

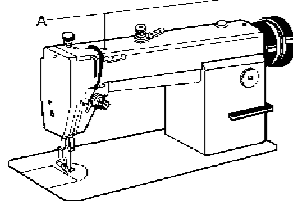
# TYPICAL

## GC6 SERIES HIGH SPEED LOCKSTITCH SEWING MACHINE



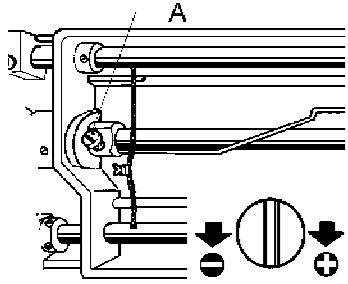
INSTRUCTIONBOOK  
PART CATALOGUE

### ※NOTE



Before putting a new machine into operation, remove the plugs(A) on the top of the arm and replenish sufficient amount of oil, then lift the presser foot and run the machine at a low speed of 2000 spm to check oil distributing condition through oil check window. When lubricating is normal, keep the machine run in at this speed for 30 minutes, then increase the running speed gradually. After one month run-in operation, the machine can be run at the Max speed under normal working

### 2. ROTATING HOOK OIL AMOUNT ADJUSTMENT



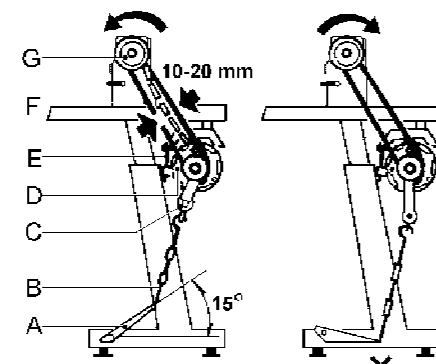
Adjust the oil amount of the rotating hook by turning the oil amount adjusting screw (A). Turn the screw(A) clockwise (in the "+" direction) to increase the oil amount; turn it counter-clockwise (in the "-" direction) to decrease the oil amount.

### 4. NEEDLE INSTALLATION

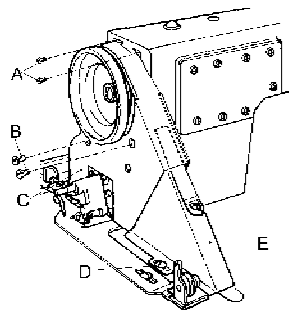
Turning the balance wheel to lift the needle bar to the upper end of its stroke. Loosen the needle clamp screw while keeping the long groove of the needle leftward, fully insert the needle shank up to the bottom of the needle socket, then tighten the needle clamp screw.

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

(1) The optimum tilt angle of pedal is approximately 15 deg.  
(2) Adjust the clutch so that the clutch lever (c) align with the draw bar (B) as shown in Fig 6.  
(3) The machine pulley should rotate counter clockwise when viewed from the outside of it. The rotating direction of motor pulley can be reversed by turning the plug of the motor at 180 deg.  
(4) Adjust the tension of O-Belt (F) by moving the motor up and down, the proper tension of the O-belt is a slack of 10-20 mm when the belt is depressed at the center of the belt by finger.

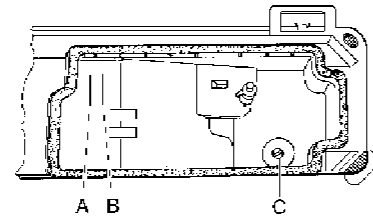


### 6. BELT COVER INSTALLATION



Install the belt cover for the sake of safety.  
Install belt cover (C) to arm with screw(A) and screw(B) and install belt cover(E) on board with screw(D).  
Note: there aren't screw(A) and screw holes on belt cover in GC6-9.

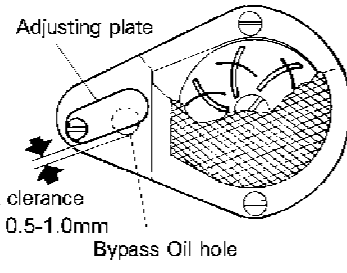
### 1. OIL FILLING



(1) The oil amount in the oil reservoir is controlled through the reference marks A and B shown in Fig2. The mark A indicates the max oil amount level, the mark B for the min. oil amount level. If the oil amount level is under the mark B replenish the oil reservoir with oil in time reservoir with oil in time.

(2) When filling oil, loosen the oil draining screw (c), drain off the remaining oil in the oil reservoir completely, clean the oil reservoir and tighten the oil draining screw(c), then fill the oil reservoir with fresh oil.

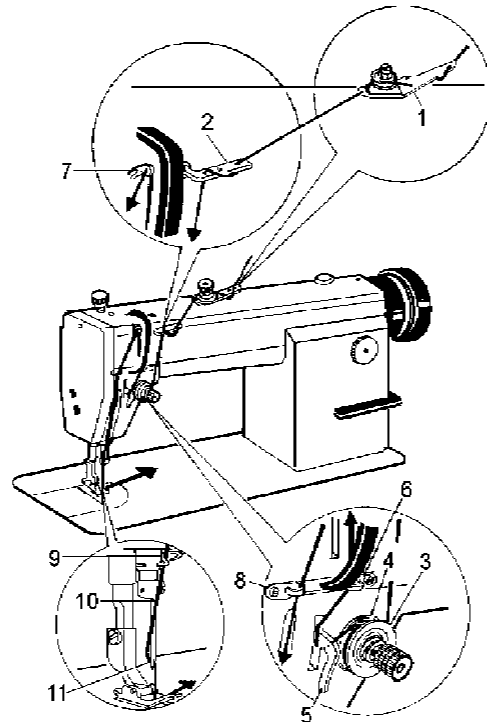
### 3. OIL PUMP ADJUSTMENT



In ordinary operation, adjustment is not required for the oil pump. If oil splashing does not occur in the oil check window when the machine runs at a low speed, close the clearance of the bypass oil hole.

