

brother

SERVICE MANUAL FOR VX-SERIES SEWING MACHINE

VX511, VX541, VX561, VX581
VX611, VX641, VX661, VX681
VX710, VX720, VX740, VX760, VX780



VX516, VX546, VX566, VX586
VX616, VX646, VX666, VX686



CONTENTS

	page		
A. HOW TO USE THIS MANUAL	2	10.1 .	Back and forth seam at automatic reverse patterns. 15
B. TROUBLE AND CHECK POINTS	3	10.2 .	Back and forth seam at automatic reverse patterns. 15
1. Skipping stitches	3	11.	Adjustment of button hole seams 16
2. Material not feeding.	3	12.1 .	Needle swing in straight stitch sewing 17
3. Breaking needle.	3	12.2 .	Needle swing in straight stitch sewing 17
4. Heavy running	4	12-3.	Needle swing in straight stitch sewing 17
5. Machine noise.	4	13.1 .	Centering of the needle 18
6. Needle sewing over the maximum width	4	13.2 .	Centering of the needle. 18
7. Uneven seams of back and forth at manual	4	14.	Position of feed cam 18
8. Improper position of needle drop slot at the max. stitch width	5	15.1 .	Setting of maximum stitch width 19
9. Needle swing in straight stitch sewing	5	15.2 .	Setting of maximum stitch width 19
10. Feeding at bar tack sewing of buttonhole.	5	15-3.	Setting of maximum stitch width 19
11. Not smooth working of pattern selecting dial	5	16.1 .	Position of the maximum needle swing 20
12. Imperfect automatic patterns.	5	16.2 .	Position of the maximum needle swing 20
13. Uneven seams of reverse patterns	6	16.3 .	Position of the maximum needle swing 20
14. Breaking of upper thread	6	17-1.	Contact of upper shaft gear, pattern cam and feed cam. . . 21
15. Breaking of lower thread.	6	17-2.	Contact of upper shaft gear, pattern cam and feed cam. . . 21
16. How to assemble the parts correctly	7	17-3.	Contact of upper shaft gear, pattern cam and feed cam. . . 21
C. HOW TO ADJUST THE ELEMENTS		18.1 .	Sewing timing of the needle. 22
1-1. Height of presser bar	8	18.2 .	Sewing timing of the needle. 22
1-2. Height of presser bar	8	18.3 .	Sewing timing of the needle. 22
2. Height of needle bar.	8	19-1A.	Clearance between cam finger and pattern cam 23
3-1. Clearance between needle and hook point	9	19-1B.	Clearance between cam finger and feed cam 23
3-2. Clearance between needle and hook point	9	20-1A.	Position of cam finger for pattern cam. 24
4-1. Position of shuttle hook	10	20-1B.	Position of cam finger for feed cam. 24
4-2. Position of shuttle hook	10	21.1 .	Setting of upper thread tension dial 25
5 1. Clearance between shuttle driver shaft and race way.	11	21.2 .	Setting of upper thread tension dial 25
5 2. Clearance between shuttle driver shaft and race way.	11	22.	Adjustment of feed dog movement at buttonhole sewing . . . 25
6-1. Position of vertical feed cam	12	23.1 .	Setting of pattern dial 26
6-2. Position of vertical feed cam	12	23.2 .	Setting of pattern dial 26
7.1 . Height of feed dog.	13	24-1.	How to take off stitch width, stitch length dial and arm panel 27
7-2. Height of feed dog.	13	24-2.	How to take off stitch width, stitch length dial and arm panel. 27
8. Forth seam.	14	24-3.	How to take off stitch width, stitch length dial and arm panel 27
9-1. Back and forth seam	14	25.1 .	Adjusting of the drive belts 28
9.2. Back and forth seam	14	25.2 .	Adjusting of the drive belts 28
		25.3 .	Adjusting of the drive belts 28

A. HOW TO USE THIS MANUAL

This service manual is compiled for repairing service for VX-SERIES SEWING MACHINE and consisting of;

B. TROUBLES AND CHECK POINTS

C. HOW TO ADJUST THE ELEMENTS

In case of home-use sewing machine, almost all troubles or problems brought from consumers will be solved by following the instruction book, because the causes in many cases are due to mis-use or carelessness. Therefore, we recommend you to refer to "CHECK LIST FOR BETTER SEWING" in the instruction book before you try to repair.

Suggest to use this manual with "PARTS CATALOGUE" when you try to repair and pick up a point or points.

Model numbers covered by this manual are
 VX511, VX541, VX561, VX581 (Free arm sewing machine)
 VX611, VX641, VX661, VX681
 VX710, VX720, VX740, VX760, VX780

VX516, VX546, VX566, VX586 (Flat bed sewing machine)
 VX616, VX646, VX666, VX686




NOTE:

1. Set the machine as below in "HOW TO ADJUST THE ELEMENTS" when there is no special instruction on each elements.

STITCH WIDTH REGULATOR O (straight stitch)
 STICH LENGTH REGULATOR. O (no feeding)
 NEEDLE POSITION SELECTOR. M (center)

2. Adjust following numbers in circle in each instruction.

3. Symbols used are:

Move the part as this way	
Set the clearance as indicated	
Move the parts to its highest or lowest position	

B. TROUBLES AND CHECK POINTS

TROUBLE AND CAUSE	CORRECTION		
	Refer to:	Refer to: SERVICE MANUAL (Item No.)	
	INSTRUCTION BOOK or:	following models	
1. SKIPPING STITCHES			
(1) Incorrect setting of the needle (2) Bent or blunt needle (3) Incorrect upper threading	TO CHANGE THE NEEDLE TO CHECK THE NEEDLE UPPER THREADING		
(4) Improper height of the needle bar (5) Improper clearance between the needle and shuttle hook (6) Improper timing of needle and hook		VX511, VX541, VX561, VX581, VX611, VX641, VX661 VX681, VX710, VX720, VX740, VX760, VX780	VX516, VX546, VX566, VX586 VX616, VX646, VX666, VX686
		2	2
		3-1	3-2
		4-1	4-2
2. MATERIAL NOT FEEDING			
(1) Improper positioning of needle plate	TO CHANGE NEEDLE PLATE		
(2) Light pressure on the presser foot (3) Improper positioning of feed cam (4) Improper positioning of vertical feed cam (5) Improper height of feed dog		VX710 1-1 14 6-1 7-1	VX511, VX541, VX561, VX581, VX611, VX641 VX661, VX681, VX720, VX740, VX760, VX780 1-2 14 6-1 7-1
			VX516, VX546, VX566, VX586 VX616, VX646, VX666, VX686 1-2 14 6-2 7-2
3. BREAKING NEEDLE			
(1) Incorrect setting of the needle	TO CHANGE THE NEEDLE		
(2) Improper height of needle bar (3) Improper clearance between the needle and shuttle hook		VX511, VX541, VX561, VX581, VX611, VX641 VX661, VX681, VX710, VX720, VX740, VX760, VX780	VX516, VX546, VX566, VX586 VX616, VX646, VX666, VX686
		3 4 1	2 3-2 & 4-2
(4) Improper max. needle swing (5) Improper swing timing of the needle		VX710 16-1 18-1	VX511, VX516 VX611, VX616 VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780 16-2 18-2 16-3 18-3

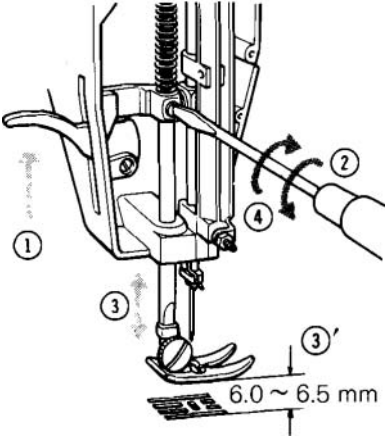
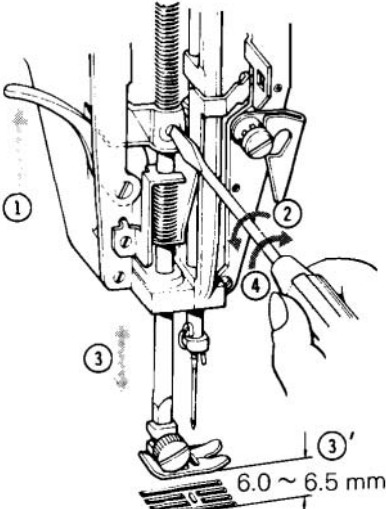
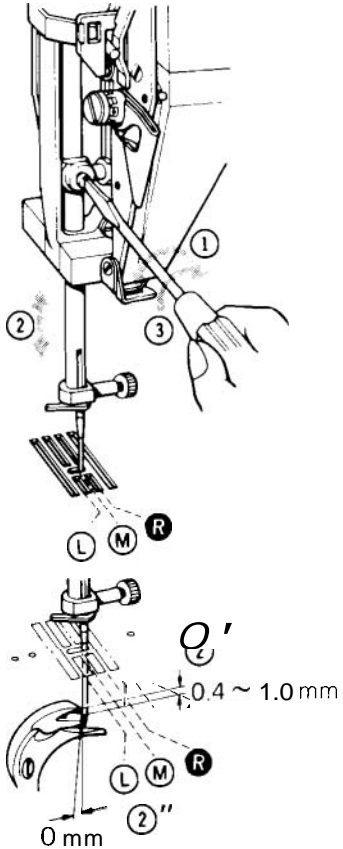
TROUBLE AND CAUSE	CORRECTION			
	Refer to:	Refer to: SERVICE MANUAL (Item No.)		
	INSTRUCTION BOOK or:	following models		
4. HEAVY RUNNING				
(1) Oil dried up (2) Accumulated lint or thread in race (3) Accumulated lint on feed dog	OILING CLEANING OF SHUTTLE RACE CLEANING OF FEED DOG			
(4) Tight setting of shuttle driver shaft		VX511, VX541, VX561, VX581, VX611, VX641, VX661 VX681, VX710, VX720, VX740, VX760, VX780	VX516, VX546, VX566, VX586 VX616, VX646, VX666, VX686	
		5-1		5-2
(5) Improper gearing of upper shaft gears		VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780
		17-1	17-2	17-3
5. MACHINE NOISE				
(1) Oil dried up	OILING			
(2) Play on shuttle driver shaft		VX511, VX541, VX561, VX581, VX611, VX641, VX661 VX681, VX710, VX720, VX740, VX760, VX780	VX516, VX546, VX566, VX586 VX616, VX646, VX666, VX686	
		5-1		5-2
(3) Improper gearing of upper shaft gears		VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780
		17-1	17-2	17-3
6. NEEDLE SWING OVER THE MAXIMUM WIDTH				
(1) Improper setting of stitch width		VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780
		15-1	15-2	15-3
7. UNEAVEN SEAMS OF BACK AND FORTH AT MANUAL				
(1) Improper adjusting of feed regulator		VX710	VX511, VX541, VX561, VX581, VX516, VX546, VX566, VX586, VX611, VX641 VX661, VX681, VX616, VX646, VX666, VX686, VX720, VX740, VX760, VX780	
		9-1	9-2	

