

**SIRUBA**<sup>®</sup> Sew Reach

使用說明書與零件圖

INSTRUCTION BOOK & PARTS LIST

■ LBHS-1790S



CE



## 為了安全地使用縫紉機

TO ENSURE SAFE USE OF  
YOUR SEWING MACHINE




由於縫製作業的具體情況，有時不得不靠近機器轉動的零部件進行操作而有可能接觸到轉動零部件，因此實際操作機器的操作員和維修保養的維修人員，必須在事前仔細閱讀有關安全的注意事項，充分理解內容之後再進行操作。此有關安全的注意事項中記述的內容有的不是使用者購買的商品規格的內容。

另外，為了能讓用戶充分地理解使用說明書以及產品的警告標籤，特將警告表示分為如下種類。請充分瞭解這些內容，並遵守指示的要求。

For the sewing machine, automatic machine and ancillary devices (hereinafter collectively referred to as "machine"), it is inevitable to conduct sewing work near moving parts of the machine. This means that there is always a possibility of unintentionally coming in contact with the moving parts. Operators who actually operate the machine and maintenance personnel who are involved in maintenance and repair of the machine are strongly recommended to carefully read to fully understand the following **SAFETY PRECAUTIONS** before using/maintaining the machine. The content of the **SAFETY PRECAUTIONS** includes items which are not contained in the specifications of your product. The risk indications are classified into the following three different categories to help understand the meaning of the labels. Be sure to fully understand the following description and strictly observe the instructions.



## ( I ) 危險等級的說明

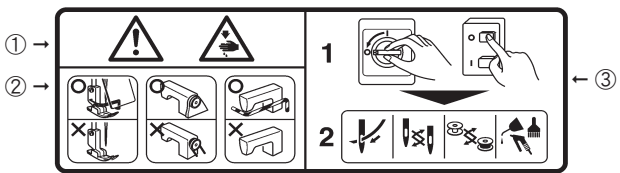
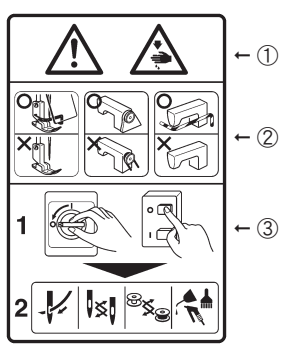

## ( I ) Explanation of risk levels

 <b>危險</b> DANGER	<p>操作或維修保養機器時，如果當事人、第 3 者操作錯誤或沒有避免該情況，有發生死亡或造成重傷的危險。</p> <p>This indication is given where there is an immediate danger of death or serious injury if the person in charge or any third party mishandles the machine or does not avoid the dangerous situation when operating or maintaining the machine.</p>
 <b>警告</b> WARNING	<p>操作或維修保養機器時，如果當事人、第 3 者操作錯誤或沒有避免該情況，有發生死亡或造成重傷的潛在可能。</p> <p>This indication is given where there is a potentiality for death or serious injury if the person in charge or any third party mishandles the machine or does not avoid the dangerous situation when operating or maintaining the machine.</p>
 <b>注意</b> CAUTION	<p>操作或維修保養機器時，如果當事人、第 3 者操作錯誤或沒有避免該情況，有造成中輕傷的可能。</p> <p>This indication is given where there is a danger of medium to minor injury if the person in charge or any third party mishandles the machine or does not avoid the dangerous situation when operating or maintaining the machine.</p>

## ( II ) 警告圖示表示和指示標籤的說明

## (II)Explanation of pictorial warning indications and warning labels

警告圖標表示 Pictorial warning indication		警告圖標表示 Pictorial warning indication	
	有接觸轉動部，造成受傷的危險。 There is a risk of injury if contact-ing a moving section.		作業時拿縫紉機的話，有讓手受傷的危險。 Be aware that holding the sewing machine during operation can hurt your hands.
	有接觸高電壓部，造成觸電的危險。 There is a risk of electrical shock if contacting a high-voltage section.		有捲入皮帶，造成受傷的危險。 There is a risk of entanglement in the belt resulting in injury.
	有接觸高溫部，造成燙傷的危險。 There is a risk of a burn if contacting a high-temperature section.		觸摸了鈕扣傳送器，有受傷的危險。 There is a risk of injury if you touch the button carrier.
	如果直接目視鐳射的話，有傷害眼睛的危險。 Be aware that eye de ciency can be caused by looking directly at the laser beam.	指示標籤 Indication label	
			指示正確的轉動方向。 The correct direction is indicated.
	有頭部接觸到縫紉機的危險。 There is a risk of contact between your head and the sewing machine.		指示地線的連接。 Connection of a earth cable is indicated.

警告標籤 Warning label					
 <p>① →</p> <p>② →</p> <p>← ③</p>	 <p>← ①</p> <p>← ②</p> <p>← ③</p>				
<p>①•有發生中輕度傷害、重傷、死亡的危險。 •觸摸了活動部分的話，有發生受傷的危險。</p> <p>②•應安裝安全防護器，然後再進行縫製。 •應安裝安全護罩，然後再進行縫製。 •應安裝保護裝置，然後再進行縫製。</p> <p>③•必須切斷電源之後，再進行「穿線」、「換針」、「更換梭心」以及「加油、清掃」的操作。</p> <p>① There is the possibility that slight to serious injury or death may be caused. • There is the possibility that injury may be caused by touching moving part.</p> <p>② To perform sewing work with safety guard. • To perform sewing work with safety cover. • To perform sewing work with safety protection device.</p> <p>③ To perform sewing work with safety protection device. • Be sure to turn the power OFF before carrying out "machine-head threading", "needle changing", "bobbin changing" or "oiling and cleaning".</p>					
觸電危險標籤 Iectrical-shock danger label					
	<table border="1"> <tr> <td><b>⚠ 危險</b></td> <td><b>⚠ DANGER</b></td> </tr> <tr> <td>誤觸高壓電、會受傷。 關掉電源超過5分鐘以上，就拆開蓋子。</td> <td>Hazardous voltage will cause injury. Turn off main switch and unplug power cord and wait at least 5 minutes before opening this cover.</td> </tr> </table>	<b>⚠ 危險</b>	<b>⚠ DANGER</b>	誤觸高壓電、會受傷。 關掉電源超過5分鐘以上，就拆開蓋子。	Hazardous voltage will cause injury. Turn off main switch and unplug power cord and wait at least 5 minutes before opening this cover.
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## 有關安全的注意事項

## SAFETY PRECAUTIONS

### •危險

事故：是指給與人身以及財產帶來損害。

1. 需要打開電氣箱時，為了防止觸電事故，請關閉電源，經過 5 分鐘以上的時間之後再打開電氣箱蓋。

### •注意

#### (1)基本注意事項

1. 使用之前，請您一定要閱讀使用說明書以及附屬的所有說明資料。另外，請您妥善保管本使用說明書，以便隨時可以立即查閱。
2. 本注意事項中有部分內容可能不是您所購買的機器規格的內容。
3. 為了防止斷針造成的事故，請戴上安全防護眼鏡進行操作。
4. 使用心臟起搏器的人，請一定要與專門醫生諮詢之後再使用。

#### (2)安全裝置、警告標籤

1. 為了防止由於沒有安裝安全裝置而造成的事故，操作本機器時，請確認安全裝置是否正確地安裝到規定位置之後再進行操作。
2. 為了防止人身事故，卸下了安全裝置後，請一定再安裝到原來的位置，並確認功能是否正常。
3. 為了防止人身事故，請把警告標籤時常地粘貼到可以明顯看到的機器上。如果脫落或發生汙損，請立即更換成新的標籤。

### •DANGER

Accident means "to cause personal injury or death or damage to property."

1. When it is necessary to open the control box containing electrical parts, be sure to turn the power off and wait for five minutes or more before opening the cover in order to prevent accident leading to electrical shock.

### •CAUTION

#### (1)Basic precaution

1. Be sure to read the instruction manual and other explanatory documents supplied with accessories of the machine before using the machine. Carefully keep the instruction manual and the explanatory documents at hand for quick reference.
2. The content of this section includes items which are not contained in the specifications of your product.
3. Be sure to wear safety goggles to protect against accident caused by needle breakage.
4. Those who use a heart pacer have to use the machine after consultation with a medical specialist.

#### (2)Safety devices and warning labels

1. Be sure to operate the machine after verifying that safety device(s) is correctly installed in place and works normally in order to prevent accident caused by lack of the device(s).
2. If any of the safety devices is removed, be sure to replace it and verify that it works normally in order to prevent accident that can result in personal injury or death.
3. Be sure to keep the warning labels adhered on the machine clearly visible in order to prevent accident that can result in personal injury or death. If any of the labels has stained or come unstuck, be sure to change it with a new one.

### (3) 安裝

#### ( I ) 機台、台腳

1. 為了防止人身事故，請一定使用純正的機台、台腳。不得以使用非純正的零件時，請一定使用可以充分承受機器重量、運轉時的反作用力的機台、台腳。
2. 為了防止人身事故，在台腳上安裝腳輪時，請使用具有充分強度的帶鎖定裝置的腳輪，操作機器時、維修保養、檢查、修理時進行鎖定不要機器晃動。

#### ( II ) 電纜、佈線

1. 為了防止觸電、漏電、火災事故，使用電纜時請不要向電纜施加過大的力量。另外，在 V 形皮帶等轉動零部件附近佈設電纜時，已經讓電纜距離它們 30mm 以上。
2. 為了防止觸電、漏電、火災事故，請不要進行分岔佈線。
3. 為了防止觸電、漏電、火災事故，請一定牢固地固定連接器。另外，拔連接器時，請一定手持連接器拔線。

#### ( III ) 接地

1. 為了防止因漏電、絕緣耐壓而造成的事故，一定請具有電氣專門知識的人安裝電源插頭。另外，請一定把電源插頭連接到接地的電源插座上。
2. 為了防止因漏電造成的事故，請一定把地線接地。

#### ( IV ) 馬達

1. 為了防止馬達燒毀而造成的事故，請一定使用規定的額定馬達 ( 純正品 ) 。

### (3) Installation

#### ( I ) Table and table stand

1. Be sure to use SIRUBA genuine table and table stand in order to prevent accident that can result in personal injury or death. If it is inevitable to use a table and table stand which are not SIRUBA genuine ones, select the table and table stand which are able to support the machine weight and reaction force during operation.
2. If casters are fitted to the table stand, be sure to use the casters with a locking mechanism and lock them to secure the machine during the operation, maintenance, inspection and repair in order to prevent accident that can result in personal injury or death.

#### ( II ) Cable and wiring

1. Be sure to prevent an extra force from being applied to the cable during the use in order to prevent electrical-shock, earth-leakage or fire accident. In addition, if it is necessary to cable near the operating section such as the V-belt, be sure to provide a space of 30 mm or more between the operating section and the cable.
2. Be sure to avoid starburst connection in order to prevent electrical-shock, earth-leakage or fire accident.
3. Be sure to securely connect the connectors in order to prevent electrical-shock, earth-leakage or fire accident. In addition, be sure to remove the connector while holding its connector section.

#### ( III ) Grounding

1. Be sure to have an electrical expert install an appropriate power plug in order to prevent accident caused by earth-leakage or dielectric strength voltage fault. In addition, be sure to connect the power plug to the grounded outlet without exceptions.
2. Be sure to ground the earth cable in order to prevent accident caused by earth leakage.

#### ( IV ) Motor

1. Be sure to use the specified rated motor (SIRUBA genuine product) in order to prevent accident caused by burnout.

2. 使用市場出售的離合馬達時，因被捲入 V 形皮帶而造成的事故，請一定選用安裝有防止捲入功能的皮帶護罩的離合馬達。

#### (4)操作前

1. 為了防止人身事故，接通電源之前，請一定確認連接器、電纜等確實沒有損傷、脫落、鬆動。
2. 為了防止人身事故，請不要把手伸到活動的部位。另外，請確認皮帶輪的轉動方向是否與箭頭標記一致。
3. 使用帶腳輪的機台腳時，為了防止突然的起動造成的事故，請一定鎖定腳輪，帶有調節器時，請調節台腳把腳固定好。

#### (5)操作中

1. 為了防止捲入而造成的事故，操作機器時，請注意不要讓手指、頭髮、衣服靠近皮帶輪、手輪、馬達等轉動部位，也不要將物品放到上面。
2. 為了防止人身事故，接通電源時或機器操作中，請不要把手指靠近機針，也不要把手指伸到挑線桿護罩裡。
3. 縫紉機以高速在進行轉動。為了防止弄傷手，操作中絕對不能讓手靠近彎針、分線器、針桿、旋梭、布切刀等活動部位。另外，更換縫紉機機線時，請關閉電源，確認了縫紉機和馬達均完全停止之後再進行更換。
4. 為了防止人身事故，從機台上拆卸縫紉機時，或者返回安裝到原來的位置時，請注意不要夾到手指。

2. If a commercially available clutch motor is used with the machine, be sure to select one with an entanglement preventive pulley cover in order to protect against being entangled by the V-belt.

#### (4)Before operation

1. Be sure to make sure that the connectors and cables are free from damage, dropout and looseness before turning the power on in order to prevent accident resulting in personal injury or death.
2. Never put your hand into the moving sections of the machine in order to prevent accident that can result in personal injury or death. In addition, check to be sure that the direction of rotation of the pulley agrees with the arrow shown on pulley.
3. If the table stand with casters is used, be sure to secure the table stand by locking the casters or with adjusters, if provided, in order to protect against accident caused by abrupt start of the machine.

#### (5)During operation

1. Be sure not to put your fingers, hair or clothing close to the moving sections such as the handwheel, hand pulley and motor or place something near those sections while the machine is in operation in order to prevent accident caused by entanglement that can result in personal injury or death.
2. Be sure not to place your fingers near the surround area of the needle or inside the thread take-up lever cover when turning the power on or while the machine is in operation in order to prevent accident that can result in personal injury or death.
3. The machine runs at a high speed. Never bring your hands near the moving sections such as looper, spreader, needle bar, hook and cloth trimming knife during operation in order to protect your hands against injury. In addition, be sure to turn the power off and check to be sure that the machine completely stops before changing the thread.
4. Be careful not to allow your fingers or any other parts of your body to be caught between the machine and table when removing the machine from or replacing it on the table in order to prevent accident that can result in personal injury or death.

5. 為了防止因突然的起動造成的事故，拆卸皮帶護罩以及 V 形皮帶時，請一定關閉電源，確認了縫紉機和馬達均完全停止之後再進行拆卸。
6. 使用伺服馬達時，機器停止時馬達不發出聲音。為了防止因突然的起動造成的事故，請注意不要忘記關閉電源。
7. 為了防止因過熱造成的火災事故，使用時請不要堵住馬達電源箱的冷卻口。

## (6)加 油

1. 請使用純正的機油和純正的潤滑脂向規定部位進行加油和塗抹潤滑脂。
2. 為了防止發炎和膿腫，眼睛、身體上粘附了油時，請立即進行清洗。
3. 為了防止腹瀉、嘔吐，如果誤飲了機油，請立即就醫治療。

## (7)維修保養

1. 為了防止因不熟練而造成的事故，有關修理、調整，請一定讓熟悉機器的維修保養技術人員按照使用說明書的說明進行修理和調整。另外，更換零部件時，請一定使用本公司的純正零部件。對於不適當的修理和調整以及使用非純正零部件造成的事故，本公司一概不負任何責任。
2. 為了防止因不熟練而造成的事故以及防止觸電事故，請一定讓具有電氣專門知識的人或委託本公司、代理店的技術人員進行有關電氣的修理和維修（包括佈線）。

5. Be sure to turn the power off and check to be sure that the machine and motor completely stop before removing the belt cover and V-belt in order to prevent accident caused by abrupt start of the machine or motor.
6. If a servomotor is used with the machine, the motor does not produce noise while the machine is at rest. Be sure not to forget to turn the power off in order to prevent accident caused by abrupt start of the motor.
7. Never use the machine with the cooling opening of the motor power box shielded in order to prevent fire accident by overheat.

## (6)Lubrication

1. Be sure to use SIRUBA genuine oil and SIRUBA genuine grease to the parts to be lubricated.
2. If the oil adheres on your eye or body, be sure to immediately wash it off in order to prevent inflammation or irritation.
3. If the oil is swallowed unintentionally, be sure to immediately consult a medical doctor in order to prevent diarrhea or vomiting.

## (7)Maintenance

1. In prevention of accident caused by unfamiliarity with the machine, repair and adjustment has to be carried out by a service technician who is thoroughly familiar with the machine within the scope defined in the instruction manual. Be sure to use SIRUBA genuine parts when replacing any of the machine parts. SIRUBA assumes no responsibility for any accident caused by improper repair or adjustment or the use of any part other than SIRUBA genuine one.
2. In prevention of accident caused by unfamiliarity with the machine or electrical-shock accident, be sure to ask an electrical technician of your company or SIRUBA or distributor in your area for repair and maintenance (including wiring) of electrical components.

3. 為了防止因突然的起動造成的事故，修理和維修保養使用氣缸等高壓空氣的機器時，請一定卸下空氣供給源的管子，排出殘留的空氣之後再進行修理和維修保養。
4. 為了防止人身事故，修理調整和更換零部件後，請一定確認螺絲螺母等沒有鬆動。
5. 機器的使用期間中，請一定定期地進行清掃。此時，為了防止因突然的起動而造成的事故，請一定關閉電源，確認了縫紉機和馬達均完全停止之後再進行清掃。
6. 進行維修保養、檢查、修理時，請一定關閉電源，確認了縫紉機和馬達均完全停止之後再進行操作。(離合馬達時，請注意關閉電源後馬達由於慣性仍然回繼續轉動一定時間。)
7. 為了防止人身事故，經過修理調整，機器不能正常操作時，請立即停止操作，與本公司或代理店聯繫，委託有關技術人員修理。
8. 為了防止人身事故，保險絲熔斷後，請一定切斷電源，排除了保險絲熔斷的原因之後，更換相同規格的新保險絲。
9. 為了防止馬達的火災事故，請定期地進行風扇通氣口的清掃和配線四周的檢查。

## (8)使用環境

1. 為了防止因誤動作造成的事故，請在沒有高頻電焊機等強噪音源(電磁波)影響的環境下使用縫紉機。

3. When carrying out repair or maintenance of the machine which uses air-driven parts such as an air cylinder, be sure to remove the air supply pipe to expel air remaining in the machine before hand, in order to prevent accident caused by abrupt start of the air-driven parts.
4. Be sure to check that screws and nuts are free from looseness after completion of repair, adjustment and part replacement.
5. Be sure to periodically clean up the machine during its duration of use. Be sure to turn the power off and verify that the machine and motor stop completely before cleaning the machine in order to prevent accident caused by abrupt start of the machine or motor.
6. Be sure to turn the power off and verify that the machine and motor stop completely before carrying out maintenance, inspection or repair of the machine. (For the machine with a clutch motor, the motor will keep running for a while by inertia even after turning the power off. So, be careful.)
7. If the machine cannot be normally operated after repair or adjustment, immediately stop operation and contact SIRUBA or the distributor in your area for repair in order to prevent accident that can result in personal injury or death.
8. If the fuse has blown, be sure to turn the power off and eliminate the cause of blowing of the fuse and replace the blown fuse with a new one in order to prevent accident that can result in personal injury or death.
9. Be sure to periodically clean up the air vent of the fan and inspect the area around the wiring in order to prevent fire accident of the motor.

## (8)Operating environment

1. Be sure to use the machine under the environment which is not affected by strong noise source (electro-magnetic waves) such as a high-frequency welder in order to prevent accident caused by malfunction of the machine.



### (3)用途、改裝

1. 為了防止人身事故，請不要將本機器使用於本來的用途和使用說明書規定的使用方法以外的用處。如果使用於規定用途以外時，本公司一概不負任何責任。
2. 為了防止人身事故，請不要改裝機器。對於因改裝而發生的事故，本公司一概不負任何責任。

### (4)教育培訓

1. 為了防止由於不熟練而造成的事故，雇用單位應就有關本機器的操作和安全注意事項，對操作人員進行教育，而且只讓具有專業知識和操作技能的操作人員使用本機器。同時，雇用單位一定事前編制操作人員的教育培訓計畫，並切實地實施。

### (5)必須關閉電源的事項

關閉電源：是指關閉電源開關之後，並且把電源插頭從電源插座上拔下來。以下相同。

1. 為了防止人身事故，當確認了異常、故障後以及停電時，請立即關閉電源。
2. 為了防止因機器突然啟動造成的事故，在如下情況時，請一定關閉電源之後再進行操作。特別是使用離合馬達時，關閉電源後，一定確認了縫紉機完全停止轉動之後再進行操作。

### (3)Application and modification

1. Never use the machine for any application other than its intended one and in any manner other than that prescribed in the instruction manual in order to prevent accident that can result in personal injury or death. SIRUBA assumes no responsibility for damages or personal injury or death resulting from the use of the machine for any application other than the intended one.
2. Never modify and alter the machine in order to prevent accident that can result in personal injury or death. SIRUBA assumes no responsibility for damages or personal injury or death resulting from the machine which has been modified or altered.

### (4)Education and training

1. In order to prevent accident resulting from unfamiliarity with the machine, the machine has to be used only by the operator who has been trained/educated by the employer with respect to the machine operation and how to operate the machine with safety to acquire adequate knowledge and operation skill. To ensure the above, the employer has to establish an education/training plan for the operators and educate/train them beforehand.

### (5)Items for which the power to the machine has to be turned off

Turning the power off: Turning the power switch off, then removing the power plug from the outlet. This applies to the following.

1. Be sure to immediately turn the power off if any abnormality or failure is found or in the case of power failure in order to protect against accident that can result in personal injury or death.
2. To protect against accident resulting from abrupt start of the machine, be sure to carry out the following operations after turning the power off. For the machine incorporating a clutch motor, in particular, be sure to carry out the following operations after turning the power off and verifying that the machine stops completely.

- 2-1. 例如，向機針、彎針、分線器等需要穿線的零件進行穿線或更換梭心時。
- 2-2. 例如，更換或調整組成機器的所有零部件時。
- 2-3. 例如，檢查、修理、清掃機器時，或離開機器時。
3. 為了防止觸電、漏電、火災事故，拔電源插頭時，一定要手持插頭拔電線，而不能拉著電線拔。
4. 不使用縫紉機閒放時，一定要關閉電源。
5. 為了防止因電氣零部件的損壞造成的事故，停電後請一定關閉電源。

- 2-1. For example, threading the parts such as the needle, looper, spreader etc. which have to be threaded, or changing the bobbin.
- 2-2. For example, changing or adjusting all component parts of the machine.
- 2-3. For example, when inspecting, repairing or cleaning the machine or leaving the machine.
3. Be sure to remove the power plug by holding the plug section instead of the cord section in order to prevent electrical-shock, earth-leakage or fire accident.
4. Be sure to turn the power off whenever the machine is left unattended between works.
5. Be sure to turn the power off in the case of power failure in order to prevent accident resulting of breakage of electrical components.

## 在各使用階段的注意事項

## PRECAUTIONS TO BE TAKEN IN VARIOUS OPERATION STAGES

### (1)搬 運

1. 為了防止人身事故，抬起縫紉機移動時，請一定根據機器的重量採用確保安全的方法進行搬運。另外，有關機器重量，請確認使用說明書的說明。
2. 為了防止人身事故，抬起縫紉機移動時，請採取確保安全的措施防止翻倒、掉落。
3. 為了防止不可預想的事故、掉落事故、機器損壞，請不要再次包裝已經開箱的機器進行搬運。

### (2)開 箱

1. 為了防止人身事故，開箱時請按照從上方開始的順序進行開箱。木框包裝時，請一定要小心不要被釘子紮破。請把釘子從木板上拔下來。
2. 為了防止人身事故，取出機器時，請一定首先確認機器的重心位置然後小心地取出。

### (1)Transportation

1. Be sure to lift and move the machine in a safe manner taking the machine weight in consideration. Refer to the text of the instruction manual for the mass of the machine.
2. Be sure to take sufficient safety measures to prevent falling or dropping before lifting or moving the machine in order to protect against accident that can result in personal injury or death.
3. Once the machine has been unpacked, never re-pack it for transportation to protect the machine against breakage resulting from unexpected accident or dropping.

### (2)Unpacking

1. Be sure to unpack the machine in the prescribed order in order to prevent accident that can result in personal injury or death. In the case the machine is crated, in particular, be sure to carefully check nails. The nails have to be removed.
2. Be sure to check the machine for the position of its center of gravity and take it out from the package carefully in order to prevent accident that can result in personal injury or death.

2. 為了防止因誤動作造成的事故，在超過額定電壓  $\pm 10\%$  的地方，請不要使用縫紉機。
  3. 為了防止因誤動作造成的事故，對於使用氣缸等高壓空氣的裝置，請確認了壓力符合規定之後再進行使用。
  4. 為了安全地使用縫紉機，請一定在下列環境下進行使用。  
動作時的周圍溫度  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$   
動作時的相對濕度  $35\% \sim 85\%$
  5. 為了防止因電氣零部件的損壞和誤動作造成的事故，從寒冷的環境急速地變到溫暖的地方後容易產生結露現象，請等待水滴完全乾燥之後再接通電源。
  6. 為了防止因電氣零部件的損壞和誤動作造成的事故，打雷時為了安全，請停止操作，並拔下電源插頭。
  7. 有的電波狀態下，可能會給予附近的電視機、收音機帶來噪音。此時，請在稍稍離開縫紉機的地方使用電視機、收音機。
  8. 為了確保作業環境，請遵守各國的有關法令。需要對應噪音時，請穿戴有關法令規定的防音防護用具等。
  9. 有關產品、包裝的廢棄，使用完的潤滑油等的處理，請按照各國的法律法規進行適當的處理。
2. Never operate the machine in any place where the voltage fluctuates by more than "rated voltage  $\pm 10\%$ " in order to prevent accident caused by malfunction of the machine.
  3. Be sure to verify that the air-driven device such as an air cylinder operates at the specified air pressure before using it in order to prevent accident caused by malfunction of the machine.
  4. To use the machine with safety, be sure to use it under the environment which satisfies the following conditions:  
Ambient temperature during operation  $5^{\circ}\text{C}$  to  $35^{\circ}\text{C}$  .  
Relative humidity during operation 35% to 85% .
  5. Dew condensation can occur if bringing the machine suddenly from a cold environment to a warm one. So, be sure to turn the power on after having waited for a sufficient period of time until there is no sign of water droplet in order to prevent accident caused by breakage or malfunction of the electrical components.
  6. Be sure to stop operation when lightning flashes for the sake of safety and remove the power plug in order to prevent accident caused by breakage or malfunction of the electrical components.
  7. Depending on the radio wave signal condition, the machine may generate noise in the TV or radio. If this occurs, use the TV or radio with kept well away from the machine.
  8. In order to ensure the work environment, local laws and regulations in the country where the sewing machine is installed shall be followed. In the case the noise control is necessary, an ear protector or other protective gear should be worn according to the applicable laws and regulations.
  9. Disposal of products and packages and treatment of used lubricating oil should be carried out properly according to the relevant laws of the country in which the sewing machine is used.



## 為了安全地使用 LBHS-1790S 縫紉機的注意事項

### • 危險

1. 為了防止觸電事故，打開電源時，請不要打開馬達電氣箱蓋，也不要觸摸電氣箱內的零件。
2. 變更圖案後，請確認落針位置。萬一圖案壓腳超越圖案範圍，縫製中有可能機針與壓腳相碰，發生斷針的危險。另外，請確認被設定的壓腳和安裝到縫紉機的壓腳是否一致。

### • 注意

1. 打開（ON）電源開關後，操作盤上什麼也不顯示時，請關閉（OFF）電源開關，然後確認電源電壓和電源規格。
2. 為了防止造成人身事故，打開電源時和縫紉機運轉途中，請不要把手指放到挑線桿、布壓腳、布切刀以及機針下面的附近。
3. 為了防止突然的啟動造成人身事故，放倒縫紉機時，拆卸馬達外罩時，請關掉電源。
4. 為了防止捲入機器的人身事故，縫紉機運轉中請不要把手指、頭髮、衣服靠近馬達、切刀等驅動部分，也不要將物品放到機器的上面。

## PRECAUTIONS TO BE TAKEN SO AS TO USE THE LBHS-1790S SERIES MORE SAFELY

### • DANGER

1. To avoid electrical shock hazards, neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.
2. After changing the pattern, make sure the needle entry point. If the pattern is protruded from the work clamp feet, the needle will interfere with the work clamp feet during sewing, and it is dangerous due to the needle breakage or the like.

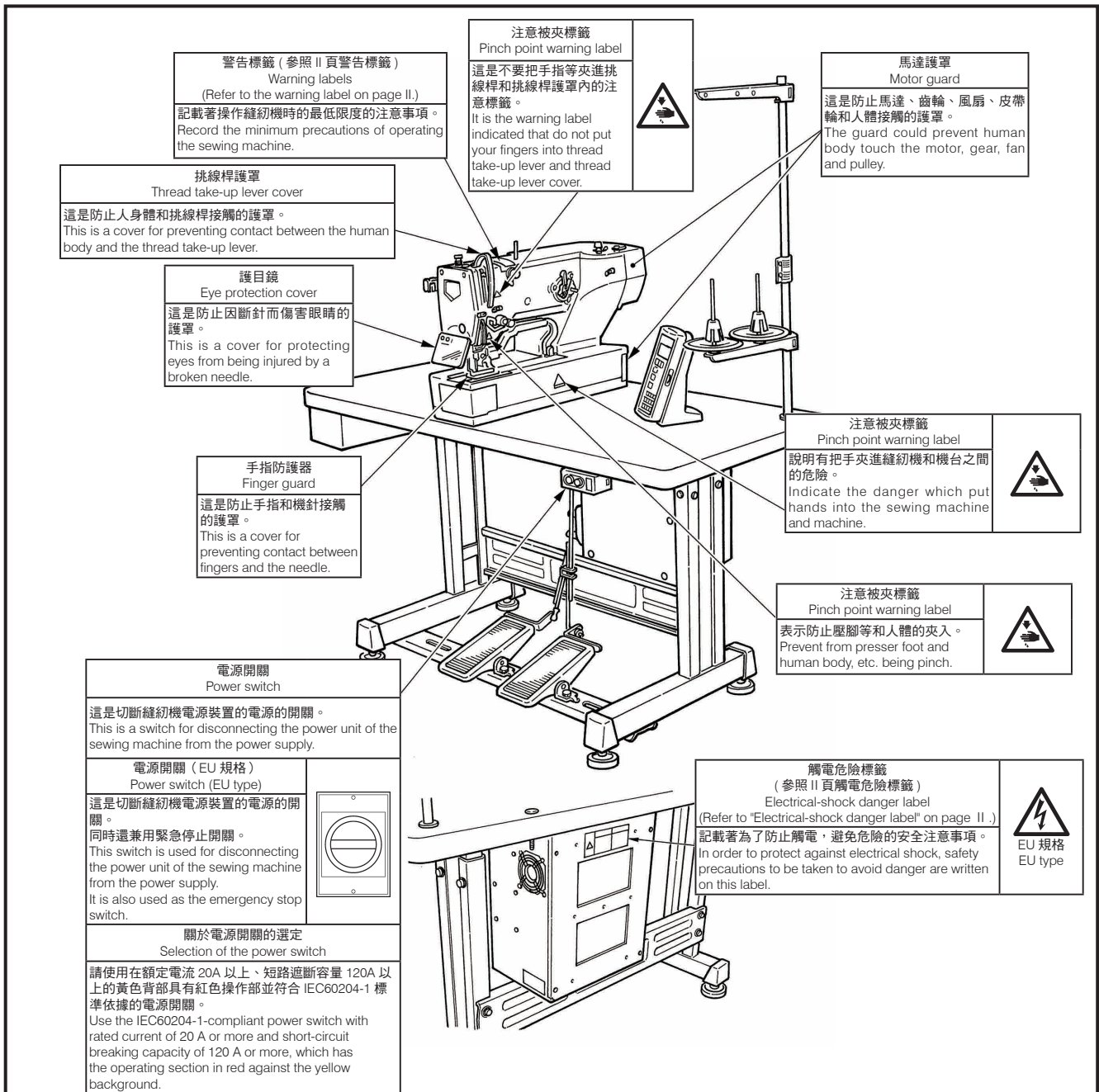
### • CAUTION

1. Please turn OFF power switch and check the power voltage and power specification if the operational panel did not show anything after turned ON power switch.
2. Please do not put your fingers under thread take-up lever, presser foot, trimmer, and needle while turn on power stitch and operating the machine in order to prevent from body injuring.
3. To prevent from body injured which cause by the sudden start up of the machine, please turn OFF power switch when put down the sewing machine and take off motor cover.
4. To prevent from body injured which cause by operating the machine, do not let your fingers, hair, and clothes near motor, trimmer, or other driving parts; also do not put any subject on the machine.

5. 為了防止對人身的傷害，請不要在卸下馬達外罩、眼睛保護罩等安全裝置的狀態下運轉縫紉機。
  6. 為了防止對人身的傷害，放倒縫紉機時和返回到原來的位罝時，請注意不要夾到手指等。
  7. 為了防止觸電和損壞電氣零件的事故，插拔電源插頭之前請一定關掉電源開關。
  8. 為了防止損壞電氣零件的事故，打雷時，請停止操作，拔下電源插頭，以保證安全。
  9. 為了防止損壞電氣零件的事故，從寒冷的地方移動到暖和的地方等時，容易發生結露現象，所以請待水滴完全乾燥之後再打開電源。
  10. 為了防止損壞電氣零件的事故，停電時，請一定關掉電源。
  11. 本裝置請在工業用環境下使用。在一般家庭裡使用時如果靠近電視機或收音機使用的話，有發生接收不良的故障。
  12. 因為本產品屬於精密機器，所以操作時請充分注意，不要把水、油濺到機器上面，也不要讓機器掉落給與基氣衝擊。
  13. 本機器是 A 級工業用機器。在家庭環境下使用此機器的話，有可能發生電波干擾的現象。此時，請使用人採取適當的措施解決電波干擾問題。
5. To prevent from body injuring, please do not take off motor cover, eyes guard or other safety devices while operating.
  6. To prevent from body injuring, be caution do not clip your fingers, etc while putting down sewing machine or put the machine back to the original position.
  7. To prevent from electric shock or the incident of electrical parts damage, please turn off power supply before plug in or out the plug from the socket.
  8. In order to prevent from incidents which damage of electrical parts, for your safety, please stop operating and take off power plug if it thundered.
  9. In order to prevent from incidents which damage of electrical parts, if move the machine from cold place to warm place, it may happen condensation. Please restart the machine after it completely dry up.
  10. In order to prevent from incidents which damage of electrical parts, please turn off power while blackout.
  11. Please use the device at industrial environment. If use the device nearby television or radio at general home place, it may happen malfunction like poor reception.
  12. Since our products are precision machine, please operate it with full caution that do not let water our oil splash on the machine, also do not let the machine hit on the ground.
  13. Our products are A class industrial machine. If operation the machine at general home place, it may happen radio wave interference. At the time, please take the adequate measurement to solve the problem.

## 關於安全裝置和警告標籤

## SAFETY DEVICES AND WARNING LABELS



## ⚠ 注意 CAUTION

- 另外，在使用說明書中為了突出說明的重點，有的地方省略顯示了「護目鏡」、「手指防護器」等安全裝置，請瞭解。但是實際使用時，請絕對不要卸下這些安全裝置。
- In addition, be aware that the safety devices such as the "eye protection cover" and "finger guard" are sometimes omitted in the sketches, illustrations and figures included in the Instruction Manual for the explanation's sake. In the practical use, never remove those safety devices.



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## I . 使用時的注意事項

1. 沒有往油箱加油時，請絕對不要運轉縫紉機。
2. 作業結束之後，請清掃旋梭、切刀部的灰塵。並確認油量是否充足。
3. 使用起動踏板時，縫紉機起動後請把踏板返回到原來的位置。
4. 本縫紉機的機頭部裝有縫紉機頭放倒時，不讓縫紉機運轉的安全開關。運轉縫紉機時，請把縫紉機頭正確地設置到機臺上之後，再打開電源開關。

## I . IMPORTANT SAFETY INSTRUCTIONS

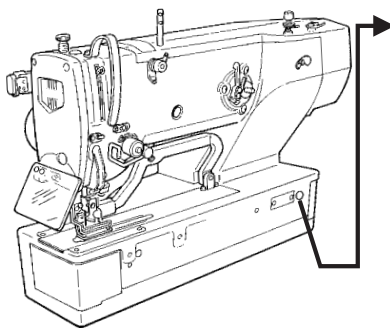
1. Never operate the machine unless the oiling tank has been properly lubricated.
2. Be sure to remove any dust from the hook or bobbin thread cutting knife section at the end of the day, and check the amount of oil remaining.
3. Be sure to return the activating pedal to the home position after the machine has started to run.
4. A safety switch is installed so that this sewing machine can not be operated in the state that the machine head is tilted. When operating this sewing machine, turn the power switch ON after setting the sewing machine to the bed base properly.

## II . 規格

1. 子機種  
LBHS-1790S 平縫電子鎖扣眼縫紉機有以下的子機種。

## II . SPECIFICATIONS

1. Subclass  
Lockstitch buttonholing machine, LBHS-1790S, has the subclass machines below.



子機種 Subclass	LBHS-1790S	LBHS-1792K	LBHS-1795S
主要用途 Major application	襯衣、襯衫、工作服、女裝等棉布鈕扣眼 Buttonholing of cloth such as men's shirts, blouses, work uniforms, ladies' wear, etc.	針織內衣、毛衣、羊毛衫、平針針織物等針織品的鈕扣眼 Buttonholing of knits such as knitted underwear, sweaters, cardigans, jersey, etc.	襯衣、襯衫、工作服、女裝等棉布鈕扣眼兒童專用汽車座席的皮帶穿孔 Buttonholing of cloth such as men's shirts, blouses, work uniforms, ladies' wear, etc. Holing of child-car seat belts
鈕扣扣眼尺寸 Buttonholing size	<p>標準：最大 5mm 特別規格零件：最大 10mm Standard: Max. 5mm Special type part: Max. 10mm</p> <p>使用切刀尺寸 6.4 ~ 31.8mm (1/4' ~ 1-1/4') Knife size used: 6.4 to 31.8mm (1/4' to 1-1/4')</p> <p>開孔縫製長度 標準：最大 41mm LBHS-1795S：最大 120mm Buttonholing sewing length Standard: Max. 41mm LBHS-1795S：Max. 120 mm</p>		



## II . 規格

## II .SPECIFICATIONS

### 2. 規格




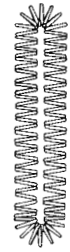





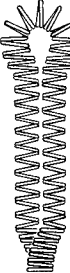





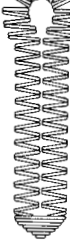


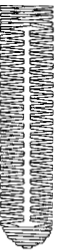



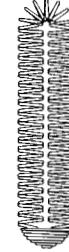






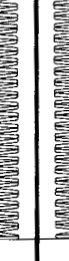
### 2. Specification

縫紉速度 Sewing speed	標準速度：3600sti/min（最高：4200sti/min） （使用幹式旋梭時，最高：3300sti/min） Standard speed：3,600 sti/min (Max.：4,200 sti/min) (Max.：3,300 sti/min when dry hook is used)
使用機針 Needle	DP×5 # 11～# 14
使用旋梭 Hook	DP 型全旋轉旋梭 DP type full-rotary hook
擺針驅動方式 Needle rocking drive method	驅動脈衝馬達 Drive by stepping motor
送針驅動方式 Feed drive method	驅動脈衝馬達 Drive by stepping motor
壓腳提升驅動方式 Presser lifting drive method	驅動脈衝馬達 Drive by stepping motor
壓腳提升量 Lift of presser foot	14mm（可以任意設定） 最大：17mm（倒轉針提升時） 14 mm (Optional setting available) Max.：17 mm (At the time of needle up by reverse run)
切布刀驅動方式 Cloth cutting knife drive method	複數電磁驅動 By double-acting solenoid drive
標準縫製形狀 Standard sewing shape	30 種 30 kinds
記憶圖案數 Number of patterns stored in memory	99 圖案 99 patterns
電源 Motor used	單相 220/230/240V、1000VA Single phase 220/230/240 V, 1000VA



## 3. 標準縫製形狀一覽表

## 3. Standard sewing shape list

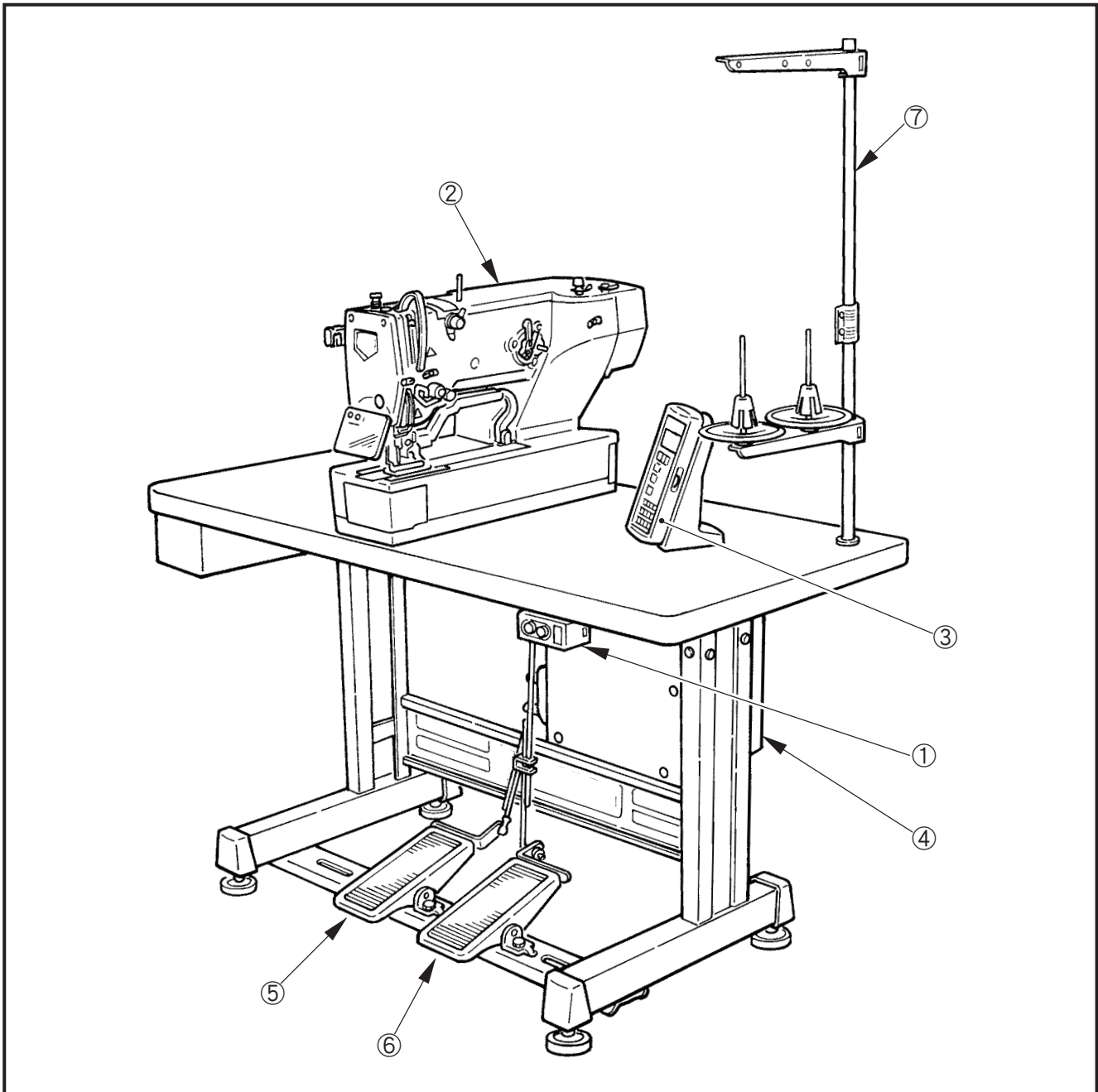
(1) 角型 (1) Square type	(2) 圓型 (2) Round type	(3) 輻射角型 (3) Radial square type	(4) 輻射型 (4) Radial type	(5) 輻射直線加固型 (5) Radial straight bar-tacking type	(6) 輻射錐形加固型 (6) Radial taper bar-tacking type
 液晶顯示 PANEL DISPLAY 1	 液晶顯示 PANEL DISPLAY 2	 液晶顯示 PANEL DISPLAY 3	 液晶顯示 PANEL DISPLAY 4	 液晶顯示 PANEL DISPLAY 5	 液晶顯示 PANEL DISPLAY 6
(7) 圓頭扣眼角型 (7) Eyelet square type	(8) 圓頭扣眼輻射型 (8) Eyelet radial type	(9) 圓頭扣眼直線加固型 (9) Eyelet straight bar-tacking type	(10) 圓頭扣眼錐形加固型 (10) Eyelet taper bar-tacking type	(11) 半月型 (11) Semilunar type	(12) 圓角型 (12) Round square type
 液晶顯示 PANEL DISPLAY 7	 液晶顯示 PANEL DISPLAY 8	 液晶顯示 PANEL DISPLAY 9	 液晶顯示 PANEL DISPLAY 10	 液晶顯示 PANEL DISPLAY 11	 液晶顯示 PANEL DISPLAY 12
(13) 半月角型 (13) Semilunar square type	(14) 半月直線加固型 (14) Semilunar straight bar-tacking type	(15) 半月錐形加固型 (15) Semilunar taper bar-tacking type	(16) 圓頭扣眼半月型 (16) Eyelet semilunar type	(17) 圓頭扣眼圓型 (17) Eyelet round type	(18) 角輻射型 (18) Square radial type
 液晶顯示 PANEL DISPLAY 13	 液晶顯示 PANEL DISPLAY 14	 液晶顯示 PANEL DISPLAY 15	 液晶顯示 PANEL DISPLAY 16	 液晶顯示 PANEL DISPLAY 17	 液晶顯示 PANEL DISPLAY 18
(19) 角半月型 (19) Square semilunar type	(20) 角圓型 (20) Square round type	(21) 角直線加固型 (21) Square straight bar-tacking type	(22) 角錐形加固型 (22) Square taper bar-tacking type	(23) 輻射半月型 (23) Radial semilunar type	(24) 輻射圓型 (24) Radial round type
 液晶顯示 PANEL DISPLAY 19	 液晶顯示 PANEL DISPLAY 20	 液晶顯示 PANEL DISPLAY 21	 液晶顯示 PANEL DISPLAY 22	 液晶顯示 PANEL DISPLAY 23	 液晶顯示 PANEL DISPLAY 24
(25) 半月輻射型 (25) Semilunar radial type	(26) 半月圓型 (26) Semilunar round type	(27) 加固縫 (27) Bar-tacking	(28) 加固右切斷 (28) Bar-tacking, right cut	(29) 加固左切斷 (29) Bar-tacking, left cut	(30) 加固中央切斷 (30) Bar-tacking, center cut
 液晶顯示 PANEL DISPLAY 25	 液晶顯示 PANEL DISPLAY 26	 液晶顯示 PANEL DISPLAY 27	 液晶顯示 PANEL DISPLAY 28	 液晶顯示 PANEL DISPLAY 29	 液晶顯示 PANEL DISPLAY 30

## II . 規格

## II . SPECIFICATIONS

### 4. 構成

### 4. Configuratio



LBHS-1790S 由以下部分所構成

- ① 電源開關
- ② 縫紉機機頭 (LBHS-1790S)
- ③ 操作盤
- ④ 控制箱 (MC-601)
- ⑤ 壓腳提升踏板
- ⑥ 起動踏板
- ⑦ 線架裝置

LBHS-1790S consists of the following components.

- ① Power ON/OFF switch
- ② Machine head (LBHS-1790S)
- ③ Operation panel
- ④ Control box (MC-601)
- ⑤ Presser lifting pedal
- ⑥ Starting pedal
- ⑦ Thread stand device

## III . 安裝

## III . INSTALLATION



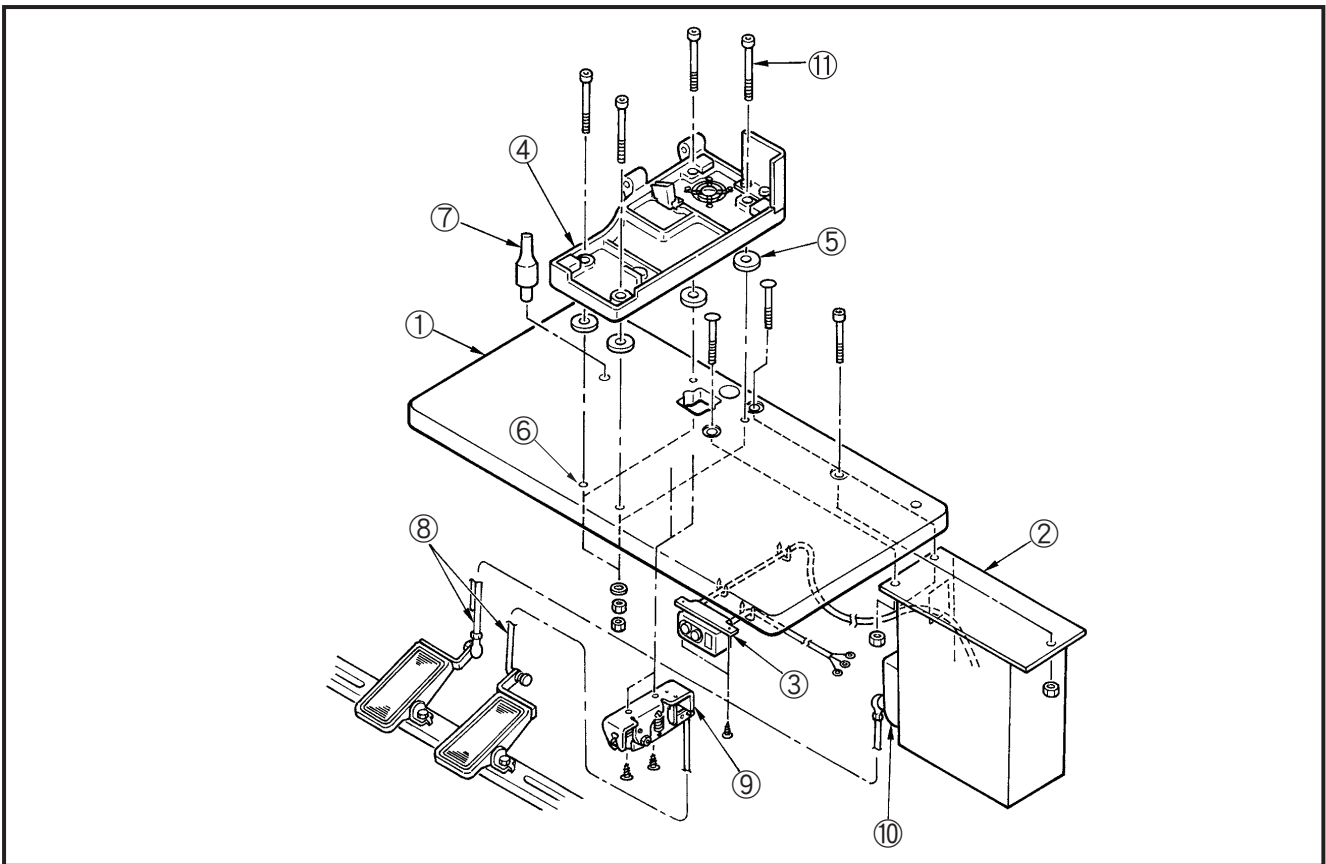
**危險**  
DANGER

搬運縫紉機時，請至少 2 人以上進行。

To prevent possible accidents caused by the fall of the sewing machine, perform the work by two persons or more when the machine is moved.

