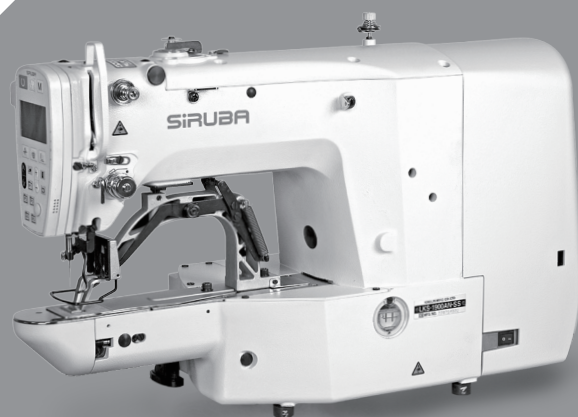


SIRUBA[®] Sew Reach

使用說明書與零件圖

ORIGINAL INSTRUCTIONS BOOK & PARTS LIST

LKS-1900P



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内容。

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。請充分瞭解這些内容，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

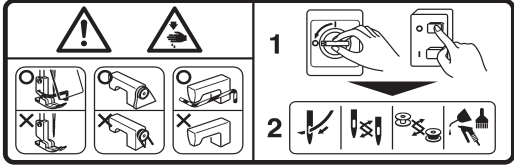
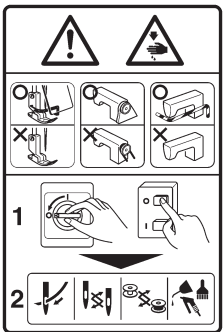
 危險 DANGER	<p>操作或維修保養機器時，如果當事人、第 3 者操作錯誤或沒有避免該情況，有發生死亡或造成重傷的危險。</p> <p>This indication is given where there is an immediate danger of death or serious injury if the person in charge or any third party mishandles the machine or does not avoid the dangerous situation when operating or maintaining the machine.</p>
 警告 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>
 注意 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 contacting 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→ ②→ ③←</p>		 <p>← ① ← ② ← 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.</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 lectrical-shock danger label

		
	<p>⚠ 危險</p> <p>誤觸高壓電、會受傷。 關掉電源超過5分鐘以上，就拆開蓋子。</p>	<p>⚠ DANGER</p> <p>Hazardous voltage will cause injury. Turn off main switch and unplug power cord and wait at least 5 minutes before opening this cover.</p>

有關安全的注意事項

•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内容。
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。

SAFETY PRECAUTIONS

•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 pacemaker 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)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

(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。

PRECAUTIONS TO BE TAKEN IN VARIOUS OPERATION STAGES

(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.

(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，排放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.

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°C to 35°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 LKS-1900P 縫紉機的注意事項

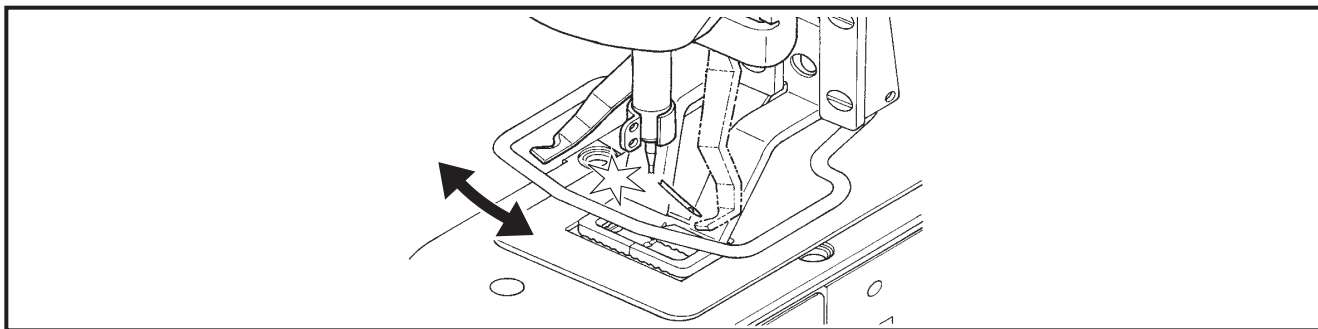
PRECAUTIONS TO BE TAKEN SO AS TO USE THE LKS-1900P SERIES MORE SAFELY

•危險

1. 為了防止觸電事故，請不要在接通電源的狀態下打開馬達電氣箱的蓋子或觸摸電氣箱內的零件。
2. 變更圖案後，請確認落針位置。萬一圖案突出壓腳，縫製中機針會碰到壓腳，發生危險的斷針事故。
3. 機針落下的狀態請不要關閉電源。有可能挑線桿弄斷機針。

•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.
3. Do not turn OFF the power in a state that the needle is lowered. Wiper may break the needle.



•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. 為了防止人身傷害，接通電源開關時以及縫紉機運轉中，請不要把手指伸到挑線桿、布壓腳、布壓腳機構部、挑線桿護罩中、切布刀以及機針下面。
3. 為了防止突然的起動造成人身事故，放倒縫紉機時，拆卸馬達外罩時，請關掉電源。
4. 為了防止被捲入的人身事故的發生，繞線時請確認了機針下沒有障礙物之後再踩起動開關。另外，切線動作中，請不要讓頭髮靠近機器。

•CAUTION

1. In case nothing is displayed in the operation panel even when the power switch is turned ON, turn OFF the power switch and check the power voltage and phase.
2. To prevent personal injury or death, never put finger into the thread take-up lever, work clamp, work clamp mechanism and thread take-up cover, and under or near the cloth cutting knife and needle when turning on the power switch or while the machine is in operation.
3. To protect against possible accidents due to abrupt startup of the machine, turn OFF the power switch before tilting the machine head or removing the motor cover.
4. So as to prevent possible accidents caused by abrupt start of the sewing machine, depress the start switch after ascertaining that there is no interfering thing under the needle when winding the bobbin thread. In addition, never put your hair close to the machine during thread trimming.

5. 變更圖案、準備鍵 ON、壓腳開關 ON、中壓腳按鈕 ON、繞線按鈕 ON 時，壓腳自動地下降，為了防止突然的啟動發生的事故，請絕對不要把手指放到壓腳下面。
 6. 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。
 7. 為了防止對人身的傷害，請不要在卸下馬達外罩、護目鏡等安全裝置的狀態下運轉縫紉機。
 8. 為了防止人身傷害，卸下縫紉機各部的護罩的狀態下，請不要運轉縫紉機。
 9. 操作盤上也進行有關安全的警告，打開 (ON) 電源後請確認了機器正常之後再運轉縫紉機。
 10. 為了防止人身傷害，縫紉機運轉中請不要用手按推皮帶飛輪。
 11. 為了防止對人身的傷害，放倒縫紉機時和返回原來位置時，請注意不要夾到手指等。
 12. 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。
 13. 為了防止損壞電氣零件的事故，打雷時，請停止作業，拔下電源插頭，以保證安全。
 14. 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。
5. Feeding frame automatically comes down when pattern is changed, ready key is ON, Presser switch is ON, intermediate presser button is ON and bobbin winder button is ON. To prevent possible accidents caused by abrupt start of the sewing machine, never place your finger under the feeding frame.
 6. To avoid personal injury, never bring your fingers hair or clothing close to V belt, cloth cutting knife or motor during operation, and never place anything on any of these parts.
 7. To avoid personal injury, never operate the machine with the motor cover, eye protection cover, or any other safety devices removed.
 8. To prevent personal injury or death, do not operate the sewing machine with its covers removed.
 9. The operation panel displays safety warnings. It is necessary therefore to first verify normal display on the panel when the power switch is turned on, before operating the sewing machine.
 10. To prevent personal injury or death, do not press the hand pulley while the sewing machine is in operation.
 11. To avoid personal injury, be careful never to allow your finger to go inside the machine when tilting or raising the machine head.
 12. To prevent possible accidents due to electric shocks or damaged electrical component(s), always turn OFF the power switch before connecting or disconnecting the power plug.
 13. During thunder and lightning storms, stop your work and disconnect the power from the outlet to ensure safety and prevent possible accidents due to damaged electrical component(s).
 14. If the machine is suddenly moved from a cold place to a warm place, dew condensation may result. If this occurs, be sure to confirm that there are no potentially dangerous water drops in the machine before turning it on in order to prevent possible accidents due to damaged electrical component(s).

15. 為了防止損壞電氣零件的事故，停電時，請一定關掉電源。
16. 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。
17. 長時間連續使用縫紉機的話，縫紉機主機的一部分、操作盤背面等有可能有溫度上升到 15°C 左右，感覺到發熱，但是這不是異常，對零部件等沒有影響。
18. 請不要往機油槽和旋梭以外加縫紉機油。因為本機除旋梭以外採用潤滑脂潤滑，如果加了縫紉機油的話，潤滑脂就會漏瀉出來，造成磨損。
19. 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機器衝擊。
20. 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。
21. 為了防止因漏電、絕緣耐壓問題造成的事故，請讓具有電氣專門知識的人正確地安裝電源插頭。另外，請一定把電源插頭插到連接地線的電源插座上。
22. 為了防止因漏電造成的事故，請一定將地線接地。
23. 連接 LKS-1900P 系列的電氣箱，請一定使用 LKS-1900P 系列專用的電氣箱。（連接了 LKS-1900P 系列用的電氣箱的話，有誤動作的危險。）
15. In the event of a power failure, be sure to turn OFF the power to the machine to protect against damaged electrical components.
16. This sewing machine should be used under industrial environment. Under general house-hold environment, the machine may cause poor reception when used in proximity of the television set or radio.
17. When the sewing machine is used without a break for many hours, the temperature of a part of the machine body or the rear side of operation panel rises higher by 15°C than the environmental temperature, and you may feel the heat from the part. However, this phenomenon is not abnormal, and does not affect the components or the like.
18. Do not lubricate the machine oil to the places other than the oil tank and the hook section. The grease lubricating system except the hook section is employed for this sewing machine, and the grease flow out when lubricating the machine oil resulting in worn-out of the components.
19. Be careful of handling this product so as not to pour water or oil, shock by dropping, and the like since this product is a precision instrument.
20. This is a Class A product. In a domestic environment this product may cause radio inter-ference, in which case the user may be required to make corrective actions.
21. In order to prevent possible accidents due to a ground fault or a dielectric voltage, an appropriate power plug should be installed by a person who has expertise in electricity. In addition, the power plug should be connected to the receptacle which is properly grounded without exceptions.
22. In order to prevent possible accidents due to a ground fault, the earth cable should be properly grounded.
23. For the control box to be connected to the LKS-1900P Series, use the exclusive control box for the LKS-1900P Series. (If the control box for the LKS-1900P Series is connected to the LKS-1900P Series sewing machine, a malfunction can be caused.)

關於安全裝置和警告標籤

SAFETY DEVICES AND WARNING LABELS

警告標籤(參照 ii 頁警告標籤)
Warning label(Refer to the warning label on page ii.)

記載著操作縫紉機時的最低限度的注意事項。

The label gives the minimum precautions to be taken when operating the sewing machine.

挑線桿護罩
Thread take-up lever cover

這是防止人身體和挑線桿接觸的護罩。
This is a cover for preventing contact between the human body and the thread take-up lever.

馬達護罩
Motor cover

這是防止馬達和人身體接觸的護罩。
This is a cover for preventing contact between the human body and the motor.

手指防護器
Finger guard

這是防止手指和機針接觸的護罩。

This is a cover for preventing contact between fingers and the needle.

注意被夾標籤
Warning label against pinching



這表示有把手指夾進縫紉機下面的危險。

This label warns that hands can be pinched under the sewing machine.

⚠ 注意 CAUTION

- 另外，在使用說明書中為了突出說明重點，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.

索引	INDEX	頁 /PAGE
規格	SPECIFICATION	1
各部的名稱	CONFIGURATION	2
1. 縫紉機的基本操作	1. BASIC OPERATION OF SEWING MACHINES	3
2. 面板應用	2. PANEL APPLICATION	10
專案資料一覽表	LIST OF ITEM DATA	14
（1）記憶體設置一參數列表	(1) Parameter List of Memory Settings I	29
（2）記憶體設置二參數列表	(2) Parameter List of Memory Settings II	31
標準花樣一覽表	TABLE OF THE STANDARD PATTERNS	35
1900B 標準花樣一覽表	Table of the 1900B Standard Patterns	35
釘扣標準花樣一覽表	TABLE OF THE 1903B STANDARD PATTERNS	39
MT20/31 套結機故障代碼	MT20/31 Bartacking Machine Error code list	41
零件圖	PART LIST	45

I . LKS-1900P 套結一體機 縫紉機的說明

I . EXPLANATION OF LKS-1900P, All-in-one Tracking Lattice Screen Machine Operating Manual

規格

SPECIFICATION

1	縫製範圍 Sewing area	X (左右) 方向 40mm Y (前後) 方向 30mm X (lateral) direction 40 mm Y (longitudinal) direction 30 mm
2	最高縫紉速度 Max. sewing speed	3,200sti/min ※ (針跡 5.0mm , Y 3.5mm 以下時) 3,200 sti/min※ (When sewing pitches are less than 5 mm in X-direction and 3.5 mm in Y-direction.)
3	縫跡長度 Stitch length	0.1 ~ 10.0mm (0.1 單位) 0.1 to 10.0 mm (adjustable in 0.1 mm step)
4	壓腳送布 Feed motion of work clamp foot	間斷送布 (步進馬達雙軸驅動方式) Intermittent feed (2-shaft drive by stepping motor)
5	針桿行程 Needle bar stroke	41.2mm
6	使用機針 Needle	DP×5、DP×17
7	壓腳上升量 Lift of work clamp foot	標準 13mm 最大 17mm 13 mm (standard) Max.17 mm
8	旋梭 Shuttle	半旋轉標準旋梭 Standard semi-rotary hook (oil wick lubrication)
9	使用機油 Lubricating oil	No.2 相當於 ISO VG32 (加油方式) New Defrix Oil No. 2 (supplied by oiler)
10	資料的記錄 Data recording	EEPROM (128Kbyte) EPROM (32Kbyte)
11	向右、縮小功能 Enlarging / Reducing facility	X 方向、Y 方向各為 20 ~ 200% (1%為單位) 20% to 200% (1% step) in X direction and Y direction respectively
12	放大、縮小方式 Enlarging / Reducing method	增減縫跡長度方式 Pattern enlargement / reduction can be done by increasing/decreasing the stitch length
13	縫紉速度限制 Max. sewing speed limitation	400 ~ 3,200sti/min※ (100sti/min 單位) 400 to 3,200 sti/min※ (100 sti/min steps)
14	圖案選擇功能 Pattern selection	圖案 No. 指定方式 (1 ~ 200) Specifying pattern No. type (1 to 200)
15	底線計數器 Bobbin thread counter	上升/下降方式 (0 ~ 9999) UP/DOWN type (0 to 9999)
16	縫紉機馬達 Sewing machine motor	伺服馬達 Servo motor
17	外形尺寸 Dimensions	W : 1,200mm L : 660mm H : 1,100mm (使用標準機架) W : 1,200 mm L : 660 mm H : 1,100 mm(Use the standard table and stand.)
18	重量 Weight	機頭 42Kg Machine head 42 kg, Control box 16.5 kg
19	消耗電力 Power consumption	450VA (圖案花樣 No.1、3200sti.min、休止 1 秒) 450 VA (Pattern No. 1, 3,200 sti/min, 1-sec pause time)
20	使用溫度範圍 Operating temperature range	5°C ~ 35°C
21	使用濕度範圍 Operating humidity range	35% ~ 85% (無結露) 35% to 85% (No dew condensation)
22	電源電壓 Line voltage	額定電壓 ±10% 50Hz/60Hz Rated voltage ± 10% 50/60 HZ

※ 最高縫製速度，請根據縫製條件降低速度使用。

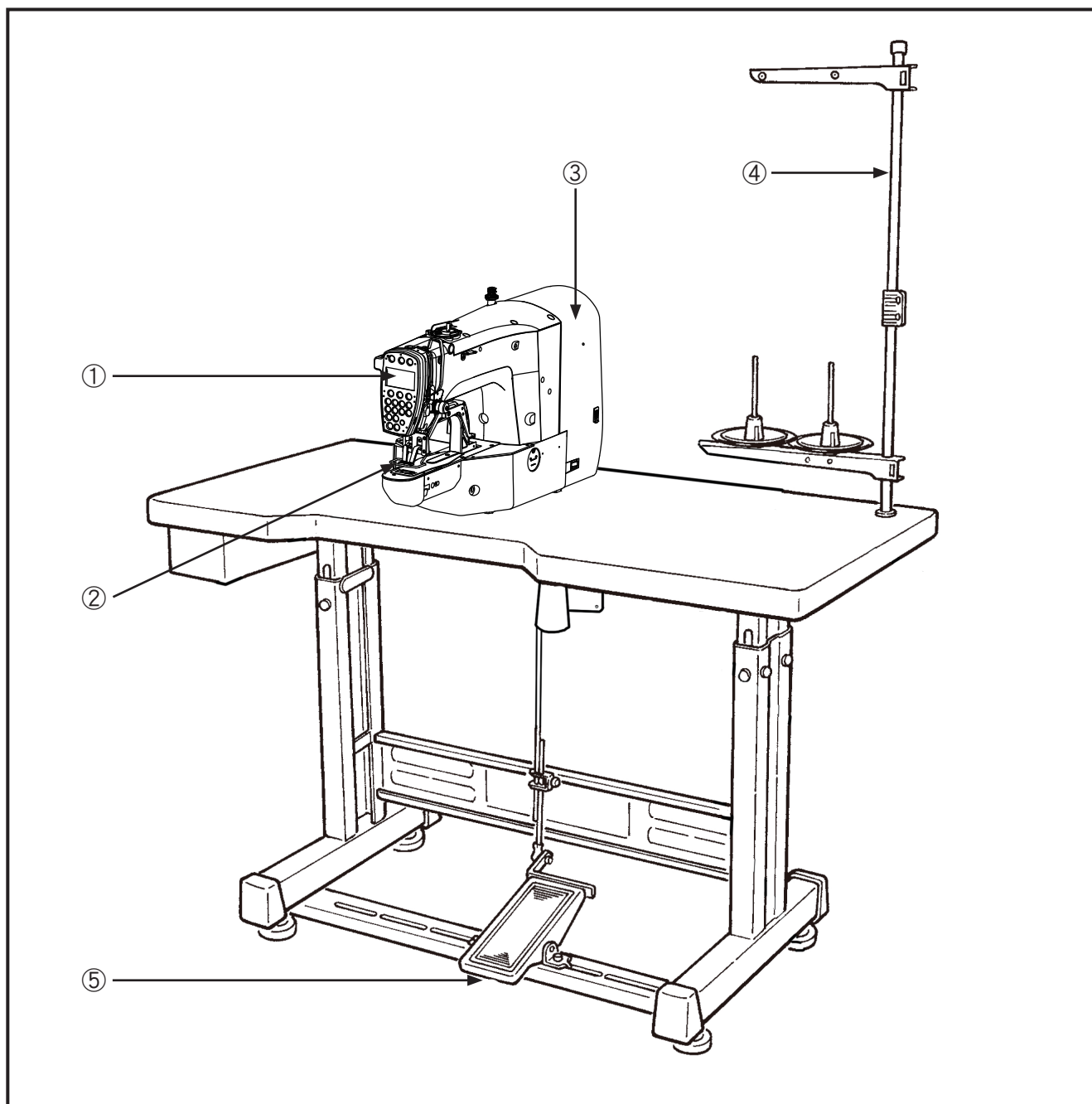
※ Reduce the max. sewing speed in accordance with the sewing conditions.

