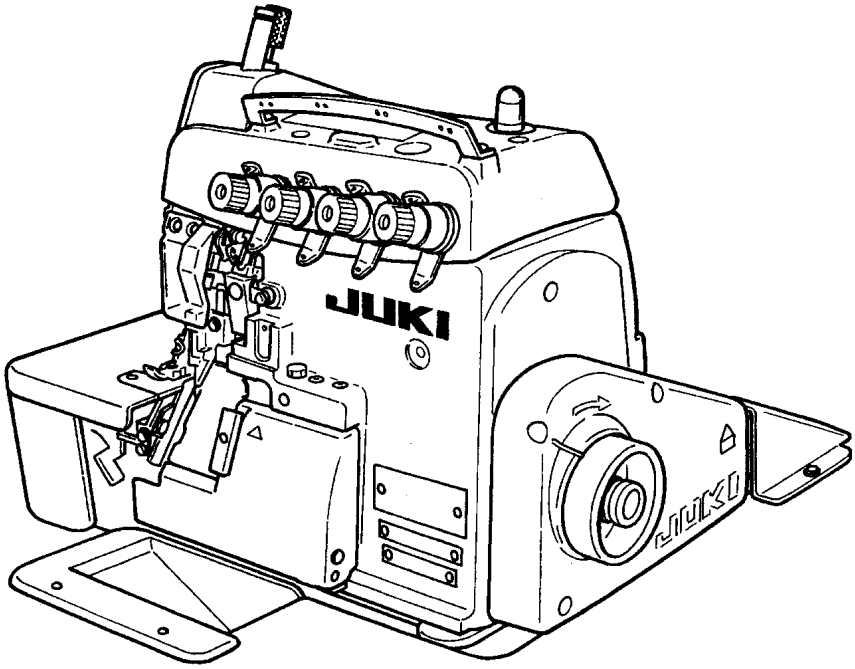
JUKI®

HIGH SPEED SEMI-DRY HEAD OVERLOCK/INTERLOCK/ SEWING MACHINE

MO-6700D Series

ENGINEER'S MANUAL



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No.E368-00

PREFACE

This Engineer's Manual is written for the technical personnel who are responsible for the service and maintenance of the machine.

The Instruction Manual for these machines intended for the maintenance personnel and operators at an apparel factory contains operating instructions in detail. And this manual describes "Standard Adjustment", "Adjustment Procedures", "Results of Improper Adjustment", and other important information which are not covered by the Instruction Manual.

It is advisable to use the relevant Instruction Manual and Parts List together with this Engineer's Manual when carrying out the maintenance of these machines.

In addition, for the motor for the sewing machine with thread trimmer, refer to the separate Instruction Manual or Engineer's Manual for the motor. And for the control panel, refer to the Instruction Manual for the control panel.

This manual gives the "Standard Adjustment" on the former page under which the most basic adjustment value is described, and on the latter page "Results of Improper Adjustment" under which stitching errors and troubles arising from mechanical failures are described together with the "Adjustment Procedures".

CONTENTS

1. SPECIFICATIONS

(1) MO-6700D SERIES

No.	Item	Specifications		
1	Model	MO-6704D	MO-6714D	MO-6716D
2	Description	1-needle Overlock machine	2-needle Overlock machine	2-needle Safety stitch machine
3	Stitch type F. S. T.	JIS E13 (USA standard : 504)	JIS E24 (USA standard : 514)	JIS E13+D12 (USA standard : 516)
4	Sewing speed	6000rpm		
5	Stitch length	0.8 to 4mm		1.5 to 4mm
6	Needle gauge	———	2.0, 3.2mm	3.2, 4.8mm
7	Overedging width	1.6, 3.2, 4, 4.8mm	2.0, 3.2, 4mm	3.2, 4, 4.8, 6.4mm
8	Differential feed ratio	Gathering 1 : 2 (Max.1 : 4), Stretching 1 : 0.7 (Max.1 : 0.6)		
9	Needle bar stroke	24.5 mm (30P for light to medium-weight materials), 25.5 mm (40H for medium to heavy-weight materials)		
10	Needle tilt angle	20°		
11	Needle bar mechanism	Upper and lower needle bar bushing type		
12	Needle	ORGAN DC X 27 (Standard) (DC X 1 can be used as well.)		
13	Presser lifting amount	7.0mm	6.5mm	7.0mm
14	Presser foot pressure	49N (5kg)		
15	Stitch adjusting method	By pushbutton		
16	Upper knife	Flat knife		
17	Differential feed adjustment	By lever with micro adjustment mechanism		
18	Weight	28kg		
19	Lubrication	Automatic geared lubrication system and grease charge		
20	Lubricating oil	JUKI MACHINE OIL 18 (Equivalent to ISO VG 18) Product No.: MML018900CA		
21	Grease	Exclusive grease (Part No. 23640204)		
22	Needle cooler	Optional		
23	Needle thread cooler	Optional		
24	Micro presser lifting device	Provided as standard		
25	Motor	2P 400W		

*1. Grease should be supplied to the needle bar system and upper looper system.

2. MODEL NUMBERING SYSTEM

MO-6700D SERIES MODEL NUMBERING SYSTEM

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

M O 6 7 △ △ **D** ◇ □ △ △ ◇ ◇ **/** □ △ △ ◇ □ △ △ △ **–** □ □ △

3 to 6	Model classification
6704	1-needle 3-thread overlock
6705	Blind-hemming
6712	2-needle, 4-thread imitation safety stitch
6714	2-needle 4-thread overlock
6716	2-needle 5-thread safety stitch
6743	3-needle 6-thread safety stitch
6745	2-needle double chain stitch

7	Type classification
D	Semi-dry head

	8	Needle gauge classification
	0	1-needle
	B	2.0mm
	D	3.2mm
	F	4.8mm
*	1	4.8+2.0mm
*	2	3.2+2.0mm

9	Overedging width classification
A	1.6mm
B	2.0mm
D	3.2mm
E	4.0mm
F	4.8mm
H	6.4mm

10	Feed dog classification
4	2-row
5	1-row
6	3-row

The asterisk (*) indicates 3-needle type.

11	Material classification (classification applied to handling material and cloth)	
1	Extra light- to right-weight material	Light weight material such as dress shirt
2		
3	Light- to medium-weight materials	General fabrics
4	Meduim- to heavy-weight materials	Exclusive for knit such as sweater
5		Medium weight material such as denim to heavy weight material

12	Application classification (classification of application based on work and process)
0	Standard
1	For blind hemming
2	For ruffling
4	For tape attaching
5	For rolled hemming
6	For tape feeding

13	Special machine classification (special classification of machine, structure and specs. other than gauge set)
0	Standard
7	Upper looper high throw
F	Swim suits
H	Upper looper extra high lift
P	Puckering prevention

15 to 22	Device and attachment classfication
G39/Q141	Presser for tape attaching (for sharp curve)/tape guide
L121	Blind stitch hemming attachment
S159	Swing-type gathering device (interlocked with pedal, for safety stitch machine)
S162	Swing-type gathering device (manual lever operated, for overlock machine)
N077	Clean finish top and bottom
E35	Overedging lug replace type throat plate

24	Place of destination
A	Standard
D	U.S.A and Japan
G	China (in China)

25	Accessories type
A	Standard
B	Eouropa and U.S.A
G	China (in China)

26	Table type
0	Fully sunken type
1	Semi sunken type

3. STANDARD ADJUSTMENT

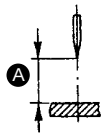
(1) Adjusting the needle height

Standard Adjustment

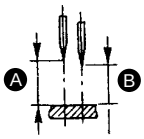
When the needle(s) is in the highest position, the needle height from the throat plate surface should be as shown below.

(Unit : mm)

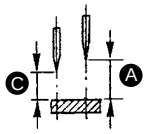
6704D
6705D



6712D
6714D



6716D



	Model	Dimension Ⓐ	Dimension Ⓑ	Dimension Ⓒ
1-needle overlock machine	MO-6704D-0A△-150	10.5	—	—
	MO-6705D-0△△-210	10.5	—	—
	MO-6704D-0△△-300	10.5	—	—
	MO-6704D-0△△-307	10.5	—	—
	MO-6704D-0△△-40H	11.3	—	—
	MO-6704D-0F6-50H	11.3	—	—
2-needle overlock machine	MO-6714D-B△△-△△7	10.5	9.1	—
	MO-6714D-B△△-△△H	11.3	9.9	—
	MO-6712D-DF6-50△	11.0	9.4	—
	MO-6714D-B△△-30P	10.5	9.1	—
Safety stitch machine	MO-6716D-△△△-300	10.5	—	9.8
	MO-6716D-FF6-307	10.5	—	9.8
	MO-6716D-△△△-4△H / 50H	11.3	—	10.6
	MO-6716D-△△△-30P	10.5	—	9.8

The adjustment of needle height for the 2-needle overlock machine should be made in reference to the left needle.

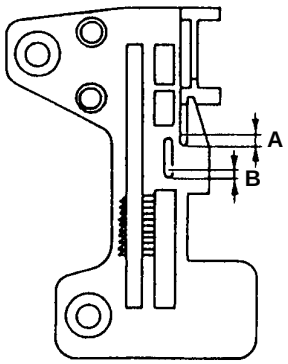
(2) Positioning the throat plate

Standard Adjustment

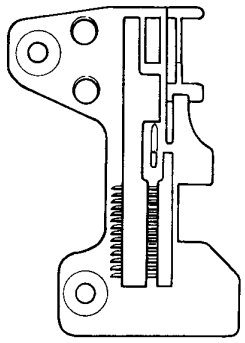
The needle entry point should be such that the distances listed below are provided between the needle slot edge of the throat plate and the center of needle.

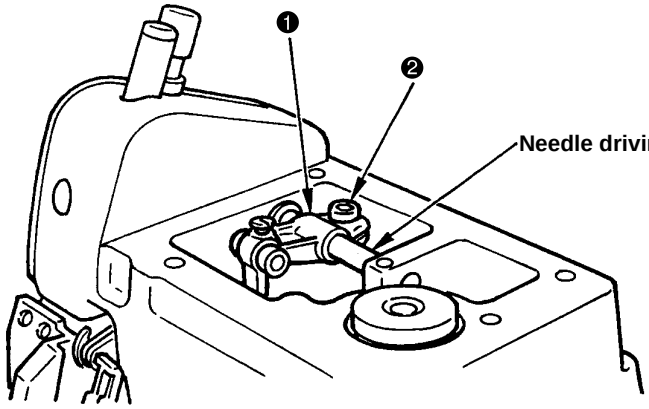
(Unit : mm)

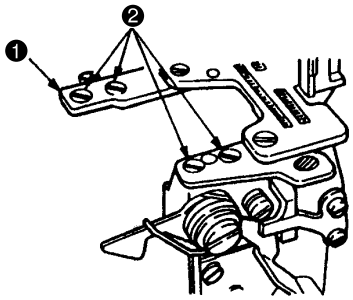
Overlock side A	1.3
Double-chainstitch side B	1.0



For 30P
(Safety stitch machine)



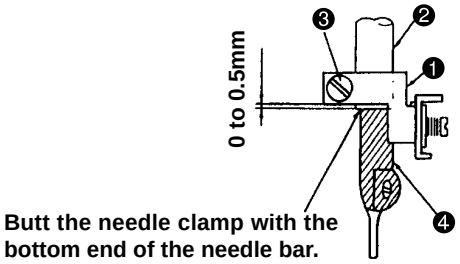
Adjustment Procedure	Results of Improper Adjustment
1) Take off the upper cover, loosen setscrew ❷ of needle driving forked crank ❶ and move needle driving forked crank ❶ up or down to adjust the needle height.  	o Any other needle height than specified here will badly affect the action of the lower looper, the timing for catching the upper looper thread, etc.
(Caution) Do not fully loosen the setscrew ❷ of the needle driving forked crank ❶. **If the needle driving forked crank has got out of position laterally when its setscrew was loosened, fully loosen the setscrew and turn pulley to allow the forked crank to turn until it settles by itself. Then tighten the setscrew to fix the forked crank at that position.**	o Improper lateral position of the needle driving forked crank will cause seizure, play, or other troubles.

Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrews ❷ of throat plate base ❶ and move throat plate base ❶ back and forth to adjust dimension A or B.  	o Improperly positioned throat plate with cause needle breakage, contact of the needles will the throat plate, or other troubles.

(3) Installing position of the needle clamp

Standard Adjustment

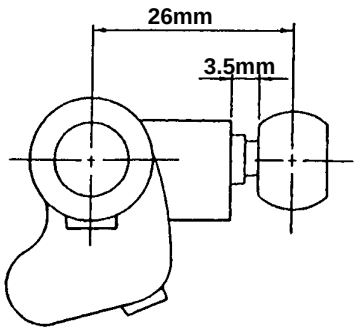
Needle clamp connecting stud ❶ should fit with the bottom end of needle bar ❷ or be spaced within 0 to 0.5 mm.

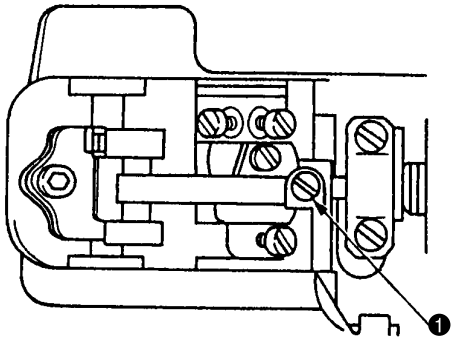


(4) Adjusting the length of the lower looper holder (Applicable only to MO-6716D series)

Standard Adjustment

The center-to-center distance should be 26 mm.
At this time, the clearance between the end surface of the arm and the neck of the ball should be 3.5mm.





Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrew ❸ and adjust, by slightly turning needle clamp ❹, the clearance provided between the right-hand side needle and the lower looper (for 2-needle overlock machine) and the clearance provided between the needle hole in the throat plate and the needle (for safety stitch machine).	o If the clearance provided between the needle and the looper is excessive, the needle thread will be likely to skip at the time of tucking. o If the clearance provided between the needle and the looper is insufficient, the needle will break or the looper blade point will be damaged causing thread breakage.

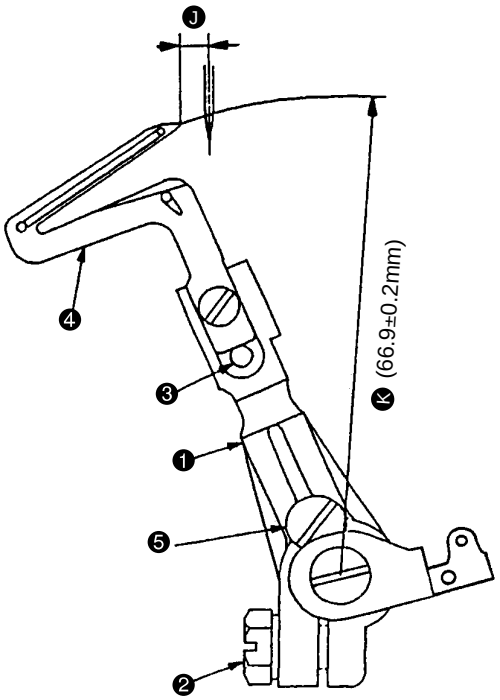
Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrew ❶ of the lower looper holder from the rear of the frame. Since it is difficult to accurately measure the center-to-center distance, perform adjustment to provide a 3.5 mm distance between the end surface of the arm and the neck of the ball as illustrated.	o Increasing the center-to-center distance will give a smaller stroke of the double chain looper or lower looper, and decreasing the distance will give larger stroke.

(5) Adjusting the lower looper

Standard Adjustment

1) Returning amount of the lower looper

The distance between the blade point of the lower looper and the center of the needle should be as follows when the lower looper is at the extreme left of its stroke.

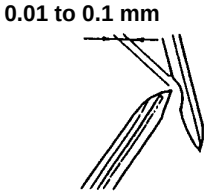


(Unit : mm)

Model		Dimension J
1-needle overlock machine	MO-6704D-0A△-150	4.0
	MO-6705D-0△△-210	4.0
	MO-6704D-0△△-300	3.8
	MO-6704D-0△△-307	3.8
	MO-6704D-0△△-40H	3.8
	MO-6704D-0F6-50H	3.8
2-needle overlock machine	MO-6714D-B△△-△△7	3.8
	MO-6714D-B△△-△△H	4.0
	MO-6712D-DF6-50△	2.2
	MO-6714D-B△△-30P	3.8
Safety stitch machine	MO-6716D-△△△-300	3.8
	MO-6716D-FF6-307	3.8
	MO-6716D-△△△-4△H / 50H	3.8
	MO-6716D-△△△-30P	3.8

2) Clearance between the lower looper and the needle

The clearance should be 0.01 to 0.1 mm.

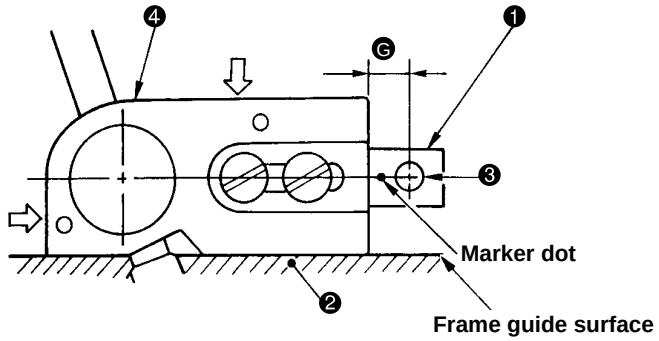


Adjustment Procedure	Results of Improper Adjustment
1) Returning amount of the lower looper ① Loosen setscrew ❷ of lower looper support arm ❶ and adjust lower looper ❹ to make adjustment of the returning amount. **(Referential information)** **1. Radius Ⓚ of lower looper ❹ will be 66.9 mm when the lower looper is inserted into lower looper support arm ❶ until it contacts with stopper pin ❸ and then is fixed.** **2. The rocking angle of the lower looper will be 26°.**	o Excessive return of the lower looper tends to cause stitch skipping when filament thread is used. o Insufficient return of the lower lopper tends to cause needle thread stitch skipping when spun thread is used.
2) Clearance between the lower looper and the needle ① Loosen setscrew ❷ of lower looper support arm ❶ to the extent that it is temporarily tightened. Then finely adjust the longitudinal position of the looper using fine adjustment screw ❺. ② Turn fine adjustment screw ❺ clockwise to move lower looper ❹ away from the needle. Turn the screw counterclockwise to move lower looper ❹ closer to it.	o Excessive clearance will often cause needle thread stitch skipping. o Insufficient clearance will cause needle breakage due to the contact of the looper with the needle, or produce scratches on the blade point of the looper, leading to needle thread breakage or other troubles.