There isn't by-pass oil hole in GC6-9 series.

### 8. THREADING

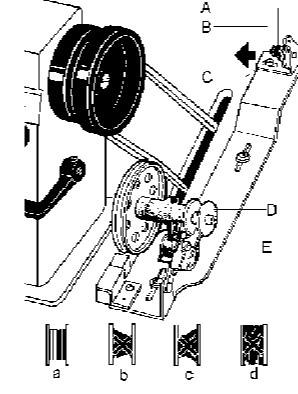


To thread the needle thread, raise the needle bar to the upper end of its stroke, lead the thread from the spool and perform threading as shown in Fig9. To draw the bobbin thread, hold the end of the needle thread and turn the balance wheel to lower the needle bar and then lift it to its highest position. Pull the ends of needle thread and bobbin thread forward under presser foot.

### 10. 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 11 (a) to increase the pressure, while for light materials, turn the pressure regulating thumb screw as shown in Fig 11(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.

### 9. WINDING INSTALLATION AND ADJUSTMENT

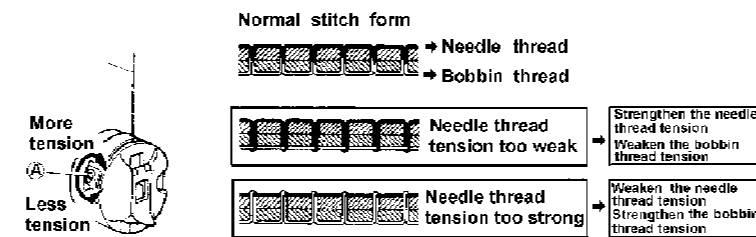


The bobbin winder pulley should Align with the V-belt and there should be some clearance between them. When the bobbin winder stop latch lever is depressed, the V-belt should be in touch with the bobbin winder pulley in order that the bobbin winder pulley can be driven by the V-belt.

The thread wound on the bobbin should be neat and tight if not tight, adjust the winding tension by turning the tension stud nut (A) of the bobbin winder tension bracket, when the thread wound on the bobbin does not present a cylindrical shape as shown in Fig 10 (a), Loosen the set screw(B) of the bobbin winder tension bracket and move the bracket (C) leftward or rightward, if the thread is wound as shown in the figure (b), move the bracket leftward or rightward of wound as shown in the figure(c), move it leftward. After positioning the bracket adequately, tighten the set screw (B).

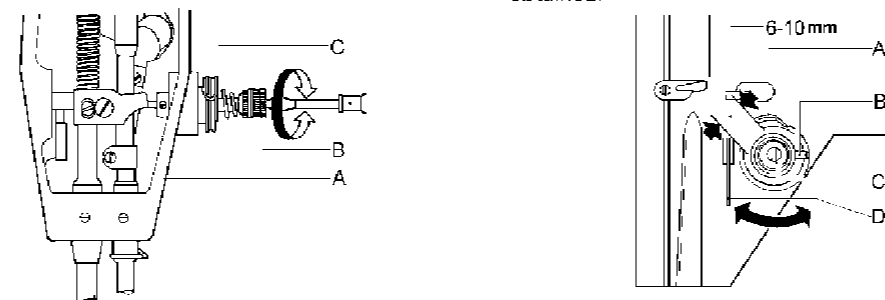
Do not overfill the bobbin. The optimum wound length of the thread will fill about 80% of the bobbin capacity. This can be adjusted by the screw(E) of the bobbin winder stop latch.

### 11. THREAD TENSION ADJUSTMENT



Thread tension should be determined in accordance with the stitch obtained by adjusting the tension of the bobbin thread and needle tension (Fig.12).

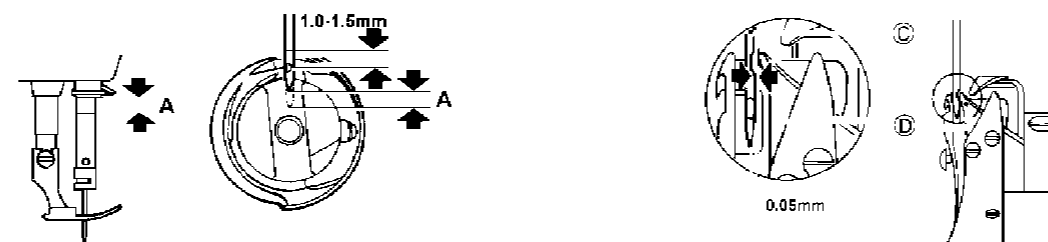
The tension of the bobbin thread to be adjusted by turning the tension spring regulating screw of the bobbin case. After adjusting, insert the bobbin into the bobbin case and hold the end of the thread from the bobbin case to hang the bobbin case, if the bobbin case falls slowly and evenly, the proper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



The stroke of the thread take-up spring runs from 8mm 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: (Fig.13) 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: (Fig.14) 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).

### 12. 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 (Fig.15)

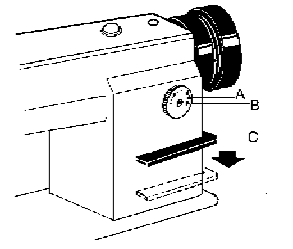
The clearance between the bottom of the needle notch and the hook point should be 0.05 mm.

	M	H	B
A	2mm	1.8mm	1.8mm

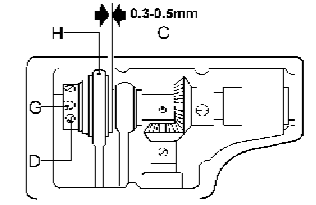
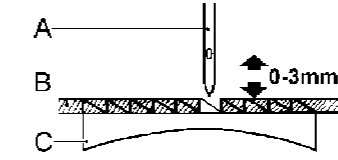
### 13. ADJUSTMENT OF STITCH LENGTH LENTH AND ADJUSTMENT

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

NOTE: Push the press key "PUSH" to adjust the stitch length. It's designed to prevent knob from rotating at working in GC6-8 and GC6-9.



