INC

FSA03801-R.3756.A

作成承認印	配布許可印
ニコン映像カンパニー CS推進部 GM	サービス 計画課 M

SB-900

FSA03801

REPAIR MANUAL

Nikon | NIKON CORPORATION
Tokyo, Japan

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CONTENTS

ELECTRICITY

Disassembly

⚠ WARNING	
	● There are high voltege parts inside. Be careful of this electric shock, when you remove the cover. ● You must discharge the main condenser according to the instruction of this repair manual after you remove the cover.

Points to notice for Lead-free solder products
・Lead-free solder is used for this product.
・For soldering work, the special solder and soldering iron are required.
・Do not mix the lead-free solder with the conventional solder.
・Use the special soldering iron respectively for lead-free solder and lead solder. They cannot be used in common.

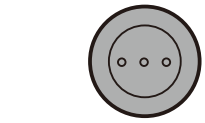
Note : ① Before disassembling, remove the battery.

② When disassembling, make sure to memorize the processing state of wires, screws to be fixed and their types, etc.

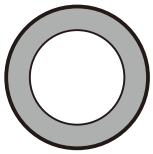
③ Because electrical parts are easily damaged by static electricity, make sure that you are well earthed/grounded.

SIDE RUBBER

- Remove the SIDE RUBBER [#008] and SIDE MOLD (A) [#009]
- **DISCHARGE OF MAIN CONDENSER**: Set the bounce angle to "90°", and discharge through the two holes as shown in "Fig.1".



SIDE RUBBER [#008]



SIDE MOLD (A) [#009]

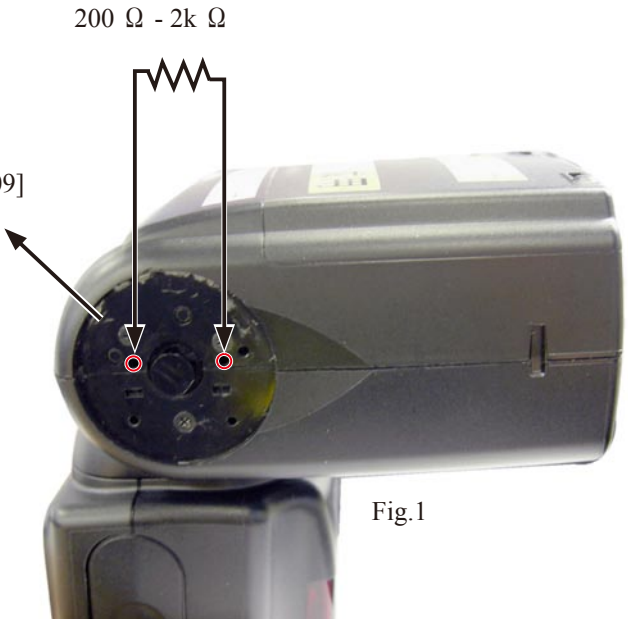
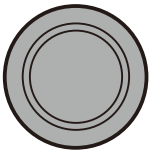


Fig.1

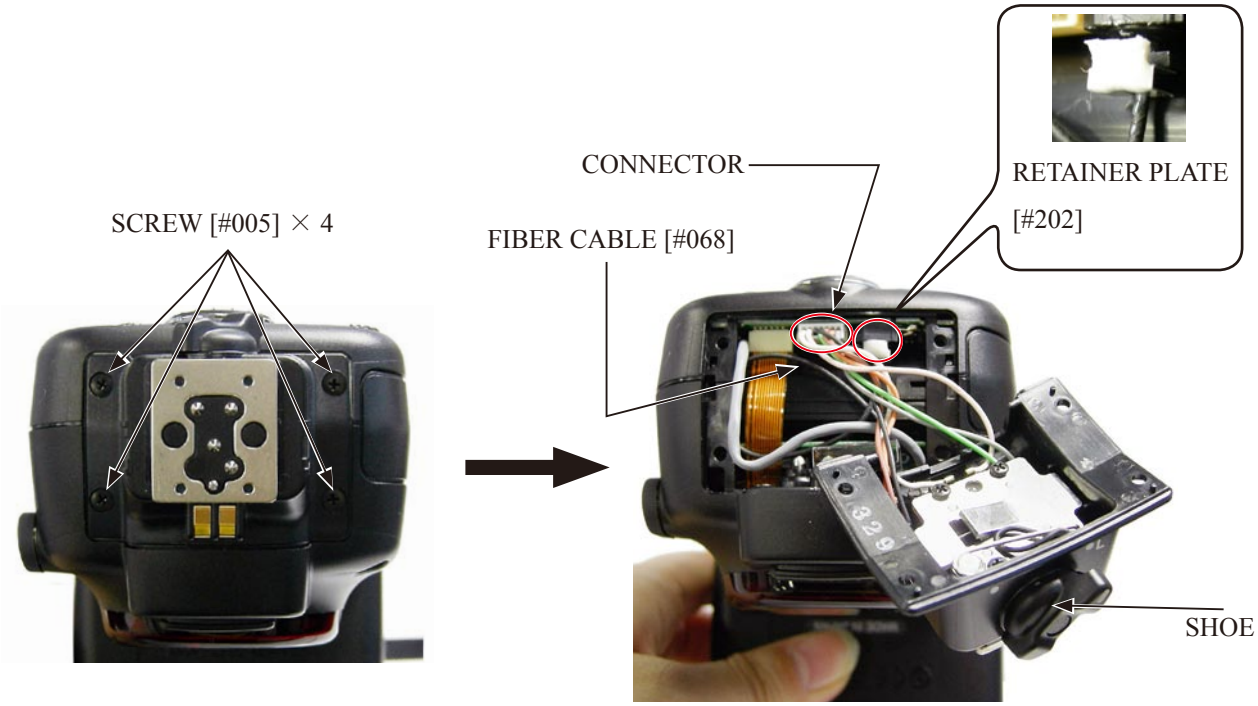
- Remove the SIDE MOLD (B) [#010]



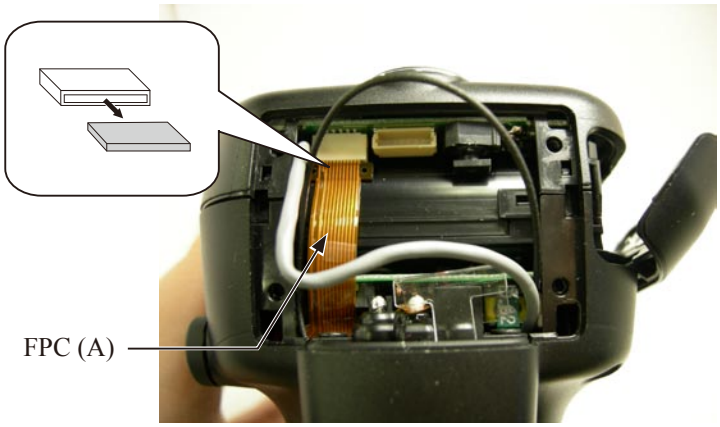
SIDE MOLD (B) [#010]

SHOE

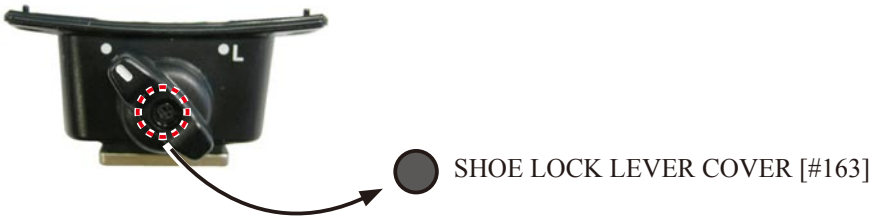
- Take out the four screws [#005].
- Remove the lead wire set（CN-9A）.
- Remove the fiber cable [#068] from the retainer plate [#202].
- The shoe comes off.



- Disconnect the FPC (A) from the connector.

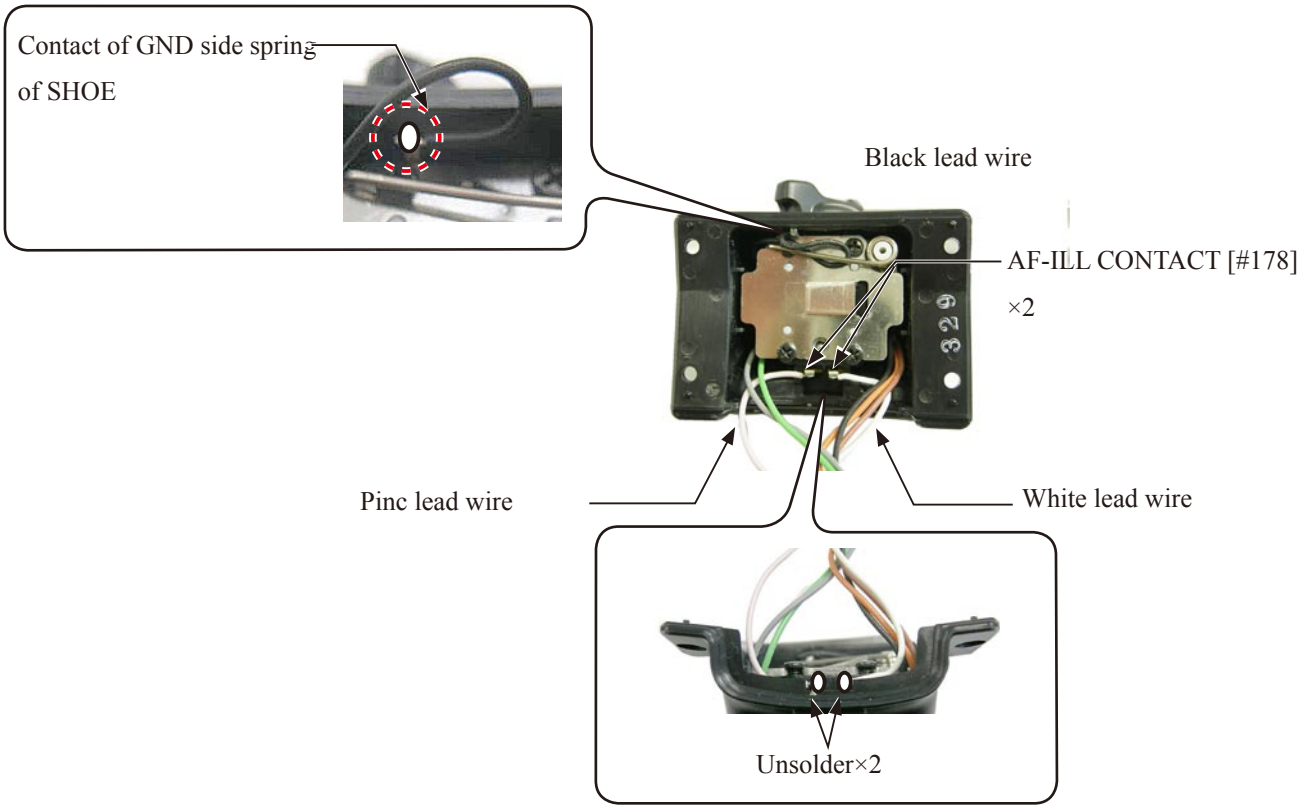


・Remove the Shoe lock lever cover [#163].



