



Industrial Sewing Machines.

※※※ PARTS BOOK /  
INSTRUCTION MANUAL ※※※

CSTMP

MOD. BH-783

# 零件冊

## PARTS BOOK

### CONTENTS

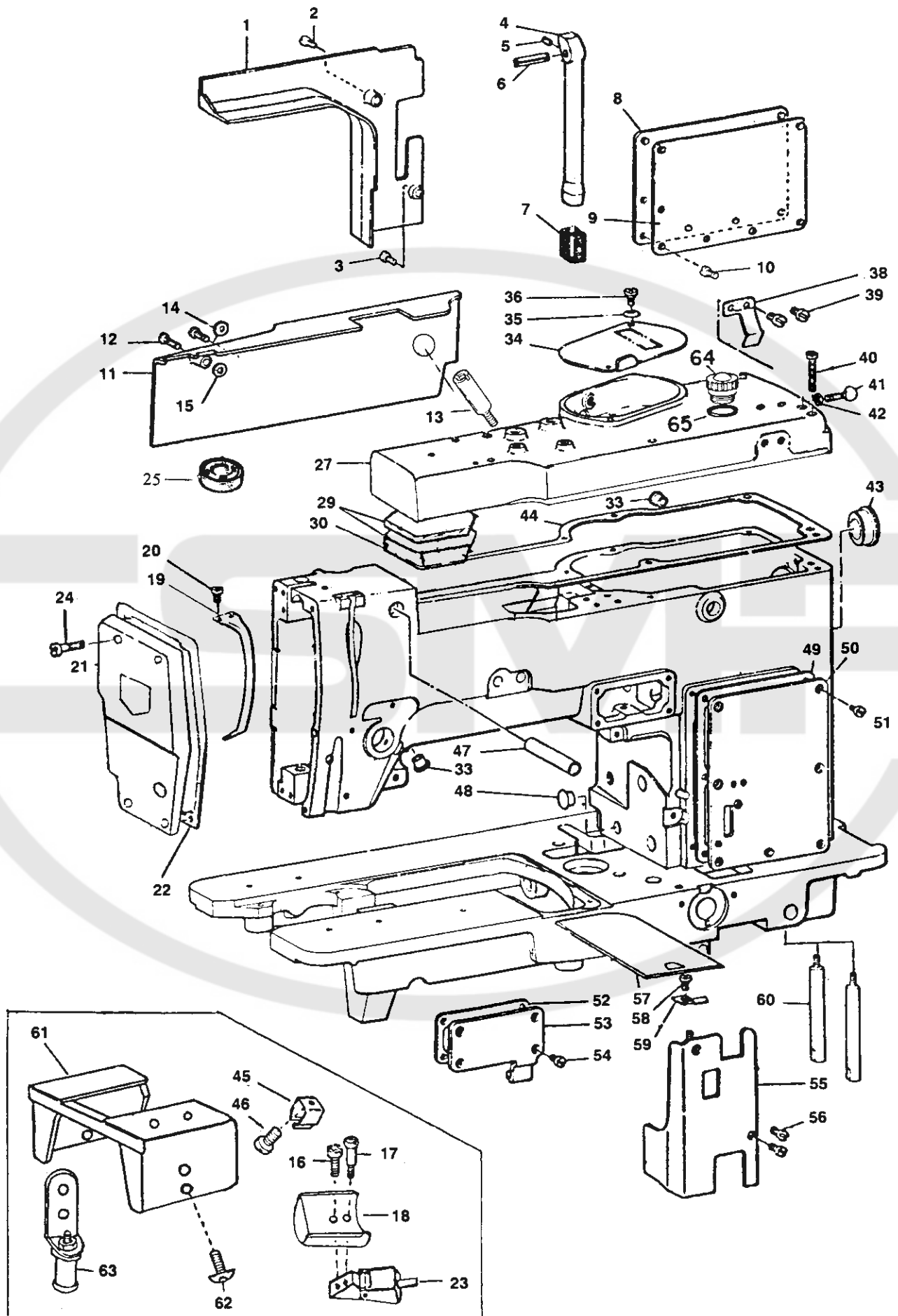
1. FRAME & MISCELLANEOUS COVER COMPONENTS
2. MAIN SHAFT COMPONENTS
3. HOOK DRIVING SHAFT COMPONENTS
4. PRESSER BAR. WORK CLAMP CARRIER COMPONENTS
5. NEEDLE BAR FRAME COMPONENTS
6. OVEREDGING WIDTH ADJUSTING COMPONENTS
7. NEEDLE THREAD TRIMMER COMPONENTS
8. BOBBIN THREAD TRIMMER COMPONENTS
9. KNIFE BAR COMPONENTS
10. FEED CAM & TRIPPING SEGMENT COMPONENTS
11. STOP-MOTION COMPONENTS
12. TRIPPING LEVER COMPONENTS
13. LIFTING LEVER & BOBBIN WINDER COMPONENTS
14. THREAD TENSION COMPONENTS
15. LUBRICATION MECHANISM COMPONENTS
16. SPEED TRANSMITTER COMPONENTS
17. EXCLUSIVE PARTS FOR 2784
18. EXCHANGING PARTS

### 目次

- 頭部外裝關係
- 上軸關係
- 下軸關係
- 押腳棒、布送板關係
- 針棒搖動台關係
- 針擺幅調節關係
- 上線切刀關係
- 下線切刀關係
- 刀棒關係
- 送布凸輪關係
- 遮斷裝置關係
- 手動停止關係
- 壓腳提升架、繞線器組
- 夾線器關係
- 給油裝置關係
- 減速機關係
- 專用零件
- 交換零件

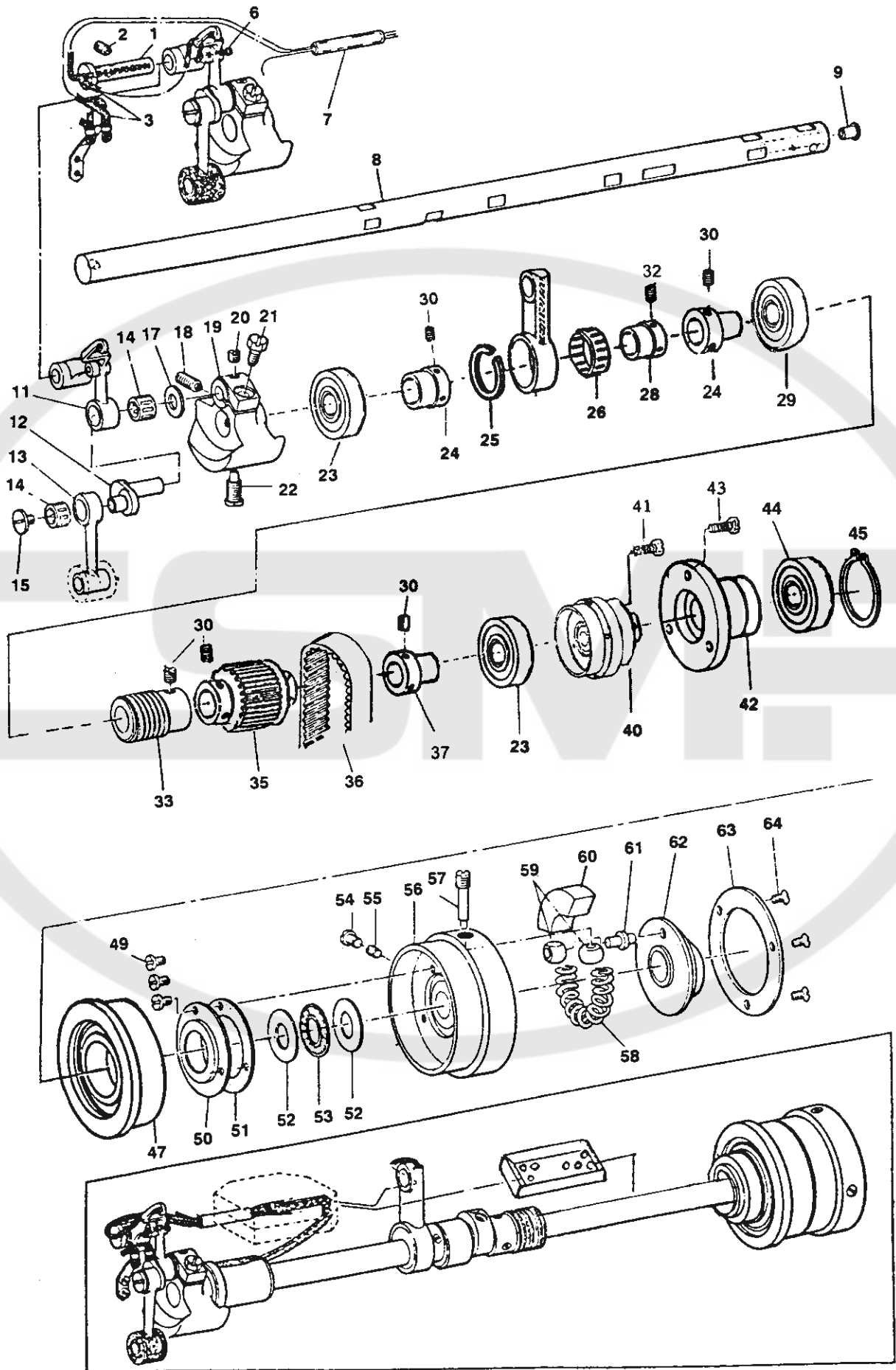
# 1. FRAME & MISCELLANEOUS COVER COMPONENTS

## 頭部外裝關係



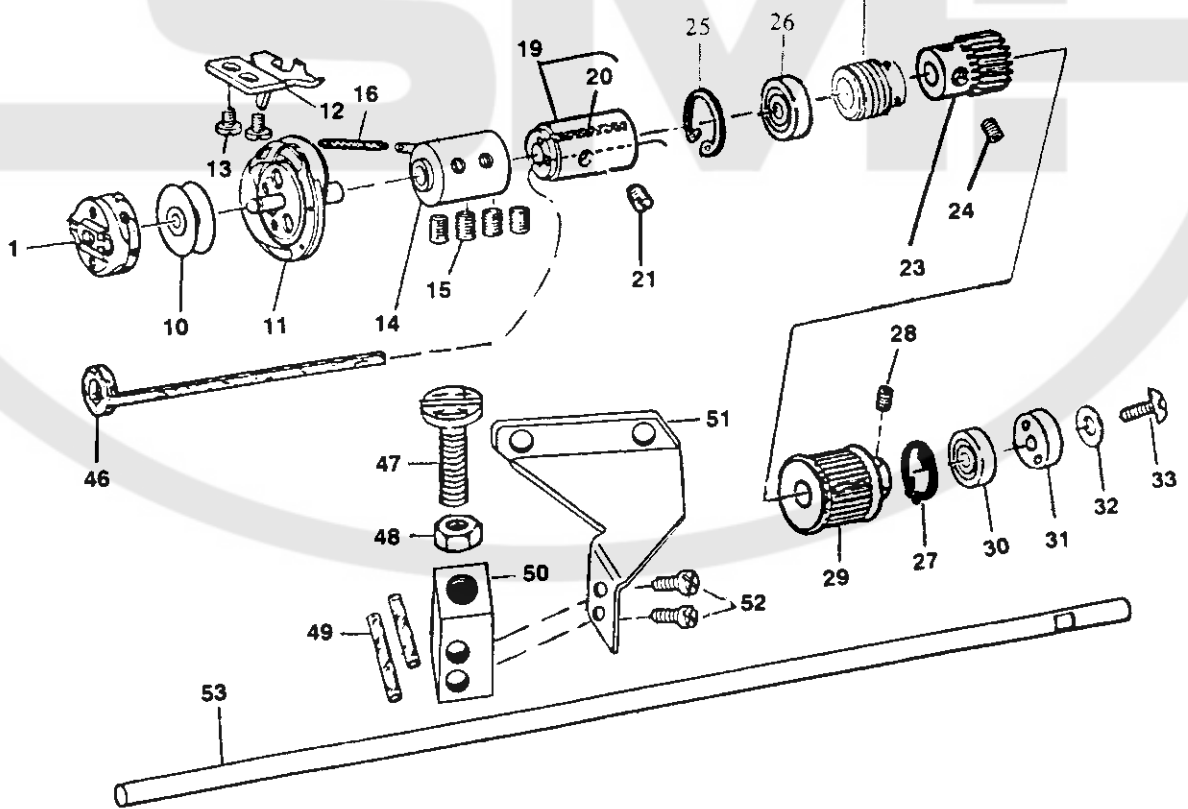
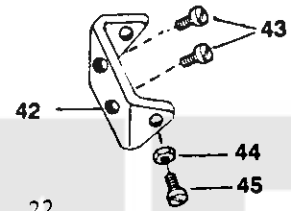
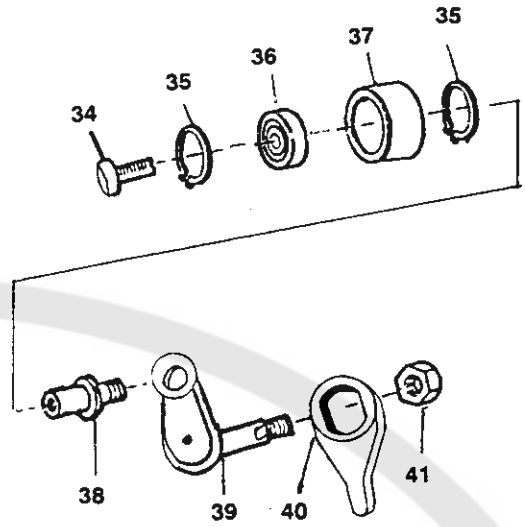
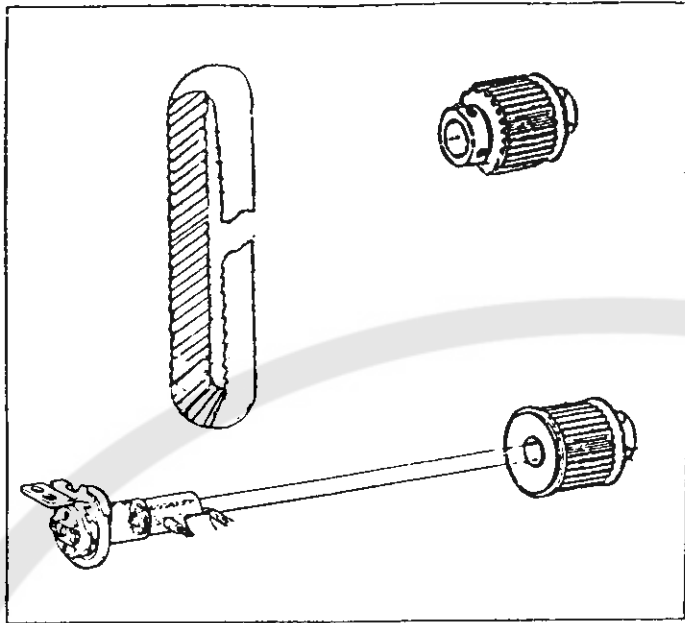


## 2. MAIN SHAFT COMPONENTS 上軸關係



	Part No.	零件名稱	Description	Amt. Req.
1	802010	鉸鏈銷	HINGE STUD	1
2	802021	螺釘	SCREW	1
3	802030	油芯	OIL WICK	1
4	-----			0
5	-----			0
6	802060	油芯環	OIL WICK SNAP RING	1
7	802070	乙烯管	VINYL TUBE	1
8	802080	上軸	MAIN SHAFT	1
9	802090	橡皮塞	RUBBER PLUG	1
10	-----			0
11	802110	挑線杆組件	THREAD TAKE-UP LEVER ASM.	1
12	802120	針杆曲柄	NEEDLE BAR CRANK	1
13	802130	針杆曲柄連杆	NEEDLE BAR CRANK CONNECTING ROD	1
14	802140	滾針軸承	NEEDLE BEARING	2
15	802151	左旋螺釘	END SCREW LEFT	1
16	802160	油氈	OIL FELT	1
17	802170	止推墊圈	THRUST WASHER	1
18	802181	螺釘	SCREW	1
19	802190	平衡塊	COUNTER WEIGHT	1
20	802201	螺釘	SCREW	1
21	802211	螺釘	SCREW	1
22	802211	螺釘	SCREW	1
23	802230	軸承	BALL BEARING	2
24	802240	軸套	BALL BEARING	2
25	802250	扣環	RETAINING RING	1
26	802260	滾動軸承	ROLLER BEARING	1
27	802270	刀杆傳動連杆	KNIFE BAR DRIVING CONNECTING ROD	1
28	802280	刀杆傳動偏心凸輪	KNIFE BAR DRIVING ECCENTRIC CAM	1
29	802290	軸承	BALL BEARING	1
30	802301	螺釘	SCREW	10
31	-----			0
32	802321	螺釘	SCREW	4
33	802330	蝸杆	WORM	1
34	-----			0
35	802350	鏈輪	SHAFT SPROCKET	1
36	802360	皮帶	TIMING BELT	1
37	802370	軸套	ADAPTER	1
38	-----			0
39	-----			0
40	802400	上軸後軸承殼體	MAIN SHAFT BUSHING	2
41	802411	螺釘	SCREW	2
42	802420	上軸後軸承座	BEARING RETAINER	1
43	802430	螺釘	ADAPTER	3
44	802440	球軸承	BALL BEARING	1
45	802450	扣環	RETAINING RING	1
47	802470	空轉帶輪	LOOSE PULLEY	1
48	-----			0
49	802491	螺釘	SCREW	3
50	802500	主軸止推密封圈	MAIN SHAFT THRUST SEAL	1
51	802510	襯墊	GASKET	1
52	802520	滾針軸承前後蓋	THRUST WASHER	2
53	802530	推力滾針軸承	BEARING	1
54	802541	螺釘	SCREW	1
55	802551	螺釘	SCREW	1
56	802560	傳動帶輪	DRIVING PULLEY	1
57	802571	螺釘	SCREW	1
58	802580	止動凸輪壓簧	STOP CAM PRESSURE SPRING	1
59	802590	止動凸輪滑塊	STOP-MOTION CAM PIN SLIDE BLOCK	2
60	802600	電木扇形塊	BAKELITE SEGMENT	1
61	802610	止動凸輪定位銷	STOP-MOTION CAM POSITION PIN	1
62	802620	止動凸輪	STOP-MOTION CAM	1
63	802630	止動凸輪壓板	STOP-MOTION CAM PRESSER PLATE	1
64	802641	螺釘	SCREW	3

### 3. HOOK DRIVING SHAFT COMPONENTS 下軸關係

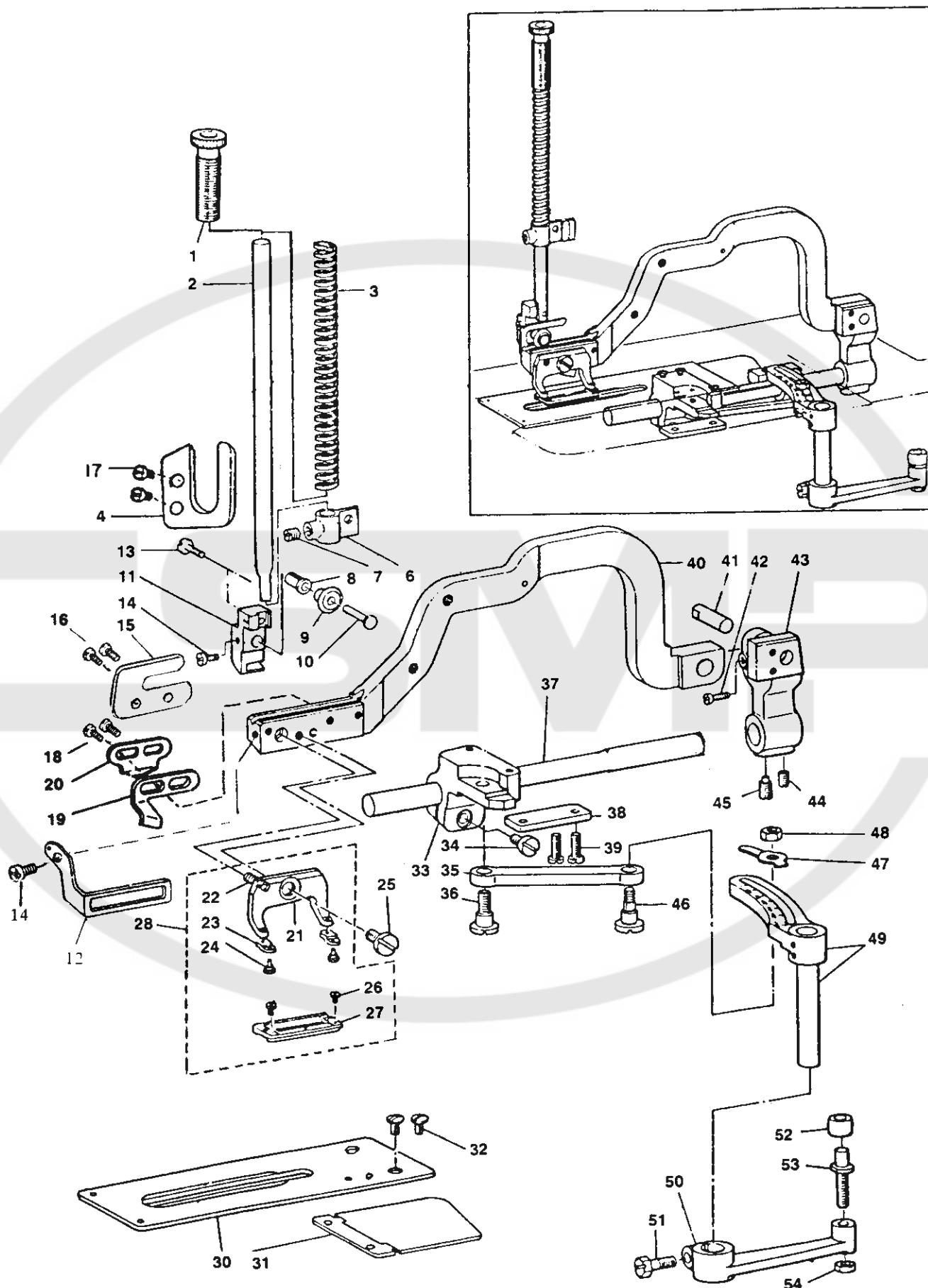


	<u>Part No.</u>	<u>零件名稱</u>	<u>Description</u>	<u>Amt. Req.</u>
1	803010	梭殼組件	BOBBIN CASE ASM.	1
10	803100	梭子	BOBBIN	1
11	803110	旋梭套組件	HOOK C ASM.	1
12	803120	梭子定位板	BOBBIN CASE POSITIONING PLATE	1
13	803131	螺釘	SCREW	2
14	803140	旋梭軸套組件	HOOK SLEEVE ASM.	1
15	803151	螺釘	SCREW	4
16	803160	油芯	OIL WICK	1
17	803170	滾動軸承	ROLLER BEARING	1
18	803180	蝸杆	WORM LEVER	1
19	803190	下軸前套管	BUSHING ASM.	1
20	803200	油芯	OIL WICK	1
21	803211	螺釘	SCREW	1
22	803220	蝸杆	WORM LEVER	1
23	803230	小齒輪	PINION	1
24	803241	螺釘	SCREW	2
25	803251	扣環	RETAINING RING	1
26	803260	球軸承	BALL BEARING	1
27	803270	扣環	RETAINING RING	1
28	803281	螺釘	SCREW	2
29	803290	皮帶鏈輪	BELT SPROCKET	1
30	803300	球軸承	BALL BEARING	1
31	803310	軸承固定擋圈	COLLAR	1
32	803320	墊圈	WASHER	1
33	803331	螺釘	SCREW	1
34	803341	螺釘	SCREW	1
35	803350	扣環	RETAINING RING	1
36	803360	球軸承	BALL BEARING	1
37	803370	皮帶張緊輪	TENSION PULLEY	1
38	803380	調整槓桿針	ADJUSTING LEVER PIN	1
39	803390	張緊輪連杆	TENSION PULLEY LINK	1
40	803400	調節配件	ADJUSTING GUIDE	1
41	803410	螺母	NUT	1
42	803420	調節杆座	ADJUSTING BASE	1
43	803431	螺釘	SCREW	2
44	803440	螺母	NUT	2
45	803451	螺釘	SCREW	2
46	803460	油氈	OIL FELT	1
47	803470	旋梭調節潤滑螺釘	HOOK OIL ADJUSTING SCREW	1
48	803480	螺母	NUT	1
49	803490	油管	OIL TUBE	2
50	803500	調節潤滑螺釘座	OIL ADJUSTING SCREW BASE	1
51	803510	調節潤滑螺釘座架	OIL ADJUSTING SCREW BRACKET	1
52	803521	螺釘	SCREW	2
53	803530	下軸	HOOK DRIVING SHAFT	1



