

# ***ENGLISH***

## **PL12,13 INSTRUCTION MANUAL**

Read safety instructions carefully and understand them before using.  
Retain this Instruction Manual for future reference.



### **CAUTION**

This Instruction Manual is intended for the PL12/PL13. To use this product when it is installed on a machine (sewing machine), make sure to read and fully understand the “IMPORTANT SAFETY INSTRUCTIONS” provided in the Instruction Manual for the machine on which this product is to be installed in advance.

For a clearer view of the PL12/PL13 illustrations of the machine (sewing machine) are simplified.

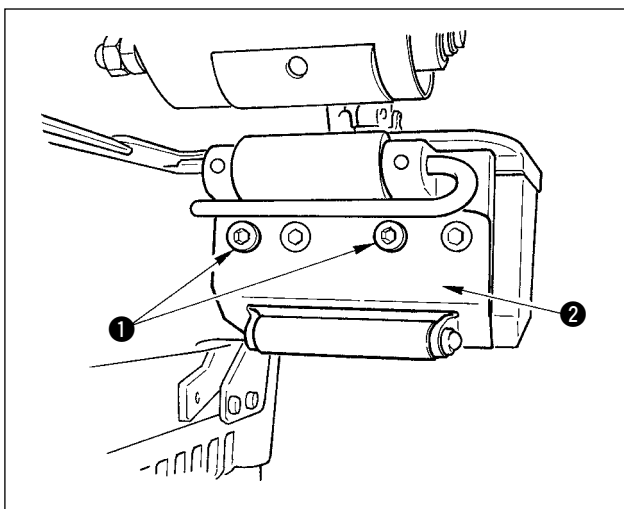
# CONTENTS

1. SPECIFICATIONS .....	1
2. ASSEMBLING THE REAR ROLLER ASM.....	1
3. ADJUSTING THE ROLLER PRESSER PRESSURE .....	1
4. HOW TO USE THE MANUAL LEVER .....	2
5. ADJUSTING THE FEED AMOUNT OF THE ROLLER.....	2
6. FEED TIMING OF THE ROLLER.....	3
7. ADJUSTING THE CLEARANCE BETWEEN THE GEAR ROLLERS (PL12) ....	3
8. ADJUSTING THE ROLLER PRESSER LIFTER .....	4
9. ADJUSTING THE CLIUTCH TENSION SPRING .....	4
10. LUBRICATION .....	5

