022140001	Slide plate	1	1
21-3	124130002	Thread tension spring	1	1	36	022140002	Washer	1	1
	048110001	Thread tension spring	1	1	37	022100006	Screw M5X18	8	8
21-4	022160004	Thread tension releasing disc	1	1	38	022100007	Washer	8	8



2. OIL RESERVOIR AND ACCESSORIES

No.	Ref.No.	Description	Qt.	
			M	H
1	036C10001	Oil reservoir asm	1	1
2	165F01001	Knee lifter lifting pin	1	1
3	006F00030--W	Thread spool asm	1	1
4	022990000	Hinge with rubber cushion	2	2
5	022900009--V	Cu shion(B)	2	2
6	022900010--V	Cu shion(S)	2	2
7	W050202001	Oil pot	1	1
8	W050103001	Magnet block	1	1
9	W050102068	Screw drivellon(g)	1	1
10	W050102040	Allen wrench 2.5	1	1
11	W210105011	Double open-end wrench	1	1
12	022900017	Oil tank	1	1
13	W060302096	Machine head cover	1	1
14	238C00006	Magnets	1	1
15	238C14000	Governor	1	1
16	238C15000	Rod complete	1	1
17	W050101039	Wood screw M5x12	4	4



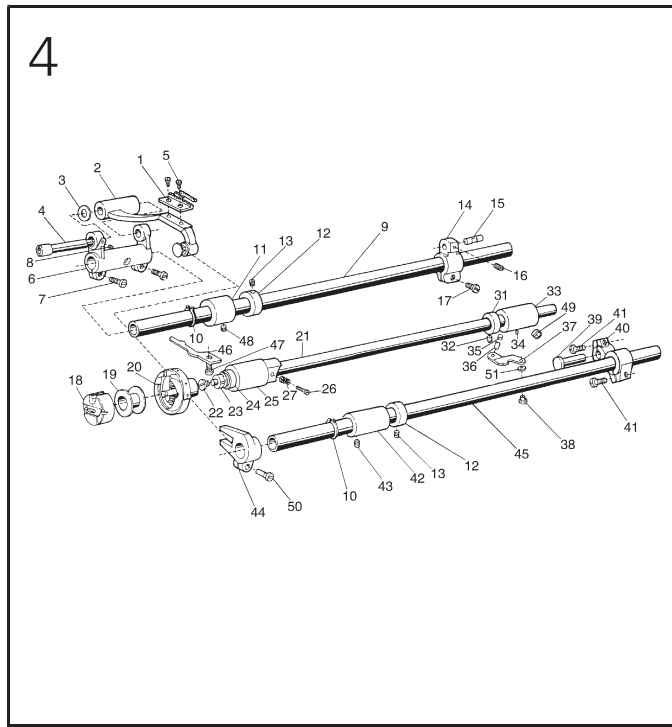
3. OIL PUMP AND MOTOR MECHANISM

No.	Ref.No.	Description	Qt.	
			M	H
1	022800001	Oil pump	1	1
2	022800002	Oil pump impeller	1	1
3	022800003	Screw	1	1
4	022800004	Screw	3	3
5	S4A0400012	Springee washer 3	1	1
6	022800006	Oil pump fitting plate	1	1
7	022800007	Oil adjusting plate	1	1
8	022810000	Oil pump screen asm	1	1
9	022800009	Screw	3	3
10	036A200	Oil pump for hook shaft	1	1
11	238600001	Oil braid fitting plate	1	1
12	036550005	Screw	2	2
13	0228400	Oil pump for arm shaft	1	1
14	238610000	Oil return pipe	1	1
15	036A00002	Oil filter holder	1	1
16	238710001	Hand wheel	1	1
17	B098049074	Screw M6x10	2	2
18	238C00004	Motor	1	1
19	B084050974	Flat Washer S5	4	4
20	B082050984	Spring Washer	4	4
21	B048509294	Screw M5x18	4	4
22	238C00003	Cord holder	1	1
23	217N00026	Cord holder	1	1
24	BXF8423009	Cord holder	1	1
25	022200019	Screw	1	1

