SERVICE MANUAL

&

PARTS LIST

MODEL:NH22

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WHAT TO DO WHEN

CONDITION	CAUSE	HOW TO FIX	REFERENCE
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	2. NEEDLE IS BENT OR WORN.	CHANGE THE NEEDLE.	
	3. INCORRECTLY THREADED	RETHREAD.	
	4. NEEDLE OR THREAD ARE INAPPROPRIATE FOR THE FABRIC BEING SEWN.	USE THE RECOMMENDED SEWING NEEDLE AND THREAD.	
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WHAT TO DO WHEN

CONDITION	CAUSE	HOW TO FIX	REFERENCE
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WHAT TO DO WHEN

CONDITION	CAUSE	HOW TO FIX	REFERENCE
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SERVICE ACCESS

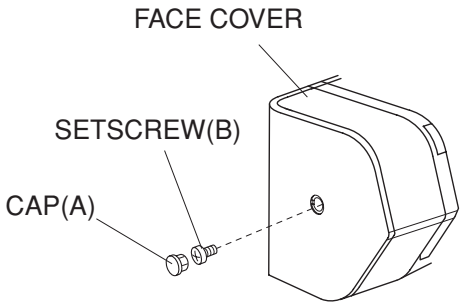
FACE COVER

TO REMOVE:

1. REMOVE THE FACE COVER BY REMOVING THE CAP (A) AND SETSCREW (B).

TO ATTACH:

2. FOLLOW THE ABOVE PROCEDURE IN REVERSE.



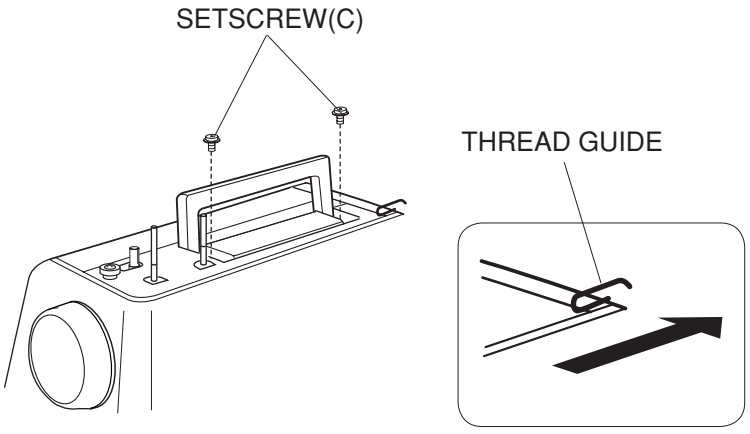
TOP COVER

TO REMOVE:

1. REMOVE THE SETSCREWS (C).
2. SLIDE THE CORNER OF THE TOP COVER SLIGHTLY IN THE DIRECTION OF ARROW. BE CAREFUL THAT THE THREAD GUIDE SHOULD NOT INTERFERE WITH THE TOP COVER WHEN REMOVING.
3. TAKE THE TOP COVER OUT.

TO ATTACH:

4. FOLLOW THE ABOVE PROCEDURE IN REVERSE.



SERVICE ACCESS

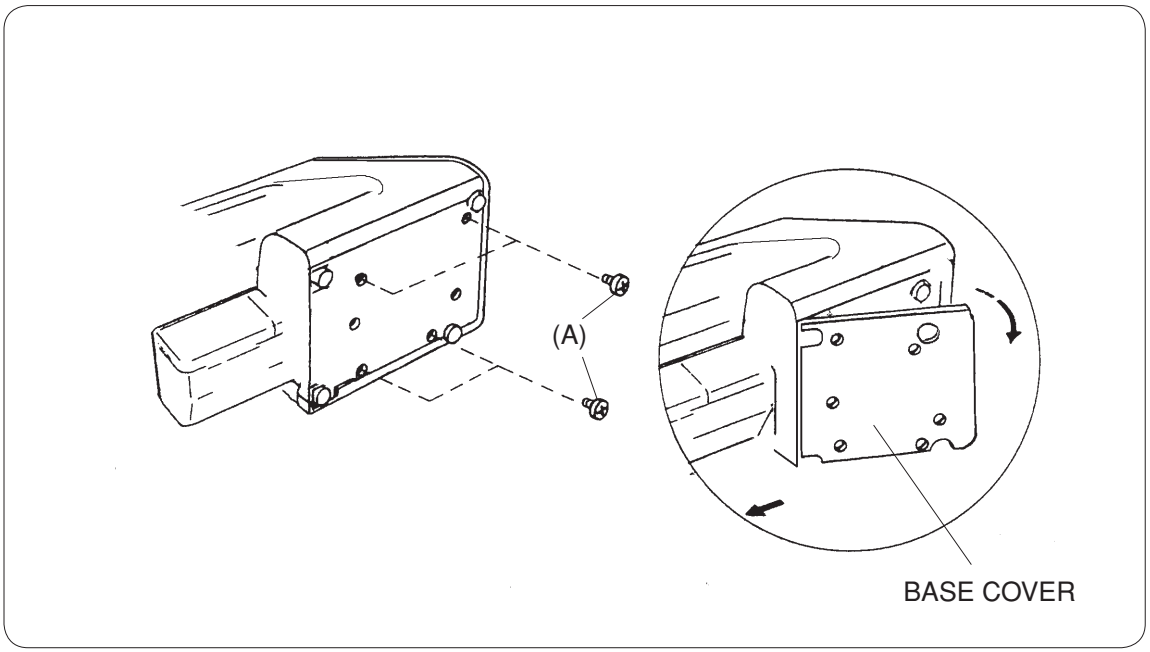
BASE COVER

TO REMOVE:

1. LOOSEN THE SETSCREWS (A).
2. REMOVE THE BASE PLATE.

TO ATTACH:

3. MOUNT THE BASE PLATE AND SECURE IT WITH SETSCREWS.



SERVICE ACCESS

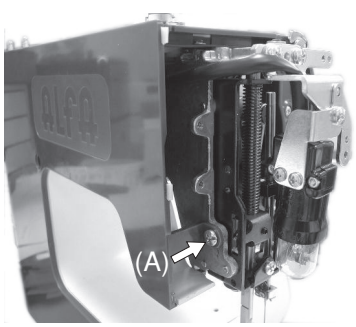
REAR COVER

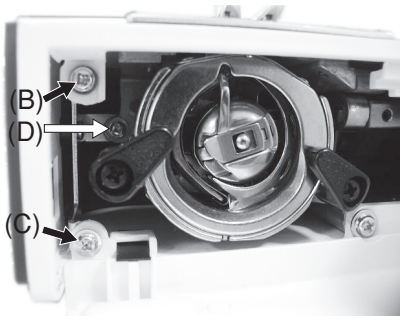
TO REMOVE:

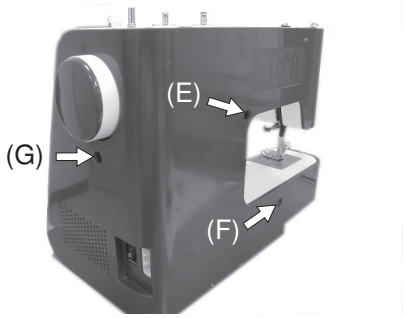
1. REMOVE THE FACE COVER AND SETSCREW (A) (SEE PAGE 4).
2. OPEN THE SHUTTLE COVER AND REMOVE THE SETSCREWS (B), (C) AND (D).
3. REMOVE THE CAPS AND SETSCREWS (E), (F), (G),
4. REMOVE THE SETSCREWS (H) AND (I).
5. OPEN THE TOP COVER (SEE PAGE 5). LOOSEN THE SETSCREW (J).
6. REMOVE THE REAR COVER.

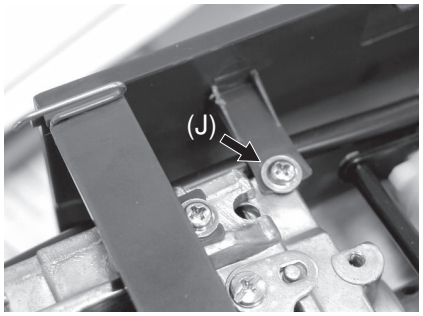
TO ATTACH:

7. MOUNT THE REAR COVER IN REVERSE PROCEDURE OF THE REMOVING.









SERVICE ACCESS

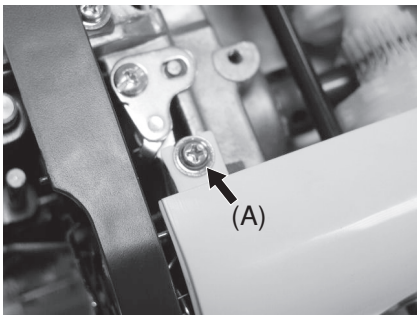
FRONT COVER

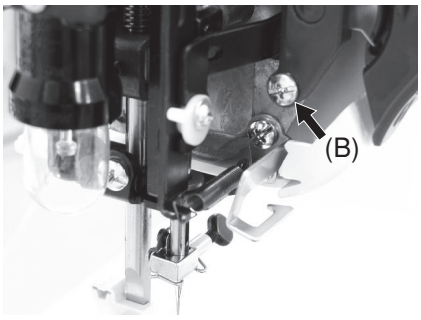
TO REMOVE:

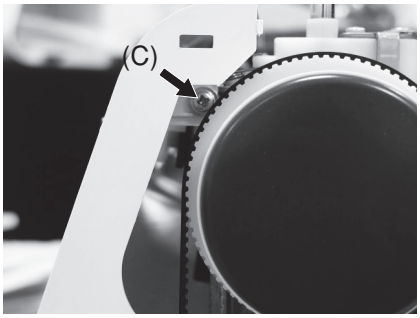
1. REMOVE THE FACE COVER AND TOP COVER (SEE PAGE 4 AND 5).
2. LOOSEN THE SETSCREW (A).
3. REMOVE THE SETSCREW (B),
   REMOVE THE REAR COVER (SEE PAGE 6).
   LOOSEN THE SETSCREW (C), (E) AND (H). REMOVE THE SETSCREW (D).
4. OPEN THE SHUTTLE COVER. REMOVE THE SETSCREW (F).
5. REMOVE THE BASE COVER AND THE SETSCREW (G) (SEE PAGE 5).

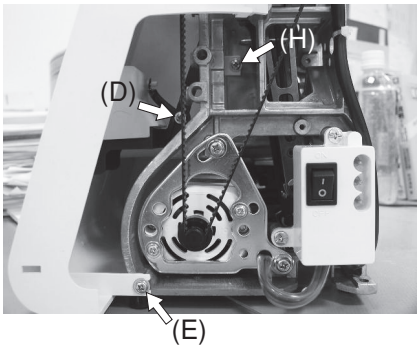
TO ATTACH:

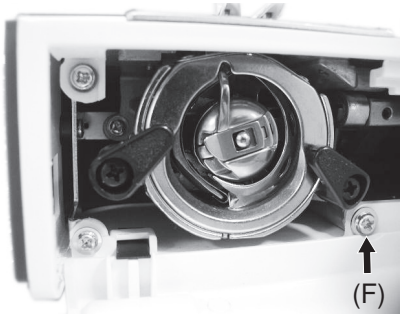
6. MOUNT THE FRONT COVER IN REVERSE PROCEDURE OF THE REMOVING.

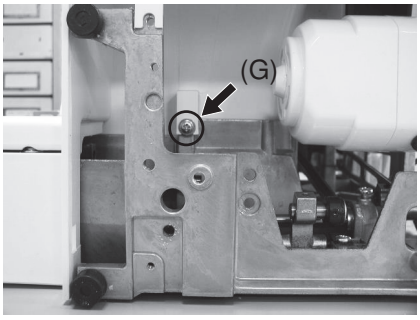












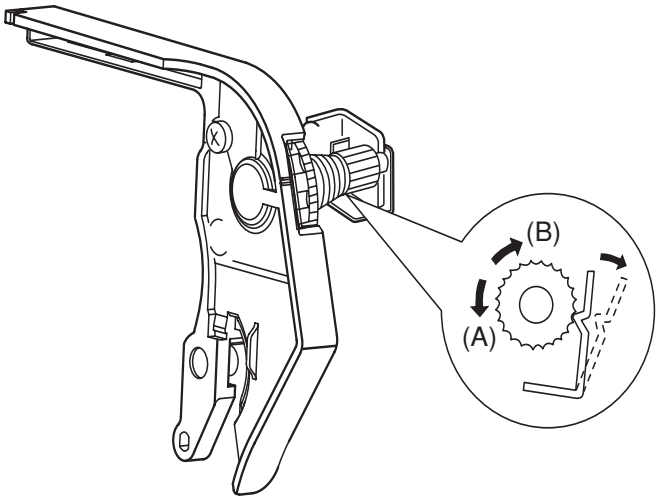
MECHANICAL ADJUSTMENT

TOP TENSION

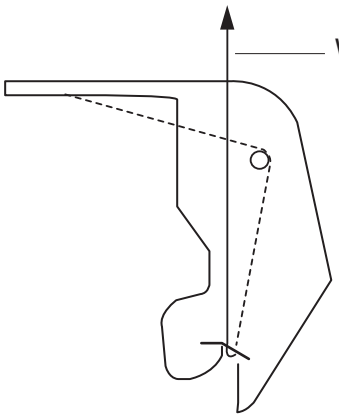
THE TOP TENSION SHOULD BE BETWEEN 65 AND 80G WHEN PULLING THE THREAD UP IN THE DIRECTION OF C.

