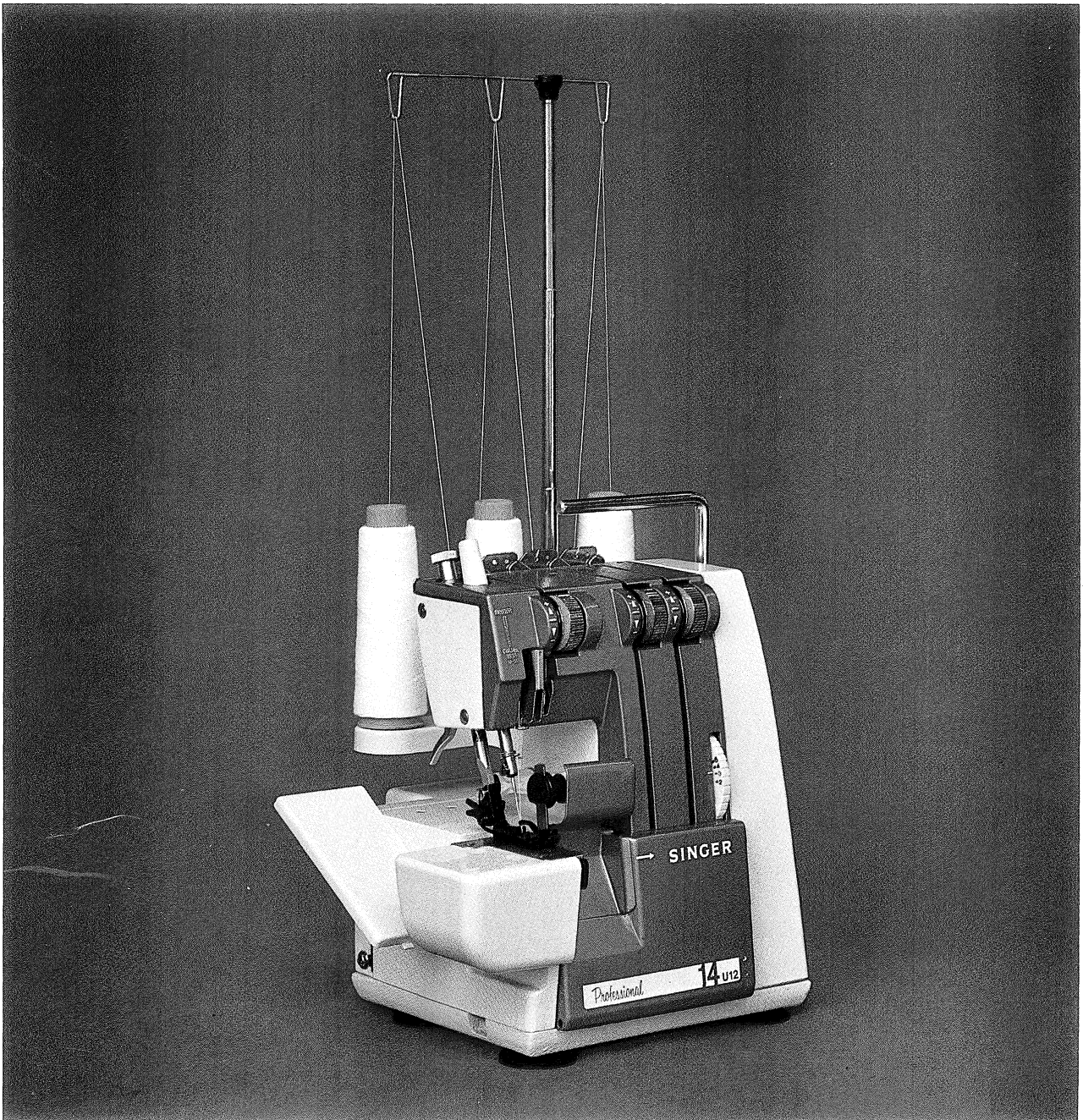


# Professional 14<sub>U12</sub>

## Operator's Guide



# SINGER\*

# Professional 14U12

## PREFACE

Thank you for your purchase of this sewing machine.

This machine will provide you with excellent performance in sewing from light to heavy material (lawn to denim). Please refer to this booklet for proper use and optimum service.

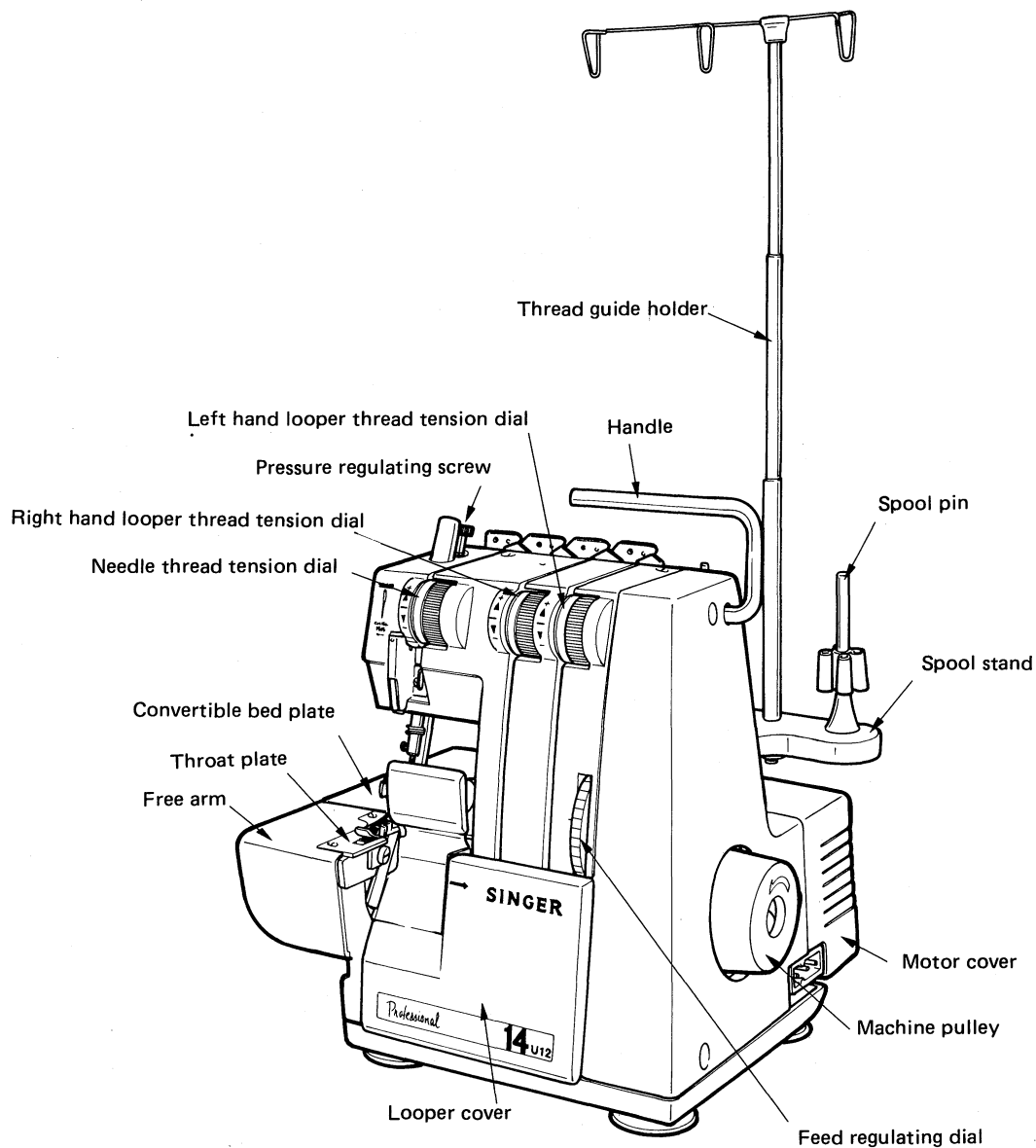
### Safety Cautions:

- Be sure that the electrical voltage of the socket outlet (wall receptacle) is the same as the rated voltage of the motor.
- Disconnect the power-line plug from the socket outlet when changing needles, presser feet or throat plates, or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the speed controller.
- Do not pull the fabric while you are stitching as this may deflect the needle, causing it to break.
- Before cleaning your machine, disconnect the power-line plug from the socket outlet.
- Do not attempt to adjust the motor belt. Contact your nearest Service Center should any adjustment be required.
- Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
- When sewing closely watch the area being sewn to avoid injuries from needles and knives.
- Use only the handle to lift and move the machine.

