

AISIN SEIKI CO., LTD.

MODEL L2512

SERVICE MANUAL

APPAREL EQUIPMENT

TOYOTA

L2512 Service Manual

DT6-L2512 is a double needle, double chainstitch Feed-Off-The-Arm Machine, designed to sew light to medium weight materials. This machine can operate at the speed of 5,000 r.p.m.

The feeding amount can be adjusted by an eccentric adjustable mechanism, the use of journal bearings give a uniform feed amount and enable the variation of the sewing speed, resulting in attractive stitches.

SPECIFICATIONS

Application	Light - medium weight materials
Thread take-up lever	Needle bar take-up lever
Needle bar stroke	30.2 mm
Feed amount	4.2 mm
Presser foot height	10 mm
Needle gauge	1/4" (standatd) Option: 3/16", 5/32", 1/8"
Lubrication	Complete automatic lubrication
Cylinder bed	177.8 mm (7")
Needle	TV x 7
Upper, Lower shaft drive	By timing belt
Sewing speed	5,000 r.p.m.

B. Timing

(1) Stitches by double chainstitch machine are made by the looper's elliptical movement. (ref. FIG-1)

When the needle moves from the lowest point to the upper, there will be a thread loop at the needle hole, due to the resistance of friction between upper thread and material. A looper catches this thread loop from righthand side and this looper moves to left to keep upper thread loop to the looper root. At this time, the needle bar continues to raise up and reaches its highest point when the looper is located at the extreme lefthand position the timing is correct.

At the time of the looper's returning motion, the lower thread and upper thread at the looper root make a triangular shape, where the needle goes through and catches the lower thread. The looper's returning motion releases the upper thread. The looper continues to move to the extreme righthand side. At this stage, the needle is at its lowest point. (ref FIG-2)

The above is one complete stitch cycle. When the needle bar is at the lowest point, the looper must be located at the extreme righthand side for correct timing.

When the looper moves from the extreme righthand to lefthand and reaches the looper thread hole at the center of needle, the center of looper thread hole must coincide with the center of needle thread hole.

In the looper's return motion, the thread holes in both the looper and the needle must also coincide.

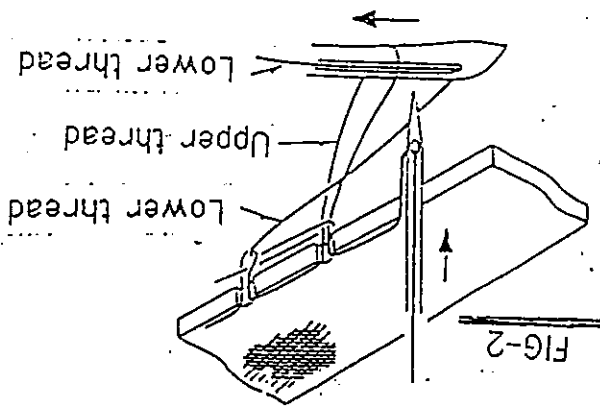


FIG-2

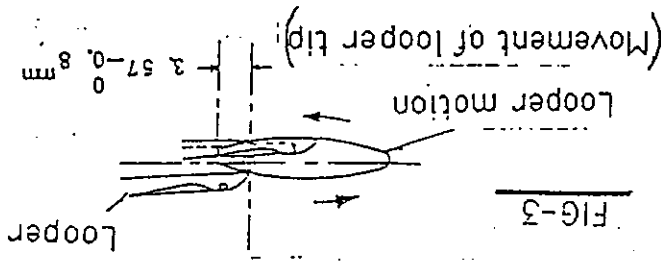


FIG-3

The motion of the looper is elliptical as shown in FIG-3. When looper is located at the extreme righthand, the tip of the looper must be away from the center of the needle at 3.57 mm (plus zero or minus 0.8 mm) as a standard set-up. The clearance between the needle and looper must be within a range of 0.07 - 0.2 mm.

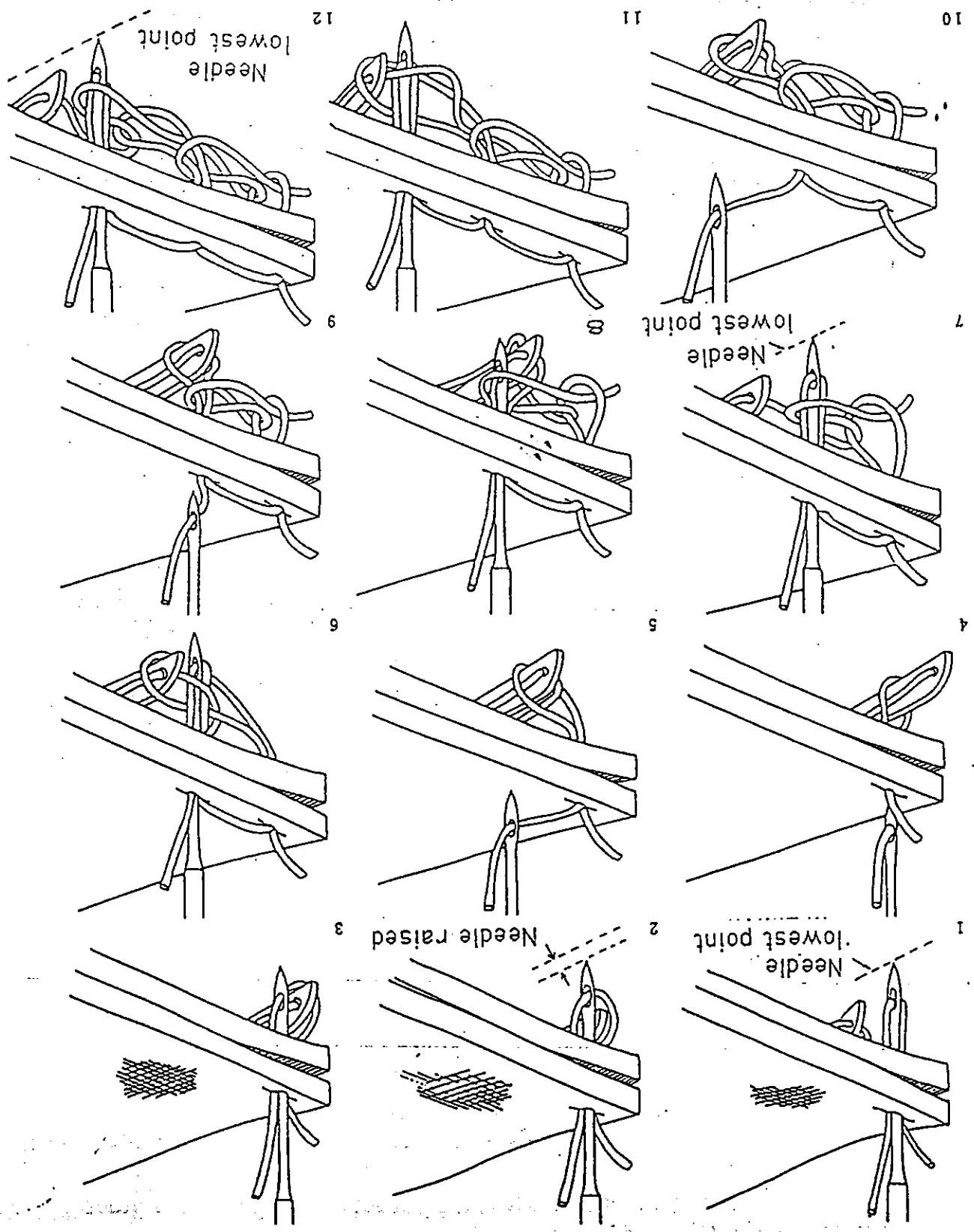


FIG-1 Formation of double chainstitch

Patent No. 1,500,000

(2) Thread take-up lever is attached to the needle bar, called Needle bar take-up lever, and the amount of thread shall be approx. 25 mm. The amount of the thread take up can be adjusted by means of the combination of upper thread bent-bar guide and upper thread adjusting plate. The correct timing of the upper thread bent-bar guide and upper thread adjusting plate is shown in FIG-4 as the standard set up.

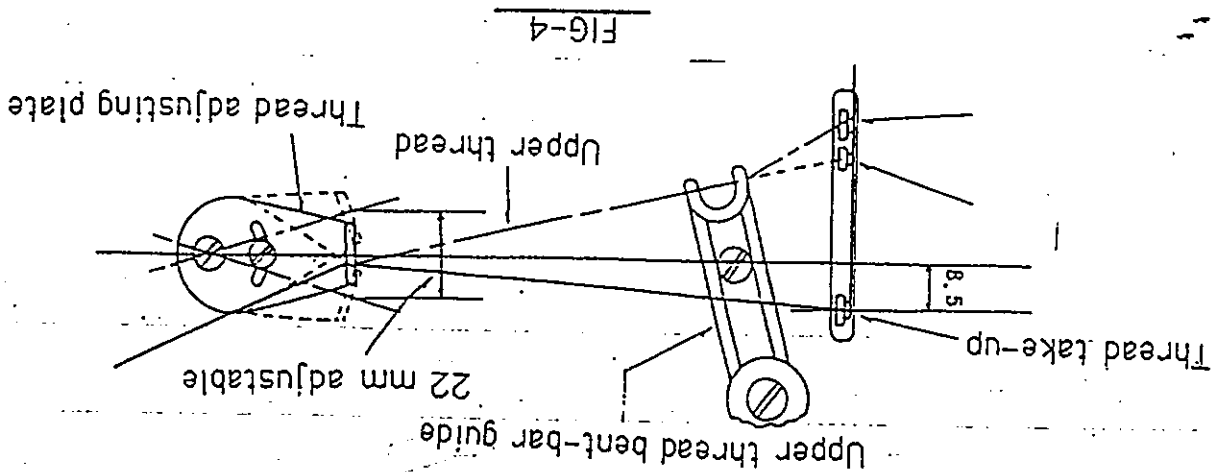


FIG-4

When thread take-up lever is at the highest position, thread hole of the Thread adjusting plate is assembled 8.5 mm lower than the thread hole of thread take-up lever. The upper thread bent-bar guide position is adjusted so as to be in line with the upper thread at the thread hole of the upper thread adjusting plate and the thread hole of thread take-up lever, when upper thread is about to come off the looper, the looper will move to position "A".

