

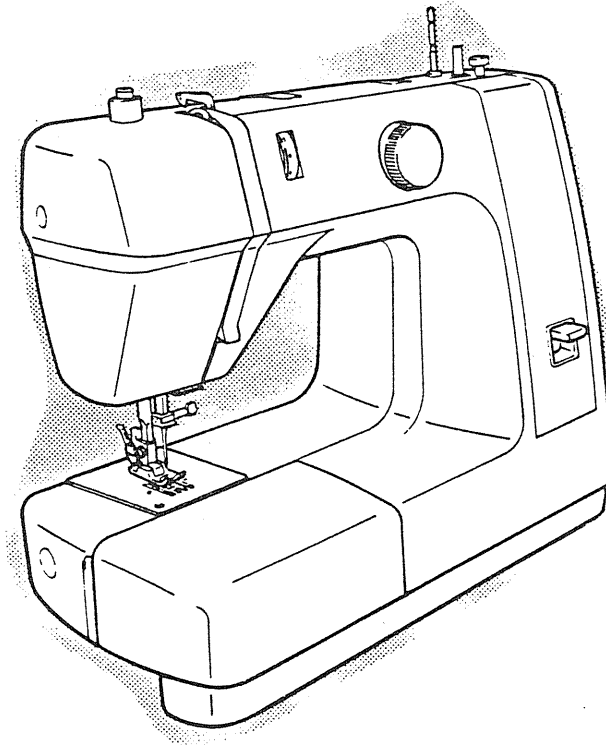
JUKI

COMPACT SEWING MACHINE

Liza - 100

Super Automatic Zigzag Sewing Machine

HZL-M100 C INSTRUCTION MANUAL



POLARIZED PLUG CAUTION

To reduce the risk of electric shock, this appliance has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

SEWING MACHINE

Record in space provided below the Serial No. and Model No. of this appliance.

The Serial No. is located Rear of arm.

The Model No. is located Rear of arm.

Serial No. _____

Model No. _____

Retain these numbers for future reference.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:

Read all instructions before using (this appliance).

DANGER – –To reduce the risk of electric shock:

An appliance should never be left unattended when plugged in. Always unplug this appliance from the electric outlet immediately after using and before cleaning.

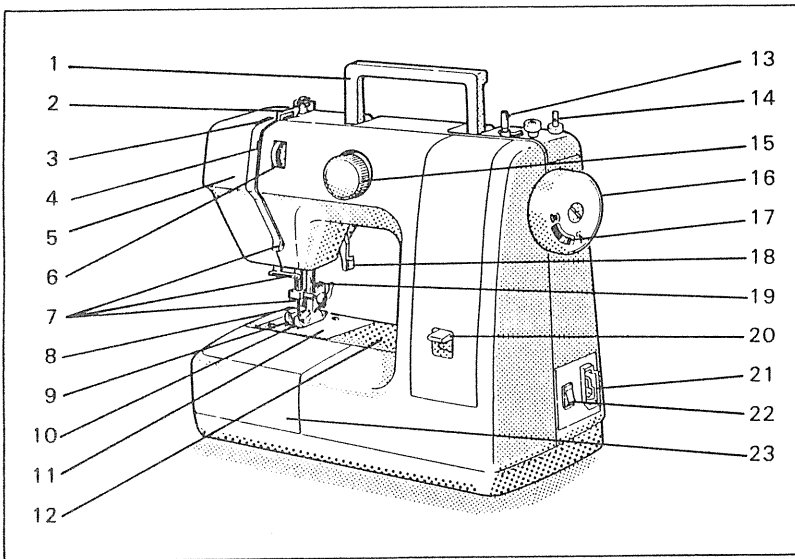
WARNING – –To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings blocked, Keep ventilation openings of the sewing machine and foot controller free from the accumulation of lint, dust, and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
9. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

DANGER

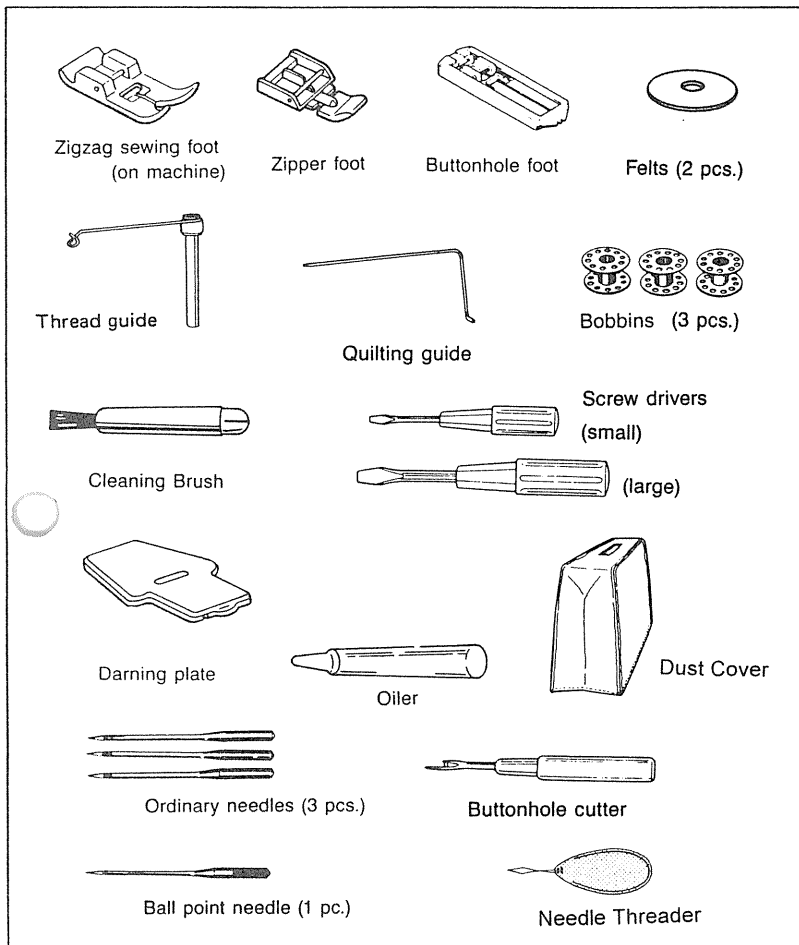
1. Always unplug before relamping. Replace bulb with same type rated 15 watts.
2. Do not reach for an appliance that has fallen into water. Unplug immediately.
3. Do not place or store appliance where it can fall or be pulled into a tub or sink. Do not place in or drop into water or other liquid.

NAMES OF PARTS



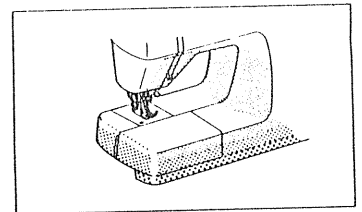
1. Handle
2. Thread guide for upper threading
3. Take-up lever
4. Upper tension plate
5. Face cover
6. Upper thread tension dial
7. Thread guide for upper threading
8. Presser foot thumb screw
9. Presser foot
10. Feed dog
11. Needle plate
12. Free arm
13. Bobbin winding spindle
14. Spool pin
15. Pattern selection dial
16. Handwheel
17. Declutch knob
18. Presser foot lifter
19. Thread cutter
20. Reverse sewing lever
21. Socket
22. Switch
23. Extension table. (Accessory box)

ACCESSORIES



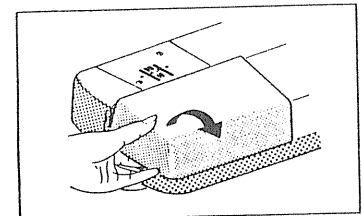
BEFORE SEWING

The machine is stored in flat-bed style which makes your work easier for ordinary sewing.



