

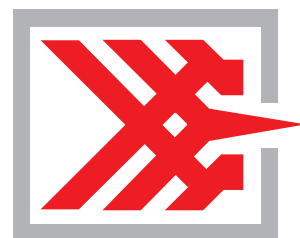


**INSTRUCTIONS MANUAL FOR THE
MAINTENANCE OPERATOR**

**AUTOMATIC LABEL, VELCRO AND/OR
EMBROIDERY APPLICATION UNIT**

**V3L - V3D - V3DL -
V3DC - V3DCL - V3DCS**

VIBEMAC



MITSUBISHI PLK-B INSTRUCTIONS FOR “V3DL” OPERATOR

INTRODUCTION

Thank you for having purchased this **VI.BE.MAC. S.p.A.** industrial sewing machine.

Before using this automatic unit, please read the following instructions, which will help you to understand how the machine operates.

These instructions illustrate the working method to be followed, in compliance with current regulations.



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1. GENERAL MACHINE SPECIFICATIONS

The Automatic Unit **V3** is a Mitsubishi PLK 1006 programmable machine, for applying labels and making embroidery on a pocket.

The high level of flexibility of the unit makes it possible to buy the sewing head with a fitting (e.g. Labels) and, with a quick change, to change easily the present fitting on the machine with another optional fitting for a different operation.

Four different operating modes can be selected for the unit. The unit allows for a quick change of forms (in about three minutes), supplied together with a floppy disk containing the personalised programmes requested by the client.

Changing the form does not require the intervention of a technician, but its simple design, together with the use of special materials, mean that it can be carried out by the operator.

1.1.SUPPLY VOLTAGE

The supply voltage is 220 V single-phase 50/60 Hz

1.2.COMPRESSED AIR CONSUMPTION AND PRESSURE

Consumption is about 1.5 litres of air intake per cycle with pressure of 5.5 bar.

1.3. DIMENSIONS AND WEIGHT

Width: 161cm (VERSION WITH LOADER AND UNLOADER)

Length: 110cm (VERSION WITH LOADER AND UNLOADER)

Height: 135cm

Weight: 300kg (approx.)

2. CONDITIONS OF USE

“Normal” operation includes all those operations for the preparation and application of a pocket onto trousers, respecting the following conditions:

- the operator must first have read and fully understood all parts of this manual.
- the operator must abide by all the instructions in this manual and "CE" regulations
- the maximum width of the pocket EMBROIDERY must be 220mm
- the maximum height of the pocket EMBROIDERY must be 90mm.
- the maximum width of the LABEL must be 110mm
- the maximum height of the LABEL must be 80mm.
- the material thickness of the trousers where the LABEL is to be applied must not be greater than 5 mm
- all safety regulations must be respected; safety covers installed by the manufacturer must not be removed.
- the electrical supply must be constant.
- the machine must be earthed to prevent disturbances and electric shocks.
- the machine must not operate at high temperatures (above 40°C) or low temperatures (below 10°C).
- water or other liquids (with the exception of oil) must not get into the sewing machine.
- water or other liquids must not get into the control panel, solenoid valves and cylinders.
- the automatic unit must be installed on a flat surface checking that the feet rest all together on the ground, and are blocked with the special nut.
- the automatic unit must not be used in areas where there is explosive gas, powder or oil vapours.
- the machine must not be connected to a compressed air circuit containing water or other liquids in the pressure circuit.
- the machine must be connected to a compressed air circuit with a constant minimum internal pressure of 5.5 bar.
- the operator must use soundproof earplugs to prevent damage to the ear.
- installation of the machine and extraordinary maintenance must be performed by qualified personnel.

The manufacturer declines any responsibility for damage to persons or things caused by the machine in cases where:

- the unit is not properly installed on an even surface.
- installation of the machine is not performed by qualified personnel.
- ordinary and extraordinary maintenance of the machine have not been performed by qualified personnel.
- the electrical supply is not constant.
- the air pressure in the pneumatic circuit does not satisfy the requirements.
- routine maintenance of the unit is not performed as required.
- non-original spare parts or parts which are not specified for the model are used.
- there is a partial or total lack of observance of the instructions on the part of the user.
- the maximum thickness of the trousers, at the point where the pocket is to be applied, is not respected.
- the operator has been working with broken or unsuitable needles, thereby ruining the trousers.

Under no circumstances:

- deactivate the safety devices provided by the manufacturer, thereby making the machine dangerous for the operator.
- remove the safety covers and devices from their position, thereby making the machine dangerous for the operator.
- remove the eye protection shield without supplying the operator with special eye protection glasses in compliance with current regulations.
- modify the machine, without authorisation from the manufacturer, thereby making the machine dangerous for the operator.

2.1. FORM OF GUARANTEE

A guarantee of 1 (one) year applies to all parts that make up the unit, when delivered to the manufacturer and found to be defective.

All parts damaged through improper use by the operator, and/or improper adjustment of the unit by technical personnel not authorised by VI.BE.MAC. S.p.A., will NOT be considered as defective by the manufacturer. In this case these will be charged for, including all transport costs and/or subsequent installation costs.

3. WORK STATION

The operator works in a standing position, in front of the sewing machine, with the pocket Loader (optional) located at its side.

The main current switch is on the left side of the support.

Fixed onto the sewing head, are the following:

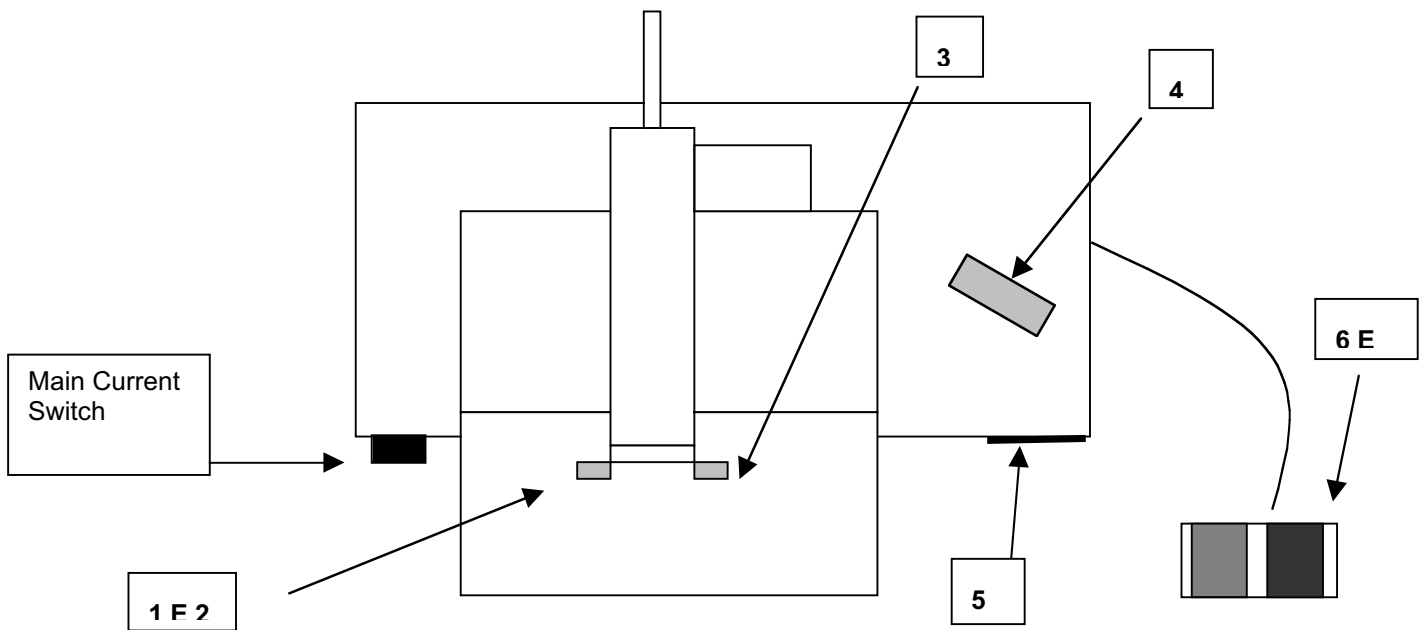
1. The right YELLOW button for starting the pocket loader, if present (selecting function Prmb 1).
2. The left YELLOW button for starting the sewing cycle (selecting the function Prmb 1 o 2 o 3 o 4).
3. The RED button for stopping the sewing cycle.

In front:

4. on the table, is the command console of the sewing head.
5. on the cabinet under the table, is the control console for selecting the working pattern with the Floppy Disk driver.

On the floor, under the loader, is the pedal unit with:

6. The GREY command button for the internal jig of the equipment (selecting the label function (selecting the function Prmb 2) - the sewing cycle start (selecting the embroidery function Prmb 5)
7. The BLACK command button for the external jig of the equipment (selecting the label function Prmb 2 or 3 or 4) – the design jig lowering (selecting the embroidery function Prmb 6) - to command the opening/closing of the loader jig in the loader (selecting the embroidery function with loader Prmb 1).



4. MACHINE START-UP

Proceed as follows:

Check the position:

- of the Handwheel, placing its reference point parallel with the reference marker on the case.
- of the Fitting, with the hole in the stainless steel plate placed above the hole of the Needle Plate.
- of the Loading Carriage, placed all the way to the right in the version with this device.

If the Handwheel, the fitting or the Carriage is out of position, move it manually to its correct position.

Introduce current by pressing the ON button on the main current switch.

When the computer has performed the check-up operation:

The following appears on the screen:

PRESS FOOT

Lower the jigs by pressing the relevant buttons

Press the **HOME** key

The machine searches for the two positioning sensors.

When the machine reads the positioning sensors it finds the Original Point.

The jigs rise and the machine is ready for operation with the programme last used already in the memory.

5. STOPPING THE MACHINE

Press the EMERGENCY button and stop the current by pressing the OFF button on the main current switch only when the machine has stopped.

The compressed air is automatically turned off.

ATTENTION

In the event of an electricity BLACKOUT, the sewing machine stops through inertia, the Loader unit remains in its resting position and the loading cycle, if running, is cancelled.

6. CALLING UP A PROGRAMME

Press the **READ** key

The following appears on the display:

READ DATA
1.MEMORY 2.FD

Select the drive from which the programme should be read

Press the **1** key for the internal memory

Press the **2** key for the Floppy Disk

Confirm the setting with **ENTER**

The following appears on the display:

1.PATT.No. INPUT
2.PATT.No.SEARCH

Press the **1** key and **ENTER**

Insert the programme number

Press **ENTER**

7. WRITING A PROGRAMME

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY

2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto a floppy disk (Max.149 programmes)

Press the **number** required and **ENTER**

Insert the programme number, referring to the following table:

PROGRAMME ORIGIN

VI.BE.MAC original programme

VI.BE.MAC. original programme modified on the machine

Programme constructed on the machine

Programme constructed and modified on the machine

TYPE

A

BA

B

B

N° start

100

400

600

600

N° end

249

549

749

749

Confirm with **ENTER**

To write over, if the number already exists

Press **1** and **ENTER**

8. CANCELLING A PROGRAMME

Press the **DELETE** key

The following appears on the display:

DELETE DATA

1.MEMORY 2.FD

Select the drive from which to cancel the programme

Press the **1** key for the internal memory

Press the **2** key for Floppy Disk

Confirm the setting with **ENTER**

The following appears on the display:

1.PATT.No. INPUT

2.PATT.No.SEARCH

Press the **1** key and **ENTER**

Insert the programme number

Press **ENTER**

9. COPYING PROGRAMMES

Press **FUNCTION**

The display changes to:

- 1.COPY 2.FORMAT
- 3.LINK

E

Press the **1** key and **ENTER**

The display changes to:

- 1.MEMORY TO F.D.
- 2.F.D. TO MEMORY

Press the **1** key to write the programme from the internal memory of the machine to a Floppy Disk

Press the **2** key to write the programme from a Floppy Disk to the internal memory of the machine

Press the **number** required and **ENTER**

The display changes to:

- 1. 1 PATTERN
- 2. ALL

Press the **1** key to write only one programme

(Follow the instructions from point "X")

Press the **2** key to write all the programmes

Press the **number** required and **ENTER**

The display changes to:

WRITE DATA	1Y
FORCIBLY	2N

Press **1** and **ENTER**

The display changes to:

M - 23. COPYNG

After a BEEP when the copying is done, the classic machine management screen appears

"X" The display changes to:

COPY XX TO XXXXX
PATT. N° 100 TO 000

XXXX= F.D. or MEMORY

Use the **JOG +** or **JOG -** keys to select the programme number to be copied

Press **ENTER**

Using the numerical keyboard, insert the number of the programme

Press **ENTER**

The display changes to:

M - 23. COPYNG

After a BEEP when the copying is done, the classic machine management screen appears

10. SETTING BOBBIN AND PRODUCTION COUNTERS

Press the **COUNTER** key (the **LED lights up**) to enable the COUNTER function

Press the **COUNTER** key
SET

The following appears on the display:

D.SET	0000	U.SET	0000
DN 0000	UP	0000	

Press the **ENTER** key

Insert the number of pieces per BOBBIN E.g.: 50 pieces

Press **ENTER**

This is the starting number of the BOBBIN counter

Insert **0 0 0 0** and **ENTER**

Insert the number of pieces per PRODUCTION E.g.:9999 pieces

Press **ENTER**

This is the starting number of the production counter

Insert **0000** and **ENTER**

FINAL SCREEN

D.SET	0050	U.SET	9999
DN 0000	UP	0000	

10.1.RESETTING BOBBIN COUNTER

A) When the BOBBIN counter reaches the number SET and the buzzer sounds

The following appears on the display:

PUSH ENTER KEY

Press the **ENTER** key to reset the counter

B) If the BOBBIN finishes before reaching the number SET

Press the **COUNTER** key

SET

The following appears on the display::

D.SET	0000	U.SET	0000
DN 0000	UP	0000	

Press the **ENTER** key

Insert a NEW number of pieces per spool (1 or 2 pieces less than set number)

Press **ENTER**

Insert **0 0 0 0**

Press **ENTER 3 times**

10.2. RESETTING PRODUCTION COUNTER (start of production)

Press the **COUNTER** key

SET

The following appears on the display::

D.SET	0000	U.SET	0000
DN 0000	UP	0000	

Press the **ENTER** key **4 times**

Insert **0 0 0 0**

Press **ENTER**

11. CHANGING THE FORM ON THE EQUIPMENT BETWEEN TWO DIFFERENT SEWINGS

The unit allows for a quick change of forms (in about TWO minutes). These forms are supplied together with a floppy disk, containing the personalised programmes requested by the client.

