

hobby lock

MADE FOR PFAFF

OPERATING INSTRUCTION



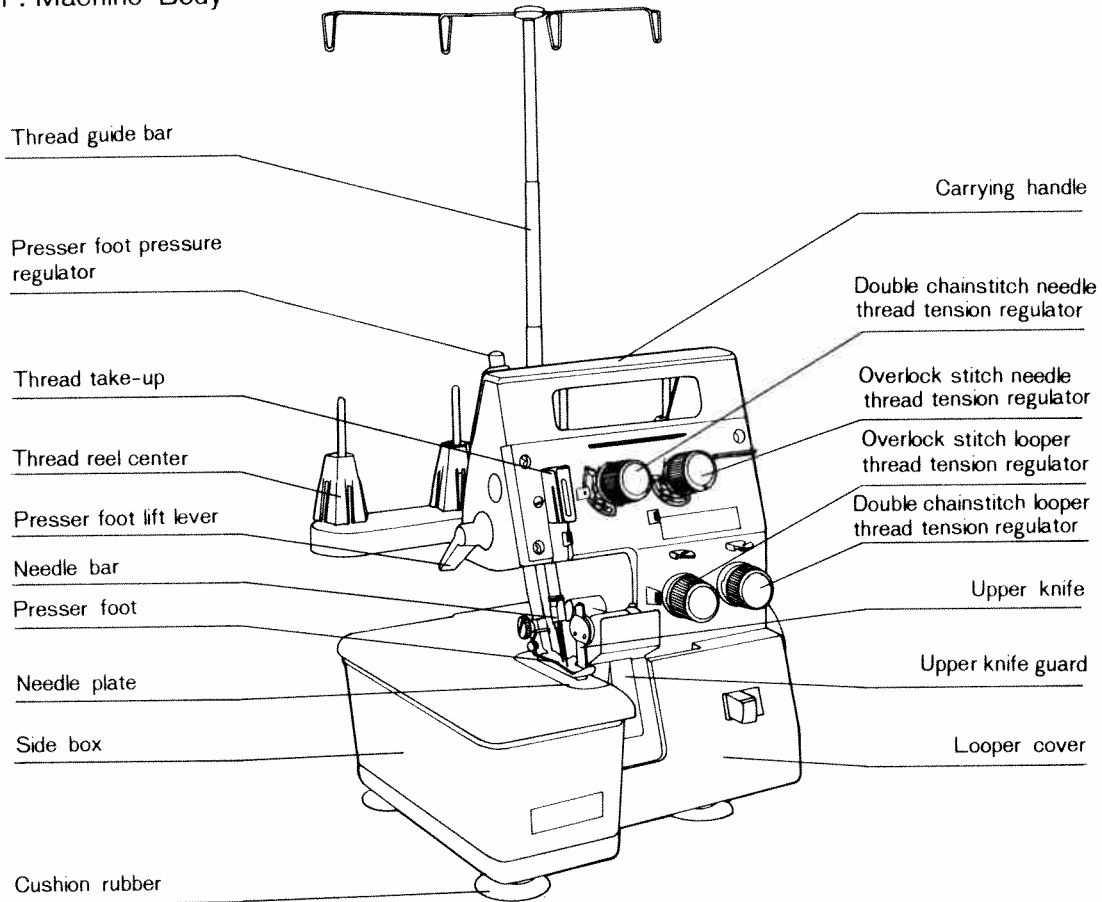
HL-604

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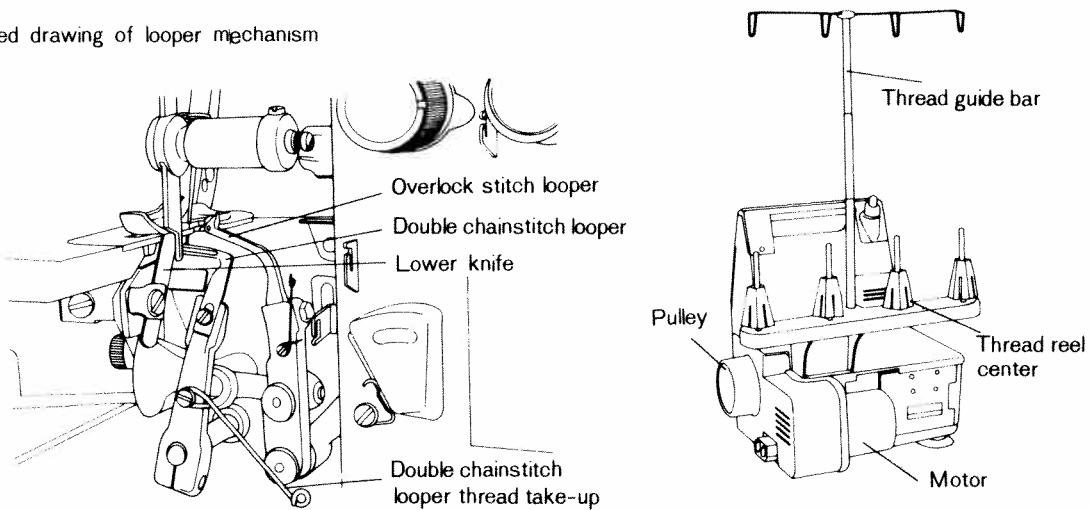
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I. Parts name

I. Machine Body



Detailed drawing of looper mechanism



2. Preparation and running the machine

1. Preparation

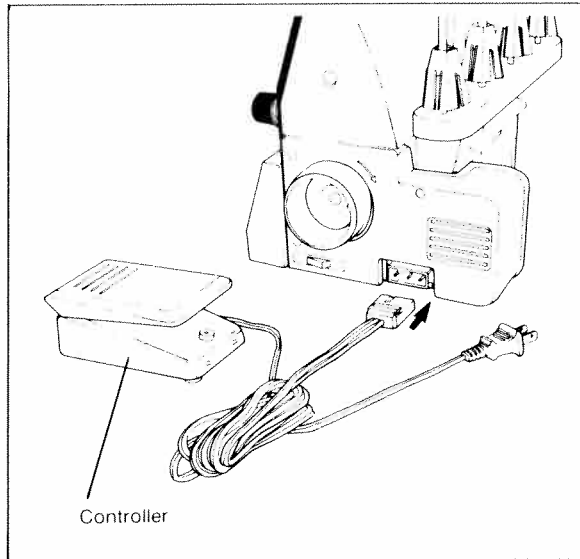
This machine must only be used on a perfectly flat and horizontal surface or purpose-built sewing machine table.