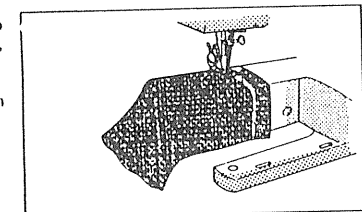
DETACHABLE EXTENSION TABLE

Remove the table (accessory box) off and the machine is used as a free-arm machine.

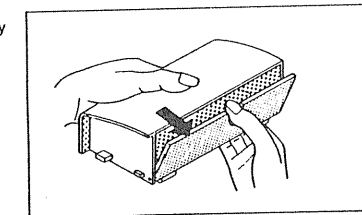


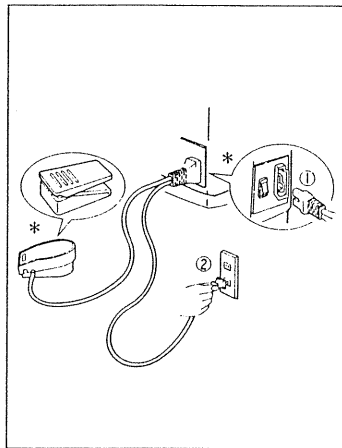
The free-arm is more convenient to sew or embroider; trousers, sleeves, cuffs of T-shirts, blouses, etc.

Reverse the above steps to attach the extension table.



To open the lid of the accessory box, pull it open, as illustrated.



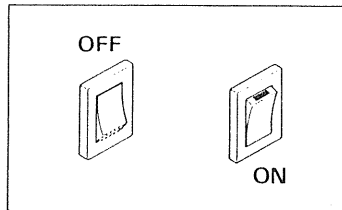


CONNECTING FOOT CONTROLLER AND POWER CORD

Connect foot controller and power cord ① ②.

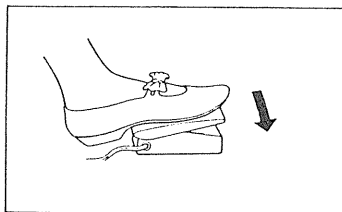
Before plugging in your machine, be sure that the voltage is same as that of your machine. (written on a plate at back of machine)

* Specifications vary from country to country.

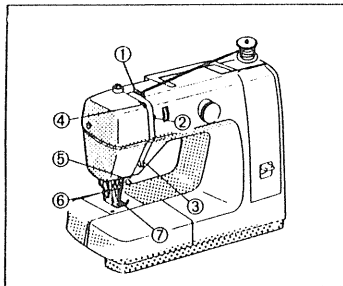


Switch on, power to the machine and turn on the sewing light.

Switch off, power off to the machine and turn off the sewing light.



The more you press foot controller, the faster the machine runs.

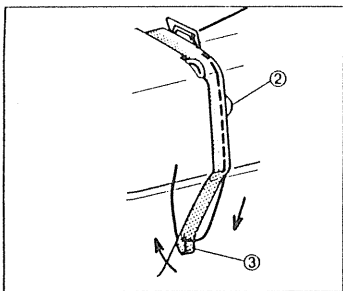


THREADING UPPER THREAD

Raise the presser foot lifter. Raise the take-up lever to the highest position by turning the handwheel towards you.

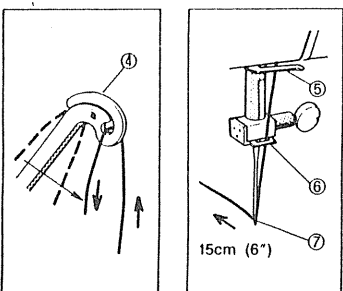
Thread following numbers ①-⑦.

Pass the thread through guide ①.



Lead thread through either side of tension disc ②.

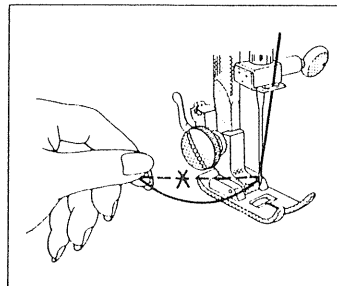
Hook the thread under the guide ③ as shown.



Thread take-up lever ④.

Pass thread through thread guide ⑤, and thread guide ⑥ then through the needle eye ⑦ from front to back.

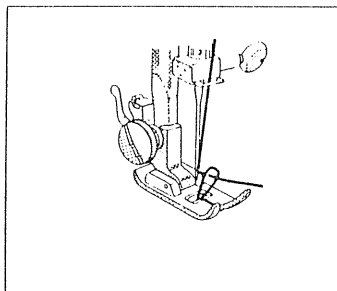
Allow about 15cm (6") of thread extra.



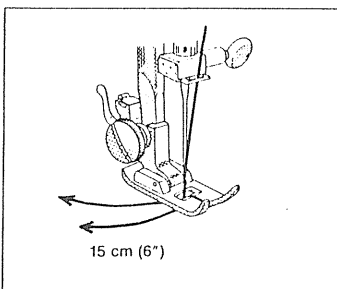
DRAWING UP LOWER THREAD

Hold the end of the upper thread with the left hand as illustrated.

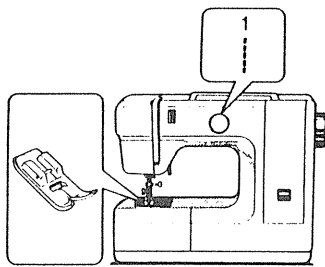
Turn the handwheel slowly towards you until the needle moves down and up again into its highest position.



Pull the upper thread slowly and the lower thread will be brought up in a loop.



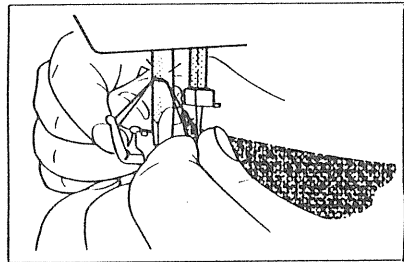
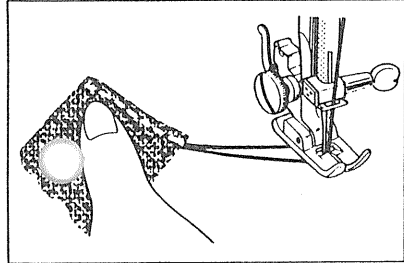
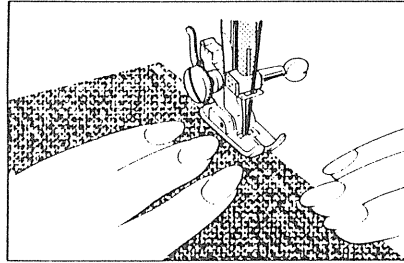
Pull out both threads to about 15 cm (6") and place them together at the left under the presser foot.




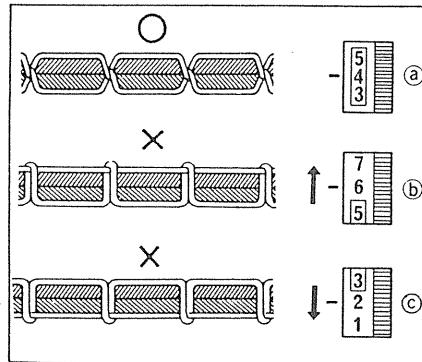
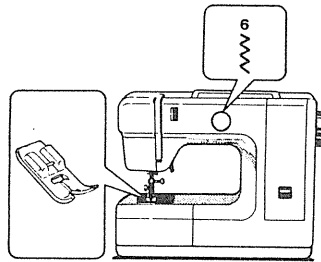
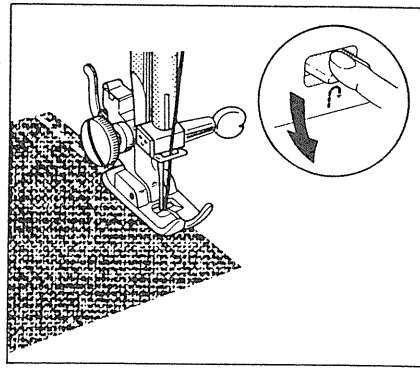
● TRIAL SEWING

Now that, you have finished the first steps (page 1-6), you are familiar with the controls on your machine and with the accessories provided for the machine you are ready to start to sew with your new sewing machine.

