



SERVICE MANUAL

MC6600

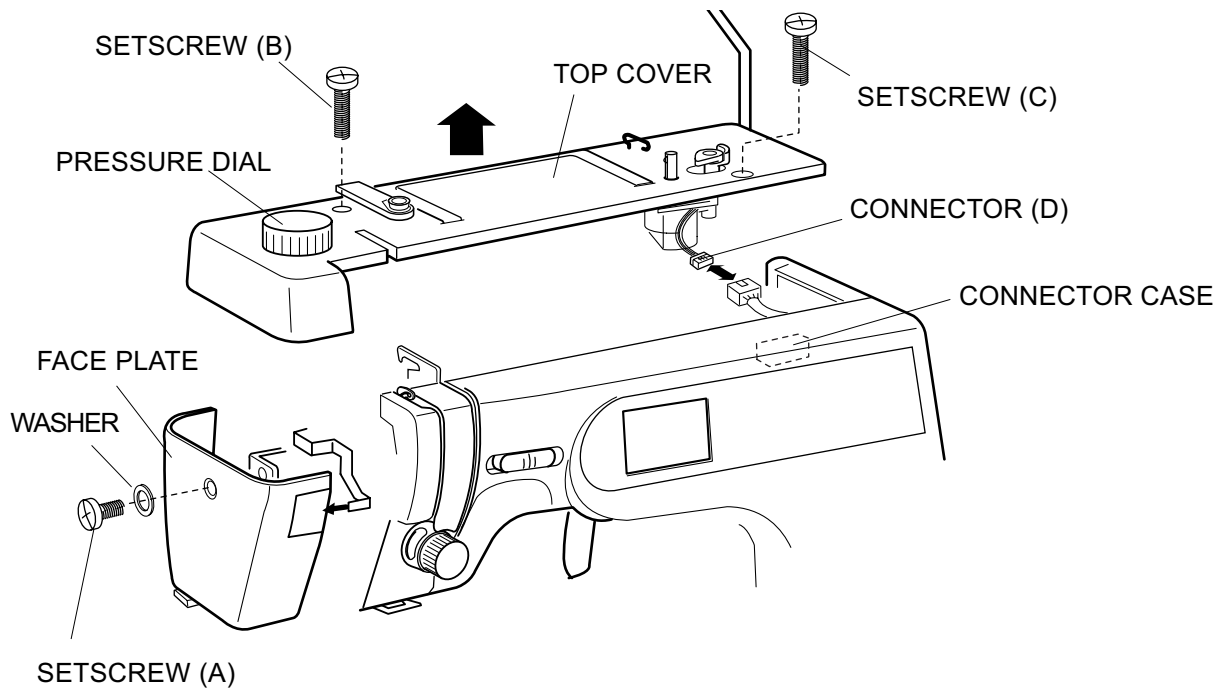
JANOME

Revised on October 20, 2005

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TO REMOVE FACE PLATE AND TOP COVER



FACE PLATE

<TO REMOVE>

REMOVE THE SETSCREW (A) TO REMOVE THE FACE PLATE.

<TO ATTACH>

ATTACH THE FACE PLATE WITH THE SETSCREW (A).

TOP COVER

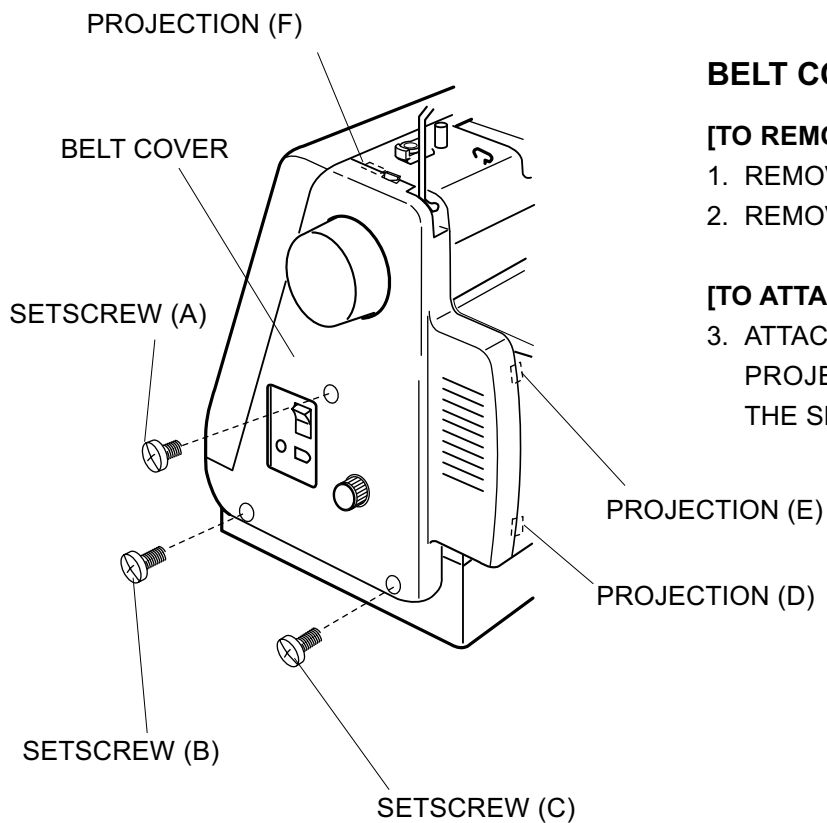
<TO REMOVE>

1. REMOVE THE SETSCREWS (B) AND (C).
2. PULL OUT THE CONNECTOR (D) OF THE BOBBIN WINDER AND REMOVE THE TOP COVER.

<TO ATTACH>

1. CONNECT THE CONNECTOR (D) AS SHOWN ABOVE. THEN ATTACH THE TOP COVER. TIGHTEN THE SETSCREWS (B) AND (C).

TO REMOVE BELT COVER AND MACHINE BASE



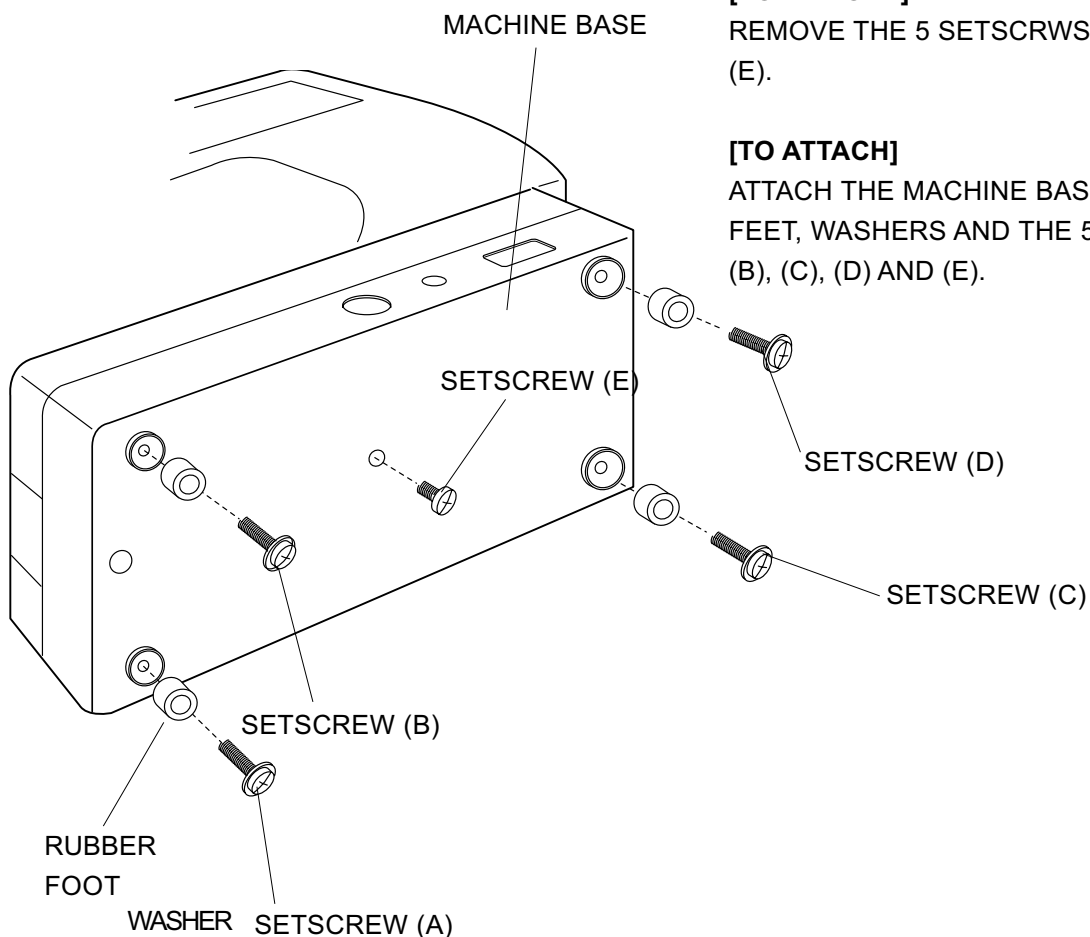
BELT COVER

[TO REMOVE]

1. REMOVE THE SETSCREWS (A), (B) AND (C).
2. REMOVE THE BELT COVER.

[TO ATTACH]

3. ATTACH THE BELT COVER BY INSERTING THE PROJECTIONS (D), (E) AND (F) AND TIGHTEN THE SETSCREWS (A), (B) AND (C).



MACHINE BASE

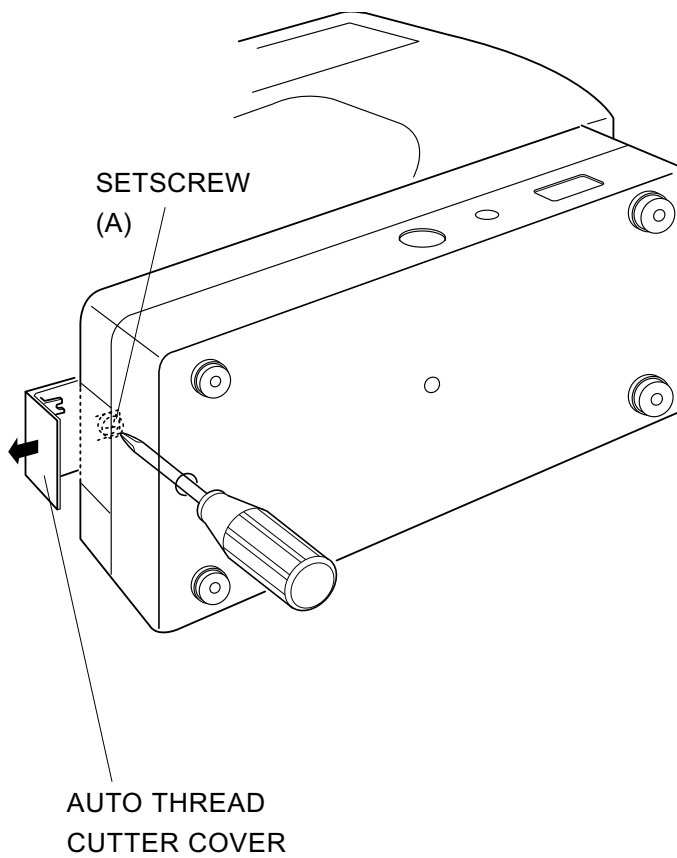
[TO REMOVE]

- REMOVE THE 5 SETSCREWS (A), (B), (C), (D) AND (E).

[TO ATTACH]

- ATTACH THE MACHINE BASE WITH RUBBER FEET, WASHERS AND THE 5 SETSCREWS (A), (B), (C), (D) AND (E).

TO REMOVE AUTO THREAD CUTTER COVER



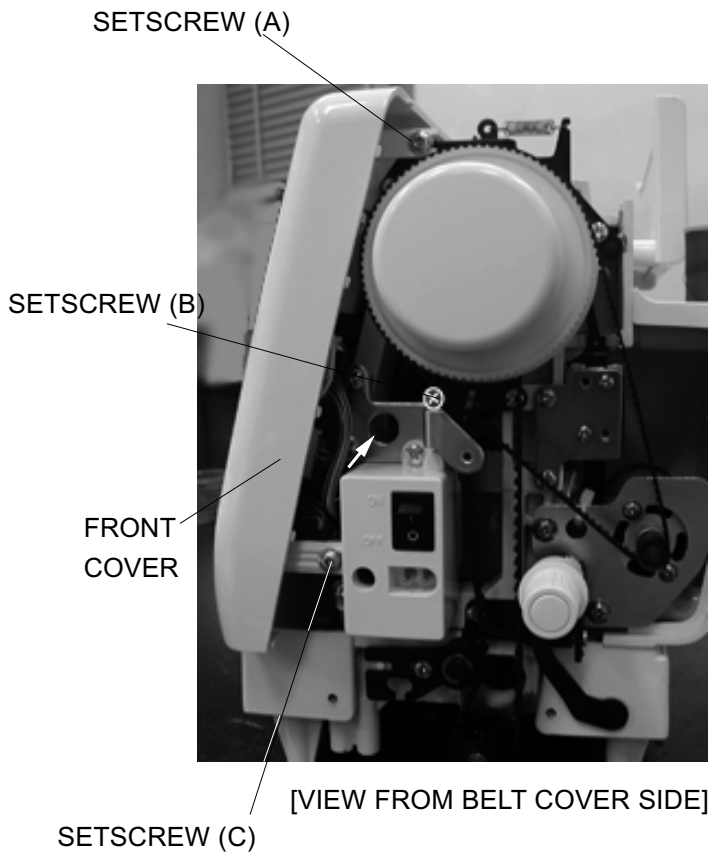
[TO REMOVE]:

LOOSEN THE SETSCREW (A) AND PULL OFF THE AUTO THREAD CUTTER COVER.

[TO ATTACH]:

REPLACE THE AUTO THREAD CUTTER COVER AND TIGHTEN THE SETSCREW (A).

TO REMOVE FRONT COVER



[TO REMOVE]

- 1 REMOVE THE FACE PLATE, TOP COVER AND BELT COVER (REFER TO PAGES 1 AND 2).
- 2 LOOSEN THE SETSCREWS (A), (B), (C) AND (D).
- 3 PULL OUT THE CONNECTORS (REFER TO PAGE 22) AND REMOVE THE FRONT COVER.
- 4 REMOVE THE NYLON CLIP FROM THE UPPER LEFT SIDE OF THE TENSION RELEASE MOTOR.
- 5 PULL OUT THE CONNECTORS FROM THE PRINTED CIRCUITBOARD K.

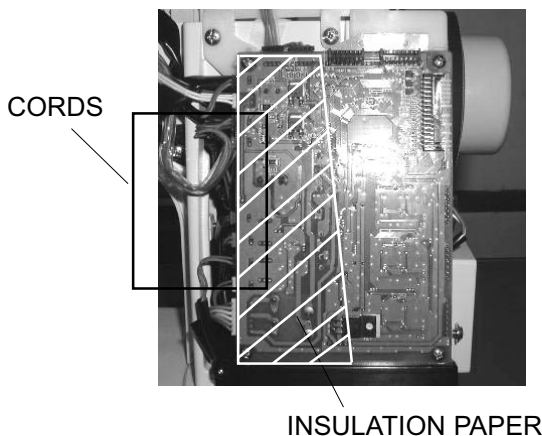
[TO ATTACH]

- 6 PROCEED WITH THE ABOVE PROCEDURE IN REVERSE.



[VIEW FROM FACE PLATE SIDE]

SETSCREW (D)



WHEN ATTACHING THE FRONT COVER, ENSURE THAT THE CORDS SHOWN IN THE PHOTO ON THE LEFT DO NOT GET CAUGHT BETWEEN THE COVER AND THE PARTS.

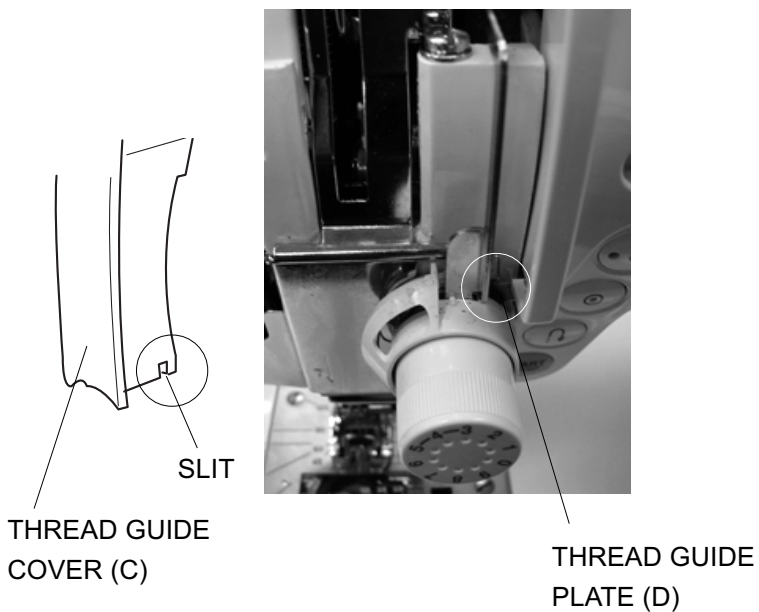
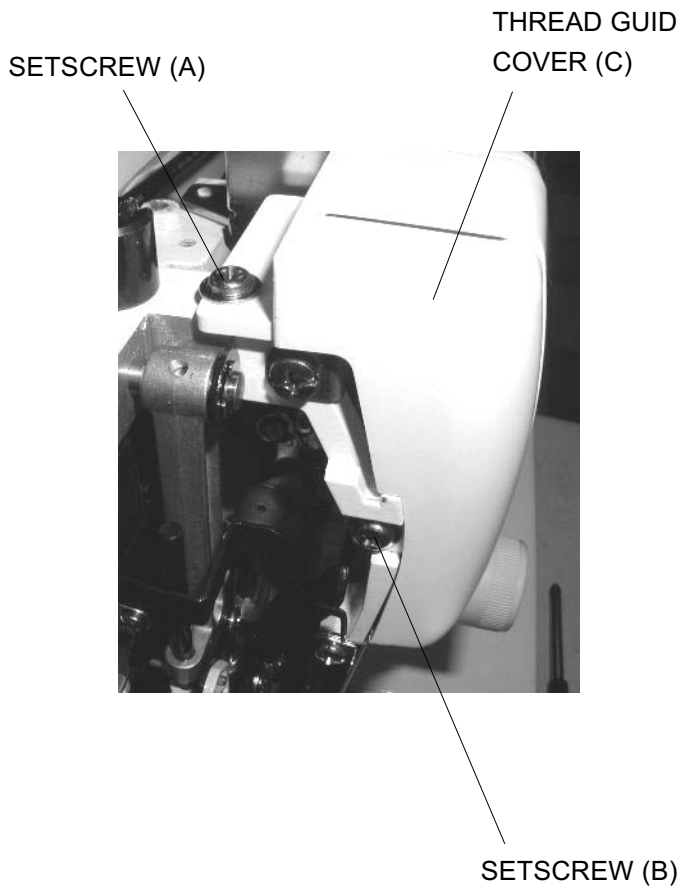
TO REPLACE THREAD GUIDE COVER

[TO REMOVE]:

1. REMOVE THE FACE PLATE AND TOP COVER.
2. REMOVE THE SETSCREWS (A) AND (B).
REMOVE THE THREAD GUIDE COVER (C).

[TO ATTACH]:

1. ATTACH THE THRED GUIDE COVER, ENGAGING THE SLIT WITH THE THREAD GUIDE PLATE (D).
2. TIGHTEN THE SETSCREWS (A) AND (B).



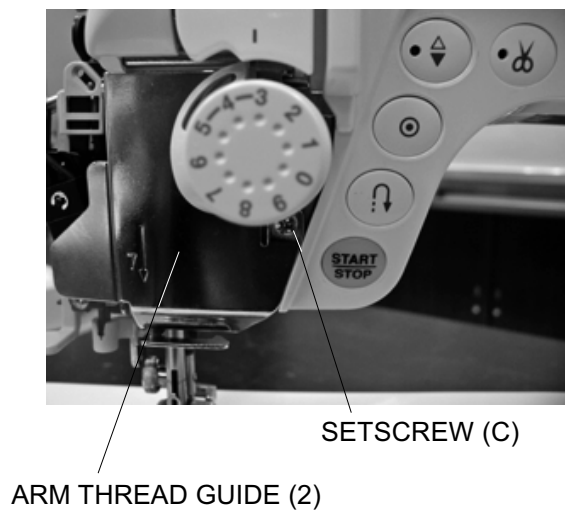
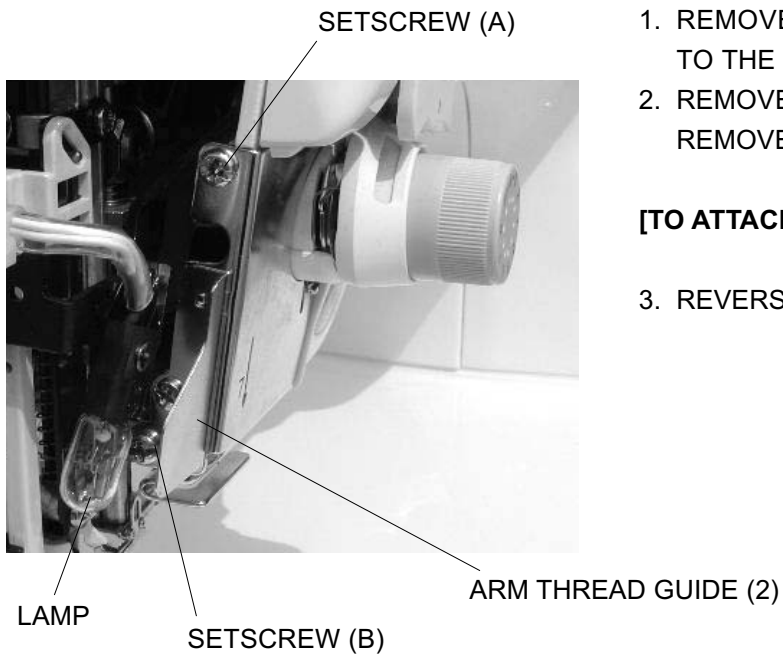
TO REPLACE ARM THREAD GUIDE (2)

[TO REMOVE]:

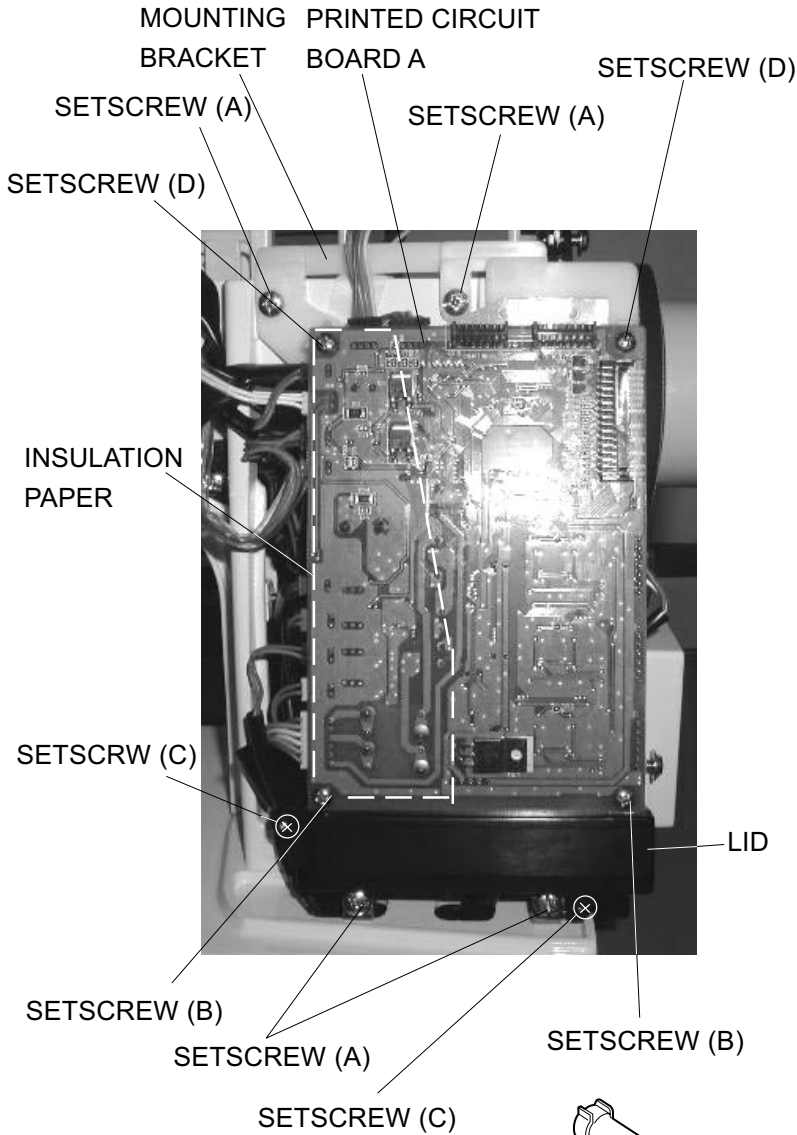
1. REMOVE THE FACE PLATE AND MOVE THE LAMP TO THE LEFT.
2. REMOVE THE SETSCREWS (A), (B) AND (C).
REMOVE THE ARM THREAD GUIDE (2).

