

C310-PH

POCKET HEMMING MACHINE



INSTRUCTION MANUAL & PARTS LIST

CONTENTS

INSTRUCTION MANUAL

- 3. Voltage Information
- 4. Control panel
- 9. Hemming folder adjustment
- 11. Feed belts settings
- 12. Feed belts & Table height adjustment
- 14. Machine operation
- 14. Threading
- 16. Sensors adjustment
- 18. Machine head settings

PARTS LIST

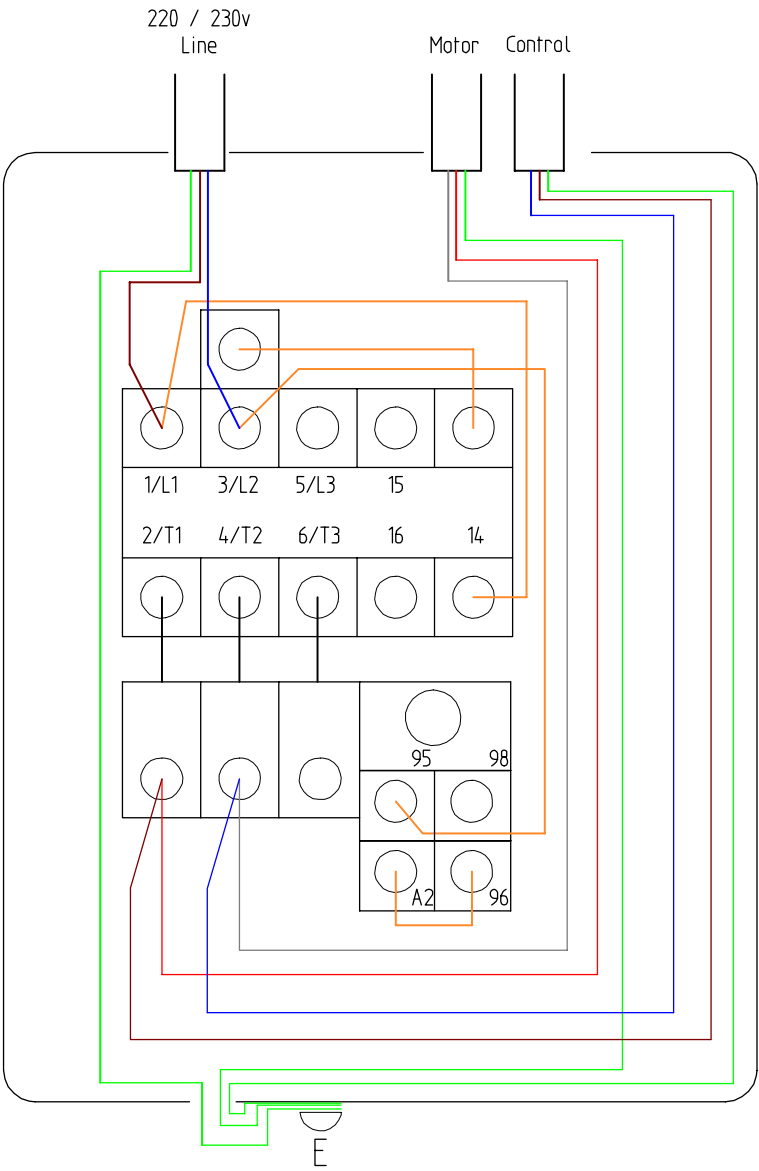
- 19. Feed belt assembly
- 22. Hemming folder assembly
- 24. Control system parts & diagram
- 26. Twin needle machine head parts
- 31. Thread chain cutter parts

Voltage Information

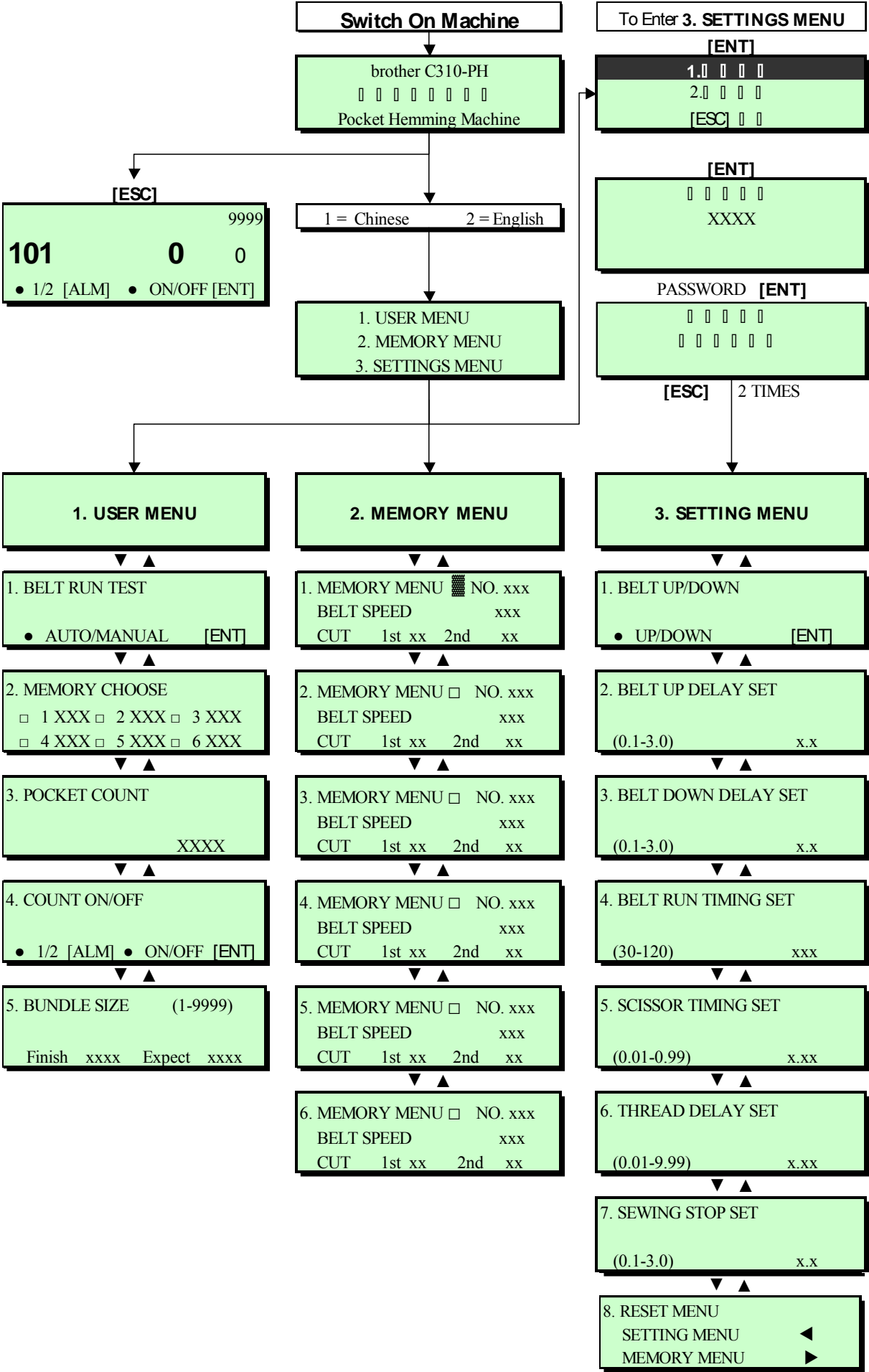
IMPORTANT

The supply voltage must be
220 / 230 VAC SINGLE PHASE
AN EARTH WIRE MUST BE CONNECTED

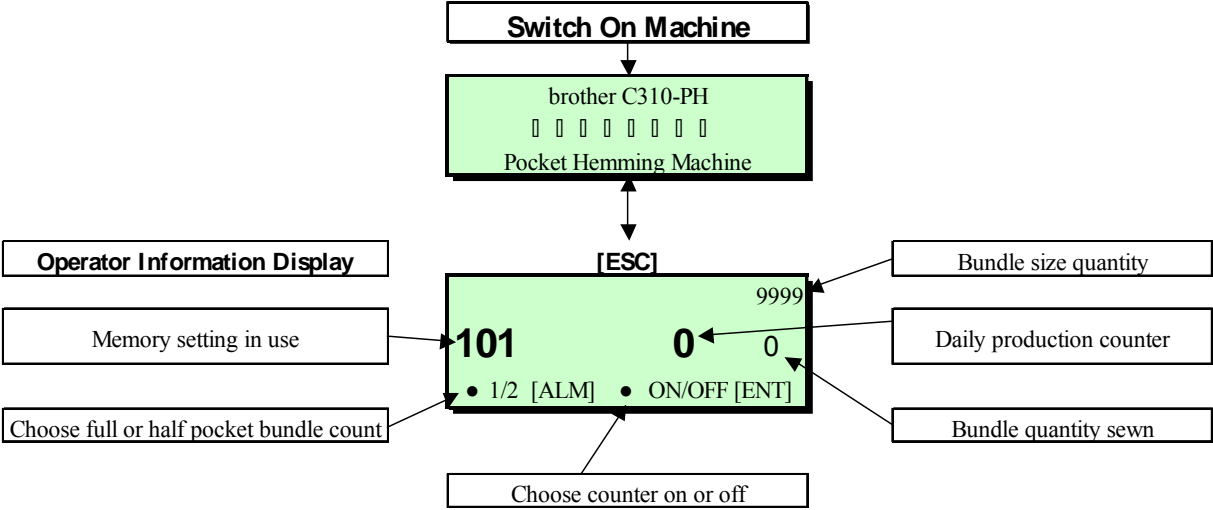
Switch Box Connections



CONTROL PANEL NAVIGATION



OPERATOR INFORMATION DISPLAYS



Emergency Stop Display

All machine functions are disabled until the RESET button is pressed

EMERGENCY STOP

Cover Out Display

If the table cover is pulled out for threading etc. the machine can not run in automatic mode until the cover is closed and RESET is pressed

COVER OUT

USER MENU

Press **[1]** to enter the User Menu
Press the **▼** or **▲** keys to
move between displays

Press the **[ENT]** key to choose
• **AUTO** or **MANUAL** mode
In manual mode the feed belts
can be run by pressing the RESET
button for testing the pocket hem

Press keys **[1]** to **[6]** twice to choose the
required memory setting (feed belt speed etc.)
Go to MEMORY MENU to set memory setting
Default = 101; 102; 103; 104; 105; 106

Shows the total number of pockets that have
been sewn.
See SETTINGS MENU for re-setting info
Default = 0

Press **[ENT]** key to switch the counter
ON or OFF
Press **[ALM]** key to switch the counter
from HIP to TICKET pocket counting


Press **[SET]** key to set the required bundle size
Input the required value then press **[ENT]** key
Press **[CLR]** key to clear the bundle counter

1. USER MENU

1. BELT RUN TEST

• **AUTO/MANUAL** **[ENT]**

2. MEMORY CHOOSE

 (1) 101 ☐ (2) 102 ☐ (3) 103
☐ (4) 104 ☐ (5) 105 ☐ (6) 106

3. POCKET COUNT

6000..

