First Edition: 22 January 2016

SERVICE MANUAL

&

PARTS LIST

MODEL: 2008P (127V, 220V)

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WHAT TO DO WHEN

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	3. Incorrectly threaded.	Rethread.	
	4. Needle or thread are inappropriate for fabric being sewn.	Use the recommended sewing needle and thread.	
	5. Sewing on stretch fabric.	Use A #11 blue tip needle.	
	6. Inappropriate needle bar height.	See mechanical adjustment “Needle bar height”.	P.15
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	3. Feed dog teeth are worn.	Change the feed dog.	

CONDITION	CAUSE	HOW TO FIX	REFERENCE
3. Breaking upper thread	1. Initial sewing speed is too fast.	Start with medium speed.	
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	3. Needle is bent or dull.	Replace with a new needle.	
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	5. Needle size is inappropriate for fabric.	Use appropriate needle and thread for fabric in use.	
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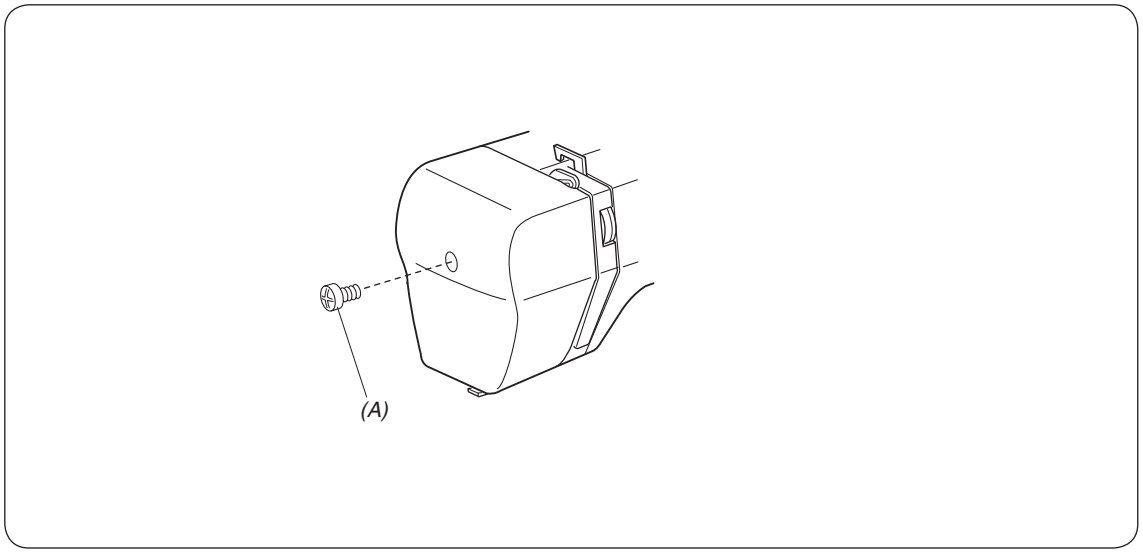
SERVICE ACCESS

FACE COVER



TO REMOVE

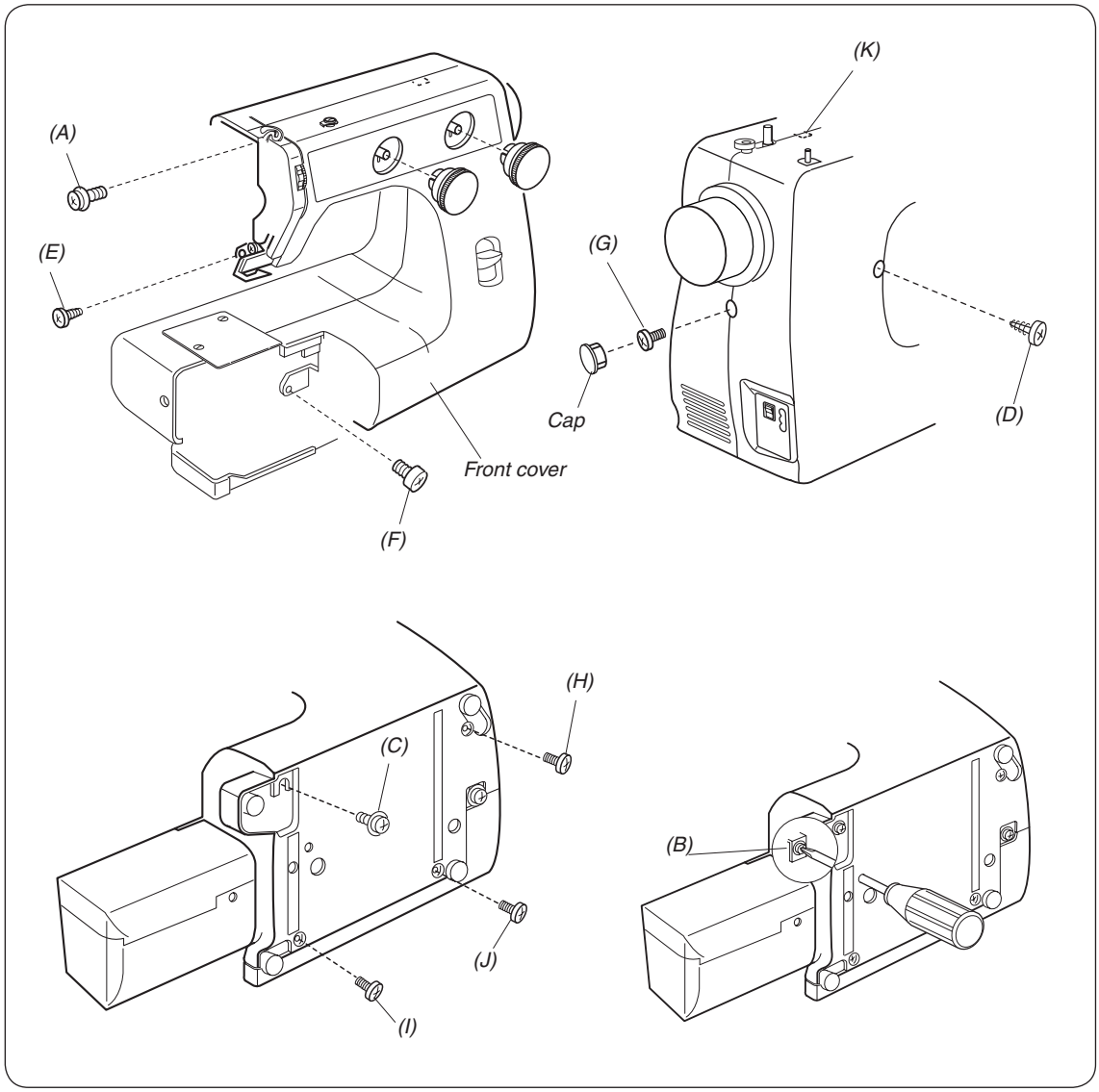
1. Remove the face cover by removing the setscrew (A).

TO ATTACH

2. Follow the above procedure in reverse.

SERVICE ACCESS

FRONT COVER



TO REMOVE

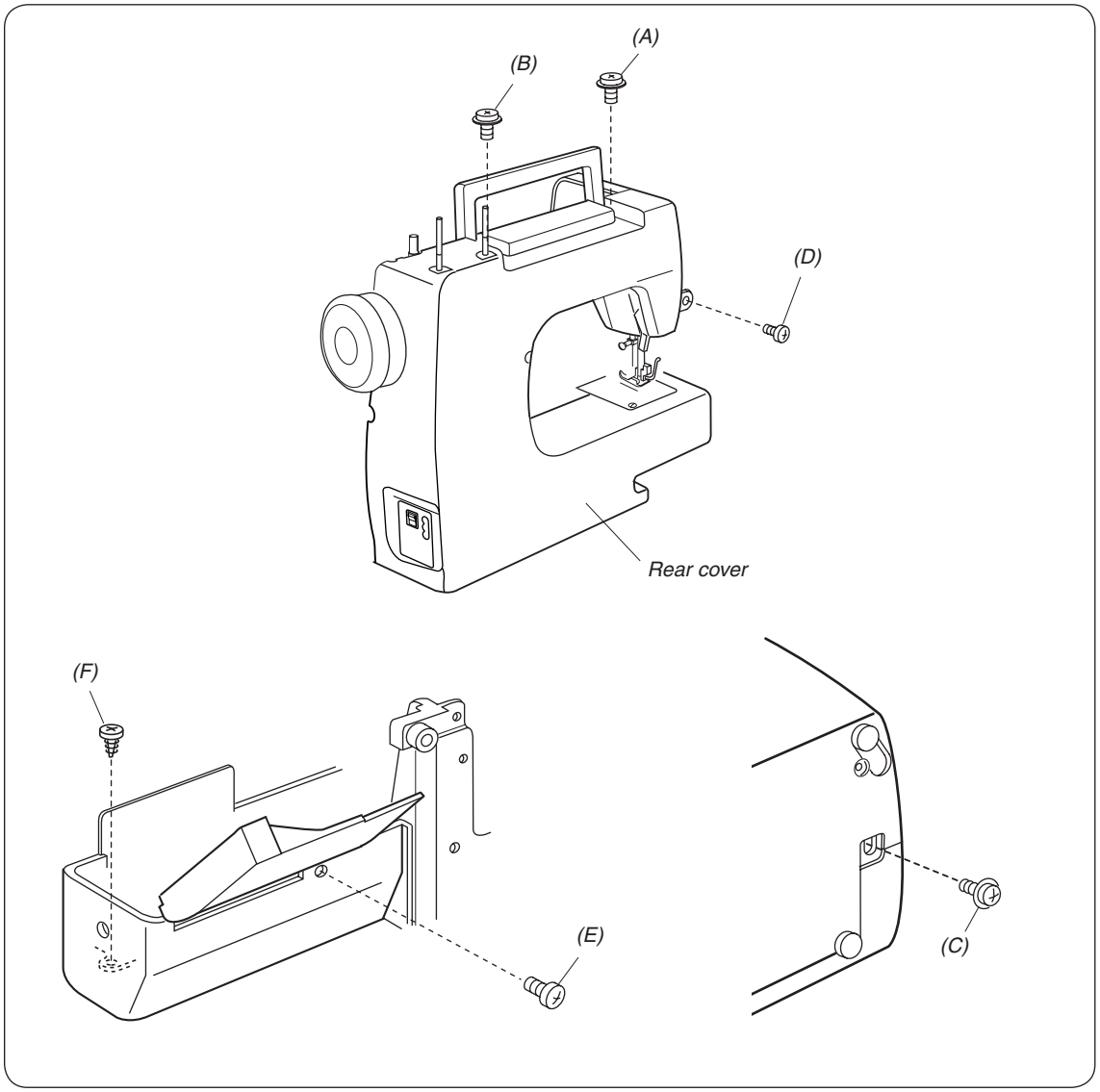
1. Remove the face cover (See page 4).
2. Remove the dial.
3. Loosen the setscrew (A), (B), and (C), and then, remove the front cover by removing the setscrews (D), (E), (F), (G), (H), (I), and (J).
   Note: Unhook the tab (K) from the rear cover when removing the front cover.

