

**SERVICE MANUAL
&
PARTS LIST**

**MODEL: ML744D 150th anniversary
model (150 lock)**

TABLE OF CONTENTS

SERVICE ACCESS

TO CHANGE THE FACE PLATE UNIT	1
TO CHANGE THE BELT COVER.....	2
TO CHANGE THE TOP COVER UNIT.....	3
TO CHANGE THE FRONT COVER UNIT.....	4
TO CHANGE THE FREE ARM COVER UNIT.....	5
TO CHANGE THE BASE PLATE UNIT	6
TO CHANGE THE REAR COVER UNIT	7
TO CHANGE THE MACHINE SOCKET UNIT	8

MECHANICAL ADJUSTMENT

TO ADJUST THE MOTOR BELT TENSION.....	9
TO ADJUST THE NEEDLE HEIGHT	10
TO ADJUST THE PRESSER BAR HEIGHT.....	11
TO ADJUST THE FEED DOG HEIGHT	12
TO ADJUST THE TIMING OF THE NEEDLE AND THE FEED DOG	13
TO ADJUST THE TIMING OF THE NEEDLE AND THE UPPER KNIFE	14
TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE LOWER LOOPER/NEEDLE GUARDS	15 to 17
TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE FIXED NEEDLE GUARD	18
TO ADJUST THE POSITION OF THE CHAINING FINGER	19
TO ADJUST THE POSITION OF THE UPPER LOOPER	20
TO ADJUST THE TIMING OF THE NEEDLE AND THE LOWER LOOPER	21
TO ADJUST THE TIMING OF THE UPPER AND LOWER LOOPERS.....	22
TO ADJUST THE CLEARANCE BETWEEN THE LOOPERS	23
TO ADJUST THE CLEARANCE BETWEEN THE NEEDLE AND THE UPPER LOOPER	24
TO ADJUST THE POSITION OF THE KNIVES	25
TO ADJUST THE POSITION OF THE LOOPER THREAD GUIDE	26
TO ADJUST THE STITCH LENGTH	27
TO ADJUST THE THREAD TENSION DIALS.....	28

PARTS LIST	29 to 51
-------------------------	----------

SERVICE ACCESS

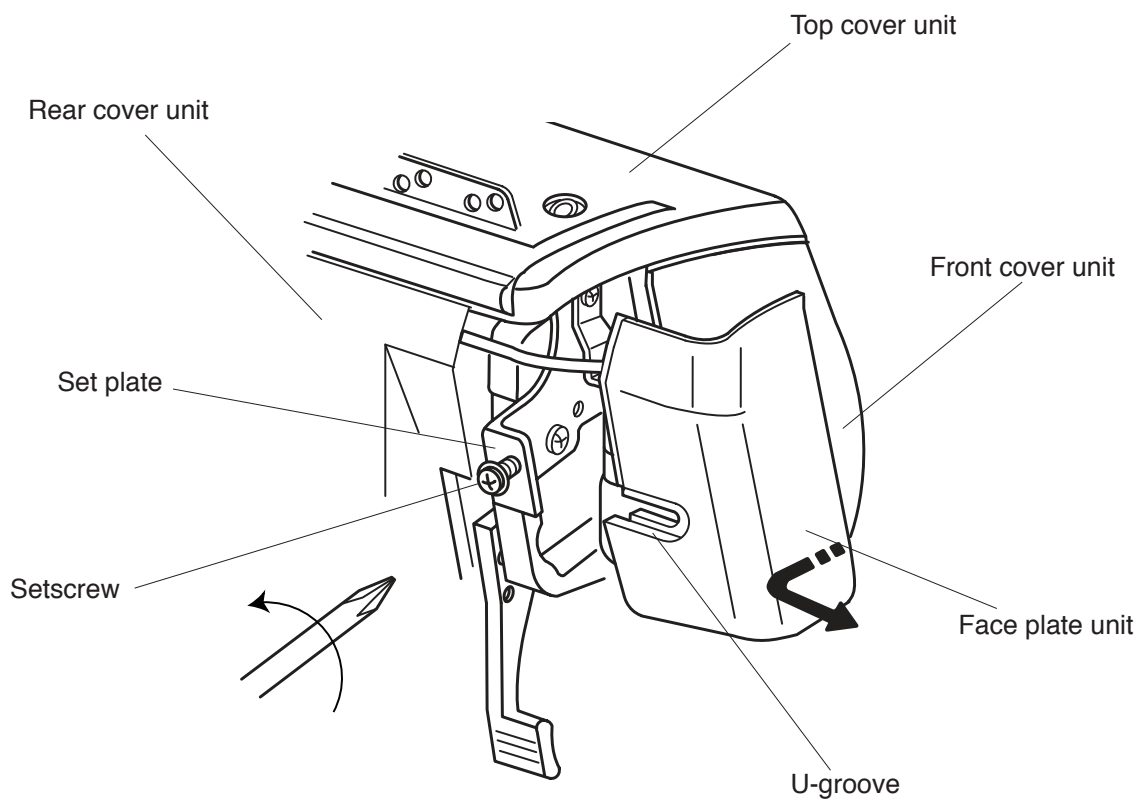
TO CHANGE THE FACE PLATE UNIT

To remove:

1. Loosen setscrew and remove the face plate unit.

To attach:

2. Fit the U-groove of the face plate between the setscrew and set plate, put the ribs of face plate into the front cover unit, rear cover unit and tighten the setscrew.



SERVICE ACCESS

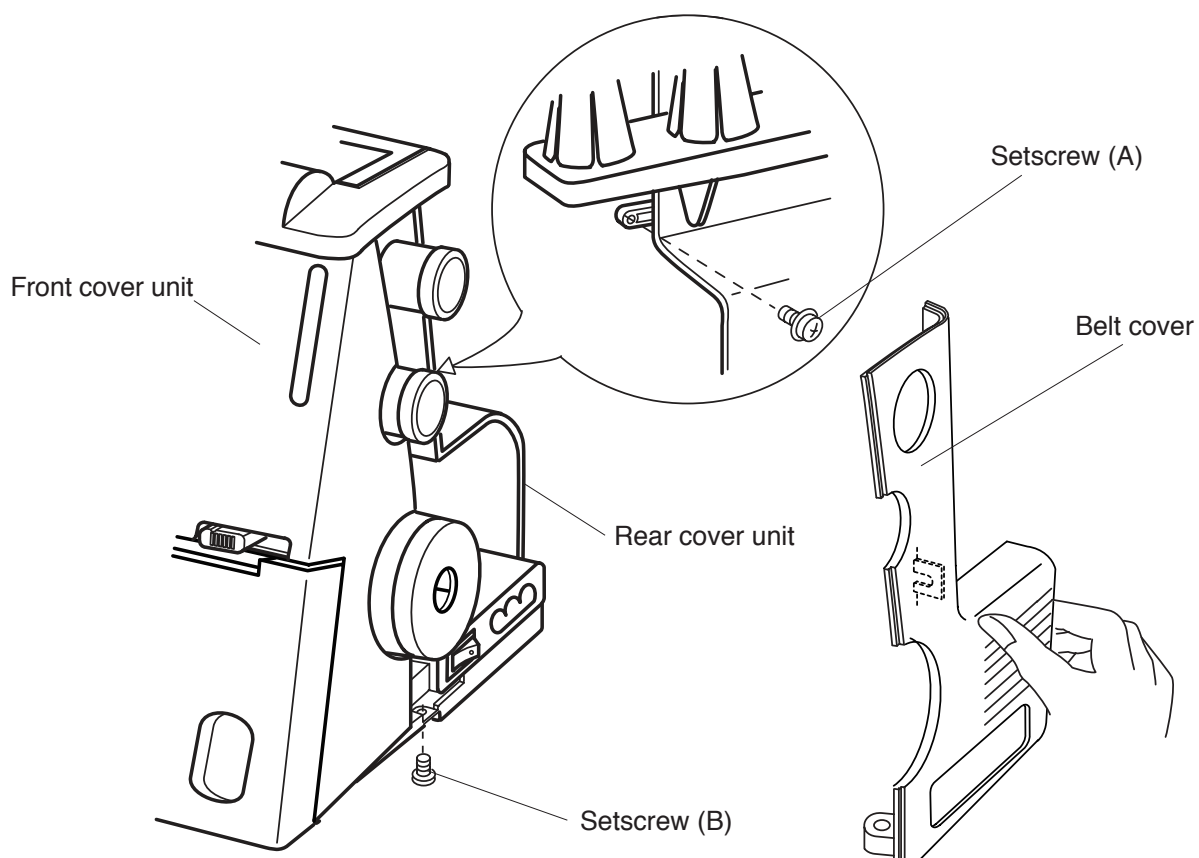
TO CHANGE THE BELT COVER

To remove:

1. Loosen the setscrew (A) and remove the setscrew (B).
2. Remove the belt cover.

To attach:

3. Put the ribs of belt cover into the front cover unit and rear cover unit and tighten setscrews (A) and (B).



SERVICE ACCESS

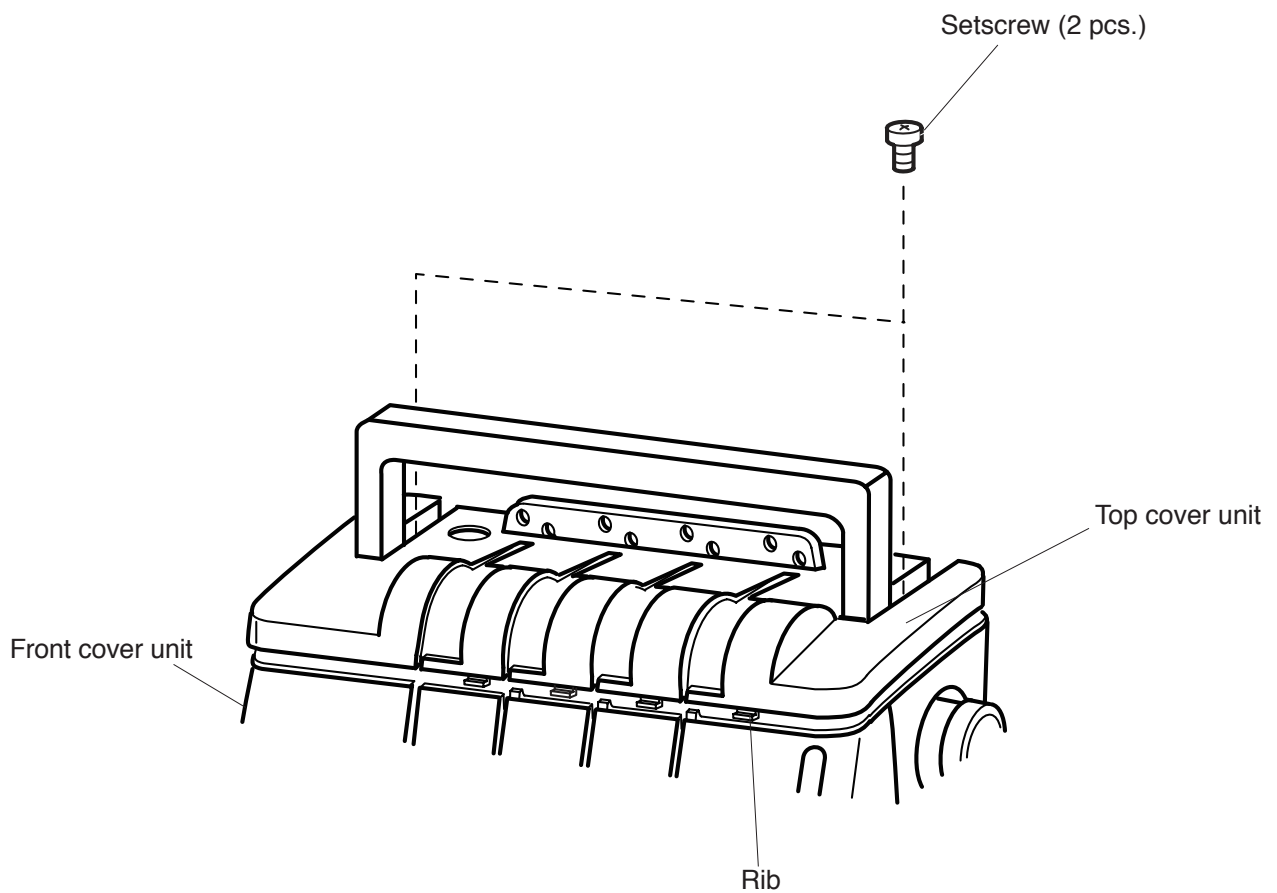
TO CHANGE THE TOP COVER UNIT

To remove:

1. Remove the setscrews (2 pcs.) and remove the top cover unit.

To attach:

2. Put the ribs in the front cover unit.
3. Tighten the setscrews (2 pcs.).



SERVICE ACCESS

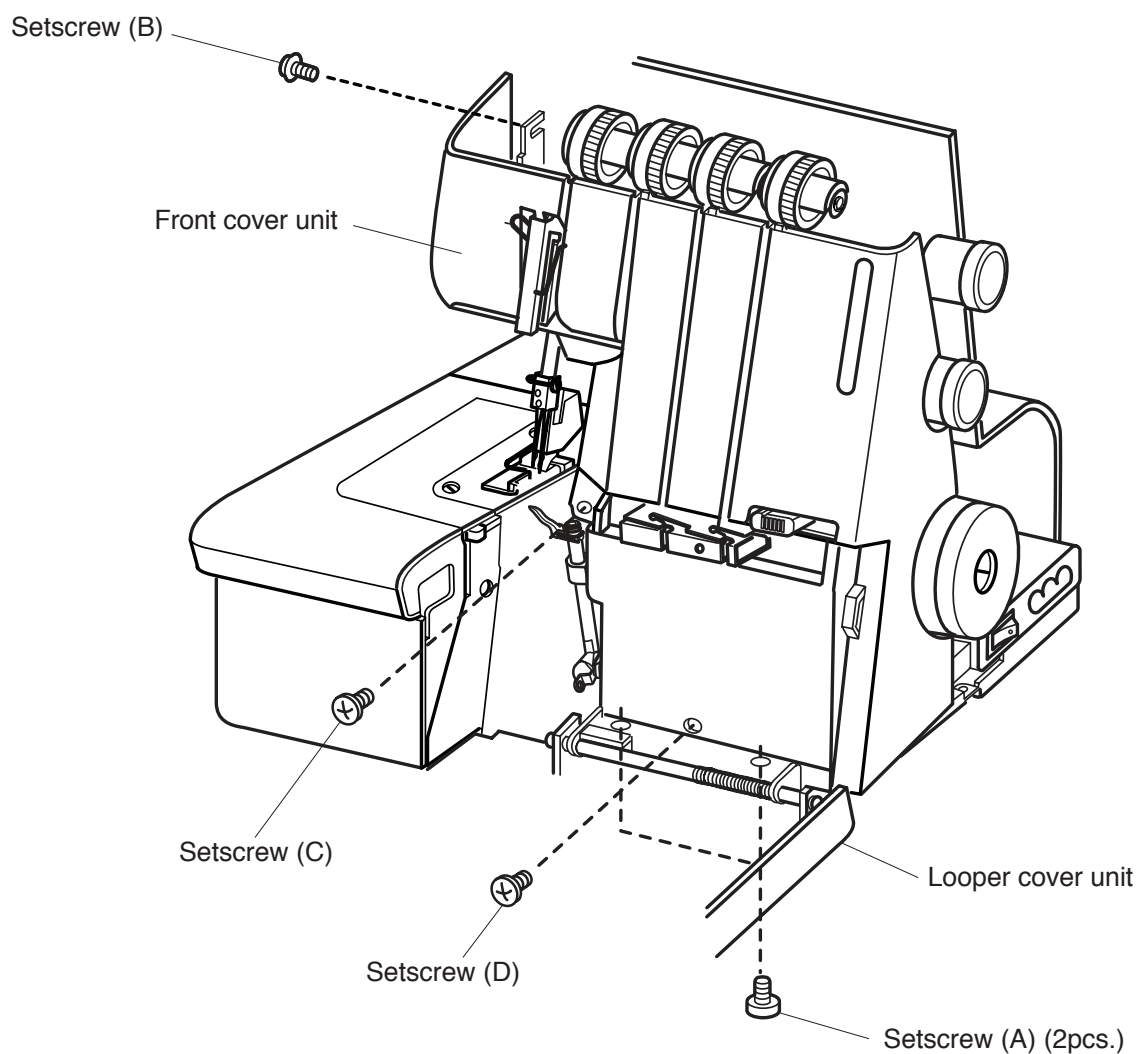
TO CHANGE THE LOOPER COVER UNIT AND THE FRONT COVER UNIT

To remove:

1. Remove setscrews (A) (2 pcs.) and looper cover unit.
2. Remove the top cover unit. (see page 3)
3. Move the upper looper to its lowest point by turning the handwheel in counterclockwise.
4. Loosen the setscrew B and remove the setscrews C and D and remove the front cover unit.

To attach:

5. Attach the front cover unit, and tighten the setscrews (B), (C) and (D).
6. Attach the top cover unit.
7. Attach the looper cover unit and tighten the setscrews (A) (2 pcs.).



SERVICE ACCESS

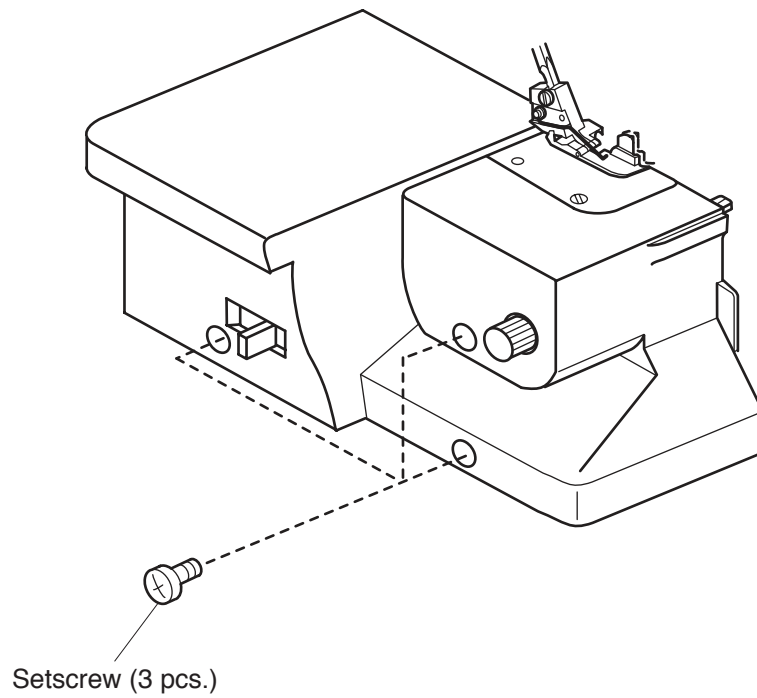
TO CHANGE THE FREE ARM COVER UNIT

To remove:

1. Remove the side cover.
2. Remove the setscrews (3 pcs.) and remove the free arm cover unit.

To attach:

3. Put the ribs of free arm cover into back cover.
4. Tighten the setscrews (3 pcs.).



SERVICE ACCESS

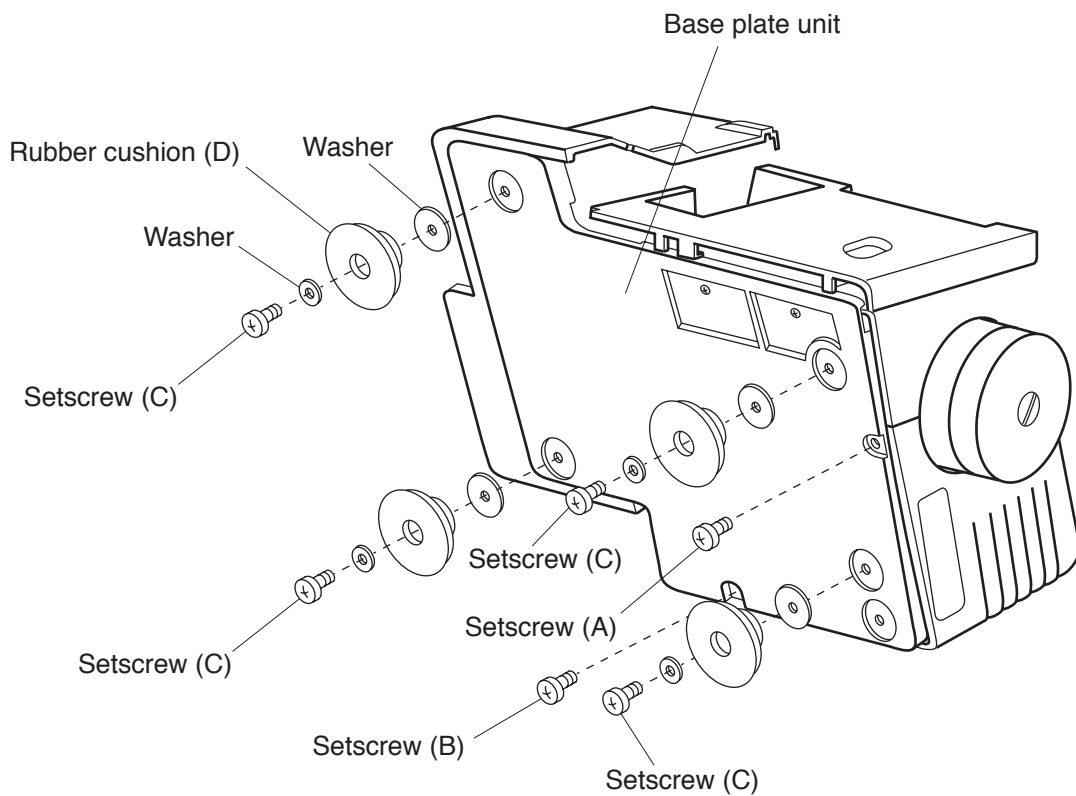
TO CHANGE THE BASE PLATE UNIT

To remove:

1. Remove the setscrews (A), (B) and setscrews (C) (4 pcs.) and remove the rubber cushions (D) (4 pcs.) and washers (8 pcs.).
2. Remove the base plate unit.