The upper thread adjusting plate can be adjusted approx. 11 mm each or 15 degrees from upper shaft, measured at the thread hole. When thread hole is lowered, the motion of thread take-up lever increases and tight stitches can be obtained with less shrinkage of the material. If thread hole area is moved up, the result is the opposite.

(3) The lower thread take-up operation is made by the lower cam. When looper is located at extreme righthand side, the lower thread must be held at the highest portion of the lower cam even though looper starts moving to the left, so as not to release lower thread from lower thread adjusting plate. (ref FIG-6)

When looper is at its returning motion, the lower thread cam must start pulling lower thread before needle bar reaches its highest point (0.2 - 0.8 mm), when lower thread and lower cam will meet together. (ref FIG-5)

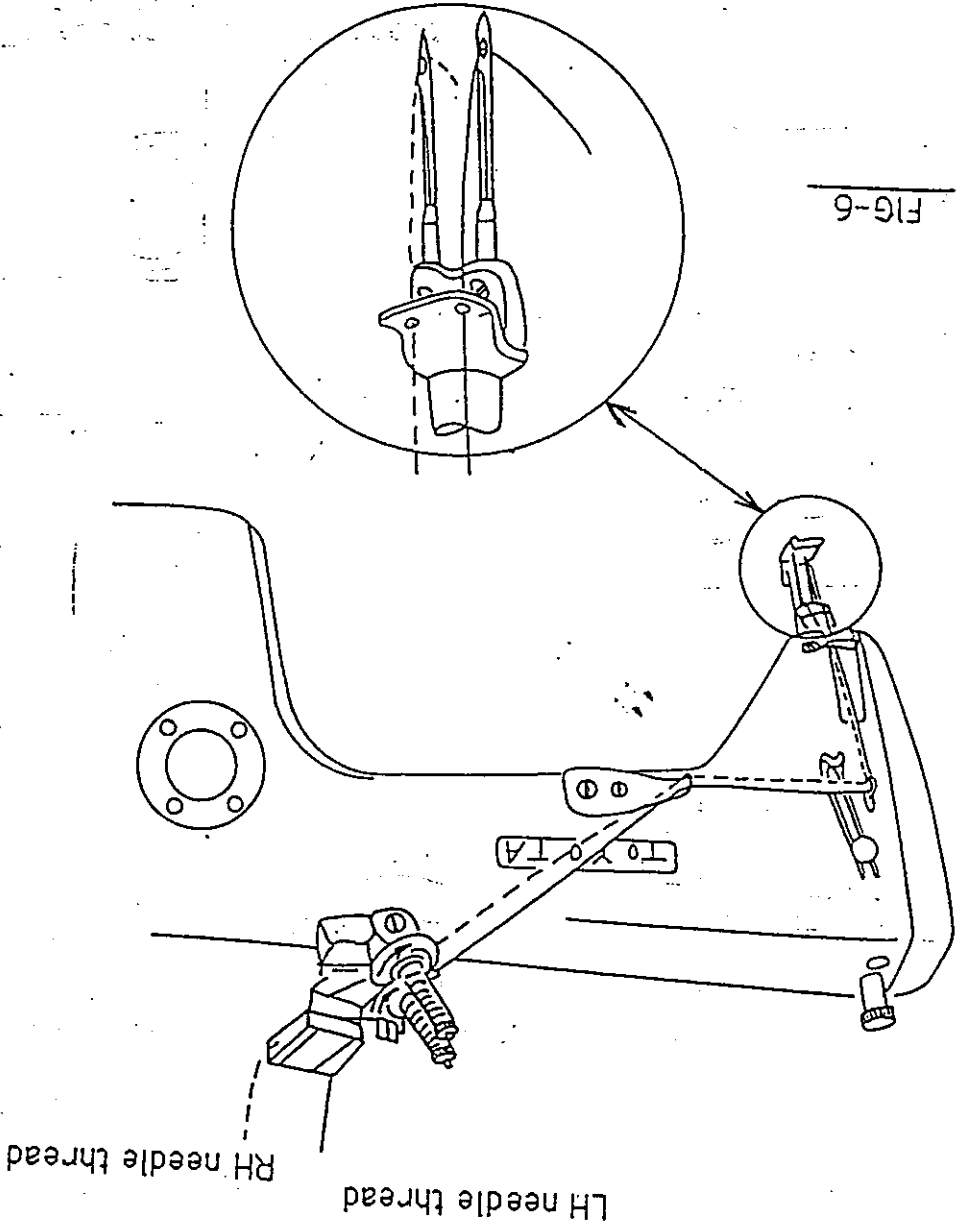


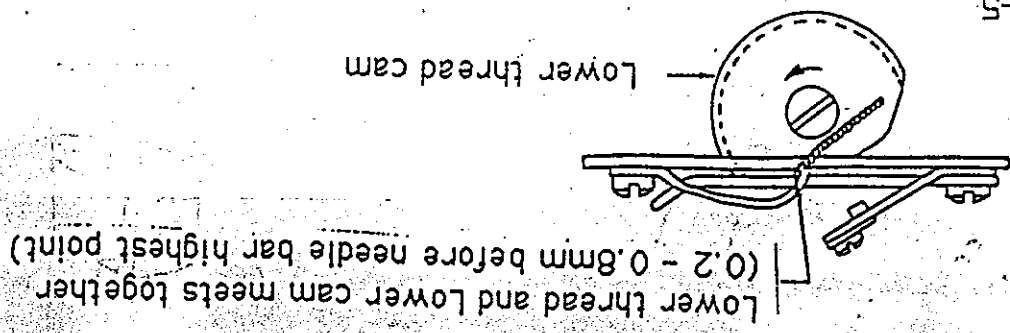
FIG-6

1. Upper thread attaching (Ref. FIG-6)

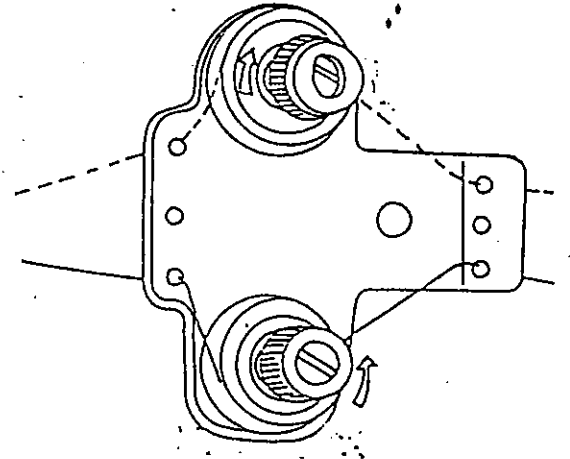
A. Threading

II Preparation for Sewing

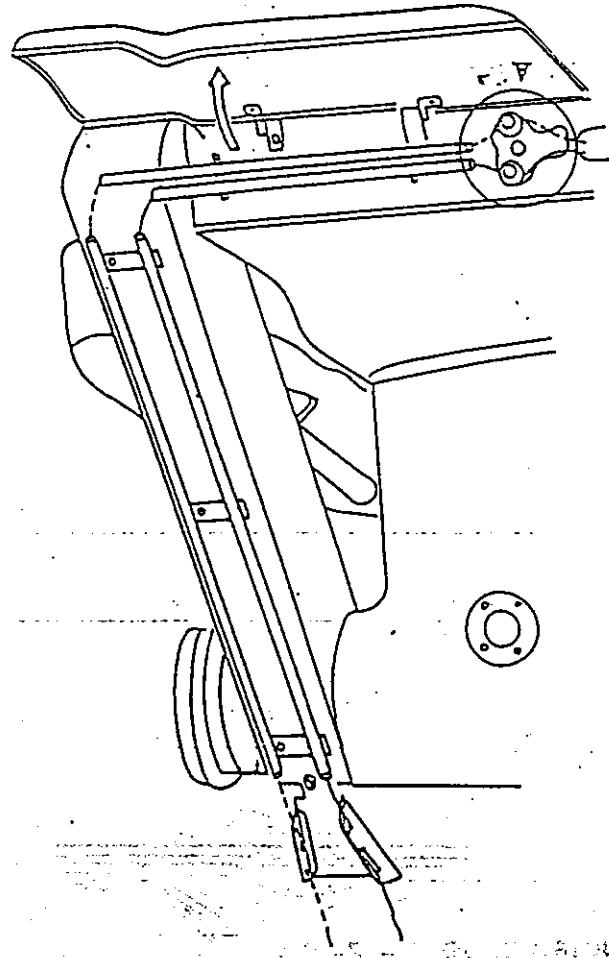
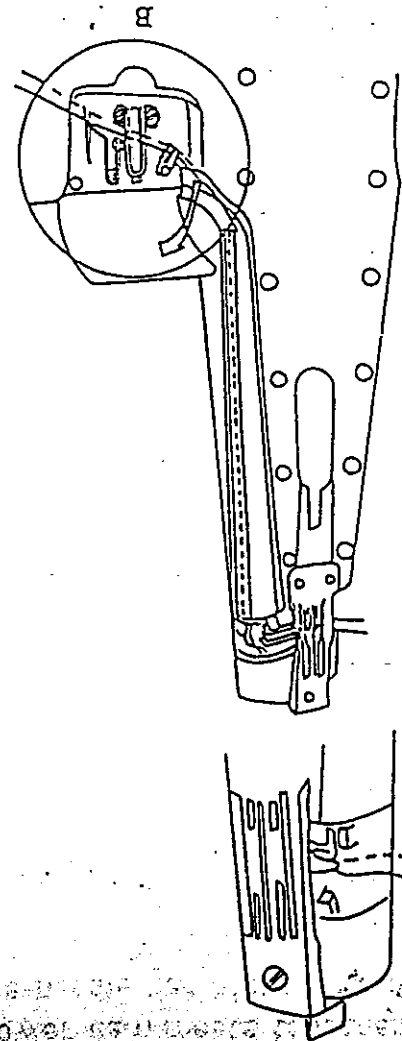
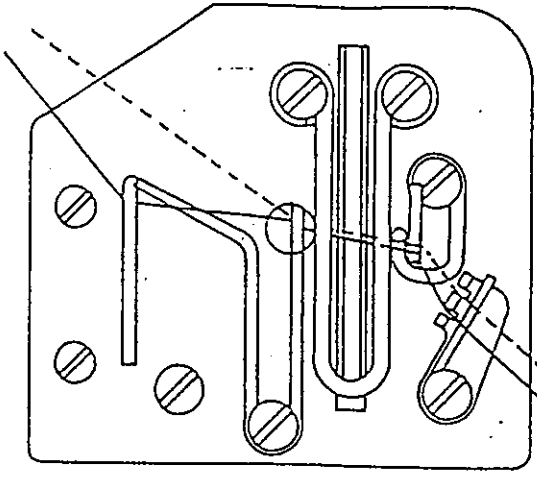
FIG-5