2. Fitting the motor controller

First, insert the controller connector into the connector socket on the side of the machine as shown in the illustration, then connect the plug to a power source.

Disconnect the machine from the power source when it is not in use.

Do not place objects on top of the controller pedal.



3. Running the machine

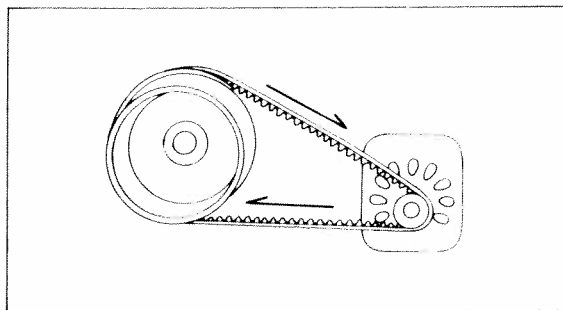
Place the tip of your foot lightly on the pedal. When you press down gently, the machine will begin to run at low speed. As you press more heavily the machine will run faster. To stop the machine, lift your foot from the pedal.

3. Notes on the motor

1. The normal running speed of the machine is 1300spm. The motor runs in the opposite direction to motors usually found on domestic sewing machines, so please take care. The direction of rotation (seen from the pulley side of the machine) is shown in the illustration.

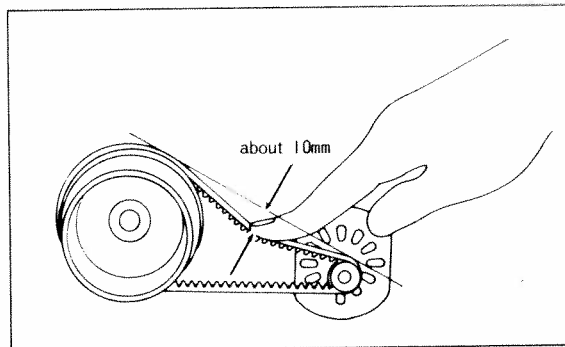
2. If the machine is used continuously for long periods of time, the motor or controller may become slightly hot, however, this will not interfere with the machine's performance at all.

3. Small sparks are emitted from the motor housing during operation. This is normal and is a result of the rectifying action of the motor. The sparks do not indicate a breakdown or mal-function.



4. Drive belt tension

Check that the belt tension is correct. The belt should be adjusted so that when the center is pressed with the forefinger, it flexes about 10mm.

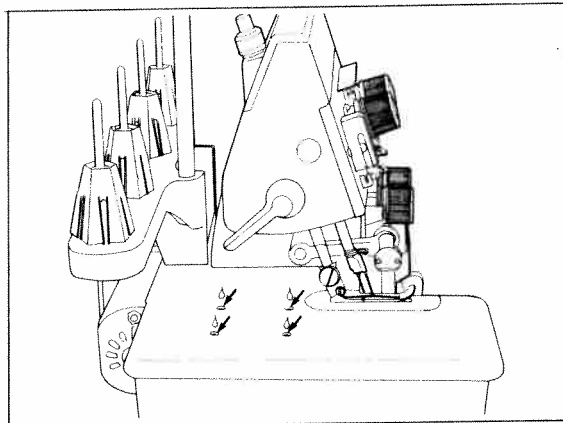
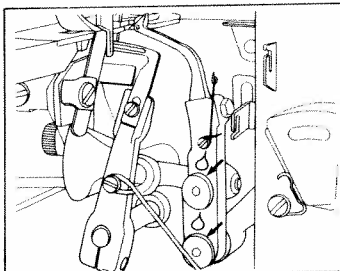


5. Lubrication

Get into the habit of always lightly oiling the points indicated before using the machine.

The bushings and other important parts contain special materials, so pour the sewing machine oil only 1 - 2 times a month.

When oiling the machine apply only one or two drops of oil each time.



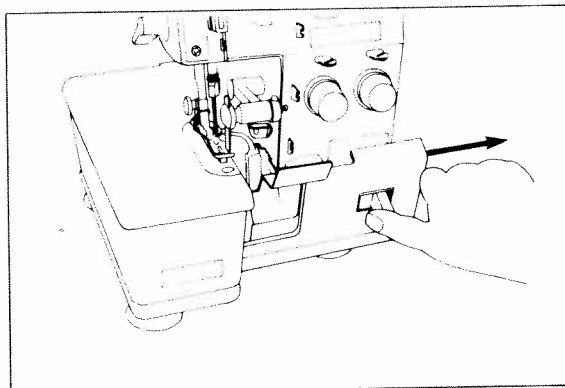
6. Opening and closing the looper cover

To Open

Slide the looper cover in the direction of the arrow and swing it out forwards.

To Close

Push the cover lightly towards the machine and it will snap shut.



7. Operating the machine

1. Precautions When Threading

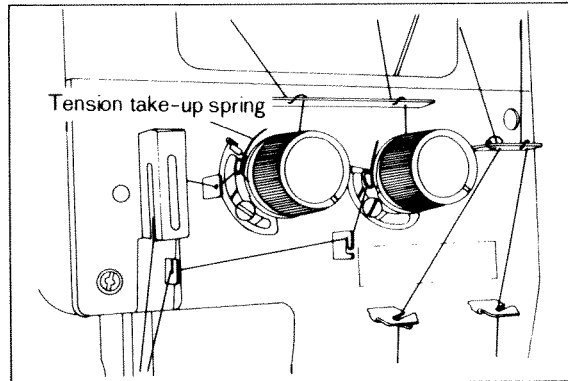
If the machine is mis-threaded it is impossible to obtain a well formed seam.

Refer to the threading diagram and thread the machine correctly.

Always thread the looper threads first.