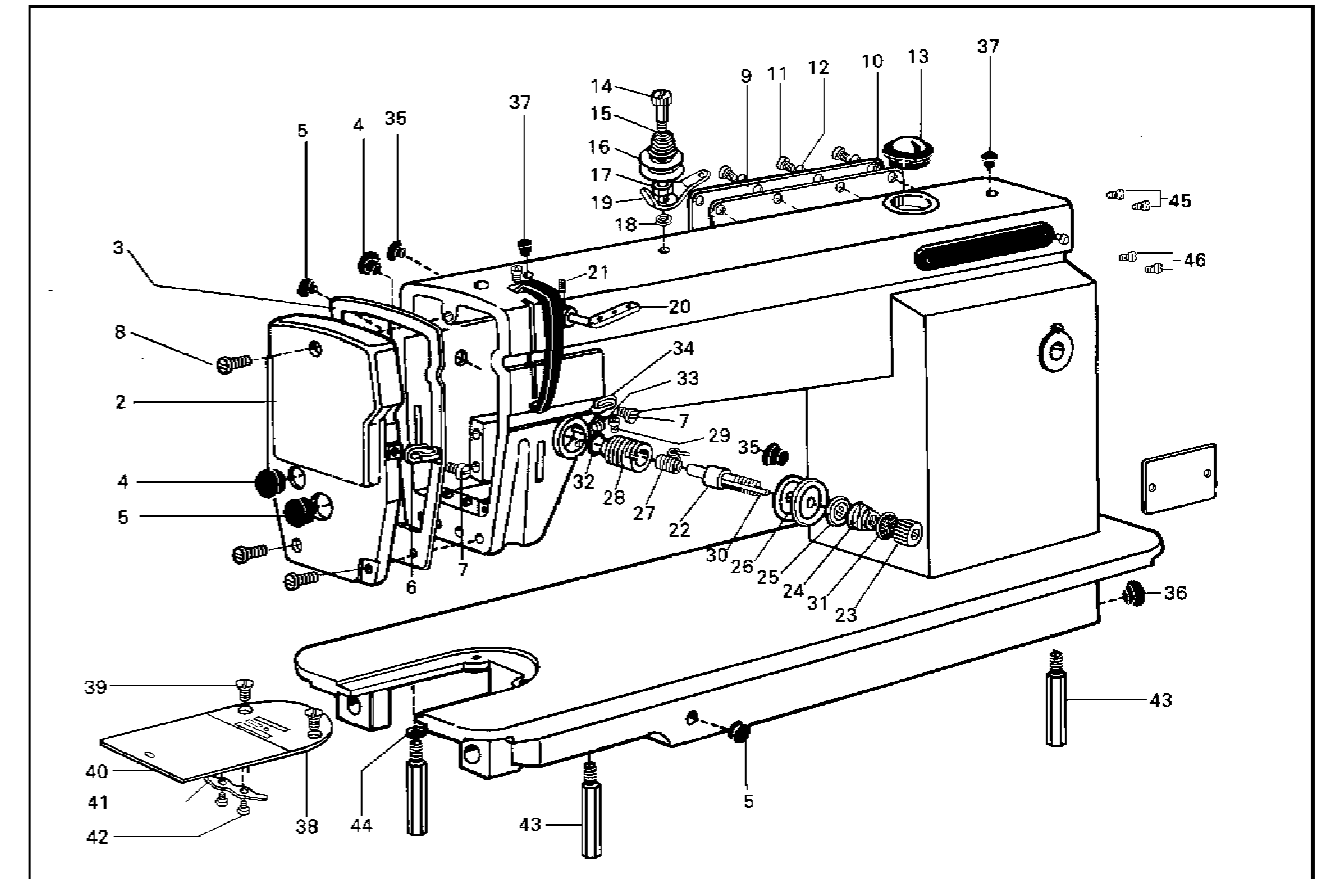
### 14. ADJUST THE SYNECHRONILATION OF THE NEEDLE MOTION WITH FEED MOTION



When the point (A) reaches the surface of the needle plate (B), the top of the feed dog (C) should be flush with the needle plate surface. This is the standard synchronous position. The upper of arm shaft hole (C) should be flush with hole (G). This is the standard position.

### GC6 Series machine's main technical data

Item	GC6-1	GC6-28	GC6-28-1	GC6-8/GC6-28-1H	GC6-9
Use for	common materials		Thick materials		Thick materials
Sewing speed(spm)	5000 spm		3500 spm		3000 spm
Max. stitch length	5 mm		7 mm		
presser foot height kneelifter	13 mm				
Needle	DB x1 11# - 14#		DP x5 18# - 22#		
Rotating shuttle	Standard automatic oiling	Thick materials automatic oiling		Twice automatic oiling	