TO ATTACH

4. 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

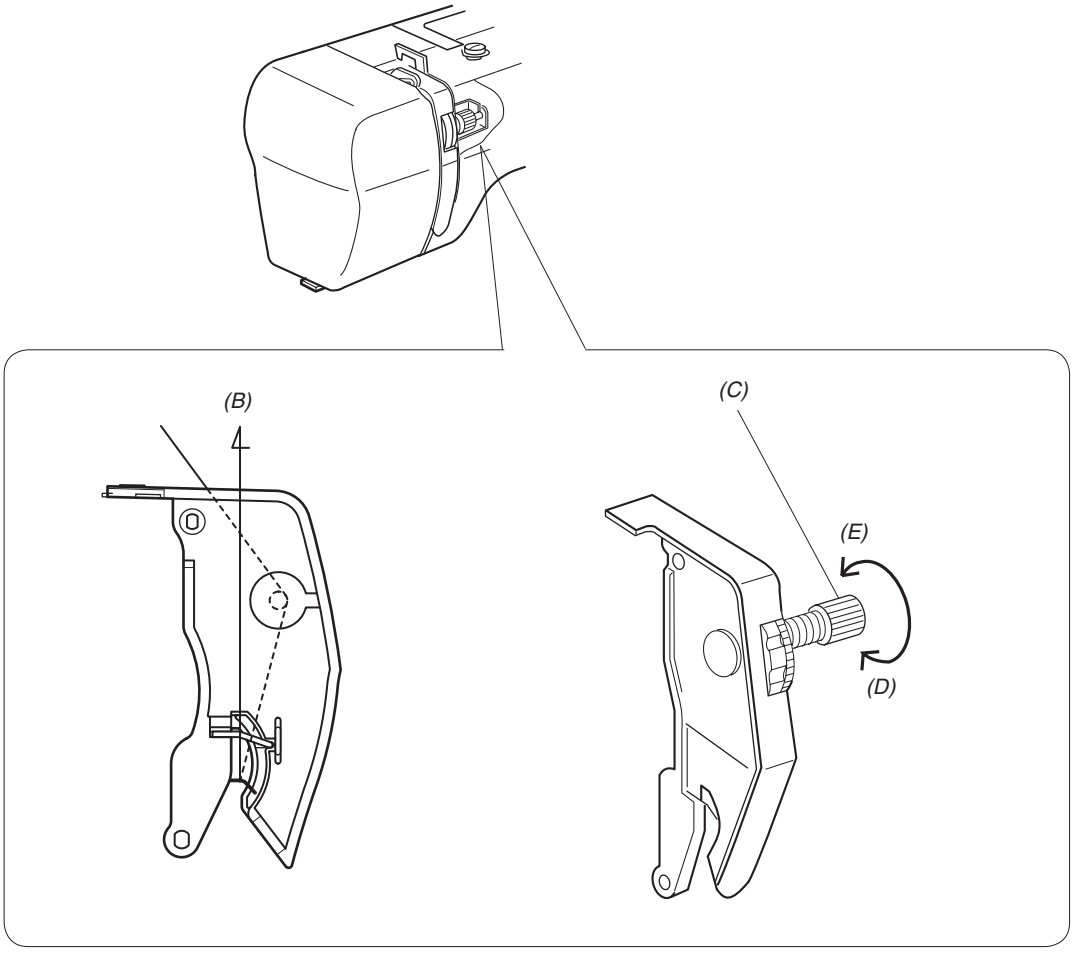
TOP TENSION

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

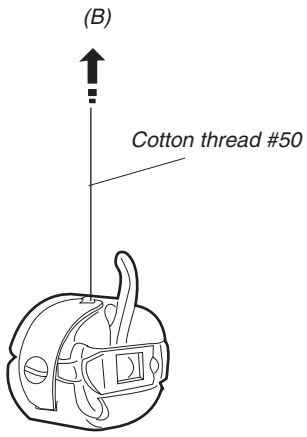
BOBBIN TENSION

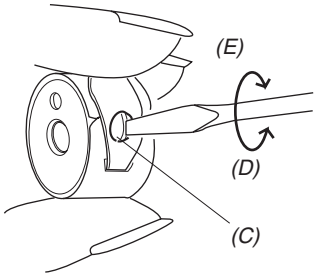
TO CHECK:

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

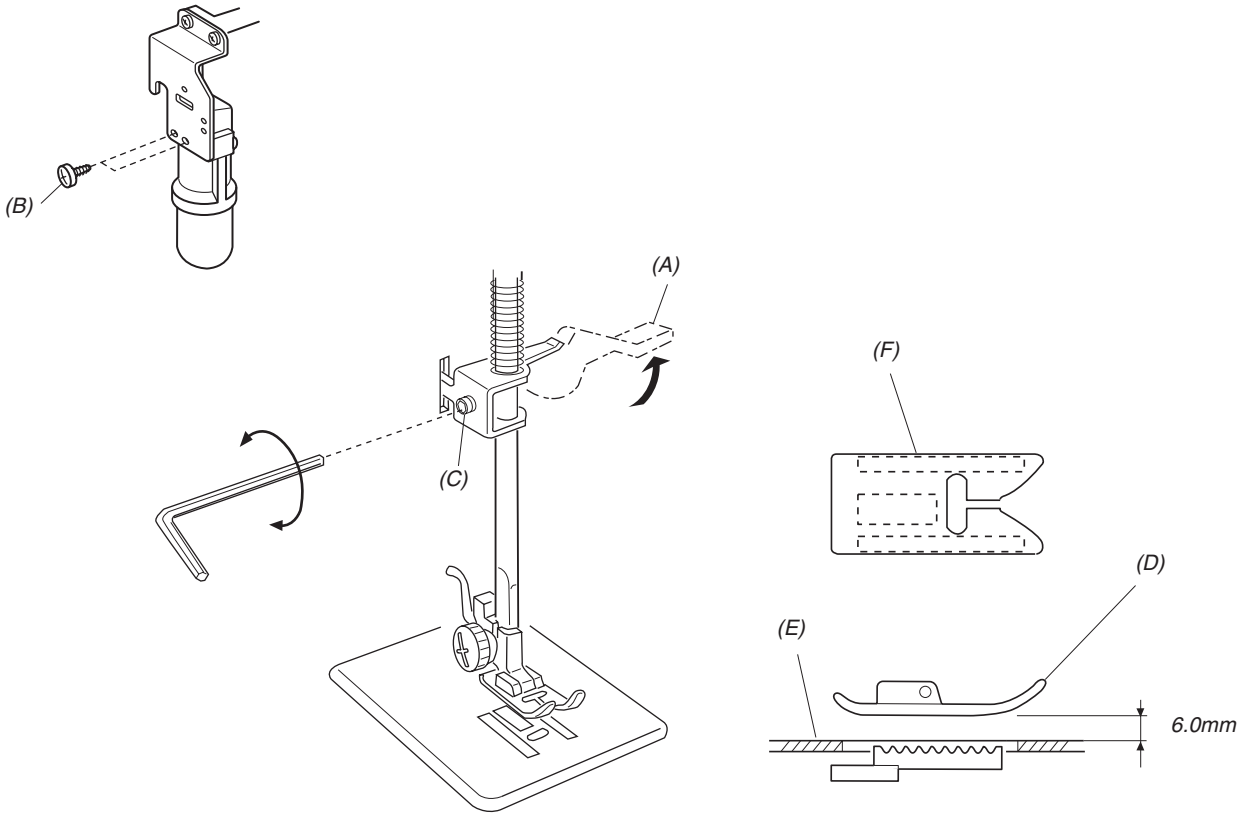
TO CHECK:

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 setscrews (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 setscrews (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

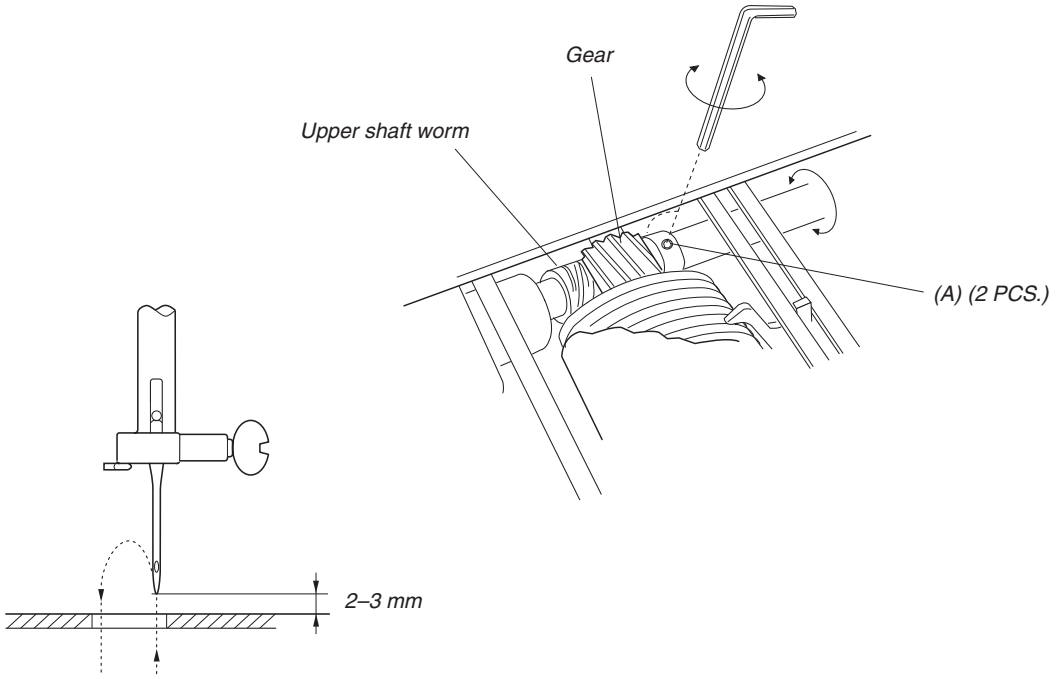
TO CHECK:

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

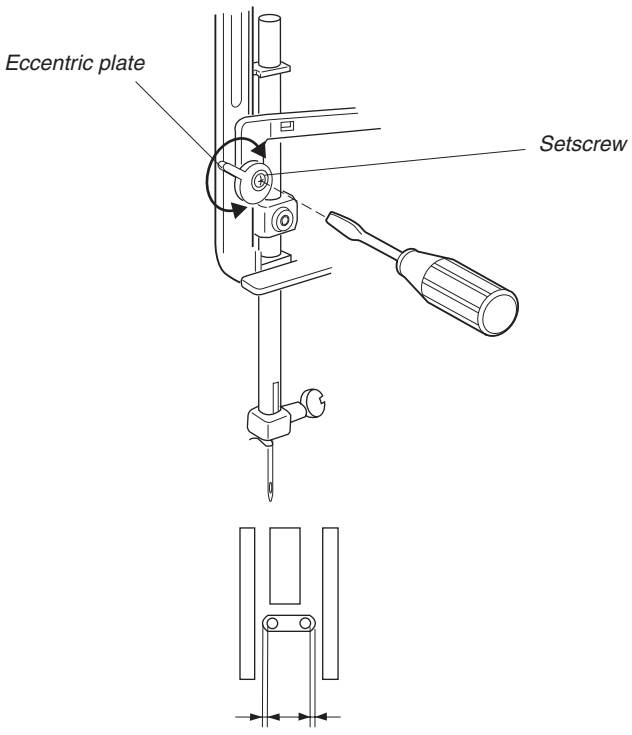
TO CHECK:

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.

Note: Check the hook timing after this adjustment.



