

SERVICE MANUAL
PARTS LIST
MODEL 920

CONTENTS

WHAT TO DO WHEN	1-3
SERVICE ACCESS	
FACE COVER	4
FRONT COVER	5
REAR COVER	6
MECHANICAL ADJUSTMENT	
TOP TENSION	7
BOBBIN TENSION	8
PRESSER BAR HEIGHT AND ALIGNMENT	9
NEEDLE SWING	10
NEEDLE DROP	11
CLEARANCE BETWEEN NEEDLE AND HOOK (NO.1)	12
CLEARANCE BETWEEN NEEDLE AND HOOK (NO.2)	13
FEED DOG HEIGHT	14
NEEDLE BAR HEIGHT	15
NEEDLE TIMING TO SHUTTLE	16
DISTORTED PATTERN	17
BUTTONHOLE FEED BALANCE	18
BARTACK FEED OF BUTTONHOLE	19
BUTTONHOLE FUNCTION	20
DISENGAGEMENT OF CAM FOLLOWER	21
MOTOR BELT TENSION	22
WIRING	23
OILING	24
PARTS LIST	25-43

WHAT TO DO WHEN

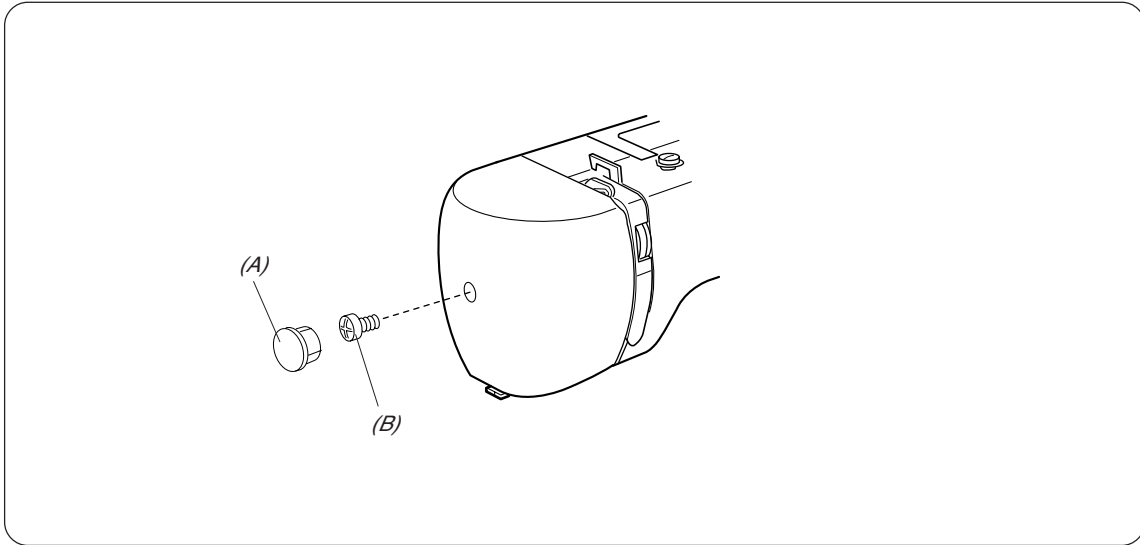
CONDITION	CAUSE	HOW TO FIX	REFERENCE
1. Skipped stitches	<ol style="list-style-type: none"> 1. Needle is not inserted properly. 2. Needle is bent or blunt. 3. Incorrectly threaded. 4. Needle or thread are inappropriate for the fabric being sewn. 5. Sewing on stretch fabric. 6. Inappropriate needle bar height. 7. Inappropriate needle to hook timing. 8. Inappropriate needle to hook clearance. 	<p>Insert the needle properly.</p> <p>Change the needle.</p> <p>Rethread.</p> <p>Use appropriate needle thread for fabric being sewn.</p> <p>Use a #11 blue tip needle.</p> <p>See mechanical adjustment "needle bar height".</p> <p>See mechanical adjustment "needle timing to shuttle".</p> <p>See mechanical adjustment "clearance between needle and hook".</p>	<p>p.15</p> <p>p.16</p> <p>p.12,13</p>
2. Fabric is not moving	<ol style="list-style-type: none"> 1. Incorrect feed dog height. 2. Thread on bottom side of fabric is jammed up. 3. Feed dog teeth are worn. 	<p>See mechanical adjustment "feed dog height".</p> <p>Make sure to bring both needle and bobbin thread under the foot when start sewing.</p> <p>Change the feed dog.</p>	<p>p.14</p>
3. The upper thread breaks	<ol style="list-style-type: none"> 1. Initial sewing speed is too fast. 2. Incorrectly threaded. 3. Needle is bent or blunt. 4. Upper thread tension is too strong. 5. Needle size is inappropriate for the fabric being sewn. 6. Needle eye is worn. 7. Needle hole of needle plate is worn or burred. 	<p>Start with medium speed.</p> <p>Thread correctly.</p> <p>Change the needle.</p> <p>Adjust the upper thread tension.</p> <p>Use appropriate needle and thread for fabric being sewn.</p> <p>Change the needle.</p> <p>Replace the needle plate.</p>	<p>p.7</p>

CONDITION	CAUSE	HOW TO FIX	REFERENCE
4. The bobbin thread breaks	<ol style="list-style-type: none"> 1. The bobbin thread is incorrectly threaded in the bobbin case. 2. Too much thread is around on the bobbin. 3. Lint has collected in the bobbin case. 4. Thread quality is too low. 5. Thread is jamming around the bobbin. 6. Bobbin thread tension is too strong. 	<p>Thread the bobbin correctly.</p> <p>Adjust the position of bobbin winder stopper and rethread the bobbin.</p> <p>Clean the bobbin case.</p> <p>Change to a high quality sewing thread.</p> <p>Clear out the jammed thread.</p> <p>Adjust the bobbin thread tension.</p>	p.8
5. Needle breaks	<ol style="list-style-type: none"> 1. Needle is hitting the needle plate. 2. Needle is bent or blunt. 3. Needle is hitting the hook race. 4. The fabric moves while the needle is piercing it, or the needle zigzags while in fabric. 5. Fabric is being pulled too strongly while sewing. 	<p>See mechanical adjustment "needle drop".</p> <p>Change the needle.</p> <p>See mechanical adjustment "clearance between needle and hook".</p> <p>See mechanical adjustment "needle swing".</p> <p>Guide the fabric gently while sewing.</p>	<p>p.11</p> <p>p.12,13</p> <p>p.10</p>
6. Noisy operation	<ol style="list-style-type: none"> 1. Backlash between the shuttle hook gear and lower shaft gear is too wide. 2. Lower shaft gear is loose. 3. Inappropriate belt tension. 4. Upper shaft gear is loose. 5. Not enough oil. 	<p>See mechanical adjustment "clearance between needle and hook (No.2)".</p> <p>Tighten the lower shaft gear.</p> <p>See mechanical adjustment "motor belt tension".</p> <p>Tighten the upper shaft gear.</p> <p>Oil all moving parts.</p>	<p>p.13</p> <p>p.22</p>

CONDITION	CAUSE	HOW TO FIX	REFERENCE
7. Deformation pattern	1. Inappropriate zigzag synchronization.	See mechanical adjustment "needle swing".	p.10
	2. Inappropriate disengagement of cam follower.	See mechanical adjustment "disengagement of cam follower".	p.21
	3. Upper thread tension is too tight.	Adjust the upper thread tension.	p.7
	4. Inappropriate feed balance.	See mechanical adjustment "distorted pattern".	p.17

SERVICE ACCESS

FACE COVER



TO REMOVE

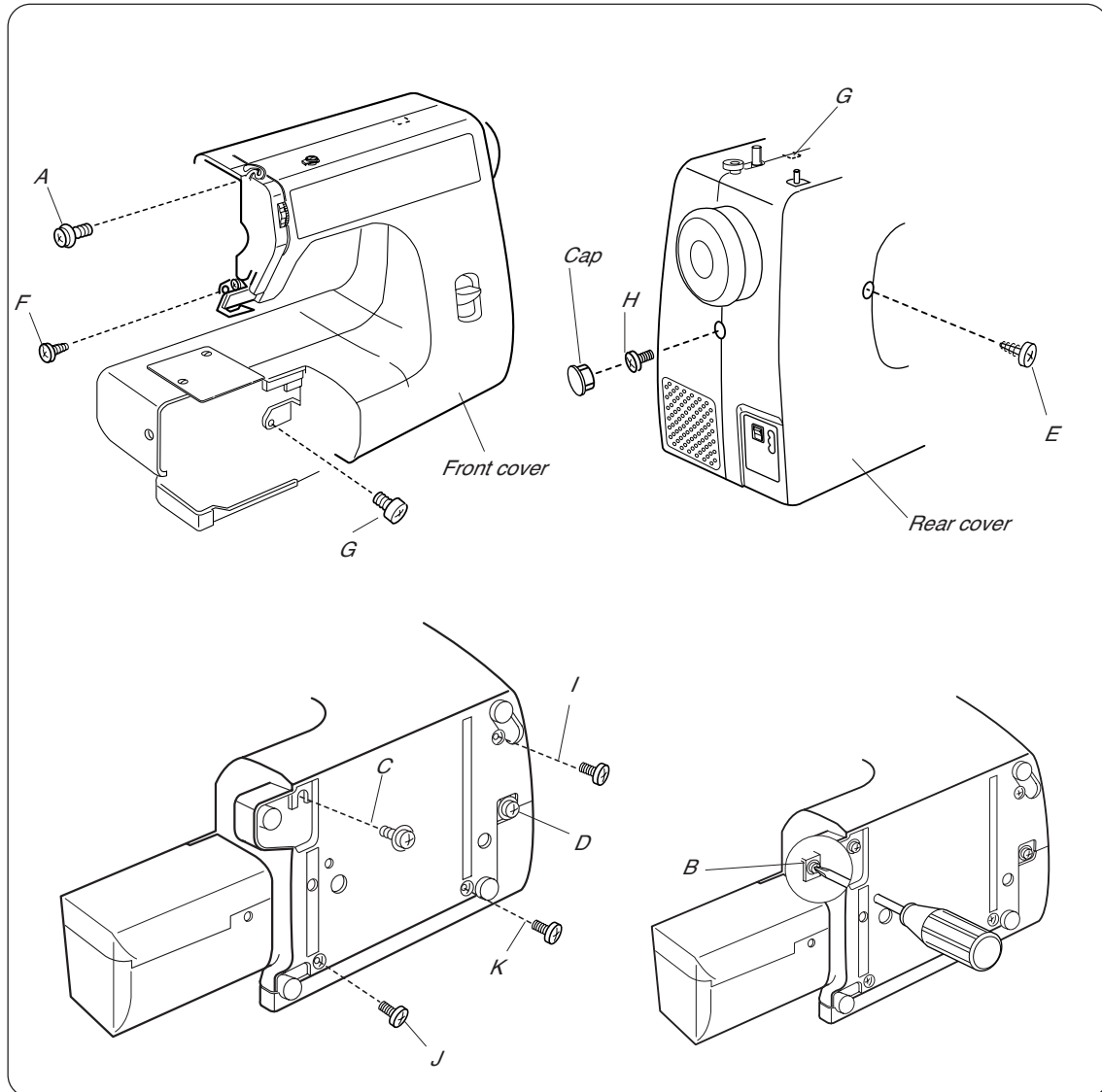
1. Remove the face cover by removing the cap (A) and screw (B).

