

# INSTRUCTION BOOK



**elna** 2110/2130

# IMPORTANT SAFETY INSTRUCTIONS

*Your Elna 2000 series sewing machine is designed and constructed for HOUSEHOLD use only. Read all instructions before using this machine.*

## **DANGER** – To reduce the risk of electric shock:

1. Your sewing machine should never be left unattended when plugged in. Always unplug the machine from the electrical outlet immediately after using and before cleaning.
2. Always unplug before replacing light bulb. Replace bulb with same bayonet socket type, 15W max.
3. Do not place or store machine where it can fall or be pulled into a tub or sink. Do not reach for the machine if it has fallen into water. Unplug immediately.

## **WARNING** – To reduce the risk of burns, fire, electrical shock or injury:

1. Do not allow machine to be used as a toy. Supervision is necessary when this machine is used by or near children.
2. Use this sewing machine only for its intended use as described in this manual. Only use attachments recommended by the manufacturer as described in this manual.
3. Never operate this machine if it has a damaged cord or plug, is not working properly, has been dropped or damaged or dropped into water. Return the machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. This machine is equipped with a special connection cord which, if damaged, must be replaced by an identical cord. This can be obtained from your dealer.
5. Never operate the sewing machine with any air opening blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust and fibers.
6. Never drop or insert any object into any opening.
7. Do not use outdoors.
8. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
9. To disconnect, turn machine off and remove plug from outlet.
10. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
11. Keep fingers away from all moving parts, especially the needle.
12. Always use the proper needle plate. The wrong plate can cause the needle to break.
13. Do not use bent needles.
14. Do not pull or push fabric while stitching. This may deflect the needle causing it to break.
15. Switch the sewing machine off when making any adjustment in the needle area, such as threading needle, changing needle, threading bobbin, changing presser foot, etc.
16. Always unplug the sewing machine from the electrical outlet when removing covers, lubricating or making any other servicing adjustments mentioned in the instruction manual.

## SAVE THESE INSTRUCTIONS

### **USA only**

Your machine comes equipped with a polarized plug (one prong wider than the other). A polarized plug reduces the risk of electrical shock. This plug is intended to fit into a polarized outlet. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

Use only foot control YC-482J or TJC-150 (UL, CSA).

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### TROUBLESHOOTING .....

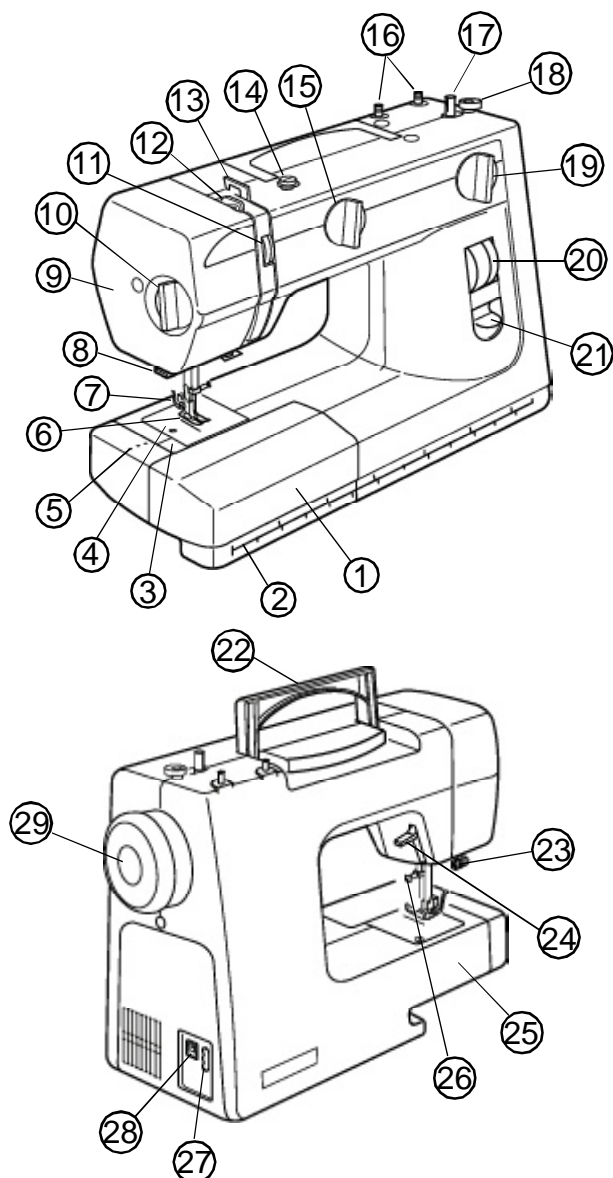
### INDEX .....

**NOTE:** Information found in this instruction manual is current at the time of printing. Elna reserves the right to change and update specifications and information as needed.

## SECTION 1

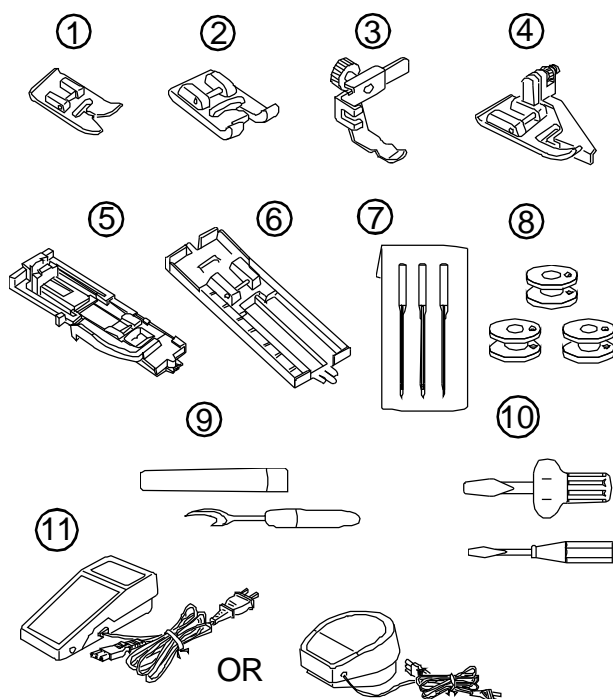
### Machine Parts and Functions

#### Part Names

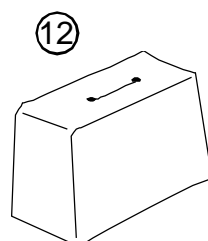


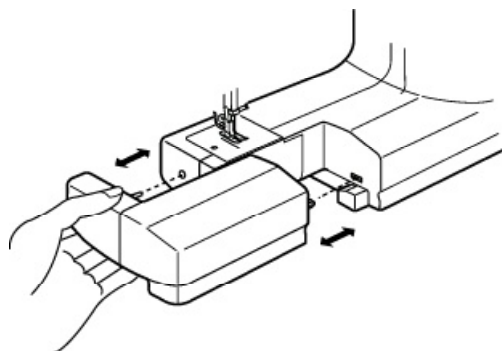
1. Extension table (accessory storage box)
2. Centimeter/inch measurements
3. Bobbin cover
4. Needle plate
5. Circular sewing pivot points
6. Presser foot
7. Presser foot release lever
8. Thread cutter
9. Face plate
10. Foot pressure dial
11. Thread tension dial
12. Thread take-up lever
13. Thread guide
14. Bobbin winder thread guide
15. Stitch selection knob
16. Spool pins
17. Bobbin winder
18. Bobbin winder stop
19. Stitch length knob
20. Stitch width/Needle position dial
21. Reverse stitch lever
22. Carrying handle
23. Buttonhole lever (Model 2130 only)
24. Presser foot lever
25. Free arm
26. Needle clamp screw
27. Machine socket
28. On/off switch
29. Flywheel (always turn towards you)

#### Standard Accessories



1. Metal foot
2. Satin stitch foot (Model 2130 only)
3. Zipper foot (Model 2130 only)
4. Blind hem foot
5. R: Automatic buttonhole foot (Model 2130 only)
6. 4-step buttonhole foot (Model 2110 only)
7. Needles
8. Bobbins (4 total)
9. Seam ripper
10. Screwdrivers, large and small
11. Foot control
12. Vinyl dust cover





## Extension Table (Accessory Storage Box) and Free Arm

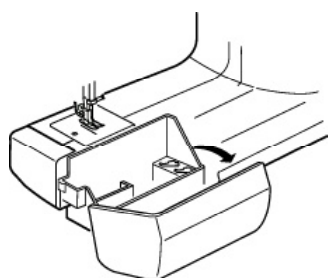
### Extension Table

The extension table provides more sewing space to make sewing easier. The extension can be easily removed for free arm sewing.

Free arm sewing is good for circle areas like sleeves, waistbands and pant legs. If socks, knee or elbow areas need mending, the free arm will be best to use.

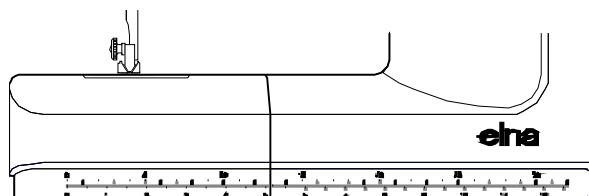
Pull the end of the extension table away from the machine, as shown in the drawing.

Push the table back into place to reattach the extension table.



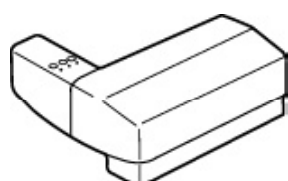
### Accessory Box

The extension table is also a storage box. Pull the door open to see the storage space.



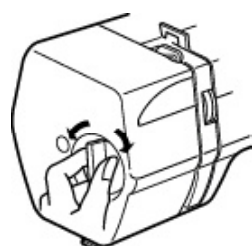
### Centimeter/Inch Measurements

Use this handy tool located on the lower portion of the front of the machine for quick measurements.



### Circular Sewing Pivot Points

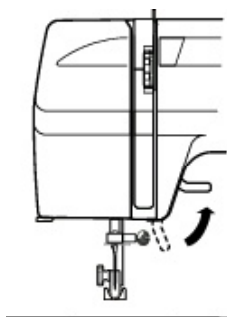
The extension table has holes that are 1 cm apart from each other. Use the holes to sew circles and scallops with the optional pivot pin.



### Foot Pressure Dial

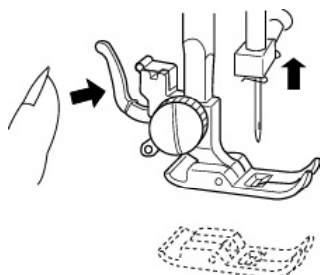
Set the pressure dial at "2" for regular sewing.

Depending on the weight of your fabric, you may need to increase (higher number) or decrease (lower number) the pressure.



## Additional Presser Foot Clearance

You can raise the presser foot higher than the normal up position for easy removal of the presser foot or to place heavy fabrics under the presser foot. Pull the presser foot lever up beyond the normal up position.



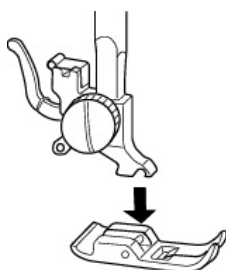
## How To Snap Presser Foot Off and On

### To snap off:

Turn the flywheel toward you to raise the needle to its highest position.

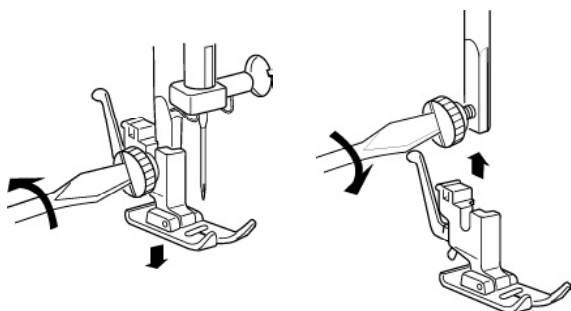
Raise the presser foot.

Press the presser foot release lever. The presser foot will drop off.



### To snap on:

Place the presser foot so that the pin on the foot lies just under the groove of the shank. Lower the shank to attach the foot.

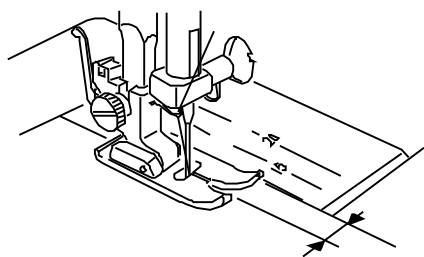


## How To Remove and Attach the Shank

Raise the presser foot.

Turn the thumbscrew counterclockwise with the screwdriver to remove the shank.

When attaching, place shank on needle bar. Lower the presser foot lever. Turn thumbscrew clockwise to tighten.

