



TOYOTA

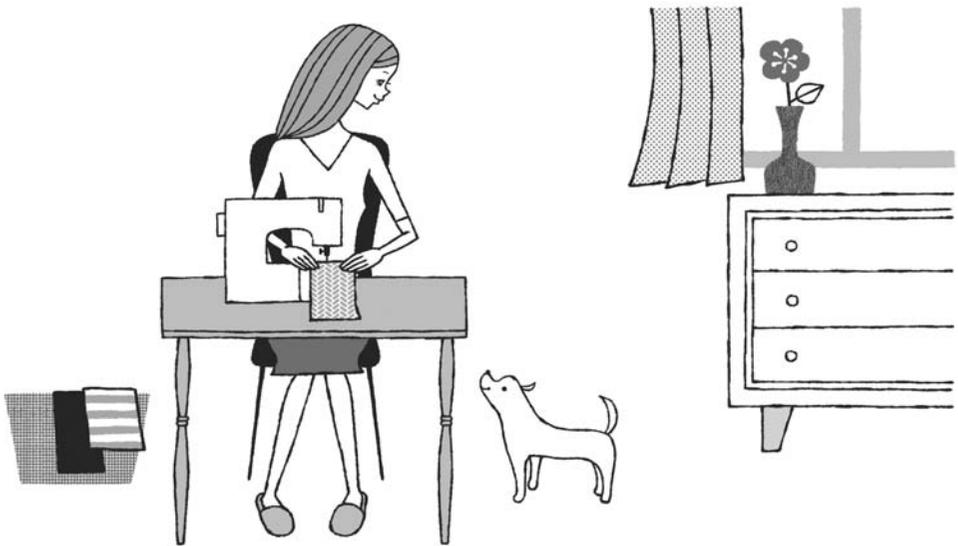
SP20 Series

HOME-USE SEWING MACHINE

INSTRUCTION MANUAL

- Read this manual carefully before use and always follow the instructions.
- Keep the manual in a convenient place for easy reference.
- If you give the sewing machine to someone else, also give them this instruction manual.





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• Important safety instructions

These safety instructions are designed to prevent danger or damage arising from the incorrect operation of the machine. Read carefully and always follow the instructions.

Explanation of “⚠ Warning” and “⚠ Caution”



Warning

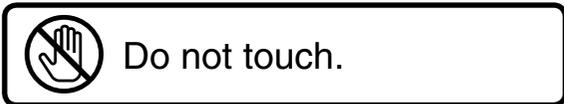
An incorrect operation could result in death or serious injury.



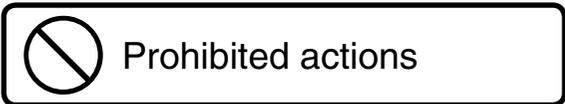
Caution

An incorrect operation could result in an injury or damage to the machine.

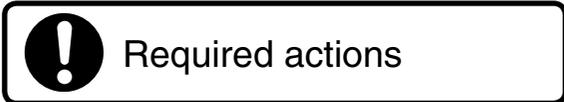
Symbol explanation



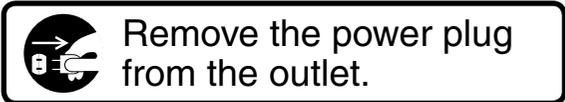
Do not touch.



Prohibited actions



Required actions



Remove the power plug from the outlet.



Warning



Use an AC 220 to 240 V power source.

Not doing so could cause an electric shock or a fire.



Do not damage the power cord, modify it, bend it excessively, jerk it or twist it.

Doing so could cause an electric shock or a fire.

If the power cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.



Do not use outdoors.

Doing so could cause an electric shock or a fire.



Do not operate where aerosol (spray) products are being used or where oxygen is being administered.

Doing so could cause a fire.



Caution



When the machine is not in use it should be stored safely, not on the floor as protruding parts could cause injury if a person fell on the machine.

Not doing so could cause an injury.

 **Caution**

 **Before replacing the needle or presser foot or when threading the upper or lower thread, remove the power plug from the outlet.**

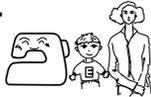
 **Do not look away from the needle while operating the sewing machine.**
If the needle breaks it could cause an injury.



 **Do not touch moving parts such as the needle, take-up lever or handwheel.**
Doing so could cause an injury.



 **Children should only use the machine under the supervision of a parent or guardian.**
Otherwise they could injure themselves.



 **Do not use when young children are near the machine.**
They could touch the needle and be injured.



 **Before leaving the sewing machine after using it, remove the power plug from the outlet.**

 **Before using the sewing machine make sure that the presser foot holder clamp screw, needle clamp screw and needle plate screw are firmly tightened, and that the presser foot is properly set in the presser foot holder.**
Not doing so could cause an injury.

 **Do not perform the following actions.**
Doing so could cause an injury.

- Sewing without lowering the presser foot.
- Sewing while the needle is incorrectly installed.
- Using a bent needle.
- Sewing while jerking the fabric.
- Moving the pattern selection dial while sewing.

 **Do not operate on an unstable surface such as a sofa or a bed.**
If the sewing machine falls down, it could cause an injury or damages to the machine.

 **Do not drop or insert any foreign objects into any openings such as opening space when you remove the face cover and / or the outer casing space of bobbin case.**
Doing so could cause an injury or damages to the machine.

 **Do not repair, disassemble or modify except what is mentioned in the instruction manual.**
Doing so could cause an electric shock, a fire or an injury.

* Before use

UK ONLY

IMPORTANT

PLEASE READ CAREFULLY

• How to change the power plug

Warning



When you change the power plug or cord, do not repair, disassemble or modify except at the authorised dealer or service centre.

Doing so could cause an electric shock or a fire



If for any reason the power plug for this product is removed it should be immediately disposed of safely and not stored anywhere where it could be inadvertently used again.

Doing so could cause an electric shock or a fire

The wires in this mains lead are coloured in accordance with the following code:

BLUE-NEUTRAL BROWN-LIVE (OR ACTIVE)

As the colours of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug - PROCEED AS FOLLOWS:

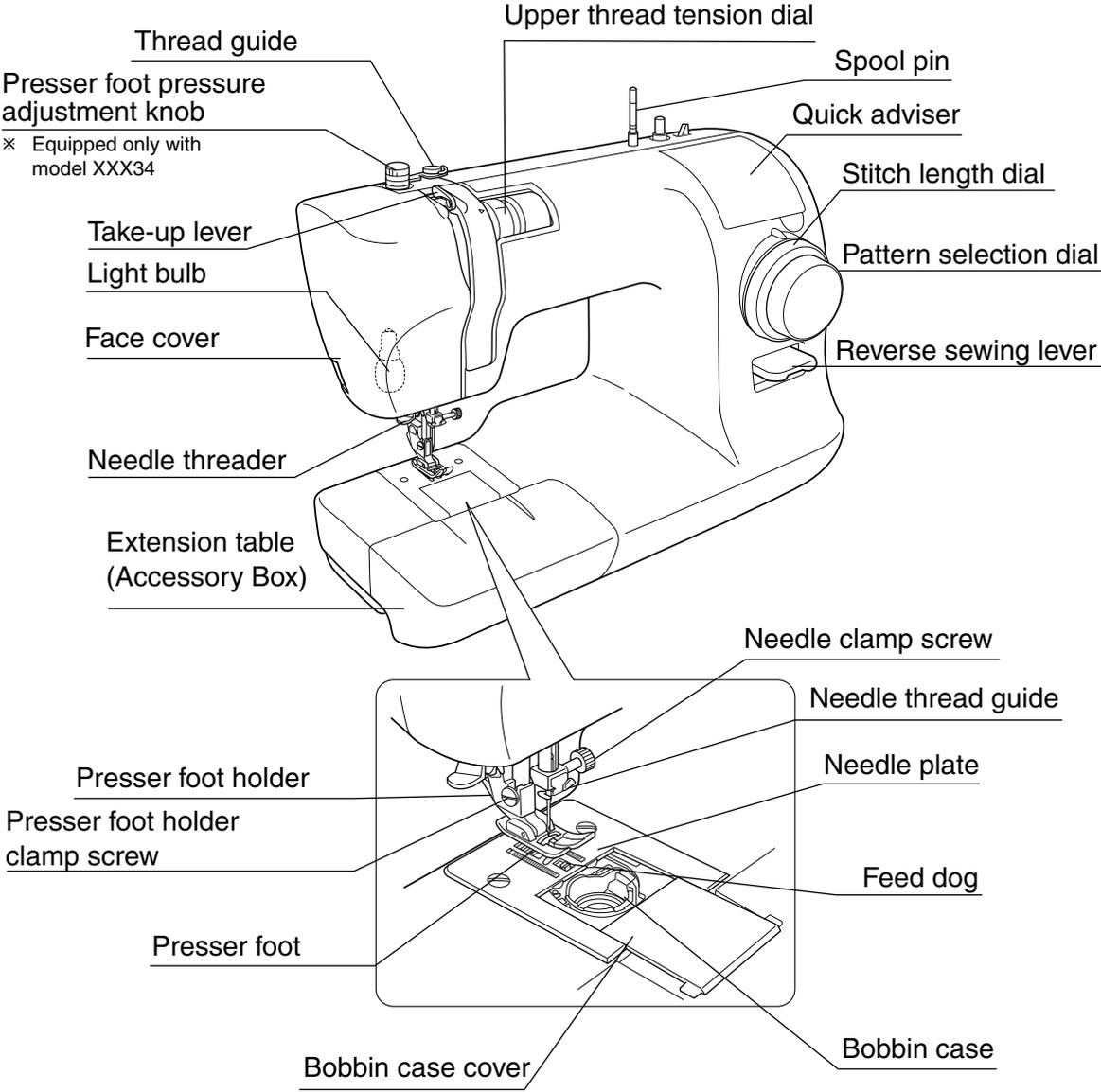
The earth plug pin is unnecessary. As the machine is designed under double insulation structure, the earth wire is removed from the machine. The wire coloured BROWN must be connected to the terminal marked L or A or coloured RED. The wire coloured BLUE must be connected to the terminal marked N or coloured BLACK. Neither core is to be connected to the earth terminal of a three-pin plug.

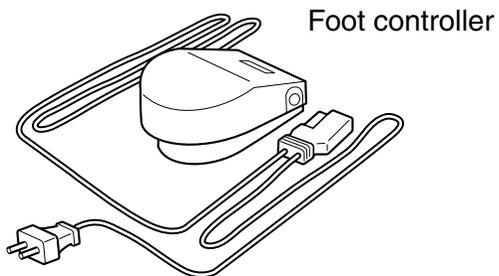
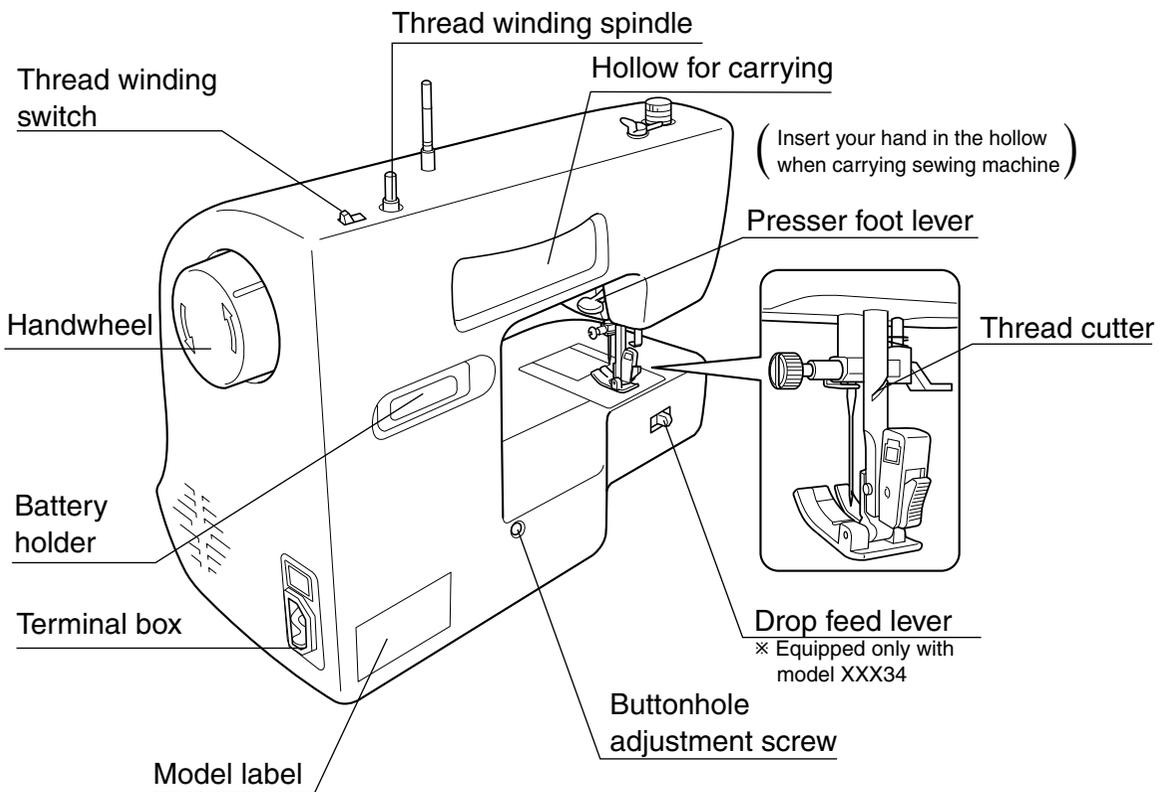
• Memo

✳ Before use

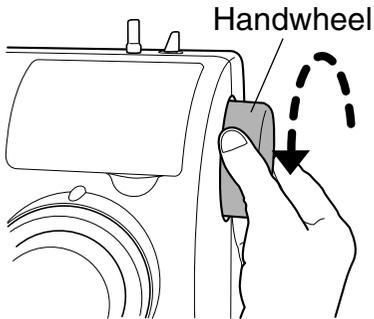
• Part names

- External appearance may differ from model to model.
- ✳ Depending on the sewing machine you have, some functions may not be applied.
The model name is indicated on the label, located on the back of the sewing machine (model SPXXX).