To attach:

3. Attach the base plate and rubber cushions (D) (4 pcs.), washers (8 pcs.), and tighten setscrews (C) (4 pcs.).
4. Tighten the setscrews (A) and (B).



SERVICE ACCESS

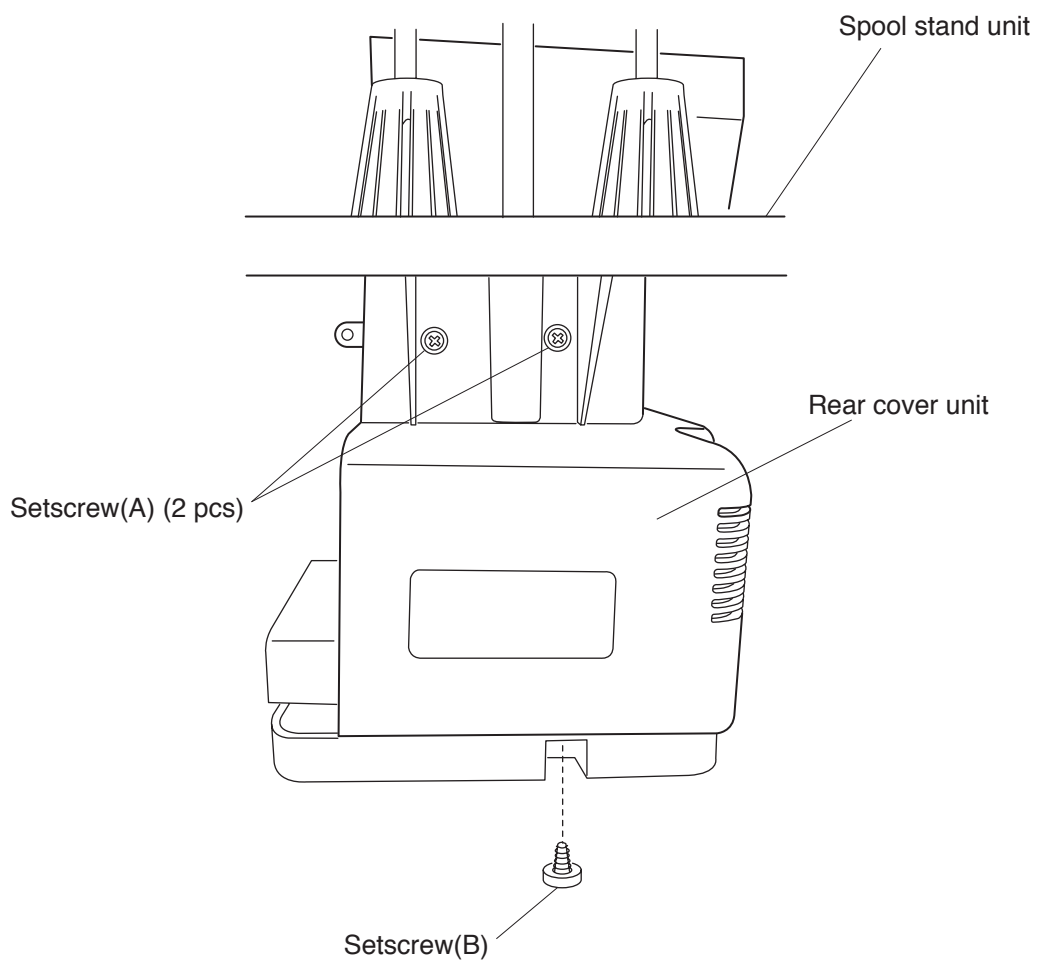
TO CHANGE THE REAR COVER UNIT

To remove:

1. Remove the face plate unit, belt cover and top cover unit (see pages 1 to 3.).
2. Remove the setscrews (A) (2 pcs.) and remove the spool stand unit.
3. Remove the setscrew (B) and remove the rear cover unit.

To attach:

4. Attach the rear cover unit, tighten the setscrew (B).
5. Attach the spool stand unit, tighten the setscrews (A) (2 pcs.).
6. Attach the belt cover and top cover unit and face plate unit.



SERVICE ACCESS

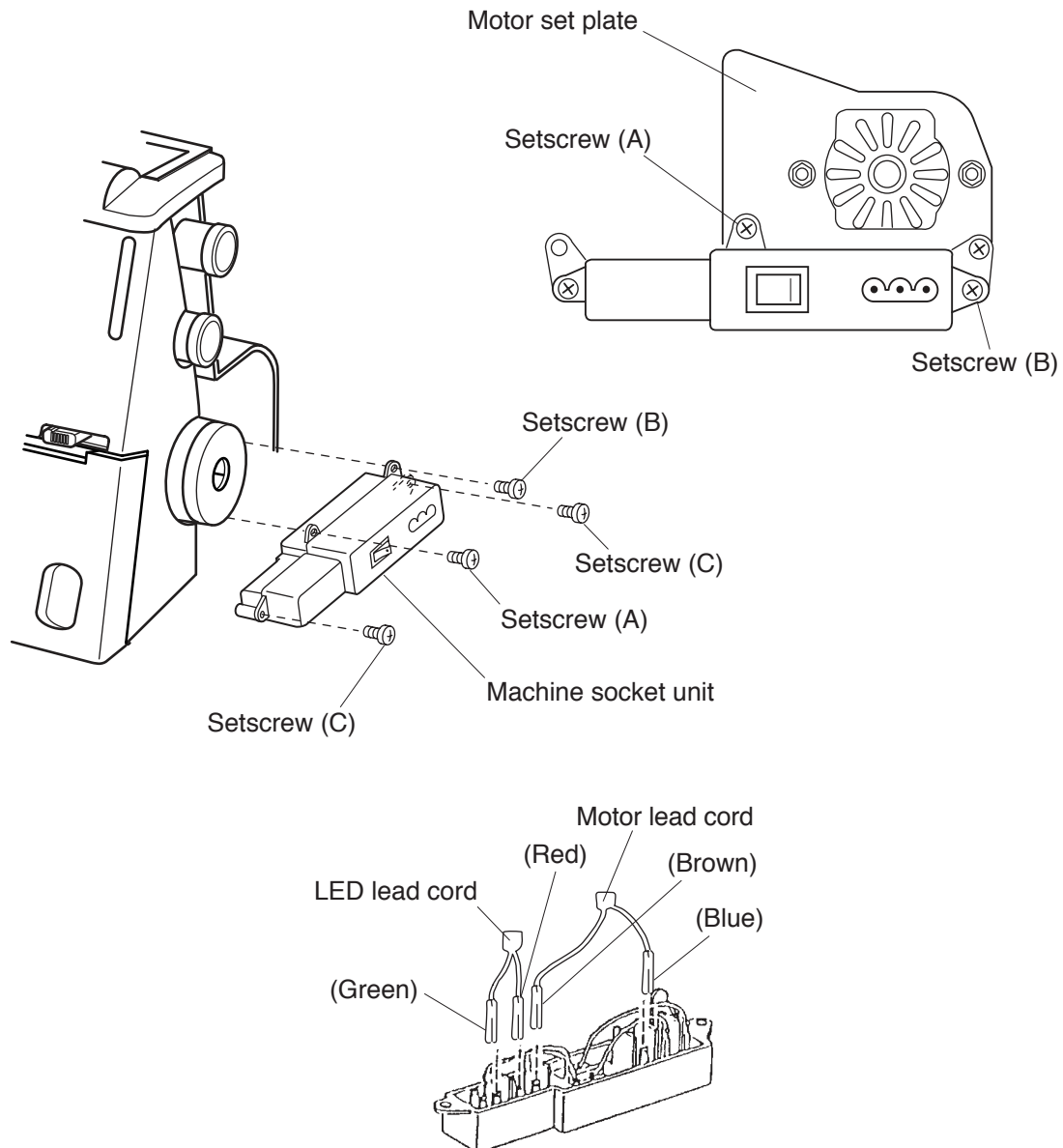
TO CHANGE THE MACHINE SOCKET UNIT

To remove:

1. Remove the belt cover. (see page 2)
2. Remove the setscrews (A), (B) and the machine socket unit from the motor set plate.
3. Remove the setscrews (C) (2 pcs.) and pull out the cord connectors.

To attach:

4. Insert the cord connectors as shown below.
5. Attach the machine socket unit and tighten the setscrews (C) (2 pcs.).
6. Attach the machine socket unit on the motor set plate and tighten the setscrews (A), (B).
7. Attach the belt cover.



MECHANICAL ADJUSTMENT

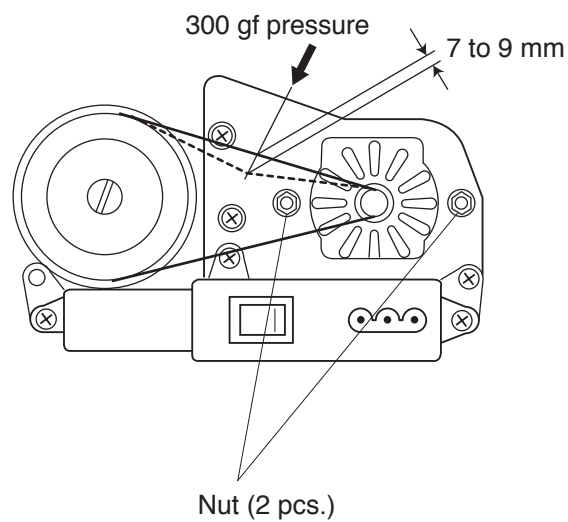
TO ADJUST THE MOTOR BELT TENSION

Correct Setting:

To check for proper belt tension, press the belt in the middle of the span lightly with your finger (approximately 300 grams-force). The belt should bend 7 to 9 mm.

To adjust:

1. Remove the belt cover (see page 2).
2. Loosen nuts (2 pcs.), then tighten them a little. Adjust the belt tension, then tighten the nuts securely.
3. Turn the handwheel for a few rotations and re-check the belt tension.
4. Attach the belt cover.



MECHANICAL ADJUSTMENT

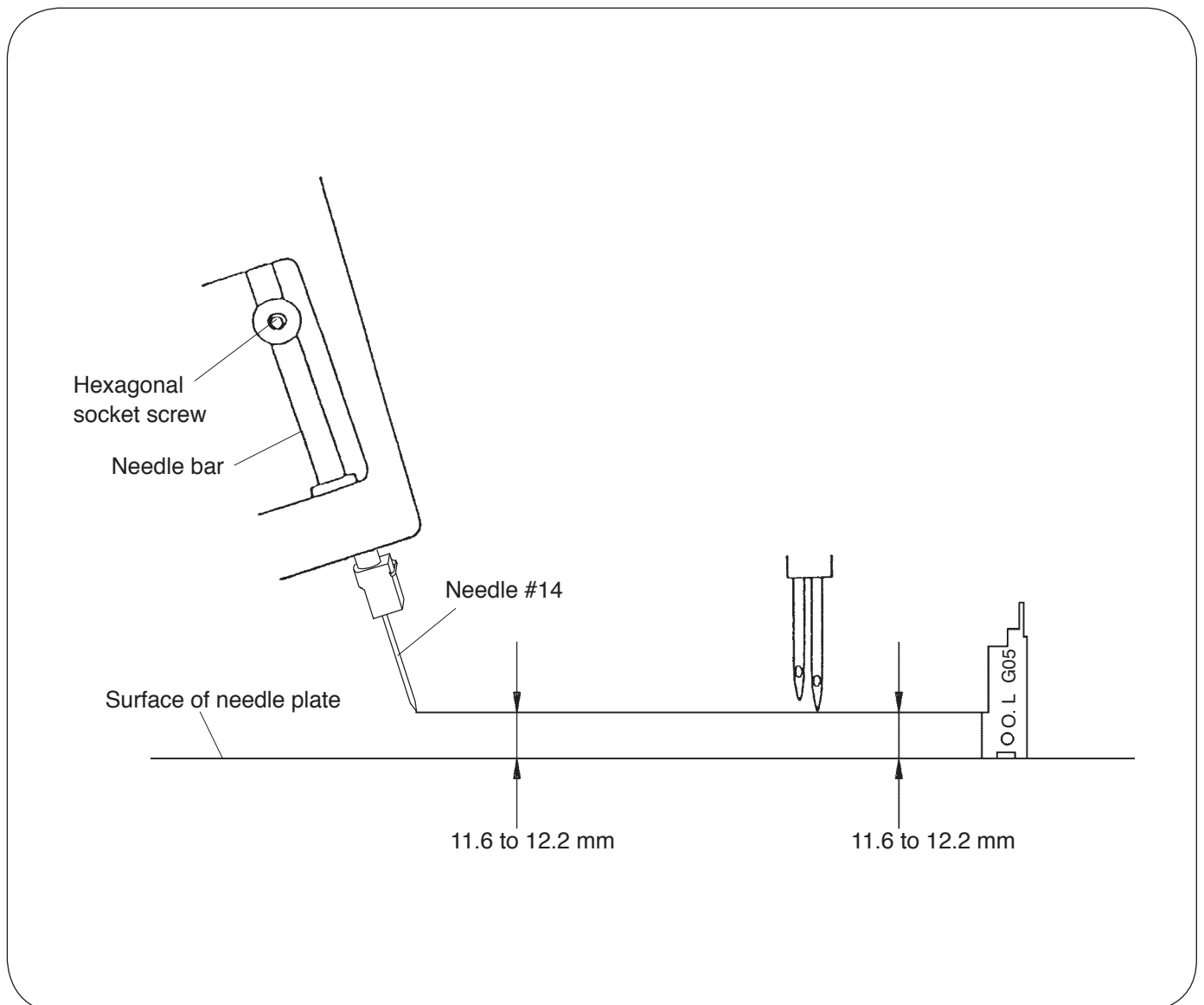
TO ADJUST THE NEEDLE HEIGHT

Correct Setting:

The distance between the tip of needle on the right and the surface of needle plate should be 11.6 to 12.2 mm when the needle bar is at the highest position.

To adjust:

1. Remove looper cover unit, top cover unit and front cover unit. (see pages 3 and 4)
2. Turn the handwheel toward you with your hand and set the needle bar at the highest position.
3. Loosen the hexagonal socket screw by a hexagonal wrench to adjust the needle bar height, and tighten the hexagonal socket screw after the adjustment is done.
Be careful not to turn the needle bar when the setscrew is loose.
4. Turn the handwheel toward you one cycle and recheck the needle bar height.
5. Attach the front cover unit, looper cover unit and top cover unit.



MECHANICAL ADJUSTMENT

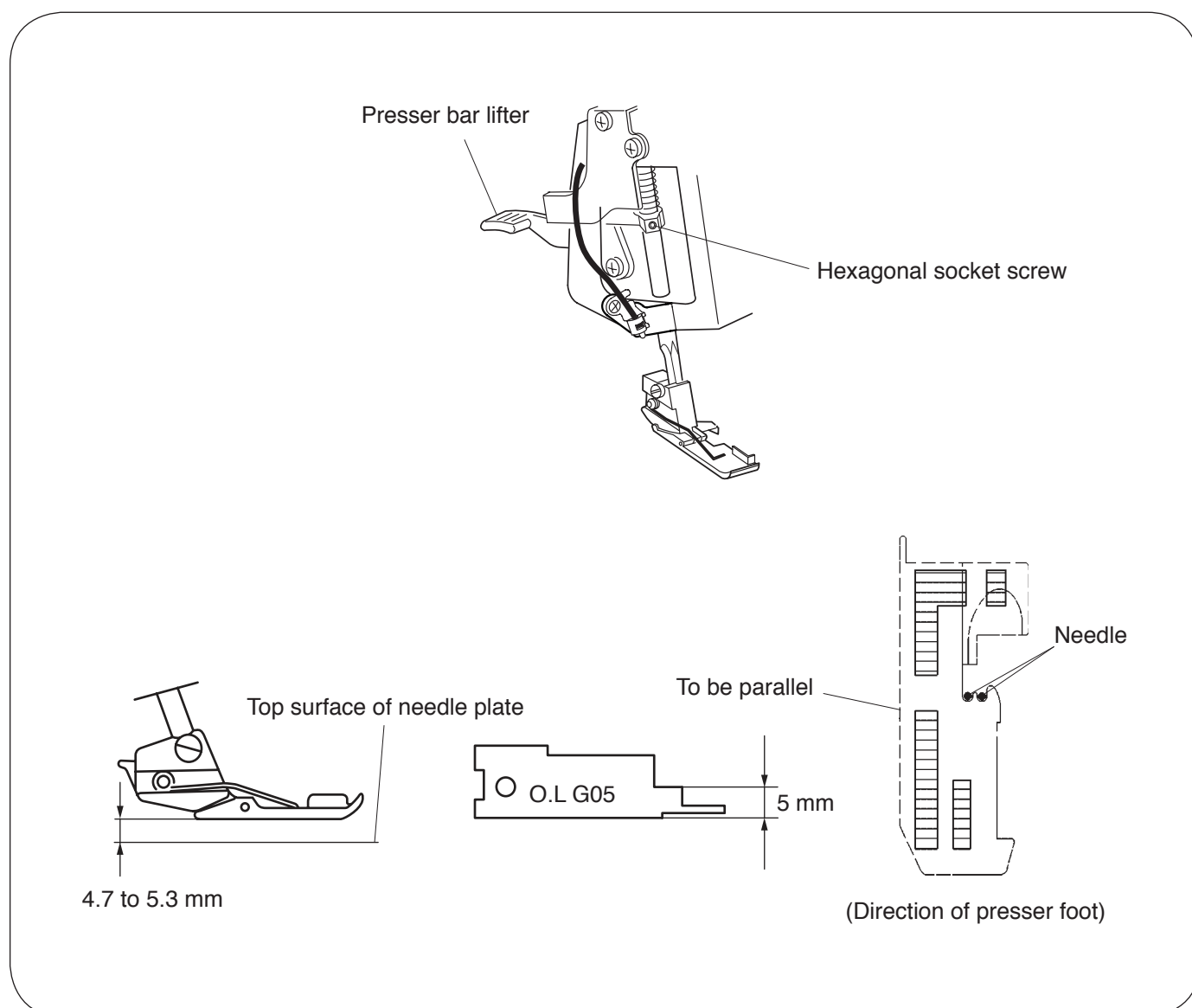
TO ADJUST THE PRESSER BAR HEIGHT

Correct Setting:

The distance between the surface of needle plate and bottom of presser foot should be 4.7 to 5.3 mm when the presser bar lifter is raised.