Threading at Lower thread Tension Control (A)



Threading at CAM (B)



(Ref)

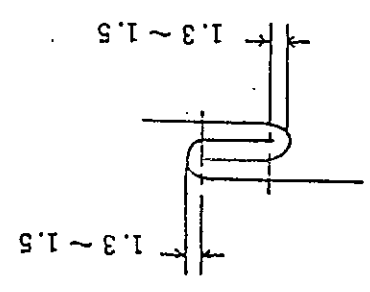
For threading the looper, lead through looper thread guide when the looper is at its extreme left hand position, then thread through lower looper thread hole and looper thread hole, taking extreme care not to twist the thread.

B. Sewing

(1) Preparation for Sewing

Thread as described above and let thread trail approx. 50 mm from thread holes (if not, no stitching is possible). Lower thread pull-up is not necessary as it is with a lockstitch machine.

When using a folder, remove folder cover plate from the forward of needle plate and locate folder. The following illustration is standard sewing when using a folder.



Oil Felt at Thread guide

When thread is not being fed smoothly, put "G" oil supplied as an accessory to the oiled felt for non-skip, stitch sewing.

(2) Adjustment of lower thread tension

As illustrated in FIG-7, turn clockwise when strong tension is required and vice versa.

III. Adjustment of sewing machine

A. Needle bar adjustment

Put needles at Needle clamp and rotate handwheel. When threadhole of looper comes to the center of the needle, both thread holes of looper and needle must coincide with each other.

If they don't coincide with each other, loosen needle bar clamp and adjust the height of it for changing thread take-up lever height.

The clearance between thread take-up lever boss and needle bar clamp must be 1.5 - 2.0mm.

Extreme care must be exercised when adjusting needle bar height, do not turn needle bar from original position, otherwise other troubles, such as needle breakage, skipped stitches, etc. may occur.

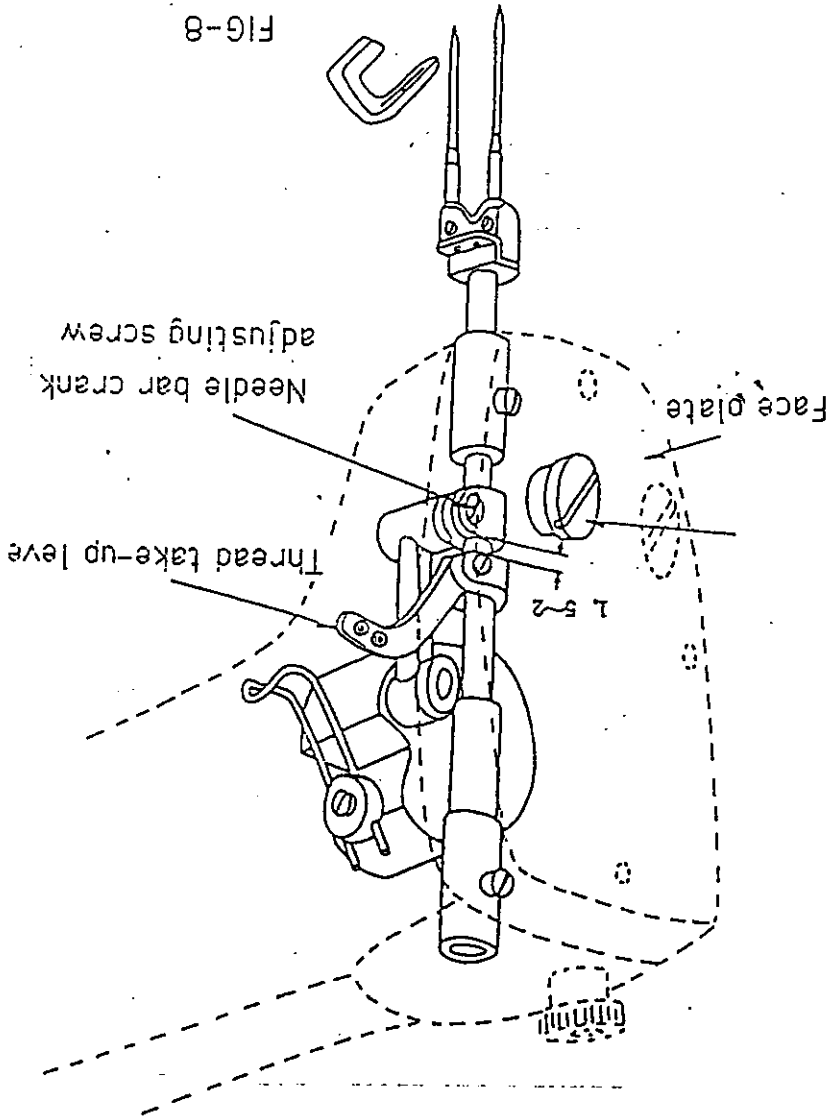


FIG-8

B. Adjustment of looper timing

(1) The standard set up is when needle bar is at its lowest point and the looper is located at the extreme righthand position. In order to see this condition, check the following:

(a) Turn handwheel toward you to get the threadhole of looper to the center line of the needle. Remember this position.

(b) Turn handwheel in the opposite direction to get the threadhole of the looper to the center line of the needle. Check if the position corresponds with above (a), if so the timing is correctly adjusted. If not, re-adjust. The deviation of plus or minus 0.3mm is considered within the tolerance.

(2) When looper is located at the extreme righthand, the deviation of the looper tip from the center line of the needle is 3.57 mm +0 and -0.8mm (Ref> FIG-9 for adjustment)

(3) The looper motion is elliptical. When looper moves from extreme righthand to lefthand, the clearance between needle and looper tip shall be 0.07 - 0.2mm. The same clearance must be obtained when looper moves from lefthand to right. If the looper and needle hit, adjust the looper operational cam for its timing. If looper and needle are hitting on only one side, move looper stem to looper axle. (ref. FIG-9)

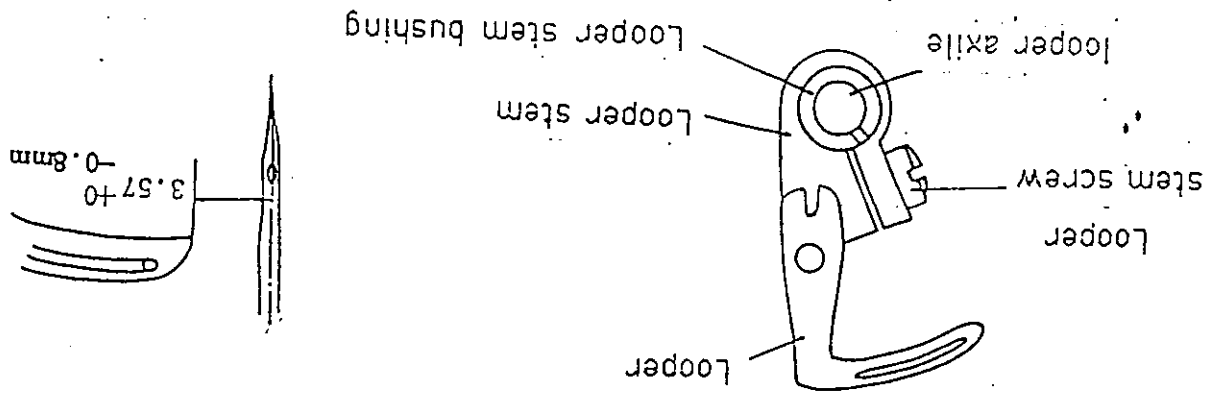
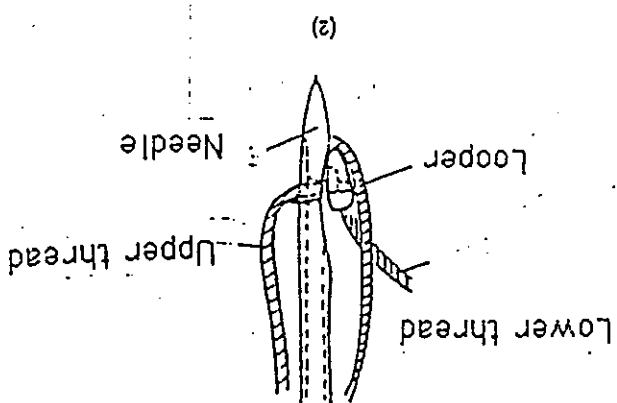
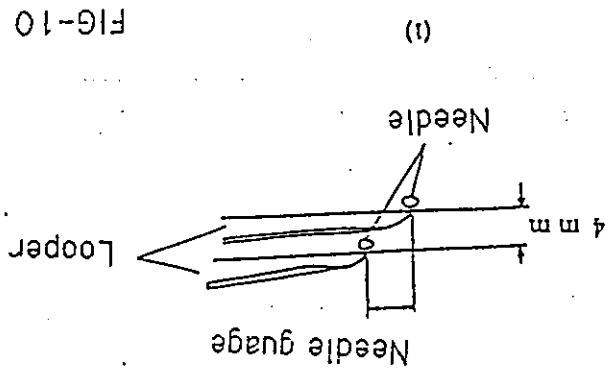