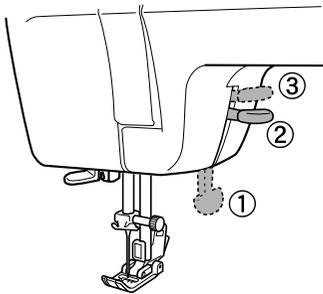
• How to use handwheel



Always turn the handwheel towards yourself.
(in the direction of the arrow, forwards)

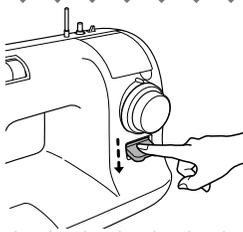
Note: If you turn it in the reverse direction it could tangle the thread.

• How to use presser foot lever



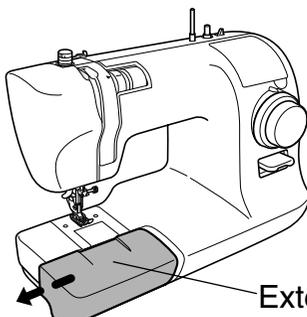
- When sewing, lower the presser foot lever to lower the presser foot. (Position ①)
- When inserting fabric, lift up the presser foot lever to raise the presser foot. (Position ②)
- When inserting very thick fabric under the presser foot, the lift height can be increased by holding the presser foot lever at this position. (Position ③)

• How to use reverse sewing lever



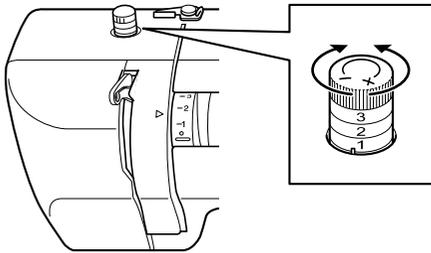
- To sew in reverse, press down on the reverse sewing lever.
- To return to sewing in the forward direction, release the reverse sewing lever.

• How to remove extension table



Pull out the extension table (accessory box)
in the direction of the arrow.

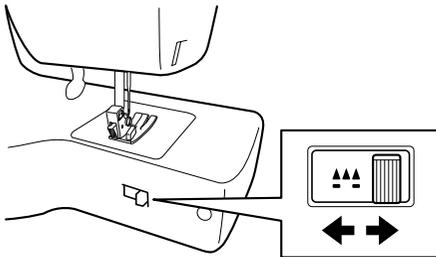
• Using the presser foot pressure adjustment knob



✳ Equipped only with model XXX34

By turning the presser foot pressure adjustment knob at the top of the sewing machine, the amount of pressure applied by the presser foot can be adjusted. Turning the presser foot pressure adjustment knob toward “-” reduces the amount of pressure applied by the presser foot. For best results when sewing stretch or thin fabrics, slightly reduce the pressure. Normally, sew with the knob set to “3”.

• Using the drop feed lever

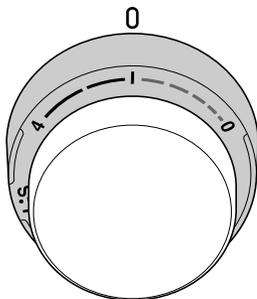


✳ Equipped only with model XXX34

The feed dog can be lowered when feeding the fabric freely by hand, for example, when embroidering or quilting. During normal sewing, move the lever to the right to raise the feed dog. When feeding the fabric manually, move the lever to the left to lower the feed dog.

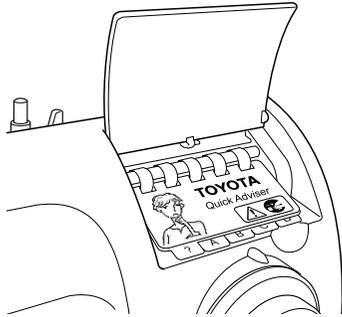
• Using the stitch length dial

(Used also when sewing stretch stitches. For details on sewing stretch stitches, refer to page 42.)



- **Stitch length dial (0 through 4)**
Turn the stitch length dial to adjust the stitch length amount.
 1. For shorter stitch, turn the dial to a lower number.
 2. For longer stitch, turn the dial to a higher number.

• How to use quick adviser



This quick adviser describes basic countermeasures about the main troubles.

Meaning of the illustrations

Illustrations of the troubles	Meaning of the illustrations	Countermeasures illustrations	
		↓	Meaning of the illustrations.
	<ul style="list-style-type: none"> • Jammed stitches • Unbalanced stitches • The fabric wrinkles/puckers • Missed stitches <p>Above troubles happen, refer to illustration (A) for countermeasures.</p>	<p>(A)</p>	<p>Shows the following 3 procedures.</p> <ol style="list-style-type: none"> ① Adjusting thread tension. ② Threading the lower thread correctly. ③ Threading the upper thread correctly.
	<p>When needle is broken, refer to illustration (B) for countermeasures.</p>	<p>(B)</p>	<p>Describes how to change needle correctly.</p> <ol style="list-style-type: none"> ① Raise the needle. ② Remove the needle. ③ Attach the new needle.
	<p>When you want to know how to attach presser foot, refer to illustration (C) for countermeasures.</p>	<p>(C)</p>	<p>Describes how to attach presser foot.</p> <ol style="list-style-type: none"> ① Raise the presser foot lever. ② Correctly position the presser foot under the presser foot holder. ③ Lower the presser foot lever.
	<p>When you want to know how to wind lower thread, refer to illustration (D) for countermeasures.</p>	<p>(D)</p>	<p>Describes how to install battery for winding lower thread.</p> <ol style="list-style-type: none"> ① Insert the battery into the battery holder on the back of the sewing machine. ② Push the thread winding switch to the left.

* Sewing preparations

• Connecting the power

⚠ Warning

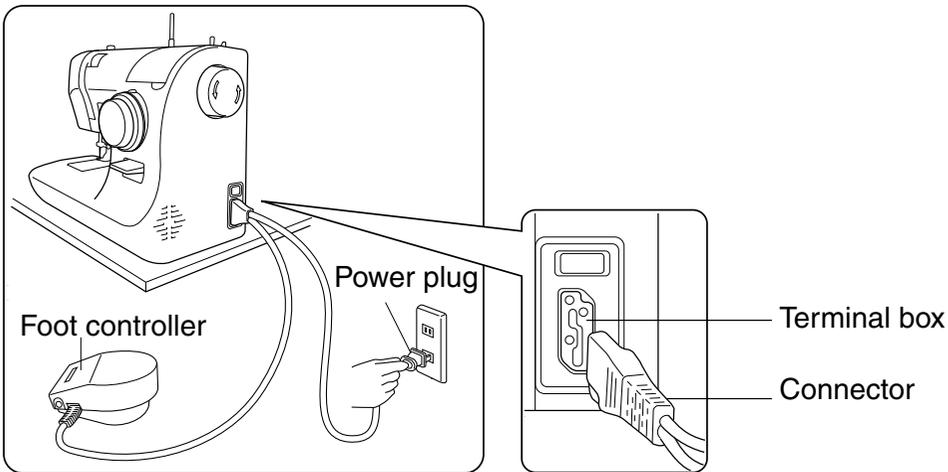


Do not touch the power plug with wet hands.
Doing so could cause an electric shock.



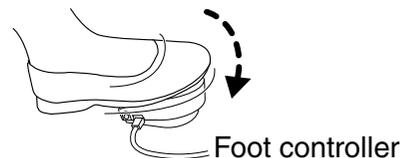
Hold the power plug when removing it from the outlet.
Not doing so could damage the cord and cause an electric shock, fire or injury.

- 1 Prepare the foot controller.
- 2 Insert the power cord connector into the terminal box.
- 3 Insert the power plug into the outlet.
The power is turned on.



How to operate foot controller

Step on the foot controller to operate the sewing machine.
The more you press the foot controller, the faster the machine runs.
Release the foot controller to stop the machine.



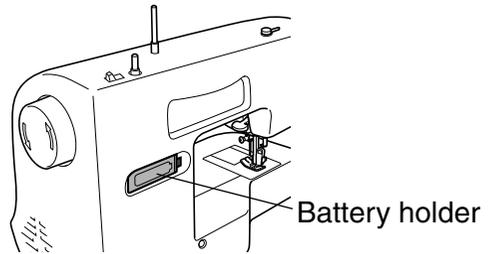
• Installation of battery for winding the lower thread

A battery is supplied as one of the accessories.

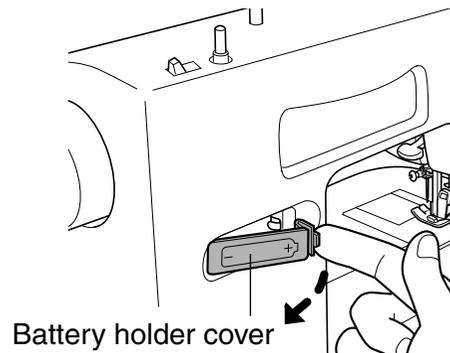
Before winding the lower thread, install it in the battery holder on back of sewing machine.

Attention

If the machine will not be used for an extended period of time, remove the battery. Not doing so may result in damage.

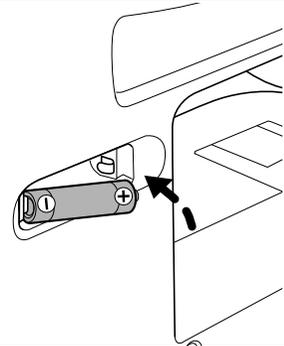


- 1 Open the battery holder cover in the direction of the arrow.



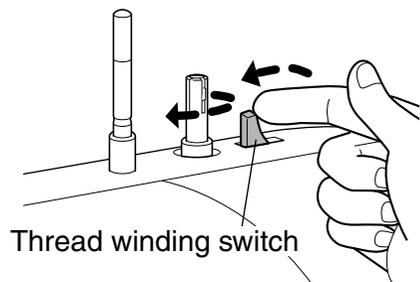
- 2 Install the battery while confirming polarity of it.
Attach battery holder cover.

Note: Refer to page 48, 49 when purchasing or changing batteries. (Use a AA alkaline battery (1.5 V).)



- 3 Hold the thread winding switch to the left, and check that the thread winding spindle rotates.

Note: The thread winding spindle rotates only while the thread winding switch is pushed to the left.



• Winding the lower thread

The exclusive motor driven by a battery winds the lower thread.

⚠ Caution



Before winding the lower thread, remove the power plug from the outlet.

Doing so could cause an injury.

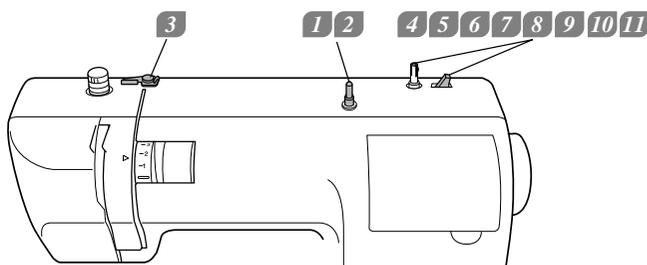


Do not touch the lower thread winding spindle when winding the lower thread.