TO ATTACH

2. Attach the face cover with the screw, and then, replace the cap.

SERVICE ACCESS

FRONT COVER



TO REMOVE

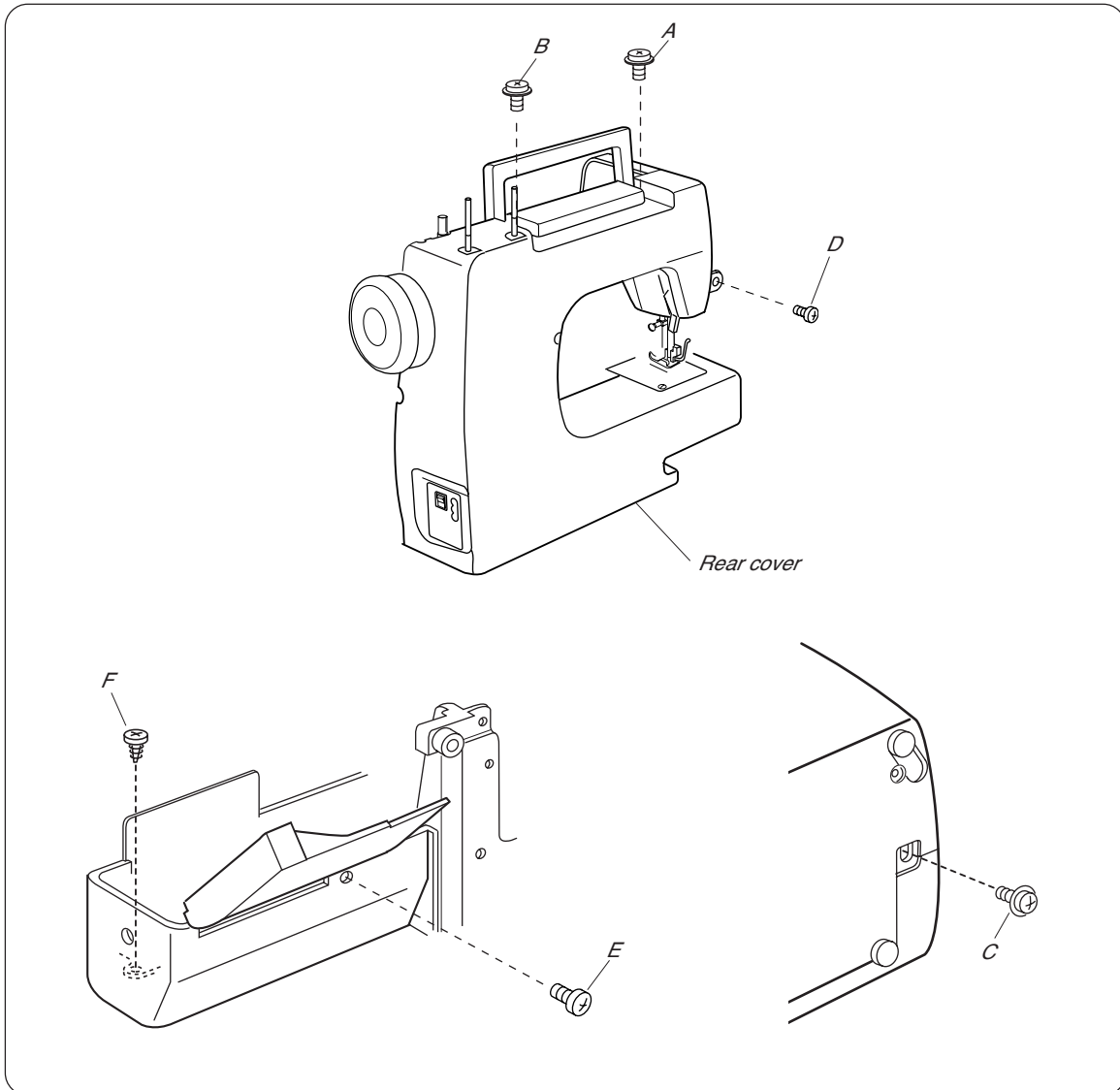
1. Remove the face cover. (See page 4.)
2. Loosen the set screws (A), (B), (C), and (D), and then, remove the front cover by removing the setscrews (E), (F), (G), (H), (I), (J) and (K).
Note: Unhook the tab (K) from the rear cover when removing the front cover.

TO ATTACH

3. Follow the above procedure in reverse.

SERVICE ACCESS

REAR COVER



TO REMOVE

1. Remove the face cover and front cover. (See page 4, 5.)
2. Loosen setscrews (A), (B), and (C), and remove setscrews (D), (E), and (F).
3. Pull up the spool pins. Remove the machine socket. Remove the rear cover clearing the presser foot lifter from the slit on the cover.

TO ATTACH

4. Follow the above procedure in reverse.

MECHANICAL ADJUSTMENT

TOP TENSION

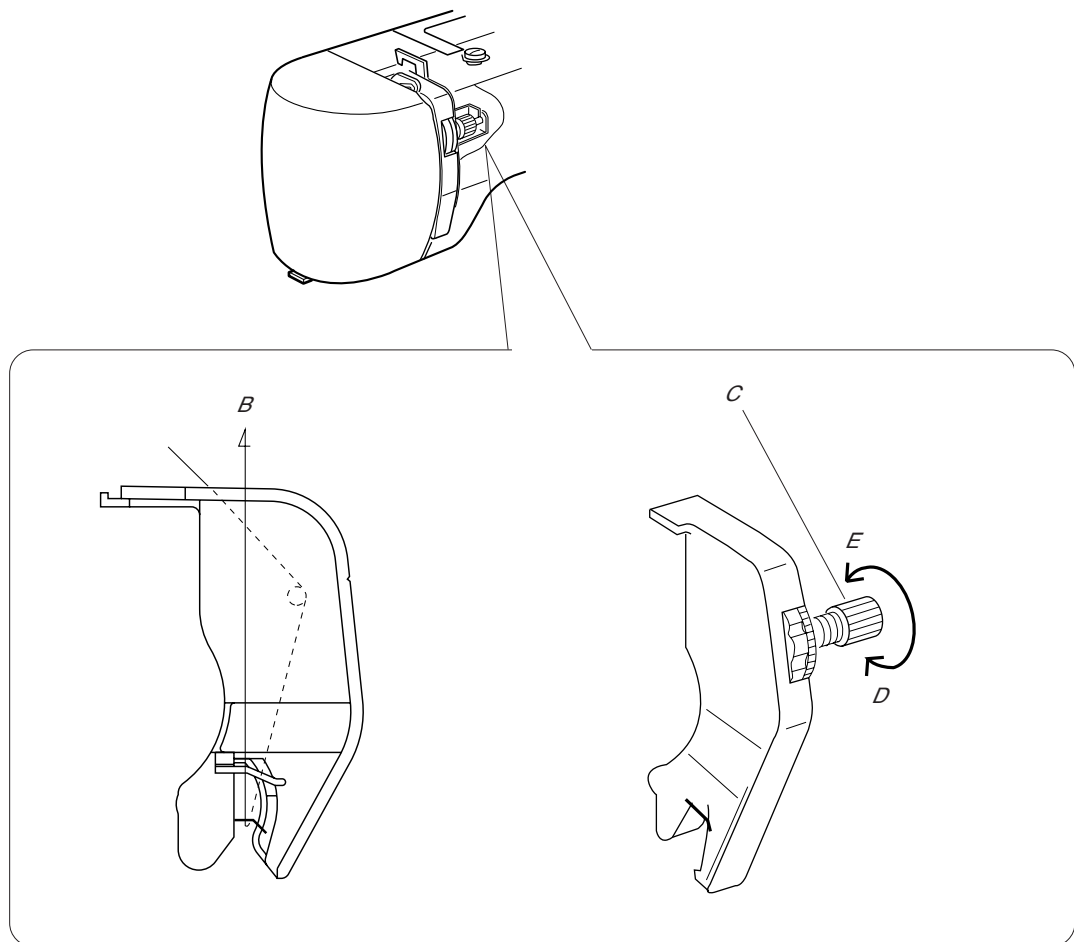
TO CHECK:

The standard upper thread tension should be 65-95g when pulling the thread (cotton thread #50) in the direction of (B) with setting the tension dial at "3". (Make sure the foot should be lowered.)

If the tension is out of the standard range, adjust it as follows:

ADJUSTMENT PROCEDURE:

1. Remove the front cover unit. (See page 5.)
2. Turn the adjusting nut (C) in the direction of (D) when the upper thread tension is too tight.
Turn the adjusting nut (C) in the direction of (E) when the upper thread tension is too loose.
3. Attach the front cover unit.



MECHANICAL ADJUSTMENT

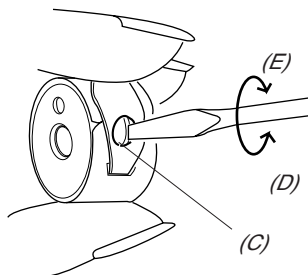
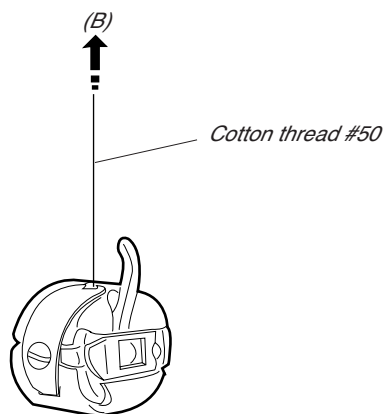
BOBBIN TENSION

TO CHECK:

Set the bobbin in the bobbin case and pass the thread (cotton #50) through the tension spring. The bobbin thread tension should be 45-55g when pulling the thread in the direction of (B). If the tension is out of the range, adjust it as follows:

ADJUSTMENT PROCEDURE:

1. Turn the adjusting screw (C) in the direction of (D) when the bobbin thread tension is too tight.
2. Turn the adjusting screw (C) in the direction of (E) when the bobbin thread tension is too loose.



MECHANICAL ADJUSTMENT

PRESSER BAR HEIGHT AND ALIGNMENT

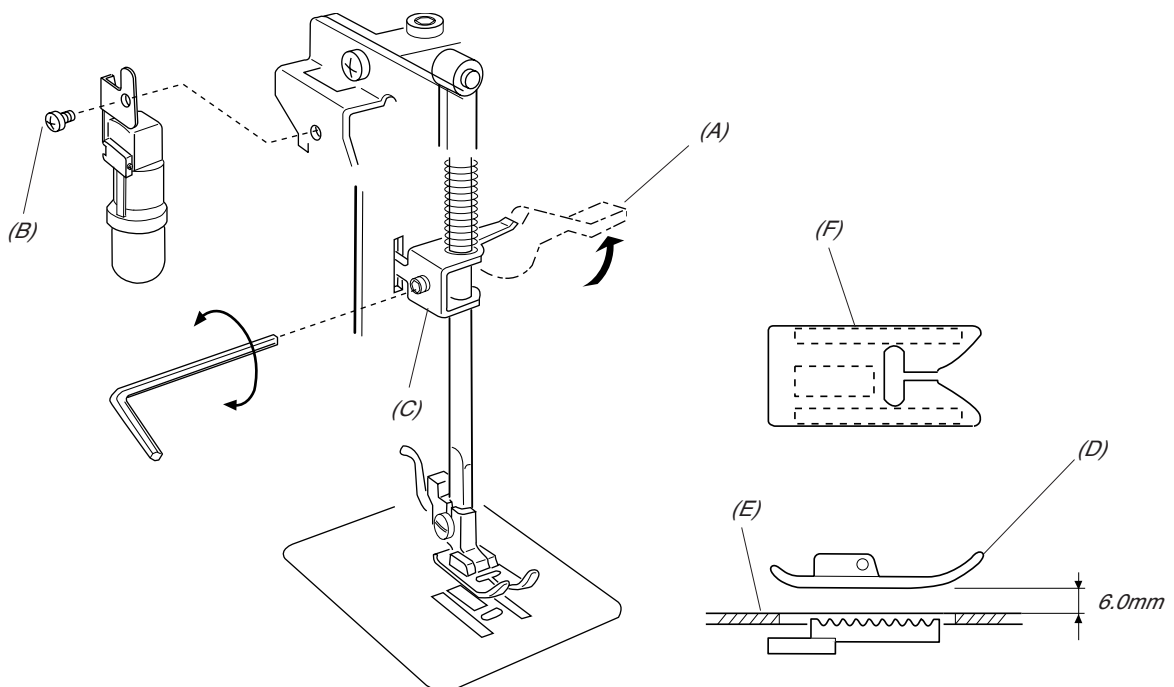
TO CHECK:

1. Raise the presser foot lever (A).
2. The distance between the presser foot (D) and the needle plate (E) should be 6.0mm (0.24").

ADJUSTMENT PROCEDURE:

1. Remove the face cover. (See page 4.)
2. Remove the setscrew (B) and take the lamp socket off.
3. Raise the presser foot lever (A) and loosen the setscrew (C) on the presser bar holder.
Adjust the distance between the presser foot (D) and the needle plate (E) to 6.0mm (0.24").
4. Tighten the setscrew (C) securely.
5. Tighten the setscrew (B) to secure the lamp socket.
6. Attach the face cover.

Note: When you tighten the setscrew (C), make sure that both sides of the presser foot are parallel to the feed dog slots (F) on the needle plate.



MECHANICAL ADJUSTMENT

NEEDLE SWING

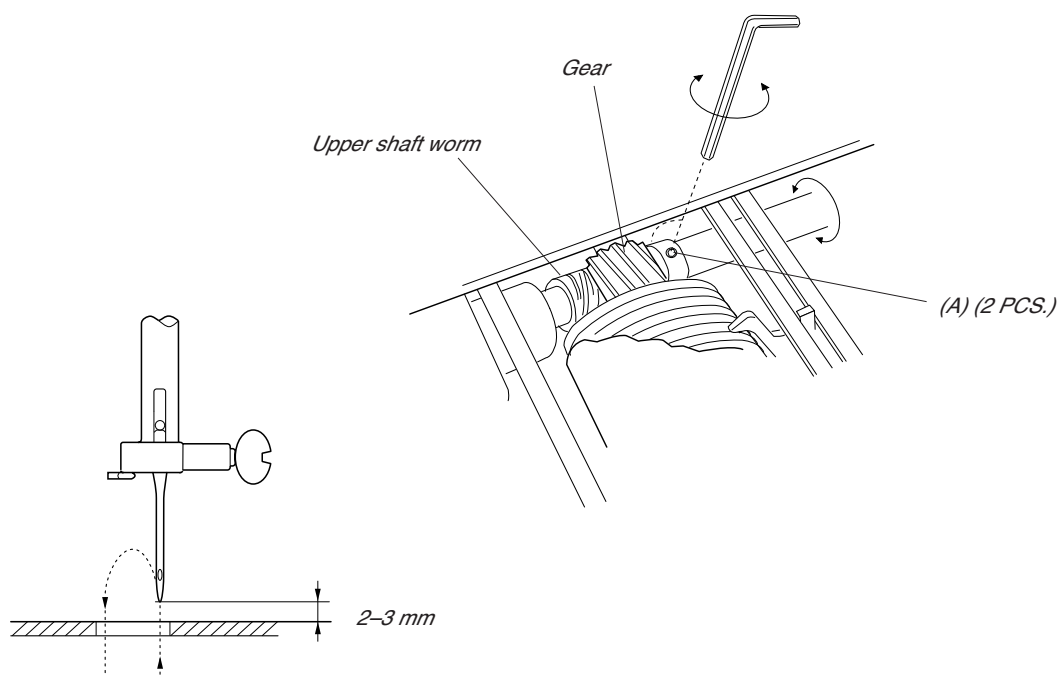
TO CHECK:

Adjust the needle swing according to the following procedure, if the needle bar starts moving sideways while the needle is in the fabric at sewing the zigzag pattern (with maximum zigzag width).