Make sure that the thread passes correctly between the thread tension regulating discs.

Use tweezers to make threading easier.



Threading procedure

① First thread the double chainstitch looper thread.

② Next, thread the overlock stitch looper thread.

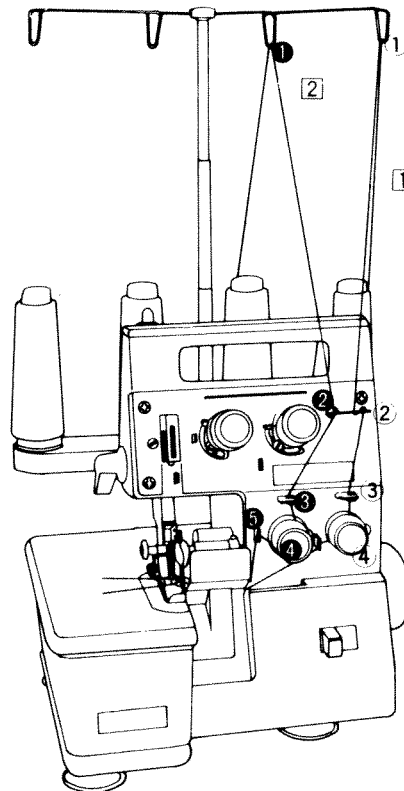
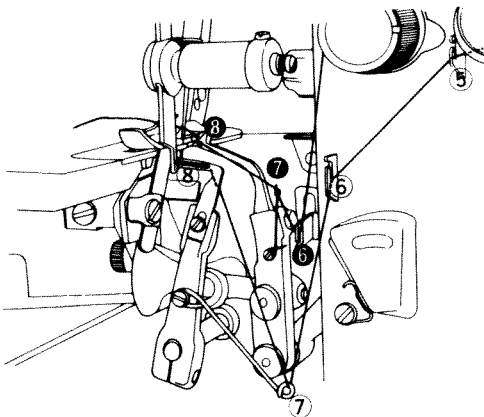
※ Make sure that about 5cm of excess thread protrudes from the looper thread eyelets.

② Overlock stitch looper thread sequence.

1. Stand thread guide → 2. Front cover thread guide (B) → 3. Thread guide (H) 4. Thread tension regulator → 5. Thread guide (F) → 6. Thread take-up → 7. Looper holder thread guide → 8. Looper

① Double chainstitch looper threading sequence

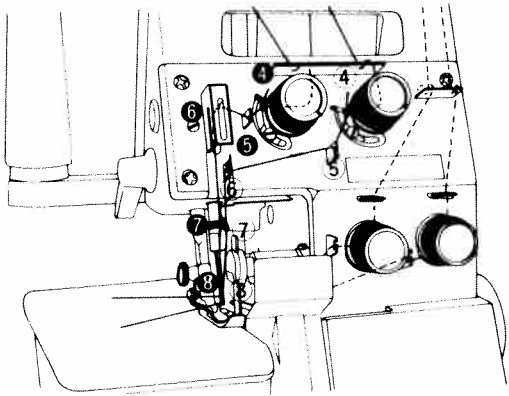
1. Stand thread guide → 2. Front cover thread guide (B) → 3. Thread guide (H) → 4. Thread tension regulator → 5. Thread guide (E) → 6. Thread guide (F) → 7. Thread take-up → 8. Looper



③ Thread the overlock stitch needle thread.

④ Thread the double chainstitch needle thread
※ Leave about 5cm of thread protruding from the needle eyelets.

※ If synthetic threads are used, remove the thread from the tension spring and loosen the thread tension regulator before sewing.

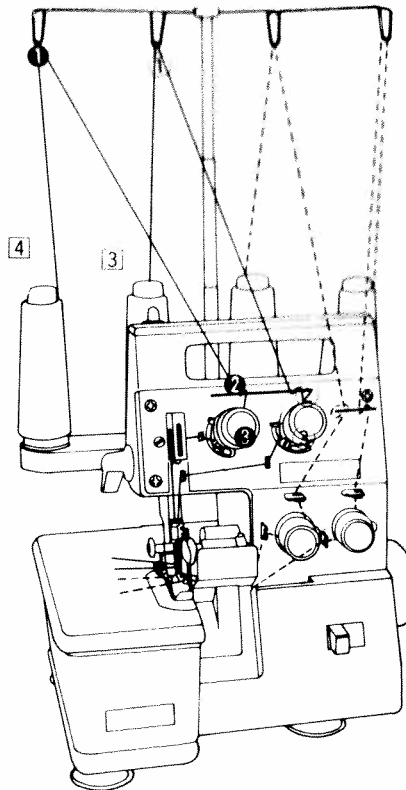


③ Overlock stitch needle threading sequence.

1. Stand thread guide → 2. Front cover thread guide (A) → 3. Thread tension regulator → 4. tension spring → 5. Thread guide (C) → Thread guide (D) → 7. Needle thread guide → 8. Needle

④ Double chainstitch needle threading sequence

1. Stand thread guide → 2. Front cover thread guide (A) → 3. Thread tension regulator →



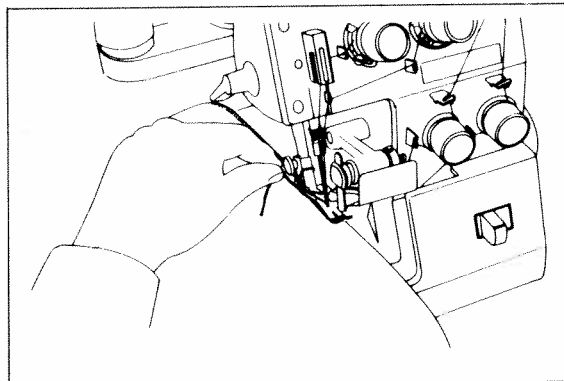
4. Tension spring → 5. Thread guide (G) → 6. Thread take-up → 7. Needle thread guide → 8. Needle

8. Test sewing

After completing threading, be sure to make a sewing test before actual operation of the machine.

