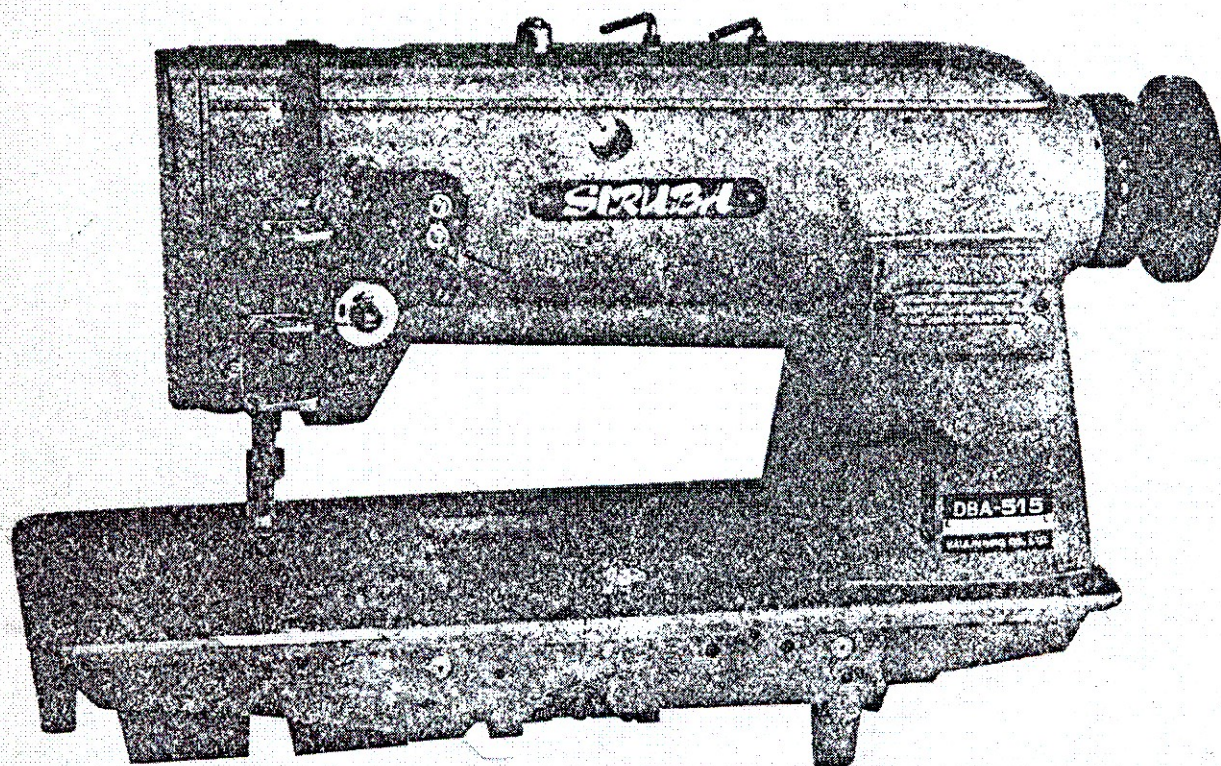


9908
SIRUBA®

INDUSTRIAL SEWING MACHINES

INSTRUCTIONS

DESCANTADO
original



DBA-510
DBA-515

DBA-520
DBA-525

KAULIN MANUFACTURING CO., LTD.

igual a mitsubishi DN-260

ARM BED

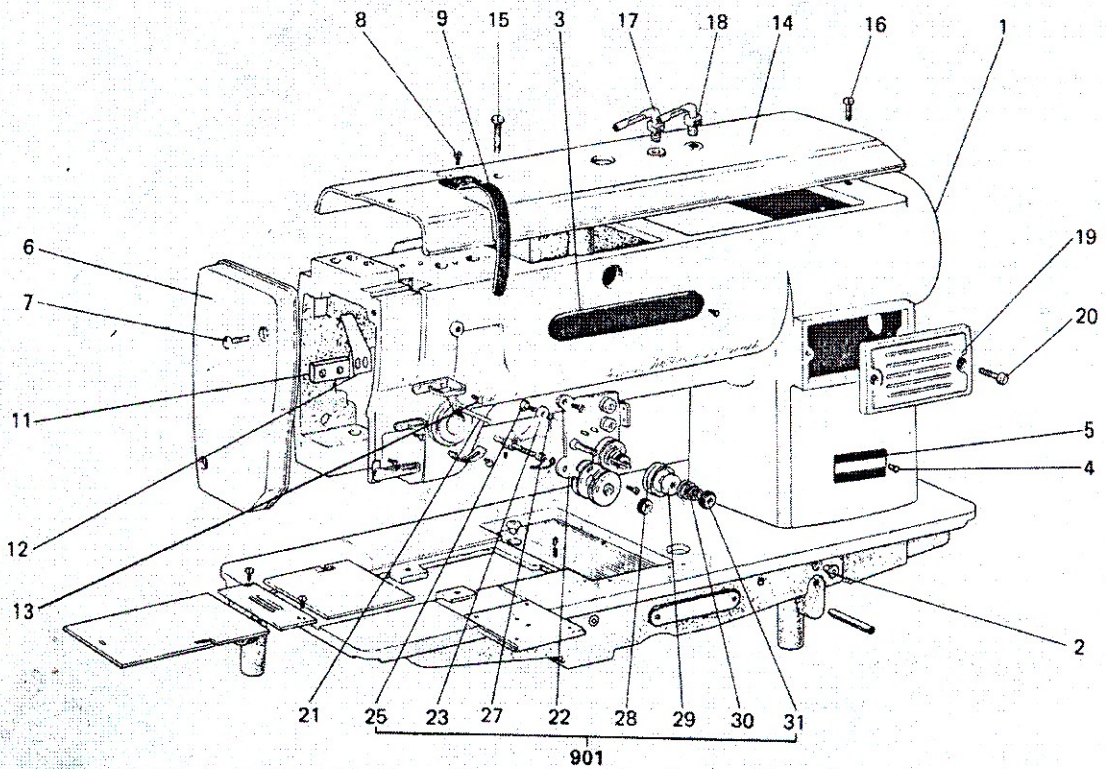


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	BBA-525	
1	E001 F001 G001 H001		Arm and bed Arm and bed Arm and bed Arm and bed	1	1	1	1	
2	G002		Cover	3	3	3	3	
3	G003		Name plate	1	1	1	1	
4	G004		Pin for name plate	6	6	6	6	
5	E005 F005 G005 H005		Model plate Model plate Model plate Model plate	1	1	1	1	
6	G006		Face plate	1	1	1	1	
7	S091		Screw for face plate	2	2	2	2	SM11/64(40)x9
8	G008		Face plate holder stud	1	1	1	1	
9	G009		Thread take-up cover	1	1	1	1	
10	G010		Face plate set spring	1	1	1	1	SM3/16(28)x10
11	G011		Washer	1	1	1	1	
12	G012		Oil rejector	1	1	1	1	
13	S095		Screw	1	1	1	1	
14	G014		Top cover	1	1	1	1	SM9/64(40)x14.5
15	S081		Screw for top cover	1	1	1	1	
16	S080		Screw for top cover	1	1	1	1	SM9/64(40)x23.5
17	G017		Thread guide for top cover	2	2	2	2	
18	N007		Thread guide nut	2	2	2	2	
19	G019		Front cover	1	1	1	1	SM11/64(40)x9
20	S091		Front cover screw	2	2	2	2	
21	G021		Thread releasing pin (large)	1	1	1	1	
22	G022		Thread regulator plate	1	1	1	1	SM9/64(40)
23	G023		Thread releasing plate	1	1	1	1	
25	G025		Screw	2	2	2	2	
26	G026		Tension screw cover	1	1	1	1	
27	G027		Reverse spring	1	1	1	1	
28	G028		Tension disc	4	4	4	4	
29	G029		Disc Presser	2	2	2	2	
30	G030		Tension spring	2	2	2	2	
31	G031		Tension nut	3	3	3	3	
32	G032		Thread regulator plate pin	4	4	4	4	
901	G901		Thread tension regulator Assy	1	1	1	1	