## 1. 機台的組裝

## 1. Set-up of the table



- (1) 把控制箱②、電源開關③固定到機台①上。
- (2) 用固定條把電源開關③的電纜線固定起來。
- (3) 把機台固定螺絲⑪（4 個）穿過機頭座④。
- (4) 把減震橡膠⑤安裝到機台的機頭座固定孔⑥（4 處），然後固定機頭座④。
- (5) 把機頭支撐桿⑦ 固定到機台①上。
- (6) 把縫紉機主機放到機台④上後，把踏板（右側）和踏板開關⑨、踏板（左側）和電氣踏板感測器⑩用附屬的连接桿⑧分別連接起來。

- (1) Securely install control box ② and power switch ③ on table ① .
- (2) Securely fix the respective power cables of power switch ③ .
- (3) Pass four bed base fix screws ⑪ through bed base ④ .
- (4) Set rubber cushions ⑤ to holes ⑥ (4 places) for fixin bed base and fix bed base ④ .
- (5) Fix head support bar ⑦ on table ① .
- (6) After placing the sewing machine main unit on bed base ④ , connect pedal (right side) to pedal switch ⑨ , and pedal (left side) to pedal sensor ⑩ respectively with connecting rods ⑧ which have been supplied as accessories.



注意：請調整踏板位置，不讓連接桿⑧和控制箱②相碰。

Caution: Adjust the positions of the pedals so that connecting rods ⑧ and control box ② do not come in contact with each other.

## 2. 電源線的連接

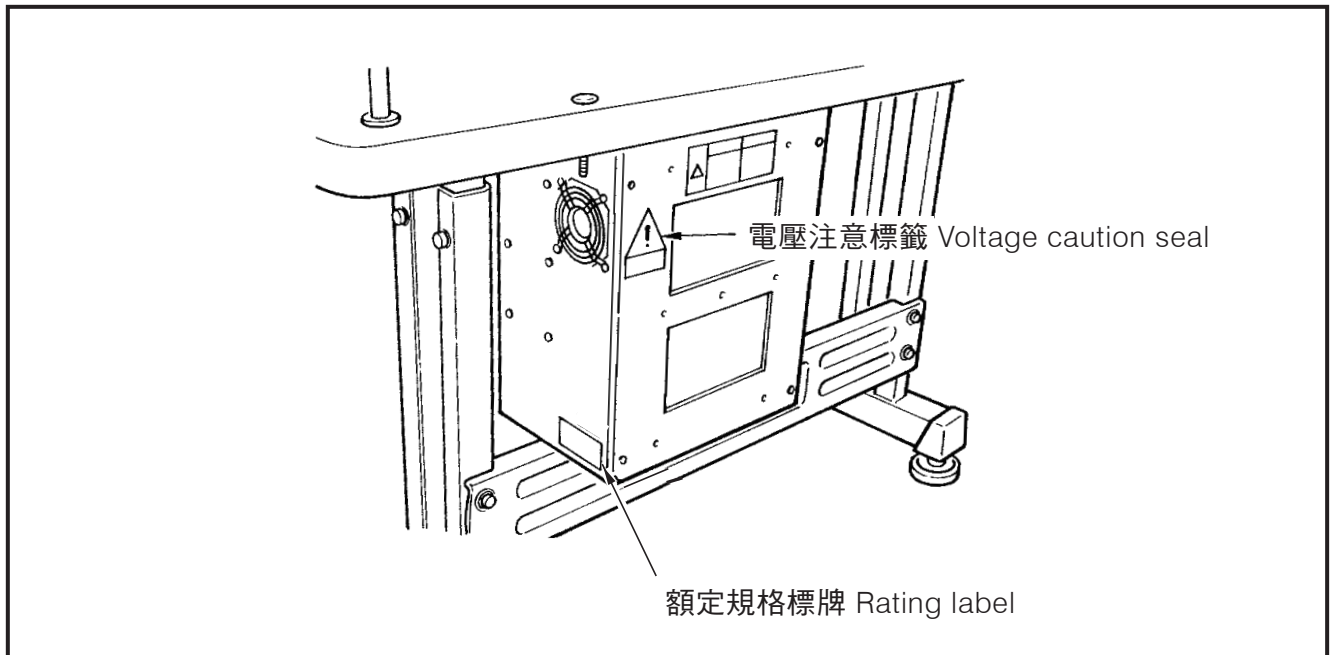
### ●電壓規格

規格請參看電壓注意標籤和額定規格標牌。請根據規格選接電線。

## (2) Connecting the power source cord

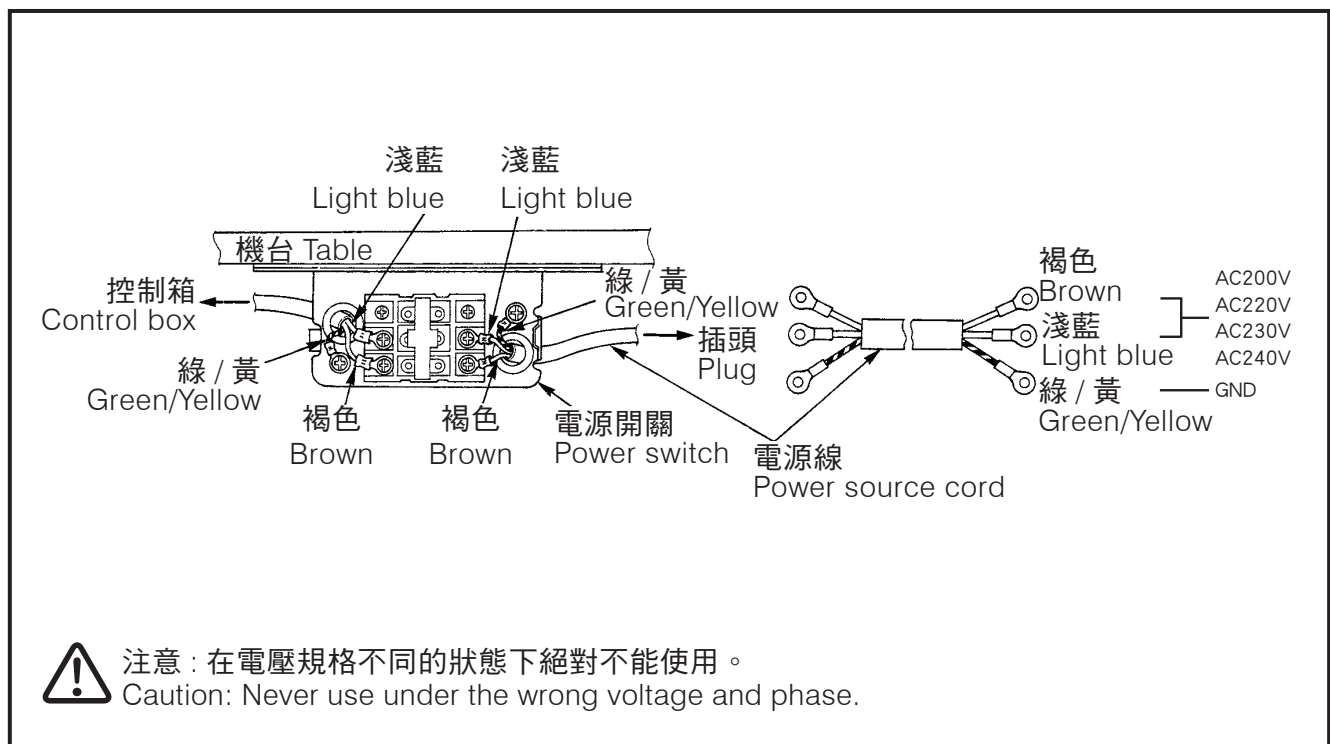
### ●Voltage specification

For other type machines, power source specifications are indicated on the voltage caution seal and the rating label. Connect the cord in accordance with the specifications.



### ●單相 200V、220V、230V 和 240V 的連接。

### ●Connecting single phase 200V, 220V, 230V and 240V.



注意：在電壓規格不同的狀態下絕對不能使用。  
Caution: Never use under the wrong voltage and phase.

### 3. 縫紉機主體的安裝

把絞鏈①和軸承座②（②-1：橡膠，②-2：金屬）裝到機頭位置的2處，然後用固定螺絲③2處把絞鏈板固定到縫紉機機頭部。

### 3. Installing the sewing machine main unit

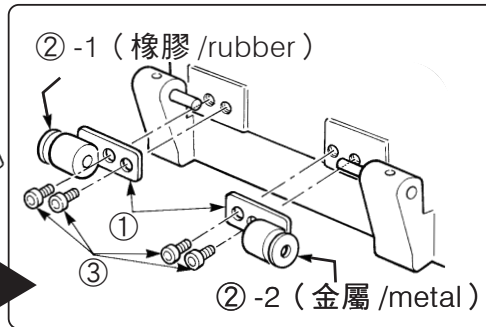
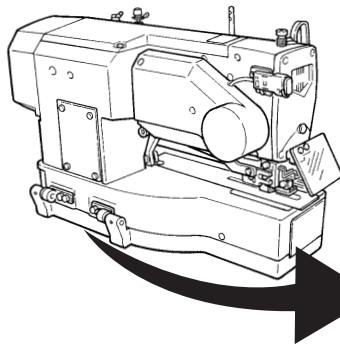
Place hinge plates ① and shaft bearings ②-1 (rubber) and ②-2(metal) in two places on the head base and fix the hinge plates to the machine head with setscrews ③ in two places.



**注意**  
CAUTION

搬運縫紉機時，請至少2人以上進行。

To prevent possible accidents caused by the fall of the sewing machine, perform the work by two persons or more when the machine is moved.



注意：請不要把橡膠絞鏈和金屬絞鏈安裝反了，否則放倒縫紉機時會發生危險。

Caution: When the rubber hinge and metal fitting hinge are installed in reverse order, it is dangerous since the sewing machine shakes when it is tilted. So, be careful.

### 4. 縫紉機的放倒方法

放倒縫紉機時，請輕輕地放倒，讓縫紉機被機頭支撐桿①支撐住。

### 4. Tilting the sewing machine head

When tilting the sewing machine head, tilt quietly the sewing machine until head support bar ① comes in contact with it.

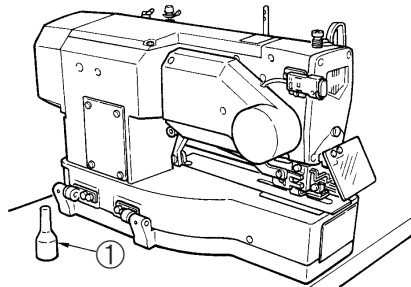


**危險**  
DANGER

放倒或抬起縫紉機時，請注意不要被縫紉機夾住手指。

為了防止突然的起動造成的事故，請關掉電源之後再進行操作。

When tilting/raising the sewing machine head, perform the work so as not to allow your fingers to be caught in the machine. In addition, to avoid possible accidents caused by abrupt start of the machine, turn OFF the power to the machine before starting the work.



注意：1. 放倒縫紉機之前，請先確認機台上是否裝有機頭支撐①。

2. 為了防止縫紉機突然倒下，請一定把縫紉機放到水平的地方，再放倒縫紉機。

Caution: 1. Make sure that sewing machine head support bar ① is placed on the table before tilting the sewing machine.

2. To protect fall-down, be sure to tilt the sewing machine in a level place.

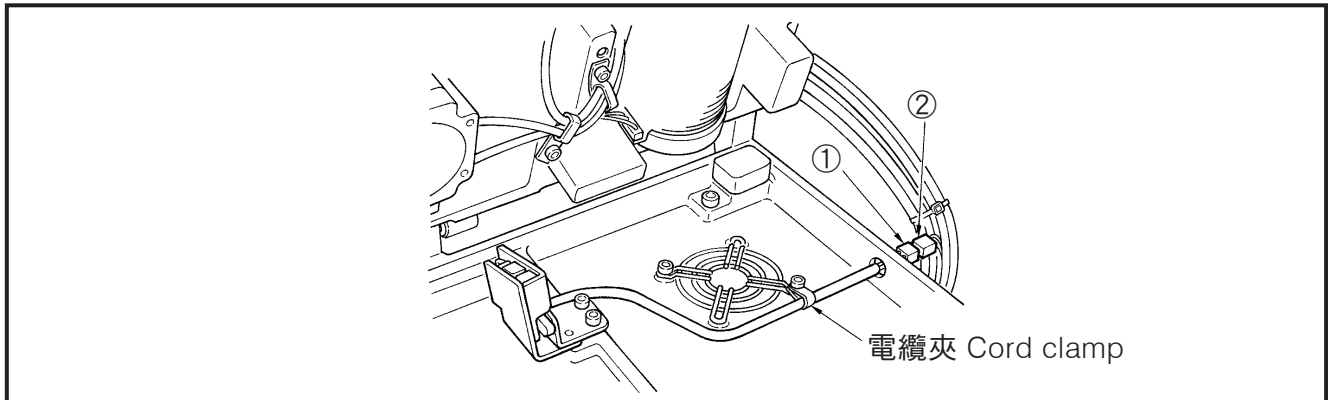


## 5. 安全開關的連接

把安全開關插頭①連接到機頭側的插頭②上。

## 5.Connecting the safety switch connector

Connect safety switch connector ① with connector ② located on the machine head side.

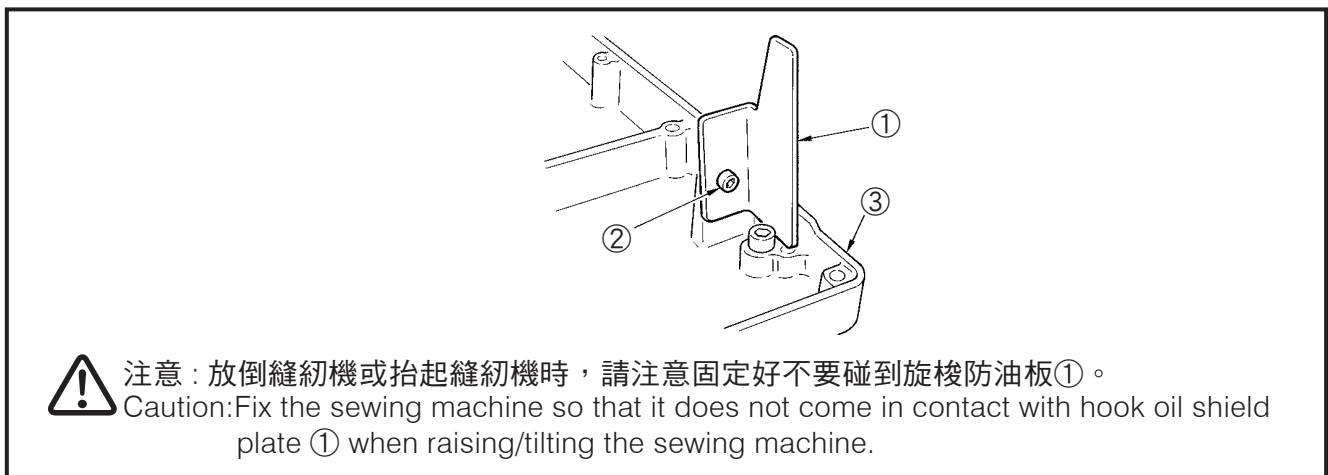


## 6. 旋梭防油板的安裝

用固定螺絲②把旋梭防油板①安裝到機台座③上。

## 6.Installing the hook oil shield plate

Install hook oil shield plate ① onto bed base ③ with setscrew ②.

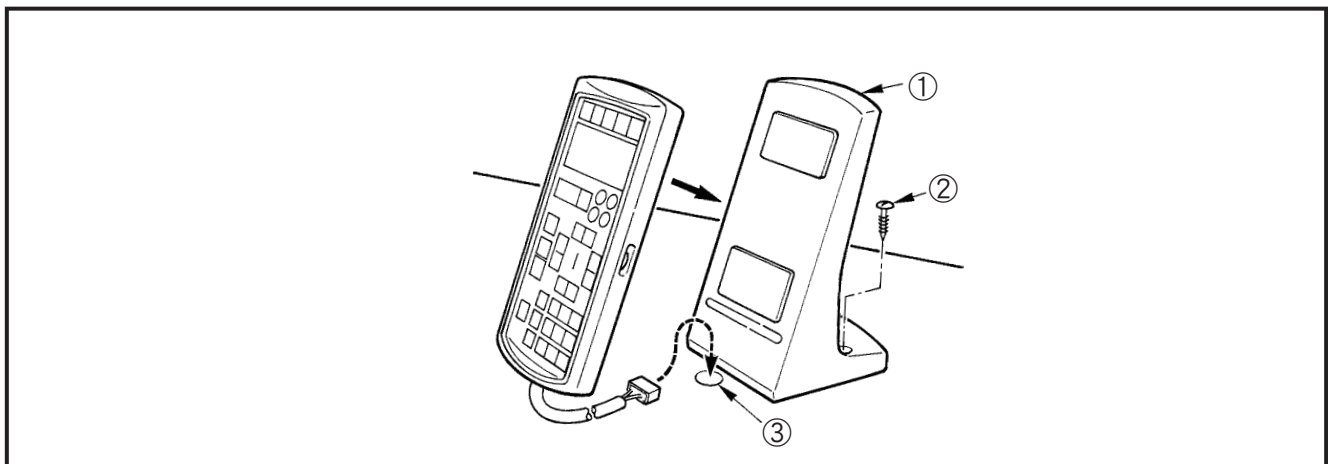


## 7. 操作盤的安裝

請把操作盤安裝板①用木螺絲②固定到機台上，然後把電纜線穿過機台孔③。

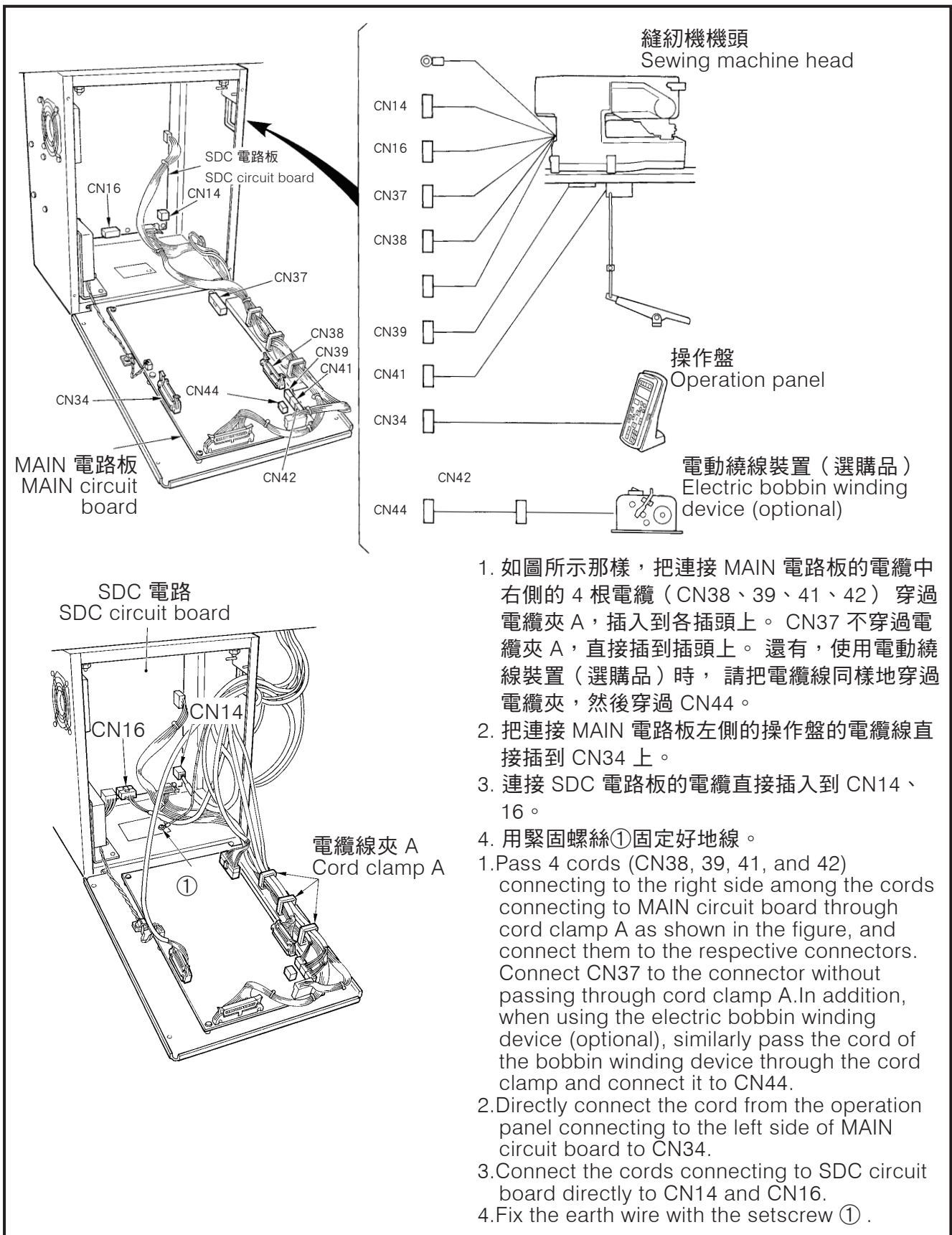
## 7.Installing the operation panel

Fix operation panel attaching plate ① on the table with woodscrew ② and pass the cable through hole ③ in the table.



## 8. 電纜的連接 請按照下圖所示的那樣連接電纜。

## 8. Connecting the cords Perform the connection of the cords as shown in the figure below.



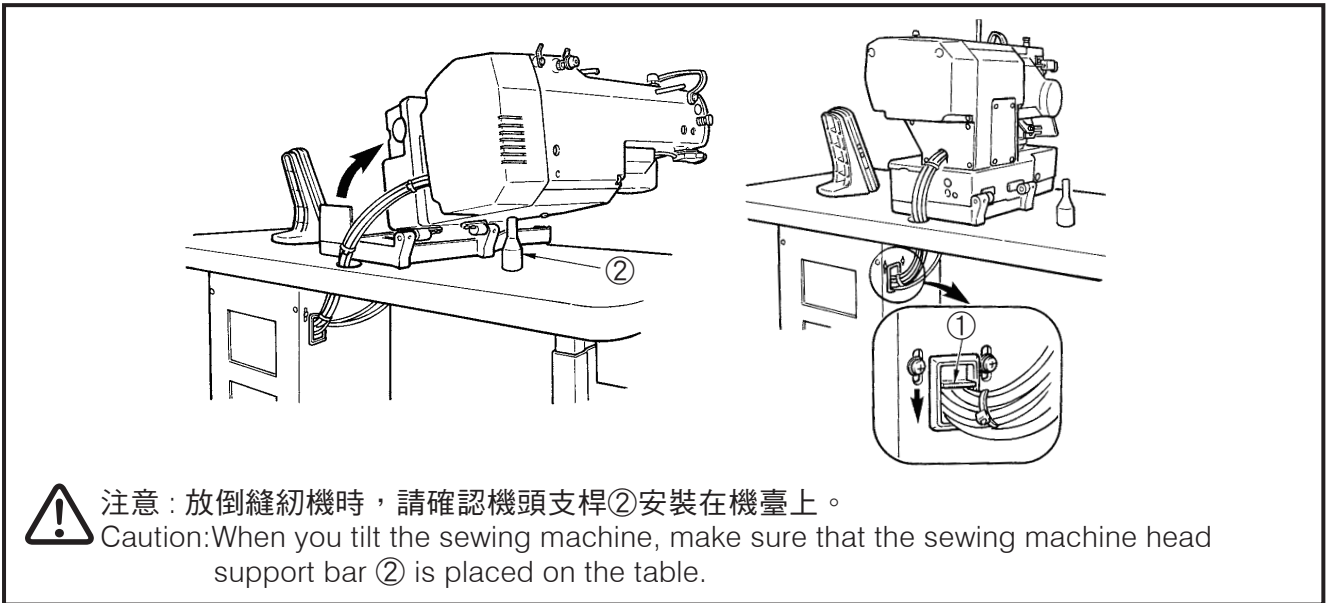
1. 如圖所示那樣，把連接 MAIN 電路板的電纜中右側的 4 根電纜（CN38、39、41、42）穿過電纜夾 A，插入到各插頭上。CN37 不穿過電纜夾 A，直接插到插頭上。還有，使用電動繞線裝置（選購品）時，請把電纜線同樣地穿過電纜夾，然後穿過 CN44。
  2. 把連接 MAIN 電路板左側的操作盤的電纜線直接插到 CN34 上。
  3. 連接 SDC 電路板的電纜直接插入到 CN14、16。
  4. 用緊固螺絲①固定好地線。
- 1.Pass 4 cords (CN38, 39, 41, and 42) connecting to the right side among the cords connecting to MAIN circuit board through cord clamp A as shown in the figure, and connect them to the respective connectors. Connect CN37 to the connector without passing through cord clamp A. In addition, when using the electric bobbin winding device (optional), similarly pass the cord of the bobbin winding device through the cord clamp and connect it to CN44.
  - 2.Directly connect the cord from the operation panel connecting to the left side of MAIN circuit board to CN34.
  - 3.Connect the cords connecting to SDC circuit board directly to CN14 and CN16.
  - 4.Fix the earth wire with the setscrew ①.

## 9. 電線的處理

- (1)請一邊慢慢地放倒縫紉機，一邊確認電纜沒有被勾住。
- (2)如圖所示，用電線固定板①固定電線。

## 9. Managing the cord

- (1) Slowly tilting the sewing machine, check that the cords are not forcibly pulled.
- (2) Fix the cords with cord setting plate ① as shown in the figure.



## 10. 眼睛保護罩的安裝

請一定安裝眼睛保護罩①後再使用縫紉機。

## 10. Installing the eye protection cover

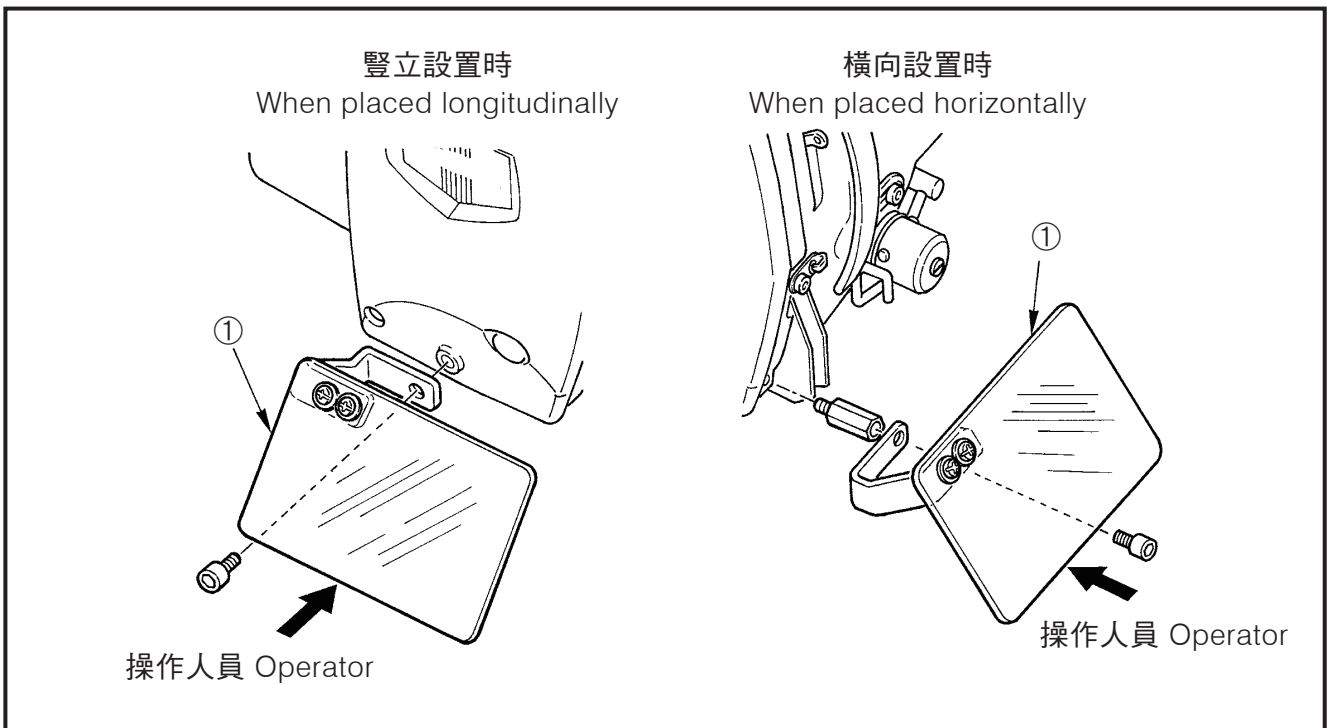
Be sure to install and use eye protection cover ① and use the sewing machine.



**危險**  
DANGER

為了保護斷針飛起弄傷眼睛，請一定安裝起來。

Be sure to attach this cover to protect the eyes from the disperse of needle breakage.



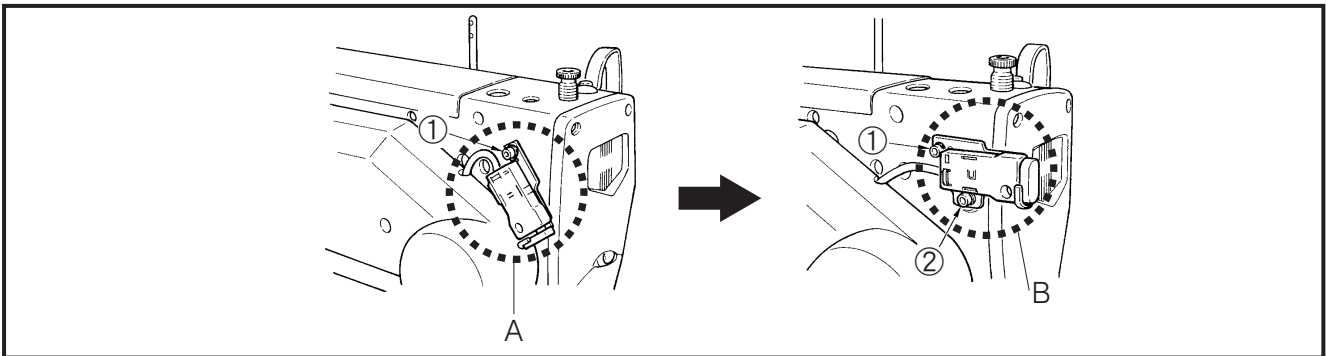


## 11. 暫停開關的固定

出貨時，暫停開關為 A 的狀態，請放鬆固定螺絲①，變更為 B 狀態，然後用附屬的固定螺絲② 和固定螺絲① 固定好。

## 11. Fixing the temporary stop switch

The temporary stop switch has been in the state as shown in figure A at the time of delivery. Loosen setscrew ① and set the switch in the state as shown in figure B, and fix it with setscrew ① together with setscrew ② supplied with the machine.

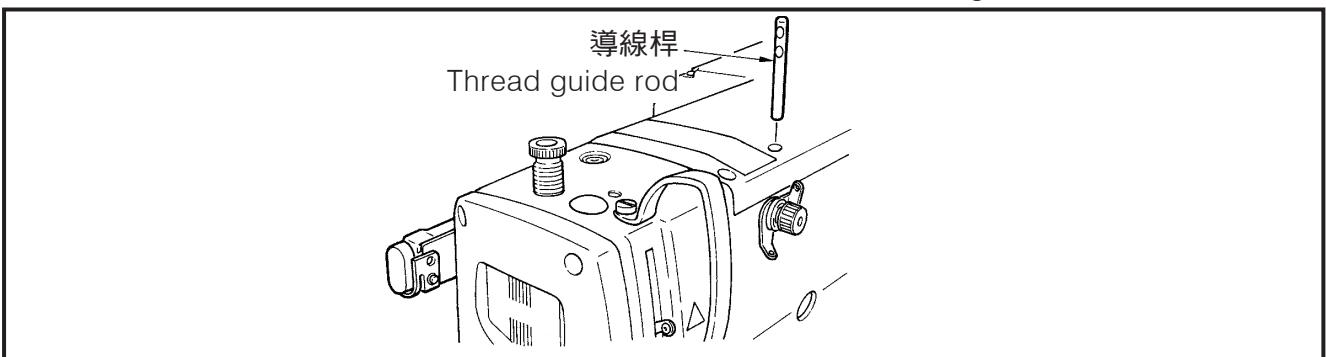


## 12. 導線桿

請把線導向桿朝向正面插到 2 個的橫孔。

## 12. Thread guide rod

Securely fit the thread guide rod so that two side holes in the thread guide rod face the thread guide.

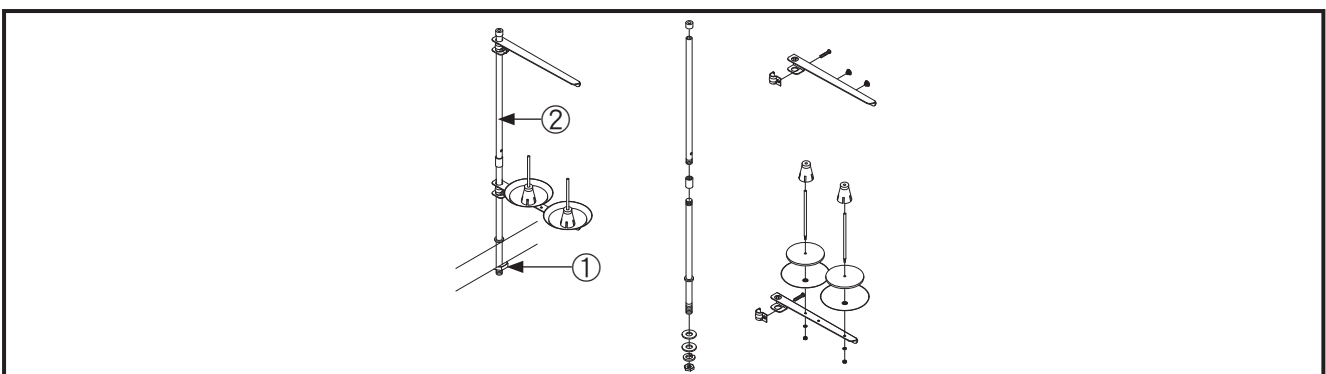


## 13. 線架裝置的安裝

- (1) 安裝線架裝置，把它安裝到機台右上的孔裡。
- (2) 鎖緊固定螺母①，不讓線架裝置鬆動。
- (3) 如果頂部可以配線時，請把電源線從線架桿② 中穿過去。

## 13. Installing the thread stand

- (1) Assemble the thread stand, and set it in the hole in the top right corner of the machine table.
- (2) Tighten locknut ① to fix the thread stand.
- (3) When ceiling wiring is possible, pass the power cable through spool rest rod ②.



## IV . 縫紉機運轉前

### 1. 加油

#### (1) 向加油罐裡加油

- 把 New Defrix Oil No.1 機油加到 MAX 記號的位置①。

#### (2) 旋梭油量的調整

- 放鬆油量調節固定螺母 ②，然後用油量調整螺絲③進行調節。
- 調節旋梭的油量時，鎖緊油量調節螺絲③則油量減少。
- 油量調節後，請用固定螺母②進行固定。
- 新裝縫紉機或較長時間沒有用過的縫紉機，使用之前請取下梭殼，在旋梭邊槽加 2 ~ 3 滴機油。另外，向下軸前金屬部件④的加油孔⑤加幾滴油，把油浸潤到裡面的毛氈裡。

## IV .PREPARATION BEFORE OPERATION

### 1.Lubrication

#### (1) Lubricating oil to oiling tank

- Fill the oiling tank with New Defrix Oil No.1 up to the level indicated by "MAX" ① .

#### (2) Adjusting the lubrication for the sewing hook

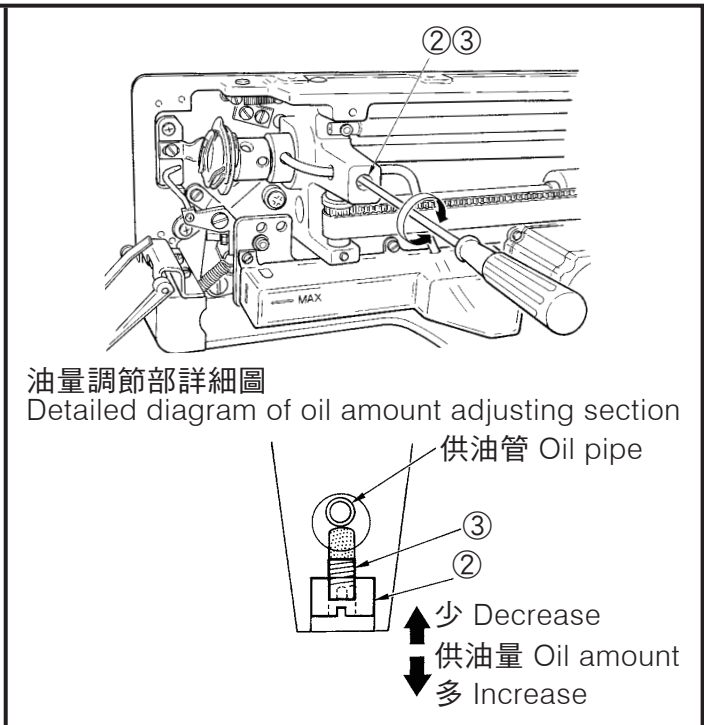
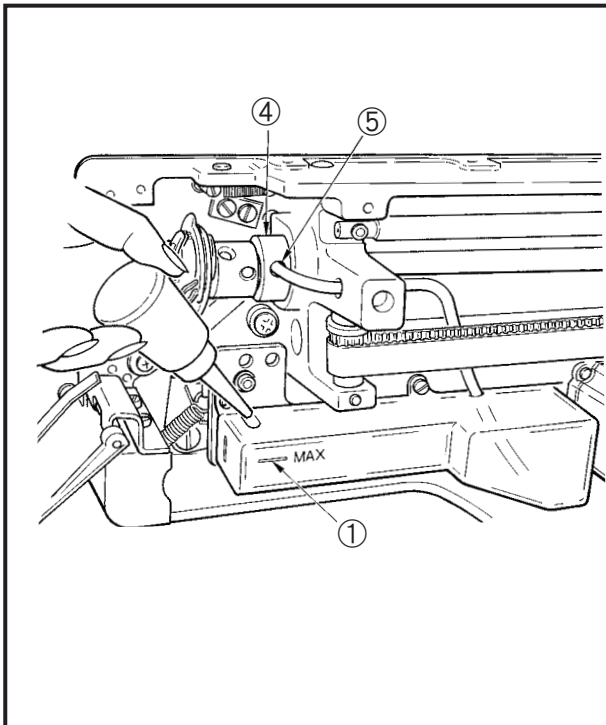
- Adjust the amount of oil supplied to the sewing hook by loosening lock nut ② and turning oil amount adjusting screw ③ .
- Amount of supplied oil is reduced when turning the screws ③ clockwise.
- Fix the screw with lock nut ② after adjusting the lubrication for the sewing hook.
- When you first operate your sewing machine after set-up or after an extended period of disuse, remove the bobbin case and apply a few drops of oil to the hook race. In addition, apply a few drops oil from oiling hole ⑤ in hook driving shaft front metal ④ to soak the inside felt in oil.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



## 2. 機針的安裝方法

從縫紉機正面看，把機針凹部橫向轉到前側 A。然後把機針插進針桿孔的深處，鎖緊機針固定螺絲①。機針使用 DP×5-(#11、#14)。

## 2. Inserting the needle

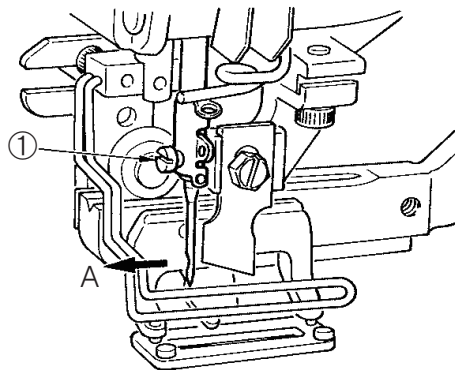
Hold needle with its recessed part facing toward the operator side A, insert the needle fully into the needle clamping hole, and tighten needle setscrew ①. Use a DP×5-(#11、#14).



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



注意：安裝機針時，請一定關掉電源。

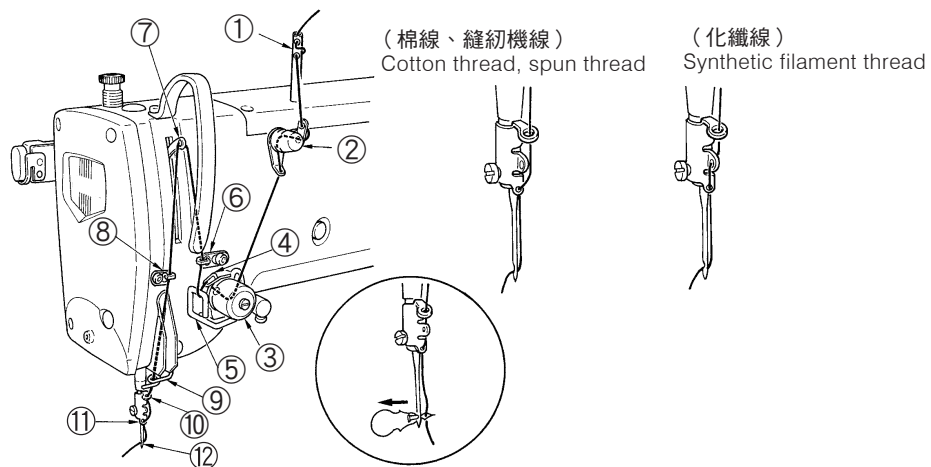
Caution: When attaching the needle, turn OFF the power to the motor.

## 3. 上線的穿線方法

- (1) 上線如圖所示①～⑫的順序進行穿線。
- (2) 把線穿針時，使用附屬的穿線器非常方便。
- (3) 使用機線不同，導線器的穿線方法也不同。

## 3. Threading the needle-thread

- (1) Pass the needle thread in the order ① to ⑫ as shown in the figures.
- (2) The threading can be done easily by using the needle threader supplied with the machine.
- (3) Change the thread guide threading method according to the thread to be used.



## 4. 梭殼的穿線方法

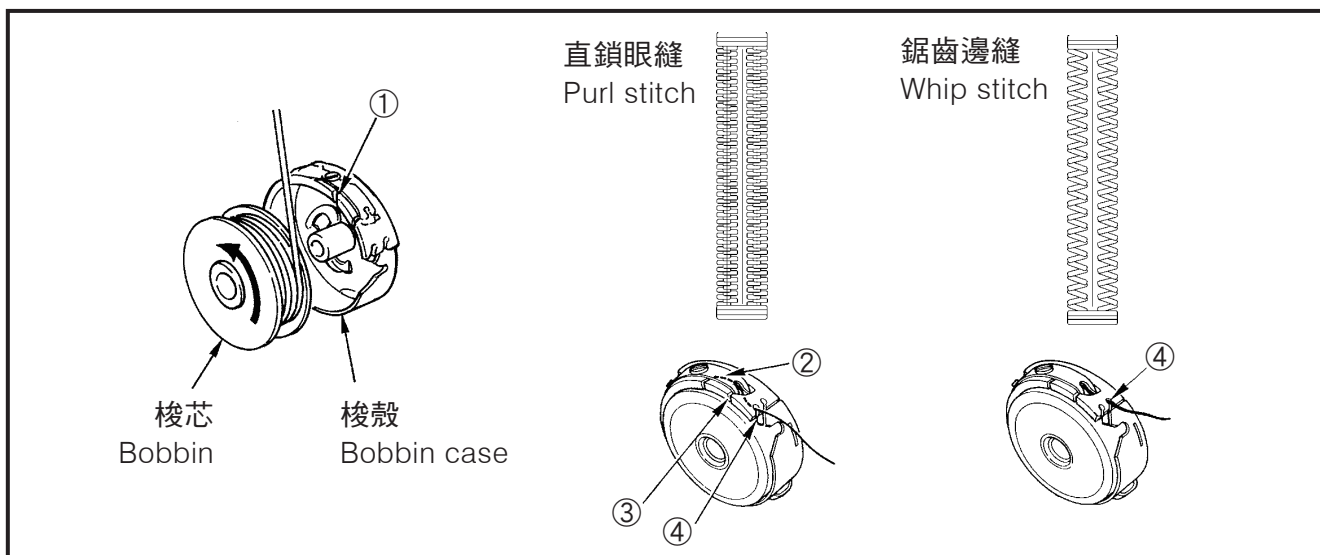
### 梭芯轉動方向和穿線方法

- (1) 請按照箭頭所指示的方向把梭芯插進去。
- (2) 請把機線穿過穿線口①，然後再從張力彈簧②的下面鑽過去，再次穿過穿線口③，從④把線拉出來。
- (3) 請注意進行直鎖眼縫和鋸齒邊縫時，④的穿線方法不同。

## 4. Threading the bobbin case

### Rotating direction of bobbin and threading

- (1) Fit the bobbin so that it rotates in the direction of the arrow.
- (2) Pass the thread through thread slit ①, then through under the tension spring ②, again through thread slit ③, and pull the thread from ④.
- (3) Threading at ④ for purl stitching is different from that for whip stitching. So, be careful.



## 5. 底線張力的調整

在梭殼穿線口①在上方的位置，把底線向上拉出之後，請按照下列的方法調整底線張力。

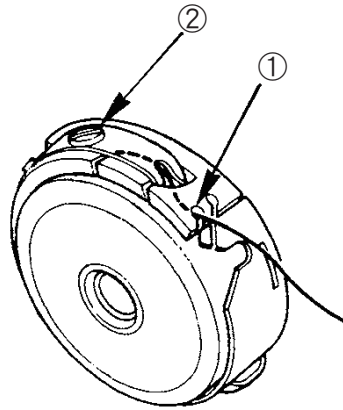
- 把線張力螺絲②向右轉動，底線張力變強，向左轉動，底線張力變弱。
- 使用化纖縫紉機線時，請把張力稍稍減弱，棉紗線時請稍稍加強。因為本機裝有防止空轉彈簧，所以裝上旋梭之後的線張力請再調強 0.05N 左右。

## 5. Adjusting the bobbin thread tension

Adjust the bobbin thread tension as given below when the bobbin thread is pulled up at the position where thread slit ① of bobbin case comes up.

- Turning tension adjust screw ② clockwise will increase bobbin thread tension, and turning it counterclockwise will decrease the tension.
- Adjust the bobbin thread tension to lower for synthetic filament thread, and to higher for spun thread. The thread tension is higher by approximately 0.05N when the bobbin case is set to the hook since idle-prevention spring is provided.

直鎖眼縫 Purl stitch	0.05 ~ 0.15N	手拿從梭殼出來的線頭，輕輕地上下擺動時，梭殼就稍稍下降 To such an extent that bobbin case quietly comes down when holding thread end coming from bobbin case and shaking it quietly up and down.
鋸齒邊縫 Whip stitch	0.15 ~ 0.3N	手拿從梭殼出來的線頭，用稍稍強的力量擺動時，梭殼才下降 To such an extent that bobbin case barely comes down when holding thread end coming from bobbin case and shaking it somewhat strongly.



注意：調整了底線張力之後，請確認記憶體開關的上線張力設定。（參照 P63）  
 Caution: When bobbin thread tension is adjusted, check the needle thread tension setting of the memory switch. (See P.63)

## 6. 梭殼的安裝方法

- (1) 撥起梭殼抓手。
- (2) 插入中旋梭軸①，關閉抓手。梭殼被按到一定位置會聽到喀喳的響聲。

## 6. Installation of bobbin case

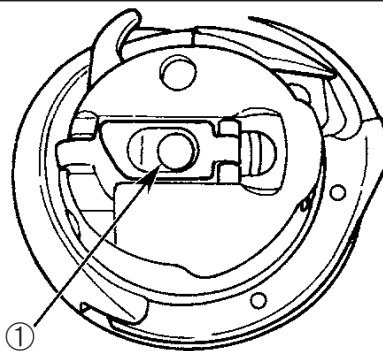
- (1) Lift up and hold bobbin case latch lever between two fingers.
- (2) Push the bobbin case into the hook so that it is supported by the hook shaft ① and then snap in the latch lever. Press the bobbin case until the predetermined position is reached, and it will click.



**注意**  
 CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



注意：1. 如果梭殼沒有在規定的位置，縫紉後梭心會飛出來，上線繞到旋梭軸上。

2. 因為標準旋梭和幹式旋梭的形狀不一樣，所以不能通用。

Caution: 1. If the bobbin case is out of the predetermined position, it can jump out from the hook to cause the needle thread to tangle on the hook shaft. Check to be sure that the bobbin case is properly installed in the correct position.

2. There is a difference in the shape of bobbin case between the standard hook and the dry one. They have nothing in common with each other.

## 7. 切刀的安裝方法

請按如下的步驟更換新的切刀。

- (1) 卸下切刀固定螺絲 ② 之後，就可以把切刀 ① 和墊片一起簡單地卸下來。
- (2) 用手按下切刀之後，如圖所示把切刀和針板上面的距離調整到 1 ~ 2mm，然後一定套上墊片，並鎖緊固定。

## 7. Installing the knife

When replacing the knife with a new one, perform as follows.

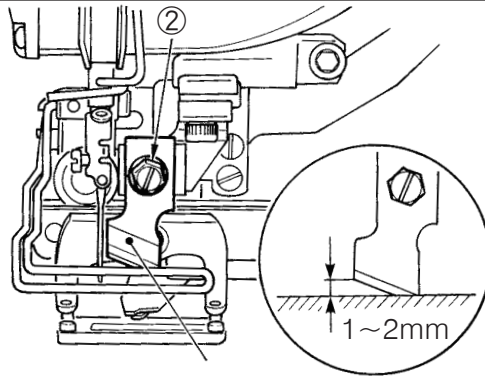
- (1) Knife ① can be easily removed together with the washer when removing knife retaining screw ②.
- (2) Adjust so that the knife, when lowered the knife bar by hand, is spaced 1 to 2 mm away from the top surface of the throat plate as illustrated in the sketch. Then, be sure to place the washer and tighten the knife retaining screw.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



如果您手中的切布刀是用英寸表示時，可以查看英寸→ mm 換算表用 mm 來設定切布刀的長度（切刀尺寸）。（參照 P38）

When the cloth cutting knife you have is indicated in inch, set the cloth cutting length (knife size) in mm using the inch → mm conversion table. (See P38)

### ●英寸→ mm 換算表

### ●Inch → mm CONVERSION TABLE

切刀尺寸 Knife size	mm 表示 Indication of mm
1/4	6.4
3/8	9.5
7/16	11.1
1/2	12.7
9/16	14.3
5/8	15.9
11/16	17.5
3/4	19.1
7/8	22.2
1	25.4
1-1/4	31.8

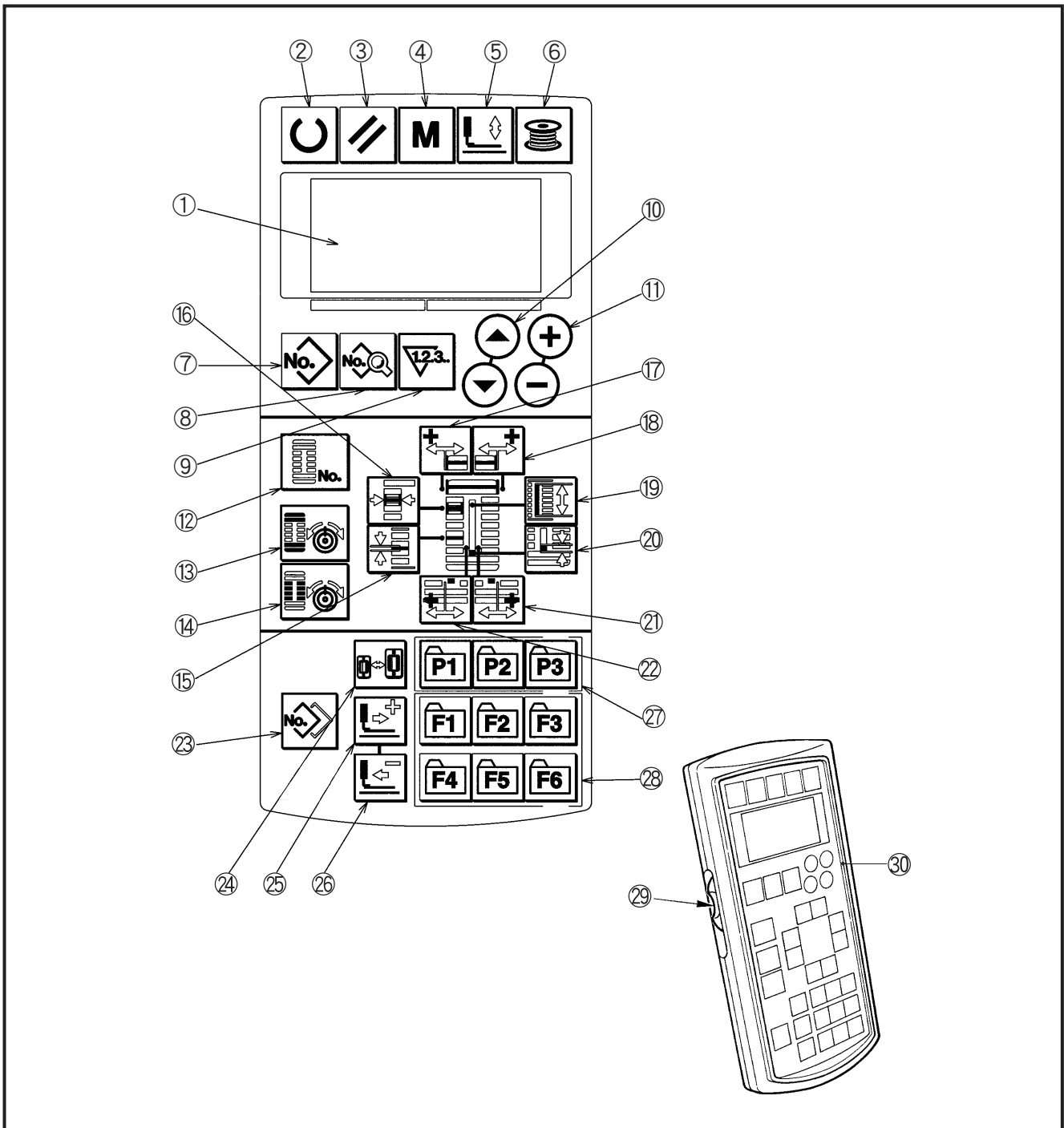


## V . 縫紉機的操作

## V . OPERATION OF THE SEWING MACHINE

### 1. 操作盤的開關說明

### 1. Explanation of the operation panel switch



不同的背光的顏色，表示如下 3 種狀態。

- 藍色：輸入模式……可以變更資料。
- 綠色：縫製模式……這是可以縫製的狀態。
- 黃色：異常狀態……表示發生了某種異常。

There are 3 states below according to back-light colors.

