

DDL-8000AS, AB INSTRUCTION MANUAL

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1. SPECIFICATIONS

1-1. Specifications of the sewing machine head



		DDL-8000A-*MS	DDL-8000A-*SH	DDL-8000A-*SJ	
Max. sewing speed		5,000 sti/min (P = Less than 4) 4,000 sti/min for "P= 4 or more"	4,500 sti/min (P = Less than 4) 4,000 sti/min for "P= 4 or more"		
Stitch length		5 mm			
	Hand lifter	5.5 mm			
Flesser loot liit	Auto lifter	13 mm or more			
Audio guidance		Provided			
Needle *1		1738 Nm65 to 110 (DB × 1 #9 to 18)	1738 Nm125 to 160 (DB × 1 #20 to 23)		
		134 Nm65 to 110 (DP × 5 #9 to 18)	134 Nm125 to 160 (DP × 5 #20 to 23)		
Lubricating oil		JUKI NEW DEFRIX OIL No.1 or JUKI CORPORATION GENUINE OIL 7			
Motor		AC servo motor			
Noise		 *MS ; Equivalent continuous emission sound pressure level (L_pA) at the workstation: A-weighted value of 78.7 dBA ; (Includes K_pA = 2.5 dBA) ; according to ISO 10821- C.6.2 -ISO 11204 GR2 at 4,000 sti/min. *SH, *SJ ; Equivalent continuous emission sound pressure level (L_pA) at the workstation: A-weighted value of 82.0 dBA ; (Includes K_pA = 2.5 dBA) ; according to ISO 10821- C.6.2 -ISO 11204 GR2 at 4,000 sti/min. 			

• The sewing speed will vary depending on the sewing conditions. The sewing speed preset at the time of shipping is 4,000 sti/min.

*1 : Needle used depends on the destination.

1-2. Specifications of the control box

Supply	Single phase	3-phase 200 to 240V	Single phase
voltage	220 to 240V	Single phase 100 to 120V	220 to 240V CE
Frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Operating environment	Temperature : 0 to 35°C	Temperature : 0 to 35°C	Temperature : 0 to 35°C
	Humidity : 90% or less	Humidity : 90% or less	Humidity : 90% or less
Input	330VA	330VA	170VA

2. SET UP

2-1. Drawing of table



- 2 -

2-2. Cautions when setting up the sewing machine

Thank you very much for the purchase of JUKI Industrial Sewing Machine this time. Make sure of items 2-1 through 2-13 before operating to use this sewing machine with ease.





2-2-1. How to carry the sewing machine

Carry the sewing machine while holding the machine arm with two persons as shown in the figure.



2-2-2. Caution when placing the sewing machine

Place the sewing machine on a horizontal and plane place when placing it and do not place any protruding thing such as a screwdriver or the like.

2-3. Installation



- The under cover should rest on the four corners of the machine table groove. Mount rubber hinge seat on the table and fix it on the table with a nail.
- 2) Fix two rubber seats ① on side ② (operator's side) using nails ② as illustrated above. Fix two cushion seats ③ on side ③ (hinged side) using a rubber-based adhesive. Then place under cover ④ on the fixed seats.
- 3) Fit hinge into the opening in the machine bed, and fit the machine head to table rubber hinge seat before placing the machine head on cushions on the four corners.





4) Securely attach head support rod 4 to the table until it goes no further.



2-4. Installing the pedal sensor



- 1) Install the pedal sensor to the table with mounting screws **1** supplied with the unit. It is necessary to install the pedal sensor at such a position that the connecting rod is perpendicular to the table.
- 2) After the completion of installation of the pedal sensor on the table, place the sewing machine head on the table.



3) Allowing some slack in the cable, install the pedal sensor 120 to 130 mm from the edge of the table.

J



2-5. Connecting the connector

WARNING :

• To protect against personal injury resulting from abrupt start of the sewing machine, be sure to turn the power OFF, unplug the machine and wait for five minutes or more before installing the pedal sensor.



- To prevent damage of device caused by maloperation and wrong specifications, be sure to connect all the corresponding connectors to the specified places. (If any of the connectors is inserted into a wrong connector, not only the device corresponding to the connector can break but also it can start abruptly, inviting the risk of personal injury.)
- To prevent personal injury caused by maloperation, be sure to lock the connector with lock.
- Do not connect the power plug until the connection of cords is completed.
- Fix the cords while taking care not to forcibly bend them or excessively clamp them with staples.
 As for the details of handling respective devices, read carefully the Instruction Manuals supplied with the devices before handling the devices.





- 1. Do not insert the power plug into the wall outlet.
- 2. Check to be sure that the power switch is turned OFF.
- Be sure to fully insert the connectors into the corresponding ports until they are locked.
- Draw out pedal sensor cable ① and AC input cable ② coming from the electrical box to the undersurface of the sewing machine table through cable draw-out hole ③.
- 2) Connect pedal sensor cable **1** and the connector under the table.



3) Secure pedal sensor cable 1 and AC input cable 2 with staples 4.

2-6. Installing the reactor box [Only for the EU type models]

* For the EU-type models, install the reactor box that is supplied with the sewing machine.





2) Remove the wood screws 2 from the accessory bag and install the reactor box under the table. (4 screw tightening locations)

3) Refer to the figure to install the reactor box 1.

4) Install the power cable and pedal cable on the underside of the table using the supplied staples 3.



2-7. Installing the power switch



WARNING :

1. Be sure to attach the ground wire (green/yellow) to the specified location (on the ground side).

- 2. Take care not to allow terminals to come in contact with each other.
- 3. When closing the power switch cover, take care not to allow the cord to be caught under it.

2-7-1. 3-phase 200 to 240V, Single phase 100 to 120V

Voltage specifications at the time of delivery from the factory are indicated on the voltage indication seal. Connect the cord in accordance with the specifications.



1) Installing the power switch

Fix power switch **1** under the machine table with wood screws **2**.

Fix the cable with staples ③ supplied with the machine as accessories in accordance with the forms of use.





Do not insert the power plug into the plug receptacle.

2) Remove screw ④ on the side face of the power switch cover to open the power switch cover.



3) Pass AC input cord (5), through the rear face of the power switch. Bundle the cord with cable clip band (6) to secure it.

4) Securely fix the terminals of the AC input cord by tightening the screws at the specified locations.



5) Close the power switch cover. Tighten screw ④ on the side face of the power switch cover.



6) Check that the power switch is in the OFF state.Then, insert the power plug coming from the power switch into the plug receptacle.



In prior to the connection of the power plug **1**, re-check the supply voltage specification indicated on the control

* The power plug **1** is different in shape according to the destination of the sewing machine.

2-8. Installing the thread stand



- 1) Assemble the thread stand unit, and insert it in the hole in the machine table.
- 2) Tighten nut 1.

2-9. Attaching the connecting rod

WARNING : To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and a lapse of 5 minutes or more.



Fix connecting rod **1** to installing hole **4** of pedal lever 2 with nut 3.

2-10. Adjustment of the pedal



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



2-10-1. Installing the connecting rod

1) Move pedal ③ to the right or left as illustrated by the arrows so that motor control lever ① and connecting rod ② are straightened.

2-10-2. Adjusting the pedal angle

- The pedal tilt can be freely adjusted by changing the length of the connecting rod ②.
- 2) Loosen adjust screw ④, and adjust the length of connecting rod ②.

2-11. Pedal operation



The pedal is operated in the following four steps :

- The machine runs at low sewing speed when you lightly depress the front part of the pedal.

 B
- 2) The machine runs at high sewing speed when you further depress the front part of the pedal.
 (If the automatic reverse feed stitching has been preset, the machine runs at high speed after it completes reverse feed stitching.)
- 3) The machine stops (with its needle up or down) when you reset the pedal to its original position.
- 4) The machine trims threads when you fully depress the back part of the pedal. **(**
- * When the auto-lifer (AK device) is used, one more operating switch is provided between the sewing machine stop switch and thread trimming switch.

The presser foot goes up when you lightly depress the back part of the pedal **(D)**, and if you further depress the back part, the thread trimmer is actuated.

When starting sewing from the state that the presser foot has been lifted with the Auto-lifter and you depress the back part of the pedal, the presser foot only comes down.

- If you reset the pedal to its neutral position **(b)** during the automatic reverse feed stitching at seam start, the machine stops after it completes the reverse feed stitching.
- The machine will perform normal thread trimming even if you depress the back part of the pedal immediately following high or low speed sewing.
- The machine will completely perform thread trimming even if you reset the pedal to its neutral position immediately after the machine started thread trimming action.
- 5) When you depress lightly the back part of pedal at its neutral position before starting, the pedal is brought to the first presser lifting position . When you depress the back part of pedal further, the pedal is brought to the second presser lifting position .

2-12. Power switch

* The switch configuration differs with the specifications.



 Turning the power ON with the power switch The power to the sewing machine is placed in the ON state when the "|" mark side of power switch
 (1ø 220 - 240V type) is pressed; or in the OFF state when the "0" mark side is pressed.

The power to the sewing machine is placed in the ON state when the ON button of power switch **2** (3ø 200 - 240V type) is pressed; or in the OFF state when the OFF button is pressed.

The power to the sewing machine is placed in the ON state when the knob of power switch ③ (EU type, 1ø 220 - 240V type) is turned by 90 degrees counterclockwise; or in the OFF state when it is turned clockwise to return to its home position.

- 1. Do not strongly tap the power switch by hand.
- 2. If the power indicator LED on the panel does not light up after having turned ON the power switch, immediately turn OFF the power switch and check the supply voltage.



When you want to re-turn ON power switch after carrying out the aforementioned steps, it is necessary to wait for five minutes or more after you have turned OFF power switch.

3. Do not place your hand or anything under the needle since the needle bar may automatically move according to the memory switch setting when you turn ON the power to the sewing machine.



2) When you depress the back part of pedal, the needle bar and the presser lifting motor carry out their initial operation to allow the sewing machine to start sewing.



6) After the completion of sewing, check to make sure that the sewing machine has stopped. Then, press power switch ● or ● (or turn EU-type power switch ●) to turn it OFF.

_ _ _ _ _ _



In the case the machine is not used for a long time, remove the power plug from the plug recep-

_ _ _ _ _ _ _ _ _ _

WARNING :

- 1. Do not connect the power plug until the lubrication has been completed so as to prevent accidents due to abrupt start of the sewing machine.
- 2. To prevent the occurrence of an inflammation or rash, immediately wash the related portions if oil adheres to your eyes or other parts of your body.
- 3. In the case of adding oil to the sewing machine while it is energized, do not place your hands into the moving parts for the sake of safety.



Fill the oil tank with oil for hook lubrication before operating the sewing machine.

- Turn ON the power switch. Remove oil hole cap

 Pour NEW Defrix Oil No. 1 (part number: 40214221 or MDFRX16000C0) supplied with the unit or JUKI CORPORATION GENUINE OIL 7 (part number: 40102087) into the oil tank through the oil hole.
- 2) When the oil amount in the oil tank reaches the maximum amount, flashes on and off on the

operation panel and the voice warning is given.

