

# JUKI®

## Dealer Training

## MO-735 Overlock

## MO-734DE Overlock



**MO-735**



**MO-734DE**

### Features of the Exceed MO-734DE:

- Fast Sewing Speed of up to 1500 SPM
- 2/3/4 Thread Overlock
- Standard Overlock Widths of: 7mm, 5mm, 2mm
- Wide Overedge Width of 9mm
- Stitch Length from 1 to 4 mm
- Differential Feed
- Automatic Rolled Hemming
- Automatic Needle Threader
- Lay-in Thread Tension Slots
- Color Coding Threading
- Disengaging Loopers for Fast, Easy Threading and
- Automatic Loper Threading
- Micro Safety Switches
- Adjustable Lower Knife
- Professional Retractable Upper Knife



**MO-734DE**

### Features of the Exceed MO-734DE:

- Fast Sewing Speed of up to 1500 SPM
- 2/3/4/5 Thread Overlock
- Standard Overlock Widths of: 7mm, 5mm, 2mm
- Wide Overedge Width of 9mm
- 2-3 Thread Wide and Narrow Coverhem
- Chain stitch
- Up to 24 Stitch Variations
- Stitch Length from 1 to 4 mm
- Differential Feed
- Automatic Rolled Hemming
- Lay-in Thread Tension Slots
- Color Coding Threading
- Disengaging Loopers for Fast, Easy Threading and
- Automatic Looper Threading
- Micro Safety Switches
- Adjustable Lower Knife
- Professional Retractable Upper Knife



MO-735

## Side By Side Comparison:

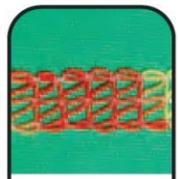
<b>Superior Performance Features of the MO-734DE and MO-735:</b>	MO-734DE	MO-735
Cut/Sew/Finish in One Operation	■	■
Lay-in Type Thread Tension Slots	■	■
Color-Coded Threading	■	■
Automatic Looper Threading	■	■
Slit-Type Molded Looper Threading Paths	■	■
Adjustable Stitch Length (external)	■	■
Adjustable Differential Feed (external)	■	■
Adjustable Lower Knife	■	■
Retractable Upper Knife	■	■
Automatic Rolled Hemming	■	■
Automatic Needle Threader	■	
2/3 Thread Conversion Cap	■	■
Wide Overedge Width (5 - 9mm)	■	■
Higher Presser Foot Lift	■	■
Sewing Light	■	■
Micro Safety Switch	■	■
Standard Parts/Accessory Kit	■	■
15 Overlock Stitch Variations	■	■
2 or 3 Needle Bottom Coverstitch		■
Compensating Presser Foot for Coverstitch		■
5-Thread Safety Stitch		■
2-Thread Chainstitch		■
Automatic Chain Looper Threader		■
Auxiliary Bed for Chain and Coverstitch		■
Waste bin	■	■

■ Standard equipment/function

### Popular Stitch Combinations:

The Juki MO-735 and MO-734DE both have popular stitch combinations that allow for almost infinite home décor, clothing and decorative sewing uses.

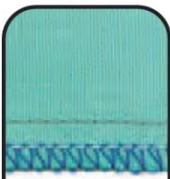
#### MO-734DE



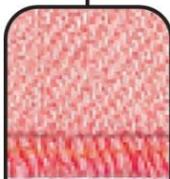
3-Needle  
Coverstitch



2-Thread  
Chainstitch



5-Thread  
Safety Stitch



4-Thread  
Overlock



3-Thread  
Flatlock



3-Thread Narrow  
Overlock-4mm



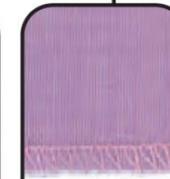
3-Thread  
Rolled Hem



3-Thread  
Overlock



2-Thread  
Rolled Hem



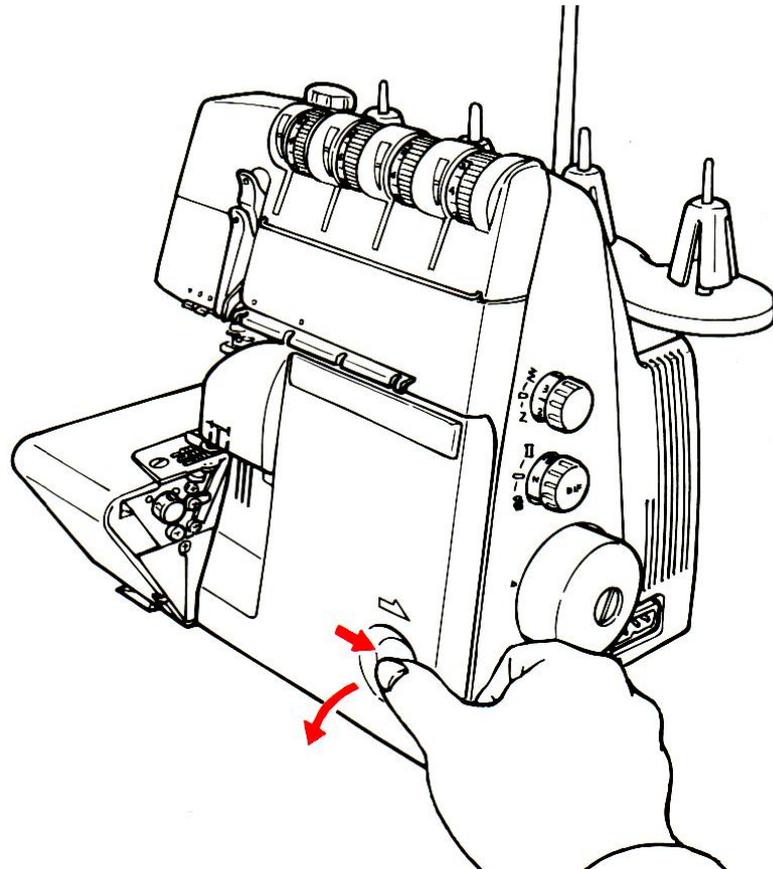
2-Thread  
Overcast

#### MO-735

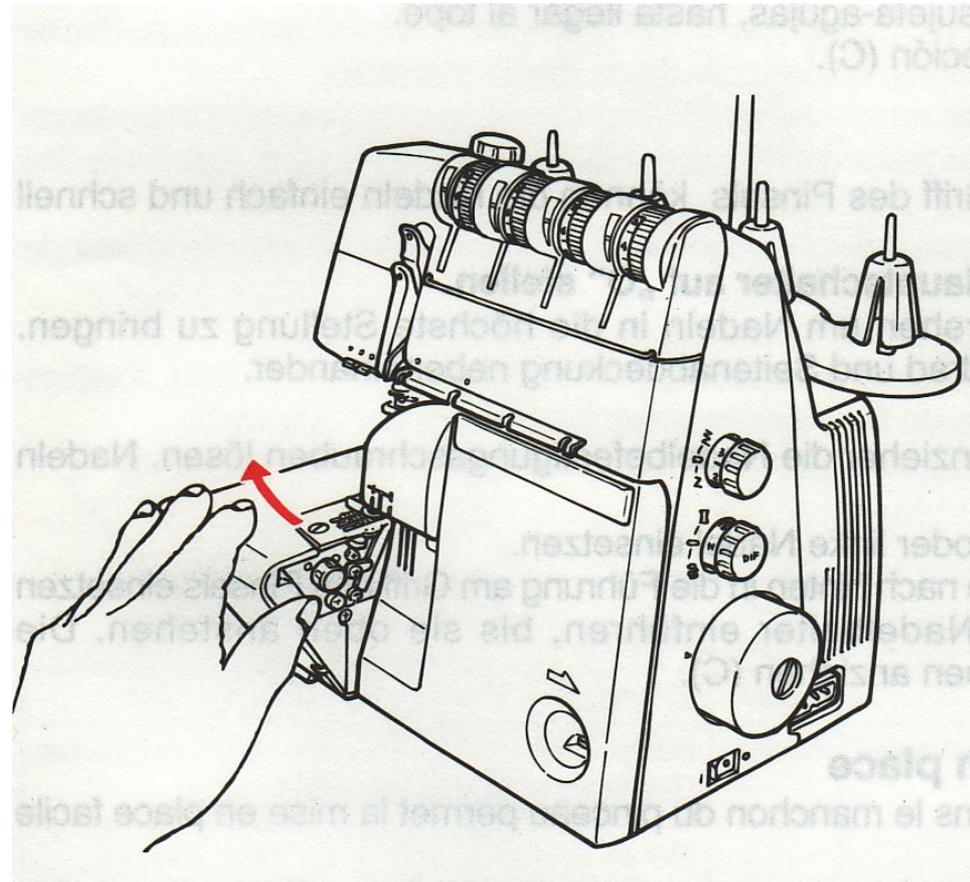
### Machine Setup: 4 Thread Overlock Or Mock Safety Stitch

There are two “doors” on the Juki Overlock:

The Loper Cover



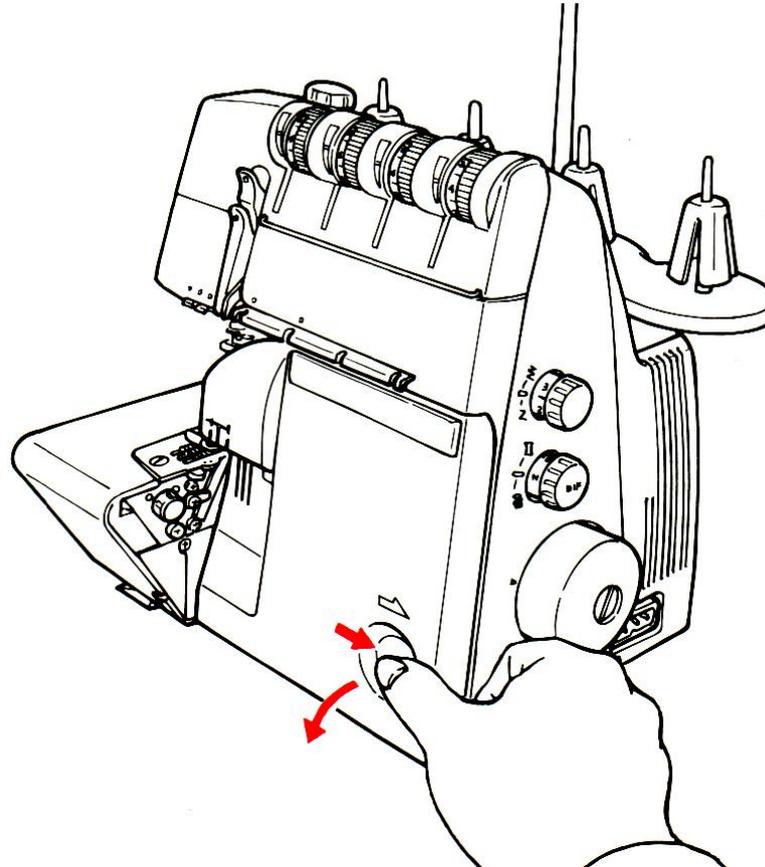
and the Cloth Plate cover



### Machine Setup: 4 Thread Overlock Or Mock Safety Stitch

Let's open the Loper Cover.

To open press to the right with your thumb as shown here and tilt the cover towards you.



### Machine Setup: 4 Thread Overlock Or Mock Safety Stitch

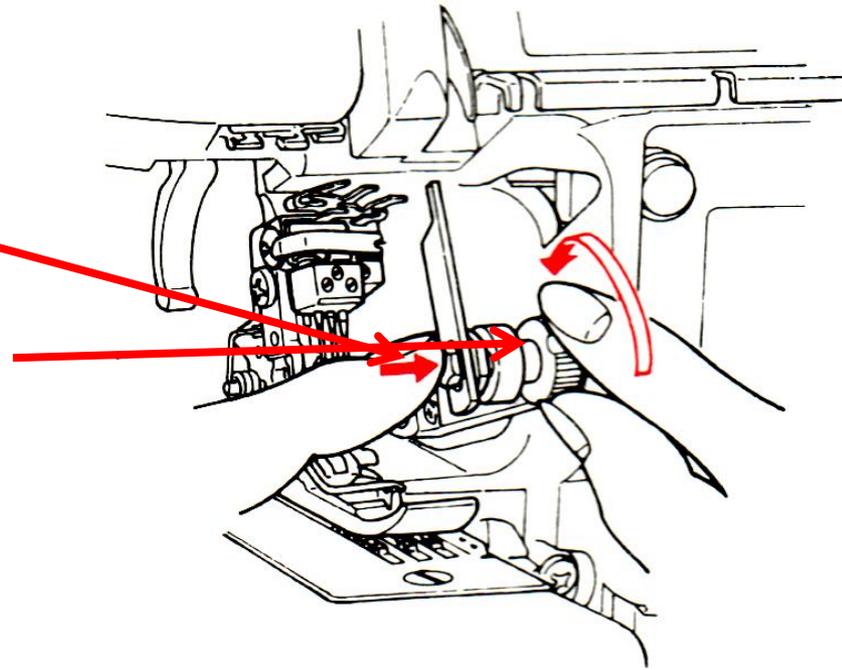
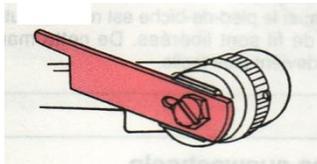
To thread the machine the upper knife should not be engaged.

To raise the upper knife check the machine needles are in the upper most position.

Press the upper knife holder to the right.

Turn the knob clockwise until the knife is in parked position as shown below.

Parked position



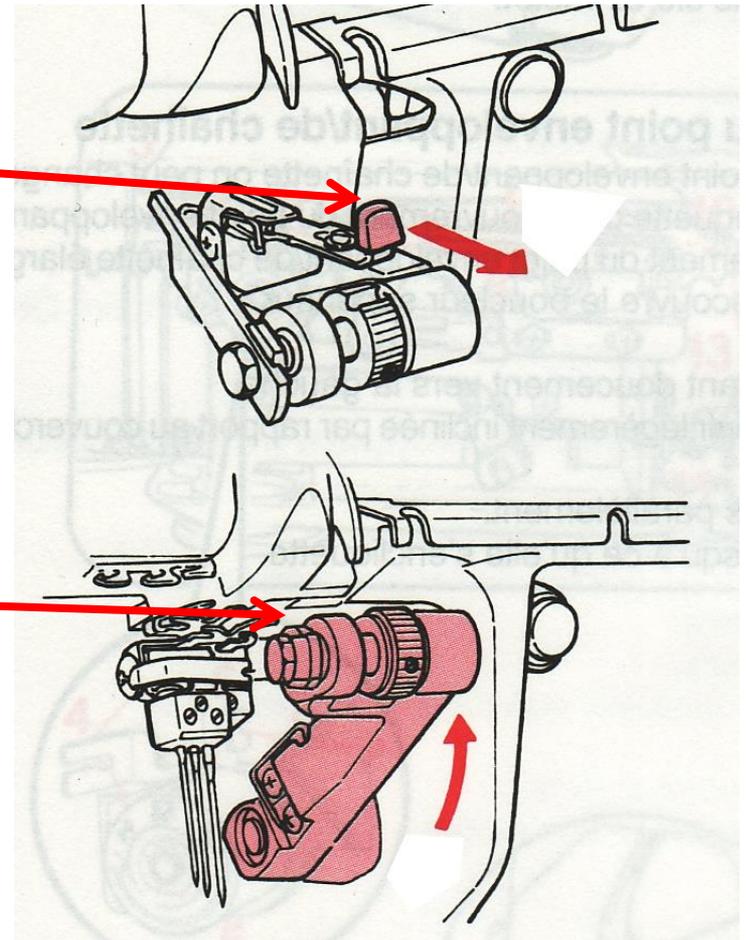
### Machine Setup : 4 Thread Overlock Or Mock Safety Stitch

Not only can the upper knife be parked, the upper knife arm can be moved out of the way.