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial with maximum zigzag width, and remove the front cover. (See page 5.)
2. Loosen two setscrews (A).
3. Adjust the needle swing by turning the handwheel, while holding the worm so as not to rotate it, until the needle swing starts at 2-3mm on the needle plate after the needle has come out of the right side of the needle hole.
4. Tighten two setscrews (A).
5. Attach the front cover.

Note: After adjusting the needle swing, check that the upper shaft worm and gear rotate smoothly without any backlash between them.



MECHANICAL ADJUSTMENT

NEEDLE DROP

TO CHECK:

When the needle swings in maximum zigzag width, the distance between the both ends of needle hole on the needle plate and the needle drop positions should be equal.

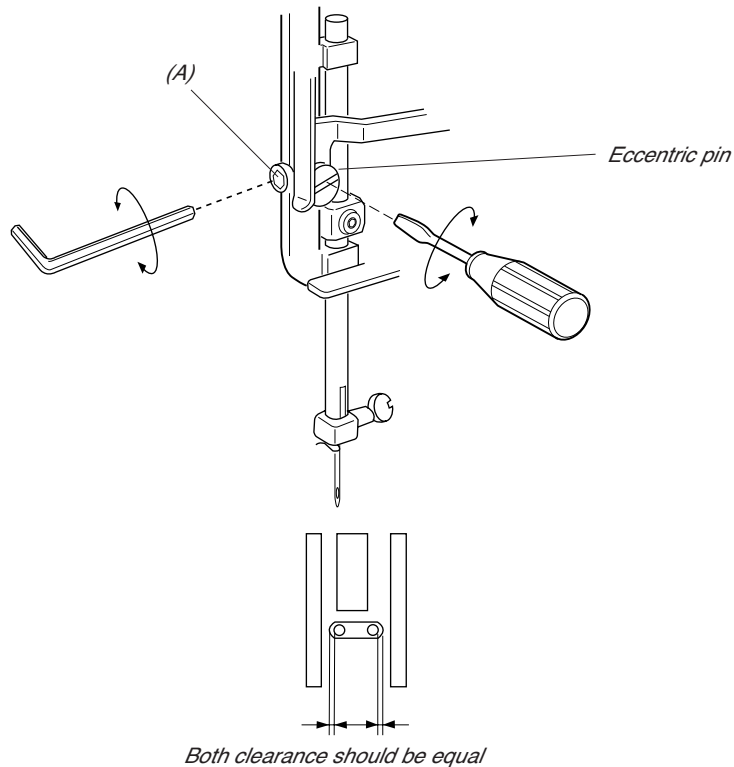
If not, make an adjustment as follows:

ADJUSTMENT PROCEDURE:

1. Remove the face cover. (See page 4.)
2. Set the pattern selector dial at maximum zigzag width.
3. Loosen the setscrew (A).
4. Turn the eccentric pin to adjust the needle drop.
5. Tighten the setscrew (A).

Note: Check the hook timing after this adjustment.

6. Attach the face cover.



MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND HOOK (NO.1)

TO CHECK:

The clearance between needle and shuttle race should be -0.05 to $+0.10$ mm.

If not, make an adjustment as follows:

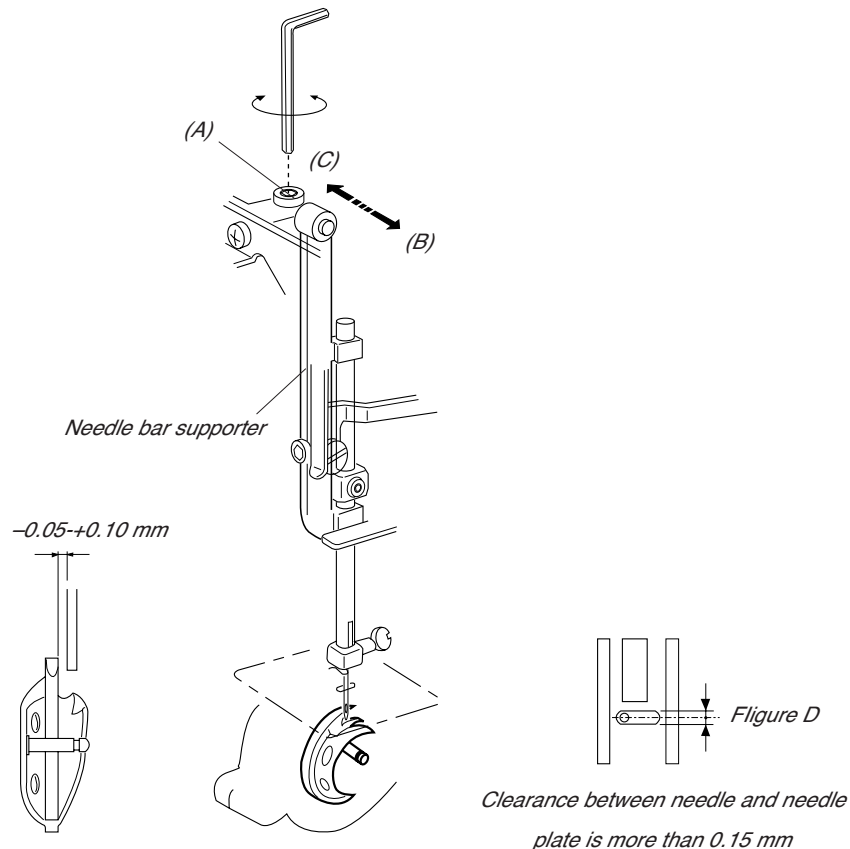
ADJUSTMENT PROCEDURE:

1. Remove the face cover. (See page 4.)
2. Set the pattern selector dial " $\text{C} \rightarrow \text{D}$ ".
3. Loosen setscrew (A), and move the needle bar supporter in either direction of arrows (B or C) to adjust the clearance between -0.05 to $+0.10$ mm.
- * When clearance is too wide, move the needle bar supporter to the direction (B).
- * When clearance is too narrow, move the needle bar supporter to the direction (C).

Note: After this adjustment, check if the clearance between needle and needle plate is 0.15 mm or more as shown in figure (D).

If not, adjust the clearance between needle and shuttle race by using the method of adjustment No.2 on page 13 after readjust the clearance between needle and needle plate.

4. Attach the face cover.



MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND HOOK (NO.2)

TO CHECK:

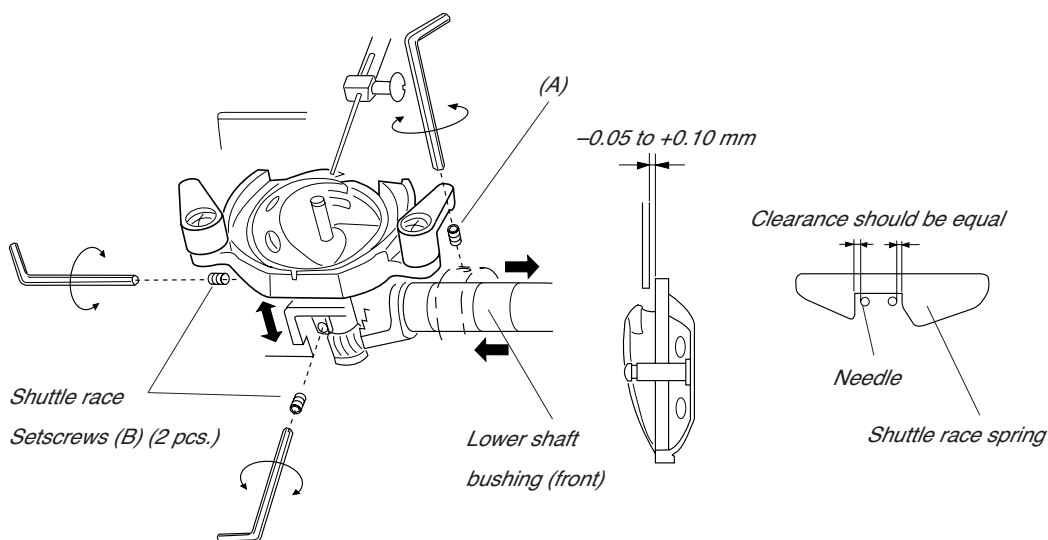
Use this adjustment method No.2 if the clearance cannot be adjusted by method No.1.
The clearance between needle and shuttle race should be -0.05 to $+0.10$ mm.

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial at " $\text{C} \rightarrow \text{D}$ ".
2. Remove the rear cover. (See page 6.)
3. Loosen the setscrew (A) on lower shaft bushing and slide the gear about 0.5mm to the right to make a slack between gears.
4. Lower the needle and loosen the two shuttle race screws (B).
Move the shuttle race unit axially either forward or backward to adjust the clearance between the needle and the shuttle race in the range of -0.05 to $+0.10$ mm.
5. Set the pattern select dial at " M ". Turn the handwheel to check if the clearance between the needle and inner edges of the shuttle race spring at the left and right needle drops are equal.
If not, make an adjustment by turning the shuttle race unit.
6. Tighten the two shuttle race screws (B).
7. Loosen the setscrew on lower shaft bushing and slide the gear back to its original position while adjusting the backlash.
8. Tighten the setscrew (A) firmly.
9. Attach the rear cover.

Note: The rotary play of the hook driver should be 0.3mm or less and the lower shaft turns smoothly.

After the adjustment, check the hook timing



MECHANICAL ADJUSTMENT

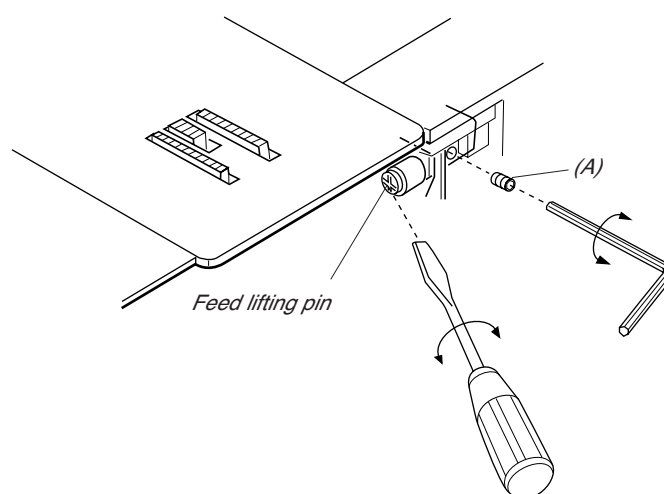
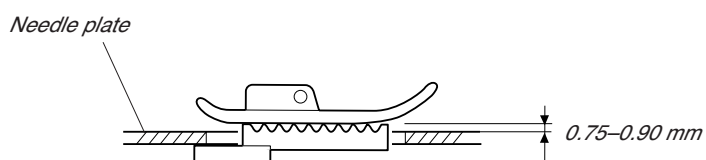
FEED DOG HEIGHT

TO CHECK:

1. Lower the presser foot.
 2. Turn the handwheel toward you until the feed dog comes to its highest position. The feed dog height should be 0.75-0.90mm.
- If it is not in the range, adjust as follows.

ADJUSTMENT PROCEDURE:

1. Open the shuttle cover.
2. Lower the presser foot and turn the handwheel toward you until the feed dog comes to its highest position.
3. Loosen the setscrew (A) .
4. Turn the feed lifting pin to adjust the feed dog height (0.75-0.90mm).
5. Tighten the setscrew (A).
6. Turn the handwheel toward you to recheck the height of feed dog.