Stop oiling.

If the oil is filled excessively, it will leak from the air vent hole in the oil tank or proper lubrication will be not performed. In addition, when the oil is vigorously filled, it may overflow from the oil hole. So, be careful.

0

3) When the remaining amount of oil in the oil tank is reduced while the sewing machine is in use, the warning screen is displayed on the operation panel as shown below, the LED at the top of the operation panel

flickers and the voice warning is given. The warning screen can be reset with the reset button



1. When you use a new sewing machine or a sewing machine after an extended period of dis-

use, use the sewing machine after performing break-in at 2,000 sti/min or less.

- 2. For the oil for hook lubrication, purchase JUKI NEW DEFRIX OIL No. 1 (part number : MD-
 - FRX1600C0) or JUKI CORPORATION GENUINE OIL 7 (part number : 40102087).
- 3. Be sure to lubricate clean oil.
- 4. Do not operate the machine with the oil hole cap **1** removed. Never remove cap **1** from the oil inlet in any case other than oiling. In addition, take care not to lose it.

3. PREPARATION BEFORE SEWING

3-1. Attaching the needle



WARNING :

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Use the specified needle for the machine. Use the proper needle in accordance with the thickness of thread used and the kinds of the materials.

- 1) Turn the handwheel until the needle bar reaches the highest point of its stroke.
- 2) Loosen screw 2 , and hold needle 1 with its indented part (A) facing exactly to the right in direction **B**.
- 3) Insert the needle fully into the hole in the needle bar in the direction of the arrow until the end of hole is reached.

4) Securely tighten screw 2.

5) Check that long groove **O** of the needle is facing exactly to the left in direction **D**.

3-2. Removing/fitting the bobbin case

WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- 1) Turn the handwheel to lift the needle above the throat plate.
- 2) Install the bobbin in the bobbin case so that the thread wound direction is clockwise.
- 3) Pass the thread through thread slit (A) of the bobbin case, and pull the thread in direction **O**. By so doing, the thread will pass under the tension spring and come out from notch **B**.
- 4) Check that the bobbin rotates in the direction of the arrow when thread is pulled.
- 5) Pinching latch **()** of the bobbin case with fingers, fit the bobbin case in the hook.

3-3. Winding the bobbin thread



- Pass the bobbin thread pulled out from the spool rested on the right side of the thread stand following the order as shown in the figure on the left. Then, wind clockwise the end of the bobbin thread on the bobbin several times.
- 3) Press the bobbin winding lever ② in the direction of ③ and start the sewing machine. The bobbin rotates in the direction of ⑤ and the bobbin thread is wound up. The bobbin winder spindle ① automatically as soon as the winding is finished.
- 4) Remove the bobbin and cut the bobbin thread with the thread cut retainer 3.
- 5) When adjusting the winding amount of the bobbin thread, loosen setscrew 4 and move bobbin winding lever 2 to the direction of or •. Then tighten setscrew 4.

To the direction of **O** : Decrease To the direction of **O** : Increase

- 6) In case that the bobbin thread is not wound evenly on the bobbin, remove the handwheel, loosen screw (3) and adjust the height of bobbin thread tension (3).
- ullet It is the standard that the center of the bobbin is as high as the center of thread tension disk ullet .
- Adjust the position of thread tension disk ③ to the direction of ④ when the winding amount of the bobbin thread on the lower part of the bobbin is excessive and to the direction ⑤ when the winding amount of the bobbin thread on the upper part of the bobbin is excessive.

After the adjustment, tighten screw 6.

7) To adjust the tension of the bobbin winder, turn the thread tension nut $m{0}$.



- 1. When winding the bobbin thread, start the winding in the state that the thread between the bobbin and thread tension disk **()** is tense.
- 2. When winding the bobbin thread in the state that sewing is not performed, remove the needle thread from the thread path of thread take-up and remove the bobbin from the hook.
- 3. There is the possibility that the thread pulled out from the thread stand is loosened due to the influence (direction) of the wind and may be entangled in the handwheel. Be careful of the direction of the wind.

3-4. Threading the machine head



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



3-5. Thread tension



3-5-1. Adjusting the needle thread tension

- Turn thread tension No. 1 nut ① clockwise (in direction ④), to shorten the thread length remaining on the needle after thread trimming or counter-clockwise (in direction ④), to lengthen the thread length.
- 2) Turn thread tension nut ② clockwise (in direction
 ③) to increase or counterclockwise (in direction ④) to reduce the needle thread tension.



3-5-2. Adjusting the bobbin thread tension

Turn tension adjusting screw ③ clockwise (in direction ④) to increase or counterclockwise (in direction ④) to reduce the bobbin thread tension.

3-6. Presser foot pressure



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- Loosen nut ② . As you turn presser spring regulator ① clockwise (in direction ③), the presser foot pressure will be increased.
- As you turn the presser spring regulator counter-clockwise (in direction ●), the pressure will be decreased.
- 3) After adjustment, tighten nut 2.

The standard value of the height **(b)** of presser spring regulator **(1)** is as follows :

• S type : 31.5 to 29 mm

(approx. 40 to 45 N / 4 to 4.5 kg)

• H type, J type : 31.5 to 28 mm (approx. 50 to 60 N / 5 to 6 kg)



To avoid personal injury, never put your fingers under the presser foot.

3-7. Adjusting the stitch length



- * The dial calibration is in millimeters.
- Turn stitch length dial ① in the direction of the arrow, and align the desired number to marker dot
 On the machine arm.
- 2) To change over the feed scale mark from "large" to "small", turn stitch dial ① while pressing feed lever ② in the direction of the arrow and pressing stopper ③ in the direction of arrow ⑤ (toward the back of the arm).
- 3) To change over the feed scale mark from "small" to "large", turn stitch dial
 while pressing stopper
 in the direction of arrow
 (toward the back of the arm).
- 4) Release stopper 6 to fix stitch dial 1.

3-8. Changing the sewing speed

The sewing speed can be changed with

6 on the normal sewing screen.



+

[How to change the sewing speed]

1) The sewing speed change screen is dis-



6 on the

normal sewing screen. On the sewing speed change screen, the sewing speed can be changed.



2) Press - 3 to determine the set val-

ue. Then, the sewing machine returns to the normal sewing state.

3-9. LED hand light



WARNING :

In order to protect against personal injury due to unexpected start of the sewing machine, never bring hands near the needle entry area or place foot on the pedal during the adjustment of intensity of the LED.



3-10. Reverse feed stitching

* This LED is intended to improve operability of the sewing machine and is not intended for maintenance.

The sewing machine is provided as standard with an LED light which illuminates the needle entry area. Intensity adjustment and turn-off of the light is carried out by pressing switch ①. Every time the switch is pressed, the light is adjusted in intensity in five steps and is turned off in turn.

[Change of intensity]

In this way, every time the switch **1** is pressed, the hand lamp status is changed in repetition.

[One-touch type reverse feed stitching mechanism]

The one-touch type reverse feed switch **1** is pressed, the machine performs reverse feed stitching.

The machine resumes normal feed stitching the moment the switch lever is released.

[Reverse feed stitching by means of the reverse feed lever]

Length of the seam sewn by feeding the material in the normal or reverse direction of feed can be controlled by operating reverse feed lever **2**.

[Adjusting the position of one-touch type reverse feed switch]

One-touch type reverse feed switch ① can be used at two different positions by turning it. (Fig. 1)

[Needle up/down switch]

The needle can be moved up and down to change the needle position by a half stitch by pressing needle up/down switch 3.

(The function of this switch can be changed to 1-stitch correction, etc. by carrying out the procedure described in **"4-6. Function setting" p. 32**.)

3-11. Adjusting the amount of oil (oil splashes) in the hook



WARNING :

Be extremely careful about the operation of the machine since the amount of oil has to be checked by turning the hook at a high speed.

3-11-1. Adjusting the amount of oil in the hook



Tighten (turn clockwise) oil amount adjustment screw **1** to increase the amount of oil in the hook, or loosen (turn counterclockwise) to decrease it.

[When using RP hook (hook for dry head) for DDL-8000A-*MS type]

- Remove hook driving shaft oil wick setscrew ② and attach hook driving shaft stopper screw
 ③ (part number : 11079506) and rubber ring ④ (part number : RO036080200).
- 2. Loosen oil amount adjustment screw ① up to the minimum so as to reduce the oil amount in a the hook. However, do not completely stop the oil and be careful not to allow oil adjustment screw ① to come off.

J

3. Never drain the oil in the oil tank even when RP hook (hook for dry head) is used.

3-11-2. How to confirm the amount of oil (oil splashes)



- * When carrying out the procedure described below in 2), confirm the state that the needle thread from the thread take-up lever to the needle and the bobbin thread are removed, the presser foot is lifted and the slide plate is removed. At this time, take extreme caution not to allow your fingers to come in contact with the hook.
- 1) If the machine has not been sufficiently warmed up for operation, make the machine run idle for approximately three minutes. (Moderate intermittent operation)
- 2) Place the amount of oil (oil splashes) confirmation paper under the hook while the sewing machine is in operation.
- 3) Confirm that oil exists in the oil tank.
- 4) Confirmation of the amount of oil should be completed in five seconds. (Check the period of time with a watch.)

3-11-3. Sample showing the appropriate amount of oil



- The state given in the figure above shows the appropriate amount of oil (oil splashes). It is necessary to finely adjust the amount of oil in accordance with the sewing processes. However, do not excessively increase/decrease the amount of oil in the hook. (If the amount of oil is too small, the hook will be seized (the hook will be hot). If the amount of oil is too much, the sewing product may be stained with oil.)
- 2) Check the oil amount (oil splashes) three times (on the three sheets of paper), and adjust so that it should not change.

3-12. Adjusting the thread take-up spring and the thread take-up stroke



(1) Adjusting the stroke of thread take-up spring **1**

- 1) Loosen setscrew 2 .
- 2) Turn tension post ③ clockwise (in direction ④), the stroke of the thread take-up spring will be increased, and turn the post ③ counterclockwise (in direction ⑤), the stroke will be decreased.

(2) Adjusting the pressure of thread take-up spring **1**

- 1) Loosen setscrew 🛿 , and remove thread tension (asm.) 🕤 .
- 2) Loosen tension post setscrew ${f 4}$.
- 3) Turn tension post 3 clockwise (in direction 3), the pressure will be increased, and turn the post 3 counterclockwise (in direction 3), the pressure will be decreased.



To check how the thread take-up spring works, draw out the needle thread in direction () after having adjusted the thread take-up spring pressure to check whether the thread take-up spring | exerts force to the thread up to the last moment (state () just before the thread comes out from (). If the spring fails to exert force to the spring until the last moment (state (), decrease the thread take-up spring pressure. In addition, the stroke of the thread take-up spring is excessively small, the spring does not work properly. For the general fabrics, a stroke of 10 to 13 mm is proper.

(3) Adjusting the thread take-up stroke

- 1) When sewing heavy-weight materials, move thread guide ③ to the left (in direction ④) to increase the length of thread pulled out by the thread take-up.
- 2) When sewing light-weight materials, move thread guide (3) to the right (in direction (**D**)) to decrease the length of thread pulled out by the thread take-up.