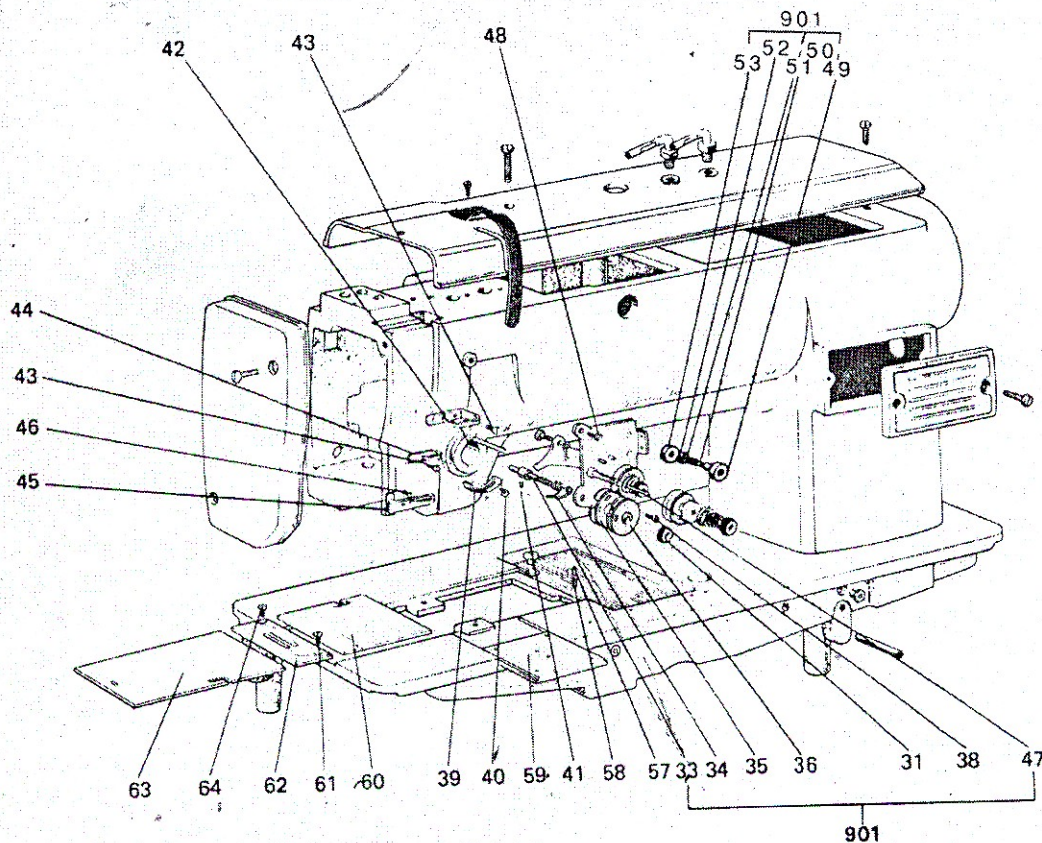


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
33	G033		Tension stud	1	1	1	1	
34	G034		Take-up spring	1	1	1	1	
35	G035		Thread controller disc (1)	2	2	2	2	
36	G036		Thread controller disc (2)	2	2	2	2	
37	G037		Thread controller stud	2	2	2	2	
38	G038		Screw	1	1	1	1	SM3/32(56)x12
901	G901		Thread tension regulator Assy.	1	1	1	1	
39	G039		Tension spring stopper	1	1	1	1	SM9/64(40)x4.8
40	S072		Screw	1	1	1	1	
41	S109		Screw	2	2	2	2	SM15/64(28)x10
42	G042		Thread guide (upper)	1	1	1	1	
43	S078		Screw	2	2	2	2	SM9/64(40)x5.5
44	G044		Thread guide (center)	1	1	1	1	
45	G045		Thread guide (lower)	1	1	1	1	SM9/64(40)x4.8
46	S072		Screw	1	1	1	1	
47	G047		Thread releasing pin (small)	2	2	2	2	
48	S091		Screw	1	1	1	1	SM11/64(40)x9
49	G049		Thread controller cover	2	2	2	2	
50	G050		Screw	2	2	2	2	SM9/64(40)x6.5
51	G051		Upper thread tension spring	2	2	2	2	
52	G052		Thread guide disc	2	2	2	2	
53	G053		Thread guide bracket	2	2	2	2	
57	G057		Pin	1	1	1	1	
58	G058		Spring	1	1	1	1	
59	G059		Slide plate (front)	1	1	1	1	
60	G060		Slide plate (right)	1	1	1	1	
61	G092		Screw	1	1	1	1	SM11/64(40)x6
62	GL14		Needle plate	1	1	1	1	
63	G063		Slide plate (left)	1	1	1	1	
64	S119		Screw	1	1	1	1	SM9/64(36)x6.5

PRESSER FOOT MECHANISM

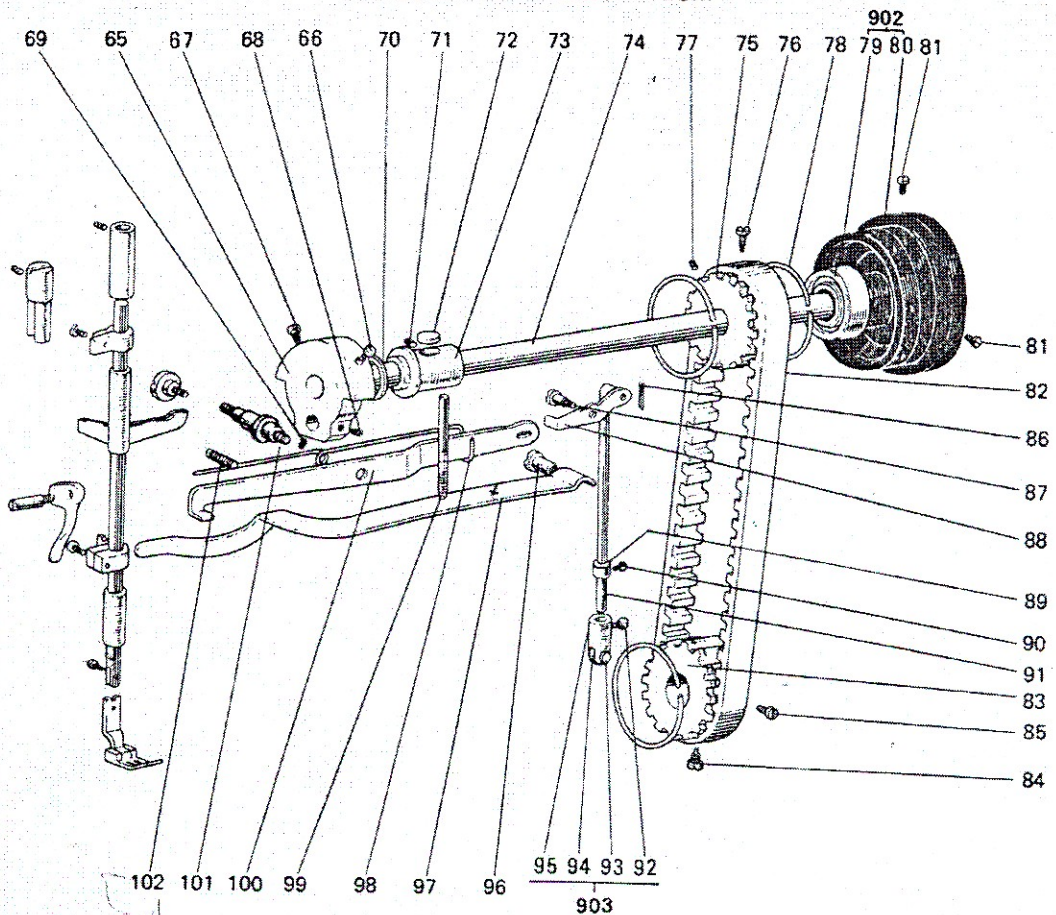


Fig. No.	Part No.	Code No.	Name of Part	Amt. req.				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
65	G065 H085		Needle bar crank	1	1	1	1	
66	S122		Position screw	1	1	1	1	
67	S121		Screw	1	1	1	1	SM9/32(28)x14
68	S110		Set screw	1	1	1	1	SM9/32(28)x13 SM15/64(28)x6.5
69	S111		Set screw	1	1	1	1	
70	G070		Ring	1	1	1	1	SM15/64(28)x4.5
71	S131		Screw for arm shaft bushing	1	1	1	1	SM1/4(24)x14
72	G072		Felt	1	1	1	1	
73	G073		Arm shaft bushing	1	1	1	1	
74	G074		Arm shaft	1	1	1	1	
75	G075		Belt pulley (upper)	1	1	1	1	
76	S104		Screw	1	1	1	1	
77	S108		Screw	1	1	1	1	SM15/64(28)x14.8 SM15/64(28)x12
78	G078		Spring flange	3	3	3	3	
79	G079		Ball bearing (upper shaft)	1	1	1	1	
80	G080		Balance wheel	1	1	1	1	
81	S108		Set screw	2	2	2	2	
902	G902		Balance wheel Assy.	1	1	1	1	SM15/64(28)x12
82	G082		Timing belt	1	1	1	1	
83	G083		Belt pulley (lower)	1	1	1	1	
84	S114		Screw	1	1	1	1	
85	S115		Screw	1	1	1	1	SM15/64(28)x11 SM15/64(28)x10
86	G086		Split pin	1	1	1	1	
87	S127		Screw	1	1	1	1	
88	G088		Knee lifter lever	1	1	1	1	SM1/4(24)
89	G089		Collar	1	1	1	1	
90	SA29		Screw	1	1	1	1	
91	G091		Lifting rod	1	1	1	1	SM11/64(40)x6.5
903	G903		Rod roller bracket Assy.	1	1	1	1	
92	SA29		Screw	1	1	1	1	
93	S076		Screw	1	1	1	1	SM11/64(40)x6.5 SM9/64(40)
94	G094		Rod roller	1	1	1	1	
95	G095		Red roller bracket	1	1	1	1	
96	S125		Screw	1	1	1	1	
97	G097		Presser spring	1	1	1	1	SM1/4(24)
98	G098		Lifting lever spring	1	1	1	1	
99	G099		Spring regulating screw	1	1	1	1	
100	G100		Lifting lever	1	1	1	1	
101	G101		Lifting lever hinge screw	1	1	1	1	
102	S128		Spring stop screw	1	1	1	1	SM1/4(24)x20