TROUBLE AND CUASE	CORRECTION		
	Refer to:	Refer to: SERVICE MANUAL (Item No.)	
	INSTRUCTION BOOK or:	following models	
8. IMPROPER POSITION OF NEEDLE DROP AGAINST NEEDLE SLOT AT THE MAX. STITCH WIDTH			
(1) Improper centering of needle	VX710	VX511, VX541, VX561, VX581, VX516, VX546, VX566, VX586, VX611, VX641 VX661, VX681, VX616, VX646, VX666, VX686, VX720, VX740, VX760, VX780	
	13-1	13-2	
(2) Improper position of max. needle swing	VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780
	16-1	16-2	16-3
9. NEEDLE SWING IN STRAIGHT STITCH SEWING			
(1) Improper setting of stitch width lever arm	VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX740, VX760, VX780
	12-1	12-2	12-3
10. FEEDING AT BAR TACK SEWING OF BUTTONHOLE			
(1) Improper setting of buttonhole feed cam (2) Improper setting of feed selecting cam	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX740, VX760, VX780		
	11		
	22		
11. NOT SMOOTH WORKING OF PATTERN SELECTING DIAL			
(1) Improper setting of cam finger, pattern cam and feed cam	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780		
	19-1A		
	19-1B		
12. IMPERFECT AUTOMATIC PATTERNS			
(1) Improper positioning of cam finger	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661 VX681, VX646, VX666, VX686, VX720, VX740, VX760, VX780		
	20-1A		
	20-1B		

TROUBLE AND CAUSE	CORRECTION	
	Refer to:	Refer to: SERVICE MANUAL (Item No.)
	INSTRUCTION BOOK or:	following models
13. UNEVEN SEAMS OF REVERSE PATTERNS		
(1) Improper setting of reverse feed devices	VX710	VX511, VX541, VX561, VX581, VX516, VX546, VX566, VX586, VX611, VX641, VX661, VX681, VX616, VX646, VX666, VX686, VX720, VX740, VX760, VX780
	9-1	9-2
	VX720	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661, VX681, VX646, VX666, VX686, VX740, VX760, VX780
	10-1	10-2
14. BREAKING OF UPPER THREAD		
(1) Incorrect relation of needle & thread (2) Bent or blunt needle (3) Inferior needle eye (4) Incorrect threading (5) Inferior needle slot of needle plate (6) Upper thread tension too tight (7) Scratch on the shuttle hook	Relative chart Change the needle Change the needle Upper threading Change needle plate Thread tension Change the shuttle hook	
15. BREAKING LOWER THREAD		
(1) Not smooth running of bobbin (2) Scratch on tension spring of bobbin case (3) Scratch on the shuttle hook (4) Lower thread tension too tight	Change the bobbin Change the spring Change the shuttle hook Thread tension	

TROUBLE AND CAUSE		CORRECTION		
		Refer to:		Refer to: SERVICE MANUAL (Item No.)
		INSTRUCTION BOOK or:		following models
16. HOW TO ASSEMBLE THE PARTS CORRECTLY				
(1) Upper thread tension dial		VX710	VX511, VX541, VX561, VX581, VX516, VX546, VX566, VX586, VX611, VX641, VX661, VX681, VX616, VX646, VX666, VX686, VX720, VX740, VX760, VX780	
		21-1	21-2	
(2) Setting of pattern dial		VX720	VX541, VX561, VX581, VX546, VX566, VX586, VX641, VX661, VX681, VX646, VX666, VX686, VX740, VX760, VX780	
		23-1	23-2	
(3) Decoration panel		VX720, VX740, VX760, VX780	VX611, VX641, VX661, VX681, VX616, VX646, VX666, VX686	VX511, VX541, VX561, VX581, VX516, VX546, VX566, VX586
		24-1	24-2	24-3
(4) Drive belts		VX710, VX720, VX740, VX760, VX780	VX516, VX546, VX566, VX586, VX616, VX646, VX666, VX686	VX511, VX541, VX561, VX581, VX611, VX641, VX661, VX681
		25-1	25-2	25-3

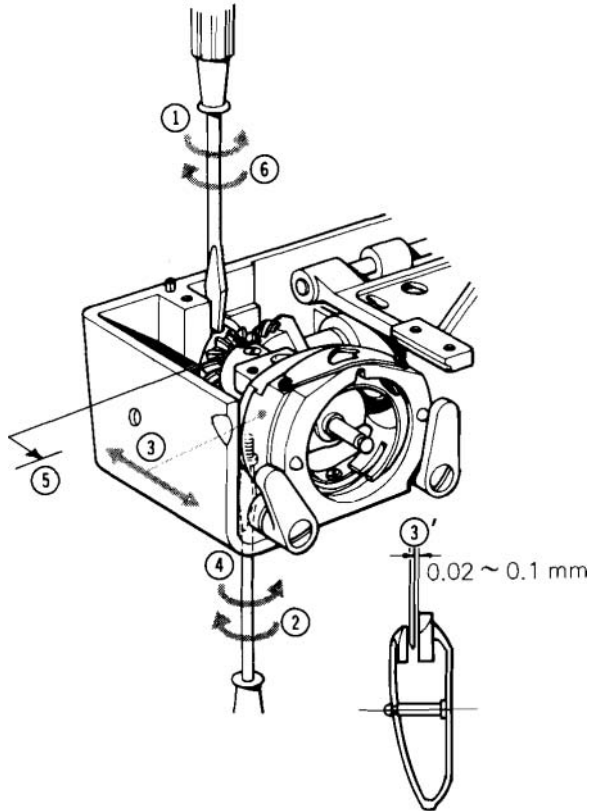
C. HOW TO ADJUST THE ELEMENTS

1-1. Height of presser bar	1-2. Height of presser bar	2. Height of needle bar
VX710	VX511, VX541, VX561, VX581, VX516 VX546, VX566, VX586, VX611, VX641 VX661, VX681, VX616, VX646, VX666 VX686, VX720, VX740, VX760, VX780	VX511, VX541, VX561, VX581, VX516, VX546 VX566, VX586, VX611, VX641, VX661, VX681 VX616, VX646, VX666, VX686, VX710, VX720 VX740, VX760, VX780
		<p>Before adjustment: Set the stitch width regulator at 5 (Max.) and check needle comes to the right side.</p> 

3-1. Clearance between needle and hook point

VX511, VX541, VX561, VX581
VX611, VX641, VX661, VX681
VX710, VX720, VX740, VX760, VX780

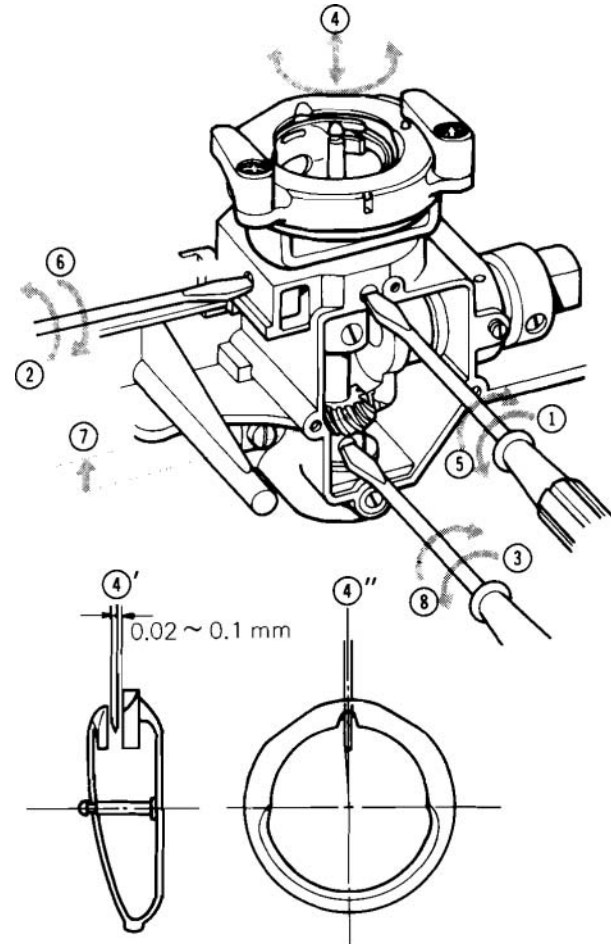
Before adjustment: Set the stitch width regulator at 0.



Note: When you adjusted this item, check item 4-1.

3-2. Clearance between needle and hook point

VX516, VX546, VX566, VX586
VX616, VX646, VX666, VX686

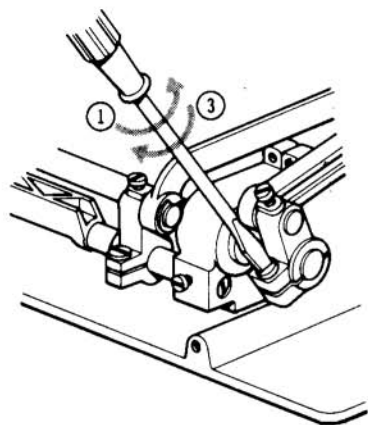


Note: When you adjusted this item, check item 4-2.

4-1. Position of shuttle hook

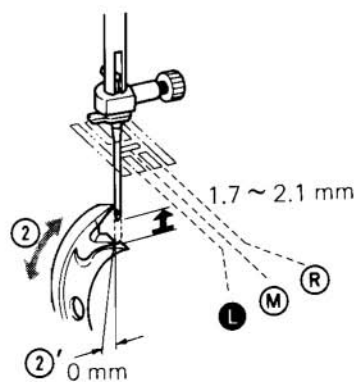
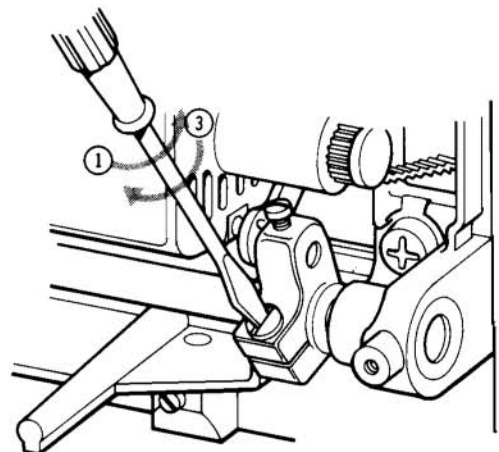
VX511, VX541, VX561, VX581
VX611, VX641, VX661, VX681
VX710, VX720, VX740, VX760, VX780

Before adjustment: Set the stitch width regulator at 5 (Max.) and check needle comes to the left.