* Standard state of the thread guide

The standard distance between the right end face of thread guide and the screw head is as follows:

	[DDL-8000A-*MS]	[DDL-8000A-*SH, *SJ]
< Destination AA and BB >	4mm	7mm
< Destination GG >	7mm	

4. FOR THE OPERATOR

4-1. How to set the machine head and to initialize data (the factory-set state at the time of shipment)

* This item has been factory-adjusted at the time of shipment. Carry out the machine head setting procedure in the case the control box is replaced, or in any case where it is necessary.



Example) In the case the selected type of machine head is "2":

P70 Change the selected type of machine head from "2" to "3". Press 4 3.

Change the selected type of machine head again from "3" to "2". Press 4



N	0.		How long the key must be pressed	Function	
)		Short time	Used to changing over the automatic reverse feed stitching at the begin- ning of sewing to: Reverse feed stitching / Double reverse feed stitching / Disable	
			Long time	Used to change over the thread clamp operation between enable / disable	
0	•	Ав	Short time	Used to change over the automatic reverse feed stitching at the end of sewing to: Reverse feed stitching / Double reverse feed stitching / Disable	
	9		Long time	Used to change over the needle bar stop position at the time of stopping the sewing machine between up and down	
	ALB1	Short time	Used to set the type of stitching to free stitching		
0			Long time	Used to change over the thread trimming operation between enable / dis- able.	
			Short time	Used to set the type of stitching to overlapped stitching	
4			Long time	Used to change over the lifting of the presser foot during sewing between "automatically lift / not lift".	
		2	Short time	Used to carry out setting of the polygonal-shape stitching.	
6		A SLA	Long time	Used to changeover the automatic lifting of presser foot after thread trim- ming between lift / not lift	
	A	+	Short time	Used to increase the maximum sewing speed	
U	в		Short time	Used to decrease the maximum sewing speed	

No.			How long the key	Function
			must be pressed	
		0	Short time	Used to set the number of reverse feed stitches (ABCD) at the beginning
● ● ● ● ●	Α	A		and end of sewing
			Long time	Used to change over the one-shot operation between enable / disable
			Short time	Used to set the number of reverse feed stitches (ABCD) at the beginning
	в			and end of sewing
			Long time	Used to set the bobbin counter
			Short time	Used to determine the set data
8				
0	E1	Short time	Used to display the parameters registered to function key F1	
			Long time	Used to register a parameter to function key F1
		E 2	Short time	Used to display the parameters registered to function key F2
Ū			Long time	Used to register a parameter to function key F2
	P		Short time	Used to return the data being edited to the initial state
	ν			
	D		Short time	Used to set the sewing machine clock right
u	9		Long time	Used to set the memory switch
ß		i	Short time	Used to change over the display to the thread trimming counter display
	U			
		• • •	-	Speaker for the audio guidance
()		•••		

4-3. Audio guidance

The audio guidance provides the following information when turning ON / OFF the power to the sewing machine, operating the sewing machine and operating the operation panel. The guidance sound is emitted from





- ① At the time of turning the power ON "Hello. (month) (day), (date)" etc.
- (2) At the time of turning the power OFF "Thank you for your hard work." etc.
- ③ At the time of operating the sewing machine "Oil level is low. Please refuel."

..... "Oil tank is full."

- "Bobbin thread will be running out."
- Guidance on the production support

"The current productivity achievement rate is at 105%" etc.

- "Kindly refer to the "Lists of errors" by using the QR code.", etc.
- (4) At the time of operating the operation panel The audio guide provides the modified parameter content.

4-4. Setting the clock

The time displayed on the operation panel can be changed.

1) Press **M P** in the normal sewing state to display the time change screen.



2) The time setting items flash on and off in the order of "year", "month", "day ", "hour", "minute" and "sec-



3) Press **4 3** to determine the set value. Then, the sewing machine returns to the normal sewing state.

Then, change the value of that item with

4-5. Operating procedure of the sewing pattern

4-5-1. Reverse feed stitching pattern

Reverse feed stitching at sewing start and reverse feed stitching at sewing end can be separately programmed.



[Setting procedure of the reverse feed stitching]

 The reverse feed stitching pattern at the beginning of sewing can be changed over to "enable / double reverse feed

stitching / disable" by pressing 📳 🕕

The reverse feed stitching pattern at the end of sewing can be changed over to "enable / double reverse feed stitch-

ing / disable" by pressing 🙌 2 . The

current setting state of the reverse feed stitching is displayed on the display section **A**.

2) Press To put the sewing machine in the state where the number of reverse feed stitches can

be set. At this time, one of the items shown in the display section **B** flashes on and off.

Move the item that flashes on and off to the target process (A, B, C or D) you want to set. Then, change

the set value for that process with (+) – $(\mathbf{0})$.

The number which exceeds 9 is indicated as follows: A = 10, b = 11, c = 12, d = 13, E = 14, and F = 15.

4-5-2. Overlapped stitching pattern

Overlapped stitching pattern can be programmed.



- A : Number of stitches of normal stitching setting : 1 to 15 stitches B : Number of stitches of reverse stitching setting : 1 to 15 stitches
- C : Number of stitches of normal stitching setting : 1 to 15 stitches
- D : Number of times of repetition : 1 to 15 times



[Setting procedure of the overlapped stitching]



 Press (a) to enable the overlapped stitching pattern.
 When the overlapped stitching pattern

is enabled, **M** is displayed in the display section **C**.

- 2) Press to put the sewing machine to the overlapped stitching setting state. In this state, one of the items displayed in the display section **B** flashes on and off.
- 3) Move the process that flashes on and off to the process (A, B, C or D) you want to set. Then, change the number of stitches and the number of times with



4-5-3. Polygonal-shape stitching pattern

A polygonal-shape stitching pattern can be set.

As many as nine different patterns can be set.

In addition, nine steps of stitching can be set in one pattern.

[How to set a polygonal-shape stitching pattern]

1) Press (5 to put the sewing machine to the constant-dimension stitching pattern setting state. In this

6

state, one of the processes A, B and C flashes on and off.

2) Move the process that flashes on and off to the process (A, B or C) you want to set with

Then, change the set value for that process with

- A : Selection of the pattern number
- B : Select what number of the step
- ${\boldsymbol{\mathsf{C}}}$: Set number of stitches of ${\boldsymbol{\mathsf{B}}}$



* Constant-dimension stitching (Straight stitching)

(Example) Select the pattern number to A.

- Set **B** to "1". Set the number stitches (1 999) of the first step to **C**.
- Set **B** to 2. Set **C** to 0 (zero).
- * Setting **C** to "0" means the end of constant-dimension stitching. In this case, the number of seams to be sewn using the constant-dimension stitching becomes "1".

After the completion of setting, press \leftarrow \bigcirc \bigcirc to determine the data.

* Polygonal-shape stitching (label sewing)

(Example) Select the pattern number to A.

Set B to "1". Set the number of stitches (1 - 999) in the first step to C.

Similarly, set **B** to 2, to 3 and to 4 in sequence to set the number of stitches (1 to 999) of the second, third and fourth seam line.

Set **B** to 5. Set **C** to 0 (zero).

- * Setting **C** to 0 (zero) means the end of polygonal-shape stitching. In this case, the number of seams to be sewn using the polygonal-shape stitching becomes "4".
- * In the initial setting, a polygonal-shape stitching pattern consisting of four steps (each steps consist of 12 stitches) has been factory set.



Display section C



The current number of steps is displayed on the left side and the set number of steps is displayed on the right side of the

display section **D** during sewing.

After the completion of setting, press

When the polygonal-shape stitching is

displayed in the display section **D**.

is displayed in the display

(B) to determine the data.

enabled,

4-6. Function setting

The set value of the function setting can be changed.



(The figure shows the function setting No. P08, that is used for setting the number stitches to be sewn using the soft-start function.)

- 3) Press to flash setting No. B on and off. In this state, change the set value by pressing +
 6.
 4) Press 3 to determine the set value.
- 5) Press M (2) to return the sewing machine to the normal sewing state.

In the case of changing the set value for other function setting number, repeat the steps of procedure 2), 3) and 4). Then, finally carry out step of procedure 5).

6) The function setting items are classified into two different levels; user level and service level. In the case of displaying the function setting items that are classified to the service level, turn the power

ON while keeping M Pheld pressed.

4-7. Setting the function keys (F1 and F2)

The functions you use frequently can be registered to these two function keys.

The set value of the function setting number that is registered can be directly changed by pressing [F1] 9

and F 2🛈 .



1) The function setting screen is displayed by keeping **F1 9** switch or **F2 1**

switch held pressed for three seconds in the normal sewing state.

A indicates the function setting number.B indicates the set value for that function setting number.

6.

- 2) The display section **A** shows the function switch F1 or F2 you have pressed. The display section **B** shows the currently-registered function setting number that is flashing on and off.
- 3) Select the function setting number you want to register by pressing (+)
- 4) Press 3 to determine the function setting number to be registered. Then, the sewing machine returns to the normal setting state.
- * If you want to registered the function setting that belongs to the service level, the power should be turned
 ON, in prior, while keeping *M P* held pressed. Then, return to the sewing screen by pressing *M P*.
 On the sewing screen, carry out the aforementioned steps of procedure 1) to 4).
4-8. Production support function

The production support function provides two different functions to allow the operator to know the production status; one is "to know productivity based on the daily operation rate of the sewing machine" and the other is "to know the progress of sewing work based on the number of times of thread trimming".

4-8-1. How to set the production support parameters



1) Press

state to display the production support screen.



5) Press **3** to determine the set value. Press **M 2** to return the screen to the previous screen.

4-8-2. List of production support parameters



Display Display section A section B

< Function setting screen >

section C section D Β Μ 口 ◀ Ð 35% :nn <u>Ľ</u>•) む 1++---->8 ALB1 P c А В 0[C. F2

Display

Display

Display section E

< Production support screen >

No.	Item		Setting range	Initial value
	Target number of	The target number of pieces to be produced within the work		
U01	pieces to be pro-	hours set with parameters U03 and U04 is set with this	1 to 1999	1000
	duced per day	parameter. (Display section B)		
	Number of times	The number of times of thread trimming to be carried out		
U02	of thread trimming	until the counter counts one is set with this parameter.	1 to 99	1
	for one count of	(Display section B)		
	product			
U03	Work hours (from	The starting time and the finishing time of sewing work is		
to	the starting time to	set with this parameter.	0:00 to 23:59	8:00 to
U04	the finishing time)	* The operation rate is calculated using the work hours		17:00
		excluding the time of work breaks.		
U05	VVork break 1 (from	I he starting time and the finishing time of a work break is		0:00 to
to	the starting time to	set with this parameter. In the case no work break is provid-		0:00
U06	the finishing time)	ed, this parameters should be "0000".		
U07	Work break 2 (from			0.00 to
to	the starting time to	* For U05 - U06, U07 - U08 and U09 - U10, enter the time	0:00 to 23:59	0.00 10
U08	the finishing time)	In the order from the earliest to latest.		0.00
U09	Work break 3 (from	[*] In the case the work break is not provided within the work		0.00 to
to	the starting time to	hours (U03 - U04), "non" will be displayed. Only the data		0.00 10
U10	the finishing time)	for which "non" is not displayed are effective.		0.00
	Type of display of	The type of display for the target number of pieces to be		
	the target number	produced (display section D) is changed over with this pa-		
	of pieces to be	rameter.		
	produced	1: The target number of pieces at the current time is dis-		
		played by calculating it at all times.		
		* Display section E : The actual number of pieces pro-		
U11		duced at the current time / The target number of pieces	0 - 1	0
		to be produced at the current time × 100 (%)		
		0: The target number of pieces to be produced for the day		
		is displayed.		
		* Display section E : The actual number of pieces pro-		
		duced for the day / The target number of pieces to be		
		produced for the day × 100 (%)		
	Changeover of the	The display of the operation rate (display section E) is		
U12	display of operation	changed over between ON / OFF.	0 - 1	1
	rate between ON /	1: Operation rate is displayed		
	OFF	0: Operation rate is not displayed		

* In the case the daily production quantity exceeds 1999, set the production support parameter:U02 to "10". Then, the "number of pieces counter" adds one every time the sewing machine has carried out thread trimming by 10 times.