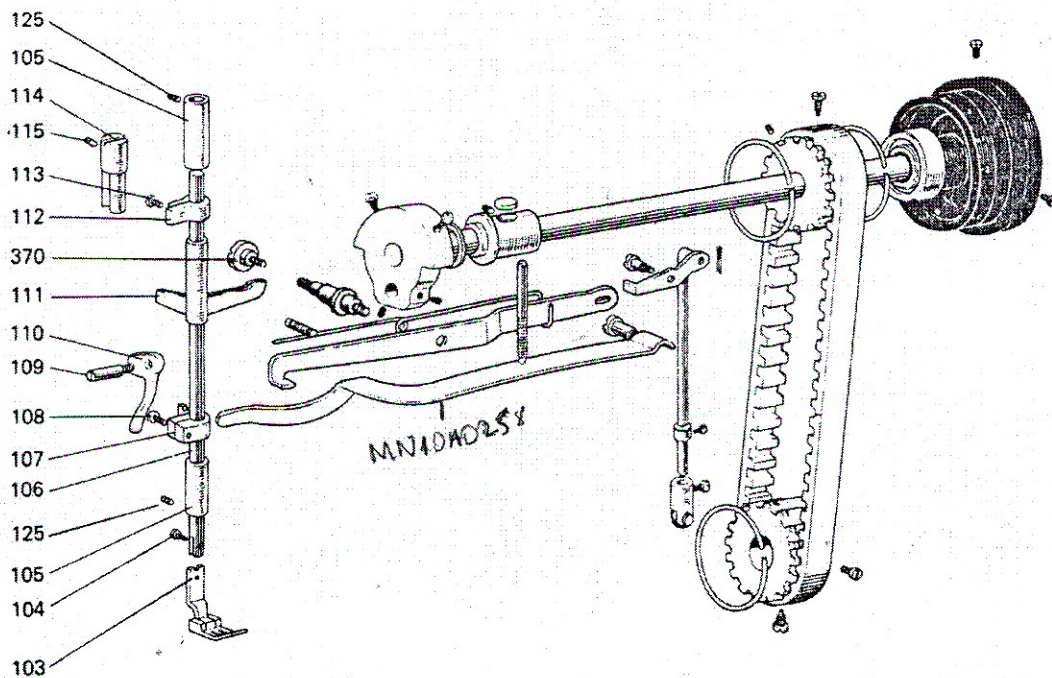


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
103	GP14 HP14		Presser foot Presser foot	1	1	1	1	
104	S100		Screw	1	1	1	1	SM1/8(44)
105	G105		Presser bar bushing	2	2	2	2	
106	G106		Presser bar	1	1	1	1	
107	G107		Spring bracket	1	1	1	1	SM9/64(40)x8.2 SM3/16(28)
108	S071		Screw	1	1	1	1	
109	S098		Hinge screw	1	1	1	1	
110	G110		Presser bar lifter	1	1	1	1	
111	G111		Releasing lever bracket	1	1	1	1	
112	G112		Presser bar guide lever	1	1	1	1	
113	S074		Pinch screw	1	1	1	1	SM9/64(40)x6.7
114	G114		Presser bar position guide	1	1	1	1	
115	S130		Set screw	1	1	1	1	SM1/4(24)x8
370	S126		Hinge screw	1	1	1	1	SM1/4(24)

THREAD TAKE-UP MECHANISM

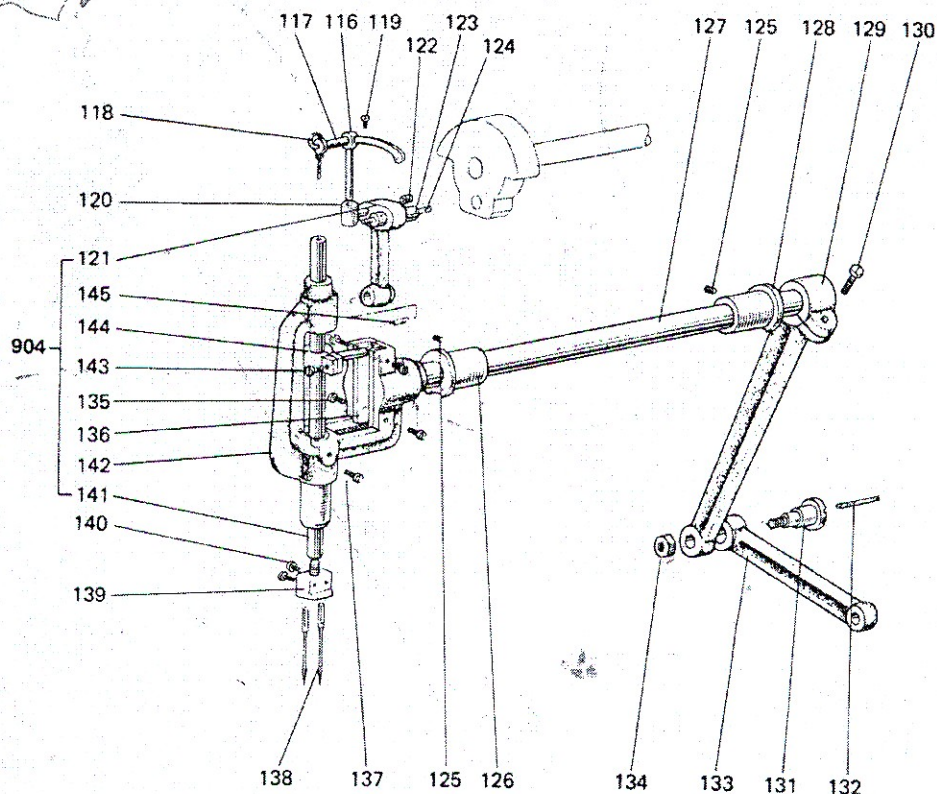


Fig No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
116	G116 H116		Thread take-up lever Thread take-up lever	1	1	1	1	
117	G117		Take-up lever support stud	1	1	1	1	
118	G118		Oil wick	1	1	1	1	
119	S108		Screw	1	1	1	1	SM15/64(28)x12
120	G120		Take-up slide block	1	1	1	1	
121	G121		Needle bar connection link	1	1	1	1	
122	G122		Plug (aluminium)	1	1	1	1	
123	G123		Crank pin	1	1	1	1	
124	G124		Felt	1	1	1	1	
125	S130		Screw	6	6	6	6	SM1/4(24)x8
126	G126		Needle bar rock frame rock shaft bushing(left)	1	1	1	1	
127	G127		Needle bar rock frame rock shaft	1	1	1	1	
128	G128		Needle bar rock frame rock shaft bushing(right)	1	1	1	1	
129	G129		Needle bar rock frame rock shaft Crank	1	1	1	1	
130	S124		Screw	1	1	1	1	
131	G131		Hinge screw	1	1	1	1	SM1/4(24)x16
132	G132		Oil wick	1	1	1	1	
133	G133		Rock shaft crank link	1	1	1	1	
134	N012		Nut	1	1	1	1	SM5/16(24)
135	S123		Screw	4	4	4	4	SM3/32(56)x3.5
136	G136		Spacer	2	2	2	2	
137	S102		Screw	4	4	4	4	SM1/8(44)x3.5
138	G138 H138		Needle Needle	2	2	2	2	
139	GC14		Needle clamp	1	1	1	1	
140	S084		Set screw	2	2	2	2	SM9/64(40)x4.2
141	G141		Needle bar	1	1	1	1	
142	G142		Needle bar rock frame	1	1	1	1	
143	S071		Screw	1	1	1	1	
144	G144		Needle bar connecting stud	1	1	1	1	SM9/64(40)x8.2
145	G145		Felt	1	1	1	1	
904	G904		Needle bar rock frame Assy	1	1	1	1	