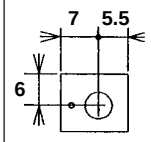
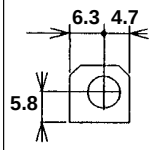
(6) Position of the upper looper guide

Standard Adjustment

Vertical position : To be in close contact with the frame guide surface.
Laternal position : To be pressed against the upper looper guide support gauge ❶.



(Unit : mm)

Upper looper guide support gauge		
		
	13131909	13132006

(Unit : mm)

Model		Dimension Ⓖ
1-needle overlock machine	MO- 6704D - 0E△ to 0F△ - 4△H	
2-needle overlock machine	MO- 6714D - BB6 to BE6 - 30P	
	MO- 6714D - BD4 to BE4 / BD6 to BE6 - 4△H	

(Unit : mm)

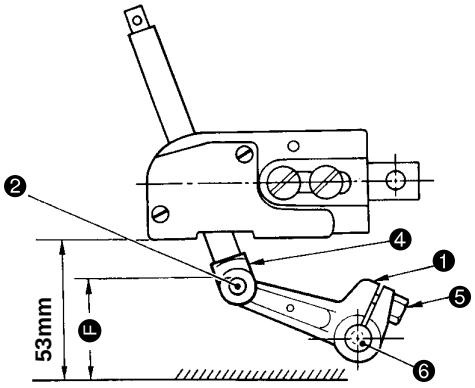
Model		Dimension Ⓖ
Safety stitch machine	MO- 6716D - △△△ - 30P	
	MO- 6716D - D△△ / F△△ - 4△H	

Adjustment Procedure	Results of Improper Adjustment
1) Fit upper looper guide support gauge ❶ over gauge fixing pin ❸ which has been driven in frame ❷ and secure the gauge with an O ring. Then position the gauge taking the marker dot engraved on it or the chamfering direction as reference. 2) When installing upper looper guide support ❹, press it against the gauge while keeping the upper looper guide support into close contact with the frame guide surface, then tighten the screws. **(Caution) Refer to "4- (4) -1) – ⑦ Various sealantsî for the various sealants.**	o If the upper looper guide has improperly positioned vertically, it will cause oil leakage or disturbed path of the upper looper with resultant stitch skipping. o If the upper looper guide has been inaccurately positioned laterally, it will cause stitch skipping, or contact with the looper.

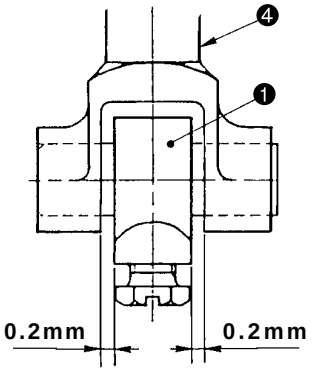
(7) Positioning the upper looper holder

Standard Adjustment

The distance between the bottom surface of the frame and the upper end of the upper looper holder pin ❷ should be as shown below when the upper looper holder ❶ is at the highest point of its stroke.

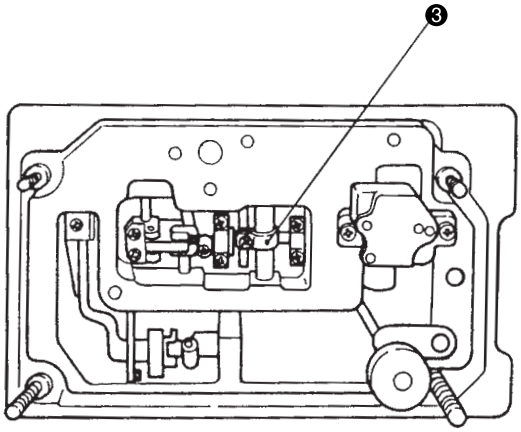


Bottom surface of frame



(Unit : mm)

Model		Dimension Ⓕ
1-needle overlock machine	MO- 6704D - 0E△ to 0F△ - 4△H	48.2
2-needle overlock machine	MO- 6714D - BB6 to BE6 - 30P	47.3
	MO- 6714D - BD4 to BE4 / BD6 to BE6 - 4△H	48.4
Safety stitch machine	MO- 6716D - △△△ - 30P	46.2
	MO- 6716D - D△△ / F△△ - 4△H	48.2



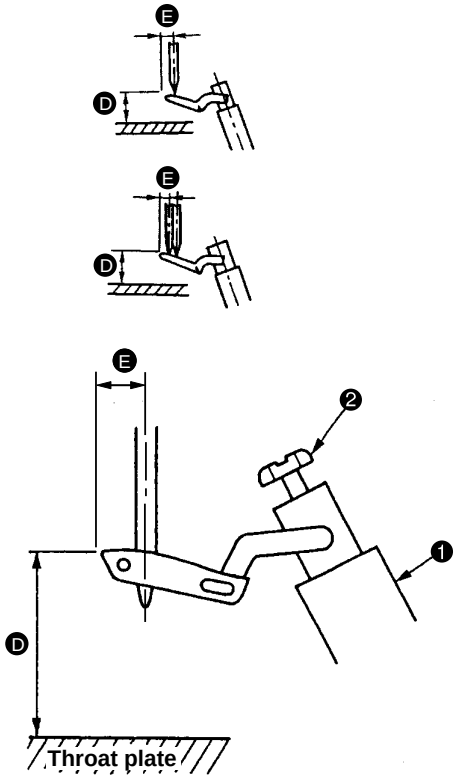
Adjustment Procedure	Results of Improper Adjustment
1) Loosen the setscrew of upper looper ball arm ❸ and setscrew ❺ of the upper looper holder. 2) Adjust the clearances between upper looper bracket ❹ and upper looper holder ❶ to approximately 0.2 mm respectively, and tighten setscrew ❺ of the upper looper holder. (Make sure that the upper looper holder smoothly moves together with upper looper shaft ❻.) 3) Then determine dimension Ⓕ from the bottom surface of the frame to the top surface of upper looper holder pin ❷ before tightening the setscrew of upper looper ball arm ❸. **(Caution) Replace upper looper holder ❶ according to the needle gauge size.**	o Inaccurately positioned upper looper holder will cause excessive projection of the upper looper, resulting in stitch skipping, or contact. **(Caution) To adjust the upper looper ball arm, take dimension Ⓕ as standard.** **Remember that the projecting amount and the height of the upper looper should eventually be properly adjusted. So, confirm the dimensions related to the upper looper.**

(8) Positioning the upper looper

Standard Adjustment

1) Height of the upper looper

The distance between the throat plate surface and the blade point of the looper should be as follows when the upper looper is at the extreme left of its travel.



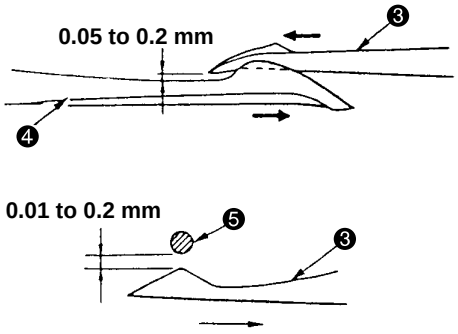
(Unit : mm)

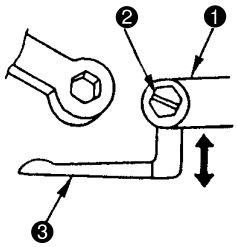
	Model	Dimension D	Dimension E
1-needle overlock machine	MO-6704D-0A△ -150	11.0	4.0
	MO-6705D-0△△-210	11.0	4.0
	MO-6704D-0△△-300	11.0	4.0
	MO-6704D-0△△-307	10.3	4.4
	MO-6704D-0△△-40H	11.3	4.4
	MO-6704D-0F6-50H	11.3	4.4
2-needle overlock machine	MO-6714D-B△△-△△7	10.3	4.4
	MO-6714D-B△△-△△H	10.5	4.8
	MO-6712D-DF6-50△	11.0	3.6
	MO-6714D-B△△-30P	10.3	4.4
Safety stitch machine	MO-6716D-△△△ -300	11.0	4.0
	MO-6716D-FF6-307	10.3	4.4
	MO-6716D-△△△-4△H 50H	11.3	4.4
	MO-6716D-△△△-30P	11.0	4.0

2) Longitudinal position of the upper looper

① The clearance between upper looper ❸ and lower looper ❹ should be 0.05 to 0.2 mm when they cross with each other.

② The clearance between upper looper ❸ and needle ❺ should be 0.01 to 0.2 mm.





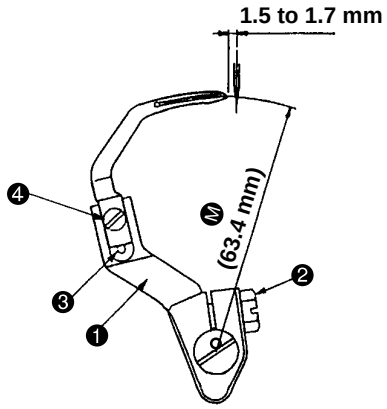
Adjustment Procedure	Results of Improper Adjustment
1) Height of the upper looper ① Set a hexagon wrench key onto setscrew ❷ at the end of upper looper bracket ❶ to adjust height Ⓓ. ② When adjusting the height, pay attention also to the clearance produced between the upper looper and lower looper ❹ at the time of their crossing.	o If the upper looper has been positioned too high, an excessive clearance will be produced between the upper looper and the needle. As the result, the upper looper thread will fail to catch the needle thread, and stitch skipping occurs. o On the contrary, if the upper looper has been positioned too low, the needle point will hit the looper, causing needle breakage. Also the looper will touch other component when the presser foot goes up.
2) Longitudinal position of the upper looper ① Loosen setscrew ❷ at the top end of upper looper bracket ❶ to move upper looper ❸ back or forth for positioning the clearance of 0.05 to 0.2 mm between upper looper ❸ and lower looper ❹ at the time of their crossing or the clearance of 0.01 to 0.2 mm between upper looper ❸ and needle ❺.	o Excessive clearance will cause stitch skipping. o Insufficient clearance will cause the upper looper to come in contact with the lower looper.

(9) Adjusting the double chain looper (Applicable only to MO-6716D series)

Standard Adjustment

1) Returning amount of the double chain looper

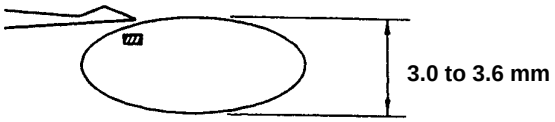
The distance between the needle center and the blade point of the double chain looper should be 1.5 to 1.7 mm when the looper is at the extreme left of its travel.

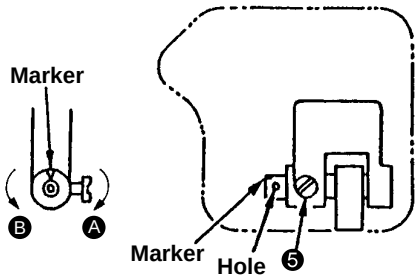


2) Longitudinal motion (Avoid motion)

The standard minor axis of the elliptical motion should be :
3.0 mm.

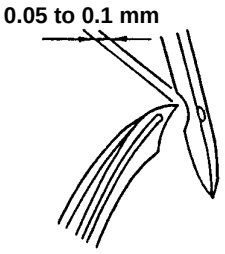
Note : The avoid motion should be adjusted in accordance with Needle No.

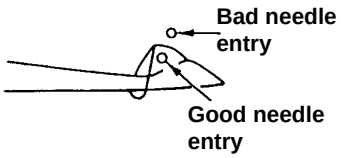




3) Clearance between the double chain looper and the needle

The clearance should be 0.05 to 0.1 mm.



Adjustment Procedure	Results of Improper Adjustment
1) Returning amount of the double chain looper ① Loosen setscrew ❷ of double chain lopper driving arm ❶ to make this adjustment. ② Radius Ⓜ of the double chain looper driving arm ❶ will be 63.4 mm when it is lowered until it comes in contact with stopper pin ❸.	o Excessive return of the double chain looper will cause frequent stitch skipping when filament thread is used. o Insufficient return of the double chain looper will cause frequent thread stitch skipping when a spun thread is used.
2) Longitudinal motion (Avoid motion) ① Open the cover of the adjusting hole on the rear of the frame, loosen setscrew ❺, and put a Ø2 rod in the hole. Now, make the adjustment by turning the rod back and forth. Marker : This side ..... Minimum (for standard to thin needle) Ⓐ Marker : Far side ..... Maximum (for thick needles) Ⓑ } As observed from this side	o If the avoid motion is too large, triangle stitch skipping will often occur.  o Insufficient avoid motion will cause the needle point to hit the looper, producing scratches on the needle point or looper.
3) Clearance between the double chain looper and the needle ① Temporarily tighten setscrew ❷ in the double chain looper, and finely adjust the longitudinal position of the double chain looper. Adjust the clearance to 0.05 to 0.1 mm.	o Excessive clearance will cause frequent needle thread stitch skipping. o Insufficient clearance will cause to looper to hit the needle, leading to needle breakage or scratches on the looper blade point with consequent thread breakage.

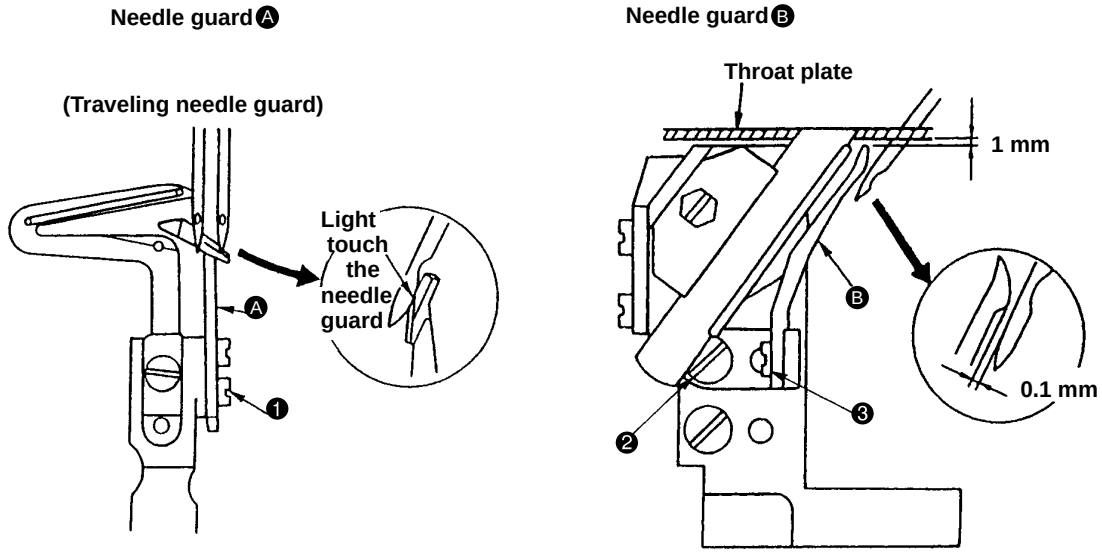
(10) Adjusting the height and clearance of the needle guard

Standard Adjustment

1) For 1-needle or 2-needle overlock machine

The overlock machine has two needle guards, Ⓐ and Ⓑ.

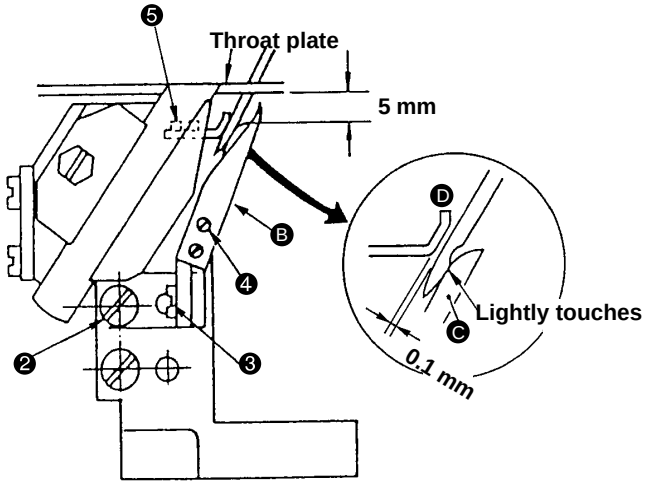
The needle guard Ⓑ should be located 1 mm below the throat plate bottom surface.



2) For safely stitch machine

The safely stitch machine has four needle guards, Ⓐ, Ⓑ, Ⓒ and Ⓓ. The needle guards Ⓐ and Ⓑ are positioned in the same manner as those for the overlock machine.

The needle guard Ⓒ should be positioned 5 mm below the throat plate bottom surface.



