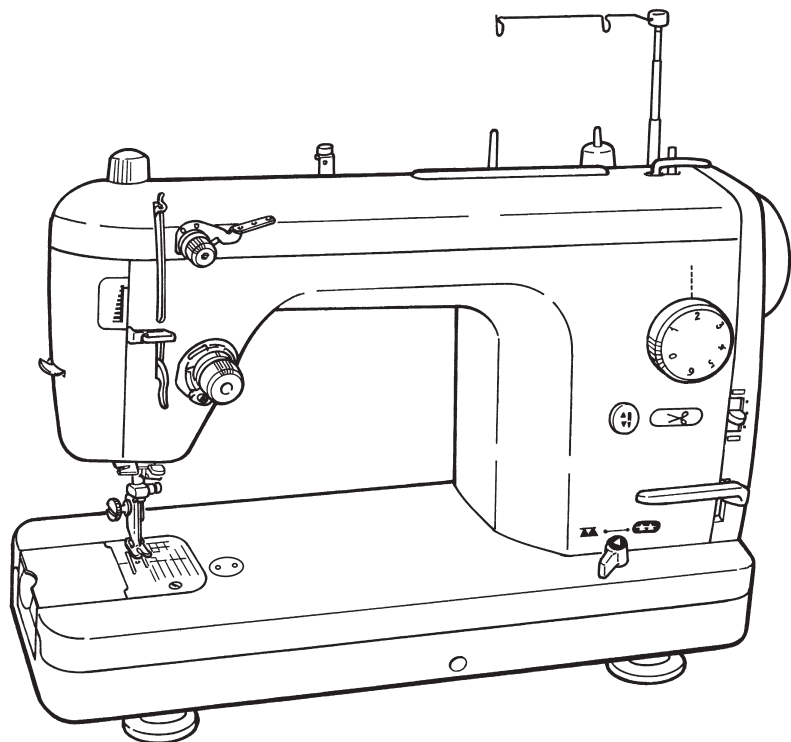


Sewing machine for professional use

TL-2020 PE

INSTRUCTION MANUAL

EN

**IMPORTANT:**

Read all safety regulations carefully and understand them before using your sewing machine. Retain this instruction manual for future reference.

“IMPORTANT SAFETY INSTRUCTIONS”

When using an electrical appliance, basic safety precautions should always be followed, including the following: Read all instructions before using this sewing machine.

“DANGER ____ To reduce the risk of electric shock:”


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

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

1. Do not allow this appliance to be used as a toy. Close attention is necessary when this appliance is used by or near children. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
2. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.
5. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper stitch plate. The wrong plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. Switch the sewing machine off “O” when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot.
10. Always unplug the machine from the electrical outlet when removing covers, when lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off “O” position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
16. Basically, the machine should be disconnected from the electricity supply when not in use.
17. If the power cord of this appliance is damaged, it must be replaced with a special cord by your nearest authorized dealer or service center.
18. (Except USA/Canada) This machine is provided with double insulation.
Use only identical replacement parts. See instructions for servicing Double-Insulated machine.

“SERVICING DOUBLE-INSULATED PRODUCTS”

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is 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 knowledge of the system and should only be done by qualified service personnel. Replacement parts for a double-insulated product must be identical to those parts in the product. A double-insulated product is marked with the words DOUBLE INSULATION or DOUBLE INSULATED.

The symbol  may also be marked on the product.

“SAVE THESE INSTRUCTIONS”

“This sewing machine is intended for household use only.”

Congratulations on your purchase of a JUKI sewing machine.



Please be sure to read safety precautions in “To use the sewing machine safely” in the Instruction Manual before use to fully understand the functions and operating procedures of the sewing machine so as to use the sewing machine for a long time.

After you have read the Instruction Manual, please be sure to keep it together with the warranty so that you can read it whenever necessary.











To use the sewing machine safely

Marks and pictographs included in the Instruction Manual and shown on the sewing machine are used so as to ensure safe operation of the sewing machine and to prevent possible risk of injury to the user and other people.

Warning marks are used for different purposes as described below.

 WARNING	Indicates that there is a possible risk of death or serious injury if this mark is ignored and the sewing machine is used in a wrong manner.
 ATTENTION	Indicates the operation, etc. which can cause a possible risk of personal injury and/or physical damage if this mark is ignored and the sewing machine is used in a wrong manner.

Pictographs mean the following:

	Danger warning which is not specified		There is a risk of electrical shock		There is a risk of fire		There is a risk of injury to hands, etc.
	Prohibited matter which is not specified		Disassembly/alteration is prohibited		Do not place fingers under the needle		Do not pour oil, etc.
	Generally required behavior		Disconnect the power plug				

WARNING

For the combination of the material and the thread and needle, in particular, refer to the explanation table in “Replacement of the needle”.

If the needle or thread does not match the material used such as in the case that an extra heavy-weight material (e.g., denim) is sewn with a thin needle (#11 or higher), the needle can break resulting in an unexpected personal injury.

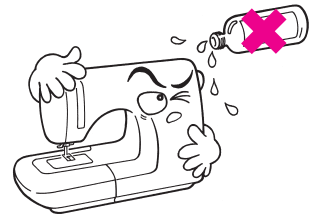
Other precautions

- Do not put the sewing machine under the direct sunlight or in a humid place.



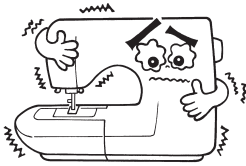
- Do not wipe the sewing machine with solvent such as thinner.

When the sewing machine is soiled, put a small quantity of neutral detergent on a piece of soft cloth and carefully wipe off the sewing machine with it.



Be aware that the following state can take place since the sewing machine incorporates semi-conductor electronic parts and precise electronic circuits.

- Be sure to use the sewing machine in the temperature range from 5°C to 40°C. If the temperature is excessively low, the machine can fail to operate normally.



- Safety device

In the case the sewing machine continuously performs sewing under the following conditions, the safety device will automatically kick in to stop the sewing machine to prevent the sewing machine from being abnormally hot.

- If the sewing machine continuously performs sewing at a low speed for an extended period of time, or under a hot environment:
 - The safety device automatically returns to its normal state approximately 30 minutes after it has stopped the sewing machine. Then, you can normally use the sewing machine again.
- If the sewing machine continuously performs sewing while the motor is abnormally overloaded such as in the case thread entanglement has occurred:
 - Remove thread and cloth chip entangling in the bobbin case, hook, etc.



* The operating temperature of the sewing machine is between 5°C and 40°C. Do not use the sewing machine under the direct sunlight, near the burning things such as a stove and candle, or in a humid place. By so doing, the temperature in the interior portion of the sewing machine can rise or the coating of the power cord can melt, causing fire or electrical shock.

“NOTES DE SECURITE IMPORTANTES”

Lorsque vous utilisez un appareil électrique, des précautions élémentaires doivent toujours être suivies, comme celles-ci. Lisez attentivement ces instructions avant d'utiliser cette machine à coudre.

“DANGER ____ Pour réduire le risque d'électrocution:”


1. L'appareil ne doit jamais être laissé sans surveillance une fois branché.
2. Toujours débrancher cet appareil du secteur immédiatement après utilisation et avant de le nettoyer

“ATTENTION ____ Pour les risques de brûlure, électrocutions et de blessures:”

1. Ne pas prendre la machine domestique pour un jouet. La plus grande prudence est de mise quand la machine est utilisée par des enfants ou quand elle se trouve à leur proximité. Cette machine à coudre peut être utilisée par des enfants âgés de 8 ans et plus ainsi que par les personnes ayant des capacités physiques, sensorielles ou mentales réduites, ou le manque d'expérience et de connaissances seulement si elles ont été formées et ont reçues les instructions concernant l'utilisation de la machine à coudre de manière sûre et comprendre les risques encourus. Les enfants ne doivent pas jouer avec la machine à coudre. Le nettoyage et l'entretien ne doit pas être fait par des enfants sans surveillance.
2. N'utiliser cet appareil que dans le cadre de ses fonctions, mentionnées dans le présent manuel. N'utiliser que les pièces fournies ou recommandées par le fabricant dans ce manuel.
3. Ne pas utiliser cet appareil si une de ses prises ou cordons est endommagée, ou s'il ne fonctionne pas correctement. S'il est tombé, a été endommagé, tombé dans l'eau, retournez l'appareil auprès de votre revendeur le plus proche pour une réparation, ou une vérification technique ou électrique.
4. Ne jamais utiliser cet appareil dans un lieu dépourvu d'aération. Maintenez une ventilation suffisante autour de la machine et du rhéostat et éviter la poussière et les chutes de tissus aux alentours des sources d'aération de la machine.
5. Eloigner vos doigts des pièces mobiles de la machine. Faites particulièrement attention aux mouvements de l'aiguille.
6. Toujours utiliser la plaque aiguille appropriée. Un plaque non appropriée peut faire casser l'aiguille.
7. Ne pas utiliser d'aiguilles courbes.
8. Ne pas tirer ou pousser le tissu lorsque vous cousez., cela pourrait abîmer, voire casser l'aiguille.
9. Mettre la machine à coudre hors tension « O » avant de faire tout réglage dans la zone de l'aiguille, comme enfiler ou remplacer l'aiguille, enfiler le fil de la canette ou remplacer le pied presseur.
10. Débranchez toujours votre machine lorsque vous ôtez le capot, lorsque vous la nettoyez, ou pour tout autre manipulation mentionnée dans le manuel d'instruction.
11. Ne jamais laisser d'objet entrer dans les ouvertures de la machine.
12. Ne pas utiliser à l'extérieur.
13. Ne pas utiliser lorsqu'un aérosol a été pulvérisé, ou lorsque de l'oxygène a été administré.
14. Avant de débrancher la machine, mettre l'interrupteur en position éteint (“O”).
15. Ne pas débrancher en tirant sur le cordon. Pour débrancher, tenir la prise, pas le cordon.
16. En cas de non-utilisation, l'appareil doit, en principe, être séparé du réseau en retirant la prise.
17. Si le cordon spécial de cet appareil est endommagé, il doit être remplacé par votre agent autorisé le plus proche ou dans un centre de service.
18. Cette machine est équipée d'une double isolation (sauf aux USA / au CANADA). N'employer que des pièces de rechange originales. Se reporter aux indication pour la remise en état des produits à isolation double.