Pull the lever towards you.

This will release the upper knife arm.

Gently raise the knife arm up until it clicks into position.



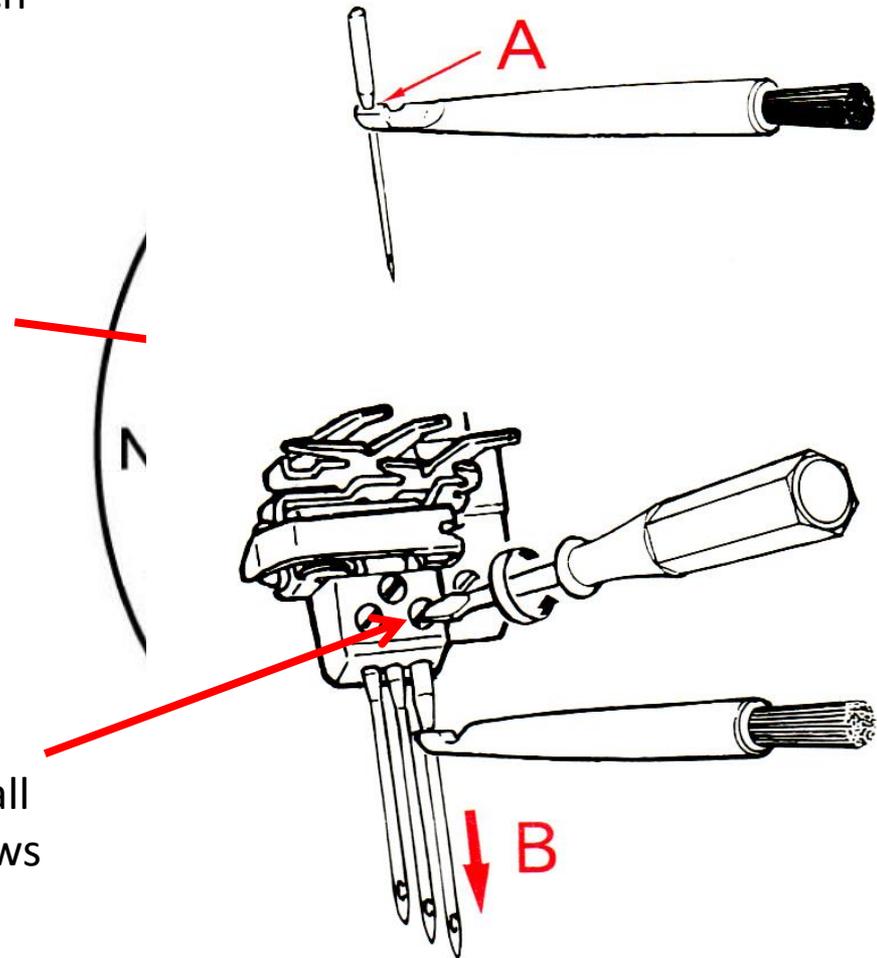
### Machine Setup : 4 Thread Overlock Or Mock Safety Stitch

The 4 Thread Overlock/Mock Safety Stitch requires that the needles be placed in a specific position to properly form the stitch.

In this case the needles will be placed in the needle holder that is in the back on the right side.

Both the left and right needle positions will be used.

If the needles in your machine are not in the correct positions, please use the small green screwdriver to loosen the set screws and remove/replace the needles.



**JUKI®**

**MO-735 Overlock**  
**MO-734DE Overlock**

**Machine Threading Overview:**

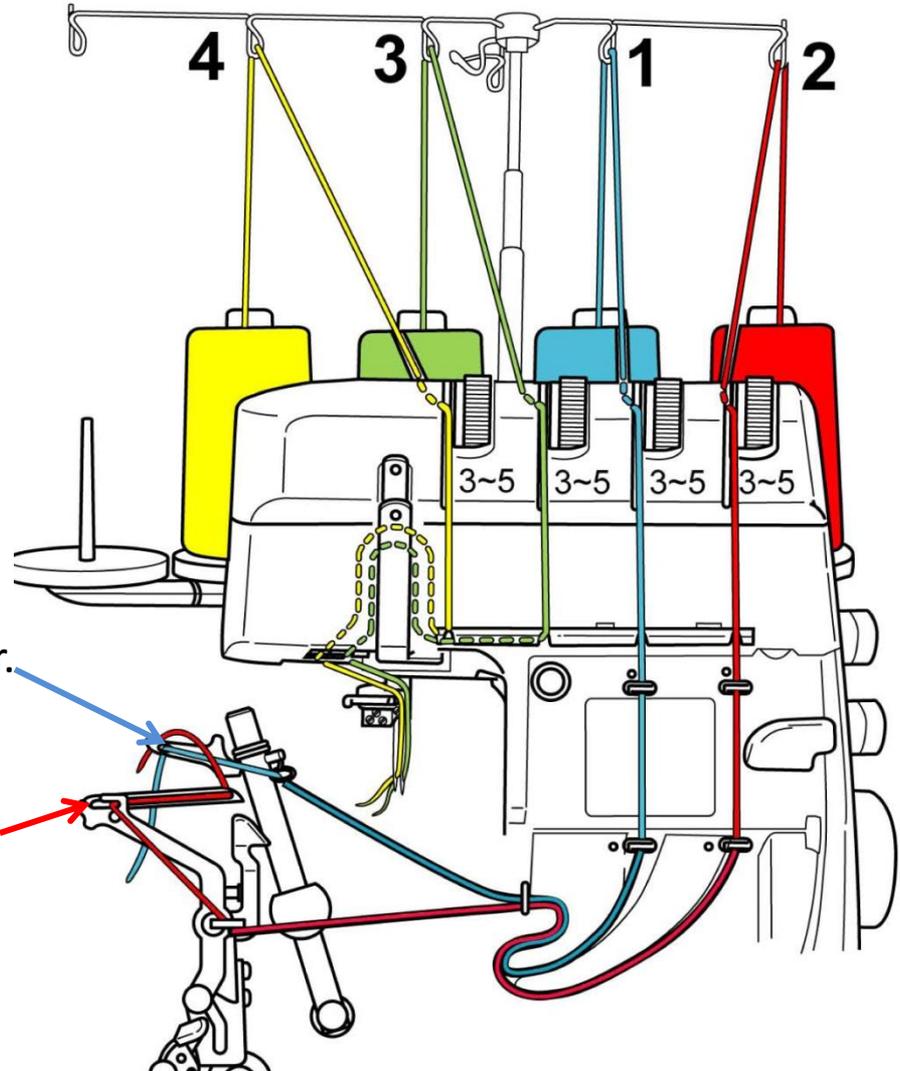


### Machine Threading Overview:

Inside this cover are the Upper and Lower thread loopers.

The Blue threaded path is the Upper Looper.

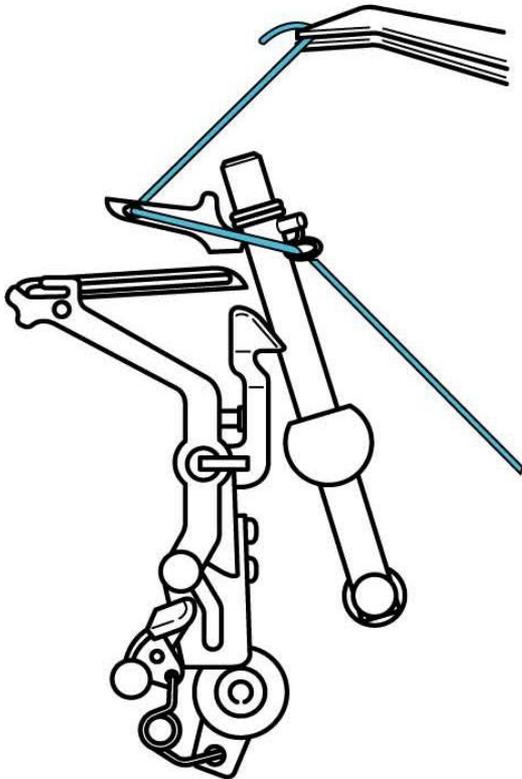
The Red threaded path is the Lower looper.



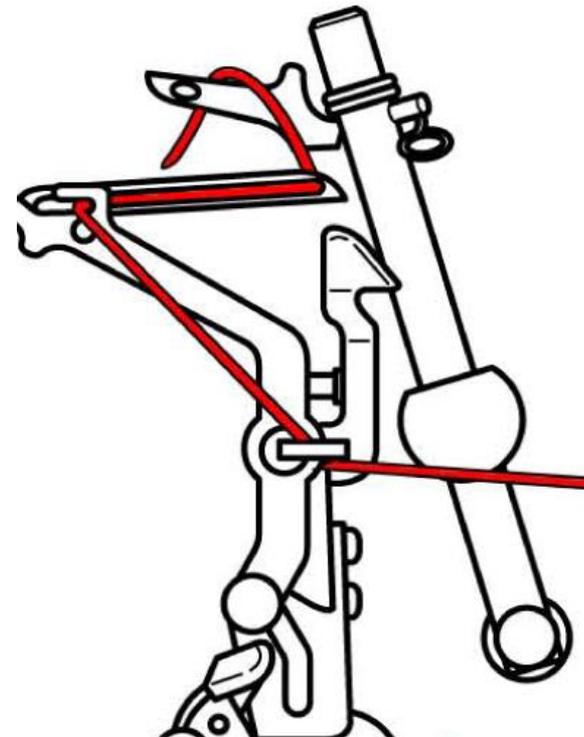
### Machine Threading Overview:

Here is a closer look at the loopers.

Upper Looper:



Lower Looper:



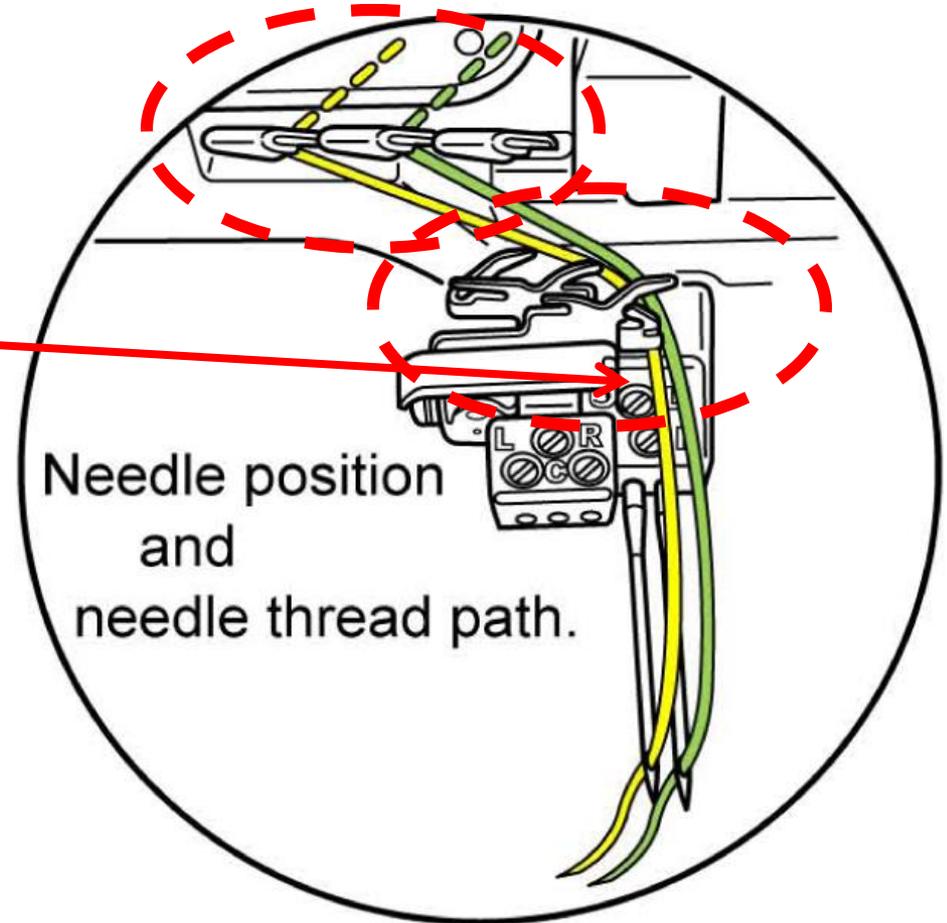
### Machine Threading Overview:

The 4-Thread Overlock/Mock Safety Stitch uses 2 needles to create the stitch.

These needles are placed in the right two needle positions.

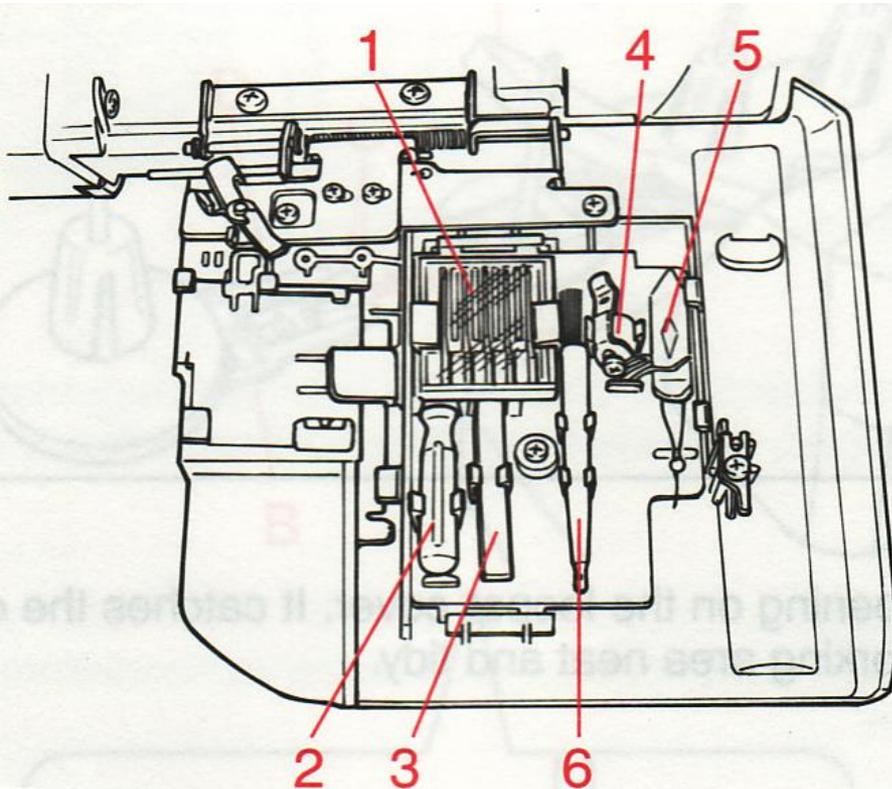
When threading the needles for the 4-Thread Overlock, the thread is placed into the first set of thread guides above the needles in a particular way.

The thread is then placed in the second set of thread guides as shown here.



### Machine Threading Overview:

To aid in threading, please look on the open Looper Cover for a small wire (#5) and the tweezers (#3).