4-2. Position of shuttle hook

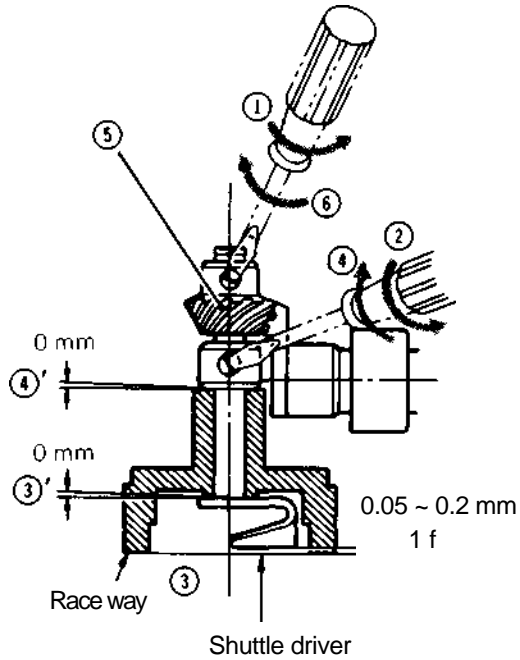
VX516, VX546, VX566, VX586
VX616, VX646, VX666, VX686



Note: When you adjusted this item, check item 2.

5-1. Clearance between shuttle driver shaft and race way

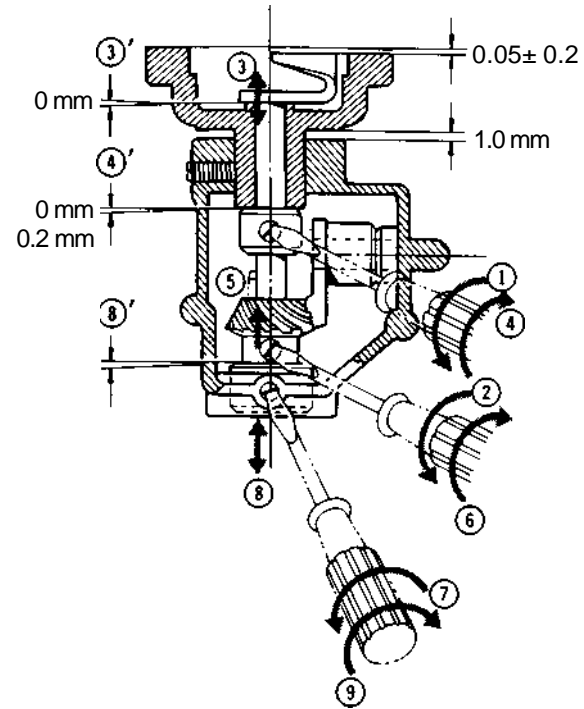
VX511, VX541, VX561, VX581 VX611,
 VX641, VX661, VX681 VX710, VX720,
 VX740, VX760, VX780



Note: When you adjusted this item, check item 4-1.

5-2. Clearance between shuttle driver shaft and race way

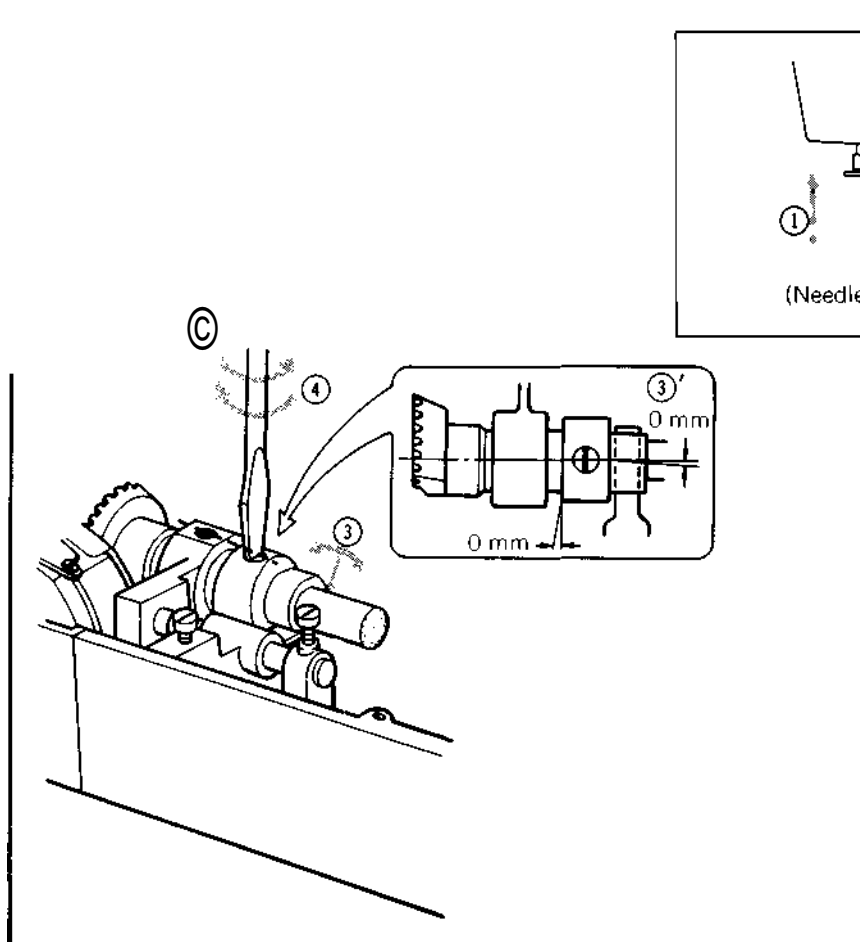
VX516, VX546, VX566, VX586
 VX616, VX646, VX666, VX686



Note: When you adjusted this item, check item 4-2.

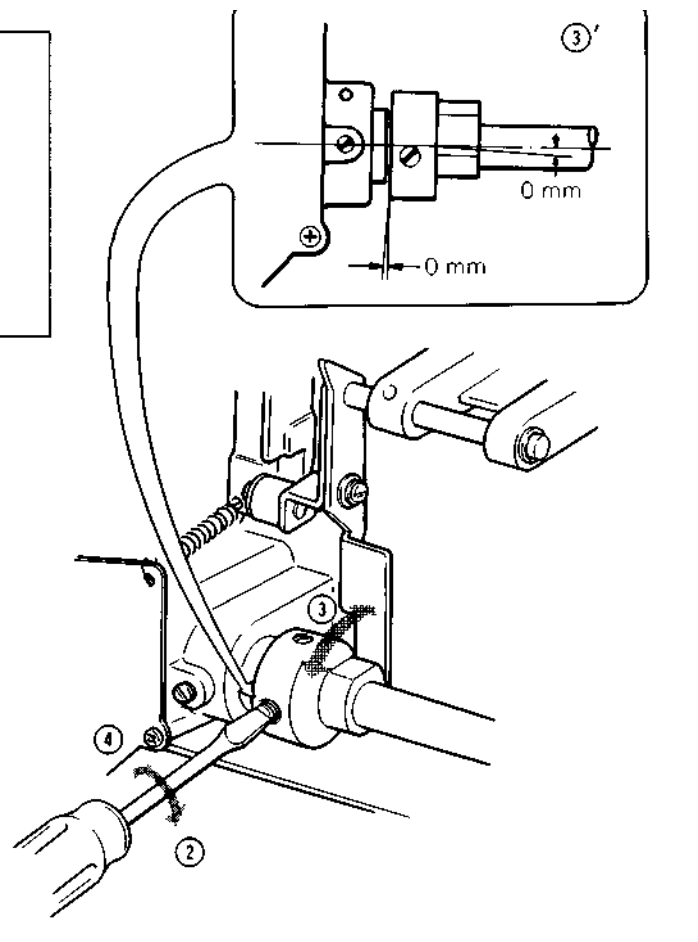
6-1. Position of vertical feed cam

VX511, VX541, VX561, VX581 VX611,
VX641, VX661, VX681 VX710, VX720,
VX740, VX760, VX780



6-2. Position of vertical feed cam

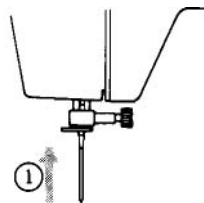
VX516, VX546, VX566, VX586
VX616, VX646, VX666, VX686



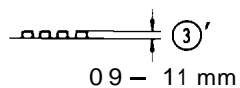
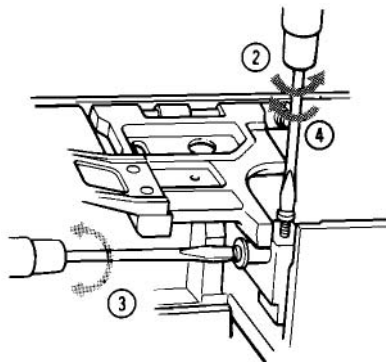
7-1. Height of feed dog

VX511, VX541, VX561, VX581
 VX611, VX641, VX661, VX681
 VX710, VX720, VX740, VX760, VX780

Before adjustment. Set the stitch length regulator at "4" (Max) & stitch width regulator at "0"

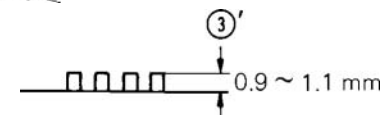
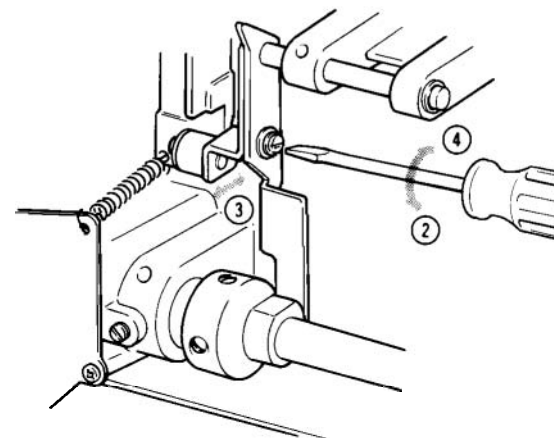
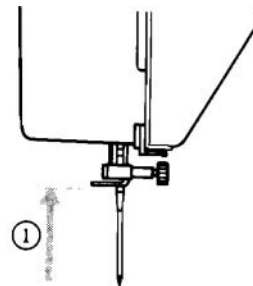


