

OPERATING INSTRUCTION

IMPORTANT SAFETY INSTRUCTIONS

Your sewing machine is designed and constructed only for HOUSEHOLD. Read all instructions before using this sewing machine.

DANGER – To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in. Always unplug this appliance from electric outlet immediately after using and before cleaning.
2. Always unplug before relamping. Replace bulb with same type 15 watts.
3. Do not reach for the appliance that has fallen into water. Unplug immediately.
4. 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.

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 opening blocked. Keep ventilation openings of the sewing machine and foot controller free from 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.
10. Keep fingers away from all moving parts. Special care is required around sewing machine needle.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Switch the sewing machine off ("0") when making any adjustment in the needle area, such as threading needle, changing needle, threading bobbin or changing presser foot, and the like.
15. Always unplug the sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.

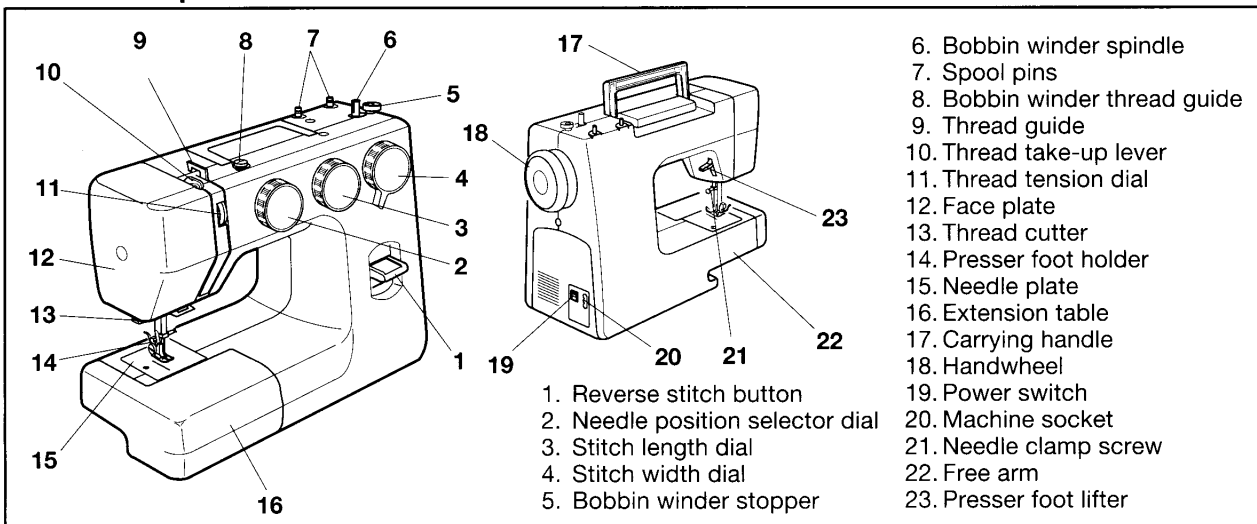
SAVE THESE INSTRUCTIONS

IMPORTANT

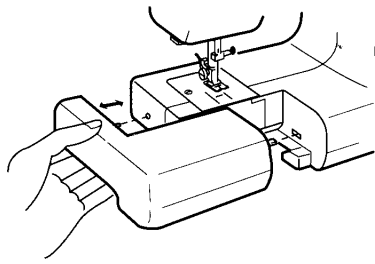
Be sure keep machine away from static electricity, heat sources, humidity, and direct sunlight.

When using your sewing machine for the first few times, place a waste fabric under the presser foot and run the machine without thread for a few minutes. Wipe away any oil which may have appeared.

1 Names of parts



2 Free arm sewing



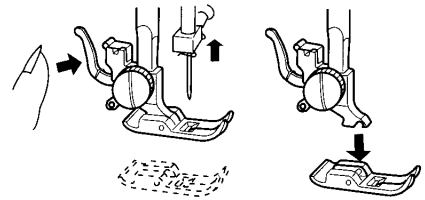
Free Arm sewing

Pull the end of the extension table away from the machine, as illustrated.