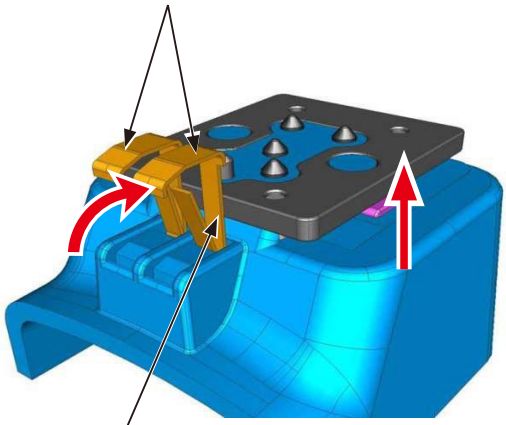
・Unsolder the GND side spring of the SHOE.

・Unsolder AF-ILL contact at two places.



・Remove the AF-ILL contact [#178] from the two places of the shoe case.

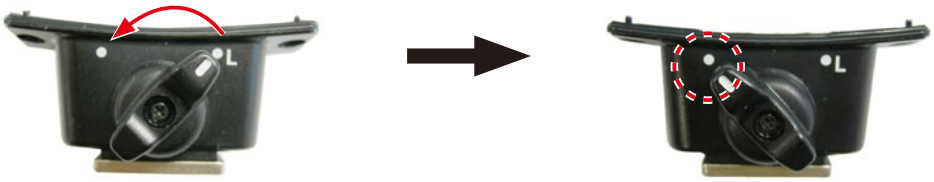
AF-ILL CONTACT [#178] × 2



While picking up the front side with tweezers, etc, lift upwards and remove [#178].

・Set the shoe lock lever [#162] to the UNLOCK position.

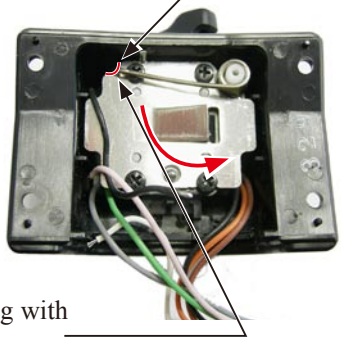
・Remove the shoe lock spring [#170] from the cutout.



Shoe lock lever: LOCK position

Shoe lock lever: UNLOCK position

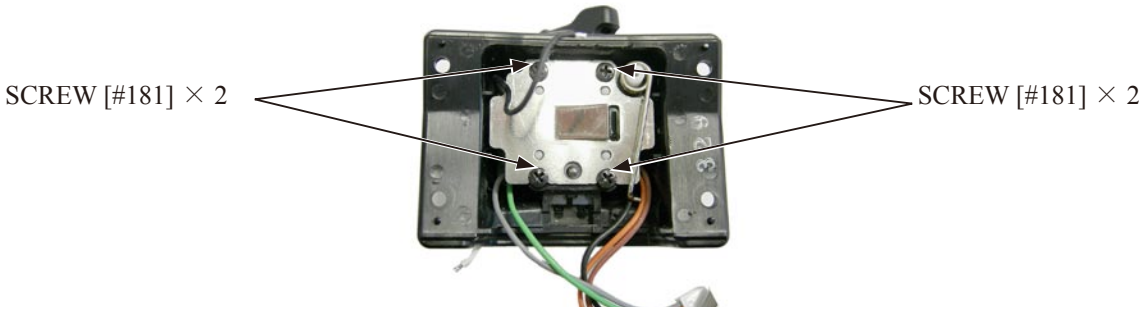
The shoe lock spring is hooked to the cutout.



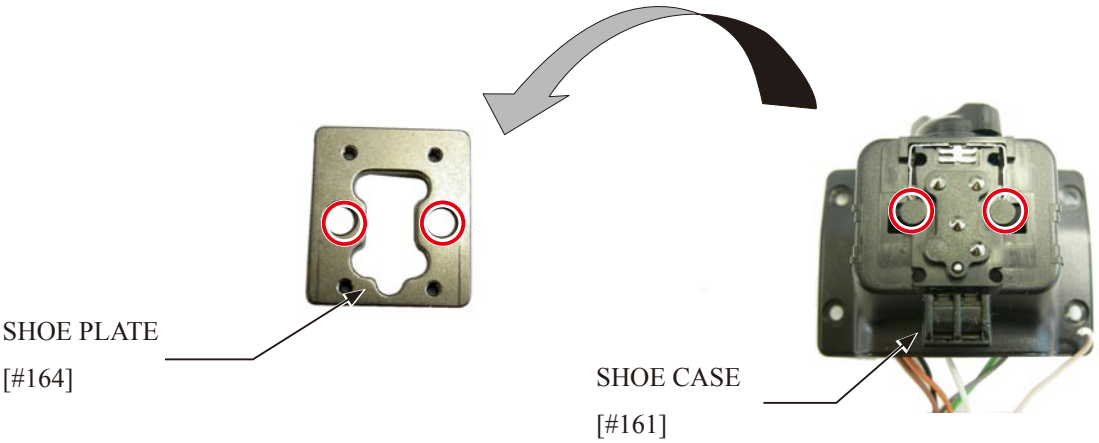
Pick up the shoe lock spring with tweezers, and lift up to move.

Note that because the spring is hooked, the movement is a little unsmooth.

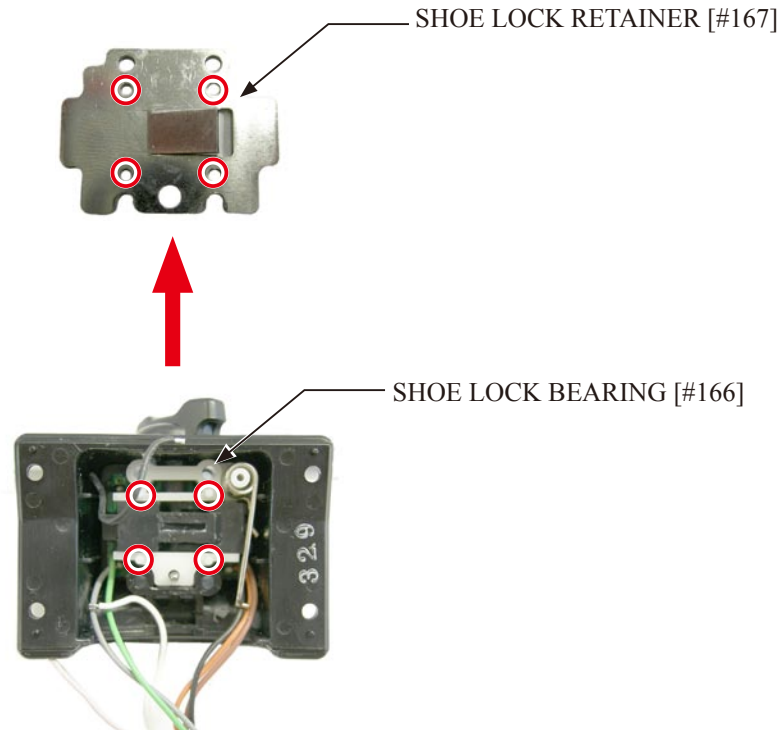
・Take out the four screws [#181].



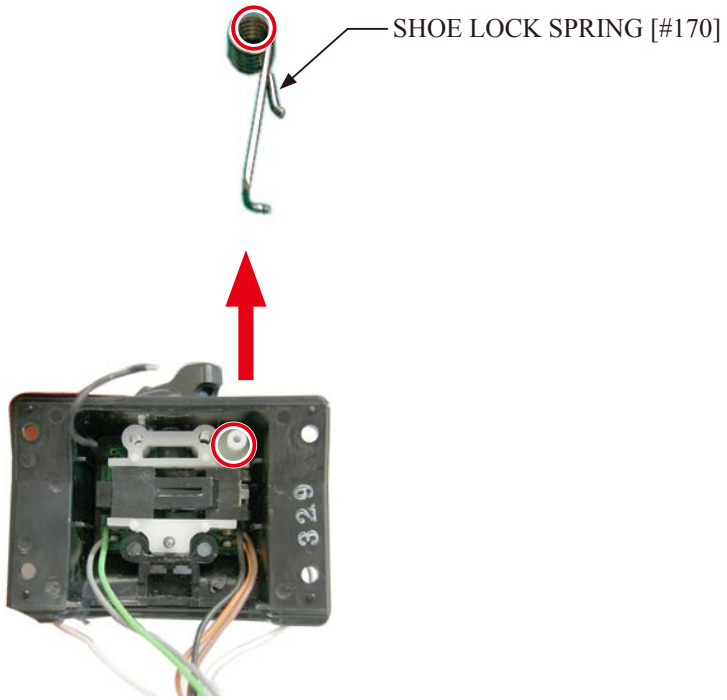
・Remove the shoe plate [#164] from the shoe case [#161]



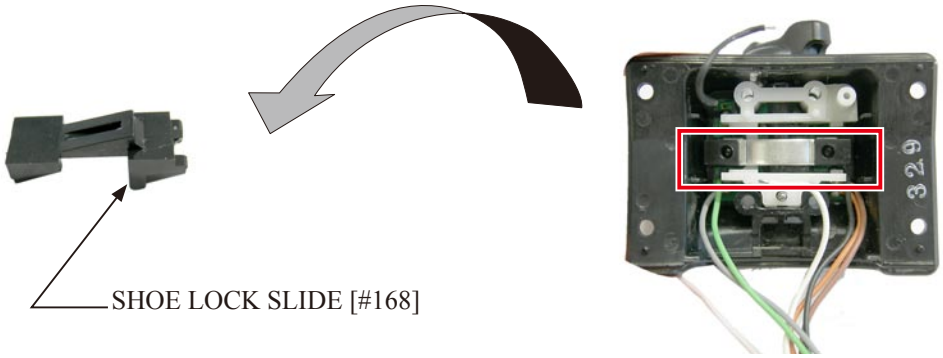
・Remove the shoe lock retainer [#167].



