

SERVICE MANUAL
&
PARTS LIST

MODEL: Cover Pro 2000CPX

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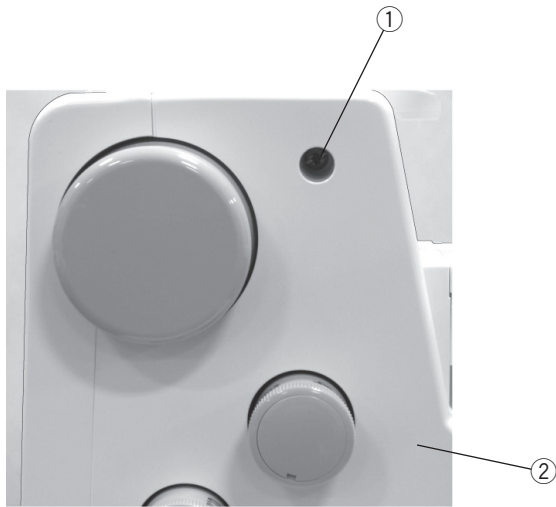
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Replacing the External Parts



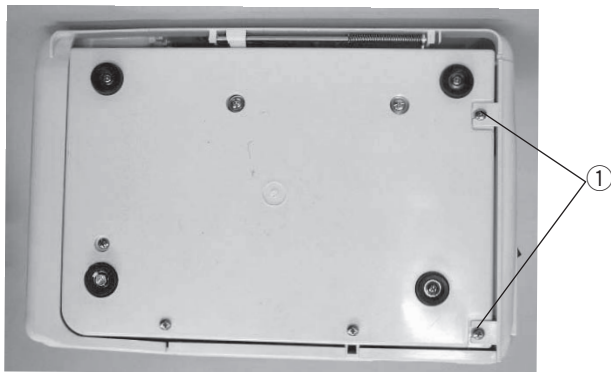
1. Belt Cover

To remove:

- 1 Remove the setscrews ① and remove the belt cover ②.

To attach:

- 2 Follow the above procedures in reverse.



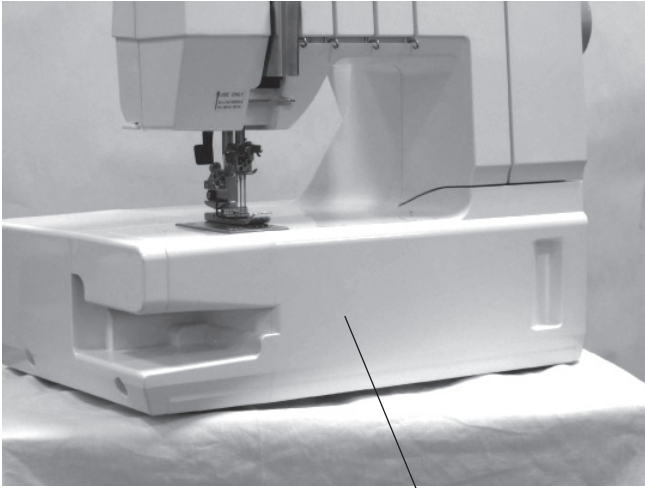
2. Looper Cover

To remove:

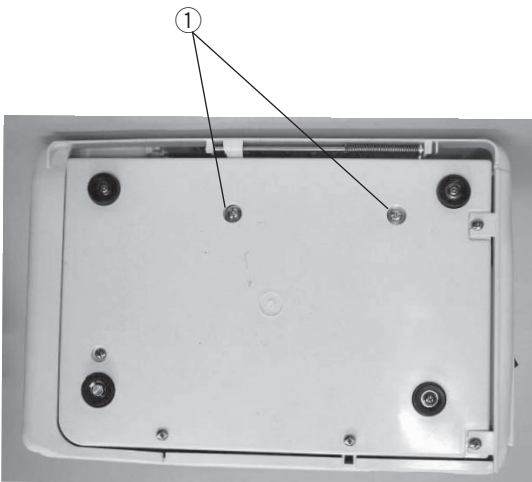
- 1 Remove the setscrews ① and remove the looper cover ② (with a hinge attached).

To attach:

- 2 Follow the above procedures in reverse.



②



①



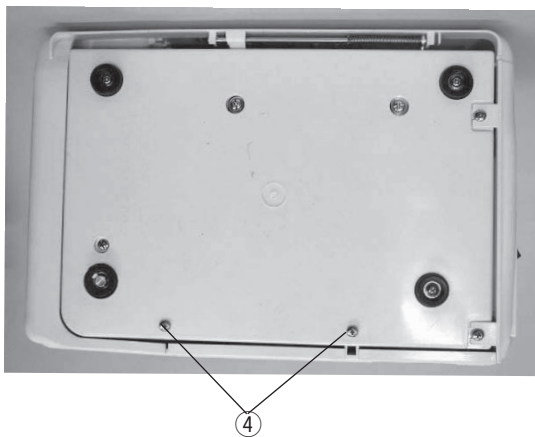
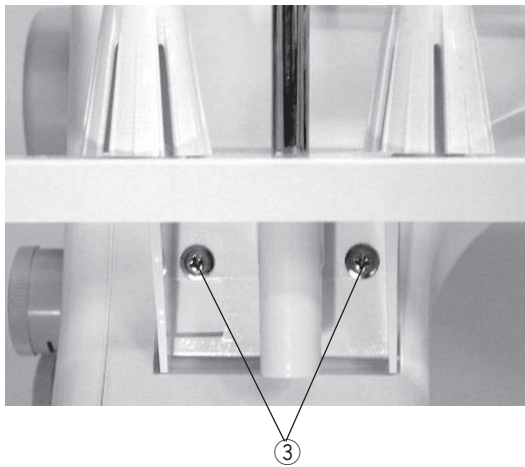
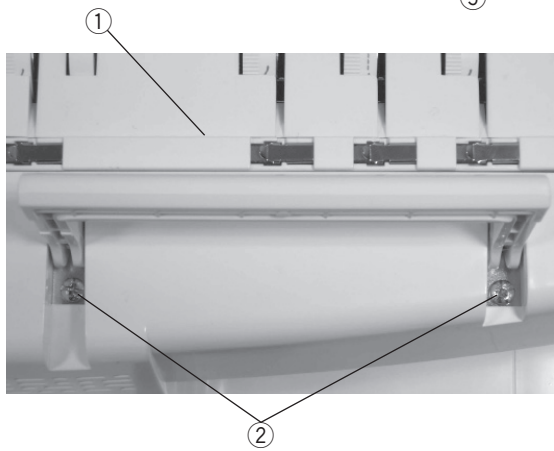
3. Rear Cover

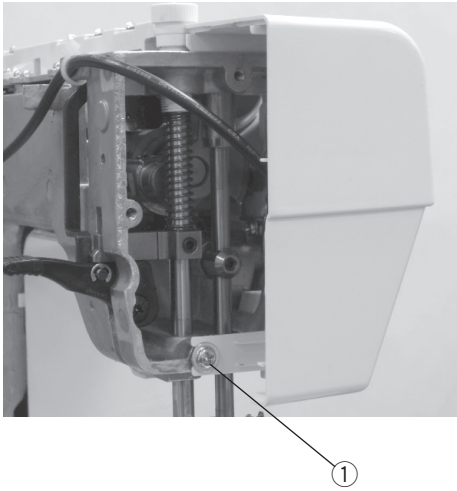
To remove:

- 1 Raise the handle ① and remove the setscrews ②, ③ and ④. Remove the rear cover ⑤.

To attach:

- 2 Follow the above procedures in reverse.





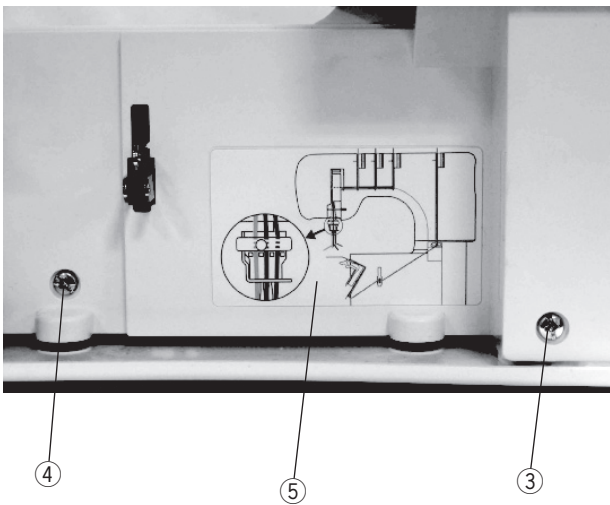
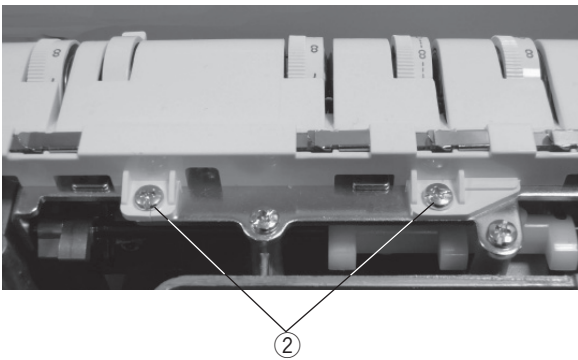
4. Front Cover

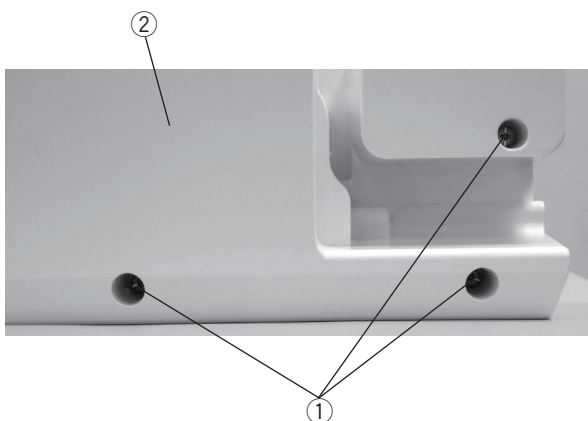
To remove:

- 1 Remove the face plate, belt cover, looper cover and rear cover.
- 2 Remove the setscrews 1, 2, 3 and 4.
Remove the front cover 5.

To attach:

- 3 Follow the above procedures in reverse.





5. Free Arm Cover

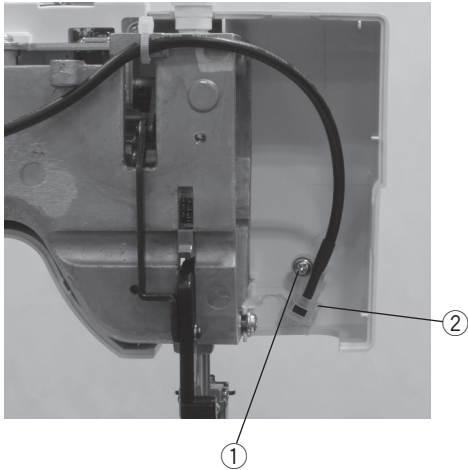
To remove:

- 1 Remove the setscrews ① and the free arm cover ②.

To attach:

- 2 Follow the above procedures in reverse.

Mechanical Adjustment



1. Presser Bar Height

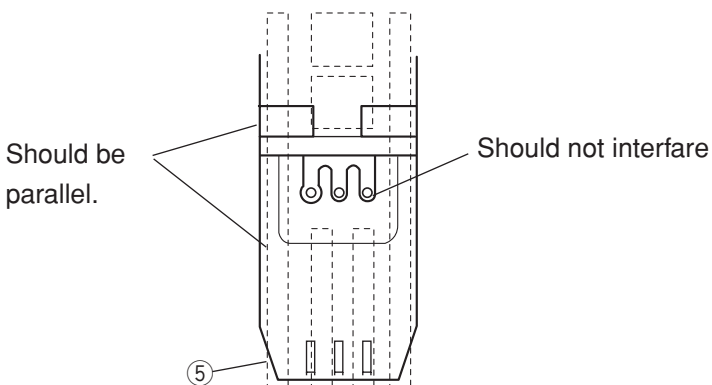
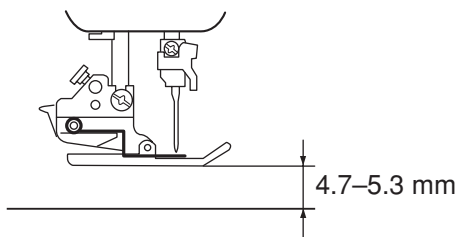
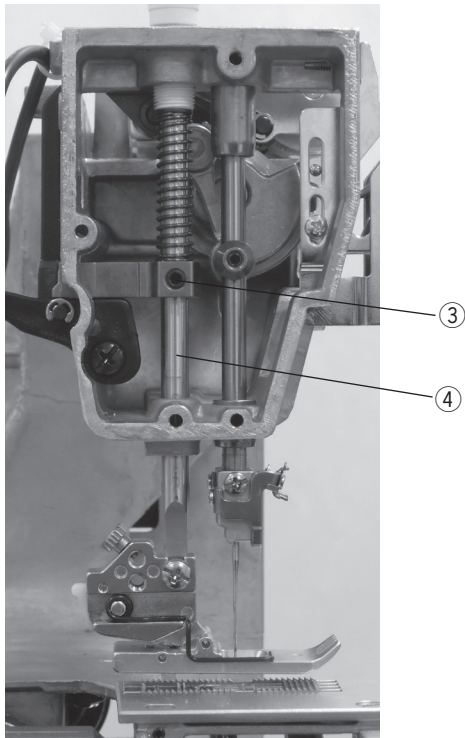
The distance between the bottom of the presser foot in up position and the needle plate should be 4.7–5.3 mm.