### Accessories

1. Needle set 130/705H (SCHMETZ)
2. Small screwdriver
3. Tweezers
4. Upper looper converter
5. Needle threader
6. Brush/needle inserter

### Machine Threading Overview:

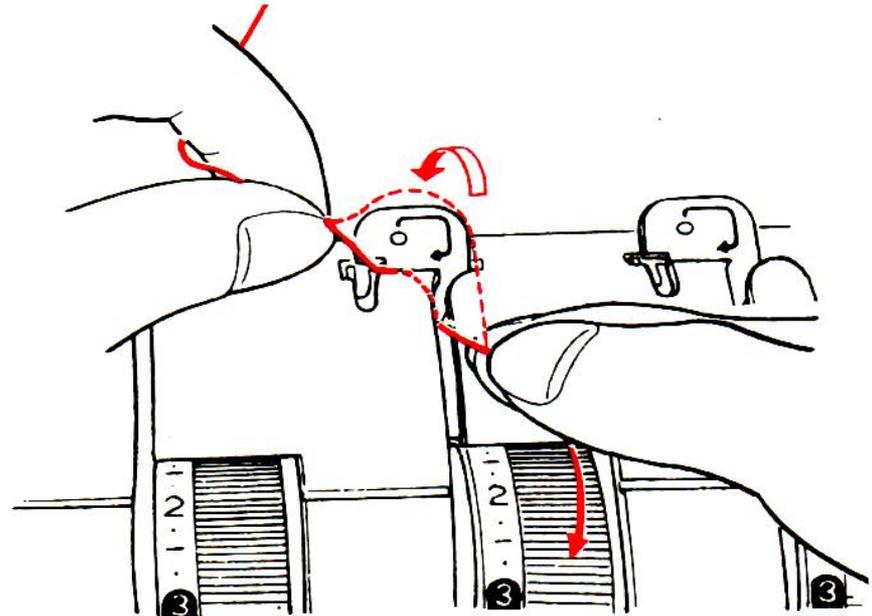
In the front of the Overlock Training Notebook there is an enlarged threading chart.

Please start by threading the upper looper (Blue) on the threading chart.

Bring thread up and through the guide on the Antenna.

The first tension/guide is located on the back of the machine.

Loop the thread through this guide as shown here.

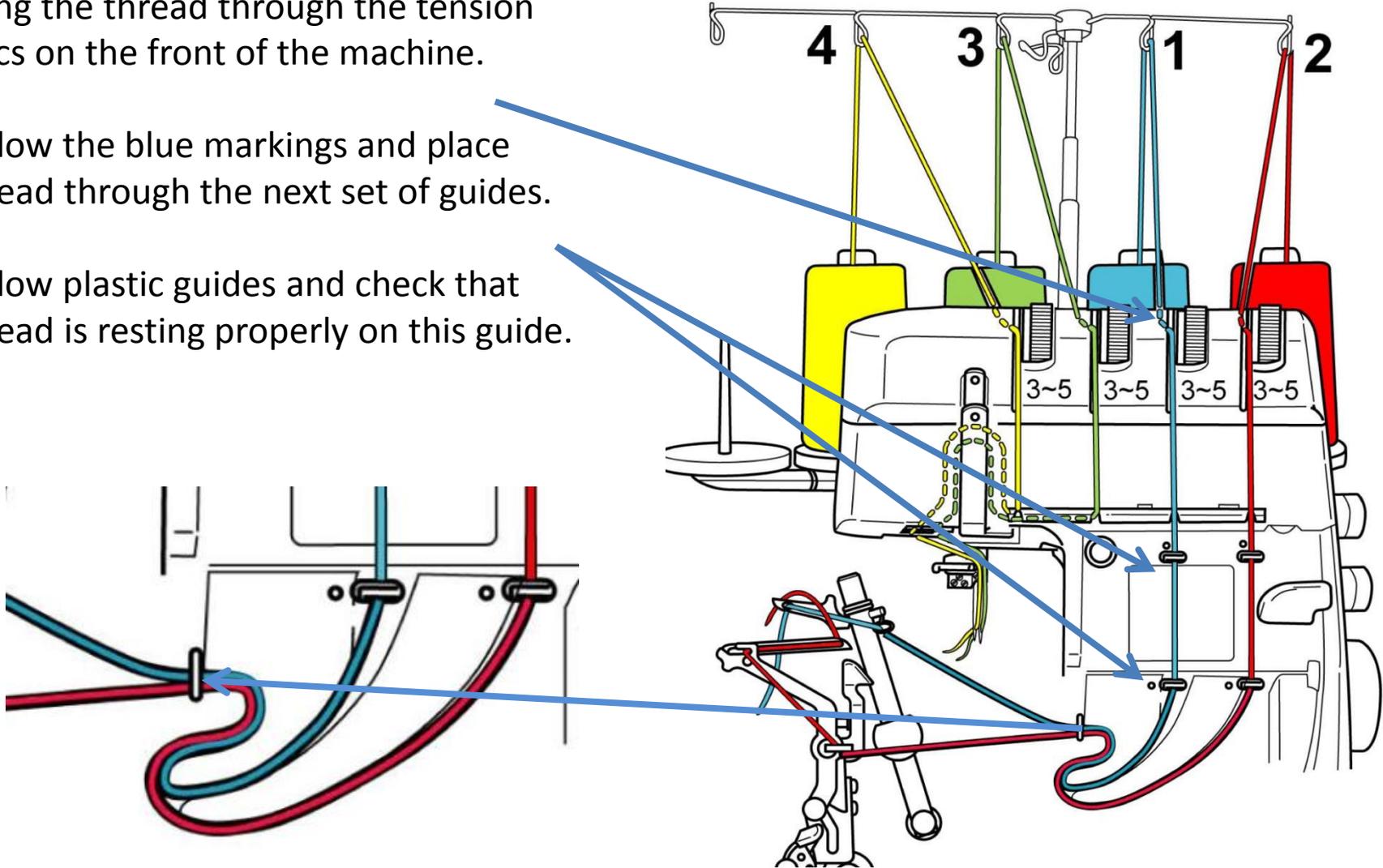


### Machine Threading Overview:

Bring the thread through the tension discs on the front of the machine.

Follow the blue markings and place thread through the next set of guides.

Follow plastic guides and check that thread is resting properly on this guide.



### Machine Threading Overview:

Check that the machine is in the highest needle position.

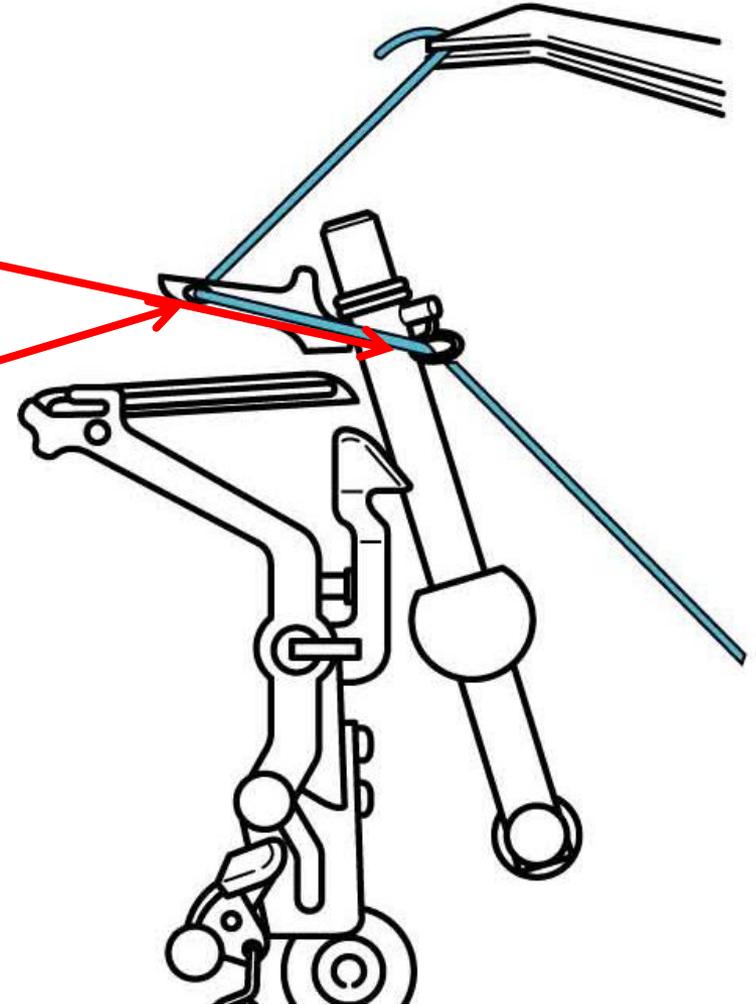
Thread the first guide on the looper.

Bring thread in front of the looper.

Then thread through the eye of the looper.

Pull thread to top of needle plate the under presser foot.

Let's thread the lower looper or **Orange** threading path.

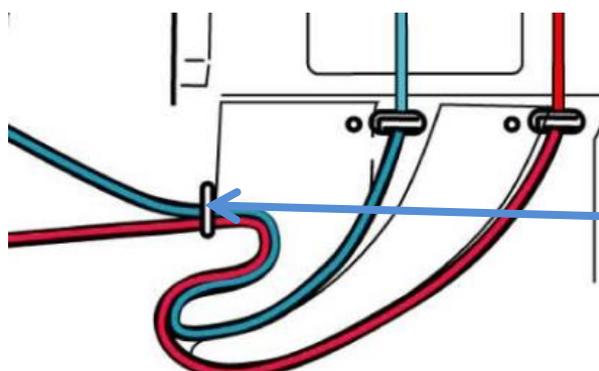
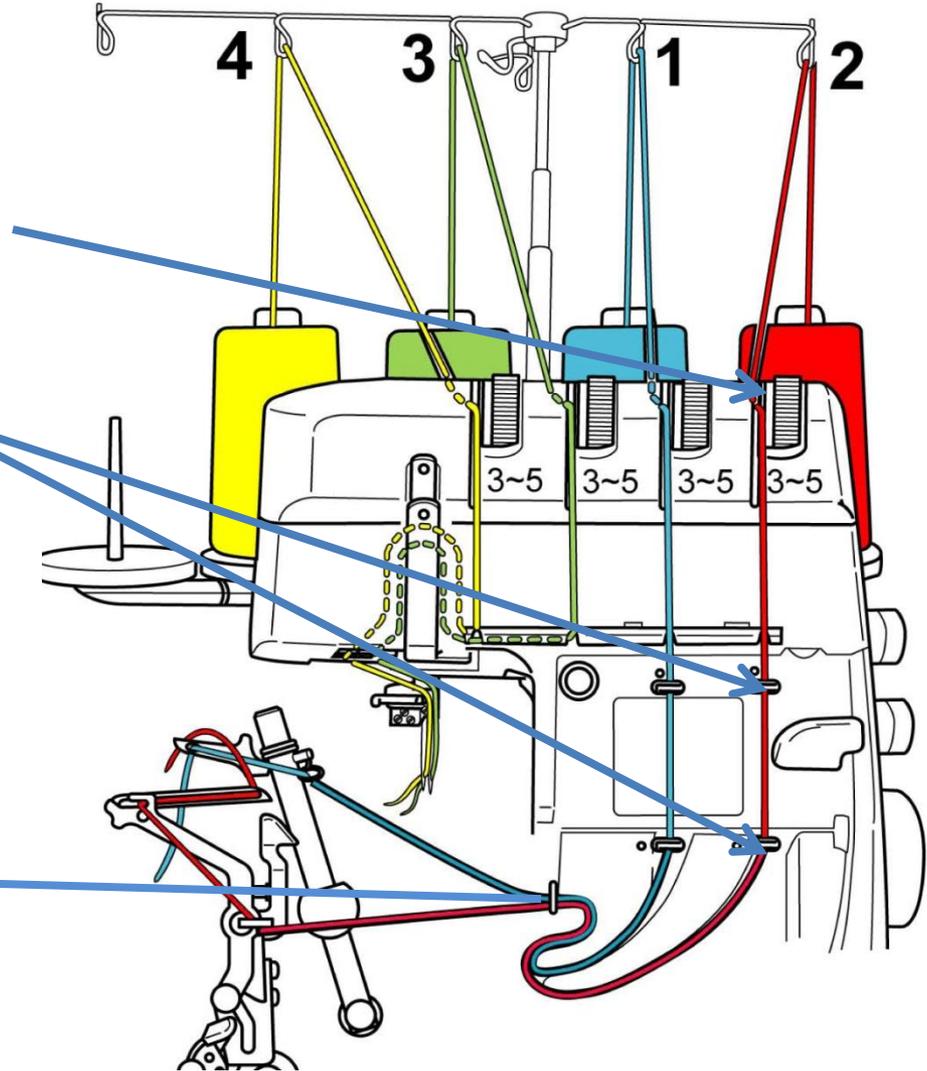


### Machine Threading Overview:

Bring thread up and through guide on the antenna. Then Bring the thread through the tension guide at back of machine and tension discs on the front of machine.

Follow the red markings and place thread through the next set of guides.

Follow plastic guides and check that thread is resting properly on this guide.



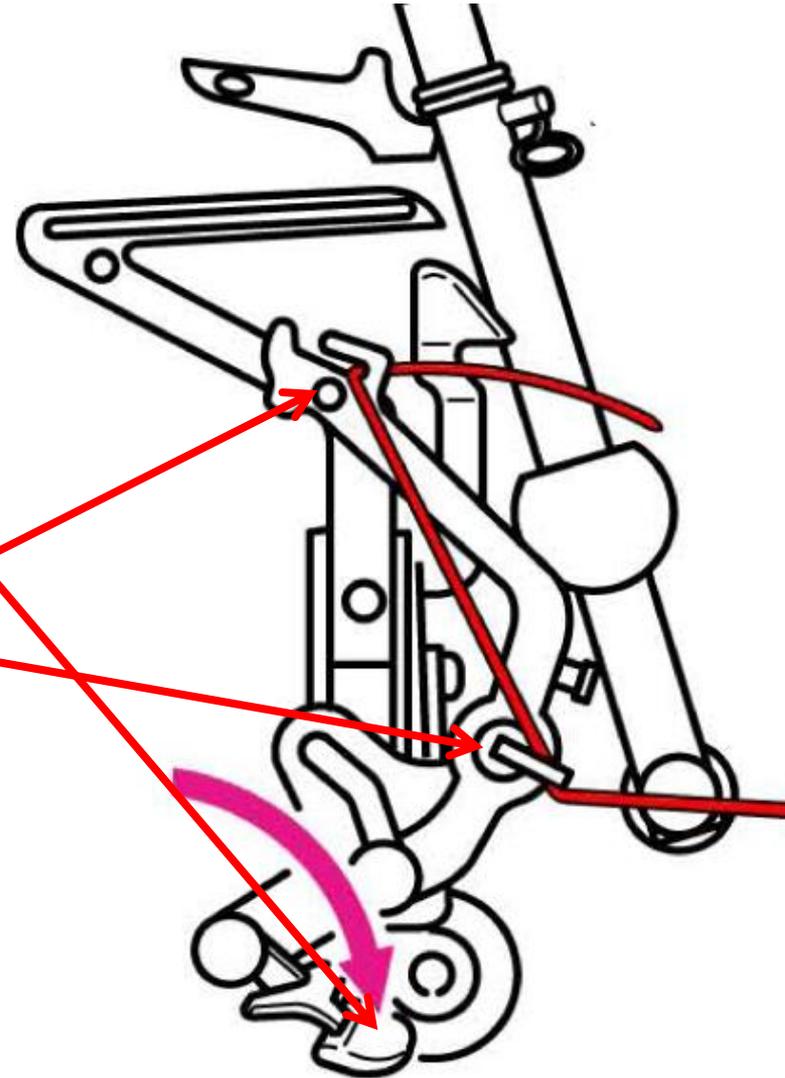
### Machine Threading Overview:

Locate the white lever at the bottom of the looper. Push that lever downwards.