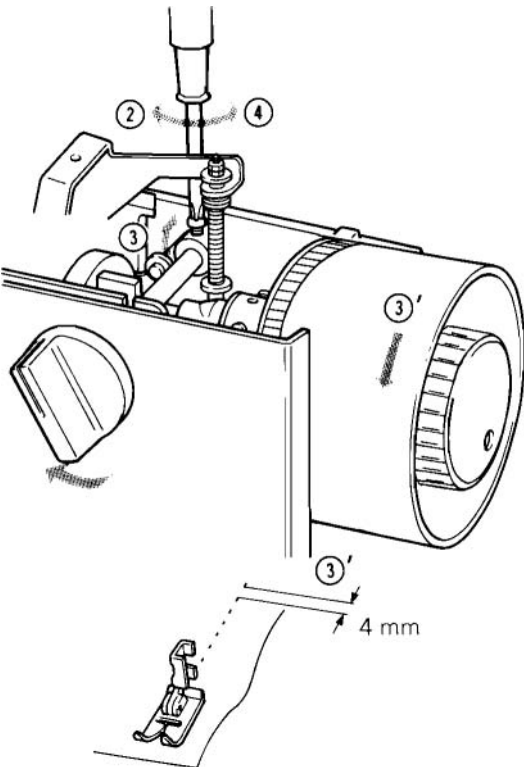
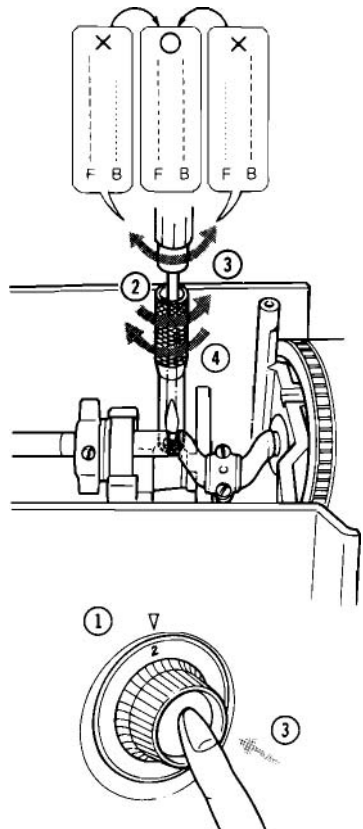
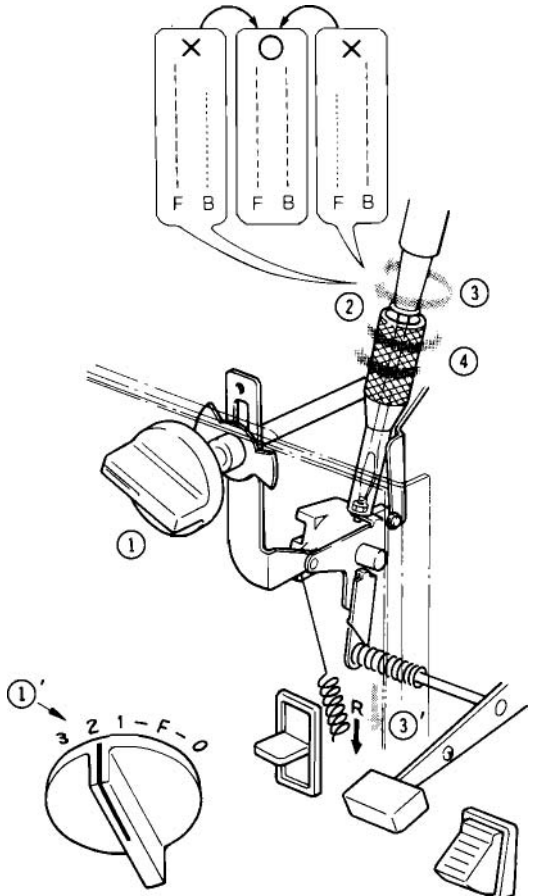
(Needle → highest)



7-2. Height of feed dog

VX516, VX546, VX566, VX586
 VX616, VX646, VX666, VX686

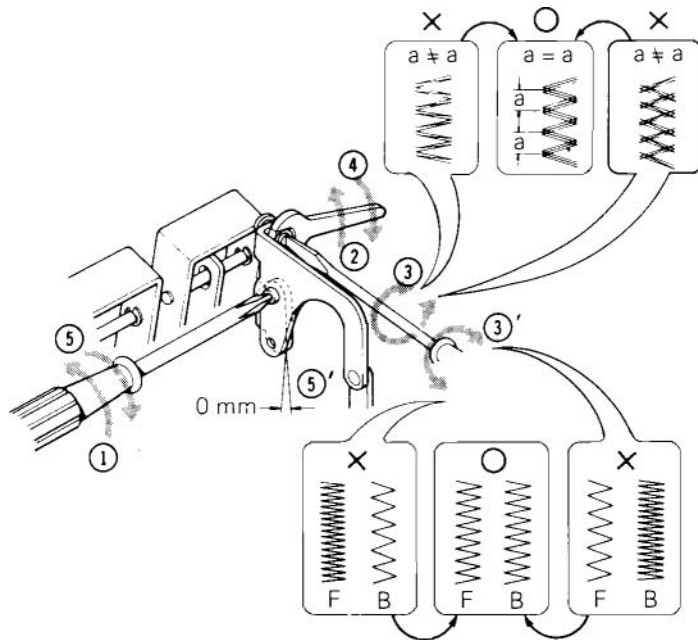


8. Forth seam	9-1. Back and forth seam	9-2. Back and forth seam
VX541, VX561, VX581, VX546, VX566, VX586 VX641, VX661, VX681, VX646, VX666, VX686 VX740, VX760, VX780	VX710	VX511, VX541, VX561, VX581, VX516 VX546, VX566, VX586, VX611, VX641 VX661, VX681, VX616, VX646, VX666 VX686, VX720, VX740, VX760, VX780
<p>Before adjustment Set the stitch length regulator at 4 (Max.) & stitch width regulator at 0</p> 	<p>Before adjustment. Set the stitch length regulator at "2". ①</p> 	

10-1. Back and forth seam at automatic reverse patterns

VX720

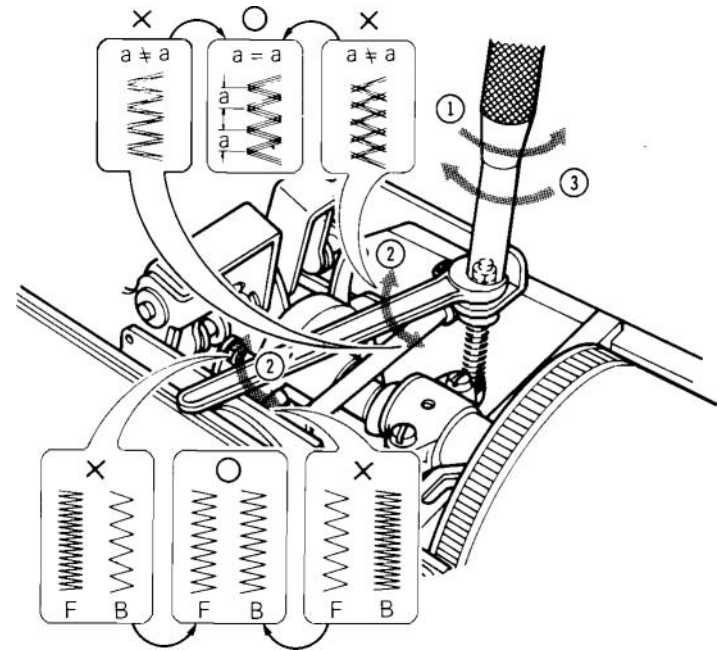
Before adjustment Set the pattern and stitch length regulator at SS (Stretch Stitch)



10-2. Back and forth seam at automatic reverse patterns

VX541, VX561, VX581, VX546, VX566, VX586
 VX641, VX661, VX681, VX646, VX666, VX686
 VX740, VX760, VX780

Before adjustment Set the pattern selecting dial at SS (StretchStitch).



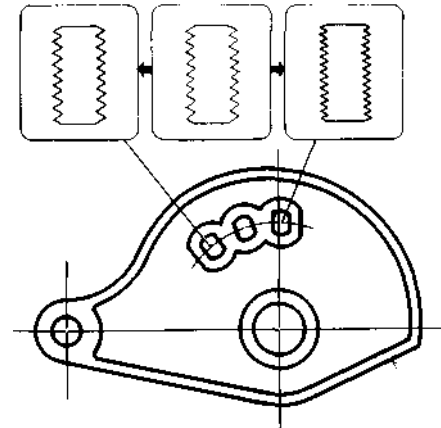
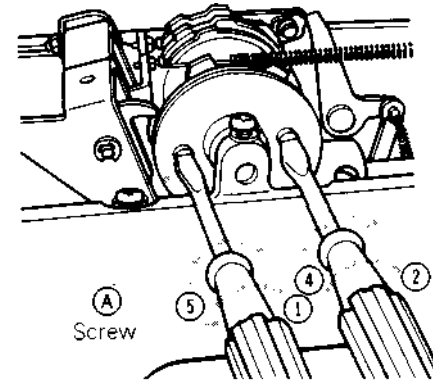
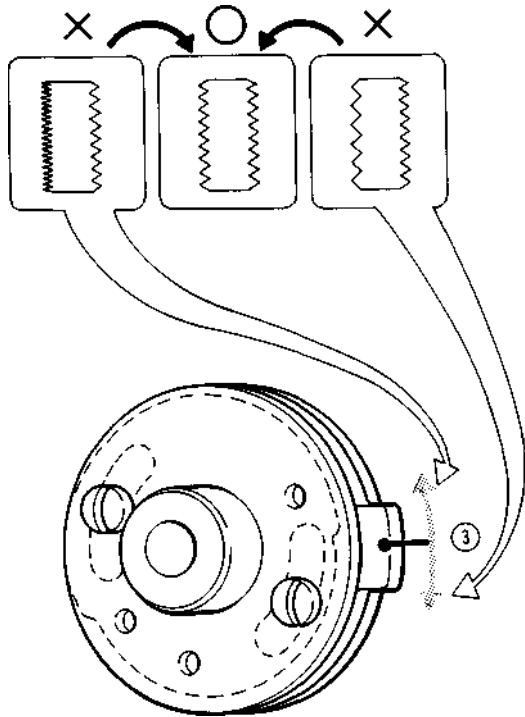
Note. When adjusted this Item, check item 11

11. Adjustment of buttonhole seams

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX740, VX760, VX780

Before adjustment: Set the pattern selecting dial at 1.