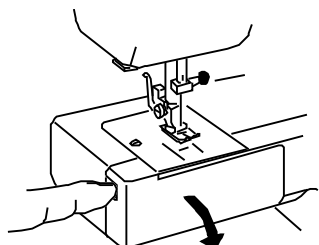


## Seam Allowance Lines

The lines on the needle plate help you measure seam width.

The number shows you the space between the center needle position and the line on the needle plate.

The numbers at the front are in millimeters. The numbers at the back are in inches.

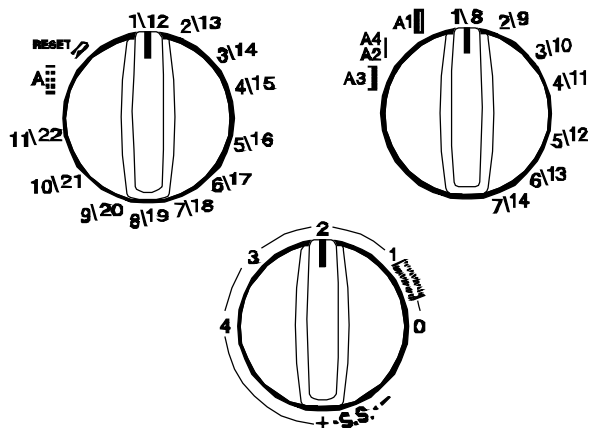
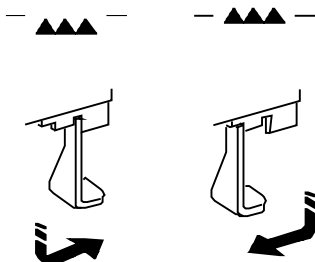


## How To Drop the Feed Dog

The feed dog must always be up for normal sewing and down for special sewing, such as free motion embroidery, button sewing, etc.

Remove extension table and open bobbin cover. Push the feed dog lever down and slide it to the right until lever fits into notch.

When special sewing is complete, pull the feed dog lever down and slide it to the left until lever fits into place. Hand turn the flywheel to raise the feed dog.



## Stitch Selection Knob

The needle must be at a high position before selecting a stitch. Turn the flywheel toward you to raise the needle.

Turn both the stitch selection knob and the stitch length knob to select a stitch.

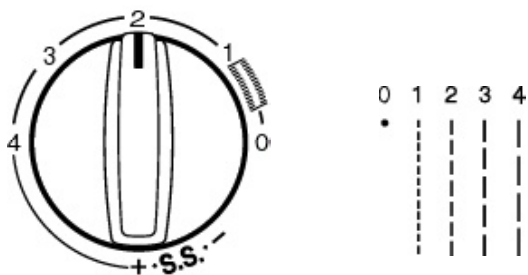
Set the stitch length knob between 0 and 4 to access stitches 1-11 (2130) and 1-7 (2110).

Set the stitch length knob on "+S.S.-" to access stretch stitches 12-22 (2130) and 8-14 (2110).

Set stitch length at .



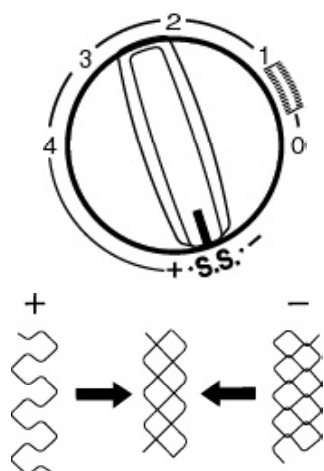




## Stitch Length Knob

Turn the stitch length knob. The lower the number, the shorter the stitch length. The higher the number, the longer the stitch length.

Each stitch will have a suggested length range.

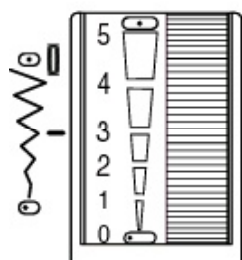


## Fine Tuning Stretch Stitches

If the stretch stitch doesn't look right, you can adjust it.

If stitches are too short, correct by turning the knob toward the "+".

If stitches are too long, correct by turning the knob toward the "-".



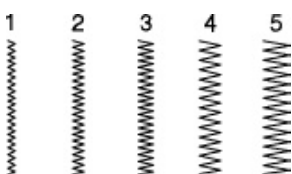
## Stitch Width/Needle Position Dial

The needle must be at a high position before changing stitch width. Turn the flywheel toward you to raise the needle.

The lower the number, the narrower the stitch. The higher the number, the wider the stitch. The widest width this machine can sew is 5 mm.

Straight Stitch and Triple Seam can sew from different needle positions.

- center needle position – set dial between 3 and 5
- left needle position – set dial between 3 and 0, with 0 being the farthest left



## Reverse Stitch Lever

The machine will sew backwards while you press down the reverse stitch lever.



## Thread Tension Dial

### Straight Stitch

In straight seams, the needle thread and the bobbin thread should lock together in the center of the two layers of fabric.

If you look at the top and bottom of the stitch, you will notice that there are no gaps; each stitch is smooth and even.

When adjusting needle thread tension, the higher the number, the tighter the needle thread.

Here are some reasons you may change the thread tension dial:

1. The fabric is stiff or heavy.
2. You are sewing more than two layers of fabric.
3. The stitch you are using needs the threads not to lock together in the center of the fabric.

#### • Tension is too tight

The bobbin thread shows through on the topside of the fabric and it will feel bumpy.

Turn the dial to a lower number to loosen the needle thread tension.

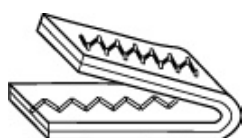
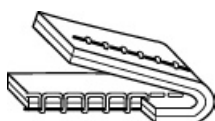
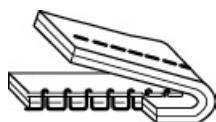
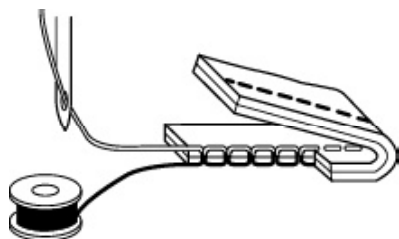
#### • Tension is too loose

The needle thread shows through on the underside of the fabric and it will feel bumpy.

Turn the dial to a higher number to tighten the needle thread tension.

#### • Adjusting Tension for Zigzag and Embroidery

The upper thread tension should be slightly weaker when sewing a zigzag or a satin stitch. The upper thread should appear slightly on the underside of the fabric.



## SECTION II

### Getting Ready to Sew

#### Selecting the Correct Needle and Thread

There are many kinds of fabrics, threads and needles. It is important to use the correct ones together.

Always purchase good quality thread. It should be strong, smooth and even in thickness. Use the same thread for needle and bobbin. Always test thread and needle size on a scrap piece of fabric.

In general, fine threads (the larger the number, the finer the thread) and needles (the smaller the number, the finer the needle) are used for sewing lightweight fabrics and heavier threads and larger needles are used for sewing heavyweight fabrics. There are many specialty needles available from your sewing machine dealer.

Check your needles frequently for rough or blunt tips. Snags and runs in knits, fine silks and silk-like fabrics are permanent and are often caused by damaged needles.

#### Changing the Needle

Turn off the machine. Turn the flywheel toward you to raise the needle. Lower the presser foot.

Turn the needle clamp screw counterclockwise to loosen.

Remove the needle from the clamp.

Insert the new needle into the clamp with the flat side to the back, pushing it up as far as it will go.

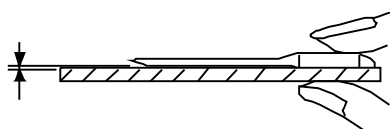
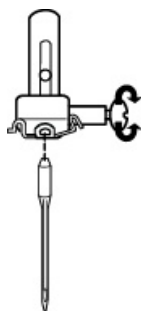
Tighten the clamp screw firmly.

To determine if the needle is defective, place the flat side of the needle on something flat (a needle plate, piece of glass, etc.). The gap between the needle and the flat surface should be even.

Never use a bent or broken needle. It may cause skipped stitches or thread breakage. Defective needles can ruin the fabric.

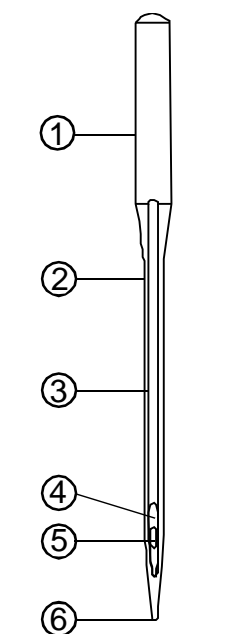
Always purchase good quality needles. Change needle often.

Weight	Fabric	Needle Type	Needle Size
Very Light	Chiffon, Fine Lace, Organdy	Universal Ball Point	9 (65) 9 (65)
Light	Batiste, Lawn, Crepe de Chine, Challis Handkerchief Linen, Crepe, Taffeta, Satin	Stretch	11 (75)
		Universal	11 (75) 12 (80)
	Single Knits, Jersey, Swimwear, Tricot	Stretch Ball Point	11 (75) 11 (75)
	Leather, Suede	Leather	11 (75)
Medium	Flannel, Velour, Velvet, Velveteen, Corduroy, Linen, Gabardine, Wool, Terry, Burlap	Universal	14 (90)
	Double Knits, Stretch Velour, Stretch Terry, Sweater Knits	Ball Point	14 (90)
	Leather, Vinyl, Suede	Leather	14 (90)
Heavy	Denim, Sailcloth, Ticking	Denim	16 (100)
	Coating, Polar Fleece, Drapery and Upholstery Fabrics	Universal	16 (100)
	Leather, Suede	Leather	16 (100)
Very Heavy	Canvas, Duck, Upholstery Fabrics	Universal	18 (110)
	Topstitching for Special Finish	Topstitching	11 (75) 14 (90)



## Needle Definitions

The illustration identifies the main parts of a sewing machine needle.



1. Body
2. Shaft
3. Long groove (round side of needle)
4. Short groove (flat side of needle)
5. Eye
6. Point



**Universal** – an all-purpose needle that handles most woven and knit fabrics. A universal needle size 14/90 comes inserted in your machine.



**Ball point** – the point spreads the fibers, preventing tears and is especially suited for knit fabrics. Not recommended for embroidery.



**Denim** – the sharp tip effectively pierces densely woven fabrics such as denim and canvas.



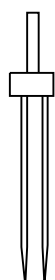
**Stretch** – specially designed to prevent skipped stitches in synthetic suedes and elasticized knits (swimwear).



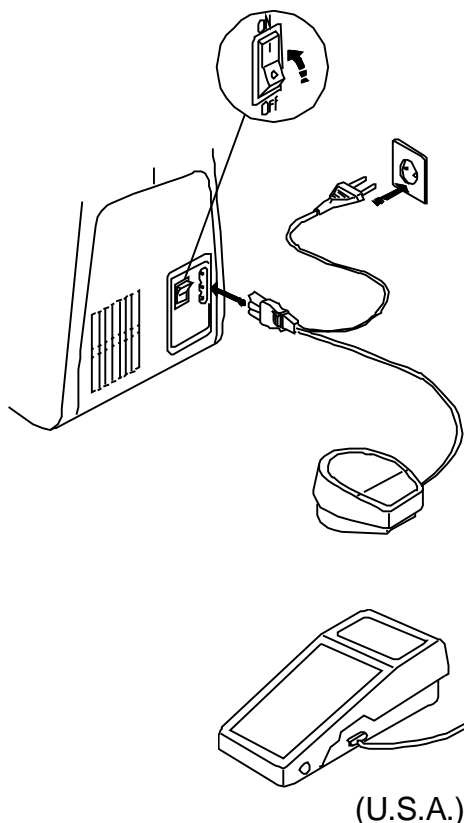
**Leather** – the cutting point creates small holes in leather and suede.



**Topstitching** – the extra sharp tip penetrates layers of fabrics; extra large eye and large groove accommodate heavyweight topstitching thread.



**Twin/Double** – 2 needles are joined on a crossbar and share a single shaft. Sews two parallel rows of stitching. Available in universal and ballpoint.



## Connecting the Machine to Power Supply

Your machine is equipped with a detachable power cord. Before connecting the power cord, make sure the voltage and frequency shown on the machine are identical to your electrical power.

Check that the power/light switch is in the off position. Push the plug into the machine socket and plug the machine into the wall socket.

Your machine may come equipped with a polarized plug (one prong wider than the other). A polarized plug reduces the risk of electrical shock. This plug is intended to fit into a polarized outlet. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

Switch on the machine.