To adjust:

1. Remove the face plate, top cover unit, looper cover unit and front cover unit. (see pages 1, 3 and 4)
2. Raise the presser bar lifter, and loosen the hexagonal socket screw. Then adjust the presser bar height, the side of presser foot should be parallel with the hole of needle plate.
3. Tighten the hexagonal socket screw.
4. Attach the front cover unit, looper cover unit and top cover unit.



MECHANICAL ADJUSTMENT

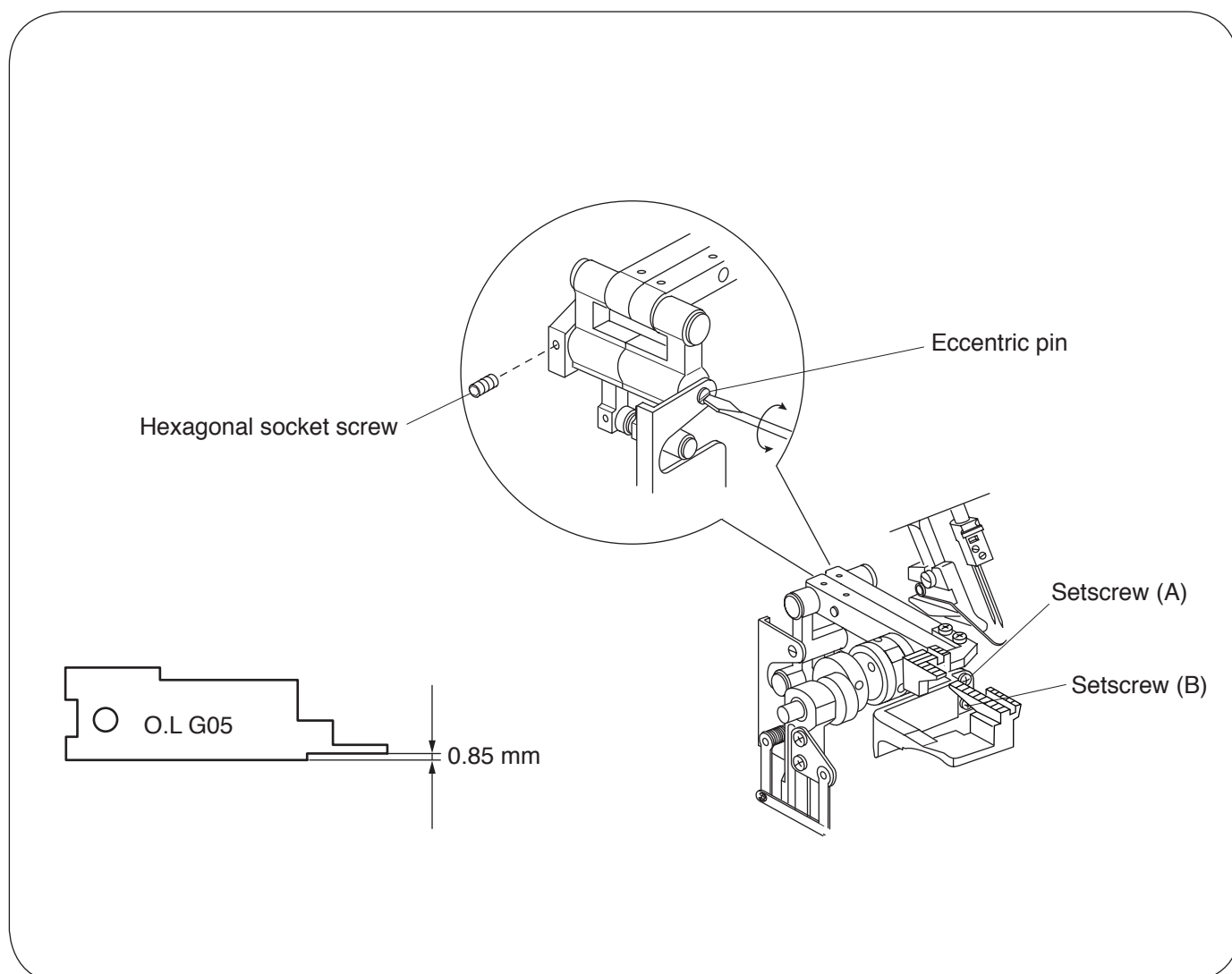
TO ADJUST THE FEED DOG HEIGHT

Correct Setting:

When the presser foot is lowered and the feed dogs are at their highest position, the distance between the surface of needle plate and bottom of presser foot should be 0.75 to 0.95 mm.

To adjust:

1. Remove the free arm cover unit and the rear cover unit (see page 5 to 6.).
2. Set the stitch length dial at "3" and the differential feed dial at "1.0".
3. Lower the presser foot and raise the feed dogs to their highest position by turning the handwheel.
4. Loosen the hexagonal socket screw, setscrews (A) and (B).
5. Insert the screwdriver in the slit of the eccentric pin.
Adjust the main feed dog by turning the pin then tighten the hexagonal socket screw.
(The standard setting of the feed dog height is when the slit on the eccentric pin is horizontal and eccentric position is at the rear side.)
6. Push the sub feed dog upward and adjust the distance between the surface of needle plate and bottom of presser foot, then tighten the setscrews (A) and (B).
7. Check the clearance between the feed dog and the slot of the needle plate when the stitch length is set at 5 and differential feed is set at maximum.
(If the direction of the eccentric adjustment is incorrect, the needle plate and feed dog may hit or rub each other.)
8. Attach the free arm cover unit and the rear cover unit.



MECHANICAL ADJUSTMENT

TO ADJUST THE TIMING OF THE NEEDLE AND THE FEED DOG

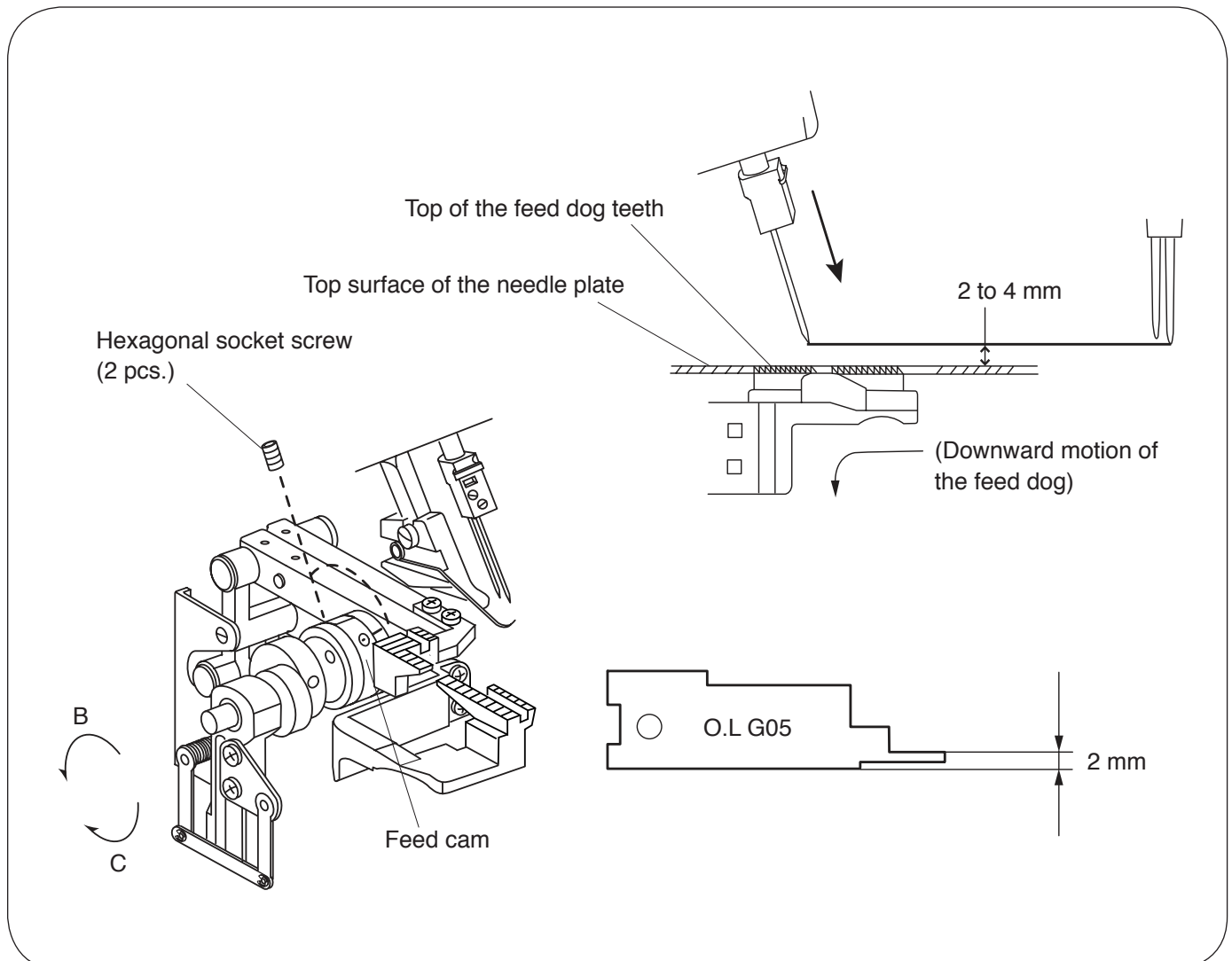
Correct Setting:

When the tip of right needle is at 2 to 4 mm above the needle plate in its downward motion and presser foot is lowered, the top of the feed dog teeth should be level with the top surface of needle plate at their rearmost position.

Before adjustment, check if the needle bar height and the feed dog height are correct.

To adjust:

1. Remove the free arm cover unit.
2. Set the stitch length dial at " 3 " and the differential feed dial at " 1.0 ".
3. Raise the presser foot and move the tip of right needle to 3 mm above the needle plate in its downward motion by turning the handwheel.
4. Lower the presser foot, and loosen hexagonal socket screws (2 pcs.) for feed cam.
Turn the feed cam in the direction B if the feed dog is lower than the surface of the needle plate.
Turn the feed cam in the direction C if the feed dog is higher than the surface of the needle plate.
5. Tighten hexagonal socket screws (2 pcs.).
6. Attach the free arm cover unit.



MECHANICAL ADJUSTMENT

TO ADJUST THE TIMING OF THE NEEDLE AND THE UPPER KNIFE

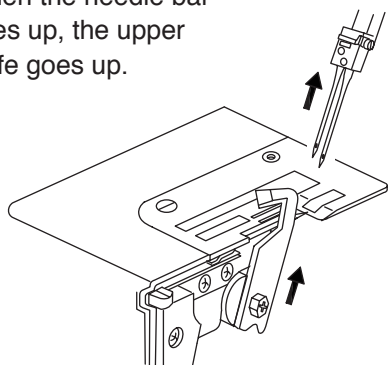
Correct Setting:

The upper knife timing is the same as that of the needle bar. In fact, when the needle bar is at highest position, the upper knife should be also at its highest position.

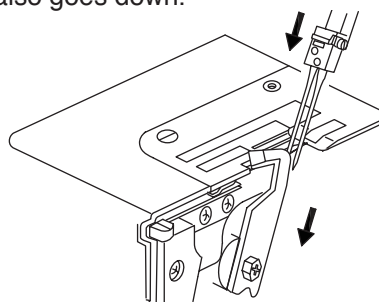
To adjust:

1. Remove the free arm cover unit.
2. Loosen hexagonal socket screw (2 pcs.) and adjust the needle and upper knife timing.
3. * Turn the upper knife drive cam to the direction B when the upper knife timing is being delayed.
* Turn the upper knife drive cam to the direction C when the upper knife timing is too soon.
4. Tighten hexagonal socket screw (2 pcs.) firmly.
* The clearance between the upper knife drive cam and upper knife connecting rod should be 1 mm.
5. Turn the handwheel toward you one cycle, and recheck the needle and the upper knife timing.
6. Attach the free arm cover unit.

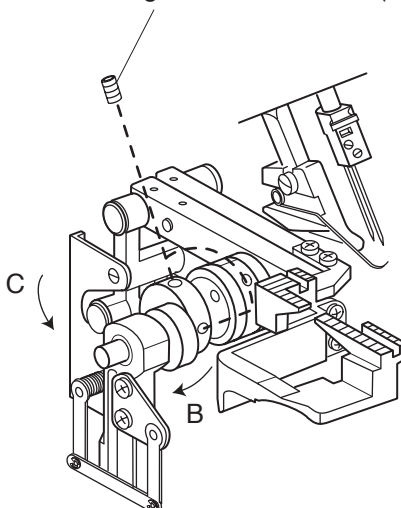
When the needle bar goes up, the upper knife goes up.



When the needle bar goes down, the upper knife also goes down.



Hexagonal socket screw (2 pcs.)



MECHANICAL ADJUSTMENT

TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE LOWER LOOPER/NEEDLE GUARDS (1 of 3)

Correct Setting:

Both right and left needles should have an equal clearance from the front edge of the needle holes on the needle plate.

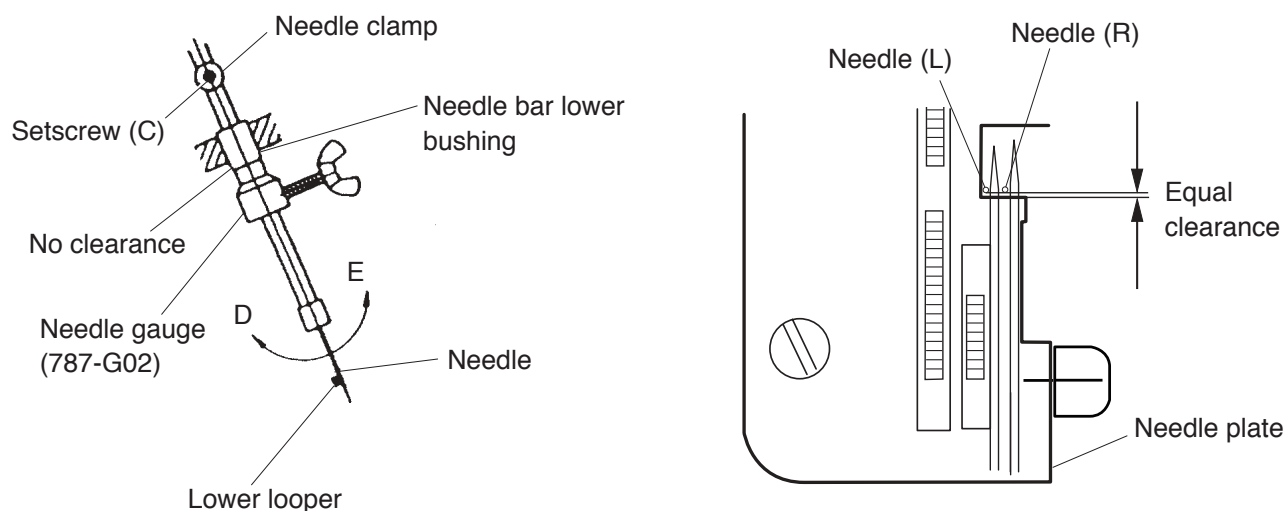
The standard clearance between the left and right needle and the lower looper is 0 mm to 0.05 mm (see page 16.).

The standard clearance between the needles and the rear needle guard is 0 mm to 0.2 mm (see page 17.).

The above standard clearance allows the needle to slightly touch the front needle guard.

To adjust:

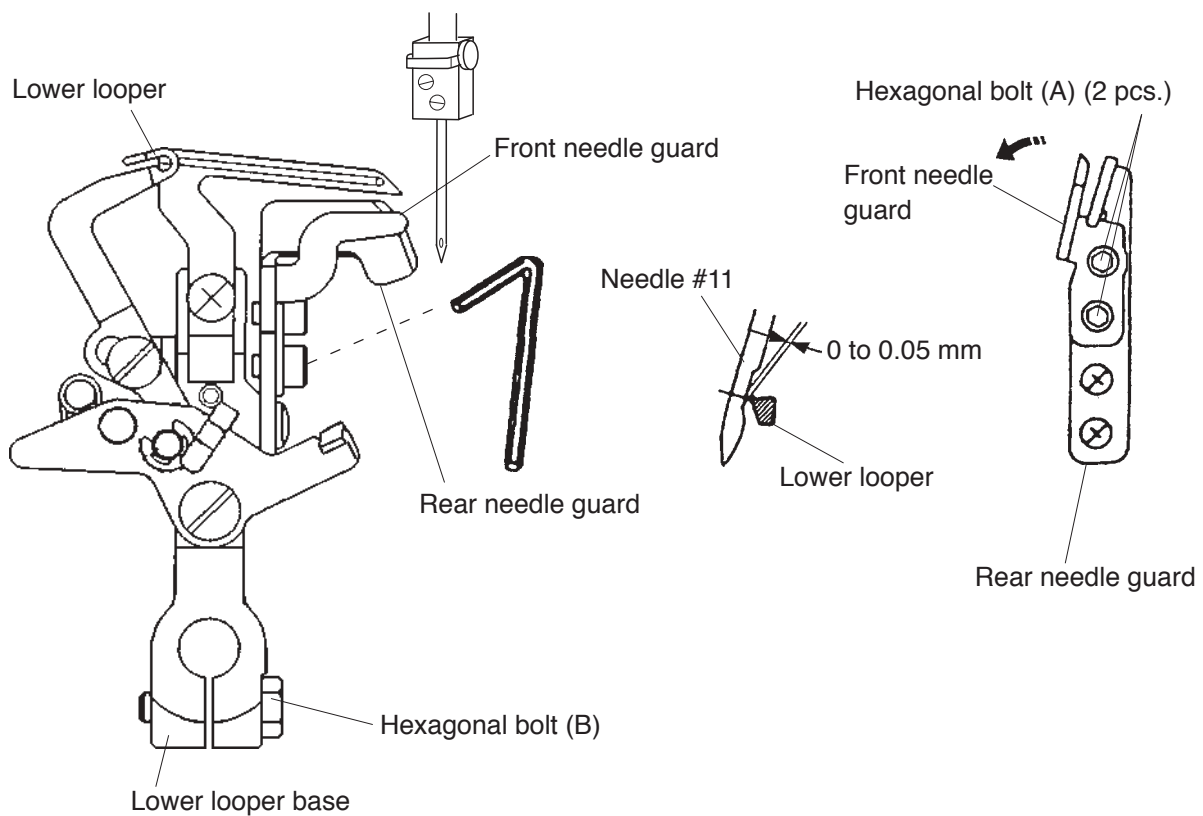
1. Remove the looper cover unit, top cover unit, front cover unit, presser foot, needle plate and needles.
2. Before loosening setscrew (C), attach the needle gauge #787-G02 to prevent change of needle bar height during the adjustment.
3. Attach two #11 needles on the needle clamp and loosen the setscrew (C). Adjust the two needles, to make the clearance between both needles and the front edge of the needle hole of the needle plate equal by turning the needle bar in the D or E direction while pushing up the needle bar to prevent change of needle bar height.
4. Retighten the setscrew (C) and remove the needle gauge.



