AMF® REECE

Better Ideas, Better Made

LOCKWELT 3000

LOCKSTITCH POCKET WELT MACHINE

PARTS AND SERVICE MANUAL

PART NUMBER 97.3000.0.000

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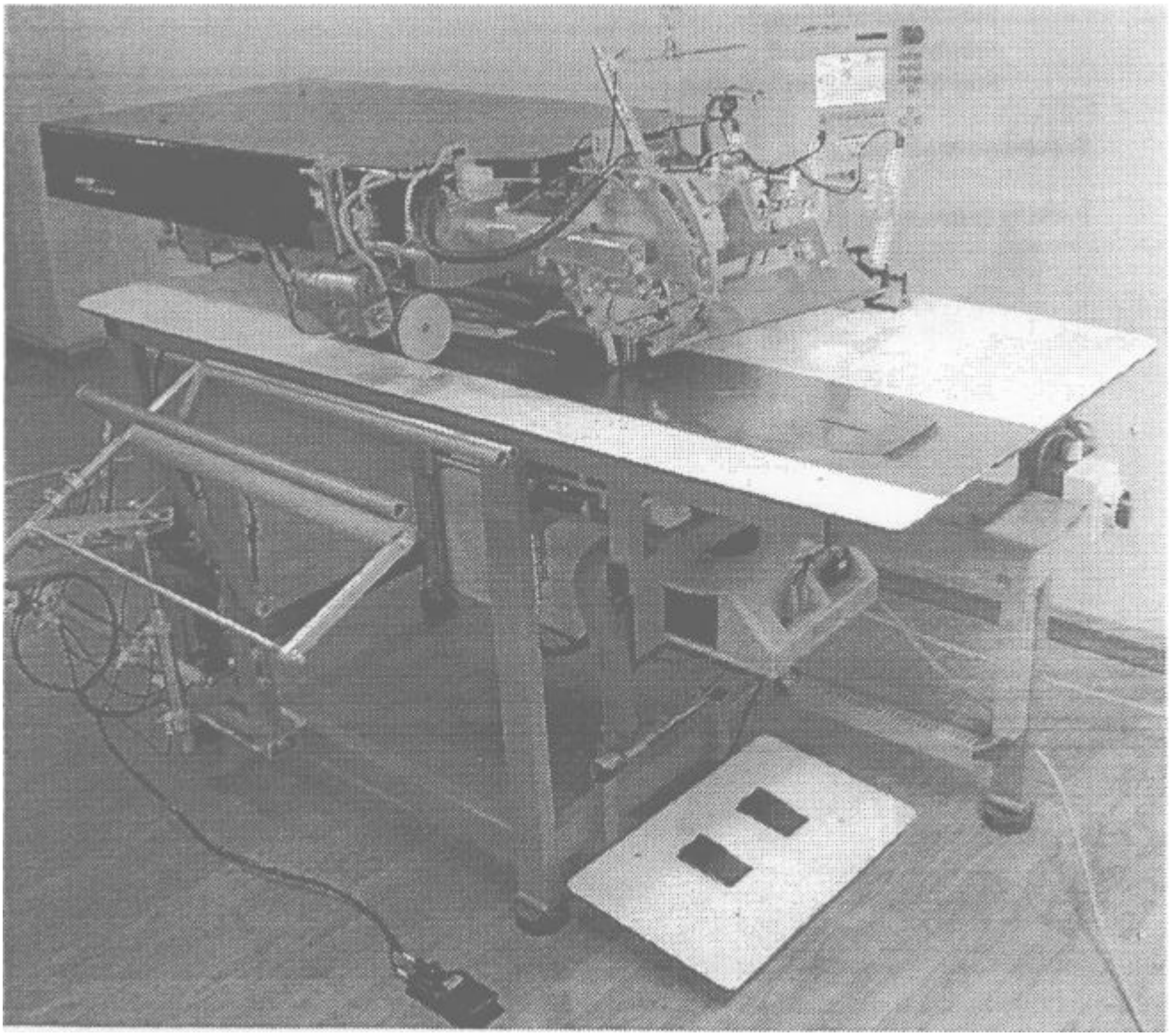
INTRODUCTION

Lockwelt 3000 Lockstitch Pocket Machine

Allows the automatic piping of pockets. The machine is equipped with a cutting mechanism, a clamp transportation system, a sewing head, and a stacking device for finished pocket panels. All machine components are mounted on a base frame made of square steel pipes and controlled by an innovative microprocessor system. The machine is operated with a control panel which may access several control programs, define new programs and check all machine components for easy maintenance and repairs.



SPECIFICATIONS

Sewing Head:	Brother Twin Needle Lockstitch, LT2-842-400.	
Stitch Type:	301 Double Thread Lockstitch.	
Control System:	Microprocessor with LCD display and 99 programmable pocket styles. Customer specific programs with transferable data cards.	
Feed System:	DC Motor controlled.	
Carriage Drive:	Step Motor controlled.	
Tab Knife Drive:	Step Motor controlled with 0.1 mm increments.	
Center Knife:	DC motor controlled with 0.1 mm increments, adjustable speed.	
Holding Station:	Swing-out system.	
Sewing Speed:	Programmable between 500 and 3,000 spm.	
Start and End Speed:	Programmable between 500-2,000 spm for 9 mm of welt start and end length	
Needle Style:	Recommended 134 x 35R 4100, 4110 for thick fabric, (optional DP 17)	
Needle Bite Sizes:	Standard Options	12 mm 10-24 mm
Pocket Lengths:	Standard Optional	30 – 180 mm, (1 3l32 - 7”) 30 – 240 mm, (l 3/32 - 9 1/2”)
Stitch Density:	Center Start and End	0 to *35* spcm (stitches per centimeter) 5 to 30 spcm
Backtacking:	Length programmable up to 20 mm at start and end of welt.	
Cycle Sewing:	Up to 6 preset for each program.	
Welt Styles:	Single, double, offset	
Flap Sewing:	Photocell for flap length sensing, both the start and the end of the flap Right, left or alternating combinations selectable from the control panel In dependent left and right clamping. (Optional) Photocell for flap length sens ing, start only for matching striped material.	

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SPECIFICATIONS

Quick Change Kit:	Standard, change flap clamp form single to double.
Bobbin Thread Monitor:	Photo electric with automatic pneumatic sensor and bobbin cleaning system.
Bobbin Thread Indicator:	Standard with thread length.
Needle Thread Monitor:	Standard with sensitivity programmable from control panel. Stops the machine when the thread breaks.
Thread Cutting System:	Pneumatic
Marking Lamps:	3 standard for positioning of patch piece and flap. Jackets use the front and rear lamps, pants use the middle lamp.
Operator Position:	Sitting
On-Board Diagnostics:	Standard, error messages and input output tests.
Piece Counter:	Standard
Stacker:	Universal or economy
Electrical Requirements:	220 Volt, 50-60 Hertz, single phase. Consumption 0.7 kW
Compressed Air:	Pressure 6 bar, (87 psi) Consumption 5 NL, (cfm)
Dimensions:	Length 1,600 mm (63”) Width 750 mm (29.5”) Height 1,300 mm (51”) Weight 220 kg (450 lbs.)

SAFETY

Safety

The Lockwelt 3000 pocket machine is carefully designed and manufactured to our high quality standards. Special attention is focused on the convenience of operation and effective hazard protection for operating and service personnel.

WARNING! Any piece of equipment may become dangerous to personnel when improperly operated or poorly maintained. It is very important all personnel expected to operate or maintain this equipment be familiar with the information contained in the parts and service manual.

It is recommended that AMF Reece service personnel supervise the installation and initial training of your mechanics and operators.

The most effective employee hazard protection is a rigidly enforced safety program which includes effective training in safe operating methods. Supplementary hazard protection, including guards and covers are useful when attached in the correct manner and properly maintained. Operators and service staff should be required to wear safety glasses.

WARNING! Only authorized service personnel are allowed to perform maintenance behind the electrical control panel door.

WARNING! Before Starting to Sew

Observe all safety requirements and ensure all covers are properly installed. Check for proper operation of each machine control switch. Ensure the sewing head is properly lubricated. Check for correct needle installation, size, condition, and ensure proper thread tension and type. Perform a final check for correct sewing performance and operation of all machine components.

WARNING! After switching off the air pressure, release any stored energy in the machine before performing any maintenance.

WARNING! Before removing any machine covers or opening any doors, engage the **Emergency Stop** rotary switch and lock the switch out. Do not modify the machine or bypass any safety devices.

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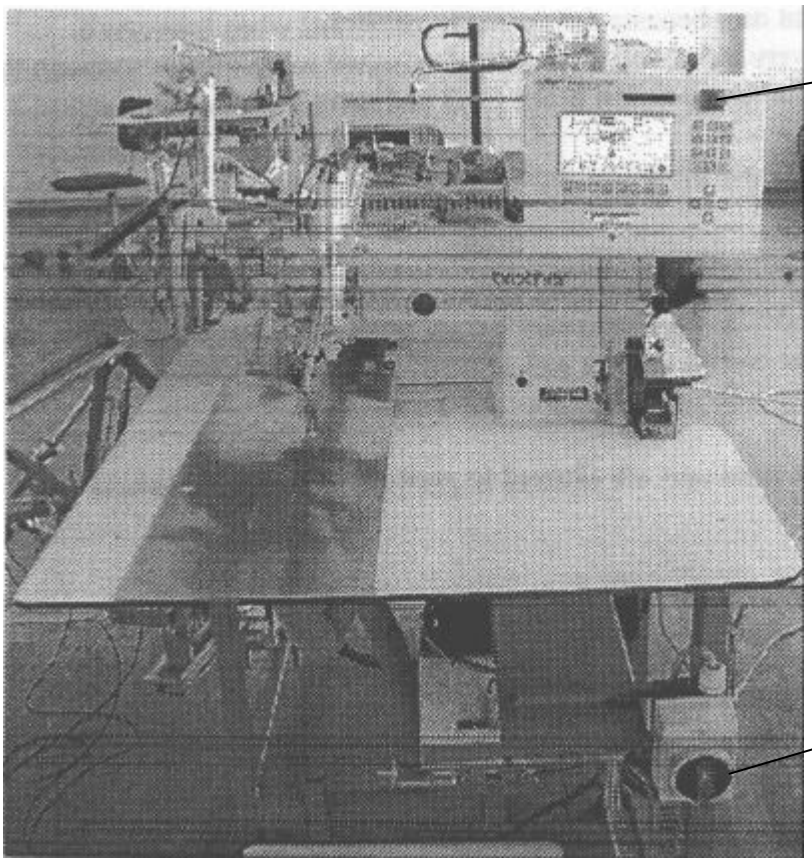
Safety

The program stop push-button switch
The mains/emergency stop rotary switch



Program Stop Push-button

When pressed, all machine components are stopped immediately. To continue production, rotate the push-button to the right to release the push-button and reset the machine, press the right-hand foot treadle to start the sewing operation.

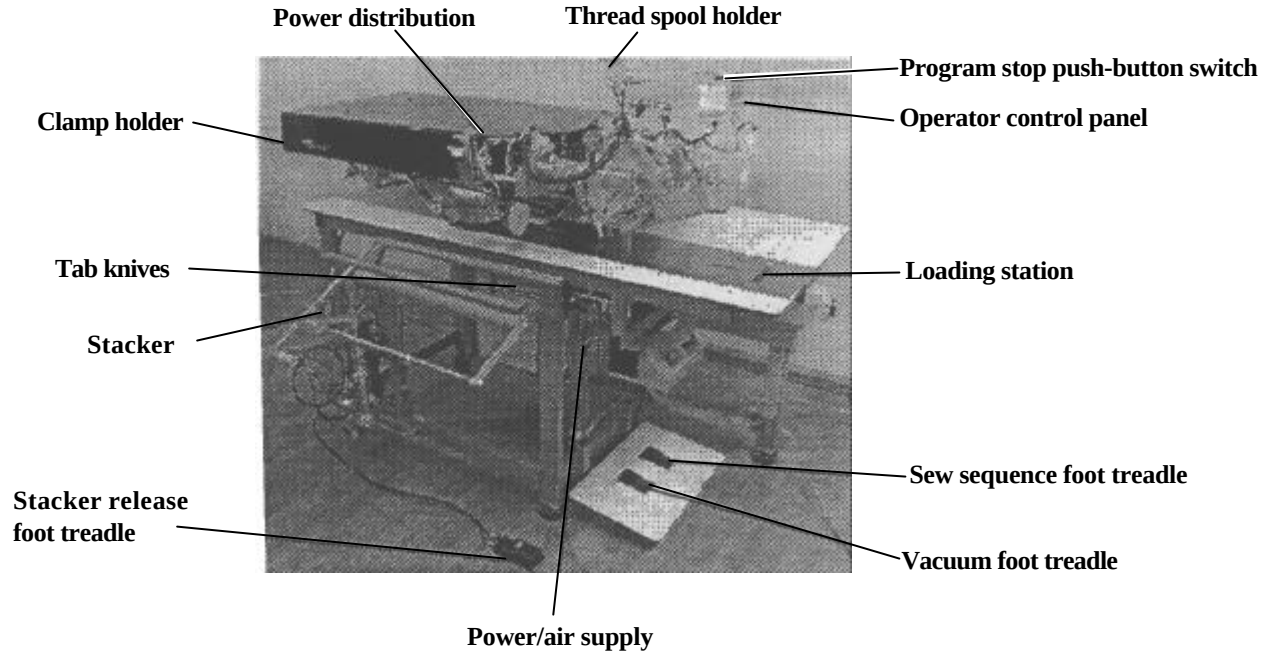
Mains/Emergency Stop Rotary Switch

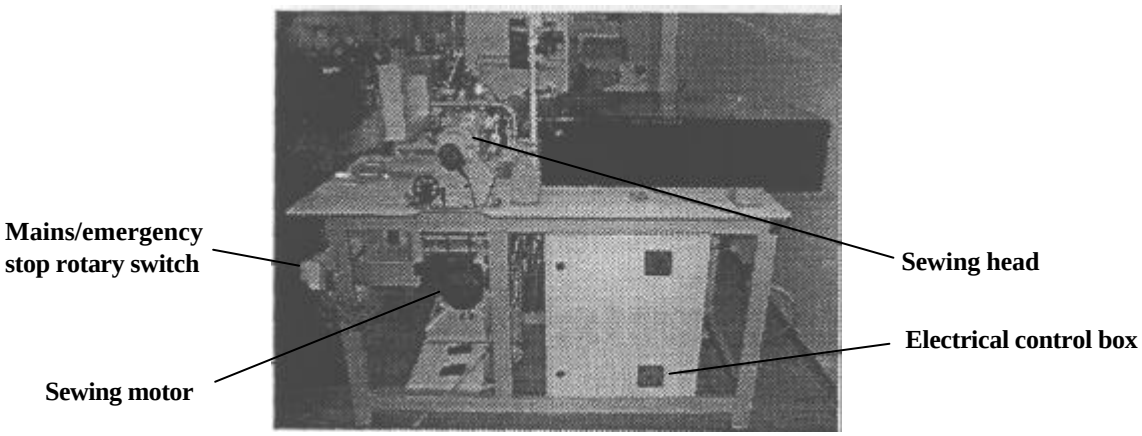
Used to switch off the main electrical power supply to the machine.

WARNING! With the mains/emergency rotary stop switch in the off position, a hole is aligned at approximately the 10 o'clock position. A lock should be inserted into the switch hole and the key should be held my the mechanic, whenever major maintenance is performed.

MACHINE IDENTIFICATION

Lockwelt 3000





Sewing Head	Operator control panel
Loading station	Clamp holder
Tab knives	Stacker
Sew sequence foot treadle	Sew motor
Power/air supply	Power distribution
Spool holder	Mains / emergency stop rotary switch
Vacuum foot treadle	Stacker release foot treadle
Program stop push-button switch	Electrical control box

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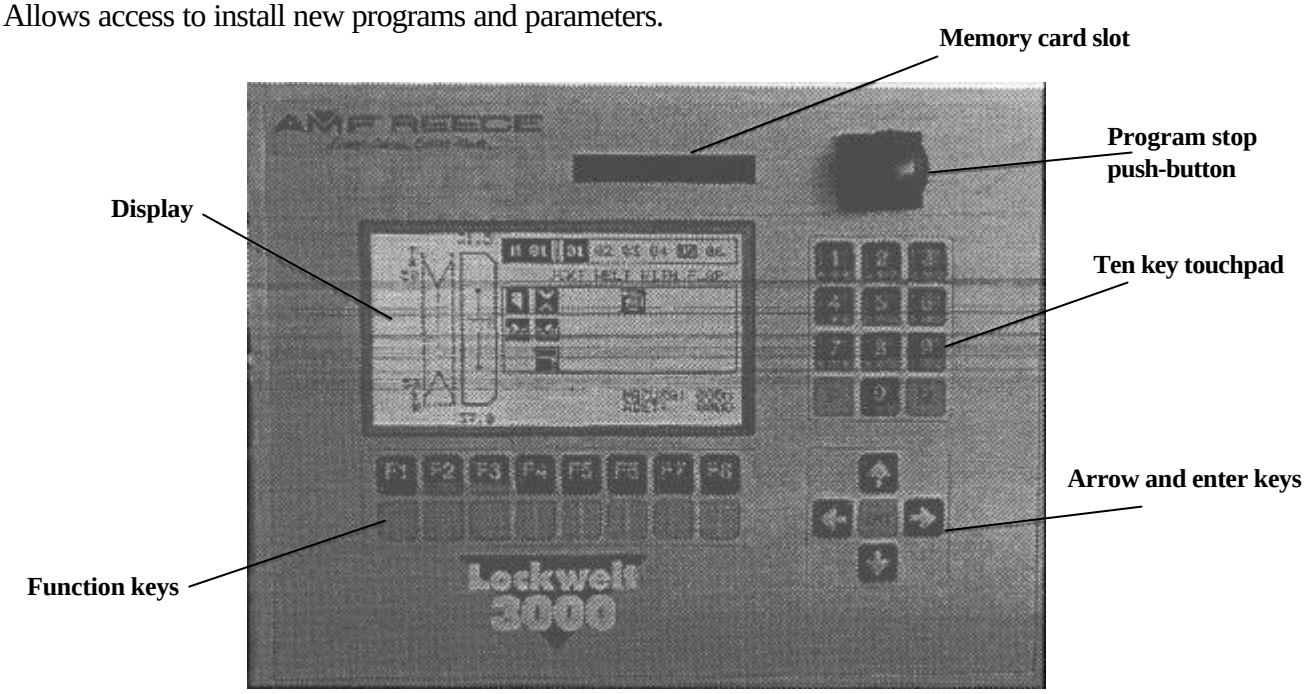
MACHINE OPERATION

Operator Control Panel

Used to select different machine functions, programs, and parameters
Allows access to install new programs and parameters.



Memory Card Slot
Program Stop Push-button
Display Ten Key Touchpad with **P** (Program) and M (Memory) Keys
Function Keys
Arrow and Enter Keys

Memory Card Slot

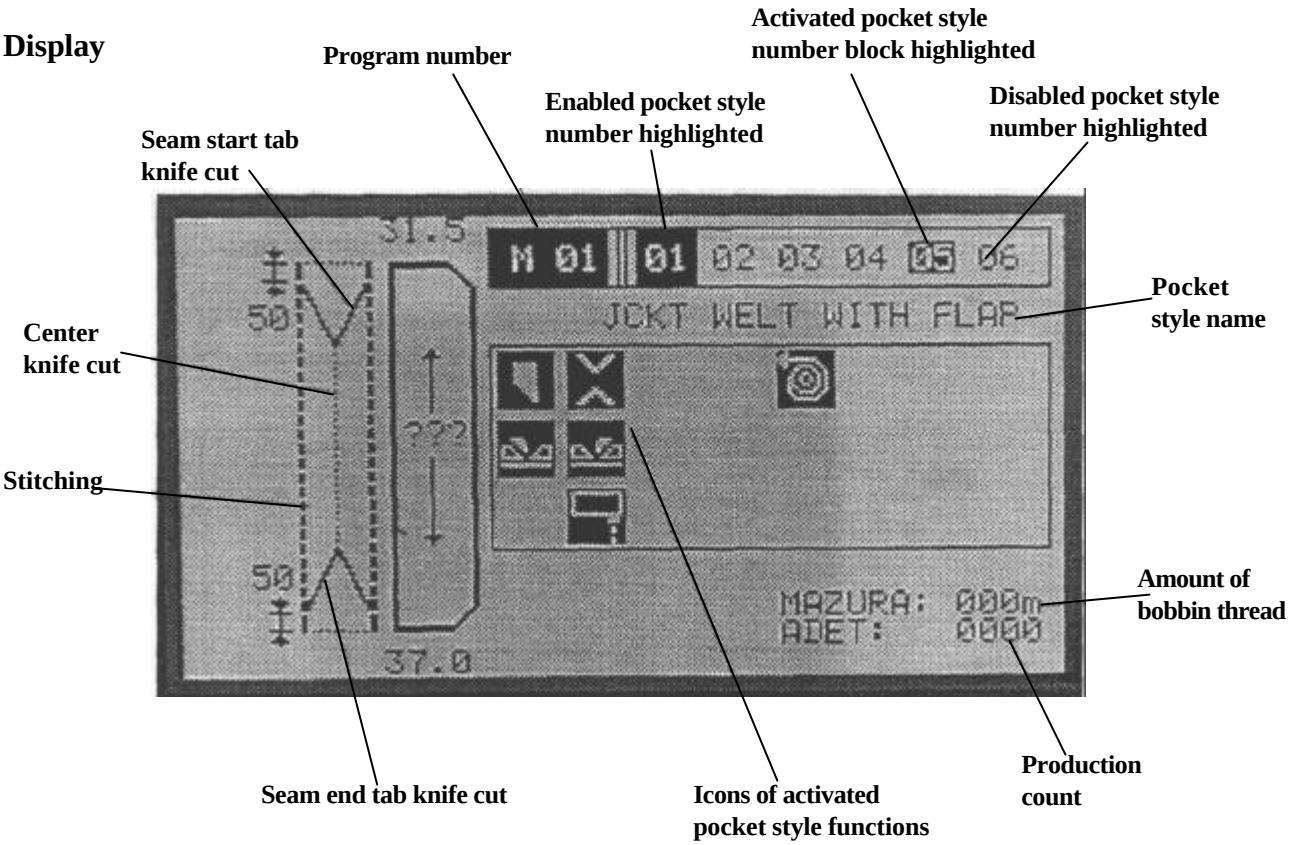
The memory card stores software and programs used in the machine. Used to load programs to the machine after a data loss.
Serial connector to access the troubleshooting web site.

Program Stop Push-button Switch

When pressed, all machine components are stopped immediately. To continue production, rotate the push-button to the right to release the push-button to reset the machine.

Operator Control Panel

Display



Indicates information needed to operate the LW 3000.
The left-hand side graphic shows the dimensions of the pocket tab knife cuts. Example shown: the tab knife cuts the basic value 50 at the seam start and 0.5 mm less at the seam end, value 45.
The right-hand graphic shows the seam length or flap length 170, of the pocket. The value above the flap, 33.0 indicates how far the flap will be positioned behind the needle, after the photocell has recognized the flap (value for the seam start), The value below the flap, 40.0 indicates how long the machine continues to sew after the photocell has recognized the end of the flap.
The top line indicates the number of the selected program (M04) and the pocket style parameters assigned to the program, (30, 31, 32, and 33). Pocket style 30 and 32 are enabled, (highlighted), pocket styles 31 and 33 are disabled, not highlighted. Pocket style 32 is being sewn, the full number block is highlighted, pocket style 30 will be the next pocket style sewn, just the number is highlighted. The assigned name of the current pocket style is indicated to the right.
The square below the name indicates the icons for the sewing functions assigned to the current pocket style being sewn and fully highlighted, 32.
Below the icon square, the amount of bobbin thread remaining, 45 meters and the production count, number of sewn pockets, 149 are listed. The production count may be reset to zero. A screen display without a flap, shows the marking lights on the left side of the pocket and the tab knife cut dimensions on the right side of the pockets.

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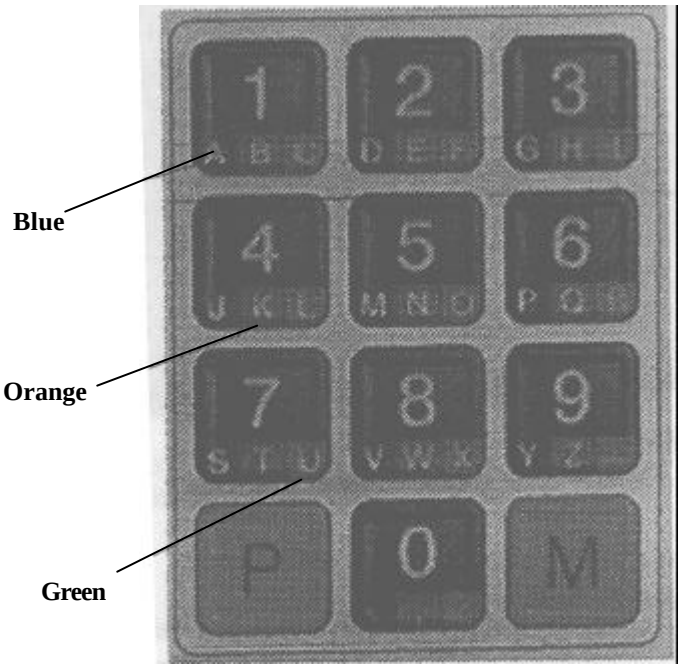
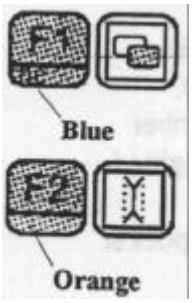
Ten Key Touchpad with P (Program) and M (Memory) Keys

Used to enter numbers, after pressing the function key (Fl, F2, or F3), with the same color as the letter key, (Bottom of touchpad keys 1 through 9), letters may be entered into the pocket style program.
The P key accesses sewing program functions and parameters to be entered or changed.
The M key accesses the sewing programs stored in the machine memory, to allow sewing different pocket seam sequences, to accommodate different types of garments being produced.



Key Functions F1 through FS (Default Mode)

Note: The line of graphic icons are not displayed in the default mode.

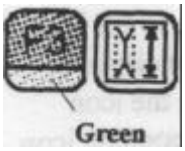


F1 Switches from the Key functions to the Icon key functions, the icons are shown on display when the Icon key functions are activated.

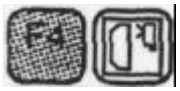
F2 Tab knives adjustment. Press the key once to change the tab knife position at the seam start, Press F2 key again and the cursor moves to the lower number on the seam end. Enter the new value with the ten key touchpad, displayed in the left-hand graphic. 50 = middle value, the higher the value the more the tab knife cuts to the outside.
Example: old value 50, new value 56, the tab knife cuts 0.6 mm more to the outside.
Example: old value 50, new value 22, the tab knife cuts 2.8 mm more to the inside.

Key Functions Fl through F8 (Default Mode)

Note: The line of graphic icons are not displayed in the default mode.

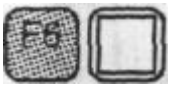


F3 Pocket length change. Press F3 and enter the new pocket length value for the pocket or flap The photocell tolerance length is automatically set. Example: pocket length is 140 mm, the maximum length allowed is 150 mm and the minimum length allowed is 130 mm. To disable the tolerance length enter 999.

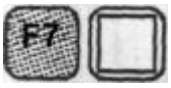


F4 Only used when sewing a flap, sewing begins before the needle reaches the edge of the flap at the seam start, press once to sew before the flap edge at the seam start and press twice to sew beyond the flap edge at the seam end. Use the ten key touchpad to enter new values. At the seam start, the smaller the value, the quicker the sewing will begin before the flap edge. At the seam end, the larger the value, the longer the seam will be sewn beyond the flap edge.

F5 If the clamps are forward, will drive the clamps to the rear position to allow manually picking the needle thread. Press once to drive the main clamp to the end position.-Press the second time and hold, to activate the thread catcher, it remains activated until the key is released.



F6 Optional, pushes the stay material forward manually, after changing the roll of material, the stay material is cut pneumatically by pressing the F6 key and is pushed into the correct operational position, if the stay material mode is enabled.



F7 Reserved

F8 Reset key, resets or reverses the program sequence step by step and sets the clamps in the correct start sewing position.

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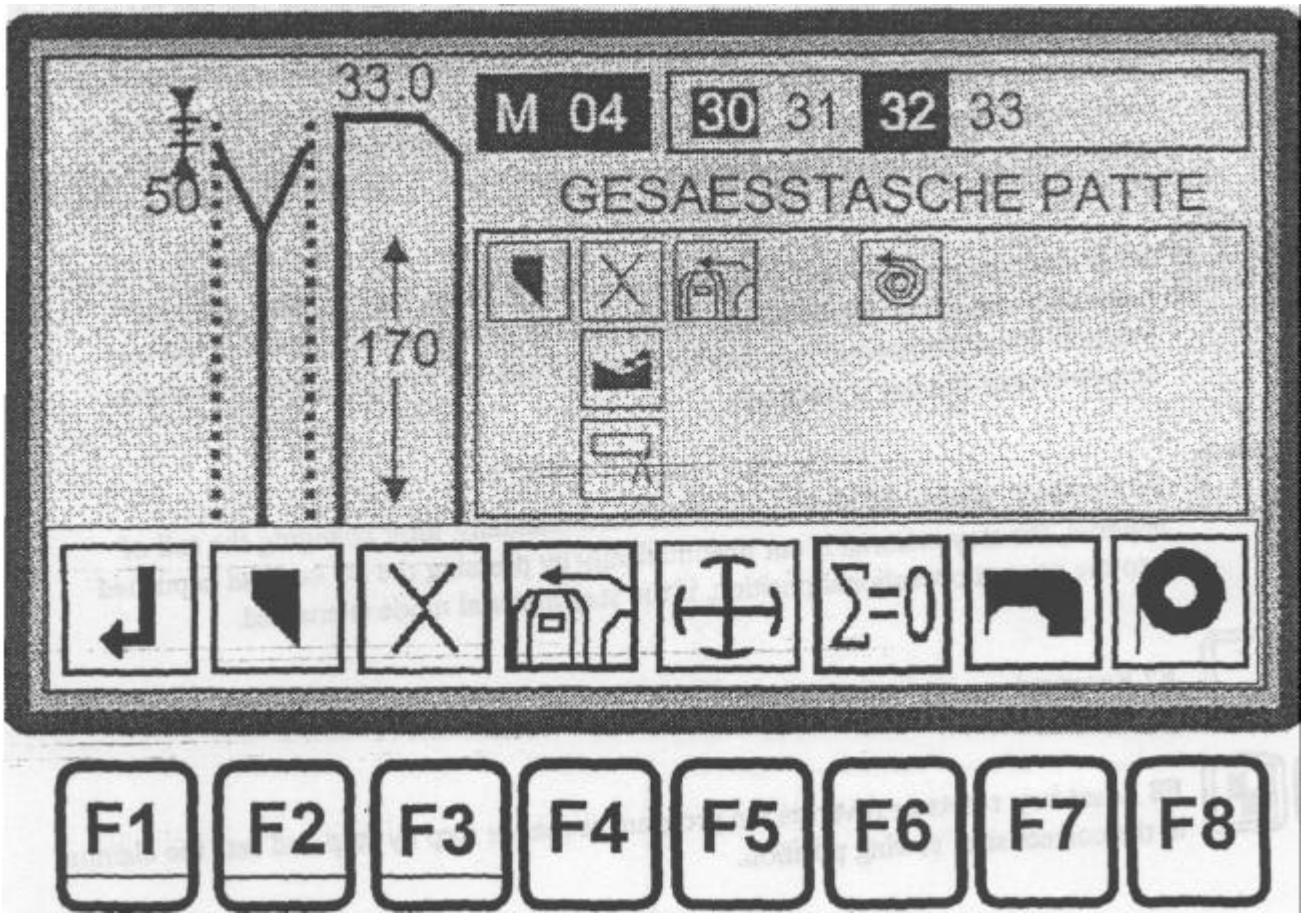
Icon Key Functions

Note: Switching the sewing function on and off will have no effect on the machine if the function was not activated using the F2 key, arrow keys, and the ENT key.

The function keys are used for two operations, Press Fl to switch from the Key functions to the Icon functions. With the Icon key functions the eight icons are displayed in the lower line of the display. After pressing the function key corresponding to the icon, the line of icons will disappear, the icon will appear in the box in the center of the screen if the function was activated. The corresponding icon in the center of the screen box will disappear if the function was deactivated. To select another function, Press Fl again to display the corresponding line of icons across the bottom of the display.



Note: Icon functions are described on the following page.

Icon Key Functions

F1 Switches back from the Icon key functions to the Key functions.

F2 Switches the center knife on and off When switched off the tab knives automatically switch off When pressed, the function icon will be added to or removed from the function display.

F3 Switches the tab knives on and off When switched off the center knife automatically switches off

F4 Switches the stacker on and off

F5 Spare, if accessed, press the ENT key to exit.

F6 Resets the production counter to zero.

F7 Manually winds the bobbin. Press once to engage the sewing head. Press the second time to stop in the upper needle position.

Note: The loading station cover plate must be pivoted to the left to remove the thread from the needles and the spools from the pickers and to wind the bobbin.

F8 When pressed after installing a full bobbin, resets the spool thread length. The maximum spool thread length is 57 meters.