4-8-3. How to display the operation rate of the sewing machine

No.	Item		Setting range	Initial value
	Changeover of the	The display of the operation rate (display section E) is		
1112	display of operation	changed over between ON / OFF.	0 1	1
012	rate between ON /	1: Operation rate is displayed	0-1	I
	OFF	0: Operation rate is not displayed		

1) Setting the production support parameters

When this parameter is set to "1", the operation rate of the sewing machine is displayed in the normal sewing state and on the production support screen. (Display section E)



< Sewing-machine operation state display state >



< Target achievement rate display screen >

Operation rate calculating method:

Operation rate	Time during which the s (U03) of w (exc	ewing machine runs from the starting time ork hours to the current time	
of the sewing ₌ machine	Work hours from the wo (exclu	rk starting time (U03) to the current time uding the work break)	× 100
2) When you keep	held pressed for three	seconds, the display on the display section E	is
changed over betwee	en the "operation rate of sewir	ig machine" and the "target achievement rate	".
	Display section E :	Display section E :	

Display of the sewing-machine operation rate

Display section **E**: Display of the target achievement rate







4-8-4. How to display the number of pieces produced



1) Press **1** in the normal sewing

state. Then, the "number of pieces produced" display screen displayed.

< Number of pieces produced display screen >

2) The number of pieces produced for the data is displayed on the display section C. Every time the sewing machine performs sewing and thread trimming, "1" is added to the current value displayed in the display section C.

The number of pieces produced for the day displayed in the display section C can be increased / de-

creased by pressing + - 6.

- * The number of pieces produced and the target number of pieces are reset to 0 (zero) two hours before the starting time of work hours (U03).
- 3) The item displayed in the display section **D** can be changed over by setting the production support parameter.

No.	Item		Setting range	Initial value
	Type of display of	The type of display for the target number of pieces to be		
	the target number	produced (display section D) is changed over with this pa-		
	of pieces to be	rameter.		
	produced	1: The target number of pieces at the current time is dis-		
		played by calculating it at all times.		
		* Display section E: The actual number of pieces pro-		
U11		duced at the current time / The target number of pieces	0 - 1	0
		to be produced at the current time × 100 (%)		
		0: The target number of pieces to be produced for the day		
		is displayed.		
		* Display section E : The actual number of pieces pro-		
		duced for the day / The target number of pieces to be		
		produced for the day × 100 (%)		

* Changeover of the aforementioned type of display will also change the method to calculate the percentage of the number of pieces produced that is displayed in the display section **E**.

4-9. Function setting list

* * * *

No.	Item	Description	Level	Setting range	Default
P01	Maximum sewing speed	The maximum sewing speed reached by fully depressing the pedal is set with this function setting item. The maximum sewing speed can be changed within the sewing speed range specified for [P68 Maximum sewing speed]. * The maximum sewing speed can also be changed using the + - switch on the operation panel.	U	100-[P68] (sti/min)	4000
P02	Tilt of the pedal	Change in the sewing speed with respect to the depressing depth of the pedal is set with this function setting item. The sewing speed is increased abruptly when this parameter is set to a large value, or increased slowly when this parameter is set to a small value.	S	10-100(%)	80
P04	Reverse feed stitching speed at the beginning of sewing	The sewing speed to be used during the reverse feed stitching at the beginning of sewing is set with this function setting item.	U	100-3000 (sti/min)	1900
P05	Reverse feed stitching speed at the end of sewing	The sewing speed to be used during the reverse feed stitching at the end of sewing is set with this function setting item.	U	100-3000 (sti/min)	1900
P06	Overlapped stitching speed	The sewing speed to be used during the overlapped stitching is set with this function setting item. * This speed can also be changed using the relevant switch on the operation panel.	U	100-3000 (sti/min)	1900
P07	Sewing speed for soft start	The sewing speed for soft start at the beginning of sewing is set with this function setting item.	U	100-1500 (sti/min)	800
P08	Soft start function	The number of stitches to be sewn with the soft-start function at the beginning of sewing is set with this function setting item. 0: The soft-start function is not selected 1 - 99: The number of stitches to be sewn with the soft-start function	U	0-99 (Stitches)	1
P09	Sewing speed for the polyg- onal-shape stitching	Sewing speed for the polygona-shape stitching is set with this function setting item. * The sewing speed can also be changed using the + - switch on the operation panel.	U	200-[P68] (sti/min)	4000
P10	Setting of the reverse feed stitching at the end of end of polygonal-shape stitching	 Whether the reverse feed stitching is automatically carried out at the end of polygonal-shape stitching is set with this function setting item. ON: Reverse feed stitching is automatically performed at the end of sewing OFF: Sewing machine stops sewing before starting reverse feed stitching at the end of sewing. It performs reverse feed stitching when the front part of pedal is depressed. 	U	ON/OFF	ON
P12	Changeover of the reverse feed stitching at the start of sewing between Auto / Manual	 The sewing speed for the reverse feed stitching at the beginning of sewing is set with this function setting item. 0: The reverse feed stitching is performed by manually operating the pedal. 1: The reverse feed stitching is performed at the sewing speed set with [P04 Reverse feed stitching speed at the beginning of sewing]. 	U	0-1	1
P13	Function of stop immedi- ately after the reverse feed stitching at the beginning of sewing	Operation to be carried out at the end of the reverse feed stitching at the beginning of sewing is selected with this function setting item. CON: The sewing machine does not stop temporarily after com- pletion of the reverse feed stitching at the beginning of sewing STP: The sewing machine stops temporarily after completion of the reverse feed stitching at the beginning of sewing	U	CON/STP	CON
P15	Changeover of the needle up/down correction function	The function of needle up/down correction switch is changed over with this function setting item. 0: Needle up/down correction 1: One stitch correction 2: Continuous half stitch 3: Continuous one stitch 4: Count number of pieces sewn	U	0-4	0
P16	Speed limit to reverse-feed stitching	The speed limit applied when reverse feed stitching is carried out is set with this function. 100 - 4000: Sewing is performed at the set sewing speed	S	100-4000 (sti/min)	2000
P18	Correction of solenoid-on timing for the reverse feed stitching at the beginning of sewing	Stitch alignment can be carried out by changing the timing of actuating the reverse-feed stitching solenoid at the time of reverse feed stitching at the beginning of sewing. When the set value for this parameter is increased, the length of stitch at the end of A process is increased and the length of stitch at the beginning of B process is decreased.	U	0-200	123
P19	Correction of solenoid-off timing for the reverse feed stitching at the beginning of sewing	Stitch alignment can be carried out by changing the timing of releasing the reverse-feed stitching solenoid at the time of reverse feed stitching at the beginning of sewing. When the set value for this parameter is increased, the length of stitch at the beginning of B process is increased.	U	0-200	130
P21	Low-speed section by pedal	Acceleration position by pedal operation is set.	S	30-1000	520
P22	Sewing starting position by pedal	Sewing starting position by pedal operation is set.	S	30-1000	420
P23	Position to lift the presser foot by pedal	I he position to lift the presser foot by operating the pedal is set with this function setting item.	S	30-1000	270
P24	Position to perform thread trimming by pedal	The position to perform thread trimming by operating the pedal is set with this function setting item.	S	30-500	130

* Do not change the set values with asterisk (*) mark as they are functions for maintenance. If the standard set value set at the time of delivery is changed, it is in danger of causing the machine to be broken or the performance to be deteriorated. If it is necessary to change the set value, please purchase the Engineer's Manual and follow the instructions.

	No.	Item	Description	Level	Setting range	Default	
	P25	Correction of solenoid-on timing for the reverse feed stitching at the end of sew- ing	Stitch alignment can be carried out by changing the timing of actuating the reverse-feed stitching solenoid at the time of reverse feed stitching at the end of sewing. When the set value for this parameter is increased, the length of stitch at the beginning of C process is increased.	U	0-200	123	
	P26	Correction of solenoid-off timing for the reverse feed stitching at the end of sew- ing	Stitch alignment can be carried out by changing the timing of releasing the reverse-feed stitching solenoid at the time of reverse feed stitching at the end of sewing. When the set value for this parameter is increased, the length of stitch at the end of C process is decreased and the length of stitch at the beginning of D process is increased.	U	0-200	130	
*	P29	Brake force of the main shaft at the time of stopping the sewing machine on the way	ke force of the main ft at the time of stopping sewing machine on the y				
	P32	Correction of solenoid-on timing for the overlapped stitching	Stitch alignment can be carried out by changing the timing of actu- ating the reverse feed stitching solenoid at the time of overlapped stitching. When the set value for this parameter is increased, the length of stitch at the end of A (C) process is increased and the length of stitch at the beginning of B process is decreased.	U	0-200	SMS, BMS : 105 SSH, SSJ, BSH, BSJ : 92	
-	P33	Correction of solenoid-off timing for the overlapped stitching	Stitch alignment can be carried out by changing the timing of releasing the reverse-feed stitching solenoid at the time of overlapped stitching. When the set value for this parameter is increased, the length of stitch at the end of B process is increased and the length of stitch at the beginning of C process is de- creased.	U	0-200	SMS, BMS : 105 SSH, SSJ, BSH, BSJ : 100	
-	P37	First current value (ON duty) of thread clamp	The first current value (ON duty) for the thread clamp is set with this function setting item. * Refer to the "explanation of the thread clamp solenoid opera- tion" in the Engineer's Manual for details.	U	0-100	SMS, BMS ∶40 SSH, SSJ, BSH, BSJ ∶50	
*	P44	Brake force of the main shaft at the time of stopping the sewing machine after thread trimming	Main shaft brake force is adjusted with this function setting item for preventing the sewing machine from overrunning before stopping.	S	1-45	16	
	P45	ON duty of the reverse feed stitching solenoid	Output duty of the reverse feed stitching solenoid when the sole- noid is in the ON state is set with this function setting item.	S	1-50	30	
	P46	Setting of the function of reverse revolution to lift the needle	This function rotates the main shaft in the reverse direction of sewing to bring the needle bar to the highest position. ON: Reverse-revolution operation is in the ON state OFF: Reverse-revolution operation is in the OFF state	U	ON/OFF	OFF	
	P47	Reverse revolution angle to lift the needle	The operating angle of the reverse-revolution to lift the needle is adjusted with this function setting item.	S	50-200 (1/4°)	160	
	P48	Sewing speed at a low speed	The minimum sewing speed of the sewing machine by operating the pedal is set with this function setting item.	U	100-500 (sti/min)	200	
	P49	Sewing speed for thread trimming	Sewing speed to be used when performing thread trimming is set with this function setting item.	U	100-500 (sti/min)	210	
*	P50	2nd thread trimming speed	Sewing speed is decreased in the latter half of thread trimming operation. That sewing speed is set with this function setting item. * In the case this speed is set to "0" (zero), the sewing machine runs at the 1st thread trimming speed.	S	0-500 (sti/min)	180	
*	P51	Timing to change over to the 2nd thread trimming speed	The timing to change over the sewing speed to the 2nd thread trimming speed is set with this function setting item.	S	270-370(°)	320	
*	P52	Time to wait for sewing after lowering the presser foot	The time to wait for starting sewing after the presser foot is low- ered is set with this function setting item.	S	10-500(ms)	120	
	P53	Setting of operation of the presser foot when the back part of pedal is depressed	 The operation of the presser foot when the back part of pedal is depressed is set with this function setting item. 0: Presser foot does not operate even when the back part of pedal is depressed. 1: Presser foot goes up to the 1st presser-foot lifting position when the back part of pedal is depressed by half of the depth. It goes up to the 2nd presser-foot lifting position when the back part of pedal is further depressed. 2: Presser foot does not operate even when the back part of pedal is further depressed. 2: Presser foot does not operate even when the back part of pedal is depressed. It goes up to the 2nd presser-foot lifting position when the back part of pedal is depressed. 	U	0-2	1	
	P68	Maximum sewing speed	The maximum sewing speed is set with this function setting item. (The MAX value differs with the type of machine head. SMS, BMS : 5000 SSH, SSJ, BSH, BSJ : 4500)	S	100-MAX (sti/min)	4000	