MECHANICAL ADJUSTMENT

TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE LOWER LOOPER/NEEDLE GUARDS (2 of 3)

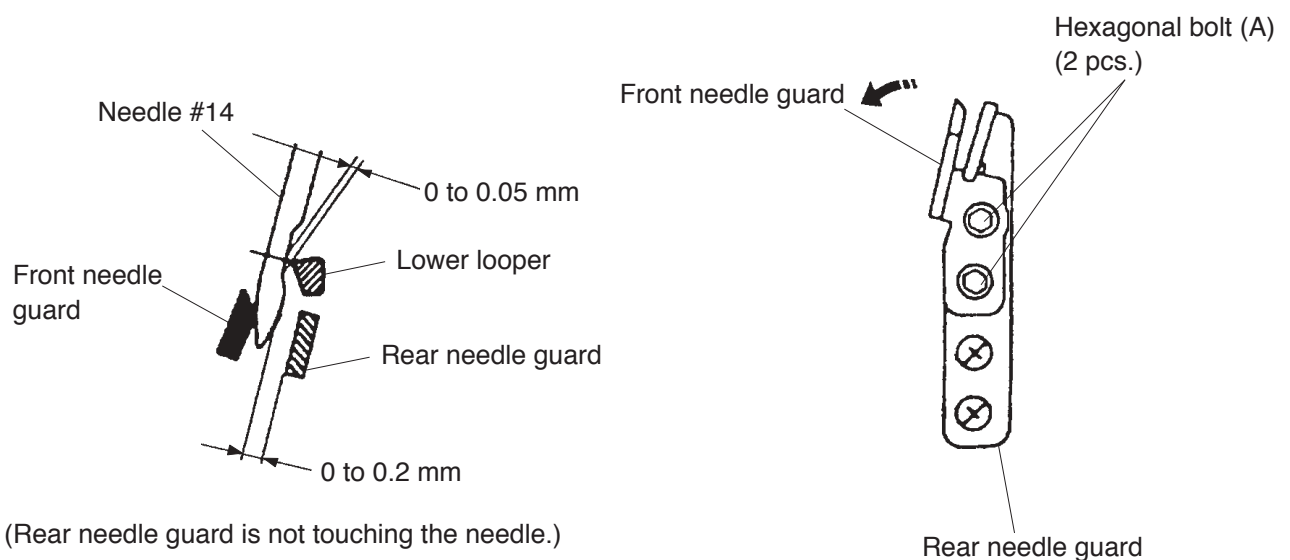
1. Remove the left needle only.
2. Turn the handwheel toward you to bring the tip of the lower looper from the left hand to the rear side of the right needle.
3. Loosen hexagonal bolt (A) (2 pcs.) on the front needle guard and open a space between the front needle guard and the needle.
4. Next, loosen the hexagonal bolt (B) and slide the lower looper unit to the front or to the back to adjust the clearance between the right needle and the lower looper. The clearance should be 0 mm to 0.05 mm. Retighten the hexagonal bolt (B).



MECHANICAL ADJUSTMENT

TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE LOWER LOOPER/NEEDLE GUARDS (3 of 3)

1. Change the right needle from #11 to #14.
2. Push the right needle by the front needle guard to adjust the clearance between the needle and the lower looper. The clearance should be 0 mm to 0.05 mm.
3. Attach #14 needle on the left needle position and turn the handwheel toward you to check the clearance between the left needle and looper.
Make sure the front needle guard is touching the needle slightly and the rear needle guard is not touching the needle.
4. Check the timing between the needle and the lower looper.
5. Recheck the needle bar height and the clearance between the needle and the lower looper.



MECHANICAL ADJUSTMENT

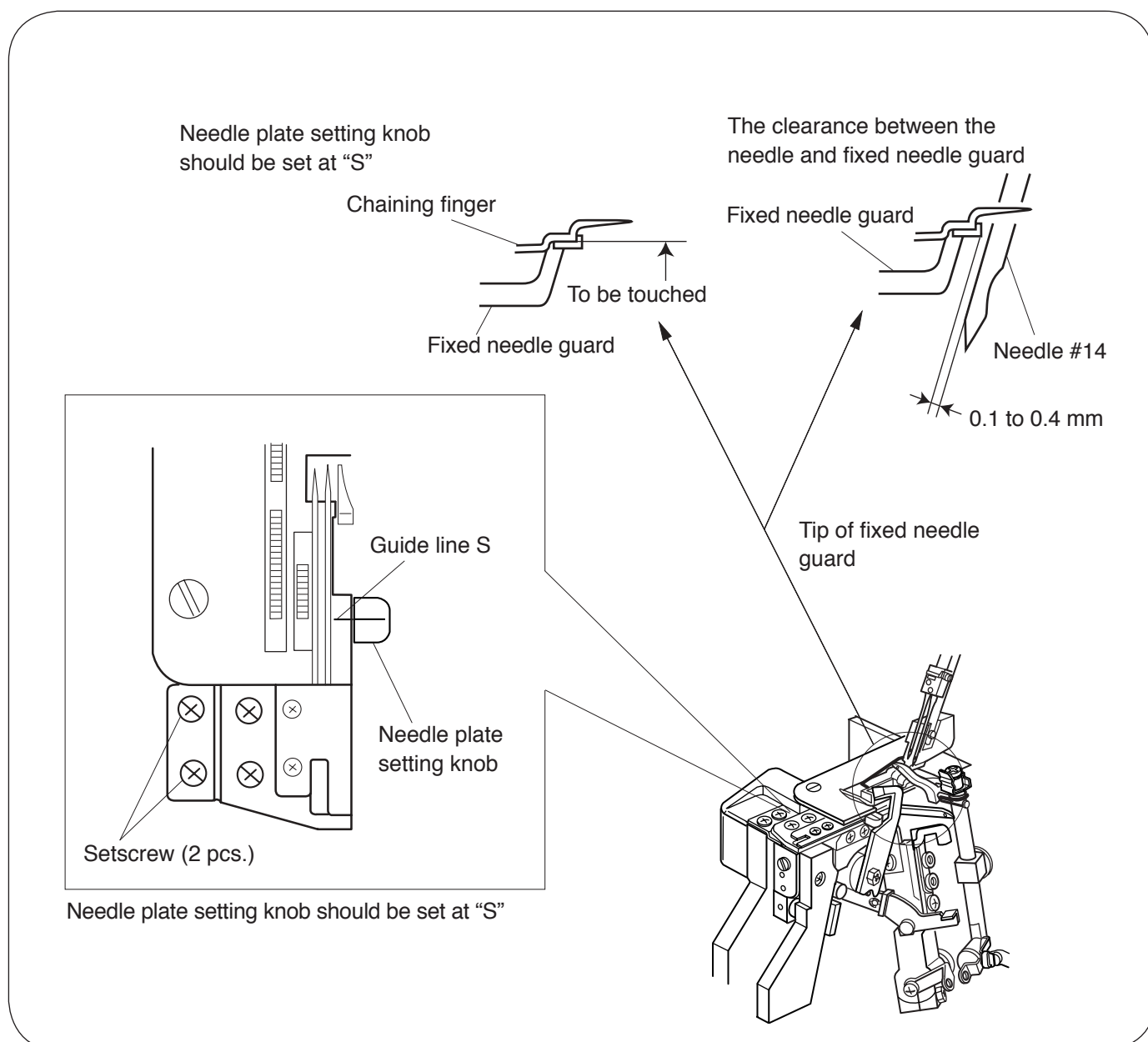
TO ADJUST THE CLEARANCE BETWEEN THE NEEDLES AND THE FIXED NEEDLE GUARD

Correct Setting:

The clearance between needles and the fixed needle guard should be 0.1 to 0.4 mm.

To adjust:

1. Remove the free arm cover unit, presser foot and the needle plate and lower the needle to its lowest position.
2. Loosen setscrews (2 pcs.) and adjust the position of the fixed needle guard.
3. Tighten setscrews (2 pcs.).
4. Attach the needle plate and set the needle plate setting knob to guide line S.
5. Check the position of the chaining finger.
6. Attach the free arm cover unit and the presser foot.



MECHANICAL ADJUSTMENT

TO ADJUST THE POSITION OF THE CHAINING FINGER

Correct Setting:

When set the needle plate setting knob to guide line S, chaining finger should touch side of needle plate, and tip of chaining finger should be same level with the tip of the needle on the needle plate.

To adjust:

1. Remove the free arm cover unit and the presser foot.
2. Set the needle plate setting knob to guide line S on needle plate.
3. Loosen setscrews (2 pcs.) and move chaining finger unit to correct position.
4. Tighten setscrews (2 pcs.).
5. Set the needle plate setting knob to guide line S and R, and check the position of chaining finger.
6. Attach the free arm cover unit and the presser foot.

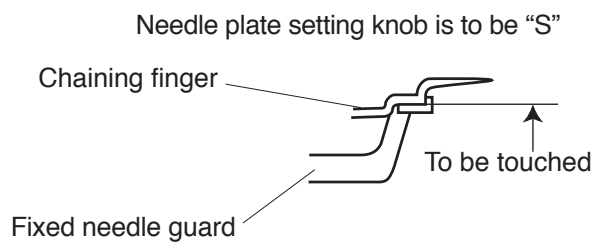


Figure 2

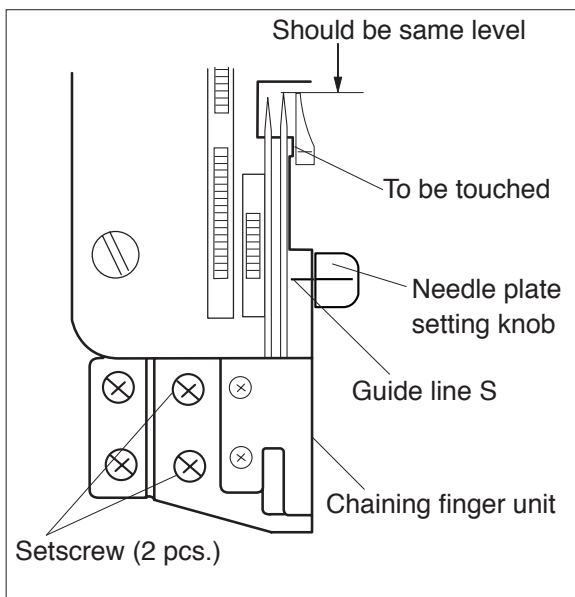
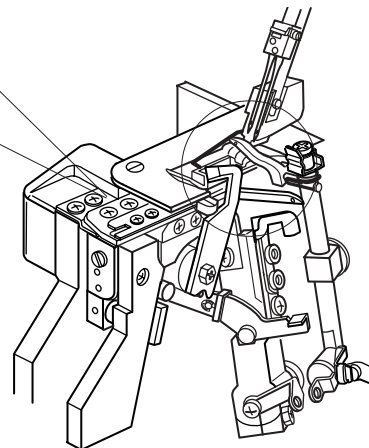


Figure 1



MECHANICAL ADJUSTMENT

TO ADJUST THE POSITION OF THE UPPER LOOPER

Correct Setting:

When the upper looper is at the leftmost position, the distance between the center of needle on the right and the center of looper eye should be 4.8 to 5.2 mm.

To adjust:

1. Remove the base plate unit (see page 6.).
2. Loosen hexagonal socket screws (A) (2 pcs.), and adjust the distance between upper looper shaft guide and bottom of upper looper. The distance should be 1.6 to 1.8 mm when the upper looper is at the lowest position as shown in Figure 1.
3. Tighten hexagonal socket screws (A) (2 pcs.).
4. Turn the handwheel and bring the upper looper to the leftmost position.
5. Remove the setscrew (B) and spreader base.
6. Loosen the hexagonal socket screw (B), and adjust the distance between the center of needle and center of upper looper eye is 5 mm (4.8 to 5.2 mm) as shown in Figure 2.
7. Tighten the hexagonal socket screw (B).
8. Set the spreader base to the upper looper shaft, and tighten the setscrew.
9. Check the upper and lower loopers timing and clearance between upper and lower loopers.
10. Attach the base plate unit.

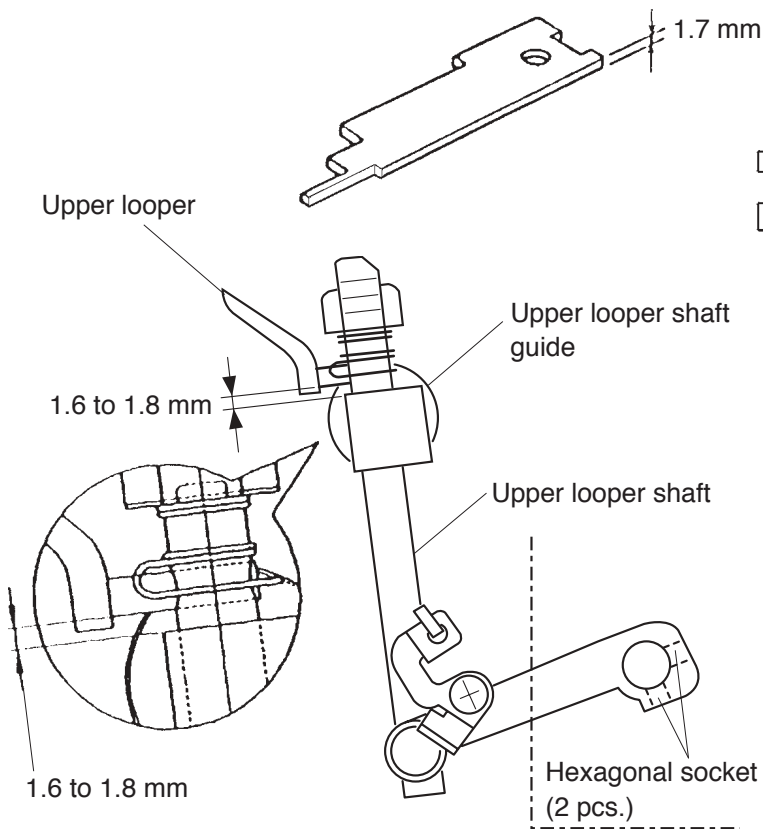


Figure 1

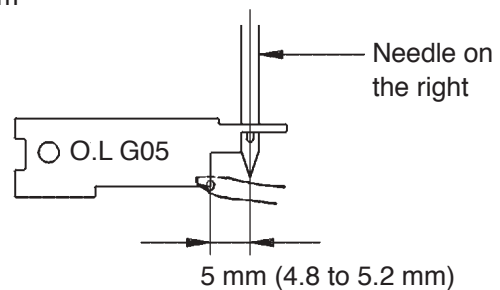


Figure 2

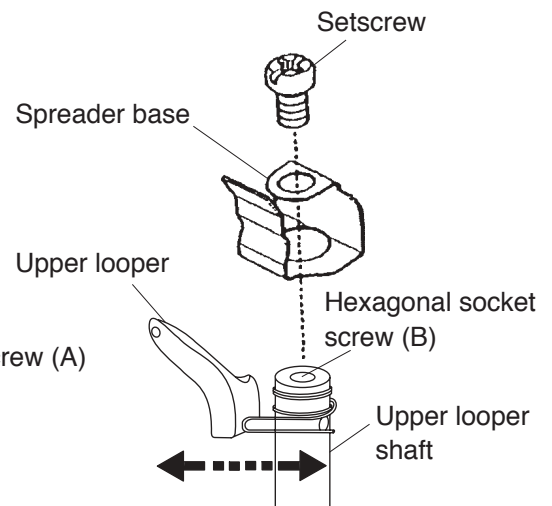


Figure 3

MECHANICAL ADJUSTMENT

TO ADJUST THE TIMING OF THE NEEDLE AND THE LOWER LOOPER

Correct setting:

When the needle comes up 2.8 to 3.2 mm from its lowest position, the tip of the lower looper comes just left of the needle (#11) on the right.

To adjust:

1. Remove the presser foot, needle plate and left-side needle.
2. Replace right-side needle with a #11 one.
3. Turn the handwheel toward you to get the lowest needle position.
4. Set the two gauges (787-G02, 787-G03), as shown in Figure 1 and tighten bolt.
* There should be no clearance between the gauges and the needle bar lower bushing.
5. Remove the plate gauge (787-G03). Then turn the handwheel toward you until the needle gauge touches the needle bar lower bushing, as shown in Figure 2.
6. In this condition, loosen the hexagonal bolt in figure 3 just enough to move the lower looper base.
Adjust the lower looper position in order to meet the tip of lower looper with left-side of needle (#11) as shown in Figure 4.
Tighten the hexagonal bolt.
7. Remove the gauge (787-G02).
Check the clearance between the needle and lower looper.
Check the clearance between the loopers.
8. Replace the right side needle with a #14 one.
9. Attach the needle, needle plate and presser foot.
* Be careful not to tighten bolt A too much.

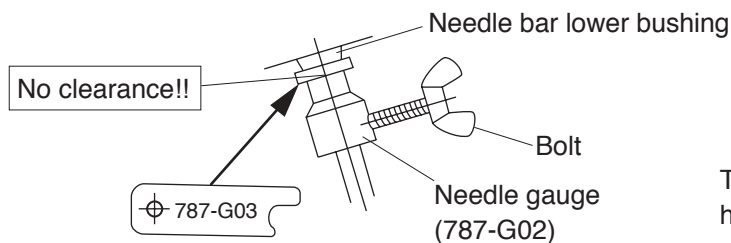


Plate gauge (787-G03)
(Thickness : 3 mm
Color : Black)

Figure 1

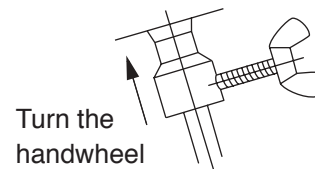


Figure 2

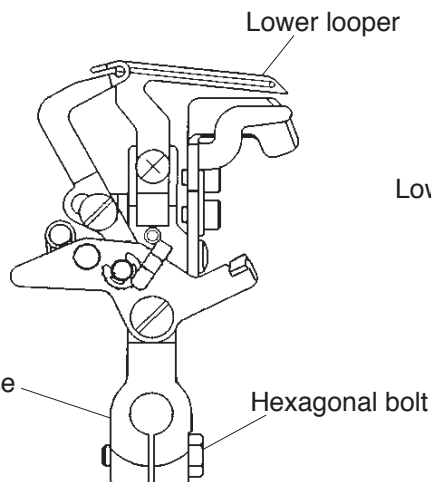


Figure 3

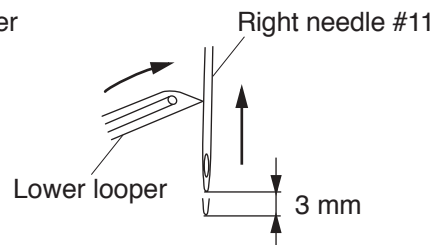


Figure 4

MECHANICAL ADJUSTMENT

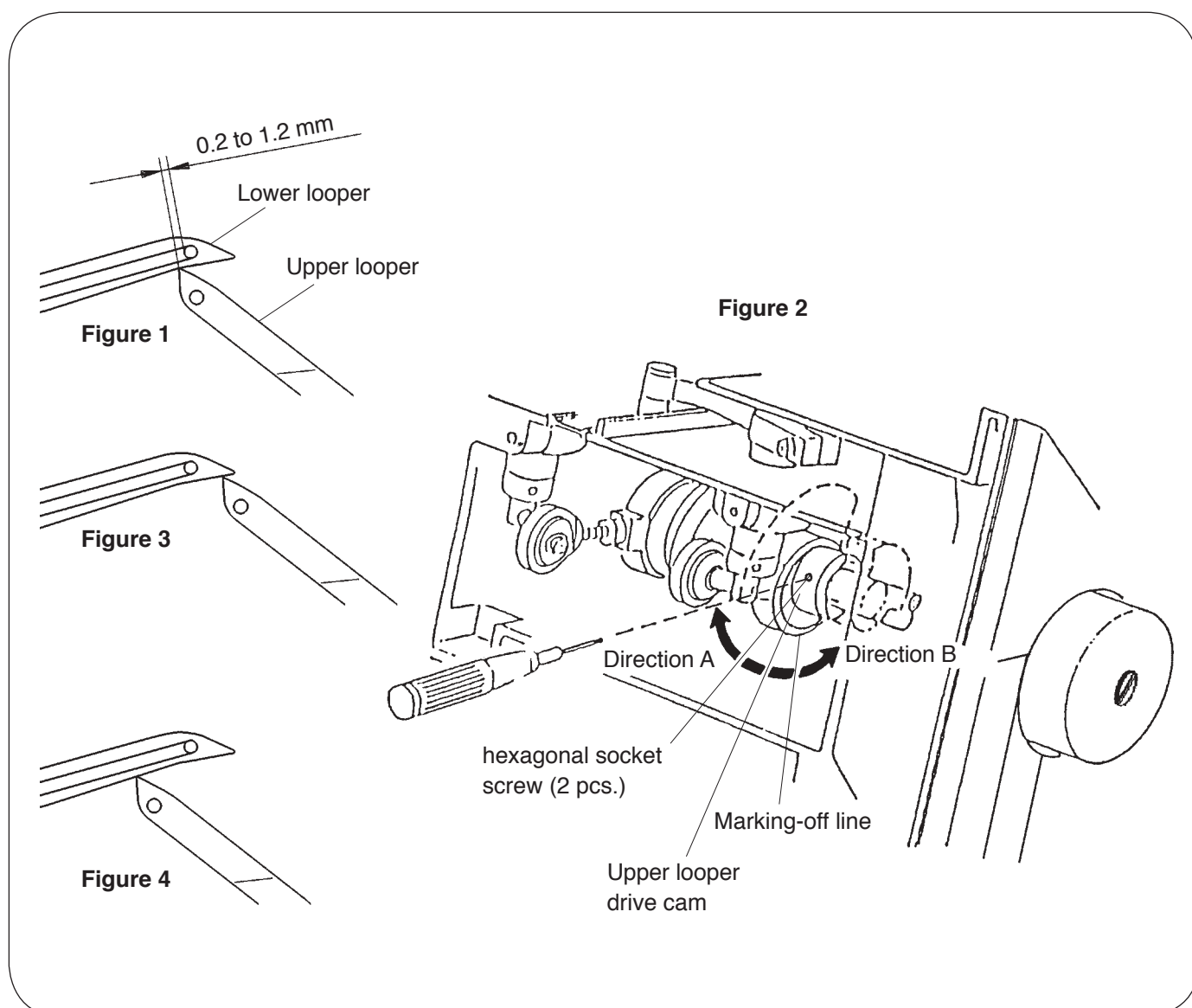
TO ADJUST THE TIMING OF THE UPPER AND LOWER LOOPERS

Correct setting:

When the lower looper moves to the right, the tip of upper looper meets the lower looper within 0.2 to 1.2 mm from the left of lower looper eye as shown in Figure 1.