- Blue : Input mode...Data change is possible.
- Green : Sewing mode...Sewing possible state
- Yellow : Error state...Some error occurs.

No.	名稱 NAME	功能 FUNCTION	No.	名稱 NAME	功能 FUNCTION
①	液晶顯示部 LCD display	表示圖案 No.、形狀等各種資料。 Various data such as pattern No., shape, etc. are displayed.	⑯	包邊寬度鍵 OVEREDGING WIDTH key	選擇顯示包邊寬度。 This key selects overedging width display.
②	準備鍵 READY key	開始縫製時按。 按鍵後，順次變換縫製準備完了 狀態和資料設定狀態。 Press this key when starting sewing. Every time this key is pressed, change-over of sewing ready set state and data set state can be performed.	⑰	左加固寬度鍵 BAR-TACKING WIDTH, LEFT key	選擇顯示左加固寬度補償。 This key selects left side of bar-tacking width compensation display.
③	復位鍵 RESET key	解除錯誤、移動到初期位置、計數復位 等時按。 Press this key when releasing error, travelling the feed mechanism to its initial position, counter resetting, etc.	⑱	右加固寬度鍵 BAR-TACKING WIDTH, RIGHT key	選擇顯示右加固寬度補償。 This key selects right side of bar-tacking width compensation display.
④	模式鍵 MODE key	變更記憶體開關的資料時按。 Press this key when changing data of the memory switches.	⑲	切布長度鍵 CLOTH CUT LENGTH key	選擇顯示切布長度。 This key selects cloth cut length display.
⑤	壓腳鍵 PRESSER key	提升、下降壓腳。 上升時，把針杆移動到原點；下 降時，把針杆移動到右側。 This key lifts or lowers the presser. When the presser goes up, the needle bar travels to the origin and when it comes down, the needle bar travels to the right.	⑳	間隙鍵 CLEARANCE key	選擇顯示間隙。 This key selects clearance display.
⑥	繞線鍵 WINDER key	在繞線時按。 This key is pressed when performing bobbin winding.	㉑	右切刀槽寬度鍵 KNIFE GROOVE WIDTH, RIGHT key	選擇顯示右切刀槽寬度補償。 This key selects knife groove width, right compensation display.
⑦	圖案 No. 鍵 PATTERN NO. key	選擇顯示圖案 No.。 This key selects pattern No. display.	㉒	左切刀槽寬度鍵 KNIFE GROOVE WIDTH, LEFT key	選擇顯示左切刀槽寬度補償。 This key selects knife groove width, left compensation display.
⑧	數據鍵 DATA key	選擇顯示資料。 This key selects data display.	㉓	複製鍵 COPY key	複製圖案時按。 Press this key when copying pattern.
⑨	計數鍵 COUNTER key	選擇顯示計數。 Thus key selects counter display.	㉔	壓腳選擇鍵 PRESSER SELECTION key	選擇壓腳類型時按。 This key selects presser type.
⑩	項目選擇鍵 ITEM SELECTION key	選擇圖案 No.、數據 No. 等。 This key selects pattern No., data No., etc.	㉕	前進鍵 FORWARD key	1 針 1 針前送針。 This key makes the feed mechanism travel forward stitch by stitch.
⑪	數據變更鍵 DATA CHANGE key	變更各種資料。 This key changes various data.	㉖	後退鍵 BACKWARD key	1 針 1 針倒送針。 This key makes the feed mechanism travel backward stitch by stitch.
⑫	形狀鍵 SHAPE key	選擇顯示形狀。 This key selects shape display.	㉗	圖案登記鍵 PATTERN REGISTRATION key	這是可以登記圖案的快速鍵。 可以登記變換到任意的圖案設定的快捷圖示。 設定方法請參照 P48。 This is a short cut key that pattern registration is available. Registration of shortcut to setting display of an optional pattern is possible. For the setting procedure, see P.48.
⑬	平行部線張力鍵 THREAD TENSION AT PARALLEL SECTION key	選擇顯示平行部線張力。 This key selects thread tension at parallel section display.	㉘	參數登記鍵 PARAMETER REGISTRATION key	這是可以登記參數的快速鍵。 可以登記變換到顯示任意的圖案、縫製參數 及調整資料的設定。 設定方法請參照 P50。 This is a short cut key that parameter registration is available. Registration of shortcut to setting display of an optional pattern, sewing parameter or adjustment data is possible. For the setting procedure, see P.50.
⑭	加固部線張力鍵 THREAD TENSION AT BAR-TACKING SECTION key	選擇顯示加固部線張力。 This key selects thread tension at bar-tacking section display.	㉙	速度旋鈕 Speed variable resistor	往上調速度變快，往下調速度變慢。 Speed increases when this is lifted upward and decreases when this is lowered downward.
⑮	間隔鍵 PITCH key	選擇顯示平行部間隔。 This key selects pitch of parallel section.	⑳	液晶調整旋鈕 LCD adjustment variable resistor	可以調整液晶顯示明暗。 Light and shade of LCD display can be adjusted.



## 2. 縫紉機的基本操作


### 1) 打開電源開關

首先，請確認被設定的壓腳類型 A 和實際安裝的壓腳類型是否一樣。確認和設定方法請參閱 4. 輸入壓腳類型。

### 2) 選擇想縫製的圖案 No.

打開電源後，現在被選擇的圖案 No. B 閃亮。想變更時，按選擇項目鍵 ⑩ ▲ ▼ 選擇想縫製的 No.。購買時，在 11. 變更縫製數據時裡記載的圖案 No. 1 ~ 10 均已被登記，因此可以從中選擇。（圖案沒有被登記的號碼不顯示。）

### 3) 進入可以縫製狀態

按準備鍵 ②  之後，液晶顯示 ① 的背景燈由藍色變為綠色，成為可以縫製的狀態。

### 4) 開始縫製

把縫製物放到壓腳部，踩踏板，縫紉機開始縫製。購買時，設定為雙踏板規格，踏板操作方法可以從 3 種中進行選擇。請選擇喜歡的操作方法使用。→ 3. 踏板的操作方法

## 2. Basic operation of the sewing machine


### 1) Turn ON the power switch.

First, check that presser type A which has been set is the same as that of the presser actually mounted. For checking and setting procedures, refer to 4. Inputting the presser type.

### 2) Select the pattern No. you desire to sew.

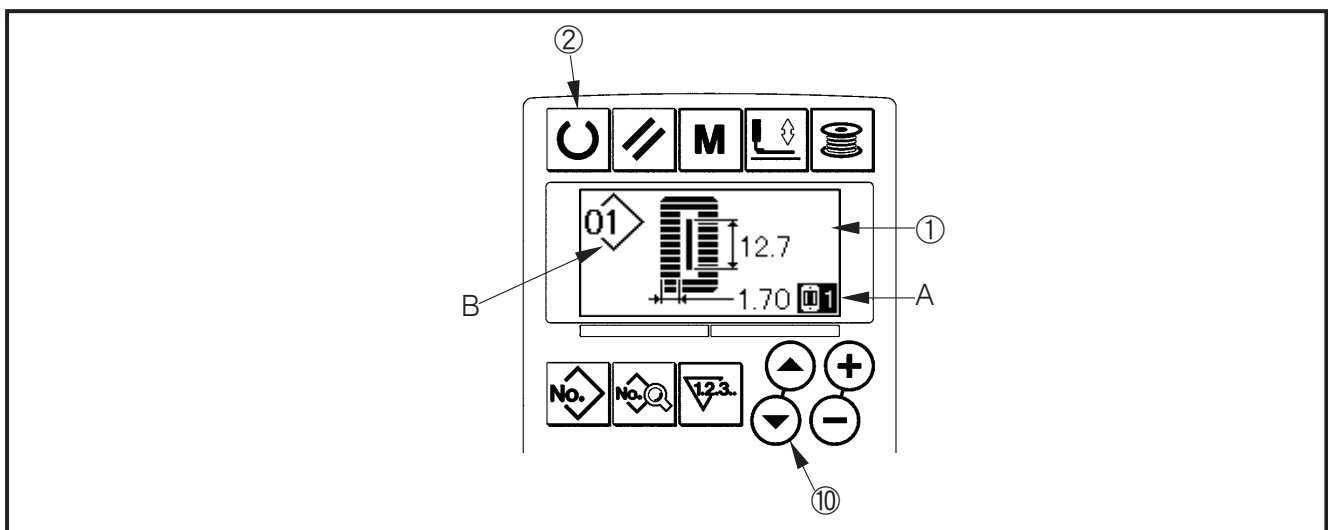
When the power is turned ON, the pattern No. B which is selected at present flashes on and off. When you desire to change it, press ITEM SELECTION key ⑩ ▲ ▼ and select the No. you desire to sew. When you purchase the sewing machine, pattern No. 1 to 10 described in 11. Changing sewing data have been registered. Select the pattern No. you desire to sew from among these numbers. (The No. with which the pattern has not been registered is not displayed.)

### 3) Set the sewing machine to sewing possible state.

Press READY key ②  and the back-light of LCD display ① changes from blue color to green color, and sewing is possible.

### 4) Start sewing.

Set the sewing product to the presser portion, and operate the pedal to start the sewing machine, and sewing starts. When you purchase the sewing machine, 2-pedal type has been set. However, pedal operating procedure can be selected from among three ones. Select the operating procedure you desire and use the sewing machine. → 3. How to use the pedal



### 3. 踏板的操作方法

本縫紉機，可以從下列 3 類型中選擇踏板的操作方法使用。請選擇作業效率高的和喜歡的操作方法使用。

#### (1) 踏板類型的設定方法

##### 1) 叫出踏板類型的設定參數

在輸入模式的狀態下，3 秒鐘以上持續按模式鍵④ **M** 之後，記憶體開關（2 級）編輯畫面 A 被顯示出來。如果踏板類型選擇參數 **K01** 沒有被顯示時，請按專案選擇鍵 ⑩  $\uparrow$   $\downarrow$ 。

##### 2) 選擇踏板類型

如果按資料變更鍵 ⑪  $\oplus$   $\ominus$ ，下圖那樣圖案因為被變更，所以請選擇喜歡的踏板類型 B。

### 3. How to use the pedal

This sewing machine can be used by selecting the pedal operating procedure from among 3 types below. Select the operating procedure you desire for working efficiency and use the sewing machine.

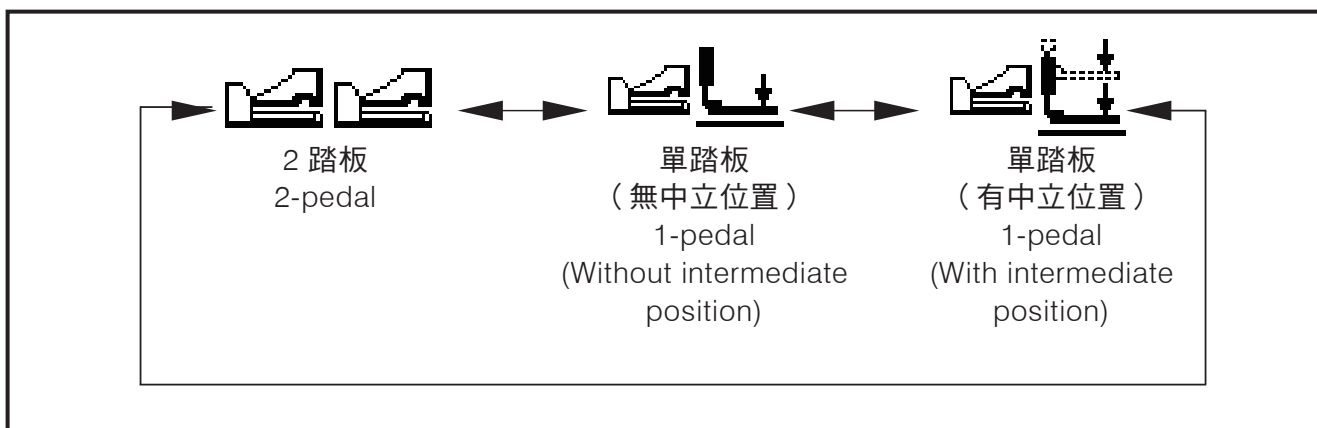
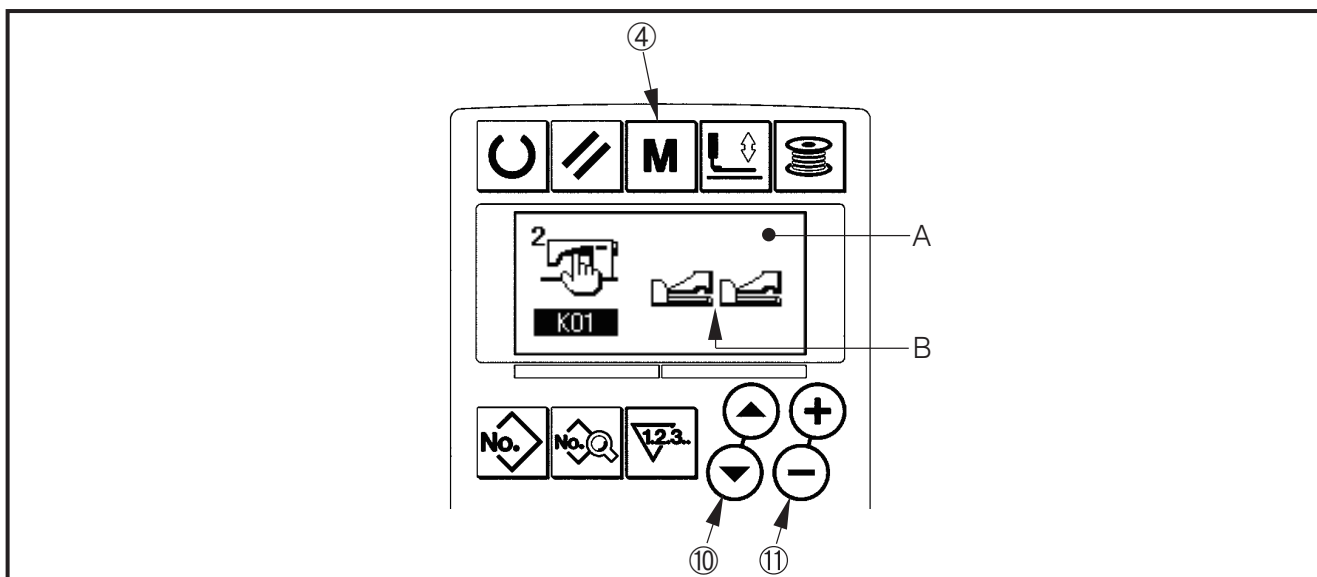
#### (1) Setting procedure of the pedal type

##### 1) Call the pedal type setting parameter.

Press MODE key ④ **M** for as long as three seconds in the state of the input mode and memory switch (level 2) edit screen A is displayed. When the pedal type selection parameter **K01** is not displayed, press ITEM SELECTION key ⑩  $\uparrow$   $\downarrow$  to select the pedal type.

##### 2) Select the pedal type

Press DATA CHANGE key ⑪  $\oplus$   $\ominus$  and the picture is changed as shown in the illustration below. Select the pedal type B you desire.



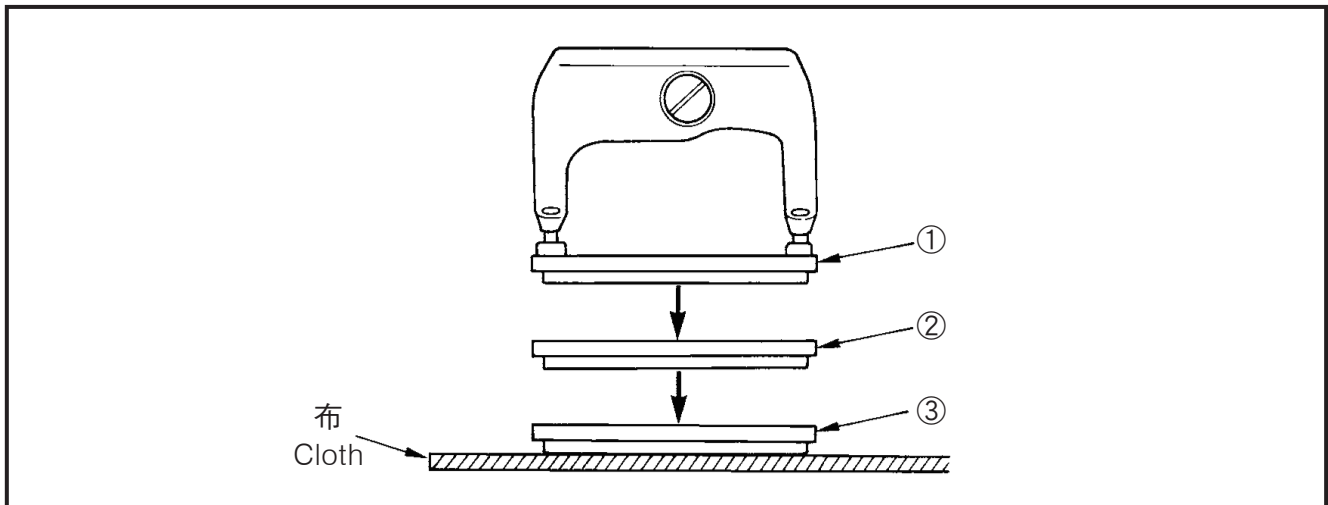
## (2) 踏板的動作說明

## (2) Explanation of pedal motion

2 踏板類型 2-pedal type	單踏板（無中立位置） 1-pedal (Without intermediate position)	單踏板（有中立位置） 1-pedal (With intermediate position)
<p>•初期位置 壓腳中立位置②或縫製位置③</p> <p>(1) 安放縫製物 壓腳僅能上升左側踏板的踩踏量</p> <p>(2) 縫製開始 踩右側踏板開始縫製開始</p> <p>(3) 縫製終了 壓腳自動地上升到中立位置②</p> <p>•Initial position Presser : Intermediate position ② or Sewing position ③</p> <p>(1)Setting of sewing product Presser goes up as high as the pedal toe down amount of the left side pedal.</p> <p>(2) Start of Sewing Sewing starts when the right side pedal is depressed.</p> <p>(3)End of sewing Presser automatically goes up to Intermediate position ② .</p>	<p>•初期位置 壓腳最高位置①</p> <p>(1) 安放縫製物</p> <p>(2) 確認安放的縫製物 踩右側踏板到 1 級之後，壓腳下降到放布位置③</p> <p>(3) 縫製開始 踩右側踏板到 2 級之後，縫製開始</p> <p>(4) 縫製終了 壓腳自動地上升到最高位置①</p> <p>•Initial position Presser : Maximum position ①</p> <p>(1)Setting of sewing product</p> <p>(2)Confirmation of setting of sewing product Presser comes down to Cloth setting position ③ when the first step of the right side pedal is depressed.</p> <p>(3)Start of sewing Sewing starts when the second step of the right side pedal is depressed.</p> <p>(4)End of sewing Presser automatically goes up to Maximum position ①</p>	<p>•初期位置 壓腳最高位置①</p> <p>(1) 安放縫製物</p> <p>(2) 確認安放的縫製物 踩右側踏板到 1 級之後，壓腳下降到中立高度②</p> <p>(3) 確認縫製開始 踩右側踏板到 2 級之後，壓腳下降到放布位置③</p> <p>(4) 縫製開始 踩右側踏板到 3 級之後，縫製開始</p> <p>(5) 縫製終了 壓腳自動地上升到最高位置①</p> <p>•Initial position Presser : Maximum position ①</p> <p>(1)Setting of sewing product</p> <p>(2)Confirmation of setting of sewing product Presser comes down to Intermedite position ② when the first step of the right side pedal is depressed.</p> <p>(3)Confirmation of start of sewing Presser comes down to Cloth setting position ③ when the second step of the right side pedal is depressed.</p> <p>(4)Start of sewing Sewing starts when the third step of the right side pedal is depressed.</p> <p>(5)End of sewing Presser automatically goes up to Maximum position ① .</p>

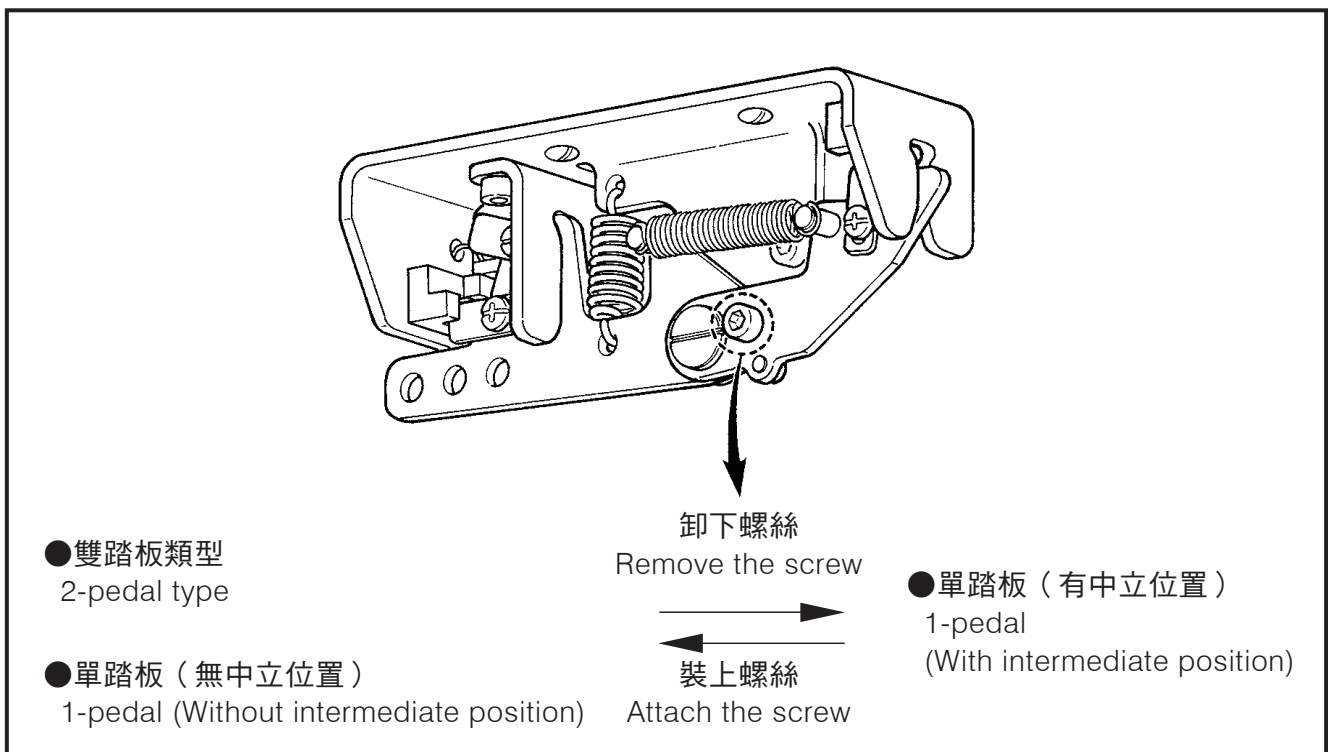
•左面①～③的各位置高度，可以用存儲開關設定變更。→ 20. 記憶體開關資料的變更方法

•Height of the respective positions of ① to ③ described on the left side can be set or changed by the memory switches. → 20. Method of changing memory switch data



•踏板開關的設定  
請根據記憶體開關的設定情況，安裝圖示中的螺絲或拆卸螺絲。

•Attach or remove the screw shown in the figure according to the setting of the memory switch.





## 4. 輸入壓腳類型

(1) 叫出壓腳類型的設定參數

1) 叫出壓腳類型的設定參數

按壓腳選擇鍵 ②④ ，顯示出記憶體開關（等級 1）編輯畫面 A。


2) 選擇壓腳類型

按數據變更鍵 ⑪   之後，如下圖所示圖示變更，參考下面的壓腳類型一覽表設定安裝在縫紉機上的壓腳類型 B。



## 4. Input of the presser type

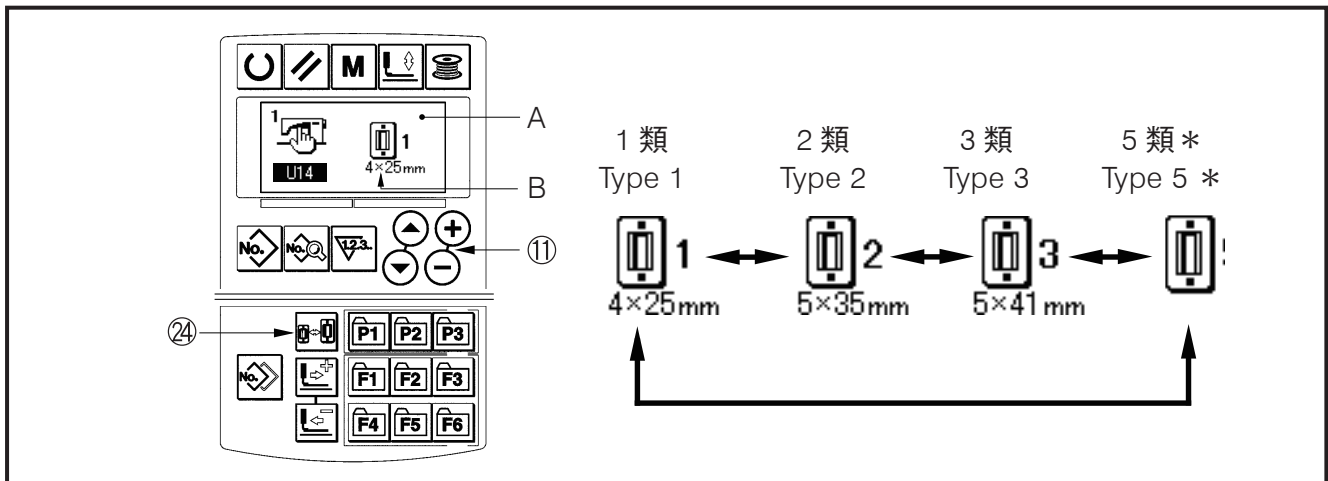
(1) Setting procedure of the presser type

1) Call the presser type setting parameter. Press PRESSER SELECTION key ②④

 and memory switch (level 1) edit screen A is displayed.



2) Select the presser type.

Press DATA CHANGE key ⑪   , and the picture is changed as shown in the illustration below. Set the presser type B actually mounted on the sewing machine referring to Table of presser type below.



## (2) 壓腳類型一覽表



壓腳頭的刻印貨號應和壓腳類型一致。

\* 使用 1 ~ 3 類以外的壓腳頭時，請設定為 5 類。請根據使用的記憶體開關（1 級）的  壓腳尺寸和  壓腳尺寸長度的壓腳進行變更。→請參照 20. 記憶體開關資料的變更方法的內容。





\* 5 類擺動寬度 6mm 以上，長度 41mm 以上時，需要更換壓腳曲柄、送布板等零部件。

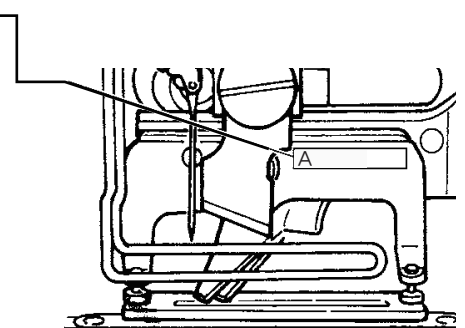
## (2) Table of presser type

Set the number in the frame of engraved part number of presser to the type of presser.

\* Set type 5 when using the presser other than type 1 to 3. Change  Presser size width and  Presser size length of the memory switch (level 1) to adjust to the presser to be used. → Refer to 20. Method of changing memory switch data.

\* When using type 5 with stitch width of 6 mm or more and 41mm or more in length, it is necessary to replace components such as presser arm, feed plate, etc.


	類型 Type	壓腳貨號 Part No. of presser foot
 4X25mm	1 類 Type 1	A
 5X35mm	2 類 Type 2	A
 5X41mm	3 類 Type 3	B
 5X41mm	5 類 * Type 5 *	-



## 5. 選擇圖案

### (1) 從選擇畫面進行選擇

#### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色輸入模式時，可以變更圖案。背景照明為綠色的縫製模式時，請按準備鍵②  變換為輸入模式。

#### 2) 叫出圖案樣選擇畫面

按圖案 No. 鍵⑦ ，顯示出圖案選擇畫面 A。現在被選擇的圖案 No.B 閃亮。

#### 3) 叫出圖案樣選擇畫面

按項目選擇鍵⑩  ，被登記的圖案順次地被顯示。這時請選擇想縫製的 No.。


### (2) 用登記鍵選擇

在本縫紉機的登記開關裡可以登記喜好的圖案 No.。圖案登記之後，只要按此開關就可以選擇圖案。→請參照 15. 使用圖案登記鍵的內容。


## 5. Performing pattern selection

### (1) Selection from the pattern selection screen



#### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to change the pattern. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.

#### 2) Call the pattern selection screen.

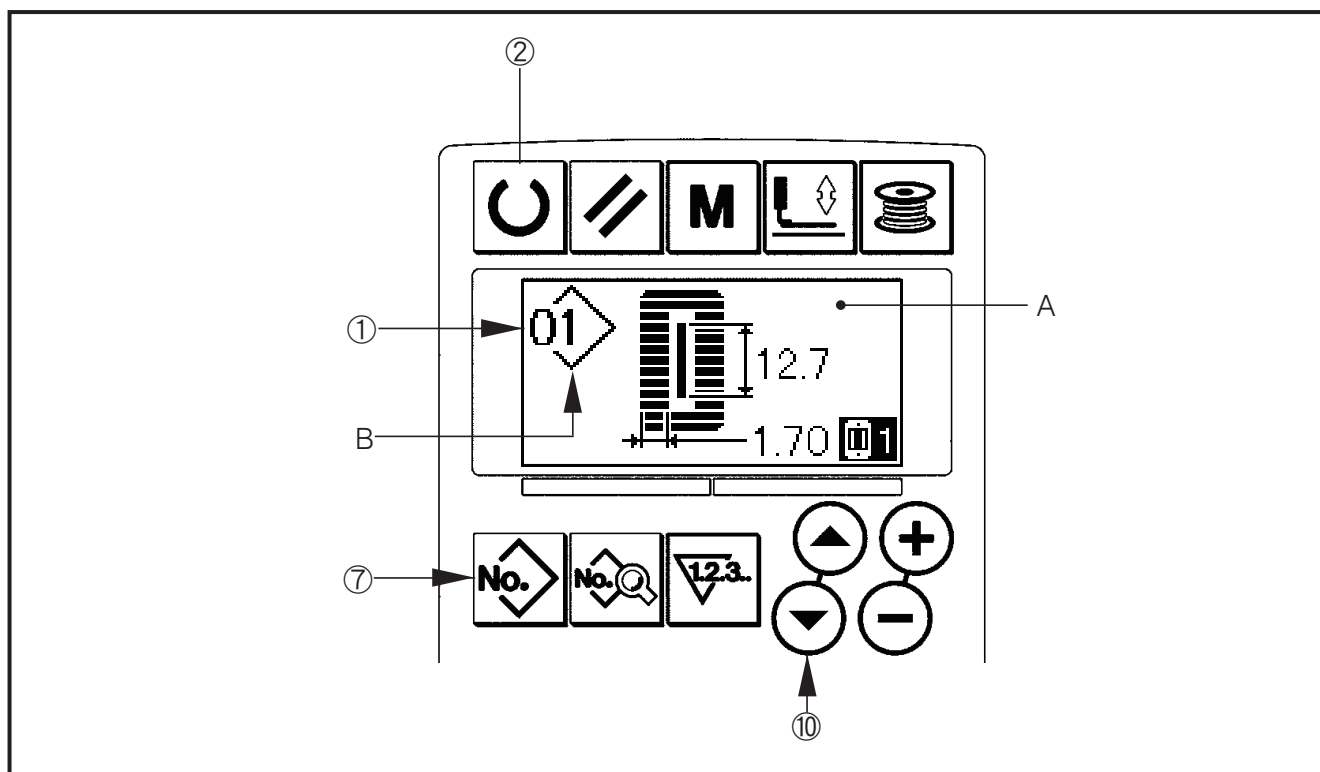
Press PATTERN No. key ⑦ ，and pattern selection screen A is displayed. Pattern No. B which is selected at present flashes on and off.

#### 3) Select the pattern.

Press ITEM SELECTION key ⑩  ，and the patterns which have been registered are changed over in order and displayed. Here, select the No. you desire to sew.

### (2) Selection by means of the register key

This sewing machine can register the pattern No. you desire with the register switch. When the pattern is registered once, pattern selection can be performed by pressing only the switch. → Refer to 15. Using pattern register key.






## 6. 變更上線張力

有關上線張力的資料，可以用縫製模式進行設定，也可以邊試縫邊變更。

### (1) 叫出平行部張力設定資料

按平行部張力鍵⑬ ，顯示出縫製資料編輯畫面 A。



### (2) 變更平行部張力

按數據變更鍵⑪  ，增減設立值 B 可以進行變更。縫製和設定值的關係如下圖所示，請參考設定。

### (3) 叫出加固部張力設定資料

按加固部張力鍵⑭ ，顯示出縫製資料編輯畫面 C。

### (4) 變更加固部張力

按數據變更鍵⑪  ，增減設立值 D 可以進行變更。縫製效果和設定值的關係如下表所示，因此請參考下表進行設定。

※ 平行部和加固部以外的張力，請參照 11. 變更縫製數據和 20. 記憶體開關資料的變更方法的有關內容。

## 6. Changing needle thread tension

Needle thread tension can be changed while performing trial sewing since the data related to the needle thread tension can be set by the sewing mode as well.


### (1) Call thread tension at parallel section setting data.

Press THREAD TENSION AT PARALLEL SECTION key ⑬ ，and sewing data edit screen A is displayed.



### (2) Change thread tension at parallel section. Press DATA CHANGE key ⑪ .

and set value B goes up or comes down and the thread tension can be changed. The relation between the finish of sewing and the set value is as shown in the illustration below. Set the value referring to the illustration.

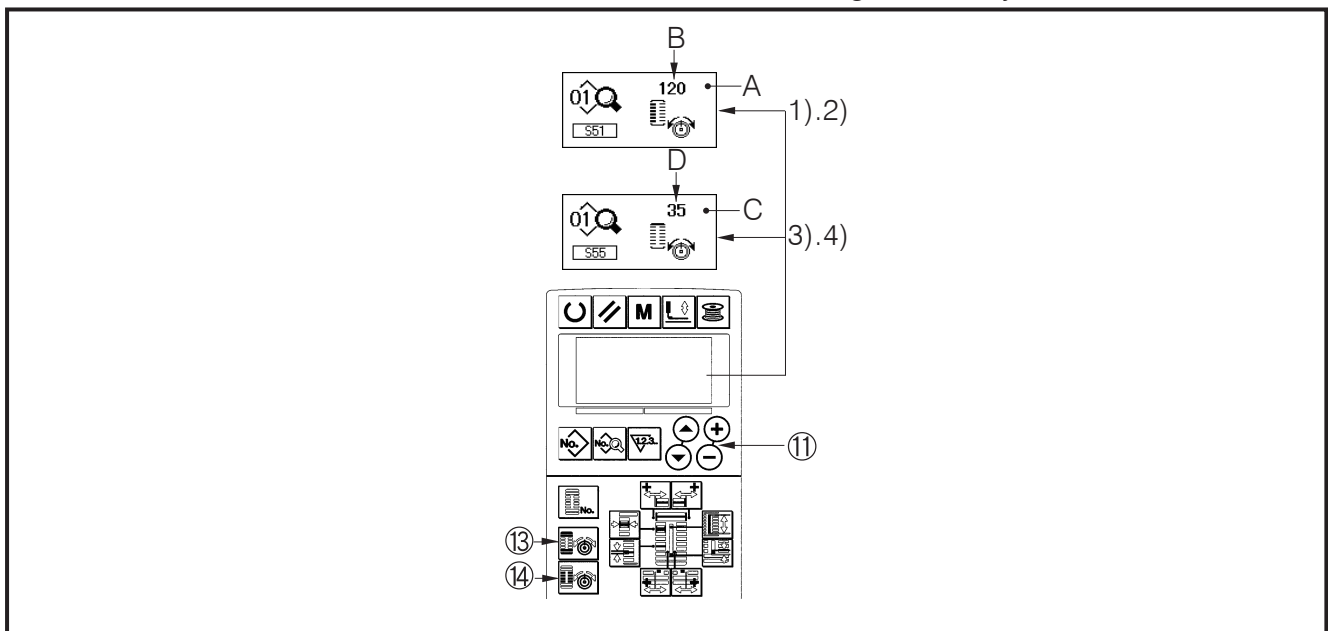
### (3) Call thread tension at bar-tacking section setting data.

Press THREAD TENSION OF BAR-TACKING SECTION key ⑭ ，and sewing data edit screen C is displayed.

### (4) Changing the needle thread tension at bar-tacking section

Press DATA CHANGE key ⑪  ，and set value D goes up or comes down and the thread tension can be changed. The relation between the finish of sewing and the set value is as shown in table below. Set the value referring to the table.

※ For the tension other than that at parallel section and bar-tacking section, refer to 11. Changing sewing data and 20. Method of changing memory switch data.




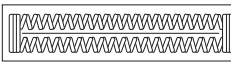
- ① 平行布張力，② 加固縫張力的設定值  
放射圓頭形狀時，請把加固張力先設定為  
120 左右，成為平衡縫跡的張力。

- Set value of tension at ① parallel section  
and ② bar-tacking section  
For the eyelet radial shape, set the bar-  
tacking tension first to approximately 120  
and make the balance of stitches.

		操作盤設定值 Set value on panel		
		⊖	初期值 Initial value	⊕
直鎖眼縫 Purl stitch	① 平行布張力 ① Tension at parallel section	降低聚起 Crest is lowered	120	提高聚起 Crest is raised
	② 加固張力 ② Bar-tacking tension	降低張力 Thread tension is decreased	35	提高張力 Thread tension is increased
鋸齒邊縫 Whip stitch	③ 平行布張力 ③ Tension at parallel section	降低張力 Thread tension is decreased	60	提高張力 Thread tension is increased
	④ 加固張力 ④ Bar-tacking tension	降低張力 Thread tension is decreased	60	提高張力 Thread tension is increased

• 鋸齒邊縫、直鎖眼縫

• Purl stitch and Whip stitch

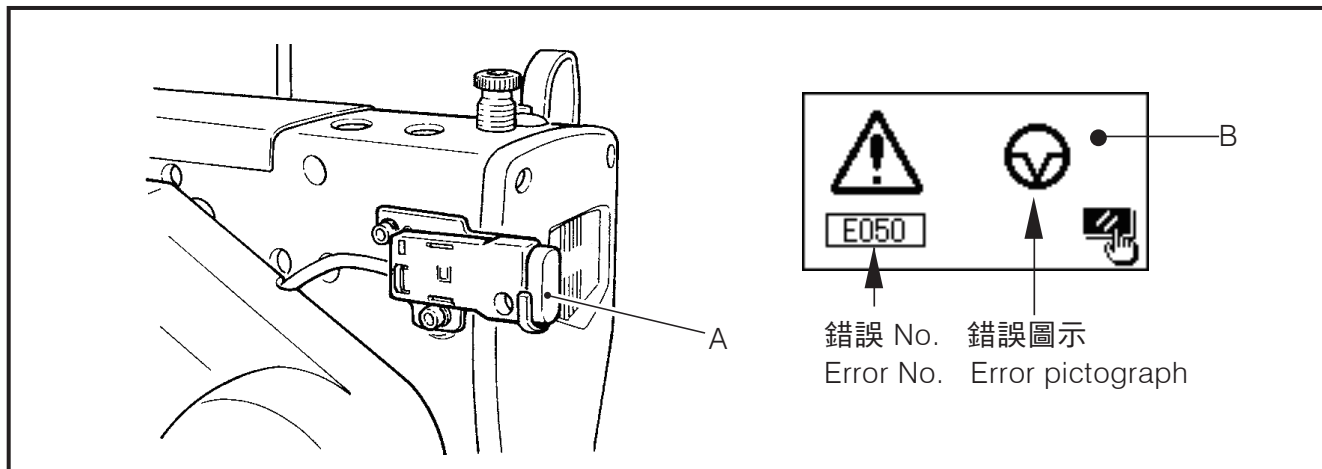
 <p>直鎖眼縫 Purl stitch</p>	<ul style="list-style-type: none"> <li>• 直鎖眼縫 增強上線張力，上線直線通 過，底線左右鎖縫的縫跡</li> <li>• Purl stitch When applying higher tension to the needle thread to permit it to pass straight through fabric, the purl stitch is formed by the bobbin thread which is pulled over from both sides to the center line.</li> </ul>	 <p>鋸齒邊縫 Whip stitch</p>	<ul style="list-style-type: none"> <li>• 鋸齒邊縫 布的表面只有上線，背面是 底線的鋸齒狀縫跡。</li> <li>• Whip stitch The whip stitch is formed in zigzag showing the needle thread only on top of fabric, and the bobbin thread on the bottom.</li> </ul>
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7. 修理縫製時

縫製動作中，按停止開關 A 之後，縫紉機中  
斷縫製停機。這時顯示錯誤顯示畫面 B，通  
知停止開關被按下。

7. Performing re-sewing


When stop switch A is pressed during  
sewing operation, the sewing machine  
interrupts sewing and stops. At this time,  
error display screen B is displayed to  
inform that the stop switch is pressed.





●途中繼續進行縫製

縫製動作停止狀態：顯示錯誤顯示畫面 B

(1) 解除錯誤

按復位鍵③ ，解除錯誤後，顯示出步驟動作畫面 C。

(2) 返回運針

按後退鍵②⑥ 後，壓腳 1 針 1 針返回，按前進鍵②⑤ 之後，變為前進。請把壓腳返回到重新縫製位置。


(3) 重新開始縫製

踩右側踏板之後，縫製重新開始。

●從最初開始重新縫製

縫製動作停止狀態：顯示出錯誤顯示畫面 B

(1) 解除錯誤

按復位鍵③ ，解除錯誤之後，顯示出步驟動作畫面 C。

(2) 返回縫製物安放位置

再一次按復位鍵③ 之後，返回到縫製物安放位置（開始位置）。

(3) 從最初開始重新縫製。



●To continue performing sewing from some point in sewing

Sewing motion stop status :Error display screen B is displayed.

(1)Release the error.

Press RESET key ③  to release the error. Then step motion screen C is displayed.

(2)Return the presser.

Press BACKWARD key ②⑥  and the presser returns stitch by stitch.Press FORWARD key ②⑤  and the presser advances stitch by stitch. Return the presser to the re-sewing position.


(3)Start sewing again.

Depress the right side pedal and sewing starts again.


●To perform re-sewing from the start

Sewing motion stop status:Error display screen B is displayed.

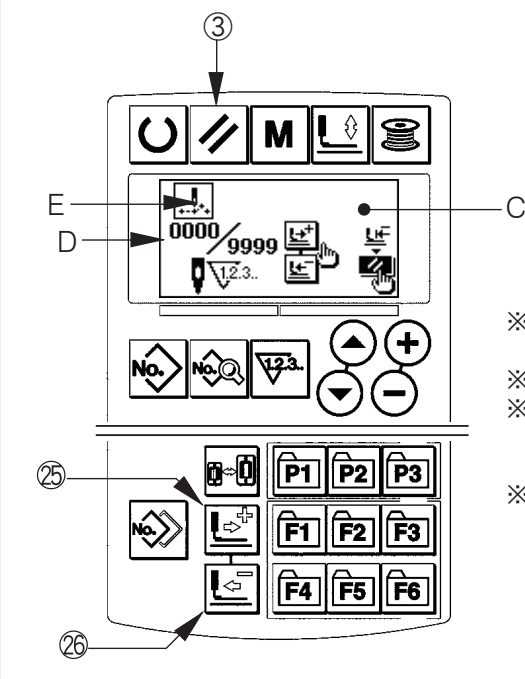
(1)Release the error.

Press RESET key ③  to release the error. Then step motion screen C is displayed.

(2)Return the presser to the sewing product setting position.

Press again RESET key ③  and the presser returns to the sewing product setting position.

(3)Perform again the sewing work from the start.



③

E





D

C

②⑤

②⑥

指令的種類有：  
Kinds of commands are :

縫製指令 Sewing command	空送指令 Jump feed command
	
切線指令 Thread trimmer command	切刀指令 Knife command
	

※ 在 D 部，顯示出現在針數／總針數。  
 ※ 在 E 部，顯示出縫製指令。  
 ※ Existing number of stitches/ total number of stitches are displayed in section D.  
 ※ Existing sewing command is displayed in section E.


## 8. 繞底線

### (1) 底線的繞線方法

#### 1) 安裝梭芯

把梭芯插到繞線軸上。按圖示的順序穿線，往梭芯上繞線。然後，請向箭頭符號方向按卷線操作桿①。


#### 2) 設為繞底線模式


在縫製狀態或在輸入狀態，按繞線鍵⑥  之後，進入繞線模式，顯示出繞線模式 C。

#### 3) 開始繞線

踩踏右側踏板之後，縫紉機轉動，開始捲繞底線。

#### 4) 停止縫紉機

捲繞完規定量的底線之後，卷線操作桿①被解除，請按繞線鍵⑥  或者踩踏右側踏板讓縫紉機停止轉動。然後，取下梭芯，用切線固定板③切線。

●按繞線鍵⑥  之後，縫紉機停止轉動，返回到通常模式。

●踩踏右側踏板的話，縫紉機在原来的繞線模式停止，如果捲繞數個梭芯時，可以使用這個方法。

### (2) 繞線量的調節

調整底線卷線量時，請鬆開固定螺絲②，把卷線操作桿①向 A 或者 B 方向移動，然後再鎖緊固定螺絲②。

A 方向：變少

B 方向：變多


## 8. Winding bobbin thread

### (1) Winding the bobbin

#### 1) Set the bobbin

Fit a bobbin fully onto the bobbin winder shaft. Take the thread from the spool and pass it through the guides in the numerical order as shown in the figure, and wind the end of the thread several times around the bobbin. Then push the bobbin winder trip latch ① in the direction of the arrow mark.

#### 2) Set the mode to the bobbin winding mode


Press WINDER key ⑥  from either input status or sewing status to enter the bobbin winding mode, and bobbin winding screen C is displayed.


#### 3) Start bobbin winding

Depress the right-hand side pedal, and the sewing machine rotates and starts winding bobbin thread.

#### 4) Stop the sewing machine

Once the bobbin is wound with the predetermined amount of thread, bobbin thread guide ① is released.

Press WINDER key ⑥  or depress the right-hand side pedal to stop the sewing machine. Then remove the bobbin and cut bobbin thread with thread trimmer retaining plate ③.

●Press WINDER key ⑥ , and the sewing machine stops and returns to the normal mode.