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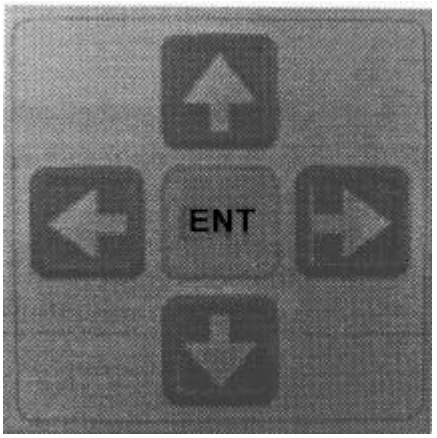
MACHINE OPERATION

Arrow and Enter Keys

Arrow keys move the highlighting cursor between the different sections of a display.
Pressing the enter key confirms and stores inputs into the program memory.



Loading Station

Pieces of the pocket assembly are stored at the loading station, lamps are used to align the pieces.

Mains/Emergency Rotary Switch

Switches off the main electrical power supply to the machine.

Right Sew Sequence Foot Treadle

Initiates the operational steps of the machine sewing sequence.

Left Vacuum Foot Treadle

Press the treadle to enable the vacuum. The pieces of the pocket assembly are located at the loading . station and held by vacuum, which is disabled automatically, after the main clamp has held the panel of the pocket assembly

.

Stacker Foot Treadle

Press the foot treadle stacker to open the stacker and access the stack of finished pocket assembly panels.

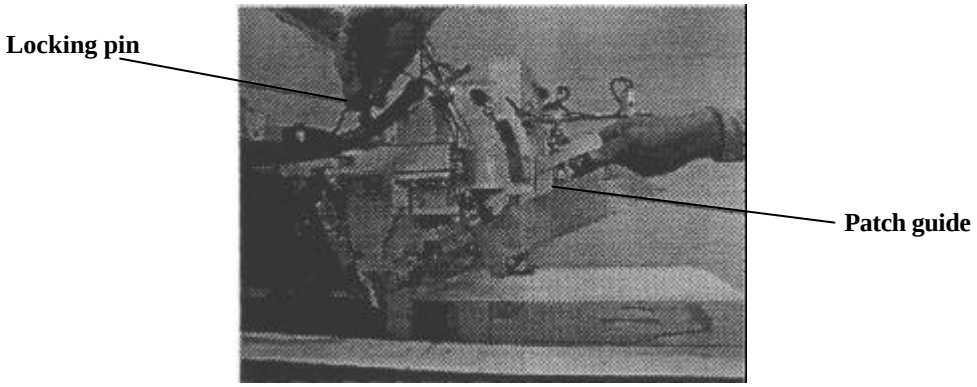
MACHINE OPERATION

Swinging the Patch Guide Away From the Sewing Head

To manually thread the machine, the patch guide must be moved away from in front of the sewing head. Pull the locking pin up and gently swing the patch guide to the left.

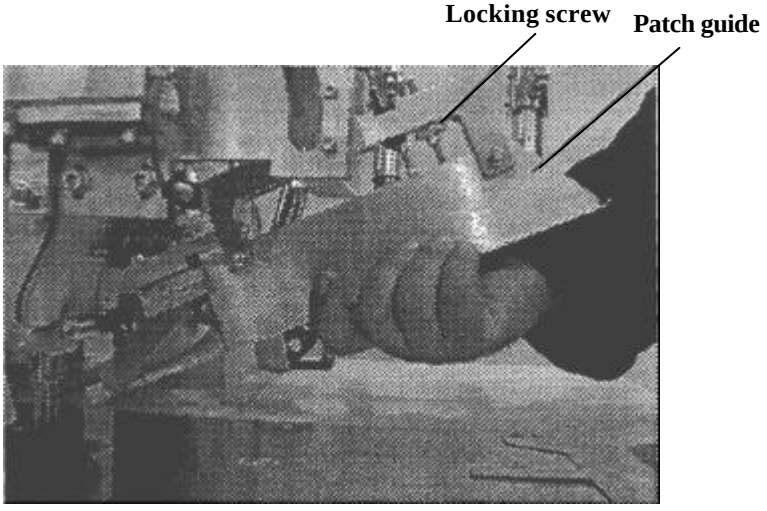
Caution! The patch guide and the lamp adjustments are sensitive, always use care when moving the patch guide.

To replace the patch guide move the patch guide slowly to the right until the locking pin inserts freely into the patch guide.



Changing the Patch Guide

Different pocket shapes, double/single piping, require different patch guides.
Loosen the locking screw on the patch guide.
Pull the patch guide forward and down to remove the patch guide from the machine.
Push in the new patch guide from the bottom into the two attachments and push the patch guide forward.
Correctly position the locking pin.



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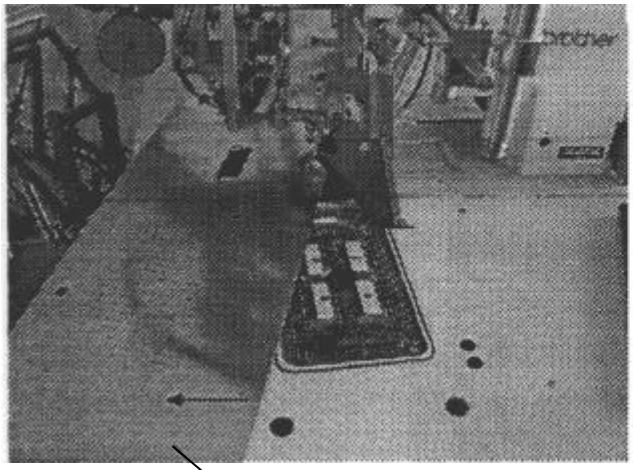
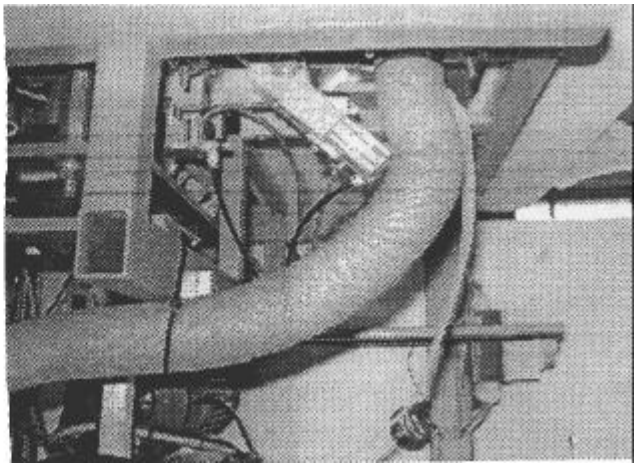
Changing the Roll of Stay Material

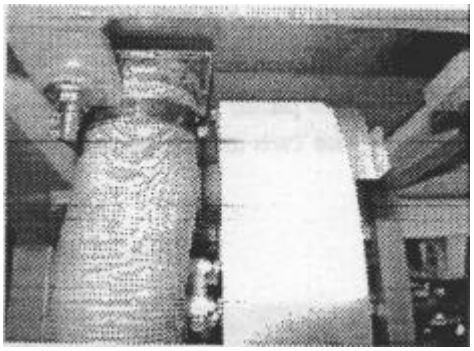
The roll of stay material is located under the working plate.
Lift the front side of the loading plate and position the plate to the left.
Remove the empty roll of stay material from the machine.
Install the new roll.





Loading plate

Install the roll of stay material over the roller and into the stay material guide.

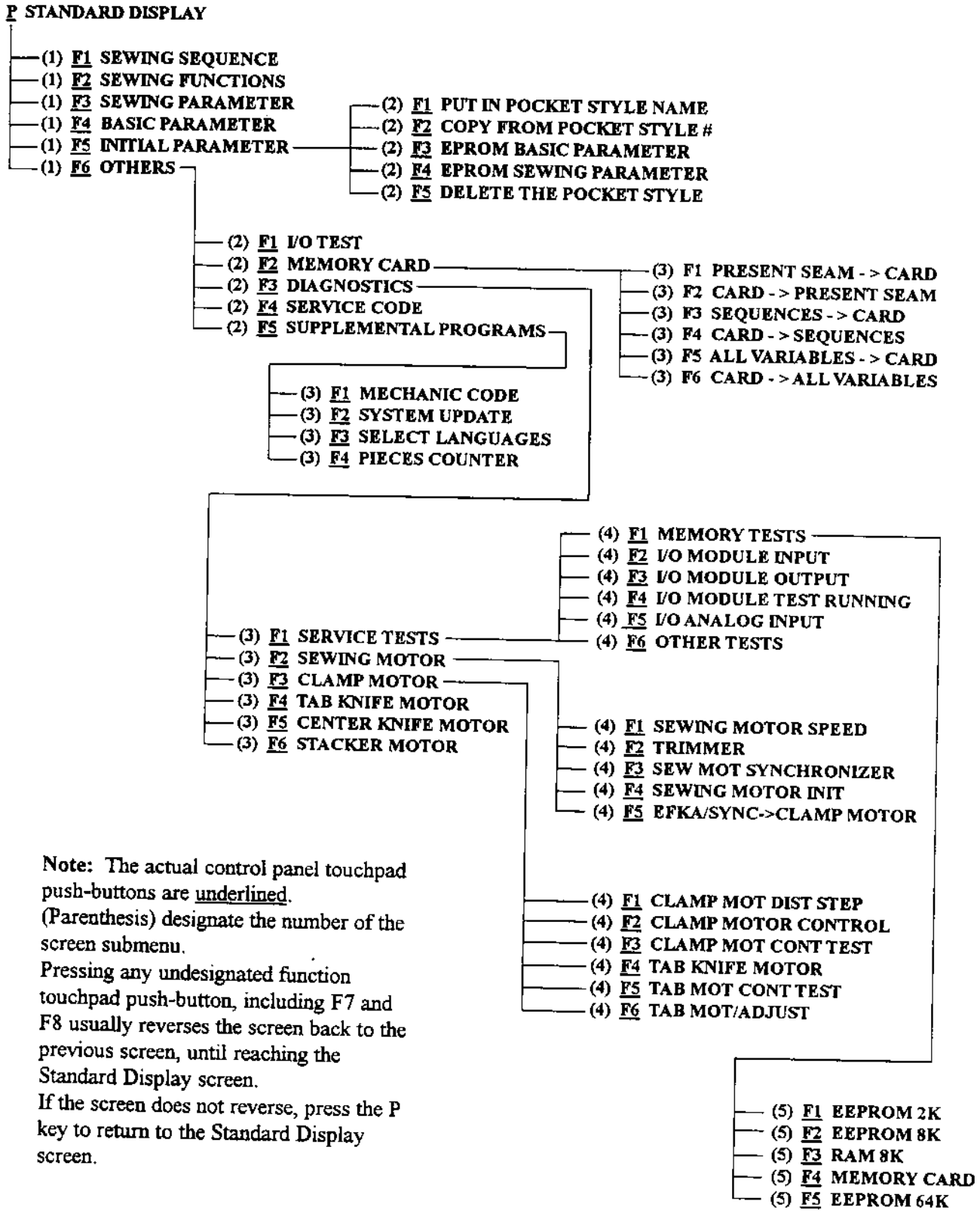


Press the F6 touchpad key repeatedly until the stay material appears above the working plate. Mount the loading plate and ensure the positioning pins, in the table top, are inserted fully into the drilled holes.

Removing Finished Panels From the Stacker

When the stacker is full, press the stacker foot treadle to open the stacker to allow the sewn material to be removed from the stacker. Release the stacker foot treadle to allow the stacker to close.

Programming Screen Menu Flowchart



Note: The actual control panel touchpad push-buttons are underlined.
(Parenthesis) designate the number of the screen submenu.
Pressing any undesignated function touchpad push-button, including F7 and F8 usually reverses the screen back to the previous screen, until reaching the Standard Display screen.
If the screen does not reverse, press the P key to return to the Standard Display screen.

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Programming Mode

Note: Error messages and machine diagnostics are listed in the Troubleshooting section.

With the Standard Display (pocket illustration) screen showing, press the P key to enter the programming mode.
Press one of the function keys to access the required parameter.

Note: The function does not need to be highlighted to be selected.

To enter or change values, use the arrow keys to select (highlight) the appropriate parameter.
Press the ENT key to activate the parameter value.
Using the number keys enter the new value.
Press the P key to store the new value to memory and return the screen to the Standard Display.

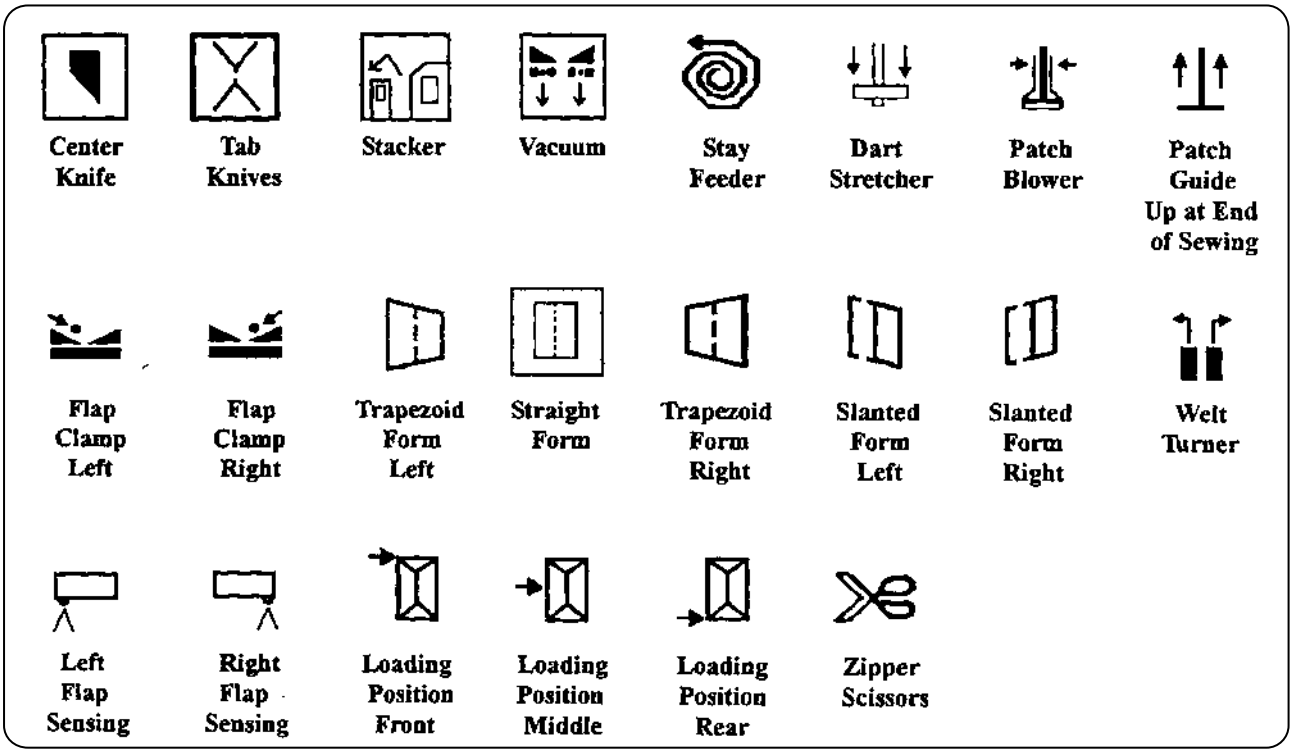
Example:
To change the value of the distance of the stitch length at the end of the seam:
Press the P key to enter the programming mode.
Press the F3 function key to access the Sewing Parameter menu.
The submenu screen shows the first 14 of 39 sewing parameters, this screen is designated with the number 0.
The 39 parameters are displayed on four submenu screens accessed by pressing the numbers 0, 1, 2, and 3.
Screen 0 displays parameters 1 through 14.
Screen 1 displays parameters 10 through 23.
Screen 2 displays parameters 20 through 33.
Screen 3 displays parameters 30 through 39.

Note: Some parameters overlap and are displayed on two screens. Submenu screens may also be changed by pressing the left and right arrow keys.

The parameter to be changed is number 12, END DENSE LENGTH, this parameter may be accessed on either screen 0 or l.
Press the number 0 to access the parameters 1 through 14.
Press the arrow keys to move the cursor to highlight the number 12 parameter.
Press the ENT key to enter a new value, just the value section of the parameter will be highlighted.
Using the number touchpad push-buttons, enter the new value, the entire parameter will now be highlighted.
Press the P key to store the new value to memory and return the screen to the Standard Display.

Note: Pressing any undesignated function touchpad push-button, including F7 and F8 usually reverses the screen back to the previous screen, until reaching the Standard Display screen. If the screen does not reverse, press the P key to return to the Standard Display screen.

Sewing Function Icons



Press the F2 function key.
Using the arrow keys, move the cursor to select the icon of the sewing function needed.
On the standard display screen, only the name of the function where the cursor is located will be indicated in the lower left-hand corner of the display.

Note: An activate icon will be highlighted. A deactivated icon will not be highlighted.

Pressing the ENT key toggles the icon located at the cursor from activated to deactivated.
A sewing function icon may be displayed in the center box on the standard display, but if the function icon has not been activated in the F2 sewing function screen, it will not be activated on the standard display screen and will not be activated when sewing the corresponding pocket style.

Note: The pocket forms are displayed with five icons, one of the forms will automatically be activated, highlighted, if the activated form icon is not an option of the machine, the pocket style will not be sewn. Under normal conditions the straight form pocket will be sewn and the straight form icon must be the one activated.

Press the P key to store the new functions to memory and return to the standard display screen.

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Standard Buttonhole Pocket Style Parameter Settings

Note: Complete pocket style parameter descriptions and operating mode options are listed on pages 1-25 through 1-32.

Clamps Return Automatic Up with Stacker and Premover On

Press the P key, to enter the programming mode
Press the F2 key, to display the sewing function icons, using the arrow keys, move the cursor to the Stacker icon and press the ENT key to highlight the icon and activate the Stacker.
Press the P key to store in memory and return to the standard display.
Press the P key, to enter the programming mode
Press the F3 key, to-list-&e Sewing- parameters
Using the arrow keys, move the cursor to parameter 23, Premover and press the ENT key to highlight the value. Using the number keys, enter the number 0.3 sec.
Move the cursor to parameter 24, Carriage Stop and press the ENT key to highlight the value, enter the number 01
Move the cursor to parameter 25, Carriage Up Rear and **press** the ENT key to highlight the value, enter the number 00
Move the cursor to parameter 35, Stacker Mode and press the ENT key to highlight the value, enter the number 03
Press the P key, to store the new parameter values to memory and return to the standard display screen.

Clamps Return Automatic with Clamps Up in Front and Stacker and Premover Off

Press the P key, to enter the programming mode
Press the F2 key, to display the sewing function icons, using the arrow keys, move the cursor to the Stacker icon and press the ENT key to highlight the icon and deactivate the Stacker.
Press the P key to store in memory and return to the standard display.
Press the P key, to enter the programming mode
Press the F3 key, to list the Sewing parameters
Using the arrow keys, move the cursor to parameter 23, Premover and press the ENT key to highlight the value. Using the number keys, enter the number 0.0 sec.
Move the cursor to parameter 24, Carriage Stop and press the ENT key to highlight the value, enter the number 01
Move the cursor to parameter 25, Carriage Up Front and press the ENT key to highlight the value, enter the number 01
Move the cursor to parameter 35, Stacker Mode and press the ENT key to highlight the value, enter the number 01
Move the cursor to parameter 36, Carriage Return Photocell and press the ENT key to highlight the value, enter the number 00
Press the P key, to store the new parameter values to memory and return to the standard display screen.

Creating New Sewing Programs

Note: A pocket form will be automatically activated for each pocket style, ensure the activated pocket form, trapeze, parallel, slanted, etc. is one the machine is capable of sewing or the pocket style will not be recognized by the computer program and the sewing will not begin.

Select memory location 

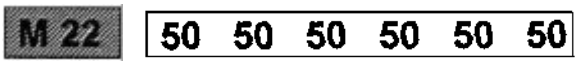
Pocket styles may be added in two ways: Copy an existing pocket style. Create a new pocket style.

Selecting a Memory Location for a New Sewing Program

Press the yellow M key. 

Enter the number of the new pocket style program memory location, example (22). 

If the empty memory location is available, pocket style number 50 will be assigned to all six available pocket style locations.



Adding a New Pocket Style

If existing pocket styles are used in the new program, copy them from the memory. To create a new pocket style, first assign a new number to the new pocket style, check all program pocket style numbers to ensure the new number is not used in another program. Example: change the number 50 which designates an empty pocket style, to pocket style number 45.

After selecting the memory location as described above: example M22.

Press the yellow P key. 

Ensure the screen displayed is the (1) screen, if not press the F8 key to reverse the screens back to the number (1) screen. Press the Fl function key, (1) Sewing Sequence.
Using the left and right arrow keys, move the cursor to the pocket style sequence number position, the new pocket style is to be inserted
Example insert the new pocket style into the second sewing sequence number position.

Press the yellow ENT key. 

The pocket style number will reset to 00. Using the number keys insert the number assigned to the new pocket style, example 45.

Press the yellow P key to exit and store the number to the new pocket style. 

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Copying Pocket Styles

If existing pocket styles are going to be used in the new program, copy the existing pocket styles to the new pocket style number.
After selecting the memory location as described above: example M22.
Using the left and right arrow keys, move the cursor to the pocket style sequence number position 45, where the copy of the pocket style is to be placed.

Press the yellow P key. 

Ensure the screen displayed is the (1) screen, if not press the P8 key to reverse the screens back to the number (1) screen. Press the FS function key, (1) Initial Parameter.
After the screen changes to the (2) screen, press the F2 function key, (2) Copy from Pocket Style #.
Using the number keys, enter the number of the pocket style to be copied, example 10, OK Please Wait, will be displayed until the program has been copied.
Pocket style number 10 parameters have been copied to pocket style number 45. Pocket style number 10 and 45 are the same. If more pocket styles are needed, assign more pocket style numbers to the program, example 46, 47, 48 and copy existing pocket styles to these numbers.

Changing Pocket Styles

The pocket styles copied to the pocket style number 45 may be changed without changing the original pocket styles used in other programs.
The following parameters may be changed:
tab knife positions and pocket style length
pocket style functions
pocket style parameters
pocket style name.

Pocket Style Names

To distinguish different pocket styles, assign names to the pocket styles.

POCKET STYLE 42 RIGHT FLAP

Press the yellow **P** key to open the menu levels. P

Ensure the screen displayed is the (1) screen, if not press the F8 key to reverse the screens back to the number (1) screen. Press the F5 function key, (1) Initial Parameter.
After the screen changes to the (2) screen, press the Fl function key, (2) Put In Pocket Style Name and the screen will display NEW SEAM NAME >> and a cursor. Move the cursor to the first space in the line and enter the pocket style name.
The keys on the ten key touchpad contain letters along the bottom of the key. Each letter is shown on the key with a color, blue, orange, or green. Press one of the keys F 1, F2, or F3 together with a number key to enter the correct letter.
Examples: The letter A = F 1 function key + 1 number key.
The letter N = F2 function key + 5 number key.
Press only a number key to enter a number.
A blank space and some punctuation are included on the bottom of keys 9 and 10.
Press the arrow keys to switch to a different letter.

Press the yellow P key to stop entering and save the pocket style name.

Deleting a Pocket Style

Press the yellow P key. P

Ensure the screen displayed is the (1) screen, if not press the F8 key to reverse the screens back to the number (1) screen. Press the FS function key, (1) Initial Parameter.
After the screen changes to the (2) screen, press the FS function key, (2) Delete the Pocket Style and the screen will display the number 00.
Using the number keys, enter the number of the pocket style to be deleted, the question ARE YOU SURE? (THEN PRESS ENT) will appear on the display. If not sure, Press the P key to exit.

Press the ENT key to delete the pocket style ENT and return the screen to the Standard Display.

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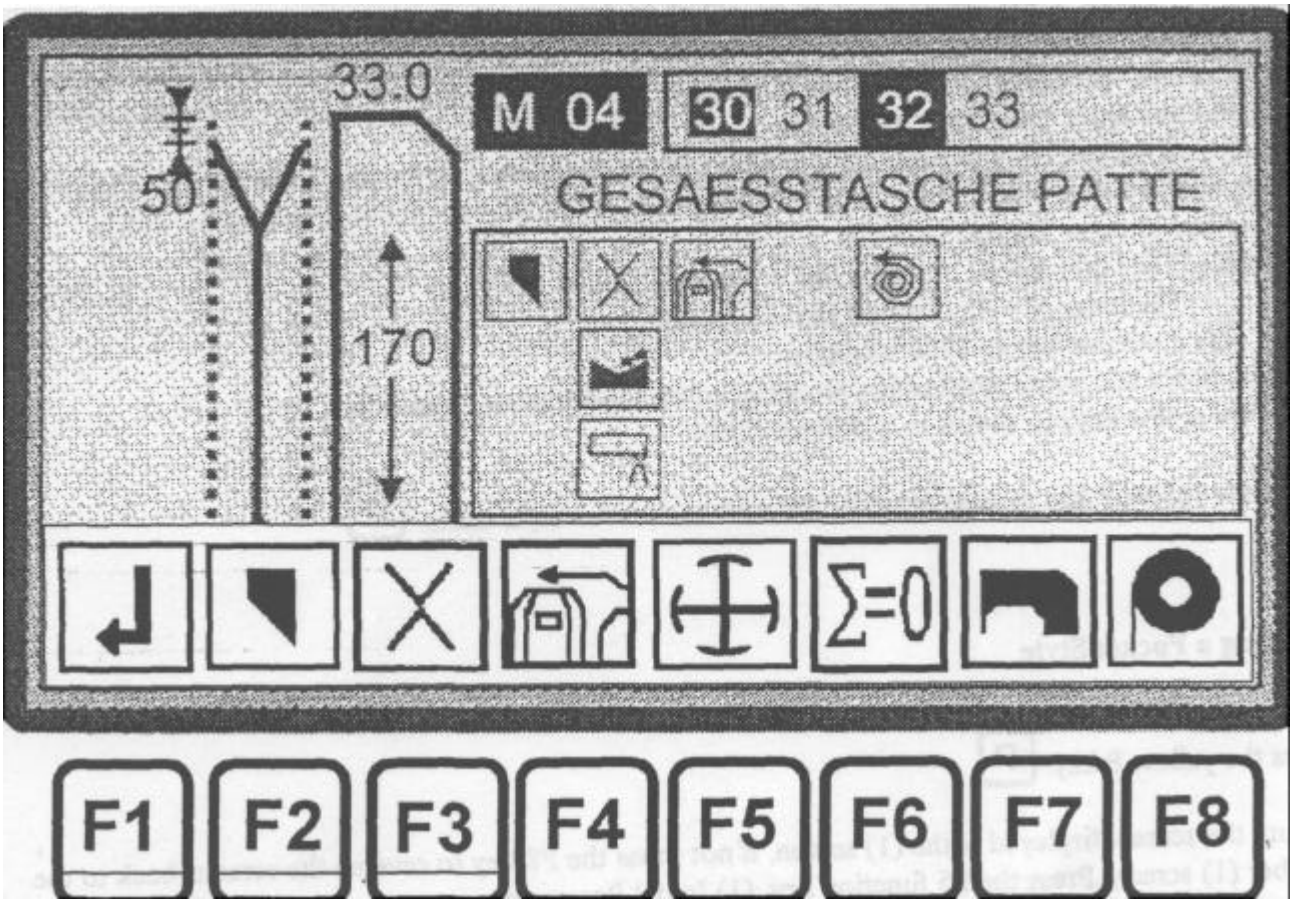
Activating and Deactivating Pocket Style Functions

Several machine functions may be activated or deactivated for a single pocket style.
Using the left and right arrow keys, select (highlight) the pocket style number to change the condition of a function, example: illustrated below, pocket style 32 is activated (highlighted), the six function icons inside the box are assigned to pocket style 32.
Press the Fl key to display the function icons across the bottom of the screen and above the function keys, Fl through F8.
Press the function key, F2 through F8 located directly below the function icon you want to change. The screen changes to the Standard Display, activated functions are shown highlighted in the box located in the center of the display, deactivated function icons are not displayed.



Sewing Function Icon Descriptions

Center Knife cuts the pocket between the seams, if the center knife is deactivated, the tab knives are automatically deactivated.

Tab Knives cut the pocket edges, if the center knife is deactivated, the tab knives are deactivated.

Sewing Function Icon Descriptions

Stacker (Optional) automatically stacks the sewn panels.

Vacuum (Optional) holds panels in the loading station until the main clamp closes.

Stay Feeder (Optional) automatic supply.

Dart Stretcher (Optional) locates the panels in the loading station.

Patch Blower (Optional) moves the piping to the folder to prevent binding during the loading of thin fabrics.

Patch Guide Up at End of Sewing (Optional) increases production by allowing the new panel to be loaded quicker.

Flap Clamp Left used when pocket bag, facing strip, etc. are added to the piping.

Flap Clamp Right used when pocket bag, facing strip, etc. are added to the piping.

Trapezoid Form Left Jacket (Optional) used to produce a breast welt, the left seam is longer than the right seam.

Straight Form the two needles sew parallel.

Trapezoid Form Right Trousers (Optional) the left needle is shorter than the right needle.

Slanted Form Left Pocket (Optional) the left seam is offset to the right seam.

Slanted Form Right Pocket (Optional) the left seam is offset to the right seam, mirrored to the right slant.

Welt Turner (Optional) turns the piping overlap.

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Sewing Function Icon Descriptions

Left Flap Sewing used for sewing the left flap,

Right Flap Sewing (Optional) used for sewing the right flap

Loading Position Front seam start position for sewing without a flap.

Loading Position Middle seam start position for sewing without a flap.

Loading Position Rear seam start position for sewing without a flap.

Zipper Scissors (Optional) used for sewing an endless zipper, issues a stop command to the machine to allow the cutting of the zipper.

Sewing Parameters (Mechanical Movement and Speed Control)

Several pocket style parameters may be used depending upon the machine process.
Press the yellow P key.
Press the F3 function key.
Using the up and down arrow keys select (highlight) pocket style parameter to be changed.
Press the ENT key.
Enter the correct value needed.
Repeat the four previous steps for each parameter needed
Press the yellow P key to exit the submenu and save the new values.

Note: When selecting the parameters, scroll line by line with the arrow keys or select the pages directly by pressing:
Number touchpad push-button 0 for pocket style parameters 01-14,
Number touchpad push-button 1 for pocket style parameters 10-23,
Number touchpad push-button 2 for pocket style parameters 20-33,
Number touchpad push-button 3 for pocket style parameters 30-40

The pocket style parameters listed may be changed. The manufacturer (default) settings are contained in brackets [ ], the range of possible values are in parenthesis ( ).

01 **Loading Reference Point** 315 mm, (End lamp)
the set value defines the relation point of the pocket style.
the distances from the needle to the start sewing position.

Sewing Parameters (Mechanical Movement and Speed Control)

02 **Carriage Speed to Start Sew Position** [60%] (10 - 90%)
clamp speed from the loading position to the sew start position, when the photocell is active, speed is halved to allow a more accurate scan, when sewing with interfacing, the speed is reduced to 1/3.

03 **Sew Speed Start** [1500 rpm] (500-3000 rpm)
revolutions of the sewing head dependent upon the needle and center knife settings.

04 **Sew Speed Center** [2500 rpm] (500-3000 rpm)
variable

05 **Sew Speed End** [1500 rpm] (500-2000 rpm)
variable

06 **Sew Speed Start Length** [5 mm] (0-99 mm)
distance with the revolutions of parameter 3

07 **Sew Speed End Length** [5 mm] (0-99 mm)
distance with the revolutions of parameter 5

08 **Stitch Length Start Dense** [1.5 mm] (0.5-3.0 mm)
stitch length at the seam start for tack or dense stitching

09 **Stitch Length Center Dense** [2.4 mm] (0.5-3.5 mm)
stitch length at the center of the seam

10 **Stitch Length End Dense** [1.5 mm] (0.5-3.0 mm)
variable, effects on the tack and dense stitching at the seam end

11 **Start Dense Length** [10 mm] (0.5-99 mm)
distance with the stitch length of parameter 8

12 **End Dense Length** [10 mm] (0.5-99 mm)
distance with the stitch length of parameter 10

13 **Back Tack Length at Start** [10 mm] (0-20 mm)
If the value is 0, dense stitching will be sewn automatically

14 **Back Tack Length at End** [10 mm] (0-20 mm)
If the value is 0, dense stitching will be sewn automatically

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Sewing Parameters (Mechanical Movement and Speed Control)

15 **Slanted Pocket Start** [3 mm] (0 - 10 mm) (Not applicable)
seam offset distance between the left and right needle at the seam start.

16 **Slanted Pocket End** [3 mm] (0 - 10 mm) (Not applicable)
seam offset distance between the left and right needle at the seam end.

17 **Center Knife Engage** [17 mm] (17 - 22 mm)
depending on seam and knife width, the center knife should cut 1 mm fur ther than the tab knives.

18 **Center Knife Disengage** [0 mm] (0 - 30 mm)
depending on seam and knife width, the center knife should cut mm fur ther than the tab knives.

19 **Thread Break Monitor On After** [30 mm] (0 - 99 mm)
distance after the thread monitor is enabled, change the parameter if the seam length is greater than 30 mm.

20 **Thread Monitor Sensitivity** [07 %] (00 - 99 %)
the smaller the number, the more sensitive the upper thread monitor, 99 disables the thread monitor.

21 **Stay Material Length Pocket Start** [60 to 85 mm] (0 - 99 mm)
stay material overlay at the seam start.

22 **Stay Material Length Pocket End** [80 mm] (0 - 99 mm)
stay material overlay at the seam end.

23 **Premover Roller On Time** [0.5 Sec.] (0 - 99 Sec.)
exact positioning of the work piece to be stacked.