Both clearances should be equal

MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND HOOK (NO.1)

TO CHECK:

The clearance between needle and shuttle race should be -0.05 to +0.10mm.
If not, make an adjustment as follows:

ADJUSTMENT PROCEDURE:

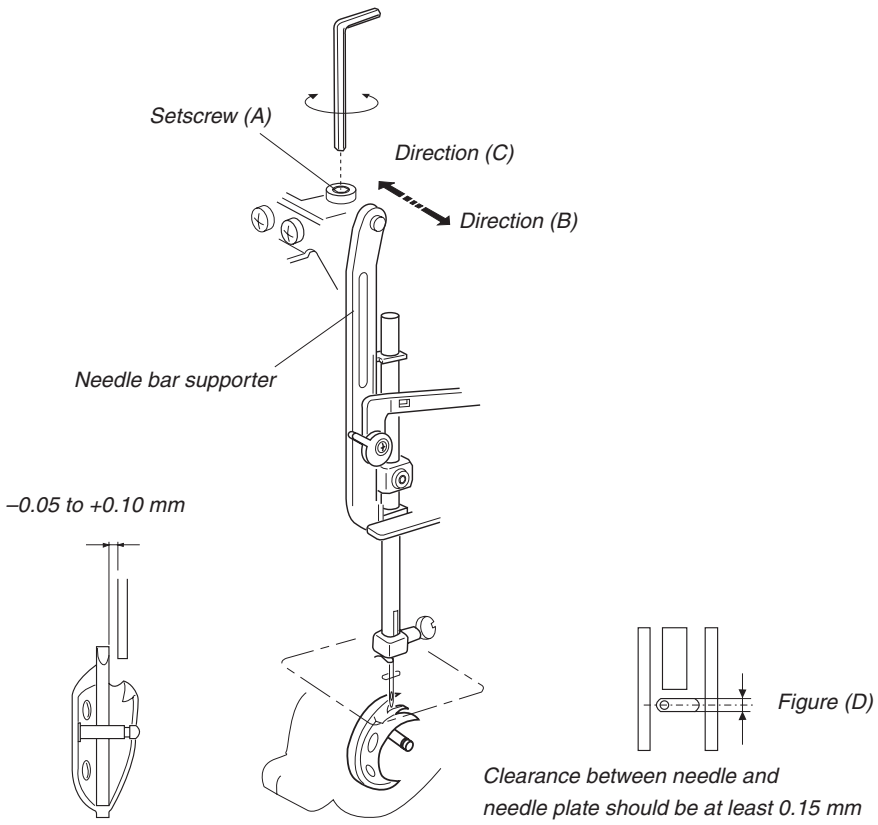
1. Remove the face cover. (See page 4.)
2. Set the pattern selector dial " ".
3. Loosen setscrew (A), and move the needle bar supporter in the direction of the arrows to get a clearance between –0.05 to +0.10 mm.

* If clearance is too wide, move the needle bar supporter to direction (B).

* If clearance is too narrow, move the needle bar supporter to direction (C).

Note: After this adjustment, check that the clearance between the needle and needle plate is more than 0.15 mm as shown in figure (D). If not, adjust the clearance between needle and shuttle race by using adjustment method NO.2 (see next page). Readjust the clearance between needle and needle plate more than 0.15 mm.

4. Attach the face cover.



MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND HOOK (NO.2)

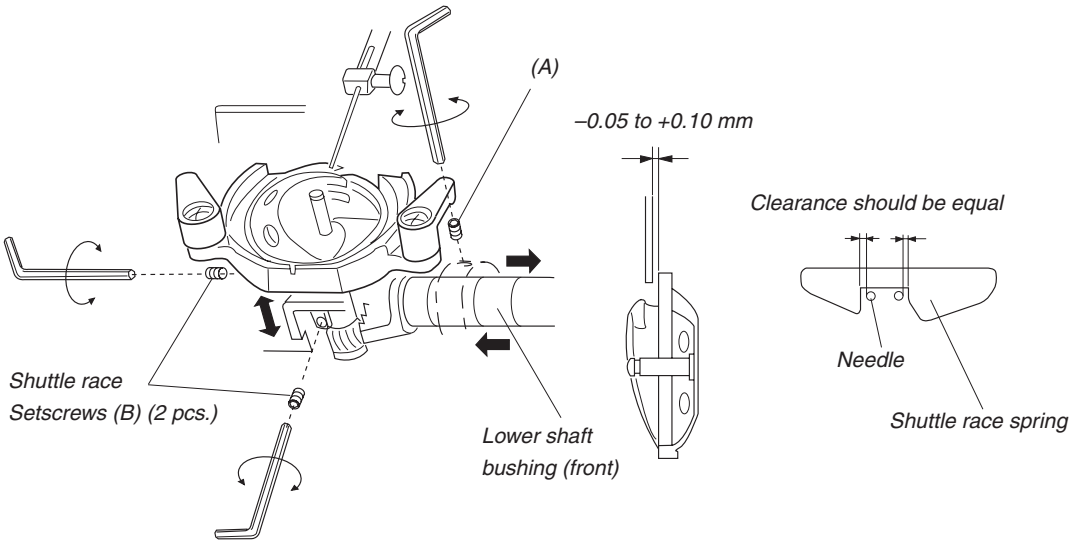
TO CHECK:

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 +0.10mm.

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial at " ".
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 +0.10mm.
5. Set the pattern select dial at " ". 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

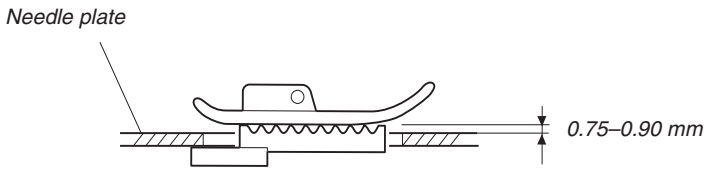
FEED DOG HEIGHT

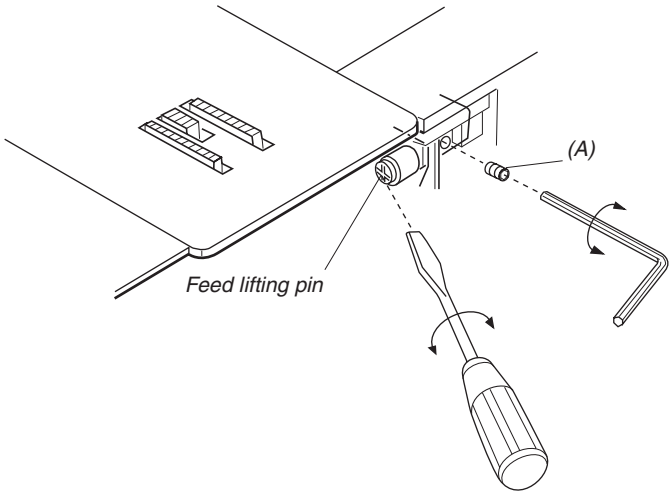
TO CHECK:

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

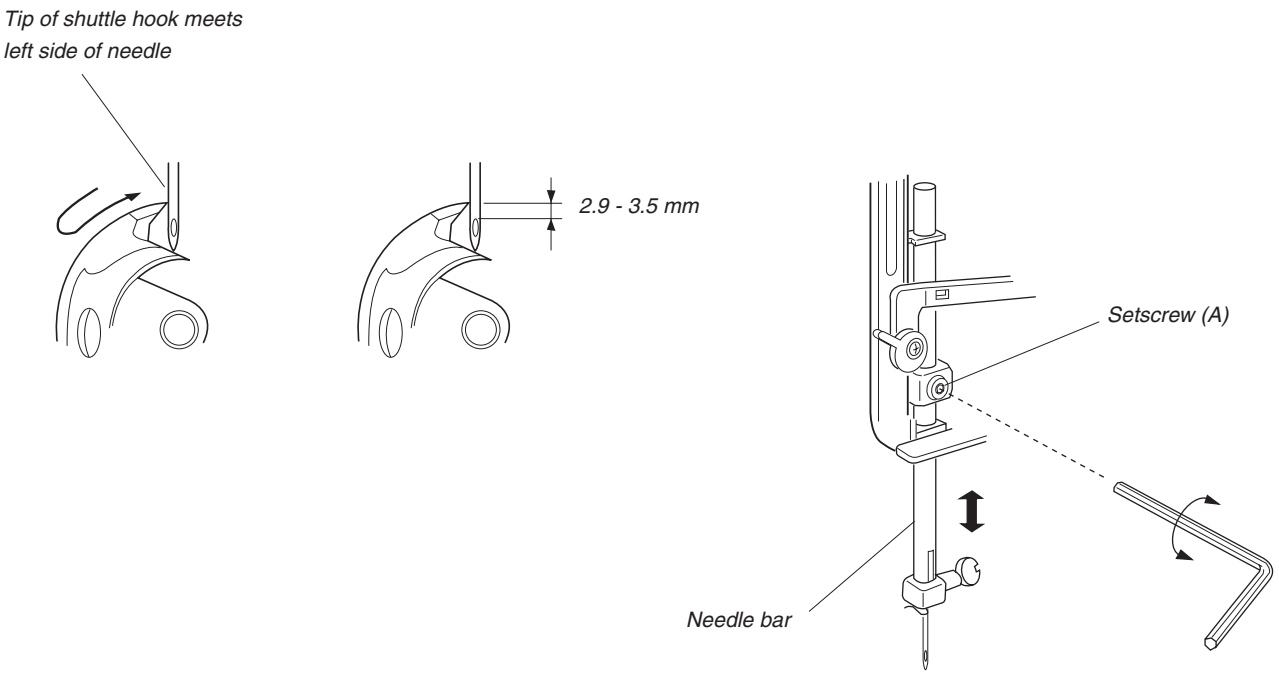
NEEDLE BAR HEIGHT

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 " ⌊ ".
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.



MECHANICAL ADJUSTMENT

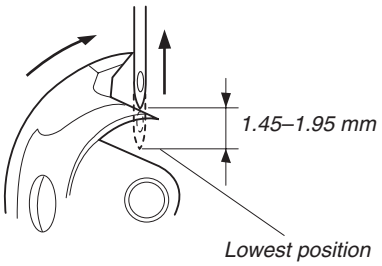
NEEDLE TIMING TO SHUTTLE

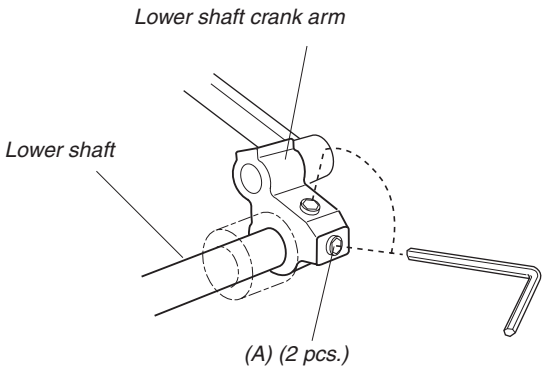
TO CHECK:

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 "  "
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