The guides flip forward to allow for easy access to guides.

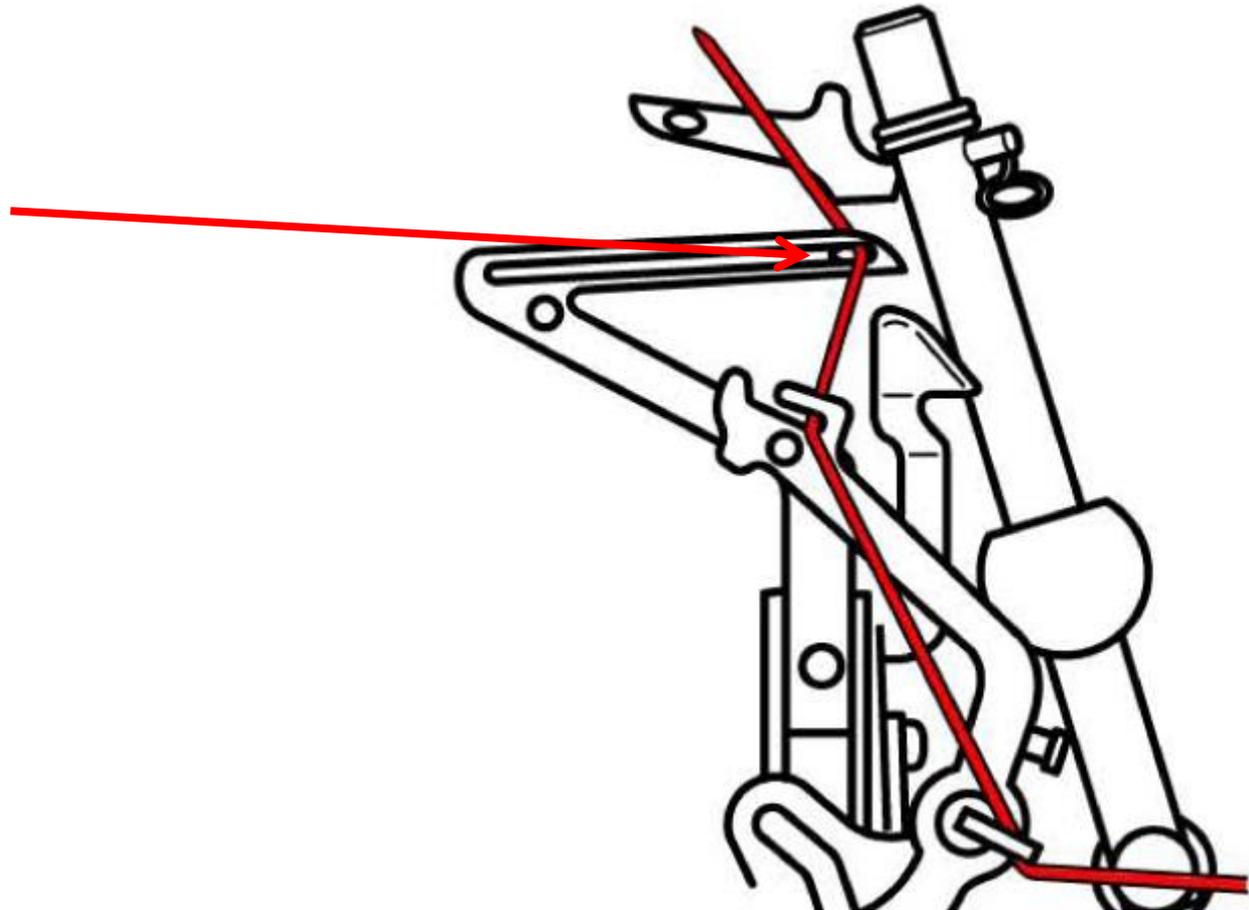
Thread the first guide on the looper.

Draw thread upwards and through second guide.



### Machine Threading Overview:

Thread the eye of the looper.

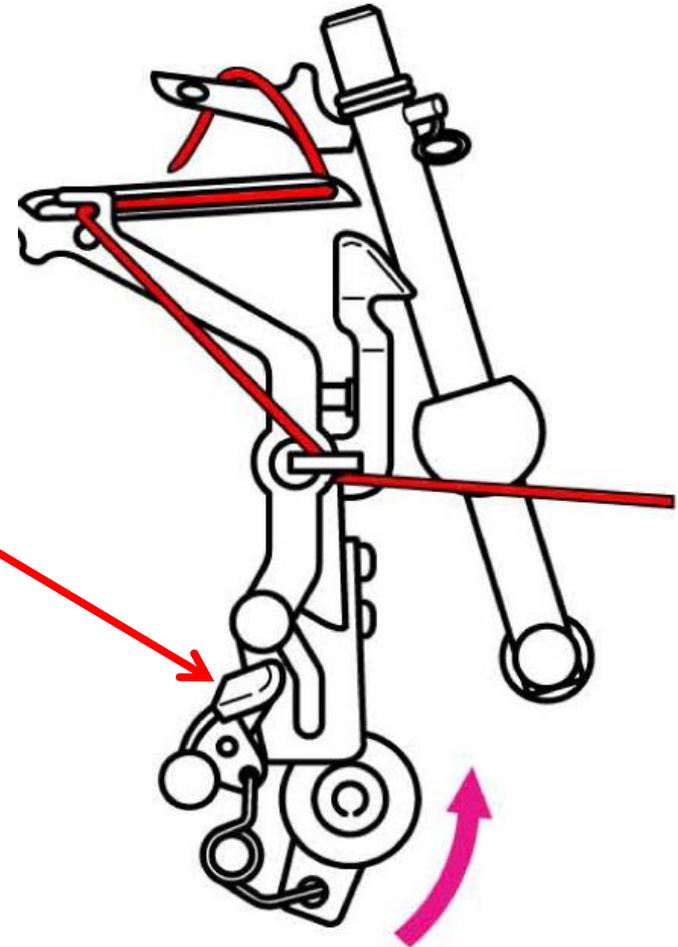


### Machine Threading Overview:

Flip the white lever upwards and the looper threading is complete.

Pull the thread to the top of the needle plate and under the presser foot.

If you forget to flip the lever the MO-734DE and MO-735 will automatically flip the lever once sewing begins.



### Machine Threading Overview:

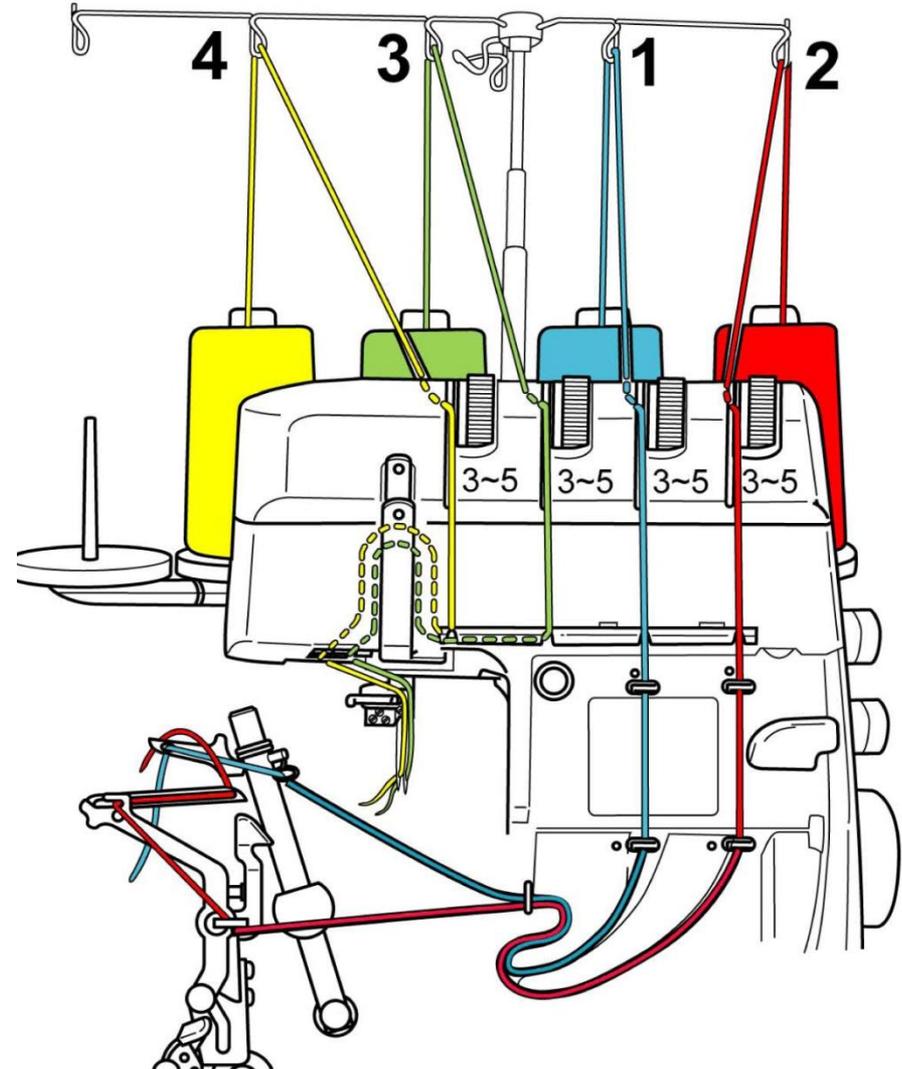
Let's thread the needles.

The Right Needle or **Green** threading path is next.

Bring thread up and through guide on the antenna.

Thread the tension/guide on the back of the machine.

Bring thread through the tension disc on the front of the machine.



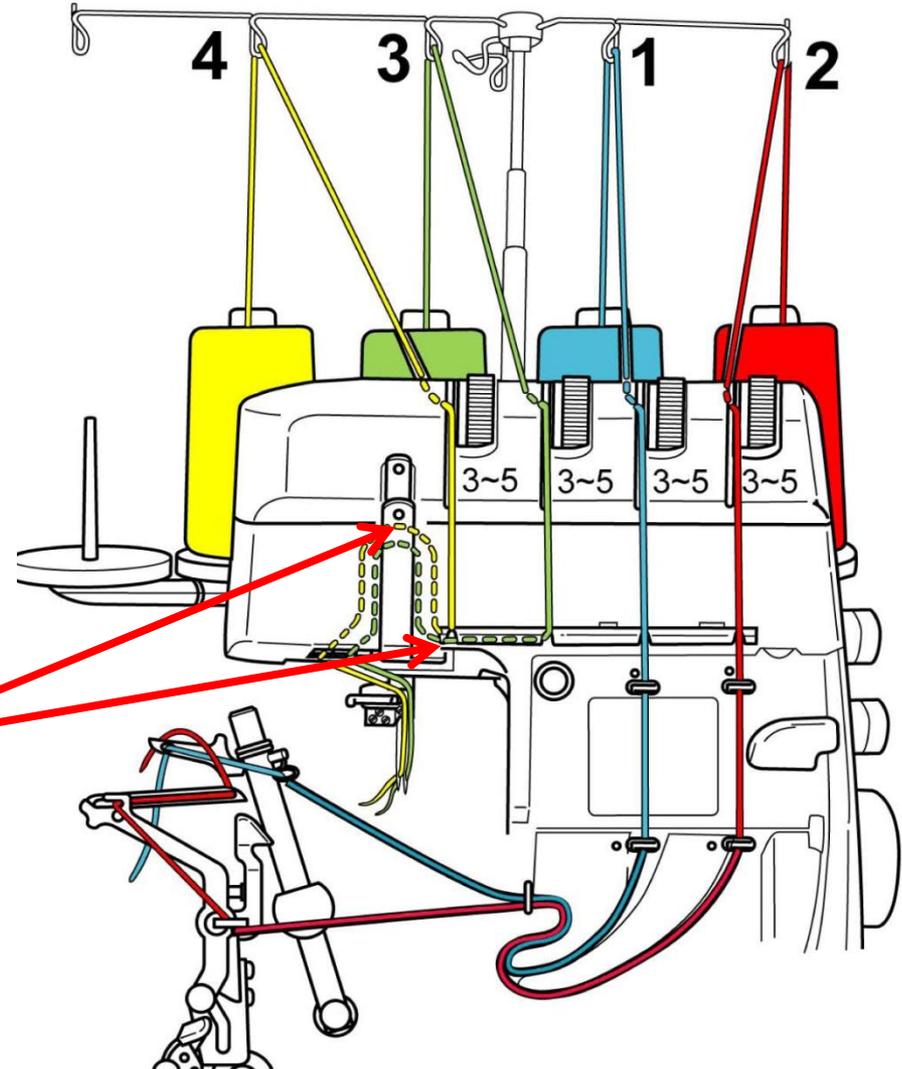
### Machine Threading Overview:

Follow the green round marks on the front of the machine. These dots are color coded to aid in threading.

You will see multiple colors in some of the round marks on the machine.

This color coding indicates different threading options for stitches like the chain stitch or coverhems.

Pull thread to the left and through the marked guides on the front of the machine.

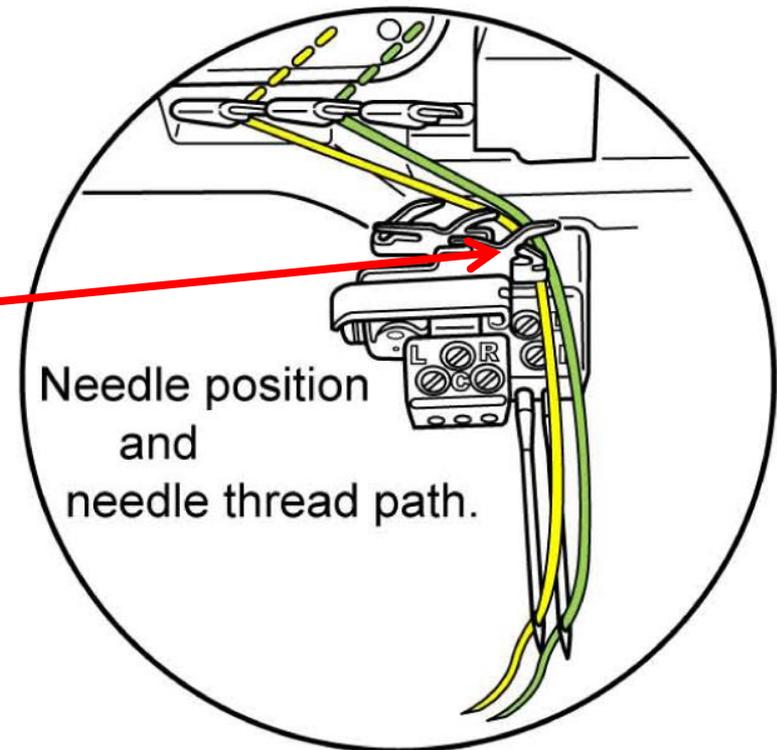


### Machine Threading Overview:

When you reach the guides above the needle, please note the placement of the Green Thread for the first guide.

There is a round marker above the correct guide for this thread that is filled with only  $\frac{1}{2}$  green.

The Guide above the needle is threaded as shown in this diagram.