Extension Table

The extension table provides added sewing surface and can be easily removed for free arm sewing.

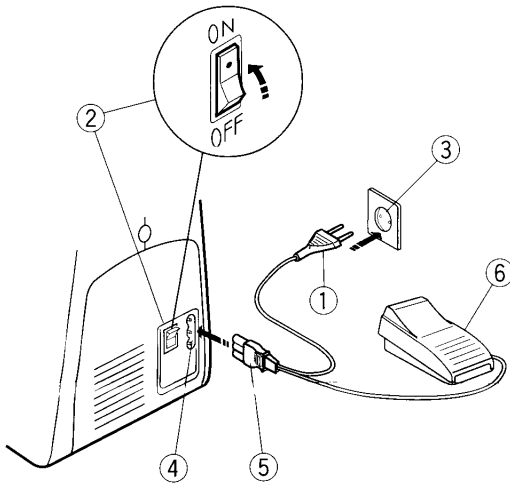
3 To attach and remove the presser foot



Press the lever on the back of the foot holder.

The presser foot will drop off.

4 Connecting the machine to the power supply

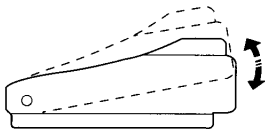


Before connecting the power cord, make sure the voltage and frequency shown on the machine conform to your electrical power.

1. Turn off the power switch ②.
2. Insert the machine plug ⑤ into the machine socket ④.
3. Insert the power supply plug ① into the outlet.
4. Turn on the power switch ② to turn on the power and sewing light.

- ① Power supply plug
- ② Power switch
- ③ Outlet
- ④ Machine socket
- ⑤ Machine plug
- ⑥ Foot control

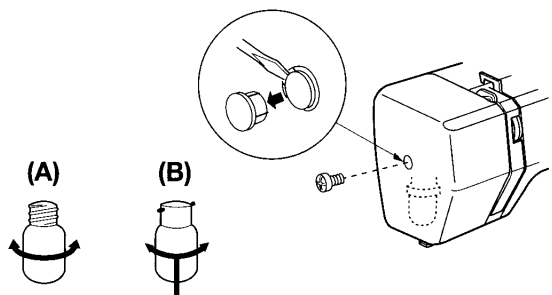
5 Speed control



Sewing speed can be varied by the foot control.

The harder you press on the control, the faster the machine runs.

6 Sewing light

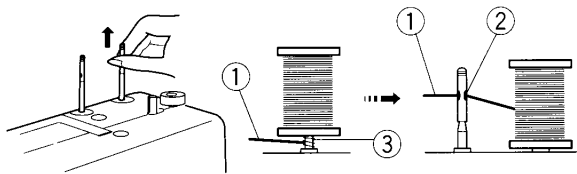


The sewing light is located behind the face plate. To change the bulb, take the face plate off the sewing machine by removing the set screw.

* Unplug the power supply before changing the bulb.

- (A) • To remove..... Turn to the left.
• To replace..... Turn to the right.
- (B) • To remove..... Push and twist to the left.
• To replace..... Push and twist to the right.

7 Setting spool pins

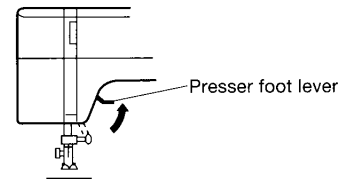


The spool pins are used for holding the spool of thread in order to feed thread to the machine.

To use, pull up the spool pin. Push down for storage.

NOTE: When using thread which has tendency to tangle around spool pin, thread through the hole of spool pin as shown. The hole should face the thread spool.

8 Adjust the presser foot lever

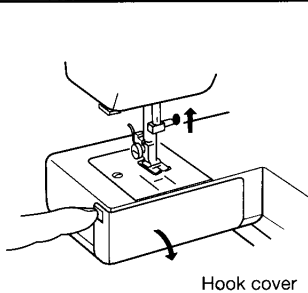


The presser foot lever raises and lowers the presser foot.

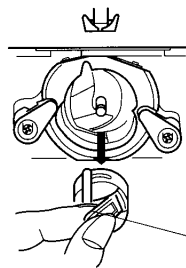
You can raise it about 1/4" higher than normal up position.