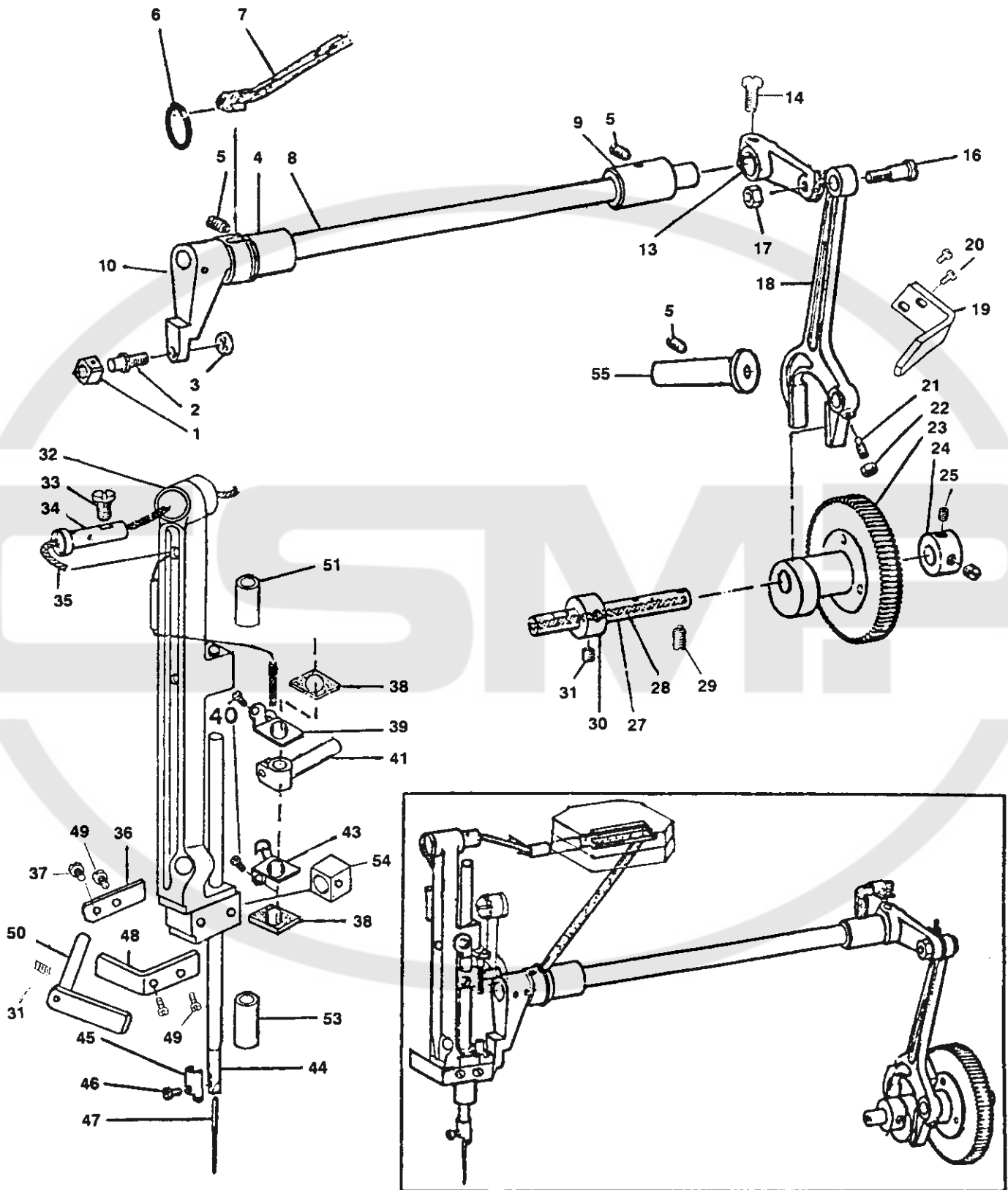
#### 4. PRESSER BAR. WORK CLAMP CARRIER COMPONENTS

押脚棒、布送板關係



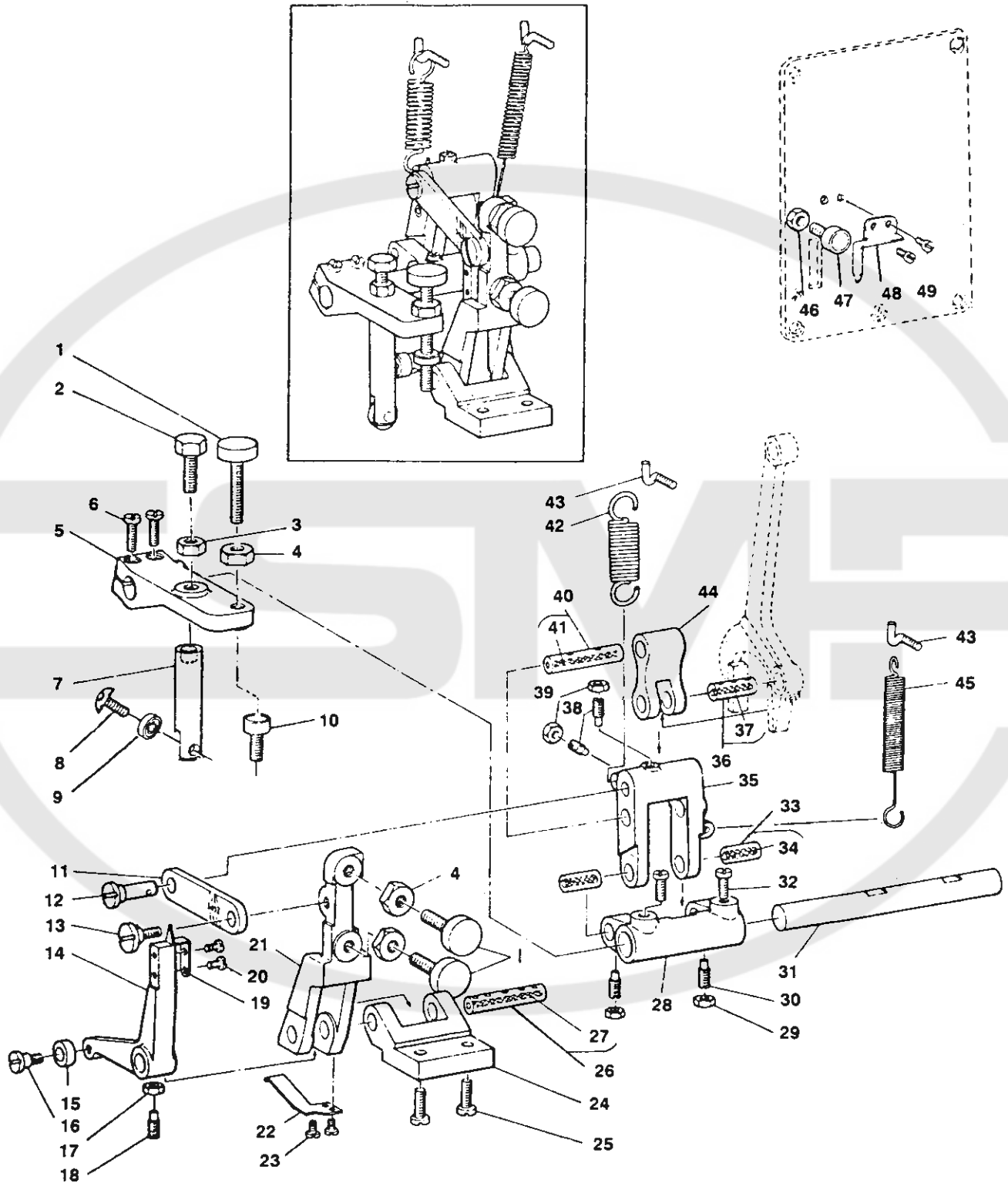
	Part No.	零件名稱	Description	Amt. Req.
1	804010	壓簧調節	PRESSER SPRING REGULATOR	1
2	804020	壓棒	PRESSER BAR	1
3	804030	壓簧	PRESSER SPRING	1
4	804040	導向支架	GUIDE BRACKET	1
5	-----			0
6	804060	壓棒定位架	PRESSER BAR POSITION BRACKET	1
7	804071	螺釘	SCREW	1
8	804080	套管	COLLAR	1
9	804090	滑動滾輪	SLIDE ROLLER	1
10	804100	滑動滾輪銷	CONNECTING PIN	1
11	804110	支架	BRACKET	1
12	804120	安全防護	SAFE DEFEND GUIDE	1
13	804131	壓棒螺釘	SCREW	1
14	804141	螺釘	SCREW	2
15	804150	導向支架	GUIDE BRACKET	1
16	804161	螺釘	SCREW	2
17	804171	螺釘	SCREW	2
18	804181	螺釘	SCREW	2
19	804190	面線剪斷器導架	NEEDLETHREAD TRIMMER GUIDE	1
20	804200	面線剪斷器導架	NEEDLETHREAD TRIMMER GUIDE	1
21	804210	壓腳板座	WORK CLAMP CHECK HOLDER	1
22	804220	壓腳板座彈簧銷	WORK CLAMP CHECK HOLDER SPRING	1
23	804230	壓腳彈簧板	WORK CLAMP CHECK SPRING	2
24	804240	壓腳彈簧定位銷	WORK CLAMP CHECK SPRING SET PIN	2
25	804251	鉸鏈銷螺釘	HINGE SCREW	1
26	804261	螺釘	SCREW	2
27	804270	壓腳板	WORK CLAMP CHECK	1
28	804280	壓腳板座組	WORK CLAMP CHECK HOLDER ASM.	1
29	-----			0
30	804300	送布拖板	STITCH PLATE	1
31	804310	支架蓋板組件	BRACKET COVER	1
32	804321	螺釘	SCREW	2
33	804330	送料支架	WORK CLAMP ARM BRACKET ASM	1
34	804341	螺釘	SCREW	1
35	804350	送料支架連杆	WORK CLAMP CARRIER BRACKET PITMAN	1
36	804361	鉸鏈銷螺釘	HINGE SCREW	1
37	804370	壓腳臂滑杆	WORK CLAMP ARM SLIDE ROD	1
38	804380	送布拖板支架導塊	WORK CLAMP CARRIER BRACKET GUIDE	1
39	804391	螺釘	SCREW	2
40	804400	布料夾支架	WORK CLAMP BRACKET	1
41	804410	連接銷	CONNECTING PIN	1
42	804421	螺釘	SCREW	1
43	804430	拖架	BEARING ARM	1
44	804441	螺釘	SCREW	1
45	804451	螺釘	SCREW	1
46	804461	調節送料長度鉸鏈銷螺釘	LENGTH REGULATING HINGE STUD	1
47	804470	調節送料長度軸導板	LENGTH REGULATING SHAFT GUIDE	1
48	804480	螺母	NUT	1
49	804490	調節送料長度刻度盤組件	LENGTH REGULATING SCALE ASM.	1
50	804500	曲柄	BELL CRANK	1
51	804511	螺釘	SCREW	1
52	804520	滾子	ROLLER	1
53	804530	曲柄滾子銷	BELL CRANK ROLLER STUD	1
54	804540	螺母	NUT	1

5. NEEDLE BAR FRAME COMPONENTS  
 針棒搖動台關係



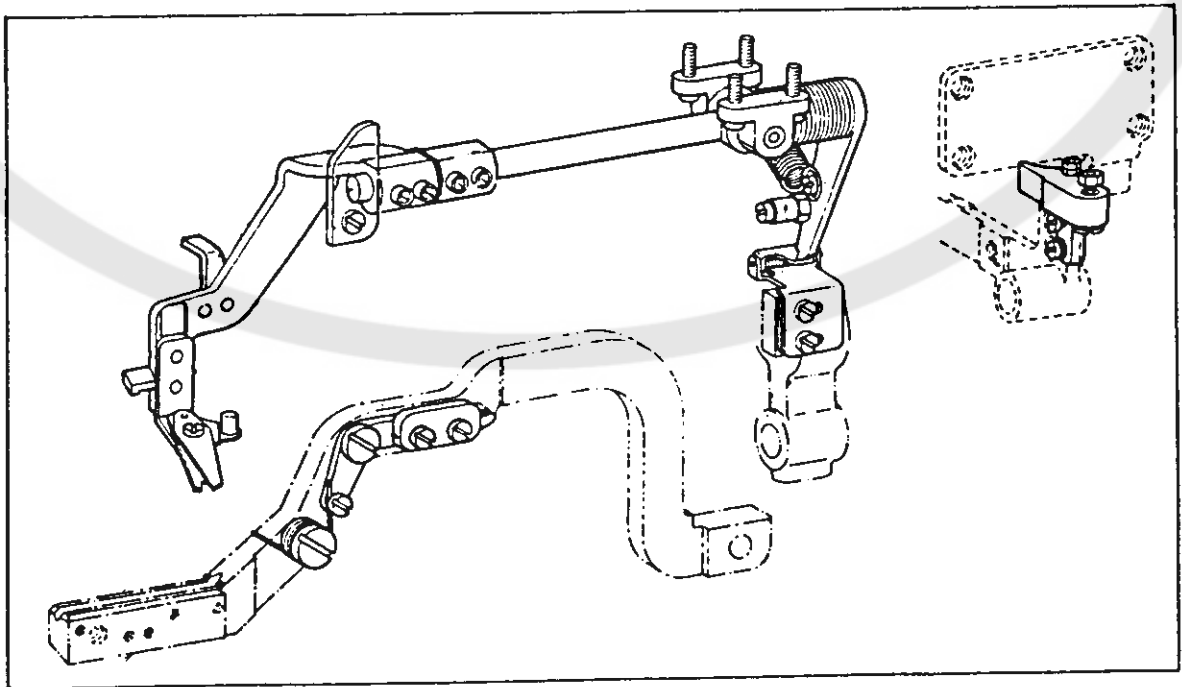
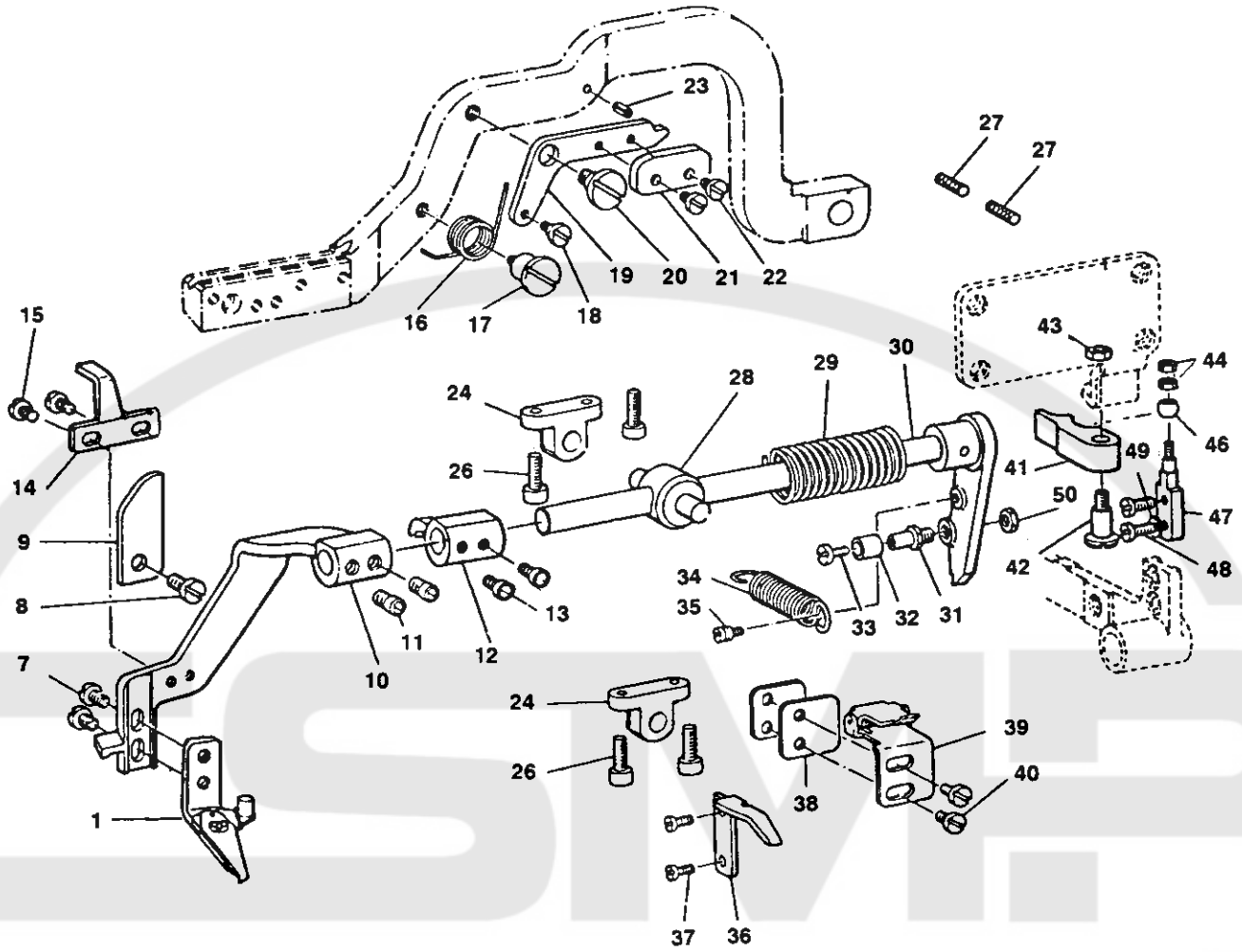
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1	805010	針杆架滑塊	NEEDLE BAR CONNECTION SLIDE BLOCK	1	
2	805021	滑塊銷螺釘	STUD	1	
3	805030	螺母	NUT	1	
4	805040	擺杆前套管	FRAME ROCK SHAFT BUSHING,FRONT	1	
5	805051	螺釘	SCREW	3	
6	805060	O型密封圈	RUBBER	1	
7	805070	油芯	OIL WICK	1	
8	805080	擺杆軸心		1	
9	805090	擺杆後套管	FRAME ROCK SHAFT BUSHING,REAR	1	
10	805100	千鳥擺動曲柄	FRAME ROCK SHAFT CRANK,	1	
13	805130	擺杆後柄	FRAME ROCK SHAFT CRANK,FRONT	1	
14	805141	螺釘	SCREW	1	
15	-----			0	
16	805161	鉸鏈銷螺釘	HINGE SCREW	1	
17	805170	螺母	NUT	1	
18	805180	針杆搖杆	NEEDLE BAR PITMAN	1	
19	805190	擺杆連接導板	ROCK SHAFT CONNECTION GUIDE	1	
20	805201	螺釘	SCREW	2	
21	805211	螺釘	SCREW	1	
22	805220	螺母	NUT	1	
23	805230	機針傳動齒輪組件	NEEDLE DRIVING GEAR	1	
24	805240	擋圈	THRUST COLLAR	1	
25	805251	螺釘	SCREW	2	
26	-----			0	
27	805270	凸輪軸心	CAM SHAFT	1	
28	805280	油繩	OIL WICK	1	
29	805291	螺釘	SCREW	1	
30	805300	擋圈	THRUST COLLAR	1	
31	805311	螺釘	SCREW	5	
32	805320	針杆架	NEEDLE BAR FRAME	1	
33	805331	螺釘	SCREW	1	
34	805340	鉸鏈銷	HINGE STUD	1	
35	805350	油繩	OIL WICK	1	
36	805360	左固定片	RETAINER,LEFT	1	
37		油繩高端固定板	OIL FELT RETAINER,HIGH	1	
38	805380	毛氈	FELT	2	
39	805390	油繩高端固定板	OIL FELT RETAINER,HIGH	1	
40	805401	螺釘	SCREW	2	
41	805410	針杆連接杆	NEEDLE BAR CONNECTION	1	
42	-----			0	
43	805430	油繩低端固定板	OIL FELT RETAINER,LOWER	1	
44	805440	針杆	NEEDLE BAR	1	
45	805450	針杆導線架	NEEDLE BAR BOBBIN THREAD GUIDE	1	
46	805461	螺釘	SCREW	1	
47	805470	機針	NEEDLE DPx5	1	
48	805480	右固定片	RETAINER,RIGHT	1	
49	805491	螺釘	SCREW	2	
50	805500	固定導片	POSITION BRACKET	1	
51	805510	針棒襯套管	NEEDLE BAR BUSHING	1	
52	-----			0	
53	805530	針棒襯套管	NEEDLE BAR BUSHING	1	
54	805540	滑塊	SLIDE BLOCK	1	
55	805550	軸心	SHAFT	1	