## For Your Safety

Do not use extension cords or plug adapters.

Do not touch plug with wet hands.

Always turn off the power/light switch first and then unplug from the electrical outlet. Examples:

- when leaving the machine unattended
- when cleaning the machine

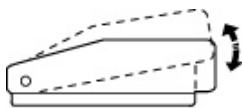
Always turn off the power/light switch:

- when attaching or removing parts such as needle, presser foot, needle plate
- when threading needle or bobbin

Do not place anything on the foot control.

Do not place heavy items on cords. Do not subject cords to heat. Do not use damaged cords. Have the cord repaired immediately.

While the machine is in operation, always keep your eye on the sewing area and do not touch any moving parts such as the thread take-up lever, flywheel or needle.



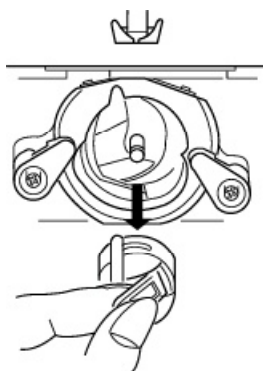
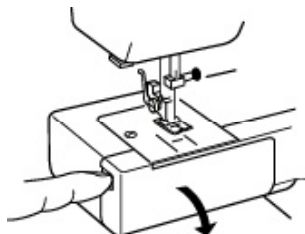
## Foot Control and Sewing Speed

Sewing speed is determined by how hard you press on the foot control. The harder you press on the foot control, the faster the machine runs.

**IMPORTANT:** Before using your sewing machine the first time, place waste fabric under the presser foot and run the machine without thread for a few minutes. Wipe away any excess oil.

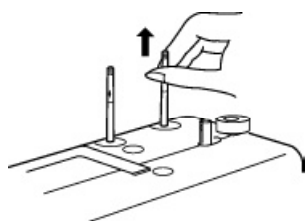
## Removing the Bobbin Case

Remove extension table and open the bobbin cover.



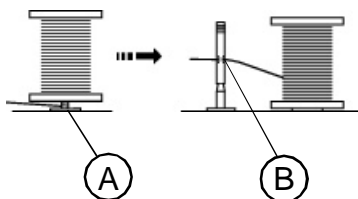
Hand turn the flywheel toward you to raise the needle. Pull out the latch to remove the bobbin case.

Release latch. Drop bobbin out of bobbin case.

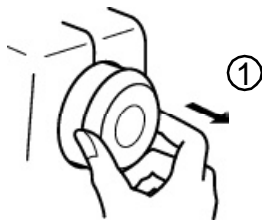


## Spool Pins

Pull up spool pin(s) to place thread spool. Push spool pin(s) down when carrying or storing machine.

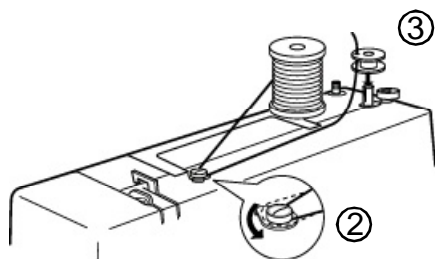


**NOTE:** If thread tangles under spool A, pass thread through hole B as shown.

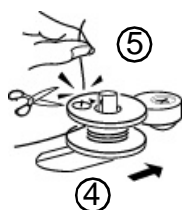


## Winding a Bobbin

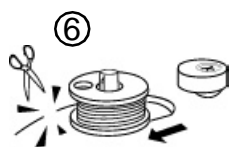
1. Pull out the flywheel to keep the needle from moving up and down.



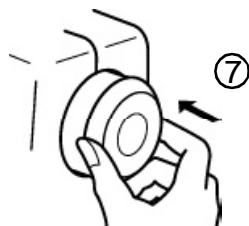
2. Place the spool of thread on the spool pin with the thread coming off the spool as shown. Pull the thread over around the bobbin winder thread guide.
3. Pass the thread through the hole in the bobbin from inside to the outside. Place the bobbin on the bobbin winder spindle.



4. Push the bobbin winder spindle to the right.
5. Hold the free end of the thread and press the foot control. Stop the machine when it has made a few turns and cut the thread tail close to the hole in the bobbin.



6. Press the foot control again until the bobbin is fully wound. Return the bobbin winder spindle to the left and cut the thread.



7. Push the flywheel back into place. (The machine needle will not go up and down until you push in the flywheel.)

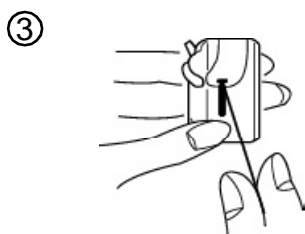
## Inserting the Bobbin



1. Place the bobbin in the bobbin case. Make sure the thread unwinds in the direction shown in the illustration.

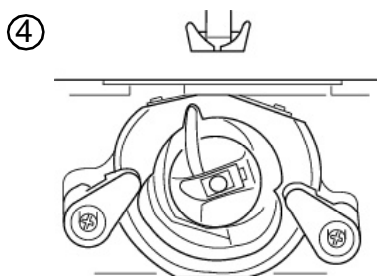


2. Pull the thread into the bobbin case slot.



3. Draw the thread under the tension spring and into the delivery eye.

Pull out about 15 cm (6") of thread.

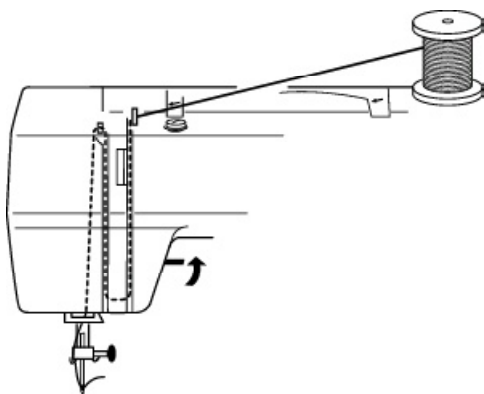


4. Pull out the latch on the bobbin case.

Insert bobbin case. Make sure the prong fits into the hook race.

Close bobbin cover.

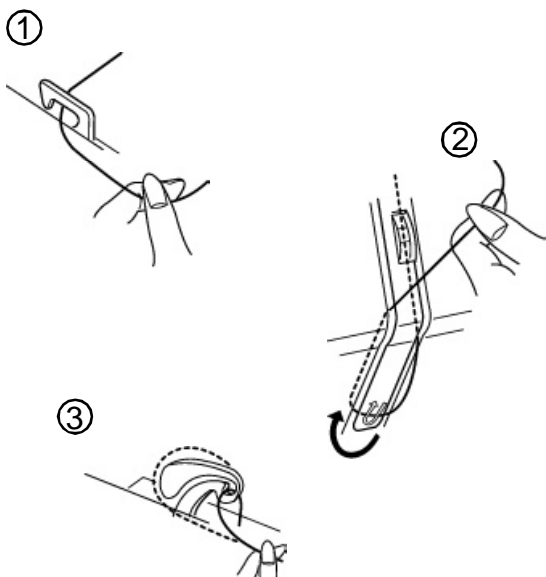




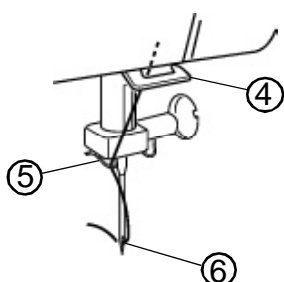
## Threading the Machine

Turn the flywheel toward you to raise the needle to its highest position.

Raise the presser foot.

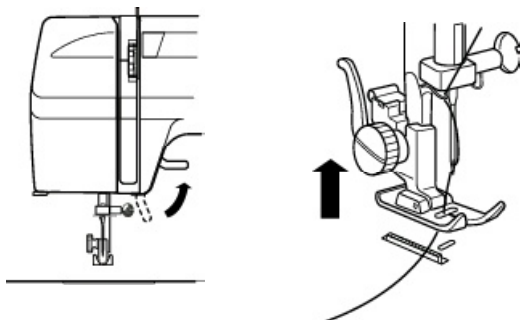


1. Pull the thread under the thread guide.
2. Guide the thread down the right side slot into the tension area, continuing down around the check spring holder.
3. Firmly pull the thread from right to left, over the take-up lever and down into the take-up lever eye.



4. Pull the thread down behind the lower thread guide.
5. Pull thread down behind left needle bar thread guide.
6. Thread the needle from front to back.

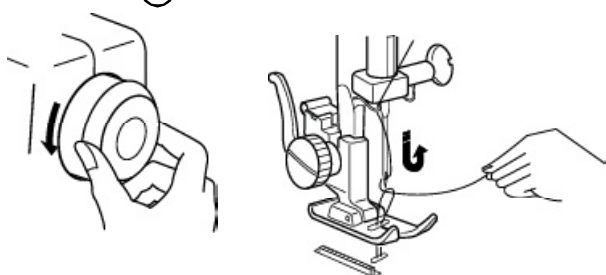
①



## Drawing Up the Bobbin Thread

1. Raise the presser foot and hold the needle thread lightly with your left hand.

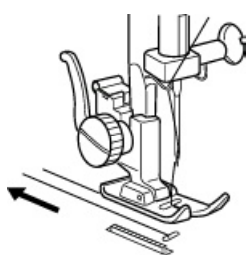
②



2. Turn the flywheel towards you to lower needle into machine. Continue turning until the needle has risen and the take-up lever is at its highest position.

Pull up the needle thread together with a loop of bobbin thread.

③



3. Slide 10 cm (4") of both threads to the back under the presser foot.

## SECTION III

### Sewing Basics

#### Example Of How To Read the Machine Set-Up Information

##### Set Stitch Selection Knob

- ① Set stitch selection knob on straight stitch.

##### Set Stitch Length Knob

- ② Set stitch length knob according to fabric weight (see page 18).

##### Set Thread Tension Dial

- ③ Set thread tension to 4. The fabric, thread and number of layers of fabric might change where tension should be set.

##### Set Stitch Width/Needle Position Dial

- ④ Move the Stitch Width/Needle Position Dial to 5 for center needle position or 0 for left position.

##### Which Presser Foot to Use

- ⑤ Use presser foot shown for the best sewing result.

Metal foot – Used mainly for straight and zigzag stitches longer than 1.0.

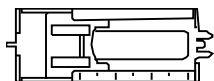
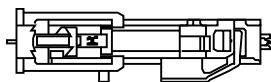
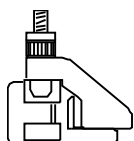
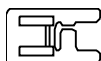
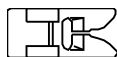
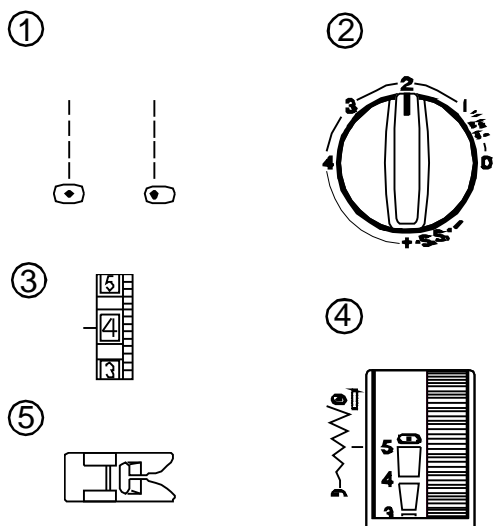
Satin stitch foot (Model 2130 only) – The cutout on the underside of the foot is designed for dense stitch formation. Ideal for satin and decorative stitches.