Doing so could cause an injury.

Attention

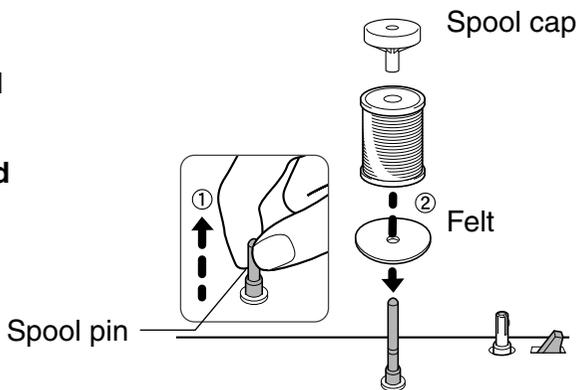
Use a TOYOTA-exclusive bobbin.



1 Pull up the spool pin.

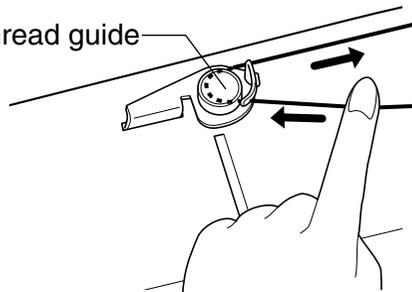
2 Insert the felt, the thread spool and the spool cap on the spool pin.

Note: The felt is already inserted on the spool pin.

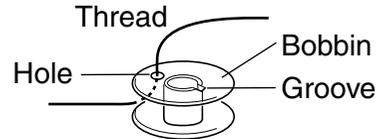


3 Pull the thread from the thread spool. Support the thread on the sewing machine with one hand, using the other hand pass the thread around the thread guide as shown in the diagram.

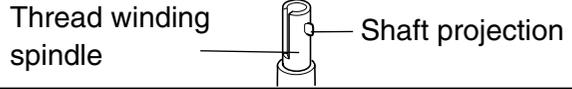
Thread guide



4 From the inside, pass the thread end through the hole in the bobbin, as shown.



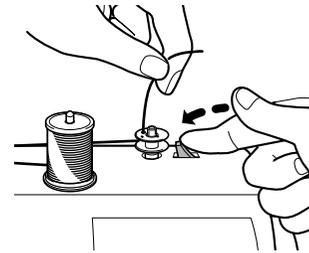
5 Place the bobbin on to the thread winding spindle so the groove will meet the shaft projection.



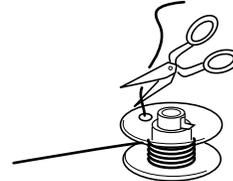
6 Hold the thread end, and push the thread winding switch to the left to start winding.

7 After winding a little, release the thread winding switch so that it returns to the right and stops winding.

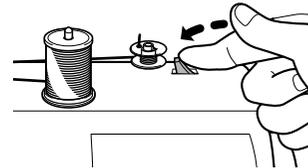
Note: The thread is wound only while the thread winding switch is pushed to the left.



8 Cut extra thread above the bobbin hole.



9 Push the thread winding switch to the left again.
Wind the thread to the amount you need.



10 To stop winding the thread, release the thread winding switch.

Attention Do not wind excessively, it causes sewing malfunction.

11 Cut the thread.
Remove the bobbin from the spindle.

Attention If the thread tail remains from the bobbin hole, please cut it, otherwise sewing will not be performed correctly.



• Threading the lower thread



Caution



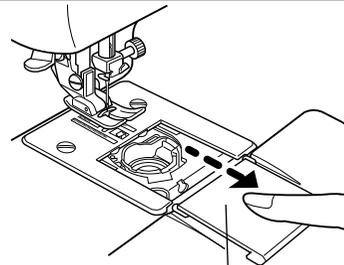
Before inserting the bobbin, remove the power plug from the outlet.

Not doing so could cause an injury.

1

Take off the bobbin case cover by sliding it towards yourself.

Pull bobbin case cover forward and lift to remove.

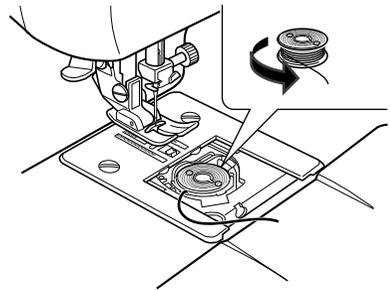


Bobbin case cover

2

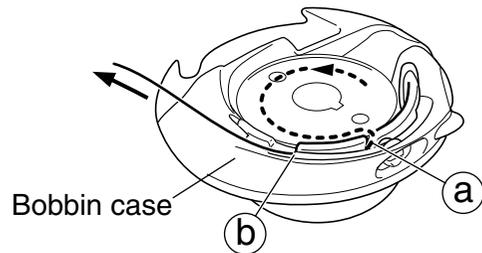
Insert the bobbin into the bobbin case so that the bobbin rotates counter clockwise when thread is fed off.

Note: Inserting the bobbin in the wrong direction causes irregular thread tension.



3

Pull the end of thread through the cut-out guide (a) to guide (b) of the bobbin case and pull out in direction of arrow.

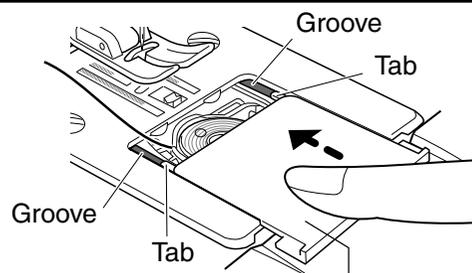


Bobbin case

4

Pull back end of thread about 15 cm, long.

Insert the tabs on the bobbin case cover into the race retainer grooves, and then push the bobbin case cover closed.



Bobbin case cover

• Threading the upper thread

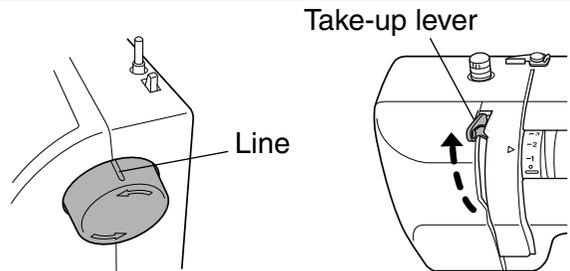
Caution



Before threading the upper thread, remove the power plug from the outlet. Not doing so could cause an injury.

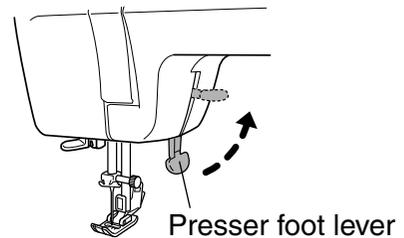
- 1** Turn the handwheel toward you to raise the take-up lever to its highest position.

The line on the handwheel should be at the top, as shown.



- 2** Raise presser foot lever.

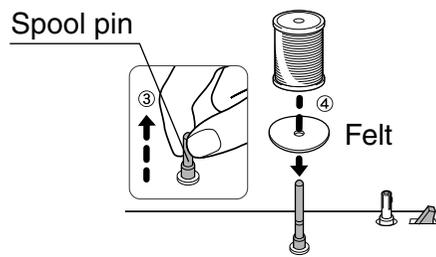
Note: If the presser foot lever is not raised, the upper thread cannot be threaded correctly.



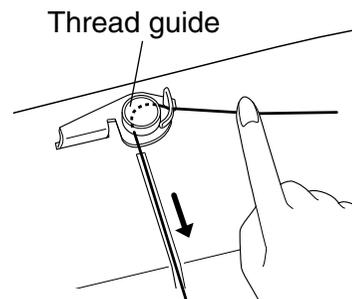
- 3** Pull up the spool pin.

- 4** Insert the felt, the thread spool and the spool cap on the spool pin.

Note: The felt is already inserted on the spool pin.

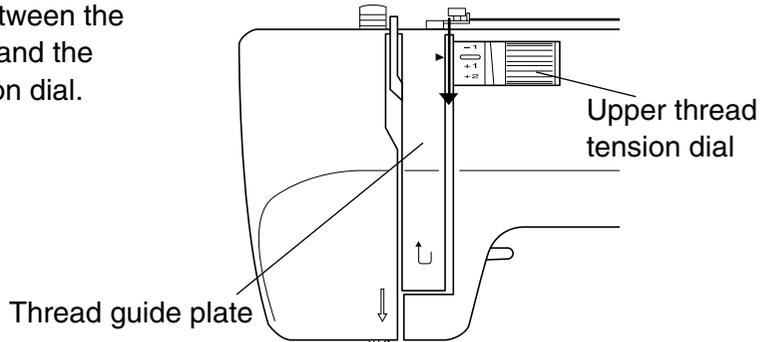


- 5** Pull the thread from the thread spool, and then press the thread against the sewing machine with one hand while passing the thread around the thread guide with the other hand, as shown in the diagram.



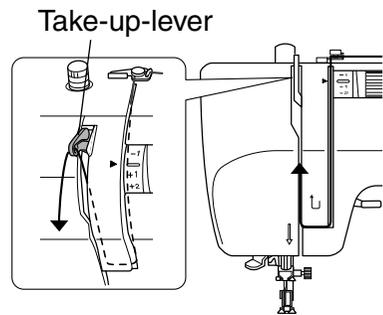
6

Pass the thread between the thread guide plate and the upper thread tension dial.



7

Pass the thread along the groove of the thread guide plate, as the arrow in the diagram. Pass the thread through the take-up lever.



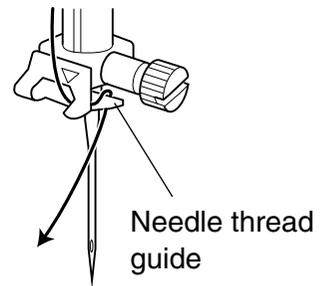
8

Pass the thread through the right side needle thread guide.

Check that the thread is threaded correctly.

※ Correct threading

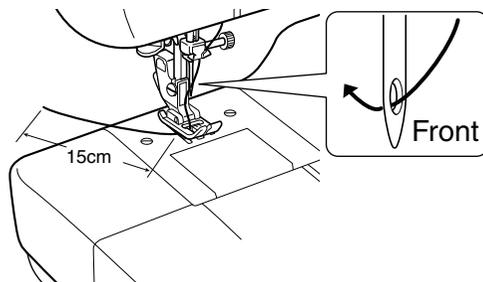
- When the presser foot is raised, the upper thread should feed smoothly when it is pulled toward you.
- When the presser foot is lowered, there should be some resistance when the upper thread is pulled toward you. The thread is correctly threaded if it is difficult to pull it.



9

From the front, pass the thread through the eye of the needle.

※ The needle can easily be threaded when the needle threader is used.



* Sewing preparations

• Using the needle threader



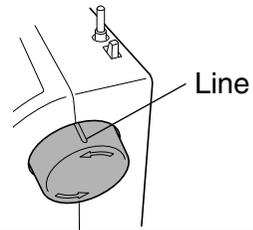
Caution



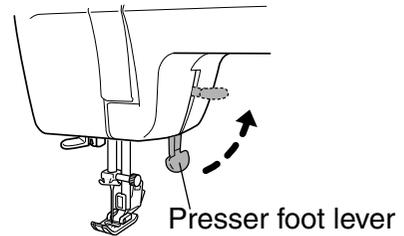
Before using the needle threader, remove the power plug from the outlet. Not doing so could cause an injury.

Note: Use sewing machine needles no. 11 through 16 with the needle threader. (Needle no. 14 is included when the sewing machine is purchased.) The needle cannot be threaded if the thread is too thick for the needle. For details of possible needle and thread combinations, refer to “Relationship between the needle, thread and fabric, and adjusting the thread tension” on page 26.

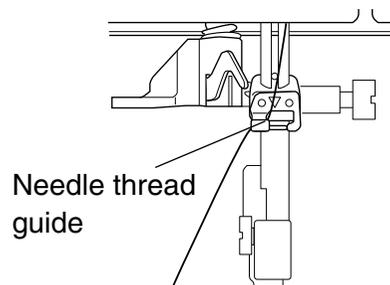
- 1** Turn the handwheel so that the line is at the top, as shown in the illustration.



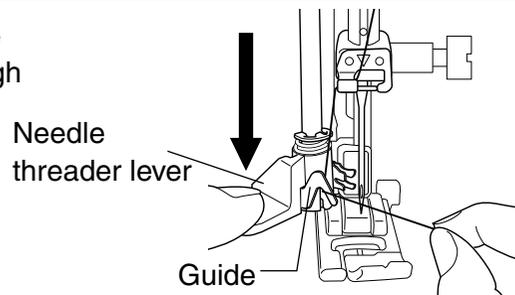
- 2** Raise the presser foot lever.