* USE POLYESTER SEWING THREAD #50 (WHITE).
* IF IT IS NOT WITHIN THE ABOVE LIMIT, ADJUST AS FOLLOWS.

1. SET THE TENSION DIAL “4”.
2. REMOVE THE COVER.
3. LOWER THE PRESSER FOOT.
   • IF THE TOP TENSION IS TOO LOOSE, TURN THE LEAD SCREW IN THE DIRECTION (A).
   • IF THE TOP TENSION IS TOO TIGHT, TURN THE LEAD SCREW IN THE DIRECTION (B).
4. CHECK THE TOP TENSION AND ATTACH THE COVER.



PULL THE THREAD AT THE SPEED OF 110 MM/ SEC IN THE DIRECTION OF ARROW



MECHANICAL ADJUSTMENT

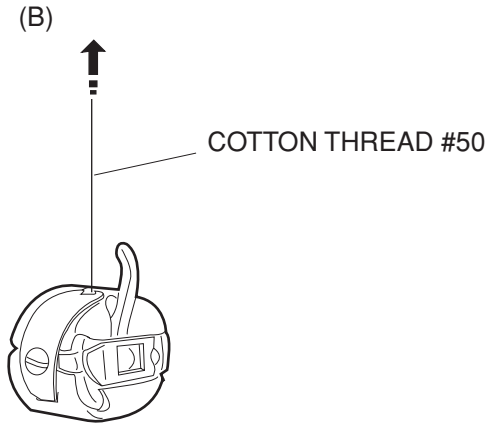
BOBBIN TENSION

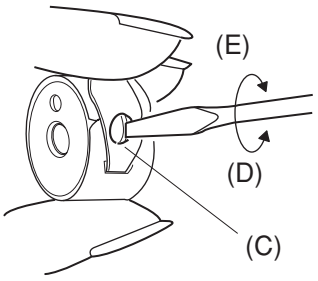
TO CHECK:

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:

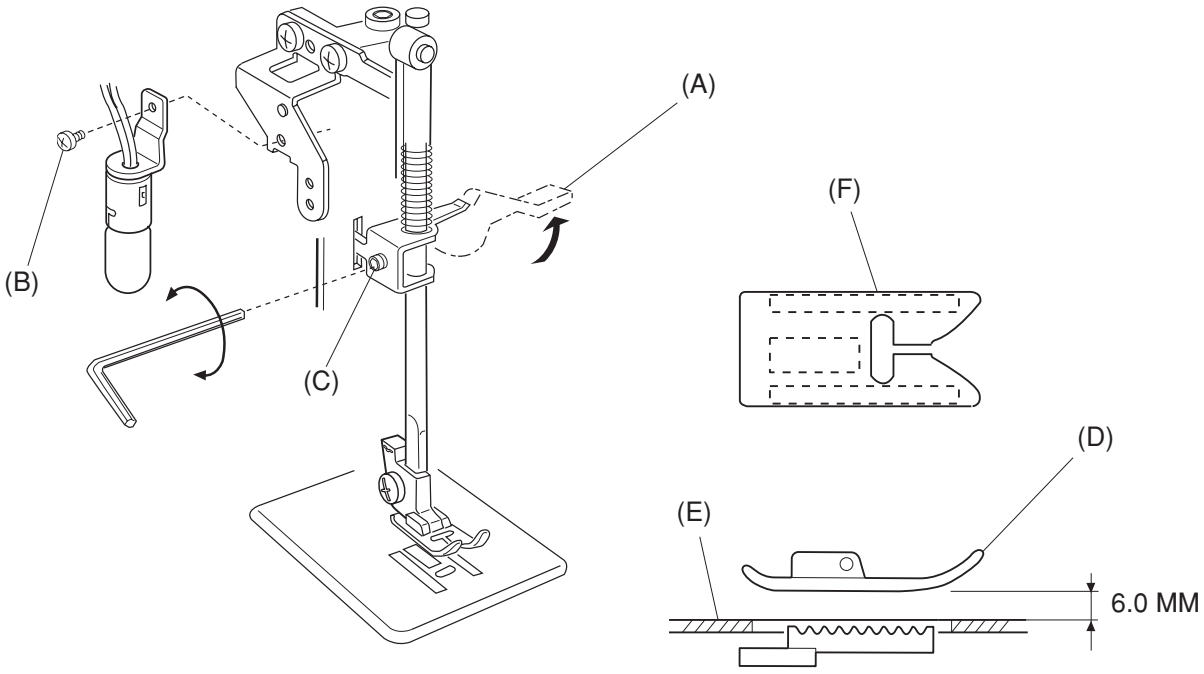
1. RAISE THE PRESSER FOOT LIFTER (A).
2. THE DISTANCE BETWEEN THE PRESSER FOOT (D) AND THE NEEDLE PLATE (E) SHOULD BE 6.0 MM (0.24˝).

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 7).
2. REMOVE THE SETSCREWS (B) AND THE LAMP SOCKET, THEN LOOSEN THE SCREW (C) ON THE PRESSER BAR HOLDER.
   ADJUST THE DISTANCE BETWEEN THE PRESSER FOOT (D) AND THE NEEDLE PLATE (D) TO 6.0 MM (0.24˝).
3. TIGHTEN THE SCREW (C) SECURELY.
4. TIGHTEN THE SETSCREW (B) TO SECURE THE LAMP SOCKET.
5. ATTACH THE FACE COVER.

NOTE:

WHEN YOU TIGHTEN THE SCREW (C), MAKE SURE THAT BOTH SIDES OF THE PRESSER FOOT ARE PARALLEL TO THE FEED DOG SLOTS (F) IN THE NEEDLE PLATE (E).



MECHANICAL ADJUSTMENT

NEEDLE SWING

TO CHECK:

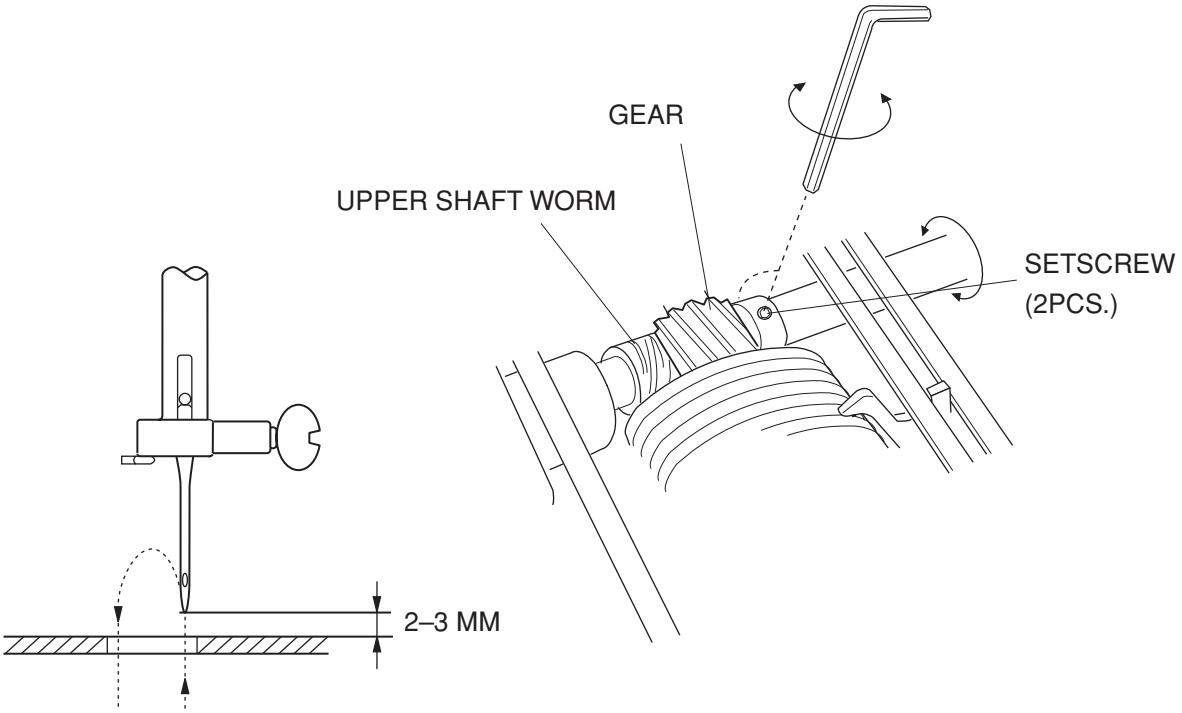
ADJUST THE NEEDLE SWING ACCORDING TO THE FOLLOWING PROCEDURE, IF THE NEEDLE BAR STARTS MOVING SIDEWAYS WHILE THE NEEDLE IS IN THE FABRIC AT SEWING THE ZIGZAG PATTERN (WITH MAXIMUM ZIGZAG WIDTH).

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL WITH MAXIMUM ZIGZAG WIDTH, AND REMOVE THE T TOP COVER (SEE PAGE 4).
2. LOOSEN TWO SETSCREWS.
3. ADJUST THE NEEDLE SWING BY TURNING THE HANDWHEEL, WHILE HOLDING THE WORM SO AS NOT TO ROTATE IT, UNTIL THE NEEDLE SWING STARTS 2–3 MM ABOVE THE NEEDLE PLATE AFTER THE NEEDLE HAS COME OUT OF THE RIGHT SIDE OF THE NEEDLE HOLE.
4. TIGHTEN TWO SETSCREWS.
5. MOUNT 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 POSITION

TO CHECK:

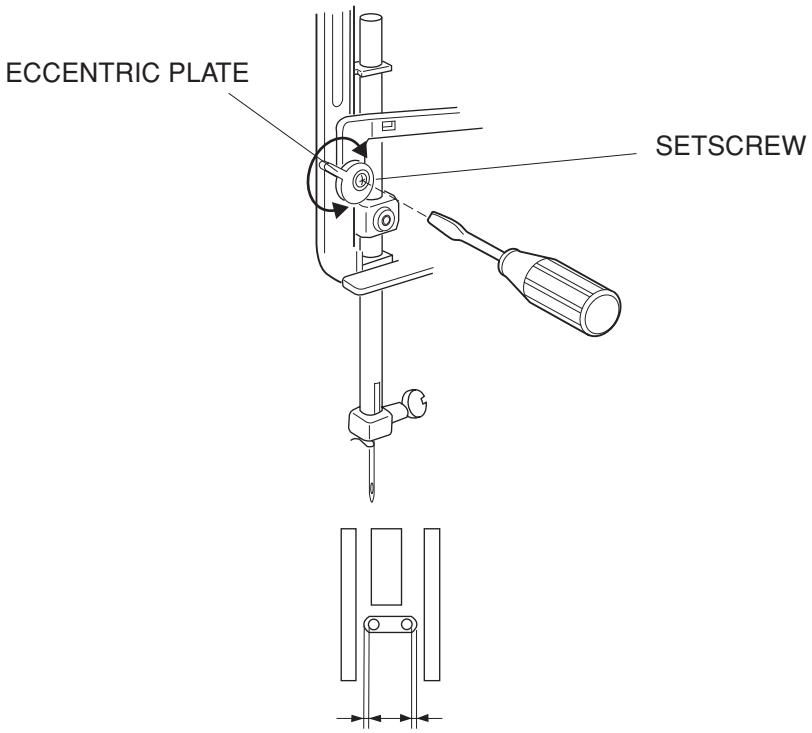
WHEN THE NEEDLE SWINGS IN MAXIMUM ZIGZAG WIDTH, THE DISTANCE BETWEEN BOTH ENDS OF THE NEEDLE HOLE IN THE NEEDLE PLATE AND THE NEEDLE DROP POSITIONS SHOULD BE EQUAL.
IF NOT, ADJUST AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 4).
2. SET THE PATTERN SELECTOR DIAL AT MAXIMUM ZIGZAG WIDTH.
3. LOOSEN THE SETSCREW.
4. TURN THE ECCENTRIC PLATE TO ADJUST THE NEEDLE DROP.
5. TIGHTEN THE SETSCREW.
6. ATTACH THE FACE COVER.