1. Insert the test material fully under the presser foot.
2. Hold the 2 needle threads and the overlock stitch looper thread in your left hand and with your right hand turn the pulley smoothly in the direction of the arrow (clockwise) for 2 or 3 turns.

Check that the threads have interlocked correctly and then start to sew slowly.



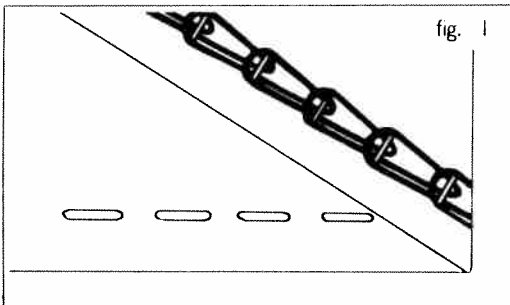
9. Thread tension and adjustment

The correct thread tension varies depending on the type of cloth and the type and thickness of thread. The correct setting should always be obtained by watching the seam and making the appropriate adjustments.

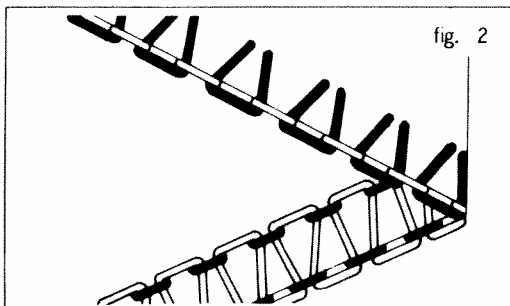
1. Correct thread tension

Refer to Figs. 1, 2 and obtain the correct tension setting.

- 1) Correct thread balance for the double chainstitch.



- 2) Correct thread balance for the overlock stitch.

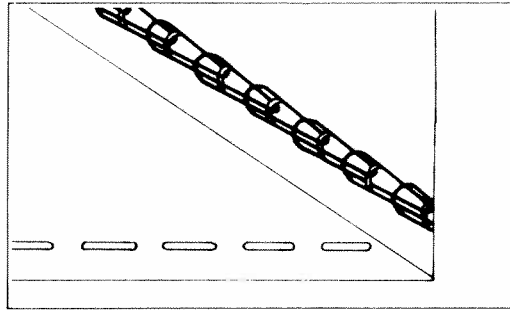


2. Incorrect thread tension and how to adjust

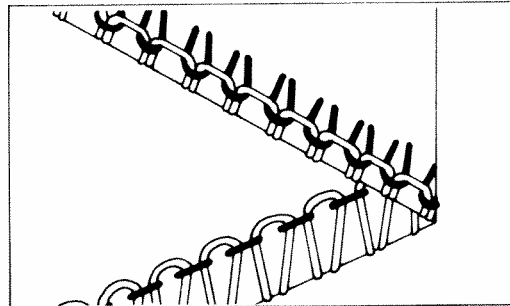
Thread tension is adjusted by means of the 4 thread tension regulators.

Turning the thread tension regulator dials clockwise increases thread tension while turning them counterclockwise reduces the tension.

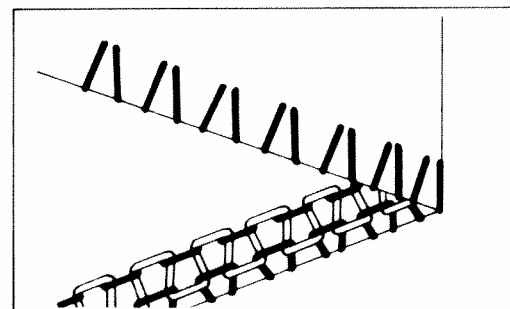
The greater the figure shown on the front of the dial, the greater the thread tension.



If the double chainstitch needle thread is too loose then the seam will look like this. If this has happened then tighten the double chainstitch needle regulator.



If the overlock stitch looper thread tension is too loose or the needle thread tension is too tight then the seam will appear as shown above. To adjust it, either loosen the overlock stitch needle thread tension regulator, or tighten the looper thread tension regulator.



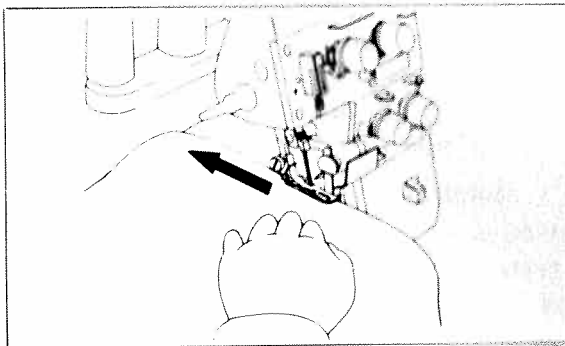
If the overlock stitch needle thread tension is too loose or the looper thread tension is too tight then the seam will appear as shown above. To adjust it, either tighten the overlock stitch needle thread tension regulator or loosen the looper thread tension regulator.

10. Main points when sewing

✧ Always insert the cloth fully under the presser foot at the start of sewing. (This applies both when the machine is first threaded and when it is re-threaded after thread breakages).

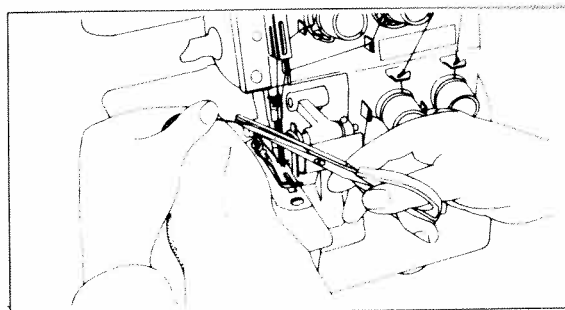
✧ Run the machine slowly for the first one or two stitches.

✧ Use your hand only to guide cloth. Do not pull it forwards or tug it. The cloth is fed automatically so this is not necessary.



1. Removing the sewn article

When you have sewn to the end of the seam run the machine slowly and sew off about 5cm of thread chain. Then cut the thread chain near the fabric so that there is about 3cm of thread chain is left.