To adjust:

1. Before proceeding with this adjustment, check the needle and lower looper timing (see page 20) and the position of upper looper (see page 20.).
2. Remove the base plate unit.
3. Loosen hexagonal socket screws (2 pcs.), and adjust the timing by turning the upper looper drive cam in the direction of:
 - A) if the timing of upper looper is advanced as shown in Figure 3.
 - B) if the timing of upper looper is delayed as shown in Figure 4.The allowance is 0.2 to 1.2 mm from the left edge of lower looper eye as shown in Figure 1.
4. Tighten hexagonal socket screws (2 pcs.).
5. Check the clearance between the loopers.
6. Attach the base plate unit.



MECHANICAL ADJUSTMENT

TO ADJUST THE CLEARANCE BETWEEN THE LOOPERS

Correct setting:

When the upper and lower loopers meet as shown in Figure 2, the clearance should be 0 to 0.1 mm as shown in Figure 1.

To adjust:

1. Remove the setscrew and the spreader base.
2. Turn the handwheel toward you with your hand to bring the loopers as shown in Figure 2.
3. Loosen the hexagonal socket screw and adjust the clearance between the loopers by moving the upper looper to the back or front as shown in Figure 3.
4. Tighten the hexagonal socket screw firmly.
5. Check the clearance between the upper looper and needle.
6. Set the spreader holding plate and tighten the setscrew.

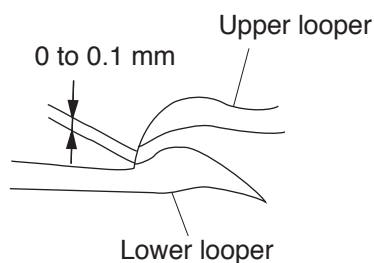


Figure 1

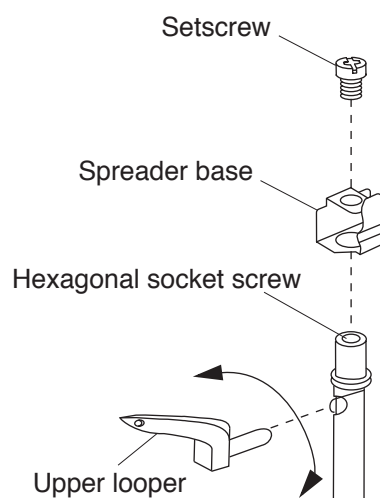


Figure 3

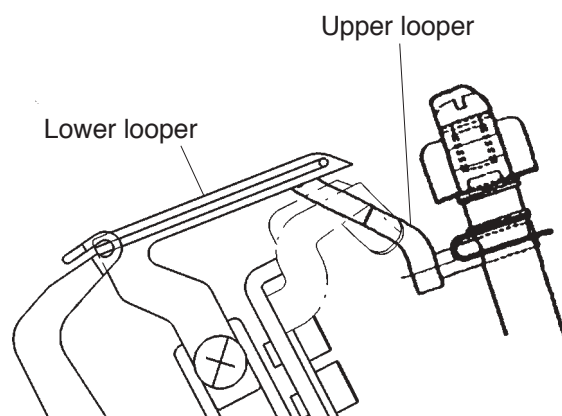


Figure 2

MECHANICAL ADJUSTMENT

TO ADJUST THE CLEARANCE BETWEEN THE NEEDLE AND THE UPPER LOOPER

Correct setting:

When the upper looper meets with needle, the clearance should be:

0 to + 0.1 mm at the needle on the left.

-0.05 to + 0.05 mm at the needle on the right.

To adjust:

1. Remove the setscrew and the spreader base.
2. Turn the handwheel toward you with your hand to bring the needle just behind the upper looper in downward travel.
3. Loosen the hexagonal socket screw and adjust the clearance between the both needles and upper looper.
4. Tighten the hexagonal socket screw.
5. Check the clearance between the loopers.
6. Set the spreader holding plate and tighten the setscrew.

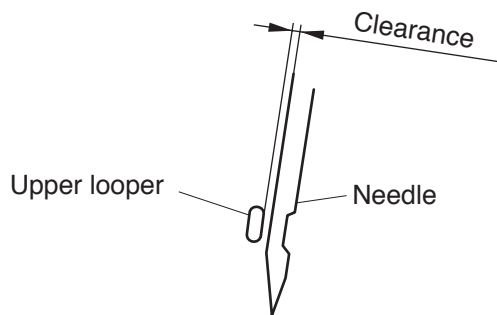


Figure 1

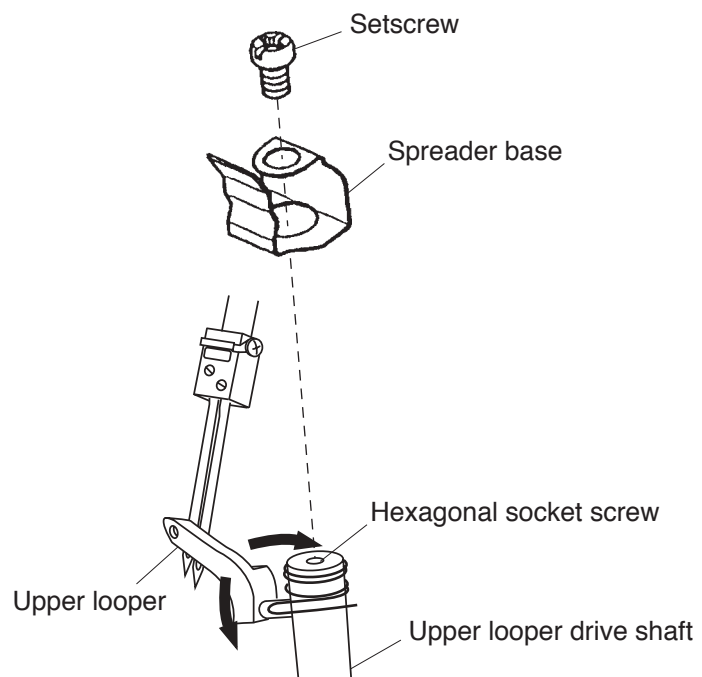


Figure 2

MECHANICAL ADJUSTMENT

TO ADJUST THE POSITION OF THE KNIVES

Correct setting:

* The tip of the lower knife should be leveled at the surface of needle plate. When the upper knife is at the lowest position, the front lower corner of the upper knife should be 0.8 to 1.5 mm below the edge of the lower knife.

To adjust:

1. Before proceeding with this adjustment, check the upper knife timing (see page 13).
2. Loosen the setscrew to remove the looper cover guide.
3. Loosen the lower knife shaft hexagonal socket screw and turn the pin slowly, then adjust the lower knife position. Tighten hexagonal socket screw. (Figure 2 to 4)
4. Turn the handwheel toward you to bring upper knife to its lowest position.
5. Loosen the hexagonal bolt and adjust the position of the upper knife. (Figure 1)
6. Tighten hexagonal bolt firmly, turn the handwheel toward you to check the upper knife matching position with the lower knife.

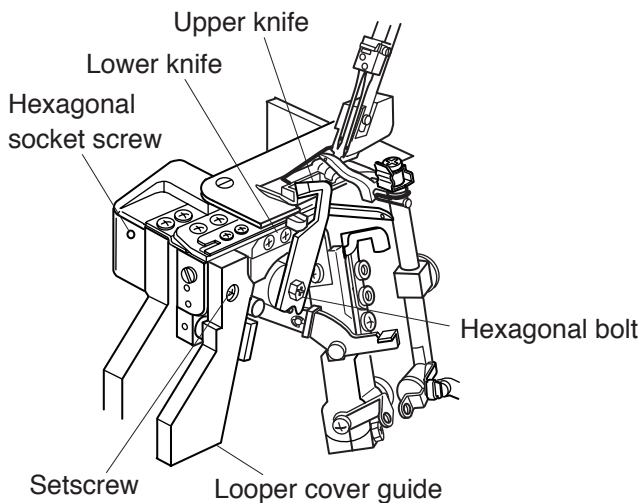


Figure 3

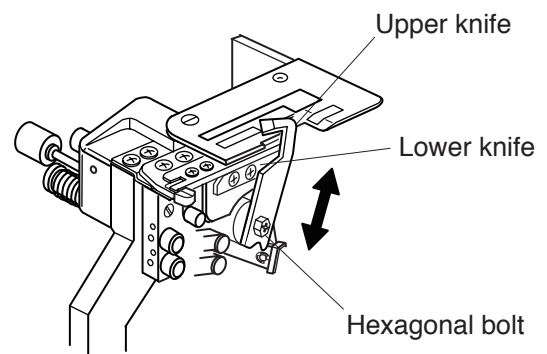


Figure 1

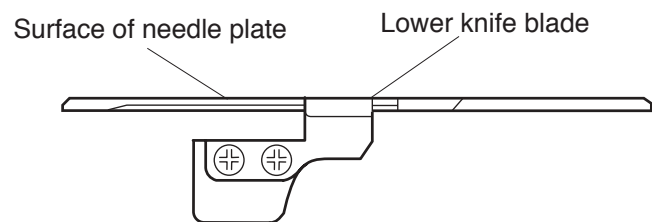


Figure 4

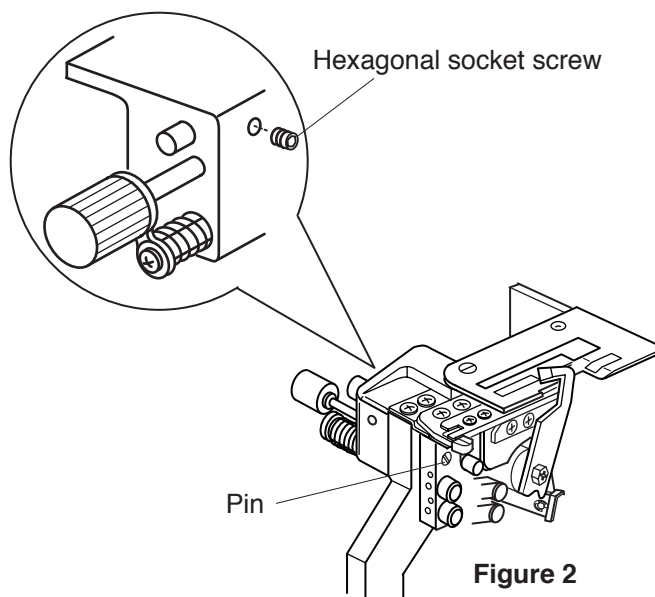


Figure 2

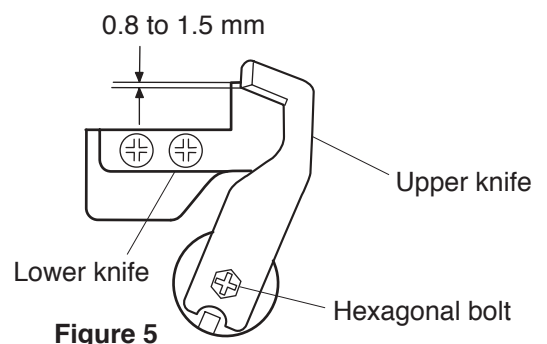


Figure 5

MECHANICAL ADJUSTMENT

TO ADJUST THE POSITION OF THE LOOPER THREAD GUIDE

Looper thread guide

Loosen the setscrew and swing the looper thread guide up or down to match the bottom edge of both looper thread guide and upper looper drive arm as shown in Figure 1.

Tighten the setscrew to secure the position.

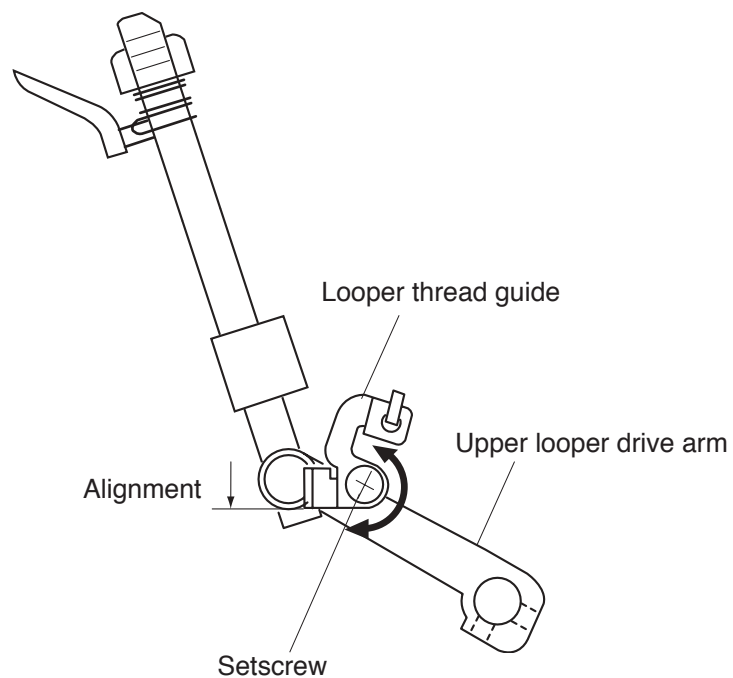


Figure 1

MECHANICAL ADJUSTMENT

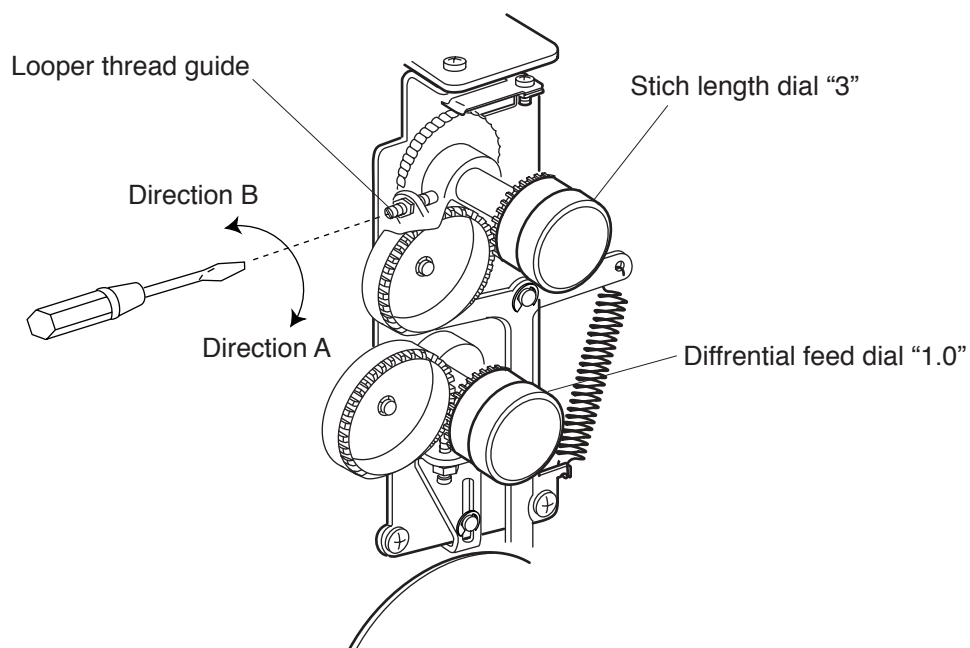
TO ADJUST THE STITCH LENGTH

Correct setting:

The actual stitch length should be 2.8 to 3.0 mm when the stitch length dial is set at “3” and differential feed dial at “1.0”.

To adjust:

1. Set the stitch length dial at “3” and the differential feed dial at “1.0”.
2. Remove the front cover unit (see page 4.).
3. If the actual stitch length is longer than 3.0 mm, turn the adjusting screw in the direction A.
If the actual stitch length is shorter than 2.8 mm, turn the adjusting screw in the direction B.
4. Attach the front cover unit.



MECHANICAL ADJUSTMENT

TO ADJUST THE THREAD TENSION DIALS

Correct setting:

Use a standard thread #50. Do not pass the thread through the top cover thread guide.