## 1. SPECIFICATIONS

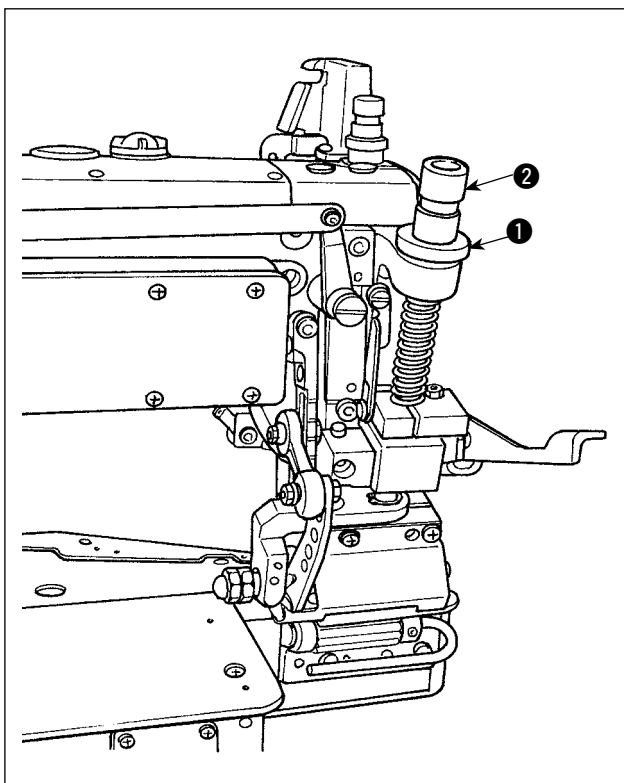
Model	PL 12 (Gear roller), PL 13 (Flat roller)		
Class name	Cloth puller device		
Sewing speed	Max. 5,000 sti/min (at the time of intermittent operation) Speed of stitch at the delivery. 4,000 sti/min (at the time of intermittent operation)		
Lift of roller	Manual lever	PL12 : 8.6mm , PL13 : 10.3mm	
	Presser lifter	When lift of presser foot is 4 mm	PL12 : 6.3 mm, PL13 : 8.0 mm
		When lift of presser foot is 5 mm	PL12 : 7.0 mm, PL13 : 8.7 mm
		When lift of presser foot is 6 mm	PL12 : 7.8 mm, PL13 : 9.5 mm
Presser pressure	50N to 150N		
Feed amount	1.6 mm to 5.0 mm		
Noise	<ul style="list-style-type: none"> <li>- Equivalent continuous emission sound pressure level (<math>L_{pA}</math>) at the workstation : A-weighted value of 82.5 dB; (Includes <math>K_{pA} = 2.5</math> dB); according to ISO 10821- C.6.2 -ISO 11204 GR2 at 5,000 sti/min.</li> <li>- Sound power level (<math>L_{WA}</math>) ; A-weighted value of 88.5 dB; (Includes <math>K_{WA} = 2.5</math> dB); according to ISO 10821- C.6.2 -ISO 3744 GR2 at 5,000 sti/min.</li> </ul>		

## 2. ASSEMBLING THE REAR ROLLER ASM.



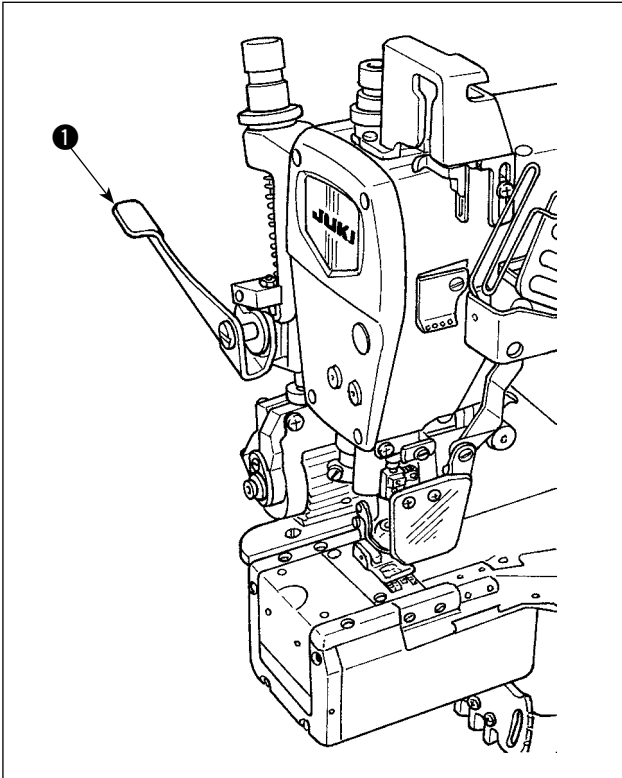
Install rear roller asm. ② which is contained in the accessories with two screws ①.

## 3. ADJUSTING THE ROLLER PRESSER PRESSURE



Loosen nut ①, and turn presser spring regulator ② to the right (clockwise) when increasing the presser pressure. Turn presser spring regulator ② to the left (counterclockwise) when decreasing the presser pressure.