[TO ATTACH]:

3. REVERSE THE ABOVE PROCEDURE.



TO REPLACE CIRCUIT BOARD A AND FUSE



[TO REMOVE]

- 1 REMOVE THE FRONT COVER (REFER TO PAGE 4).
- 2 REMOVE THE 4 SETSCREWS (A). REMOVE THE CIRCUIT BOARD A TOGETHER WITH THE MOUNTING BRACKET.
- 3 REMOVE THE 2 SETSCREWS (B) AND 2 SETSCREWS (C).
- 4 REMOVE THE CIRCUIT BOARD CASE AND LID.

[TO ATTACH]

REVERSE THE ABOVE PROCEDURE.

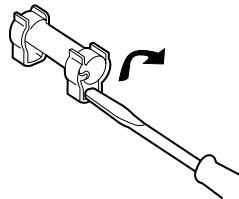
- * THE SHINY SIDE OF THE INSULATION PAPER SHOULD FACE THE CIRCUIT BOARD A.

[TO CHANGE THE FUSE]

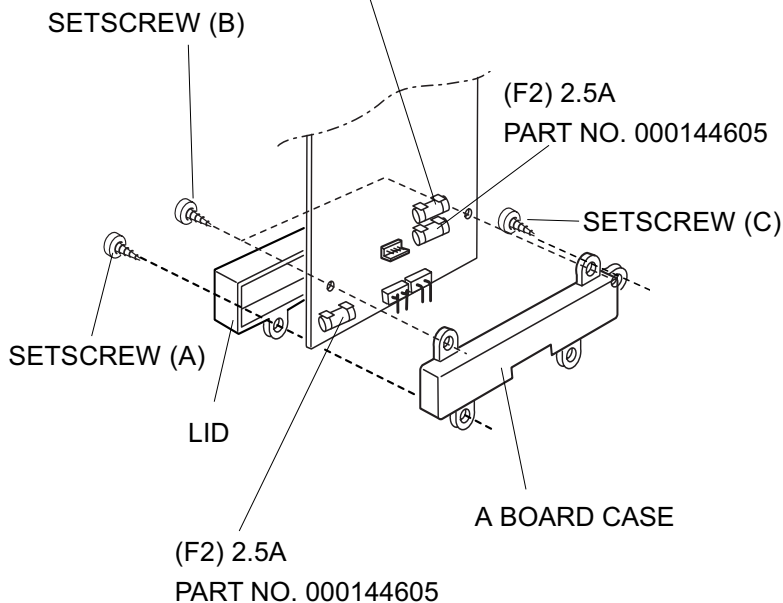
1. REMOVE THE 2 SETSCREWS (B) AND 2 SETSCREWS (C).
2. REMOVE THE CIRCUIT BOARD CASE AND LID.
3. PRY THE FUSE OUT WITH A SCREWDRIVER AS SHOWN.

IF THE FUSE IS LOOSE, BEND THE FUSE HOLDER WITH YOUR FINGERS.

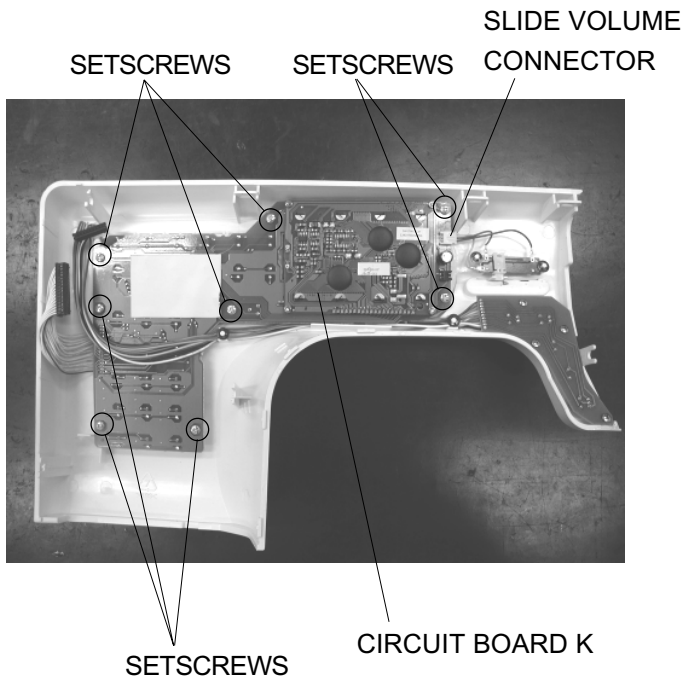
REPLACE THE FUSE WITH THE SAME PART NUMBER AS SHOWN IN THE ILLUSTRATION.



(F1) 3.15A
PART NO. 00182904



TO REMOVE CIRCUIT BOARD K



[TO REMOVE]

1. REMOVE THE FRONT COVER (REFER TO PAGE 4).
PULL OUT SLIDE VOLUME CONNECTOR.
2. REMOVE THE 8 SETSCREWS AND CIRCUIT BOARD K.

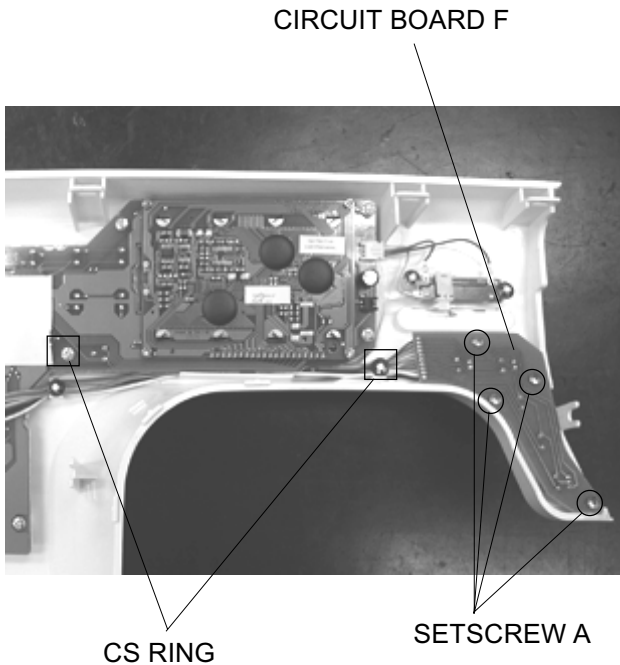
[TO ATTACH]

PROCEED WITH THE ABOVE PROCEDURE IN REVERSE.

TO REMOVE CIRCUIT BOARD F AND SLIDE VOLUME

[TO REMOVE THE CIRCUIT BOARD F]

1. REMOVE THE FRONT COVER (REFER TO PAGE 4)
2. PULL OUT THE CONNECTOR FROM THE CIRCUIT BOARD A.
3. REMOVE THE 4 SETSCREWS (A), 2 CS RINGS AND CIRCUIT BOARD F.

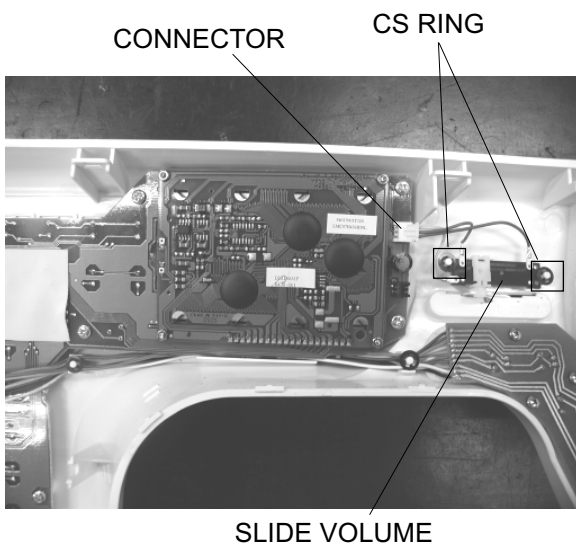


[TO ATTACH]

REVERSE THE ABOVE PROCEDURE.
MAKE SURE THAT THE BUTTONS ARE PLACED IN THE CORRECT PLACES AND DIRECTION (FIG. 1).

[TO REMOVE THE SLIDE VOLUME]

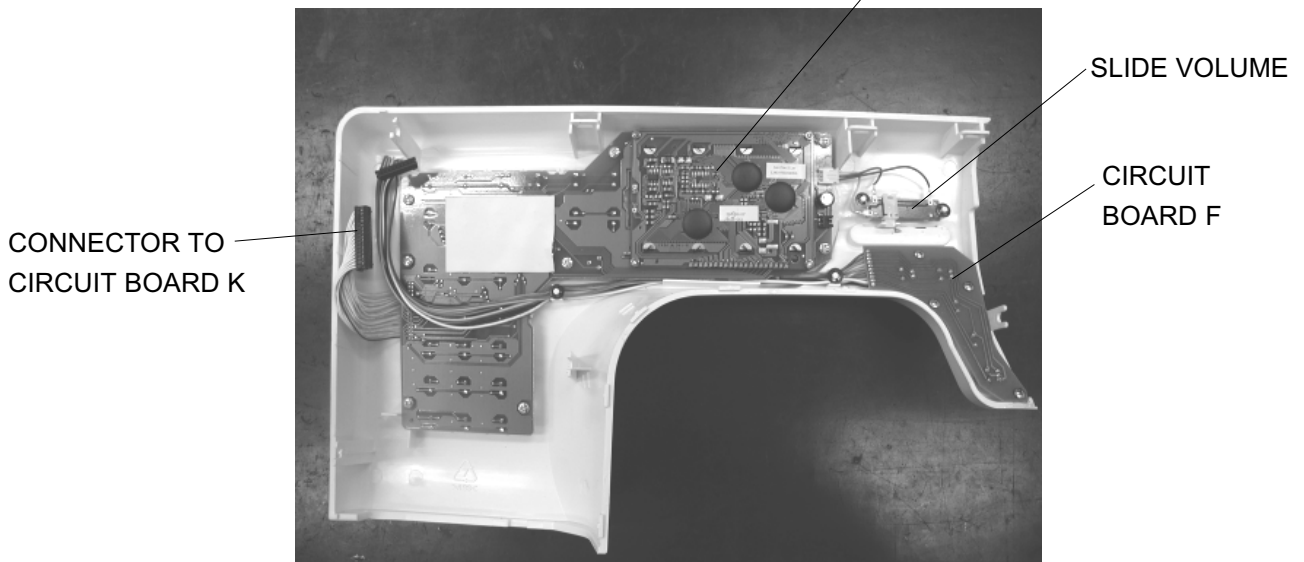
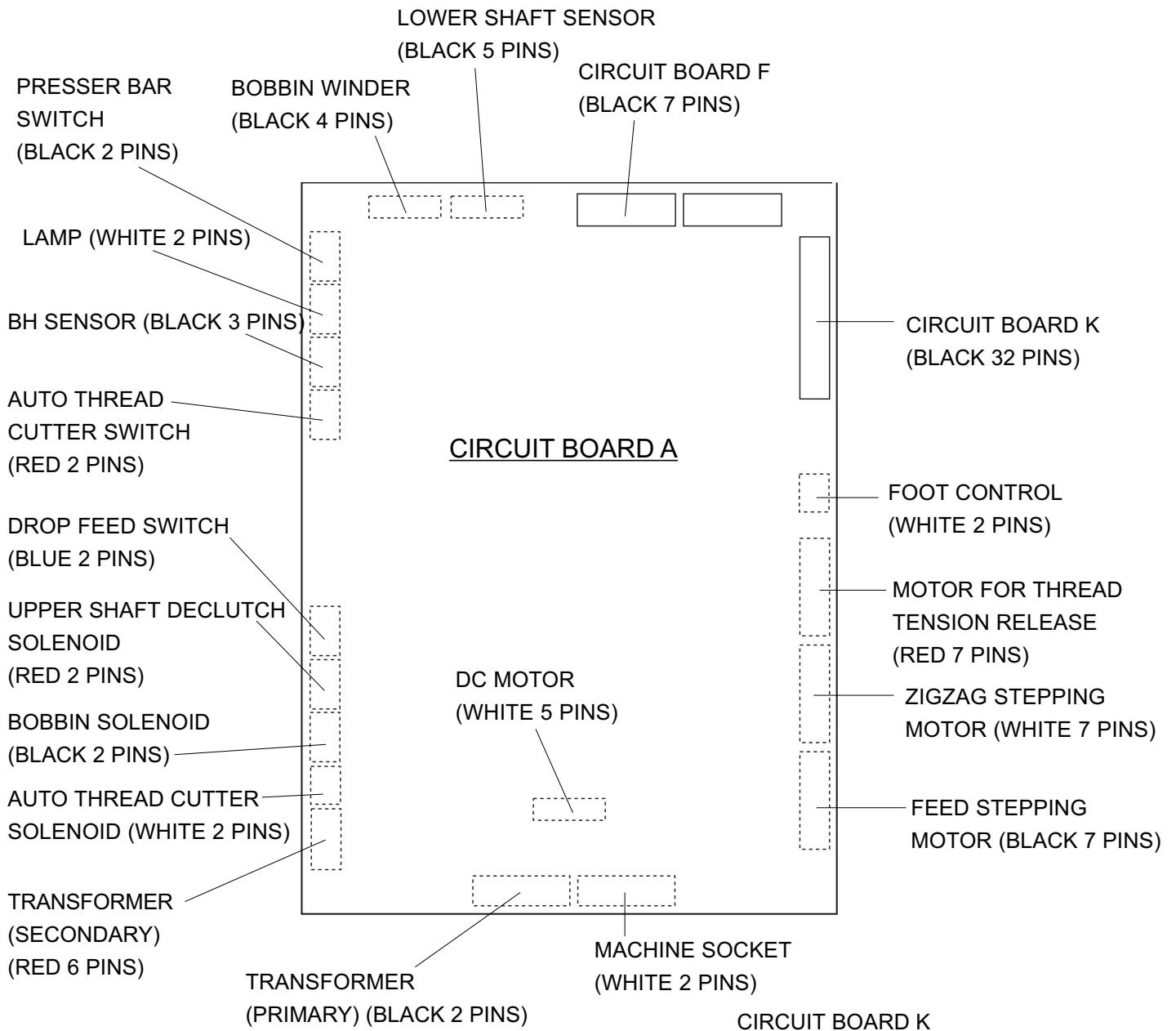
1. REMOVE THE FRONT COVER (REFER TO PAGE 4)
2. PULL OUT THE CONNECTOR FROM THE CIRCUIT BOARD K.
3. REMOVE THE 2 CS RINGS AND SLIDE VOLUME.



[TO ATTACH]

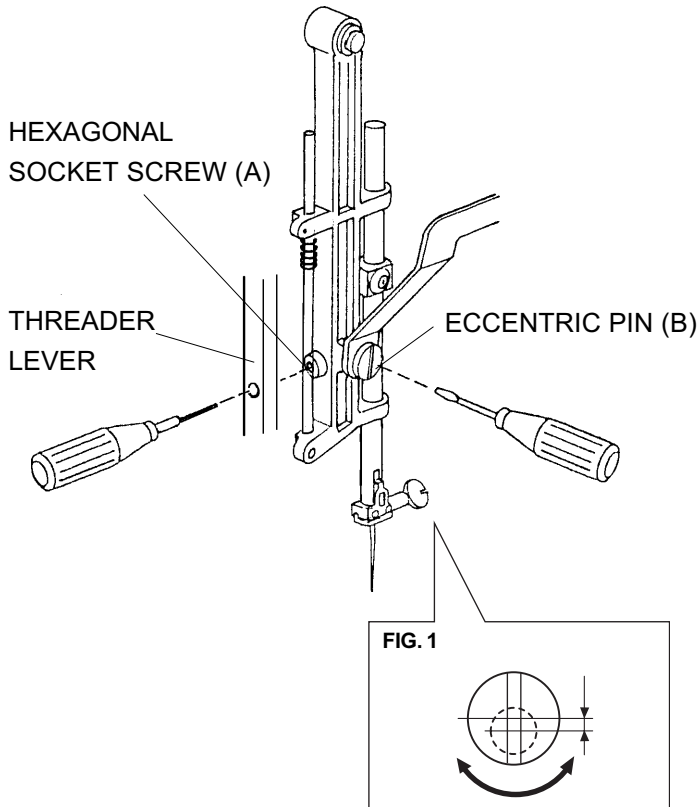
REVERSE THE ABOVE PROCEDURE.

CONNECTION OF CONNECTORS



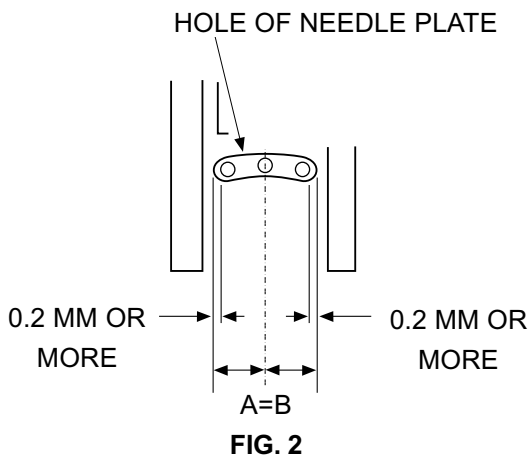
TO ADJUST NEEDLE DROP POSITION

WHEN THE STRAIGHT STITCH IS SELECTED, THE NEEDLE SHOULD BE AT THE CENTER OF THE HOLE OF THE NEEDLE PLATE. WHEN THE MAXIMUM ZIGZAG WIDTH IS SELECTED, THE DISTANCE BETWEEN THE NEEDLE AND THE EDGE OF THE HOLE OF THE NEEDLE PLATE AT THE RIGHT AND LEFT NEEDLE POSITIONS SHOULD BE 0.2 MM OR MORE AS SHOWN IN FIG. 2.



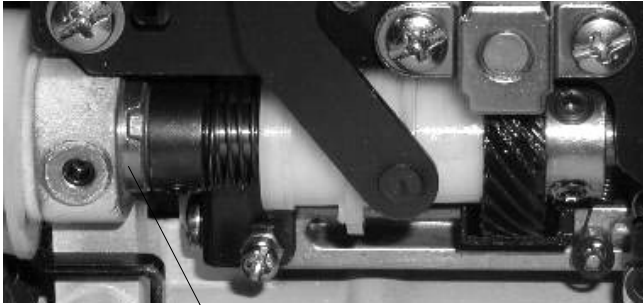
[TO ADJUST]:

- 1 REMOVE THE FACE PLATE.
CHECK THE NEEDLE DROP POSITION ON THE STITCH PATTERN (⊕) AND ZIGZAG STITCH (⚡) WITH MAXIMUM WIDTH.
- 2 LOOSEN THE HEXAGONAL SOCKET SCREW (A) JUST ENOUGH TO TURN THE ECCENTRIC PIN (B). ADJUST THE NEEDLE DROP POSITION BY TURNING THE ECCENTRIC PIN. THE DIRECTION OF THE ECCENTRIC PIN (B) SHOULD BE AS SHOWN IN FIG. 1.
- 3 TIGHTEN THE HEXAGONAL SOCKET SCREW (A).
- 4 ATTACH THE FACE PLATE.

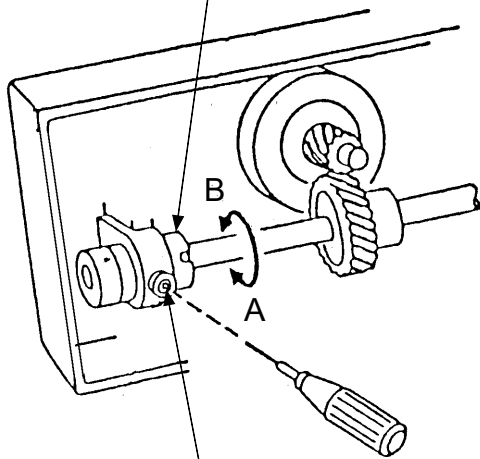


TO ADJUST THE BACKLASH OF HOOK DRIVE AND LOWER SHAFT GEARS

THE GEARS TURNS SMOOTHLY AND ROTARY PLAY OF THE HOOK SHOULD BE 0.8 MM OR LESS (F) WHEN THE TIP OF HOOK (E) IS WITHIN THE WIDTH OF THE FEED DOG (C) AS SHOWN BELOW.