This helps when removing the foot or when sewing thick material.

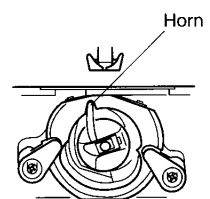
9 Removing or inserting the bobbin case



Open the hook cover.

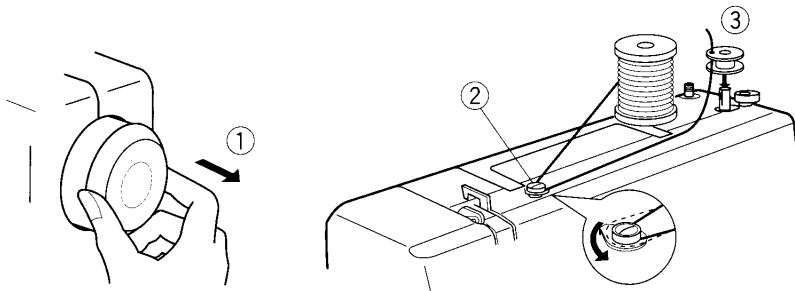


Raise the needle by turning the handwheel toward you. Take out the bobbin case by holding the latch.



When inserting the bobbin case, place the horn into the recess of the hook race.

10 Winding the bobbin

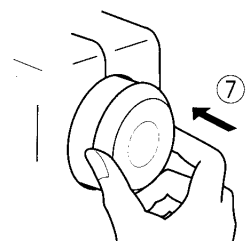
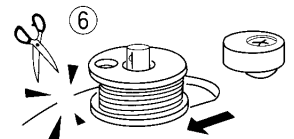
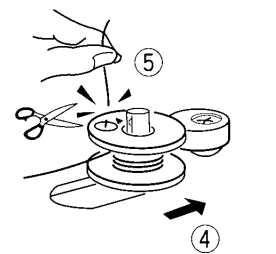


- ① Pull the handwheel out.
- ② Draw the thread from spool. Guide the around the bobbin winder thread guide.
- ③ Insert the thread through the hole in the bobbin from the inside to the outside.

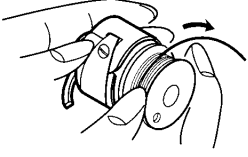
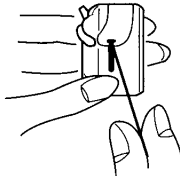
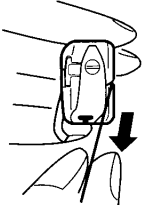
Put the bobbin on the bobbin winder spindle.

- ④ Push it to the right.
- ⑤ With the free end of the thread held in your hand, depress the foot control. Stop the machine when it has made a few turns, and cut the thread close to the hold in the bobbin.
- ⑥ Depress the foot control again. When the bobbin is fully wound, stop the machine. Return the bobbin winder spindle to its original position by moving the spindle to the left, and cut the thread.
- ⑦ Push the handwheel to the left (original position).

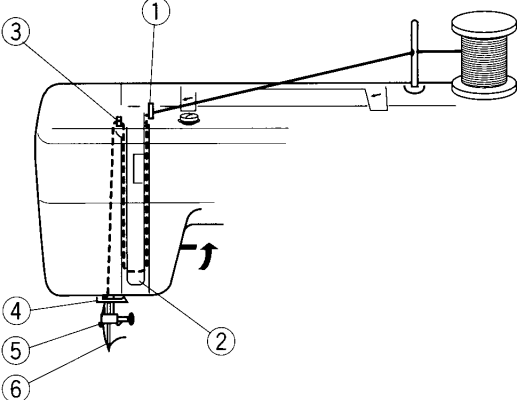
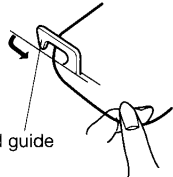
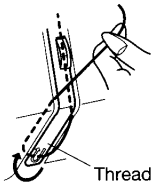
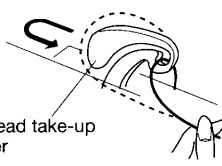
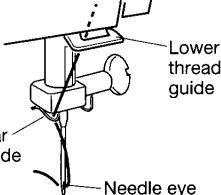
NOTE: Return the bobbin winder spindle when the machine stops.