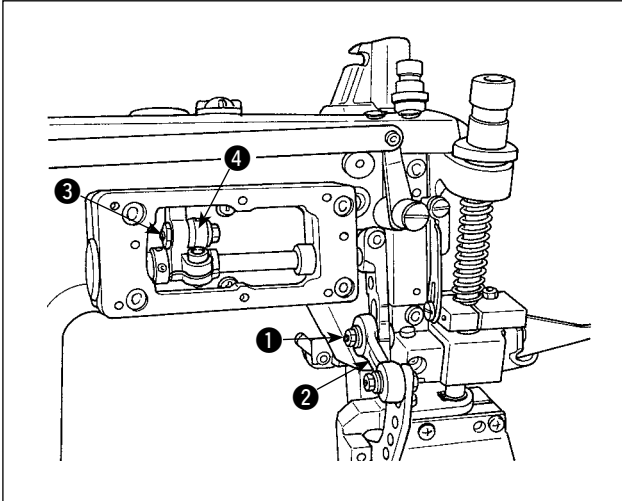
#### 4. HOW TO USE THE MANUAL LEVER



Lift lever ❶ when the cloth puller device is not used at the time of performing setting of material or removing material which has been sewn.

Lower lever ❶ when sewing using the cloth puller device.

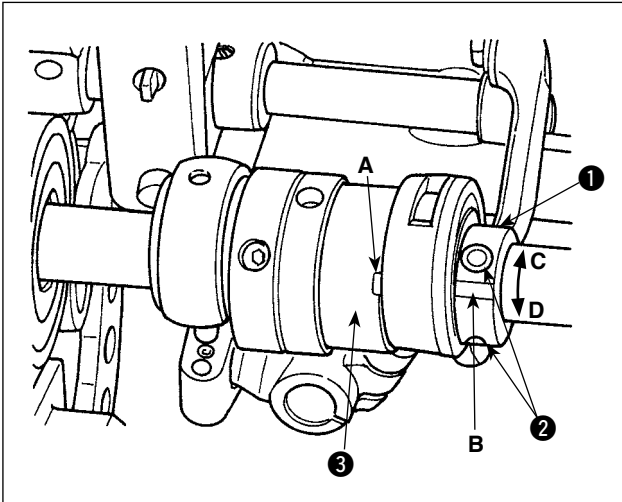
#### 5. ADJUSTING THE FEED AMOUNT OF THE ROLLER



Loosen screw ❶ when adjusting the feed amount of the roller. Feed amount is decreased when link ❷ is lifted. Feed amount is increased when link ❷ is lowered.

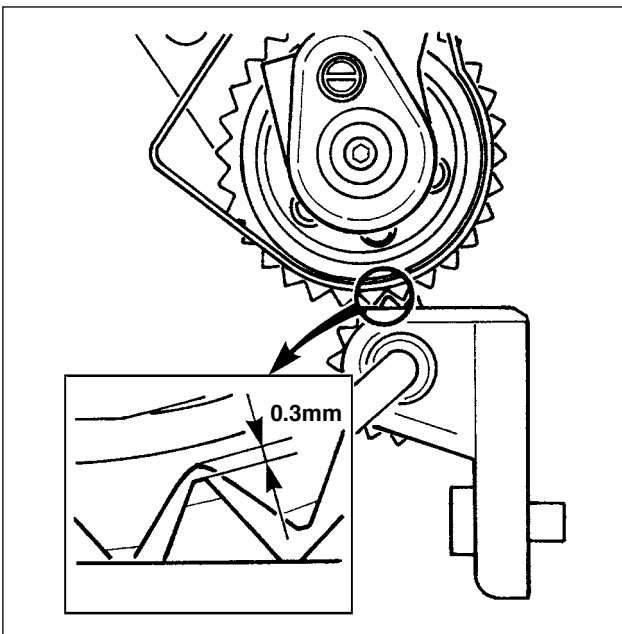
When changing the feed amount further, loosen screw ❸ to adjust. Feed amount is decreased when rod ❹ is lifted. Feed amount is increased when rod ❹ is lowered.

