

Bernette

THE
Bernette
OVERLOCKER

Welcome to the world of overlock sewing! As a new Bernette owner, you are being introduced to one of the greatest timesavers since the sewing machine itself. After just a short while, you will surprise yourself with how much more you can accomplish in your sewing room. And you will have more fun doing it!

The purpose of this book is not only to guide you in operation of the machine; but also to show you the many ways the Bernette, in combination with your sewing machine, can make your sewing faster, easier, and more professional. *"Make your sewing work a sewing pleasure."*

We have arranged the book in five convenient sections. The general section gives information which applies to all three models. An individual section for each model describes features which apply only to that model. Finally, the sewing techniques section gives directions for many commonly-used applications of overlocking.

There are several good books available which contain generic instructions for more advanced or specialized overlocking techniques. We have listed a few of these resources at the back of this book. We invite you to fully acquaint yourself with your Bernette; and then *"serge ahead,"* exploring the (nearly) infinite variety of applications for this new machine marvel!

Ann Price, Editor
Educational Manager

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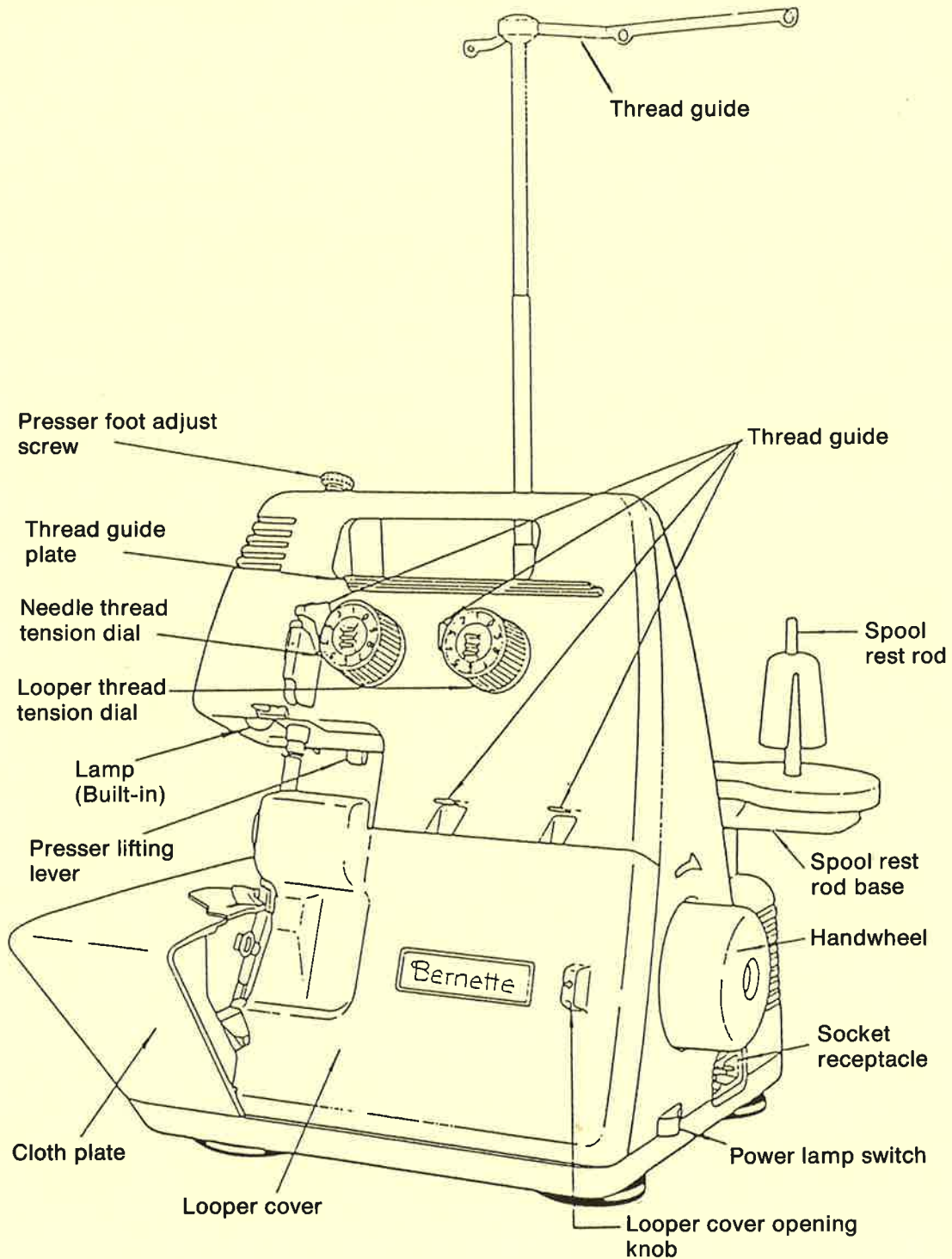
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Using 3-Thread Bernette as Example



Thread used on overlock machines is different from that for household sewing machines. Overlock thread must meet these specifications:

- *FINE WEIGHT* — because a great deal of thread is used in forming a seam or a seam finish. Fine weight produces flat, flexible seams.
- *EXTRA STRENGTH* — necessary because of the speed involved (1500 s.p.m.) and the greater number of eyelets that guide the thread between spool and stitch.
- *CROSS-WOUND ON CONE* — eliminates tangling during high speed sewing, as the thread cone does **not** turn. The thread must easily slip off the cone.
- *UNIFORM CONSTRUCTION* — thread must be fine and even with no variance in thickness. Thick and thin spots affect stitch uniformity and weak areas in the thread are prone to snap.
- *BULK PACKAGING* — reduces costs because a greater amount of thread is used.

Several quality brands of threads on the market are suitable for overlock machines. One in particular is *Mettler Metrocor*, with these characteristics:

- 100% polyester core-spun
- Size 120
- All-purpose sewing thread, especially suited for stronger seams
- Available in three cone sizes — 1000m, 2500m, 5000m

Select a few basic colors of overlock sewing thread to have on hand. Perhaps grey or natural for spring/summer sewing and navy or brown for fall/winter. It is not necessary to have a perfect match if you are merely finishing edges.

If seaming fabrics, you may wish to use a regular spool of thread in a matching color in the **needle**, and use overlock thread in a blending color for the loopers. Of course, you can use regular thread for all three spools, but it will be used up very quickly.

If a decorative edge finish is desired, specialty threads can be used in the upper looper. Generally, the tension may require special settings. It will be easy to remember these because the tension dials are numbered and revolve only once.

Some specialty threads which work well include the following:

J & P Coats Knit-Cro-Sheen

J & P Coats Royal Mouline Knit and Crochet Thread

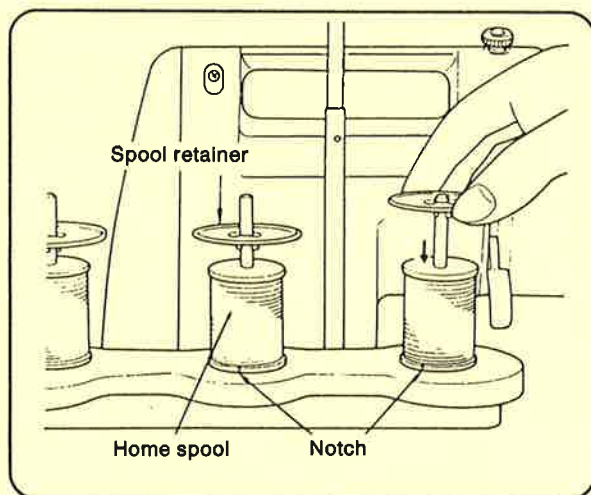
Metrosene Cordonnet top stitching thread

perle cotton

lightweight yarns

metallic threads

NOTE: When using spools of thread which are not cross-wound, use the thread caps supplied with the Bernette to insure the thread flows smoothly off the spool.



You will find a color-coded threading illustration when you open the looper cover. In addition, each thread guide is appropriately colored, making an easy-to-follow procedure:

1. Raise needle to its highest position.
2. Thread in the sequence shown in the illustration inside the looper cover.
3. Give each thread a tug after passing it through tension disc. You should feel resistance on the thread, to be sure it is firmly engaged in the disc.
4. Threading the loopers and needle may be done easily by using the needle threader and tweezers, conveniently provided inside the looper cover.

Once the machine is properly threaded, you may never need to start "*from scratch*" again. To save time, simply clip the threads near the spools, place new spools on the thread stand, tie old thread onto new, and run machine slowly. The new thread will "*sew*" itself into the thread guides for you. The knotted thread will not pass through the needle eye, though, so stop the machine before that point. Clip the knot and manually rethread needle.

The looper threads will be used up more quickly than the needle thread, so you may wish to rotate your cones to get more even usage.

Thread tension may vary slightly according to the type and thickness of both thread and fabric. When first learning to use the Bernette, use threads to match the color coding of the machine. It will be easier to understand which tension dial affects which part of the stitch.

Turning the tension controls clockwise to a higher number will increase tension and counter-clockwise to a lower number will decrease tension.

HINT: *Too Loose Increase Tension Higher Number*
Too Tight Decrease Tension Lower Number

Always stitch a test seam after making tension or thread changes on your Bernette. If you have any trouble balancing the tension, try the following:

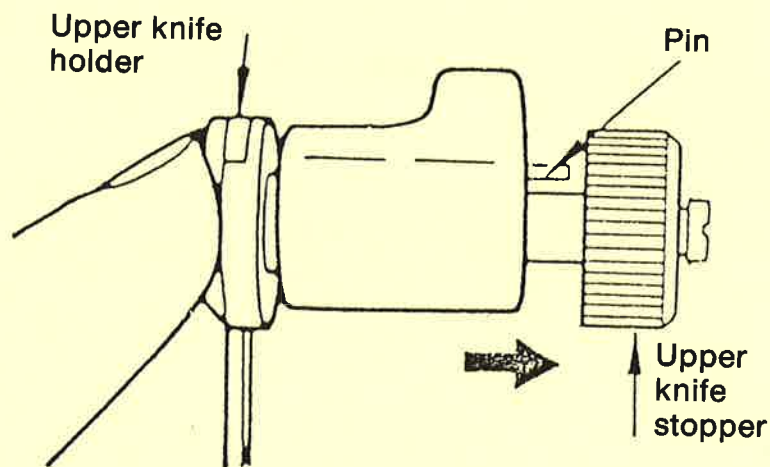
1. Be sure the machine is threaded properly and that thread is firmly engaged in the tension discs.
2. Change the needle. A needle which is dull or bent can affect the tension and the stitch formation.
3. Start with tensions set on 4. Tighten or loosen tensions, about a half number at a time.
4. Rethread the machine in the order recommended on the threading chart inside the looper cover.

Two knives cut the fabric as it feeds through the Bernette. Frayed edges can be "neatened" as they are being finished, and narrow seams can be trimmed at the same time they are being sewn. If you pin-baste pieces together, be sure to remove the pins before they reach the knives, or pin parallel to the fabric edge to the left of the presser foot.

Rotating the Upper Knife

Sometimes you may wish to overlock an area without cutting. The upper knife can be rotated up and back into a locked position for safety.

