AMF® REECE

Better Ideas, Better Made

S100

EYELET BUTTONHOLE MACHINE

PARTS AND SERVICE MANUAL

PART NUMBER 97.0100.0.000

AMF is trademark of AMF Group,

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LIMITED WARRANTY ON NEW AMF REECE EQUIPMENT

Warranty provisions:

A ninety (90) day limited service labor warranty to correct defects in installation, workmanship, or material without charge for labor. This portion of the warranty applies to machines sold as "installed" only.

A one (1) year limited material warranty on major component parts to replace materials with defects. Any new part believed defective must be returned freight prepaid to AMF Reece, Inc. for inspection. If, upon inspection, the part or material is determined to be defective, AMF Reece, Inc. will replace it without charge to the customer for parts or material.

Service labor warranty period shall begin on the completed installation date. Material warranty shall begin on the date the equipment is shipped from AFM Reece, Inc.

Exclusions:

Excluded from both service labor warranty and material warranty are: (1) Consumable parts which would be considered normally replaceable in day-to-day operations. These include parts such as needles, knives, loopers and spreaders. (2) Normal adjustment and routine maintenance. This is the sole responsibility of the customer. (3) Cleaning and lubrication of equipment. (4) Parts found to be altered, broken or damaged due to neglect or improper installation or application. (5) Damage caused by the use of non-Genuine AMF Reece parts. (6) Shipping or delivery charges.

There is no service labor warranty for machines sold as "uninstalled".

Equipment installed without the assistance of a certified technician (either an AMF Reece Employee, a Certified Contractor, or that of an Authorized Distributor) will have the limited material warranty only. Only the defective material will be covered. Any charges associated with the use of an AMF Reece Technician or that of a Distributor to replace the defective part will be the customer's responsibility.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, and FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY SELLER OR SELLER'S AGENT IN CONNECTION HEREWITH. UNDER NO CIRCUMSTANCES SHALL SELLER OR SELLER'S AGENT BE LIABLE FOR LOSS OF PROFITS OR ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES OR DAMAGES ARISING OUT OF DEFECTS IN OR FAILURE OF THE EQUIPMENT OR ANY PART THEREOF.

WHAT TO DO IF THERE IS A QUESTION REGARDING WARRANTY

If a machine is purchased through an authorized AMF Reece, Inc. distributor, warranty questions should be first directed to that distributor. However, the satisfaction and goodwill of our customers are of primary concern to AMF Reece, Inc. In the event that a warranty matter is not handled to your satisfaction, please contact the appropriate AMF Reece office:

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8080 AMF Drive
Mechanicsville, Virginia 23111
Service: 800-367-7332 (USA only)
(804) 559-5242
(Worldwide)
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Istanbul, Turkey
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AMF Reece UK
Leeds, England
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Fax: 44 113 275-4116

18-May-98

EC - DECLARATION OF CONFORMITY

in the sense of the EU instruction for machines No. 89/392/EEC, Annex IIA

We AMF Reece CR, a.s. Prostějov
Prostějov Czech republic 796 25

declare under our sole responsibility that the product:

Machine designation: EYELET BUTTONHOLE MACHINE WITH CHAIN STITCH AND WITH LOWER GIMP
Machine type: S - 100
Year of design: 1997
Year of manufacture: 2000
Serial Number: 2779

to which this declaration relates is in conformity with the following standards or other normative documents:

Pertinent EU Instructions:
EC - Directive for machines (89/392/EEC) as amended by the 91/368/EEC, 93/44/EEC, 93/68/EEC, 73/23/EEC

EC - Directive on electromagnetic compatibility (89/336/EEC) as amended by the 96/31/EEC

Used harmonised standards and other in particular: EN 292 - 1, EN 292 - 2, EN 294, EN 349, EN 60204 - 1, IEC 204 - 3 - 1

Surname and name Ing. Konečný Antonín

Department director AMF Reece CR, a.s. Prostějov

Prostějov 12.5.1997
(Place and date of issue)

(Signature or equivalent marking of authorised person)

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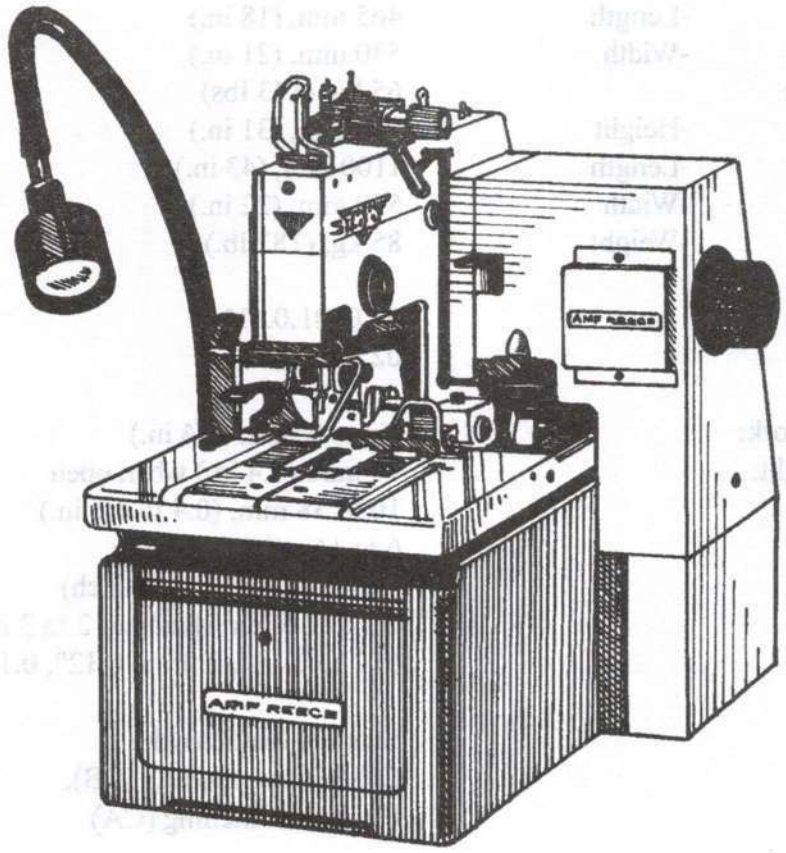
INTRODUCTION

S100 Eyelet Buttonhole Machine

The S100 eyelet buttonhole machine, is a versatile two thread chain stitch sewing machine. The regular eye, Cut Before/Cut After, adjustable fly machine may be used for suits, jeans, slacks, and a wide variety of sewing applications.

The S100 incorporates a revolutionary stop motion to improve quality by eliminating double stops defects and extending the life and reliability of the machine with momentum absorbing roller activation.
Seventeen pattern cams, included with the S100, allow quick changes in buttonhole size, eye style (eye, no eye), and end finishing (open end, or fly bar).
The pneumatic cord trim produces consistent trimming with simplified adjustments.
The round eye incorporates single or double thread stitching with Cut Before/Cut After capabilities.
The S100 is capable of speeds to 1,750 spm.
The semiautomatic lubrication system uses drip oil wicks to lubricate the critical machine areas.
To prevent machine damage, an oil level sight gauge warns of an insufficient amount of oil.
Simple two lever Cut Before/Cut After engagement.



SPECIFICATIONS

Description:		Eyelet Buttonhole Sewing Machine
Machine Type:		17.0000.0.030A - AF-CB/CA-R-RE 17.0000.0.030J - AF-CB/CA-R-RE (Jeans) 17.0000.0.030T - AF-CB/CA-R-RE (Tailored) 17.0000.0.033 - 16 mm Cord Trim 17.0000.0.035 - 19 mm Cord Trim 17.0000.0.036 - 22 mm Cord Trim 17.0000.0.052 - Round Eye (Small Eye) 17.0000.0.053 - Round Eye (Large Eye)
Machine Speed:		1,750 stitches per minute
Power Input:		350 W, 1/3 HP
Electrical Requirements:		110V 60Hz 1 phase 220V 50Hz 1 phase 220V 60Hz 3 phase 380V 50Hz 3 phase
Pneumatics:		5.6 bar, (80 psi)
Machine Head:	-Height	500 mm, (20 in.)
	-Length	465 mm, (18 in.)
	-Width	530 mm, (21 in.)
Machine Head Weight:		65 kg, (143 lbs)
Machine Stand:	-Height	780 mm, (31 in.)
	-Length	1100 mm, (43 in.)
	-Width	550 mm, (22 in.)
	-Weight	85 kg, (187 lb.)
Needle:		02.0501.0.111 02.0503.3.113
Thickness of Sewn Work:		Up to 6 mm, (1/4 in.)
Rear Clamp Foot Height:		10 mm, (0.4 in.) when open
Buttonhole Length:		10 to 38 mm, (0.4 to 1.5 in.)
Stitch Density:		6 to 16 stitches per cm, (15 to 41 stitches per inch)
Stitch Width:		2.5 to 3.5 mm standard, 2 to 3 mm, 3 to 4 mm, (0.1 to 0.14", 0.08 to 0.12", 0.12 to 0.157")
Lubrication:		Semiautomatic wicking
Buttonhole Cutting:		Cut Before stitching (CB), Cut After stitching (CA)

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Safety

The S100 eyelet buttonhole 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.

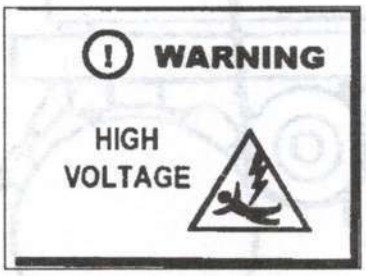
It is recommended that AMF Reece service personnel supervise the installation and initial training of your mechanics and operators.

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.

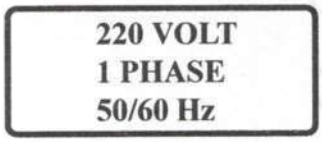
Safety Labels

Safety glasses required.
Located on the front of the sewing head, above the needle.

Possible shock.
Located on the outer electrical box cover door.



Possible shock.
Located on the outer electrical box cover door and two clear guards inside the electrical box.



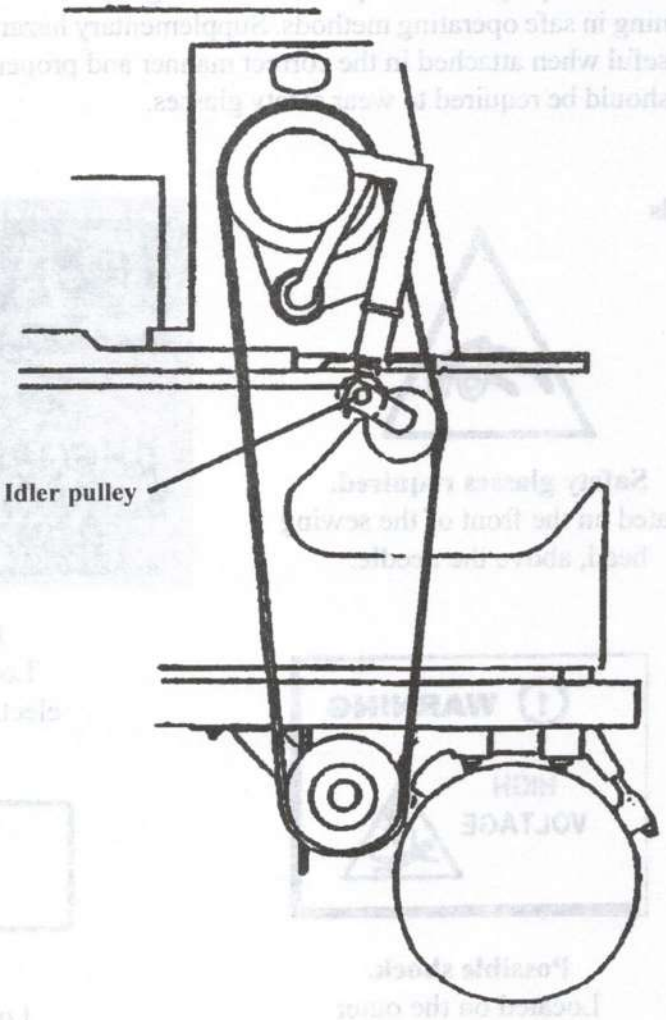
Possible shock.
Located on the outer electrical box cover door.

V-belt Tension

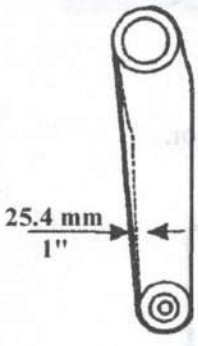
Loosen the idler pulley locking screw.

Adjust the V-belt idler pulley until 25.4 mm, (1") of flex is obtained in the belt, as illustrated.

Tighten the idler pulley locking screw.



Correct belt deflection



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BELT ADJUSTMENTS

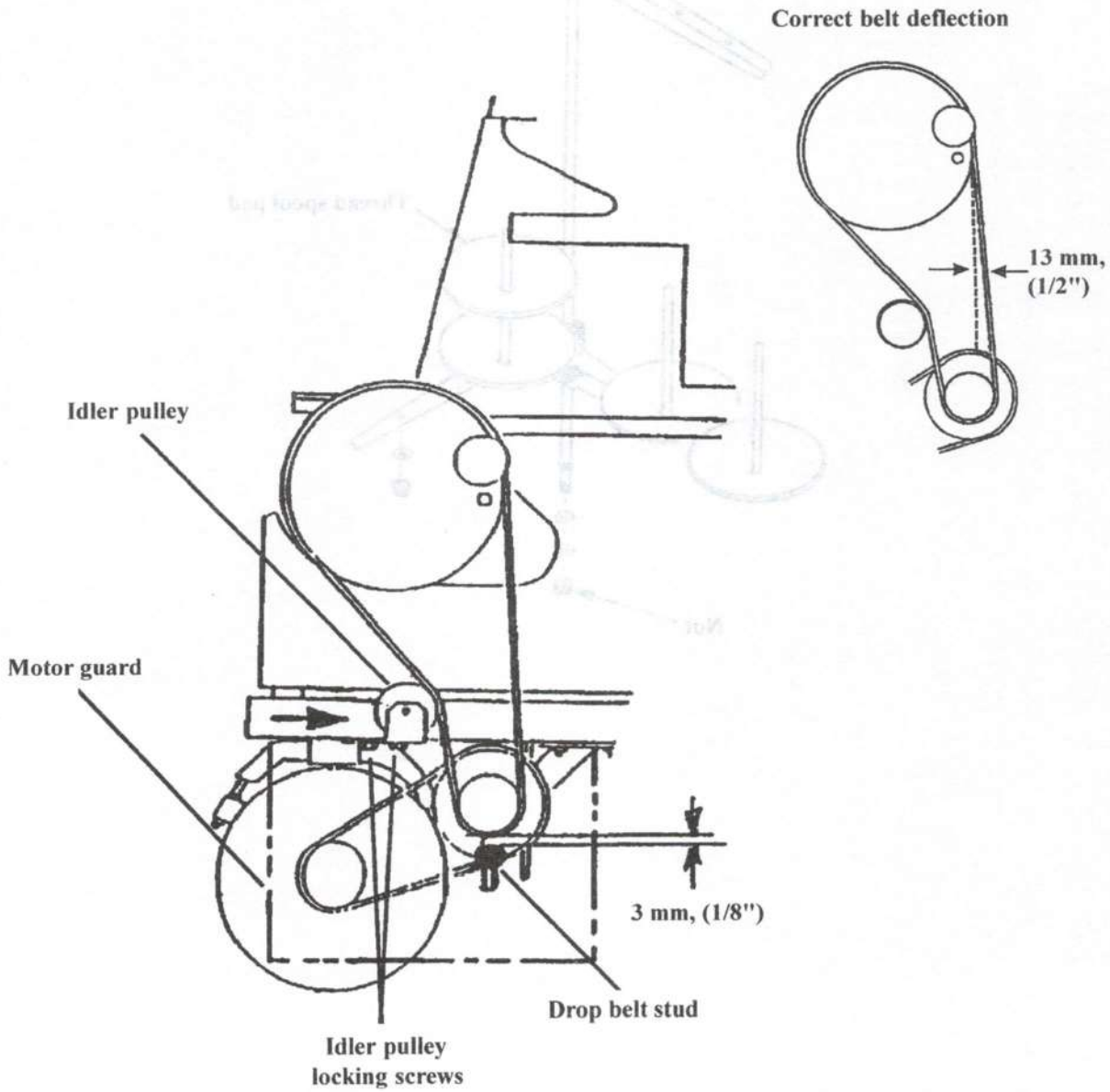
Belt Tension

Loosen the idler pulley locking screws.

Adjust the idler pulley until 13 mm, (1/2") of flex is obtained in the belt, as illustrated.

Tighten the idler pulley locking screws.

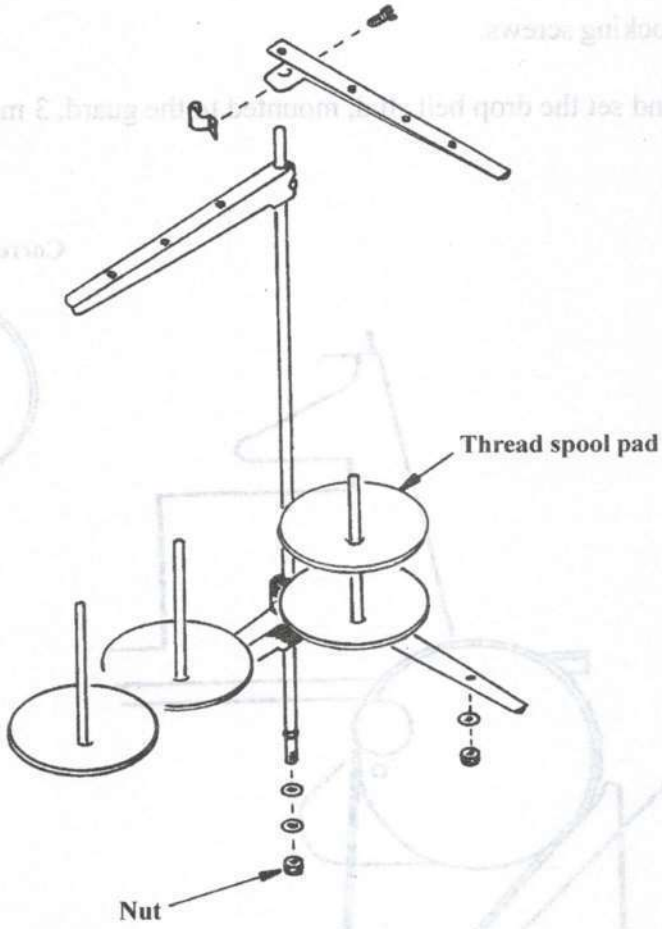
Install the motor guard and set the drop belt stud, mounted to the guard, 3 mm, (1/8") below the pulley.



Installation

Assemble the thread stand as illustrated and insert into the hole provided in the table.

Tighten the nut securely.



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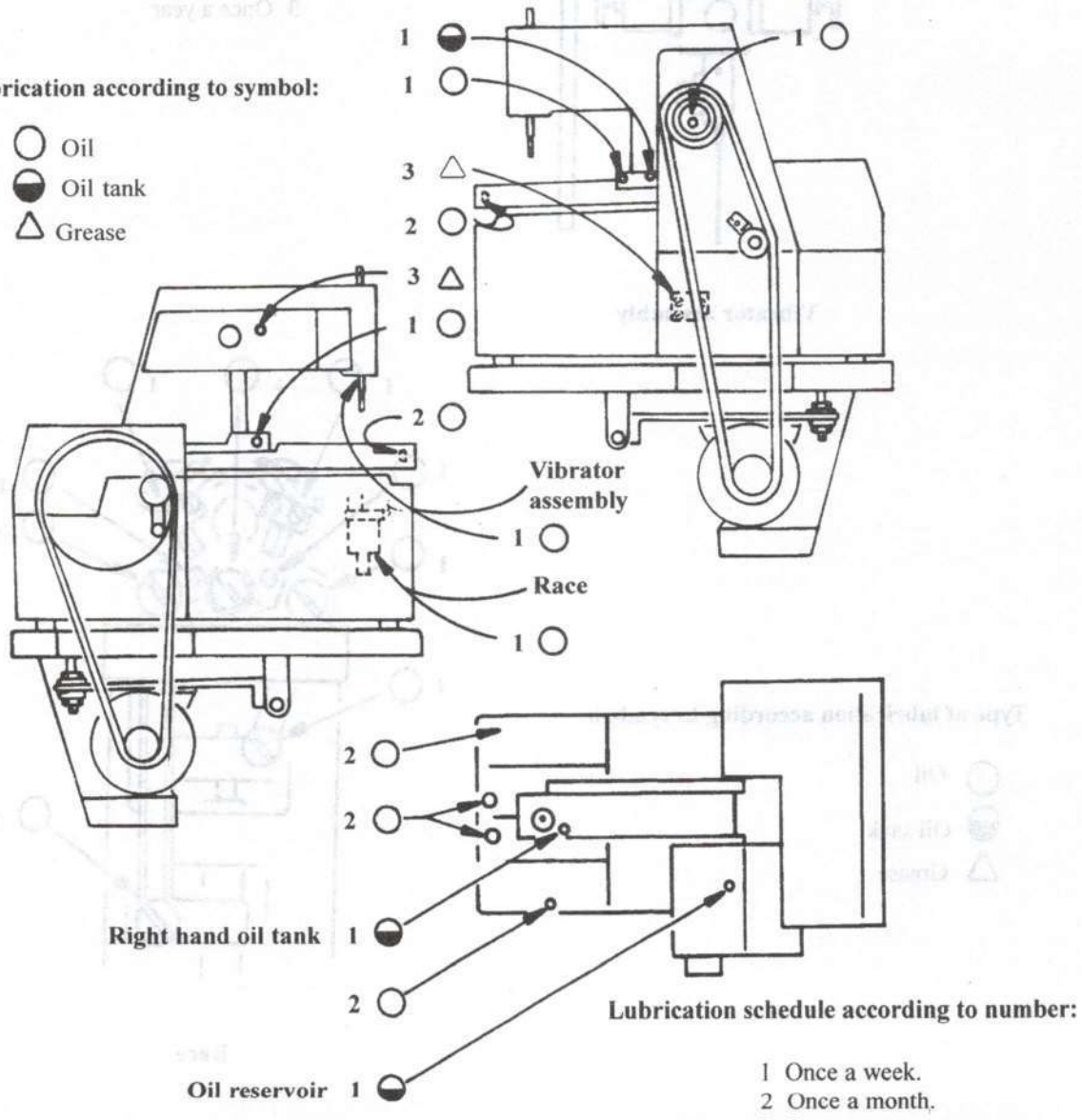
Lubrication

Before starting the machine, be sure to lubricate the appropriate areas as illustrated.

The correct amount of oil needed for the oil tank, on the right-hand side of the machine, as marked below, must not exceed the level of the red marker located in the center. If too much oil is added, an oil leak around the needle bar may result.

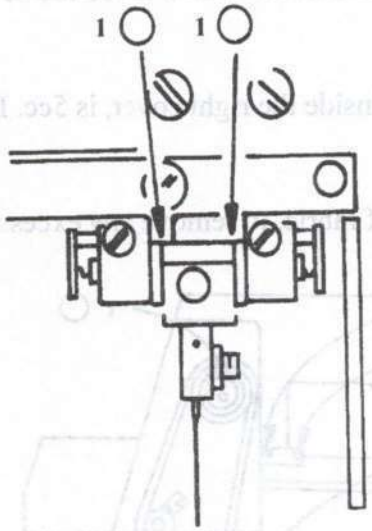
The amount of oil needed for the oil reservoir, located inside the right cover, is 5cc. If the amount of oil exceeds this, a leak may result.

Cycle the machine 10 or more times, on a scrap piece of fabric, to remove any excess oil.



Lubrication

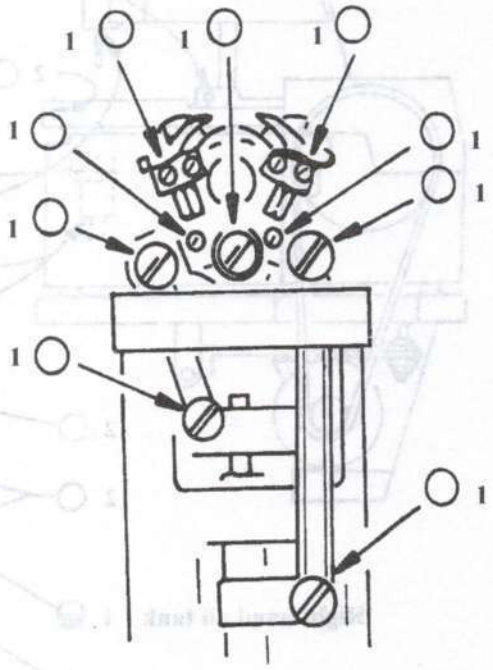
Note: The various red dots/oil stickers located on the machine must be oiled once a week.



Vibrator assembly

Lubrication schedule according to number:

1 Once a week.
2 Once a month.
3 Once a year



Race

Type of lubrication according to symbol:

- Oil
- Oil tank
- Grease

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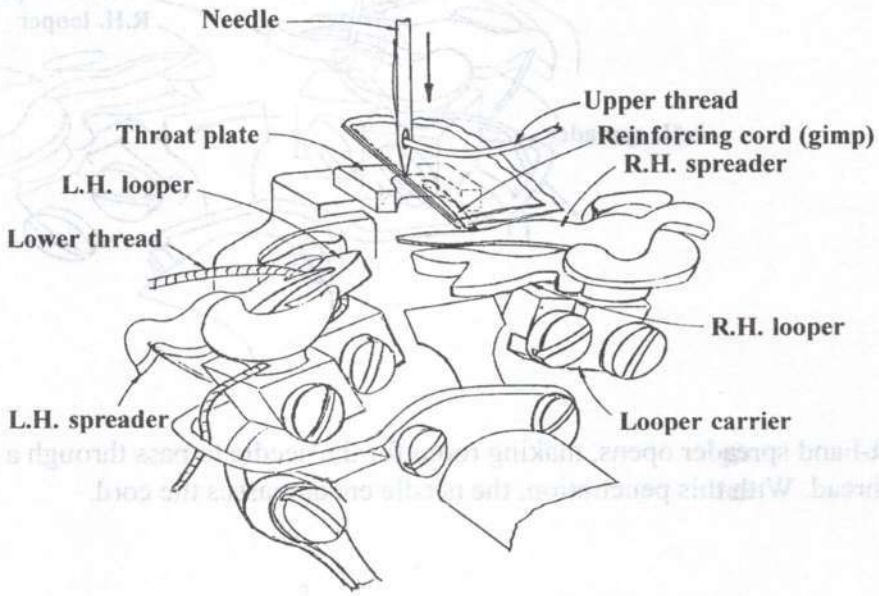
Stitching

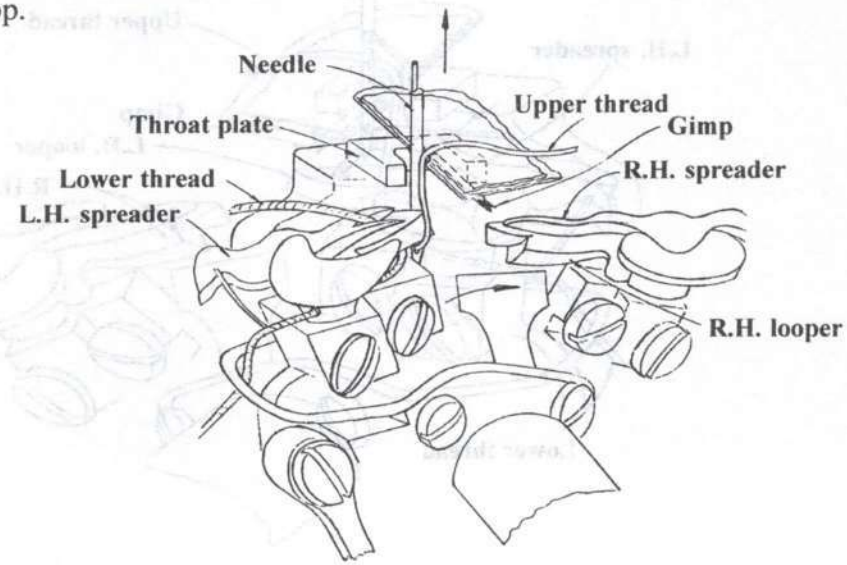
A stitch is the unit of thread formed in the production of seams and stitching.

Stitching is defined as a series of stitches embodied in a material for ornamental purposes, for finishing an edge, or both.

The type of stitch used in the eyelet buttonhole machine is a 401 stitch, two-thread, chain lock, purl stitch enveloping a reinforcing cord. When the thread, loopers, and spreaders create a buttonhole:

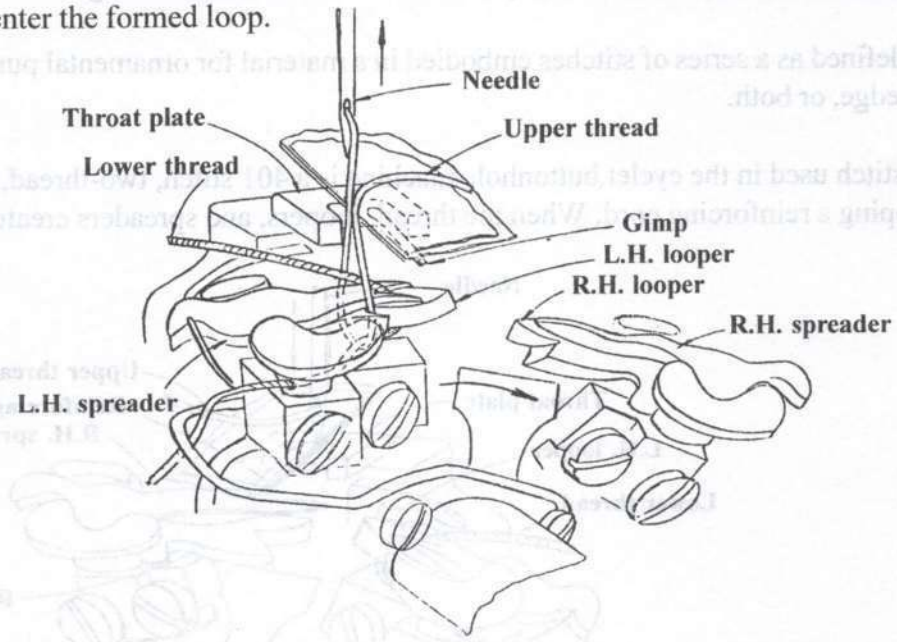


A loop is formed when the needle rises. The looper carrier moves to the right and the left-hand looper enters the formed loop.