“ENTRETIEN DES PRODUITS A DOUBLE ISOLATION (Excepté USA / Canada)”

Un produit à double isolation est équipé de deux isolations au lieu d'une mise à la terre. La mise à la terre n'est pas prévue sur un produit à double isolation et ne devrait donc pas être employée. L'entretien d'un produit à double isolation qui exige de grands soins et des connaissances poussées sur le système, doit donc être réalisé seulement par du personnel qualifié. N'employer que des pièces de rechange originales pour l'entretien et la réparation. Un produit à double isolation est désigné de la manière suivante: “Isolation double” ou “A double isolement”.

Le symbole  peut également caractériser un tel produit.

“PRIERE DE CONSERVER SOIGNEUSEMENT LES PRESCRIPTIONS DE SECURITE”

“Cette machine à coudre est destinée à un usage domestique uniquement.”

Merci d'avoir fait l'achat d'une machine à coudre JUKI.



Avant l'utilisation, veuillez lire les consignes de sécurité sous la section « Pour utiliser la machine à coudre en toute sécurité » du Manuel d'instructions, afin de comprendre parfaitement les fonctions et procédures d'utilisation de la machine à coudre, ainsi que pour prolonger sa durée de service.

Après avoir lu le Manuel d'instructions, veuillez à le conserver, avec la garantie, de façon à pouvoir le consulter en tout temps.











Pour utiliser la machine à coudre en toute sécurité

Les symboles et icônes compris dans le Manuel d'instructions ou apposés sur la machine à coudre ont pour but d'assurer l'utilisation sécuritaire de la machine à coudre et de protéger l'utilisateur et autres personnes contre les risques éventuels de blessure.

Les symboles de mise en garde sont utilisés aux diverses fins décrites ci-dessous.

 AVERTISSEMENT	Indique un risque éventuel de décès ou de blessure grave en cas d'ignorance de ce symbole et d'une mauvaise utilisation de la machine à coudre.
 ATTENTION	Indique une utilisation qui comporte un risque éventuel de blessure et/ou de dommages matériels en cas d'ignorance de ce symbole et d'une mauvaise utilisation de la machine à coudre.

La signification des icônes est telle que décrite ci-dessous.

	Mise en garde contre un danger non spécifié		Risque de choc électrique		Risque d'incendie		Risque de blessure aux mains, etc.
	Interdiction non spécifiée		Démontage/modification interdit		Ne pas mettre les doigts sous l'aiguille		Ne pas huiler, etc
	Comportement généralement requis		Débrancher la fiche d'alimentation				

⚠ AVERTISSEMENT

Pour combiner l'aiguille en fonction de la matière et du fil, reporter vous à la section «remplacement de l'aiguille». Si l'aiguille ou le fil n'est bien adapté au tissu, comme dans le cas d'un tissu très lourd (p. ex. du jean) cousu avec une aiguille mince (n° 11 ou supérieure), l'aiguille risquera de se casser et de causer une blessure.

Autres précautions à prendre

- Ne pas exposer la machine directement au soleil ou dans une atmosphère humide.



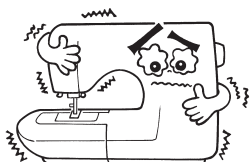
- Ne pas utiliser de détergents ou alcool pour nettoyer la machine.

Si la machine à coudre est sale, mettre un peu de détergent neutre sur un linge doux, et le passer soigneusement sur la machine à coudre pour enlever les taches.



Il faut savoir que l'état suivant peut avoir lieu du fait que la machine intègre des semi-conducteurs et des circuits électroniques.

- Penser à utiliser la machine à coudre dans une plage de température de 5 °C à 40 °C. À température excessivement basse, la machine risque de ne pas fonctionner normalement.



- Dispositif de sécurité
Si la machine à coudre exécute la couture en continu dans les conditions suivantes, le dispositif de sécurité se déclenche automatiquement pour arrêter la machine à coudre afin d'éviter qu'elle ne chauffe anormalement.

- Si la machine à coudre exécute la couture en continu à basse vitesse pendant une période prolongée ou dans un environnement chaud :

→ Le dispositif de sécurité revient automatiquement à son état normal 30 minutes après avoir arrêté la machine à coudre. Ensuite, vous pouvez réutiliser normalement la machine à coudre.

- Si la machine à coudre exécute la couture en continu alors que le moteur est en surcharge anormale comme dans le cas d'un enchevêtrement du fil :

→ Retirer le fil et les copeaux de tissu enchevêtrés dans la boîte à canette, le crochet, etc.



* La température de fonctionnement de la machine à coudre est de 5 °C à 40 °C. Ne pas utiliser la machine à coudre sous la lumière solaire directe, près de sources de flammes telles qu'un poêle ou une chandelle, ni dans un emplacement humide. Cela risquerait de faire monter la température à l'intérieur de la machine à coudre ou de faire fondre la gaine du cordon d'alimentation, causant un incendie ou un choc électrique.

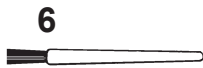
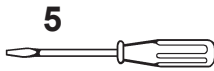
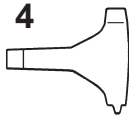
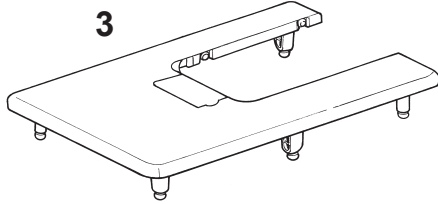
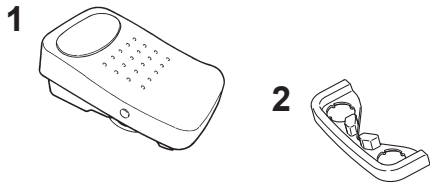
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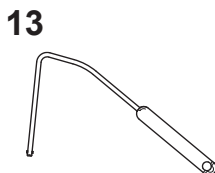
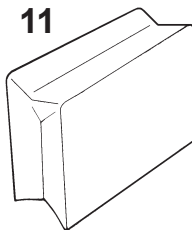
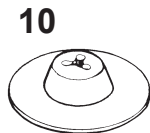
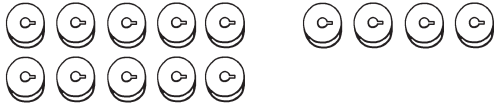
Specifications

Description	Specification
Sewing speed	Max. 1,500 sti/min
Stitch length	Max. 6 mm
Needle bar stroke	32 mm
Lift of presser foot	7 mm (12 mm by knee lifter)
Needle	HAX1 #11, #14
Lubricating oil	New Defrix Oil No. 1 or equivalent
Dimensions of sewing machine	45.2W x 35.0H x 21.9L (cm)
Size of bed	43W x 17.8L (Auxiliary table: 59W x 27.7L) (cm)
Weight of sewing machine	11.9 kg
Foot control model No.	JC-001

Accessories

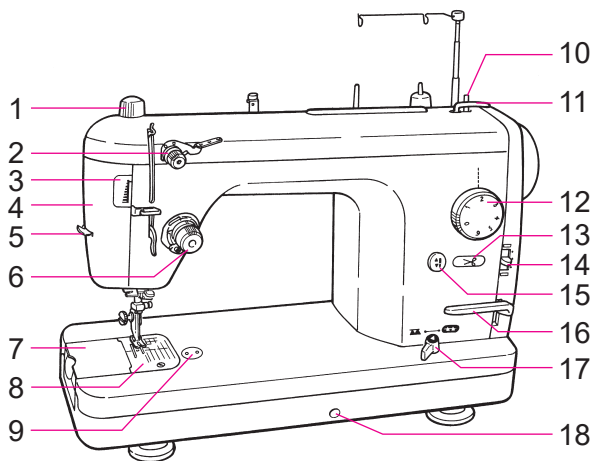


7 (for 230V:10pcs.) (for 120V:4pcs.)