Changing the form does not require the intervention of a technician, but its simple design, together with the use of special materials, mean that it can be carried out by the operator.

11.1.FROM ONE DESIGN TO ANOTHER OF DIFFERENT SHAPE.

First, with the material blocking jig opened, STOP the machine with the EMERGENCY button.

Loosen the TWO clamping knobs (n°1) to loosen the support plate of the LEXAN form from the equipment bracket.

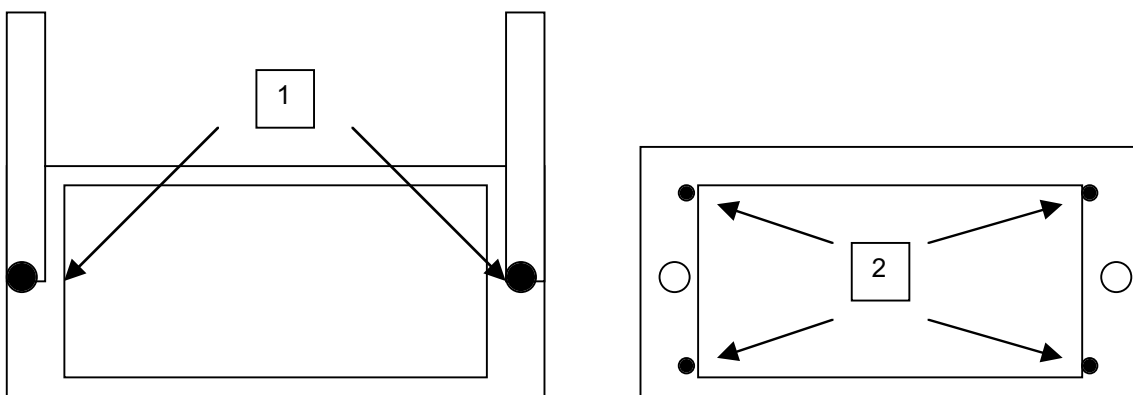
Loosen the four clamping screws (n°2) of the LEXAN form.

Take out the form from the frame and insert in its place the form required.

Tighten the four clamping screws (n°2) of the LEXAN form.

Tighten the TWO clamping knobs (n°1) to block the LEXAN form to the equipment brackets.

Unblock the EMERGENCY button by turning it gently, to free the machine.



11.2.FROM ONE LABEL TO ANOTHER OF A DIFFERENT SHAPE.

First, with the material blocking jig opened, STOP the machine with the EMERGENCY button.

Loosen the TWO clamping knobs (n°1) to loosen the LABEL from the equipment bracket.

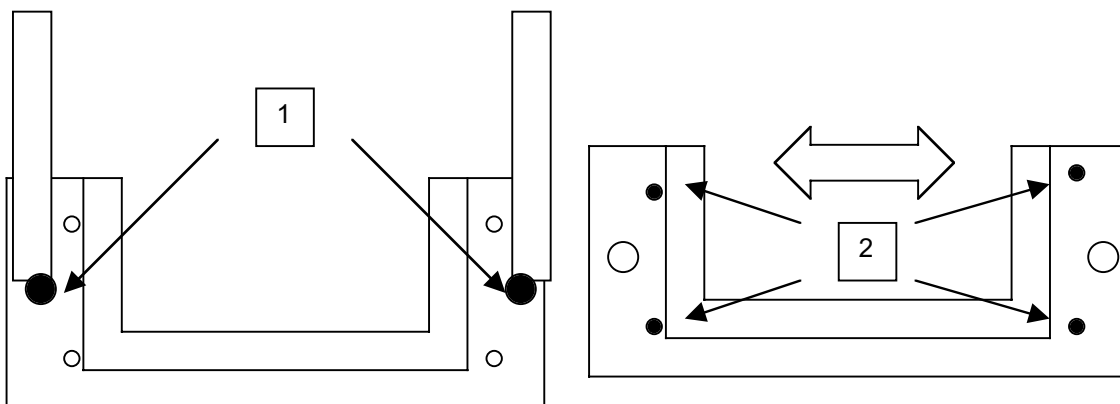
Take out the form from the frame and insert in its place the form required.

Loosen the four clamping screws (n°2) and move the two rods of the adjustable form to the new size

Tighten the four clamping screws (n°2) of the form adjustable to the new size

Tighten the TWO clamping knobs (n°1) to block the LABEL form to the equipment brackets.

Unblock the EMERGENCY button by turning it gently, to free the machine.



12. CHANGING THE EQUIPMENT

The **V3Unit**, using a quick change, allows the operator to change, in a simple way, the fitting in the machine for another optional fitting for carrying out a different operation.

Three different working patterns for the unit can be selected.

With a special eyelet containing a "key" and with the two clamping screws of the fitting, it can be changed maintaining its position perfectly in respect to the regulation carried out by the manufacturer.

NOTE: Under no circumstances loosen the clamping screws of the key positioned on the Y axis carriage, which keeps the fitting perfectly aligned.

12.1.FROM THE DESIGN TO THE LABEL.

First **STOP** the machine using the specific instruction

Remove the material pressure foot by loosening the clamping screw.

Remove the design form by loosening the two clamping knobs (A) on the equipment brackets.

Loosen the two clamping screws (B) on the side supports of the transversal shaft of the equipment with a 2.5mm Allen key.

Take off the shaft (C) from the two supports.

Loosen the two clamping screws of the equipment (D) at the Y axis carriage with a 4mm Allen key.

Take out the equipment from its location

Loosen the two clamping screws (E) of the pneumatic connector (OCTOPORTA)

Loosen the two retaining springs of the working surface (F), using the two small levers (G) under the surface.

Manually un-hook the mobile part of the retaining spring from the clamping pin (H), on the right and left side of the sewing machine.

Place the equipment on the working plane

Take out the working surface from the two tapered locations. If the two guides are difficult to get out, push the surface downwards delicately and then pull gently.

Now the machine appears as only the sewing head.

Place the fitting for labels on the head, with the "key" eyelet positioned above it.

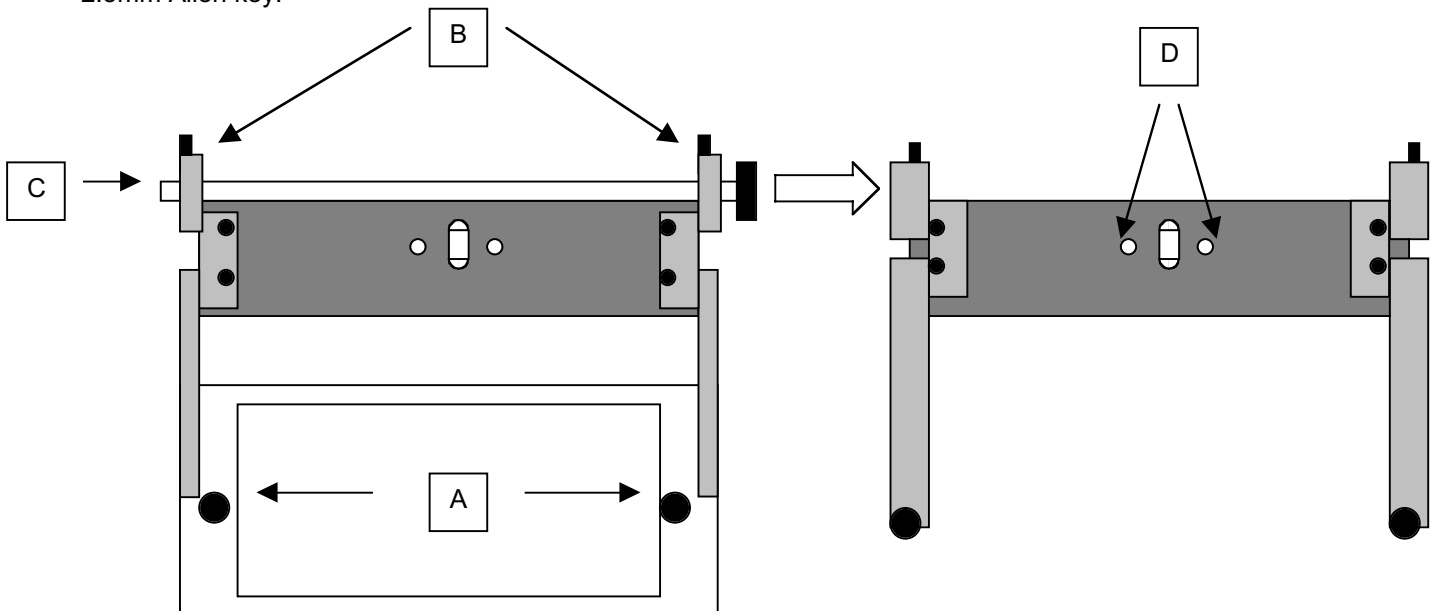
Insert gently the "key" in the eyelet (L) placed on the lower support.

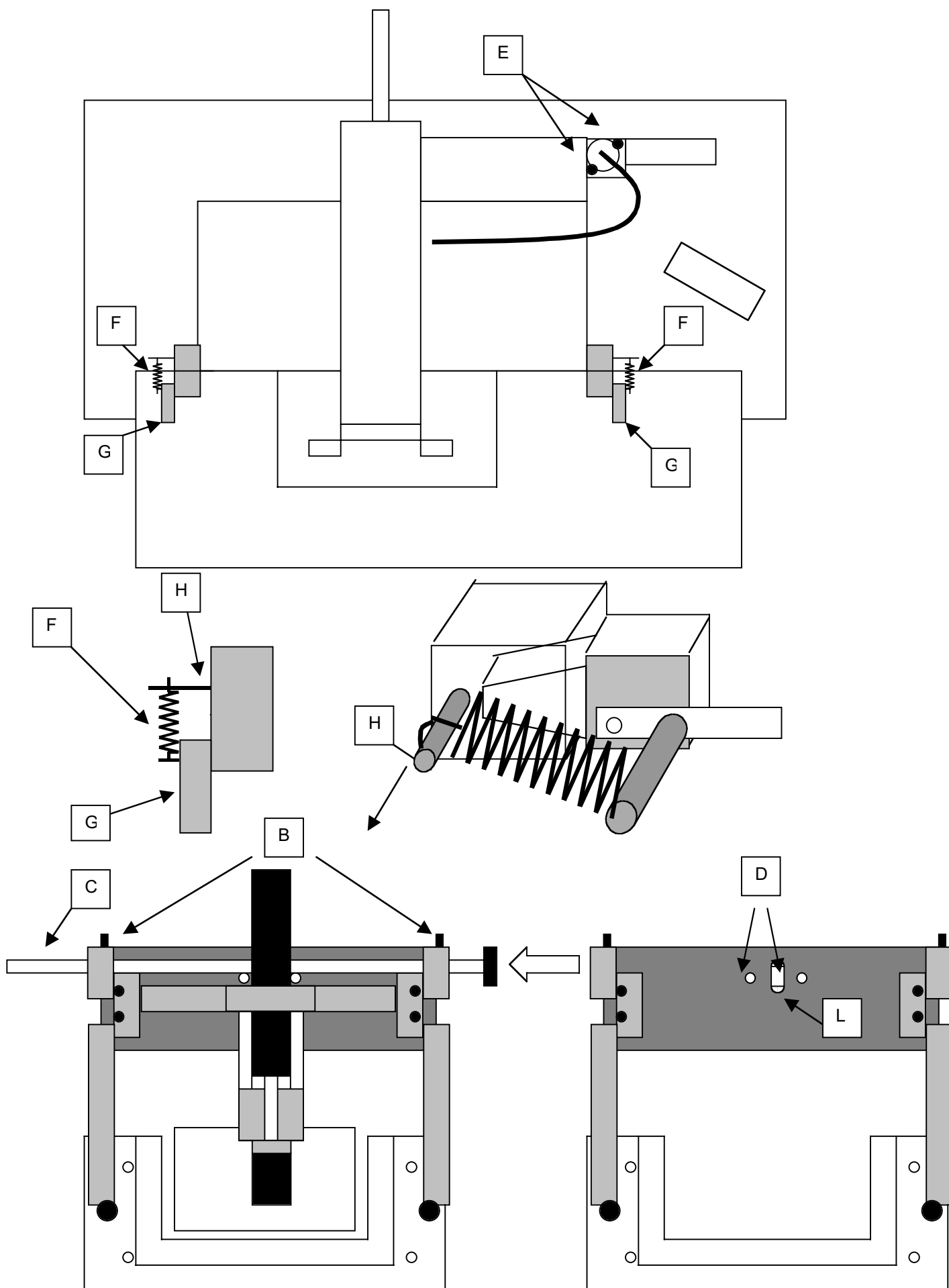
Tighten the two clamping screws (D) of the pneumatic connector (OCTOPORTA).

Tighten the two clamping screws of the equipment (C) at the Y axis carriage with a 4mm Allen key.

Insert the shaft (B) in the two supports.

Tighten the two clamping screws on the two side supports (A) of the equipment transversal shaft with a 2.5mm Allen key.





13. OPERATING SYSTEM

The machine can perform the 7 different types of operation.

These are:

N°	TYPE	OPERATION
1	DESIGN NORMAL + LOADER	The operator lowers the blocking jig and presses the button for the start of the sewing cycle. The operator closes the loading pincer and pushes the loader start button. The loader positions the pocket under the blocking jig which lowers automatically and returns to its standby position
2	LABEL NORMAL	The operator lowers the external and internal jig (high internal position) and the sewing cycle is started manually. Reading the FUN1 code the jig raises, retracts and lowers.
3	LABEL AUTOMATIC 1	The operator lowers the external and internal jig (high internal position) and the sewing cycle is started automatically. Reading the FUN1 code the jig raises, retracts and lowers.
4	LABEL AUTOMATIC 2	The operator lowers the external and internal jig (high internal position) and the sewing cycle is started automatically. Reading the FUN1 code the jig raises, retracts and stops in its high position
5	NORMAL DESIGN	The operator commands the blocking jig with the Black pedal and commands the start of the sewing cycle with the grey pedal.

6 – 7 DO NOT USE

13.1.FUNCTIONING SYSTEM SELECTION

On the command console fixed to the card cabinet under the Loader:

Press the **F** key

The following appears on the display:

F U N C

Press the **two arrows** together (HIGH + LOW)

The following appears on the display:

P - P (P mode)

Hold the **two arrows** down until the writing changes to:

S Y S w R (WRITING SYSTEM)

- Not used -

Press the arrow **↑** once

The following appears:

P R M b (PROGRAMMING basic METHOD)

A number appears, in place of

Select the required type of function.