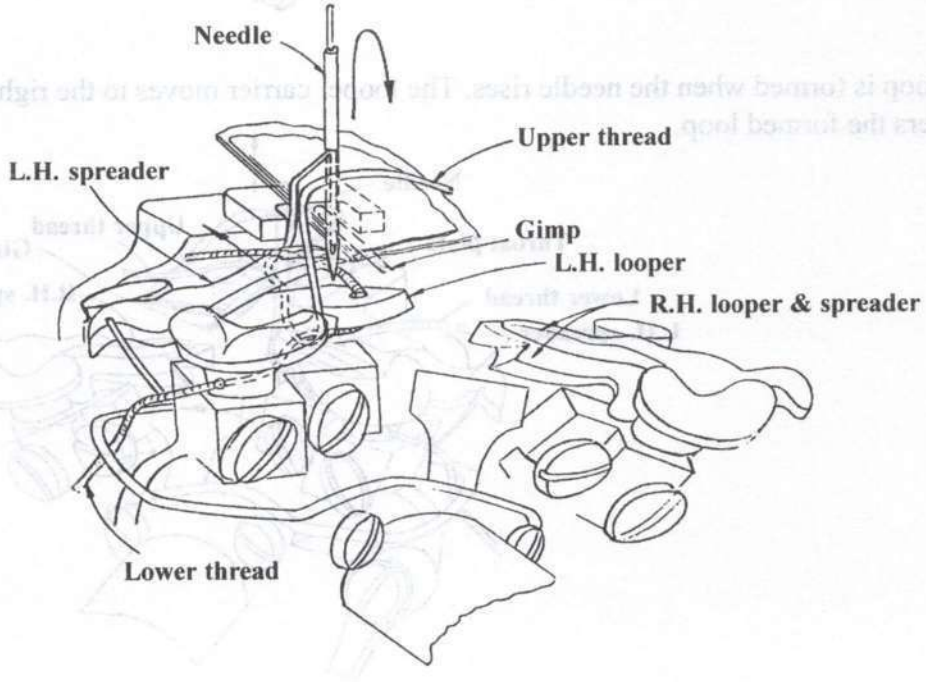


Stitching

The looper carrier continues moving to the right, carrying the lower thread, the left-hand looper, and the spreader, fully enter the formed loop.



The left-hand spreader opens, making room for the needle to pass through a loop formed by the lower thread. With this penetration, the needle encompasses the cord.



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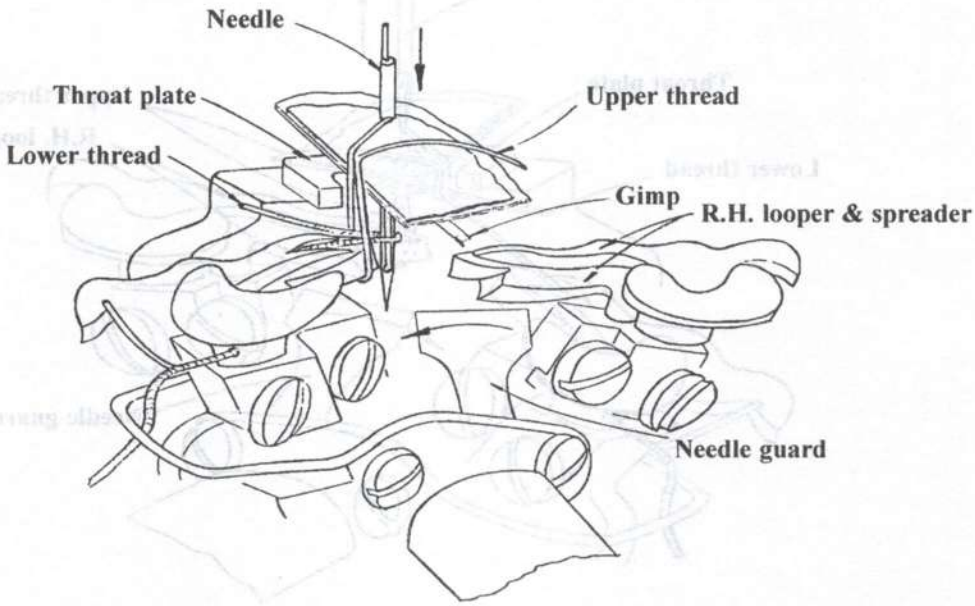
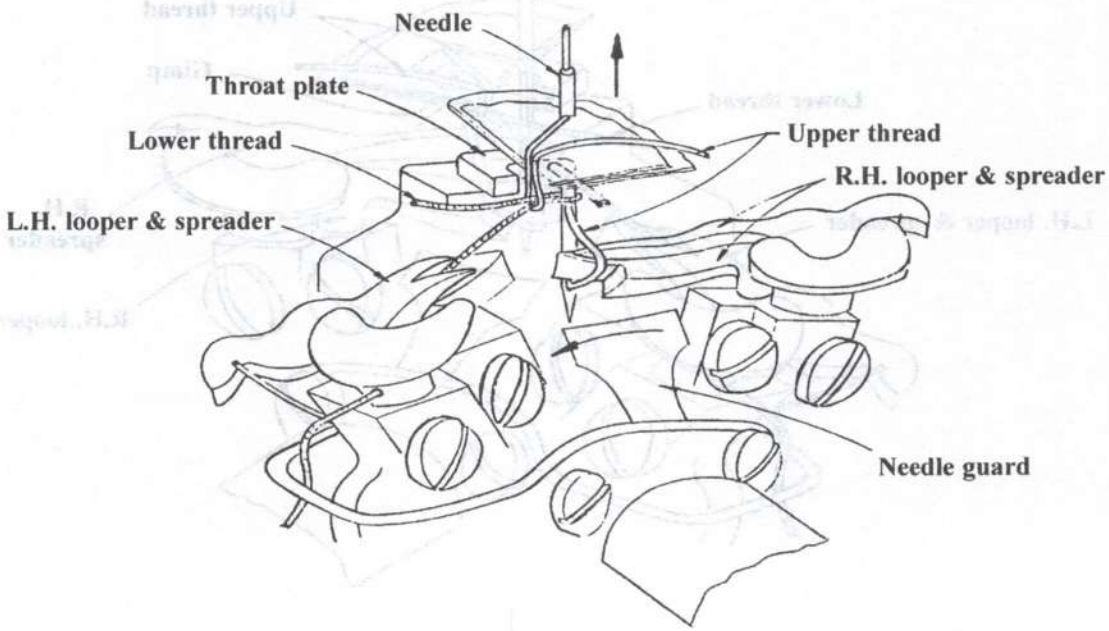
Stitching

As the needle moves down to form a new loop, a take-up implement pulls the upper thread up into the material, and brings the lower thread with it.

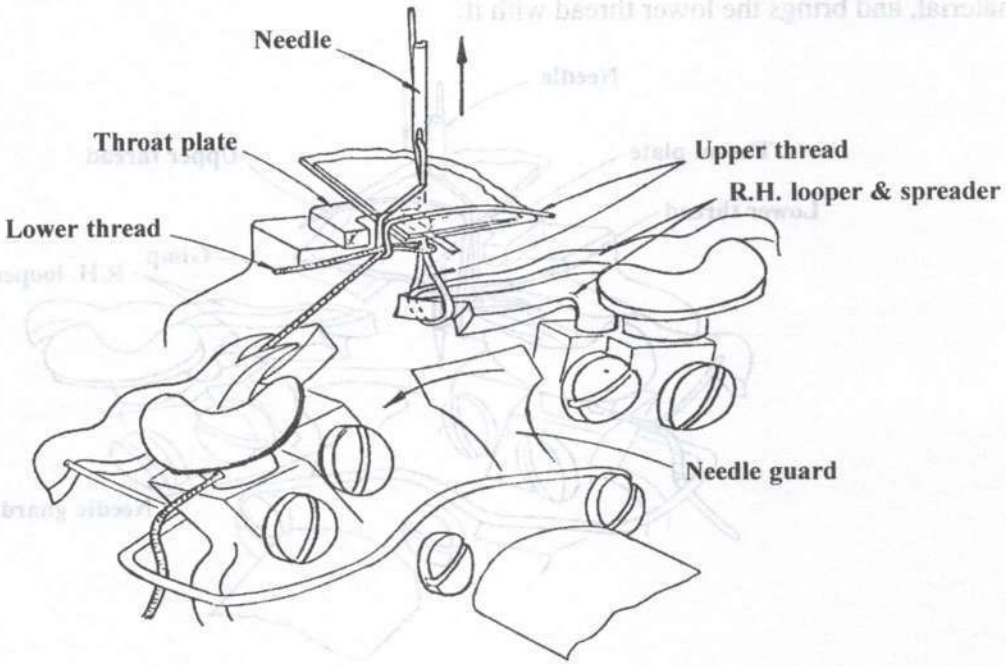


A loop is formed as the needle rises. The looper carrier continues moving to the left and the right-hand looper, enter the new loop formed. The previous loop is pulled up tight against the material.

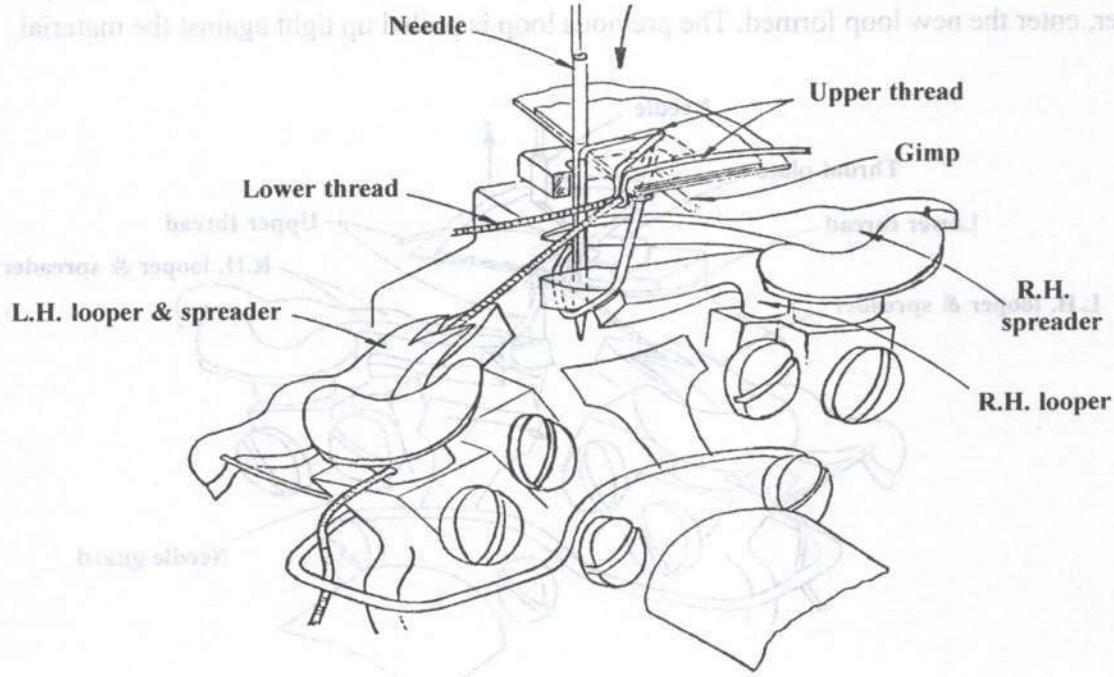


Stitching

The looper carrier continues moving to the left. The right-hand looper and spreader fully enter the formed loop.



The right-hand spreader opens, making room for the needle to pass through a loop formed by the upper thread.



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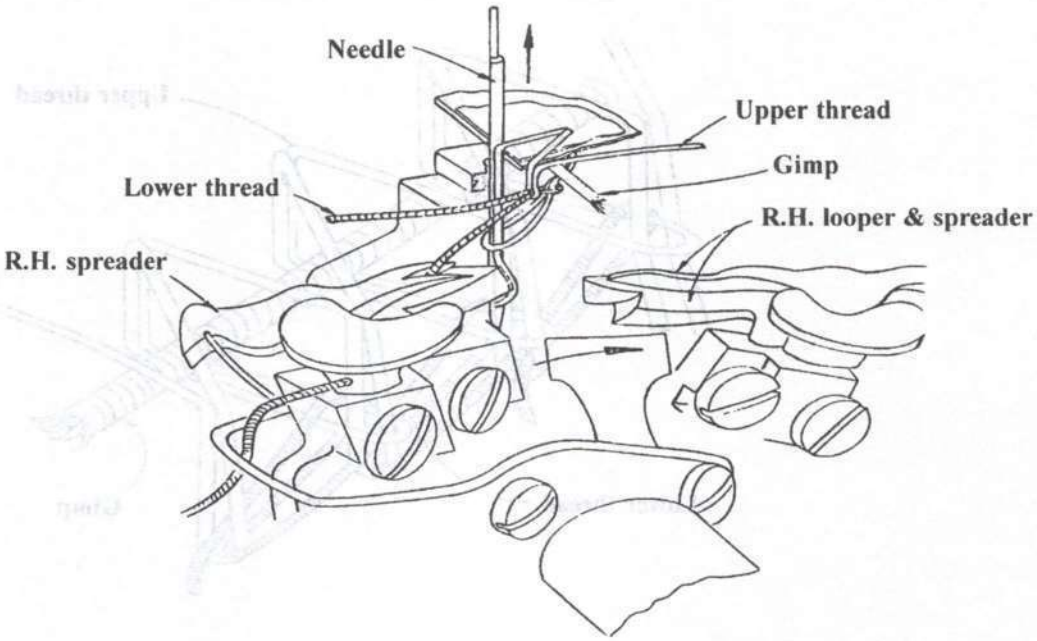
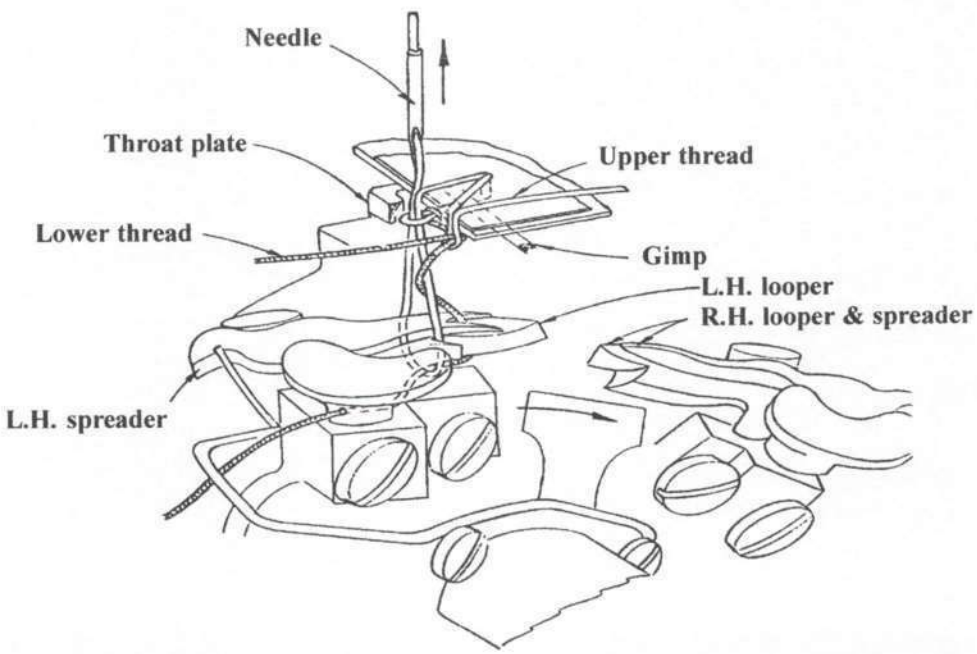
Stitching

The looper carrier moves to the right as the needle "strips" the loop previously formed. The left-hand looper enters the new loop which is being formed.

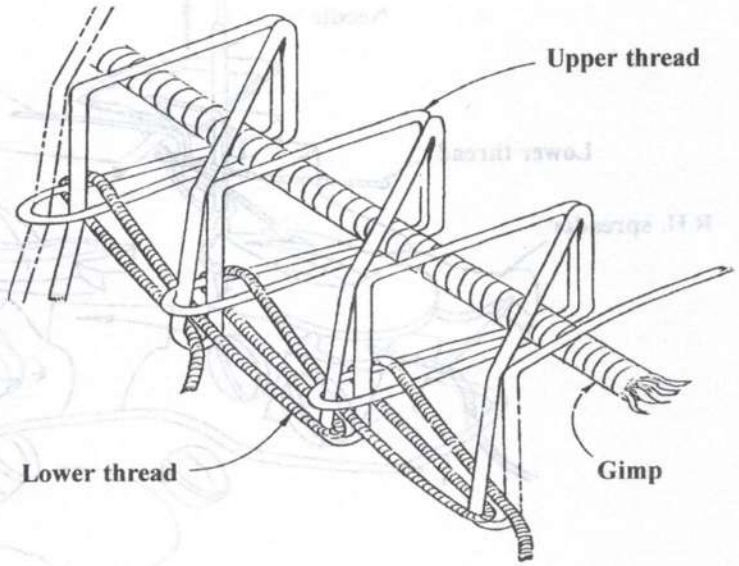


The lower thread forms a purl as it, and the previously formed thread loop, are pulled up against the material. The enveloped cord provides the buttonholes with body.



Stitching

AMF Reece two-thread, chain lock, purl stitch with reinforcing cord.



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Machine Controls

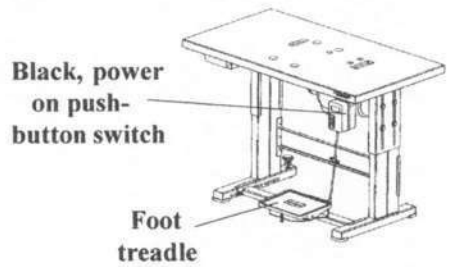
Press the black push-button switch to engage the machine motor power.

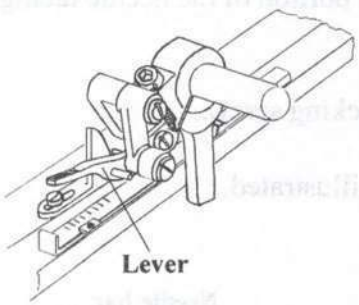
To start the machine sewing, insert the fabric under the clamps, pull forward on the clamps lever to lower the clamps, engage the foot treadle, and press down on the start sewing lever. With power on and the foot treadle engaged, pressing the start lever will automatically lower the clamps and release the clamps at the end of the sewing cycle.

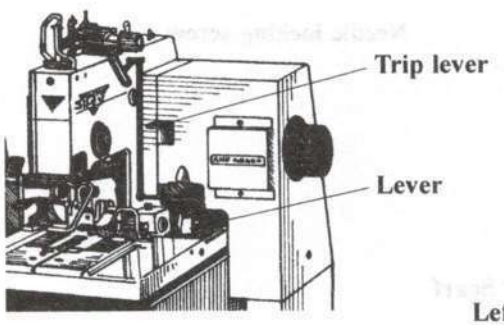
To stop the machine any time during the sewing cycle, heel down on the foot treadle, located on the treadle rail. To return the machine to the home position without sewing, press the trip lever and manually rotate the handwheel to lock the right-hand stitch wheel to ensure the needle is out of the fabric. Cycle the machine without sewing or manually hand crank the left-hand wheel until the clamps raise, indicating the machine is in the home position.

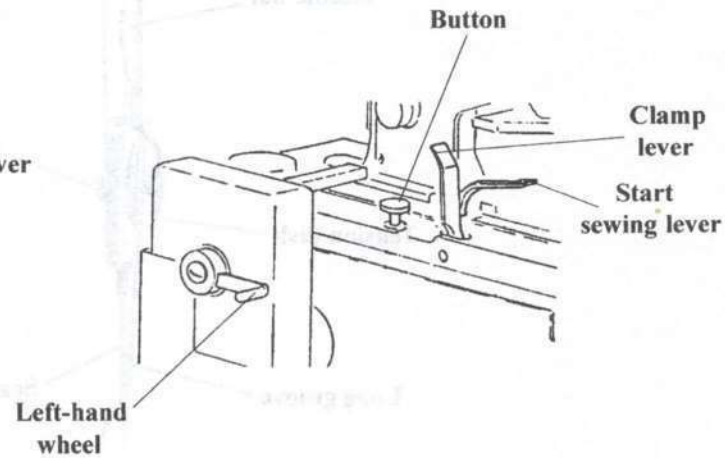
Before the end of the cycle, press and hold the button during repairs requiring the clamps to stay down on the fabric, instead of the clamps lifting at the end of the cycle. Perform the necessary repairs and continue the sewing cycle.

To cycle the machine without stitching, with the power on, lift the lever and depress the start sewing lever.









Preparing to Sew

Observe all safety requirements and ensure all covers are installed.
Ensure the clamping and shearing air pressure gauge indicates 80 PSI minimum (cord trim only).
Check for the proper operation of each machine control switch.
Feed oil to the manual oiling points and ensure each component of the sewing head is properly lubricated.
Ensure the needle and gimp threads are correctly installed.
Perform a final check for proper sewing performance, and operation of all machine components.

Needle Installation and Threading

Loosen the needle locking screw.

With the machine in the Cut/After mode:

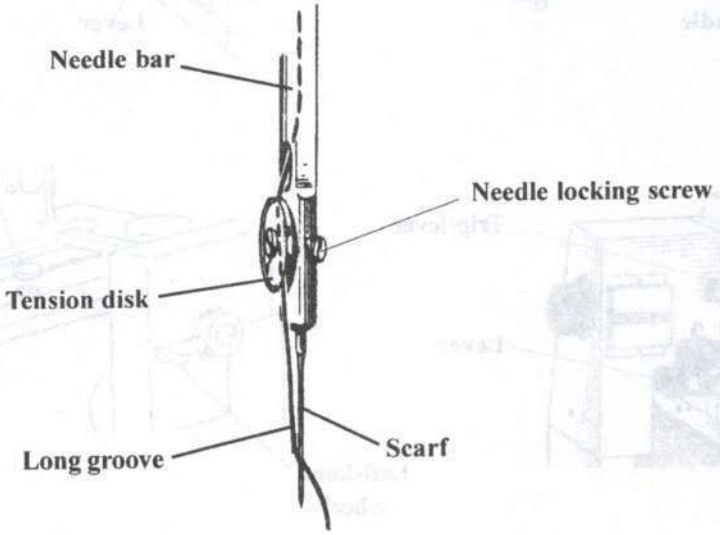
With the long groove portion of the needle facing the rear of the machine, insert the needle fully up into the needle bar.

With the machine in the Cut/Before mode:

With the long groove portion of the needle facing the front of the machine, insert the needle fully up into the needle bar.

Tighten the needle locking screw.

Thread the needle as illustrated.



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Importance of the Air Pressure

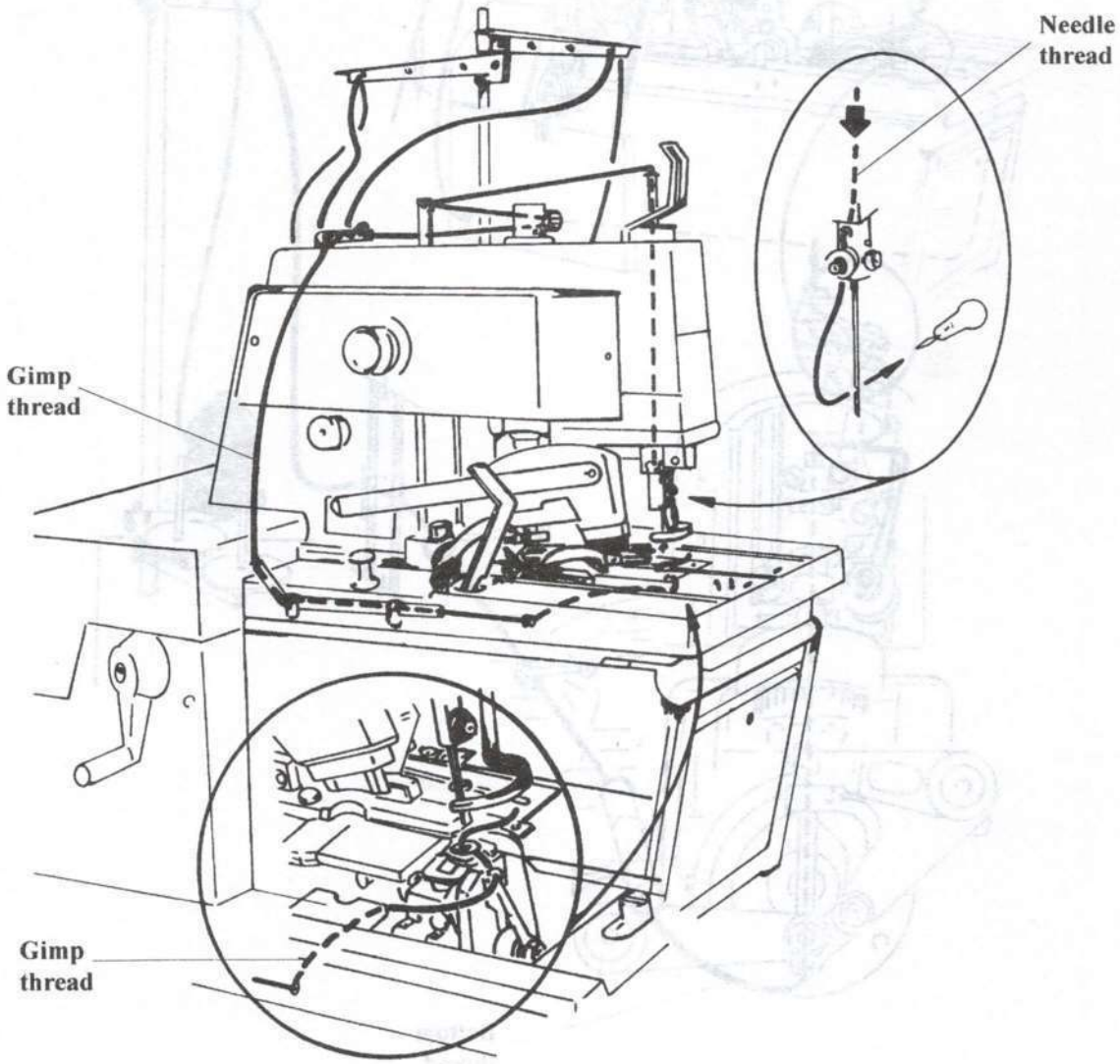
Required air pressure is 5.6 bar, (80 PSI). (cord trim only)

Caution! To avoid serious damage to the machine, do not operate the S100 CT without air pressure.

Threading the Machine

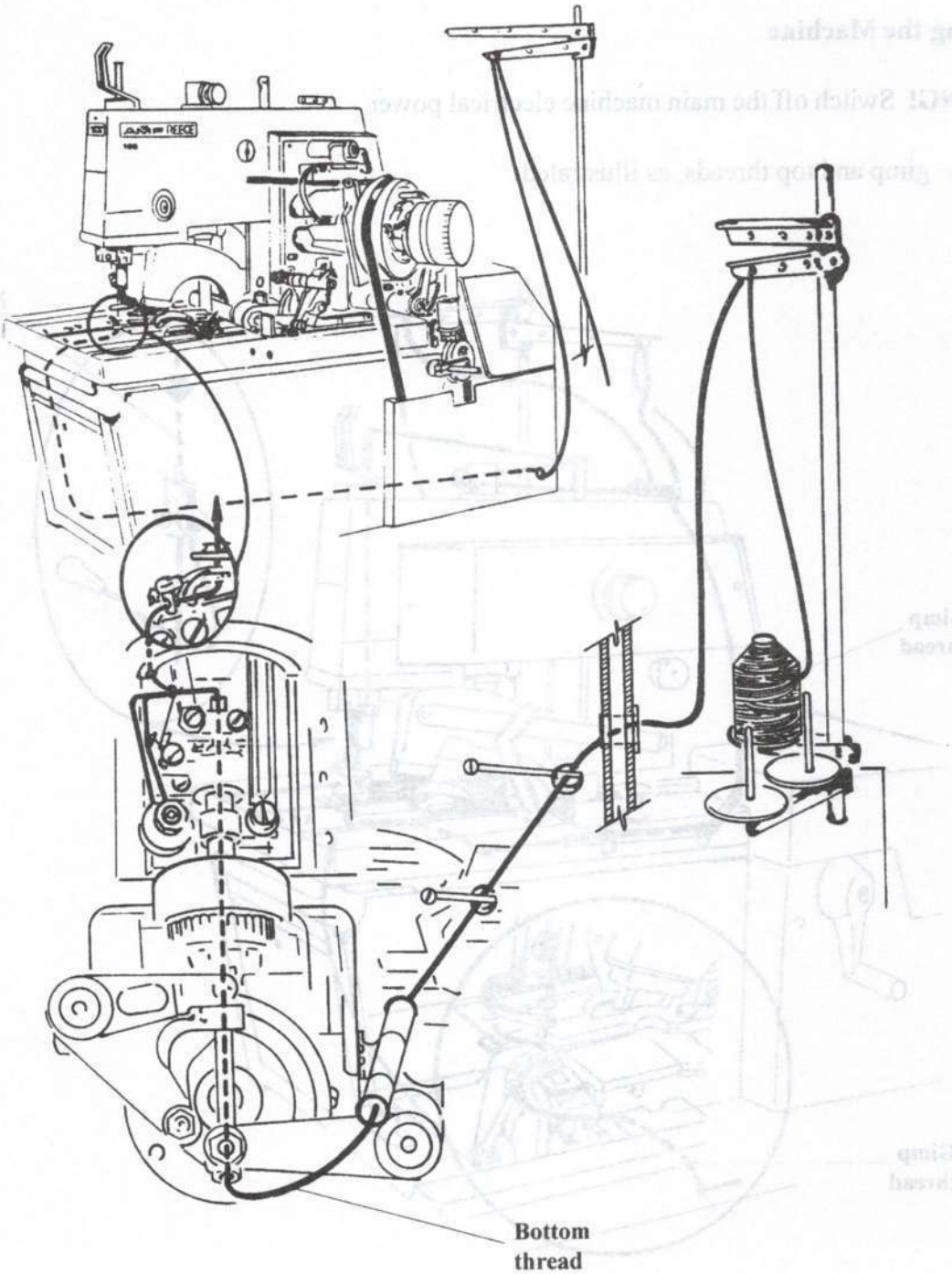
WARNING! Switch off the main machine electrical power.

Thread the gimp and top threads, as illustrated.



Threading the Machine

Thread the bottom thread, as illustrated.



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Starting the Machine

Note: To make sure the machine is sewing correctly, we recommend sewing a few buttonholes on a scrap piece of material before sewing on a quality garment.

Switch on the main power.

Position the sewing work under the clamp feet.

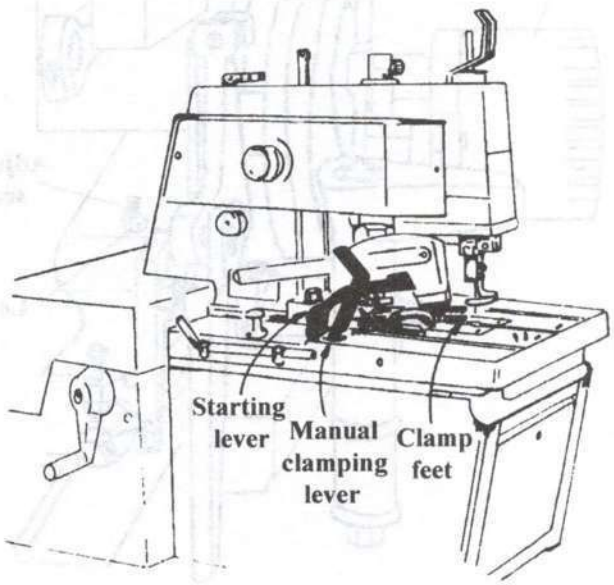
Pull the manual clamping lever forward to lower the clamps, or pressing the starting lever, lowers the clamp feet automatically and holds the fabric in place while being sewn.