Adjustment Procedure	Results of Improper Adjustment
1) For 1-needle or 2-needle overlock machine ① Adjust needle guard Ⓐ with setscrews ❶ in the needle guard so that it lightly comes in contact with the needle when the blade point of the lower looper reaches the needle center. ② To adjust the clearance provided between needle guard Ⓑ and the needle when the needle bar is at the lowest point of its stroke, loosen setscrews ❷ in the needle guard support and turn needle guard Ⓑ to adjust the clearance to 0.1 mm. ③ Adjust the height of needle guard Ⓑ to 1 mm from the throat plate bottom surface with setscrew ❸ in the needle guard.	o Excessively close contact between the needle guard Ⓐ and the needles will lead to needle bend or stitch skipping. o A clearance left between the needle guard Ⓐ and the needles will cause the looper blade point to come in contact with the needles, leading to needle or blade point breakage, or other troubles. o If the needle guard Ⓑ is too high, thread loops will be damaged with resultant stitch skipping. Also, double chain loops will be affected, causing double chain stitch skipping. o If the needle guard Ⓑ is too low, the needle cooling felt will be lowered, resulting in deteriorated effect of the cooling and needle guard. o Excessive clearance between the needle guard Ⓑ and the needle will cause stitch skipping due to needle shake. On the contrary, insufficient clearance will cause the needle guards to catch the needles between them, leading to wear on the needle guards and scratches on the needles.
2) For safety stitch machine ① Loosen setscrews ❹ in the needle guard, and adjust the clearance provided between needle guard Ⓒ and the needle so that it lightly comes in contact with the needle. ② Adjust the installing height of needle guard Ⓒ to 5 mm with setscrew ❸ in the needle guard. ③ Adjust the clearance provided between needle guard Ⓓ and the needle to 0.1 mm with setscrews ❺. **(Caution) Check again the clearance provided between needle guard Ⓑ and the needle after adjusting the height of needle guard Ⓒ.**	o If the needle guard Ⓒ is too high, the needle thread loops will be damaged, and stitch skipping occurs. If it is too low, the needle points will be crushed. o If the clearance between the needle guard Ⓒ and the needles is too large, the double chain looper blade point will come in contact with the needles, causing the breakage of the needles, causing the breakage of the needles or looper blade point. No clearance left between them will cause them to come in excessively close contact with each other, and bend of needle, wear on the needle guard and scratches on the needles will occur. o Excessive clearance left between the needle guard Ⓓ and the needles will cause stitch skipping due to needle shake, and insufficient clearance will cause the needle guards to catch the needles between them, leading to wear on the needle guards and scratches on the needles.

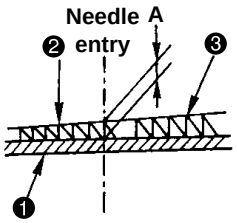
(11) Adjusting the height of the feed dog

Standard Adjustment

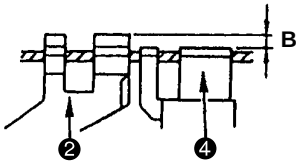
The height of main feed dog ❷ from the top surface of the throat plate ❶ should be as follows when it is at its highest position.

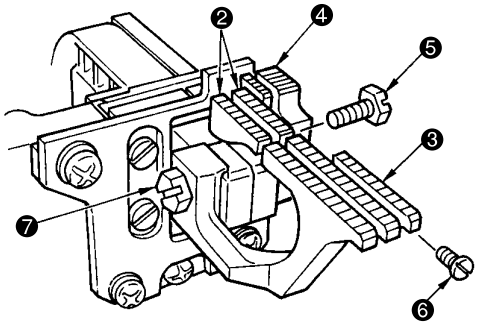
(Unit : mm)

Model	Dimension A
MO-6700D series (30P excluded)	1.0
MO-67△△D-△△△ -30P	0.8



[Standard]
Auxiliary feed dog ❹ is 0.5 mm lower than main feed dog ❷.
B = 0.5 mm
[30P]
Auxiliary feed dog ❹ is as high as main feed dog ❷.
B = 0 mm

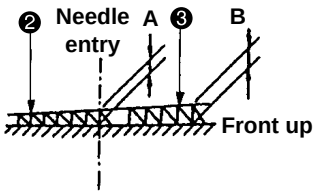




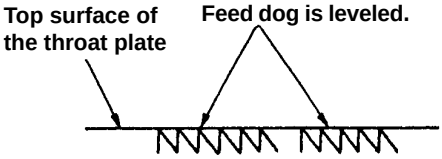
(12) Adjusting the tilt of the feed dog

Standard Adjustment

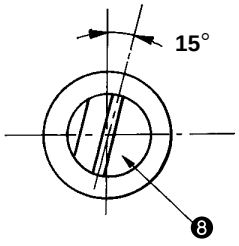
Tilt of the feed dogs when the feed dogs have come up most.



When the feed dog juts out the top surface of the throat plate

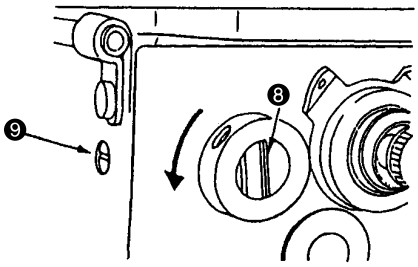


In case of 30P type



(Unit : mm)

Model	Dimension A	Dimension B
MO-6700D series (30P excluded)	1.0	(1.2)
MO-67△△D-△△△-30P	0.8	(0.9)

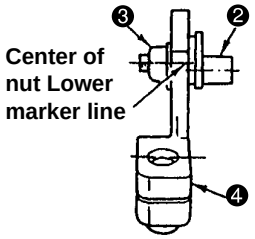
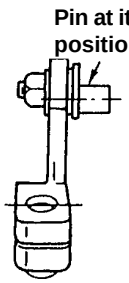
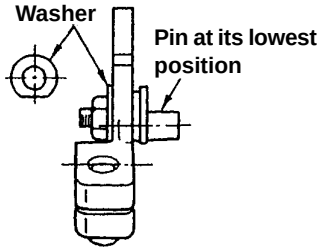


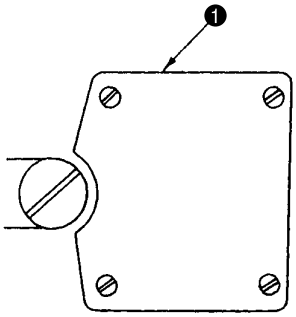
Adjustment Procedure	Results of Improper Adjustment
1) Adjust the height of main feed dog ❷ to dimension A with setscrew ❺. 2) Adjust the height of differential feed dog ❸ with setscrew ❼ so that there is no difference in level between main feed dog ❷ and differential feed dog ❸. 3) Adjust the height of auxiliary feed dog ❹ with setscrew ❻ so that it is 0.5 mm lower than main feed dog ❷.	o If the feed dogs are too high, the needles will be deflected and broken when sewing heavyweight materials. The feed dogs will tend to suffer scratches when sewing light-weight materials. Puckering will frequently occur. o If the feed dogs are too low, insufficient feed power will result. o If the auxiliary feed dog is too high, chain-off thread will be often jammed. o If the main feed dog and differential feed dog are set at different heights, proper differential feeding action will be hindered.

Adjustment Procedure	Results of Improper Adjustment
1) Use the tilt of the feed dog when it is in its highest position as a reference and adjust so that the feed dog is flush with the throat plate when the feed dog juts out the throat plate. 2) Feed bar shaft ❽ consists of an eccentric shaft. Loosen setscrew ❾ to perform adjustment. When the marker line is set at middle .....The feed dog will be flat. When the marker line is set at bottom .....The feed dog will be tilted with its front up (in the arrowed direction). When the marker line is set at top .....The feed dog will be tilted with its front down. **(Caution) The marker line should be used just as the reference since it slightly differs with that of each machine due to the disparity of the components.** **Confirm the accurate tilt of the feed dog by observing the feed dog itself.**	o When tilted with the front up Good material catching will be obtained. o When tilted with the front down Uneven feed and puckering will be effectively prevented.

(13) Adjusting the differential feed ratio

Standard Adjustment

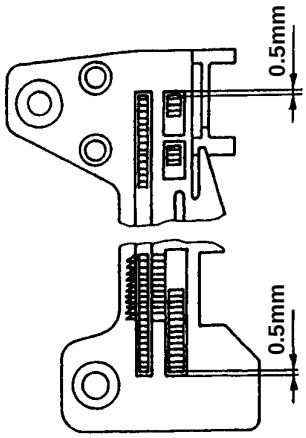
		
(Standard) Gathering: 1: 2 Stretching: 1: 0.7	(Max, stretching) Gathering: 1:1.6 Stretching: 1:0.6	(Max, gathering) Gathering: 1: 4 Stretching: 1: 1.3

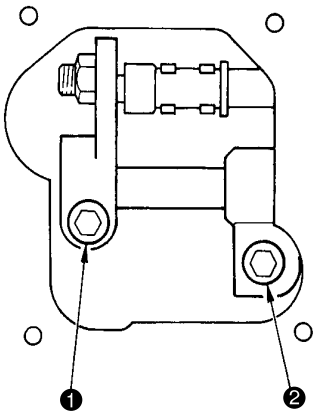


(14) Longitudinal position of the feed dog

Standard Adjustment

When the feed pitch is maximized and the differential feed ratio is also maximized, the clearances of the front and rear ends of the feed dog, and the throat plate should be spaced approximately 0.5 mm respectively.





Adjustment Procedure	Results of Improper Adjustment
1) Remove cover ❶ on the rear of the frame and loosen main feed pin and nut ❸. 2) Move main feed pin ❷ up or down to adjust the differential feed ratio. 3) Adjust so that the lower engraved marker line on main feed rocker ❹ aligns with the center of nut ❸. (Standard) 4) When adjusting the maximum stretching, adjust main feed pin ❷ to the highest position. 5) When adjusting the maximum gathering, adjust main feed pin ❷ to the lowest position. 6) After performing adjustment, tighten the main feed pin and nut ❸, and install cover ❶.	

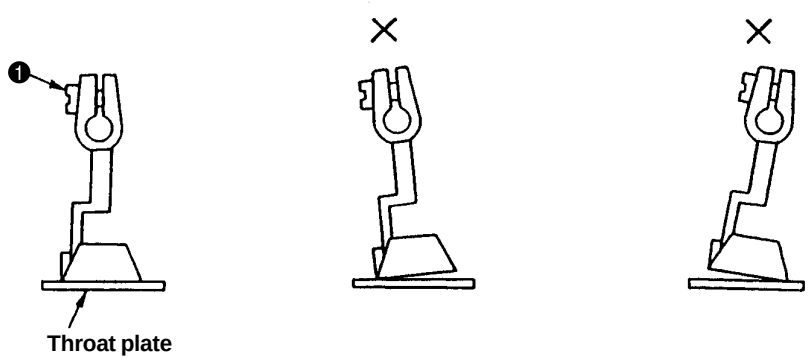
Adjustment Procedure	Results of Improper Adjustment
1) Remove the cover on the rear of the frame, loosen main feed bracket clamping screw ❶ and differential feed bracket clamping screw ❷, and adjust the clearances provided between the front and rear ends of the feed dogs and the slots in the throat plates to approximately 0.5 mm. Then tighten main feed bracket clamping screw ❶ and differential feed bracket clamping screw ❷.	o If the clearance provided between the throat plate and the feed dog is too small, they will come in contact with each other when the sewing machine runs at high speed

(15) Adjusting the presser foot

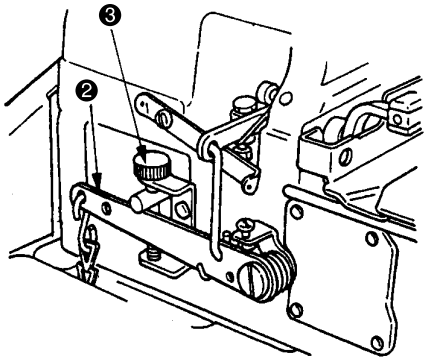
Standard Adjustment

1) Adjusting the tilt of the presser foot

The presser foot should be positioned so that the feed dogs go down under the specified presser foot pressure, and the presser foot sole comes in contact evenly with the throat plate surface.



2) Adjusting the micro-lifting mechanism of the presser foot

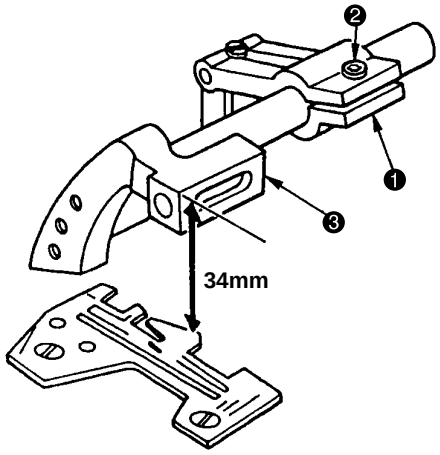


Adjustment Procedure	Results of Improper Adjustment
1) Adjusting the tilt of the presser foot ① Turn the handwheel and place the feed dog in the position where the feed dog does not jut out the top surface of the throat plate. ② Loosen setscrew ❶ and adjust so that the presser foot sole comes in contact evenly with the throat plate top surface. Then tighten setscrew ❶. **(Reference) Accurate adjustment can be made by using two pieces of thin paper to check for even drawing-out tension. In addition, even contact of the presser foot with the throat plate top surface is achieved rather easily by tightening the screw while pushing the right side of the presser foot.** **2) Adjusting the micro-lifting mechanism of the presser foot** ① When moving presser lifting lever ❷ just a little, perform it with fine adjustment screw ❸.	o Uneven contact will result in bad straight material feed and weak feed force. Puckering is apt to occur as well.

(16) Positioning the upper knife arm shaft

Standard Adjustment

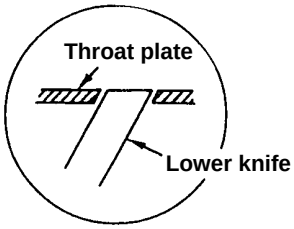
The upper knife shaft should be positioned 34 mm above the top surface of the throat plate when it is at its highest position.

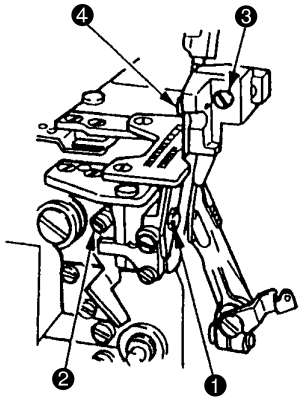


(17) Positioning the upper and lower knives, and available overedge widths

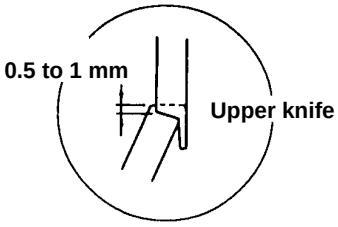
Standard Adjustment

1) Lower knife





2) Upper knife



3) Overedging width

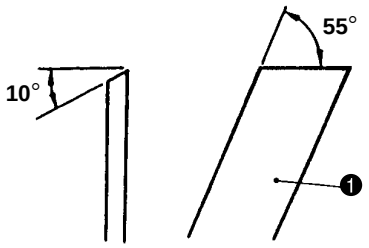
Overedging width can be adjusted from 1.6 to 6.4 mm.

Adjustment Procedure	Results of Improper Adjustment
1) Remove the upper cover, loosen setscrew ❷ in upper knife driving arm ❶, and turn upper knife shaft ❸ to adjust the position from the top surface of the throat plate to 34 mm. **(Caution) Be sure to fully tighten the setscrew since upper knife shaft ❸ is subjected to high load.**	o Improperly positioned upper knife arm shaft will come in contact with the frame. If it is moved with the position of the upper knife unchanged, proper engagement of the knives will be disturbed, prohibiting sharp cutting of the knives.

Adjustment Procedure	Results of Improper Adjustment
1) Lower knife ① Adjust the vertical position of the lower knife by screw ❶ so that the blade top aligns with the top surface of the throat plate. ② Tighten screw ❷ after bringing the upper knife to its lowest position of its stroke. **2) Upper knife** ① Adjust the position of the upper knife by screw ❹ so that the engagement with the lower knife is 0.5 to 1 mm when the upper knife is in the lowest position of its stroke. **(Caution) Adjust the lateral position of the lower knife by screw ❷. Adjust the lateral position of the upper knife by screw ❸. After performing adjustment, be sure to fix the knife. Otherwise, the durability of the knife will be affected.** **3) Overedging width** ① Adjust the overedging width in the following way : Laterally position the upper knife before loosening screw ❷. Tighten screw ❷ when the upper knife has settled by itself under the pressure applied by the spring. Repeat this adjustment procedure to obtain desired overedging width.	o The lower knife, if positioned too high, will catch materials or cause no contact of the presser foot with the throat plate top surface. o If the lower knife is positioned too low, the cutting width will be changed or materials will be caught by the lower knife. o The upper knife, if positioned too high, will fail to cut materials. o Failure of cutting or abnormal wear on the knives will result unless the lower knife is laterally positioned and fixed at a position where it has settled by itself under the upper knife spring.