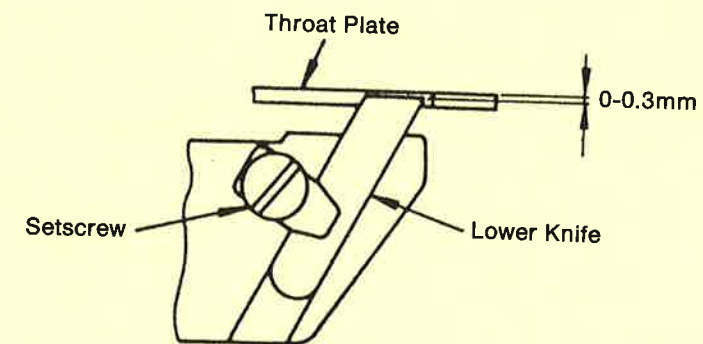
1. Turn the handwheel until the knife reaches the highest position. Open the looper cover.
2. Push the upper knife holder fully to the right, so the upper knife stopper leaves the pin.
3. Turn the upper knife stopper **away** from you. It will stop and lock when the knife is all the way back.



Changing the Lower Knife

The lower knife, which is stationary, tends to become dulled by long use, and must be replaced periodically. An extra lower blade is supplied with the purchase of a Bernette.

1. Swing open the looper cover and turn back the upper knife.
2. Loosen set screw of lower knife and remove old blade.
3. Fit new blade in lower knife holder groove with point away from you.
4. Position blade edge so that it is **nearly** flush with the throat plate surface and tighten set screw.



5. Return upper knife to position and close cover.

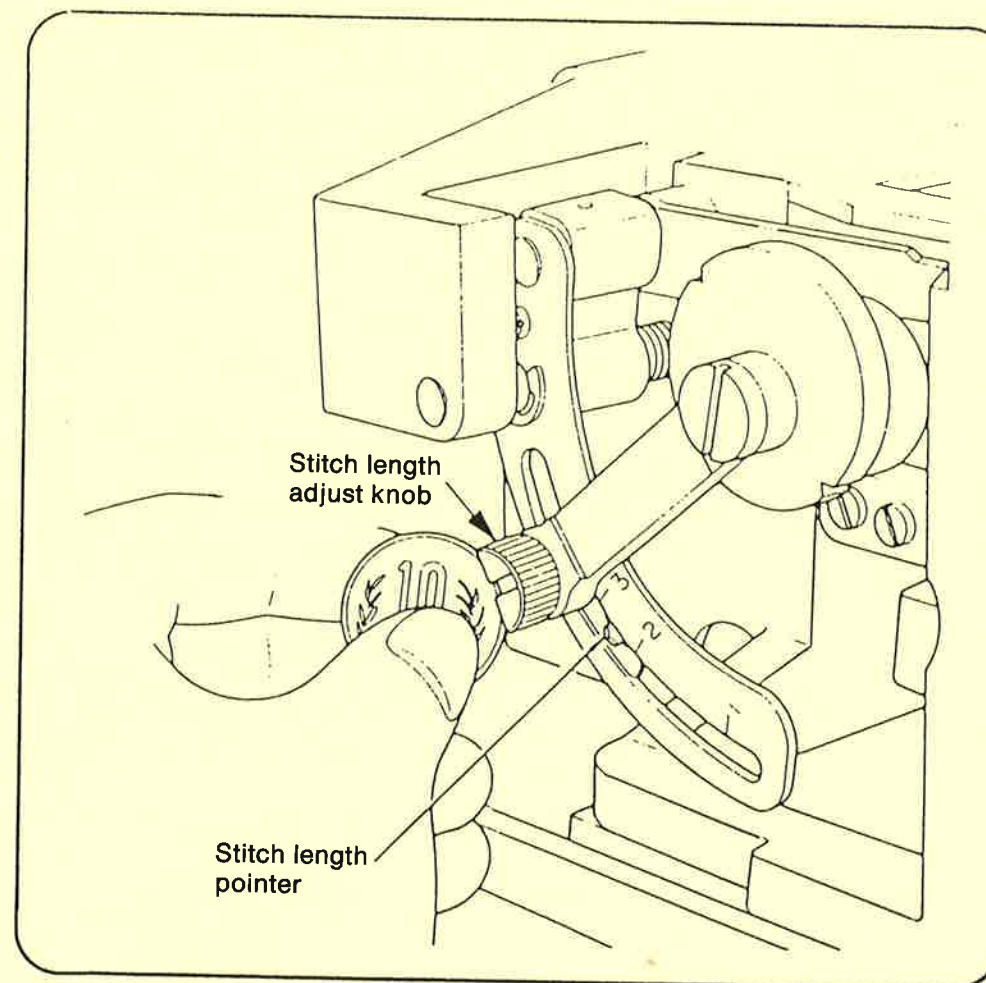
NOTE: The upper knife of the Bernette is made of special hardened carbide and normally does not need changing. However, if it should be damaged by sewing over pins, for example, your local Bernina/Bernette dealer can change the upper knife for you.

It is usually unnecessary to change the factory-set length of 2.5mm. However, for special effects or applications, the length may be adjusted as follows:

1. Swing open cloth plate.
2. Hold handwheel while loosening stitch length knob.
3. Move pointer to desired length and retighten knob.

The lengths available range from 1mm to 5mm.

View with the Cloth Plate Opened



Roll Hemming Attachment

Attractive and professional rolled edges for napkins, scarves, ruffles, and hems have never been easier than with this special accessory. The attachment is not just for hemming and edging though. Please see the sewing techniques section for other practical and decorative applications. An attachment is available for each model Bernette.

Blindhem Foot

The blindhem foot makes it possible to overlock the raw hem edge and sew a blind hem in the same operation. It is an optional accessory for both the 3-thread and 3/4-thread Bernettes.

Tape Sewing Device

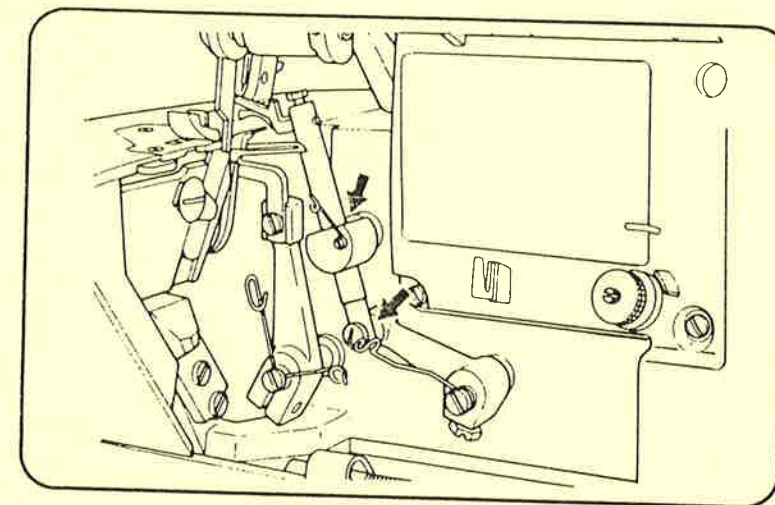
The tape sewing guide can be used when tape or ribbon is to be oversewn in practical or decorative applications. For example, shoulder seams of knitted garments can be stabilized with twill tape. Or, a colorful ribbon may be couched with decorative overlocking stitches. The guide can also keep narrow elastic in place while forming a thread casing of overlock stitches. It is a standard feature of the presser foot for the 3/4-thread Bernette and an optional accessory for the 3-thread.

NOTE: Directions for using each of the above accessories is included in the individual section on each model, as applicable.

To keep your Bernette running smoothly, proper cleaning and oiling are important.

Since your high-speed overlocker is both cutting and overedging, it produces more than the usual amount of lint. Your machine will operate smoothly like a new product for a long time with frequent brushing and dusting. Use the lint brush conveniently located on the inside of the looper cover. A few sprays of compressed air from time to time will completely remove threads or lint.

Approximately every four hours of running time, apply one drop of oil on the two places shown in the diagram inside the looper cover. It is recommended that you use good quality sewing machine oil.



| | 3-Thread | 4-Thread | 3/4-Thread (convertible) |
|---|----------|----------|-----------------------------|
| 3.5mm 3-Thread Overlock | X | | |
| 4mm 3-Thread Overlock | X | | X |
| Double Chain Stitch | | X | |
| 5mm Separate Safety Stitch | | X | |
| 6mm 4-Thread Overlock | | | X |
| 6mm 3-Thread Overlock | | | X |
| 4mm 2-Thread Overedge | | X | |
| Built-In Accessories | X | X | X |
| Accessory Case | X | X | X |
| Roll Hemming Attachment | opt. | opt. | opt. |
| Tape Sewing Device | opt. | | X |
| Blind Hemming Foot | opt. | | opt. |
| Industrial Needle System | X | X | |
| Standard Sewing Machine Needles | | | X |
| Numbered Thread Tension Dials | X | X | X |
| Single Revolution Tension Dials | X | X | X |
| Color-Coded and Numbered Threading | X | X | X |
| Built-In Sewing Light | X | X | X |
| Swing-Away Knife/Safety Lock | X | X | X |
| Waste Receptacle | X | X | X |
| On/Off Power and Light Switch | X | X | X |
| Machine Dust Cover | X | X | X |
| Integrated Carrying Handle (independent of threading) | X | X | X |
| Suction Feet for Stability | X | X | X |
| Retractable Thread Stand | X | X | X |
| Totally Enclosed Motor | X | X | X |
| "Childproof" Cloth Plate Cover | | | X |
| Finger Protection on Presser Foot | X | X | X |
| Needle Protection Front and Behind | X | X | X |
| Only Two Oiling Points | X | X | X |