Standard tension:

Left needle: Tension dial set to 3, 25 to 35 grams-force, Tension dial set to 9, 125 grams-force or more

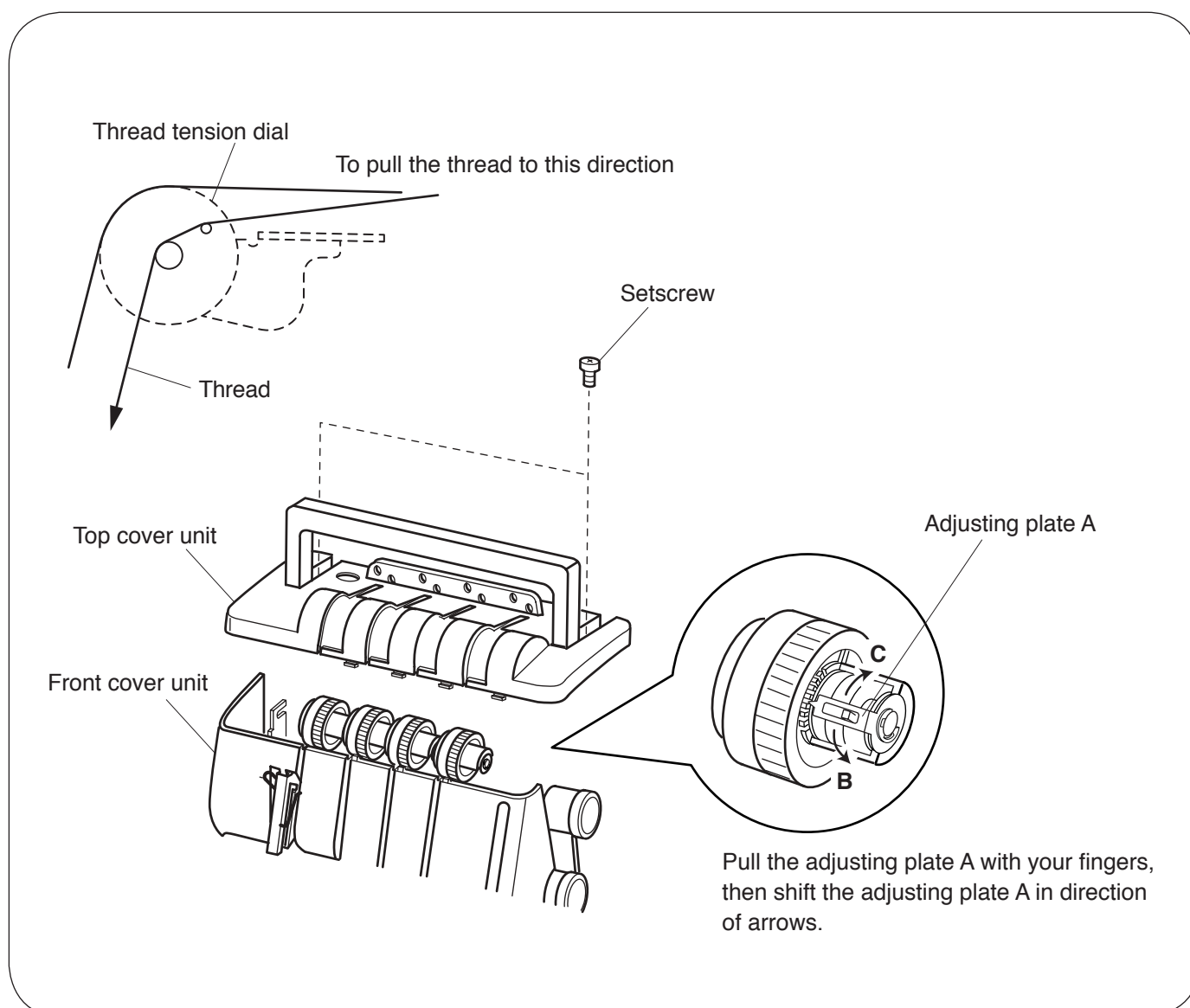
Right needle: Tension dial set to 3, 15 to 25 grams-force, Tension dial set to 9, 60 grams-force or more

Upper looper: Tension dial set to 3, 10 to 20 grams-force, Tension dial set to 9, 55 grams-force or more

Lower looper: Tension dial set to 3, 20 to 30 grams-force, Tension dial set to 9, 120 grams-force or more

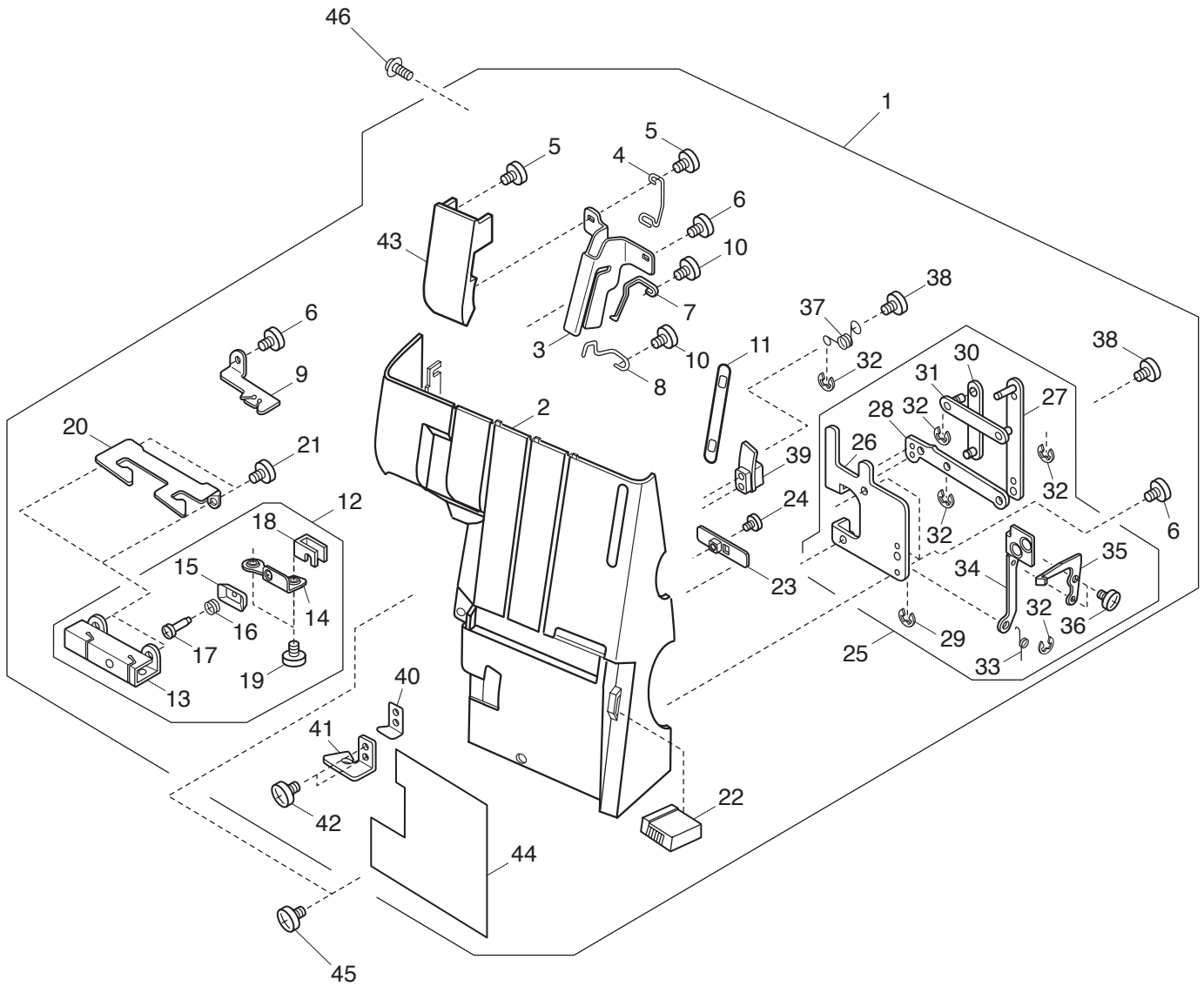
To adjust:

1. Remove the top cover unit (see page 3.).
2. Adjust each thread tension with the adjusting plate A.
 - * If the thread tension is at stronger level, shift the adjusting plate in the direction B.
 - * If the thread tension is at weaker level, shift the adjusting plate in the direction C.
3. Rotate the thread tension dial while sewing to check the sewing performance.
4. Attach the top cover.



PARTS LIST

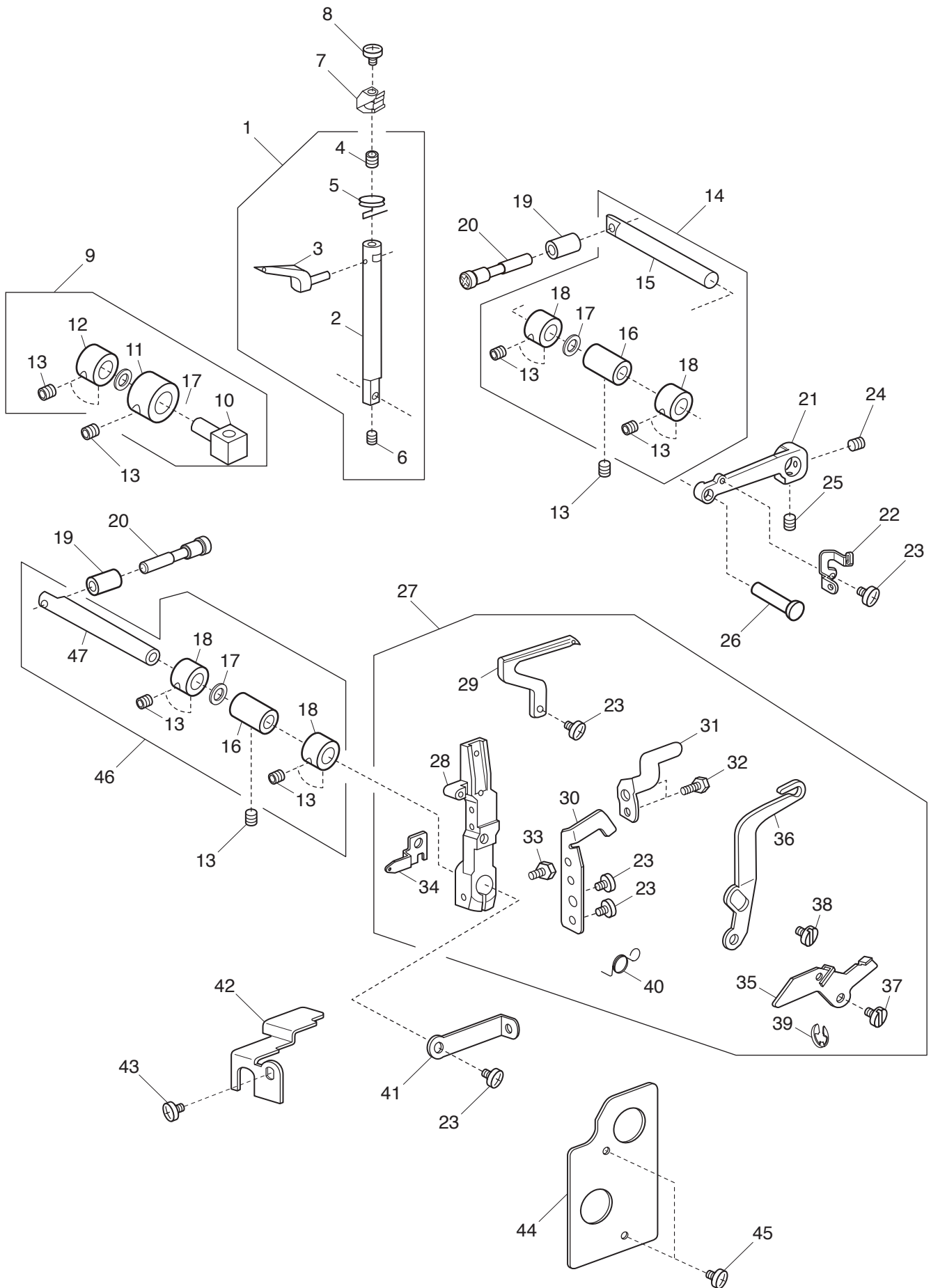
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794617064	Panel cover (unit)
2	794071A02	Panel cover
3	788059007	Thread take-up lever cover
4	788061002	Thread guide (L)
5	000149002	Setscrew 3x10 (B)
6	000120203	Setscrew 3x8 (B)
7	788060001	Thread guide (R)
8	788107001	Needle thread guide
9	788063004	Needle thread guide plate
10	000149301	Setscrew 3x8 (B)
11	794072A04	Window
12	788615007	Looper thread guide (unit)
13	788068009	Looper thread guide
14	788069000	Sub thread tension set plate
15	788070004	Sub thread tension plate
16	788071005	Sub thread tension spring
17	788072006	Thread tension screw
18	788092002	Thread tension screw set plate
19	000101116	Setscrew 3x4
20	788132005	Looper thread guide (2)
21	000078319	Setscrew 3x6
22	788108105	Slider
23	788065006	Slider set plate
24	000161309	Setscrew 3x12 (B)
25	788616101	Sub thread tension holding plate (unit)
26	788074008	Sub thread tension holding plate
27	788075009	Thread tension connecting link (1)
28	788076000	Thread tension connecting link (2)
29	000002507	Snap ring E-4
30	788077001	Thread tension connecting link (3)
31	788129009	Thread tension connecting link (4)
32	000002105	Snap ring E-3
33	788073007	Thread tension release spring
34	788078002	Thread tension release Plate (1)
35	788079003	Thread tension release Plate (2)
36	000101105	Setscrew 3x4
37	788081008	Spring
38	000109402	Setscrew 3x8
39	788067008	Thread guide set plate
40	788094004	Thread guide spring
41	788066007	Thread guide
42	000104913	Setscrew 3x16
43	794074007	Thread guide cover
44	794073006	Threading chart
45	000081016	Setscrew 4x8
46	000115607	Setscrew TP 4x8

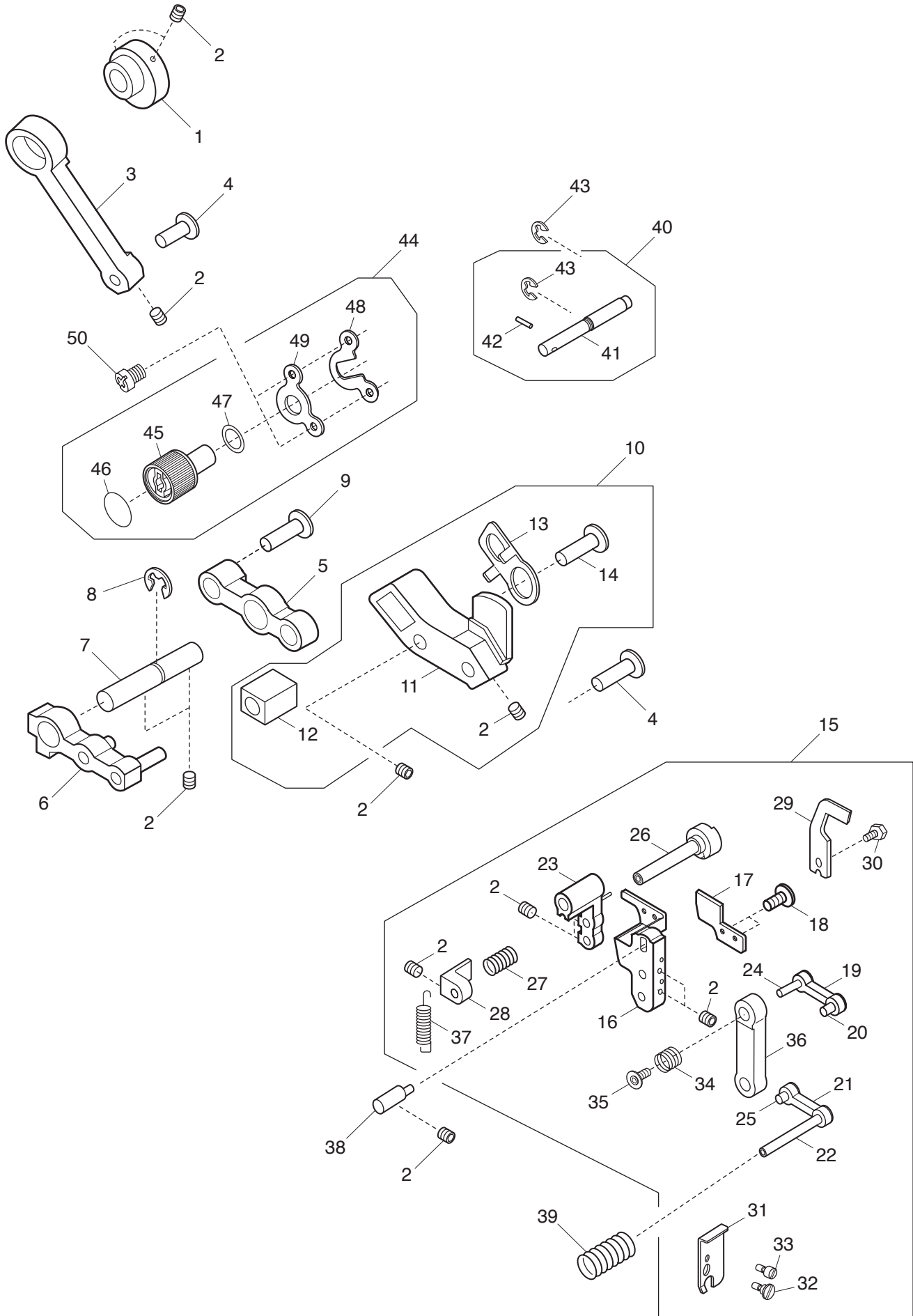
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794636106	Upper looper shaft (unit)
2	788039001	Upper looper shaft
3	792055017	Upper looper
4	000112501	Hexagonal socket screw 4x4
5	784077009	Upper looper thread guide (3)
6	000177205	Hexagonal socket screw 3x6
7	788040005	Spreader base
8	788041006	Setscrew
9	792614102	Upper looper shaft guide (unit)
10	792038003	Upper looper shaft guide
11	792039004	Bushing
12	792048006	Ring
13	000111201	Hexagonal socket screw 4x4
14	794637004	Upper looper crank shaft (unit)
15	794061001	Upper looper crank shaft
16	787104005	Bushing
17	000038502	Washer
18	820166001	Crank ring
19	787107101	Crank spacer
20	787108010	Hinge screw
21	789112002	Upper looper driving arm
22	788038000	Lower looper thread guide
23	000078320	Setscrew 3x6
24	000111304	Hexagonal socket screw 5x5
25	000110107	Hexagonal socket screw 5x5 (WP)
26	789116006	Upper looper pin
27	794615109	Lower looper (unit)
28	794063003	Lower looper base
29	792056007	Lower looper
30	787383000	Rear needle guard
31	785023003	Front needle guard
32	000099006	Hexagonal bolt 3x4
33	000138008	Hexagonal bolt 4x16
34	794064004	Set plate
35	794065108	Threader lever
36	794066006	Looper thread guide (3)
37	788047002	Hinge screw (1)
38	794067007	Hinge screw (2)
39	000002105	Snap ring E-3
40	794068008	Lower looper spring
41	785010203	Lower looper thread guide
42	794143008	Supporting plate
43	000101404	Setscrew 4x6
44	794145000	Arm seat
45	000081016	Setscrew 4x8
46	794638005	Lower looper crank shaft (unit)
47	794062002	Lower looper crank shaft

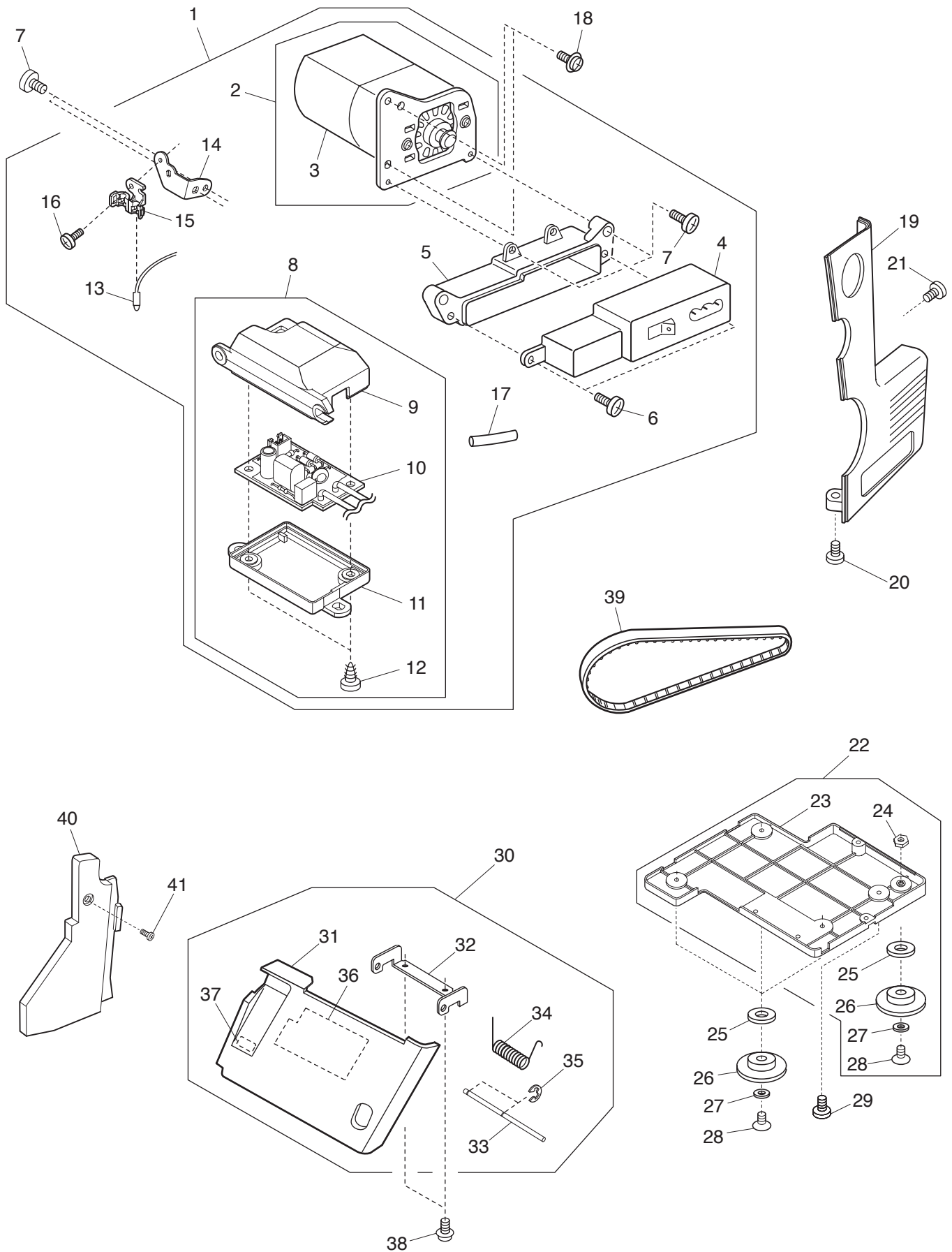
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794008000	Upper knife drive cam
2	000111201	Hexagonal socket screw 4x4
3	794009001	Upper knife connecting rod
4	888100007	Pin
5	794121000	Upper knife drive arm
6	794122001	Upper knife release arm
7	794123002	Upper knife drive shaft
8	000002909	Snap ring E-7
9	789013002	Pin
10	794633000	Upper knife waving arm (unit)
11	794124003	Upper knife waving arm
12	794017013	Block
13	794126005	Block press plate
14	794127006	Pin
15	794629003	Upper knife drive arm (unit)
16	794021009	Lower knife bracket
17	794022000	Lower knife
18	000102221	Setscrew 4x6
19	794023001	Upper knife link (upper)
20	794025003	Link pin
21	794019004	Upper knife link (lower)
22	794024002	Lower knife shaft
23	794018003	Upper knife connecting arm
24	794020008	Link pin
25	787059004	Pin
26	794113009	Upper knife supporter
27	794104007	Spring
28	794105008	Spring bracket
29	794026004	Upper knife
30	624303008	Hexagonal bolt 4x6
31	794080006	Guide plate
32	794081007	Hinge screw
33	794082008	Guide screw
34	794106009	Spring
35	000193104	Thin head Setscrew TP 3x4
36	794128007	Upper knife rink
37	794112008	Upper knife connecting spring
38	794027005	Lower knife pin
39	888231008	Spring (left)
40	794607005	Lower knife pin (unit)
41	794028006	Lower knife pin
42	000003508	Spring pin 2x8
43	000002105	Snap ring E-3
44	794608006	Lower knife knob (unit)
45	794029007	Lower knife knob
46	888207005	Sticker
47	000116701	Washer 10
48	794030001	Guide plate
49	794031002	Support plate
50	000081005	Setscrew 4x8