24 **Intermediate Carriage Stop Position** [0 cm] (0 - 48 mm)
enter a position where the main clamp will be stopped after stacking.
01 cm = main clamp is positioned at the loading station.

25 **Clamp Up Position** [0 cm] (0 - 48 mm)
00 Clamp raises the rear.
01 Clamp raises the front.
if a value is defined, the main clamp pressure is automatically released after the tab knives cut and the work piece is positioned at the loading station.

Sewing Parameters (Mechanical Movement and Speed Control)

26 **Center Knife Motor Speed**[40%] (10 - 99%)
cutting speed.

27 **Premover Roller Speed** [99%] (10 - 99%)
a reduction achieves the best stacking position.

28 **O-Point, Com. KN. SS.** 00% (Not applicable)

29 **O-Point, Com. KN. SE.** 00% (Not applicable)

30 **Flap Clamp Mode**
00 both clamps are locked in the down position.
04 Both clamps are in the up position.

Sewing Parameter 30, Flap Clamp Mode

Switches the left and right flap clamps on and off and engages one of eight modes to perform different clamp functions.

The left and right flap clamps are activated. 

00 loading position 

01 same as 00

02 same as 00

03 same as 00

04 loading position is automatic with the folding slide. 

05 same as 04

06 same as 04

07 same as 04

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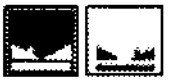
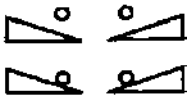
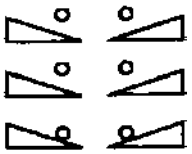
Sewing Parameter 30, Flap Clamp Mode

Switches the left and right flap clamps on and off and engages one of eight modes to perform different clamp functions.

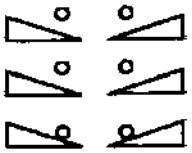
The left flap clamp is activated and the right flap clamp is deactivated. 

00 loading position with foot treadle pressure. 

01 same as 00

02 loading position is automatic with the folding slide with foot treadle pressure. 

03 same as 02

04 loading position is automatic with the folding slide with foot treadle pressure. 

05 same as 04

06 same as 04

07 same as 04

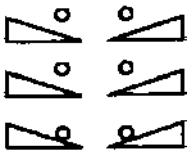
Sewing Parameter 30, Flap Clamp Mode

Switches the left and right flap clamps on and off and engages one of eight modes to perform different clamp functions.

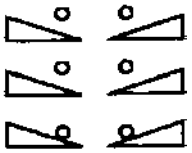
The left flap clamp is deactivated and the right flap clamp is activated. 

00 loading position with foot treadle pressure. 

01 same as 00

02 loading position is automatic with the folding slide with foot treadle pressure 

03 same as 02

04 loading position is automatic with the folding slide with foot treadle pressure. 

05 same as 04

06 same as 04

07 same as 04

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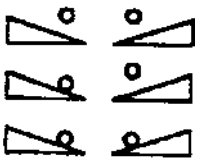
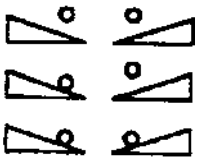
Sewing Parameter 30, Flap Clamp Mode

Switches the left and right flap clamps on and off and engages one of eight modes to perform different clamp functions.

The left flap clamp and the right flap clamp are both activated. 

00 loading position with foot treadle pressure, with 2nd foot treadle pressure. 

01 loading position with foot treadle pressure. 

02 loading position is automatic with the folding slide with foot treadle pressure. 

03 same as 02

04 same as 00

05 same as 01

06 loading position with foot treadle pressure. 

07 same as 06

31 Brush Blade Mode (Brush Blade)

00 the left and right brush blades are activated. (True single welt)
01 the right brush blade is activated.
02 the left brush blade is activated.

32 Vacuum Mode (Optional)

00 the vacuum is deactivated.
01 the vacuum is activated with the left foot treadle vacuum (with the dis play activated vacuum, if not activated with the foot treadle).
02 the vacuum is activated automatically if the clamp is located at the loading position.
03 the vacuum is activated with the right foot treadle advance.

Sewing Parameters (Mechanical Movement and Speed Control)

33 Clamp Mode (Two stage clamping) pressure is adjustable, gauge and regulator
00 the left and right clamps are down and tight.
01 the left clamp is down and tight.
02 the right clamp is down and tight.
03 the left and right clamps are loose, before loading both are tight.

34 Piping Cut Mode (Not applicable)

35 Stacker Mode
01 the stacker premover roller only.
02 the folding stacker only.
03 the folding stacker and the stacker premover roller.

36 Clamp Carriage Return Safety Photocell
00 the premover photocell is activated by the work piece.
01 the premover photocell is deactivated.

37 Dart Stretcher (Optional)
00 the normal loading process is activated.
01 with the first step on the foot treadle, the dart stretcher lowers and holds the work piece, the next step moves the main clamp to the loading position, the next step the clamps close, only for trouser production.

38 Flap Clamp Automatic (Not applicable)
00 the flap clamp is activated with the foot treadle.
01 the flap clamp is automatically activated.

39 **Breast Welt With Tab and Center Cuts** (Light pressure lowers clamp, press treadle for tight pressure)
Aligning plaid patterns on breast welt only.
The breast welt will pivot with the flap station.
00 the folder is down when the left flap clamp closes.
01 the folder is down after the flap clamp closes. (Normal)

Deactivating the Automatic Clamp Return Restriction Parameter 36

Pocket style parameter 24 INTERMEDIATE CARRIAGE STOP POSITION allows positioning the clamp after stacking.
Pocket style parameter 24 = 0 cm.
Causes the clamp to wait on the tab knife position, until the foot treadle process is pressed.

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Activating the Automatic Clamp Return Restriction Parameter 36

Pocket style parameter 24 INTERMEDIATE CARRIAGE STOP POSITION.
Pocket style parameter 24 = 01 cm.
Causes the clamp to move to the loading position after stacking. Pressing the foot treadle closes the clamp.

The Clamp Intermediate Stop Position is Activated

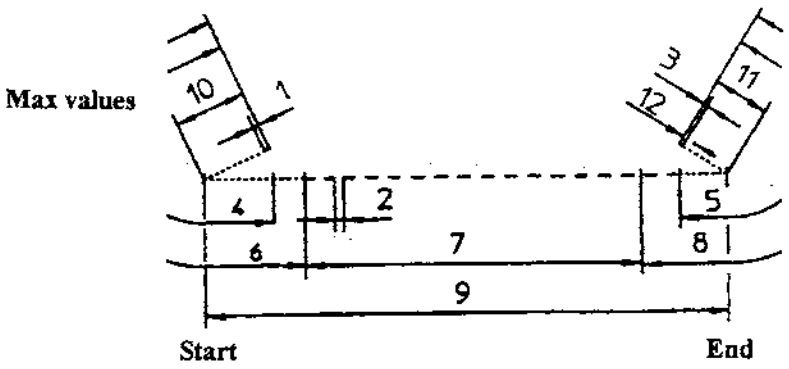
Pocket style parameter 24 = 20 cm.
Causes the clamp to move to 20 cm before the loading position after stacking. Press the foot treadle to move the clamp to the loading position. If a different intermediate position of the main clamp is needed, change the SP 24. The higher the value, the greater the distance between the intermediate and loading positions.

Clamp Up Position is Activated

Pocket style parameter 25 = CLAMP UP POSITION.
Pocket style parameter 25 = 00 cm.
C1amp Up position is deactivated.
Pocket style parameter 25 = 01 cm.
Clamp Up Position delays until the loading position is reached.
The clamps will lift after the tab cuts and Sp 23 (duration of the premover roller) is performed. The premover roller pulls the work piece slightly out from the open clamp. The clamp lowers after the time of the basic parameter 28 and moves with the work piece to the loading position.
Pocket style parameter 25 = 01 cm.
When defining SP -23 (duration of the premover roller) = 00 and NSP 23 = 00 sec., the premover roller will not activate and the clamps remain closed and move without clamping pressure to the loading position.

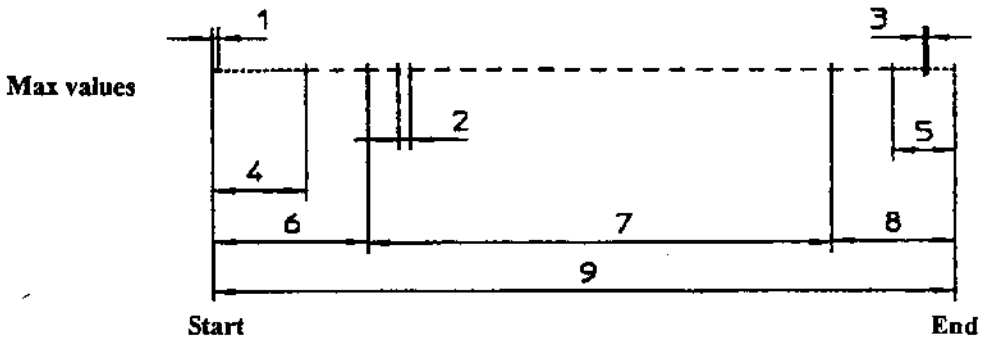
Pocket Style Sewing Parameter Illustrations

Sewing with Back Tack Length

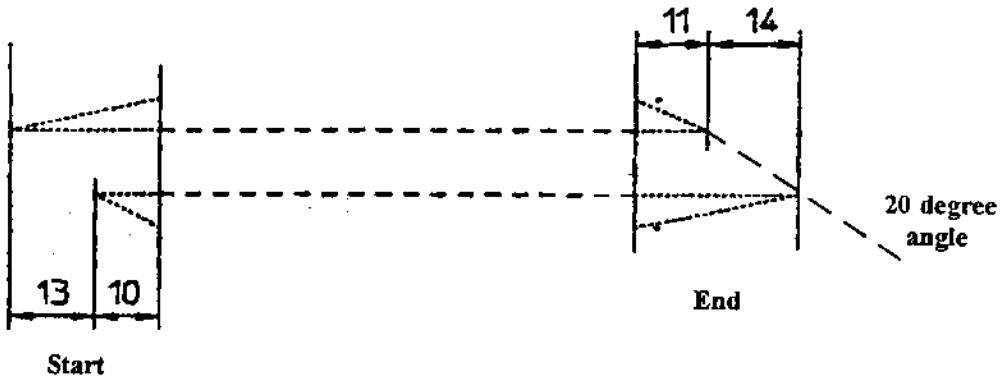


Pocket Style Sewing Parameter Illustrations

Sewing with Dense Stitching Without Back Track



Slanted Pocket Sewing with Split Needle Bar



Values indicated are maximum sewing parameters.

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Basic Parameters

The basic parameters contain the general machine settings.
Changing a basic parameter affects all of the pocket styles contained in the program.
Changing a sewing parameter affects only the one pocket style and has no effect on the other pocket styles contained in the program.

Caution! The manufacturer programs the basic parameters. Improper changes to the program may result in poor sewing performance and possible machine damage.

Changing the Basic Parameters (Time Control for Solenoid Valves to Stay Open or Closed)

Note: Page 1-17 describes changing parameters as -an example of how to use the flowchart on page 1-16.as an aid.

Press the yellow P key.
Press the F4 function key.
Using the up and down arrow keys select the parameter to be changed.
Press the ENT key.
Enter the new value.
Repeat the previous steps for all parameter changes.
Press the P key to exit the submenu and save the new values.

Note: During parameter selection, using the left and right arrow keys or the number touchpad push-buttons 0, 1, 2, and 3 allows selecting the pages directly.

Number touchpad push-button 0 assesses basic parameters 01-14
Number touchpad push-button 1 assesses basic parameters 10-23
Number touchpad push-button 2 assesses basic parameters 20-33
Number touchpad push-button 3 assesses basic parameters 30-40

The Following Basic Parameters May be Changed [Parameters Set by the Manufacturer are in Brackets]

01 Loading Position Front [135 mm] = distance from the needle to the front marking lamp position and the seam start, a pocket style length change only varies the seam end.

02 Loading Position Middle [225 mm] = Used for back pockets with a dart, if the dart is positioned in the middle of the pocket, distance from the needle to the middle marking lamp. A pocket style length change is calculated to delay the seam start and the seam end the same amount.

PROGRAMMING

The Following Basic Parameters May be Changed (Time Control for Solenoid Valves to Stay Open or Closed) [Parameters Set by the Manufacturer are in Brackets]

03 **Loading Position Rear** [315 mm] = distance between the loading position and the seam end, a seam length change only varies the seam start, distance from the needle to the end marking lamp.

Main Clamp Length	165 mm	set value	205 mm
	245 mm		285 mm
	290 mm		330 mm

Note: This parameter determines the end of the main clamp, if the parameter is too large, sewing problems may occur, if the parameter is too small, an error message will be displayed.

04 **Patch Guide Up After Sew** [335 mm] = Length of travel the patch guide lifts after sewing, if too short, raises too soon and the patch guide interferes with the brush blades.

05 **Full Bobbin Thread Length** [57 m] = Incorrect thread length causes incorrect displayed values.

06 **Clamp Up After Tab Cut** [0.6 sec.] = Clamps up after tab knife cut.

07 **Reserved** (Not applicable)

08 **Clamp Automatic Down** [0.0 sec.] deactivated = Determines the amount of time the main clamps close after reaching the loading position.

09 **Time After Clamp Down** [0.3 sec.] deactivated = Amount of time between clamp down and the next operation after pressing the foot treadle.

16 **Carriage Return** [0.3 sec.] = After pressing the right foot treadle the clamps move forward.

17 **Flap Blow Off** [0.5 mm] (Not applicable) = Blows the piping and the flap towards the brush blade to prevent a tilt movement of the piping, if the time is too long, the thread will be blown toward the needle.

18 **Thread Pickup Release** [0.24 sec.] = After the first two stitches, the upper threads release from the thread clamp after the amount of time programmed, the thread clamp opens. 00 = Releases right away.

19 **Thread Clamp Duration** [0.6 sec.] = Length of time the thread clamp stays down at the seam start.

20 **Point Stitches During Sewing** (Not applicable) = Allows one or several stitches at the seam start and end to meet exactly at the end point.

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PROGRAMMING

The Following Basic Parameters May be Changed (Time Control for Solenoid Valves to Stay Open or Closed) [Parameters Set by the Manufacturer are in Brackets]

21 **Needle Thread Trim Position** [0.12 sec.] = Time for catching and cutting the needle thread. The higher the number, the longer the finishing thread.

Caution! Time too short may damage the picker or the clamps, do not set less than 0.12 sec.

22 **Duration Needle Thread Trim Knife** [0.12 sec.] = Thread length after the upper threads are picked up at the end of the pocket being sewn.

23 **Scissors Cut Time** [0.05 sec.] (Not applicable) = Causes the zipper scissor to cut the zipper completely before moving to the end position.

24 **Carriage Speed to Tab Cut** [40 %] = The percentage of the carriage speed to the tab knives.

25 **Tab Knife Start** [46 mm] = Position of the start (movable) tab knife.

26 **Tab Knife Cutting Time** [0.03 sec.] = Cutting Time of the Tab knives. Small number fast, large number slow. How long the tab knife air cylinder stays activated.

27 **Clamps Up** [0.03 sec.] = After the tab cuts, sets the amount of time the clamps lift and the stacker starts, if time is too short, a long work piece may slip out.

28 **Pick Up Work Piece** [0.03 sec.] = After the tab cuts, sets the amount of time the clamps lift and the stacker and premover roller- start, if time is too short, a long work piece may slip out.

29 **Premover Roller Rotating** [0.3 sec.] = Time to start the premover roller rotating.

30 **Premover Up Delay** [0.5 sec.] = Holding the work piece after rotating until the-stacker removes the work piece.

31 **Carriage Speed** [90%] = The speed the carriage moves to the rear position.

32 **Sequence In Step** [00] = enter > 01 to activate by pressing the foot treadle, for each press all the machine operate one step at a time.

33 **Bobbin Thread Photocell On/Off** [00] = Optional, 01 activates the remaining thread monitor and deactivates the spool thread counter.
00 = On
01 = Off, used to bypass if photocell is malfunctioning and prohibiting the machine from operating.

PROGRAMMING

The Following Basic Parameters May be Changed (Time Control for Solenoid Valves to Stay Open or Closed) [Parameters Set by the Manufacturer are in Brackets]

34 **Trimming Speed** [250 rpm] = Thread trimmer revolutions per minute. (Last stitch)

35 **Trimming Position** [59] (01-59) = Starts the correct thread cutter impulse, the smaller the number, the quicker the bobbin thread cutter starts.

Caution! Below 45 needle comes up and contacts the bobbin and breaks the needle.

36 **Bobbin Trimming Duration** [0.12 sec.] = The amount of time the bobbin thread trimmer remains engaged, (speed). The duration of the thread cutter should be minimal to keep the main clamps from moving too soon.

37 **Dart Stretcher Return** [00 mm] (Optional) = the time the main clamps lift.

38 **Time To Welt Turning** [0.0 sec.] (Not applicable) = impulse duration for the piping turn.

39 **Trouser Smoothing Out** (Not applicable)

40 **Second Photocell =** 00 left side photocell activated
02 both photocells activated

Basic Parameter Default Setting Procedure

Note: The default procedures will not correctly load the manufacturer default parameters unless the machine program is locked up, if the machine is functioning properly the default procedures are ignored. All information entered by the customer will be deleted.

Press the P key. P
Press the F5 key.
Press the F3 key.
Disregard screen and enter the numbers 01.
Press ENT key to reload the parameters.

Sewing Parameter Default Setting Procedure

Press the P key.
Press the FS key.
Press the F4 key.
Disregard screen and enter the numbers 01.
Press ENT key to reload the parameters.

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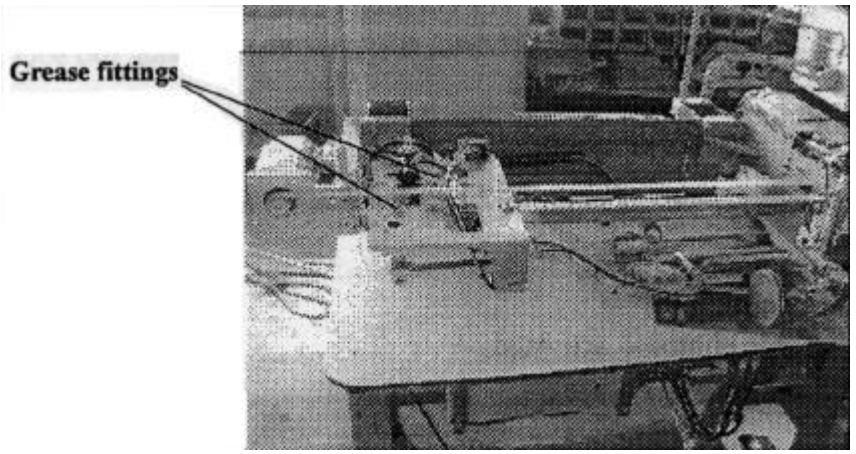
Sewing Head Oil Sight Gauge

Using the oil bottle supplied with the machine accessory kit and the oil hole located on top of the sewing head, keep the sewing head oil supply level with the upper red line on the gauge when the machine has not been recently operated.

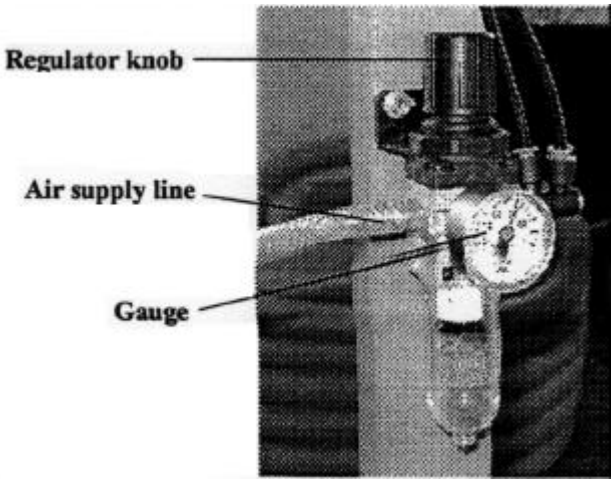


Grease Fittings

At least once a year, use normal ball bearing grease to lubricate the linear guides.

Air Pressure and Filter

Ensure the air supply line is connected and unobstructed.
Adjust the regulator knob until the gauge indicates the required pressure of 6 bar, (87 PSI). If excessive moisture accumulates in the filter drain as needed, by pressing up on the drain plunger at the bottom of the filter bowl and catching the water m a container, to dispose of safely.



Supplying Electrical Power to the Machine

WARNING! Keep away from the needle and clamping area of the machine, after releasing the program stop push-button switch, components may move to the start sewing position.

Ensure the electrical connecting plug is inserted into a correct voltage outlet.

Switch on the main electrical power rotary switch.

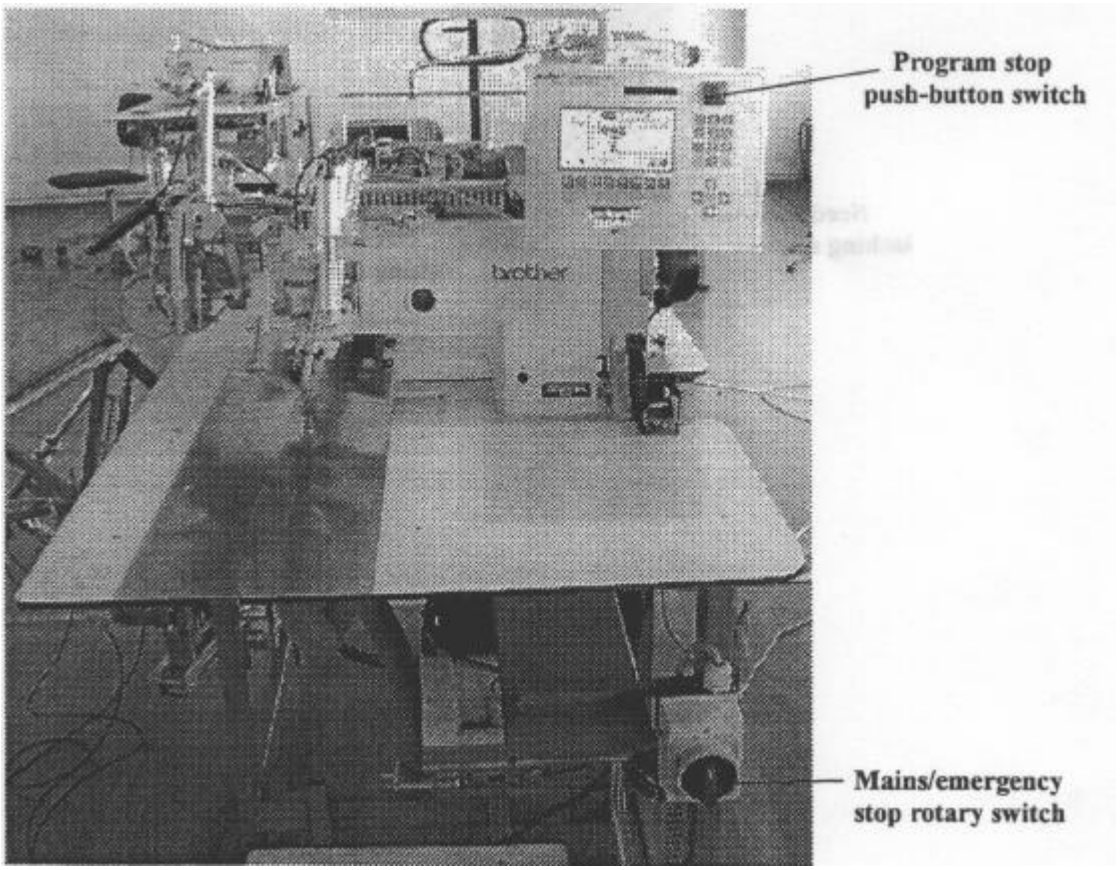
The display will read WAIT FOR RESET.

Rotate the Program Stop Push-button Switch, located on the control panel to reset the machine.

The display will show the Standard Display with the pocket illustration.

If not in the correct start sewing position, the machine will cycle to the start sewing position, and the clamps will lift.

The machine is now ready to begin sewing by pressing the right sew sequence foot treadle.



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Needle Installation

WARNING! Keep away from the needle and clamping area of the machine, after pressing push- button switches, components may move to the correct start sewing position.

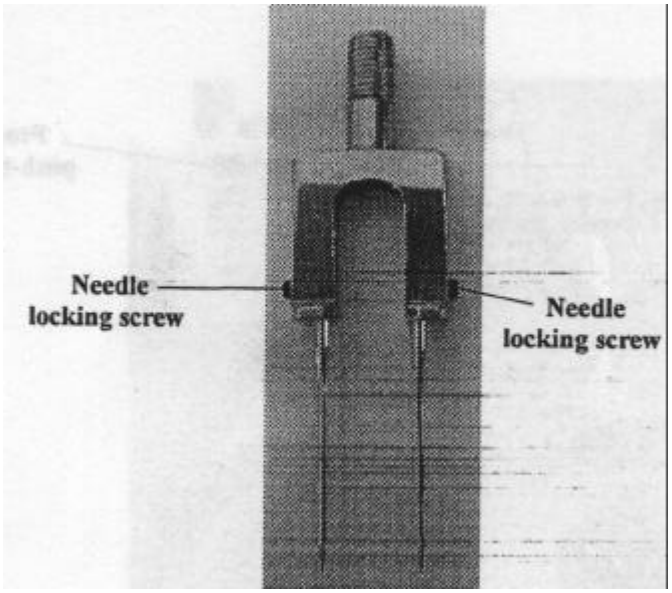
WARNING! Press the Program Stop push-button switch.

WARNING! To avoid possible cuts, use extreme caution when working around the center knife.

Loosen the needle locking screw and remove the damaged needle.

With the long thread groove facing inward, insert the new needle fully up into the needle head.

Tighten the needle locking screw.



Threading the Machine

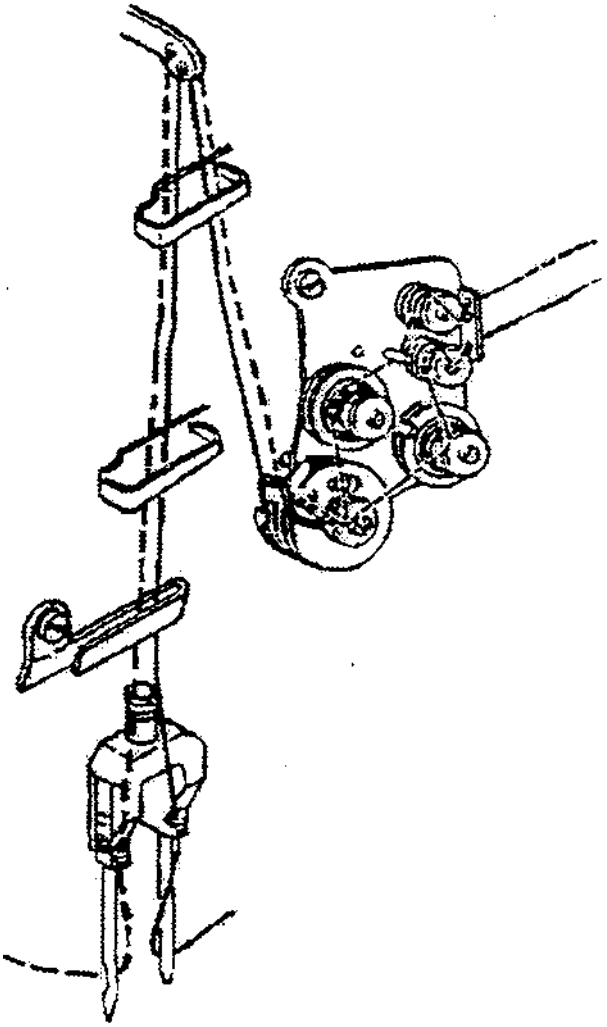
WARNING! Keep away from the needle and clamping area of the machine, after pressing push- button switches, components may move to the correct start sewing position.

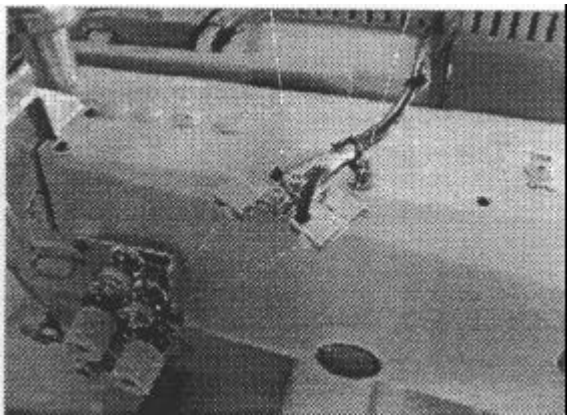
WARNING! Press the Program Stop push-button switch.

WARNING! To avoid possible cuts, use extreme caution when working around the center knife.

Pull the needle thread from the thread stand spool, through the unwinder and into the thread smoother on top of the sewing head, the thread enters the left smoother hole from the back and enters the front of the right smoother hole.

Install the threads as illustrated.





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Catching the Needle Threads

WARNING! Keep away from the needle and clamping area of the machine, after pressing push- button switches, components may move to the correct start sewing position.

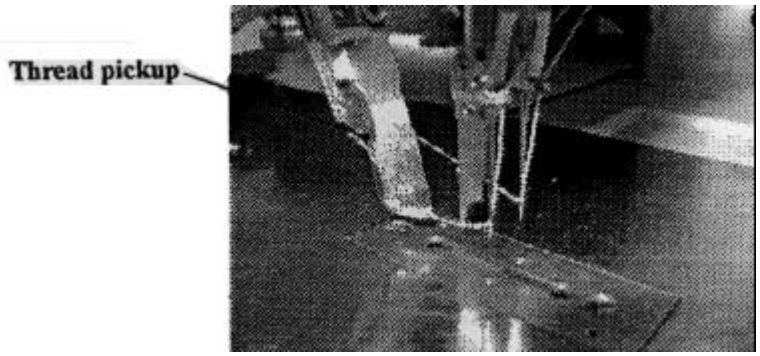
WARNING! Press the **Program Stop** push-button switch.

WARNING! To avoid possible cuts, use extreme caution when working around the center knife.

With the machine in the correct start sewing position, press and hold the F5 function key to lower the thread pickup.

Pull the two needle threads toward the rear of the machine and position the threads into the thread pickup.

Release the F5 function-key and the thread pickup will raise and catch and trim the threads.



Bobbin Winder

Install the empty bobbin onto the bobbin winder shaft.

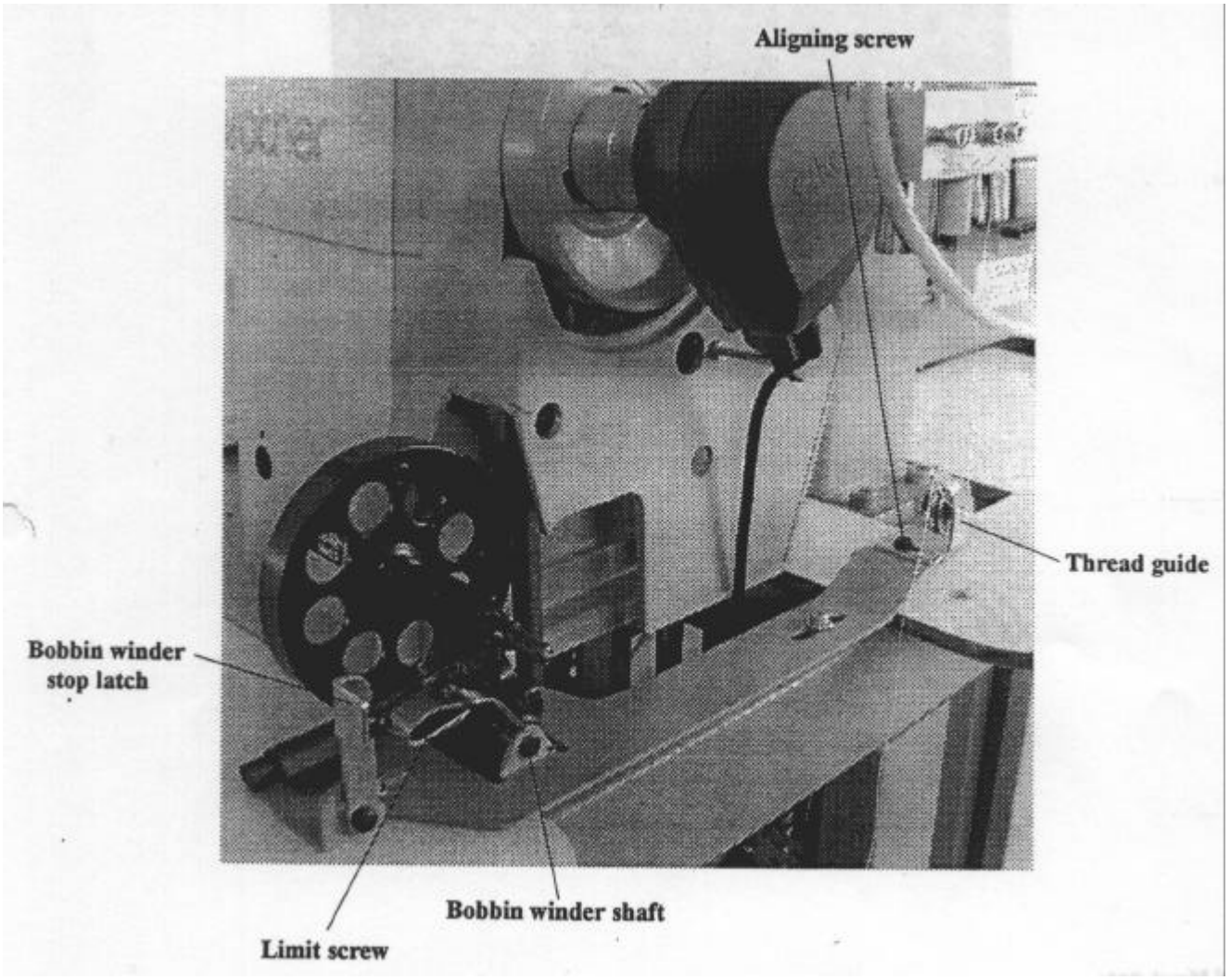
Press in the bobbin winder stop latch until locked.