# 6. OVEREDGING WIDTH ADJUSTING COMPONENTS 針擺幅調節關係



Part No.	零件名稱	Description	Amt. Req.
1	806011	線跡寬度調節螺釘	3
2	806021	螺釘	1
3	-----		0
4	806040	螺母	1
5	806050	復位杆	1
6	806061	螺釘	2
7	806070	離合杆	1
8	806081	螺釘	1
9	806090	滾輪	1
10	806101	調節杆螺釘	1
11	806110	調節杆連接板	1
12	806120	調節銷	1
13	806131	鉸鏈銷螺釘	1
14	806140	指示曲柄	1
15	806150	滾輪	1
16	806161	鉸鏈銷螺釘	1
17	-----		0
18	806181	螺釘	1
19	806190	刻度指示針	1
20	806201	螺釘	2
21	806210	調節杆叉	1
22	806220	彈簧板	1
23	806231	螺釘	2
24	806240	調節杆座	1
25	806251	螺釘	2
26	806260	調節杆軸	1
27	806270	油繩	1
28	806280	軸承座	1
29	806290	螺母	2
30	806301	緊定螺釘	2
31	806310	針擺復位軸	1
32	806321	螺釘	2
33	806330	連接銷	2
34	806340	油繩	2
35	806350	叉形連杆	1
36	806360	連接銷	1
37	806370	油繩	1
38	-----		0
39	-----		0
40	806400	連接銷	1
41	806410	油繩	1
42	806420	拉簧	1
43	806431	懸掛螺釘	2
44	806440	叉形連杆	1
45	806450	拉簧	1
46	806460	螺母	1
47	806471	調節杆限位螺釘	1
48	806480	縫寬指示針	1
49	806491	螺釘	2

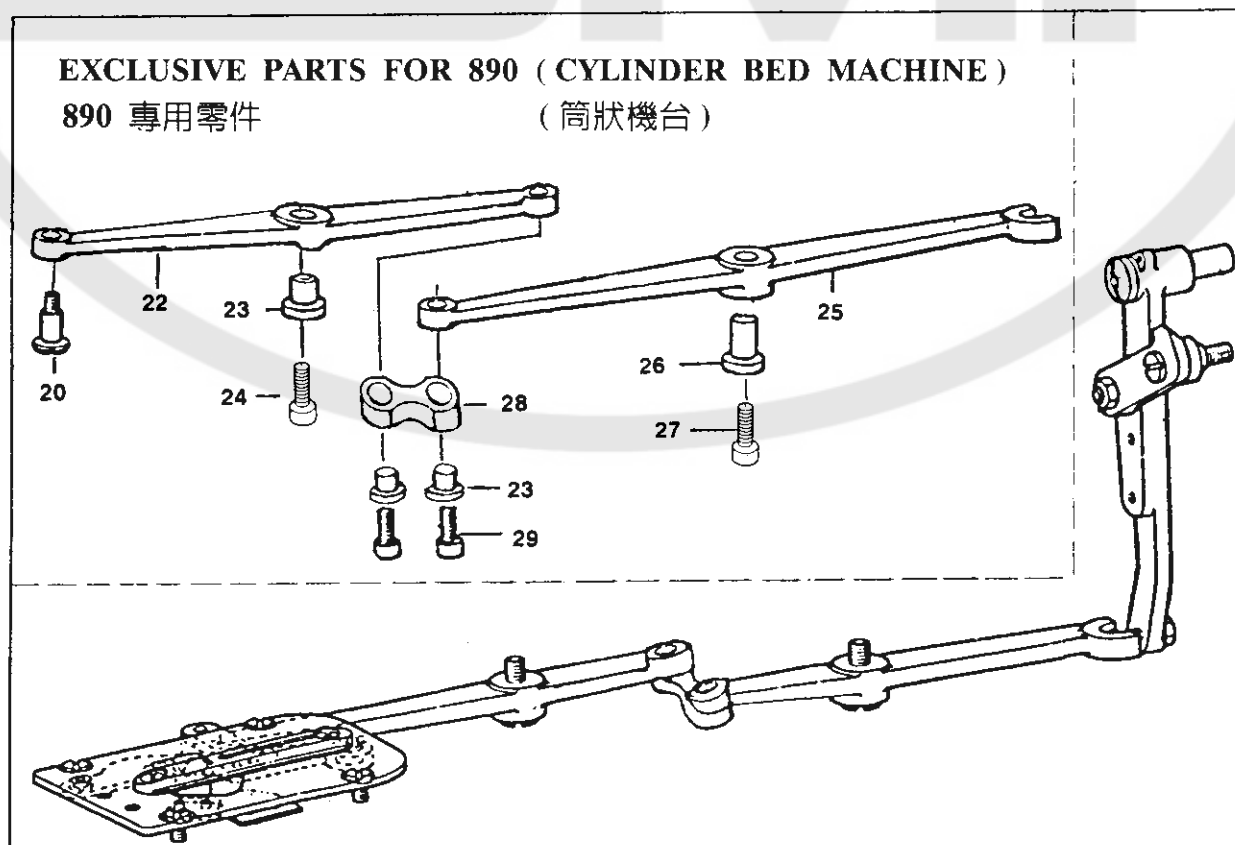
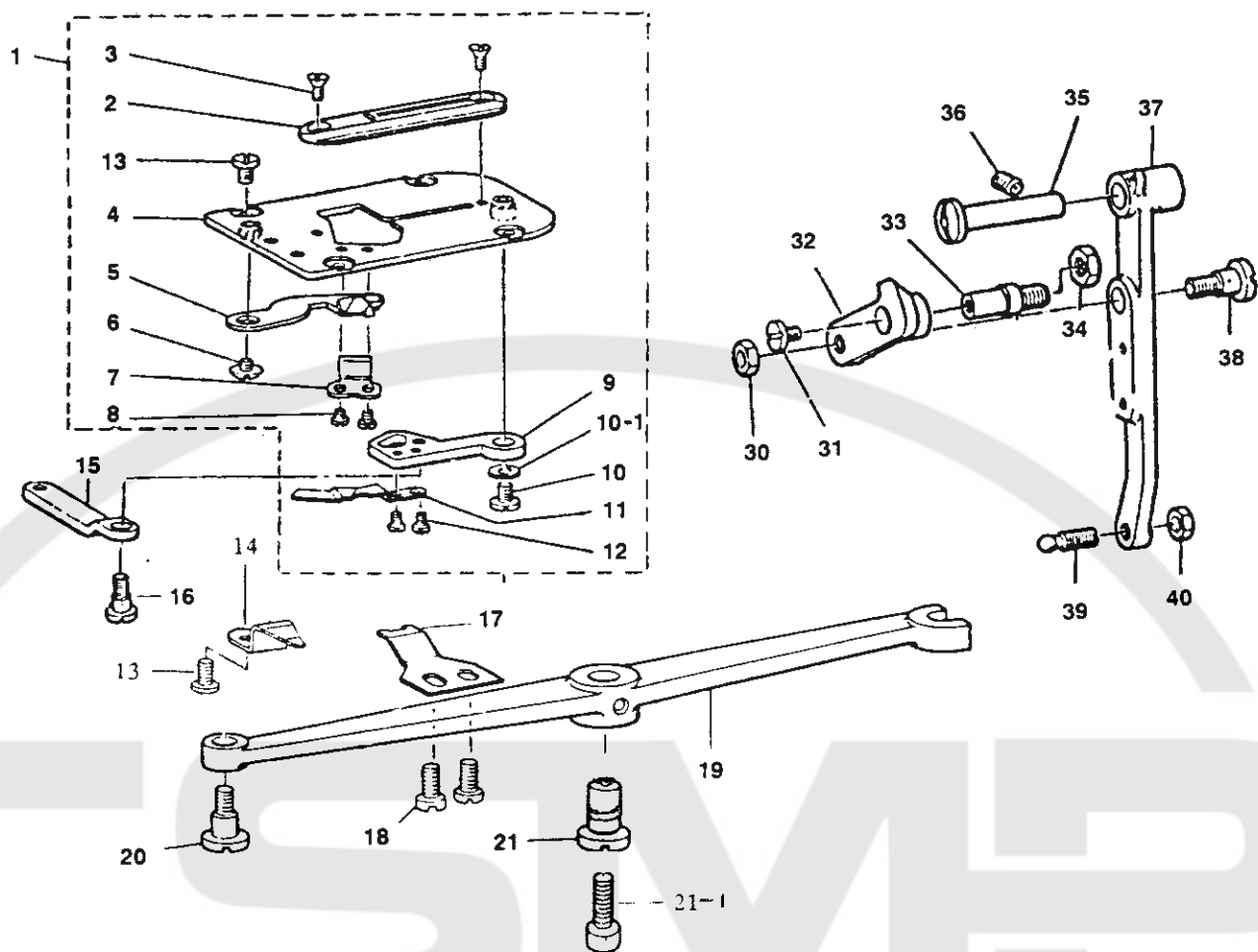
7. NEEDLE THREAD TRIMMER COMPONENTS  
 上線切刀關係



	Part No.	零件名稱	Description	Amt. 7 Req.
1	807010	面線修整器組件	NEEDLE THREAD TRIMMER ASM.	1
7	807071	螺釘	SCREW	2
8	807081	螺釘	SCREW	1
9	807090	剪面線器軸導板	NEEDLE THREAD TRIMMER SHAFT GUIDE	1
10	807100	保持架組件	THREAD TRIMMER HOLDER	1
11	807111	螺釘	SCREW	2
12	807120	剪面線保持架組件	THREAD TRIMMER HOLDER	1
13	-----			0
14	807140	限位板	LIMITING PLATE	1
15	807151	螺釘	SCREW	2
16	807160	轉矩彈簧	DRIVING CAM SPRING	1
17	807170	傳動凸輪轉矩彈簧軸	DRIVING CAM SPRING AXLE	1
18	807181	鉸鏈銷螺釘	HINGE SCREW	1
19	807190	傳動凸輪安裝板	DRIVING CAM INSTALLING PLATE	1
20	807201	鉸鏈銷螺釘	HINGE SCREW	1
21	807210	傳動凸輪板	DRIVING CAM	1
22	807221	螺釘	SCREW	2
23	807230	彈性園柱銷	SPRING PIN	1
24	807240	支架	BRACKET	2
25	-----			0
26	807261	螺釘	SCREW	4
28	807280	萬向接頭	UNIVERSAL JOINT	1
29	807270	彈簧	SPRING	1
30	807300	剪面線器軸組件	NEEDLE THREAD TRIMMER SHAFT	1
31	807310	滾輪銷	STUD	1
32	807320	滾子	CAM ROLL	1
33	807331	螺釘	SCREW	1
34	807340	彈簧	SPRING	1
35	807351	懸掛螺釘	SUSPENSION SCREW	1
36	807360	壓腳臂鎖門	LATCH PRESSER ARM	1
37	807371	螺釘	SCREW	2
38	807380	墊片	SPACER	2
39	807390	鎖架組件	LOCKING BRACKET LATCH	1
40	807401	螺釘	SCREW	2
41	807410	剪線軸頂塊	THREAD TRIMMING SHAFT SEGMENT	1
42	807421	鉸鏈銷螺釘	HINGE SCREW	1
43	807430	螺母	NUT	1
44	807440	螺母	NUT	2
45	-----			-
46	807460	滾柱	ROLLER	1
47	807470	嵌件	STUD	1
48	807481	螺釘	SCREW	2
49	807490	墊圈	WASHER	1
50	807500	螺母	NUT	1



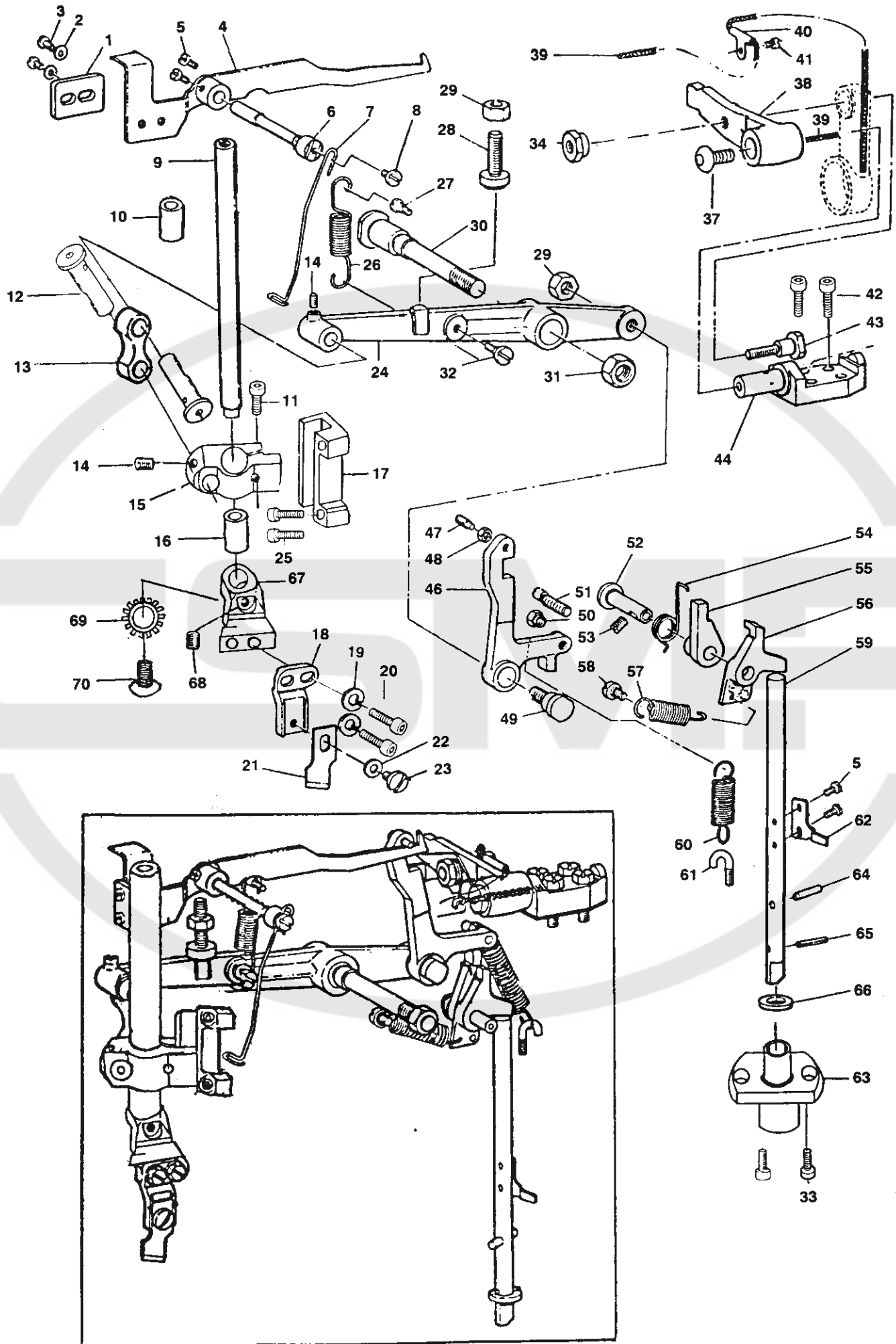
8. BOBBIN THREAD TRIMMER COMPONENTS  
下線切刀關係



	Part No.	零件名稱	Description	Amt. Req.
1	808010	剪底線器組件	BOBBIN THREAD TRIMMER ASM.	1
2	808020	針板	NEEDLE PLATE	1
3	808031	螺釘	SCREW	2
4	808040	針板座	THROAT PLATE BASE	1
5	808050	剪底線動刀	BOBBIN THREAD TRIMMER	1
6	808061	螺釘	SCREW	1
7	808070	剪底線定刀	COUNTER KNIFE	1
8	808081	定刀螺釘	SCREW	2
9	808090	剪底線杆	BOBBIN THREAD TRIMMER LEVER	1
10	808101	螺釘	SCREW	1
10-1	808100	墊圈	WASHER	1
11	808110	底線拉杆	BOBBIN THREAD PULLER	1
12	808121	螺釘	SCREW	2
13	808131	螺釘	SCREW	4
14	808140	壓板	PRESSER PLATE	1
15	808150	剪底線連杆	BOBBIN THREAD TRIMMER LINK	1
16	808161	螺釘	SCREW	1
17	808170	梭芯導線架	BOBBIN THREAD GUIDE	1
18	808181	螺釘	SCREW	2
19	808190	剪底線傳動杆	BOBBIN THREAD TRIMMER DRIVING LEVER	1
20	808201	鉸鏈銷螺釘	HINGE SCREW	1
21	808211	套筒	SLEEVE	1
22	808220	剪底線傳動杆	BOBBIN THREAD TRIMMER DRIVING LEVER	1
23	808230	套筒	SLEEVE	3
24	808241	鉸鏈銷螺釘杆套筒	HINGE SCREW	1
25	808250	剪底線傳動杆	BOBBIN THREAD TRIMMER DRIVING LEVER	1
26	808260	套筒	SLEEVE	1
27	808271	螺釘	SCREW	1
28	808280	剪底線傳動杆連接	DRIVING LEVER CONNECTION	1
29	808291	螺釘	SCREW	2
30	808300	螺母	NUT	1
31	808311	螺釘銷	SCREW	1
32	808320	凸輪連杆	CONNECTING LINK	1
33	808331	限位螺釘	STOP SCREW	1
34	808340	螺母	NUT	1
35	808350	鉸鏈銷	HINGE STUD	1
36	808361	緊定螺釘	SCREW	1
37	808370	剪底線器傳動臂	BOBBIN THREAD TRIMMER DRIVING ARM	1
38	808381	鉸鏈銷螺釘	HINGE SCREW	1
39	808391	球形螺釘	BALL SCREW	1

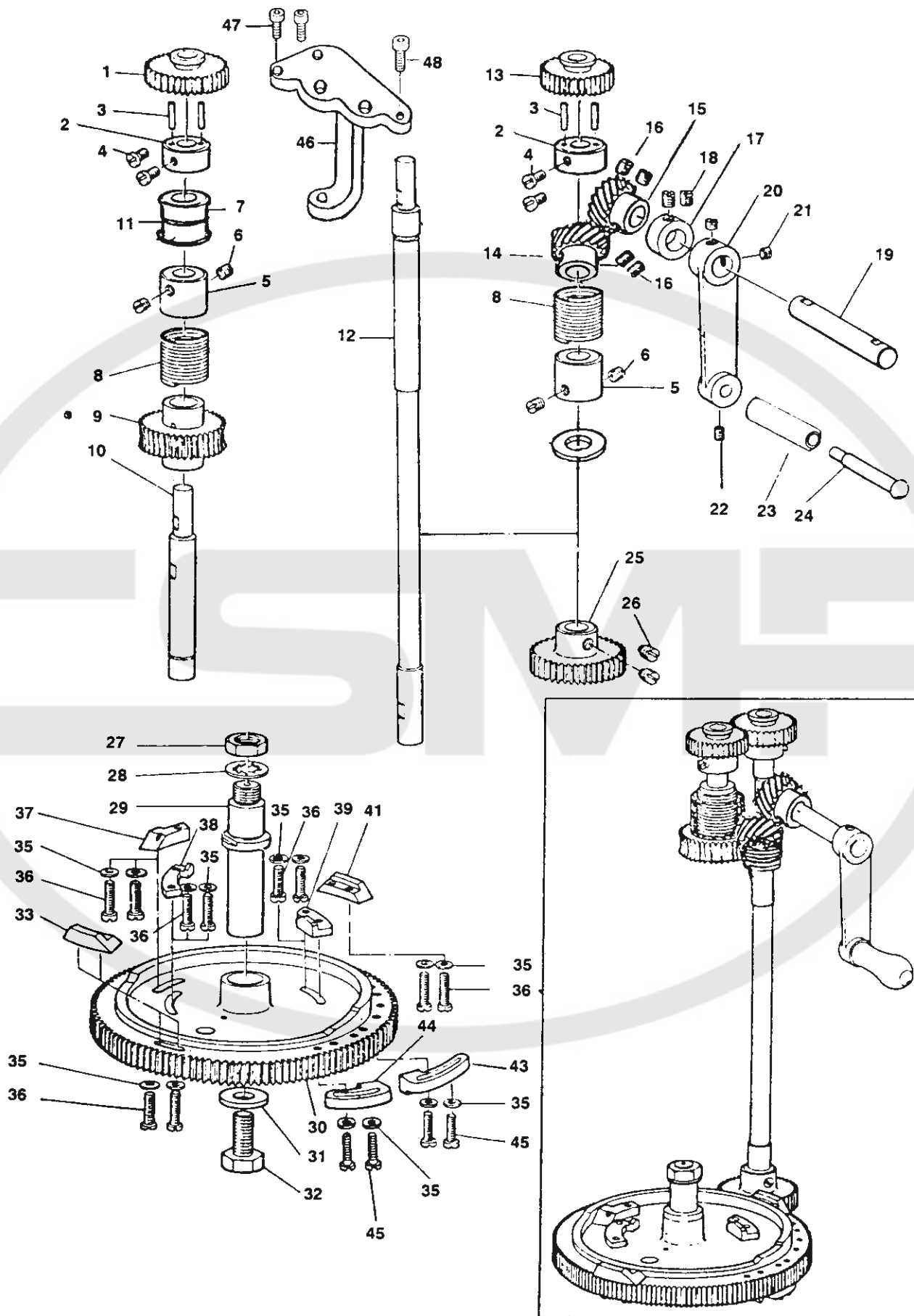
# 9. KNIFE BAR COMPONENTS

## 刀棒關係



	Part No.	零件名稱	Description	Amt. Req.
1	809010	停刀杆架	KNIFE STOP LEVER BRACKET	1
2	809020	墊圈	WASHER	2
3	809031	螺釘	SCREW	2
4	809040	停刀杆	KNIFE STOP LEVER	1
5	809051	螺釘	SCREW	4
6	809060	停刀杆鉸鏈銷	KNIFE STOP LEVER HINGE STUD	1
7	809070	線檢測鋼絲	THREAD CHECK WIRE	1
8	809081	螺釘	SCREW	1
9	809090	刀杆	KNIFE BAR	1
10	809100	刀杆導板	KNIFE BAR BUSHUNG	1
11	809111	螺釘	SCREW	1
12	809120	連桿針	CONNECTING LINK PIN	2
13	809130	刀杆連杆	KNIFE BAR CONNECTING LINK	1
14	809141	螺釘	SCREW	2
15	809150	刀杆定位架	KNIFE BAR POSITION BRACKET	1
16	809160	套管	KNIFE BAR BUSHING	1
17	809170	刀杆導引	KNIFE BAR GUIDE	1
18	809180	刀固定架	KNIFE HOLDER	1
19	809190	彈簧墊圈	SPRING WASHER	1
20	809201	螺釘	SCREW	2
21	809210	1/2"L刀	KNIFE 1/2"	1
22	809220	墊圈	WASHER	1
23	809231	螺釘	SCREW	1
24	809240	刀杆傳動杆	KNIFE BAR DRIVING LEVER	1
25	809251	螺釘	SCREW	2
26	809260	彈簧	SPRING	1
27	809271	鉸鏈銷螺釘	HINGE SCREW	1
28	809281	調節螺釘	ADJUSTING SCREW	1
29	809290	螺母	NUT	2
30	809300	刀杆傳動杆軸	KNIFE BAR DRIVING LEVER SHAFT	1
31	809310	螺母	NUT	1
32	809321	鉸鏈銷螺釘	HINGE SCREW	1
33	809330	螺絲	SCREW	2
34	809340	刀杆傳動杆螺母	KNIFE BAR DRIVING CRANK NUT	1
37	809371	螺釘	SCREW	1
38	809380	刀杆傳動杆曲柄	KNIFE BAR DRIVING CRANK	1
39	809390	油芯	OIL WICK	1
40	809400	油芯保持架	OIL WICK HOLDER	1
41	809411	螺釘	SCREW	1
42	809421	螺釘	SCREW	2
43	809431	鉸鏈銷螺釘	HINGE SCREW	1
44	809440	刀杆傳動曲柄軸	KNIFE BAR DRIVING CRANK SHAFT	1
46	809460	刀杆傳動杆	KNIFE BAR DRIVING LEVER BELL CRANK	1
47	809471	螺釘	SCREW	1
48	809480	螺母	NUT	1
49	809491	鉸鏈銷螺釘	HINGE SCREW	1
50	809500	螺母	NUT	1
51	809510	偏心銷	PIN	1
52	809520	鉸鏈銷	HINGE STUD	1
53	809531	螺釘	SCREW	1
54	809540	轉矩扭簧	TENSION SPRING	1
55	809550	棘輪爪(B)	RATCHET PAWL(B)	1
56	809560	棘輪爪(A)	RATCHET PAWL(A)	1
57	809570	拉簧	TENSION SPRING	1
58	809581	鉸鏈銷螺釘	HINGE SCREW	1
59	809590	傳動杆	DRIVING ROD	1
60	809600	拉簧	TENSION SPRING	1
61	809611	懸掛螺釘	SUSPENSION SCREW	1
62	809620	指形板	FINGER	1
63	809631	傳動杆定位架	DRIVING ROD POSITION BRACKET	1
64	809640	園柱銷	POSITIONING PIN	1
65	809650	彈簧園柱銷	SPRING PIN	1
66	809660	止推墊圈	THRUST WASHER	1
67	809670	刀座固定架	KNIFE HOLDER POSITION BRACKET	1
68	809681	螺釘	SCREW	1
69	809690	墊圈	WASHER	1
70	809701	螺釘	SCREW	1