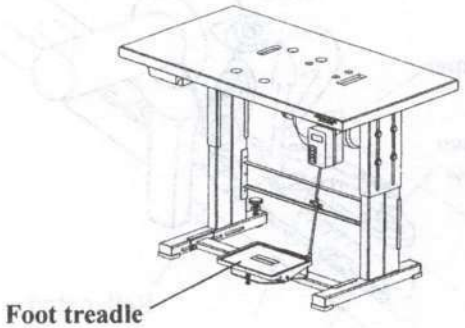
Switch on the motor power and toe the foot treadle, the power will engage and the brake will release.

WARNING! <u>Do Not</u> Try To Hold Or Remove The Sewing Work With Your Hands. After the machine has stopped, safely remove the sewn work from under the clamp feet.

Stopping the Machine

Heel the foot treadle, switch off the motor power, release the trip lever and rotate the right handwheel until locked.





Stop Motion

WARNING! Switch off the main power to prevent accidental engagement of the machine.

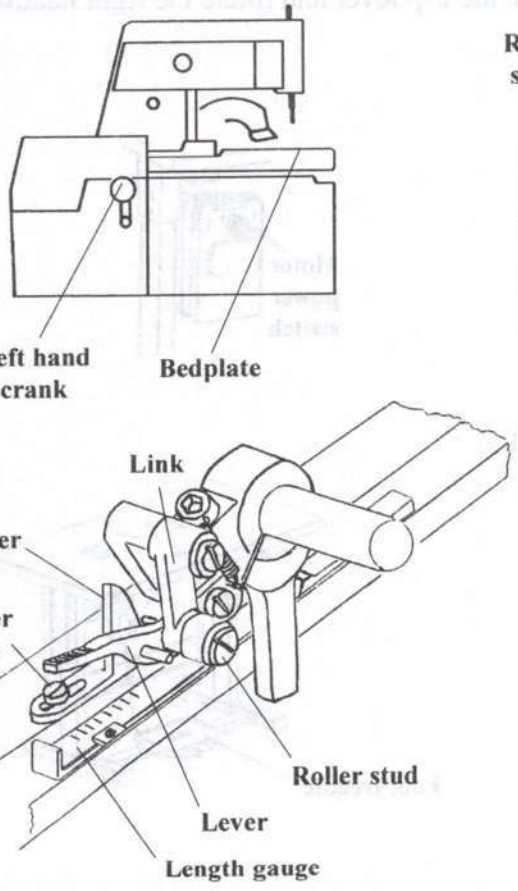
Note: Initial setting is for Cut After sewing.

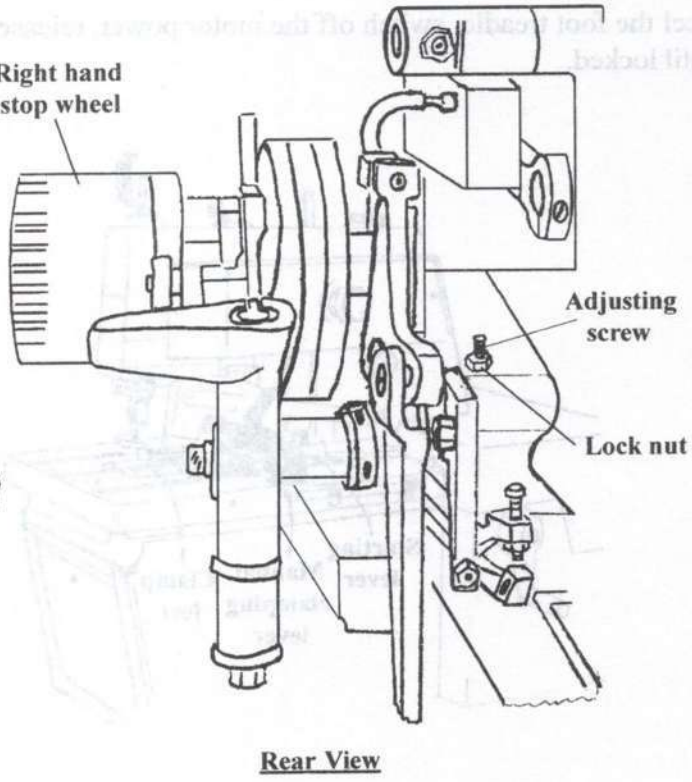
Rotate the left-hand crank until the machine is in the home position. In the home position, the bedplate no longer moves to the rear.

Rotate the right-hand stop wheel counterclockwise until it locks.

Push the link back, the lever must latch over the roller stud.
If incorrect:
Loosen the 2 bumper screws and position the bumper back and forth against the roller stud until the latch location is correct.

The roller clearance must be 0.06 mm, (0.002") from the length gauge.
If incorrect:
Loosen the lock nut and adjust the screw up or down as needed and tighten the nut.





Rear View

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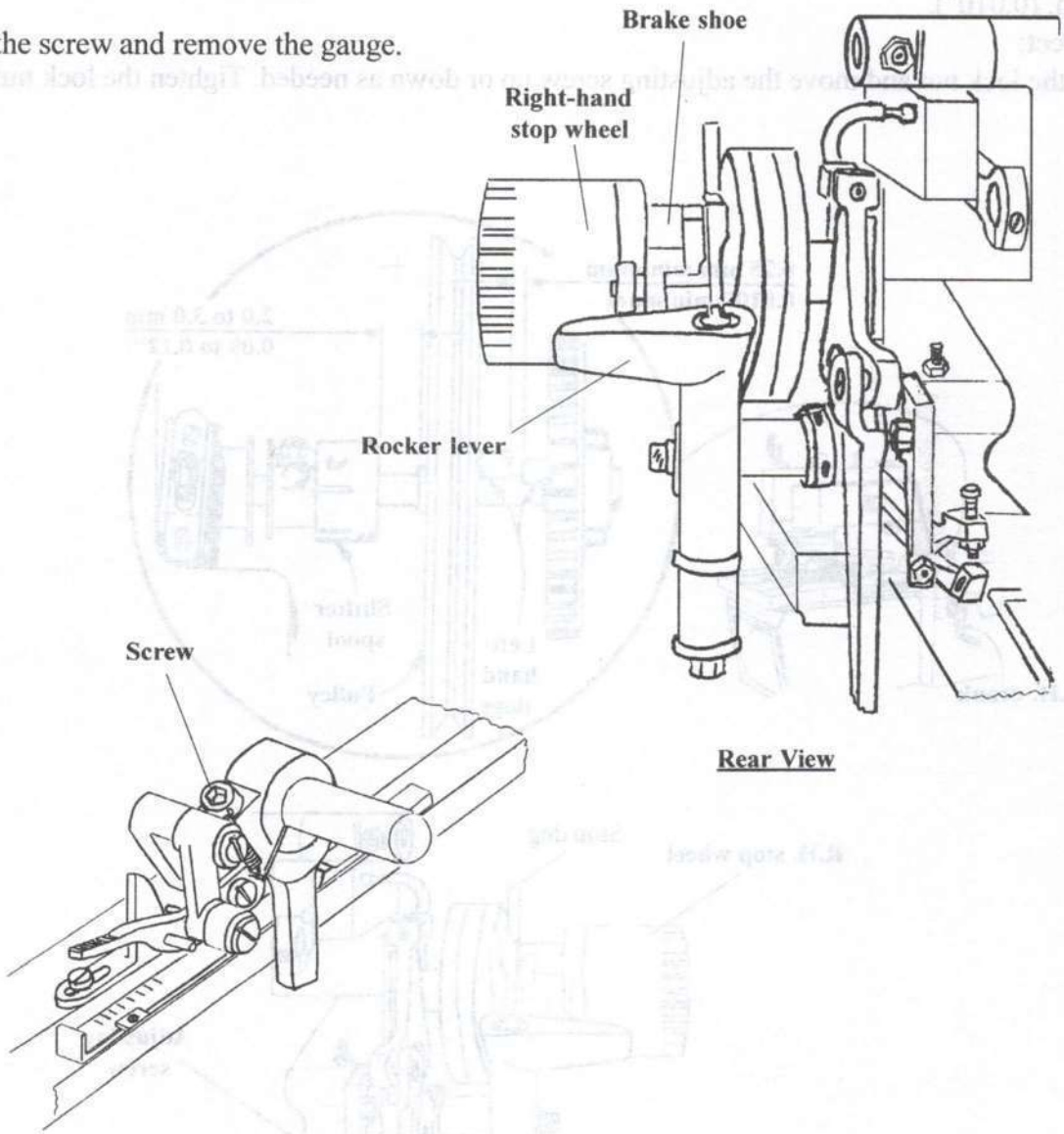
Stop Motion

Clearance between the brake shoe and the right-hand stop wheel is 0.25 to 0.38 mm, (0.010 to 0.015"). To adjust:

With the right-hand stop wheel in the locked position, loosen the screw, insert a .010" feeler gauge between the stop wheel and the brake and pull the rocker lever forward until the correct clearance is obtained.

Tighten the screw and remove the gauge.

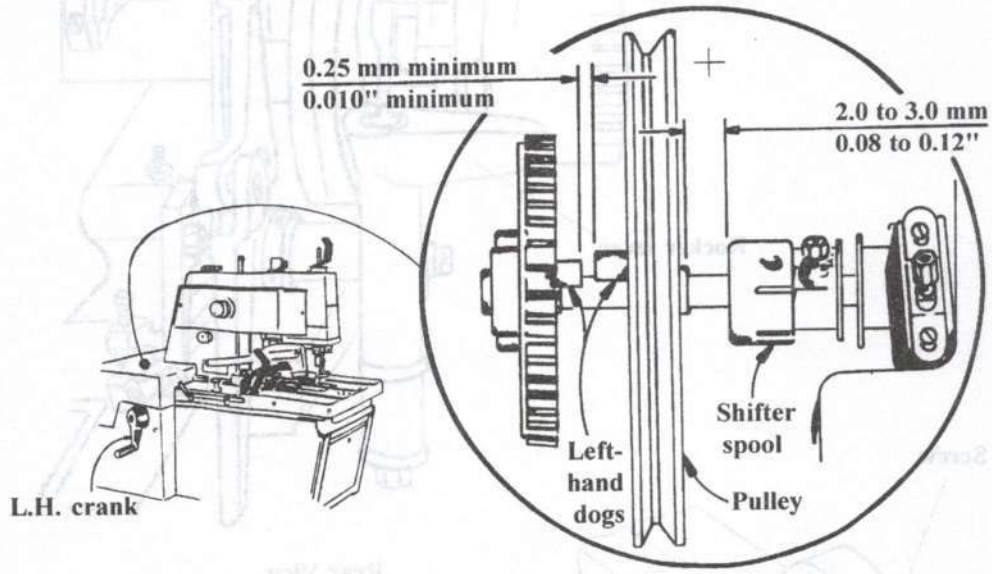


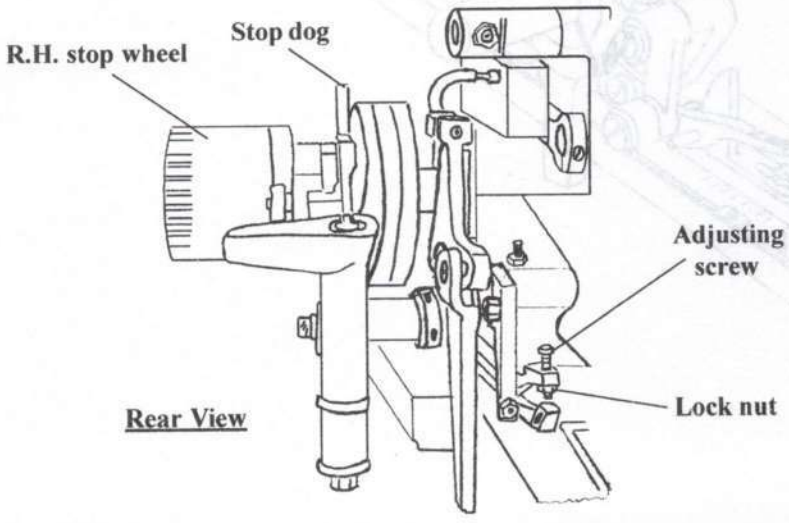
Rear View

Stop Motion

The left-hand pulley to the shifter spool clearance is 2.0 to 3.0 mm, (0.08 to 0.12").
If incorrect:
Loosen the shifter spool screw and position the pulley in or out as needed. Tighten the screw.

Rotate the left-hand crank until the stop dog releases the right-hand stitch wheel. Rotate the right-hand stop wheel until the stop dog is in the twelve o'clock position. The left-hand dog clearance is 0.25 mm, (0.010").
If incorrect:
Loosen the lock nut and move the adjusting screw up or down as needed. Tighten the lock nut.





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Stop Motion

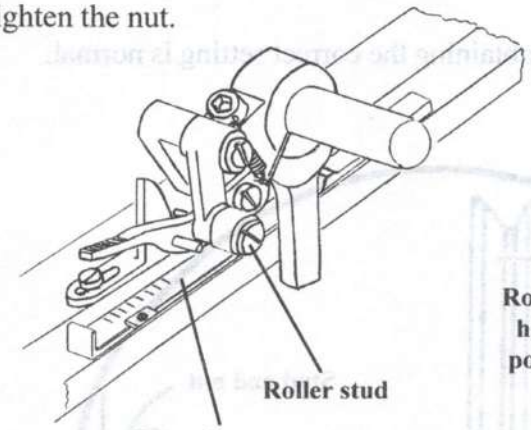
Rotate the left-hand crank until the roller stud reaches the highest position on the length gauge.

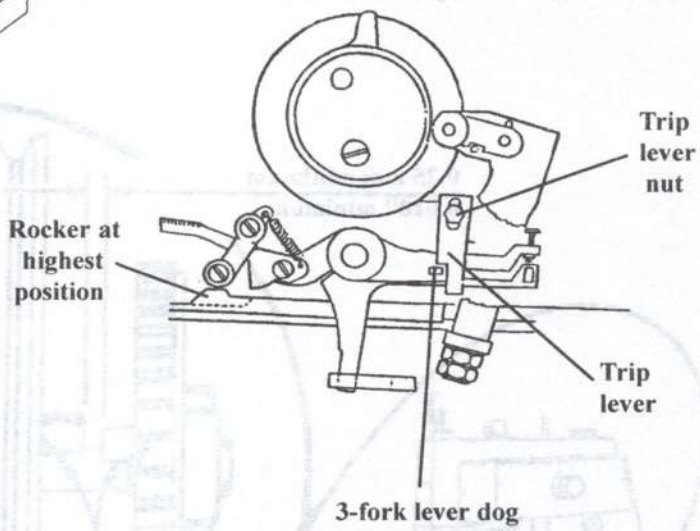
Continue rotating the left-hand crank until the rocker lever moves forward 0.125 to 0.254 mm, (0.005 to 0.010").

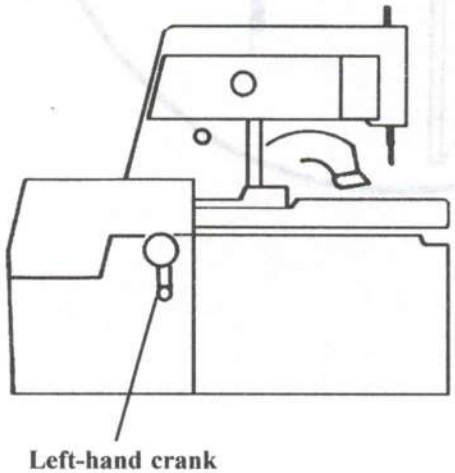
Adjust the trip lever:

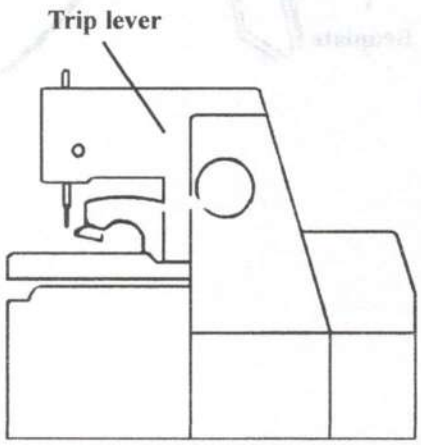
Loosen the nut and move the trip lever link up or down as needed, to allow the trip lever to pass over the stop dog on the 3-fork lever, stopping forward movement.

Tighten the nut.









Stop Motion

To adjust the left-hand dogs clearance for the final stopping position:

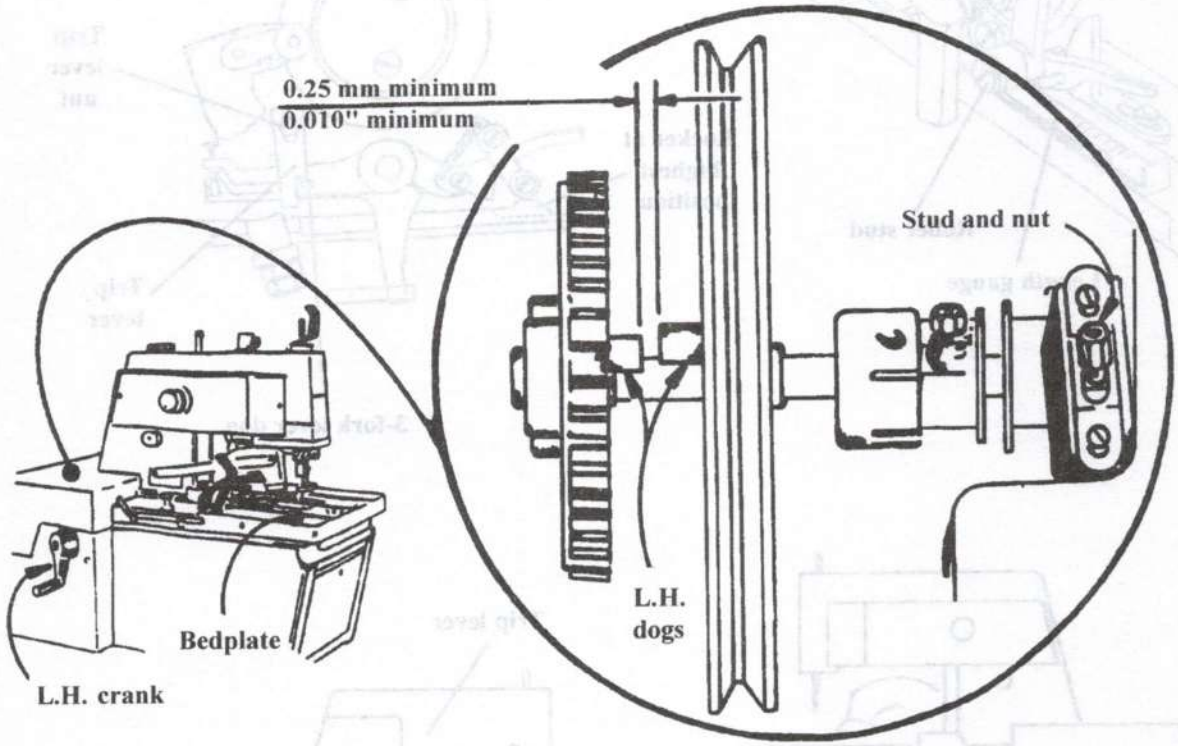
Rotate the left-hand crank until the bedplate is in the home position.

Loosen the locking nut on the stud and set the left-hand dogs clearance to a minimum of 0.25 mm, (0.01").

Tighten the locking nut.

Switch on the motor power switch and cycle the machine to ensure proper operation..

Note: Performing these adjustments several times, before obtaining the correct setting is normal.



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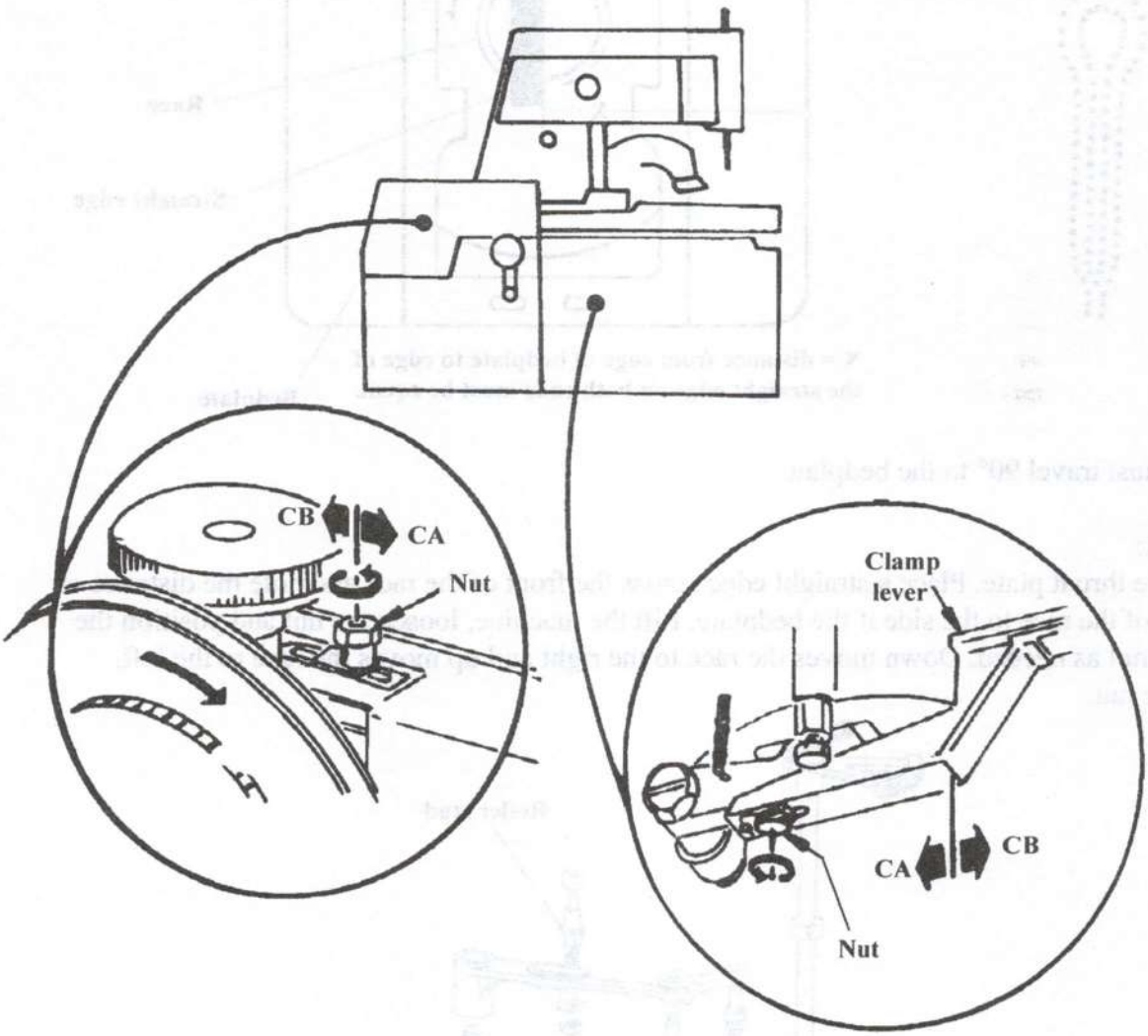
Cut Before/Cut After Sewing

Changing From Cut Before to Cut After Sewing or From Cut After to Cut Before Sewing

Loosen the two locking nuts illustrated.

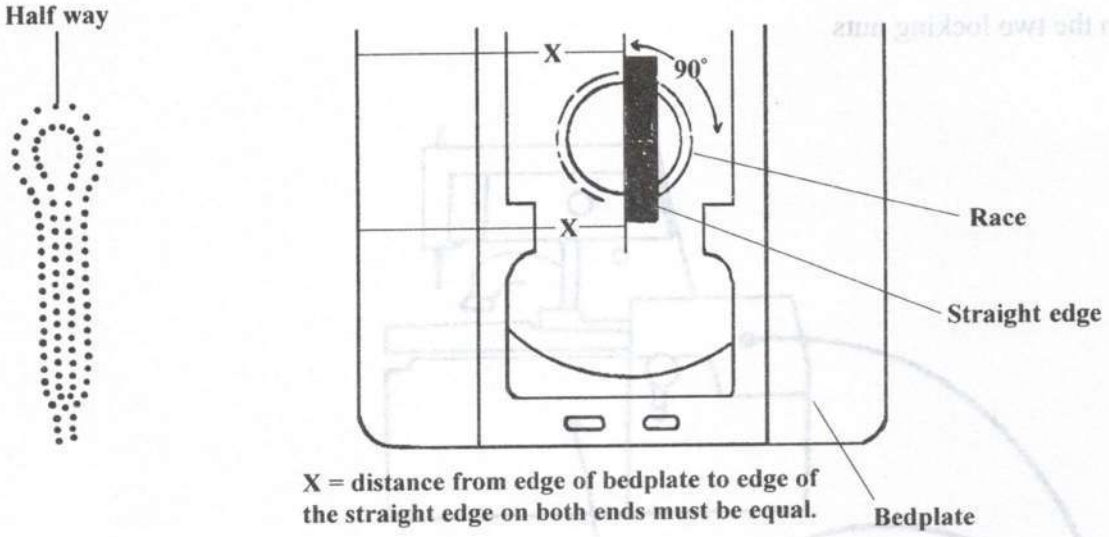
Push nuts in the slots, toward the inscribed letters for the required sewing, CA for Cut/After and CB for Cut/Before.

Tighten the two locking nuts



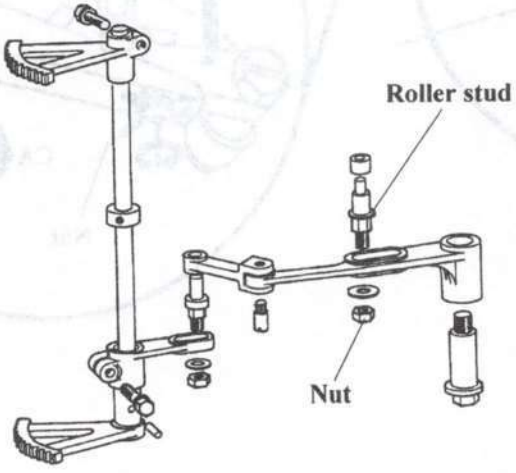
Race to the Side of the Bedplate

Use the prick-in needle to produce a stitch pattern on a piece of paper.
Hand crank the machine and stop approximately half way around the buttonhole eye and stop.



The race must travel 90° to the bedplate.

If incorrect:
Remove the throat plate. Place a straight edge across the front of the race and note the distance on both sides of the race to the side if the bedplate. Lift the machine, loosen the nut and position the roller stud nut as needed. Down moves the race to the right and up moves the race to the left. Tighten the nut.



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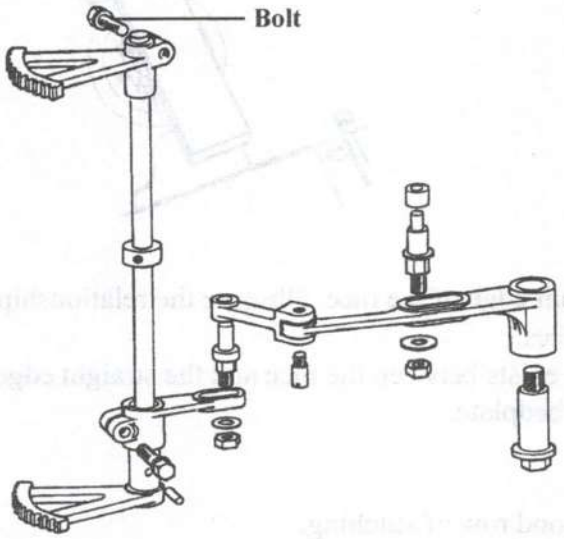
Race to the Needle Bar Gears

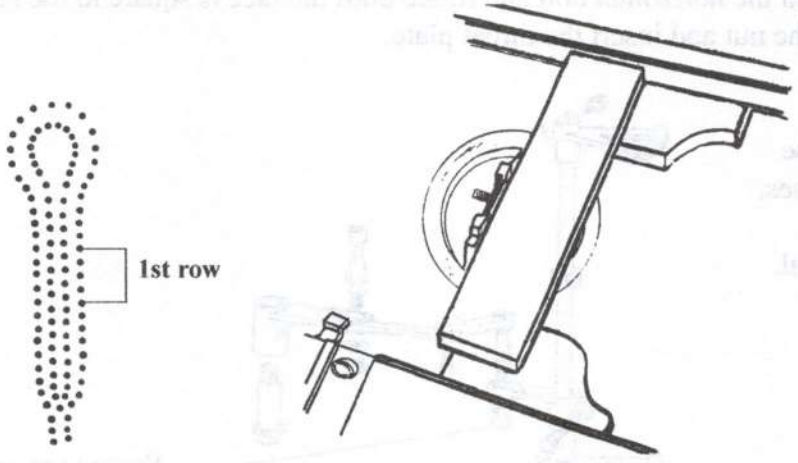
With the race positioned 90°, the upper vibrator block must be square to the race.

If incorrect:
Loosen the bolt and rotate the upper sector gear until square. Tighten the bolt.



Race 180° Travel

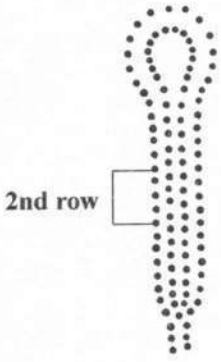
Lower the machine. Using the left-hand crank, move the machine to the home position. Rotate the crank and stop half way along the first row of stitches.

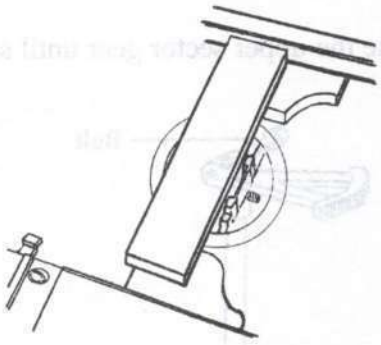


Place a straight edge across the front edge of the race. Observe the relationship between the race and the straight edge, noting the distances.

Race 180° Travel

Continue rotating the crank through the buttonhole eye and stop at the second row of stitches.