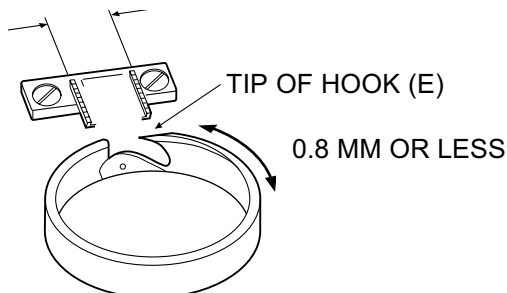
LOWER SHAFT BUSHING



HEXAGONAL SOCKET SCREW (D)

- 1 REMOVE THE MACHINE BASE (REFER TO PAGE 2)
- 2 REMOVE THE NEEDLE, NEEDLE PLATE AND BOBBIN HOLDER.
- 3 LOOSEN THE HEXAGONAL SOCKET SCREW (D).
- 4 IF THE BACKLASH IS TOO MUCH, TURN THE LOWER SHAFT BUSHING IN DIRECTION A. IF THE BACKLASH IS TOO LITTLE, TURN THE LOWER SHAFT BUSHING IN DIRECTION B.
- 5 TIGHTEN THE HEXAGONAL SOCKET SCREW (D).
- 6 ATTACH THE NEEDLE, NEEDLE PLATE AND BOBBIN HOLDER.
- 7 ATTACH THE MACHINE BASE.

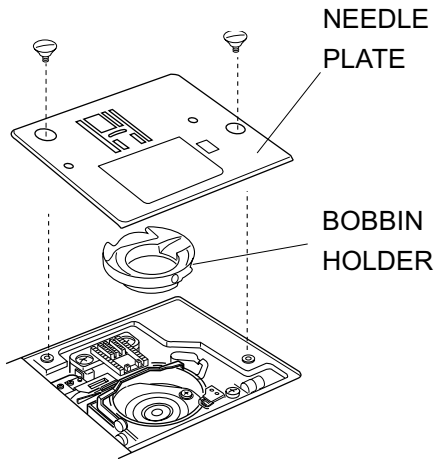
WIDTH OF THE FEED DOG (C)



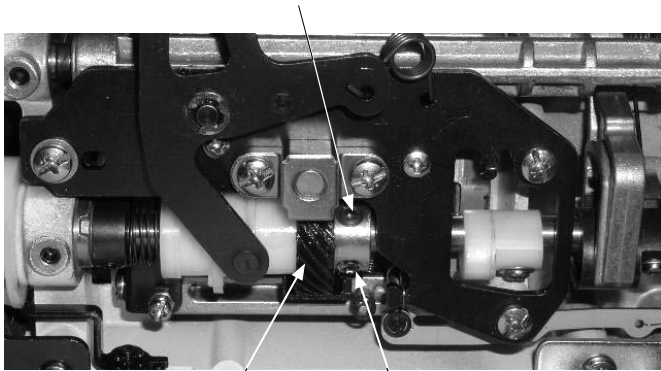
ADJUSTMENT OF HOOK TIMING

THE AMOUNT OF ASCENDING TRAVEL OF THE NEEDLE BAR FROM ITS LOWEST POSITION TO THE POSITION WHERE THE TIP OF THE ROTARY HOOK EXACTLY MEETS THE RIGHT SIDE OF THE NEEDLE SHOULD BE 3.25 TO 3.55 MM.

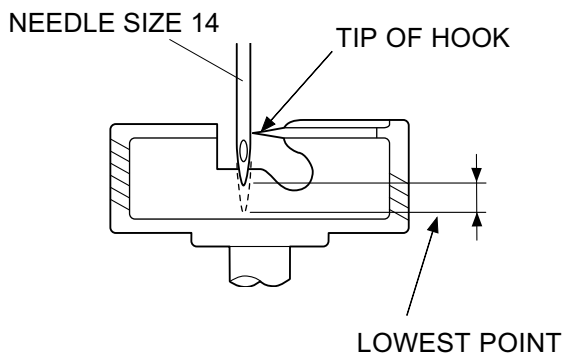
[TO ADJUST]:



HEXAGONAL SOCKET SCREW (A)



LOWER SHAFT GEAR (C) HEXAGONAL SOCKET SCREW (B)

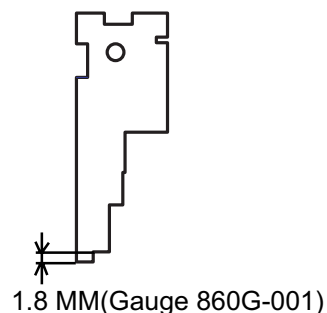


- 1 REMOVE THE MACHINE BASE (REFER TO PAGE 2)
- 2 TURN THE POWER SWITCH ON AND SELECT STITCH PATTERN NO. 2 () IN MODE 1.
- 3 SET THE ZIGZAG WIDTH AT 0 AND TURN THE POWER SWITCH OFF.
- 4 REMOVE THE PRESSER FOOT, NEEDLE PLATE AND BOBBIN HOLDER.
- 5 TURN THE HANDWHEEL TOWARD YOU TO SET THE NEEDLE BAR AT ITS LOWEST POSITION.
- 6 LOOSEN THE HEXAGONAL SOCKET SCREWS (A) AND (B) ON THE LOWER SHAFT GEAR (C).
- 7 MOVE THE NEEDLE BAR 3.4 MM FROM THE LOWEST POSITION.
- 8 TURN THE LOWER SHAFT GEAR (C) UNTIL THE TIP OF THE HOOK MEETS THE RIGHT SIDE OF THE NEEDLE WHILE HOLDING THE HANDWHEEL.
- 9 TIGHTEN THE HEXAGONAL SOCKET SCREW (A) AND (B).
- 10 ATTACH THE BOBBIN HOLDER, NEEDLE PLATE AND PRESSER FOOT.
- 11 ATTACH THE MACHINE BASE.

[ALTERNATIVE WAY OF ADJUSTMENT]


BEFORE PROCEEDING THIS ADJUSTMENT, CHECK THE NEEDLE BAR HEIGHT USING THE [ALTERNATIVE WAY OF ADJUSTMENT] (SEE PAGE 14).

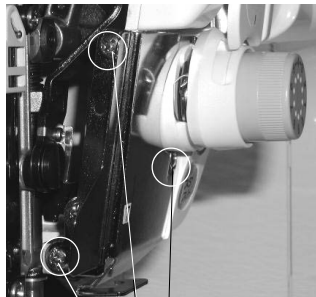
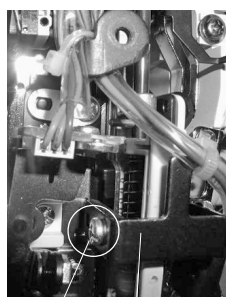
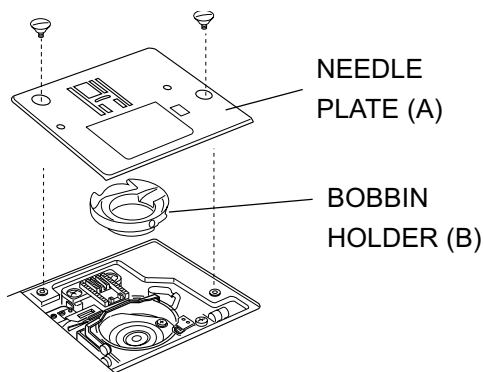
1. REMOVE THE PRESSER FOOT, NEEDLE PLATE, AND BOBBIN HOLDER.
2. REMOVE THE MACHINE BASE.
3. TURN THE POWER SWITCH ON AND SELECT THE STITCH NO. 8. SET THE ZIGZAG WIDTH MAXIMUM AT LEFT NEEDLE POSITION.
4. ADJUST THE HOOK TIMING SO THAT THE DISTANCE BETWEEN THE TIP OF HOOK AND THE TOP OF THE NEEDLE EYE IS 1.8 MM WHEN THE TIP OF HOOK MEETS WITH THE RIGHT SIDE OF THE NEEDLE IN THE UPWARD TRAVEL OF NEEDLE BAR AT THE LEFT NEEDLE POSITION.
5. ATTACH THE BOBBIN HOLDER, NEEDLE PLATE AND PRESSER FOOT.
6. ATTACH THE MACHINE BASE.



1.8 MM (Gauge 860G-001)

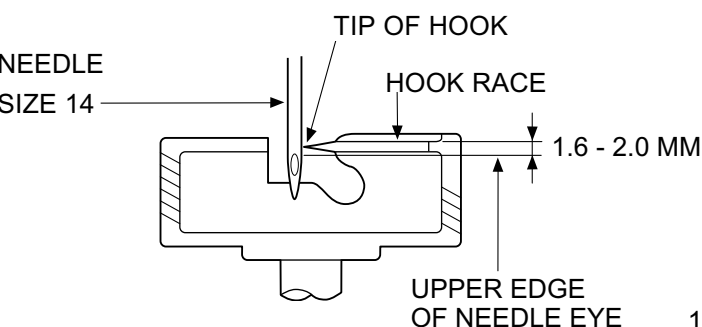
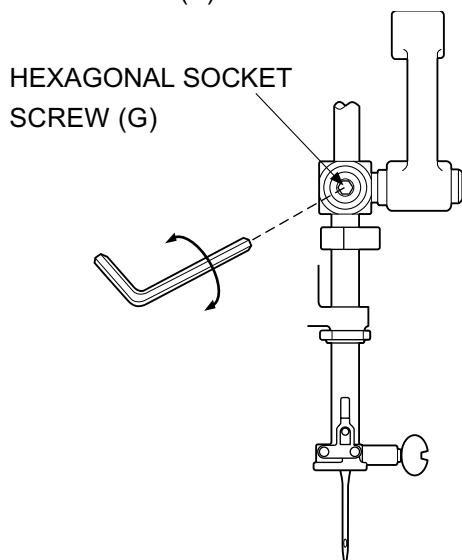
ADJUSTMENT OF NEEDLE BAR HEIGHT

BEFORE PROCEEDING WITH THIS ADJUSTMENT, CHECK THE HOOK TIMING (REFER TO PAGE 13). THE DISTANCE BETWEEN THE UPPER EDGE OF THE NEEDLE EYE AND THE TIP OF THE HOOK SHOULD BE IN THE RANGE OF 1.6 - 2.0MM WHEN THE TIP OF THE HOOK MEETS RIGHT SIDE OF THE NEEDLE IN THE LEFT NEEDLE POSITION () AS THE NEEDLE ASCENDS FROM ITS LOWEST POSITION.




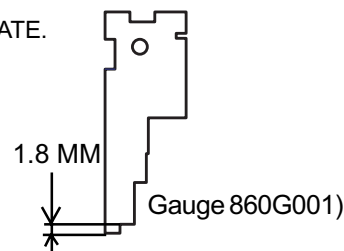
LAMP SET PLATE
SETSCREW (A)

SETSCREW (B)



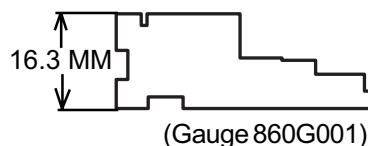
[TO ADJUST]:

- 1 TURN THE POWER SWITCH ON AND SELECT STITCH PATTERN NO. 2 () IN MODE 1.
- 2 SET THE ZIGZAG WIDTH AT 0 AND TURN THE POWER SWITCH OFF. REMOVE THE TOP COVER (SEE PAGE 1).
- 3 REMOVE THE PRESSER FOOT, NEEDLE PLATE (A), BOBBIN HOLDER (B) AND FACE PLATE.
- 4 REMOVE THE SETSCREW (C), AND REMOVE THE LAMP SET PLATE.
- 5 REMOVE THE ARM THREAD GUIDE BY REMOVING THE SETSCREWS (SEE FIG. I.) REMOVE THE FACE PLATE GUIDE BY REMOVING THE SET SCREWS (D), (E) AND (F).
- 6 TURN THE BALANCE WHEEL TOWARD YOU UNTIL THE TIP OF THE HOOK MEETS THE RIGHT SIDE OF THE NEEDLE.
- 7 LOOSEN THE HEXAGONAL SOCKET SCREW (G).
- 8 MOVE THE NEEDLE BAR TO ADJUST THE NEEDLE BAR HEIGHT, AND TIGHTEN THE HEXAGONAL SOCKET SCREW (G). BE CAREFUL NOT TO TURN THE NEEDLE BAR.
- 9 FIX THE ARM THREAD GUIDE AND FACE PLATE GUIDE.
- 10 ATTACH THE FACE PLATE.



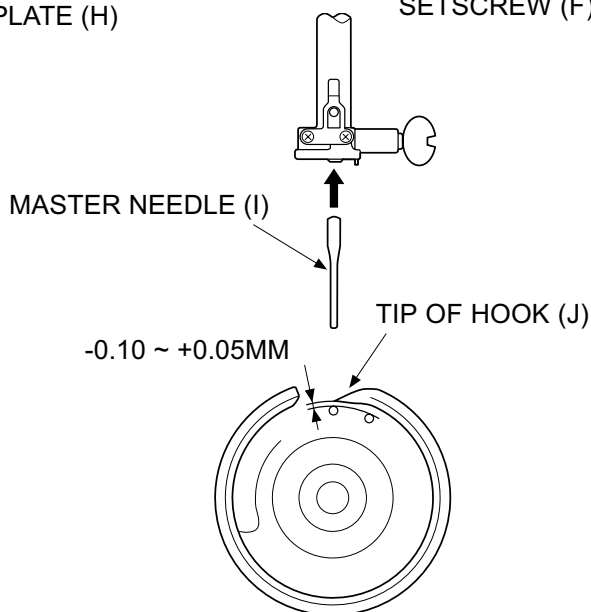
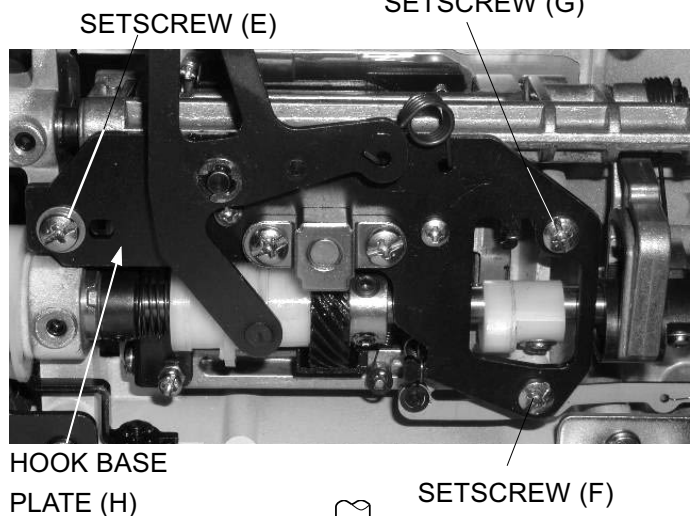
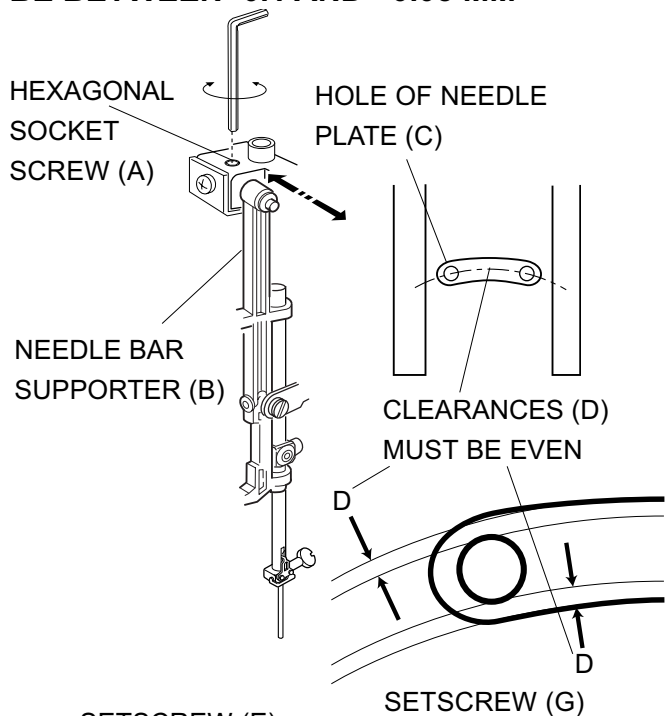
[ALTERNATIVE WAY OF ADJUSTMENT]
BY TAKING THIS WAY OF ADJUSTMENT, IT IS NOT NECESSARY TO CHECK THE HOOK TIMING.

- 1 RAISE THE NEEDLE TO ITS HIGHEST POSITION.
- 2 IN THIS CONDITION, THE DISTANCE BETWEEN THE TIP OF NEEDLE AND THE SURFACE OF THE NEEDLE PLATE SHOULD BE 16.3 MM.




ADJUSTMENT OF CLEARANCE BETWEEN NEEDLE AND ROTARY HOOK


THE CLEARANCE BETWEEN NEEDLE AND THE TIP OF THE ROTARY HOOK (J) SHOULD BE BETWEEN -0.1 AND $+0.05$ MM



[ADJUSTMENT I]

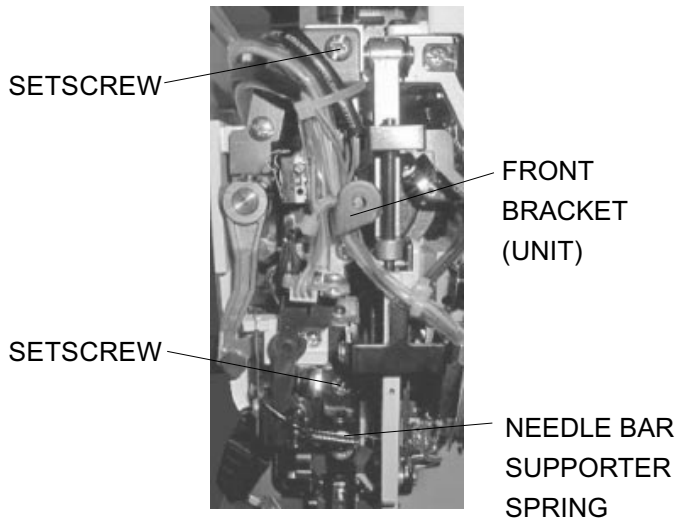
1. REMOVE THE FACE PLATE, AND ATTACH A MASTER NEEDLE (I).
2. TURN THE POWER SWITCH ON.
3. SELECT THE STITCH PATTERN  AND SET THE ZIGZAG WIDTH AT $\dot{\iota}\dot{\iota}$.
4. REMOVE THE PRESSER FOOT, NEEDLE PLATE AND BOBBIN HOLDER.
5. LOOSEN THE HEXAGONAL SOCKET SCREW (A) AND ADJUST THE CLEARANCE BETWEEN THE NEEDLE AND TIP OF ROTARY HOOK (J) BY MOVING THE NEEDLE BAR SUPPORTER. CHECK THE CLEARANCE (D) BETWEEN THE NEEDLE AND THE EDGE OF NEEDLE PLATE HOLE. IF THE CLEARANCES (D) ARE NOT EVEN FOLLOW THE PROCEDURE BELOW.

[ADJUSTMENT II]

1. REMOVE THE MACHINE BASE (REFER TO PAGE 2).
2. TURN THE POWER SWITCH ON, AND SELECT THE STITCH PATTERN  . SET THE ZIGZAG WIDTH AT $\dot{\iota}\dot{\iota}$,
3. REMOVE THE PRESSER FOOT, NEEDLE PLATE AND BOBBIN HOLDER.
4. LOOSEN THE SETSCREWS (E) AND (F). LOOSEN THE SETSCREW (G) JUST ENOUGH TO MOVE THE HOOK BASE PLATE (H).
5. TURN THE HANDWHEEL TOWARD YOU UNTIL THE TIP OF HOOK COMES JUST BEHIND THE MASTER NEEDLE. ADJUST THE CLEARANCE BETWEEN THE NEEDLE AND THE TIP OF THE ROTARY HOOK, BY MOVING THE HOOK BASE PLATE UP OR DOWN, TO WITHIN -0.1 TO $+0.05$ MM AT THE LEFT AND RIGHT NEEDLE POSITIONS.
6. TIGHTEN THE SETSCREWS (E), (F) AND (G) FIRMLY.
7. CHECK THE BACKLASH BETWEEN THE HOOK DRIVE AND LOWER SHAFT GEARS. REFER TO PAGE 13 FOR THE ADJUSTMENT.
8. ATTACH THE MACHINE BASE, BOBBIN HOLDER, NEEDLE PLATE AND PRESSER FOOT.

ADJUSTMENT OF DIRECTION OF PRESSER BAR AND ITS HEIGHT (1)

WHEN THE PRESSER FOOT IS LIFTED, THE DISTANCE BETWEEN THE SURFACE OF THE NEEDLE PLATE AND THE BOTTOM OF THE ZIGZAG FOOT SHOULD BE 6 MM. WHEN THE PRESSER BAR IS LOWERED, THE PRESSER FOOT SHOULD BE PARALLEL WITH THE SLOTS FOR THE FEED DOGS.

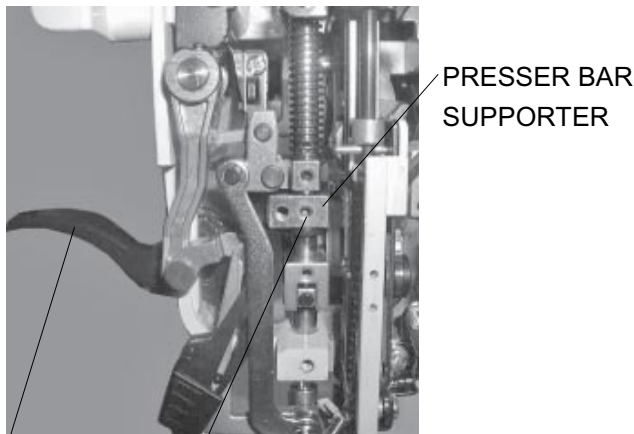


- 1 REMOVE THE FACE COVER AND TOP COVER.
- 2 REMOVE THE NEEDLE BAR SUPPORTER SPRING.
- 3 REMOVE THE SETSCREWS. REMOVE THE FRONT BRACKET (UNIT).
- 4 REMOVE THE ARM THREAD GUIDE (2) (REFER TO PAGE 6)
- 5 ATTACH THE ZIGZAG FOOT (A).
- 6 ADJUST THE PRESSER FOOT PRESSURE TO 13.
- 7 RAISE THE PRESSER FOOT LIFTER.
- 8 LOWER THE FEED DOG.