Press the **D** key until the corresponding number appears on the display.

(The number changes from 1 through to 7, then returns to 1.)

Press the **H** key to exit.

14. LIST OF ERRORS AND MESSAGES MITSUBISHI TYPE "B"**14.1. LIST OF ERRORS (E - xx)**

If an error is reported, turn off the machine and check for the cause, before turning on again.

E - 01	Too much current to the Motor Machine turns with difficulty	Check motor connection Check whether the sewing machine is hard to turn or if the machine is blocked
E - 02	Excess tension	Check supply voltage
E - 03	Error on motor encoder	Check that the motor encoder is connected properly. Check that the motor encoder is connected properly. Check the belt between the motor and the sewing machine Check whether the sewing machine is hard to turn or if the machine is blocked Check whether the motor is blocked
E - 04	Error on Electric Motor	Check that the motor connector is inserted properly
E - 08	Error on Synchroniser	Check that the Synchroniser connector is inserted properly Check in the TEST that the UP/DN signals are correct
E - 09	Error on solenoid valves SHORT CIRCUIT	Check that there are no solenoid valve coils or their connections in SHORT CIRCUIT
E - 20	Error in the SOFTWARE	Reload the System Software from the special disk (available, on request, from VI.BE.MAC.)
E - 25	Air Pressure too low	Check for the cause and restore correct pressure
E - 26	Too much current to the panel STEP-BY-STEP MOTORS	Check the connections of the STEP-BY-STEP motors Check whether the motors are in short circuit
E - 28	The message appears for a few seconds when turning off the machine (PROTECTION)	Check the electrical connection and try again

14.2. LIST OF MESSAGES (M - xx)

After checking for the cause of the Message, press the ENTER key to return to normal operation

M-01	Floppy Disk not inserted System Software damaged	Check that the Disk is properly inserted Reload the System Software from the special disk (available, on request, from VI.BE.MAC.)
M - 02	Floppy Disk protected	Move the protection selector on the Floppy Disk Use another Floppy Disk
M - 03	Floppy Disk damaged	Use another Floppy Disk
M - 04	Lack of free memory on Floppy Disk	Use another Floppy Disk
M - 05	Programme N°. called up from Floppy Disk not correct	Check that the number inserted is correct and make the Floppy Disk read again
M - 08	Not at Departure Point	The writing function is not allowed, NOT in its Original Position. Press the RESET HOME key
M - 09	Not at Departure Point	The writing function is not allowed, NOT in its Original Position. Press the RESET HOME key
M - 10	Writing into Internal Memory not allowed	The writing function is not allowed. Enable the PFL function using the control panel
M - 11	Error in Internal Memory key. Repeat the operation.	Press the ENTER
		If the message occurs again copy the content of the Internal memory onto a Floppy Disk and reformat the Internal Memory with the appropriate function
M - 12	Lack of free memory on the Internal Memory	Cancel unused programmes from the Internal Memory or change the partition (>47 programmes)
M - 13	Programme N°. called up from Internal Memory not correct	Check that the number inserted is correct and make the Internal Memory read again
M - 16	Internal Memory Partition Number is not correct	Insert the correct partition number of the Internal Memory
M - 20	Machine not in UP position	Turn the handwheel by hand until the reference point on the casing is inline with the reference point on the handwheel
M - 21	Needle thread broken	Check that the threading of the machine is correct Press the ENTER key
M - 22	Programme outside maximum sewing range	Check the dimensions of the programme Check that the ALC function is ON (P-A)
M - 23	Lower the pressure foot	Press the relative switch to lower the Jigs
M - 24	Production Counter UP COUNTER	The machine has reached the programmed number Press ENTER to reset the counter
M - 25	Internal Memory empty	There are no programmes saved in Internal Memory Press ENTER and then call up a programme from the Floppy Disk
M - 26	Not at Departure Point	Press the HOME key

M - 27	The reduction value requested is too low	The value inserted is below 10% Insert the correct value
M - 28	The increase value requested is too high	The value inserted is above 200% Insert the correct value
M - 29	The stitch length value requested is too high	The value inserted is over 12.7 mm Insert the correct value
M - 30	The number of stitches in the programme is too high	Press the ENTER key and check the set value of the FLB function
M - 33	Data elaboration in progress	The machines elaborates the data of the program
M - 37	The value inserted is too high	Insert the correct value
M - 38	The number or data inserted is wrong	Reinsert the number or data Insert the correct value
M - 41	The stitch length value requested is too low	The value inserted is 0.0 mm Insert the correct value
M - 42	The number or data inserted is wrong	Reinsert the number or data Insert the correct value
M - 43	The value inserted is too low	Insert the correct value
M - 44	The machine is going to the 1st modification point	Wait until it reaches the modification starting point (modification, BLOCK option)
M - 45	The machine is going to the 1st sewing point	Wait until it reaches the sewing starting point (modification, FEED option)
M - 53	The STOP button is pressed	Unblock the STOP button
M - 54	Bobbin Counter DOWN COUNTER	The machine has reached the programmed number Press ENTER to reset the counter
M - 55	Danger stop	Turn off the machine immediately at the main switch
M - 57	Operation impossible Not at Departure Point	Press ENTER and then the HOME key

15. ELECTRICAL CONNECTION

15.1. INPUTS

There is a card on the right-hand side of the machine, with a series of terminals for the various connections.

15.1.1. LEFT GREY PEDAL (I1)

Connected to connector CON I, located in the back of the main cabinet

The two terminals used are n°1 and n°2.

Its function is:

- LABEL commands the INTERNAL Jig in the equipment of the machine
- DESIGN commands the start of the sewing cycle
- DESIGN with LOADER commands the Jig in the equipment of the machine.

15.1.2. RIGHT BLACK PEDAL (I2)

Connected to connector CON I, located in the back of the main cabinet.

The two terminals used are n°1 and n°3.

Its function is:

- LABEL commands the EXTERNAL Jig in the equipment of the machine
- DESIGN commands the Jig in the equipment of the machine
- DESIGN with LOADER commands the Material Blocking Jig in the loader unit.

15.1.3. LEFT YELLOW MICROSWITCH on the sewing head (IH)

Connected to connector TE2, in the card located on the right-hand side of the machine.

The two terminals used are B3 and common B10.

Its function is:

- LABEL commands the start of the sewing cycle
- DESIGN not used
- DESIGN with LOADER commands the start of the sewing cycle

15.1.4. RIGHT YELLOW MICROSWITCH on the sewing head (ID)

Connected to connector TE1, in the card located on the right-hand side of the machine

The two terminals used are A9 and common B10.

Its function is:

- LABEL and DESIGN not used
- DESIGN with LOADER commands the start of the loader

15.1.5. RED STOP MICROSWITCH on the sewing head (I4)

Connected to connector CON3, in the card located on the right-hand side of the machine.

The two terminals used are 1 and 2.

It stops the sewing cycle and blocks all movements of the sewing head. (STOP)

15.1.6. LOADER RIGHT LIMIT STOP MICROSWITCH (I7)

Connected to connector TE1, in the card located on the right-hand side of the machine

The two terminals used are A6 and the common A5.

It sends a signal to the software that the Loader has arrived in its standby position.

15.1.7. LOADER LEFT LIMIT STOP MICROSWITCH (IA)

Connected to connector TE1, in the card located on the right-hand side of the machine

The two terminals used are B4 and the common A5.

It sends a signal to the software that the Loader has arrived in its loading position.

15.1.8. BROKEN THREAD SENSOR (IG)

Connected to connector TE2, in the card located on the right-hand side of the machine.

The three terminals used are:

B2 (Red +) B1 (Brown Out) B10 (White -)

It sends a signal to the software that, for some reason, the thread inside is not flowing.

15.1.9. INTERNAL JIG RE-ENTRY SENSOR (IO)

Connected to connector G, located on the back of the main cabinet. The three terminals used are n°1 (LIGHT BLUE), n°9 (out BLACK) and n°25 (+ BROWN). It sends a signal to the software reporting the position of the internal jig after reading the code FUN1.

15.2.OUTPUTS

15.2.1. EXTERNAL JIG (04)

Connected to connector CON 8 (FU), in the card located on the right-hand side of the machine.
The two terminals used are 2 and the common to TE2 B5
It commands solenoid valve EV1 in the equipment of the machine.

15.2.2.INTERNAL JIG or LOADER JIG (0C)

Connected to connector TE2, in the card located on the right-hand side of the machine.
The two terminals used are A10 and the common to B7.
It commands solenoid valve EV2 in the equipment of the machine.

15.2.3.JIG RE-ENTRY or LOADER (08)

Connected to connector TE2, in the card located on the right-hand side of the machine.
The two terminals used are A6 and the common to B6.
It commands solenoid valve EV3 in the equipment of the machine.
It is called up on the programme using the function FUN1

15.2.4.UNLOADER (07)

Connected to connector TE2, in the card located on the right-hand side of the machine.
The two terminals used are A5 and the common to B4.
It commands solenoid valve EV4 in the equipment of the machine.

15.2.5.PRESSURE FOOT (05)

Connected to connector CON11 (PF), in the card located on the right-hand side of the machine.
The two terminals used are 3 and the common to 1.
It commands solenoid valve EV5 in the machine.

15.2.6.STACKER (02)

Connected to connector CON9 (W), in the card located on the right-hand side of the machine. The two terminals used are 3 and the common to TE2 B5.
It commands solenoid valve EV6 in the equipment of the machine.
It is called up on the programme using the function FUN2

16. SOLENOID VALVES

3 types of solenoid valve are used in the machine. They are:

- The 5-way double exchange model SY3120-5LOU-C6 used for valves from EV1 to EV3.
- The 5-way double exchange model SY3120-5LOU-C4 used for valves from EV4.
- The 3-way single exchange model PA13/0205 used for valves EV5 and EV6.

All the electric coils are type 24Vcc 2.5W.

Depending on the operative system called up, the Solenoid Valves have the following functions with their relative connections:

- 1006 V3L LABEL

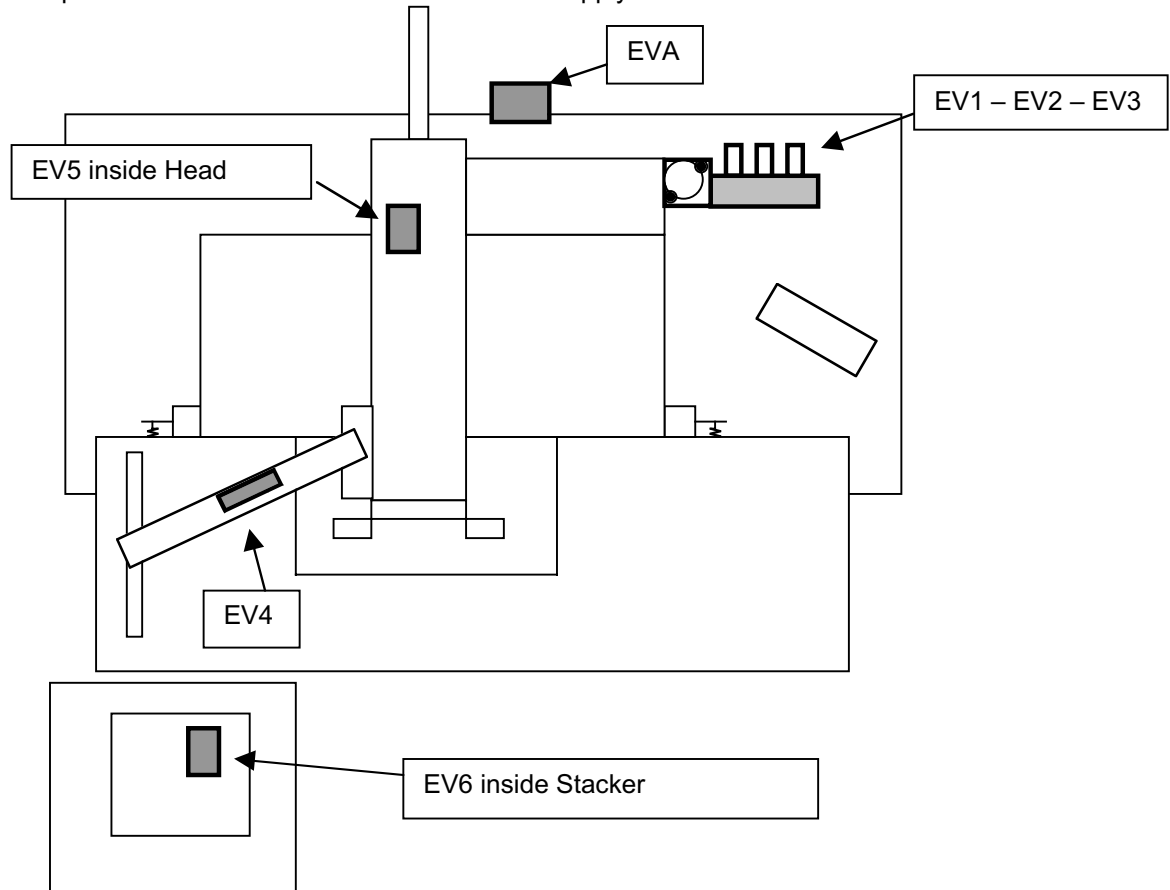
SOLENOID VALVE	FUNCTION	CONNECTION NUMBER	code
EV1 EV2 EV3 EV5	External Jig Internal Jig Internal Jig Re-entry Pressure foot	CON8 (FU) 2 TE2 A10 TE2 A9 CON11 (PF) 3	FUN1

- 1006 V3DLCs DESIGN + LOADER + UNLOADER + STACKER

SOLENOID VALVE	FUNCTION	CONNECTION NUMBER	code
EV1 EV2 EV3 EV4 EV5 EV6	External Jig Internal Jig Internal Jig Re-entry UNLOADER Pressure foot Stacker	CON8 (FU) 2 TE2 A10 TE2 A9 TE2 A5 CON11 (PF) 3 CON9 (W) 3	FUN1

The 3-way model 76.026.01.00 used for the EVA GENERAL safety valve operating at 24V 5W 50/60Hz on the back side of the bracket

EVA Compressed air cut-off in absence of electrical supply



17. CONTROL CIRCUIT

The equipment uses an electro-pneumatic sequential circuit, managed entirely by the machine's software (FULL LOGIC AUTOMATION) free of electronic disturbance and in compliance with the directive 89/336/CEE regarding electro-magnetic compatibility.