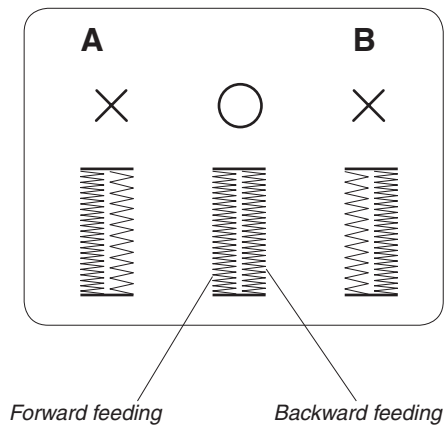
BUTTONHOLE FEED BALANCE

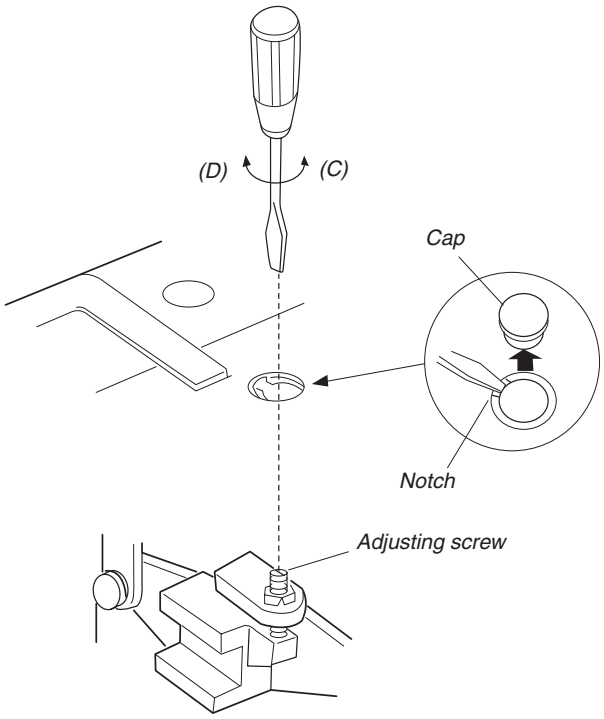
TO CHECK:

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

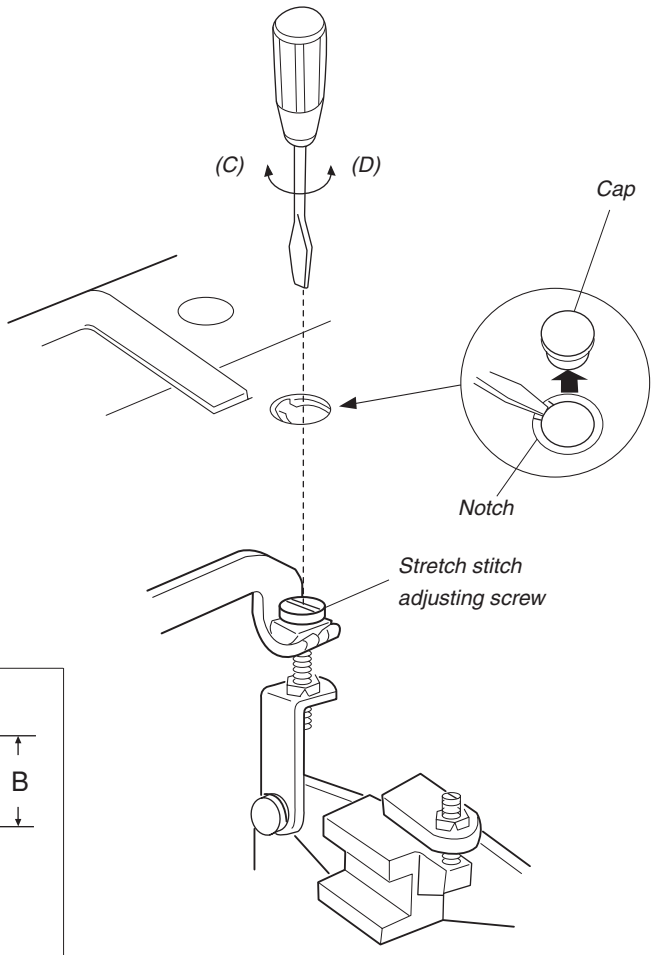
FEED BALANCE ON STRETCH STITCH

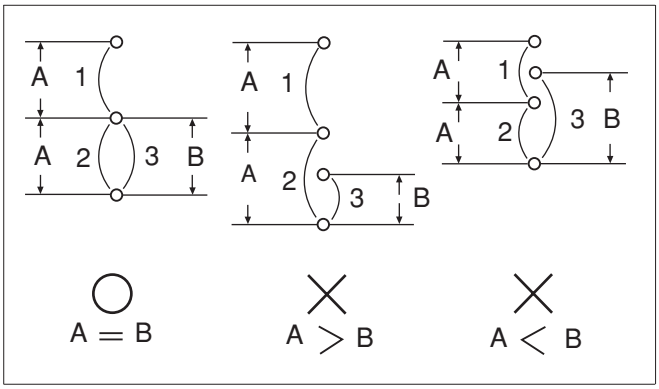
TO CHECK:

If the stretch stitch patterns are distorted with setting the stitch length dial at " S.S. ".
(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 dial " ", and the stitch length dial at " S.S. ".
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. Attach the cap.





MECHANICAL ADJUSTMENT

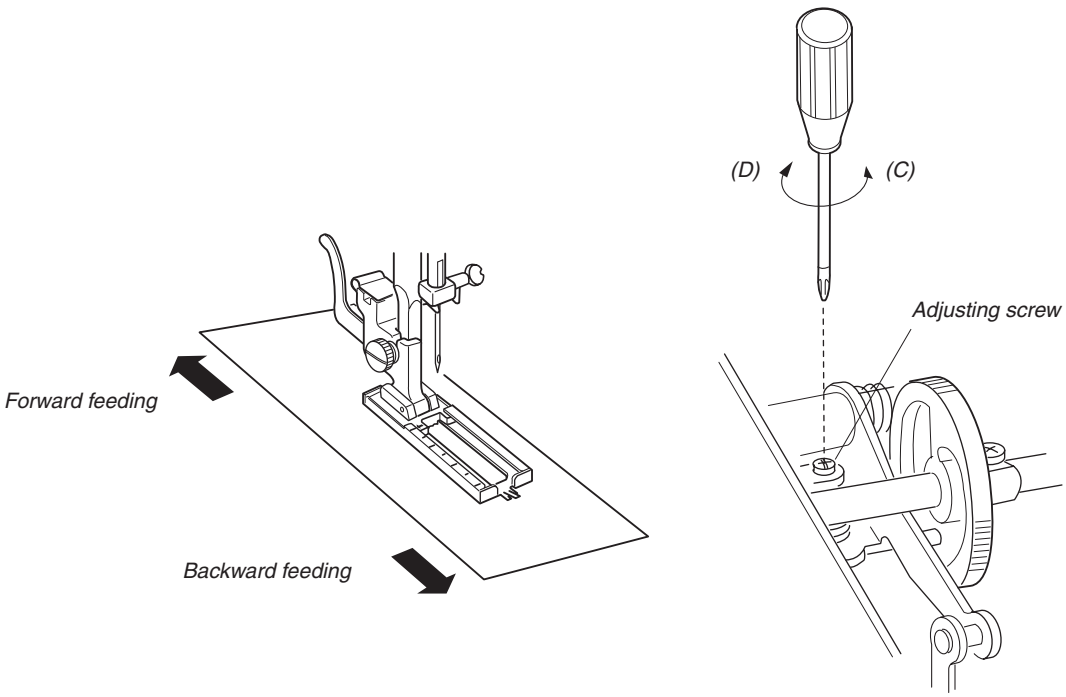
BARTACK FEED OF BUTTONHOLE

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 " 4/2 " 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 fed forward, turn the adjusting screw in the direction of (C).
   If the paper is fed backward, turn the adjusting screw in the direction of (D).
4. Attach the front cover.



MECHANICAL ADJUSTMENT

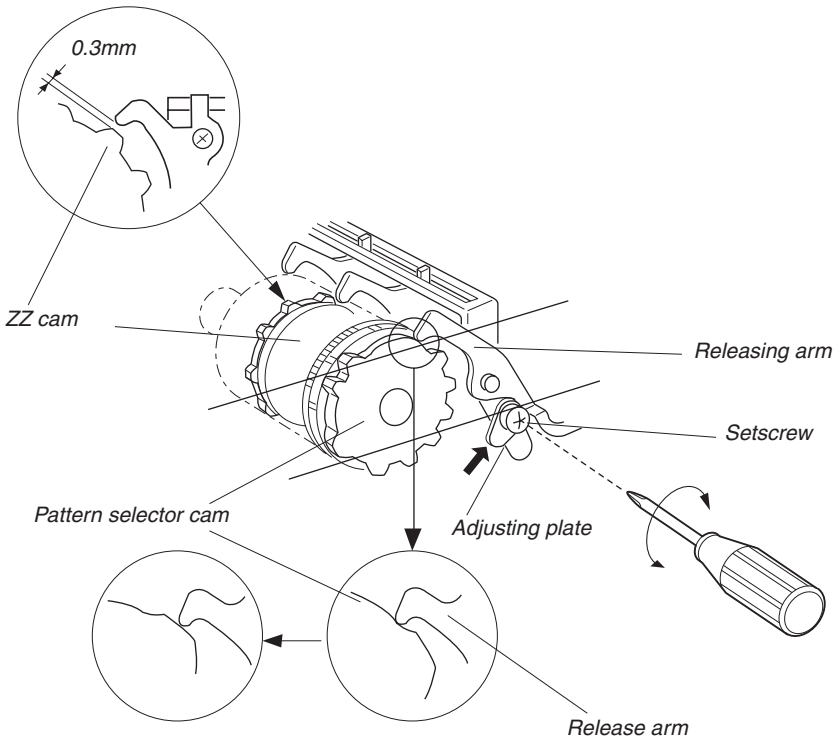
DISENGAGEMENT OF CAM FOLLOWER

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 cannot correct pattern.

ADJUSTMENT PROCEDURE:

1. Set the pattern selector dial " ⏐ ".
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 pat tern select cam.
6. Attach the front cover.



MECHANICAL ADJUSTMENT

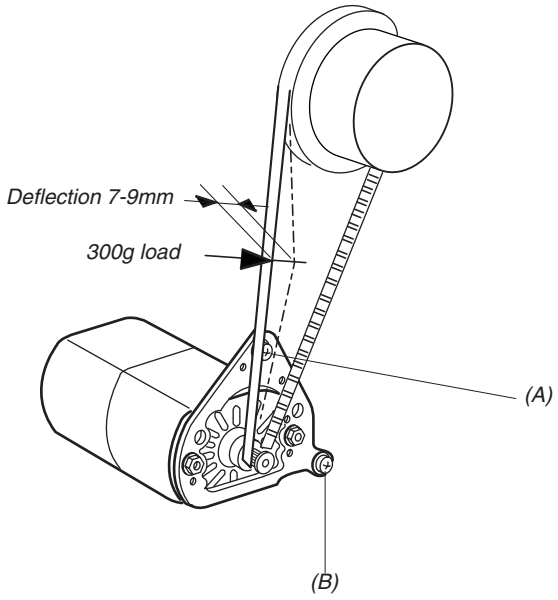
MOTOR BELT TENSION

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:

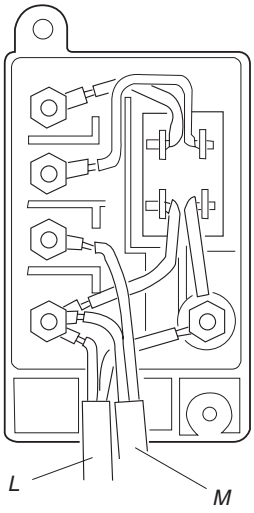
1. Remove the rear cover. (See page 6)
2. Loosen the setscrews (A) and (B).
3. Move the motor up or down to adjust the deflection about 7mm (0.28") - 9mm (0.36").
4. Tighten the setscrews (A) and (B).