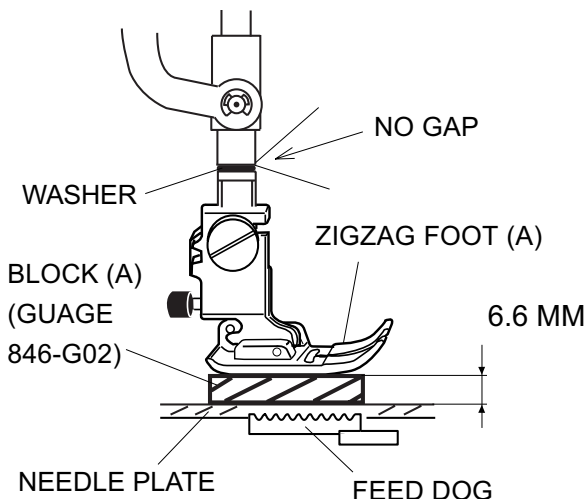
TO ADJUST THE PRESSER BAR HEIGHT

- 9 PLACE THE 6.6 MM BLOCK (A) (GAUGE 846-G02) BETWEEN THE PRESSER FOOT AND NEEDLE PLATE. (THE PRESSER FOOT LIFTER SHOULD BE AT THE NORMAL UP POSITION)
- 10 LOOSEN THE SETSCREW (B). TIGHTEN THE SET SCREW (A).
 - * MAKE SURE THERE SHOULD BE NO GAP BETWEEN THE WASHER AND THE PRESSER BAR.

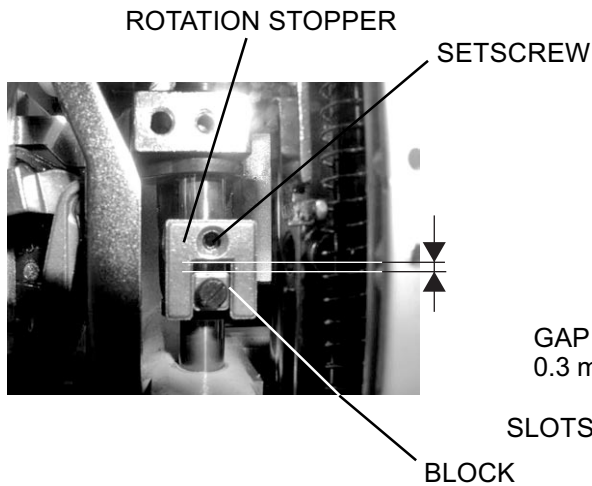
THE PRESSER FOOT IS HOLDING THE BLOCK (6.6 mm)



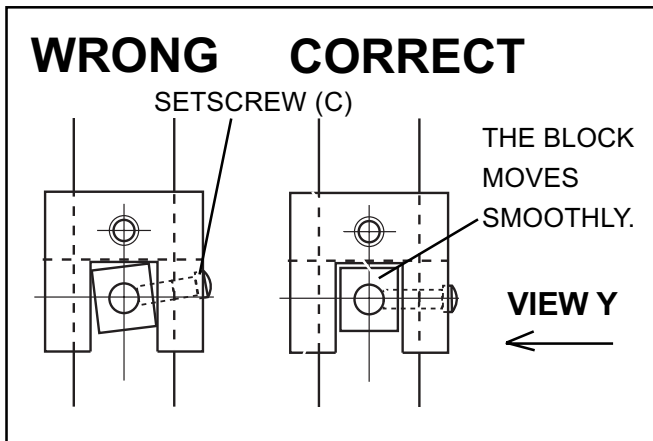
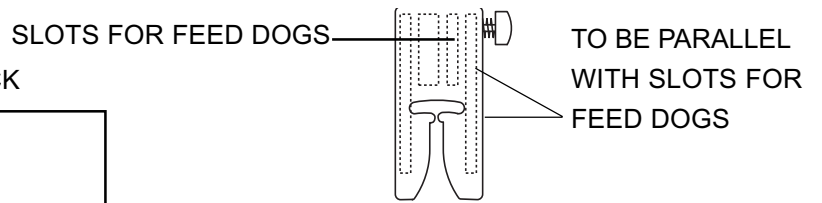
PRESSER FOOT LIFTER
SETSCREW (B) (2 mm)



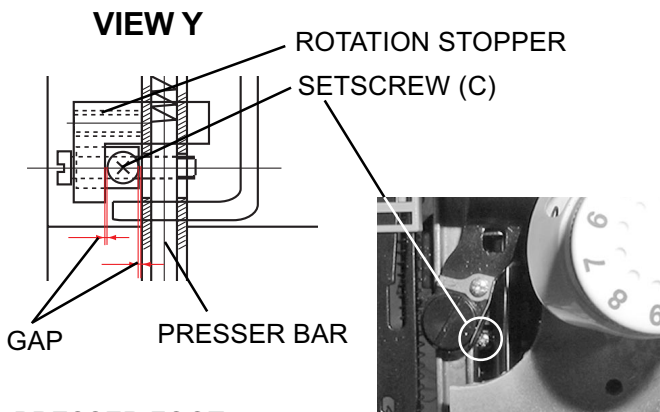
ADJUSTMENT OF DIRECTION OF PRESSER BAR AND ITS HEIGHT (2)



- 11 LOOSEN THE SETSCREW ON THE ROTATION STOPPER WHILE THE PRESSER FOOT HOLDING THE BLOCK (A). ADJUST THE DIRECTION OF THE PRESSER BAR. THE DISTANCE BETWEEN THE BLOCK AND THE ROTATION STOPPER MUST BE 0.3 MM.
- 12 REMOVE THE BLOCK (A). LOWER THE PRESSER FOOT TO CHECK THE DIRECTION OF THE PRESSER FOOT. THE SLOTS FOR FEED DOGS AND THE PRESSER FOOT MUST BE PARALLEL.

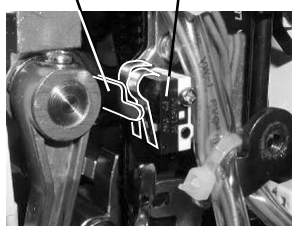


- 13 RAISE THE PRESSER FOOT. PUSH UP THE PRESSER FOOT WITH YOUR FINGER. CHECK IF THE BLOCK MOVES SMOOTHLY.
- 14 IF THE BLOCK DOES NOT MOVE SMOOTHLY: LOOSEN THE SETSCREW A AND ADJUST THE ROTATION STOPPER SO THAT THE BLOCK SHOULD BE PARALLEL TO THE ROTATION STOPPER. SETSCREW (C) SHOULD NOT INTERFERE WITH NEITHER ROTATION STOPPER NOR PRESSER BAR AS ILLUSTRATED.



- 15 ATTACH THE ARM THREAD GUIDE (2).

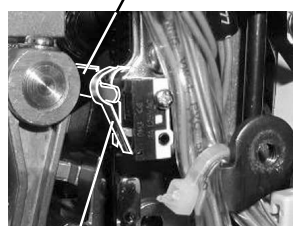
PRESSER FOOT LIFTER SWITCH PLATE



CORRECT

PRESSER FOOT LIFTER SWITCH

PRESSER FOOT LIFTER SWITCH PLATE



WRONG

LEVER

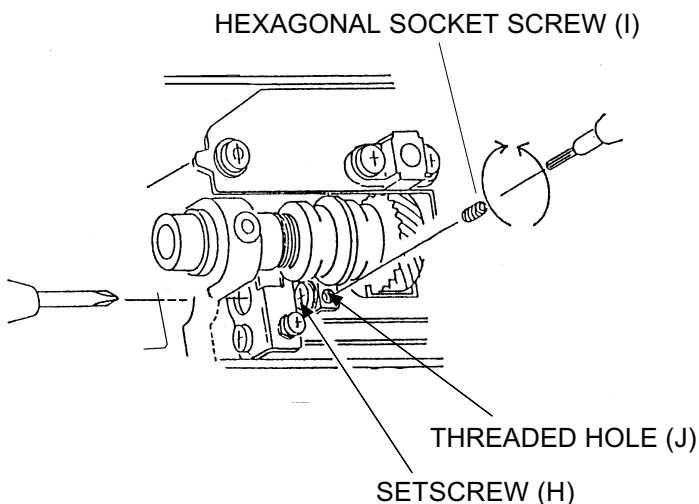
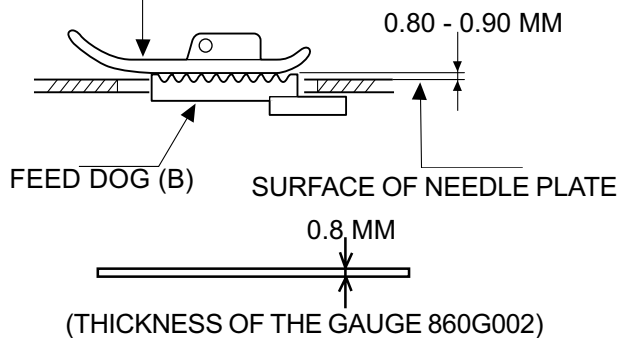
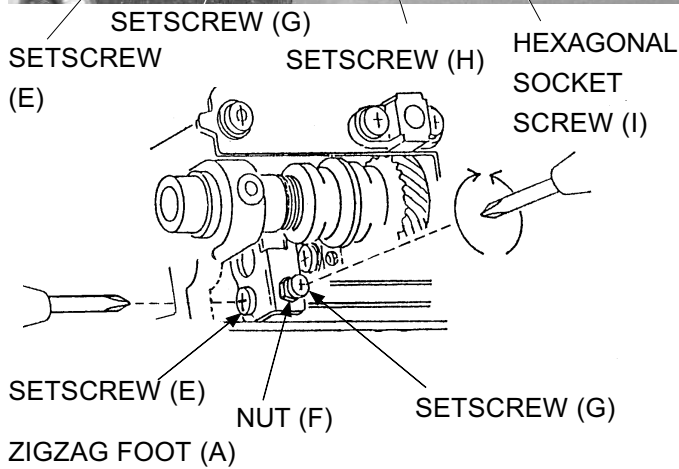
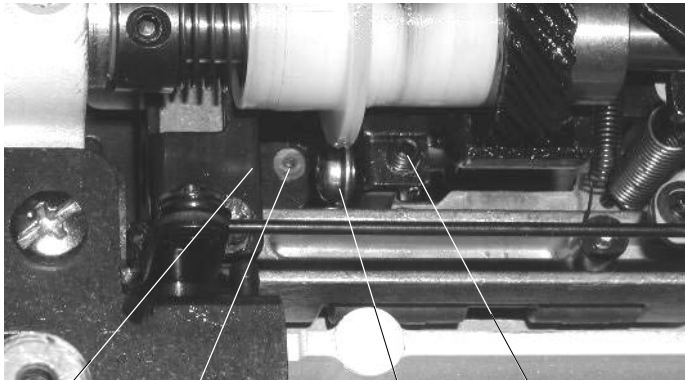
- 16 ATTACH THE FRONT BRACKET (UNIT). MAKE SURE THE PRESSER FOOT LIFTER SWITCH PLATE IS ABOVE THE SWITCH LEVERS, NOT UNDER THE LEVERS.

- 17 ATTACH THE NEEDLE BAR SUPPORTER SPRING.

- 18 ATTACH THE FACE COVER AND TOP COVER.

TO ADJUST THE FEED DOG HEIGHT

WHEN THE PRESSURE ADJUSTING DIAL IS AT 131 AND THE PRESSER FOOT (A) IS LOWERED, THE HIGHEST POSITION OF THE FEED DOG (B) SHOULD BE 0.80 TO 0.90 MM (C) FROM THE SURFACE OF THE NEEDLE PLATE (D).



[TO ADJUST]:

1. REMOVE THE MACHINE BASE AND AUTO-THREAD CUTTER COVER.
2. SET THE PRESSURE ADJUSTING DIAL AT 131 WITH THE PRESSER FOOT LOWERED.
3. TURN THE BALANCE WHEEL TOWARD YOU TO GET THE HIGHEST POSITION OF THE FEED DOG.
4. LOOSEN THE SETSCREW (E).
5. LOOSEN THE NUT (F).
6. ADJUST THE FEED DOG HEIGHT TO 0.80 - 0.90 MM BY TURNING THE ADJUSTING SCREW (G).
7. TIGHTEN THE NUT (F) AND SET SCREW (E).
8. ATTACH THE BED COVER.

[PARALLEL OF THE FEED DOG]

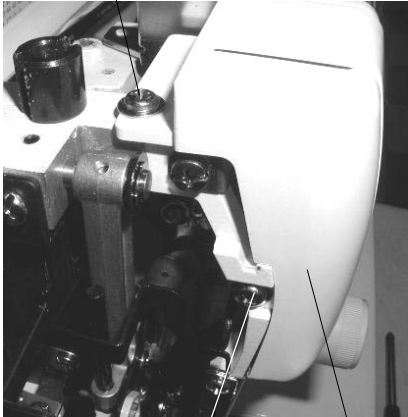
IF THE FEED DOG IS NOT PARALLEL TO THE SURFACE OF THE NEEDLE PLATE AT ITS HIGHEST POSITION, MAKE THE ADJUSTMENT AS FOLLOWS:

* FOR THIS ADJUSTMENT, A HEXAGONAL SOCKET SCREW (I), PART NO. 000111108 IS REQUIRED.

1. INSERT A HEXAGONAL SOCKET SCREW (I), PART NO. 000111108 INTO THE THREADED HOLE (J) UNTIL IT STOPS.
2. TURN THE SETSCREW (H) CLOCKWISE TO LOOSEN IT.
3. TURN THE HEXAGONAL SOCKET SCREW (I) UNTIL THE FEED DOG IS PARALLEL WITH THE SURFACE OF THE NEEDLE PLATE.
4. TIGHTEN THE LEFT-HANDED SETSCREW (H).
5. REMOVE THE HEXAGONAL SOCKET SCREW (I).
6. ATTACH THE AUTO-THREAD CUTTER COVER AND MACHINE BASE.

TO REPLACE NEEDLE THREAD TENSION UNIT

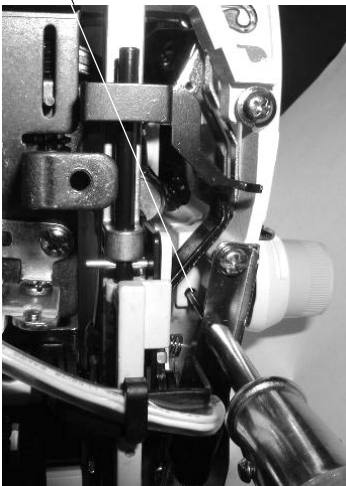
SETSCREW (A)



SETSCREW (B)

HEXAGONAL SOCKET
SCREW (D)

THREAD GUIDE
COVER (C)

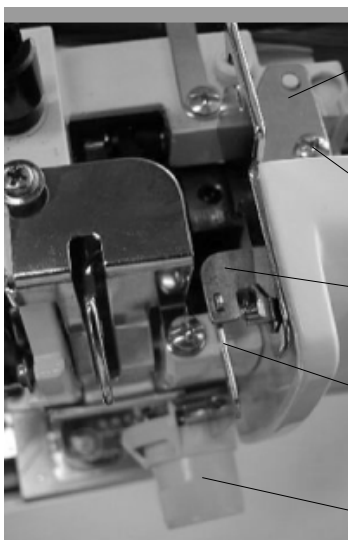


[TO REMOVE]:

1. REMOVE THE FACE PLATE.
2. LOOSEN THE SETSCREWS (A) AND (B).
REMOVE THE THREAD GUIDE COVER (C).
3. LOOSEN THE HEXAGONAL SOCKET SCREW (D).
4. REMOVE THE TENSION RELEASE PLATE (F) FROM
THE TENSION RELEASE ARM (E).
REMOVE THE NEEDLE THREAD TENSION UNIT (G).

[TO ATTACH]:

5. REVERSE THE ABOVE PROCEDURE.



NEEDLE THREAD
TENSION (UNIT)

SETSCREW (C)

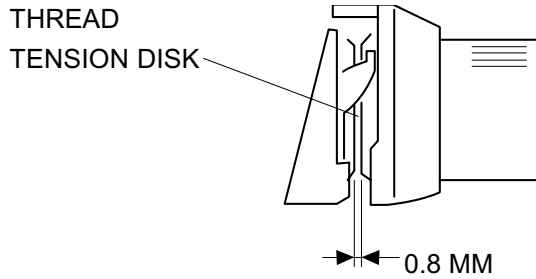
THREAD TENSION
RELEASE ARM (E)

THREAD TENSION
RELEASE PLATE (F)

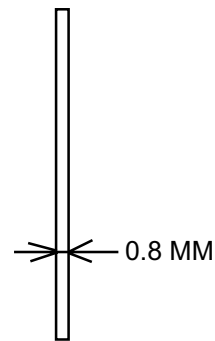
THREAD TENSION

TO ADJUST THE UPPER THREAD TENSION RELEASE (1)

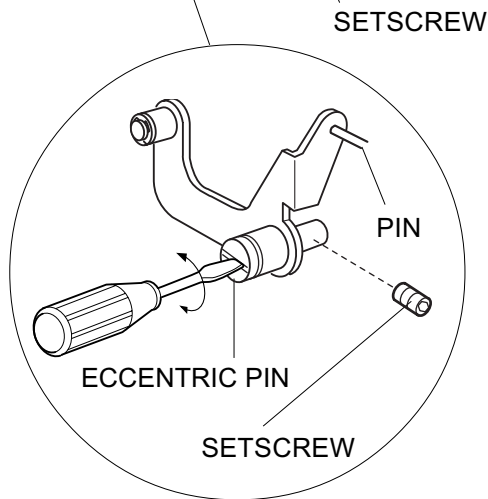
THE CLEARANCE OF UPPER THREAD TENSION DISKS SHOULD BE 0.8 MM WHEN THE PRESSER FOOT IS RAISED.



1. REMOVE THE FACE PLATE AND ARM THREAD GUIDE (2).
2. LOOSEN THE SETSCREW.
3. ROTATE THE ECCENTRIC PIN TO ADJUST THE CLEARANCE BETWEEN THREAD TENSION DISKS.
4. TIGHTEN THE SETSCREW.

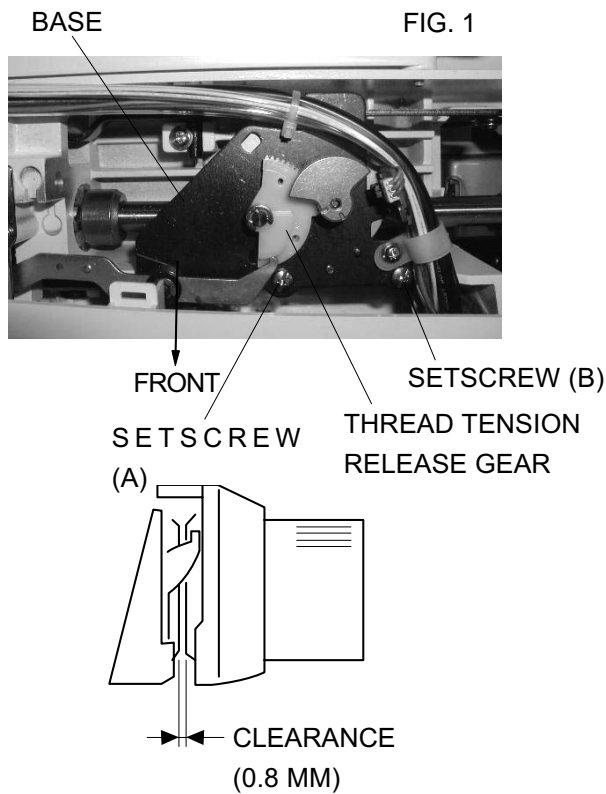


(THICKNESS OF THE GAUGE 860G002)



TO ADJUST THE UPPER THREAD TENSION RELEASE (2)

UPPER THREAD TENSION DISKS SHOULD OPEN 0.8 MM WHEN THE TENSION RELEASE MOTOR OPERATES. IF NOT, ADJUST FOLLOWS.

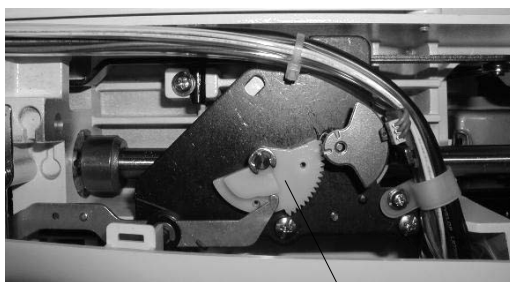


- 1 REMOVE THE FACE PLATE, TOP COVER AND THREAD GUIDE COVER.
- 2 SET THE THREAD TENSION DIAL TO "9". LOWER THE PRESSER FOOT LIFTER.
- 3 TURN THE THREAD TENSION RELEASE GEAR COUNTERCLOCKWISE UNTIL IT STOPS.
- 4 CHECK THE GAP OF UPPER THREAD TENSION DISKS. THE CLEARANCE SHOULD BE 0.8 MM.

IF THE CLEARANCE IS SMALLER THAN 8.0 MM LOOSEN THE SETSCREW (A) AND (B). TIGHTEN THE SETSCREW (B) LIGHTLY. SLIDE THE BASE TO THE FRONT. TIGHTEN THE SETSCREW (A) AND (B) SECURELY.

- 5 ATTACH THE THREAD GUIDE COVER, TOP COVER AND FACE PLATE.

TO CHECK



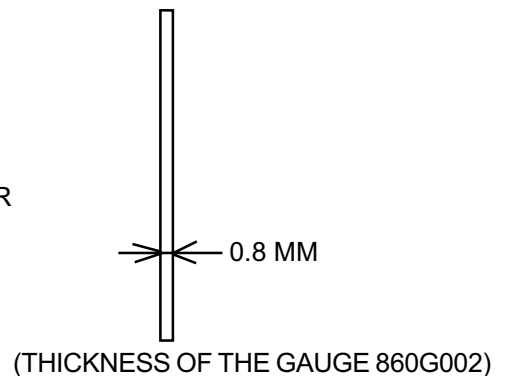
THREAD TENSION RELEASE GEAR



THREAD TENSION RELEASE PLATE

TO CHECK

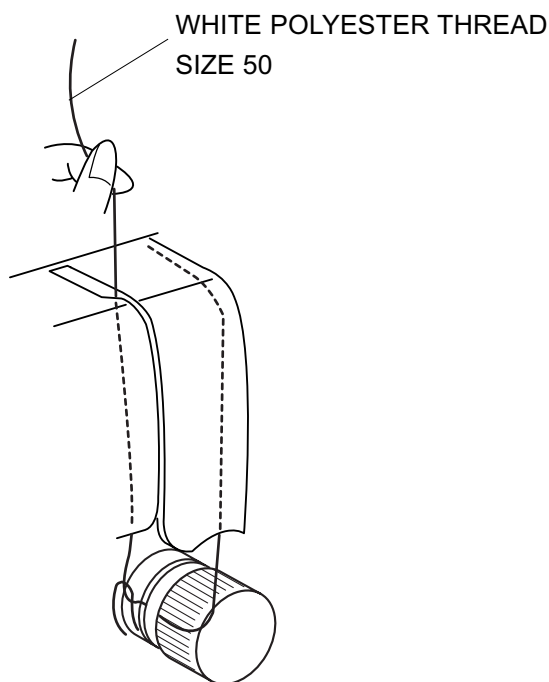
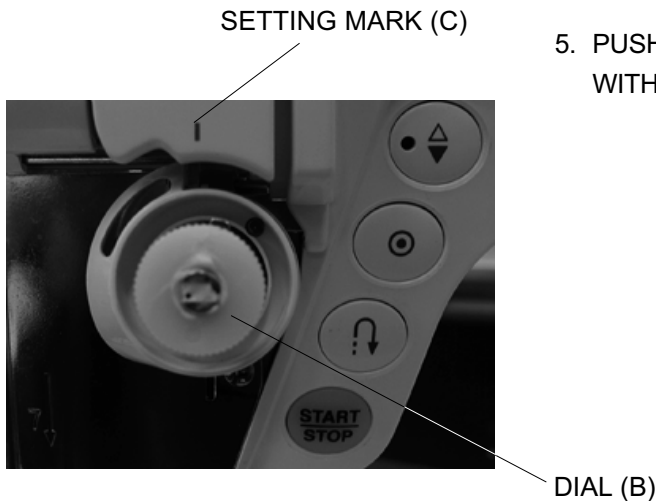
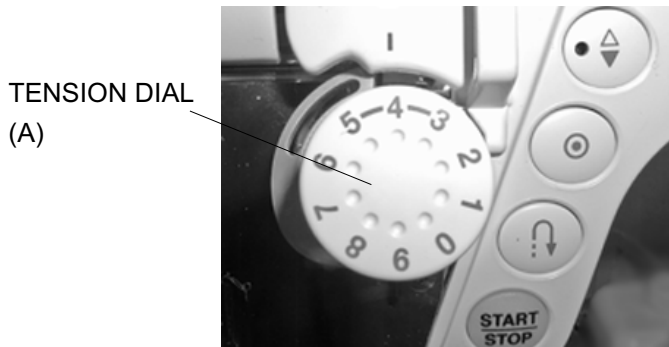
TURN THE THREAD TENSION RELEASE GEAR COUNTERCLOCKWISE UNTIL IT STOPS.