- 1 Remove the face plate and front cover.
- 2 Remove the setscrews ①, and lamp set plate ②.
- 3 Raise the presser foot and loosen the setscrew ③. Move the presser bar ④ up or down to set the presser foot height to 5 mm.
- 4 Tighten the setscrew ③ firmly.

NOTE:

Make sure that the presser foot should be parallel to the feed dog slots ⑤ in the needle plate and should not interfere with the needles.

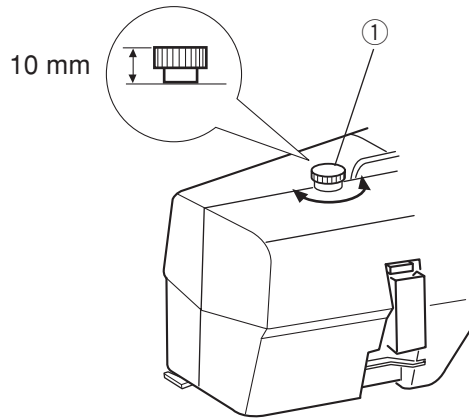
- 5 Attach the lamp set plate, front cover and face plate.

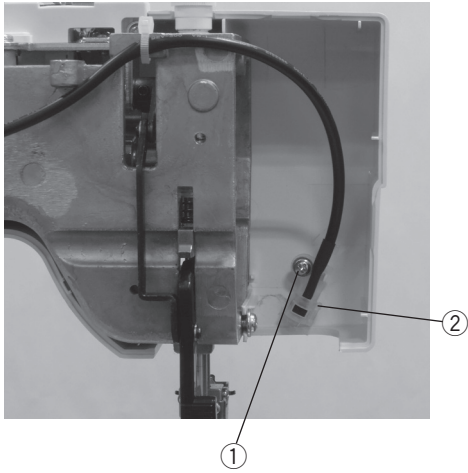


2. Foot Pressure

The pressure adjusting screw should protrude 10 mm from the top of the machine.

- 1 Turn the adjusting screw ① to set its height at 10 mm.





3. Needle Bar Height

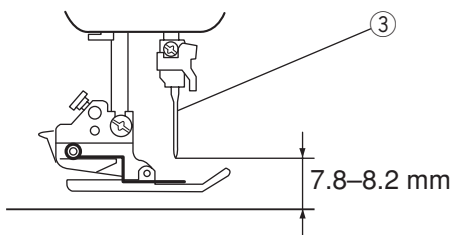
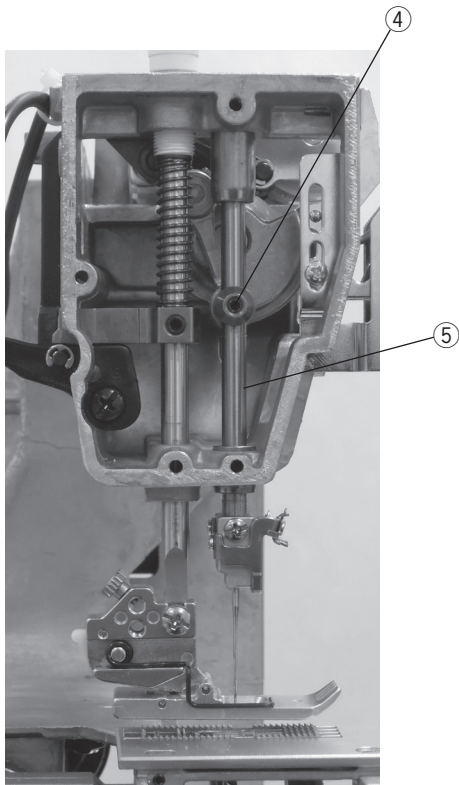
The distance between the point of the left needle (Schmetz ELx705, size 80/12) and the upper surface of the needle plate should be 7.8–8.2 mm when the needle bar is at the highest position.

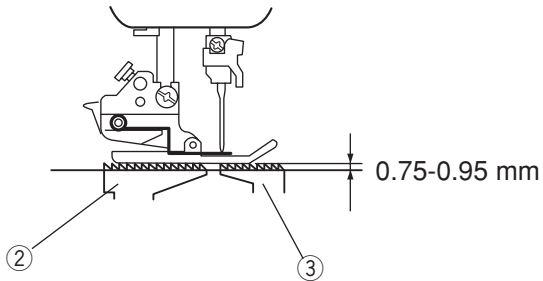
- 1 Remove the face plate and front cover.
- 2 Remove the setscrews 1 and lamp set plate 2.
- 3 Replace the left needle with Schmetz ELx705, size 80/12 needle 3.
- 4 Turn the handwheel toward you to raise the needle bar to the highest position.
- 5 Loosen the setscrew 4 and move the needle bar 5 up or down to adjust the distance at 8.0 mm.

NOTE:

Be sure not to rotate the needle bar when adjusting the needle bar height.

- 6 Tighten the setscrew 4 and attach the lamp set plate.
- 7 Attach the face plate and front cover.





4. Feed Dog Height

Turn the handwheel toward you to raise the feed dog to its highest position.

When the presser foot is lowered, the maximum height of the feed dog should be 0.75-0.95 mm above the needle plate.

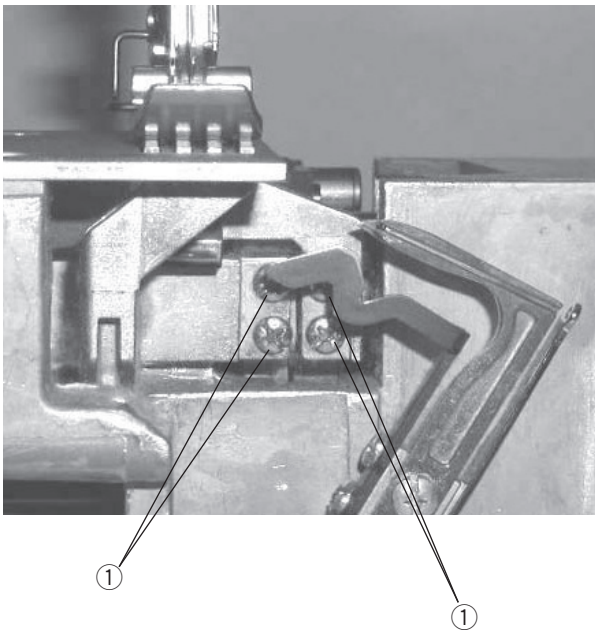
1 Set the stitch length dial at **3** and differential feed dial at **1.0**.

2 Lower the presser foot and turn the handwheel toward you to raise the feed dog to its highest position.

3 Open the looper cover and loosen the setscrews 1.

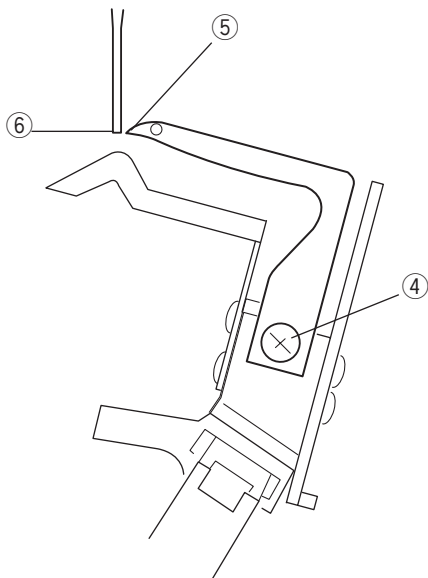
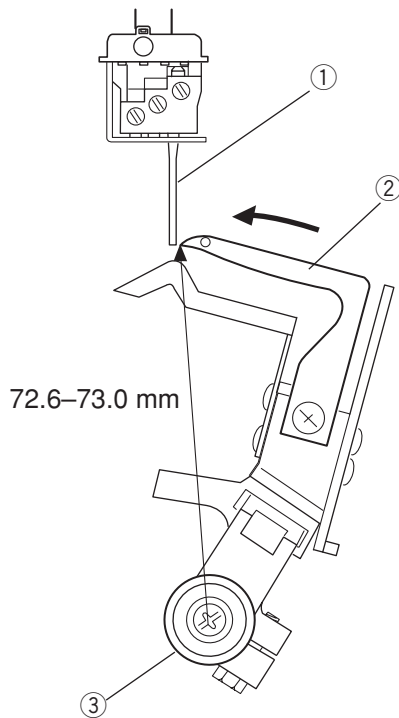
4 Move the main 2 and sub 3 feed dogs up or down to set the height at 1.0 mm.

5 Tighten the setscrews 1 firmly.

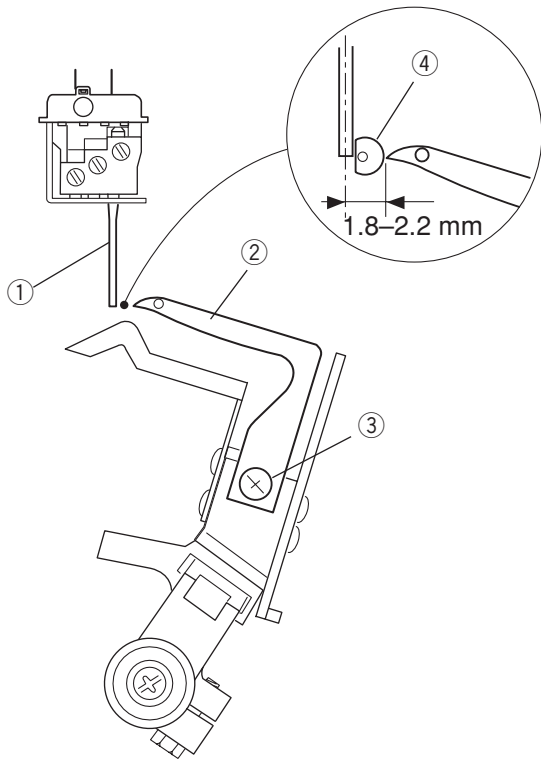


5. Looper Height

The height of the looper point should be 72.6–73.0 mm.



- 1 Remove the free arm cover and needle plate.
- 2 Replace the right needle with the short test pin (28.8 mm long) ①.
- 3 Turn the handwheel toward you to bring the looper ② to its rightmost position.
- 4 Pull the looper release knob ③ and swing the looper ② to the left until its point matches with the test pin ①.
- 5 Loosen the setscrew ④ and move the looper up or down to match its point ⑤ with the tip ⑥ of the test pin.
- 6 Tighten the setscrew ④ firmly.
- 7 Replace the test pin with a regular needle. Attach the needle plate and free arm cover.



6. Looper Position

The distance between the looper point and center of the right needle should be 1.8–2.2 mm when the looper is at its rightmost position.

- 1 Remove the free arm cover and needle plate.
- 2 Replace the right needle with the short test pin (28.8 mm long) ①.
- 3 Turn the handwheel toward you to bring the looper ② to its rightmost position.
- 4 Loosen the setscrew ③ and move the looper to the left or right to adjust the distance between the test pin and looper point to 2.0 mm.

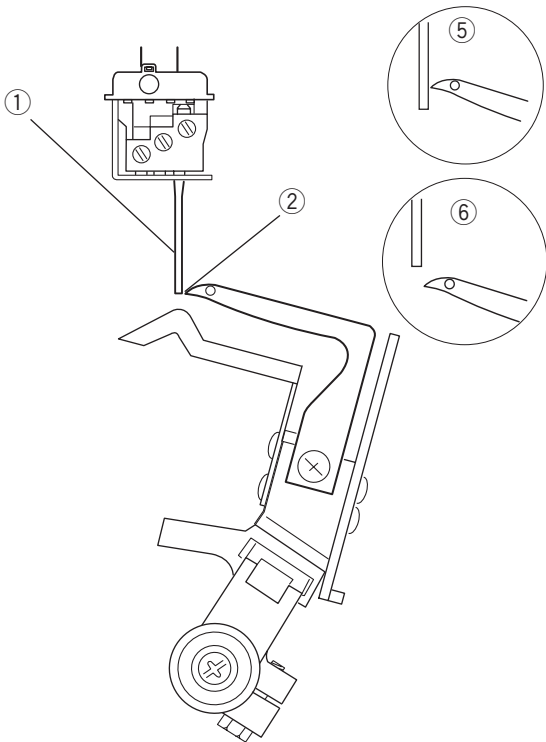
NOTES:

Do not move the looper up or down, otherwise the looper height will change.
Use a stem ④ of the regular needle to check if there is a proper gap between the looper point and test pin

- 6 Tighten the setscrew ③ firmly.
- 7 Replace the test pin with a regular needle.
Attach the needle plate and free arm cover.