Bernette

3-THREAD

OVERLOCK SEWING MACHINE

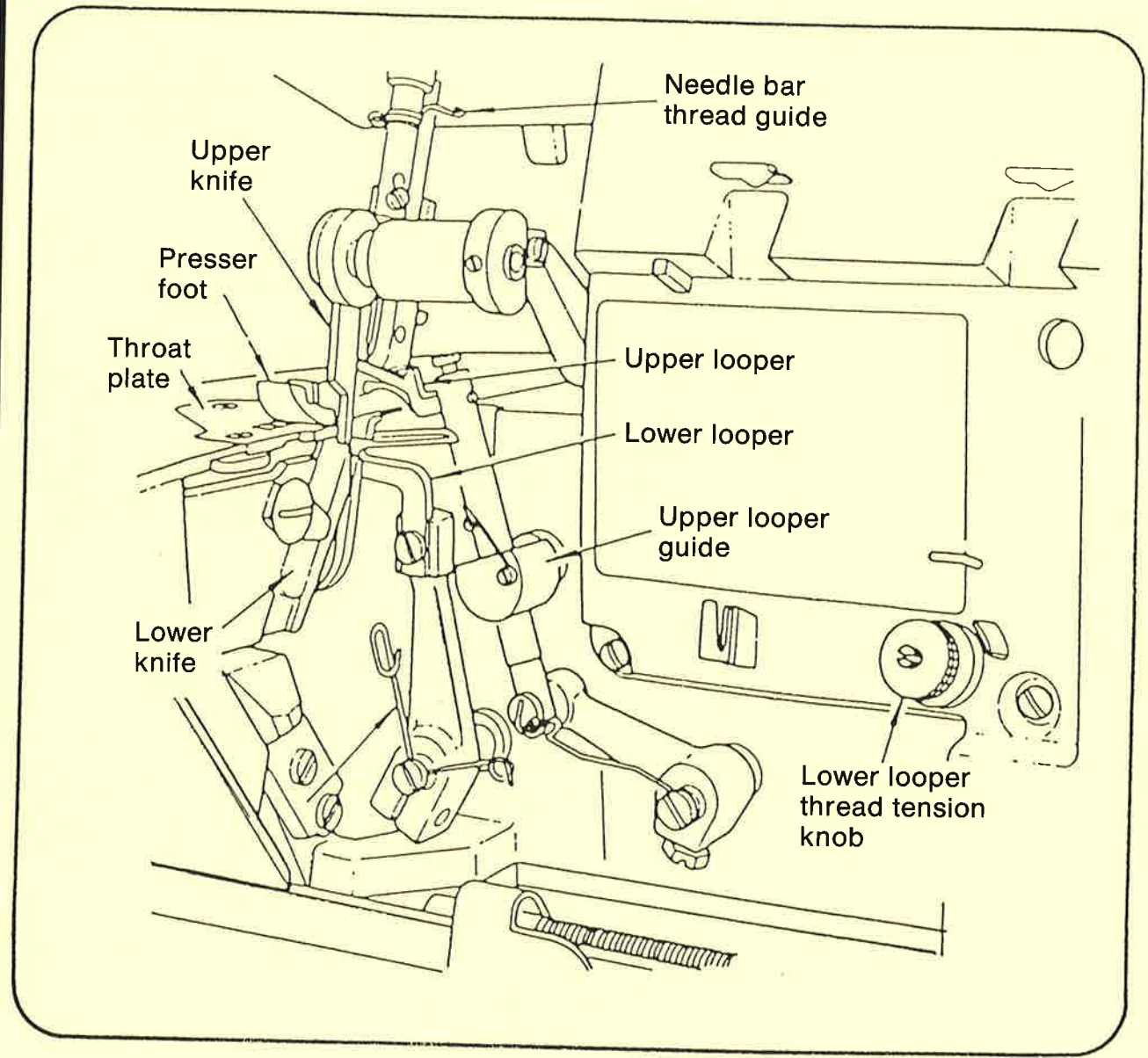
Bernette

MO-203

1-needle, 3-thread

The 3-thread Bernette is ideal for finishing the edges of fabrics which fray and for seaming knitted fabrics. While it can be used for seaming wovens also, the stitch may not be wide enough to be used in areas of stress. This Bernette produces a very elastic stitch, so stretchy fabrics, such as swimwear, will still stretch without popping the thread.

Many practical and decorative applications are possible with the use of specialty threads and accessories.

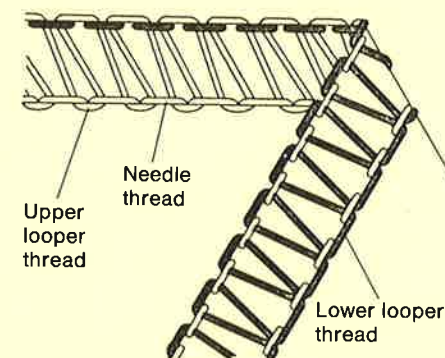


To thread your Bernette, follow the sequence as illustrated inside the looper cover.

1. blue — upper looper
2. red — lower looper
3. green — needle

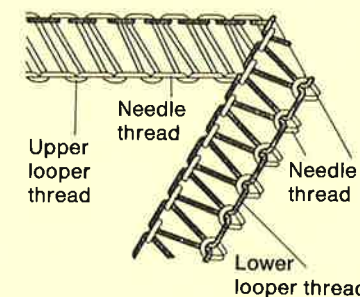
Proper threading will ensure correct stitch formation and even stitches. Please refer to the general section for details and suggestions.

The correct balance of tension for a 3-thread overlock stitch should look like this:

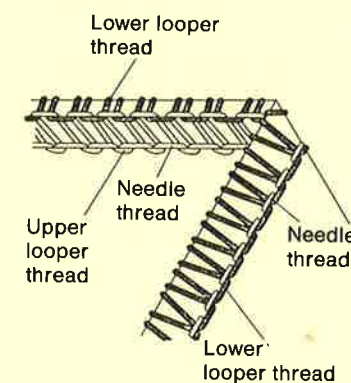


The needle thread (green) should look like a normal straight stitch. The upper looper (blue) and the lower looper (red) should just meet at the fabric edge.

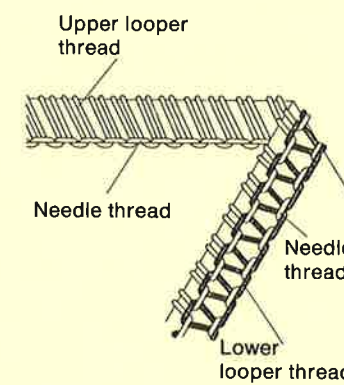
Following are examples of **unbalanced** thread tension:



Loops of needle thread are forming on the underside, indicating the needle tension is too loose. Increase needle tension by turning "green" dial to a higher number.



Lower looper threads are being pulled to the upper side, indicating upper looper tension is too tight. Decrease upper looper tension by turning "blue" dial to a lower number.

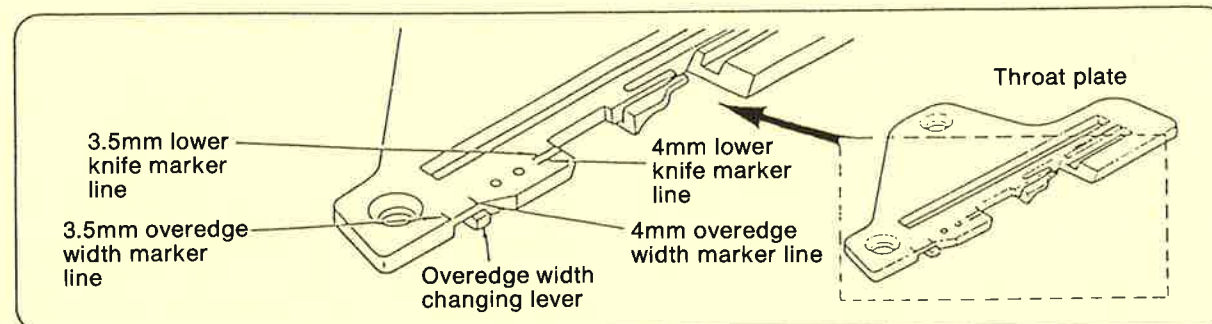


Upper looper threads are being pulled to the underside, indicating upper looper tension is too loose. Increase upper looper tension by turning "blue" dial to a higher number.

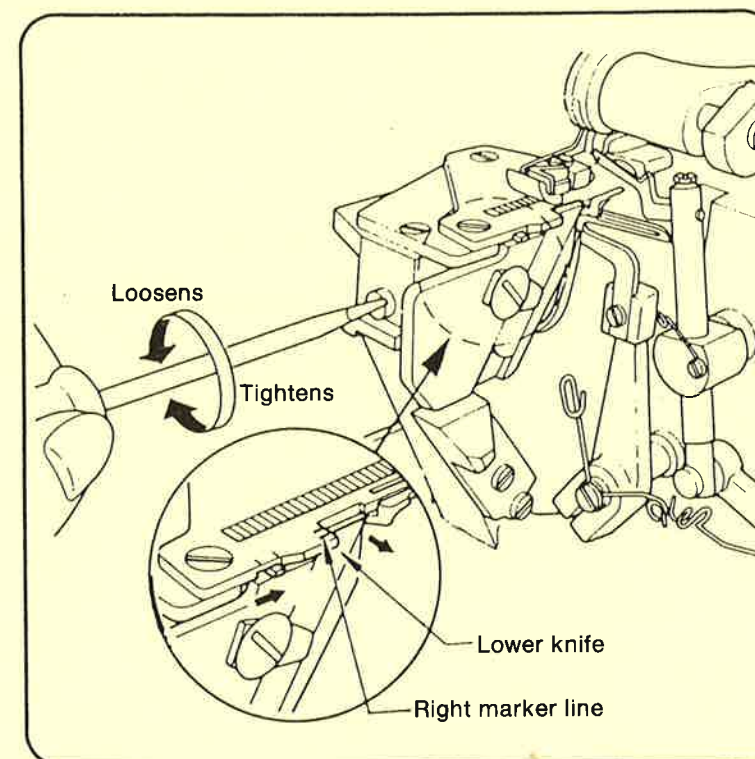
NOTE: The lower looper thread tension has been factory-adjusted to meet all types of materials, so requires no adjustment.

To accommodate special fabrics, such as lofty fleece or shearling, the overedge width can be easily changed from the factory-set 3.5mm to 4.0mm as follows:

1. Check that the needle is in its highest position.
2. Open looper cover and cloth plate and turn back upper knife.
3. Move overedge width changing lever **away** from you.



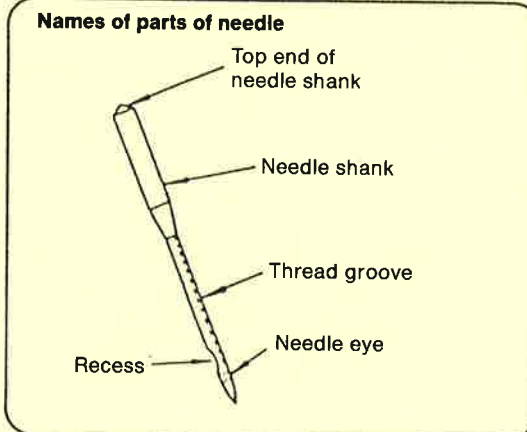
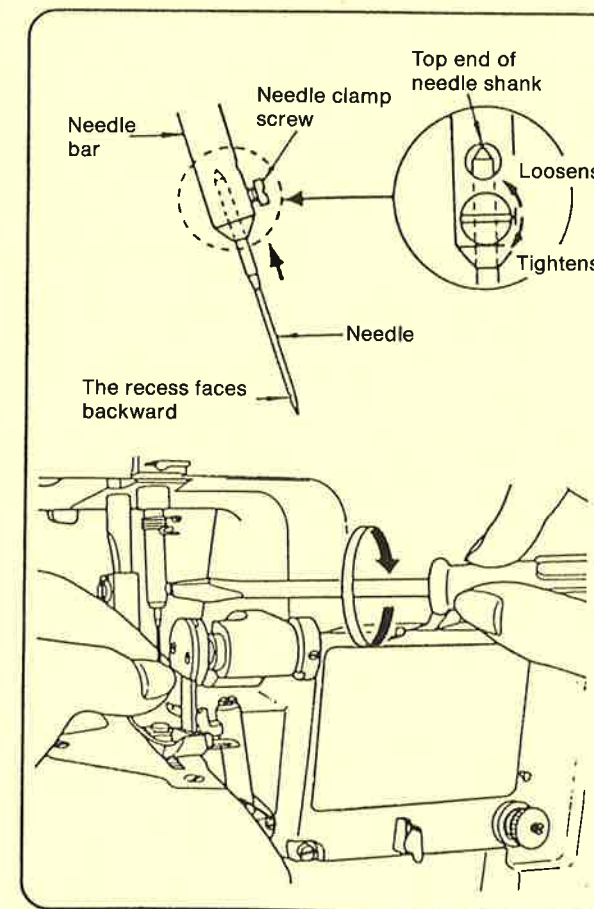
4. Loosen set screw and move the lower knife holder so that the **right** edge of the knife is aligned with the **right** marker line on the throatplate. Tighten set screw.