- 3** Check that the thread has been passed through the needle thread guide.

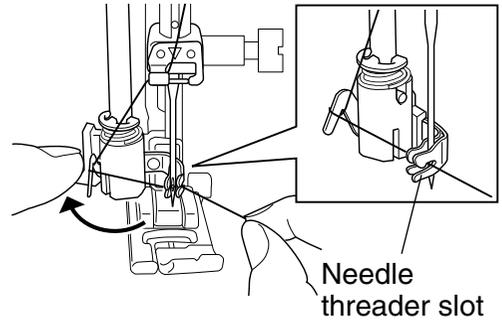


- 4** While completely lowering the needle threader lever, pass the thread through the guide as shown in the illustration.



5

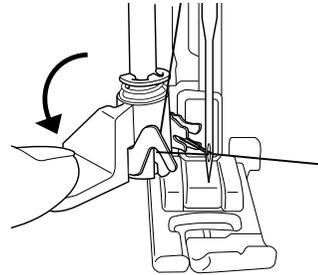
Fully turn the needle threader lever backward and pull the thread through the needle threader slot.

**6**

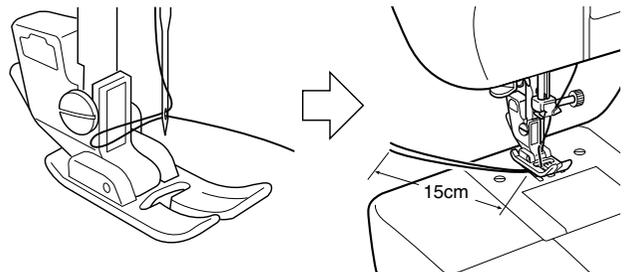
Loosen the tension on the thread, and slowly return the needle threader lever forward as much as possible. After checking that the thread has passed through the eye of the needle, release the needle threader lever while releasing the end of the thread.

(The needle threader lever automatically returns to its storage position.)

※ If the needle is not threaded, return to step 3, and try threading the needle again.

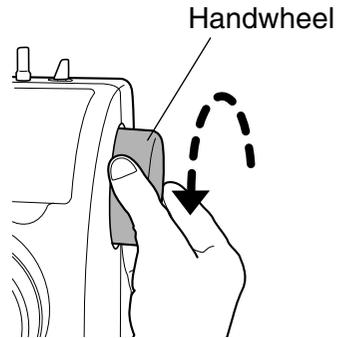
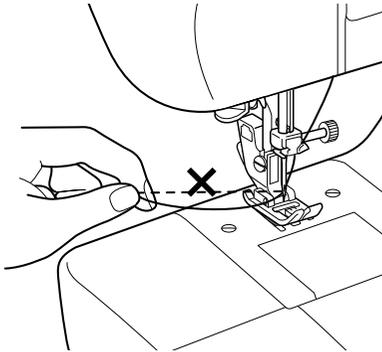
**7**

Pull the loop in the thread that formed at the back of the needle, and then pull about 15 cm of thread to the back of the sewing machine.



• Pulling up the lower thread

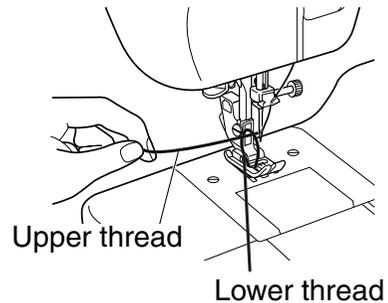
- 1** Hold the end of the thread, turn the handwheel towards yourself for one full turn, and then stop when the needle is at its highest position.



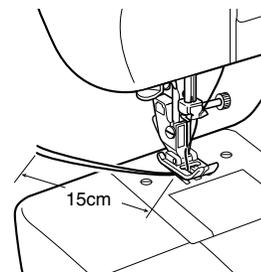
Note: Always turn the handwheel towards yourself (in the direction of the arrow). If you turn it in the wrong direction it could tangle the thread.

Note: If the thread is tight the lower thread will not come out, so hold the thread loosely.

- 2** Pull up the upper thread and the loop of the lower thread will come out. Pull out this lower thread.

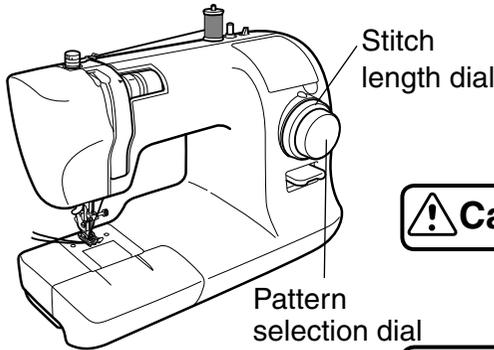


- 3** Align the upper thread and lower thread, and thread through the groove of the presser foot. Pull back about 15 cm.



* Sewing preparations

• Application of each stitch pattern



The stitch is selected according to the combination of settings selected on the pattern selection dial and the Stitch length dial. For details on selecting stitches, refer to “* Sewing”.

* Stitch length for the stitch number 1 through 15 on the pattern selection dial can be adjusted from 0 to 4 mm by stitch length dial. Stitch settings A through S on the pattern selection dial have a fixed stitch length of 3 mm.

Caution



Do not turn the pattern selection dial or stitch length dial while operating the machine.
Doing so could cause injuries.

Attention

- Stitches L through S can be sewn only with model XXX34.
- The model name is indicated beside “MODEL” in the model label on the back of the sewing machine. (MODEL SP **)

Stitch list

Pattern selection dial No.	Stitch length dial (recommend setting)	Stitch	Application	MODEL	
				model 34	model 26
1 2 3 4	0-4 (0.4~1)		Buttonhole	○	○
5	0-4 (1~4)		Straight stitch (left side)	○	○
6	0-4 (1~4)		Straight stitch (center)	○	○
	0-4 (2~4)		Zipper insertion	○	○
7	0-4 (1~2)		Blind hem stitch	○	○
8	0-4 (1~4)		Decorative stitch	○	○
9	0-4 (1~2)		Stretch fabric blind hem stitch	○	○
10	0-4 (1~2)		Mending stitch Thin fabric overcasting	○	○
11	0-4 (1~2)		Decorative stitch Overcasting	○	○
12	0-4 (1~2)		Decorative stitch	○	○
13	0-4 (1~2)		Decorative stitch	○	○
14	0-4 (0.5~2)		Zigzag stitch (medium)	○	○
15	0-4 (1~4)		Zigzag stitch (large) Overcasting	○	○

Pattern selection dial No.	Stitch length dial	Stitch	Application	MODEL	
				model 34	model 26
A	A-K		Reinforced straight stitch (left side)	○	○
B	A-K		Reinforced straight stitch (center)	○	○
C	A-K		Decorative stitch Double overlock	○	○
D	A-K		Decorative stitch	○	○
E	A-K		Decorative stitch	○	○
F	A-K		Decorative stitch	○	○
G	A-K		Decorative stitch Overlock	○	○
H	A-K		Decorative stitch Overlock	○	○
I	A-K		Decorative stitch	○	○
J	A-K		Reinforced zigzag stitch (medium)	○	○
K	A-K		Reinforced zigzag stitch (large)	○	○
L	L-S		Decorative stitch	○	-
M	L-S		Decorative stitch	○	-
N	L-S		Fagoting	○	-
O	L-S		Appliqué	○	-
P	L-S		Appliqué	○	-
Q	L-S		Decorative stitch	○	-
R	L-S		Decorative stitch	○	-
S	L-S		Decorative stitch	○	-

• Changing the presser foot

 **Caution**

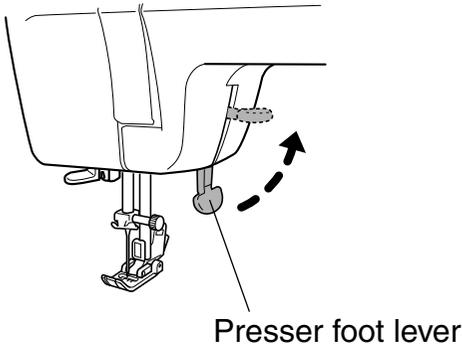


Before changing the presser foot, remove the power plug from the outlet.
Not doing so could cause an injury.

Removal

1

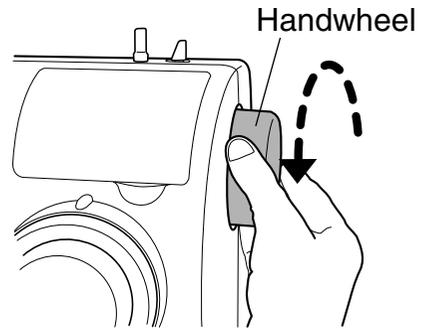
Raise the presser foot lever.



2

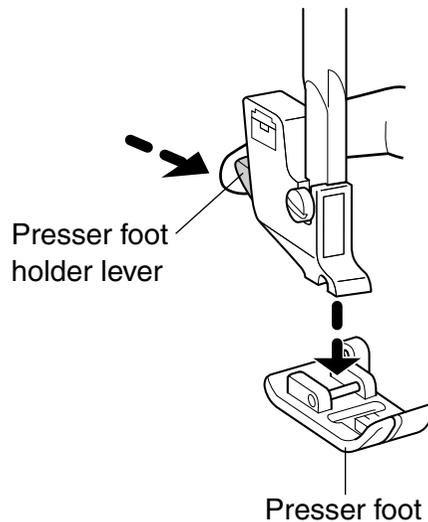
Turn the handwheel towards yourself to raise the needle.

Note: Never turn in the wrong direction.



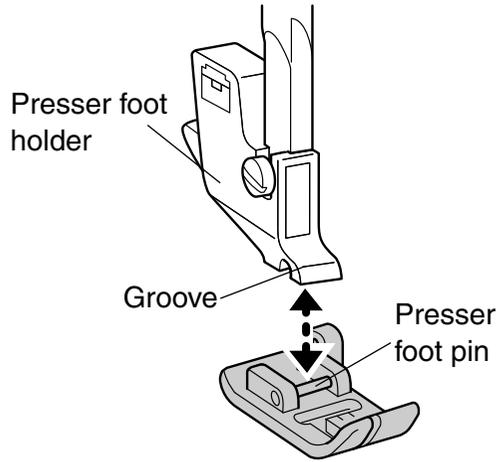
3

Press the presser foot holder lever in the direction of the arrow to release the presser foot.

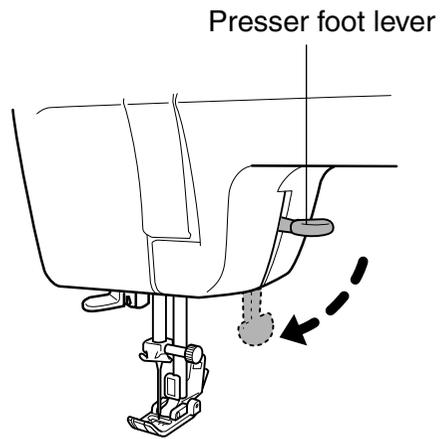


Installation

- 1 Position the presser foot pin directly below the groove in the presser foot holder.



- 2 Lower the presser foot lever to attach the presser foot.



• Changing the needle

Caution



Before changing the needle, remove the power plug from the outlet.

Not doing so could cause an injury.

Be sure to dispose of broken needle in a safe manner.

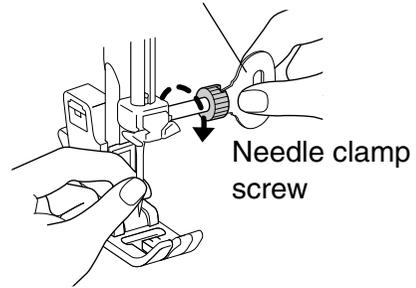
Not doing so could cause an injury.

1 Turn the handwheel towards yourself to raise the point of the needle higher than the needle plate.

2 Hold the needle in one hand, loosen the needle clamp screw with the screw driver for the needle plate, and remove the needle.

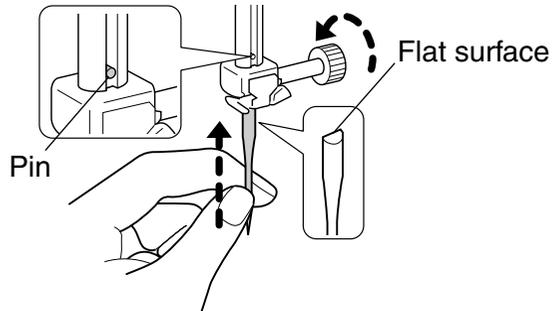
Note: Do not remove the needle clamp screw. Loosen the needle clamp screw to remove the needle.