・Remove the shoe lock spring [#170].

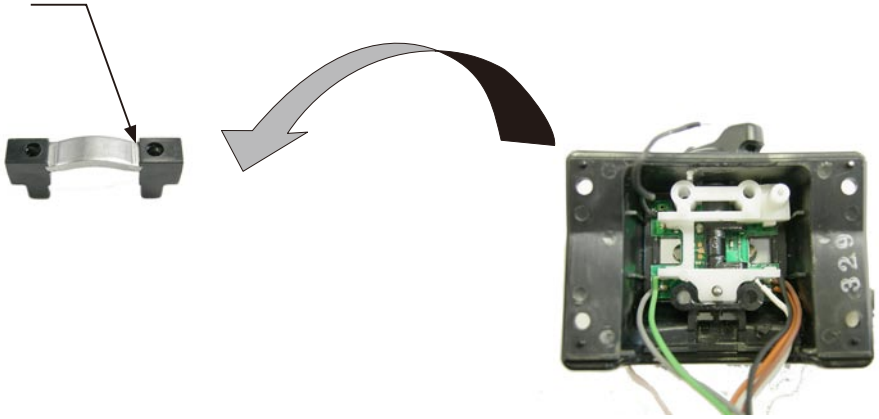


・Remove the shoe lock slide [#168].

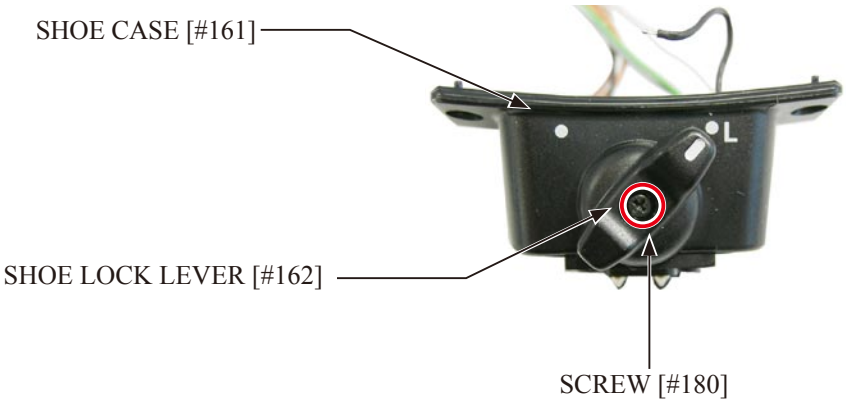


・Remove the shoe lock plate [#169].

SHOE LOCK PLATE
[#169]

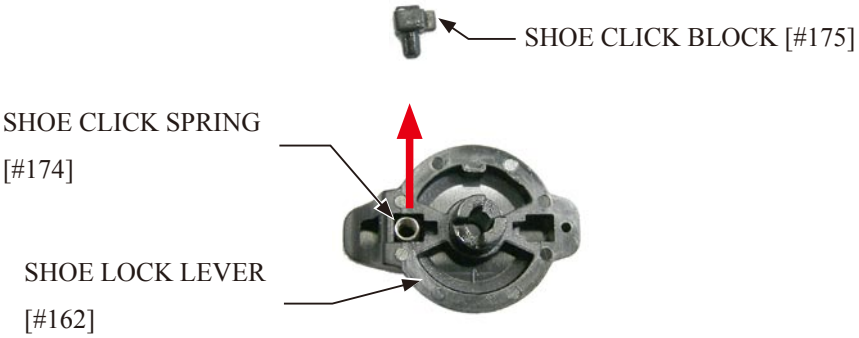


・Take out the screw [#180].

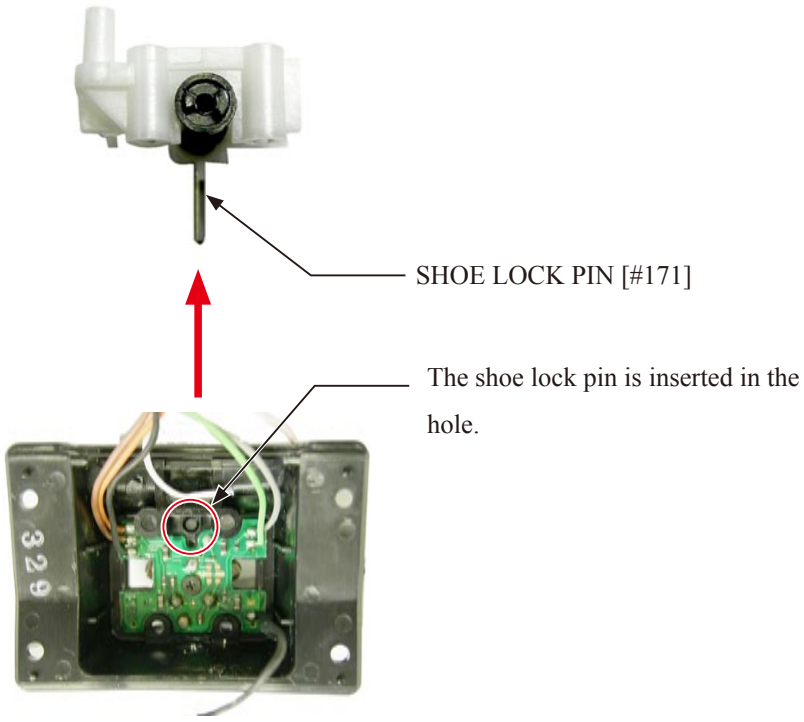


・Remove the shoe click block [#175] and shoe click spring [#174] from the shoe lock lever [#162].

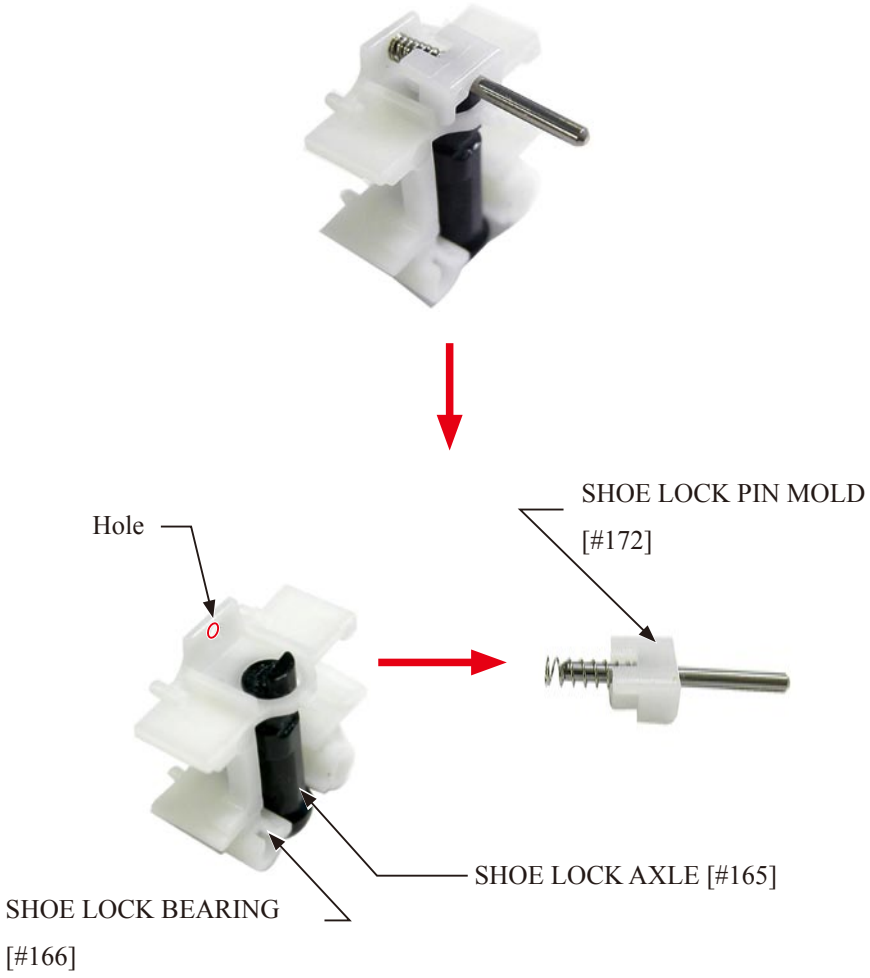
Use caution to avoid popping out of the shoe click spring and shoe click block, because they are small.