WIRING

WIRING FOR MACHINE SOCKET UNIT

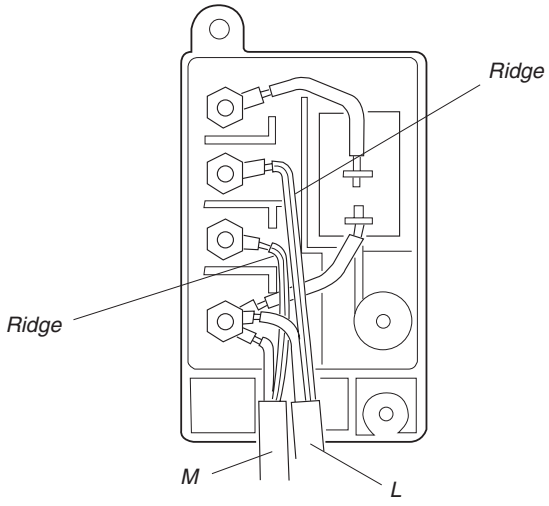
(FOR 220~240V)



M : MOTOR

L : LAMP

(FOR 110~120V)



M : MOTOR

L : LAMP

OILING

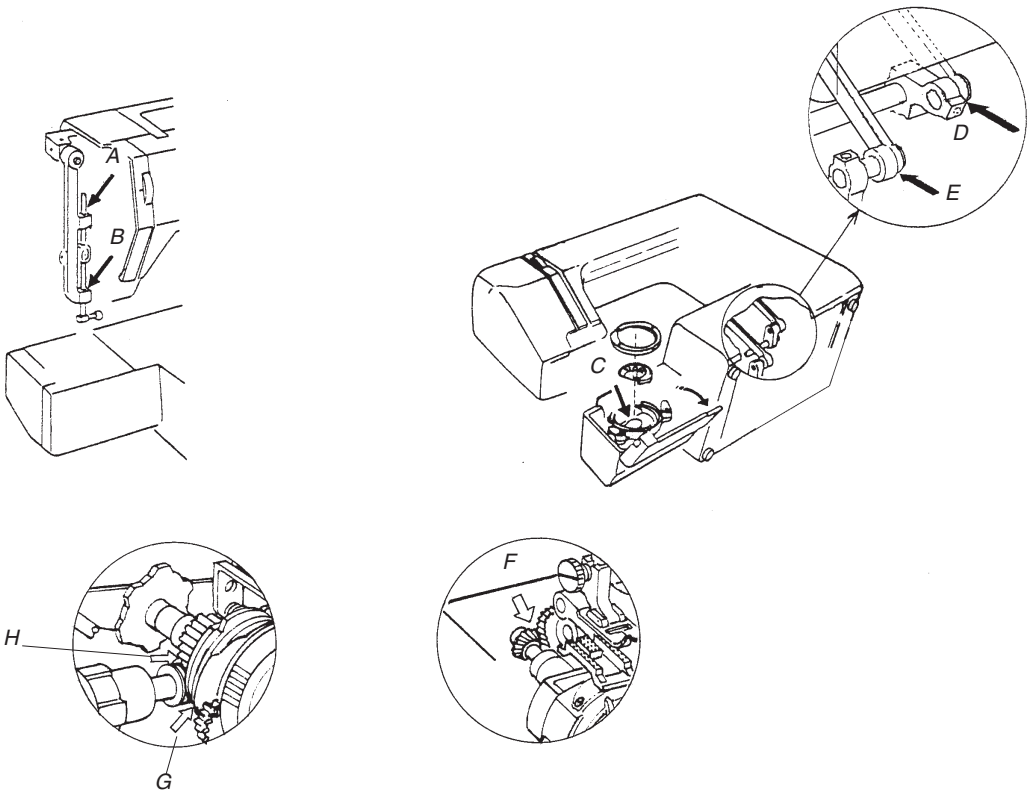
Factory lubricated parts will provide years of household sewing without routine oiling.
However, whenever the machine is being serviced, check to see if any parts need to be lubricated.

OIL

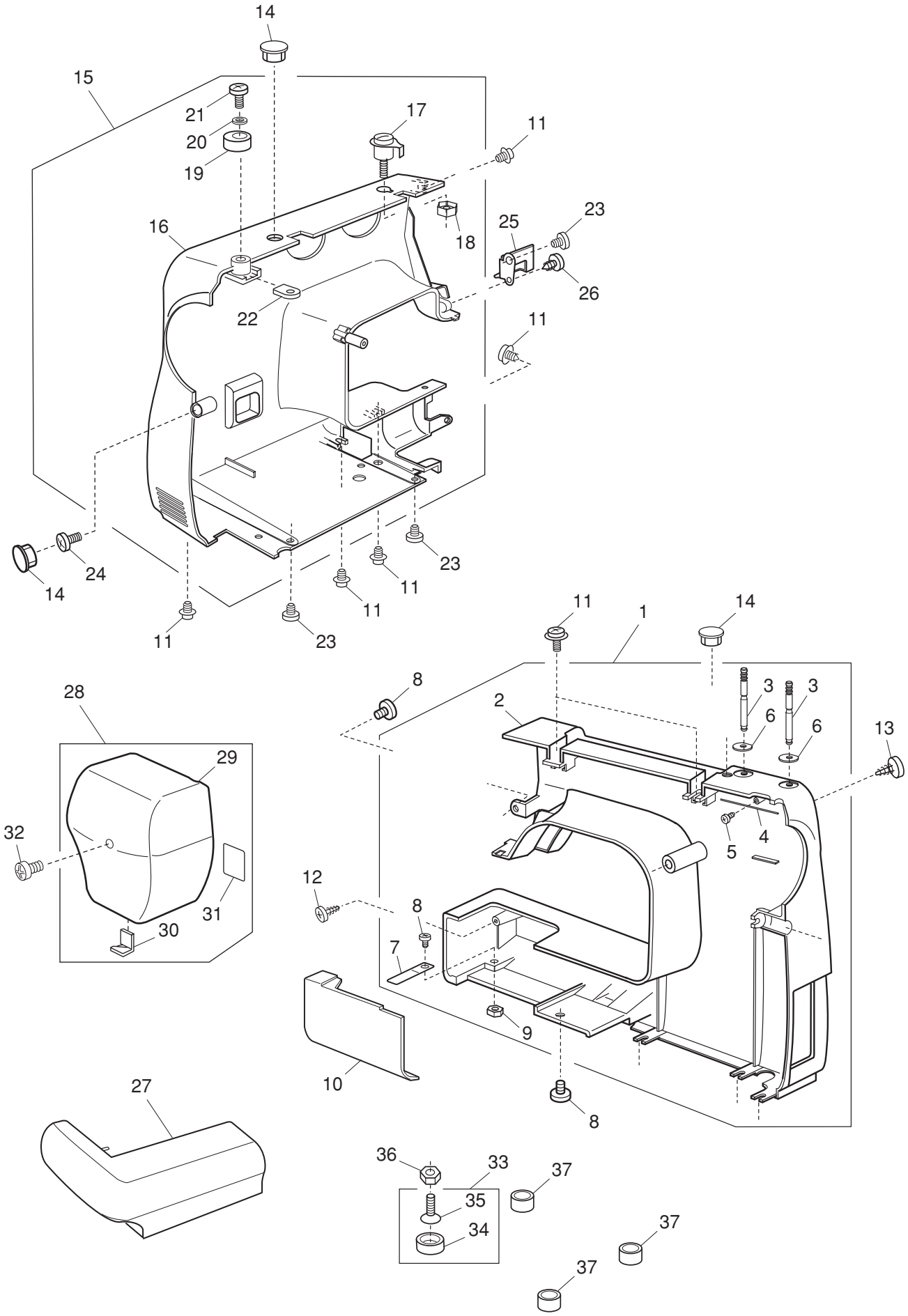
Use good quality sewing machine oil at the points (A, B, C, D, E) indicated by black arrows.

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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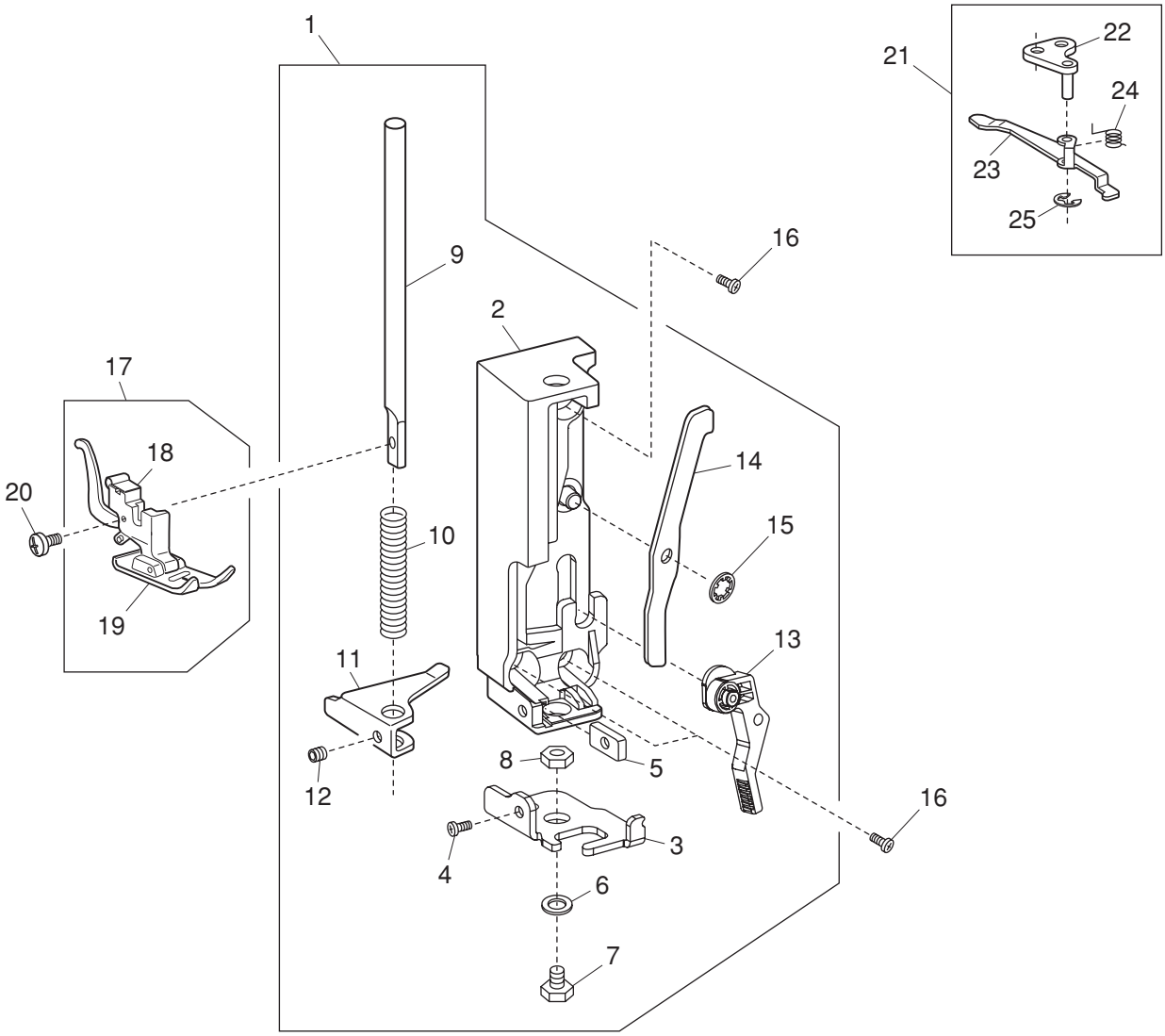
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	306601037	Rear cover (unit)
2	306101102	Rear cover
3	652205109	Spool pin
4	736007009	Spool pin spring
5	000161206	Setscrew 3x10 (B)
6	735013005	Spool pin spring base
7	730006000	Spring
8	000101404	Setscrew 4x6
9	000061205	Nut 4-3-7
10	739004005	Bed cover plate
11	000115205	Setscrew TP 4x6
12	000121905	Tapping screw 4x12 (B)
13	000198604	Tapping screw 4x14 (B)
14	653006101	Cap
15	306604960	Front cover (unit)
16	306109A05	Front cover
17	730501011	Thread guide plate (unit)
18	000160102	Adjustable lock nut 4
19	735016307	Bobbin winder stopper
20	000071013	Washer 4
21	000103107	Setscrew 4x14
22	843014004	Nut
23	000081005	Setscrew 4x8
24	000101703	Setscrew 4x12
25	745031000	Thread guide plate
26	000107307	Tapping screw 3x8 (B)
27	306102000	Extension table
28	306602304	Face cover (unit)
29	306103300	Face cover
30	840602006	Thread cutter (unit)
31	724025006	Reflex sticker
32	000080901	Setscrew 4x25
33	735616200	Rubber base (unit)
34	735002001	Rubber base
35	000097901	Flat screw M5x18
36	000061319	Nut 5-1-8
37	739064003	Bed rubber base