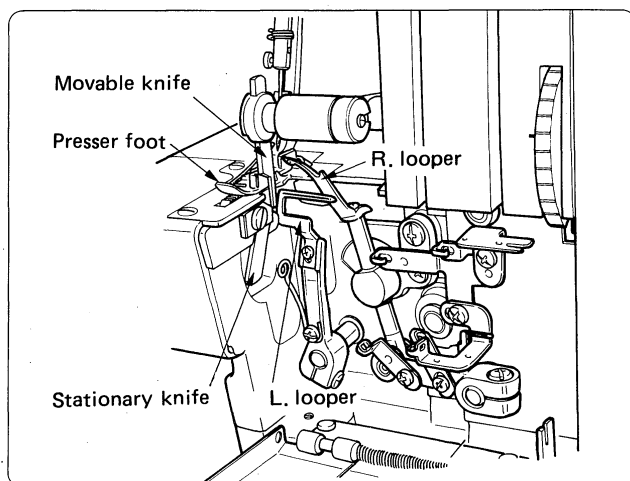
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## 1. Principal parts

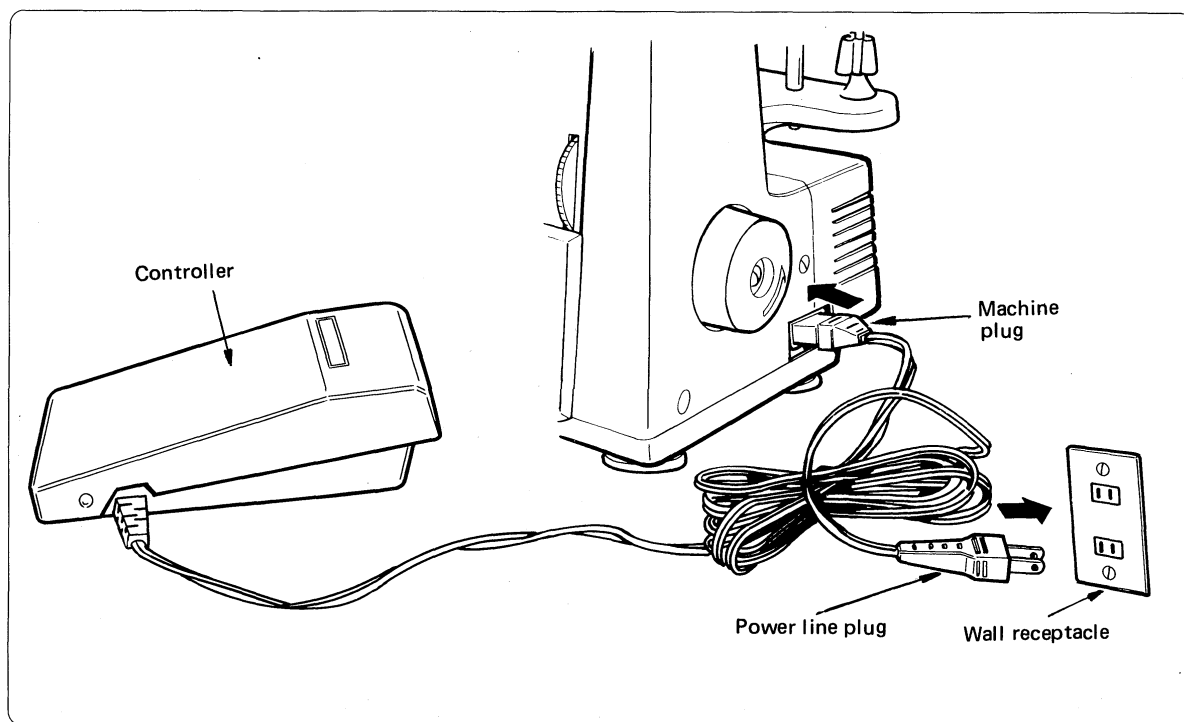


### ● Machine with looper cover opened



## 2. Preparation prior to sewing

Connect the machine plug to the electrical receptacle of your machine and the power line plug to the wall receptacle.



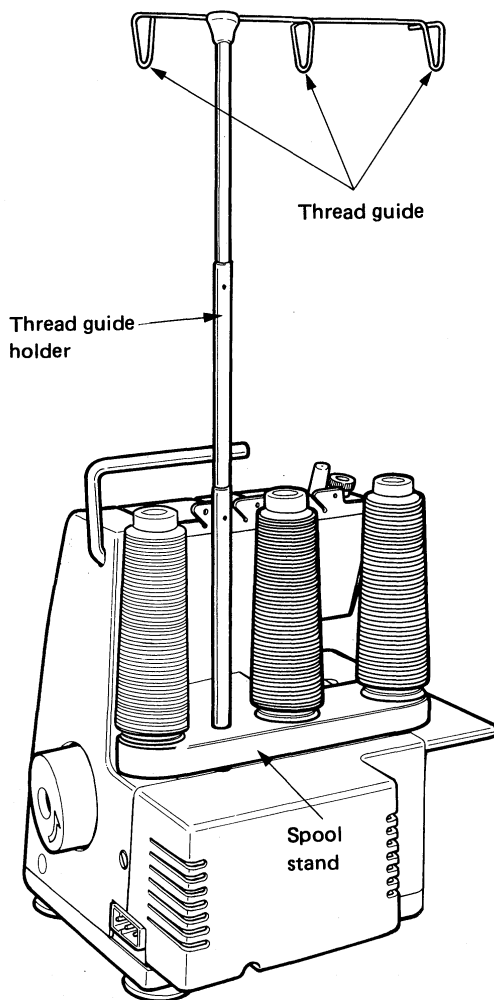
To run the machine and control the speed, press the speed controller. The harder you press, the faster the machine will sew. To stop the machine from sewing, remove your foot from the speed controller.

### Caution:

- Be sure that the electrical voltage of the socket outlet (wall receptacle) is the same as the rated voltage of the motor.
- Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
- Disconnect the power-line plug from the socket outlet when changing needles, presser feet or throat plates, or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the speed controller.
- Before cleaning your machine, disconnect the power-line plug from the socket outlet.

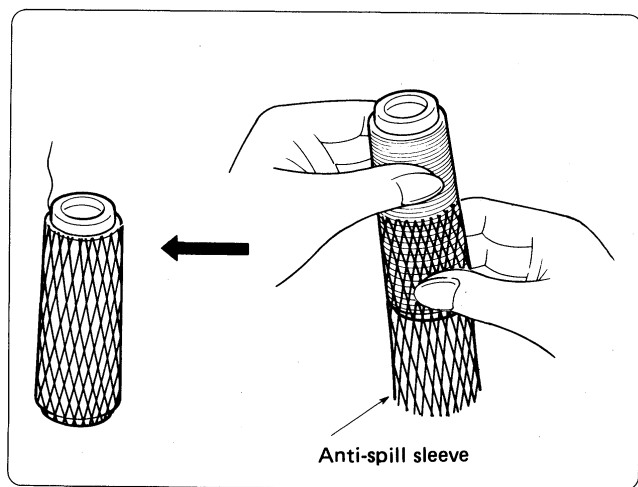
### 3. Threading the machine

- Setting up the thread guide holder

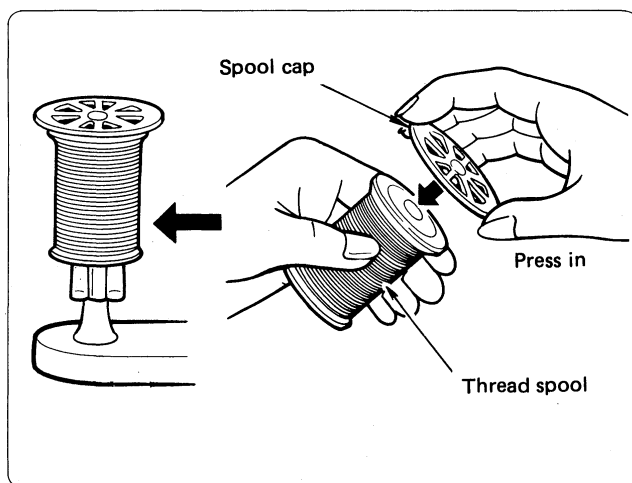


Extend the thread guide holder as far as possible and set the thread guides so that they are located right above the spool pins.