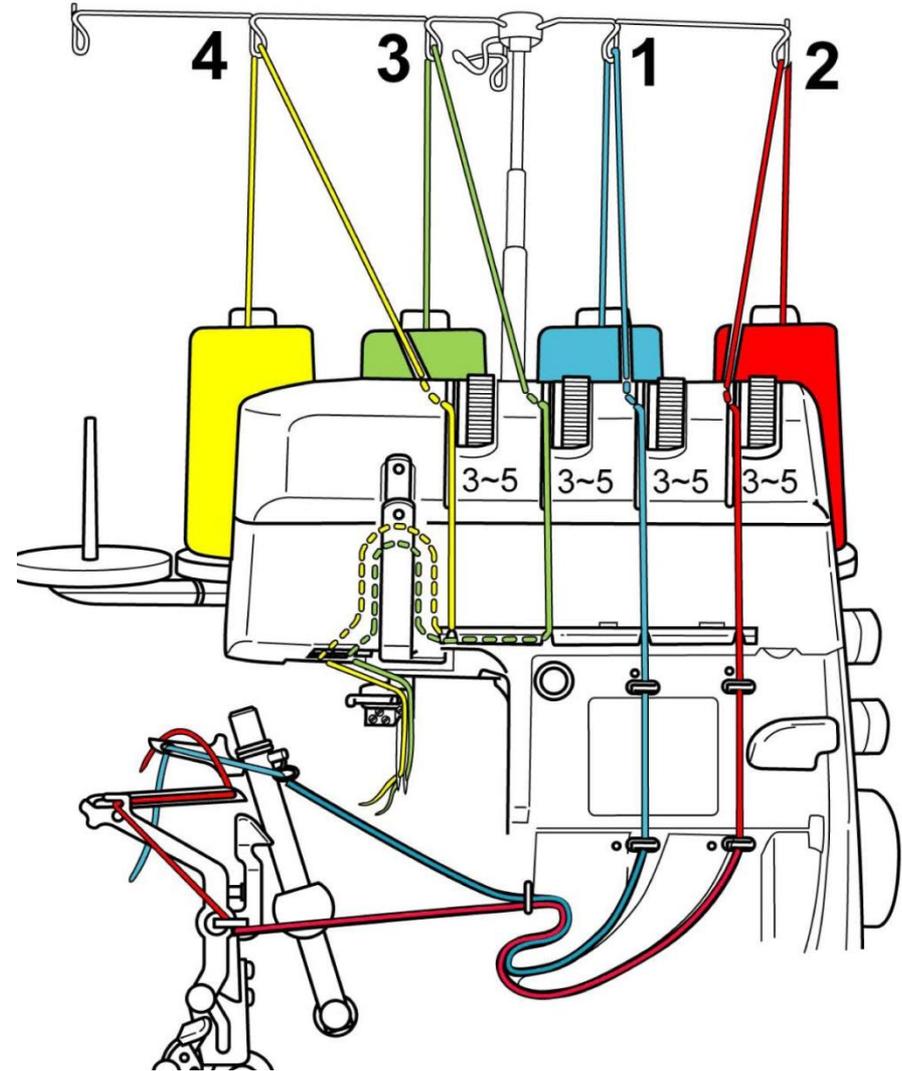
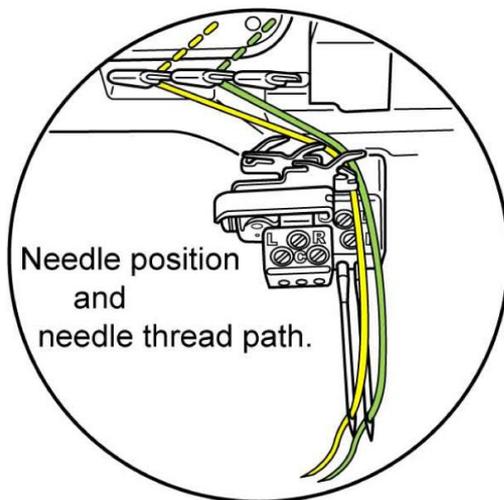


### Machine Threading Overview:

Thread the Left Needle or Yellow thread Path.

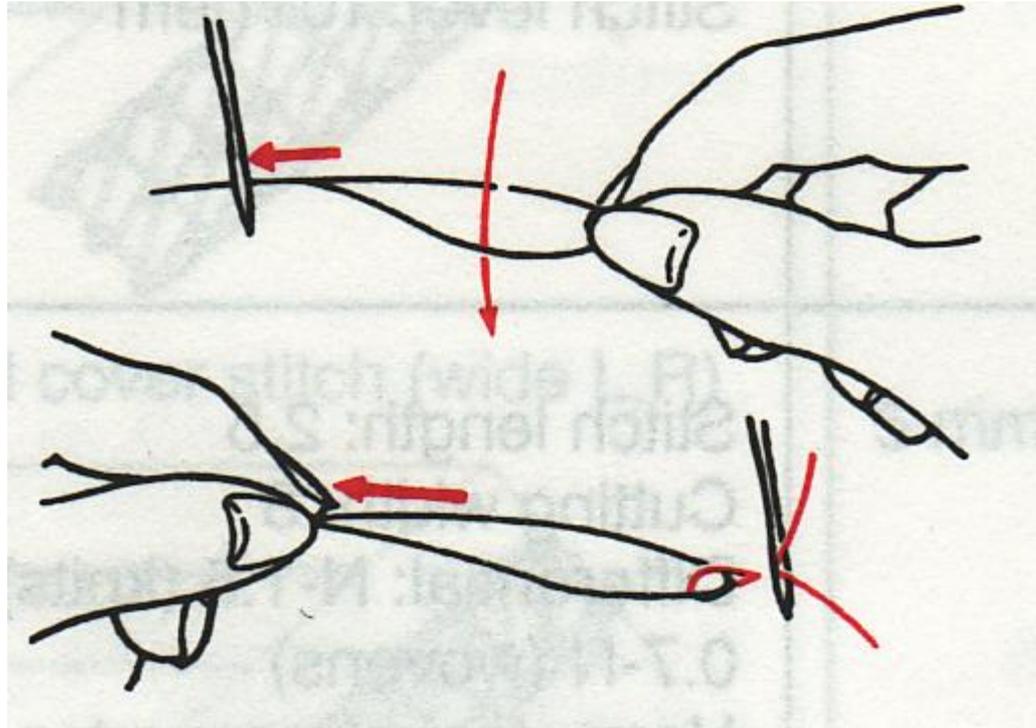
Use the round yellow markers as guides for threading the machine.

Pay close attention to the guides used above the needle for the 4-thread overlock.



### Machine Threading Overview:

If you need a little help with threading the needles or the loopers, try using the needle threader.



### Machine Settings Overview:

Now that all the loopers and needles are threaded, gently pull the threads under the presser foot.

Let's set our Tensions for this stitch.

The tension dials are on the front of the machine.

Set the tensions as follows:

Left Needle (yellow): 4

Right Needle (green): 4

Upper Loper (blue): 4

Lower Loper (red): 4



MO-735

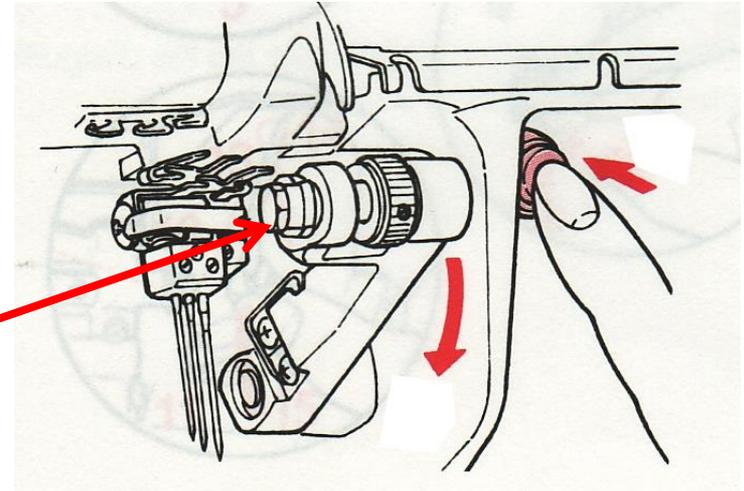
### Machine Settings Overview:

We need to engage the upper knife for the 4-Thread Overlock stitch.

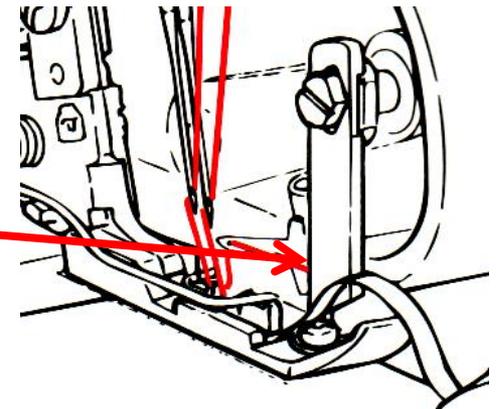
Push the button located below the green thread guide.

The upper knife arm will release. Press gently downward until it locks into position.

Engage the upper knife by pressing the upper knife holder to the right.



Turn the knob counter-clockwise until the knife is locked in the down position.



### Machine Settings Overview:

With the Loper cover open, locate the Cutting Width Dial.

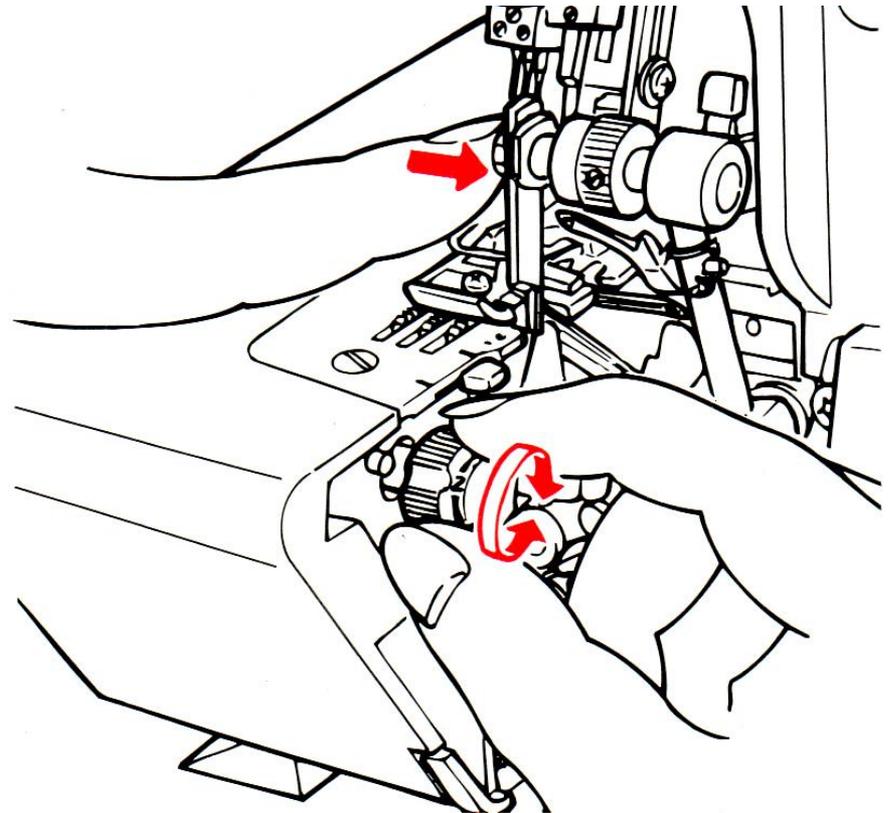
Set the Cutting Width to 3.

The position of the knife, will determine the seam width.

A cutting width of 3 creates a stitched seam width of 6-8mm.

Close the Loper cover.

*TIP: If the edges of the fabric curl up when being sewn, increase the cutting Width.*

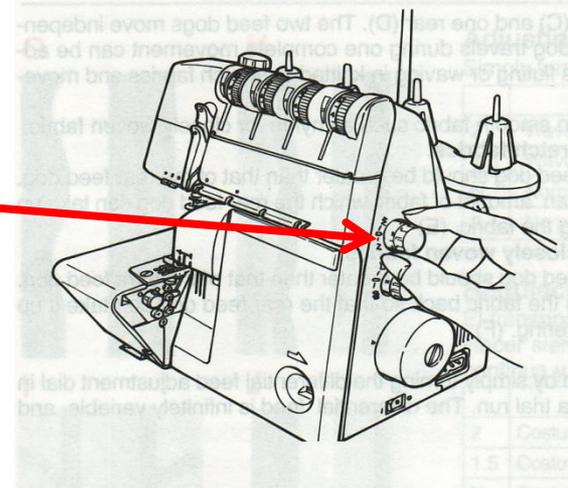


### Machine Settings Overview:

On the side of the machine there are two small dials.

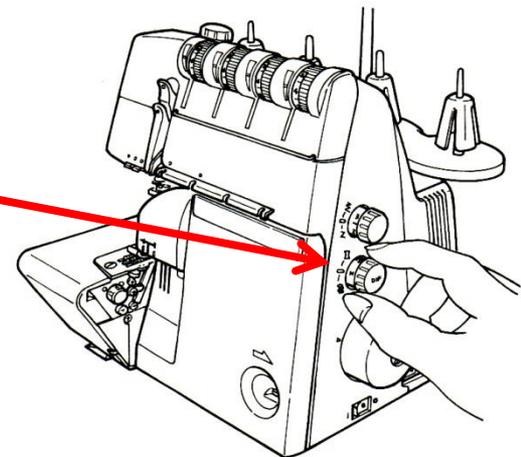
The top dial controls the stitch length..

Set the stitch length to 2.5



The bottom Dial controls the differential feed on the machine.

Set this to N.



## 4 Thread Overlock Or Mock Safety Stitch

Place two pieces of the white cotton from your kit under the presser foot.  
Lower the presser foot.

Begin sewing at a slow to medium rate.

If stitches do not properly form, stop sewing.

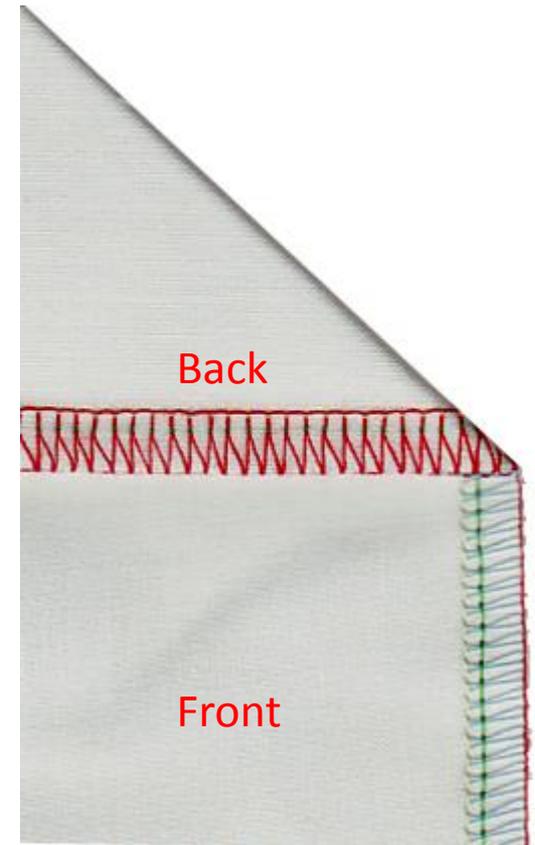
Raise the presser foot.

Clip the needle threads close to the eye of the needle.

Rethread the Upper and Lower loopers.

Then rethread the needles.

Your stitched sample should look similar to this.



### 4 Thread Overlock Tension Adjustments

Look at the front of the stitched sample.