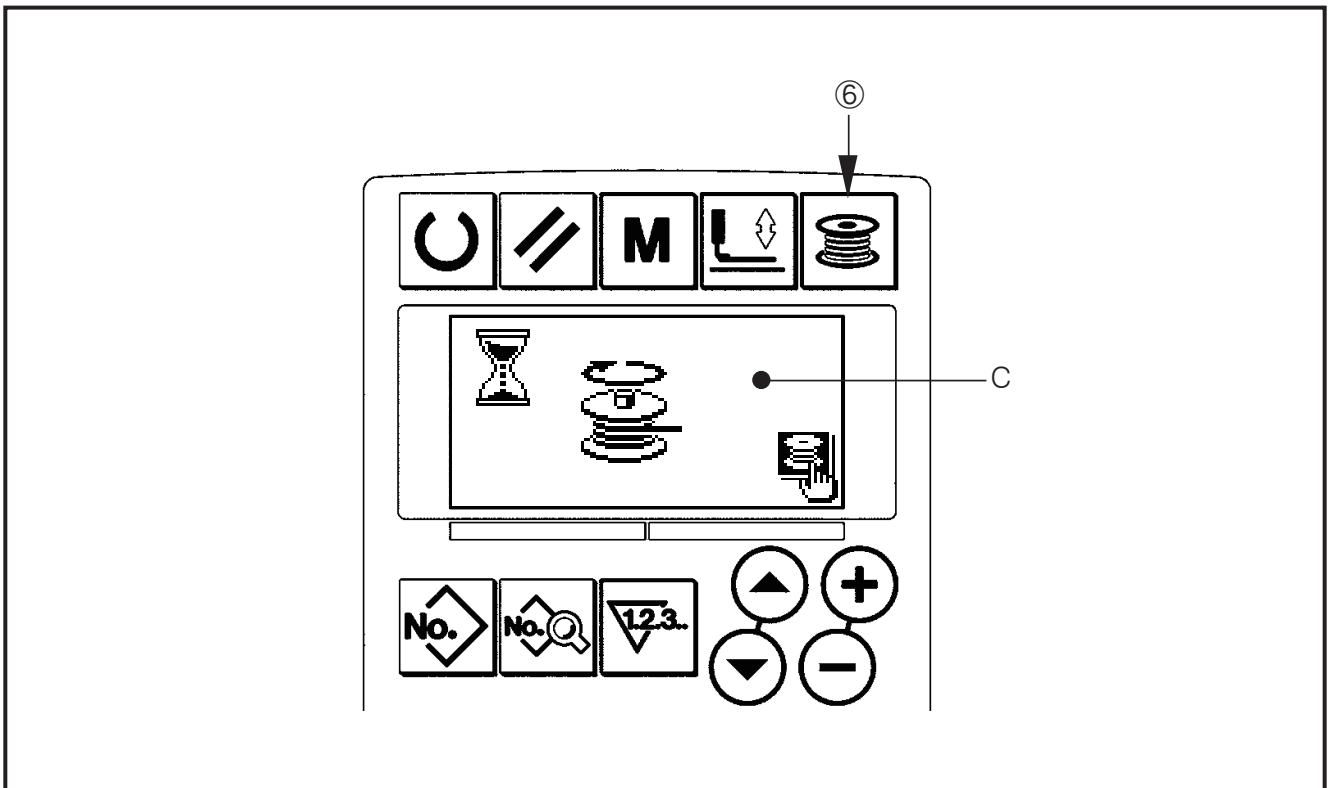
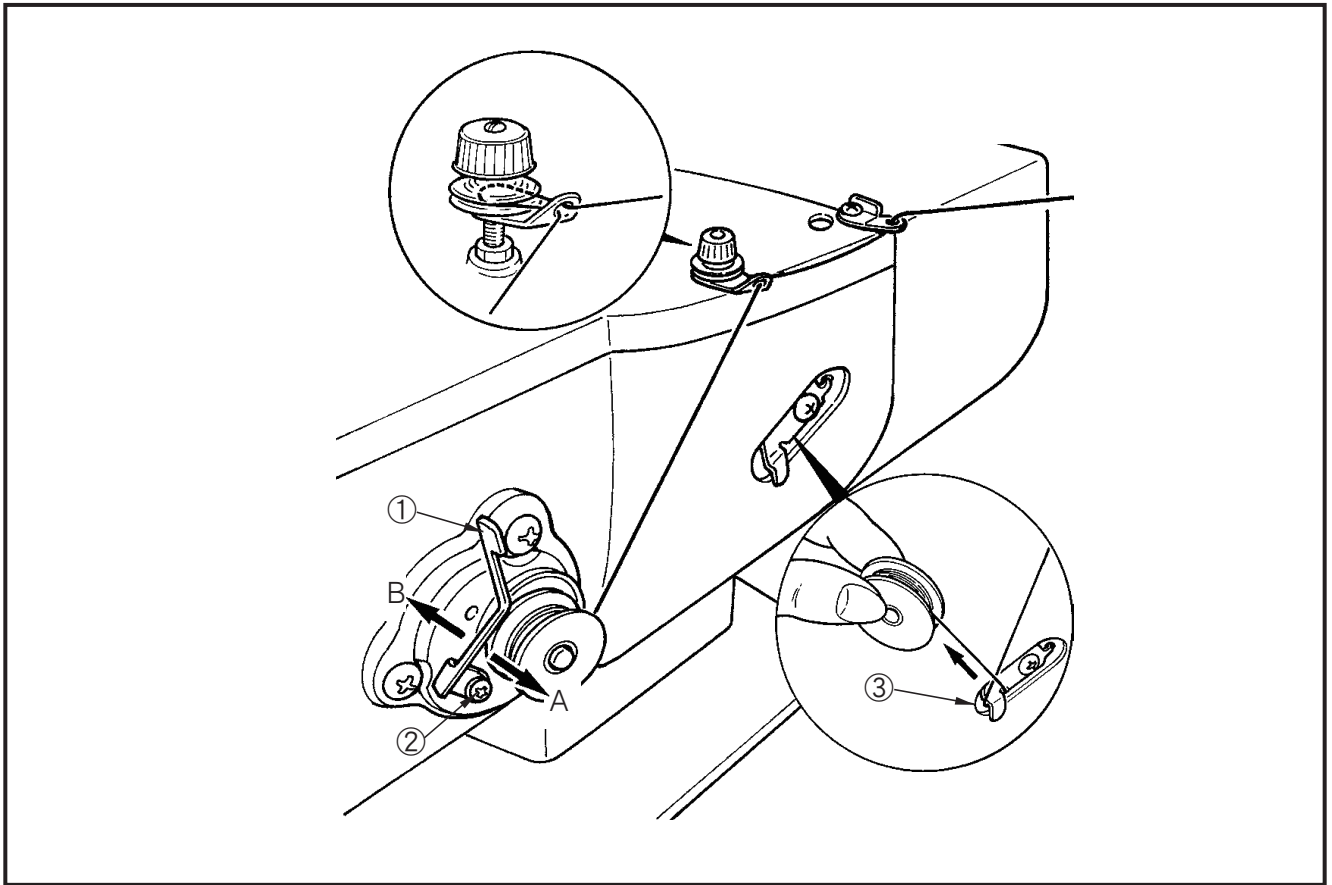
●Depress the right-hand side pedal and the sewing machine stops while the bobbin thread winding mode stays as it is. Use this way when winding bobbin thread around plural bobbins.

### (2) Adjusting the amount to be wound on a bobbin

To adjust the winding amount of the bobbin thread, loosen the setscrew ② and move the bobbin winder operational lever ① to the direction of A or B. Then, tighten the setscrew ②.

To the direction of A : Decrease



To the direction of B : Increase





## 9. 使用計數器

### (1) 計數器值的設定方法

#### 1) 叫出計數器設定畫面

在輸入模式按計數器鍵⑨  之後，顯示出可以設定計數器畫面 A。計數器值的設定，只能在輸入模式（液晶① 的背景照明藍色）時設定。縫製模式（液晶① 的背景照明綠色）時，請按準備鍵②  之後變為輸入模式。




#### 2) 計數器類別的選擇

按項目選擇鍵⑩ ，表示計數器類別的圖標 B 閃亮。按數據變更鍵⑪ ，從下列計數器類別中選擇適當的計數器。

#### 3) 計數器設定值的變更

按項目選擇鍵⑩ ，計數器設定值 C 閃亮。按數據變更鍵⑪ ，輸入設定值。



#### 4) 計數器現在值的變更

按項目選擇鍵⑩ ，計數器現在值 D 閃亮。按復位鍵③  之後，可以清除計數器途中的值。另外，用資料變更鍵⑪  也可以進行數值編輯。



## 9. Using the counter

### (1) Setting procedure of the counter value



#### 1) Call counter setting screen.

Press COUNTER key ⑨  under the input mode, and counter screen A is displayed. Then setting is possible. Setting of the counter value can be performed only with the input mode (back-light of LCD display ① is blue). In case of the sewing mode (back-light of LCD display ① is green), press READY key ②  to set the mode to the input mode.




#### 2) Selection of kinds of counters

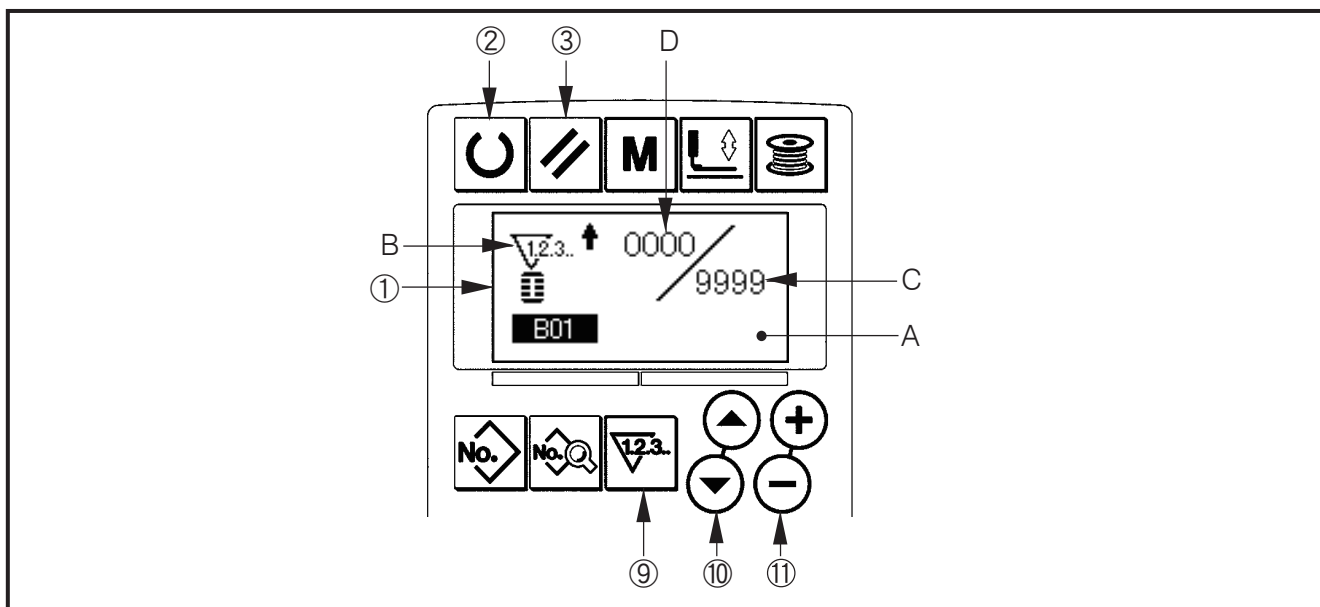
Press ITEM SELECTION key ⑩  to make pictograph B showing the kind of counter flash on and off. Press DATA CHANGE key ⑪ ，and select the counter you desire from among the kinds of counters below.

#### 3) Change of counter set value

Press ITEM SELECTION key ⑩  to make counter set value C flash on and off. Press DATA CHANGE key ⑪  and input the set value until count-up is reached.

#### 4) Change of existing counter value




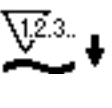

Press ITEM SELECTION key ⑩  to make existing counter value D flash on and off. Press RESET key ③  and the value on the way of counting can be cleared. In addition, it is possible to edit the numerical value with DATA CHANGE key ⑪ .






## (2) 計數器類別


## (2) Kind of counter

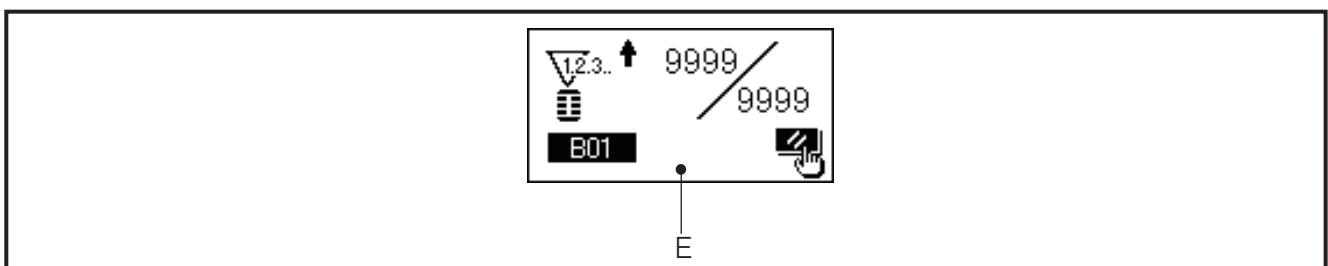
	<p>1. 縫製加數計數器 每進行 1 形狀的縫製之後，現在值數字加 1。 現在值和設定計數器。</p> <p>1. Sewing UP counter Every time the sewing of one shape is performed, the existing value is counted up. When the existing value is equal to the set value, count-up screen is displayed.</p>
	<p>2. 縫製減數計數器 每進行 1 形狀的縫製之後，現在值數字減 1。 現在值到達 0 之後，顯示出減數計數器畫面。</p> <p>2. Sewing DOWN counter Every time the sewing of one shape is performed, the existing value is counted down. When the existing value is reached to "0", count-up screen is displayed.</p>
	<p>3. 件數加數計數器 每進行 1 個週期或 1 個連續縫製之後，現在值數字加 1。 現在值和設定值相等之後，顯示出 加數計數器畫面。</p> <p>3. No. of pcs. UP counter Every time one cycle or one continuous stitching is performed, the existing value is counted up. When the existing value is equal to the set value, count-up screen is displayed.</p>
	<p>4. 件數減數計數器 每進行 1 個週期或 1 個連續縫製之後，現在值數字減 1。 現在值到達 0 之後，顯示出減數計數器畫面。</p> <p>4. No. of pcs. DOWN counter Every time one cycle or one continuous stitching is performed, the existing value is counted down. When the existing value is reached to "0", count-up screen is displayed.</p>
	<p>5. 不使用計數器</p> <p>5. Counter not used</p>

## (3) 計數器類別

縫製作業中如果到達加數條件之後，則顯示出加數畫面 E。按復位鍵③  之後，復位元數目器，返回縫製模式。而且，開始再記數。

## (3) Count-up releasing procedure


When count-up condition is reached during sewing work, the whole count-up screen E flashes on and off. Press RESET key ③  to reset the counter, and the mode returns to the sewing mode. Then the counter starts counting again.






## 10. 使用初期值模式

本縫紉機設有最適的縫製形狀（30 種形狀）的初期值。→請參照 XI. 各種形狀的初期值資料一覽表新編制縫製資料時，採用複製初期值副本的方法非常便利。



### 1) 設為輸入模式

設為輸入模式 ① 的背景照明為藍色的輸入模式時，可以變更圖案。背景照明為綠色的縫製模式時，請按準備鍵 ②  變換為輸入模式。


### 2) 叫出初期值模式

按圖案 No. 鍵 ⑦  之後，顯示出圖案選擇畫面 A。現在被選擇的圖案 No.B 閃亮，所以按項目選擇鍵 ⑩ ，選擇初期值圖案 。

### 3) 選擇形狀

按形狀鍵 ⑫  之後，形狀選擇畫面 C 被顯示，現在被選擇的形狀 D 閃亮。請選擇用資料變更鍵 ⑪  縫製的形狀 D。購買時，可以從 12 種形狀中進行選擇，但是如果升級了形狀選擇等級（K04），則最多可以從 30 種形狀中進行選擇。→請參照 20. 記憶體開關資料的變更方法的內容。

### 4) 進行試縫

按準備鍵 ② ，設定為縫製模式（液晶顯示 ① 的背景照明為綠色）之後，變為縫製模式，可以縫製選擇的形狀。

※ 請注意，初期值圖案僅可以編輯上線張力數據，如果變更形狀，再次叫出新的圖案的話，必須返回初期值。


### 5) 複製初期值圖案

把上述步驟中選擇、確認的圖案複製到通常圖案裡。複製方法→請參照 14. 複製縫製圖案的內容。




## 10. Using the initial value pattern

This sewing machine has the initial value to perform the optimum sewing for the sewing shapes (30 shapes). → Refer to XI. INITIAL VALUE DATA FOR EACH SHAPE TABLE. When creating sewing data newly, it is convenient to create it by copying the initial value pattern.



### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows input mode in blue color, it is possible to change the pattern. When the back-light shows the sewing mode in green color, Press READY key ②  to change over to the input mode.

### 2) Call initial value pattern.


Press PATTERN NO. key ⑦ , and pattern selection screen A is displayed. Pattern No. B which is selected at present flashes on and off on the display. Press ITEM SELECTION key ⑩  to select initial value pattern .

### 3) Select shape.

Press SHAPE key ⑫ , and shape selection screen C is displayed. Shape D which is selected at present flashes on and off on the display. Select shape D to sew with DATA CHANGE key ⑪ . It is possible to select the shape from among 12 shapes at the time of your purchase. However, it is possible to select the shape from among maximum 30 shapes by increasing the shape selection level (K04).

→ Refer to 20. Method of changing memory switch data.

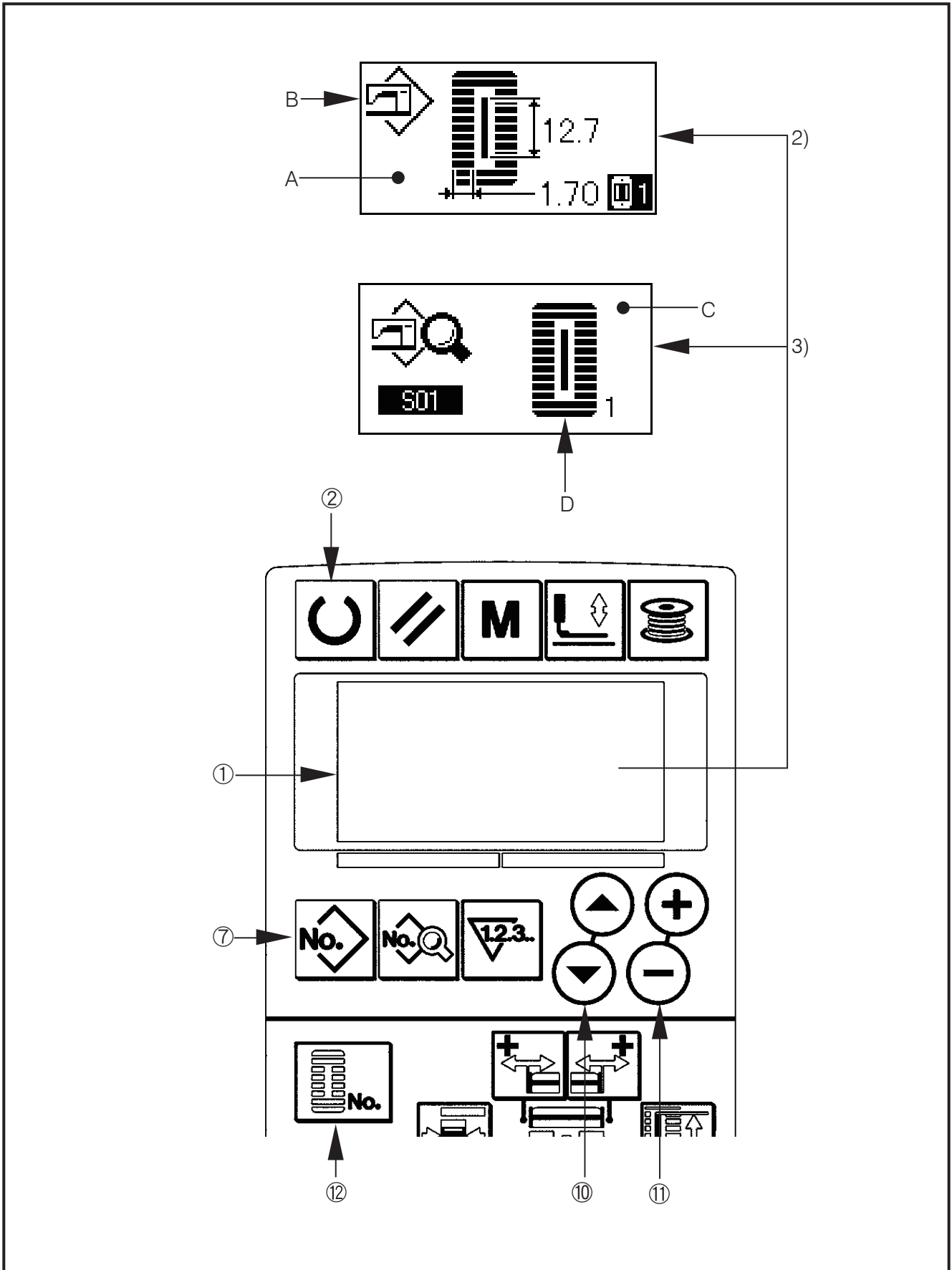
### 4) Perform trial sewing.

Press READY key ②  to set the mode to the sewing mode (back-light of LCD display ① is green). Then it is possible to perform sewing and the selected shape can be sewn.

※ Initial value pattern can edit the needle thread tension data only. However, it returns to the initial value when changing the shape or performing recall of the pattern. So, be careful.

### 5) Copy initial value pattern.

Copy the pattern which has been selected and confirmed through the steps above to the normal pattern and use it. Copying procedure → Refer to 14. copying sewing pattern.



## 11. 變更縫製數據

### (1) 購買時的初期縫製資料

購買時，已經登記了 1 ~ 10 的圖案，該縫製資料僅切布長度的各種不同的角型形狀的初期值被輸入。→角型形狀初期值請參照 X. 各種形狀的初期值資料一覽表

## 11. Changing sewing data


### (1) Initial sewing data at the time of your purchase

Patterns from 1 to 10 have been already registered at the time of your purchase. Initial values of the square type, the cloth cutting length of which only is different from each other, have been inputted in the sewing data. → Refer to X.INITIAL VALUE DATA FOR EACH SHAPE TABLE.


圖案 No. Pattern No.	切布長度  S02 Cloth cutting length  S02
1	6.4mm(1/4 英寸)(1/4" )
2	9.5mm(3/8 英寸)(3/8" )
3	11.1mm(7/16 英寸)(7/16" )
4	12.7mm(1/2 英寸)(1/2" )
5	14.3mm(9/16 英寸)(9/16" )
6	15.9mm(5/8 英寸)(5/8" )
7	17.5mm(11/16 英寸)(11/16" )
8	19.1mm(3/4 英寸)(3/4" )
9	22.2mm(7/8 英寸)(7/8" )
10	25.4mm(1 英寸)(1" )

### (2) 縫製資料的變更方法

#### 1) 設定為輸入模式


用液晶顯示①背景照明藍色輸入方法，可以變更縫製數據。背景照明綠色的縫製方法的場合，請按準備鍵②  變換輸入方法。

#### 2) 叫出縫製資料編輯畫面


按資料鍵⑧  之後，顯示出現在被選擇的圖案 NO. 的縫製資料編輯畫面 A。

### (2) Changing procedure of sewing data

#### 1) Set the mode to the input mode.

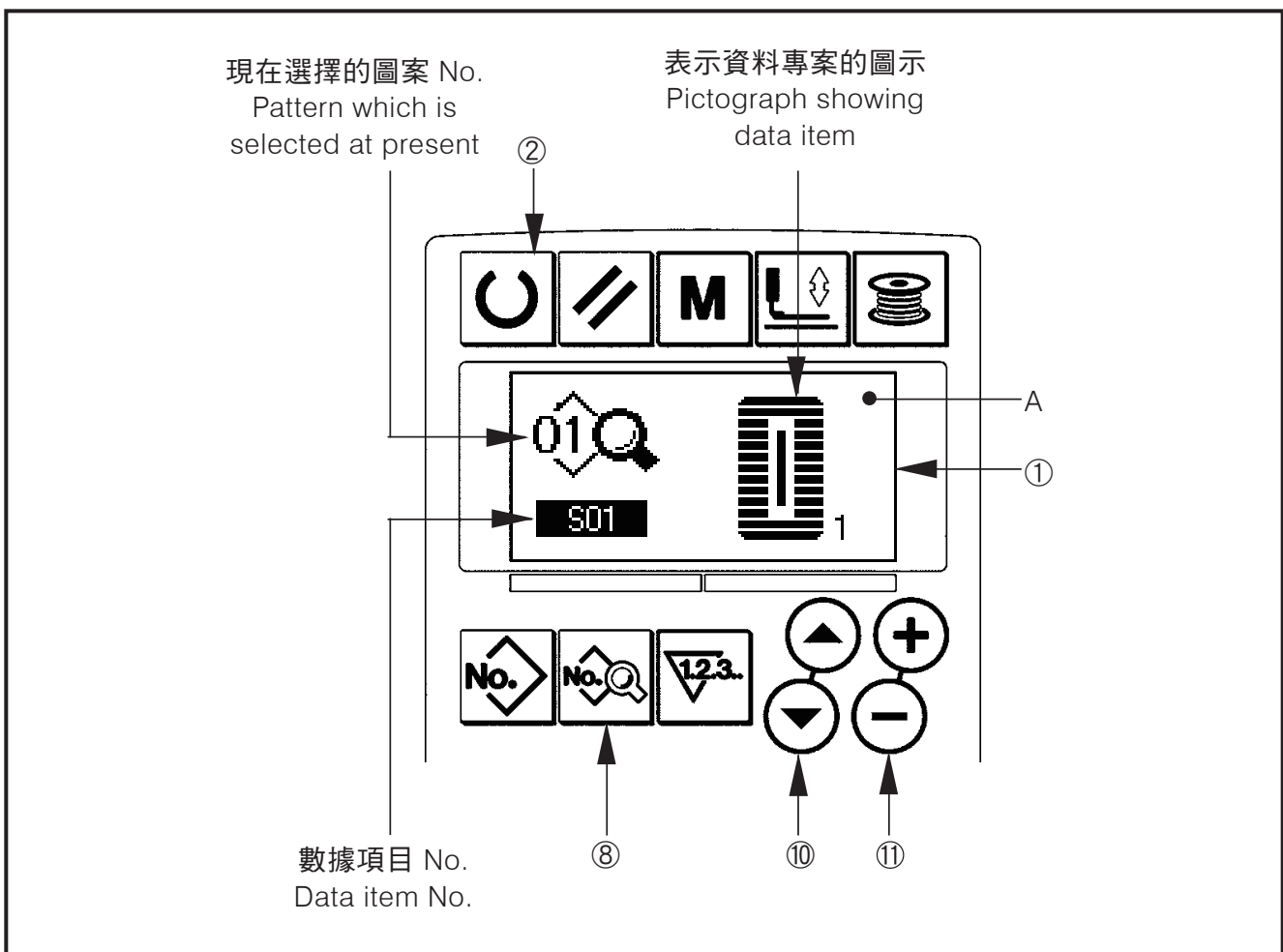
When the back-light of LCD display ① shows the input mode in blue color, it is possible to change the sewing mode. When the back-light of shows the sewing mode in green color, press READY key ②  to change over to the input mode.

#### 2) Call sewing data edit screen.

Press DATA key ⑧  , and sewing data edit screen A of the pattern No. which is selected at present is displayed.

- 3) 選擇變更的縫製資料  
按項目選擇鍵⑩(▲▼)，選擇想變更的資料項目。請注意有的形狀不使用的資料項目和沒有設定功能的資料項目均不能被顯示。→請參照 12. 縫製資料編輯有／無的設定方法的內容。
- 4) 變更數據  
縫製資料中，有變更數值的資料項目和選擇圖標的資料項目。變更數值的資料項目有 **S02** 那樣的 No.，可以用數據變更鍵⑪(+)(-)增減設定值進行變更。選擇圖示的資料項目有 **S01** 那樣的 No.，可以用數據變更鍵⑪(+)(-)選擇圖示。→縫製資料的詳細內容，請參照 13. 縫製數據一覽表。

- 3) Select sewing data to be changed.  
Press ITEM SELECTION key ⑩(▲▼), and select the data item you desire to change. Data item which is not used according to the shape and data item which is set without function are skipped and not displayed. So, be careful. → Refer to 12. Method of setting sewing data with/without edit
- 4) Change data.  
For the sewing data, there are data item which changes numerical value and that which selects pictograph.No. such as **S02** is attached to the data item which changes numerical value. Increase or decrease the set value with DATA CHANGE key ⑪(+)(-) to change the value.No. such as **S01** is attached to the data item which selects pictograph. Pictograph can be selected with DATA CHANGE key ⑪(+)(-). → For the details of sewing data, refer to 13. Sewing data table.




## 12. 縫製資料編輯有／無的設定方法


購買時，本縫紉機把使用頻率低的縫製資料項目設定為不能編輯。如果縫製物需要進行更詳細的設定，請將該縫製資料項目設定為可以編輯狀態。

\* 縫製資料的編輯有／無的設定，當把 S52 右平行部張力設定為無編輯後，則用 S51 左平行部張力進行縫製。如果把 S56 第 2 加固張力設定為無編輯後，則用 S55 第 1 加固張力進行縫製。設定為不編輯其他的縫製資料項目時，則為初期值數據。


### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色輸入模式時，可以設定。背景照明為綠色的縫製模式時，請按準備鍵②  變換為輸入模式。


### 2) 叫出縫製資料有／無編輯的變換畫面

按資料鍵⑧  3 秒鐘之後，顯示出資料有／無編輯的變換畫面 A、B。

### 3) 選擇想變換的縫製資料

按項目選擇鍵⑩ ，選擇想變換的縫製數據項目 C。此時，僅可以選擇可以變換的項目。



### 4) 變換有／無編輯

按數據變更鍵⑪  之後，選擇的縫製資料圖示顯示 C 可以反覆反轉／不反轉。

反轉顯示：可編輯

不反轉顯示：不可編輯  
返回步驟 3，可以轉換複數的縫製資料項目。

### 5) 保存設定的資料


按準備鍵②  之後，變為保存狀態，2 秒鐘後返回原來的畫面。按復位鍵③  之後，不保存返回原來的畫面。

## 12. Method of setting sewing data with/without edit


This sewing machine has been set so as not to be capable of editing sewing data items which are less frequently used at the time of your purchase. When you desire to set the data more closely in accordance with the sewing products, set the sewing data item to the edit possible state and use the machine.

\* For the setting of sewing data with/without edit, when S52, right parallel section tension is set to without edit, sewing is performed with the data of S51 left parallel section tension. When S56, 2nd bar-tacking tension is set to without edit, sewing is performed with the data of S55, 1st bar-tacking section. When the sewing data items other than the above ones are set to without edit, the data to be referred are the initial value data.


### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to set. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.

### 2) Call sewing data with/without edit changeover screen.

Press DATA key ⑧  for as long as three seconds, and data with/without edit changeover screen A or B is displayed.

### 3) Select sewing data you desire to change over.

Press ITEM SELECTION key ⑩ ，and select sewing data item C you desire to change over. At this time, changeover possible item only can be selected.

### 4) Changeover of with/without edit



Press DATA CHANGE key ⑪ ，and pictograph display C of sewing data repeats reverse/non-reverse.

Non-reverse display : With edit

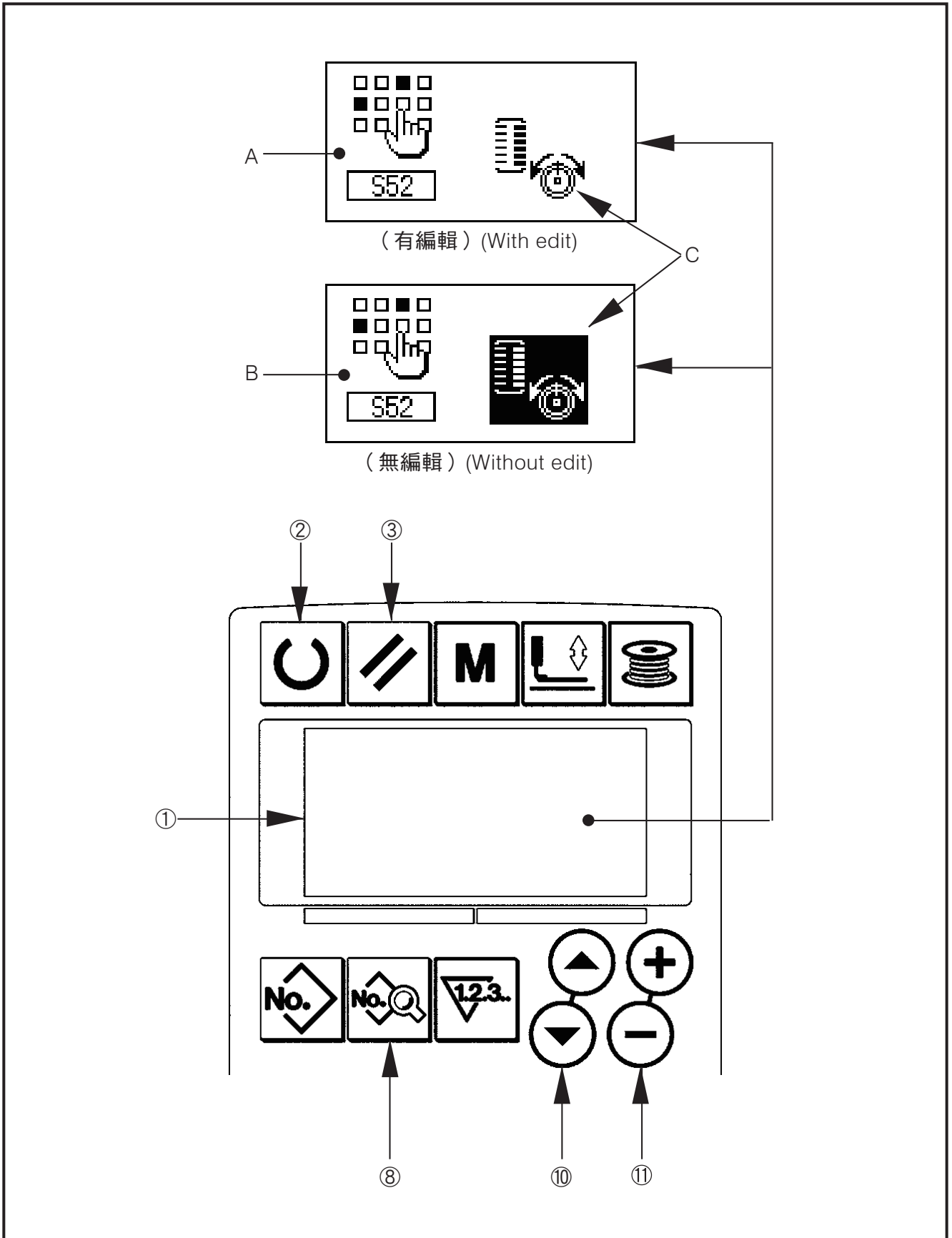
Reverse display : Without edit

Return to step 3), and plural sewing data items can be changed over.

### 5) Save data which have been set.

Press READY key ② ，and the data in the state of being changed over can be saved. After two seconds, the screen returns to the former one. Press RESET key ③ ，and the screen returns to the former one without saving the data.





### 13. 縫製數據一覽表

☆ 縫製資料為圖案 1 ~ 99 的 99 個圖案的可輸入的資料，可按每種圖案進行輸入。

購買時，為不能選擇設定有／無編輯資料的狀態。使用時，請根據需要變換為有編輯的狀態後再使用。→請參照 12. 縫製資料編輯有／無的設定方法。

- \* 1：不同的形狀有不同的顯示。
- \* 2：設定為有編輯之後被顯示。請參照 12. 縫製資料編輯有／無的設定方法。
- \* 3：選擇功能之後，被顯示。

























### 13. Sewing data list


☆ Sewing data are those that can be inputted to 99 patterns from pattern 1 to 99 and can be inputted to each pattern. The sewing machine has been set in the state that the data which is necessary to set “With/without edit” cannot be selected at the time of your purchase. Change over the function to “With edit” if necessary for the use. → Refer to 12. Method of setting sewing data with/without edit.

- \* 1：Displayed according to the shape
- \* 2：Displayed when it is set to with edit. Refer to 12. Method of setting sewing data with/without edit.
- \* 3：Displayed when the function is selected.

No.	項目 Item	設定範圍 Setting range	編輯單位 Edit unit	備考 Remarks
S01	<ul style="list-style-type: none"> <li>• 縫製形狀 可以從縫紉機所具有的 30 種縫製形狀中選擇形狀</li> <li>• Sewing shape This item selects the shape from among the sewing shapes of 30 different kinds which the sewing machine has.</li> </ul>  <p>參照 II-3 .標準縫製形狀一覽表 Refer to II-3. Standard sewing shape list.</p> <ul style="list-style-type: none"> <li>※購入時，只能選擇標準的 12 種縫製形狀 增加形狀種類時，請進行記憶體開關資料 K04 縫製形狀等級的設定。→請參照 21. 記憶體開關資料一覽表</li> <li>※Only 12 kinds of standard sewing shapes can be selected at the time of your purchase. When increasing the kinds of shapes, perform setting of K04 Sewing shape selection level of memory switch data. → Refer to 21. Memory switch list.</li> </ul>	1~30	1	-
S02	<ul style="list-style-type: none"> <li>• 切布長度 設定切布刀切斷縫製品的長度。但是，條形卷褶形狀 (S01 的形狀 NO.27、28、29、30) 時，只能設定縫製長度。將記憶體開關資料的 U19 切布刀數次動作功能設定為有效之後，就可以按照 U18 切布刀尺寸設定的切刀尺寸，讓切刀數次動作，切斷縫製品。 →請參照 21. 記憶體開關資料一覽表</li> <li>• Cloth cut length This item sets the length of cloth that is cut by cloth cutting knife. However, in case of bar-tack shape (Nos. 27, 28, 29, and 30 of S01), sewing length is set. By making effective U19 Function of plural motions of cloth cutting knife of memory switch data, make the plural motions of knife by the knife size set in the item U18 Cloth cutting knife size, and the sewing product is cut. →Refer to 21. Memory switch list.</li> </ul> 	3.0~119.6	0.1mm	-
S03	<ul style="list-style-type: none"> <li>• 右切刀槽寬度 設定切布刀和右平行部的間隙</li> <li>• Knife groove width, right This item sets the clearance between cloth cutting knife and right parallel section.</li> </ul> 	-2.00~2.00	0.05mm	-
S04	<ul style="list-style-type: none"> <li>• 左切刀槽寬度 設定切布刀和左平行部的間隙</li> <li>• Knife groove width, left This item sets the clearance between cloth cutting knife and left parallel section.</li> </ul> 	-2.00~2.00	0.05mm	-
S05	<ul style="list-style-type: none"> <li>• 左包邊寬度 設定左平行部的包邊寬度</li> <li>• Overedging width, left This item sets the overedging width of left parallel section.</li> </ul> 	0.10~5.00	0.05mm	-
S06	<ul style="list-style-type: none"> <li>• 左右形狀比率 設定以切刀位置為中心的右側形狀的擴大縮小率</li> <li>• Ratio of right and left shapes This item sets enlargement/reduction ratio of right side shape making the knife position as the center.</li> </ul> 	50~150	1%	-

S07	<ul style="list-style-type: none"> <li>平行部間隔 設定左右平行部的縫製間隔</li> <li>Pitch at parallel section This item sets sewing pitch of left and right parallel sections.</li> </ul>		0.200~2.500	0.025mm	-
S08	<ul style="list-style-type: none"> <li>第 2 加固部長度 設定面前的加固部長度</li> <li>2nd bar-tacking length This item sets length of bar-tacking on the front side.</li> </ul> <p>角型下  直線加固下  錐形下  Bottom of square type Bottom of straight bar-tacking Bottom of taper</p>		0.2~5.0	0.1mm	-
S09	<ul style="list-style-type: none"> <li>第 1 加固部長度 設定裡側加固部的長度</li> <li>1st bar-tacking length This item sets length of bar-tacking on the rear side.</li> </ul> <p>角型上  Top of square type</p>		0.2~5.0	0.1mm	-
S10	<ul style="list-style-type: none"> <li>加固部右寬度修正 調整加固部的右側外形和包縫部 第 1 加固、第 2 加固均被修正</li> <li>Compensation of bar-tacking width, right This item adjusts right side outer shape of bar-tacking section in terms of overedging section. The first section and second section have been compensated.</li> </ul> <p>角型上  角型下  直線加固下  Top of square type Bottom of square type Bottom of straight bar-tacking</p>		-1.00 ~ 1.00	0.05mm	-
S11	<ul style="list-style-type: none"> <li>加固部左寬度修正 調整加固部的左側外形和包縫部</li> <li>Compensation of bar-tacking width, left This item adjusts left side outer shape of bar-tacking section in terms of overedging section.</li> </ul> <p>角型上  角型下  直線加固下  Top of square type Bottom of square type Bottom of straight bar-tacking</p>		-1.00~1.00	0.05mm	-
S12	<ul style="list-style-type: none"> <li>錐形加固部左對稱 設定形成錐形加固形狀的加固部的長度</li> <li>Taper bar-tacking offset, left This item sets length to form bar-tacking section of taper bar-tacking shape.</li> </ul>		0.00~3.00	0.05mm	*1
S13	<ul style="list-style-type: none"> <li>錐形加固部右對稱 設定形成錐形加固形狀的加固部的長度</li> <li>Taper bar-tacking offset, right This item sets length to form bar-tacking section of taper bar-tacking shape.</li> </ul>		0.00~3.00	0.05mm	*1
S14	<ul style="list-style-type: none"> <li>圓頭扣眼形狀長度 設定從圓頭扣眼形狀的圓頭扣眼中心到上側的長度</li> <li>Eyelet shape length This item sets upper side length from center of eyelet of eyelet shape.</li> </ul>		1.0~10.0	0.1mm	*1
S15	<ul style="list-style-type: none"> <li>圓頭扣眼形狀針數 設定圓頭扣眼形狀的上部 90 度中的縫製條數</li> <li>Number of stitches of eyelet shape This item sets number of stitches in the upper 90° of eyelet shape.</li> </ul>		1~8	1	*1
S16	<ul style="list-style-type: none"> <li>圓頭扣眼寬度 設定圓頭扣眼形狀的內側橫尺寸 實際的落針處為加算上 S04 切刀槽左寬度的尺寸</li> <li>Eyelet width This item sets crosswise size of the inside of eyelet shape. Actual needle entry point is the dimension to which S04 Knife groove width, left is added.</li> </ul>		1.0~10.0	0.1mm	*1
S17	<ul style="list-style-type: none"> <li>圓頭扣眼長度 設定圓頭扣眼形狀的內側豎尺寸</li> <li>Eyelet length This item sets lengthwise size of the inside of eyelet shape.</li> </ul>		1.0~10.0	0.1mm	*1

S18	<ul style="list-style-type: none"> <li>• 圓型形狀長度 設定圓型形狀的中心到上側的長度</li> <li>• Round type shape length This item sets upper length from the center of round type shape.</li> </ul> <p>圓型上 Top of round type  放射上 Top of Radial type  半月上 Top of semilunar type </p> <p>圓型下 Bottom of round type  放射下 Bottom of radial type  半月下 Bottom of semilunar type </p>	1.0~5.0	0.1mm	*1
S19	<ul style="list-style-type: none"> <li>• 放射形狀針數 設定放射形狀的上部 90° 中的縫製條數</li> <li>• Number of stitches of radial shape This item sets number of stitches in the upper 90° of radial shape.</li> </ul> 	1~8	1	*1
S20	<ul style="list-style-type: none"> <li>• 放射形狀加固 設定有/無放射形狀的加固縫</li> <li>• Reinforcement of radial shape This item sets with/without reinforcement stitching of radial shape.</li> </ul>  : 有 : With  : 無 : Without	-	-	*1, *2
S21	<ul style="list-style-type: none"> <li>• 加固部間隔 設定加固部的縫製間隔</li> <li>• Pitch at bar-tacking section This item sets sewing pitch of bar-tacking section.</li> </ul> <p>角型上 Top of square type  圓型上 Top of round type  半月上 Top of semilunar type </p> <p>角型下 Bottom of square type  圓型下 Bottom of round type  半月下 Bottom of semilunar type  直線加固 Bottom of straight bar-tacking  錐形下 Bottom of taper bar-tacking </p>	0.200~2.500	0.025mm	-
S22	<ul style="list-style-type: none"> <li>• 第 1 間隙 設定第 1 加固和切刀槽間隙 適用於全形狀</li> <li>• 1st clearance This item sets the clearance between 1st bar-tacking and knife groove. This item is applied to all shapes.</li> </ul> 	0.0~4.0	0.1mm	-
S23	<ul style="list-style-type: none"> <li>• 第 2 間隙 設定第 2 加固和切刀槽間隙 適用於全形狀</li> <li>• 2nd clearance This item sets the clearance between 2nd bar-tacking and knife groove. This item is applied to all shapes.</li> </ul> 	0.0~4.0	0.1mm	-
S31	<ul style="list-style-type: none"> <li>• 單/雙重 選擇單縫、雙重縫</li> <li>• Single/double stitching This item selects single or double stitching.</li> </ul>  : 單縫 : Single stitching  : 雙重縫 : Double stitching	-	-	-
S32	<ul style="list-style-type: none"> <li>• 選擇交叉雙重縫 設定雙重縫時，請選擇是重疊縫製平行部的落針還是進行交叉縫制</li> <li>• Double stitching cross selection This item selects overlapping stitching or cross stitching at the needle entry of parallel section when setting double stitching.</li> </ul>  : 重疊縫 : Double stitching  : 交叉縫 : Cross stitching	-	-	*3
S33	<ul style="list-style-type: none"> <li>• 修正雙重縫寬度 設定雙重縫時，設定第 1 迴圈的包縫寬度縮小量</li> <li>• Compensation of double stitching width This item sets amount to narrow overedging width of 1st cycle when setting double stitching.</li> </ul> 	0.0~2.0	0.1mm	*3

S34	<ul style="list-style-type: none"> <li>下縫次數 設定下縫的次數</li> <li>Number of times of basting This item sets number of times of basting.</li> </ul>	 : 無下縫  : 有下縫 (設定次數) : Without basting : With basting (Setting of number of times)	0~9	1次 1 time	-
S35	<ul style="list-style-type: none"> <li>下縫間隔 設定進行下縫時的縫製間隔</li> <li>Basting pitch This item sets pitch at the time of performing basting.</li> </ul>		1.0~5.0	0.1mm	*3
S36	<ul style="list-style-type: none"> <li>下縫捲入長度 設定進行下縫時的上線捲入縫製長度</li> <li>Rolling length of basting This item sets rolling length of needle thread when performing basting.</li> </ul>		2.0~20.0	0.1mm	*3
S37	<ul style="list-style-type: none"> <li>下縫捲入間隔 設定進行下縫時的上線捲入縫製間隔</li> <li>Rolling pitch of basting This item sets rolling pitch of needle thread when performing basting.</li> </ul>		0.2~5.0	0.1mm	*3
S38	<ul style="list-style-type: none"> <li>下縫捲入寬度 設定進行下縫時的上線捲入縫製寬度</li> <li>Rolling width of basting This item sets rolling width of needle thread when performing basting.</li> </ul>		0.0~4.0	0.1mm	*3
S39	<ul style="list-style-type: none"> <li>下縫落針前後修正 進行 2 迴圈以上的下縫時，設定落針處的前後移動量</li> <li>Lengthwise compensation of needle entry of basting This item sets the amount to move needle entry position back and forth when performing basting more than two cycles.</li> </ul>		0.0~2.5	0.1mm	*2, *3
S40	<ul style="list-style-type: none"> <li>下縫落針左右修正 進行 2 迴圈以上的下縫時，設定落針處的左右移動量</li> <li>Crosswise compensation of needle entry of basting This item sets the amount to move needle entry position to the right or left when performing basting more than two cycles.</li> </ul>		0.0~1.0	0.1mm	*3
S41	<ul style="list-style-type: none"> <li>下縫左側位置修正 設定把下縫的縫製基準位置從左包縫的中心向左右的移動量</li> <li>Compensation of left side position of basting This item sets the amount to move the sewing reference position of basting from the center of left overedging to the right or left.</li> </ul>		-2.0~2.0	0.1mm	*2, *3
S42	<ul style="list-style-type: none"> <li>下縫右側位置修正 設定把下縫的縫製基準位置從右包縫的中心向左右的移動量</li> <li>Compensation of right side position of basting This item sets the amount to move the sewing reference position of basting from the center of right overedging to the right or left.</li> </ul>		-2.0~2.0	0.1mm	*2, *3
S44	<ul style="list-style-type: none"> <li>設定下縫速度 設定下縫的速度</li> <li>Speed setting of basting This item sets speed of basting.</li> </ul>		400~4200	100sti/min	*3
S51	<ul style="list-style-type: none"> <li>左平行部張力 設定左平行部的上線張力</li> <li>Left parallel section tension This item sets needle thread tension at left parallel section.</li> </ul>		0~200	1	-
S52	<ul style="list-style-type: none"> <li>右平行部張力 設定右平行部的上線張力</li> <li>Right parallel section tension This item sets needle thread tension at right parallel section.</li> </ul>		0~200	1	*2
S53	<ul style="list-style-type: none"> <li>左平行部張力 (雙重縫的第 1 迴圈) 雙重縫時，設定第 1 迴圈的左平行部上線張力</li> <li>Left parallel section tension (1st cycle of double stitching) This item sets needle thread tension at left parallel section of 1st cycle at the time of double stitching.</li> </ul>		0~200	1	*2, *3

S54	<ul style="list-style-type: none"> <li>右平行部張力（雙重縫的第 1 迴圈） 雙重縫時，設定第 1 迴圈的左平行部上線張力</li> <li>Right parallel section tension (1st cycle of double stitching) This item sets needle thread tension at right parallel section of 1st cycle at the time of double stitching.</li> </ul>		0~200	1	*2, *3
S55	<ul style="list-style-type: none"> <li>第 1 加固部張力 設定第 1 加固部的上線張力</li> <li>Tension at 1st bar-tacking section This item sets needle thread tension at 1st bar-tacking section.</li> </ul>		0~200	1	-
S56	<ul style="list-style-type: none"> <li>第 2 加固部張力 設定第 2 加固部的上線張力</li> <li>Tension at 2nd bar-tacking section This item sets needle thread tension at 2nd bar-tacking section.</li> </ul>		0~200	1	*2
S57	<ul style="list-style-type: none"> <li>縫製開始上線張力的設定 設定縫製開始加固縫的上線張力</li> <li>Setting of needle thread tension at the start of sewing This item sets needle thread tension of tie stitching at the start of sewing.</li> </ul>		0~200	1	-
S58	<ul style="list-style-type: none"> <li>下縫上線張力的設定 設定下縫的上線張力</li> <li>Setting of needle thread tension of basting This item sets needle thread tension of basting.</li> </ul>		0~200	1	*3
S59	<ul style="list-style-type: none"> <li>第 1 加固縫開始，調整 ACT 同步時間 調整第 1 加固部的上線張力輸出開始的同步時間</li> <li>ACT timing adjustment at the start of 1st bar-tacking This item adjusts needle thread tension output start timing at 1st bar-tacking section.</li> </ul>		-5~5	1針 1stitch	*2
S60	<ul style="list-style-type: none"> <li>右包縫開始，調整 ACT 同步時間 調整右包縫部的上線張力輸出開始的同步時間</li> <li>ACT timing adjustment at the start of right overedging This item adjusts needle thread tension output start timing at right overedging section.</li> </ul>		-5~5	1針 1stitch	*2
S61	<ul style="list-style-type: none"> <li>第 2 加固開始，ACT 同步時間 調整第 2 加固部的上線張力輸出開始的同步時間</li> <li>ACT timing adjustment at the start of 2nd bar-tacking This item adjusts needle thread tension output start timing at 2nd bar-tacking section.</li> </ul>		-5~5	1針 1stitch	*2
S62	<ul style="list-style-type: none"> <li>縫製開始加固縫針數 設定縫製開始加固縫的針數</li> <li>Number of stitches of tie stitching at the start of sewing This item sets number of stitches of tie stitching at the start of sewing.</li> </ul>		0~8	1針 1stitch	-
S63	<ul style="list-style-type: none"> <li>縫製開始加固縫間隔 設定縫製開始加固縫的間隔</li> <li>Sewing pitch of tie stitching at the start of sewing This item sets sewing pitch of tie stitching at the start of sewing.</li> </ul>		0.00~0.70	0.05mm	*2
S64	<ul style="list-style-type: none"> <li>縫製開始的加固縫寬度 設定縫製開始的加固縫寬度</li> <li>Tie stitching width at the start of sewing This item sets tie stitching width at the start of sewing.</li> </ul>		0.0~3.0	0.1mm	-
S65	<ul style="list-style-type: none"> <li>縫製開始加固縫的豎向修正 設定縫製開始加固縫的豎方向開始位置</li> <li>Lengthwise compensation of tie stitching at the start of sewing This item sets start position of tie stitching in lengthwise direction at the start of sewing.</li> </ul>		0.0~5.0	0.1mm	*2
S66	<ul style="list-style-type: none"> <li>縫製開始加固縫的橫向修正 設定縫製開始加固縫的橫方向開始位置</li> <li>Crosswise compensation of tie stitching at the start of sewing This item sets start position of tie stitching in crosswise direction at the start of sewing.</li> </ul>		0.0~2.0	0.1mm	*2




S67	<ul style="list-style-type: none"> <li>縫製結束加固縫寬度 設定縫製結束加固縫的寬度</li> <li>Tie stitching width at the end of sewing This item sets tie stitching width at the end of sewing.</li> </ul>		0.1~1.5	0.1mm	-
S68	<ul style="list-style-type: none"> <li>縫製結束加固縫針數 設定縫製結束加固縫的針數</li> <li>Number of stitches of tie stitching at the end of sewing This item sets number of stitches of tie stitching at the end of sewing.</li> </ul>		0~8	1	-
S69	<ul style="list-style-type: none"> <li>縫製結束加固縫豎向修正 設定縫製結束加固縫的豎方向開始位置</li> <li>Lengthwise compensation of tie stitching at the end of sewing This item sets start position of tie stitching in lengthwise direction at the end of sewing.</li> </ul>		0.0~5.0	0.1mm	*2
S70	<ul style="list-style-type: none"> <li>縫製結束加固縫橫向修正 設定縫製結束加固縫的橫方向開始位置</li> <li>Crosswise compensation of tie stitching at the end of sewing This item sets start position of tie stitching in crosswise direction at the end of sewing.</li> </ul>		0.0~2.0	0.1mm	*2
S81	<ul style="list-style-type: none"> <li>切刀動作 設定通常的切布刀動作有/無</li> <li>Knife motion This item sets "With/without motion" of normal cloth cutting knife.</li> </ul> <p> : 通常切刀動作 OFF     : 通常切刀動作 ON   : Normal knife motion OFF     : Normal knife motion ON</p>		-	-	-
S83	<ul style="list-style-type: none"> <li>雙重縫的第 1 迴圈切刀 雙重縫時，設定第 1 迴圈的切布刀有/無動作。</li> <li>Knife motion at 1st cycle of double stitching This item sets "With/without motion" of cloth cutting knife at 1st cycle when double stitching is performed.</li> </ul> <p> : 通常切刀動作 OFF     : 通常切刀動作 ON   : Normal knife motion OFF     : Normal knife motion ON</p>		-	-	*2, *3
S84	<ul style="list-style-type: none"> <li>最高速度限制 設定縫紉機的最高轉速。 資料編輯的最大值為記憶體開關資料 K07 最大轉速限制速度的設定的轉速。 →請參照 21. 記憶體開關數據一覽表。</li> <li>Maximum speed limitation This item sets max. speed limitation of the sewing machine. The maximum value of data edit is equal to the number of revolutions of K07 Maximum speed limitation of the memory switch data.→Refer to 21. Memory switch list</li> </ul>		400~4200	100sti/min	-
S86	<ul style="list-style-type: none"> <li>前進間隔 設定條形衣褶形狀 (S01 的形狀 NO.27、28、29、30)前進側的縫製間隔。</li> <li>Pitch of going This item sets sewing pitch of going side of bar-tacking shape (Shape Nos. 27, 28, 29 and 30 of S01).</li> </ul>		0.200~2.500	0.025mm	-
S87	<ul style="list-style-type: none"> <li>前進寬度 設定條形衣褶形狀 (S01 的形狀 NO.27、28、29、30)前進側的縫製寬度。</li> <li>Width of going This item sets width of going side of bar-tacking shape (Shape Nos. 27, 28, 29 and 30 of S01).</li> </ul>		0.1~10.0	0.05mm	-
S88	<ul style="list-style-type: none"> <li>返回間隔 設定條形衣褶形狀 (S01 的形狀 NO.27、28、29、30)返回側的縫製間隔。</li> <li>Pitch of coming This item sets sewing pitch of coming side of bar-tacking shape (Shape Nos. 27, 28, 29 and 30 of S01).</li> </ul>		0.200~2.500	0.025mm	-
S89	<ul style="list-style-type: none"> <li>返回寬度 設定條形衣褶形狀(S01 的形狀 NO.27、28、29、30)返回側的縫製寬度。</li> <li>Width of coming This item sets width of coming side of bar-tacking shape (Shape Nos. 27, 28, 29 and 30 of S01).</li> </ul>		0.1~10.0	0.05mm	-

## 14. 複製縫製圖案

可以把已登記的圖案 NO. 的資料複製到沒有使用的 NO.。因為圖案設定為禁止重寫複製，所以需要重寫時，請先把圖案消去後再進行複製。


### 1) 設定為輸入模式

液晶顯示①的背景照明為青色的輸入模式時，可以複製。背景照明為綠色的縫製模式時，請按準備鍵②  變換為輸入模式。




### 2) 選擇要複製的原圖案 NO.

在圖案選擇畫面，選擇複製的原圖案 NO.。→請參照 5. 選擇圖案的內容。編制新圖案資料時，複製初期值圖案的話使用起來非常便利。→請參照 10. 使用初期值模式的內容。



### 3) 叫出複製畫面

按複製鍵③  之後，顯示出複製畫面 A。

### 4) 選擇複製位置的圖案 NO.

沒有使用的圖案 No.B 閃亮顯示，所以按資料變更鍵⑪  ，選擇想複製的 No.。如果想消去圖案時，請選擇垃圾箱 。

### 5) 開始複製


按準備鍵②  之後開始複製，複製 2 秒鐘後，在編制圖案 No. 被選擇的狀態，返回輸入畫面。按復位鍵③ ，不複製返回原來的畫面。

※ 迴圈資料、連續縫製資料也可以用同樣的方法進行複製。

## 14. Copying sewing pattern

Data of pattern No. which has been already registered can be copied to pattern No. which has not been used. Overwriting copy of the pattern is prohibited. When you desire to overwrite, perform it after erasing the pattern once.