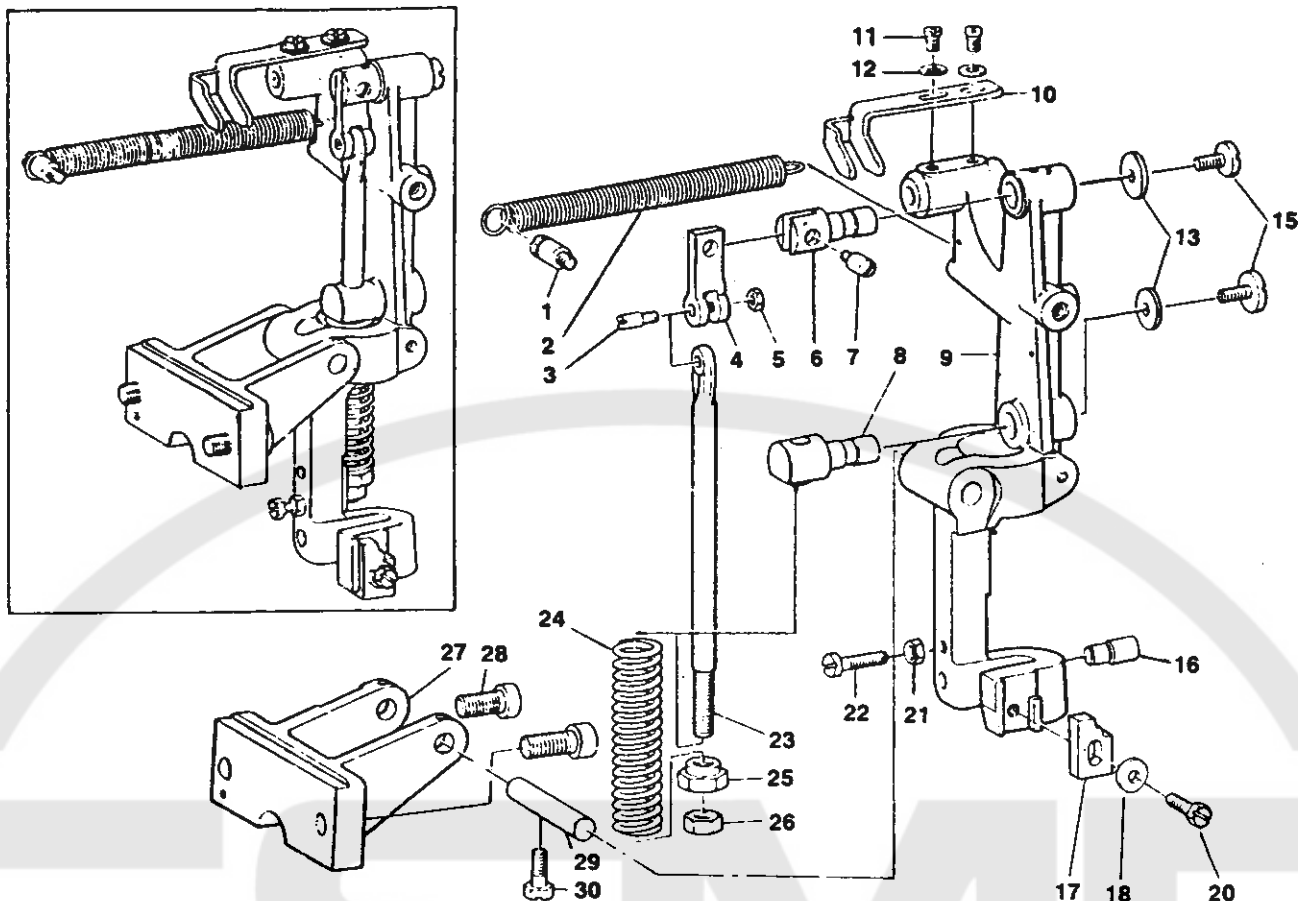
# 10. FEED CAM & TRIPPING SEGMENT COMPONENTS 送布凸輪關係



	Part No.	零件名稱	Description	Amt. 10 Req.
1	810010	直齒輪	SPUR GEAR	1
2	810020	直齒輪軸套	SPUR GEAR BUSHING	2
3	810030	直齒輪定位銷	SPUR GEAR BUSHING PIN	4
4	810041	螺釘	SCREW	4
5	810050	離合環	CLUTCH COLLAR	2
6	810061	螺釘	SCREW	4
7	810070	固定套管	POSITION. BUSHING	1
8	810080	離合彈簧	CLUTCH SPRING	2
9	810090	送布凸輪傳動蝸輪	FEED CAM DRIVING WORM WHEEL	1
10	810100	傳動蝸輪軸	FEED CAM DRIVING WORM WHEEL SHAFT	1
11	810110	油氈	COLLAR	1
12	810120	送布凸輪傳動蝸輪	FEED CAM DRIVING SHAFT	1
13	810130	直齒輪	SPUR GEAR	1
14	810140	手搖曲柄左齒輪	HANDLE CRANK BEVEL GEAR,LEFT	1
15	810150	手搖曲柄右齒輪	HANDLE CRANK BEVEL GEAR,RIGHT	1
16	810161	螺釘	SCREW	2
17	810170	擋圈	THRUST COLLAR	1
18	810181	螺釘	SCREW	2
19	810190	手搖曲柄軸	HANDLE CRANK SHAFT	1
20	810200	手搖曲柄	HANDLE CRANK	1
21	810211	螺釘	SCREW	2
22	810221	螺釘	SCREW	1
23	810230	手柄	HANDLE SHAFT	1
24	810240	手柄軸	HANDLE SHAFT	1
25	810250	送布凸輪傳動蝸輪	FEED CAM DRIVING GEAR	1
26	810261	螺釘	SCREW	2
27	810270	螺母	NUT	1
28	810280	止推墊圈	THRUST WASHER	1
29	810290	送布凸輪軸	FEED CAM SHAFT	1
30	810300	送布凸輪	FEED CAM	1
31	810310	墊圈	WASHER	1
32	810321	螺釘	SCREW	1
33	810330	加固離合塊	BAR TRIPPING SEGMENT	1
34	-----			0
35	810350	墊圈	WASHER	14
36	810361	螺釘	SCREW	10
37	810370	切刀離合塊	KNIFE TRIPPING SEGMENT	1
38	810380	松線離合塊	TENSION RELEASE TRIPPING SEGMENT	1
39	810390	松線離合塊	TENSION RELEASE TRIPPING SEGMENT	1
40	-----			0
41	810410	加固離合塊	BAR TRIPPING SEGMENT	1
42	-----			0
43	810430	低速凸輪塊	LOW SPEED CAM	1
44	810440	止動凸輪塊	STOPPER CAM	1
45	810451	螺釘	SCREW	4
46	810460	齒輪定位架	GEAR POSITION BRACKET	1
47	810470	螺釘	SCREW	2
48	810481	螺絲	SCREW	1

# 11. STOP-MOTION COMPONENTS

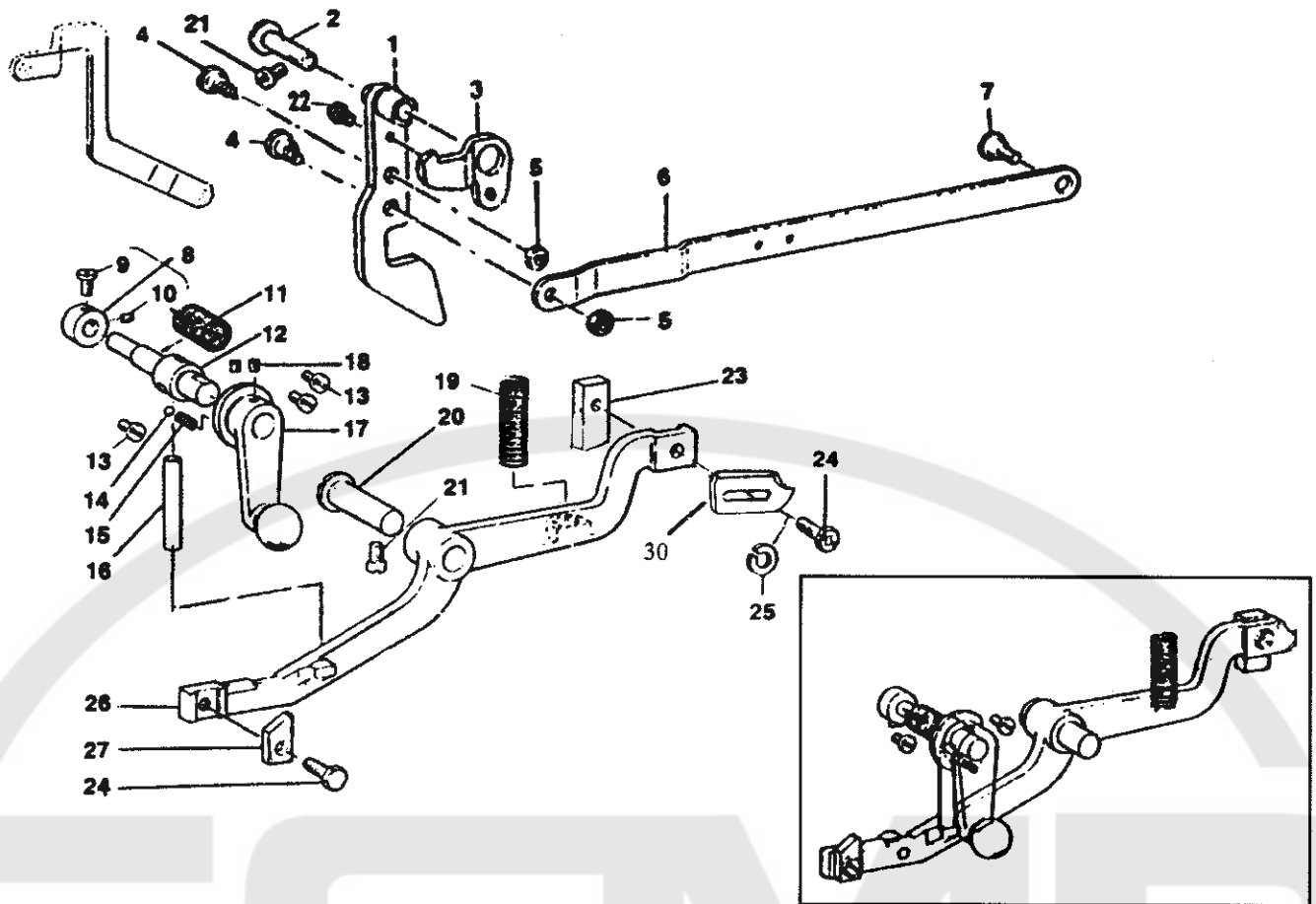
## 遮斷裝置關係



Part No.	零件名稱	Description	Amt. Req.
1	811010 吊簧螺釘	SUSPENSION SCREW	1
2	811020 拉簧	TENSION SPRING	1
3	811031 止動連杆鉸鏈銷螺釘	STOP LINK ROD HINGE SCREW	1
4	811040 止動鉸接板	STOP LINK	1
5	811050 螺母	NUT	1
6	811060 止動連杆接頭	STOP LINK HINGE STUD	1
7	811071 止動鉸接板連接螺釘	STOP LINK CONNECTING SCREW	1
8	811080 止動連杆接頭	STOP LINK ROD HINGE STUD	1
9	811090 止動杠杆	STOP MOTION LEVER	1
10	811100 皮帶撥叉	BELT SHIFTER	1
11	811111 螺釘	SCREW	2
12	811120 墊圈	WASHER	2
13	811130 墊圈	WASHER	2
14	-----		0
15	811151 螺釘	SCREW	2
16	811160 限位銷	STOP PIN	1
17	811170 鎖定板	LATCH	1
18	811180 墊圈	WASHER	1
19	-----		0
20	811201 螺釘	SCREW	1
21	811210 螺母	NUT	1
22	811221 螺釘	SCREW	1
23	811230 止動連杆	STOP LINK ROD	1
24	811240 止動杆壓簧	STOP LINK ROD PRESSURE SPRING	1
25	811250 止動連杆螺母	NUT FOR STOPMLINK ROD	1
26	811260 螺母	NUT	1
27	811270 止動杠杆座	STOP MOTION LEVER BRACKET	1
28	811281 圓柱頭內六角螺釘	SCREW	2
29	811290 銷	PIN	1
30	811301 螺釘	SCREW	1

## 12. TRIPPING LEVER COMPONENTS

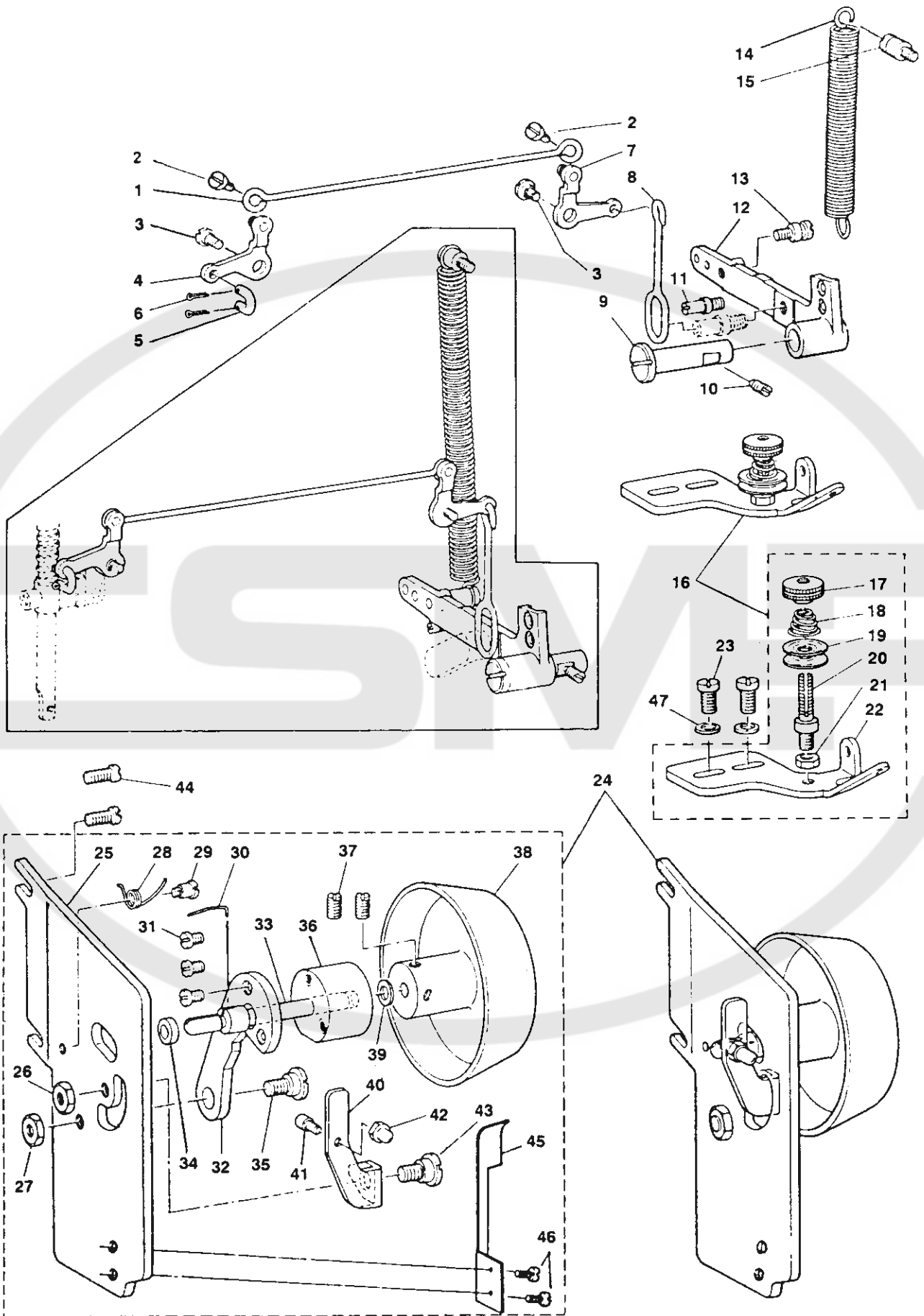
### 手動停止關係



Part No.	零件名稱	Description	Amt. Req.	
1	812010	起動架	STARTING LINK	1
2	812020	鉸鏈銷	HINGE STUD	1
3	812030	安全底	SAFETY BASE	1
4	812041	偏心鉸鏈銷螺釘	HINGE SCREW	1
5	812050	螺母	NUT	2
6	812060	起動架拉杆	STARTING LINK DRIVING ROD	1
7	812071	鉸鏈銷螺釘	HINGE SCREW	1
8	812080	下軸後軸承擋圈	THRUST COLLAR	1
9	812091	螺釘	SCREW	1
10	812101	螺釘	SCREW	1
11	812110	曲軸轉矩彈簧	CRANK SHAFT TENSION SPRING	1
12	812120	手制動曲柄軸	HAND STOP CRANK SHAFT	1
13	812131	螺釘	SCREW	2
14	812140	鋼球	BALL	1
15	812150	曲柄壓簧	CRANK SHAFT PRESSURE SPRING	1
16	812160	手制動軸	HAND STOP ROD	1
17	812170	手柄	HAND STOP CRANK	1
18	812181	螺釘	SCREW	2
19	812190	運轉脫離杆壓簧	TRIPPING LEVER TENSION SPRING	1
20	812200	運轉脫離杆鉸鏈銷	TRIPPING LEVER HINGE PIN	1
21	812211	螺釘	SCREW	1
22	812221	螺釘	SCREW	1
23	812230	鎖定板	LATCH	1
24	812241	螺釘	SCREW	2
25	812250	輕型彈簧墊圈	SPRING WASHER	1
26	812260	運轉脫離杆	TRIPPING LEVER	1
27	812270	脫離爪	TRIPPING DOG	1
28	812280	滾輪	ROLLER	1
29	812291	鉸鏈銷螺釘	HINGE SCREW	1
30	812300	撥叉凸板	SHIFTER PLATE	1