### 1. ARM BED AND ITS ACCESSORIES

No.	Ref. No.	Description	Qt.	No.	Ref. No.	Description	Qt.
3		Gasket for Face plate	1	25	022160004	Thread tension releasing disc	1
4	022130003	Rubber plug(Ø19)	2	26	022160005	Thread tension disc	2
5	022130004	Rubber plug(Ø11.8)	4	27	*	Thread take-up spring	1
6	*	Thread guide on face plate	1	28	022160007	Thread tension regulating bushing	1
7	022130006	Thread guide screw	2	29	022160008	Set screw	1
8	022100004	Face plate screw	3	30	022160009	Thread tension releasing pin	1
9	022140001	Arm side cover	1	31	0226100010	Thumb nut revolution stopper	1
10	022140002	Gasket for arm side cover	1	32	0221600011	Rubber ring	1
11	022100006	Arm side cover screw	1	33	022100013	Set screw	1
12	022100007	Washer	8	34	*	Thread guide for arm center	1
13	022180001	Oil check Window	1	35	022100015	Rubber plug(Ø8.8)	2
14	022160001	Screw type tension stud	1	36	022100016	Rubber plug(Ø27)	1
15	022160002	Spring for pre-tension	1	37	022500017	Red rubber plug(Ø5.7)	2