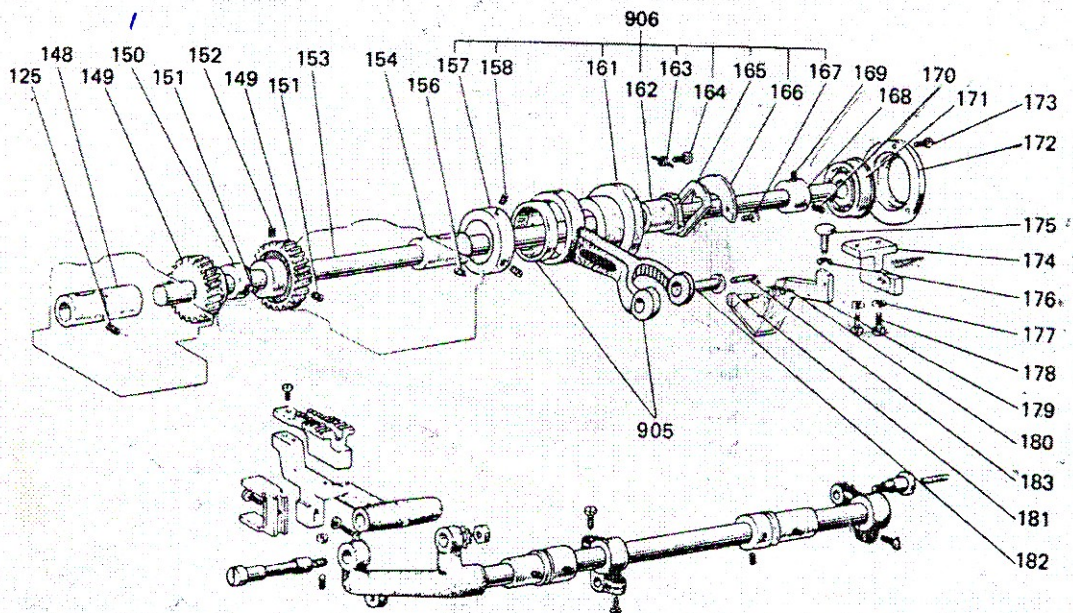
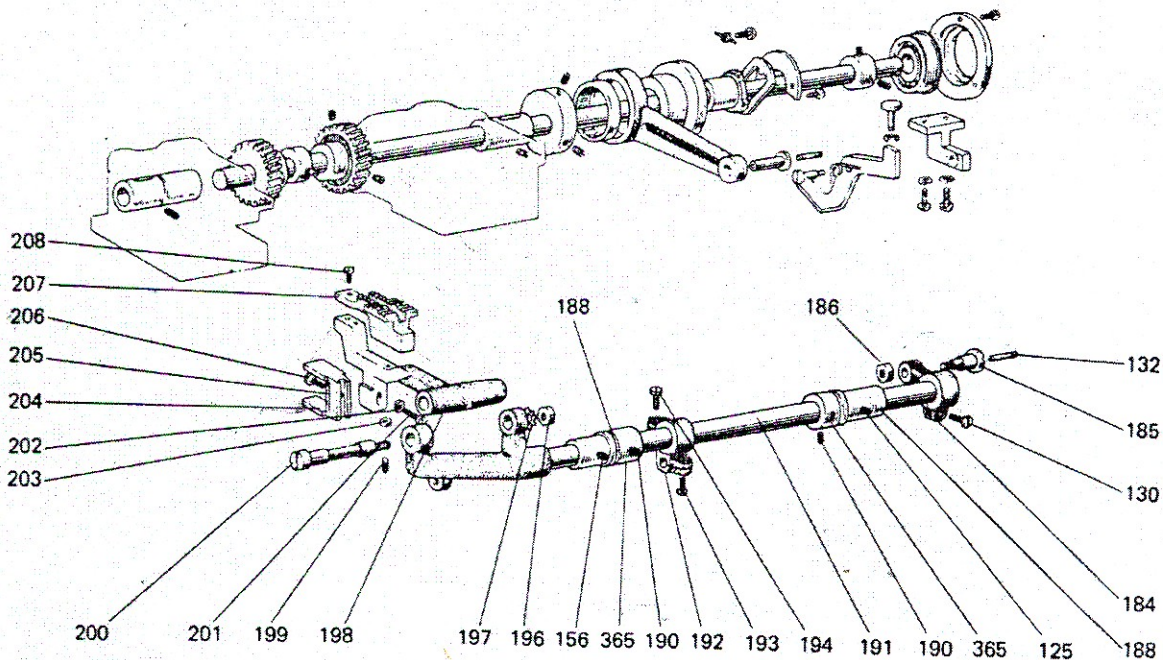


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
148	G148		Hook driving shaft bushing(left)	1	1	1	1	
149	G149		Gear(large)	2	2	2	2	
150	G150		Feed lifting cam	1	1	1	1	
151	S136		Screw	2	2	2	2	SM1/4(40)x6
152	S135		Screw	8	8	8	8	SM1/4(40)x5.2
153	G153		Hook driving shaft	1	1	1	1	
154	G154		Hook driving shaft bushing(right)	1	1	1	1	
156	S131		Screw	2	2	2	2	SM1/4(24)x14
157	G157		Collar	1	1	1	1	
158	S109		Screw	2	2	2	2	SM15/64(28)x10
159	G159		Needle bearing	1	1	1	1	(NTN)INA-SC208
160	G160		Feed connection	1	1	1	1	
161	G161		Eccentric link	1	1	1	1	
162	G162		Eccentric	1	1	1	1	
163	G163		Spring	1	1	1	1	
164	S082		Screw	1	1	1	1	SM9/64(40)
165	G165		Friction plate	1	1	1	1	
166	G166		Cover plate	1	1	1	1	
167	S072		Screw	2	2	2	2	SM9/64(40)x4.8
168	G168		Needle bar connecting stud	1	1	1	1	SM1/4(40)x5.2
169	S135		Screw	1	1	1	1	
170	S136		Screw	1	1	1	1	SM1/4(40)x6
171	G171		Ball bearing(lower shaft)	1	1	1	1	6203ZZ
905	E905		Feed connection Assy.	1	1	1	1	
906	G906		Feed regulator Assy.	1	1	1	1	
172	G172		Bearing holder	1	1	1	1	
173	S074		Screw	3	3	3	3	SM9/64(40)x6.7
174	G174		Lever bracket	1	1	1	1	
175	G175		Push button	1	1	1	1	
176	G176		Stop ring	1	1	1	1	
177	G177		Spring washer	2	2	2	2	
178	S088		Screw	2	2	2	2	SM11/64(40)x12
179	G179		Push button lever	1	1	1	1	
180	G180		Twisted spring	1	1	1	1	
181	S087		Screw	1	1	1	1	SM11/64(40)
182	G182		Pin	1	1	1	1	
183	G183		Oil wick	1	1	1	1	

LOWER FEED MECHANISM

[illegible]

HOOK MECHANISM

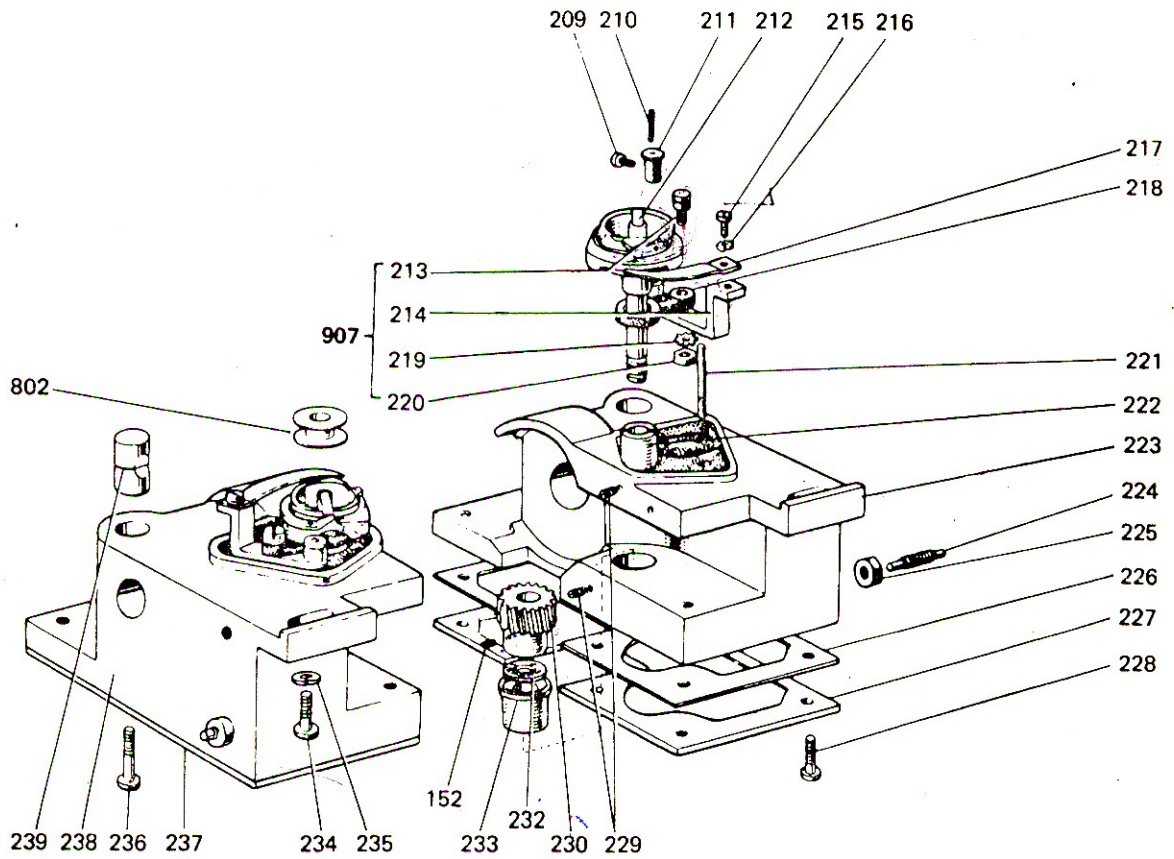


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
209	S097		Screw	2	2	2	2	SM3/16(28)x21
210	G210		Oil wick	2	2	2	2	
211	G211		Opener supporter	2	2	2	2	
212	G212 H212		Rotating hook Assy, Rotating hook Assy,	2	2	2	2	HSH-12-15M HSH- 12-15MM
213	G213		Bobbin case opener lever pin	2	2	2	2	
214	G214 H214		Robbin case opener lever Bobbin case opener lever	2	2	2	2	
215	S072		Screw	2	2	2	2	SM9/64(40)x4.8
216	G216		Washer	2	2	2	2	
217	G217		Bobbin case opener	2	2	2	2	
218	G218		Bobbin case opener lever link	2	2	2	2	SM3/16(32)
219	W001		Toothed washer	2	2	2	2	
220	N008		Nut	2	2	2	2	
221	G221		Oil gauge	2	2	2	2	
222	G222 H222		Hook driving shaft bushing(upper) Hook driving shaft bushing(upper)	2	2	2	2	
223	G223 H223		Hook saddle(right) Hook saddle(right)	1	1	1	1	
224	S103		Cock screw	2	2	2	2	SM3/16x(32) SM3/16(32)
225	N008		Nut	2	2	2	2	
226	G226		Gasket	2	2	2	2	
227	G227		Oil cover (hook saddle left)	1	1	1	1	SM3/16(28)x11
228	S096		Screw	16	16	16	16	
907	G907 H907		Bobbin case opener Assy, Bobbin case opener Assy,	1	1	1	1	
229	S111		Screw	4	4	4	4	SM15/64(28)x4.5
230	G230		Hook shaft gear (small)	2	2	2	2	
232	G232		Washer	2	2	2	2	
233	G233		Hook driving shaft bushing(lower)	2	2	2	2	SM1/4(24)x24
234	S129		Screw	2	2	2	2	
235	W235		Washer	2	2	2	2	
236	S106		Screw	2	2	2	2	SM15/64(28)x28
237	G237		Oil cover	1	1	1	1	
238	G238 H238		Hook saddle (left) Hook saddle (left)	1	1	1	1	
239	G239		Pinching bushing	2	2	2	2	