(18) Resharpening of the knife

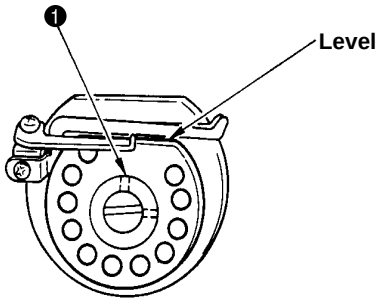
Standard Adjustment



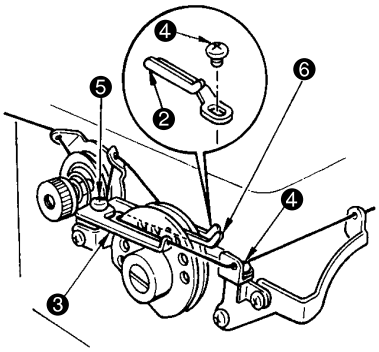
(19) Position of the thread cam (Applicable only to MO-6716D series)

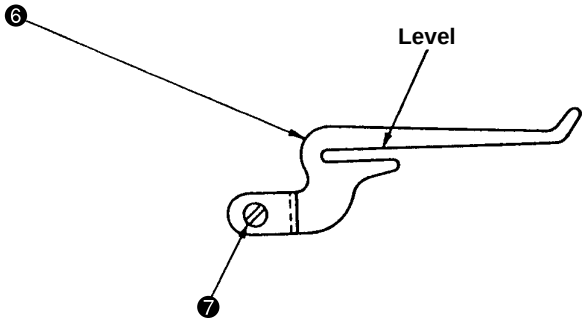
Standard Adjustment

1) Adjustment of the thread cam

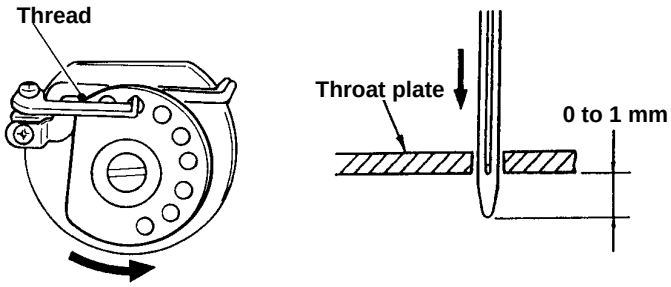


2) Adjusting looper thread cam thread guides A and B and the looper thread cam nail





Adjustment Procedure	Results of Improper Adjustment
1) When the knives have become dull, fully resharpen lower knife ❶ until the contact mark of it disappears. 2) When the upper knife has become dull, replace it with a new one. (This is because the upper knife is a serrated carbide knife.)	o If the 10∞ angle of the lower knife is exceeded, the durability of the knife will be deteriorated, often resulting in blade chipping. o If the angle is smaller than 10°, the knife will be dull. o If the 55° angle is not observed, the knife may catch materials.

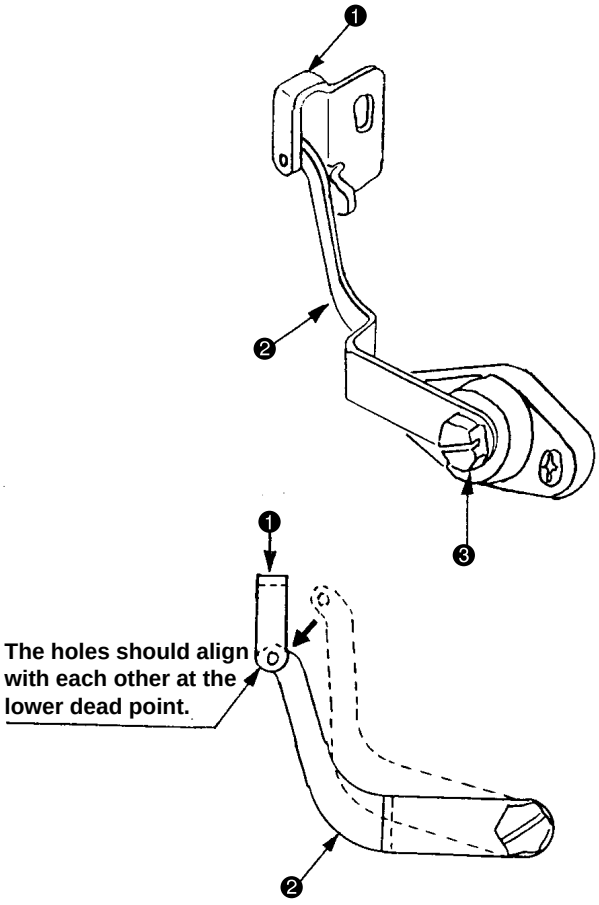
Adjustment Procedure	Results of Improper Adjustment
1) Adjusting the thread cam ① Adjust the position of the thread cam by its setscrew ❶ with the needles at their upper dead point so that the straight section of the thread cam is leveled. ② Laterally position the thread cam so that the looper thread cam nail is located at the center of the thread cam groove. **[How to check for proper positioning]** Check that the thread cam releases the looper thread when the needle tip begins to come out of the bottom surface of the throat plate by 0 to 1 mm.  	o If the timing of the thread cam is too early, the needle point will fail to enter a thread triangle, resulting in looper thread stitch skipping. o If the timing of the thread cam is too late, puckering and loose looper thread stitches will results.
2) Adjusting the looper thread cam thread guides A and B and the looper thread cam nail ① Install looper thread cam thread guides A ❷ and B ❸ at the center of the slots with setscrews A ❹ and B ❺. ② Install looper thread cam nail ❻ with setscrew ❼so that the straight section of the forked portion is leveled.	o If the chain looper thread guide is moved away from you, the take-up amount of the lower looper thread will decrease. In this case, puckering may result there by impairing the feeling of the finished product.

(19) Position of the thread cam (Applicable only to MO-6716D series)

Standard Adjustment

3) Adjusting looper thread auxiliary thread take-up lever (Exclusive for 30P)

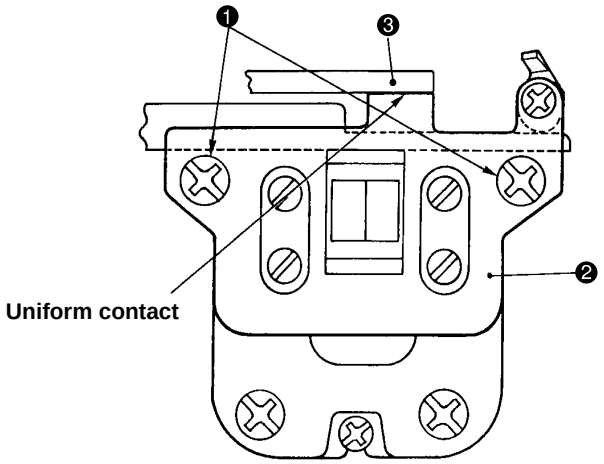
When lopper thread auxiliary thread take-up lever ❷ is in its lower dead point, the thred hole should align with the hole in lopper thread auxiliary thread take-up lever guide ❶.



Adjustment Procedure	Results of Improper Adjustment
1) Open the cloth base cover and loosen setscrew ❸. 2) When looper thread auxiliary thread take-up lever ❷ is in its lower dead point (when the feed dog goes back to the end), tighten setscrew ❸ so that the thread hole in looper thread auxiliary thread take-up lever ❷ aligns with the thread hole in looper thread auxiliary thread take-up lever guide ❶. **(Caution) 1. When the feed pitch is changed, perform re-adjustment.** **2. Confirm that looper thread auxiliary thread take-up lever ❷ does not come in contact with the cloth base cover.**	

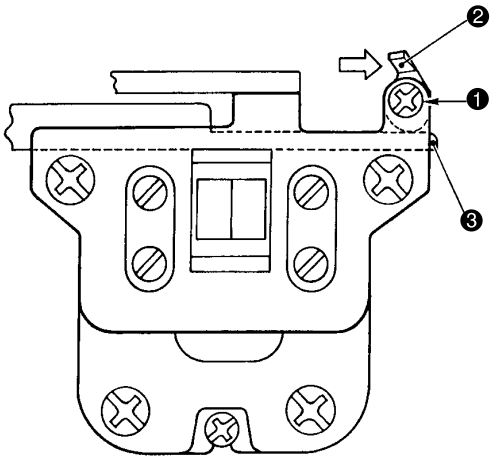
(20) Adjusting the throat plate support

Standard Adjustment



(21) Adjusting the feed mechanism cover presser

Standard Adjustment



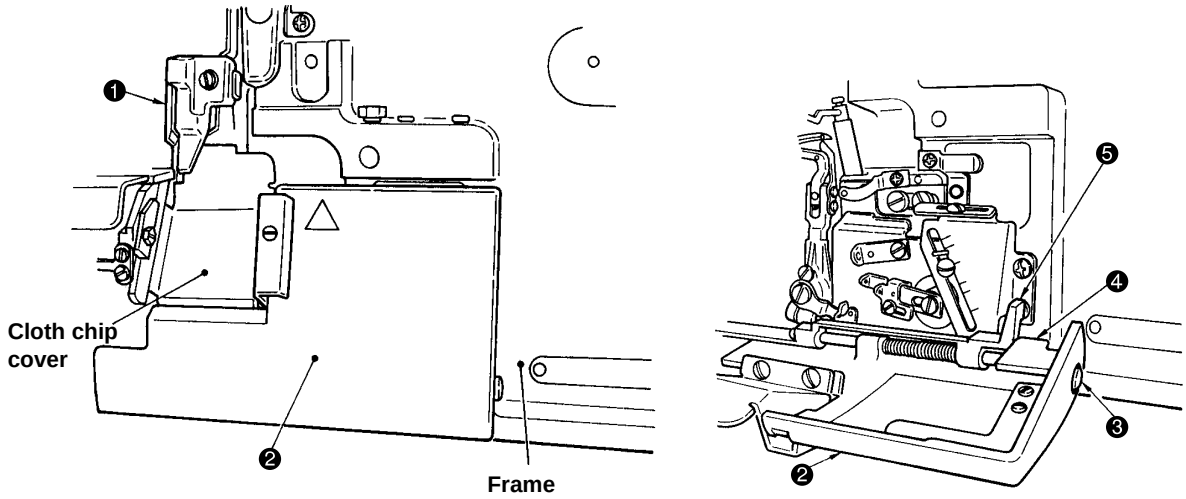
Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrews ❶ and adjust so that throat plate support ❷ should not come in single-sided contact but come in uniform contact with throat plate ❸ using setscrews ❶.	o If the throat plate support comes in single sided contact with the throat plate or does not come in contact with it, the throat plate will vibrate severely.

Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrew ❶ and press feed mechanism cover presser ❷ in the direction of arrow. 2) Press feed mechanism cover ❸ and tighten setscrew ❶ so that the feed mechanism cover should not rise. **(Caution) Check that feed mechanism cover ❸ is pressed so that it should not rise.**	o If the feed mechanism cover is not fully pressed and the cover rises, oil leakage will be caused.

(22) Adjusting the looper cover

Standard Adjustment

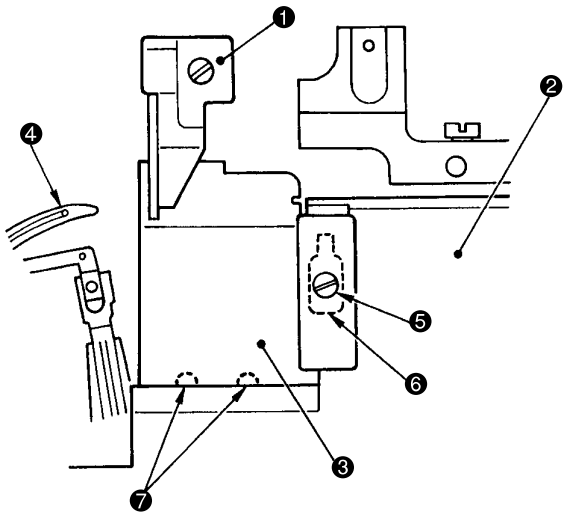
o The looper cover should smoothly close without coming in contact with upper knife ❶ when slowly closing looper cover ❷ with upper knife ❶ in its lowest position of its troke.



(23) Adjusting the cloth chip cover

Standard Adjustment

o When cloth chip cover ❸ is pressed away from you, it should not rattle.
In addition, the cloth chip cover should not come in contact with upper knife ❶ and lower looper ❹.



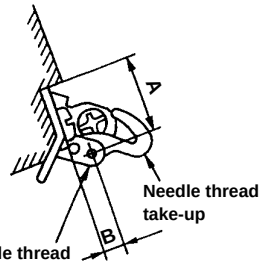
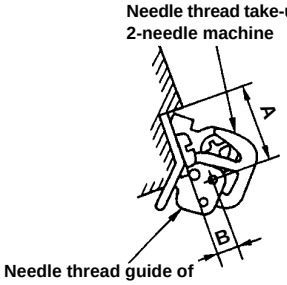
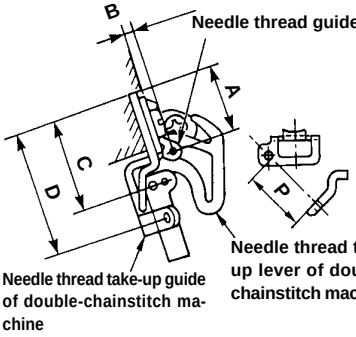
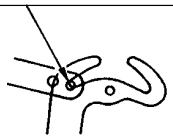
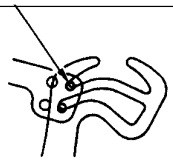
(There are 2 pcs. inside.)

Adjustment Procedure	Results of Improper Adjustment
1) Close looper cover ❷, loosen setscrew ❸, and move looper cover guide plate ❹ back and forth until the looper cover is brought to a position where the cover smoothly closes. 2) Move looper cover guide plate ❹ until it slightly comes in contact with looper cover receiving bracket ❺. Now, fix the guide plate by tightening setscrew ❸.	

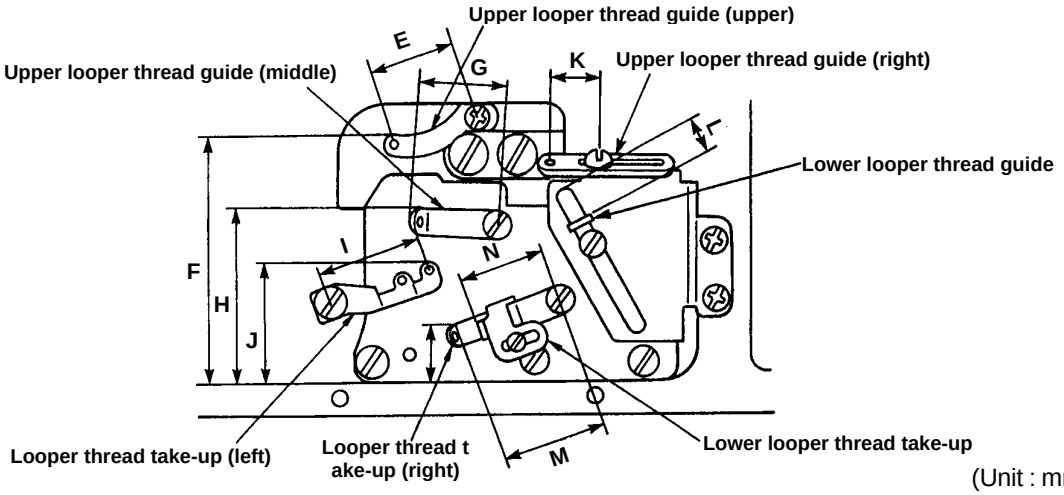
Adjustment Procedure	Results of Improper Adjustment
1) Loosen setscrew ❺ and temporarily tighten the setscrew with cloth chip cover stopper ❻ raised. 2) Loosen setscrews ❼ in the cloth chip cover, and adjust the longitudinal position of cloth chip cover ❸. 3) Loosen setscrew ❺ in the cloth chip cover stopper again, and press cloth chip cover stopper ❻ downward until the stopper slightly comes in contact with looper cover ❷. Now, tighten setscrew ❺. 4) Finally, confirm that cloth chip cover ❸ comes in contact with neither upper knife ❶ nor lower looper ❹.	

(24) Position of the thread guides and the looper thread take-ups

Standard Adjustment

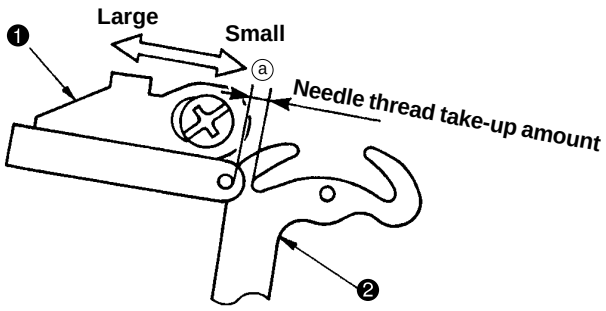
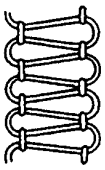
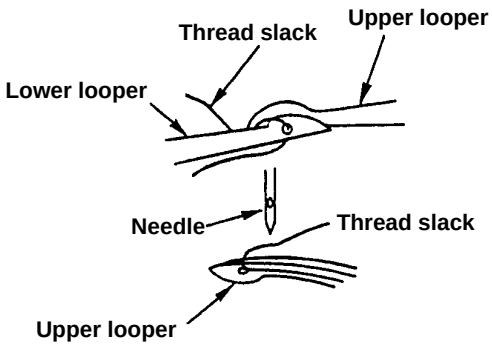
MO-6704D	MO-6714D	MO-6716D
		
The thread hole in the needle thread guide and the hooked portion of the needle thread take-up are in the position where 2/3 of the hole in the needle thread guide can be observed. 	The thread hole in the needle thread guide and the hooked portion of the needle thread take-up are in the position where 2/3 of the hole in the needle thread guide can be observed. 	The thread hole in the needle thread guide and the hooked portion of the needle thread take-up are in the position where 2/3 of the hole in the needle thread guide can be observed.  The thread hole in the double-chainstitch needle thread guide and the hooked portion of the needle thread take-up are in the position where the entire hole in the needle thread guide can be observed.

(Caution) The needle thread take-up shall be positioned at the lower dead point.