NOTE:

CHECK THE HOOK TIMING AFTER THIS ADJUSTMENT.



BOTH CLEARANCES SHOULD BE EQUAL

MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND SHUTTLE (ADJUSTMENT METHOD NO. 1)

TO CHECK:

THE CLEARANCE BETWEEN THE NEEDLE AND SHUTTLE RACE SHOULD BE –0.05 TO +0.10 MM.
IF NOT, ADJUST AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 4).
2. SET THE PATTERN SELECTOR DIAL AT " ".
3. LOOSEN SCREW (A), AND MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION OF THE ARROWS TO GET A CLEARANCE BETWEEN –0.05 TO +0.10 MM.

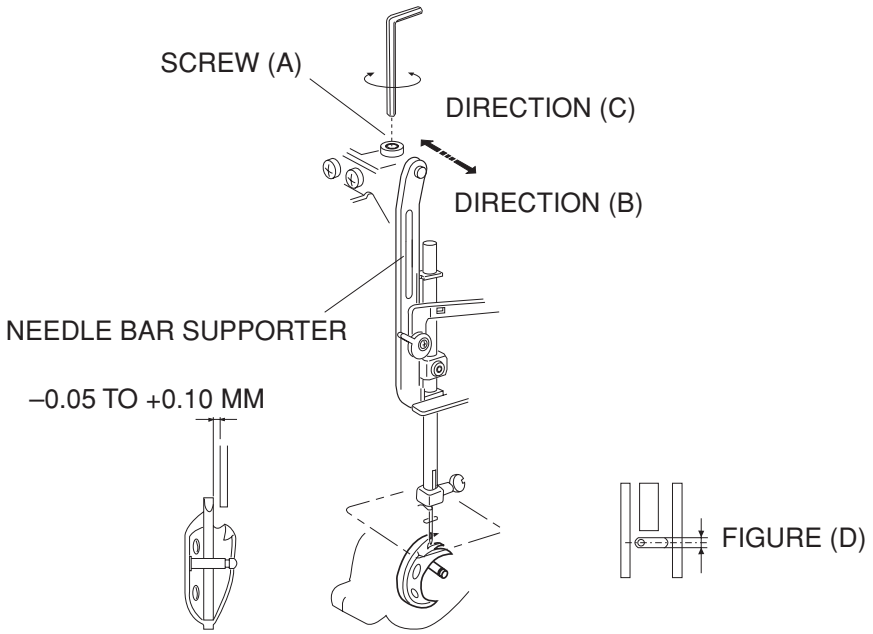
* IF CLEARANCE IS TOO WIDE, MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION (B).

* IF CLEARANCE IS TOO NARROW, MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION (C).

NOTE:

AFTER THIS ADJUSTMENT, CHECK THAT THE CLEARANCE BETWEEN THE 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 ADJUSTMENT METHOD NO. 2 (SEE PAGE 14).

4. ATTACH THE FACE COVER.



CLEARANCE BETWEEN NEEDLE AND NEEDLE PLATE SHOULD BE 0.15 MM OR MORE.

MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND SHUTTLE (ADJUSTMENT METHOD NO.2)

TO CHECK:

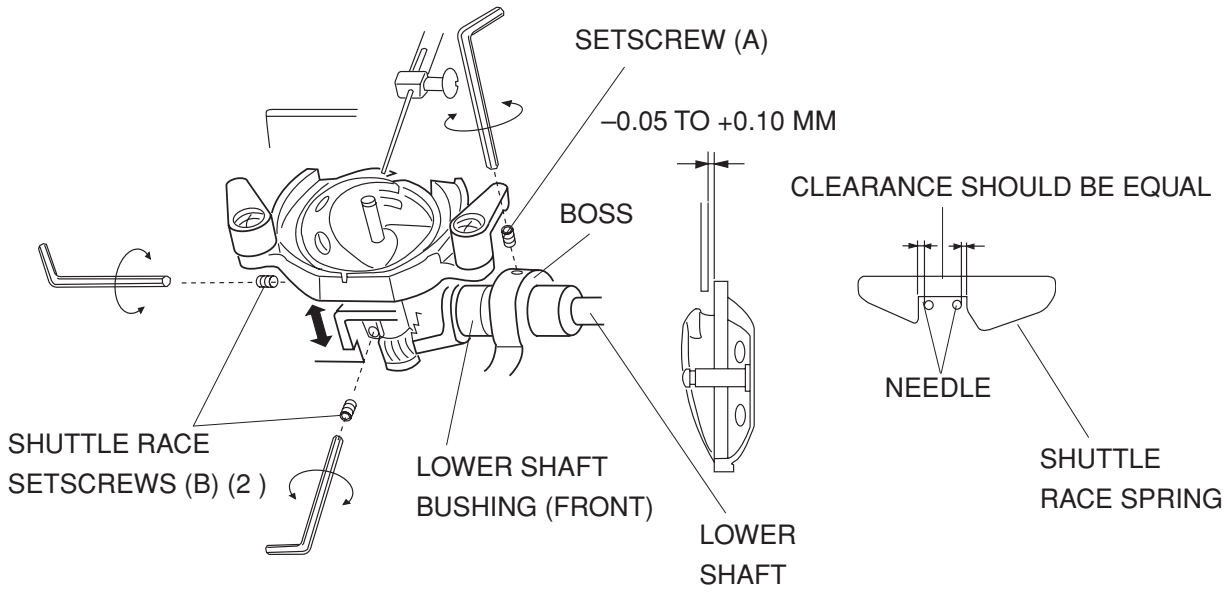
USE THIS ADJUSTMENT METHOD NO. 2 IF THE CLEARANCE CANNOT BE ADJUSTED BY METHOD NO.1.
THE CLEARANCE BETWEEN THE NEEDLE AND SHUTTLE RACE SHOULD BE –0.05 TO +0.10 MM.

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL AT " ".
2. REMOVE THE REAR COVER (SEE PAGE 6).
3. LOOSEN THE SCREW (A) ON THE LOWER SHAFT BUSHING AND SLIDE THE GEAR ABOUT 0.5 MM TO THE RIGHT TO CREATE SOME BACKLASH BETWEEN THE GEARS.
4. LOWER THE NEEDLE AND LOOSEN THE TWO SHUTTLE RACE SETSCREWS (B). PULL UP OR PUSH DOWN THE SHUTTLE RACE 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 SELECTOR 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, ADJUST BY TURNING THE SHUTTLE RACE UNIT.
6. TIGHTEN THE TWO SHUTTLE RACE SETSCREWS (B).
7. SLIDE THE GEAR BACK TO THE ORIGINAL POSITION WHILE ADJUSTING THE BACKLASH.
8. TIGHTEN SCREW (A) FIRMLY.
9. ATTACH THE REAR COVER.

NOTE:

THE ROTARY PLAY OF THE TIP OF THE SHUTTLE DRIVER SHOULD BE 0.3 MM OR LESS AND THE LOWER SHAFT SHOULD TURN SMOOTHLY. AFTER THE ADJUSTMENT, CHECK THE HOOK TIMING.



MECHANICAL ADJUSTMENT

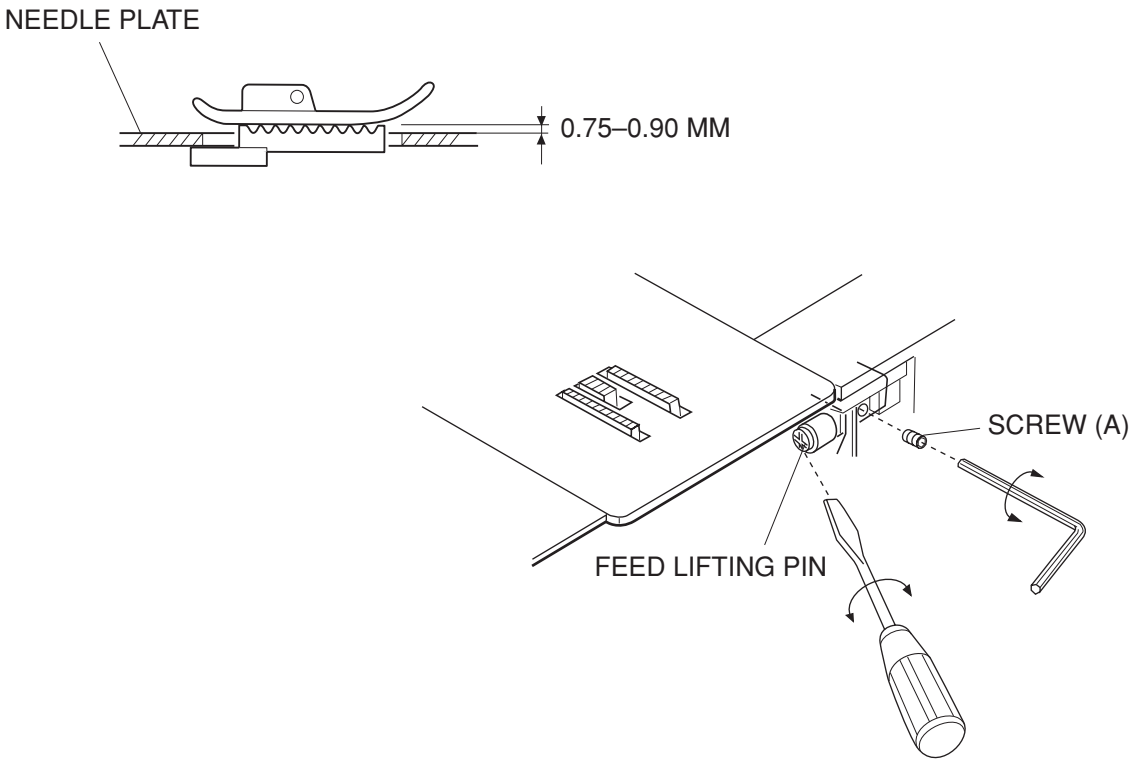
FEED DOG HEIGHT

TO CHECK:

1. LOWER THE PRESSER FOOT.
2. TURN THE HANDWHEEL TOWARD YOU UNTIL THE NEEDLE BAR COMES TO THE FEED DOG ABOVE THE NEEDLE PLATE SHOULD BE 0.75–0.90 MM.
   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 POINT.
3. LOOSEN THE SCREW (A) .
4. TURN THE FEED LIFTING PIN TO ADJUST THE HEIGHT OF FEED DOG (0.75–0.90 MM).
5. TIGHTEN THE SCREW (A).
6. TURN THE HANDWHEEL TOWARD YOU TO RECHECK THE HEIGHT OF FEED DOG.



MECHANICAL ADJUSTMENT

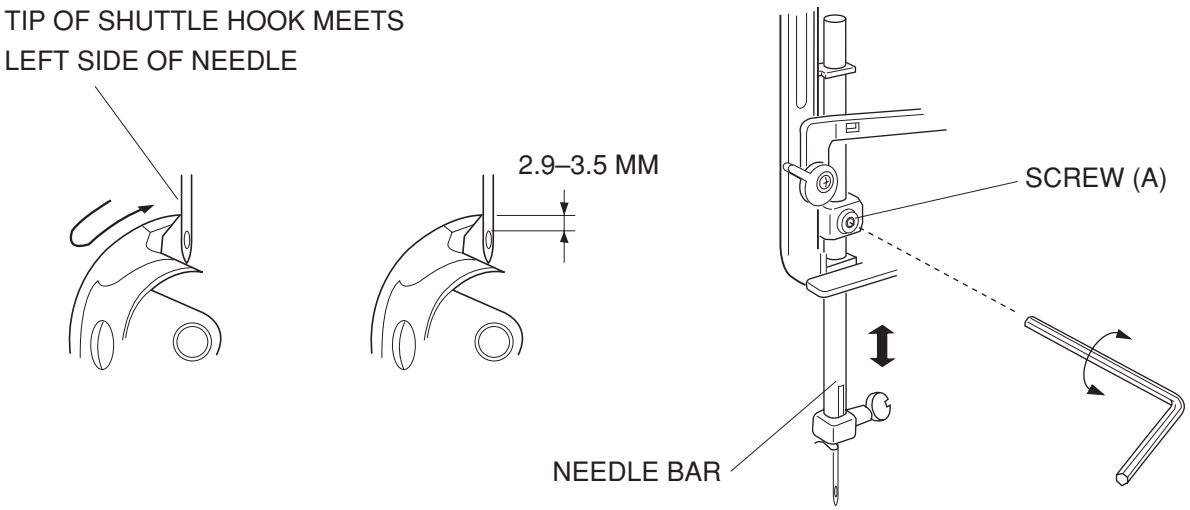
NEEDLE BAR HEIGHT

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. OPEN THE FACE COVER.
2. SET THE PATTERN SELECTOR DIAL AT " ". MODEL NEXT40 PATTERN SELECT DIAL AT " ", WIDTH SELECTOR DIAL AT " 0 ".
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 SCREW (A).
7. ADJUST THE HEIGHT OF THE NEEDLE BAR BY MOVING THE NEEDLE BAR UPWARD OR DOWNWARD WITHOUT TURNING IT.
8. TIGHTEN THE SCREW (A).
9. ATTACH THE SHUTTLE RACE RING.