LUBRICATION MECHANISM

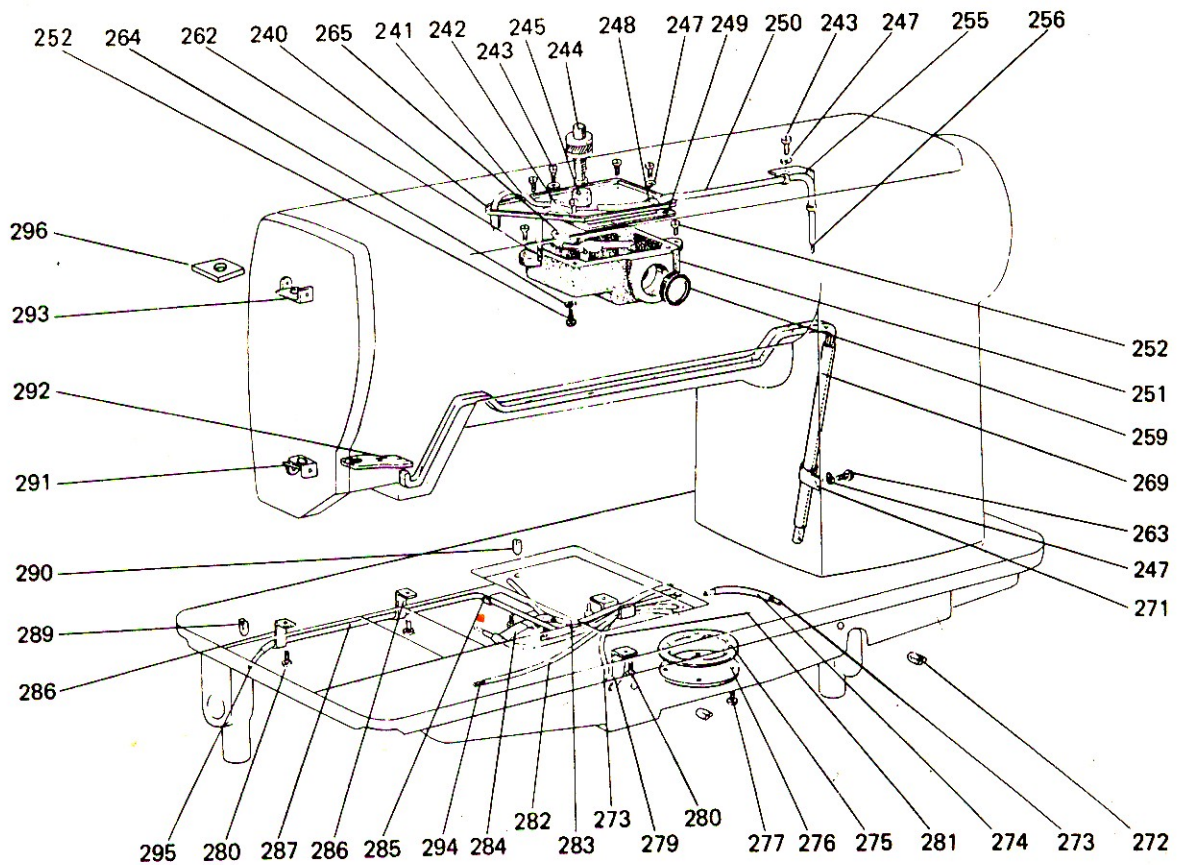


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
240	G240		Drip pan cover	1	1	1	1	
241	E241		Oil wick	1	1	1	1	
242	G242		Pipe holder	1	1	1	1	
243	S074		Screw	6	6	6	6	SM9/64(40)x6.7
244	G244		Oil plunger	1	1	1	1	
245	G245		Bushing	1	1	1	1	
247	W247		Spring washer	8	8	8	8	
248	G248		Pine holder	1	1	1	1	
249	G249		Packing	1	1	1	1	
250	G250		Vinyl pipe	1	1	1	1	
251	G251		Oil tank	1	1	1	1	
252	S071		Screw	2	2	2	2	SM9/64(40)x8.2
255	G255		Pipe holder	1	1	1	1	
256	E256		Oil wick	1	1	1	1	
259	G259		Oil flow indicator	1	1	1	1	
262	G262		Felt	1	1	1	1	
263	S072		Screw	1	1	1	1	SM9/64(40)x4.8
264	W264		Spring washer	2	2	2	2	
265	G265		Pipe holder	1	1	1	1	
269	G269		Vinyl pipe	1	1	1	1	
271	G271		Pipe holder	1	1	1	1	
272	E272		Oil wick	2	2	2	2	
273	E273		Oil wick	2	2	2	2	
274	G274		Vinyl pipe	2	2	2	2	
275	G275		Packing	1	1	1	1	
276	G276		Cover	1	1	1	1	
277	S093		Screw	4	4	4	4	SM11/64(40)x12
279	G279		Pipe holder	1	1	1	1	
280	S072		Screw	5	5	5	5	SM9/64(40)x4.8
281	G281		Vinyl pipe	1	1	1	1	
282	G282		Vinyl pipe	1	1	1	1	
283	G283		Vinyl pipe	1	1	1	1	
284	G284		Pipe holde	1	1	1	1	
285	G285		Pipe holder	1	1	1	1	
286	G286		Pipe holder	2	2	2	2	
287	G287		Vinyl pipe	1	1	1	1	
289	E289		Oil wick	1	1	1	1	
290	E290		Oil wick	1	1	1	1	
291	G291		Felt holder (2)	1	1	1	1	
292	G292		Felt	1	1	1	1	
293	G293		Felt holder (1)	1	1	1	1	
294	E294		Oil wick	1	1	1	1	
295	E295		Oil wick	1	1	1	1	

LUBRICATION MECHANISM

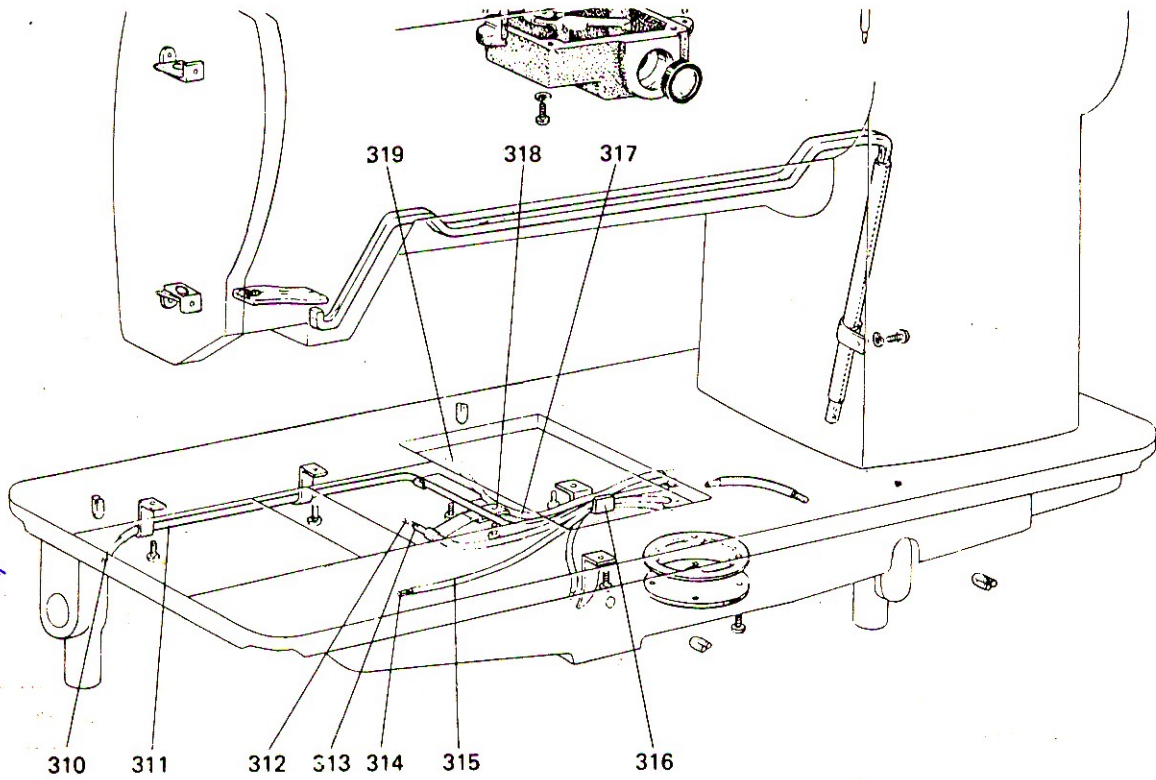


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
310	G310 H310		Oil wick Oil wick			1	1	
311	G311 H311		Vinyl pipe Vinyl pipe			1	1	
312	G312		Oil wick			1	1	
313	G313		Vinyl pipe			1	1	
314	G314		Oil wick			1	1	
315	G315		Vinyl pipe			1	1	
316	G316		Pipe holder			1	1	
317	G317		Vinyl pipe			1	1	
318	G318		Pipe holder			2	2	
319	G319		Oil wick			1	1	