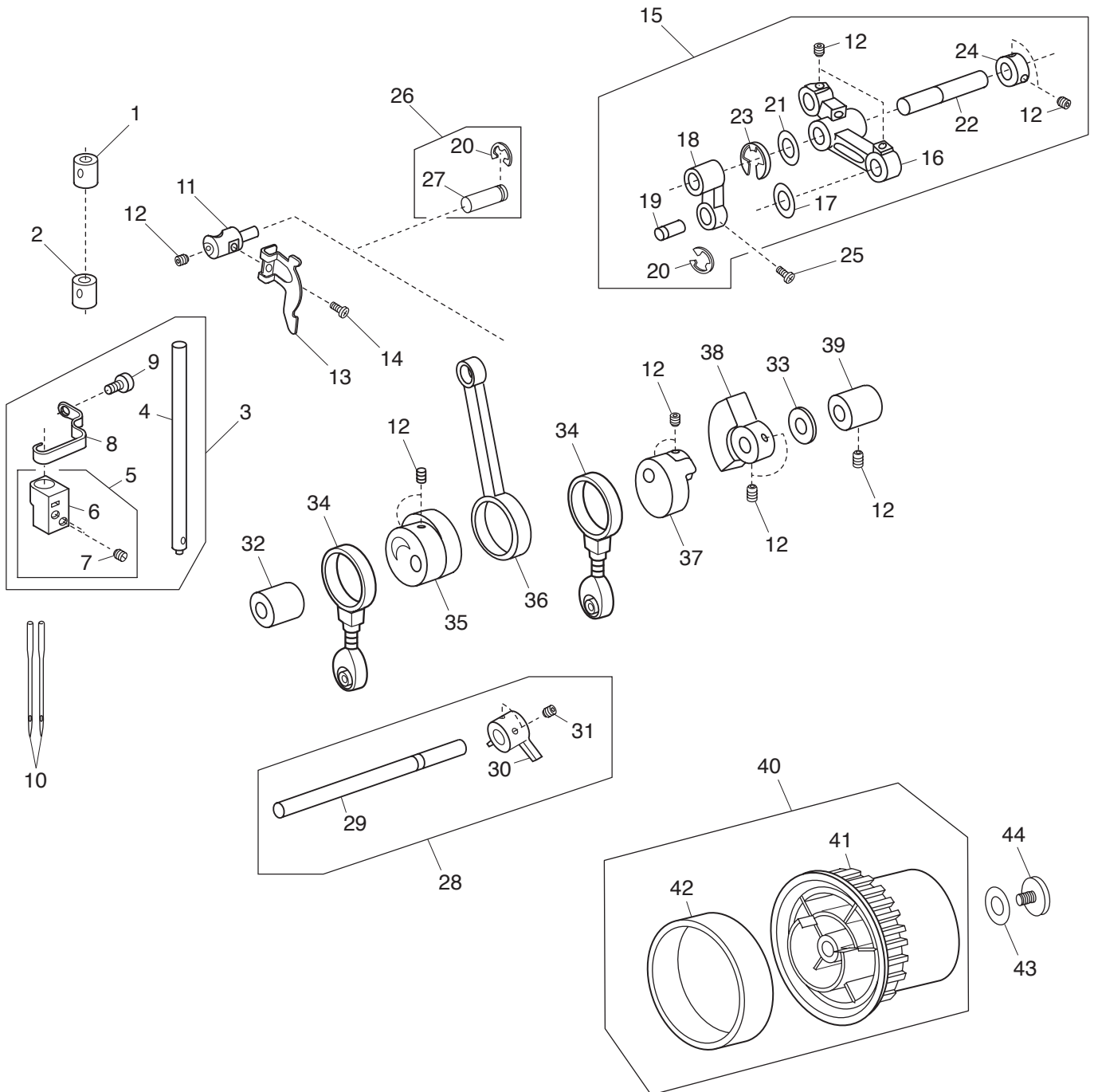
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794640206	Machine socket (whole unit)
2	794625032	Motor (unit)
3	M-2119A	Motor
4	777502109	Machine socket (unit)
5	794087003	Machine socket cover
6	000121905	Setscrew 4x12 (B)
7	000081005	Setscrew 4x8
8	795651018	Printed circuit board C case (unit)
9	795181012	Printed circuit board C case
10	508512308	Printed circuit board C (unit)
11	795182002	Printed circuit board C case cover
12	000120203	Setscrew 3x8 (B)
13	508515507	LED (unit)
14	791121001	LED set plate
15	508143005	LED holder
16	000101105	Setscrew 3x4
17	652102909	Tube
18	000115504	Setscrew TP 5x10
19	794088107	Belt cover
20	000198305	Setscrew 4x10 (B)
21	000198316	Setscrew 4x10 (B)
22	794628105	Base plate (unit)
23	794086105	Base plate
24	000061205	Nut 4-3-7
25	785260004	Washer
26	784135006	Rubber cushion
27	000070300	Washer 5
28	784169010	Hinge screw
29	000103509	Setscrew 4x10
30	794619147	Looper cover (unit)
31	794078A07	Looper cover
32	792026008	Looper cover supporter
33	792027009	Looper cover shaft
34	792028000	Looper cover spring
35	000002105	Snap ring E-3
36	789028000	Sticker
37	888261007	Sticker
38	000115205	Setscrew TP 4x6
39	784124105	Timing belt
40	794079002	Looper cover guide
41	000078320	Setscrew 3x6

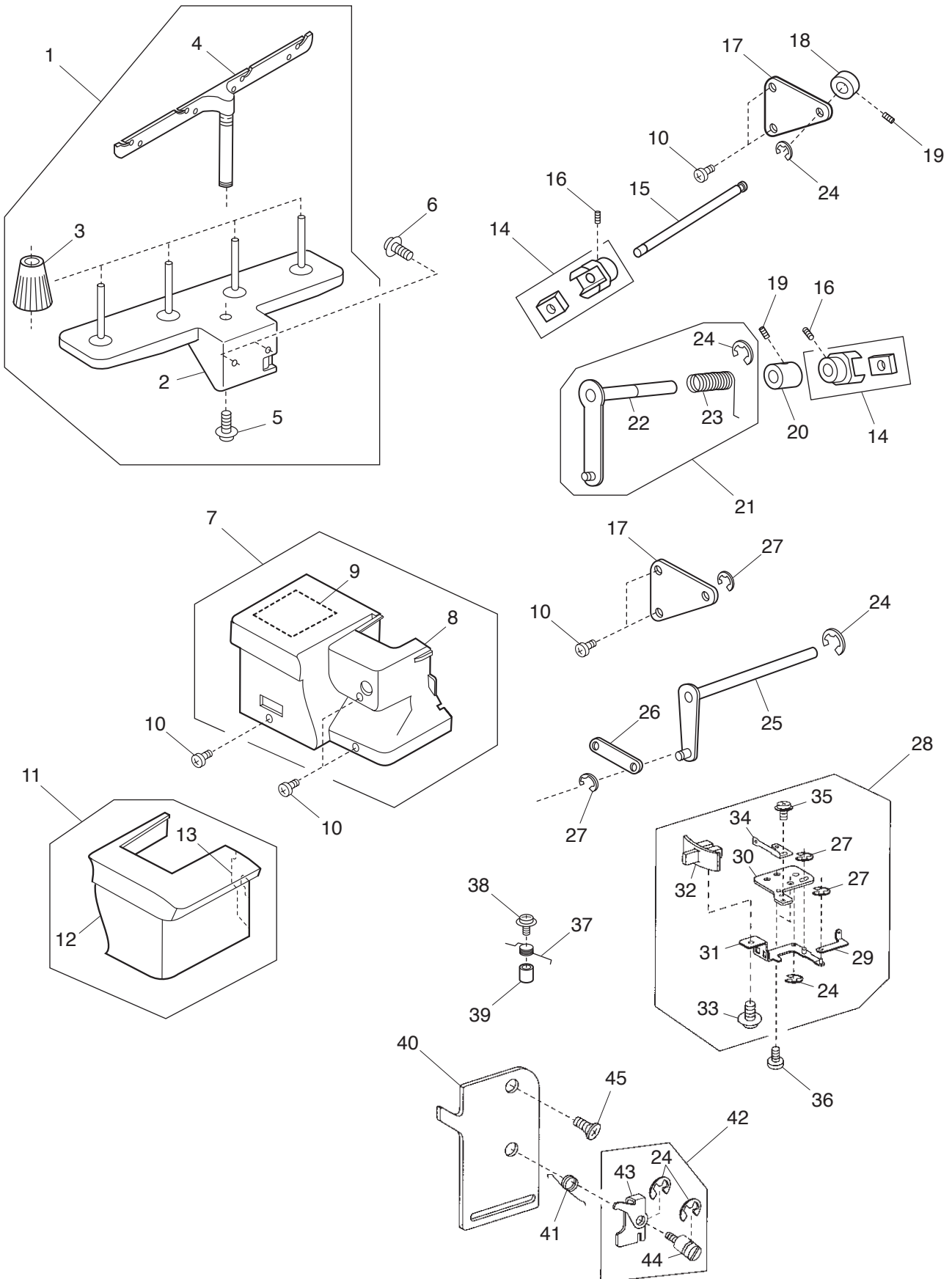
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	784027004	Needle bar upper bushing
2	784028005	Needle bar lower bushing
3	792601003	Needle bar (unit)
4	792001007	Needle bar
5	792501002	Needle clamp screw (unit)
6	792002008	Needle clamp
7	888264000	Needle clamp screw
8	792003009	Needle bar thread guide
9	000078320	Setscrew 3x6
10	784157015	Needle
11	784024001	Needle bar bracket
12	000111201	Hexagonal socket screw 4x4
13	788004007	Take-up lever
14	000078319	Setscrew 3x6
15	789612007	Needle bar crank (unit)
16	789104001	Needle bar crank
17	000039905	Washer
18	789007003	Needle bar link
19	784022009	Link pin
20	000001609	Snap ring E-5
21	000038502	Washer
22	789008004	Needle bar crank shaft
23	000002909	Snap ring E-7
24	624245001	Ring
25	000081005	Setscrew 4x8
26	793606001	Needle bar balancer pin (unit)
27	793013005	Pin
28	794602000	Main shaft (unit)
29	794003005	Main shaft
30	792041010	Balance ring
31	000111304	Hexagonal socket screw 5x5
32	673062004	Bushing
33	000038605	Washer
34	792951001	Looper cam ring
35	787007203	Needle bar cam
36	789004103	Needle bar crank rod
37	787004107	Upper looper cam
38	787176008	Balance weight
39	784009000	Bushing
40	794632009	Handwheel (unit)
41	794004109	Handwheel
42	793012004	Rubber sheet
43	556047007	Washer
44	618070004	Setscrew

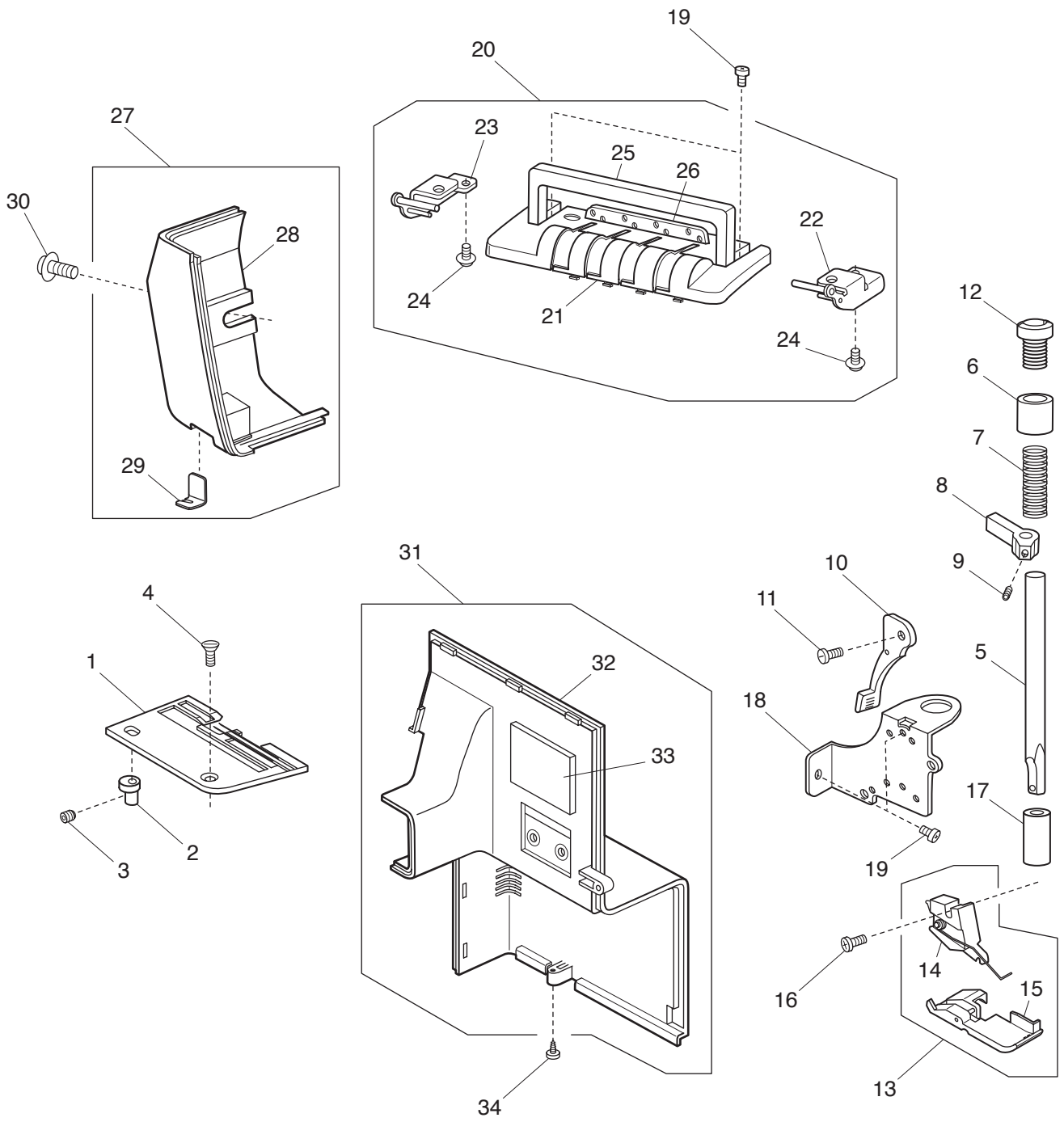
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	789606008	Spool stand (unit)
2	777011003	Spool stand
3	784223105	Spool holder
4	789607009	Thread guide bar (unit)
5	000115700	Setscrew TP 4x10
6	000114802	Setscrew TP 4x12
7	794627104	Free arm cover (unit)
8	794083205	Free arm cover
9	794110006	Rubber sheet
10	000081005	Setscrew 4x8
11	794620200	Side cover (unit)
12	794084000	Side cover
13	794085001	Side cover plate
14	785521109	Feed adjusting block (unit)
15	794049003	Main feed connecting shaft
16	000111304	Hexagonal socket screw 5x5
17	794050007	Connecting arm support
18	650136009	Ring
19	000111201	Hexagonal socket screw 4x4
20	625144002	Feed shaft bushing (front)
21	794612003	Sub feed transfer shaft (unit)
22	794051008	Sub feed transfer shaft
23	794100003	Connecting arm spring
24	000001609	Snap ring E-5
25	794097006	Sub feed connecting shaft
26	787081005	Feed connecting arm link
27	000002105	Snap ring E-3
28	794630007	Chaining lever (unit)
29	794136008	Connecting plate
30	794132004	Set plate
31	794133005	Chaining lever
32	794134006	Chaining knob
33	000115205	Setscrew TP 4x6
34	794135007	Spring
35	000115401	Setscrew TP 3x4
36	810220003	Setscrew 4x6.5
37	794137009	Spring
38	000201405	Setscrew TP 4x16
39	794146001	Bushing
40	794138000	Fixation plate
41	794141006	Spring
42	794631008	Return lever (unit)
43	794139001	Return lever
44	794140005	Setscrew (2)
45	000102221	Setscrew 4x6