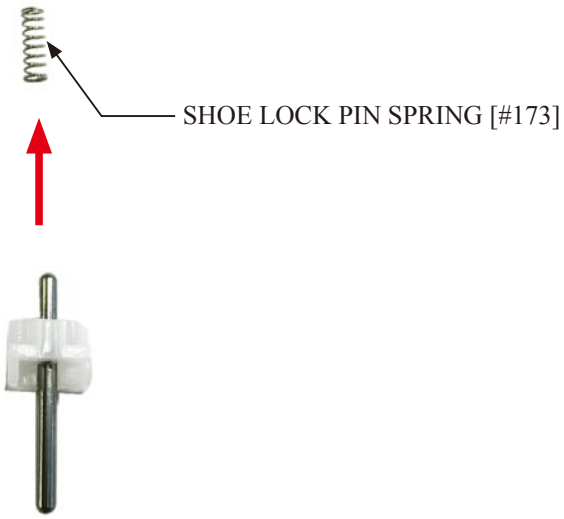
・Remove the shoe lock pin [#171] from the shoe case [#161].



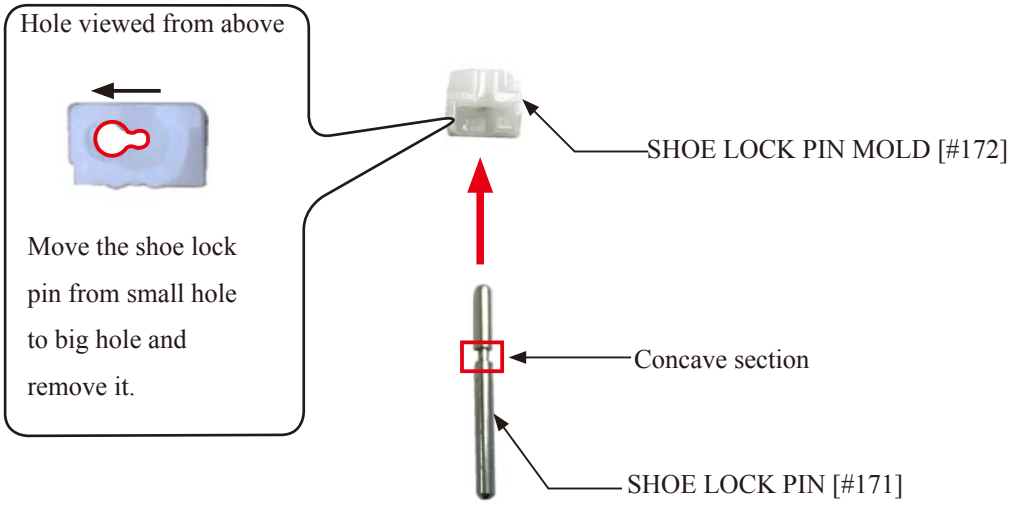
・Pull out the shoe lock pin mold [#172] from the hole of the shoe lock bearing [#166].



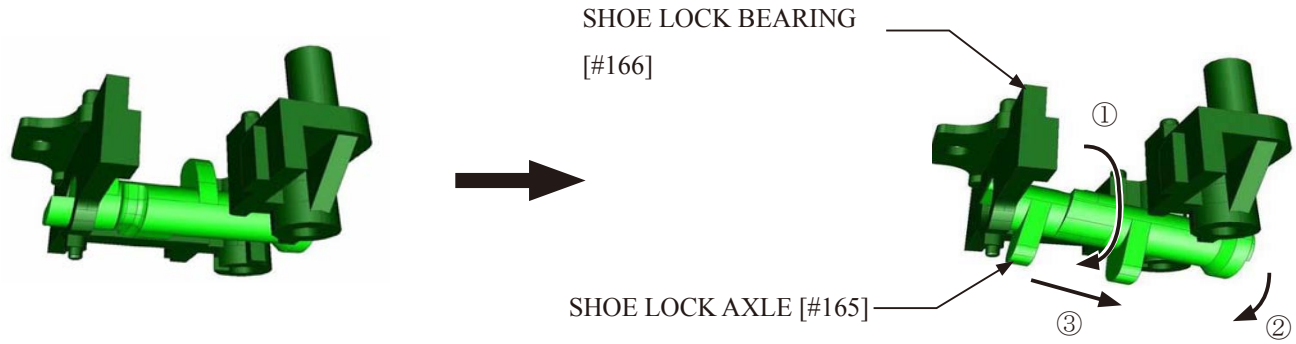
・Remove the shoe lock pin spring [#173].



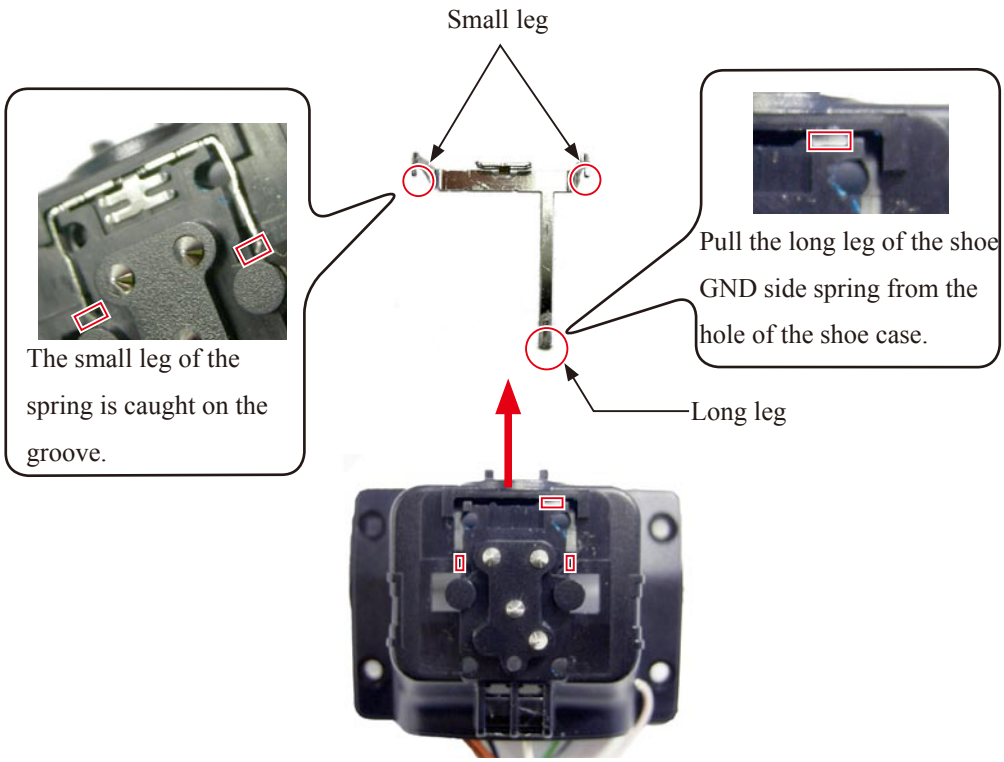
・Remove the shoe lock pin [#171] from the shoe lock pin mold [#172].



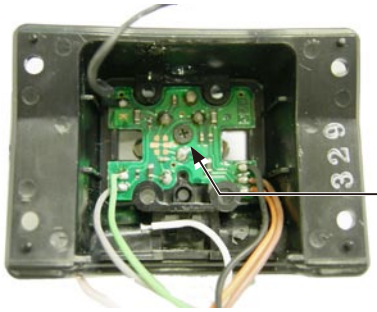
・Remove the shoe lock axle [#165] from the shoe lock bearing [#166] in numeric order from ① to ② .



・Remove the shoe GND spring [#177].

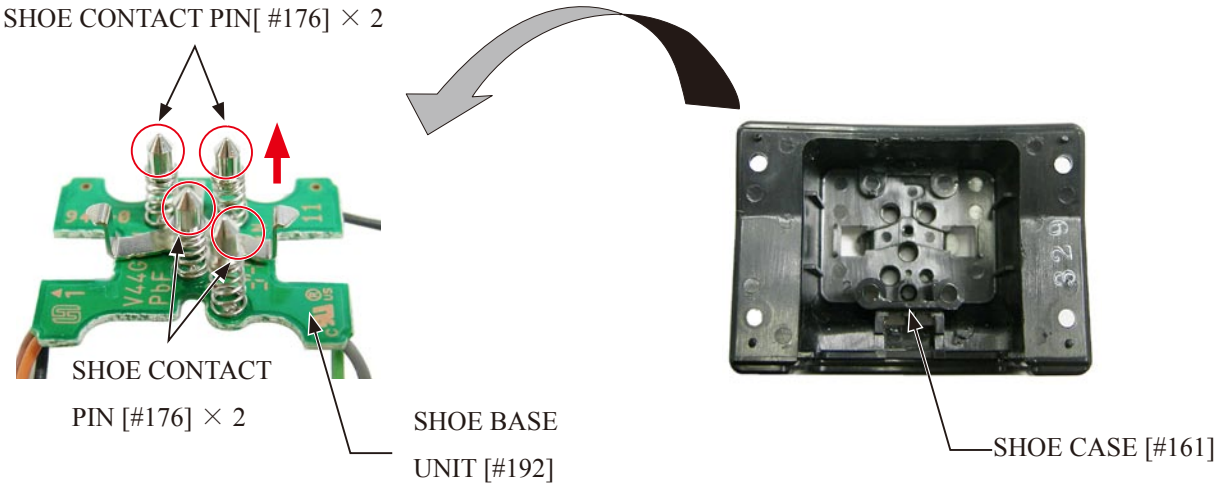


・Take out the screw [#025].



・Remove the shoe base unit [#192] from the shoe case [#161].

・Remove the four shoe contact pins [#176] from the shoe base unit [#192].