Wind the thread in the direction of the arrow around the bobbin several revolutions.

Operate the sewing head, by pressing the right foot treadle, to fill the bobbin, the lock releases automatically when the bobbin is full.

If the thread does not wind the bobbin evenly, loosen the aligning screw and adjust the thread guide as needed.

To increase the amount of thread wound onto the bobbin, rotate the limit screw in.



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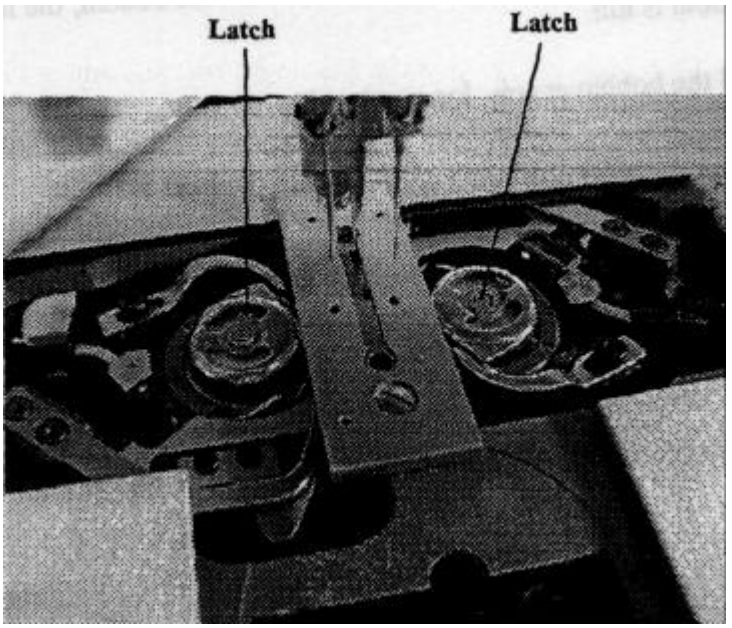
Removing the Bobbins

WARNING! Press the **Program Stop** push-button switch.

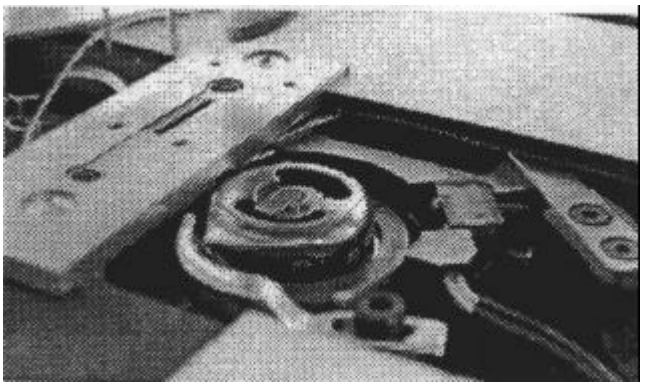
With the main clamp in the rear position.
Move the loading plate to the left to expose both bobbin cases.
Lift up the latches on top of the bobbin cases and remove the bobbin cases and bobbins from the machine.

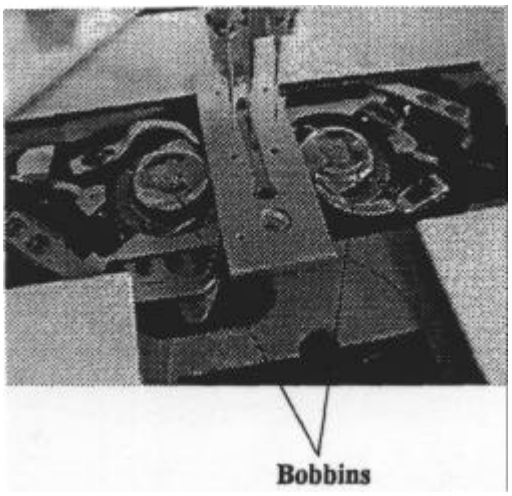


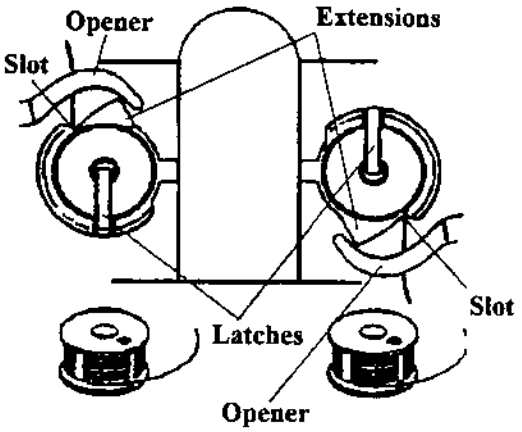
Bobbin Installation

WARNING! Press the **Program Stop** push-button switch.

Insert the bobbins into the cases and ensure the bobbins unwind in the counterclockwise direction. Pull the thread into the slot and under the tension spring.
With a length of thread long enough to cover the face of the bobbin case, hold the thread across the bobbin case and start the bobbin case and bobbin onto the latch.
Locate the bobbin and bobbin case to ensure the extensions on the cases contact the bobbin case openers.
Close the latches to lock the bobbin and bobbin cases into the correct position.
Move the loading plate to the right to fit onto the locating pin and ensure the opening fits correctly around the throat plate.
Release the Program Stop push-button switch.







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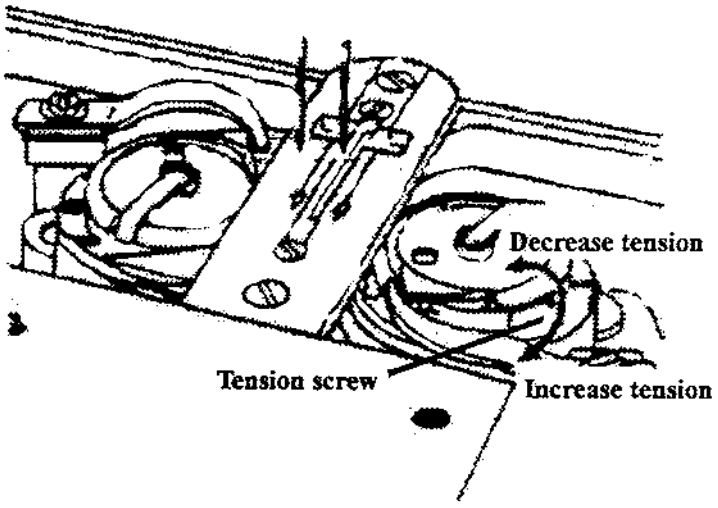
Bobbin Thread Tension

Note: The proper tension will vary according to the type of fabric and thread being used.

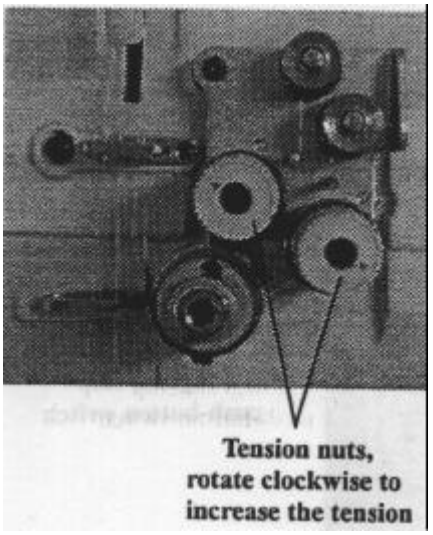
Rotate the tension screw as needed.

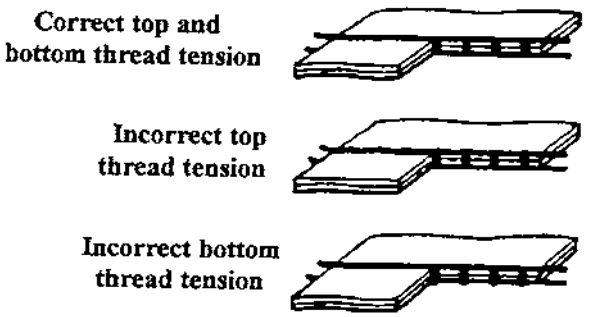


Needle Thread Tension

Note: The proper tension will vary according to the type of fabric and thread being used.

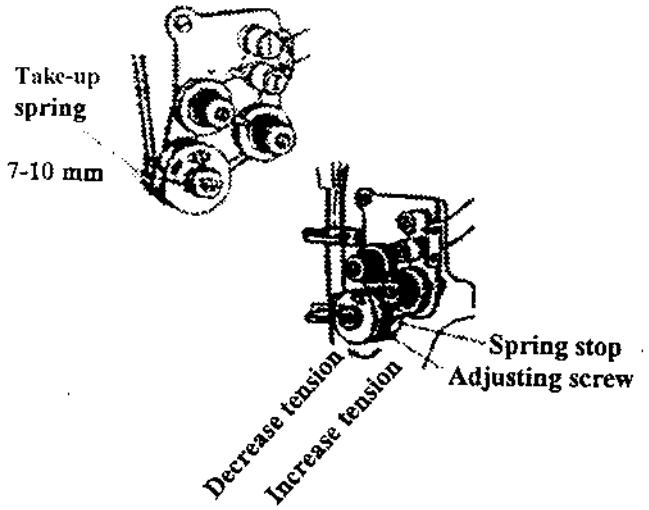
Rotate the tension nuts as needed.

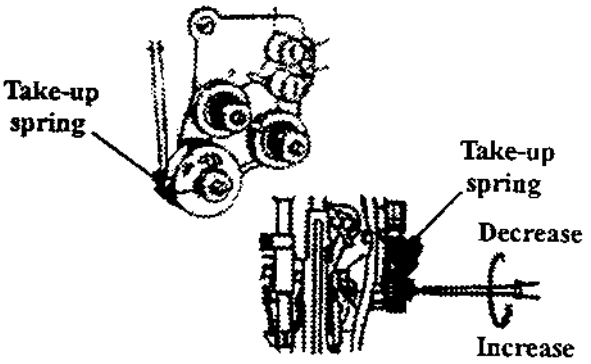




Thread Take-up Spring

Loosen the adjusting screw and rotate the spring stop to obtain the correct setting, the range of the spring is 7 to 10 mm.





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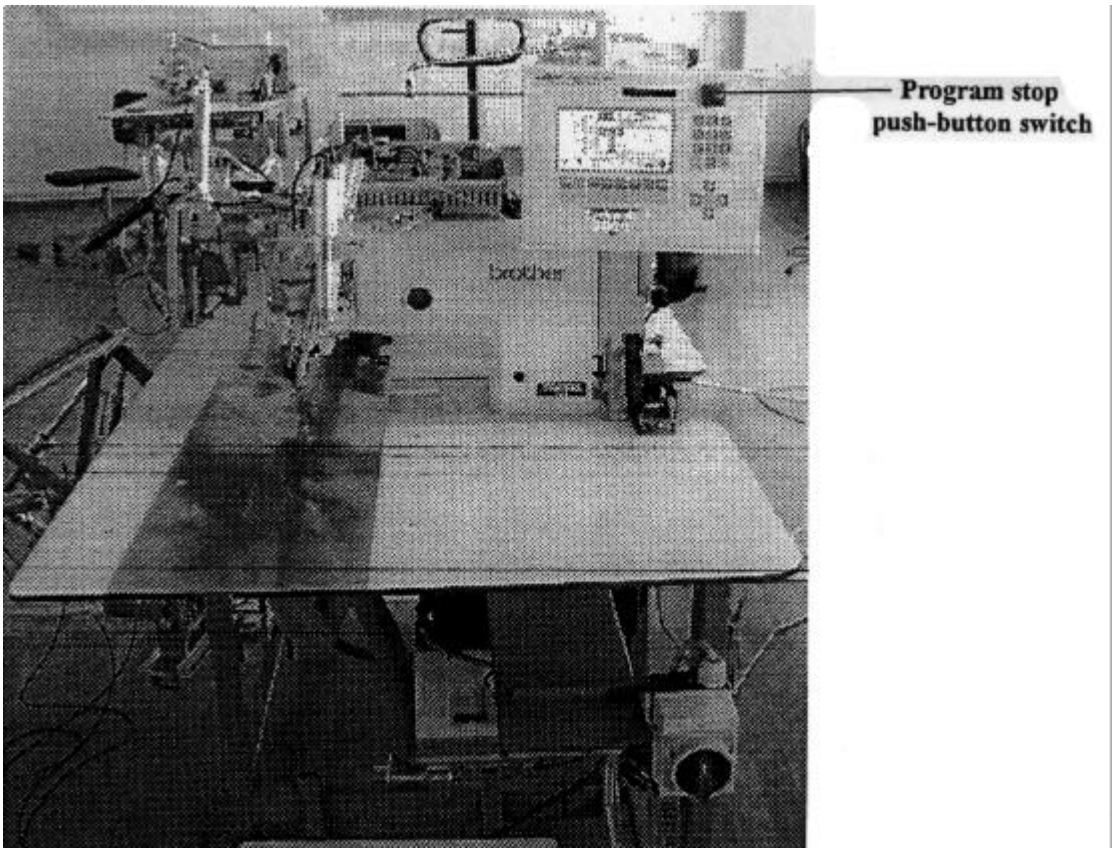
Initial Pocket Sewing

Caution! Never sew over the same pocket twice during the same sewing cycle, the clamp will not raise and the trimmer will contact the needle.

Note: The Right Sewing Sequence Treadle is a multistage switch. If problems occur, press the **Program Stop** push-button.

Press the **Right Sewing Sequence Treadle** fully, to sew a complete pocket cycle.

Sew a second pocket and ensure proper operation of all mechanical components.



Machine Sewing Sequence With All Seam Options Activated

Note: The steps in the operation sequence will vary according to the pocket style program selected.

The sewing sequence is divided into several procedures.
The machine must be in the correct start sewing position before the sewing sequence can begin.
Insert and correctly align the pocket parts to be sewn, into the loading station.
Press and release the right-hand foot treadle and the clamps will move forward.
Press and release the right-hand foot treadle the second time and the clamp will lower.
Press and release the right-hand foot treadle the third time and the patch guide lowers and pivots toward the front of the seam.
Press and release the right-hand foot treadle the fourth time and the flap clamp closes.
Press and release the right-hand foot treadle the fifth time and the clamps position the panel under the sewing head.
The pocket is sewn and the center knife cuts the pocket opening, the tab knives cut and the clamp pens and the sewn panel is placed onto the stacker.
The operator may engage each step by pressing the foot treadle each time, or sew an automatic sequence by keeping the foot treadle pressed until the pocket has finished sewing.

Program Functions

The machine sewing sequence operates according to a program number selected by the operator.
The programs are stored in the machine memory, example M04 and contain between one and six different pocket styles.
The selected program and the assigned pocket styles are shown in the upper line of the display.
The machine sews all the activated pocket styles of a program in sequence.
The activated pocket styles are shown highlighted with a black background around the pocket style numbers.
The program allows sewing several pocket shapes and lengths in sequence, without changing the sewing program.

Selecting a Sewing Different Program

The current sewing program is indicated in the upper line of the display, example M04.

Press the yellow M key on the touchpad. 

Using the ten key touchpad, enter the number of a new sewing program, example 09. All pocket styles in the program will be displayed example, 22, 23, 24, 33, and 34.

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MACHINE OPERATION

Activating and Deactivating Pocket Styles

Between 1 and 6 pocket styles are assigned to the sewing program. All activated pocket styles are sewn in sequence. Activated pocket styles are shown highlighted with a black background around the pocket style number, example 23, 24, 33, and 34 are activated pocket styles and will be sewn in sequence. Pocket Style 23, the fully highlighted number, is the pocket style number where the functions icons contained inside the box in the center of the display are assigned.

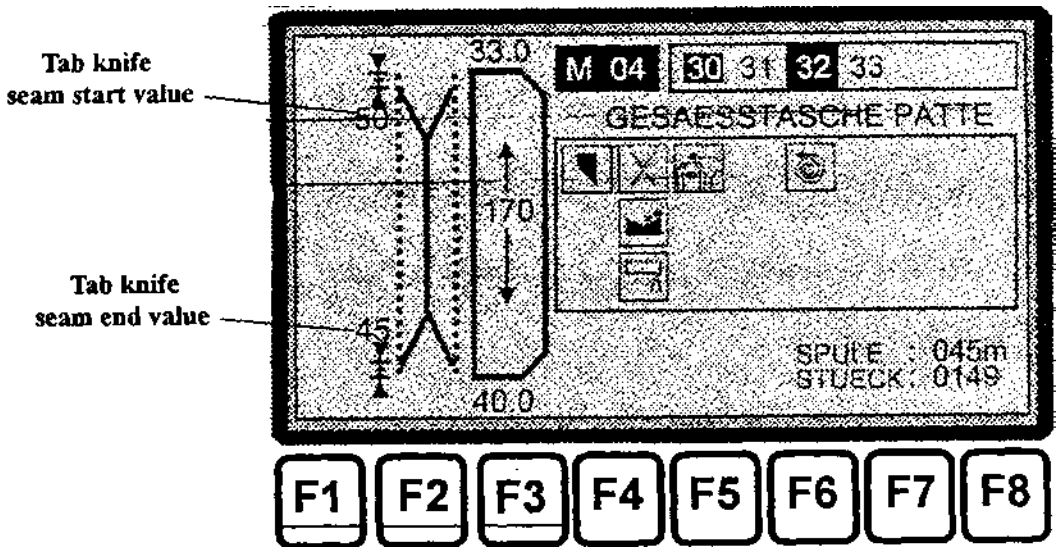
To not sew a pocket style, use the left and right arrow keys to move the cursor to the number of the pocket style you want to deactivate.

Press the ENT key to deactivate the pocket style number. ENT
Pressing the ENT key switches the pocket style number from activated, highlighted, to deactivated, not highlighted, example pocket style number 22 will not be sewn.

Tab Knife Values

Press the F2 key and the cursor is positioned at the seam start value.
Using the number keys, enter the new value.
Press the F2 key again to position the cursor at the seam end value.
Using the number keys, enter the new value.

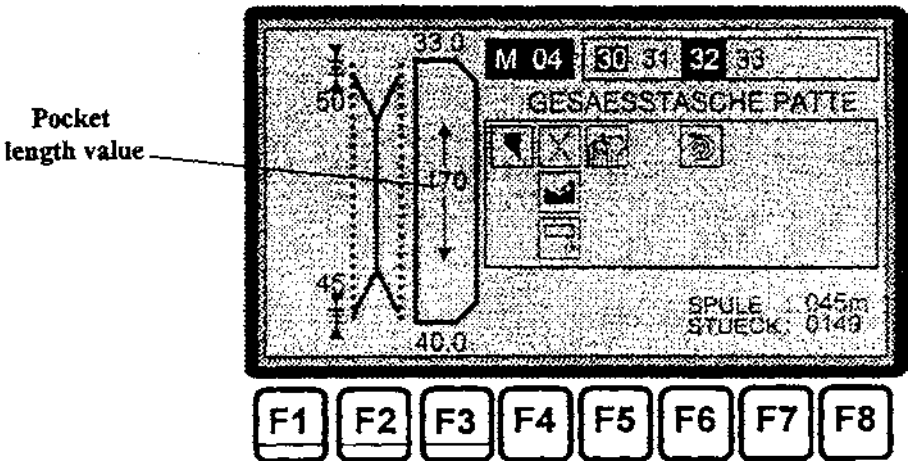
Press the P key to exit and store the new values to memory. P



Note: Detailed description, Key Functions F 1 through FS (Default Mode) section, pages 1-9 & 1-10. All changes are stored for all pocket styles with the same number, even if used in different programs.

Pocket Length Change

Press the F3 key and the cursor is positioned at the pocket length value.
Using the number keys, enter the new value.

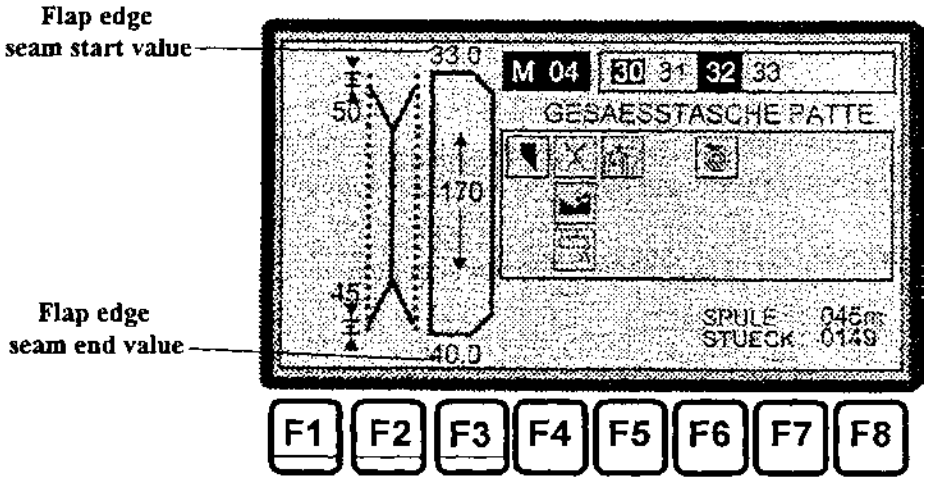


Note: Detailed description, Key Functions F 1 through F8 (Default Mode) section, pages 1-9 & 1-10. All changes are stored for all pocket styles with the same number, even if used in different programs.

Flap Edge Values

Press the F4 key and the cursor is positioned at the flap edge seam start value.
Using the number keys, enter the new value.
Press the F4 key again to position the cursor at the flap edge seam end value.
Using the number keys, enter the new value.

Press the P key to exit and store the new values to memory. P



Note: Detailed description, Key Functions F 1 through F8 (Default Mode) section, pages 1-9 k 1-10. All changes are stored for all pocket styles with the same number, even if used in different programs.

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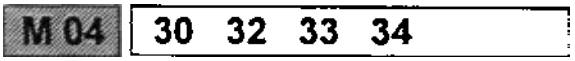
Pocket Style Removal

Select the sewing program to be changed, example M04.

Press the yellow P key. P

Ensure the screen displayed is the (1) screen, if not press the F8 key to reverse the screens back to the number (1) screen. Press the Fl function key, (1) Sewing Sequence.
Using the arrow keys, position the cursor on the pocket style number to be removed, example 31.

Press the yellow M key to remove the pocket style.



Adding a Pocket Style

Select the sewing program to be changed, example M04.

Press the yellow P key. P

Ensure the screen displayed is the (1) screen, if not press the F8 key to reverse the screens back tp the number (1) screen. Press the F 1 function key, (1) Sewing Sequence. Using the arrow keys, move the cursor to the position where the new pocket style is needed in the sewing sequence, example place the pocket style number 12 between the 30 and 32.

Press the ENT ENT key. The number 00 is entered into the sequence.
Enter the number, example 12 of the new pocket style.

Press the yellow P key P to store the setting and leave the submenu.

Memory Card Functions

Used to save pocket styles or to copy pocket styles and programs stored to the removable data card. The card is used to replace programs destroyed by defective EPROMs or other faults.

Caution! The memory card contains a battery. Change the battery and save the machine data onto the memory card every two years.

Saving Machine Pocket Styles Data to the Memory Card

Insert the memory card into the slot on the front of the control panel.
Press the yellow P key.
Press the F6 function key.
Press the F2 function key.

Note: The next step includes 3 options.

Press the Fl function key to save the active pocket style displayed on the control panel.
Press the F3 function key to save all pocket style orders.
Press the F5 function key to save all pocket style variables.
Press the yellow ENT key.

Note: To save all the machine data to the memory card Press the FS function key.

Loading Pocket Styles Data From the Memory Card to the Machine

Note: Data from the memory card overwrites the data in the control panel. Pocket style changes have to be saved on the memory card.

Insert the memory card into the slot on the front of the control panel.
Press the yellow P key.
Press the F6 function key.
Press the F2 function key.

Note: The next step includes 3 options.

Press the F2 function key to load the active pocket style displayed on the control panel from the memory card.
Press the F4 function key to load all pocket style orders.
Press the F6 function key to load all pocket style variables.
Press the yellow ENT key.

Note: To load all the machine data from the memory card Press the F5 function key.

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ERROR MESSAGES

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
Error message displayed		Turning the main electrical power rotary switch off, turning the main electrical power on and releasing the **Program Stop** push-button, will **Reset** the machine and sometimes clear an Error message. It is recommended before troubleshooting procedures are performed.
Error - 01 = Sewing program empty.	Troubleshooting Section, page 2-4.	Troubleshooting Section, page 2-4.
Error - 02 = Seam deactivated.	Troubleshooting Section, page 2-4.	Troubleshooting Section, page 2-4.
Error - 05 = I/O communication error.	Troubleshooting Section, page 2-4.	Troubleshooting Section, page 2-4.
Error - 06 = Invalid path pulses.	Troubleshooting Section, page 2-4.	Troubleshooting Section, page 2-4.
Error - 07 = No path pulses from the clamp motor.	Troubleshooting Section, page 2-4.	Troubleshooting Section, page 2-4.
Error - 08 = Main Clamp has stopped prematurely.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.
Error - 09 = Clamp does not leave the stop switch.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.
Error - 10 = A work piece is loaded into the starting position.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.
Error - 11 = Activate vacuum before.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.
Error - 12 = Interfacing end.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.

ERROR MESSAGES

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
Error - 13 = Incorrect clamp position.	Troubleshooting Section, page 2-5.	Troubleshooting Section, page 2-5.
Error - 14 = Loading seam length is too short.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 15 = Dart stretcher is not up	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 16 = Empty.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 17 = Patch guide is not up.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 18 = Patch guide is not down.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 19 = Empty.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 20 = Knives are not together.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 21 = Center knife is not fully up.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 22 = The front tab knife is not fully down.	Troubleshooting Section, page 2-6.	Troubleshooting Section, page 2-6.
Error - 23 = The rear tab knife is not fully down.	Troubleshooting Section, page 2-7.	Troubleshooting Section, page 2-7.
Error - 24 = The scissor is not up. (Zipper only)	Troubleshooting Section, page 2-7.	Troubleshooting Section, page 2-7.
Error - 25 = The scissor is not down. (Zipper only)	Troubleshooting Section, page 2-7.	Troubleshooting Section, page 2-7.
Error - 26 = The turning fingers are not fully up.	Troubleshooting Section, page 2-7.	Troubleshooting Section, page 2-7.

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ERROR MESSAGES

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
Error - 27 = The turning fingers are not fully down.	Troubleshooting Section, page 2-7.	Troubleshooting Section, page 2-7.
Error - 28 = No sewing motor impulses. (No power signal)	Troubleshooting Section, page 2-8.	Troubleshooting Section, page 2-8.
Error - 29 = The sewing motor speed is too fast.	Troubleshooting Section, page 2-8.	Troubleshooting Section, page 2-8.
Error - 30 = Incorrect thread cutting.	Troubleshooting Section, page 2-8.	Troubleshooting Section, page 2-8.
Error - 33 =The sewing motor will not stop.	Troubleshooting Section, page 2-8.	Troubleshooting Section, page 2-8.
Error - 34 = The needle is not fully up.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 35 = Top thread broken.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 36 = Spool empty. Minus sensor bobbin count 00.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 37 = Spool only residual. Bobbin sensor no thread.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 41 = No flap.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 42 = Photocell not activated. Incorrect sensitivity.	Troubleshooting Section, page 2-9.	Troubleshooting Section, page 2-9.
Error - 43 = Photocell activated too early. Too sensitive.	Troubleshooting Section, page 2-10.	Troubleshooting Section, page 2-10.
Error - 45 = Main drive board.	Troubleshooting Section, page 2-10.	Troubleshooting Section, page 2-10.
Error - 54 = Patch guide station will not pivot.	Troubleshooting Section, page 2-10.	Troubleshooting Section, page 2-10.

ADJUSTMENTS

Clamp Assemblies

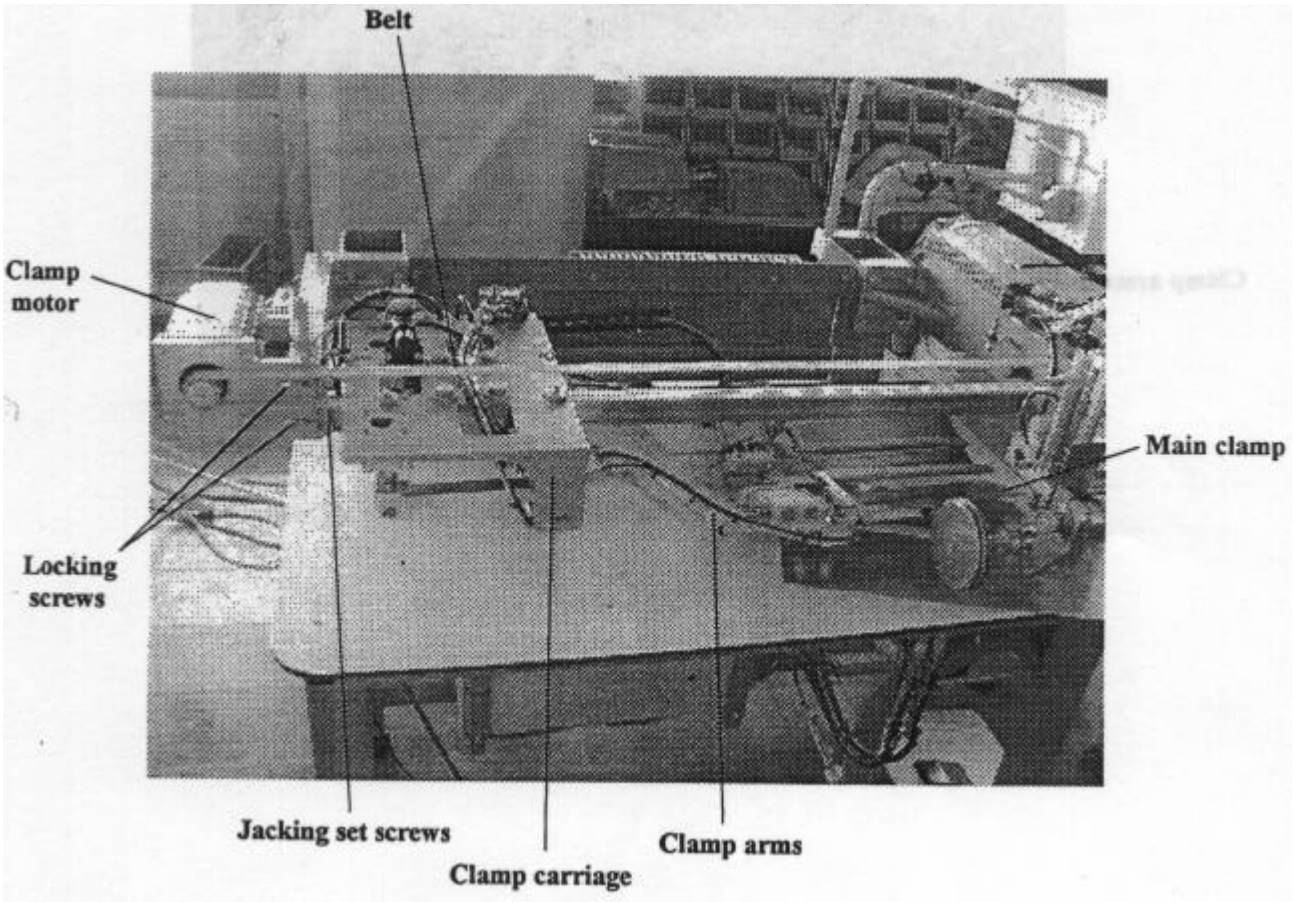
The machine clamping consists of several assemblies:
The clamp motor, clamp carriage, clamp drive belt, clamp arms, and the main clamp.

WARNING! With the mains/emergency rotary stop switch in the off position, a hole is aligned at approximately the 10 o'clock position. A lock should be inserted into the switch hole and the key should be held my the mechanic, whenever major maintenance is performed.

Clamp Drive Belt

Ensure the clamp is in the correct start sewing position as illustrated.
The correct belt tension is obtained when a 1 kg load is positioned in the middle of the pulley and the load lowers the belt approximately 15 mm.

If incorrect:
Loosen the two locking screws and rotate the jacking set screws to obtain the correct belt tension.
Tighten the locking screws.