16	022160003	Discs for pre-tension	2	38	*	Needle plate (B1.6)	1
17	022160004	Spacer for pre-tension	1	39	022100020	Needle plate screw	2
18	S4A0105006	Stop ring	1	40	022170001	Slide plate	1
19	022160005	Thread guide for pre-tension	1	41	022170002	Spring for slide plate	1
20	022100010	Three hole thread guide	1	42	022170003	Screw	2
21	022100011	Set screw	1	43	048100005	Leg	3
22	022160001	Thread tension stud	1	44	022170003	Spring washer	3
23	124130001	Thumb nut thread tension regulator	1	45	048100005	Screw (small)	2
24	*	Thread tension spring	1	46	022900006	Screw (big)	2
				38		Needle plate (GC6-8/GC6-28-1H)	1
						Needle plate (GC6-9)	1

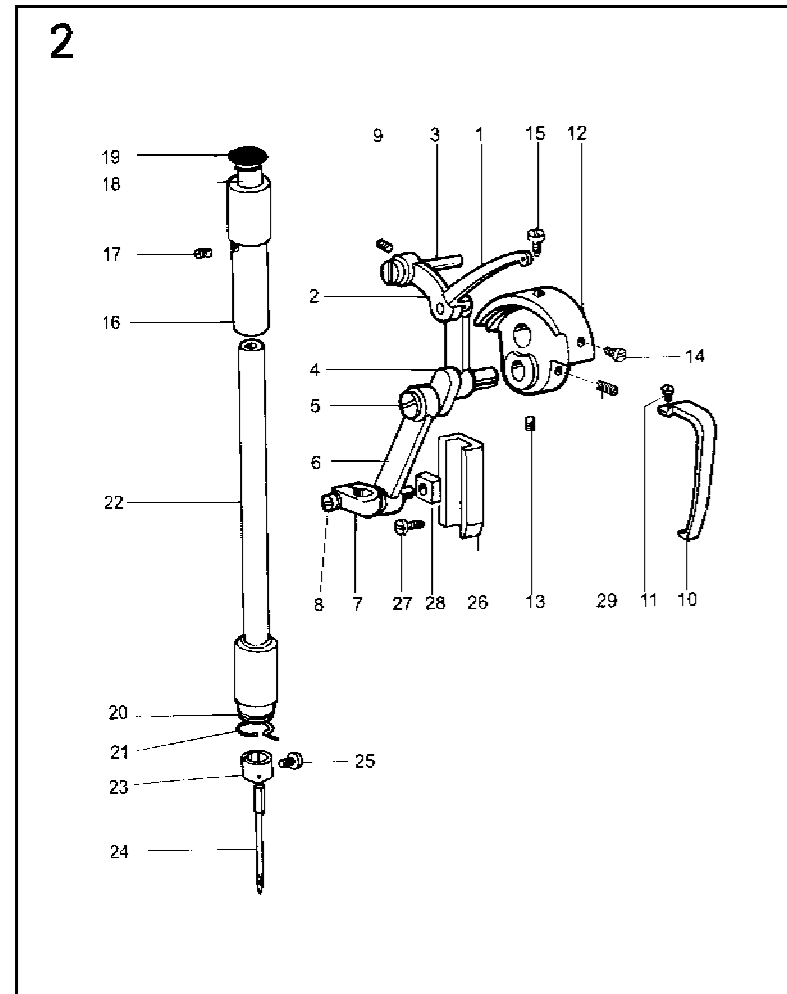
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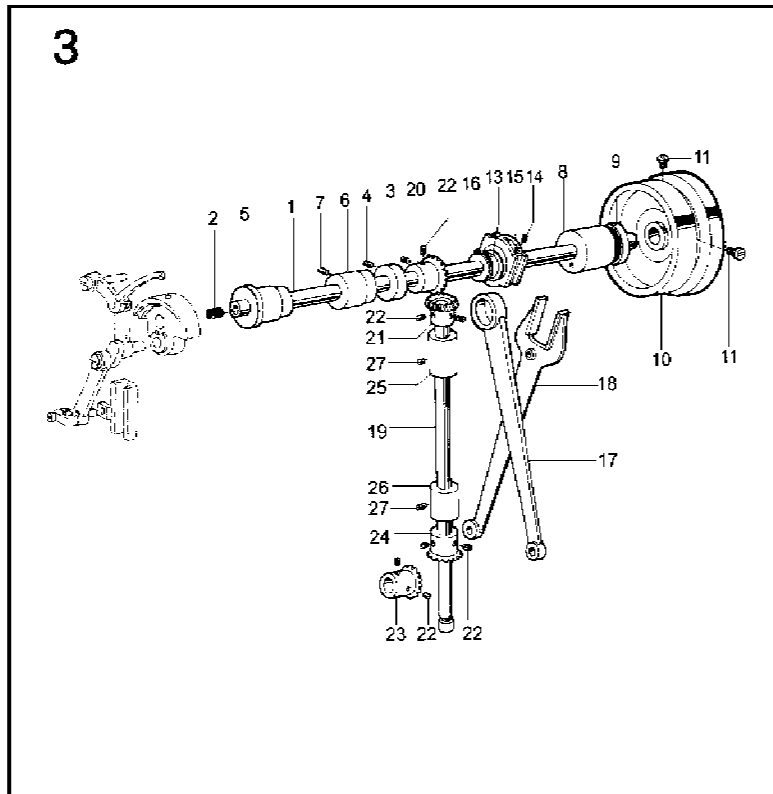
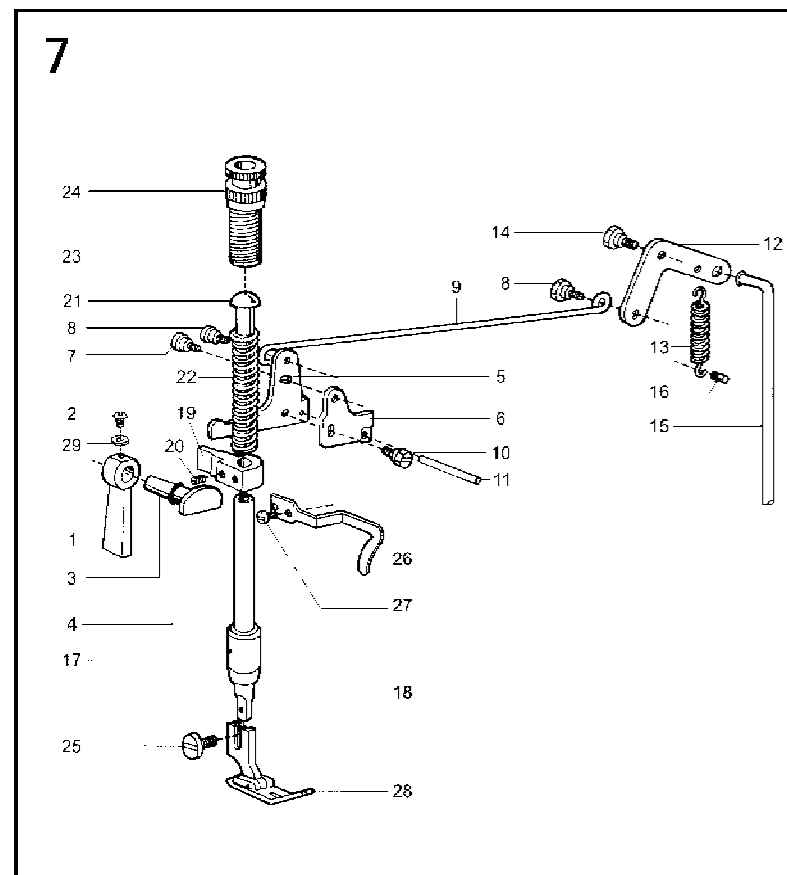
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## 2. NEEDLE BAR AND THREAD TAKE -UP MECHANISM