MECHANICAL ADJUSTMENT

NEEDLE BAR HEIGHT

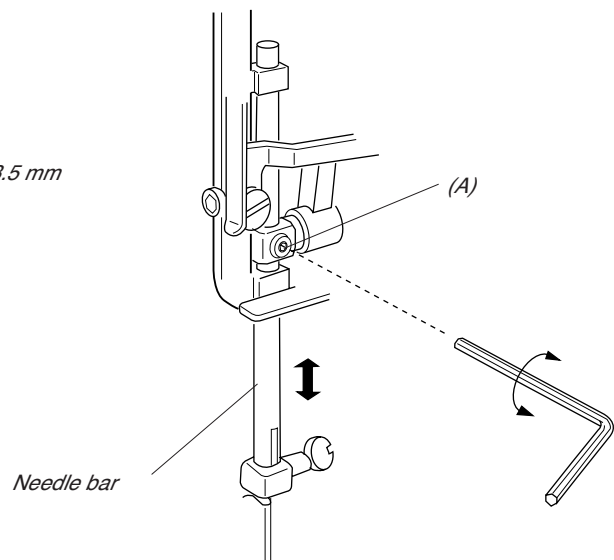
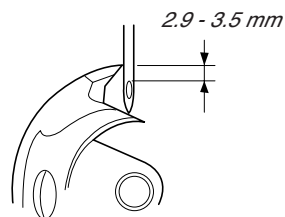
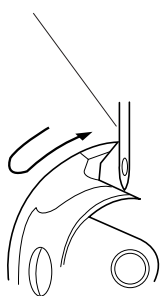
TO CHECK:

When the tip of shuttle hook meets the left side of the needle in ascending travel of the needle from its left and lowest position, the distance between the top of the needle eye and the tip of the shuttle hook should be in the range of 2.9-3.5 mm.

ADJUSTMENT PROCEDURE:

1. Remove the face cover. (See page 4.)
2. Set the pattern selector dial at "C"  "D".
3. Open the shuttle cover.
4. Remove the shuttle race ring.
5. Turn the handwheel toward you until the tip of the shuttle hook meets the left side of the needle.
6. Loosen the lower shaft crank arm setscrews (A).
7. Adjust the height of the needle bar by moving the needle bar upward or downward without turning it.
8. Tighten the setscrew (A).
9. Attach the shuttle race ring.

*Tip of shuttle hook meets
left side of needle*



MECHANICAL ADJUSTMENT

NEEDLE TIMING TO SHUTTLE

TO CHECK:

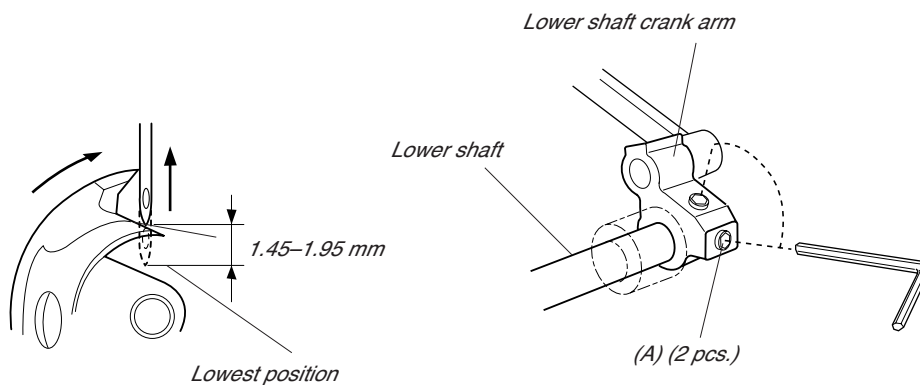
The height of the needle point from its lowest point of travel should be in the range of 1.45-1.95 mm when the tip of the shuttle hook just meets the left side of the needle at the left needle position.

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial at " C: D "
2. Remove the front cover. (See page 5.)
3. Open the shuttle cover.
4. Remove the shuttle race ring.
5. Turn the handwheel toward you until the tip of the shuttle hook meets the left side of the needle.
6. Loosen the lower shaft crank arm setscrews (A).
7. While holding the shuttle hook so it doesn't turn, turn the handwheel toward you until the needle comes to its lowest position.

Turn the handwheel further to raise the needle about 1.7mm from its lowest position.

8. Tighten the setscrews (A).
9. Turn the handwheel toward you to check if the height is in the range of 1.45 - 1.95 mm.
If it is not in this range, repeat the above procedure.
10. Attach the shuttle race ring.
11. Attach the front cover.




MECHANICAL ADJUSTMENT

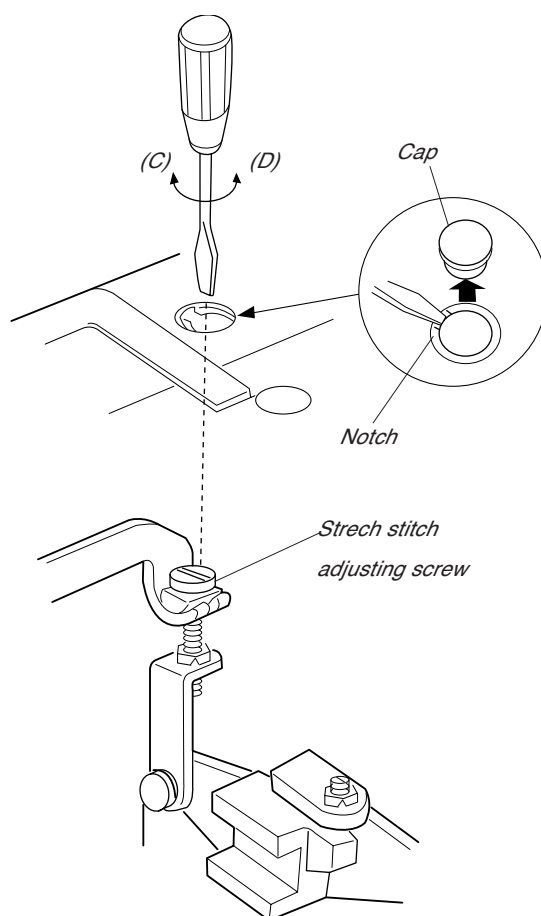
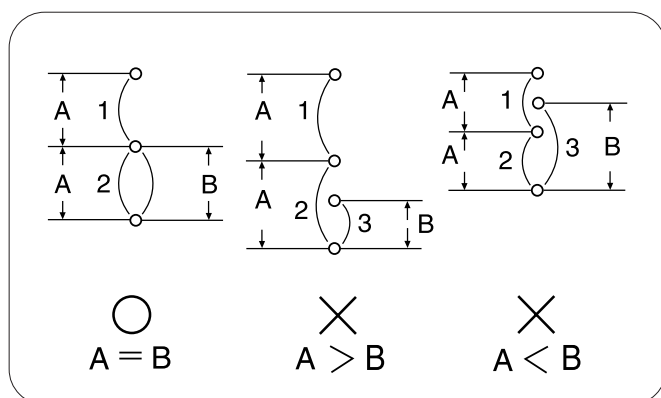
DISTORTED PATTERN

TO CHECK:

If the stretch stitch patterns are distorted with setting the stitch length control at “ ▼ ”.
(In case of being a difference between forward feeding and backward feeding during stretch stitch patterns), make an adjustment as follows:

ADJUSTMENT PROCEDURE:

1. Remove the cap.
2. Set the pattern selector control at “  ”, and the stitch length control at “ ▼ ”.
3. Turn the stretch stitch adjusting screw in the direction of (C) when $A > B$, or in the direction of (D) when $A < B$.
4. Mount the cap.



MECHANICAL ADJUSTMENT

BUTTONHOLE FEED BALANCE

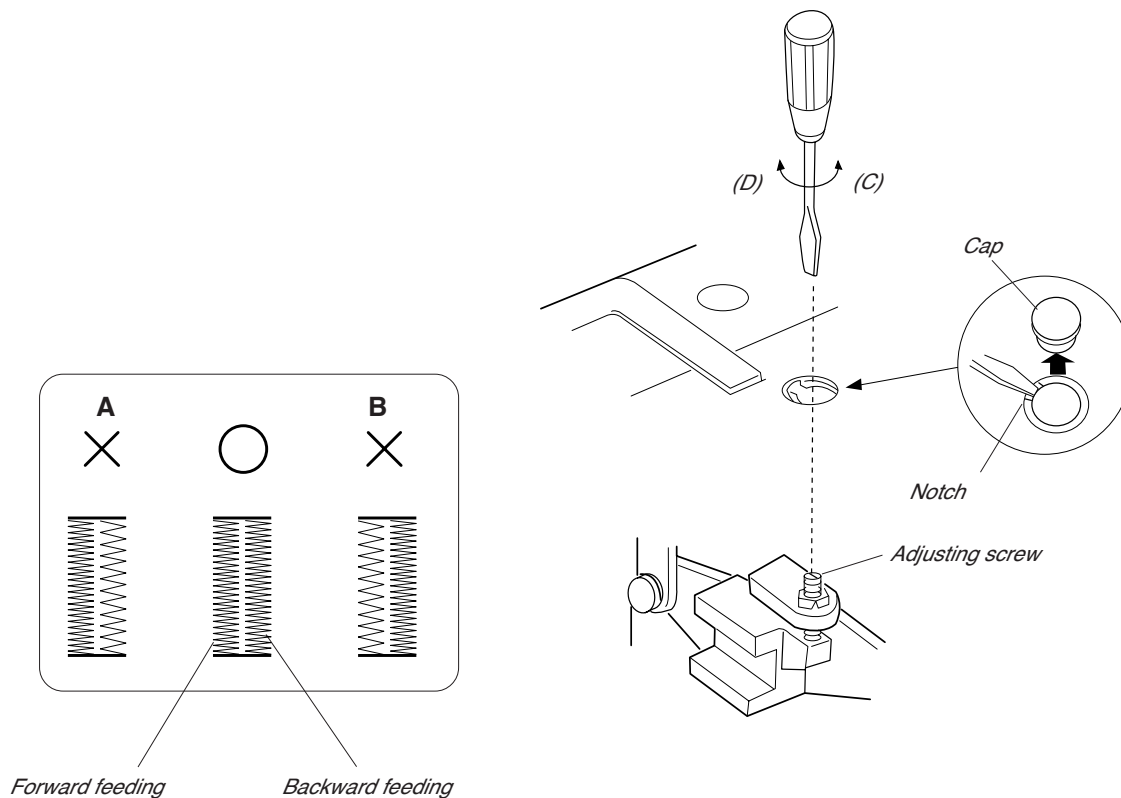
TO CHECK:

When sewing buttonhole, the stitches on each side of buttonhole should be the same stitch density.

The range of 9-12 stitches in the right side row "backward feeding" against 10 stitches in the left side row "forward feeding" is considered acceptable.

ADJUSTMENT PROCEDURE:

1. Confirm the stitches by sewing buttonholes, and remove the cap.
2. Turn the adjusting screw in the direction of (C) in case of (A) (right stitches are rough), or in the direction of (D) in case of (B) (left stitches are rough).
3. Attach the cap.




MECHANICAL ADJUSTMENT

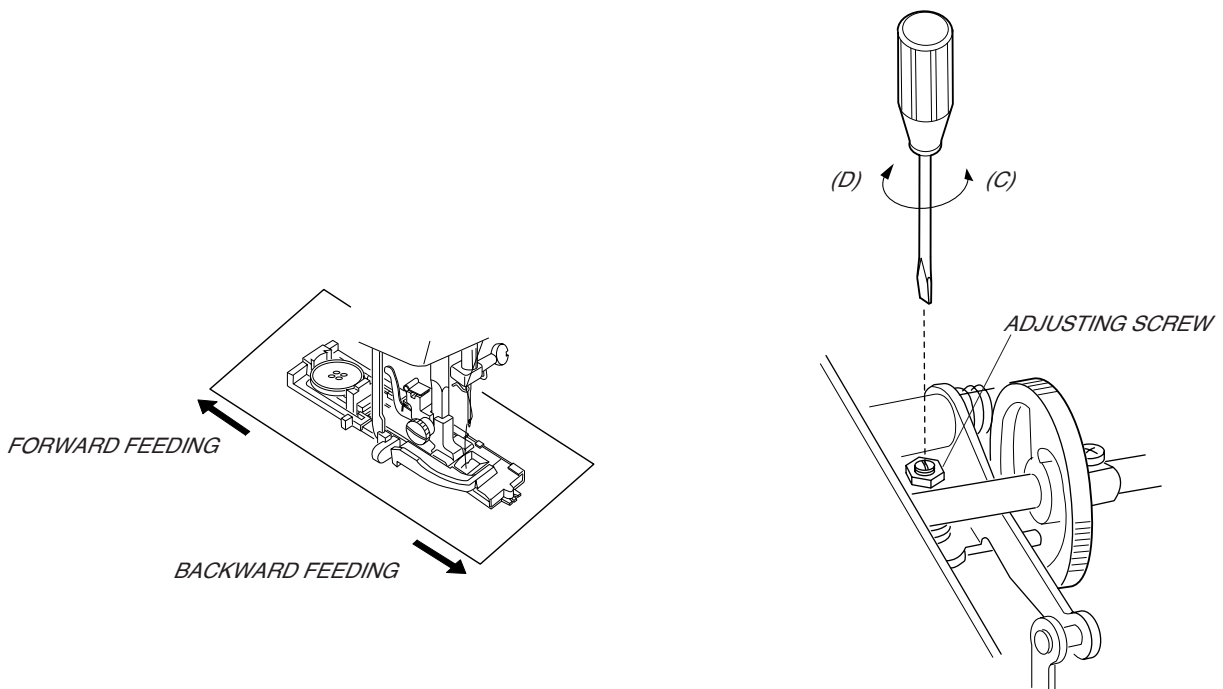
BARTACK FEED OF BUTTONHOLE

TO CHECK:

If the material is feed forward or backward when sewing bartack on buttonhole, make an adjustment as follows:

ADJUSTMENT PROCEDURE:

1. Set the pattern selector control at “” and the stitch length control at “4”.
2. Remove the front cover. (See page 5.)
3. Place a piece of paper under the foot and turn the handwheel.
 - If the paper is feed forward, turn the adjusting screw in the direction of (C).
 - If the paper is feed backward, turn the adjusting screw in the direction of (D).
4. Mount the front cover.