### 1) Set the mode to input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to copy. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.




### 2) Select pattern No. of copy source.

Select pattern No. of copy source from the pattern selection screen. → Refer to 5. Performing pattern selection  
When creating pattern data quite newly, it is convenient to copy the initial value pattern. → Refer to 10. Using initial value pattern.


### 3) Call copy screen.


Press COPY key ③ , and copy screen A is displayed.

### 4) Select pattern No. of copy destination.

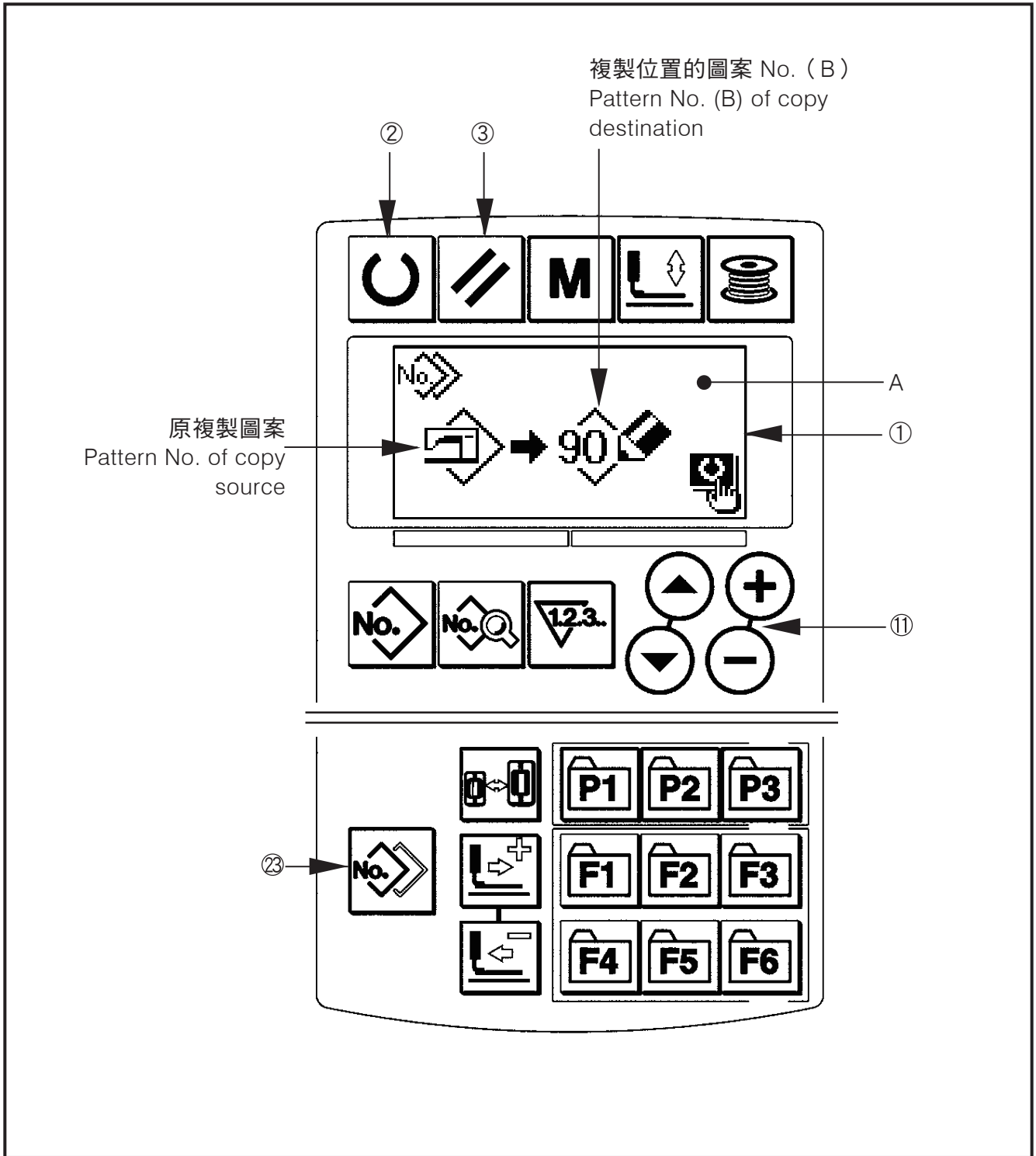
Pattern No. B which is not used flashes on and off in the display. Press DATA CHANGE key ⑪  , and select the No. you desire to copy. When you desire to erase the pattern, select the garbage can .

### 5) Start copying.

Press READY key ②  to start copying. After two seconds, the pattern No. which is created by copying returns to the input screen in the state of being selected.

Press RESET key ③ , and the screen returns to the former one without copying.

※ In addition, cycle data and continuous stitching data can be copied by the same method.




## 15. 使用圖案登記鍵



可以頻繁使用的圖案 NO. 登記到圖案登記鍵。用輸入模式，只要按圖案登記鍵就可以選擇被登記的圖案。

### (1) 登記方法




#### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色輸入模式時方，可以登記圖案。背景照明為綠色的縫製模式時，請按準備鍵②  變換為輸入模式。



#### 2) 叫出圖案登記畫面

按想登記圖案的 No. 的鍵 (P1 至 P3)  至  3 秒鐘之後，顯示出圖案登記畫面 A。

#### 3) 選擇圖案 No.

現在可以使用的圖案 NO.B 閃亮顯示，所以按項目選擇鍵⑩  ，選擇想登記的圖案 No.。選擇了垃圾箱之後，登記可以解除。

#### 4) 開始登記

按準備鍵② 之後開始登記，2 秒後返回輸入畫面。按復位鍵③ 之後，不登記返回原來的畫面。

### (2) 購買時的登記狀態

登記鍵 Register key	登記圖案 NO. Registered pattern No.
P1	圖案 NO.1 Pattern No. 1
P2	圖案 NO.2 Pattern No. 2
P3	圖案 NO.3 Pattern No. 3


## 15. Using pattern register key

Register pattern No. which are frequently used with the pattern register key and use them. Patterns which have been registered can be selected by pressing only the pattern register key under the input mode.



### (1) Method of register

#### 1) Set the mode to the input mode.



When the back-light of LCD display ① shows the input mode in blue color, it is possible to register patterns.


When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.

#### 2) Call pattern register screen.


Press key (P1 to P3) ⑳  to  which you desire to register pattern No. for as long as 3 seconds, and pattern register screen A is displayed.


#### 3) Select pattern No.

Pattern No. B which can be used at present flashes on and off in the display. Press ITEM SELECTION key ⑩   , and select the pattern No. you desire to register.

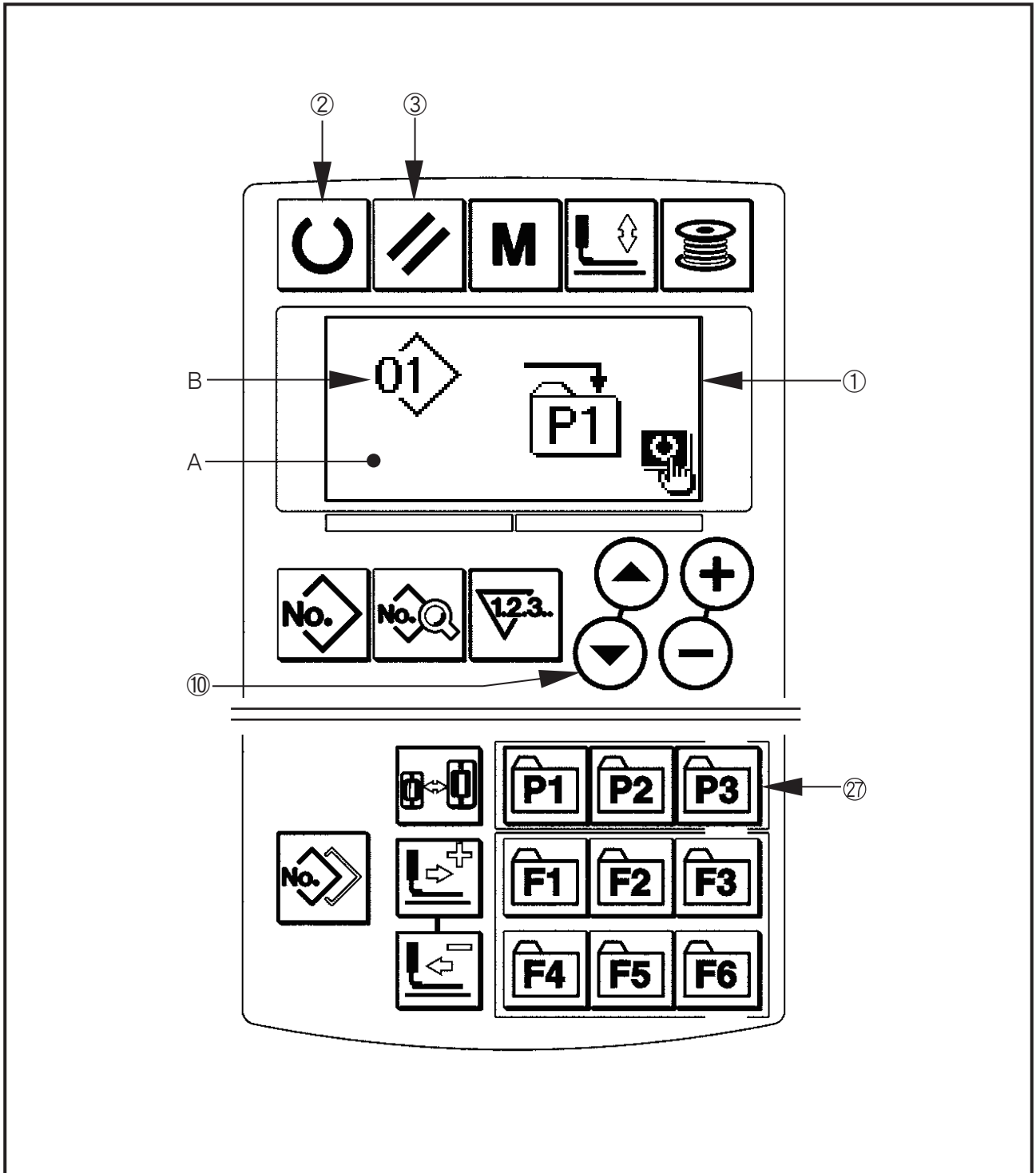
When trash can  is selected, register can be released.

#### 4) Start register.

Press READY key ②  to start register and the screen returns to the input screen after two seconds.

Press RESET key ③  , and the screen returns to the former one without registering.

### (2) Register status at the time of your purchase




## 16. 使用參數登記鍵時



把可以頻繁使用的參數登記到參數登記鍵進行使用。用輸入模式，只要按參數登記鍵就可以選擇被登記的參數。另外，此鍵不僅可以設定參數，還可以登記圖案 No.，因此可以使用與 15. 使用圖案登記鍵同樣的方法進行登記。

### (1) 登記方法




#### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色的輸入模式時，可以登記參數。背景照明為綠色的縫製模式時，請按準備鍵 ②  變換為輸入模式。



#### 2) 叫出參數登記畫面

按想登記參數的鍵 (F1 至 F6) ②  至  3 秒鐘之後，顯示出參數登記畫面 A。

#### 3) 選擇參數

可以登記的登記的專案 B 在鍵上顯示，所以按項目選擇鍵 ⑩  ，選擇想登記的項目。可以登記的專案是縫製資料和記憶體開關 (等級 1) 的參數和圖案 No.。另外，選擇垃圾箱  可以解除登記。

#### 4) 開始登記


按準備鍵 ②  之後，開始登記，2 秒鐘後返回輸入畫面。按復位鍵 ③  之後，不登記返回原來畫面。

## 16. Using parameter register key



Register parameters which are frequently used with parameter register key and use them. Parameters which have been registered can be selected by pressing only the parameter register key under the input mode. In addition, this key can use the same method as that of 15. Using pattern register key since this key can register not only the parameters but also pattern No.

### (1) Method of register




#### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to register parameters. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.



#### 2) Call parameter register screen.

Press key (F1 to F6) ②  to  which you desire to register the parameter for as long as 3 seconds, and parameter register screen A is displayed.

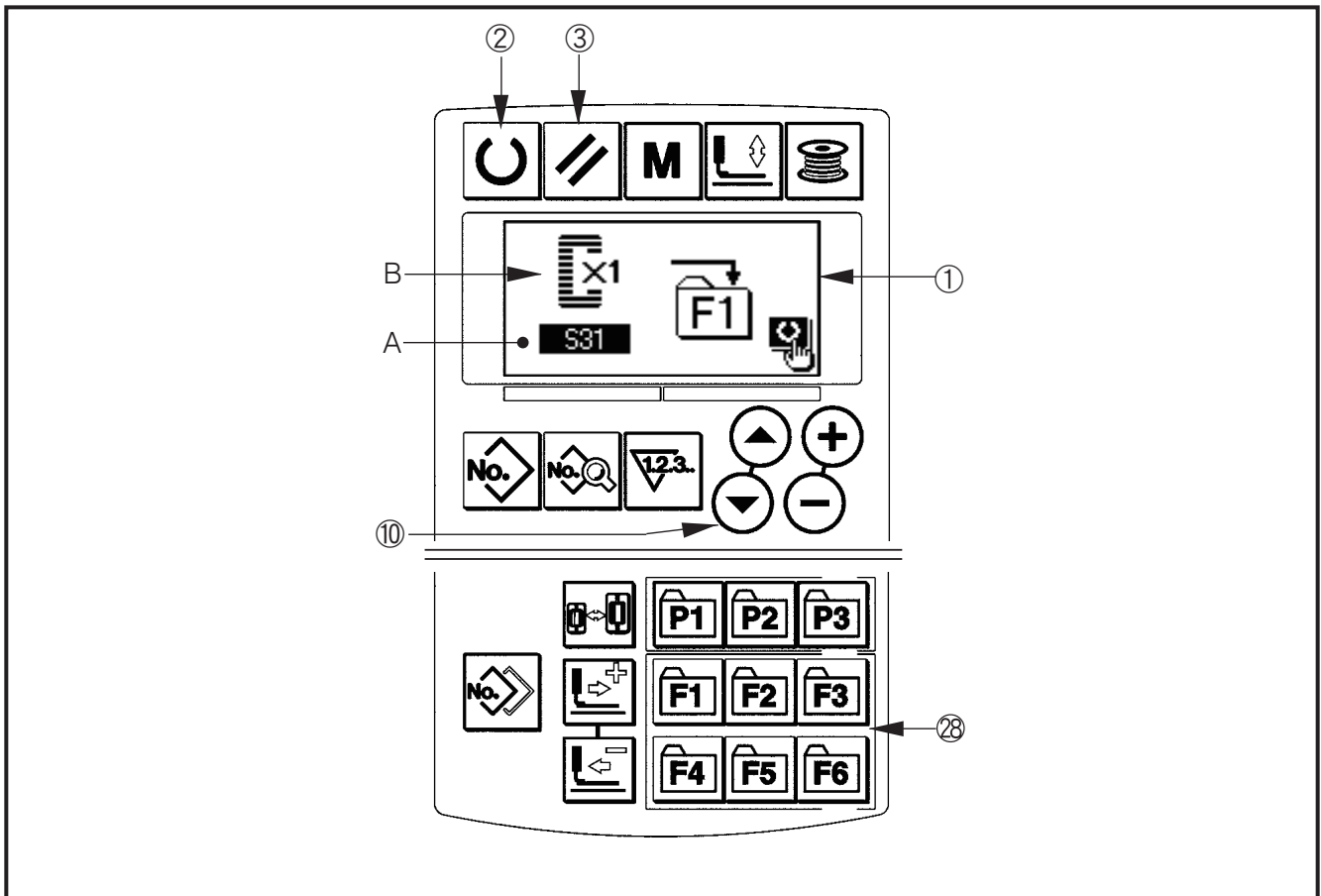
#### 3) Select parameter.

Item B which can be registered with the key flashes on and off. Press ITEM SELECTION key ⑩   to select the item you desire to register. Items which can be registered are sewing data, parameters of memory switches (level 1) and pattern No. In addition, when trash can  is selected, register can be released.

#### 4) Start register.

Press READY key ②  to start register and the screen returns to the input screen after two seconds. Press RESET key ③ , and the screen returns to the former one without registering.





(2) 購買時的登記狀態

(2) Register status at the time of your purchase

登記鍵 Register key	登記參數 Registered parameter	
F1	單重縫／雙重縫的變換 Changeover of single/double stitching	
F2	下縫 OFF/ 次數 Basting (off/number of times)	
F3	設定下縫上線張力 Basting needle thread tension setting	
F4	切布刀複數次動作 無效／有效 Plural motions of cloth cutting knife Ineffective/effective	
F5	切布刀尺寸 Cloth cutting knife size	
F6	設定開始縫上線張力 Setting of needle thread tension at the start of sewing	


## 17. 進行連續縫製時

本縫紉機，可以不提升壓腳，連續縫製複數圖案。在 1 迴圈中最多可以自動地縫製 6 種形狀。另外，最多還可以登記 20 個資料。需要時，請複製之後使用。→請參照 14. 複製縫製圖案的內容。


\* 有的設定條件，需要更換購買時安裝的零件。

### (1)連續縫製資料的選擇


#### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色的輸入模式時，可以選擇連續縫製資料。背景照明為綠色的縫制模式時，請按準備鍵②  變換為輸入模式。


#### 2) 叫出圖案選擇畫面

按圖案 NO. 鍵⑦  之後，顯示出圖案選擇畫面 A。現在被選擇的圖案 NO.B 閃亮顯示。

#### 3) 選擇連續縫製資料

按項目選擇鍵⑩  之後，被登記的圖案按順序變換顯示，最後登記圖案 NO. 之後顯示被登記的迴圈資料 NO.，連續縫製 NO.。在這裡請選擇想縫製的連續縫製資料 NO.。

#### 4) 進行縫製

在連續縫製資料被選擇的狀態，按準備鍵②  之後，液晶顯示①的背景照明變為綠色成為可以縫製的狀態。購買時僅登記了連結資料 NO.，而縫製圖案沒有被輸入，所以不能成為可以縫製的狀態。請參照下頁 (2) 連續縫製資料的編輯方法進行以上的輸入。

## 17. Performing continuous stitching

This sewing machine can perform continuous stitching which is capable of continuously sewing plural sewing pattern data without lifting the presser foot. It is possible to automatically sew up to maximum 6 shapes in one cycle.


In addition, registration of as many as 20 data can be performed. Copy and use the data to fill the needs. → Refer to 14.

Copying sewing pattern


\* It is necessary to change the parts from the state at the time of your purchase according to the setting conditions.

### (1) Selection of continuous stitching data


#### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to select continuous stitching data. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.


#### 2) Call pattern selection screen.

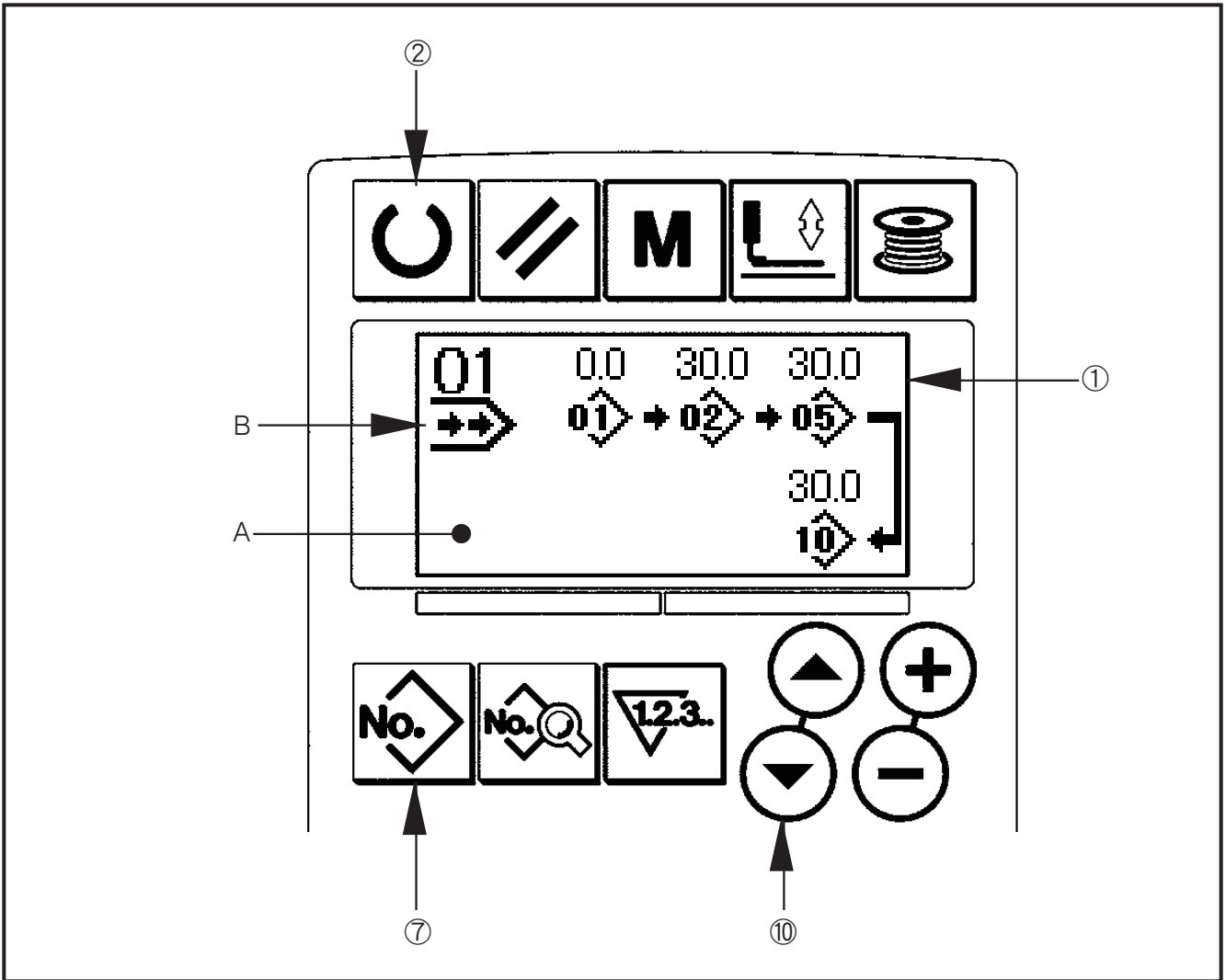
Press PATTERN NO. key ⑦  , and pattern selection screen A is displayed. Pattern No. B which is selected at present flashes on and off.

#### 3) Select continuous stitching.









Press ITEM SELECTION key ⑩  , and patterns which have been registered are changed over and displayed in order. Cycle data No. and continuous stitching data No. which have been registered after the last registered pattern No. are displayed. Here, select the continuous stitching data No. which you desire to sew.

#### 4) Perform sewing.









Press READY key ②  in the state that continuous stitching data is selected, and the back-light of LCD display ① shows green and it is possible to sew. Continuous stitching data No. 1 only has been registered at the time of your purchase. However, sewing status cannot be obtained since the sewing pattern has not been inputted. Perform inputting of sewing pattern referring to (2) Method of editing continuous stitching data on the next page.



## (2) 連續縫製資料的編輯方法

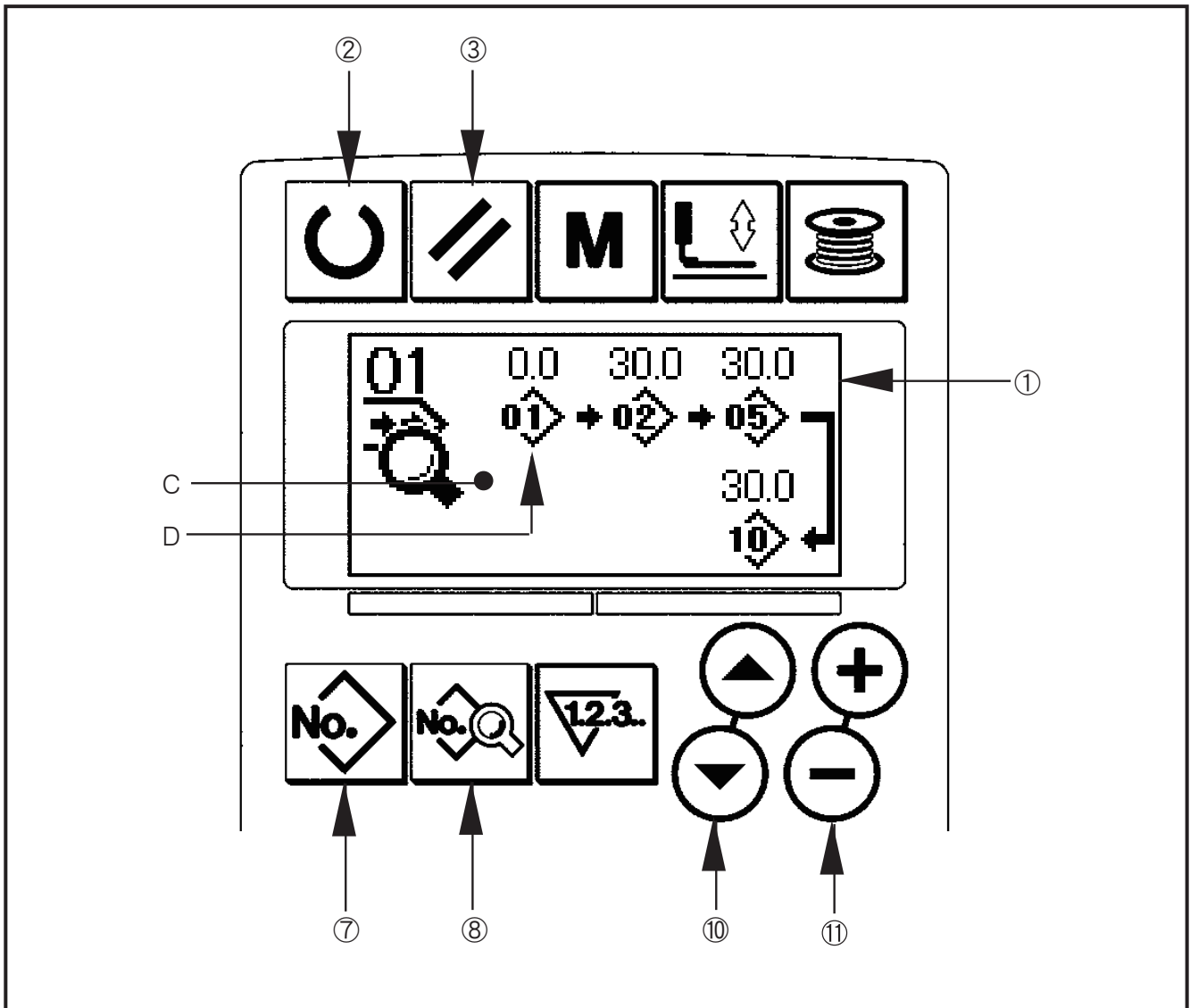
- 1) 設定為輸入模式  
液晶顯示①的背景照明為藍色的輸入模式時，可以輸入連續縫製資料。背景照明為綠色的縫制模式時，請按準備鍵②  變換為輸入模式。
- 2) 叫出編輯的連續縫製資料 NO.  
按圖案 NO. 鍵⑦ ，叫出圖案選擇畫面之後，現在被選擇的圖案 NO.B 閃亮顯示。按項目選擇鍵⑩  之後，被登記的圖案順次變換顯示，最後的登記的圖案 NO. 之後顯示被登記的迴圈資料 NO.，連續縫製 NO.。在這裡請選擇想縫製的連續縫製資料 NO.。
- 3) 把連續縫製資料設定為編輯狀態  
按資料鍵⑧  之後，顯示出連續縫製資料編輯顯示 C，最初縫製的圖案 NO.D 閃亮顯示。在此狀態下可以編輯資料。
- 4) 選擇編輯要點  
按項目選擇鍵⑩  之後，按圖案 NO. → 空送量 → 圖案 NO. → 空送量的順次編輯要點移動顯示。進入到資料的最後編輯要點之後，顯示出追加指示圖示 。
- 5) 變更選擇的編輯要點的資料  
按數據變更鍵⑪  之後，可以變更編輯要點的資料。編輯要點為圖案 NO. 時被登記的圖案 NO. 被顯示成為可以選擇的狀態。編輯要點為空送時在 ±120MM 的範圍內可以編輯數值。另外，按復位鍵③  之後，可以消除編輯要點的圖案資料。請重複步驟 4)，步驟 5)，編輯資料。

## (2) Method of editing continuous stitching data

- 1) Set the mode to the input mode.  
When the back-light of LCD display ① shows the input mode in blue color, it is possible to select continuous stitching data. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.
- 2) Call continuous stitching data No. to edit.  
Press PATTERN No. key ⑦  to call pattern selection screen, and pattern No. B which is selected at present flashes on and off. Press ITEM SELECTION key ⑩ , and patterns which have been registered are changed over and displayed in order. Cycle data No. and continuous stitching data No. which have been registered after the last pattern No. are displayed. Here, select the continuous stitching No. which you desire to sew.
- 3) Set continuous stitching data to editing status.  
Press DATA key ⑧ , and continuous stitching data editing display C appears. Pattern No. D which is sewn first flashes on and off. In this state, it is possible to edit the data.
- 4) Select editing point.  
Press ITEM SELECTION key ⑩ , and editing point moves in order of "pattern No. → jump feed mount → pattern No. → jump feed amount" and flashes on and off. When moving the editing point up to the last data, additional indication pictograph  is displayed.
- 5) Change data of selected editing point.  
Press DATA CHANGE key ⑪ , and data of editing point can be changed.  
When the editing point is at the pattern No. :Pattern No. which has been registered is displayed and it is possible to select.  
When the editing point is at the jump feed :It is possible to edit numerical value within the range of ±120 mm. In addition, press RESET key ③  and the pattern data of editing point can be deleted.  
Repeat steps 4) and 5) to perform editing data.

※ 以上輸入完了，進行連續縫製時，所有的資料應在壓腳尺寸範圍內。因為超過的話，將顯示範圍錯誤，所以請一定正確地輸入壓腳尺寸。→請參照 4. 輸入壓腳類型的內容。

※ Input is completed by the steps above. For the continuous stitching, however, input all data within the range of the presser size. Error message will be shown when the data exceeds the range. Be sure to precisely input the presser size. → Refer to 4. Inputting presser type




## 18. 進行迴圈縫製時


本縫紉機可以順次地縫製複數的迴圈縫製圖案資料。最大可以輸入 15 種圖案，請在縫製物上有複數不一樣的扣眼時使用。另外，最多還可以登記 20 個資料。需要時，請拷貝之後使用。→請參照 14. 複製縫製圖案的內容。

### (1) 迴圈資料的選擇


#### 1) 設定為輸入模式

液晶顯示① 背景照明為藍色輸入模式時，可以選擇迴圈縫資料。背景照明為綠色的縫製模式時，請按準備鍵②  變更為輸入模式。


#### 2) 叫出編輯的迴圈縫資料 NO.

按圖案 NO. 鍵⑦  之後，顯示出圖案選擇畫面 A。現在被選擇的圖案 NO. B 閃亮顯示。

#### 3) 選擇迴圈縫製資料

按項目選擇鍵⑩  之後，被登記的圖案順序地變更顯示，最後登記圖案 NO. 後，顯示被登記的迴圈資料 NO.、連續縫資料 NO.。這時，請選擇想縫製的迴圈資料 NO.。

#### 4) 進行縫製


在迴圈資料被選擇的狀態，按準備鍵②  之後，液晶顯示①的背景照明變為綠色，成為可以縫製的狀態。購買時僅登記了迴圈資料 NO.1，沒有輸入縫製圖案，不能成為縫製狀態。因此，請參照 (2) 迴圈縫資料的編輯方法進行輸入。

## 18. Performing cycle stitching


This sewing machine can perform sewing of plural sewing pattern data in one cycle in the order of the data. Use this stitching when sewing plural different button holes on the sewing product since as many as 15 different kinds of patterns can be inputted. In addition, registration of as many as 20 cycles can be performed. Copy and use the data to fill the needs. → Refer to 14. Copying sewing pattern

### (1) Selection of cycle data


#### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to select cycle data. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.


#### 2) Call pattern selection screen.

Press PATTERN No. key ⑦ , and pattern selection screen A is displayed. Pattern No. B which is selected at present flashes on and off.

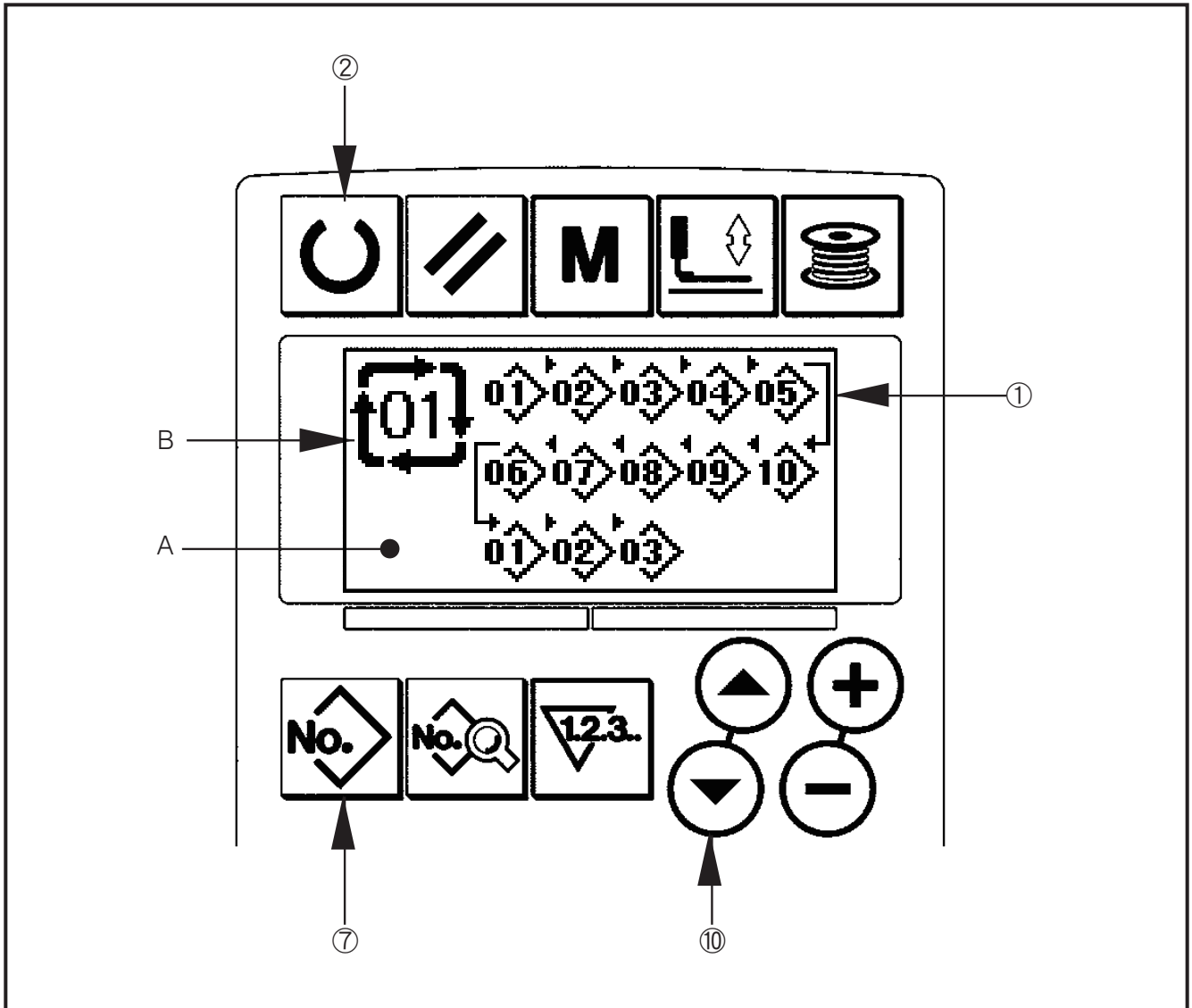
#### 3) Select cycle stitching data.

Press ITEM SELECTION key ⑩  , and patterns which have been registered are changed over and displayed in order. Cycle data No. and continuous stitching data No. which have been registered after the last registered pattern No. are displayed. Here, select the cycle data No. which you desire to sew.

#### 4) Perform sewing.


Press READY key ②  in the state that the cycle data is selected, and the back-light of LCD display ① shows green and it is possible to sew. Cycle data No. 1 only has been registered at the time of your purchase. However, sewing status cannot be obtained since the sewing pattern has not been inputted. Perform inputting of sewing pattern referring to (2) Method of editing cycle data.







## (2) 迴圈縫資料的編輯方法


### 1) 設定為輸入模式

液晶顯示①的背景照明為藍色的輸入模式時，可以輸入迴圈縫資料。背景照明為綠色的縫製模式時，請按準備鍵②  變換為輸入模式

### 2) 叫出編輯迴圈縫資料 NO.

按圖案 NO. 鍵⑦ ，叫出圖案樣選擇畫面之後，現在被選擇的圖案 NO.B 閃亮顯示。按項目選擇鍵⑩  之後，被登記的圖案順次地變換顯示，最後的圖案 NO. 以後，顯示被登記的迴圈縫數據 NO.、連續縫資料 NO.。這裡請選擇想縫製的迴圈縫 NO.。



### 3) 把迴圈縫資料設定為編輯狀態

按資料鍵⑧  之後，變為迴圈縫資料編輯中顯示 C，最初縫製的圖案 NO.D 閃亮顯示。此狀態可以編輯資料。

### 4) 選擇編輯要點


按項目選擇鍵⑩  之後，編輯要點順次移動閃亮。論據最後進入編輯要點之後，顯示出追加指示圖示 。

### 5) 變更選擇的編輯要點的資料



按數據變更鍵⑪  之後，可以變更編輯要點的資料。被登記的圖案 NO. 被顯示出來，可以進行選擇。另外，按復位鍵③  之後，可以刪除編輯要點的圖案資料。請反覆步驟 4)、步驟 5) 進行資料編輯。

## (2) Method of editing cycle data


### 1) Set the mode to input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to input the cycle data. When the back-light is the sewing mode in green color, press READY key ②  to change over to the input mode.



### 2) Call cycle data No. to edit.

Press PATTERN No. key ⑦  to call pattern selection screen, and pattern No. B which is selected at present flashes on and off. Press ITEM SELECTION key ⑩  , and patterns which have been registered are changed over and displayed in order. Cycle data No. and continuous stitching data No. which have been registered after the last registered pattern No. are displayed. Here, select the cycle data No. which you desire to sew.



### 3) Set cycle data to editing status.

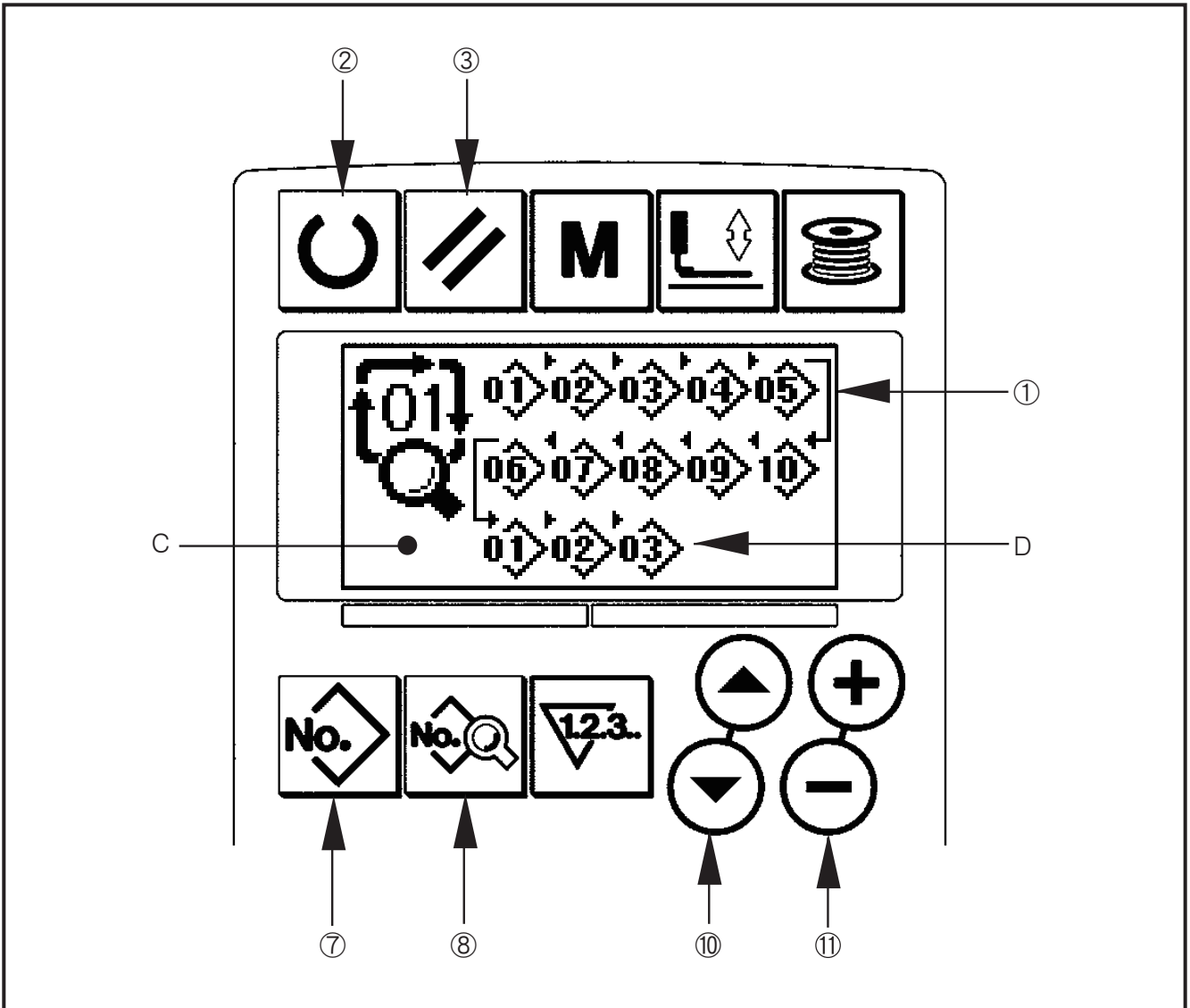
Press DATA key ⑧  , and cycle data editing display C appears. Pattern No. D which is sewn first flashes on and off. In this state, it is possible to edit the data.

### 4) Select editing point.

Press ITEM SELECTION key ⑩  , and editing point moves in order and flashes on and off. When moving the editing point up to the last data, additional indication pictograph  is displayed.

### 5) Change data of selected editing point.

Press DATA CHANGE key ⑪  and data of editing point can be changed. Pattern No. which has been registered is displayed and it is possible to select. In addition, press RESET key ③  , and the pattern data of editing point can be deleted. Repeat steps 4) and 5) to perform editing data.




## 19. 切刀數次動作的說明







本縫紉機安裝的切刀尺寸由操作盤來進行設定，自動地讓切刀進行數次動作，因此可以縫製比切刀尺寸大的扣眼。不更換切刀而要縫製各種各樣的形狀時，請設定之後使用。

### (1)切刀數次動作的設定






#### 1) 設定為輸入模式

液晶顯示 ① 背景照明為藍色輸入模式時，可以選擇迴圈縫資料。背景照明為綠色的縫製模式時，請按準備鍵 ②  變更為輸入模式。


#### 2) 輸入切布刀尺寸

按模式鍵④ ，顯示出記憶體開關資料（等級 1）編輯畫面 A。按項目選擇鍵⑩  ，叫出  布切刀尺寸 B。然後用資料變更鍵⑪   設定安裝的切刀尺寸 C。詳細內容請參照 21. 記憶體開關資料一覽表。

#### 3) 把布切刀數次動作設定為有效

接著，再次按項目選擇鍵⑩  ，叫出  布切刀數次動作功能 D。然後用資料變更鍵⑪   把切刀數次動作設定為有效狀態。詳細內容請按照 21. 記憶體開關資料一覽表。

#### 4) 進行縫製

按準備鍵 ②  之後，液晶顯示 ① 的背景照明變為綠色，成為可以縫製的狀態。此時，S02 布切刀長度被上述設定為 U18 布切刀尺寸以上之後，自動地進行數次動作。


※ 如果縫製比安裝的切刀尺寸小的扣眼的話，將顯示錯誤 489。

## 19. Explanation of plural motions of knife







This sewing machine can automatically actuate the knife plural times and sew a buttonhole larger than the size of knife by setting the size of knife attached from the operation panel. Set and use this function when sewing various sewing shapes without replacing the knife.

(1) Setting of plural motions of knife






### 1) Set the mode to the input mode.

When the back-light of LCD display ① shows the input mode in blue color, it is possible to edit the memory switch data. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.


### 2) Input the size of cloth cutting knife

Press MODE key ④  to display memory switch data (level 1) edit screen A. Press ITEM SELECTION key ⑩   to call  Cloth cutting knife size B. Then set size C of knife attached with DATA CHANGE key ⑪  . → For the details, refer to 21. Memory switch data list.

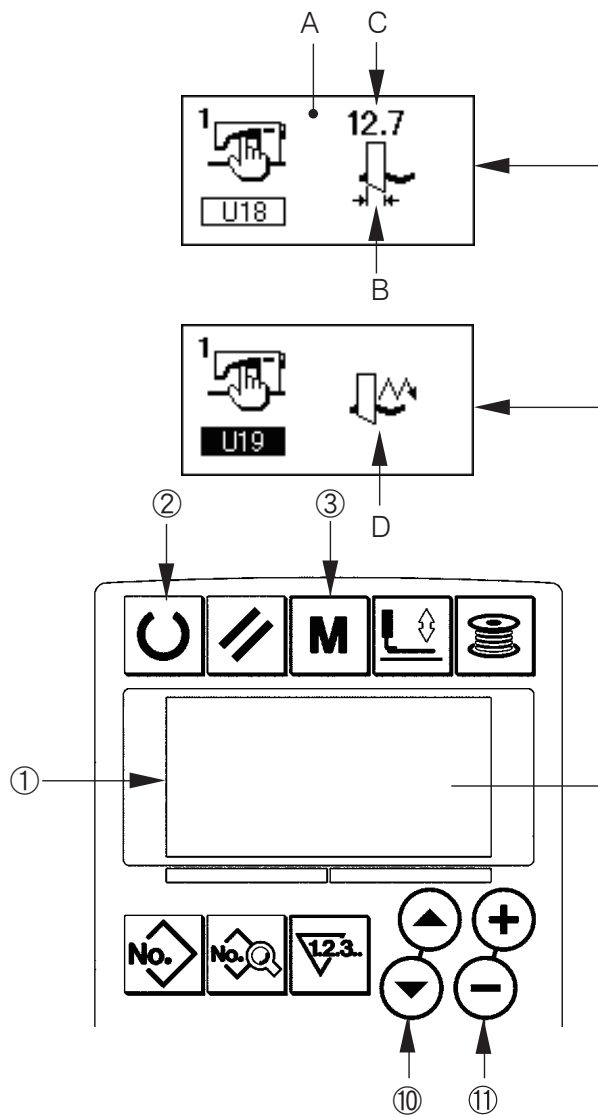
### 3) Set the function of the plural motions of cloth cutting knife to effective.