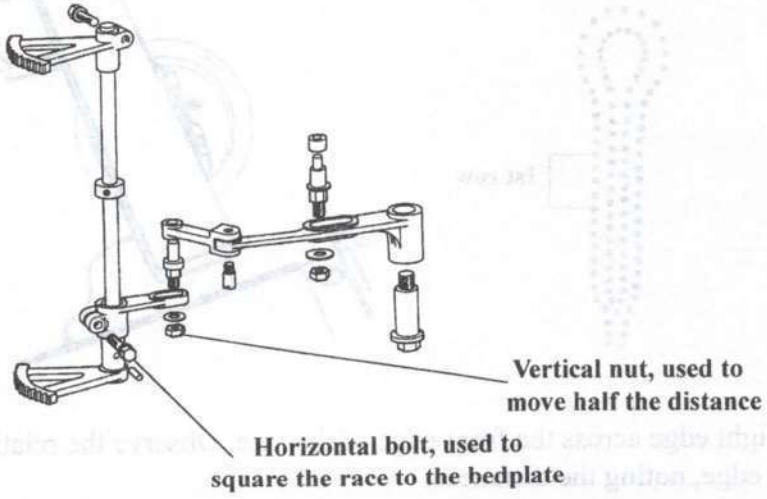


Place a straight edge across the front edge of the race. Observe the relationship between the race and the straight edge, noting the distances.
Travel is correct when no distance exists between the race and the straight edge, indicating the race is square to the straight edges of the bedplate.

If incorrect:
Hand crank the machine to the second row of stitching.
Lift the machine, loosen the vertical nut and move until the distance between the straight edge and the race is reduced by half. Tighten the nut.

Lower the machine. Using the left-hand crank, move the machine to the home position. Rotate the crank and stop half way along the first row of stitches.
Place a straight edge across the front edge of the race.
Lift the machine, loosen the horizontal bolt and rotate until the race is square to the straight edge of the bedplate. Tighten the nut and insert the throat plate.

Note: Performing these adjustments several times, before obtaining the correct setting is normal.



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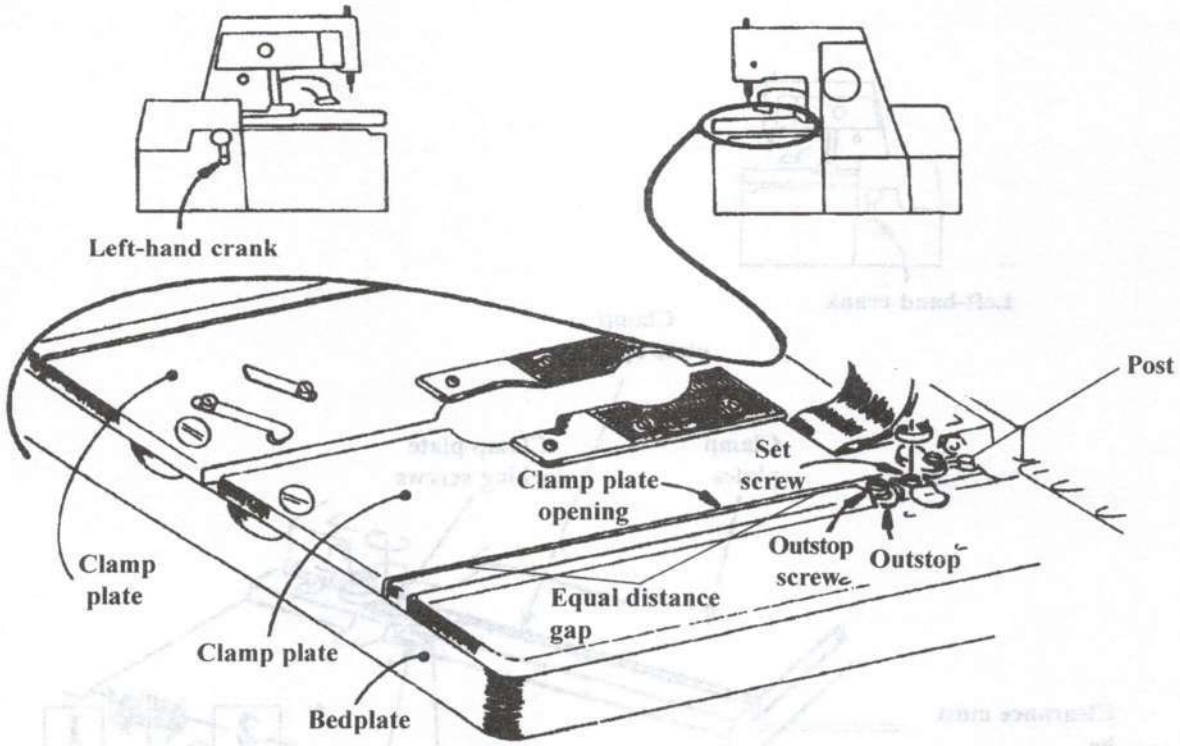
Clamp Plates to Bedplate Alignment

With the machine in the home position, install the clamp plates and ensure they are parallel to the bedplate on both sides.

If incorrect:
Loosen the outstop and set screw.
Manually position the right clamp toward the side of the bedplate.
Loosen the post and the position of the post as needed.
Tighten the post.
Using the previous steps, set the left clamp.

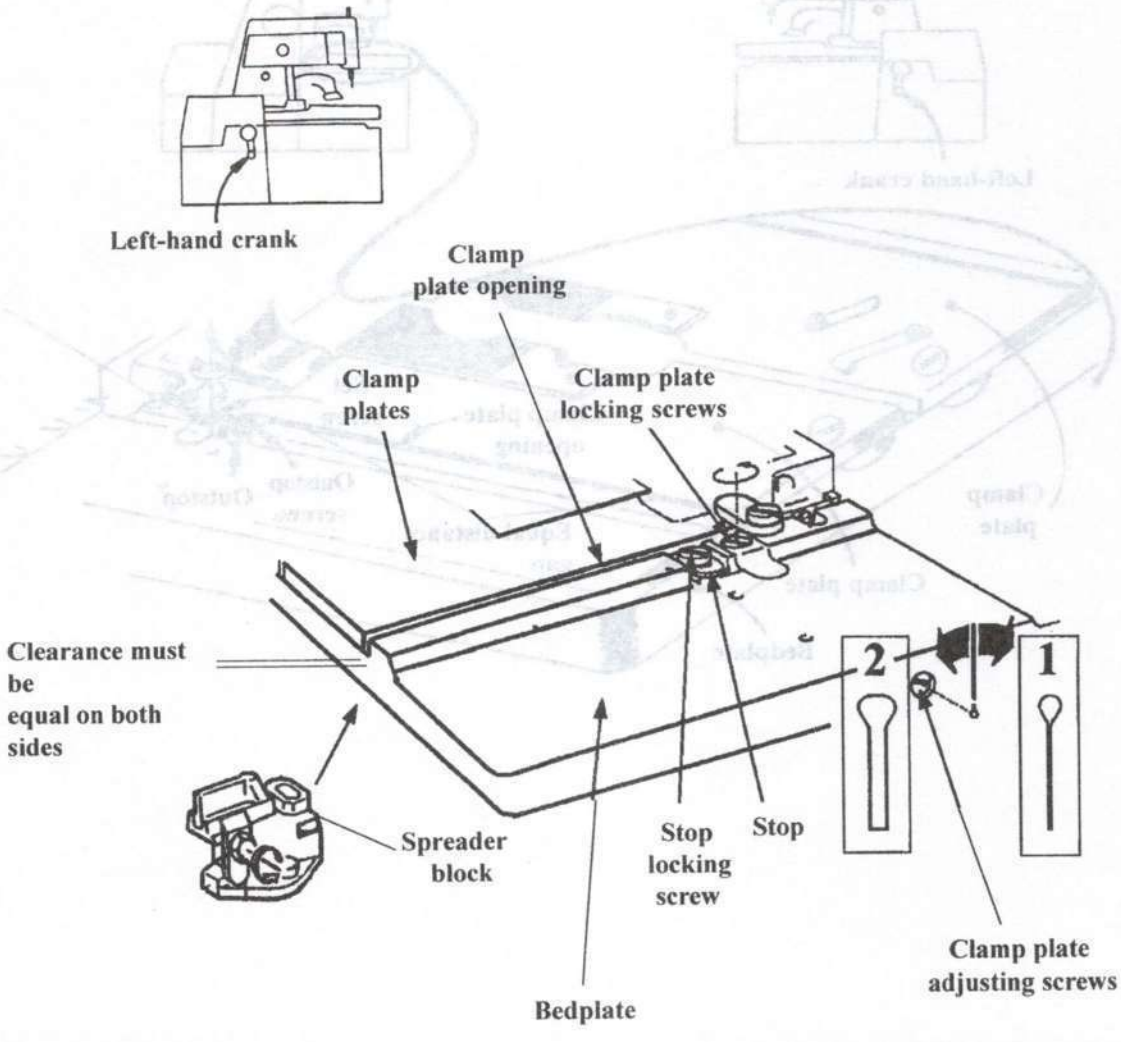


Clamp Plate Spread

The amount of spread distance is determined by the sewing application.

Rotate the left-hand crank until the clamp plate rollers are positioned to the widest part of the spreader block.. Loosen the outstop screw and slide the outstop to the outer most position.

Loosen the set screw and rotate the instop adjusting screw until the correct spread is obtained and tighten the set screw. Position the outstop to contact the side of the clamp plate and tighten the outstop screw. Perform the same setting for the other side.



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Clamp Feet Position and the Needle Entry Point

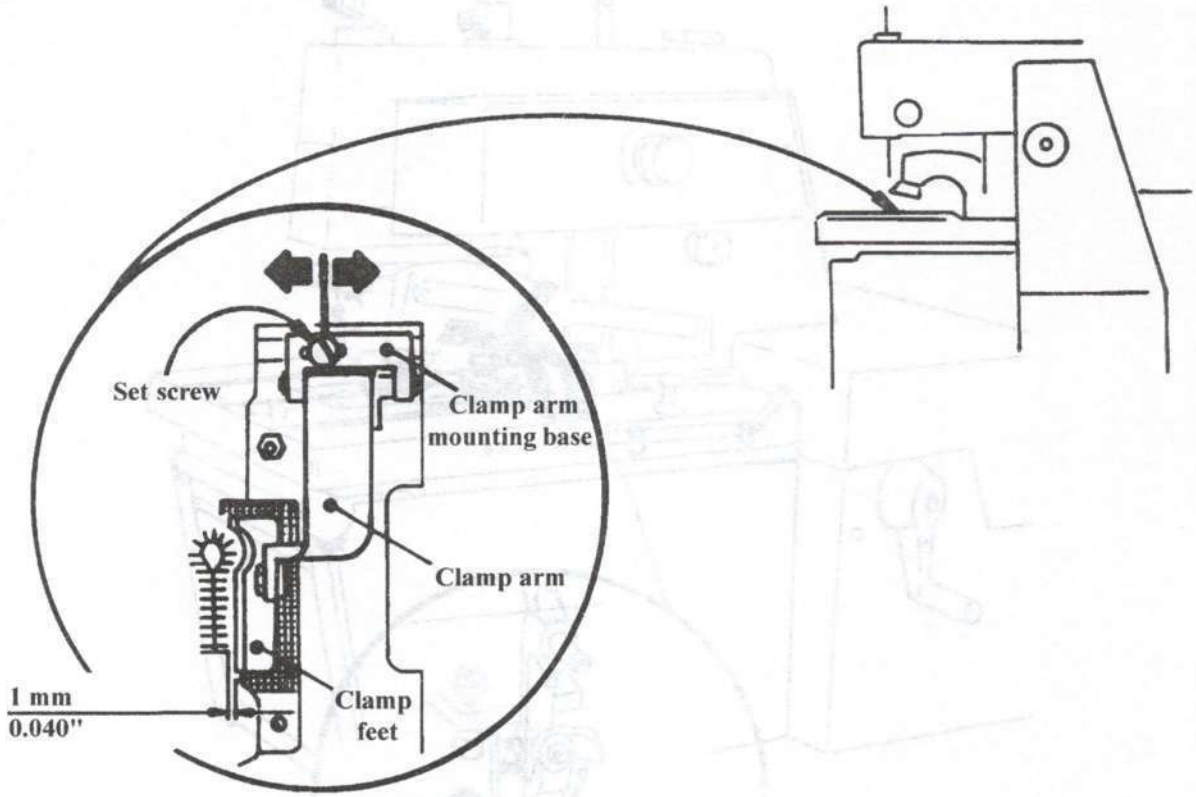
If the stitch bite or clamp feet spread changes, ensure the standard clearance between the clamp feet and the outside needle entry point remains 1 mm, (0.040").

Loosen the mounting base set screw on the clamp arm.

Moving the mounting base of the clamp arm in direction ←—— decreases the clearance between the clamp feet and the outside needle entry point.

Tighten the set screw.

Note: With the waist band setup, make sure when the clamp feet are correctly positioned, they do not drop over the edge of the mats. The clamp feet must sit flat onto the mats.



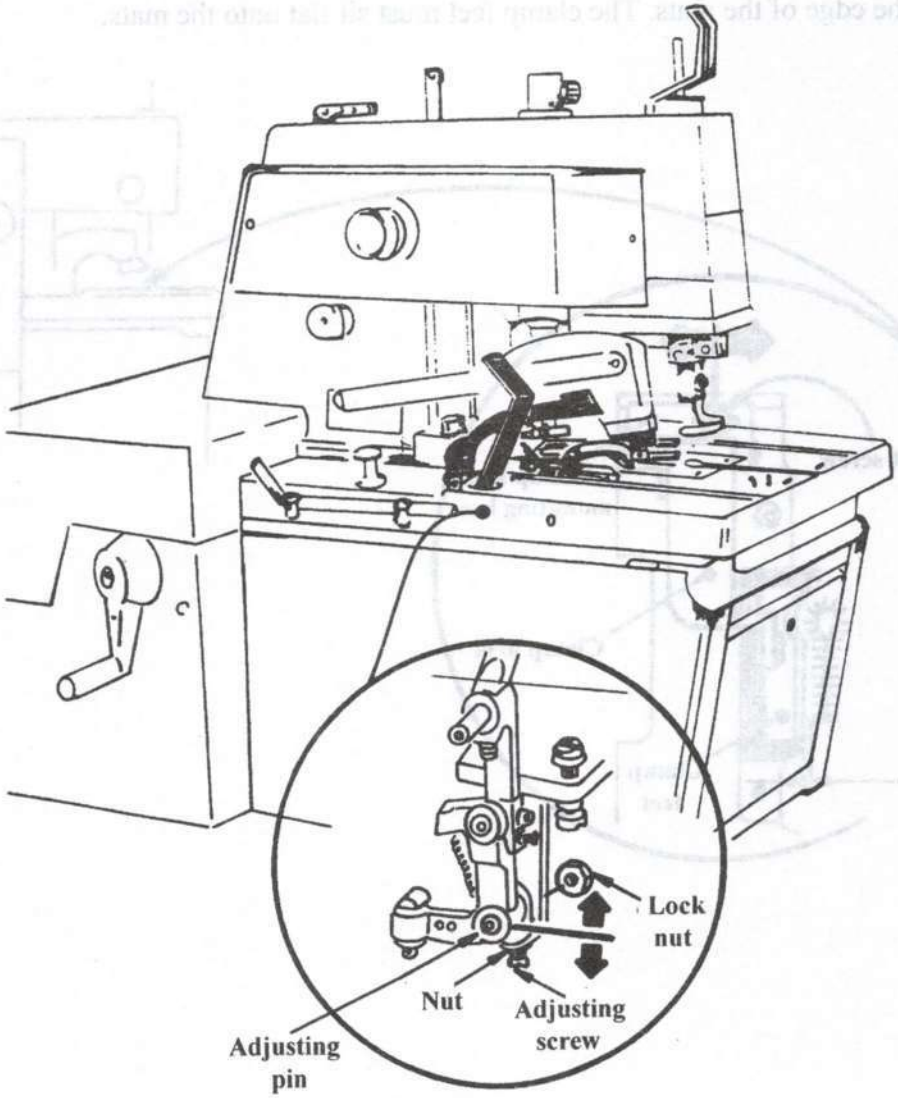
Clamping Pressure

The clamping pressure is set by the manufacturer for medium/heavy weight materials. If light weight materials are sewn, the clamp feet pressure must be modified.

Loosen the pressure adjustment pin locking nut.

Loosen the pressure adjustment screw and locking nut and correctly adjust the clamping pressure for light weight fabric. Up increases the amount of pressure.

Hold the position of the adjustment screws and tighten the locking nuts.



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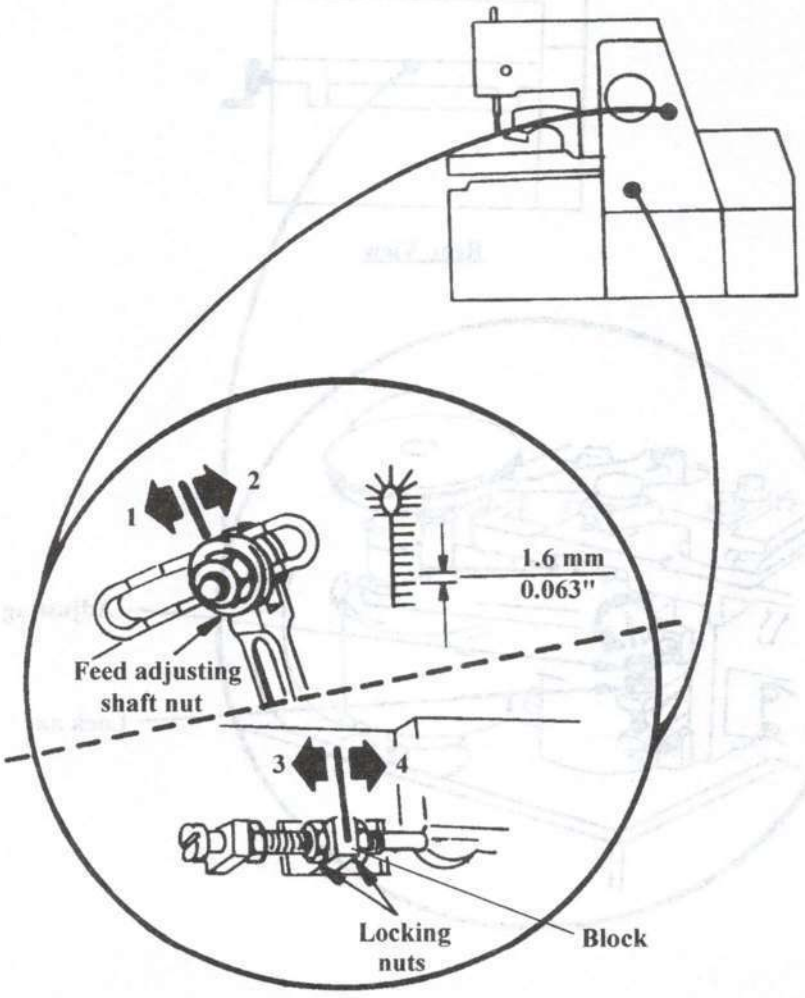
Main Cam Brake and Stitch Density

The main cam brake controls the maximum density of 6 stitches/cm, approximately 1.6 mm, (0.063"). This is a manufacturer specification for setting the distance between stitches. Under normal use, the brake band will need to be adjusted to maintain the factory specifications.

To adjust the main cam brake pressure:
Loosen the locking nuts. Move the brake band in direction **4** to increase the brake pressure and at the same time make the stitch density finer. Move the block in direction **3** to decrease the pressure and make the stitch density coarser. Tighten the locking nuts.

Caution! If the main cam brake pressure is excessively high, the machine may malfunction. The brake pressure must be minimal and within the manufacturer specifications.

To adjust the stitch density:
Loosen the link nut and slide the link in direction **1** or **2** as needed. Direction **1** increases the stitch density and direction **2** decreases the stitch density.

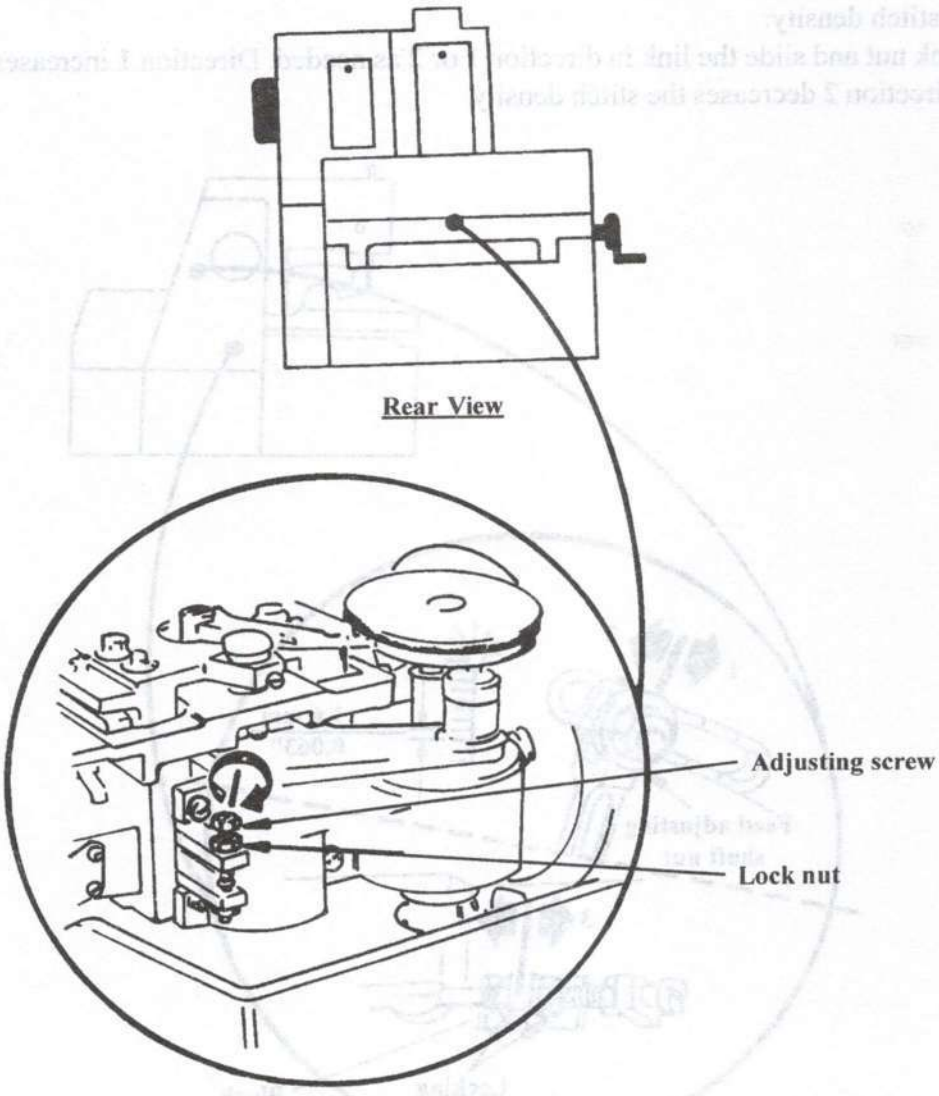


Main Shaft Brake

The main shaft brake equalizes the stitch density of the buttonhole seam for the left and right-hand sides.

Loosen the locking nut of the adjusting screw in the main shaft brake. Adjust the brake pressure to obtain equal stitch density between the stitches. Tighten the adjusting screw. Rotating the adjusting screw clockwise, increases the brake pressure.

Caution! The main shaft brake is an auxiliary brake, used to obtain equalization of stitch density on the left and right-hand sides. If the main shaft brake pressure is excessively high, the machine components may malfunction, maintain the lightest brake pressure possible.



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Prick-In

Install the throat plate.
Insert the prick-in needle 02.0001.0.000 into the needle bar.
The depth of the needle into the needle bar must allow the point of the needle to just barely penetrate a piece of paper.
Place the a piece of paper across the clamp area of the bedplate to check needle penetration.
Switch on the motor power.
Holding the piece of paper in place, cycle the machine to display the stitching pattern.

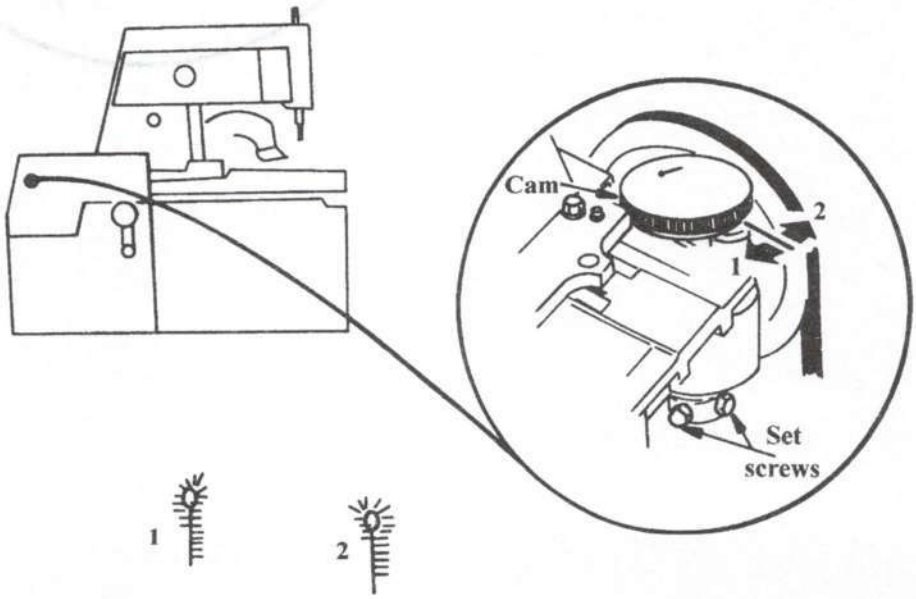
Prick-in Needle 02.0001.0.000

Eye Shape Lateral Cam Setting

Loosen the set screws of the lateral cam gear shaft and rotate the cam to change the eye shape of the butttonhole. Tighten the set screws.

Remove the cutting knife and thread from the machine. Place paper under the clamp feet for a prick-in to check the eye shape of the buttonhole. If the shape at the eye section resembles illustration **1**, rotate the lateral cam in direction **1**. If the shape of the eye section resembles illustration **2**, rotate the lateral cam in direction **2**.

Caution! Minimal cam movement is required to obtain the correct setting.



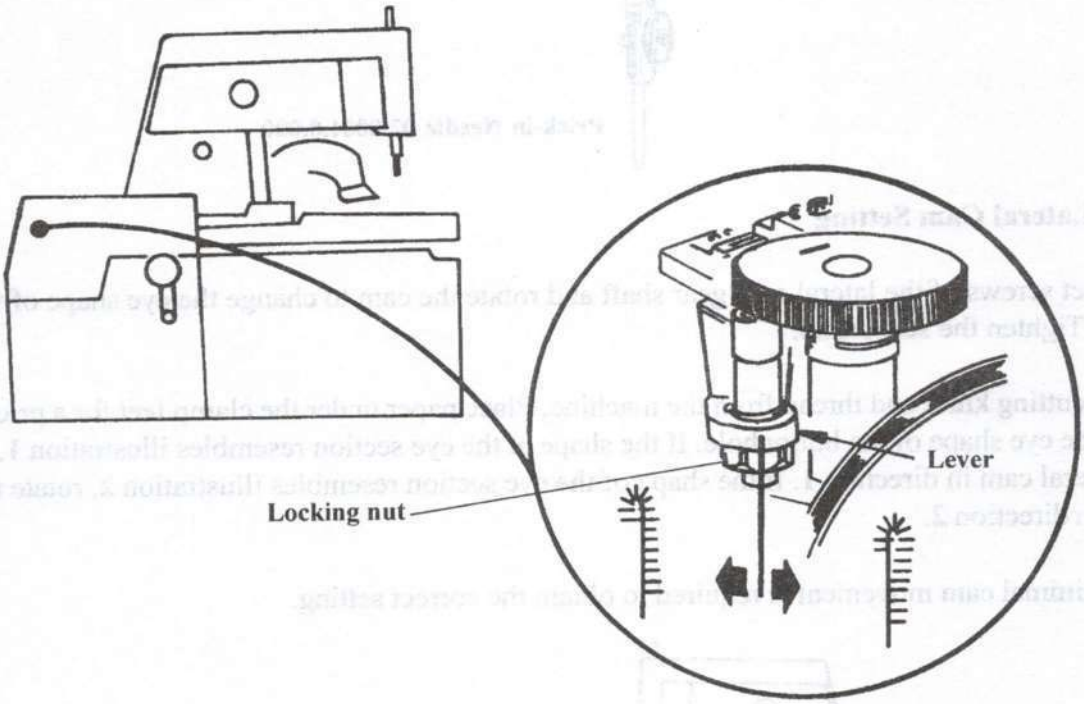
Lateral Cam Change

With the bedplate in the home position, the replacement cam must install freely into the correct operating position.

If binding:

With the bedplate in the home position, loosen the lateral lever locking nut and position the pin to ensure the cam may be lowered easily into the correct operating position.

Tighten the locking nut.



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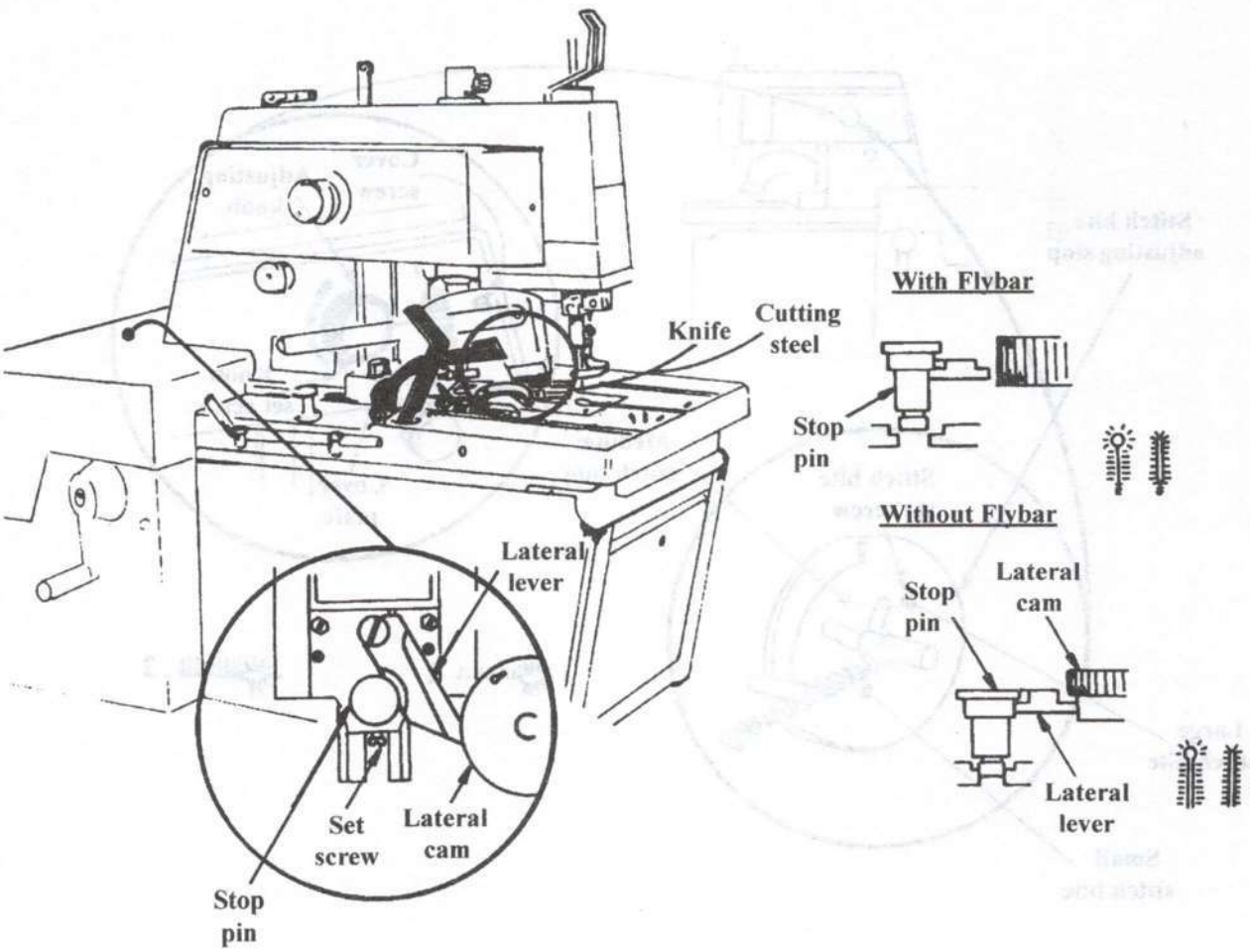
Sewing With or Without a Flybar

To change from "without flybar" to "with flybar" sewing, replace the lateral cam with the proper length flybar cam. Loosen the set screw and raise the stop pin. Position the lateral lever against the stop pin.