HEAD UNIT / BATTERY CHAMBER MOLD / COVER (E) / COVER (F)

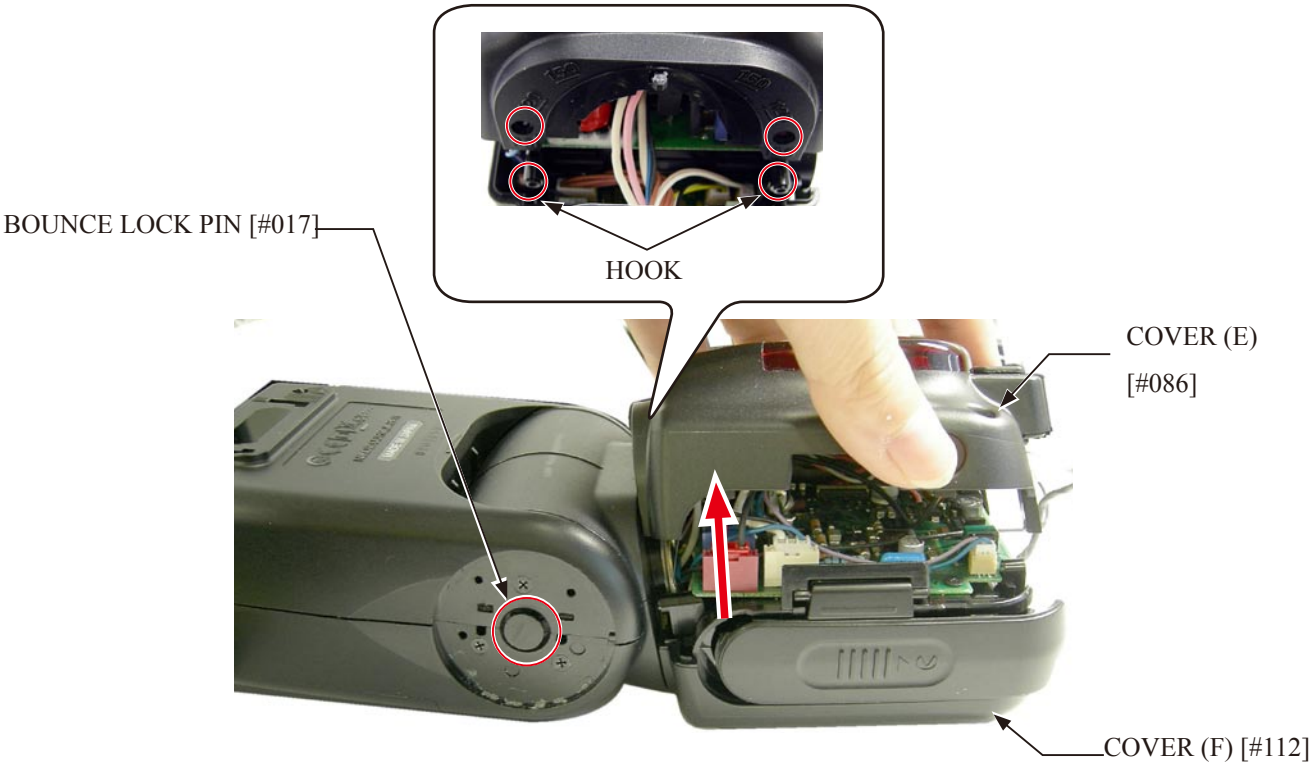
・While pressing the bounce lock pin [#017], give the head unit half-turn.

・Take out the screw [#005].

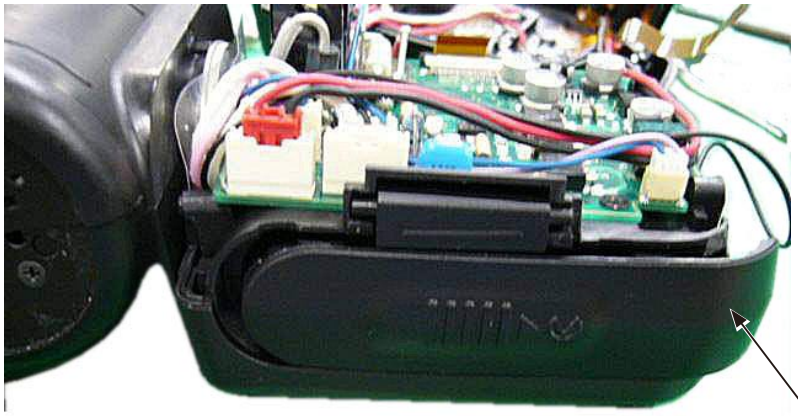
・Take out the two screws [#005] on the other side.

・Open the battery lid [#159].

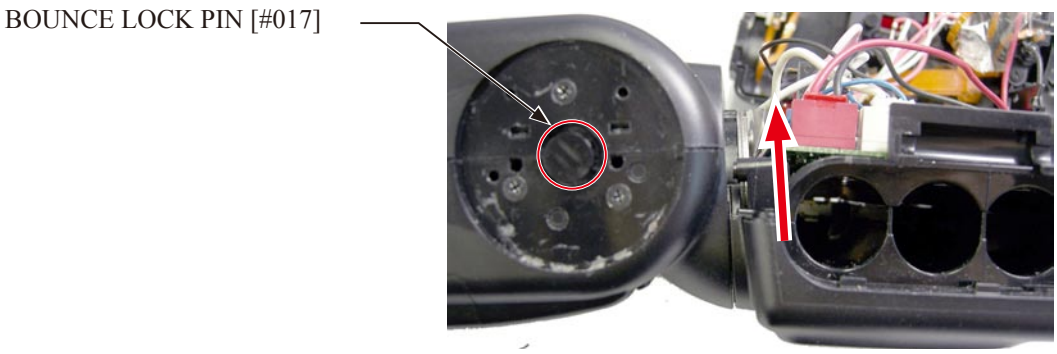
・While pressing the bounce lock pin [#017], separate the cover (E) [#086] from the cover (F) [#112].



・The battery lid [#159] comes off.

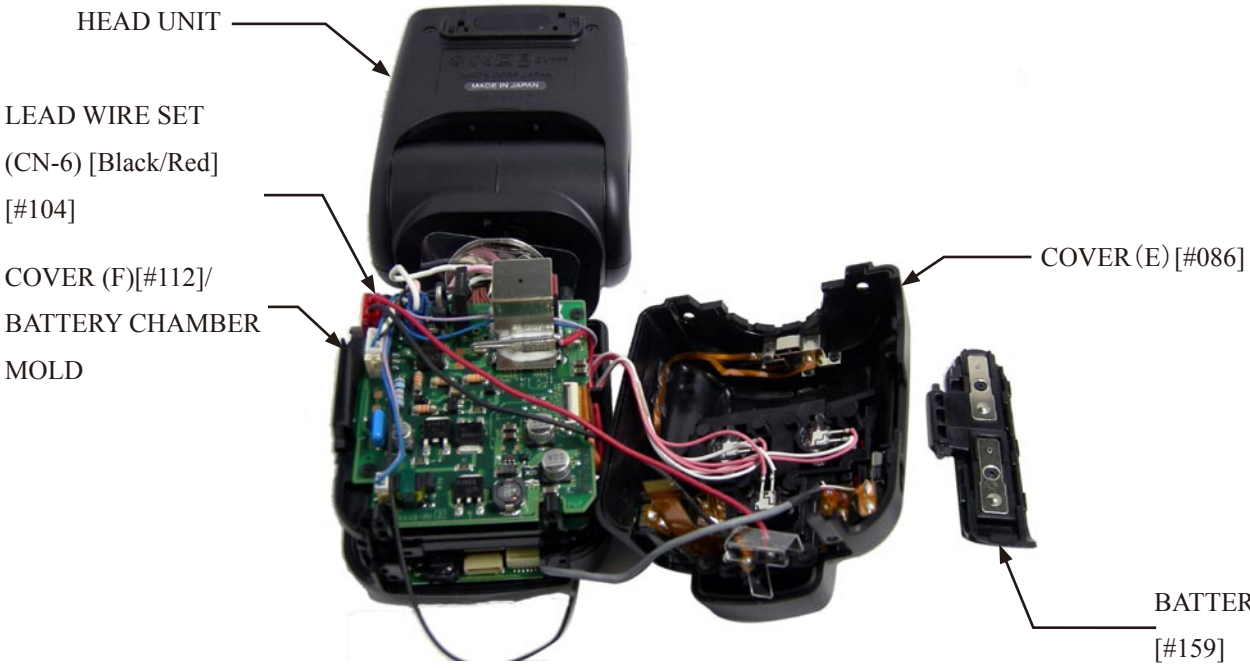


・While pressing the bounce lock pin [#017], remove the battery chamber from the head unit.

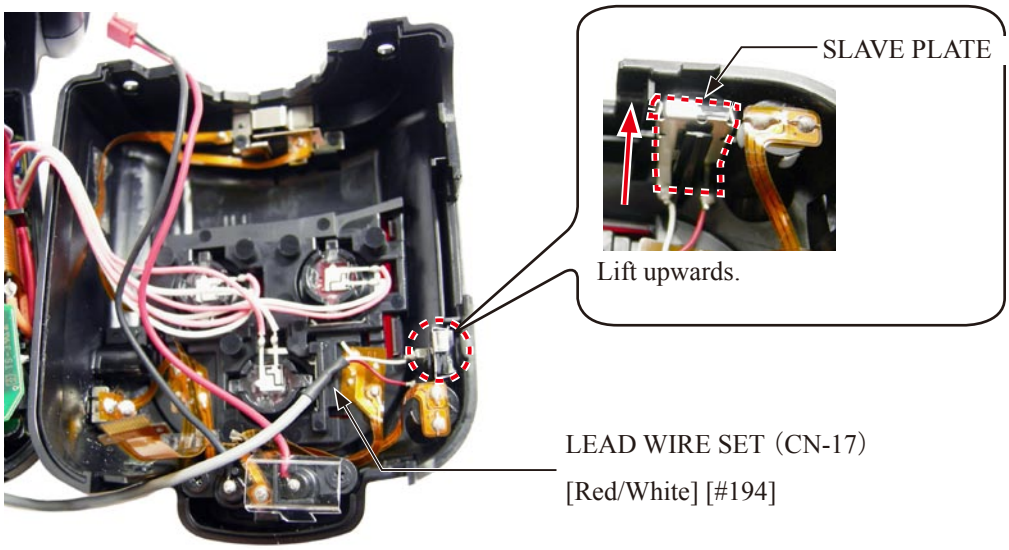


・SB is divided into the cover (E) [#086], cover (F) [#112]/battery chamber, battery lid [#159], and head unit.