TO ADJUST THE UPPER THREAD TENSION

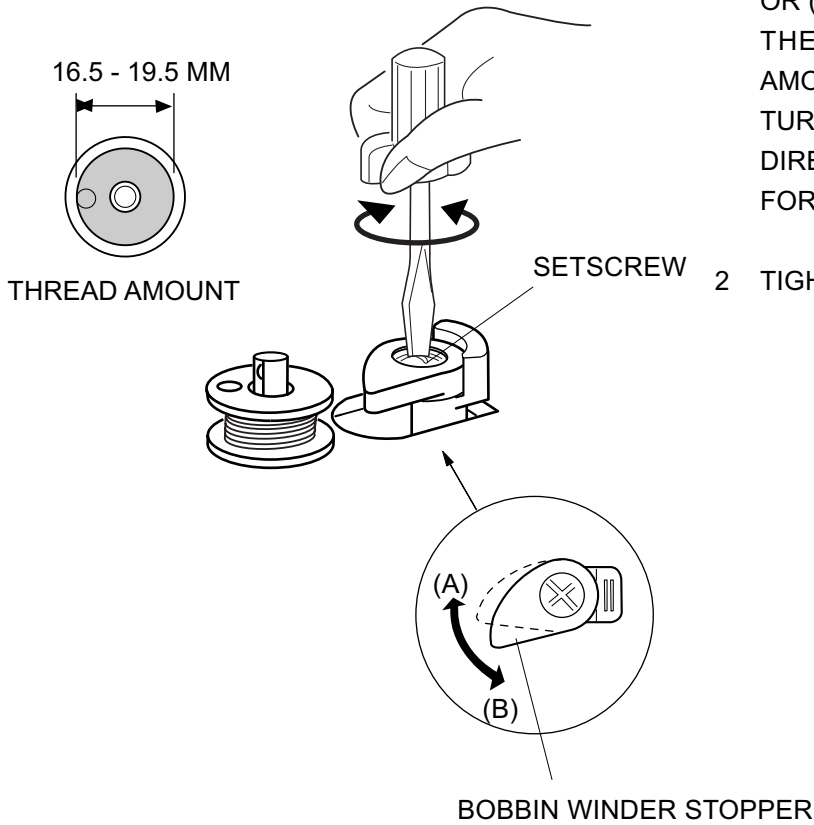
THE UPPER THREAD TENSION SHOULD BE 65 - 80 GRAMS WHEN PULLING THE THREAD (WHILE POLYESTER THREAD SIZE 50) AT THE SPEED OF 110 MM/SEC WITH THE TENSION DIAL AT 4 (MAKE SURE THE FOOT IS LOWERED.)

- 1 SET THE THREAD TENSION DIAL (A) TO 4.
- 2 PULL OUT THE TENSION DIAL (A).
- 3 LOWER THE PRESSER FOOT.
- 4 ADJUST THE TENSION BY TURNING THE DIAL (B). TO LOOSEN THE TENSION, TURN IT COUNTER-CLOCKWISE. TO TIGHTEN THE TENSION, TURN IT CLOCKWISE.
5. PUSH IN THE TENSION DIAL (A) ALIGNING THE 4 WITH THE SETTING MARK (C).

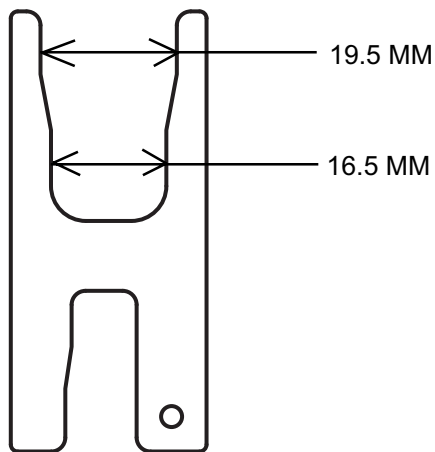


TO ADJUST THE BOBBIN WINDER STOPPER

THE DIAMETER OF THREAD WOUND ON BOBBIN SHOULD BE 16.5 TO 19.5 MM.

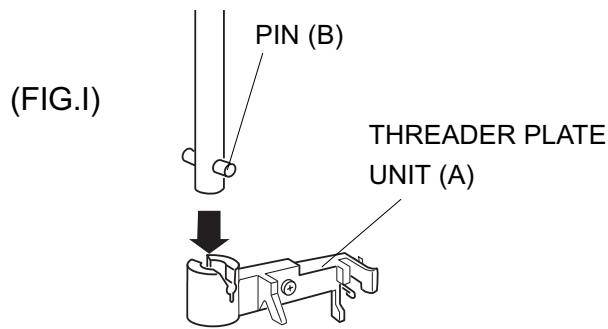


- 1 TO ADJUST THE THREAD AMOUNT FOR BOBBIN, LOOSEN THE SETSCREW AND TURN THE BOBBIN WINDER STOPPER IN THE DIRECTION OF (A) OR (B). TURN THE BOBBIN WINDER STOPPER IN THE DIRECTION OF (A) WHEN THE THREAD AMOUNT FOR BOBBIN IS TOO LARGE. TURN THE BOBBIN WINDER STOPPER IN THE DIRECTION OF (B) WHEN THE THREAD AMOUNT FOR BOBBIN IS TOO SMALL.
- 2 TIGHTEN THE SETSCREW.



(Gauge 860G002)

TO REPLACE NEEDLE THREADER PLATE

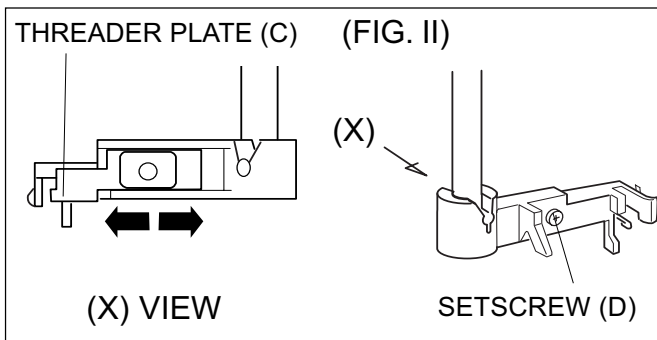


[TO REMOVE]:

- 1 REMOVE THE FOOT HOLDER.
- 2 PULL OUT THE THREADER PLATE UNIT (A).

[TO ATTACH]:

- 3 PUSH THE THREADER PLATE UNIT (A) UP TO SNAP IT WITH THE PIN (B) AS SHOWN IN FIG. I.
- 4 ATTACH THE FOOT HOLDER



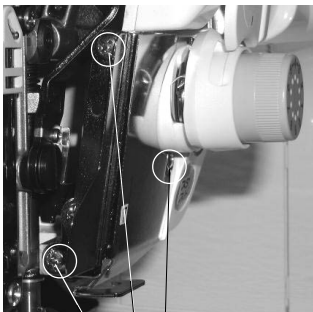
TO ADJUST THE POSITION OF THE THREADER PLATE (C)

IF THE THREADER HOOK THRUSTS OR HITS AGAINST EITHER LEFT OR RIGHT EDGE OF THE NEEDLE EYE:

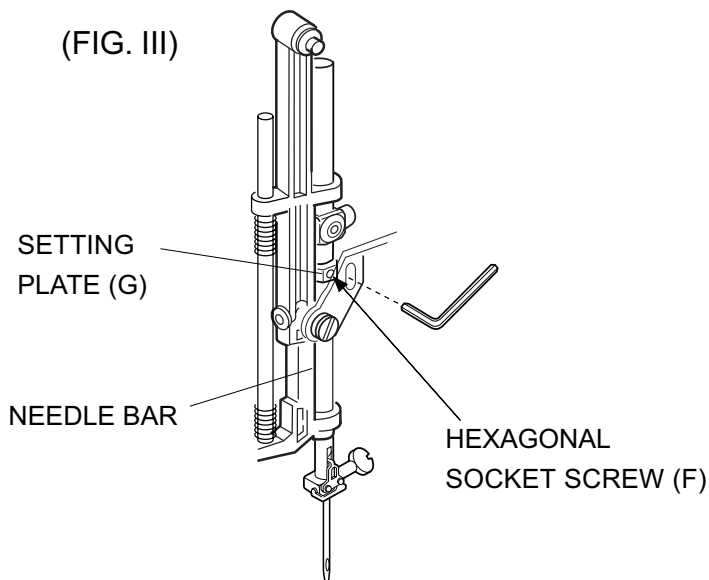
LOOSEN SCREW (D) AND ADJUST THE POSITION OF THE THREADER PLATE (C).

IF THE THREADER HOOK THRUSTS AGAINST EITHER TOP OR BOTTOM EDGE OF THE NEEDLE EYE, OR MISSES THE NEEDLE EYE:

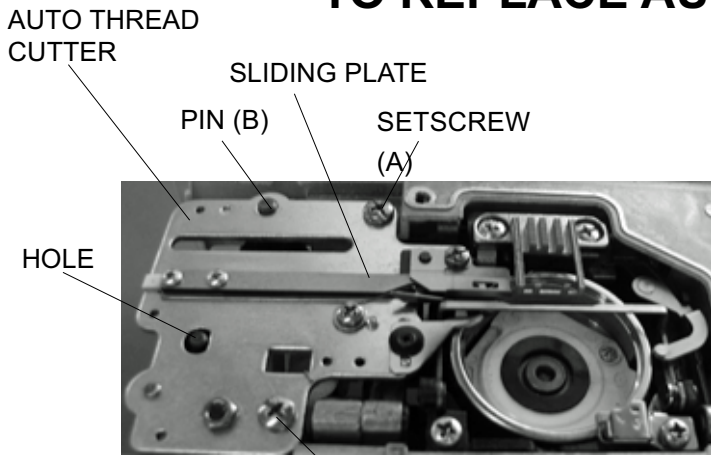
REMOVE THE FACE COVER AND LOOSEN THE HEXAGONAL SOCKET SCREW (F). MOVE THE SETTING PLATE (G) UP OR DOWN TO ADJUST THE HOOK POSITION. THEN TIGHTEN THE SETSCREW (F).



SETScrews (E)



TO REPLACE AUTO THREAD CUTTER



[TO REMOVE]:

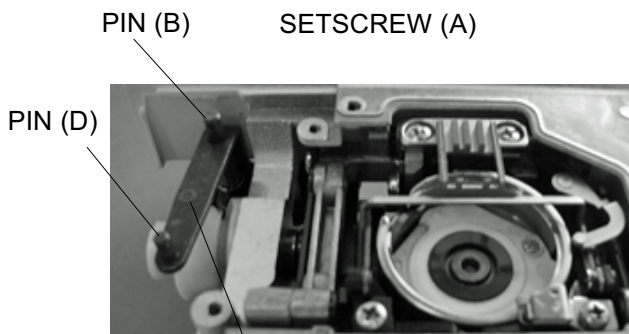
- 1 REMOVE THE NEEDLE PLATE, MACHINE BASE AND AUTO THREAD CUTTER COVER (REFER TO PAGE 2 AND 3).
- 2 REMOVE THE 2 SETSCREWS (A) AND REMOVE THE AUTO THREAD CUTTER.

[TO ATTACH]:

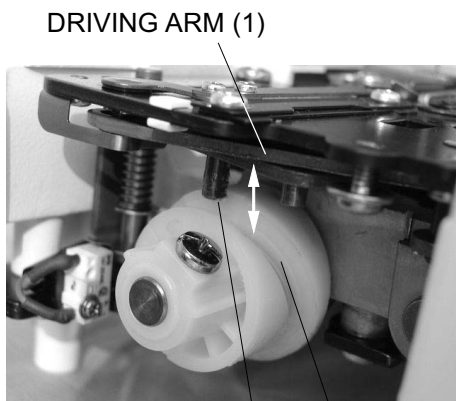
- 3 INSERT THE PINS (B) AND (D) INTO THE HOLES OF THE AUTO THREAD CUTTER.

[TO CHECK THE AUTO-THREAD CUTTER]

SET THE NEEDLE BAR AT THE LOWEST POSITION. INSERT THE PIN (C) INTO THE GROOVE OF THE CUTTER DRIVING CAM BY PUSHING DOWN THE DRIVING ARM (1). TURN THE HANDWHEEL TOWARD YOU TO MOVE THE SLIDING PLATE BACK AND FORTH. WHEN THE SLIDING PLATE RETURNS FROM THE RIGHTMOST POSITION, THE DRIVING ARM (1) SHOULD BE RELEASED AND THE PIN (D) SHOULD BE IN THE HOLE.



DRIVING ARM (1)

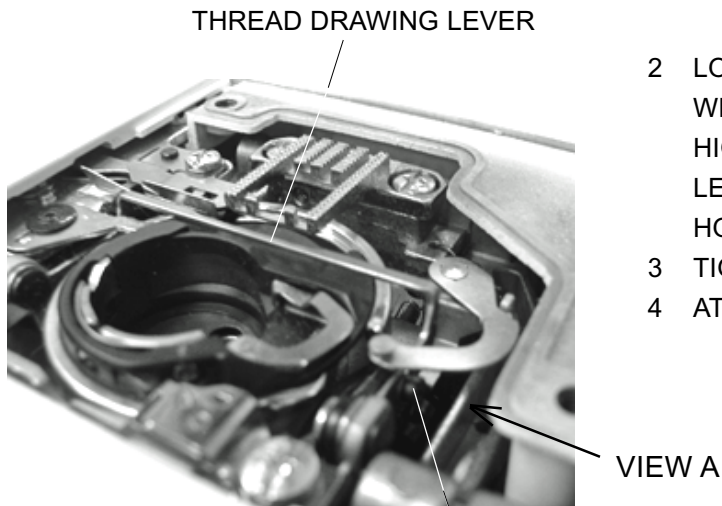


PIN (C)

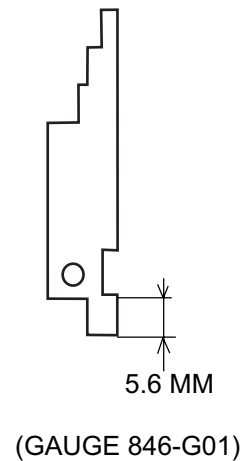
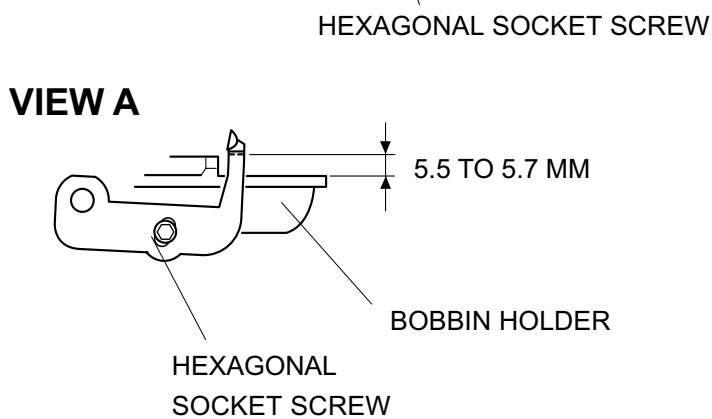
GROOVE OF THE SLIDING CAM

TO ADJUST THREAD DRAWING LEVER

THE MAXIMUM HEIGHT OF THE THREAD DRAWING LEVER SHOULD BE BETWEEN 5.5 TO 5.7 MM.



- 1 REMOVE THE NEEDLE PLATE.
- 2 LOOSEN THE HEXAGONAL SOCKET SCREW. WHEN THE THREAD DRAWING LEVER IS AT THE HIGHEST POSITION, ADJUST THE DRAWING LEVER SO THE DISTANCE BETWEEN BOBBIN HOLDER AND THE DRAWING LEVER IS 5.6 MM.
- 3 TIGHTEN THE HEXAGONAL SOCKET SCREW.
- 4 ATTACH THE NEEDLE PLATE.



TO ADJUST UPPER FEED DOG (1)

THE CLEARANCE BETWEEN THE UPPER FEED LINK SHAFT AND UPPER FEED LOWER SHAFT SHOULD BE 2.5 MM WHEN THE UPPER FEED ADJUSTING DIAL IS SET TO "0".

UPPER FEED DOG ADJUSTING DIAL

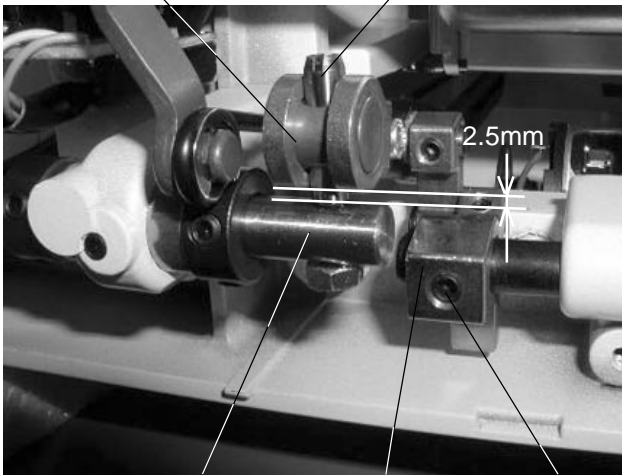


TO CHECK

1. TURN THE POWER ON AND SELECT MODE 1. SELECT STITCH #1 (\downarrow).
2. PRESS THE STITCH LENGTH ADJUSTING KEY. SET THE STITCH LENGTH TO 10. TURN THE POWER OFF.
3. LOWER THE FEED DOGS.
4. REMOVE THE BASE.
5. CHECK IF THE BED AND UPPER FEED LOWER SHAFT REAR ARM ARE PARALLEL.

UPPER FEED LINK SHAFT

UPPER FEED LOWER SHAFT REAR ARM



UPPER FEED LOWER SHAFT

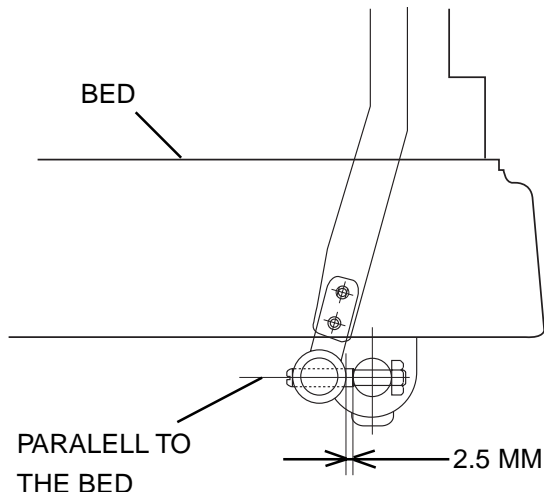
UPPER FEED ADJUSTING ARM (1)

SETSCREW

ADJUSTMENT

6. SET THE UPPER FEED ADJUSTING DIAL TO 0.
7. LOOSEN THE SETSCREW SO THE CLEARANCE BETWEEN THE UPPER FEED LINK SHAFT AND UPPER FEED LOWER SHAFT SHOULD BE 2.5 MM.
8. ATTACH THE BASE.

VIEW FROM THE BELT COVER SIDE




(GAUGE 846-G01)

TO ADJUST THE UPPER FEED DOG (2)

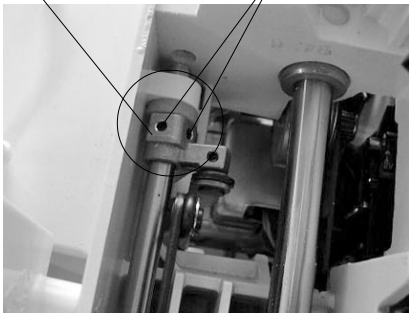
UPPER FEED DOG ADJUSTING DIAL



- 1 ATTACH THE DUAL FEED FOOT.
- 2 SET THE UPPER FEED DOG. TURN THE POWER SWITCH ON. SELECT THE MODE 1, THEN SELECT THE STITCH #1 ().
- 3 PRESS THE STITCH LENGTH ADJUSTING KEY. SET THE STITCH LENGTH TO 0.
- 4 LOWER THE FEED DOG.
- 5 SET THE UPPER FEED DOG ADJUSTING DIAL TO 0.
- 6 LOWER THE PRESSER FOOT. CHECK THE CLEARANCE BETWEEN THE DUAL FEED FOOT AND UPPER FEED DOG. THE CLEARANCE SHOULD BE 4 MM.

UPPER SHAFT REAR ARM (UPPER FEED)

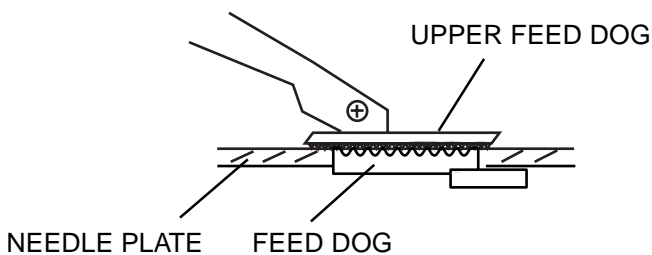
SETSCREW (A)



ADJUSTMENT

IF THE CLEARANCE BETWEEN THE DUAL FEED FOOT AND UPPER FEED DOG IS NOT 4MM, FOLLOW THE PROCEDURE BELOW.