Place the thread on the spool stand as shown in the figure at the left.

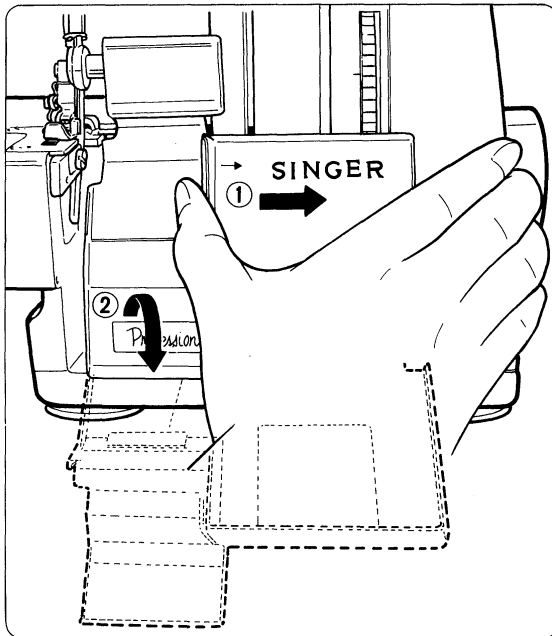


When using synthetic threads that easily spill off the cop (cone) slip the anti-spill sleeve furnished with the machine over the thread from the bottom of the cop (cone) leaving the thread end hanging free at the top of the anti-spill sleeve as shown above.



When using a reel type thread spool, fit the spool cap supplied with the machine onto the thread spool as shown at left.

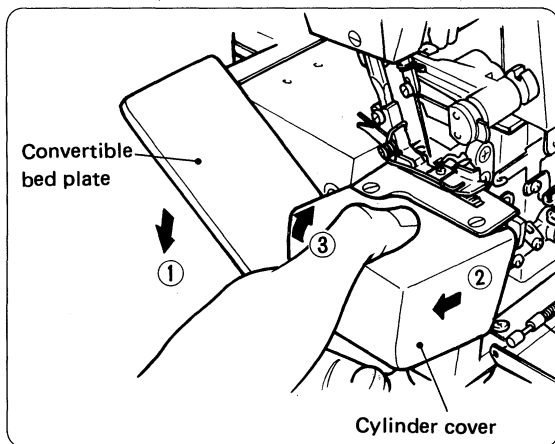
- **How to open looper cover**



- ① Push the cover to the right as far as it will go and
- ② Pull cover down toward you.

\* Be sure looper cover is closed when sewing.

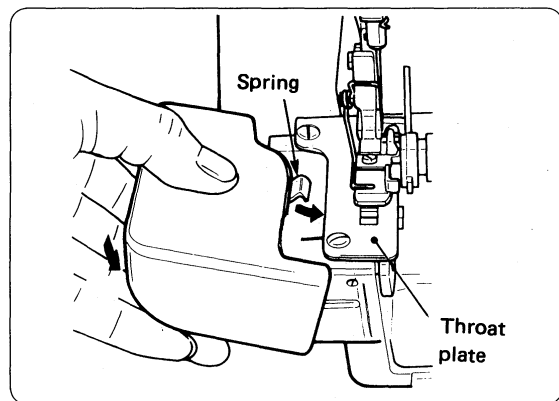
- **How to remove cylinder cover**



- ① Push convertible bed plate down and
- ② While pulling the cylinder cover to the left,
- ③ Lift cover upward and off the machine.

- \* Be sure to lower the plate.
- \* Do not hold the cylinder cover when moving the machine.

**To replace cover**



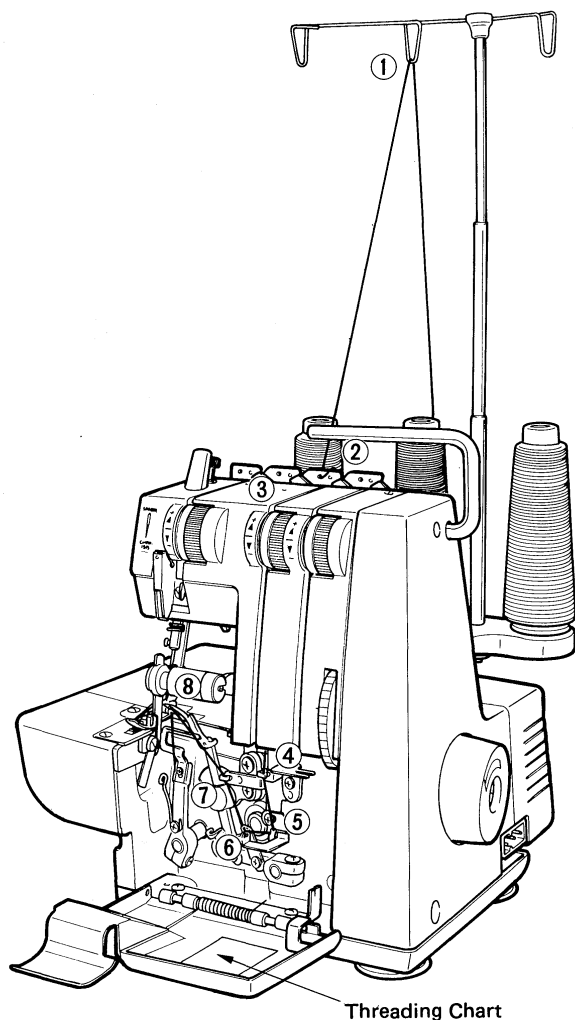
Place the upper spring on the cover under the throat plate and press cover downward to the right.

## • How to thread your machine correctly

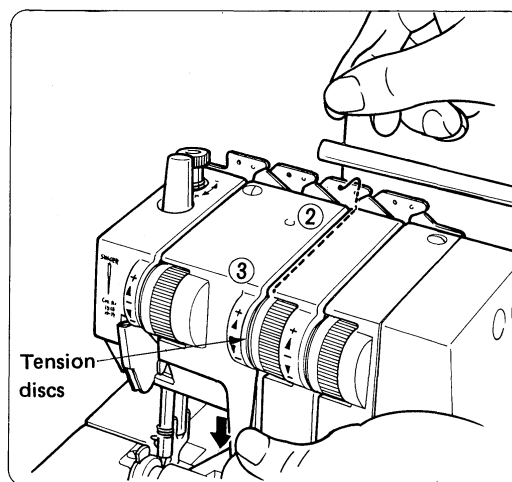
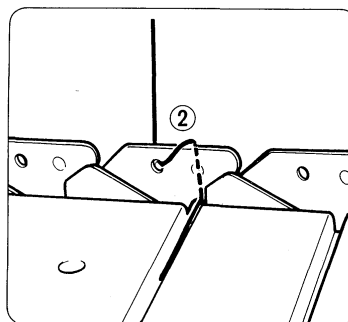
Correct sewing cannot be obtained when machine is threaded incorrectly.

Threading is diagrammed on the inner side of the looper cover and identified with colors on the various thread guides.