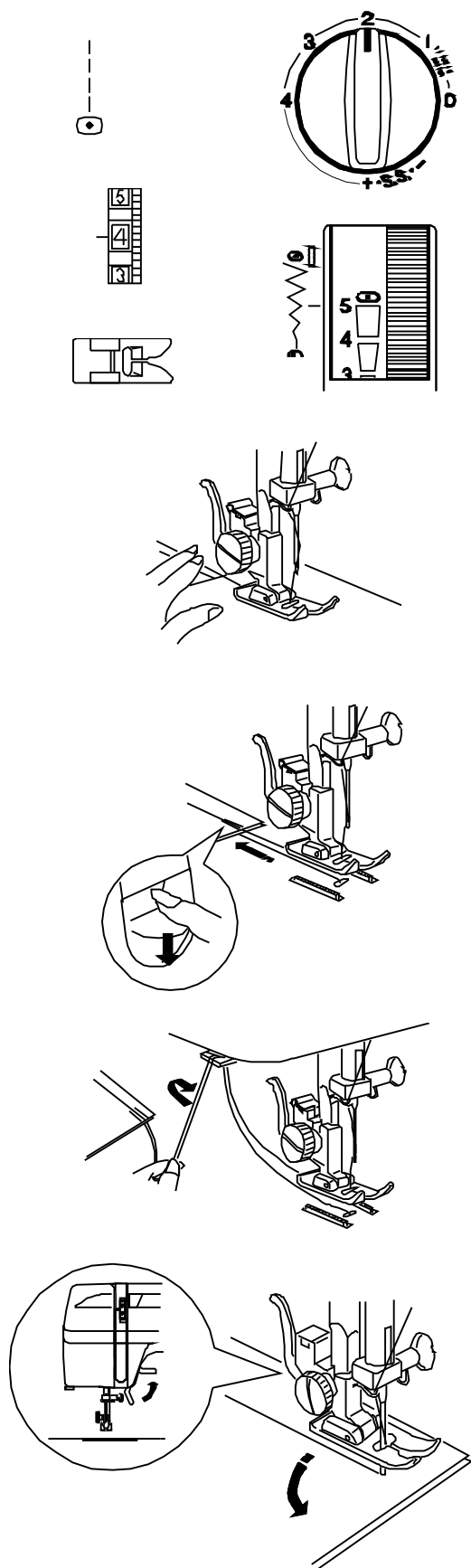
Zipper foot (Model 2130 only) – Use when sewing zippers into place to avoid the foot riding on top of the zipper coil.

Blind Hem foot – The adjustable guide ensures that the needle catches only one or two fibers of the hem.

R: Automatic buttonhole foot (Model 2130 only) – Place button in foot. The machine will automatically sew the correct size.

4-step buttonhole foot (Model 2110 only) – Use the measurements on the foot to make a properly sized buttonhole.





## Straight Stitch

The straight stitch is used to sew a seam in woven fabrics and may also be used for gathering, basting, sewing in a zipper, pintucks, rolled hems and twin needle hems.

**NOTE:** Fine fabrics should have a stitch length between 1.5 and 2.5, medium fabrics between 2.0 and 3.0 and heavier fabrics between 3.0 and 4.0.

## Starting To Sew

Raise the presser foot and position the fabric next to a seam allowance line on the needle plate. Lower the needle to the point where sewing is to begin.

Pull the threads under the foot towards the back and lower the presser foot. Press the foot control. Gently guide the fabric along the seam allowance line letting the fabric feed naturally.

## Finishing Off a Seam

To fasten the threads at the end of a seam, press and hold the reverse stitch lever while sewing.

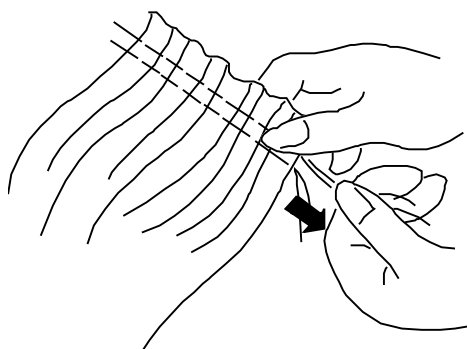
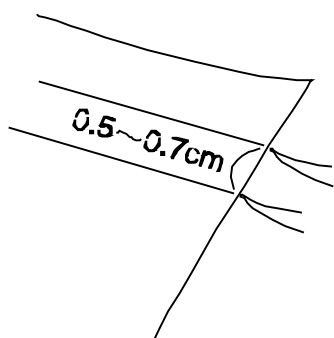
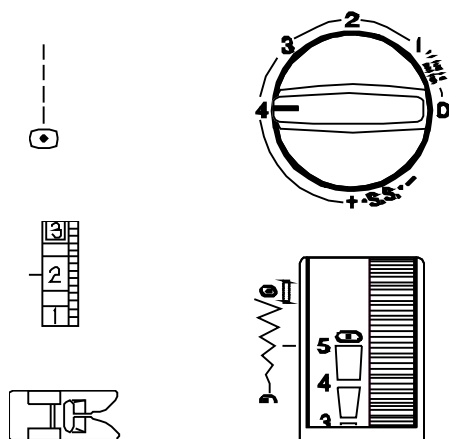
Raise the presser foot. Use the flywheel to bring the needle to its highest position before moving the fabric. Remove the fabric; pull the threads up and into thread cutter to cut them the proper length to start the next seam.

## Changing Sewing Direction

Begin sewing and stop when you reach the point where you want to turn the fabric. Using the flywheel, bring the needle down into the fabric.

Raise the presser foot.

Pivot the fabric around the needle to change the sewing direction. Lower the presser foot and continue sewing.



## Gathering

Gathering/shirring evenly distributes fullness in an area with very tiny pleats. Gathering is one row or two parallel rows. Shirring is three or more parallel rows. Light to medium weight fabrics provide the best results.

Decrease tension to 2.0 – 4.0.

Increase stitch length to 4.

Sew two rows of parallel stitches. Sew first row next to raw edge using foot edge as guide. Sew second row next to first row using foot edge as guide. Leave long thread tails at beginning and end of each row.

Pull the bobbin threads simultaneously from each end of the fabric until the desired amount is gathered.

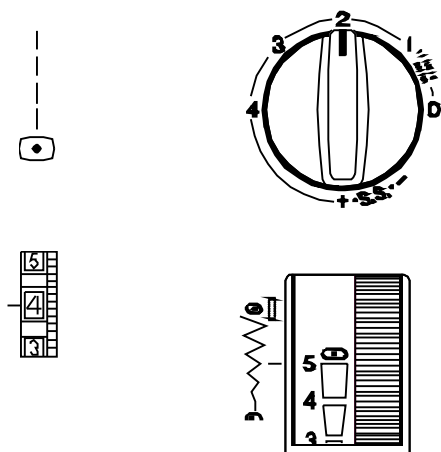
Knot the threads at each end and distribute the gathers evenly.

Reset machine settings to straight stitch. See page 18.

Sew between two rows of stitching to secure gathering.

**OR**

Lay gather fabric over flat fabric and sew the two fabrics together directly on the second row of gathering stitches.



## Zipper Insertion (Model 2110 – optional foot)

### • Lapped Application

Lapped zippers are usually inserted into a side seam of skirts or pants, for example.

Attach the pin on the zipper foot to the groove on the shank.

- To sew the left side of the zipper, attach the zipper foot on the right-hand side.
- To sew the right side of the zipper, attach the zipper foot on the left-hand side.

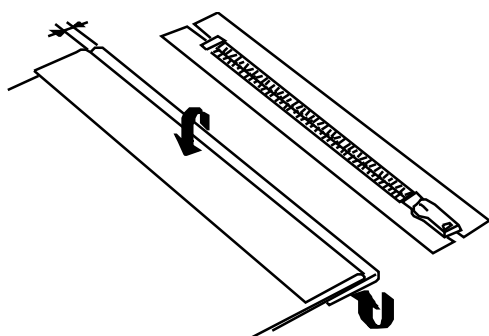
### • Fabric Preparation

Add 1 cm (3/8") to the zipper size. Use this measurement and mark the opening for the zipper.

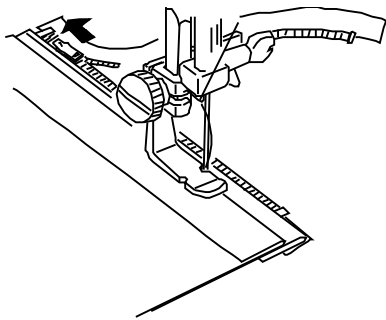
Place right sides of fabric together and sew the seam located below zipper placement. (Make sure to reverse sew the stitches directly below the zipper placement.)

Increase stitch length to 4 and baste the zipper opening closed. Press the seam and basting seam open.

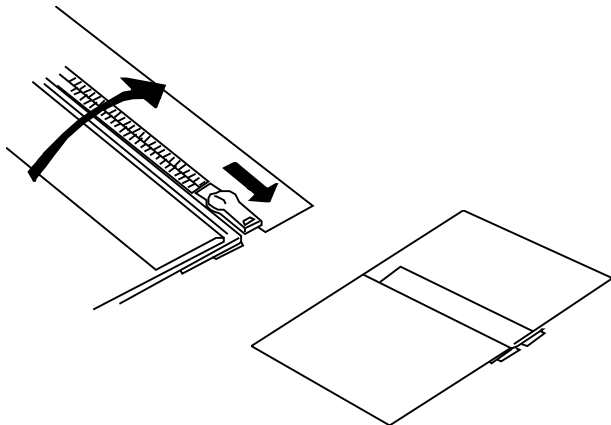
Open zipper and place it face down on the seam allowance. Teeth are on the seam line and zipper top is 1 cm (3/8") from fabric top edge. Attach foot with left side pin. Baste zipper in place, sewing from bottom to top.



Close zipper. Turn zipper face up (right seam allowance forms a small fold at basting line) and smooth zipper teeth away from seam. Attach foot with right side pin. Reset straight stitch length to 2.5. Starting at the bottom, sew through the folded seam allowance and zipper tape.

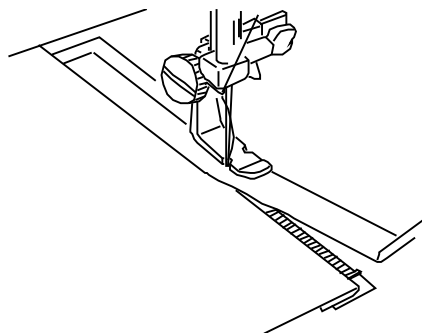


Stop just before the zipper foot reaches the slider on the zipper tape. Lower the needle slightly into the fabric. Raise the zipper foot and open the zipper. Lower the foot and stitch the remainder of the seam.



Close the zipper and spread the fabric flat with the right side facing up. Set stitch length to 4 and baste through the opened seam allowance and zipper tape.

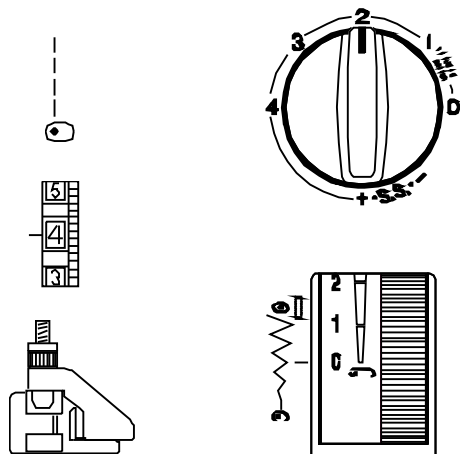
Reset stitch length to 2.5.



Move the zipper foot to the left side pin. Guide the edge of foot along the zipper teeth and stitch through the garment and zipper tape. Stop about 5 cm (2") from the top of the zipper.

Slightly lower the needle into the fabric. Raise the foot, remove the seamline basting stitches and open the zipper. Lower the foot and stitch the remainder of the seam, making sure the fold is even. Remove remaining basting stitches.

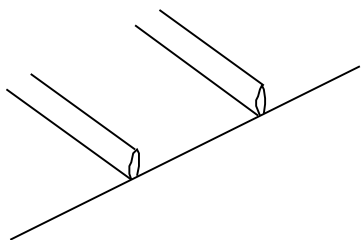
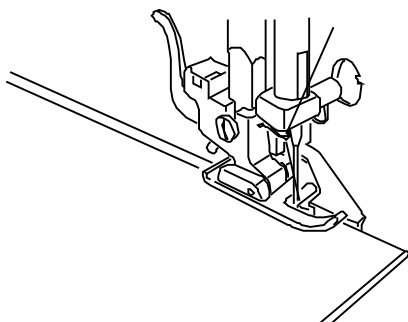


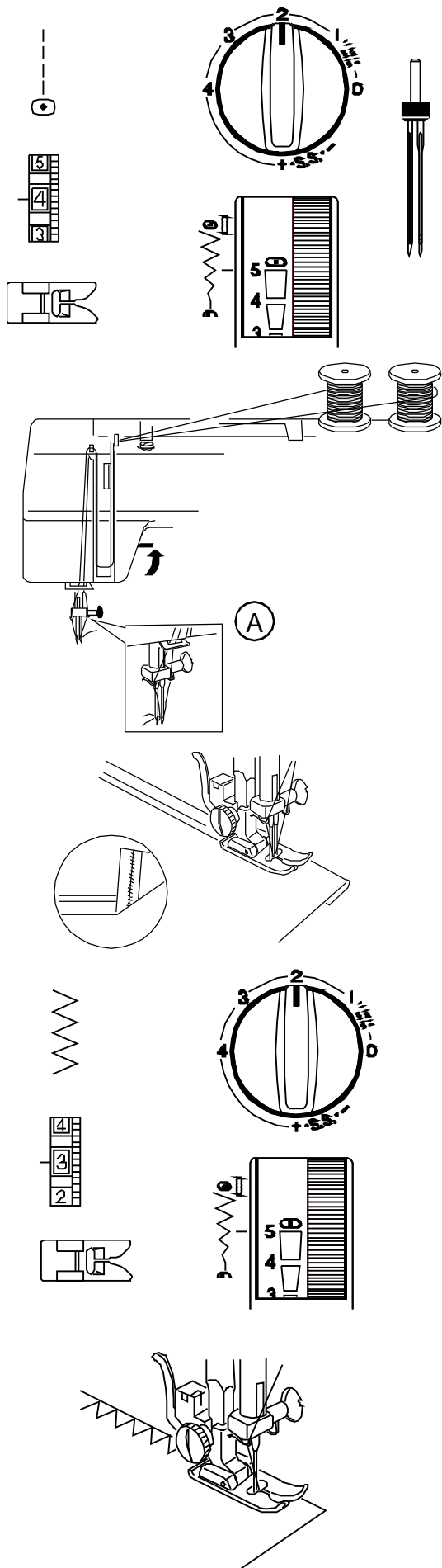


## Pintucks

Pintucks should be added to your fabric before cutting out the pattern piece.