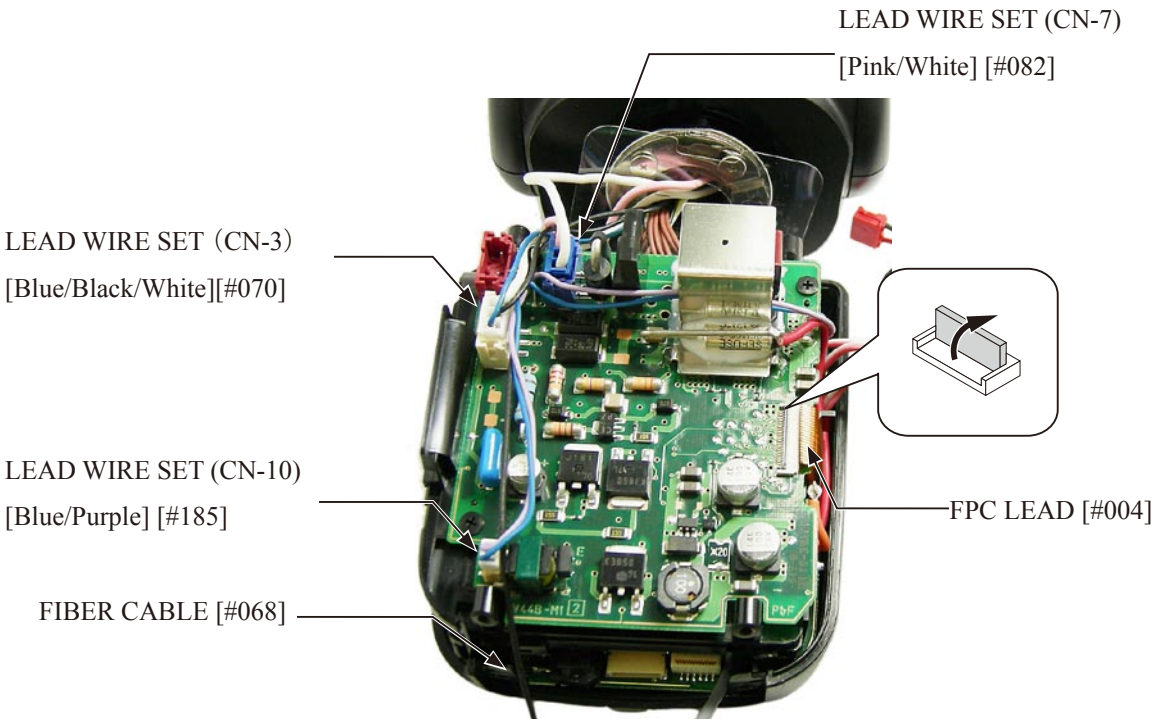
・Remove the LEAD WIRE SET (CN-6) [Black/Red] [#104] from the red connector.



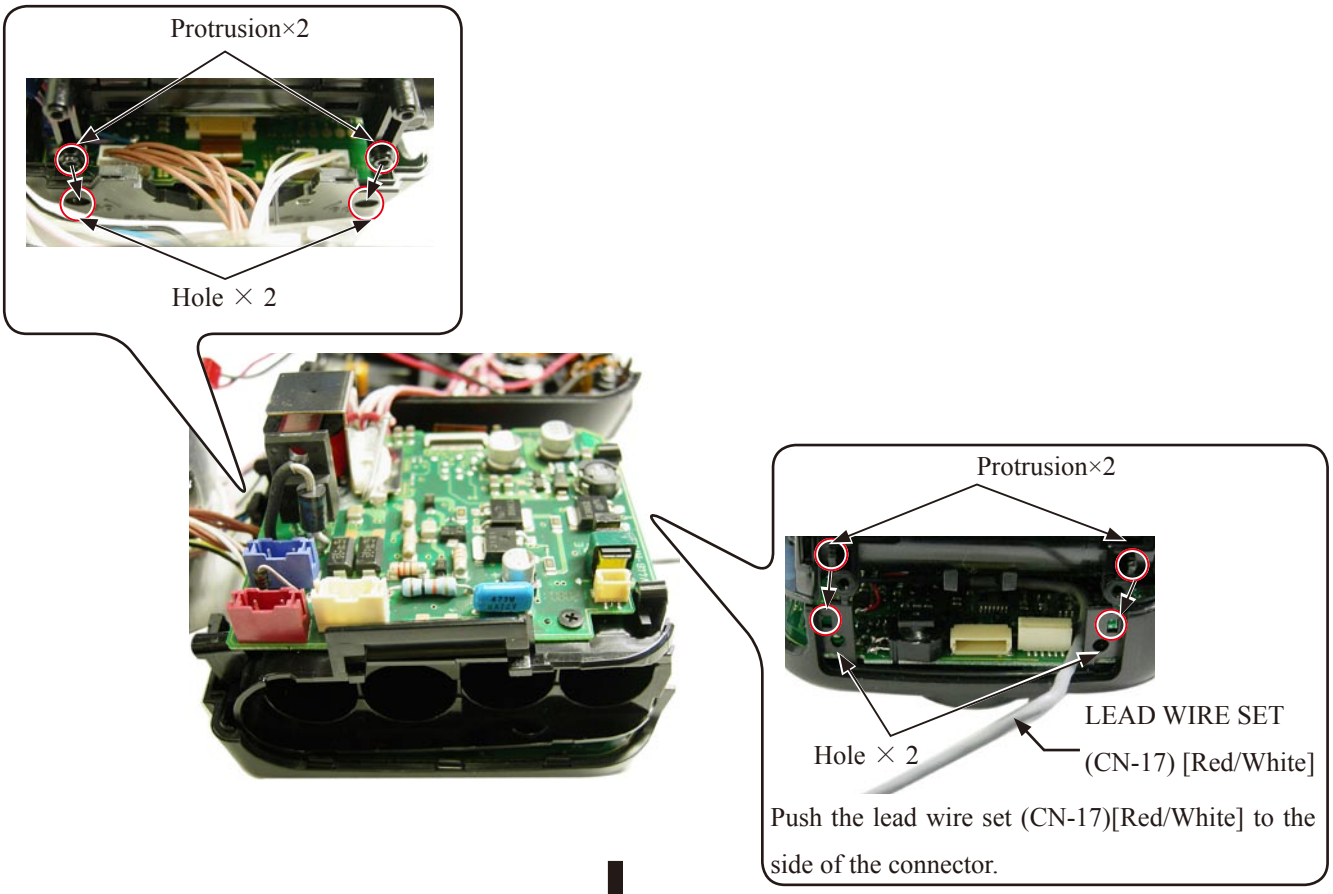
・Remove the lead wire set (CN-17) [Red/White][#194] together with the slave plate from the cover (E) [#086].

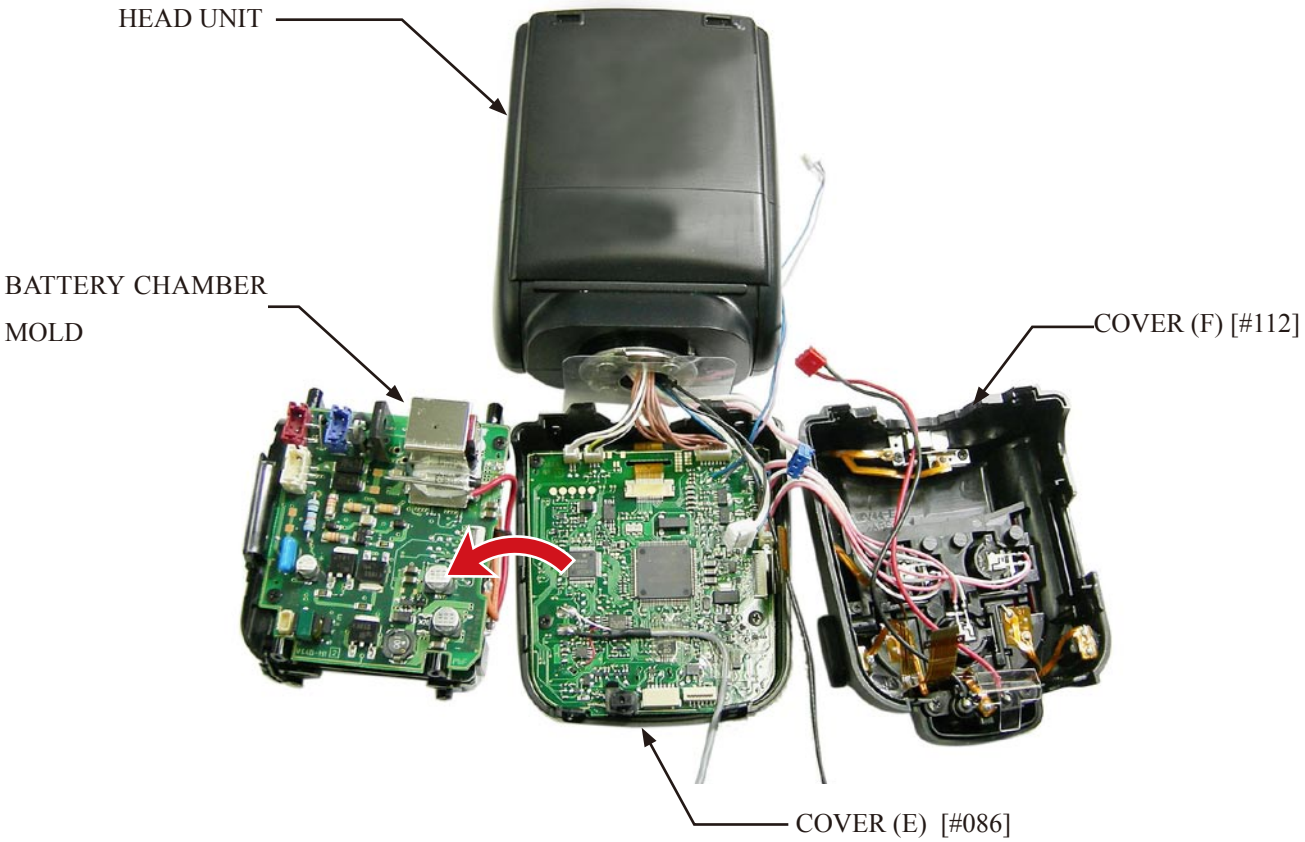


・Disconnect the lead wire set (CN-3) [Blue/Black/White] [#070] from the white connector (small).
・Disconnect the lead wire set (CN-7) [Pink/White][#082] from the blue connector.
・Disconnect the lead wire set (CN-10) [Blue/Black/White] [#185] from the white connector (large).
・Disconnect the FPC lead [#004] from the connector.
・Leave the fiber cable exposed outside of the case.