REVERSE LEVER MECHANISM

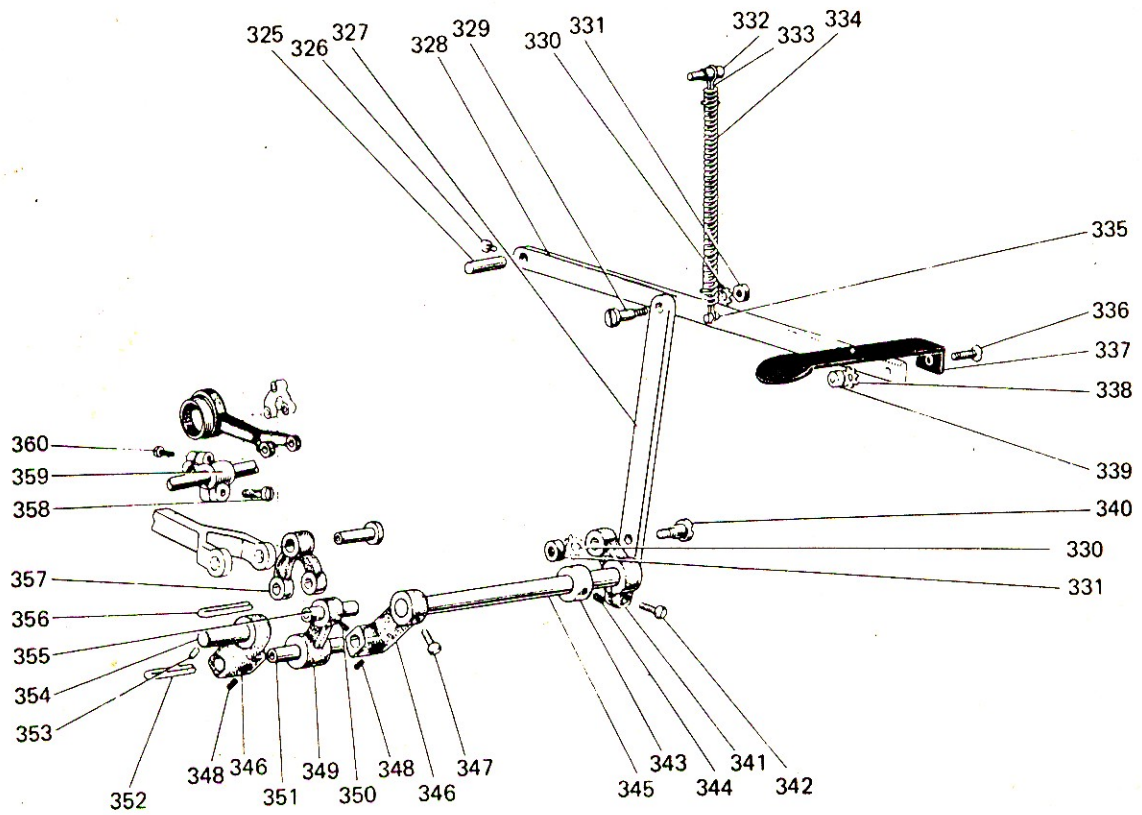


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
325	G325		Pin			1	1	SM9/64(40)x6.5
326	S074		Screw			1	1	
327	G327		Reverse lever connecting plate			1	1	
328	G328		Reverse stitch lever			1	1	SM15/64(28)
329	S107		Hinge screw			2	2	
330	W002		Lock washer					SM15/64(28)
331	N009		Nut			2	2	
332	G332		Spring guide pin			1	1	SM15/64(28)
333	G333		Hook for spring			2	2	
334	G334		Coil spring			1	1	SM3/16(28)x10
335	G335		Pin for spring			1	1	
336	S095		Screw			1	1	
337	G337		Reverse stitch plate			1	1	SM3/16(28)
338	W001		Lock washer			1	1	
339	N007		Nut			1	1	
340	S113		Hinge screw			1	1	SM15/64(28)
341	G341		Reverse stitch shaft crank (right)			1	1	SM11/64(40)x12
342	S093		Screw			1	1	
343	G343		Collar			1	1	SM15/64(28)x4.5
344	S111		Screw			2	2	
345	G345		Reverse stitch shaft			1	1	
346	G346		Reverse stitch shaft crank (left)			2	2	SM15/64(28) SM11/64(40)x6.8
347	S104		Screw			1	1	
348	S140		Screw			2	2	
349	G349		Bell crank			1	1	SM3/16(28)x5
350	S099		Screw			1	1	
351	G351		Pin			1	1	
352	E352		Oil wick			1	1	SM1/4(24)x7
353	S180		Screw			1	1	
354	G354		Pin			1	1	
355	G355		Pin			1	1	
356	E356		Oil wick			1	1	
357	G357		Link			1	1	
358	S124		Screw			1	1	SM1/4(24)x16
359	G359		Feed arm (left)			1	1	SM3/16(28)x15
360	S097		Screw			1	1	
361	G361		Feed connecting rod Assy,			1	1	

ACCESSORIES (ACCESSORIES BOX)