MECHANICAL ADJUSTMENT

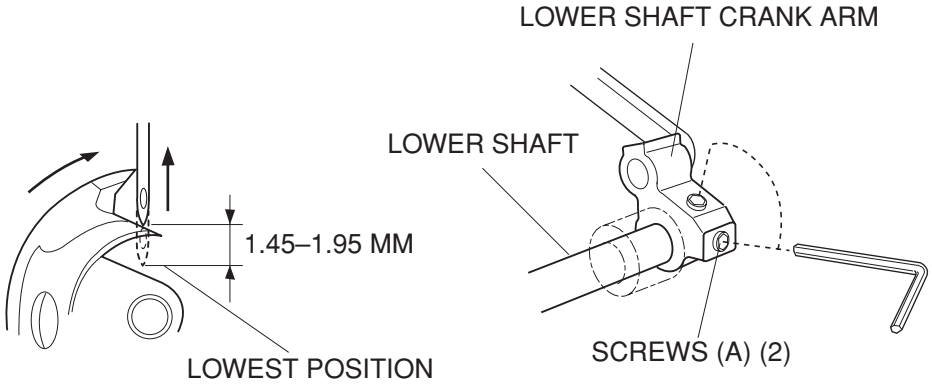
NEEDLE TIMING TO SHUTTLE

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 " ⊂•⊃ ".
   FOR MODEL NEXT 40, SELECT DIAL AT " ⊂•⊃ ", WIDTH SELECTOR DIAL AT " 0 ".
2. REMOVE THE BASE (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 SCREWS (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.
   THEN, FURTHER TURN THE HANDWHEEL TO RAISE THE NEEDLE ABOUT 1.7 MM FROM ITS LOWEST POSITION.
8. TIGHTEN THE SCREWS (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 BASE.



MECHANICAL ADJUSTMENT

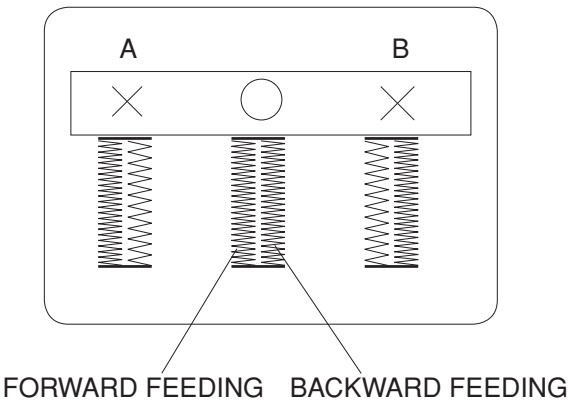
BUTTONHOLE FEED BALANCE

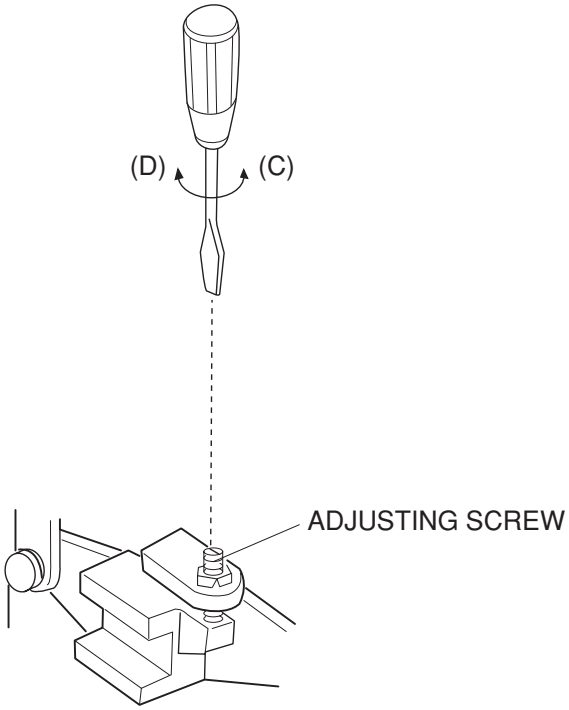
TO CHECK:

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. CHECK THE FEED BALANCE BY SEWING BUTTONHOLES.
2. REMOVE THE CAP ON THE FRONT COVER.
3. TURN THE ADJUSTING SCREW IN THE DIRECTION OF (C) IN CASE OF (A) (RIGHT STITCHES ARE COARSE), OR IN THE DIRECTION OF (D) IN CASE OF (B) (LEFT STITCHES ARE COARSE).
4. MOUNT THE CAP.





MECHANICAL ADJUSTMENT

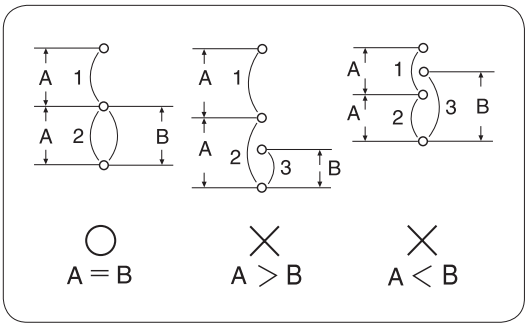
DISTORTED PATTERN (MODEL NEXT 40, 30 ONLY)

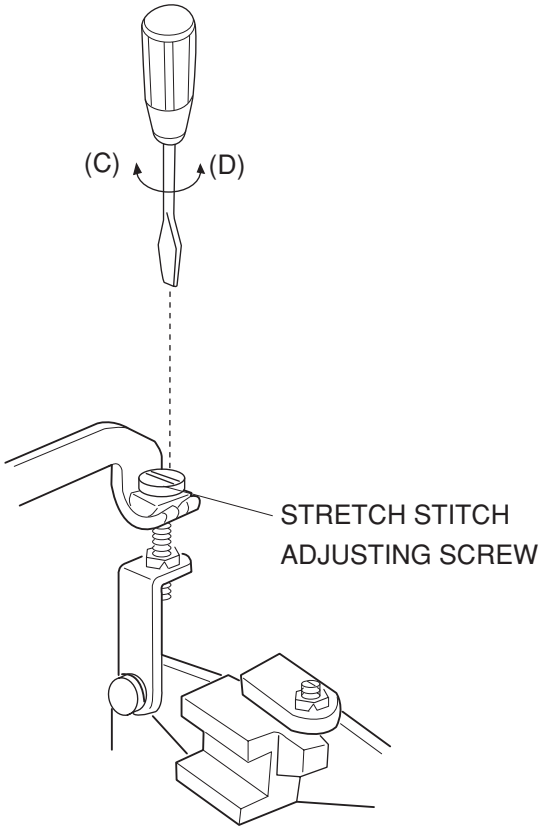
TO CHECK:

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 AT " "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. MOUNT THE CAP.





MECHANICAL ADJUSTMENT

ADJUSTING BUTTONHOLE LEVER POSITION

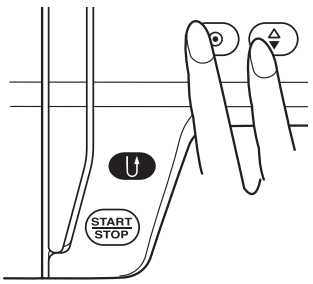
TO ADJUST THE BUTTONHOLE LEVER GUIDE:

1. ENTER THE BUTTONHOLE SENSOR ADJUSTING MODE. (SEE BELOW. THE LCD SHOULD DISPLAY BH SYMBOL.)
2. REMOVE THE FACE COVER (SEE PAGE 8) AND LOOSEN THE SETSCREW (A).
3. MOVE THE BUTTONHOLE LEVER GUIDE SO THE BH SYMBOL DISAPPEAR WHEN THE BUTTON HOLE LEVER IS LOWERED. TIGHTEN THE SETSCREW (A). TO ADJUST THE BUTTONHOLE SENSOR POSITION.
4. ATTACH THE BUTTONHOLE FOOT (R).
5. LOWER THE BUTTONHOLE LEVER TO ITS LOWEST POSITION AND OPEN A 1.6 MM GAP BETWEEN THE SLIDER AND THE BUTTONHOLE FOOT.
6. TURN THE ADJUSTING SCREW TO THE LEFT UNTIL THE LCD DISPLAY BH SYMBOL.
7. NEXT, TURN THE ADJUSTING SCREW TO THE RIGHT UNTIL THE BH SYMBOL DISAPPEARS.
8. TURN OFF THE POWER SWITCH.
9. ATTACH THE FACE COVER.

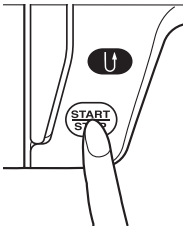
NOTE:

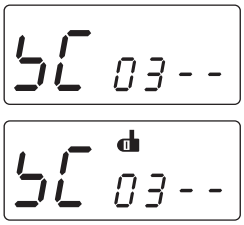
IF THERE IS ANY LINT OR DUST IN THE BUTTONHOLE SENSOR SLIT, LOOSEN THE 2 SCREWS (B) AND CLEAN IT OUT WITH A SWAB.

TO ENTER ADJUSTING MODE

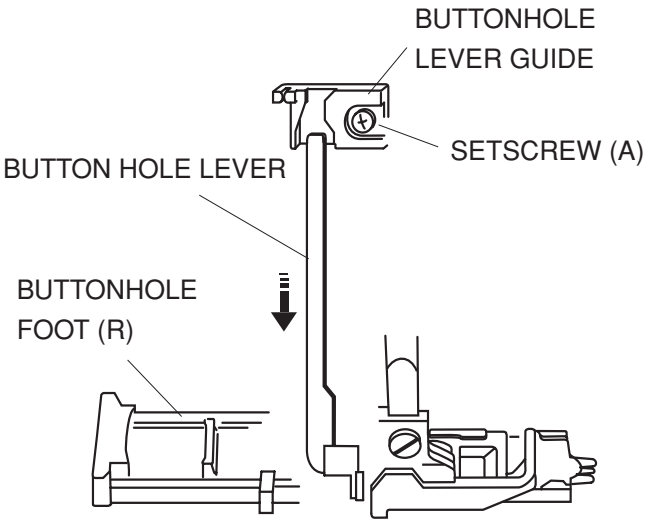


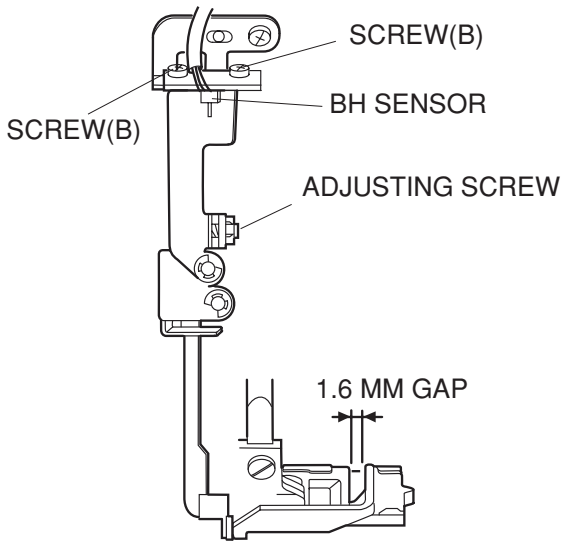
TURN THE POWER SWITCH ON WHILE PRESSING THE NEEDLE UP/DOWN BUTTON AND LOCKING STITCH BUTTON SIMULTANEOUSLY.





PRESS THE START/STOP BUTTON TO SELECT THE STEP “SC 03”.





MECHANICAL ADJUSTMENT

DISENGAGEMENT OF CAM FOLLOWER

TO CHECK:

IF THE CLEARANCE BETWEEN THE CAM FOLLOWER AND THE TOP CONVEX OF THE ZIGZAG CAM IS NOT ENOUGH, THE PATTERN SELECTOR DIAL IS BLOCKED OR WILL NOT SELECT THE CORRECT PATTERN.