MECHANICAL ADJUSTMENT

BUTTONHOLE FUNCTION

TO CHECK:

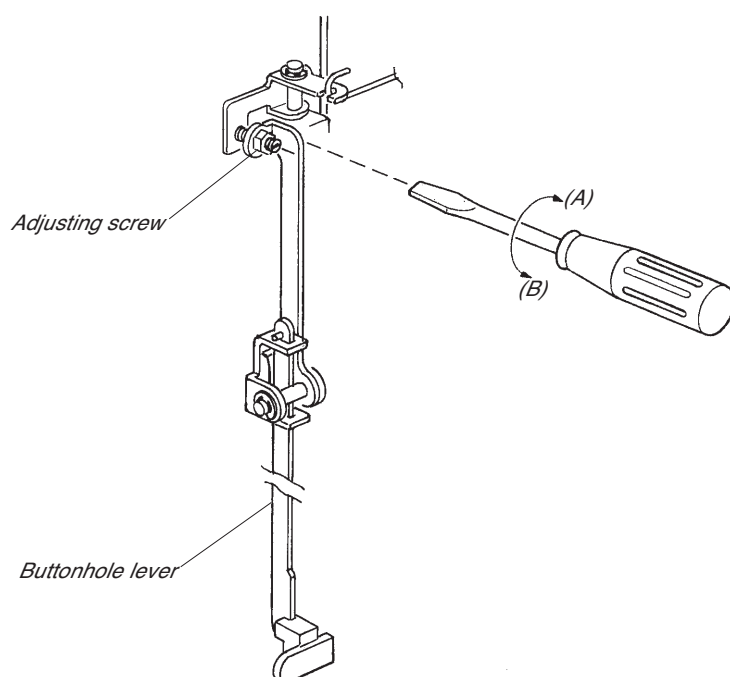
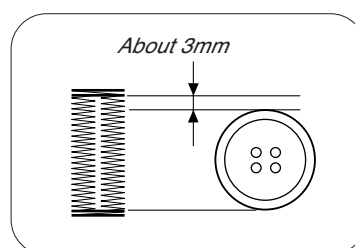
Buttonholes should be about 3mm longer than the length set by the buttonhole foot.

If this length cannot be obtained, then check and adjust as follows:

ADJUSTMENT PROCEDURE:

1. Remove the face cover. (See page 4.)
2. Turn the adjusting screw in the direction of (A) if the buttonhole stitch length is longer than the standard, or in the direction of (B) if the buttonhole stitch length is shorter than the standard.
3. Attach the face cover.

Standard



MECHANICAL ADJUSTMENT

DISENGAGEMENT OF CAM FOLLOWER

TO CHECK:

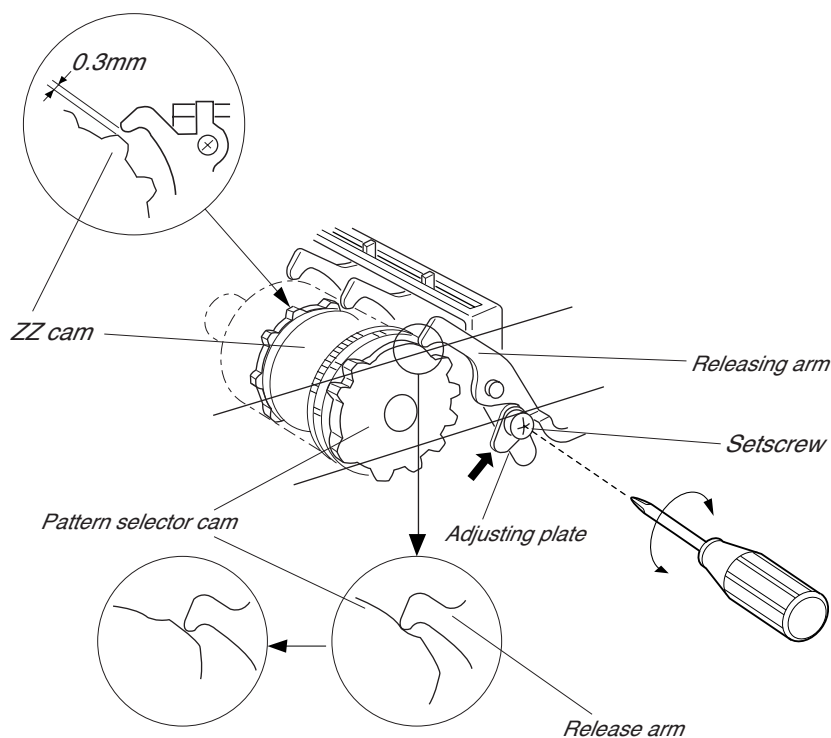
Too narrow clearance between the cam follower and the top convex of zigzag cam may often cause difficulty in turning of the pattern selector dial, or can not correct pattern.

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial " C | D ".
2. Remove the front cover. (See page 5.)
3. Put the cam follower to the zigzag cam (straight cam), and also put the cam follower releasing arm to the pattern select cam.
4. Loosen the setscrew.
5. Move adjusting plate in the direction of arrow until to touch to the releasing arm tighten setscrew.

Note: After this adjustment, check that the clearance between the zigzag cam and the cam follower is 0.3 mm when putting the cam follower releasing arm onto position (A) of pattern select cam.

6. Attach the front cover.



MECHANICAL ADJUSTMENT

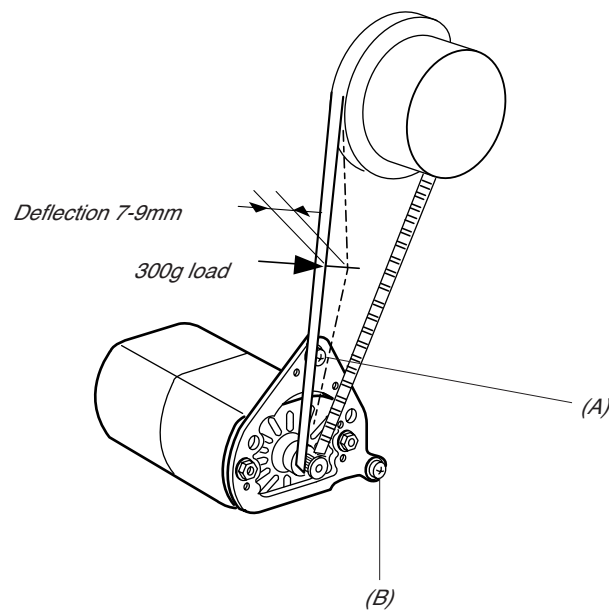
MOTOR BELT TENSION

TO CHECK:

1. If the motor belt tension is too tight or too loose, it can cause a belt noise: If the tension is too tight, it can cause the machine to run slowly and the motor to overload; if the tension is too loose; it can cause the belt to jump.
2. The correct motor belt tension is when the deflection of motor belt is about 7mm (0.28") - 9mm (0.36"). (when pushing the motor belt by finger with a 300 gram load.)

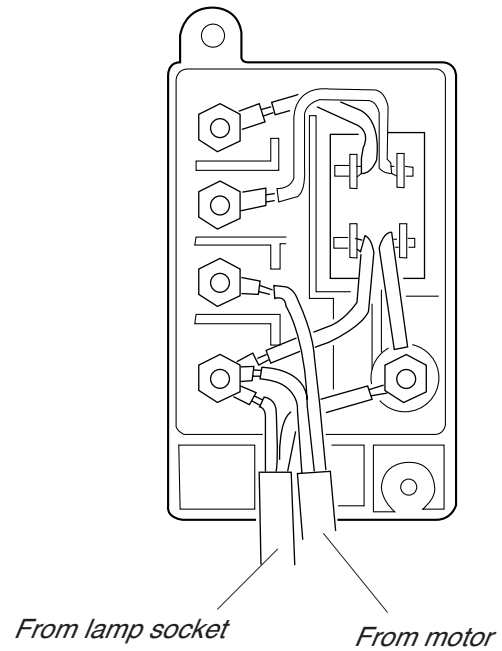
ADJUSTMENT PROCEDURE:

1. Remove the rear cover. (See page 6)
2. Loosen the setscrews (A) and (B).
3. Move the motor up or down to adjust the deflection about 7mm (0.28") - 9mm (0.36").
4. Tighten the setscrews (A) and (B).



WIRING

1. WIRING FOR MACHINE SOCKET UNIT



OILING

Factory lubricated parts will provide years of household sewing without routine oiling. However, whenever the machine is being serviced, check to see if any parts need to be lubricated.

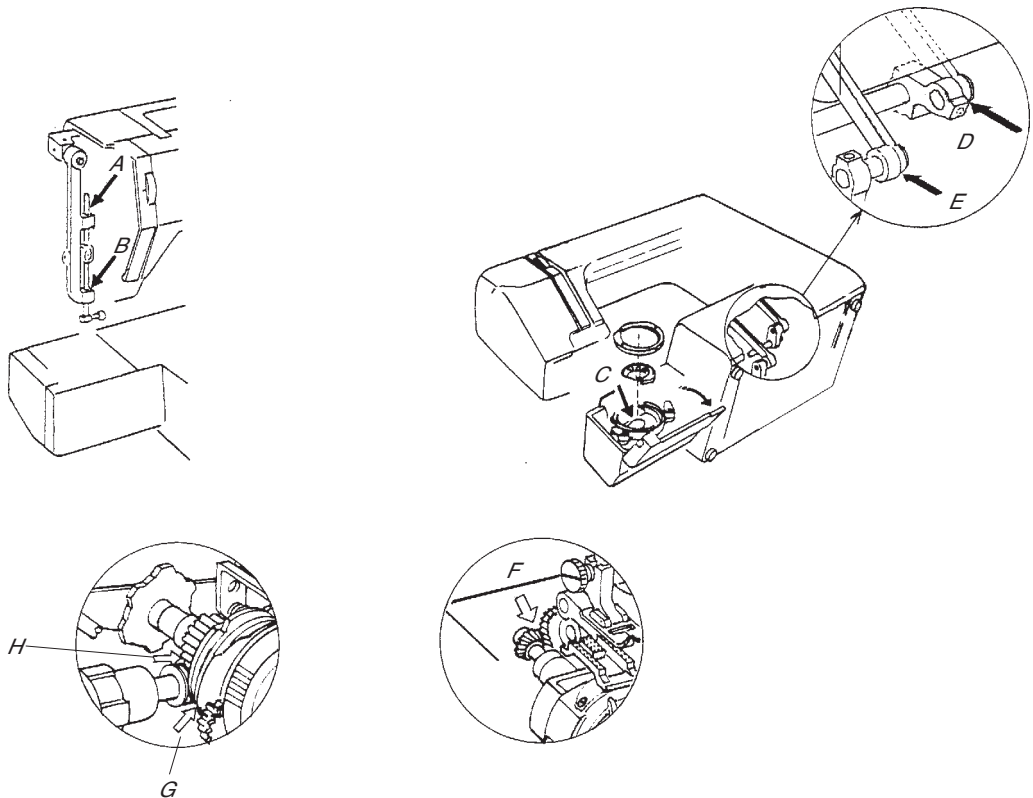
OIL

Use good quality sewing machine oil at the points (A, B, C, D, E) indicated by black arrows.