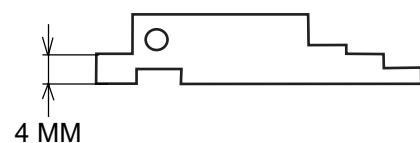
- 7 REMOVE THE TOP COVER.
- 8 LOOSEN THE SETSCREWS (A).
- 9 ADJUST THE UPPER SHAFT REAR ARM SO THE CLEARANCE BETWEEN THE DUAL FEED FOOT AND UPPER FEED DOG IS 4MM.
- 10 ATTACH THE TOP COVER.



UPPER FEED DOG

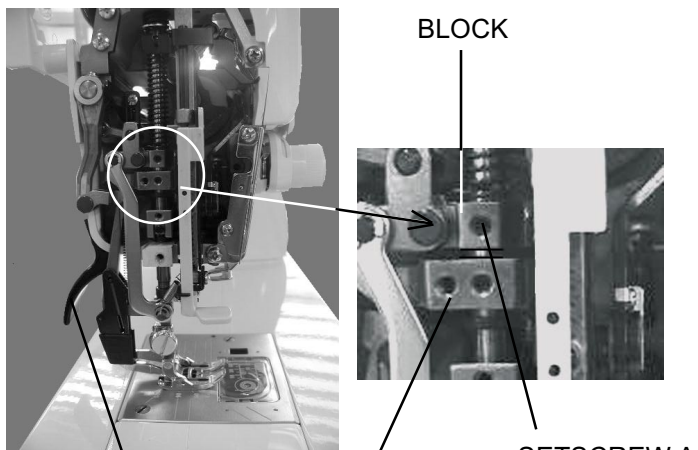
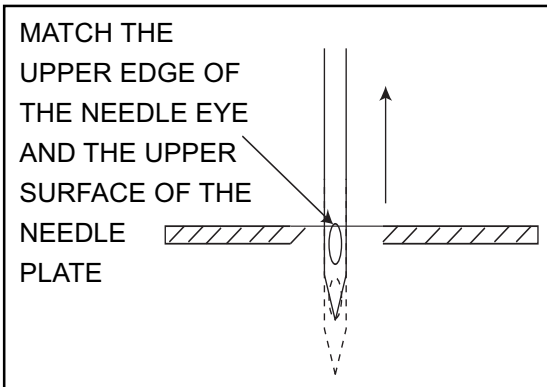
DUAL FEED FOOT

4 MM



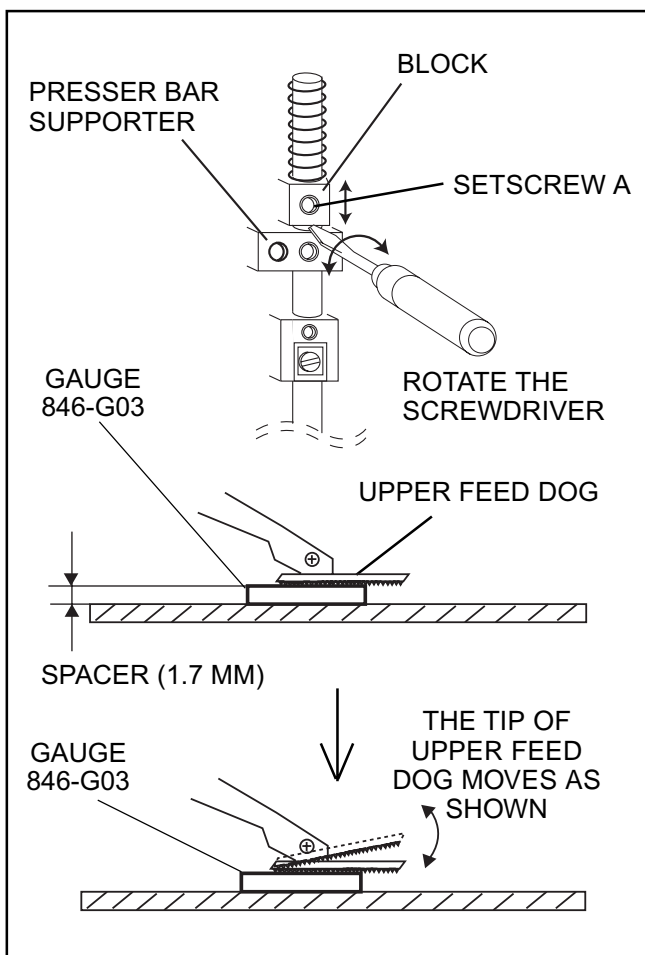
(GAUGE 846-G01)


TO ADJUST UPPER FEED DOG HEIGHT



LOWER THE PRESSER FOOT LIFTER

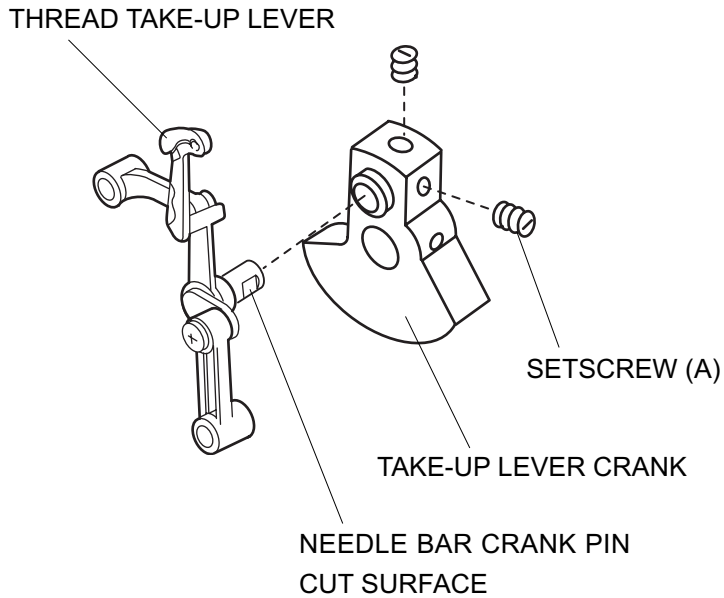
PRESSER BAR SUPPORTER



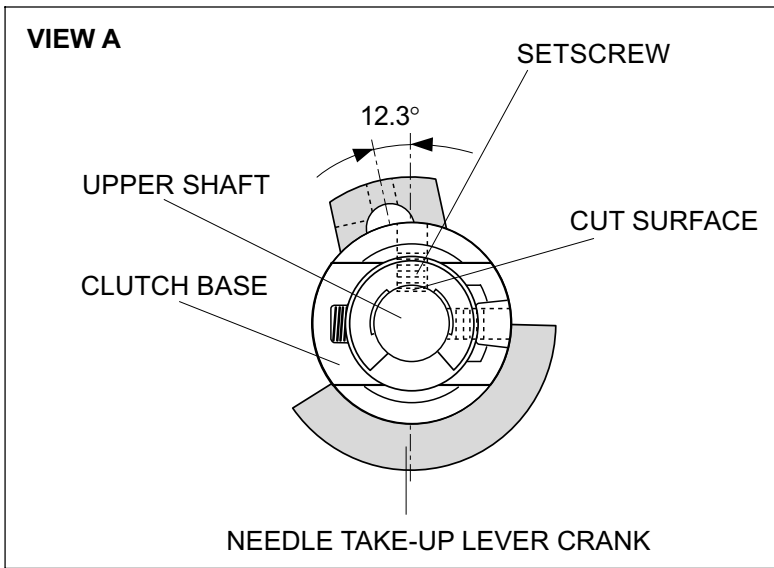
- 1 ATTACH THE DUAL FEED FOOT.
- 2 REMOVE THE FACE PLATE AND TOP COVER.
- 3 SET THE UPPER FEED DOG. TURN THE POWER SWITCH ON. SELECT THE MODE 1 AND STITCH PATTERN #1 ().
- 4 PRESS THE STITCH LENGTH ADJUSTMENT KEY. SET THE STITCH LENGTH TO "0". TURN OFF THE POWER SWITCH.
- 5 LOWER THE FEED DOG.
- 6 REMOVE THE FRONT BRACKET (UNIT) AND NEEDLE BAR SUPPORTER SPRING.
- 7 TURN THE HANDWHEEL TOWARD YOU (COUNTERCLOCKWISE) TO RAISE THE NEEDLE FROM ITS LOWEST POSITION UNTIL THE UPPER EDGE OF THE NEEDLE EYE MEETS THE UPPER SURFACE OF THE NEEDLE PLATE.
- 8 INSERT THE 1.7 MM SPACER (GAUGE 846-G03) BETWEEN THE UPPER FEED DOG AND NEEDLE PLATE FROM THE REAR SIDE OF UPPER FEED DOG. LOWER THE PRESSER FOOT LIFTER.
- 9 LOOSEN THE SETSCREW A. INSERT A NARROW SCREWDRIVER BETWEEN THE BLOCK AND PRESSER BAR SUPPORTER. OPEN THE CLEARANCE WITH THE SCREWDRIVER FEW TIMES.
- 10 TIGHTEN THE SETSCREW A WHILE THE UPPER FEED DOG PRESSING THE SPACER .
- 11 ATTACH THE FRONT BRACKET (UNIT) AND NEEDLE BAR SUPPORTER SPRING.
- 12 ATTACH THE TOP COVER AND THE FACE PLATE.

THREAD TAKE-UP LEVER PHASE

INSERT THE NEEDLE BAR CRANK PIN INTO THE TAKE-UP LEVER CRANK AS ILLUSTRATED. THE SETSCREW (A) MUST HOLD THE NEEDLE BAR CRANK PIN CUT SURFACE.

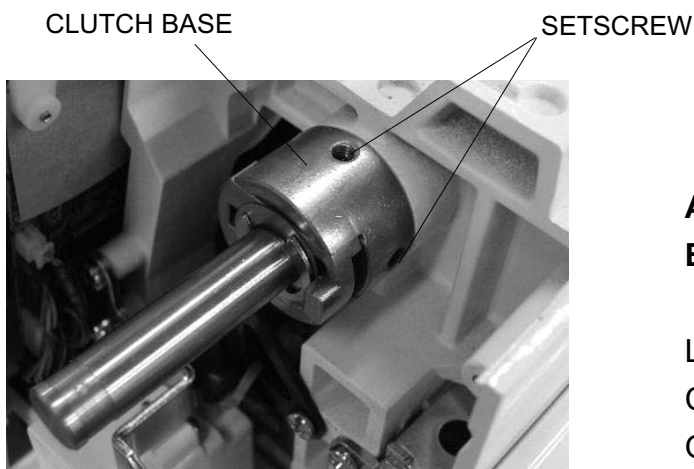


TO ADJUST UPPER SHAFT CLUTCH



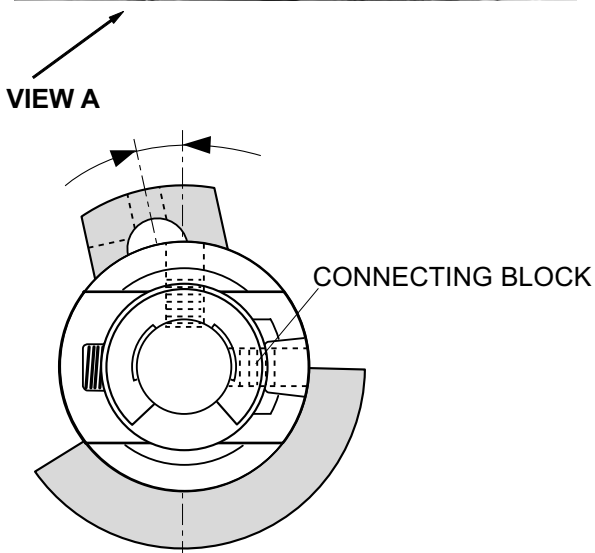
CLUTCH BASE (UNIT) ANGLE

WHEN THE CUT SURFACE OF THE UPPER SHAFT IS PARALLEL TO THE GROUND, THE CRANK AXIS SHOULD BE A 12.3-DEGREE ANGLE.



ADJUSTING THE PLAY OF CONNECTING BLOCK

LOOSEN THE SETSCREWS. ADJUST THE CLUTCH BASE POSITION TO FIX THE PLAY OF THE CONNECTING BLOCK. THE CONNECTING BLOCK SHOULD WORK SMOOTHLY, AND THERE SHOULD BE NO PLAY.



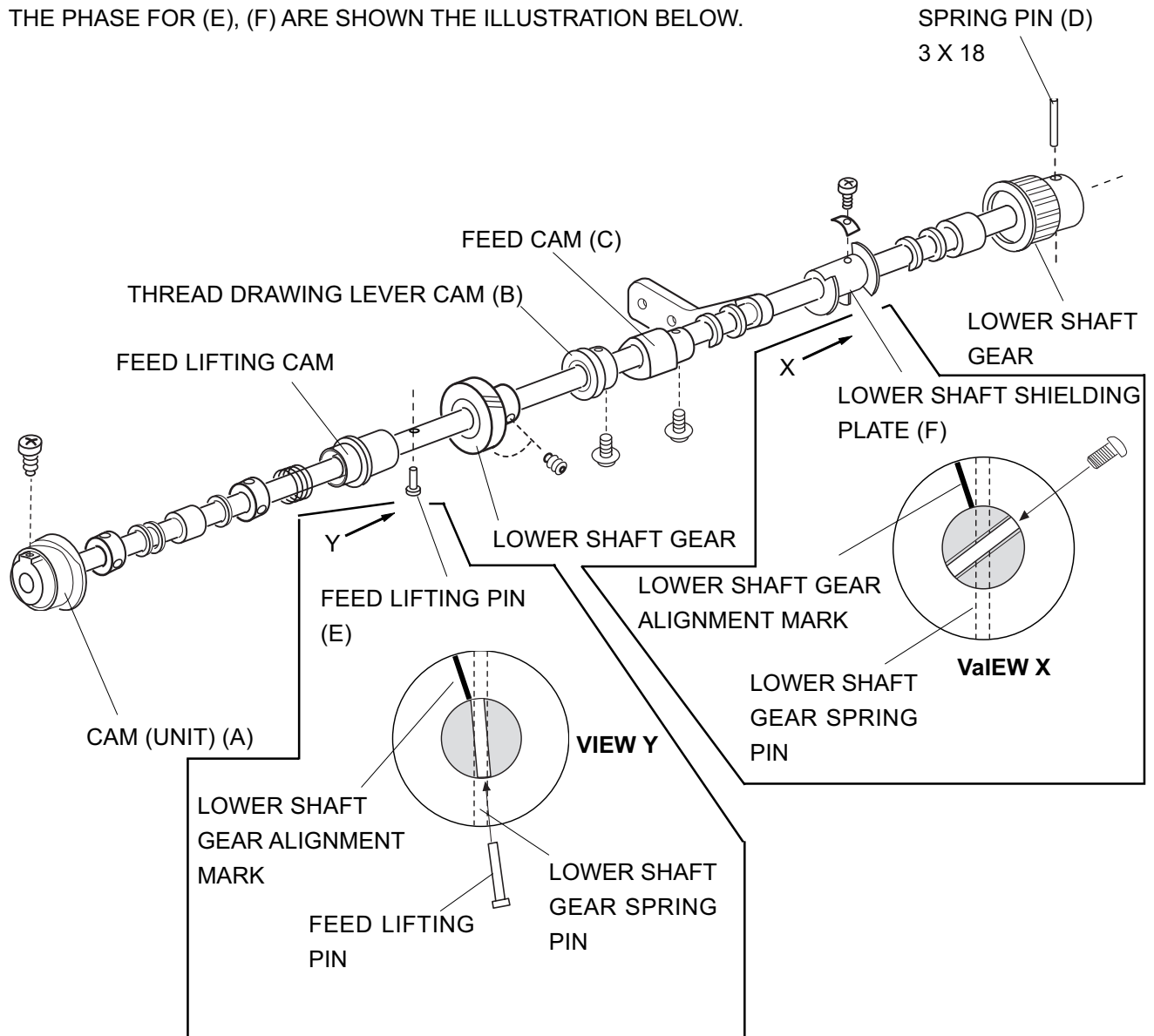
LOWER SHAFT

TO ATTACH THE LOWER SHAFT PARTS

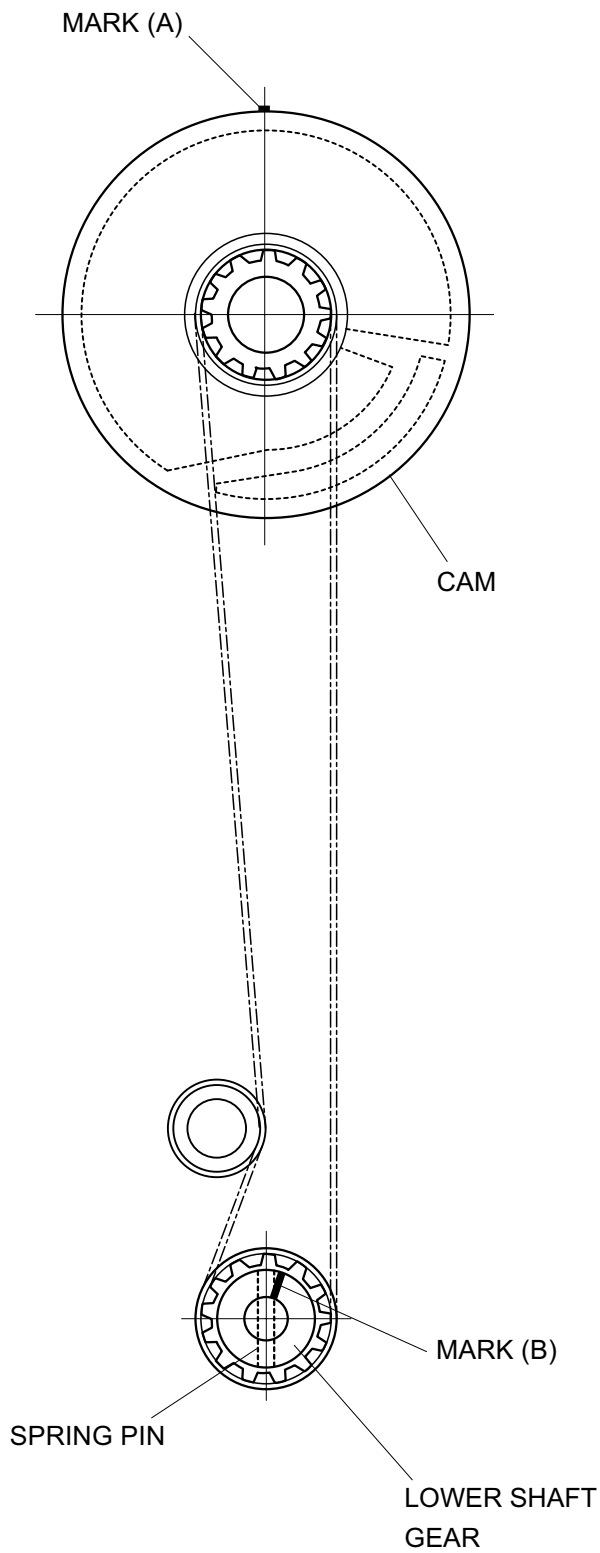
ANGLE:

THE ANGLE FOR (A), (B), (C) AND (D) IS SAME AS THAT OF THE SPRING PIN (D) ON THE LOWER SHAFT GEAR.

THE PHASE FOR (E), (F) ARE SHOWN THE ILLUSTRATION BELOW.



TIMING BELT



- 1 SET THE THE MARK (A) TO THE TOP OF THE CAM, WHEN THE MARK (B) POINTING UPWARD. ATTACH THE BELT.

TO REPLACE DRIVING MOTOR



SETSCREW (A)

[TO REMOVE]

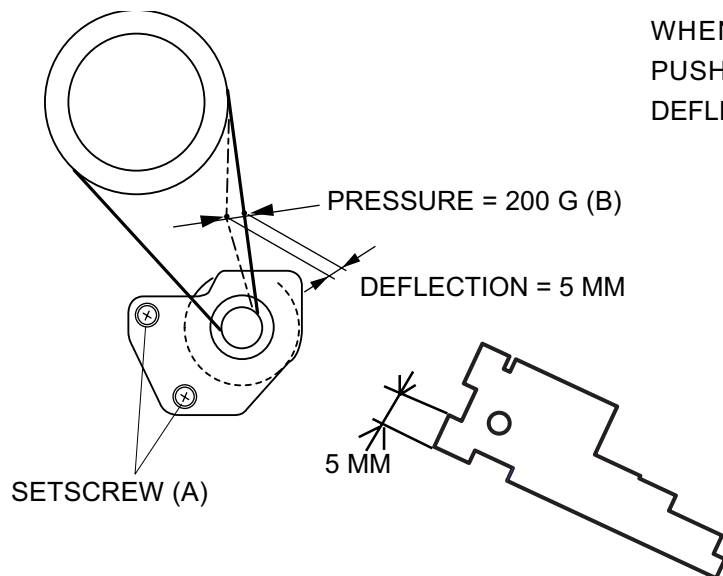
- 1 REMOVE THE FRONT COVER.
(REFER TO PAGE 4)
- 2 REMOVE THE MOTOR BELT.
- 3 PULL OUT THE CONNECTOR FROM THE CIRCUIT BOARD A.
- 4 REMOVE THE 2 SETSCREWS (A) AND PULL OUT THE DRIVING MOTOR.

[TO ATTACH]

- 5 TIGHTEN THE 2 SETSCREWS (A) SLIGHTLY.
- 6 ADJUST THE BELT TENSION AND TIGHTEN THE 2 SETSCREWS (A) FIRMLY.

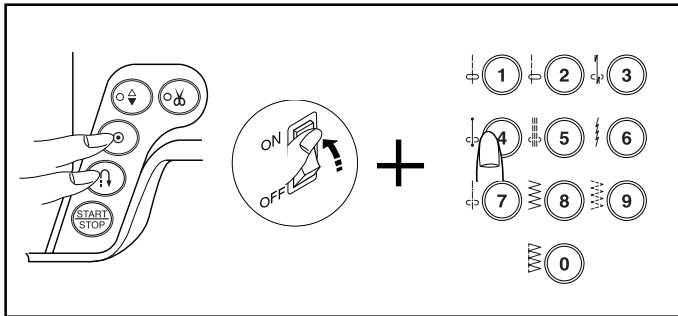
[CORRECT MOTOR BELT TENSION]:

WHEN THE MIDDLE OF THE MOTOR BELT IS PUSHED WITH A PRESSURE OF 200 G (B), THE DEFLECTION SHOULD BE 5 MM.