ADJUSTMENT PROCEDURE:

1. REMOVE THE FRONT COVER (SEE PAGE 7).
2. SET THE PATTERN SELECTOR DIAL AT PATTERN " ".
3. PUT THE CAM FOLLOWER TO THE ZIGZAG CAM AND PUT THE CAM FOLLOWER RELEASING ARM TO THE PATTERN SELECTOR CAM.
4. LOOSEN THE SET SCREW.
5. PUSH THE CONVEX PART OF THE CAM FOLLOWER RELEASING ARM IN THE DIRECTION OF ARROW UNTIL THE CAM FOLLOWER RELEASING ARM TOUCHES POSITION (A) OF THE PATTERN SELECTOR CAM, AND THEN, TIGHTEN THE SETSCREW.

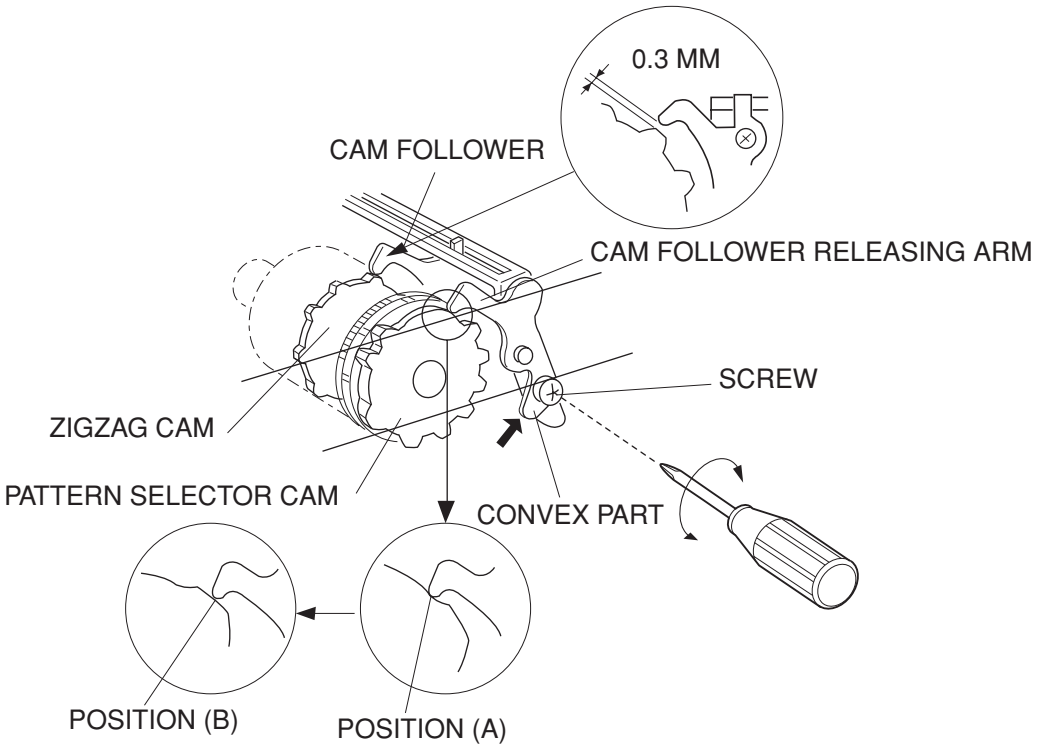
NOTE:

AFTER THIS ADJUSTMENT, CHECK THAT THE CLEARANCE BETWEEN THE ZIGZAG CAM AND THE CAM FOLLOWER IS ABOUT 0.3 MM WHEN SETTING THE CAM FOLLOWER RELEASING ARM ONTO POSITION (B) OF PATTERN SELECTOR CAM.

6. MOUNT THE FRONT COVER.

NOTE:

CHECK THE NEEDLE MOVEMENT FOR STRAIGHT STITCH.



MECHANICAL ADJUSTMENT

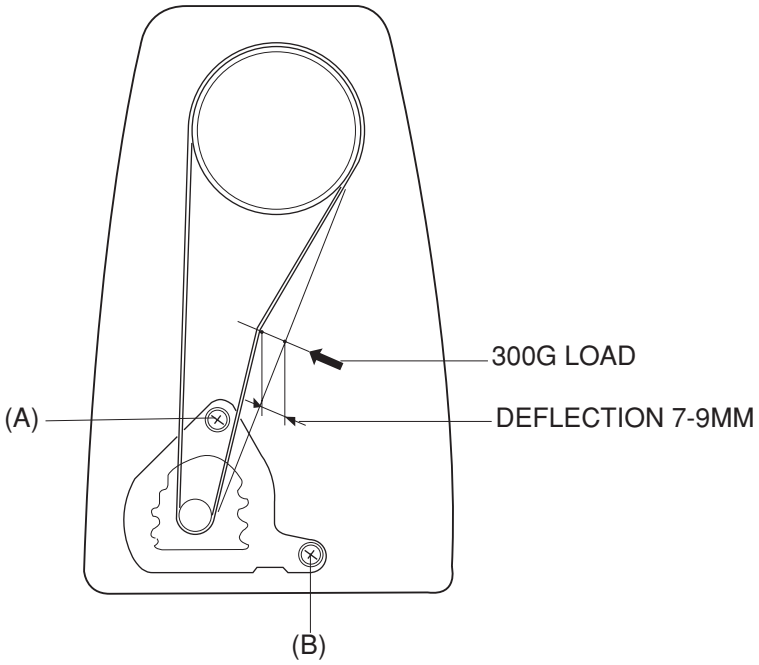
MOTOR BELT TENSION

TO CHECK:

1. IMPROPER BELT TENSION MAY CAUSE NOISE, OVERLOAD OF MOTOR, SLOW RUNNING OR MOTOR BELT JUMPING.
2. THE BELT DEFLECTION SHOULD BE 7 MM - 9 MM WHEN PRESSING THE MIDDLE OF THE MOTOR BELT WITH APPROXIMATELY 300 GRAMS OF PRESSURE.

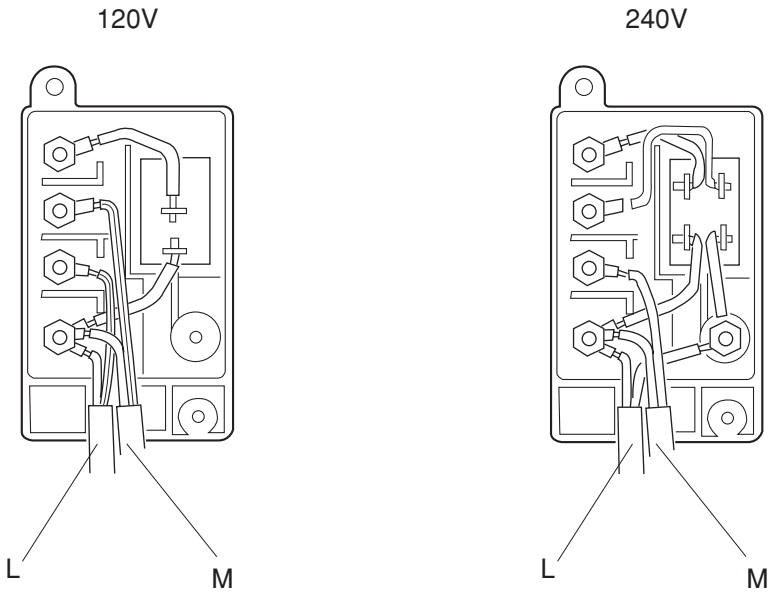
ADJUSTMENT PROCEDURE:

1. REMOVE THE FRONT AND REAR COVER (SEE PAGE 6, 7).
2. LOOSEN THE SCREWS (A) AND (B).
3. MOVE THE MOTOR UP OR DOWN TO ADJUST THE DEFLECTION ABOUT 7 MM -9 MM.
4. TIGHTEN THE SCREWS (A) AND (B).
5. ATTACH THE FRONT AND REAR COVER.