GREASE

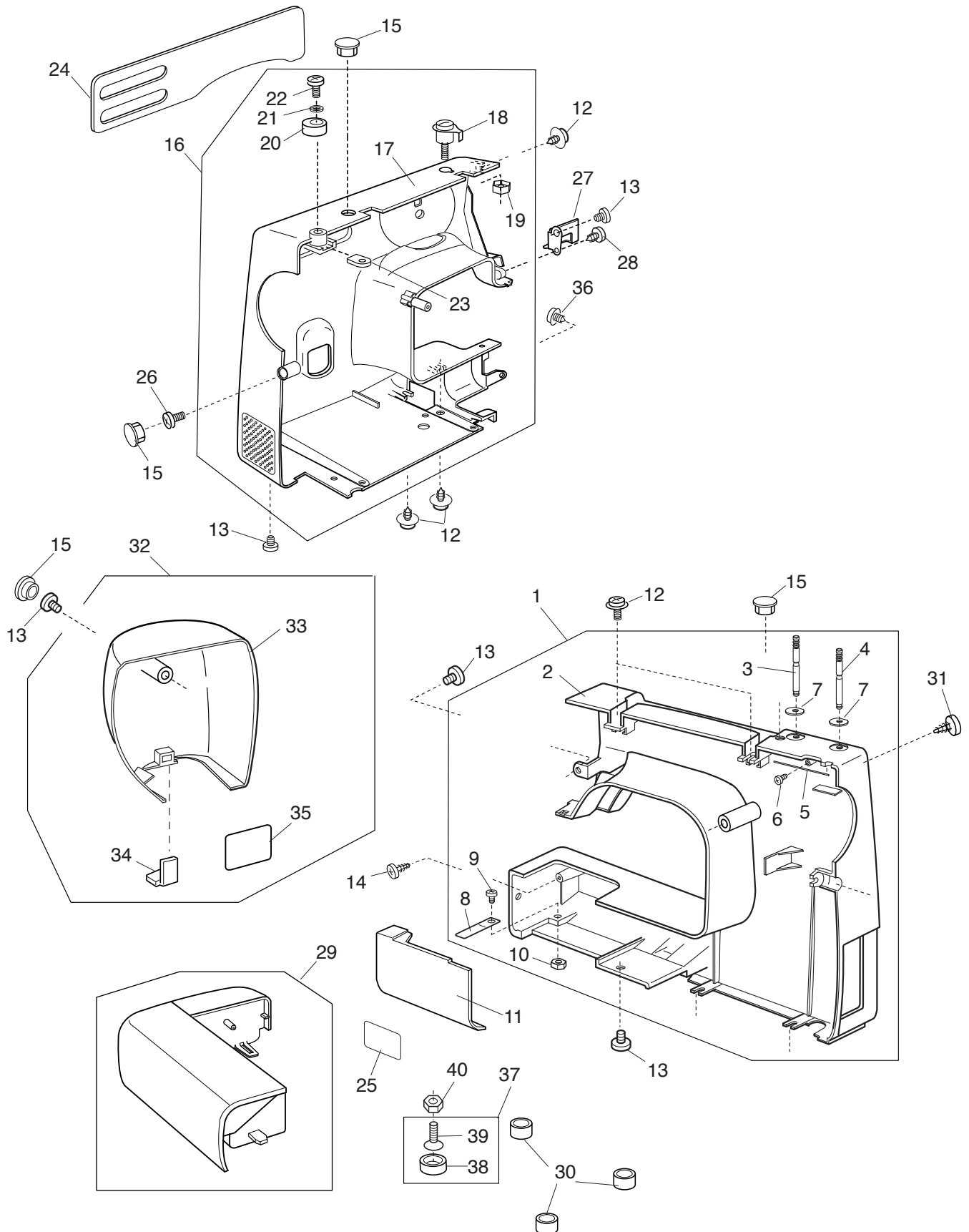
White grease is recommended for use on gears and cam surfaces.

It is an improved grease, and it can be used on the metal and plastic parts which points are indicated by the white arrows (F, G, & H).



PARTS LIST

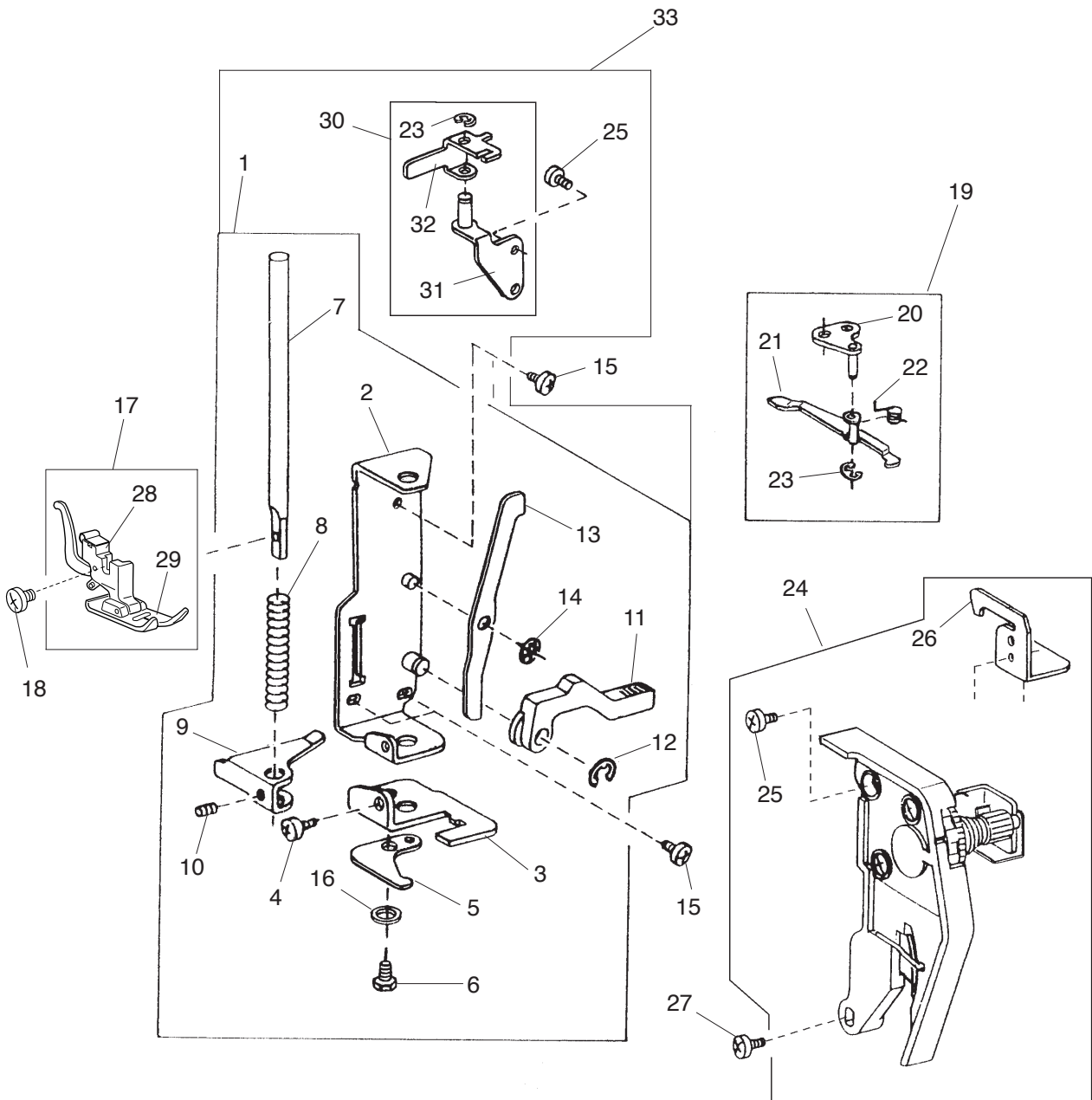
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	304601307	Rear cover (unit)
2	304001105	Rear cover
3	652302004	Spool pin
4	652205006	Spool pin
5	736007009	Spool pin spring
6	000076317	Tapping screw 3x10
7	735013005	Spool pin spring base
8	730006000	Spring
9	000101404	Setscrew 4x6
10	000061205	Nut
11	739004005	Bed cover plate
12	000115205	TP screw 4x6
13	000081005	Setscrew 4x8
14	000121905	Tapping screw 4x12 (B)
15	653006101	Cap
16	304605079	Front cover (unit)
17	304029361	Front cover
18	730501011	Thread guide plate (unit)
19	000160102	Adjustable lock nut 4
20	735016307	Bobbin winder stopper
21	000071013	Washer
22	000101828	Setscrew 4x16
23	843014004	Nut
24	304030804	Panel
25	639161008	Sticker
26	000101703	Setscrew 4x12
27	745031000	Thread guide plate
28	000107307	Tapping screw 3x8 (B)
29	304501007	Extension table (unit)
30	739064003	Bed rubber base
31	000198604	Tapping screw 4x14 (B)
32	304613003	Face cover (unit)
33	304051007	Face cover
34	840602006	Thread cutter (unit)
35	724025006	Reflex sticker
36	000115607	TP screw 4x8
37	735616200	Rubber base (unit)
38	735002001	Rubber base
39	000097901	Flat screw M5x18
40	000061319	Nut

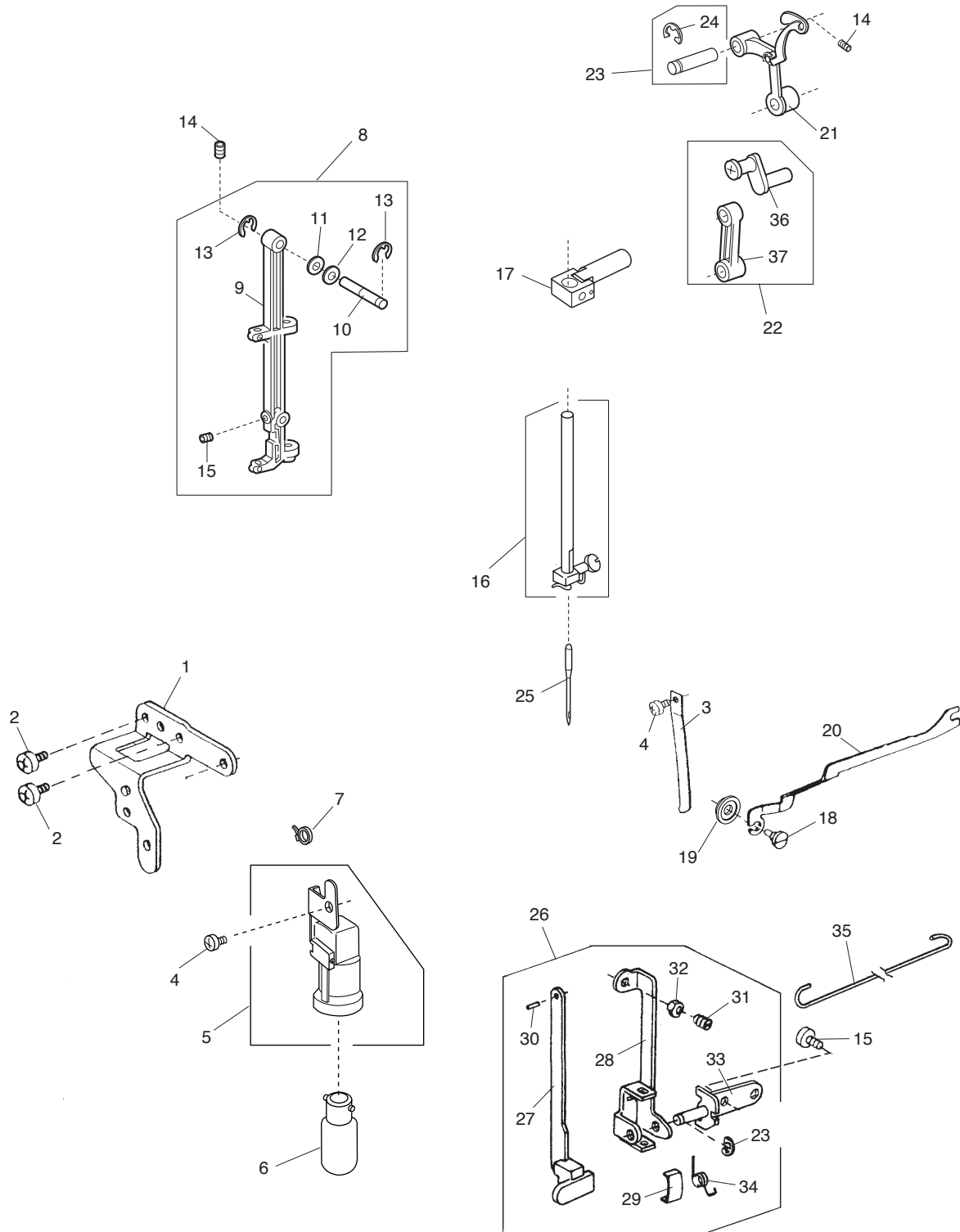
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	305604004	Presser bar base plate (unit)
2	735221008	Presser bar base plate
3	735222009	Needle drop adjusting plate
4	000101404	Setscrew 4x6
5	735025000	Needle bar supporter stopper
6	000138307	Bolt 4x8
7	735026001	Presser bar
8	735027002	Presser bar spring
9	735028003	Presser bar bracket
10	000111500	Hexagonal socket screw 4x8
11	735029004	Presser foot lifter
12	000001609	Snap ring E-5
13	735030008	Tension release lever
14	000013903	Snap ring CS-5
15	000081005	Setscrew 4x8
16	000070506	Washer
17	301612003	Presser foot (unit)
18	660106001	Setscrew
19	304610000	Tension release arm (unit)
20	739017001	Tension release arm base
21	304045008	Tension release arm
22	739019003	Tension release spring
23	000002105	Snap ring E-3
24	304603000	Tension assembly
25	000103808	Setscrew 3x5
26	304008009	Top cover thread guide
27	000101703	Setscrew 4x12
28	611510000	Foot holder (unit)
29	301505002	Zigzag foot (unit)
30	740613007	BH lever base (unit)
31	740050000	BH lever base
32	740051001	BH adjusting lever
33	740620018	Presser bar base plate (unit)