各部的名稱

CONFIGURATION

1. 主機的名稱

1. Names of main unit

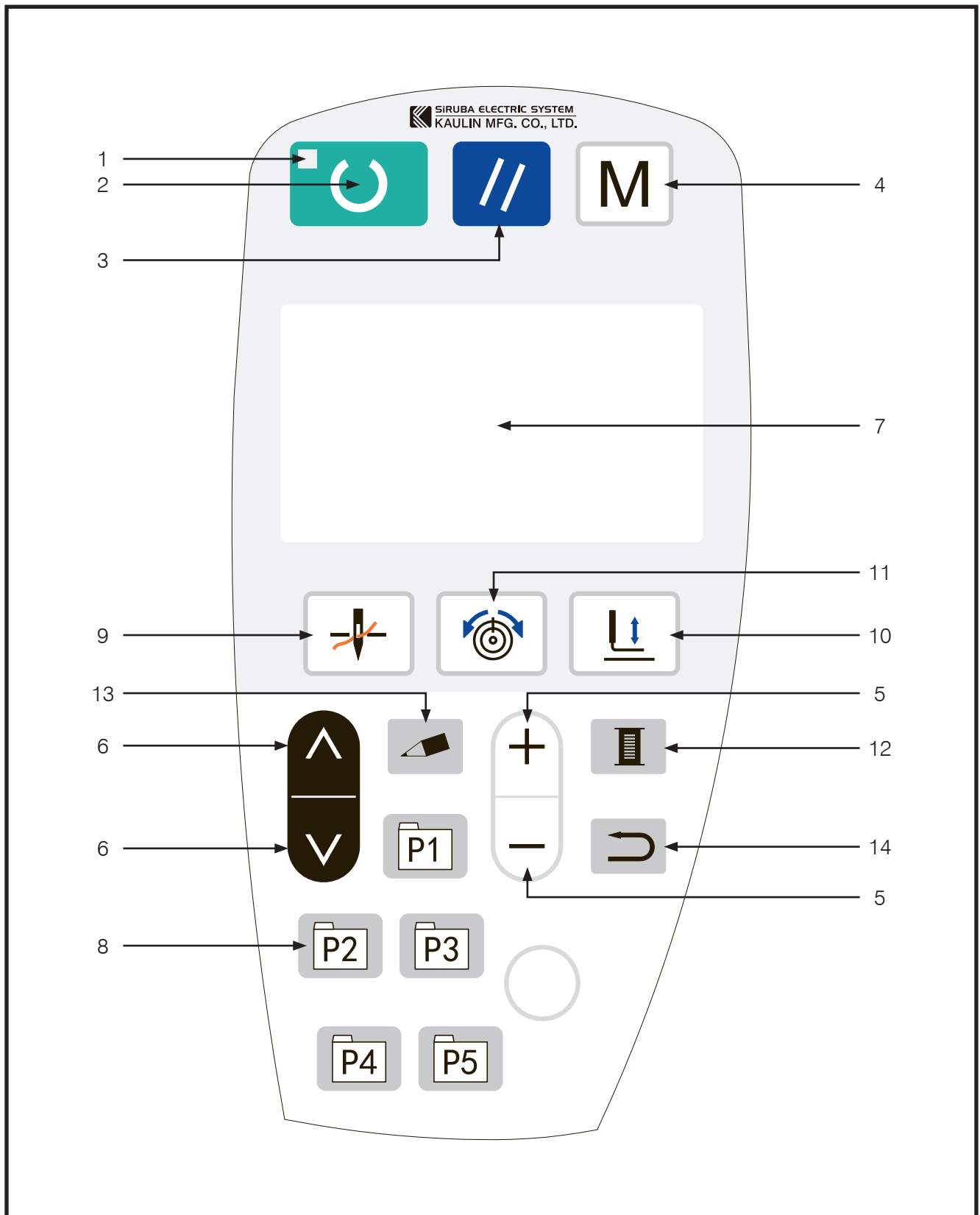


- ① 液晶操作盒
- ② 布壓腳
- ③ 控制箱
- ④ 線架裝置
- ⑤ 踏板開關

- ① LCD operating box
- ② Work clamp feet
- ③ Control box
- ④ Thread stand
- ⑤ Pedal switch

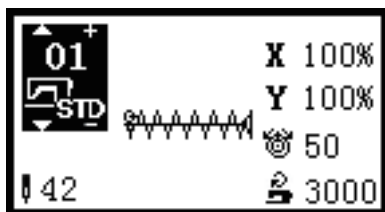
1. 縫紉機的基本操作

1. BASIC OPERATION OF SEWING MACHINES




No.	名稱 Name	功能 Function
1	縫製 LED Sewing LED	設定程式設計狀態時為滅燈，縫製狀態時為亮燈。通過準備鍵來切換。 The light is off when setting the programming state and is on while sewing. It is switched through the standby key.
2	準備鍵 Standby Key	控制台的設定程式設計狀態和縫紉機實際動作的縫製狀態的變換鍵。 It is the switch key of the set programming status of the control panel and the sewing status of the actual operation of the sewing machine.
3	復位鍵 Reset Key	解除異常、將設定值返回到初期值時使用。 It is used to release the exception and reset the set value to the initial one.
4	模式鍵 Mode Key	顯示模式畫面。Display mode screen.
5	數據變更鍵 Data Change Key	變更圖案 No.、各種資料。1 針 1 針地前進傳送。 Change pattern number and various data. Transmit forward needle by needle.
6	項目選擇鍵 Item Selection Key	選擇資料 No. 等。 It is used to select the data number, etc.
7	液晶選擇部分 LCD Selection Part	顯示圖案，形狀等各種資料。 It is used to display various data such as patterns, shapes and so on.
8	P 花樣設置鍵 P Pattern Setting Key	設置 P 花樣並將其存儲，存儲後的 P 花樣通過按此鍵就可立即進行縫製。 Set the P pattern and store it. The stored P patterns can be immediately sewed by pressing this button.
9	抓線鍵 Thread-grasping Key	LED 燈亮時，設置抓線開關。 Set the thread-grasping switch when the LED light is on.
10	壓腳 Presser Foot	提升、下降壓腳。在 LED 燈亮的情況下，可進入單步縫製模式。 It is used to raise and lower the presser foot. When the LED light is on, the single-step sewing state is activated.
11	線張力 Thread Tension	快速進入線張力設置介面。 Quickly enter the thread tension setting interface.
12	卷線鍵 Winding Key	在 LED 燈滅的狀態下，壓腳放下，XY 步進找原點。 When the LED light is off, release the presser foot and find the origin point via XY stepping.
13	編輯按鍵 Edit Key	顯示編輯畫面，選擇專案，或者顯示詳細畫面。 It is used to display the editing screen, select the item, or display the detailed screen.
14	返回鍵 Return Key	返回到前一個畫面。 Return to the previous screen.

1-1. 圖案 No. 的設定




打開電源開關。

在畫面的左上方圖案 No. 被顯示，圖案形狀、X/Y 放大縮小率、線張力值、縫製速度也被顯示出來。


按了數據變更鍵  之後，可以變更圖案。

※No. 圖案號碼，請參照附錄一覽表。

1-2. 項目數據的設定

按了編輯按鍵  之後，專案資料登錄畫面被顯示出來。

在畫面的左側顯示出可以編輯的專案，在畫面右側顯示出設定內容。

用項目選擇鍵  選擇專案，然後可以用資料

變更鍵  變更設定內容。

(1) X 尺寸的輸入

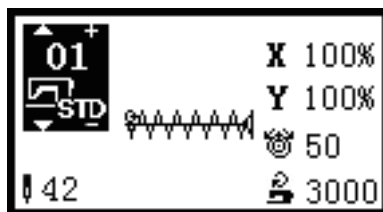


請按項目選擇鍵 ，顯示出 X 尺寸。請

按數據變更鍵 ，顯示出希望的數值。



X•Y 的尺寸輸入從實際尺寸值進行選擇。

1-1. Setting of Pattern No.



Turn on the power switch.

The pattern No. on the upper left of the screen is displayed, and so are the pattern shape, the X/Y magnification and reduction rate, the thread tension and the sewing speed.

After pressing the Data Change Key  , the pattern No. can be changed.


※Please refer to the Appendix List for the pattern No.

1-2. Setting of Item Data

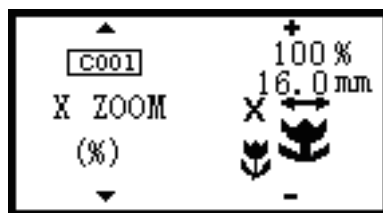
Pressing the Edit Key , you will see the item data input screen.



The editable items are displayed on the left side of the screen, and the set items are on the right side.

Use the Item Selection Key  to select the

items, and then use the Data Change Key  to change the setting.

(1) Input of X Size

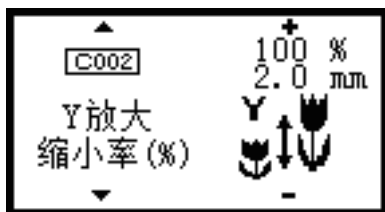


Press the Item Selection Key  to display the C001X size. Press the Data Change Key  to display the desired value.

(初期值 : % 輸入)。

※ 設定超過 100%的話，機針和布壓腳會相碰，發生斷針，非常危險。

(2) Y 尺寸的輸入



請按專案選擇鍵  選擇，顯示出 Y 尺寸。

請按數據變更 ，顯示出希望的數值。

X•Y 的尺寸輸入從實際尺寸值進行選擇。
(初期值 : % 輸入)

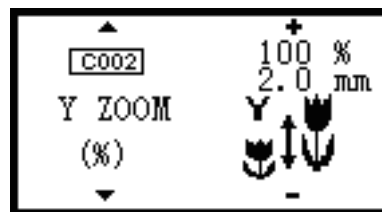
※XY 的尺寸由 % 來設置當前的數值尺寸 mm



※ 設定超過 100%的話，機針和布壓腳會相碰，發生斷針，非常危險。

The size input of X • Y is selected from the actual size value. (Initial value: % input)

※If setting more than 100%, the needle and cloth presser foot will be collided to cause needle breakage, which is very dangerous.

(2) Input of Y Size



Press the Item Selection Key  to display the C002Y size. Press the Data Change Key  to display the desired value.

The size input of X • Y is selected from the actual size value. (Initial value: % input)

※The size (mm) of XY is set by %.

※If setting more than 100%, the needle and cloth presser foot will be collided to cause needle breakage, which is very dangerous.

(3) 縫製速度的輸入

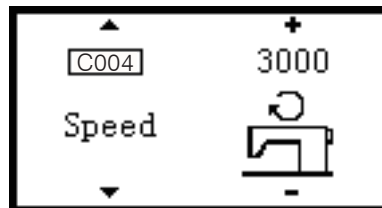



請按專案選擇鍵 ，顯示出 C004 縫製速度。


請按數據變更鍵 ，顯示出希望的數值。

輸入的最大範圍是記憶體開關 U001 最高縫製速度的數值。

(3) Input of Sewing Speed



Press the Item Selection Key  to display the C004 sewing speed.

Press the Data Change Key  to display the desired value.


The maximum input range is the value of the maximum sewing speed of the memory switch U001.

(4) 線張力的設定

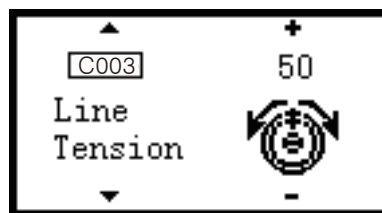



請按項目選擇鍵 ，顯示出 C003 張力，


請按數據變更鍵 ，顯示出希望的數值。（輸入範圍：20~200）


※ 在 LED 燈滅或 LED 燈亮的介面按線張力按鍵  會快速顯示出線張力顯示介面，其中在縫製狀態（LED 燈亮）中，修改的線張力數值即時更新，不需要其他操作，直接退出即可。

(1) Setting of Thread Tension

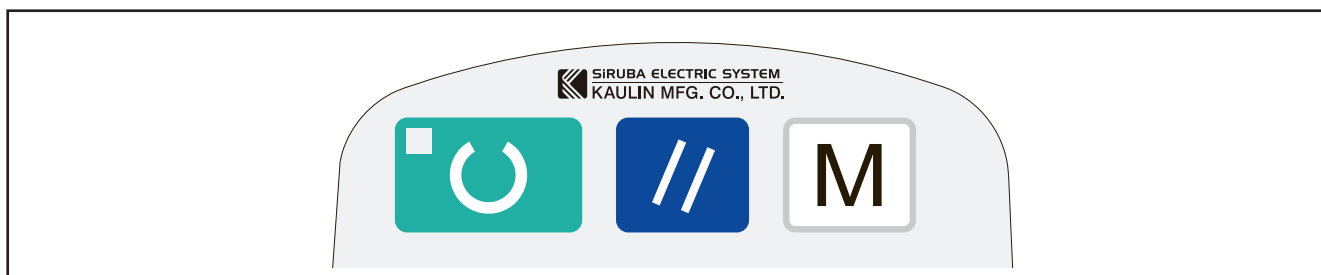



Press the Item Selection Key  to display the C003 thread tension.

Press the Data Change Key  to display the desired value (range: 20-200).

※ Press the Thread Tension Key  in the interface that controls the LED light to quickly display the thread tension interface. In the sewing state (the LED light is on), the modified tension value is updated in real time. No other operation is required, so you can exit directly.

(5) 完成設定




按準備鍵 。壓腳移動→上升後準備完了 LED 亮燈，轉換為可以縫製的狀態。

※ 壓腳上升時，壓腳首先下降然後再移動，因此請注意不要夾到手指。


※ 按準備鍵  之後，圖案 No.、XY 擴大縮小率等設定值被記憶。


※ 按了準備鍵  之後，準備完了 LED 滅燈。可以變更各項目的設定。

(5) Completion of Settings


Press the Standby Key . Move the presser foot → upward to get the LED light on, and enter the sewing standby state.

※ When the presser foot is rising, it is firstly lowering and then moving. NOTE: Be cautious of finger pinching.

※ After pressing the Standby Key  , the setting value such as pattern No. and XY magnification and reduction ratio will be memorized.


※ After pressing the Standby Key  , to get LED light off so as to change the settings for each item.


※ 線張力在準備完了 LED 亮燈時也可以變更。線張力用開始開關也可以記憶。

※ 請確認圖案 No. 在標準圖案 E010 設定中是開啟 (✓) 狀態，若是關閉 (✗) 狀態下，按了準備鍵  之後，會顯示 E010 異常錯誤。此時，請將關閉的標準圖案 No. 打開。

※ 不按準備鍵  開關，關掉電源後，圖案 No.、XY 擴大縮小率、最高轉速、線張力的設定值均不能被記憶。

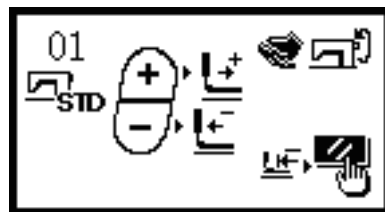
※ The thread tension can also be changed when the LED light is on and be memorized with the start switch.






※ Please use it after confirming the pattern No. When the Standby Key  is pressed while the pattern No. is displayed, the E010 error will be displayed. In this case, please reset the pattern No. 請修改翻譯






※ If the Standby Key  switch is not pressed, after the power is switched off, the set value for the pattern No., XY magnification and reduction ratio, maximum rotation speed and the thread tension cannot be memorized.

1-3. 圖案形狀的確認

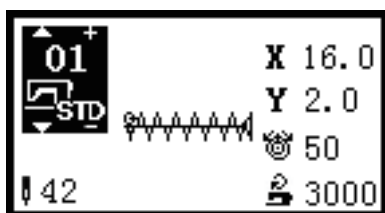
1-3. Confirmation of Pattern Shapes



- (1) 按準備鍵 ，讓準備完了 LED 亮燈。
- (2) 按壓腳卷線鍵 ，顯示出「壓腳下降畫面」。
- (3) 踩踏板顯示出形狀確認畫面。
- (4) 請用數據變更鍵  確認形狀。
- (5) 用復位鍵 ，返回到縫製開始位置，壓腳上升。按了返回鍵  之後，在現在的位置的狀態下顯示縫製畫面。在此狀態下，踩了踏板之後，可以從現在的位置進行縫製。

- (1) Press the Standby Key  to get the LED light on.
- (2) Press the Presser Foot Winding Key  to display the “presser foot downward screen”.
- (3) The pedal shows the shape confirmation screen.
- (4) Use Data Change Key  to confirm the shape.
- (5) Use the Reset Key  to return to the sewing start position and get the presser foot rise. When the Return Key  is pressed, the sewing screen is displayed in the current position. In this state, after the pedal is stepped, the sewing can be performed from the current position.

1-4. 向其他圖案的變更

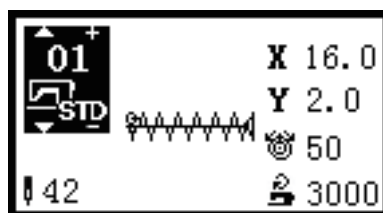



按準備鍵 ，讓準備完了 LED 滅燈。

用資料變更鍵  設定圖案 No。


與 1-2 同樣，可以設定 XY 放大縮小率、速度等。按了準備鍵  之後，準備完了 LED 亮燈變成可以縫製的狀態。

1-4. Change to Other Patterns

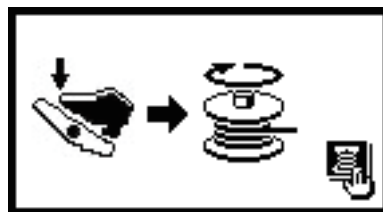


Press the Standby Key  to get the LED light off.

Use Data Change Key  to set pattern No.

As in 1-2, the XY magnification and reduction rate, speed and so on can be set. After the Standby Key  is pressed, the LED light is on to enter the sewing standby status.

1-5. 捲繞底線




(1) 按準備鍵  讓準備完了 LED 滅燈。

(2) 按壓腳卷線鍵 ，選擇下降壓腳。當在按壓腳卷線鍵之前需要確定壓腳處於抬起狀態，當不在抬起狀態時，需要重新按準備鍵 。


(3) 按  鍵。顯示卷線畫面。



(4) 踩踏板之後，縫紉機轉動。

(5) 再次踩踏板或者按了復位鍵  之後縫紉機停止。

(6) 按了準備鍵  或返回鍵  後結束卷線畫面。


1-5. Winding Base Thread

(1) Press the Standby Key  to get the LED light off.


(2) Press the Presser Foot Winding Key and select to lower the presser foot. Before pressing the Presser Foot Winding Key  , it shall be confirmed that the presser foot is at the raised status. If it is not in the lift status, the Standby Key  needs to be pressed again.

(3) Press  to display the winding screen.


(4) After the pedal is pedaled, the sewing machine starts to rotate.

(5) Step down the pedal again or press the Reset Key  to stop the sewing machine.

(6) Press the Standby Key  or the Return

※ 剛剛打開 (ON) 電源後，卷線不動作。
請設定 1 次圖案 No. 等， 按鍵讓
準備完 LED 亮燈之後再進行操作。

Key  to finish the winding.






※When it is just powered on (ON), the winding is not working. Please set pattern No. once, and press  to get the LED light on before operation.