11 Threading the bobbin case

 <p>① Place the bobbin into the bobbin case. Make sure the thread unwinds the in direction of arrow.</p>	 <p>② Pull the thread into the bobbin case slot.</p>	 <p>③ Draw the thread under the tension spring and into the delivery eye. * Leave about 10 cm (4 inches) of free thread.</p>
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12 Threading the machine

	<p>①</p>  <p>Thread guide</p>	<p>②</p>  <p>Thread guide plate</p>
<p>③</p>  <p>Thread take-up lever</p>	<p>④ ⑤</p>  <p>Lower thread guide Needle bar thread guide Needle eye</p>	

Raise the thread take-up lever to its highest position by turning the handwheel toward you.

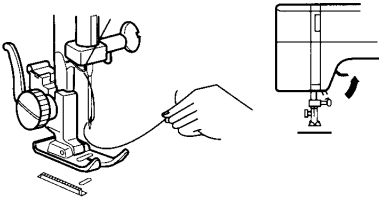
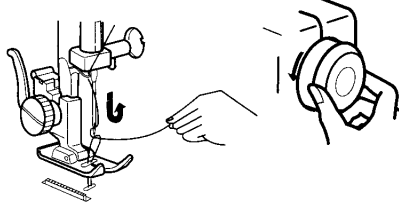
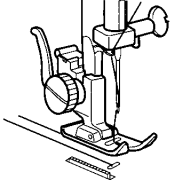
Raise the presser foot.

Place the spool on the spool pin as shown, with the thread coming from the back of the spool.

- ① Draw thread into the thread guide using both hands.
- ② While holding thread near spool, draw thread down into the tension area and then around the check spring holder.
- ③ Firmly draw thread up and through take-up lever from right to left.
- ④ Then draw thread down and slip it into the lower thread guide.
- ⑤ Draw thread down and slip it into needle bar thread guide.
- ⑥ Thread needle eye from front to back.

NOTE: You may want to cut the end of thread with sharp scissors for easier needle threading.

13 Drawing up the bobbin thread

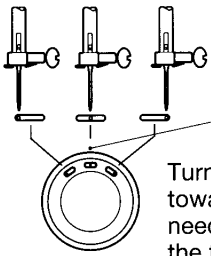
 <p>① Raise the presser foot and hold the needle thread lightly with your left hand.</p>	 <p>② Turn the handwheel slowly towards you with your right hand until the needle goes down and continue turning the handwheel until the take-up lever is at its highest position. Lightly draw up the needle thread forming a loop of the bobbin thread.</p>	 <p>③ Pull 15 cm (6") of both threads back and under the presser foot.</p>
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14 To select needle position

Stitch length selection

Zigzag width selection

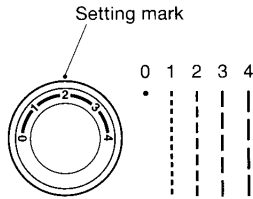
15 Reverse lever



Turn the handwheel toward you until the needle comes above the fabric.

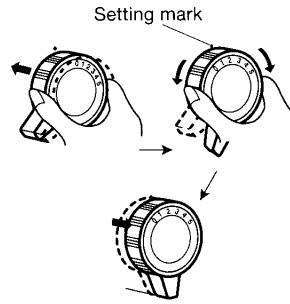
Turn the needle position dial to set left, middle or right needle position.

Note: Do not turn the needle position dial while the needle is in the fabric. (The needle may break or bent.)

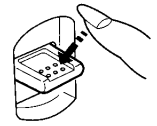


Turn the stitch length dial to get the desired stitch length.

The bigger the number, the longer the stitch length.