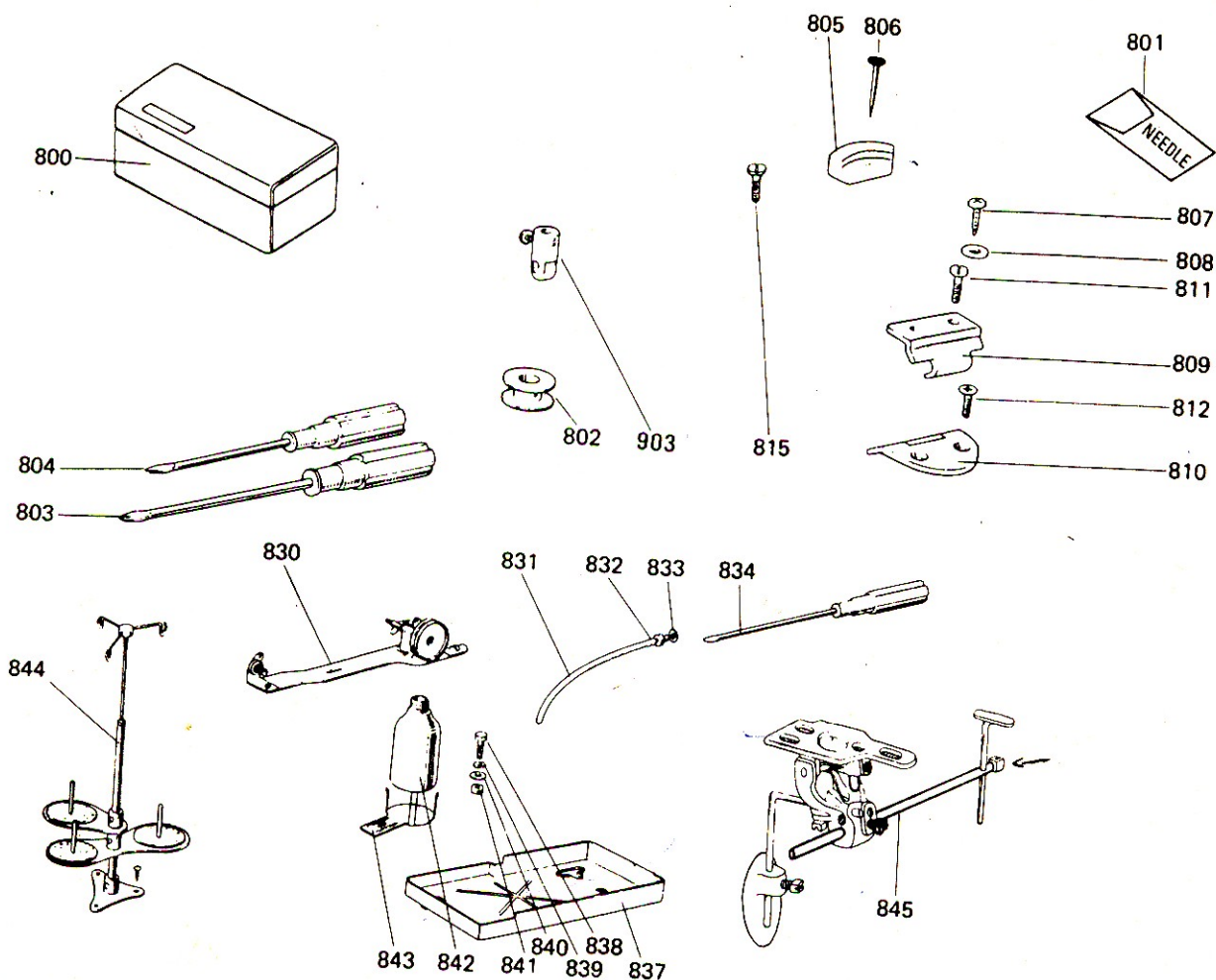
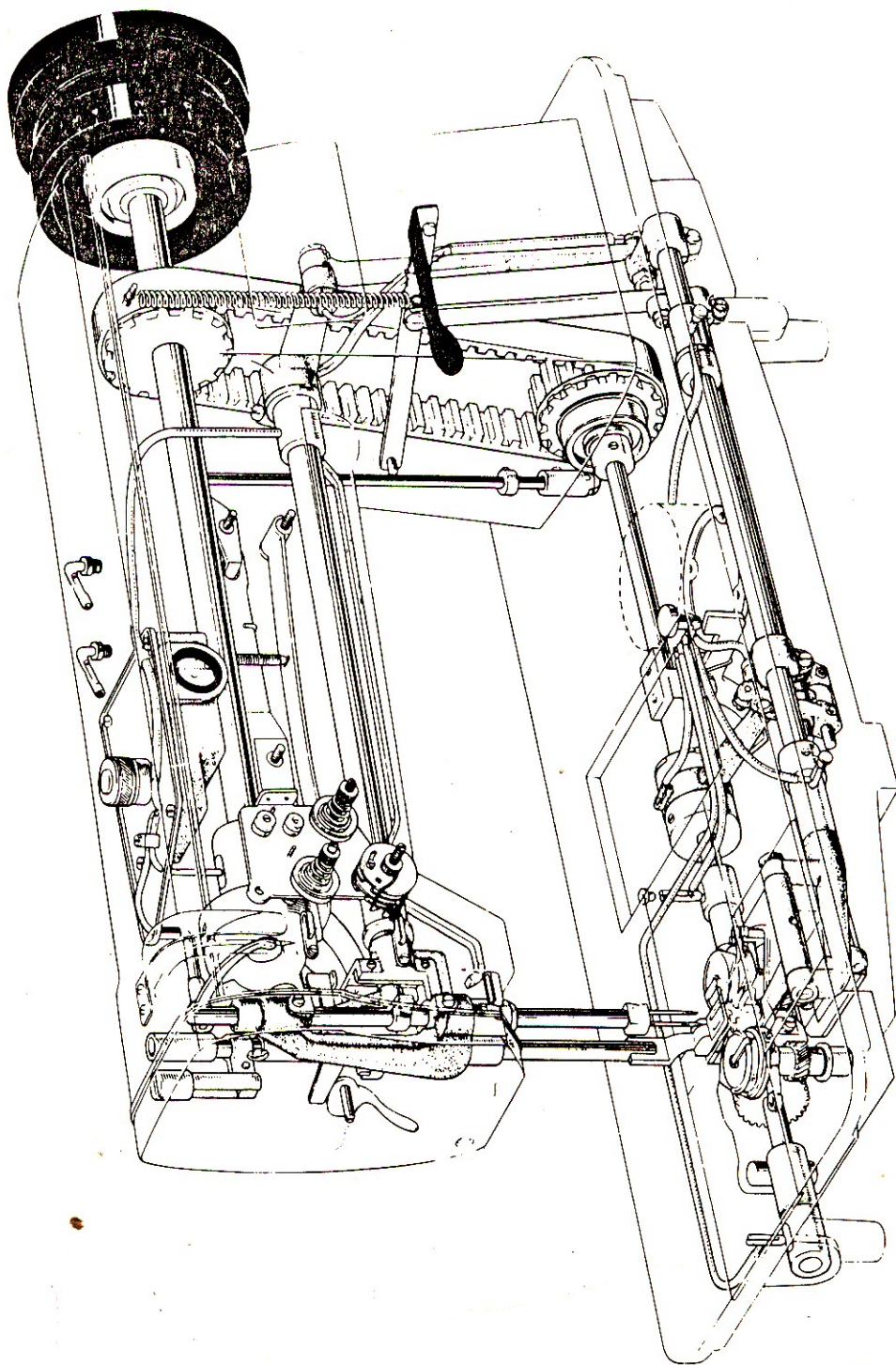


Fig. No.	Part No.	Code No.	Name of Part	Amt. req				Remarks
				DBA-510	DBA-515	DBA-520	DBA-525	
800	G800		Accessories box	1	1	1	1	
801	G801 H801		Needle Needle	10	10			
802	G802 H802		Bobbin Bobbin	4	4	10	10	DP x 5 # 14 DP x 5 # 21
803	G803		Screw driver (middle)	1	1	4	4	
804	G804		Screw driver (small)	1	1	1	1	
805	G805		Vibration preventing	4	4	4	4	
806	G806		Nail	9	9	9	9	
807	G807		Screw	2	2	2	2	
808	G808		Washer	2	2	2	2	4.5 x 20
809	G809		Hinge hook (1)	2	2	2	2	
810	G810		Hinge hook (2)	2	2	2	2	
811	G811		Screw	4	4	4	4	
812	G812		Screw	1	1	1	1	
903	G903		Roller (set)	4	4	4	4	5.5 x 25
815	G815		Screw	1	1	1	1	
830	G830		Bobbin winder Assy.	2	2	2	2	
831	G831		Bobbin winder Assy.	1	1	1	1	
832	G832		Vinyl pipe	1	1	1	1	
833	G833		Screw bushing	1	1	1	1	
834	G834		Packing	1	1	1	1	
837	G837		Screw driver (large)	1	1	1	1	
838	G838		Oil pan	1	1	1	1	
839	G839		Bolt	1	1	1	1	
840	G840		Spring washer	1	1	1	1	
841	G841		Washer	1	1	1	1	
842	G842		Nut	1	1	1	1	
843	G843		Oil bottle	1	1	1	1	
844	G844		Oil bottle holder	1	1	1	1	
845	G845		Cotton stud assembly	1	1	1	1	
			Knee lifter (set)	1	1	1	1	

TOTAL ASSY,



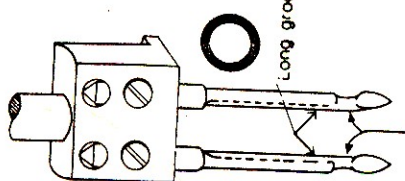
How to use the machine

1. To set the needles

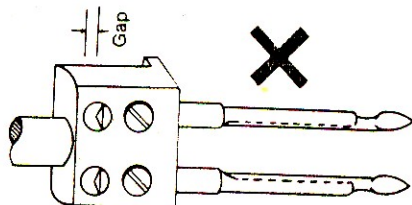
Caution:

Before making the following adjustment, be sure to turn off the power source switch.

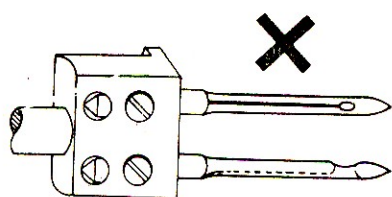
Insert the needles into the needle clamp as far as they will go, with the long grooves facing each other. Then tighten the needle clamp screws.



Insufficient insertion



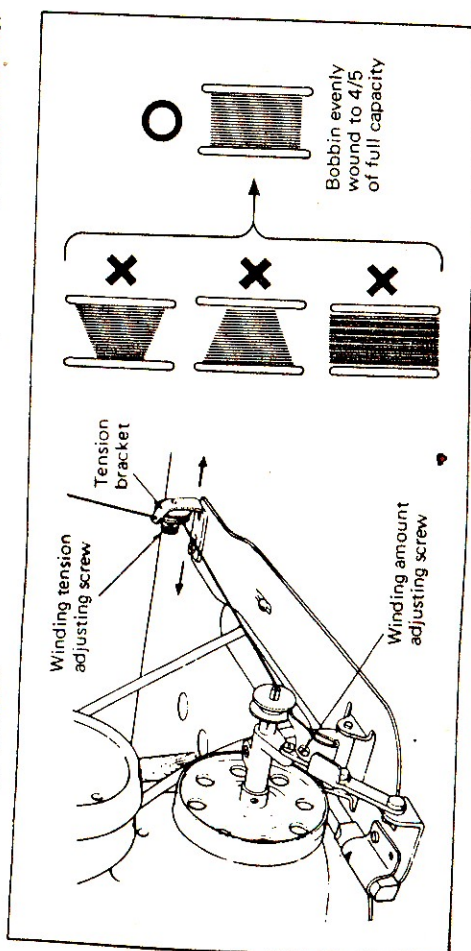
Needles facing the wrong direction.



2. To wind the bobbin

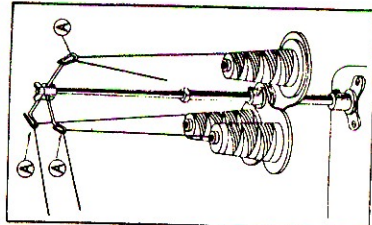
- When winding a bobbin with fine thread such as nylon or tetron threads, the bobbin should be wound loosely using a light tension.
- If bobbin does not wind evenly, move tension bracket to the left or right as required.
- If bobbin winds high on right, move bracket to left, and if bobbin winds high on left, move bracket to right.
- Bobbin should be wound to 4/5 of its capacity. For more thread on the bobbin, turn adjusting screw clockwise; for less thread, turn screw counterclockwise.