2. 面板應用

2. PANEL APPLICATION






2-1. 使用圖案鍵 進行縫製

可以把已經登記的圖案 (No.1 ~ 200) 登記到 P1 ~ P50 上。變更擴大縮小率、最高轉速限制、線張力、縫製位置就可以登記，用圖案 No. 的滾動視窗選擇同樣可以登記圖案，可以一次地叫出 P1 ~ P25。

※ 選擇了 P8 ~ P25 時，用下表所示的鍵      的組合 (同時按) 進行縫製。

2-1. Use Pattern Key for Sewing

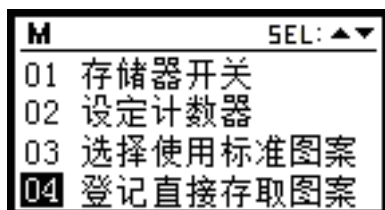
The registered patterns (No. 1 to 200) can be registered on the P1 to P50. The registration can be conducted by changing the magnification and reduction ratio, maximum rotation speed limitation, thread tension and sewing position. The pattern can also be registered by using the scrolling window of pattern No., and P1 ~ P25 can be made out in one time.

※When P8 to P25 is selected, sewing is performed with the combination (press at the same time) of the keys      shown in the table below.


P-No.	選擇鍵 Selection Key	P-No.	選擇鍵 Selection Key	P-No.	選擇鍵 Selection Key	P-No.	選擇鍵 Selection Key
P1	P1	P8	P1+P4	P15	P4+P5	P22	P2+P3+P4
P2	P2	P9	P1+P5	P16	P1+P2+P3	P23	P2+P3+P5
P3	P3	P10	P2+P3	P17	P1+P2+P4	P24	P2+P4+P5
P4	P4	P11	P2+P4	P18	P1+P2+P5	P25	P3+P4+P5
P5	P5	P12	P2+P5	P19	P1+P3+P4		
P6	P6	P13	P3+P4	P20	P1+P3+P5		
P7	P7	P14	P3+P5	P21	P1+P4+P5		

(1) 往圖案鍵上的登記

設定例：把圖案 No.3、X 擴大縮小 50%、Y 擴大縮小 80%、最高速度限制 3,000RPM、線張力 50，圖案位置右移 0.5mm、前移 0.5mm 的設定登記到 P1。

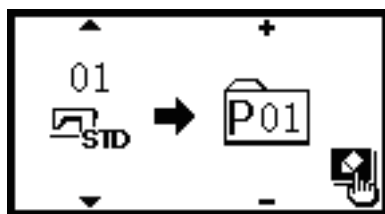


1. 打開 (ON) 電源，然後按模式鍵 **M**。(準備完了 LED 應該滅燈) 進入方式設定 (記憶體開關設定)。

按項目選擇鍵 ，把「04 選擇直接圖案」

設定為選擇狀態。

按編輯按鍵 ，顯示圖案登記模式。



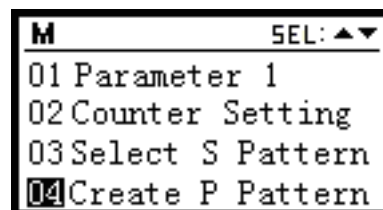
2. 按項目選擇鍵 ，把標準圖案設定為

No.1。按數據變更鍵 ，把 P-No. 設定為 1。


按了編輯按鍵  之後，P1 被登記，模式畫面被顯示出來。

(1) Registration on the Pattern Key

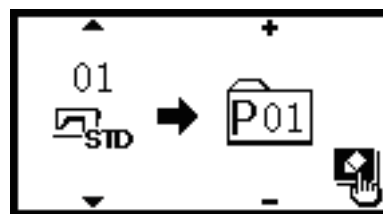
Setting example: Register the following settings of Pattern No.3 to P1: magnify and reduce X by 50% and Y by 80%, and limit the maximum speed to 3,000 RPM and thread tension 50, and move the pattern position 0.5mm to the right and 0.5mm to the front.




1. Turn on the power (ON) and press the Mode Key **M** (When it is standby, the LED light should be off) to enter the method setting interface (memory switch setting).


Press the Item Selection Key  to set "04 select direct pattern" as the selected status.

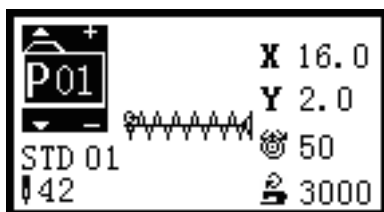
Press the Edit Key  to display the pattern registration mode.



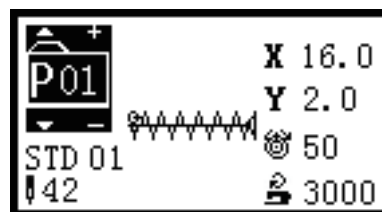
2. Press the Item Selection Key  to set the


standard pattern to No.1. Press the Data Change Key  to set P-No. as 1.

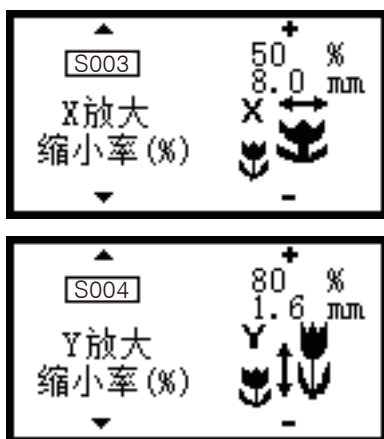
When the Edit Key  is pressed, P1 is registered and the mode screen is displayed.




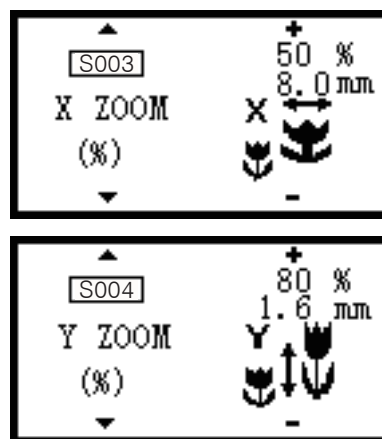
3. 再按編輯按鍵  之後，顯示出當前 P 花樣所需要的修改的參數項。




3. Press the Edit Key  again, the parameters that need to be modified for P patterns will be displayed.



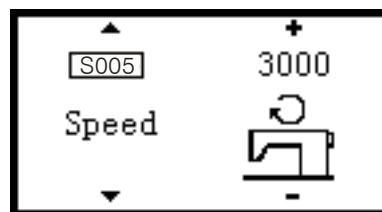
4. 請用數據變更  鍵進行專案資料的編輯。
有關可以編輯的專案資料，如「(2) 專案資料一覽表」P.14 所示。



4. Please use the Data Change Key  to edit the item data.
For item data that can be edited, it is as shown in “(2) List of Item Data” on P.14.



5. 分別進行設定，把 X 尺寸縮小率設為「50」%，把 Y 尺寸縮小率設定為「80」%，把縫製速度設定為「3000」RPM，把線張力設定為【50】。

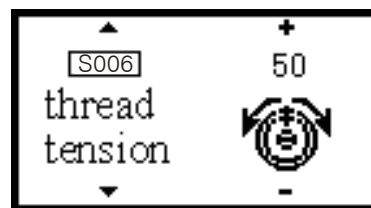



5. Perform the settings respectively. Set the X size reduction ratio to be 50% and Y size reduction ratio to be 80%, the sewing speed to be 3,000 RPM and the thread tension to be 50.

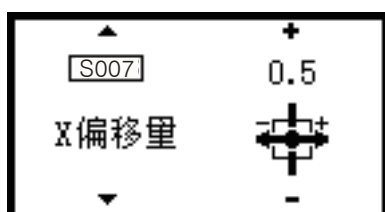


6. 「X 放大縮小率」顯示為 0.0。可以用 0.1mm 單位來設定 X 方向的移動量。

用數據變更鍵  把數據變更為【0.5】。

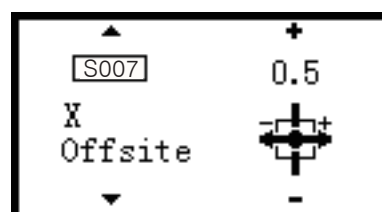



6. The “X Magnification and Reduction Ratio” is displayed as 0.0. The amount of movement in the X direction can be set in units of 0.1 mm. Use the Data Change Key  to change the data to be 0.5.

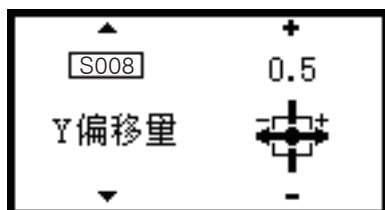




7. Y 放大縮小率」顯示為 0.0。可以用 0.1mm 單位來設定 Y 方向的移動量。用數據變更鍵

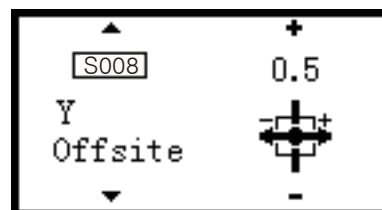
 把數據變更為【0.5】。





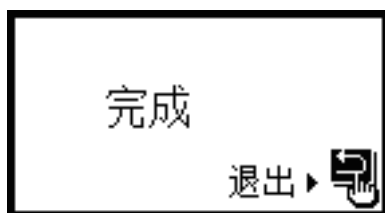
7. The “Y Magnification and Reduction Ratio” is displayed as 0.0. The amount of movement in the Y direction can be set in the unit of 0.1 mm. Use the Data Change Key  to change the data to be 0.5.



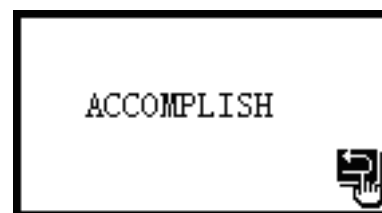
8. 按準備鍵  之後，設定結束，保存當前輸入的所有圖案資訊。
※ 若不想登記當前 P 花樣則可以直接按返回鍵 。




8. Press the Standby Key  to finish the setting and save all the pattern information currently input.
※ Press the Return Key  if you don't want to save the currently set P pattern.



9. 按返回鍵  結束圖案登記。



9. Press the Return Key  to end the pattern registration mode.

專案資料一覽表

LIST OF ITEM DATA

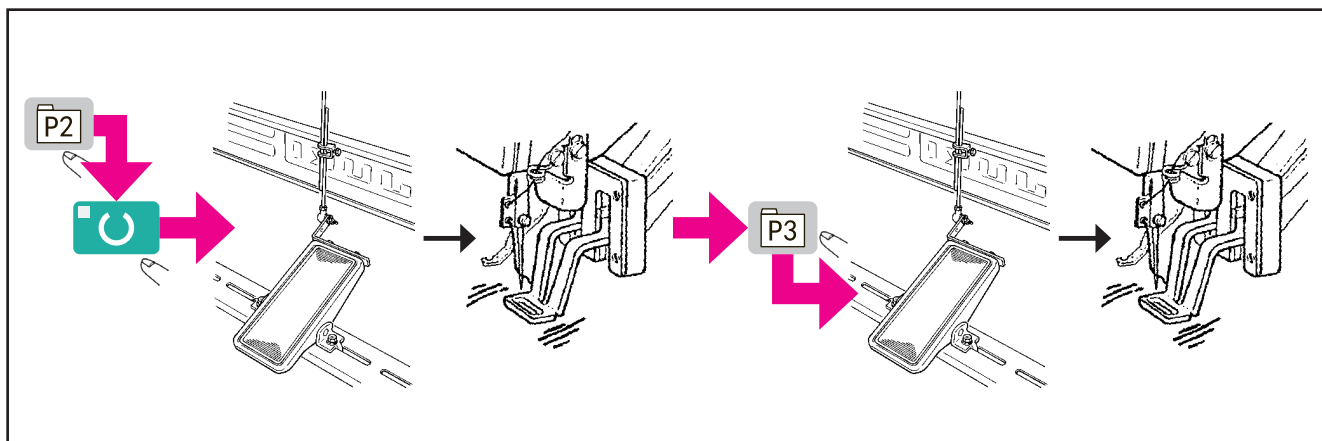
數據號碼 Data No.	項目名稱 Item Name	圖示 Icon	輸入範圍 Input Range	備註 Remarks
S001	圖案種類 Pattern Type		標準圖案 / 使用者圖案 Standard pattern/user pattern	
S002	圖案 No. Pattern No.		標準圖案：1 ~ 100 使用者圖案：1 ~ 200 Standard pattern: 1-100 User pattern: 1-200	
S003	X 放大縮小率 / 實際尺寸 X Magnification and Reduction Ratio/Actual Size		% 輸入時：20 ~ 200% 實際尺寸輸入時：對應 % 的實際尺寸的範圍內 % Input: 20-200% When inputting the actual size: it shall be within the range of the actual size of the corresponding %	用記憶體開關 U064 的設定可以 選擇 輸入方法（%、實際尺 寸）。（初期值：%輸入） The settings of memory switch U064 can be used to select the input method (% , actual size). (Initial value: % input).
S004	Y 放大縮小率 / 實際尺寸 Y Magnification and Reduction Ratio/Actual Size		% 輸入時：20 ~ 200% 實際尺寸輸入時：對應 % 的實際尺寸的範圍內 % Input: 20-200% When inputting the actual size: it shall be within the range of the actual size of the corresponding %	用記憶體開關 U064 的設定可以 選擇 輸入方法（%、實際尺 寸）。（初期值：%輸入） The settings of memory switch U064 can be used to select the input method (% , actual size). (Initial value: % input).
S005	線張力 Thread Tension		20 ~ 200	用線張力鍵直接進行指定。 It can be set directly by the Thread Tension Key.
S006	縫製速度 Sewing Speed		400 ~ 3300	最大輸入範圍按照記憶體開關 U001 最高縫製速度的設定值。 The maximum input range is subject to the set value of the maximum sewing speed of the memory switch U001.
S007	X 移動量 X Movement Amount		- 20 ~ 20	
S008	Y 移動量 Y Movement Amount		- 20 ~ 10	
S009	抓線開關 Thread catching switch		 ：使用 Use ：不使用 Not Use	按數據變更鍵 選擇 Press the Data Change Key to select


(3) 縫製操作


操作例：先以登記的 P2 內容進行縫製，
然後縫製 P3 的內容。

(3) Sewing Operation

Example of operation: first sew with the
registered P2 content, and then the P3
content.





1. 打開電源。
2. 按直接圖案。
3. 按準備鍵 ，準備完了 LED 亮燈之後，
壓腳移動後上升。
4. 確認圖案形狀。（請參照「1.3 (4) 圖案形狀
的確認」P35~P44 之項。）
5. 如果圖案形狀正確，則可以縫製。
6. 縫製結束後，按了直接圖案之後，壓腳下降，
檢索原點後，移動到始縫點，然後壓腳 上
升。
7. 進行 4. 5. 項操作。

※P1 ~ P25 也可以選擇指定圖案。請用數
變更鍵  讓其顯示。沒有登記的 P1 ~ P25
則不顯示。

→0~200←→P1~P25←

※ 準備完了 LED 亮燈時，按 P1 ~ P25 鍵之
後，壓腳下降。請注意不要夾到手指。

1. Power it on.
2. Press the direct pattern.
3. Press the Standby Key  to get the LED
light on, so that the presser foot can rise after
movement.
4. Confirm the pattern shape. (Please refer to
1.3 (4) Confirmation of Pattern Shapes on
P35~P44).
5. If the pattern shape is correct, it can be
sewed.
6. After sewing and pressing the direct pattern,
the presser foot is lowered to retrieve the
origin, and move to the initial sewing point,
and then the presser foot goes up.
7. Perform the operations of Item 4) and 5).

※The specified patterns can also be
selected for P1-P25. Please use the Data
Change Key  to display it. If not
registered, P1-P25 will not be displayed.

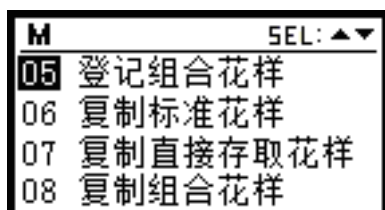
→0~200←→P1~P25←

※After it is standby and the LED light is
on, press P1-P25 to lower the presser foot.
NOTE: Be cautious of finger pinching!

2-2. 使用組合功能（循環縫製）的縫製

本縫紉機可以順次地縫製複數的迴圈縫製圖案資料。最多可以輸入 99 個團，縫製具有多個不同的圖案的縫製物時可以使用。另外，最多還可以登記 99 個資料。需要時，請拷貝之後使用。

※ 請參照「2-5. 複製和刪除各種圖案時」P.23 的內容。

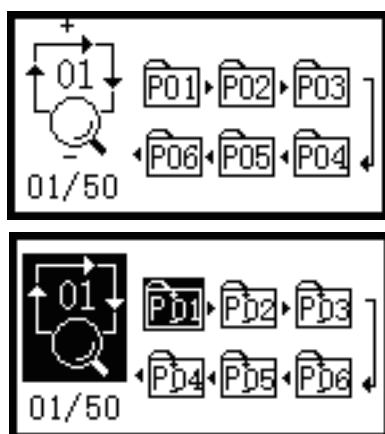


(1) 迴圈資料的選擇

1. 打開（ON）電源，然後按模式鍵 **M**。（準備完了 LED 應該滅燈）進入方式設定（記憶體開關設定）。

按專案選擇鍵 ，把「05 登記組合花樣」設定為選擇狀態。

按編輯按鍵 ，顯示圖案登記模式。



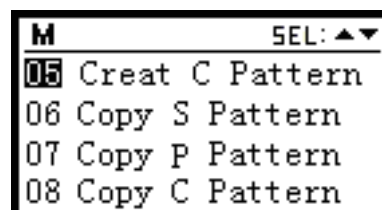
2. 按數據變更鍵 ，把 C-No. 設定為 01。

按了編輯按鍵 之後，01 被登記，模式

2-2 Sewing with Combined Functions (Cycling Sewing)

The sewing machine can sequentially sew a plurality of cycle sewing pattern data. Up to 99 groups can be entered and it can be used when the sewing pieces are with a number of different patterns. In addition, up to 99 data can be registered. If necessary, please use after copying.

※ Please refer to contents of P.23: "2-5. Copying and Deleting Various Patterns".

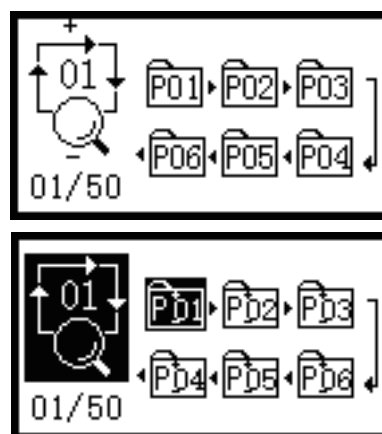


(1) Selection of Cycle Data

1. Turn on the power (ON) and press the Mode Key **M** (when it is standby, the LED light should be off). Enter the method settings (memory switch settings).

Press the Item Selection Key to set the "05 registered pattern combination" as the selected status.



Press the Edit Key to display the pattern registration mode.






2. Press the Data Change Key to set C-No. to be 01.

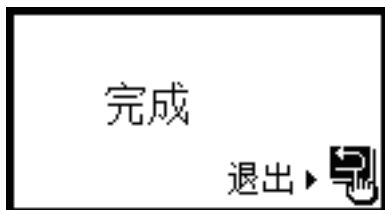
When the Edit Key is pressed, 01 is

畫面被顯示出來。


按項目選擇鍵  來選擇下一步縫製的 P 花樣編號，按資料變更鍵 ，來選擇 P 花樣 No.。

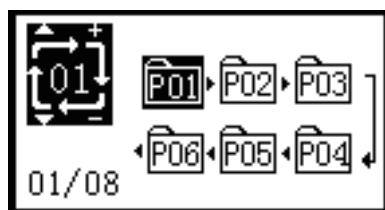
按了復位鍵  之後，可以刪除登記的當前圖案資料，長按則刪除全部圖案資料。

在迴圈花樣中的某一個花樣圖案設置為空白圖案的時候想將後續的圖案前移，則在當前圖案短按編輯鍵 ，可將後續花樣圖案前移。
若想在當前圖案前增加一個圖案，則在當前圖案長按編輯鍵  增加一個新的空白圖案。




按準備鍵  之後，設定結束。



按返回鍵 。結束圖案登記方式（不保存當前設定的 P 花樣）。






3. 進行縫製

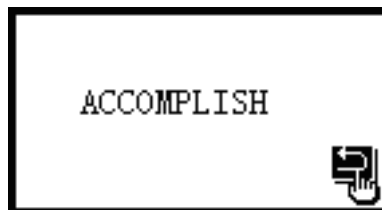
在連續縫製資料被選擇的狀態下，按了準備鍵  之後，準備完了 LED 亮燈，變成可以縫製。
購買時僅登記了迴圈資料 No.1，沒有輸入縫製圖案，不能成為縫製狀態。

registered and the mode screen is displayed.