5. Bring upper knife back into place and close covers.

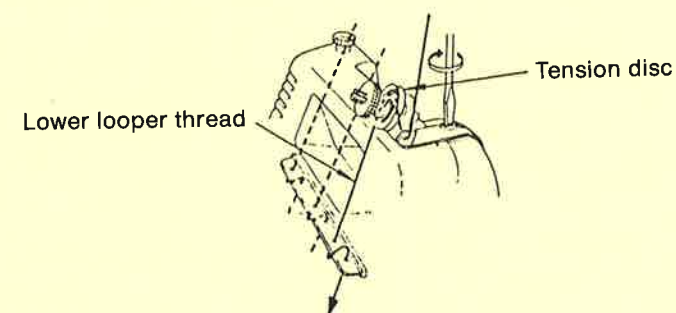
Needle System — 287 WH (full industrial). Available in a range of sizes.

1. Raise the needle to the highest position, leave the presser foot down, and turn back the upper knife.
2. Remove old needle by loosening needle clamp screw.
3. Insert new needle with long grooved side toward you.
4. Be sure that needle is inserted as far up as it will go by checking to see that the top end of the needle shank is in contact with the top of the needle bar hole.
5. Securely tighten needle clamp screw.



Directions

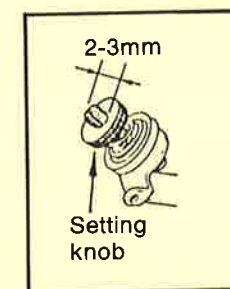
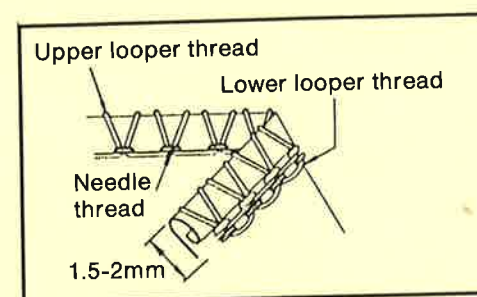
1. Raise needle to the highest position.
2. Remove the presser foot and throat plate.
3. Mount the roll hem throat plate first, then the roll hem presser foot.
4. Decrease stitch length to 1.0-1.5mm.
5. Attach the extra tension device with the screw at the top right of the machine. Thread the lower looper thread (red) in the extra tension disc as shown.



NOTE: Once attached to the machine, this tension device need not be removed. For regular overlocking, without roll hemming, simply omit threading this extra tension disc.

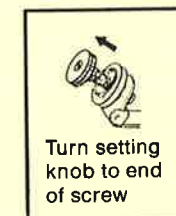
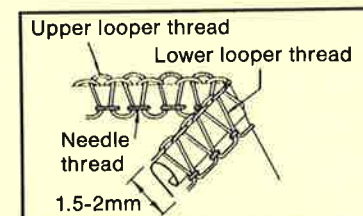
6. Use a size 70 needle for roll hemming. You may wish to use a special thread in the upper looper, different from your regular overlocking. Cotton thread may roll more because it is softer. It may also be finer, so may produce a prettier satin stitch. Other possibilities include silk or rayon thread for extra sheen.
7. For a full roll hem, the desired result is for the upper looper threads to nearly completely encase the roll. The three threads will lock on the **under** side of the fabric rather than on the edge.

Set upper looper tension between 2 and 4. The extra tension device should be screwed almost all the way down so the stem of the screw measures 2-3mm. This extra tension on the lower looper pulls the upper looper threads to the under side.



8. A narrow overlock stitch is also possible with the roll hem attachment. In this case, the stitch formation should look the same as for regular overlocking, except the stitch width will be only 1.5-2.0mm. The threads should lock on the **edge** of the fabric.

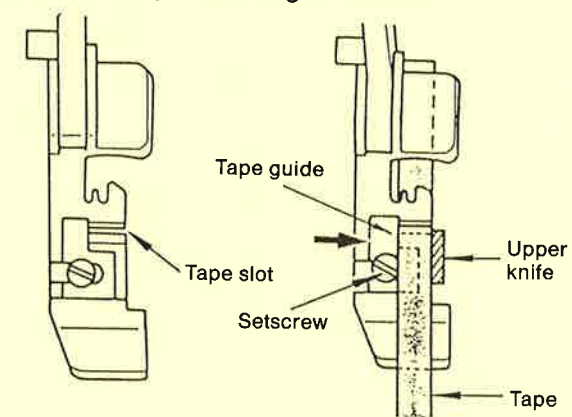
Set tension knobs the same as for regular overlocking. The setting knob of the extra tension device should be flush with the end of the screw, rather than being screwed down.



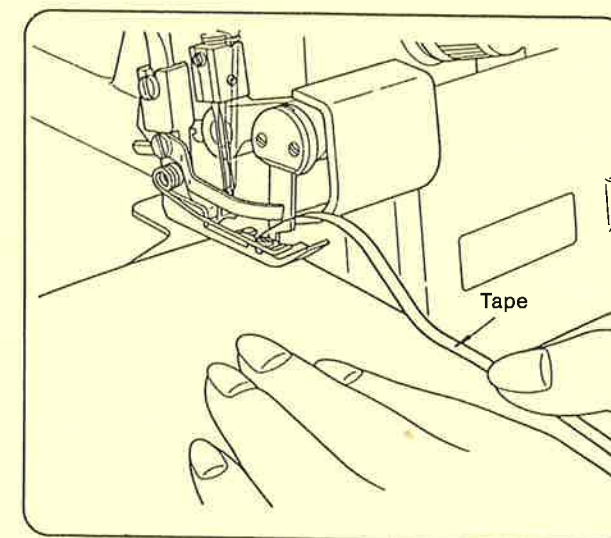
With the roll hemming attachment, therefore, your Bernette has three different stitch widths — 4mm, 3.5mm and 1.5-2.0mm.

Directions

1. Loosen presser foot screw and remove foot.
2. Mount tape sewing presser foot and retighten screw.
3. Raise the needle to the highest position, raise the presser foot, and swing the knife up.
4. Slip the tape or elastic under the foot, from the left side to the right. As you move the tape back toward the left, insert it into the tape slot of the foot. Lower the knife.
5. Place the tape firmly between the upper knife and the tape guide. The position of the tape guide can be adjusted by loosening the setscrew.

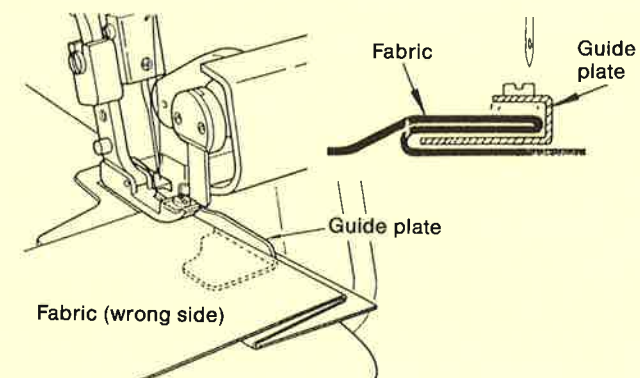


6. Lower the presser foot, and sew 2 or 3 stitches on the tape to anchor it.
7. Raise the foot and position the fabric under. Lower the foot and start sewing.



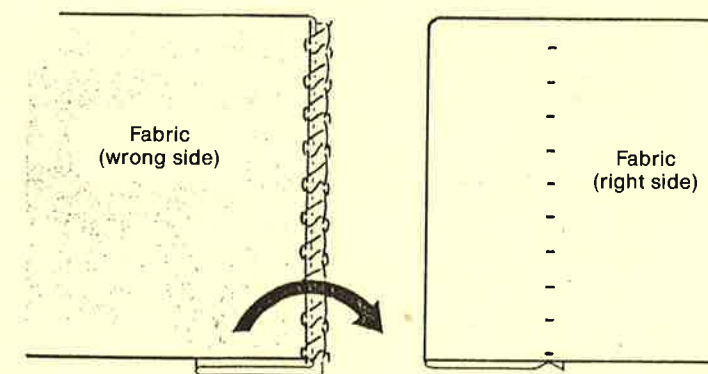
Directions

1. Loosen presser foot screw and remove foot.
2. Mount blindhem foot and retighten screw.
3. Increase stitch length to 4 or 5.
4. Fold the fabric as for a conventional blind hem on the sewing machine. Insert the fabric under the presser foot, as shown below.



5. Loosen the guide plate setscrew, and adjust the guide plate to the left or right until the fold of the fabric is in line with the needle.
6. Sew the fabric so the fold is always against the guide.

HINT: To aid easing the upper layer onto the lower as you are blind hemming, pull slightly on the lower layer as you stitch. You may also find it helpful to loosen the presser foot pressure with the large screw on the top left of the machine.



OVERLOCK SEWING MACHINE

Bernette

**MO-234 2-needles, 4 or 3 threads*
with safety stitch**

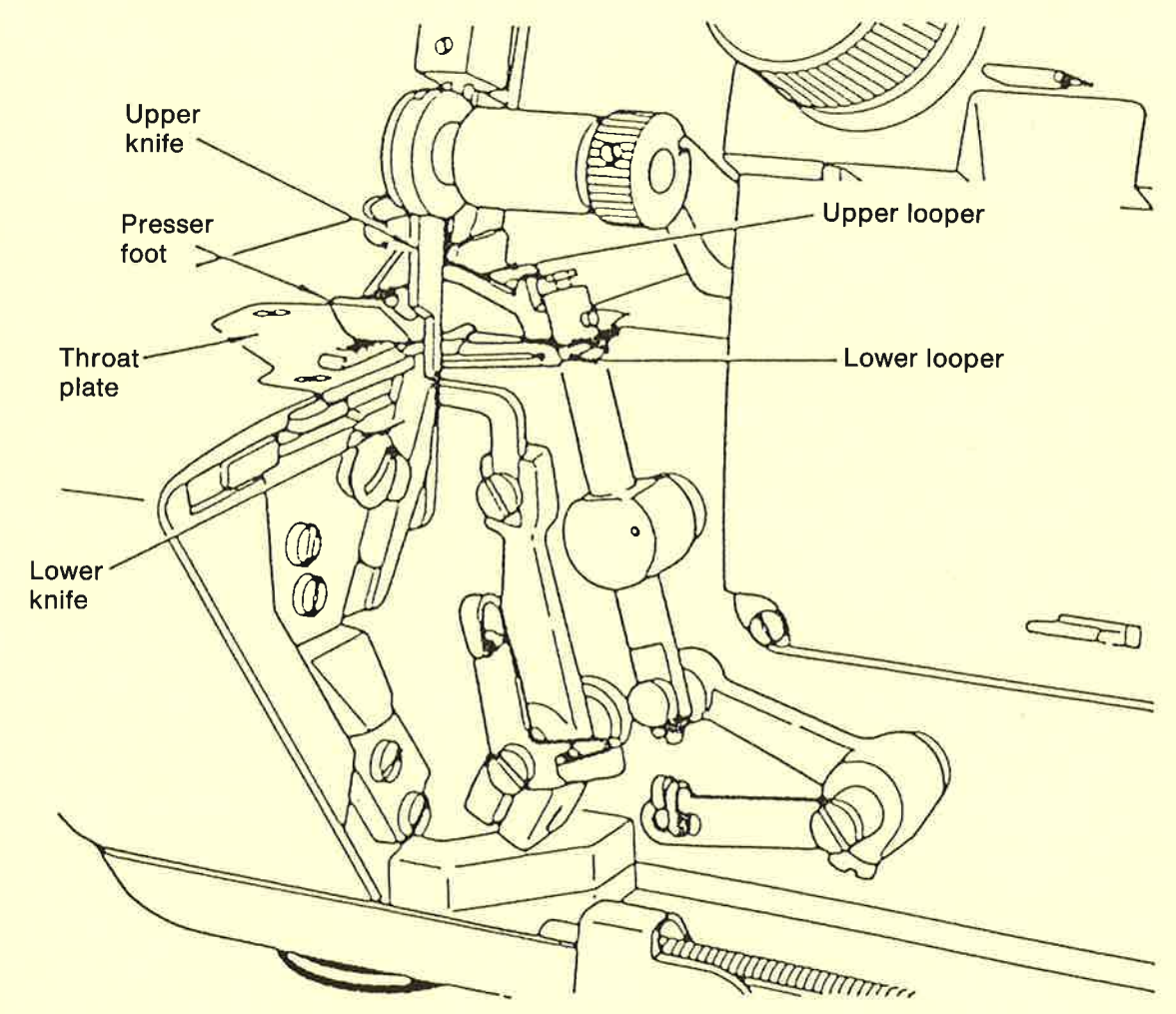
*** Convertible from 4 to 3 threads in seconds**

The 3/4-thread Bernette is ideal for seaming and finishing most fabrics. With a fourth thread as a mock safety stitch through the overlocking, this Bernette produces a stronger seam than a 3-thread stitch. The seam is wider too (6mm), so it is more suitable for bulky fabrics.