- Let's try to sew straight stitch. -




1. Make sure your machine is set completely as illustrated at the bottom figure of page 6.
 2. Pattern selection dial to 1 ().
 3. Upper thread tension dial to 4.
 4. Place fabric under the presser foot.
- * Fabric should be placed under the presser foot with the bulk of the material to the left of the needle and the right edge of the material placed on the appropriate seam allowance.
5. Lower presser foot lifter.
 6. Press foot controller lightly and commence forward sewing guiding the fabric by hand as it is fed. Never push or pull the material.
- * The more you press foot the controller, the faster the machine runs.
7. Draw out fabric to left when sewing is finished.
- * Always finish sewing each seam with the needle at its highest position.
- * Leave at least 15cm (6") of thread behind the needle so that it will not be drawn out of the eye of the needle when next sewing.
8. Cut threads with thread cutter behind the presser bar.




- Let's try reverse sewing. -



9. At first, sew forward. Then, push down reverse sewing lever to sew backwards. This is reverse sewing.
 10. Release lever to return to sew forward.
- * Reverse sewing is often done for reinforcement at the ends of seam (back stitching)

- Let's try zigzag sewing. -

11. Set pattern selection dial to 6 ().
12. Follow above step 4-6 This is zigzag sewing.

ADJUSTING THREAD TENSION

Test stitch performance on a scrap of material you are going to use. With correct tension (), upper and lower threads tension is equal and strong enough to lock both threads in center.

If upper tension is too tight (loose), upper (lower) thread lies straight along upper (lower) surface of fabric ( , ). Correct by turning tension dial.

* Always check the balance of upper and lower tensions by test sewing using fabric, needle, thread and stitch pattern you plan to use. (Correct combinations are described on page 15.)

● STARTING TO SEW

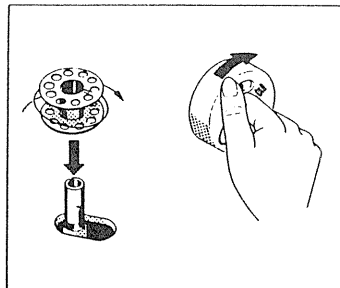
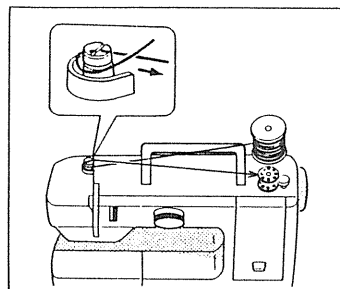
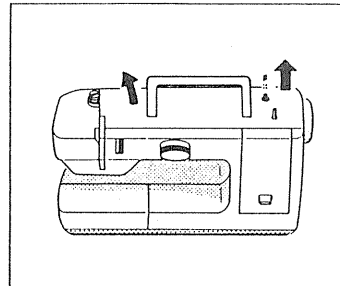
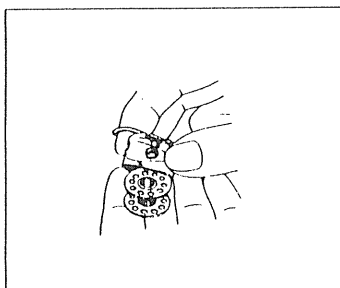
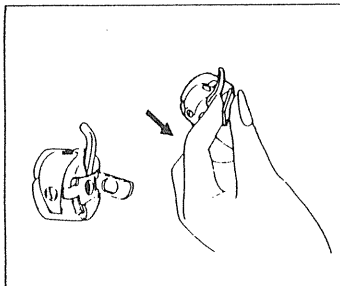
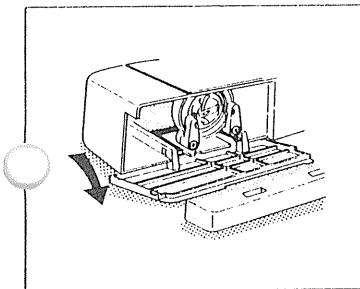
■ BOBBIN WINDING

Set the needle in the highest position by turning the handwheel towards you.

Open shuttle cover.

Open latch of bobbin case and pull it out.


Close latch of bobbin case and bobbin comes out easily.

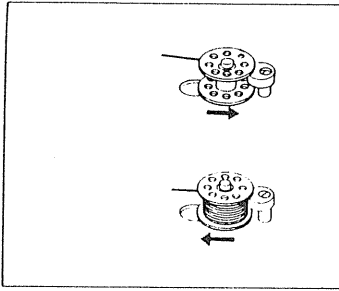


Fold the handle back. Pull out spool pin.

Put a spool on spool pin. Draw thread from spool pin through thread guide as shown.

Wind thread clockwise around bobbin several times. Push bobbin on to spindle.

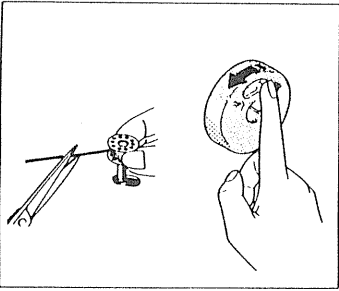
Move the declutch knob in the handwheel into the  direction.



Push bobbin to right and press down foot controller.

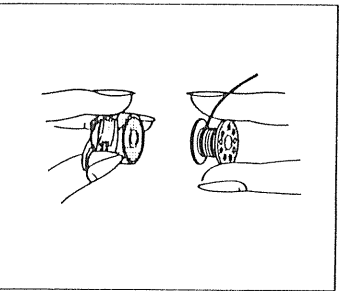
Machine stops automatically when bobbin is full.

Push bobbin to left, to disengage from wheel.



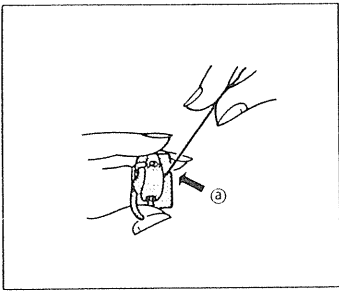
Take off bobbin off the spindle and cut the thread.

Move the declutch knob in the handwheel into the direction.

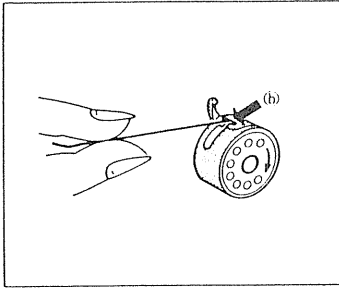


INSERTING BOBBIN

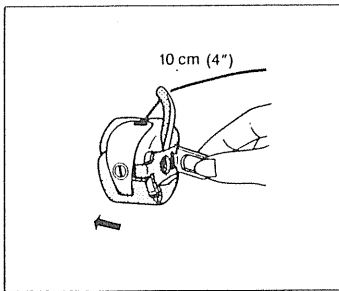
Place bobbin in its case with thread running in direction of arrow. (clockwise)



Guide thread into slot of bobbin case.

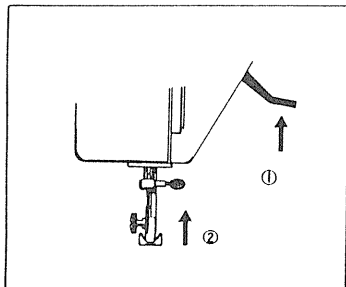


Pulling thread to left, bring it under tension spring then to delivery eye.



Raise the needle to the highest position.

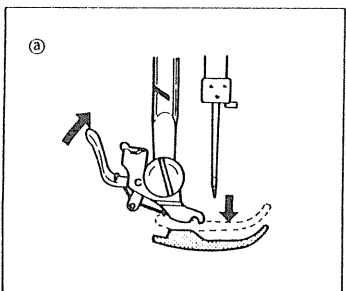
Leave end of thread of about 10 cm (4") from bobbin case. Take hold of latch and push bobbin case into shuttle. Release latch when bobbin case is fully inserted.