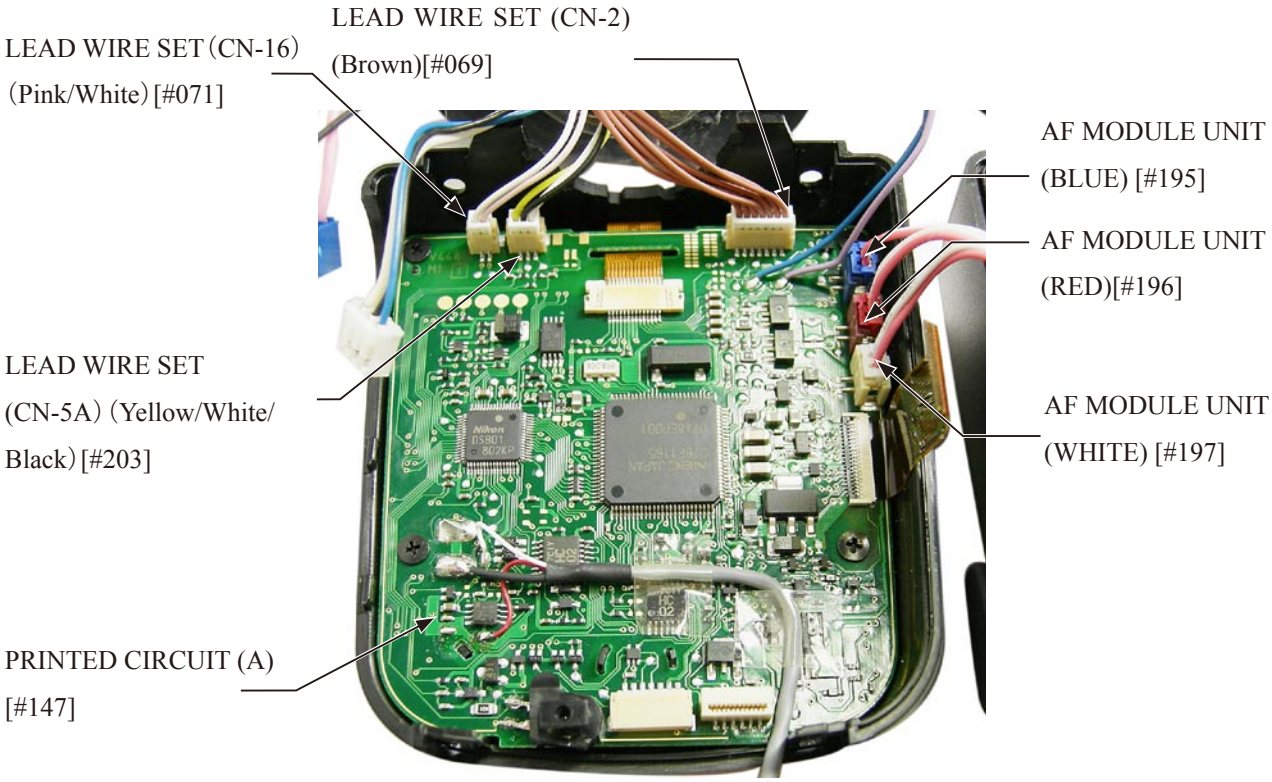
・Release the four protrusions of the battery chamber mold (A) [#148] from each hole of the cover (E) [#086].



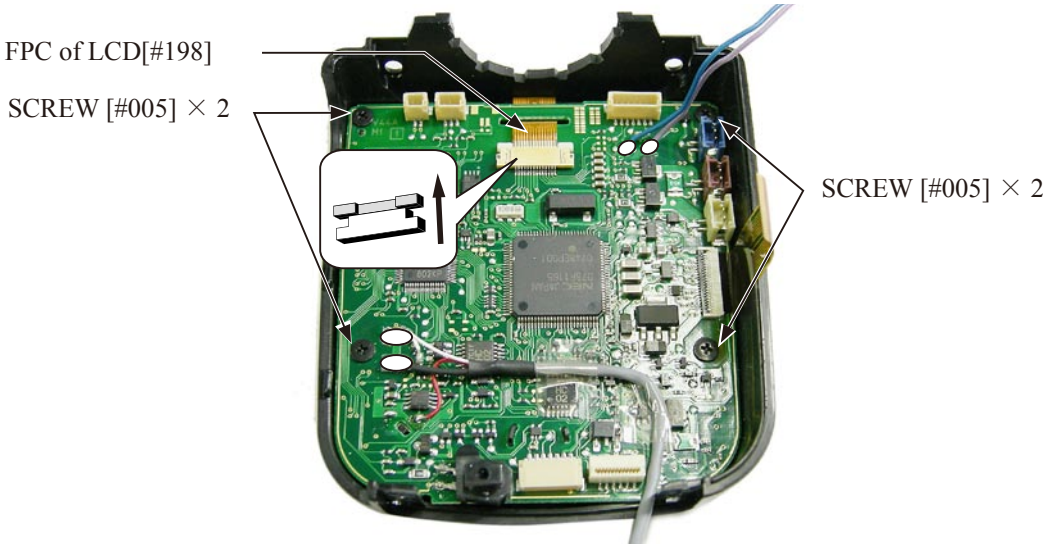


PRINTED CIRCUIT (A)

- Remove the lead wire set (CN-16) (Pink/White) [#071], lead wire set (CN-5A) (Yellow/White/Black) [#203], and lead wire set (CN-2) (Brown)[#069] from the printed circuit (A) [#147].
- Remove the AF module unit (blue wire) [#195], AF module unit (red wire)[#196], and AF module unit (white wire)[#197] from the cover (E) [#086].



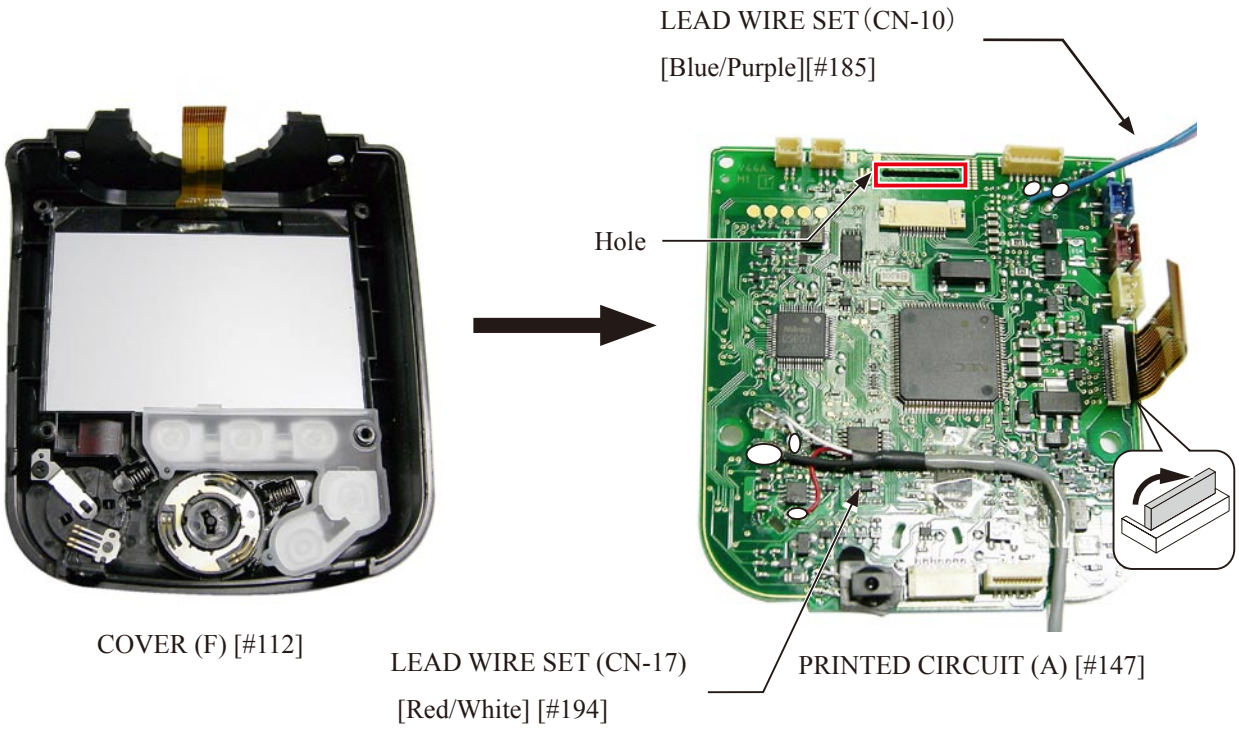
- Take out the four screws [#005].
- Disconnect the FPC of LCD [#198] from the connector.



・Remove the FPC of the LCD [#198] by passing through the hole of the printed circuit (A) [#147].