FIG-9

(4) Setting looper

Assemble looper as illustrated in FIG-10 (1). Otherwise it may cause the looper and needle to hit, scratch the looper or needle, or cause thread breakage.

The looper passes the loop of the needle as in FIG-10 (2). As the needle raises up and looper and needle catch the upper thread there may be friction, as shown in FIG-10 (1). This friction can be eliminated by making the looper motion elliptical. Both looper (A) and looper (B) can be adjusted individually.



(5) Adjustment of looper height

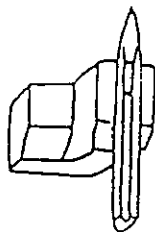
The height of the looper should be as close to the needle plate as possible, it is however restricted by needle plate thickness, feed dog motion, etc. The looper height adjustment can be made by rotating the eccentric looper stem and looper stem bushing.

C. Adjustment of Lower CAM

(1) Adjustment of lower cam timing

For the lower cam adjustment, the lower cam and lower thread must meet before the needle bar reaches its highest point. The clearance before the needle bar reaches its highest position is 0.2 - 0.8 mm, and is dependant upon the material used.

The timing adjustment of lower thread cam is made in the hole marked "A" as shown in FIG-11. Loosen securing screw of lower thread cam to the lower shaft.

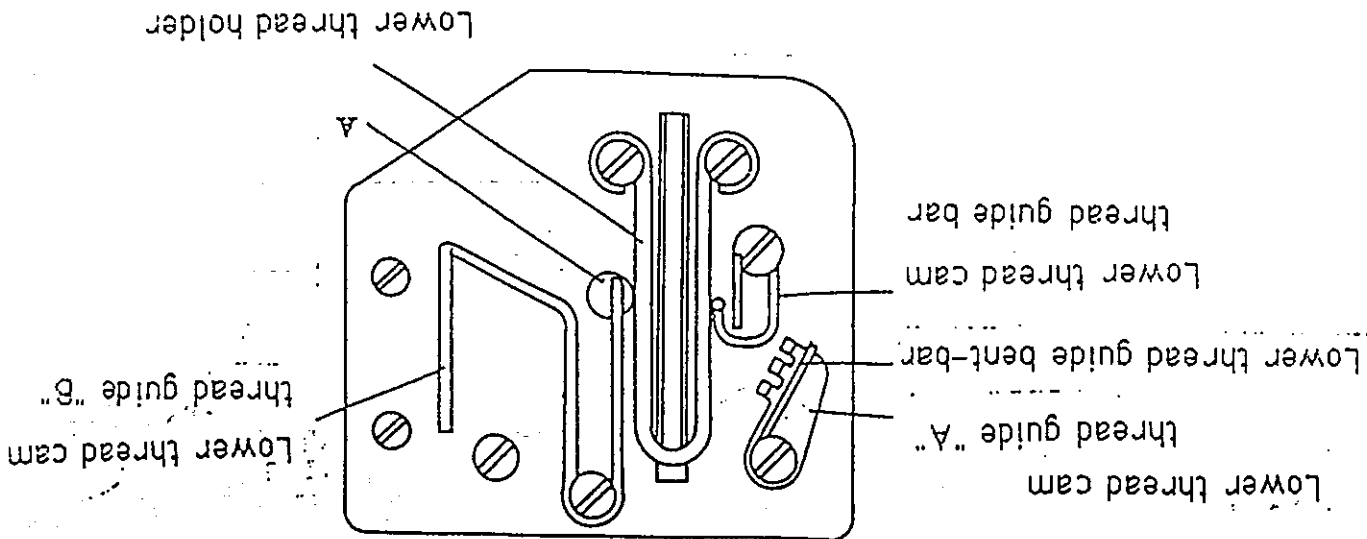


The correct up and down needle guide position is shown in FIG-12. When needle is at the lowest position, lower threadhole of needle and lower needle guide must be in line. The forward and backward adjustment can be made to thread the needle and lower the needle to almost the lowest position and check if the needle thread is chafing with needle guide. In this test, the needle should not be bent.

The needle guide can be adjusted in any direction, up and down and forward and backward. The upper and lower adjustment will help to prevent needle breakage and the adjustment of the upper thread loop will prevent skip-stitches. The forward and backward adjustment will adjust the clearance between needle and needle guide to prevent skip-stitches and/or needle breakage.

D. Adjustment of Needle Guide

FIG-11



E. Adjustment of Feed Dog

Feed dog must go through the groove of needle plate without chafing at any corners. The forward and backward clearance between feed dog and needle plate at must be more than 0.5 mm. The clearance of the side of feed dog must be 0.1 mm or more.

The height of the feed dog can be adjusted by an eccentric feed height control device. The suggested standard height is 0.9 - 1.2 mm.

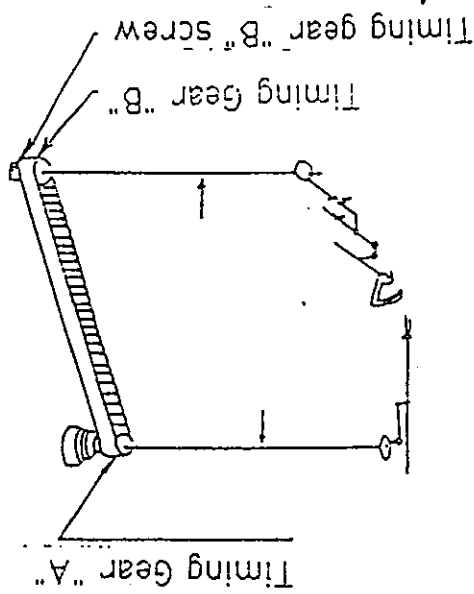
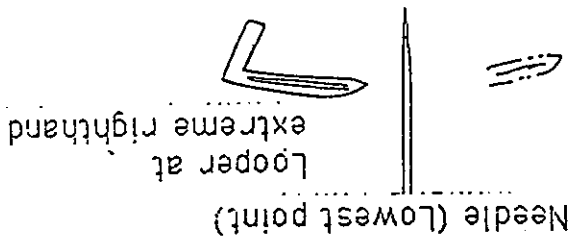
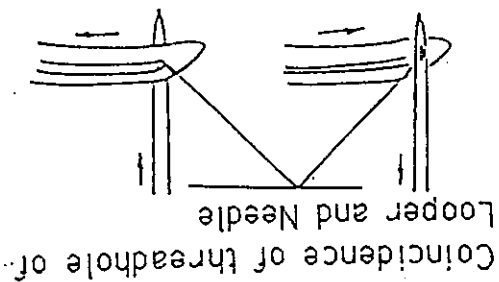
G. Attaching Feed Cam (Horizontal Feed Cam)

The position of the feed cam can be adjusted by pushing the adjusting push-button, which releases the feed cam finger from the finger wheel so that the feed cam rotates and changes the amount of eccentricity.

The required torque to change the eccentricity must be less than 3,000 grms.

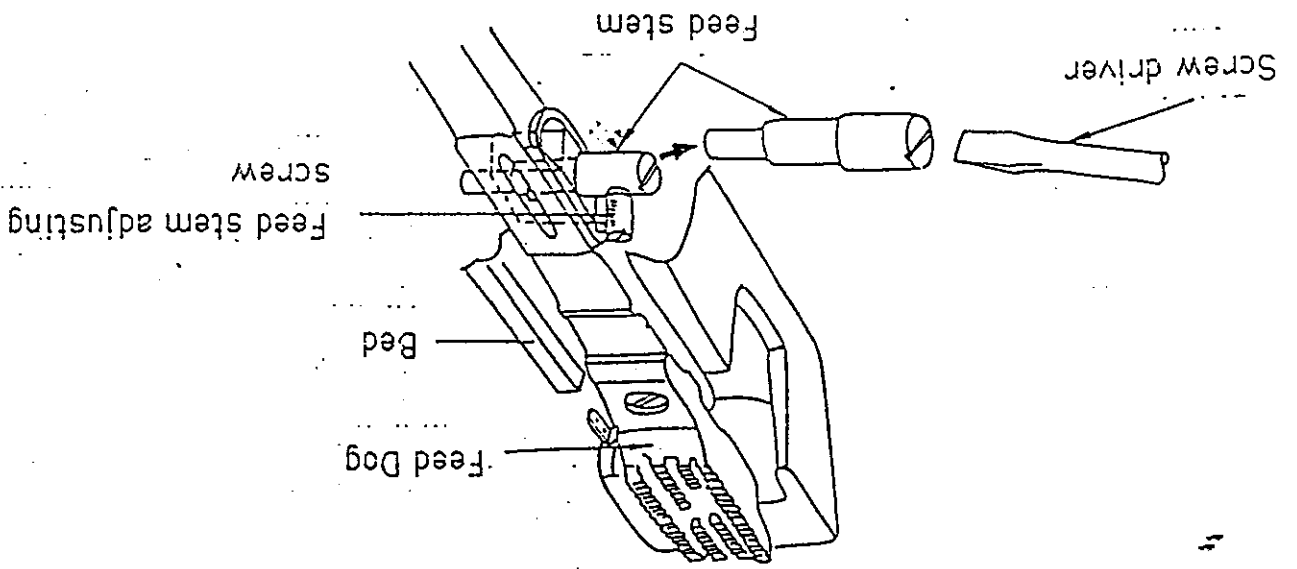
H. Installation of Feed Cam (Upper & Lower Cam)

The upper and Lower cam are connected to the driving cam since there is no set mark on horizontal cam. The driving cam has 2 set marks at the lower shaft.