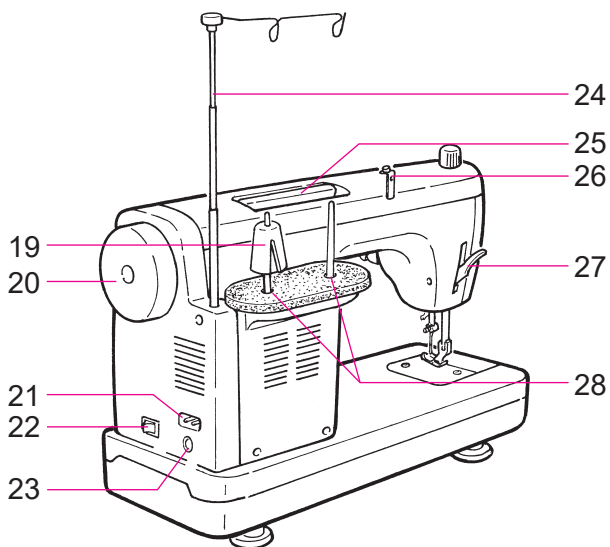


1. Foot controller
2. Foot switch stopper
3. Auxiliary table
4. Exclusive screwdriver
5. Screwdriver (small)
6. Cleaning brush
7. Bobbins
(for 230V: 10pcs.)
(for 120V: 4pcs.)
8. Oiler
9. Needles (HAX1)
10. Spool cap
11. Sewing machine cover
12. Power cord
13. Knee lifter lever

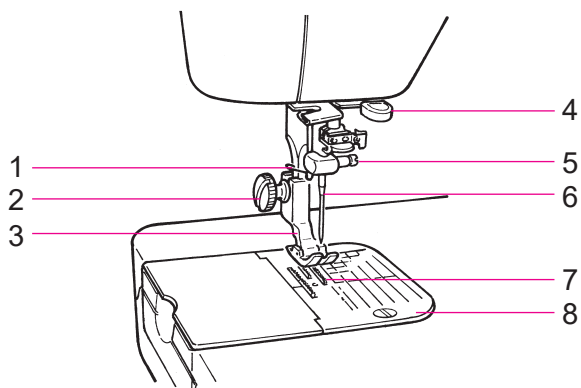
Principal Parts



1. Presser foot pressure regulator
2. Sub-tension knob
3. Indicator of the presser foot pressure regulator
4. Face plate cover
5. Manual thread cutter
6. Thread tension dial
7. Slide plate
8. Throat plate
9. Attachment mounting plate
10. Bobbin thread winding shaft
11. Bobbin presser
12. Stitch length adjusting dial
13. Automatic thread trimming switch
14. Speed control knob
15. Needle up/down switch
16. Reverse feed stitch lever
17. Drop-feed knob
18. Hole for knee lifter lever setting



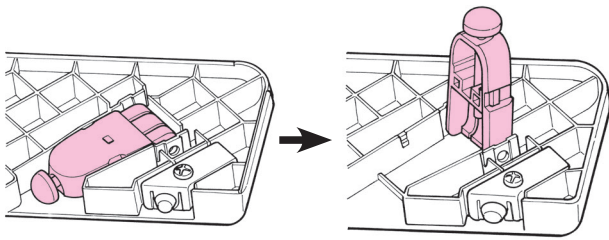
19. Anti vibration cone
20. Handwheel
21. Inlet of electric power cord
22. Power switch
23. Inlet of the controller
24. Support rod
25. Handle
26. Bobbin winder guide
27. Presser foot lifting lever
28. Spool pin



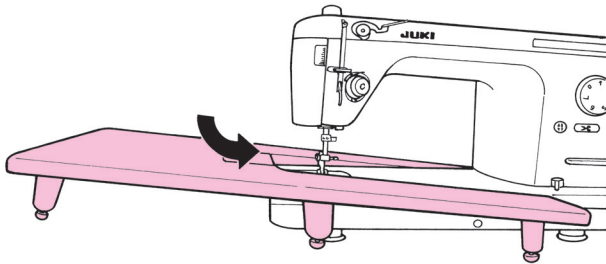
1. Needle bar thread hook
2. Screw in the presser foot
3. Presser foot
4. Needle threader lever
5. Needle clamp
6. Needle
7. Feed dog
8. Sewing guide lines

Name and Function of each component

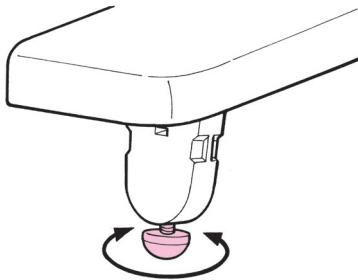
■ Installing the auxiliary table



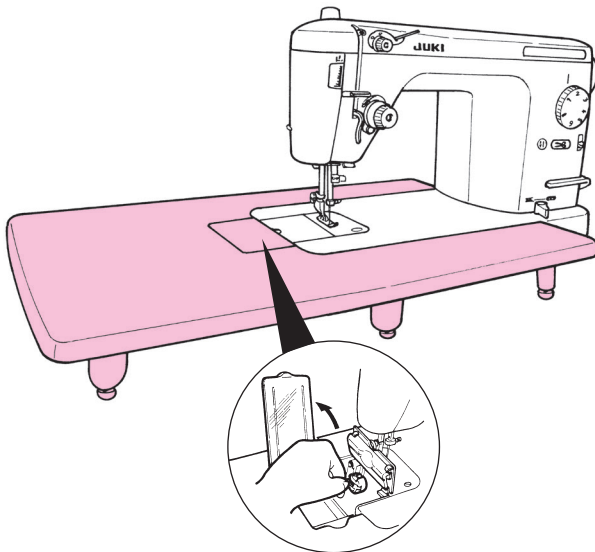
- 1** Open legs of auxiliary table until they stop securely at the stopping position.



- 2** Assemble auxiliary table to sewing machine body.

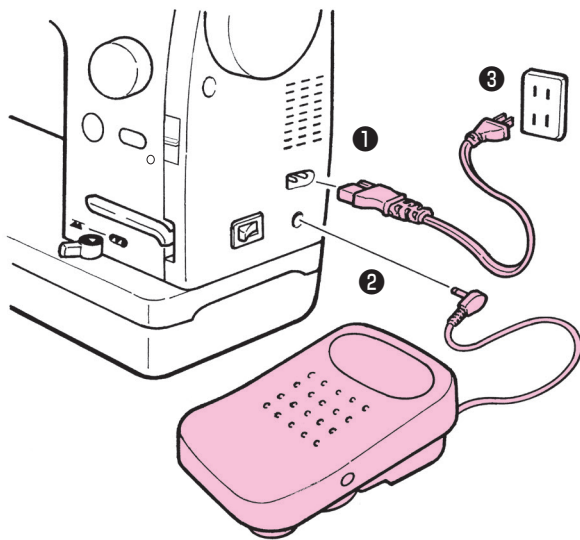


- 3** Adjust the height of legs so that the top surface of auxiliary table is the same height of sewing machine body.



- 4** Open the cover of the auxiliary table when replacing the bobbin thread.

Name and Function of each component



⚠ CAUTION:

Be sure to turn OFF the power switch before plugging/unplugging the controller.

■ Installing the foot controller

- 1 Insert the electric power cord plug into the corresponding inlet.
- 2 Insert the foot controller plug into the corresponding inlet.
- 3 Insert the power plug into the wall outlet.

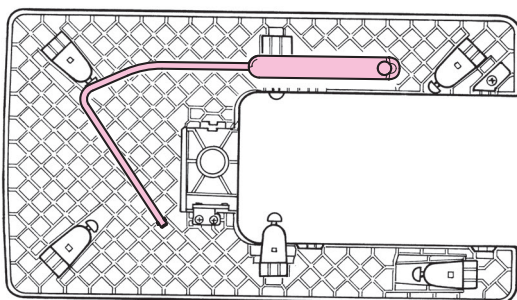
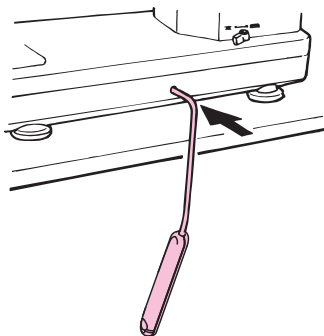
⚠ CAUTION:

Perform these following steps when you are not using your sewing machine.

1. Be sure to turn OFF the power switch.
2. Be sure to remove the power plug from the wall outlet.
3. Do not place a thing on the foot controller.

⚠ WARNING (For U.S.A., Canada only)

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

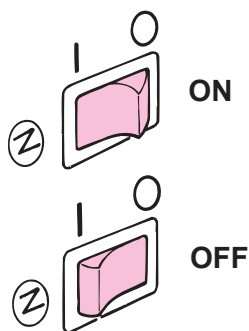


■ Attaching the knee lifter lever

The knee lifter lever allows the operator to lift/lower the presser foot without releasing his/her hand away from the material being sewn. (Lift of the presser foot: max. 12mm)

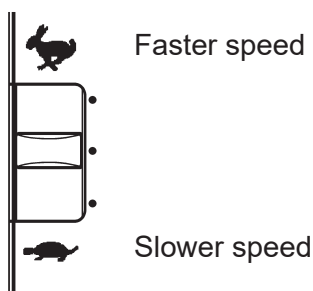
The knee lifter lever can be stored in the reverse side of the auxiliary table.

Name and Function of each component



■ Power switch

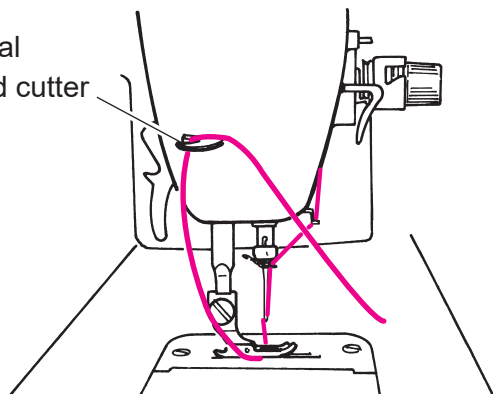
Turn ON when it is pressed on your side.
Turn OFF when it is pressed on the other side.