4. COUNT ON/OFF

• **1/2** **[ALM]** • **ON/OFF** **[ENT]**

5. BUNDLE SIZE (1-9999)

Finish 000 Expect 000

PRESS **[ESC]** to return to the
memory selection widow

NOTE: After switching on, the
start sensor must be operated
before MANUAL mode can be entered

NOTE: Memory code numbers may be
changed as desired.
(Go to MEMORY MENU)

NOTE: When the bundle size (Expect)
number is reached the feed belts will
not feed the next pocket.
Press RESET to start again

MEMORY MENU

Press **[2]** to enter the Memory Menu
Press the ▼ or ▲ keys to
move between displays

In these display panels 1 to 6 you can set
The MEMORY MENU allocation code No.
to your choice. (Defaults = 101 to 106)


The Feed BELT SPEED from
50 to 300 mm / sec.


The first and second thread chain length
from 11 to 60mm


Press the **[SET]** key to scroll through each
item, press the **[CLR]** key then enter the
new value. Press **[ENT]** key to confirm


Memory 6. Is set to 50 for feed testing.
When MANUAL is chosen, MEMORY 6.
is automatically selected as the feed speed.


2. MEMORY MENU


1. MEMORY MENU  NO. 101
BELT SPEED 260
CUT 1st 40 2nd 40


2. MEMORY MENU  NO. 102
BELT SPEED 250
CUT 1st 40 2nd 40

3. MEMORY MENU  NO. 103
BELT SPEED 240
CUT 1st 40 2nd 40

4. MEMORY MENU  NO. 104
BELT SPEED 230
CUT 1st 40 2nd 40

5. MEMORY MENU  NO. 105
BELT SPEED 220
CUT 1st 40 2nd 40

6. MEMORY MENU  NO. 106
BELT SPEED 50
CUT 1st 40 2nd 40

NOTE: The black  denotes
the memory in current use.
(Set in the USER MENU)

PRESS **[ESC]** to return to the memory
selection widow

SETTINGS MENU

Enter the security code to access the SETTINGS MENU refer to Menu Navigation

Press the [3] key to enter Settings Menu

Press the ▼ or ▲ keys to move between displays

3. SETTING MENU



Press [ENT] key to choose:

- = Belt go UP/DOWN, used for front loading
- = Belt stays down, used for end loading

1. BELT UP/DOWN

● UP/DOWN [ENT]



Press [SET] key to change the value. This is the time delay for the belt to lift after each pocket is loaded.

2. BELT UP DELAY SET

(0.1-3.0) 0.5



NOTE: this is only used for front loading

Default = 0.5 seconds

Press [SET] key to change the value. This is the time delay for the belt to lower after each pocket is loaded.

3. BELT DOWN DELAY SET

(0.1-3.0) 0.5



NOTE: this is only used for front loading

Default = 0.5

Press [SET] key to change the value. This is the time delay for the belt to stop after the last pocket is loaded.

4. BELT RUN TIMING SET

(30-120) 40



NOTE: this must be set long enough for the last pocket to reach the end of the feed belt.

Press [SET] key to change the value. This is the pulse time for the chain cutter.

5. SCISSOR TIMING SET

(0.01-0.99) 0.06



NOTE: The chain cutter will cut at the start and end of each pocket, however, if the pockets are loaded less than 40mm apart, the cutter will only cut once between each pocket.

Press [SET] key to change the value. Sets a time delay from the machine start to activating the thread sensors

6. THREAD DELAY SET

(0.01-9.99) x.xx



NOTE: Only used then optional thread sensors are fitted

Press [SET] key to change the value. This is the time delay for the machine to stop after the last pocket passes the Head Sensor.

7. SEWING STOP SET

(0.1-3.0) 0.6



NOTE: this must be set long enough for the last pocket to pass the thread chain cutter.

In this window ALL parameters can be reset to the DEFAULT settings.

Press RESET and hold then press ◀ ALL SETTINGS MENU values will return to the default settings.

8. RESET MENU

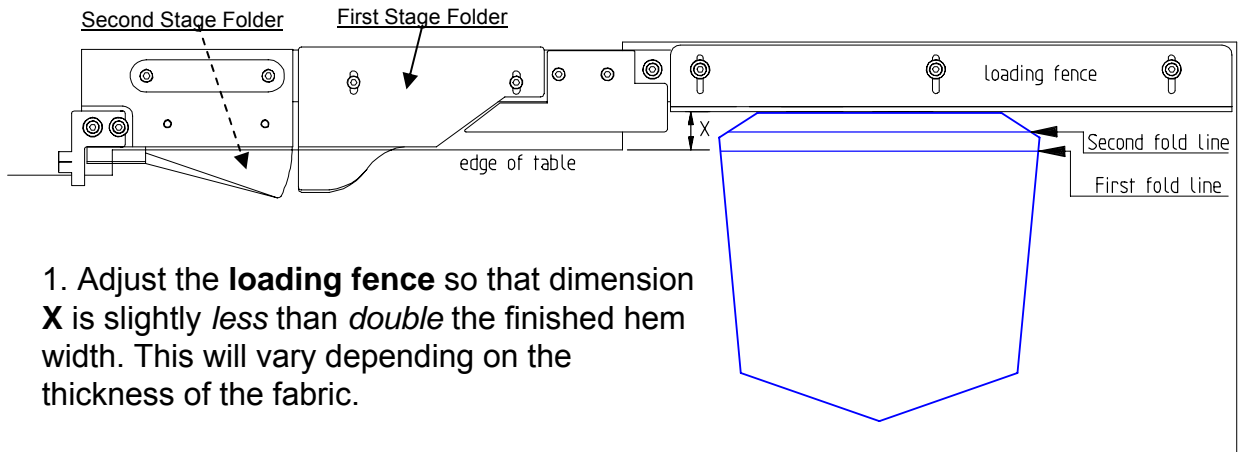
SETTING MENU ◀

MEMORY MENU ▶

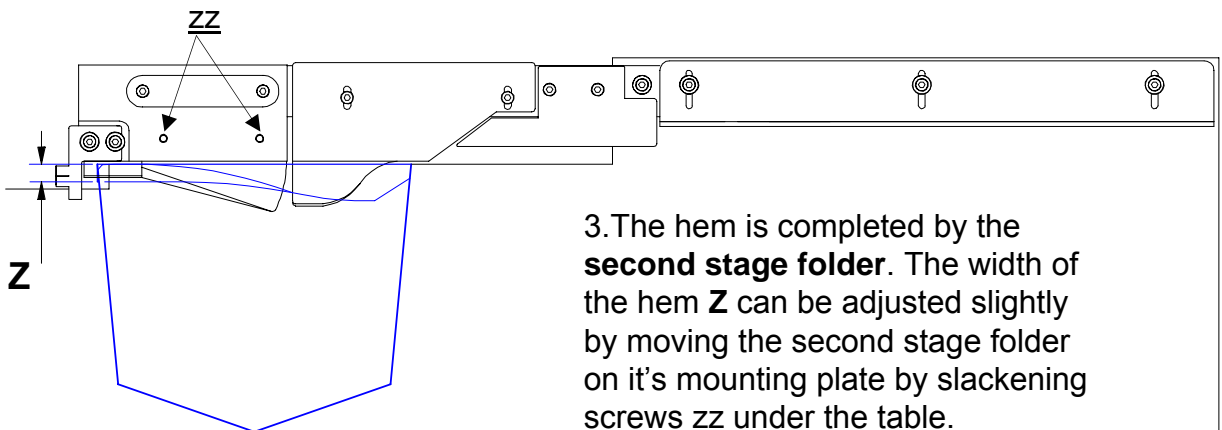
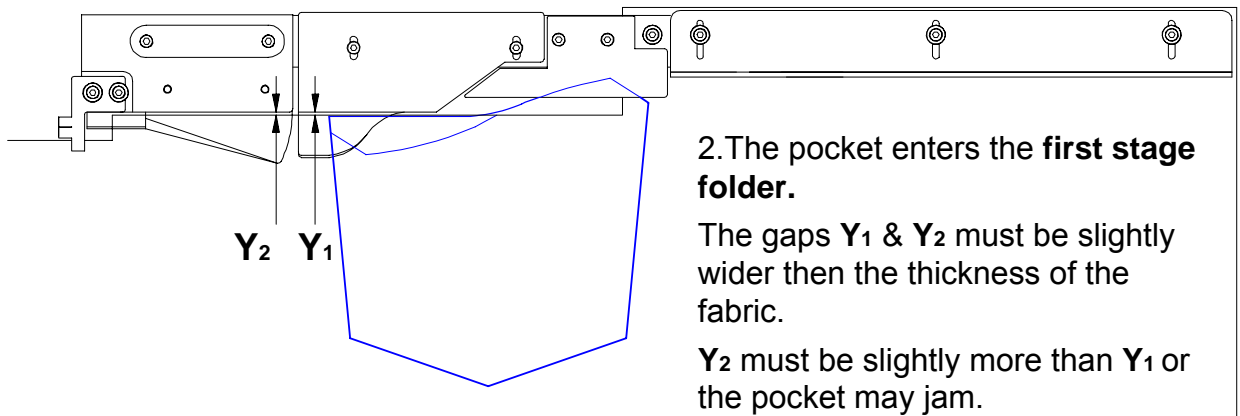
Press RESET and hold then press ▶ ALL MEMORY MENU values will return to the default settings

Hemming folder adjustment

Unlike most hemming folders which role the fabric, the C310-PH works by first folding the fabric over the edge of the table to form the final top crease. A second stage folder then tucks the raw edge inside the fold. This adjustable method enables many fabrics to be handled without the need to purchase several expensive hemming folders.



1. Adjust the **loading fence** so that dimension **X** is slightly *less* than *double* the finished hem width. This will vary depending on the thickness of the fabric.



Hemming folder adjustment

After adjusting the folder, test the hemming result as follows.

In the USER MENU 1. BELT RUN TEST press [ENT] to set Auto/Manual to O (Manual).

Pull the table away from the machine head. Lift the belt and place a pocket in the loading position. (If front loading is in use, press the belt down onto the pocket). Press the RESET button. The pocket can now be observed as it moves through the the folding system. The pocket should run through the feed belts smoothly with no sticking or twisting. As it leaves the second stage folder it will uncurl leaving 2 parallel crease lines.

Should a pocket become jammed, SWITCH OFF. The belts may now be turned in reverse by hand.

If this does not release the pocket, release the font belt locking lever **A**. The belt unit can now be lifted to remove the pocket.