7. Needle to Looper Timing

When the point of the looper meets with the right side of the needle on the right, the needle bar rises 1.3-1.5 mm from the lowest position.



1 Remove the free arm cover and needle plate.

2 Replace the right needle with the long test pin (30.24 mm long) 1.

3 Turn the handwheel toward you until the looper point 2 meets with the right side of the test pin.

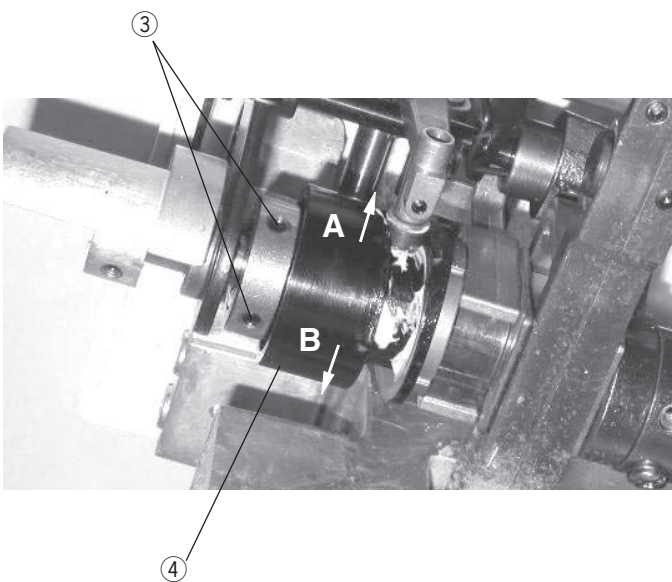
4 Loosen the setscrews 3 and turn the looper rocking cam 4 to match the looper point with the tip of the test pin.

- If the timing is too early 5, turn the cam in the direction **A**.

- If the timing is too late 6, turn the cam in the direction **B**.

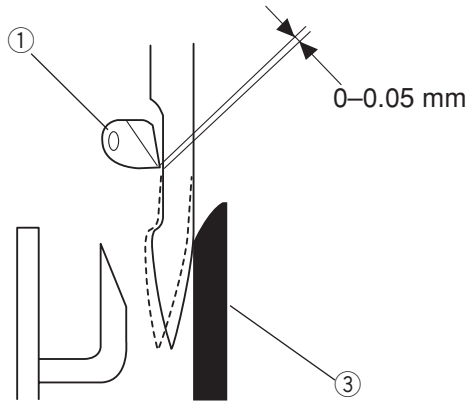
5 Tighten the setscrews 3 firmly.

6 Replace the test pin with a regular needle. Attach the needle plate and free arm cover.

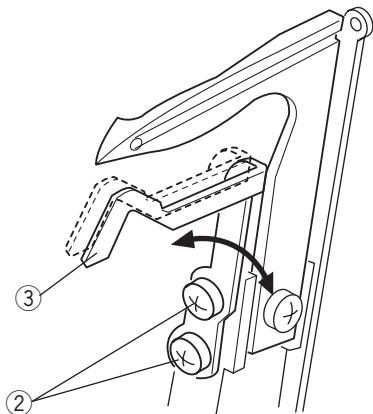


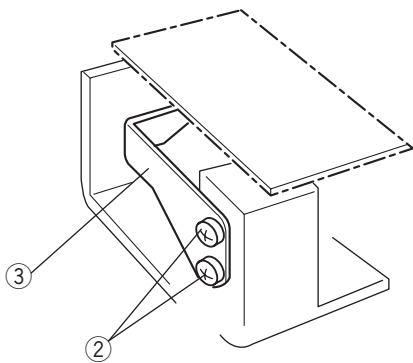
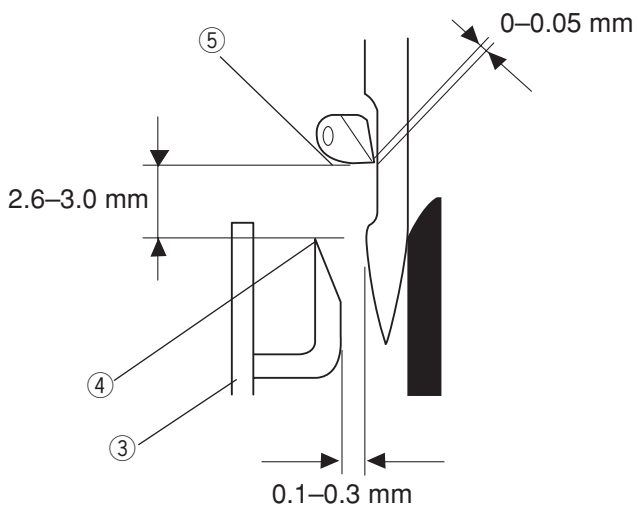
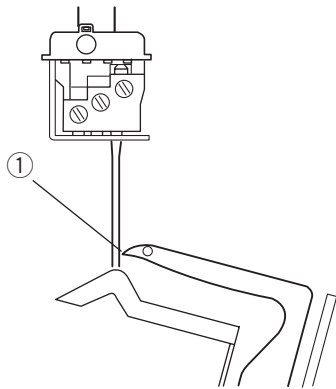
8. Clearance between the Needle and Looper

The clearance between the looper point and scarf of the needle (Schmetz ELx705, size 80/12) should be 0–0.05 mm.



- 1 Remove the free arm cover and needle plate.
- 2 Turn the handwheel toward you until the looper point ① comes behind the needle.
- 3 Loosen the setscrews ② and thrust the front needle guard ③ against the needle to make 0-0.05 mm clearance between the needle and looper point.
- 4 Tighten the setscrews ② and check the clearance.
- 5 Attach the needle plate and free arm cover.





9. Back Needle Guard Height

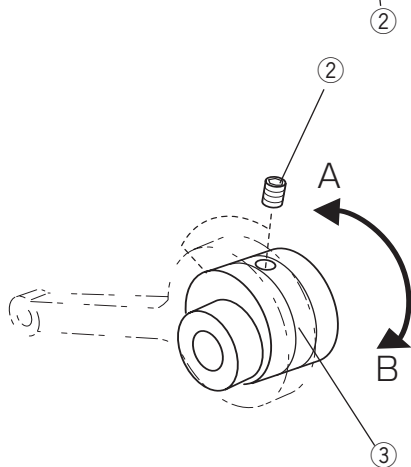
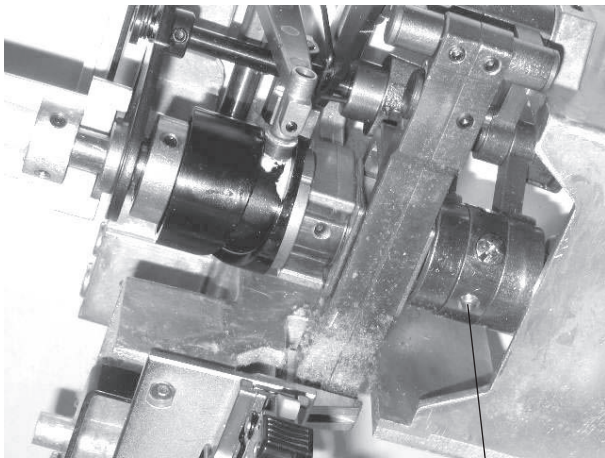
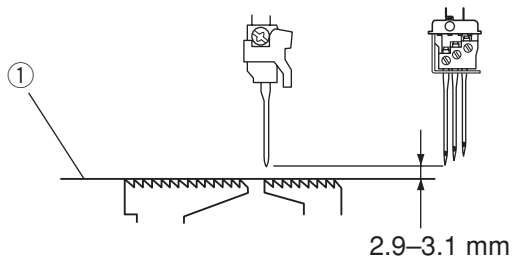
The upper edge of the back needle guard should be 2.6–3.0 mm below the lower edge of the looper point when the looper point meets with the right side of the needle.

- 1 Remove the free arm cover and needle plate.
- 2 Turn the handwheel toward you until the looper point ① matches with the right side of the needle.
- 3 Loosen the setscrews ② and move the back needle guard ③ up or down to set the upper edge ④ 2.8 mm below the lower edge ⑤ of the looper point.
- 4 Turn the handwheel toward you slightly to bring the looper point behind the needle.
Check the clearance between the back needle guard and the needle (Schmetz ELx705, size 80/12). It should be 0.1–0.3 mm.

NOTE:

If the clearance is out of standard range, adjust it by re-positioning the front needle guard. However, the clearance between the looper point and needle should be 0–0.05 mm.

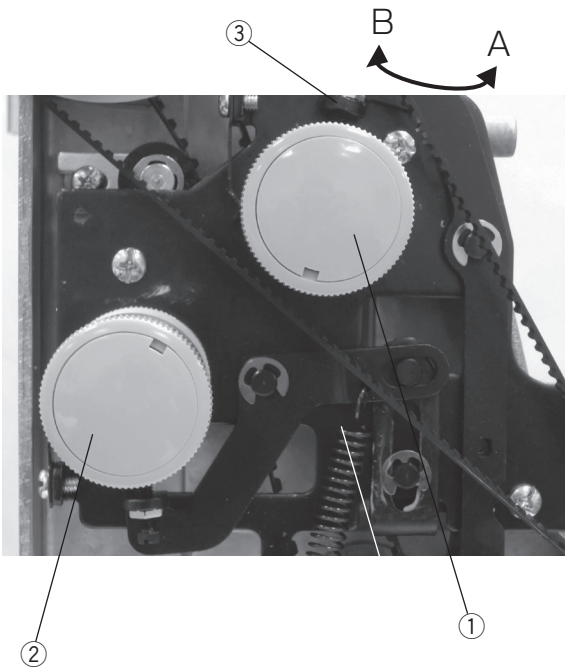
- 5 Tighten the setscrews ②.
- 6 Attach the needle plate and free arm cover.



10. Needle to Feed Dogs Timing

The point of the left needle should be 2.9–3.1 mm above the upper surface of the needle plate when the top of the feed dogs are level with the upper surface of the needle plate in downward motion.

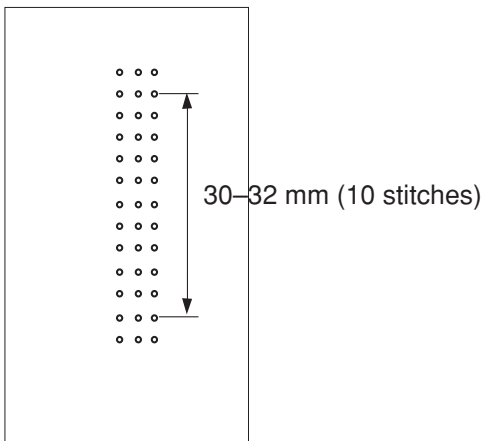
- 1 Remove the free arm cover and rear cover.
- 2 Set the stitch length dial at **3** and differential feed dial at **1.0**.
- 3 Turn the handwheel toward you to lower the needle bar until the point of the left needle is 3.0 mm above the upper surface of the needle plate ①.
- 4 Loosen the setscrews ② and turn the feed cam ③ to adjust the height of the feed dogs.
 - If the top of the feed dogs are higher than upper surface of the needle plate, turn the feed cam in the direction **A**.
 - If the top of the feed dogs are lower than upper surface of the needle plate, turn the feed cam in the direction **B**.
- 5 Tighten the setscrews ②. Attach the rear cover and free arm cover.