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ADJUSTMENTS

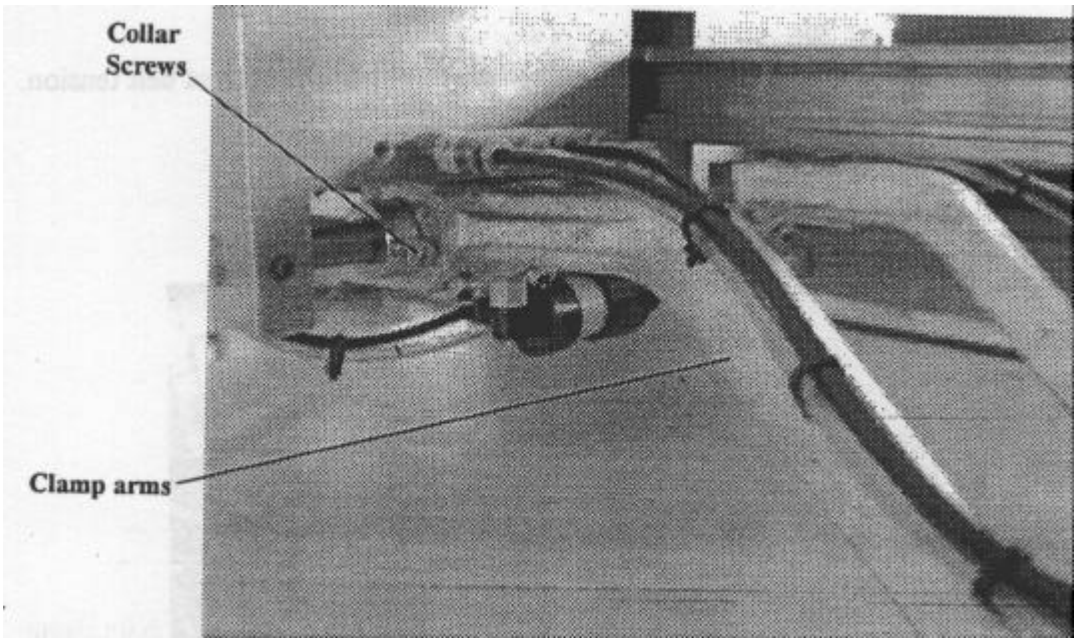
Clamp Arm Side to Side Movement

WARNING! Press the **Program Stop** push-button switch.

The clamp arms must move freely with little or no side to side movement.

If incorrect:
Using the collar screws correctly adjust the side to side movement of the clamp arm.

Note: The clamp arm is set parallel by the manufacturer.



Double Welt Lateral Setting

WARNING! Press the **Program Stop** push-button switch.

Insert the double welt patch guide.
Set the distance between the inner side of the clamp and the side edge of the patch guide sole plate on both the right and left sides to 1.5 mm, (1/16”).

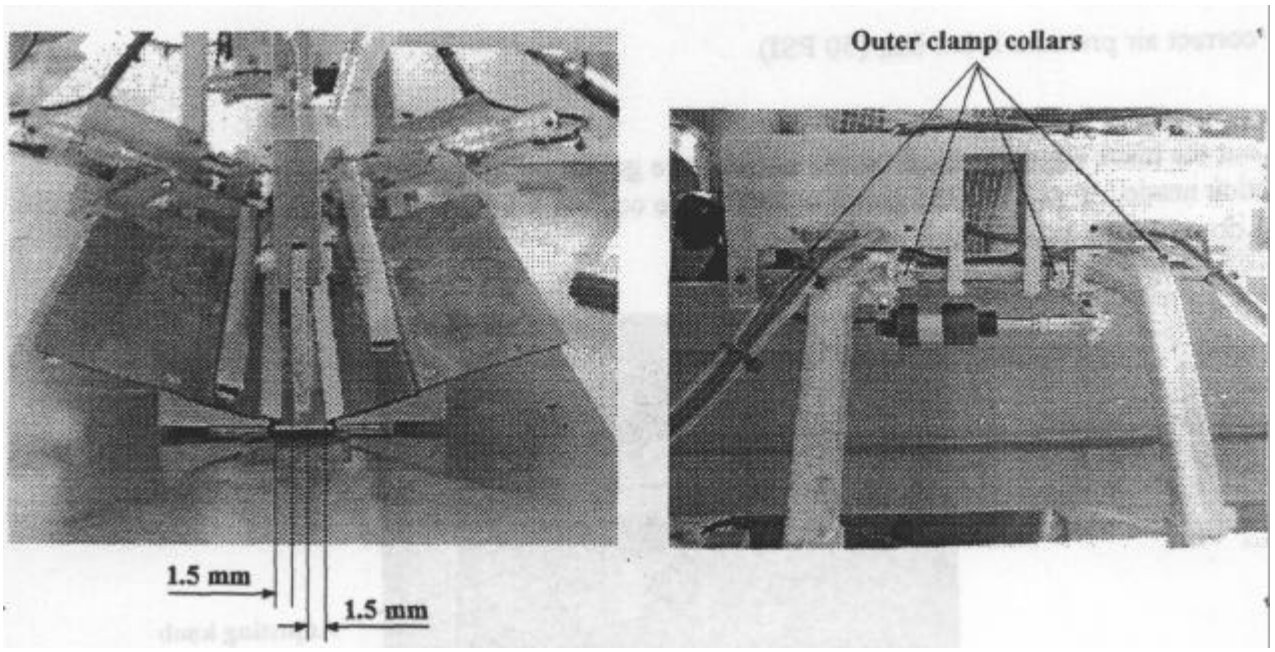
If incorrect:
Using the two outer clamp collars, obtain the correct distance.

Lateral Flap

WARNING! Press the **Program Stop** push-button switch.

Insert the single welt patch guide. Ensure the distance between the inner side of the clamp and the side of the patch guide is 1.5 mm, (1/16”).

If incorrect:
Using the two outer clamp collars, obtain the correct distance.



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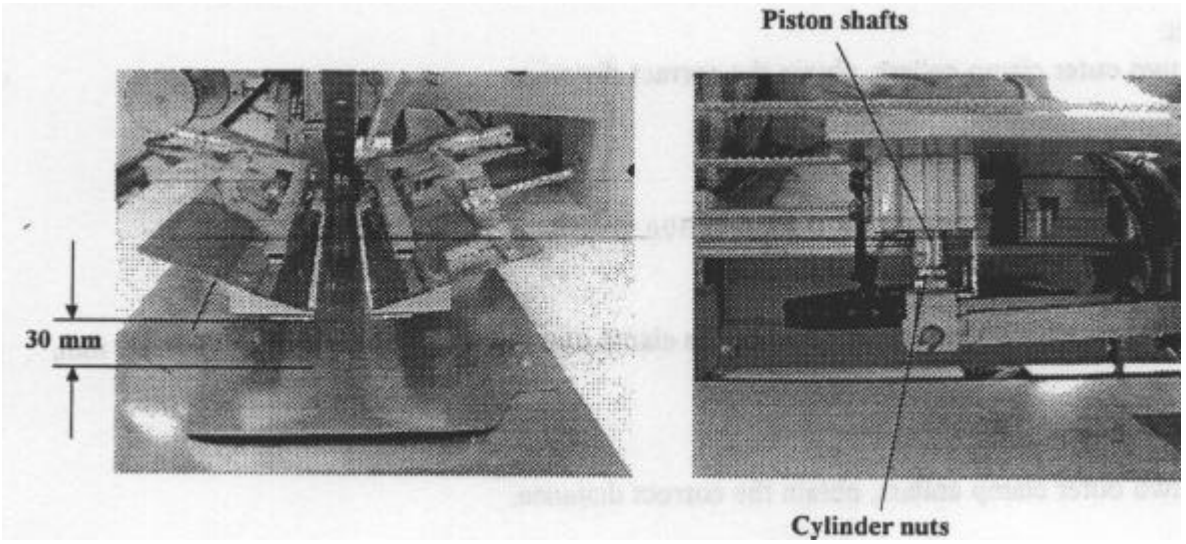
ADJUSTMENTS

Clamp Height

In the loading position, the correct clamp height is 30 mm.

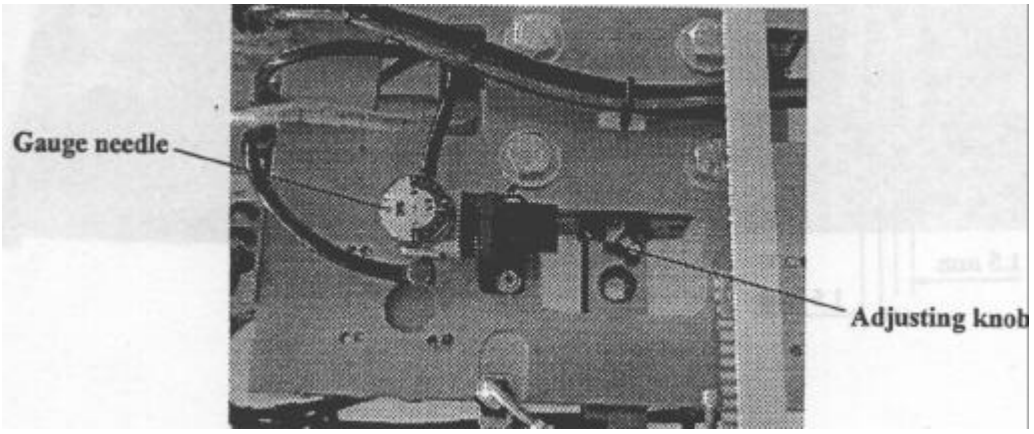
If incorrect:
Loosen both clamp pressure cylinder nuts and rotate the piston shafts to obtain the correct height. Tighten the cylinder nuts.



Clamp Air Pressure

The correct air pressure is 3.5 bar, (50 PSI).

If incorrect:
Pull out the black adjusting knob on the air pressure gauge assembly and rotate the knob in the direction needed to position the gauge needle to the-correct 3.5 bar, (50 PSI pressure required Press down on the knob to lock the setting.

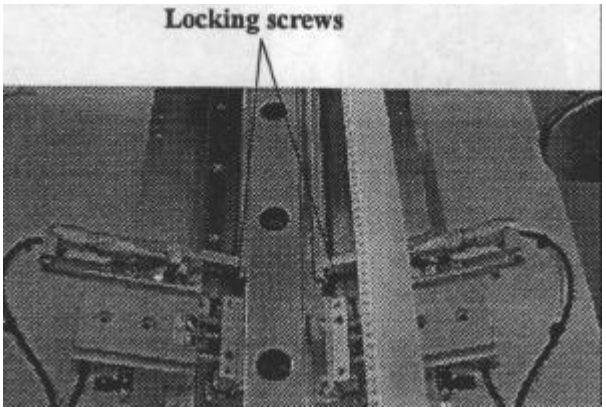


ADJUSTMENTS

Clamp Pressure Distribution

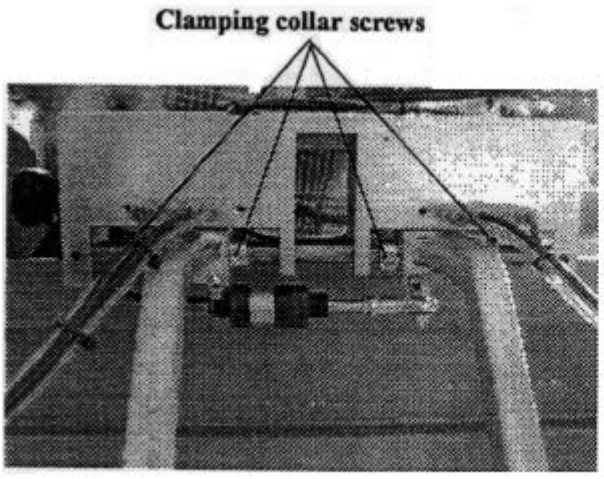
The clamps must hold the work piece with an even pressure over the entire clamp surface.
Move the clamp into the loading position and place a thin fabric work piece under the clamp arms.
Lower the clamps and pull the fabric laterally to ensure an even pressure along the clamp arms.

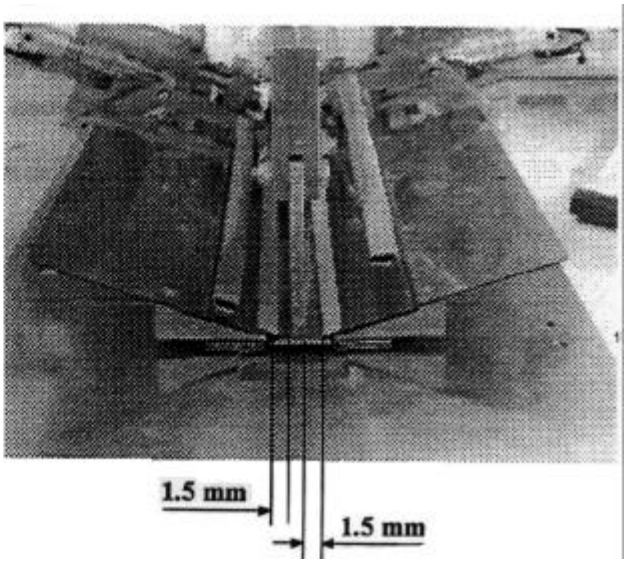
If incorrect:
Loosen the locking screws and rotate the screws to obtain the required pressure along the entire clamp arms.
Tighten the screws.



Clamp Quick Adjustment Double/Single Welt (Option)

An initiator, mounted at the loading station, recognizes the patch guide for double or single welt.
The clamps move to the proper position depending on the type of patch guide being used.
Using the double welting patch guide, loosen the clamping collar screws and position both collars to obtain 1.5 mm between the side edge and the clamp edge.
Using the single patch guide, loosen the clamping collar screws and position both collars to obtain 1.5 mm between the side edge and the clamp edge and ensure the clamp will only move to one side.
Tighten the clamping collar screws.





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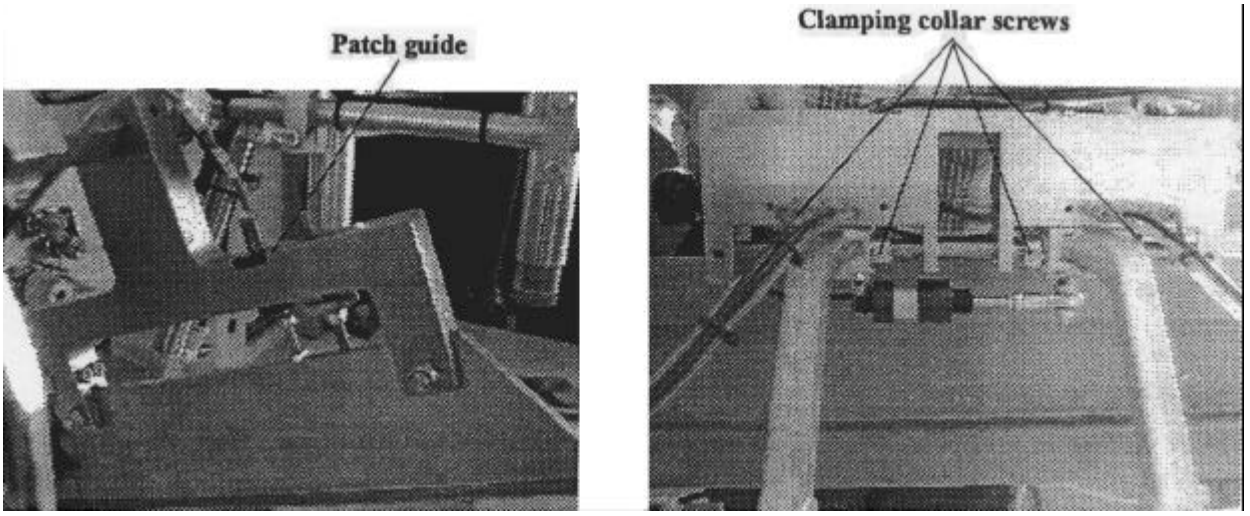
ADJUSTMENTS

Clamp Quick Adjustment Jacket/Trouser (Option)

An initiator, mounted at the patch guide (1), includes a control valve used to move the clamps to the proper position.
Loosen the clamping collar screws and obtain 1.5 mm between the patch guide sole and the inner side of the clamp.
Tighten the ring screws.

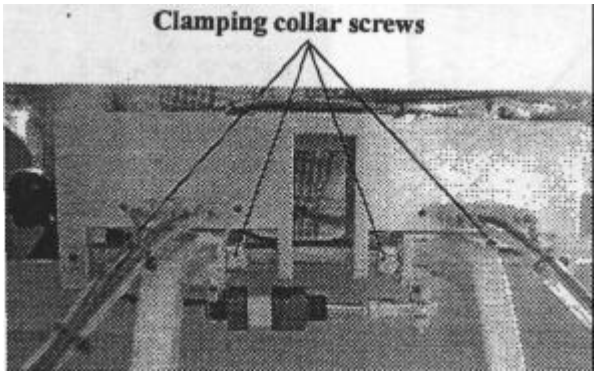


Lateral Clamp Without Quick Adjustments

Using the double welt patch guide, loosen the clamping collar screws and position both inner collars to obtain 1.5 mm between the clamp and the sole.
Using the single welt patch guide, loosen the clamping collar screws and position both outside collars to obtain 1.5 mm between the patch guide and the sole.
Tighten the collars to prevent lateral movement of the clamp arms.

Clamp Double Welt - Flap Without Quick Adjustments

When changing from double to single welts, Use either clamp collar to move together with the clamp arm to obtain the proper 1.5 mm distance between the double welt - flap and the clamp.

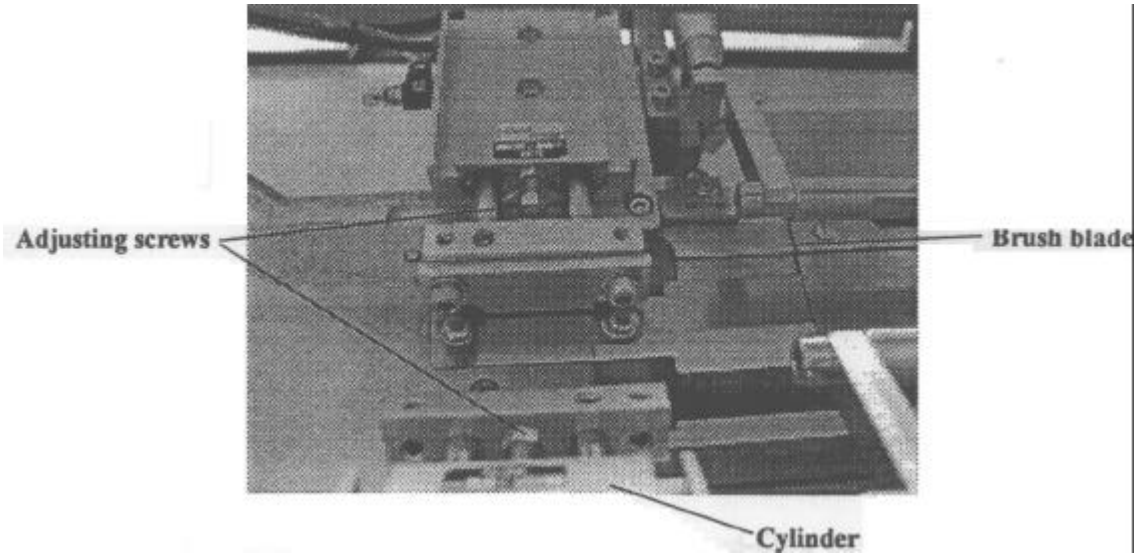


Brush Blade Path

WARNING! Press the **Program Stop** push-button switch.

The correct movement of the brush blade is 5 mm.

If incorrect:
Loosen the cylinder adjusting screws and rotate the screw to obtain the proper setting.
Tighten the screws.

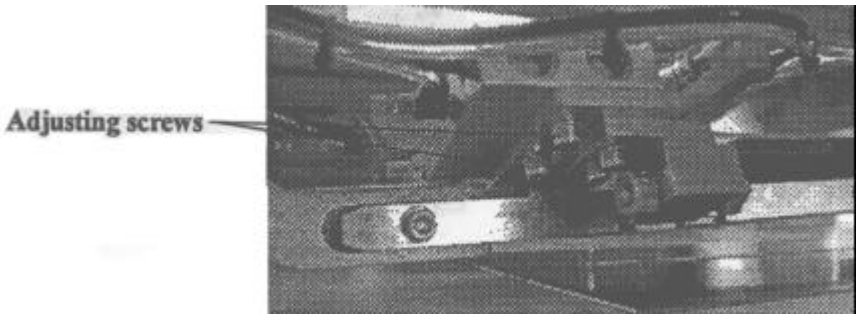


Brush Blade Parallel

WARNING! Press the **Program Stop** push-button switch.

In the driven state, the brush blade must be parallel to and 0.5 mm away from the clamp edge.

If incorrect:
Loosen the cylinder adjusting screws and rotate the screw to obtain the proper setting.
Tighten the screws



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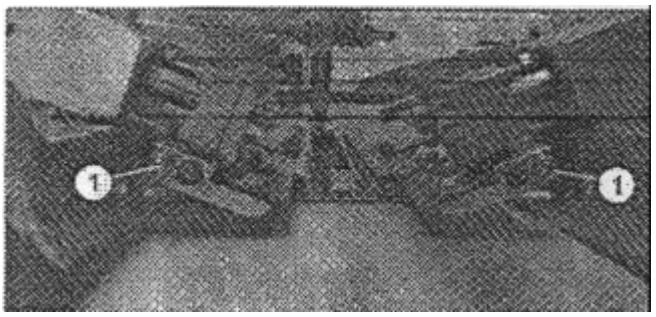
ADJUSTMENTS

Brush Blade

WARNING! Press the **Program Stop** push-button switch.

The brush blade must rotate freely without play to accommodate varying fabrics.

If incorrect:
Loosen the adjusting screws **(1)** and obtain the proper rotation.
Tighten the screws.

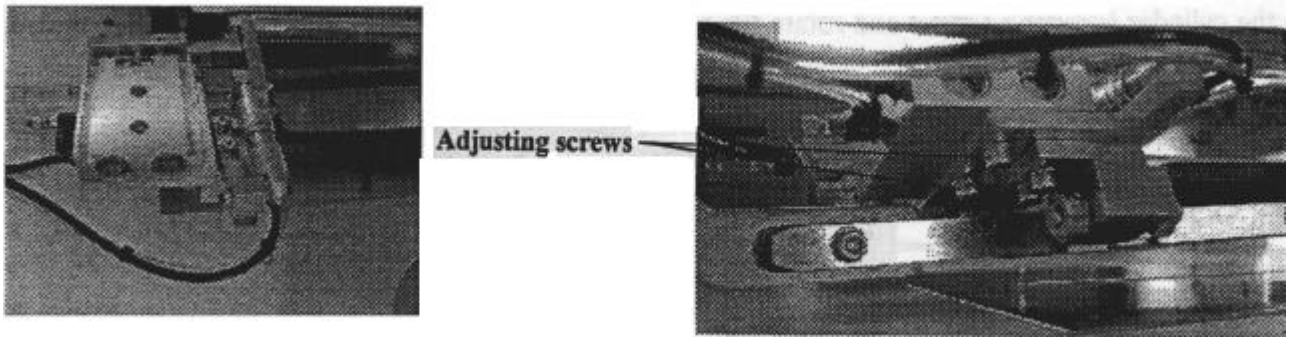


Flap Clamp Position

WARNING! Press the **Program Stop** push-button switch.

The flap clamps must be parallel and 5 mm away from the inner side of the clamp.

If incorrect:
Loosen the flap clamp beam adjusting screws and obtain the proper setting.
Tighten the screws.



ADJUSTMENTS

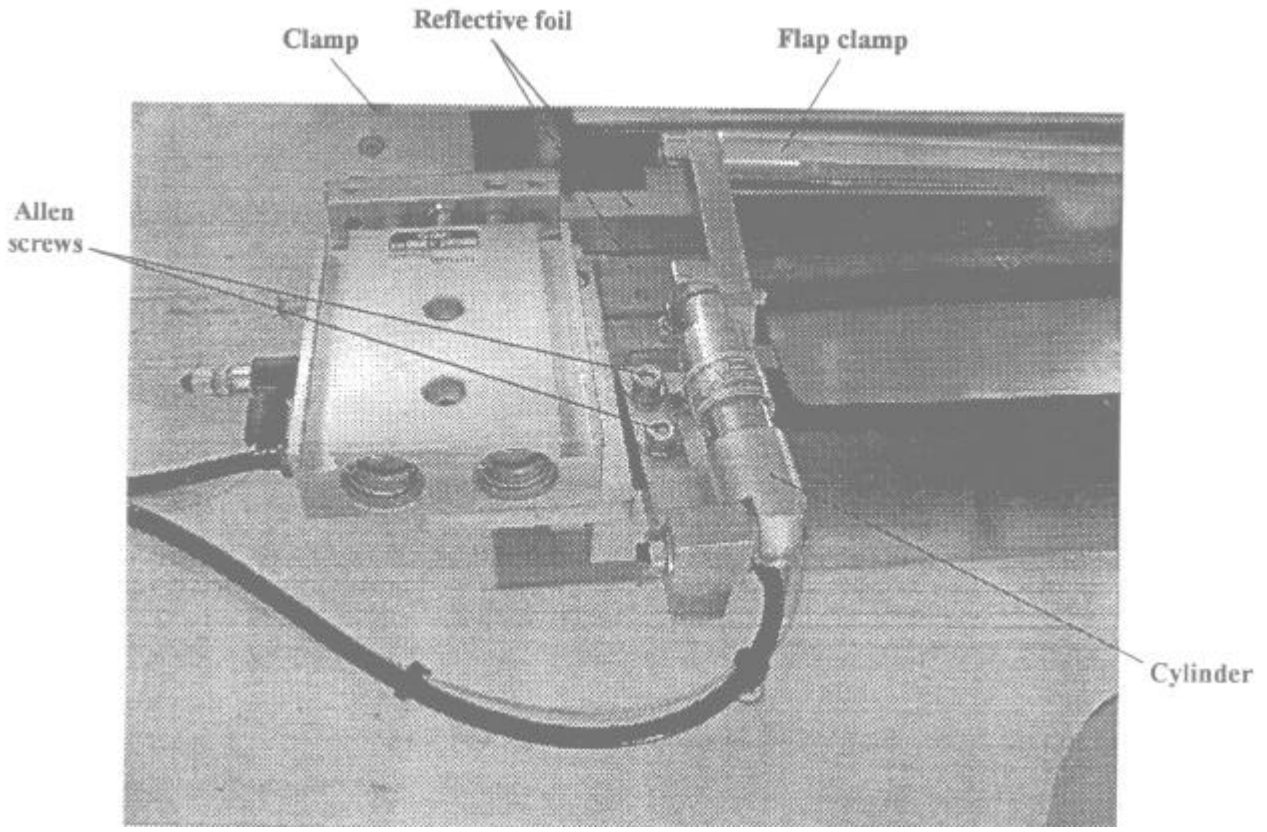
Opening Path of the Flap Clamp

With the flap clamp cylinder fully extended, the opening path of the flap clamp must allow the entire length of the flap clamp to press onto the main clamp.

If incorrect:
Loosen both of the allen screws at the flap clamp to be adjusted and correctly adjust the cylinder. Tighten the allen screws.

Photocell Reflective Foil

A reflective foil is attached to each clamp.
Keep the foil clean and replace any damaged foil to maintain a good flap detection.



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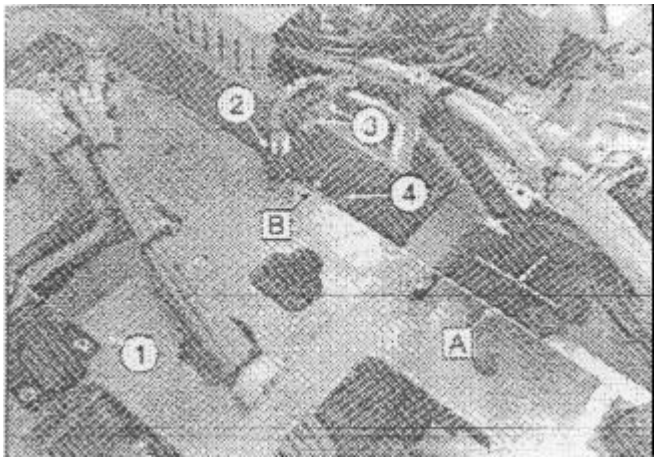
ADJUSTMENTS

Clamp Path Front Stop

WARNING! Press the **Program Stop** push-button switch.

Place the clamp assembly **(1)** into the loading position, the initiator one **(2)** must deactivate.
The correct distance **(A)** between the beam and the clamp assembly is 19 mm.

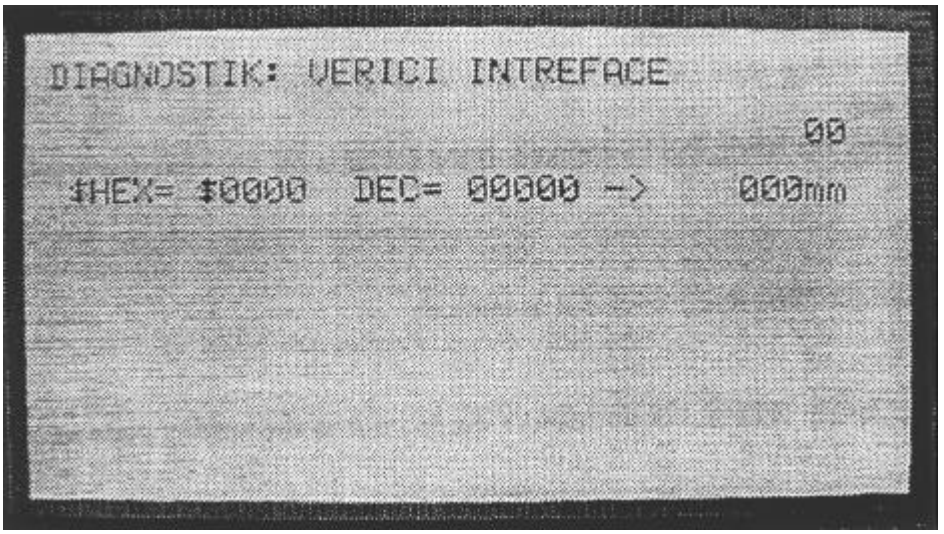
If incorrect:
Loosen the initiator one screws **(2)** and adjust for the proper distance.
Tighten the screws.
Loosen the rubber stop **(3)** adjusting screws and rotate in or out until the distance between the stop and the damp- assembly equals 3 mm.
Tighten the adjusting screws.



Clamp Path Measurement

Using the mains/emergency stop rotary switch, switch on the main electrical power to the machine. Wait until the clamp has been initialized, the machine must be in the correct start sewing position, clamp assembly to the rear.
Press the P key.
Press the F6 key.
Press the F3 key.
Press the F3 key again.
Press the Fl key.
The diagnostic display screen will appear.
Manually push the clamp forward into the loading position, until the initiator 1 deactivates.
Check the value displayed in the lower right corner of the display in millimeters.

Less than 000 mm, initiator 17 is located too far to the rear and must be adjusted toward the sewing head.
000 mm, the initiator 17 is correctly adjusted.
Greater than 000 mm, initiator 17 is located too far to the front and must be adjusted away from the head.



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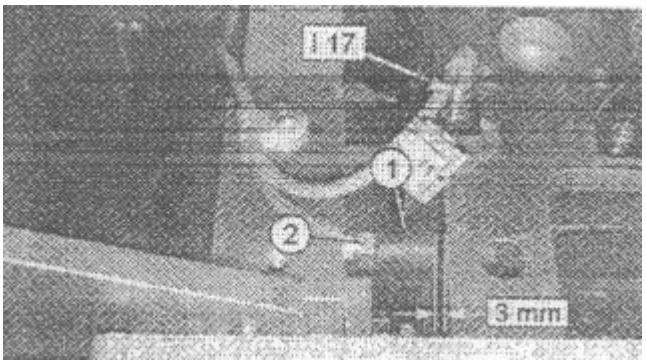
ADJUSTMENTS

Clamp Path Rear Rubber Stop

The rubber stop **(1)**, located beside the initiator seventeen (I17), must be the correct distance of 3 mm between the stop and the clamp assembly.

If incorrect:
Move the clamp assembly to the correct start sewing position.
Loosen the nut **(2)** and rotate the rubber stop to obtain the proper setting.
Tighten the nut.

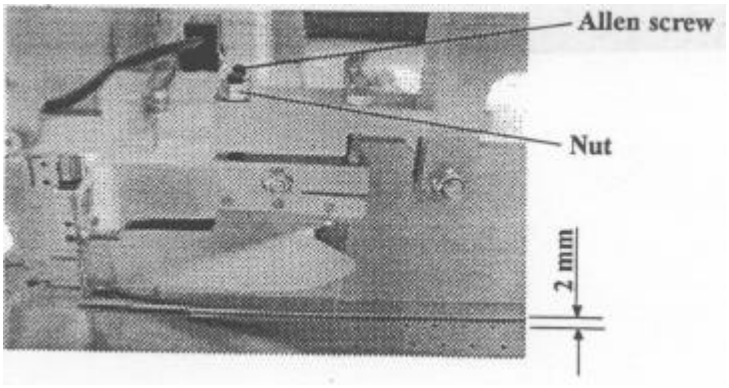


Folder Height

Select output 24/25 in the machine controls.
The distance between the sliding plate and the folder sole must be adjusted to the fabric being sewn.
The initial distance is 2 mm.
If the folder is set too deep, the fabric will be blocked. If the folder is set too high, the brush blade cannot fold the fabric.

To adjust:
Loosen the nut and rotate the allen screw in or out as needed.
Tighten the nut.

Note: After every folder height change, the position-of the initiator at the loading plate must be checked.



ADJUSTMENTS

Loading Plate Proximity Switch

When the folder lowers completely, the switch closes the folding slides, if included in the program being used.
If the initiator is not correct, the brush blades activate too early or not at all.

If incorrect:
Loosen the adjusting screws **(1)** and position the switch to correspond to the brush blades.
Tighten the screws.

Folder Movement

WARNING! Press the **Program Stop** push-button switch.