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4. FEEDING AND FEED LIFTING AND ROTATING HOOK MECHANISM

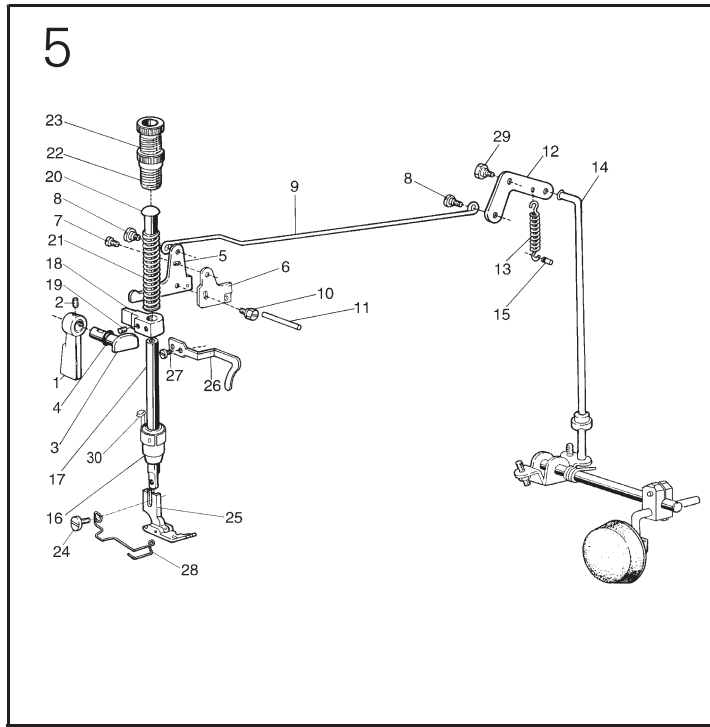
No.	Ref. No.	Description	Qt.	
			M	H
1	022610003	Feed dog	1	1
2	036411000	Feed bar	1	1
3	022610006	Washer	1	1
4	036410002	Shaft for feed bar	1	1
5	022610004	Screw	2	2
6	022611001	Feed rock shaft crank	1	1
7	022612001	Screw	2	2
8	022200019	Screw	1	1
9	124600002	Feed rock shaft	1	1
10	S4A0500010	C-type stop ring 15	2	2
11	022600004	Bushing for feed rock shaft	1	1
12	022620001	Collar for feed rock shaft	2	2
13	022320002	Screw	4	4
14	036400003	Feed rock shaft crank(right)	1	1
15	114400001	Feed rock shaft crank(right)	1	1
16	036400204	Pin	1	1
17	036550005	Screw	1	1
18	022640003	Screw	1	1
19	054A00004	Bobbin case complete	1	1
20	048400003	Bobbin	1	1
21	022471000	Rotating hook complete	1	1
22	048410000	Rotating hook complete	1	1
23	036400001	Hook shaft	1	1
24	022411002	Filter screw	1	1
25	022411002	Filter	1	1
26	022400109	Oil seal	1	1
27	022400004	Hook shaft bushing(left)	1	1
28	022400005	Oil adjusting screw	1	1
29	022400006	Coil spring	1	1
30	022420001	Collar for hook shaft	1	1
31	022200009	Screw	2	2
32	036400001	Hook shaft bushing(right)	1	1
33	022430002	Oil pipe for hook shaft bushing	1	1
34	036400015	Plunger	1	1
35	036400016	Plunger spring	1	1
36	022400010	Guide plate	1	1
37	022510004	Screw	1	1
38	022600007	Hinge pin	1	1
39	036400017	Feed lifting rock shaft crank(R)	1	1
40	022600016	Screw	2	2
41	022600012	Bushing for feed lifting shaft(L)	1	1
42	022200002	Screw	1	1
43	036484001	Feed lifting fork	1	1
44	124600003	Feed lifting rock shaft	1	1
45	022400013	Hook positioner	1	1
46	048400002	Hook positioner	1	1
47	022400015	Screw	1	1
48	022200009	Screw	1	1
49	022200002	Screw	1	1
50	022640003	Screw	1	1
51	S4A0400011	Washer	1	1

9. Darning switch assembly

No.	Ref. No.	Description	Qt.	
			M	H
1	Z38C13001	Darning switch assembly	1	1
2	B048600494	Screw M4x6	1	1
3	022200019	Screw	2	2