Note: Be sure to raise the presser foot when running the machine without material under the foot.



How to use the machine

3. Threading the machine



Note: The thread guide (A) should be positioned just above the thread spool.

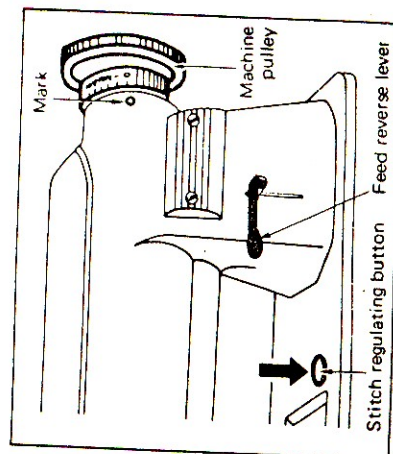
4. To adjust stitch length

Stitch length adjustment is achieved simply by depressing a button in the machine bed and turning the machine pulley.

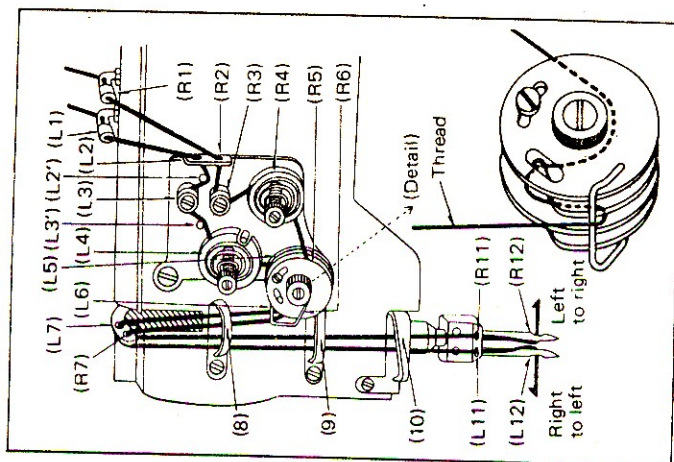
- Depress button and turn machine pulley slowly toward you until button sinks further into the machine bed and the machine pulley stops.
- Depress the button harder and turn machine pulley toward you, or away from you, to set stitch length graduation on the marking on arm. Release the button when desired setting is obtained.

Caution: NEVER depress the button while the machine is running.

To change the direction of feed for back tacking, depress feed reverse lever to lowest position until back tack is completed.

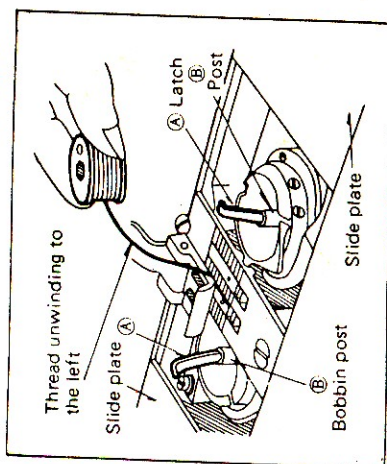


Raise the thread take-up lever to its highest position and pass the needle thread from the thread stand through threading points in the order shown below.



5. To replace the bobbin

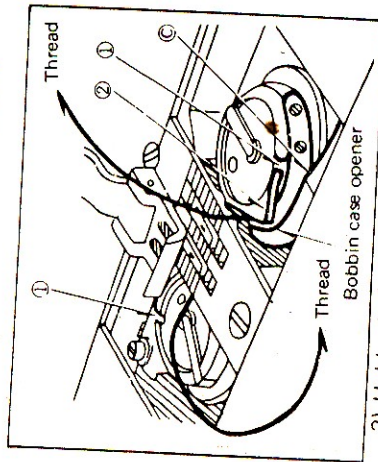
Hold bobbin so that thread will unwind in the direction shown in illustration below and place it in the bobbin case.



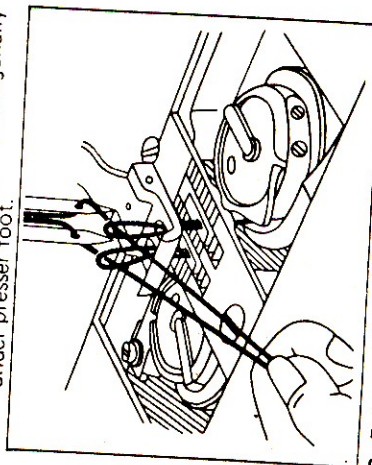
How to use the machine

6. Threading the bobbin case

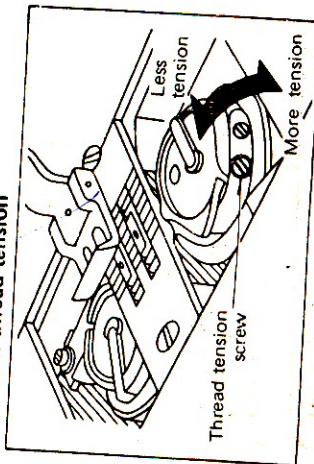
- 1) Pull thread into slot ① in bobbin case and draw it through between horn ② and bobbin case opener.



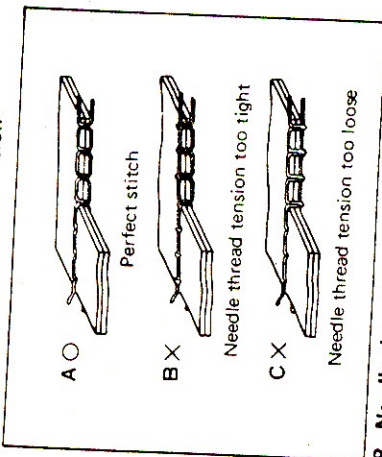
- 2) Hold needle threads with left hand and turn machine pulley until needles bring up bobbin threads. Pull ends of bobbin threads up through throat plate and place both needle and bobbin threads diagonally under presser foot.



9. Bobbin thread tension



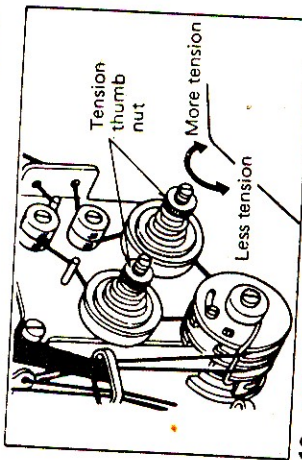
7. Adjustment of thread tension



8. Needle thread tension

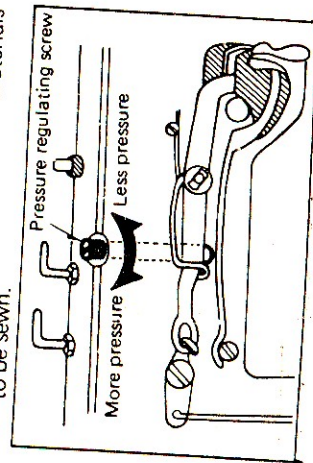
- Needle thread is adjusted according to the bobbin thread tension.
- Needle thread tension is adjusted by tension regulating thumb nut.

For special fabric sewing with special thread, the desired tension can be obtained by adjusting the tension and range of movement of the take-up spring.



10. Adjustment of presser foot pressure

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



Trouble & Repair

Trouble	Causes	Corrective Action
Skip Stitching	1) Needle o Bent needle o Not suited for thread being used	Change the needle with a new one. Replace with needle suited for thread being used.
	2) Improperly set needle o Insufficient insertion o Incorrectly inserted needle	Insert properly as instructed in manual. Set needle holes parallel to front edge of bed. Set the needles with long grooves facing each other.
Loose Stitches	1) Needle thread tension too loose	Turn tension regulating thumb nut clockwise to increase tension.
	2) Take-up spring tension too weak	Turn tension stud clockwise to increase tension.
	3) Bobbin thread tension too loose	Turn bobbin case tension screw clockwise to increase tension.
Thread Breakages	1) Poor quality thread	Use better quality thread.
	2) Needle o Bent needle o Improperly set needle o Needle too small for thread being used	Change the needle with a new one. See item 2) of skip stitching. Replace with correct size needle for thread being used.
	3) Needle thread tension too tight o Lint accumulated between tension discs o Uneven or over wound bobbin o Lint accumulated in bobbin case o Broken or bent bobbin case o Tension spring improperly inserted bobbin	Turn tension regulating thumb nut counterclockwise to decrease tension. Remove thumb nut and tension discs and clean with a lint brush. Replace with bobbin evenly wound to 4/5 of its full capacity. Remove bobbin case and clean with a lint brush. Replace with a new one.
	1) Size of needle and thread incorrect for fabric being sewn	Insert bobbin correctly so that it will rotate in counterclockwise direction when the thread is pulled out. Use correct size needle and thread for the fabric being sewn.
	2) Needle and bobbin thread tensions too tight	Adjust needle thread tension by adjusting tension thumb nut and take-up spring. Adjust bobbin thread tension by turning tension screw.
Puckering	3) Excessive presser foot pressure	Decrease pressure on presser foot by turning pressure regulating screw counterclockwise.

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