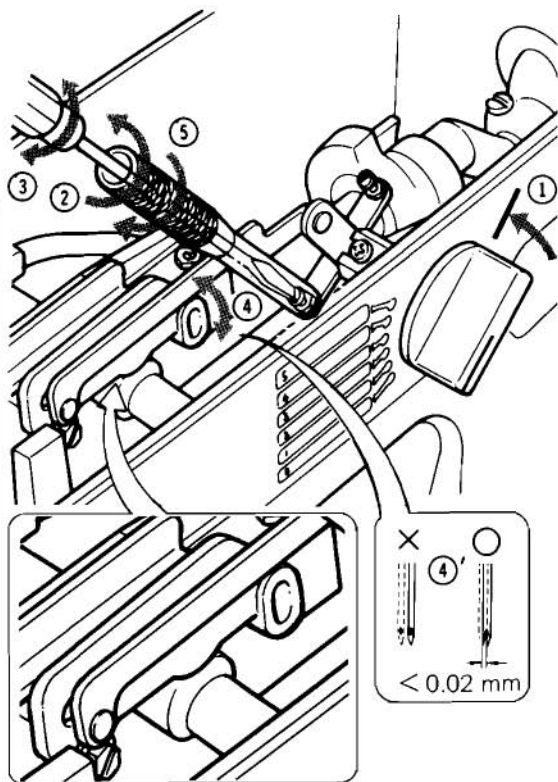
*If the buttonhole seams are too fine or too coarse, change the screw hole as follows by loosening the screw (A) completely.



12-1. Needle swing in straight stitch sewing

VX710

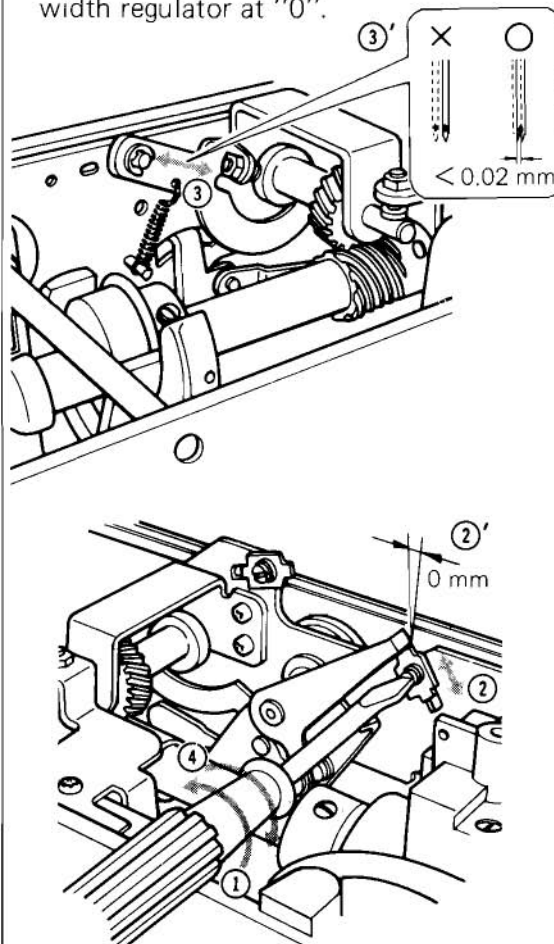
Before adjustment: Set the stitch width regulator at "0". ①



12-2. Needle swing in straight stitch sewing

VX511, VX516
VX611, VX616

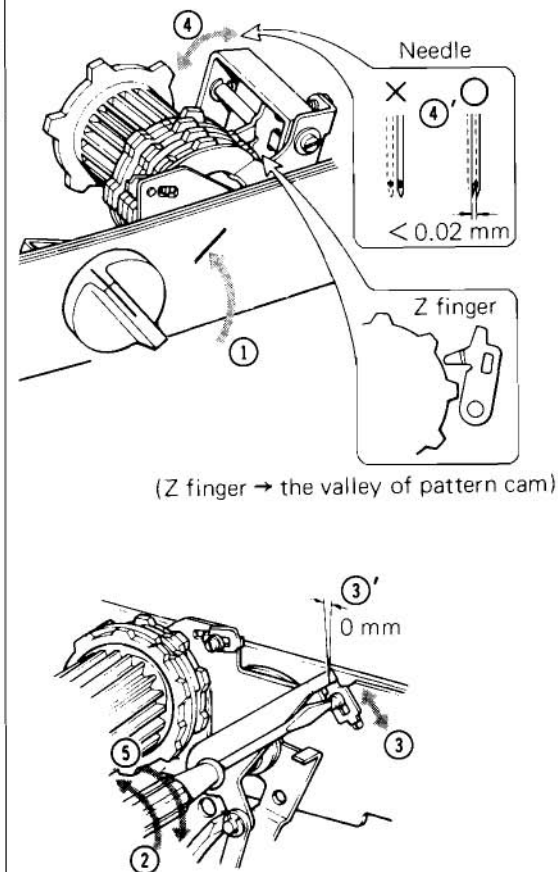
Before adjustment: Set the stitch width regulator at "0".



12-3. Needle swing in straight stitch sewing

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX720, VX740, VX760, VX780

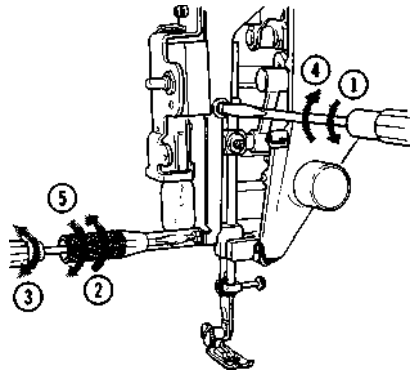
Before adjustment: Set the stitch width regulator at "0". ①



13-1. Centering of the needle

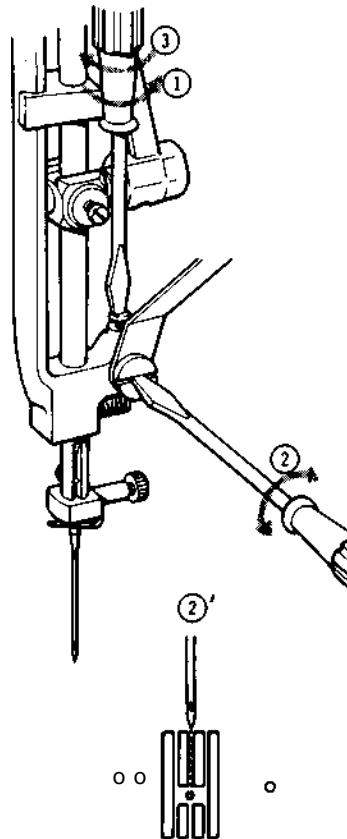
VX710

Before adjustment: Set the stitch width regulator at "0".



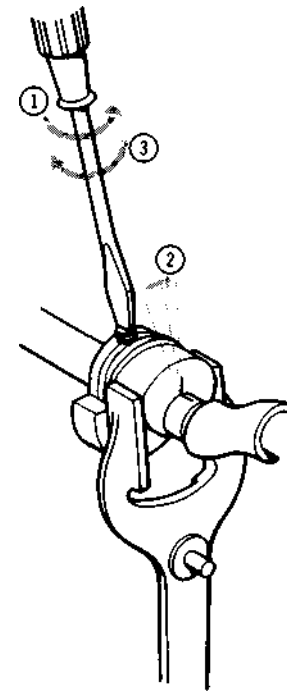
13-2. Centering of the needle

VX511, VX541, VX561, VX581, VX516, VX546
VX566, VX586, VX611, VX641, VX661, VX681
VX616, VX646, VX666, VX686, VX720, VX740
VX760, VX780



14. Position of feed cam

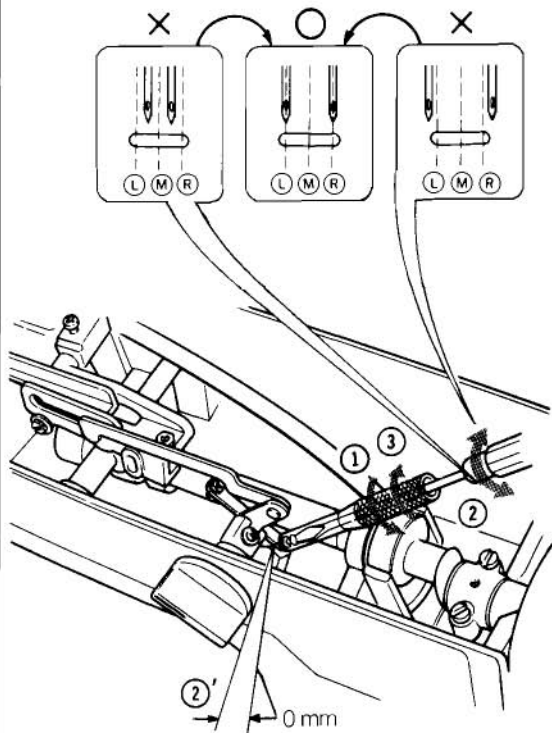
VX511, VX541, VX561, VX581, VX516, VX546
VX566, VX586, VX611, VX641, VX661, VX681
VX616, VX646, VX666, VX686, VX710, VX720
VX740, VX760, VX780



15-1. Setting of maximum stitch width

VX710

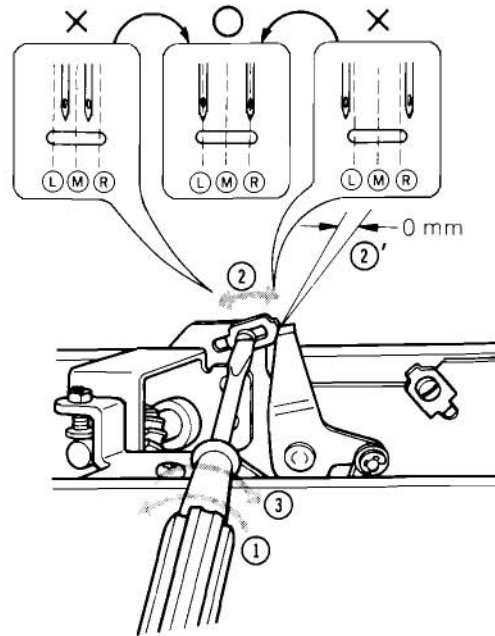
Before adjustment: Set the stitch width regulator at "5".



15-2. Setting of maximum stitch width

VX511, VX516
VX611, VX616

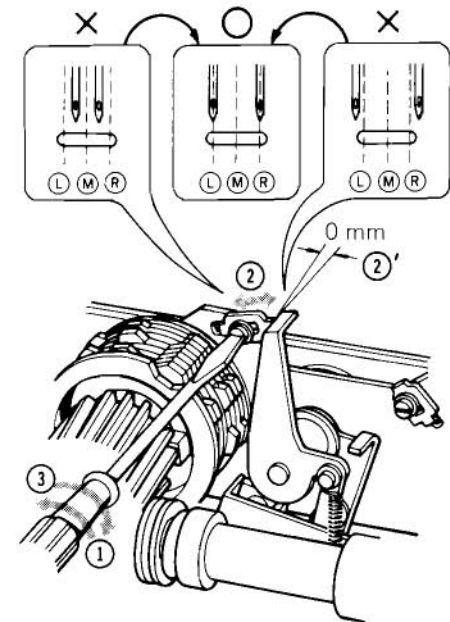
Before adjustment: Set the stitch width regulator at "5".