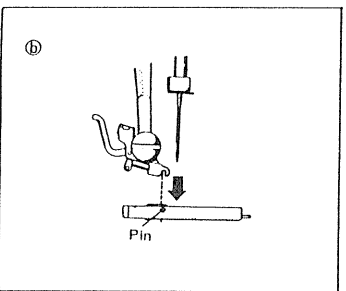
CHANGING FOOT

Raise presser foot lifter.

Set needle in the highest position by turning handwheel towards you.

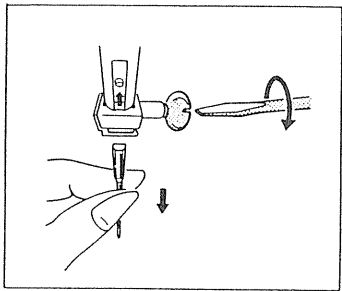


Push button of holder towards you and foot will come off.



Position a new foot by aligning holding groove of shank with pin of foot.

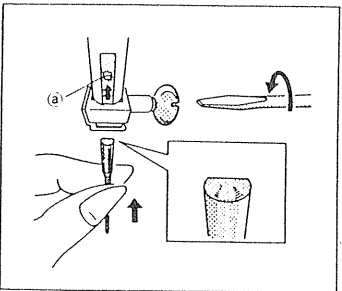
Lower presser foot lifter so that holder catches presser foot.



CHANGING NEEDLE

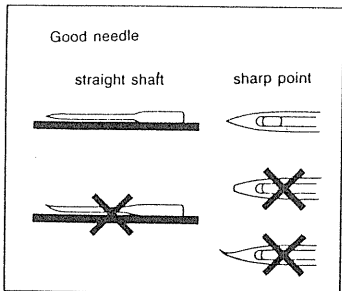
Set the needle in the highest position by turning the handwheel towards you.

Loosen needle clamp screw and take out needle.



With the flat side away from you, insert a new needle into groove of needle bar.

Push needle into clamp until it reaches stopper and tighten needle clamp screw firmly.

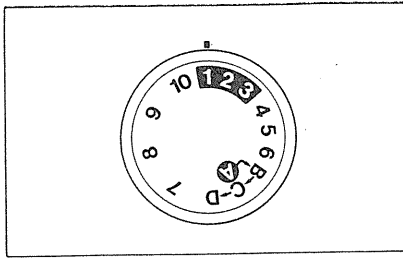


Always use a straight needle with a sharp point.

Using defective or worn needles not only causes stitch skipping, breakage of needles or snapping of thread; it also can damage shuttle and needle plate. Note: Always use needle type 15x1/705

● FABRIC, THREAD AND NEEDLE TABLE

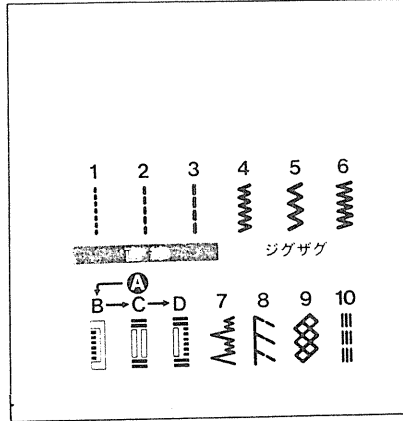
FABRIC	THREAD			NEEDLE			REMARKS
	European Cotton	Mercerized Cotton	Cotton Covered Polyester, Silk, Nylon	European 705	U.S.Size 15x1	Point Style	
VERY SHEER: Lace, Voile, Chiffon, Net	70	60	Silk Nylon	65-70	9	Regular	Loosen upper tension one or two points
SHEER: Blouse Crepe, Lawn, Organdy, Taffeta	50-70	60	Silk Nylon	65-70	9	"	
LIGHT-WEIGHT: Crepe, Wool, Brocada, Velvet	30	50	Silk	75-80	11	"	
MEDIUM: Wool, Silk, Linen, Velveteen, Cotton Faille, Terrycloth	30	50	Silk	80-90	11-14	"	
HEAVY: Denim, Duck, Sailcloth	30	Heavy Duty	C.C.Poly.	100	16	"	
EXTRA HEAVY; Upholstery, Canvas, Awning	30	Heavy Duty	C.C.Poly.	120	19	"	
[KNITS]							
LIGHT-WEIGHT: Tricot	50-70	60	Silk Nylon	70	9	Ball Point	
MEDIUM-WEIGHT; Jersey, Double Knit,	30	50	Silk Nylon C.C.Poly.	70-80	9-10	Ball Point	
HEAVY-WEIGHT; Double knit	30	50	Silk Nylon C.C.Poly.	80-90	11-14	Ball Point	
FAKE-FURS, VELOURS	30	Heavy Duty	C.C.Poly.	90-100	14-16	Ball Point	
[LEATHER]							
VINYLS FILMS	30	50	C.C.Poly.	90	14	Wedge	
LIGHT-TO-MEDIUM-WEIGHT	30	50	C.C.Poly.	90-100	14-16	Wedge	
HEAVY LEATHER	30	Heavy Duty	C.C.Poly.	100-110	16-18	Wedge	
[DECORATIVE TOUCHES]							
TOP STITCHING	Silk twist			100-110	16-18	Regular	
MACHINE EMBROIDERY	Size 50-70			65-80	9-11	Regular	



PATTERN SELECTION DIAL

The desired stitch will be obtained by turning the stitch selector, it can be turned either to the right or to the left.

Note: When operating selector, make sure the needle is in the highest position.



THE STITCHES ARE SHOWN AS BELOW

- Bartack stitch of buttonhole.
- Left side stitch of buttonhole.
- Right side stitch of buttonhole.

1 2 3 Straight stitch (3 kinds of stitch length)

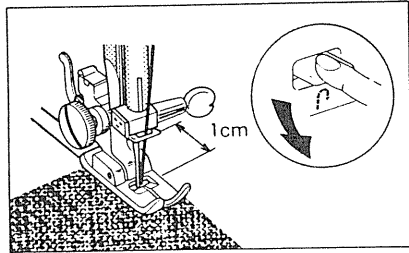
4 5 6 Zigzag stitch (3 kinds of zigzag width)

7 Stretch blind hem stitch

8 Feather stretch stitch

9 Honey comb stitch

10 Straight stretch stitch.



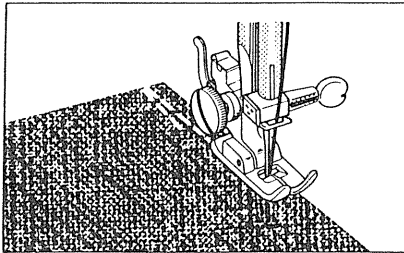
REVERSE SEWING

(Starting to sew)

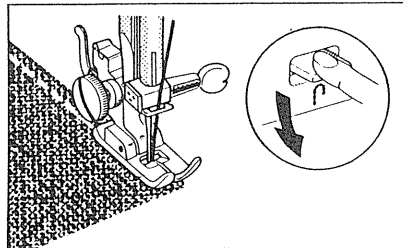
Place fabric under foot about 1 cm (0.4") inside the edge. Lower presser foot lifter.

(Reverse sewing)

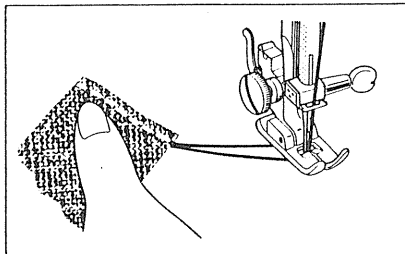
To reinforce seam, sew backwards to the edge of fabric by pushing reverse sewing button.