Press the Item Selection Key  to select the P pattern number for the next step, and press the Data Change Key  to select P pattern No.

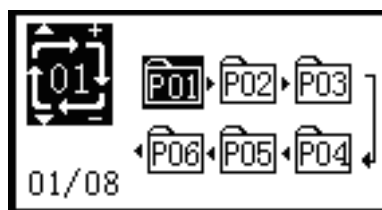
Press the Reset Key  to delete the pattern data registered currently, and press and hold it to delete all the registered patterns.

When a certain pattern among the cycle sewing patterns is set to be blank, pressing the Edit Key  shortly can move the subsequent pattern forward.
If you want to add a pattern before the current pattern, press and hold the Edit Key  in the current pattern to add a new blank pattern before it.




Press the Standby Key  to finish the setting.

Press the Return Key  to end the pattern registration mode (do not save the currently set P pattern).

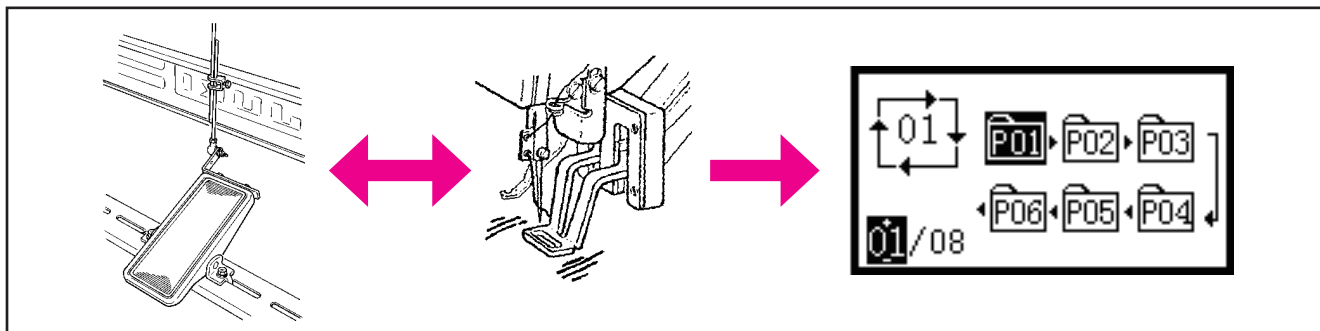





3. Sewing


In the state where the continuous sewing data are selected, press the Standby Key  to get the LED light on and it is ready for sewing.
Only the cycle data No. 1 is registered at the time of purchase, and no sewing patterns are input, so it can't become the sewing state.

(2) 縫製操作




(2) Sewing Operation




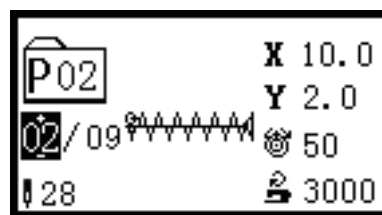
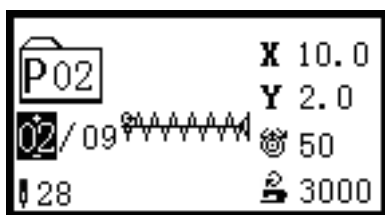
1. 打開電源。
2. 用項目選擇鍵  選擇循環圖表案，然後用資料變更鍵  選擇循環圖表案 No。
3. 按準備按鍵 ，準備完了 LED 亮燈之後，壓腳移動，然後上升。
4. 如果圖案形狀良好，就可以進行縫製。
5. 每次縫製時，組合的順序也按照步驟縫製，1 迴圈結束後，返回到最初的步驟，可以反復縫製。

※ 縫製後，想要返回到前一個圖案，或者跳到下一個圖案時，請在準備 LED 亮燈的狀態下，按資料變更鍵 。

圖案顯示變化，壓腳向始縫點移動。

1. Power it on.
2. Use the Item Selection Key  to select the cycle patterns, and then use the Data Change Key  to select the cycle pattern No.
3. Press the Standby Key  to get the LED light on, so that the presser foot can rise after movement.
4. If the pattern is well shaped, then it is ready for sewing.
5. Every time when sewing, the order of the combination is also sewn according to the steps. After the end of Cycle 1, return to the initial step to sew repeatedly.

※ After sewing, if you want to return to the previous pattern, or skip to the next one, press the Data Change Key  when it is standby and the LED light is on. The pattern shows the change, and the presser foot moves towards the initial sewing point.



※ 請注意，登記了 C1 ~ C99 後，如果變更了 P1 ~ P50 的內容，在 C1 ~ C99 中使用的 P1 ~ P50 的內容也全部變更了。


※ 如果當前 P 花樣中的標準花樣在功能表選項：“03 選擇使用標準圖案”中被鎖定時，

※ Please note that after C1-C99 are registered, if the contents of P1-P50 are changed, the contents of P1-P50 used in C1-C99 are all changed, too.

※ If the S patterns in the current P patterns

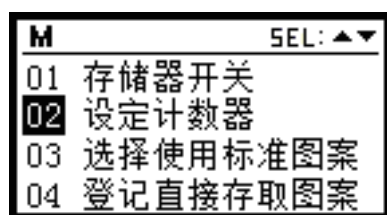
面板會報出 E10 的錯誤資訊。

※ 請確認各個圖案中的每個圖案形狀。（請參照「1.5-4. 圖案形狀的確認」p.20）

※ 在縫製畫面上，按了專案選擇鍵  之後，
可以顯示縫製的圖案的詳細內容。



2-3. 使用計數器的縫製


(1) 計數器值的設定方法



1. 叫出計數器設定畫面


在準備完了 LED 滅燈的輸入模式，按模式鍵

，顯示出模式畫面。用項目選擇鍵 

，把「02 計數器設定」設定為選擇狀態按編輯按鍵，顯示計數器畫面。計數器畫面 A 被顯示，成為可以設定。計數器值的設定只能用輸入模式進行設定。如果是縫製模式時，請按準備鍵 ，設定為輸入模式。




2. 計數器類別的選擇

按項目選擇鍵 ，反轉表示計數器類別。

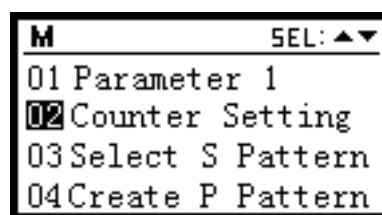
are locked in the menu option “03 Select S Patterns”, the panel will give the error message of E10

※ Please confirm each pattern shape in various patterns. (Please refer to “1.5-4 Confirmation of Pattern Shapes on p.20.)

※ On the sewing screen, after pressing the Item Selection Key  the details of the sewing pattern can be displayed.


2-3 Sewing with Use of Counter


(1) Setting Method of Counter Value



1. Setting Screen of Calling out the Counter


When the LED light off input mode is ready, press the Mode Key  to display the


mode screen. Use the Item Selection Key 

to set “02 Counter Setting” to the selection status. Press the Edit Key to display the counter screen. The counter screen A is displayed and can be set. The setting of the counter value can only be done in the input mode. If it is in the sewing mode, press the Standby Key  to change it to be the input mode.




2. Selection of Counter Categories

Press the Item Selection Key  to reverse the counter categories. Press the Data


按數據變更鍵 ，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 ，反轉計數器設定值。按

數據變更鍵 ，輸入設定值。

4. 計數器現在值的變更

按項目選擇鍵 ，反轉計數器現在值。按

復位鍵  之後，可以清除計數器途中的值。另外，用資料變更鍵  也可以進行數值編輯。

(2) 計數器類別


1. 縫製加數計數器



每進行 1 形狀的縫製之後，現在值數位加 1。現在值和設定計數器

2. 底線減數計數器




每縫製 10 針，在現在值的基礎上進行減算。現在值等於 0 之後，顯示計數器加數畫面。

3. 不使用計數器

Change Key  to select an appropriate counter from the following counter categories.3. Change of Counter Setting Value

Press the Item Selection Key  to reverse the counter setting value. Press the Data Change Key  to enter the set value.

4. Change of Current Value of the Counter

Press the Item Selection Key  to reverse the current value of the counter. After pressing the Reset Key  , the value in the transit process of the counter can also be cleared. In addition, the Data Change Key  can also be used for the value editing.

(2)Counter Categories

1. Sewing Addend Counter

After the sewing of Shape 1, the current value will be added 1. Current value and setting counter.

2. Baseline Subtractor Counter

The subtraction shall be conducted on the basis of the current value after sewing every 10 needles. When the current value equals to 0, the counter addend screen will be displayed.

3. Not Using a Counter

(3) 計數器加數的解除方法



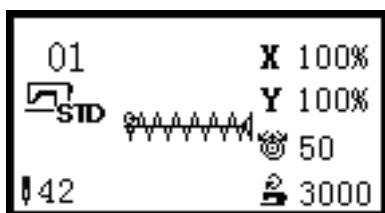
縫製作業中如果到達加數條件之後，則顯示出加數畫面。按復位鍵 **//** 之後，複位元數目器返回縫製模式。而且，從新記數。

(3) Release Method of Counter Addend Condition



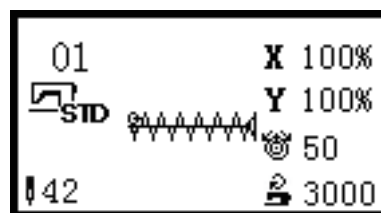
If the addend condition is reached in the sewing job, the addend screen will be displayed. When the Reset Key **//** is pressed, the reset counter returns to the sewing mode. Besides, the count will start anew.

(4) 在準備狀態下的計數器的確認方法

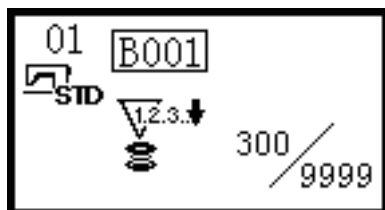


1. 在準備完了 LED 亮燈的縫製模式，按了專案選擇鍵 **↑** 之後，計數器畫面被顯示出來。

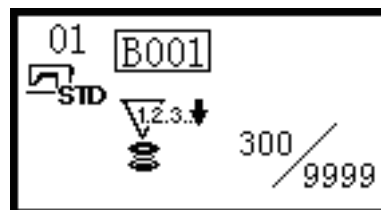
(4) Confirmation Method of Counter in the Standby State



1. Press the Item Selection Key **↑** in the sewing state when the LED light is on, the counter screen will be displayed.



2. 在計數器畫面上，用資料變更鍵 **+**/**-** 可以更新計數器的現在值。另外，用復位鍵 **//** 可以清除現在值。



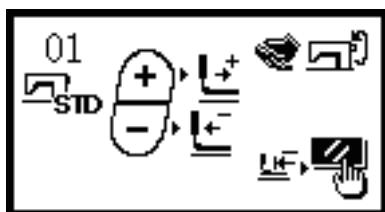
2. On the counter screen, use the Data Change Key **+**/**-** to update the current value of the counter. In addition, use the Reset Key **//** to clear the current value.

2-4. 暫停的使用方法

用記憶體開關 U031 把重定鍵設定為暫停之後，復位鍵變成暫停鍵，縫製中可以用來停止縫紉機。（請參照「1.8-2. 記憶體開關功能一覽表」p.52。）



- (1) 用復位鍵 讓縫紉機停止，E050 被顯示出來。按了復位鍵 之後，解除異常，前進後退送布畫面被顯示出來。



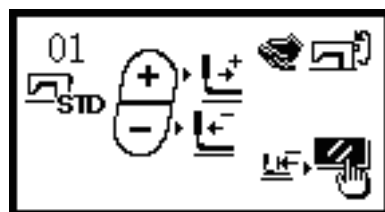
- (2) 解除後的操作有以下 3 種。
1. 用開始開關重新開始縫製。
 2. 按復位鍵 ，進行切線後，用資料變更鍵 調整位置，然後再用開始開關開始縫製。
 3. 按復位鍵 ，進行切線後，再次按復位鍵 複歸原點。

2-4 How to Use Pause

After setting the Reset Key to pause with memory switch U031, the Reset Key is changed to the Pause Key, and it can be used to stop the sewing machine in the process of sewing. (Refer to 1.8-2. Memory Switch Function List on p.52.).



- (1) Use the Reset Key to stop the sewing machine, and the E050 is displayed. Press the Reset Key to release the abnormalities, and the forward and backward cloth transmission screens will be displayed.



- (2) There are three operations after release, as follows:
1. Start sewing again with the start switch.
 2. Press the Reset Key to cut the thread, use the Data Change Key to adjust the position, and start the sewing with the start switch.
 3. Press the Reset Key to cut the thread, and press the Reset Key again to return to the origin point.

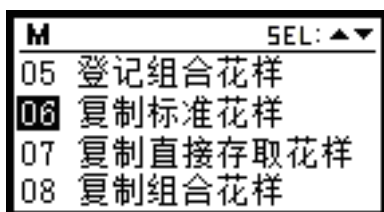
2-5. 複製各種圖案時

可以把已登記的圖案 NO. 的資料複製到沒有使用的 NO.。


可以複製圖案有以下 3 種情況。

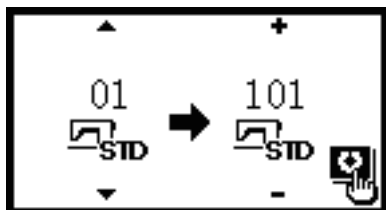
- 把標準圖案、使用者圖案複製到使用者圖案
- 複製圖案鍵
- 複製循環圖表案

(1) X 尺寸的輸入




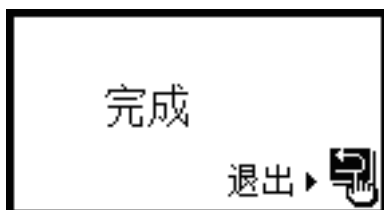
1. 設定為輸入模式

在準備完了 LED 滅燈的輸入模式下，可以進行複製。縫製模式時，請按準備鍵  變換為輸入模式。



2. 顯示模式畫面

按模式鍵 **M**，顯示出模式畫面。用項目選擇鍵  把複製圖案設定為選擇狀態，請按編輯按鍵。



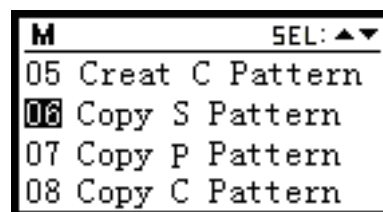
2-5. Copy of Various Patterns

The data of the No. of registered patterns can be copied to the No. that is not used.


There are three cases when copying the patterns:

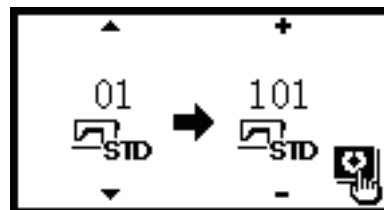
- Copy the standard patterns/user patterns to the user patterns;
- Copy the pattern key; and
- Copy the cycle patterns.

(1) Input of X Size




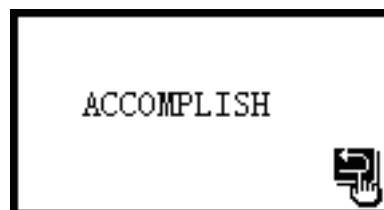
1. Set as Input Mode

In the input mode when the LED light is off, it is ready for copy. When it is in the sewing mode, press the Standby Key  to change to the input mode.




2. Display Mode Screen

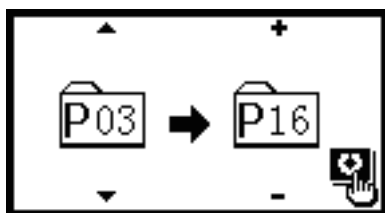
Press the Mode Key **M** to display the mode screen. Use the Item Selection Key  to set the copy pattern to the selection mode, and press the Edit Key




3. 叫出複製畫面

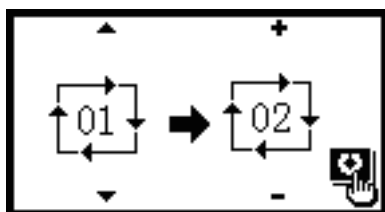
按項目選擇鍵 ，選擇複製原圖案的圖案

No.。可以選擇的圖案種類有標準圖案、使用者圖案。僅登記的圖案 No. 被顯示出來。按了返回鍵 之後，取消複製功能，返回到模式畫面。




4. 選擇複製位置的圖案 No.

按數據變更鍵 ，選擇想複製的 No.



5. 開始複製

按準備鍵  之後，開始複製，在複製步驟編制的圖案 No. 被選擇的狀態下。返回到輸入畫面。

※ 複製直接圖案時，在模式畫面上請選擇「直接圖案複製」，複製循環圖表案時，在模式畫面上選擇「循環圖表案複製」。也可以用同樣的方法進行複製。

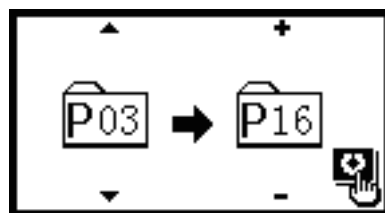
※ 直接存取圖案、循環圖表案也可以用同樣的方法進行複製。

3. Call out Copy Screen


Press the Item Selection Key  and select

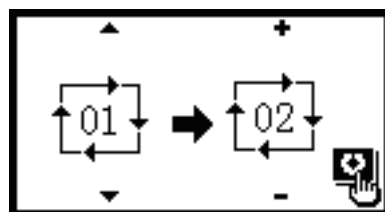
to copy the pattern No. of the original pattern. The type of pattern that can be selected includes standard patterns and user patterns. Only the registered pattern No. will be displayed.

Press the Return Key to cancel the copy function and return to the mode screen.




4. Select the Pattern No. to Copy the Position

Press the Data Change Key  to select the No. to be copied.



5. Start Copying

Press the Standby Key  to start copying, and in the status that the pattern No. prepared in the copy step is selected, return to the input screen.

※When copying the direct patterns, please select “Direct Pattern Copy” on the mode screen and select “Cycle Pattern Copy” on the mode screen when copying the cycle pattern. The same way can be used for copying.

※For the direct storage patterns and cycle patterns, they can be copied in the same way.