NEVER pull a pocket from under the belt by force. This may damage the folder.

To take the belt unit off completely, remove lever screw **A** and Bolt **B**. This will retain the correct belt alignment when the unit is refitted.

NEVER remove the belt unit by releasing the 4 cap bolts **C**. These bolts are used only for aligning and positioning the complete belt unit.

Feed belt settings

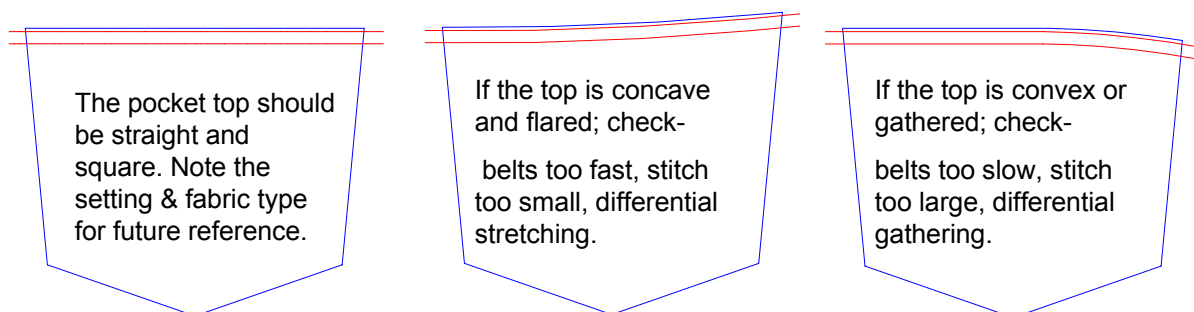
The relationship between machine feed speed and belt feed speed will vary according to stitch size and fabric type.

Normally difficult to hem fabrics such as lightweights, corduroys and stretch can be handled by adjusting the C310 differential feed system in conjunction with the electronically variable feed belt speed.

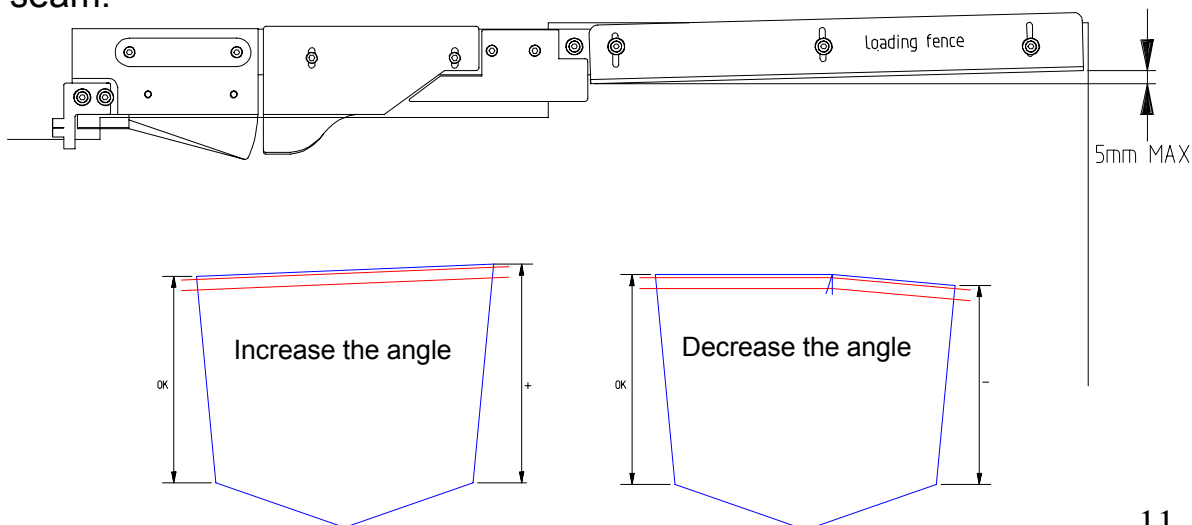
The machine feed dogs must be set all level, 1mm above the surface of the needle plate. On no account must the feed dogs be set higher than recommended in an effort to improve feeding. The result will be poor chaining and poor feeding.

As a starting point, the differential should be 1:1. With a stitch size of 2.5mm the feed belt speed should be set to 250mm/second.

Thread the machine and sew test, making sure that the machine head is chaining freely without pulling on the threads. Close the table, press RESET and load a test pocket. Check the results; see below.



If a fabric is very prone to slip or puckering, in my be difficult to achieve a straight hem. In this case the **loading fence** may be angled slightly to counter the tendency of the pocket to slide away at the left end of the seam.

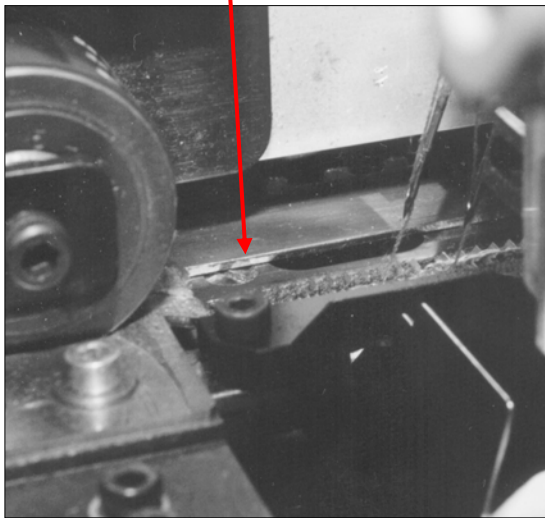


Feed belt & Table adjustments

If the belt unit is removed it must be replaced and adjusted as follows.

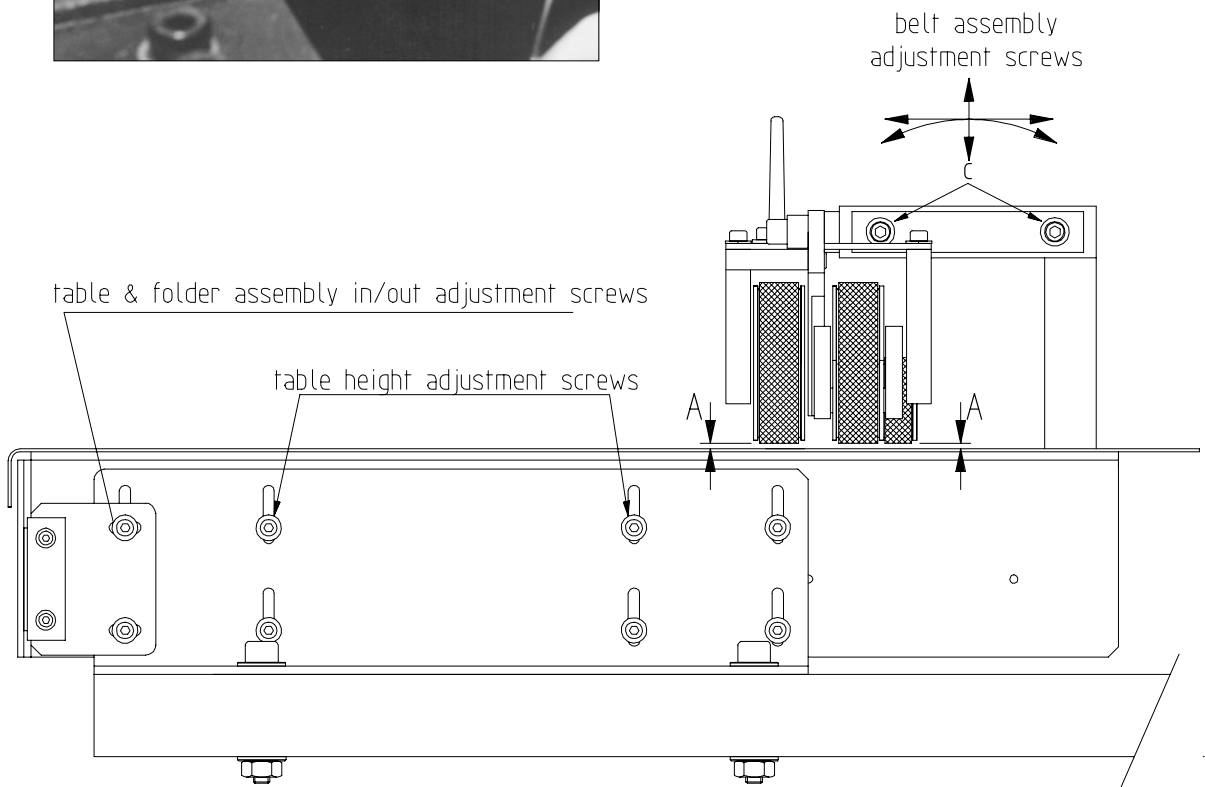
The entire belt assembly is removed by removing the locking lever screw **A** and pivot bolt **B** (see page 10).

The feed table must slide OVER the needle plate. There should be a gap of **0.5mm**