1. Use a washable fabric marker and draw lines for pintucks on the fabric right side.
2. Fold the fabric together on the first line with wrong sides together.
3. Place folded fabric under presser foot against the blind hem foot guide. Lower the needle into the fabric. Decide how wide you want the pintucks and move the adjustment nut.
4. Sew using the foot as a guide for the folded edge.
5. Sew all pintucks. Remove fabric marker lines before pressing pintucks to one side.





## Twin Needle Hem (optional needle)

A twin needle hem is quick and easy. It is especially useful for very stretchy fabrics. Be sure to use a stretch twin needle for knit fabrics.

Turn off the power switch and insert a twin needle.

Thread the machine in the same manner as for single thread (see page 15), using both spool pins. Pull one thread down behind each needle bar thread guide (A).

Thread each needle from front to back.

Fold the hem up desired amount and topstitch with the twin needle. Carefully trim away excess fabric using sharp scissors. This is an excellent hemming method for knit fabrics because the bobbin thread zigzags, allowing the hem to stretch with the fabric.

Remove twin needle. Set up machine for single needle sewing.

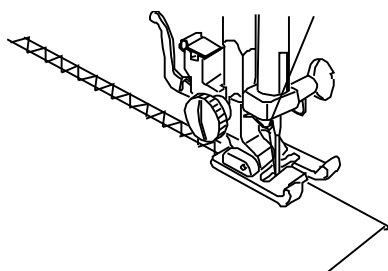
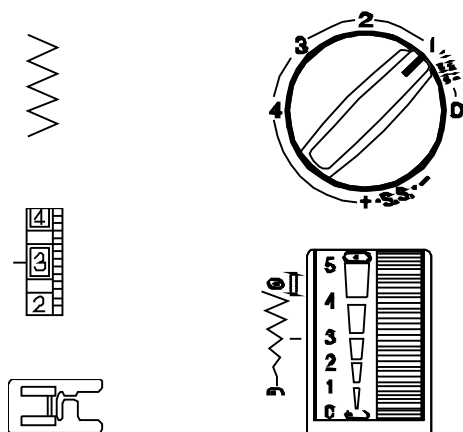
## Zigzag Stitch

The zigzag stitch is a very versatile stitch. Simply change its width and length. Use the zigzag to finish raw edges, sew satin stitch appliques, sew on buttons, etc.

## Overcasting

Simple zigzag stitching is used for finishing raw seam edges to prevent fabric from unraveling. Finishing seam edges is called overcasting.

Place the fabric under the presser foot so the needle swings off the fabric to the right.



## Whip and Roll Hem (Model 2110 – optional foot)

This technique makes a beautiful edge on ruffles and hems. It should only be used for lightweight fabrics.

1. The fabric edge must be clean cut with no unraveling threads.
2. Lay the fabric edge in the middle of the foot. Begin sewing slowly with the zigzag catching the fabric edge on the left and going off the raw edge on the right. The fabric will automatically roll itself under the stitch.

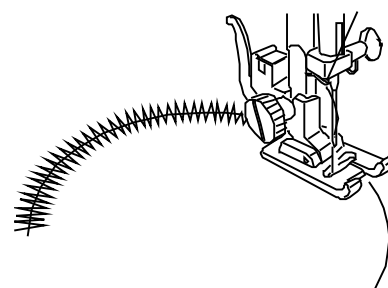
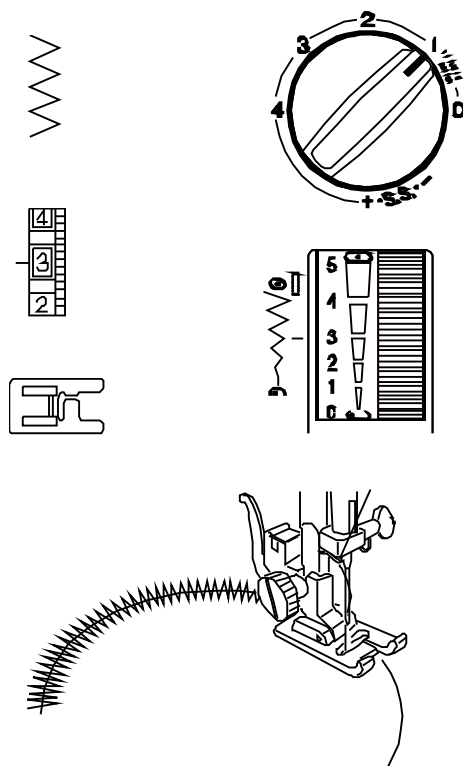
## Satin Stitch Applique (Model 2110 – optional foot)

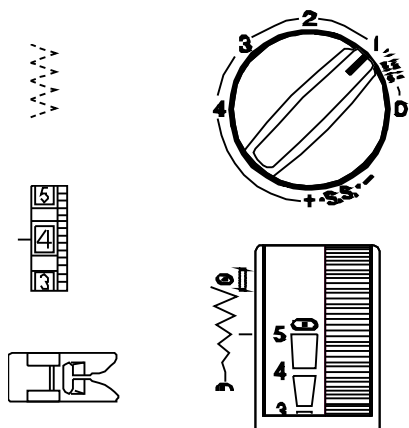
The zigzag stitch is commonly used for applique, monogramming, stems of flowers and petals. (A short zigzag stitch length creates the satin stitch.) Threads of 100% cotton, rayon or silk provide the best results.

- Apply stabilizer to the fabric for the stitch to form correctly.

### • Applique Preparation

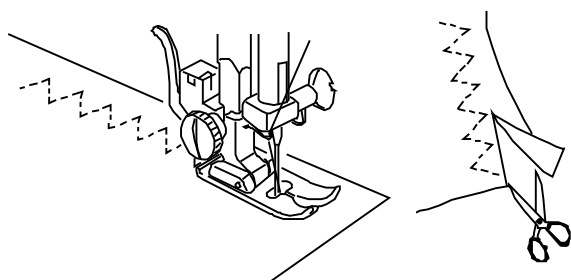
1. Press fusible webbing to the wrong side of a lightweight fabric.
2. Cut out design shape. Fuse design to main fabric.
3. Sew design to fabric with the needle swinging off the applique.
4. When you reach a place where you need to turn, bring the needle into the fabric, raise the presser foot, turn fabric, lower the presser foot and continue sewing.



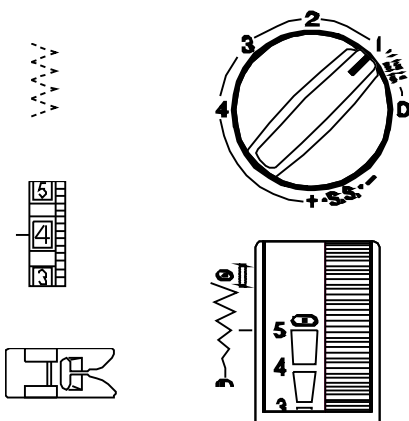


### 3-Step Zigzag

The 3-step zigzag (sometimes called a multiple zigzag) is used to finish raw seam edges. This stitch gives a flatter edge finish than the regular zigzag. It is also used for mending tears in fabric.



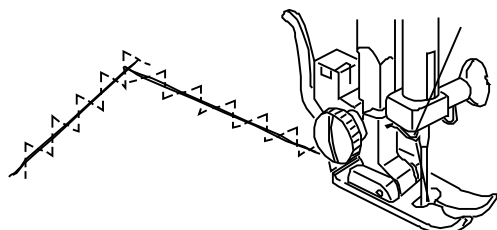
Place the fabric under the presser foot so the needle swings off the fabric to the right or trim away any excess fabric.

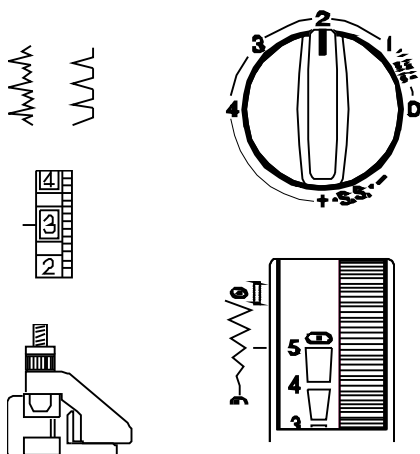


#### • Mending a Tear

Pull torn edges together and fuse a piece of interfacing slightly larger than the tear to the wrong side of the garment.

Begin sewing above the tear. Stitch down the middle, pulling edges together. Stop sewing just beyond end of tear. Depending on the tear, you might need to stitch area 2 or 3 times.



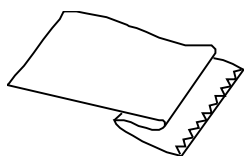


## Stretch Blind Hem (#4)

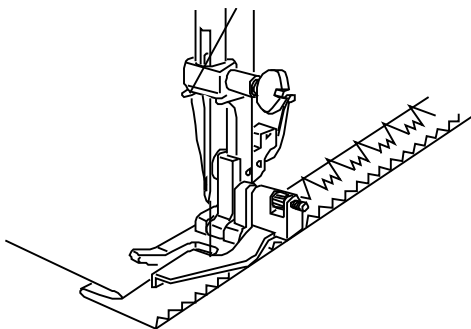
Or

## Woven Blind Hem (#5)

The blind hem may be used to sew a blind hem on either knit or woven fabrics. Elna invented the stretch blind hem in 1952.

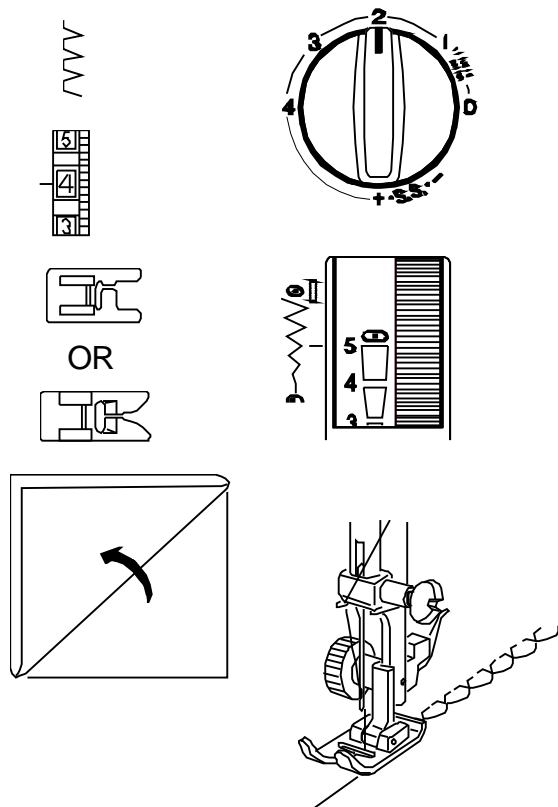


Finish the raw hem edge with a zigzag or 3-step zigzag before sewing the blind hem. Fold up the hem allowance and press. Fold under the hem toward right side of garment. Leave a 6.5-10 mm (1/4" to 3/8") extension at the right.



Lower the presser foot. Loosen the shank thumb-screw and insert blind hem foot between thumb-screw and shank. Tighten thumbscrew and raise presser foot.

Position the fabric so the folded edge is to the left side of the guide. Lower the presser foot. Make sure only the widest zigzag catches one or two fibers of the fold.