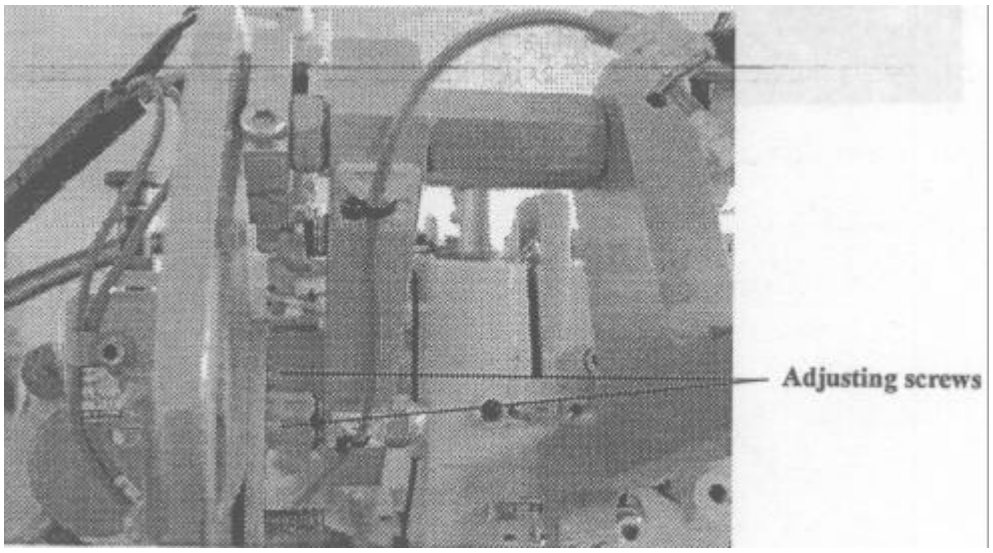
Located in the correct folding position, the folder must Gt tight enough to not detect any movement when lightly pushing and pulling the folder.

If incorrect:
Loosen the adjusting screws at the stop bar and push the folder towards the bearing.
Tighten the screws.

Folder Parallel to the Clamp

WARNING! Press the **Program Stop** push-button switch.

Loosen the-allen slightly and adjust the folder parallel to the clamp.
Tighten the allen and ensure the setting remains correct.



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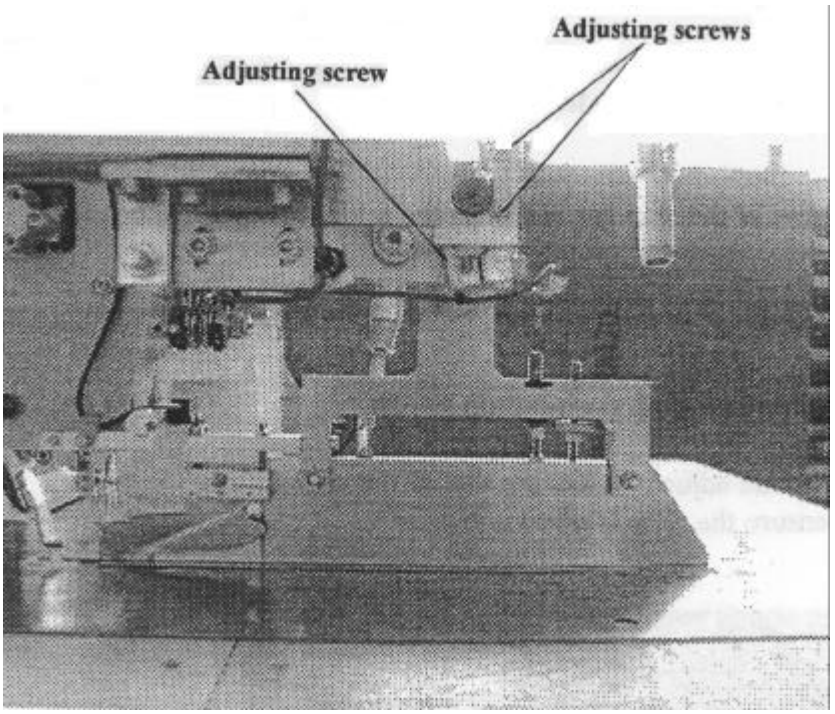
ADJUSTMENTS

Welt Width

WARNING! Press the **Program Stop** push-button switch.

Loosen both clamp block adjusting screws.
Use the adjusting screw slightly tilt the clamp block to the left or right as needed.
Tighten the screws.
Ensure the distance to both clamps is correct.

Note: Double and single welt widths are adjusted automatically. After folder adjustments the marking lamp positions must be checked. The folder sole width determines the welt width, the width is variable.

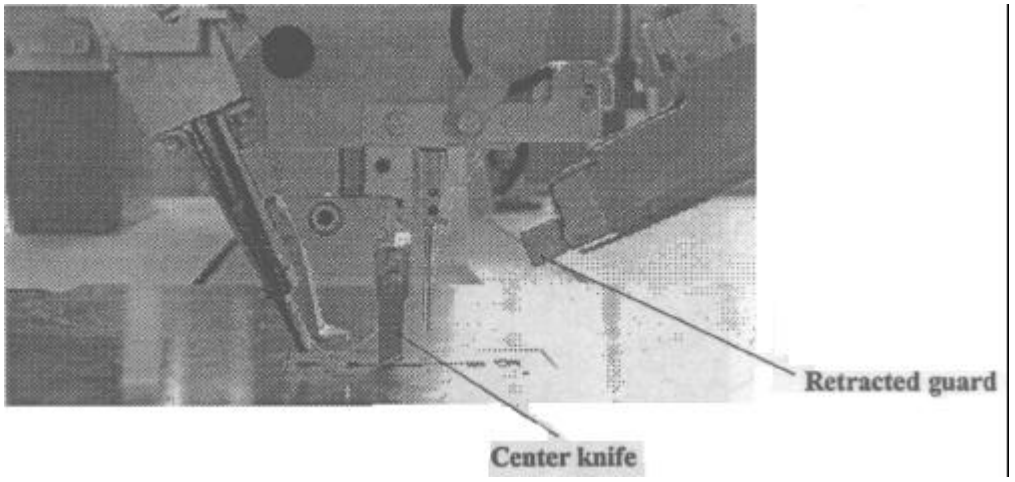


ADJUSTMENTS

Center Knife Guard

WARNING! Press the **Program Stop** push-button switch.

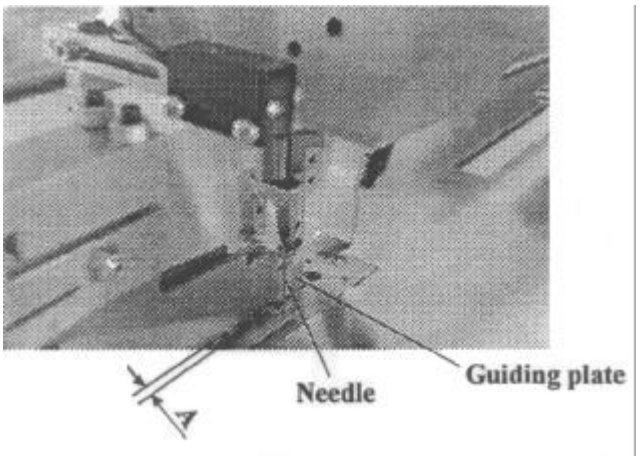
The center knife guard is mounted at the folder.
It must surround the center knife without contact.



Distance Between the Guiding Plate and the Needle

WARNING! Press the **Program Stop** push-button switch.
.
Distance **(A)** to the needle, must be as close as possible to the guiding plate, without needle contact.

If incorrect:
Lightly bend the guiding plate to obtain the proper clearance.



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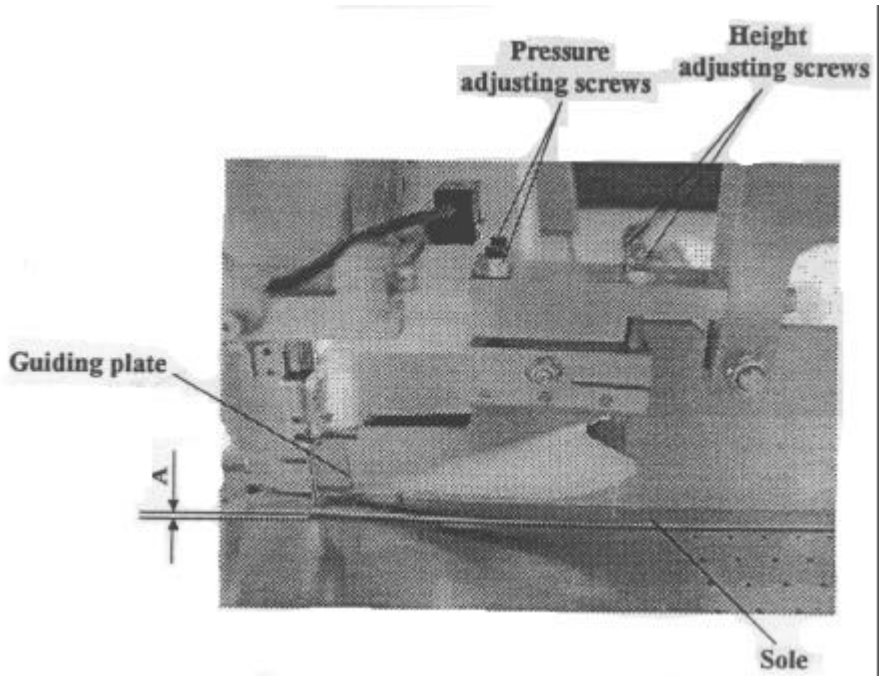
ADJUSTMENTS

Guiding Plate Height Stop

The maximum distance **(A)**, used when sewing very thick fabric, between the upper side of the sole and the lower side of the guiding plate is 0.5 mm.

To adjust:
Loosen the height adjusting screws and rotate in or out as needed.
Tighten the screws.



Guiding Plate Pressure

The spring pressure must safely lower both plates at any time.
Pressure too low may break a needle during the front tack.
Pressure too high will push the flap back at the seam start.

If incorrect:
Rotate both pressure adjusting screws to obtain the proper pressure at the guiding plates.

ADJUSTMENTS

Marking Lamps Parallel Setting

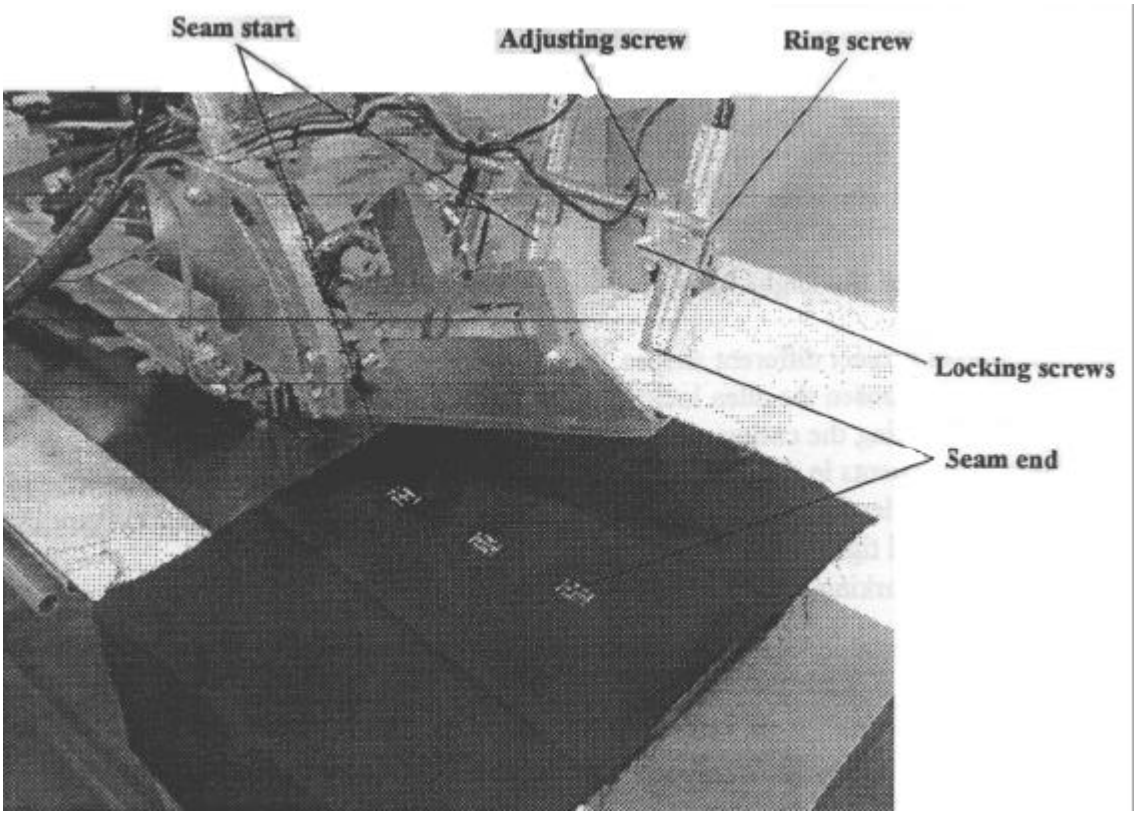
The middle axis of the marking lamp light must cross the middle cut exactly.

If incorrect:
Loosen the adjusting screw and the ring screw to position the marking lamp as needed.

Marking Lamps Distance

The first line of the marking lamp seam start must be 135 mm from the needle.
The distance between the first line of the marking lamp seam start and the last line of the marking lamp seam end must be 180 mm.
The distance between the fist line of the marking lamp seam start and the middle line of the third marking lamp must be 90 mm.

If incorrect:
Loosen the locking screws and position the marking lamps to obtain the correct distances.
Tighten the screws.



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ADJUSTMENTS

Marking Lamp Light Cross Size

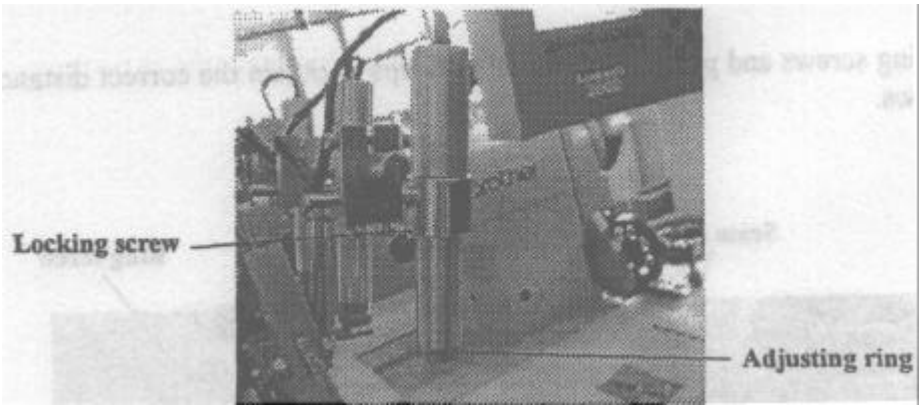
Loosen the locking screws and position the lamp vertically to adjust the light cross size.
Tighten the screws.

Focusing the Marking Lamps

Rotate the adjusting ring to obtain a sharp image of the light cross.

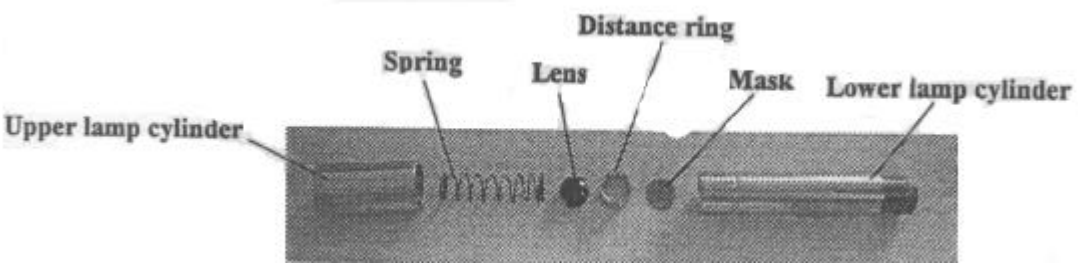
Marking Lamps Installation and Removal

Unplug both plugs from the top side of the marking lamp.
Loosen the locking screws and remove the lamp.
Tighten the screws.
Install the lamp in the reverse order.



Changing the Shape of the Light Mask

Different light masks project different shapes.
Remove the lamp and loosen the allen locking screw in the upper lamp cylinder.
Use caution when opening the casing, the lamp components are under spring pressure.
Insert the lamp components in order, distance ring, mask, lens, and spring into the lower lamp cylinder and ensure the lens is inserted with the vaulted side down into the cylinder. Press on the upper lamp cylinder and tighten the allen locking screw.
Install and adjust the marking lamp.



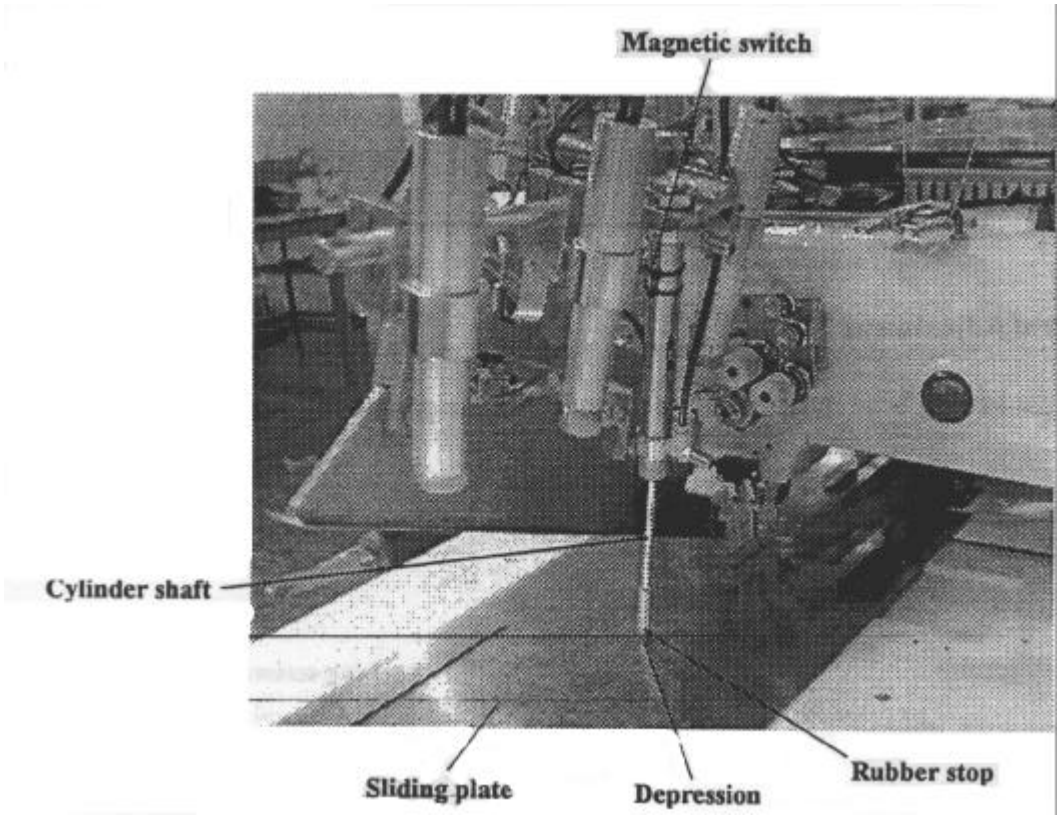
ADJUSTMENTS

Dart Stretcher Guiding Plate Installation

The cylinder lightly locks into the depression in the sliding plate.
The height of the rubber stop may be adjusted by loosening the rubber stop and rotating the cylinder shaft in or out as needed.
Install the thread case.

Dart Stretcher Cylinder Magnetic Switch

If the switch is not set correctly the error message Dart Stretcher Not Up will be displayed.
Adjust the magnetic switch to obtain a safe operation.



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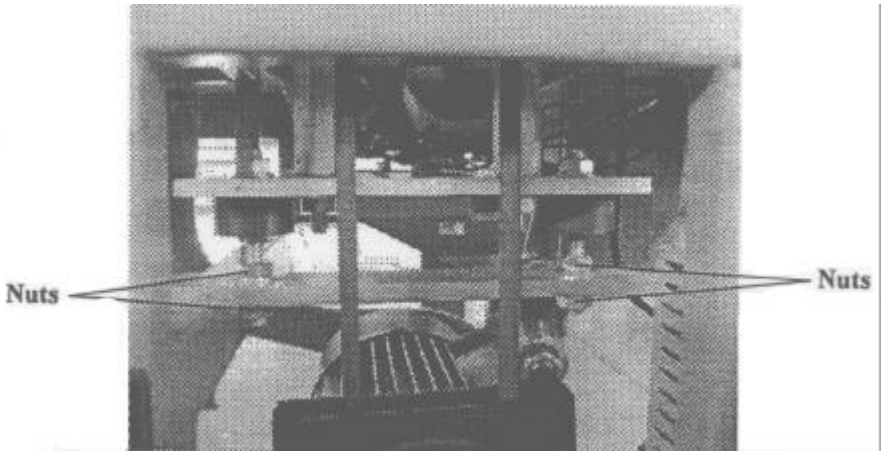
ADJUSTMENTS

Sewing Head Height

Note: The sewing head ground plate must be level with the upper edge of the working table.

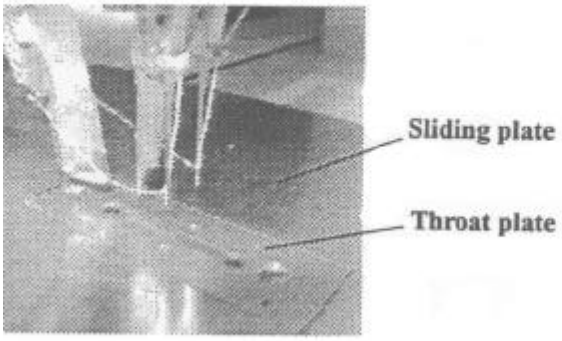
Loosen the nuts and rotate the nuts in or out as needed.
Tighten the nuts.

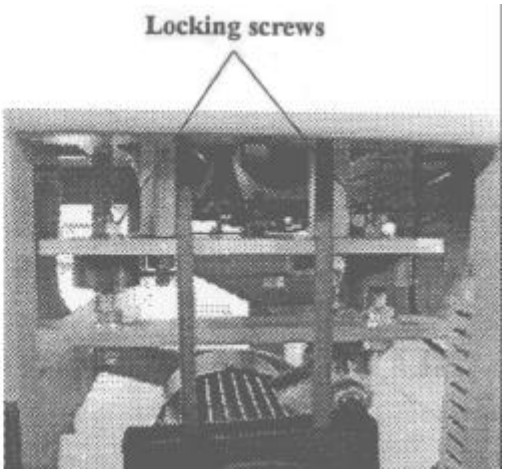


Sewing Head Lateral Adjustment

The throat plate of the sewing head must be centered exactly in the gap of the sliding plate.

If incorrect:
Loosen the mounting frame locking screws and level the sewing head.
Tighten the screws.





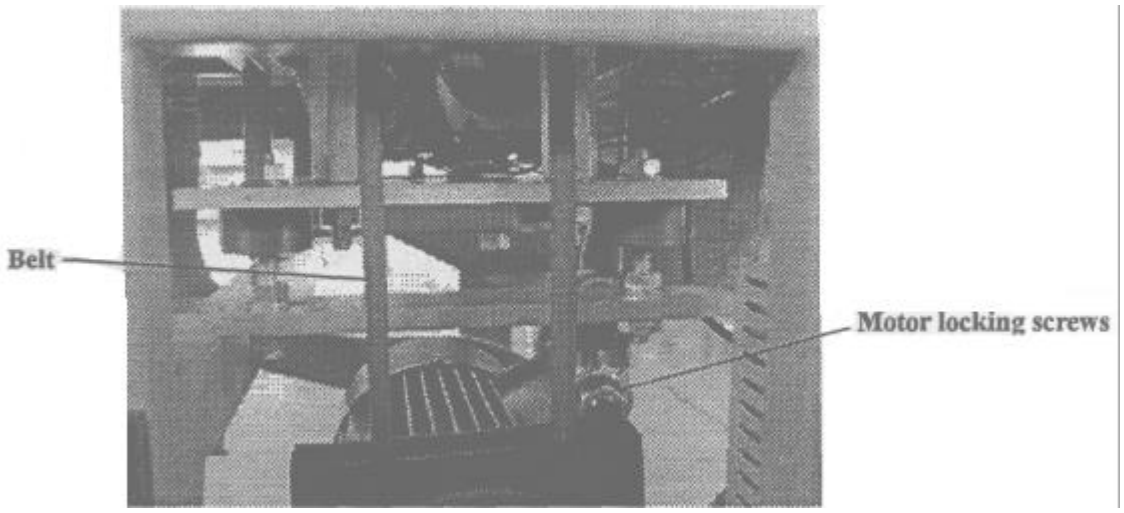
Sewing Motor Replacement

After installing the new motor,
Press the P key.
Press the F6 key.
Press the F3 key.
Press the F2 key.
Press the F4 key.
Press the P key and the display will read Motor Information.
Switch off the machine.
Wait ten minutes for the computer to program the new motor and switch on the machine.
The machine is now ready for operation.

Sewing Motor Drive Belt

Press on the middle of the belt, the belt must move in approximately 20 mm to confirm the proper amount of tension.

If incorrect:
Loosen the motor locking screws and move the motor vertically to obtain the correct amount of belt tension. T
ighten the screws.



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ADJUSTMENTS

Top Thread Cutter

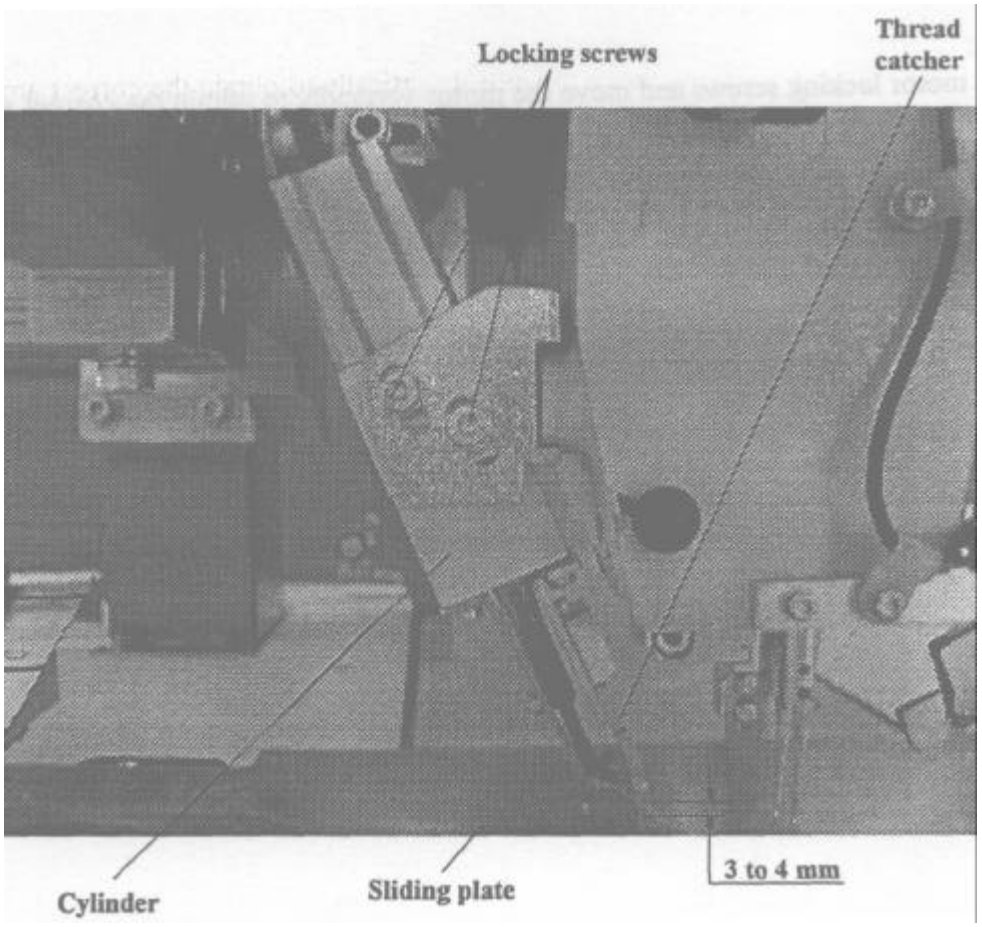
After sewing, the top threads are held by the top thread catcher as the clamp moves to the tab knife cutting position.
The threads are first clamped on the top side of the catcher and cut on the backside.
The thread clamp must hold the threads during the first stitches of the seam start to ensure good quality sewing at the seam start.

Top Thread Catcher Height

A distance of 3 to 4 mm, must be maintained between the sliding plate and the thread catcher, when the thread catcher cylinder is fully extended.

If incorrect:
Loosen the cylinder locking screws and position the cylinder to the proper height.
Tighten the screws.

Caution! Ensure the center knife does not contact the thread catcher.



ADJUSTMENTS

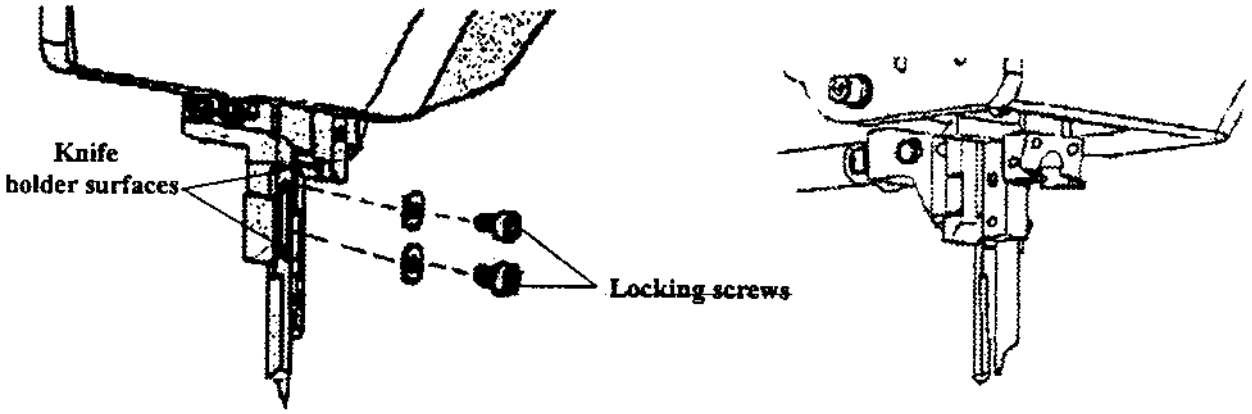
Center Knife Replacement

WARNING! Keep away from the needle and clamping area of the machine, after pressing push- button switches, components may move to the correct start sewing position.

WARNING! Press the **Program Stop** push-button switch.

WARNING! To avoid possible cuts, use extreme caution when working around the center knife.

With the machine in the correct start sewing position, remove the two locking screws and remove the center knife. Install the new center knife and push up fully against the knife holder surfaces. Install and tighten the center knife locking screws.



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ADJUSTMENTS

Switching On the Center Knife

The center knife is pushed down during the sewing process by cylinder Y3 and locked in position by a pin on cylinder Y49.

Switching Off the Center Knife

As soon as the seam end is sewn, the center knife switches o6; this action may be delayed.
The withdrawal of the cylinder Y49 locking pin allows the center knife to spring up.

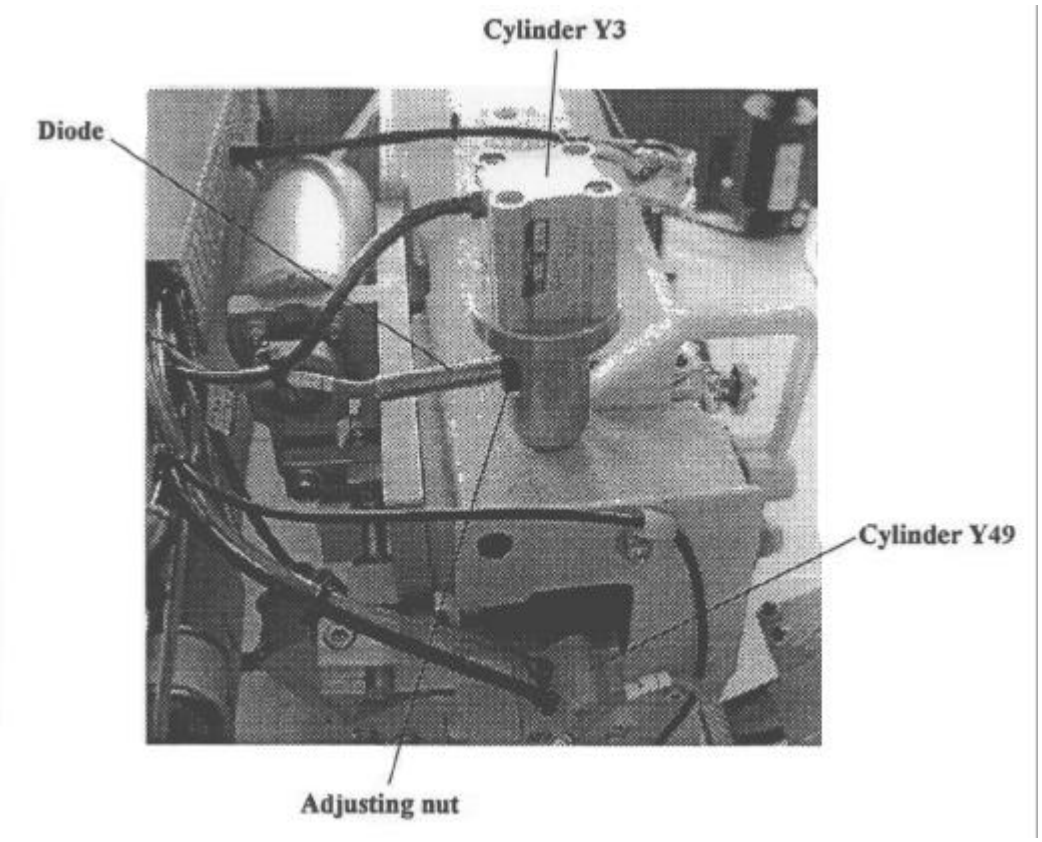
Center Knife Shaft Safety Indicator

When the center knife is switched off the diode must be activated.