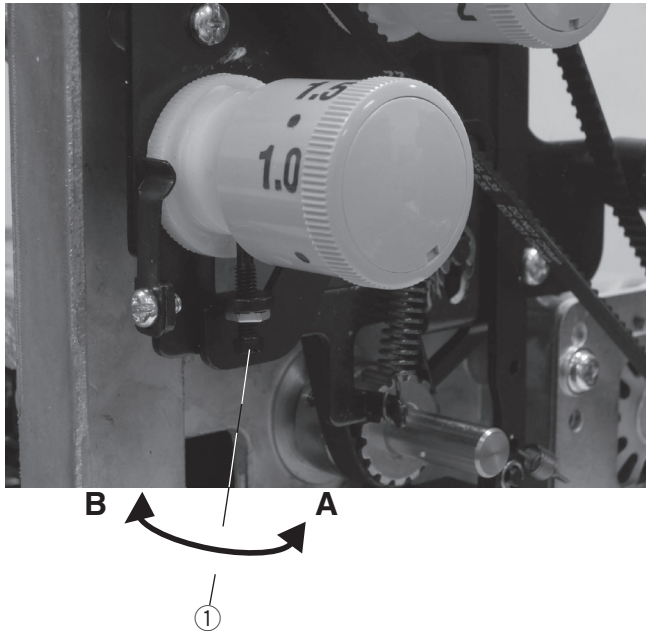


11. Stitch Length

The stitch length should be 30–32 mm when the stitch length dial is set at 3 and differential feed dial at 1.0.

- 1 Remove the belt cover.
- 2 Set the stitch length dial ① at **3** and differential feed dial ② at **1.0**.
- 3 Place a piece of paper under the presser foot. Lower the foot and turn the handwheel toward you about 15 times. Measure the distance of needle marks of 10 stitches. The distance should be 30–32 mm.
 - 4 Turn the adjusting screw ③ to adjust the stitch length.
 - If the stitch length is longer than 32 mm, turn the adjusting screw in the direction **A**.
 - If the stitch length is shorter than 30 mm, turn the adjusting screw in the direction **B**.
- 5 Attach the belt cover.





12. Differential Feed Ratio

The main and sub feed dogs should move uniformly together when the stitch length dial is set at 3 and differential feed dial at 1.0.

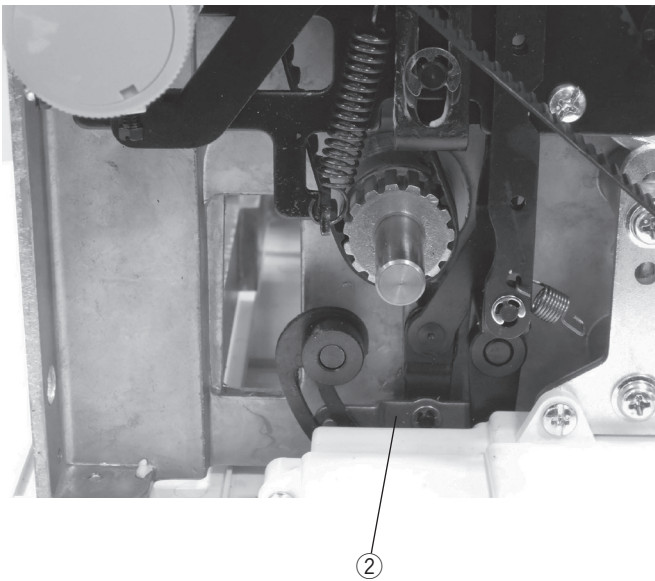
- 1 Remove the belt cover.
- 2 Set the stitch length dial at **3** and differential feed dial at **1.0**.
- 3 Turn the adjusting screw ① to adjust the differential feed ratio.

- If the sub-feed dog moves less than the main feed dog does, turn the adjusting screw in the direction of **A**.
- If the sub-feed dog moves more than the main feed dog does, turn the adjusting screw in the direction of **B**.

NOTE:

When the differential feed ratio is properly adjusted, the feed link ② sits horizontally.

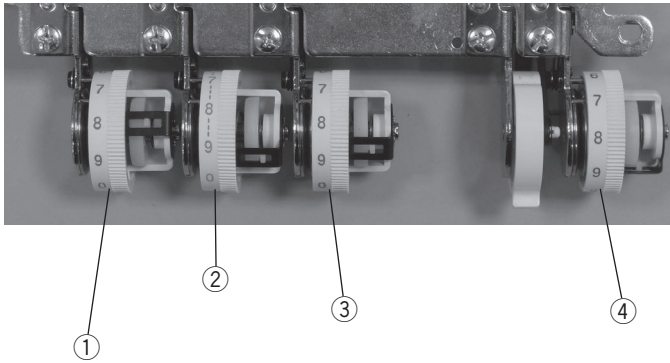
- 4 Attach the belt cover.



13. Thread Tension

The standard thread tension measured with the King brand white polyester thread (#50) should be as follows:

- ① Left needle thread: 65–75 grams (Dial set at 4)
- ② Center needle thread: 55–65 grams (Dial set at 4)
- ③ Right needle thread: 45–55 grams (Dial set at 4)
- ④ Looper thread: 9–15 grams (Dial set at 3)

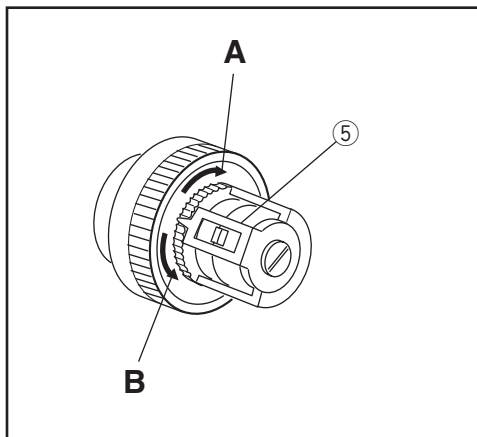


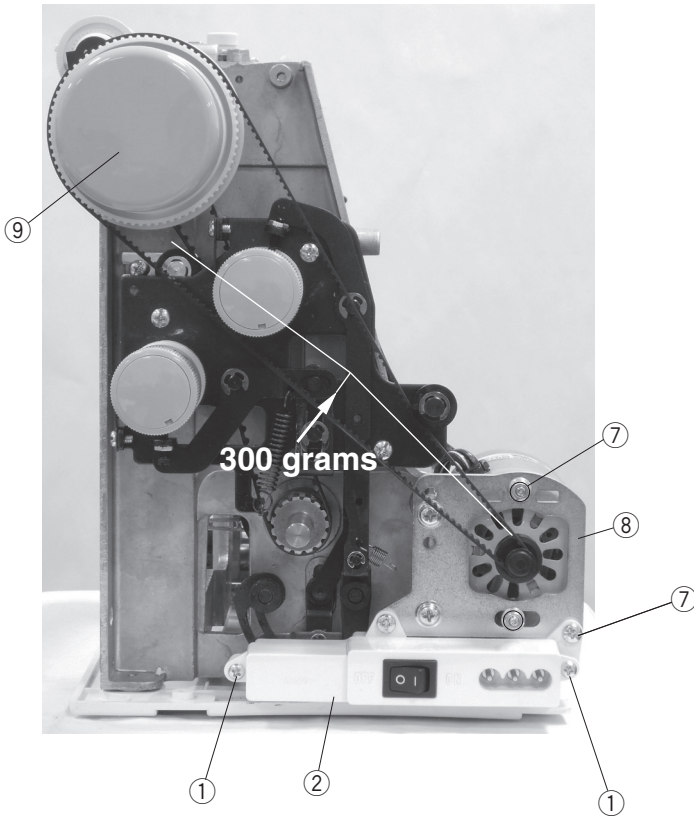
① Remove the front cover.

② Turn the adjusting plate ⑤ to adjust the tension.

- If the tension is too loose, turn the adjusting plate in the direction of **A**.
- If the tension is too tight, turn the adjusting plate in the direction of **B**.

③ Attach the front cover.





14. Motor

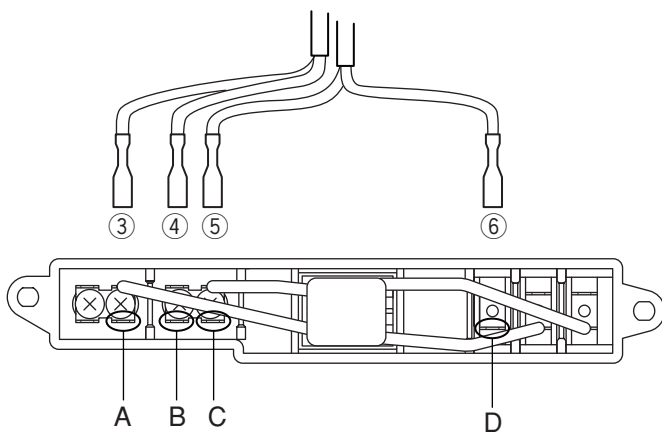
To replace:

- 1 Remove the belt cover and rear cover.
- 2 Remove the setscrews ① and machine socket ②.
- 3 Disconnect the motor cords ③, ④, ⑤ and ⑥ from the connector tabs A, B, C and D.
- 4 Remove the setscrews ⑦ and remove the motor.
- 5 Install the new motor to the bracket ⑧ with the setscrews ⑦. Attach the motor belt.
- 6 Connect the motor cords ③, ④, ⑤ and ⑥ to the connector tabs A, B, C and D.
- 7 Attach the machine socket ② with the setscrews ①.
- 8 Adjust the motor belt tension (see below).

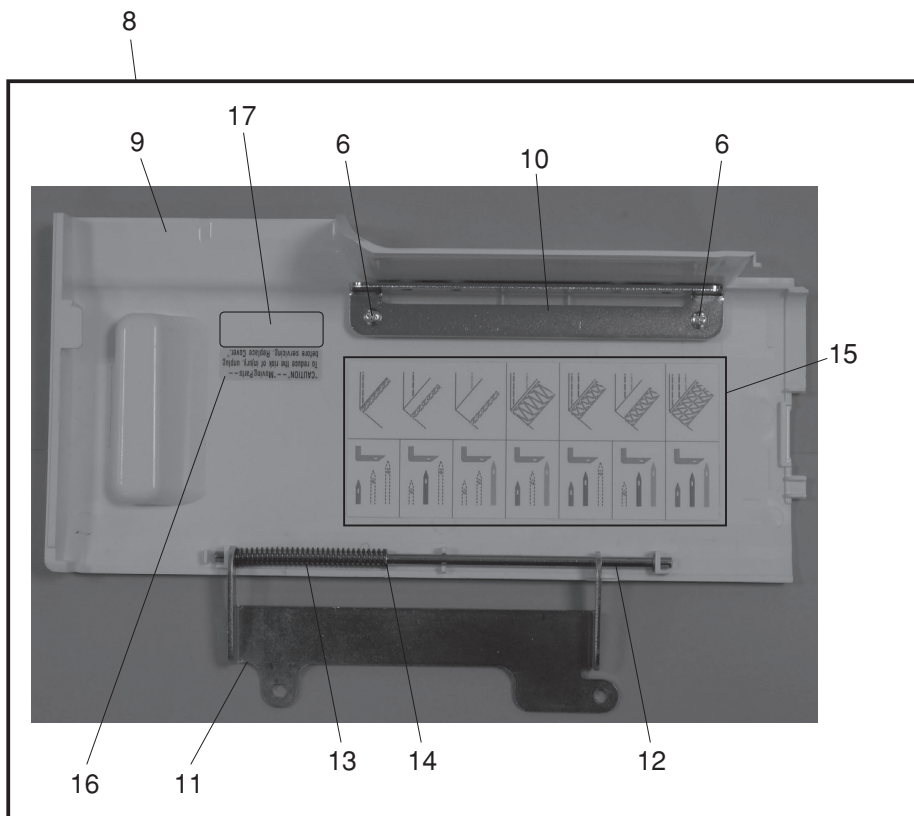
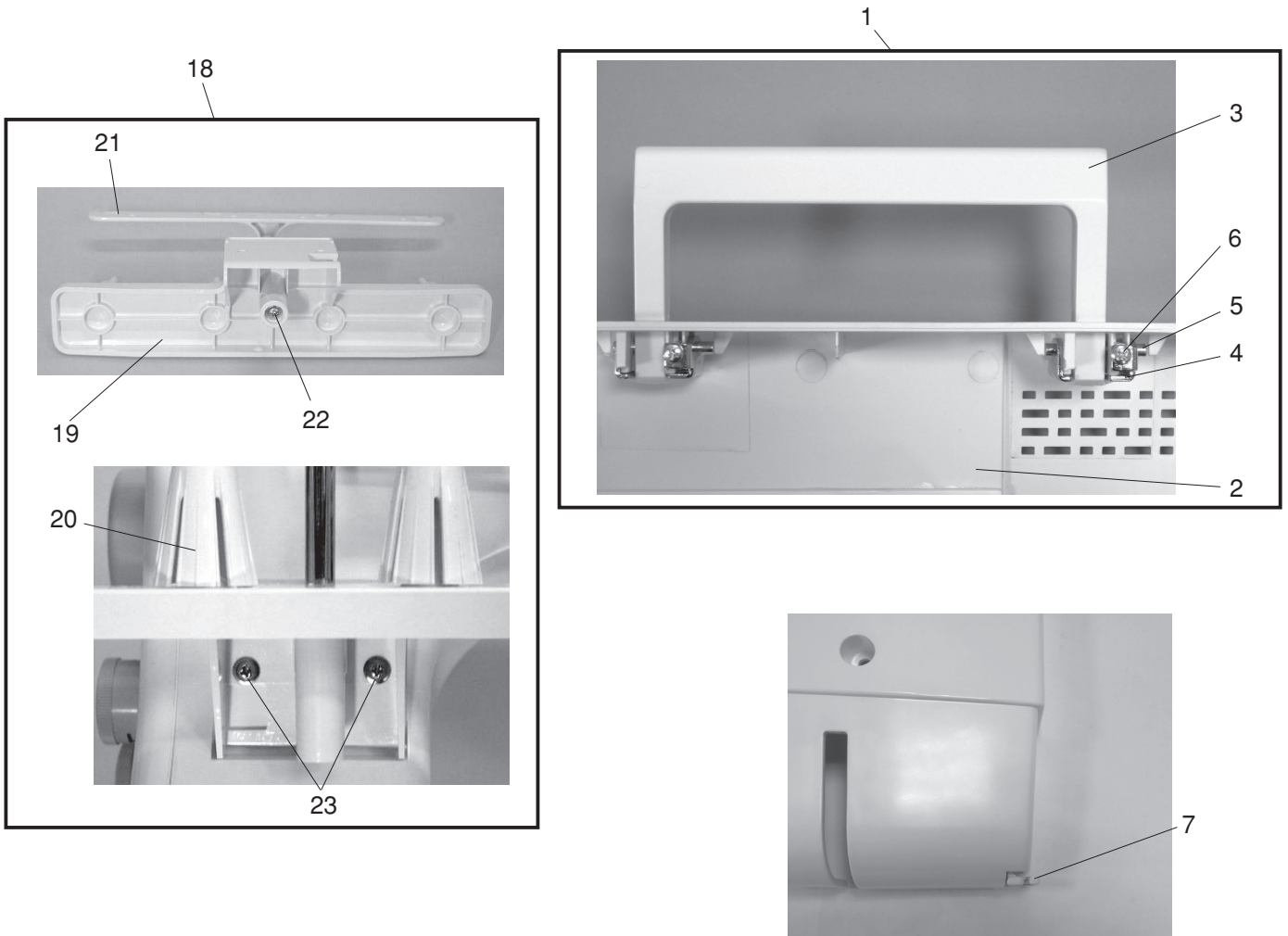
To adjust the motor belt tension:

The motor belt ⑨ should deflect 7–9 mm when applying 300 grams of load to the middle of the belt.

- 1 Slightly loosen the setscrews ⑦. Move the motor up or down to adjust the motor belt tension.
- 2 Tighten the setscrews ⑦ firmly.
- 3 Attach the rear cover and belt cover.



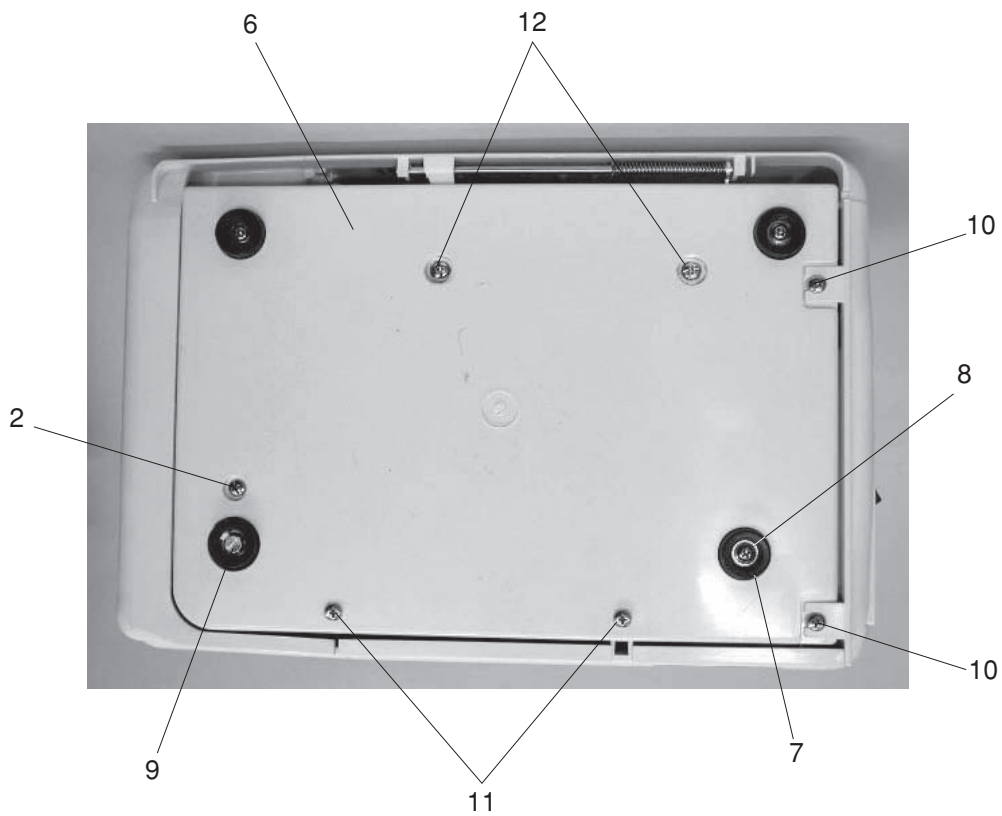
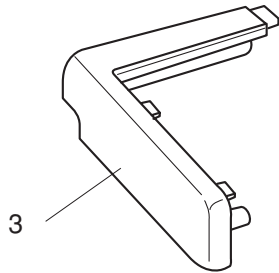
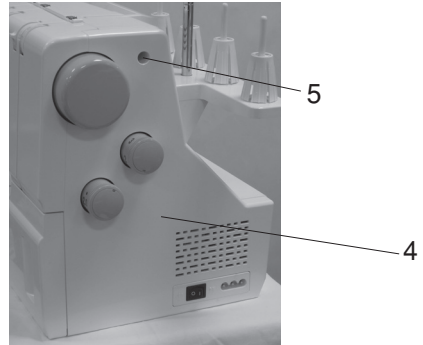
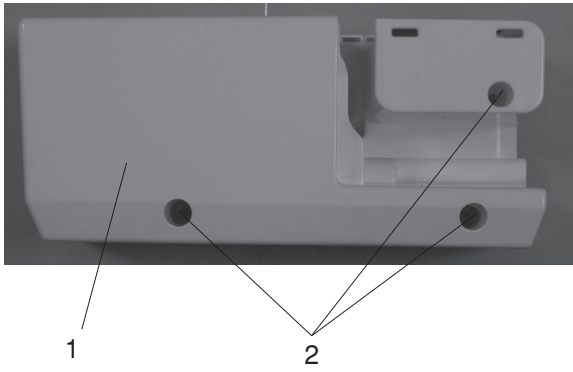
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795648001	Rear cover (unit)
2	795175A01	Rear cover
3	795004009	Handle
4	795005000	Handle supporter
5	730015002	Handle shaft
6	000120203	Setscrew 3x8 (B)
7	840602006	Thread cutter (unit)
8	795650006	Looper cover (unit) (U.S.A.)
	795650017	Looper cover (unit) (Continental Europe) (Australia) (UK)
	795650028	Looper cover (unit) (Canada)
9	795177A01	Looper cover
10	795102008	Attachment set plate
11	795011009	Looper cover supporter
12	795013001	Looper cover shaft
13	795150001	Looper cover spring
14	000002105	Snap ring E-3
15	795015A01	Stitch chart
16	830312016	Caution sticker (U.S.A.)
17	100970003	Caution sticker (Canada)
18	789606008	Spool stand (unit)
19	777011003	Spool stand
20	784223105	Spool holder
21	789607009	Thread guide bar (unit)
22	000115700	Setscrew TP 4x10
23	000114802	Setscrew TP 4x12

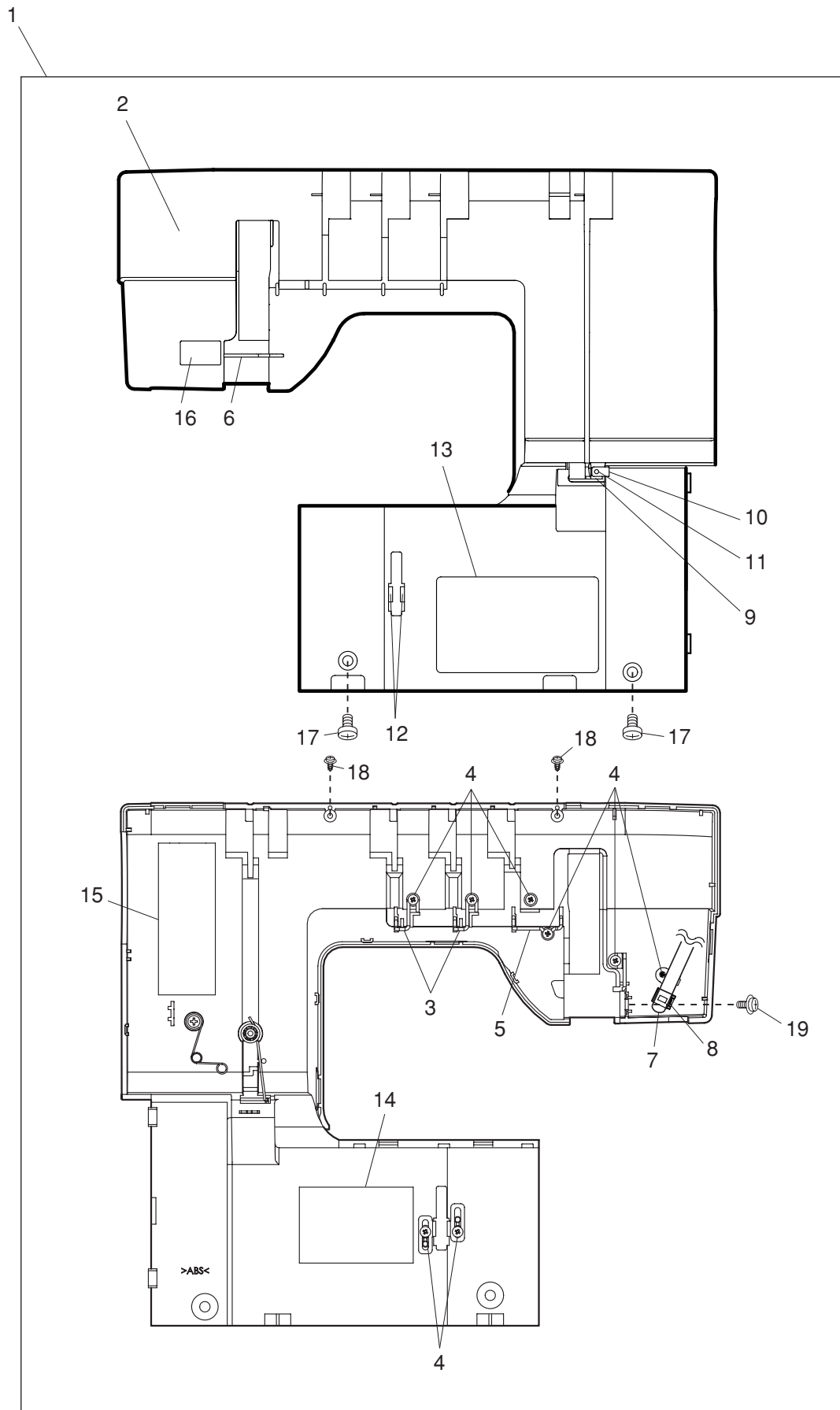
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795179006	Free-arm cover
2	000081005	Setscrew 4x8
3	795180000	Extension table
4	795176A01	Belt cover
5	000101703	Setscrew 4x12
6	795112001	Base plate
7	605074008	Rubber foot
8	000119106	Setscrew TP 4x10
9	795634004	Adjusting screw (unit)
10	000234603	Setscrew 4x10
11	000198305	Setscrew 4x10 (B)
12	000081016	Setscrew 4x8