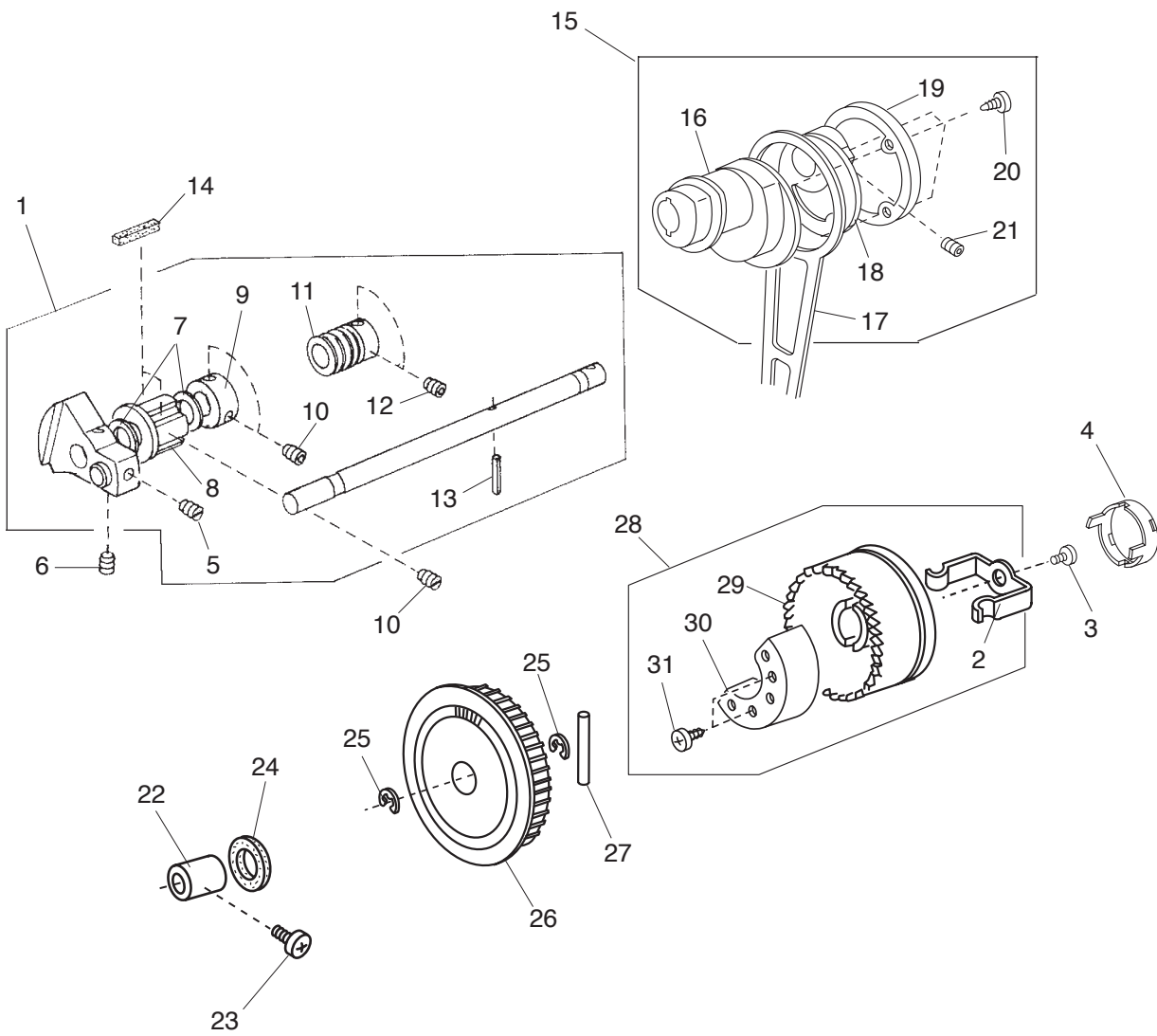
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	740007013	Face cover set plate
2	000081005	Setscrew 4x8
3	730024004	Needle bar supporter spring
4	000101404	Setscrew 4x6
5	743634003	Lamp socket (unit)
6	000009009	Lamp 240v 15w
7	000053709	Cord tie band
8	301610001	Needle bar supporter (unit)
9	301032003	Needle bar supporter
10	730022002	Needle bar supporter pin
11	673022002	Wave washer
12	000070609	Plain washer
13	000002507	Snap ring E-4
14	000111304	Hexagonal socket screw 5x5
15	000111902	Hexagonal socket screw 3x4
16	730503116	Needle bar (unit)
17	301504104	Needle bar connecting stud (unit)
18	678084007	Eccentric pin
19	748021006	Zigzag rod plain washer
20	735119002	Zigzag rod
21	625506109	Thread take-up lever (unit)
22	743664105	Needle bar crank (unit)
23	731511006	Thread take-up lever pin (unit)
24	000002806	Snap ring E-6
25	102408089	#14 Needle
26	740617001	BH lever (unit)
27	753629109	BH lever (unit)
28	740047004	BH lever supporter
29	753027008	Friction spring
30	000023009	Spring pin
31	000113306	Socket screw 4x10
32	000160102	Adjustable lock nut 4
33	740048005	BH lever base plate
34	740049006	BH lever spring
35	740052002	BH shifting rod
36	735504008	Needle bar crank pin (unit)
37	680032007	Needle bar crank rod

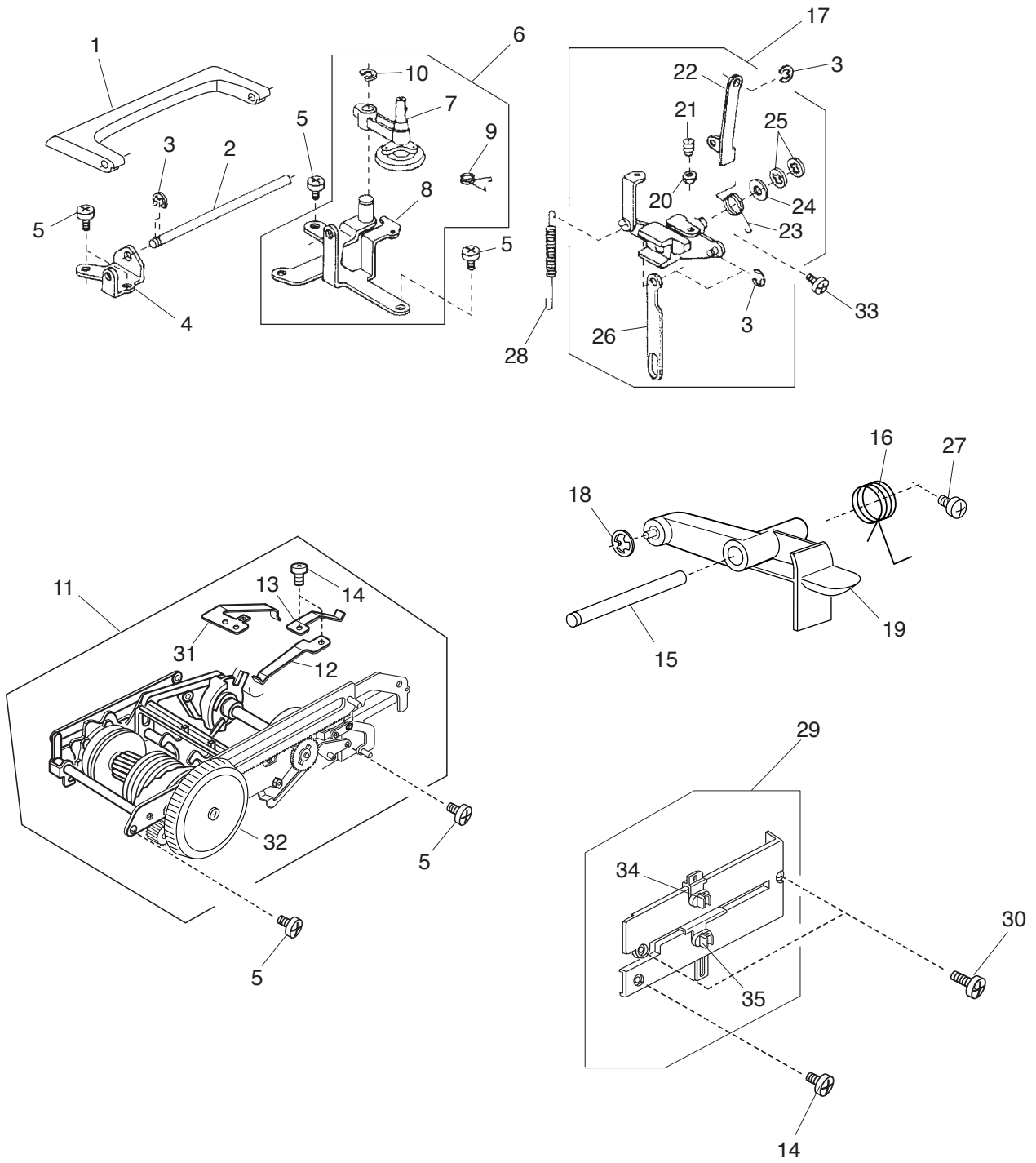
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	304607004	Upper shaft (unit)
2	639113016	Clutch spring
3	000810005	Setscrew 4x8
4	650070037	Clutch cap
5	102073003	Setscrew
6	761052007	Setscrew
7	000036717	Thrust washer
8	732025001	Upper shaft front bushing
9	639095000	Ring
10	000111304	Hexagonal socket screw 5x5
11	749011109	Worm
12	000111201	Hexagonal socket screw 4x4
13	000022802	Spring pin 2x12
14	731312005	Felt
15	304609006	Crank rod (unit)
16	304042005	Feed cam
17	743011008	Crank rod
18	304044007	Crank cam
19	304043006	Crank cam plate
20	000161309	Tapping screw 3x12
21	000110107	Hexagonal socket screw 5x5
22	732003003	Upper shaft rear bushing
23	000172602	Setscrew 5x8
24	743029009	Felt
25	000030205	Snap ring E-8
26	743019006	Belt wheel
27	000023803	Spring pin
28	304612301	Handwheel (unit)
29	639097242	Handwheel
30	304050006	Balance weight
31	000107802	Tapping screw 3x10 (B)

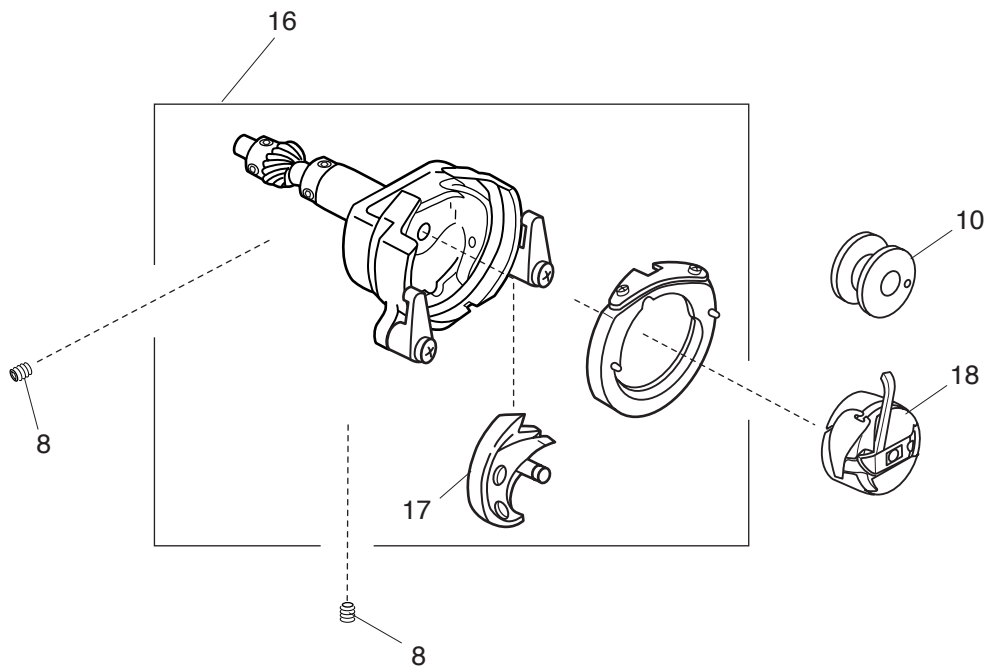
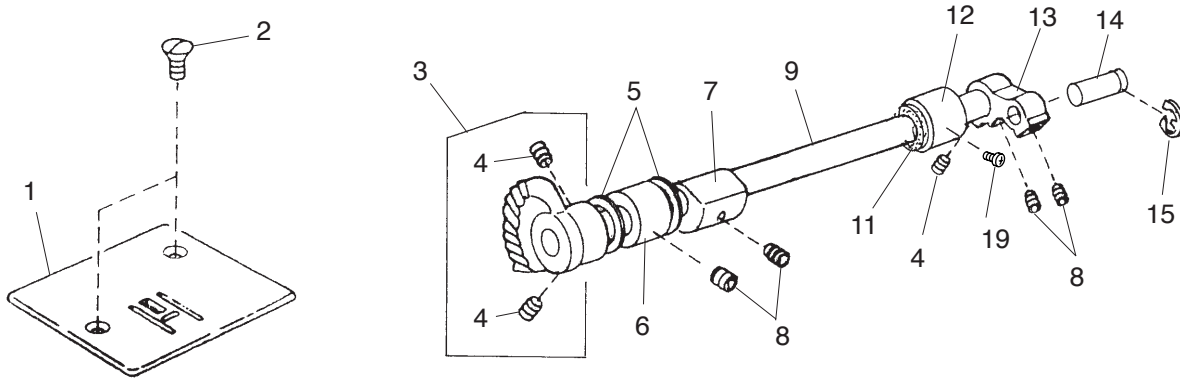
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	304006007	Handle
2	740011009	Handle shaft
3	000002105	Snap ring E-3
4	740010008	Handle supporter
5	000081005	Setscrew 4x8
6	740602405	Bobbin winder base plate (unit)
7	735501108	Bobbin winder arm (unit)
8	740003101	Bobbin winder base plate
9	740042009	Bobbin winder arm spring
10	000002806	Snap ring E-6
11	304604702	Zigzag mechanism (unit)
12	303028002	Index spring (1)
13	303051004	Index spring (2)
14	000103808	Setscrew 3x5
15	736015000	R button shaft
16	739063002	R button spring
17	304611104	Feed regulator (unit)
18	000014007	Snap ring CS-4
19	304007204	R button
20	000160102	Adjustable lock nut 4
21	648010009	Setscrew
22	739020007	Feed regulating rod
23	735077007	Feed regulating body spring
24	735073003	Plain washer
25	000013800	Snap ring CS-6
26	745052007	Reverse link
27	000101301	Setscrew 5x10
28	740125007	Feed regulator spring
29	304608201	Button base (unit)
30	000081500	Setscrew 3x12
31	303078007	Spring
32	304063002	Pattern indicator plate
33	000172602	Setscrew 5x8
34	304063002	Stitch length button
35	304028201	Stitch width button