■ Speed control knob

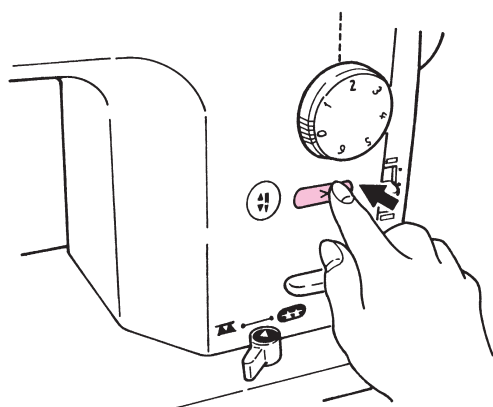
Maximum sewing speed can be freely set by the speed controller.

Manual thread cutter



■ Manual thread cutter

Lift the needle and the presser foot after the completion of sewing, draw out the material, and cut the thread with the manual thread cutter.

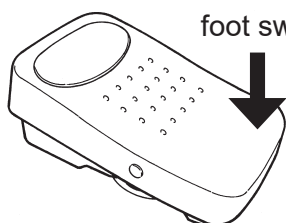


■ Automatic thread trimming switch/ Thread trimming foot switch

When the sewing is completed, both the needle and the bobbin threads can be simultaneously trimmed. You can re-start sewing even if the bobbin thread does not appear on the throat plate.

Use either one of the two switches when trimming thread.

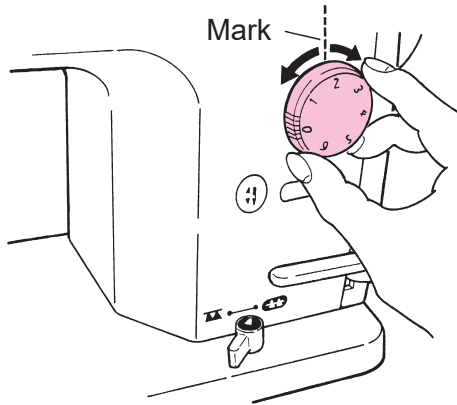
Thread trimming foot switch



“Thread trimming foot switch”

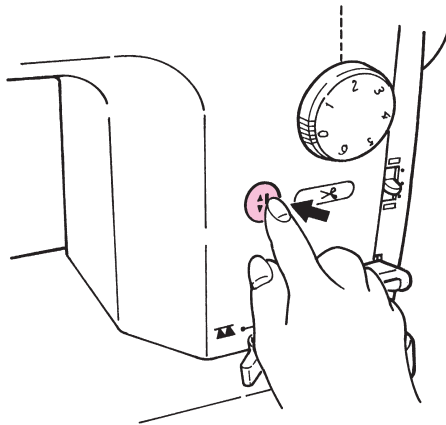
When the heel side of the foot controller is pressed, the threads are trimmed.

Name and Function of each component



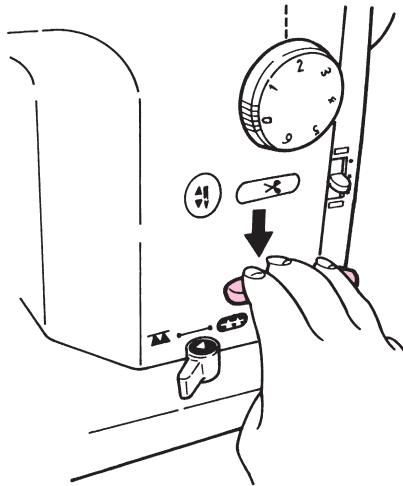
■ Stitch length adjusting dial

Stitch length for normal stitching is 2 to 2.5 mm.
(Adjusting range: 0 to 6 mm)



■ Needle up/down switch

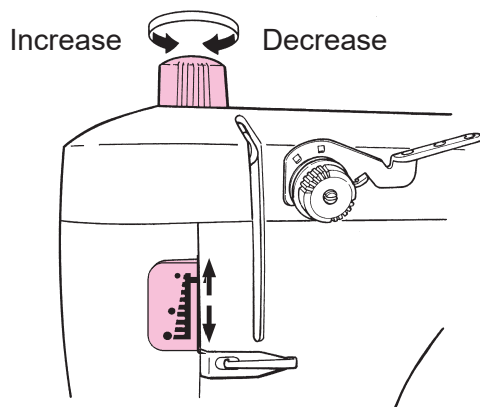
- Every time the switch is pressed, the needle goes up or comes down.
This switch can be used when using needle threader or dropping the needle on the material.
- If the switch is continuously pressed, a needle will move slowly.
Please use when sewing end of fabrics.



■ Reverse feed stitch lever

The seam does not fray when the reverse feed stitching is performed at the start or the end of sewing.

Name and Function of each component

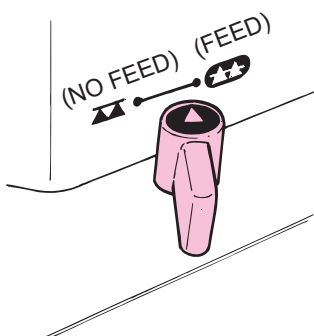


■ Presser foot pressure regulator and its indicator

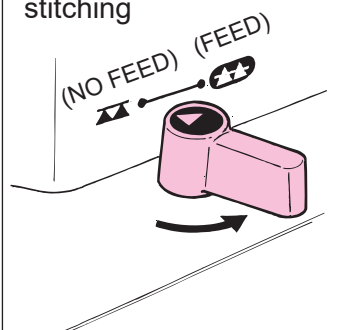
Turning the presser foot pressure regulator adjusts the pressure of the presser foot.

By turning the regulator pointer of the indicator goes up or comes down.

For normal stitching



For free embroidery stitching

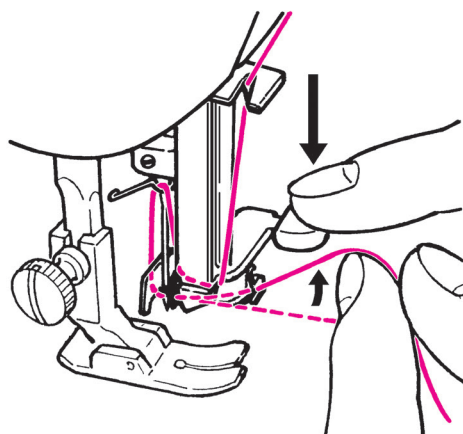


* Feed dog comes down.

■ Drop-feed knob

Set the knob to "FEED" for normal stitching.

Set the knob to "NO FEED" for free embroidery stitching.



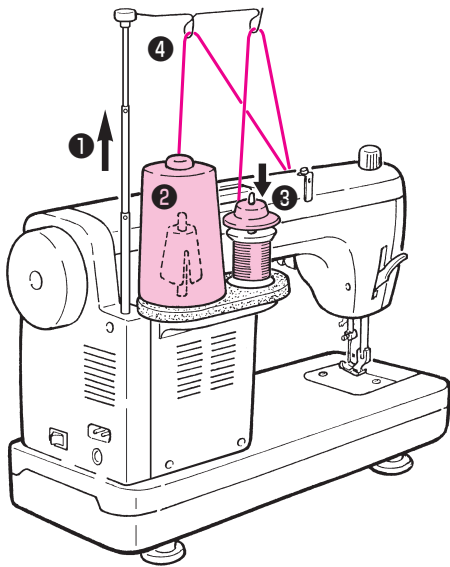
■ Needle threader lever (Automatic needle threader)

Lower the threading lever, pass the needle thread through the lever and pass the thread through the needle's eye. (This lever can be used for the needle #11-#16.)

Winding the bobbin

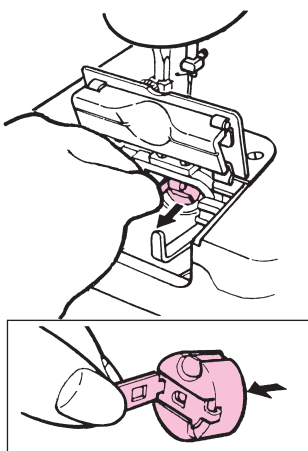
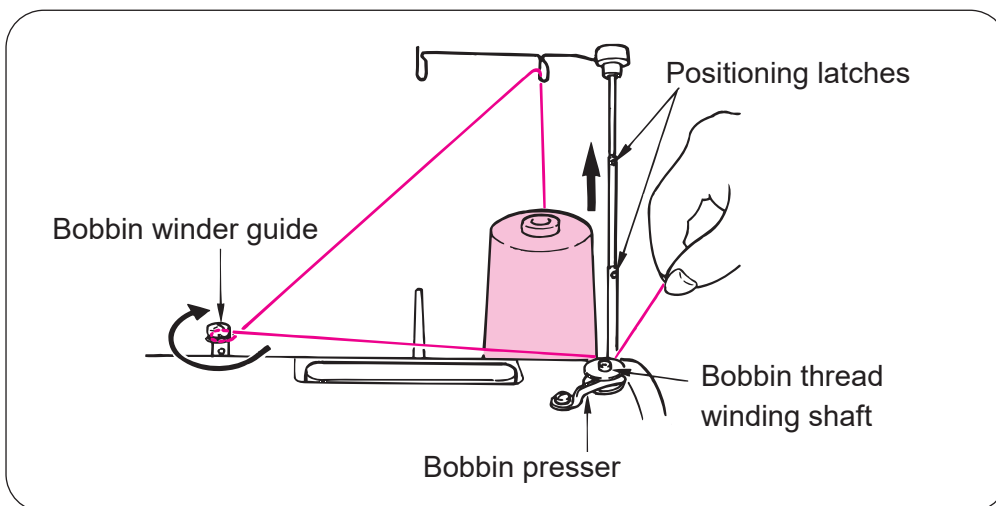


CAUTION: Turn OFF the power switch when opening the slide plate.