## Shell Tuck (Model 2110 – optional foot)

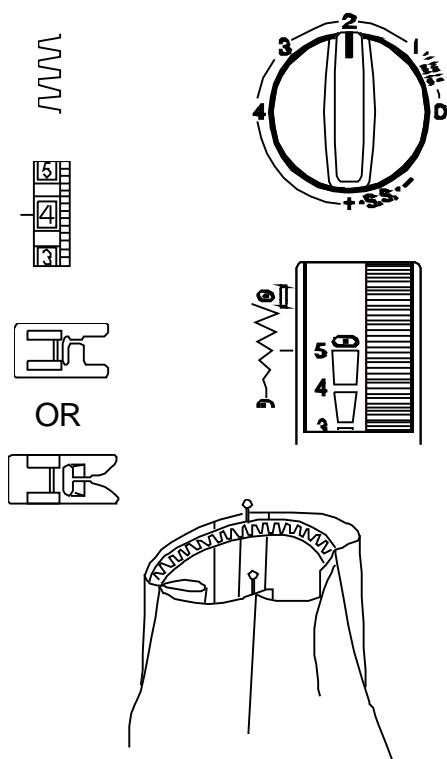
This is a pretty hem finish for lingerie and tricot fabrics.

May also be used for decorative rows of stitching.

Use a lightweight fabric such as tricot. Fold and stitch on the bias. Set the stitch width and length as you desire. You may need to tighten the top thread slightly. Allow the needle to just clear the folded edge of the fabric when it swings off the fabric to the right.

If you sew rows of shell stitches, space the rows at least 1.5 cm (5/8") apart.

You can sew shell stitches in any direction on knits or soft silky wovens.

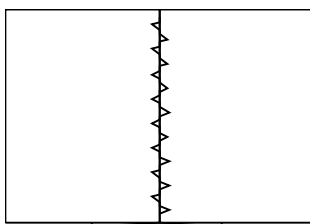
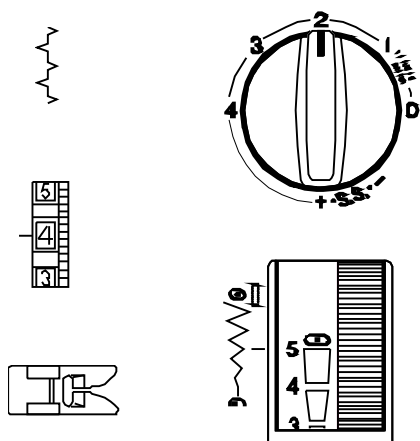


## Box Stitch (Model 2110 – optional foot)

Choose the box stitch to attach elastic directly onto fabric without making an elastic casing.

1. Mark the elastic into quarters and match these to the center front, center back and side seams.
2. Place the middle of the elastic under the center of the presser foot and stitch into place, making sure the elastic is evenly stretched.

**NOTE:** Use the optional Elastic Gatherer to eliminate manually stretching the elastic.



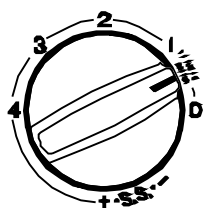
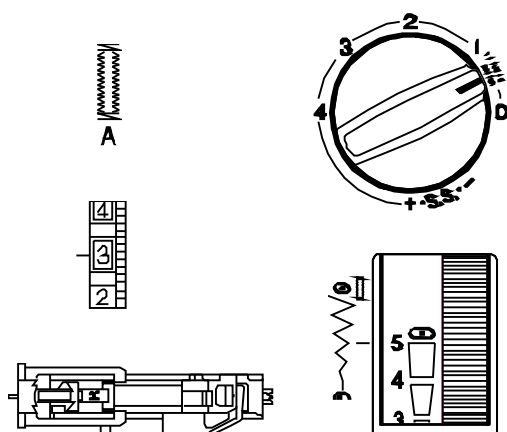
## Picot Stitch

The picot stitch may be used to sew fabrics together "edge-to-edge".

1. Fold and press under the seam allowance to wrong side of fabric on both fabric edges.
2. With the fabric right side up, place the folded edges next to each other under the middle of the presser foot. Sew with the folded edges touching each other.

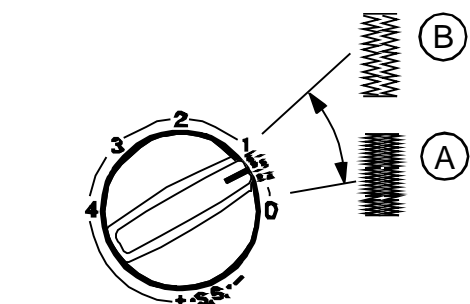
**NOTE:** Create fagoting (bridging), a technique seen in heirloom sewing, with the optional Fagoting (Bridging) Plate. Two folded edges are joined together by threads over an open area.



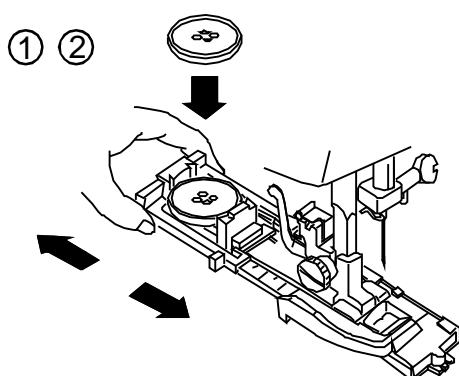


## Automatic Buttonhole (Model 2130 Only)

All buttonholes should use interfacing that is the same weight as the fabric. Interfacing is especially important when sewing on stretch fabrics. **Always** make a test buttonhole on extra fabric before sewing on your garment.

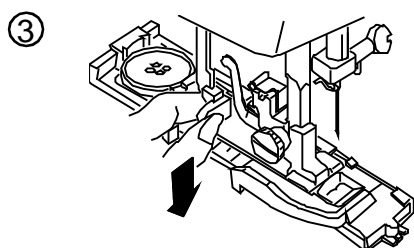


Use a shorter stitch length for finer fabrics ①. Use a longer stitch length for heavier fabrics ②.

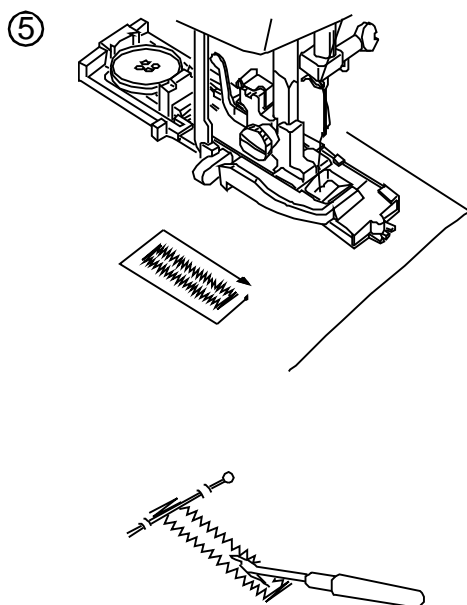
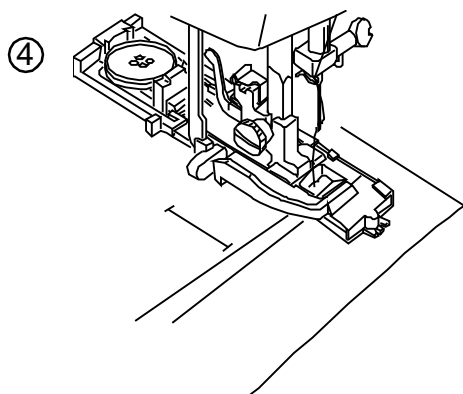


1. Attach the automatic buttonhole foot. Make sure the button opening is at the back of the foot when it is attached.
2. Pull open the button holder to the back and place the button in it. Push the holder together tightly around the button.

Placing the button in the automatic buttonhole foot automatically sets the size of the buttonhole. The button holder on the foot adjusts for a button up to 2.5 cm (1") in diameter.



3. Pull the buttonhole lever down as far as it will go.



4.. Mark the buttonhole area on the fabric. Place both threads to the left under the foot. Insert the garment under the foot and turn the flywheel until the needle comes down into the fabric. The needle should go in exactly at the marked line for the buttonhole. Lower the presser foot.

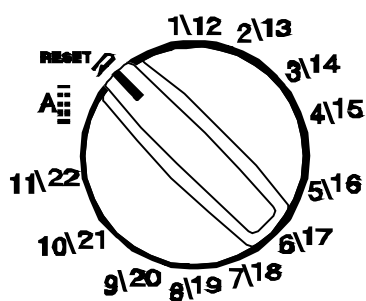
5. The buttonhole will automatically sew:

1. the front bartack and zigzag on left side
2. back bartack
3. zigzag on right side

Sew slowly and stop sewing when front bartack is reached and buttonhole is complete.

6. Cut threads at least 10 cm (4") long. Pull the needle thread to the wrong side of the fabric. Knot the threads.

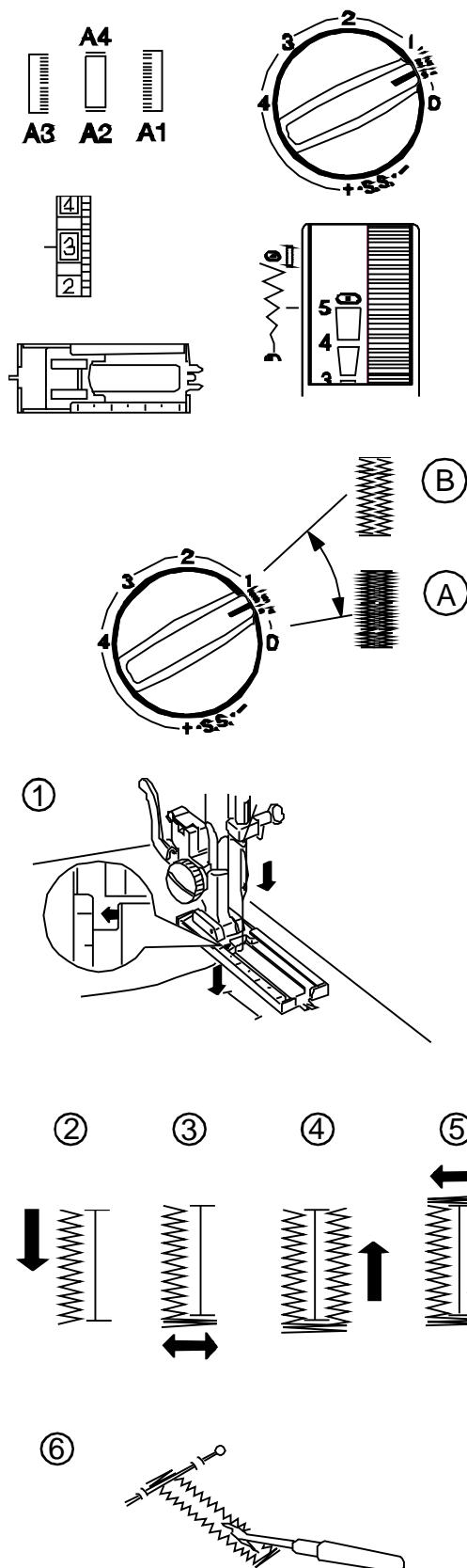
To cut the buttonhole open, place a pin just inside the bartack (to prevent accidentally cutting bartack) and use a seam ripper.



To sew another buttonhole, turn the stitch selector knob to "Reset" and back to "A".

**NOTE: It is important to turn the stitch selector knob so that you begin the next buttonhole with the front bartack step.**

When buttonhole sewing is finished, push the buttonhole lever upward as far as it will go.



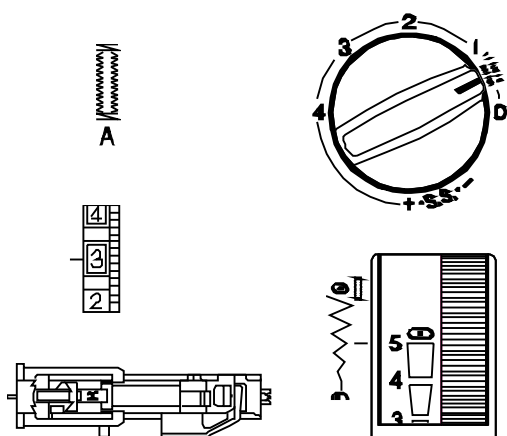
## 4-Step Buttonhole (Model 2110 Only)

All buttonholes should use interfacing that is the same weight as the fabric. Interfacing is especially important when sewing on stretch fabrics. **Always** make a test buttonhole on extra fabric before sewing on your garment.