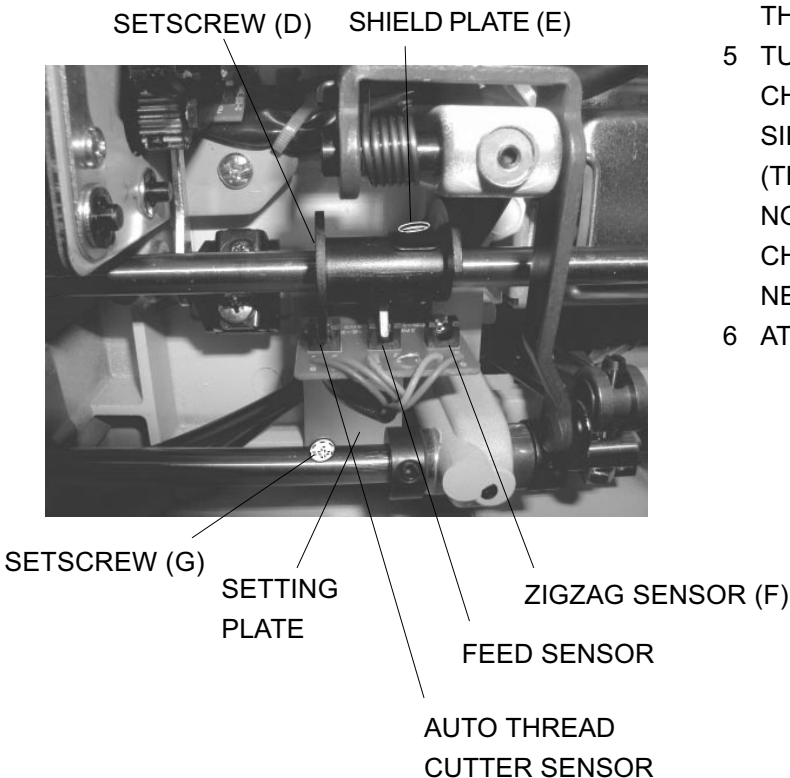
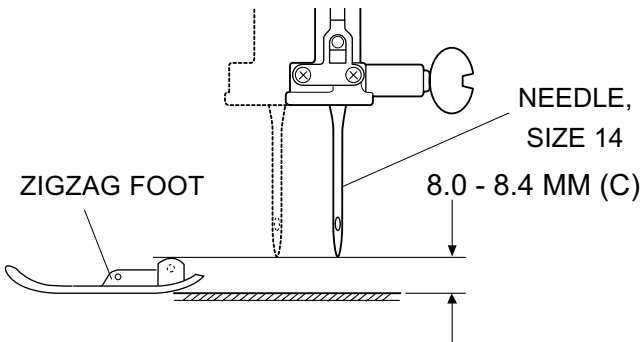


(Gauge 860G-001)

TO ADJUST ZIGZAG TIMING

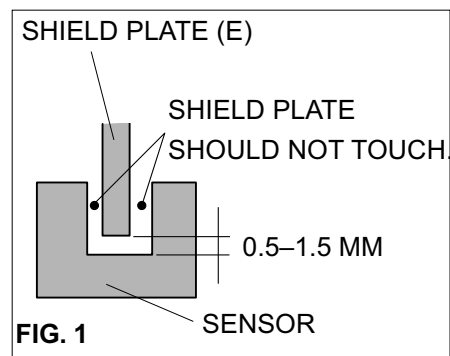


Step4 BH
Sensor H
Csen Fsen Bsen
L H L

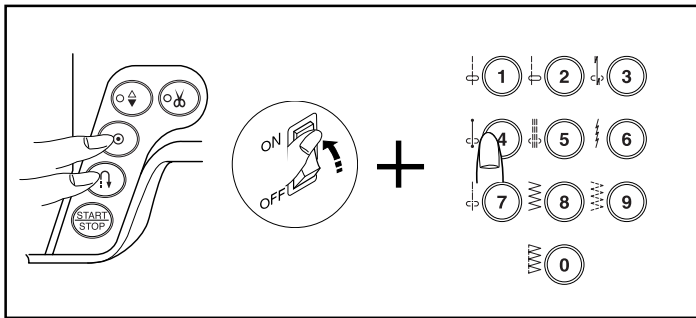


WHEN THE MACHINE IS SET FOR ZIGZAG STITCHING, THE NEEDLE SHOULD START TO ZIGZAG 8.0 MM TO 8.4 MM (C = HEIGHT OF ZIGZAG FOOT) ABOVE THE SURFACE OF THE NEEDLE PLATE.

- 1 SET THE MACHINE FOR ADJUSTING MODE BY TURNING THE POWER SWITCH WHILE PRESSING THE NEEDLE UP/DOWN AND THE LOCK STITCH BUTTONS AT A TIME. THEN PRESS THE NUMBER 4 BUTTON WITHIN 3 SECONDS (IF IT IS NOT PRESSED WITHIN 3 SECONDS, THE MACHINE WILL RETURN TO NORMAL SEWING MODE).
- 2 TURN THE HANDWHEEL TOWARD YOU SLOWLY WITH YOUR HAND UNTIL THE NEEDLE COMES 8.2 MM ABOVE THE SURFACE OF THE NEEDLE PLATE.
- 3 REMOVE THE MACHINE BASE. LOOSEN THE SETSCREW (D) AND TURN THE SHIELD PLATE (E) UNTIL THE 'Bsen' ON THE LCD CHANGES FROM [L] TO [H] AND BUZZER SOUNDS. TIGHTEN THE SETSCREW (D).
- 4 SET THE RIGHT SIDE OF THE SHIELD PLATE TO THE CENTER OF THE SENSOR AS SHOWN IN THE FIG. 1 AND TIGHTEN THE SET SCREW (G).
- 5 TURN THE BALANCE WHEEL TOWARD YOU, AND CHECK THE CLEARANCE BETWEEN THE LEFT SIDE OF THE SHIELD PLATES AND SENSORS. (THE SHIELD PLATES AND SENSORS SHOULD NOT TOUCH.) ALSO, CHECK THAT 'Csen' CHANGES FROM [L] TO [H] AT THE LOWEST NEEDLE POSITION.
- 6 ATTACH THE MACHINE BASE.



TO ADJUST BUTTONHOLE LEVER POSITION



Step4	BH		
Sensor	H		
Csen	Fsen	Bsen	
L	H	L	

1 WHILE PRESSING THE NEEDLE UP/DOWN AND LOCK STITCH KEYS, TURN THE POWER SWITCH ON. PRESS THE NUMBER 4 BUTTON WITHIN 3 SECONDS.

2 REMOVE THE FACE PLATE (REFER TO PAGE 1). LOWER THE BUTTONHOLE LEVER (C).

3 LOOSEN THE SETSCREW (A) AND MOVE THE BUTTONHOLE LEVER GUIDE (B) UNTIL THE DISPLAY SHOWS \dot{i} SENSOR \dot{L} .

4 ATTACH THE BUTTONHOLE FOOT (R).

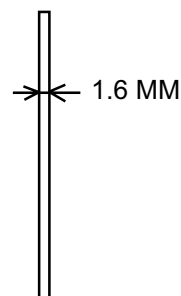
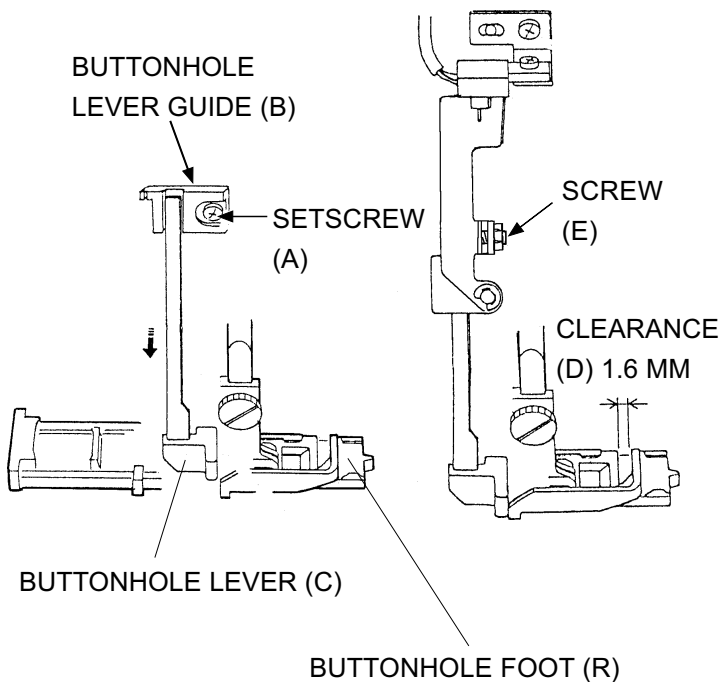
5 ADJUST THE CLEARANCE OF THE BUTTONHOLE FOOT TO 1.6 MM (D).

6 LOOSEN THE SCREW (E) UNTIL THE DISPLAY SHOWS \dot{i} SENSOR \dot{H} .

7 TIGHTEN THE SCREW (E) UNTIL THE DISPLAY JUST CHANGES FROM \dot{i} SENSOR \dot{H} TO \dot{i} SENSOR \dot{L} .

8 TURN OFF THE POWER SWITCH.

9 ATTACH THE FACE PLATE.



(Thickness of the Gauge 860G002)

ADJUSTMENT OF STRETCH STITCH FEED BALANCE

WHEN THE NUMBER 8 IS SHOWN 5 TIMES WITH THE STRETCH STITCH BALANCE DIAL (C) AT THE SETTING MARK (D), THE MEASUREMENT SHOULD BE BETWEEN 32 AND 38 MM AS SHOWN IN FIG. 1.

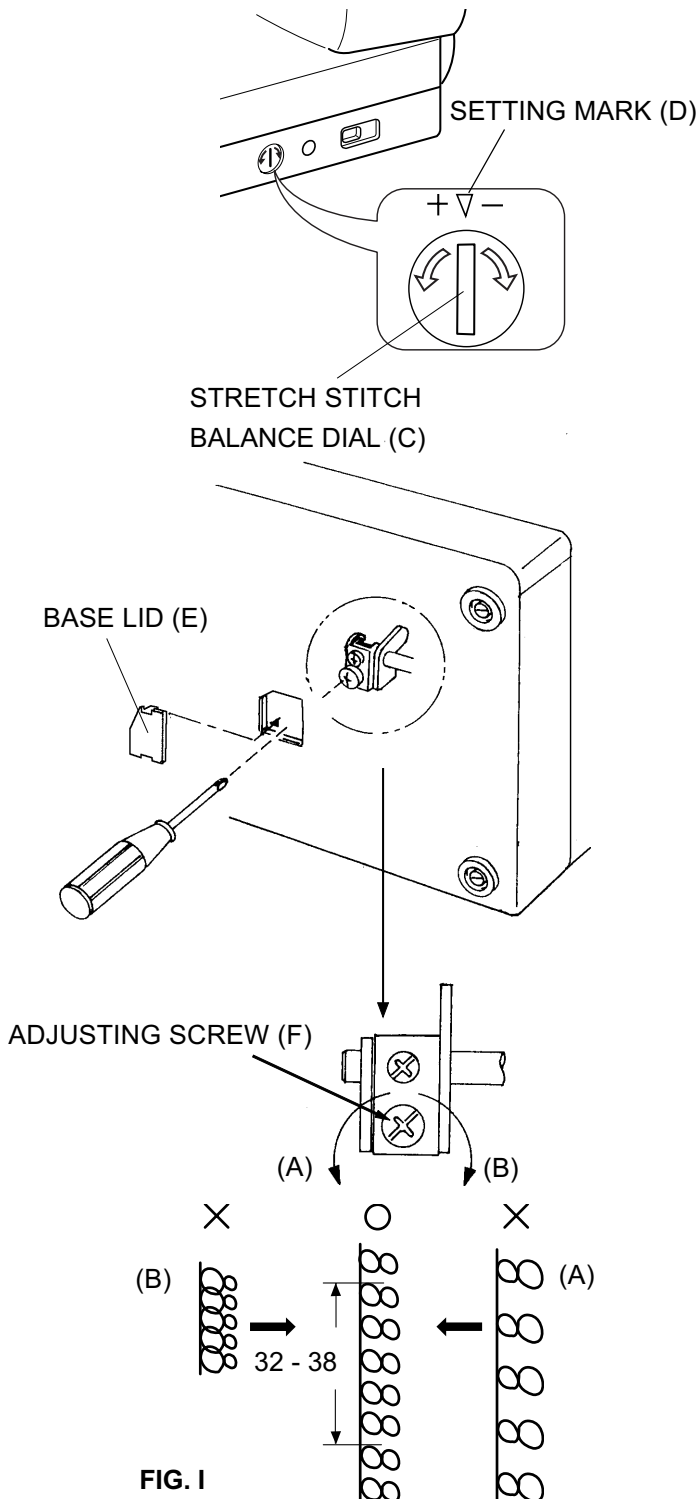
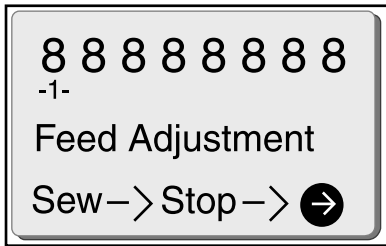


FIG. I

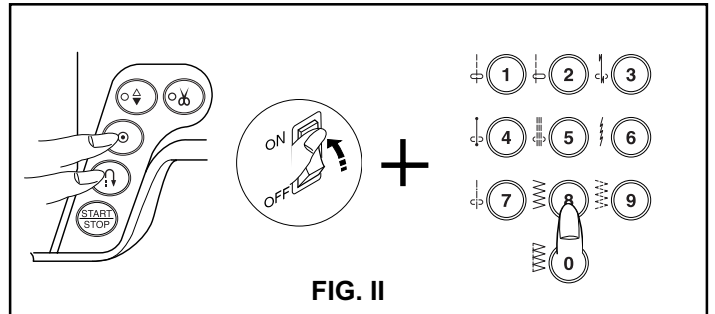


FIG. II

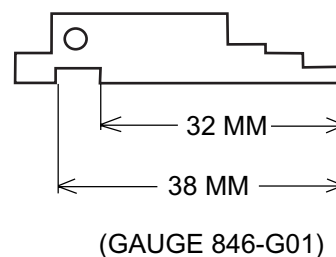
[TO ADJUST]

1. WHILE PRESSING THE NEEDLE UP/DOWN BUTTON AND LOCK STITCH BUTTON, TURN THE POWER SWITCH ON. THEN PRESS THE NUMBER 8 BUTTON WITHIN 3 SECONDS AS SHOWN IN THE FIG II.
2. SET THE STRETCH STITCH BALANCE DIAL (C) AT THE SETTING MARK (D).
3. SEW 8 OF NUMBER 8 AND CHECK IF THE MEASUREMENT OF FIVE OF THEM IS BETWEEN 32 AND 38 MM.
4. IF NOT, REMOVE THE BASE LID (E), AND TURN THE ADJUSTING SCREW IN THE DIRECTION OF:

- (A) IF THE MEASUREMENT IS MORE THAN 38 MM.
- (B) IF THE MEASUREMENT IS LESS THAN 32 MM.

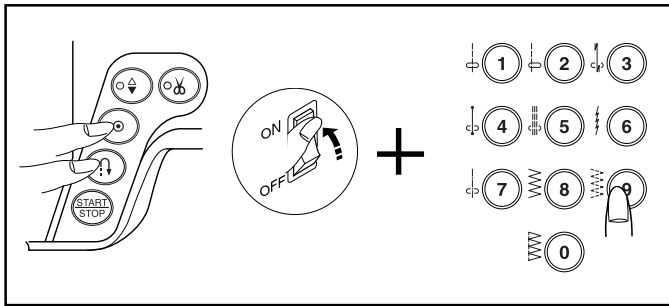
* WHEN THE BUTTON IS PRESSED, THE ADJUSTING SCREW (F) COMES TO THE ADJUSTING POSITION. TURN THE ADJUSTING SCREW, THEN PRESS BUTTON AND SEW 8 OF NUMBER 8.

5. TURN OFF THE POWER SWITCH.
6. ATTACH THE BASE LID (E).



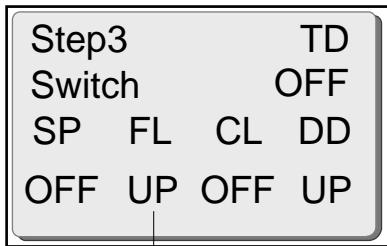
(GAUGE 846-G01)

ADJUSTMENT OF PRESSER BAR LIFTER SWITCH POSITION



1 WHILE THE PRESSING THE NEEDLE UP/DOWN AND LOCK STITCH BUTTONS, TURN THE POWER SWITCH ON. PRESS THE NUMBER 1 BUTTON IN 3 SECONDS.

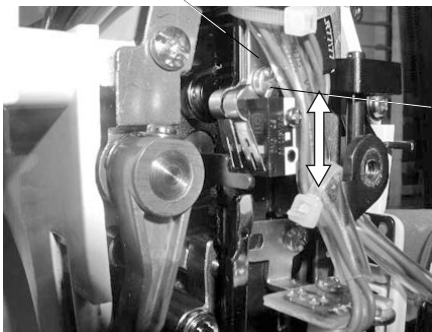
2 REMOVE THE FACE PLATE AND TOP COVER PLATE.



DISPLAY (A)

3 WHEN THE PRESSER BAR IS LIFTED OR LOWERED, THE DISPLAY (A) SHOWS **UP** OR **DOWN** RESPECTIVELY. IF NOT, LOOSEN THE SETSCREW (A) AND ADJUST THE POSITION OF THE SWITCH SET PLATE SO THAT THE DISPLAY(A) CHANGES **UP** TO **DOWN** OR VICE VERSA, WHEN THE CLEARANCE BETWEEN THE FOOT AND NEEDLE PLATE IS 4 TO 5.5 MM BY LOWERING OR RAISING THE PRESSER FOOT LIFTER.

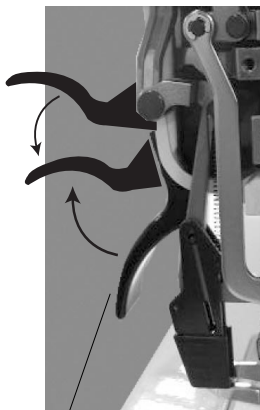
PRESSER BAR LIFTER SWITCH



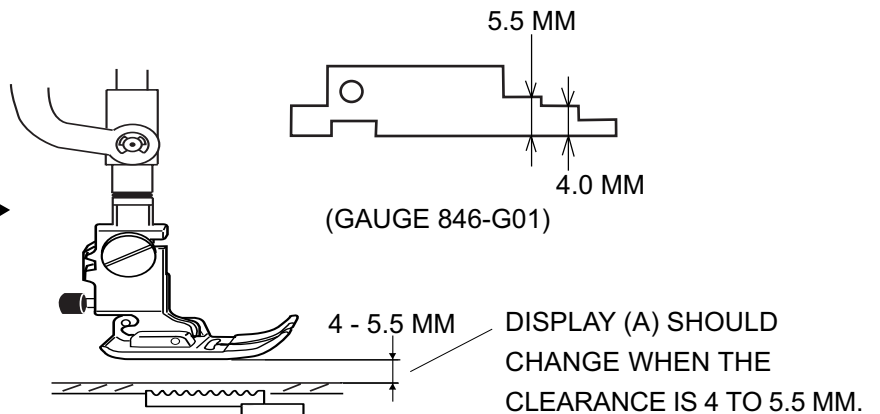
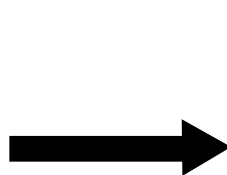
SETSCREW (A)

4 TURN OFF THE POWER SWITCH.

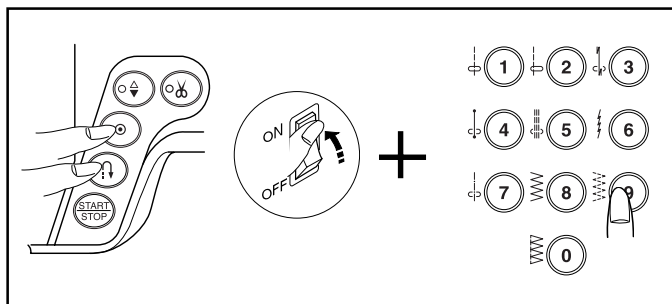
5 ATTACH THE TOP COVER PLATE AND FACE PLATE.



PRESSER BAR LIFTER



TO ADJUST THE AUTO THREAD CUTTER SWITCH POSITION



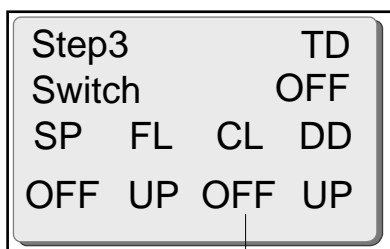
1 WHILE PRESSING THE NEEDLE UP/DOWN AND LOCK STITCH BUTTONS, TURN THE POWER SWITCH ON. PRESS THE NUMBER 9 BUTTON WITHIN 3 SECONDS.

2 REMOVE THE MACHINE BASE AND AUTO THREAD CUTTER COVER (REFER TO PAGES 2 AND 3).

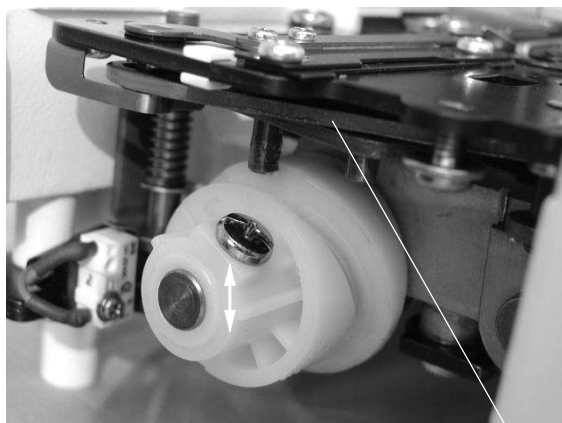
3 SET THE NEEDLE BAR AT THE LOWEST POSITION.

4 LOOSEN THE SETSCREW (A) AND ADJUST THE POSITION OF THE SWITCH (B) AS FOLLOWS.

- * WHEN THE DRIVING ARM (1) IS LOWERED, THE DISPLAY (C) SHOWS 1ON1.
- * WHEN THE DRIVING ARM (1) IS RAISED, THE DISPLAY (C) SHOWS 1OFF1.