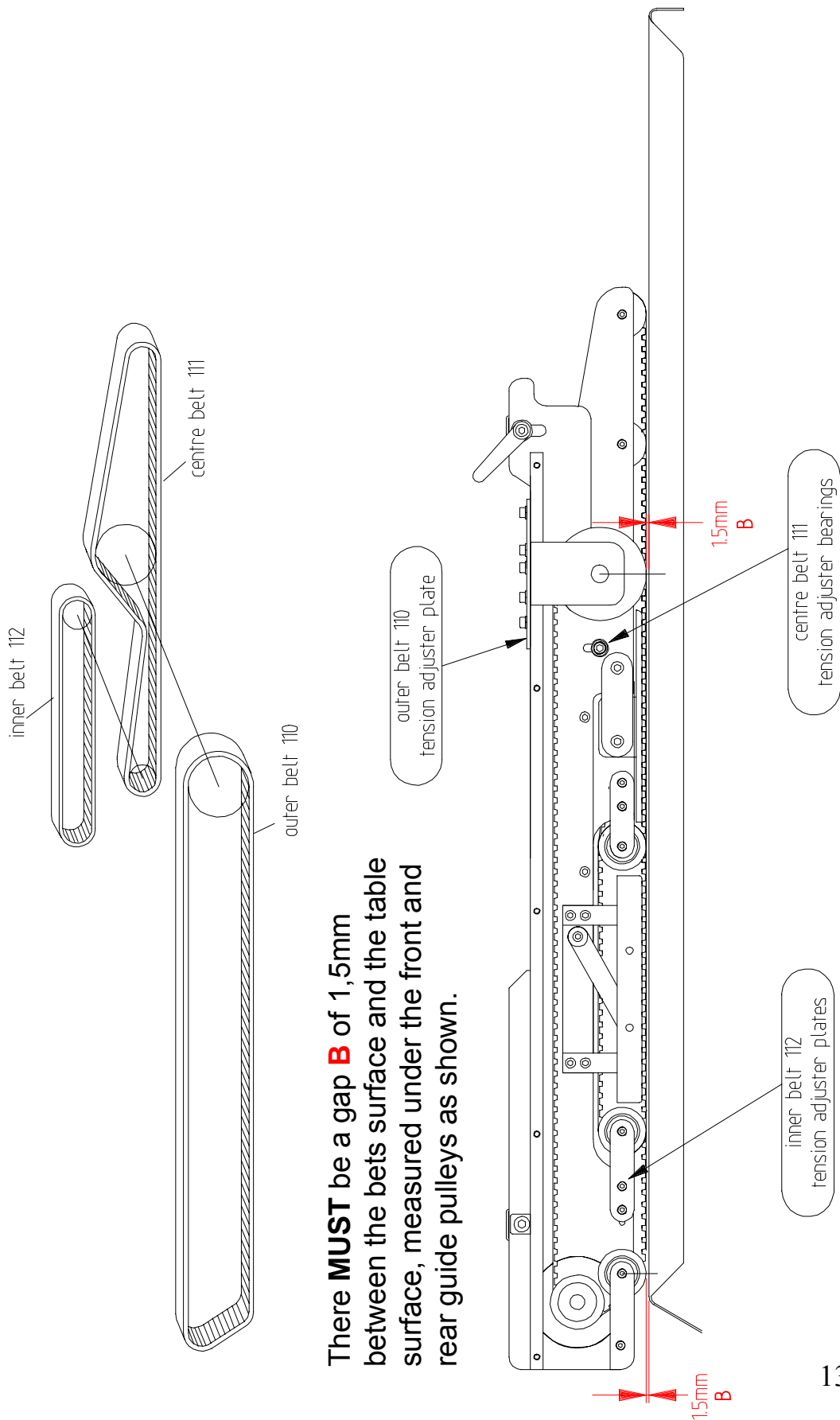


To adjust the position and alignment of the belt assembly, slacken 4 bolts **C**.

The belt assembly must be level; viewed from the front, dimensions **A** MUST BE EQUAL.



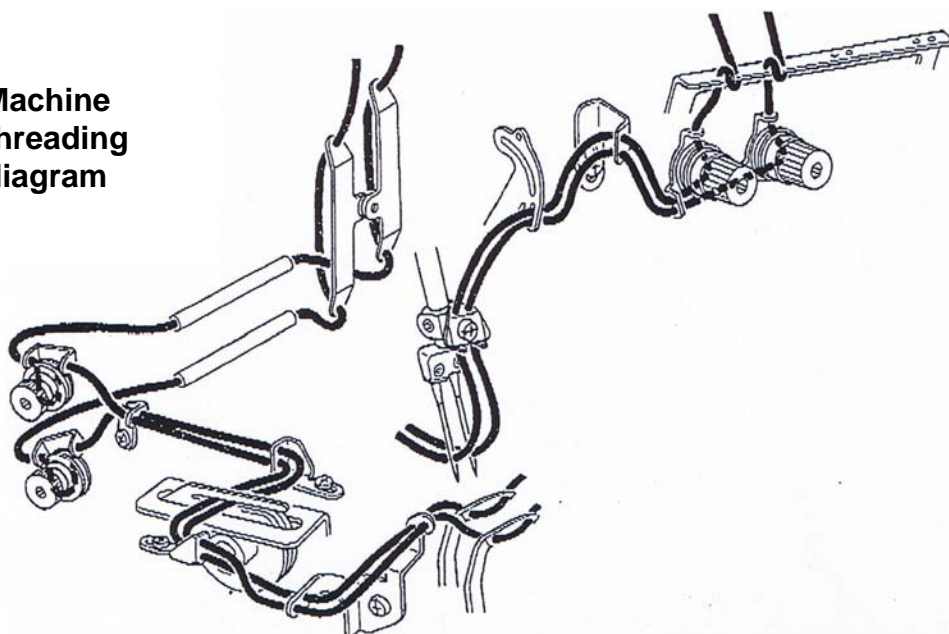
Feed belt adjustments



There **MUST** be a gap **B** of 1,5mm between the belts surface and the table surface, measured under the front and rear guide pulleys as shown.

Machine operation

Machine
threading
diagram



Load the pocket under the feed belt. If using the front loading method (see page 15) release the pocket immediately. The belt will lower and feed the pocket through the folder and up to the machine.

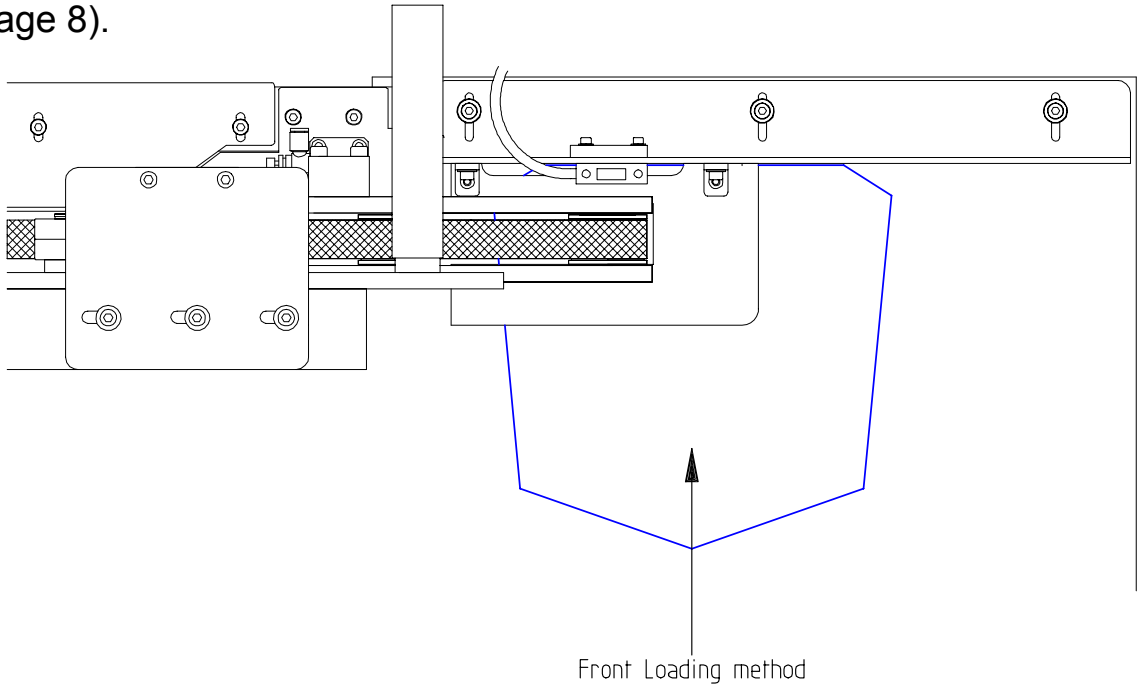
When the pocket reaches the second sensor the machine will start. The thread chain will be cut at the start and end of the pocket then the machine head will stop, but the belts will continue taking the pocket to the collection bin (or stacker if fitted). If the next pocket is loaded before the belts stop they will continue to run. However in order to save thread, the machine will stop. If the pockets are loaded continuously within 50 to 60mm apart the machine head will continue to run until the last pocket is loaded and hemmed.

This machine will *not* stop with a pocket under the belts, each pocket is completed and stacked. It is not necessary to load scrap fabric under the feed belts or to cover the sensor to make the last pocket reach the end of the cycle.

To obtain a set bundle size, set the **BUNDLE SIZE** counter in the USER MENU (see page 6).

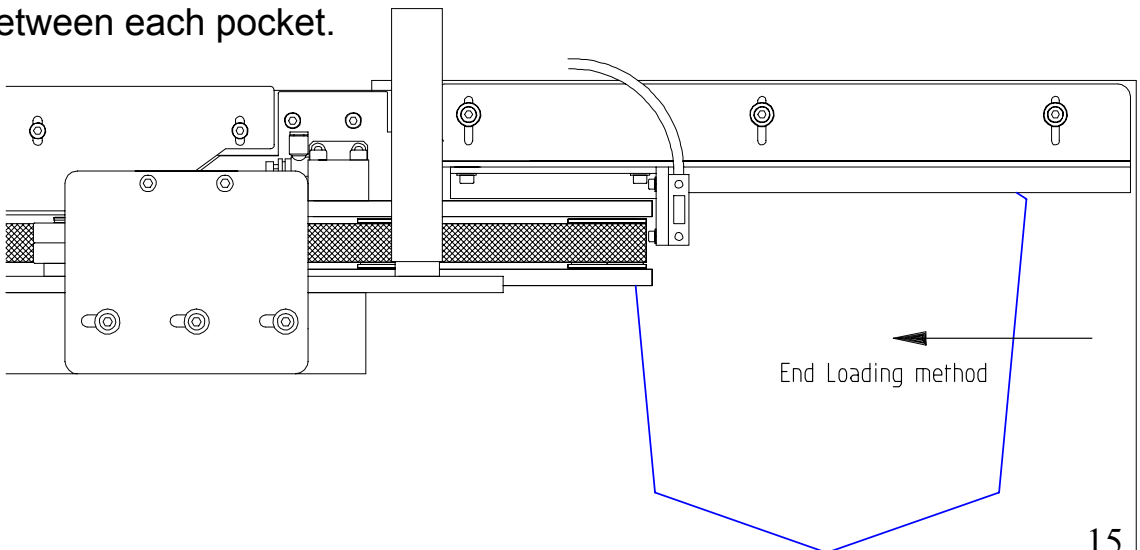
Machine operation

The pocket may be loaded from the front or the end of the feed belt. Front loading has the advantage of ensuring that the pocket is set square under the feed belt and also helps to keep the pockets equally spaced. To choose this method select **● BELT UP/DOWN** in the SETTINGS MENU, the belt will lift for each pocket to be loaded. (see page 8).