Screw driver for the needle plate



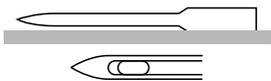
Needle clamp screw

3 Face the flat surface of the needle to the rear and insert until it makes contact with the pin. Firmly tighten the needle clamp screw with the screw driver for the needle plate.



Correct needle selection

○ Good needle



If a faulty needle is used, not only could it impair the sewing performance, but it could also damage the needle plate or hook, or break the needle.

***Incorrect stitching or thread breaking, try replacing the needle.**

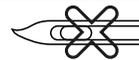
× Faulty needle



The entire needle is bent



The point of the needle is blunt / worn away

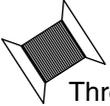
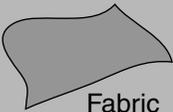
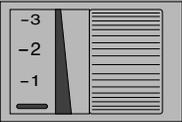
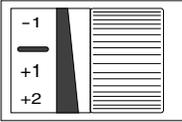
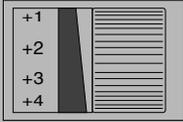


The point of the needle is bent

* Sewing preparations

• Relationship between the needle, thread and fabric, and adjusting the thread tension

The quality of the sewing finish will improve if the needle and thread are changed to match the type of fabric. Follow the directions in the table below.

		Sewing thin fabric 	Sewing normal fabric 	Sewing thick fabric 
Relationship between the needle, thread and fabric	 Needle	No. 75/11	No. 90/14	No. 100/16
	 Thread	Polyester No. 90 Cotton No. 80 to No. 120 Silk No. 80	Polyester No. 50 to No. 60 Cotton No. 60 to No. 80 Silk No. 50 to No. 80	Polyester No. 30 to No. 50 Cotton No. 40 to No. 50 Silk No. 50
	 Fabric	Lining Quipler Georgette Lawn Lace, etc.	Broad Soft denim Satin Pile Gingham, etc.	Curtains Denim Quilting Fleece Tweed Felt, etc.
Adjusting the thread tension	Thread tension	 -1 ~ -3	 -	 +1 ~ +3

- Use a ball point needle for the sewing alignment of stretch fabric.
- Please purchase any needles not included as accessories, after checking they are specified as home-use sewing machine needles.
- Use the same kind of threads for upper/lower thread.
- The higher the needle number is, the needle gets thicker. The higher the thread number is, the thread gets thinner.

• Straight stitching and reverse sewing

Caution

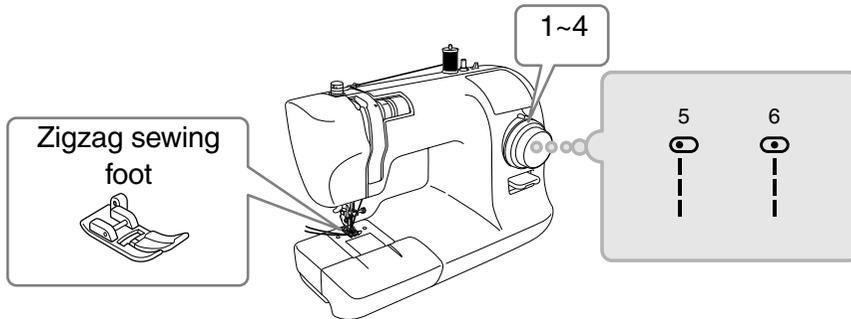


Do not pull the fabric excessively while sewing.
Doing so could break the needle and cause an injury.

Straight stitch

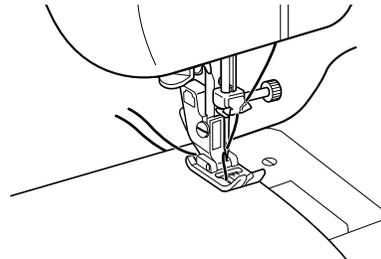
1 Turn the handwheel towards yourself to raise the needle.

2 Turn the pattern selection dial to choose the pattern.
Set the stitch length dial between “1” and “4”.



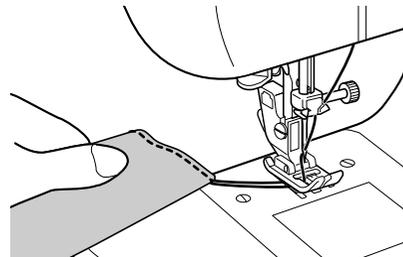
3 Position the fabric under the presser foot, and then lower the presser foot lever.

Step on the foot controller to begin sewing.



End of sewing

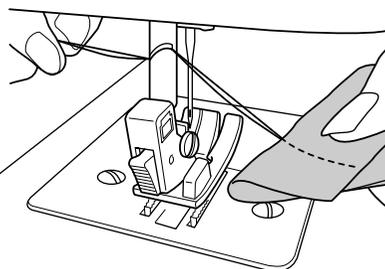
After sewing, turn the handwheel toward you to raise the needle to its highest position, raise the presser foot, and then pull out the fabric to the back.



Thread cutter on the presser bar

Line up the two threads, and then cut them with the thread cutter on the presser bar.

Thread cutter



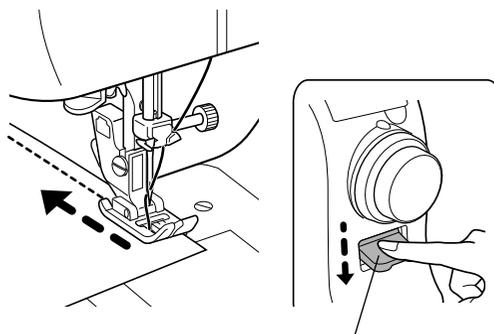
Reverse sewing

Reverse sewing is performed at the beginning and the end of sewing to prevent the thread from unraveling.

Reverse sewing is performed while pressing down the reverse sewing lever.

- Stitch 1 cm from the edge of the fabric to prevent unraveling at the start of sewing.
- Sew 3 to 4 reverse stitches at the end of sewing.

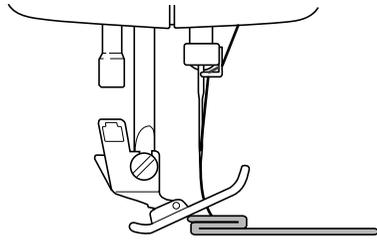
Note: Remove your finger from the reverse sewing lever to return to forward direction sewing.



Reverse sewing lever

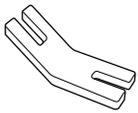
Sewing thick fabric

When sewing thick fabric from the edge, the presser foot may tilt and be unable to feed through the fabric.

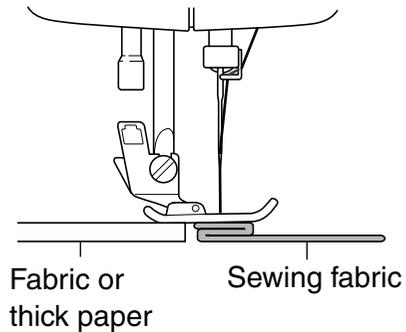


Place fabric or thick paper of the same thickness as the fabric you wish to sew under the presser foot. This will enable smooth sewing.

※ For best sewing results, use the optional “Jeans support” when sewing different thicknesses of thick fabrics.

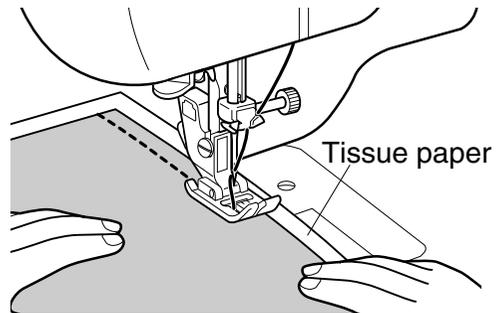


Jeans support



Sewing thin fabric

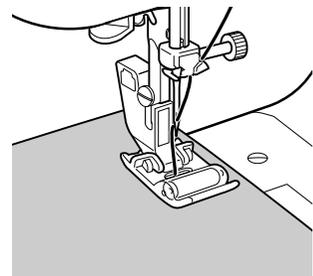
When sewing thin fabric, sometimes fabric puckers or is not fed correctly. At that time, sewing is easier if tissue paper is placed under the fabric. After sewing remove the paper carefully.



Sewing hard-to-feed fabric

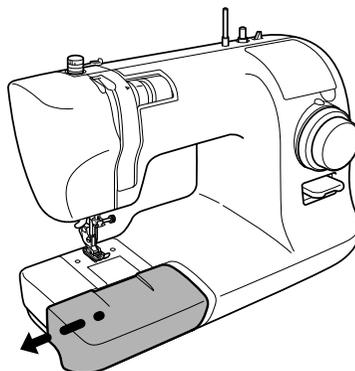
When sewing hard-to-feed fabric, such as leather, use the roller foot.

※ The roller foot is only included with model XXX34.

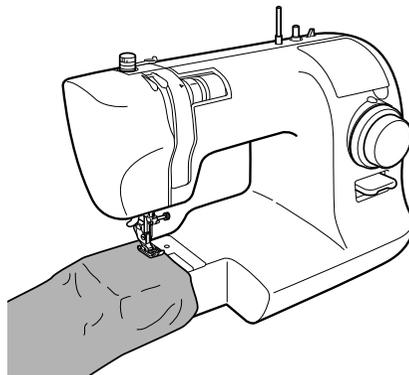


Sewing tube-shaped fabrics

- 1 Pull out the extension table (accessory box) in the direction of the arrow.



- 2 Sew tube-shaped fabrics such as trousers or sleeves, by pulling them over the machine free arm as shown in the diagram.

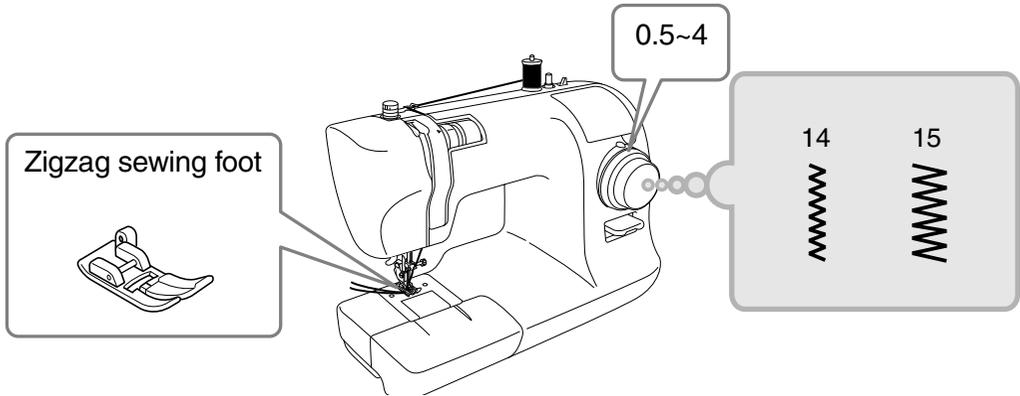


• Zigzag sewing

There are various zigzag applications, such as applique and overcasting.

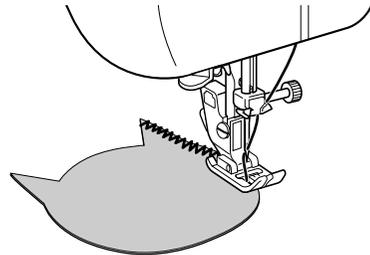
1 Turn the handwheel towards yourself to raise the needle.

2 Turn the pattern selection dial to choose the pattern.
Set the stitch length dial between "0.5" and "4".



3 Position the fabric under the presser foot, and then lower the presser foot.

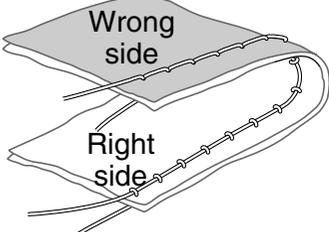
Step on the foot controller to begin sewing.