Installing the thread guide

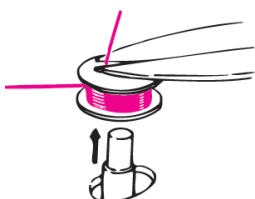
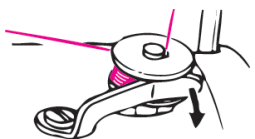
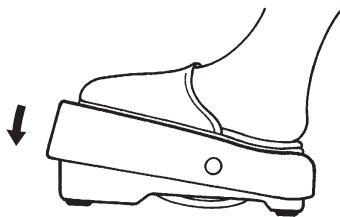
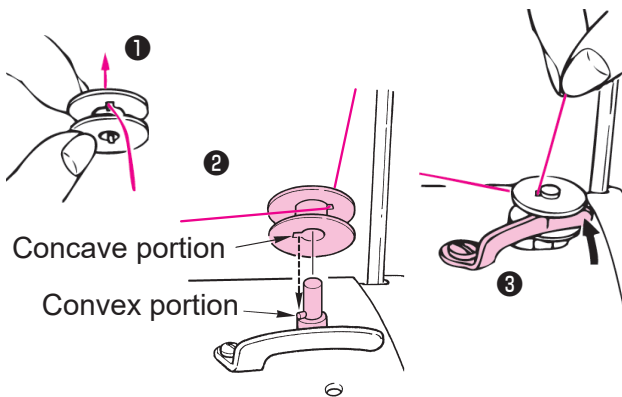
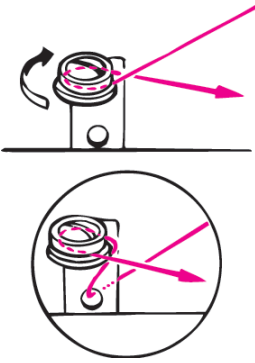
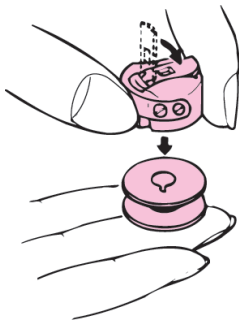
- 1 Raise the support rod fully, turning slightly until the positioning latches engage.
- 2 Set the large spool over the anti vibration cone, or
- 3 Set the household-type thread onto the spool pin and then insert a spool cap in place.
- 4 Pass the thread coming from the spool on the thread guide pin (rod) just above the spool.



1 Take out the bobbin case.

Bring up the needle. Opening the slide plate, take out the bobbin case.

Winding the bobbin



2 Take out the bobbin from the bobbin case.

Snap in the latch to let the bobbin come out of the bobbin case.

3 Thread the bobbin winder guide.

If the thread slips out of the bobbin winder guide, pass it through the hole located under the bobbin winder guide.

4 Installing the bobbin.

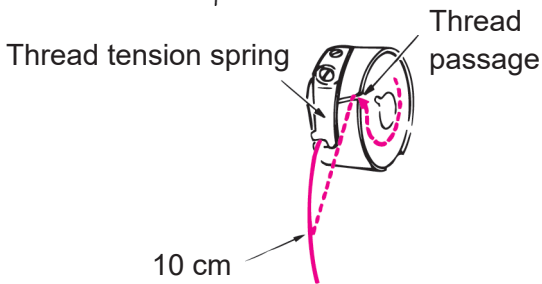
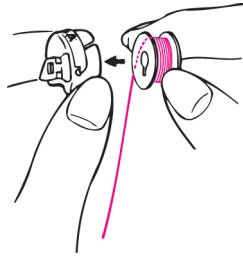
- 1 Pass the thread through the hole of the bobbin.
- 2 Adjust the convex portion of the bobbin thread winding shaft to the concave portion of the bobbin to set the bobbin.
- 3 Press the bobbin presser.

5 Start winding the bobbin.

6 Upon completion of winding the bobbin.

Return the bobbin presser on your side. Trim the excessive thread and take out the bobbin.

Winding the bobbin

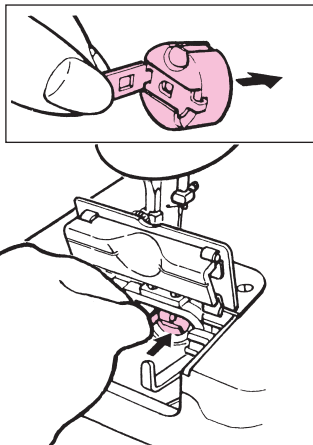


* The bobbin should run clockwise.

7 Loading the bobbin into the bobbin case.

Snap in the bobbin case latch, and put the bobbin into the bobbin case so that the bobbin runs clockwise.

Passing the thread through the slit of the bobbin case, continue passing it under the thread tension spring, and pull out the thread open end about 10cm from the bobbin case.



8 Set the bobbin in the sewing machine. Close the slide plate.

Insert the bobbin case fully into the hook, and close the bobbin case latch.

■ Adjusting the bobbin winder guide

Good

Thread unevenly wound around the bobbin would badly affect the bobbin thread tension.

Thicker toward downside

Thicker toward upside

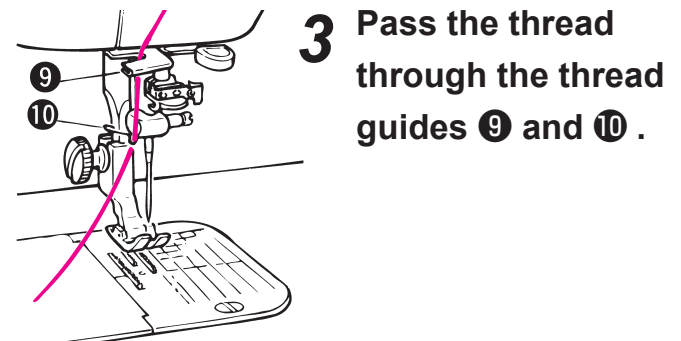
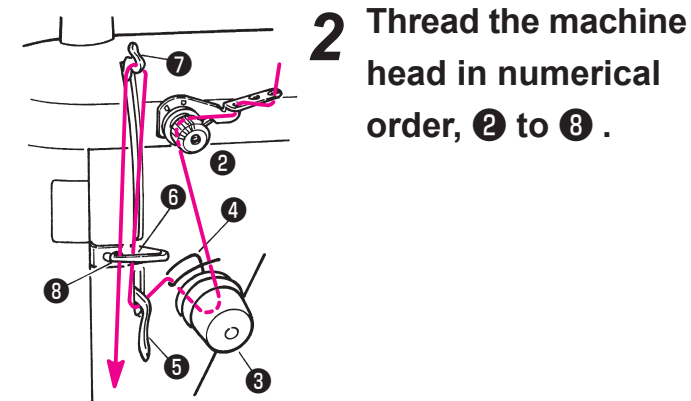
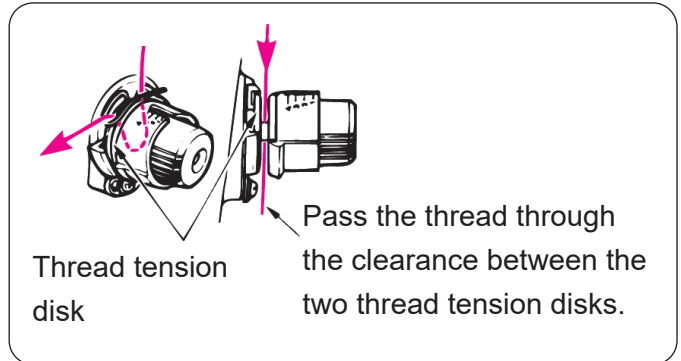
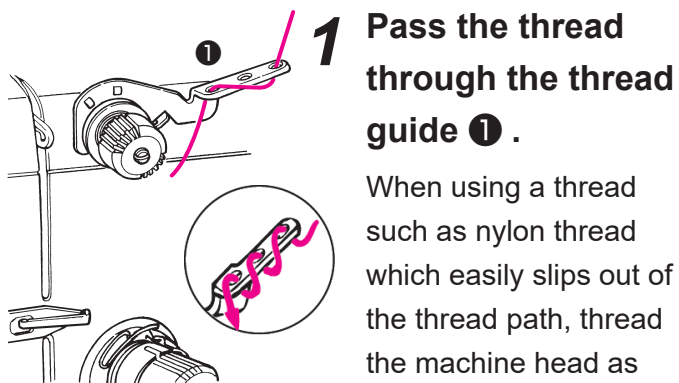
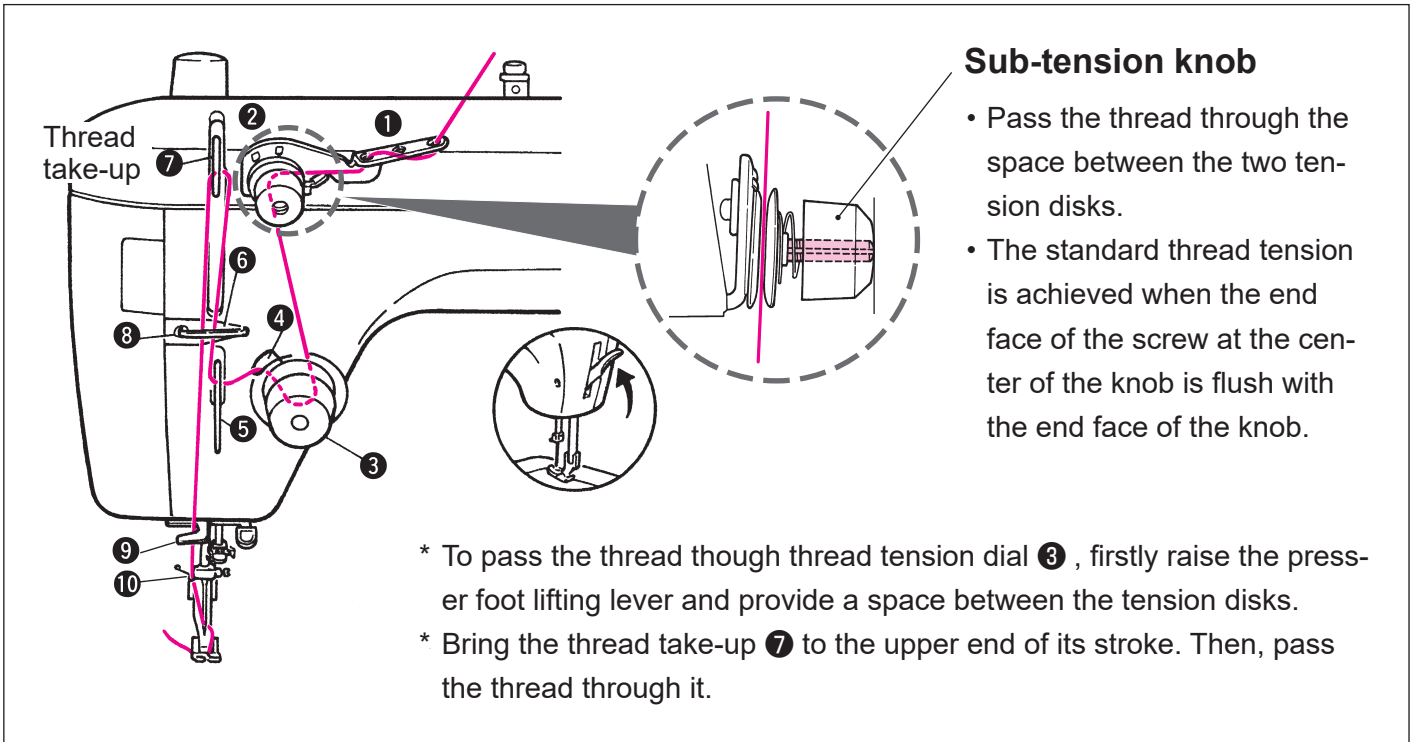
Loosen the screw of the bobbin winder guide to make adjustment.