	No.	Item	Description	Level	Setting range	Default
	P70	Machine head selection (Initialization of data)	Machine head type is selected with this function setting item. 2 : DDL-8000ASMS 3 : DDL-8000ASSH 4 : DDL-8000ABSSH 5 : DDL-8000ABSH 6 : DDL-8000ASSH	S	2-13	2
			 0 DL-8000ABSJ 7 DDL-8000ABSJ 8 DDL-8000ASSH(CE) 9 DDL-8000ASSH(CE) 10 DDL-8000ABSH(CE) 11 DDL-8000ABSH(CE) 12 DDL-8000ASSJ(CE) 13 DDL-8000ABSJ(CE) * When you select the corresponding machine head and press the enter switch, all existing data are initialized to the initial 			
	P72	Adjustment mode for the needle-up stop angle	values for the machine head you have selected. The current main shaft angle is always displayed in the data display section. When you turn the pulley to bring the main shaft to the needle-up stop position and press the enter switch, the needle-up angle and needle-down angle of the main shaft are submittedly act	S	0-1439 (1/4°)	
	P73	Adjustment mode for the needle-down stop angle	The current main shaft angle is always displayed in the data display section. When you turn the pulley to bring the main shaft to the needle-down stop position and press the enter switch, the only the needle-down angle of the main shaft is automatically set.	S	0-1439 (1/4°)	
*	P74	Back-tack solenoid OFF parameter	Back-tack solenoid OFF parameter * Refer to the explanation of operation of the BT solenoid in the Engineer's Manual for details.	S	0-990	3
*	P75	Back-tack solenoid OFF parameter	Back-tack solenoid OFF parameter * Refer to the explanation of operation of the BT solenoid in the Engineer's Manual for details.	S	0-990	10
*	P76	Back-tack solenoid ON parameter	Back-tack solenoid ON parameter * Refer to the explanation of operation of the BT solenoid in the Engineer's Manual for details.	S	10-990	200
	P77	Back-tack solenoid ON timing at the end of sewing	BT solenoid ON timing at the end of sewing is set with this tion setting item. Fins parameter applies only to the free stitching.		50-500	150
	P78	Thread clamp ON angle	N-angle of the thread clamp is set with this function setting item.		0-359 (°)	190
	P79	Thread clamp OFF angle	FF-angle of the thread clamp is set with this function setting		0-359 (°)	300
	P93	Reaction time when the back part of pedal is de- pressed	The reaction time required to start lifting of the presser foot after the back part of the pedal is depressed is set with this function setting item.	S	10-990(ms)	100
	P109	Wiper operation timing	The waiting time required until the wiper starts operation after the sewing machine stops with its needle up.	S	5-990	5
	P110	Waiting time until the sewing machine starts next sewing	The waiting time required until the sewing machine starts next sewing after the thread trimming solenoid is turned OFF.	S	0-500	250
	P113	Bobbin counter	The largest value that the bobbin counter can count is set with this function setting item. 0: Bobbin counter OFF 1 to 9999: Count-up value	U	0-9999 (10 stitches)	0
*	P114	Reverse feed solenoid oper- ation stopping angle (start)	The angle at which the solenoid output is prohibited (start) after pressing the reverse-feed stitching on the way switch.	S	0-359 (°)	262
*	P115	Reverse feed solenoid oper- ation stopping angle (end)	The angle at which the solenoid output is prohibited (end) after pressing the reverse-feed stitching on the way switch.	S	0-359 (°)	112
	P116	Function of prohibiting the correction operation after turning the handwheel by hand	The correction stitching function when turning the pulley by hand upon completion of the polygonal-shape stitching is set with this function setting item. 0: Correction sewing function is enabled 1: Correction sewing function is disabled	U	0-1	0
	P117	Thread trimming operation after turning the handwheel by hand	 The thread trimming operation after turning the pulley by hand to move the sewing machine from the upper and lower positions is set with this function setting item. 0: Thread trimming operation is carried out after turning the pulley by hand 1: Thread trimming operation is not carried out after turning the pulley by hand. 	U	0-1	1
	P118	Setting of the needle up/ down switch operation after thread trimming	The operation of the needle up/down switch after thread trimming is set with this function setting item. 0: Needle up/down operation is carried out 1: One-stitch operation is carried out	U	0-1	0
	P128	Number of condensation stitches at the beginning of sewing	The number of condensation stitches at the beginning of sewing is set with this function setting item.	U	0-5(stitches)	0
	P129	Number of condensation stitches at the end of sewing	The number of condensation stitches at the end of sewing is set with this function setting item.	U	0-5(stitches)	SMS, SSH, SSJ : 0 BMS, BSH, BSJ : 2
	P130	Condensation stitching speed at the end of sewing	The sewing speed for condensation stitching at the end of sewing is set with this function setting item.	U	100-1900 (sti/min)	310

	No.	Item	Description	Level	Setting range	Default
	P131	Condensation stitching speed at the beginning of sewing	The sewing speed for condensation stitching at the beginning of sewing is set with this function setting item.	U	0-1900 (sti/min)	310
*	P132	Condensation solenoid operation starting duty	ON duty of the condensation solenoid when it starts operation is set with this function setting item.	S	1-80(%)	55
*	P133	Condensation solenoid duty while it is in operation	The duty of the condensation solenoid while it is in operation is set with this function setting item.	S	1-80(%)	10
*	P134	Condensation solenoid operation starting time	The operation starting time for the condensation solenoid is set with this function setting item.	S	10-150(ms)	115
*	P135	Condensation solenoid operation starting angle	The operation starting angle for the condensation solenoid is set with this function setting item.	S	10-359(°)	75
	P136	Selection of the presser foot operation when the power is turned ON	 Operation of the presser foot when the power is turned ON is selected with this function setting item. 0: The presser foot does not operate (It operates when the back part of the pedal is depressed.) 1: The presser foot goes up after automatically retrieving the origin 2: The presser foot comes down after automatically retrieving the origin 	U	0-2	0
	P138	Function of pedal curve selection	Pedal curve is selected. (Improving pedal inching operation) Sewing speed Pedal stroke Pedal stroke	U	0-2	0
	P139	Function of reverse feed stitching on the way	The function activated when the reverse feed stitching on the way switch is pressed is selected with this function setting item. 0: Normal back-tack function 1: Function of reverse feed stitching on the way is enabled	U	0-1	0
	P140	Number of stitches of reverse feed stitching on the way	The number of stitches of reverse feed stitching on the way is set with this function setting item.	U	1-19	4
	P141	Condition to be satisfied to enable the reverse feed stitching on the way while the sewing machine is at rest	The condition to be satisfied to enable the reverse feed stitching switch while the sewing machine is at rest is set with this function setting item. 0: Disabled while the sewing machine is at rest 1: Enabled while the sewing machine is at rest	U	0-1	0
	P142	Thread trimming function after performing reverse feed stitching on the way	 Automatic thread trimming operation after performing the reverse feed stitching on the way is set with this function setting item. 0: Automatic thread trimming is not performed after the completion of reverse feed stitching on the way 1: Automatic thread trimming is performed after the completion of reverse feed stitching on the way 	U	0-1	0
	P143	Sewing speed for reverse feed stitching on the way	Sewing speed during the reverse feed stitching on the way is set with this function setting item.	U	200-3000 (sti/min)	1900
	P145	ON/OFF of the data output to JANET	Output of data to JANET is set with this function setting item.	S	0-9999	0
	P146	Waiting time to start opera- tion of thread pulling cylinder	Waiting time until the start of operation of the (bird's nest prevent- ing) thread pulling cylinder is set with this function setting item.	U	0-990	200
	P147	Thread pulling cylinder ON time	The time to turn ON the (bird's nest preventing) thread pulling cylinder is set with this function setting item.	U	0-990	300
	P148	Time until sewing starts after turning OFF the thread pulling cylinder	The waiting time required until the sewing machine starts next sewing after turning OFF the (bird's nest preventing) thread pull- ing cylinder is set with this function setting item.	S	0-990	30
*	P149	Back-tack solenoid ON parameter	Back-tack solenoid ON parameter * Refer to the explanation of operation of the BT solenoid in the Engineer's Manual for details.	S	50-100	50
*	P150	Back-tack solenoid OFF parameter	Back-tack solenoid OFF parameter * Refer to the explanation of operation of the BT solenoid in the Engineer's Manual for details.	S	2-500	2
	P151	ON/OFF of the bird's nest preventing operation	(Bird's nest preventing) ON/OFF of the bird's nest preventing operation is set with this function setting item.	U	0-1	0
	P152	Waiting time until the wiper cylinder starts operation	(Bird's nest preventing)The waiting time required until the wiper cylinder starts operation is set with this function setting item.	S	0-990(ms)	110
	P153	Wiper cylinder ON time	(Bird's nest preventing) ON time of the wiper cylinder is set with this function setting item.	U	0-990(ms)	100
	P154	Time until sewing starts after turning OFF the wiper cylinder	(Bird's nest preventing) The waiting time required until the sewing machine starts the next sewing after turning OFF the wiper cylinder is set with this function setting item.	S	0-990(ms)	30
	P159	Suction ON/OFF	(Bird's nest preventing) ON/OFF of the suction device is set with this function setting item.	S	0-1	1
	P160	Suction time	(Bird's nest preventing) Suction time is set with this function set- ting item.	S	5-5000(ms)	650