In seconds the machine can be converted to a 3-thread overlocker, with a stitch width of either 4mm or 6mm. Eliminating one spool conserves thread when seaming fabrics not requiring the safety stitch, or when merely finishing edges.

Many practical and decorative applications are possible with different stitch widths and lengths, special accessories, and/or specialty threads.

Bernette **VIEW WITH THE LOOPER COVER OPEN**



Bernette

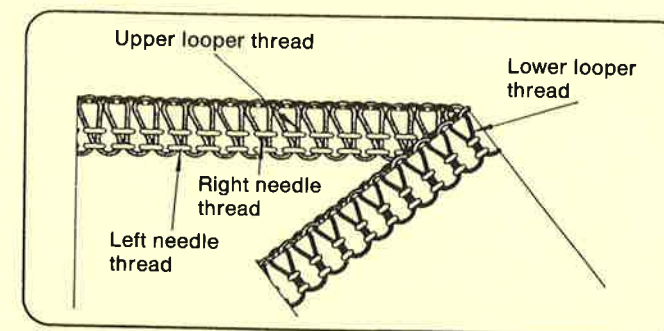
To thread your Bernette for 4-thread overlocking, follow the sequence as illustrated inside the looper cover. (Please refer to the general section for details.)

1. blue — upper looper
2. red — lower looper
3. green — right needle
4. yellow — left needle

Two different stitch widths are possible when using your Bernette for 3-thread overedging. It is easy to set the machine for a 6mm or 4mm width, simply by selecting the appropriate needle and thread.

By threading only the left needle with the left needle thread (yellow), a width of 6mm is produced. Conversely, threading only the right needle with the right needle thread (green), will result in a 4mm width. In either event, the needle not being used should be removed. (See "Changing Needles" for directions.)

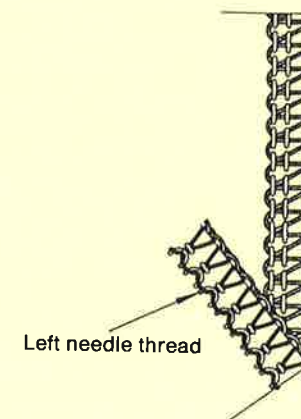
For general sewing the tension dials may be set in the colored range from 4-6. The correct balance of tension for a 4-thread overlock stitch should look like this:



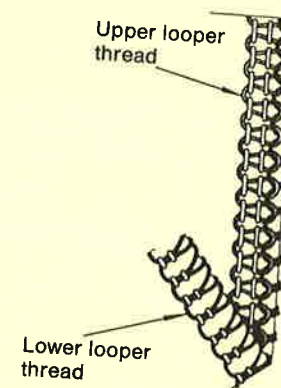
The two needle threads (green and yellow) should look like normal straight stitches. The upper looper (blue) and the lower looper (red) should just meet at the fabric edge.

When the machine is converted to 3-thread overlocking, either width, the same principles apply. The needle thread should look like a straight stitch; the loopers should meet at the edge.

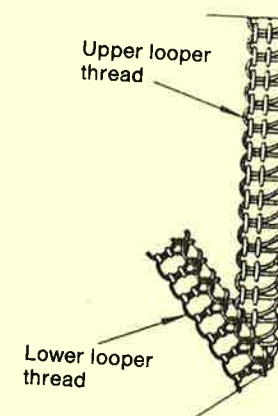
Following are examples of **unbalanced** thread tension:



Loops of needle thread are forming on the under side, indicating the needle tension is too loose. Increase needle tension by turning "green" or "yellow" dial to a higher number.



Lower looper threads are being pulled to the right side, indicating upper looper tension is too tight. Decrease upper looper tension by turning "blue" dial to a lower number.



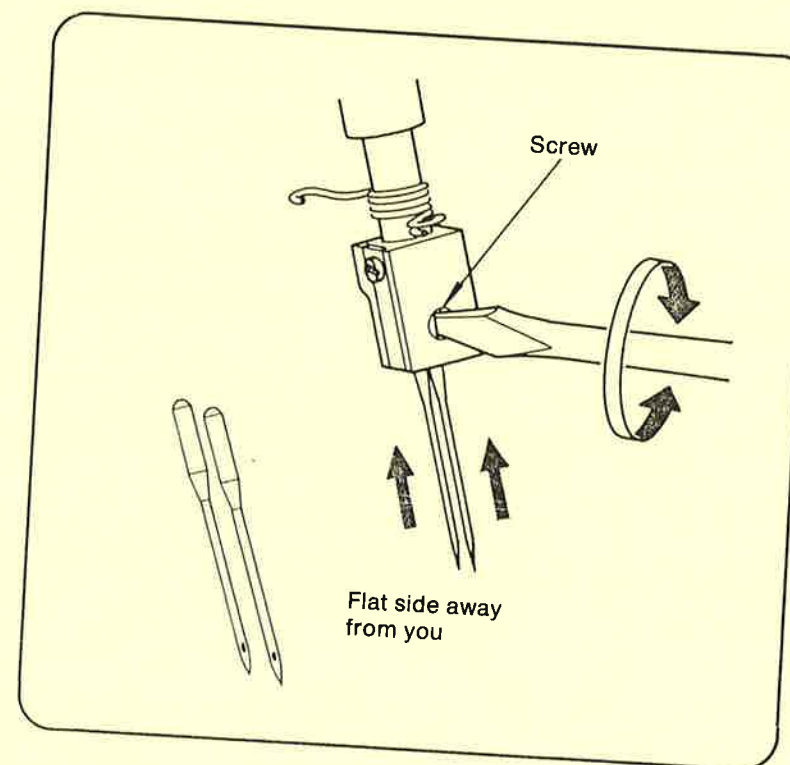
Upper looper threads are being pulled to the under side, indicating upper looper tension is too loose. Increase upper looper tension by turning "blue" dial to a higher number.

For general sewing with polyester core thread designed for overlocking, the lower looper tension dial (red) may be kept in the range from 4-6. Adjustments are made using the upper looper thread tension dial. For sewing with specialty threads, it may become necessary to also make adjustments with the lower looper dial.

Needle System — 130/705H (standard sewing machine needle)

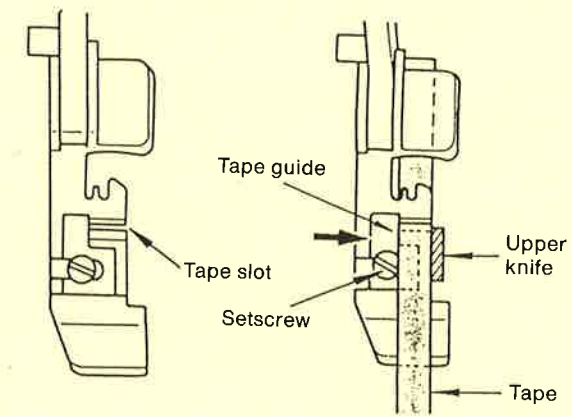
1. Raise the needles to the highest position, leave the presser foot down, and turn back the upper knife.
2. Loosen needle clamp screw to remove needles. If removing only one needle, hold other needle in place with the fingers or tweezers.
3. Insert new needles with the flat side away from you, pushing upward to be sure they are inserted as far up as they will go.
4. Securely tighten needle clamp screw.

HINT: When adding the second needle, when one has already been in place, have the second needle in position **before the screw is loosened**. The fingers then holding the second needle can, at the same time, hold the one in the machine and prevent it from dropping out.

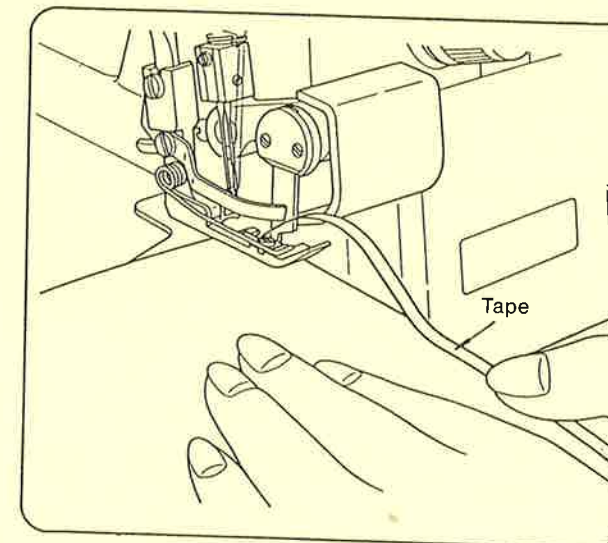


Directions

1. Raise the needle to the highest position, raise the presser foot, and swing the knife up.
2. Slip the tape or elastic under the foot, from the left side to the right. As you move the tape back toward the left, insert it into the tape slot of the foot. Lower the knife.
3. Place the tape firmly between the upper knife and the tape guide. The position of the tape guide can be adjusted by loosening the setscrew.



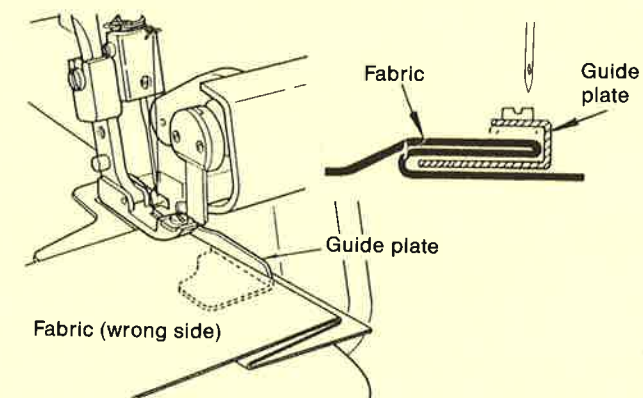
4. Lower the presser foot, and sew 2 or 3 stitches on the tape to anchor it.
5. Raise the foot and position the fabric under. Lower the foot and start sewing.