↑
Move up

↓
Move down

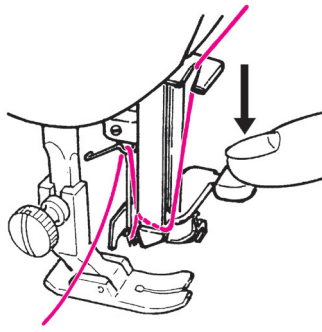
Threading the machine

CAUTION: Turn OFF the power switch when threading or passing thread.



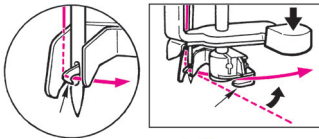
Threading the machine

■ Automatic needle threader



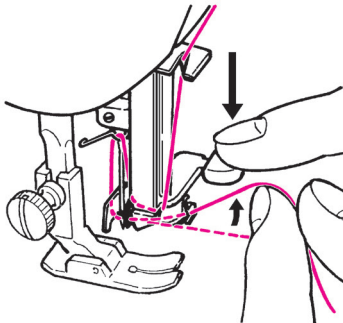
1 Lower the presser foot and lower needle threader lever.

Bring the needle to the top position and lower the threading lever.



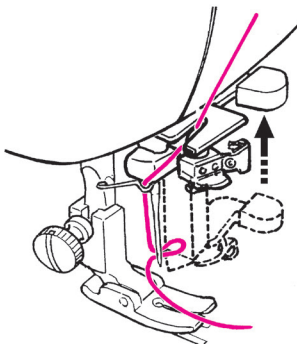
2 Pass the needle thread through the hook.

Pass the needle thread from the opposite side to this side, and move the thread on the right-hand side until it comes in contact with the guide.



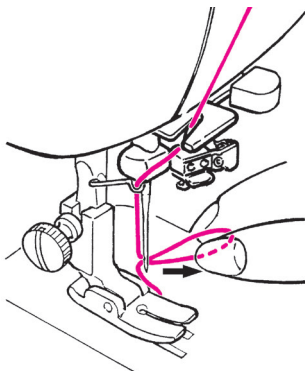
3 Take your finger off the needle threader lever.

When the finger is taken off, thread is caught in the hook and passed through the needle's eye.



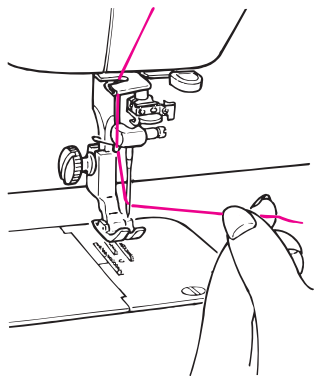
4 Draw out the needle thread.

Draw out the passed thread about 10 cm from the needle's eye.

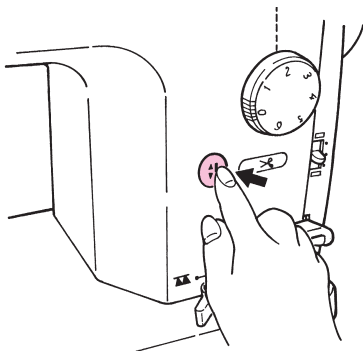


Threading the machine

■ Drawing up the bobbin thread

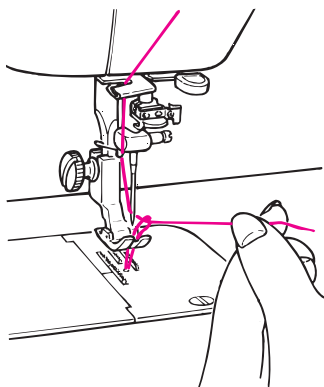


- 1** Hold the end of the needle thread with your left hand.

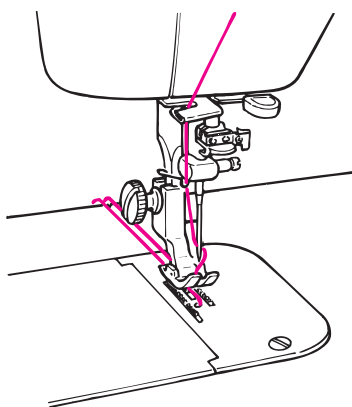


- 2** Press the needle up/down switch.

Normally press two times, to make needle move down and then up.



- 3** Bobbin thread is drawn out.



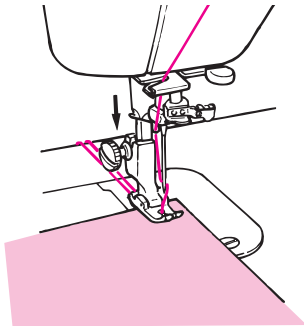
- 4** Draw both the needle thread and bobbin thread for about 10cm.

Bring both the needle and the bobbin threads under the presser foot, and draw them uniformly from the far end of the presser foot.

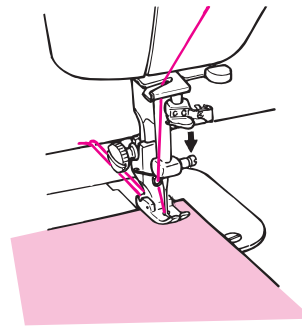
Test sewing

CAUTION: Do not place anything on the foot controller which is set to the sewing machine.

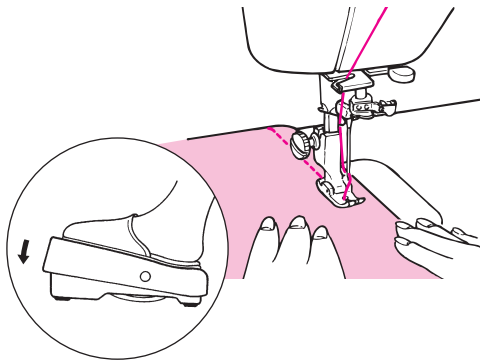
If you start sewing while the thread take-up is engaged in its ascending motion, the needle thread may slip out of the needle's eye.



1 Place the material under the presser foot, and lower the presser foot.



2 Lower the needle.
Turn the handwheel toward you or press the needle up/down switch to drop the needle on the material.



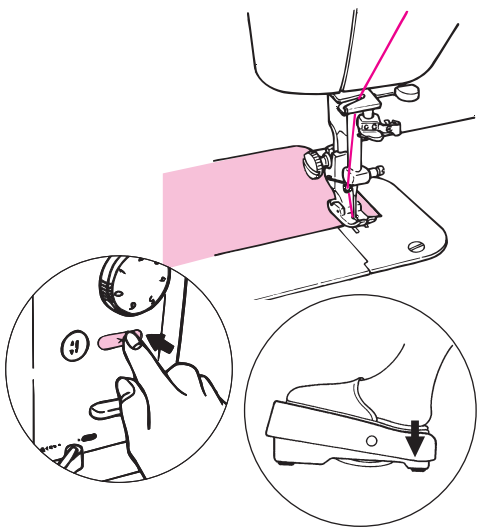
3 Start to run the sewing machine.