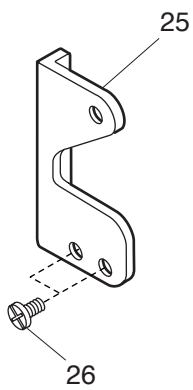
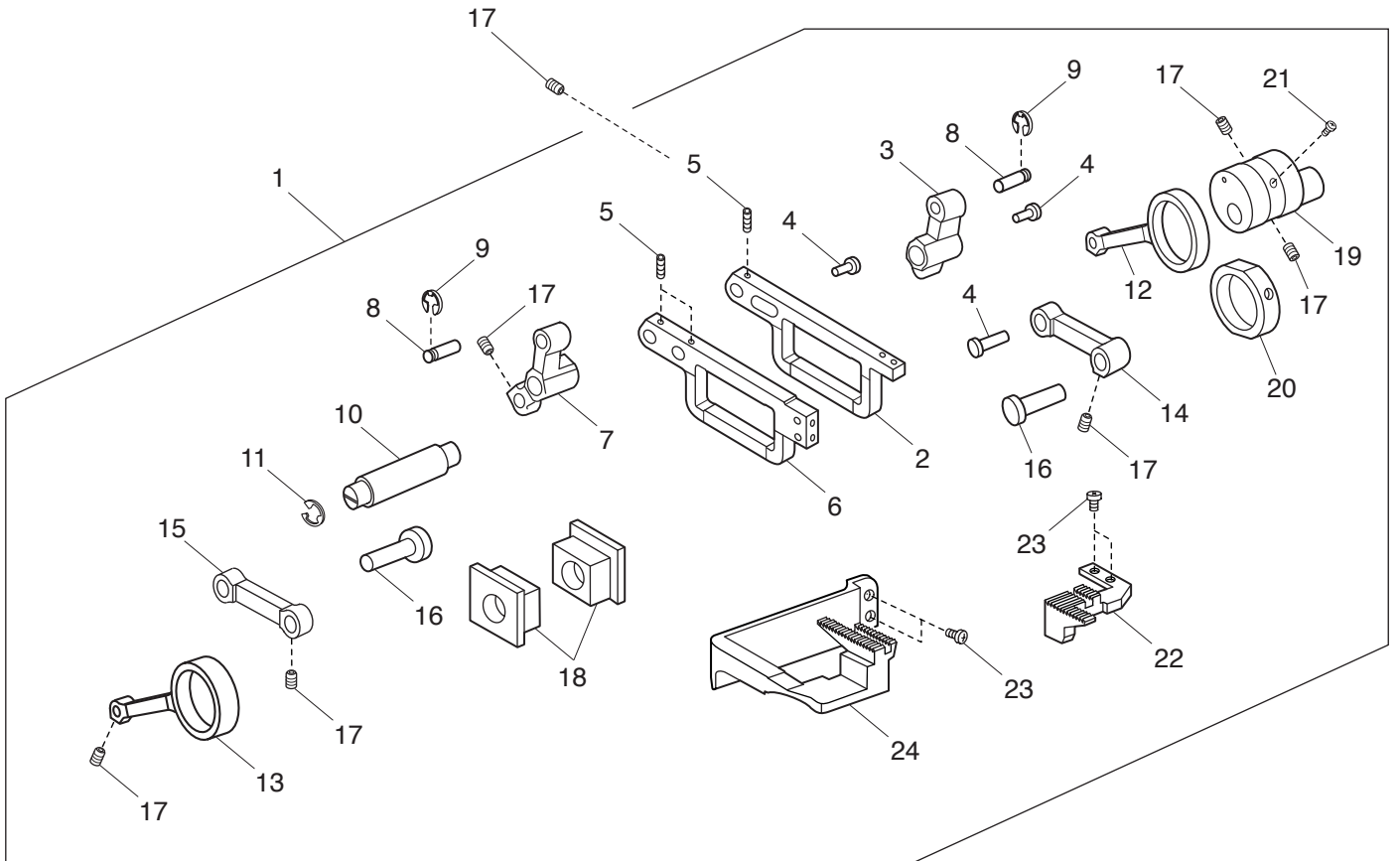
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794601009	Needle plate (unit)
2	789100007	Eccentric pin
3	000111902	Hexagonal socket screw 3x4
4	681009101	Plain screw
5	787019002	Presser bar
6	777002001	Bushing
7	787020006	Presser bar spring
8	794006008	Presser bar bracket
9	000111304	Hexagonal socket screw 5x5
10	650032015	Presser lifter
11	810431009	Hinge screw
12	777013108	Presser adjusting screw
13	788501009	Presser foot (unit)
14	787541008	Foot holder (unit)
15	788502000	Presser foot (lower) (unit)
16	660106001	Setscrew
17	794142007	Bushing
18	794005007	Set plate
19	000101404	Setscrew 4x6
20	794621809	Top cover (unit)
21	794089902	Top cover
22	794090009	Handle set plate (R)
23	794091000	Handle set plate (L)
24	000120203	Setscrew 3x8 (B)
25	794092702	Handle
26	794093002	Thread guide plate
27	794603104	Face plate (unit)
28	794007009	Face plate
29	840602006	Thread cutter (unit)
30	000115700	Setscrew TP 4x10
31	794634001	Rear cover (unit)
32	794077103	Rear cover
33	794110006	Rubber sheet
34	000198305	Setscrew 4x10 (B)

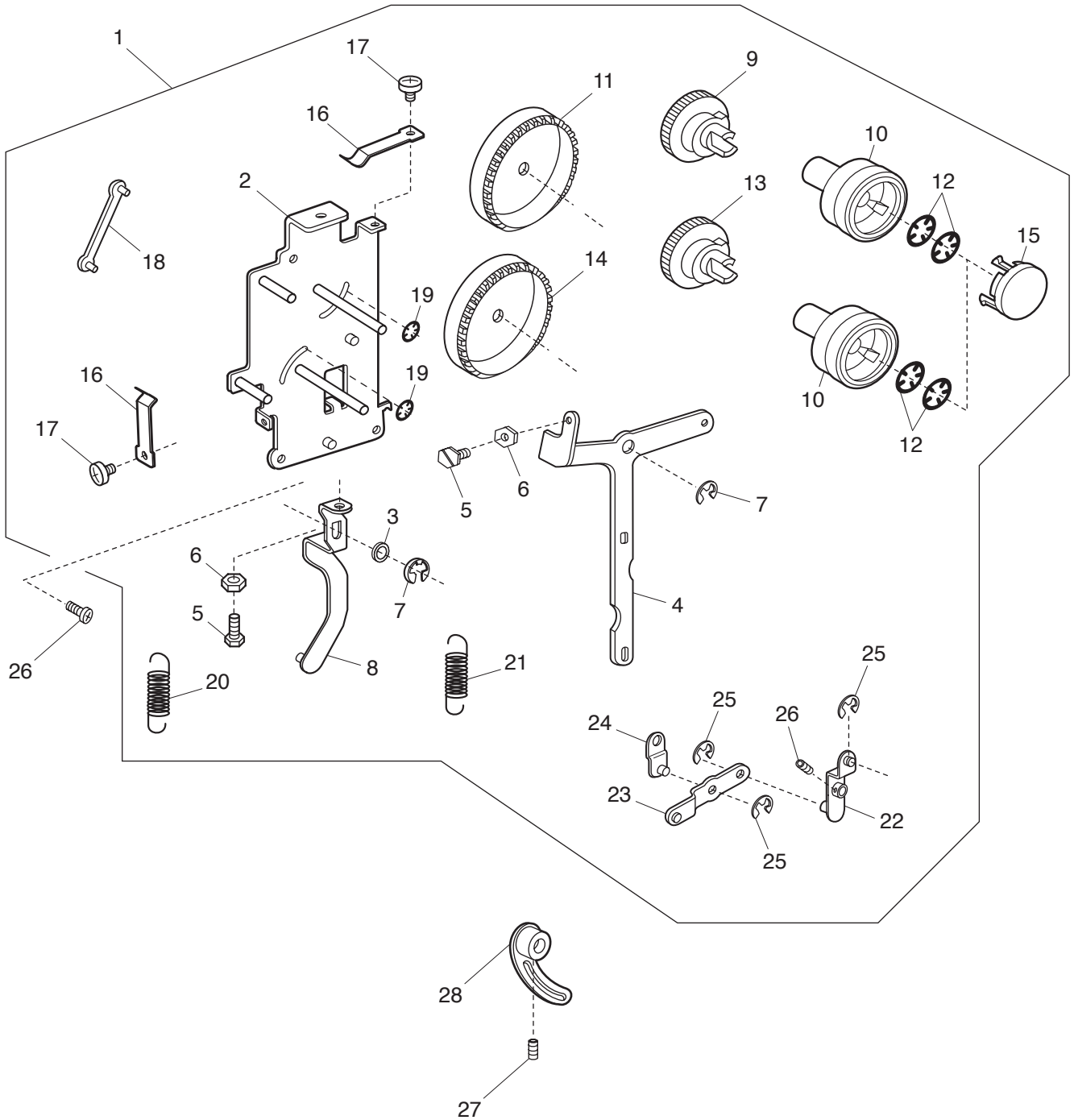
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794611002	Feed bar (unit)
2	794037008	Main feed bar
3	794038009	Main feed bar drive arm
4	787055000	Pin
5	000111902	Hexagonal socket screw 3x4
6	794039000	Sub feed bar
7	794040004	Sub feed drive arm
8	787224002	Pin
9	000002507	Snap ring E-4
10	888076003	Feed bar pin
11	000002909	Snap ring E-7
12	787065003	Feed bar link
13	794144009	Sub feed bar link
14	794042006	Feed link (1)
15	794043007	Feed link (2)
16	888100018	Pin
17	000111201	Hexagonal socket screw 4x4
18	792008004	Block
19	794045009	Main feed drive cam
20	794046000	Ring
21	000103705	Setscrew 4x5
22	794047001	Main feed dog
23	000066705	Setscrew 3x8
24	794048002	Sub feed dog
25	794041005	Feed set plate
26	000081005	Setscrew 4x8

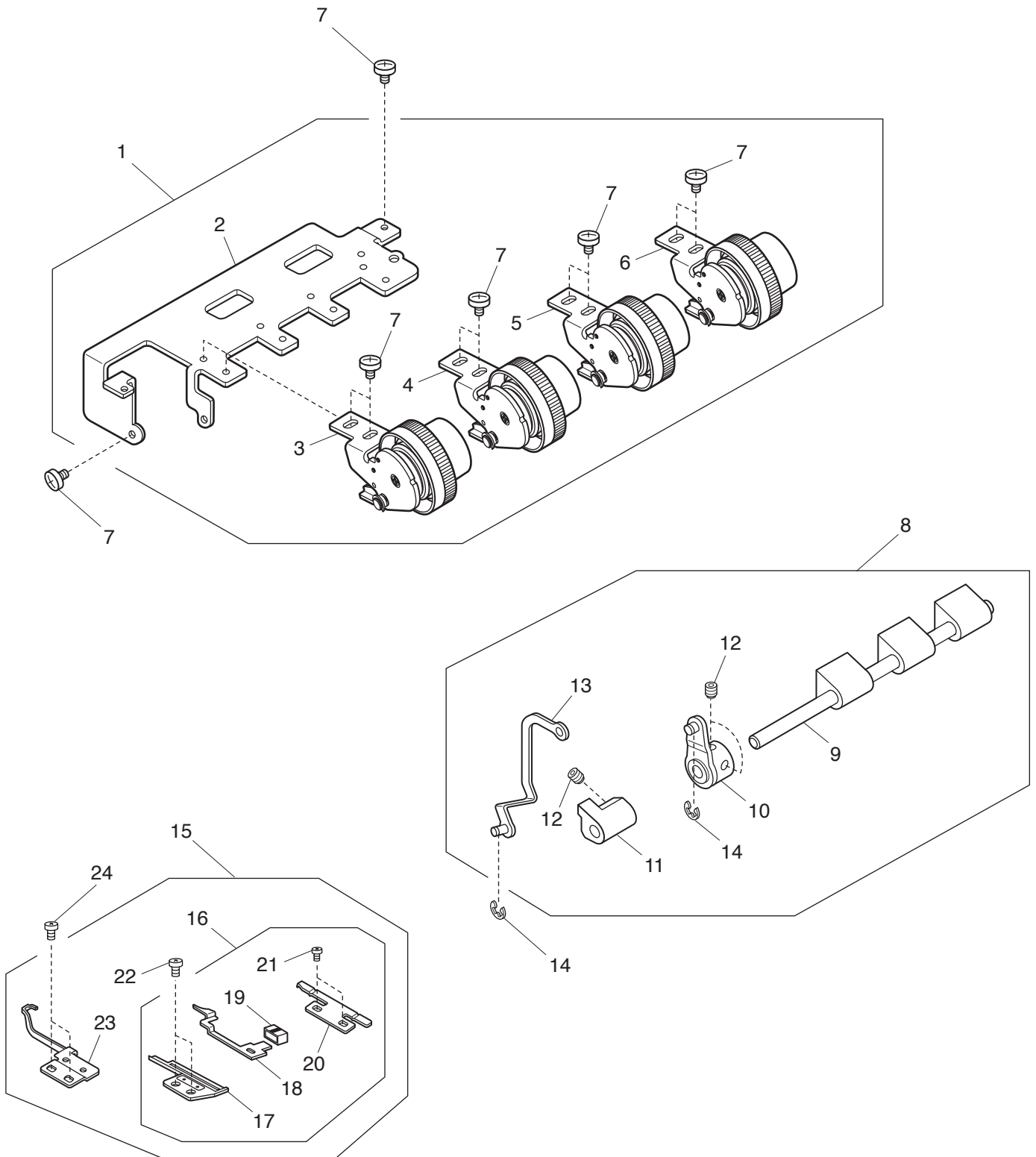
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794614706	Feed adjuster (unit)
2	794054001	Set plate
3	000036005	Washer
4	794055002	Feed rod
5	785224006	Adjustable screw
6	000160102	Adjustable lock nut 4
7	000001609	Snap ring E-5
8	794056003	Differential rod
9	794057004	S. length adj. cam
10	794058603	S. length dial
11	794060A01	Dial plate (feed)
12	000013800	Snap ring CS-6
13	794059006	Differential adj. cam
14	794060A02	Dial plate (differential)
15	794099008	Dial cap
16	787263003	Spring
17	000081119	Setscrew 4x6
18	788037009	Link
19	000014306	Snap ring CS-3
20	794103006	Spring
21	787259006	Spring
22	794052009	M. feed con. arm
23	788030002	Feed con. plate
24	788031003	Differential transfer arm
25	000002105	Snap ring E-3
26	000081005	Setscrew 4x8
27	000111201	Hexagonal socket screw 4x4
28	794053000	Sub feed con. arm

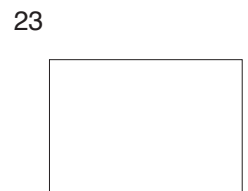
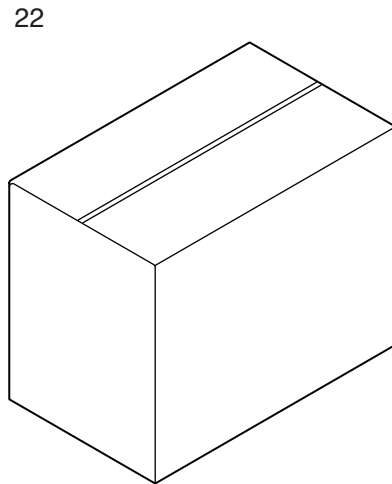
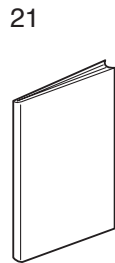
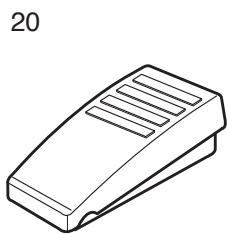
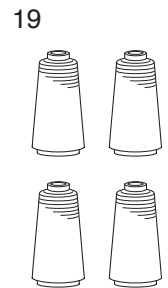
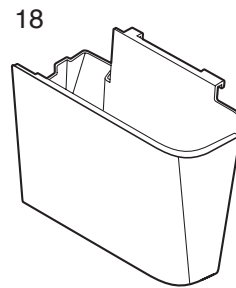
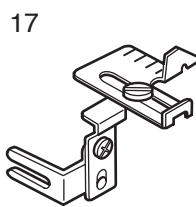
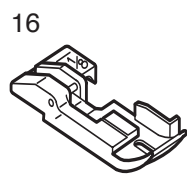
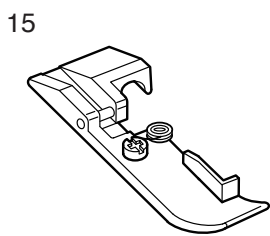
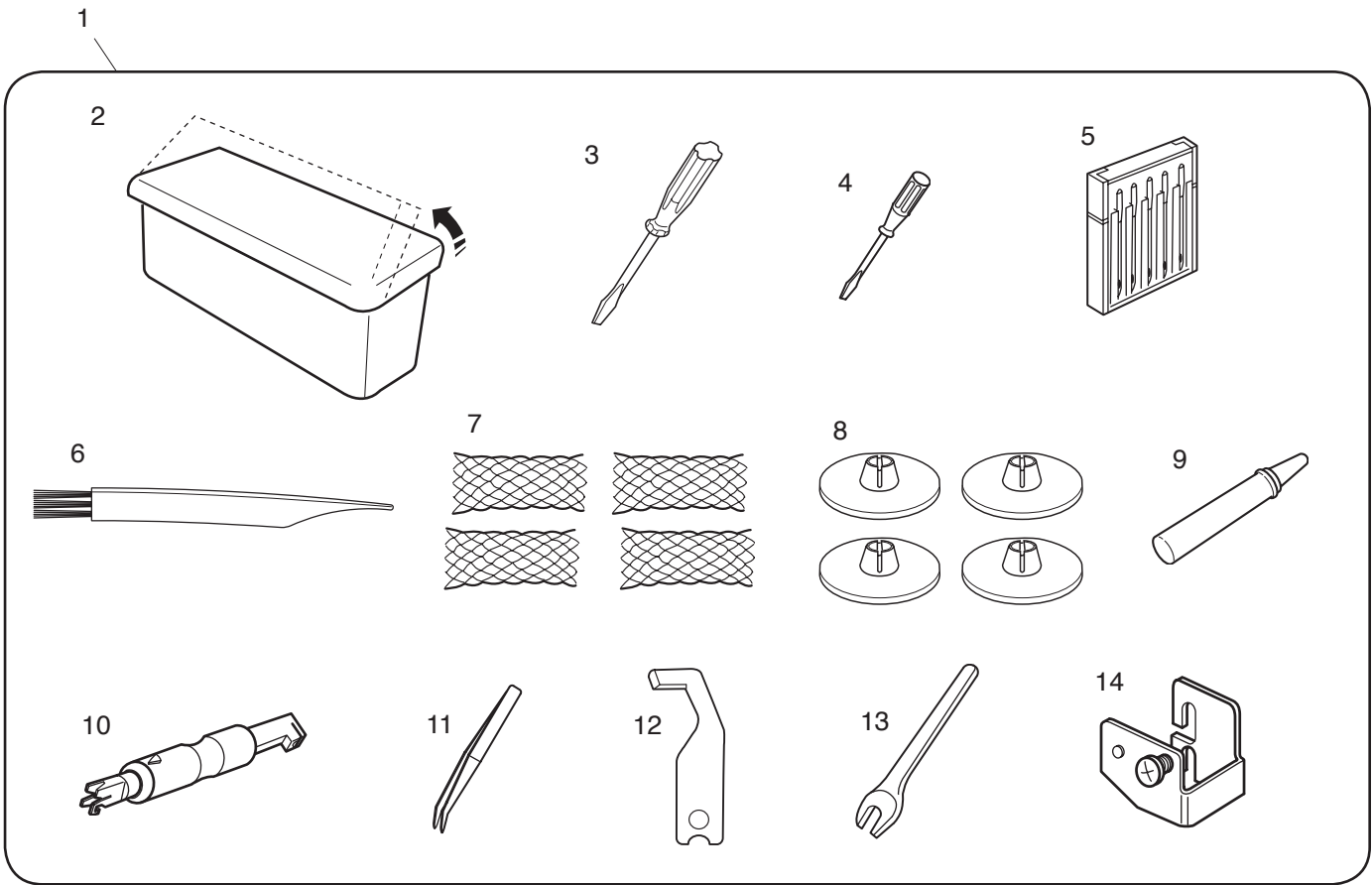
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794616100	Thread tension set plate (unit)
2	794070003	Thread tension set plate
3	788503908	Needle thread tension (L) (unit)
4	788504806	Needle thread tension (R) (unit)
5	788505807	Looper thread tension (U) (unit)
6	788506808	Looper thread tension (L) (unit)
7	000101404	Setscrew 4x6
8	794639006	Thread tension release shaft (unit)
9	793127003	Thread tension release shaft
10	794075008	Thread tension release lever
11	788056004	Cam ring
12	000111201	Hexagonal socket screw 4x4
13	794076009	Thread releasing lever
14	000002105	Snap ring E-3
15	794609007	Chaining finger bracket (unit)
16	794610001	Chaining finger (unit)
17	794032003	Chaining finger set plate
18	794033004	Chaining finger
19	794034005	Needle plate setting knob
20	794035006	Chaining finger spring
21	000074603	Setscrew 2x4-2
22	000101105	Setscrew 3x4
23	794036007	Fixed needle guard
24	000078319	Setscrew 3x6

PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	794870104	Standard accessory (unit)
2	794095004	Accessory box
3	784810002	Screwdriver (large)
4	792030005	Screwdriver (small)
5	784860100	Needle set
6	802424004	Lint brush
7	624806006	Net
8	822020503	Spool cap
9	741814003	Oil
10	200254502	Needle threader
11	624801001	Tweezers
12	794026004	Upper knife
13	784809008	Spanner
14	794622006	Attaching plate
15	200207005	Cooding foot (1)
16	200219000	1/8" Piping foot
17	200216007	Cloth guide
18	794094003	Waste catcher
19	777812002	Overlock thread (white)
20	C-2060	Foot controller
21	794800882	Instruction book
22	785808000	Cover
23	794812005	Accessory instruction sheet