2-6. 關於通信

(1) 關於 USB

1. 有關使用 USB 的注意事項

- 縫製時，請不要在 USB 插口上連接 USB 機器、USB 電纜進行運轉。振動有時會造成連接器損壞，也有可能丟失 USB 的資料或發生 USB 機器、縫紉機的故障。
- 讀取寫入程式或縫製資料時，請不要插拔 USB 插頭。有發生資料損壞或機器誤動作的危險。
- 在 USB 機器的保存領域裡劃分分區後，可以僅與一個分區通訊。
- 有的 USB 機器可能本機不能正確地識別。
- 使用本機時，如果 USB 機器內的資料消失，本公司一律不予賠償損失。
- 通訊畫面、圖案資料一覽被顯示上，插上媒體也不能識別驅動器。
- USB、CompactFlash(TM) 等的媒體原則上僅可以連接 1 台。如果連接了數台機器，只能識別 1 台。有關詳細內容，查閱 USB 的規格。
- 請把 USB 連接器確實地深深插進 IP 操作盤的 USB 端子的裡面。
- 在與 USB 上的資料進行存取的中途，請不要關閉 (OFF) 電源。

2. USB 的規格

- 對應 USB 1.1 規格
- 對應機器 ※1 ————USB 記憶體、USB 集線器、讀卡器的等記憶裝置
- 不對應機器 ———— CD、DVD、MO、磁帶驅動器等
- 對應格式 ————FD(軟碟)FAT12
_ 其他 (USB 記憶體等)FAT12•FAT16•FAT32
- 對應媒體尺寸 ————其他 (USB 記憶體等)4.1MB ~ (8)
- 驅動器的識別 ————與 USB 機器等外部媒體通訊時，僅和最初識別的媒體通訊。但是向內裝媒體插口插入了媒體時，向該媒體的通訊為最優先。(例：插入了 USB 記憶體後，如果向媒體插口插入媒體則僅向媒體插口通訊。)

2-6 About Communication

(1)About USB

1. Notes on Using USB

- When sewing, do not connect USB devices or USB cables on the USB port. Sometimes, vibration may cause damage to the connector, and may also cause USB data loss or failure of USB devices and sewing machines.
- Do not insert or remove the USB plug when reading and writing program or sewing data. There are risks of causing data corruption or malfunction of the machine.
- After partitioning the area of the USB machine, only one partition can be communicated.
- Some USB machines may not be recognized by the machine properly.
- When using this device, the company will not compensate for any data lost in the USB device.
- Once the communication screen and pattern data list are displayed, the drive cannot be recognized by plugging in the media.
- In principle, the media such as USB, CompactFlash (TM), etc. can only be used to connect 1 unit. If multiple machines are connected, only 1 unit can be identified. For details, please check the USB specifications.
- Do deeply and firmly insert the USB connector into the USB terminal of the IP operating panel.
- Do not turn off the power supply while accessing the data on the USB.

2. USB Specifications

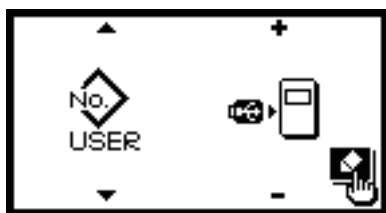
- Corresponding USB 1.1 Specifications
- Corresponding Machines※1 — memory devices such as USB memory units, USB hubs, card readers and so on.
- Non-corresponding Machines — CD, DVD, MO, tape drives and so on.
- Corresponding Format — FD (floppy disk) FAT12. Other (USB memory units, etc.) FAT12•FAT16•FAT32.
- Corresponding Media Size — other (USB memory units, etc.) 4.1MB- (8).
- Identification of Drives — When communicating with an external medium such as a USB device, it communicates only with the medium that is initially identified. But when the medium is inserted into the media socket, the communication to that medium enjoys the highest priority. (Example:

- 連接的限制———最多 10 裝置（連接了超過最大限數時，超過限數的記憶媒體取下，不重新連接的話，就不能識別。）
- 消費電流———可以連接的 USB 機器的額定消費電流為最大 500mA。

※1 不能保證所有的對應機器的動作。由於不相匹配等問題，有的機器不能動作。

(2) 使用通信功能時

本縫紉機可以使用 USB 記憶體進行資料的輸入輸出。



1. 設定為通信模式

按模式鍵 **M**，顯示出模式畫面。


用項目選擇鍵  把通信為選擇狀態，請

按編輯按鍵 。

2. 選擇通信種類

按變更數據鍵 ，選擇通信種類。

3. 選擇通信方向

按變更數據鍵 ，顯示出表示選擇通信方向的圖示。

按變更資料鍵 ，選擇通信方向。

：把主控的資料寫入 USB。

：把 USB 的數據讀入主控。

When the USB memory unit is inserted, if the medium is inserted to the media port, the communication only transfers to the media jack.

- Restrictions on Connections — Up to 10 devices (when the maximum number of connections is reached, the memory medium that exceeds the limit will be removed and it cannot be recognized if not reconnected.)
- Current Consumption — The rated consumption current of the USB machine be connected is up to 500mA.

※1 All actions of the corresponding machines cannot be guaranteed. Because of the issues such as non-matching and so on, some machines cannot work.



(2) Use Communication Function

The sewing machine can use USB memory units for data input and output.




1. Set as Communication Mode


Press the Mode Key **M** to display the mode screen.


Press the Item Selection Key  to set the communication to the selection mode, and press the Edit Key .

2. Select Type of Communication


Press the Data Change Key  to select the type of communication.

3. Select Communication Direction

Press the Item Selection Key  to display the icon that indicates the direction of the communication.

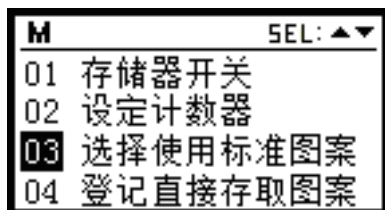
Press the Data Change Key  to select the direction of communication.

 : write the master control data to USB.





 : Read the USB data into the master control.

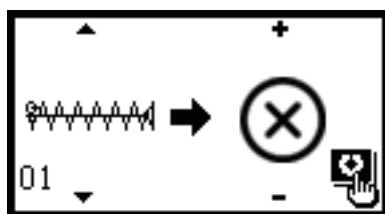
2-7. 標準圖案是否可以呼出的設定


不能呼出不需要的圖案，可以防止錯誤地呼出不需要的圖案。另外，可以呼出需要的圖案。





設定例：圖案 No.2 設定為不可以呼出。

- (1) 設定為輸入模式，準備完了 LED 滅燈的輸入模式時，可以進行設定。如果是縫製模式時，請按準備鍵  變換到輸入模式。
- (2) 按模式鍵 ，顯示出模式畫面。用項目選擇鍵 ，把使用標準圖案設定為選擇狀態，然後請按選擇鍵。
- (3) 按項目選擇鍵 ，顯示出圖案 No.2。

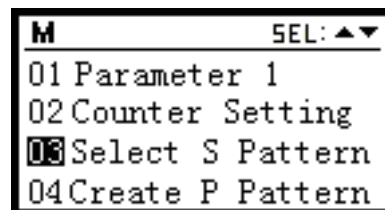


- (4) 按數據變更鍵 ，選擇使用、不使用圖案。





：使用
：不使用

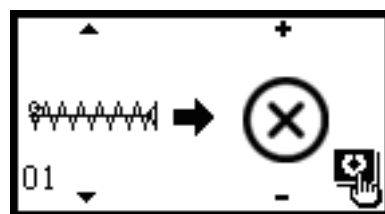
2-7 Setting if the Standard Patterns Can Be Called out


Undesired patterns cannot be called out, which can prevent the wrong call-out of the unwanted patterns. In addition, the desired patterns can be called out.





Setting Example: Pattern No. 2 is set as call-out disabled.

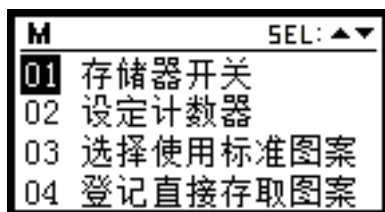
- (1) To set as the input mode: In the input mode when the LED light is off, it is ready for setting. When it is in the sewing mode, press the Standby Key  to change to the input mode.
- (2) Press the Mode Key  to display the mode screen. Use the Item Selection Key  to set the standard pattern to be used, and then press the SELECT Key.
- (3) Press the Item Selection Key  to display pattern No. 2.




- (4) Press the Data Change Key  to select to use or not to use the pattern.

：Use;
：Not Use


2-8. 存儲器開關的啟動和變更




(1) 設定輸入模式

在準備完了 LED 滅燈的輸入模式下，可以變更記憶體開關資料。縫製模式時，請按準備鍵  變換為輸入模式。

(2) 叫出記憶體開關資料編輯畫面

按了模式鍵  之後，模式畫面（操作人員等級）被顯示出來。在此畫面，選擇記憶體開關資料（等級 1）。


(3) 選擇變更的記憶體開關資料

按項目選擇鍵 ，選擇想變更的資料項目。



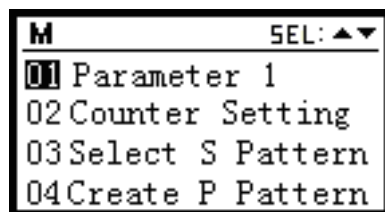
(4) 變更數據

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 ，可以增減變更設定值。

→ 記憶體開關資料的詳細內容，請參照「1.2-9. 記憶體開關功能一覽表」p.52。


2-8. Start-up and Change of Memory Switch




(1) Setting of Input Mode

In the input mode when the LED light is off, it is ready to change the memory switch data. When it is in the sewing mode, press the Standby Key  to change to the input mode.

(2) Call out Memory Switch Data Edit Screen

When the Mode Key  is pressed, the mode screen (operator level) is displayed. On this screen, select the memory switch data (Level 1).



(3) Select the Changed Memory Switch Data

Press the Item Selection Key  to select the data item to be changed.



(4) Data Change

Among the memory switch data, there are data items with changed values and selected data items.

For items with the changed value marked with the NO. like  , use the Data Change Key  to change the set value.

→ For details on the memory switch data, refer to “1.2-9. Memory Switch Function List” on p.52.

2-9. 存儲器開關功能一覽表

使用記憶體開關，可以用程式設定縫紉機的各種動作。出貨時的初期值根據集中的需要設定了各種專案。

2-9. Memory Switch Function List

For using the memory switch, various actions of the sewing machine set by the program can be used. For the initial value at the time of shipment, various items are set according to the concentrated needs.

(1) 記憶體設置一參數列表

(1) Parameter List of Memory Settings I

參數號 Parameter No.	功能 Function	調整範圍 Adjustment Range	初值 Initial Value	備註 Remarks
U001	縫製的最高速度。 (可以以 100rpm 為單位設定) The highest sewing speed (Can be set in 100 rpm)	400 ~ 3300	3000	
U008	切線時的線張力 Thread tension during cutting	0~200	0	
U009	切線時的線張力變換同步時間 Synchronization time to change the thread tension during cutting	-20 ~ 7	0	
U010	第 1 針的縫製速度。 (可以以 100rpm 為單位設定) Sewing Speed of the 1st needle (Can be set in 100 rpm)	100 ~ 1500	400	
U011	第 2 針的縫製速度。 (可以以 100rpm 為單位設定) Sewing Speed of the 2nd needle (Can be set in 100 rpm)	300 ~ 3000	900	
U012	第 3 針的縫製速度。 (可以以 100rpm 為單位設定) Sewing Speed of the 3rd needle (Can be set in 100 rpm)	400 ~ 3200	3000	
U013	第 4 針的縫製速度。 (可以以 100rpm 為單位設定) Sewing Speed of the 4th needle (Can be set in 100 rpm)	400 ~ 3200	3200	
U014	第 5 針的縫製速度。 (可以以 100rpm 為單位設定) Sewing Speed of the 5th needle (Can be set in 100 rpm)	400 ~ 3200	3200	
U015	縫製開始的線張力 Thread tension at the beginning of sewing	0~200	10	
U016	縫製開始的線張力變換同步時間 Synchronization time to change the thread tension at the beginning of sewing	- 22 ~ 30	-1	

U017	XY 擴大縮小率，最高轉速限制的顯示，以及變更可否。 Display of XY magnification/ reduction rate, max. rotation speed limit and change availability.	0：可變更 1：不可變更 0: Changeable 1: Unchangeable	0	
U031	可以用操作鍵盤（清除鍵）停止縫紉機動作 The operation keypad (clear key) can be used to stop the operation of the sewing machine	0：無效 1：操作盤復位鍵 2：踏板倒踩和急停按鈕 0: Invalid; 1: Reset key of the operation panel; 2: Pedal reverse and emergency stop button	0	
U032	蜂鳴器開關 Buzzer switch	0~1	1	
U036	選擇送布動作的同步時間 緊線不好時設定為一方向 To select the synchronization time for the feed operation; If the thread is not tightened, it is set as the “-” direction	- 8 ~ 16	0	向一側移動過多的話，有斷針的危險。縫製厚料時請加以注意 There may be the risk of breaking the needle if it moves too much to the “-” side. Please be careful when sewing thick materials.
U037	縫製結束 XY 回原點抬壓腳順序 XY' s sequence of returning to the initial sewing point and lifting the presser foot when the sewing is finished.	0：先回起縫點再抬壓腳 1：回起縫點同時抬壓腳 2：回起縫點後手動抬壓腳 0: Return to the initial sewing point first and then lift the presser foot; 1: Return to the initial sewing point and meanwhile lift the presser foot; 2: Return to the initial sewing point first and then manually lift the presser foot;	1	
U039	可以設定每次縫製結束後均檢索原點（除迴圈縫製以外） It can be set that the origin is always retrieved after the end of each sewing (except cycle sewing)	0：不檢索原點 1：檢索原點 0: Do not retrieve the origin; 1: Retrieve the origin;	0	
U040	可以設定迴圈縫製時的原點檢索 To set the origin retrieve status for cycle sewing	0：不檢索原點 1：每 1 圖案結束 0: Do not retrieve the origin; 1: Retrieve the origin when every pattern is finished;	0	
U042	設定針杆停止位置 To set the needle bar stop position	0：上位置 1：上死點 0: Upper position 1: Top dead center	0	上死點停止時為上位置，停車後反轉停止 It is in the upper position when the top dead center stops. And it reverses when the machine stops running.
U046	可以禁止切線 To prohibit thread cutting	0：通常 1：禁止切線 0: General; 1: Thread cutting is prohibited;	0	
U049	可以設定卷線速度 To set the winding speed	800 ~ 2000	1600	

(2) 記憶體設置二參數列表

(2) Parameter List of Memory Settings II

參數號 Parameter No.	功能 Function	調整範圍 Adjustment Range	初值 Initial Value	備註 Remarks
K020	標準踏板、踏腳急停位置 Standard pedal and pedal emergency stop position	10~80	30	
K021	標準踏板、踏腳開關位置 Standard pedal and pedal emergency switch position	200-280	240	增加設定值的話，踏板的踩踏量會增多 If the set value is increased, the pedaling amount will be increased.
K022	標準踏板、高低段行程開關位置 Switch position of standard pedal and high and low range stroke	250-380	260	增加設定值的話，踏板的踩踏量會增多 If the set value is increased, the pedaling amount will be increased.
K023	標準踏板、啟動開關位置 Standard pedal and starting switch position	400-480	420	增加設定值的話，踏板的踩踏量會增多 If the set value is increased, the pedaling amount will be increased.
K024	單雙踏板切換 Switch between the single and double pedal	0：單踏板；1：雙踏板 0: Single; 1: Double;	0~2	
K027	踩踏板時壓腳下降速度 Presser foot descending speed when stepping down the pedal	100-4,000pps	4000	
K028	踩踏板時壓腳上升速度 Presser foot ascending speed when stepping down the pedal	100-4,000pps	4000	設定上升過度的話會引起操作不良 Poor operation can be caused if the excessive ascending is set.
K029	縫製結束時切線壓腳上升速度 Ascending speed of thread-cutting presser foot when the sewing is ended	100-4,000pps	3000	設定上升過度的話會引起操作不良 Poor operation can be caused if the excessive ascending is set.
K038	縫製結束自動抬壓腳 The presser foot can be automatically lifted when the sewing is ended	0：自動抬壓腳；1：踩踏板到 1 檔抬壓腳 0: The presser foot will be lifted automatically; 1: The presser foot will be lifted when the pedal is stepped down to Gear 1;	0	
K043	切線速度 Tangential speed	400~800	400	
K044	切線時在易於切線的方向選擇有無送布的操作 To select the feeding status (W/O) in the direction more easily for thread cutting	0：無送布 1：有送布 0: Without Feeding; 1: With Feeding;	0	
K045	切線時進行送布的針孔導向直徑（可設定以 0.2mm 為單位） Diameter of feeding needle guider for thread cutting (Can be set in 0.2 mm)	-40~40 (1.6mm~4.0mm)	16	
K050	剪線角度 Trimming angle	120~300	161	
K051	剪線氣閥輸出時間 Trim line valve output time	0~2000	100	
K056	+X 方向（右側）的移動限定範圍 Movement limit range in the +X direction (right side)	-30-30mm	20	在出廠狀態下不考慮壓腳的形狀 The shape of presser foot is not considered at the shipment status
K057	-X 方向（左側）的移動限定範圍 Movement limit range in the -X direction (left side)	-30-30mm	-20	在出廠狀態下不考慮壓腳的形狀 The shape of presser foot is not considered at the shipment status

K058	+Y 方向（後面）的移動限定範圍 Movement limit range in the +Y direction (rear side)	-30-30mm	10	在出廠狀態下不考慮壓腳的形狀 The shape of presser foot is not considered at the shipment status
K059	-Y 方向（前面）的移動限定範圍 Movement limit range in the -Y direction (front side)	-30-30mm	-20	在出廠狀態下不考慮壓腳的形狀 The shape of presser foot is not considered at the shipment status
K063	當前參數檔索引 Current parameter file index	0~5	5	禁止修改 Prohibited to amend
K068	主軸停車補償 Principal axis stopping compensation	-100~+100	36	
K069	語音播報選擇 Voice broadcast selection	0：中文 1：英文 0：Chinese 1：English	0	
K101	點陣屏保護時間 Screen saver time	0-5	1	0：無保護，1：30S，2：60S，3：120S，4：300S,5:600S
K112	上針位偏移 Needle bit offset	-20~20	0	
K120	加潤滑油報警針數 Number of alarm needle for refilling with lubricating oil	3000~12000	8000	單位：萬針 Unit: 10,000 needles
K130	電子撥線開關 Electronic dial switch	0~1	0	
K135	起縫前壓腳動作順序 Presser foot action sequence before sewing	↓	0	參數值為 2 的情況僅在 #38=1 時生效 2 is only valid when #38=1
<p>0：表示 XY 找原點後壓腳先自動空送到起縫點再降下壓布；1：表示 XY 找原點後壓腳停留在原點位置踩踏板到一檔在原點降下壓布踩踏板到二檔壓腳先自動移動到起縫點再開始縫製；2：的動作在起縫時與 1 相同，只是當縫製結束時，壓腳停留在結束點，踩踏板到 1 檔時回到原點並抬壓腳</p> <p>0 indicates that after XY finds the origin, the presser foot will automatically move to the starting point without load and then descends to press the cloth;</p> <p>1 indicates that after XY finds the origin, the presser foot will stay on the position of the origin; step the pedal down to gear 1 to descend the cloth at origin, and step it down to gear 2, the presser foot will firstly move to the initial sewing point automatically and then start to sew.</p> <p>2: The action is the same as 1 during sewing. But when the sewing is finished, the presser foot stays at the ending point. Step the pedal down to gear 1 to return to the origin and lift the presser foot.</p>				
K138	線張力控制方式 Thread tension control method	0：類電子夾線方式；1：支線方式 0: Electronic-like thread clapping method; 1: Branching thread method;	0	
K149	LOGO 選擇 Logo selection	0~1	0	點陣屏面板未使用該參數 NO USE
K150	機頭翻起安全開關可以無效 When the head is turned up, the safety switch can be invalid	0：普通 1：機頭翻起安全形狀無效 0: General 1: When the head is turned up, the safety shape is invalid;	0	
K200	語言選擇 language selection	0~3	0	0：中文 1：英語 2：預留 3：預留 0：Chinese 1：English 2：No USE 3：No USE

K202	開機語言選擇 Boot language selection interface	0~1	1	0：開機顯示語言選擇介面 1：不顯示語言選擇介面 0：Display 1: No Display
K241	機型選擇 Model Selection	1900/1903	1900	

注：以上參數只供維修人員使用，用戶不能輕易改動。

Note: Above parameters are only for the use of maintenance personnel, and users can't change them freely.