	No.	Item	Description	Level	Setting range	Default
	P161	The presser foot lifting operation ON/OFF when the thread clamp works	The presser foot lifting operation ON/OFF when the thread clamp works is set with this function setting item. 0: OFF 1: ON	S	0-1	0
	P162	The angle at which the presser foot starts going up when the thread clamp works.	The angle at which the presser foot starts going up when the thread clamp work is set with this function setting item.		0-359	100
	P163	Ending angle of soft start for the thread clamp	The ending angle of the soft start for the thread clamp is set with this function setting item. * Refer to the explanation of operation of the thread clamp solenoid in the Engineer's Manual for details.	U	0-359	340
	P164	Setting of the lifting amount of the presser foot when the thread clamp works	lifting amount of the presser foot when the thread clamp ks is set with this function setting item.		0-500	50
	P165	Time during which the presser foot goes up when clamping the thread	time during which the presser foot goes up when clamping thread is set with this function setting item.		1-990	20
	P166	1st electric current time for thread clamp	Period of time during which the 1st electric current is fed applied to the thread clamp is set with this function setting item. * Refer to the explanation of operation of the thread clamp sole- noid in the Engineer's Manual for details.	U	1-990	7
	P167	2nd electric current value for thread clamp (ON duty)	"ON duty" is set in order to determine the 2nd electric current value of the thread clamp * Refer to the explanation of operation of the thread clamp solenoid in the Engineer's Manual for details.	U	0-100	69
*	P168	Back-tack solenoid ON parameter	Back-tack solenoid ON parameter * Refer to the explanation of operation of the back-tack solenoid in the Engineer's Manual for details.	S	1-200	25
*	P169	Back-tack solenoid ON parameter	* Refer to the explanation of operation of the back-tack solenoid S 1-200 in the Engineer's Manual for details.		1-200	40
*	P170	Back-tack solenoid OFF parameter	ack-tack solenoid OFF parameter S ack-tack solenoid OFF parameter S ack-tack solenoid S 1-200			10

No.	Item	Description	Level	Setting range	Default
J04	Selection of language for the audio function	The language for the audio function is selected with this function setting item. 1: Chinese 2: English 3. Other language 1 4. Other language 2	U	1-4	2
J05	Audio ON/OFF function	ON/OFF of the audio guidance is set with this function setting item. 0: All audio guidance is set to OFF 1: Only the panel operation guidance is enabled 2: All audio guidance is set to ON. * When this item is set to "1", the audio guidance for " ③ At the time of operating the sewing machine; Guidance on the production support" ("4-3. Audio guidance" p. 26) is placed in OFF.	U	0-2	2
J10	Setting of brightness of the back- light	Brightness of the backlight is set with this function setting item.	U	1-3	3
J11	Energy saving mode	Time to turn OFF the backlight of LCD when the panel is not operated is set with this function setting item. 0: The backlight is not turned OFF 1 - 20: Time to be elapsed before turning OFF the backlight	U	0-20(min)	0
J14	Password	If the password is set to a number other than "0000", the password entry screen will be displayed before displaying the function setting screen by pressing the M switch.	S	0000-9999	0

No.	Item	Description	Level	Setting range	Default
N01	Main software version	Main software version is displayed with this function setting item.	U		
N02	Panel software version	Panel software version is displayed with this function setting item.	U		
N14	ST motor software version	Version of the stepping motor control software is dis- played with this function setting item.	U		
N15	Number of stitches to stop the grease counter	The number of stitches sewn is monitored in order to notify the operator of the timing of replenishing grease. Unit: (× 100,000 stitches) When the grease counter value reaches 800,000,000 stitches, the grease shortage warning "E220" occurs. When the grease counter value reaches 900,000,000 stitches, the grease shortage error "E221" occurs. * The grease counter is cleared to "0" (zero).	S		
N20	Audio guidance version	Version of the audio guidance is displayed with this function setting item.	U		

4-10. Detailed explanation of selection of functions

1 Selection of the soft-start function (Function setting No. P08)

The needle thread may fail to interlace with the bobbin thread at the start of sewing when the stitching pitch (stitch length) is small or a thick needle is used. To solve such problem, this function (called "soft-start") is used to limit the sewing speed, thereby assuring successful formation of the starting stitches.

P 0 8 0 : The function is not selected.

1 to 9 : The number of stitches to be sewn under the soft-start mode.

The sewing speed limited by the soft-start function can be changed. (Function setting No. P07)

P 0 7 Data setting range : 100 to 1500 [sti/min] <10 sti/min>

(2) Changeover of the needle up/down switch function (Function setting No. P15)

The function of the needle up/down switch is changed over with this function setting number.

- P 1 5 0 : Needle up/down correction
 - 1 : One-stitch correction
 - 2 : Continuous half stitch
 - 3 : Continuous one stitch
 - 4: Count number of pieces sewn

③ Function of reverse feed stitching on the way (Function setting Nos. P139 to P143)

Functions of the limit of number of stitches and thread trimming command can be added to the touch back switch on the sewing machine head.

Function setting No.139 Function of reverse feed stitching on the way is selected.

- 1 3 9 0: OFF Normal back-tack function
 - 1: ON Function of reverse feed stitching on the way
- Function setting No.140 Number of stitches performing reverse feed stitching is set.
 - **1 4 0** Setting range : 0 to 19 stitches

Function setting No.141 Effective condition of reverse feed stitching on the way

- **1 4 1** 0 : OFF Inoperative when the sewing machine stops. (The reverse feed stitching on the way functions only while the sewing machine is in operation.)
 - 1 : ON Operative when the sewing machine stops. (The reverse feed stitching on the way functions while both the sewing machine is in operation and is at rest.)

(Caution) Either condition is operative when the sewing machine is running.

Function setting No.142 Thread trimming is performed when reverse feed stitching on the way is completed.

- **1 4 2** 0: OFF Without thread trimming
 - 1 : ON Thread trimming is executed.

Function setting No.143 Set the sewing speed when the reverse feed stitching at midpoint of sewing is performed.

1 4 3 Setting range : 200 to 3000 [sti/min] <10 sti/min>

Application	Function setting			Output function	
Application	No. P139	No. P141	No . P142		
0	0	0 or 1	0 or 1	It works as normal touch-back switch.	
0	1	0	0	When operating touch-back switch at the time of depressing front part of the pedal, reverse feed stitching as many as the number of stitches specified by the function setting No. P140 can be performed.	
0	1	1	0	When operating touch-back switch at the time of either stop of the sewing machine or depressing front part of the pedal, reverse feed stitching as many as the number of stitches specified by the function setting No. P140 can be performed.	
0	1	0	1	When operating touch-back switch at the time of depressing front part of the pedal, automatic thread trimming is performed after reverse feed stitching as many as the number of stitches specified by the function setting No. P140 has been performed.	
6	1	1	1	When operating touch-back switch at the time of either stop of the sewing machine or depressing front part of the pedal, automatic thread trimming is performed after reverse feed stitching as many as the number of stitches specified by the function setting No. P140 has been performed.	

Actions under each setting state

- Used as the normal reverse feed stitching touch-back switch.
- Used for reinforcing seam (press sewing) of the pleats. (It works only while the sewing machine is in operation)
- 3 Used for reinforcing seam (press sewing) of the pleats. (It works either when the sewing machine stops or when the sewing machine is running.)
- Used as starting switch for reverse feed stitching at the sewing end. (Used as the substitute for thread trimming by depressing back part of the pedal. It works only while the sewing machine is in operation. This is especially effective when the sewing machine used as the sewing machine for standing work.)
- Oused as starting switch for reverse feed stitching at the sewing end. (Used as the substitute for thread trimming by depressing back part of the pedal. It works either when the sewing machine stops or when the sewing machine is running. It is especially effective when the sewing machine is used as the stand-ing-work machine.)

(4) How to balance stitches for [Start Back-Tacking] (Function setting Nos. P18 and P19)

Example) Step 1: Setting stitch number for Start Back-Tacking A and B = 3

Step 2: Sewing the pattern in normal speed.

Step 3: If unbalanced situation is appeared please correct it as below:

Suggestion: Select the balance stitches for Section A before selecting for B.



(5) How to balance stitches for [End Back-Tacking] (Function setting Nos. P25, P26 and P77)

Example) Step 1: Setting stitch number for End Back-Tacking C and D = 3

Step 2: Sewing the pattern in normal speed.

Step 3: If unbalanced situation is appeared please correct it as below:

Suggestion: Select the balance stitches for Section C before selecting for D.



Start point

6 How to balance stitches for [Bar Tacking] (Function setting Nos. P32 and P33)

Example) Step 1: Setting stitch number for Bar-Tacking A = B = 4 and turns of Bar-Tacking D = 4 Step 2: Sewing the pattern in normal speed.

Step 3: If unbalanced situation is appeared please correct it as below:



⑦ Function of pedal curve selection (Function setting No. P138)

This function can perform the selection of the curve of sewing speed of the sewing machine against the depressing amount of the pedal.

Change to this function when you feel that inching operation is hard or that pedal response is slow.

- **1 3 8** 0 : Sewing speed in terms of the depressing amount of the pedal increases linearly.
 - 1 : Reaction to intermediate speed in terms of the depressing amount of the pedal is delayed.
 - 2 : Reaction to intermediate speed in terms of the depressing amount of the pedal is advanced.



(8) Selection of the presser foot operation when the power is turned ON (Function setting No. P136)

The needle bar goes up to its upper position and the presser motor carries out origin retrieval operation immediately after the power is turned ON.

- **1 3 6** 0: Neither the needle bar nor the presser motor (Operates when the back part of pedal is depressed)
 - 1: Needle bar goes up to its upper position and the presser motor automatically goes up after automatic origin retrieval.
 - 2: Needle bar automatically goes up to its upper position and the presser motor comes down after automatic origin retrieval.

(9) Setting of the operation of needle up/down switch after thread trimming (Function setting No. P118)

One stitch operation can be performed only when the needle up / down compensating switch is pressed at the time of upper stop immediately after turning ON the power switch or upper stop immediately after thread trimming.

- **1 1 8** 0 : Normal (Only needle up / down compensating stitching operation)
 - 1 : One stitch compensating stitching operation (upper stop / upper stop) is performed only when aforementioned changeover is made.

1 Setting of max. sewing speed (Function setting No. P68)

This function can set the max. sewing speed you desire to use.

Upper limit of the set value varies in accordance with the sewing machine head to be connected.