Do not pull the material by hand while it is being sewn.

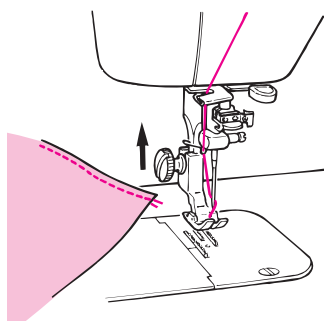
4 When the sewing is finished, stop the sewing machine and actuate the thread trimmer.

Press the automatic thread trimming switch or depress the thread trimming foot switch. When actuating the automatic thread trimmer, the needle will stop in its highest position after trimming. (If you use a thread as thick as count #20 or more or a special-kind of thread, manually cut the thread using a pair of scissors.)

* After the thread trimming, you can re-start sewing even if the bobbin thread does not appear on the throat plate.



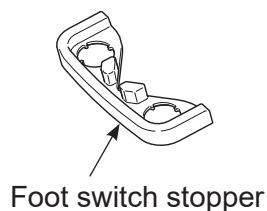
5 Raise the presser foot, and take out the finished material.



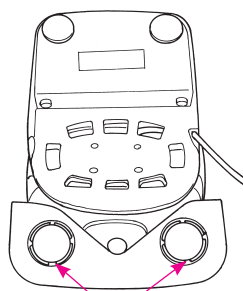
Test sewing

■ To turn OFF the thread trimming foot switch

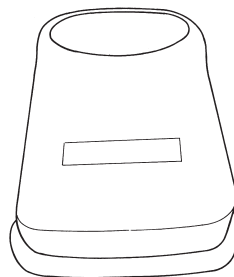
Fit the foot switch stopper in position.



Reverse side



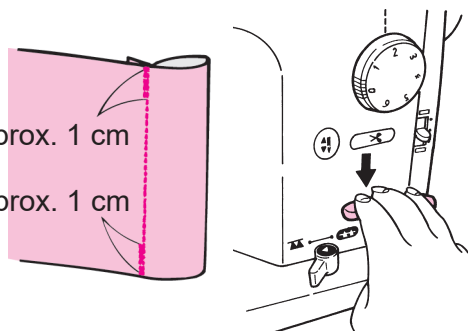
Top side



Securely fit the foot switch stopper by pressing four claws.

Approx. 1 cm

Approx. 1 cm

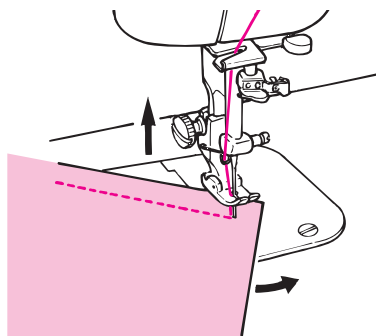


■ Reverse feed stitch (lock stitch)

Push down the reverse feed stitch lever to sew reverse stitches over the forward stitches for about 1 cm.

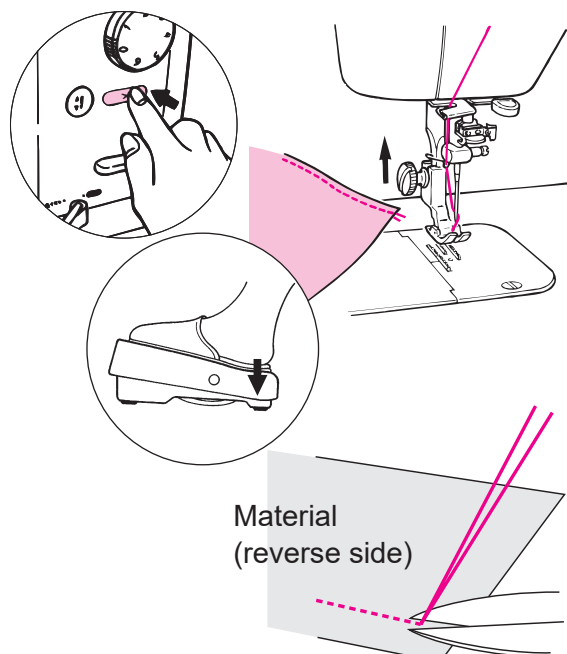
■ Changing the sewing direction

1. Keep the needle at its down position.
2. Lift the presser foot, and turn the material in a desired direction.



■ When making a knot on the reverse side of the material

- 1** When the sewing is finished, raise the needle and the presser foot. Then draw both the needle and the bobbin threads away from you by approximately 10 cm together with material, after lowering the presser foot. (The needle and the bobbin threads are simultaneously trimmed.)
- 2** Draw the needle thread onto the reverse side of the material. Fasten the needle thread and the bobbin thread together. Then trim the both threads near the knot.



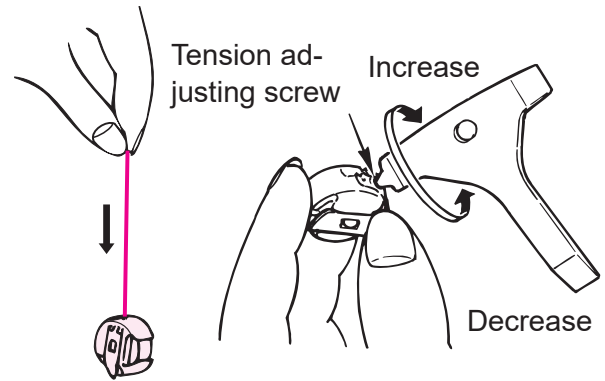
Adjusting the thread tension

CAUTION: Turn OFF the power switch when taking out the bobbin case.

The standard bobbin thread tension is such that the bobbin case goes down slowly when you hold the open end of the bobbin thread and shake it as shown at right. (The count of the thread is #50.)

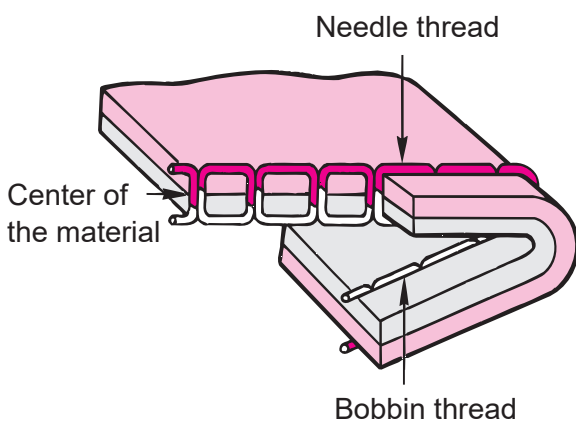
- * Adjust the needle thread tension in accordance with the bobbin thread tension.
- * The bobbin case is an exclusive JUKI part. Please consult the JUKI dealers when you purchase it.

Adjusting the bobbin case

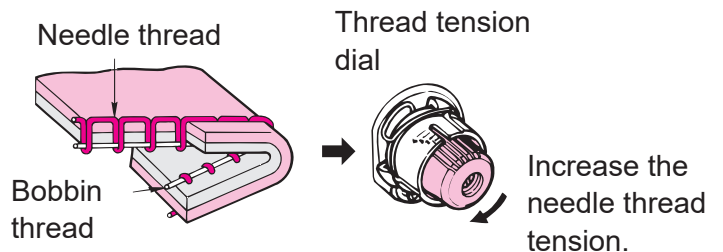


Proper thread tension

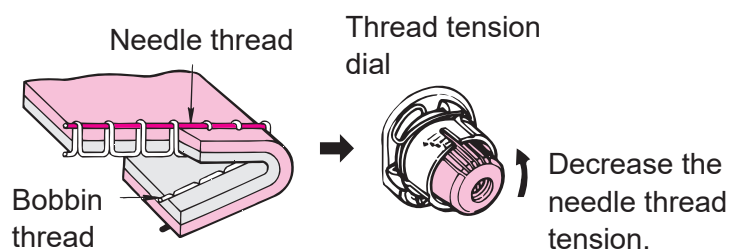
Improperly adjusted thread tension may cause puckering on materials, inferior stitches, or thread breakage.



The needle thread tension is too low



The needle thread tension is too high



Adjusting the thread tension

■ Tabulated relationship between material, thread and needle

	Material	Thread	Needle (HAX1)
Light-weight materials	Nylon Cupro Georgette	Synthetic thread #80-#90	No.9-11
	Smooth Tricot		
Medium-weight materials	Broadcloth Gingham	Cotton thread #60-#80 Synthetic thread #80-#90	No.11-14
	Light-weight jersey Synthetic cloth	Synthetic thread #50-#60	
	Flannel Wool	Synthetic thread #50-#60 Silk yarn #50	
Heavy-weight materials	Denim	Synthetic thread #20-#50 Cotton thread #20-#50	No.14-18
	Canvas	Synthetic thread #30-#50	
	Tweed	Synthetic thread #50 Silk yarn #50	
	Artificial leather	Synthetic thread #20-#30	

■ Topstitching

With this sewing machine, you can make beautiful topstitches with stitch length up to 6 mm.

You can use various threads ranging from the standard runstitching thread to #8 topstitching thread. Change the needle according to the thread used (see the table at right).

Count of thread	Needle Size
#80-50	No.11
#60-50	No.14(11)
#50-30	No.16
#20-8	No.18

Adjusting the thread tension

CAUTION: Turn OFF the power switch when replacing the needle.