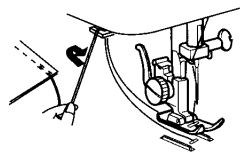
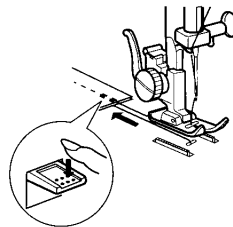
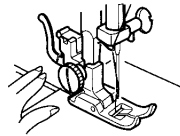
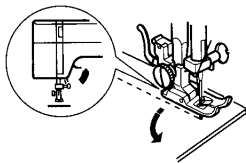
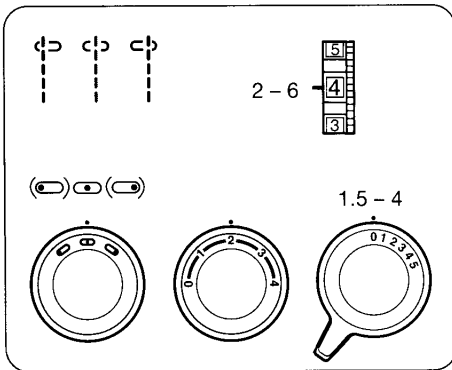


Turn the zigzag width dial while pushing it and set the dial at desired position and release it.



As long as you keep the reverse stitch button depressed, the machine sews backwards.

16 Straight stitch sewing



Raise the presser foot and position the fabric to a stitching guide line on the needle plate.

Lower the needle into the fabric. Lower the presser foot and smooth the threads toward the back. Depress the foot control.

Gently guide the fabric along the guide line letting the fabric feed by itself.

For fastening the ends of seams, press the reverse stitch button and sew several reverse stitches. Raise the presser foot and remove the fabric, drawing the threads to the back.

The threads are cut the proper length for starting the next seam.

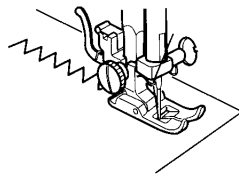
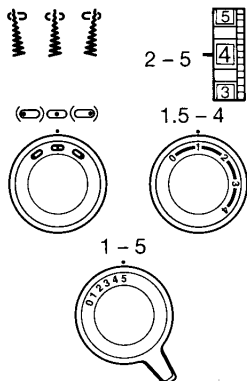
To change sewing direction

Stop the machine and turn the handwheel toward you to bring the needle down into the fabric.

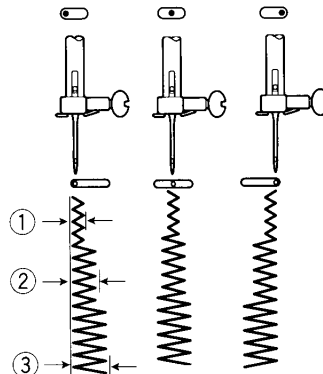
Raise the presser foot.

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

17 Zigzag stitching and overcasting



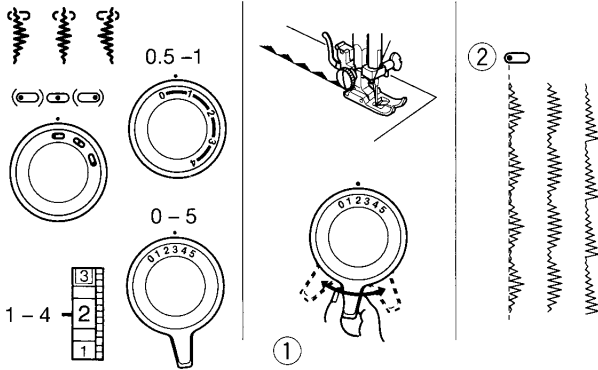
Simple zigzag stitching is widely used for overcasting sewing on buttons, etc.



The illustration shows the effect of manual zigzag width sewing with the different needle position (left, middle and right).