- (1) Open looper cover. Thread the right looper in the order ① to ⑧ as indicated in the figure below. (threading points marked in orange)

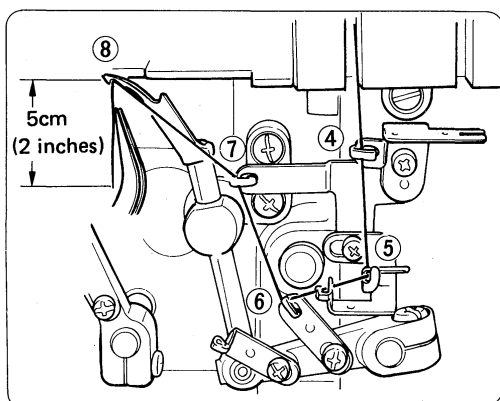


Wind thread around thread guide when threading ② as shown in figure below.



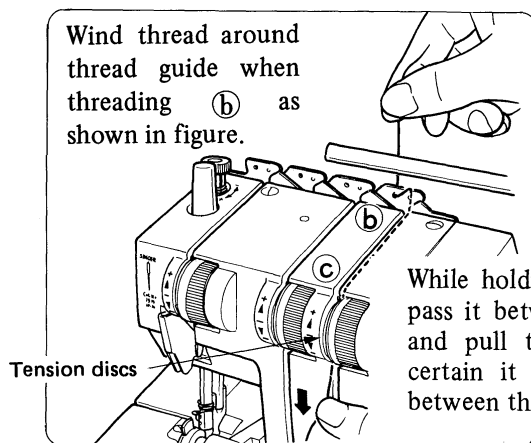
While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.

- Use tweezer provided in the accessory set when threading looper thread hole ⑧ .
- Draw about 5cm (2 inches) of thread from the looper thread hole.

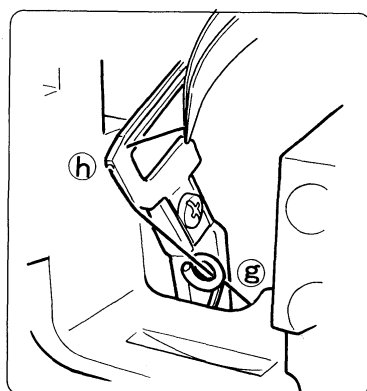
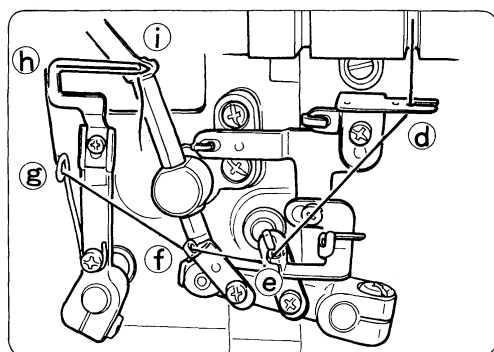




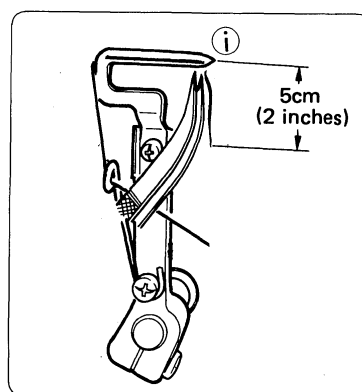
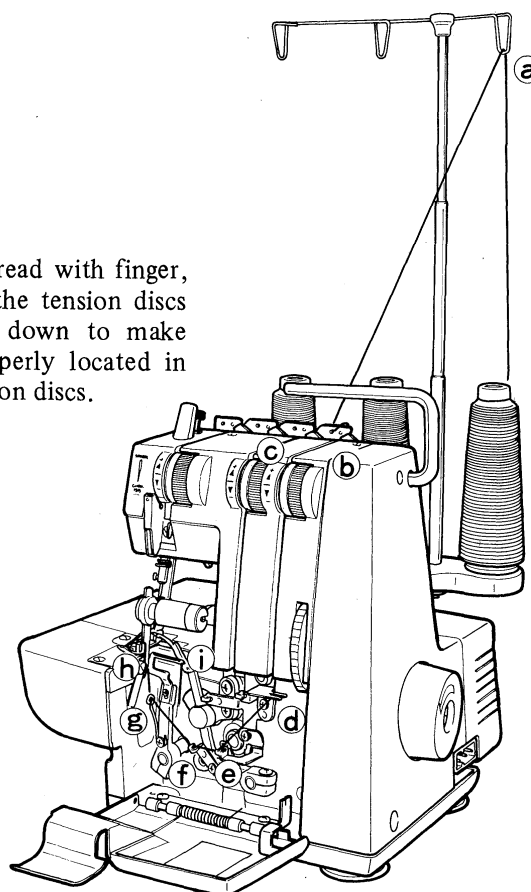
- (2) Thread left looper in sequence from ① to ⑩ (marked in yellow color). Cylinder cover must also be removed when threading this part. (Refer to page 5 for cylinder cover removal).



While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.



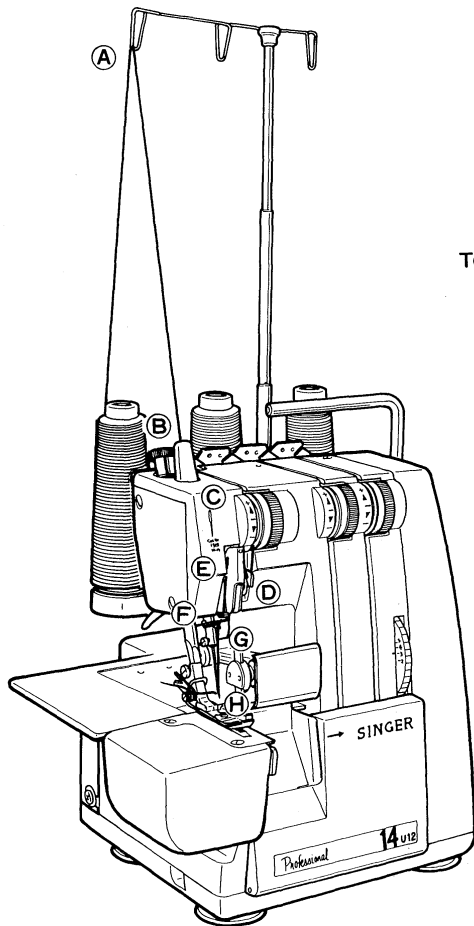
Turn machine pulley toward you until left looper is at left as far as it will go and thread looper thread hole ⑧ from left to right. (Use tweezers provided in your accessory set).



Turn machine pulley toward you until the looper is at right as far as it will go passing the thread under the throat plate, then using a tweezer, thread the looper thread hole ⑩ from front to back. Draw about 5cm (2 inches) of thread from thread hole.

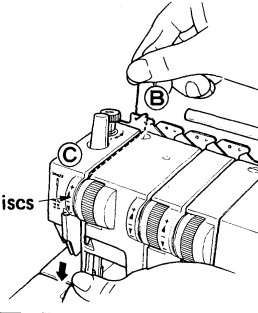
(3) Thread the needle thread in the order (A) to (H) (blue mark).

Threading of needle eye (H) becomes easier when the movable knife is set at the nonoperating position (See figure on page 14 for movable knife non-operating position).



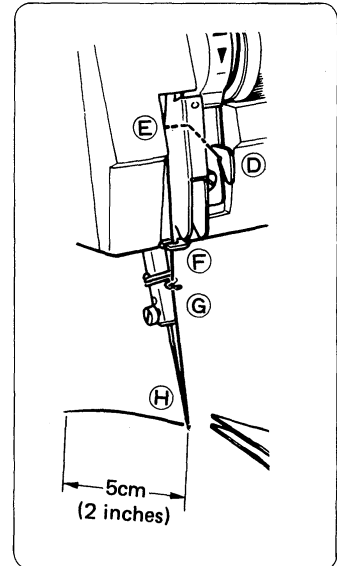
Wind thread around guide when threading (B) as shown in figure.