Safety Indicator Height

The safety indicator must be 0.3 to 0.5 mm from the center knife shaft.

If incorrect:
Loosen the indicator adjusting nut and rotate the indicator until the indicator contacts the shaft.
Rotate the indicator out a half of a revolution and tighten the nut.



Center Knife Height

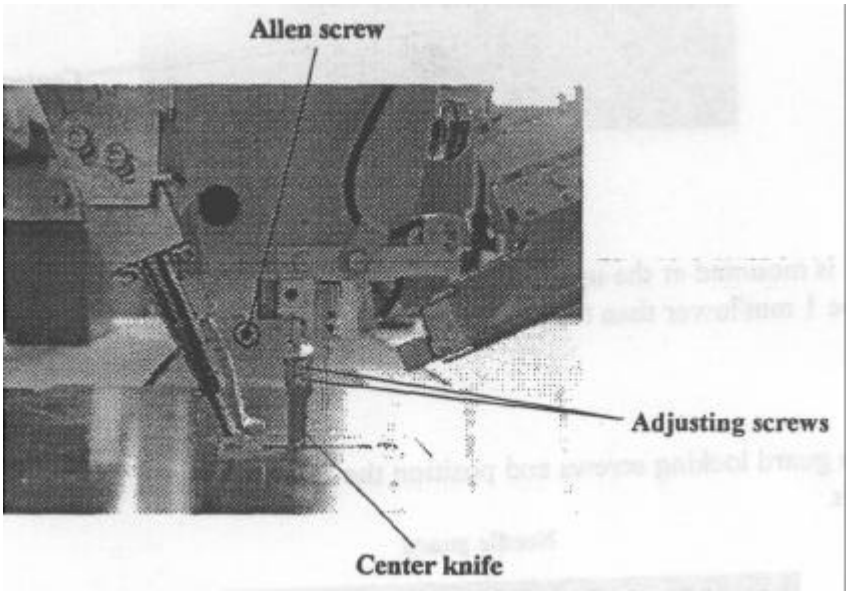
With the center knife on and in the lowest position, the front edge of the center knife must be 1 mm lower than the top side of the throat plate.

If incorrect:
Loosen both of the adjusting screws and correctly position the center knife.
Tighten the screws.

Center Knife Shearing

The center knife must be slightly folded against the stitch plate counter knife.

If incorrect:
Loosen the allen screw and rotate the holding hook on the center knife shaft until the required position is obtained.
Tighten the allen screw.



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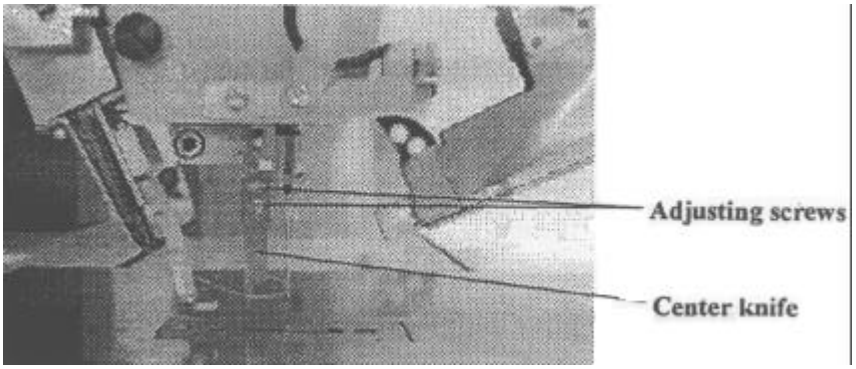
ADJUSTMENTS

Center Knife Lateral Adjustment

The center knife must be adjusted to obtain minimal pressure.

If incorrect:
Loosen the adjusting screws and adjust the center knife as needed.
Tighten the screws.

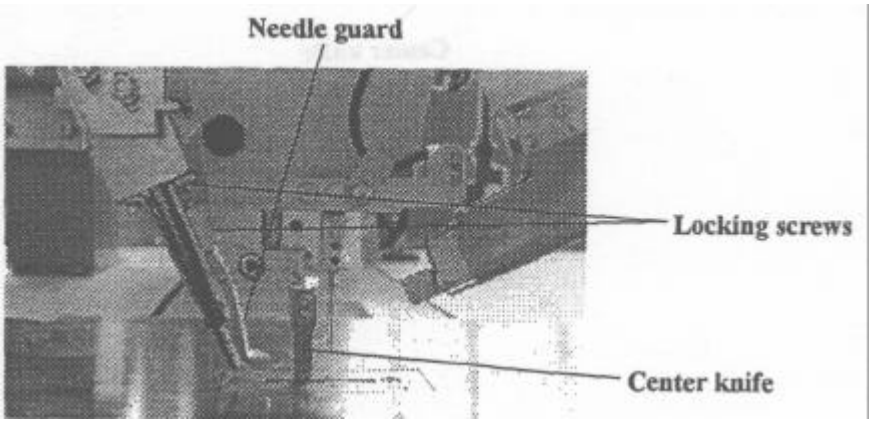
Caution! If the center knife contacts the counter knife with too much pressure, a machine sequence fault may occur. The spring cannot withdraw the knife after sewing into the start sewing position. The knife will become dull very quick, causing bad cuts, different seam lengths, improper tab cuts, and added seam width.



Needle Guard

The needle guard is mounted at the upper thread catcher holder.
The guard must be 1 mm lower than the top of the center knife and 1 to 1.5 mm away from the back of the knife.

If incorrect:
Loosen the needle guard locking screws and position the guard to obtain the proper setting.
Tighten the screws.

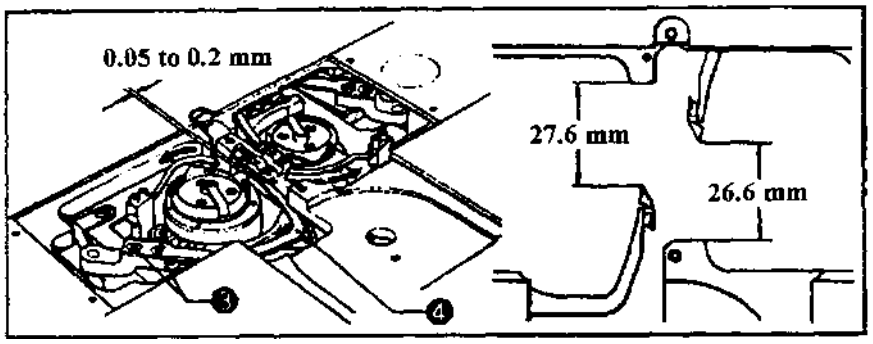


ADJUSTMENTS

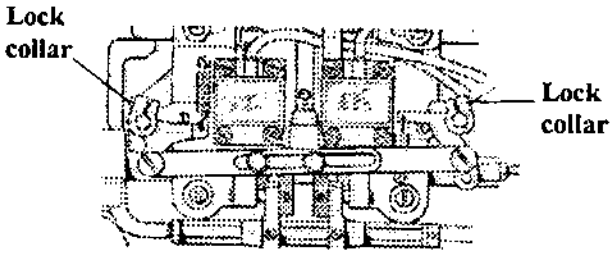
Bobbin Thread Catcher

WARNING! Press the **Program Stop** push-button switch.

Manually rotate the belt pulley until the spool capsule lever is positioned as far back as possible in the direction of the arrow.
Install the movable knife **(4)** temporarily with the screw **(3)** and press onto the top side of the knife **(4)** to move it.
Tighten the screw **(3)** when the distance between the top of the movable knife and the catcher holder is 0.05 to 0.2 mm.
Install the movable knife **(4)** at the top of the spool clamp spring.



If the 27.6 mm setting is incorrect:
Loosen the allen lock collar screws, correct the setting and tighten the collar screws.



Bobbin Thread Cutting Time

The time is programmable.
If the time is too early, the upper and bobbin threads will be caught and cut at the same time causing all the upper threads to be too short for the next sewing process.

Bobbin Thread Cutting Duration

The time is programmable.
If the time is too short, the bobbin threads wi11 not get caught.
If the time is too long, the main clamp might drive to the tab cut before the thread catcher is in the correct position and the will lengthen both threads remaining at the seam end.

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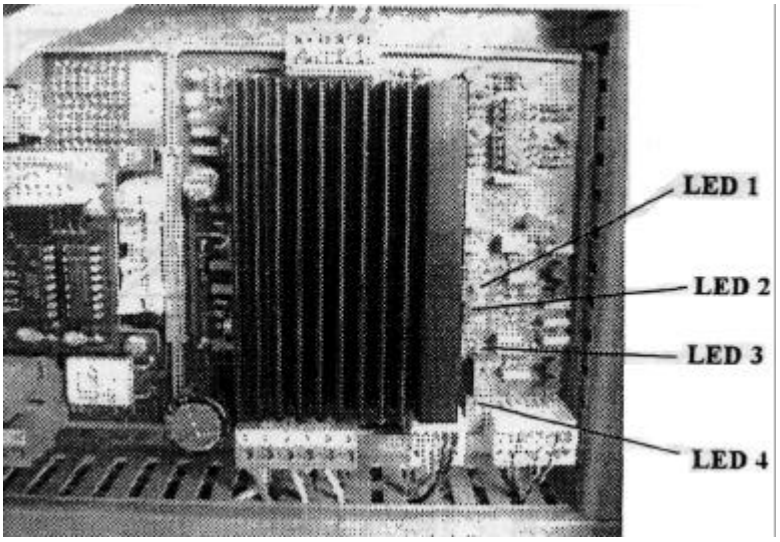
ADJUSTMENTS

Bobbin Detector Sensitivity

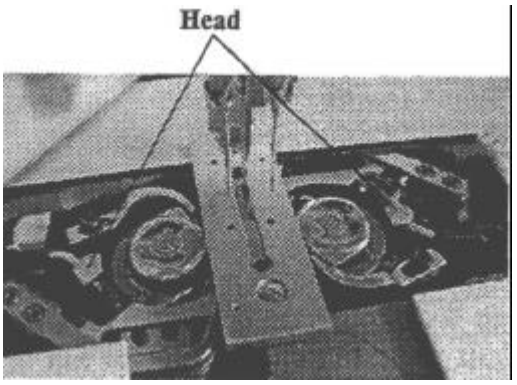
Insert full bobbins into the holder and close the sliding plate.
Activate the bobbin detector.
Open the electrical control panel door and rotate the potentiometer to the left until the LED 1 activates.
Rotate the potentiometer to the right until the LED does not activate during sewing.
Close the electrical control panel door.
LED and potentiometer functions:
1 and 3 right-hand spool 2 and 4 left-hand spool.

Note: During sewing with residual thread on the spool, the LEDs 1 and 2 must switch several times per revolution.



Bobbin Head Detector Cleaner

A bobbin detector air system is used to blow dirt away from the head.
Clean the head with a clean lint free cloth.



Welt Detection Lateral Adjustment

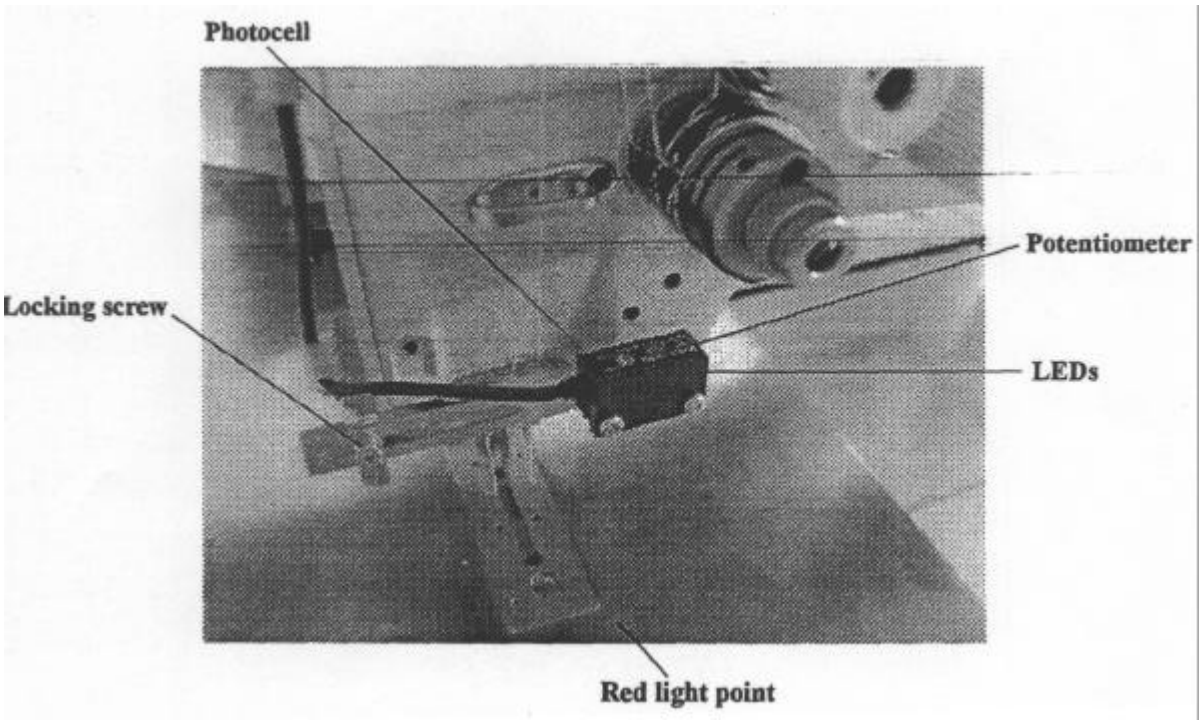
The photocell is equipped with a red light point which indicates the exact switching point on the brush blade.
The complete light point must hit the reflecting foil when the brush blade is driven out.

If incorrect:
Loosen the locking screw of the photocell and adjust as needed.
Tighten the screw.

Welt Detection Intensity

The intensity of the photocell may be adjusted using a potentiometer located at the side of the casing.
Move the clamp into the loading position and close the clamp. Insert the Rap and press the Program, Stop push-button.
Manually push the clamp under the photocell.
Adjust the intensity with the potentiometer until the red and green LEDs on the front of the photocell both activate from the foil reflection.
Push the clamp until the flap covers the reflecting foil.
Adjust the intensity with the potentiometer until just the green LED activates.

Note: After changing the intensity of the photocell, ensure the correct flap detection at the flap start and the flap end is maintained.



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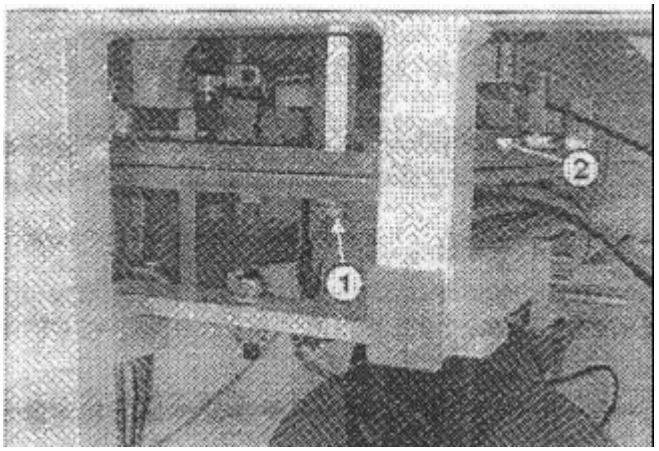
Pivoting the Sewing Head Up

WARNING! When performing maintenance with the sewing head raised, the support must be locked at the oil reservoir to prevent the head from falling down.

The sewing head may be raised up.
Remove the spooler, position actuator, belt guard, and push the sliding plate to the left.
Loosen the screw **(1)** and using the support **(2)** pivot the sewing head up.



Upper Thread Monitor

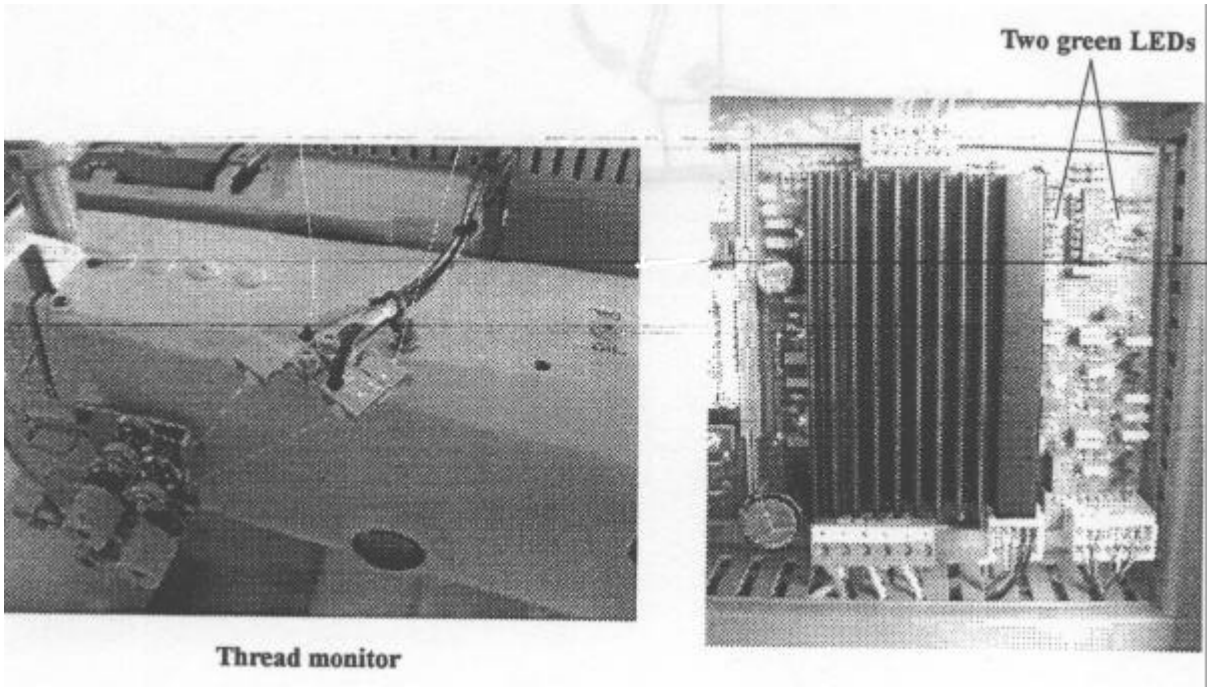
Both upper threads are monitored during sewing.
The threads must pass through the thread guides with a light tension.
Both of the green LEDs in the control box indicate the switching of the heads.

Switch On Time Duration

Decides when the thread monitor is activated.
Press the P key.
Press the F3 key.
Set the parameter to 19.
If the time is too ear1y, the tack will be incorrectly sewn.

Thread Monitor Filter

The set value determines after how many missing impulses of the thread monitor the control signals the thread break.
Press the P key.
Press the F3 key.
Select parameter 20.



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ADJUSTMENTS

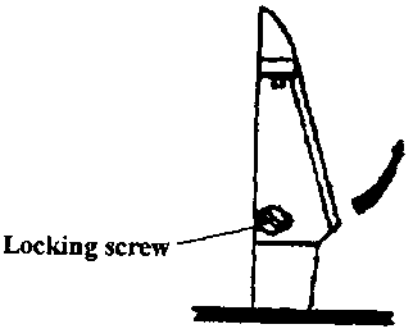
Tab Knife Replacement

WARNING! Keep away from the needle and clamping area of the machine, after pressing push- button switches, components may move to the correct start sewing position.

WARNING! Press the **Program Stop** push-button switch.

WARNING! To avoid possible cuts, use extreme caution when working around the center knife.

With the machine in the correct start sewing position, raise the tab knives.
Loosen the locking screw and remove the old knife.
Install the new tab knife and align the knife slot with the pin and push upward.
Ensure the rear edge of the tab knife is flush with the rear edge of the tab knife support.
Tighten the locking screw.
Lower the tab knives.



ADJUSTMENTS

Stationary Tab Knife at the Seam End

The correct distance for the seam end between the tab knife and the holder is 21 mm.

If incorrect:
Loosen both screws and position the tab knife to obtain the proper distance.
Tighten the screws.

Movable Tab Knife at the Seam Start

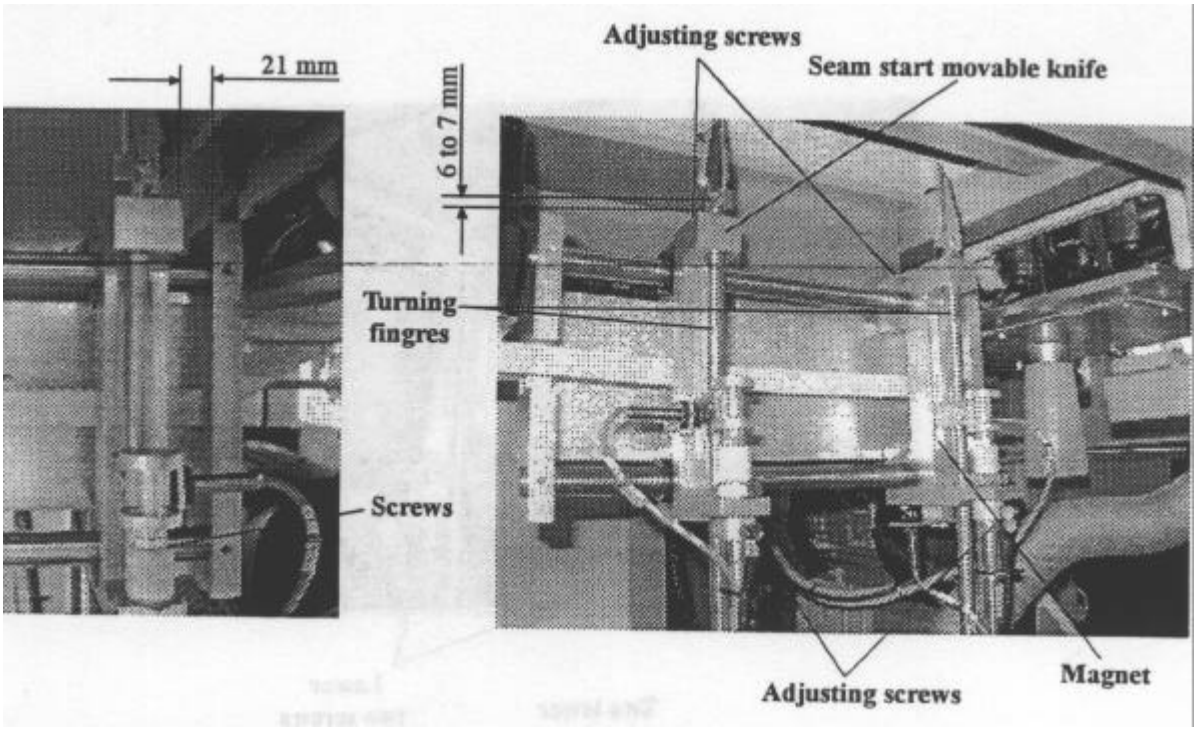
When the movabe knife at the seam start contacts the stationary tab knife, the correct distance between the holders is 3 mm.

If incorrect:
Rotate the magnet and screw in or out as needed to obtain the proper distance.

Tab Knife Height

The height of the tab knife turning fingers must be in the lowest position with the correct distance of 6 to 7 mm higher than the tab knife holder.

If incorrect:
Loosen the adjusting screws and position the turning fingers as needed.
Tighten the screws.



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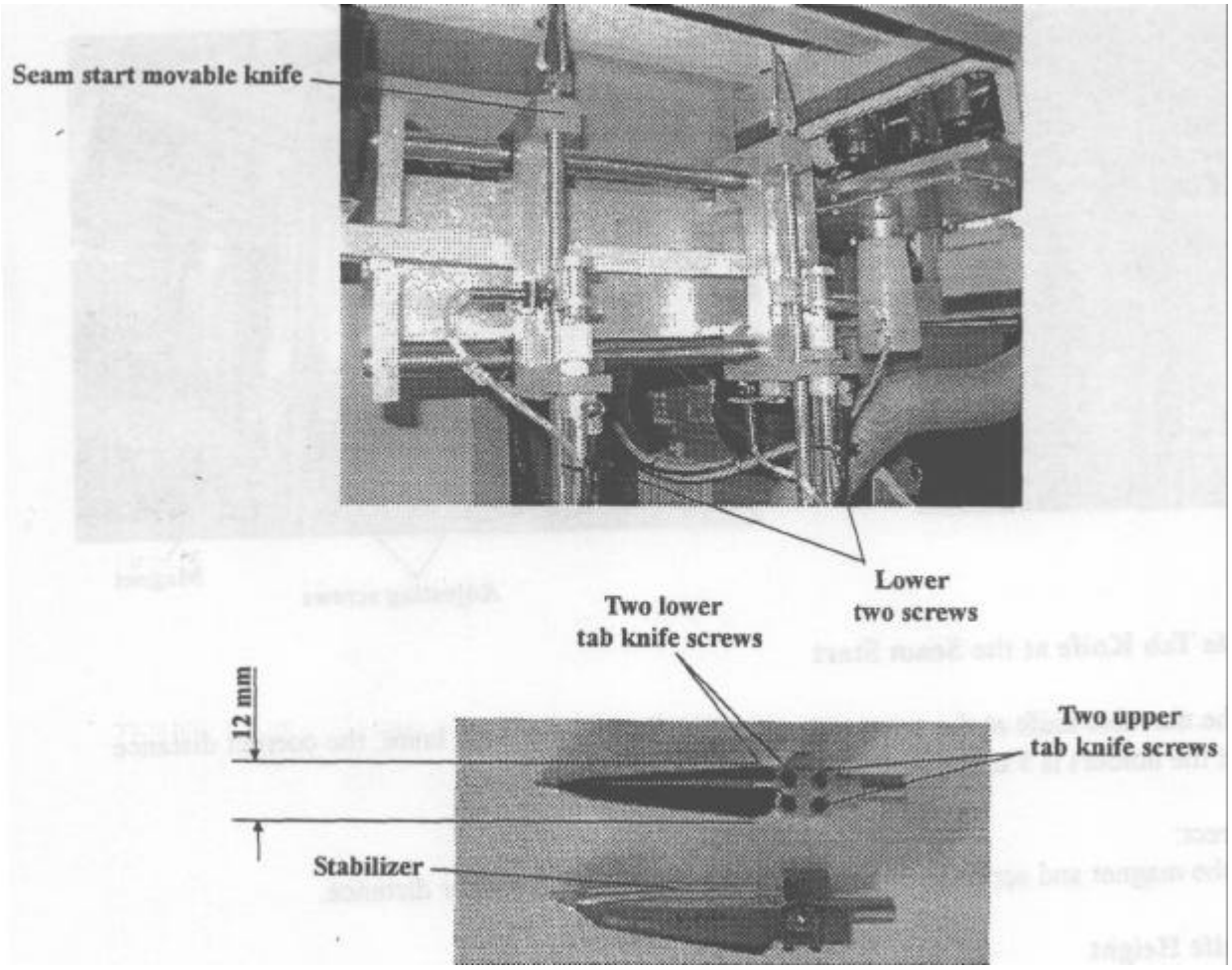
ADJUSTMENTS

Tab Knife Width

Rotate the lower two screws until the tab knives can be removed.
Using the two lower tab knife screws, adjust the tab knife width to a 12 mm seam distance which requires a setting of between 10 and 10.2 mm.
Rotate the two upper tab knife screws until both knives touch at the top.



Stabilizer

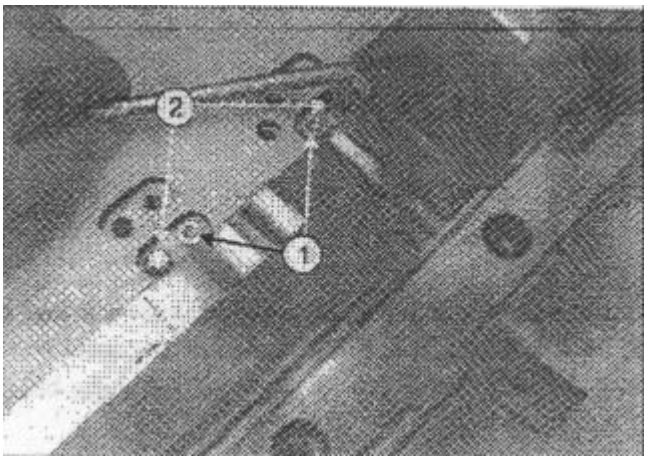
The stabilizer, located at the tab knives, prevents the piping and the flap from being damaged during cutting.

ADJUSTMENTS

Tab Knife Lateral Adjustment

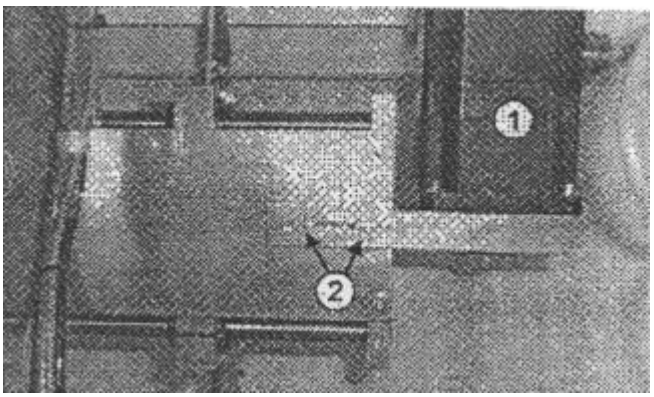
Bring the tab knives to the upper final position, output 54.
Measure the distance between the sliding plate and the tab knives.
Loosen both allen screws **(1)** and rotate the eccentric **(2)** to obtain a proper tab cut for the seam start.
Rotated to the right, the tab knife moves to the left at the seam start.
Rotating the eccentric for the tab knife for the seam end, rotating to the right causes the tab knife to move to the right.
Tighten the screws.

Note: After eccentric adjustments, sew some samples on scrap fabric, before continuing production.



Tab Knife Fine Length Adjustment

Press the F2 key.
Perform the seam start settings.
Press the- *F2* key again.
Perform the seam end settings.



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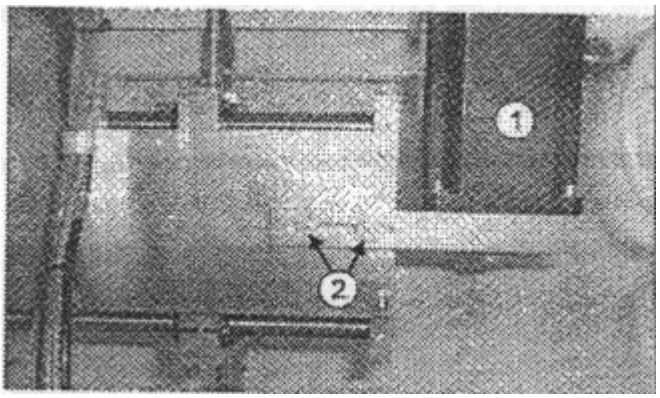
ADJUSTMENTS

Tab Knife Timing Belt Tension

Press down on the middle of the timing belt and the belt must lower approximately 2 to 3 mm.

If incorrect:
Loosen the tab knife motor screws **(2)** and position the motor **(1)** to obtain the proper distance.
Tighten the screws.

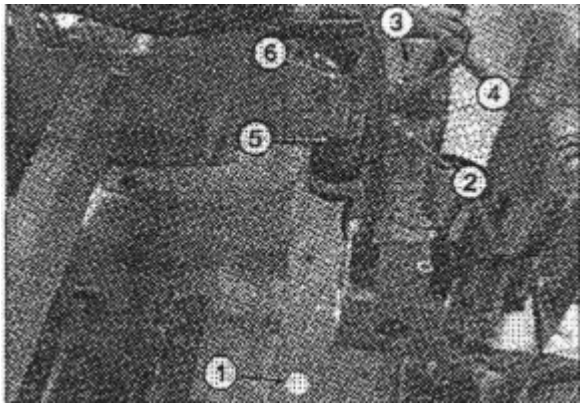


Automatic Carriage Return Inhibit Photocell

The beam of the automatic carriage return inhibit photocell **(5)** must strike the center of the reflecting foil **(1)** and must be located 70 mm away from the outer edge of the table.
The correct distance between the setting ring **(2)** of photocell **(5)** and the bearing shield **(3)** is 10 mm.

To adjust:
Loosen the locking screw **(4)** and push the photocell against the setting ring.
Tighten the locking screw.
To ensure the beam is in the center of the foil **(1)**, lay a piece of fabric on the table and push it from all directions over the foil. As soon as the photocell switches, the red diode deactivates.
Using the setting ring, move the photocell until the beam is correctly positioned.