The following are used in the circuit:

17.1 ELECTRIC LIMIT STOPS for LOADER

Two limit stops are used, to send a signal to the control circuit that the Loader cylinder in the equipment has performed its movement.

TYPE	FUNCTION
MS10	Loader Carriage Cylinder Closed Signals lowering of 1° material blocking clamp
MS32	Loader Carriage Cylinder Open Lowers the 2° material blocking clamp and at the start of the sewing cycle in Automatic Operation

17.2. FLOW REGULATORS

Two models are used to regulate the speed of movement of the cylinders in the equipment. They are used as a BRAKE for the outlet of air from the cylinder.

TYPE	FUNCTION
"C"	Screw-type flow regulator in the Unloader
AS1201FM504	Knob-type micro-regulator in the equipment and on solenoid valve EV9
SCO 604 1/8	Screw-type flow regulator for Loader cylinder speed located in the expansion

17.3. LOADING CYLINDER EXPANSIONS

On the right-hand side of the machine, under the Loader plate are two cylinder expansions with two type SCO 604 1/8 flow regulators on the end.

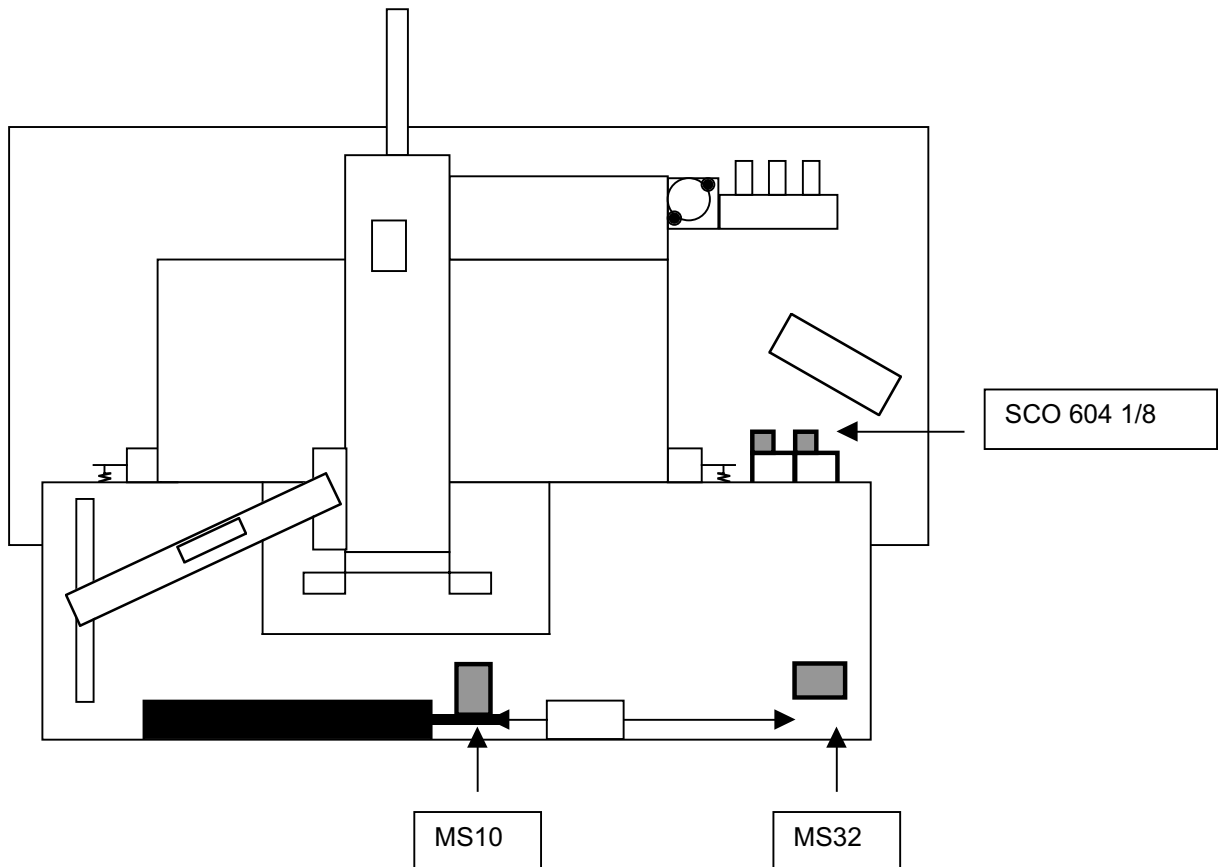
The right regulator controls the return speed of the loading carriage

The left regulator controls the advance speed of the loading carriage.

ADJUSTMENT

Open the two regulators to maximum and close them by three turns.

ATTENTION: On the two ends of the loading cylinder there are regulators for the braking in the final 5 mm of the stroke of the cylinder in both directions. Close the regulators completely and open them by 1/2 to 3/4 of a turn.



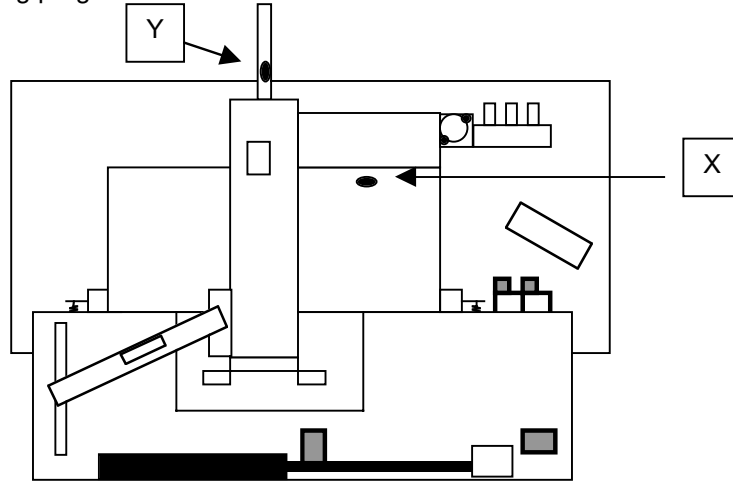
18. ORIGINAL POINT SENSORS

There are two magnetic positioning sensors inside the sewing head.

They are located at the following points:

- inside the Sewing Head near the carriage sliding guides, under the transparent LEXAN cover on the right (X AXIS).
- inside the back longitudinal arm under the handwheel behind the machine (Y AXIS).

Their function is to position the machine at Zero point (Original Point), when the machine needs to be re-set, or at the end of each sewing programme.



19. PNEUMATIC SYSTEM

A series of cylinders (some special), controlled by the Solenoid Valves, are used to carry out all the various functions.

The cylinder connections for the FUNCTION are as follows:

- 1006 V3L LABEL

SOLENOID VALVE	FUNCTION	CONNECTION NUMBER	code
EV1	External Jig	n°1 and n°2	18320-C
EV2	Internal Jig	n°3 and n°4	18320-C
EV3	Internal Jig Re-entry	n°5 and n°6	16X82
EV5	Pressure foot	Supply	V3LKRIC0054

- 1006 V3DLCS DESIGN + LOADER + UNLOADER + STACKER

SOLENOID VALVE	FUNCTION	CONNECTION NUMBER	code
EV1	Machine Jig	n°1 and n°2	18320-C
EV2	Loader Jig	n°3 and n°4	
EV3	Loader	n°5 and n°6	C85N20-300C
EV4	Unloader	Supplied by RELIVING R07-100-RNKG	21215/C
EV5	Pressure foot	Supplied by RELIVING R07-100-RNKG	V3LKRIC0054
EV6	Stacker	Supplied by RELIVING R07-100-RNKG	Special

20. LIFTING THE SEWING HEAD

Before carrying out any operation, make sure that:

- the unit is off, by pressing the OFF key on the main switch.
- the unit is disconnected from the general compressed air system.
- the wheels at the base of the stand of the machine are blocked.

Loosen the pneumatic connector above the table

Loosen the clamping straps in the supply cable to the Step by Step motors under the table

Remove the belt covering safety guard fixed to the table with wood screws.

Remove the transmission belt from the pulley of the electric motor.

Remove the transparent LEXAN X-axis guide safety cover on the left, by unscrewing the clamping screws.

Move the loading carriage completely to the left.

Now with two people (one on each side) turn the sewing head so that it pivots on its hinges on the left side of the sewing head base, until the sewing head rests on the wooden support.

ATTENTION: Do not put any pressure on the LOADER when lifting the head, so as not to lose the alignment, but place both hands on the casing.

ATTENTION: DANGER OF CRUSHING HANDS

One person should now hold the machine in a vertical position while the other can carry out the necessary controls.

To lower the machine, **again with a minimum of two people**, pay maximum attention to avoid the **danger of crushing hands**.

Make sure that the pneumatic connector does not end up under the pressure feet of the sewing head or the equipment.

ATTENTION

Danger of crushing hands.

Always check their position according to the action to be carried out.

21. SYSTEM SOFTWARE PARAMETERS

With the new management software, version 3.0, the automatic unit can now perform the following 7 different types of operation.

While the automatic unit is running, the following parameters can be varied, for every operation called up by paragraph 6.OPERATION SYSTEMS.

21.1. VARYING TIMER SETTINGS WITH AUTOMATIC CYCLE PRMB = 1

To synchronise the various movements correctly the following timers are used during all movements of the equipment:

STEP 5: Delay in loading jig opening from the Left end-stop reading (IA)

STEP 6: Delay in loading cylinder return from the Left end-stop reading (IA)

STEP 9: Delay in sewing cycle start from the Right end-stop reading (I7)

} First cycle with machine stopped

STEP 19: Delay in loading jig opening from the Left end-stop reading (IA)

STEP 20: Delay in loading cylinder return from the Left end-stop reading (IA)

STEP 23: Delay in sewing cycle start from the Right end-stop reading (I7)

} From second cycle with machine sewing

In this example, the FUNCTION "Delay in loading jig opening from the Left end-stop reading" at STEP 19 is changed.

Lower the plates

Press the **FUNCTION** key

Press the **6** key and **ENTER**

The display changes to:

*** Please Input ***

Password = (0000) E

Press **1 0 0 6** and **ENTER**

The display changes to:

STEP MOVEMENT

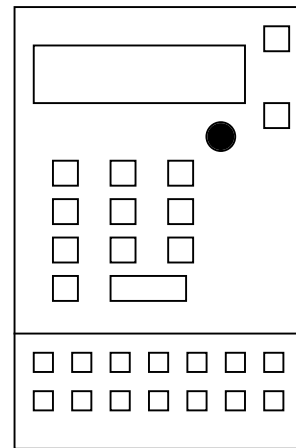
1.SET 2.TEST 1E

Press **1** and **ENTER**

The display changes to:

1.SEQUENCE

2.RANDOM 2 E



Press **2** and **ENTER**

The following appears on the display:

001:INPUT EDGE

I1.POS OUT:PWR:END>

If the timer in use to another function is varied, proceed to the correct step of the programme listed

Press the **JOG+** key until the number of the line to be modified appears at top left.

When the following appears on the display:

036:INPUT EDGE

I1.POS OUT:FN1:AND>

Press the **ENTER** key until the time value to be modified appears at bottom right.

When the following appears on the display:

036:OUTPUT:IN: IOC

HIGH:TIMER: 0220 E

Timer value (timer: xxxx)

When the flashing square is over the **TIMER** value, use **JOG+** or **JOG-** keys to vary the set value, press **ENTER** to confirm.

Press **END**

The following appears on the display:

RUN STEP 1.Y

SEQUENCE NOW 2.N E

Press **1** and **ENTER**

STEP WRITE OK? 1Y

2 N E

Press **1** and **ENTER**

The following appears on the display:
 WRITING.....

When the display once again shows the programme, turn off the machine and wait until the display goes out. Re-start the machine and check that everything functions correctly.

21.2. VARYING TIMER SETTINGS WITH AUTOMATIC CYCLE PRMB = 2

To synchronise the various movements correctly the following timers are used during all movements of the equipment:

- STEP 12: Delay in intervention of safety sensor from the code FUN1 reading. (not used)
- STEP 37: Remaining time for raised internal jig during the backward movement given by code FUN1 reading.

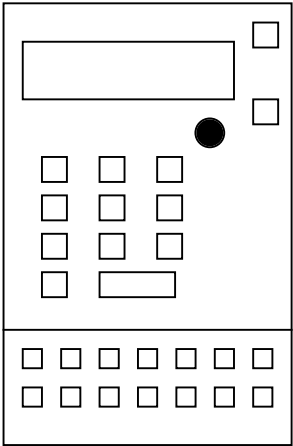
In this example, the delay function in the intervention of the safety sensor from the code FUN1 reading in line 12 is varied.

Lower the plates
 Press the **FUNCTION** key
 Press the **6** key and **ENTER**
 The display changes to:
 *** Please Input ***
 Password = (0000) E

Press **1 0 0 6** and **ENTER**
 The display changes to:
 STEP MOVEMENT
 1.SET 2.TEST 1E

Press **1** and **ENTER**
 The display changes to:
 1.SEQUENCE
 2.RANDOM 2 E

Press **2** and **ENTER**
 The following appears on the display:
 001:INPUT EDGE
 I1.POS OUT:PWR:END>



If the timer in use to another function is varied, proceed to the correct step of the programme listed

Press the **JOG+** key until the number of the line to be modified appears at top left.
 When the following appears on the display:
012:INPUT EDGE
 I1.POS OUT:FN1:AND>

Press the **ENTER** key until the time value to be modified appears at bottom right.
 When the following appears on the display:
 036:OUTPUT:IN: IOC
 HIGH:TIMER: 0220 E

Timer value (timer: xxxx)

When the flashing square is over the TIMER value, use **JOG+** or **JOG -** keys to vary the set value, press **ENTER** to confirm.

Press **END**
 The following appears on the display:
 RUN STEP 1.Y
 SEQUENCE NOW 2.N E

Press **1** and **ENTER**
 STEP WRITE OK? 1Y
 2 N E

Press **1** and **ENTER**
 The following appears on the display:
 WRITING.....

When the display once again shows the programme, turn off the machine and wait until the display goes out. Re-start the machine and check that everything functions correctly.