No.	Ref. No.	Description	Qt.
1	*	Thread take -up lever	1
2	022210002	Thread take -up link	1
3	022210003	Thread take -up lever hinge pin	1
4	*	Thread take -up crank	1
5	022210005	Needle roller bearing	2
6	022210006	Set screw (left hand thread.)	1
7	022100008	Needle bar link ass	1
8	022210009	Needle bar connecting bar joint	1
9	022200002	Screw	1
10	*	Take -up lever guard	1
11	022200004	Screw	1
12	*	Needle bar crank	1
13	022220002	Screw	1
14	022200006	Screw	1
15	022200007	Needle bar position screw	1
16	153200004	Needle bar bushing(upper)	1
17	022200009	Set screw	1
18	022200010	Felt plug	1
19	022200011	Red rubber plug(Ø8, 8)	1
20	*	Needle bar bushing(lower)	1
21	022300002	Thread guide for needle bar bushing	1
22	*	Needle bar	1
23	048200004	Thread guide for needle(GC6 - 28 - 1)	1
24	*	Needle	1
25	022200017	Needle clamp screw	1
26	022200018	Needle bar connecting link guide	1
27	022200019	Set screw	2
28	022200020	Slide block	1
29	022220003	Thread take -up crank position screw	1

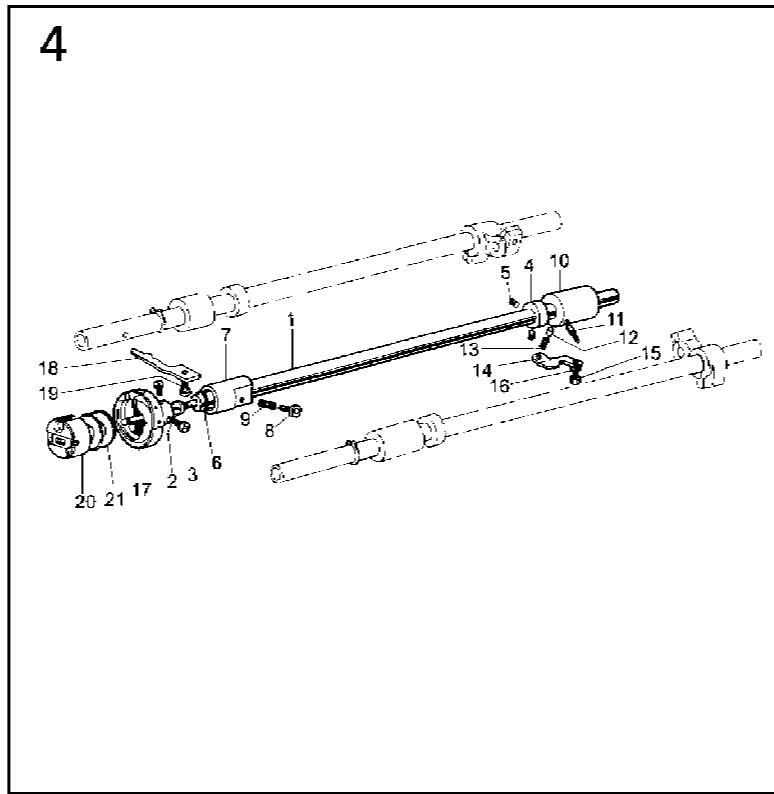


## 3. ARM SHAFT AND VERTICAL SHAFT MECHANISM

No.	Ref. No.	Description	Qt.
1	022310001	Arm shaft	1
2	022310002	Rubber plug for arm shaft	1
3	022320001	Collar for arm shaft	1
4	022220003	Set screw	2
5	022300003	Arm shaft bushing (left)	1
6	022300004	Arm shaft bushing (middle)	1
7	022200002	Set screw	1
8	036460001	Arm shaft (right)	1
9	022360001	Oil seal	1
10	*	Balance wheel	1
11	022330002	Set screw	2
13	022341001	Feed and feed lifting eccentric	1
14	022100013	Set screw	2
15	022341002	Eccentric sleeve	1
16	022342001	Crank rod for stopper	1
17	022343001	Crank rod for feed lifting rock shaft	1
18	*	Feed forked connection	1
19	022350001	Vertical shaft	1
20	Z01800891	Bevel gear for arm shaft	1
21	Z01800892	Bevel gear for vertical shaft (upper)	1
22	022220003	Set screw	8
23	Z01800886	Bevel gear for hook shaft	1
24	Z01800885	Bevel gear for vertical shaft (lower)	1
25	022300111	Vertical shaft bushing (upper)	1
26	*	Vertical shaft bushing (lower)	1
27	022200002	Set screw	2

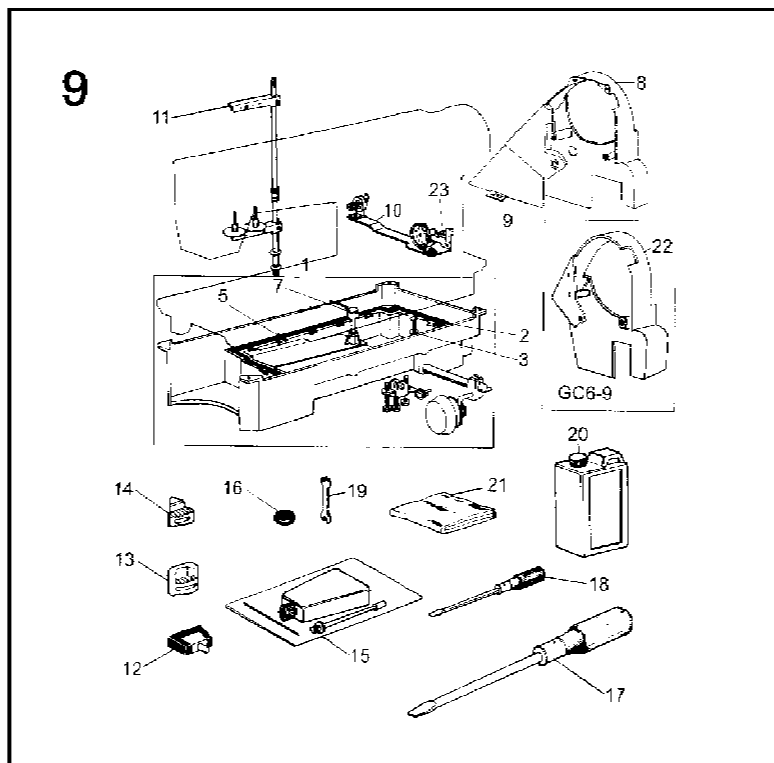
## 7. PRESSER FOOT MECHANISM

No.	Ref. No.	Description	Qt.
1	022710001	Presser bar lifter	1
2	022100006	Set screw	1
3	022700002	Presser bar lifting cam	1
4	036620002	Oil seal	1
5	022721001	Knee lifter lever (left)	1
6	022722001	Tension releasing cam	1
7	022723001	Screw	1
8	022720002	Hinge screw	2
9	022720003	Knee lifter rod	1
10	022700005	Bolt for tension releasing cam	1
11	022700006	Tension releasing pin	1
12	022730001	Knee lifter lever (right)	1
13	022730002	Spring for knee lift lever	1
14	022700005	Bolt for knee lifter lever	1
15	022730003	Knee lifter connecting rod	1
16	022700008	Pin for spring	1
17	022700009	Presser bar bushing	1
18	022700010	Presser bar	1
19	022740001	Presser bar lifting bracket	1
20	022100013	Set screw	1
21	022700012	Presser bar guide	1
22	*	Presser spring	1
23	022750001	presser regulating thumb screw	1
24	022750002	Lock nut	1
25	022700015	Set screw	1
26	022700016	Slack thread regulator	1
27	022200004	Screw	1
28	02276	Presser foot complete	1
29	022100007	Washer	1
GC6 - 8 GC6 - 9 GC6 - 28 - 1H			
28	04881	Presser foot complete	1
GC6 - 28 - 1			
26		Slack thread regulator	1