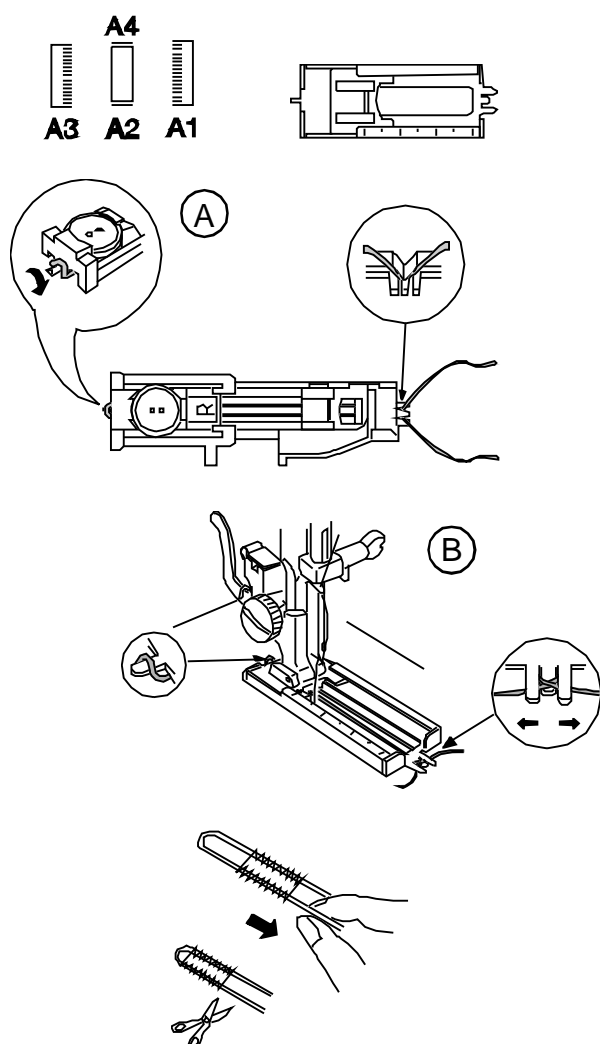
Use a shorter stitch length for finer fabrics A. Use a longer stitch length for heavier fabrics B.

1. Set stitch selection knob on buttonhole step A1. Turn the flywheel toward you to raise the needle to its highest position. Raise presser foot. Mark buttonhole placement.
2. Place fabric under presser foot with slide pushed back as far as it will go (see illustration). Lower presser foot. Sew left side of buttonhole. Stop sewing when desired length is sewn.
3. Set stitch selection knob on buttonhole step A2. Sew 5 bartack stitches.
4. Set stitch selection knob on buttonhole step A3. Sew right side of buttonhole. Stop sewing when right length equals left length.
5. Set stitch selection knob on buttonhole step A4. Sew 5 bartack stitches.
6. Cut threads at least 10 cm (4") long. Pull needle thread to wrong side of fabric. Knot the threads.

To cut the buttonhole open, place a pin just inside the bartack (to prevent accidentally cutting bartack) and use a seam ripper.



OR



## Corded Buttonhole

Corded buttonholes are found on coats and other garments that require extra strong buttonholes. The cording reinforces and accentuates the buttonhole.

With the buttonhole foot raised, hook the filler cord on the spur at the back of the buttonhole foot. Bring the ends forward under the buttonhole foot.

Position the cord into the forks on the front of the foot to hold the ends tight. (A – model 2130, B – model 2110)

Sew a corded buttonhole using the same directions as for a buttonhole.

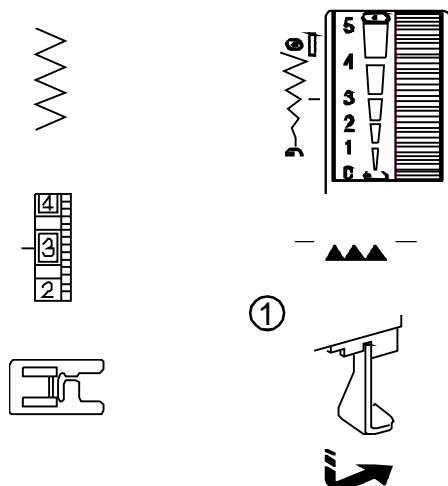
- Set the stitch width to match the thickness of the cording.

Lower the needle into the garment where the buttonhole will start and lower the presser foot.

Press the foot control and slowly sew the buttonhole. Each side of the buttonhole and the bartacks will be sewn over the cord. Remove the fabric from the machine and cut only the sewing threads.

Pull the left end of the cord to tighten it. Thread the end through a darning needle; draw to the wrong side of the fabric and cut.

Cut open buttonhole.

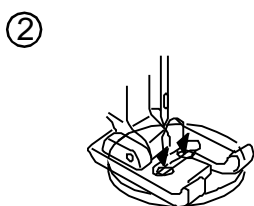


## How To Sew On a Button (Model 2110 – optional foot)

Hand sewing buttons to a garment is very time-consuming.

Sew them on in one quick, easy step.

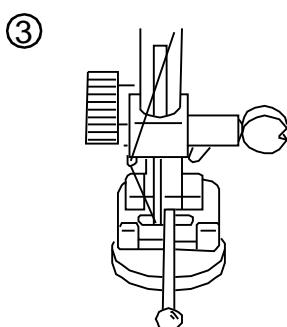
1. Drop the feed dog. See page 6.
2. Place the button on the fabric and turn the flywheel to lower the needle into a hole of the button. Lower the presser foot to hold the button in place.



3. Turn the flywheel to have the needle enter the opposite hole of the button. Readjust the stitch width if necessary. To form a thread shank, place a pin on top of the foot.

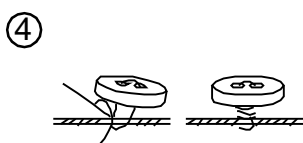
Stitch several times.

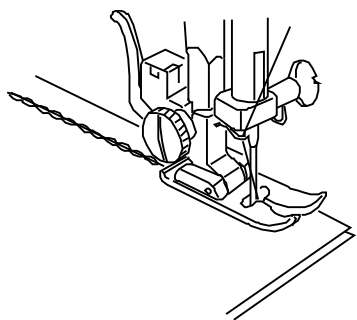
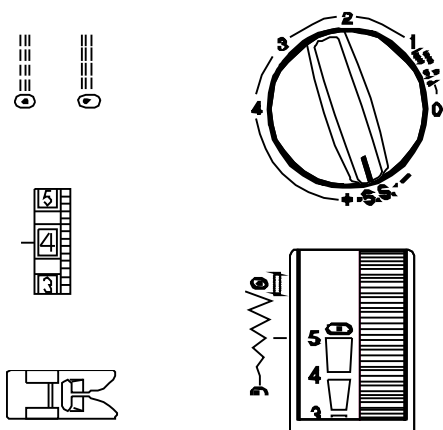
After you finish sewing, cut the thread but leave 10-15 cm (4-6") of thread at the button.



4. Pull the thread to the reverse side of the fabric and tie the threads.

Raise the feed dog after sewing on buttons.





## SECTION IV

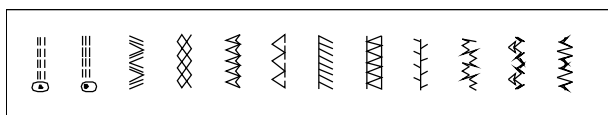
### Stretch Stitches

#### Triple Seam

This strong durable stitch is recommended where both elasticity and strength are needed. Because of its durability, once in place this stitch is not easily removed. Use it to reinforce areas such as crotch and armhole seams or to construct items such as backpacks. This stitch can also be used for topstitching.

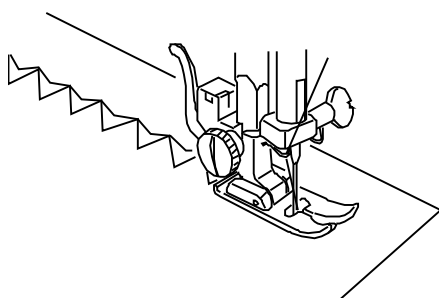
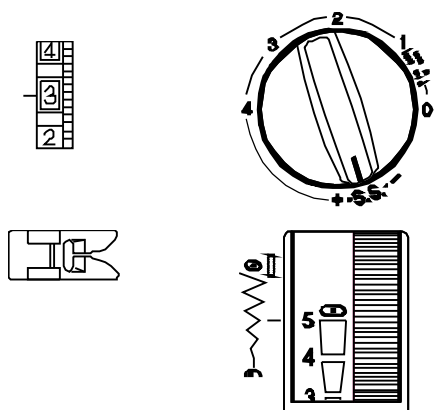
Elna invented this stitch in 1952.

Using a straight stitch (stitch length 4), baste a seam together. Verify the fit. Reset the machine for triple seam and sew.

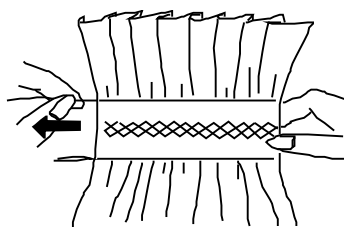
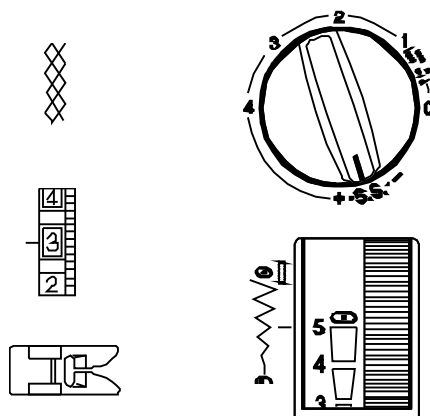
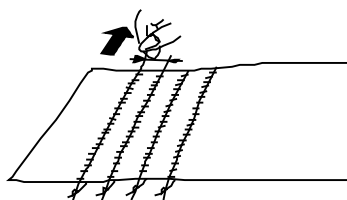
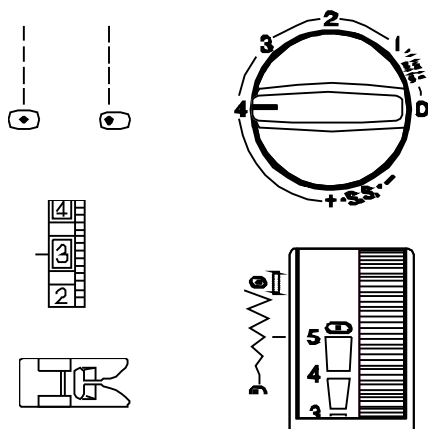


#### Decorative Stretch Stitches

Choose a decorative stretch stitch for applying a hem to knit fabrics.



1. Fold and press under hem allowance.
2. Place the fabric underneath the presser foot. Lower the presser foot. Sew hem.
3. Trim away any excess hem fabric.

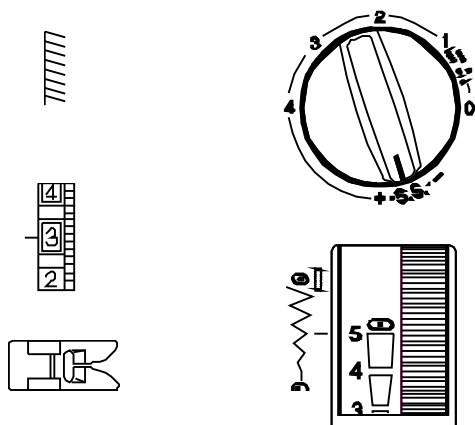


## Smocking

Smocking is a delicate, decorative treatment on children's clothing or women's blouses. Choose a soft, lightweight fabric such as batiste, gingham or challis. Cut the fabric three times the finished width.

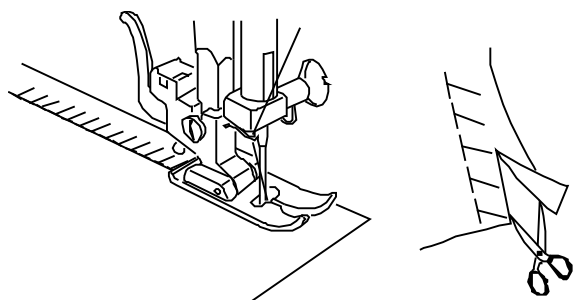
1. Set needle thread tension to 2.5. Use the straight stitch with the stitch length at 4.0.
2. Sew rows of straight stitches about 13 mm (1/2") apart, across the area to be smocked.
3. Tie the threads along one edge. Pull the bobbin threads to gather the fabric and make the gathers even. Tie the threads at the other end.
4. Turn the stitch selection knob to decorative stitch. Set needle thread tension to 3.0.
5. Sew the decorative stitch between the straight stitching lines.
6. Pull out straight stitching lines.