Next, press again ITEM SELECTION key ⑩   to call  Function of the plural motions of cloth cutting knife D. Then set the plural motions of cloth cutting knife to the effective status with DATA CHANGE key ⑪  . For the details, refer to 21. Memory switch data list.

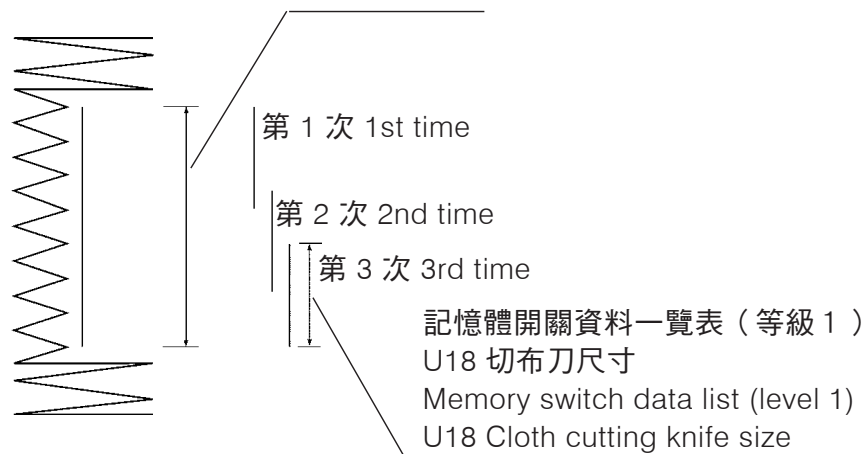
### 4) Perform sewing.

Press READY key ②  , and the back-light of LCD display ① becomes green. Then it is possible to sew. At this time, when S02 Cloth cutting length is set to a size larger than U18 Cloth cutting knife size which has been set above, the plural motions of knife is automatically performed for sewing.

※ If a buttonhole smaller than the size of knife attached is desired to be sewn, error 489 will be displayed.




縫製數據 S02 切布長度  
Sewing data S02 Cloth cut length




## 20. 記憶體開關資料的變更方法

### 1) 設定輸入模式

液晶顯示①的背景照明為藍色的輸入模式時，記憶體開關資料可以進行變更。背景照明為綠色的縫製模式時，請按準備鍵②  變換成輸入模式。







### 2) 叫出記憶體開關資料編輯畫面

按模式鍵④  之後，顯示出記憶體開關資料（等級 1）編輯畫面 A。再繼續按 3 秒鐘之後，顯示出記憶體開關資料（等級 2）編輯畫面 B。

### 3) 選擇變更的記憶體開關資料

按項目選擇鍵⑩  ，選擇想變更的資料項目。


### 4) 變更數據

記憶體開關資料中，有變更數值的資料項目和選擇的資料項目。變更數值的項目標有  那樣的 NO.，用變更數據鍵⑪  ，可以增減變更設定值。選擇圖示的資料項目有  那樣的 NO.，用變更數據鍵⑪  ，可以選擇圖示。→ 記憶體開關資料的詳細內容，請參照


21. 存儲器開關資料一覽表。

## 20. Method of changing memory switch data

### 1) Set the mode to input mode.



When the back-light of LCD display ① shows the input mode in blue color, it is possible to change the memory switch data. When the back-light shows the sewing mode in green color, press READY key ②  to change over to the input mode.

### 2) Call memory switch data edit screen.







Press MODE key ④  , and memory switch data (level 1) edit screen A is displayed.

Further hold pressing the key for 3 seconds, and memory switch data (level 2) edit screen B is displayed.

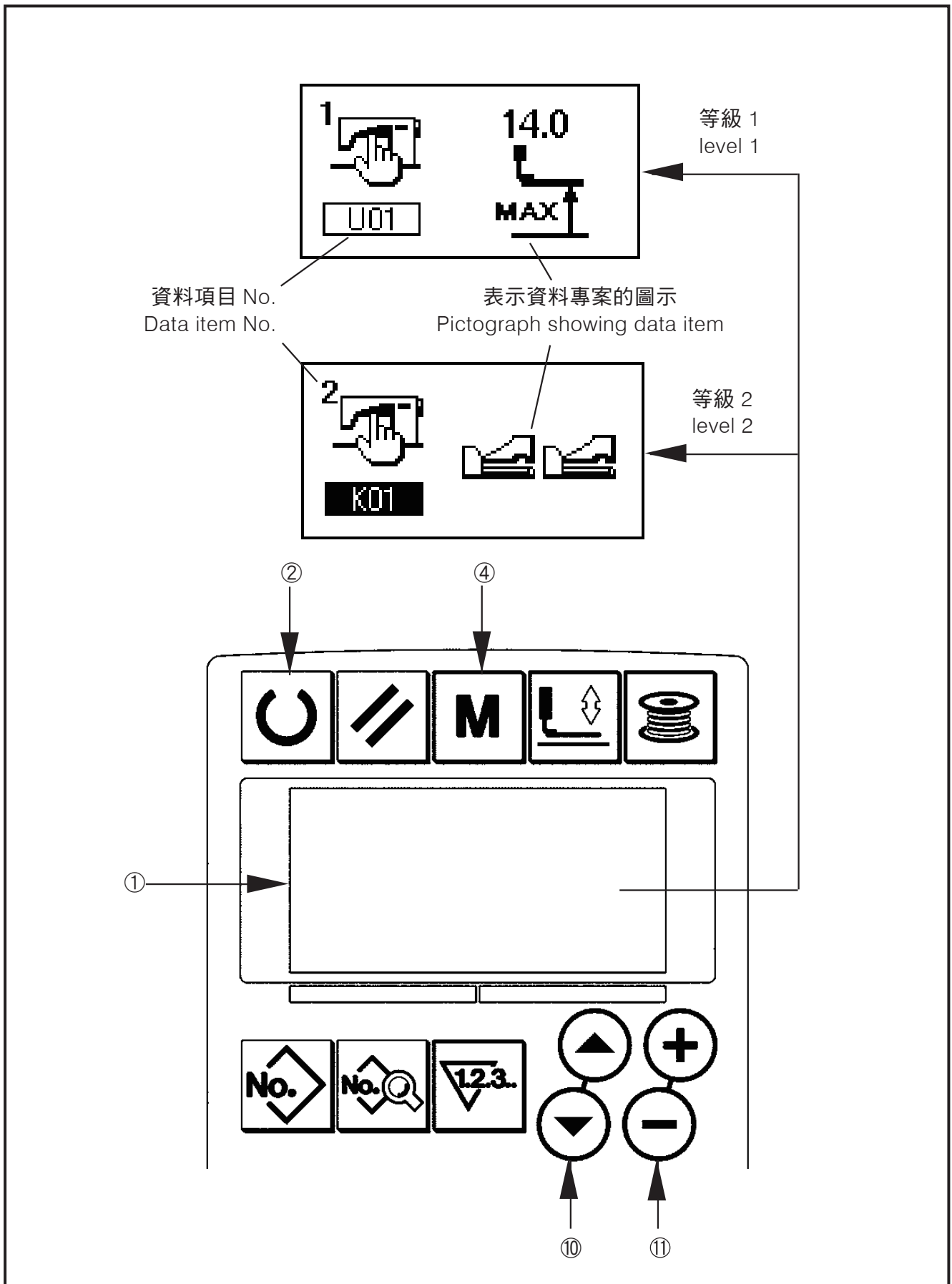
### 3) Select memory switch data to change.

Press ITEM SELECTION key ⑩   and select the data item which you desire to change.

### 4) Change data.

There are one data item to change the numerical value and the other data item to select the pictograph in the memory switch data.No. such as  is attached to the data item to change the numerical value. Set value can be changed by increasing → decreasing the value with DATA CHANGE key ⑪   .No. such as  is attached to the data item to select the pictograph. Pictograph can be selected with DATA CHANGE key ⑪   . → For the details of memory switch data, refer to 21. Memory switch data list.





## 21. 記憶體開關資料一覽表
















### (1)等級 1

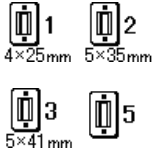



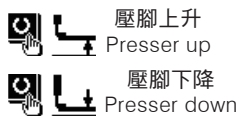


☆記憶體開關資料（等級 1）是縫紉機通用的動作資料，是所有的縫製圖案通用的資料。

## 21. Memory switch data list

### (1) Level 1

☆ Memory switch data (level 1) are the motion data that the sewing machine has in common and the data that operate on all sewing patterns in common.

No.	項目 Item	設定範圍 Setting range	編輯單位 Edit unit	初期值 Initial value
U01	<ul style="list-style-type: none"> <li>壓腳提升最高位置 設定踏板動作的最高位置的高度。</li> <li>Presser lifter maximum position Height of maximum position of pedal operation is set.</li> </ul> 	0 ~ 17.0	0.1mm	14.0mm
U02	<ul style="list-style-type: none"> <li>壓腳提升中間位置 設定踏板動作的中間位置的高度。</li> <li>Presser lifter intermediate position Height of intermediate position of pedal operation is set.</li> </ul> 	0 ~ 14.0	0.1mm	6.0mm
U03	<ul style="list-style-type: none"> <li>壓腳提升布安放位置 設定踏板動作的布安放位置的高度。</li> <li>Presser lifter cloth setting position Height of cloth setting position of pedal operation is set.</li> </ul> 	0 ~ 14.0	0.1mm	0.0mm
U04	<ul style="list-style-type: none"> <li>雙踏板的踩入位置 (%) 設定雙踏板時的操作感覺。 詳細內容參照下列內容。</li> <li>Pedal toe down position of 2-pedal (%) Operation feeling at the time of 2-pedal is set. Refer to the item below.</li> </ul> 	5 ~ 95	1%	80%
U05	<ul style="list-style-type: none"> <li>雙踏板的壓腳提升上升位置 (%) 設定雙踏板時的操作感覺。</li> <li>Lifting position of presser foot of 2-pedal (%) Operation feeling at the time of 2-pedal is set.</li> </ul> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>踏板的踩入量 Pedal toe down amount</p>  <p>U04 雙踏板的踩入位置 (%) U04 Pedal toe don position of 2-pedal (%)</p> </div> <div style="text-align: center;"> <p>壓腳上升量 Presser lifting amount</p>  <p>U01 壓腳上升最高位置 U01 Presser lifter maximum position</p>  <p>U05 雙踏板的壓腳提升上升位置 (%) U05 Lifting position of presser foot of 2-pedal (%)</p> </div> </div>	5 ~ 95	1%	50%
U06	<ul style="list-style-type: none"> <li>縫製結束上線張力的設定</li> <li>Needle thread tension at sewing end setting</li> </ul> 	0 ~ 200	1	35
U07	<ul style="list-style-type: none"> <li>切線時的上線面張力的設定</li> <li>Needle thread tension at thread trimming setting</li> </ul> 	0 ~ 200	1	35
U08	<ul style="list-style-type: none"> <li>縫合下縫的上線張力的設定</li> <li>Needle thread tension of basting for sewing together setting</li> </ul> 	0 ~ 200	1	60
U09	<ul style="list-style-type: none"> <li>軟起動速度的設定 第 1 針</li> <li>Soft-start speed setting 1st stitch</li> </ul> 	400 ~ 4200	100sti/min	800sti/min
U10	<ul style="list-style-type: none"> <li>軟起動速度的設定 第 2 針</li> <li>Soft-start speed setting 2nd stitch</li> </ul> 	400 ~ 4200	100sti/min	800sti/min
U11	<ul style="list-style-type: none"> <li>軟起動速度的設定 第 3 針</li> <li>Soft-start speed setting 3rd stitch</li> </ul> 	400 ~ 4200	100sti/min	2000sti/min
U12	<ul style="list-style-type: none"> <li>軟起動速度的設定 第 4 針</li> <li>Soft-start speed setting 4th stitch</li> </ul> 	400 ~ 4200	100sti/min	3000sti/min
U13	<ul style="list-style-type: none"> <li>軟起動速度的設定 第 5 針</li> <li>Soft-start speed setting 5th stitch</li> </ul> 	400 ~ 4200	100sti/min	4000sti/min


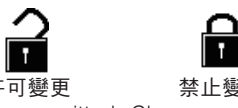

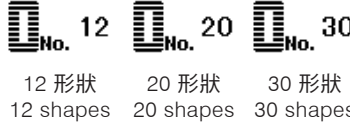
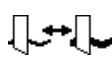




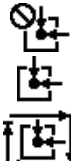
No.	項目 Item	設定範圍 Setting range	編輯單位 Edit unit	初期值 Initial value
U14	<ul style="list-style-type: none"> <li>壓腳種類 請設定壓腳的種類。→ 參照 4. 輸入壓腳類型</li> <li>Kind of presser Set the kind of the presser. → 4. Inputting presser type</li> </ul> 	—	—	1 型 (1790S・1792K) 5 型 (1795S) Type 1 (1790S・1792K) Type 5 (1795S)
U15	<ul style="list-style-type: none"> <li>壓腳尺寸寬度 U14 壓腳類型設定為 5 型後請輸入壓腳的寬度。</li> <li>Presser size width When type 5 of U14 Kind of presser is set, input the width of the presser.</li> </ul> 	3.0 ~ 10.0	0.1mm	3.0mm (1790S・1792K) 5.0mm (1795S)
U16	<ul style="list-style-type: none"> <li>壓腳尺寸長度 U14 壓腳類型設定為 5 型後，請輸入壓腳的長度。</li> <li>Presser size length When type 5 of U14 Kind of presser is set, input the length of the presser.</li> </ul> 	10.0 ~ 120.0	0.5mm	10.0mm (1790S)
U17	<ul style="list-style-type: none"> <li>縫製開始位置（送布方向） 設定與壓腳相對的縫製開始位置。 根據布層想調整開始位置時進行設定。</li> <li>Sewing start position (Feed direction) Sewing start position in terms of presser is set. Set this item when starting position is desired to be shifted due to overlapped section or the like.</li> </ul> 	2.5 ~ 110.0	0.1mm	2.5mm
U18	<ul style="list-style-type: none"> <li>切布刀尺寸 請輸入使用的切刀尺寸。</li> <li>Cloth cutting knife size Input knife size used.</li> </ul> 	3.0 ~ 32.0	0.1mm	32.0mm
U19	<ul style="list-style-type: none"> <li>切布刀數次切布動作機能的無效/有效</li> <li>Function of plural motions of cloth cutting knife Ineffective/effective</li> </ul> 	—	—	無效 Ineffective
U20	<ul style="list-style-type: none"> <li>切線檢測功能 無效/有效</li> <li>Function of thread breakage detection Ineffective/effective</li> </ul> 	—	—	有效 Effective
U21	<ul style="list-style-type: none"> <li>準備鍵 ON 時壓腳位置的選擇（上/下） 設定按了準備鍵後的壓腳位置。</li> <li>Selection of presser position at the time of ON of READY key (Up/Down) Presser foot position when READY key is pressed is set.</li> </ul> 	—	—	壓腳上升 Presser Up
U22	<ul style="list-style-type: none"> <li>迴圈縫製結束時壓腳位置的選擇（上位置/下位置） 設定 1 迴圈縫製結束之後的壓腳位置。 （僅在單踏板設定時有效）</li> <li>Selection of the position of presser foot at the time of the end of sewing (Up/Down) This item sets the position of presser foot at the time of the end of sewing. (Effective only at the time of 1-pedal settin)</li> </ul> 	—	—	壓腳上升 Presser Up
U23	<ul style="list-style-type: none"> <li>上線切線動作開始的距離 輸入從開始縫製到上線切刀開始張開動作為止的距離。</li> <li>Needle thread trimming motion start distance Distance from the start of sewing to the start of needle thread trimmer release motion is inputted.</li> </ul> 	0 ~ 15.0	0.1mm	1.0mm
U24	<ul style="list-style-type: none"> <li>底線切線動作開始的距離 輸入從開始縫製到底線切刀開始張開動作為止的距離。</li> <li>Bobbin thread trimming motion start distance Distance from the start of sewing to the start of bobbin thread trimmer release motion is inputted.</li> </ul> 	0 ~ 15.0	0.1mm	1.5mm
U25	<ul style="list-style-type: none"> <li>更新計數單位 設定更新縫製計數的單位。</li> <li>Counter updating unit Unit to update sewing counter is set.</li> </ul> 	1 ~ 30	1	1
U26	<ul style="list-style-type: none"> <li>總針數 不顯示 / 顯示</li> <li>Total number of stitches Non-display/Display</li> </ul> 	—	—	不顯示 Non-display


(2)等級 2

☆持續 3 秒鐘按模式開關，變成可以編輯的狀態。

(2) Level 2

☆ Press MODE switch for as long as three seconds and it is possible to edit.

No.	項目 Item	設定範圍 Setting range	編輯單位 Edit unit	初期值 Initial value
K01	<ul style="list-style-type: none"> <li>踏板選擇 設定踏板的類型。 → 參照 3. 踏板的操作方法</li> <li>Pedal selection Pedal type is set. → 3. How to use the pedal</li> </ul> 	—	—	雙踏板 2-pedal
K02	<ul style="list-style-type: none"> <li>參數設定變更 許可／禁止 設定禁止縫製資料、記憶體開關資料的變更。</li> <li>Parameter setting change Permitted/Prohibited Prohibition of change of sewing data and memory switch data is set.</li> </ul> 	—	—	變更許可 Change permitted
K03	<ul style="list-style-type: none"> <li>禁止選擇壓種類之機能 許可／禁止 U04 設定禁止壓腳種類的變更。</li> <li>Function of prohibition of selection of kind of presser Permitted/Prohibited Prohibition of change of U14 Kind of presser is set.</li> </ul> 	—	—	變更許可 Change permitted
K04	<ul style="list-style-type: none"> <li>縫製形狀選擇等級 可以擴大可以縫製的縫製形狀數。 (最大 30 種形狀)</li> <li>Sewing shape selection level Number of sewing shapes which can be sewn can be increased. (Max. 30 shapes)</li> </ul> 	—	—	12 形狀 12 shapes
K05	<ul style="list-style-type: none"> <li>切布匹刀動力 設定切布刀的輸出動力。 0：最小動力→ 3：最大動力</li> <li>Cloth cutting knife power Output power of cloth cutting knife is set. 0：Min. power / 3：Max. power</li> </ul> 	0 ~ 3	1	1
K06	<ul style="list-style-type: none"> <li>機種選擇 設定縫紉機頭部的類型。 0：標準型 1：幹式</li> <li>Selection of machine type Type of sewing machine head is set. 0：Standard type 1：Dry head type</li> </ul> 	0 ~ 1	1	0 (標準型) 0 (Standard type)
K07	<ul style="list-style-type: none"> <li>最大縫製轉速的設定 設定縫紉機的最高轉速。 K06 機種選擇為幹式時，最高轉速自動被限制為 3300sti/min。</li> <li>Max. speed limitation speed setting Max. speed of sewing machine can be limited. When K06 Selection of machine type is set to dry head type, max. speed is automatically limited to 3,300 sti/min.</li> </ul> 	400 ~ 4200	100sti/min	3600sti/min
K08	<ul style="list-style-type: none"> <li>上線張力偏差補正 全面補正上線張力的輸出值。</li> <li>Compensation of unsteady needle thread tension Output value of needle thread tension is wholly offset and compensated.</li> </ul> 	-30 ~ 30	1	0
K09	<ul style="list-style-type: none"> <li>上線張力變更值輸出時間 變更了上線張力有關的資料後， 僅在設定時間內輸出變更值。</li> <li>Output time of needle thread tension changed value When data related to needle thread tension is changed, the changed value is output as long as the set-up time.</li> </ul> 	0 ~ 20	1s	0s
K10	<ul style="list-style-type: none"> <li>每次基準點檢索機能 縫製結束後或者迴圈縫結束後，進行原點檢索。</li> <li>Function of origin retrieval each time Origin retrieval is performed after completion of sewing or completion of cycle.</li> </ul> 	—	—	無 Without

No.	項目 Item	設定範圍 Setting range	編輯單位 Edit unit	初期值 Initial value	
K11	<ul style="list-style-type: none"> <li>•倒轉針提升 允許/禁止</li> <li>•U01 壓腳提升最高位置被設定為 14.0mm 以上時，自動地倒轉針提升，縫紉機停機。也可以設定禁止此動作。</li> <li>•Needle up by reverse run Permitted/Prohibited</li> <li>•When U01 Presser lifter maximum position is set to 14.0 mm or more, motion of needle up by reverse run is automatically performed and the machine stops. Prohibition of the motion can be set.</li> </ul>	 許可倒轉針提升 Needle up by reverse run prohibited  禁止倒轉針提升 Needle up by reverse run permitted	—	—	允許 Permitted
K12	<ul style="list-style-type: none"> <li>•設定切刀電磁下降時間</li> <li>•Knife solenoid lowering time setting</li> </ul>		25 ~ 100	5ms	35
K13	<ul style="list-style-type: none"> <li>•設定切刀電磁上升時間</li> <li>•Knife solenoid lifting time setting</li> </ul>		5 ~ 100	5ms	15
K14	<ul style="list-style-type: none"> <li>•切刀缸筒下降時間 (選購)</li> <li>•Knife cylinder lowering time (Optional)</li> </ul>		5 ~ 300	5ms	50
K15	<ul style="list-style-type: none"> <li>•Y 送布馬達基準點補正</li> <li>•Y-feed motor origin compensation</li> </ul>		-120 ~ 400	1 脈衝 (0.025mm) 1pulse (0.025mm)	0
K16	<ul style="list-style-type: none"> <li>•針擺動馬達基準點補正</li> <li>•Needle-rocking motor origin compensation</li> </ul>		-10 ~ 10	1 脈衝 (0.05mm) 1pulse (0.05mm)	0
K17	<ul style="list-style-type: none"> <li>•壓腳提升馬達基準點補正</li> <li>•Presser lifter motor origin compensation</li> </ul>		-100 ~ 10	1 脈衝 (0.05mm) 1pulse (0.05mm)	0
K18	<ul style="list-style-type: none"> <li>•縫製模式下的圖案選擇功能 無效/有效</li> <li>•Pattern selection function under sewing mode Ineffective/effective</li> </ul>	 無效 Ineffective run  有效 Effective	—	—	無效 Ineffective
K19	<ul style="list-style-type: none"> <li>•連續縫製途中切線 允許/禁止</li> <li>•Thread trimming on the way in continuous stitching Permitted/Prohibited</li> </ul>	 允許 Permitted  禁止 Prohibited	—	—	允許 Permitted
K20	<ul style="list-style-type: none"> <li>•切布刀返回動力</li> <li>•設定切部刀返回時的輸出動力。</li> <li>•Cloth cutting knife return power</li> <li>This item sets output power at the time of returning the cloth cutting knife.</li> </ul>		0 ~ 3	1	0
K21	<ul style="list-style-type: none"> <li>•縫製開始底線切線剪的開放量</li> <li>•設定縫製開始底線切線剪的開放量。</li> <li>•Release amount of bobbin thread trimmer at the start of sewing</li> <li>This item sets the amount of releasing the bobbin thread trimmer at the start of sewing.</li> </ul>		0 ~ 15	1 脈衝 1pulse	8
K22	<ul style="list-style-type: none"> <li>•壓腳提升速度</li> <li>•設定壓腳提升速度。</li> <li>•Presser lifter speed</li> <li>This item sets presser lifter speed.</li> </ul>		1 ~ 3	—	2
K51	<ul style="list-style-type: none"> <li>•上線切線調整模式開始</li> <li>•用準備鍵 ON 開始上線切線動作的調整。</li> <li>•Needle thread trimming adjustment mode start</li> <li>Needle thread trimming adjustment motion starts with READY key ON.</li> </ul>		—	—	—
K52	<ul style="list-style-type: none"> <li>•底線切線調整模式開始</li> <li>•用準備鍵 ON 開始底線切線動作的調整。</li> <li>•Bobbin thread trimming adjustment mode start</li> <li>Bobbin thread trimming adjustment motion starts with READY key ON.</li> </ul>		—	—	—
K53	<ul style="list-style-type: none"> <li>•感測器確認模式開始</li> <li>•用準備鍵 ON 開始確認感測器。</li> <li>•Sensor check mode start</li> <li>Sensor check starts with READY key ON.</li> </ul>		—	—	—

## VI . 維修

1. 機針 A 和旋梭的同步調整  
機針和旋梭的同步調節，請在機針落到針板孔的中央時調整。
- (1) 針桿高度
  - 1) 把針桿降到最下點。
  - 2) 把同步尺 [1] A 的部分如圖所示插入針板和針桿下端之間，針桿碰到規尺。
  - 3) 鬆開針桿套管固定螺絲①，決定針桿高度。

## VI . MAINTENANCE

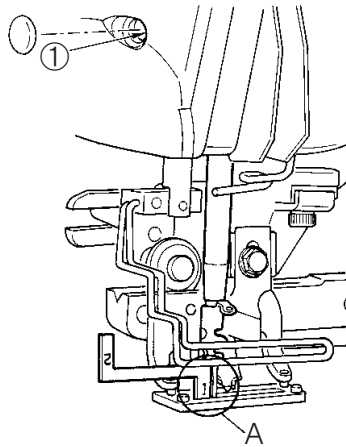
1. Adjusting the needle-to-hook relation  
Adjust the needle-to-hook relation when the needle enters the center of the needle hole in the throat plate.
- (1) Needle bar height
  - 1) Bring down the needle bar to the lowest point.
  - 2) Insert the part [1] A of timing gauge into the gap between the bottom end of needle bar and throat plate, where the bottom end of the needle bar touches the top of the part [1] A of the timing gauge.
  - 3) Loosen needle bar connection screw ①, and adjust the height of the needle bar.



### 注意 CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

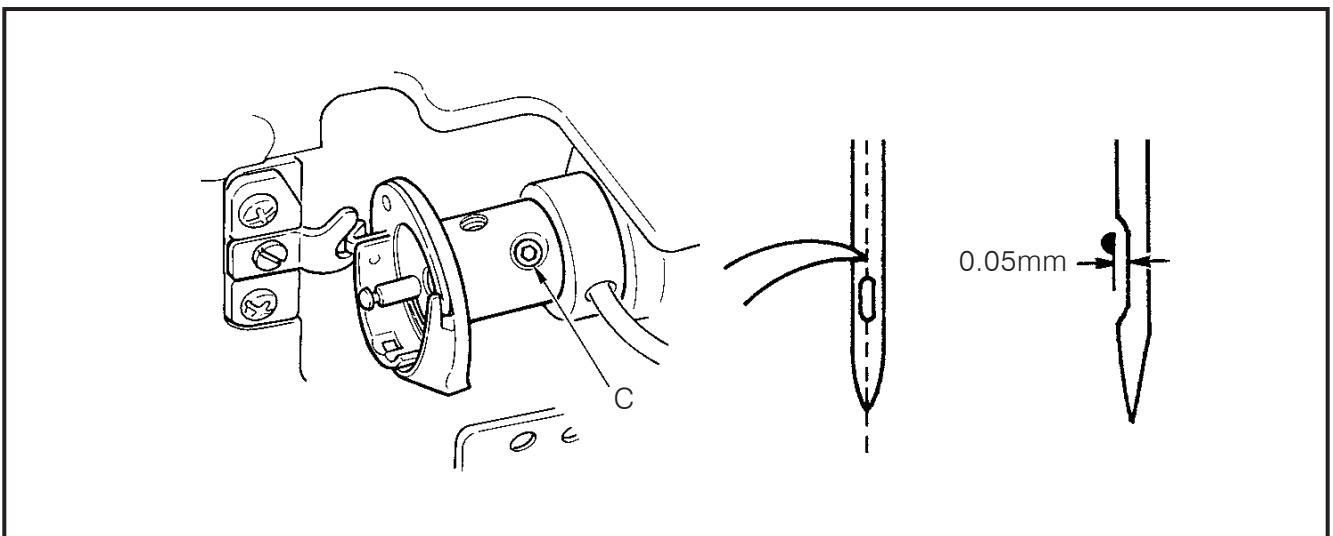
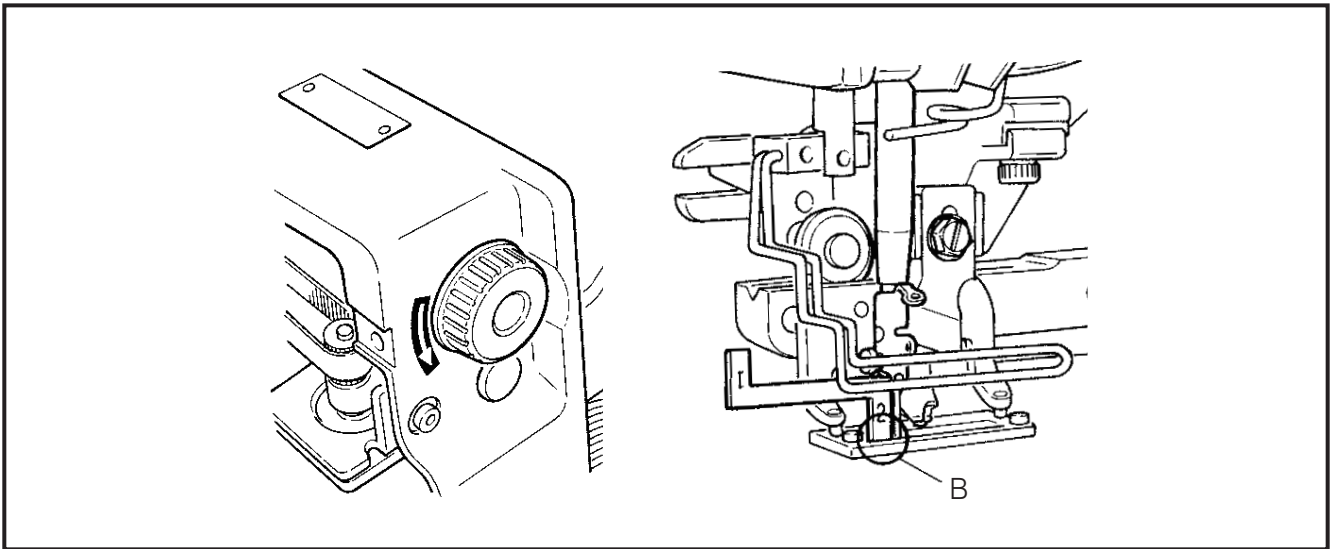
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



- (2) 機針和旋梭的同步
  - 1) 按正規的轉動方向轉動手轉動輪，讓機針從最下點開始上升。
  - 2) 把同步規尺 [2] B 的部分插入針板和針桿下端之間，讓針桿頂到規尺。
  - 3) 鬆開軸套固定螺絲 C，把旋梭尖調整到機針的中心。此時，機針與旋梭尖之間的間隙為 0.05MM。

- (2) Set the needle to hook relation in the following way
  - 1) Rotate the hand pulley in the correct direction until the needle starts to go up from its lowest point.
  - 2) Insert the part [2] B of the timing gauge into the gap between the bottom end of the needle bar and the throat plate, where the bottom end of the needle bar touches the top of the part [2] B of the timing gauge.
  - 3) Loosen setscrew C of the hook sleeve, and align blade point of the sewing hook with the center of needle hole. Make adjustment so that a clearance of approx. 0.05 mm is provided between the needle and the blade point of the hook.



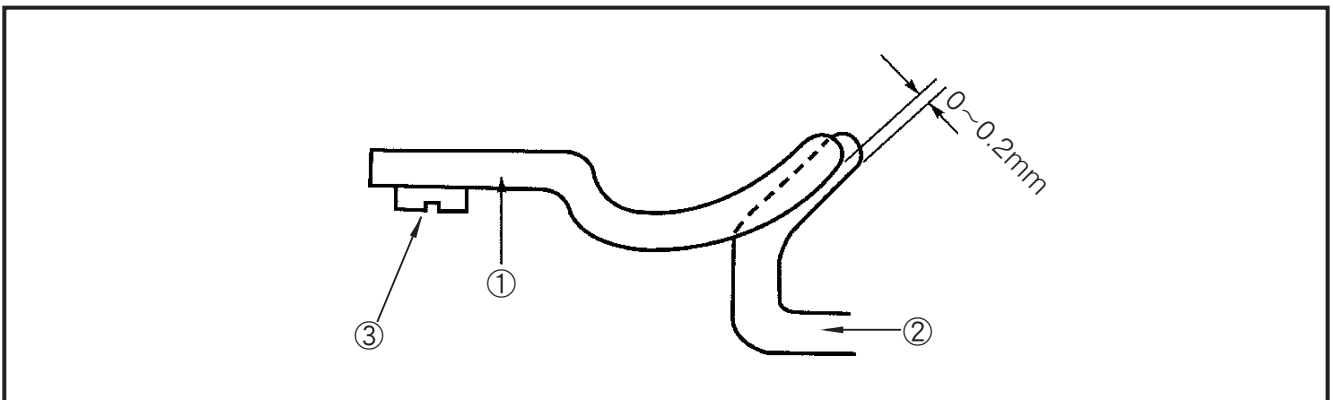


(3) 內旋梭的固定調整

用固定螺絲③把內旋梭固定器①的前端和內旋梭②的端面的咬合調整為 0 ~ 0.2mm。

(3) Adjusting the bobbin case positioning stopper

Adjust with setscrew ③ so that the contact of the top end of bobbin case positioning stopper ① and the end of inner hook ② is 0 to 0.2 mm.



## 2. 上線切線的調整

### (1) 上線切刀的切線力的調整

上線切刀切線力不穩定的話，始縫時上線容易跳線。

- 1) 上線切線力弱時，鬆開螺絲①，卸下上線切刀②。
- 2) 用手把壓線彈簧前端輕輕弄彎，把壓線彈簧③和上切刀④的接觸間隙調整為沒有間隙。

## 2. Adjusting the needle thread trimmer

### (1) Adjusting the thread grasping force of the needle thread trimmer

If the needle thread trimmer fails to provide consistent thread grasping force, the needle thread can slip off at the beginning of sewing.

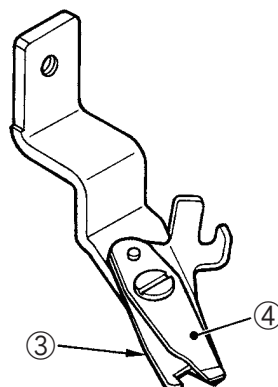
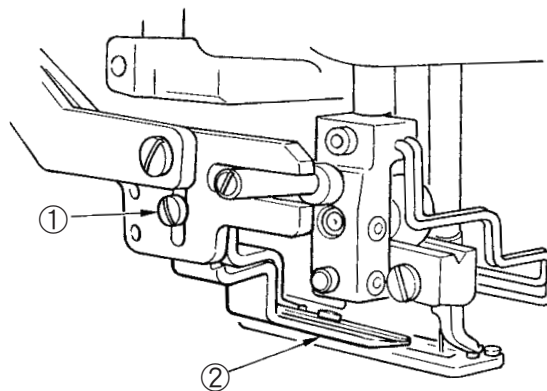
- 1) If the thread grasping force of the needle thread trimmer has reduced, loosen setscrews ① and detach needle thread trimmer ②.
- 2) Slightly bend the top end of thread presser spring ③ so that it comes in contact with thread trimming blade of upper knife ④ over the length with no clearance and so that the needle thread trimmer securely holds the thread regardless of the position of the thread trimming blade at which the thread is trimmed.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



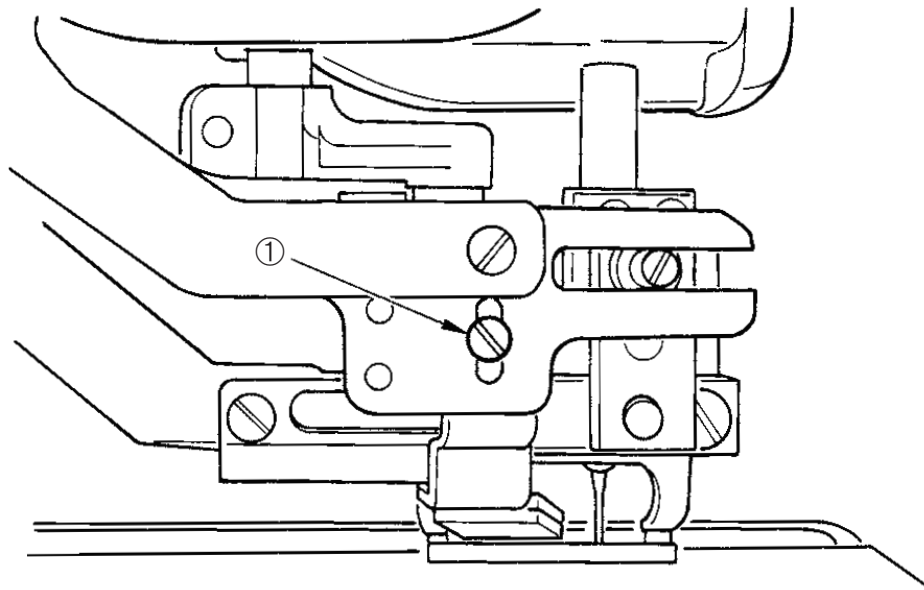
## (2) 上切刀的安裝高度

請鬆開上切刀安裝螺絲①調整上切刀的安裝刀度。請儘量使上切刀和壓腳不接觸。這樣上線切線殘線長度短。但是縫紉多層部時，壓腳會傾斜。請把位置稍稍提高，不讓切刀與壓腳相碰。

## (2) Adjusting the height of the needle thread trimmer

To adjust the height of the needle thread trimmer, loosen setscrew ①. Set the height of trimmer as low as possible, provided that it does not touch work clamp check, in order to minimize the length of remaining thread on the needle after trimming.

Note that the work clamp check tilts when sewing a multi-layered portion of the material, attach the needle thread trimmer to slightly raise the installing position of the trimmer.



注意：更換了上線切線切刀之後，請確認在上線切線調整模式（記憶體開關等級 2：K51）下切刀是否正常動作。

Caution: When replacing the needle thread trimmer, make sure that the trimmer normally works under the needle thread trimmer adjusting mode (memory switch level 2 : K51).

### 3. 布壓腳壓力的調整

布壓腳的壓力用壓腳調節螺絲①調節。鎖緊調節螺絲①後，布壓腳壓力變大，布不容易出褶。

### 3. Adjusting the presser bar pressure

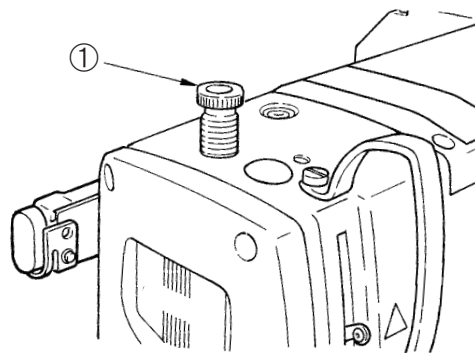
To adjust the pressure applied by the presser bar to fabric, turn presser spring regulator ①. When the pressure is not enough to prevent fabric from puckering, turn regulator ① clockwise.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



### 4. 旋梭壓片裝置的調整

縫紉機停止時，鬆開螺母②把機台前端和旋梭壓腳①的距離調整為 8 ~ 15mm，然後用止動器螺絲③調整位置，再鎖緊螺母②。

### 4. Adjustment of the bobbin presser unit

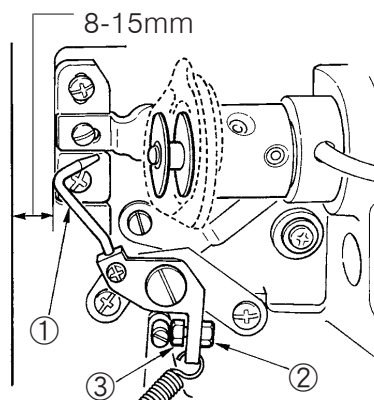
Loosen nut ① and adjust the position with stopper spring ② so that the distance from the front end of machine bed to bobbin presser ③ is 8 to 15 mm when the sewing machine stops. Then tighten nut ②.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



## 5. 線張力

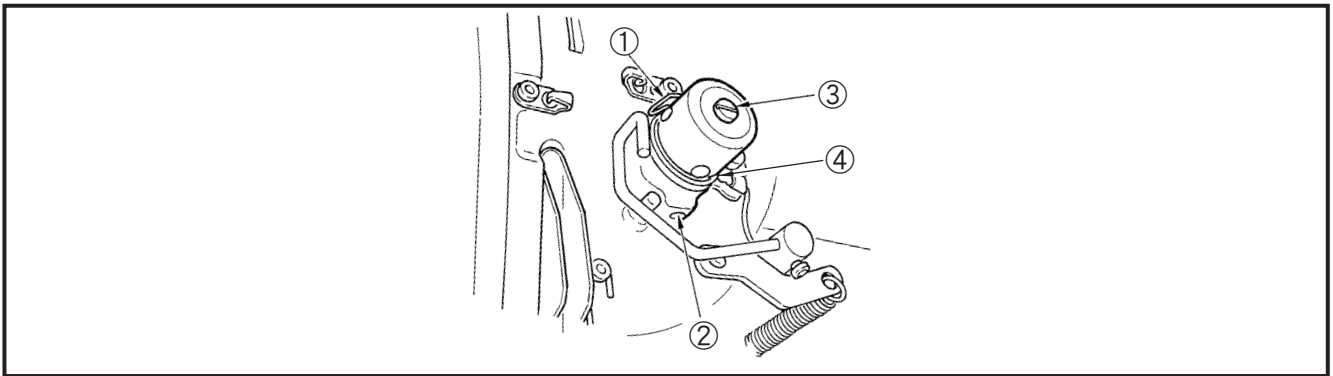
## (1) 挑線彈簧 (直鎖眼縫)

- 1) 挑線彈簧①的挑線量為 8 ~ 10mm，始動強度 0.06 ~ 0.1N 左右較為適當。
- 2) 改變挑線彈簧的動作量時，請轉鬆螺絲②，把細螺絲刀插到線張力桿③的缺口部轉動調節。
- 3) 改變挑線彈簧的強度時，請在螺絲②鎖緊的狀態下，把細螺絲刀插到線張力桿③的缺口部轉動調節。向右轉動之後，挑線彈簧的強度變強，向左轉動之後，強度變弱。

## 5. Thread tension

## (1) Thread take-up spring (purl stitch)

- 1) The thread take-up amount of thread take-up spring ① is 8 to 10 mm, and the appropriate pressure at the start is approximately 0.06 to 0.1N.
- 2) To change the stroke of the thread take-up spring, loosen screw ②, insert a thin screwdriver into the slot of thread tension post ③, and turn it.
- 3) To change the pressure of the thread take-up spring, insert a thin screwdriver into the slot of thread tension post ③ while screw ② is tightened, and turn it. Turning it clockwise will increase the pressure of the thread take-up spring. Turning it counterclockwise will decrease the pressure.



## (2) 挑線桿挑線量的調整

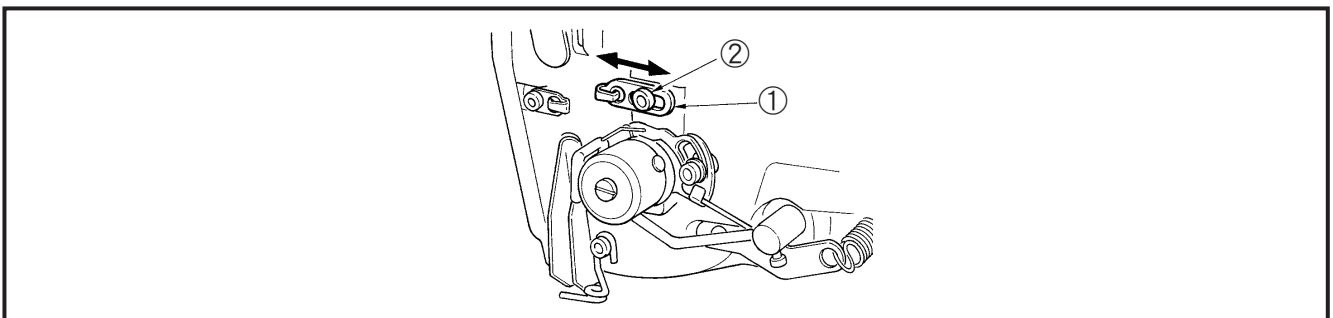
挑線桿的挑線量，根據布料的厚度進行調節。

- 1) 縫製厚料時，鬆開導線器①的固定螺絲②，向左移動導線器。
- 2) 縫製薄料時，把導線器①向右移動。挑線桿的挑線量變少。

## (2) Adjusting the thread take-up amount of the thread take-up lever

The thread take-up amount of the thread take-up lever should be adjusted in accordance with the thickness of the sewing products so as to obtain well-tightened stitches.

- 1) For heavy-weight materials, loosen setscrew ② in thread guide ①, and move the thread guide to the left. The thread take-up amount of the thread take-up lever will be increased.
- 2) For light-weight materials, move thread guide ① to the right. The thread take-up amount of the thread take-up lever will be reduced.



## 6. 濾清器的清掃

- 請每週清掃機台下面的風扇篩過濾器②。
- 1) 沿箭頭方向拉過濾網①，把它卸下來。
- 2) 用水沖洗清掃濾清器②。
- 3) 把濾清器②、過濾網①安裝到原來的位  
置。

## 6. Cleaning the filter

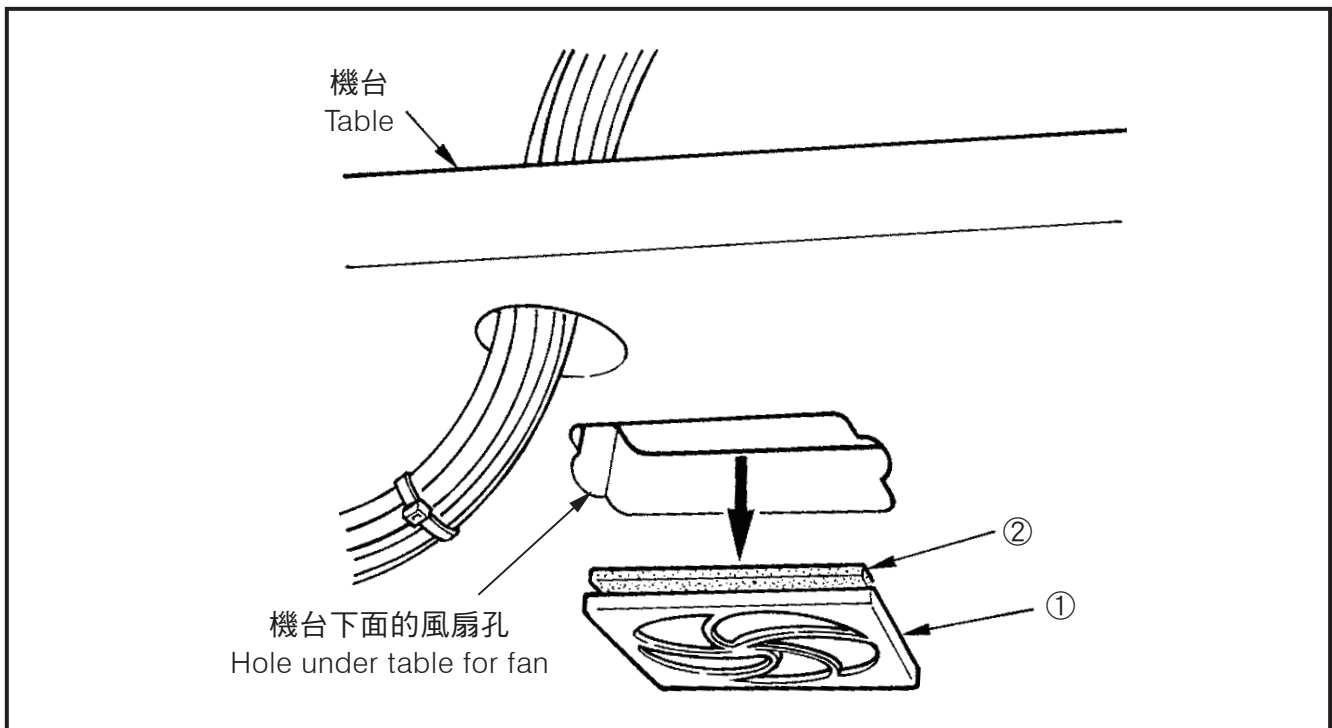
- Clean filter ② of the fan located on the bottom surface of the machine table (bed base) once every week.
- 1) Pull the screen kit ① in the direction of the arrow to remove it.
- 2) Wash the filter ② under running water.
- 3) Reinstall the filter ② and the screen kit ①.



**注意**  
CAUTION

為了防止突然起動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行操作。

To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.



## 7. 保險絲的更換

- 使用 3 個保險絲。
- ①脈衝馬達電源保護用 5A (延時保險絲)。
- ②電磁，脈衝馬達電源保護用 3.15A (延時保險絲)。
- ③控制電源保護用 2A (速斷型保險絲)。

## 7. Replacing the fuse

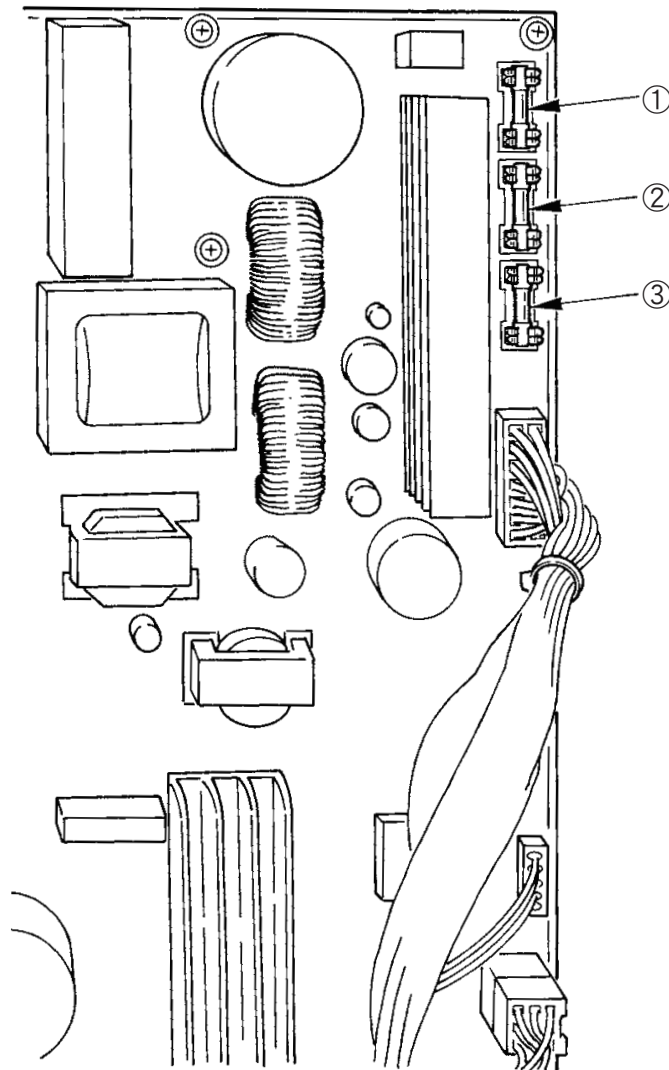
- The machine uses the following three fuses :
- ① For pulse motor power supply protection 5A (time-lag fuse)
- ② For solenoid and pulse motor power supply protection 3.15A (time-lag fuse)
- ③ For control power supply protection 2A (fast-blow type fuse)





**注意**  
CAUTION

1. 為了防止觸電事故，關掉電源 5 分鐘之後再打開外罩。
  2. 請一定關掉電源開關之後再打開控制箱的蓋子，更換規定容量的保險絲。
1. To avoid electrical shock hazards, turn OFF the power and open the control box cover after about five minutes have passed.
  2. Open the control box cover after turning OFF the power without fail. Then, replace with a new fuse with the specified capacity.