PARTS LIST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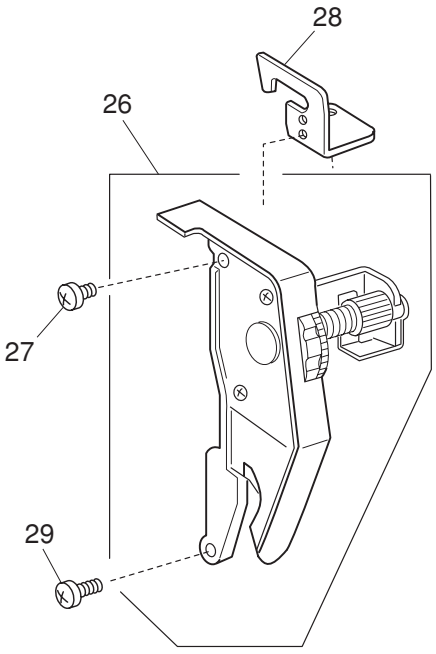
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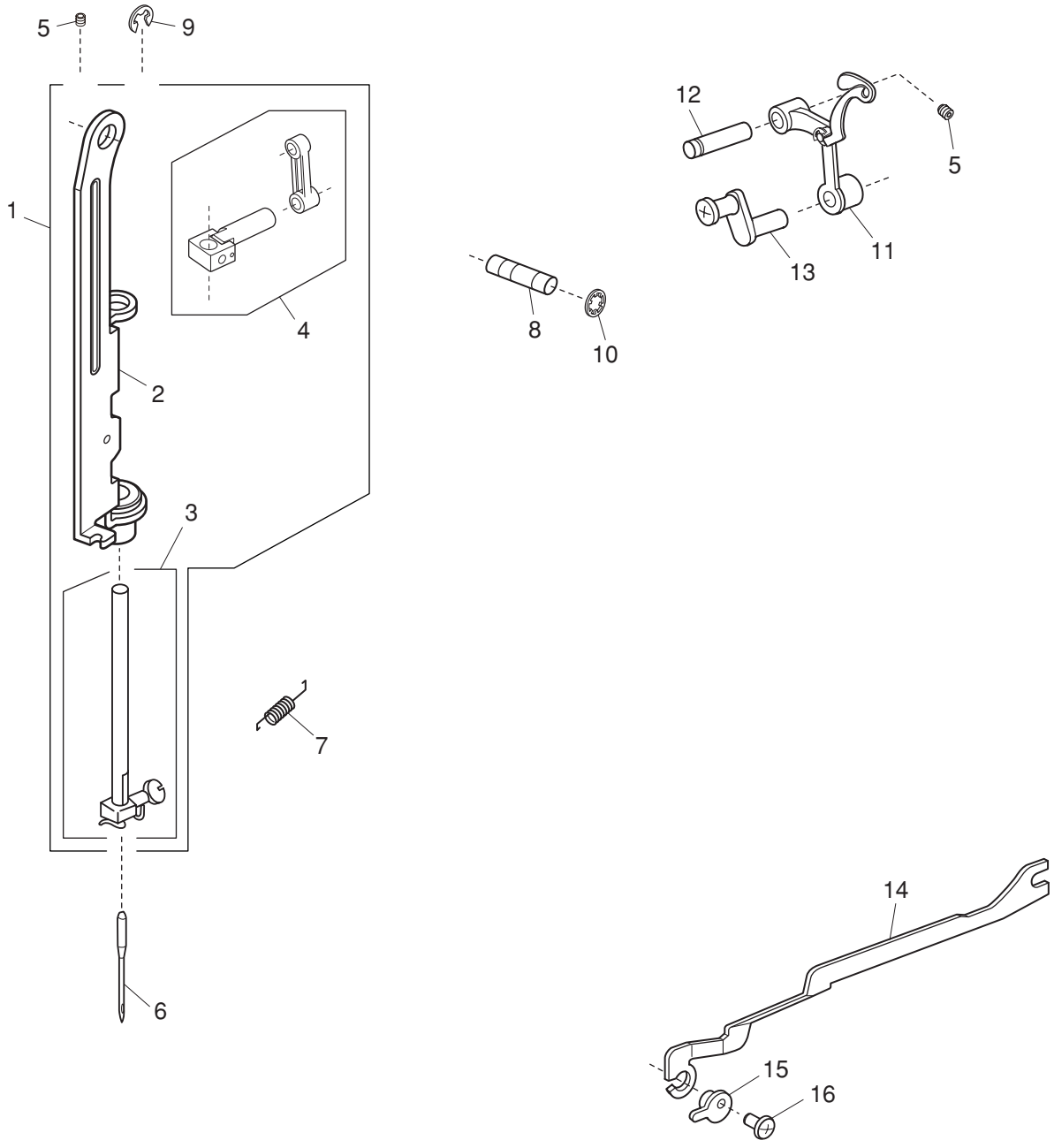
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	311605004	Presser bar base plate (unit)
2	311009002	Presser bar base plate
3	311031003	Needle drop adjusting plate
4	000115009	Setscrew TP 3x8
5	311023002	Nut
6	000070506	Washer 4
7	000138606	Bolt 4x10
8	000062402	Nut 4-2-7
9	735026001	Presser bar
10	735027002	Presser bar spring
11	735028003	Presser bar bracket
12	000111500	Hexagonal socket screw 4x8
13	311010006	Presser foot lifter
14	735030008	Tension release lever
15	000013903	Snap ring CS-5
16	000081005	Setscrew 4x8
17	310612003	Presser foot (unit)
18	611510000	Presser foot holder (unit)
19	301505002	Zigzag foot (unit)
20	660106001	Thumb screw
21	304610000	Tension release arm (unit)
22	739017001	Tension release arm base
23	304045008	Tension release arm
24	739019003	Tension release spring
25	000002105	Snap ring E-3
26	306501106	Tension assembly (unit)
27	000103808	Setscrew 3x5
28	739016000	Top cover thread guide
29	000101703	Setscrew 4x12

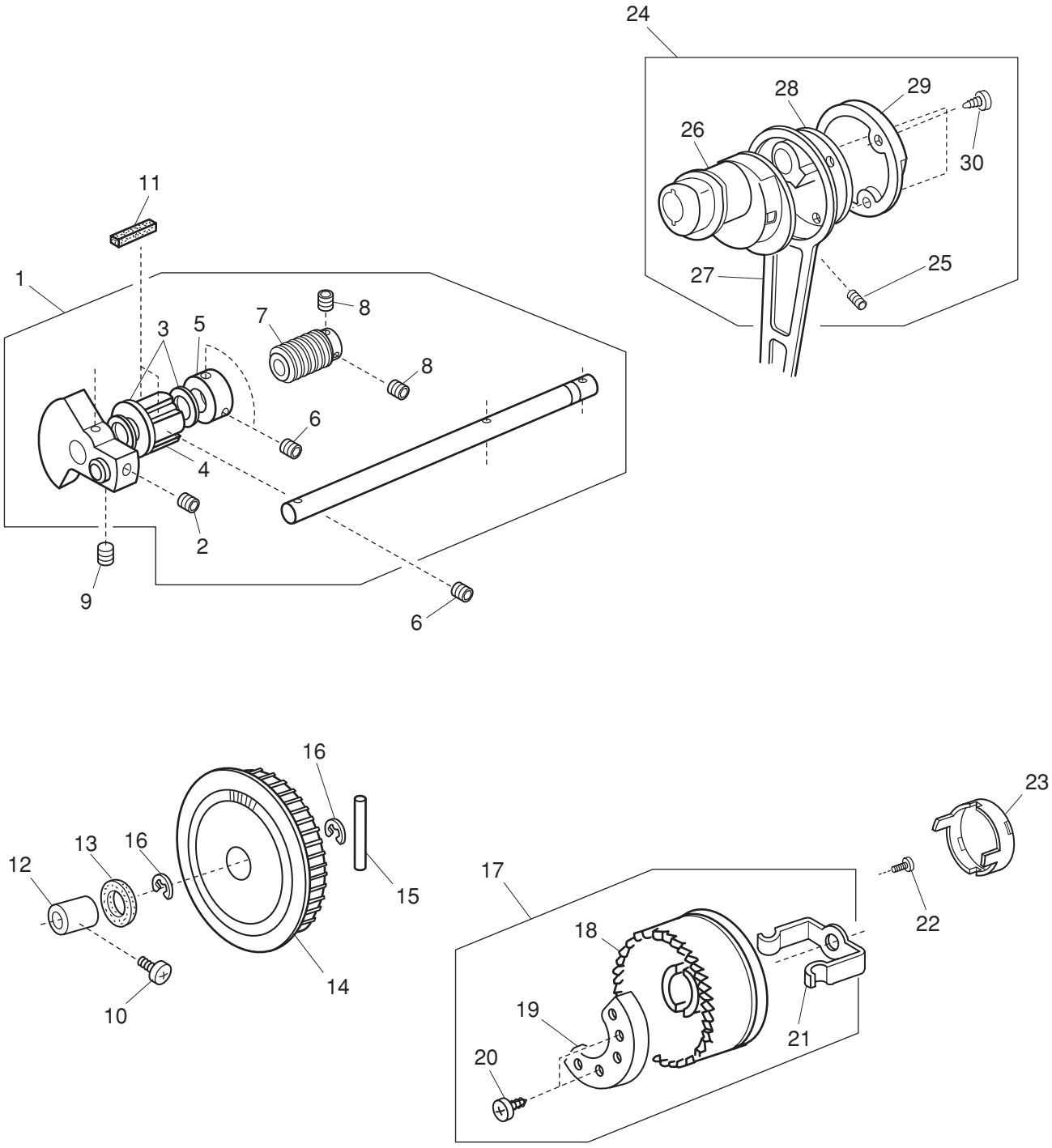
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	311609008	Needle bar supporter (unit)
2	743213002	Needle bar supporter
3	730503116	Needle bar (unit)
4	311502000	Needle bar connecting stud (unit)
5	000111304	Hexagonal socket screw 5x5
6	102408089	Needle
7	743216005	Needle bar supporter spring
8	310013109	Needle bar supporter pin
9	000001609	Snap ring E-5
10	000013800	Snap ring CS-6
11	625506109	Thread take-up lever (unit)
12	647040108	Thread take-up lever shaft
13	735504008	Needle bar crank (unit)
14	735119002	Zigzag rod
15	310041003	Eccentric plate
16	000078319	Setscrew 3x6