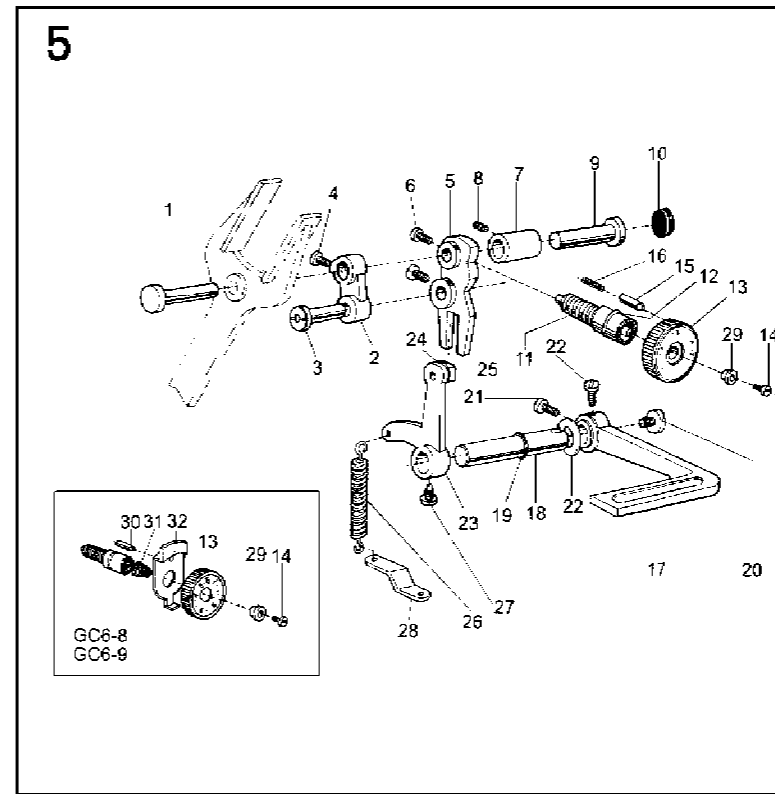
## 4. ROTATING HOOK MECHANISM

No.	Ref. No.	Description	Qt.
1	*	Rotating hook shaft	1
2	022411001	Filter screw	1
3	022411002	Filter	1
4	022420001	Collar for rotating shaft	1
5	022200009	Set screw	2
6	022400109	Oil seal for rotation hook shaft	1
7	022400004	Hook shaft bushing (left)	1
8	022400005	Oil adjusting screw	1
9	022400006	Spring for oil adjuster	1
10	036460001	Rotating hook shaft bushing (right)	1
11	022430002	Oil pipe for hook shaft bushing	1
12	036400015	Plunger	1
13	036400015	Plunger spring	1
14	036400016	Guide plate	1
15	022400010	Set screw	1
16	022900006	Spring washer	1
17	*	Rotating hook	1
18	*	Rotating hook positioner	1
19	022400015	Bobbin case	1
20	*	Bobbin	1
21	*	Bobbin	1



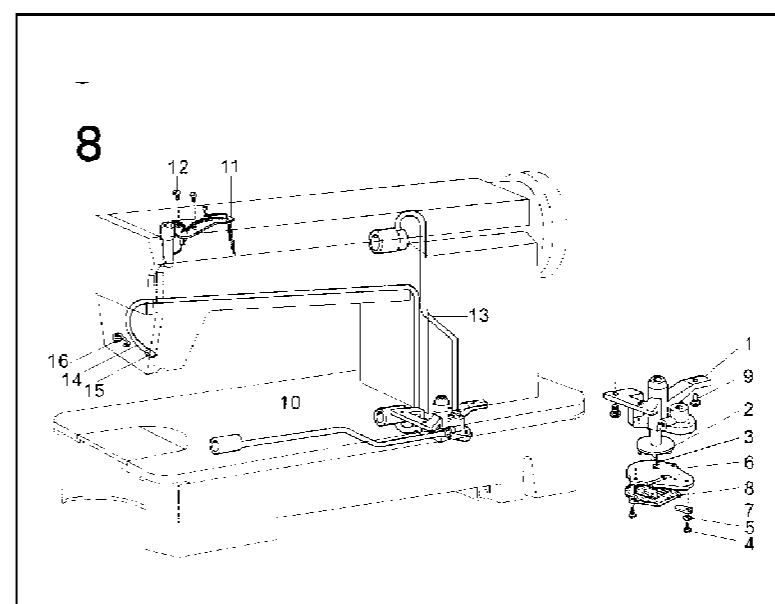
## 9. OIL RESERVOIR AND OTHER ACCESSORIES

No.	Ref. No.	Description	Qt.
1	036C10001	Oil reservoir complete	1
2	022910002	Oil drain screw	1
3	022910003	Washer	1
5	0229100005	Gasket for oil reservoir	1
7		Knee lifter lifting rod	1
8	006F20000	Belt guard complete	1
9	124920001	Belt guard complete (S)	1
10	006F10001	Thread winder complete	1
11	006F00030	Spool stand	1
12	02299	Machine head hinge complete	2
13	022900009	Cushion (big)	2
14	022900010	Cushion (small)	2
15	W050202001	Oil pot	1
16	W050103001	Magnet	1
17	W050102050	Screwdriver (long)	1
18	W050102051	Screwdriver (short)	1
19	W210105011	Double - open - end wrench	1
20	W050202009	Oil tank	1
21	W060302036	Machine cover	1
22	03181	Belt guard complete	1
23	006F40001	Bobbin winder stop latch	1
	006F00104	Bobbin winder stop latch (GC6 - 9)	1



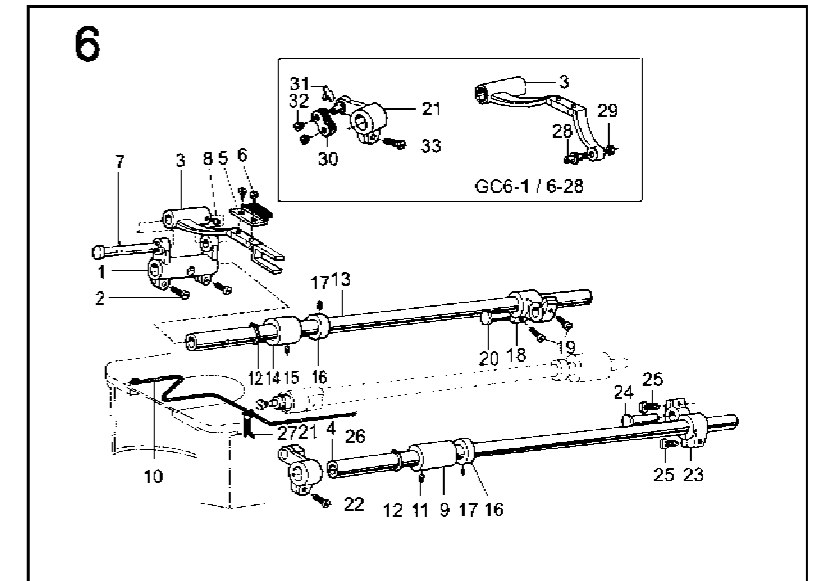
## 5. STITCH LENGTH REGULATING MECHANISM