Directions

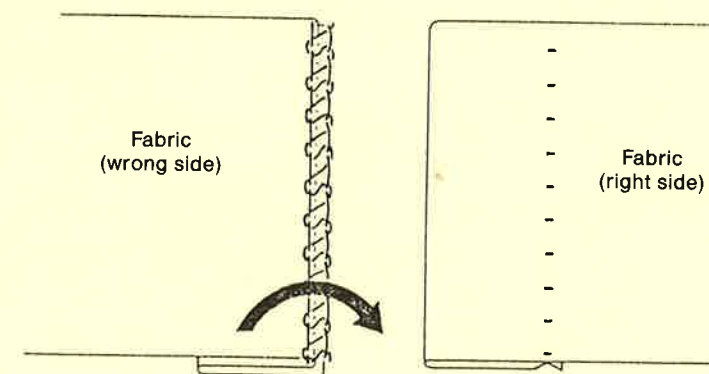
Thread the machine as for 4mm overlocking, using the right-hand needle only.

1. Loosen presser foot screw and remove foot.
2. Mount blindhem foot and retighten screw.
3. Increase stitch length to 4 or 5.
4. Fold the fabric as for a conventional blind hem on the sewing machine. Insert the fabric under the presser foot, as shown below.



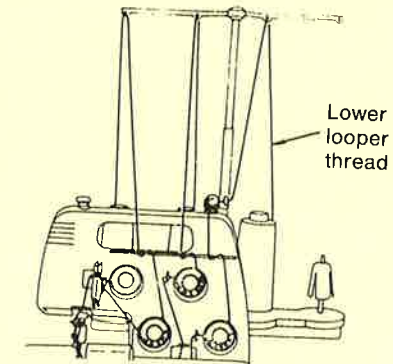
5. Loosen the guide plate setscrew, and adjust the guide plate to the left or right until the fold of the fabric is in line with the needle. Sew a test sample first to check position of guide plate.
6. Sew the fabric so the fold is always against the guide.
7. Open out the fabric and press lightly on the wrong side.

HINT: To aid easing the upper layer onto the lower as you are blind hemming, pull slightly on the lower layer as you stitch. You may also find it helpful to loosen the presser foot pressure with the large screw on the top left of the machine.



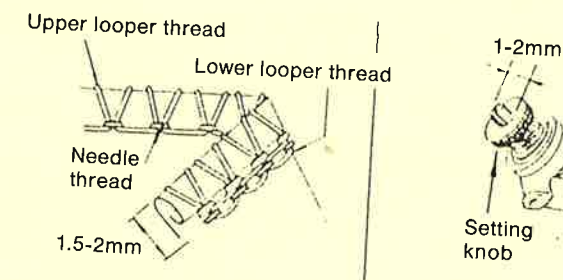
Directions

1. Raise needles to the highest position.
2. Remove the presser foot, throat plate and left needle.
3. Mount the roll hem throat plate first, then the roll hem presser foot.
4. Decrease stitch length to 1.0-1.5mm.
5. The **left** three spool holders are to be used for the roll hemming attachment, as in the figure below. Rethread the machine by clipping the threads near the spools and retying the thread on (see page 4).
6. Attach the extra tension device with the screw at the top right of the machine. Thread the lower looper thread (red) in the extra tension disc as shown.

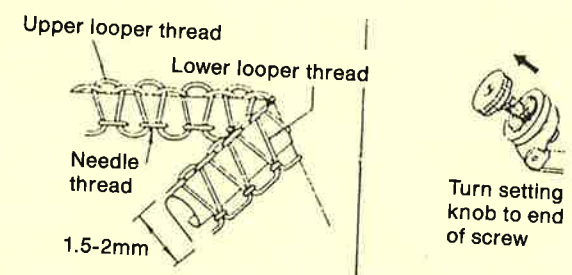


7. Use a size 70 needle for roll hemming. You may wish to use a special thread in the upper looper, different from your regular overlocking. Cotton thread may roll more because it is softer. It may also be finer, so may produce a prettier satin stitch. Other possibilities include silk or rayon thread for extra sheen.
8. For a full roll hem, the desired result is for the upper looper threads to nearly completely encase the roll. The three threads will lock on the **under** side of the fabric rather than on the edge.

The extra tension device should be screwed almost all the way down so the stem of the screw measures 2-3mm. This extra tension on the lower looper pulls the upper looper threads to the under side.



9. A narrow overlock stitch is also possible with the roll hem attachment. In this case, the stitch formation should look the same as for regular overlocking, except the stitch width will be only 1.5-2.0mm. The threads should lock on the **edge** of the fabric. The setting knob of the extra tension device should be flush with the end of the screw, rather than being screwed down.



With the roll hemming attachment, therefore, your Bernette has three different stitch widths — 6mm, 4mm and 1.5-2.0mm.

Bernette

4-THREAD

OVERLOCK SEWING MACHINE

Bernette

MO-204

2-needles, 4 threads

with separate safety stitch

(double-chain stitch)

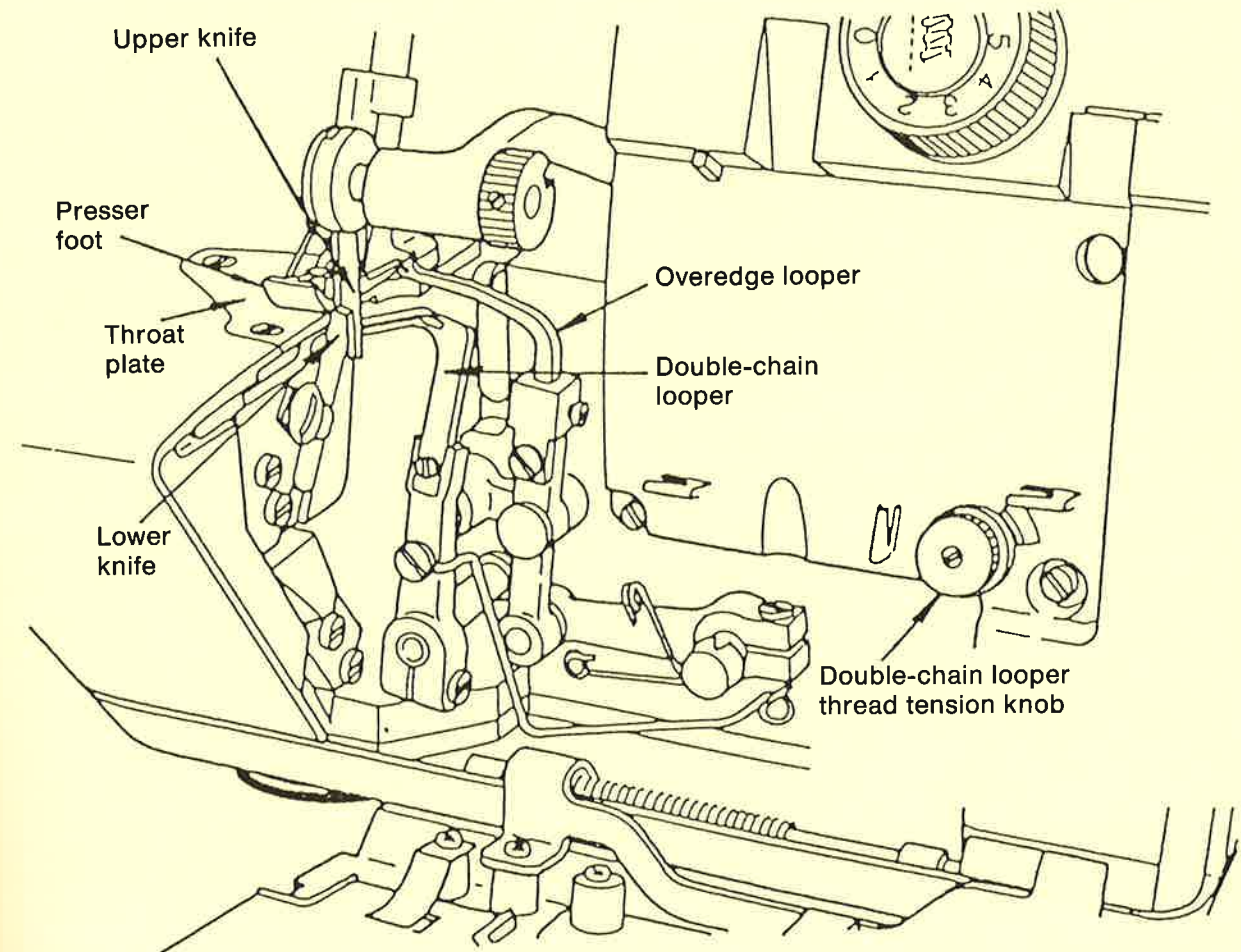
The 4-thread Bernette produces a 2-thread chain and a separate 2-thread overedge stitch. Together the two stitches make a very secure seam and finish the edges at the same time. The safety stitch is ideal for seaming woven fabrics, especially in areas of stress. Because the double chain has no "give", this seam is not recommended for knit fabrics which must stretch, such as swimwear or pullover shirts.

The chain and the overedge can each be used alone as well. The double chain stitch is ideal for seaming hand or machine knitted items where stability is desired. Soft yarns and perle cotton can be used in the chain looper. In the same way, decorative topstitching is possible using specialty thread in the looper, and stitching from the wrong side.

The 2-thread overedge stitch is ideal for edge finishing, since it will prevent raveling using less thread than the 3-thread overlock. It is not designed for stitching a regular serged seam, since the stitches do not lock on the seam line. For this reason, the 2-thread overedge will sew a **flatlock** seam. The two fabric layers are deliberately pulled apart so the seam allowances lie flat inside the stitching. It adds a decorative detail, and can be made even more special using a novelty thread in the overedge looper. Two-thread overedging is also engaged for the roll hemming attachment.