To change from a lateral cam with a flybar, to a lateral cam without a flybar, loosen the set screw and lower the stop pin and position the lateral lever against the stop pin.

Note: Once the lateral cam has been replaced, replace the knife and the cutting steel. Adjust the buttonhole length if needed.

Caution! If the machine sews as a Cut After, without making the above adjustment, the knife may cut the thread at the end of the cycle.



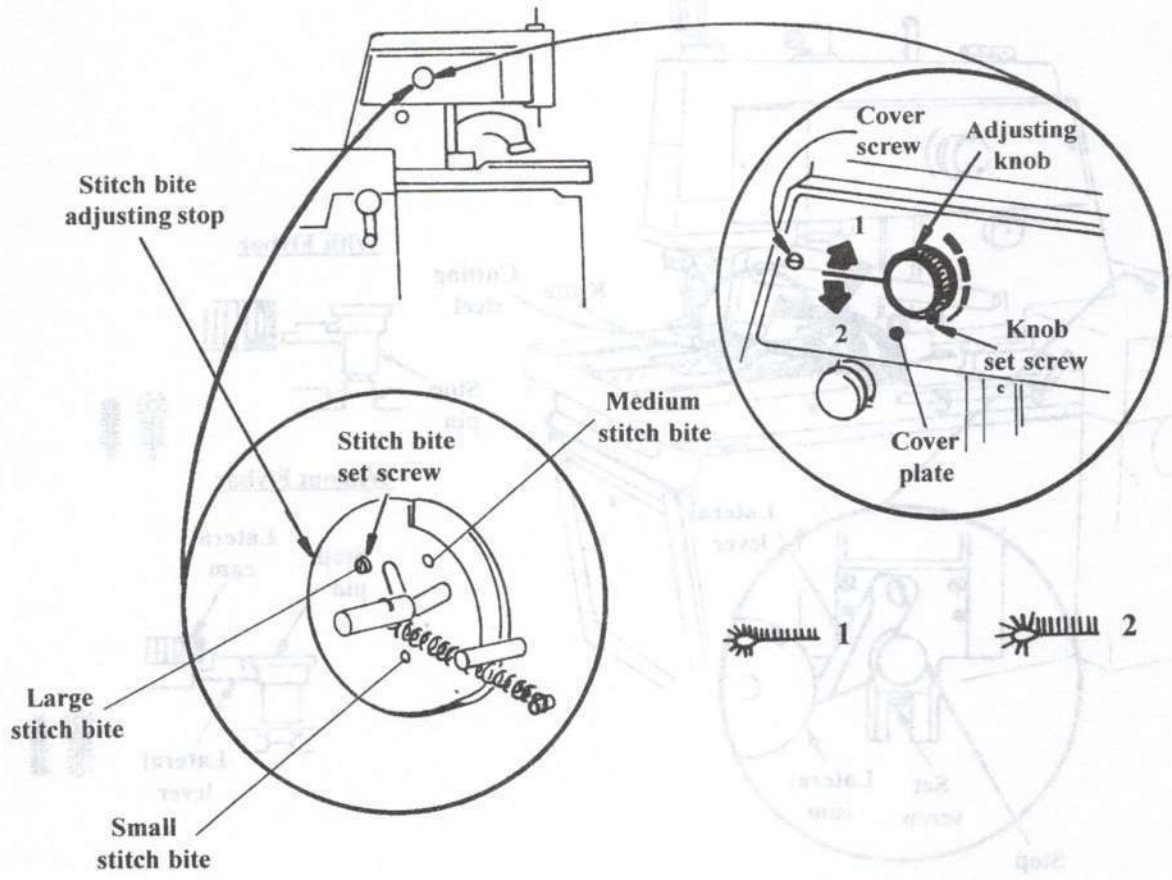
Stitch Bite Width Change

Rotating the stitch bite adjusting knob clockwise, decreases the stitch bite width, as illustrated in example **1**. Rotating the knob counterclockwise increases the stitch bite width, as illustrated in example **2**.

The three stitch bite width option are small, medium, and large, the medium standard stitch bite is set by the manufacturer between 2.5 and 3.5 mm, (0.100 and 0.140").

To change the stitch bite width, loosen the adjusting knob set screw and remove the adjusting knob. Remove the cover plate screw, cover plate, and stitch bite set screw. Rotate the stitch bite adjusting stop until the hole indicating the desired stitch bite is obtained. Tighten the stitch bite set screw and replace all parts.

Note: When changing the stitch bite, reset the correct looper timing, if needed.



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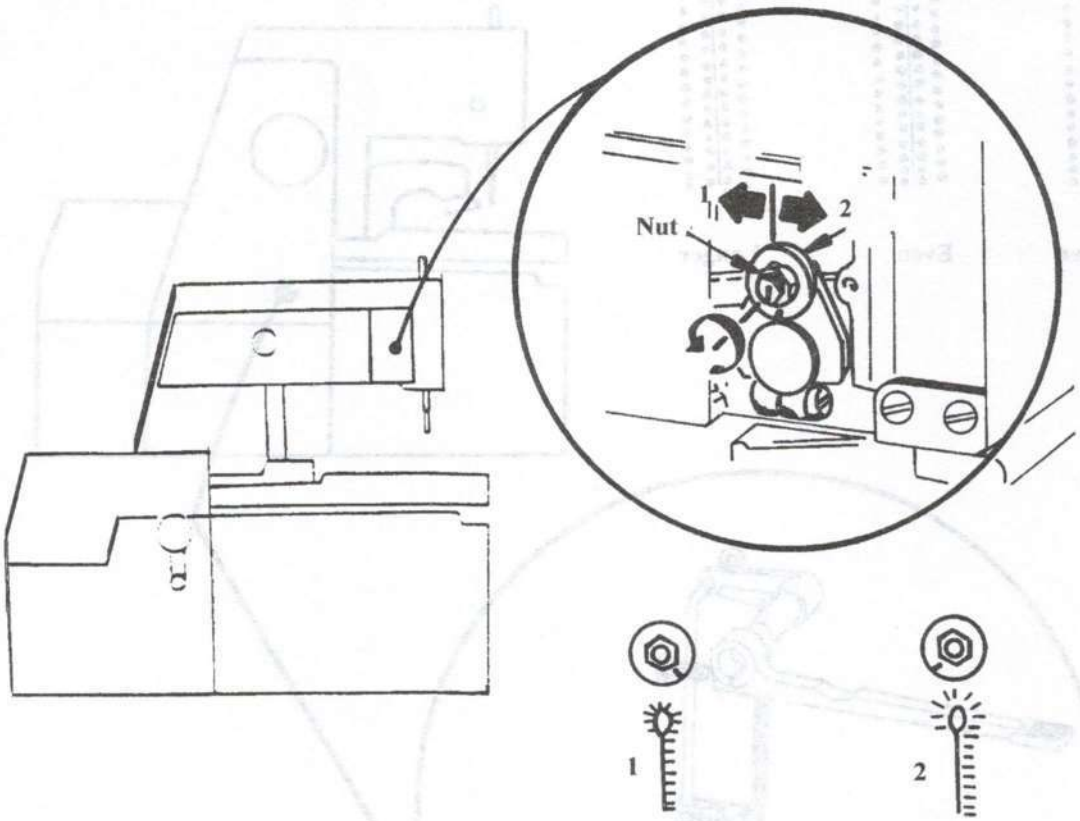
Cutting Space

Loosen the nut.

Move the screw clockwise for more cutting space, illustrated in example **2** or counterclockwise for less cutting space, as illustrated in example **1**.

Tighten the nut.

Note: When you change the cutting space, reset the correct looper timing, if needed.

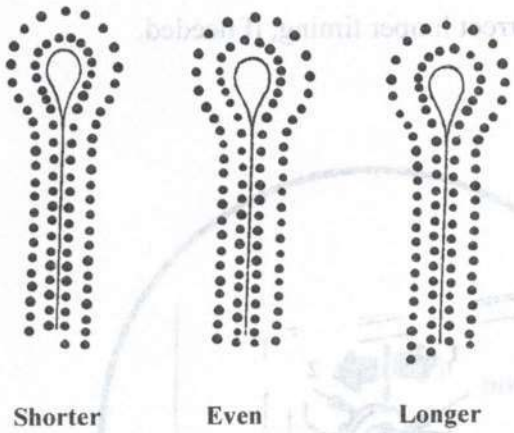


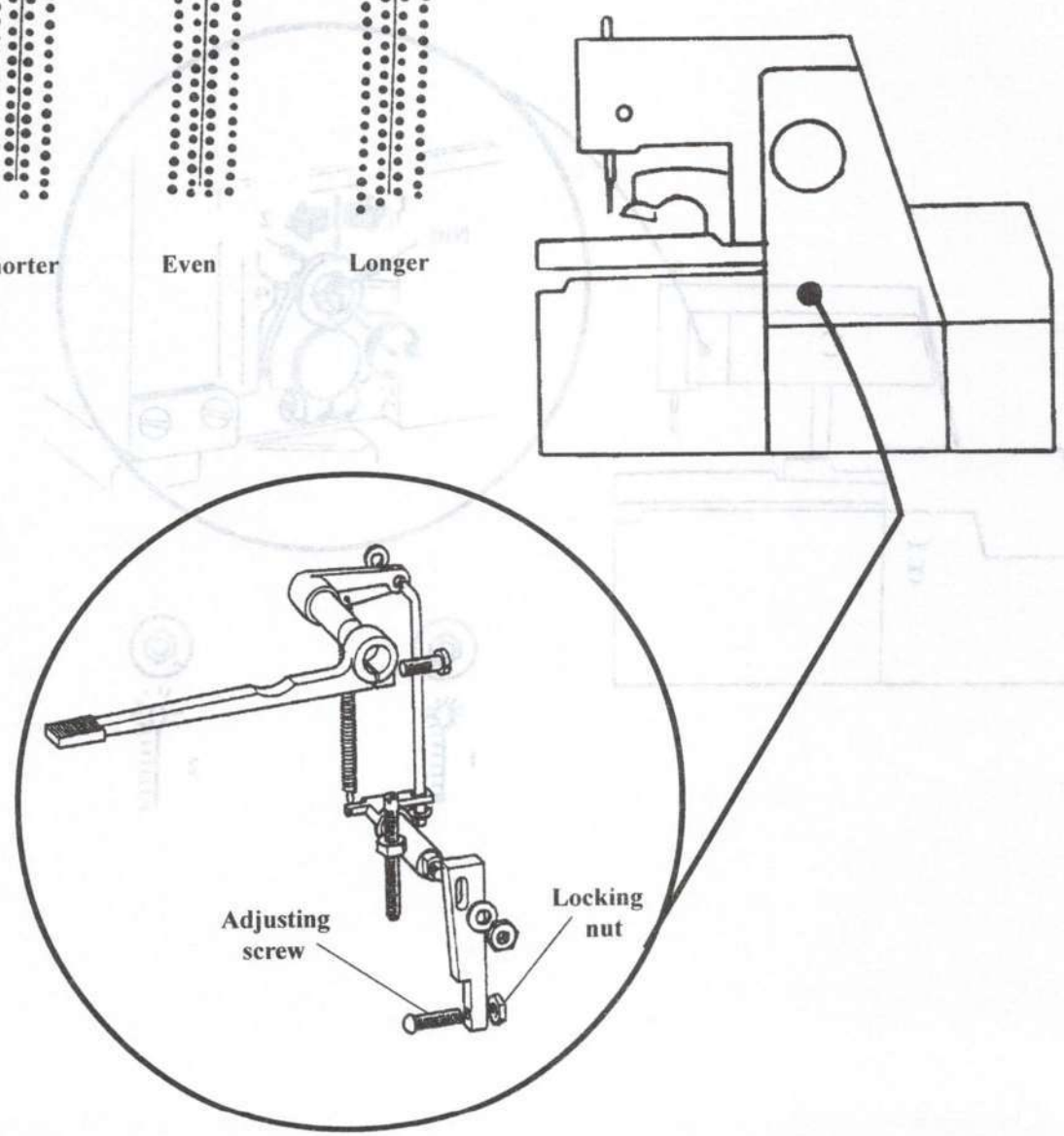
Last Stitch Stop

Loosen the locking nut and rotate the adjusting screw for the correct last stitch stop location.

Rotating the screw in will shorten the stitching length, rotating the screw out will extend the stitching length.

Stitch Examples





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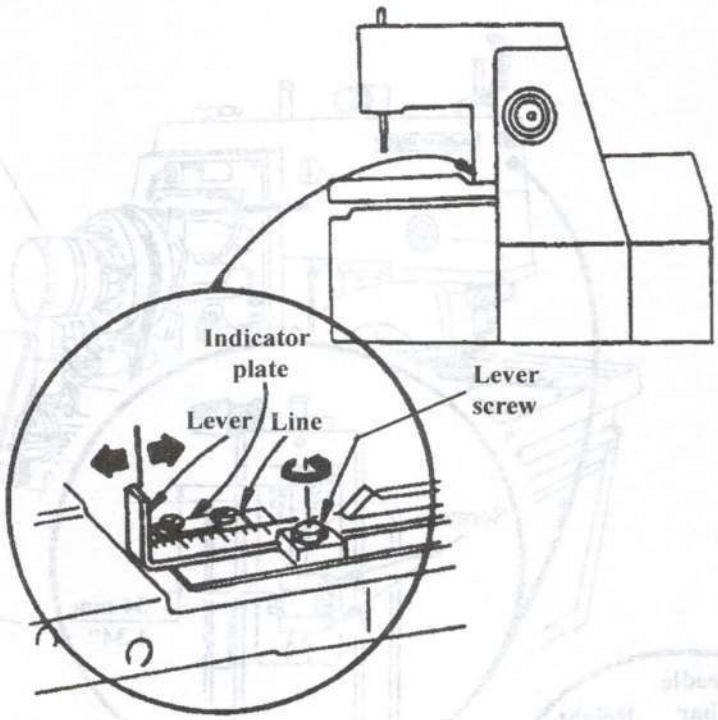
Buttonhole Length Change

Loosen the lever locking screw and align the lever with the line engraved on the length plate indicating the buttonhole length required.

When sewing flybar buttonholes, the lateral cam must be changed, according to the buttonhole length being sewn.

When the length of the buttonhole changes, the cutting steel must change according to the buttonhole length specified.

When an open end, without flybar, buttonholes are being sewn, the open end lateral cam must be installed.

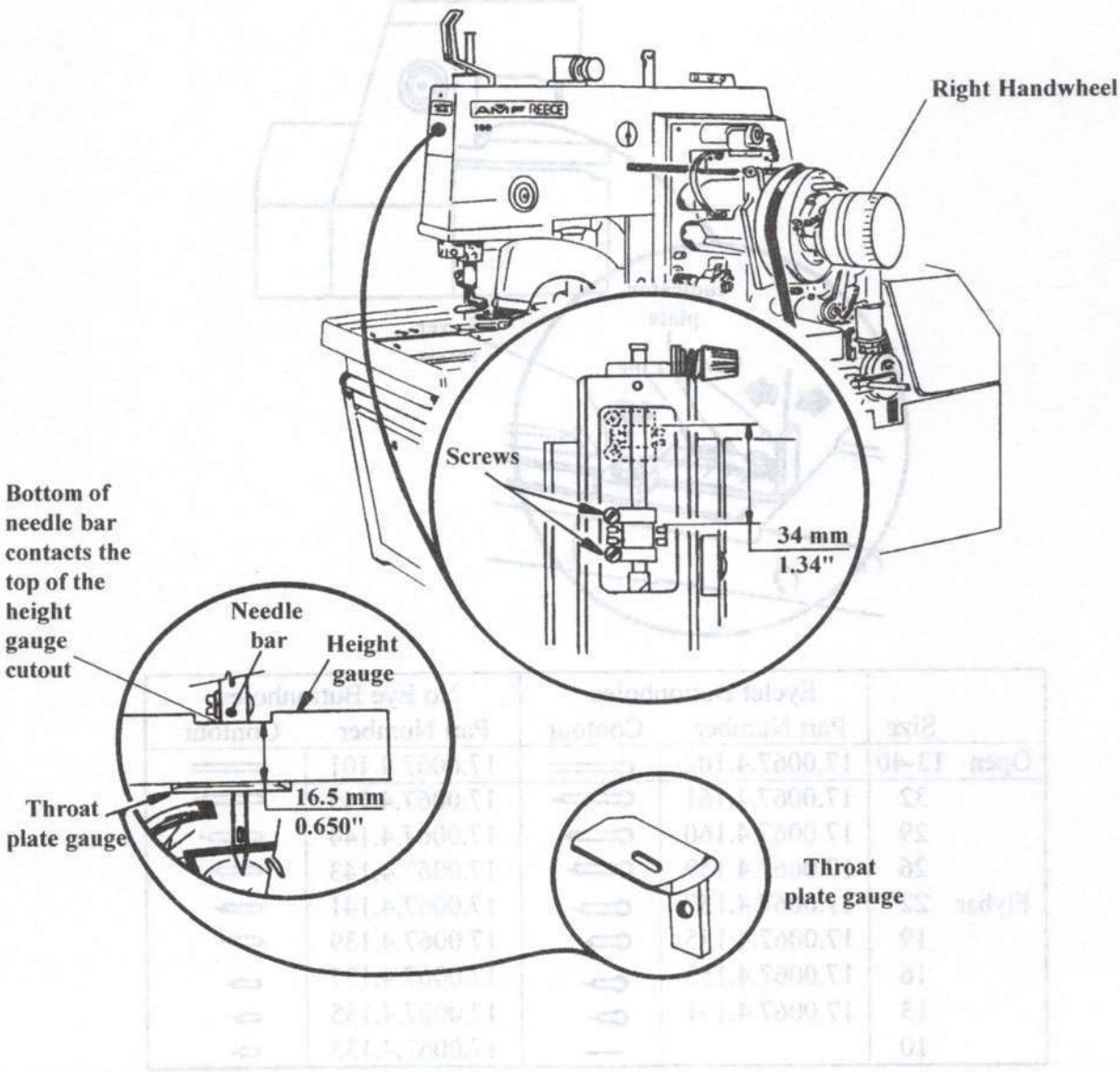


	Size	Eyelet Buttonholes Part Number	Contour	No Eye Buttonholes Part Number	Contour
Open	13-40	17.0067.4.102		17.0067.4.101	
	32	17.0067.4.161		17.0067.4.145	
	29	17.0067.4.160		17.0067.4.144	
	26	17.0067.4.159		17.0067.4.143	
Flybar	22	17.0067.4.157		17.0067.4.141	
	19	17.0067.4.155		17.0067.4.139	
	16	17.0067.4.153		17.0067.4.137	
	13	17.0067.4.151		17.0067.4.135	
	10			17.0067.4.133	

Needle Bar Height

Remove the throat plate and manually rotate the left-hand crank until the right-hand wheel is released.
Install the throat plate gauge.
Install the needle bar height gauge and check the needle bar height, with the needle bar set at the bottom of the stroke.
Standard height of the needle bar is 16.5 mm, (0.65") between the top of the gauge cutout and the bottom of the needle bar, when the needle bar is at the lowest point.

To align the bottom of the needle bar and the top of the height gauge cutout::
Loosen the screws and move the needle bar up or down as needed. Tighten the screws and ensure the correct needle bar height with the gauge.
Tighten the screws.



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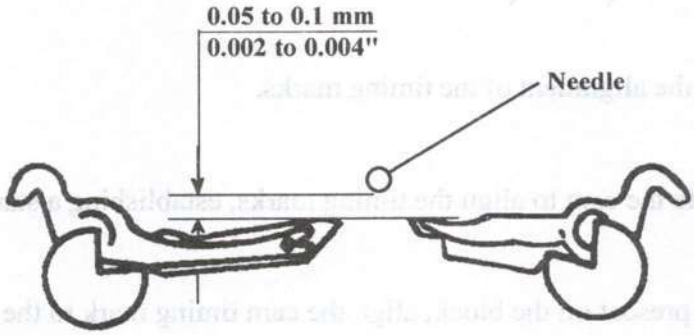
Clearance Between the Looper and the Needle

The standard clearance between the loopers and needle is 0.05 to 0.1 mm, (0.002 to 0.004").

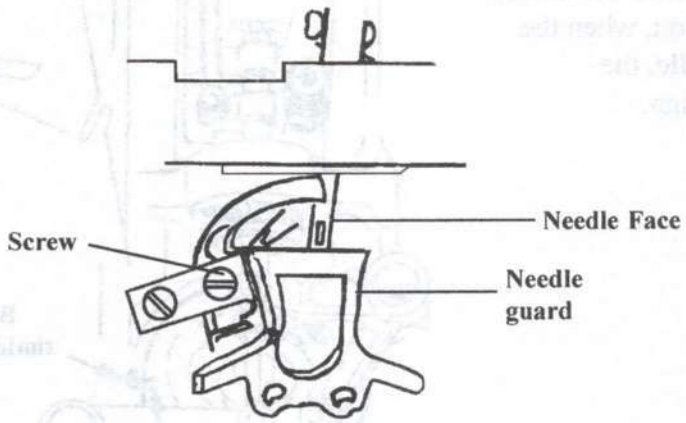
Manually rotate the right handwheel and ensure the distance between the needle and each looper, as the needle passes the loopers at the closest point, are equal.

To adjust:
Loosen the screw and position the loopers in or out to obtain the proper clearance.
Tighten the screw.

The standard clearance between the face of the needle and back of needle guard is between 0.05 to 0.1 mm, (0.002 to 0.004"). To adjust, bend the needle guard in or out as necessary in order to obtain the proper clearance.

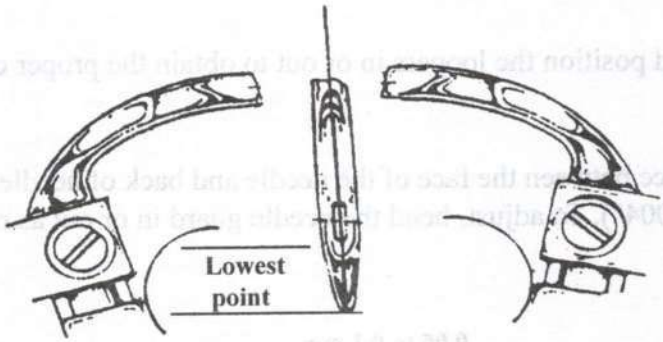


Right hand looper



Timing Between the Loopers and the Needle

Ensure the machine is in the home position. Rotate the left-hand crank until the right-hand stitch wheel releases. Rotate the right-hand stitch wheel until the needle bar is at the bottom of the first stroke.



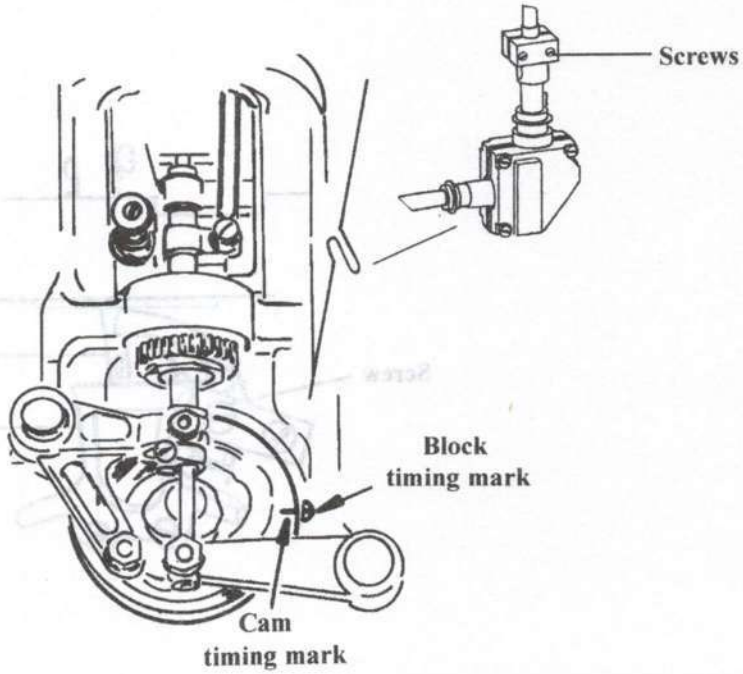
Lift the machine and check the alignment of the timing marks.

If incorrect:
Loosen the screws and rotate the cam to align the timing marks, establishing a starting point for the final looper settings.

Note: If no timing mark is present on the block, align the cam timing mark to the center of the block.

Tighten the screws.

Note: This timing may be checked in the sewing mode. Lower the needle bar to the lowest position, when the looper crosses the needle, the timing marks should align.



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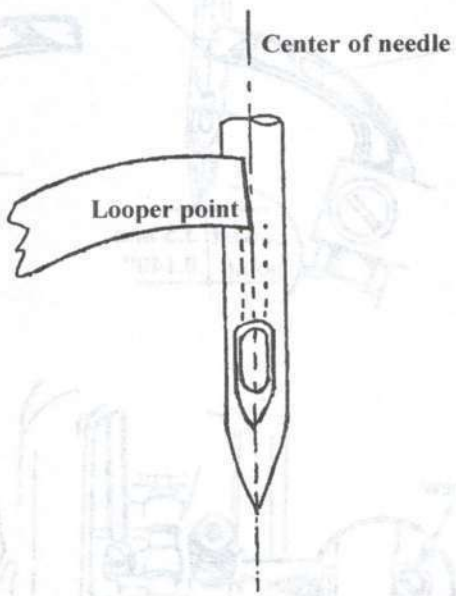
Timing Between the Loopers and the Needle

Rotate the right-hand stitch wheel until the needle bar reaches the lowest point of the first needle bar stroke, bring the needle bar up to contact the top of the height gauge cutout, raising the needle bar 3.5 mm, (0.140"). The point of left-hand looper must be half way across the needle.

If incorrect:
Loosen the screw and rotate the cam to the right or left to bring the left-hand looper point to the needle centerline.
Tighten the screw.

Check the point of the right-hand looper and ensure it is aligned with the center of the needle.

Check the equalization of both loopers to the needle, set if needed.



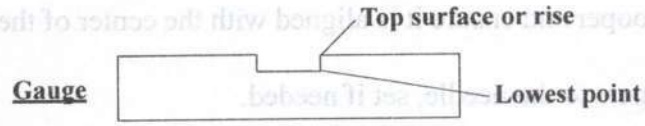
Note: Repeating these steps several times, to obtain the correct looper timing, is normal.

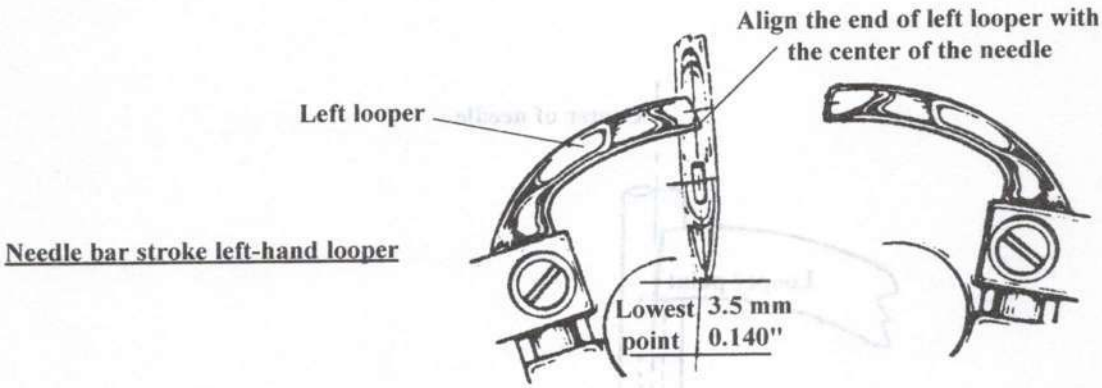
Caution! Using S100 AMF Reece designed replacement parts, will ensure the best quality and highest production possible. The part numbers are listed in the Parts Section of this manual.

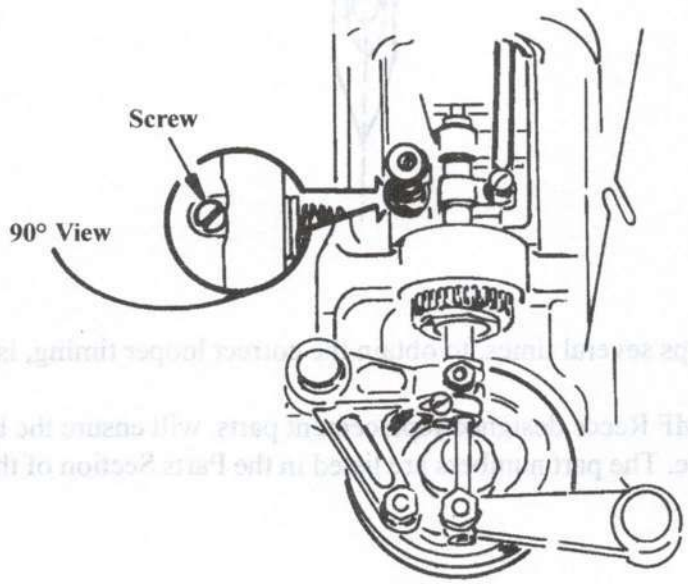
Equalization of the Needle to the Loopers

Rotate the right-hand stitch wheel until the needle bar reaches the lowest point of the first needle bar stroke, the needle bar will contact the top of the height gauge cutout. Rotate the handwheel until the needle bar contacts the highest part of the height gauge, raising the needle bar 3.5 mm, (0.140"). The point of the left-hand looper must be half way across the needle.

If incorrect:
Loosen the screw and move the left-hand looper to the right or left, to bring the looper into the needle centerline and tighten the screw.