1. Rotate upper shaft in order to set needle bar at its lowest position.
2. Rotate lower shaft in order to set the looper at its extreme righthand position.
3. Timing gear "A" is at "set" position.
4. Timing Gear "B" has no "set" point.
5. Install timing belt only when needle bar is at the lowest position and looper is at extreme righthand.
6. Minor adjustment of looper at the extreme righthand position and needle bar lowest point by timing gear "B", which has no "set" mark.

Adjustment of needle bar and looper position when timing belt is released:



1. Open bed cover and loosen feed stem.
2. Put screw driver on feed stem and rotate it either clockwise or counter clockwise. (Shaft is eccentric)
3. Tighten feed stem and replace bed cover.

Adjustment of Feed Dog Height

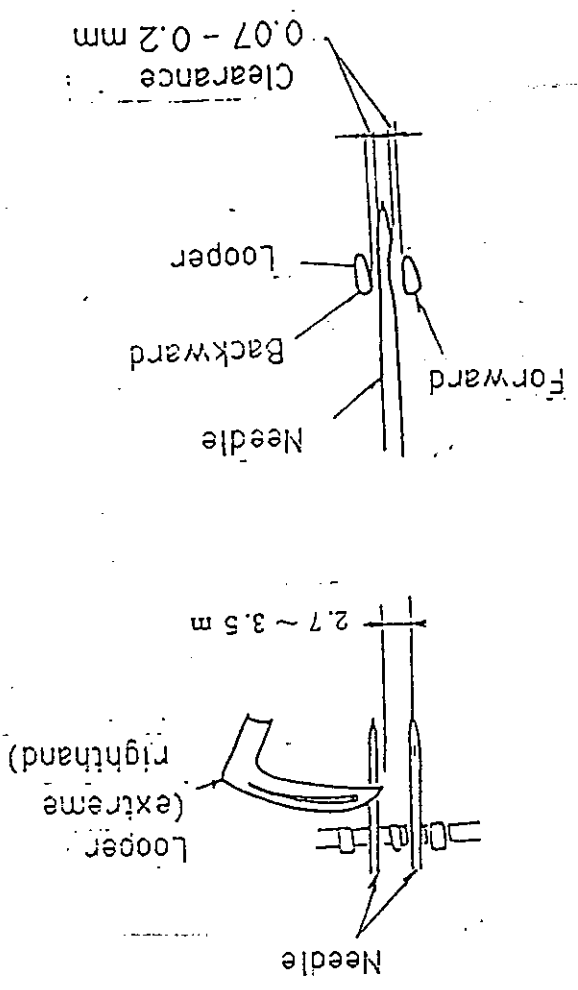
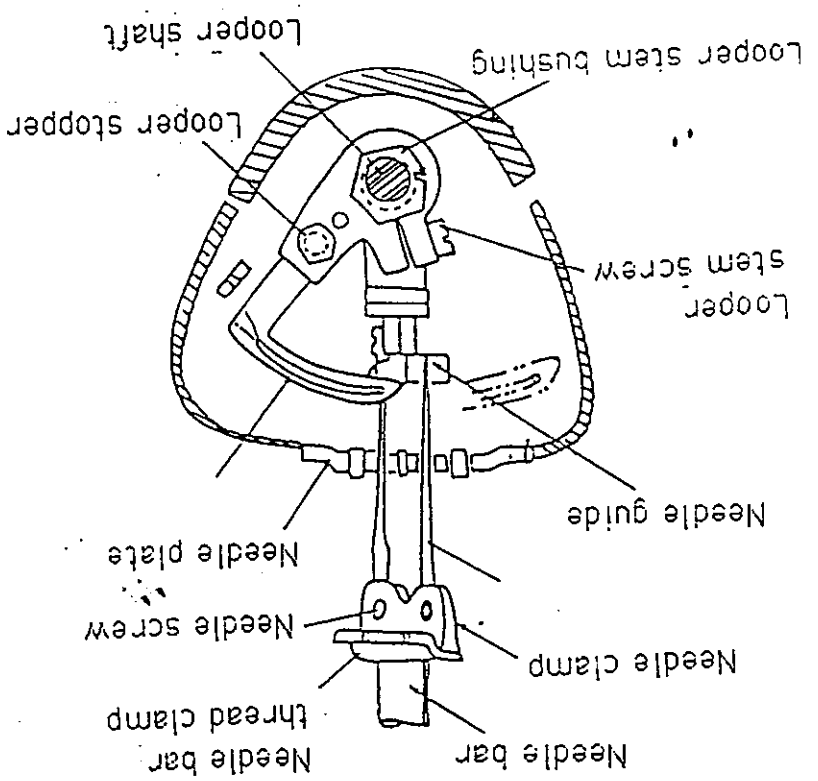
Adjustment of Looper

1. Adjust looper timing and clearance between needle and looper by looper stem screw.

(a) When needle bar is the lowest position, the distance between center of needle and tip of looper must be 2.7 - 3.5mm.
 (b) The clearance between needle and looper must be 0.07 - 0.2 mm.

2. The height of looper can be adjusted by adjusting the looper stem bushing.

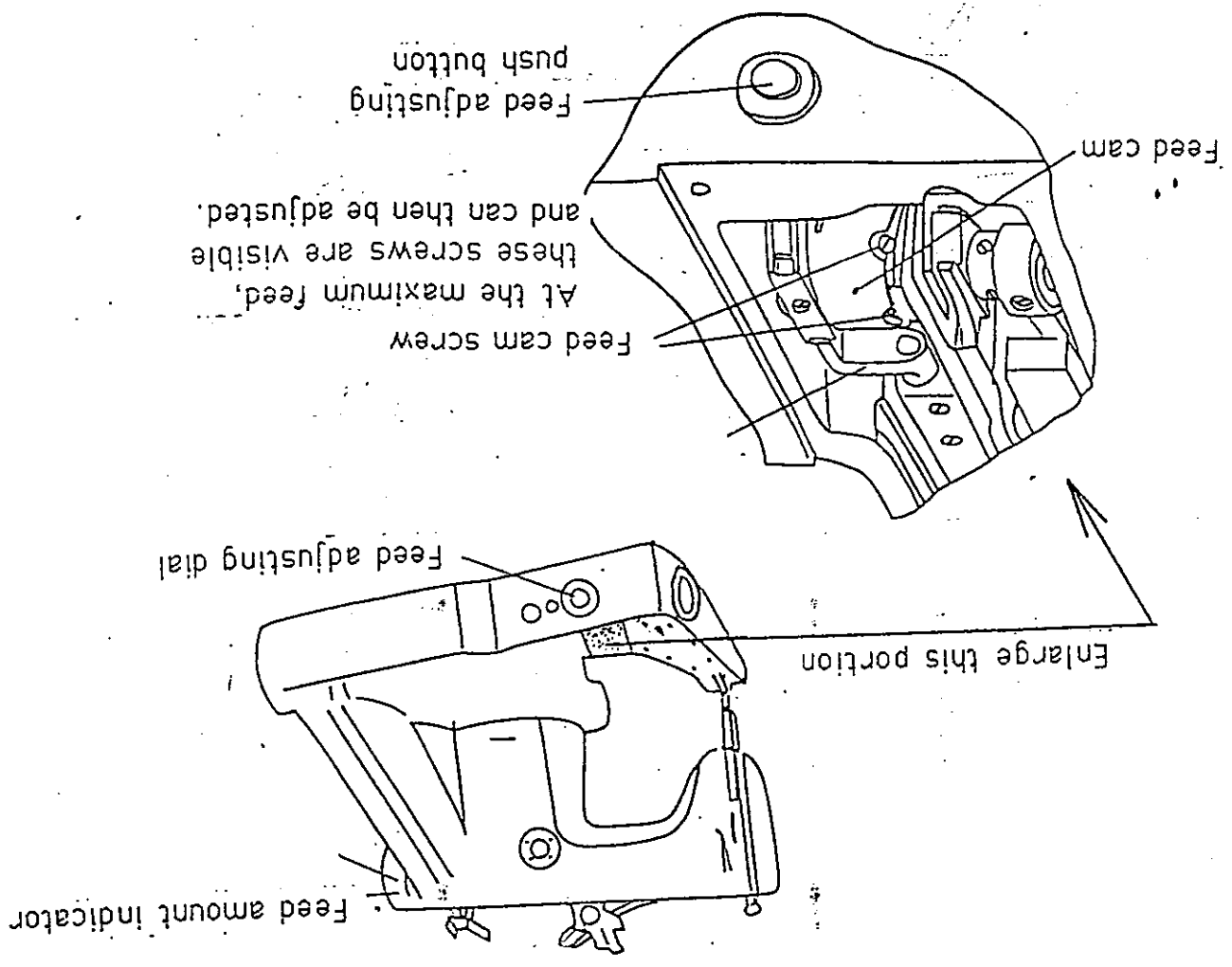
(a) Threadhole of needle and looper must coincide at the center line of the needle.
 (b) After completion of the timing adjustment, securely tighten the looper stem screw.