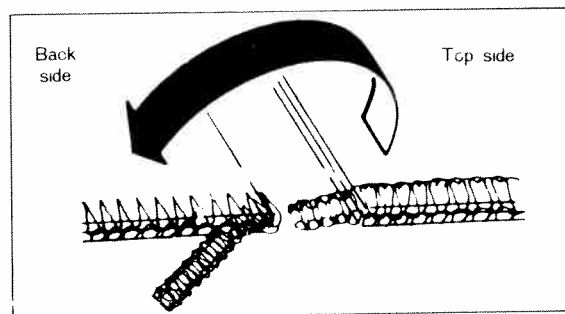


2. At the end of the seam

Tie the end of the thread chain. In the case of knit fabrics use a latch needle to pull the thread chain into the seam.

3. Prevention of seam unravelling

At the end of the seam run off a 5cm thread chain and then, without cutting the chain, turn the fabric over and sew back along the seam a little way. (see illustration)

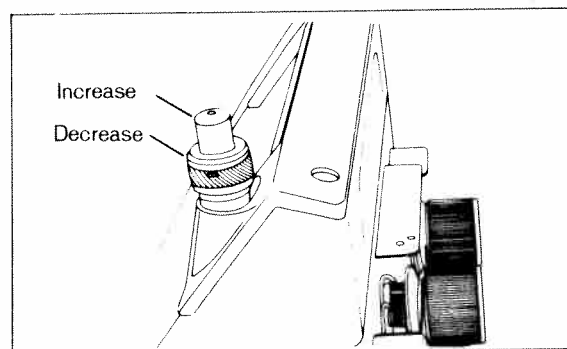


11. Presser foot pressure

The presser foot pressure on this machine is set for medium weight fabrics. The presser foot pressure only needs to be adjusted when sewing extra light or extra heavy weight fabrics. Reduce the pressure for light weight fabrics and increase it for heavy weight fabrics.

To increase the presser foot pressure, push the center button. Conversely, if you want to decrease pressure, press the outer button.

The center button will automatically return to its original position and the presser foot pressure can be decreased.



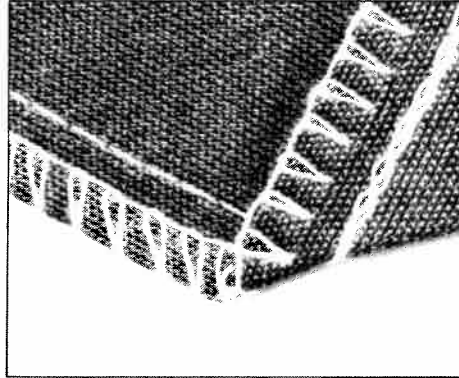
12. Types of seam and their applications

Three following stitch types are obtained by a simple operation.

1. Safety stitch

When all 4 threads are used, a safety stitch can be obtained. This may be used for a variety of fabrics varying from lightweight to heavy-weight.

APPLICATIONS Side closing and sleeve attaching on shirts, blouses, etc.



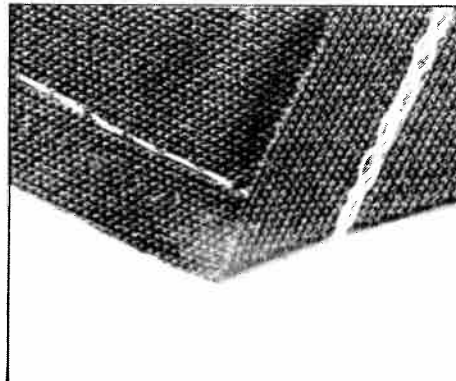
2. Double Chainstitch

When the double chainstitch needle and looper threads are used an attractive double chainstitch seam can be obtained.

∴ For a stronger seam it is recommended that the seam is sewn twice.

APPLICATIONS Joining operations on knitwear and jersey.

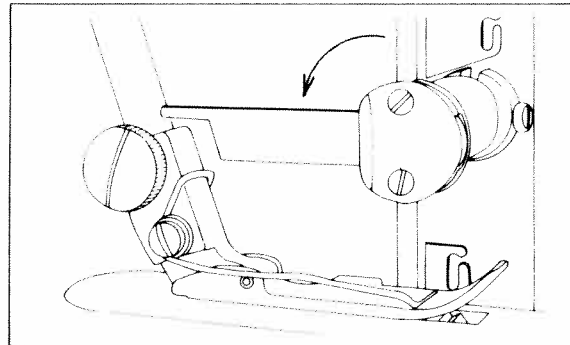
∴ When this seam type is selected the knives are not necessary, so fold back the upper knife and stop the operation of the overlock stitch looper, and use welt guide.



Folding back the upper knife

Turn the pulley by hand until the needle bar is at its lowest position. Push the knife to the right and fold it back as shown in the illustration.

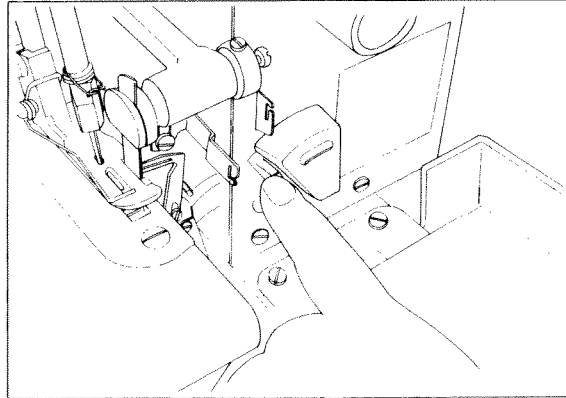
(in the direction of the arrow)



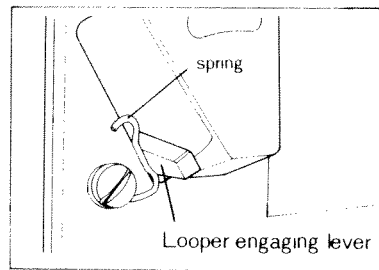
Disengaging the overlock stitch looper

※To disengage the overlock stitch looper
Open the looper cover and turn the pulley by hand. When the needle is in its lowest position pull the looper engaging lever downwards. The lever is latched by a spring so be sure to pull it down firmly.