21.3.INPUTS / OUTPUTS TEST

On the command console fixed to the card cabinet under the Loader:

Press the **F** key

The following appears on the display:

F U N C

Press the **two arrows** and the **A** key together

The following appears on the display:

P - E (E mode)

Hold the two keys down until the writing changes to:

1. E - X X

The last error message on the machine appears on the display

Press the **down arrow** key

The following appears on the display:

2. E - X X

The penultimate error message on the machine appears on the display

Press the **down arrow** key

The following appears on the display:

3. E - X X

The third from last error message on the machine appears on the display

Press the **down arrow** key

The following appears on the display:

4. E - X X

The fourth from last error message on the machine appears on the display

Press the **down arrow** key

Display of all INPUTS present with the possibility of testing them manually (from i 1 to i P)

The following appears on the display:

i 1 - o f

input parameter i 1 = OFF

The INPUT value of parameter **i 1** is displayed.

Press the relative pedal or function switch to change from **o n** to **o f** and/or viceversa.

Press the **down arrow** to display all the INPUTS present, from **i 1** to **i P**

The parameters used are as follows:

LEFT GREY PEDAL (**I1**)

RIGHT BLACK PEDAL (**I2**)

STOP MICROSWITCH (red) on the sewing head (**I4**)

RIGHT LOADER LIMIT STOP MICROSWITCH (**I7**)

LEFT LOADER LIMIT STOP MICROSWITCH (**IA**)

RIGHT MICROSWITCH (yellow) on the sewing head (**ID**)

BROKEN THREAD SENSOR (**IG**)

LEFT MICROSWITCH (yellow) on the sewing head (**IH**)

Press the **down arrow key to cycle through all the parameters**

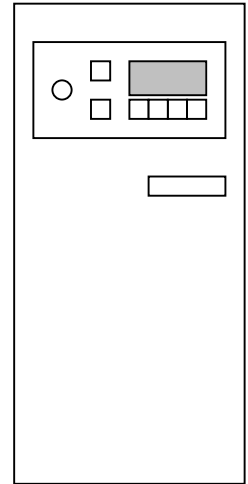
When the following appears on the display:

i P - o f

output parameter i P = OFF

The INPUT value of the last parameter **i P** is displayed.

Press the **down arrow**



The following appears on the display:

U P - o n

Synchroniser of Thread-puller Position Sensor UP

The INPUT value of the parameter **U P** is displayed.

Turn the synchroniser on the machine to check that the value changes from **o n** to **o f** or viceversa.

Press the **down arrow**

The following appears on the display:

d n - o f

Synchroniser of Needle Position Sensor DOWN

The INPUT value of the parameter **d n** is displayed.

Turn the synchroniser on the machine to check that the value changes from **o n** to **o f** or viceversa.

Press the **down arrow**

The following appears on the display:

X H - o n

X AXIS Sensor

The INPUT value of the parameter **X H** is displayed.

Lower the jigs and press the **HOME** key to check if the value changes from **o n** to **o f** or viceversa.

Press the **down arrow**

The following appears on the display:

Y H - o f

Y AXIS Sensor

The INPUT value of the parameter **Y H** is displayed.

Lower the jigs and press the **HOME** key to check if the value changes from **o n** to **o f** or viceversa.

Press the **down arrow**

The following appears on the display:

E C A

Motor Encoder timing A

The INPUT value of the parameter **E C A** is displayed

Making the machine sew the value changes continuously from ON to OFF.

Press the **down arrow**

The following appears on the display:

E C B

Encoder Motor timing B

The INPUT value of the parameter **E C B** is displayed.

Making the machine sew the value changes continuously from ON to OFF.

Press the **down arrow**

The following appears on the display:

C R S on/of

Input Alternate Tension Control

The INPUT value of the parameter **C R S** is displayed with a continual change between ON and OFF.

Press the down arrow key


Display of all OUTPUTS present with the possibility of testing them manually (from **0 1 o** to **0 o o**)

The following appears on the display:

0 1 o - o f

output parameter 0 1 = OFF THREAD-TRIMMER


The OUTPUT value of the parameter **0 1 o** is displayed.

Press the **D**  to change the value from **o n** to **o f**

ATTENTION: The coil connected to the output that is called up is also excited automatically. Be extremely careful to avoid possible malfunctions(Loading carriage / Equipment jigs).

Press the **down arrow** key

The following appears on the display:

The OUTPUT value of the parameter **0 2 o** is displayed.
Press the **D**  key to change the value from **o n** to **o f**

Press the **down arrow** to check the various Outputs used:
FUNCTION PARAMETER

0 1 o	Thread-trimmer
0 2 o	Stacker
0 3 o	Tension Releaser
0 4 o	Sewing Head External Jig
0 5 o	Pressure foot
0 7 o	Unloader
0 8 o	Jig Re-entry (FUN1) or Loader
0 C o	Internal Jig or Loader Jig

Press the **down arrow**, when the following appears on the display:
0 o o - o f output parameter 0 o = OFF

The OUTPUT value of the parameter **0 o o** is displayed.

Press the down arrow key

Display of all signals going from the CPU to the OUTPUTS while the sewing machine is running (from d 1 o to d o o)

The following appears on the display:

0 1 d - o f

output signal 0 1 = OFF THREAD-TRIMMER

The OUTPUT value of the parameter **0 1 o** is displayed.
Press the **down arrow** to check the various Outputs used:

PARAMETER FUNCTION

0 1 o	Thread-trimmer
0 2 o	Stacker
0 3 o	Tension Releaser
0 4 o	Sewing Head External Jig
0 5 o	Pressure foot
0 7 o	Unloader
0 8 o	Jig Re-entry (FUN1) or Loader
0 C o	Internal Jig or Loader Jig

Press the **down arrow**, when the following appears on the display:
0 o o - o f output parameter 0 o = OFF

The OUTPUT value of the parameter **0 o o** is displayed.
Press the **down arrow**

The following appears on the display:

P. xxxxx Actual running time in hours from the first start-up of the machine
Multiply the value by ten (Total hours = n° X 10)

Press the **down arrow** key
The following appears on the display:

M. xxxx Actual sewing time in hours (motor rotation) from the first start-up of the machine
Multiply the value by ten (Total hours = n° X 10)

Press the **down arrow** key
The following appears on the display:

DU.00x Version of SIMPLE SETTING in use (x = from 1 to 7)

Press the **down arrow** key
The following appears on the display:

BU.302 Version of BIOS in use in the main memory

Press the down arrow key
The following appears on the display:

SU.459 Version of system SOFTWARE in use in the main memory

Press the **H** key to exit

20.4. MATERIAL CARRIAGE PARAMETER CONTROL – TENSION RELEASE TIME DURING CUT CYCLE

On the command console fixed to the card cabinet under the Loader:

Press the **F** key

The following appears on the display:

F U N C

Press the **down arrow** and the **B** key together

The following appears on the display:

P - b (B mode)

Hold the two keys down until the display changes to:

W b t. o f

Press the **down arrow** key until the following appears on the display:

S 8. 0 9 4 (Alternated Feed of the Material – material shift start value)

The parameter **S 8.** can be adjusted between the value of **084** and **104** in the event of problems. Standard Value = 94.

Press the down arrow key until the following appears on the display:

L 1. 240 (Tension release delay)

Use the **D** key to change the units

Use the **C** key to change the tens

Use the **B** key to change the hundreds

Use the **A** key to change the thousands

The parameter **L1.** can be adjusted between the value of **040** and **240**

Press the **H** key to exit

21.5.CONTROL OF SET SPEEDS (FEED and SEWING) AND SLOW START FUNCTION

On the command console fixed to the card cabinet under the Loader:

Press the **F** key

The following appears on the display:

F U N C

Press the **down arrow** and the **B** key together

The following appears on the display:

P - b (B mode)

Hold the two keys down until the display changes to:

W b t. o f

Press the **down arrow** key until the following appears on the display:

F e s. x (MOVING speed x = Adjusted speed value)

The parameter **F e s.** can be adjusted to between **0 (minimum speed)** and **9 (MAXIMUM speed)**.

Standard value = **5**

Press the **down arrow** until the following appears on the display:

H = XXXX (MAXIMUM speed XXXX = Adjusted speed value)

Use the **D** key to change the units

Use the **C** key to change the tens

Use the **B** key to change the hundreds

Use the **A** key to change the thousands

Adjust to a value of 2300 revolutions (2100 while running in)

Press the **down arrow** key until the following appears on the display:

L = XXXX (MINIMUM speed XXXX = Adjusted speed value)

Use the **D** key to change the units

Use the **C** key to change the tens

Use the **B** key to change the hundreds

Use the **A** key to change the thousands

Adjust to a value of 200

Press the down arrow key until the following appears on the display:

M = XXXX (MEDIUM-HIGH speed XXXX = Adjusted speed value)

Use the **D** key to change the units

Use the **C** key to change the tens

Use the **B** key to change the hundreds

Use the **A** key to change the thousands

Adjust to a value of 1000

Press the down arrow key until the following appears on the display:

n = XXXX (MEDIUM-LOW speed XXXX = Adjusted speed value)

Use the **D** key to change the units

Use the **C** key to change the tens

Use the **B** key to change the hundreds

Use the **A** key to change the thousands

Adjust to a value of 700

Press the down arrow key until the following appears on the display:

t = XXXX (TRIM speed XXXX = Adjusted speed value)

Use the **D** key to change the units
Use the **C** key to change the tens
Use the **B** key to change the hundreds
Use the **A** key to change the thousands

Adjust to a value of 180

Press the down arrow key until the following appears on the display:

S = XXXX (SOFT START speed XXXX = Adjusted speed value)

Use the **D** key to change the units
Use the **C** key to change the tens
Use the **B** key to change the hundreds
Use the **A** key to change the thousands

Adjust to a value of 500

Press the down arrow key until the following appears on the display:

SL = o f (SOFT START FUNCTION)


Press the D key  to change the value from **OFF** to **ON** and thereby enable the function

Adjust to a value of OF

Press the down arrow key until the following appears on the display:

SLn = X (N° of slow stitches with SOFT START inserted)

X = Number of slow stitches at the start of the seam

Press the D key  to change the value from **1** to **5**

Adjust to a value of 2

Press the **H** key to exit

22. PROGRAMMING

22.1.GENERAL SPECIFICATIONS

The MITSUBISHI PLK B 1006 machine is equipped with an extremely versatile and easy-to-use software. To create a new sewing programme on a pocket, follow the instructions given below, which will take you, step by step, all the way to saving the programme onto a Floppy Disk or into the Internal Memory.

22.1.1.MEMORY

The machine comes with a diskette that can contain 150 programmes and an internal memory that can contain 47 programmes. For each programme, a maximum of 8000 stitches can be memorised.

The number of the programme memorised depends on the type selected.

From n°100 to n°249 for type A programmes

From n°400 to°447 for type BA programmes

From n°600 to°749 for type B programmes

22.1.2.STITCH LENGTH

Stitch lengths of between 0.1mm and 12.7mm can be programmed, in variations of 0.1mm. The machine turns at its maximum speed with a stitch length of between 0.1 and 3.3mm.

22.1.3.SEWING SPEED

Four different types of speed may be selected (H – MD1 – MD2 – L) during the sewing programme.

The machine is calibrated for a maximum speed of 2300 rpm. The thread cutting speed is calibrated at 180 rpm.

22.1.4.CODES

A series of codes manage the operation of the machine or of any solenoid valves mounted. The codes may be inserted into the sewing programme.

Type of codes used in the programmes:

FUN 1: Internal jig re-enter

22.1.5.METHOD OF PROGRAMMING

Press the **TEACHING METHOD** key to choose the type of seam.

Those present on the machine are:

P- P	Straight seam	Automatic Programming of stitches within a straight line.
A P1	Circle arc	Automatic Programming of a circle arc with only 3 stitches.
A P1	Circle	Automatic Programming of a circle with 3 stitches.
S 001	Irregular curves	Programming insertion of a n° of stitches united by Irregular Curves
B 001	Open line	Inserting of a n° of stitches united by Straight Lines.
POINT		Programming stitch by stitch

22.2.PROGRAMMING AN EMBROIDERY

Lower the jigs
Press **PEN IN**
Press **1** and **ENTER**
Press **HOME**
The display changes to:
TYPE DATA
1.B DATA 2.BA DATA

Press **1** and **ENTER**
The display changes to:
SPEED HIGH
ST.LENGTH 3.0mm

With the **SPEED** key select type of speed required from the 4 possible, normally HIGH

With the **numerical keys** set the required stitch length

E.g. 2.5mm insert **2** and **5**
 3.1mm insert **3** and **1**

Press **ENTER**

- **(X)** Check whether the word FEED appears at the bottom right of the display, , , **if the word SEW appears**, press the **FEED** key

Move to the starting point of the seam with the directional arrows

Press **ENTER**

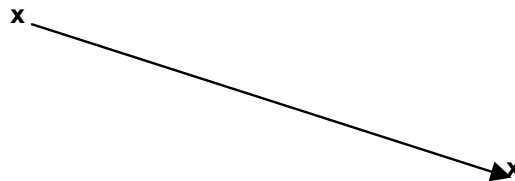
Check the type of seam required at the beginning of each tract (STRAIGHT – ARC – CIRCLE – IRREGULAR CURVES):

STRAIGHT SEAM

Press the **TEACHING METHOD** key and select the **P-P** method in the upper right of the display

Move with the directional arrows to the end of the seam

Press **ENTER**



CURVE SEAM (CIRCLE ARC – REGULAR CURVE)

Press the **TEACHING METHOD** key and select the **A P1** method in the upper right of the display

Move with the directional arrows to the CENTER of the arc.

Press **ENTER**

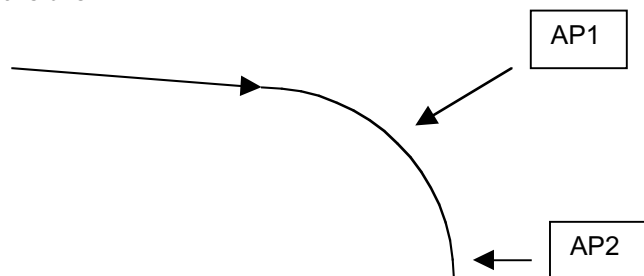
Move with the directional arrows to the END of the arc.

Press **ENTER**

The display changes to:

MAKE ARC
DATA

1 Y
2 N



Press **1** and **ENTER**

CURVE SEAM (IRREGULAR CURVE)

Press the **TEACHING METHOD** key and select the **S 01** method in the upper right of the display
Move with the directional arrows TO THE VARIOUS POINTS OF THE CURVE.