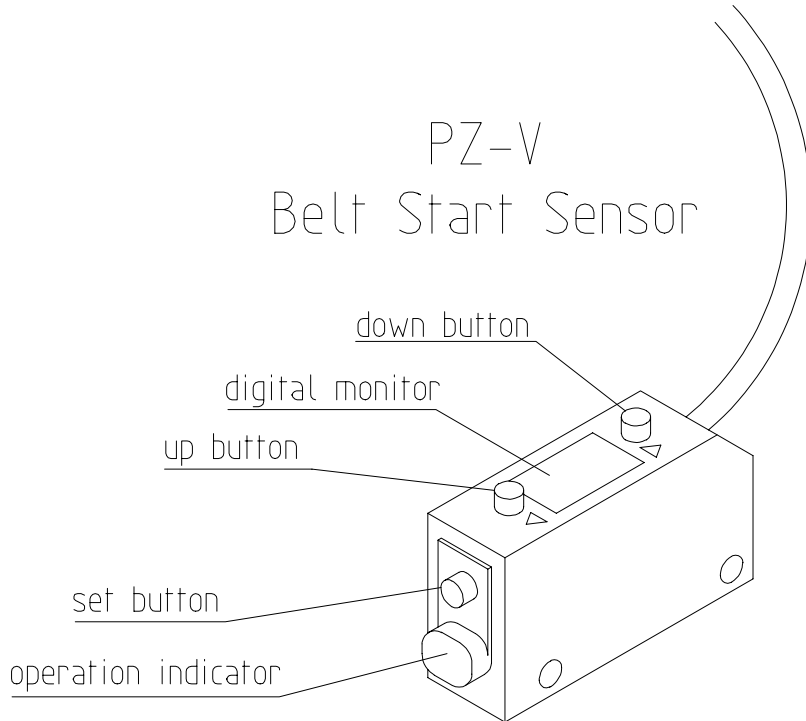


To choose the end loading method select **○ BELT UP/DOWN** in the SETTINGS MENU, the belt will remain in the down position. (see page 8).

In this case the pockets must be loaded at least 40mm apart to ensure that the thread chain is cut at both start and end of the pocket. If the pockets are set closer together the chain cutter will cut only once between each pocket.



Sensors adjustment



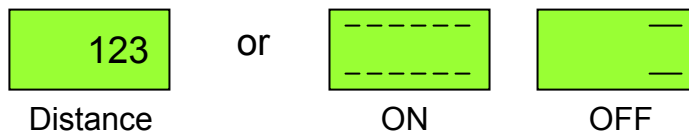
Sensitivity Adjustment:

Step 1. With no pocket under the sensor, press the SET button and release it. "**S E t**" and the current distance will flash alternately in the monitor.

Step 2. Place a pocket under the sensor, press and release the SET button. The preset value will flash several times before the normal display appears.

To make fine sensitivity adjustments. Press the ◀ or ▶ button, the numerical value will flash for 2 seconds. This is the preset value, if the ◀ or ▶ is pressed while the display is flashing, the preset value can be increased or decreased.

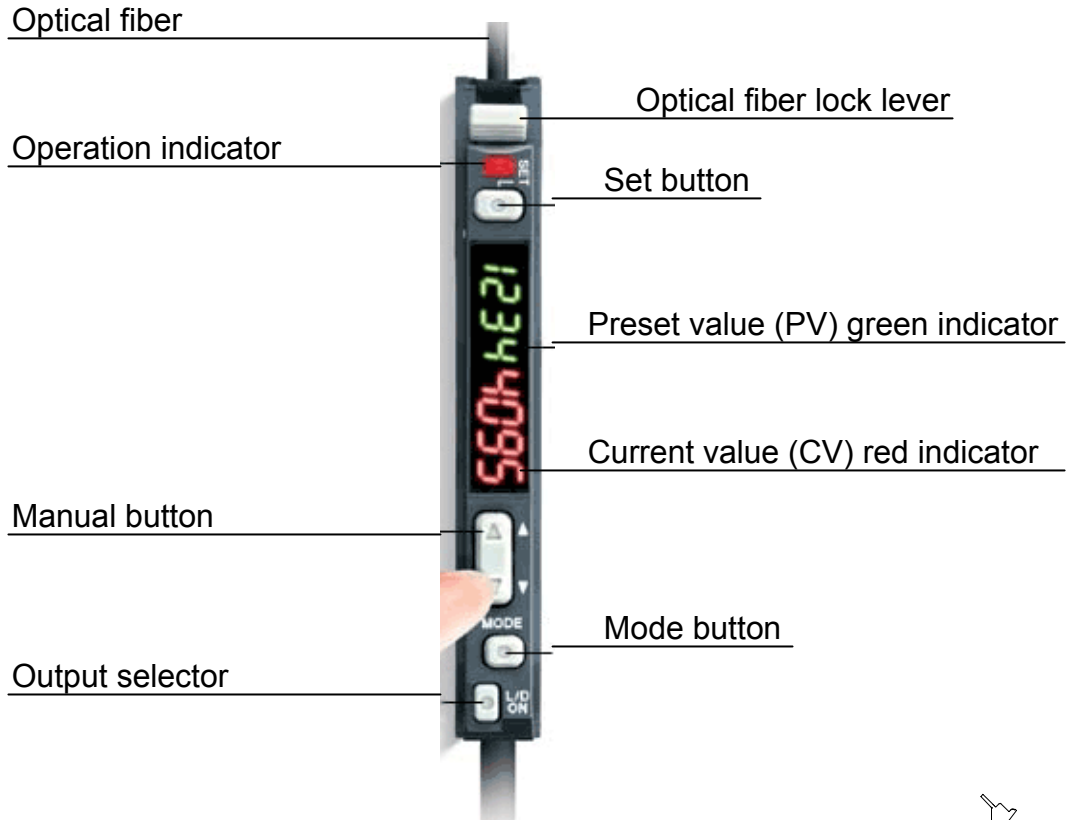
Display selection. Press the ◀ and ▶ simultaneously and release them. This will select either:



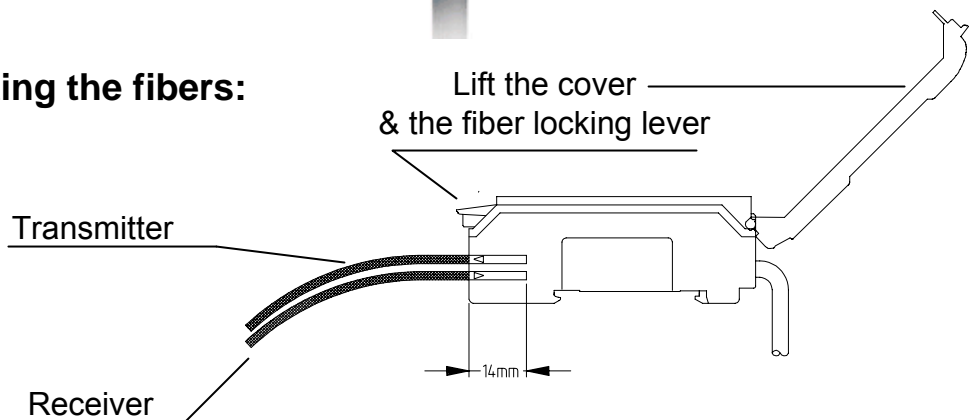
Button lock. Press the ◀ and ▶ simultaneously for over 3 seconds. To unlock, press the ◀ and ▶ simultaneously for over 3 seconds again.

Sensors adjustment

FS-V21 Machine Head Start Sensor, with fiber optic though beam.



Inserting the fibers:



Sensitivity adjustment:

Step 1. With **no pocket blocking the sensor beam**, press the SET button momentarily.

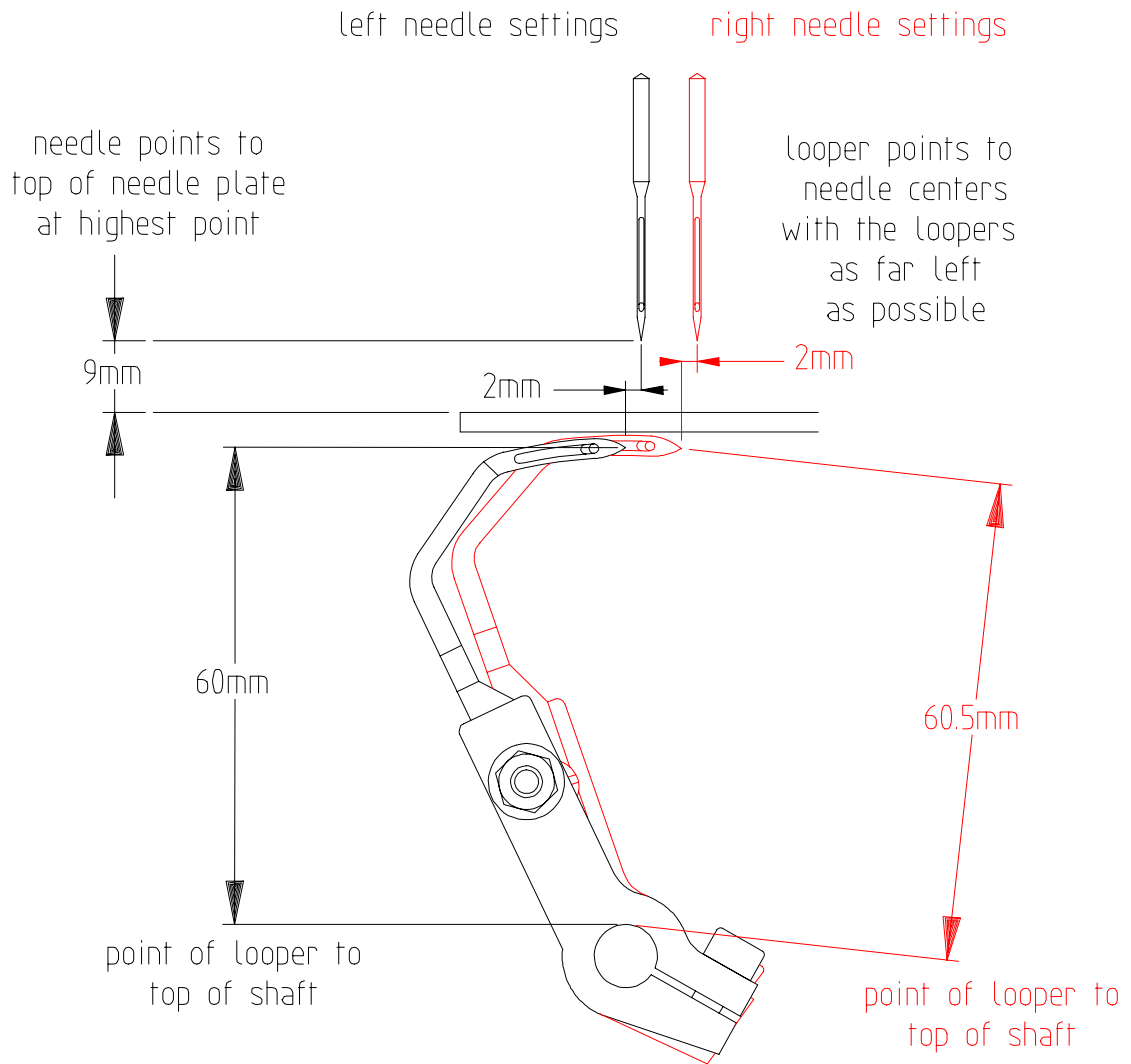
Step 2. Move the front edge of a pocket in the sensor then press the SET button for over 3 seconds.

The display will flash when the setting is finished, then the PV will be displayed.

Clean the ends of the fiber optic cable regularly using the blow gun provided.