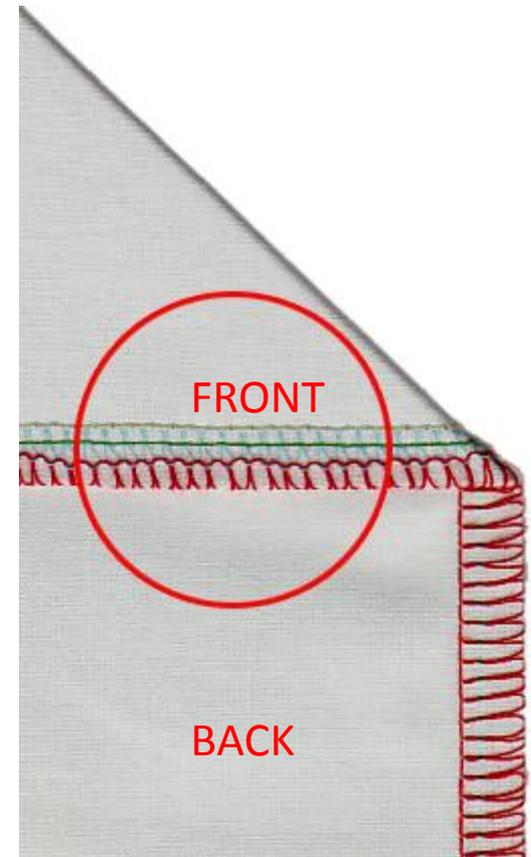
Look at the back of the stitch sample.

If you see the Red thread being pulled to the front side of the sample, increase the tension settings on the lower looper.

Tension should be set to 4. Increase the tension to 4.5 if a small amount of red thread is pulled to the front.

Increase the tension to 5 if a large amount of red thread has been pulled to the front.

Adjust as needed.



### 4 Thread Overlock Tension Adjustments

Look at the front of the stitched sample.

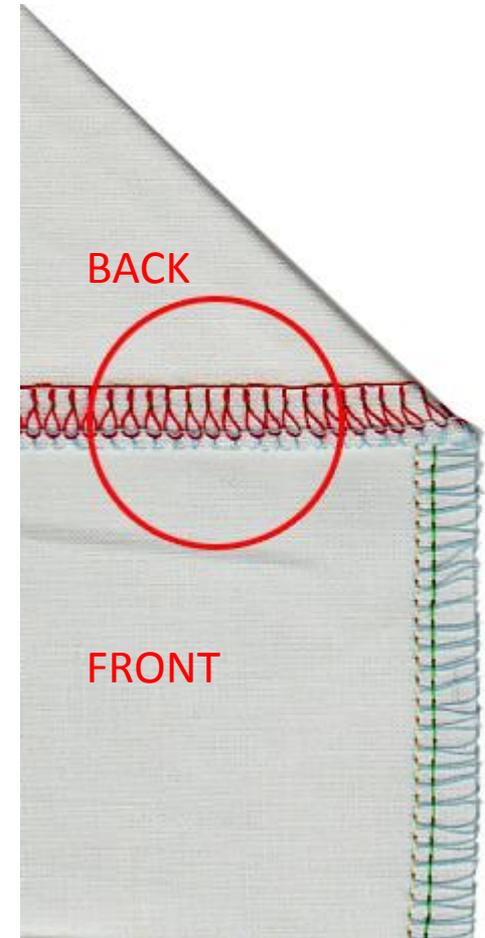
Look at the back of the stitch sample.

If you see the blue thread pulling to the back, the Upper Looper thread tension is too loose.

Tension should be set to 4. Increase the tension to 4.5 if a small amount of blue thread is pulled to the back.

Increase the tension to 5 if a large amount of blue thread has been pulled to the back.

Adjust as needed.



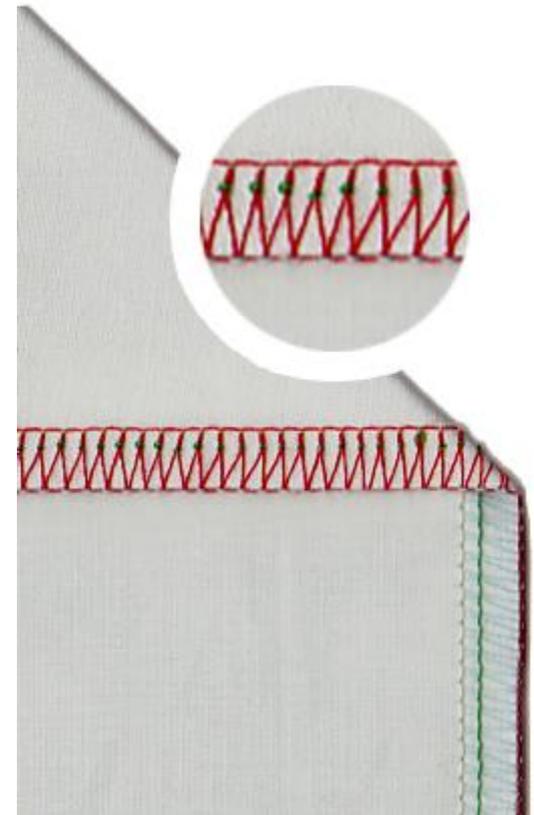
### 4 Thread Overlock Tension Adjustments

Left (yellow) and Right (green) needle tensions should also be checked.

Left needle tension too loose.



Right needle tension too loose.



### 3 Thread Super Stretch Stitch

Carefully clip the blue thread close to the back tension/thread guide.

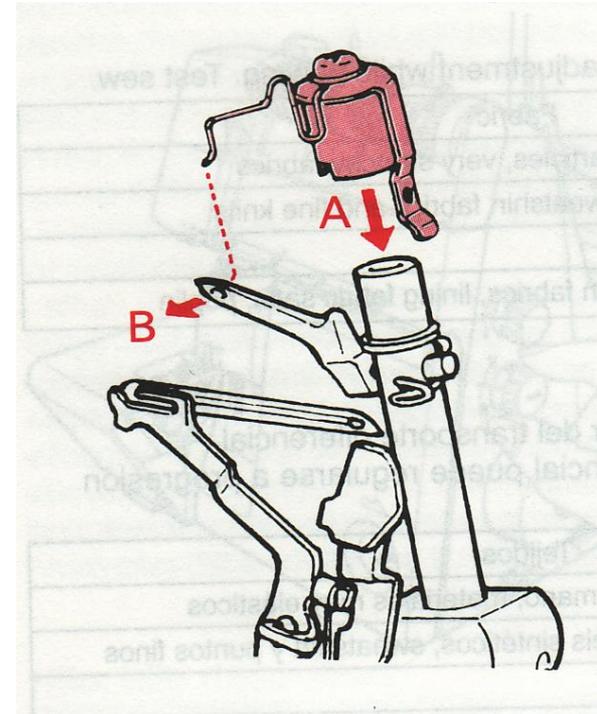
With the machine presser foot down, chain off (stitch) the thread until the blue thread is no longer stitching.

Open the Loper cover and raise the upper knife and knife arm. Locate the 2-thread converter.

Check that the red thread is not in the way. If necessary move the thread using the tweezers.

Place the converter over the upper looper as shown here.

The converter slips over the end of the upper looper. (A)  
and snaps onto the small post on the looper.  
The wire goes into the looper eye. (B)



## 3 Thread Super Stretch Stitch Settings

Cutting Width should be set to 2.5-3

Stitch Length should be set to 2.5

Differential Feed should be set between N-2 for knits. Let's start with 1.

**Lower the upper knife and close the looper cover.**

Tension settings should be set to:

Left Needle (Yellow): 6

Right Needle (Green): 4

Lower Looper (red): 4

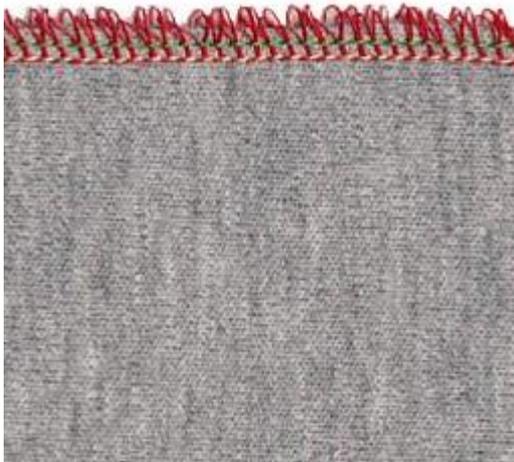
Locate two pieces of the yellow or gray knit fabric from your kit.

Place under presser foot and begin sewing at a slow speed.

### 3 Thread Super Stretch Stitch Settings

The finished stitch sample should look similar to this:

If stitches are loose and/or off the edge of the fabric, as shown here, check that the cutting width is set to 2.5-3.0.



### Understanding Differential Feed

Sheer Materials often require that the front feed dog pull the fabric at a slower pace than the rear feed dogs releases the material.

There is a positive differential feed and a negative differential feed.

A Differential Feed setting of 0.7 would be a negative feed.

The fabric feeds at a slower rate and decreases puckering on thin fabrics.

The example shown here was stitched with a Differential Feed setting of 2.0 on the top portion and 0.7 on the bottom.



## Understanding Differential Feed

Knits often stretch more than desired when sewing. Adjusting the differential feed can decrease or eliminate waving on the seam line.

There is a positive differential feed and a negative differential feed.

A Differential Feed setting of 2.0 would be a positive feed.

The fabric feeds at a faster rate and decreases puckering on knit fabrics.

The example shown here was stitched with a Differential Feed setting of 2.0 on the top portion and 0.7 on the bottom.



## 3 Thread Overlock Narrow and Wide

The 3 Thread Overlock Wide is suitable for constructing knitwear or for an edge finish on a single layer of fabric.

The 3 Thread Overlock narrow has the same uses as the wide version and is suitable for light to medium weight fabrics.

Clip thread Right Needle (green) thread near the **back** tension/thread guide.

Clip the Left Needle (yellow) thread near the eye of the needle.

Chain off until all yellow thread is removed from the machine.

Check that the needles are in the UP position.

Look at the hand wheel on the machine. There is a square mark on the hand wheel.

Align the square mark with the arrow on the machine body and the needles are in the UP position.

## 3 Thread Overlock Narrow and Wide

Raise the upper knife and upper knife arm.

Remove the RIGHT (green) needle from the machine.

Remove the 2 thread converter from the upper looper.

Thread the upper looper (Blue).

Thread the Left needle (yellow).

Set the cutting width to 3.

Lower the upper knife and close the looper door.

Let's get set up for the Narrow 3 thread overlock stitch.

### 3 Thread Overlock Narrow and Wide

Tension Settings for the Narrow 3 Thread Overlock should be:

Left Needle: 4

Upper Looper: 4

Lower Looper: 4

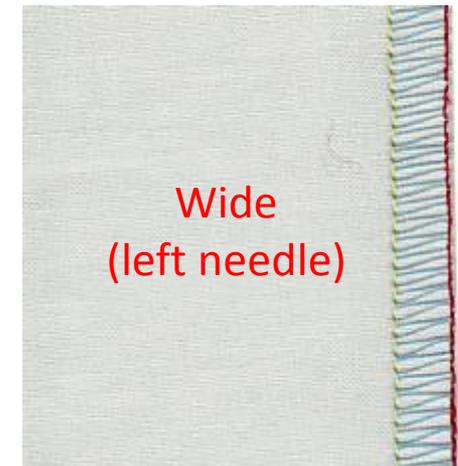
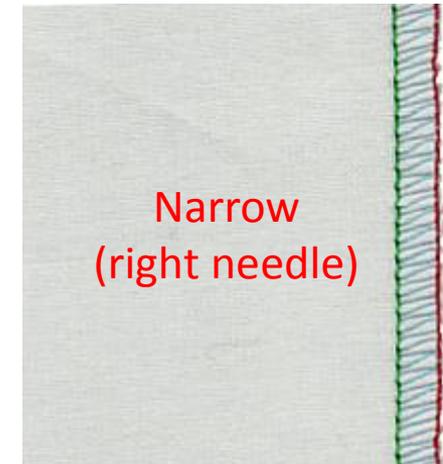
Set your stitch length to 2.5.

Set the Differential Feed to N.

Locate one piece of white cotton from your sewing kit.

Place the cotton under the presser foot and begin sewing at a slow to medium speed.

Your finished sample should look similar to the examples shown here.



## 3 Thread Overlock Narrow and Wide

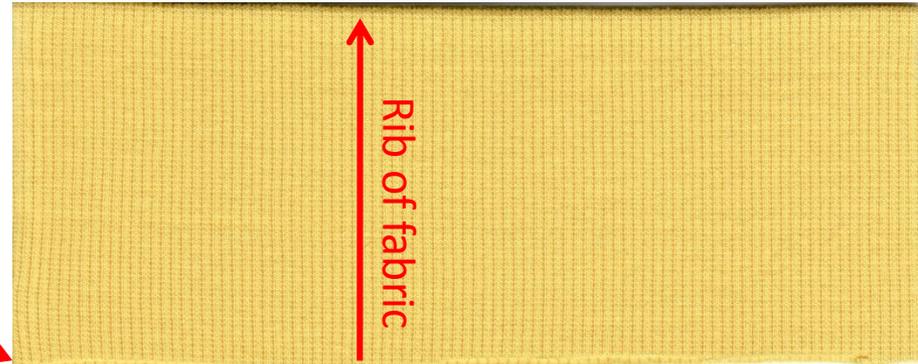
You can use this stitch to apply ribbing to knits around collars, cuffs or waistbands.

Locate one piece of yellow or gray knit from your fabric kit.

Locate one piece of yellow or red ribbing from your kit.

Fold the ribbing in half so that the rib is perpendicular with the folded edge.

With Right sides together, align the raw edge of the folded ribbing with the raw edge of the t-shirt knit.



We need to make some changes to the machine settings.

### 3 Thread Overlock Narrow and Wide

Check that your settings are:

Left Needle: 4

Upper Lopper: 4

Lower Lopper: 4

Stitch Length: 2.5

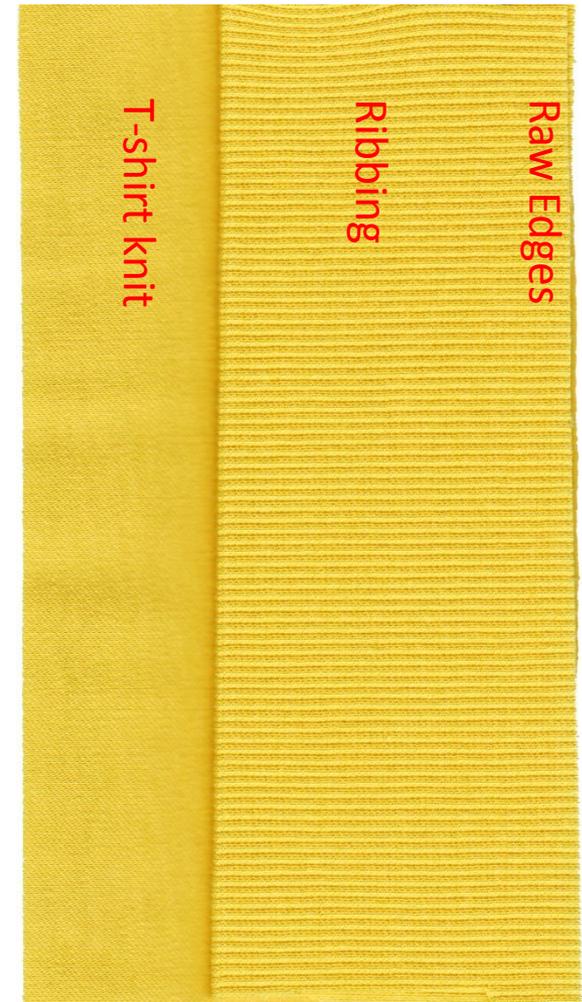
Differential Feed: 1.5

Cutting Width: 3

Upper Knife is in the down position.