Tension discs

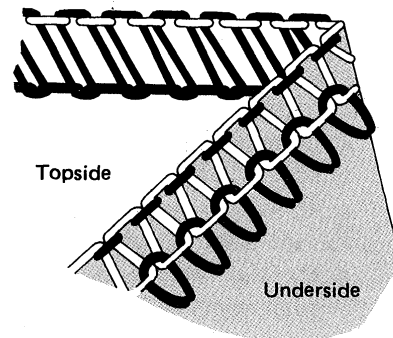


While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.

- Lower needle bar when threading (E).
- Use tweezer to thread eye (H).
- Draw about 5cm (2 inches) of thread from needle eye.



(4) When needle thread is not correctly threaded between the tension discs, it will lie loose on the underside of the material as shown in figure at right.

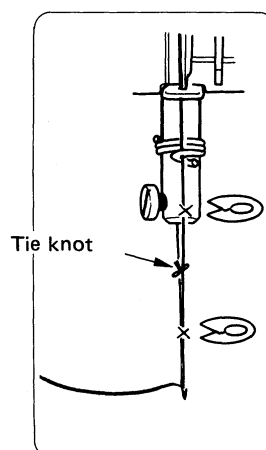
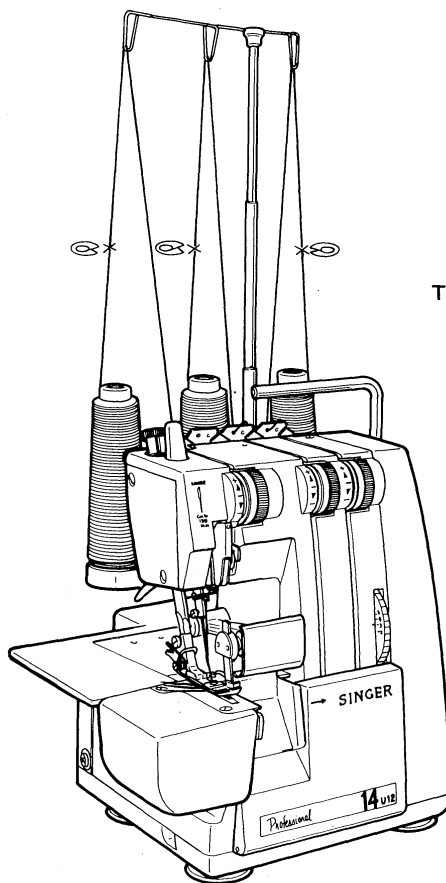


## • How to change thread

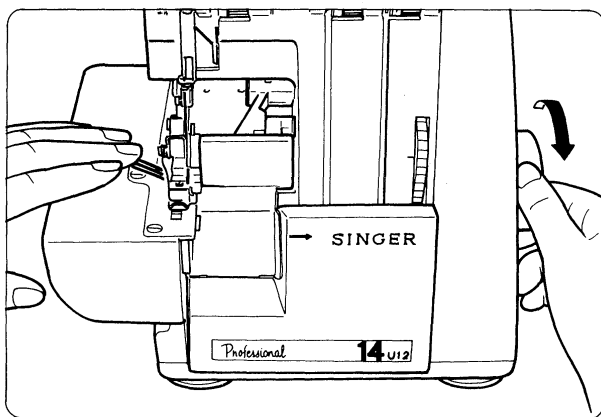
The thread is pre-set at the factory before shipment.

When you wish to change the needle thread, left looper thread or right looper thread with a different thread, the following steps will make the changing convenient.

- (1) Cut the thread near the spool and tie the end to the thread you wish to change to as shown in figure at right.
- (2) Raise presser foot.
- (3) Turn the tension dials down toward the minus (–) sign until the dial stops and draw the thread out so that the tie knot of the threads extend about 5cm (2 inches) from the presser foot. When drawing needle thread through the needle eye, stop the tie knot before the needle eye, cut the thread and pass it through the needle eye.

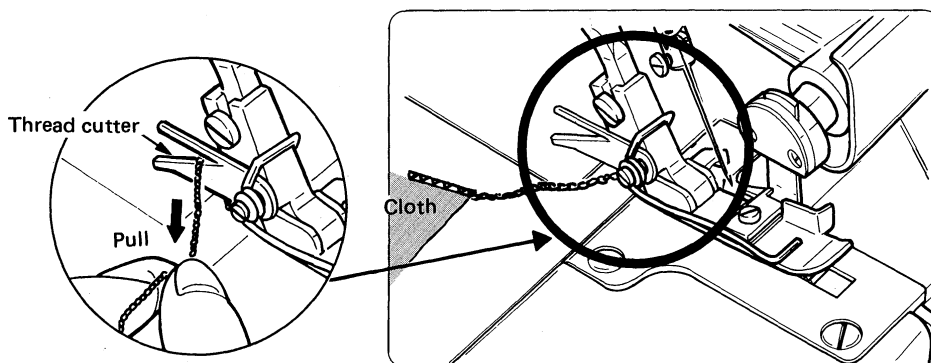


## 4. Chain off and test sew



When the machine is completely threaded, turn the machine pulley toward you 2 or 3 turns while holding the 3 threads applying a slight tension as shown in figure at left.

After chaining off, make a test stitch on a sample of your fabric so that you can adjust the thread tensions correctly.



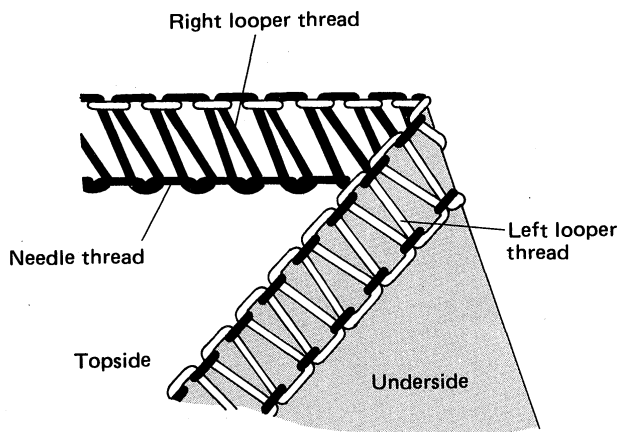
After completing the seam, chain off approx. 5cm (2 inches) as shown in figure at left and cut thread with the thread cutter on the presser foot.

## 5. How to adjust thread tension

Adjust thread tension to suit the type of material and size of the thread used. Tension becomes tighter as the tension dial is turned up toward the plus sign (+).

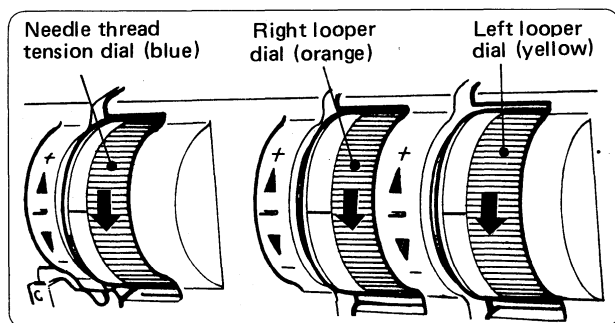
### • Correct thread tension

Be sure the threads are correctly threaded since otherwise proper thread tension cannot be obtained (See page 6).

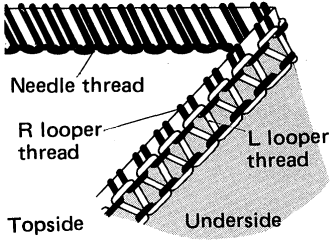
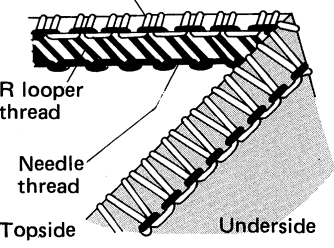
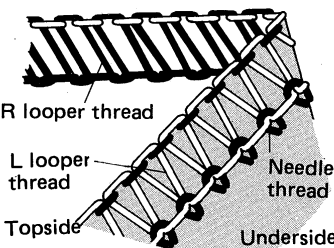


Correct thread tension can be obtained when the thread tension dials are set as follows.