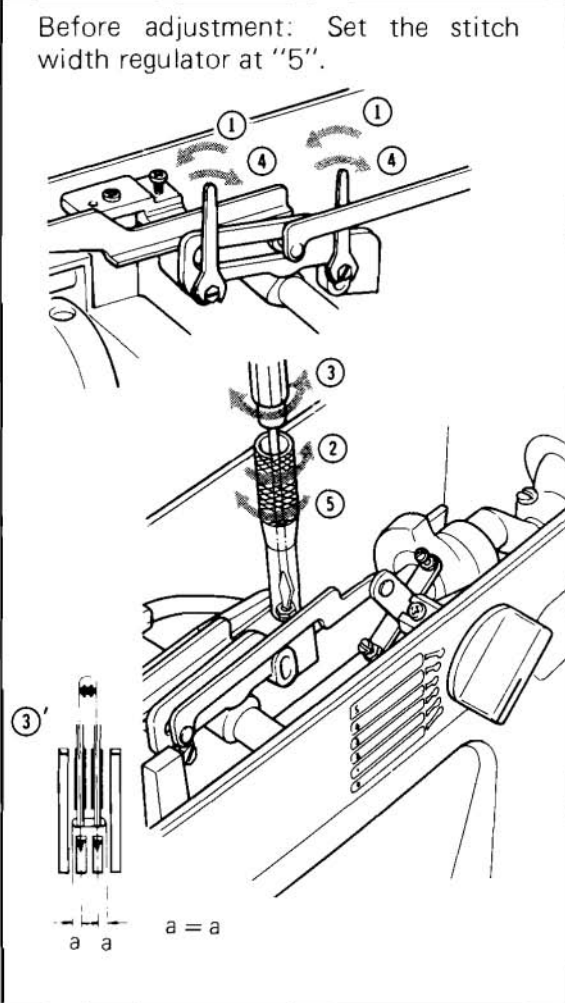
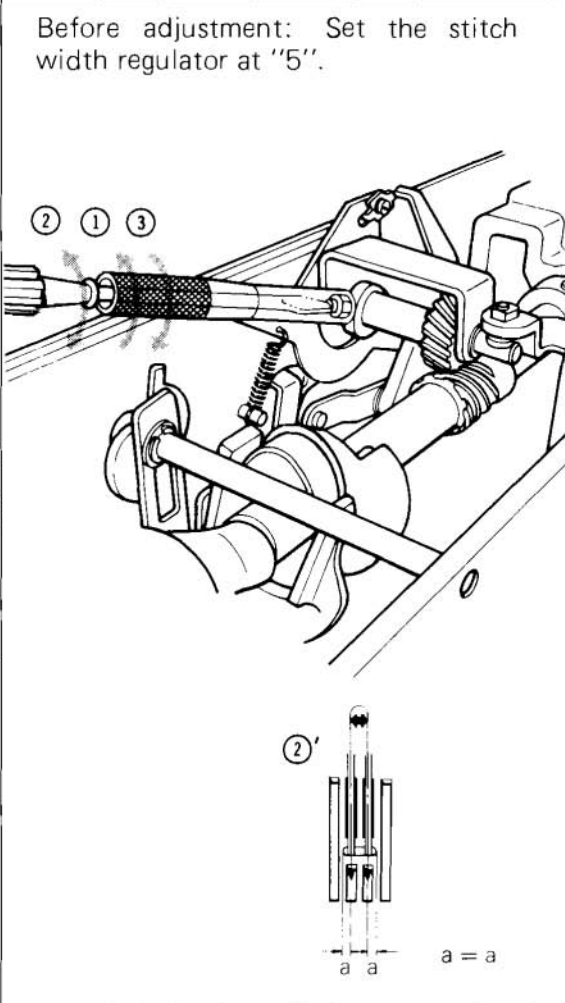
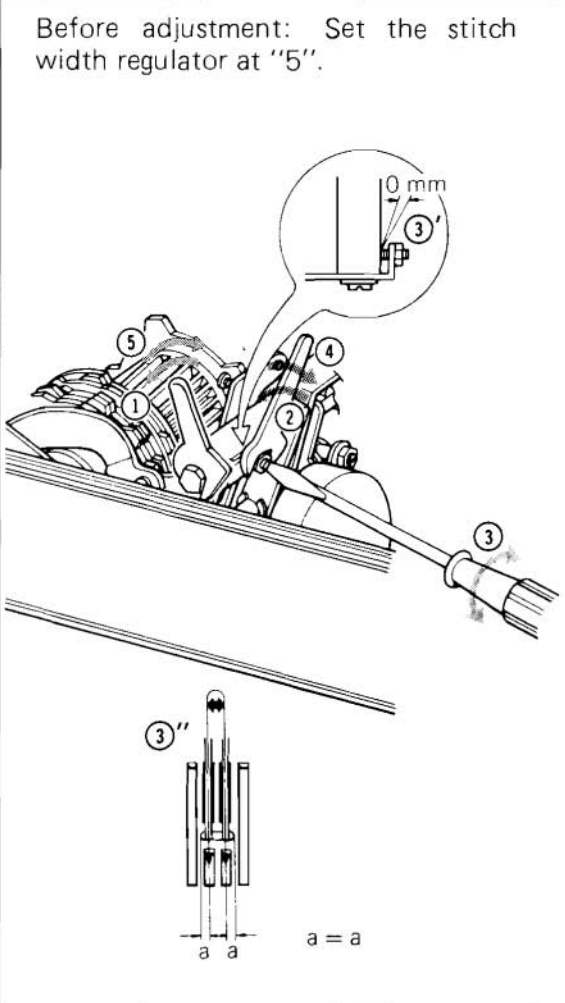


15-3. Setting of maximum stitch width

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX720, VX740, VX760, VX780

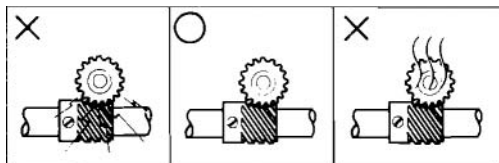
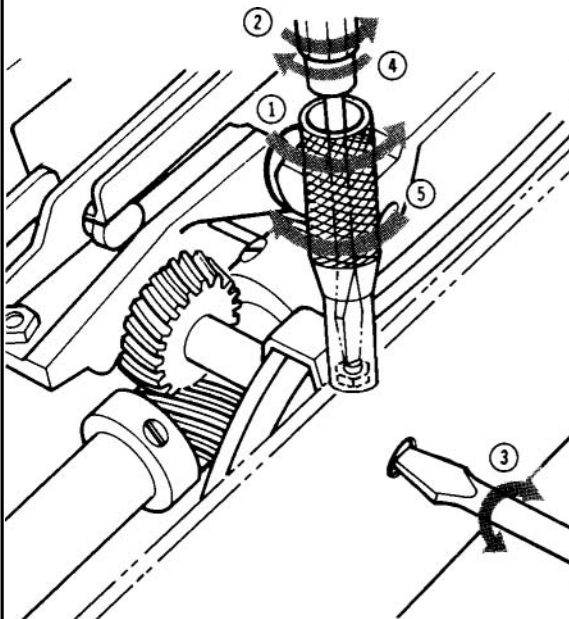
Before adjustment: Set the stitch width regulator at "5".



16-1. Position of the maximum needle swing	16-2. Position of the maximum needle swing	16-3. Position of the maximum needle swing
<p style="text-align: center;">VX710</p>	<p style="text-align: center;">VX511, VX516 VX611, VX616</p>	<p style="text-align: center;">VX541, VX561, VX581, VX546, VX566, VX586 VX641, VX661, VX681, VX646, VX666, VX686 VX720, VX740, VX760, VX780</p>
<p>Before adjustment: Set the stitch width regulator at "5".</p> 	<p>Before adjustment: Set the stitch width regulator at "5".</p> 	<p>Before adjustment: Set the stitch width regulator at "5".</p> 

17-1. Contact of upper shaft gear, pattern cam and feed cam

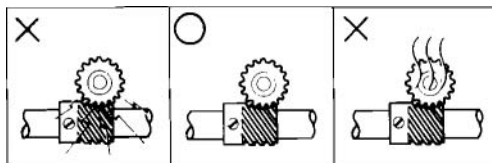
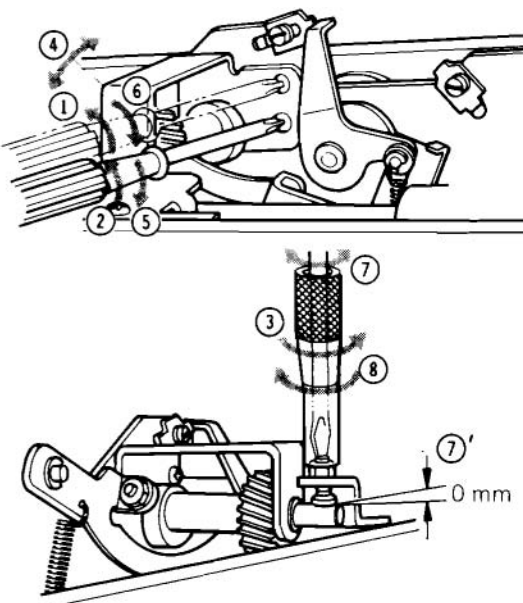
VX710



Note: When you adjusted this item, check item 18-1

17-2. Contact of upper shaft gear, pattern cam and feed cam

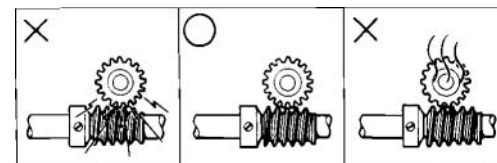
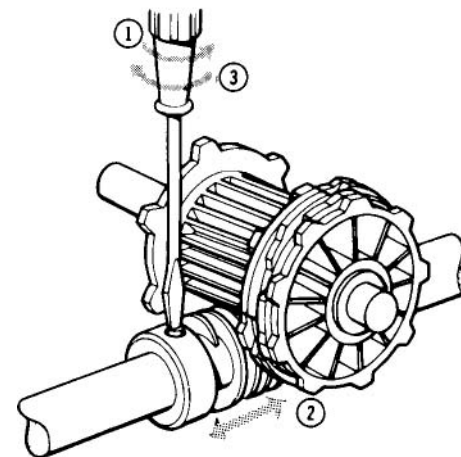
VX511, VX516
VX611, VX616