※When this is done remove both the overlock stitch looper and needle thread.

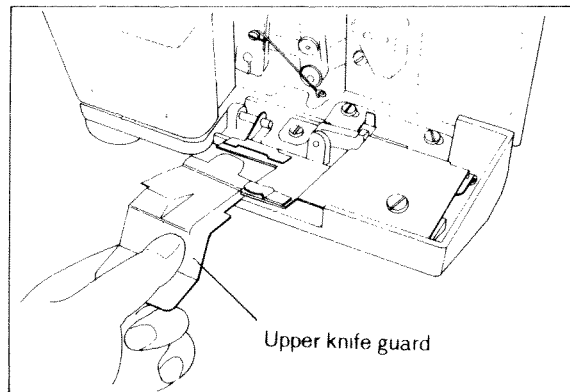


※To re-engage the overlock stitch looper.
Turn the pulley by hand and when the needle is in its lowest position lift the lever upwards. The overlock stitch looper will then operate.

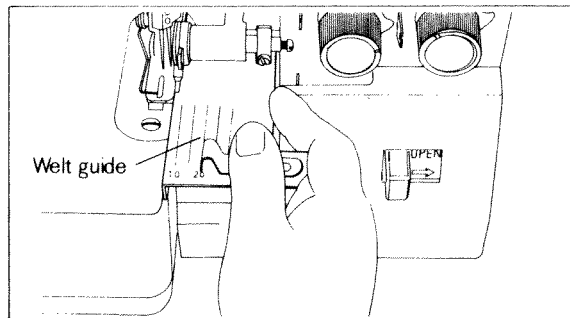


Interchanging the upper knife guard and welt guide

1. Pull the upper knife guard forwards and remove it as shown in the illustration.



2. Next, insert the welt guide as shown in the illustration.

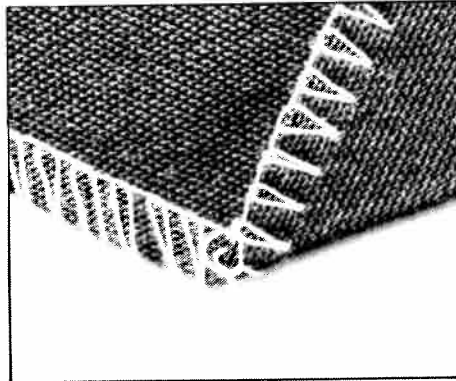


3. Overlock stitch seam

Overlock stitching can be obtained by simply using only the overlock stitch needle and looper thread.

Before starting always check the following:

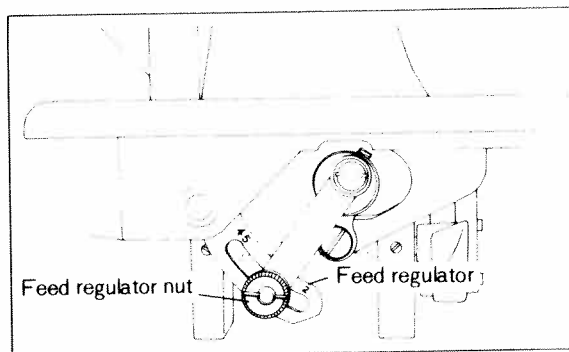
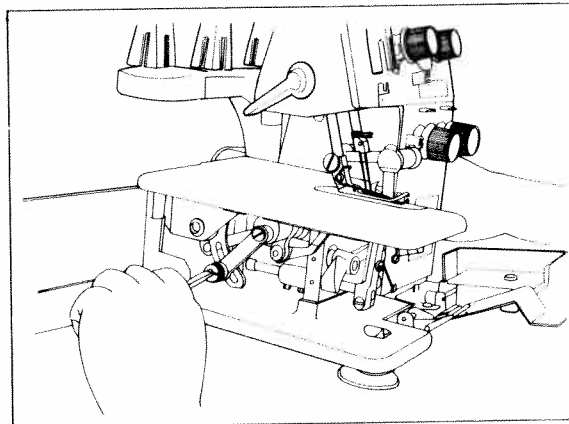
1. The knife should be set in its normal position.
2. The looper engaging lever should be in its operating position.
3. The upper knife guard should be set correctly in position.



13. Adjusting stitch length

※To change the stitch length, open the side box and,

1. Hold the pulley firmly with your right hand to prevent it from moving and loosen the feed regulator nut with the screwdriver.
2. Align the feed regulator nut and the number on the feed regulator. To make the stitch length longer move the nut to a bigger number. To make the stitch length shorter select a smaller number.
3. After making the adjustments, tighten the feed regulator nut and close the side box.



14. Replacing needles

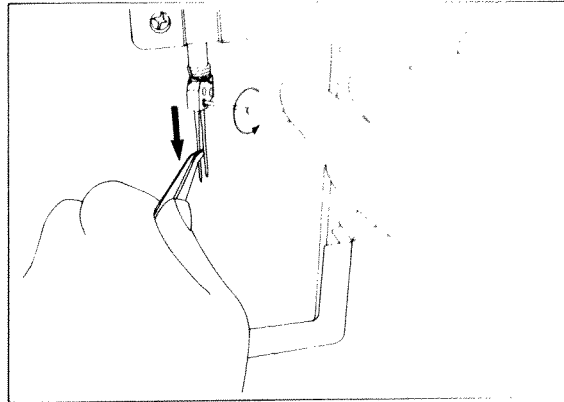
∴ DBx1 needles are recommended for this machine. These are suitable for most types of sewing.

∴ Although the correct needle size depends on the type of fabric and thickness of thread which you are using, #14 needles are the recommendable size.

Depending on your sewing conditions however, any of the needles #11 - #14 may be used.

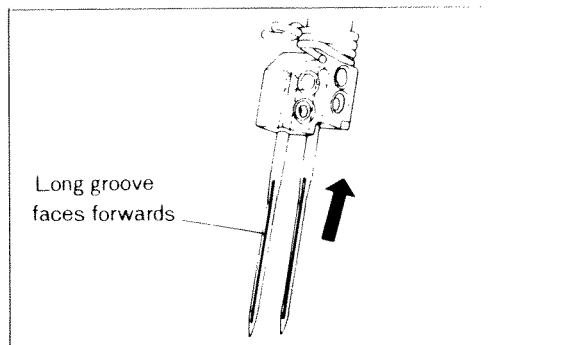
1. Removing needles

Turn the pulley clockwise (in the direction of the arrow) by hand and move the needles to their highest position. Using an allen screw driver, loosen the needle clamp screws and pull the needles out using tweezers.