Adjustment of Feed Cam

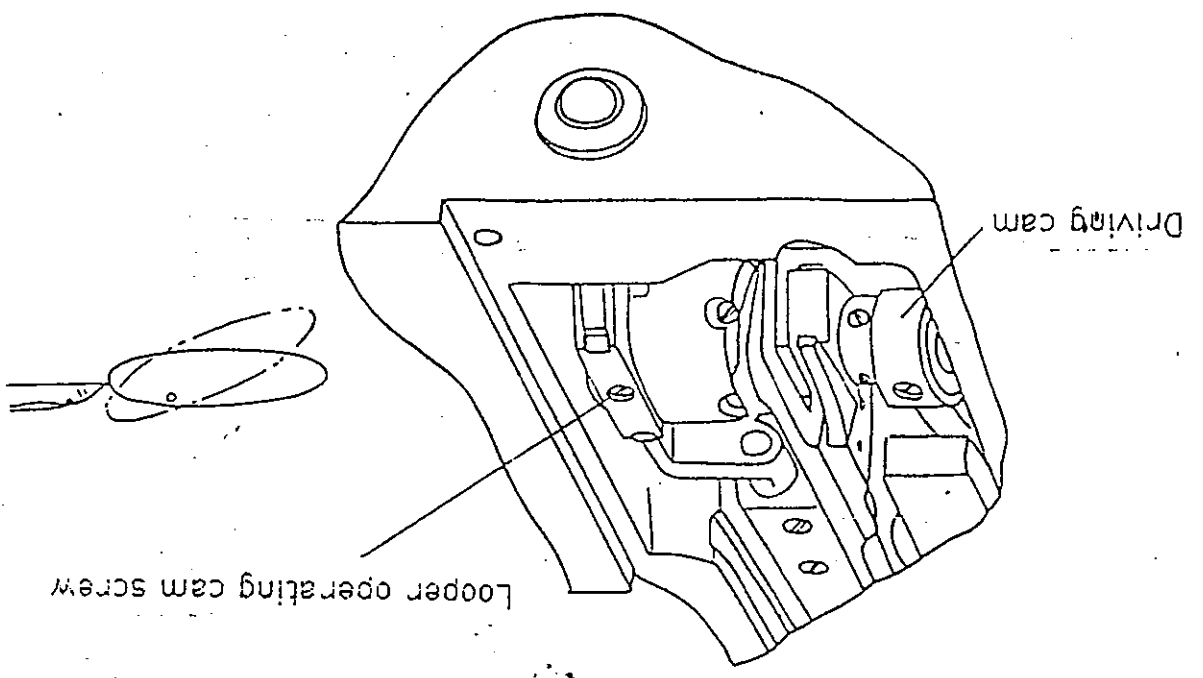
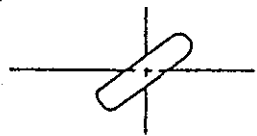
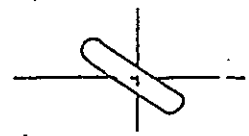
Diagram 12-1000-100A

1. Remove bed cover.
2. Push feed adjustment push button to set feed amount at maximum.
3. Loosen feed cam screw.
4. Without moving feed cam, rotate handwheel to the normal operating rotation and feed will be delayed.
5. Without moving feed cam, rotate handwheel to opposite direction as normal operation and feed will be faster.
6. After adjustment, tighten feed cam screw.
7. Install bed cover.



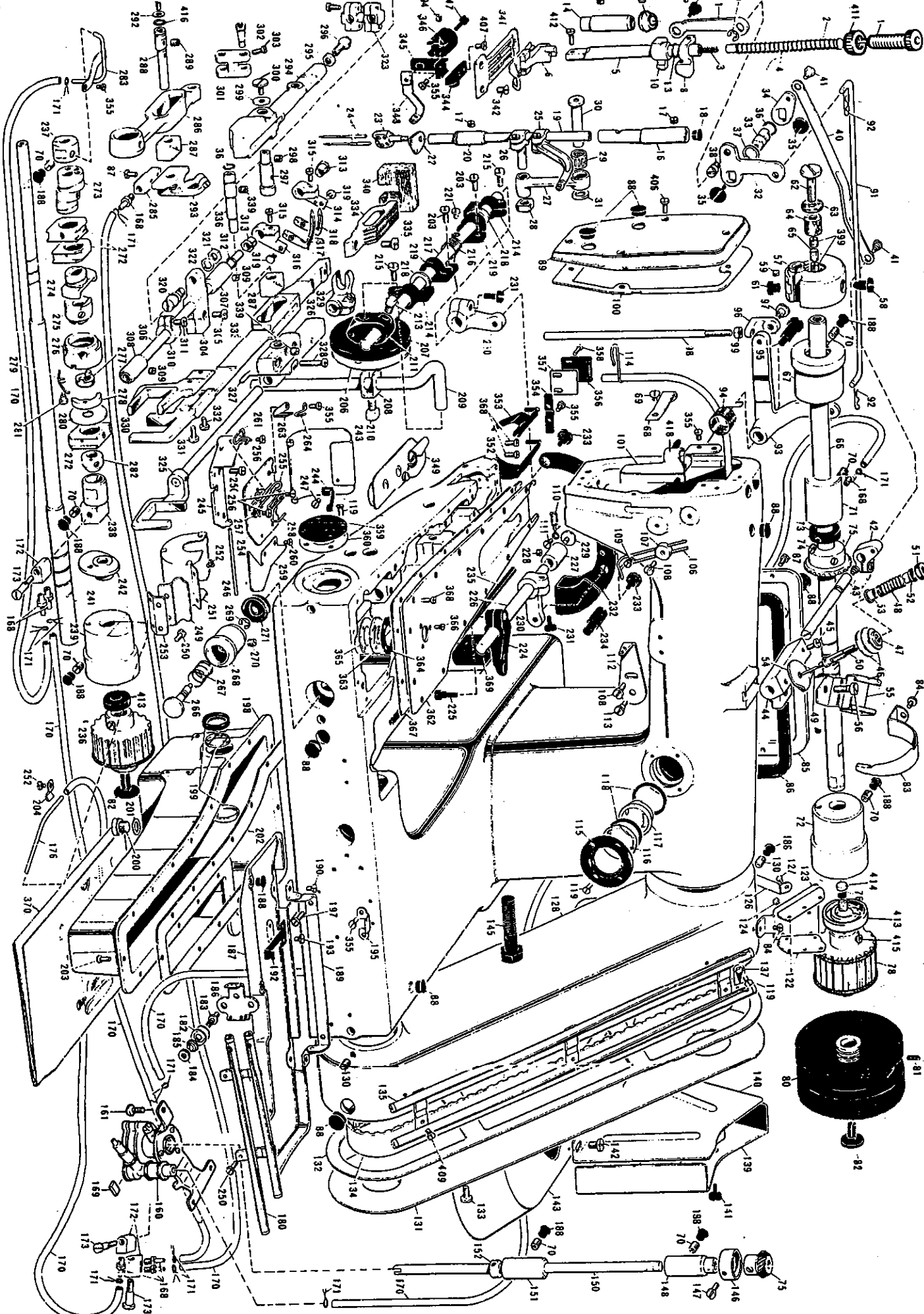
Adjustment of Looper Motion

1. Remove bed cover.
2. Loosen looper operating cam screw.
3. Without moving looper operating cam, rotate handwheel in the normal operating direction and looper motion shall be as illustrated below.
4. Rotate the handwheel in the opposite direction of #3, and the looper motion shall be as below.
5. Adjustment of looper motion is possible by adjusting the looper operating cam.
6. When adjusting looper motion, check for minimal clearance between the needle and looper, and there will be less opportunity for skip stitches.