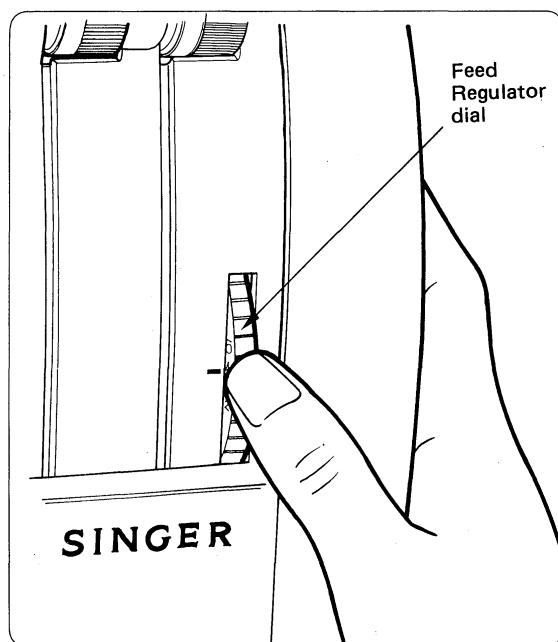
- (1) Turn the needle thread tension dial and the left and right looper thread tension dials toward the minus sign (–) until the dials stop.
- (2) When the dials stop, turn the dials toward the plus sign (+) as shown in table below and set the needle tension dial and left and right looper thread tension dials to suit the material to be sewn. Slight adjustment will give better thread tensions.



Fabric	Thread Tension			
	Needle Thread	Right Looper Thread	Left Looper Thread	
Light Weight	1 turn	1 turn	1 turn	
Medium Weight	1.5 turns	1 turn	1 turn	
Heavy Weight	2 turns	1 turn	1 turn	

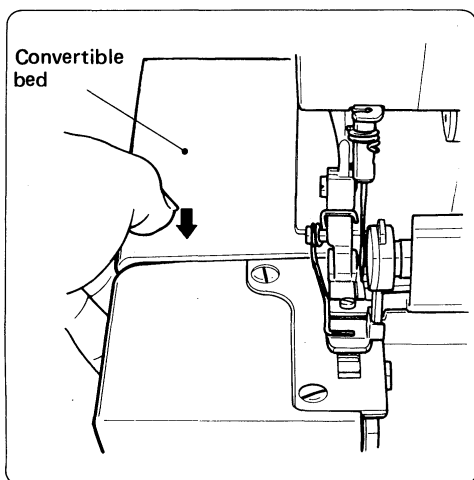
<p><b>When the right looper thread lie on the underside of fabric.</b></p>  <p>Turn right looper dial (orange color) toward the plus sign (+). Or, turn the left looper dial (yellow) toward the Minus sign (-).</p>	<p><b>When the left looper thread appears on the top.</b></p>  <p>Turn left looper dial (yellow) toward the plus sign (+). Or, turn the right looper dial (orange) toward the minus sign (-).</p>	<p><b>When the needle thread tension is too loose.</b></p>  <p>Turn the needle thread tension dial (blue) toward the plus sign (+). Or, turn both right and left looper dials (orange and yellow) toward the minus sign (-).</p>
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## 6. How to adjust stitch length



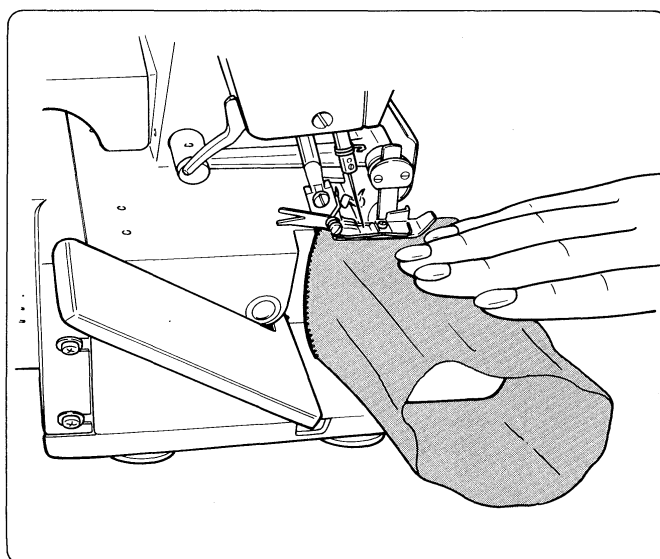
The feed regulator dial on this machine is pre-set to 3mm for normal sewing condition. Since the adjustment can be made easily, adjust the stitch length to 4mm when sewing heavy weight fabrics such as quilting and to 2mm when sewing light weight fabrics such as lining fabric, crepe, etc. and you will obtain excellent seams without puckering.

## 7. Free arm sewing (Tubular work)



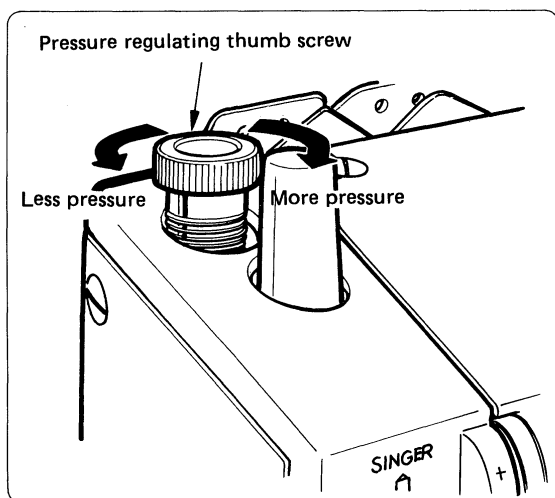
As shown in figure at left, this machine becomes a free arm machine simply by pushing the convertible bed plate down making tubular work such as sewing sleeves very easy.

This is especially convenient for finishing hard-to-reach areas such as arm holes and overcasting trouser cuffs.



Slip tubular work onto the free arm and sew.

## 8. Adjustment of presser foot pressure



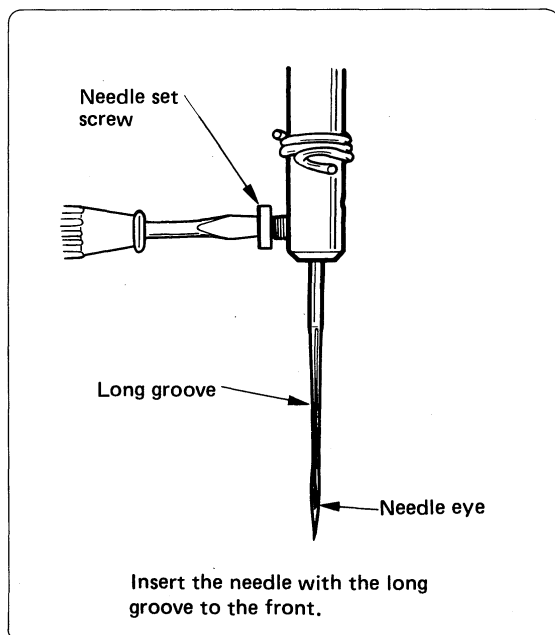
The presser foot pressure of this machine is preadjusted at the factory to suit the sewing of medium weight fabrics.

It may become necessary to adjust the pressure in the case of delicate or heavy weight fabric.

For light weight fabric – Decrease the pressure (as shown at left).

Heavy weight fabric – Increase the pressure (as shown at left).

## 9. How to replace needle



Use Singer needle Cat. No. 2053. Available in sizes #10, #11, #14.

**Needles for household machines can not be used.**

### To remove the needle:

- Be sure the power line plug is disconnected from the wall receptacle.
- Turn the machine pulley toward you until the needle is at its highest position. Loosen the needle set screw with a screw driver and remove needle.