• Adjusting thread tension

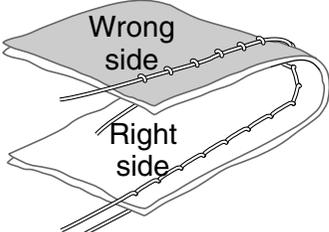
Straight stitch

Upper thread is tight



Wrong side
Right side

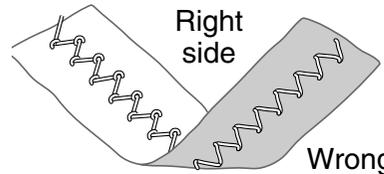
Upper thread is loose



Wrong side
Right side

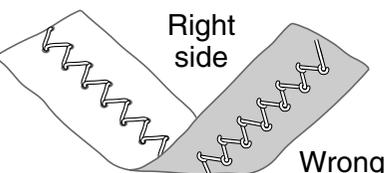
Zigzag sewing

Upper thread is tight



Right side
Wrong side

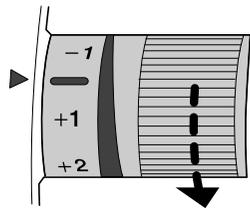
Upper thread is loose



Right side
Wrong side

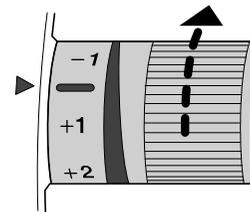
Adjustment method for upper thread tension

● Upper thread is tight



Lower the upper thread tension.

● Upper thread is loose



Increase the upper thread tension.

Note: If the tension does not change even when you adjust the upper thread tension, thread the upper thread and lower thread again.

• Buttonhole sewing

Buttonhole sewing to match the size of the button is possible.

For stretch fabric or thin fabric, it is recommended to use a stabilizer for a better buttonhole finish.

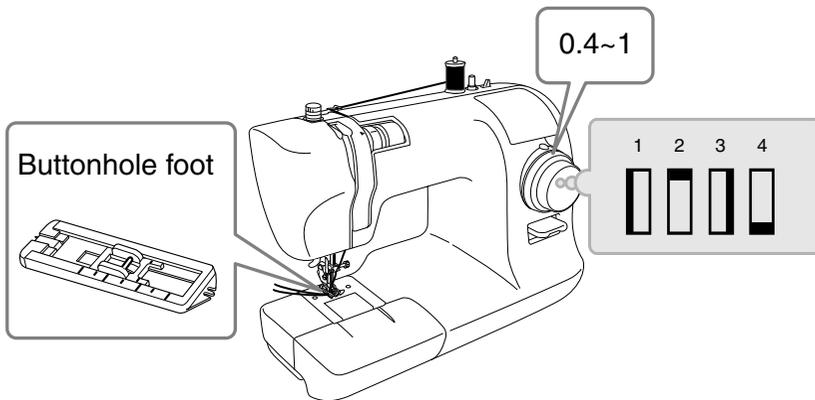
Caution



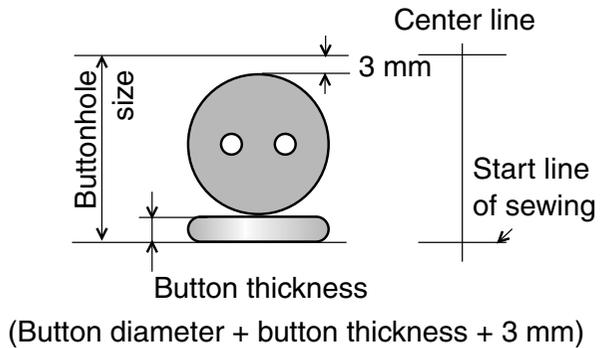
Before changing the presser foot, remove the power plug from the outlet.

Not doing so could cause an injury.

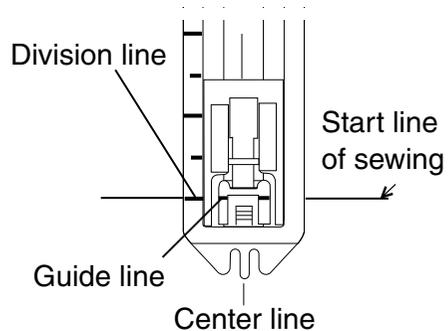
- 1 Change to the buttonhole foot.
(Refer to “Changing the presser foot”, p23.)



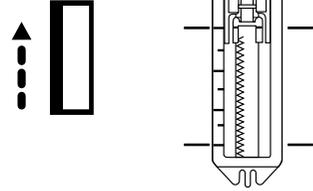
- 2 Set the buttonhole size and mark lines on the fabric.



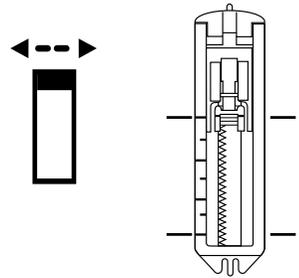
- 3 Align the buttonhole foot division line closest to you with the guide line, and lower the presser foot to the start line of sewing on the fabric.



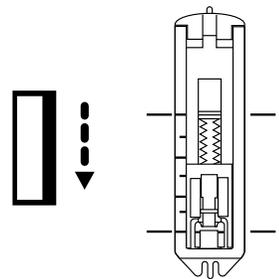
4 Raise the needle to the highest position, set the pattern dial to “1”, sew the left side and stop at the line marked on the fabric. Set the stitch length dial between “0.4” and “1”.



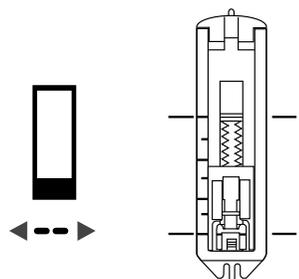
5 Raise the needle to the highest position, set the pattern dial to “2”, and sew 5 to 6 bar-tack stitches. “2” and “4” on the pattern selection dial use the same dial position.



6 Raise the needle to the highest position, set the pattern dial to “3”, sew the right side and stop at the line marked on the fabric.



7 Raise the needle to the highest position, set the pattern dial to “4”, and sew 5 to 6 bar-tack stitches.



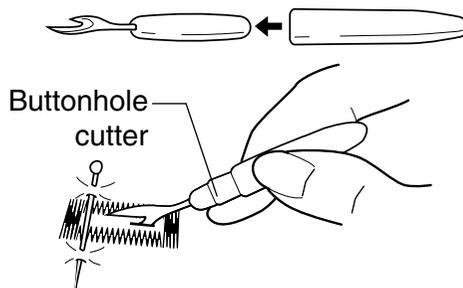
Caution



When using the buttonhole cutter to cut the buttonholes, do not hold the fabric in front of the cutter. Doing so could cause an injury to your hand.

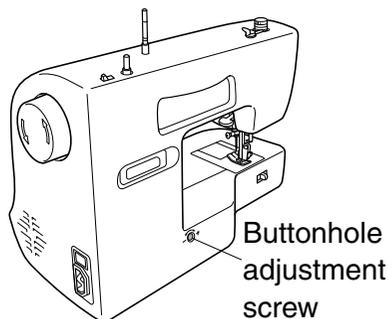
8 Use the buttonhole cutter to cut the center, making sure not to cut the stitches.

Note: If a marking pin is put in the bar-tack area it helps to prevent cutting the bar-tack with the buttonhole cutter.

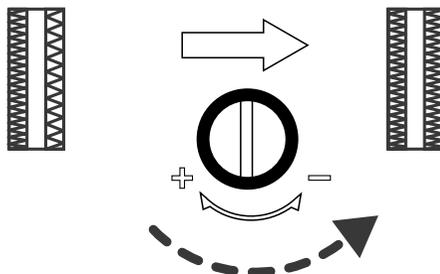


Adjustment of buttonhole balance

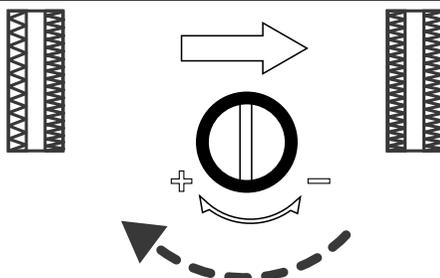
- Use the buttonhole adjustment screw to adjust the balance between the stitches (rear side).
 - Adjust by turning with the ⊖ screw driver of your own.
 - Don't turn the screw more than 90°.
- Note:** The original position of buttonhole adjustment screw may vary according to the model of machine.



If the stitches are loose on the right side of the buttonhole, turn slightly in the “-” direction.



If the stitches are loose on the left side of the buttonhole, turn slightly in the “+” direction.



Overcasting

This is a sewing method that prevents unraveling at the edge of the fabric.

Caution



Before changing the presser foot, remove the power plug from the outlet.

Not doing so could cause an injury.

1

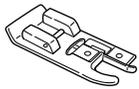
Raise the needle to its highest position, and then turn the pattern selection dial to select stitch number 10 or 15.

Note: Select pattern No.10 when sewing thin fabric. Set the stitch length dial between "1" and "4".

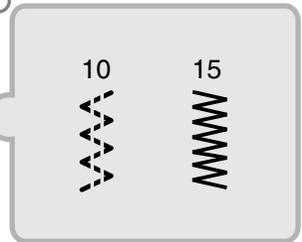
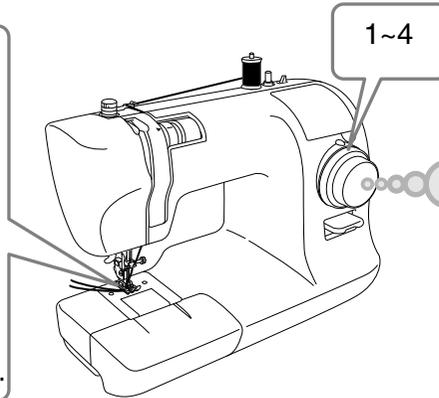
Zigzag sewing foot



Overcasting foot



※ The overcasting foot is only included with model XXX34.

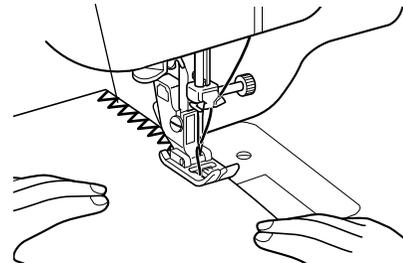


- When using the zigzag sewing foot

2

Position the fabric so that the needle extends slightly off the edge of the fabric when the needle moves to the right.

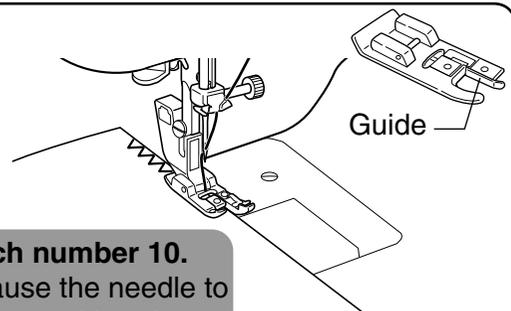
Right needle entry point



- When using the overcasting foot

2

Attach the overcasting foot. (Refer to "Changing the presser foot" on page 23.) Sew with the edge of the fabric against the guide on the foot.



Caution



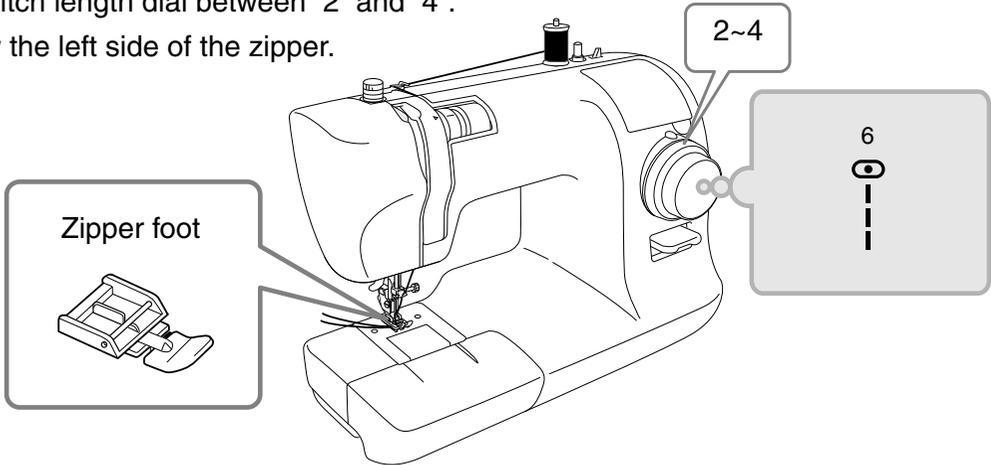
Do not use stitch number 10.

Doing so may cause the needle to hit the presser foot and break or cause injuries.

• Zipper insertion

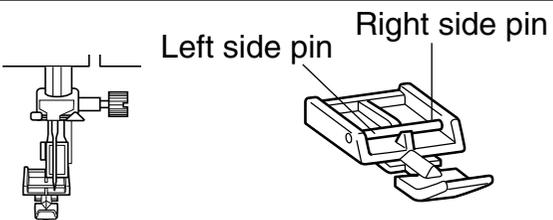
Caution  **Before changing the presser foot, remove the power plug from the outlet.**
Not doing so could cause an injury.