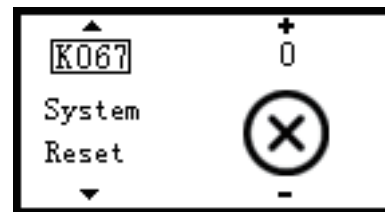
2-10. 復位操作



(1) 設定輸入模式

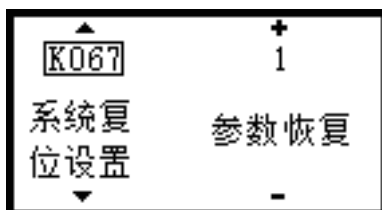
在準備完了 LED 滅燈的輸入模式下，長按模式鍵 **M**。聽到蜂鳴器長響一聲後鬆開，進入二級模式中。

2-10. Reset Operation



(1) Setting of Input Mode


In the input mode when the LED light is off, press and hold the Mode Key **M**, and stop pressing it while hearing a long beep to enter the secondary mode interface.



(2) 進入參數重定顯示介面

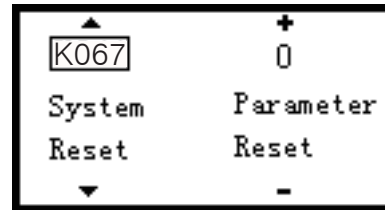
按了模式鍵 **M** 之後，模式畫面（操作人員等級）被顯示出來。在此畫面，選擇記憶體開關資料 2（等級 2）。

按專案變更鍵  選擇 K067 號參數

按數據變更鍵 ，選擇 1（參數恢復），


按下準備鍵 ，在聽到一聲長鳴後，關機重啟。



※ 花樣重定與參數花樣重定的操作與參數資料重定操作一致，但是參數花樣復位有一聲短鳴接一聲長鳴後，才能關機重啟



(2) Enter Parameter Reset Display Interface

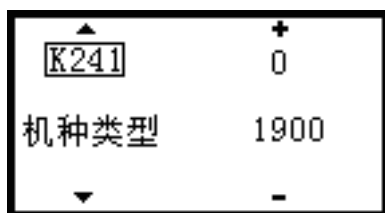
Press the Mode Key **M** to display the mode interface (operator level). On this screen, select the memory switch data 2 (Level 1).

Press the Item Selection Key  and select the "K067 Parameter".

Press the Data Change Key ，select 1 (Parameter Reset), press the Standby Key ，and reboot the machine after hearing a long beep.

※ The operations of pattern reset and pattern parameter reset are consistent with the parameter reset, but during pattern parameter reset, the machine can only be rebooted after hearing a long beep.

2-11. 機型選擇



(1) 設定輸入模式


在準備完了 LED 滅燈的輸入模式下，長按模式鍵 **M**。聽到蜂鳴器長響一聲後鬆開，進入二級模式中。

(2) 進入參數重定顯示介面

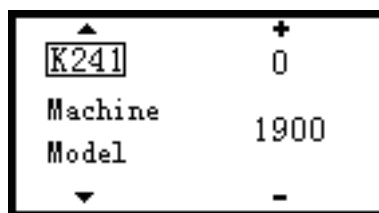
按了模式鍵 **M** 之後，模式畫面（操作人員等級）被顯示出來。在此畫面，選擇記憶體開關資料 2（等級 2）。

按專案變更鍵  選擇 K241 號參數。

按數據變更鍵 ，選擇 0，按下準備鍵

，在聽到短鳴接一聲長鳴後，關機重啟。

2-11. Selection of Machine Model






(1) Setting of Input Mode

In the input mode when the LED light is off, press and hold the Mode Key **M**, and stop pressing it while hearing a long beep to enter the secondary mode interface.

(2) Enter Model Selection Display Interface

Press the Mode Key **M** to display the mode interface (operator level). On this screen, select the memory switch data 2 (Level 2).

Press the Item Selection Key  and select the "K241 Parameter".

Press the Data Change Key  to select 0 (MT31 All-in-one Tracking Machine), press the Standby Key , and reboot the machine after hearing a long beep.









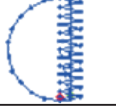
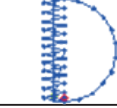


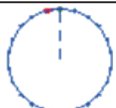
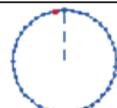






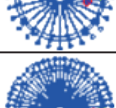
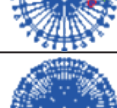
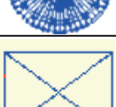







標準花樣一覽表












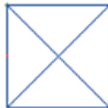










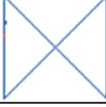







TABLE OF THE STANDARD PATTERNS

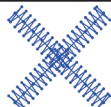

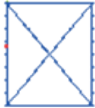




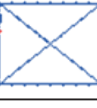






1900B 標準花樣一覽表

Table of the 1900B Standard Patterns

NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)	NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)
1		42	16 × 2	2		42	10 × 2
3		42	16 × 2.4	4		42	24 × 3
5		28	10 × 2	6		28	16 × 2.4
7		36	10 × 2	8		36	16 × 2.4
9		56	24 × 3	10		64	24 × 3
11		21	6 × 2.4	12		28	6.2 × 2.4
13		36	6 × 2.4	14		15	8 × 2
15		21	8 × 2	16		29	8 × 2
17		22	10 × 0	18		28	10 × 0
19		28	25 × 0	20		37	24.8 × 0
21		42	25 × 0	22		45	35 × 0
23		29	4 × 20	24		38	4 × 20
25		43	4 × 20	26		58	4 × 20























NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)	NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)
27		18	0 × 20	28		22	0 × 10
29		21	0 × 20	30		28	0 × 20
31		52	10 × 7	32		63	12 × 7
33		24	10 × 6	34		31	12 × 6
35		48	7 × 10	36		48	7 × 10
37		90	24 × 3	38		29	8 × 2
39		28	11.8 × 12	40		48	12 × 12
41		30	2.2 × 20	42		40	2.2 × 25
43		46	2.2 × 25	44		59	2.2 × 30
45		77	2.2 × 30	46		43	2.2 × 30
47		88	8 × 8	48		104	8 × 8
49		128	8 × 8	50		152	8 × 8
51		110	40 × 30	52		82	40 × 30
53		66	40 × 30	54		52	6.8 × 10
55		52	6.8 × 10	56		53	21 × 6

NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)	NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)
57		58	21 × 6	58		103	19 × 3
59		116	40 × 5	60		116	40 × 5
61		309	6 × 25	62		258	6 × 20
63		109	40 × 30	64		81	40 × 30
65		65	40 × 30	66		97	30 × 30
67		77	30 × 30	68		61	30 × 30
69		53	40 × 30	70		41	40 × 30
71		33	40 × 30	72		45	30 × 30
73		37	30 × 30	74		29	30 × 30
75		61	40 × 30	76		49	40 × 30
77		37	40 × 30	78		57	30.2 × 30
79		45	30 × 30	80		37	30 × 30
81		68	40 × 30	82		52	40 × 30
83		40	40 × 30	84		56	30 × 30
85		46	30 × 30	86		43	30 × 30

NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)	NO.	縫紉圖案 Stitch Diagram	針數 Numbers of Stitches	長 × 寬 L × W (mm)
87		146	16.2 × 16	88		157	12 × 12.4
89		75	20 × 24	90		55	20 × 24
91		66	20 × 20	92		50	20 × 20
93		40	20 × 20	94		64	25 × 20
95		52	25 × 20	96		46	25 × 20
97		43	25 × 20	98		34	25 × 20
99		28	25 × 20	100		89	30 × 25

釘扣標準花樣一覽表

TABLE OF THE 1903B STANDARD PATTERNS

圖案號 Pattern No.	縫製 圖案 Stitch shape	縫線 (根) Number of threads (thread)	標準縫 製長度 Standard sewing size X(mm)	標準縫 製長度 Standard sewing size Y(mm)	圖案號 Pattern No.	縫製 圖案 Stitch shape	縫線 (根) Number of threads (thread)	標準縫 製長度 Standard sewing size X(mm)	標準縫 製長度 Standard sewing size Y(mm)
1•34		6-6	3.6	3.6	18		6	4	0.4
2•35		8-8			19		8		
3		10-10			20		10		
4		12-12			21		12		
5		6-6		3.8	22		16	0.4	4.4
6		8-8			23		6		
7		10-10			24		10		
8		12-12			25		12		
9•38		6-6		3.6	26•47		6-6	3.6	3.6
36		6-6			46		6	0.4	
37		8-8			27		10-10		

圖案號 Pattern No.	縫製 圖案 Stitch shape	縫線 (根) Number of threads (thread)	標準縫 製長度 Standard sewing size X(mm)	標準縫 製長度 Standard sewing size Y(mm)	圖案號 Pattern No.	縫製 圖案 Stitch shape	縫線 (根) Number of threads (thread)	標準縫 製長度 Standard sewing size X(mm)	標準縫 製長度 Standard sewing size Y(mm)
10•39		8-8	3.6		28		6-6	3.8	3.6
11		10-10			29		10-10		
12		6-6	4	3.6	30•49		5-5-5	3.0	2.4
13		8-8			31		8-8-8		
14		10-10			32•50		5-5-5		
15		6-6	3.6	3.8	33		8-8-8	3.6	3.6
16		8-8			48		6-6		
17		10-10			43		8-8		
40		6		3.6	44		6	3.6	0.4
41		8			45		8		
42		6-6							

※ 標準縫製長度 X、Y 擴大所效率 100% 時，圖案號 No.34~No.50 鈕扣眼小時 (ø1.5 mm 以下) 使用。
 ※ The standard sewing sizes of X and Y are when the enlargement / reduction rate is 100%. Use the pattern No. 34 to No.50 when the button hole is small (ø1.5 mm or less).

MT20/31 套結機故障代碼

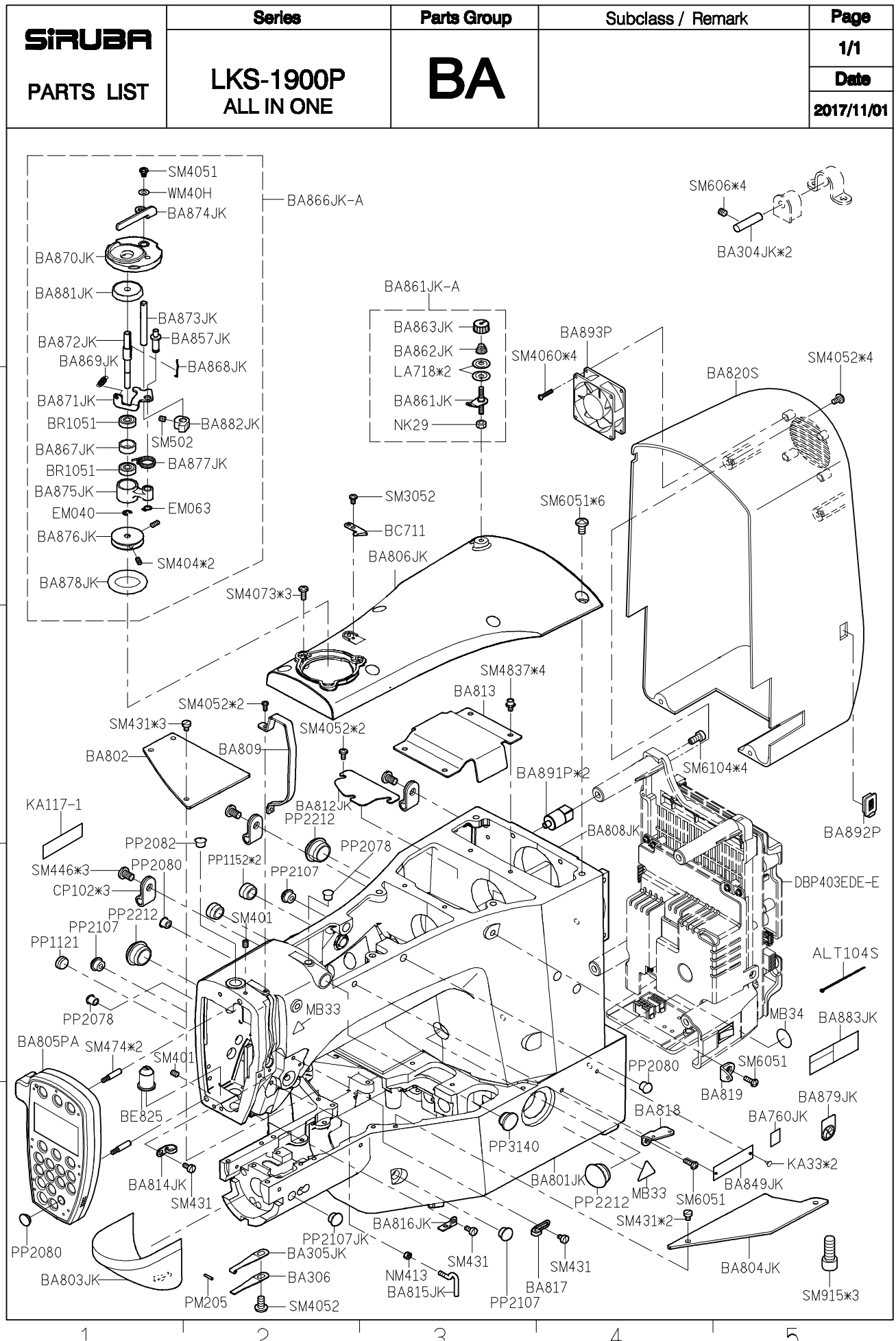
MT20/31 Bartacking Machine
Error code list

故障代碼 Indication	故障名稱 Name of the Error	故障原因 Description of the Error
E10	圖案 NO 異常 Pattern NO exception	被準備的圖案 NO. 沒有登記到 ROM 裡，或是被設定為不能讀出。圖案 NO. 為 0。 The prepared pattern NO is not registered in the ROM, or is set to not read. Pattern NO is 0.
E30	停下針位異常 Stop the needle position exception	針杆不在上位置。 The needle bar is not on the upper position.
E31	找上針位異常 Find the needle position exception	針杆找不到上位置。 Needle bar can not find the upper position.
E40	超過縫製區 Over the sewing area	X/Y 超過縫製區域。X / Y exceeds the sewing area.
E43	放大異常 Zoom in	針跡不大於 24mm。Stitch is not more than 10mm
E44	針數超限 Needle limit	2000 針。2000 pin
E45	圖案資料異常 Pattern data is abnormal	不能對應的圖案資料。 Can not correspond to the pattern data
E46	參數資料異常 Parameter data exception	不能對應的參數資料 Can not correspond to the parameter data
E50	暫停 time out	縫紉機運轉中按了重定開關，暫停。 The sewing machine presses the reset switch and pauses.
E221	補充潤滑油報警異常 Added lubricant alarm exception	機器運轉到了向指定位置補充潤滑油的時期，所以縫紉機停止了。 The machine is running until the specified position replenishes the lubricating oil, so the sewing machine is stopped.
E302	機頭翻到異常 Nose turned to abnormal	機頭翻倒檢測開關被設定為 ON。 The machine tipping detection switch is set to ON.
E303	90V 電源異常 90V power supply exception	90V 電壓過低。 90V voltage is too low.
E305	切刀位置異常 Cutter position is abnormal	切線刀不在正確位置。 The thread cutter is not in the correct position.
E401	閉環位置 Closed loop position	暫無 None
E402	反轉堵轉 Reverse stall	暫無 None
E403	正轉堵轉 Turn around	暫無 None
E404	過溫 Over temperature	暫無 None
E405	X 步進過流 X step overcurrent	X 步進硬體過電流。檢查電機、MOSFET 驅動橋。 X step hardware overcurrent. Check the motor, MOSFET drive axle
E406	Y 步進過流 Y step overcurrent	Y 步進硬體過電流。檢查電機、MOSFET 驅動橋。 Y step hardware overcurrent. Check the motor, MOSFET drive axle

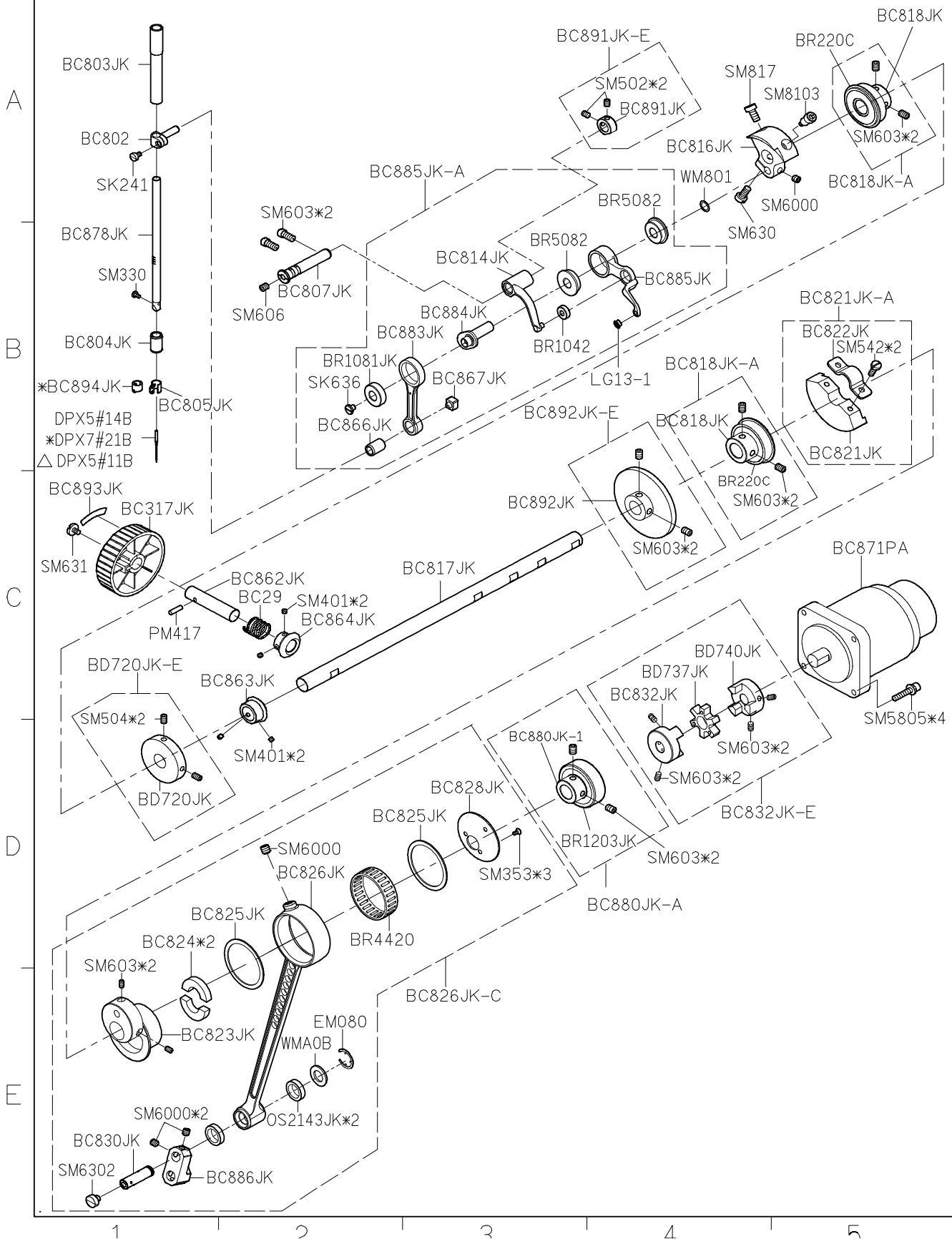
E407	STEP1 繞組開路 STEP1 winding open circuit	暫無 None
E408	STEP1 編碼器故障 STEP1 encoder failure	暫無 None
E410	步進 90V 欠壓 Step 90V undervoltage	暫無 None
E411	X 同步異常 X sync exception	暫無 None
E412	Y 同步異常 Y sync exception	暫無 None
E413	X 針數異常 X pin number exception	完成一次縫紉後主控檢測到步進板在 X 方向接收的命令與主控發送的命令步數不符。 After completing a sewing, the master detects that the command received by the step board in the X direction does not match the number of commands sent by the master.
E414	Y 針數異常 Y pin number exception	完成一次縫紉後主控檢測到步進板在 Y 方向接收的命令與主控發送的命令步數不符。 After completing a sewing, the master detects that the command received by the board in the Y direction does not match the number of commands sent by the master.
E415	STEP2 繞組開路 STEP2 winding open circuit	暫無 None
E416	STEP2 編碼器故障 STEP2 encoder failure	暫無 None
E417	STEP1 位置偏差異常 STEP1 position deviation is abnormal	X 軸位置誤差過大。檢查 X 軸編碼器，或者檢查負載是否過重、卡住。 X axis position error is too large. Check the X-axis encoder, or check that the load is too heavy to jam
E418	STEP2 位置偏差異常 STEP2 position deviation is abnormal	Y 軸位置誤差過大。檢查 Y 軸編碼器，或者檢查負載是否過重、卡住。 Y axis position error is too large. Check the Y-axis encoder, or check that the load is too heavy to jam
E419	電流感測器 1 故障 Current sensor 1 is faulty	X 軸電流感測器中點值異常。檢查電流回饋電路。 X-axis current sensor midpoint value exception. Check the current feedback circuit.
E420	電流感測器 2 故障 Current sensor 2 fault	Y 軸電流感測器中點值異常。檢查電流回饋電路。 Y-axis current sensor midpoint error. Check the current feedback circuit.
E435	壓腳過流 Presser foot overcurrent	壓腳步進電流檢測異常。 Presser foot step current detection is abnormal
E436	抓線過流 Overlines the line	抓線步進電流檢測異常。 Grab line stepping current detection is abnormal
E447	壓腳步進故障 Press foot step fault	步進或者編碼器故障。 Step or encoder failure