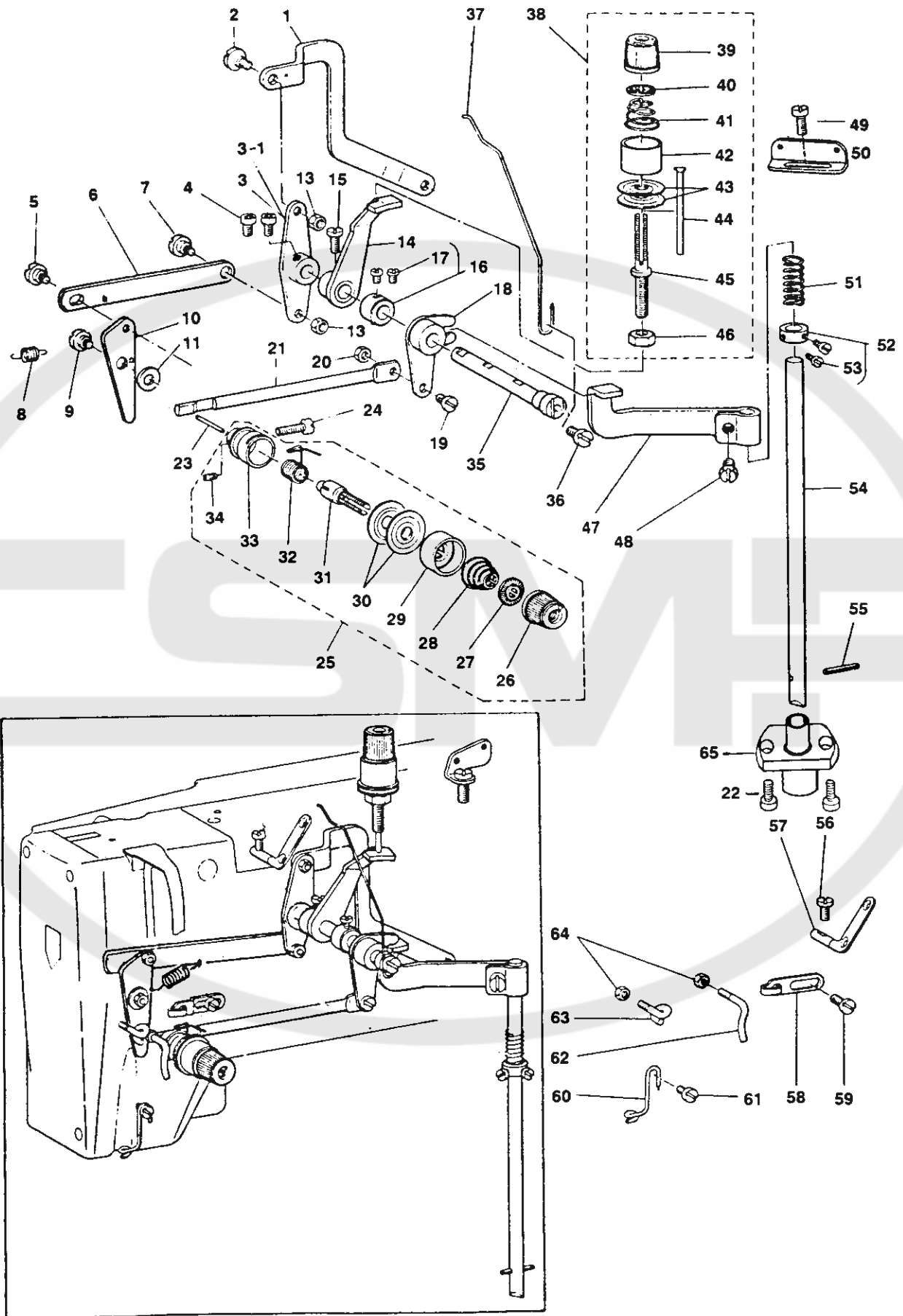


13. LIFTING LEVER & BOBBIN WINDER COMPONENTS  
 壓腳提升架、繞線器組



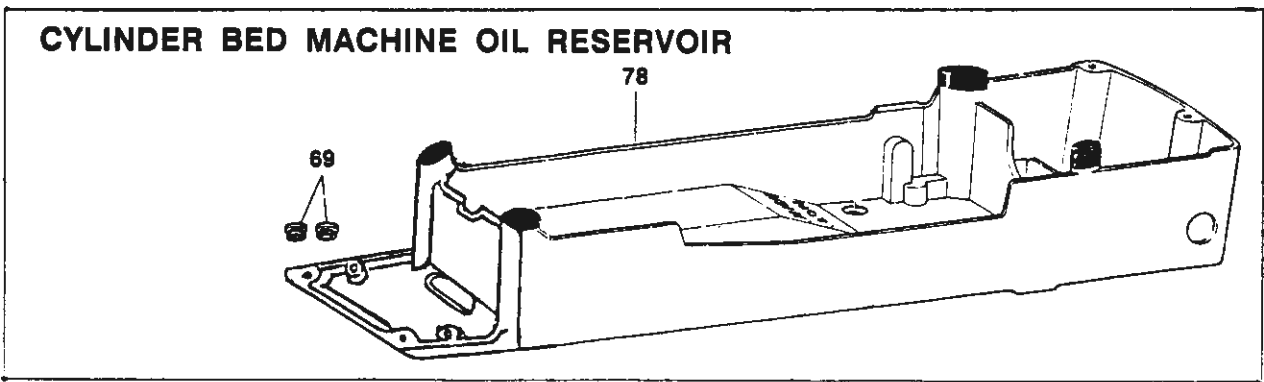
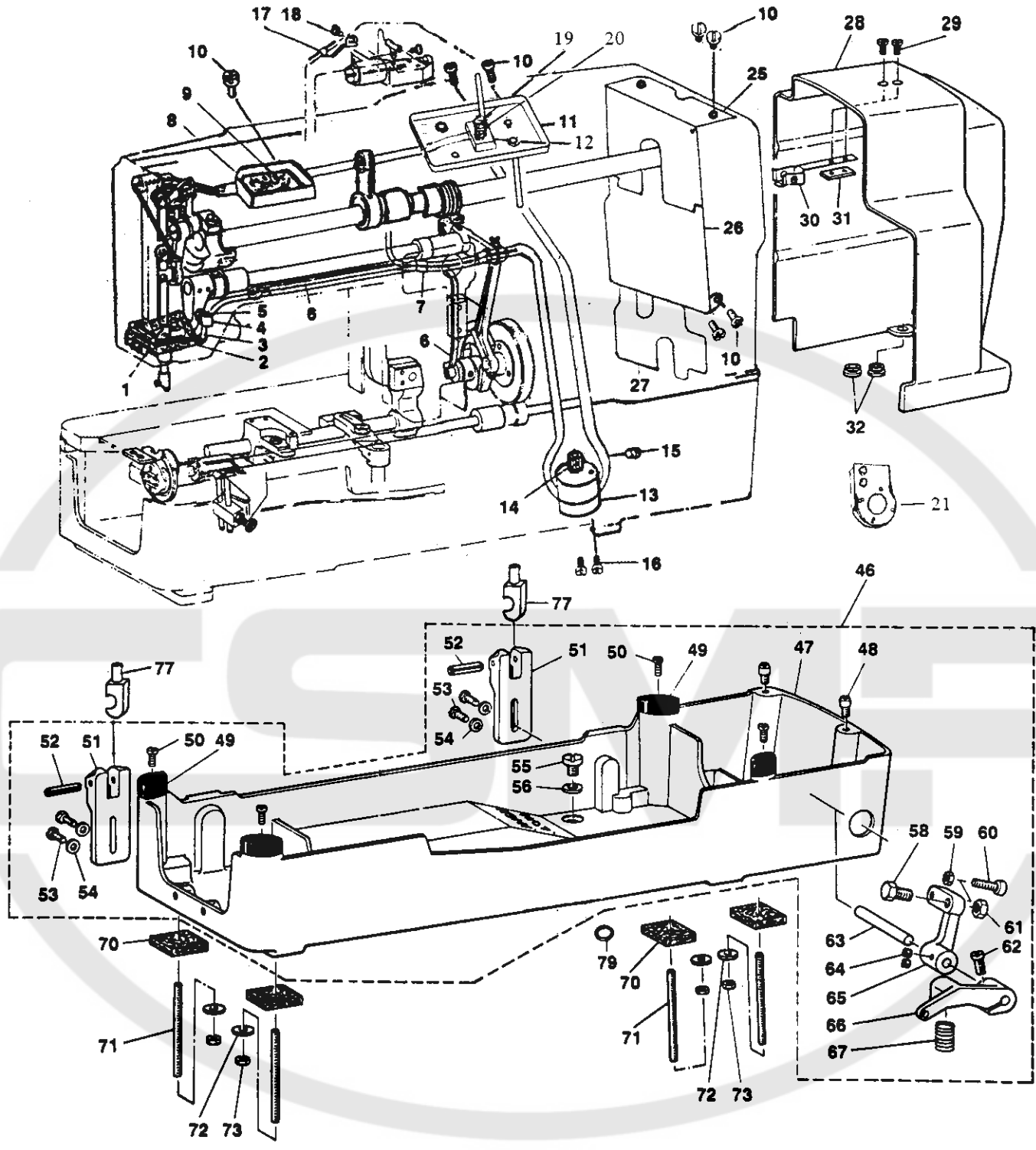
	<u>Part No.</u>	<u>零件名稱</u>	<u>Description</u>	<u>Amt. 13 Req.</u>
1	813010	壓棒提升長拉杆	PRESSER BAR LIFTING ROD, LONG	1
2	813020	螺釘	SCREW	2
3	813031	鉸鏈銷螺釘	HINGE SCREW	2
4	813040	前部杠杆	LEVER, FRONT	1
5	813050	鏈環	LINK	1
6	813060	開口銷	SPLIT PIN	2
7	813070	後部杠杆	LEVER, REAR	1
8	813080	壓棒提升拉杆	PRESSER BAR LIFTING ROD	1
9	813090	離合杆鉸鏈銷	TRIPPING LEVER HINGE PIN	1
10	813101	螺釘	SCREW	1
11	813110	提升杆限位螺釘	LIFTING LEVER STOPPER	1
12	813120	壓棒提升杆	PRESSER BAR LIFTING LEVER	1
13	813131	懸掛螺釘	SUSPENSION SCREW	1
14	813140	壓腳提升彈簧	PRESSER FOOT LIFTING SPRING	1
15	813151	吊簧螺釘	SUSPENSION SCREW	1
16	813160	繞線器過線組件	BOBBIN WINDER TENSION ASM.	1
17	813170	第一夾線螺母	BOBBIN WINDER TENSION NUT	1
18	813180	繞梭心線夾線彈簧	BOBBIN WINDER TENSION SPRING	1
19	813190	夾線盤	BOBBIN WINDER TENSION DISC	2
20	813200	繞梭心過線螺釘	BOBBIN WINDER TENSION POST	1
21	813210	螺母	NUT	1
22	813220	繞梭心線過線架	BOBBIN WINDER TENSION BRACKET	1
23	813231	螺釘	SCREW	2
24	813240	繞線器組件	BOBBIN WINDER ASM.	1
25	813250	繞線器板	BOBBIN WINDER BRACKET	1
26	813260	螺母	NUT	1
27	813270	螺母	NUT	1
28	813280	滿線跳板簧	BOBBIN WINDER SPRING	1
29	813291	鉸鏈銷螺釘	HINGE SCREW	1
30	813300	梭心固定簧	BOBBIN SET SPRING	1
31	813311	螺釘	SCREW	3
32	813320	帶輪軸座	PULLEY SHAFT BASE	1
33	813330	繞線器軸	BOBBIN WINDER SHAFT	1
34	813340	軸套	COLLAR	1
35	813351	鉸鏈銷螺釘	HINGE SCREW	1
36	813360	繞線器軸軸套	BOBBIN WINDER SHAFT BUSHING	1
37	813371	螺釘	SCREW	2
38	813380	繞線器傳動帶輪	BOBBIN WINDER DRIVING PULLEY	1
39	813390	墊圈	WASHER	1
40	813400	滿線跳板	BOBBIN WINDER TRIP LATCH	1
41	813411	調節螺釘	ADJUSTING SCREW	1
42	813420	調節螺母	ADJUSTING NUT	1
43	813431	鉸鏈銷螺釘	HINGE SCREW	1
44	813441	螺釘	SCREW	2
45	813450	彈簧板	SPRING BRACKET	1
46	813461	螺釘	SCREW	2
47	813470	墊圈	WASHER	2

14. THREAD TENSION COMPONENTS  
夾線器關係



	Part No.	零件名稱	Description	Amt. 14 Req.
1	814010	松線連杆	TENSION RELEASE LINK	1
2	814021	鉸鏈銷螺釘	HINGE SCREW	1
3	814030	松線杆	TENSION RELEASE LEVER	1
4	814041	螺釘	SCREW	2
5	814051	鉸鏈銷螺釘	HINGE SCREW	1
6	814060	連杆板	BLOCKING LINK	1
7	814071	鉸鏈銷螺釘	HINGE SCREW	1
8	814080	彈簧	BLOCKING ARM SPRING	1
9	814091	鉸鏈銷螺釘	HINGE SCREW	1
10	814100	杠杆板	BLOCKING ARM	1
11	814110	擋圈	WASHER	1
12	-----			0
13	814130	螺母	NUT	1
14	814140	松線杆	TENSION RELEASE LEVER	1
15	814151	螺釘	SCREW	1
16	814160	下軸後軸承擋圈	THRUST COLLAR	1
17	814171	緊定螺釘	SCREW	2
18	814180	松線杆曲柄	TENSION RELEASE LEVER CRANK	1
19	814191	鉸鏈銷螺釘	HINGE SCREW	1
20	814200	螺母	NUT	1
21	814210	松線杆	TENSION RELEASE ROD	1
22	814221	螺釘	SCREW	2
23	814230	松線釘	TENSION RELEASE PIN	1
24	814241	螺釘	SCREW	1
25	814250	夾線控制器2號組件	TENSION CONTROLLER NO.2 ASM.	1
26	814260	夾線螺母	TENSION NUT	1
27	814270	拉線鋼絲	THREAD PULLING WIRE	1
28	814280	壓線彈簧	TENSION SPRING	1
29	814290	管狀夾線板壓板	TENSION DISC PRESSER TUBE	1
30	814300	夾線盤	TENSION DISC	2
31	814310	面線第二過線螺釘	TENSION POST	2
32	814320	挑線簧	THREAD TAKE-UP SPRING	1
33	814330	過線螺釘座	TENSION POST SOCKET	1
34	814341	螺釘	SCREW	1
35	814350	松線杆軸	TENSION RELEASE LEVER SHAFT	1
36	814361	螺釘	SCREW	1
37	814370	拉線鋼絲	THREAD PULLING WIRE	1
38	814380	夾線控制器1號組件	TENSION CONTROLLER NO.1 ASM.	1
39	814390	真線螺母組件	TENSION NUT	1
40	814400	拉線鋼絲	TENSION DISC STOPPER	1
41	814410	真線彈簧	TENSION SPRING	1
42	814420	管狀真線壓板	TENSION DISC PRESSER TUBE	1
43	814430	夾線盤	TENSION DISC	2
44	814440	松線銷	TENSION RELEASE PIN	1
45	814450	面線第一過線螺釘	TENSION POST	1
46	814460	螺母	NUT	1
47	814470	松線臂	TENSION RELEASE ARM	1
48	814481	螺釘	SCREW	1
49	814491	螺釘	SCREW	1
50	814500	導線板	THREAD GUIDE PLATE	1
51	814510	彈簧	SPRING	1
52	814520	止推緊圈	THRUST COLLAR	1
53	814531	螺釘	SCREW	2
54	814540	松線杆	TENSION RELEASE ROD	1
55	814550	彈性圓柱銷	SPRING PIN	1
56	814561	螺釘	SCREW	1
57	814570	二眼線鉤	THREAD EYELET	1
58	814580	右線鉤	FRAME THREAD GUIDE	1
59	814591	螺釘	SCREW	1
60	814600	針杆過線鉤	NEEDLE BAR THREAD GUIDE	1
61	814611	螺釘	SCREW	1
62	814620	緊線鉤	TENSION THREAD GUIDE	1
63	814630	挑線過線鉤	TAKE-UP THREAD GUIDE	1
64	814630	螺母	NUT	2
65	814650	定位架	POSITION BRACKET	1

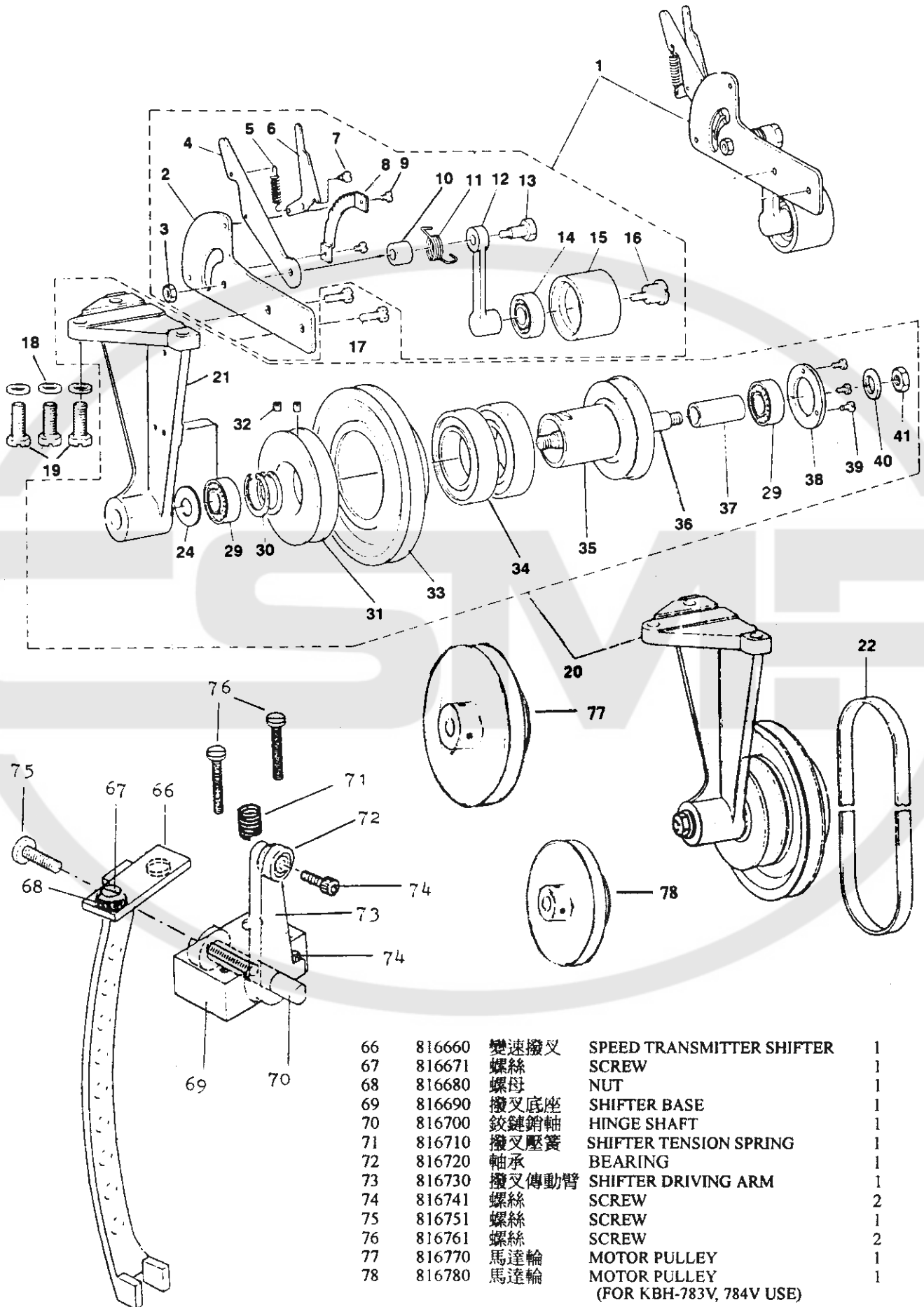
15. LUBRICATION MECHANISM COMPONENTS  
給油装置關係



	<u>Part No.</u>	<u>零件名稱</u>	<u>Description</u>	<u>Amt. 15 Req.</u>
1	815010	回油壓板組件	OIL FELT HOLDER	1
2	815020	回油氈	OIL RETURN FELT	1
3	815030	回油管	OIL RETURN TUBE	1
4	815040	油管壓板	CABLE HOLDER	1
5	815051	螺釘	SCREW	1
6	815060	油芯	OIL WICK	1
7	815070	油管導架	PIPE GUIDE	1
8	815080	儲油器	OIL RECEIVER	1
9	815090	油氈	OIL FELT	1
10	815101	螺釘	SCREW	10
11	815110	盛油架	OIL RECEIVER	1
12	815120	調節潤滑螺釘座	OIL ADJUSTING SCREW BASE	1
13	815130	油泵完全座	OIL PUMP	1
14	815140	油泵驅動蝸輪	OIL PUMP DRIVING WORM GEAR	1
15	815151	螺釘	SCREW	2
16	815161	螺釘	SCREW	2
17	815170	油氈導架	OIL FELT GUIDE	1
18	815181	螺釘	SCREW	1
19	815191	旋梭調節潤滑螺釘	HOOK OIL ADJUSTING SCREW	1
20	815200	彈簧	SPRING	1
21	815210	油泵板	OIL PUMP PLATE	1
22			PLATE	1
25	815251	油罩	OIL SHIELD	1
26	815260	油罩	OIL SHIELD	1
27	815271	油罩	OIL SHIELD	1
28	815280	皮帶罩	BELT GUARD	1
29	815291	螺釘	SCREW	2
30	815300	皮帶罩安裝夾	BELT GUARD LATCH	1
31	815310	底部導板	BOTTOM GUIDE	1
32	815320	橡膠軸套	RUBBER BUSHING	1
46	815460	底座組件	MACHINE BASE ASM.	1
47	815470	油池	OIL RESERVOIR	1
48	815480	導銷	GUIDE PIN	2
49	815490	橡膠墊	RUBBER CUSHION	4
50	815501	螺釘	SCREW	4
51	815510	鉸鏈座	HINGE HOLDER	2
52	815520	彈性圓柱銷	PIN	2
53	815531	螺釘	SCREW	4
54	815540	墊圈	WASHER	4
55	815551	螺釘	SCREW	1
56	815560	密封墊	OIL DRAIN CAP GASKET	1
58	815581	螺釘	SCREW	1
59	815590	螺母	NUT	1
60	815601	止動螺釘	STOP SCREW	1
61	815610	螺母	NUT	1
62	815621	螺釘	SCREW	1
63	815630	起動架軸	STARTING LINK SHAFT	1
64	815641	螺釘	SCREW	2
65	815650	起動架	STARTING LINK	1
66	815660	起動杠杆	STARTING LEVER	1
67	815670	起動杠杆壓簧	STARTING LEVER PRESSURE SPRING	1
68	815680	撥叉傳動銷	SHIFTER DRIVING PIN	1
69	815690	橡膠軸套	RUBBER BUSHING	2
70	815700	底座氈墊	MACHINE BASE FELT PAD	4
71	815710	底座螺栓	MACHINE BASE SCREW STUD	4
72	815720	墊圈	WASHER	4
73	815730	螺母	NUT	4
74	815740	傳動銷座	DRIVING PIN BASE	1
75	815751	螺釘	SCREW	3
76	815760	擋圈	SNAP RING	1
77	815770	連接銷	CONNECTION STUD	2
78	815780	油池	OIL RESERVOIR	1
79	815790	O型環	O-RING	1