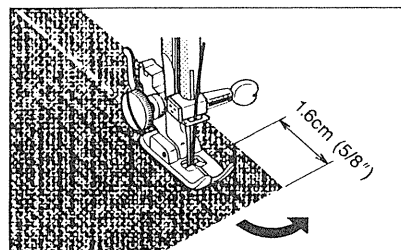
Release button and commence forward sewing guiding fabric by hand as it is fed. Never pull material.



Sew reverse stitches for reinforcement at end of seam.



Draw fabric to left when sewing is finished.



TURNING A SQUARE CORNER

To turn a square corner 1.6cm (5/8") from the fabric edge, stop stitching with the needle tip piercing the fabric, when reaching the cornering guide as shown. Raise the presser foot, turn fabric. New stitching line will align with 1.6cm (5/8") seam guide on side of needle plate. Lower the presser foot and begin stitching in new direction.

● SELECTING THE STITCH

The desired stitch will be obtained by turning the Pattern Selection Dial.

* When operating the selector, make sure that needle is in the highest position.

■ STRAIGHT SEWING

Set machine as shown, 3 kinds of straight stitch lengths can be selected as shown below.

Stitch Selector	Stitch Length
No. 1	2mm
No. 2	2.8mm
No. 3	4.2mm

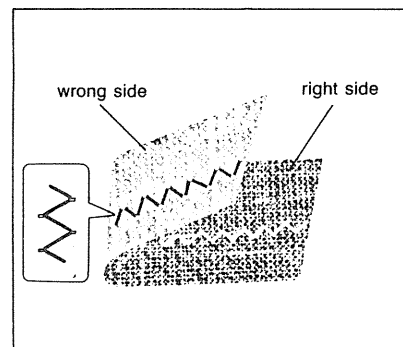
■ ZIGZAG SEWING

Set machine as shown.

To prevent seam ends unravelling, set machine for straight stitch and sew in reverse at beginning and ending of seam.

3 kinds of zigzag patterns can be selected as shown.

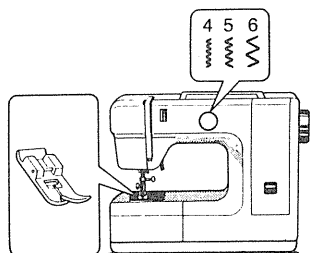
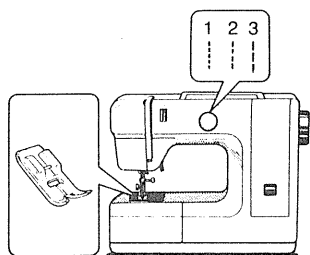
Stitch Selector	Zigzag Width	Stitch Length
No. 4	2mm	1mm
No. 5	3mm	2mm
No. 6	5mm	4mm



● Thread Tension for Zigzag Stitch

Better-looking zigzag stitching requires less upper tension than straight stitching.

Loosen upper tension slightly.

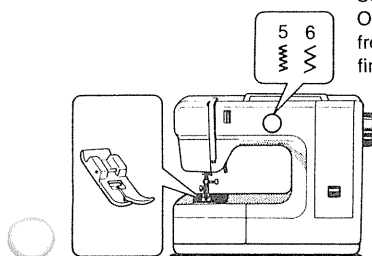


■ OVERCASTING

For light weight material:

Set machine as shown.

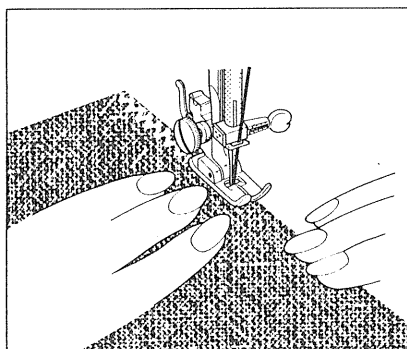
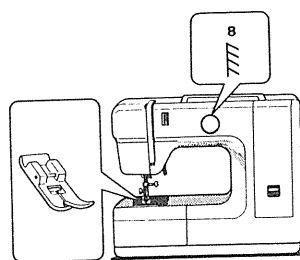
Overcasting prevents edge of fabric from fraying and produces neat finish.



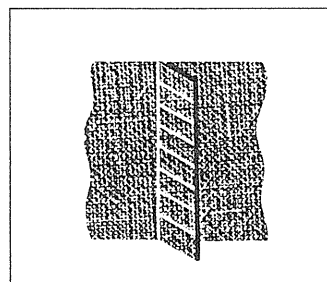
■ OVERLOCKING

Overlocking stitches make it possible to sew and overcast seams at the same time.

Set machine as shown.



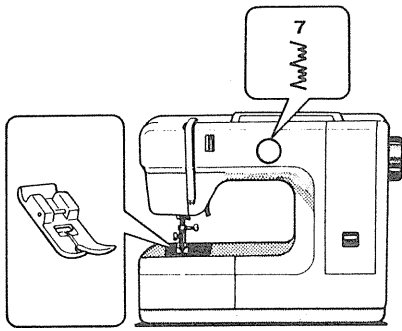
Place the seam allowance under the presser foot with the edge of the seam in line with the side of the presser foot as illustrated. Trim the fabric to the stitch line.



Put two pieces of cloth together with right sides facing and sew.

To prevent edges from fraying, sew so that right side stitches drop outside the edge of material.

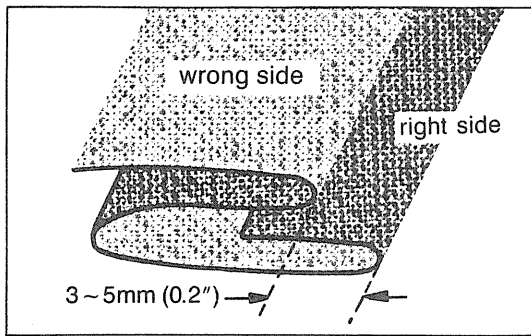
In some case overlocking stitches can be used for overcasting.



■ BLIND HEM STITCH

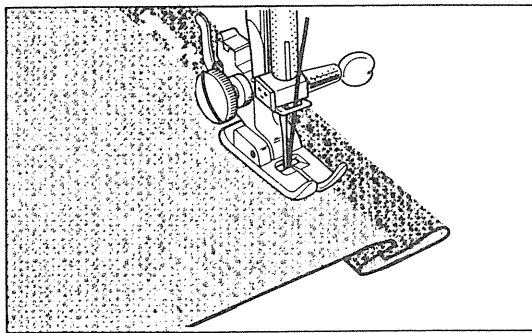
Elastic Blind Hem Stitch

Set machine as shown.

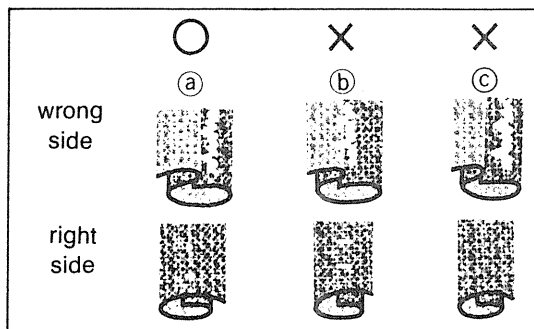


Fold material as shown and place it under foot.

For a neater finish, it is preferable to baste or iron hem beforehand.



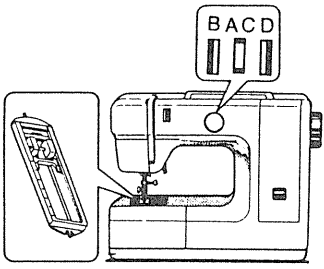
Sew carefully, so that straight stitches are made on hem edge, and slanting stitches pierce only one or two threads of fold.



- (a) Correct seam.
- (b) Needle is catching edge of fold too much.
- (c) Needle is not catching edge of fold at all.