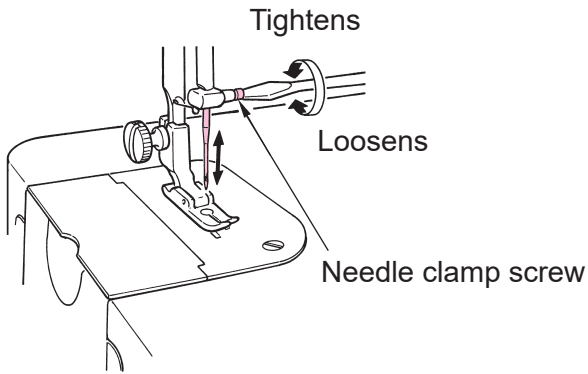
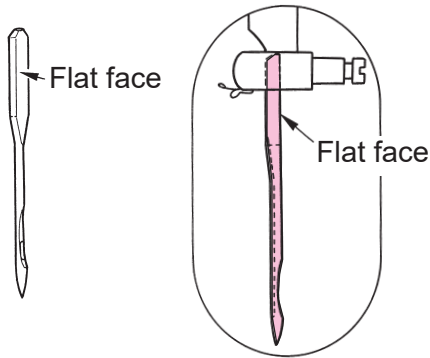


Figure as observed from the front



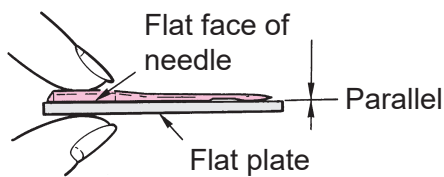
■ Attaching the needle

1. Turn off power.
2. Lower the presser foot.
3. Move the needle bar up to the highest position of its stroke.
4. With the flat face of the new needle facing to the right, insert the new needle into the needle bar until it can go no further. Then tighten the needle clamp screw.

* The needle to be used is HAX1.

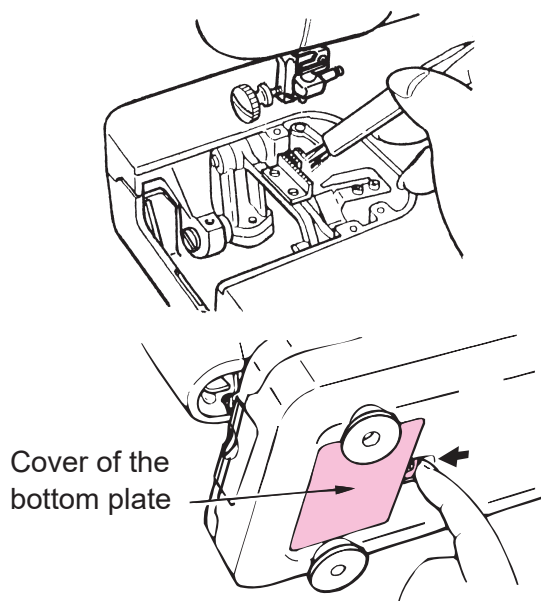
■ Checking the needle

Check the needle for its straightness occasionally. Any defective needle would cause needle breakage, stitch skipping, thread breakage or damage to materials.



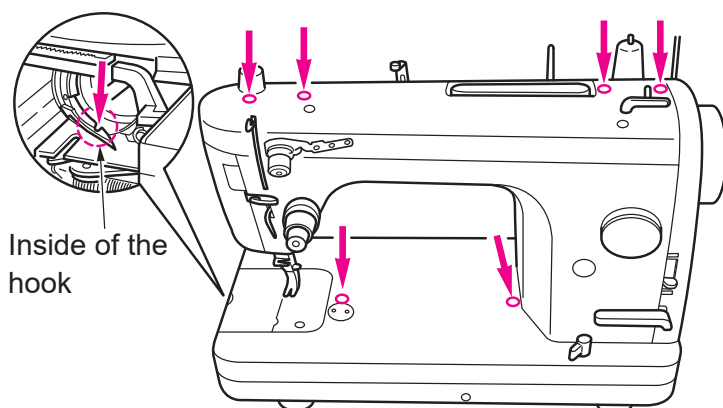
Maintenance and lubrication

CAUTION: Be sure turn OFF the power to the sewing machine and disconnect the plug from the wall outlet when cleaning or lubricating the sewing machine.



■ Cleaning the feed dog and the hook

- Turn off power. Remove the needle, the presser foot and the throat plate. Then clean up the feed dog and the hook components using a cleaning brush.
- The cover of the bottom plate is designed to open when cleaning the hook components or when a bobbin is dropped mistakenly.



Lubricate the machine after removing the bobbin case.

■ Lubricating the machine

- Apply a few drops of oil to each of the arrow points shown in the right.
- Use the machine oil supplied with the sewing machine, or New Defrix Oil No. 1 or equivalent.
- Lubricate the machine once a day if you use it every day.
- Apply a larger quantity of oil (approximately 5 to 7 drops) to the relevant points of sewing machine after unpacking or when using the sewing machine after an extended period of disuse (approximately two months).
Do not apply an excessive quantity oil to the needle bar and the section around the hook with particular care since oil can drop on the material at the time of lubrication.
- Be sure to always carry out test sewing after lubricating the sewing machine.

Precautions to be taken when handling oil

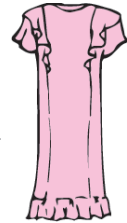
- * In the event the oil gets in the eye or adheres on skin, immediately wash it off in order to prevent irritation and rash.
- * If swallowed accidentally, immediately seek for medical advice in order to prevent diarrhea and vomiting.
- * Keep the oil away from children.
- * Oil disposal is obliged by legislation. Dispose of the oil properly in compliance with the relevant legislation.

Introduction of optional parts



CAUTION: Turn OFF the power switch when replacing the presser foot.

■ Presser foot and throat plate for light-weight materials



It is applicable to sew the light-weight material such as nylon, georgette, tricot, etc.

■ Throat plate for heavy-weight materials

* Please consult the JUKI dealer when you purchase the optional parts.

Troubles and Corrective Measures

If sewing difficulties occur, make sure the instructions are correctly followed. If a problem still exists, the reminders below help to solve it.

Troubles	Case	Corrective measures	Page
Stitches are skipped.	1. The needle is bent or the needle point is blunted.	• Replace the needle.	25
	2. The needle has not been attached to the needle bar properly.	• Attach the needle properly to the needle bar.	25
Needle thread breaks.	1. The machine head has been threaded incorrectly.	• Correct the threading.	18-20
	2. The needle thread tension is too high or low.	• Properly adjust the thread tension.	23
	3. The needle is bent or the needle point is blunted.	• Replace the needle.	25
	4. The needle is not suited to the thread used.	• Replace the needle by the one suited to the thread used.	24
The bobbin thread breaks.	1. The bobbin thread tension is too high.	• Decrease the tension.	23
	2. The rubbing of the bobbin case spring has produced a slot.	• Replace the bobbin case.	-
	3. Scratches on the needle hole in the throat plate.	• Replace the throat plate.	-
The needle breaks.	1. The needle is bent or has been installed improperly.	• Replace or correctly attach the needle.	25
	2. The needle hits the throat plate or the presser foot.	• Correctly position the needle, throat plate, or presser foot.	-
Stitches are puckered.	1. The presser foot applies too much pressure to the material.	• Decrease the pressure of the presser foot.	14
	2. The tension of the needle thread is not balanced with that of the bobbin thread.	• Balance the tension.	23
	3. When the combination of the needle and the thread is improper.	• Properly correct the combination of needle and the thread.	25
	4. The needle is too thick for the material.	• Replace the needle by the one suited to the material.	25
Stitch performance is bad.	1. The tension of the needle thread is not balanced with that of the bobbin thread.	• Balance the tensions.	23
The rotation noise is too heavy or too high.	1. Dust accumulates in the feed dog.	• Carry out maintenance of your sewing machine.	26
	2. The oil in the machine has run out due to a long period of usage.	• Carry out maintenance of your sewing machine.	26
	3. The oil other than the exclusive sewing machine oil is used.	• Apply the proper sewing machine oil.	26
	4. Thread wastes accumulate in the hook.	• Clean up the sewing machine.	26

Troubles	Case	Corrective measures	Page
The handwheel does not rotate smoothly or does not turn.	1. The thread is entangled and caught in the hook.	<ul style="list-style-type: none"> Lubricate the hook, strongly turn the handwheel clockwise and counterclockwise several times, then remove the thread caught in the hook. 	-
The material cannot be fed.	1. The stitch length is set "0".	<ul style="list-style-type: none"> Set the stitch length to an appropriate amount. 	13
	2. Drop-feed knob is set to "NOT FEED".	<ul style="list-style-type: none"> Set the drop-feed knob to "FEED". 	14
	3. The pressure of the presser foot is too low.	<ul style="list-style-type: none"> Turn the presser foot pressure regulator to increase the pressure properly. 	14
Needle threading cannot be performed.	1. When the needle has not been raised.	<ul style="list-style-type: none"> Turn the handwheel or press the needle up/down switch to bring the needle to its highest position. 	13
	2. When the needle has not been inserted until it can go no further at the time of attaching the needle.	<ul style="list-style-type: none"> Attach the needle properly. 	25
	3. When the sewing machine has been turned with the needle threader lever lowered (during threading) by mistake.	<ul style="list-style-type: none"> Slightly turn the handwheel by hand to the opposite side (opposite to the direction at the time of sewing). 	-

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