2. Fitting needles

Turn the pulley and move the needle bar to its highest position. Push the shank of the needles fully into the needle holder, make sure that the long groove faces forwards, and then tighten the needle holder screws firmly.



15. Replacing the knives

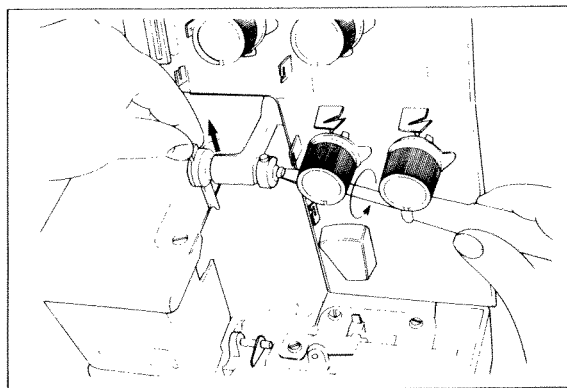
∴ If the knives become blunt replace them as follows.

∴ Always disconnect the machine from the power source before replacing the knives.

1. Replacing the upper knife

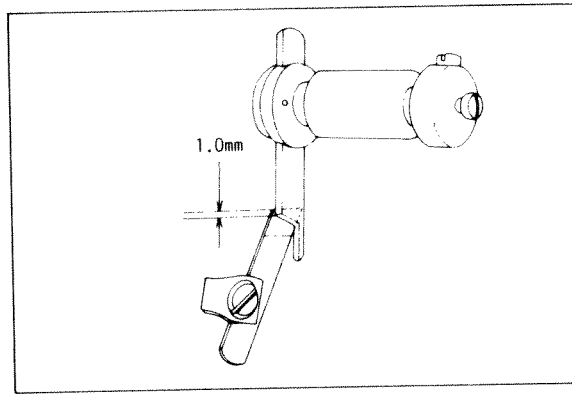
* Removing knife

Loosen the upper knife guide screw and remove the knife upward.



***Replacing knife**

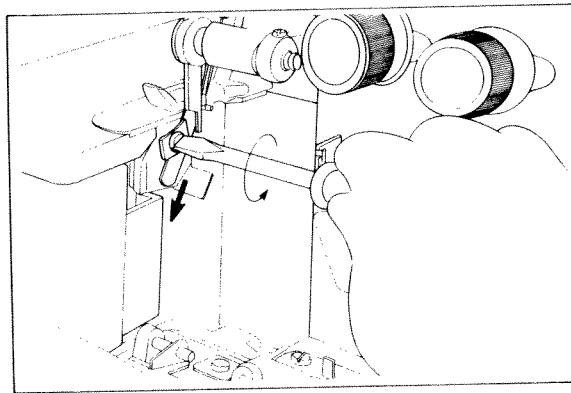
Push the upper knife holder to the right and insert the knife into it from above. Making sure that the cutting edge faces to the left, tighten it lightly. Next, turn the pulley, move the knife to its lowest position and adjust the upper knife so that the overlap between the front of the upper knife and the lower knife is 1.0 mm. Tighten the upper knife guide screw securely.



2. Replacing the lower knife

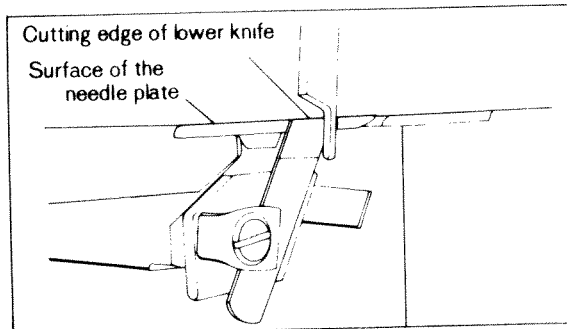
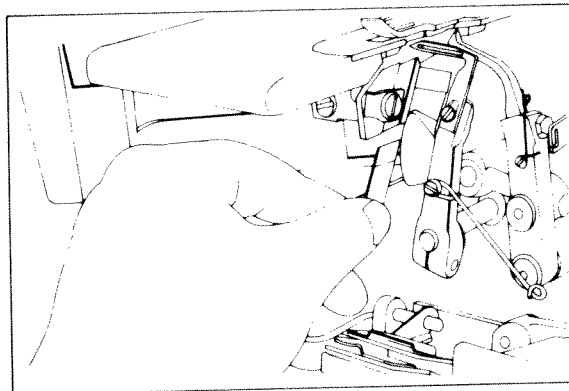
***Removing knife**

Loosen the lower knife clamp screw and remove the lower knife downward.



***Replacing knife**

1. Insert the lower knife into the holder from below with the cutting edge facing to the right.
2. Next, line up the blade of the lower knife with the surface of the needle plate and tighten the clamp screw securely so that the knife does not move.



16. Replacing the drive motor carbon brushes

The carbon brushes must be replaced when they wear down.