# 16. SPEED TRANSMITTER COMPONENTS

## 減速機關係

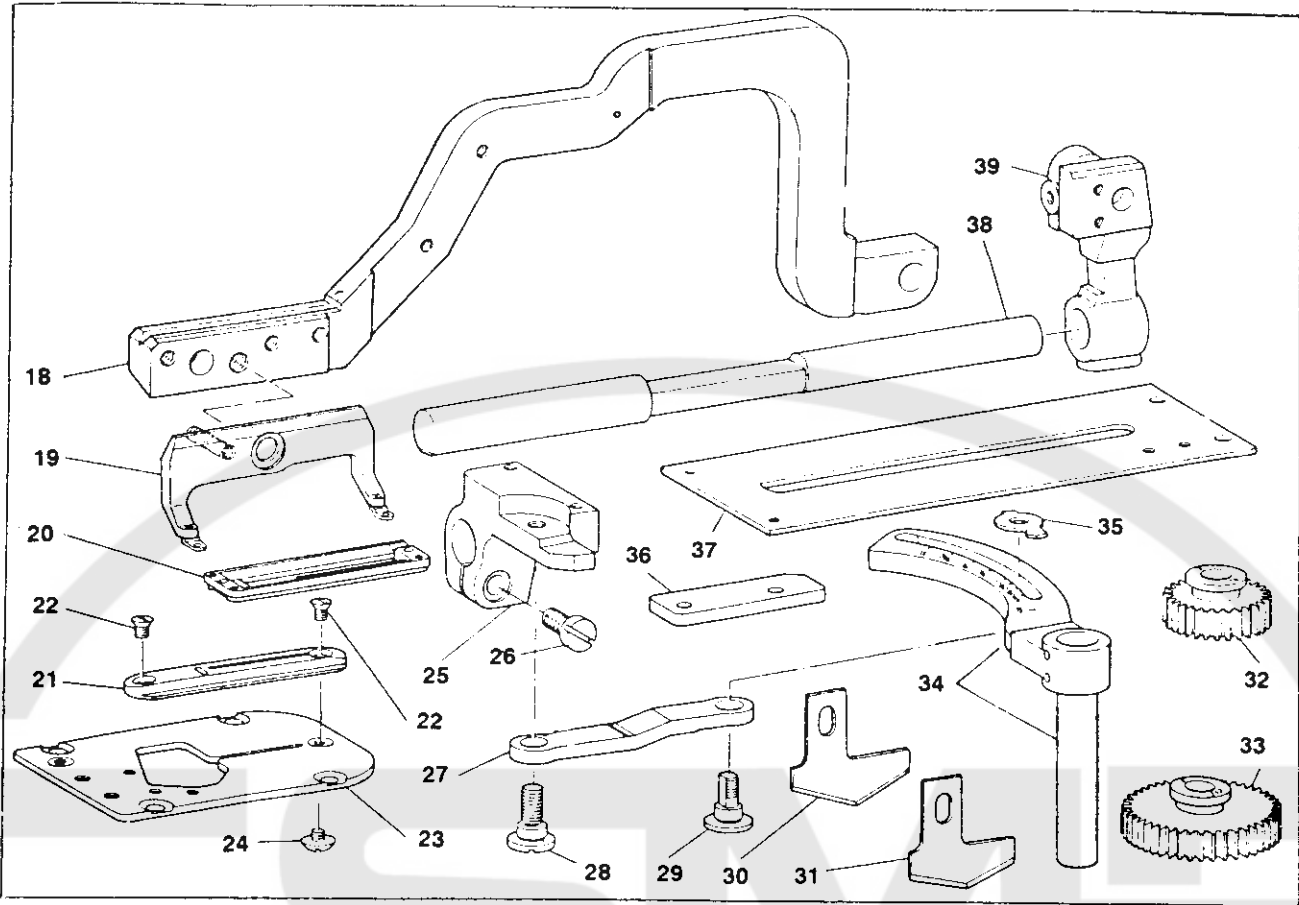


66	816660	變速撥叉	SPEED TRANSMITTER SHIFTER	1
67	816671	螺絲	SCREW	1
68	816680	螺母	NUT	1
69	816690	撥叉底座	SHIFTER BASE	1
70	816700	鉸鏈銷軸	HINGE SHAFT	1
71	816710	撥叉壓簧	SHIFTER TENSION SPRING	1
72	816720	軸承	BEARING	1
73	816730	撥叉傳動臂	SHIFTER DRIVING ARM	1
74	816741	螺絲	SCREW	2
75	816751	螺絲	SCREW	1
76	816761	螺絲	SCREW	2
77	816770	馬達輪	MOTOR PULLEY	1
78	816780	馬達輪	MOTOR PULLEY (FOR KBH-783V, 784V USE)	1

Part No.	零件名稱	Description	Amt. 16 Req.	
1	816010	皮帶張緊輪座組件	TENSION PULLEY ASM.	1
2	816020	皮帶張緊輪座	TENSION PULLEY BRACKET	1
3	816030	螺母	NUT	1
4	816040	張杆	TENSION LEVER	1
5	816050	定位爪拉簧	NIPPER BAR ACTUATING LEVER SPRING	1
6	816060	定位爪	FIXING PAWL	1
7	816071	鉸鏈銷螺釘	HINGE SCREW	1
8	816080	棘爪	RATCHET	1
9	816091	緊定螺釘	SCREW	2
10	816100	隔套	LEVER COLLAR	1
11	816110	轉矩彈簧	TENSION SPRING	1
12	816120	張緊輪連杆	TENSION PULLEY LINK	1
13	816131	鉸鏈銷螺釘	HINGE SCREW	1
14	816140	單列向心球軸承	BEARING	1
15	816150	皮帶張緊輪	TENSION PULLEY	1
16	816161	鉸鏈銷螺釘	HINGE SCREW	1
17	816171	螺釘	SCREW	2
18	816180	墊圈	WASHER	3
19	816191	螺釘	SCREW	3
20	816200	撥叉傳動組件	SHIFTER DRIVING ASM.	1
21	816210	變速器支架	SPEED TRANSMITTER BRACKET	1
22	816220	傳動膠帶	BELT	1
23	-----			-
24	816240	增速帶輪軸承墊圈	HIGH SPEED WASHER FOR BEARING	1
25	816250	止動螺釘組件	STOP SCREW ASM.	1
26	816260	螺母	NUT	1
27	816270	撥叉限位器支架	SHIFTER STOPPER BRACKET	1
28	816281	螺釘	SCREW	2
29	816290	單列向心球軸承	BEARING	2
30	816300	擋圈	RETAINING RING	2
31	816310	增速帶輪	ACCELERATING PULLEY	1
32	816321	緊定螺釘	SCREW	2
33	816330	高速帶輪	HIGH-SPEED PULLEY	1
34	816340	單列向心球軸承	BEARING	2
35	816350	低速帶輪	LOW-SPEED PULLEY	1
36	816360	變速軸	SPEED TRANSMITTER SHAFT	1
37	816370	隔套	SLEEVE	1
38	816380	軸承壓緊環	BEARING PRESSER	1
39	816391	螺釘	SCREW	3
40	816400	墊圈	WASHER	1
41	816410	螺母	NUT	1
42	816420	撥叉拉簧	SHIFTER TENSION SPRING	1
43	816430	撥叉底座組件	SHIFTER BASE ASM.	1
44	816440	撥叉底座	SHIFTER BASE	1
45	816450	螺母	NUT	3
46	816460	撥叉凸輪彈簧	SHIFTER CAM SPRING	1
47	816470	螺母	NUT	2
48	816480	彈簧懸掛螺釘	SPRING SUSPENSION SCREW STUD	1
49	816490	撥叉傳動臂	SHIFTER DRIVING ARM	1
50	816501	鉸鏈銷螺釘	HINGE SCREW	3
51	816510	滾輪銷	ROLLER STUD	1
52	816520	滾子	CAM ROLL	1
53	816531	螺釘	SCREW	1
54	816540	撥叉安裝板	SHIFTER INSTALLING PLATE	1
55	816551	鉸鏈銷螺釘	HINGE SCREW	2
56	816560	撥叉連架臂	SHIFTER HOLDING ARM	1
57	816570	變速撥叉	SPEED TRANSMITTER SHIFTER	1
58	816581	螺釘	SCREW	2
59	816590	撥叉銷	SHIFTER PIN	1
60	816600	螺母	NUT	1
61	816610	撥叉凸輪固定架	SHIFTER CAM MOUNTING	1
62	816621	螺釘	SCREW	2
63	816630	撥叉凸輪	SHIFTER CAM	1
64	816640	懸吊銷	SUSPENSION PIN	1
65	816651	緊定螺釘	SCREW	2



17. EXCLUSIVE PARTS FOR 784  
784專用零件



Part No.	零件名稱	Description	Amt. Req.
1			0
17			0
18	布料夾	WORK CLAMP ARM	1
19	壓腳	WORK CLAMP CHECK HOLDER	1
20	壓腳板組件	WORK CLAMP CHECK	1
21	針板	THROAT PLATE	1
22	螺絲	SCREW	2
23	針板座	THROAT PLATE BASE	1
24	螺釘	SCREW	1
25	送料支架	WORK CLAMP ARM BRACKET	1
26	螺釘	SCREW	1
27	送料支架連杆	WORK CLAMP CARRIER PITMAN	1
28	螺釘	SCREW	1
29	調節送料長度鉸鏈銷螺釘	FEED ADJUSTING SCREW	1
30	刀	KNIFE 1-1/2"	1
31	刀	KNIFE 1-3/8"	1
32	直齒輪	SPUR GEAR (74)	1
33	直齒輪	SPUR GEAR (252)	1
34	調節送料長度刻度盤組件	LENGTH REGULATING ARM ASM.	1
35	調節送料長度軸導板	LENGTH REGULATING SHAFT GUIDE	1
36	送布拖板支架導塊	WORK CLAMP ARM BRACKET GUIDE	1
37	送布拖板	WORK CLAMP CARRIER	1
38	壓腳臂滑杆	WORK CLAMP ARM SLIDE ROD	1
39	托架	WORK CLAMP ARM BEARING BRACKET	1

**18. EXCHANGING PARTS**  
**交換零件**

SET	① 小齒輪 SMALL GEAR		② 大齒輪 LARGE GEAR	
	針數 STITCH NO.	件號 PART NO.	針數 STITCH NO.	件號 PART NO.
E	74	81801E	252	81802E
G	83	81801G	225	81802G
J	100	81801J	190	81802J
K	105	81801K	180	81802K
L	110	81801L	170	81802L
N	123	81801N	152	81802N

③ 刀片 KNIFE			④ 壓腳 WORD CLAMP CHECK		⑤ 針板 THROAT PLATE		⑥ 導片 GUIDE			
NO.	規格 SIZE (mm)	件號 PART NO.	件號 PART NO.		件號 PART NO.		件號 PART NO.			
1	1/4" (6.3)	818301	81841A 81841B (25.4mm)		818501 (31.7mm)		818601 (25.4mm)			
2	3/8" (9.5)	818302								
3	1/2" (12.7)	818303								
4	9/16" (14.3)	818304								
5	5/8" (15.8)	818305								
6	3/4" (19.0)	818306								
7	7/8" (22.2)	818307								
8	1" (25.4)	818308								
9	1-1/4" (31.7)	818309	81842A 81842B (31.7mm)		818502 (38.1mm)		818602 (31.7mm)			
10	1-3/8" (34.9)	818310	81843A 81843B (38.1mm)				818502 (38.1mm)		818602 (38.1mm)	
11	1-1/2" (38.1)	818311								

# MANUAL BOOK

1. SPECIFICATION
2. TYPES OF STITCHES
3. SETTING UP THE MACHINE HEAD
4. MOTOR PULLEY AND V BELT
5. ATTACHING THE FLAT BELT
6. INSTALLATION/REMOVAL OF BELT COVER
7. ATTACHING THE BOBBIN
8. INSTALLATION/REMOVAL OF BOBBIN CASE
9. HOW TO INSTALL THE NEEDLE
10. SETTING UP THE THREAD STAND
11. LUBRICATION
12. WINDING THE BOBBIN
13. THREADING THE NEEDLE-THREAD
14. REDUCTION OF SEWING SPEED AND EMERGENCY STOP
15. MANUAL FEED HANDLE
16. HOW TO HOLD THE DESCENDING KNIFE
17. REPLACING THE KNIFE
18. CHANGING THE NUMBER OF STITCHES
19. NEEDLE-TO-HOOK RELATION
20. THREAD TENSION
21. ADJUSTING THE OVEREDGING LENGTH (BUTTONHOLE LENGTH)
22. ADJUSTING THE OVEREDGING WIDTH AND OVEREDGING REFERENCE POSITION
23. ADJUSTING THE PRESSER BAR PRESSURE
24. ADJUSTION THE BOBBIN THREAD WINDER
25. ADJUSTING THE SPEED TRANSMITTER
26. ADJUSTMENT OF THE NEEDLE THREAD TRIMMER
27. ADJUSTMENT OF NEEDLE THREAD TRIMMER HOLDER AND LIMITING PLATE
28. TIMING FOR DROPPING THE KNIFE
29. STITCHING TROUBLES CAUSED BY OTHER REASONS
30. TROUBLE, CAUSE, AND REMEDY

**BEFORE OPERATING YOUR LOCKSTITCH MACHINE, PLEASE READ THIS INSTRUCTION MANUAL CAREFULLY IN ORDER TO OPERATE IT IN THE CORRECT AND EFFICIENT MANNERS.**

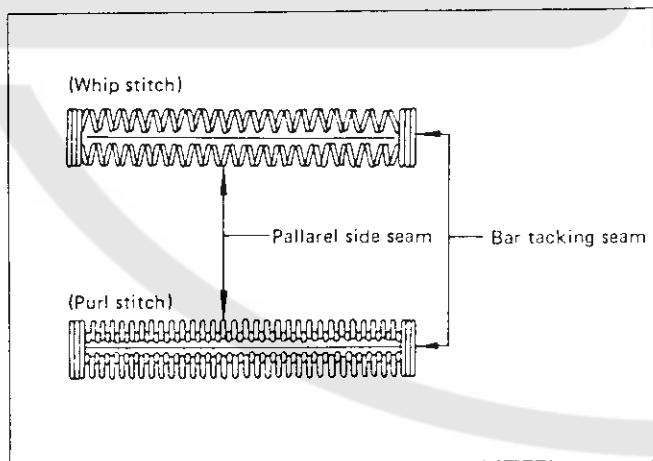
**● CAUTIONS IN OPERATION**

1. The machine should rotate counterclockwise as observed from the pulley. Take care not to rotate the machine in the opposite direction.
2. Never start the machine before filling the machine base with lubricating oil.
3. Remove the bobbin case and the needle thread from the machine before performing the trial operation.
4. Clean up the sewing hook and the bobbin thread trimmer every day after sewing work. Also check the level of the lubricating oil.
5. Never bring your fingers or hair close to, or place anything on the handwheel, V-belt, bobbin winder wheel or motor during operation. It may lead to serious personal injuries.
6. If your machine is provided with a belt cover, finger guard and eye guard, never operate your machine with any of them removed.

**● 1. SPECIFICATION**

	890		
	780	783	784
Application	Buttonholing for ordinary cloth, knit, etc.		
Sewing speed	Max. 3,600 s.p.m.		
Buttonhole length	6.4 ~ 19.0 mm (1/4" ~ 3/4")	6.4 ~ 31.7 mm (1/4" ~ 1-1/4")	12.7 ~ 38.0 mm (1/2" ~ 1-1/2")
Bar-tack width	2.5 ~ 4.0 mm (3/32" ~ 5/32")	2.5 ~ 5.0 mm (3/32" ~ 3/16")	
Needle	DP x 5J #11 ~ #14		
Presser lift	12 mm (15/32")		
Lubricating oil	New Defrix Oil No. 1		

**● 2. TYPES OF STITCHES**



This machine is capable of forming two different types of stitches, namely whip stitch and purl stitch.

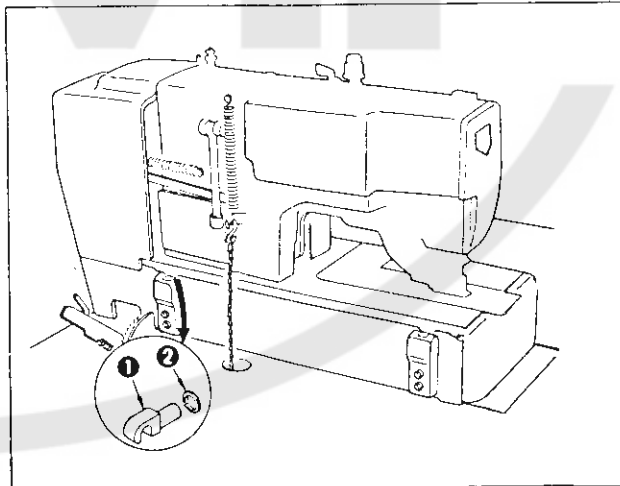
**(Whip stitch)**

The whip stitch is formed in zigzag showing the needle thread only on top of fabric, and the bobbin thread on the bottom.

**(Purl stitch)**

When applying higher tension to the needle thread to permit it to pass straight through fabric, the purl stitch is formed by the bobbin thread which is pulled over from both sides to the center line.

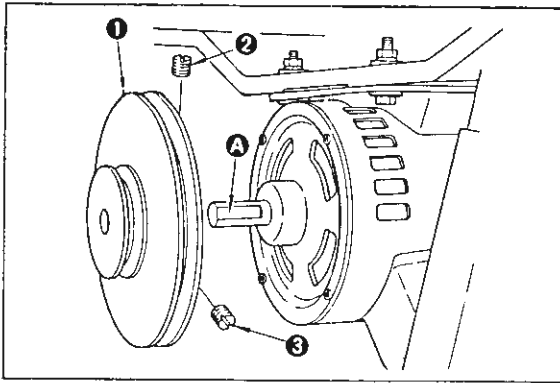
**● 3. SETTING UP THE MACHINE HEAD**



Insert hinge ❶ into the machine head.

Then, place the machine head on the machine base.

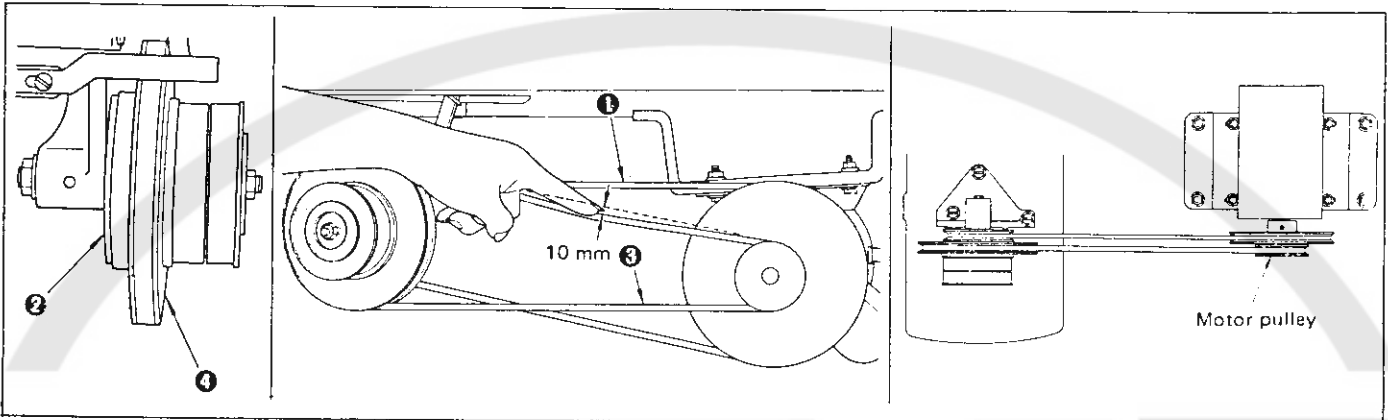
## 4. MOTOR PULLEY AND V BELT



1. Motors of 300W, 4-pole are used for single-phase or three-phase operation. (If a 250W motor has to be used, operate the machine at 3,100 s.p.m. or less.)
2. M-type V belts are used.
3. Refer to the following table for the motor pulleys, V belt length, and sewing speed.

### ★ How to install motor pulley

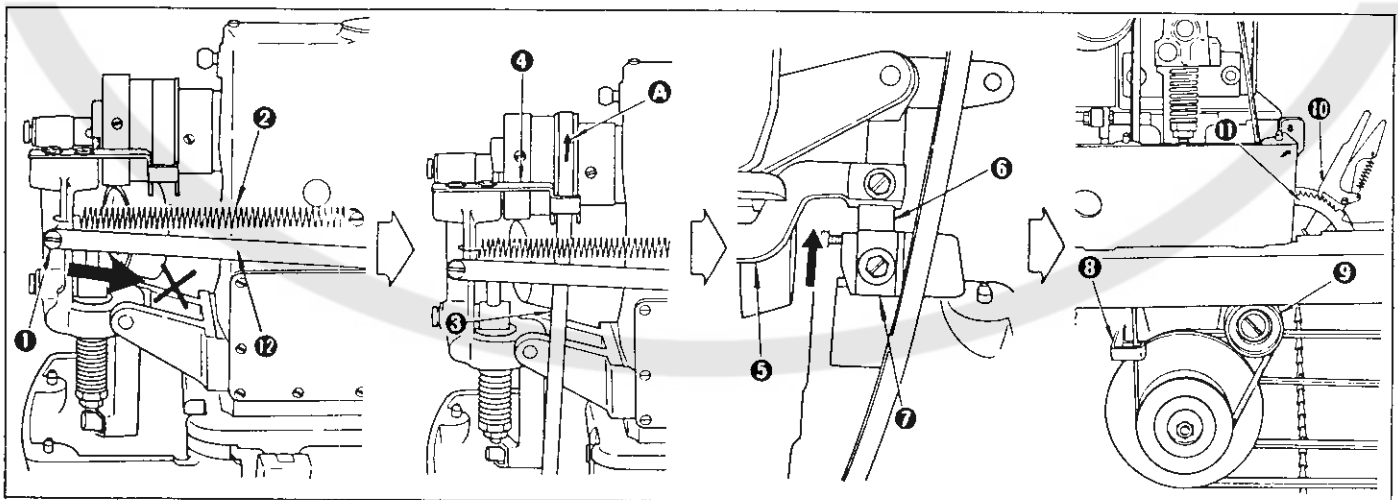
Place motor pulley ① into the motor shaft so that flat part A of the motor shaft aligns with first setscrew ②. Then securely tighten setscrews ② and ③.