Machine Head Settings

LOOPER ADJUSTMENTS:

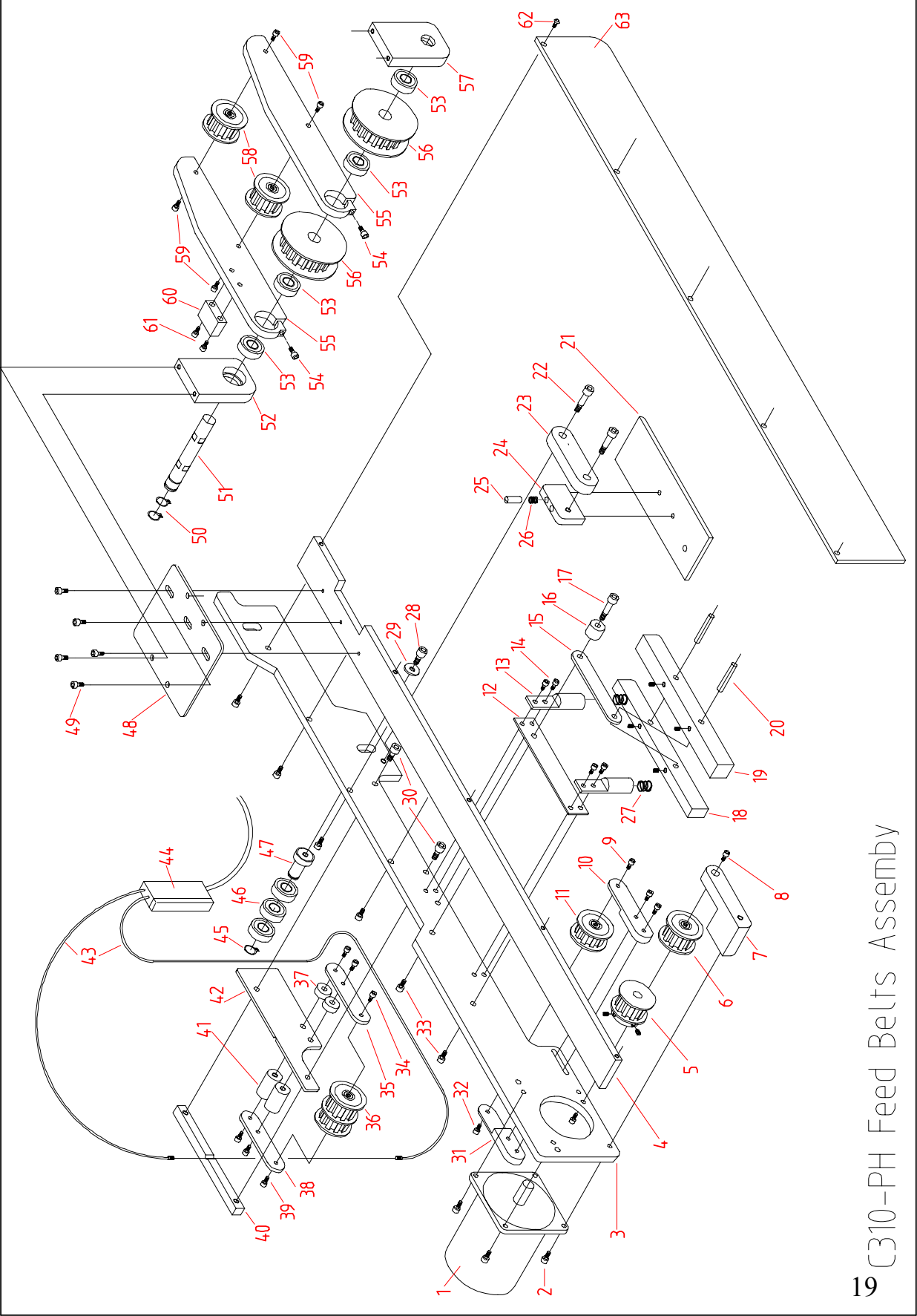


PRESSER FOOT:

The presser foot must be completely flat on the needle plate surface. To align the needle holes, move the foot bar bush at the rear of the machine head.

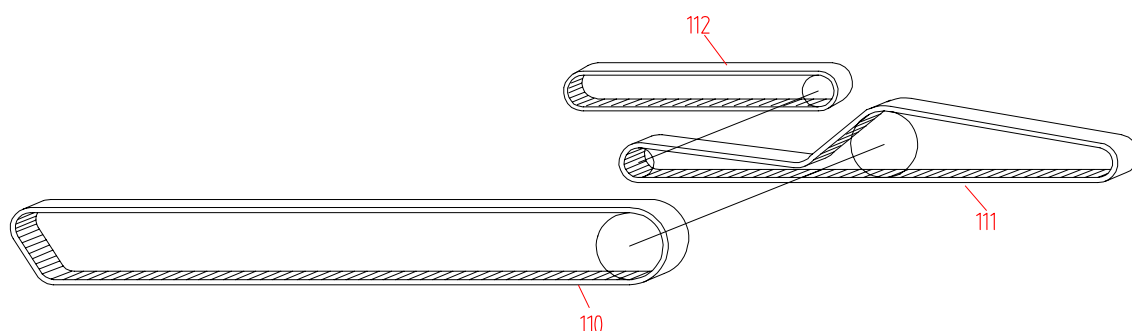
FEED DOGS:

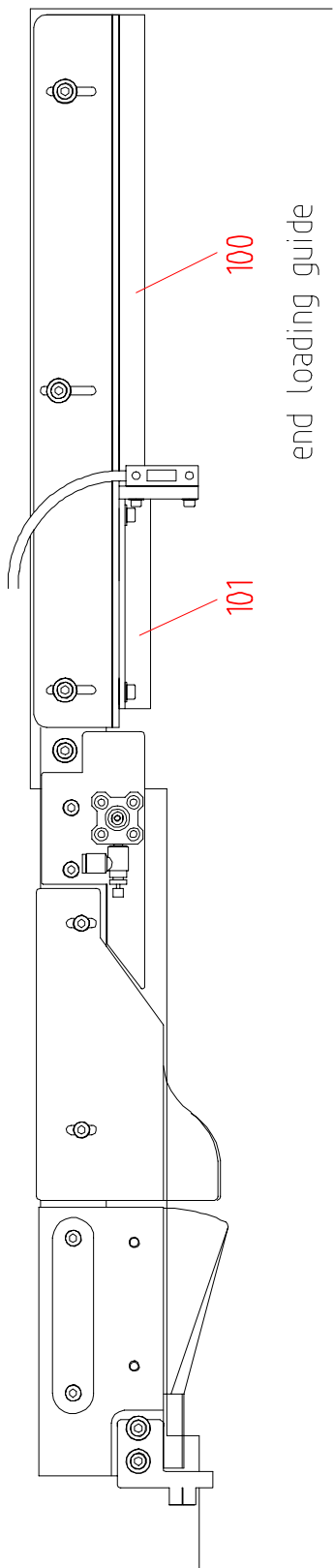
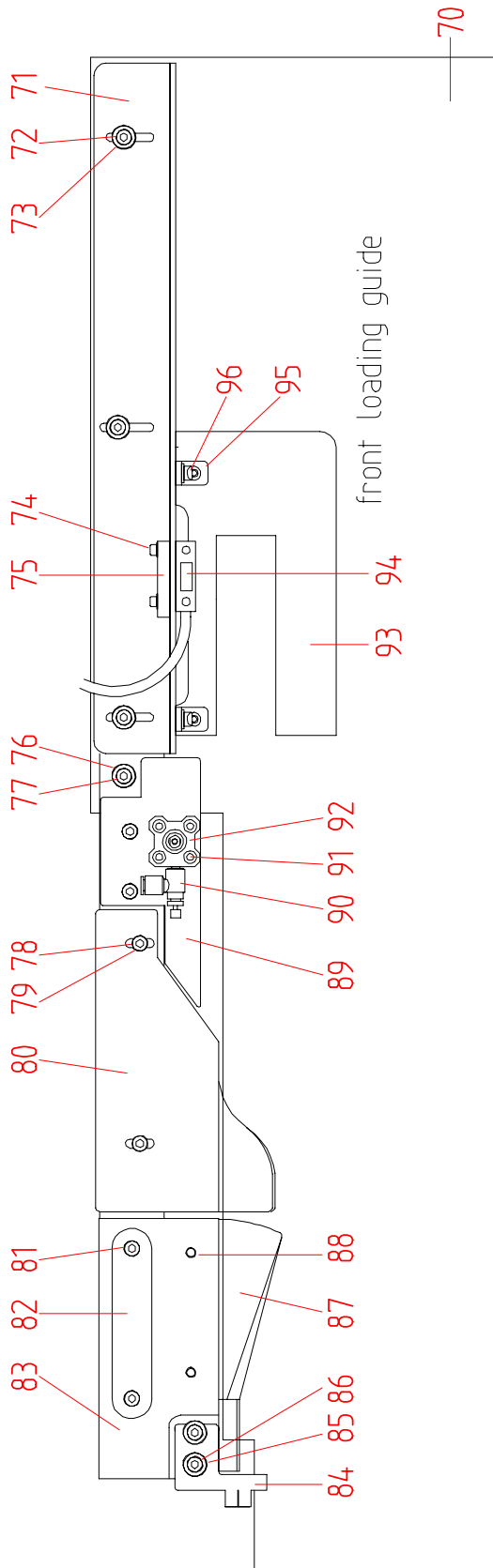
Both the differential and main feed dogs must be set to the same height. The maximum height should be 1mm above the surface of the needle plate. DO NOT set higher or the machine will not feed or chain properly.