E448	中壓腳、抓線步進故障 In the pressure foot, grasping line step failure	步進或者編碼器故障。 Step or encoder failure
E733	主軸過流 Spindle overcurrent	馬達發熱、停轉。改電機高、低速、停車 KP 值。更換驅動模組。 The motor is hot and stops.
E739	主軸電機超載 Spindle motor overload	主軸電機負載過大，功率超過電機承受範圍。 Spindle motor load is too large, the power exceeds the motor to withstand the range.
E740	主電機轉速異常 The main motor speed is abnormal	主軸電機超速。 Spindle motor overspeed.
E741	主軸電機反轉異常 The spindle motor reverses abnormally	主軸電機發生反轉。 The spindle motor reverses.
E811	停機時過壓 Excessive shutdown	供電電壓過高。 Supply voltage is too high.
E812	運行時過壓 Run overpressure	供電電壓過高。 Supply voltage is too high
E813	系統欠壓 System undervoltage	供電電壓過低。 Supply voltage is too low
E814	電磁鐵回路故障 Electromagnet circuit failure	電磁鐵短路。 Electromagnet short circuit
E815	電流檢測回路故障 Current detection circuit failure	電機電流檢測異常。 Motor current detection is abnormal
E816	主軸電機堵轉 Spindle motor stalled	主軸電機堵轉。 Spindle motor stalled
E817	主軸電機停針感測器故障 Spindle motor stop sensor failure	主軸電機結束停針時檢測不到停針信號。 The stop signal is not detected when the spindle motor is stopped
E818	主軸電機初始角測量異常 Spindle motor initial angle measurement error	主軸電機初始角測量異常。 Spindle motor initial angle measurement error
E819	HALL 故障 HALL failure	主電機 HALL 故障。 Main motor HALL fault
E899	面板斷言 Panel assertion	面板出錯，重啟。 Panel error, restart
E906	NO5 原點檢索異常 NO5 origin search abnormality	第 5 路原點感測器不變化。 The 5th origin sensor does not change
E907	X 原點檢索異常 X origin search exception	X 原點感測器不變化。 X origin sensor does not change.
E908	Y 原點檢索異常 Y origin search exception	Y 原點感測器不變化。 Y origin sensor does not change.
E910	壓腳原點檢索異常 The origin of the presser foot is abnormal	壓腳原點感測器不變化。 The presser foot origin sensor does not change.

E911	X 向步進電機故障 X to stepper motor failure	X 電機在動作中主控再次發送動作命令。 X motor in the action master again send action command.
E912	Y 向步進電機故障 Y-stepping motor failure	Y 電機在動作中主控再次發送動作命令。 Y The motor sends the action command again in the action.
E913	抓線原點感測器故障 Threading origin sensor failure	壓腳電機在動作中主控再次發送動作命令。 The pin press the motor in action again to send the action command again.
E915	主電路板 - 操作面板通信故障 Main circuit board - Operator panel communication failure	主電路板與操作面板不能通信或通訊錯誤。 The main circuit board and the operator panel can not communicate or communicate incorrectly.
E916	主電路板 - 步進 XY 電路板通信故障 Main circuit board - Stepping XY board communication failure	主電路板與 XY 步進電路板不能通信或通訊錯誤。 The main circuit board and the XY stepper circuit board can not communicate or communicate incorrectly.
E917	主電路板 - 步進壓腳電路板通信故障 Main circuit board - step presser board circuit board communication failure	主電路板與壓腳步進電路板不能通信或通訊錯誤。 The main circuit board and the presser foot pedal can not communicate or communicate incorrectly.
E918	壓腳步進電機故障 Compressor stepping motor failure	壓腳電機在動作中主控再次發送動作命令。 Master send the action command again during the motor in action.
E919	4 路步進動作回應失敗 C action response failed	電機在動作中主控再次發送動作命令。 The motor is in action again to send the action command again.
E920	5 路步進動作回應失敗 5 action response failed	電機在動作中主控再次發送動作命令。 The motor is in action again to send the action command again.
E921	X 步進接受指令異常 X step to accept instruction exception	步進 X 針數異常【主控中暫時未用（V23 版）】 Stepped X-pin number of abnormal
E922	Y 步進接受指令異常 Y step to accept instruction exception	步進 Y 針數異常【主控中暫時未用（V23 版）】 Stepped Y-pin number of abnormal
E923	中壓腳異常 / 抓線異常 Cut line exception / catch line exception	檢查感測器、電機。 Check the sensor, motor
E947	主電路板 - 主軸電路板通信故障 Main circuit board - spindle board communication failure	主電路板與主軸電路板不能通信或通訊錯誤。 The main circuit board and the spindle board can not communicate or communicate incorrectly.
E950	NO5 步進握手故障 NO5 step handshake failure	第 5 路步進通訊問題。 Step 5 stepping communication problem.
E951	軟體版本不符合 The software version does not match	主控、操作屏、主軸軟體不匹配。 Master, operation screen, spindle software does not match
E998	伺服軟體異常 Servo software exception	主軸軟體不對。 Spindle software is wrong.
E999	主控軟體異常 Master software exception	主控軟體不對。 The master software is wrong.



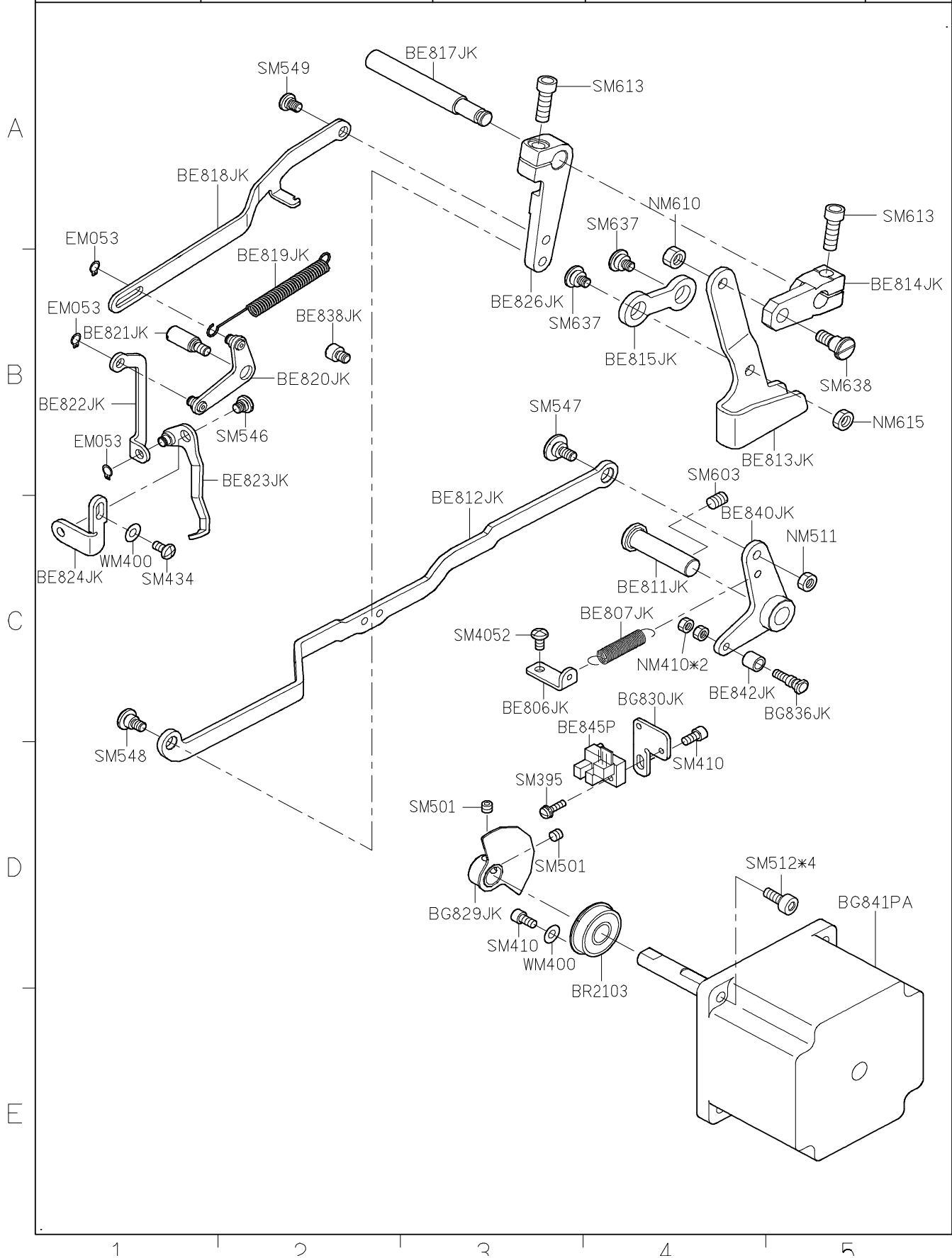
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				Date
				2017/11/01



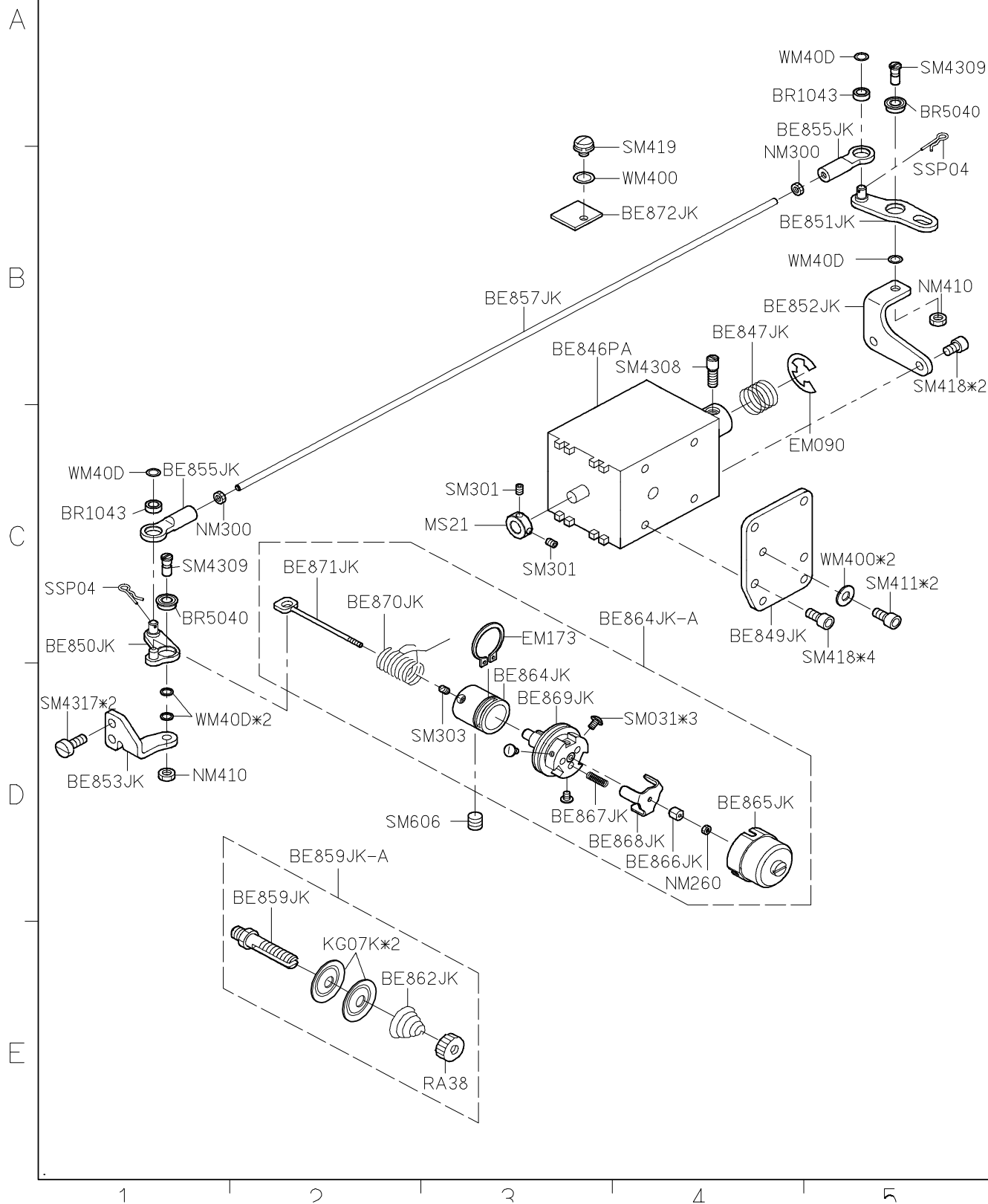
SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
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				Date
				2016/11/01

BC835JK-E
SK4100
BC836BJK
*BC836CJK
△BC836AJK
*G185JK
G186JK
BC835JK
G311JK
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SM4837*2
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BC849
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BC837JK-A
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BC837JK-5
BC806JK*2
BC837JK-1*2
BC808JK
BC843JK
BC840JK
BC839JK*2
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BC841JK
BC842JK
SM235*2
BC851JK
BC851JK-E
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SM6000
BC847
SM6000B
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BC852JK
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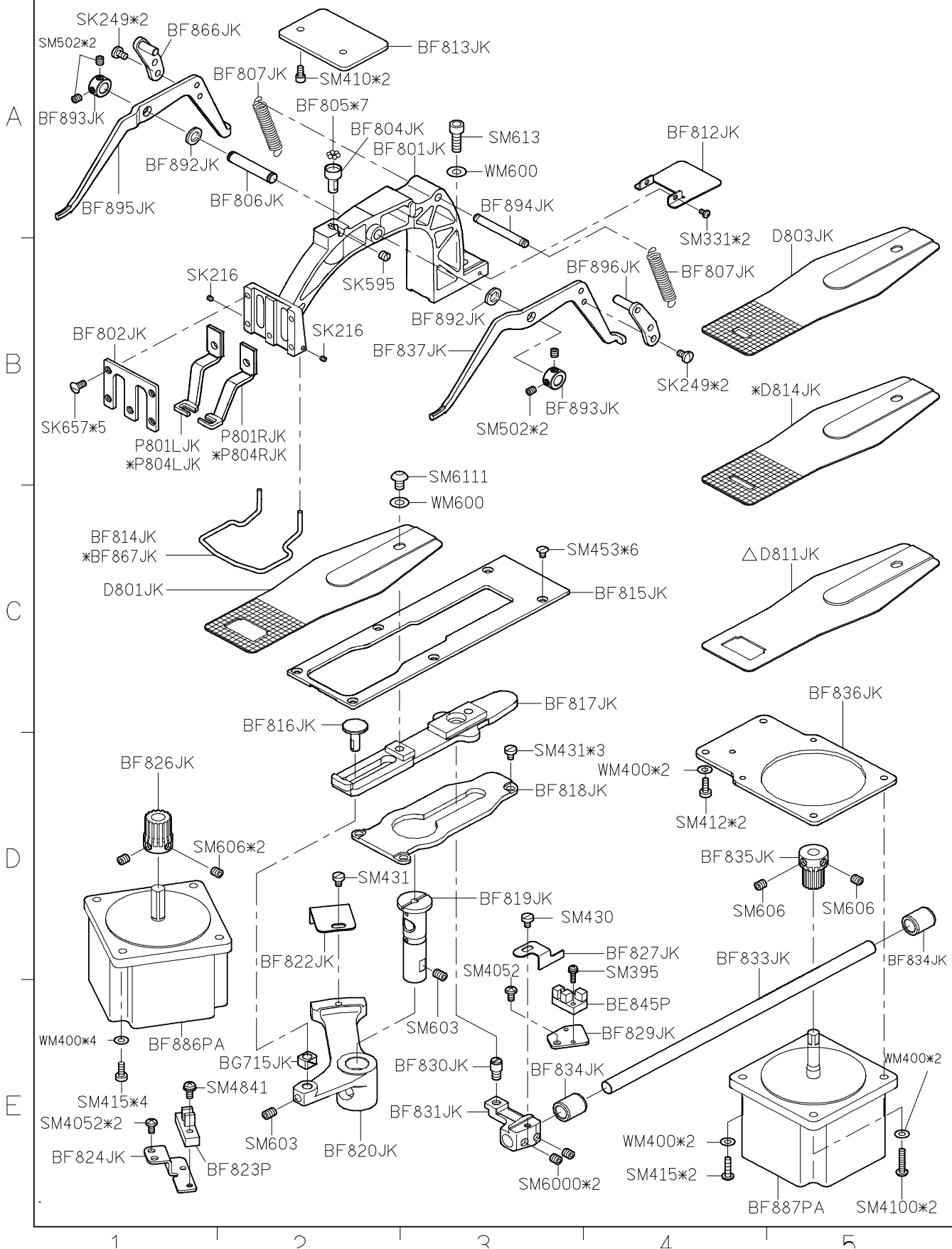
SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1900P ALL IN ONE	BE		1/2
				Date
				2017/11/01



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	LKS-1900P ALL IN ONE	BE		2/2
				Date
				2017/11/01