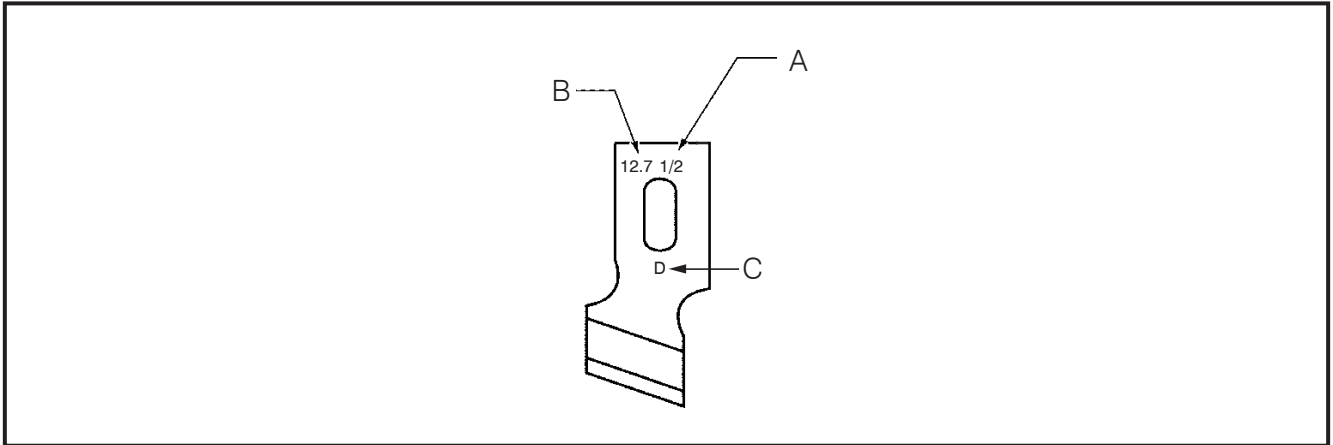


VII . 標準部件

VII .GAUGE COMPONENTS

1. 切布刀

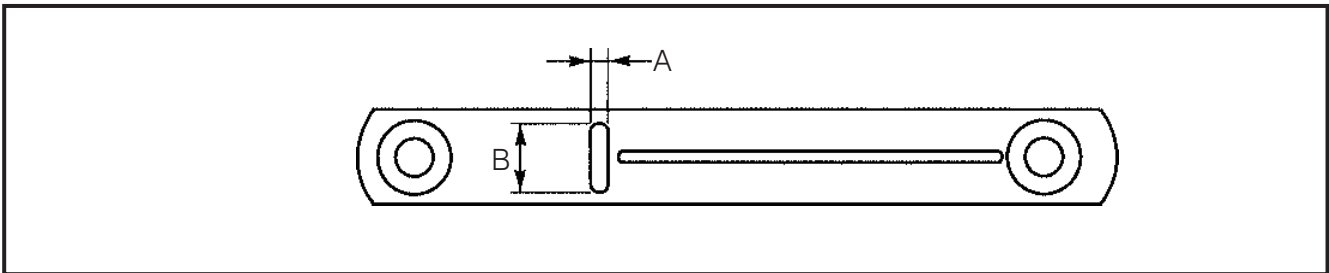
1. Cloth cutting knife



A 切刀尺寸 (英寸) A Knife size (inch)	B 切刀尺寸 (MM) B Knife size (mm)	C 記號 C Mark	D 貨號 D Part No.
1/4	6.4	A	BL724AJK
3/8	9.5	B	BL724BJK
7/16	11.1	C	BL724CJK
1/2	12.7	D	BL724DJK
9/16	14.3	E	BL724EJK
5/8	15.9	F	BL724FJK
11/16	17.5	G	BL724GJK
3/4	19.1	H	BL724HJK
7/8	22.2	I	BL724IJK
1	25.4	J	BL724JJK
1-1/4	31.8	K	BL724KJK

## 2. 針板

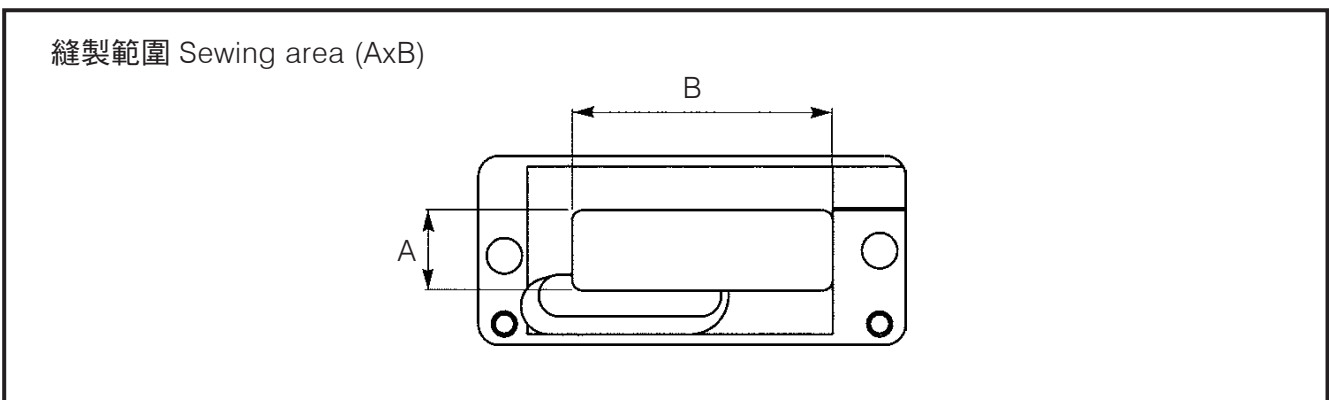
## 2. Throat plate



規格 Type	擺動幅度 Stitch width	5MM (刻印 • AXB) 5mm (Marking • AXB)	6MM (刻印 • AXB) 6mm (Marking • AXB)
標準 (S) Standard (S)		E201AJK (S5 • 1.4X6.2)	E202AJK (S6 • 1.4X7.4)
針織布 (K) For knits (K)		E201BJK (K5 • 1.2X6.2)	E202BJK (K6 • 1.2X7.4)

## 3. 壓腳

## 3. Presser



## • 擺動幅度 5MM

## • Stitch width 5 mm

規格 Type	尺寸 (AXB) Size (AxB)	4X25	5X35	5X41	5X120、5X70
標準 (S) Standard (S)		P570CJK	P571CJK	P579JK	P575AJK P578JK
針織布 (K) For knits (K)		P576JK	P572JK	P577JK	—

## • 擺動幅度 6MM

## • Stitch width 6 mm


規格 Type	尺寸 (AXB) Size (AxB)	6X41
標準 (S) Standard (S)		P573JK

## VIII . 錯誤代碼一覽表

## VIII .ERROR CODE LIST

錯誤代碼 Error code		錯誤內容 Description	復位方法 How to recover	復位地點 Place of recovery
E001		<ul style="list-style-type: none"> <li>主控電路板的 EEP-ROM 初期化 EEP-ROM 裡沒有寫入資料，或資料損壞時，自動進行通知進行了初期化。</li> <li>Contact of initialization of EEP-ROM of MAIN CONTROL p.c.b. When data is not written in EEP-ROM or data is broken, initialization of the data is automatically informed.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E007		<ul style="list-style-type: none"> <li>主軸馬達被鎖定 縫製了大於機針阻抗的縫製物後</li> <li>Main shaft motor-lock When large needle resistance sewing product is sewn.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E018		<ul style="list-style-type: none"> <li>EEP-ROM 的形式不對 安裝的 EEP-ROM 形式不對時</li> <li>Type of EEP-ROM is wrong. When the type of mounted EEP-ROM is wrong.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E023		<ul style="list-style-type: none"> <li>檢測出壓腳提升馬達異常 通過壓腳提升馬達原點感測器時和動作開始時馬達異常時</li> <li>Detection of step-out of presser lifting motor When step-out of motor is detected at the time when presser lifting motor passes origin sensor or starts operation.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	標準畫面 Standard screen
E024		<ul style="list-style-type: none"> <li>圖案資料尺寸超過 連續縫製資料的總尺寸和下載的資料尺寸過大，不能進行縫製時</li> <li>Pattern data size over When sewing cannot be performed since total size of continuous stitching data or size of downloaded data is too large.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	標準畫面 Standard screen
E025		<ul style="list-style-type: none"> <li>檢測出上線切線馬達異常 通過上線切線馬達原點感測器時和動作開始時馬達異常時</li> <li>Detection of step-out of needle thread trimmer motor When step-out of motor is detected at the time when needle thread trimmer motor passes origin sensor or starts operation.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	標準畫面 Standard screen
E026		<ul style="list-style-type: none"> <li>檢測出底線切線馬達異常 通過底線切線馬達原點感測器時和動作開始時馬達異常時</li> <li>Detection of step-out of bobbin thread trimmer motor When step-out of motor is detected at the time when bobbin thread trimmer motor passes origin sensor or starts operation.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	標準畫面 Standard screen
E030		<ul style="list-style-type: none"> <li>針桿上位置偏離 縫紉機啟動時，讓機針上動作，但是機針不能在上位置停止時</li> <li>Needle bar upper position failure When needle does not stop at UP position even with needle UP operation at the time of starting sewing machine.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	標準畫面 Standard screen
E050		<ul style="list-style-type: none"> <li>停止開關 縫紉機啟動途中按了停止開關時</li> <li>Stop switch When stop switch is pressed during machine running.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	步驟畫面 Step screen
E052		<ul style="list-style-type: none"> <li>斷線檢測錯誤 縫紉機啟動途中發生了斷線時</li> <li>Thread breakage detection error When thread breakage has occurred during machine running.</li> </ul>	<p>復位後可以重新啟動 Possible to re-start after pressing reset key.</p>	步驟畫面 Step screen

錯誤代碼 Error code		錯誤內容 Description	復位方法 How to recover	復位地點 Place of recovery
E061		<ul style="list-style-type: none"> <li>記憶體開關資料錯誤</li> <li>記憶體開關資料損壞或是版本老時</li> <li>Memory switch data error</li> <li>When memory switch data is broken or revision is old.</li> </ul>	電源 OFF Turn OFF the power.	
E062		<ul style="list-style-type: none"> <li>縫製資料錯誤</li> <li>縫製資料損壞或是版本老時</li> <li>Sewing data error</li> <li>When sewing data is broken or revision is old.</li> </ul>	電源 OFF Turn OFF the power.	
E099		<ul style="list-style-type: none"> <li>切刀下降指令和切線動作相碰</li> <li>外部資料動作時，切刀指令的插入位置不對，與切線動作相衝突時</li> <li>Interference of knife lowering command with thread trimming motion</li> <li>When inserting position of knife command is improper and knife command interferes with thread trimming motion in case of motion by data from external input device.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	標準畫面 Standard screen
E302		<ul style="list-style-type: none"> <li>放倒機頭進行確認</li> <li>放倒機頭，感測器 OFF 時</li> <li>Confirmation of tilt of machine head</li> <li>When tilt of machine head sensor is OFF.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	標準畫面 Standard screen
E303		<ul style="list-style-type: none"> <li>主軸 Z 相感測器異常</li> <li>縫紉機馬達編碼器的 Z 相感測器異常</li> <li>Z phase sensor error of main shaft motor</li> <li>Z phase sensor of sewing machine motorencoder is abnormal.</li> </ul>	電源 OFF Turn OFF the power.	
E304		<ul style="list-style-type: none"> <li>切布刀感測器錯誤</li> <li>切刀下降時感測器關不了時</li> <li>Cloth cutting knife sensor error</li> <li>When sensor is not OFF while knife is lowered.</li> </ul>	電源 OFF Turn OFF the power.	
E486		<ul style="list-style-type: none"> <li>圓頭扣眼長度錯誤</li> <li>圓頭扣眼形狀時圓頭扣眼切刀長度過短無法縫製</li> <li>Eyelet knife length error</li> <li>Eyelet knife length is too short to form the shape in case of eyelet shape.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S17] 圓頭扣眼切刀長度 Sewing data edit screen [S17] Eyelet knife length
E487		<ul style="list-style-type: none"> <li>圓頭扣眼形狀錯誤</li> <li>圓頭扣眼形狀時圓頭扣眼形狀長度過短無法縫製</li> <li>Eyelet shape length error</li> <li>Eyelet shape length is too short to form the shape in case of eyelet shape.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S14] 圓頭扣眼形狀長度 Sewing data edit screen [S14] Eyelet shape length
E488		<ul style="list-style-type: none"> <li>錐形加固補正錯誤</li> <li>錐形加固形狀時加固長度過短無法縫製</li> <li>Taper bar-tacking compensation error</li> <li>When bar-tacking length is too short to form the shape in case of taper bar-tacking shape.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S08] 第 2 加固縫長度 Sewing data edit screen [S08] 2nd bar-tacking length
E489		<ul style="list-style-type: none"> <li>切刀尺寸錯誤（數次動作時）</li> <li>切刀尺寸比切布刀尺寸大時</li> <li>Knife size error (at the time of plural motions of knife)</li> <li>When knife size is larger than cloth cutting knife size.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S02] 切布長度 Sewing data edit screen [S02] Cloth cut length
E492		<ul style="list-style-type: none"> <li>下縫的壓腳尺寸超過</li> <li>下縫的運針資料超過壓腳尺寸時</li> <li>Presser size over of basting</li> <li>When stitching data of basting exceeds presser size.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S40] 下縫落針補正 Sewing data edit screen [S40] Basting needle entry compensation
E493		<ul style="list-style-type: none"> <li>縫製結束加固縫的壓腳尺寸超過</li> <li>縫製結束加固縫的運針資料超過壓腳尺寸時</li> <li>Presser size over of tie stitching at sewing end</li> <li>When stitching data of tie stitching at sewing end exceeds presser size.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S67] 縫製結束加固縫寬度 Sewing data edit screen [S67] Tie stitching at sewing end width

錯誤代碼 Error code		錯誤內容 Description	復位方法 How to recover	復位地點 Place of recovery
E494		<ul style="list-style-type: none"> <li>縫製開始加固縫的壓腳尺寸超過</li> <li>縫製開始加固縫的運針資料超過壓腳尺寸時</li> <li>Presser size over of tie stitching at sewing start</li> <li>When stitching data of tie stitching at sewing start exceeds presser size.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S64] 縫製開始加固縫寬度 Sewing data edit screen [S64] Tie stitching at sewing start width
E495		<ul style="list-style-type: none"> <li>壓腳尺寸錯誤（僅寬方向・右側）</li> <li>運針資料僅超過壓腳的寬度方向右側的尺寸時</li> <li>Presser size error (Width direction : right only)</li> <li>When stitching data exceeds the size of right only of width direction of presser.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S03] 右切刀槽寬 Sewing data edit screen [S03] Knife groove width
E496		<ul style="list-style-type: none"> <li>壓腳尺寸錯誤（僅寬方向・左側）</li> <li>運針資料緊超過壓腳的寬度方向左側的尺寸時</li> <li>Presser size error (Width direction : left only)</li> <li>When stitching data exceeds the size of left only of width direction of presser.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S04] 左切刀槽寬 或 [S06] 左右形狀比率 Sewing data edit screen [S04] Knife groove width, left or [S06] Ratio of right and left shapes
E497		<ul style="list-style-type: none"> <li>壓腳尺寸錯誤（長度方向・面前）</li> <li>運針資料超過壓腳長度方向面前的尺寸時</li> <li>Presser size error (Length direction : front)</li> <li>When stitching data exceeds the size of front of length direction of presser.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	標準畫面 Standard screen
E498		<ul style="list-style-type: none"> <li>壓腳尺寸錯誤（寬方向・左右）</li> <li>運針資料超過壓腳的寬方向左右兩側的尺寸時</li> <li>Presser size error (Width direction : right and left)</li> <li>When stitching data exceeds the size of both right and left of width direction of presser.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S05] 左包縫寬度 Sewing data edit screen [S05] Overedging width, left
E499		<ul style="list-style-type: none"> <li>壓腳尺寸錯誤（長度方向・裡側）</li> <li>運針資料超過壓腳的長度方向裡側的尺寸時</li> <li>Presser size error (Length direction : rear)</li> <li>When stitching data exceeds the size of rear of length direction of presser.</li> </ul>	復位後可以重新啟動 Possible to re-start after pressing reset key.	縫製資料編輯畫面 [S02] 切布長度 Sewing data edit screen [S02] Cloth cut length
E703		<ul style="list-style-type: none"> <li>操作盤連接到設定外的縫紉機上（機種錯誤）</li> <li>初期通訊時，系統的機種代碼不對時</li> <li>Panel is connected to the machine other than supposed. (Machine type error)</li> <li>When machine type code of system is improper in case of initial communication.</li> </ul>	電源 OFF Turn OFF the power.	
E704		<ul style="list-style-type: none"> <li>系統的版本不對</li> <li>初期通訊時，系統軟體的版本不對時</li> <li>Nonagreement of system version</li> <li>When version of system software is improper in case of initial communication.</li> </ul>	電源 OFF Turn OFF the power.	
E730		<ul style="list-style-type: none"> <li>主軸馬達調節器不良・欠相</li> <li>縫紉機馬達的調節器異常時</li> <li>Main shaft motor encoder defectiveness or phase-out</li> <li>When encoder of sewing machine motor is abnormal.</li> </ul>	電源 OFF Turn OFF the power.	
E731		<ul style="list-style-type: none"> <li>主軸馬達感測器不良・位置感測器不良</li> <li>縫紉機馬達感測器或位置感測器不良時</li> <li>Main motor hole sensor defectiveness or position sensor defectiveness</li> <li>When hole sensor or position sensor of sewing machine motor is defective.</li> </ul>	電源 OFF Turn OFF the power.	
E733		<ul style="list-style-type: none"> <li>主軸馬達倒轉</li> <li>縫紉機馬達倒轉時</li> <li>Reverse rotation of main shaft motor</li> <li>When sewing machine motor rotates in reverse direction.</li> </ul>	電源 OFF Turn OFF the power.	
E801		<ul style="list-style-type: none"> <li>電源欠相</li> <li>輸入電源欠相時</li> <li>Phase-lack of power</li> <li>When phase-lack of input power occurs.</li> </ul>	電源 OFF Turn OFF the power.	



錯誤代碼 Error code		錯誤內容 Description	復位方法 How to recover	復位地點 Place of recovery
E802		<ul style="list-style-type: none"> <li>• 檢測出電源瞬間斷電 輸入電源瞬間斷電時</li> <li>• Power instantaneous cut detection When input power is instantaneously OFF.</li> </ul>	電源 OFF Turn OFF the power.	
E811		<ul style="list-style-type: none"> <li>• 過高電壓 輸入電源達 280V 以上時</li> <li>• Overvoltage When input power is 280V or more.</li> </ul>	電源 OFF Turn OFF the power.	
E813		<ul style="list-style-type: none"> <li>• 過低電壓 輸入電源達 150V 以下時</li> <li>• Low voltage When input voltage is 150V or less.</li> </ul>	電源 OFF Turn OFF the power.	
E901		<ul style="list-style-type: none"> <li>• 主軸馬達 IPM 異常 伺服控制基板的 IPM 異常時</li> <li>• Abnormality of main shaft motor IPM When IPM of servo control p.c.b. is abnormal.</li> </ul>	電源 OFF Turn OFF the power.	
E902		<ul style="list-style-type: none"> <li>• 主軸馬達電流過大 縫紉機馬達裡電流過大時</li> <li>• Overcurrent of main shaft motor When current flows excessively to sewing machine motor.</li> </ul>	電源 OFF Turn OFF the power.	
E903		<ul style="list-style-type: none"> <li>• 脈衝馬達電源異常 伺服控制基板的脈衝馬達電源變動 <math>\pm 15\%</math> 以上時</li> <li>• Abnormality of stepping motor power When stepping motor power of servo control p.c.b. fluctuates <math>\pm 15\%</math> or more.</li> </ul>	電源 OFF Turn OFF the power.	
E904		<ul style="list-style-type: none"> <li>• 繼電器電源異常 伺服控制基板的繼電器電源變動 <math>\pm 15\%</math> 以上時</li> <li>• Abnormality of solenoid power When solenoid power of servo control p.c.b. fluctuates <math>\pm 15\%</math> or more.</li> </ul>	電源 OFF Turn OFF the power.	
E905		<ul style="list-style-type: none"> <li>• 伺服控制電路板用熱敏溫度異常 伺服控制電路板的熱敏電阻達 85 以上時</li> <li>• Abnormality of temperature of heat sink for servo control p.c.b. When temperature of heat sink of servo control p.c.b. is 85°C or more.</li> </ul>	電源 OFF Turn OFF the power.	
E907		<ul style="list-style-type: none"> <li>• 機針擺動馬達原點檢索錯誤 原點檢索動作時，原點感測器信號沒有被輸入時</li> <li>• Stitch width motor origin retrieval error When origin sensor signal is not inputted at the time of origin retrieval motion.</li> </ul>	電源 OFF Turn OFF the power.	
E908		<ul style="list-style-type: none"> <li>• Y 送馬達原點檢索錯誤 原點檢索動作時，原點感測器信號沒有被輸入時</li> <li>• Y feed motor origin retrieval error When origin sensor signal is not inputted at the time of origin retrieval motion.</li> </ul>	電源 OFF Turn OFF the power.	
E909		<ul style="list-style-type: none"> <li>• 上線切線馬達原點檢索異常 原點檢索動作時，原點感測器信號沒有被輸入時</li> <li>• Needle thread trimmer motor origin retrieval error When origin sensor signal is not inputted at the time of origin retrieval motion.</li> </ul>	電源 OFF Turn OFF the power.	
E910		<ul style="list-style-type: none"> <li>• 壓腳馬達原點檢索錯誤 原點檢索動作時，原點感測器信號沒有被輸入時</li> <li>• Presser motor origin retrieval error When origin sensor signal is not inputted at the time of origin retrieval motion.</li> </ul>	電源 OFF Turn OFF the power.	

錯誤代碼 Error code		錯誤內容 Description	復位方法 How to recover	復位地點 Place of recovery
E911		<ul style="list-style-type: none"> <li>• 底線切線馬達原點檢索異常 原點檢索動作時，原點感測器信號沒有被輸入時</li> <li>• Bobbin thread trimmer motor origin retrieval error When origin sensor signal is not inputted at the time of origin retrieval motion.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E915		<ul style="list-style-type: none"> <li>• 操作盤 ↔ 主 CPU 間通訊異常 資料通訊時發生異常後</li> <li>• Abnormality of communication between operation panel and main CPU When abnormality occurs in communication.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E916		<ul style="list-style-type: none"> <li>• 主 CPU 主軸 ↔ CPU 間通訊異常 資料通訊時發生異常後</li> <li>• Abnormality of communication between main CPU and main shaft CPU When abnormality occurs in communication.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E918		<ul style="list-style-type: none"> <li>• 主控制電路板用熱敏電阻溫度異常 主控制電路板的熱敏電阻達 85°C 以上時</li> <li>• Abnormality of temperature of heat sink for main control p.c.b. When temperature of heat sink of main control p.c.b. is 85°C or more.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E943		<ul style="list-style-type: none"> <li>• 主控制電路板的 EEPROM 不良 EEP-ROM 不能寫入時</li> <li>• Defectiveness of EEPROM of main control p.c.b. When data writing to EEPROM is not performed.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E946		<ul style="list-style-type: none"> <li>• 機頭部連接電路板 EEPROM 不能寫入 EEP-ROM 不能寫入時</li> <li>• Defectiveness of writing to EEPROM of head relay p.c.b. When data writing to EEPROM is not performed.</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	
E999		<ul style="list-style-type: none"> <li>• 布切刀不能返回原位時 布切刀在規定時間後不能返回原位時 切布刀上升時（待機時）感測器不動作時。</li> <li>• When cloth cutting knife does not return When cloth cutting knife does not return after the lapse of predetermined time. When sensor is not turned ON while cloth cutting knife is raising (at the time of waiting).</li> </ul>	<p>電源 OFF Turn OFF the power.</p>	

## IX . 故障的現象與原因 • 處理對策

IX .MALFUNCTION & REASDNS  
AND CORRECTIVE MEASURES

現象 Troubles	原因 Causes	處理對策 Corrective measures	頁 Page
1. 上線斷線 1. Needle thread breakage	1. 平行部線張力過強。 2. 挑線彈簧的強度過強，移動量過大。 3. 旋梭尖部分有毛刺，有傷痕。 4. 旋鎖的同步時間不對。 5. 線道上有傷痕。 6. 機針安裝不良。 7. 機針過細。 8. 機針的前端有傷痕。 1. Thread tension at parallel section is too high. 2. Pressure or stroke of thread take-up spring is too large. 3. There is a burr or scratch on the blade point of hook. 4. Hook timing is not proper. 5. There is a scratch on the thread path. 6. Attaching needle is wrong. 7. Needle is too thin. 8. Needle tip is damaged.	• 平行部線張力過弱。 • 減弱挑線彈簧的彈力，或縮小移動量。 • 銼平旋梭尖的毛刺，過更換旋梭。 • 用同步規尺調整旋梭的同步時間。 • 用布或銼刀銼平傷痕和毛刺。 • 調整機針的朝向和高度。 • 更換成粗針。 • 更換機針。 • Decrease the thread tension at parallel section. • Decrease the tension of thread take-up spring or decrease its stroke. • Buff the blade point of hook. Or, replace the hook. • Adjust again the hook timing with timing gauge. • Polish the thread path with sand paper and buff it. • Adjust again the direction, height, etc. • Replace the needle with a thicker one. • Replace the needle.	P.25 P.71 - P.66 - P.13 - - P.25 - P.71 - P.66 - P.13 - -
2. 上線脫線 2. Needle thread slips off.	1. 上線切刀張開過早。 2. 始縫部線勾不到一起。 (始縫的張力過強。) 3. 上線穿線方法不對。 4. 始縫的速度過快。 1. Needle thread trimmer opens too early. 2. Whip stitching is not formed at the start of sewing. (Tension at the start of sewing is too high.) 3. Threading needle thread is wrong. 4. Speed at the start of sewing is too fast.	• 上線切線時，夾子打開時間晚。 • 減弱始縫張力。 • 重新正確地穿線。 • 設定軟起動。 • Delay the opening timing of the needle thread trimmer. • Decrease tension at the start of sewing. • Thread properly again. • Set the soft-start function.	P.68 P.42 P.13 P.62 P.68 P.42 P.13 P.62
3. 平行部縫跡不均勻 3. Wobbling at parallel section.	1. 平行部線張力過弱。 2. 底線張力過強。 3. 張力過弱。 1. Thread tension at parallel section is too low. 2. Bobbin thread tension is too high. 3. Pre-tension is too low.	• 加強平行部線張力。 • 減弱底線張力。(直線鎖縫 0.05 ~ 0.1N) • 增強張力 • 增加平行部線張力。 • Decrease bobbin thread tension. (Purl stitching : 0.05 to 0.1N) • Increase pre-tension.	P.25 P.14 - P.25 P.14 -
4. 始縫縫跡不均勻 4. Wobbling at the start of sewing.	1. 平行部線張力過弱。 2. 上線切刀位置過高。 3. 挑線彈簧的移動量過大。 1. Thread tension at parallel section is too low. 2. Position of needle thread trimmer is too high. 3. Stroke of thread take-up spring is too large.	• 加強平行部張力。 • 只要不碰到壓腳儘量下降切刀。 • 減小挑線彈簧的移動量。 • 增加平行部線張力。 • Lower the needle thread trimmer to such an extent that it does not come in contact with the presser. • Decrease the stroke of thread take-up spring.	P.25 P.68 P.71 P.25 P.68 P.71
5. 加固縫部上線從布的下面露出，成團狀 5. Needle thread appears on the wrong side of material at bar-tacking section in dumping condition.	1. 加固縫線張力過弱。 2. 底線張力過強。 3. 因呈放射形狀，所以針數多。 4. 結束縫的張力過弱。 1. Bar-tacking thread tension is too low. 2. Bobbin thread tension is too high. 3. Number of stitches of radial shape is too many. 4. Tension at the end of sewing is too low.	• 加強加固縫線張力。 • 減弱底線張力。(0.05 ~ 0.1N) • 減少針數。 • 加強結束縫張力。 • 增加加固縫線張力。 • Decrease the bobbin thread tension. (0.05 to 0.1N) • Decrease the number of stitches. • Increase tension at the end of sewing.	P.25 P.14 P.40 P.62 P.25 P.14 P.40 P.62

現象 Troubles	原因 Causes	處理對策 Corrective measures	頁 Page
6. 縫跡鼓起 6. Stitches float	1. 底線張力過弱。 2. 底線從梭殼脫出來。  1. Bobbin thread tension is too low. 2. Bobbin thread comes off bobbin case.	<ul style="list-style-type: none"> <li>• 加強底線張力。</li> <li>• 重新正確地穿梭殼線。</li> <li>• 底線捲繞量繞得不要過多。</li> <li>• Increase the bobbin thread tension.</li> <li>• Perform proper threading the bobbin case.</li> <li>• Take care that the winding amount of bobbin thread is not excessive.</li> </ul>	P.14 P.14 P.28 P.14 P.14 P.28
7. 鎖眼綻出 7. Stitch skipping	1. 鈕扣孔比壓腳小。 2. 縫製薄料時皺縮。 3. 機針安裝不好。 4. 機針彎曲。 5. 旋梭尖部有毛刺和傷痕。  1. Button hole is small in terms of the size of presser. 2. Material flops because of light-weight.  3. Attaching needle is wrong. 4. Needle is bent. 5. There is a burr or scratch on the blade point of hook.	<ul style="list-style-type: none"> <li>• 把壓腳更換成較小的。</li> <li>• 推遲機針和旋梭的同步時間。 (把針杆下降 0.5mm 左右)</li> <li>• 重新調整機針的朝向、高度等。</li> <li>• 更換機針。</li> <li>• 用銼刀銼平梭尖或更換旋梭。</li> <li>• Replace the presser with a smaller one.</li> <li>• Delay the hook-to-needle timing. (Lower the needle bar by 0.5 mm.)</li> <li>• Adjust again the direction, height, etc.</li> <li>• Replace the needle.</li> <li>• Buff the blade top of hook. Or, replace the hook.</li> </ul>	- P.66 P.13 - - - P.66 P.13 - -
8. 線綻開 8. Thread frays.	1. 固定縫針數少。 2. 固定縫寬度太寬。  1. Number of stitches of tie stitching is too less.  2. Width of tie stitching is too wide.	<ul style="list-style-type: none"> <li>• 增加縫製結束的加固縫針數。</li> <li>• 弄窄縫製結束的加固縫寬度。</li> <li>• Increase the number of stitches of tie stitching at the end of sewing.</li> <li>• Narrow the width of tie stitching at the end of sewing.</li> </ul>	P.43 P.43 P.43 P.43
9. 縫製結束上線留線過長 9. Length of needle thread remaining at the end of sewing is too long.	1. 固定縫寬度過窄。 2. 固定縫張力過弱。  1. Width of tie stitching is too narrow.  2. Tension of tie stitching is too low.	<ul style="list-style-type: none"> <li>• 弄寬縫製結束的加固縫寬度。</li> <li>• 加大縫製結束的張力。</li> <li>• Widen the width of tie stitching at the end of sewing.</li> <li>• Increase tension at the end of sewing.</li> </ul>	P.43 P.62 P.43 P.62
10. 始縫時上線斷線，或背面線跡不好看 10. Needle thread breaks at the start of sewing, or the wrong side of seam is bad.	1. 始縫張力過弱  1. Tension at the start of sewing is too low.	<ul style="list-style-type: none"> <li>• 加強始縫張力。</li> <li>• Increase tension at the start of sewing.</li> </ul>	P.42 P.42
11. 切上線但切刀不下落 11. Knife drops even when needle thread is cut.	1. 切線檢測板的調整是否良好？  1. Check whether the thread breakage detector plate is properly adjusted.	<ul style="list-style-type: none"> <li>• 調整檢測板（參照服務手冊）</li> <li>• Adjust the detector plate. (Refer to the Engineer's Manual.)</li> </ul>	- -
12. 斷針 12. Needle breaks.	1. 機針是否彎曲？ 2. 機針和旋梭尖是否相碰？ 3. 上線切刀張開時是否碰機針？ 4. 機針是否落入針板孔的中心？ 5. 機針的停止位置過低，上線切線刀閉合時是否碰機針？  1. Check whether needle is bent. 2. Check whether needle comes in contact with the blade point of hook. 3. Check whether needle thread trimmer comes in contact with needle when it opens. 4. Check whether needle comes in the center of the needle hole of throat plate. 5. Needle stop position is too low and needle comes in contact with needle thread trimmer when it closes.	<ul style="list-style-type: none"> <li>• 更換機針</li> <li>• 調整機針和旋梭的同步時間</li> <li>• 調整上線切刀的安裝位置</li> <li>• 重新調整針板座的安裝位置</li> <li>• Replace the needle.</li> <li>• Adjust the needle-to-hook timing.</li> <li>• Adjust the installing position of needle thread trimmer.</li> <li>• Re-adjust the installing position of throat plate base.</li> </ul>	P.13 P.66 P.68 - P.13 P.66 P.68 -
13. 切刀下落數次 13. Knife drops plural times.	1. 切布刀是否設定成數次？  1. Check whether the cloth cutting knife dropping is set to plural dropping.	<ul style="list-style-type: none"> <li>• 接觸數次的設定。</li> <li>• Release the plural time setting.</li> </ul>	P.58 P.58

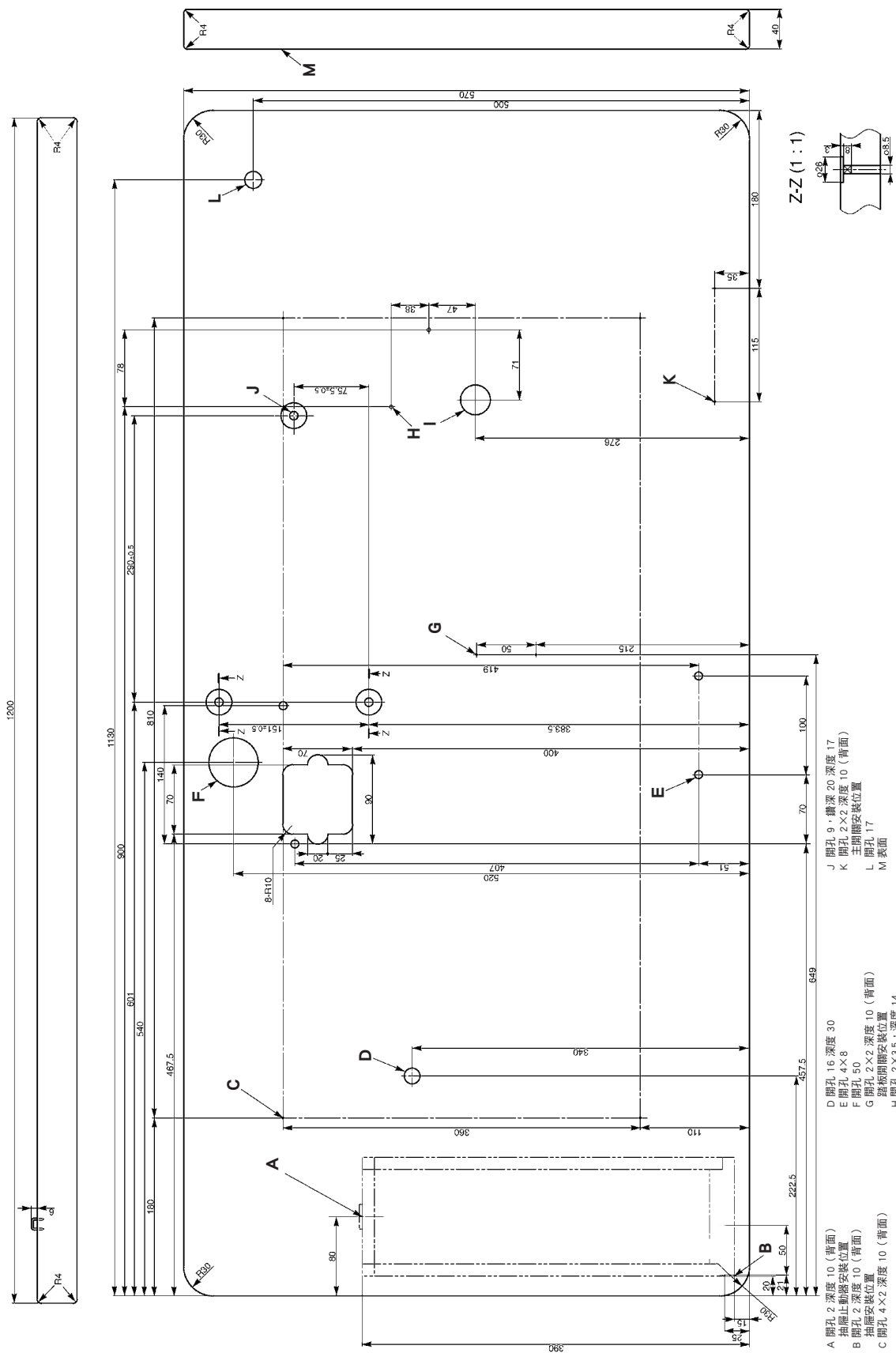


No.	項目 Item	單位 Unit	形狀選擇等級 1 (12 形狀) Shape selection Level 1 (12 shapes)												形狀選擇等級 2 (20 形狀) Shape selection Level 2 (20 shapes)												形狀選擇等級 3 (30 形狀) Shape selection Level 3 (30 shapes)											
			形狀選擇等級 1 (12 形狀) Shape selection Level 1 (12 shapes)												形狀選擇等級 2 (20 形狀) Shape selection Level 2 (20 shapes)												形狀選擇等級 3 (30 形狀) Shape selection Level 3 (30 shapes)											
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
S01	縫形形狀 Sewing shape		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
S31	單/雙車 1/2 stitching		<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<						
S32	選擇雙車線 < X Double stitching		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
S33	補正雙車線寬度 Double stitching width compensation	mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
S34	下縫次數 Number of times of basting	Time 次	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
S35	下縫速度 Pitch of basting	mm	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
S36	下縫插入長度 Rolling length of basting	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0						
S37	下縫插入間隔 Rolling pitch of basting	mm	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8						
S38	下縫輪入寬度 Rolling width of basting	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5						
S39	補正下縫落針前後 needle entry of basting	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5						
S40	補正下縫落針左右 needle entry of basting	mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
S41	補正下縫左側位置 position of basting	mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
S42	補正下縫右側位置 position of basting	mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
S44	下縫速度設定 Speed setting of basting	st/mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000						
S51	左平行部張力 Left parallel section tension		120	60	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120						
S52	右平行部張力 Right parallel section tension		120	60	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120						
S53	左平行部張力 (雙車線的第 1 週圈) Left parallel section tension (1st cycle of double stitching)		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60						
S54	右平行部張力 (雙車線的第 1 週圈) Right parallel section tension (1st cycle of double stitching)		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60						
S55	第 1 加面部張力 1st bar-lacking section tension		35	60	120	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35						
S56	第 2 加面部張力 2nd bar-lacking section tension		35	60	120	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35						
S57	設定縫開始上線張力 thread tension at sewing start		25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25						
S58	設定下縫上線張力 thread tension of basting		80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80						
S59	開始第 1 加面縫 調整 ACT 同步 ACT timing adjustment at 1st bar-lacking start	Stitch 計	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						

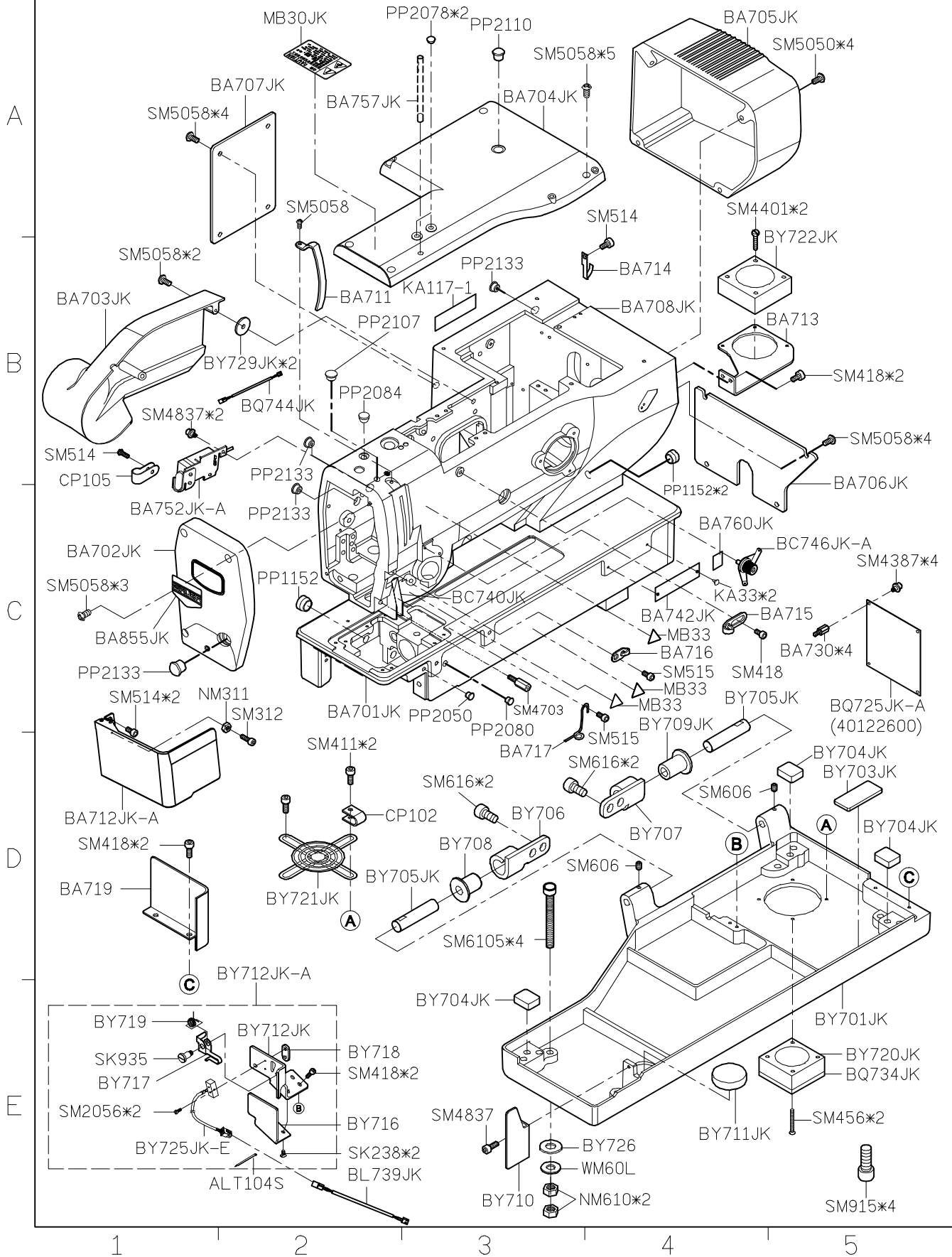


形狀選擇等級 3 (30 形狀) Shape selection Level 3 (30 shapes)

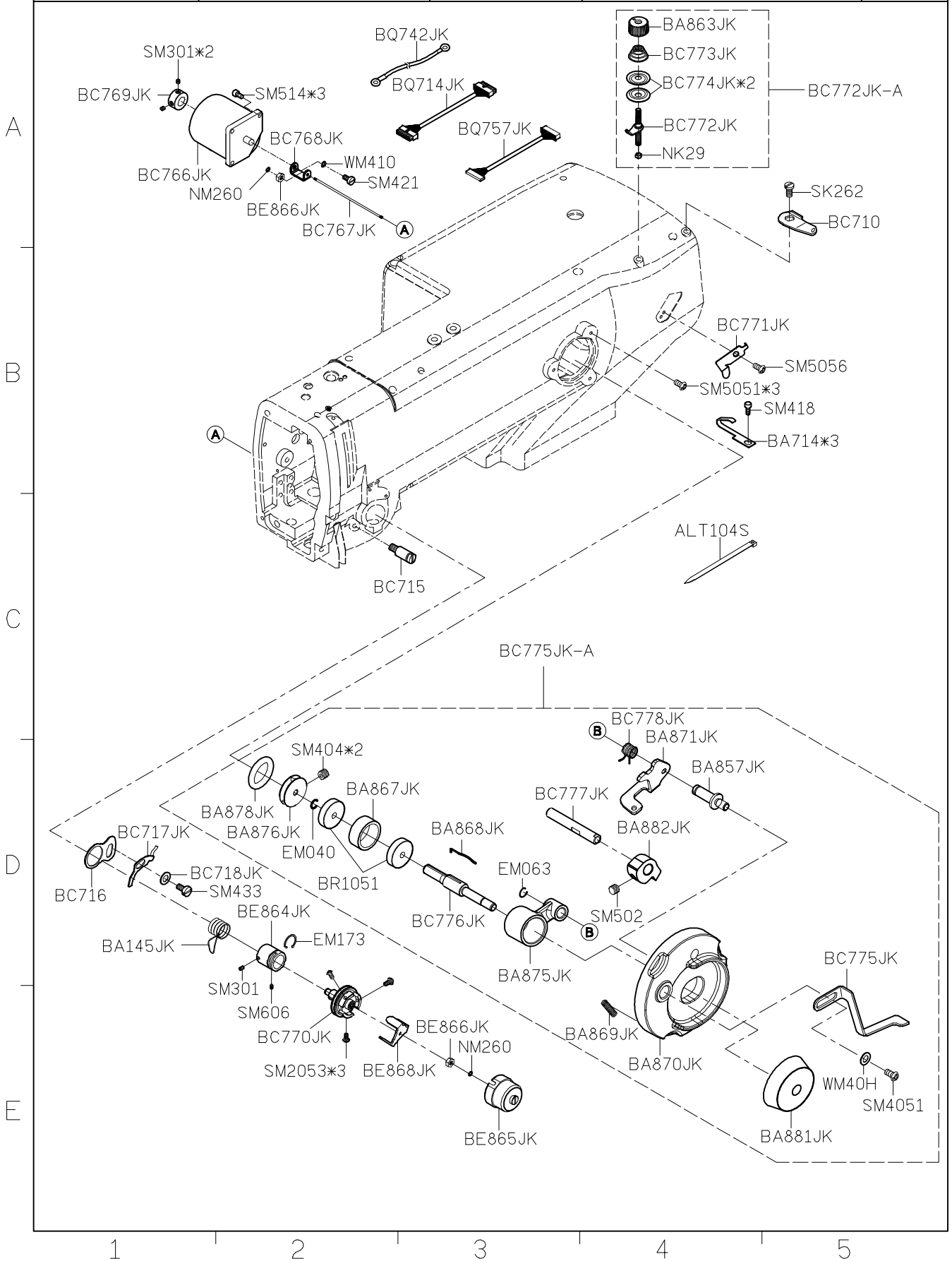
No.	項目 Item	單位 Unit	形狀選擇等級 2 (20 形狀) Shape selection Level 2 (20 shapes)																													
			形狀選擇等級 1 (12 形狀) Shape selection Level 1 (12 shapes)																													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
S01	縫紉形狀 Sewing shape																															
S01	右包腳開始 ACT 同步調整 ACT timing adjustment at the start of right overcasting	Stitch 計	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S60	右包腳開始 ACT 同步調整 ACT timing adjustment at the start of right overcasting	Stitch 計	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S61	開始第 2 加足縫 調整 ACT 同步 ACT timing adjustment at End bar-tacking start	Stitch 計	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S62	開始縫加面針數 Number of stitches added at the start of sewing	Stitch 計	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
S63	開始縫加面針數 Stitching at the start of sewing		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
S64	開始縫寬度 The stitching width at sewing start	mm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6		
S65	開始縫加面寬向修正 Lengthwise compensation of the stitching at the start of sewing	mm	0.0	1.5	0.0	1.5	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0		
S66	開始縫加面橫向修正 Crosswise compensation of the stitching at the start of sewing	mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
S67	結束縫加面寬度 The stitching width at sewing end	mm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6		
S68	結束縫加面針數 Number of stitches of the stitching at sewing end	Stitch 計	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
S69	結束縫加面寬向修正 Lengthwise compensation of the stitching at the end of sewing	mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
S70	結束縫加面橫向修正 Crosswise compensation of the stitching at the end of sewing	mm	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
S81	切刀動作 (無/有) Knife motion (With/without)		With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有	With 有		
S83	雙車的第 1 週圍切刀 Knife at 1st cycle of double stitching (Without/with)		Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無	Without 無		
S84	最高速度限制 Max. speed limitation	st/min	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600		
S86	去開頭 Pitch of going	mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
S87	去回頭 Width of going	mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
S88	回速度 Pitch of returning	mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
S89	回寬度 Width of returning	mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

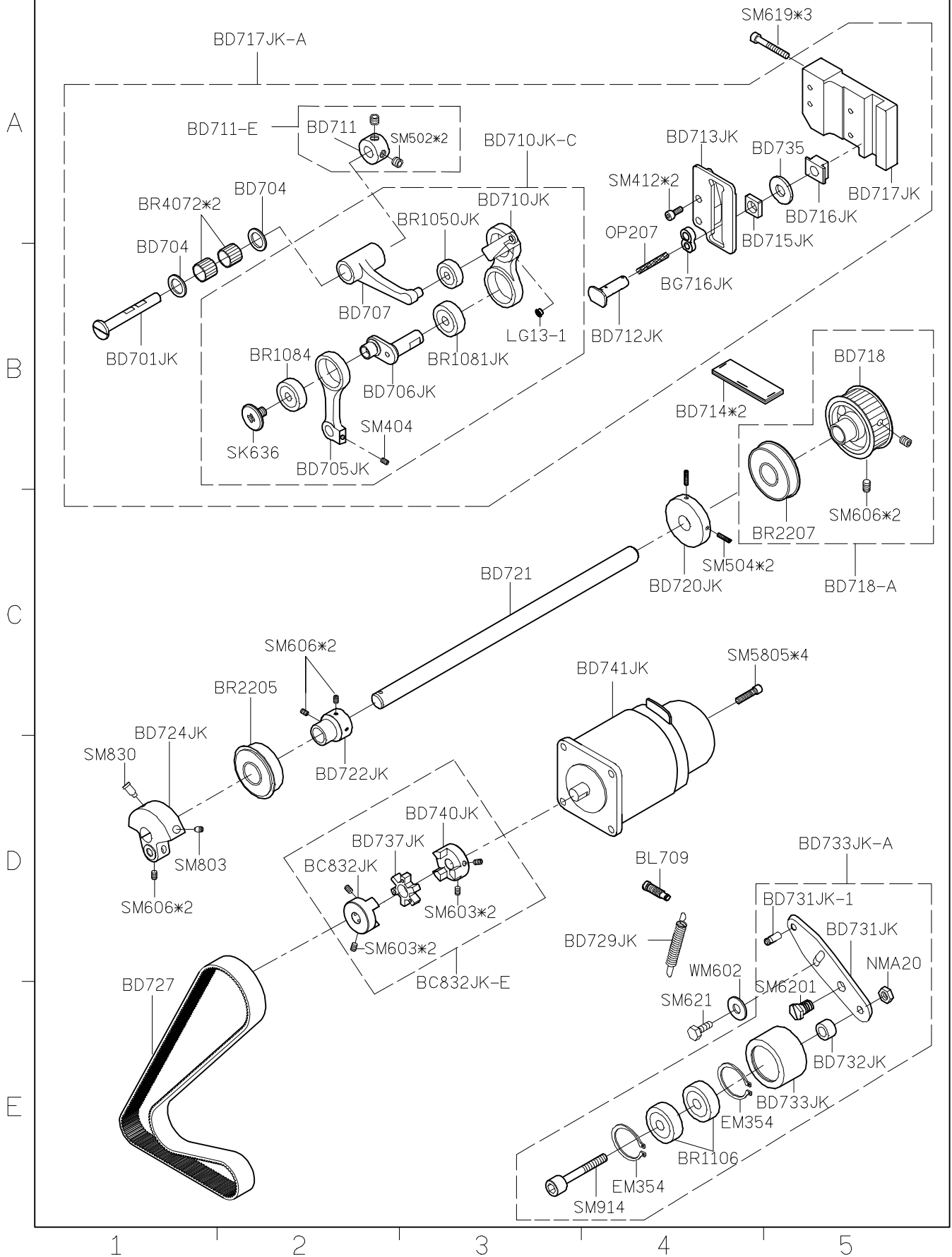


- A 開孔 2 深度 10 (背面)  
抽屜止動器安裝位置
- B 開孔 2 深度 10 (背面)  
抽屜安裝位置
- C 開孔 4×2 深度 10 (背面)  
Stand installing hole
- D 開孔 16 深度 30  
E 開孔 4×8  
F 開孔 50  
G 開孔 2×2 深度 10 (背面)  
抽屜安裝位置
- H 開孔 2×3.5 深度 14  
I 開孔 30
- J 開孔 9 深度 20 深度 17  
K 開孔 2×2 深度 10 (背面)  
主開關安裝位置
- L 開孔 17  
M 表面
- N 開孔 9 深度 20 深度 17  
K 2.2 drilled hole, depth 10 on the bottom surface  
Main switch installing position
- O 開孔 17 drilled hole  
M Right side  
I 30 drilled hole