- ① Zigzag width: 1
- ② Zigzag width: 3
- ③ Zigzag width: 5

18 Decorative stitches

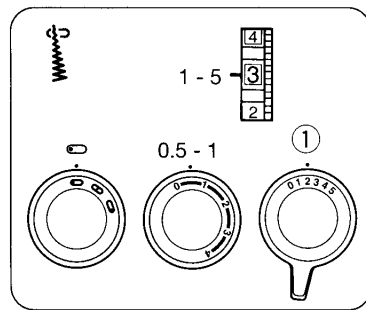


How to sew

- (A) Turn the zigzag width dial from "0" to "5" and "5" to "0" while the needle is above the fabric. Also, a constant sewing speed is required when moving the zigzag width lever manually for best sewing results.
- (B) To sew a rounded-shape stitch, turn the zigzag width lever by hand to achieve the desired results.
- (C) To make pattern (C) turn the zigzag width dial slowly from "0" to "5" while the needle is above the fabric, then return the zigzag width dial to "0" quickly. Repeat indefinitely.

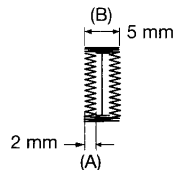
- ① Zigzag width lever
② Example: sewing results at left needle position.

19 Sewing buttonholes



- ① Zigzag width dial setting:

- (A) Set the dial at "2" for line-tack.
(B) Set the dial at "5" for bar-tack.



- ① Pull 15 cm (6") of both threads to the side and under the presser foot.
② Needle thread
③ Bobbin thread

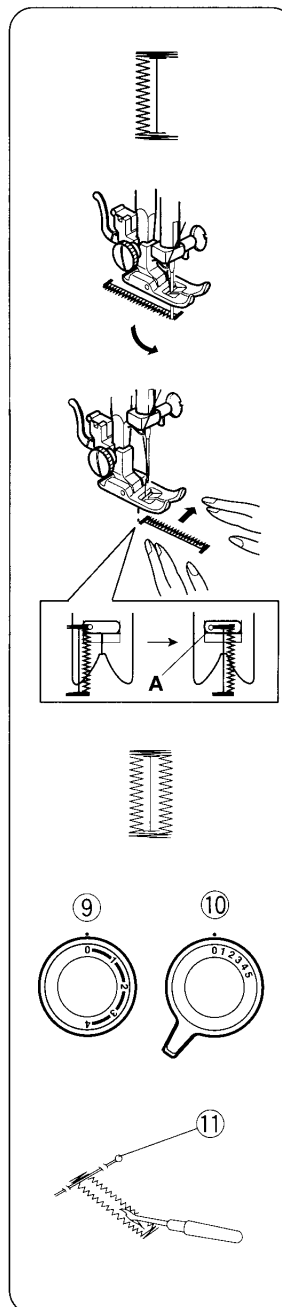
《Bar-Tack》

- ② Set the stitch length dial at "0" and the zigzag width dial at "5".
③ Lower the needle at the starting position, and lower the presser foot. Sew 5 stitches for the bar-tack, then stop the machine with the needle in the left position.

- ④ Length dial: 0
⑤ Width dial: 5
⑥ Start position

《Line-tack》

- ④ Set the stitch length dial at "0.5" and zigzag width dial at "2".
⑦ Length dial: 0.5
⑧ Width dial: 2
⑤ Sew the line-tack stitch for the desired length.



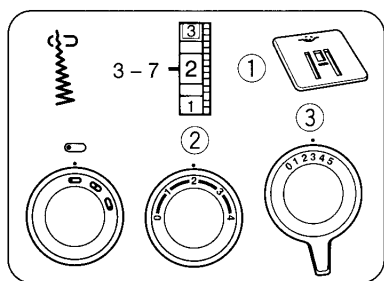
《Bar-Tack》

- ⑥ Raise the needle, set the stitch length dial at "0" and stitch width dial at "5". Sew 5 stitches of bar-tack and stop the machine with the needle in the left position.
⑦ Leave the needle at the left needle position in the fabric and raise the presser foot so that you can turn the fabric 180 degrees.

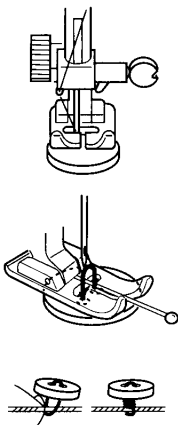
《Line-tack》

- ⑧ Raise the needle, set the stitch length dial at "0.5" zigzag width dial at "2" and slide the fabric to the right, so the needle is at "A" position, as shown.
⑨ Sew the left side of BH the same length as the right side, then stop the machine.
⑩ Set the stitch length dial at "0," zigzag width dial at "0" and sew several stitches for lock-stitch.
⑨ Length dial: 0
⑩ Width dial: 0
⑪ Insert a pin at the end of the buttonhole, then cut the opening with a seam ripper. Take care not to cut the stitches.