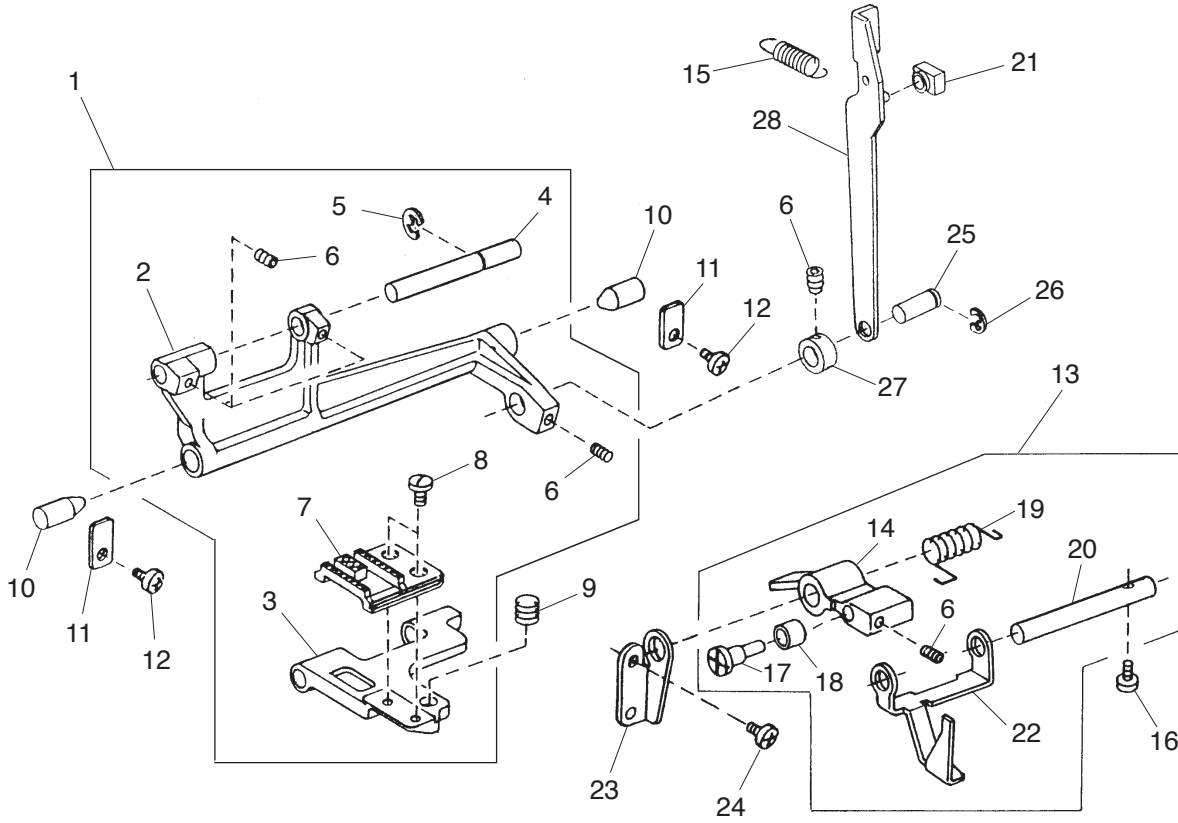
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	744004001	Needle plate
2	681009101	Setscrew
3	735950003	Lower shaft gear (unit)
4	000110107	Hexagonal socket screw 5x5WP
5	000036201	Washer 8-0.5
6	735233003	Bushing
7	735061101	Feed lifting cam
8	000111304	Hexagonal socket screw 5x5
9	735236006	Lower shaft
10	102261000	Bobbin
11	822070003	Felt
12	735234004	Bushing
13	639036003	Lower shaft crank arm
14	639037004	Pin
15	000001609	Snap ring E-5
16	735610101	Shuttle race body (unit)
17	532096007	Shuttle hook
18	647515006	Bobbin case (unit)
19	000172602	Setscrew 5x8

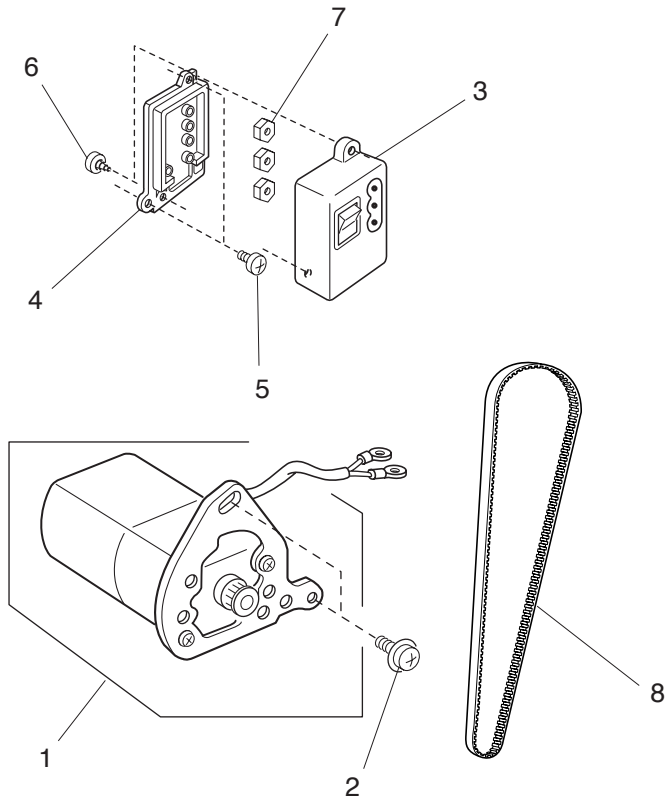
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	735612000	Feed rock shaft (unit)
2	735078008	Feed rock shaft
3	735079009	Feed bar
4	735080003	Feed bar shaft
5	000002507	Snap ring E-4
6	000111201	Hexagonal socket screw 4x4
7	735081004	Feed dog
8	735082005	Setscrew
9	735083006	Feed bar spring
10	735084007	Feed rock shaft center
11	735085008	Feed rock shaft center plate
12	000101404	Setscrew 4x6
13	301609007	Feed lifting arm (unit)
14	301027005	Feed lifting arm
15	743013000	Feed rod spring
16	000097200	Setscrew 4x12
17	735087000	Feed lifting pin
18	735088001	Feed lifting roller
19	730061003	Feed lifting spring
20	735090006	Feed lifting shaft
21	102141003	Feed regulator slide block
22	740013001	Drop feed selecting plate
23	739022009	Feed lifting shaft holder
24	000081119	Setscrew 4x6
25	735071104	Feed rock shaft connecting pin
26	000002806	Snap ring E-6
27	735276008	Ring
28	743012009	Feed rod

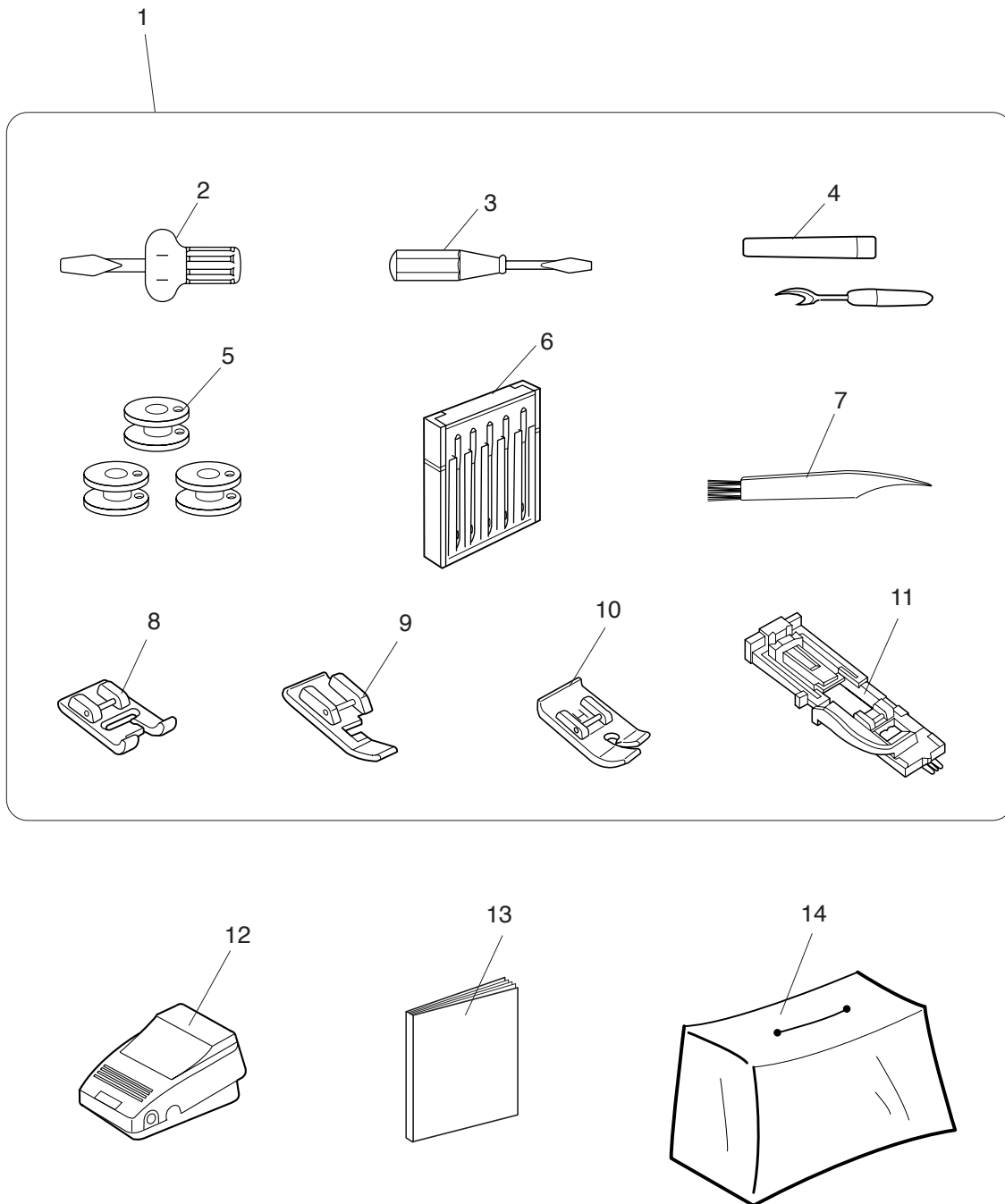
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	743611004	Motor (unit)
2	000201209	Setscrew 5x12
3	739503308	Machine socket (unit)
4	739037007	Machine socket cover
5	000103509	Setscrew 4x10
6	000107802	Setscrew 3x10
7	000060802	Nut
8	650166019	Motor timing belt

PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	304870309	Accessory set
2	820832005	Screw driver (Large)
3	647803004	Screw driver (Small)
4	647808009	Buttonhole opener
5	102261000	Bobbin
6	540401026	Needle set
7	802424004	Brush
8	737801015	Buttonhole foot
9	611406002	Zipper foot
10	731806001	Straight stitch foot
11	740801004	Buttonhole foot (unit)
12	042870308	Foot control
13	304800283	Instruction book
14	741811000	Cover