(Unit : mm)

Symbol	MO-6△04D (Standard)		MO-6△14D (Standard)		MO-6△16D (Standard)		MO-6△16D (50H)	MO-6△05D (Blind-hemming)		MO-6△04D (Soft chain)
	General thread	Wooly thread	General thread	Wooly thread	General thread	Wooly thread	General thread	General thread	Wooly thread	General thread
A	15.8	←	←	←	←	←	←	←	←	13.5
B	3.4	←	←	←	1.8	←	2.6	3.4	←	2.1
C	—	—	—	—	21.5	←	2.3	—	—	—
D	—	—	—	—	30.5	←	24.5	—	—	—
E	22	←	←	←	←	←	←	←	←	←
F	65	←	←	←	←	←	←	←	←	←
G	17.5	←	←	←	←	←	←	←	←	←
H	43.5	←	←	←	←	←	←	40.5	←	43.5
I	26.5	←	←	←	←	←	←	24	←	26.5
J	38	41	38	←	34	36	34	38	42	43.5
K	15	←	12	15	12	15	12	12	←	14
L	6.5	←	10	←	6.5	←	←	24	34	←
M	29	←	←	←	27.5	←	←	29	←	26.5
N	27	21	23	←	20	←	19	24	←	19
O	11	←	←	←	←	←	←	12	←	9.5
P	—	—	—	—	16	←	12.8	—	—	—

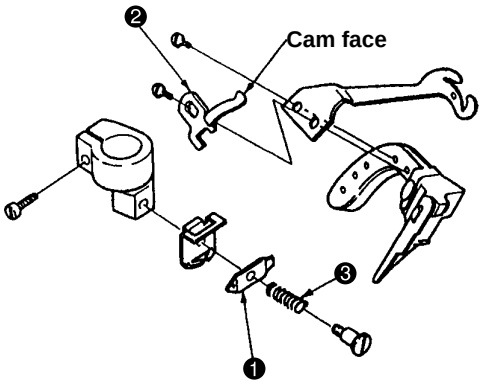
Adjustment Procedure	Results of Improper Adjustment
1) Perform the adjustment by the setscrews. Position of the needle thread guide ❶ and needle thread take up ❷ lever is a very important decisive factor when making soft chains since the needle thread take-up amount is increased in this case. So, carefully position these parts.  2) Set distance I a little smaller when using synthetic thread or the like which tends to form stitches swelling out of the cloth edge. A smaller I is effective for preventing stitch skipping.  Swell out 3) Distance J is related to the vertical knotting point of the upper and lower looper threads. Set this distance larger for wooly thread, and set it smaller for thin thread which is likely to cause stitch skipping. 4) It is desirable to set distance K larger for stretchy threads such as wooly thread. 5) Set distance L a little larger when making blind hemming soft chain stitches. 6) Set distance N a little smaller for blind hemming or making soft chain stitches. 7) Set distance O larger if stitch skipping occurs due to looper thread slack. Set it smaller for better appearance and touch of produced stitches when wooly thread is used.  	o Distance ⓐ When set smaller, better tightness of needle thread stitches will be obtained. When set larger, loose needle thread stitches will result. o Distance E, F and H exert least influence on stitch formation, however, improper setting of these distances will cause contact between the moving parts. o Distance J When set larger, the amount of the upper looper thread will be increased. When set smaller, the amount of the upper looper thread will be decreased. o Distance K When set larger, the amount of the upper looper thread will be increased. When set smaller, the amount of the upper looper thread will be decreased. o Distance L When set larger, the amount of the upper looper thread will be increased. When set smaller, the amount of the upper looper thread will be decreased. o Distance N When set larger, the amount of the upper looper thread will be increased. When set smaller, the amount of the upper looper thread will be decreased. o Distance I When set larger, the amount of the upper and lower looper threads will be increased. When set smaller, the amount of the upper and lower looper threads will be decreased. o Distance O When set larger, the amount of the upper and lower looper threads will be decreased. When set smaller, the amount of the upper and lower looper threads will be increased.

(25) Adjusting soft chain making mechanism

Standard Adjustment

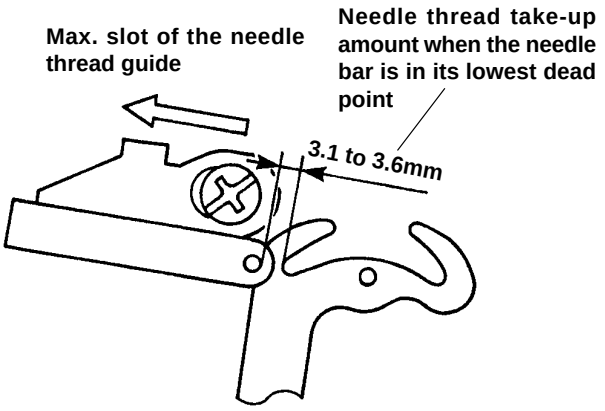
1) Replacing the parts with those exclusively designed for making soft chains

❶ Needle thread presser plate C 12112504
❷ Driving cam 12112603
❸ Needle thread presser spring B 12112702
❹ Throat plate .....(only for 1-needle overlock machine)
0D4-300 ..... R4200J6DD0A

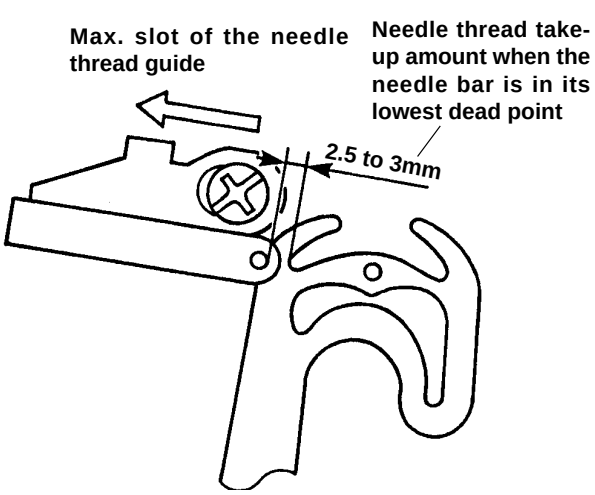


2) Adjustment value

① Needle thread guide and needle thread take-up lever
Adjust the needle thread guide to increase the needle thread feeding amount when the needle bar is in the lowest dead point of its stroke.



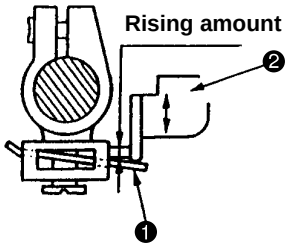
(04 1-needle overlock machine)

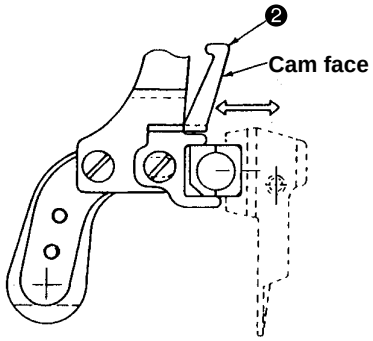


(16 Safely stitch machine)

② Adjust the rising amount of needle thread presser plate C.
Adjust the rising amount of needle thread presser plate C ❶ to 0.6 to 1 mm (max.) by moving driving cam ❷ to the right and left within the slot.

Rising amount : 0.6 to 1 mm (max.)





3) Important points in adjustment

① Increase the thread take-up amount of the needle thread take-up lever.
Refer to the adjustment values related to the needle thread guide and needle thread take-up lever.

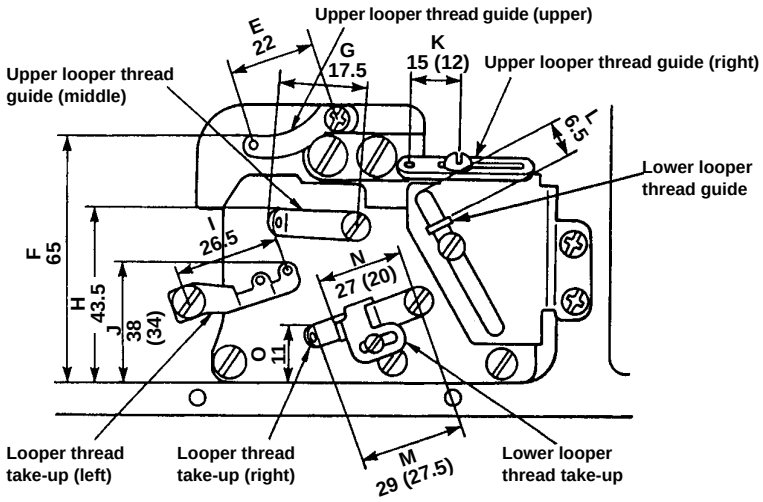
② Reduce the feed of the looper threads. (Mainly lower looper thread)
Set J, K, L and M for the soft chain distances.
Fine adjustment of J and M is required to produce even stitches.

③ Adjsut the thread tension while checking the appearance and touch of the stitches produced.
1) Minimize the needle thread tension as far as satisfactory tightness of needle thread stitches is obtained.
2) Increase the upper looper thread tension as much as possible.

④ If the chain-off thread does not stretch satisfactorily, and if it is not satisfied, proceed with the following.
1) Increase the upper looper thread tension.
2) Further increase distances J and K.
3) Further increase the upper looper thread tension.
4) Increase the lower looper thread tension to a maximum as far as good tightness of needle thread stitches is maintained.
5) Increase the thread take-up amount. If the needle thread is poorly tensed, increase the needle thread tension.

⑤ Fine adjustment for producing stitches with better appearance and touch
1) If the knotting point varies at high or low sewing speed, slightly reduce L, and increase the lower looper thread tension.
2) If a knot is made at a high point, increase J and I.
3) If the needle thread is likely to break, decrease the thread take-up amount and lower the needle thread tension.

⑥ Pay attention to the following
1) Minimize the needle thread tension as far as satisfactory tightness of needle thread stitches is obtained.
2) The knot of upper and lower looper threads should be made near the upper edge of a material.
3) Minimize the lower looper thread tension as far as even stitches are maintained.
4) For a safety stitch machine, adjust the soft chain making mechanism so that uniform chain-off thread is produced during double-chain stitching and overlocking.



The value given in ( ) parentheses is the adjustment value for the safety stitch machine. (Unit : mm)

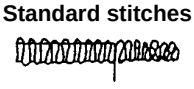
Soft chain stitches

When the chain-off thread is pulled.

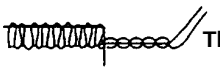
⇨ 

Looper thread should not be loosened and stretch well

Standard stitches



When the chain-off thread is pulled.

⇨ 

The looper thread loosens

4. ADDITIONAL INFORMATION AND PRECAUTIONS

(1) Thread tension

1) Strength of tension spring

Part No.	Color	Natural length (mm)	Operating length (mm)	Weight required to compress spring to working length
13137807	Red	19.5mm	11.5mm	4.21±0.49N (430±50g)
13138508	Yellow	17.8mm	9.8mm	3.14±0.34N(320±35g)
13138805	Blue	17.3mm	9.3mm	1.47±0.20N(150±20g)

2) Springs used for each model.

Model \ Where to use	Needle thread	Double-chainstitch needle thread	Upper looper thread	Lower looper thread
MO-6704D series	Red	—	Yellow	Blue
MO-6714D series	Red • Yellow	—	Blue	Yellow
MO-6716D series (30P included)	Red	Yellow	Yellow	Blue
MO-6716D-△△△-4△H, -50H	Red	Red	Blue	Yellow

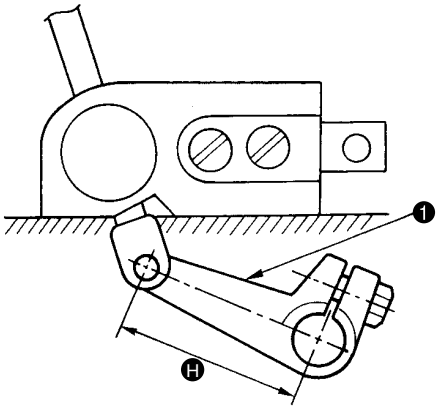
(2) Upper looper

Use a proper upper looper in accordance with the needle No. When ordering, refer to the Parts List. The numbers shown in ☐ frame in the table below are engraved markers. In addition, the letters in ( ) parentheses are the kinds of the needles.
Parts Nos. with an asterisk * are factory-installed on the standard machine heads at the time of delivery.

Model	Nos. engraved on upper looper	Needle No. (kind)
MO-6704D series MO-6716D series	*1188 81	#9 #11 #14
MO-6714D series	*1217 60	

(3) Center-to-center distance of the upper looper holder

The center-to-center distance of upper looper holder 1.



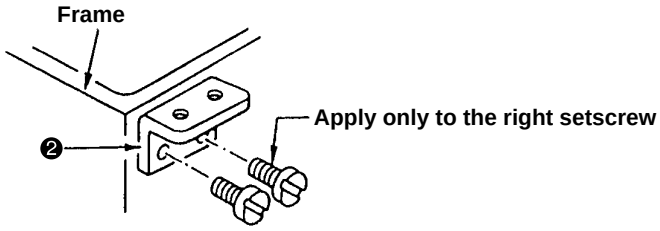
(Unit : mm)

Model	Center-to-center distance Ⓗ
MO-6704D - △△△ - △△△ MO-6705D - △△△ - △△0	38
MO-6704D - 0E4 - 40H 0F6 - 50H	39
MO-6712D -D△△- △△△	39
MO-6714D - △△△ - △△△	39
MO-6716D - △△△ - △△0	38
MO-6716D -DE△ to FF△ - 4△H 5△H	39
MO-6743D - △△△ - 40H	39

(4) Caution in assembly

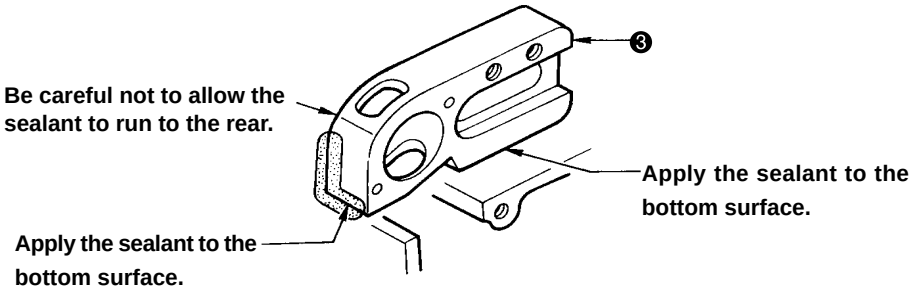
1) Application of sealant

① Setscrew of the throat plate base (B) retainer ❷ (JUKI seal)
Apply the sealant only to the right setscrew.



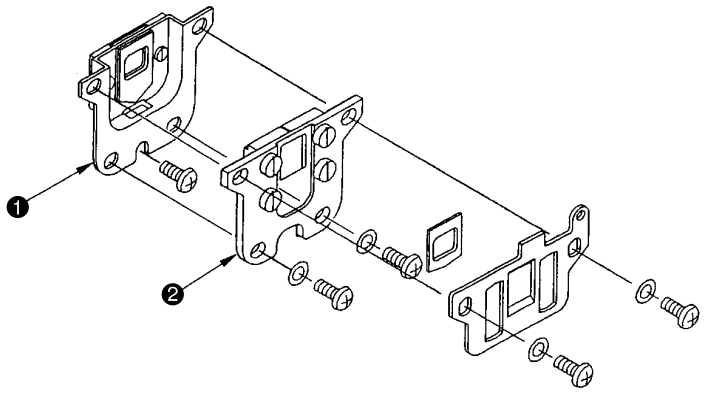
② Bottom surface of the upper looper guide support ❸ (Three-bond 1104)
Apply the sealant to the bottom surface of the upper looper guide support ❸, which contacts with the frame surface.

③ After assembling the front edge of the upper looper guide support ❸ (JUKI seal), apply the sealant to the gap of the contact surface between the frame and the upper looper guide support (▦ section in the illustration).



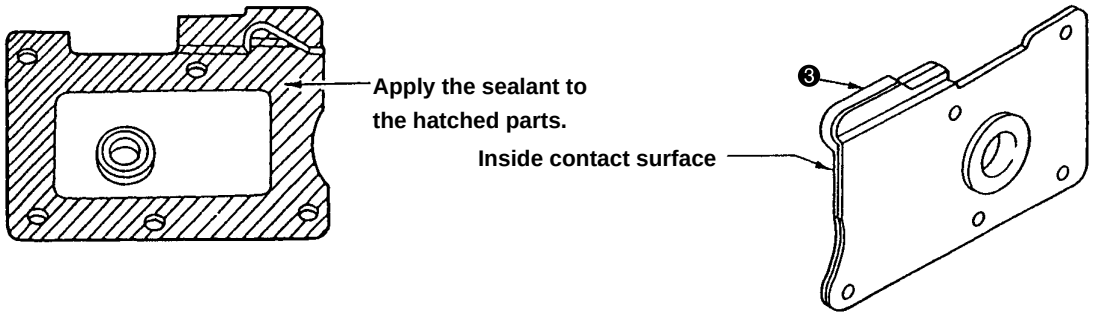
④ Portion of the setscrews of the dust-proof rubber case (JUKI seal)

Apply the sealant to the oil shield case setscrew ❶ (1 pc.) and the dust-proof rubber case ❷ setscrews (4 pcs.)