20 Sewing buttons



- ① Darning plate. Use the darning plate for button sewing.
- ② Stitch length dial any number (not necessary to adjust).
- ③



A pin can be placed on top of the foot to form a shank. Set the pattern selector at "0".

Align both holes of the button with the slot of the foot and place the left hole of the button just below the needle point.

Lower the foot and turn the pattern selector until the needle point comes just above the right hole of the button.

Sew above five stitches and raise the needle.

To strengthen the shank, cut the threads leaving a 20 cm (8") tail.

Bring the needle thread down through the hole in the button and wind it around the shank.

Draw the thread to the wrong side and knot.

21 Needle removal and replacement

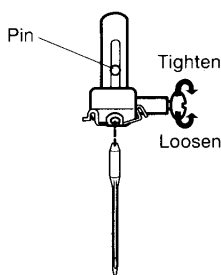
Raise the needle by turning the handwheel toward you and lower the presser foot.

Loosen the needle clamp screw by turning it counterclockwise.

Remove the needle from the clamp.

Insert the new needle into the clamp with the flat side away from you.

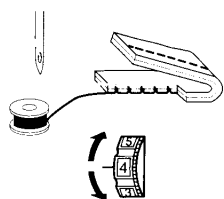
When inserting the needle into the clamp, push it up as far as it will go and tighten the clamp screw firmly with the screwdriver.



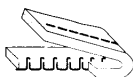
* Check your needles frequently for barbed or blunted points. Snags and runs in knits, fine silks and silk-like fabrics are permanent and are almost always caused by a damaged needle.

22 Balancing needle thread tension

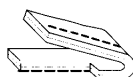
The needle thread and the bobbin thread should interlock in the center of two layers of fabric in straight seams.



- ① Match the desired of the thread tension number with the setting mark.

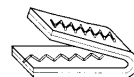


- ② Loosen the needle thread tension by moving the dial to a lower number.



- ③ Tighten the needle thread tension by moving the dial to a higher number.

Thread Tension for Zigzag Sewing



To obtain better zigzag stitches, the upper tension should be slightly weaker than in the case of straight sewing. The upper thread should appear slightly on the reverse side of the fabric.

23 Matching fabric, thread and needle types.

	Fabric	Thread	Needle Size
Light weight	Crepe de Chine, Voile, Lawn, Organdy, Georgette, Tricot	Fine Silk Fine Cotton Fine Synthetic Fine Cotton Covered Polyester	9 or 11
Medium weight	Linens, Cotton, Pique, Serge, Double Knits, Percale.	50 Silk 50 to 80 Cotton 50 to 60 Polyester Synthetic Cotton Covered	11 or 14
Heavy weight	Denim, Tweed, Gabardine, Coating, Drapery and Upholstery Fabric	50 Silk 40 to 50 Cotton 40 to 50 Polyester Synthetic Cotton Covered	14 or 16

* In general, fine threads and needles are used for sewing thin fabrics, and thicker threads and needles are used for sewing heavy fabrics. Always test thread and needle size on a small piece of fabric which will be used for actual sewing.

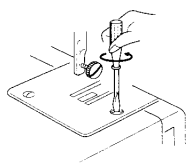
* Use the same thread for needle and bobbin.

* When sewing stretch, very fine fabrics and synthetic, use a BLUE TIPPED needle. The blue tipped needle effectively prevents skipped stitches.

* When sewing very fine fabrics, sew over a piece of paper to prevent yarn distortion.

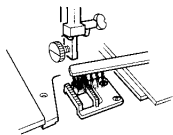
CARE OF YOUR MACHINE

24 Cleaning the feed dog



Note: Turn off the power switch or unplug the machine before cleaning the feed dog.