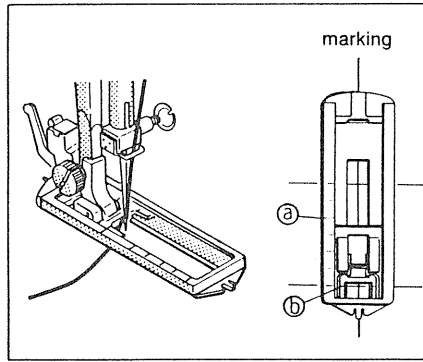
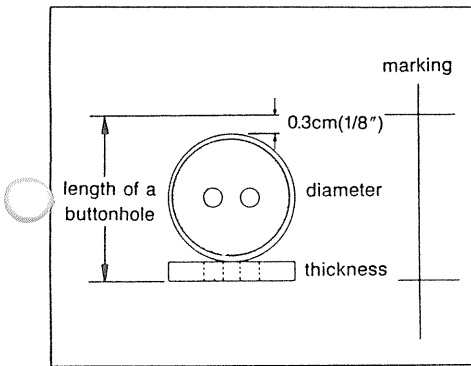
MAKING BUTTONHOLES

Set machine as shown.




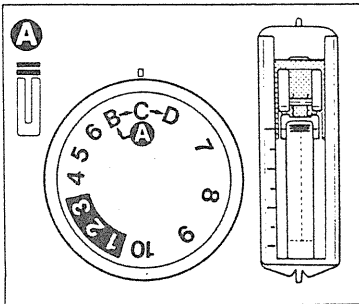
Determine Length


Measure the diameter and thickness of the button and add 0.3cm (1/8") for bar tacks.
Mark buttonhole size on material.

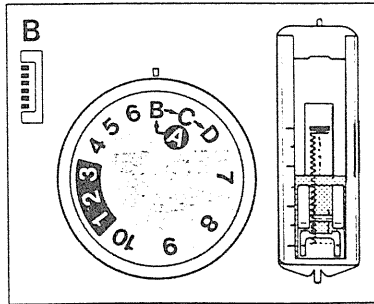



Attach buttonhole foot. Completely push back sliding part (a) of buttonhole foot. Place marking of buttonhole passes through centre of foot. Directions line (b) of foot indicates beginning line of marking. Extra thread is placed under foot and then to left.

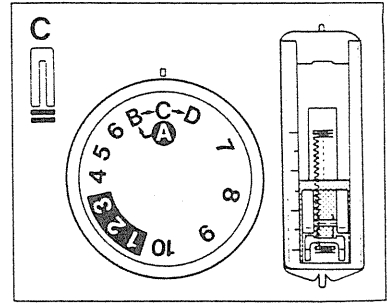
Bar tacking: Set pattern selection dial to A () and sew 5-6 stitches.




Left side: Change pattern to B (). Sew left side from front to back until it reaches the end line.

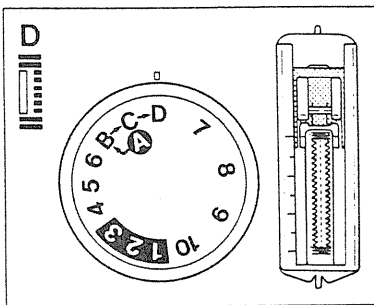


Bar tacking: Change pattern to C () and sew 5-6 stitches.

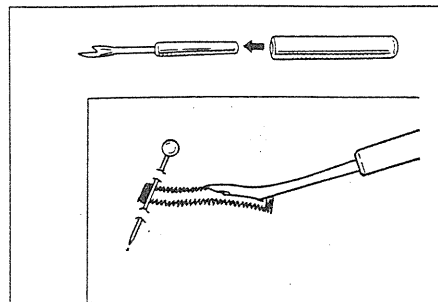


Note at which line the centre marker points so that it is not necessary to mark the end lines for all buttonholes.

Right side: Change pattern to D () and sew right side until it catches first bar tack.



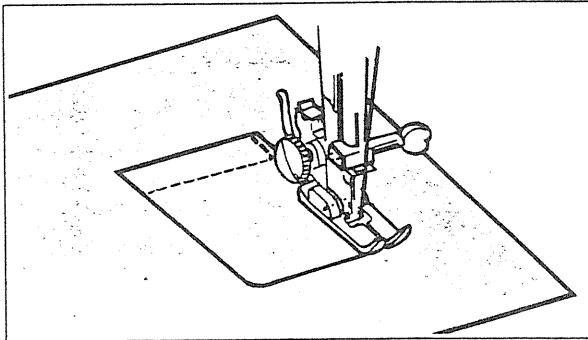
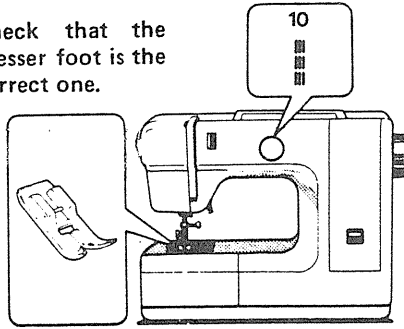
Cutting Buttonholes



Stick a needle or pin through bar tacks to prevent over-cutting.

Cut buttonhole along center with buttonhole cutter.

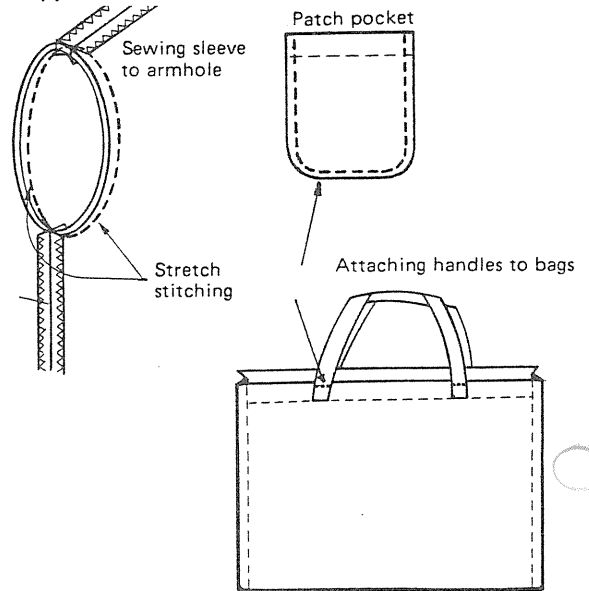
Check that the presser foot is the correct one.



■ Stretch Stitch

Stretch stitching reinforces the seam on elastic material or sections that are likely to after overged.

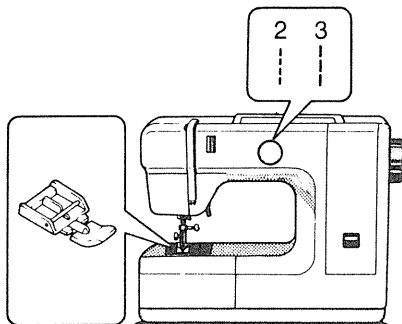
● Application examples



■ ZIPPER SEWING

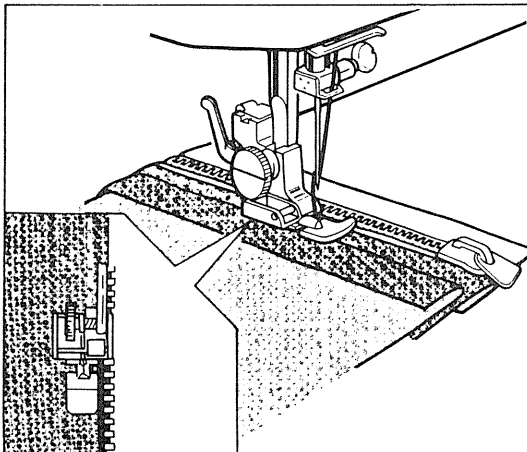
Set machine as shown.