P 6 8 Setting range : 100 to MAX. sti/min <10 / sti/min>
 DDL8000ASMS, BMS : 5000 sti/min
 DDL8000ASSH, SSJ, BSH, BSJ : 4000 sti/min

① Number of condensation stitches at the end of sewing (Function setting No. P129)

1 2 9 For the sewing machine head provided with the condensation stitching function, the number of stitches at the end of sewing has been factory-set to "two" at the time of shipment.

4-11. How to use the bobbin counter

2) Press

+

6.

In the case the number of stitches that can be counted on the bobbin counter (Function setting number P113) is set to "x10", the bobbin count complete screen is displayed when the bobbin counter reaches the set value to notify the operator that the bobbin has to be changed.



1) Call function setting No. P113 referring to "4-6. Function setting" p. 32.

When the bobbin counter reaches the "bobbin counter value x 10", the bobbin count complete screen is displayed.

to flash the set value **B** on and off. Then, set the bobbin counter value by pressing

(3) to determine the set value and return the sewing machine to the normal sewing state. 3) Press



4) The current value on the bobbin count-

er can be checked by keeping

7 B held pressed for three seconds in the normal sewing state.

The current value on the bobbin counter is displayed. Every time the sewing machine has sewn 10 stitches, "1" is added to the current value on the bobbin counter.

When you press **M b** switch is

pressed, the sewing machine returns to the normal sewing state.

5) Carry out sewing. When the bobbin counter value becomes "0" (zero), the count complete screen is displayed.



When you press 🥢 1, the current

value on the bobbin counter returns to the value set with "function setting No. P113 Bobbin counter" and the sewing machine returns to the normal sewing state.

4-12. Initialization of function setting data

The function setting data that are changed arbitrarily by the customer can be stored in memory. The current function setting data can be restored to the aforementioned data.



1) When you keep M 🕑 held pressed

for three seconds in the normal sewing state, the function setting screen is displayed. Refer to **"4-6. Function setting" p. 32**.

- 2) When you keep **1** B held

pressed for three seconds on the function setting screen, all function setting data are stored in memory and the "SAVE" screen is displayed for a brief second.

- When you keep held pressed
 for six seconds, the data initialization
 confirmation screen is displayed.
- 4) When you press 💶 🛽 , all of the

current function setting data are initialized to the function setting data to those stored in memory in the aforementioned steps of procedure 1) and 2), and returns the sewing machine to the normal sewing state.



4-13. Password lock

It is possible to lock the operation for setting the functions by keeping M @ held pressed, with the password.





4) If the password is set to a number other than "0000", the password entry screen will be displayed before displaying the function setting screen by pressing the M the held pressed for

three seconds.



- 6.
- 6) The function setting screen is displayed by pressing 6). On this screen, the functions can be set.

4-14. About the USB

WARNING :

The device to be connected to the USB port should have the rated current value or less as shown below.

If any device rated current value of which is higher than the rated current value, the main body of the sewing machine or the USB device connected can be damaged or malfunction. Rated current value of the USB port USB port on the electrical box side: Maximum rated current value of 1 A

USB port on the operation panel side: Maximum rated current value of 0.5 A

4-14-1. Insertion position of the USB thumb drive



The USB connectors are equipped on upper section

1 of the operation panel and electrical box **2**.

To use a USB thumb drive, remove connector cover

(3) and insert the USB thumb drive into the USB connector.

 * In the case a USB thumb drive is not used, the USB connector should be protected with connector cover ③ without exceptions.

If dust or the like enters the USB connector, a failure can be caused.

4-14-2. Upgrading of the program by means of a USB

It is possible to upgrade the program by means of a commercially-available USB thumb drive.

① Position of the USB connector

[USB thumb drive insertion position]

The USB connector is provided on top **1** of the operation panel.

To use a USB thumb drive, remove connector cover ② and insert the USB thumb drive into the USB connector.

* In the case a USB thumb drive is not used, the USB connector should be protected with connector cover ② without exceptions.
If dust or the like enters the USB connector, a failure can be caused.

2 Precautions to be taken when handling USB devices

- Do not insert/remove the USB thumb drive while the sewing machine is reading the program. It may cause data breakage or malfunction.
- When the storage space of a USB device is partitioned, only one partition is accessible.
- Never forcefully insert a USB thumb drive into the USB connector while carefully checking the orientation of the USB thumb drive. Forceful insertion of the USB thumb drive can cause failure.
- JUKI does not compensate for loss of data stored on the USB device caused by using it with this sewing machine.
- In principle, connect only one USB thumb drive to the operation panel. When two or more devices/media are connected/inserted, the machine will only recognize one of them. Refer to the USB specifications.
- Do not turn the power OFF while the data on the USB flash drive is being accessed.

③ USB specifications

- Conform to USB 1.1 standard
- Applicable devices *1 _____ USB memory
- Format supported _____ FAT 12, FAT 16, FAT 32
- Applicable medium size _____ 4.1MB ~ (2TB)
- Consumption current _____ The rated consumption current of the applicable USB devices is 500 mA at the maximum.
- *1: JUKI does not guarantee operation of all applicable devices. Some device may not operate due to a compatibility problem.

5. ADJUSTMENT OF THE MACHINE HEAD (APPLICATION)

5-1. Needle-to-hook relationship



WARNING :

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Adjust the timing between the needle and the hook as follows :

- 1) Adjusting the needle bar height. Turn the handwheel to bright the needle bar down to the lowest point of its stroke, and loosen setscrew 1.
- 2) Adjusting the needle bar height. Align marker line (For a DB needle : marker line (A), For a DA needle : marker line () on needle bar () with the bottom end of needle bar lower bushing 3, then tighten setscrew 1.
- 3) Position the needle and the hook **a**. Loosen the three hook setscrews, turn the handwheel in normal rotation and align marker line (For a DB needle : marker line **B**, For a DA needle : marker line ()) on ascending needle bar () with the bottom end of needle bar lower bushing 3.
- 4) In this state, align hook blade point **5** with the center of needle 4. Provide a clearance of 0.04 to 0.1 mm (reference value) between the needle and the hook, then securely tighten the three hook setscrews.



If the clearance between the blade point) of hook and the needle is smaller than the specified value, the blade point of hook will be damaged. If the clearance I is larger, stitch skipping will result.

5-2. Adjusting the needle thread presser device



aution

WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



[Feature]

The needle thread presser device is able to tuck the needle thread on the wrong side of material as in the case of the conventional wiper device.

- Operability around the needle entry point is improved.
- Applicability of various kinds of attachments designed for use around the needle entry point is improved.

[How to set the needle thread presser device]



Keep thread presser operation enable / disable switch ()) () held pressed to change over the ON/OFF of the thread presser. When the thread presser device is set to

ON, the thread presser icon is displayed on display section C.

In the case the memory switch "Reverse-rotation needle-up after thread trimming, P46" is used, the length of needle thread remaining after thread trimming becomes longer. So, in this case, the needle thread clamp device should be set to "OFF".



[Adjusting the remaining length of needle thread]

Adjust the length of needle thread remaining at the needle to 35 to 45 mm (for the S, H and J types) by turning thread tension No. 1 nut ①.

Turn thread tension No. 1 nut ① clockwise (in direction ④), to shorten the thread length remaining on the needle after thread trimming or counterclockwise (in direction ⑤), to lengthen the thread length.

So-called "bird's nest phenomenon" is reduced by shortening the length of needle thread remaining at the needle. In this case, however, the needle thread is likely to slip off the needle eyelet. To reduce slip-off of the needle thread, sewing speed at the beginning of sewing should be reduced.

[Response to problems occurring at the beginning of sewing]

- In the case needle thread breakage occurs when using a thin thread or fragile thread
- · In the case needle thread is not tucked on the wrong side of material
- · In the case needle thread breakage occurs when starting sewing from the material end (such as sewing the material with needle thread tucked on the undersurface of material)

If any of the aforementioned problems occurs, the presser foot pressure should be reduced to allow the needle thread pinched between the presser foot and the material to be released smoothly.

(The recommended presser foot pressure is 30 N (3 kg) or less.)

Adjust the presser foot pressure and the sewing speed appropriately to prevent insufficient feed efficiency due to jumping or other faults of the presser foot. After the adjustment, confirm the adjustment result by actually sewing the material.

Needle thread breakage can be reduced and the needle thread can be smoothly tucked in to the undersurface of material by lifting the presser foot by a minute amount at the beginning of sewing.

(Set the parameter P161 to 1, and adjust the parameters P162, P164 and P165.)



1. The amount of uplift of the presser foot above the throat plate varies according to the material thickness of the item to be sewn and the presser foot pressure. Be sure to check the actual condition before starting sewing.

I

2. If the adjustment is increased while the presser foot presser is high, the operating noise will become larger. Adjust the adjustment value and the presser foot pressure while visually checking the needle thread condition.

No.	Description	Setting range	Default
P161	ON / OFF of the presser lifting operation when clamping the thread is set with the	0-1	0
	function setting item.		
	0: OFF		
	1: ON		
P162	Degree of an angle at which the presser foot starts going up when clamping the	0-359	100
	thread		
	Degree of an angle at which the presser foot starts going up when clamping the		
	thread is set with function setting item.		
P164	Setting of the amount of lift of the presser foot when clamping the thread	0-500	50
	The amount of lift of the presser foot when clamping the thread is set with this		
	function setting item.		
P165	Time during which the presser foot goes up when clamping the thread	1-990	20
	The time during which the presser foot goes up when clamping the thread is set		
	with this function setting item.		

5-3. Adjusting the thread trimmer



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Turn thread trimming cam (3) in the direction of arrow until the outer periphery of thread trimming cam groove O comes in contact with roller O and stops. At this position, fix thread trimming cam setscrew 🕢



5-3-1. For checking of the thread trimming cam timing

The purpose of the adjustment of the thread trimming is to bring marker line (A) on electrical box cover (5) to the portion between the colorless marker dots **B** and **O** on handwheel **6**.

- 1) Tilt the sewing machine head.
- 2) Turn handwheel **6** by hand in the normal direction of rotation until the thread take-up lever goes up slightly below the upper dead point. Press cam follower 1 with fingers to the left (in direction of arrow (B) to fit roller (2) to in groove (C) in thread trimming cam 3.
- 3) In this state, turn handwheel 6 in the direction which is opposite to the normal direction of rotation until handwheel 6 will go no further. (If the handwheel is turned further, it reaches the position at which cam follower 1 starts moving.) At this time, adjust so that the marker line (A) on electrical box cover (5) is brought to the portion between the colorless marker dots **B** and **O** on handwheel 6.

5-3-2. Adjustment of the thread trimming cam timing

- 1) Tilt the sewing machine head.
- 2) Loosen the screws No.1 and No. 2 of thread trimming cam setscrew **7** in the written order.
- 3) Align marker line (A) on electrical box cover (5) with the colorless marker dot (B) on handwheel (6).
- 4) Pressing cam follower 1 to the left (in the direction of arrow (**B**), engage thread trimming cam 3 with roller 2. Then, turn only thread trimming cam 3 with fingers in the direction which is opposite to the normal direction of rotation of feed driving shaft ④ until it will go no further without turning feed driving shaft 4. At this position, tighten the screws No. 1 and No. 2 of thread trimming cam setscrew **1** in the written order while pressing thread trimming cam 3 against roller 2.



trimming cam (3) and roller (2) is position (**G**) from which cam follower **1** starts moving. Position (**©**) at which you feel that thread trimming cam (3) comes in contact with roller 2 for the first time during adjustment is not the correct alignment position.