### ★ How to install V belt

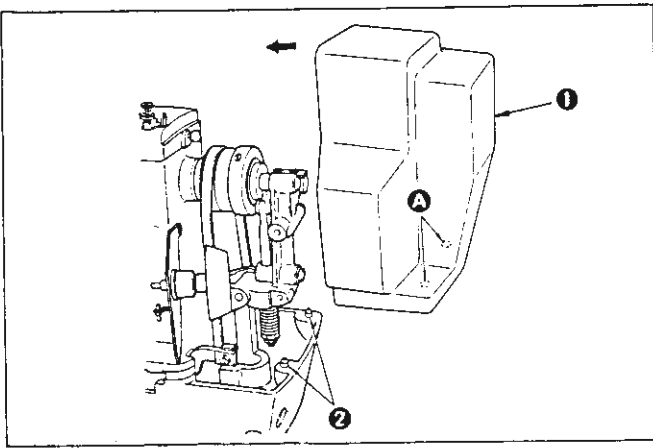
1. Mount high-speed V belt ① on accelerating pulley ② and the large diameters of the motor pulley.
2. Mount low-speed V belt ③ on low-speed pulley ④ and the small diameters of the motor pulley.
3. By moving the motor from side to side, adjust the tension of V belts ① and ③ so that they give an approx. 10 mm slack when their middle portions are pushed lightly by hand.
4. Move the motor pulley back and forth to align V belts ① and ③.

## 5. ATTACHING THE FLAT BELT



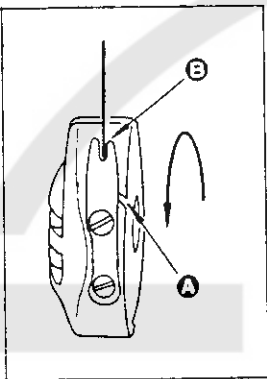
1. Removing screw ①, remove spring ② from the suspension screw.  
At this time, be careful not to push the starting link driving rod in the arrowed direction.
  2. Pass belt ③ through belt shifter ④ so that the belt rotates in arrow A direction.
  3. Reinstall screw ① and spring ②.
  4. Lift tripping lever ⑤ in the direction, pass the belt between latch B ⑥ and latch A ⑦.
  5. Passing belt shifter ⑧ of the speed transmitter, attach the belt onto tension pulley ⑨.
  6. Put fixing pawl ⑩ in the second groove from the bottom of ratchet ⑪ to provide the belt with tension.
- (NOTE) Some expansion or contraction in the belt caused by temperature or humidity may make it rather difficult to install the belt. However, the belt will restore its original length while in use.

## 6. INSTALLATION/REMOVAL OF BELT COVER



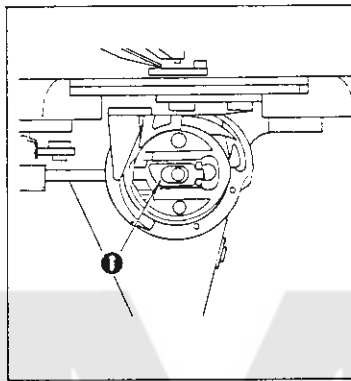
Aligning guide pin ② with hole ④ in belt cover ①, push the belt cover in the arrow direction until it snaps. For removal of the belt cover, bring down the belt cover in the direction opposite to the arrow, and slide it up.

## 7. ATTACHING THE BOBBIN



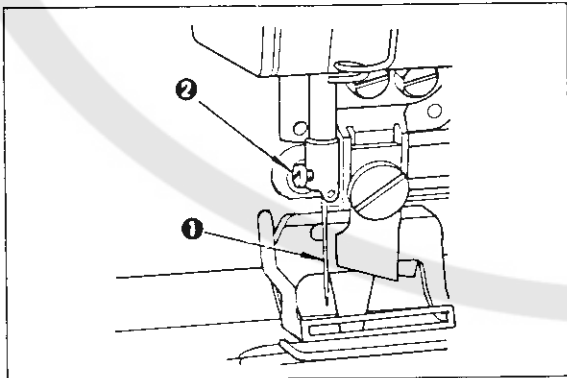
1. Hold and place a bobbin into the bobbin case so that the bobbin is wound counterclockwise.
  2. Passing the thread through thread outlet ④ of the bobbin case, pull the thread, and the thread can be drawn out from thread outlet ③, passing under the bobbin winder tension spring.
- ☆ Set the bobbin so that it rotates in the arrow direction when the bobbin thread is pulled.

## 8. INSTALLATION/REMOVAL OF BOBBIN CASE



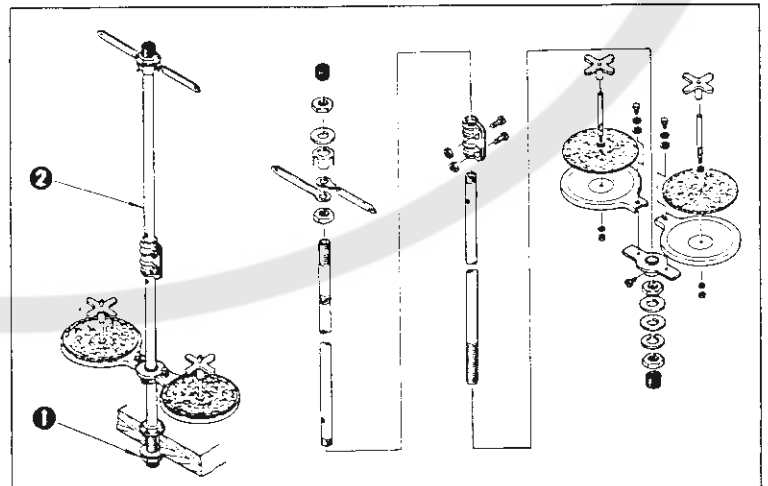
1. Lift up and hold bobbin case latch lever ① between two fingers to remove it from the hook. A bobbin does not fall off the bobbin case while the latch lever is lifted up.
2. For installation of the bobbin case, push the bobbin case into the hook so that it is supported by the hook shaft, and then snap in the latch lever.

## 9. HOW TO INSTALL THE NEEDLE



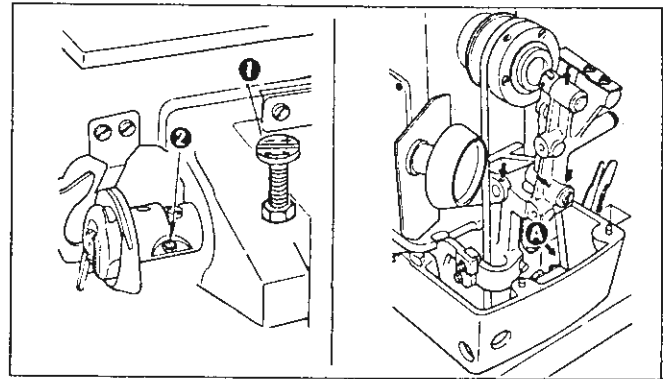
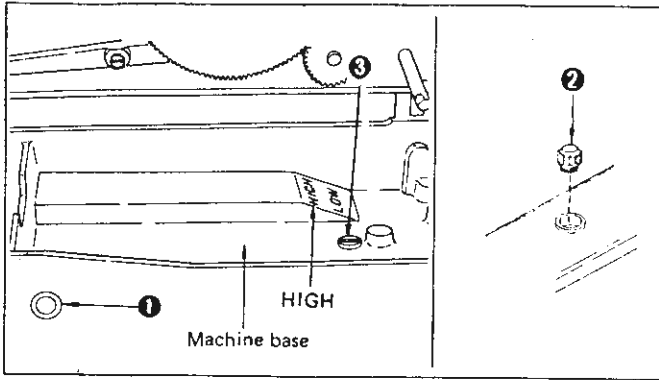
- ★ Turn off the motor power. Use a DPx5J needle.
1. Loosening needle setscrew ②, hold needle ① with its recessed part facing toward the operator,
  2. insert the needle fully into the needle clamping hole, and
  3. securely tighten the needle setscrew.

## 10. SETTING UP THE THREAD STAND



Assemble the thread stand, and fix it in the table hole. Then tighten lock nut ① to fix the thread stand. If ceiling wiring can be made, pass the power cable through spool rest rod ②.

## 11. LUBRICATION



### ★ Before starting the machine;

1. Fill the oil reservoir of the machine base with New Defrix Oil No. 1 up to the level indicated by "HIGH".
  2. Supplement the oil when the oil level has lowered below the bottom line of oil gauge ①.
  3. When the machine has been properly lubricated, the oil is seen to run through the pipe from oil sight window ②. (Low speed operation permits easier observation of the lubricating oil.)
- ★ Drain dirty oil by loosening oil drain screw ③, and fill the oil reservoir with fresh oil.

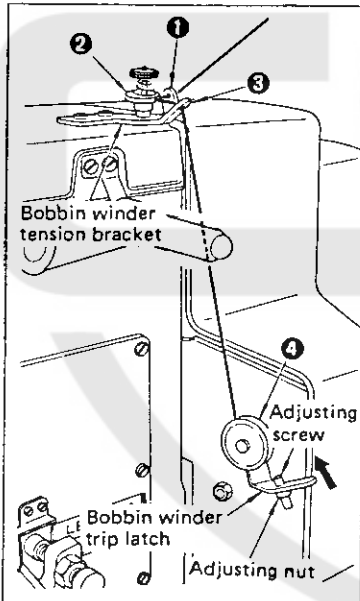
### ★ Adjusting the lubrication for the sewing hook

Adjust the volume of lubricating oil supplied to the sewing hook by turning oil adjusting screws ① for rough adjustment, and ② for fine adjustment; oil volume is reduced when turning the screws clockwise.

### ★ Other lubricating points

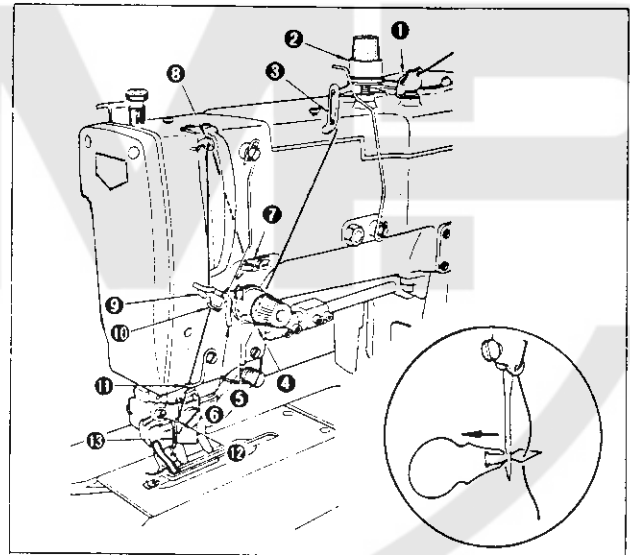
1. Apply one or two drops of lubricating oil to the arrowed points once a week or every other week.
2. Apply two or three drops of lubricating oil only to A point when the machine is newly set up or has been out of use for a long time.

## 12. WINDING THE BOBBIN



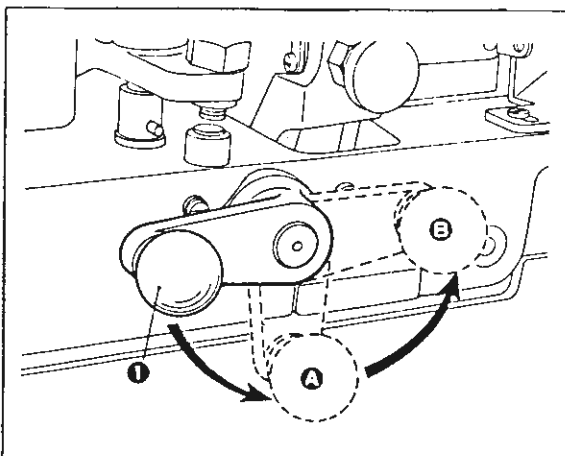
1. Fit a bobbin onto the bobbin winder shaft.
2. Take the thread from the spool and pass it through the guides in the numerical order shown in the figure, and wind the end of the thread several turns around the bobbin.
3. Push the bobbin winder trip latch in the arrow direction, and the bobbin will be wound.
4. Loosening the adjusting nut, perform adjustment by screwing in or out the adjusting screw so that the bobbin is wound about four-fifths full.
5. If the bobbin is wound unevenly, adjust the position of the bobbin winder tension bracket for proper and even winding.

## 13. THREADING THE NEEDLE-THREAD



1. Pass the needle thread in the order as shown in the figures.
2. The threading can be done easily by using the needle threader supplied with the machine.

## 14. REDUCTION OF SEWING SPEED AND EMERGENCY STOP



### ★ Reduction of sewing speed

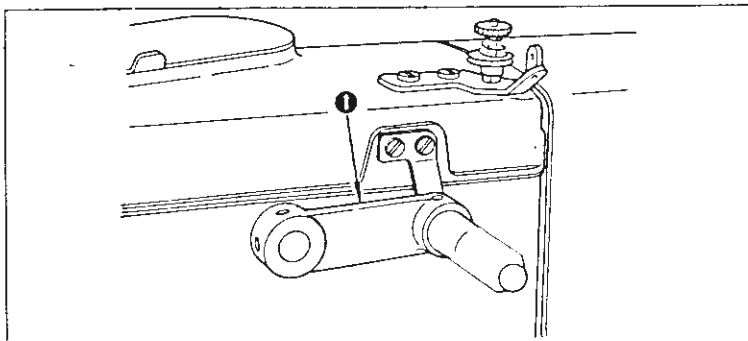
1. Turn hand stop crank ① downwards to position A, and
2. the machine will be immediately slowed down.

### ★ Emergency stop

1. Turn the hand stop crank downwards to position A, and further upwards to position B and
2. the machine will stop immediately.

(NOTE) When the hand stop crank do not return, push it down.

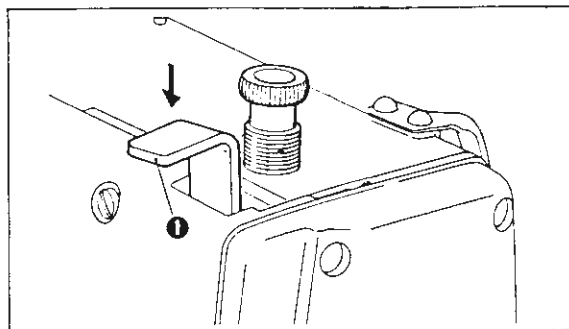
### ● 15. MANUAL FEED HANDLE



When you want to feed fabric manually after giving an emergency stop or to resume sewing from the point at which thread was broken, rotate manual feed handle ① to operate the cloth feeding mechanism.

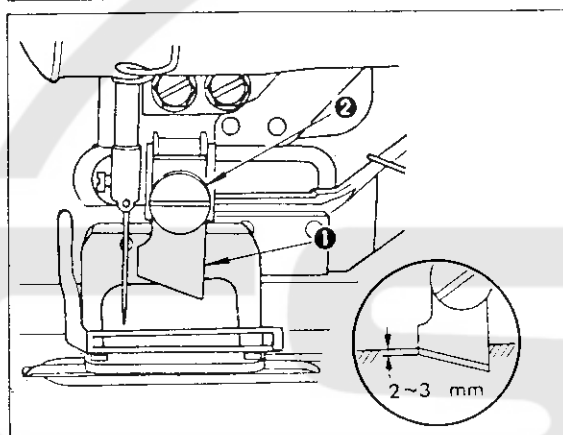
(NOTE) Confirm that the needle does not stick in fabric before turning the manual feed handle.

### ● 16. HOW TO HOLD THE DESCENDING KNIFE



When you do not want to cut fabric after sewing because of thread breakage or some other reasons, keep on pressing down knife stop lever ① lightly until the machine stops. Then the knife will not descend.

### ● 17. REPLACING THE KNIFE



When sharpening or replacing the knife, remove it as follows:

1. Loosen setscrew ②, and remove knife ① together with the washer.
2. Attach the knife to the knife holder so that the higher end of the slanted knife blade comes down 2 to 3mm above the surface of the throat plate when the knife is brought down to the lowest position.

(NOTE): Do not forget to install the washer when retightening the setscrew.

### ● 18. CHANGING THE NUMBER OF STITCHES

Symbol	No. of stitches of small gears	No. of stitches of large gears	Symbol	No. of stitches of small gears	No. of stitches of large gears
A	54	345	I	93	200
B	62	300	Ⓜ	100	190
C	66	285	K	105	180
D	70	268	Ⓛ	110	170
Ⓢ	74	252	M	115	160
F	79	238	Ⓝ	123	152
Ⓒ	83	225	O	130	145
H	88	212			

#### ★ Spur gears

1. By selecting the spur gears, you can control the number of stitches as shown in the table.
2. Alphabetical marks like A, B, C, etc., and numerals like 123, 152, etc. are both engraved on each spur gear for identification.
3. Use a combination of gears which have the same alphabetical marks.
4. The numeral engraved on the gear installed in the rear position will represent the number of stitched provided by the then combination of spur gears.

(The circled alphabetical symbols in the above table show that the gears are included in the standard accessories. All other gears are optional attachments.)

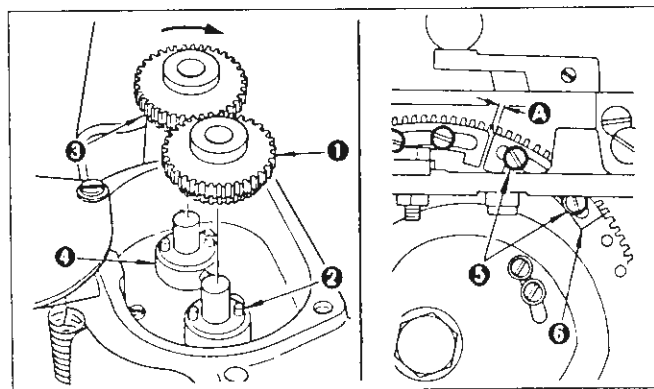
#### ★ Attaching the spur gears to their shafts

1. Push gear ① into the shaft so that it is securely fixed by the pin on gear bushing ② located nearer to an operator.
2. For installing gear ③ on the pin of rear gear bushing ④, push gear ③ into the shaft while turning it in the arrow direction.

#### ★ Adjusting the low-speed cam position

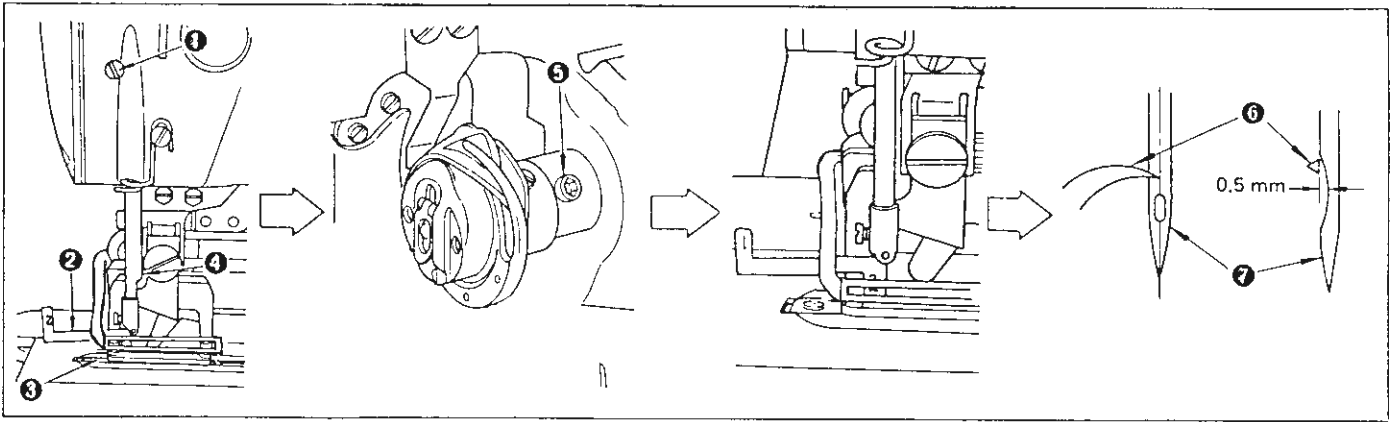
Loosen setscrews ⑤, and adjust the position of low-speed cam ⑥ to set clearance A as shown below:

Number of stitches	Clearance A
93 stitches or less	10 ~ 12 mm
115 stitches or less	5 mm
123 stitches	0





## 19. NEEDLE-TO-HOOK RELATION

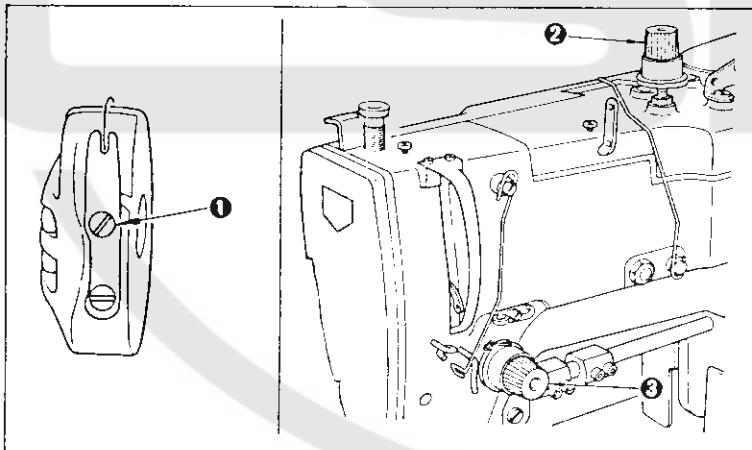


### ★ Set the needle to hook relation in the following way:

1. Bring down the needle bar to the lowest point when the needle is coming down through the center of the needle hole on the throat plate.
2. Loosen needle bar connection screw ①, and adjust the height of the needle bar.  
(Setting the needle bar)
3. Insert the part "1" of timing gauge ② into the gap between the bottom end of needle bar ④ and throat plate ③.
4. Retighten the needle bar connection screw to adjust the position of the sewing hook.  
(Setting the hook)
5. Loosen setscrew ⑤ of the hook sleeve by the bar spanner supplied with the machine.
6. Rotate the driving pulley in the correct direction until the needle starts to go up from its lowest point.
7. Insert the part "2" of the timing gauge into the gap between the bottom end of the needle bar and the throat plate, where the bottom end of the needle bar touches the top of the timing gauge.
8. Align blade point ⑥ of the sewing hook with the center of needle ⑦, and make adjustment so that a clearance of approx. 0.5mm (1/64") is provided between the needle and the blade point of the hook. Then, securely retighten the setscrew of the hook sleeve.