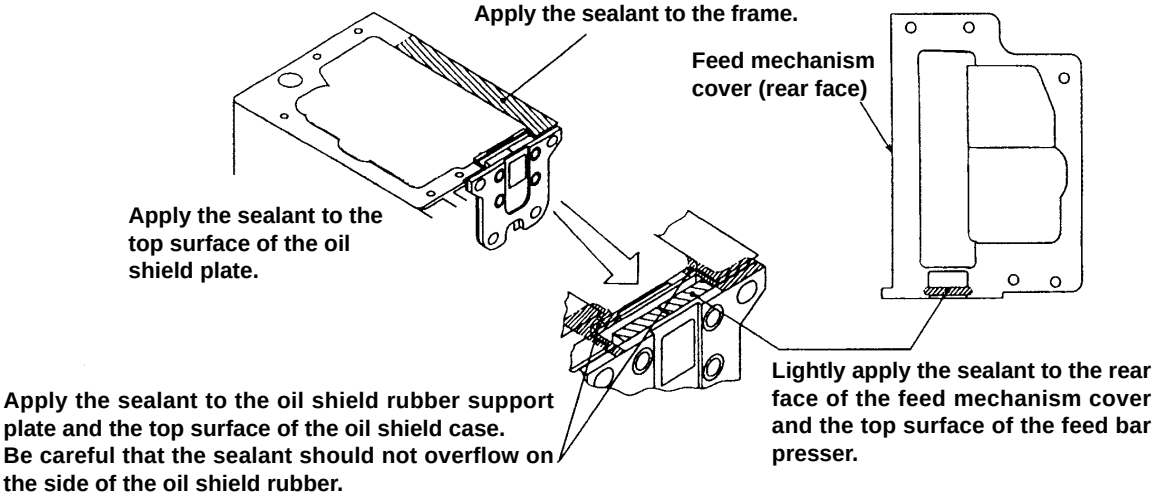
⑤ Oil shield plate assembly (JUKI seal)

Apply the sealant to the inside of the oil shield plate ❸.



⑥ Portion of the feed mechanism cover (Three-bond 1212)

Apply the sealant to the rear face of the feed mechanism cover, the top surface of the oil shield plate, the oil shield rubber support plate , the top surface of the oil shield case, and the hatched parts on the top surface of the feed bar presser.



⑦ Various sealants

Maker's name	Part No.
Three Bond	1104D *
Three Bond	1104
Three Bond	1212

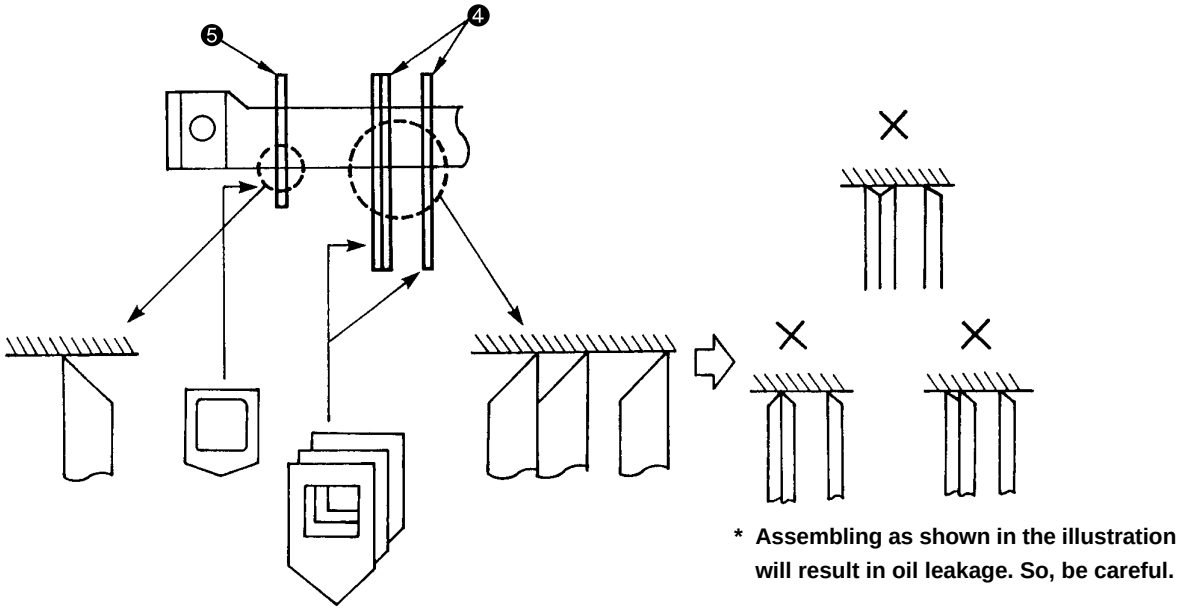
*** : It is commonly called "JUKI seal".**

JUKI exclusive part Nos. of the above 3 kinds of the sealants are not set.

2) Precautions to be taken with respect to the lubricating components

① Feed bar components

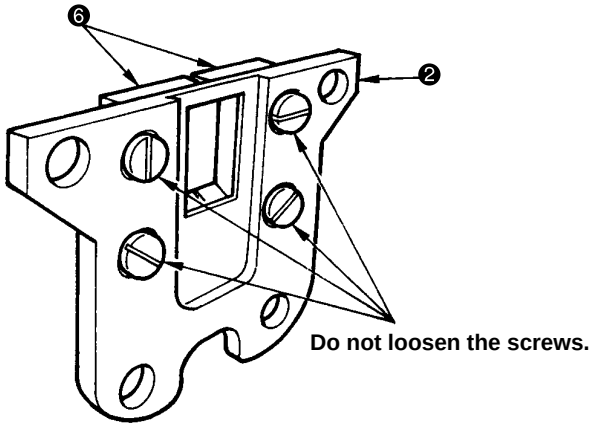
o Be careful of the orientation of the oil shield rubber ❹ and the dust-proof rubber ❺.



*** Assembling as shown in the illustration will result in oil leakage. So, be careful.**

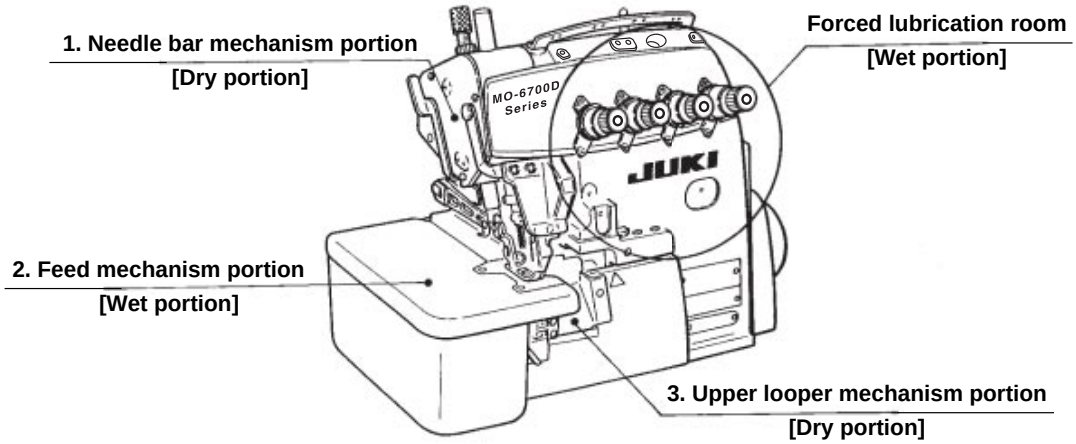
o Assemble the feed bar presser ❻ and the dust-proof rubber case ❷so that their top faces are flush with the frame plane on which the feed mechanism cover is installed.

o Do not loosen the screws in feed bar presser ❻ unless it is necessary. The clearance between the feed bar presser and the feed bar and the contact with each other are important.



Do not loosen the screws.

② Portion converted to dry-head type



3) Applying the exclusive grease

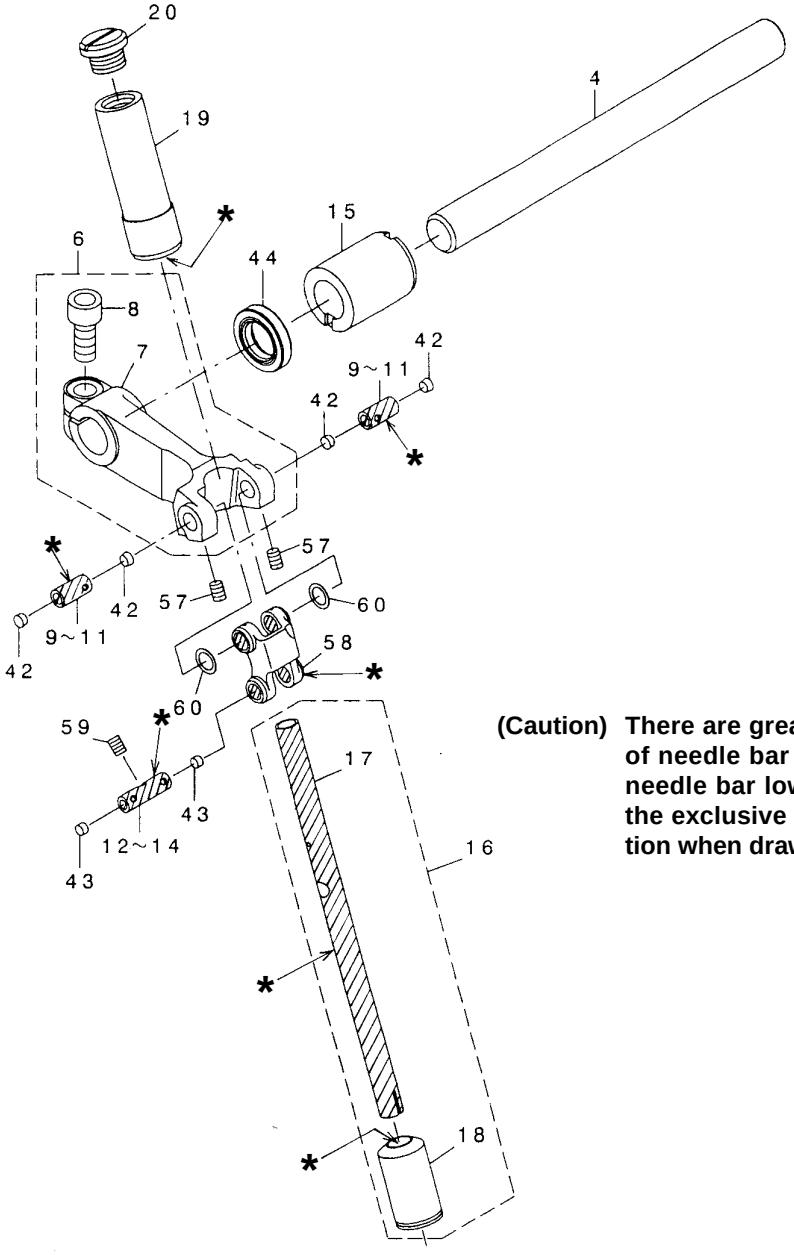
o The exclusive grease (23640204) is applied to the necessary components other than the lubricating components. Never use any grease other than the exclusive one.

It is not necessary to additionally apply grease to the components when the sewing machine is used under the normal condition.

When the machine is used under the specially severe condition, it is effective to periodically (once a year or every other year) fill up the exclusive grease.

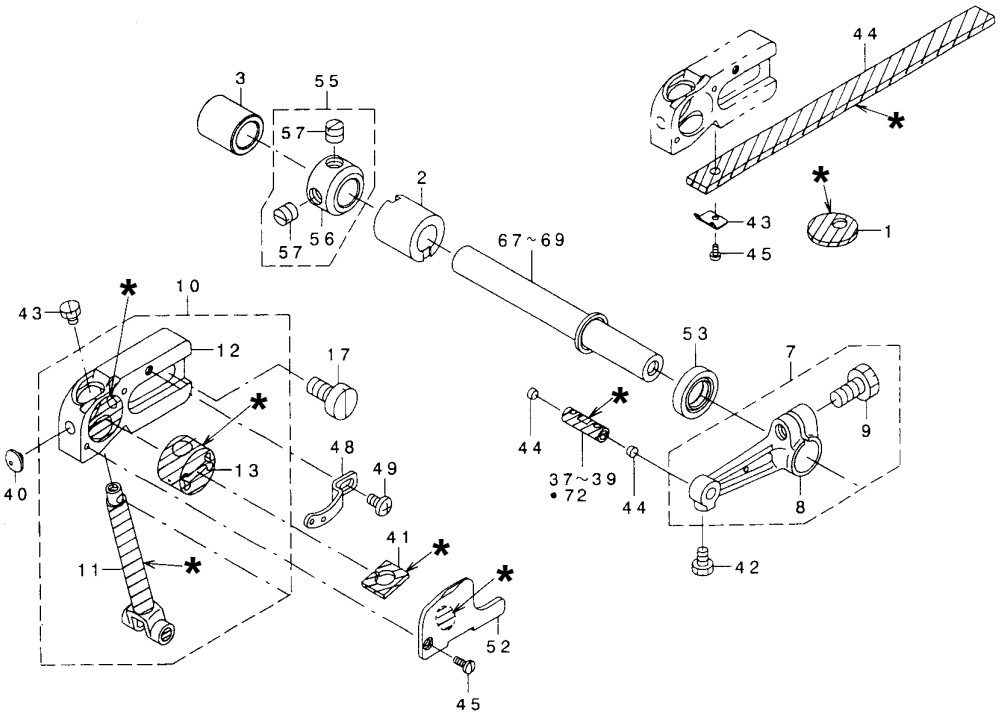
* ▨ : Apply the exclusive grease.

① Needle bar components



(Caution) There are grease grooves on the inside of needle bar upper metal (No. 19) and needle bar lower metal (No. 18). Fill up the exclusive grease to the groove portion when drawing out the needle bar.

② Upper looper components



(5) Kinds of motor pulleys, belts and frame support plate bolts

1) Motor pulleys and belts

Sewing speed of sewing machine (rpm)	50Hz			60Hz		
	Outside diameter of motor pulley mm (effective diameter mm)	V-belt		Outside diameter of motor pulley mm (effective diameter mm)	V-belt	
		Semi-sunken type mm (inch)	Fully-sunken type mm (inch)		Semi-sunken type mm (inch)	Fully-sunken type mm (inch)
6000	110 (105)	914 (36)	813 (32)	95 (90)	889 (35)	762 (30)
5500	100 (95)	914 (36)	813 (32)	85 (80)	889 (35)	762 (30)
5000	90 (85)	889 (35)	762 (30)	80 (75)	864 (34)	762 (30)
4500	85 (80)	889 (35)	762 (30)	70 (65)	864 (34)	762 (30)
4000	75 (70)	864 (34)	762 (30)	60 (55)	864 (34)	737 (29)

* A motor with 1/2 horsepower (400 W) or more shall be used.

(Caution) If a motor of less than 400W is used, in the low temperature area, viscosity of oil increases and the sewing speed may not increase or the sewing machine may fail to run in some cases.

* Part No. of motor pulley

MTKP0xxx000 (Enter the effective diameter to “xxx.”)

If the outside diameter of the motor pulley is 90 mm, the effective pulley will be 085.

.....So, the part No. will be MTKP0085000.

* Part No. of belt

MTJVM00xx00 (Enter a number that shows the belt length to “xx”)

If the belt length is 889 mm (35 inches), enter “35” to “xx.”

.....So, the part No. will be MTJVM003500.

2) Pat No. of frame support plate bolt

① Semi-sunken type

Support plate bolt (A)	13155007	x 4
Locknut	NS6240630SE	x 4
Washer	WP1002036SE	x 4
Spring washer	WS1002560KR	x 4

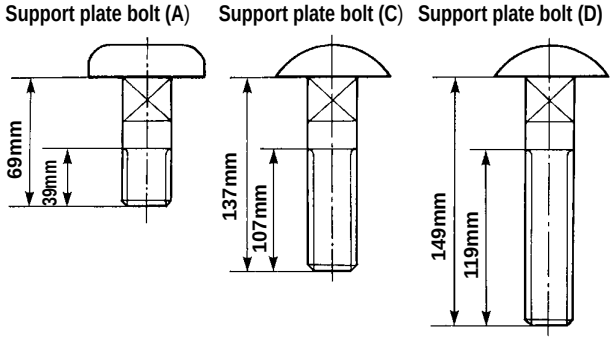
② Fully-sunken type

Support plate bolt (C)	13155106	x 2
Support plate bolt (D)	13155205	x 2
Locknut	NS6240630SE	x 12
Washer	WP1002036SE	x 12
Spring washer	WS1002560KR	x 4

Difference of support plate bolts (A), (C) and (D)

Entire length under the neck and length of threaded part

	Entire length (mm)	Length of threaded part (mm)
Support plate bolt (A)	69	39
Support plate bolt (C)	137	107
Support plate bolt (D)	149	119



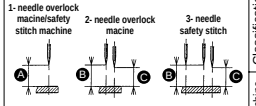
5. ADJUSTMENT VALUES OF THE NEEDLE HEIGHT AND LOOPER TIMING

(1) MO-6700D SERIES

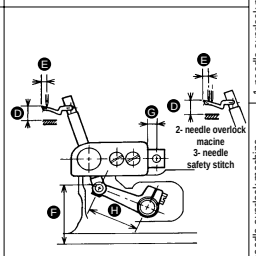
(Unit : mm)