By using a special zipper foot, zipper sewing can be easily done without turning the fabric.



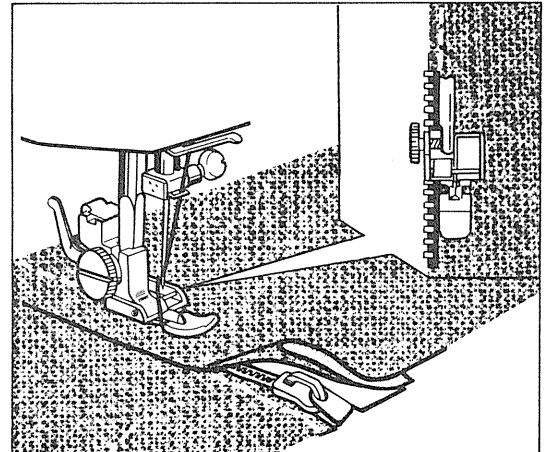
Set zipper foot on the right of the needle.

Sew right side of zipper guiding fabric carefully so that right side teeth of zipper are parallel with left edge of foot.

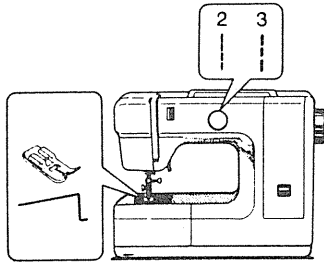


Re-set zipper foot to the left of the needle.

Sew left side of zipper in the same way.

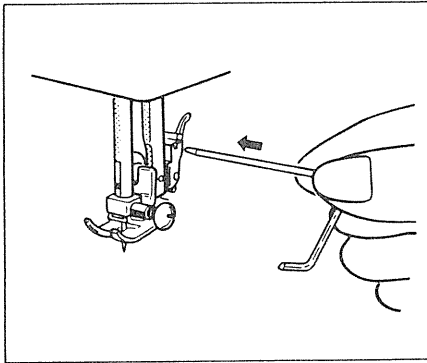


■ QUILTING



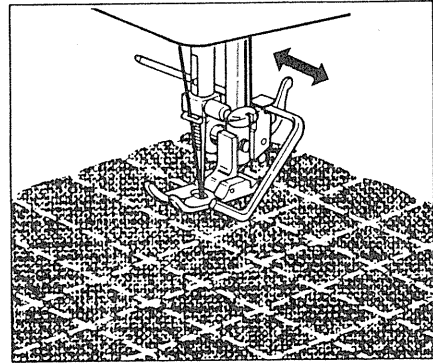
Set machine as shown.

Insert the quilting guide under the spring plate on the holder.

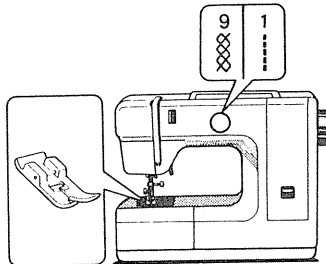


Baste layers of material to prevent them from slipping out as you sew.

Attach quilting guide and sew in the same way as pin tucking.



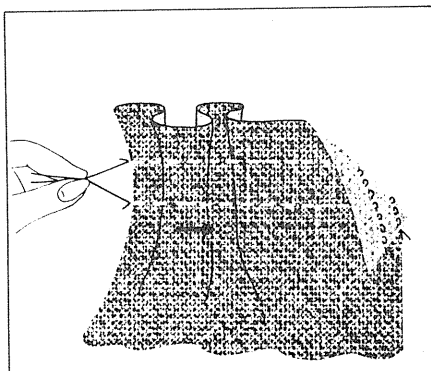
■ SMOCKING



Set machine as shown.

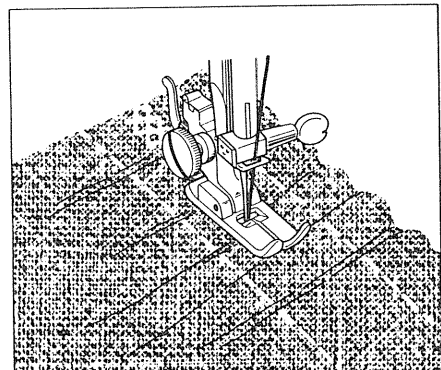
To gather the fabric, sew two straight lines with stitch length 5 and very loose upper tension. Make knots in one end.

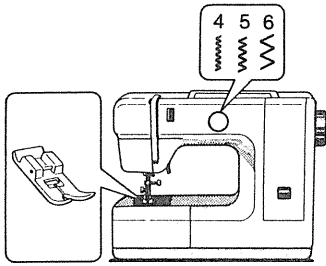
Gather fabric toward knots while holding the other end of lower threads with fingers.



Sew smocking stitches on gathered part between two straight lines of stitches.

Take out the threads of the straight stitching after you finish sewing.

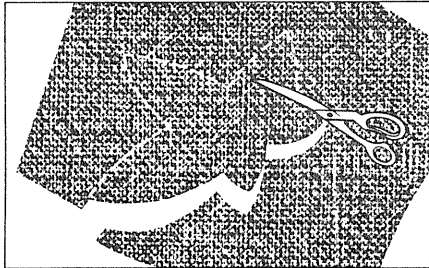




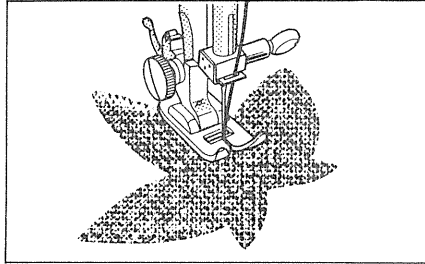
APPLIQUE WORK

Set machine as shown.

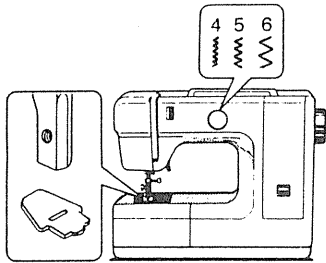
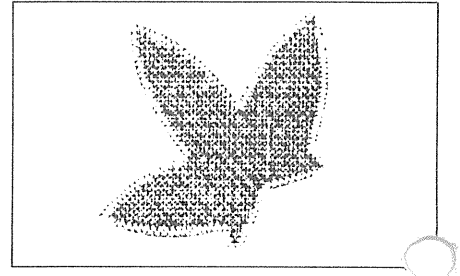
Draw design on material to be used as an applique and cut it out. Place cut-out on base material and baste it.



Sew around the outline with zigzag stitch adjusting stitch length and width according to shape and size of cut-out and type of base material.



To change direction at corners, or to sew very small circles, stop machine, positioning needle just away from edge of cut-out, lift presser foot and turn material. Lower presser foot and continue sewing.



EMBROIDERY

Set machine as shown.

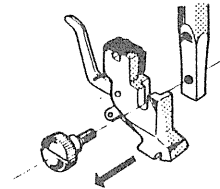
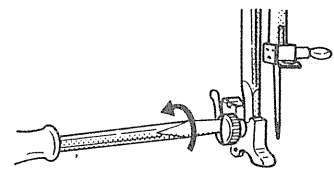
Remove foot, and holder screw.

To avoid lower thread being pulled up, reduce upper thread tension.

For good embroidery, it is important to use correct needles and thread. Use thin embroidery silk for upper thread and a thinner silk of same kind and color for lower thread. Trace your design on material and centre it in embroidery hoop. Make sure material is taut.

REMOVING FOOT HOLDER

Remove foot holder by loosening screw with screwdriver.