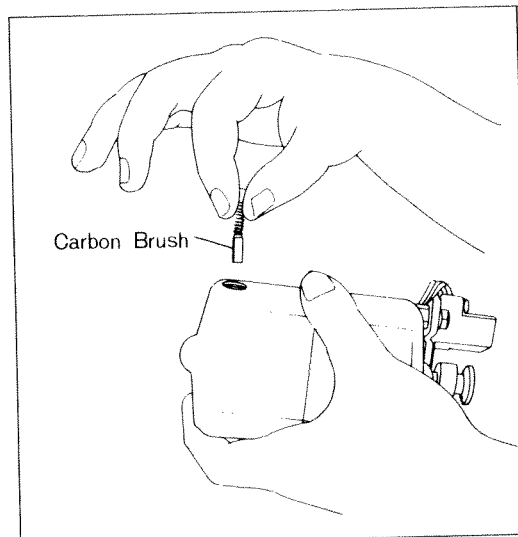
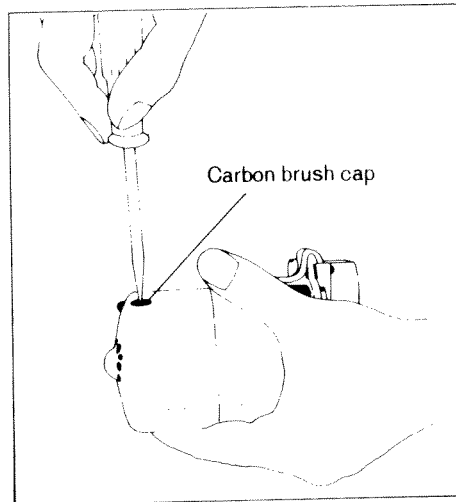
1. Symptoms of worn brushes

1. They become noisy.
2. The motor will not turn at all.
3. The motor emits a noise but will not turn.
4. There are more sparks than usual.

2. Replacement of brushes

1. Remove motor from machine.
2. Loosen the 2 brush caps.
3. Remove the carbon brush springs and the old carbon brushes.
4. Insert the new carbon brushes and the carbon brush springs. Replace and tighten the brush caps.
5. Replace the motor and re-adjust the belt tension. (See belt tension adjustment).

The carbon brushes are standard spare parts and can be obtained from the dealer where you bought the machine.



17 . Causes of poor sewing and its solution

This machine has been designed to be as easy to use as possible. There is no need for difficult adjustments. Breakdowns similar to the ones below occur because of simple adjustment errors. They can be cured simply by making the correct adjustments as described below.

PROBLEM	CAUSE	ADJUSTMENT
Cloth is not fed	Presser foot pressure is too small	Press in the control button in the center of the presser foot regulating button to increase the presser foot pressure (see p. 7)
Needle breaks	The needle is bent or the needle point is damaged. Needle is fitted incorrectly Cloth has been pulled excessively	Replace needle for a new one (see p.11) Fit needles correctly (see p.11) Avoid pressing or pulling the fabric excessively during sewing.
Thread breaks	The machine has been threaded incorrectly. Thread has become tangled or caught. Tension is too tight. Needles fitted incorrectly. Wrong needle has been used.	Re-thread correctly (see p. 4) Check that the thread has not become tangled on the thread stand. See p. 6 . See p. 11 . Always use DBx1 needles.
Skip stitching occurs	The needle is bent or the needle point damaged. Needles are not fitted perfectly. The wrong needle is being used. Threading is incorrect. Presser foot pressure is too weak. Synthetic threads are being used.	Replace needles (see p. 11.) Re-fit needles correctly. (see p.11) Always use DBx1 needles. Re-thread correctly. Push the center of the presser foot regulating button and increase the presser foot pressure. (see p. 7) Remove thread from thread regulating spring.
Poor seam formation	Thread tension incorrect.	See p. 6
Fabric puckering occurs	Thread tension is too strong. Threading is incorrect. Thread has become tangled.	Reduce the thread tension as much as possible when sewing lightweight fabrics. Re-thread correctly. (see p. 4)

18 . Variation of weight of fabric, threads and stitch length

Weight of fabric	Type of fabric	Operation	Threads	Stitches' per inch
Light	Organdies, light tricots, traffeta, linings, silk, etc.	Chainstitch	Cotton # 80~ #100 Silk # 80~ #100	12 -- 8
		Overlock stitch	Cotton # 80~ #100 Silk # 80~ #100	8 - 6
Medium	Cotton, tricot, linen, satin, dress fabrics, etc.	Chainstitch	Cotton # 60~ #100 Silk # 50~ #100	12 - 8
		Overlock stitch	Cotton # 60~ #100 Silk # 50~ #100	8 -- 6
Heavy	Tweed, overcoat fabrics, denim, heavy outerwear fabrics, etc.	Chainstitch	Cotton # 40~ #60 Silk # 40~ #60 Tetlon, Woolen yarn	12 -- 6
		Overlock stitch	Cotton # 40~ #60 Silk # 40~ #60 Tetlon, Woolen yarn	8 5
	Knitted fabrics	Chainstitch	Cotton # 40~ #50 Silk # 30~ #40 Tetlon, Woolen yarn	12 6
		Overlock stitch	Woolen yarn, tetlon available to use very thin thread in looper thread	8 5

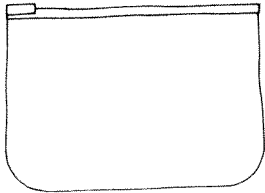
19 . Specification

Maximum Speed	1300 ± 100sp.m.
Overlock seamwidth	4.0mm (standard)
Needle width	3.0mm
Stitch length	2.0 - 4.5mm
Presser foot	Hinged
Lubrication	Manual
Presser foot lift	4.0mm
Standard needles.	DBxI #14(#11 -- 14)
Needles	4 pcs.
Dimensions.	263 (wide) × 276 (deep) × 294 (high)
Weight	8 kg (with motor)

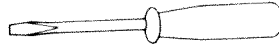
20. Packing details

1. Machine (with motor) 1 set
2. Controller 1 set
3. Operating instruction 1 pc.
4. Accessories. 1 set

21. Accessories



Accessories case



Screwdriver ()



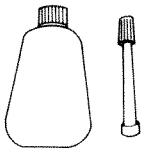
Needles (DBx1)



Screwdriver (hexagonal head)



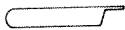
Tweezers



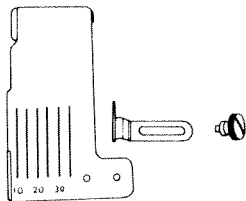
Oiler (Contained with 50cc.)



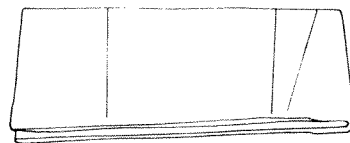
Brush for dusting



Upper knife



Conversion plate



Machine head cover