## 6. FEED TIMING OF THE ROLLER

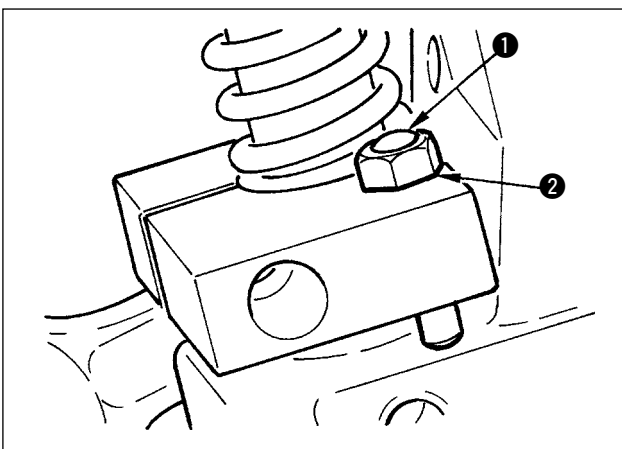


Notch A in collar ③ aligns with notch B in the puller eccentric cam when the roller is placed in the standard position. When changing the feed timing, loosen two setscrews ② in puller eccentric cam ① to adjust. When the cam is moved in the direction of C, the start of the roller is advanced, and when it is moved in the direction of D, the start of the roller is delayed.

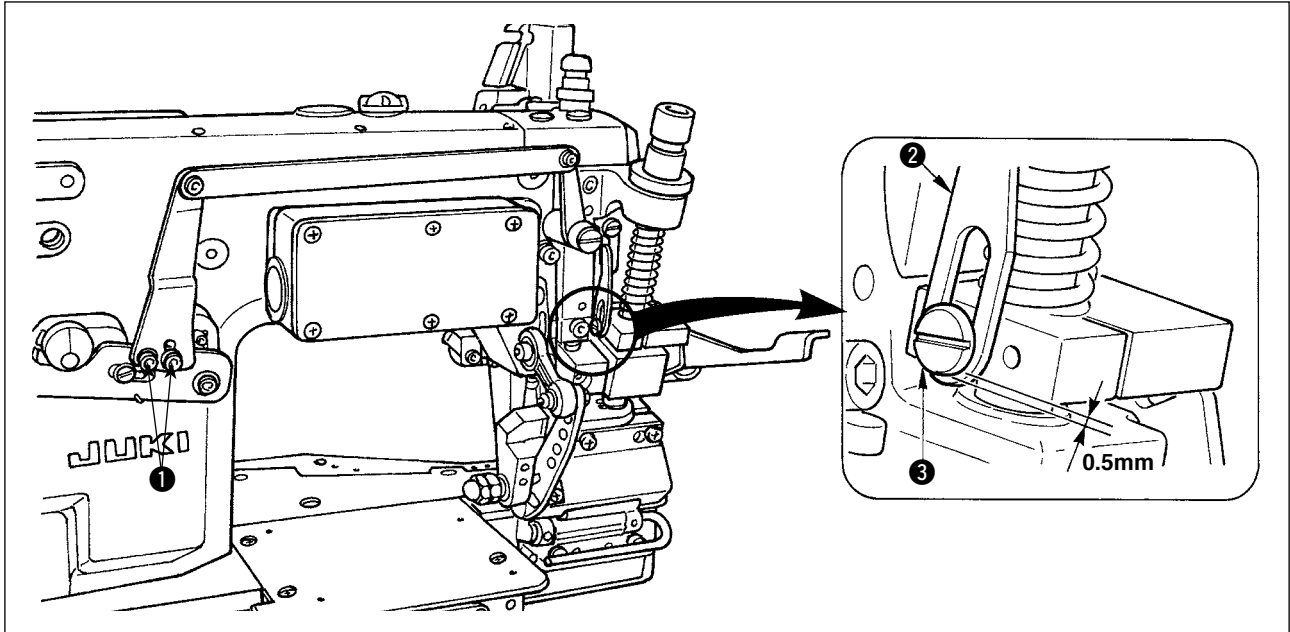
## 7. ADJUSTING THE CLEARANCE BETWEEN THE GEAR ROLLERS (PL12)



In case of the gear type roller, loosen nut ② and adjust the length of screw ① so that the clearance between the top and the bottom rollers is approximately 0.3 mm in the state that the rollers are lowered.