(NOTE): If stitches are skipped, lower the needle bar by approx. 0.5mm (1/64") from the timing gauge "1".

## 20. THREAD TENSION

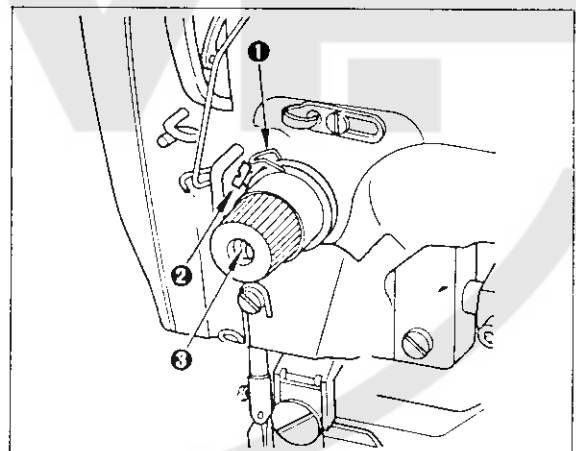


### ★ Adjusting the thread tension for purl stitch:

1. Adjust the bobbin thread tension to approx. 15 to 20g by adjusting screw ① of the bobbin case.
2. Adjust tension controller No. 1 ② for proper needle thread tension so that the bar-tack part is formed by well-shaped whip stitches. If the tension is too low, bar tacking seam may form thread knots on the rear face of fabric.
3. Adjust tension controller No. 2 ③ for proper tension of the parallel side seams by judging from the stitch formation.

### ★ Adjusting the thread tension for whip stitch:

1. Adjust the bobbin thread tension to approx. 40 to 50g by adjusting screw ① of the bobbin case.
2. Exchange the adjusting springs of tension controllers No. 1 ② and No. 2 ③ each other (the tension controller No. 2 will have a weak spring).
3. Adjust tension controller No. 2 ③ to prevent ravelling off at the end of a seam.
4. The stitches of the parallel sides or bar-tack can be adjusted by tension controller No. 1 ②.



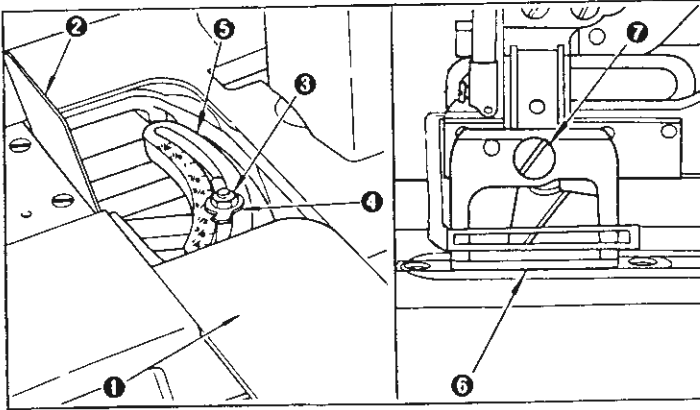
### ★ Adjusting the thread take-up spring (for purl stitch)

The suitable range of the stroke of thread take-up spring ① is from 6 to 8mm with a starting tension of 20 to 50g.

For adjusting the stroke of the thread take-up spring, loose screw ②, and insert a thin screwdriver into the slit of tension post ③ to turn the tension post.

To adjust the tension of the thread take-up spring, insert a thin screwdriver into the slit of tension post ③ to turn it, with screw ② tightened. The tension of the thread take-up spring increases when the tension post is turned clockwise, and decreases when turned counterclockwise.

## 21. ADJUSTING THE OVEREDGING LENGTH (BUTTONHOLE LENGTH)



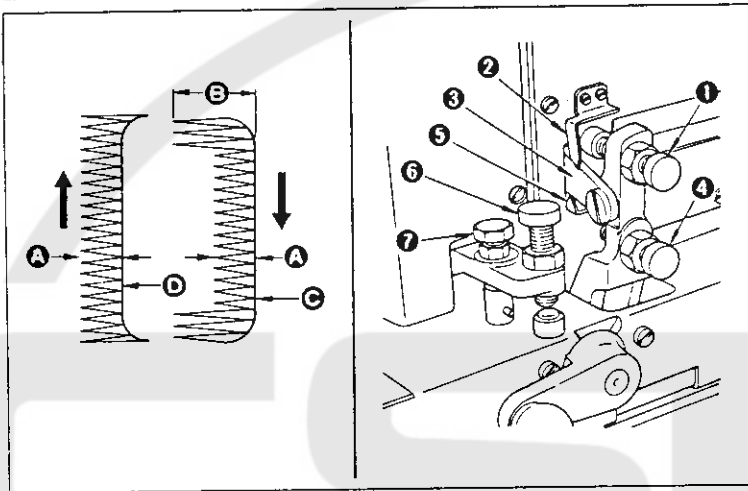
1. Pull out cover ①, and raise cover ②.
2. Loosen nut ③ by the spanner supplied with the machine. Set point ④ to a desired length on scale ⑤ (this length is the same with the knife width), and then retighten nut ③.
3. Through your trial sewing, adjust the overedging length accurately to the extent that the bar tacking seams are not cut by the knife.

### ★ Changing the work clamp check

Use work clamp check ⑥ having the size nearly the same as that of a buttonhole length.

By removing setscrew ⑦, a work clamp checks can be changed together with a work clamp check holder as a set.

## 22. ADJUSTING THE OVEREDGING WIDTH AND OVEREDGING REFERENCE POSITION

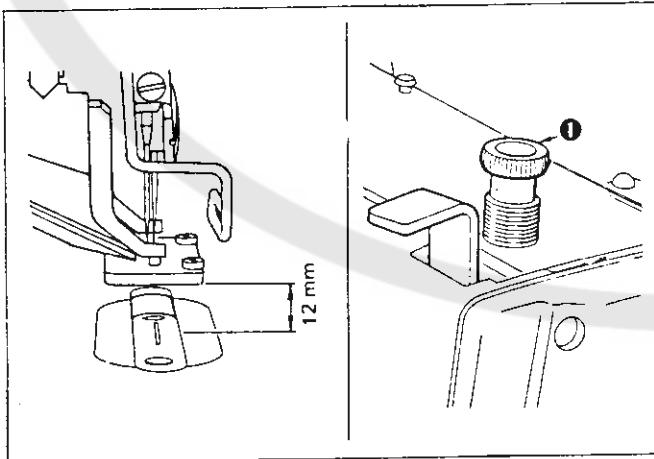


The needle swings from right to left with the right base line established as the reference position.

Perform the adjustment as follows:

1. To adjust stitch width A, screw in or out screw ①, and set pointer ② to a desired value on scale plate ③. The actually sewn stitch width will be the half of the set scale value (mm).
2. For adjustment of bar tacking width B, screw in or out screw ④, and set pointer ⑤ to the value indicated by scale plate pointer ②, making the bar tacking width twice as large as the stitch width.
3. Adjust the position of right base line C by screwing in or out screw ⑥ so that it is kept away from the cutting line of the knife. As screw ⑥ is screwed in, the right base line moves to the left.
4. Through your trial sewing, further perform fine adjustment.
5. It is not necessary to adjust the position of left base line D since it remains unchanged when the stitch width is changed. However, the left base line should be moved to the left by screwing in screw ⑦ if it is cut by the knife.

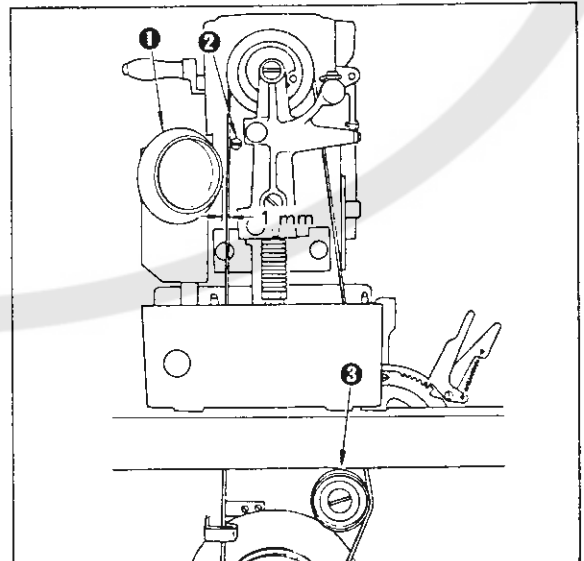
## 23. ADJUSTING THE PRESSER BAR PRESSURE



The presser bar goes up 12mm when the pedal is fully stepped down.

To adjust the pressure applied by the presser bar to fabric, turn presser spring regulator ①. When the pressure is not enough to prevent fabric from puckering, turn regulator ① clockwise.

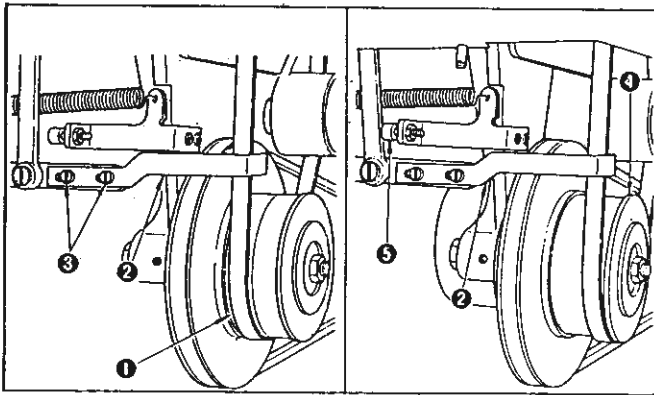
## 24. ADJUSTION THE BOBBIN THREAD WINDER



Loosen screw ② to make adjustment so that the clearance between bobbin thread winder pulley ① and belt ② becomes approx. 1mm (33/64") when pulley ① is apart from the belt.

If, however, the belt touches the pulley, adjust the tension by tension pulley ③ to decrease the deflection of the belt. And if the belt still touches the pulley, increase the clearance to more than 1mm (3/64").

## 25. ADJUSTING THE SPEED TRANSMITTER



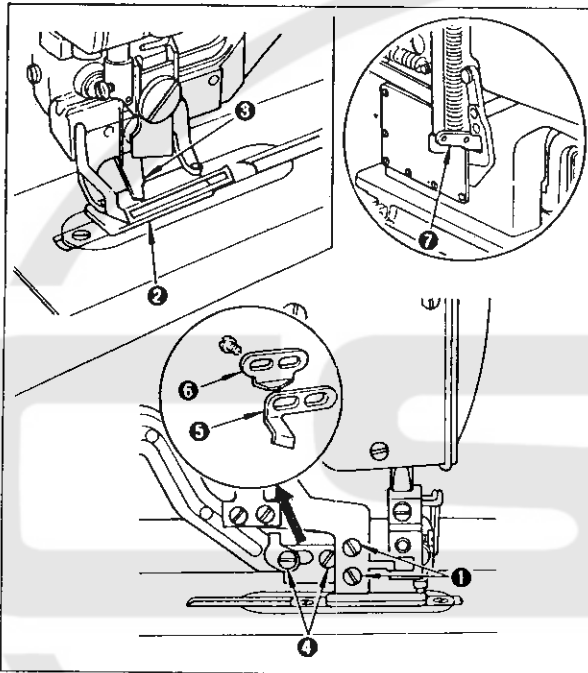
### ★ Adjustment of the position of the belt shifter

When the hand stop crank is turned down to the low speed position; loosen screw ③ and allow the belt to move onto low-speed pulley ①, moving the position of belt shifter ②.

### ★ Adjusting the stopper screw

Perform adjustment by stopper screw ⑤ so that belt shifter ② does not cause the belt to come off high-speed pulley ④ during high speed operation.

## 26. ADJUSTMENT OF THE NEEDLE THREAD TRIMMER



### ★ Attaching the trimmer

Loosen setscrew ①, and adjust the height of trimmer ③. Set the height of trimmer ③ as low as possible, provided that it does not touch work clamp check ②, in order to minimize the length of remaining thread on the needle after trimming.

### ★ Closing timing of the needle thread trimmer

Adjust the closing timing of the needle thread trimmer so that the trimmer completely closes when it advances farthest. To perform the adjustment, loosen screw ④, and move needle thread trimmer driving plate A ⑤ back and forth. When the needle thread trimmer driving plate is moved towards you, the closing timing is delayed with reduced amount of closing.

(NOTE) Confirm that an allowance of 0.3 to 0.5 mm is left between the blades of the trimmer when the trimmer has completely closed.

If there is no such allowance, the trimmer would interfere with the operation of the needle thread trimmer driving plate, preventing smooth movement of lifting lever ⑦.

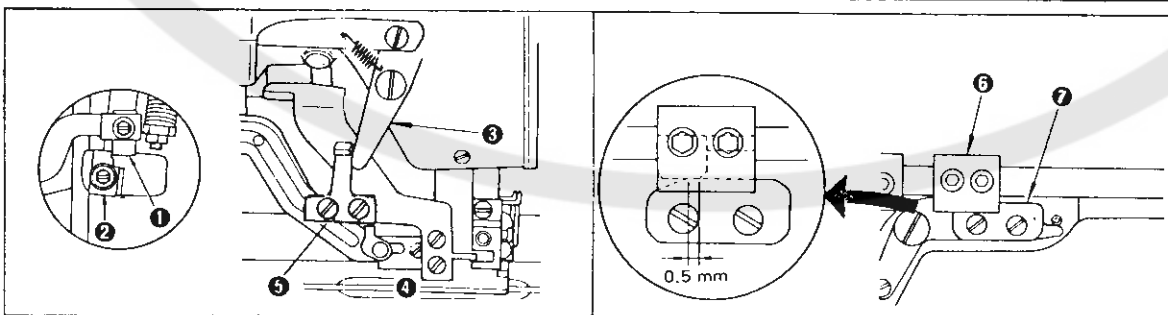
### ★ Opening timing of the needle thread trimmer

Adjust the timing of the thread trimmer so that the trimmer begins to open gradually at a distance of approx. 2.5 to 3mm (3/32" to 1/8") from the start.

To perform the adjustment, loosen screw ④, and move needle thread trimmer driving plate B ⑥ back and forth. As it moves towards you, the trimmer begins to open earlier.

(NOTE): Take care not to cause the already fixed needle thread trimmer driving plate A to get out of position.

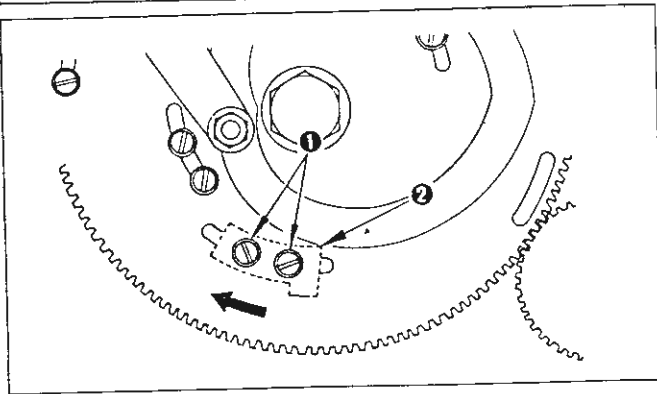
## 27. ADJUSTMENT OF NEEDLE THREAD TRIMMER HOLDER AND LIMITING PLATE



Loosen setscrew ④, and install and adjust limiting plate ⑤ so that it comes in contact with the blocking arm ③ at the time of slow start of the machine (when latch B ① is engaged with latch A ②).

Needle thread trimmer holder ⑥ should be installed in such manner that it engages with cam ⑦ by 0.5mm (1/64") when the needle thread trimmer opens.

## 28. TIMING FOR DROPPING THE KNIFE



Loosen screws ①, and move knife tripping segment ② in the direction shown by the arrow, and the knife will drop earlier. Adjust it so that the knife drops two to three stitches before the machine stops.

## 29. STITCHING TROUBLES CAUSED BY OTHER REASONS

Trouble	Cause	Remedy
1. Starting pedal does not work. (The work clamp arm is not lifted up fully.)	(1) Needle plate, needle plate base or bobbin thread trimmer is clogged with fibrous dust. (2) The needle thread trimmer is interfered by the work clamp check or the trimmer driving plate.	<ul style="list-style-type: none"> <li>○ Tilt the machine head and clean them up.</li> <li>○ Readjust the installation of the trimmer, or the position of the trimmer driving plate.</li> </ul>
2. Machine does not reach the high speed even when the pedal is stepped down fully.	(1) The hand stop crank is not in the correct position. (2) The belt shifter of the speed transmitter has not changed to the high speed pulley.	<ul style="list-style-type: none"> <li>○ Correct the position of the hand stop crank.</li> <li>○ Lubricate the shifter driving pin.</li> </ul>
3. A loud noise is produced with a stop-motion, or sewing speed does not lower at the end of sewing.	(1) Improper setting of the low speed cam for small numbers of stitches. (2) The flat belt is too loose. (3) The low speed V belt is too loose.	<ul style="list-style-type: none"> <li>○ Readjust the setting of the low speed cam.</li> <li>○ Increase the belt tension by the tension pulley.</li> <li>○ Increase the tension of the V belt by the motor.</li> </ul>
4. Stop-motion is not smooth.	(1) Stop-motion lever needs lubrication. (2) The belt shifter of the speed transmitter has not changed to the low speed pulley.	<ul style="list-style-type: none"> <li>○ Lubricate the stop-motion lever.</li> <li>○ Readjust the position of the belt shifter.</li> </ul>
5. The machine does not lubricate.	(1) Oil level in the oil reservoir is too low. (2) Oil is not circulated.	<ul style="list-style-type: none"> <li>○ Fill the lubricating oil up to "HIGH" mark.</li> <li>○ Apply oil to the oil return felts.</li> </ul>
6. Knife is dropped during high speed rotation.	(1) Position of the knife tripping segment is not correct. (2) The setting of the low speed cam for numbers of stitches is not correct.	<ul style="list-style-type: none"> <li>○ Adjust the position of the driving cam so that the knife is dropped down at a delayed timing.</li> <li>○ Correct the setting of the low speed cam.</li> </ul>
7. Knife is dropped even if the needle thread is broken.	(1) The machine is threaded incorrectly.	<ul style="list-style-type: none"> <li>○ Correct the threading.</li> </ul>
8. Needle is broken.	(1) The needle is bent. (2) The needle and the hook blade touch with each other. (3) Needle thread trimmer hits the needle when opening its blades.	<ul style="list-style-type: none"> <li>○ Replace the needle.</li> <li>○ Readjust the positions of the needle and the sewing hook.</li> <li>○ Readjust the position of the trimmer.</li> <li>○ Adjust so that the limiting plate and the blocking arm touch each other at the time of starting.</li> </ul>

### 30. TROUBLE, CAUSE, AND REMEDY

Trouble	Cause	Remedy
1. Needle thread is broken.	<ol style="list-style-type: none"> <li>(1) The tension of the tension controller No. 2 is too tight.</li> <li>(2) The tension or the stroke of the take-up spring is too great.</li> <li>(3) Blade point of sewing hook has burr or scratches.</li> <li>(4) Poor timing of the sewing hook.</li> <li>(5) The thread path has scratches.</li> <li>(6) The needle is too thin.</li> </ol>	<ul style="list-style-type: none"> <li>○ Decrease the tension of the tension controller No. 2</li> <li>○ Decrease the tension or the stroke of the take-up spring.</li> <li>○ Buff the blade point of the sewing hook, or replat the sewing hook.</li> <li>○ Readjust the sewing hook's timing by the timing gauge.</li> <li>○ Buff the thread path by cloth files, etc.</li> <li>○ Replace by a thick needle.</li> </ul>
2. Thread slips out of the needle.	<ol style="list-style-type: none"> <li>(1) The needle thread trimmer opens too early.</li> <li>(2) The needle thread trimmer opens when the work clamp check is coming down.</li> <li>(3) The whip stitch is not formed at the start of sewing.</li> <li>(4) Wrong threading.</li> </ol>	<ul style="list-style-type: none"> <li>○ Move back the needle thread trimmer driving plate B.</li> <li>○ Move back the needle thread trimmer driving plate B.</li> <li>○ Decrease the tension of the tension controller No. 1.</li> <li>○ Perform correct threading.</li> </ul>
3. Wobbling stitches are formed in the overedging seams.	<ol style="list-style-type: none"> <li>(1) The tension disc No. 2 is too loose.</li> <li>(2) The tension and stroke of the take-up spring is not enough.</li> <li>(3) Bobbin thread tension is too high.</li> </ol>	<ul style="list-style-type: none"> <li>○ Increase the tension of the tension disc No.2.</li> <li>○ Readjust the take-up spring.</li> <li>○ Decrease the bobbin thread tension (15 to 20g for purl stitches).</li> </ul>
4. Wobbling stitches are formed at the start of sewing.	<ol style="list-style-type: none"> <li>(1) The tension disc No. 1 is too loose.</li> <li>(2) The position of the needle thread trimmer is too high.</li> <li>(3) The stroke of the take-up spring is too great.</li> </ol>	<ul style="list-style-type: none"> <li>○ Increase the tension of the tension disc No. 1 (15 to 30g).</li> <li>○ Lower the trimmer as low as possible, provided it does not come in contact with the work clamp check.</li> <li>○ Decrease the stroke of the take-up spring, and increase the spring pressure.</li> </ul>
5. The needle thread at the first bar tacking comes out and lumps on the bottom of cloth.	<ol style="list-style-type: none"> <li>(1) The tension disc No. 1 is too loose.</li> <li>(2) The bobbin thread tension is too high.</li> </ol>	<ul style="list-style-type: none"> <li>○ Increase the tension of the tension disc No. 1.</li> <li>○ Decrease the bobbin thread tension (15 to 20g).</li> </ul>
6. Stitches float over cloth.	<ol style="list-style-type: none"> <li>(1) Bobbin thread tension is not enough.</li> <li>(2) Bobbin thread slips out of the thread path on the bobbin case.</li> </ol>	<ul style="list-style-type: none"> <li>○ Increase the bobbin thread tension.</li> <li>○ Properly thread the bobbin case.</li> </ul>
7. Stitches are skipped.	<ol style="list-style-type: none"> <li>(1) The work clamp check is too large for the buttonhole.</li> <li>(2) The cloth is made of light-weight materials.</li> </ol>	<ul style="list-style-type: none"> <li>○ Change the work clamp check with a smaller one.</li> <li>○ Delay the timing of the needle and the sewing hook. (Lower the needle bar by approx. 0.5mm (1/2"))</li> </ul>