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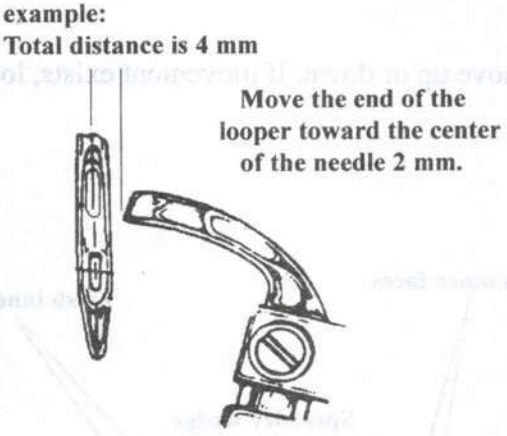
Equalization of the Needle to the Loopers

Rotate the right-hand stitch wheel until the needle bar reaches the lowest point of the vibrator stroke. Bring the needle bar up to contact the highest part of the height gauge, raising the needle bar 3.5 mm, (0.140"). Note the position of the looper point to the centerline of the needle.

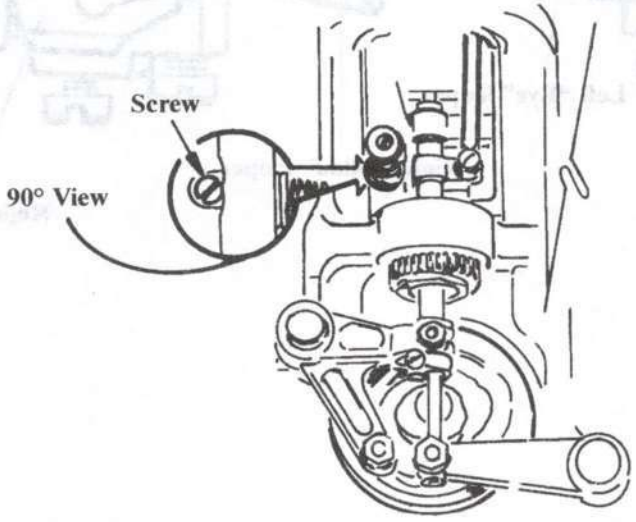
If incorrect:
Loosen the screw and move the right-hand looper half the distance to the needle centerline.
Tighten the screw.

Adjust the end of the looper half the distance from the center of the needle, to equalize the distance for both loopers.



Caution! Check both needle bar strokes to ensure both sides are equal distance from the point of the looper to the needle centerline.

Note: Performing the centerline setting affects the position of the looper to the needle on the first stroke. Ensure the final setting has both loopers equal distance from the needle.



Spreader Clearance

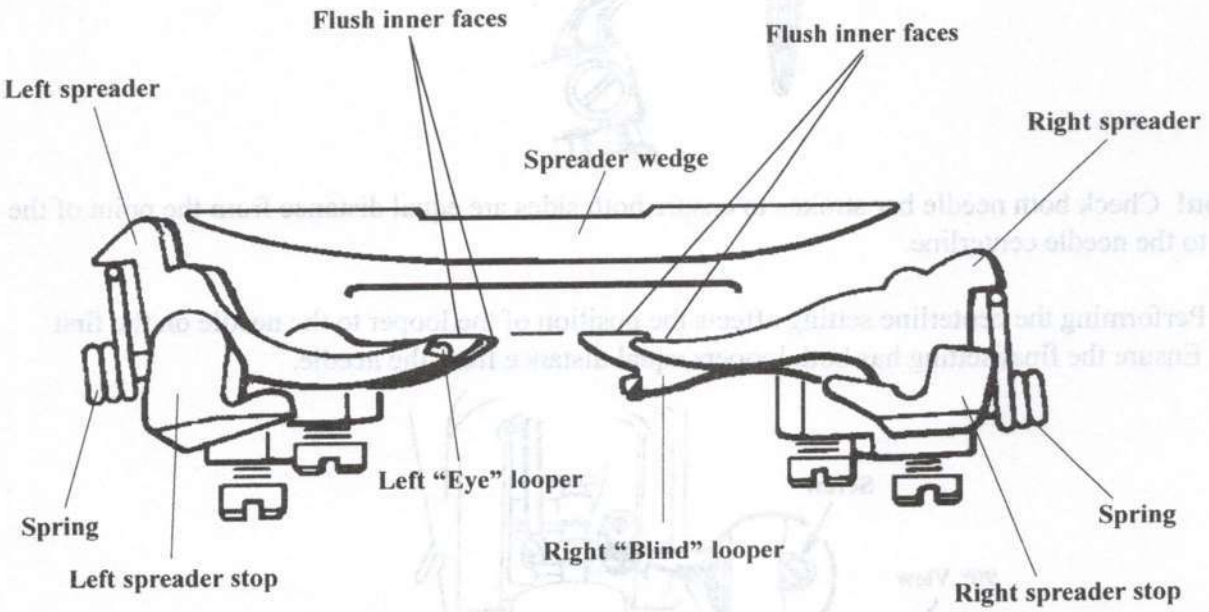
Install the left and right-hand spreaders and spreader stops.

Position the left-hand spreader stop until the left-hand spreader fork straddles the hole in the left-hand looper and maintains a clearance equal to the thread thickness being sewn.

Adjust the right spreader stop until the inner face of the right spreader is flush with the corresponding inner face of the right-hand looper. The right-hand spreader must be flush with the looper without binding.

Check the action of both the spreaders and make sure they do not bind against the top surface of the loopers or spreader stops.

Ensure the spreaders do not move up or down. If movement exists, lower the stops.



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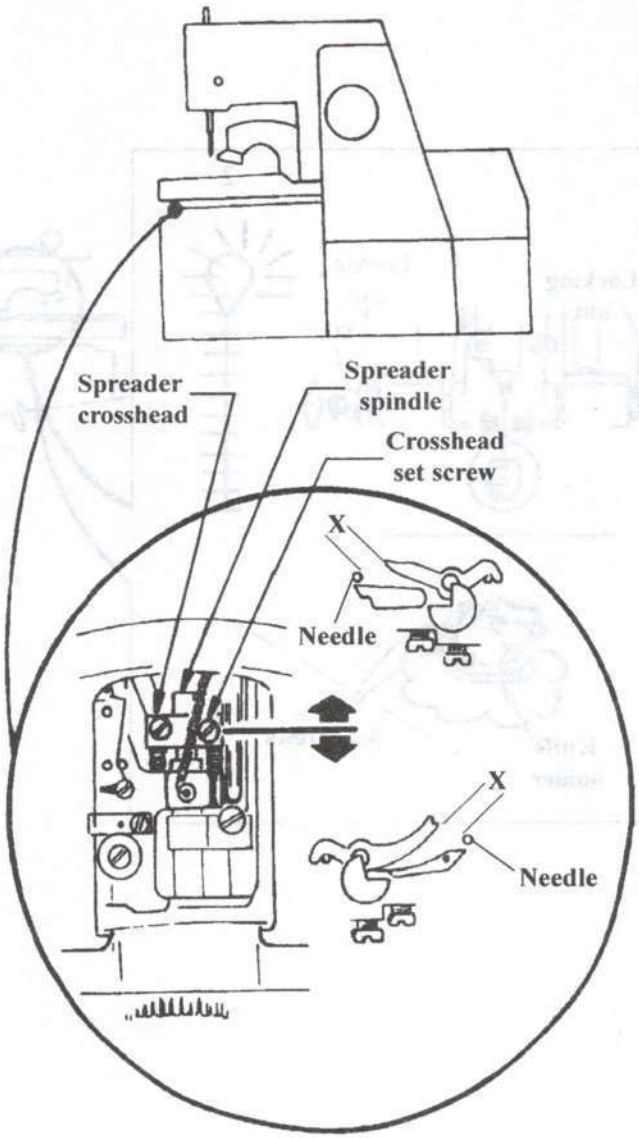
Spreader Open/Close Timing

Note: If the setting is correct, the spreaders will open and close equally on the left and right, without contacting the needle.

Loosen the spreader crosshead set screw, located in the spreader crosshead, and position the crosshead up and down on the spreader spindle, as needed.

Tighten the crosshead set screw.

Caution! The right and left-hand spreader distances X, from the needle, must be equal.



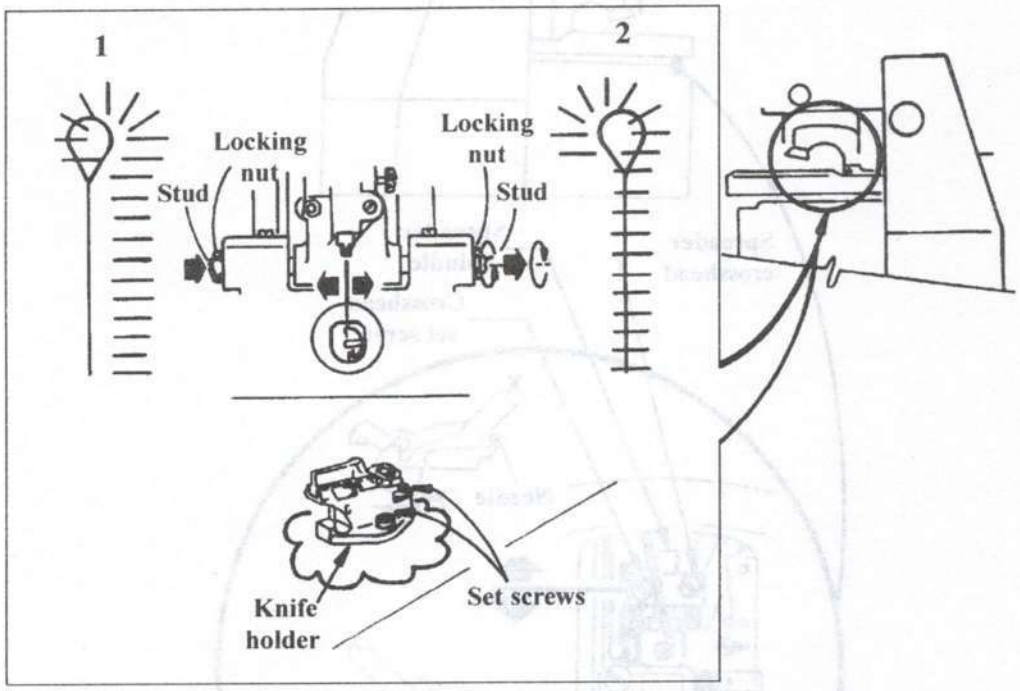
Knife and Cutting Lever

WARNING! Switch off the main machine power, disconnect the air supply and release any stored energy.

Upper Knife - Loosen the cutting lever studs locknuts and adjust by moving the studs to the left or right, as needed. Tighten the studs. If the buttonhole cut looks like illustration **1**, rotate the studs to the right, if the buttonhole cut looks like illustration **2**, rotate the studs to the left.

Cutting Steel - Loosen the knife holder set screws and obtain the proper setting by moving the knife holder to the left or right. Tighten the set screws.

Note: The upper knife must be aligned with the center of the buttonhole. The cutting steel must be centered to the upper knife.



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Cutting Knives

Cutting knives supplied with the machine:

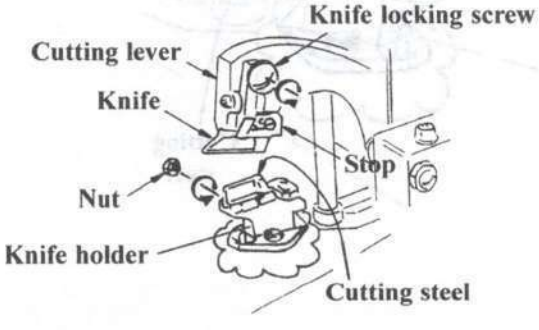
Knife Style	Buttonhole Length	Part Number
3/5CA	10-40 mm	18.0087.0.405
3/5CB	10-40 mm	18.0087.0.406
Without Eye	10-40 mm	17.0064.5.863
3/5CA-T	10-22 mm	18.0087.0.407
3/5CB-T	10-22 mm	18.0087.0.408
Without Eye	10-22 mm	17.0064.6.325

Note: The cutting pressure must be adjusted when the cutting steel is replaced or the material being sewn changes. The machine may be cycled without sewing to check the knife and cutting steel alignment, page 1-15.

Caution! To obtain correct buttonhole cuts, perform each step of the following procedure. Failure to follow these steps may cause knife breakage and possible machine damage.

WARNING! Switch off the main machine power, disconnect the air supply and release any stored energy.

Remove the knife and cutting steel.
Ensure the contact surface of the cutting lever and the knife holder are not damaged.
Install the new cutting steel into the knife holder.
Install the new knife into the cutting lever and lightly tighten the knife locking screw.
Manually lower the knife against the cutting steel to seat the knife in the cutting lever and fully tighten the knife locking screw.
Manually lower the cutting lever toward the knife holder and ensure the knife and the cutting steel are correctly aligned.
Decrease the cutting lever pressure by rotating the pressure adjusting screw counterclockwise three revolutions.
Position a piece of fabric between the knife and the cutting steel and cycle the machine and check the cut of the fabric. Ensure the entire length of the cut is correct.
If incorrect:
Rotate the pressure adjusting screw one revolution clockwise, cycle the machine and check the cut.
Increase the adjusting screw pressure one revolution at a time until a correct cut is obtained.

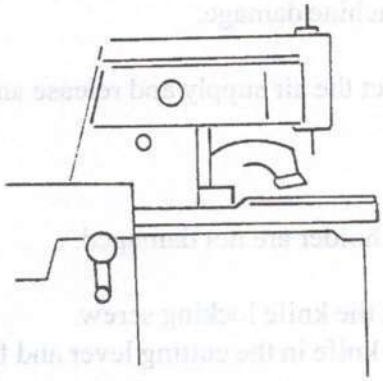


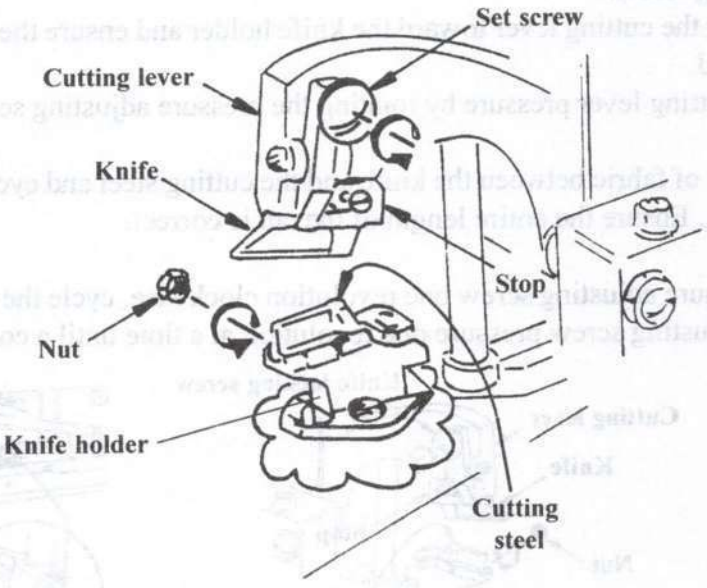
Knife and Cutting Steel Replacement

Knives supplied: No eye
Regular eye, Cut/After applications
Large eye, Cut/Before applications

Note: The cutting steel varies according to the buttonhole length.

To change the upper knife and cutting steel:
Loosen the set screw and remove the knife.
Loosen the locking nut and remove the cutting steel.
Press the proper knife and cutting steel against the stop and lightly tighten the set screw.
Lower the knife arm against the knife and cutting steel to obtain the correct cutting position.
Tighten the set screw.





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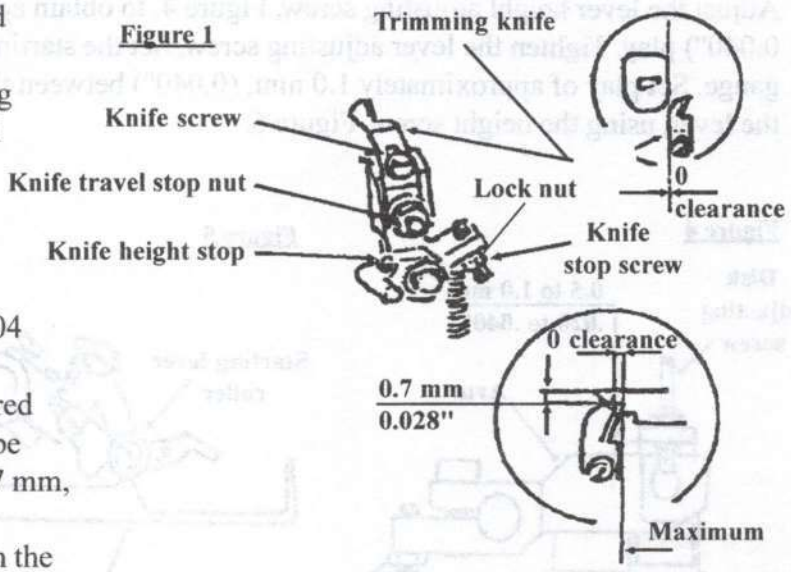
Thread Trimming Knife

Loosen the lock nut and adjust the thread trimming knife by rotating the knife stop screw. The left-hand edge of the trimming knife must be aligned with the right-hand edge of the throat plate, Figure 1.

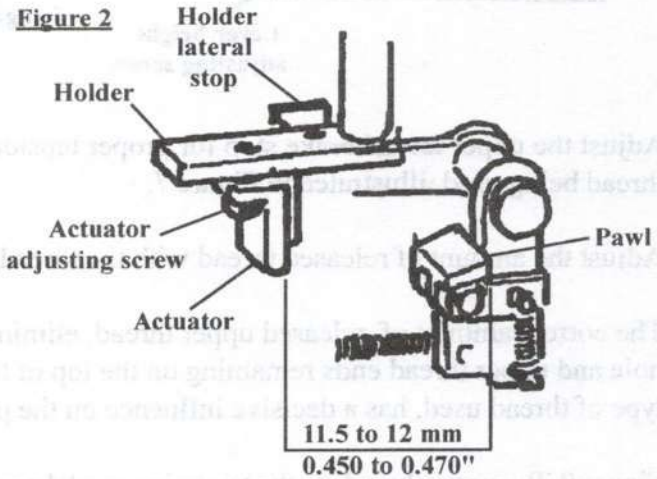
Figure 1



After loosening the knife travel nut, the thread trimming knife height must be set with a clearance of 0.1 to 0.15 mm, (0.004 to 0.006") above the right side spreader, tighten the nut. The knife position, required for catching the upper thread loop, may be corrected as illustrated in Figure 1, to 0.7 mm, (0.028") after loosening the knife screw. Align the knife tip 0.7 mm, (0.028") from the rear edge of the right-hand looper. Tighten the knife screw.

To adjust the actuator, rotate the actuator adjusting screw and move the end position of the thread trimmer knife until the point of the knife passes the point of the right-hand looper, measured during the moment the actuator passes over the pawl. 0.0 to 0.1 mm, (0.0 to 0.004") is required between the lever and the thread trimming knife arm, illustrated Figure 3.

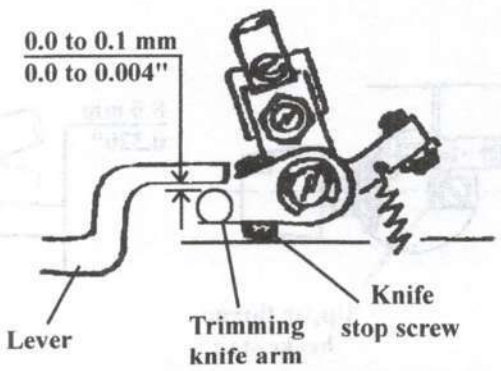
Figure 2



Caution! The knife screw stop eliminates the risk of trimming the lower thread by limiting the range of the trimming knife motion, illustrated in Figure 3.

Time the thread trimming by sliding the actuator holder forward or backward. The basic adjustment between 11.5 to 12.0 mm, (0.450 to 0.470") is obtained in the initial machine stop position. This adjustment corresponds to the buttonhole length limit of 32 mm, (1.260") adjusted by moving the holder lateral stop, illustrated in Figure 2.

Figure 3



Thread Release Mechanism

Adjust the lever height adjusting screw, Figure 4, to obtain approximately 0.5 to 1.0 mm, (0.020 to 0.040") play. Tighten the lever adjusting screw. Set the starting lever rollers to the top of the length gauge. Set play of approximately 1.0 mm, (0.040") between the lower end of the slot and the pin of the lever, using the height screw, Figure 6.

Figure 4

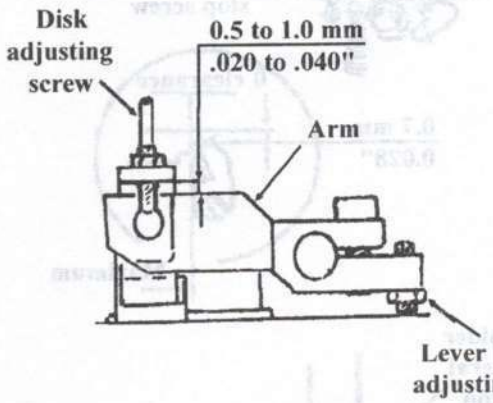


Figure 5

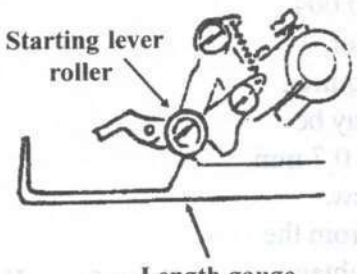
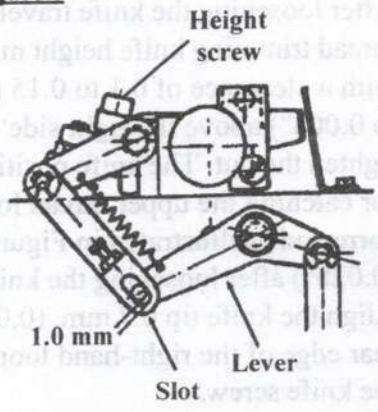


Figure 6



Adjust the upper thread brake stop for proper tension. The pressure required depends on the type of thread being used, illustrated in Figure 7.

Adjust the amount of released thread with the thread release adjusting screw, illustrated in Figure 8.

The correct amount of released upper thread, eliminates the skipped first stitch of the next button-hole and upper thread ends remaining on the top of the first stitch. The type of fabric sewn and the type of thread used, has a decisive influence on the proper amount of released thread.

Figure 9 illustrates threading the trimming model machine.

Figure 7

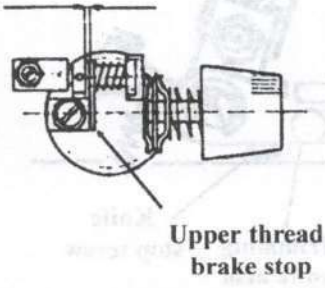


Figure 8

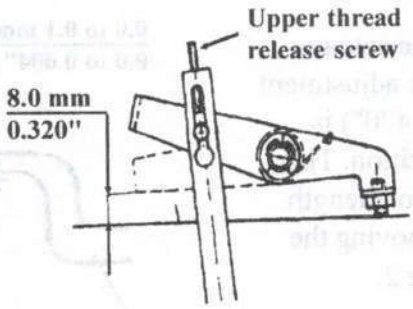
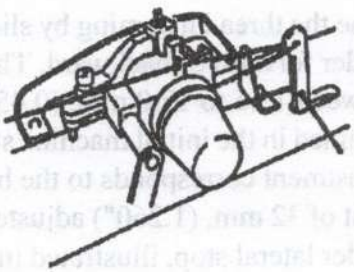


Figure 9



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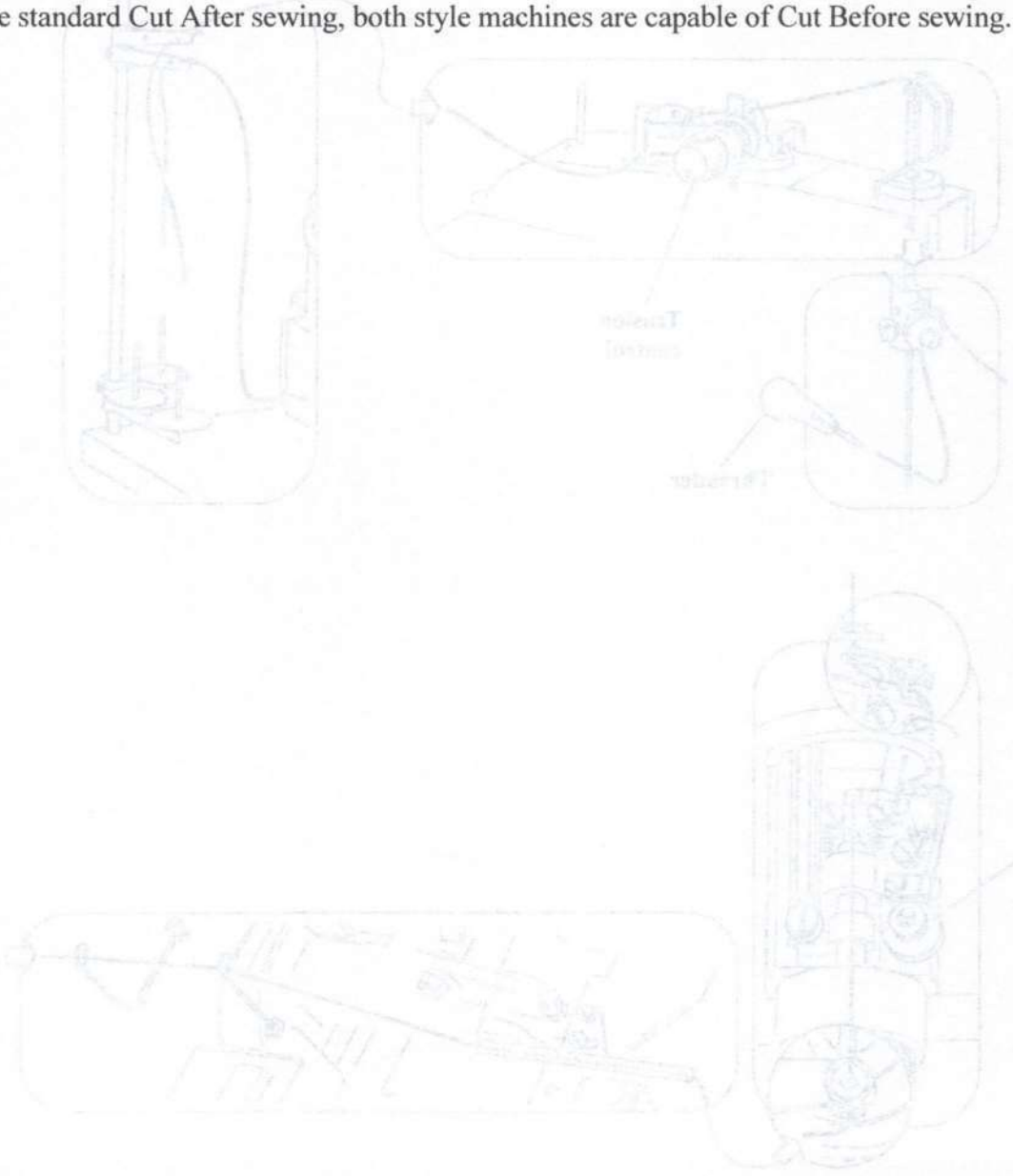
ROUND EYE ADJUSTMENTS

Round Eye Description

The S100-052 & -053 are two thread or single thread, round eye machines, used for decorative round holes in materials up to 6 mm thick, such as round holes in capes and cap vent holes.

Key Features and Benefits

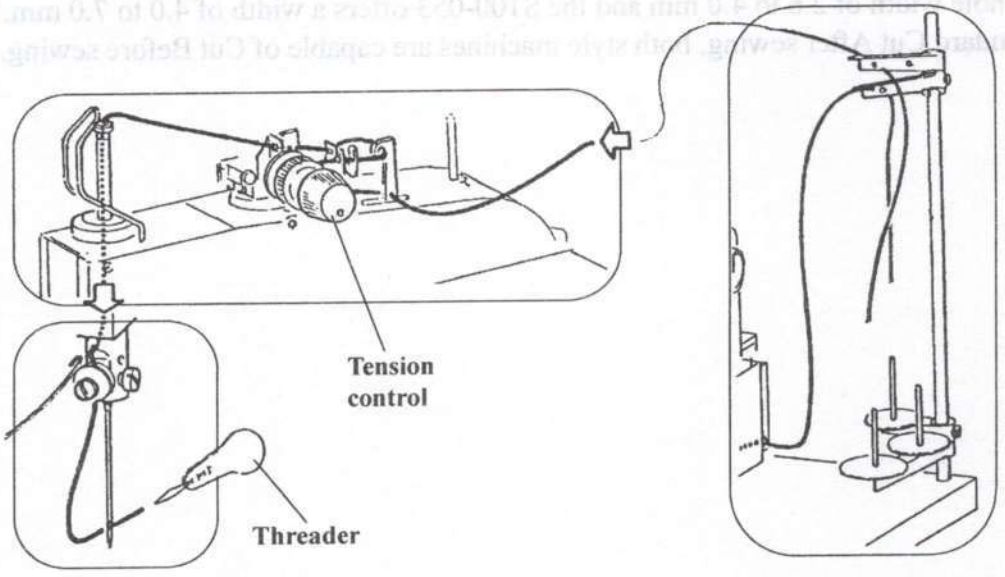
The S100-052 & -053 offer a stitch density of 15 to 40 stitches per hole. The S100-052 has a standard hole width of 2.6 to 4.0 mm and the S100-053 offers a width of 4.0 to 7.0 mm. In addition to the standard Cut After sewing, both style machines are capable of Cut Before sewing.

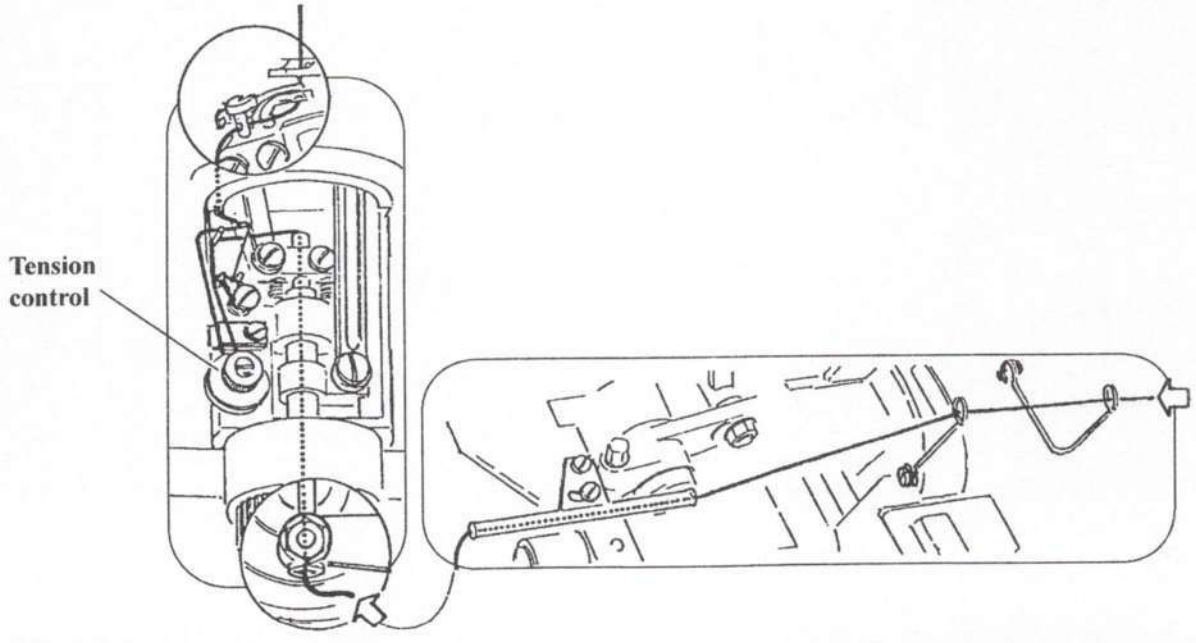


Round Eye Threading

Using the threader, thread the machine as illustrated.
Using the tension controls, adjust the proper thread tension according to the type and thickness of the fabric sewn.