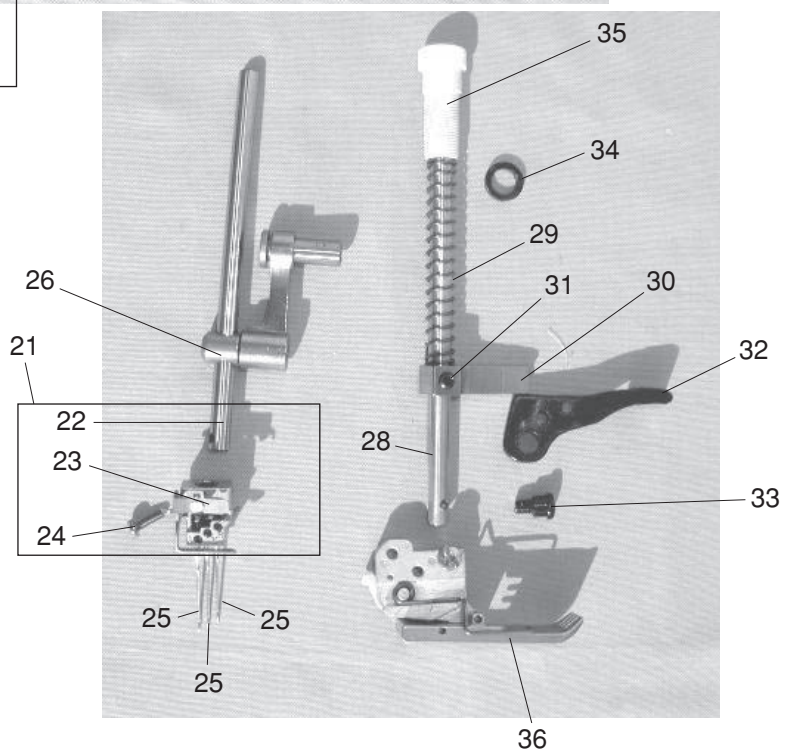
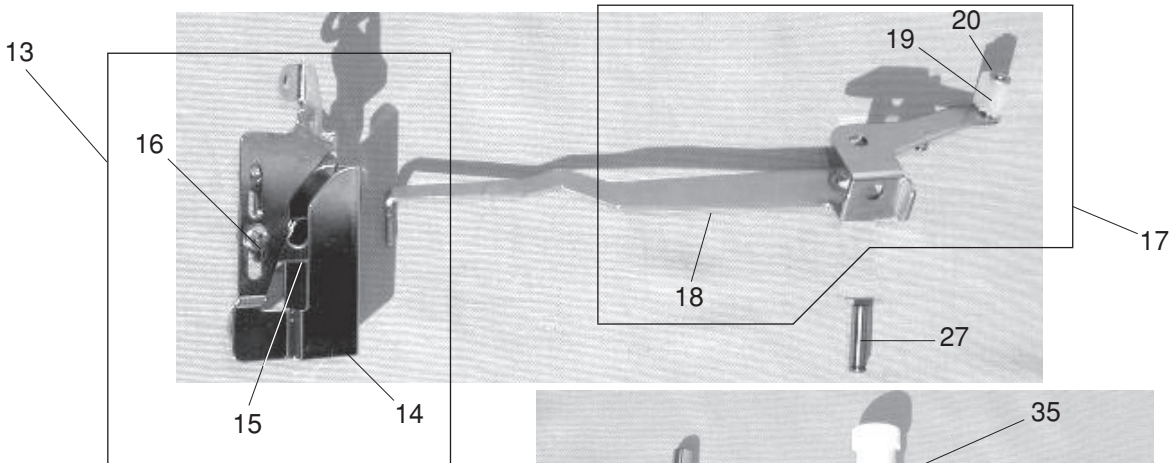
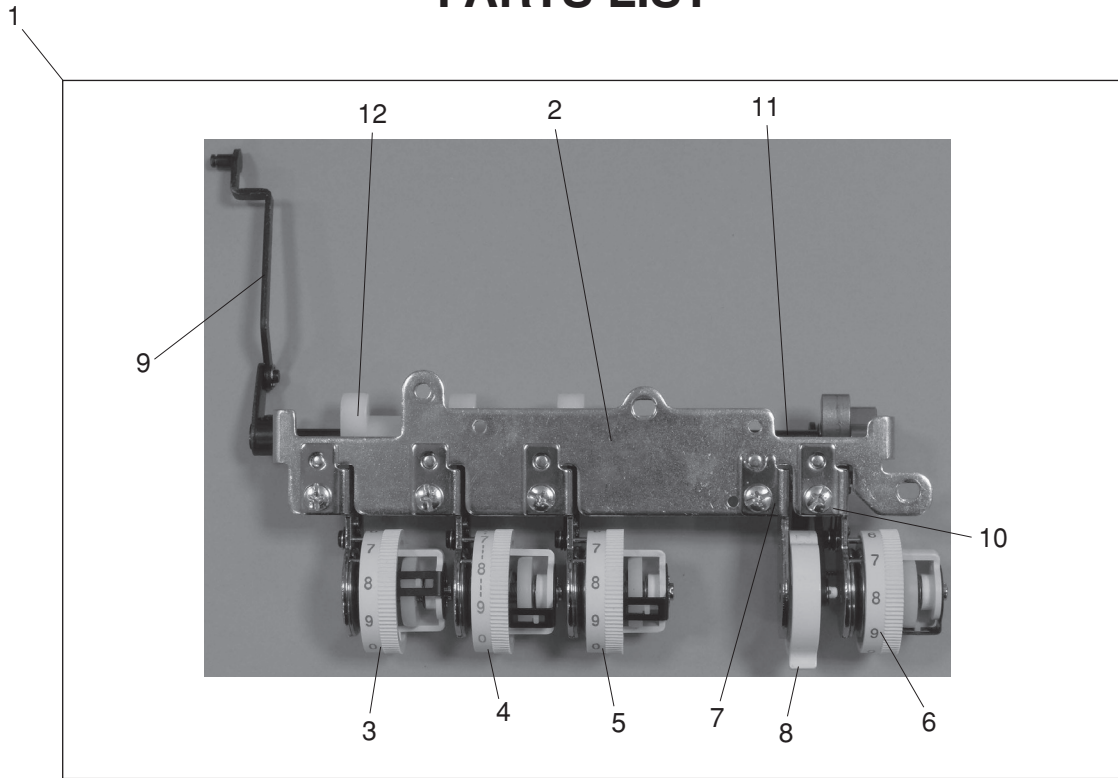
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795652008	Front cover (unit)
2	795174A01	Front cover
3	795040007	Needle thread guide (1)
4	000149301	Setscrew 3x8 (B)
5	795192005	Needle thread guide
6	795042009	Needle thread guide (3)
7	508515208	LED (unit)
8	508143005	LED holder
9	795165009	Looper thread guide (1)
10	795167001	Spring
11	820374004	Setscrew 2x2.3
12	795045002	Looper thread guide (2)
13	795046A01	Thread guide chart
14	795143104	Vibration absorber 1
15	795143300	Vibration absorber 3
16	795146004	Sticker
17	000081016	Setscrew 4x8
18	000149002	Setscrew 3x10 (B)
19	000115607	Setscrew TP 4x8

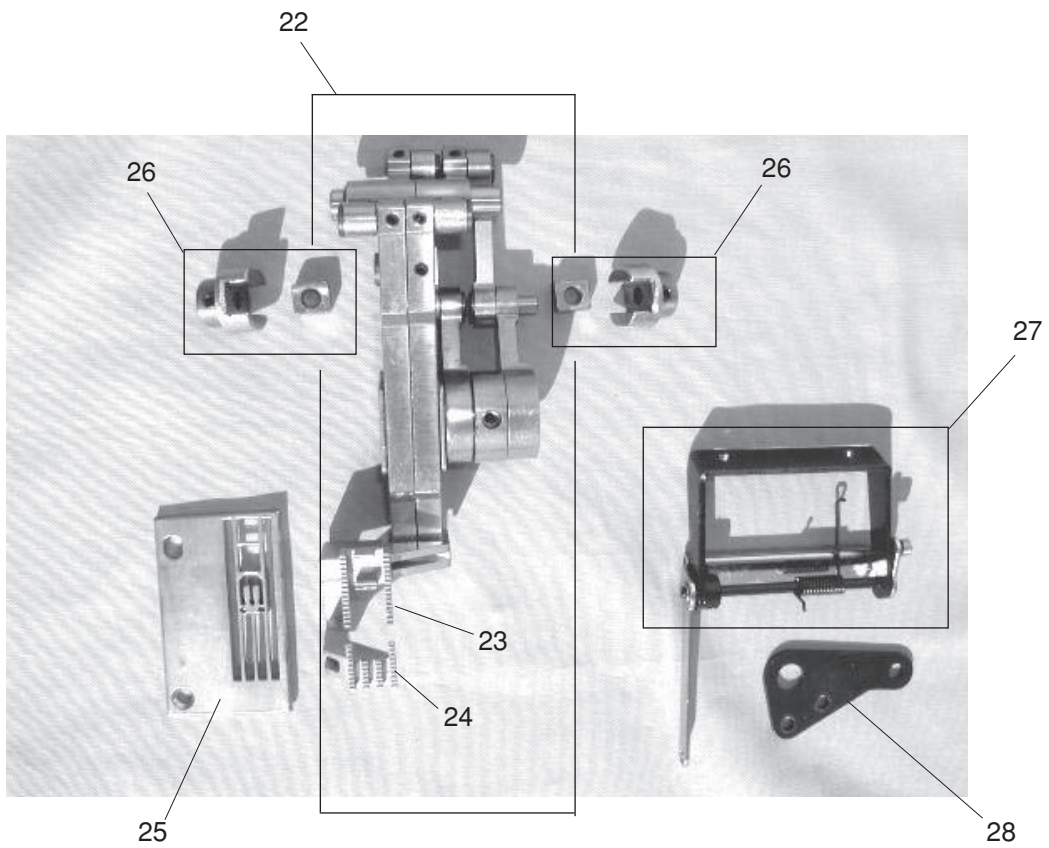
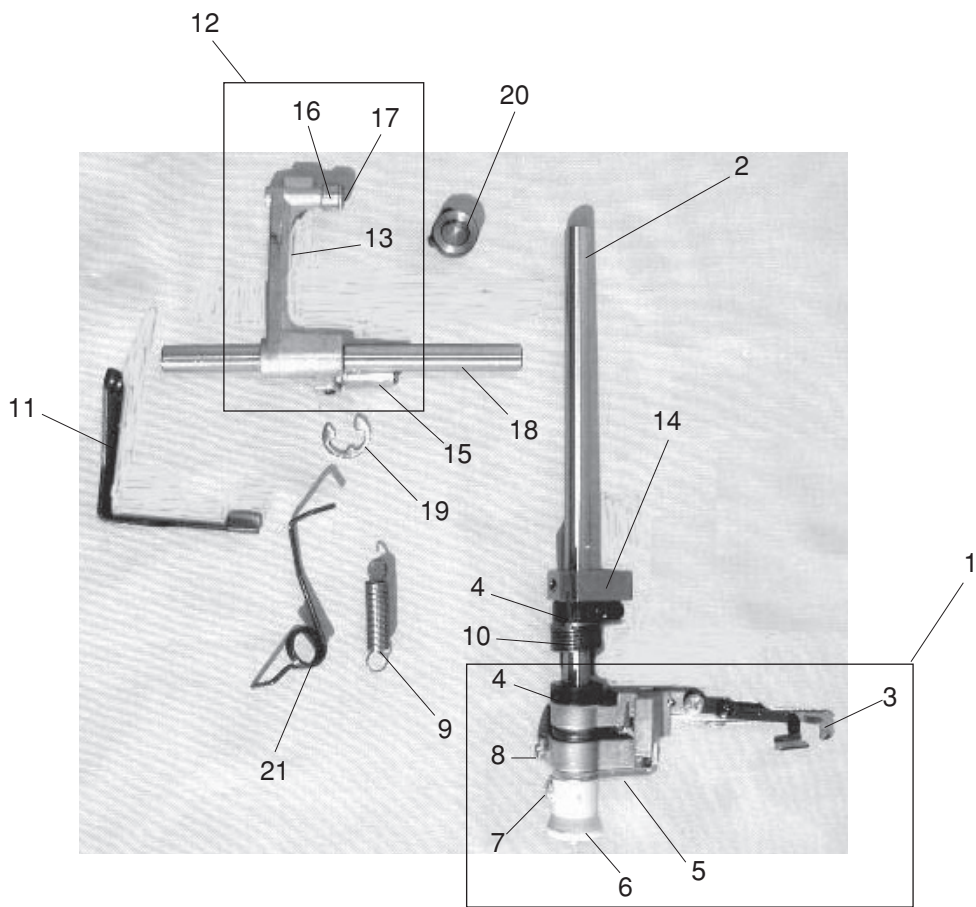
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795645008	Thread tension set plate (unit)
2	795104000	Thread tension set plate
3	795502002	Needle thread tension (L) (unit)
4	796503006	Needle thread tension (C) (unit)
5	795503003	Needle thread tension (R) (unit)
6	795504004	Looper thread tension (unit)
7	795646102	Thread guide upper (unit)
8	795647000	Looper thread tension switching lever
9	795615009	Thread tension release lever (unit)
10	000101415	Setscrew 4x6
11	795108107	Thread releasing shaft
12	795191004	Cam
13	795605006	Thread take-up lever cover (unit)
14	795043000	Thread take-up lever cover
15	795121003	Thread take-up lever
16	000097406	Setscrew 3x3
17	795604005	Needle thread take-up lever (unit)
18	795026007	Needle thread take-up lever
19	795123005	Cam follower
20	000001207	Snap ring E-2.5
21	796602006	Needle bar (unit)
22	795018006	Needle bar
23	796603007	Needle clamp (unit)
24	000080428	Setscrew 3x10
25	795031005	Needle ELx705-12
26	795024005	Needle bar connecting stud
27	795629006	Take-up lever supporter pin (unit)
28	784029006	Presser bar
29	795029000	Presser bar spring
30	724118007	Presser bar bracket
31	000111304	Hexagonal socket screw 5x5
32	650032015	Presser foot lifter
33	810431009	Hinge screw
34	102061008	Washer
35	795030004	Pressure adjusting screw
36	796501004	Presser foot (unit)