Classification	Subclass	Needle height: 1-needle 2-needle (left) Ⓐ Ⓑ	Needle height: 2-needle (right) Ⓒ	Upper looper components: Upper looper height Ⓓ	Projection of upper looper Ⓔ	Upper looper holder height of pin Ⓕ	Marker of guide support	Position of guide support Ⓖ	Guide support cover	Center-to-center of upper looper holder Ⓗ	Marker of upper looper holder	Lower looper components: Feed amount of lower Ⓙ	Lower looper components: Radius of lower looer Ⓚ	Double-chain looper: Feed amount of double-chain looper Ⓛ	Double-chain looper: Radius of double-chain looper Ⓜ
1-needle overlock machine	MO- 6704D - 0A5 to 0F5 15 △ 6705D - 0A4 to 0E4 - 210 0D6 3 △△	10.5±0.1	—	11.0±0.3	4.0±0.3	(45.0)	A	7	40004713 Marker A	38	#81 (11888609)	$4.0^{+0.5}_{-0.8}$	66.9	—	—
	MO-6704D - 0F4 - 30△	10.5±0.1	—	11.0±0.3	4.0±0.3	(46.2)	A	6.3	40004713 A	38	#81 (11888609)	$3.7^{+0.5}_{-0.7}$	66.9	—	—
	MO- 6704D - 0D4 to 0E4 0F6 - 4△H 50H	11.3±0.1	—	11.3±0.3	4.4±0.3	(48.2)	A	5.8	40004713 A	39	#19 (11991908)	$3.8^{+0.5}_{-0.8}$	66.9	—	—
2-needle overlock machine	MO- 6714D - BD6 to BE6 - △△7	10.5±0.1	(9.1)	10.3±0.3	4.4±0.3	(47.3)	B	6	40004714 B	39	#60 (12176004)	$3.8^{+0.5}_{-0.8}$	66.9	—	—
	MO-6714D - B△6 - 30P	10.5±0.1	(9.1)	10.3±0.5	4.4±0.3	(47.3)	B	6	40004714 B	39	#60 (12176004)	$3.8^{+0.5}_{-0.8}$	66.9	—	—
	MO- 6714D - BD△ to BE△ - △△H	11.3±0.1	(9.9)	11.0±0.5	4.8±0.3	(48.4)	A	5.8	40004713 A	39	#61 (12176103)	$3.8^{+0.5}_{-0.8}$	66.9	—	—
	MO- 6712D - DF6 - 50F	11.0±0.3	(9.4)	11.0±0.5	3.6±0.3 (Right side)	(46.9)	B	5.5	40004714 B	39	#66 (11996600)	2.2±0.3	66.9	—	—
Safety stitch machine	MO- 6716D - △△△ - 30△	10.5±0.1	—	11.0±0.3	4.0±0.3	(46.2)	A	6.3	40004713 A	38	#81 (11888609)	$3.7^{+0.5}_{-0.7}$	66.9	1.5 to 2.0	63.4
	MO- 6716D - D△△ to F△△ - 4△H 50H	1.3±0.1	—	11.3±0.3	4.4±0.3	(48.2)	A	5.8	40004713 A	39	#19 (11991908)	$3.8^{+0.5}_{-0.8}$	66.9	1.5 to 2.0	63.4
	MO- 6743D - 1D6 2D6 - 40H	11.3±0.1	(9.9)	11.0±0.3	4.8±0.3	(48.4)	A	5.8	40004713 A	39	#61 (12176103)	$3.8^{+0.5}_{-0.8}$	66.9	1.5 to 2.0	63.4
	MO- 6745D - FF4 - 360	9.8±0.1	—	—	—	—	—	—	—	—	—	—	—	2.0 to 2.5	63.6

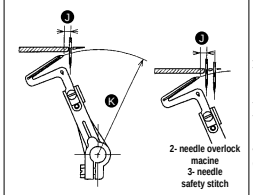
Needle height



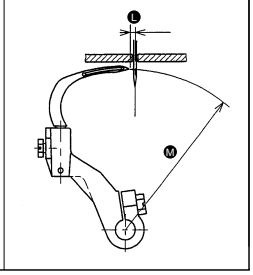
Upper looper components

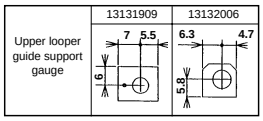


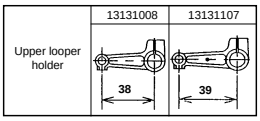
Lower looper components



Double-chain looper components





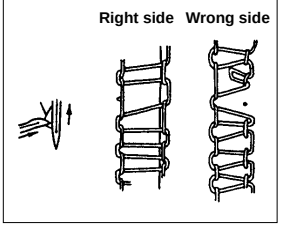


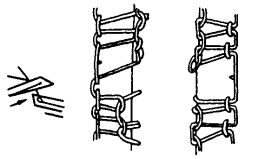
6. TROUBLES AND CORRECTIVE MEASURES

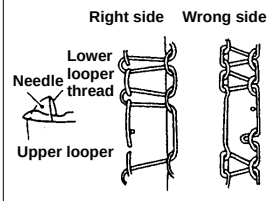
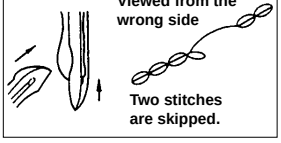
Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
1. Needle thread breakage	Threading	The thread is entangled with the thread guide, or the machine head has been incorrectly threaded.	Refer to the threading diagram. (Refer to the Instruction Manual)	
	Thread path	Scratches, burrs or rust on the pawls or needle holes of the throat plate, stitch tongue, lower looper, double chain looper, needle thread take-up, needle thread presser spring, thread guide, or tension discs causes friction.	Remove such scratches, burrs, etc. and perform thread path finishing. Replace major components such as looper, which have been deformed, causing thread breakage.	
	Needle guard	The needle hits the needle guard intensely, and sharp edges are produced on them, causing thread breakage.	Replace the needle and needle guard if they have worn,	18
	Needle	The needle is too thin for the thread.	Replace the needle by a proper one.	
	Needle heat	The needle gets very hot, depending on the type of materials, number of plies and sewing speed, and causes the thread to burn and break.	Use a thinner needle. Reduce the sewing speed. Use the needle cooler. Use an S-point needle or needle for synthetic thread.	
	Thread	The thread is weak because of its poor quality.	Replace the thread by one with good quality.	
	Thread tension	The thread tension is too high.	Reduce the thread tension. Check whether the needle thread take-up guide and needle thread guide are positioned too high, causing such excessive thread tension.	
	Contact	The double chain looper or lower looper has been improperly positioned and strikes the feed dog or throat plate.	Properly position the double chain looper or lower looper.	8, 16
	Double thread hooking (only for double chain stitch)	Poor drawing up of the needle thread causes the looper to catch it again.	Increase the needle thread tension. Properly position the thread cam. Properly position the double chainstitch thread guide.	28
	Defective double chain-off thread (only for double chain stitch)	Refer to the clause referring to defective double chain-off thread.		

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
2. Looper thread breakage	Thread path	Scratches, burrs, rust, etc, on the paw of the throat plate, stitch tongue, looper, looper thread take-up, thread guide, or tension discs causes friction.	Remove such scratches, burrs, etc. and carry out thread path finishing. Replace loopers or other components which have been deformed, causing thread breakage.	
	Adjustment of the looper thread take-up	The looper thread take-up or thread guide has been improperly positioned, causing excessive thread tension.	Refer to the pertinent Standard Adjustment.	36
	Thread tension	The looper thread tension is too high.	Reduce the tension while checking the tension balance other looper thread.	
	Thread	The thread is weak because of its poor quality.	Replace the thread by one with good quality.	
	Position of the thread guides (only for double chain stitch)	The upper looper thread guide is too high, and the thread taking balance is disturbed, resulting in the thread breakage.	Refer to the pertinent Standard Adjustment.	36
	Double chain looper avoid	The double chain looper strikes the needle at the back, causing the thread breakage.	Correct the longitudinal motion of the double chain looper so as not to cause the looper to strike the needle.	16
	Needle heat	The needle gets hot, and the looper thread breaks when it comes in contact with the hot needle at the time of needle stop.	Refer to the clause relating to the needle heat causing needle thread breakage.	
3. Needle breakage	Needle entry	The needle entry has not been correctly adjusted, and the needle strikes the throat plate or presser foot.	Correct the needle entry.	4
	Upper looper position	The upper looper juts out too much or it is too low.	Refer to the related Standard Adjustment.	14
	Contact with the looper	The needle strikes the looper, resulting in needle breakage.	Re-position the looper so that it does not come in contact with the needle. Adjust the longitudinal motion of the double chain looper for the contact of its back with the needle.	

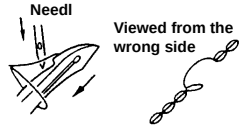
to the next page

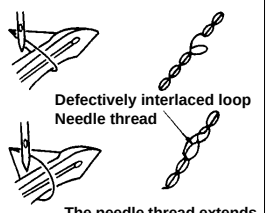
Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
From the previous page				
	Needle guards	A needle guard has been improperly positioned, causing the needle point to strike it.	Refer to the pertinent Standard Adjustment.	18
	Needle No.	The needle is too thin for the materials.	Replace the needle with a thicker one.	
	Thread tension	The thread tension is too high.	Reduce the thread tension.	
	Height of the feed dog or needle	The feed dog is too high, or the needle is too low, causing the needle to deflect with resultant needle breakage.	Refer to the related Standard Adjustment.	4, 20
4. The needle point is crushed. (Double chain stitch needle)	Needle guard	The needle guard C is too low, or its longitudinal position is not correct.	Increase the height of the needle guard (C). Check the clearance between the needle and needle guard.	18
	Contact with the looper	The tilt of the looper is not correct. The longitudinal motion of the looper is not correct.	Check the tilt of the looper. Correct the longitudinal motion of the looper, and increase the clearance between the looper and needle when the looper reaches its most retracted position.	16
5. Overlocking needle thread stitches are skipped.	Lower looper	The blade point has defective shape and does not catch needle thread loops.	Replace the lower looper.	
	Adjustment of the loopers.	The clearance or the amount of return is not correct.	Refer to the relevant Standard Adjustment.	8
	Needle thread presser	The duration in which the presser holds the needle thread is not correct, and unstable loop result.	Refer to the pertinent Standard Adjustment.	
	Needle	The needle is bent or improperly oriented. A needle or DC x 1 is used.	Replace the bent needle. Correctly orient and attach the needle. Use a DC x J27 needle for a stretchy thread.	
	Needle guards	Incorrect height or clearance prohibits correct guide for the needle. If a needle guard is too high, loops are crushed with consequent stitch skipping.	Refer to the pertinent Standard Adjustment.	18
The lower looper fails to catch needle thread loops. 				
to the next page				

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
From the previous page				
	Height of needle	The needle has incorrect height and does not properly pick up loops even if the looper has a correct return.	Refer to the related Standard Adjustment.	4, 8
	Needle heat	Stitch skipping occurs before the thread breaks due to needle heat.	Refer to the clause relating to the needle thread breakage due to needle heat.	
	Positioning of the needle thread take-up guide and needle thread guide	They are positioned too high, and the needle thread take-up takes too much thread, producing too small loops.	Refer to the pertinent Standard Adjustment.	36
	Threading	The thread has been entangled with a thread guide. The reading has bot been correctly done.	See the threading diagram. (Refer to the Instruction Manual)	
6. Lower looper stitches are skipped	Threading	The thread has been entangled with a thread guide. Threading has not been done correctly.	Refer to the threading diagram. (Refer to the Instruction Manual)	
The upper looper does not catch the lower looper thread. **Right side** **Wrong side** 	Upper looper	The blade point has a bad shape, and fails to catch the loops.	Replace the upper looper with badly deformed blade point.	
	Lower looper	The clearance between the needle and the back of lower looper are not correct.	Replace the lower looper having a deformed tip.	
	Adjustment of the loopers	The feed amount of the lower looper, height of the upper looper, or clearance produced at time of crossing of the upper and lower oopers is not correct.	Refer to the relevant Standard Adjustment.	8, 14
	Thread amount	Too much lower looper thread is fed, giving slack of thread.	Slightly lower the looper thread take-up (left) (reduction in distance J), or slightly reduce distance I to decrease the amount of thread.	36
			Slightly raise the looper thread take-up (right) (increase in dimension O) to decrease the amount of thread. Lower the lower looper thread guide (increase in distance L), and decrease distance N to reduce the amount of thread.	36

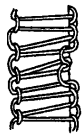
Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
7. Upper looer thread stitches are skipped. **The needle does not take the upper looper thread.**  	Threading	The thread has been entangled with a thread guide. Threading has not been done correctly.	See the threading diagram. (Refer to the Instruction Manual)	
	Needle height	The needle, if positioned too high or low, may fail to catch the upper looper thread.	Refer to the related Standard Adjustment	4
	Needle	The needle is bent or crushed, in its point.	Replace the needle. At this time, be sure to eliminate the cause for such needle bend or needle point crush.	
	Adjustment of the upper looper.	The height of the blade point is not correct, making the upper looper unable to properly pass the thread to the needle. The clearance between the needle and the back of the upper looper is not correct.	Refer to the relevant Standard Adjustment.	4, 14
	Amount of thread	Excessive upper looper thread is fed, producing stack of thread.  	Slightly lower the looper thread take-up (left) (reduction in distance J), or slightly reduce distance I to decrease the amount of thread. Make the upper looper thread guide (right) (shorter decrease in distance K), to reduce the amount of thread.	36
			Slightly raise the looper thread take-up (right) (increase in dimension O) to decrease the amount of thread.	36
			If the thread tension is not enough, increase it.	
8. Double chain stitches are skipped. **The double chain looper tails to catch needle thread loops.**  	Needle height	If the needle is not correct, stitch skipping occurs even when the return of the chain looper is correct.	Refer to the pertinent Standard Adjustment.	
	Needle	The needle is bent or attached with wrong orientation. A DC x1 needle is used.	Replace the bent needle. (Remove the cause for the needle bend.) Correct the orientation of the needle. Use a DC x27 needle (with a better recess configuration).	
	Double chain looper	The lower part of the blade point has been deformed, and the blade point fells loops.	Replace the double chain looper.	

to the next page

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
From the previous page				
	Adjustment of looper	Clearance or returning amount is not correct.	Refer to the related Standard Adjustment.	6
	Thread tension	The thread tension is too high, preventing formation of good loops.	Reduce the tension. However, be careful not to reduce the tension too much, otherwise unstable loops will result.	
	Needle guards	A needle guard is too high, and loops are crushed. The clearance is too big, causing the needle to shake.	Refer to the relevant Standard Adjustment.	18
	Needle heat	The thread breaks due to heat generated on the needle, depending on the type of materials, number of plies, and sewing speed.	Use a thinner needle. Reduce the sewing speed. Check the coolant if necessary.	
9. Triangle double chain looper thread stitches are skipped.	The needle point is crushed.	The needle point has been crushed and got thicker and shorter.	Refer to the clause relating to the needle point crush.	
The needle fails to catch the double chain looper thread. 	Double chain looper	The thread hole in the tip has worn, and the looper thread does not reach the needle as shown at right.	Replace the double chain looper.	
	Adjustment of looper	Excessive return or longitudinal motion will often cause this stitch skipping.	Refer to the pertinent Standard Adjustment.	16
	Thread cam timing	The thread cam timing is too early, causing the looper thread to slack before the needle enters a thread triangle.	Refer to the pertinent Standard Adjustment.	28
	Thread tension	The lower thread tension is very low, and the thread is not stretched.	Increase the thread tension a little.	
	Threading	he area around the thread cam has threaded erroneously.	Correct the threading.	

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
10. Triangle double chain needle thread stitches are skipped.	Double chain looper	The chain looper is too high and too close to the throat plate, or has bad shape.	Correct the height of the chain looper by pushing it down until it cones into contact with the stopper. Replace the chain looper having a bad shape.	16
The needle fails to catch the needle thread loop on the double chain looper, resulting in the stitch skipping shown below. 	Adjustment of looper	The return is not enough, causing the needle to miss the loop.	Refer to the related Standard Adjustment.	16
	Thread tension	The needle thread tension is too low.	Slightly increase the needle thread tension.	
	Stitch length	The stitch length is as small as 1.5 mm or less.	Slightly increase the stitch length.	
			Adjustment of loopers for producing chain-off thread without materials requires higher accuracy than that with materials.	28
	Needle guard	A needle guard is too high, and catches needle thread loops.	Refer to the related Standard Adjustment.	18
	Double-chain stitch needle thread guide.	The needle thread guide is installed too high, and it fails to tense the thread.	Refer to the related Standard Adjustment.	36
11. Overlocking chain-off thread is bad. (Provided that no chain-off trouble occurred when sewing operation was done with materials set on the machine.)	Position of the throat plate	The throat plate has been improperly positioned longitudinally, and chain-off thread gets in between the main feed dog and throat plate, causing defective chain-off thread.	Correctly position the throat plate.	
	Feed dog	The auxiliary feed dog has scratch.	Repair or replace the auxiliary feed dog.	20
		The auxiliary feed dog is too high, and interferes with chain-off thread. The auxiliary feed dog is too low. (Lower than the main feed dog by more than 0.5 mm)	Refer to the pertinent Standard Adjustment.	
	Adjustment of looper	Adjustment of loopers for producing chain-off thread without materials requires higher accuracy.	Refer to the related Standard Adjustment.	8
	Thread tension	The thread tension is too low.	Slightly increase the tension.	
		The needle thread tension is too high, causing damaged balance with other thread tension.	Check whether the needle thread take-up guide or needle thread guide is positioned too high with consequent excessive needle hread tension. And if so, correct it.	36

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
12. Problems with double chain stitch chain-off thread.	Adjustment of loopers	Adjustment of the loopers for producing chain-off thread without materials requires higher accuracy.	Refer to the related Standard Adjustment.	16
	Needle Guard	The needle guard (C) is too high, damaging loops.	Refer to the related Standard Adjustment.	18
	Position of the throat plate	The needle comes into contact with the front edge of the needle hole in the throat plate.	Correctly position the throat plate.	
		The lateral position of the throat plate with respect to the feed dogs is wrong, causing chain-off to drop in. 		
	Throat plate	A dent exists on the flat part between the rear edge of the needle hole and feed dog groove. 	Repair or replace the throat plate, since such dent causes chain-off thread to slip out.	
	Presser foot	The rear pressure foot is indented and not flush with the presser foot sole, so that it cannot hold chain-off thread.	Replace it, or correct it to make it flush with the presser foot sole.	
	Main feed dog	The leading edge of the main feed dog is too sharp and cuts chain-off thread.	Buff the leading edge of the main feed dog.	
	Double hooking	The needle thread is not drawn up fully because of the insufficient return of the double chain looper or wrong threading.	Refer to the related Standard Adjustment for the return of the double chain looper. See the threading diagram for correct threading.	16, 28
		If the feed pitch is too small, the cam timing will be advanced.	Retard the cam timing.	
	Thread tension	The needle is bend or chain-odd thread runs back due to excessive needle thread tension.	Reduce the needle thread tension.	
		Both the needle thread and looper thread tension are too low.	Slightly increase the both tensions.	