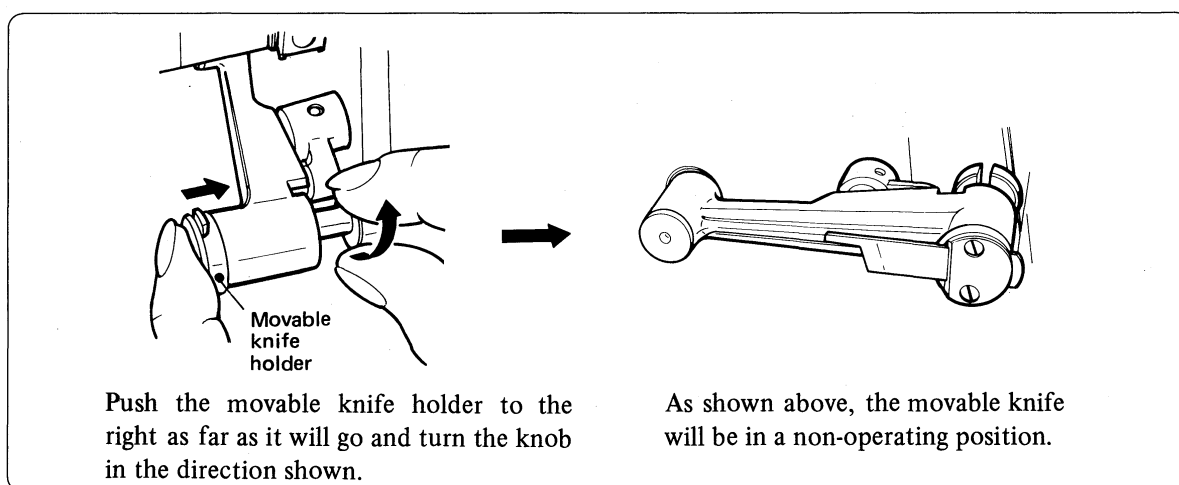
### To replace the needle:

- Insert the needle into needle bar as far as it will go, with long groove toward you, as shown in figure at left.
- Hold needle firmly so that its direction can not change and securely tighten the needle set screw.

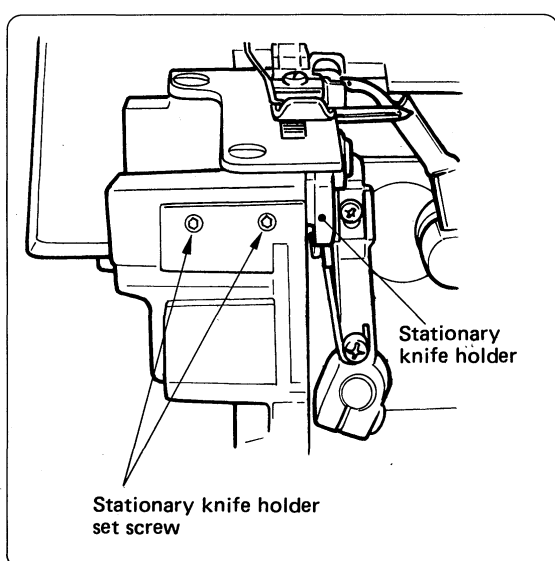
## 10. Adjustment of overedge seam width

The overedge seam width of this machine is set to 3.5mm (9/64 inches) for normal sewing condition, however it can be increased up to 5mm (13/64 inches) for overedging heavy weight fabrics as instructed below. If any problems arise in making the adjustment, call your Singer representative.

- (1) Before making the adjustment, be sure that the power line plug is disconnected from the wall receptacle.
- (2) Open the looper cover. (See page 5)
- (3) Turn the machine pulley toward you, lower the movable knife as far as it will go and set it in the nonoperating position as shown in figure below.



- (4) Press down convertible bed plate and remove the cylinder cover. (See page 5)



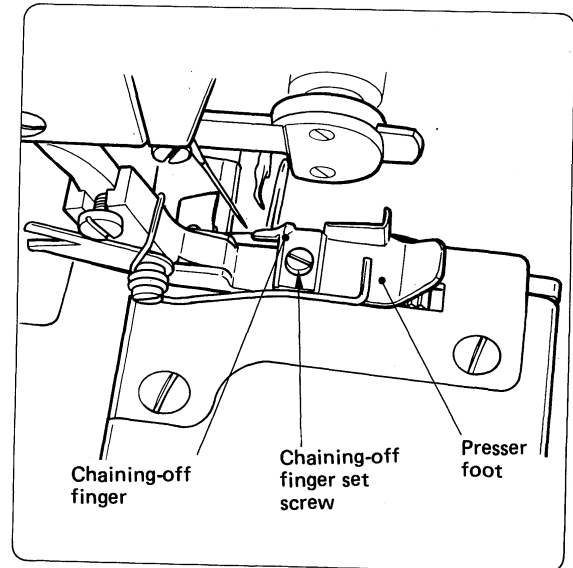
- (5) Loosen the 2 stationary knife holder set screws with the hex-head wrench provided in the accessories, move the stationary knife holder to the right or left and tighten the set screw.

(When a wider seam is desired, move the holder to the right and when a narrower seam is desired, move the holder to the left).

Be sure to align the cutting edge of the stationary knife level with the top surface of the throat plate.



- (6) Replace the cylinder cover. (See page 5)
- (7) Loosen the chaining-off finger set screw on the presser foot and adjust the finger to the cutting width desired by moving it either to the right or left and tighten set screw.
- (8) Return the movable knife to its original position.



(9) Test sew

Make a test sample first so that you can correctly adjust the position of the chaining-off finger, since an improperly positioned finger may cause the cutting width to become narrower than the overedge seam width, or become wider and cause the edge of the fabric to fold.

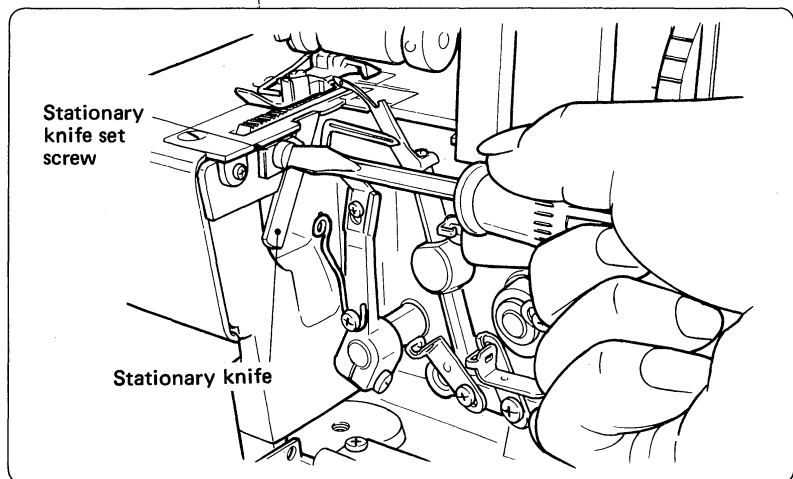
It may be necessary to re-adjust position of chaining-off finger when other materials are used.

## 11. How to replace knives

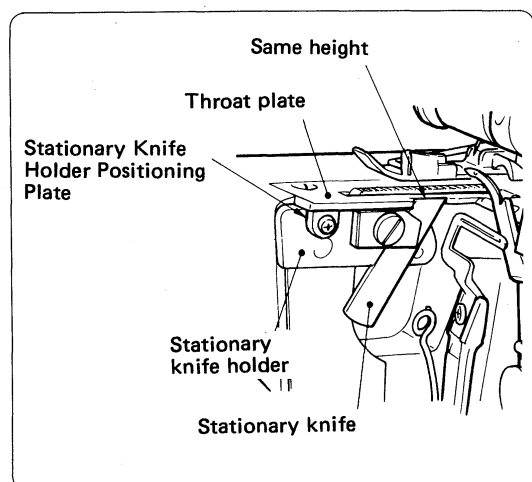
The stationary knife should be changed when it becomes dull.

The stationary knife can be replaced according to the following steps, however if there are any difficulties experienced, call your Singer representative to make the adjustment.