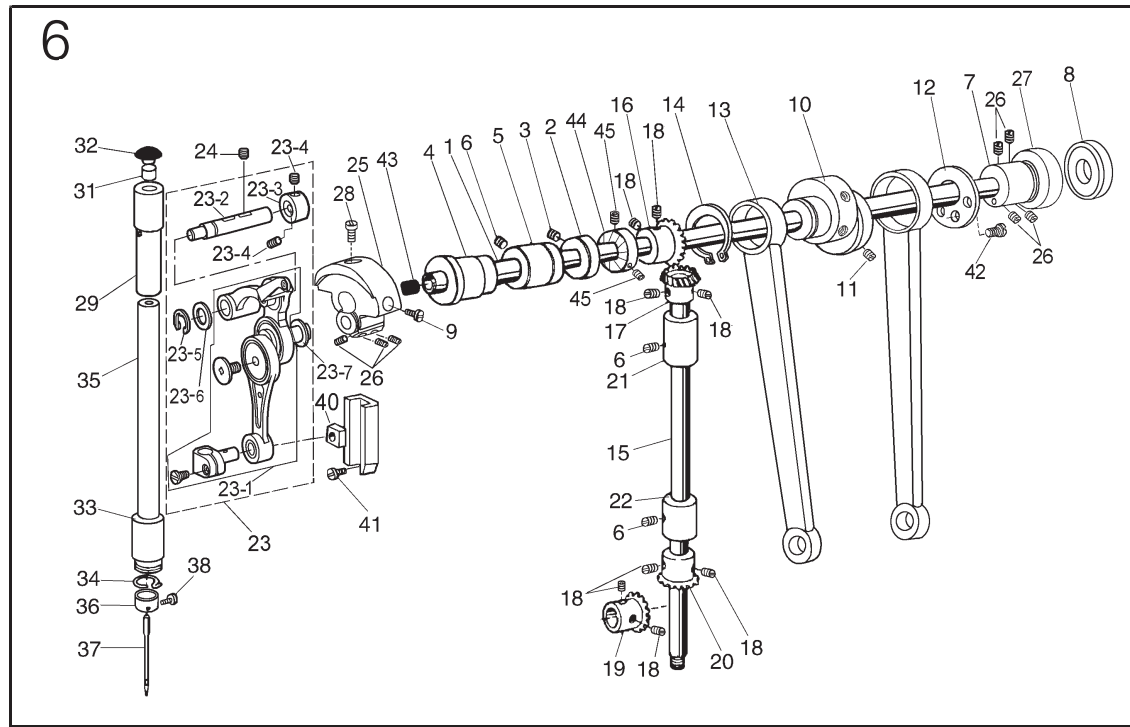
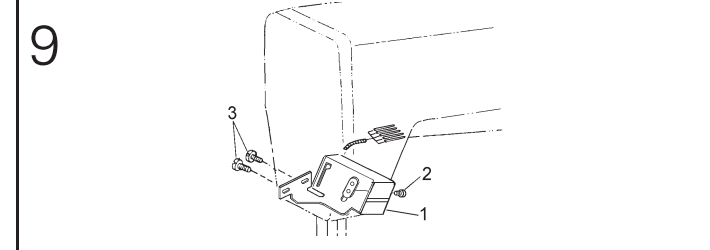
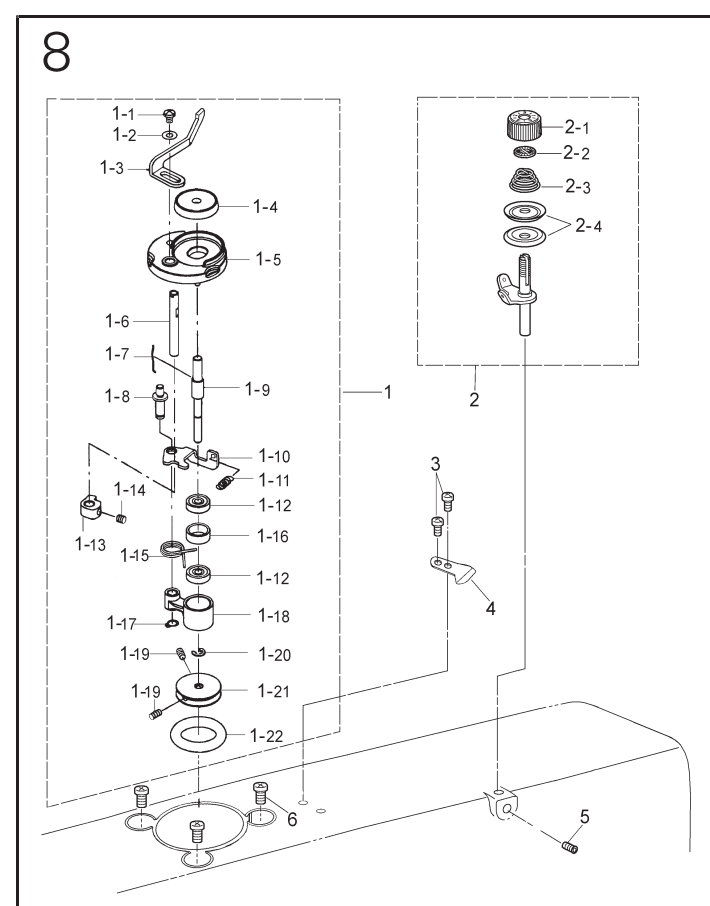
Parts choosing list