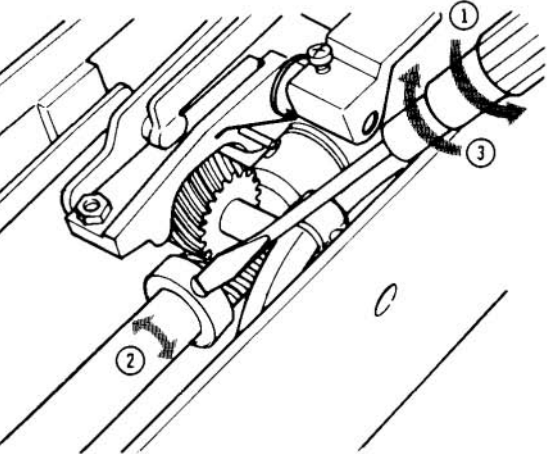
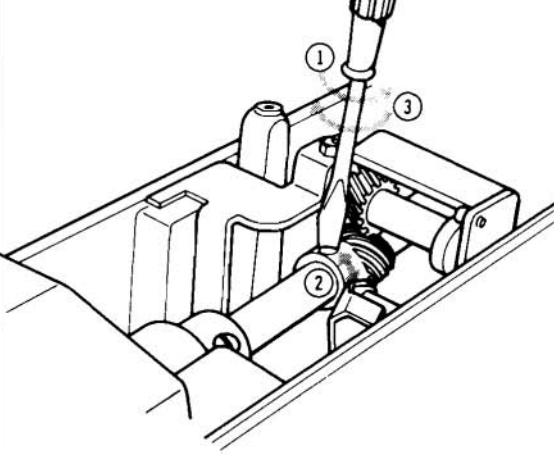
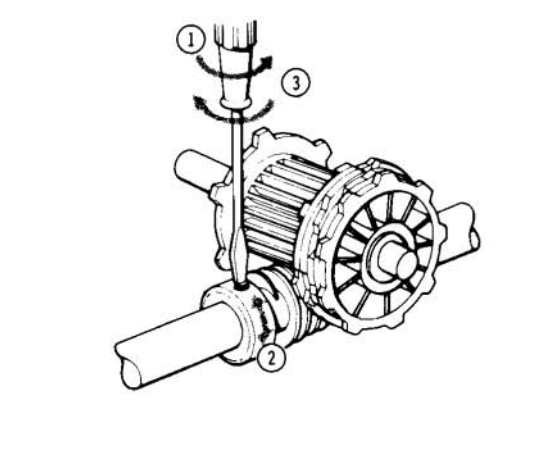
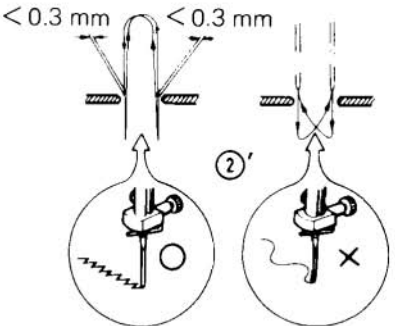
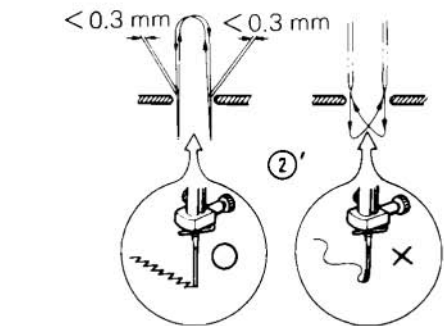
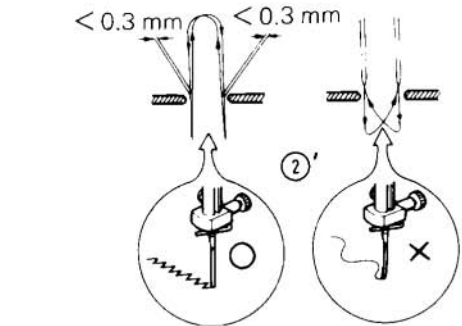
Note: When you adjusted this item, check item 18-2.

17-3. Contact of upper shaft gear, pattern cam and feed cam

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX720, VX740, VX760, VX780



Note: When you adjusted this item, check item 18-3

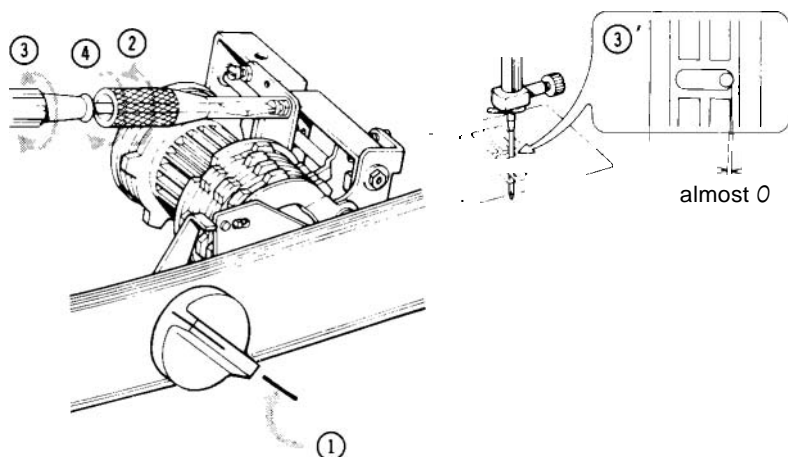
18-1. Sewing timing of the needle	18-2. Sewing timing of the needle	18-3. Sewing timing of the needle
VX710	VX511, VX516 VX611, VX616	VX541, VX561, VX581, VX546, VX566, VX586 VX641, VX661, VX681, VX646, VX666, VX686 VX720, VX740, VX760, VX780
<p>Before adjustment: Set the stitch width regulator at "5".</p>	<p>Before adjustment: Set the stitch width regulator at "5".</p>	<p>Before adjustment: Set the stitch width regulator at "5".</p>
		
		

19-1A. Clearance between cam finger and pattern cam

VX541, VX561, VX581, VX546, VX566, VX586
 VX641, VX661, VX681, VX646, VX666, VX686
 VX720, VX740, VX760, VX780

Before adjustment:

VX720	Set the stitch width regulator at "5". Set the pattern dial between SS (stretch stitch) and BS (blind stitch) so that cam finger becomes disengaged. Then, lower the needle.
VX546, VX541 VX566, VX561 VX586, VX581 VX646, VX641 VX666, VX661 VX686, VX681 VX740, VX760 VX780	Set the stitch width regulator at "5". Set the pattern dial between BH (buttonhole) and manual cam (general zigzag and straight) so that cam finger becomes disengaged. Then, lower the needle.

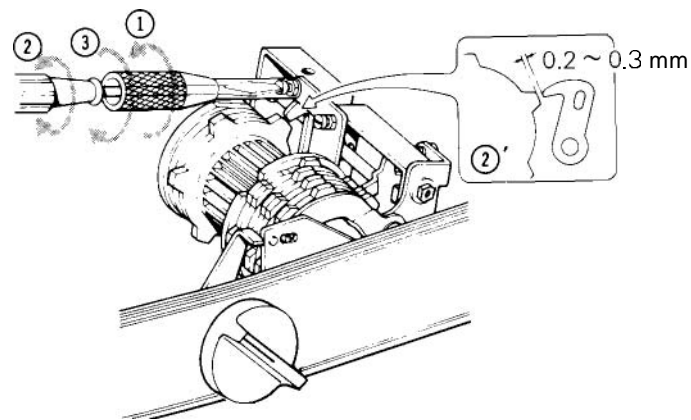


19-1B. Clearance between cam finger and feed cam

VX541, VX561, VX581, VX546, VX566, VX586
 VX641, VX661, VX681, VX646, VX666, VX686
 VX720, VX740, VX760, VX780

Before adjustment:

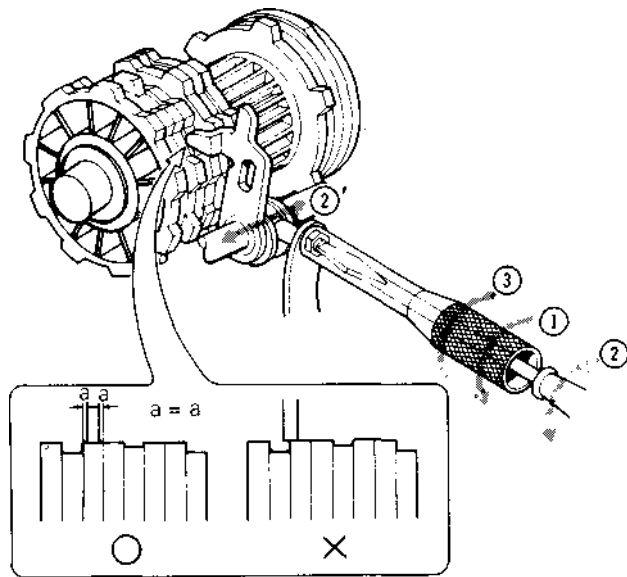
VX720	Set the pattern dial between SS (stretch stitch) and BS (blind stitch) so that cam finger becomes disengaged.
VX546, VX541 VX646, VX641 VX740	Set the pattern dial between No. 2 (stretch stitch) and No. 3 (blindstitch) so that cam finger becomes disengaged.
VX566, VX561 VX586, VX581 VX666, VX661 VX686, VX681 VX760, VX780	Set the pattern dial between No. 2 (stretch stitch) and No. 3 (elastic blind stitch) so that cam finger becomes disengaged.



20-1 A. Position of cam finger for pattern cam

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX720, VX740, VX760, VX780

Before adjustment: Set the pattern dial at SS (stretch stitch).

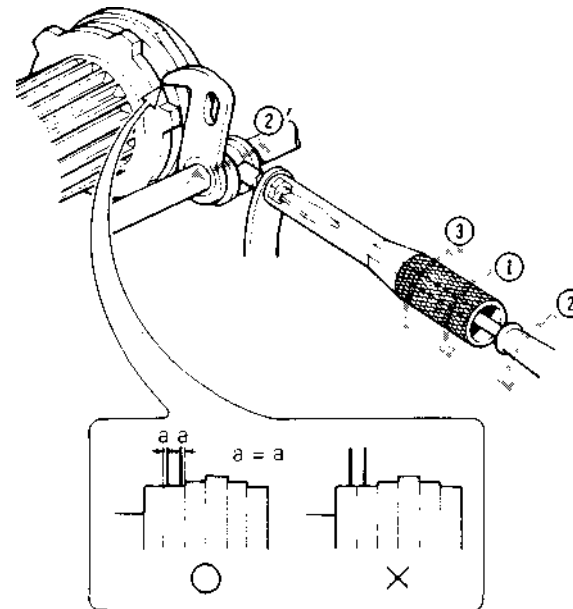


Cam finger VS Pattern cam.