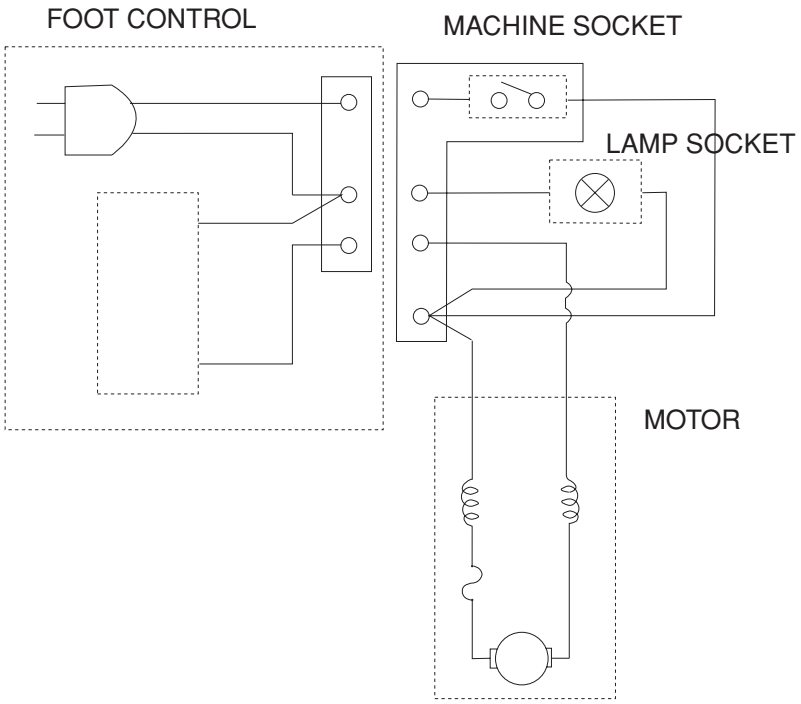
WIRING

1. WIRING FOR MACHINE SOCKET UNIT

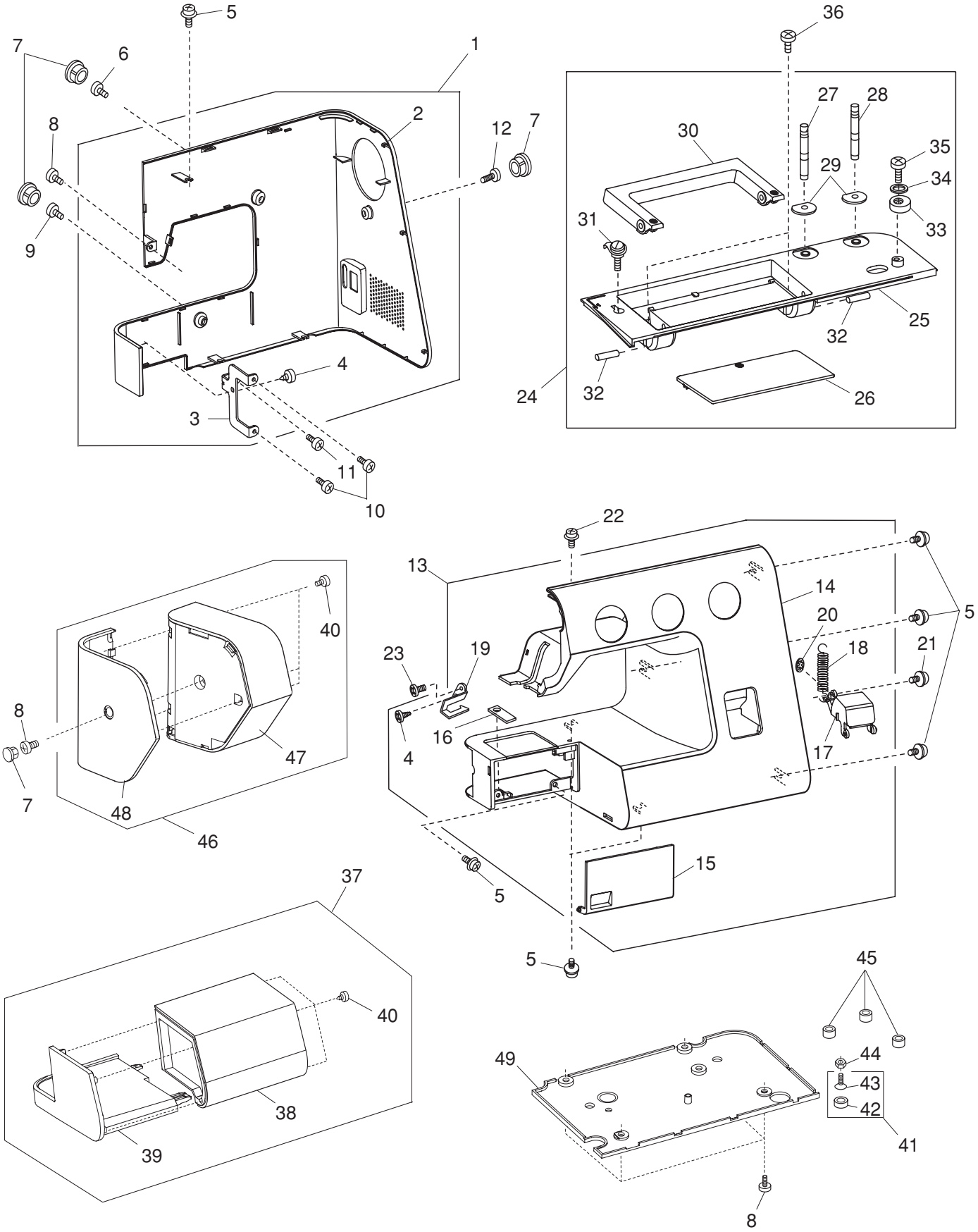


M: MOTOR
L: LAMP

2. WIRING DIAGRAM



PARTS LIST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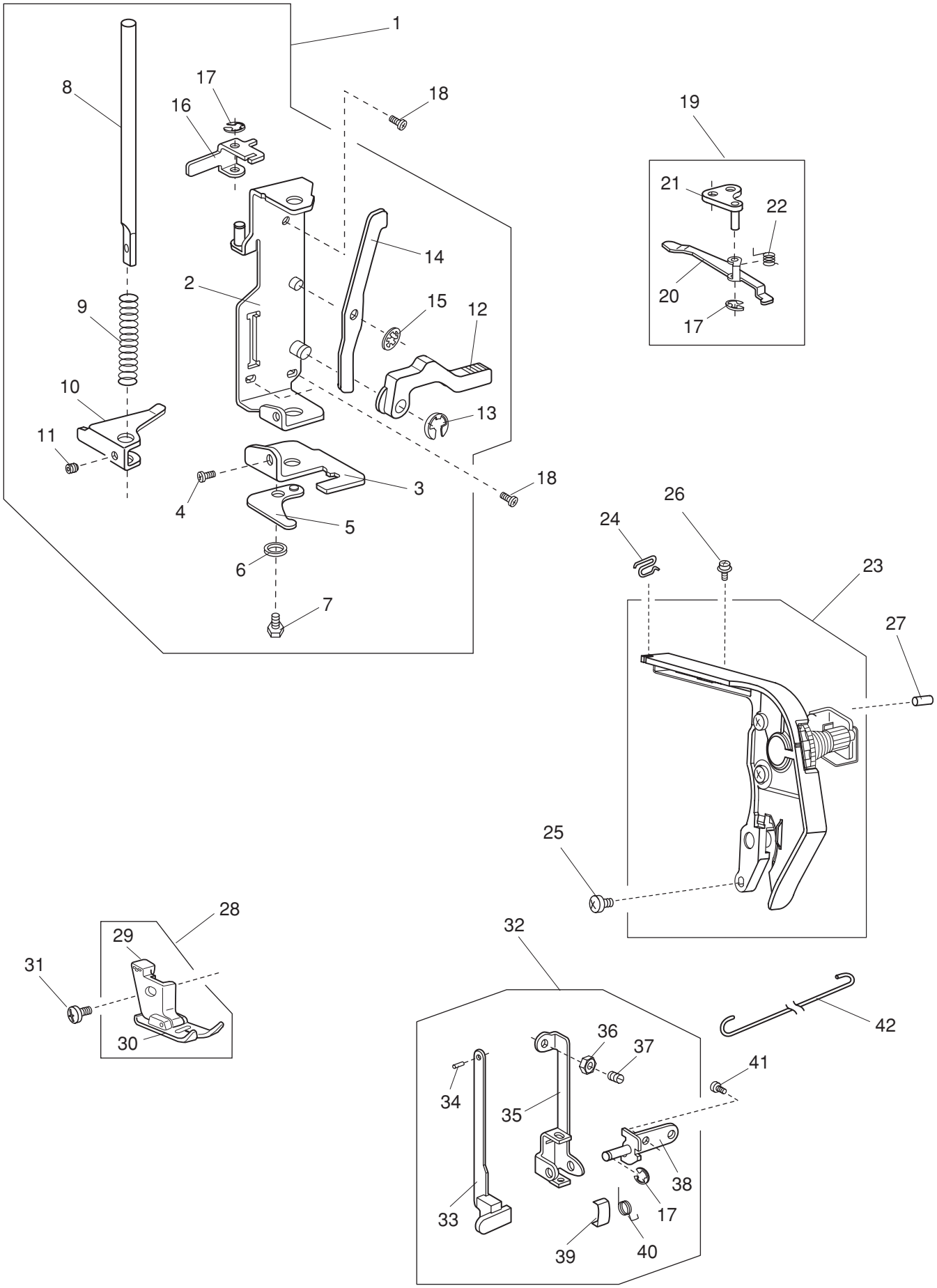
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310613909	Rear cover (unit)
2	310048701	Rear cover
3	310049001	Cover fixing plate
4	000120203	Tapping screw 3x8 (B)
5	000115205	Setscrew TP4x6
6	000198305	Setscrew 4x10 (B)
7	745033013	Cap
8	000081005	Setscrew 4x8
9	810220003	Setscrew
10	000114709	Setscrew TP3x6
11	000115009	Setscrew TP3x8
12	000080901	Setscrew 4x25
13	310612908	Front cover (unit)
14	310044040	Front cover
15	310047009	Bed lid
16	730006000	Spring
17	310045708	R button
18	310046008	R button spring
19	745031000	Thread guard plate
20	000014306	Snap ring CS-3
21	000149301	Setscrew 3x8 (B)
22	000115607	Setscrew TP4x8
23	000101404	Setscrew 4x6
24	310614807	Top cover (unit)
25	310051006	Top cover
26	310052133	Stitch guide
27	652302004	Spool pin
28	652205006	Spool pin
29	735013108	Spool pin cushion
30	310053008	Carrying handle
31	730501011	Thread guide plate (unit)
32	000028107	Spring pin 4x25
33	735016307	Bobbin winder stopper
34	000071013	Washer
35	000160814	Setscrew 4x18
36	000103510	Setscrew 4x10
37	310616706	Extension plate (unit)
38	310056001	Extension plate 1
39	310057703	Extension plate 2
40	000161206	Setscrew 3x10 (B)
41	735616200	Rubber base (unit)
42	735002001	Rubber base
43	000097901	Flat screw 5x18
44	000061319	Nut
45	739064003	Bed rubber base
46	310615808	Face cover (unit)
47	310054401	Face cover
48	310055701	Face cover plaque
49	310050005	Bottom cover

PARTS LIST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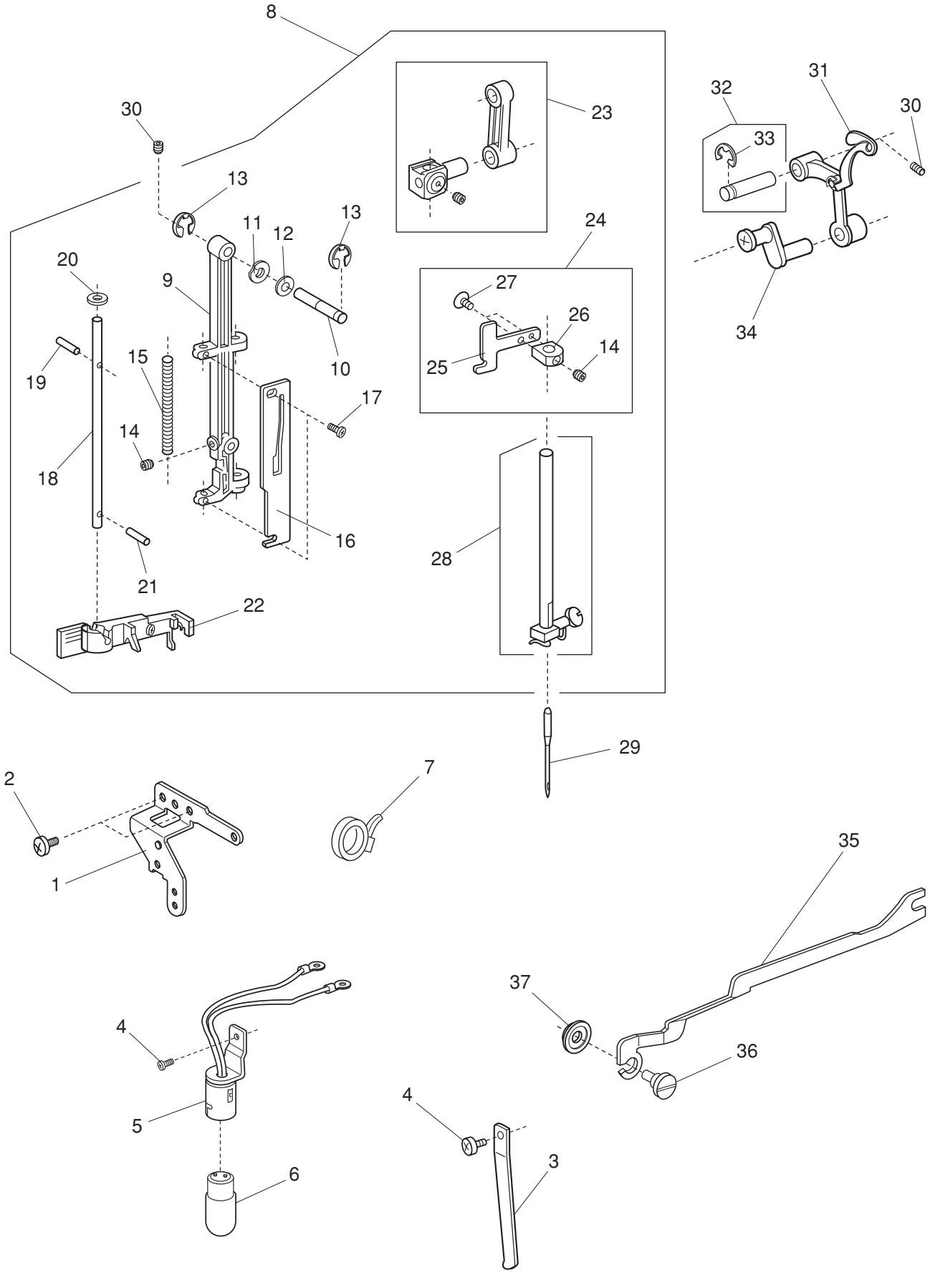
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	308611106	Presser bar base plate (unit)
2	308060001	Presser bar base plate
3	735222009	Needle drop adjusting plate
4	000101404	Setscrew 4x6
5	735025000	Needle bar supporter stopper
6	000070506	Washer
7	000138307	Bolt 4x8
8	303017101	Presser bar
9	735027002	Presser bar spring
10	735028003	Presser bar bracket
11	000111500	Hexagonal socket screw 4x8
12	735029004	Presser foot lifter
13	000001609	Snap ring E-5
14	735030008	Tension release lever
15	000013903	Snap ring CS-5
16	740051001	BH regulating lever
17	000002105	Snap ring E-3
18	000081005	Setscrew 4x8
19	739605002	Tension release arm (unit)
20	739017001	Tension release arm base
21	739018002	Tension release arm
22	739019003	Tension release spring
23	310504700	Tension regulator (unit)
24	310066004	Thread guide
25	000101703	Setscrew 4x12
26	000115205	Setscrew TP4x6
27	000024505	Spring pin 1.6x18 (K)
28	310621003	Presser foot (unit)
29	301801009	Presser foot holder
30	301505002	Zigzag foot
31	660106001	Thumb screw
32	740617001	BH lever (unit)
33	753629109	BH lever (unit)
34	000023009	Spring pin 1.6x4
35	740047004	BH lever supporter
36	000160102	Adjustable lock nut 4
37	000113306	Socket screw 4x10
38	740048005	BH lever base plate
39	753027008	Friction spring
40	740049006	BH lever spring
41	000103808	Setscrew 3x5
42	740052002	BH shifting rod