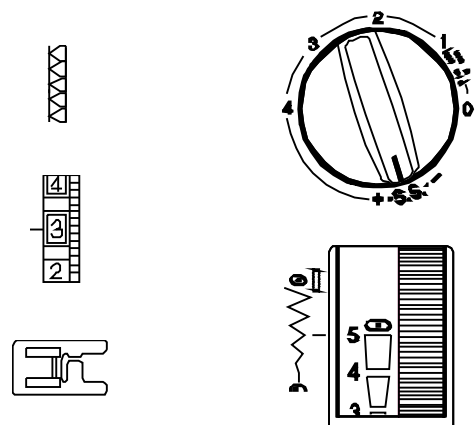


## Super Stretch Stitch

This stitch is recommended for sewing fabrics such as swimwear and stretch velour as it provides the greatest amount of stretchability and strength. Seams lie flat and do not lose their shape. Foot pressure may need to be lowered for fabric to maintain its shape.



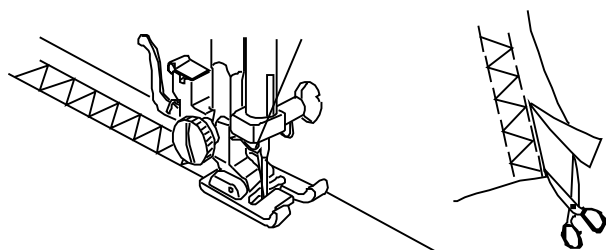
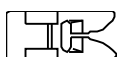
Place the fabric edges together under the presser foot. Trim away any excess seam allowance.



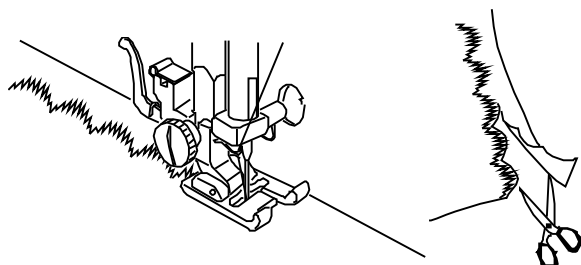
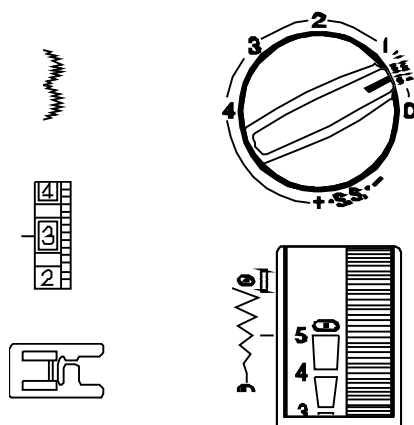
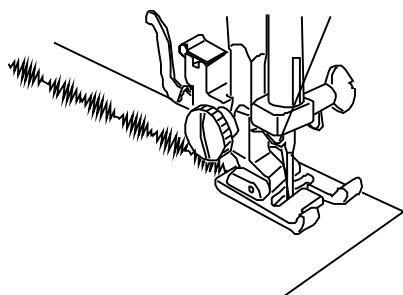
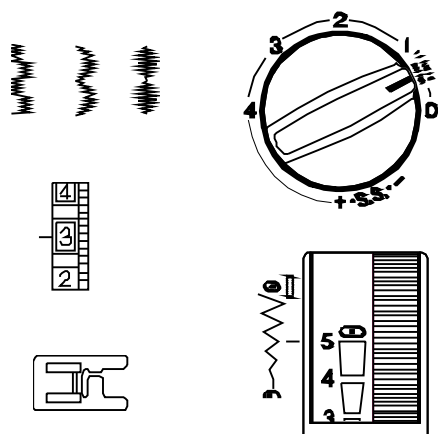
## Double Overlock Stitch

This stitch finishes the edges of your seams similar to a commercial overlock machine stitch.

OR



Place the fabric edges together under the presser foot. Trim away any excess seam allowance.



## SECTION V

### Satin Stitches (Model 2130 only)

Express your creative talents by using one of the pretty satin stitches to add a decorative accent.

It is very important to use a stabilizer with your fabric or the stitch will not form correctly. The weight of the stabilizer should be the same as the fabric.

1. Use a washable fabric marker to draw lines for the satin stitches.
2. Place the fabric underneath the presser foot. Lower the presser foot and sew over the line.

### Scallop Edges (Model 2130 only)

A scallop satin stitch can be used to attractively finish the edges of collars, pockets and placemats.

1. To edge a collar, place interfacing between upper and under collar and sew the scallop on the seam line.
2. After sewing, trim fabric close to stitching, taking care not to cut the scallops.

## SECTION VI

### Taking Care of Your Machine

The area around the bobbin, hook and feed dog must be cleaned each time the machine has been used a lot.

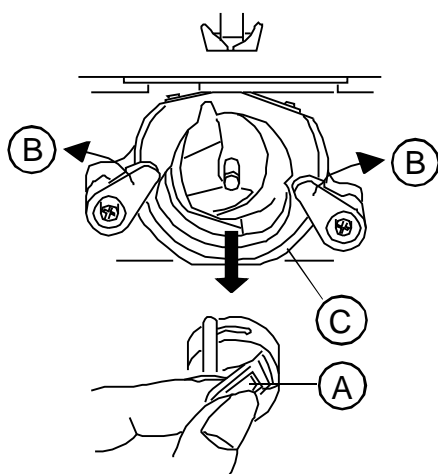
Clean the outside of the machine with a soft cloth and pure soap.

#### Cleaning the Bobbin Case and Hook

Loose threads and dust may cause puckered stitches and thread breakage during stitching. Check for lint buildup after each project is completed.

Unplug the machine before cleaning.

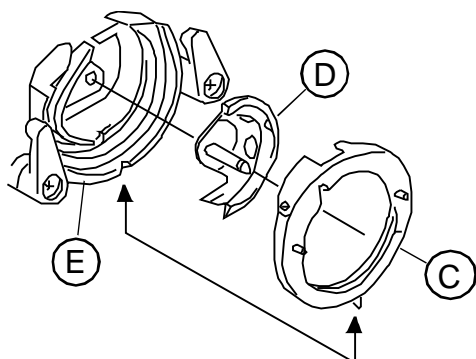
Turn the flywheel until the needle is raised and remove the needle.



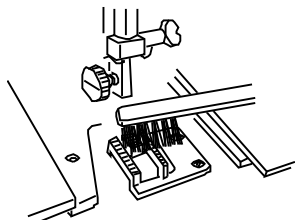
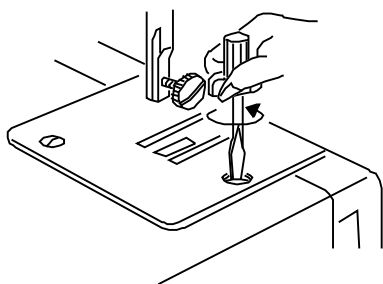
Remove the extension table and open the bobbin cover. Pull out the latch A and remove bobbin case and bobbin.

Open the hook race ring holders B and remove the hook race ring C.

Remove the hook D. Clean the hook race E with a brush or a soft cloth. (You may also use a small vacuum cleaner.)



To assemble the hook race, hold the hook D by the center pin and carefully put it back into the hook race E. Attach the hook race ring C making sure the bottom pin fits into the notch. Turn the holders B back into position to lock the hook race ring. Insert the bobbin case. Oil the hook slightly.

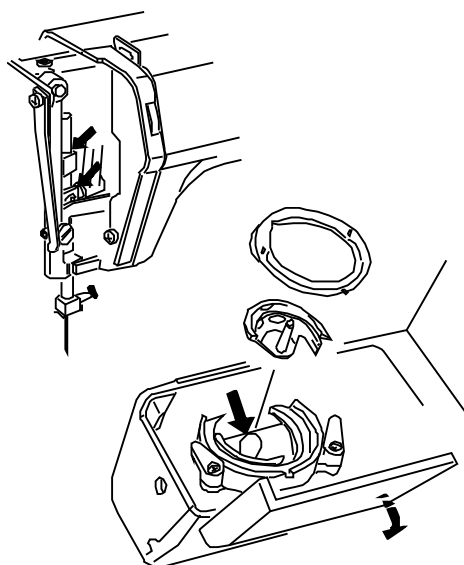


## Cleaning the Feed Dog

Unplug the machine. Remove the needle and presser foot. Remove the needle plate set screws and the needle plate.

With a brush, clean out dust and lint clogging the feed dog teeth.

Attach the needle plate. Replace needle and presser foot.

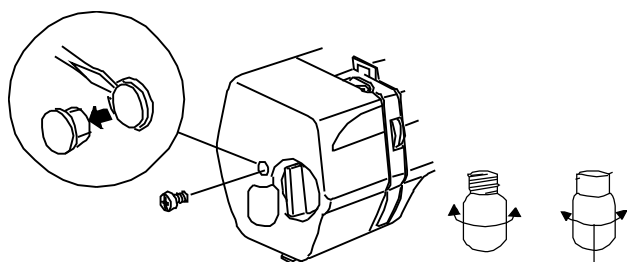


## Oiling

Unplug the machine. Remove screw cap, screw and face plate.

Apply a few drops of sewing machine oil to the points indicated by arrows in illustrations.

Machine should be oiled two or three times a year or more depending on frequency of use.



## Changing the Light Bulb

The sewing light is located behind the face plate.

Unplug the machine.

Remove screw cap, screw and face plate.

To remove: push and twist to left.

To replace: push and twist to right.

## TROUBLESHOOTING

Condition	Cause	See page(s)
<b>The machine is noisy and does not run smoothly.</b>	<ol style="list-style-type: none"> <li>1. Threads have been caught in the hook area.</li> <li>2. The feed dog is packed with lint.</li> </ol>	<p>38 39</p>
<b>The needle thread breaks.</b>	<ol style="list-style-type: none"> <li>1. The needle is not threaded properly.</li> <li>2. The needle thread tension is too tight.</li> <li>3. The needle is bent or blunt.</li> <li>4. The needle is not inserted correctly.</li> <li>5. The thread is either too heavy or too fine for the needle.</li> </ol>	<p>15 8 9 9 9</p>
<b>The bobbin thread breaks.</b>	<ol style="list-style-type: none"> <li>1. The bobbin thread is not threaded correctly in the bobbin case.</li> <li>2. Lint has collected in the bobbin case.</li> <li>3. The bobbin is damaged and does not turn smoothly.</li> </ol>	<p>14  38 Replace bobbin.</p>
<b>The needle breaks.</b>	<ol style="list-style-type: none"> <li>1. The needle is not inserted correctly.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle clamp screw is loose.</li> <li>4. The needle thread tension is too tight.</li> <li>5. The needle is too fine for the fabric being sewn.</li> <li>6. The stitch selection knob has been turned while the needle was in the fabric.</li> </ol>	<p>9 9 9 8 9 6</p>
<b>Skipped stitches.</b>	<ol style="list-style-type: none"> <li>1. The needle is not inserted correctly.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle and/or the thread are not suitable for the fabric being sewn.</li> <li>4. A stretch needle is not being used for sewing stretch, very fine and synthetic fabrics.</li> <li>5. The needle thread is not threaded properly.</li> </ol>	<p>9 9 9 10 15</p>
<b>The seam puckers.</b>	<ol style="list-style-type: none"> <li>1. The needle thread tension is too tight.</li> <li>2. The machine is not threaded correctly.</li> <li>3. The needle is too large for the fabric being sewn.</li> <li>4. The stitch length is too long for the fabric.</li> <li>5. The foot pressure dial is not set correctly.</li> <li>6. Threads have been caught in the hook area.</li> </ol> <p><i>Place lightweight tearaway stabilizer under lightweight fabrics.</i></p>	<p>8 15 9 18 4 38</p>
<b>The stitches form loops underneath the fabric.</b>	<ol style="list-style-type: none"> <li>1. The needle thread tension is too loose.</li> <li>2. The needle is either too large or too small for the thread.</li> </ol>	<p>8 9</p>
<b>The fabric does not feed smoothly.</b>	<ol style="list-style-type: none"> <li>1. The feed dog is packed with lint.</li> <li>2. The pressure foot dial is not set correctly.</li> <li>3. The stitches are too short.</li> <li>4. The correct presser foot is not being used.</li> </ol>	<p>39 4 18 17</p>
<b>The machine does not work.</b>	<ol style="list-style-type: none"> <li>1. The machine is not plugged in.</li> <li>2. A thread is caught in the hook area.</li> <li>3. The flywheel is pulled out for bobbin winding.</li> <li>4. The bobbin winder spindle is in the winding position.</li> </ol>	<p>11 38 13 13</p>
<b>The buttonhole is not correct.</b>	<ol style="list-style-type: none"> <li>1. The stitch length is not suitable for the fabric being sewn.</li> <li>2. Interfacing is not being used with fabrics.</li> </ol>	<p>29, 31 29, 31</p>

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