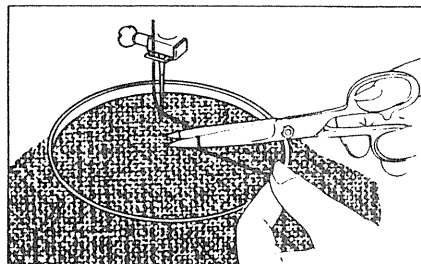
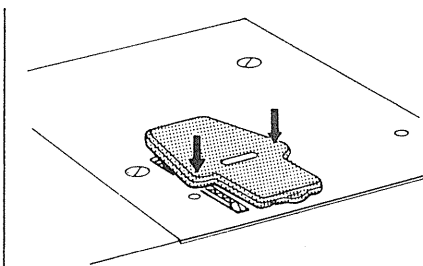


Needle	Thread
No. 9	120 ~ 100
No. 11	100 ~ 80
No. 14	60 ~ 50

DARNING PLATE

There are a few times when you want to control the feeding of the fabric yourself. Raise needle to its highest position and raise presser foot. Place darning plate over needle plate aligning two pins of darning plate with holes of needle plate.

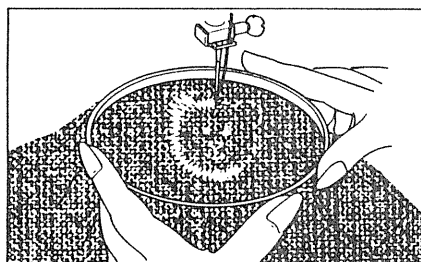
You may then determine the movement of the fabric yourself.



Pull out lower thread by turning handwheel towards you while holding upper thread lightly.

Lower presser foot lifter.

Grasp lower thread then make two or three stitches, snip off excess threads.

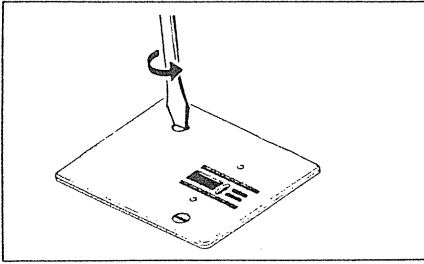


Start sewing along outline of design with satin stitch.

Continue sewing with guiding hoop by hand.

To finish filling, sew several straight stitches.

Lay typewriting paper underneath when embroidering sheer fabric.

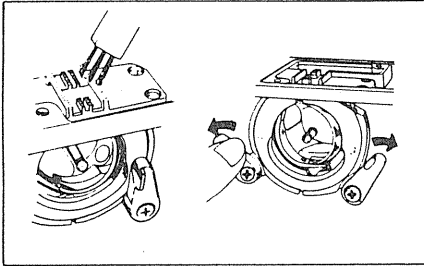


MAINTENANCE

Your machine requires regular cleaning and oiling for satisfactory sewing performance. A machine which is used for a few hours a day needs to be cleaned and oiled once a month.

(Important)

Disconnect power supply before carrying out for maintenance on machine.



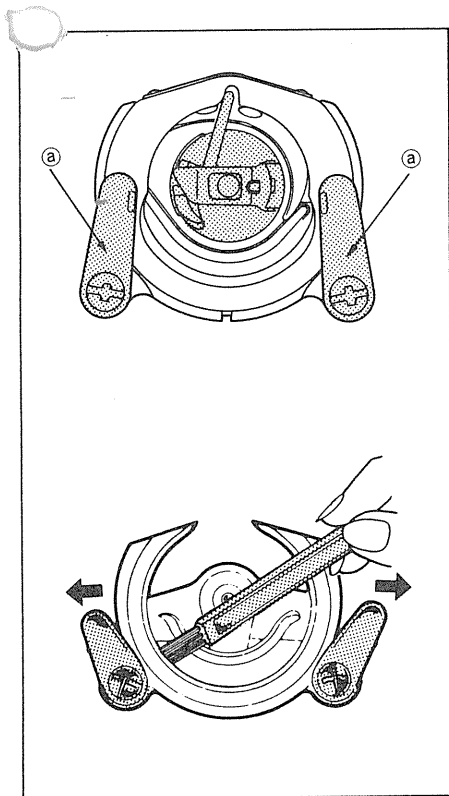
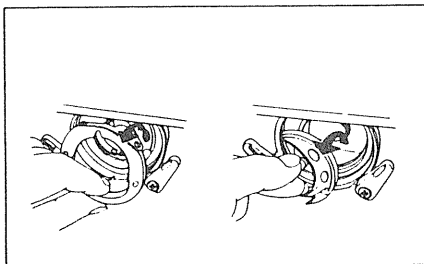
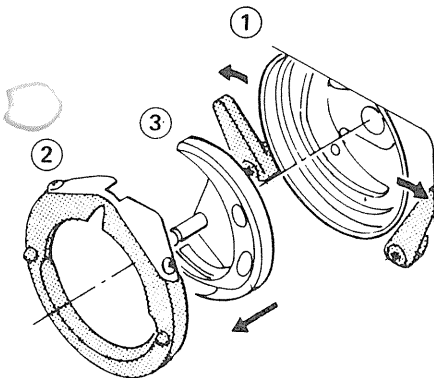
● CLEANING

Remove foot and needle.
Remove needle plate.

Brush off all dust and lint on feed dog with a cleaning brush.

Turn latches outwards.

Remove shuttle race cover.
Remove shuttle. Clean shuttle race with a cleaning brush and a soft cloth.



● CLEANING SHUTTLE RASE

Thread stuck between shuttle and shuttle case causes sudden rapid running or sudden stopping of the machine.

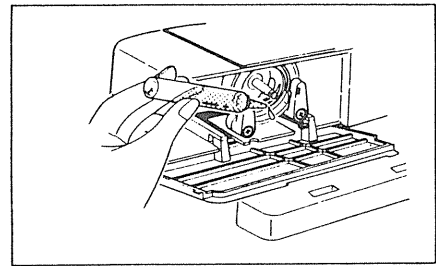
In this case you should proceed as follows:

- ① Open latch of bobbin case and pull it out.
- ② Turn latches ② towards outside and remove shuttle cover and shuttle.
- ③ Clean shuttle and shuttle rase and re-assemble them.

● OILING

Use oil manufactured specially for sewing machine use. Other oils will eventually cause mechanism to jam.

Apply one drop of oil to part of shuttle where friction occurs.

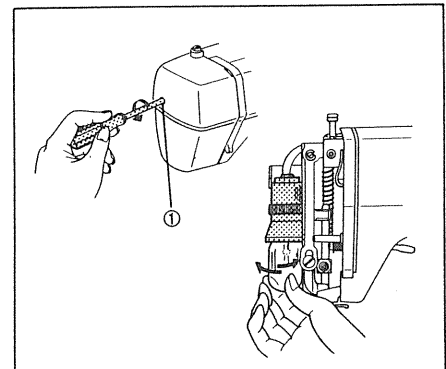


● CHANGING LIGHT BULB

Unplug the machine.

Loosen the screw ① as shown and open face cover as shown.

Remove the bulb by unscrewing it in a counterclockwise direction. Install a new bulb by screwing it in clockwise.



TROUBLE CHART

PROBLEM	PROBABLE CAUSE
Breaking lower thread	Thread not wound evenly on the bobbin or not drawn up correctly Lower thread tension too tight Lint stuck in the bobbin case and inside the tension spring
Skipping stitches	Needle not fully inserted Needle bent Size or type of needle and thread not suitable for the material Incorrect upper threading Too much oil on the shuttle
Irregular stitches	Incorrect size of needle for the material Upper thread tension too loose Incorrect lower tension
The material not fed correctly	Pattern selection dial not set correctly Lint stuck on the feed dog
Noisy machine	Check for thread in race, the slightest amount of thread in race may cause noise or binding, use material like tooth pick or cotton swab to clean.
The material puckers	Upper or lower thread tension too tight Stitch too long for material Thread too thick Incorrect threading of upper or lower thread
Breaking needle	Needle not correctly inserted Needle bent Needle clamp screw too loose Upper thread tension too tight Needle too fine for the material Dials have been changed while the needle was down in the material

* If trouble is still apparent in the machine, please consult your nearest dealer. Do not try to correct fault by yourself.