PARTS LIST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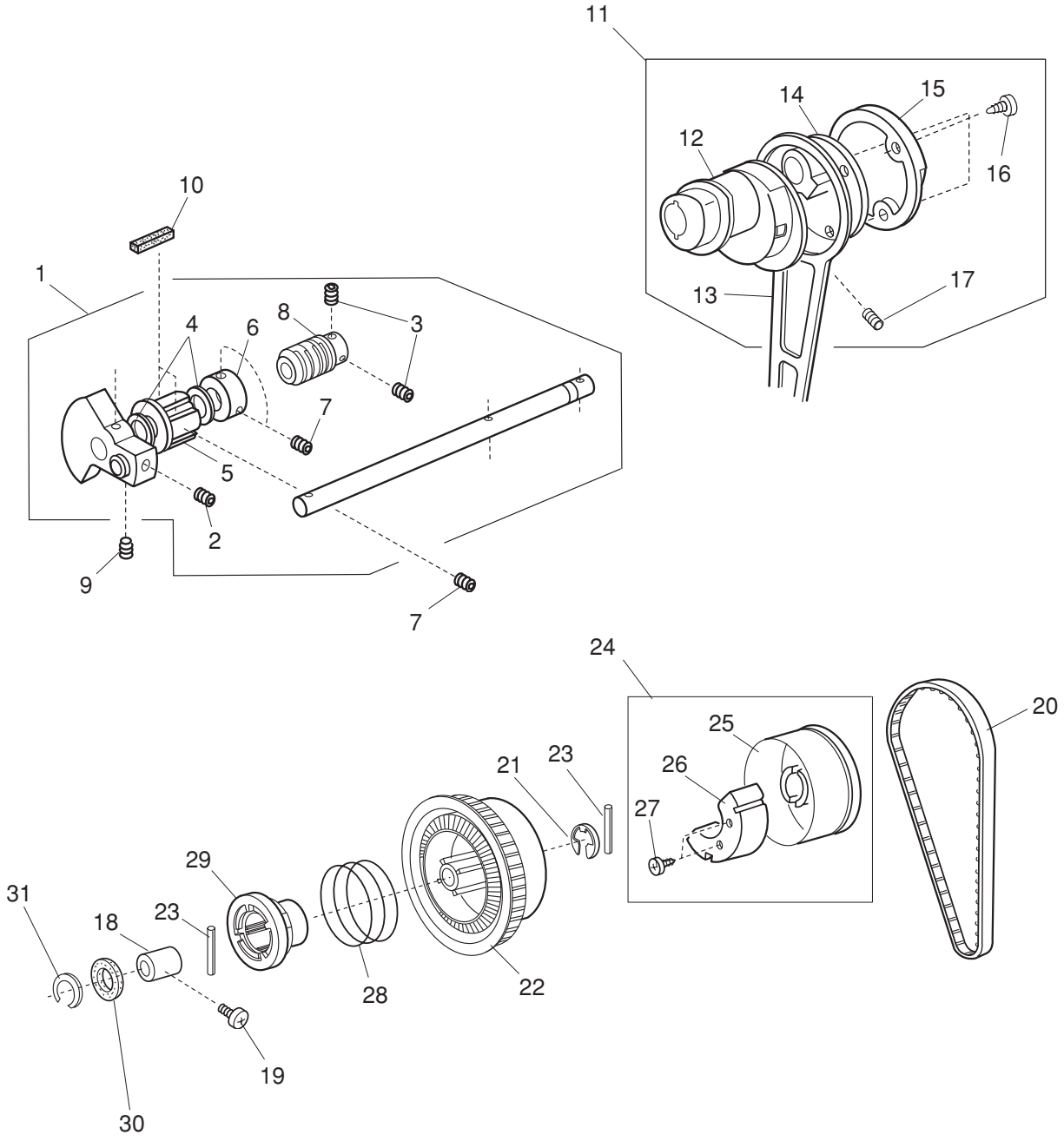
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	740007013	Face cover set plate (unit)
2	000081005	Setscrew 4x8
3	730024004	Needle bar supporter spring
4	000101404	Setscrew 4x6
5	647513015	Lamp socket (unit)
6	000009803	Lamp 120V 15W
7	000053008	Cord tie band
8	301611105	Needle bar supporter (unit)
9	301032106	Needle bar supporter
10	730022002	Needle bar supporter pin
11	673022002	Washer
12	000070609	Washer
13	000002507	Snap ring E-4
14	000111902	Hexagonal socket screw 3x4
15	734094007	Needle threader spring
16	735196003	Needle threader plate
17	000101105	Setscrew 3x4
18	301034005	Needle threader shaft
19	000122906	Pin
20	734107004	Washer
21	000003508	Pin
22	639643009	Needle threader plate (unit)
23	680504005	Needle bar connecting stud (unit)
24	735628009	Needle threader set plate (unit)
25	735197004	Needle threader set plate
26	734102009	Needle threader base
27	000097602	Flat screw 2x4
28	730503116	Needle bar (unit)
29	102408089	Needle ha1–14
30	000111304	Hexagonal socket screw 5x5
31	625506109	Thread take-up lever (unit)
32	731511006	Thread take-up lever pin (unit)
33	000002806	Snap ring E-6
34	735504008	Needle bar crank pin (unit)
35	735119002	Zigzag rod
36	678084007	Eccentric pin
37	748021006	Zigzag rod plain washer

PARTS LIST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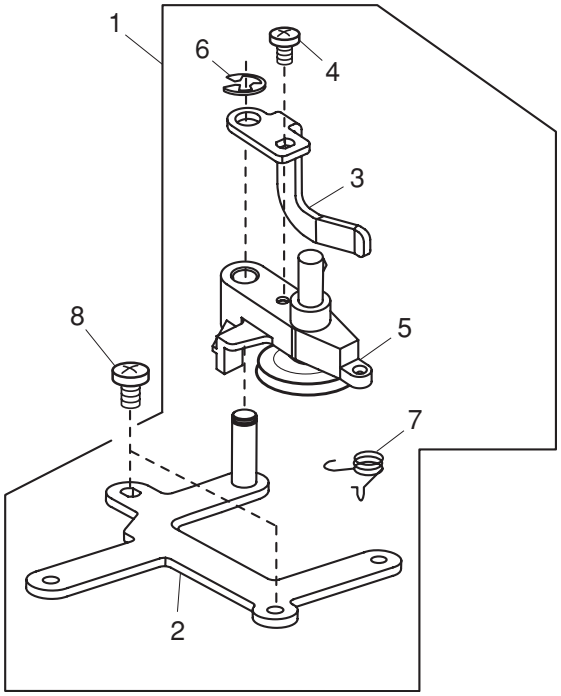
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310602008	Upper shaft (unit)
2	102073003	Setscrew
3	000111201	Hexagonal socket screw 4x4
4	000036717	Thrust washer
5	732025001	Upper shaft front bushing
6	639095000	Ring
7	000111304	Hexagonal socket screw 5x5
8	749011109	Worm
9	761052007	Setscrew
10	731312005	Felt
11	304609006	Crank rod (unit)
12	304042005	Feed cam
13	743011008	Crank rod
14	304044007	Crank cam
15	304043006	Crank cam plate
16	000161309	Tapping screw 3x12 (B)
17	000110107	Hexagonal socket screw 5x5
18	732003003	Upper shaft rear bushing
19	000172602	Setscrew 5x8
20	650166008	Motor timing belt
21	000030205	Snap ring E-8
22	303025009	Belt wheel
23	000024206	Spring pin 3x30
24	310619709	Handwheel (unit)
25	310007708	Handwheel
26	743030003	Balance weight
27	000121400	Tapping screw 3x14 (B)
28	502065004	Clutch spring
29	502064003	Clutch ring
30	743029009	Felt
31	310069007	Felt clip

PARTS LIST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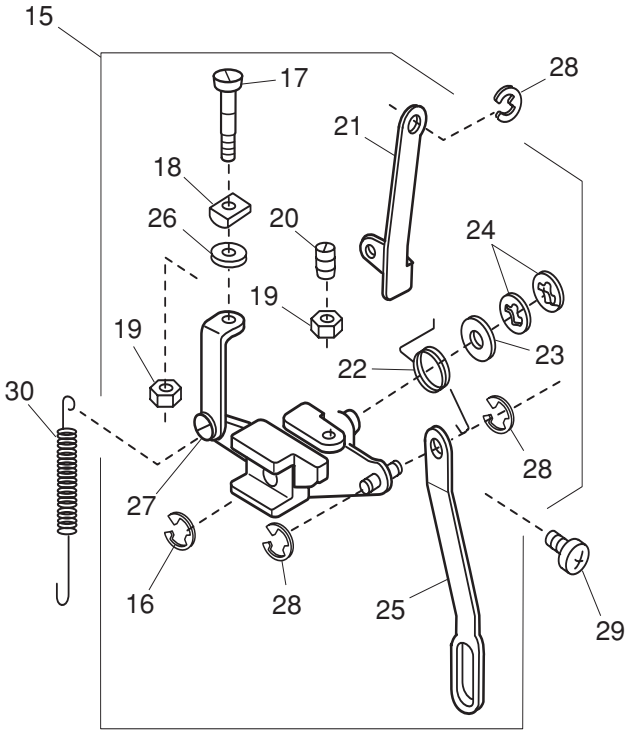
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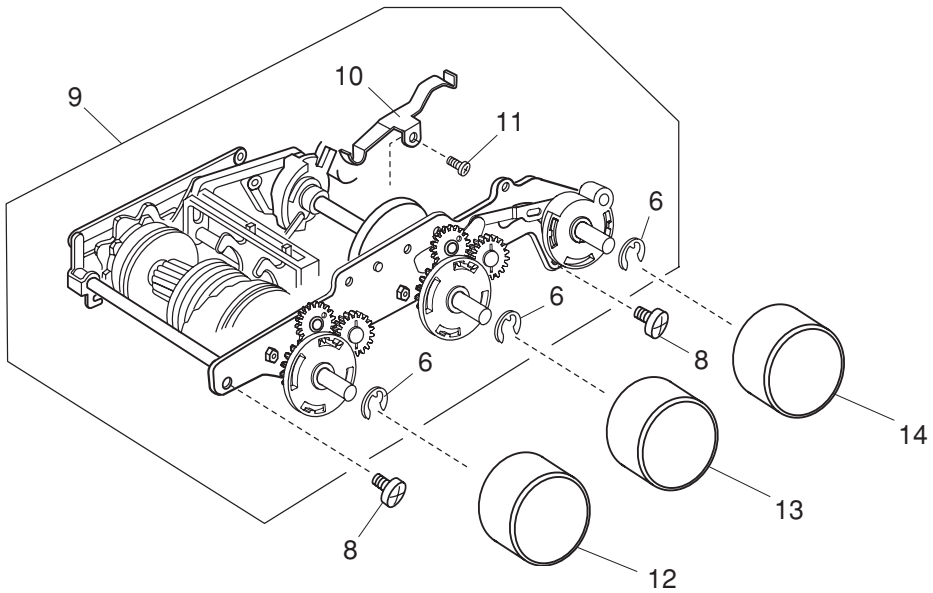
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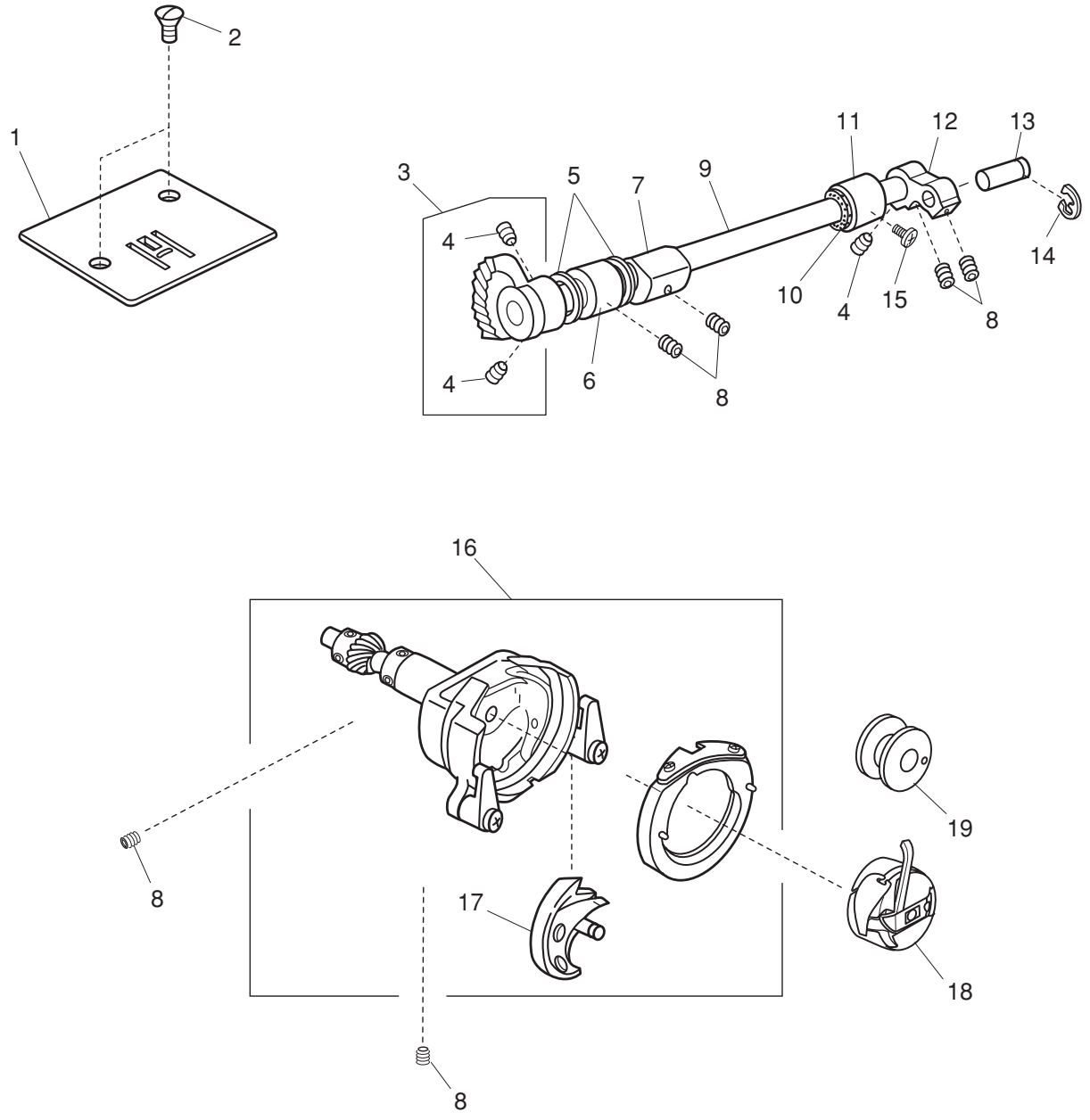
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310601007	Bobbin winder support plate (unit)
2	310001001	Bobbin winder support plate
3	310003003	Clutch opener plate
4	000120203	Setscrew 3x8 (B)
5	310501006	Bobbin winder arm (unit)
6	000001609	Snap ring E-5
7	505071002	Bobbin winder arm spring
8	000081005	Setscrew 4x8
9	310623005	Zigzag mechanism (unit)
10	737011009	Index spring
11	000103808	Setscrew 3x5
12	310043186	Dial
13	310043245	Dial
14	310043337	Dial
15	310620002	Feed regulator (unit)
16	000002507	Snap ring E-4
17	735074004	SS adjusting screw
18	735076006	SS rod block
19	000160102	Adjustable locknut 4
20	648010009	Setscrew
21	739020007	Feed regulating rod
22	735077007	Feed regulating body spring
23	735073003	Plain washer
24	000013800	Snap ring CS-6
25	310058003	Reverse link
26	000071013	Washer 4
27	648012001	Hinge screw
28	000002105	Snap ring E-3
29	000172602	Setscrew 5x8
30	670100006	Feed regulator spring