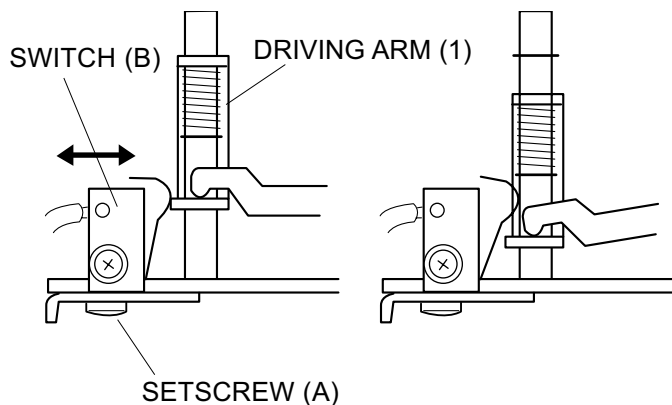
DISPLAY (C)



DRIVING ARM (1)

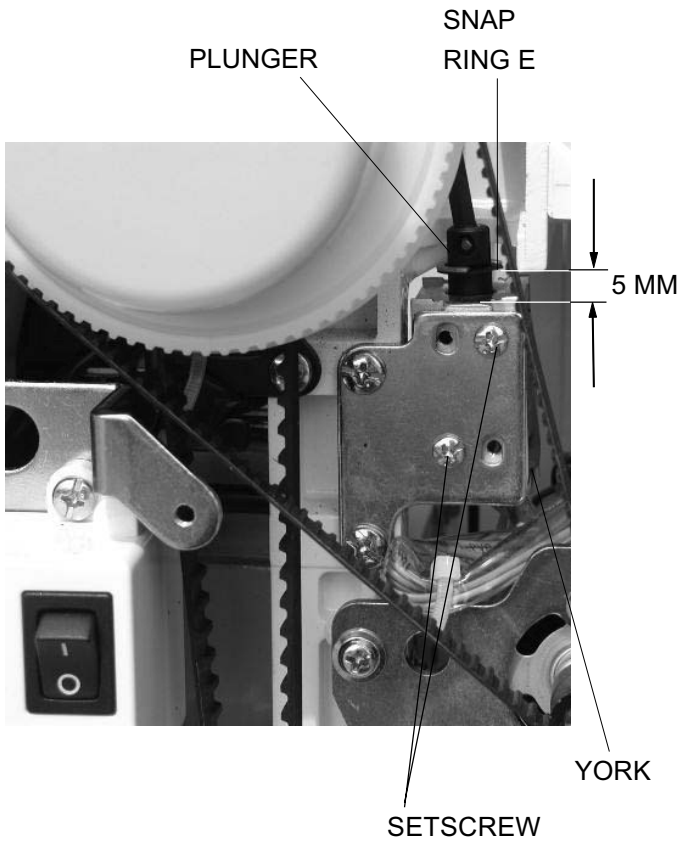
(SEWING MODE)
THE DRIVING ARM (1)
IS RAISED.

(CUTTING MODE)
THE DRIVING ARM (1)
IS LOWERED.

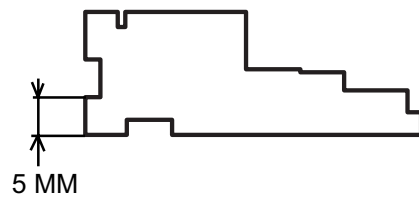


TO ADJUST UPPER CLUTCH SOLENOID

THE CLEARANCE BETWEEN THE SNAP RING E ON THE PLUNGER AND THE YORK SHOULD BE 5 MM.



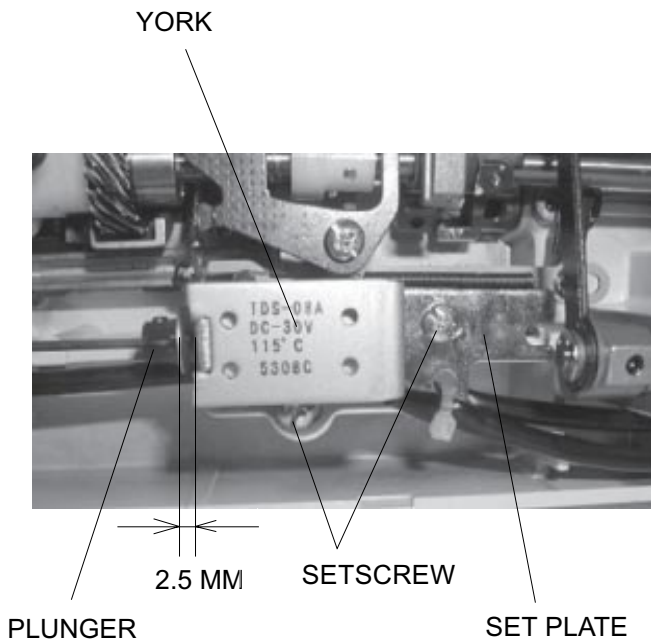
- 1 REMOVE THE BELT COVER.
- 2 LOOSEN THE SETSCRWS. ADJUST THE YORK SO THAT THE CLEARANCE BETWEEN THE SNAP RING E AND YORK IS 5 MM.
- 3 TIGHTEN THE SETSCREW.
- 4 ATTACH THE BELT COVER.



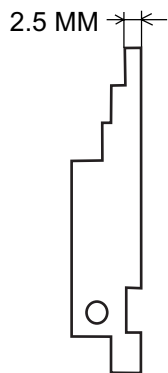
(Gauge 860G001)

TO ADJUST THREAD CUTTER SOLENOID

THE CLEARANCE BETWEEN THE PLUNGER AND THE TOP OF YORK SHOULD BE 2.5 MM.



- 1 REMOVE THE BASE.
- 2 LOOSEN THE SETSCRWS. ADJUST THE YORK SO THAT THE CLEARANCE BETWEEN THE SNAP RING AND YORK IS 2.5MM.
- 3 TIGHTEN THE SETSCREW.
- 4 ATTACH THE BELTCOVER.

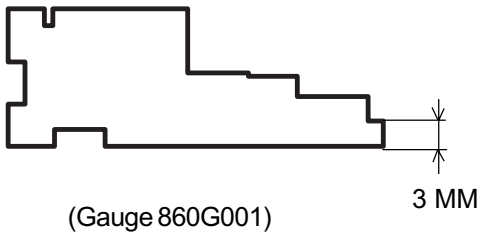
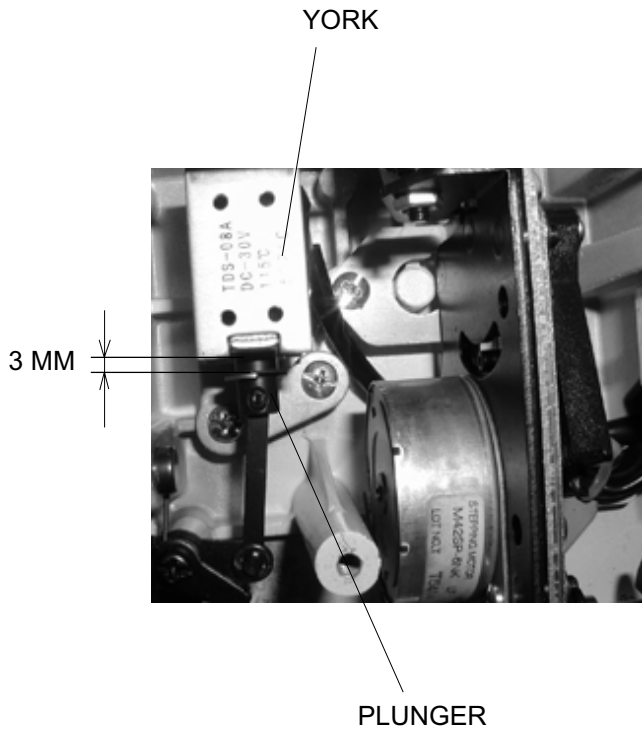


(GAUGE 846-G01)

TO ADJUST BOBBIN DETAINING SOLENOID

THE CLEARANCE BETWEEN THE BOBBIN DETAINING SOLENOID AND THE TOP OF YORK SHOULD BE 3 MM.

- 1 REMOVE THE BASE.
- 2 LOOSEN THE SETSCRW. ADJUST THE YORK SO THAT THE CLEARANCE BETWEEN THE SNAP RING AND YORK IS 3MM.
- 3 TIGHTEN THE SETSCREW.
- 4 ATTACH THE BASE.



DIAGNOSIS CHART

NOTE:

1. THIS DIAGNOSIS DEVICE IS PROVIDED FOR THE PURPOSE OF CHECKING THE CIRCUIT BOARDS A AND K AND THE FUNCTIONS OF MC6600P.
2. THE POWER SWITCH MUST BE TURNED OFF WHEN REPLACING PARTS.
3. THE LANGUAGE ON THE LCD IS ENGLISH ONLY.

PREPARATION

1. REMOVE THE MACHINE BASE.
2. REMOVE THE BELT COVER.
3. SHIFT THE BOBBIN WINDER STOPPER TO THE RIGHT.
4. SLIDE THE DROP FEED LEVER TO THE LEFT TO RAISE THE FEED DOG.
5. SLIDE THE SPEED ADJUSTING LEVER TO THE LEFT.
6. REMOVE THE PRESSER FOOT AND RAISE THE PRESSER BAR LIFTER.
7. SET THE NEEDLE BAR AT THE HIGHEST POSITION.

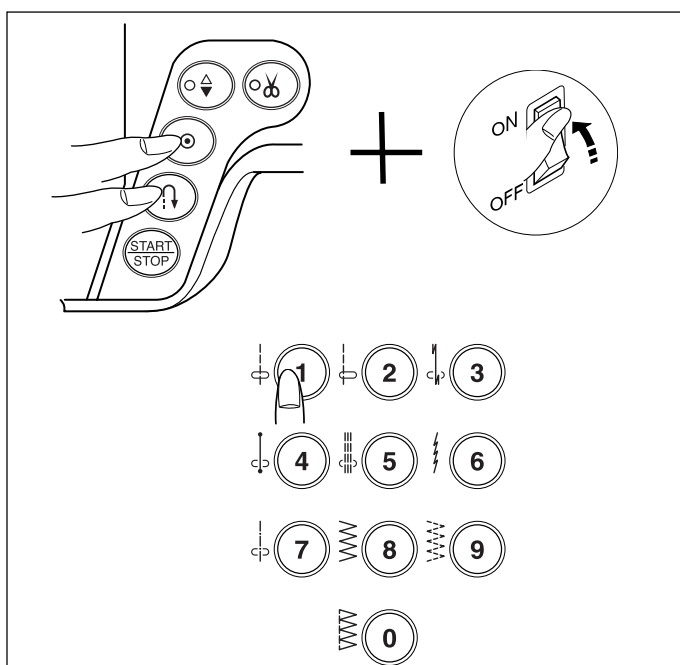
BEFORE USING THE DIAGNOSIS DEVICE,

CHECK OR REPLACE THE FOLLOWING PART(S) IF NOTHING HAPPENS WHEN THE POWER SWITCH IS TURNED ON:

1. THE CONNECTORS ARE CONNECTED PROPERLY (REFER TO PAGE 8)
2. REPLACE THE CIRCUIT BOARD A OR FUSE ON IT (REFER TO PAGE 7)
3. REPLACE THE POWER SUPPLY CORD.
4. REPLACE THE MACHINE SOCKET.
5. REPLACE THE TRANSFORMER.

WHEN THE SEWING LAMP DOES NOT TURN ON,

1. REPLACE THE SEWING LAMP.
2. REPLACE THE CIRCUIT BOARD A.

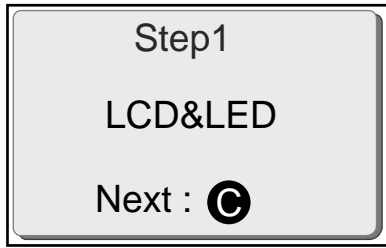


TO ACTIVATE THE DIAGNOSIS DEVICE

1. WHILE PRESSING THE NEEDLE UP/DOWN AND LOCK STITCH BUTTONS, TURN THE POWER SWITCH ON. THEN PRESS THE NUMBER 1 BUTTON WITHIN 3 SECONDS.
2. THE STEP 1 SCREEN APPEARS.



1.STEP 1 (FUNCTION OF BUZZER, LCD AND LED)



[CORRECT CONDITION]

- 1) BUZZER SOUNDS
- 2) LCD AND LED BLINK AT 1 SECOND INTERVAL.
- 3) SEWING LIGHT TURNS ON.

PRESS THE 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

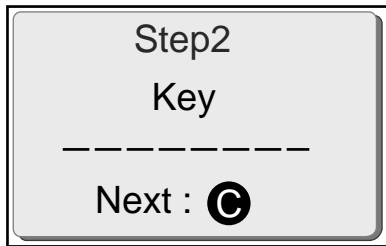
[FAULTY CONDITION]

BUZZER DOES NOT SOUND. THE STEP 1 SCREEN DOES NOT APPEAR. LCD AND LED DO NOT BLINK.

-REMEDY-

- A) TURN THE LCD BRIGHTNESS ADJUSTING DIAL CLOCKWISE OR COUNTERCLOCKWISE.
- B) REPLACE CIRCUIT BOARDS, F, K, OR A.

2.STEP 2 (FUNCTION OF BUTTONS)



[CORRECT CONDITION]

PRESS ALL OF THE BUTTONS ON THE FRONT COVER. (PRESS THE BUTTON 'i' AT LAST.) EACH TIME A BUTTON IS PRESSED, THE NAME OF THE BUTTON APPEARS ON THE LCD.

PRESS 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP

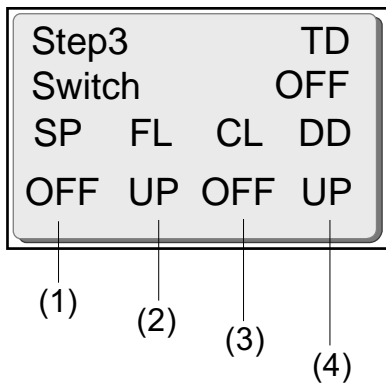
[FAULTY CONDITION]

THE NAME OF THE BUTTON DOES NOT APPEAR AND LCD CONTINUES TO INDICATE — — — — .

-REMEDY-

- REPLACE CIRCUIT BOARDS F, K OR A.

3.STEP 3 (DETECTING SWITCH)



[CORRECT CONDITION]

- (1) BOBBIN WINDING SWITCH (SP)
BOBBIN WINDER STOPPER AT LEFT:ON
BOBBIN WINDER STOPPER AT RIGHT:OFF
- (2) PRESSER BAR LIFTER SWITCH (FL)
PRESSER FOOT IS UP POSITION:UP
PRESSER FOOT IS DOWN POSITION: DOWN
- (3) AUTO THREAD CUTTER SWITCH (CL)
DRIVING ARM AT UP POSITION:
OFF
DRIVING ARM AT DOWN POSITION:
ON

[FAULTY CONDITION]

THE DISPLAY DOES NOT CHANGE OR IS REVERSED.

-REMEDY-

- ADJUST THE POSITION OF THE SWITCHES, OR REPLACE A SWITCH OR CIRCUIT BOARD A.

PRESSER
BAR

LIFTER
SWITCH

BOBBIN WINDER
SWITCH

AUTO THREAD
CUTTER SWITCH

DRIVING ARM (1)

PIN (C)

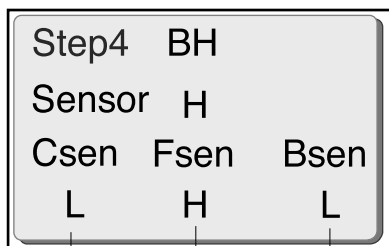
AUTO THREAD
CUTTER SWITCH

DROP FEED
SWITCH

- (4) DROP FEED SWITCH (DD)

LEVER AT THE LEFT: UP
LEVER AT THE RIGHT: DOWN

4.STEP 4 (PHOTO SENSOR)



[CORRECT CONDITION]

THE DISPLAY SHOWS [H] OR [L].

PULL THE BUTTONHOLE LEVER TOWARD YOU-[H]

RELEASE THE BUTTONHOLE LEVER-[L]

PUSH THE BUTTONHOLE LEVER TO THE BACK-[H]

TURN THE HANDWHEEL AND SEE IF DISPLAY ((1), (2) AND (3)) CHANGES TO [H] OR [L].

[FAULTY CONDITION]

THE SCREEN DOES NOT CHANGE.

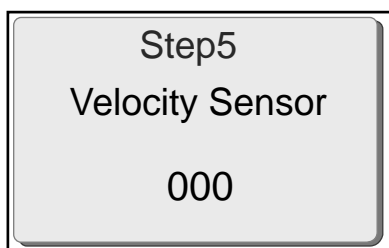
-REMEDY-

ADJUST THE POSITION OF THE SHIELD PLATE.

ADJUST THE POSITION OF THE PHOTO SENSOR.

REPLACE THE PHOTO SENSOR OR CIRCUIT BOARD A.

5.STEP 5 (SPEED SENSOR)



[CORRECT CONDITION]

TURN THE HANDWHEEL AGAINST YOU SLOWLY. THE 3-DIGIT NUMBER REACHES BETWEEN 414 AND 420, THEN RETURN TO 0.

PRESS THE 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

[FAULTY CONDITION]

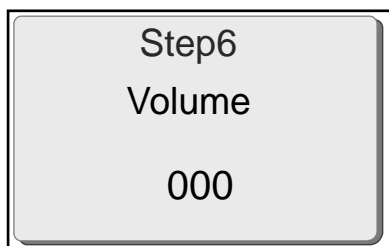
THE DISPLAY DOES NOT CHANGE OR SHOWS 413 OR LESS.

-REMEDY-

CLEAN UP THE PHOTO SENSOR. ADJUST THE POSITION OF THE PHOTO SENSOR.

REPLACE THE MOTOR OR CIRCUIT BOARD A.

6.STEP 6 (SPEED CONTROL LEVER)



[CORRECT CONDITION]

MOVE THE SPEED CONTROL LEVER SLOWLY.

THE DISPLAY SHOWS:

AT THE LEFT END: 000-002

AT THE RIGHT END: 253-255

PRESS THE 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

[FAULTY CONDITION]

THE DISPLAY DOES NOT CHANGE OR INDICATES INCORRECT VALUE.

-REMEDY-

REPLACE THE SPEED CONTROL LEVER, CIRCUIT BOARDS K OR A.

7.STEP 7 (FOOT CONTROL)



[CORRECT CONDITION]

THE DISPLAY SHOWS: 000-016 WHEN RELEASED FOOT CONTROL.

208 - 250 WHEN FULLY DEPRESSED.

251 - 255 WHEN THE FOOT CONTROL IS DISCONNECTED.

PRESS 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

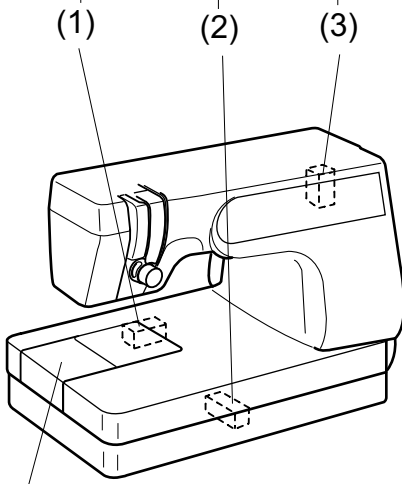
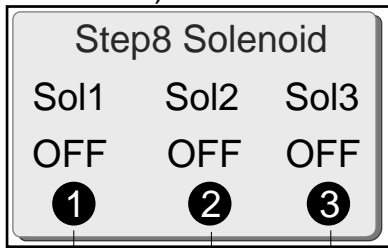
[FAULTY CONDITION]

THE DISPLAY DOES NOT CHANGE OR INDICATES INCORRECT VALUE.

-REMEDY-

REPLACE THE FOOT CONTROL, MACHINE SOCKET OR CIRCUIT BOARD A.

8. STEP 8
(SOLENOID)



AUTO THREADER CUTTER COVER

[CORRECT CONDITION]

PRESS A NUMBER CORRESPONDING TO THE SOLENOIDS

1) FOR AUTO-THREAD CUTTER SET THE NEEDLE BAR AT THE LOWEST POSITION.

PRESS THE BUTTON(1) WHEN THE DRIVING ARM IS AT:
UP: OFF
DOWN: ON

2) FOR BOBBIN SPINNING IDLE PREVENION LEVER REMOVE THE HOOK COVER PLATE.

PRESS THE BUTTON (2) WHEN THE LEVER IS AT THE:
RIGHT: OFF
LEFT: ON

3) FOR UPPER SHAFT SET THE NEEDLE BAR AT THE HIGHEST POSITION. WHEN THE ACTIVATING ROD IS AT THE POSITION OF:
UP: OFF
DOWN: ON

[FAULTY CONDITION]

THE DRIVING MECHANISM DOES NOT FUNCTION.

-REMEDY-

CHECK IF THE CONNECTING PARTS MOVES PROPERLY. REPLACE A SOLENOID OR THE CIRCUIT BOARD A.

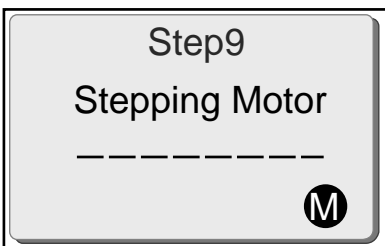
PRESS 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

9. STEP 9 (STEPPING MOTORS)

(1)



(2)



(3)



[CORRECT CONDITION]

1) WHEN THE (M) BUTTON IS PRESSED WITH THE NEEDLE BAR AT 'UP' POSITION, THE NEEDLE BAR VIBRATES AND THE NEEDLE DROP IS SET AT CENTER POSITION. (ZIGZAG STEPPING MOTOR)

2) WHEN THE (M) BUTTON IS PRESSED WITH THE NEEDLE BAR AT 'MIDDLE' POSITION, THE TENSION DISC IS CLOSED. (TENSION STEPPING MOTOR)

3) WHEN THE (M) BUTTON IS PRESSED WITH THE NEEDLE BAR AT 'DOWN' POSITION, THE FEED DOG VIBRATES AND THE FEED DOG IS IN THE MIDDLE OF ITS TRAVEL (FEED STEPPING MOTOR)

PRESS THE 'CLEAR' BUTTON TO PROCEED TO THE NEXT STEP.

[FAULTY CONDITION]

THE DISPLAY SHOWS "E1 Error", "E2 Error" OR "Error2".

-REMEDY-


CHECK THE STEPPING MOTORS IF THEY ROTATE SMOOTHLY. REPLACE THE STEPPING MOTOR. REPLACE THE CIRCUIT BOARD A.

10. STEP 10 (DRIVING AND BOBBIN WINDING MOTORS)

Step10
Sewing Motor
Spool Motor

[CORRECT CONDITION]

WHEN THE PRESSER BAR IS LOWERED AND THE FOOT CONTROL IS DEPRESSED, THE DRIVING MOTOR RUNS.

WHEN THE BOBBIN WINDING BUTTON  IS PRESSED, THE BOBBIN WINDING MOTOR RUNS.

[FAULTY CONDITION]

THE DISPLAY SHOWS "error".

"REMEDY"

CHECK THE MOTOR BELT TENSION. REPLACE THE DRIVING MOTOR, BOBBIN WINDING MOTOR OR CIRCUIT BOARD A.