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
13. Overlocking needle thread is loose.	Position of the needle thread take-up guide and needle thread guide	They are positioned too high, and the thread take-up draws out excessive needle thread.	Refer to the pertinent Standard Adjustment.	36
	Thread tension	The thread tension balance has been disturbed.	Refer to the Standard Adjustment for the looper thread take-up components, and increase the tension if necessary.	
	Needle	The needle is too thin for the thread used.	Replace it with a proper one.	
14. Double chain stitch needle thread is loose.	Thread tension	The looper thread tension is too high, and the needle thread tension is too low.	Reduce the looper thread tension to a minimum, and increase the needle thread tension.	
	Thread cam	The thread cam draws out an insufficient amount of thread.	Refer to the relevant Standard Adjustment.	28
		The thread cam timing is bad.	Refer to the relevant Standard Adjustment.	28
	Needle	The needle is too thin for the thread used.	Replace the needle with a proper one.	
	Double-chain stitch needle thread take-up guide	Drawing amount of the needle thread is insufficient.	Refer to the relevant Standard Adjustment.	36
15. Uneven overlocking stitches	Looper thread tension	The upper and lower looper thread tensions are not enough.	Slightly increase the upper and lower looper thread tensions.	
The knotting position of the upper and lower looper threads varies as shown below. 	Looper thread take-up	The looper thread take-up (left) is too high.	Slightly lower the looper thread take-up (left)	36
	Knife width	The knife width is unsuited for the overedging width.	Make the overedging width slightly smaller than that given for the knife width.	26
	Thread path	Scratches on the thread path catch thread.	Check the thread path for scratches.	
	Presser foot	The presser foot cones into contact unevenly with the throat plate and feed dogs and tends to meander.	Make the presser foot come into contact with them evenly.	
	Thread stand	Thread dose not come out smoothly.	Make the thread come out smoothly.	

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
16. Uneven double chain stitches	Thread tension	The looper thread tension is not enough.	Slightly increase the tension.	
	Presser foot	The presser foot comes into contact with the throat plate unevenly.	Make the presser foot come into contact with the throat plate evenly.	
		The presser foot pressure is not enough.	Increase the presser foot pressure.	
17. The looper thread bulges out	Knife width	The knife width is too small for the overedging width.	Use a knife having width suited to the overedging width.	
	Looper thread take-up adjustment	The looper thread take-up draws out excessive looper thread.	Decrease the radius of the looper thread take-up (left) (reduction in dimension l). Raise the looper thread take-up (right) (increase in distance O).	36
18. Looper thread bite	Knife width	The knife width is too large for the overedging width.	Use a knife having width suited to the overedging width.	
	Adjustment of the looper thread take-up	The looper thread take-up draws out insufficient amount of looper thread.	Increase the radius of the looper thread take-up (left) (increase dimension l). Lower the looper thread take-up (right) (reduction in distance O).	36
19. Knotting position is not correct. **Right side**  **Knots are deflected to the upper looper side.**	Threading	Re-threading after thread breakage,etc. has been done erroneously.	See the threading diagram. (Refer to the Instruction Manual)	
	Adjustment of the looper thread take-up	The height of the looper thread take-up (left) is not correct.	Raise the looper thread take-up (left) to increase the amount of upper looper thread, and the knotting position moves toward the lower looper side.	36
		The upper looper thread guide (right) is too short.	Increase distance K.	

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page
20. Uneven material feed	Presser foot pressure	The presser foot pressure is too high.	Reduce the presser foot pressure except for the uneven material feed due to puckering.	
	Presser foot	The hinge is too stiff.	Remove the stiffness provided no hinge play is produced.	
		Scratches on or defective finish on the presserfoot sole produce friction between the presser foot and materials.	Buff the presser foot sole for good surface finish.	
	Tilt of feed dogs	The front is too high.	Make the front down. However, be sure to align the differential feed dog with the main feed dog.	
	Height of feed dogs	A different in level exists between the main feed dog and differential feed dog.	Eliminate the difference in level.	
	Adjustment of differential feed	The differential feed has been improperly adjusted.	Provide differential feed suited to the material.	
21. Puckering (Mainly concerned with double chain stitch)	Needle	The needle is too thick.	Use a thin needle as much as possible.	
	Thread	The thread used is too thick.	Use a thin needle as much as possible.	
	Thread tension	Both the needle thread and looper thread tensions are too high.	Reduce the both thread tensions to a minimum.	
	Throat plate	The throat plate has a large needle hole.	Replace the throat plate with one with a small needle hole.	
	Thread cam timing	The thread cam timing is too late	Advance the cam timing. Refer to the related Standard Adjustment.	
	Feed dogs	The leading edge of the feed dog teeth has been rounded off.	Replace the feed dog.	
		A difference in level exists between the main feed dog and differential feed dog.	Eliminate such difference in level.	

to the next page

Trouble	Case (1)	Case (2)	Check and Corrective measures	Page

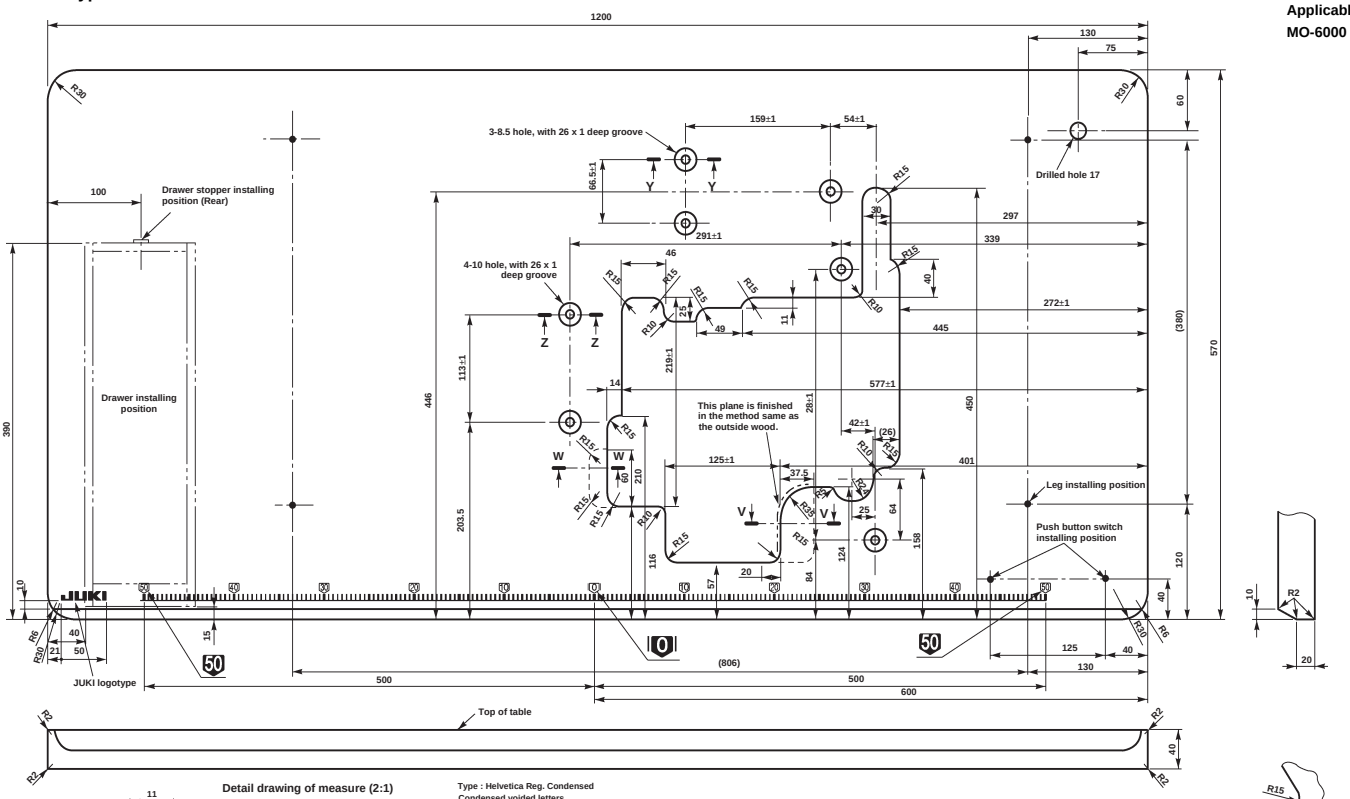
From the previous page

Presser foot pressure	The presser foot pressure is not high enough, providing poor ironing effect.	Increase the presser foot pressure.
Differential feed ratio	The differential feed ratio has been set for gathering.	Set it for stretching. When stretching light-weight materials, be careful not to cause the presser foot to contact unevenly with the materials.
Thread amount	The looper thread amount is not enough, causing excessively tensed stitches.	Bring the thread cam thread guide fully to the front to increase the amount of looper thread.

7. DIMENSIONS OF TABLE

(1) Semi-sunken type

Applicable models
MO-6000 Series

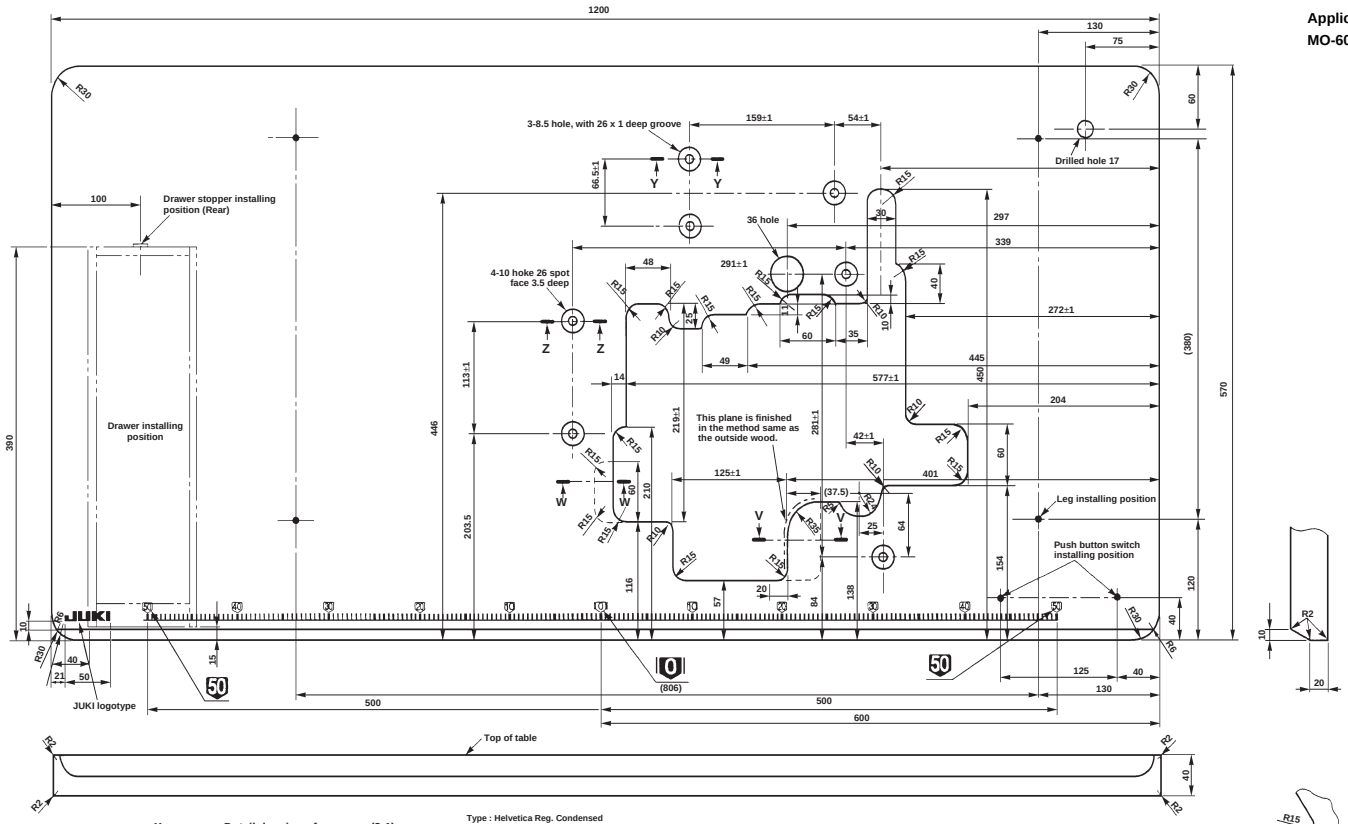


(Note) **All dimensions are in millimeter.**
Detailed dimensions of section W-W, section Z-Z, section Y-Y and section V-V

Part No. of table : 11959400

(2) Semi-sunken type (synchronizer is used)

Applicable models
MO-6000 Series

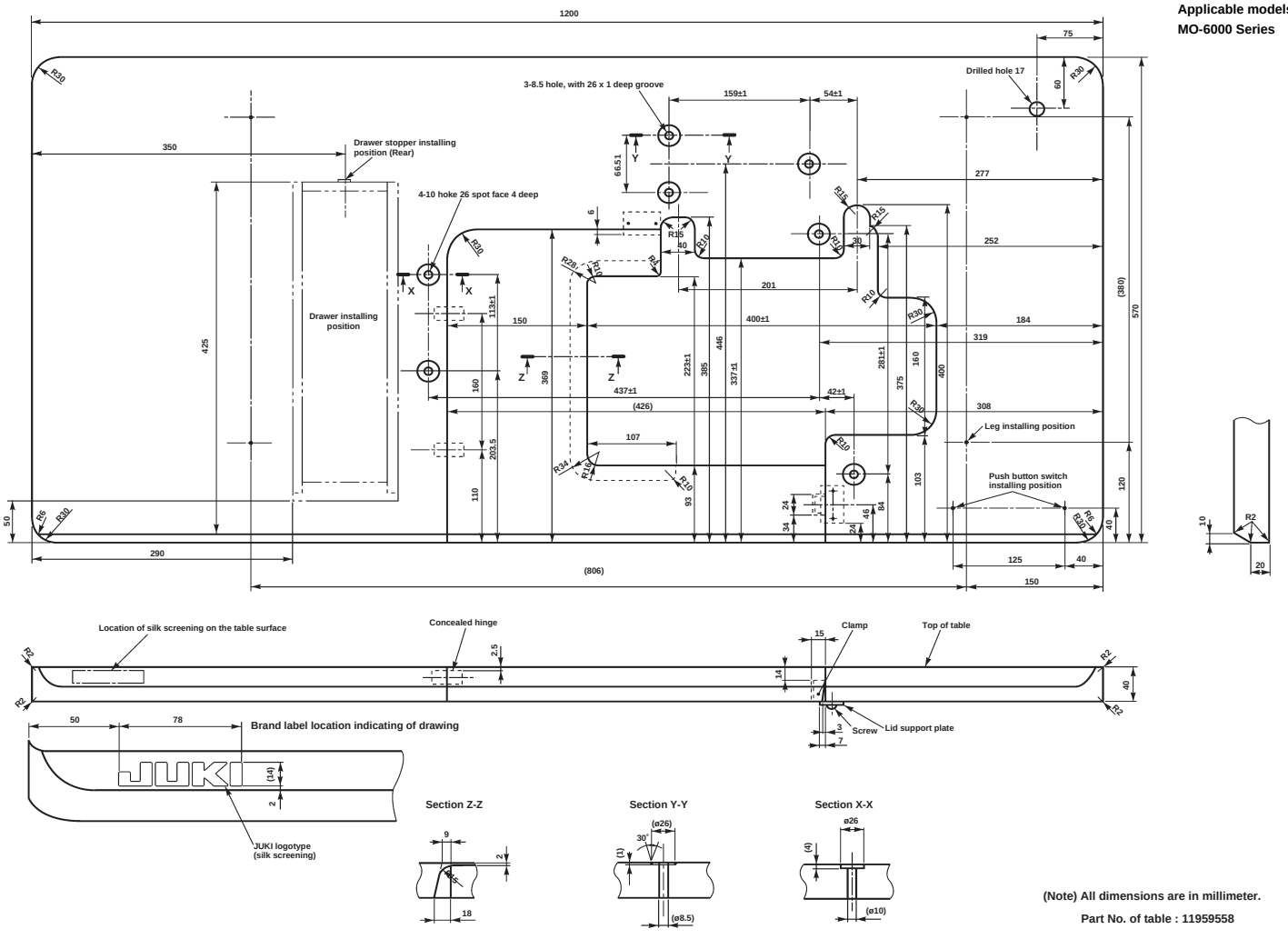


(Note) All dimensions are in millimeter.

Part No. of table : 11959707

(3) Fully-sunken type

Applicable models
MO-6000 Series



(Note) All dimensions are in millimeter.

Part No. of table : 11959558

JUKI CORPORATION HEAD OFFICE

The environmental management system to promote and conduct
①the technological and technical research, the development and design of the products in which the environmental impact is considered,
②the conservation of the energy and resources, and the recycling, in the research, development, design, distribution, sale and maintenance service of the industrial sewing machines, household sewing machines and industrial-use robots, etc. and in the sale and maintenance service of data entry system and in the purchase, distribution and sale of the household commodities including the healthcare products.

This manual uses environment-friendly soyink.

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JUKI CORPORATION

MARKETING & SALES H.Q.
8-2-1, KOKURYO-CHO,
CHOFU-SHI, TOKYO 182-8655, JAPAN
PHONE : (81)3-3480-2357 • 2358
FAX : (81)3-3430-4909 • 4914

Please do not hesitate to contact our distributors or agents in your area for further information when necessary.

* **The description covered in this engineer's manual is subject to change for improvement of the commodity without notice.**

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