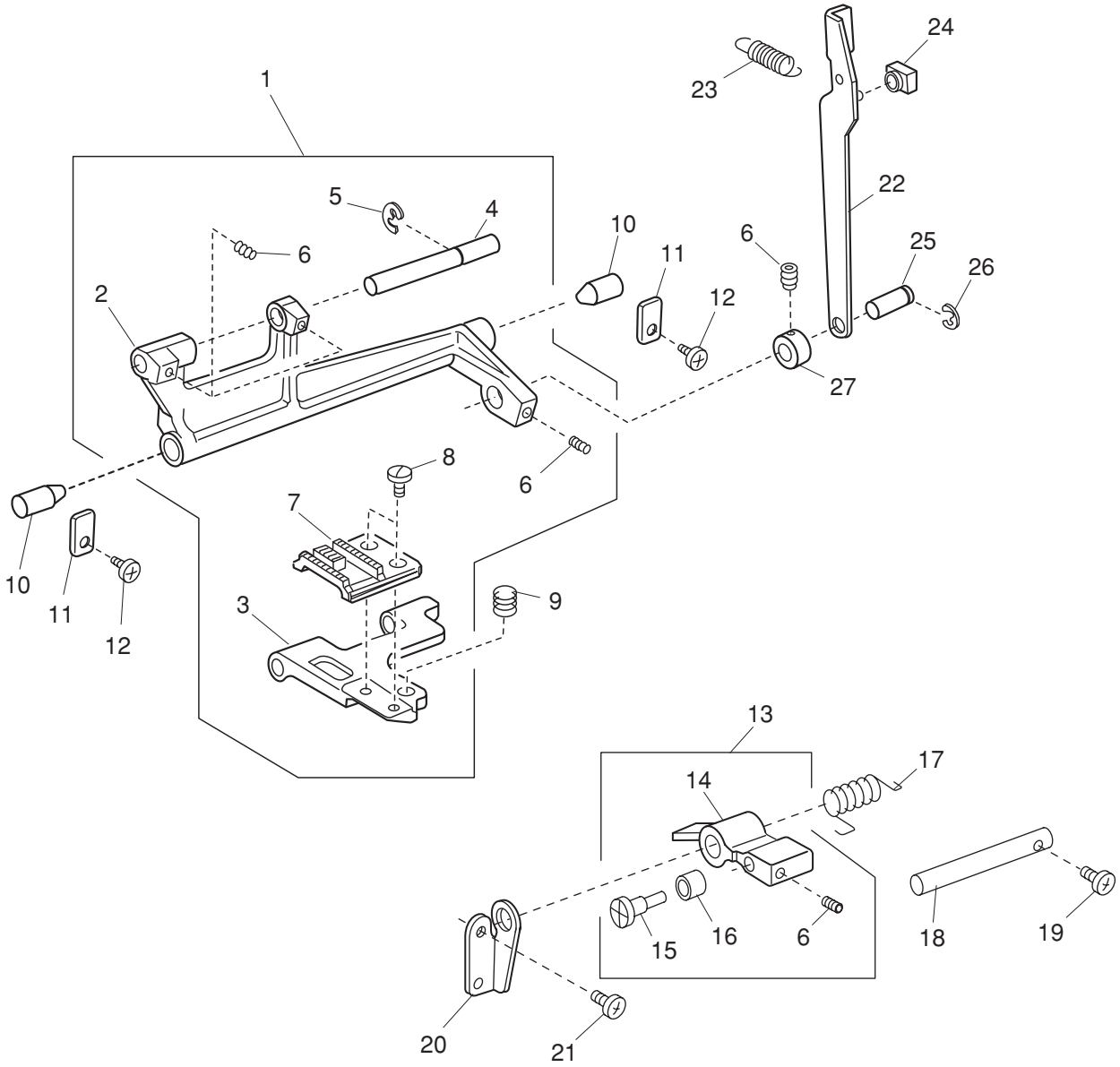
PARTS LIST



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	735061008	Feed lifting cam
8	000111304	Hexagonal socket screw 5x5
9	735236006	Lower shaft
10	822070003	Felt (1)
11	735234004	Bushing
12	639036003	Lower shaft crank arm
13	639037004	Pin
14	000001609	Snap ring E-5
15	000172602	Setscrew 5x8
16	735610101	Shuttle race body (unit)
17	532096007	Shuttle hook
18	647515006	Bobbin case (unit)
19	102261000	Bobbin

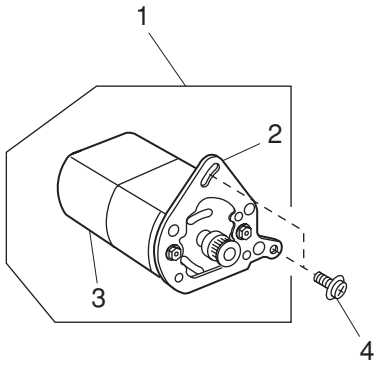
PARTS LIST

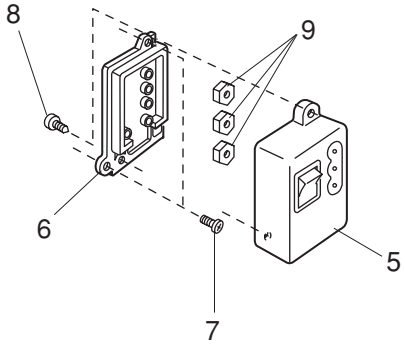


PARTS LIST

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	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

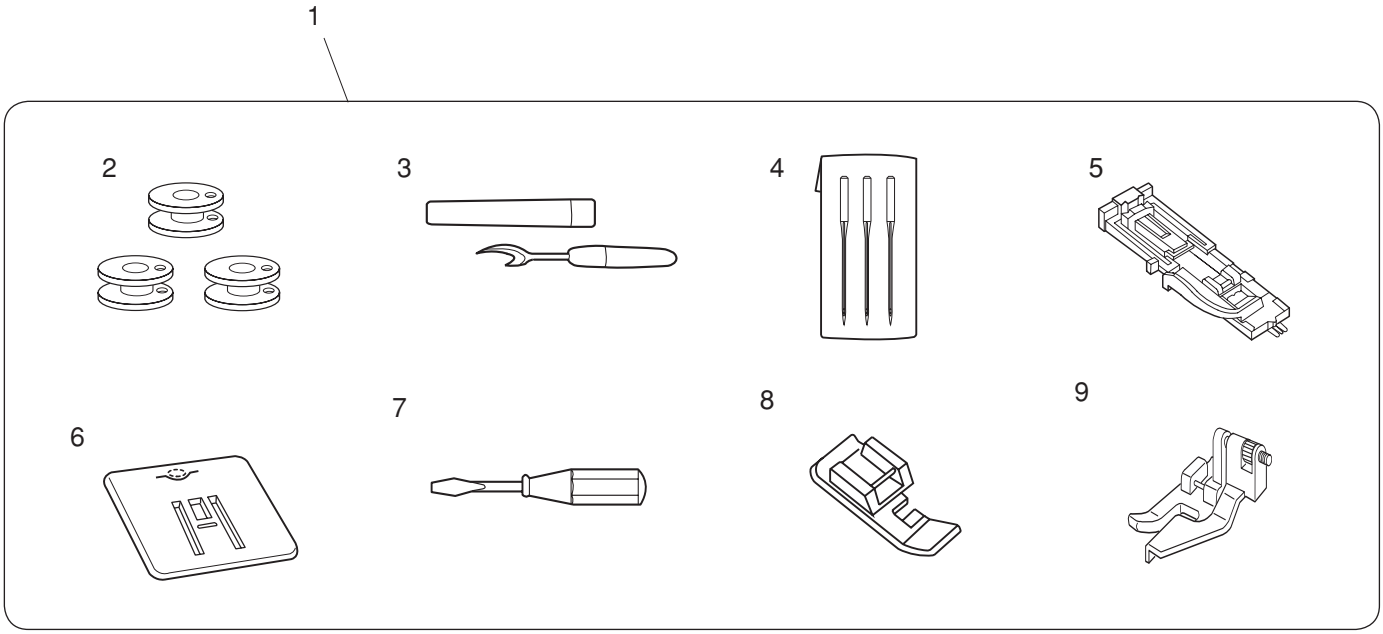


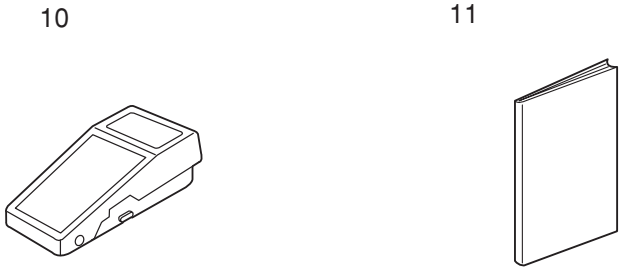


PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	743612005	Motor assy
2	743025005	Motor bracket
3	014170108	Motor
4	000115504	Setscrew TP5x10
5	739505403	Machine socket unit
6	739037007	Machine socket cover
7	000103509	Setscrew 4x10
8	000107802	Setscrew 3x10(B)
9	000060802	Nut

PARTS LIST





PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310870010	Accessory set
2	102261000	Bobbin
3	647808009	Seam ripper (unit)
4	639804000	Needle set (unit)
5	740801004	Buttonhole foot
6	735801008	Darning plate
7	647803004	Screwdriver (small)
8	611406002	Zipper foot (unit)
9	611411000	Blind foot (unit)
10	C-1028	Foot control
11	310800259	Instruction book