Place fabric layers under presser foot so that the ribbing is on top.

Align the raw edges of the fabric with the ½ inch mark on the machine front.



### 3 Thread Overlock Narrow and Wide

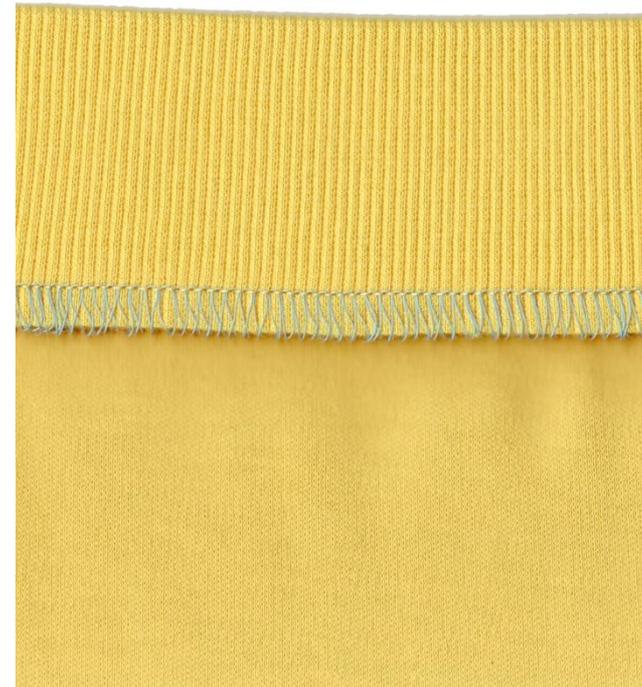
Begin sewing at a slow to medium pace slightly stretching the ribbing as you sew.

The finished sample should look similar to this:

FRONT



BACK



### What else can the 3 Thread Overlock do?

A blanket stitch edge can be created using the 3 Thread Overlock.

The example shown here is created using poly floss and wooly nylon.

There is almost no limit to what you can create with the Mo 734DE and MO-735.



## 3 Thread Flatlock Wide and Narrow

3 Thread Flatlock stitching can be used for bulkier knitwear and as a decorative accent.

To set up the machine for a 3 thread flatlock stitch, raise the upper knife and knife arm. We are going to look at the flatlock stitch as a decorative stitch.

Change the Tension settings on the machine to:

Left needle: 2

Upper Lopper: 3

Lower Lopper: 8

Knife is in the up position.

Check that the differential feed is set to N, the stitch length is set to 2.5 and the cutting width is at 3.

*The left needle position will create a WIDE flatlock. The Right needle position will create a NARROW flatlock.*

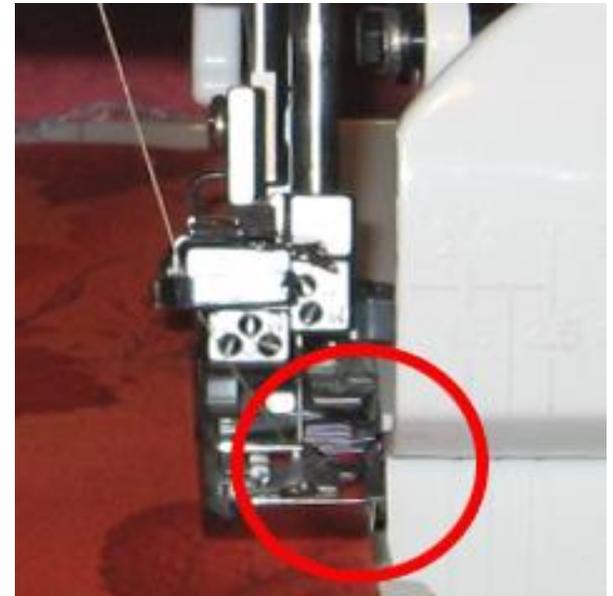
### 3 Thread Flatlock Wide

Locate one of the colorful cotton pieces of fabric in your kit.

Fold the fabric in half so that WRONG sides are together.

Place the fabric under the presser foot so that the folded edge of the fabric is aligned with the edge of the presser foot.

Begin sewing at a slow to medium speed.



### 3 Thread Flatlock Wide

When sewing is completed, unfold the fabric and tug gently on both sides.

This will create the flatlock effect on the top of the fabric.

Depending on the thread used or the fabric type, you may wish to create a flatter effect.

You can do this easily.



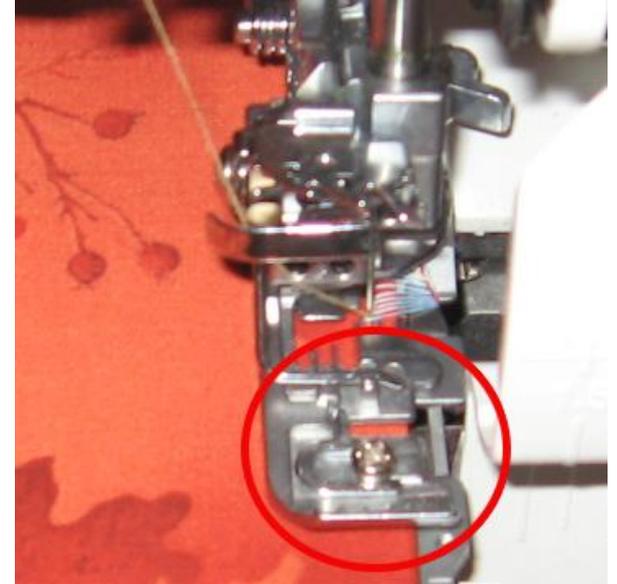
### 3 Thread Flatlock Wide

If a flatter effect is desired try this:

Align the folded edge of the fabric with the first raised needle position mark on the presser foot.

The thread will fall off the edge of the fabric as it stitches.

The effect will be a flatter stitch on the top of the fabric.



### 3 Thread Flatlock Wide

You can also add decorative thread such as wooly nylon or rayon floss for decorative effects.

Examples below are stitched with rayon floss:

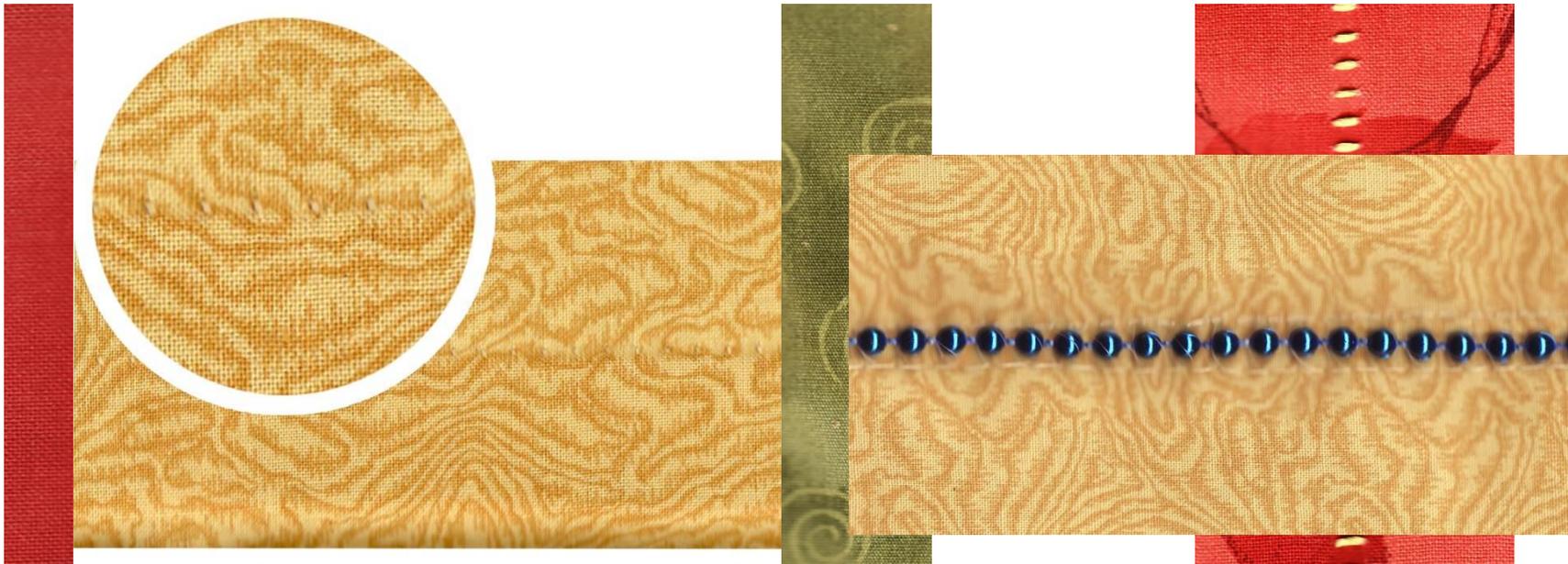
Floss in Upper Looper:

Flatlock

Upper Knife Down

Floss in Needle:

Deco Ladder Stitch



## 3 Thread Narrow and Rolled Hem

3-Thread Narrow stitch (often referred to as Narrow Hem 3) can be used to finish the raw edges of fabric and is particularly useful for the hem lines of scarves, napkins and ruffles.

To set up the machine for the 3-Thread Narrow stitch raise the upper blade and upper blade arm.

Clip the Left (yellow) Needle thread near the antenna and chain off on the machine until the yellow thread is completely removed from the machine.

Remove the left needle and place the needle in the Right (green) Needle position.

Thread the Right Needle.

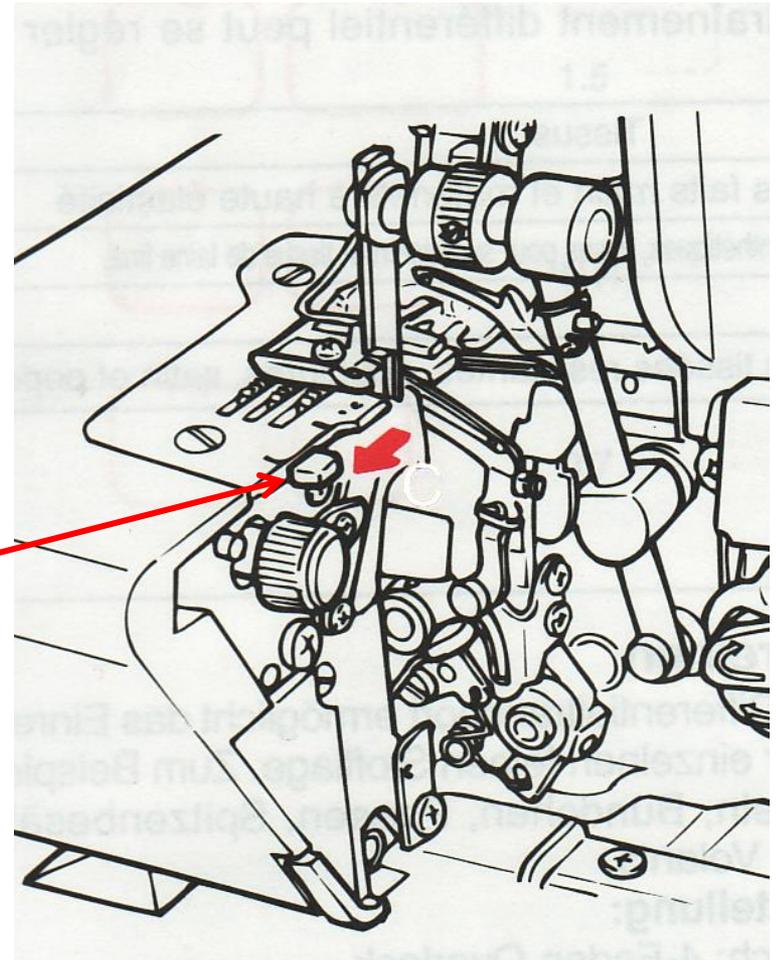
### 3 Thread Narrow and Rolled Hem

Change the machine settings as follows:

Right Needle Tension: 6  
Upper Looper Tension: 6  
Lower Looper Tension: 4

Stitch length: 1  
Cutting Width: 3  
Differential Feed: N

We will also be using a another feature on the machine called the Stitch Lever.



### 3 Thread Narrow and Rolled Hem

To activate the Roll Hemming stitch lever pull the selection lever towards you.

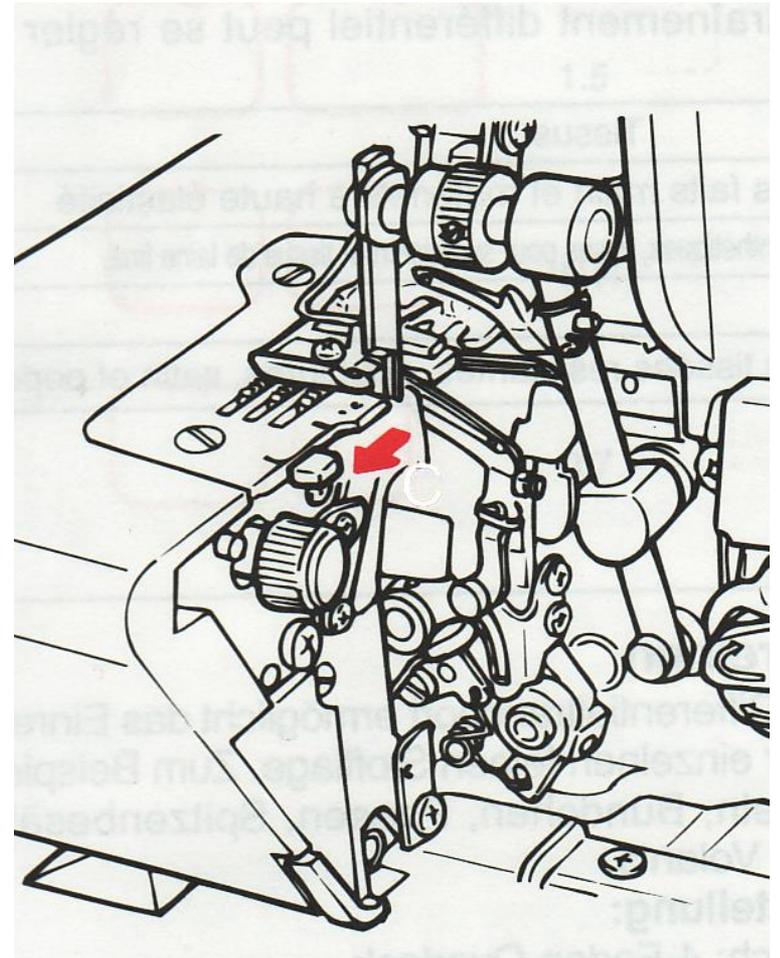
The roll hemmer is fully integrated into the machine. You do not need a special presser foot or needle plate.

Activate the Roll Hem now.

Lower your upper knife and close looper cover.

Locate a piece of the white cotton from your kit.

Place the cotton under the presser foot and begin sewing at a slow to medium speed.



### 3 Thread Narrow and Rolled Hem

The stitch Narrow Hem sample should look similar to this:

The narrow hem does not pull the upper looper thread to the back.

The upper and lower looper threads should be balanced on the front and back.

Let's look at creating a 3-thread Rolled Hem.



### 3 Thread Narrow and Rolled Hem

To set up for the rolled hem change:

Right Needle: 6

Upper Looper: 4

Lower Looper: 6

Check that the Cutting Width is set to 1.