20-1B. Position of cam finger for feed cam

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX720, VX740, VX760, VX780

Before adjustment: Set the pattern dial at SS (stretch stitch).



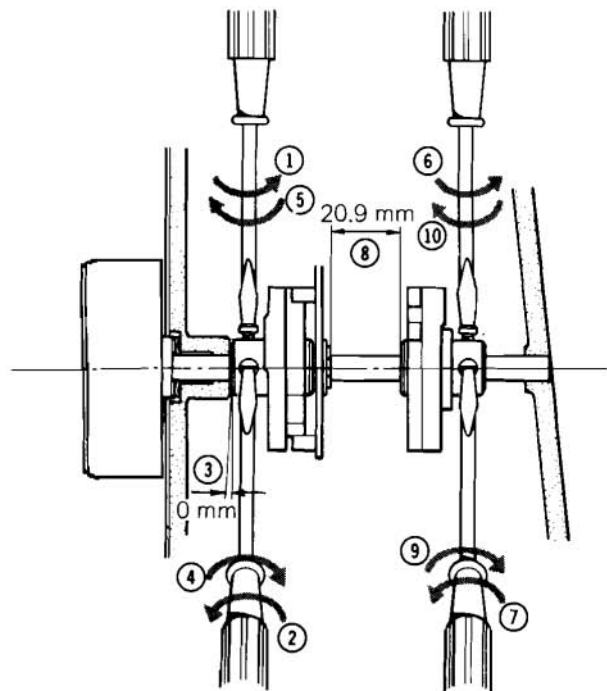
Cam finger VS Feed cam.

21-1. Setting of upper thread tension dial	21-2. Setting of upper thread tension dial	22. Adjustment of feed dog movement at buttonhole sewing
VX710	VX511, VX541, VX561, VX581, VX516 VX546, VX566, VX586, VX611, VX641 VX661, VX681, VX616, VX646, VX666 VX686, VX720, VX740, VX760, VX780	VX541, VX561, VX581, VX546, VX566, VX586 VX641, VX661, VX681, VX646, VX666, VX686 VX740, VX760, VX780
	<p>* If the upper thread tension is too tight or too loose, adjust the nut. After this adjustment, make sure there is no thread tension at dial "0".</p>	<p>Before adjustment: Set the stitch length regulator at "4".</p>

23-1. Setting of pattern dial

VX720

Before adjustment: Set the pattern dial at "SS".

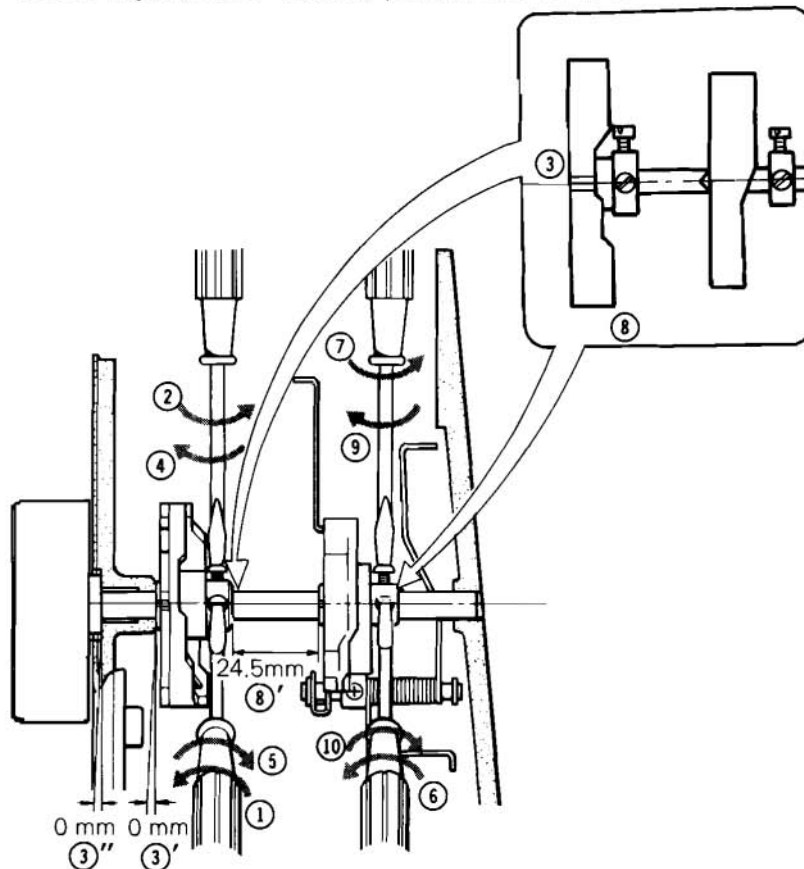


Note: When you adjusted this item, check item 20-1A, 20-1B.

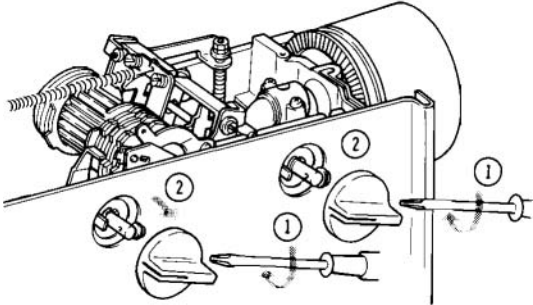
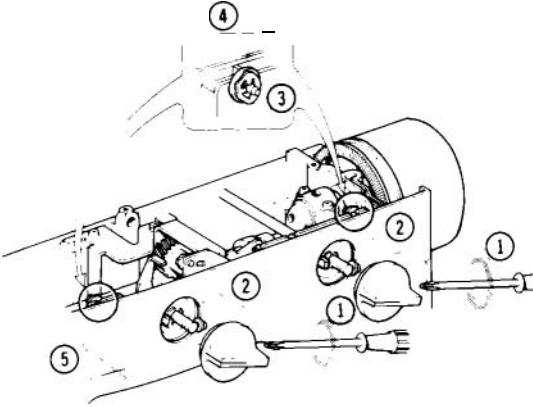
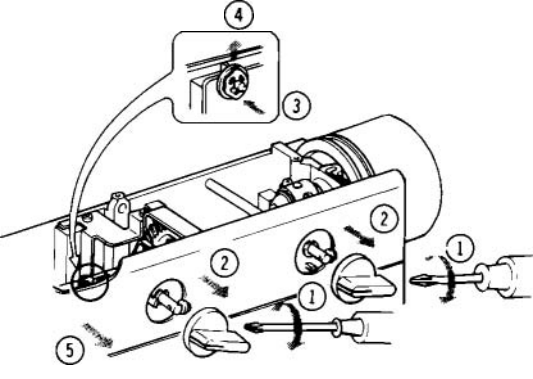
23-2. Setting of pattern dial

VX541, VX561, VX581, VX546, VX566, VX586
VX641, VX661, VX681, VX646, VX666, VX686
VX740, VX760, VX780

Before adjustment: Set the pattern dial at "2".

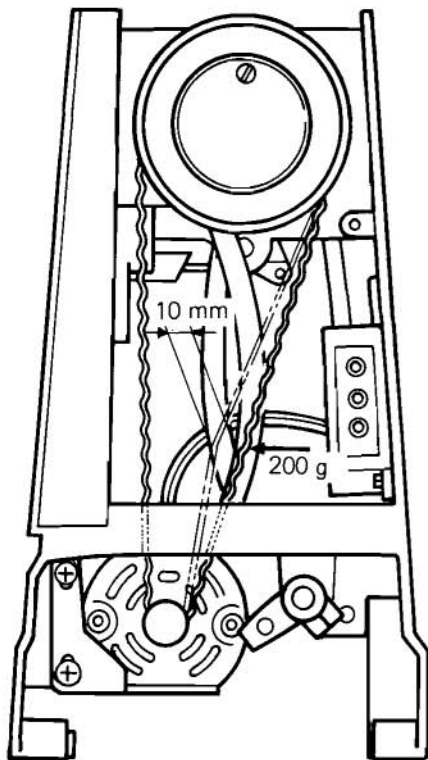


Note: When you adjusted this item, check item 20-1A, 20-1B.

24-1. How to take off stitch width, stitch length dial and arm panel	24-2. How to take off stitch width, stitch length dial and arm panel	24-3. How to take off stitch width, stitch length dial and arm panel
<p>VX720, VX740, VX760, VX780</p>	<p>VX611, VX641, VX661, VX681 VX616, VX646, VX666, VX686</p>	<p>VX511, VX541, VX561, VX581 VX516, VX546, VX566, VX586</p>
		

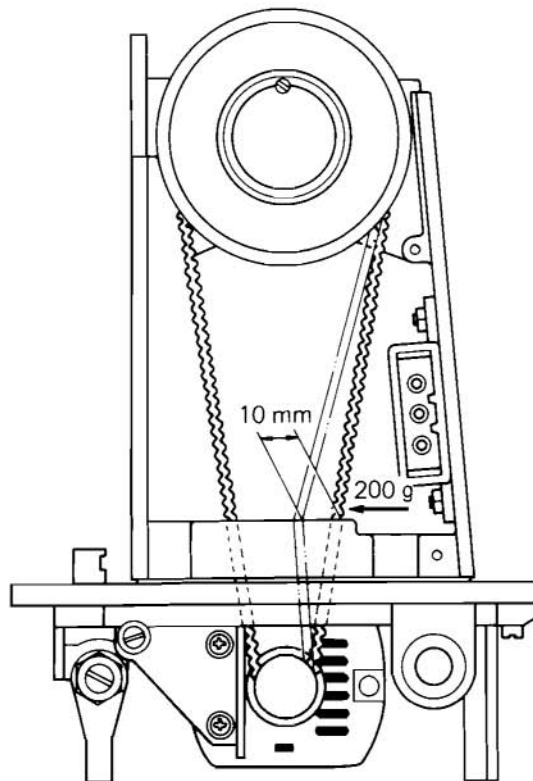
25-1. Adjusting of the drive belts

VX710, VX760, VX740
VX720, VX780



25-2. Adjusting of the drive belts

VX516, VX546, VX566, VX586
VX616, VX646, VX666, VX686



25-3. Adjusting of the drive belts

VX511, VX541, VX561, VX581
VX611, VX641, VX661, VX681

Loosen the two screws. Both belts automatically become to correct tensions by the power of spring. Then, fasten the two screws. If this spring does not work, adjust the idle pully assembly.