PARTS LIST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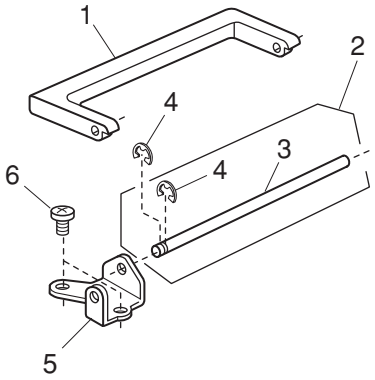
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	304607200	Upper shaft (unit)
2	102073003	Setscrew
3	000036717	Thrust washer
4	732025001	Upper shaft front bushing
5	639095000	Ring
6	000111304	Hexagonal socket screw 5x5
7	755108000	Worm
8	000111201	Hexagonal socket screw 4x4
9	761052007	Setscrew
10	000172602	Setscrew 5x8
11	731312005	Felt
12	732003003	Upper shaft rear bushing
13	743029009	Felt
14	743019006	Belt wheel
15	000023803	Spring pin 4x40
16	000030205	Snap ring E-8
17	306605101	Handwheel (unit)
18	306105014	Handwheel
19	304050006	Balance weight
20	000121400	Tapping screw 3x14 (B)
21	639113016	Clutch spring
22	000081005	Setscrew 4x8
23	650070509	Clutch cap
24	304609006	Crank rod (unit)
25	000110107	Hexagonal socket screw 5x5
26	304042005	Feed cam
27	743011008	Crank rod
28	304044007	Crank cam
29	304043006	Crank cam plate
30	000161309	Tapping screw 3x12 (B)

PARTS LIST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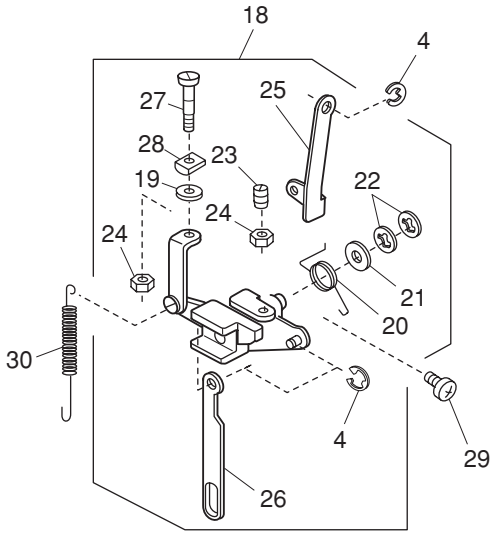
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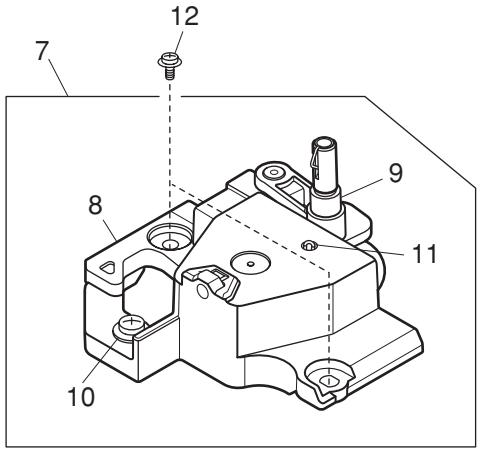
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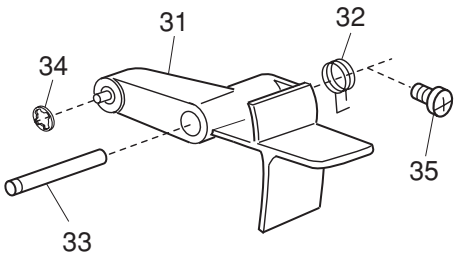
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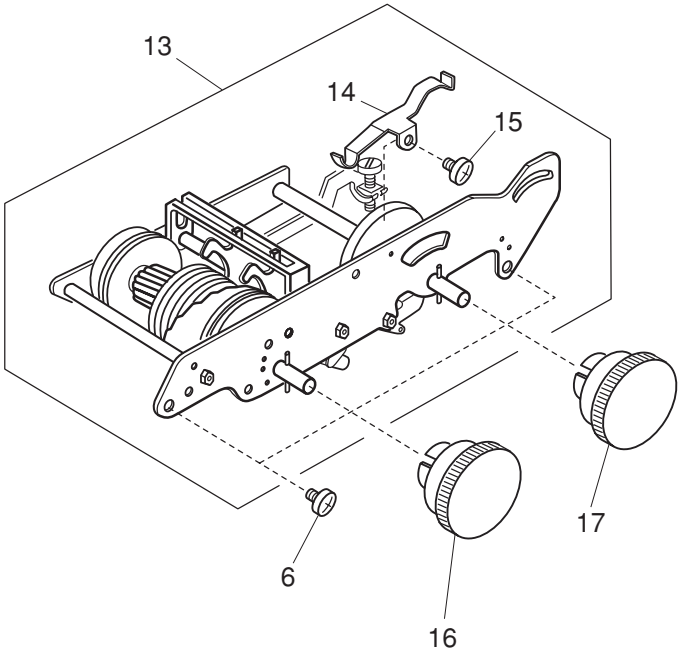
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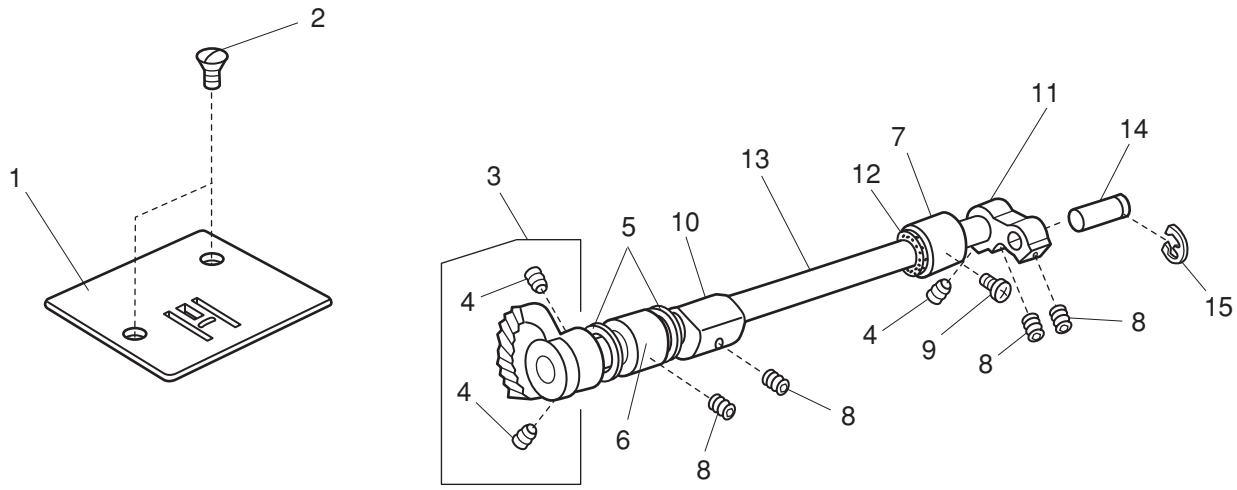
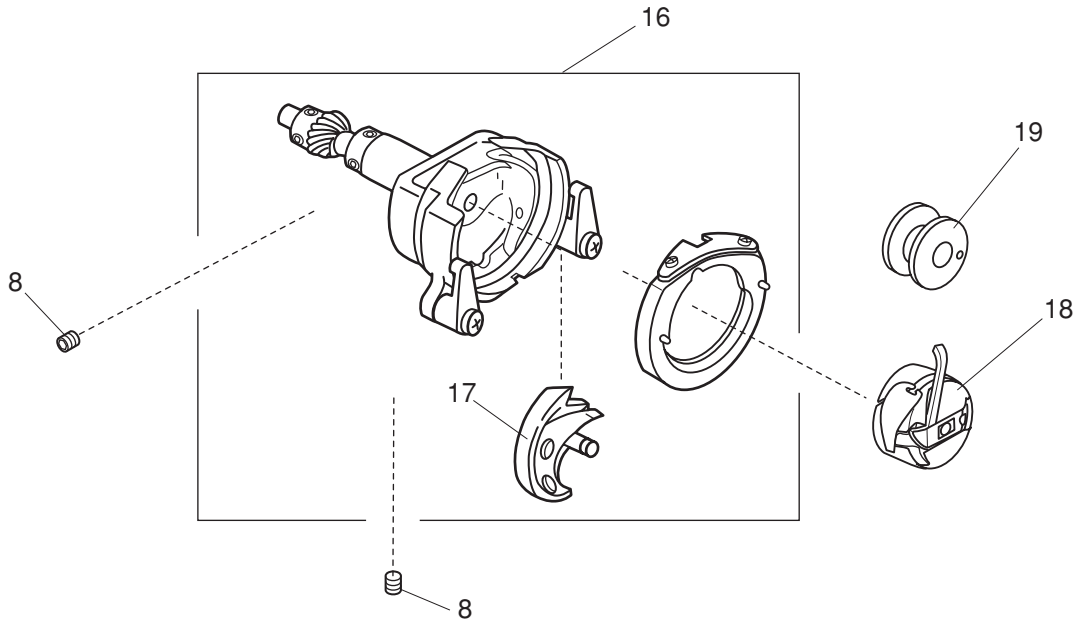
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	753017308	Handle
2	740624001	Handle shaft (unit)
3	740011009	Handle shaft
4	000002105	Snap ting E-3
5	740010008	Handle supporter
6	000081005	Setscrew 4x8
7	311606005	Bobbin winder supporter (unit)
8	311011007	Bobbin winder base plate
9	311503001	Bobbin winder arm (unit)
10	000109103	Setscrew 4x12
11	740042009	Bobbin winder arm spring
12	000115607	Setscrew TP 4x8
13	745606105	Zigzag mechanism (unit)
14	737011009	Index spring
15	000103808	Setscrew 3x5
16	306108A16	Pattern selector dial
17	306107A16	Feed dial
18	736604105	Feed regulator (unit)
19	000071013	Washer 4
20	735077007	Feed regulating body spring
21	735073003	Plain washer
22	000013800	Snap ring CS-6
23	648010009	Setscrew
24	000160102	Adjustable lock nut 4
25	739020007	Feed regulating rod
26	745052007	Reverse link
27	735074004	SS adjusting screw
28	735076006	SS rod block
29	000172602	Setscrew 5x8
30	670100006	Feed regulating spring
31	306106004	R button
32	739063002	R button spring
33	736015000	R button shaft
34	000014007	Snap ring CS-4
35	000101301	Setscrew 5x10