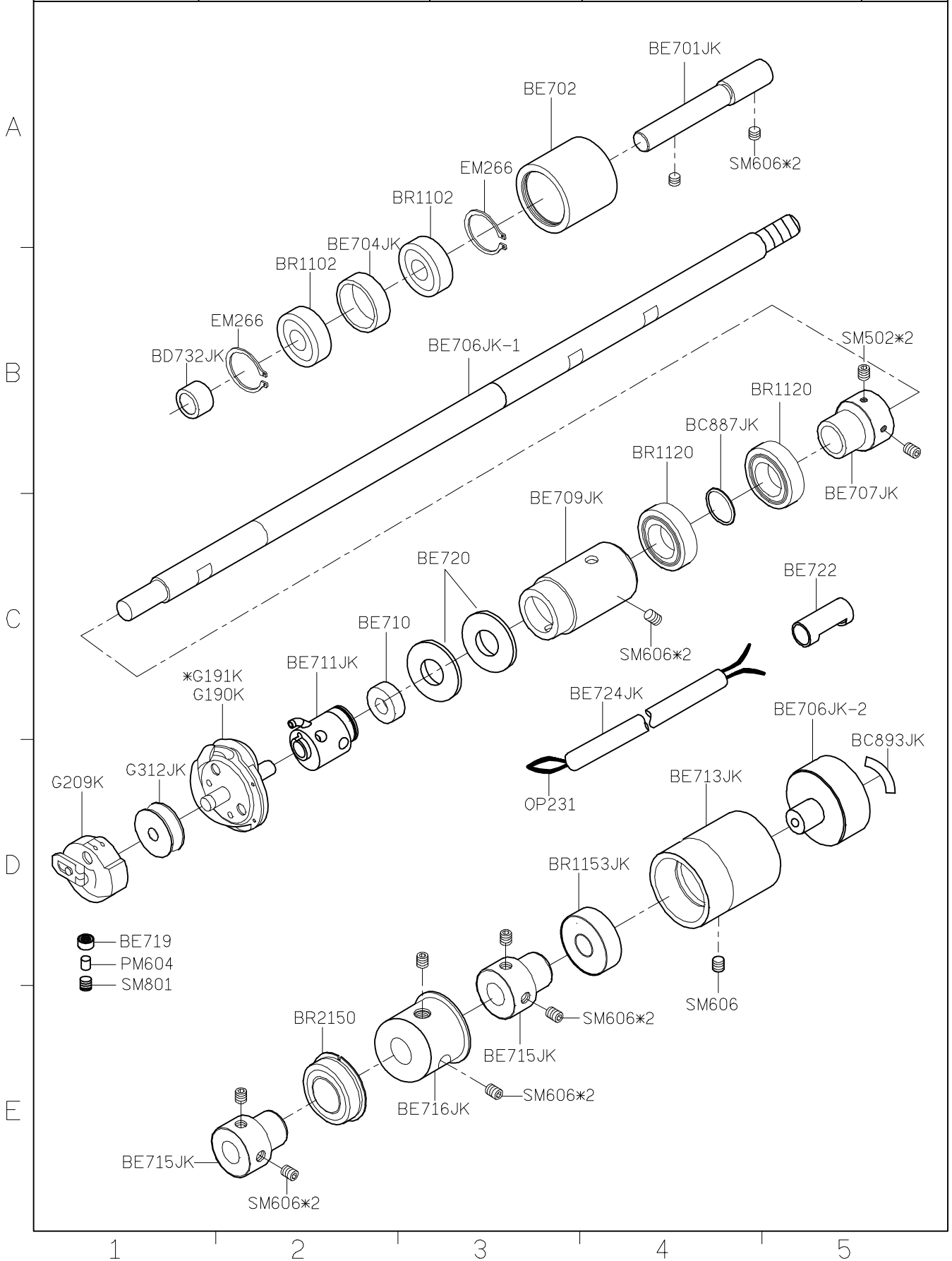


<b>SIRUBA</b>  <b>PARTS LIST</b>	<b>Series</b>	<b>Parts Group</b>	<b>Subclass / Remark</b>	<b>Page</b>
	<b>LBHS-1790S</b>	<b>BC</b>		<b>1/1</b>
				<b>Date</b>
				<b>2015/11/13</b>





<b>SIRUBA</b> PARTS LIST	<b>Series</b>	<b>Parts Group</b>	<b>Subclass / Remark</b>	<b>Page</b>
	<b>LBHS-1790S</b>	<b>BE</b>	<b>Use For *LBHS-1792K</b>	1/1
				<b>Date</b> 2016/02/16





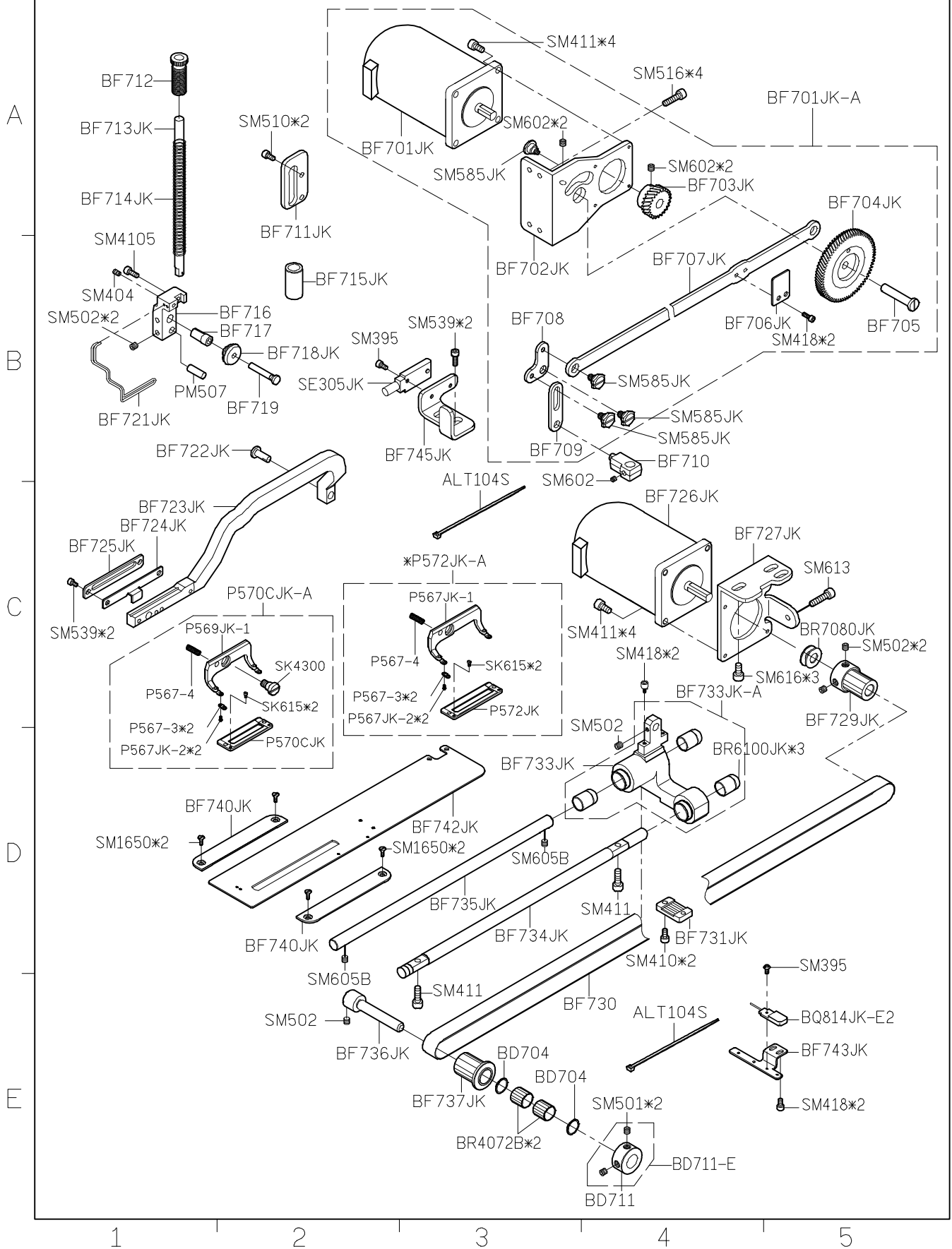
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PARTS LIST

**Series**  
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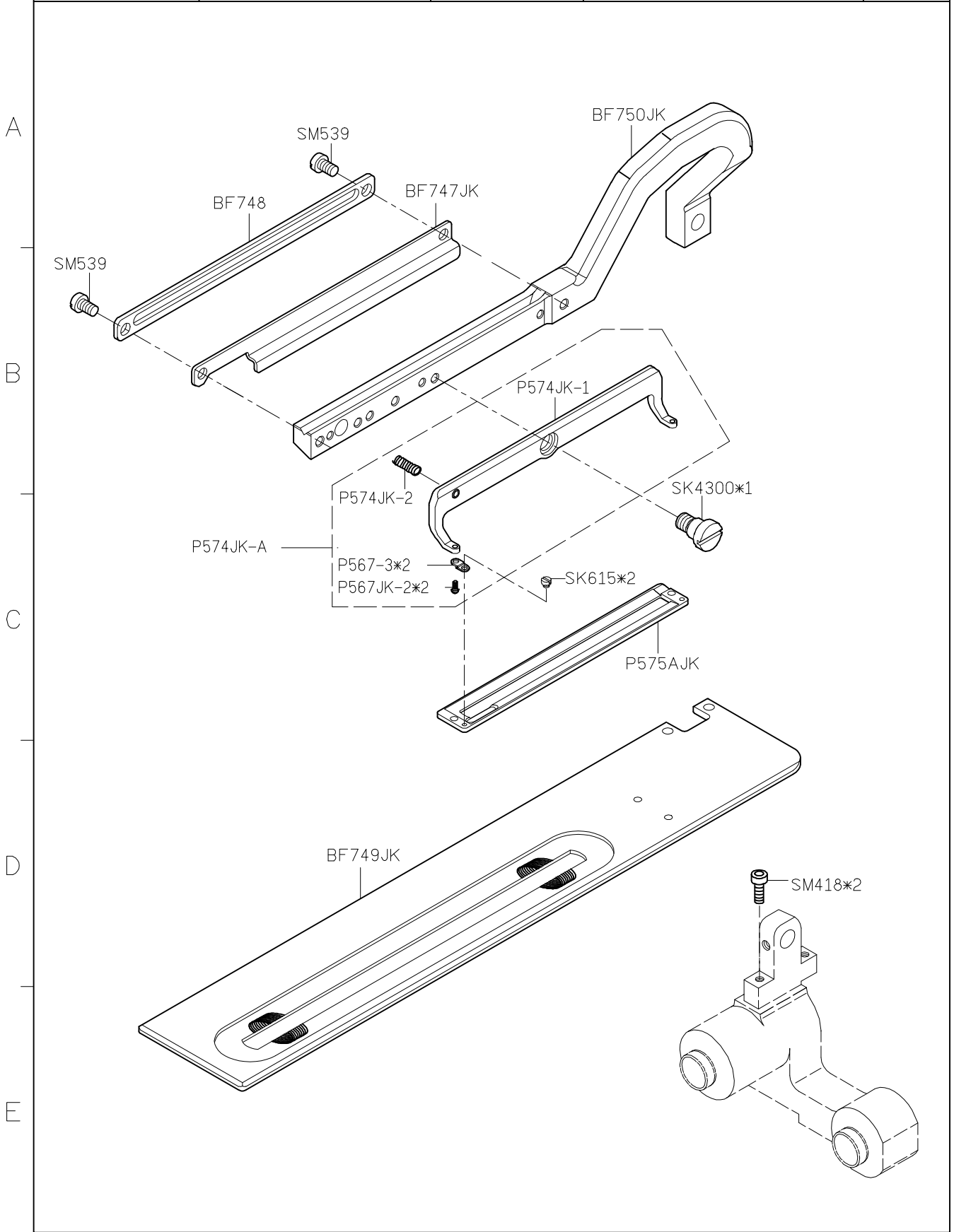
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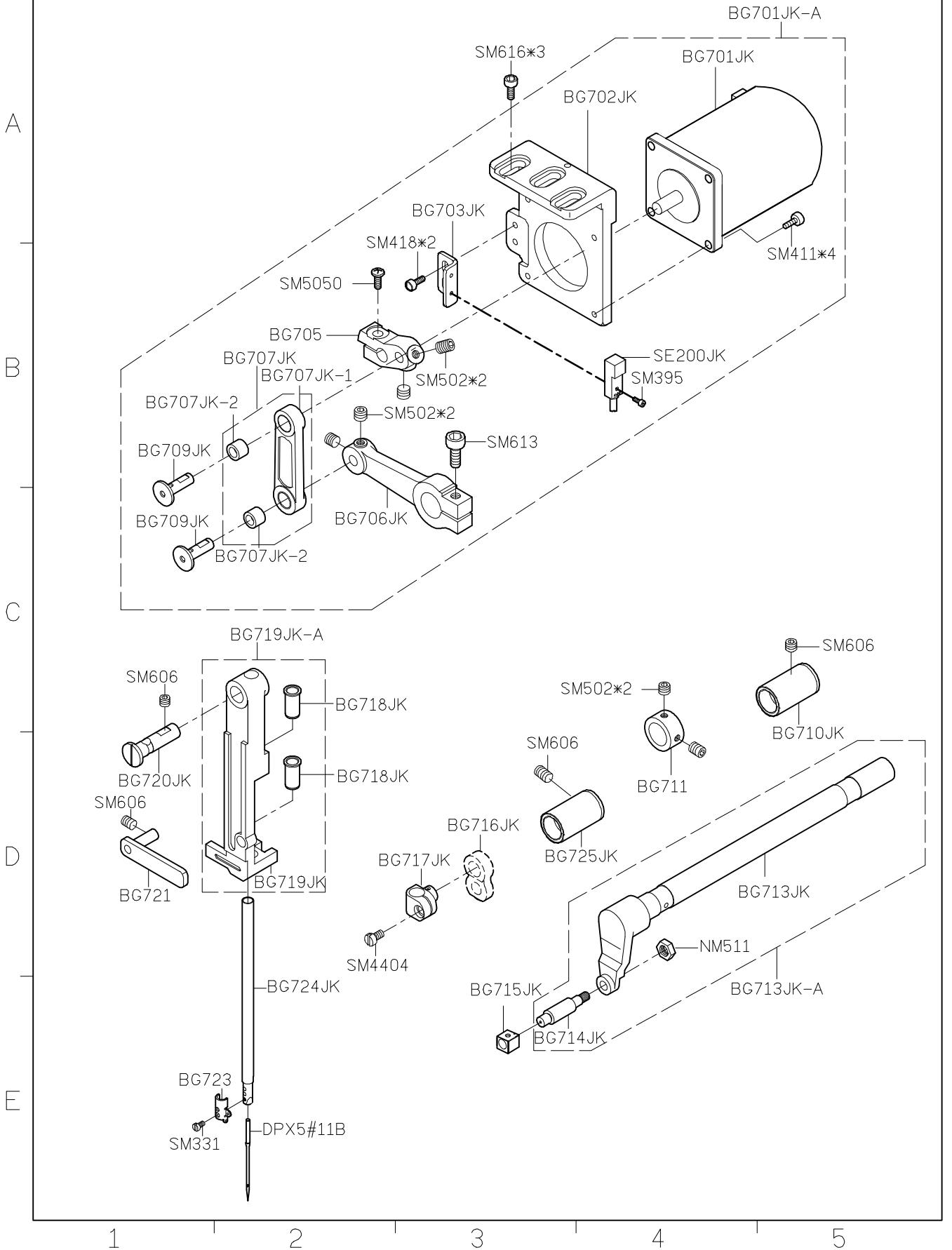
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Use For  
\*LBHS-1792K

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2015/12/04

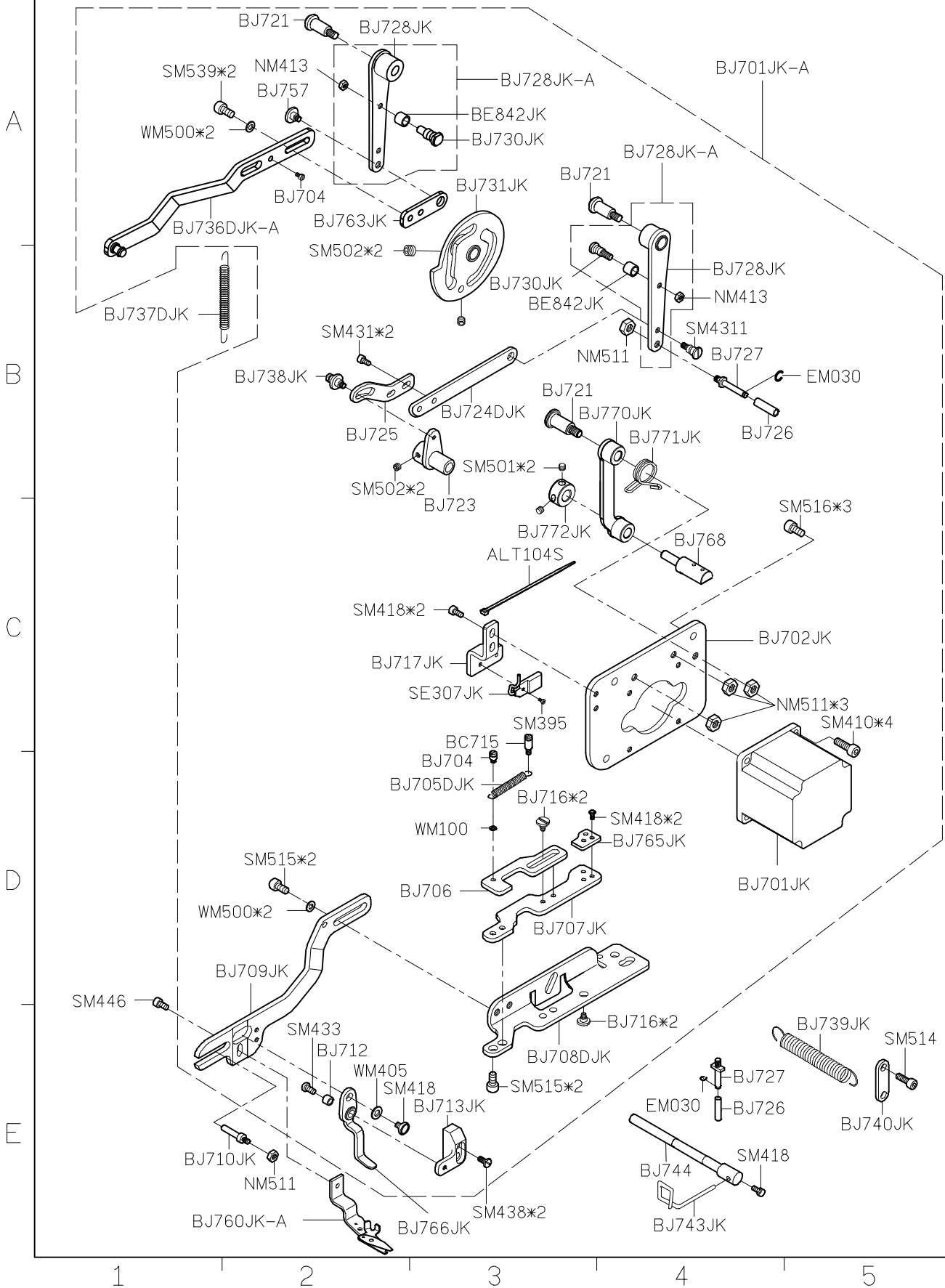


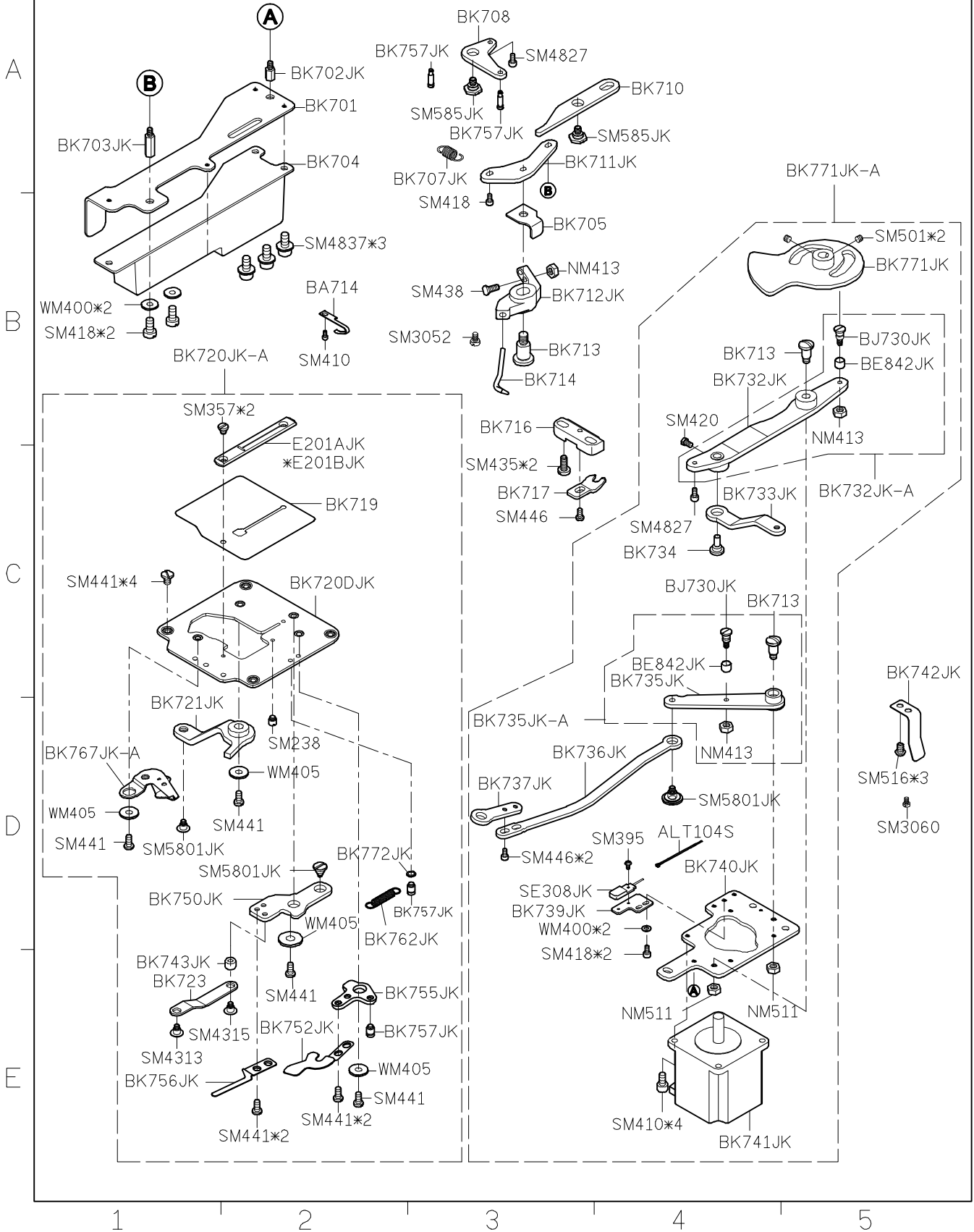
SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LBHS-1795S	BF		2/2
				Date
				2016/01/20



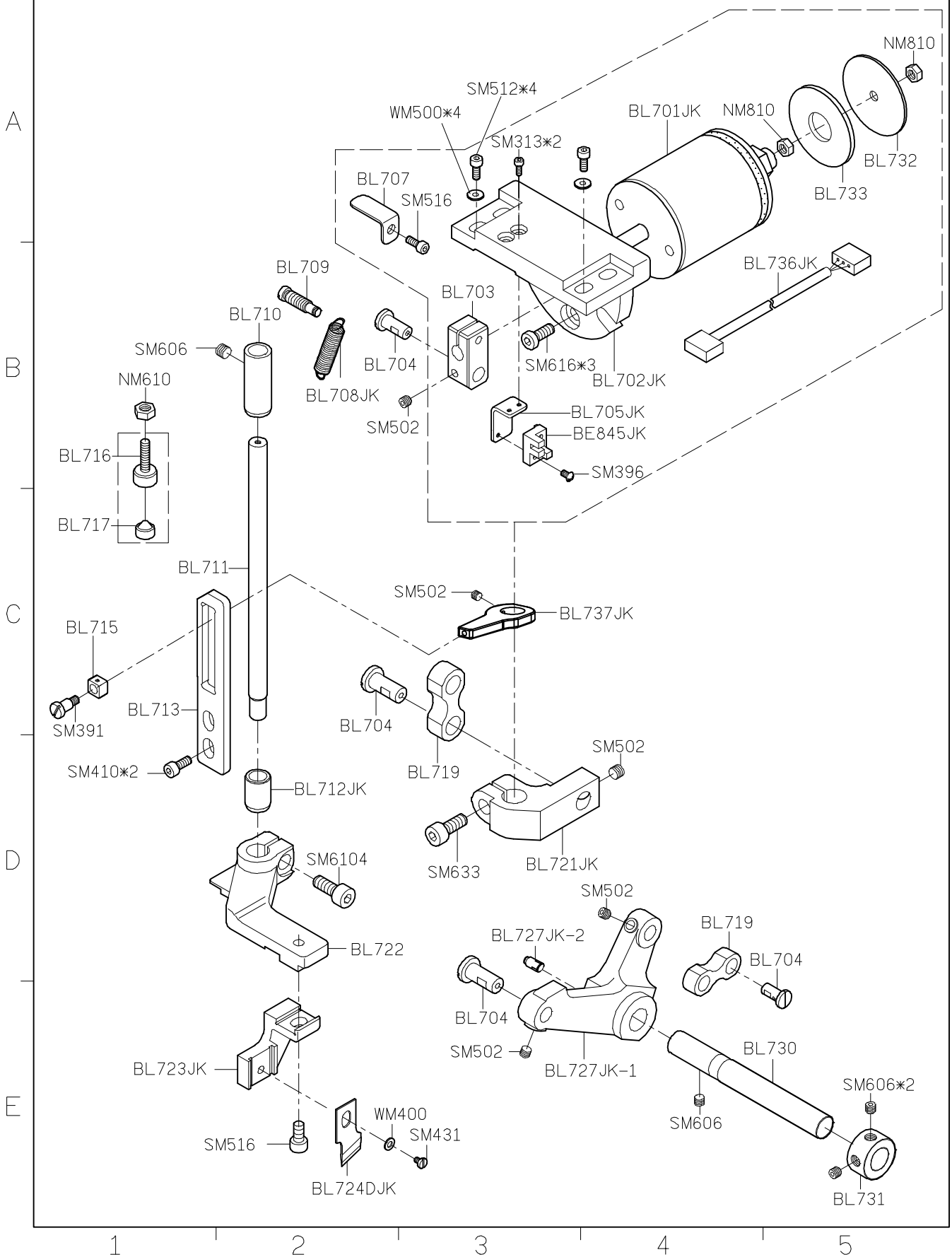


<b>SIRUBA</b>  <b>PARTS LIST</b>	<b>Series</b>	<b>Parts Group</b>	<b>Subclass / Remark</b>	<b>Page</b>
	<b>LBHS-1790S</b>	<b>BJ</b>		<b>1/1</b>
				<b>Date</b>
				<b>2015/11/13</b>





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				Date
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**SIRUBA**

**PARTS LIST**

**Series**

**LBHS-1790S**

**Parts Group**

**BN**

**Subclass / Remark**

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2014/10/31

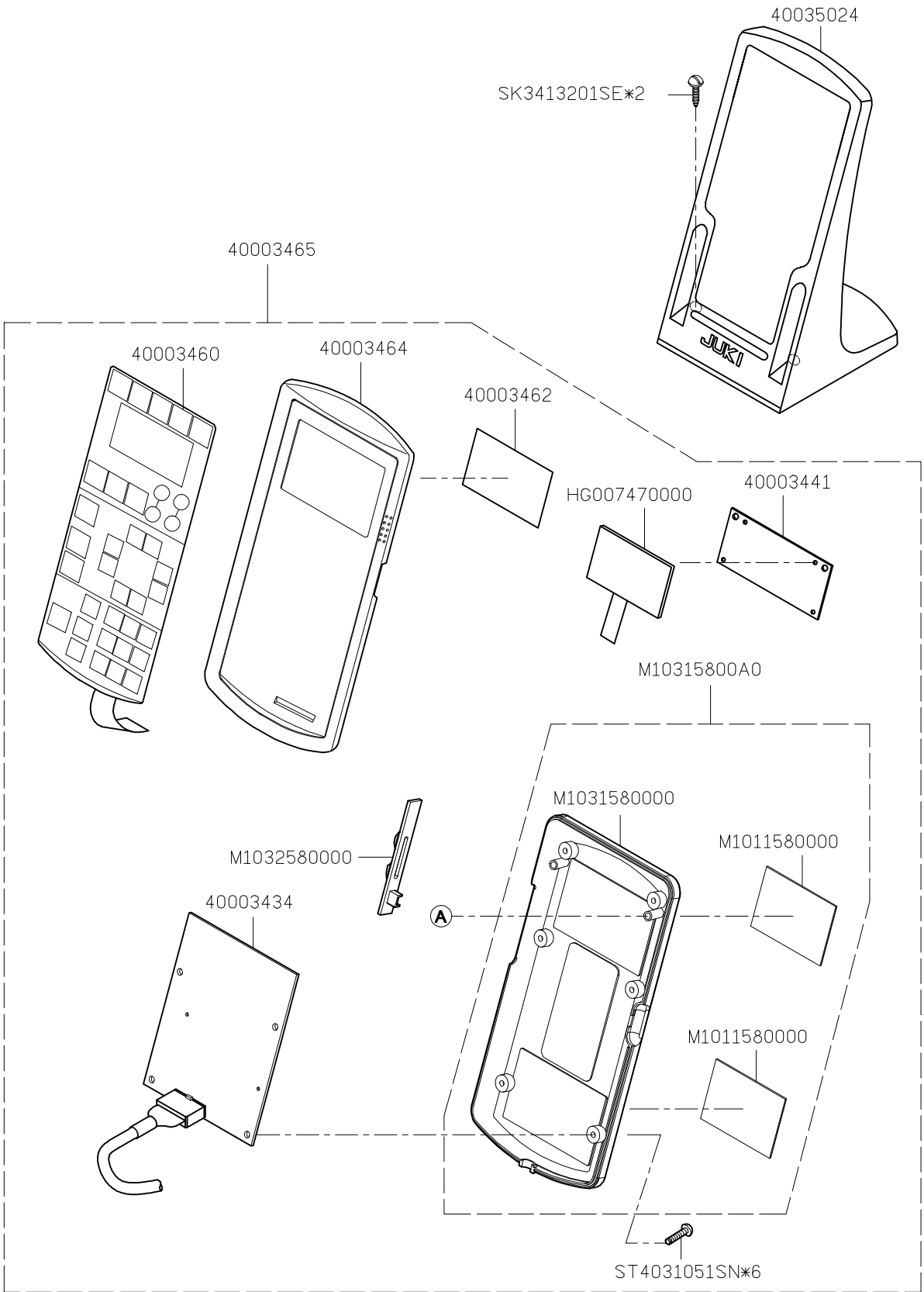
A

B

C

D

E



1

2

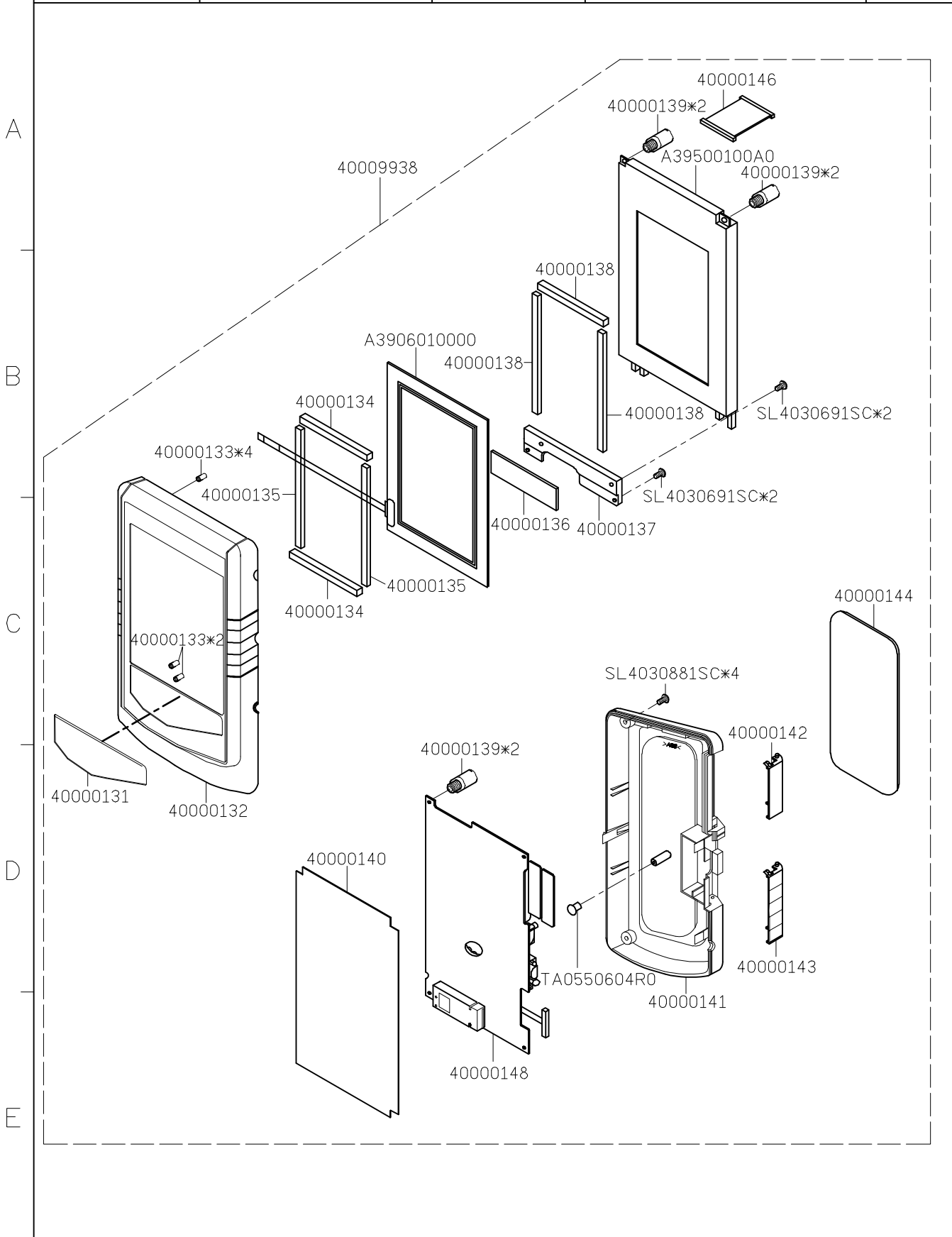
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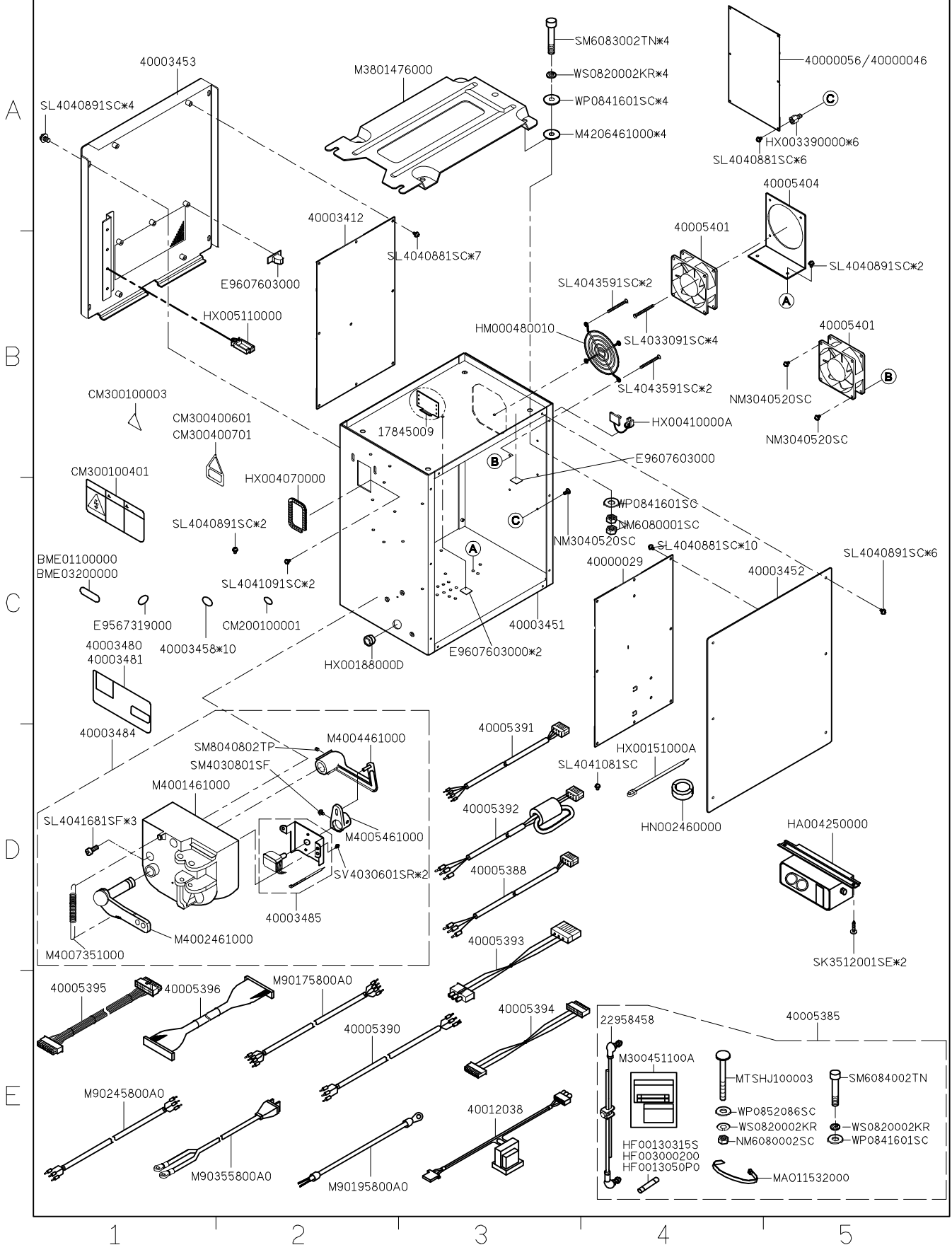
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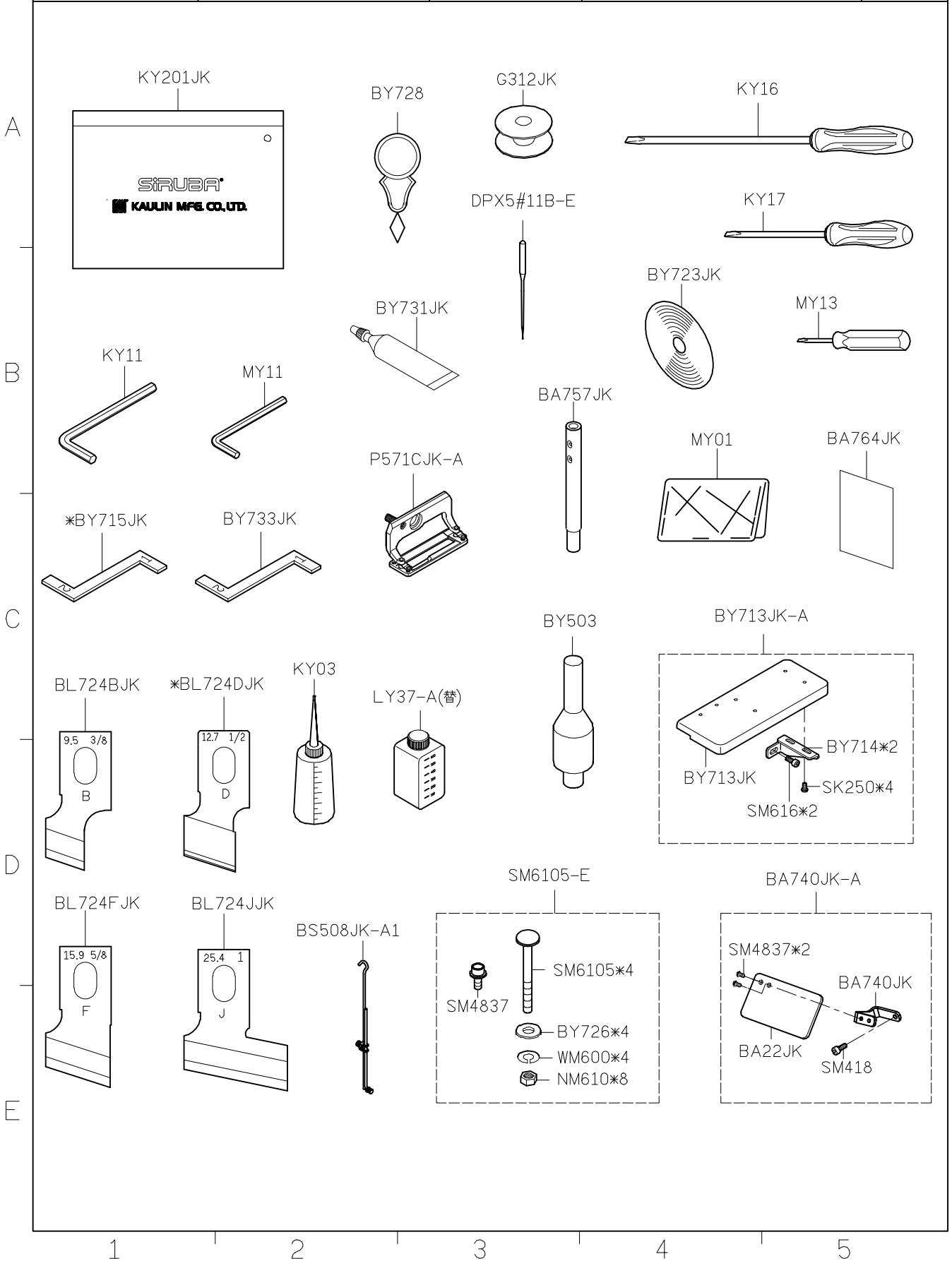


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	LBHS-1790S	BN		2/2
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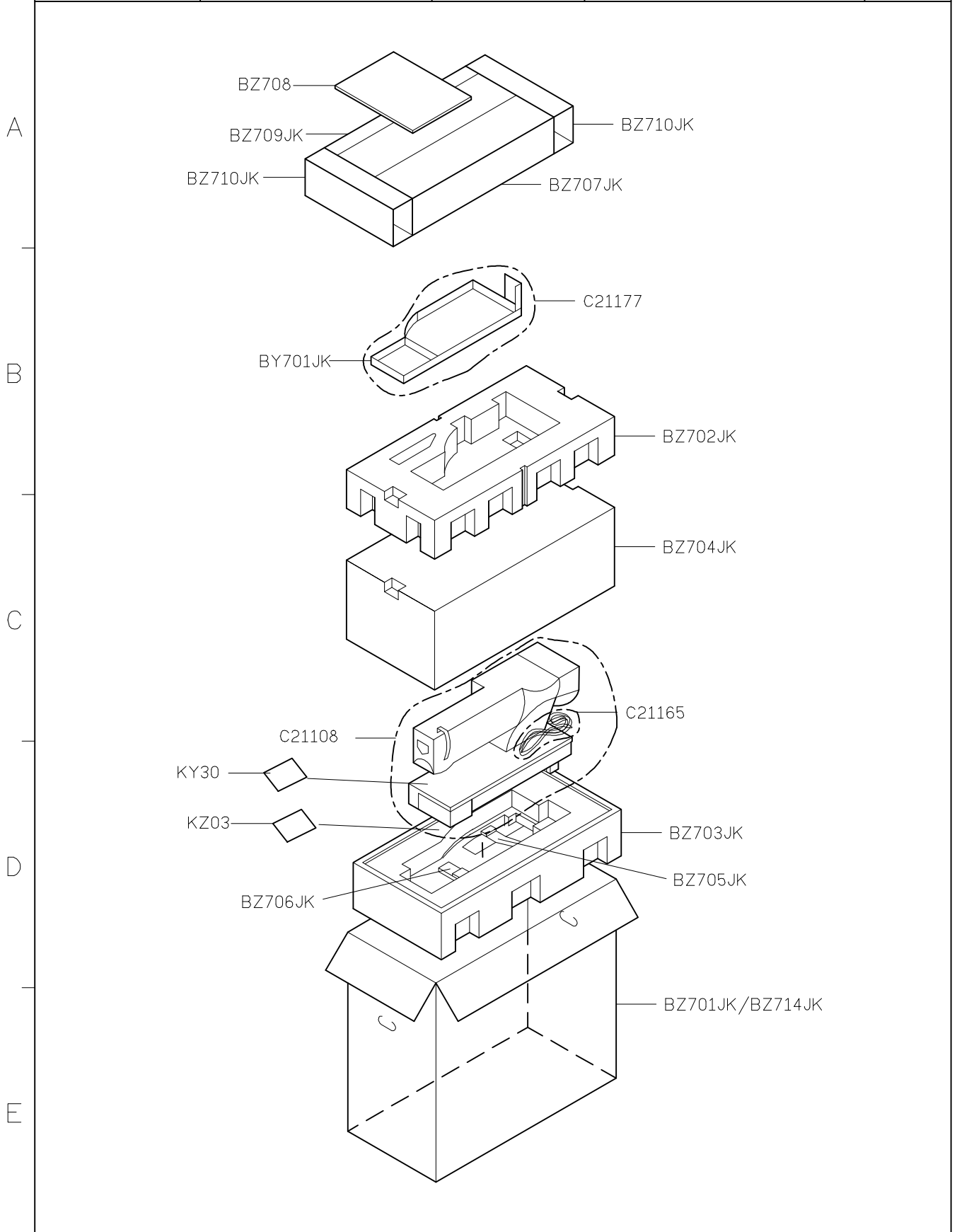




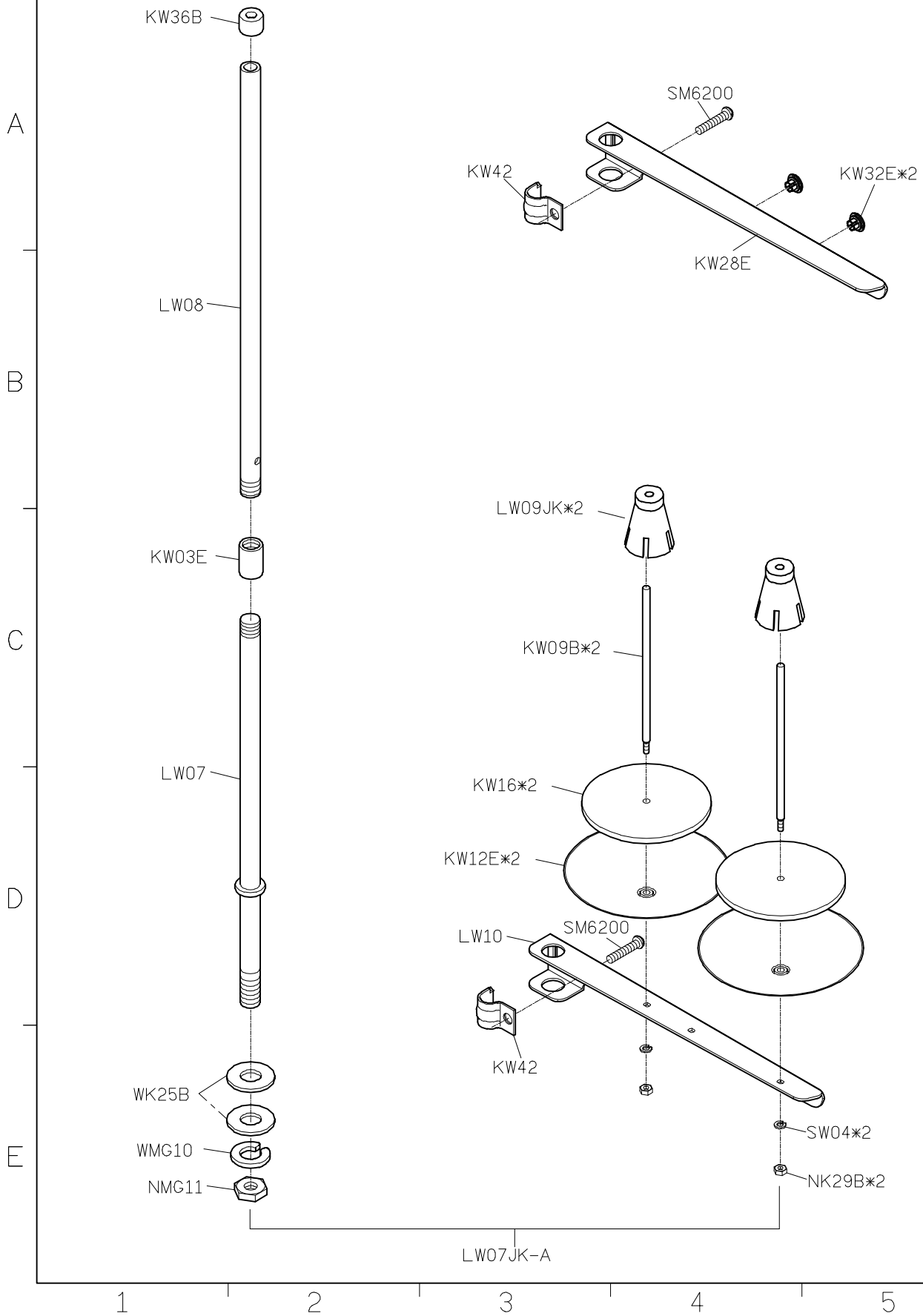
<b>SIRUBA</b> PARTS LIST	<b>Series</b>	<b>Parts Group</b>	<b>Subclass / Remark</b>	<b>Page</b>
	<b>LBHS-1790S</b>	<b>BY</b>	<b>Use For</b> <b>*LBHS-1792K</b>	<b>1/1</b>
				<b>Date</b>
				<b>2016/01/15</b>



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	LBHS-1790S	LW		1/1
				Date
				2015/12/04





 高林股份有限公司  
KAULIN MFG. CO., LTD.

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The specification and/or the equipment described in the instruction book are subject to  
change because of modification with out previous notice  
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