Attach the zipper foot. (Refer to “Changing the presser foot” on page 23.)
Raise the needle to its highest position, and then turn the pattern selection dial to select stitch number 6.
Set the stitch length dial between “2” and “4”.
First, sew the left side of the zipper.

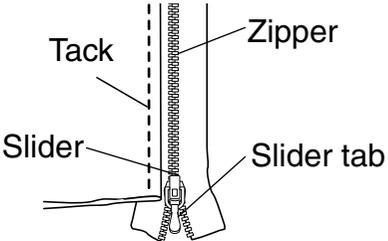


Sewing the left side of the zipper

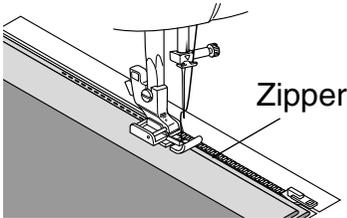
1 Set the right side pin of the zipper foot to the presser foot holder.



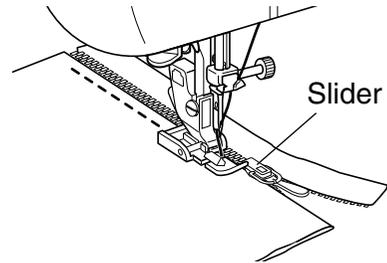
2 Align the zipper and the fabric, and tack.
※ Lay down the slider tab toward you.



3 Position the fabric so that the zipper is on the right side of the presser foot.



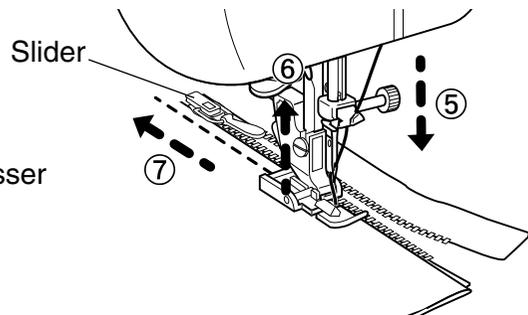
- 4 Sew until just before the presser foot makes contact with the slider, and then stop the sewing machine.



- 5 Turn the handwheel towards yourself to lower the needle into the fabric.

- 6 Raise the presser foot.

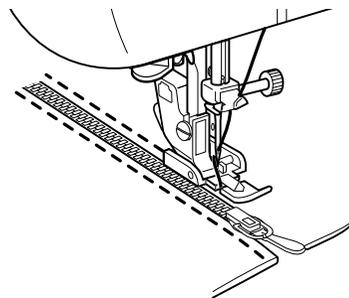
- 7 Move the slider to the rear of the presser foot, and finish the sewing.



Sewing the right side of the zipper

Release the presser foot and set to the left side pin.
Sew the right side of the zipper using the same procedures as for the left side.

Note: Sewing in the same direction as the left side will help prevent sewing misalignment.



• Blind hem stitching

In this sewing method the stitch cannot be seen on the front of the fabric.

Caution



Before changing the presser foot, remove the power plug from the outlet.

Not doing so could cause an injury.

Raise the needle to its highest position, and then turn the pattern selection dial to select stitch number 7 or 9.

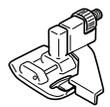
(When sewing stretch fabrics, select stitch number 9.)

Set the stitch length dial to setting "1" or "2".

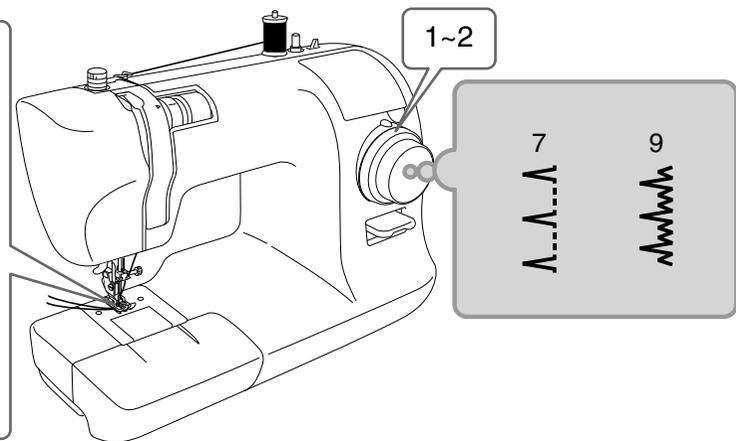
Zigzag sewing foot



Blind stitch foot

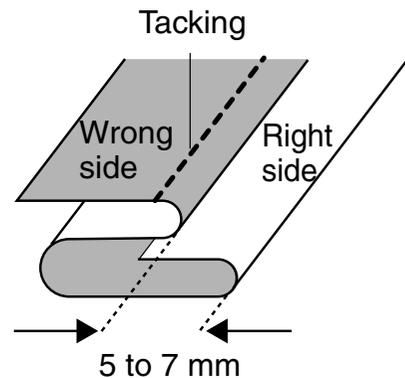


※ The blind stitch foot is only included with model XXX34.



1 Fold back the cloth so that the folded area protrudes by about 5 to 7 mm.

2 Iron and tack by hand.



- When using the zigzag sewing foot

3 Position the fabric so that the needle slightly catches the fold when the needle moves to the left.

4 Lower the presser foot and start sewing. The part of the stitch that catches the fold will be visible from the right side of the fabric. Sew the stitch evenly so that the part of the stitch that catches the fold is not too large or too small.

5 After sewing, pull out the tacking, open out the fabric.

- When using the blind stitch foot

3 Attach the blind stitch foot. (Refer to “Changing the presser foot” on page 23.) Position the fabric so that the needle slightly catches the fold when the needle moves to the left.

4 Lower the presser foot, adjust the screw so that the fold aligns with the guide, and then sew with the fold against the guide.

5 After sewing, pull out the tacking, open out the fabric.



○

Balanced stitches

Wrong side	Right side

Small stitches evenly located on right side.

×

Needle catches too much on the fold

Wrong side	Right side

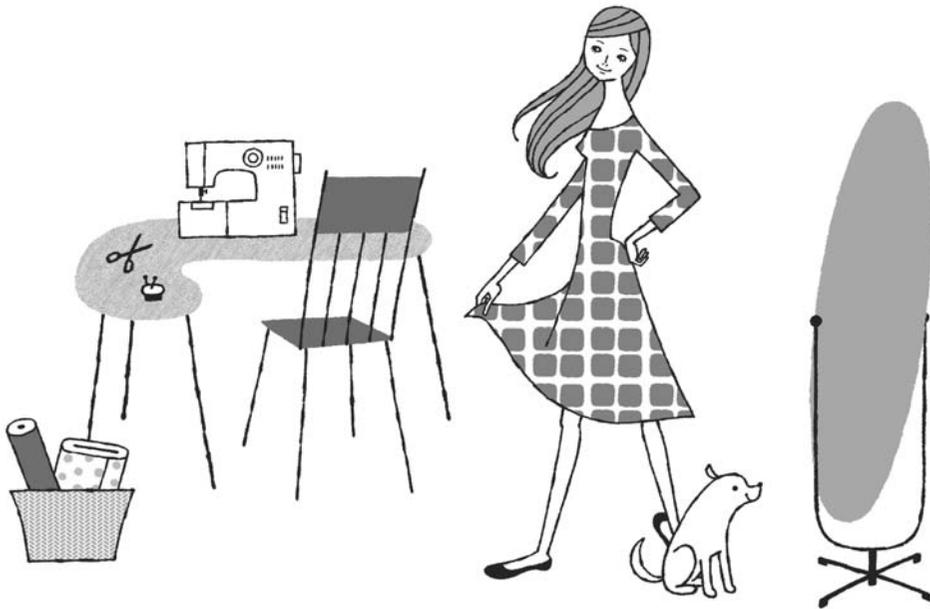
Large stitches on right side.

×

Needle does not catch on the fold

Wrong side	Right side

The blind hem stitches do not come through



Stretch & Decoration stitching

Use this stitching method for reinforcing stitching, decorative stitching and quilting.

Caution

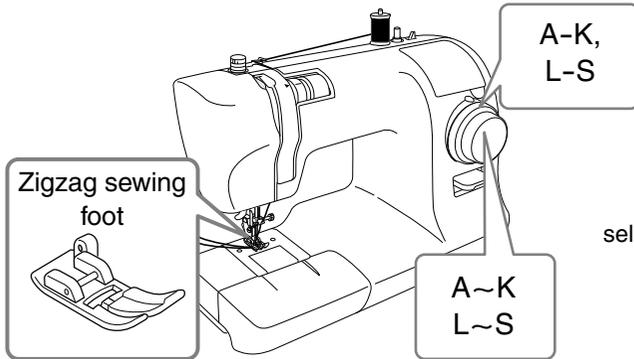


Do not turn the pattern selection dial or stitch length dial while operating the machine. Doing so could cause injuries.

Attention

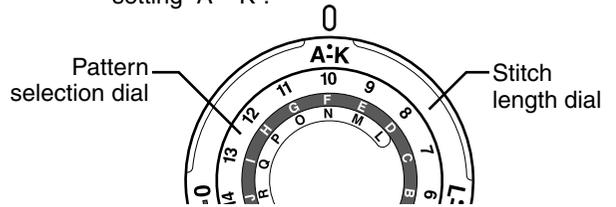
- Stitches L through S can be sewn only with model XXX34.
- The model name is indicated beside "MODEL" in the model label on the back of the sewing machine. (MODEL SP **)

Selecting a stitch



As an example, the following procedure describes how to select stitch number F.

- Raise the needle to its highest position, and then turn the pattern selection dial to select stitch number F.
- Turn the stitch length dial to select setting "A - K".



Note: Select the same setting on the stitch length dial and the pattern selection dial.

Stitch list

Pattern selection dial No.	Stitch length dial	Stitch	MODEL		Pattern selection dial No.	Stitch length dial	Stitch	MODEL	
			model 34	model 26				model 34	model 26
A	A-K		○	○	L	L-S		○	-
B	A-K		○	○	M	L-S		○	-
C	A-K		○	○	N	L-S		○	-
D	A-K		○	○	O	L-S		○	-
E	A-K		○	○	P	L-S		○	-
F	A-K		○	○	Q	L-S		○	-
G	A-K		○	○	R	L-S		○	-
H	A-K		○	○	S	L-S		○	-
I	A-K		○	○					
J	A-K		○	○					
K	A-K		○	○					

• Feed dog and hook maintenance

If the sewing machine makes a loud noise or rotates slowly, or there could be thread waste or dust in the hook or feed dog. Perform maintenance on the hook and the feed dog.

⚠ Caution



Before cleaning the hook, remove the power plug from the outlet. Not doing so could cause an injury.

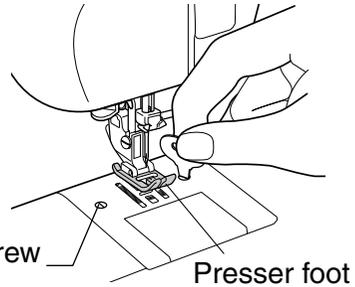
Attention

Do not use detergent, bleach, benzine, or thinner chemical cloths. Doing so could cause discoloration or cracking.

Cleaning the feed dog and hook

- 1 Remove presser foot and needle. Use a screwdriver to loosen the screws in the needle plate, and then remove the needle plate.

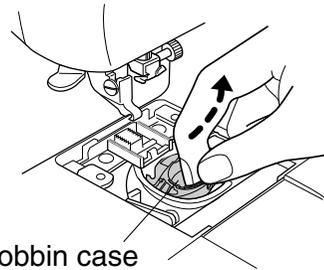
Needle plate screw
(2 screws)



Presser foot

- 2 Lift bobbin case in the direction of the arrow and remove it.

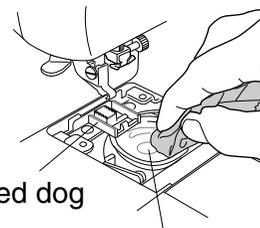
Bobbin case



- 3 Brush off lint and dust on feed dog and hook, then clean it with a soft cloth. A vacuum cleaner wand or hose may be used to remove lint from this area.