Bernette

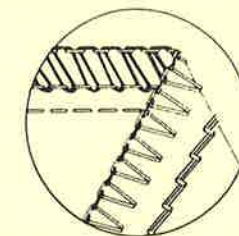
VIEW WITH THE LOOPER COVER OPEN



Safety Stitch

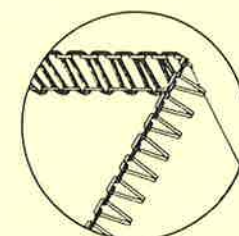
Follow the color-coded threading chart on the inside of the looper cover, threading in this sequence:

1. red — overedge looper
2. yellow — chain looper
3. blue — overedge needle
4. green — chain needle



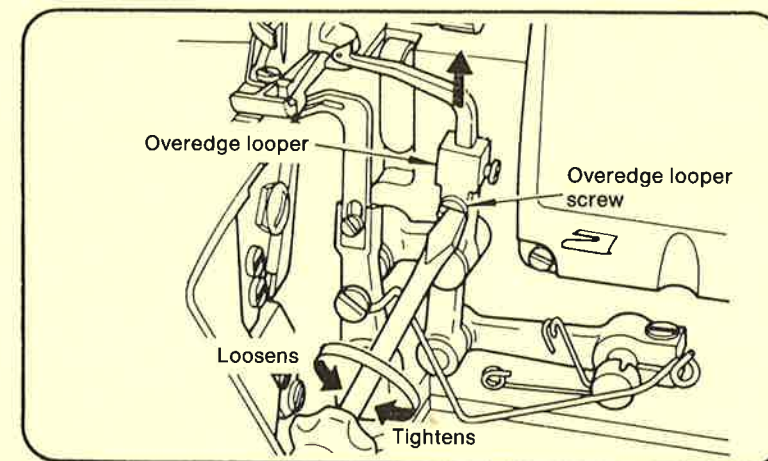
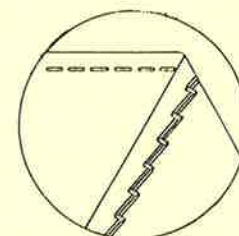
Overedge Stitch

- A. Remove chain needle (left)
- B. Thread as follows:
 1. red — overedge looper
 2. blue — overedge needle

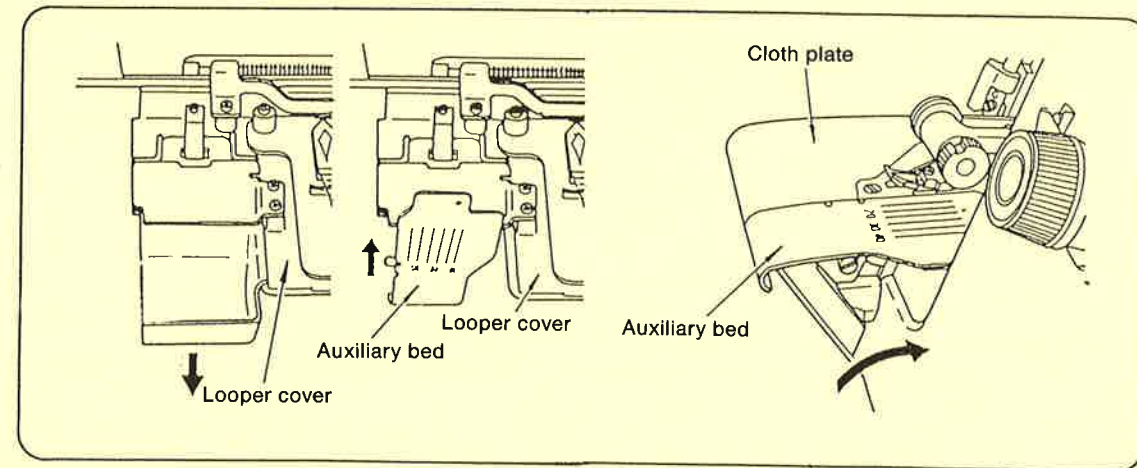


Double-Chain Stitch

- A. Remove overedge needle (right)
- B. Swing upper knife up and back
- C. Loosen the overedge looper screw one turn; pull off overedge looper; retighten screw



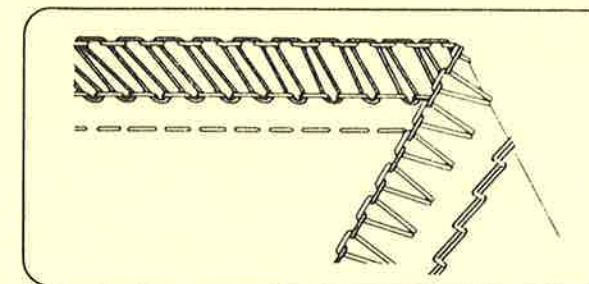
D. Pull off the looper cover; insert auxiliary bed; close looper cover



E. Thread as follows:

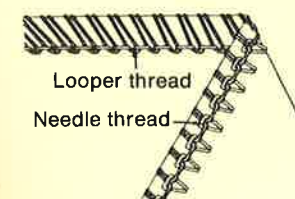
1. yellow — chain looper
2. green — chain needle

The correct balance for a 4-thread safety stitch should look like this:

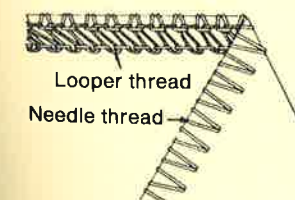


The double chain should look like a straight stitch on the right side, without large loops on the under side. The two threads of the overedge stitch should just meet at the fabric edge.

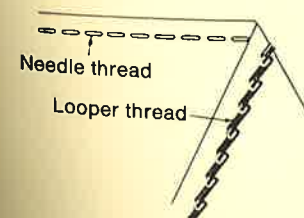
Following are examples of unbalanced thread tension:



The overedge looper thread is being pulled to the under side, rather than meeting on the edge, indicating the looper tension is too loose. Increase tension by turning the "red" dial to a higher number.



The overedge needle thread is being pulled to the right side, indicating the looper tension is too tight. Decrease tension by turning the "red" dial to a lower number.

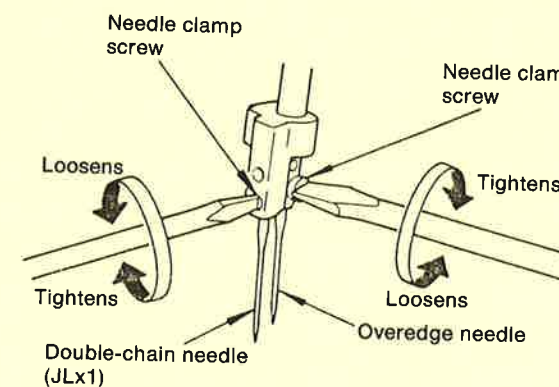


Large loops of chain needle thread are forming on the under side, indicating the needle tension is too loose. Turn the "green" dial to a higher number.

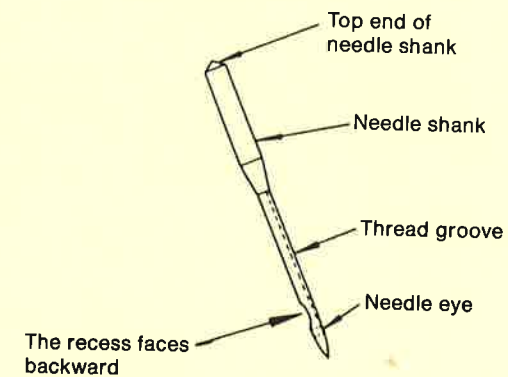
NOTE: The chain looper thread tension has been factory set to meet all types of materials, so requires no adjustment.

Industrial Needle System — Overedge needle 287WH
 Double chain needle JLx1

1. Raise the needle to the highest position, leaving the presser foot down, and turn back upper knife.
2. Remove needle by loosening the appropriate needle clamp screw.
3. Insert new needle with long grooved side toward you. Tweezers are helpful here.
4. Be sure needle is inserted as far up as it will go by checking to see that the top end of the needle shank is in contact with the top of the needle bar hole.
5. Holding needle in the proper position, securely tighten needle clamp screw.

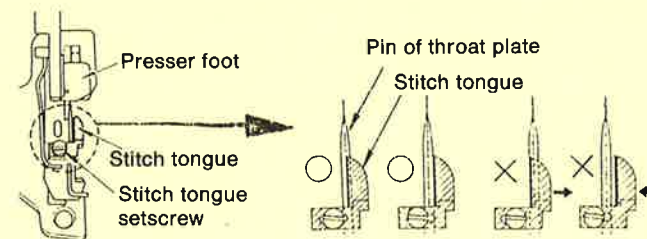


Names of parts of needle

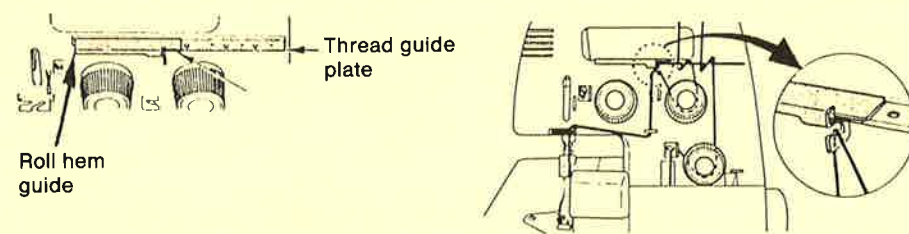


Directions

1. Raise the needle to the highest position.
2. Remove the presser foot, throat plate, both needles, and the chain stitch threads (green and yellow).
3. Mount the roll hem throat plate.
4. Insert the separate roll hem needle in the right needle hole and securely tighten screw. Roll hemming is done with the two overedge threads (blue and red) only.
5. Mount the roll hem presser foot.
6. Lower the presser foot and check to be sure the left edge of the stitch tongue is positioned between the center and right edge of the throat plate pin. Use the stitch tongue setscrew to make adjustments, as necessary.

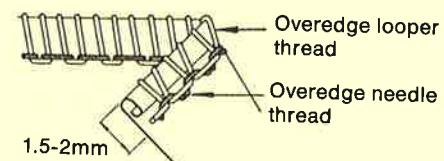


7. Decrease stitch length to 1-1.5mm.
8. Place the roll hem guide on the thread guide plate, aligning the left edges. Thread the overedge needle thread (blue) over the extra hook of the roll hem guide, as shown below.



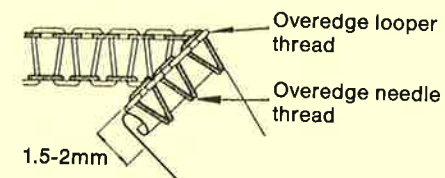
9. For a full roll hem, the desired result is for the overedge looper threads to nearly completely encase the roll. The two threads will lock on the **under** side of the fabric rather than on the edge.

Threading the hook of the roll hem guide causes extra tension on the needle thread, so the looper threads are pulled to the under side.



10. A narrow overedge stitch is also possible with the roll hem attachment. In this case, the stitch formation should look the same as for regular 2-thread overedging, except the stitch width will be only 1.5-2mm. The threads should meet at the edge of the fabric.

Increase looper thread tension to 8 or 9, and decrease needle thread tension to 2-4.



**BASIC
GUIDE
TO
BERNETTE
OVERLOCKING**

Bernette

Since most overlocked edges will eventually be crossed with other edges, it is usually unnecessary to secure the ends. For those areas where such is not the case, any of the following methods may be used.

- Chain off 2-3" (5-8cm) of thread; tie knots.
- Clip threads at end of stitching; use dot of liquid seam sealant (e.g. Fray Check®).
- Chain off 1-2" (3-5cm) of thread; weave chain back through overlocking with crochet hook or large needle.
- "Backstitching" (overlocker-style):
 - At beginning of stitching —
 1. Sew 3-4 stitches onto fabric; raise needle and presser foot.
 2. Bring thread chain around from left to in front of the presser foot; align with edge of fabric. Lower presser foot.
 3. Continue stitching, overlapping thread chain.
 - At end of stitching —
 1. Stitch ½" (1.3cm) off the fabric.
 2. Raise presser foot, turn fabric over toward you, place the corner near the needle, and lower the presser foot.
 3. Rotate knife up.
 4. Continue stitching over previous stitches for about 1" (2.5cm); stitch off fabric.

To finish in the middle of an edge, rather than at a corner, as in tubular work, choose one of the following:

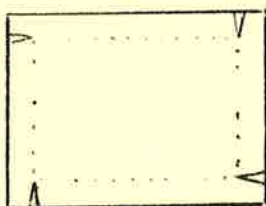
- Sew off the edge of the fabric.
- Overlap the stitching 1-2" (3-5cm), release threads from stitch tongue, and clip threads.
- Finish stitching at exact point where beginning and end meet, release threads from stitch tongue, clip, and dot with Fray Check®.