Note: The appearance and quality of the buttonhole is affected by:
stitch density, thread thickness, thread and fabric stretch, upper and lower thread tension, needle diameter, and stitch bite (width of sewing).





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ROUND EYE ADJUSTMENTS

Round Eye Machine Controls

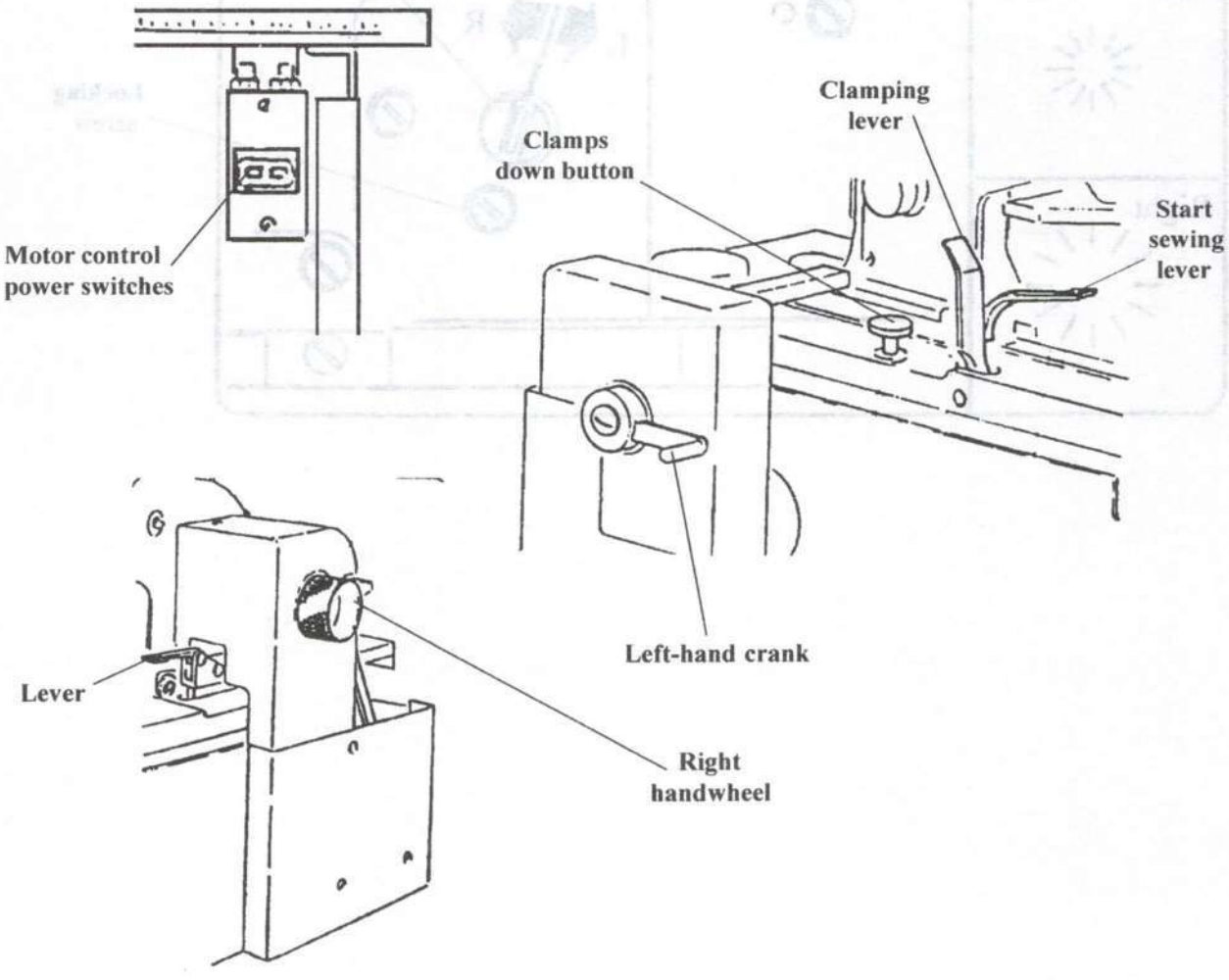
Press the black motor control push-button, to switch on power to the motor.

To start the machine sewing, insert the fabric under the clamps, pull forward on the clamping lever to lower the clamps, engage the foot treadle, and push down on the start sewing lever.

To stop the machine any time during the sewing cycle, push down on the foot treadle. Ensure the needle is out of the fabric by locking the right handwheel.

Press and hold the clamps down button, at the end of the cycle, the clamps will stay down on the fabric, instead of lifting. Perform the necessary repairs, by continuing the next sewing cycle over the existing buttonhole.

To cycle the machine without stitching, with the power engaged, press the lever and the start sewing lever.

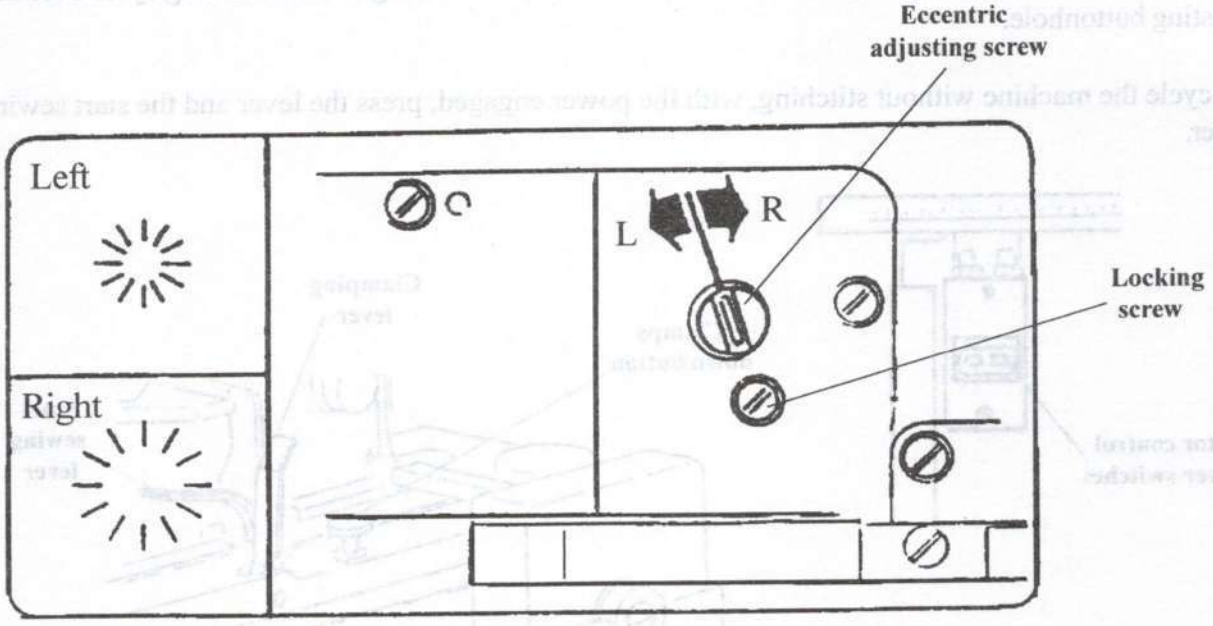


Round Eye Machine Eyelet Diameter or Cutting Space Change

To alter the eyelet diameter, without affecting the stitch bite, loosen the locking screw and rotate the eccentric adjusting screw to the left or right, as needed. Rotating left, decreases the diameter, rotating right increases the diameter.

Note: If a significant eyelet diameter change is performed, ensure the cutting knife and cutting block are correct. Check the looper/spreader timing and reset if needed.

Caution! Before sewing large diameter buttonholes, manually rotate the handwheel to ensure the needle is not contacting the throat plate.



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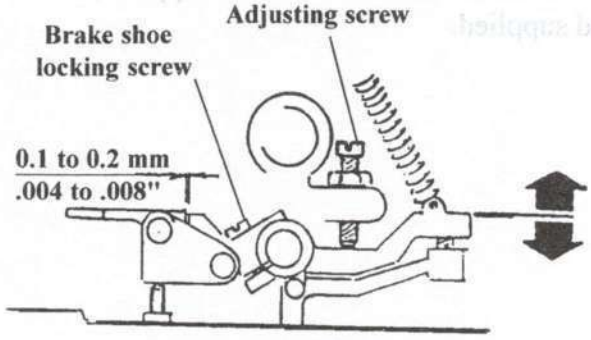
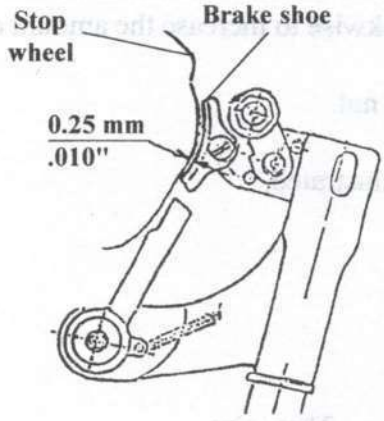
ROUND EYE ADJUSTMENTS

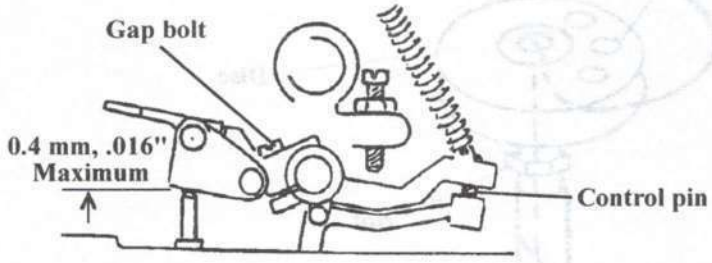
Round Eye Stop Motion Control

With the machine in the home position, using the adjusting screw, set the gap 0.1 to 0.2 mm, (0.004 to 0.008"). Loosen the brake shoe locking screw and adjust the brake shoe and the right-hand stop wheel clearance to 0.25 mm, (0.010").

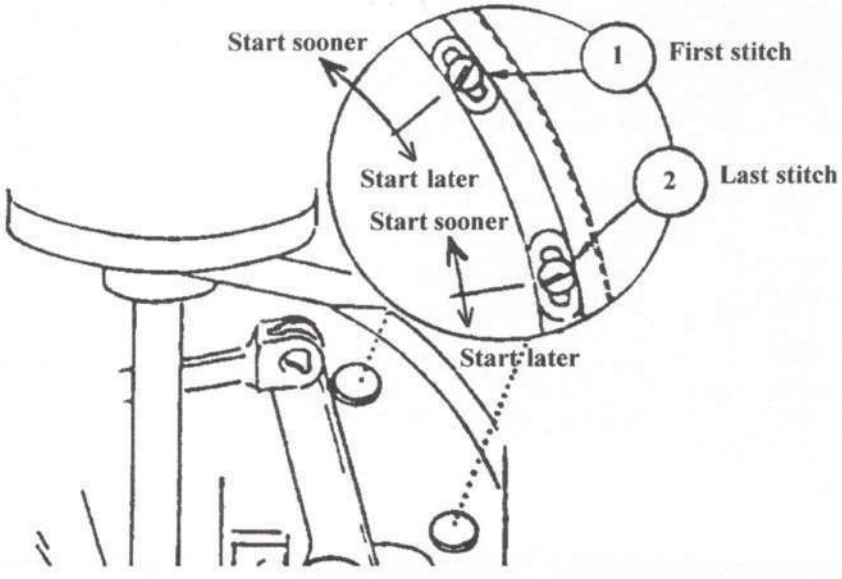




Using the control pin, adjust the gap bolt to 0.4 mm, (0.016").



To adjust the sew start mechanism, loosen the first stitch screw **1** and correctly position the sewing mechanism. Adjust the last stitch screw **2** to obtain the normal correct setting for the last stitch. The normal correct setting for the last stitch, is to sew 2 or 3 stitches over the first stitch, to ensure the eyelet will not unravel.



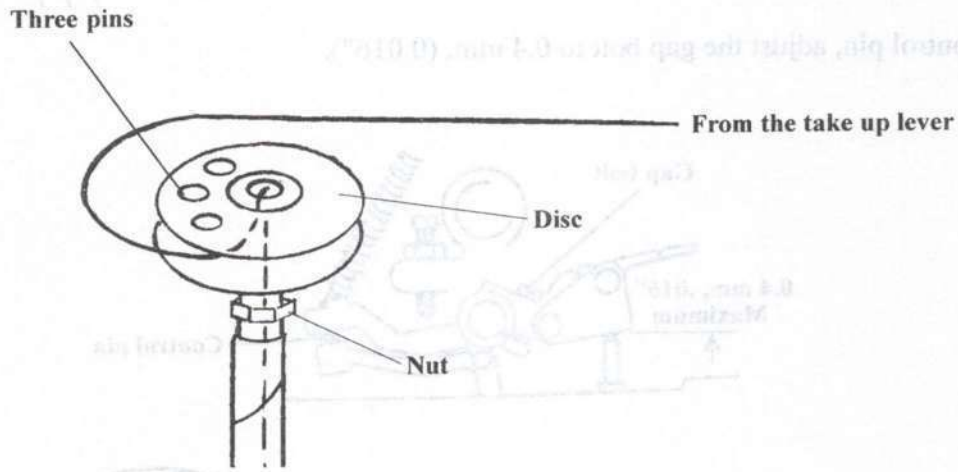
Round Eye Machine Thread Draw-Off Disk

The upper disk ensures enough thread is supplied to correctly start the next eyelet buttonhole.

To adjust:
Loosen the nut and rotate the disk clockwise to decrease the amount of thread supplied, or counterclockwise to increase the amount of thread supplied.

Tighten the nut.

Thread as illustrated.



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CORD TRIM ADJUSTMENTS

Cord Trim Description

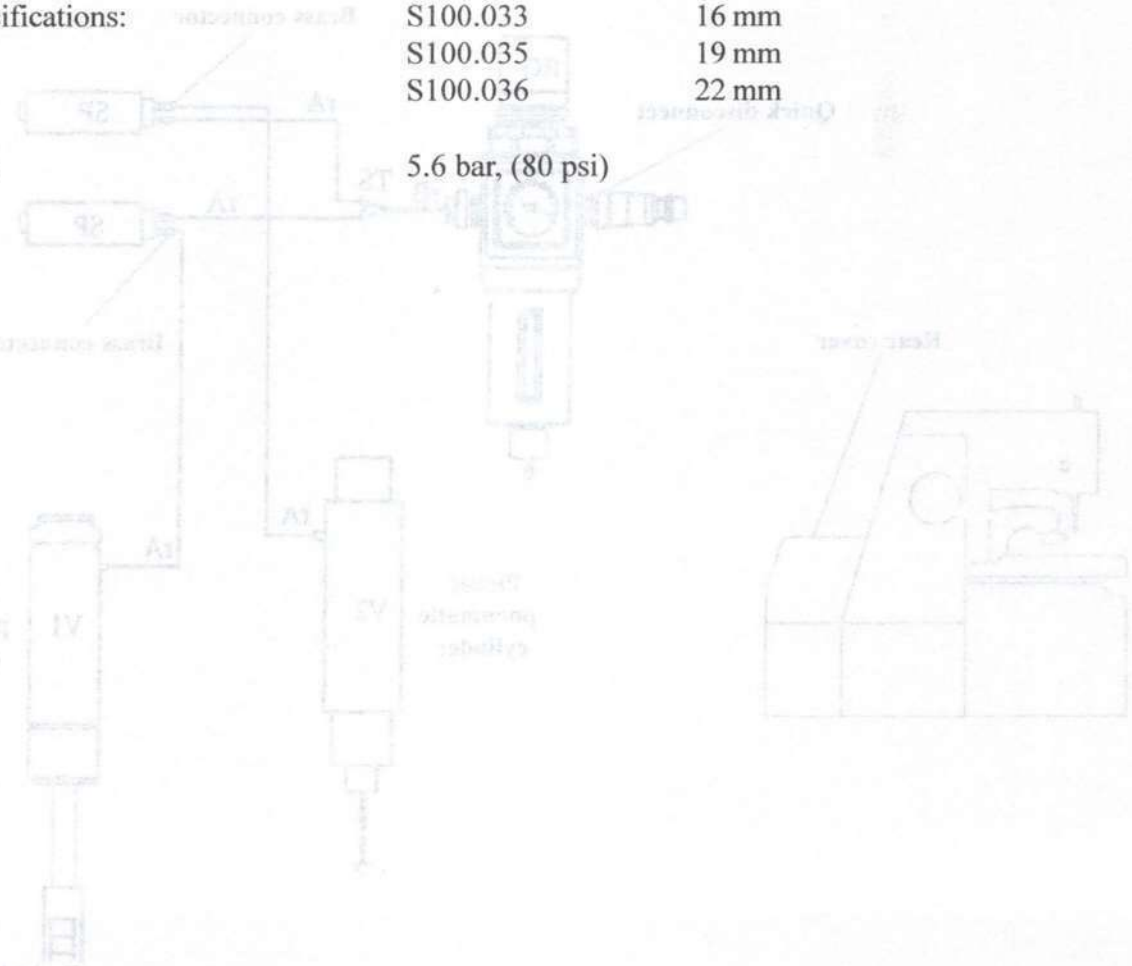
The S100 Cord Trim is an adjustable length automatic cord trim machine, used for a variety of applications, including suits, slacks, and jeans.

Key Features and Benefits

The S100 Cord Trim has a pneumatic cord trim mechanism allowing simplified adjustment and consistent trimming. A pneumatic upper thread picker removes the upper thread from the garment, before shearing, and controls the length of the starting thread for the next buttonhole. A semiautomatic lubrication system uses wicks to lubricate the critical parts of the machine. A revolutionary stop motion increases machine life, reliability, and decreases quality problems, such as double stops, while sewing speeds up to 1,750 spm.

The S100 Cord Trim is available in 16 mm, (5/8"), 19 mm, (3/4") and 22 mm, (7/8") adjustable length, Cut After models.

Machine specifications:	S100.033	16 mm
	S100.035	19 mm
	S100.036	22 mm
Air pressure:	5.6 bar, (80 psi)	



CORD TRIM ADJUSTMENTS

Cord Trim Pneumatic System Connections

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

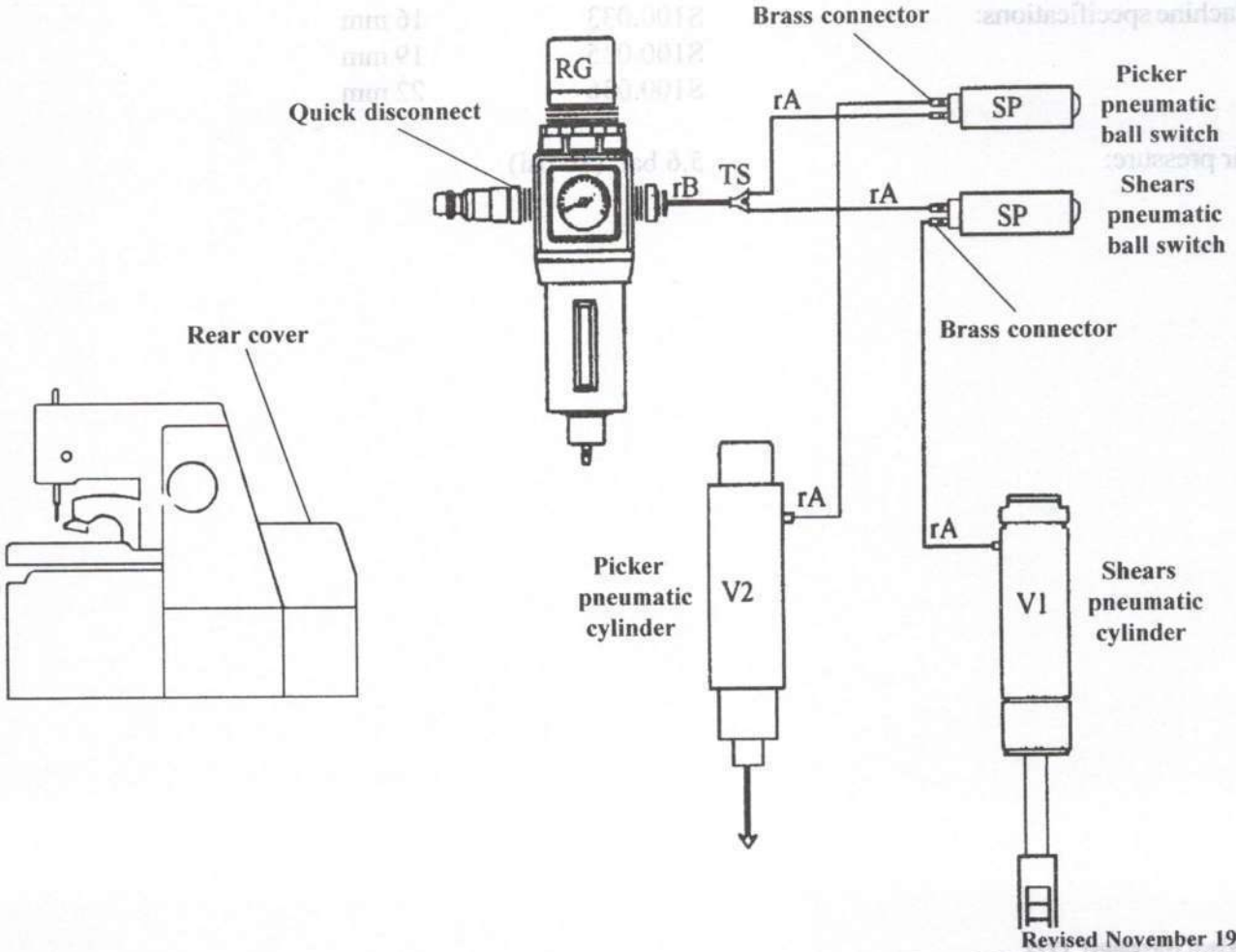
The air connection consists of the air regulator, "Y" fitting, pneumatic ball switches, and air cylinders.

Insert the factory air supply line into the quick connect on the regulator.

Caution! The factory air pressure must be 4.8 to 5.6 bar, (70 to 80 psi), with a minimum machine pressure of 4.1 bar, (60 psi). Using a lower pressure may result in incorrect trimming by the shears.

Air distribution parts:

RG	Regulator and filter
SP	Pneumatic ball switches
V1	Shears pneumatic cylinder
V2	Picker pneumatic cylinder
rA	Tubing PUN 4 x 0.75
rB	Tubing PUN 6 x 1
TS	Three-way valve



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CORD TRIM ADJUSTMENTS

Cord Trim Actuator

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

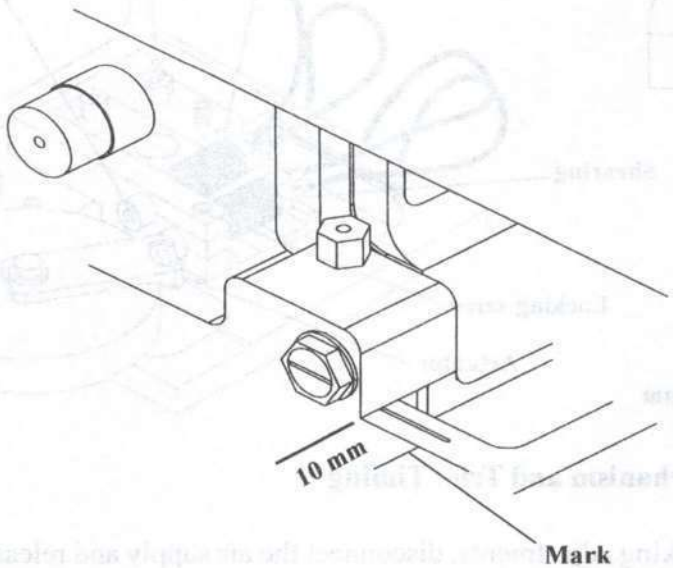
Manually rotate the machine to the last stitch or knock-off position and mark the bedplate, as illustrated.

Rotate the handwheel and lock the machine.

Measuring from the mark, the top thread trimmer must activate within 10 mm after the last stitch mark. After approximately 6 mm of travel, adjust the actuator until the picker moves down toward the thread. After approximately 2 mm of travel, the picker must return to the raised position just after the upper thread trim is complete.

The top picker must fire before the race completes 45 degrees of rotation.

The gimp thread shears must activate after the cutting lever lowers, but before the race completes rotating.



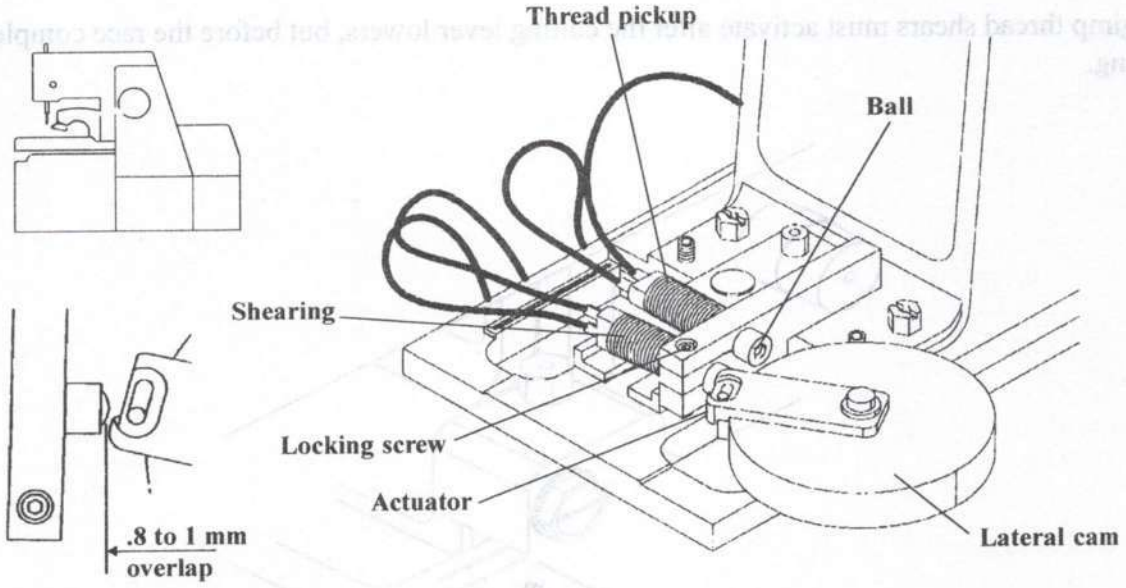
Cord Trim Style Shearing Actuation

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

Caution! To prevent machine damage, it is important to maintain the correct buttonhole length for fixed length applications. Sewing buttonholes too long will damage the machine.

Align the pneumatic ball switches with the actuator on top of the lateral cam. This is a starting point. Shearing action is controlled by the lobe on the lateral cam. To obtain accurate shearing, the balls of the pneumatic switches must overlap the cam lobes by .8 to 1 mm, (.031 to .040"). Loosen the pneumatic ball switch cylinders lock screw. Rotate the threaded ball switch cylinders as needed and tighten the locking screw.

To test the pneumatic ball switch cylinders, manually press the ball at the end of the switches.



Top Thread Picker Mechanism and Trim Timing

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

The top thread picker mechanism pulls the thread out of the garment. The picker mechanism is controlled by a pneumatic switch and cylinder, page 1-62 and timed from the lateral cam.

First, the top thread is trimmed by the standard trim mechanism and just after being trimmed, the thread must be pulled out, by the harpoon, over the material.

The lower and gimp threads are trimmed just before the race rotates. The control is located under the rear cover.

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CORD TRIM ADJUSTMENTS

Top Thread Picker Mechanism and Trim Timing

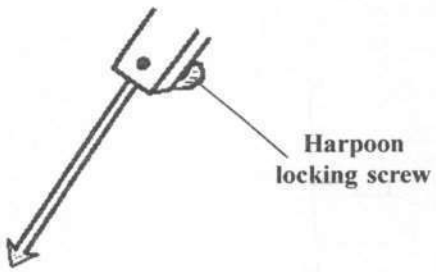
Sew a buttonhole, lock the machine in the last stitch position. Loosen the locking screw, page 1-64 and align the upper cam actuator to the pneumatic picker ball switch.

Connect the air supply and ensure correct operation of the picker air cylinder.

If incorrect:

Loosen the picker harpoon locking screw and manually adjust the picker harpoon until the thread just clears the harpoon. When the harpoon retracts, the thread must be pulled back.

After the buttonhole is sewn, ensure the needle thread trimmer has activated and the picker lowers. Manually move the table and the picker must rise.

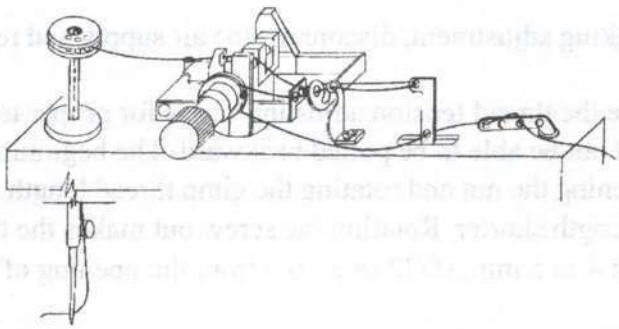


Threading the Machine

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

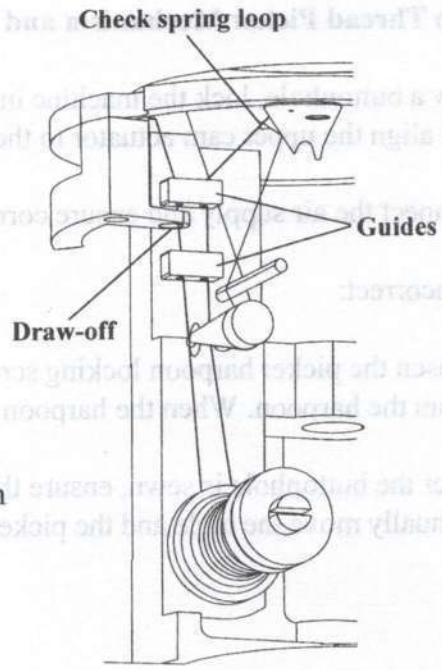
Ensure the power is Off.

Install the upper thread in accordance with S100-052, page 1-56 and page 1-60, as illustrated.