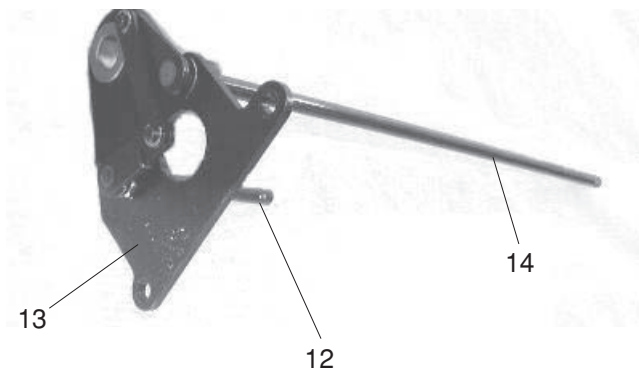
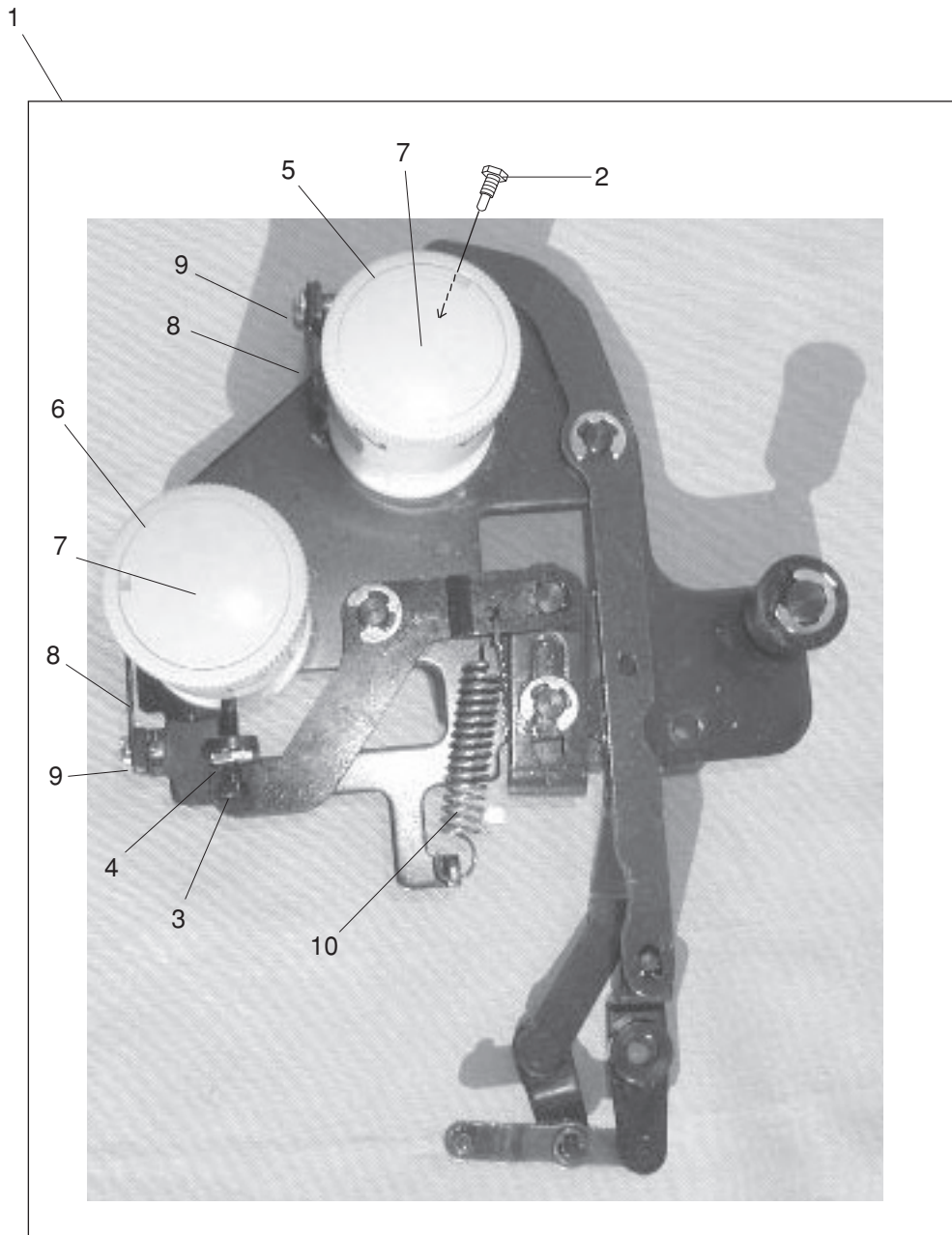
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795613007	Looper shaft (unit)
2	795092004	Looper shaft
3	795614008	Looper (unit)
4	792048006	Looper shaft ring
5	795099001	Looper link arm
6	795101007	Looper release knob
7	000101116	Setscrew 3x4
8	000138008	Hexagonal bolt 4x16
9	795132007	Looper spring
10	795135000	Looper rocking spring
11	795085004	Needle guard
12	795612006	Looper crank arm
13	795089008	Looper rocking arm
14	795093005	Looper arm
15	795090002	Looper slider block
16	795034008	Looper cam roller
17	795053003	Looper cam roller pin
18	795088007	Looper rocking shaft
19	000002909	Snap ring E-7
20	624245001	Thrust stopper
21	795127009	Looper crank spring
22	795610004	Main feed base (unit)
23	795060003	Main feed dog
24	795061004	Sub feed dog
25	796601005	Needle plate (unit)
26	785521006	Feed regulator (unit)
27	795609000	Looper thread take-up lever (unit)
28	795073009	Link shaft support base

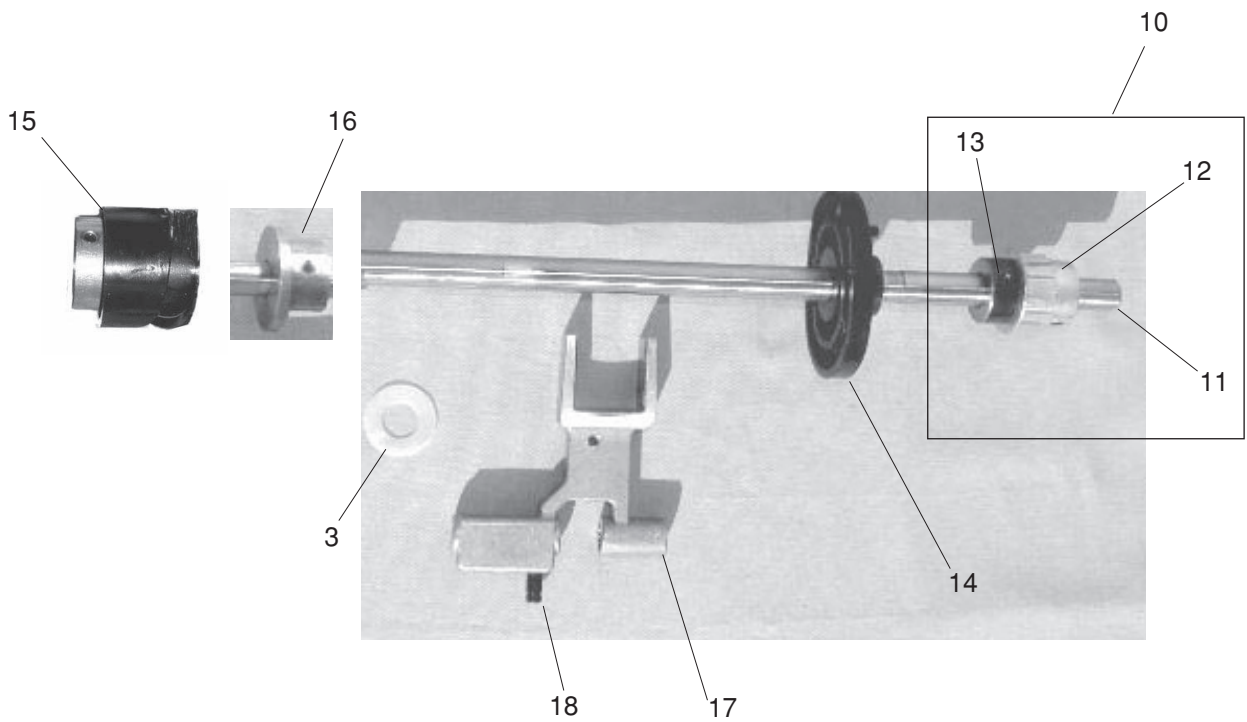
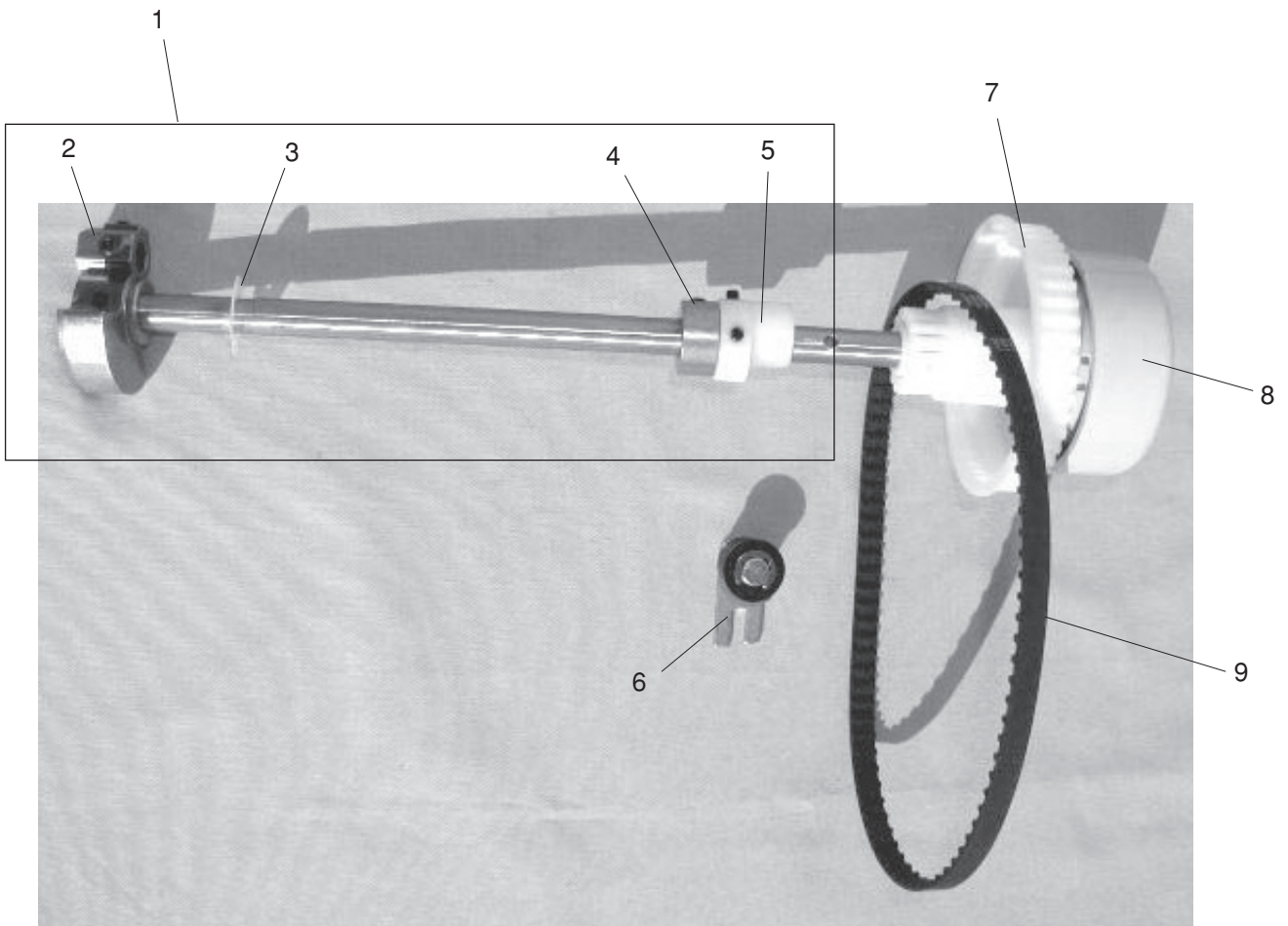
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795611108	Feed adjuster bracket (unit)
2	652056000	Adjusting screw
3	785224006	Adjusting screw
4	000160102	Adjustable nut 4
5	795087109	Stitch length dial
6	795087202	Differential feed dial
7	794099008	Dial cap
8	787263003	Spring
9	000081119	Setscrew 4x6
10	787259006	Spring
11	794053000	Sub feed link arm
12	795074000	Sub feed convert arm shaft
13	795076002	Lower shaft base
14	795077003	Sub feed link arm shaft