Be sure to correct the thread trimming cam timing carefully since it largely affects the loop spreading timing.

5-3-3. Checking of the knife unit



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- Check to make sure that the power switch is in the OFF state. Remove the gauge (presser foot, throat plate and feed dog) from around the needle.
- In the standby state of loop spreading knife ●, the distance from center of needle ④ to the tip of loop spreading knife ● is 5 to 6 mm.



Be aware that, if the distance between loop spreading knife **①** and center of needle **②** is reduced, thread loop is likely to interfere with loop spreading knife **①**.

- * Refer to "5-3-4. Adjustment of the knife unit" p.
 60 for how to adjust it.
- 3) The purpose of adjustment of the aligning position of loop spreading knife ① and thread trimming knife ② (far end of the hole in loop spreading knife ① and the tip of thread trimming knife ②) is to align the aforementioned aligning position with center of needle ④.



Be aware that, if the aligning position of the loop spreading knife and the thread trimming knife does not align with center of needle (2), the length of thread remaining on the material after thread trimming will be longer.

4) The amount of engagement between loop spreading knife ① and thread trimming knife ② is 2 to 2.5 mm (H type : 2.5 to 3 mm) as measured from center of needle ③.



aution

Be aware that, if the amount of engage-) ment between them is insufficient, faulty | thread trimming can occur.

* Refer to "5-3-4. Adjustment of the knife unit" p.
60 for how to adjust it.



In this case, correct the aforementioned problem by increasing the thread takeup spring stroke to a value that is larger than the standard value.

5-3-4. Adjustment of the knife unit



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.





- Check to make sure that the power switch is in the OFF state. Remove the gauge (presser foot, throat plate and feed dog) from around the needle.
- 2) Tilt the sewing machine head.
- Loosen loop spreading knife eccentric pin setscrews ⁽²⁾ (two pieces). Turn loop spreading knife eccentric pin ⁽¹⁾ with a flat-blade screwdriver to finely adjust the rotational-direction position of loop spreading knife ⁽³⁾.
- 4) After the adjustment, tighten loop spreading knife eccentric pin setscrews ② (two pieces).



Position of marker dot (2) on loop spreading knife eccentric pin (1) should be adjusted only from the operator's side.

5-4. Adjusting the main shaft stop position



If the position of the marker line (blue) on the handwheel is too far from the position of the marker line (blue) on the cover after thread trimming, machine head angle should be adjusted following the steps of procedure described below.





1) The function setting screen is displayed

by keeping M
P held pressed for

three seconds on the normal sewing state.

2) Press **T b** to flash function

setting No. **A** on and off. In this state,

press **to** select parameter P72.

- 4) Press
 8 to determine the setting.
- 5) Press **M (**) to return the sewing machine to the sewing state.

5-5. Grease shortage warning

5-5-1. Grease shortage warning

When the time of maintenance for adding the grease, "E220 Grease shortage warning" error is displayed for three seconds after turning the power ON. In this state, however, the sewing machine can be used for a certain period time.





 To reset the error (to clear n15), refer to "5-5-3. How to reset the grease shortage error" p. 63.

5-5-2. Grease shortage error

If the error E220 is not reset, "E221 Grease shortage error" will be continuously displayed.

If this state continues, the sewing machine operation will be disabled. To prevent this, be sure to reset the error (to clear n15) after carrying out the maintenance for replenishing the sewing machine with grease.



 To reset the error (to clear n15), refer to "5-5-3. How to reset the grease shortage error" p. 63.

5-5-3. How to reset the grease shortage error



1) Turn ON the power to the sewing

machine while keeping M P held

pressed.

Then, the function setting screen is displayed.

A shows the function setting number, and **B** shows the set value for the function setting number.

6 to select the func-

- While the function setting number (A) is flashing on and off, press switch tion setting No. n15.
- 3) Press 🥢 🛈 to clear the set value (**B**) to "0" (zero).
- * The grease shortage error is reset by carrying out this operation.
- 4) Press **M e** to return the sewing machine to the normal sewing state.

5-6. Disposal of batteries



The operation panel has a built-in battery in order to operate the clock even when the power is turned OFF.

Be sure to dispose of the battery following the local laws and regulations.

[How to remove the battery]



- Remove panel **1** from the main body of sewing machine.
- 2) Loosen screw **2** from the rear surface of the operation panel. Detach case **3**.

- is the battery for clock. Type number: CR2450
- Pull out the connector in the direction of A. Detach the whole main body of battery together with its case from the PCB. (The battery is secure on the PCB with double-faced adhesive tape.)

6. CARE

Perform the maintenance below every day for longer use of your machine.

6-1. Cleaning the area around the hook



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Remove needle ①, presser foot ② and throat plate ③.



2) Remove dust adhered to feed dog (4) and thread trimmer unit (5) with a soft brush or cloth.

- 3) Tilt the machine head and wipe out the dirt of bobbin case and the like with soft cloth, and confirm that there is no scratch. Wipe out with the cloth dust and hook oil drained in the under cover near the hook.

6-2. Cleaning the interior of the frame



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



1) Remove face plate ①.

- Remove dust stuck the parts inside the frame such as needle bar ② and presser bar ③ with a soft brush or a piece of soft cloth.
- After the completion of cleaning, add grease to the needle bar and the presser bar. Then, attach face plate 1.





6-3. Applying grease



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

- When the time for greasing has come, the warning alarm sounds. When the alarm sounds, apply / supply the grease to the relevant parts. In the case the sewing machine is used under severe conditions such as high temperatures, high operation rate, dusty environment, etc., it is effective to apply / supply the grease periodically once every six months.
 Do not apply oil to the sections which are lubricated with grease.
 - 3. Be aware that grease can leak from the thread take-up cover and needle bar if the amount of grease is excessive.
- 4. Be sure to use JUKI GREASE A TUBE ① (part number : 40006323).

6-4. Applying grease to the needle bar lower bushing



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Caution Carry out installed.

Carry out greasing with the needle bar installed.

- 1) Remove the face plate.
- Remove needle bar lower bushing greasing screw (2) (only for the DDL-8000A-*MS) with a hexagonal wrench key.



- 3) Remove the cap of exclusive grease tube ①.
 Insert its tip into the oil hole and replenish grease from exclusive grease tube ①.
 At this time, add grease until it overflows the oil hole.
- Push overflowing exclusive grease with the oil filling screw into the oil hole.
- 5) Wipe the excess of grease off the area around the oil hole.

6-5. Optional devices



WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

JUKI standing-machine pedal unit (PK-70 / -71) can be used with the DDL-8000A Series sewing machine by using the optional standing-work pedal junction unit (JUKI Part No.: 40242689).

Caution It is not allowed to use the standard pedal and the standing-machine pedal simultaneously.



Structure of the standing-machine pedal junction unit

- Main body of the standing-machine pedal junction unit
- 2 Table-fixing wood screw (2 pcs.)







- **Connection method**
- Loosen and remove four setscrews 3. Detach the rid of standing-machine pedal junction unit 1.

2) Connect connector (5) of the standing-machine pedal unit to connector (4) on the PCB.



Take care of the orientation of the connector key.

3) Push the cord **6** of the standing-machine pedal unit into the slot in the standing-machine pedal junction unit **1**.



The slot is slightly narrow to allow the cord to be clamped.









- Put the rid on the standing-machine pedal junction unit and secure it with four setscrews ③ you have removed.
- 5) Secure the standing-machine pedal junction unit on the undersurface of the sewing machine table with accessory wood screws ②.



6) Secure cords **1** and **3** coming from the pedal junction unit on the table with staples **9**.



 Connect the connector ① of the standing-machine pedal junction unit to the pedal cord connector ① of the DDL-8000A sewing machine.

Now, the setup procedure has been completed.
7. LIST OF ERROR CODES

Error number	Description	How to correct
E001	High-voltage error (320 V or more)	Turn the power OFF. Check the supply voltage.
E002	Low-voltage error (170 V or less)	Turn the power OFF. Check the supply voltage.
E003	CPU communication fault	Turn the power OFF. Check the connection of the connector
E003P		to the operation panel and the cable.
E005	Pedal connection fault	Turn the power OFF. Check the connection of the connector
		to the pedal and the cable.
E007	Main shaft rotation fault	Check whether the main shaft motor is locked by turning the
		pulley. Check the connection encoder cable and motor power
		Check whether the supply voltage is normal. Check whether
		the sewing speed is set extremely high.
E008	Reverse-feed stitching switch operation	Turn the power OFF. Then, re-turn the power ON.
	time expired	
E009	Encoder Z-phase detection fault	Turn the power OFF. Check the connection of the motor
E011		encoder cable to the connector.
E014	Encoder AB-phase detection fault	Turn the power OFF. Check the connection of the motor
		encoder cable to the connector.
E015	Main shaft motor overcurrent error	Turn the power OFF. Then, re-turn the power ON.
E017	Machine head tilting error	Raise the machine head. Then, turn the power OFF and re-
		turn the power ON. Check whether the machine head tilt
		switch has broken.
E020	Main shaft rotation fault	Turn the power OFF. Check the connection of the main
		shaft motor encoder cable and motor power cable to the
	Communication foult between the main	Connectors.
E030	CPUL and the presser motor CPUL	locked Check the connection of the presser motor to the
		connector.
E031	Presser motor overcurrent error	Turn the power OFF. Check whether the presser motor is
		locked. Check the connection of the presser motor to the
		connector.
E032	Presser motor origin retrieval error	Turn the power OFF. Check whether the presser motor is
		locked. Check the connection of the presser motor and origin
		sensor to the connectors.
E040	Crystal oscillator fault	Turn the power OFF. Change the panel PCB with a new one.
E041	MAIN software communication error	Press the RESET button. Display the MAIN software
		rewriting screen. Then, rewrite the MAIN software.
E042	ST motor software communication	Press the RESET button. Display the ST motor software
	error	rewriting screen. Then, rewrite the ST motor software.
E044	Screen reading software	Press the RESET button. Display the screen reading
	communication error	software rewriting screen. Then, rewrite the screen
		reading software.
E050 to	MAIN software write error	
E059		
E060 to	PANEL software write error	Check the connection of the USB thumb drive.
E069		Check whether or not the file contained in the USB
E070 to	SI motor software write error	thumb drive has broken.
E079	Screen reading software write error	
E08A	Screen reading software write end	

Error number	Description	How to correct
E220	Grease shortage warning	Carry out maintenance for replenishing the grease. Then, reset the error (to clear n15). Refer to "5-5. Grease shortage warning" p. 62 .
E221	Grease-shortage error	Carry out maintenance for replenishing the grease. Then, reset the error (to clear n15). Refer to "5-5. Grease shortage warning" p. 62 .