CORD TRIM STYLE ADJUSTMENTS

Threading the Machine

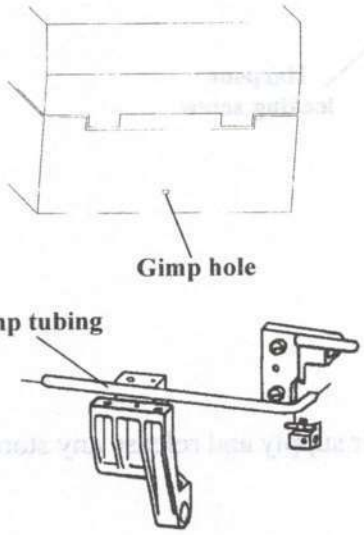


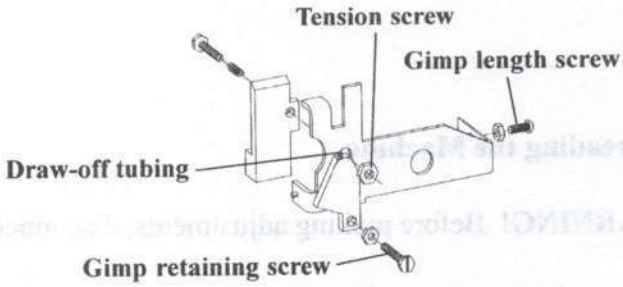
WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

Ensure the main power is Off.

Insert the lower thread through the holes in the draw-off and guides and through the check spring loop.

Insert the gimp thread through the gimp tubing, located on the back cover, through the gimp tubing on the left side of the base and through the draw-off tubing. The gimp thread goes through a hollow screw, tubing, and through a hole in the throat plate.





Gimp Control Mechanism

WARNING! Before making adjustment, disconnect the air supply and release any stored energy.

Loosen the nut and rotate the thread tension adjusting screw for proper tension. The gimp thread must draw out freely and not be able to be pulled backward. The beginning length of the gimp thread may be changed by loosening the nut and rotating the gimp thread length adjusting screw. Rotating the screw in makes the length shorter. Rotating the screw out makes the thread longer. The end of the gimp thread must project 4 to 5 mm, (5/32 to 3/16") from the opening of the throat plate.

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CORD TRIM STYLE ADJUSTMENTS

Air Cylinder Travel for Cord Trim Shearing

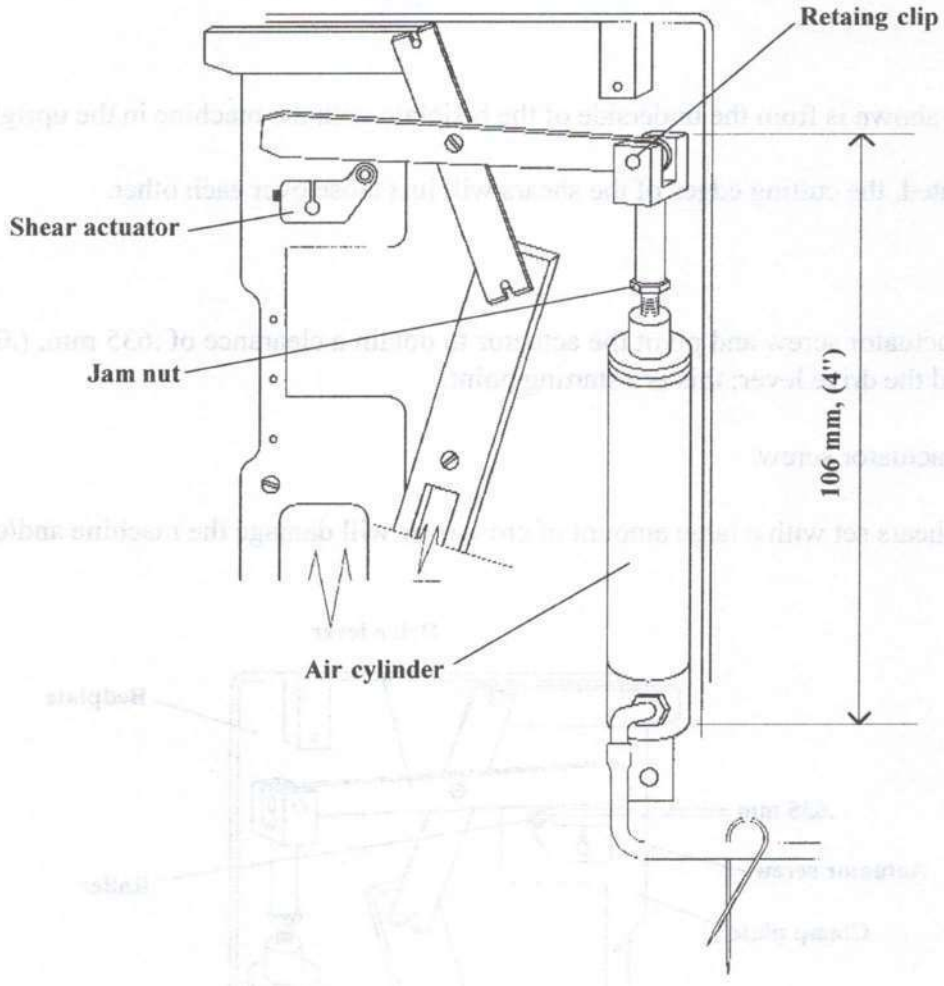
WARNING! Before making adjustment, disconnect the air supply and release any stored energy. Only adjust the air cylinder in the relaxed position.

Loosen the jam nut and remove the retaining clip.

Rotate the clevis in or out, as needed, for an approximate length of 106 mm, (4.0").

Tighten the jam nut and install the retaining clip.

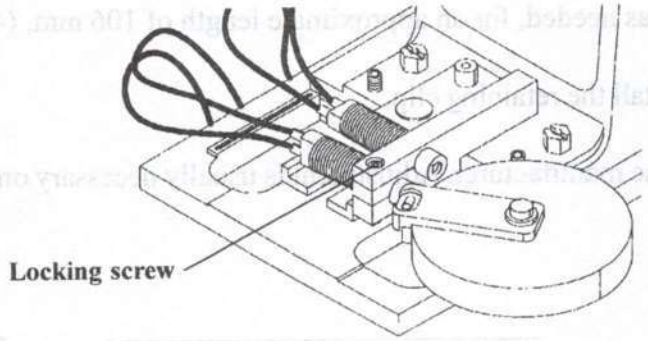
Note: Travel is preset by the manufacturer. Adjustment is usually necessary only when replacing parts.



Shear Cross-Over

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

Loosen the locking screw and adjust the lower lobe of the cam to activate the shears just as the race starts to rotate. The switch must activate before the race rotates 45 degrees. Tighten the screw.



Note: View shown is from the underside of the bedplate with the machine in the upright position.

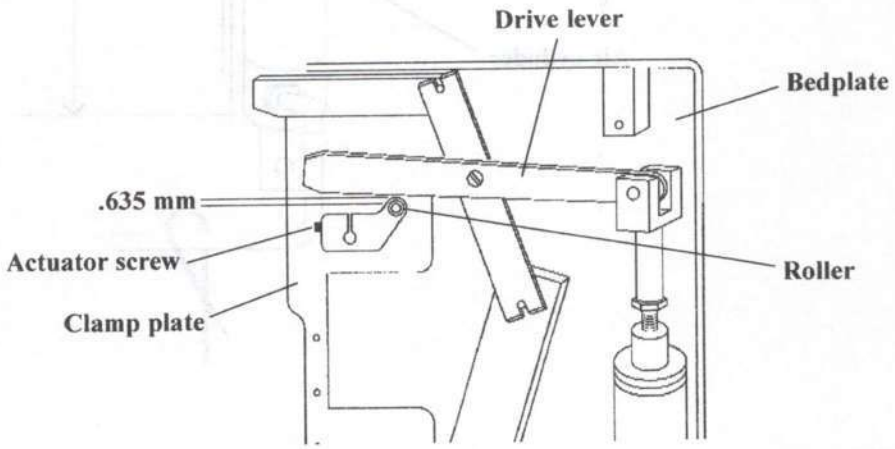
When activated, the cutting edges of the shears will just close over each other.

To adjust:

Loosen the actuator screw and pivot the actuator to obtain a clearance of .635 mm, (.025") between the roller and the drive lever; this is a starting point.

Tighten the actuator screw.

Caution! Shears set with a large amount of cross over will damage the machine and/or parts.



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CORD TRIM ADJUSTMENTS

Cord Trim Mechanism

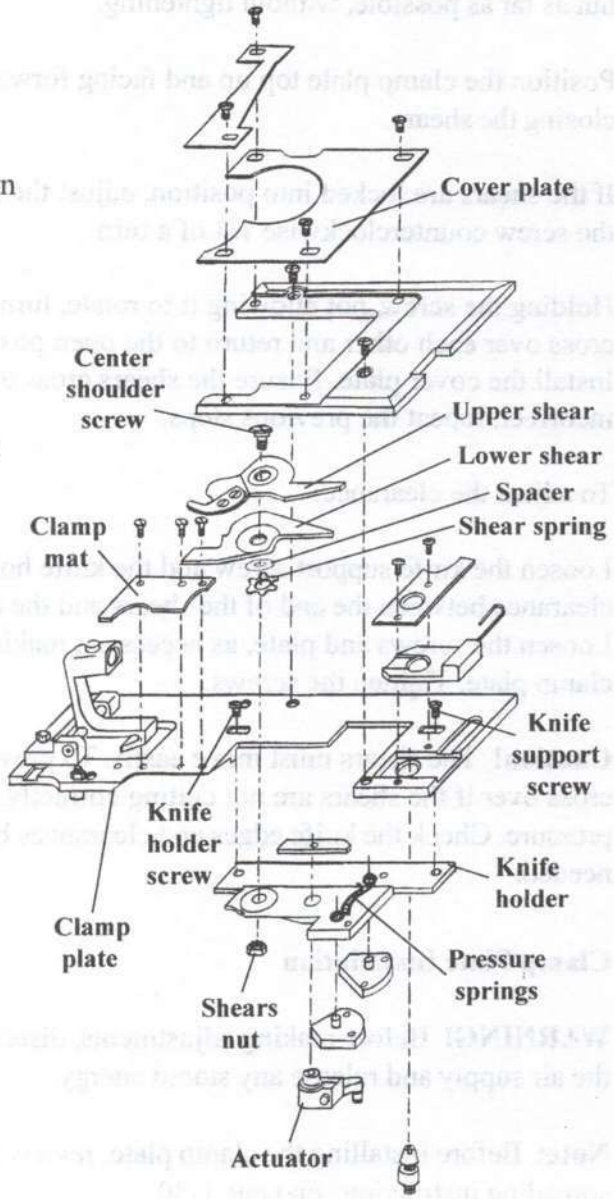
WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

Each cord trim model includes a set of shears and a trim knife for trimming the upper and lower threads, eliminating the need for a secondary trimming operation.

To ensure the shears are able to perform correctly, the following must be properly adjusted:

Shears set
Lower thread tension
Lower thread draw-off
Lower thread tension release

Caution! Failure to maintain these adjustments will result in poor trimming and unnecessary machine down time. Continued operation of the machine out of adjustment will damage key machine parts, including the main cam.



Shears Set Adjustments

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

The cord trim shears are designed like a pair of scissors. During trimming, their edges must cross over.

Caution! Too much cross over will cause the machine to malfunction and damage key parts. It is imperative the correct adjustment be maintained.

To adjust:

Remove cover plate.

Holding the clamp plate, projections pointing up, insert the spring into the circle cutout area of the clamp plate. Place the lower shear over the spring and spacer, place the upper shear on top of the lower shear.

CORD TRIM ADJUSTMENTS

Shears Set

Insert the shoulder screw in the circle cutout area of the clamp plate, through the upper and lower shears, spacer, and spring. Add a few drops of oil to the shears.

Turn the upper and lower shears to ensure the shoulder screw has gone through all the parts without binding.
Tighten the screw and attach the spring to the outside edges of the upper and lower shears.

Turn the clamp plate upside down and install the nut onto the screw. Using your fingers, rotate the nut as far as possible, without tightening.

Position the clamp plate top up and facing forward, use your thumb to move the actuator to the left, closing the shears.

If the shears are locked into position, adjust the screw just enough to allow the shears to open, rotate the screw counterclockwise 1/4 of a turn.

Holding the screw, not allowing it to rotate, turn the plate over and tighten the nut. Ensure the shears cross over each other and return to the open position. If incorrect, repeat the previous step.
Install the cover plate. Ensure the shears cross over each other and return to the open position. If incorrect, repeat the previous steps.

To adjust the clearance:

Loosen the knife support screw and the knife holder screw and position back and forth for proper clearance between the end of the shears and the clamp mat.
Loosen the screws and plate, as necessary, making sure the shears' movement is not restricted by the clamp plate. Tighten the screws.

Caution! The shears must move easily. To prevent damage, do not increase the amount of shear cross over if the shears are not cutting correctly. Do not use the center screw to increase shear knife pressure. Check the knife edges and clearances by manually cutting at least 3 threads, replace if needed.

Clamp Plate Installation

WARNING! Before making adjustments, disconnect the air supply and release any stored energy.

Note: Before installing the clamp plate, review the clamp feet spreading instructions on page 1-30.

Move the clamp hold-down and install the clamps.

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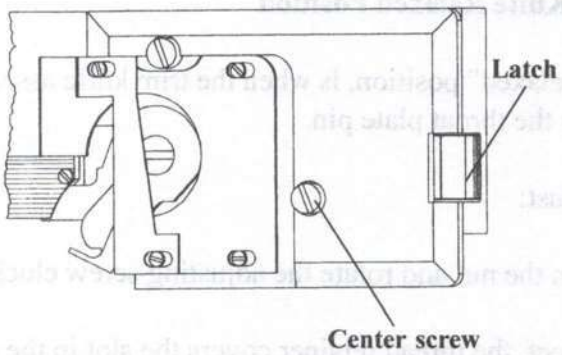
CORD TRIM ADJUSTMENTS

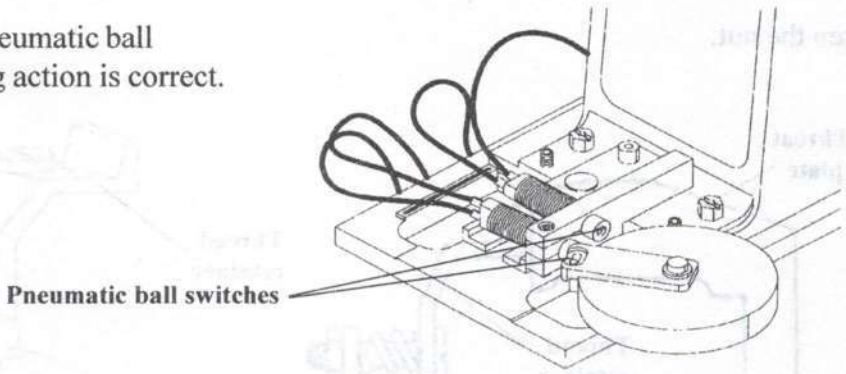
Clamp Plate Installation

Push the latch on the left-hand clamp plate and position the clamp plate onto the bedplate.



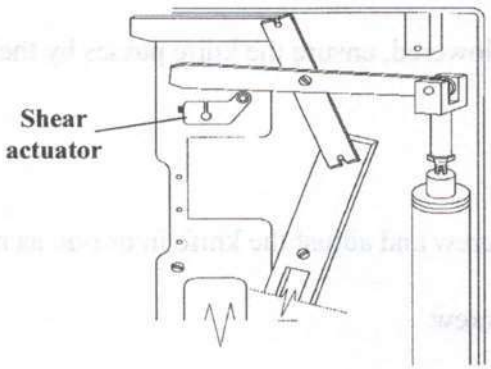
Manually operate the clamps to ensure correct installation.

Manually actuate the shears pneumatic ball switches to ensure the shearing action is correct.



After the pneumatic ball switches operate correctly, make the final adjustment of the actuator arm. The shear blades must cross over each other approximately 1 to 1.5 mm, (.039 to .059") in their end position.

Note: View shown is from the underside of the bedplate with the machine in the upright position.



Trim Knife Relaxed Position

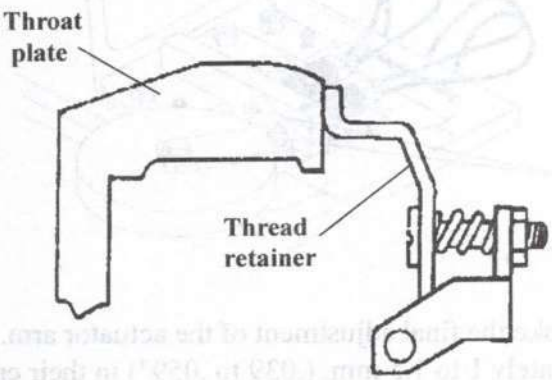
The "relaxed" position, is when the trim knife assembly is located over the right-hand spreader stop and by the throat plate pin.

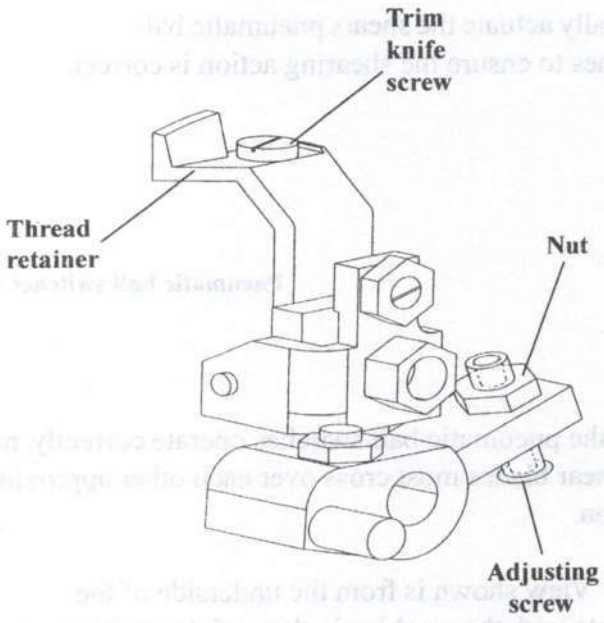
To adjust:

Loosen the nut and rotate the adjusting screw clockwise or counterclockwise, as needed.

If correct, the thread retainer covers the slot in the throat plate and rests against the pin, ensuring the proper relaxed position.

Tighten the nut.





Needle to Trim Knife Clearance

When the needle bar is lowered, ensure the knife passes by the needle as close as possible **without touching**.

If incorrect:

Loosen the trim knife screw and adjust the knife in or out, as needed.

Tighten the trim knife screw.

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CORD TRIM ADJUSTMENTS

Trim Knife Height

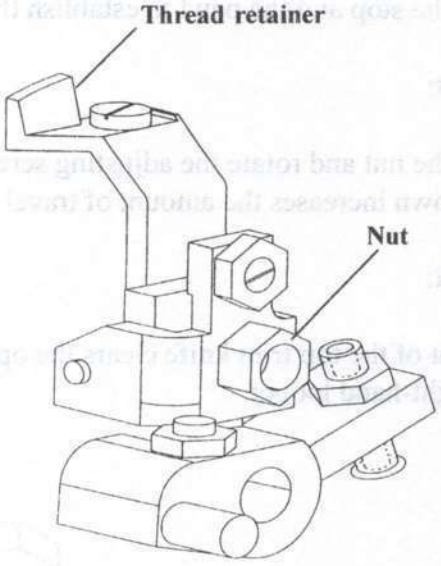
The trim knife is positioned to just clear the underside of the throat plate and the top of the right-hand spreader.

If incorrect:

Loosen the nut and move the knife up or down, as needed.

Tighten the nut.

Note: Ensure the point of the thread retainer picks up the lower thread in the throat plate slot.



Thread Retainer

The thread retainer must rest squarely on the front face of the throat plate to correctly retain the lower thread for the next buttonhole. During the trim knife movement, the retainer must travel across the throat plate without binding.

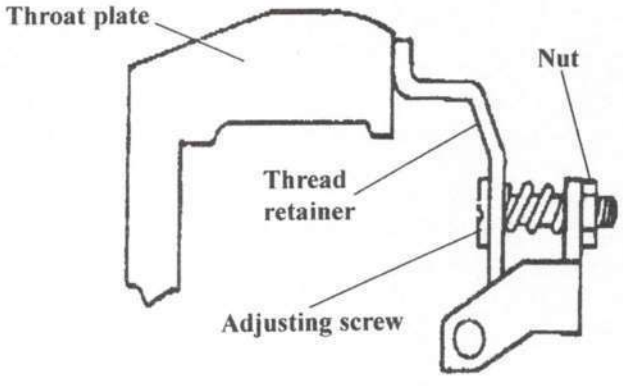
Note: The throat plate must be installed to correctly set the spring pressure.

To adjust:

Loosen the nut.

Adjust the screw in or out, as needed.

Tighten the nut.



Trim Knife Travel

The amount of trim knife travel must be maintained, too much travel will cut the lower thread, while not enough travel will prevent trimming of the upper thread.

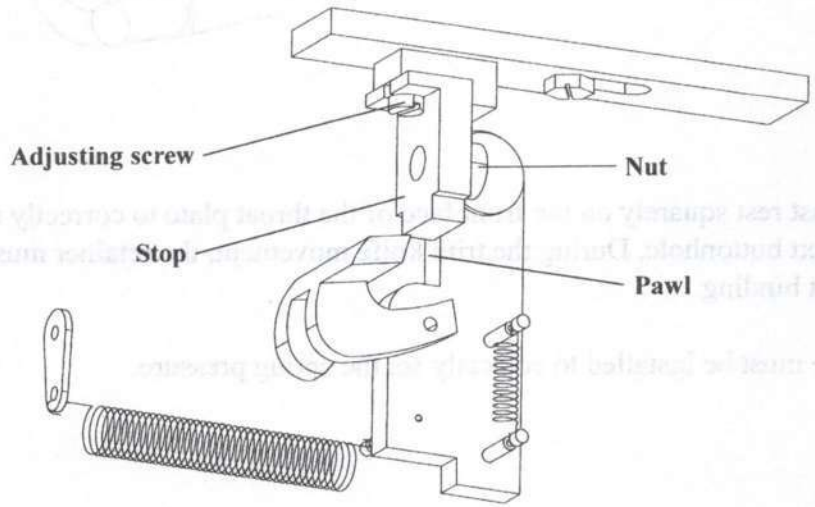
Engage the stop and the pawl to establish the correct amount of trim knife travel.

To adjust:

Loosen the nut and rotate the adjusting screw up or down, as needed. Up decreases the amount of travel, down increases the amount of travel. When adjustment is correct, tighten the nut.

If correct:

The point of the top trim knife clears the opening in the throat plate, but does not go beyond the point of the right-hand looper.



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CORD TRIM ADJUSTMENTS

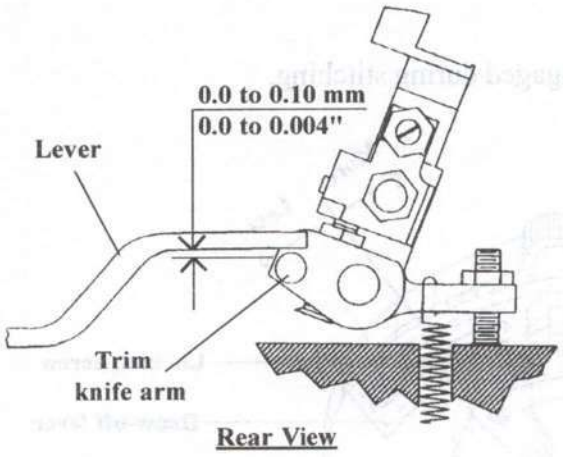
Trim Knife Travel

After the amount of travel has been established, set the clearance between the lever and the trim knife arm to 0.10 mm, (0.004").

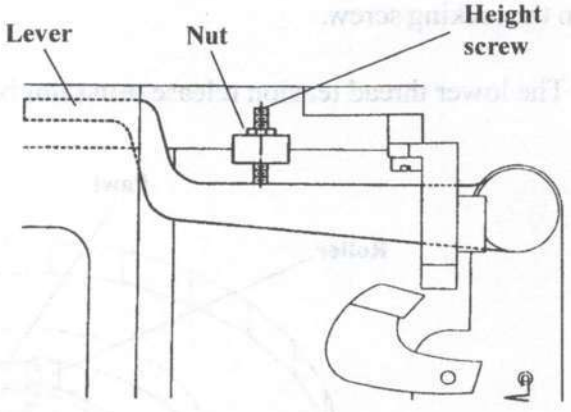
Manually rotate the trim knife arm under the lever.

Loosen the nut on the height screw and adjust up or down, as needed, tighten the nut.

Caution! This adjustment must be maintained to avoid damage to both the knife and the machine.



Rear View



Right Side View

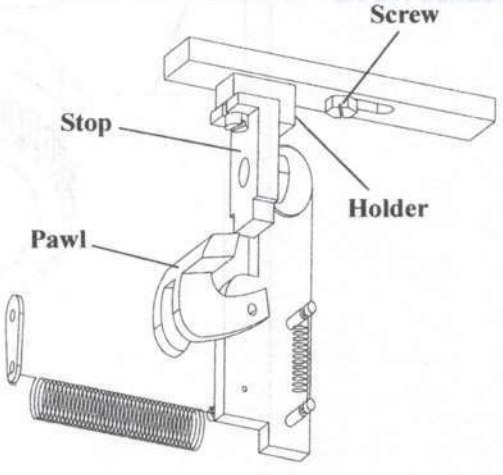
Thread Trimming Timing

Note: This adjustment corresponds to the buttonhole length and must be performed just before the top thread picker activates.

With the machine in the home position, loosen the screw and adjust the clearance between the stop and the pawl from 18 to 19 mm, (0.70 to 0.75").

Move the holder to the front, or rear, as needed.

When clearance is correct, tighten the screw.



Caution! This adjustment must be maintained, the tip of the knife clears the throat plate hole and does not move behind the tip of the right looper. Failure to maintain the proper clearance will result in damage to the knife and/or machine.

Lower Thread, Draw-off Tension Release

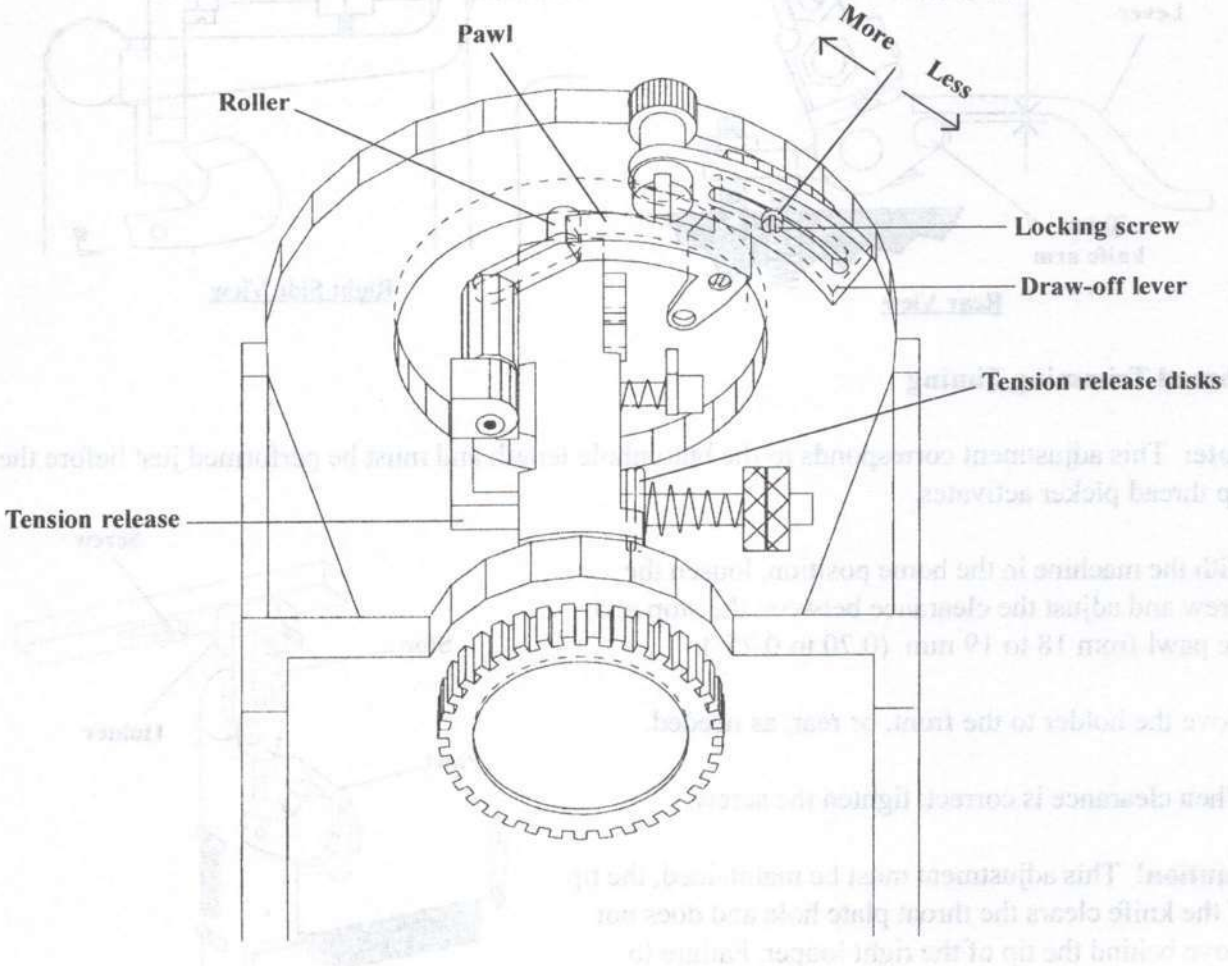
During a sewing cycle, the race rotates to the home position, the lower thread draw-off pawl moves and the lower thread tension release and lower tension release disk are activated by the roller engaging with the surface of the thread draw-off lever.

If incorrect:

To change the length of the lower thread draw-off, loosen the locking screw and position the lever as illustrated.

Tighten the locking screw.

Note: The lower thread tension release **must not** be engaged during stitching.



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CORD TRIM ADJUSTMENTS

Buttonhole Size Changes

The S100 Cord Trim machine provides three different fixed lengths.

Cut after buttonhole size options: 16 mm, (5/8")
19 mm, (3/4")
22 mm, (7/8")

To change the buttonhole size:

Caution! Changes to be performed by qualified personnel.

Exchange the right clamp plate, lateral cam, and cutting steel from parts kit:

P/N 17.2044.0.033 for 16 mm
P/N 17.2044.0.035 for 19 mm
P/N 17.2044.0.036 for 22 mm

Install the correct lateral cam for the size required.

Adjust the buttonhole length, page 1-41.

Check the cutting steel for a clean buttonhole cut.

Ensure the shears close and open correctly when the pneumatic control system is activated, page 1-62.

Sew off the machine to ensure correct operation of all components.

Caution! To prevent the needle from striking the shears, ensure the sewing length is correct. The correct sewing length is 6 mm longer than the buttonhole.