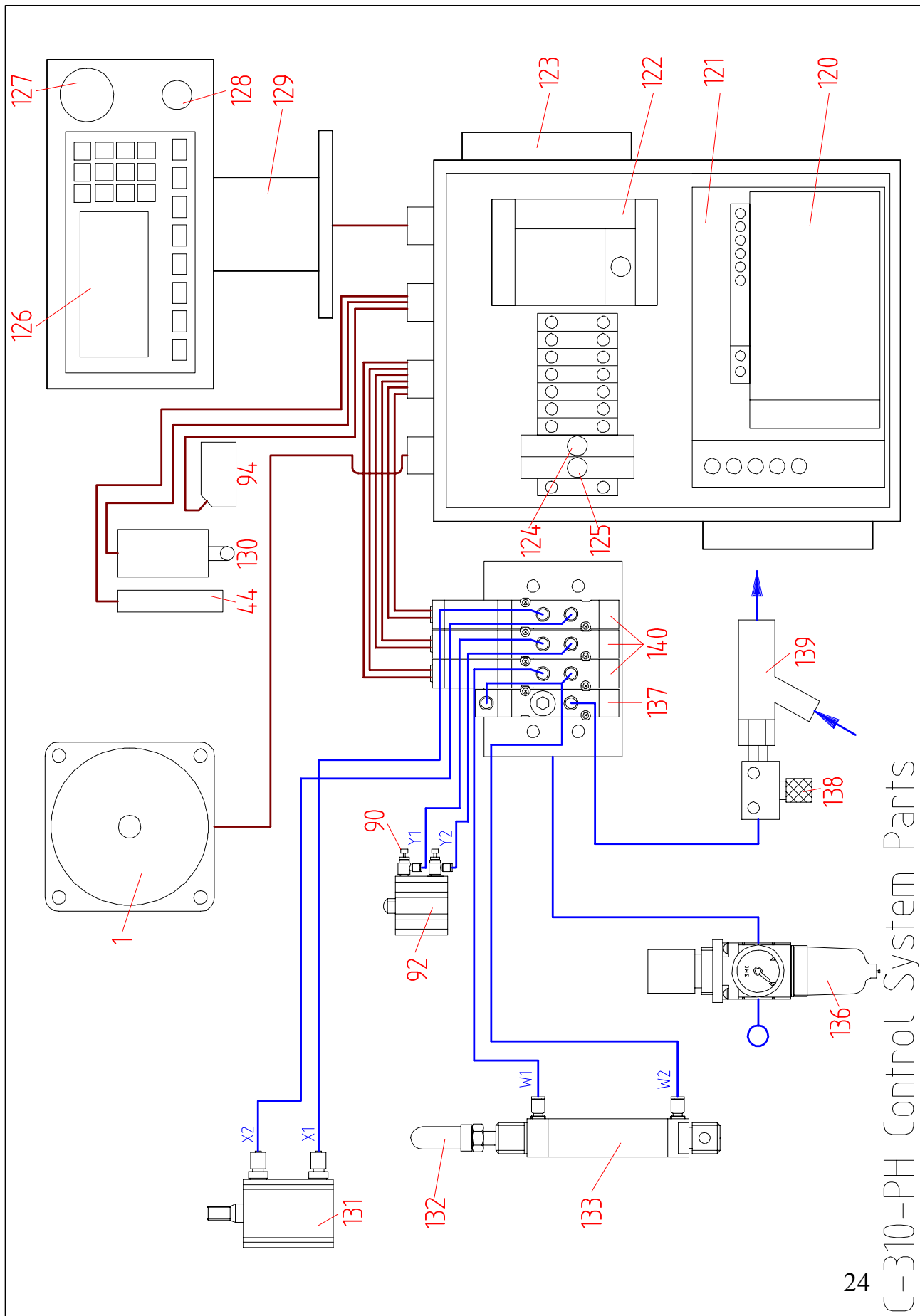
	Feed Belt Assembly	1	
Ref	Part Number	Qty	Description
1	10382225141	1	Motor
2	5120	4	Screw
3	26103052	1	Back plate
4	26103054	1	Top plate
5	26103037	1	Pulley
6	26103035	1	Pulley assembly
7	26103062	1	Bracket
8	4120	1	Screw
9	4120	3	Screw
10	26103013	1	Bracket set
11	26103034	1	Pulley assembly
12	26103009	1	Spacer
13	26103027	2	Guide
14	4120	4	Screw
15	26103028	1	Link
16	26103015	1	Bush
17	261035620	1	Shoulder screw
18	26103029	1	Presser bar
19	26103030	1	Presser bar
20	26103026	2	Pin
21	26103050	1	Presser bar assembly
22	56160	2	Shoulder screw
23	26103049	1	Link
24	26103050	1	Presser bar assembly
25	31011010	1	Plunger
26	31011011	1	Spring
27	31011012	2	Spring
28	6160	1	Screw
29	6001	1	Washer
30	6200	2	Screw
31	26103013	1	Bracket set
32	4120	1	Screw
33	5200	2	Screw
34	4120	2	Screw
35	26103065	1	Bracket
36	26103033	1	Pulley assembly
37	26103015	2	Spacer
38	261003065	1	Bracket
39	5120	4	Screw
40	26103006	1	Bracket

	Feed Belt Assembly	2	
Ref	Part Number	Qty	Description
41	26103020	2	Bush
42	26103014	1	Bracket
43	670001	1	Optical fibre sensor
44	100001	1	Sensor amplifier
45	120001	1	Circlip
46	220807	3	Bearing
47	26103048	1	Shaft
48	26103007	1	Belt pulley plate
49	5120	5	Screw
50	120001	2	Circlip
51	26103018	1	Shaft
52	26103012	1	Bearing housing
53	281208	4	Bearing
54	4160	2	Screw
55	26103017	2	Pivot bracket
56	26103036	2	Pulley
57	26103019	1	Bearing housing
58	26103035	2	Bearing assembly
59	4120	4	Screw
60	26103046	1	Cylinder block
61	4250	2	Screw
62	5160	6	Screw
63	26103058	1	Cover
110	540075	1	Belt
111	390075	1	Belt
112	225050	1	Belt





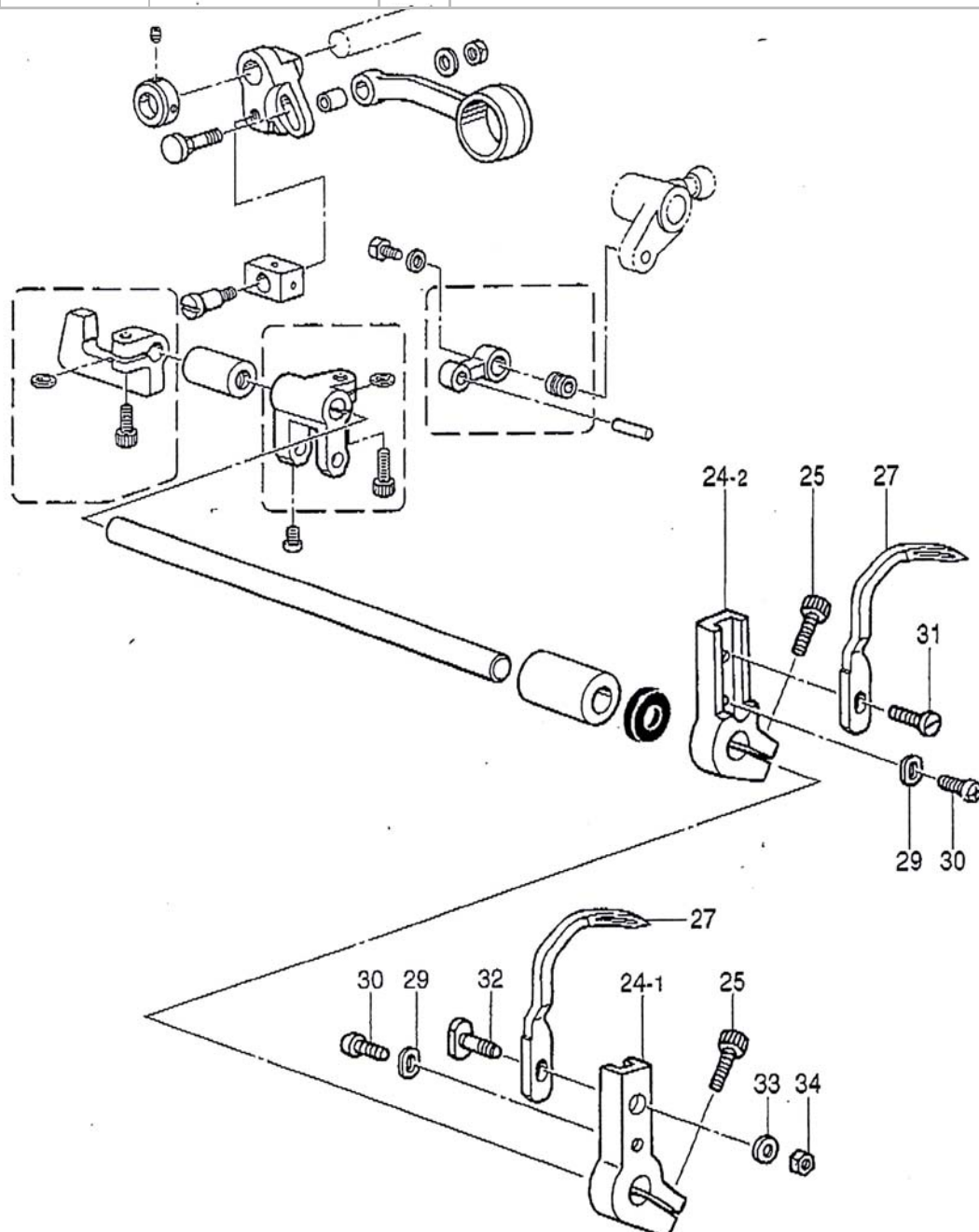
Hemming Folder Assembly			
Ref	Part Number	Qty	Description
70	6101043	1	Table
71	26103016	1	Loading fence
72	5120	3	Screw
73	5001	3	Washer
74	3200	2	Screw
75	26103038	1	Clamp
76	5001	1	Washer
77	5200	1	Screw
78	5120	2	Screw
79	5001	2	Washer
80	26103056	1	First stage folder
81	5160	2	Screw
82	26103064	1	Washer plate
83	26103043	1	Bracket
84	26103039	1	Hem control plate
85	4001	2	Washer
86	4120	2	Screw
87	26103057	1	Second stage folder for 1/4" Needle Gauge
88	4120	2	Screw
89	26103008	1	Deflector guide
90	12004	2	Speed regulator
91	3300	4	Screw
92	12100	1	Cylinder
93	34040212	1	Loading guide (front loading)
94	9411	1	Optical sensor
95	34040212	2	Bracket
96	4100	2	Screw
87	31003057	1	Second stage folder for 9/32" needle gauge
100	61013103	1	Loading guide (end loading)
101	61013102	1	Loading guide (end loading)