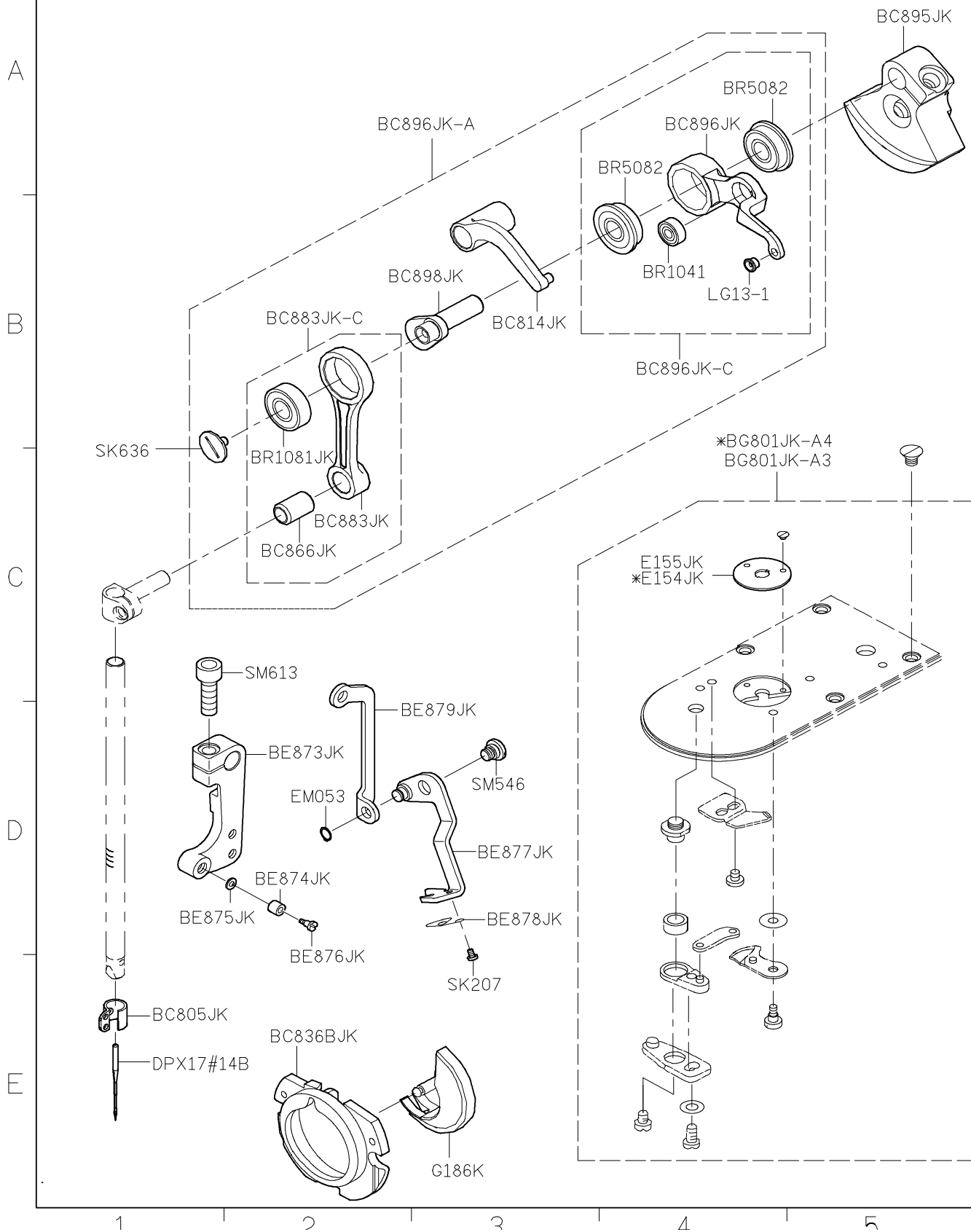


SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
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				Date
				2017/11/01



SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1902P ALL IN ONE	BF	Use For *LKS-1902PHS	2/5
				Date
				2017/11/01

SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1903P ALL IN ONE	BF	* Use For LKS-1903PSS302	3/5
				Date
				2017/11/01



SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1903P ALL IN ONE	BF	* Use For LKS-1903PSS301	5/5
				Date
				2017/11/01

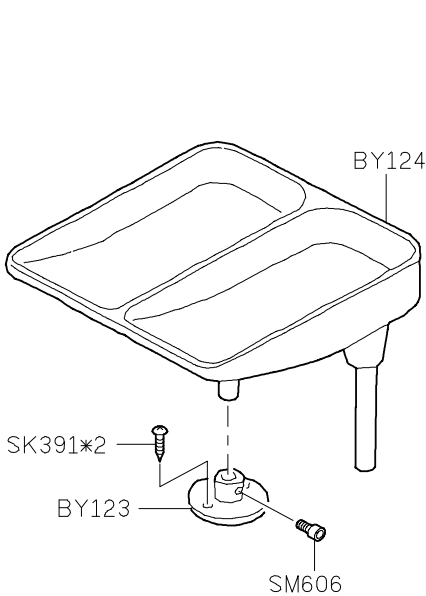
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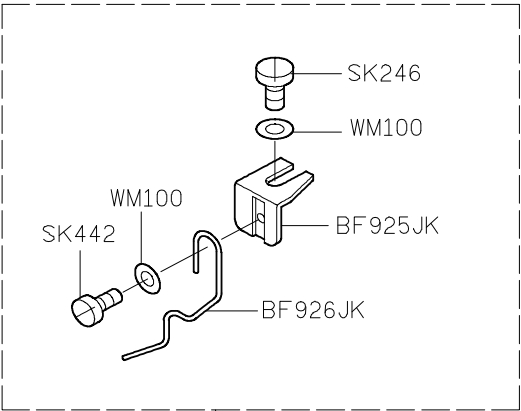
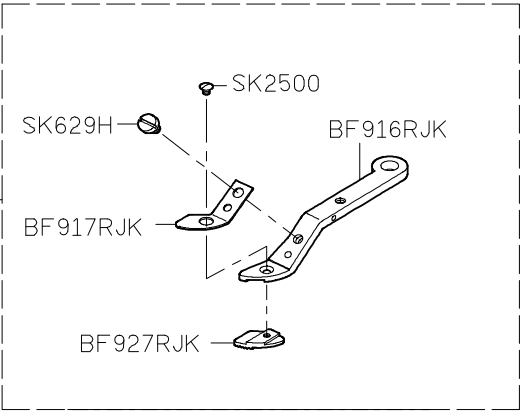
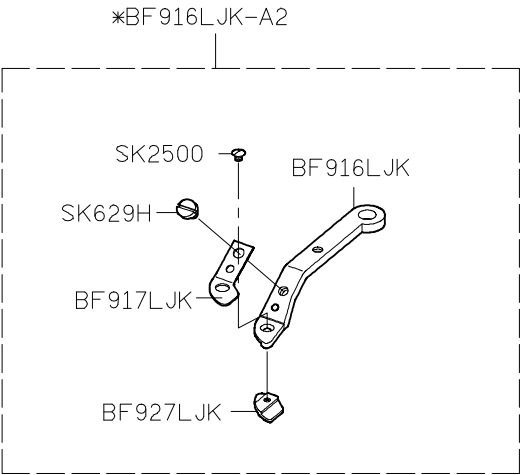
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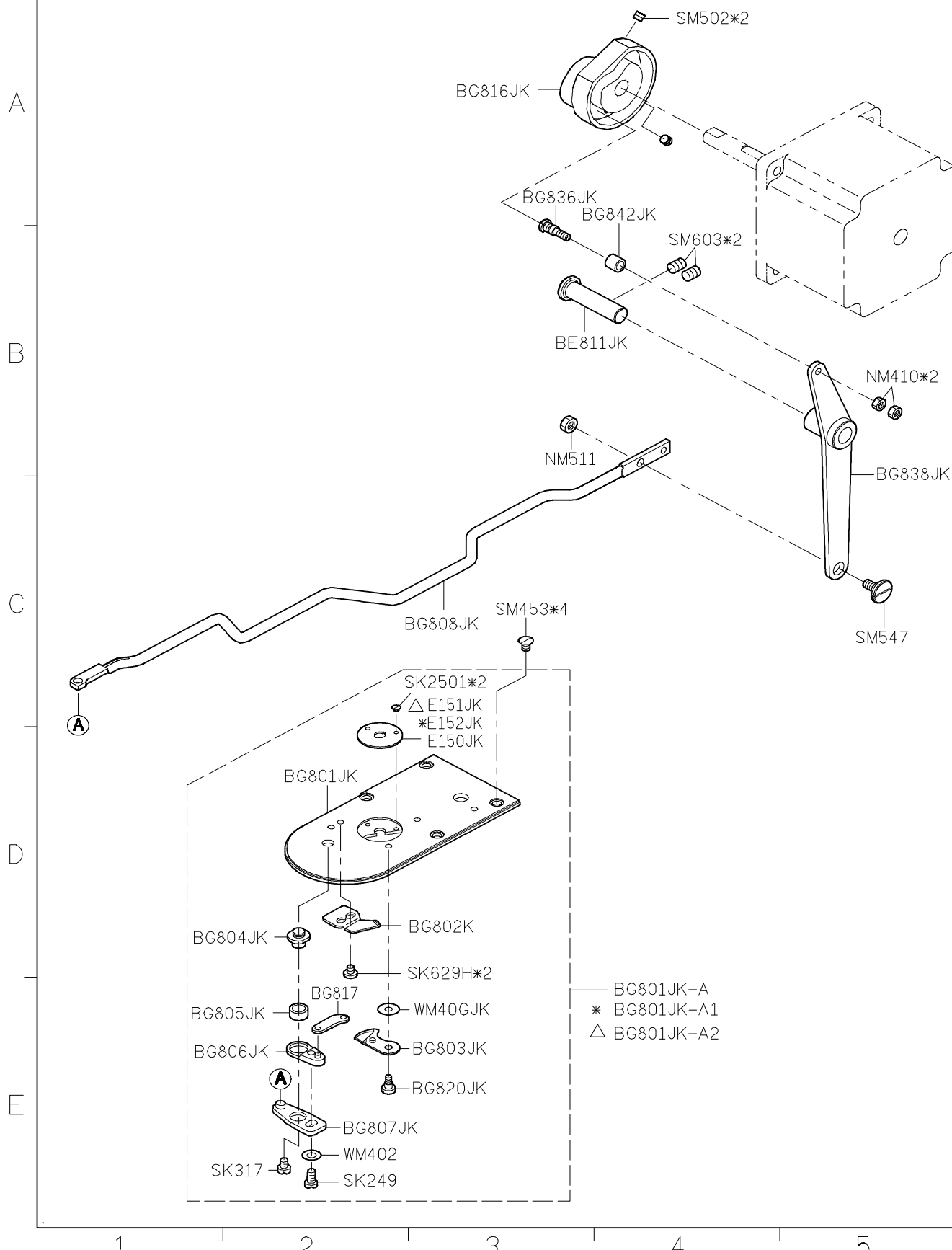


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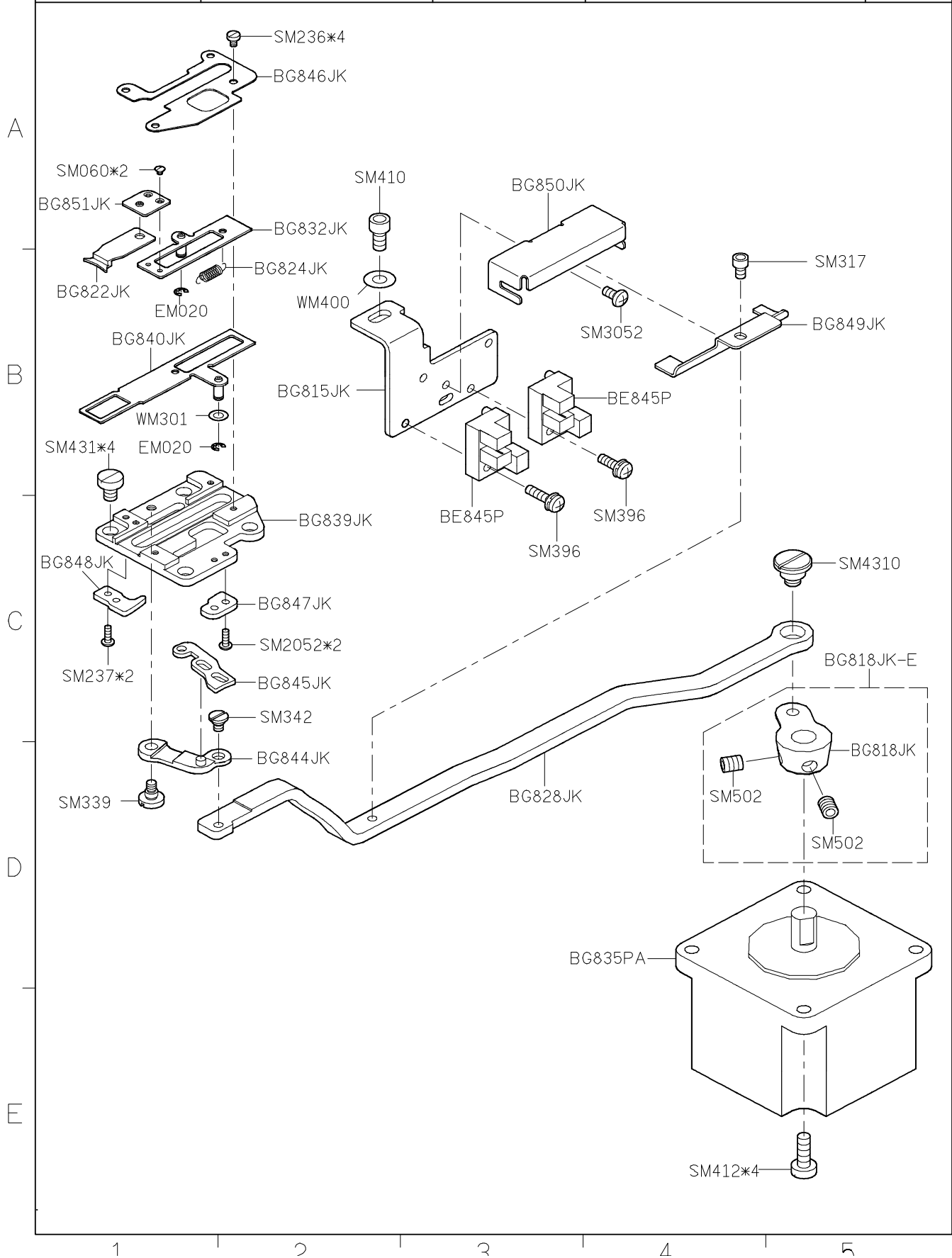


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SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
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				Date
				2017/11/01



SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1900P ALL IN ONE	BG		2/2
				Date
				2017/11/01



SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1900P ALL IN ONE	BQ		1/1
				Date
				2017/11/01

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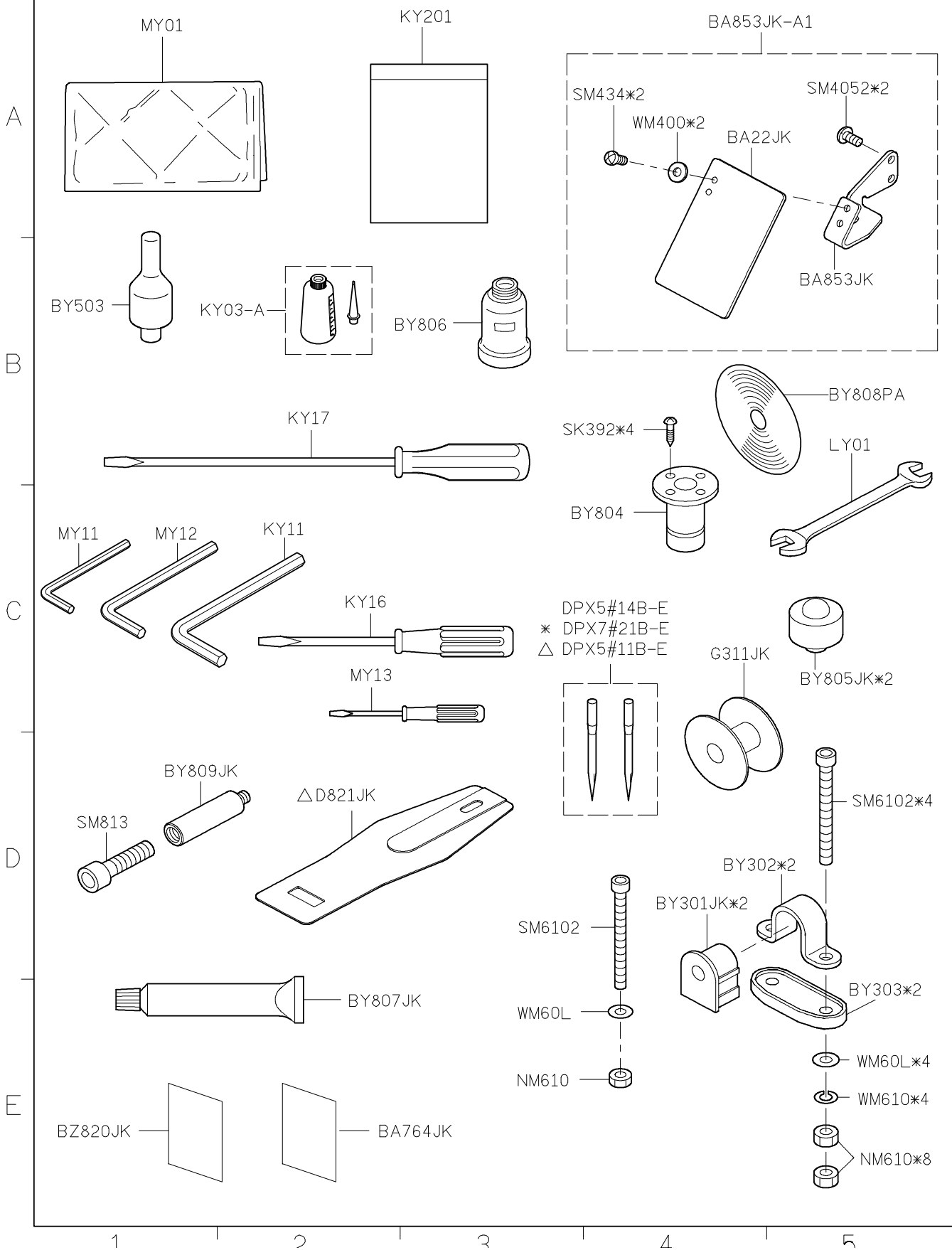
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SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1900P ALL IN ONE	BY	Use For * LKS-1900PHS △ LKS-1900PFS	1/1
				Date
				2017/11/01



SIRUBA PARTS LIST	Series	Parts Group	Subclass / Remark	Page
	LKS-1900P ALL IN ONE	BZ		1/1
				Date
				2017/11/01

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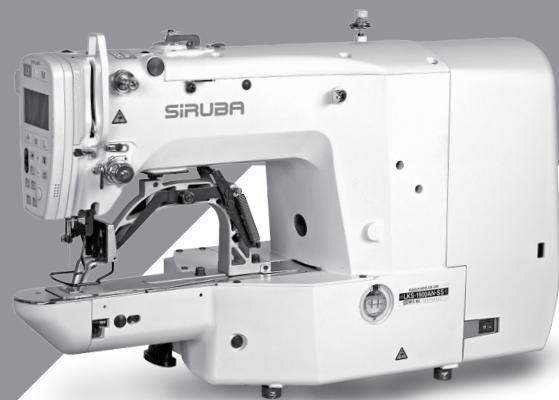
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