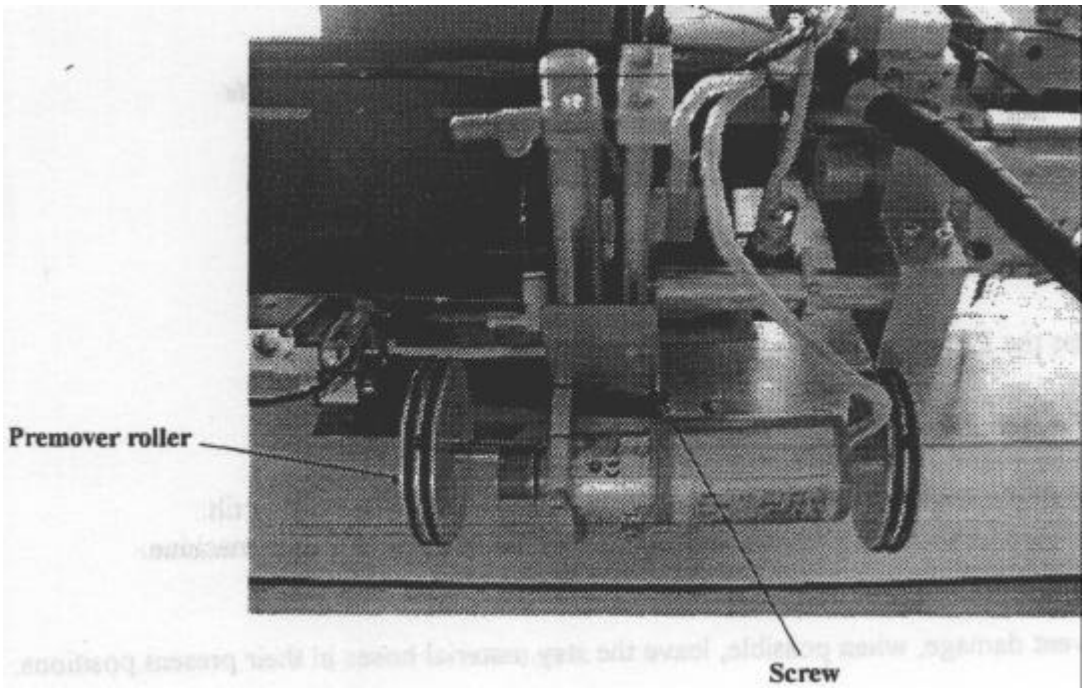
Note: In case of a automatic carriage return inhibit photocell breakdown, it may be deactivated in the machine control parameter 36.



Premover Roller Height

Lower the premover roller, output 23.
Ensure the screw has 1 mm of side to side movement.

If incorrect:
Loosen the counter nut at the screw and move it correspondingly.
Tighten the nut.



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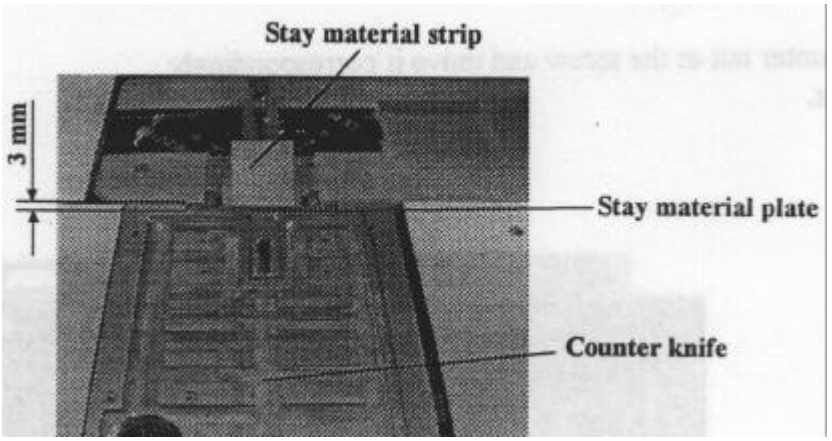
ADJUSTMENTS

Stay Material

The stay material strip must be seen after the sliding plate has been installed, but set back away from the front edge of the interfacing supply by 3 mm.
Stay material plate
Counter knife



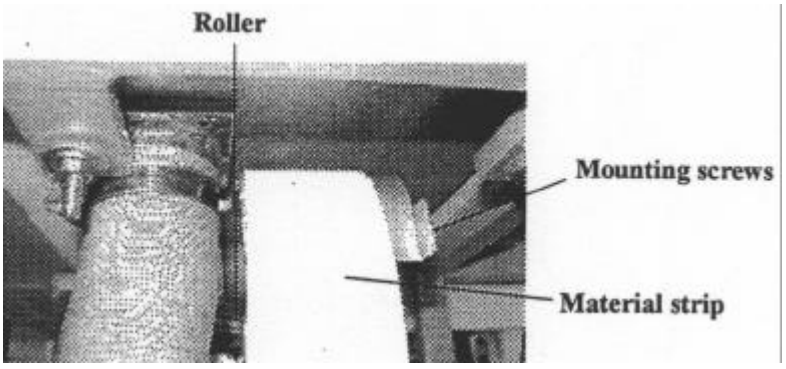
Stay Material Plate Removal

WARNING! Press the **Program Stop** push-button switch.

Pull out the stay material strip 6om the supply slot.
Loosen the mounting screw from the roller and remove by pulling to the left.
Loosen the three stay material plate mounting screws and ensure the plate will not tilt.
Loosen the table support mounting screws and swing it to the front or rear of the machine.
Remove the stay material plate.

Caution! To prevent damage, when possible, leave the stay material hoses in their present positions.

Note: Using the adjusting screw, adjust the height of the stay material plate even with the table height.



Stay Material Counter Knife Cutting Pressure

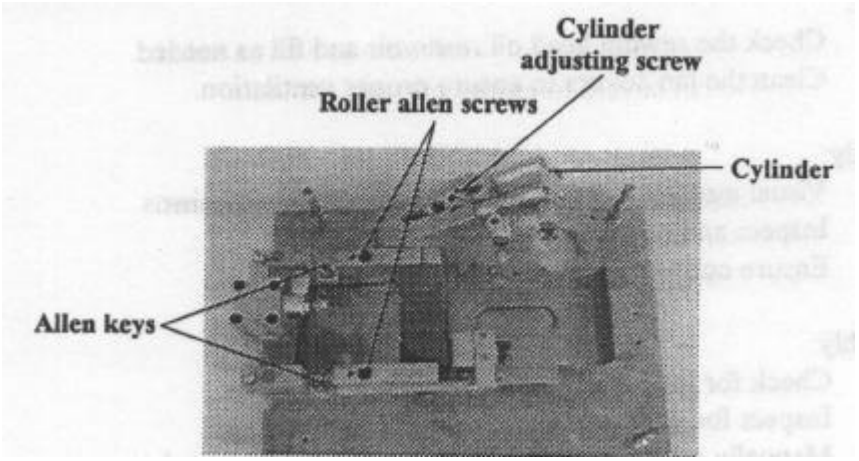
Loosen both allen keys and position the counter knife to obtain a full clean cut.
Tighten the allen keys.

Stay Material Supply

The stay material must be seen after the sliding plate is inserted.
Loosen the cylinder adjusting screw and pull the stay material through the slot in the plate.
Tighten the screw.

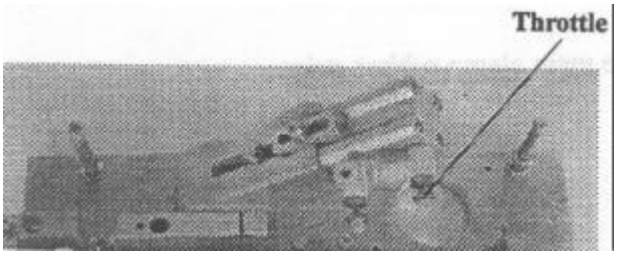
Stay Material Roller

The stay material roller must rotate freely.
Loosen one of the allen screws until the roller rotates freely.
Tighten the allen screw.



Stay Material Supply Speed

The stay material supply speed must be the same as the clamp speed.
Rotate the throttle to the right to reduce the supply speed.
Rotate the throttle to the left to increase the supply speed.



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PREVENTIVE MAINTENANCE

WARNING! Before performing any maintenance, switch the main machine power off to prevent accidental starting of the machine. Disconnect the air supply and release any stored energy.

To obtain the maximum quality product with the least amount of machine down time and cost, a good preventive maintenance program must be regularly enforced.

Routine cleaning and upkeep requires:
- oil
- vacuum cleaner
- brush

WARNING! Never clean using an air pressure hose instead of a vacuum. Dirt particles may contaminate moving parts causing possible machine damage or personal injury.

Periodic Maintenance Checklist:

Daily:
- Check the sewing head oil reservoir and fill as needed.
- Clean the fan covers to ensure proper ventilation.

Weekly:
- Visual inspection of internal and external mechanisms.
- Inspect and replace the knives, if needed.
- Ensure correct belt tensions.

Monthly:
- Check for loose fasteners and tighten.
- Inspect for worn and damaged parts and replace.
- Manually grease the carriage swing arm and timing belt pulleys.

6 Months:
- Perform complete machine parts inspection.
- Ensure all machine adjustments are accurate.
- Perform complete wiring inspection.
- Lubricate the lateral guide grease fittings.

1 Year:
- Replace the main clamp rubber strips.

SHIPPING

LW 3000 Packing Instructions

Disconnect all electrical power and air lines from the machine.

Place a foam block under the LCD display, wedge the block between the bottom of the display and the table top to keep the display from bouncing up and down during shipping.

Using a tie wrap, lock the clamp assembly swing arm in the raised position.

Remove the stacker from the machine and place it under the sewing head and secure it to the base of the machine.

Using a tie wrap, lock the carriage in the rear position, to the solenoid block.

Caution! Do not damage the sensor.

Using a tie wraps, lock the premover roller in the raised position.

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TROUBLESHOOTING

Adjustments Quick Reference List

WARNING! With the mains/emergency rotary stop switch in the off position, a hole is aligned at approximately the 10 o'clock position. A lock should be inserted into the switch hole and the key should be held my the mechanic, whenever major maintenance is performed.

Note: All settings are variable, according to fabric and thread variations and the amount of wear on individual machine parts.

Machine Code, 50190.

The air pressure gauge must indicate the required 6 bar, (87 PSI) air pressure.

The correct drive belt tension is 15 mm flex in the middle of the belt with 1 kg load.

The distance between the inner side of the clamp and the side edge at the patch guide on both the right and left sides is 1.5 mm.

The distance between the inner side of the clamp and the side of the patch guide is 1.5 mm.

In the loading position, the correct clamp height is 30 mm.

The distance between the side edge and the clamp edge is 1.5 mm.

Using the single piping patch guide, obtain 1.5 mm between the side edge and the clamp edge and ensure the clamp will only move to one side.

The correct distance between the patch guide sole and the inner side of the clamp is 1.5 mm.

Using the double patch guide, both inner rings have 1.5 mm between the clamp and the sole.

Using the single piping patch guide, both outside rings have 1.5 mm between the guide and the sole.

When changing from double to single piping, Use either adjusting ring to move together with the clamp arm to obtain the proper 1.5 mm distance between the double piping - flap and the clamp.

The correct distance between the brush blade moving in and out is 5 mm.

In the driven state, the brush blade must be parallel to and 0.5 mm away from the clamp edge.

The flap clamps must be parallel and 5 mm away from the inner side of the main clamp.

TROUBLESHOOTING

Adjustments Quick Reference List

WARNING! With the mains/emergency rotary stop switch in the off position, a hole is aligned at approximately the 10 o'clock position. A lock should be inserted into the switch hole and the key should be held my the mechanic, whenever major maintenance is performed.

Note: All settings are variable, according to fabric and thread variations and the amount of wear on individual machine parts.

Place the clamp assembly into the loading position, the initiator must deactivate.
The correct distance between the beam and the clamp assembly is 19 mm.

The distance between the stop and the clamp assembly is 3 mm.

The rubber stop, located beside the initiator seventeen (I 17), must be the correct distance of 3 mm between the stop and the clamp assembly.

Select output *24/25* in the machine controls.
The distance between the sliding plate and the patch guide sole must be adjusted to the fabric.
The initial distance is 2 mm.

The maximum distance, used when sewing very thick fabric, between the upper side of the sole and the lower side of the guiding plate is 0.5 mm.

The first line of the marking lamp seam start must be 135 mm from the needle.

The distance between the first line of the marking lamp seam start and the last line of the marking lamp seam end must be 180 mm.

The distance between the first line of the marking lamp seam start and the middle line of the third marking lamp must be 90 mm.
The distance of 3 to 4 mm, must be maintained between the sliding plate and the thread catcher, when the thread catcher cylinder is fully extended.

The safety indicator must be 0.3 to 0.5 mm from the center knife shaft.

With the center knife on and in the lowest position, the front edge of the center knife must be 1 mm lower than the top side of the stitch plate.

The guard must be 1 mm lower than the top of the center knife and 1 to 1.5 mm away from the back of the knife.

The distance between the top of the movable knife and the catcher holder is 0.05 to 0.2 mm.

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TROUBLESHOOTING

Adjustments Quick Reference List

WARNING! With the mains/emergency rotary stop switch in the off position, a hole is aligned at approximately the 10 o'clock position. A 1ock should be inserted into the switch hole and the key should be held my the mechanic, whenever major maintenance is performed.

Note: All settings are variable, according to fabric and thread variations and the amount of wear on individual machine parts.

The distance for the seam end between the tab knife and the holder is 21 mm.

When the movable knife, at the seam start, contacts the locked tab knife, the correct distance between the holders is 3 mm.

With the height of the tab knife turning fingers in the lowest position, the proper distance is 6 to 7 mm higher than the tab knife holder.

Tab knife width, a 12 mm seam distance requires a setting of between 10 and 10.2 mm.

Press down on the middle of the timing belt and the belt must lower approximately 2 to 3 mm.

The beam of the automatic carriage return inhibit photocell must strike the center of the reflecting foil and must be located 70 mm away from the outer edge of the table.

The correct distance between the photocell setting ring and the bearing shield is 10 mm

In the correct start sewing position, both knives fully to the right, the proper distance between the basic bodies of the tab knives is 3 mm.

The correct distance between the split needle pushing block and the top thread catcher cylinder is at least 0.5 mm.

The stay material strip must be seen after the sliding plate has been installed, but set back away from the front edge of the stay material supply by 3 mm.

Basic Parameter Default Procedure

Note: The default procedure will not work unless the machine program is locked up.

Press the P key
Press the F5 key
Press the F3 key
Disregard screen and enter the numbers 01
Press ENT key to reload the parameters

Sewing Parameter Default Procedure

Press the P key
Press the F5 key
Press the F4 key
Disregard screen and enter the numbers 01
Press ENT key to reload the parameters

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Error message displayed		Turning the main electrical power rotary switch off, turning the main electrical power on and releasing the Program Stop push-button will Reset the machine and sometimes clear an Error message. It is recommended before troubleshooting procedures are performed.
Error - 01 = Sewing program empty	Distances and values are not entered, or the program was deleted.	Manually enter the program values or copy from other programs or load from memory. Initial parameters.
Error - 02 = Pocket style deactivated	Pocket style number is not highlighted.	Press the ENT key to activate and highlight the pocket style.
Error - 05 = I/O communication error	Transfer error between controls and the I/O module. Faulty controls. Faulty I/O module.	Check the wire connections. Replace the controls. Replace the I/O module.
Error - 06 = Invalid path pulses	Incorrect clamp sledge position. Faulty adaptation module 9020020	Check the generator connection to the clamp motor. Check the adaptation module flat conductor plug 9020020 and 9020013. Replace the adaptation module 9020020.
Error - 07 = No path pulses from the clamp motor	If the clamp motor performs a small movement, the path pulses won´t process correctly. Motor fault. Faulty activation or power part of the clamp motor.	Check the clamp motor connection. Replace the clamp motor. Replace the adaptation module 9020020. Check the power card diodes. Perform motor diagnostic check of connection 9020020. Replace the adaptation module 9020020.

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TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Error 08 = Clamp has stopped prematurely.	Limit switch ES01 or ES 17 has incorrectly switched during the clamp movement.	Using the Test Program, check the distance counter. If deactive, replace the clamp motor or adaptation board 9020020. If counter is operating correctly, chect the switches and connections.
Error 09 = Clamp does not leave the stop switch.	The clamp sledge moves to the stop switch after activation, but does not change direction and leave the switch.	Using the Test Program, enter a reduced clamp motor speed and change direction using the arrow keys. If the motor does not change direction check the connection 9020020 and the power insert plug. If the motor changes direction check the stop switch ES17.
Error 10 = A work piece is loaded into the starting position.	The carriage return inhibit photocell ES27 is not activated.	Check the photocell and the film.
Error 11 = Activate vacuum before.	The vacuum is activated with mode parameter 32 = 01, but not switched on before the start of the sewing sequence.	Switch on the vacuum supply or change the vacuum mode.
Error 12 = Stay material end.	The stay material monitor, photocell 21 detects the end of the material.	Install a new roll of stay material, if the roll is not low, check the operation of the photocell.
Error 13 = Incorrect clamp position.	The difference between the required and actual position, impulses from the incremental Gerber, of the clamp edge is too large or the clamp edge is blocked.	Unblock the clamp edge and ensure the motor operates freely. Tighten the pinion and the transport belt.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Error 14 = Loading seam length is too long.	With the rear loading position selected, the seam length is longer than the distance to the rear loading point.	Incorrect program lengths.
Error 15 = Dart stretcher is not fully up.	The stretcher has not reached the top position, after switching off.	Check the cylinder gauge Y20 and the stop switch ES19.
Error 16 = Patch guide is not straight. (Not used)	The patch guide has not reached the middle position within the error amount of time.	Check the cylinder gauge Y15 and the stop switch ES05.
Error 17 = Parch guide is not fully up.	The patch guide has not reached the top position within the error amount of time.	Check the cylinder gauge Y24 and Y25 and the stop switches ES03 and ES04.
Error 18 = Patch guide is not fully down.	The patch guide has not reached the down position within the error amount of time.	Check the cylinder gauges Y24 and Y25 and the stop switches ES03 and ES04.
Error 19 = Patch guide is not slanted. (Not used)	The patch guide has not reached the slanted position, for thread picking, within the error amount of time.	Check the cylinder gauge Y15 and the stop switch ES06.
Error 20 = Knives are not together.	The tab knife has not reached the start position before sewing loading.	Check the stop switch ES20. Check the tab knife motor connection plug. Check the diodes on the power card. Using the motor diagnostics check all components.
Error 21 = Center knife is not fully up.	The center knife has not reached the top position, within the error amount of time.	Check the cylinder gauge Y03 and Y48 and the stop switch ES13.
Error 22 = The front tab knife is not fully down.	The front tab knife, seam end, has not reached the bottom position, within the error amount of time.	Check the cylinder gauge Y04 and the stop switch ES19.

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Error 23 = The rear tab knife is not fully down	The rear tab knife, seam start, has not reached the bottom position, within the error amount of time.	Check the cylinder gauge Y04 and the stop switch ES18.
Error 24 = The scissor is not up. (Continuous zipper only)	The scissor has not reached the top position, within the error amount of time.	Check the cylinder gauges Y21 and Y22 and the stop switch ES14.
Error 25 = The scissor is not down. (Zipper only)	The scissor could not reach the cutting position, within the error amount of time.	Check the cylinder gauges Y21 and Y22 and the stop switch ES15.
Error 26 = The turning fingers are not fully up.	The turning fingers, for flap turning, could not reached the top position, within the error amount of time.	Check the cylinder gauge Y59 and the stop switch ES41.
Error 27 = The turning fingers are not fully down.	The turning fingers have not reached the bottom position, within the error amount of time.	Check the cylinder gauge Y59 and the stop switches ES39 and ES40.

Error 28 = No impulses from the sewing motor. (No power signal)	Faulty motor.	Check the sewing motor and the synchromization of connection 9020013. Check the upper diodes at 9020013, the left diode must activate briefly when the needle is in the top position, the right diode indicates synchronized impulses, 512 impulses per revolution. Rotate the handwheel, if the diodes do not activate, check the power supply and replace the sewing motor if needed. If the diodes activate but the motor does not move before the error message, check the connection 9020020. If the connection is good, replace the motor. If the motor operates just before the error message, check the connection controls and the I/O module, replace if needed.
Error 29 = The sewing motor speed is too fast.	During the thread cutting, the sewing motor could not reach the cutting speed, within the error amount of time.	Replace the sewing motor or the synchronizer.
Error 30 = Incorrect thread cutting.	Incorrect sewing motor speed.	Reduce the cutting speed. Set an earlier cutting position. Replace the sewing motor. Replace the synchronizer.
Error 33 = The sewing motor will not stop.	The sewing motor could not stop, withing the error amount of time, after thread cutting.	Reduce the cutting speed. Set an earlier cutting position. replace the sewing motor. Replace the synchronizer.

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Error 43 = Photocell activated too early. (Too sensitive)	The automatic flap length detection with the photocell is activated, the flap edge is detected to early.	Program a shorter tolerance length. Switch off the detector, enter 250 mm seam length and check the photocell ES31 and the film. Reduce the photocell sensitivity.
Error 45 - 48 = I/O DAC I/O ULN I/O 485 I/O RES (Main drive board)	Internal hardware error during data transfer to adaptation board 9020020.	Replace 9020020.
Error 51 = Flap station will not pivot.	The flap station could not reach the active position within the error amount of time.	Check the cylinder gauge Y17 and the stop switch ES08.
Error 54 = Patch Guide	Pivoting patch guide assembly is not locked into the correct operating position. Sensor malfunction.	Push patch guide assembly into the correct operating position and insert the locking pin. Replace the sensor.

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DIAGNOSTICS

Loading Data From The EPROMs

The manufacturer basic and pocket style parameters may be loaded from the EPROMs, instead of the memory card, after a complete data loss.

Loading the Basic Parameters

Press the yellow P key.
Press the F5 function key.
Press the F3 function key.
Enter- the-number l.
Press the ENT key.

The basic parameters saved in the EPROM will be loaded and overwrite the parameters saved in the control panel. The pocket styles will be according to the manufacturer parameters.

Loading the Pocket Style Parameters

Press the yellow P key.
Press the F5 function key.
Press the F4 function key.
Enter the number l.
Press the ENT key.

The pocket style parameters saved in the EPROM will be loaded and overwrite the parameters saved in the control panel. The pocket styles will be according to the manufacturer parameters.

Test Programs and Diagnostics

Press the yellow P key.
Press the F6 function key.
Press the F 1 function key.
Execute the following actions necessary.
All the inputs and their numbers will be displayed in the upper half of the display.
The inputs highlighted are active.
All the outputs and their numbers will be displayed in the lower half of the display.
The outputs highlighted are active.
Using the arrow keys, select an output and activate and deactivate the output by pressing the ENT key. Pressing and holding the ENT key longer than 2 seconds causes the output to change from activated to deactivated until the ENT key is pressed for a short period of time.
Press the yellow P key to end the test.

Inputs Pocket Welting Machine LW 3000 Sensors and Microswitches (Metal Sensing)

Standard Equipment

Input	S No	Description	Type		Connected	Remarks
01	01	Carriage forward	Initiator	Opened	X24 Pin 02	
02	02	Patch guide down				
04	04	Patch guide fully down	Initiator	Closed	X24 Pin 05	
13	13	Center knife up	Initiator	Closed	X24 Pin 06	
17	17	Carriage rear	Initiator	Opened	X24 Pin 03	carriage sensor
18	18	Stationary tab knife down	Initiator	Closed	X24 Pin 07	reverse signal
19	19	Movable tab knife down	Initiator	Closed	X24 Pin 08	
20	20	Tab knives return	Initiator	Closed	X24 Pin 09	
22	22	Right foot switch	Foot sw.	Closed	X24 Pin 01	
23	23	Left foot switch				

Options

03	03	Patch guide up	Initiator	Closed	X24 Pin 04	
09	09	Dart stretcher up	Initiator	Closed	X27 Pin 20	
10	10	Clamp quick adjustment	Initiator	Closed	X27 Pin 21	
14	14	Scissor up (home position)	Initiator	Closed	X27 Pin 22	folder safety sw
15	15	Scissor down (cut postion)	Initiator	Closed	X27 Pin 23	
21	21	Stay end	Photocell	Photocell	X27 Pin 24	
23	23	Foot switch vacuum	Foot sw.	Closed	X24 Pin 12	
26	26	Switch reset	Foot sw.	Closed	X24 Pin 13	
27	27	Clamp stop photocell	Photocell	Photocell	X24 Pin 11	
28	31	Photocell left	Photocell	Photocell	X24 Pin 10	
	32	Switching single welt jacket/trouser	Initiator	Closed	direct	
32	33	Photocell right	Photocell	Photocell	X27 Pin 17	
35	35	Thread monitor F & P	Photocell		X27 Pin 25	
	36	Zipper transport	Micro.sw.	Closed	direct	
38	38	Bobbin detector	Photocell	Photocell	X27 Pin 29	
39	39	Pocket welt turn dev. down seam start	Initiator	Closed	X27 Pin 30	
40	40	Pocket welt turn dev. down seam end	Initiator	Closed	X27 Pin 31	
41	41	Pocket welt turn dev. up seam start	Initiator	Closed	X27 Pin 30	

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DIAGNOSTICS

Outputs Pocket Welting Machine LW 3000 Selenoid Valves

Note: Brown wire 24 V, White wire neutral.

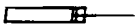
Standard Equipment

No.	Description	Valve No.	Cylinder No.	Cylinder State	Location
01	Bobbin thread Cutter	Y01	01		X25 Pin 01
03	Center knife motion	Y03	03		X26 Pin 26
04	Tab knife up	Y04	04/04.1		X25 Pin 16
11	Tension release	Y11	11		X25 Pin 02
24	Patch Guide upward	Y24	24	No air pressure	X25 Pin 07
24	Patch Guide downward	Y25	25	No air pressure	X25 Pin 08
	Clamp quick adjustment	Y32	32		
33	Pocket pouch clamp right	Y33	33		X26 Pin 20
34	Brush blade right	Y34	34		X25 Pin 13
35	Brush blade left	Y35	35		X25 Pin 14
36	Pocket pouch clamp left	Y36	36		X26 Pin 19
38	Both main clamps open	Y38	39/40	No air pressure	X25 Pin 04
39	Clamp right	Y39	39	No air pressure	X25 Pin 05
40	Clamp left	Y40	40	No air pressure	X25 Pin 06
41	Top thread catcher (pickup)	Y41	41		25 Pin 15

Options

12	Tab knife middle stop	Y12			X26 Pin 21
05	Tab knife left seam end	Y05	05.1		X25 Pin 11
06	Tab knife left seam start	Y06	06		X25 Pin 12
53	Needle switch off right	Y53	53	No air pressure	X26 Pin 22
54	Needle switch off left	Y54	54	No air pressure	X26 Pin 23
09	Stay cutting knife	Y09	9		X26 Pin 31
51	Stay release	Y51	51		X26 Pin 30
60	Stay feed motion	Y62	60		X26 Pin 29
13	Stacker	Y13			X26 Pin 18
23	Take off roller	Y23	23		X26 Pin 17
20	Dart stretcher	Y20	20		X26 Pin 25
21	Scissor swing in	Y21	21		X26 Pin 28
22	Scissor cut	Y22	22		X26 Pin 27
10	Vacuum	Y10	10		X25 Pin 10
42	Piping blowing system	Y42			X25 Pin 09
	Clamp quick adj. trouser / jacket	Y50	50		
01	Blowing bobbin detector	Y55	56		X25 Pin 01

Output Pocket Welting Machine LW 3000 Selenoid Valves

No.	Description	Valve No.	Cylinder No.	State	Location
Options					
02	Main clamp laterally	Y02	2		X35 Pin 14
56	Pocketwelt turner bed side	Y56	56		X26 Pin 22
57	Pocket turner outer seam st.	Y57	57		X25 Pin 12
58	Pocketwelt turner outer seam e.	Y58	58		X25 Pin 11
59	Pocketwelt turner up	Y59	59		X26 Pin 11
31	Zipper finger move	Y60	60		X26 Pin 23
32	Zipper finger up/down	Y61			X26 Pin 24
20	Needle strip big	Y08	08/08.1		X26 Pin 25

Output Diagnostics

Select outpupt number 04.
Press the ENT key to raise and lower the tab knives to energize selenoids 18 and 19 and perform the correct height settings.
Press the ENT key to exit.

Select output number 13.
Press the ENT key to continuously operate the stacker.
Press the ENT key to stop the stacker.

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DIAGNOSTICS

Service Tests

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.

Note: The next step includes 6 submenu options used to check individual system components.

Caution! Tests are to be performed by qualified personnel, otherwise all machine data may be destroyed.

Sewing Motor

Caution! The loading station must be pivoted out and all the threads and bobbins must be removed from the sewing head.

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.
Press the F2 function key.
The submenu includes 4 sewing motor tests, press the corresponding F key to access each test.

Fl Select Sewing Motor

The actual value is compared to the required number of the sewing motor revolutions.
After opening the test, use the number keys to enter the required revolutions.
Press the ENT key, the sewing head starts and the actual revolutions are displayed.
Press the P key to end the test.

F2 Thread Cutter
Caution! The loading station must be pivoted out and all the threads and bobbins must be removed from the sewing head.

Press the 0 (zero) key, the sewing head will operate for a short time.
The needle is correctly positioned and the thread cutter activates, basic parameter 36: TC duration.

Service Tests

Sewing Motor

F3 Position Actuator

Caution! The loading station must be pivoted out and all the threads and bobbins must be removed from the sewing head

Displays the handwheel increments and position. Rotating the handwheel to the left or right counts the increments, the required value is 520 increments per revolution.
To check the needle up position:
Press the 0 (zero) key and the needle will move to the correct position.
The display will read 510 increments plus or minus 1 increment.

F4 Sewing Motor

Transfers the sewing motor parameters from the control box.

Note: After changing the control or pocket style motor the F4 function must be performed.

Press F4.
Press the ENT key, the data will automatically transfer.
Using the mains rotary switch, switch off the main machine power.
Switch on the main machine power and the data will be loaded automatically.

Clamp Motor

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.
Press the F3 function key.
The submenu includes 3 clamp motor tests, press the corresponding F key to access each test.

F1 Clamp Motor Path Steps

Measures the path steps of the clamp path.

F2 Select Clamp Motor

Caution! This test is to be performed by qualified personnel only.

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DIAGNOSTICS

Service Tests

Clamp Motor

F3 Clamp Motor Long Term Test

Note: The main clamp must be in the starting position, clamp on initiator 17.

Press the F3 key.
Press the ENT key, the main clamp must move back and forth in high speed and change direction at the same position.

Tab Knife Motor

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.
Press the F4 function key.
The submenu includes 2 tab knife motor tests, press the corresponding F key to access each test.

F1 Select Tab Knife Motor

Caution! This test is to be performed by qualified personnel only.

F2 Tab Knife Motor Long Term Test

The tab knife must be in the correct starting position, on indicator 20.
Press the F2 key.
Press the ENT key, the tab knife moves back and forth with consistent speed and changes direction at the same location.
Using the mains rotary switch, switch off the main machine power to end the test.

Center Knife Motor

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.
Press the F5 function key.
Enter a value between 01 and 99 to check the speed of the center knife motor.
Press the ENT key to switch off the motor.
To switch the center knife motor on, Press the 0 (zero) key.
To stop the center knife, Press the ENT key.
Press the P key to end the test.

Service Tests

Premover Roller

Press the yellow P key.
Press the F6 function key.
Press the F3 function key.
Press the F6 function key.
Enter a value between 01 and 99 to check the speed of the final roller.
Press the ENT key to switch off the motor.
Press the P key to end the test.

Service Code

Two codes are available to lock out all or part of the machine data.

Machine Code

Required to copy pocket style parameters, basic parameters, or pocket style programs and to select a part of the diagnostic programs.
The code number is 50190.
If the code is deactivated due to safety concerns, enter 00000.

Safety Code

Required for the execution of most of the diagnostic functions. Must be obtained from the manufacturer.
The machine number is required.

Four Memory Cards

Caution! Four memory cards may be obtained from the manufacturer, these cards can restore manufacturer settings to the machine. Strict control of the cards must be maintained. All customer information is deleted when information is downloaded from any of these cards into the machine memory.

Sewing Parameters
Basic Parameters
Downloading parameters from one machine to another machine.
Elka Motor

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DIAGNOSTICS

Preset Sewing Programs

Pocket styles stored in the machine memory by the manufacturer:

Pocket Style No.	Pocket Styles
01 - 99	Jacket outside pocket, with or without flap.
10 - 19	Jacket outside pocket, slanted pocket or slanted flap.
20 - 29	Inside pocket, lined pocket with pelon.
30 - 39	Patns pocket, pants front or back pocket with or without a flap.
40 - 49	Pocket with zipper

Pocket Style Memory Location

Pocket programs stored in the machine memory by the manufacturer.

M01 Jacket, M02 Pants Side Pocket

Memory Location		Pocket Style
M01	01	Flap pocket, jacket right panel.
	02	Flap pocket, jacket left panel.
	03	Welt pocket, jacket right panel.
	04	Welt pocket, jacket left panel.
M02	10	Slanted pocket with flap, right panel.
	11	Slanted pocket with flap, left panel.
	12	Slanted welt pocket, right panel.
	13	Slanted welt pocket, left panel.
M03	20	Jacket inside pocket with pelon, pocket length 100 mm.
	21	Jacket inside pocket with pelon, pocket length 100 mm.
	22	Jacket inside pocket with pelon, pocket length 150 mm.
	23	Jacket inside pocket with pelon, pocket length 150 mm.
M04	30	Pants back pocket.
	31	Pants front pocket.
	32	Pants back pocket with flap.
	33	Pants back pocket with button loop.
M05	40	Pocket with zipper.
	41	Pants back pocket with zipper.
M06	16	Jacket breast welt pocket.