Pivoting at corners with your Bernette requires a different set of techniques than turning corners with a conventional sewing machine. Running off the edge of the fabric and restarting on the other side of the corner leaves a thread chain which needs securing. A quicker method of turning corners gives a neat appearance on either side of the fabric.

Outside Corners

1. If **not** trimming any fabric, overlock the edge of the fabric until you reach the corner. Stop with the needle up.
2. Pull a little slack in the needle thread to allow for ease when turning the corner. Raise presser foot. Gently pull the fabric back, pulling the thread chain off the stitch tongue.
3. Turn the fabric and align the edge with the knife. Lower the presser foot and continue overlocking.

NOTE: If trimming fabric while stitching, clip into the fabric along the cutting line at each corner before beginning. Follow procedure as above, pivoting at the clipped corners.



Inside Corners

Inside corners are most easily finished if the seam allowances are first trimmed off.

1. Overlock the edge of the fabric until the blade reaches the inner corner.
2. Straighten the corner by pulling the fabric toward you to form a straight line.
3. Continue overlocking.

The same techniques are followed for attaching either ribbing or bands, except ribbing is stretched in front of the needle as it is being attached. Bands are stretched only slightly if at all to fit the garment piece. For this reason, all three models can be used for attaching bands, but the 4-thread Bernette is not recommended for ribbing since it does not have sufficient stretch.

Directions:

1. Cut ribbing according to pattern piece.
2. Seam ribbing, divide into four parts of equal length.
3. Divide garment opening into four equal parts.
4. Sew with ribbing side up, stretching ribbing between markings to fit garment opening.

Alternate Flat Method

Leave one seam in the area unsewn so that ribbing may be applied flat to the garment. For example, attach ribbing to the sleeve edge before the sleeve seam has been sewn. Then sew the seam, continuing through ribbing.

NOTE: Flat construction methods are generally faster and easier, but the tubular method may produce a more *“finished”*-looking result.

The 3-thread and 3/4-thread Bernettes produce a very stretchy stitch, so they are ideal for attaching elastic. The 4-thread Bernette does not have sufficient stretch for this technique.

Directions:

1. Increase stitch length to 5mm.
2. Attach elastic to edge of wrong side of fabric, stretching elastic the desired amount as you stitch. Be sure not to cut the elastic with the knife, **or** rotate knife up before you begin.

(You may consider the edge finished at this point, or you may proceed one step further with your conventional machine.)

3. Turn elastic and fabric to the wrong side and top stitch in place while stretching the fabric and elastic.

HINT: For 1/4" (6mm) or narrower elastic, use the tape sewing device to guide it under the presser foot as you overlock.

A quick, easy and durable method of hemming casual garments. Looks as though a band has been added at the hem edge. Use this technique also to form a casing for any width of elastic.

Directions:

1. Fold fabric as for conventional machine blind hem.
2. Align the fold with the colored dot on the Bernette presser foot (indicating edge of overlocking) and sew. If forming elastic casing, leave a small opening in the stitching, then insert elastic; stitch opening closed.
3. Open out the fabric, pressing serged edge toward garment.

Gathering stitches and edge finishing can be sewn in one operation on the Bernette. The same methods used for gathering on the sewing machine can be adapted for the Bernette, on any edge with a 1/4" (6mm) seam allowance.

The simplest method is to increase the stitch length to 5 and overlock with a 3-thread stitch (or with safety stitch on 4-thread Bernette). Then, instead of pulling a bobbin thread, pull the needle thread (**chain** needle thread on 4-thread Bernette).

Another method of gathering is to oversew a cord or heavy thread, such as buttonhole twist. Pulling on the cord then draws up the gathers.

1. Place the cord along the edge of the fabric to be gathered.
2. Stitch a few stitches into cord and fabric just to anchor cord.
3. With the upper knife in position, guide the cord between the blade and needle while stitching, being sure not to cut the cord. If guided properly, the cord will lie free within the stitching.
4. Pull on the cord and distribute gathers as desired.

Your Bernette will put an end to the frustrating task of turning narrow tubings of $\frac{3}{8}$ " (1cm) or more, such as spaghetti straps, button or belt loops, or tubular fabric belts.

Settings:

3-thread — set for regular overlocking

3/4-thread — use only 3 threads; 4mm width

4-thread — use chain stitch only; trim seam allowance to $\frac{1}{4}$ " (6mm) before turning

Directions:

1. Chain off with no fabric until you have thread the length of the tube plus about 3".
2. Bring chain around to the front of the machine. Fold fabric strip, right sides together, over chain and sew fabric without catching the chain between the layers.
3. Pull on the extra length of chain to turn the fabric tube right side out.

HINT: Narrower tubings can be created with the use of the roll hemming attachment.

Your Bernette will open up a whole new range of decorative possibilities. Variations of narrow roll hemming, oversewing trims, and special threads can create interesting and attractive looks.

Special Threads

Because the machine uses loopers with very large eyes, it is easy to use novelty threads, even soft yarns. Most often the special thread is used only in the upper looper, while keeping all-purpose overlock thread in the needle and lower looper. It is usually necessary to adjust the thread tension.

The 3-thread overlock stitch generally gives the best finished appearance, although the 2-thread overedge (4-thread Bernette) or the 4-thread overlock (3/4-thread Bernette) may be used. Specialty thread can also be used in the chain looper while stitching the double-chain stitch alone on the 4-thread Bernette. For the latter, stitch with the **wrong** side of the fabric up.

Try varying the stitch length to create an even greater variety of looks.

Decorative edges may be applied by oversewing metallic or colorful braids, narrow ribbon, yarn, or even rows of attached sequins.

Select stitch width according to the width of the trim. Rotate the knife up and guide the right edge of the trim and the edge of the fabric by the colored dot on the presser foot. Or, keep knife engaged to cut excess fabric edge while guiding trim. Be careful not to cut the trim.

For oversewing trims with the greatest of ease, use the tape sewing device available for the 3-thread and 3/4-thread Bernettes. (See General Section)

The same technique can be used to make your own custom novelty braids. Simply oversew soutache or middy braid with the 3-thread overlock stitch. Three strands of couched trim can be braided, then hand-sewn to a garment or craft item. Different threads, trims and colors will yield an infinite variety of looks.

The roll hemming attachment produces a narrow, decorative satin stitch along the edge of the fabric. Because the finish is very professional-looking and can be done in one quick step, it is the preferred edge finish wherever a conventional narrow hem might otherwise be called for, such as ruffle edges. It can also be used as a decorative edge in place of facings, such as the neckline of a T-top. Special threads may be used in the same way as for regular overlocking.

Three-thread roll hemming is ideal for seaming sheer and lightweight fabrics which might normally be sewn with a French seam. The result is a very narrow finished seam on the inside of the garment.

Lettuce Edging

Lettuce edging may be created when roll hemming along the crosswise grain of a stretch knit, such as ribbing. Stretch the knit in front of the presser foot while stitching the edge, trimming a small amount at the same time. The knit may be stretched further after the rolled hem is stitched.

Thread Loops

Thread loops of any length for belt carriers or button loops may be made simply by running the Bernette with no fabric. The chain of thread created by the roll hemming attachment is then sewn into the seam of the garment according to the size of loop needed. (**CAUTION:** Do not pull the thread chain as it is being formed. Gently guide it as it is released from under the presser foot.)

Pintucks sewn on your Bernette can be as varied as your imagination will allow, since contrasting colors and specialty threads can play an important role. A little experimentation may produce some very pretty effects.

The stitch width determines the size of the pintucks, so plan accordingly. You may find it easiest to sew pintucks first, **before** cutting out the pattern pieces.

Settings:

3-thread — use either width of overlocking, or roll hemming attachment (narrow overlock settings)

3/4-thread — use either width of 3-thread overlocking, or roll hemming attachment (narrow overlock settings)

4-thread — use with roll hemming attachment (narrow overlock settings) or double chain stitch alone (with specialty thread in chain looper)

Stitch length — can vary according to desired effect

Rotate knife up

Directions:

1. Fold the fabric along the placement line with wrong sides together and press.
2. Stitch, aligning the fold with the colored dot on the presser foot.
3. Press tucks to one side.

NOTE: If using a special thread, be sure to sew on the proper side of the fabric so the decorative thread will not be "*hidden*" under the tuck.

A decorative and trendy visible seam finish can be created using the two overedge threads of the 4-thread Bernette. The basic technique can be varied to blind hem a garment or to attach lace or elastic with a flat finish.

Directions:

1. Thread machine for overedging only, using right-hand needle.
2. Press seam allowances under on fabrics which fray, and rotate knife up. For fabrics which do not ravel, the knife may be left engaged, cutting seam allowances off during stitching.
3. With wrong sides of garment layers together, overlock along the folded or cut edges.
4. Gently pull the two layers apart. The folded or cut edges will lie flat within the stitching.

Since the stitching is meant to show on the outside of the garment, the flat lock seam is particularly attractive when sewn in a contrasting color, or with specialty threads in the looper.

Flat Lock Stitching within a Garment or Craft Item:

1. Fold fabric on the desired placement line for stitching.
2. Place the fabric under the presser foot so that the fold is positioned to the left of the colored dot on the foot. This leaves part of the stitch free from the edge of the fabric.
3. Follow steps 3 and 4 above.

A blind hem can be achieved on the 4-thread Bernette using a variation of the flat lock seam.

Directions:

1. Increase stitch length to 5mm.
2. Fold fabric as for a conventional machine blind hem and insert it under the presser foot. Keep knife engaged.
3. Overedge the fold, barely catching the edge as you sew.* Any excess hem allowance will be trimmed as you stitch.
4. Open out fabric to flatten.

* Do not be discouraged if at first you don't succeed!! With practice, you will be able to guide the fabric for a truly blind hem.

With Flat Lock Seam

A flat finish is the result when the flat lock seam is used to attach lace or elastic to a fabric edge.

Directions:

1. Thread the 4-thread Bernette for overedging only, using right-hand needle.
2. Press seam allowance under on fabrics which fray, and rotate knife up. For fabrics which do not ravel, the knife may remain engaged, cutting seam allowance off during stitching.
3. With **right** sides of garment and lace or elastic together, overlock along the edges, being sure not to cut edge of lace or elastic. Stretch elastic in front of the presser foot while sewing, as needed to fit garment section.
4. Gently pull the two layers apart. The edges will lie flat within the stitching, creating a "ladder" stitch on the right side.

Alternate Method Using 3-Thread and 3/4-Thread Bernette:

1. Thread the 3-thread Bernette for regular overlocking, or thread the 3/4-thread machine for 4mm overlocking. Decrease needle tension (green) to 0, and increase upper looper tension (blue) to 9.
2. Follow steps 2 through 4 above.

Factory Fast at Home

A Guide for Using the Four-Thread Home Overlock/Serging Machine

A 29-page booklet by Arlene S. Gillilan, 796 East Lazon Drive, Sandy, UT 84070.

Overlock Sewing

A Guide for Using Overlock Machines

A 20-page leaflet by Coats & Clark Inc., Consumer and Educational Affairs Department, 383 Main Ave., Norwalk, CT 06851.

Serge & Sew

Time-Saving Serger Tips

A 24-page booklet by Ann Person, Stretch & Sew, Inc., P.O. Box 185, Eugene, OR 97440.

Sewing with Sergers

The Complete Guide to Overlock Sewing

A 128-page book by Gail Brown and Pati Palmer, Palmer/Pletsch Associates, P.O. Box 12046, Portland OR 97212-0046.