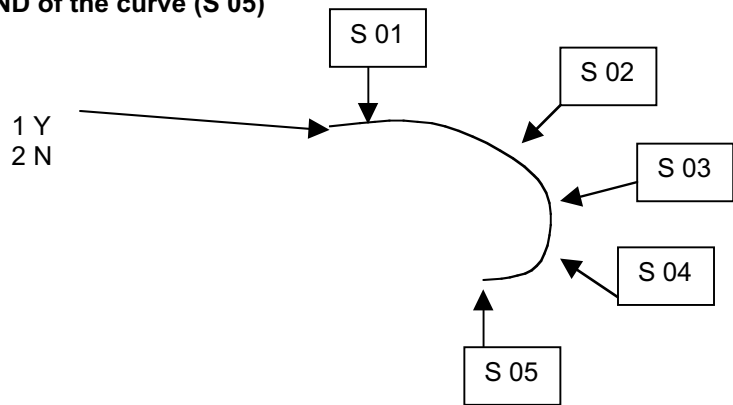
Press **ENTER**

Move with the directional arrows to the END of the curve (S 05)

Press **ENTER**

Press **ENTER**

The display changes to:
 MAKE CURVE
 DATA



Press **1** and **ENTER**

End of the seam

Press **CODE**

Press **1** and **ENTER**

Press **1** to select TRIM

Press **ENTER**

- If there is a second seam start again from point (X)

- If the programme is finished

Press **RETURN**

The machine moves automatically to the original point

Press **END**

Press **HOME**

Lower the jigs and test the programme with the **JOG+** key and, if all goes well, press **HOME**

Try the programme and, if all goes well save it to memory

Try the programme and then save it to memory as follows:

Press **WRITE**

The display changes to:

WRITE DATA
 1.MEMORY 2.FD

Press **1** to save the programme into the internal memory of the machine (Max.47 programmes)

Press **2** to save the programme onto the floppy disk (Max.149 programmes)

Confirm with **ENTER**

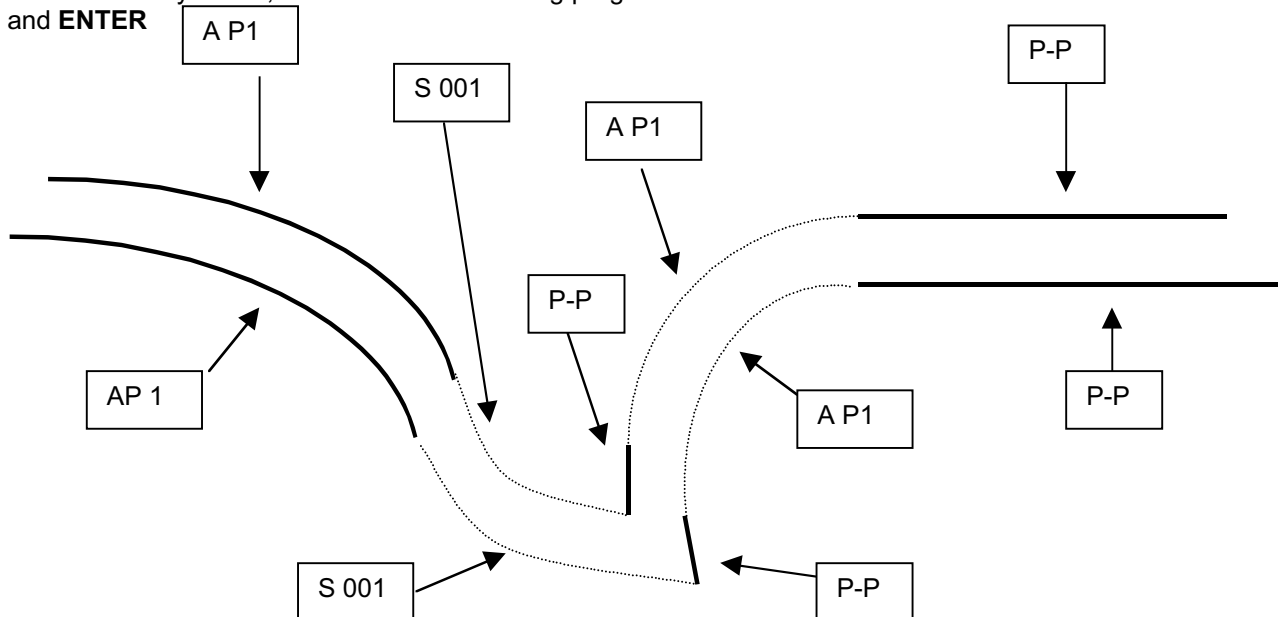
Insert a programme number between **600** and **749** in case of **type B programme**

Insert a programme number between **400** and **549** in case of **type BA programme**

Press **ENTER**

If this number is already in use, to write over the existing programme

Press **1** and **ENTER**



22.3.RE-PROGRAMMING THE SECOND SEAM INTO AN EMBROIDERY

Lower the plates

Press the **PEN IN** key

The display changes to:

DO YOU CLEAR 1Y
RAM 2N

Press **2** and **ENTER**

The display changes to:

PRESS HOME KEY

Press the **HOME** key

The machine resets to the ORIGINAL POINT

Press **ENTER**

Press the **JOG+** and **JOG-** keys together

Insert the number **800** and press **ENTER**

Press **1** and **ENTER**

Press **JOG+** and **ENTER** together

The machine automatically shifts to the last stitch.

Press the **STITCH CLEAR** key to cancel, one stitch at a time, the entire **SECOND** seam up to point **1** of the design

ATTENTION: Be sure to cancel the **TRIM** code (Thread trimming). When the **TRIM** code (Thread trimming) appears on the display press the **STITCH CLEAR** key once

Press **SPEED**

The display changes to:

SPEED HIGH
ST.LENGTH 3.0mm

With the **SPEED** key select the type of speed required from the 4 possible, normally **HIGH**

With the **numerical keys** set the required stitch length

E.g. 2.5mm insert **2** and **5**

3.1mm insert **3** and **1**

Press **ENTER**

Check the type of seam required at the beginning of each tract (**STRAIGHT – ARC – CIRCLE – IRREGULARE CURVES**):

STRAIGHT SEAM

Press the **TEACHING METHOD** key and select the **P-P** method in the upper right of the display

Move with the directional arrows to the end of the seam

Press **ENTER**



CURVE SEAM

Press the **TEACHING METHOD** key and select the **A P1** method in the upper right of the display

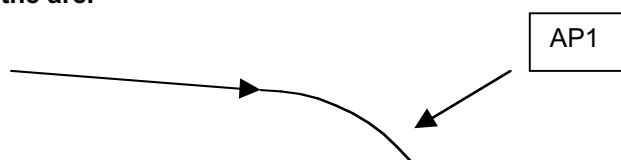
Move with the directional arrows to the CENTER of the arc.

Press **ENTER**

Move with the directional arrows to the END of the arc.

Press **ENTER**

The display changes to:



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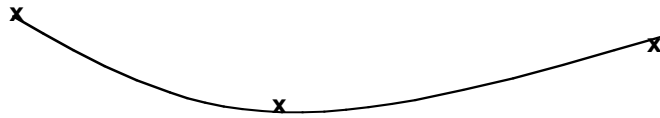
MAKE ARC

DATA

1 Y

2 N

Press **1** and **ENTER**



End of the seam

Press **CODE**

Press **1**

Press **ENTER**

Press **1** to select TRIM

Press **ENTER**

Press **RETURN**

The machine automatically resets to the ORIGINAL POINT

Press **END**

Press **HOME**

Lower the jigs and test the programme with the **JOG+** key and, if all goes well, press **HOME**

Try the programme and, if all goes well save it to memory

Try the programme and then save it to memory as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY

2.FD

Press **1** to save the programme into the internal memory of the machine (Max.47 programmes)

Press **2** to save the programme onto the floppy disk (Max.149 programmes)

Confirm with **ENTER**

Insert a programme number between **600** and **749** in case of **type B programme**

Insert a programme number between **400** and **549** in case of **type BA programme**

Press **ENTER**

If this number is already in use, to write over the existing programme

Press **1** and **ENTER**

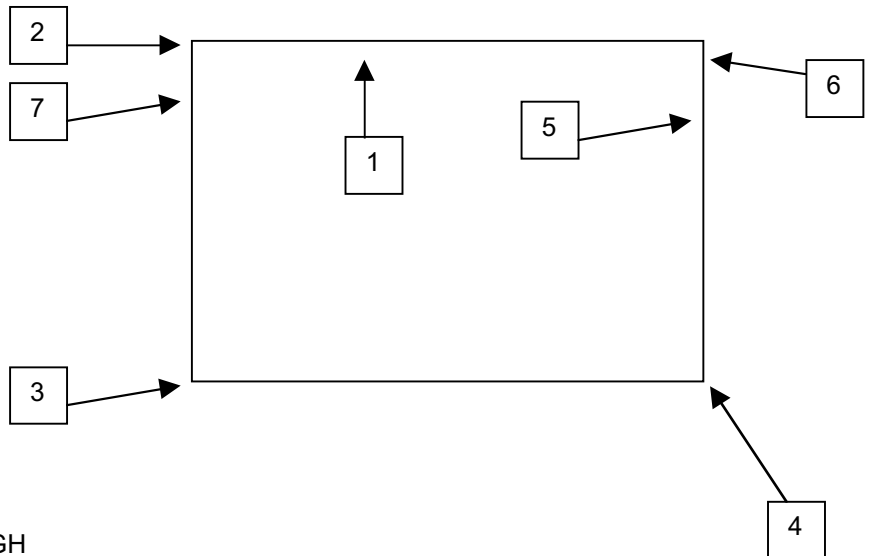
22.4.PROGRAMMING A LABEL

Lower the jigs
 Press **PEN IN**
 Press **1**
 Press **ENTER**
 Press **HOME**
 The display changes to:
 TYPE DATA
 1.B DATA 2.BA DATA

Press **1**
 Press **ENTER**

The display changes to:
 SPEED HIGH
 ST.LENGTH 3.0mm

With the **SPEED** key select the type HIGH
 With the **numerical keys** set the required stitch length
 E.g. 2.5mm press the **2** and **5** keys
 3.1mm press the **3** and **1** keys
 Press **ENTER**



ATTENTION - Check whether the word FEED appears at the bottom right of the display
 • **X**) If not press **FEED**
Move to the first stitch (point 1) of the seam, using the directional arrows.
 Press **ENTER**

Check the type of seam required at the beginning of each tract:

STRAIGHT SEAM

Press the **TEACHING METHOD** key and select **P-P** of the upper right display
Move to the end of the FIRST seam (point 2) with the directional arrows
 Press **ENTER**
Move to the end of the SECOND seam (point 3) with the directional arrows
 Press **ENTER**
Move to the end of the THIRD seam (point 4) with the directional arrows
 Press **ENTER**
Move to 1Cm before the end of the FOURTH seam (point 5) with the directional arrows
 Press **ENTER**
 Press the **SPEED** key until the following appears on the display
 SPEED **MD2**
 ST.LEN. xxxxx

Press **ENTER**
 Press the **CODE** key
 Insert the number **1** and **ENTER**
 Insert the number **3** and **ENTER** to select FUN1
Move to the end of the FOURTH seam (point 6) with the directional arrows
 Press **ENTER**
 Press the **SPEED** key until the following appears on the display
 SPEED **HIGH**
 ST.LEN. xxxxx

Press **ENTER**
Move to the end of the FIFTH seam (point 7) with the directional arrows
 Press **ENTER**

End of the seam
 Press **CODE**
 Press **1** and **ENTER**
 Press **CODE**
 Press **1** to select TRIM

Press **ENTER**

- **In there is a second LABEL start again from the stitch “X”**
- **If the program is finished**

Press **RETURN**

The machine automatically resets to the ORIGINAL POINT

Press **END**

Press **HOME**

Lower the jigs and test the programme with the **JOG+** key and, if all goes well

Press **HOME**

Lower the jigs and test the programme with the **JOG+** key and, if all goes well

Press **HOME**

Try the program and if all goes well, save it to memory

Try the programme and then save it to memory as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY 2.FD

Press **1** to save the programme into the internal memory of the machine (Max.47 programmes)

Press **2** to save the programme onto the floppy disk (Max.149 programmes)

Confirm with **ENTER**

Insert a programme number between **600** and **749** in case of a **type B program**

Insert a programme number between **600** and **549** in case of a **type BA program**

Press **ENTER**

If this number is already in use, to write over the existing programme

Press **1** and **ENTER**

23. MODIFICATIONS TO THE PROGRAMME

23.1.GENERAL SPECIFICATIONS

The MITSUBISHI PLK B 1006 is equipped with an extremely versatile and easy-to-use software. To modify a sewing programme, of a pocket embroidery or a label follow the instructions given below, which will take you, step by step, all the way to saving the programme onto a Floppy Disk or into the Internal Memory.

With the jigs lowered, press the **MODIFY (PROGRAMME MODIFICATION)** key.

The red LED above the key lights up enabling this function.

Press the **FUNCTION (SELECT FUNCTIONS)** key to enable the following FUNCTIONS:

MAIN MENU

- 1 STITCH Enter this menu to modify the sewing programme
- 2 SPEED Enter this menu to modify the sewing speed
- 3 CODE Enter this menu to add or delete codes and signals
- 4 MOVE (B) Enter this menu to move a selected BLOCK within a programme
(Programmes constructed on the machine)

Choices within this menu:



SUBMENU "1 STITCH"

1 BLOCK **Modify the seam between two points selected within a programme**

Choices within this menu:

- 1.BREAK (double line)
- 2.ARC (circle arc, regular curve)
- 3.CURVE (irregular curves)
- 4.LINE (line)
- 5.ZIG (zigzag)

2 FEED **Modify the trial shift**

Choices within this menu:

- 1.START POINT MODIFY (modify start point)
- 2.FEED BLOCK MODIFY (modify shift path)

3 DEL **Delete ONE stitch**

4 ADD **Add ONE stitch**

Choices within this menu:

- 1.ADD 1 STITCH (of the required length)
- 2.ADD SOME STITCH (same as the previous stitch)

5 MOD **Modify the length of a stitch**

Choices within this menu:

- 1.1 ST. DATA FIX (keep the following stitches in the same position)
- 2.1 ST. DATA MOVE (move the following stitches in the quantity set)

2 SPEED

1 ALL
2 N. STITCHES

SUBMENU "2 SPEED"

- 1 **ALL** Means modifying the sewing speed, from that point in the programme until its end.
- 2 **N. STICHES** Means modifying the speed, from that point in the programme, ONLY for a determined number of stitches.