Change the stitch length to 1 and lower upper knife.

Place one piece of white cotton fabric under the presser foot and begin to sew.

The **Upper Looper** thread should pull to the back and wrap around the edge of the fabric.

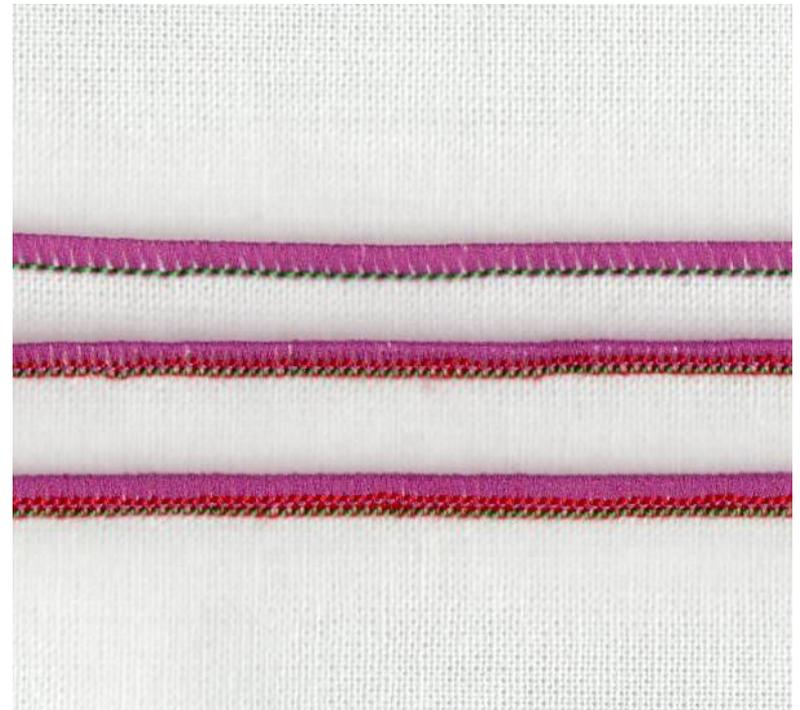
Your sample should look similar to this:



### 3 Thread Narrow and Rolled Hem

The 3-thread rolled hem can be used to create decorative effects.

Add specialty thread to the upper looper to create rolled edges or mock pintucks.



### 2-Thread Wrapped Overlock

The 2-Thread Wrapped Overlock stitch is useful for finishing open seam edges on light to medium weight fabrics.

To set up the machine for the 2-thread”

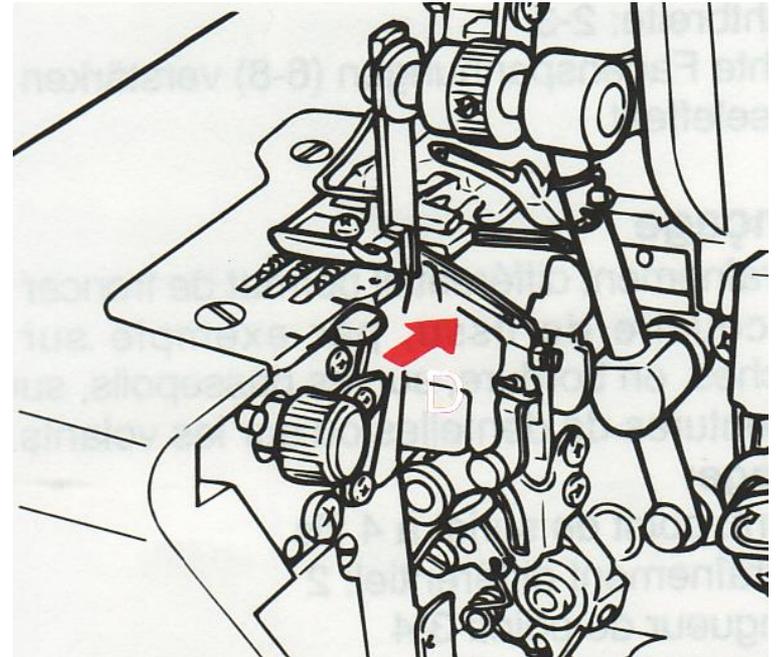
Roll Hemmer should be disengaged.

Push the roll hem away from you towards the needle plate.

Clip the right needle thread above the eye of the needle.

Clip the Upper Looper (blue) thread near the antenna.

Chain off until thread is removed.



### 2-Thread Wrapped Overlock

Place the 2 thread converter on the upper looper.

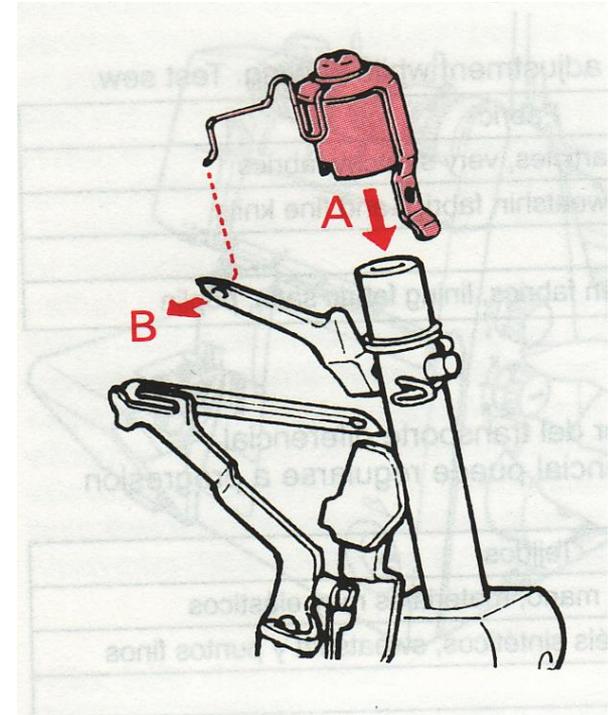
Thread the lower looper (red).  
Set tension to 4.

Thread the right needle (green).  
Set tension to 6.

Set cutting width to 3.  
Set stitch length to 2.5  
Set differential feed to N.

Lower upper knife.

Locate a piece of the white cotton in your kit.



### 2-Thread Wrapped Overlock

Place the fabric under the presser foot and begin sewing at a slow to medium speed.

Your finished sample should look similar to this:

Let's look at other two thread options.



## 2-Thread Flatlock

The 2-thread overlock stitch is useful for the construction of under garments and decorative hemming techniques.

Clip the thread above the left right needle.  
Move the needle into the left needle position.

Thread left needle (yellow) and set tension to 1.  
Change lower looper (red) tension to 5.

Set stitch length to 2.5.  
Set cutting width to 3.0  
Set differential feed to N.

Upper knife should be in the up position.

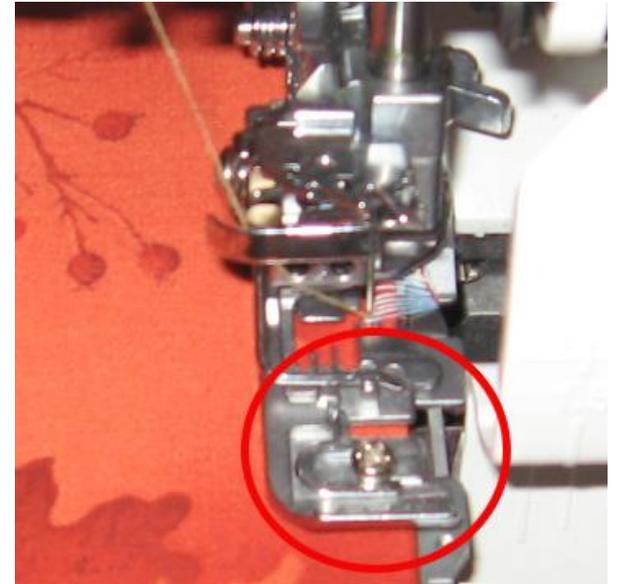
### 2-Thread Flatlock

Locate one of the colorful pieces of cotton from your sewing kit.

Align the folded edge of the fabric with the first raised needle position mark on the presser foot.

The thread will fall off the edge of the fabric as it stitches.

The effect will be a flatter stitch on the top of the fabric.

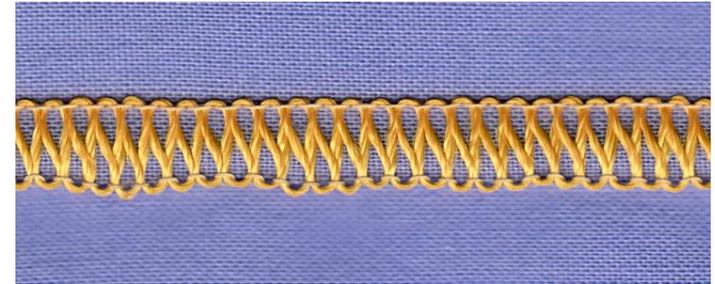


### 2-Thread Flatlock

The results will be a wide flatlock on the right side of the fabric.

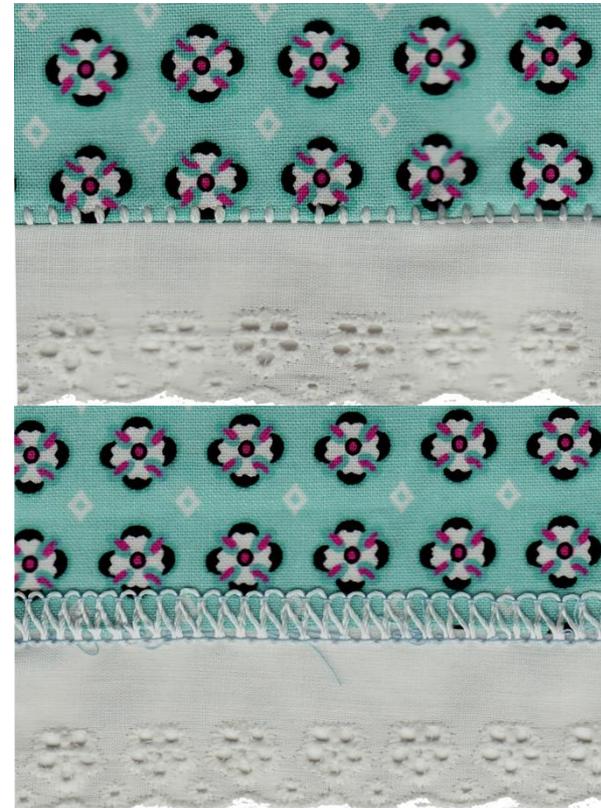
Try adding decorative thread to the looper.

You can also use this stitch to join two fabrics together, as was done with the 3-thread flatlock and decorative thread in the looper and upper knife lowered.



### 2-Thread Flatlock

You can also use the 2-thread flatlock to create joining, lace insertion or attaching lace.



### 2-Thread Rolled Hem

To set up the machine for the 2 thread rolled hem, clip the thread above the left needle.

Move the needle to the right needle position.  
Thread needle and set the tension to 6.

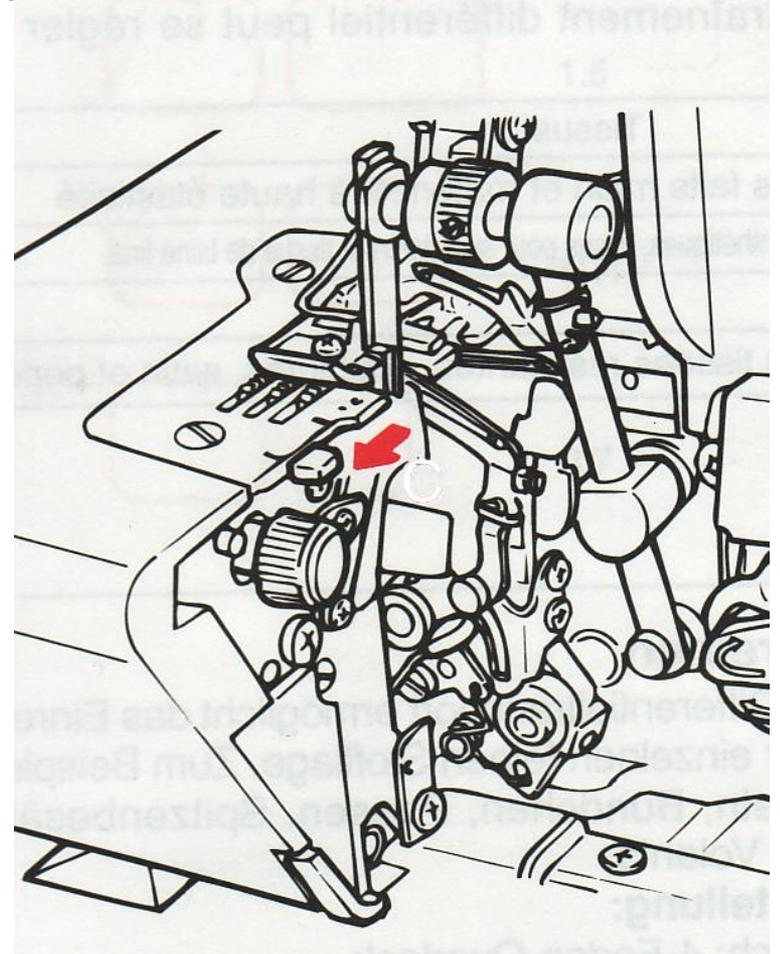
Change the lower looper tension to 5.

Set the stitch length to 1.5.  
Set the cutting width to 1.5.

Differential feed should be set to N

Engage the roll hem by pulling the lever towards you.

Lower upper knife.



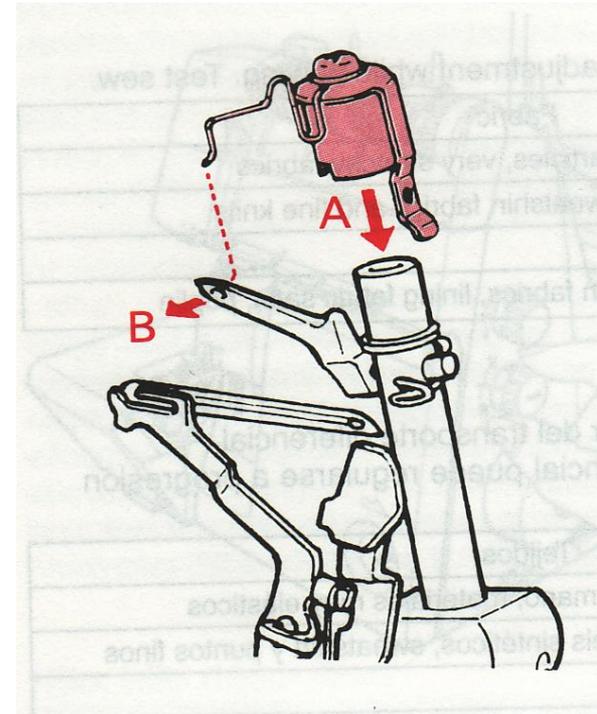
### 2-Thread Rolled Hem

Check that the 2-thread converter is in the correct position.

Locate one of the white cotton pieces of fabric from your sewing kit.

Place the fabric under the presser foot and begin sewing at a slow to medium pace.

The Loper thread should be wrapping around the fabric and look similar to this example.



## 2-Thread Rolled Hem

Clip all threads and chain off until thread is removed from machine.

Raise the upper knife.

Remove the 2-thread converter and place it back into the storage space on the looper cover.

Remove all needles from the machine.

And let's get up and stretch for 15 minutes.