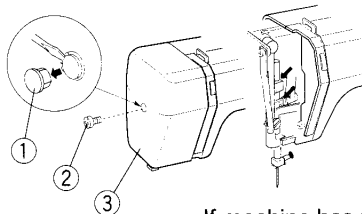
Remove the needle and the presser foot.



Remove the needle plate set screw and remove the needle plate.

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

25 Oiling the machine

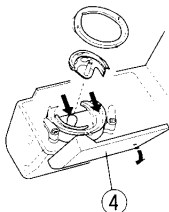


Note: Turn off the power switch or unplug the machine. Oil the point as shown at least once a year. Use good quality sewing machine oil. One or two drops of oil is sufficient. Remove excess oil, otherwise it may stain fabric.

If machine has not been used for an extended time, oil it before sewing.

Remove the cap, screw and face plate. Oil the point indicated in the illustration.

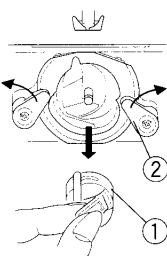
① Cap ② Screw ③ Face plate



Open the hook cover by pulling down the embossed part on the left side of the cover. Oil the point indicated in the illustration.

④ Hook cover

26 Dismantling and assembling hook race

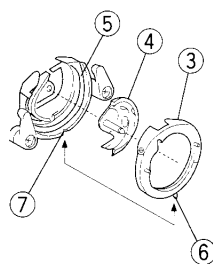


Note: Turn off the power switch or unplug the machine.

To dismantle hook race:

Raise the needle to its highest position and open the hook cover. Open the hinged latch of bobbin case and take it out of the machine. Open the hook race ring holders and remove the hook race ring. Remove the hook.

* Clean the hook race with a brush and a soft dry cloth.



To assemble hook race:

Hold the hook by the center pin and fit it carefully back into the hook race, forming a perfect circle with the shuttle driver.

Attach the hook race ring marking sure the bottom pin fits into the notch.

Lock the hook race ring by turning the holders back into position. Insert the bobbin case.

① Bobbin case ② Hook race ring holder ③ Hook race ring ④ Hook ⑤ Hook race ⑥ Pin ⑦ Notch

27 Trouble shooting

Problem	Cause	Setting
The needle thread breaks.	<ol style="list-style-type: none"> The needle thread is not threaded properly. The needle thread tension is too tight. The needle is bent or blunt. The needle is incorrectly inserted. The thread is either too heavy or too fine for the needle. 	See No. 12 See No. 22 See No. 21 See No. 21 See No. 23
The bobbin thread breaks.	<ol style="list-style-type: none"> The bobbin thread is not threaded properly in the bobbin case. The bobbin case tension spring set screw is too tight. Lint has collected in the bobbin case. 	See No. 11 See No. 11 See No. 26
The needle breaks.	<ol style="list-style-type: none"> The needle is incorrectly inserted. The stitch selector dial has been turned while the needle was in the material. The needle is too fine for the fabric being sewn. 	See No. 21 See No. 14 See No. 23
Skipping stitches	<ol style="list-style-type: none"> The needle is incorrectly inserted or bent. The needle and/or thread is not suitable for the material being sewn. A blue tip needle is not being used when sewing stretch, very fine fabrics, synthetics. The needle thread is not threaded properly. 	See No. 21 See No. 23 See No. 23 See No. 12
Seam puckering	<ol style="list-style-type: none"> The needle thread tension or bobbin thread tension is too tight. The needle and/or bobbin thread are not threaded properly. 	See No. 22 See No. 11, 12
Stitches form loops below the work.	<ol style="list-style-type: none"> The needle thread tension is too loose. The needle is either too heavy or too fine for the thread. The needle and/or bobbin thread are not threaded properly. 	See No. 22 See No. 23 See No. 12
The cloth is not feeding.	<ol style="list-style-type: none"> The feed dog is packed with lint. 	See No. 24
The machine does not work (noise, slow speed).	<ol style="list-style-type: none"> The Feed dog or shuttle hook area is packed with lint. The shuttle hook needs to be oiled. 	See No. 24, 26 See No. 25