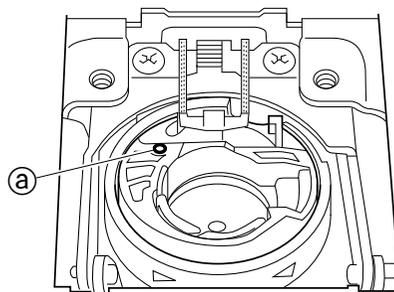
Feed dog

Hook



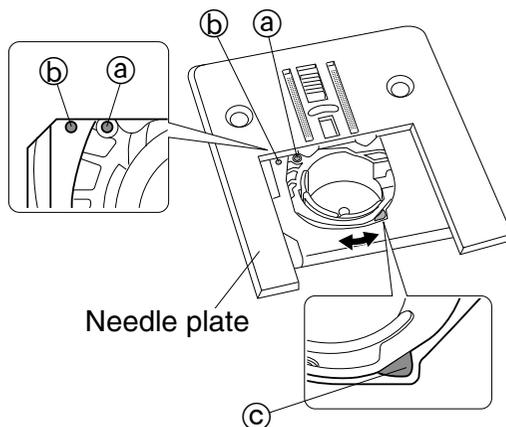
Attaching the Bobbin Case

- 1 Insert the bobbin case from the front.
The red mark ① on the bobbin case should be in the position, as shown in the diagram.



- 2 Align the red mark ① and ②, and attach the needle plate with the projection ③ on the bobbin case positioned as shown in the diagram.

- 3 Make sure that bobbin case moves slightly from side to side as indicated by the arrow.



- 4 Tighten needle plate clamp screws.

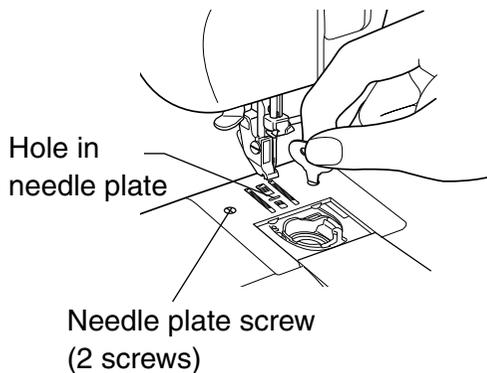
Turn the handwheel and see if hook moves smoothly.

When the bobbin case is attached incorrectly, the handwheel is heavy and does not turn smoothly.

At that time remove the needle plate and the bobbin case, attach them again.

Attach the needle and presser foot.

Check that the needle correctly enters the hole in the needle plate.



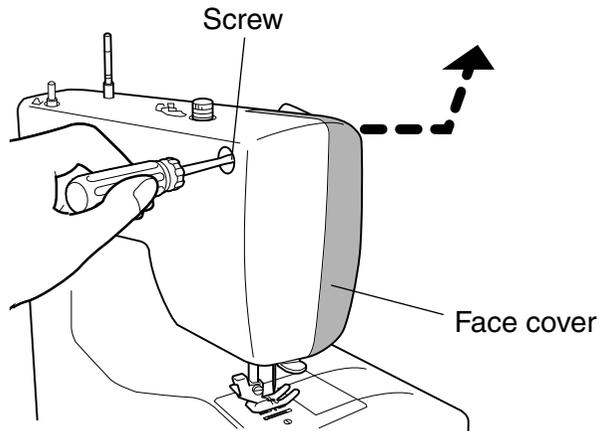
• Changing light bulb

Warning

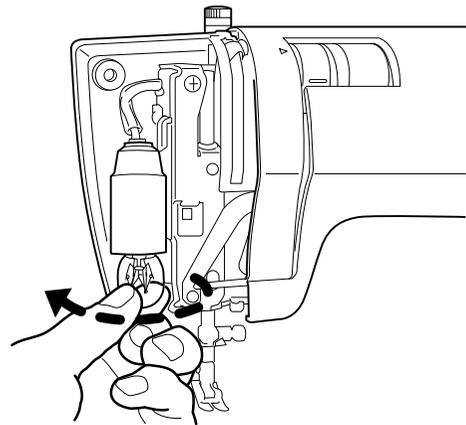


Before changing the light bulb, remove the power plug from the outlet and wait until the bulb cools. Not doing so could cause a burn or electric shock.

- 1** Loosen the screw with a “+” screw driver of your own, and take off the face cover in the direction of the arrow.



- 2** Turn the light bulb counterclockwise as the arrow in the diagram and remove.



- 3** Turn the new light bulb clockwise to install.

Note: Contact your distributor or the service center listed on the last page of this Instruction Manual to purchase a light bulb for the SP20 series.

- 4** Always reinstall the face cover after replacing the light bulb.

• Troubleshooting

What is the problem? Check the following possibilities before contacting the service center for repair.

Trouble	Cause	Countermeasure	Page
Does not rotate Does not work	The power plug is not inserted	Connect the power plug correctly	11
	Thread is tangled in the hook, or there is a broken needle in the hook	Clean the hook	43
Loud noise Slow rotation	There is thread waste or dust in the hook or feed dog	Remove thread waste or dust	43
Broken needle	The needle is incorrectly installed	Install the needle correctly	25
	The needle clamp screw is loose	Firmly tighten the screw	25
	The needle is too fine for the cloth	Use a needle appropriate to the fabric	26
	The tension of the upper thread is too tight	Adjust the thread tension	32
	The fabric is being pulled too strongly	Do not pull the fabric strongly	27
	The bobbin case is not in the correct position	Put the bobbin case in the correct position	44
Upper thread breakage	The upper and lower thread are not correctly threaded	Thread the upper and lower thread correctly	15, 16
	The thread is tangled in the bobbin case or hook	Remove thread waste from the feed dog and hook	43
	The tension of the upper thread is too tight	Adjust the thread tension	32
	The needle is bent The point of the needle is burred	Replace with a good needle	25
	The needle, thread and fabric combination is inappropriate	Use an appropriate needle, thread and fabric combination	26
Lower thread breakage	The lower thread is incorrectly threaded	Thread the lower thread correctly	15
Fabric is not fed through	There is thread waste in the feed dog	Remove thread waste from the feed dog and hook	43
	The feed dog is lowered	Raise the feed dog	9
	The stitch length dial is set to "0"	Adjust the stitch length dial	9
	The stitch length amount is too small	Adjust the stitch length dial to an appropriate setting	9
	The pressure applied by the presser foot is too light	Adjust the pressure applied by the presser foot to an appropriate setting	9

Trouble	Cause	Countermeasure	Page
Missed stitches	The needle is incorrectly installed	Install the needle correctly	25
	The needle is bent	Use a straight needle	25
	The needle and thread are not appropriate for the fabric	Sew with a needle and thread appropriate to the fabric	26
	The upper thread is not correctly threaded	Thread the upper thread correctly	16
The fabric wrinkles / puckers	The tension of the upper thread is too tight	Adjust the thread tension	32
	The upper and lower thread are not correctly threaded	Thread the upper and lower thread again	15, 16
	The needle is too thick for the cloth	Use a needle appropriate to the fabric	26
	The needle is burred	Replace with a good needle	25
Too much lower thread showing on right side of the fabric	The lower thread is incorrectly threaded	Thread the lower thread correctly	15
	The tension of the upper thread is too tight	Adjust the thread tension	32
	The bobbin is not correctly inserted in the bobbin case	Insert the bobbin in the bobbin case correctly	15
Too much upper thread showing on wrong side of the fabric	The upper thread is not correctly threaded	Thread the upper thread correctly	16
	The tension of the upper thread is too loose	Adjust the thread tension	32
	The upper thread is not correctly threaded (not threaded through the thread guide)	Thread the upper thread correctly	16
Stretch stitches cannot be sewn	The stitch length dial is not set to setting "A – K" or "L – S"	Set the stitch length dial to the appropriate setting	42
	The stitch length dial and the pattern selection dial are set to different settings	Select the same setting on the stitch length dial and the pattern selection dial	42
The needle cannot be threaded with the needle threader	The needle position is too low	Turn the handwheel so that the line is at the top	18
	Needle no.9 is being used	Use needle no. 11 through 16	26
	The needle is incorrectly installed	Install the needle correctly	25
	The needle is bent	Use a straight needle	25
	The thread has not been correctly passed through the needle bar thread guide	Pass the thread through the needle bar thread guide correctly	18

If the above treatments do not solve the problem, contact the service center as described in your warranty. When calling for service, please note the MODEL and SERIES that are inscribed on the back of your sewing machine.

SP20 SERIES / SERIE MODEL / MODELE SP			
			Manufacturer: ZHEJIANG AISIN ELITE MACHINERY & ELECTRIC CO., LTD. P.R.C.
220-240V ~ 50Hz Total 85W max 15W			Importer/ Distributor: AISIN EUROPE S. A.
			Designed and engineered by AISIN SEIKI JAPAN
MADE IN P. R. C. / FABRIQUE A P.R.C.			

* Maintenance / Others

• Servicing double-insulated products (230V-240V)

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means are provided on a double-insulated product nor should a means for grounding be added to the product. Servicing a double-insulated product requires extreme care and should only be done by qualified service personnel with knowledge of the system under his or her responsibility. Replacement parts for a double-insulated product must be identical to those parts in the product. The symbol is marked on the double-insulated product.

* Others

• Safety precaution about the battery

Warning



If the alkaline solution from the battery get in the eyes or come into contact with the skin or clothes, rinse with a large quantity of clean water and consult a doctor immediately.

Not doing so could cause an injury.

Caution



- 1. Do not short-circuit, disassemble, heat, recharge, deform, dispose of in fire.**
- 2. Do not insert batteries in reverse polarity.**
- 3. Do not expose batteries to strong impact by dropping or throwing the batteries.**

Doing so could cause a leakage of alkaline solution.

• Recycling



DO NOT THROW AWAY!

EU ONLY

We are committed to the protection of the environment. We strive to minimize the environmental impact of our products by continuously improving product design and our manufacturing methods.

At end of life, please dispose of this product in an environmentally responsible way.

The crossed-out wheellie bin symbol featured above and on the product's data-plate means that this product falls under the scope of the E.U. "Waste Electrical and Electronic Equipment" (WEEE) directive and "Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment" (ROHS) directive and should not be disposed of with your household waste. At end of life, you must ensure that this product is disposed of in accordance with national and local legislation and that it is sorted as Category 2 "Small Domestic Appliances" WEEE. You may be liable under local and national laws for improper disposal of this product. Please consult the web, or a competent national or local body, for the return and collections systems available to you and the locations of your nearest recycling points. If you purchase a new product direct from us, we will take your old product back, irrespective of the brand, if it is a like for like sale.

As an individual, you can make a positive impact on reuse, recycling and other forms of recovery of WEEE. This will reduce use of landfill and minimize the environmental impact of the products you use.

Hazardous substances in electronic and electrical products can have a harmful impact on human health and on the environment.

• Specifications

Model	SP20 series
Hook type	Horizontal
Needle	Home-use sewing machine needle (HA-1)
Bobbin	TOYOTA-exclusive plastic bobbin
Maximum stitch length	4 mm
Maximum stitch width	5 mm
Straight stitch needle position	Center needle position, left needle position
Sewing machine weight (sewing machine and foot controller)	6.3 kg
Sewing machine size	Width: 412 mm Depth: 192 mm Height: 292 mm
Rated voltage	220 - 240 V ~
Rated frequency	50 Hz
Rated power consumption	85 W
Light bulb	15 W
Battery	Alkaline 1.5 V, Mignon/AA/LR6

If you have any queries about this TOYOTA sewing machine, check the warranty for details.

EU ONLY

Imported by / Importé par :

AISIN EUROPE S.A. Web: www.home-sewing.com

Head Office	Avenue de l'Industrie 21, Parc Industriel, 1420 Braine-L'Alleud BELGIUM TEL: +32 (0) 2 387 0707 FAX: +32 (0) 2 387 1995
UK Branch	Unit 4, Swan Business Park, Sandpit Road, Dartford, Kent, DA1 5ED UK. TEL: +44 (0) 1322 291137 FAX: +44 (0) 1322 279214
France Branch	Bât. Le Minnesota, allée Rosa Luxembourg, B.P.70294, 95615 Cergy Pontoise Cedex, FRANCE TEL: +33 (0) 1 34 30 25 00 FAX: +33 (0) 1 34 30 25 01
Germany Branch	Odenwaldstrasse. 3, D-63263 Neu-Isenburg, GERMANY TEL: +49 (0) 61 02-3 67 89-0 FAX: +49 (0) 61 02-3 67 89-13
Holland Branch	Energieweg 14, 2382 NJ Zoeterwoude (Rijndijk), THE NETHERLANDS TEL: +31 (0) 71 5410251 FAX: +31 (0) 71 5413707
Austria Branch	Donaufelderstrasse 101/5/1, A-1210 Wien, AUSTRIA TEL: +43 (0) 1 812 06 33 FAX: +43 (0) 1 812 06 33-11

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