There are four types of speed:

1 L Low 2 MD2 Medium-Low 3 MD1 Medium-High 4 H High

3 CODE

1 DEL. CODE
2 ADD. CODE

SUBMENU "3 CODE"

- 1 **DEL. CODE** Means CANCELLING codes
- 2 **ADD. CODE** Means ADDING codes

Type of codes used in the programmes and their functions: **FUN 1**: Internal Jig - Backward movement at end of first seam

23.1.1.MEMORY

The machine is equipped with a Floppy Disk that can contain 150 programmes and an internal memory that can contain 47 programmes.

For each programme, a maximum of 8000 stitches can be memorised.

The number of the programme memorised depends on the selected program, make reference to the following table:

PROGRAMME ORIGIN	TYPE	N° start	N° end
VI.BE.MAC original program	A	100	249
VI.BE.MAC original program, modified in the machine	BA	400	449
Programme constructed in the machine	B	600	749
Programme constructed and modified in the machine	B	600	749

It is very important to save the program to memory correctly, in order to avoid undesired variations or changes.

23.1.2.STITCH LENGTH

Stitch lengths of between 0.1mm and 12.7mm can be programmed, in variations of 0.1mm. The machine turns at its maximum speed with a stitch length of between 0.1 and 3.3mm.

23.2.MOVING THE ENTIRE PROGRAMME

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
The machine resets to its ORIGINAL POINT
Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N

Press the **1** key and **ENTER**
The display changes to:
1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **1** and **ENTER**
The display changes to:
1 BLOCK 2 FEED 3DEL 4ADD 5MOD

Press **2** and **ENTER** to select FEED
The display changes to:
1 START POINT MODIFY
2 BLOCK MODIFY

Press **1** and **ENTER**
The machine moves automatically to the 1st sewing point
The display changes to:
START POINT MODIFY
X +000.0 Y+000.0mm

Use the directional arrows to move to the quantity required
(Each impulse is the equivalent of one tenth of a millimetre in that direction)

Press **ENTER**
The display changes to:
MAKE FEED 1Y
DATA? 2N

Press **1** and **ENTER**
The machine returns automatically to the Original Point
Press **MODIFY**
The display changes to:
PRESS HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**
Try the programme and save it as follows:

Press **WRITE**
The display changes to:
WRITE DATA
1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

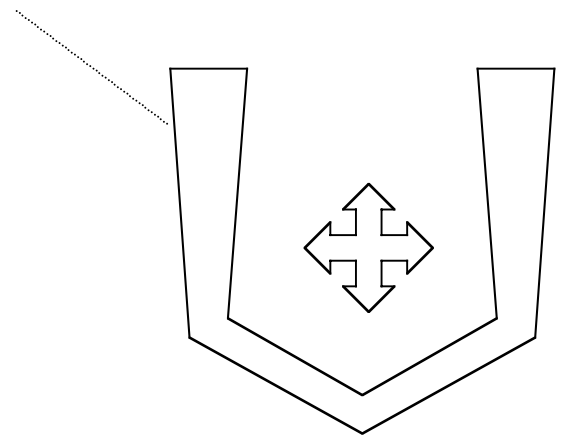
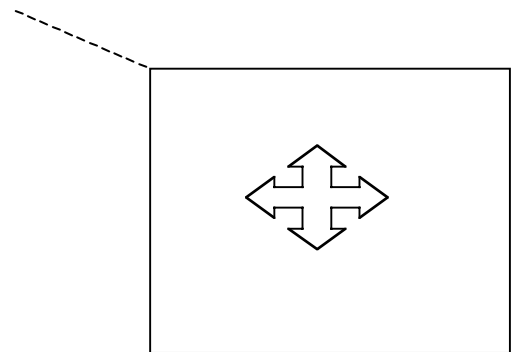
Insert a programme number, between **600** and **749** for a type **B** programme

Insert a programme number, between **400** and **549** for a type **BA** programme

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**



23.3.MODIFYING AN ANGLE INSERTED IN THE PROGRAMME

Lower the plates
 Press the **MODIFY** key
 The display changes to:
 PRESS HOME KEY

Press the **HOME** key

The machine resets to its ORIGINAL POINT

Press the **FUNCTION** key
 The display changes to:
 CHANGE RETURN 1Y
 FEED 2N

Press the **1** key and **ENTER**
 The display changes to:
 1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **1** and **ENTER**
 The display changes to:
 1 BLOCK 2 FEED 3 DEL 4ADD 5MOD

Press **1** and **ENTER** to select BLOCK
 The display changes to:
 START POINT JOG

Use **JOG+** to go to the start of the modification (point A)
 Press **ENTER**
 The display changes to:
 END POINT JOG

Use **JOG+** to go to the end of the modification (point B)
 Press **ENTER**
 The machine automatically returns to point (A)
 The display changes to:
 1 BREAK 2 ARC 3 CURVE 4 LINE 5 ZIG

1 BREAK = Joins starting point A to end point B, with two straight seams through a NEW point D selected by the operator

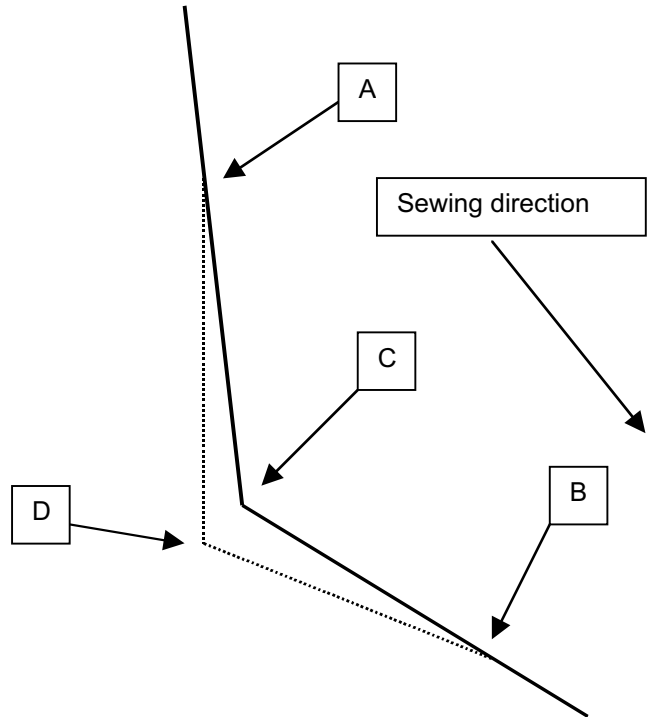
Press **1** and **ENTER**
 The display changes to:
 BREAK LINE
 STITCH LENGTH 3.0mm

Insert the required stitch length. E.g. 3.1mm insert **3** and **1**
 Press **ENTER**
 The display changes to:
 SPECIFY JOG 1Y
 2N

Press **1** and **ENTER**
 The display changes to:
 START POINT JOG SEW
 X xxxx Y yyyy E

Use **JOG+** key to go to the central point C of the pocket.
 Press **ENTER**
 The display changes to:
 BREAK INPUT POINT
 X +000.0 Y +000.0 E

Use the **directional arrows** to go to the new central point D of the new corner.
 Press **ENTER**



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The display changes to:

START POINT JOG SEW
X xxxx Y yyyy E

Use **JOG+** key to go to the end point of the modification (Point B).

Press **ENTER**

The following appears on the display::

MAKE BREAK 1Y
LINE DATA 2N

Press **1** and **ENTER**

Press the **MODIFY** key

The display changes to:

PRESS HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme and save it as follows:

Press **WRITE**

The display changes to:

WRITE DATA
1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a **type B programme**

Insert a programme number, between **400** and **549** for a **type BA programme**

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**

23.4.MODIFYING A CURVE INSERTED IN THE PROGRAMME

Lower the plates
 Press the **MODIFY** key
 The display changes to:
 PRESS HOME KEY

Press the **HOME** key

The machine resets to its ORIGINAL POINT

Press the **FUNCTION** key
 The display changes to:
 CHANGE RETURN 1Y
 FEED 2N

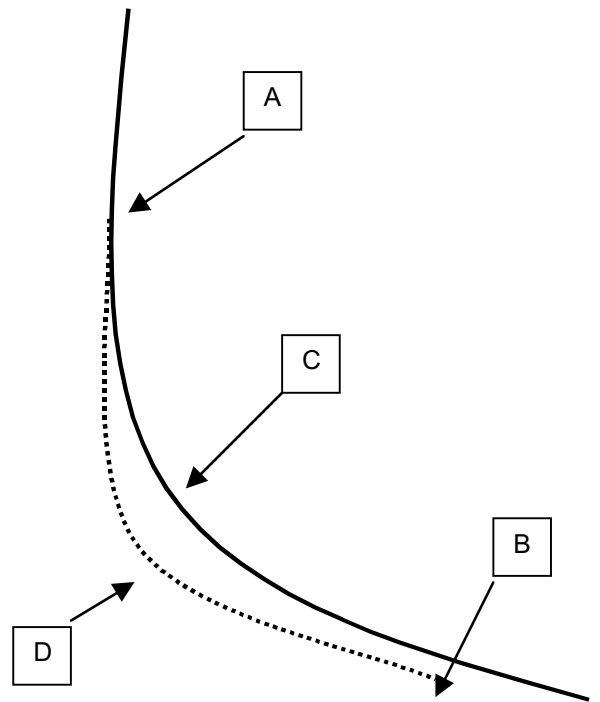
Press the **1** key and **ENTER**
 The display changes to:
 1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **1** and **ENTER**
 The display changes to:
 1 BLOC 2 FEED 3 DEL 4ADD 5MOD

Press **1** and **ENTER** to select BLOCK
 The display changes to:
 START POINT JOG+

Use **JOG+** to go to the start of the modification (point A)
 Press **ENTER**
 The display changes to:
 END POINT

Use **JOG+** to go to the end of the modification (point B)
 Press **ENTER**
 The machine automatically returns to point (A)
 The display changes to:
 1 BREAK 2 ARC 3 CURVE 4 LINE 5 ZIG



2 ARC = Joins the starting point A to the end point B with an arc through a NEW point D selected by the operator

Press **2** and **ENTER** to select ARC
 The display changes to:

ARC STITCH LENGTH
 3.0mm

Insert the required stitch length. E.g. **3.1** mm insert **3** and **1**

Press **ENTER**
 The display changes to:
 SPECIFY JOG 1Y
 2N

Press **1** and **ENTER**
 The display changes to:
 START POINT JOG SEW
 X xxxx Y yyyy E

Use **JOG+** key to go to the central point C of the arc in the pocket.
 Press **ENTER**
 The display changes to:
 ARC INPUT POINT
 X +000.0 Y +000.0 E

Use the **directional arrows** to go to the new central point D of the arc.
 Press **ENTER**
 The following appears on the display:
 pag.44

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MAKE ARC 1Y

DATA

2N

Press **1** and **ENTER**

Press the **MODIFY** key

The display changes to:

PRESS HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme and save it as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a type **B** programme

Insert a programme number, between **400** and **549** for a type **BA** programme

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**

23.5.MODIFYING THE SEWING SPEED (n° of stitches)

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
The machine resets to its ORIGINAL POINT

"X" Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N

Press the **1** key and **ENTER**
The following appears on the display:
1 STITCH 2 SPEED 3 CODE 4 MOVE (B)

Press **2** and **ENTER**
The following appears on the display:
1 ALL STITCH
2 N. STITCH

Press **2** and **ENTER**
The following appears on the display:
1 LOW 2 MD2 3 MD1 4 HIGH

Choose the type of speed from those present.
Insert the corresponding **number** and **ENTER**
The display changes to:
SPEED JOG SEW
X xxx.x Y yyy.y E

With the **JOG+** key go to the point to be modified
Press **ENTER**
The display changes to:
N. STITCH
SPEED CHANGE ... E

Insert **the number** of stitches you wish to slow down.
Press **ENTER**
The following appears on the display::
CHANGE SPEED 1Y
nnn xxxx 2N

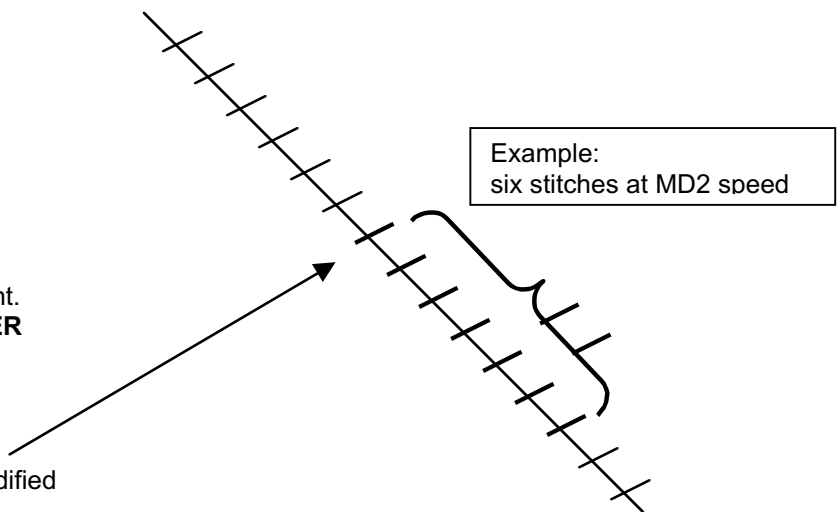
nnn = number of stitches xxx = pre-selected type of speed

Press **1** and **ENTER**

• **IF FURTHER MODIFICATIONS ARE REQUIRED**
Repeat the operation, starting from point *X*

• **IF NO FURTHER MODIFICATIONS ARE REQUIRED**
Proceed in the program with **JOG+** until the beginning of the left bar
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press **HOME**



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Test the programme with the **JOG+** key and if all goes well to the end press **HOME**

Try the programme while sewing and save it as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY

2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a type **B** programme

Insert a programme number, between **400** and **549** for a type **BA** programme

Press **ENTER**

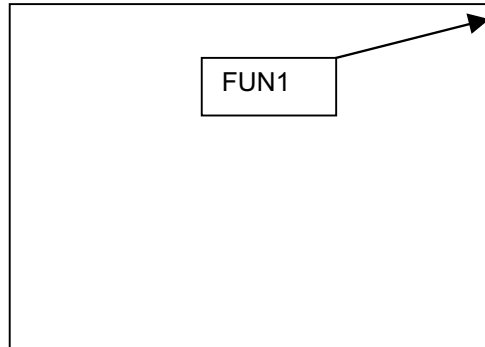
If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**