No.	Ref. No.	Description	Qt.
1	022510001	Feed for hinge pin	1
2	022510002	Feed connecting link	1
3	022510003	Hinge pin for feed connecting link	1
4	022510004	Feed regulator	1
5	*	Set screw	1
6	022510004	Feed regulator bushing	2
7	022500003	Feed regulator hinge pin	1
8	022200002	Set screw	1
9	022500004	Feed regulator screw	1
10	022500005	Rubber plug(Ø20 x 4)	1
11	0366540001	Feed regulator screw	1
12	142400002	O - ring for feed regulating screw	1
13	057510001	Stopper pin	1
14	0366540005	Screw	1
15	022500008	Spring for stopper pin	1
16	022500009	Rotating hook	1
17	022540001	Backtacking lever shaft	1
18	02541001	Backtacking lever shaft	1
19	S4A0604005	O - ring(6.3 x 1.8G)	1
20	022540003	Screw	1
21	022540004	Screw	2
22	022500011	O - ring	1
23	022550001	Backtacking crank	1
24	022551001	Slide block pin	1
25	022550001	Slide block for backtacking crank	1
26	022550001	Spring for backtacking crank	1
27	0225500013	Screw	1
28	022500014	Bracket for spring	1
29	022540004	Bush	1
GC6 - 8 GC6 - 9 GC6 - 28 - 1H			
30	036500012	Stopper pin	1
31	036500011	Spring	1
32	036500010	Knob	1
33	048520001	Dial	1



## 8. LUBRICATION MECHANISM

No.	Ref. No.	Description	Qt.
1	022800001	Oil pump body	1
2	022800002	Oil pump impeller	1
3	02800003	Screw	1
4	022800004	Screw	3
5	S4A0400012	Spring washer	1
6	*	Oil pump fitting plate	1
7	022800007	Oil adjusting plate	1
8	022810001	Oil pump screen complete	1
9	022800009	Screw	3
10	022820N	Oil pipe for hook shaft	1
11	022831	Oil braid fitting plate	1
12	022700015	Screw	2
13	*	Oil pipe for arm shaft	1
14	022800014	Oil returning pipe	1
15	022800015	Felt pouch for return oil filter	1
16	036A00002	Spring for oil felt	1



## 6. FEEDING AND FEED LIFTING MECHANISM

No.	Ref. No.	Description	Qt.
1	*	Feed rock shaft crank	1
2	022612001	Screw	2
3	*	Feed bar	1
4	022600011	Feed lifting rock shaft	1
5	022610003	Feed dog	1
6	022610004	Screw	2
7	*	Shaft for feed bar crank	1
8	022200019	Screw	1
9	022600012	Bushing for feed lifting rock shaft	1
10	022610007	Oil braid for feed bar crank	1
11	022200002	Set screw	1
12	S4A0600010	C - type stop ring	2
13	022600003	Feed rock shaft bushing	1
14	022600004	Feed rock shaft bushing	1
15	022200009	Set screw	1
16	022620001	Collar	2
17	022320002	Set screw	4
18	*	Feed rock shaft crank	1
19	022200016	Screw	2
20	*	Hinge pin for feed rock shaft crank	1
21	*	Feed lifting rock shaft crank (left)	1
22	022640003	Screw	1
23	022670001	Feed lifting rock shaft crank (right)	1
24	022600007	Hinge pin for feed rock shaft crank	1
25	022600016	Screw	2
26	*	Oil braid for feed bar link	2
27	022600015	Oil braid holder	1
GC6 - 1 GC6 - 28			
28	022610009	Hinge pin for feed bar link	1
29	022610008	Nut for hinge pin	1
30	022680001	Feed bar link	1
31	022680002	Oil braid holder	1
32	022600010	Screw	2
33	022640003	Screw	1

## 10. PARTS TABLE

No.	Name	Model		
		GC6 - 1 GC6 - 28 GC6 - 28 - 1	GC6 - 8 GC6 - 28 - 1H	GC6 - 9
1 - 6	Thread guide on face plate	022130005	⇔	078130001
1 - 24	Thread tension spring	022160003	048110001	⇔
1 - 27	Thread take -up	022160006	048110002	⇔
1 - 34	Thread guide for arm center	022100014	⇔	078100005
2 - 1	Thread take -up lever	02221	04821	048100006
2 - 4	Thread take -up crank	022210004	⇔	07821
2 - 6	Needle bar link	2272 - 001A7b	048210002	⇔
2 - 10	Take -up lever guard	036200007	⇔	078200002
2 - 12	Needle bar crank	022520001	048220001	⇔
2 - 20	Needle bar bushing (lower)	153200006	124200006	⇔
2 - 22	Needle bar	153200003	048200003	⇔
2 - 24	Needle	DB x 1	DP x 5	⇔
3 - 10	Balance wheel	022330001	⇔	078330001
3 - 18	Feed forked connection	022340002	048310001	⇔
3 - 26	Vertical shaft bushing (lower)	022300012	⇔	078300001
4 - 1	Rotating hook shaft	022410001	⇔	078410001
4 - 17	Rotating hook	02247	04841	078400002
4 - 18	Rotating hook positioner	022400013	048400002	078400003
4 - 20	Bobbin case	02248	⇔	07846
4 - 21	Bobbin	022400011	⇔	078400005
5 - 5	Feed regulator	022520001	048510001	⇔
6 - 1	Feed rock shaft crank	022611001	048611001	⇔
6 - 3	Feed bar	226110002	048610002	⇔
6 - 7	Shaft for feed bar crank	022610005	048610003	⇔
6 - 18	Feed rock shaft crank	022630001	048620001	⇔
6 - 20	Hinge pin for feed rock shaft crank	022600007	04	