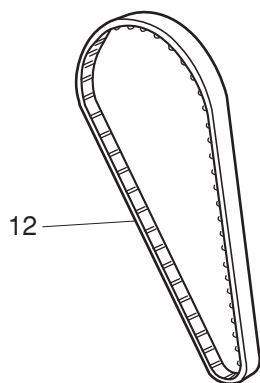
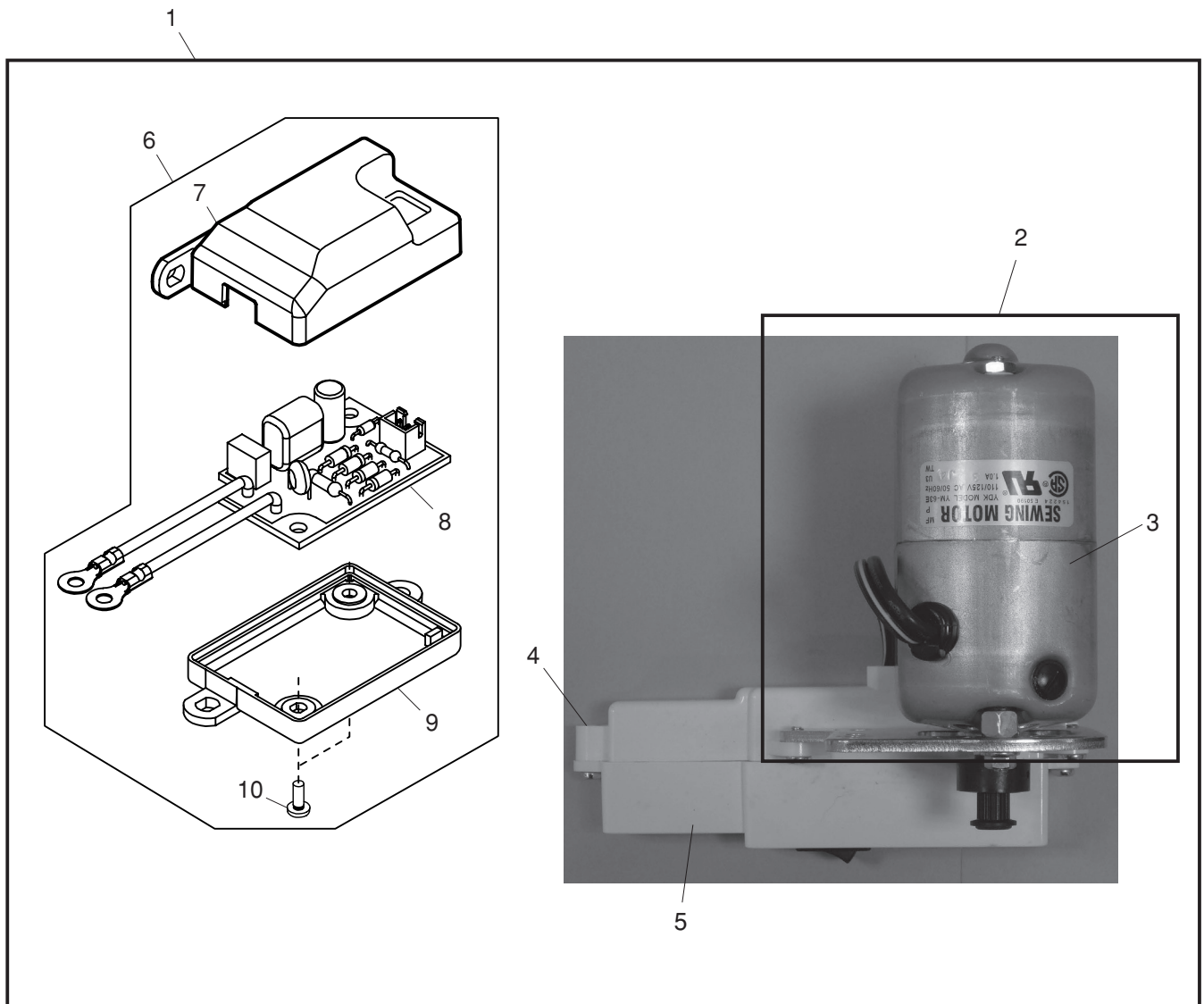
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	795606007	Upper shaft (unit)
2	795048005	Needle bar crank
3	000038605	Washer
4	639095000	Ring
5	795125007	Needle thread take-up lever cam
6	795607008	Idler (unit)
7	795632013	Belt wheel (unit)
8	846081104	Handwheel
9	795050000	Timing belt
10	795608009	Lower shaft (unit)
11	795051001	Lower shaft
12	795173000	Lower shaft timing gear
13	619006002	Upper shaft ring
14	795057007	Looper take-up lever cam
15	795628005	Looper rocking cam (unit)
16	795055005	Looper cam
17	795056006	Looper rod
18	795134009	Screw

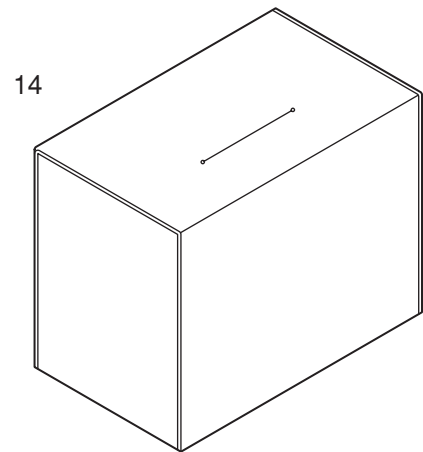
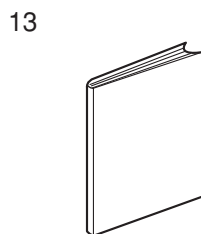
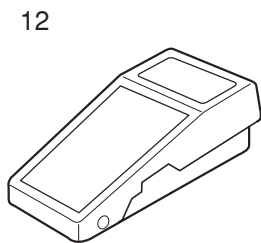
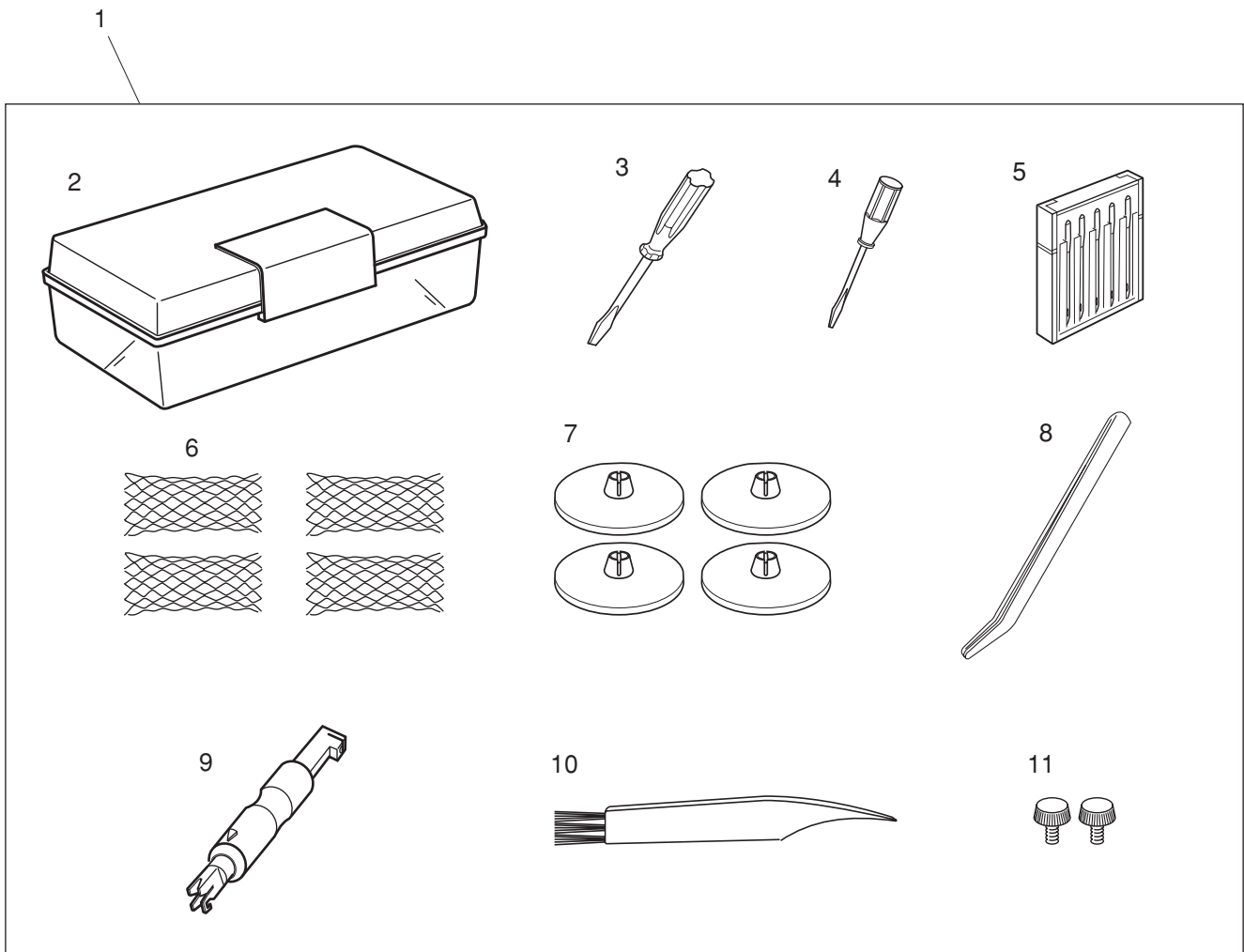
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	796609106	Machine socket (unit) (U.S.A.) (Canada)
	796609209	Machine socket (unit) (Continental Europe)
	796609302	Machine socket (unit) (Australia) (UK)
2	795626210	Motor (unit) (U.S.A.) (Canada)
	795627015	Motor (unit) (Continental Europe)
	795627118	Motor (unit) (Australia) (UK)
3	795518001	Motor (unit) (U.S.A.) (Canada)
	795520006	Motor (unit) (Continental Europe)
	795521007	Motor (unit) (Australia) (UK)
4	795504101	Machine socket (unit) (U.S.A.) (Canada)
	795502109	Machine socket (unit) (Continental Europe) (Australia) (UK)
5	794087003	Machine socket cover
6	795651007	Printed circuit board C case (unit) (U.S.A.) (Canada)
	795651018	Printed circuit board C case (unit) (Continental Europe) (Australia) (UK)
7	795181001	Printed circuit board C case
8	508512205	Printed circuit board C (U.S.A.) (Canada)
	508512308	Printed circuit board C (Continental Europe) (Australia) (UK)
9	795182002	Printed circuit board C case cover
10	000120203	Setscrew 3x8 (B)
11	000053008	Cord bind
12	795162006	Timing belt 185XL

PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	796870100	Standard accessories (unit)
2	366401400	Accessory box
3	784810002	Screwdriver (large)
4	792030005	Screwdriver (small)
5	795802005	Needle case (unit)
6	624806006	Nets
7	822020503	Spool caps
8	624801001	Tweezers
9	200254502	Needle threader
10	802424004	Lint brush
11	200217134	Thumbscrews (for optional attachment)
12	C-1028-1	Foot control (U.S.A.) (Canada)
	C-2060-1	Foot control (Continental Europe)
	C-2065-1	Foot control (Australia)
	C-2064-1	Foot control (UK)
13	796800659	Instruction book (English/Spanish/French)
	796800660	Instruction book (Dutch/German/French)
14	795801107	Cover