23.6.ADDING CODES

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
X Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N



Press the **1** key and **ENTER**
The following appears on the screen:
1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **3** and **ENTER**
The following appears on the display:
1 DELETE CODE 2.ADD. CODE

Press **2** and **ENTER**
The display changes to:
JOG +

Using the **JOG+** key, go to the required point
Press **ENTER**
The display changes to:
1 CODE 2 CODE NUMBER 3 EXTENDED CODE

Press the **1** key and **ENTER**.
The display changes to the next menu.
· Select the type of code required
Press the **3** key and **ENTER** to select FUN1

The display changes to:
FUN1 CODE 1 Y
ADDITION 2 N xxxx Code name

Press the **1** key and **ENTER**
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and if all goes well to the end press **HOME**
Try the programme while sewing and save it as follows:

Press **WRITE**
The display changes to:
WRITE DATA
1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)
Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)
Confirm choice with **ENTER**
Insert a programme number, between **600** and **749** for a type **B** programme
Insert a programme number, between **400** and **549** for a type **BA** programme
Press **ENTER**
If this number is already in use, to overwrite the existing programme
Press **1** and **ENTER**

23.7.REMOVING CODES

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
The machine resets to its ORIGINAL POINT

X Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N

Press the **1** key and **ENTER**
The following appears on the screen:
1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **3** and **ENTER**
The following appears on the display:
1 DELETE CODE 2.ADD. CODE

Press **1** and **ENTER**
The display changes to:
JOG +

Use **JOG+** to go to the point where the code to be eliminated is situated.
When the name of the code to be deleted appears on the display (E.g.:FUN1)

Press **ENTER**
The display changes to:
xxx CODE 1 Y
DELETION 2 N xxxx = Code name

Press the **1** key and **ENTER**

IF FURTHER MODIFICATIONS ARE REQUIRED

Repeat the operation, starting from point *X*

IF NO FURTHER MODIFICATIONS ARE REQUIRED

Proceed in the program with **JOG+** until the end of the programme
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme and save it as follows:

Press **WRITE**
The display changes to:
WRITE DATA
1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a type **B** programme

Insert a programme number, between **400** and **549** for a type **BA** programme

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**

23.8.RE-PROGRAMMING THE SEAM OF A STRAIGHT SIDE

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
The machine resets to its ORIGINAL POINT
Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N

Press the **1** key and **ENTER**
The display changes to:
1 STITCH 2 SPEED 3 CODE 4MOVE (B)

Press **1** and **ENTER**
The display changes to:
1 BLOCK 2 FEED 3 DEL 4ADD 5MOD

Press **1** and **ENTER** to select **BLOCK**
The display changes to:
START POINT JOG

Use **JOG+** to go to the start of the modification (point A)
Press **ENTER**
The display changes to:
END POINT JOG

Use **JOG+** to go to the end of the modification (point B)
Press **ENTER**
The machine automatically returns to point (A)
The display changes to:
1 BREAK 2 ARC 3 CURVE 4 LINE 5 ZIG

4 LINE Joins starting point A to end point B with ONE straight seam

Press **4** and **ENTER**
The display changes to:
BREAK LINE
STITCH LENGTH 3.0mm

Insert the required stitch length. E.g. **3.1mm** insert **3** and **1**
Press **ENTER**

The following appears on the display::
MAKE 1Y
LINE DATA 2N

Press **1** and **ENTER**
Press the **JOG+** key and move near the left bar
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press **HOME**

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Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme while sewing and save it as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY

2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max. 47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a **type B programme**

Insert a programme number, between **400** and **549** for a **type BA programme**

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1** and **ENTER**

23.9. MODIFYING THE POSITION OF A SEAM FROM A SPECIFIC POINT TO THE END OF THE PROGRAMME, MOVING THE STITCHES

Lower the plates
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key
The machine resets to the ORIGINAL POINT
Press the **FUNCTION** key
The display changes to:
CHANGE RETURN 1Y
FEED 2N

Press the **1** key and **ENTER**
The display changes to:
1 STITCH 2 SPEED 3 CODE 4 MOVE (B)

Press **1** and **ENTER**
The display changes to:
1 BLOK 2 FEED 3 DEL 4 ADD 5 MOD

Press **5** and **ENTER** to select **MOD**
The display changes to:
1 DATA FIX
2 DATA MOVE

Press **2** and **ENTER**
The display changes to:
1 STITCH - MOVE JOG+ SEW

Move with **JOG+** to the start of the modification
Press **ENTER**
The display changes to:
STITCH - MOVE INPUT
X 000.0 Y 000.0 E

Move with the directional arrows as necessary. (E.g. 1.5 mm down)
Press **ENTER**
The display changes to:
MODIFY 1 1Y
STITCH - MOVE 2N

Press **1** and **ENTER**
Press the **MODIFY** key
The display changes to:
PRESS HOME KEY

Press **HOME**

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Try the program with the **JOG+** key and if all goes well to the end, press HOME

Try the programme and then save it to memory as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY

2.FD

Press **1** to save the programme into the internal memory of the machine (Max.47 programmes)

Press **2** to save the programme onto the floppy disk (Max.149 programmes)

Confirm with **ENTER**

Insert a programme number between **600** and **749** for a **type B program**

Insert a programme number between **600** and **549** for a **type BA program**

Press **ENTER**

If this number is already in use, to write over the existing programme

Press **1** and **ENTER**

23.10.ENLARGING OR REDUCING A PROGRAMME (varying the X AXIS% and the Y AXIS% values)

Lower the plates
 Press the **CONVERT** key
 The display changes to:
 PUSH HOME KEY

Press the **HOME** key
 The machine resets to its ORIGINAL POINT
 The display changes to:
 1 HOME 2 ENLARGE
 3 MIRROR 4 ROTATE

Press the **2** key and **ENTER**
 The display changes to:
 1 FIX ST.LENGTH = Fixes the stitch length (Only type B programmes)
 2 FIX ST.NUMBER = Fixes the number of stitches

Press **2** and **ENTER**
 The following appears on the display:
 X PROPORTION
 100.0 100.0 = BASE Value

Insert the required value using the **numerical keys**. Range = **99.0 - 101.0**
 Increase the value to move seams outwards.
 Decrease the value to move the seams inwards.
 Press **ENTER**

The following appears on the display:
 Y PROPORTION
 100.0 100.0 = BASE Value

Insert the required value using the **numerical keys**. Range = **99.0 - 101.0**
 Increase the value to move seams outwards.
 Decrease the value to move the seams inwards.
 Press **ENTER**

The following appears on the display:
 CENTER (JOG KEY) FEED

Use **JOG+** to go to point **A** where the modification is to be made

Selecting point
A = Upper corner of the programme

VARYING THE "X" AXIS VALUE
 Only the seams on the right are moved

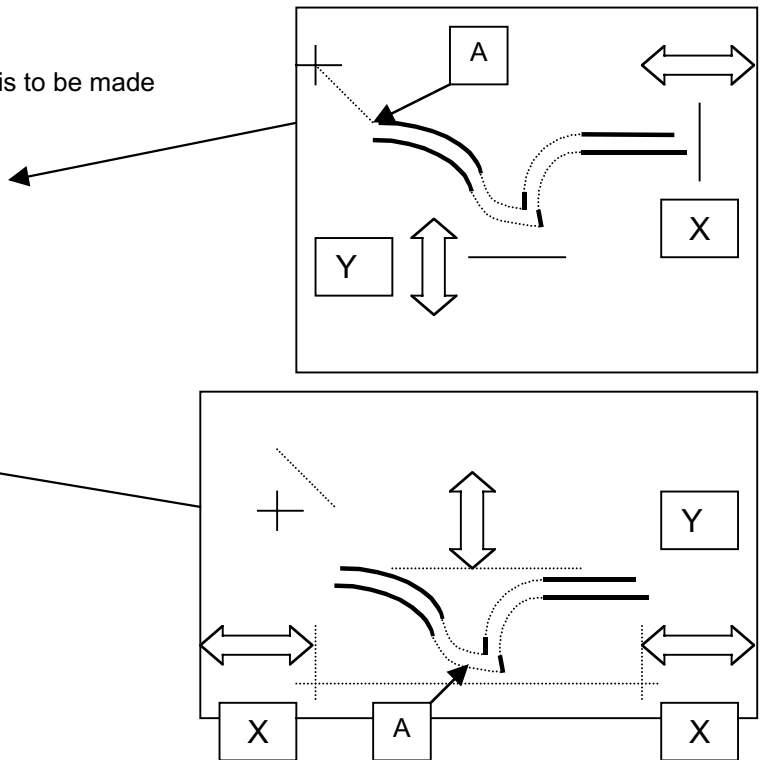
VARYING THE "Y" AXIS VALUE
 Only the seams at the tip of the pocket are moved

A = Central Point of the programme
 VARYING THE "X" AXIS VALUE
 The seams on the right and left are moved

VARYING THE "Y" AXIS VALUE
 The position of both tacks is moved

Press **ENTER**
 The following appears on the display:
 CENTER (ARROW KEY) FEED
 X000.0 Y000.0 E

Press **ENTER**



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The following appears on the display:

ENLARGE / REDUCE 1Y
FIX ST. NUMBER 2N

ATTENTION: Remove the external jig if point A = Central Point of the programme

Press **1** and **ENTER**

The following appears on the display::

PUSH HOME KEY

Press the **HOME** key

The machine resets to its ORIGINAL POINT

Press the **CONVERT** key to exit

The display changes to:

PUSH HOME KEY

Press **HOME**

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme while sewing and save it as follows:

Press **WRITE**

The display changes to:

WRITE DATA

1.MEMORY 2.FD

Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a type **B** programme

Insert a programme number, between **400** and **549** for a type **BA** programme

Press **ENTER**

If this number is already in use, to overwrite the existing programme

23.11.ROTATION OF A PROGRAMME

Press the **CONVERT** key
The display changes to:
PRESS HOME KEY

Press the **HOME** key

The machine resets to its ORIGINAL POINT

The display changes to:
1 HOME 2 ENLARGE
3 MIRROR 4 ROTATE

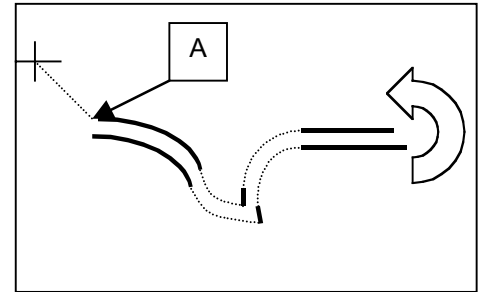
Press the **4** key to select ROTATE
Press **ENTER**
The following appears on the display:.
ROTATION
ANGLE 1.0°

Using the numerical keys, select the number of degrees the pocket is to be rotated. Normally, either 0.1° or 0.2° is used.

Press **ENTER**
The following appears on the display:
CENTER (JOG KEY) FEED

Use **JOG+** to go to the top left-hand corner (point A)

Press **ENTER**
The following appears on the display:
CENTER (ARROW KEY) FEED
X000.0 Y000.0 E



Press **ENTER**
The following appears on the display:
ROTATION
1RIGHT 2 LEFT

Using the numerical keys, select the required rotation direction of the pocket.

Select 1 to rotate the pocket in a **CLOCKWISE** direction.
Select 2 to rotate the pocket in an **ANTICLOCKWISE** direction.
Confirm the choice with **ENTER**

The following appears on the display:
ROTATION 1Y
 2N

Press number **1** and **ENTER**

The following appears on the display:
PUSH HOME

Press the **HOME** key

The machine returns to the ORIGINAL POINT

The display changes to:
1 HOME 2 ENLARGE
3 MIRROR 4 ROTATE

Press the **CONVERT** key
The following appears on the display:
PUSH HOME

Press the **HOME** key

Test the programme with the **JOG+** key and, if all goes well to the end, press **HOME**

Try the programme while sewing and save it as follows:

Press **WRITE**
The display changes to:
WRITE DATA
1.MEMORY 2.FD
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Press the **1** key to write the programme into the internal memory of the machine (Max.47 programmes)

Press the **2** key to write the programme onto the Floppy Disk (Max.149 programmes)

Confirm choice with **ENTER**

Insert a programme number, between **600** and **749** for a **type B** programme

Insert a programme number, between **400** and **549** for a **type BA** programme

Press **ENTER**

If this number is already in use, to overwrite the existing programme

Press **1**

24. INSTRUCTIONS FOR LOADING THE SYSTEM SOFTWARE AND THE OPERATION TABLES INTO THE CONTROL UNIT

24.1. LOADING THE SYSTEM SOFTWARE

Turn off the machine

Insert the floppy disk **SYSTEM SOFTWARE VER. 459** in the driver

Press button **"F"** on the console, under the driver and, while holding it down, **TURN ON THE MACHINE**

F + MACHINE START-UP

The following appears on the display:

00. x x x (Type of machine)

THE NUMBER 10 APPEARS ___ FOR THE 1006 MACHINE

The number 25 appears ___ for the 2516 machine

Press the down directional arrow and select the type of machine required

Press the **"D"** key on the console

The following appears on the display:

LA. E n g (Type of language: E n g)

Press the down directional arrow and select the required language from those present

Eng = English Fra = French Ita = Italian Spa = Spanish Jap = Japanese

Press the **"D"** key on the console

The machine starts to read the disk in the driver. It takes about **10** minutes for the computer to read the data and load it into memory.

When on the console appears RESET/TEACHING, press **ENTER**.

Now proceed with loading the operational system.

24.2. LOADING THE OPERATIONAL SYSTEM "SYSTEM TABLE"

Turn off the machine

Insert the Floppy disk **SET EMBROIDERY/LABEL** or **POCKET-SETTING** or **FLY/PAD** in the driver.

Press button **"B"** on the console, under the driver and, while holding it down, **TURN ON THE MACHINE**

B + MACHINE START-UP

The following appears on the display:

T B L. r d (READ TABLES)

Press the **"D"** key on the console

The machine starts to read the disk in the driver.

It takes about **5** minutes for the computer to read the data and load it into memory.

The number of the programme reappears in the console, the machine is ready to operate.

Always check, referring to paragraph 6.OPERATING SYSTEM that the unit has called up into memory the type of operation required.