No	Specification	Needle gauge	Needle bar	Needle guide	Needle clamp	Needle plate	Slide plate	Folders	Window plate
1	2211201-101	1 #4#	2210112-116-A	2211222-151	2210122-170	2211103-111	2210103-120-A	—	2211203-150
2	2211201-102	1/64"	—	2211212-151	2210112-170	2211273-111	2210103-120-A	—	2211203-150
3	2211201-103	1/4"	2210102-116-A	2210102-151-A	2210102-170	2210103-111-B	2210103-120-A	2210103-140	2211203-150
4		3/16	2210102-116-A	2210102-151-A	2210152-170	2210153-111-A	2210103-120-A	2210133-140	2211203-150
5		5/32	2210102-116-A	2210102-151-A	2210142-170	2210143-111-A	2210103-120-A	2210123-140	2211203-150
6		1/8	2210102-116-A	2210102-151-A	2210132-170	2210133-111-A	2210103-120-A	2210113-140	2211203-150
7		1/2	2210192-116	2210192-151	2210192-170	2210193-111	2210193-120	—	2211293-150
8		7/8	—	2211212-151	2210112-170	2211113-111	2210103-120-A	—	2211203-150
9		7/8	—	(2210112-151-A) (2210122-151-A) (2211212-151 2211222-151)	2210112-170	2210113-111-A	2210103-120-A	—	2211203-150
10		1 #4#	2210112-116-A	2211222-151	2210122-170	2210123-111	2210103-120-A	—	2211203-150

No	Specification	Needle gauge	Presser bar	Presser spring A	Presser spring B	Presser foot	Looper A	Looper B	Feed Dog
1	2211200-101	1 #4#	2210203-211-A	—	2210903-213	(2211223-220) 2211103-220	—	2210124-342-A	2211105-223
2	2211200-102	1/64"	2210203-211-A	—	2210903-213	2211273-220	2211274-341	2211274-342	2211115-223
3	2211200-103	1/4"	2210103-211-B	2110203-213-B	2210103-214-A	2210103-220	2210104-341-A	2210104-342-A	2210105-223
4		3/16	2210103-211-B	2110203-213-B	2210103-214-A	2210143-220	2210144-341-A	2210154-342-A	2210105-223
5		5/32	2210103-211-B	2110203-213-B	2210103-214-A	2210133-220	2210134-341-A	2210144-342-A	2210105-223
6		1/8	2210103-211-B	2110203-213-B	2210103-214-A	2210123-220	2210124-341-A	2210134-342-A	2210105-223
7		1/2	2210103-211-B	2110203-213-B	2210103-214-A	2210193-220	2210194-341	2210194-342	2210195-223
8		7/8	2210203-211-A	—	2210103-213	2211103-220	2210114-341-A	2210114-342-A	2211115-223
9		7/8	2210103-211-B	2110203-213-B	2210103-214-A	2210103-220	2210114-341-A	2210114-342-A	2210115-223-A
10		1 #4#	2210103-211-B	2110203-213-B	2210103-214-A	2210103-220	—	2210124-342-A	2210115-223-A



1. 本体関係

見出番号	品番	品名	個数
1B	2110203-271-B	押エ調節ネジ	1
2C	2110203-272-C	押エ調節ネジロケット	1
3B	2110203-213-B	押エバネA	1
4	2210203-214	押エバネB	1
5B	2210103-211-B	押エ棒	1
6	2210103-220	押エ(組)(1/4")	1
8A	2210103-231-A	押エ棒抱キ	1
9	9531102-256	平小ネジ	1
10A	2210203-241-A	押エ棒上テ	1
11B	2210103-242-B	引上テ板	1
12A	9015500-021-A	段ネジ	1
13	9060100-009	オリソク	1
14	2211203-215	押エ棒バネ	1
16A	2210102-113-A	針棒バネ上	1
17	9501501-256	止ネジ	3
18D	2110202-115-D	針棒バネ下	1
19A	2210102-111-A	針棒	1
20B	2210202-114-B	針棒バネ下	1
22	2211502-116	針棒ネジケ	1
23A	2210102-170-A	針止バネ(組)	1
24	2210102-195	針(#16)	2
25B	2210102-021-B	天秤(組)	1
26A	2210102-101-A	針棒抱キ(組)	1
27B	2210102-121-B	針棒クラソクコック	1
28B	2110202-122-B	針棒角コマ	1
29	2110602-140	ニールバネソク	1
30A	2210102-102-A	針棒クラソク軸(組)	1
31B	2210102-215-B	針棒クラソク軸座金	1
32B	2210203-255-B	引上テソク	1
33	2210203-251	引上テソク軸	1
34	2210203-419	ネコルメ作動腕	1
35	9541111-207	丸平小ネジ	2
36	9060100-001	オリソク	2
37B	9030100-012	平座金	1
38	9015500-035-B	段ネジ	1
39	9080200-004	E形ソク	1
40	2210203-418	ネコルメ腕ソク	1
41	9015500-012	段ネジ	2
42A	2211203-407-A	ネコルメ腕(組)	1
43C	2210103-413-C	ネコルメ軸	1
44C	2210103-416-C	ネコルメ台	1
45	9013200-010	ネコルメソク	1
46	2110102-352	ネコルメ腕	4
47	2110102-353	皿押エ	2
48A	2210102-355-A	ネコルメバネ	2
49A	2210102-356-A	ネコルメソク	2
50A	2210102-357-A	ネコルメ棒	2
51	2210102-359	ネコルメ棒ソク	2
52	2210102-366	ネコルメバネ座A	2
53	2210102-367	ネコルメバネ座B	2
54	2210102-371	調子皿	2
55A	2210102-318-A	ネコルメ内	1
56	9013200-005	ネコルメソク	1
57D	2210102-131-D	天ビソクソク	1
58	9013400-026	丸平小ネジ	1
59	9501204-279	止ネジ	1
61	9541604-256	丸平小ネジ	1
62A	2210104-121-A	油漏止ネジ	1
63	2210204-124	ソクソクバネソク	1
64	2210106-361	上軸バネソク	1

1. 本体関係

見出番号	品番	品名	個数
357B	2210202-381-B	糸切り	1
358	9540926-241	丸平小ネジ	2
359	2210201-284	下軸カバ-	1
360A	2210201-285-A	下軸カバ-バッキンク	1
362E	2210201-191-E	ハッ下カバ-	1
363	2210201-193	オイルクー-シ窓	1
364A	2210201-194-A	オイルクー-シバッキンク	1
365	2210201-195	オイルクー-シ押エ	1
366	9530801-479	平小ネジ	3
367D	2210201-192-D	ハッ下カバ-バッキンク	1
368	9530909-207	平小ネジ	1
369B	2210201-325-B	頭部支エラバ-	2
394	9501204-279	止ネジ	1
399	9015600-004	止ネジ	1
406	9540907-247	丸平小ネジ	4
407	9540809-279	丸平小ネジ	1
408A	2210203-414-A	糸エムル軸バネ	1
409	9013800-001	バインフ小ネジ	3
410	2111103-223	押エ機油切り	1
411	2111113-274	押エ調節ナット	1
412	9540926-241	丸平小ネジ	1
413	9060200-013	オイルシール	2
414	2110904-127	ワラワラワッ+	1
415	9541607-276	丸平小ネジ	2
416	9060100-011	オリツク	1
417	2210206-311	ウイック	1
418A	2210106-391-A	針線給油板	1
502A	0103083-112-A	フライバ-(小)	1
503A	0103083-111-A	フライバ-(大)	1
504	0201021-111	付属ケ-ス	1
506F	0201033-122-F	スバチ	1
507B	0201052-103-B	オイル罐(組)	2
508	0202033-123	レンチ(中)	1
509	0202073-161	ピソセット	1
510	2210102-319	糸潤滑ワ-エルト	1
511B	2210122-190-B	針(組)	1
512	2210201-326	頭部支エ(組)	3
513	9013800-004	バインフ小ネジ	3
514	9173600-119	ナット	3
515	9030100-066	平座金	3
516	9016100-004	丸小ネジ	3
517	0202012-105	上糸用オイル容器(組)	1
518E	0201013-111-E	フライバ-(特大)	1
601	2210152-170	針止	1
602	2210143-220	押エ(段押エ)	1
603	2210215-111	針板(3/16")	1
604	2210215-223	送り(3/16")	1
605	2210213-140	ワッパ(組)(3/16")	1

1. 本体関係

見出番号	品番	品名	個数
134	2210204-161	タイミツベルト	1
135A	2210202-330-A	※案内パイプA(組)	1
137A	2110201-243-A	送り指示板	1
139A	2210201-411-A	ベルトカバー	1
140A	2210201-412-A	ベルトカバー支エ(組)	1
141	9541203-247	丸平小ネジ	1
142	9013800-004	パイノ下小ネジ	3
143C	2210201-413-C	ベルトカバー台	1
145	9583202-436	六角ボルト	1
146	2210204-244	立軸×タル油受ケ	1
147	9530908-119	平小ネジ	1
148A	2210204-242-A	立軸×タル上	1
150A	2210204-241-A	立軸	1
151A	2110204-243-A	立軸×タル下	1
152A	2210204-240-A	立軸カラ(組)	1
160	2210226-110-B	オトルボソフ(組)	1
161	9541201-256	丸平小ネジ	3
168	2110206-163	ピニオンパイプツギキチC	4
169C	2110206-116-C	オトルボソフネット	1
170	2210206-420	オトルパイプ	1
171B	0251011-154-B	ピニオンパイプツギカバーハネ	8
172	2210206-182	給油口金B	1
173A	2210206-183-A	口金ネジ	1
176	2210206-173	下軸×タル後パイプ	1
180	2210202-340-A	※案内パイプB(組)	1
182	2110202-352	※調子皿	3
183	2210202-357	※調子棒	2
184	2210202-359	※調子棒ナット	2
185	2210202-368	※調子ハネB	2
186	2210202-371	調子皿	1
187B	2210202-327-B	※カバー	1
188A	2110201-254-A	止ネジ枠	9
189	2210202-337	※カバーピソシ(組)	1
190	9013800-001	パイノ下小ネジ	2
192	2210202-338-A	※カバーハネ	1
193	9013800-005	パイノ下小ネジ	2
195A	2210202-339-A	※カバーハネ掛ケ金	1
197	9013200-006	平小ネジ	2
198B	2210201-311-B	オトルパイプ	1
199A	2210201-316-A	オトルケーシ(組)	1
200A	2110201-313-A	ネジ	1
201C	2110201-314-C	パッキン	1
202	2210201-312	オトルボソフツギキチ	1
203	9541201-256	丸平小ネジ	2
204A	2110206-423-A	油戻シパイプ止メ金	1
206A	2110203-336-A	膝当板	1
207A	2110203-337-A	膝当板カバー	1
208A	2110203-338-A	膝当板支エ	1
209B	2110903-342-B	膝当棒	1
210A	9024000-002-A	四角ボルト	1
211C	2110203-341-C	膝当棒支持金	1
213	9592002-159	四角ボルト	2
214	2210203-344	膝当板制御体	1
215	9013200-013	平小ネジ	1
216	2210203-333	膝上ツバネ	1
217	2210203-334	膝上ツバネ	1
218	2110203-343	膝当棒支持金座	2
219A	2210203-338-A	膝上ツバネ支エ	2
221	9530909-207	平小ネジ	1
224A	2210203-362-A	押エ上ツバネ	1