No.	Ref. No.	Description	Qt.	
			M	H
1	165100101	Needle plate B1.8	1	1
2	153100004	Needle plate	1	1
3	165400105	Feed dog	1	1
4	165400102	Feed dog	1	1
5	022701100	Presser foot asm	1	1



5. PRESSER FOOT MECHANISM

No.	Ref. No.	Description	Qt.	
			M	H
1	022710001	Presser bar lifter	1	1
2	022200019	Screw	1	1
3	022700002	Presser bar lifting cam	1	1
4	036620002	Oil seal(4.5 x 1.8G)	1	1
5	022721001	Knee lifter lever (left)	1	1
6	022722001	Tension relasing cam	1	1
7	022723000	Screw	1	1
8	022720002	Screw	2	2
9	Z38400002	Knee lifter rod	1	1
10	022700005	Screw	1	1
11	Z38C00002	Thread releasing pin	1	1
12	022730001	Knee lifter lever (right)	1	1
13	022730002	Coil spring	1	1
14	022730003	Knee lifter connecting rod	1	1
15	022700008	Pin for spring	1	1
16	Z38400005	Bushing for presser bar	1	1
17	022700010	Presser bar	1	1
18	Z38400001	Presser bar guide bracket	1	1
19	022100013	Screw	1	1
20	022700012	Presser bar spring guide	1	1
21	022700013	Presser bar spring	1	1
22	048700002	Presser bar spring	1	1
23	022750001-W	Thumb screw	1	1
24	022750002-W	Lock nut	1	1
25	022700015	Screw	1	1
26	022760000	Presser foot asm	1	1
27	048710000	Presser foot asm	1	1
28	Z38400009	Thread guide	1	1
29	057700002	Presser foot spring	1	1
30	022730004	Screw	1	1
31	Z38400006	Cord holder	1	1



6. ARM SHAFT AND VERTICAL SHAFT THREAD TAKE-UP MECHANISM

No.	Ref. No.	Description	Qt.	
			M	H
1	Z38200001	Arm shaft	1	1
2	022320001	Collar for arm shaft	1	1
3	022320002	Screw	2	2
4	022320003	Arm shaft bushing(left)	1	1
5	022320004	Arm shaft bushing(middle)	1	1
6	022200002	Screw	3	3
7	Z38200003	coupling	1	1
8	Z38200004	oil seal	1	1
9	022200006	Screw	1	1
10	036300003	Eccentric wheel	1	1
11	114300001	Eccentric wheel	1	1
12	022200002	Screw	2	2
13	036300004	Sprocket	1	1
14	022343001	Crank rod for lifting rock shaft	1	1
15	022342001	Sprocket	1	1
16	022350001	Vertical shaft	1	1
17	Z0A180891	Bevel gear for arm shaft	1	1
18	Z0A180892	shaft(lower)	1	1
19	022200003	Set screw	8	8
20	Z0A180886	Bevel gear for hook shaft	1	1
21	Z0A180885	shaft(lower)	1	1
22	022300001	Vertical shaft bushing(upper)	1	1
23	022300002	Vertical shaft bushing(lower)	1	1
24	022300003	Slide block	1	1
25	022300004	Slide block	1	1
26	BXF8871009	Needle bar link asm	1	1
27	BXF8871009	Needle bar link asm	1	1
28	BXF9981009	Thread take up lever asm	1	1
29	BXF9981009	Thread take up lever asm	1	1
30	BXF9981009	lever	1	1
31	BXF9981009	Screw	1	1
32	0098600674	Screw M4x6	2	2
33	0062040768	Retaining ring E6	1	1
34	BXF8949009	Washer	1	1
35	B990743009	Washer 8	1	1
36	022200002	Screw	2	2
37	Z38200002	Needle bar crank	1	1
38	BXB7459009	Screw	7	7
39	BXB5876009	Bearing	1	1
40	022200007	Set screw	1	1
41	153200004	Needle bar bushing(upper)	1	1
42	022200010	Felt plug	1	1
43	022200011-V	Rubber plug Ø8.8	1	1
44	153200005	Needle bushing(lower)	1	1
45	124200006	Needle bushing(lower)	1	1
46	022230002	Thread guide	1	1
47	153200003	Needle bar	1	1
48	078200004	Needle bar	1	1
49	048200004	Thread guide for needle bar	1	1
50	D5 x 1 1/4#	Needle	1	1
51	D7 x 5 1/8#	Needle	1	1
52	022200017	Screw	1	1
53	Z38C00001	Guide rail for slide block	1	1
54	022200020	Slide block	1	1
55	022200019	Set screw	2	2
56	022200018	Set screw	3	3
57	022200017	Rubber plug	1	1
58	207302001	Rubber plug Ø7.4x10	1	1
59	S150224011	Screw M5x6	2	2