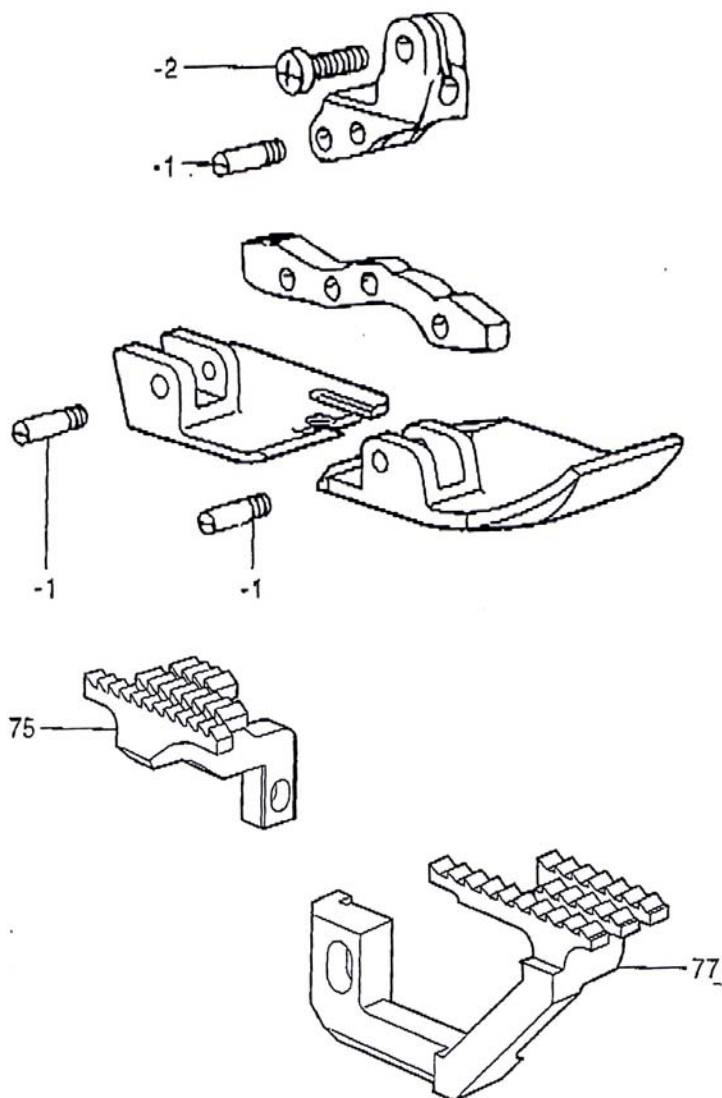
C-310-PH Control System Parts

	Control System Parts		
Ref	Part Number	Qty	Description
1	10382225141	1	Motor
44	100001	1	Sensor amplifier
90	12004	2	Speed regulator
92	12100	1	Cylinder
94	9411	1	Optical sensor
120	11024024	1	Power supply unit
121	11024024	1	Power supply unit
122	20382225142	1	Motor Driver
123	24001	2	Fan assembly
124	24011	2	Fuse
125	24011	2	Fuse
126	31087201	1	Control panel
127	31087202	1	Stop button
128	31087203	1	Reset button
129	31000004	1	Stand
130	31087205	1	Table switch
131	161001	1	Cutter cylinder
132	6101126	1	Cylinder rod end
133	202501	1	Motor cylinder
136	31087206	1	Filter regulator
137	31087207	1	Vacuum valve
138	31087208	1	Vacuum flow control
139	31087209	1	Vacuum venturi
140	312001	3	Valve

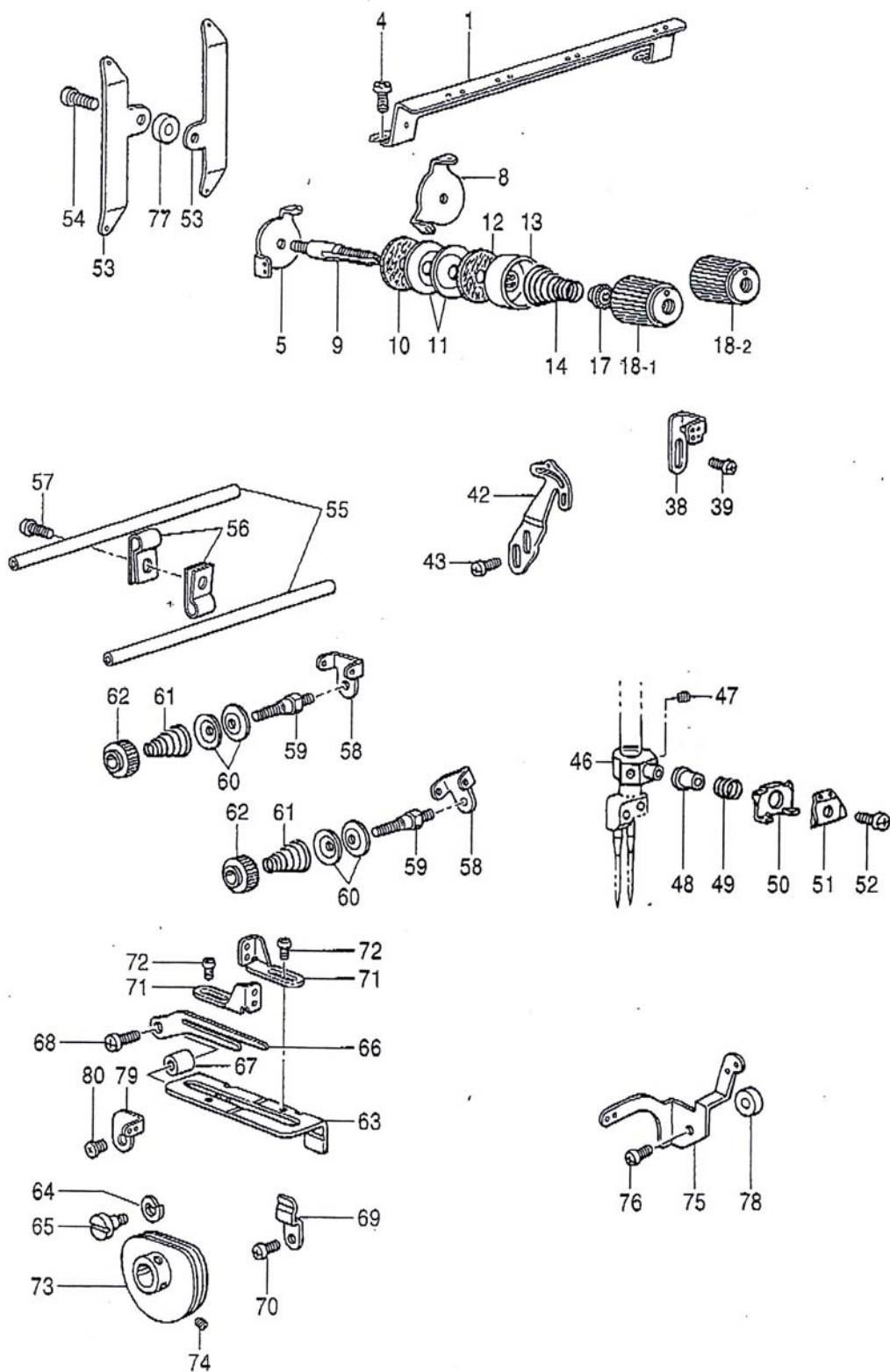
Machine head Looper parts			
Ref	Part Number	Qty	Description
24-1	S49031001	1	Looper holder
24-2	S49032001	1	Looper holder
25	018401622	2	Bolt M4 x 16
27	S20653001	2	Looper
29	S20654001	2	Washer
30	S23456101	2	Screw
31	112751003	1	Screw
32	S49033001	1	Screw
33	025040233	1	Washer
34	021400212	1	nut M4



Machine head Presser foot & feed dogs			
Ref	Part Number	Qty	Description
50	S49023001	1	Presser foot 6.35 (1/4")
50	S49026001	1	Presser foot 7.14 (9/32")
50-1	S19311101	3	Screw
50-2	062670712	1	Screw
75	S49029001	1	Main feed dog
77	S49030001	1	Differential feed dog



Machine head Thread Guides & Tensions parts



Machine head Thread tension parts				
Ref	Part Number		Qty	Description
1	S20672001		1	MAIN THREAD GUIDE
4	060400812		2	SCREW, BIND M4X8
5	S20693001		1	NEEDLE GUIDE, 2-NEEDLE
8	S20675001		1	TENSION DISC THREAD GUIDE
9	S20676051		2	TENSION STUD
10	S20677000		2	TENSION DISC FELT
11	S20673001		4	TENSION DISC
12	110832009		2	TENSION DISC FELT
13	144103009		2	TENSION DISC PRESSER
14	S32276001		2	TENSION SPRING, LL
17	S20681000		2	WASHER
18-1	S20682103		1	TENSION NUT, RED
18-2	S20682101		1	TENSION NUT, LIGHT BLUE
38	S21127001		1	NEEDLE THREAD GUIDE, C
39	060400612		1	SCREW, BIND M4X6
42	S21130051		1	NEEDLE THREAD TAKE-UP, A
43	060400812		2	SCREW, BIND M4X8
46	S38330050		1	NEEDLE THREAD PRESSER HOLDER
47	146427001		2	SET SCREW, SOCKET (CP) SM3.18
48	S20689001		1	NEEDLE THREAD PRESSER COLLAR
49	S20690001		1	SPRING
50	S20691001		1	NEEDLE THREAD PRESSER PLATE
51	S20743001		1	NEEDLE THREAD GUIDE
52	060300612		1	SCREW, BIND M3X6
53	S20694001		2	LOOPER THREAD GUIDE
54	060401012		1	SCREW, BIND M4X10
55	S20695001		2	THREAD GUIDE PIPE
56	S20696001		2	THREAD GUIDE PIPE SUPPORT
57	060400812		1	SCREW, BIND M4X8
58	S20697001		2	LOOPER THREAD GUIDE
59	S20698121		2	TENSION STUD
60	144504001		4	THREAD GUIDE DISC
61	158782101		2	PRE TENSION SPRING
62	155510001		2	TENSION NUT
63	S39756021		1	THREAD HANDLER BRACKET
64	028050242		1	WASHER, SPRING 2-5
65	S20342001		1	SHOULDER SCREW, M4
66	S20701001		1	THREAD HANDLER
67	S39757001		1	COLLAR
68	060401412		1	SCREW, BIND M4X14
69	150813001		1	SPRING
70	062350612		1	SCREW, PAN M3.5X6
71	S49091001		2	THREAD TAKE-UP GUIDE
72	S20158101		2	SCREW, PAN M2.5X3
73	S20703051		1	THREAD TAKE-UP ASSY
74	S23452002		2	SET SCREW, SOCKET (FT) M4X3.2
75	S49034001		1	CHAIN STITCH THREAD GUIDE, B
76	060401012		1	SCREW, BIND M4X10
77	S03303001		1	COLLAR
78	S03303001		1	COLLAR
79	S49035001		1	CHAIN STITCH THREAD GUIDE
80	060400612		1	SCREW, BIND M4X6

Machine head Thread chain cutter parts			
Ref	Part Number	Qty	Description
1	S21274001	1	Chain cutter assembly
1-1	S21275001	1	Chain cutter body
1-2	S21276001	1	Chain cutter shaft moving knife
1-3	147394001	1	Spring
1-4	147792001	2	Washer
1-5	147401001	1	Circlip
1-6	S21277001	1	Fixed knife
1-7	S20355002	2	Screw
1-9	S21279001	1	Cushion
2	S21284001	1	Mounting block
3	06401212	2	Screw
4	S23849001	3	Screw
17	S21283001	1	Upper blade cover
18	S23418002	2	Screw