PARTS LIST

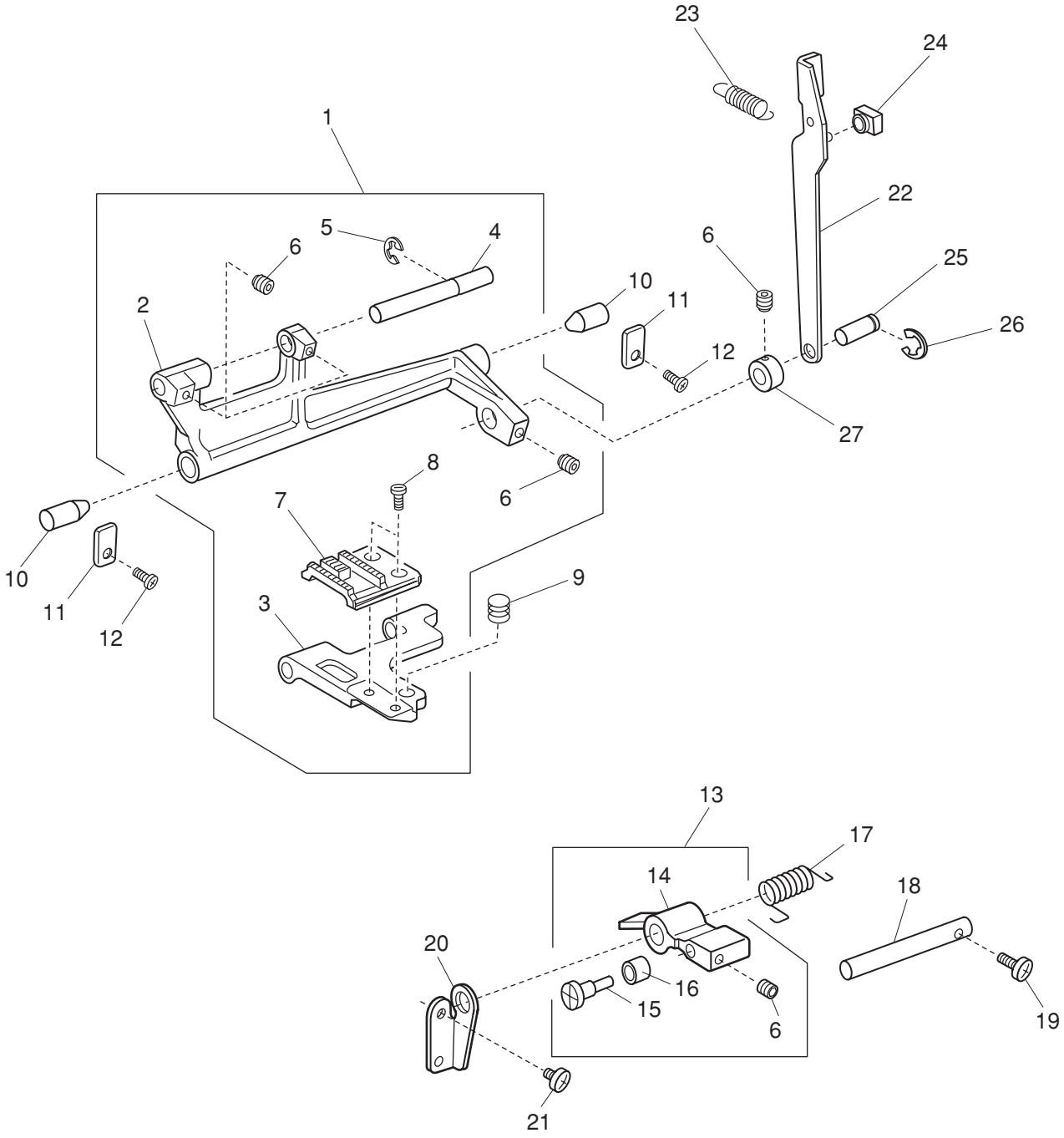




PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	744004001	Needle plate
2	681009101	Setscrew
3	735950003	Lower shaft gear (unit)
4	000110107	Hexagonal socket screw 5x5 (WP)
5	000036201	Washer FT80-0.5
6	735233003	Bushing
7	735234004	Bushing
8	000111304	Hexagonal socket screw 5x5
9	000172602	Setscrew 5x8
10	735061008	Feed lifting cam
11	639036003	Lower shaft crank arm
12	822070003	Felt
13	735236006	Lower shaft
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	102261000	Bobbin

PARTS LIST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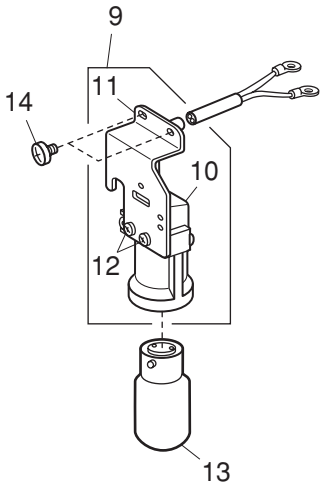
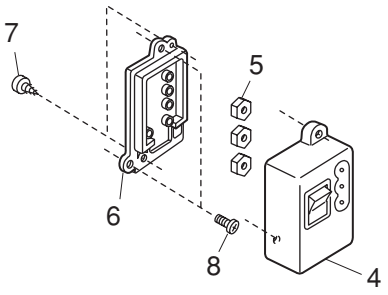
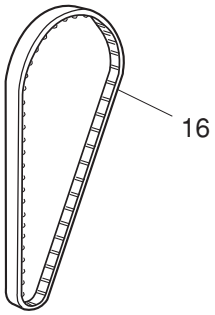
PARTS LIST

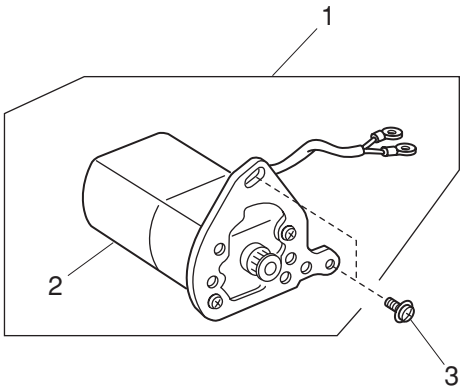
KEY NO.	PARTS NO.	DESCRIPTION
1	735612000	Feed rock shaft (unit)
2	735078008	Feed rock shaft
3	735079009	Feed bar
4	735080003	Feed bar shaft
5	000002507	Snap ring E-4
6	000111201	Hexagonal socket screw 4x4
7	735081004	Feed dog
8	735082005	Setscrew
9	735083006	Feed bar spring
10	735084007	Feed rock shaft center
11	735085008	Feed rock shaft center plate
12	000101404	Setscrew 4x6
13	301608006	Feed lifting arm (unit)
14	301027005	Feed lifting arm
15	735087000	Feed lifting pin
16	735088001	Feed lifting roller
17	735089002	Feed lifting spring
18	735090006	Feed lifting shaft
19	000101703	Setscrew 4x12
20	739022009	Feed lifting shaft holder
21	000081119	Setscrew 4x6
22	743012009	Feed rod
23	743013000	Feed rod spring
24	102141003	Feed regulator slide block
25	735071104	Feed rock shaft connecting pin
26	000002806	Snap ring E-6
27	735276008	Ring

PARTS LIST





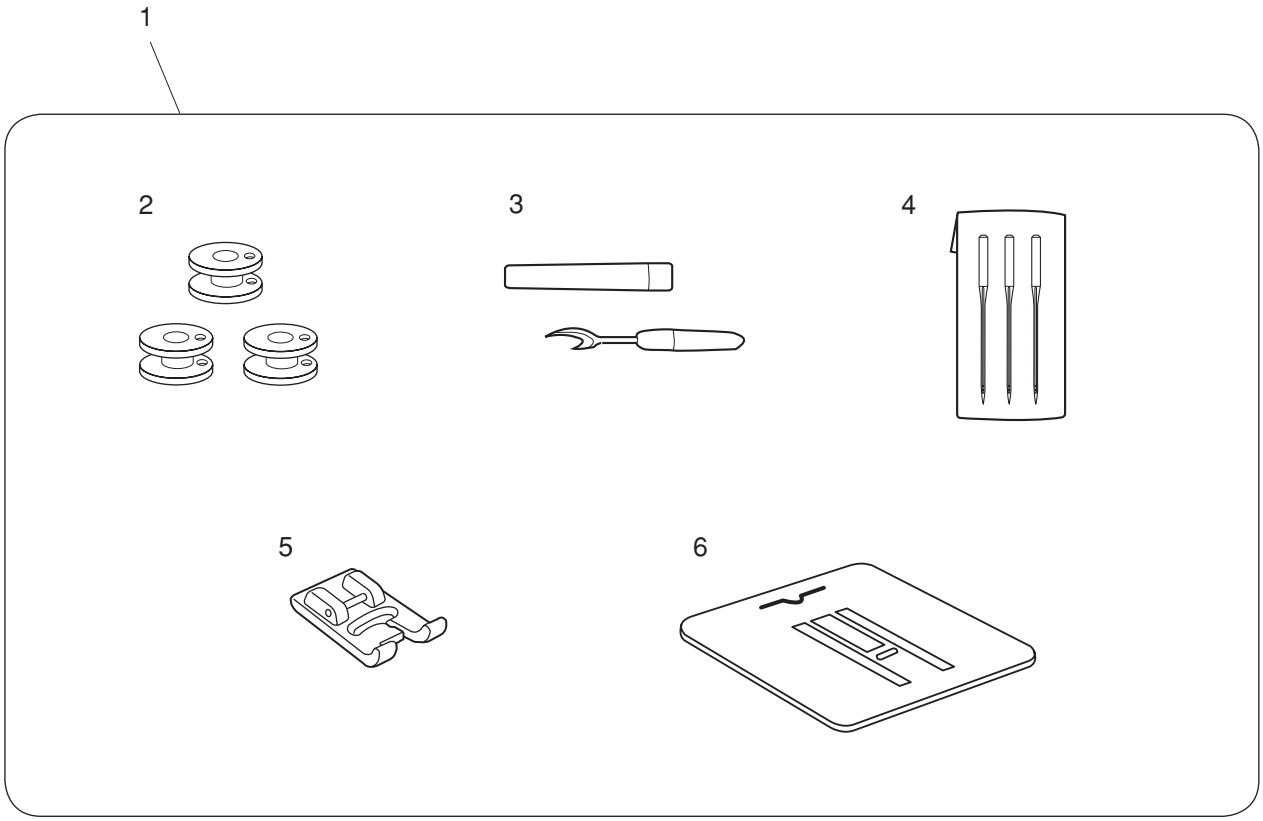


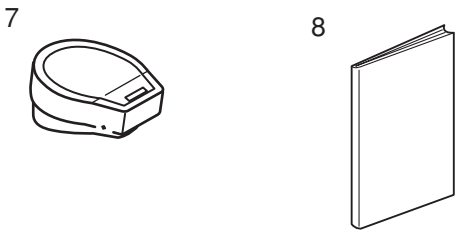


PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	743611048	Motor assy (unit) (127V)
	743611303	Motor assy (unit) (220V)
2	014570102	Motor (127V)
	024070407	Motor (220V)
3	000115504	Setscrew TP 5x10
4	739503308	Machine socket (unit)
5	000060802	Nut 3-1-5.5
6	739037007	Machine socket cover
7	000107802	Setscrew 3x10 (B)
8	000103509	Setscrew 4x10
9	310622107	Lamp socket (unit)
10	655681009	Lamp socket (unit)
11	310065106	Fase plate set plate
12	000120203	Setscrew 3x8 (B)
13	000009803	Lamp 120V 15W
	000009009	Lamp 240V 15W
14	000081005	Setscrew 4x8
15	000053008	Cord binder
16	650166008	Motor timing belt

PARTS LIST





PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	743870391	Accessory set
2	102261000	Bobbin
3	647808009	Seam ripper
4	639804000	Needle set
5	737801015	Satin stitch foot
6	735801008	Darning plate
7	C-1037-1	Foot control (127V)
	C-2086	Foot control (220V)
8	306801121	Instruction book