8. BOBBIN WINDER MECHANISM

No.	Ref. No.	Description	Qt.	
			M	H
1	207107000	Bobbin winder complete	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	207107004	Bobbin winder support	1	1
1-6	207107010	Bobbin winder cam shaft	1	1
1-7	207107002	Spring	1	1
1-8	207107012	Bobbin winder lever shaft	1	1
1-9	207107001	Bobbin winder shaft	1	1
1-10	207107014	Bobbin winder lever	1	1
1-11	207107005	Spring	1	1
1-12	S150866067	Beal 6252 ZNR	2	2
1-13	207107011	Bobbin winder cam	1	1
1-14	S150224008	Screw M5x5	1	1
1-15	207107013	Spring	1	1
1-16	207107007	Beal bushing	1	1
1-17	W120607001	Retaining ring C6	1	1
1-18	207107006	Bobbin winder crank	1	1
1-19	S150224009	Screw M4x6	2	2
1-20	B062060768	Retaining ring E4	1	1
1-21	207107008	Bobbin winder wheel	1	1
1-22	207107009	Flutted ring	1	1
2	BXF9116009	Thread tension complete(S)	1	1
2-1	BX79078009	Nut	1	1
2-2	BX9869009	Washer	1	1
2-3	B900609089	Spring	1	1
2-4	B965664009	Tension disc	2	2
3	022830004	Screw SM3.57	2	2
4	001100009	Knife	1	1
5	022200009	Screw	1	1
6	BXF9118909	Screw M5x6	3	3

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Code	Parts	No.
022320004	6	5
022342001	6	14
022343001	6	13
022350001	6	15
022400004	4	25
022400005	4	26
022400006	4	27
022400010	4	37
022400013	4	46
022400015	4	47
022411002	4	23
022411002	4	23
022420001	4	24
022411001	4	22
022411002	4	23
022420001	4	31
022430002	4	34
022471000	4	20
022500003	7	12
022500004	7	13
022500009	7	33
022500011	7	25
022500013	7	17
022510004	4	38
022540001	7	20
022540003	7	23
022540004	7	10
022540004	7	24
022540004	7	24
022540004	7	15
022550001	7	15
022551001	7	15
022600004	4	11
022600012	4	42
022600016	4	41
022610003	4	1
022610004	4	5
022610006	4	3
022611001	4	6

INDEX 4

Code	Parts	No.
022612001	4	7
022640003	4	17
022640003	4	50
022640003	7	7
022640003	7	9
022700002	5	3
022700005	5	10
022700008	5	15
022700010	5	17
022700012	5	20
022700013	5	21
022700015	5	24
022710001	5	1
022720002	5	8
022721001	5	1
022722001	5	6
022723000	5	7
022730001	5	12
022730002	5	13
022730003	5	14
022730004	5	29
022760000	5	25
022800001	3	1
022800002	3	2
022800003	3	3
022800004	3	4
022800006	3	6
022800007	3	7
022800009	3	9
022810000	3	8
022830004	8	3
022900017	2	12
022990000	2	4
036240001	1	15
036240002	1	16
036240003	1	18

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Code	Parts	No.
0363		