- (1) Be sure that the power line plug is disconnected from the wall receptacle.
- (2) Open the looper cover and set the movable knife in the non-operating position (see page 14).
- (3) Loosen the stationary knife set screw and remove the stationary knife.

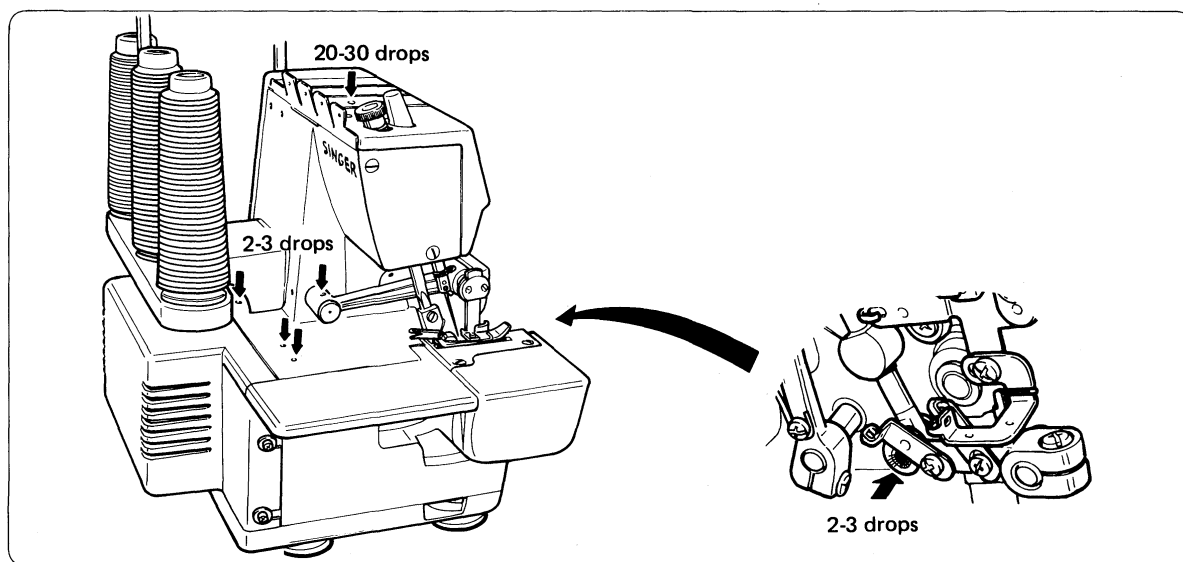


- (4) Place a new stationary knife in the groove of the stationary knife holder, align the cutting edge level with the top surface of the throat plate and tighten set screw.
  - (5) Return the movable knife to its original position.
- The movable knife on this machine has a carbide alloy tip cutting edge and under normal use will not require replacement.



## 12. Lubrication

Special material is used for the important parts of this machine, therefore only occasional lubrication is required. The oiling points shown on the figure below should be lubricated periodically.



## 13. Reasons for poor stitches and how to make adjustment

Whenever sewing difficulty is encountered, make the adjustments as noted below.

Condition	Reason	Method of Adjustments (reference pages)
When the fabric is not fed.	<ul style="list-style-type: none"> <li>Insufficient presser foot pressure.</li> </ul>	<ul style="list-style-type: none"> <li>Increase presser foot pressure (page 13).</li> </ul>
When the needle breaks.	<ul style="list-style-type: none"> <li>Needle not inserted properly.</li> <li>Fabric being pulled too hard.</li> <li>Loose needle set screw.</li> </ul>	<ul style="list-style-type: none"> <li>Insert needle correctly or replace with correct needle (page 13).</li> <li>Do not pull the fabric by hand. Use hand only to guide the fabric.</li> <li>Tighten screw firmly.</li> </ul>
When the thread breaks.	<ul style="list-style-type: none"> <li>Incorrect threading.</li> <li>Bent needle or needle point damaged.</li> <li>Thread tension too tight.</li> <li>Thread tangled.</li> <li>Needle inserted incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>Thread machine correctly (page 6).</li> <li>Change to correct needle (page 13).</li> <li>Adjust tension (page 10).</li> <li>Thread correctly (page 6).</li> <li>Insert needle correctly (page 13).</li> </ul>
When stitches skip.	<ul style="list-style-type: none"> <li>Needle bent or needle point damaged.</li> <li>Needle set loosely.</li> <li>Incorrect threading.</li> <li>Wrong needle used.</li> <li>Insufficient presser foot pressure.</li> </ul>	<ul style="list-style-type: none"> <li>Replace with correct needle (page 13).</li> <li>Set needle firmly in position (page 13).</li> <li>Thread machine correctly (page 6).</li> <li>Use Singer Cat. 2053 #10, #11, #14.</li> <li>Increase presser foot pressure (page 13).</li> </ul>
When stitches are irregular.	<ul style="list-style-type: none"> <li>Thread tension not balanced.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust tensions (page 10).</li> </ul>
When fabric puckers	<ul style="list-style-type: none"> <li>Thread tension too tight.</li> <li>Threading incorrect or tangled.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust tension (page 10).</li> <li>Thread correctly (page 6).</li> </ul>
When the machine does not operate.	<ul style="list-style-type: none"> <li>Power line plug not connected.</li> <li>Motor damaged.</li> <li>Controller damaged.</li> </ul>	<ul style="list-style-type: none"> <li>Connect with power source.</li> <li>Change carbon brush.*</li> <li>Have your Singer representative repair and service the controller.</li> </ul>
When motor is excessively noisy or when sparking is excessive.	<ul style="list-style-type: none"> <li>Motor damaged.</li> </ul>	<ul style="list-style-type: none"> <li>Change carbon brush.*</li> </ul> <p>* Have your Singer representative replace the carbon brush.</p>

## 14. Relationship between cloth, thread and needle

Type of Fabric	Type of Thread	Needle Singer Cat. No. 2053
<b>Lightweight</b> Lawn, Organdy, Voil, Crepe, etc.	Cotton #100 Silk #100 Spun #80 – #90 Tetron #80 – #100	#10
<b>Medium Weight</b> Muslin, Soccer, Satin, Gabardine Broadcloth, etc.	Cotton #60 – #80 Silk #50 Spun #60 – #80 Tetron #60 – #80	#11, #14
<b>Heavy Weight</b> Oxford, Denim Tweed, Corduroy Serge	Cotton #40 – #60 Silk #40 – #60 Spun #60 – #80 Tetron #50 – #80	#14
<b>Knit</b> Tricot  Jersey  Wool (woven, knit)	Spun #80 – #90 Tetron #60 – #80	#10, #11
	Spun #60 – #80 Tetron #60 – #80 Cotton #60 – #80	#11, #14
	Spun #60 – #80 Tetron #50 – #60 Wooley nylon Wooley tetron	#11, #14

## 15. Accessories

(Accessory box)

1. Needle	Set of 5 needles (Singer Cat. No. 2053 2 each #10 and 3 each #14 needles)
2. Screwdriver (medium size)	1
3. Hex-head wrench	1
4. Tweezer	1
5. Thread unwinder spool cap	3
6. Stationary knife	1
7. Brush	1
8. Oiler	1
9. Machine cover	1
10. Anti-spill sleeve	3

## 16. Specification of the 14U12 machine

Item	Specification
Sewing speed	1,500 spm maximum
Stitch length (amount of feed)	2 – 5 mm (5/64" – 13/64") (5 to 12 s.p.i.)
Overedge stitch width	3.5 – 5 mm (Standard 3.5 mm) (9/64" – 13/64")
Needle bar stroke	25 mm (1")
Presser bar rise	5 mm (13/64")
Needle	Singer Cat. No. 2053 #10, #11, #14
Number of threads used	3
Size of machine	Width 257 mm × Depth 231 mm × Height 290 mm (10-1/8" × 9-3/32" × 11-13/32")
Weight of machine	8.5 kg (18.7 lbs)



Form U 3209 (681)  
Part No. 543200-002  
Printed in Japan