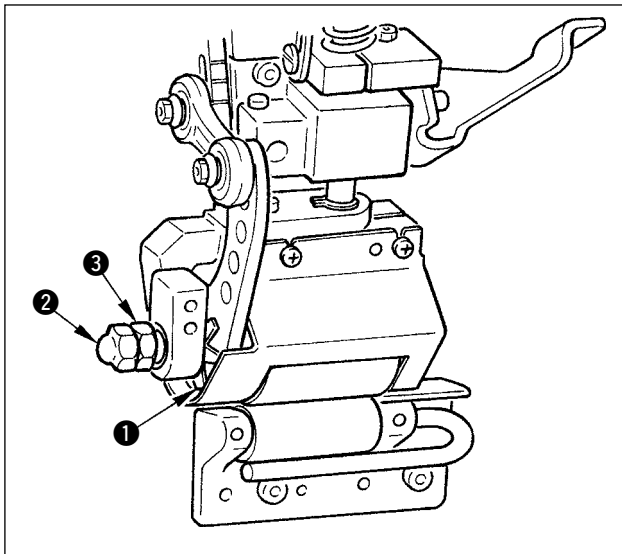


## 8. ADJUSTING THE ROLLER PRESSER LIFTER



Adjust with two screws ① so that the clearance between presser lifter lever link, short ② and hinge screw ③ is 0.5 mm when performing the presser lifting in the state that the top roller is lowered.

## 9. ADJUSTING THE CLUTCH TENSION SPRING

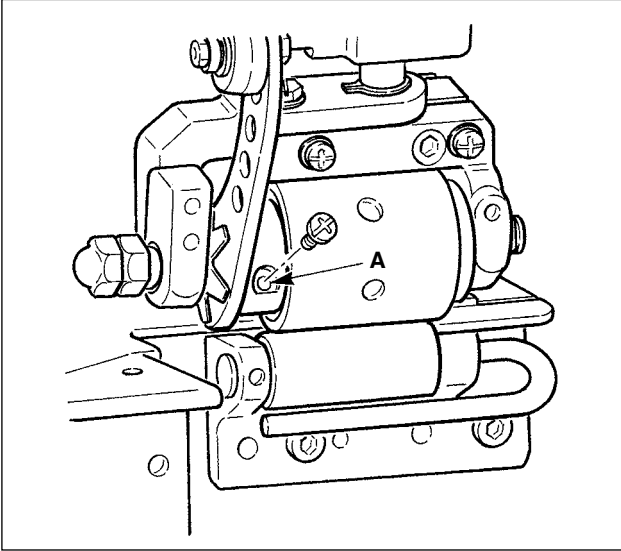


Adjustment is performed with clutch tension spring ① so that the top roller does not overrun at high-speed rotation. When performing the adjustment, loosen cap nut ②, and turn nut ③ to the right (clockwise) to increase the spring pressure. When decreasing the spring pressure, turn nut ③ to the left (counterclockwise).

After the adjustment, tighten cap nut ②.

(Note) The standard of the spring pressure is to such an extent that clutch tension spring ① turns with the small force of your finger after tightening cap nut ②.

## 10. LUBRICATION



Periodically perform greasing once a year as the standard. Use the exclusive grease supplied as the accessories.

- Grease tube (Part No. 13525506)

Remove the upper roller cover, and remove the screw in section A. Fully pour the grease supplied as the accessories out of the section A into the device. After pouring the grease, install the screw and the upper roller cover.