1. 本体関係

見出番号	品番	品名	個数
225	9581601-207	六角ボルト	1
226B	2210203-363-B	押上ゲ軸	1
227	2210203-367	押上ゲ軸×マル	1
228	9501501-256	止ネジ	1
229	9540915-104	丸平小ネジ	1
230	2210203-337	膝上ゲ腕	1
231	9013800-003	パイプ小ネジ	1
232B	2210203-336-B	膝上ゲロッド	1
233B	9015500-029-B	段ネジ	2
234	2210203-339	押上ゲ支エ棒	1
235B	2210202-345-B	※案内パイプC	1
236E	2210204-250-E	タイミッドグフーリー-B(組)	1
237B	2210204-212-B	下軸×マル前	1
238	2210204-213	下軸×マル中	1
239C	2210204-214-C	下軸×マル後	1
241A	2210204-211-A	下軸	1
242B	2210202-250-B	下ネカム(組)	1
243B	2210202-271-B	下ネカム窓板	1
244	2210202-272	下ネカム窓板×ネ	1
245C	2210202-273-C	下ネカム窓板支エ	1
246	2210202-274	下ネカム窓板ピン	1
247	9540806-106	丸平小ネジ	1
249	2210202-275	下ネカム窓板×ネ掛ケ金	1
250	9013200-007	下ネカムカバ- (組)	6
251	2210202-263	下ネカムカバ-	1
252	9540904-119	丸平小ネジ	3
253	2210202-264	下ネカムカバ-支エ	1
254A	2210202-252-A	下ネカム台	1
255A	2210102-258-A	下ネ押エ	1
256	9013200-006	下ネ小ネジ	4
257A	9030100-006-A	平座金	2
258B	2210202-254-B	下ネ案内	1
259	2210202-259	下ネカム台※案内	1
260	9540806-106	丸平小ネジ	2
261A	2210202-262-A	下ネカム掛ケB	1
263B	2210202-255-B	下ネカム掛ケA	1
264B	2210202-261-B	下ネカム掛ケ曲リ棒	1
266	2210201-221	下ネカム掛ケ	1
267	2210201-222	下ネカム掛ケ	1
268	2210201-223	下ネカム掛ケ支エ	1
269	9080200-007	E形リソク	1
270	9501502-256	止ネジ	1
271	2210201-224	下ネカム掛ケ	1
272B	2210204-385-B	揺動カムリソク	3
273B	2210204-390-B	駆動カム(組)	1
274B	2210205-121-B	送りカム	1
275	2210205-102	送りカム支持体(組)	1
276B	2210205-150-B	カム揺動体(組)	1
277	2210205-114	下ネカム掛ケ	1
278A	2210205-115-A	下ネカム掛ケ	1
279C	2210205-122-C	下ネカム掛ケ	1
280	2210205-131	下ネカム掛ケ	1
281	9015500-001	段ネジ	1
282A	2210204-304-A	揺動カム(組)	1
283A	2210206-159-A	給油口(組)	1
285B	2210206-171-B	駆動腕軸給油口	1
286E	2210204-375-E	ルーバー駆動ロッド	1
287B	2210205-226-B	送り角コナ	2
288A	2210204-379-A	角コナ軸	1

1. 本体関係

見出番号	品番	品名	個数
292A	2110506-421-A	油戻シバックキック	1
293F	2210204-308-F	駆動腕軸文=(組)	1
294C	2210204-376-C	駆動腕	1
296	9410161-207	ナット	1
296	2210204-366	駆動腕ポール	1
297A	2210204-377-A	駆動腕軸	1
298	9501506-276	止ネジ	1
299C	2110204-119-C	上軸バックキック	1
300	9530906-119	平小ネジ	1
301C	2210204-361-C	駆動リック	1
302B	2210204-363-B	継手ピン	2
303	9013400-003	丸平小ネジ	2
304B	2210204-365-B	ルーパー軸腕	1
305	9541210-259	丸平小ネジ	1
306	2210204-352	ルーパー台軸	1
307D	2210204-382-D	ルーパー軸マルチ前	1
308A	2210204-383-A	ルーパー軸マルチ後	1
309	9015600-014	止ネジ	2
310A	2210204-367-A	ルーパー軸カマ	1
311	9541102-259	丸平小ネジ	1
312	9060100-001	オリック	1
313	2210204-353	ルーパー台マルチ	2
314	2210204-331	ルーパー台A(組)	1
315	9531102-256	平小ネジ	2
316	2210204-351	ルーパー台B	1
317B	2210204-341-B	ルーパー-A	1
318B	2210204-342-B	ルーパー-B	1
319	2210204-343	ルーパー締ネジ	2
320	2210104-366	駆動ロッド腕ポール	1
321	9410151-219	ナット	1
322	9130600-108	パネ座金	1
323A	2210204-370-A	駆動クランクロッド(組)	1
324	9013200-007	ナベ小ネジ	4
325A	2210204-380-A	揺動軸(組)	1
326B	2210201-172-B	ルーパー揺動軸文	1
327	2210206-174	駆動腕オイルパイプ支	1
328	9541206-102	丸平小ネジ	2
329	2210204-306-A	揺動腕(組)	1
330B	2210205-264-B	上下送りニ又	1
331	9531104-267	平小ネジ	1
332	9531102-256	平小ネジ	1
333D	2210205-221-D	送り台	1
334	2210205-223	送り歯(1/4")	1
335	9541219-119	丸平小ネジ	1
336	2210205-225	送り角コキ軸	1
339	9501508-276	止ネジ	2
340A	2210206-375-A	送り台ホルト	1
341	2210203-111	針板(1/4")2本針用	1
342	9013600-003	丸皿小ネジ	3
343C	2210202-346-C	ルーパー糸案内	1
344D	2210202-151-D	針案内	1
345E	2210202-153-E	針案内台	1
346B	2210202-155-B	針案内台支	1
347	9540903-241	丸平小ネジ	1
349E	2210203-140-E	ラッパ(組)	1
352C	2210201-201-C	密板A(組)	1
353B	2210201-202-B	密板B(組)	1
354C	2210201-283-C	密板支エバネ	1
355	9013200-006	ナベ小ネジ	10
356A	2210202-380-A	糸切り座(組)	1

1. 本体関係

見出番号	品番	品名	個数
65	2110402-115	針棒フックソケット	1
66L	2210204-111-L	上軸	1
67A	2110904-220-A	上軸×タム前(組)	1
68	2210106-428	油戻シバイン案内	1
69	9531101-264	平小ネジ	1
70	9015600-006	止ネジ	8
71F	2110904-113-F	上軸×タム中	1
72E	2210204-114-E	上軸×タム後	1
73A	2110604-141-A	上軸カマ	1
74	9501602-276	止ネジ	2
75	2210204-012	キヤ(組)	1
76A	2110604-118-A	上軸フック	1
77	9015600-004	止ネジ	1
78F	2210204-160-F	タイミンクローリ-A(組)	1
80D	2210504-151-D	ハズミ車	1
81	9531507-276	平小ネジ	2
82B	2110604-152-B	ハズミ車スクリーン	2
83	2210201-218	油案内板	1
84	9013800-005	バインフ小ネジ	3
85A	2210201-181-A	サイフカバ	1
86B	2210201-182-B	サイフカババッキソク	1
87	9540907-247	丸平小ネジ	7
88A	2120201-234-A	調節穴フック	5
89A	2210201-231-A	面板	1
91	2210203-253	膝上ク引棒	1
92A	2210203-257-A	膝上ク引棒止ピン	2
93A	2210203-252-A	膝上ク引棒	1
94A	2210203-256-A	膝上ク引棒バネ	1
95C	9015500-038-C	段ネジ	1
96A	2110603-313-A	膝上ク引棒ツキテ	1
97B	9015500-019-B	段ネジ	1
98D	2210203-314-D	膝上ク棒	1
99	9410125-107	ナット	1
100B	2110601-232-B	面板バッキソク	1
101A	2210106-391-A	針棒給油板	1
105	9540805-102	丸平小ネジ	2
106A	2210102-323-A	曲リ棒糸掛ク	1
107	2210102-325	曲リ棒糸掛ク隠金	1
108	9540903-241	丸平小ネジ	2
109	9013400-003	丸平小ネジ	1
110A	2210102-315-A	フーム糸掛ク	1
111	9540904-101	丸平小ネジ	1
112	2210102-321	糸調節板	1
113	9015500-011	段ネジ	1
114A	2210106-424-A	油戻シバイン支エB	1
115A	2110601-214-A	オイルクーラシヤクシヤク	1
116A	2210201-212-A	オイルクーラシヤクシヤク	1
117	2210201-217	オイルクーラシヤクシヤク	1
118	2110601-213	オイルクーラシヤクシヤク	2
119	9560904-307	丸皿小ネジ	4
122	2210202-326	糸案内	2
123B	2210202-329-B	糸案内支エ	1
124	9540809-279	丸平小ネジ	4
126A	2210202-324-A	糸案内支エ取付板	1
127	9013800-007	バインフ小ネジ	2
128C	2210201-451-C	タイミンクローリカバ-A	1
130	9510501-256	丸小ネジ	2
131A	2210201-452-A	タイミンクローリカバ-	1
132	2210201-453	タイミンクローリカババッキソク	1
133	9541210-259	丸平小ネジ	2