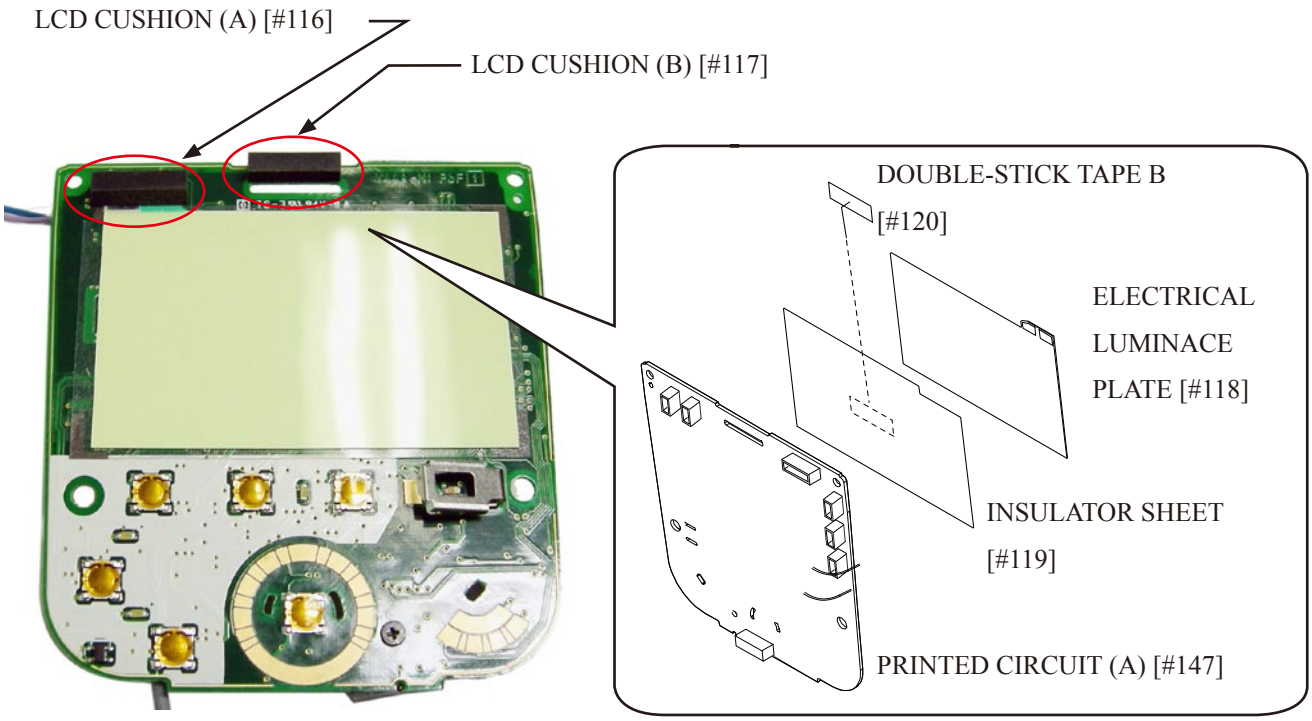
・Unsolder the lead wire set (CN-17) [Red/White] [#194] at three places.

・Unsolder the lead wire set (CN-10) [Blue/Purple][#185].



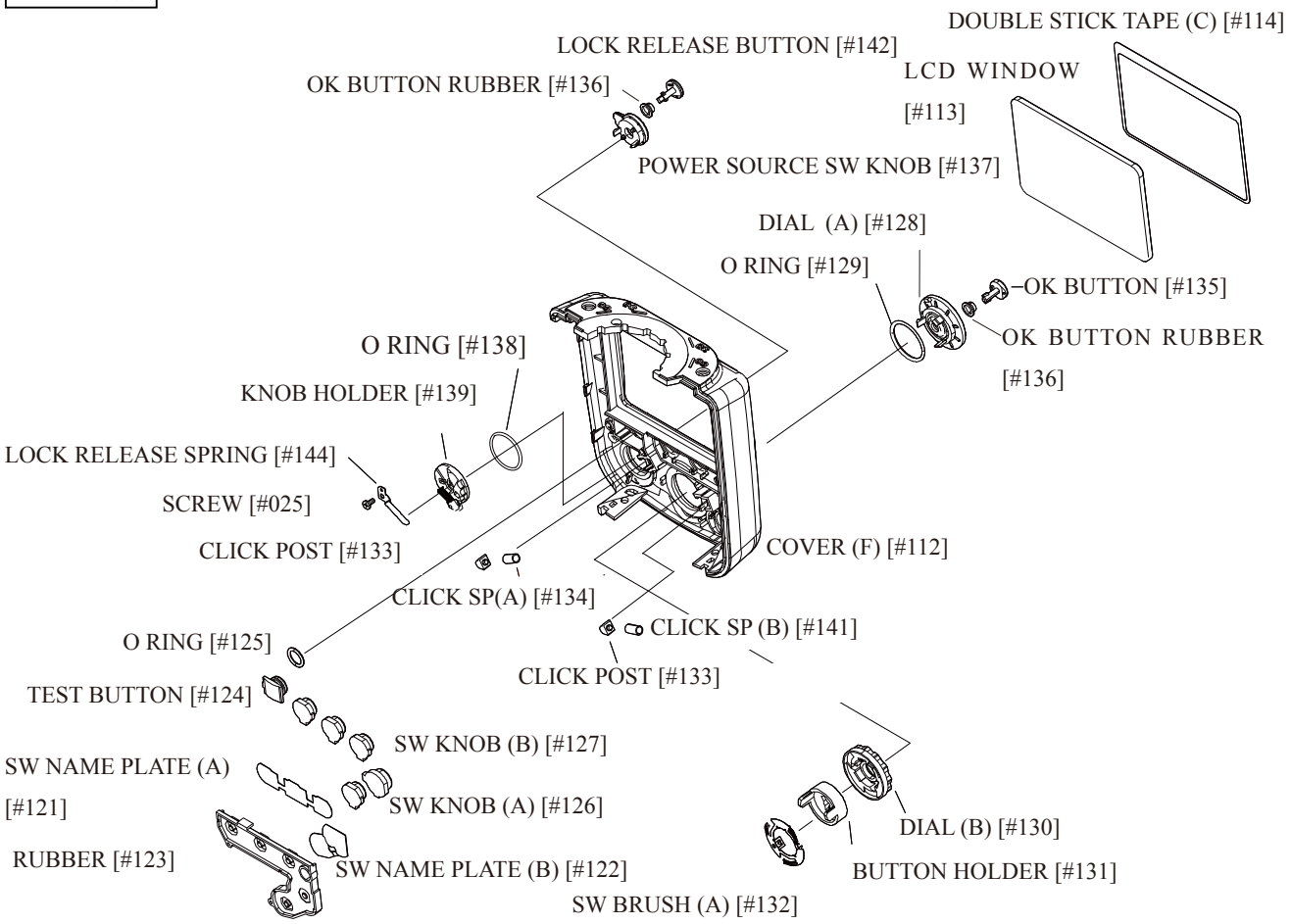
・Remove the LCD[#198].

- Remove the LCD cushion (A) [#116].
- Remove the LCD cuchion (B) [#117].
- Remove the electrical luminance plate [#118].
- Remove the insulator sheet [#119].

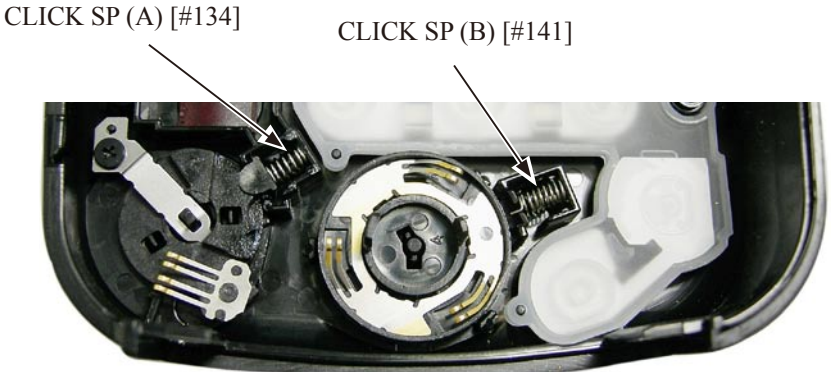


PRINTED CIRCUIT (A) [#147] back side

COVER (F)

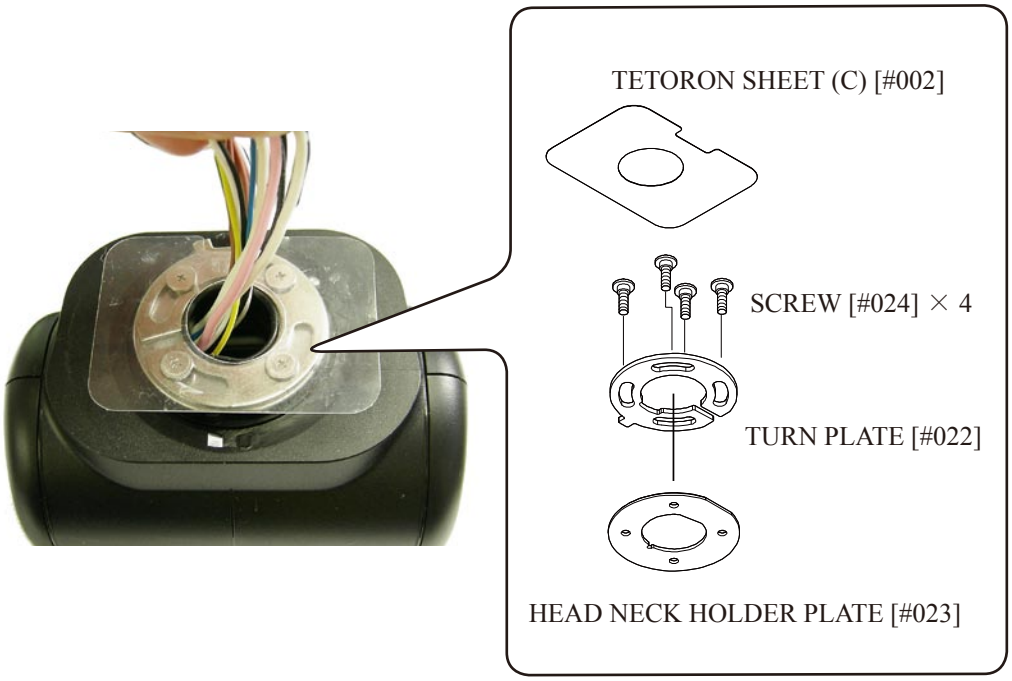


Caution: When the power button or OK button is removed, the click SP or click post may pop out.



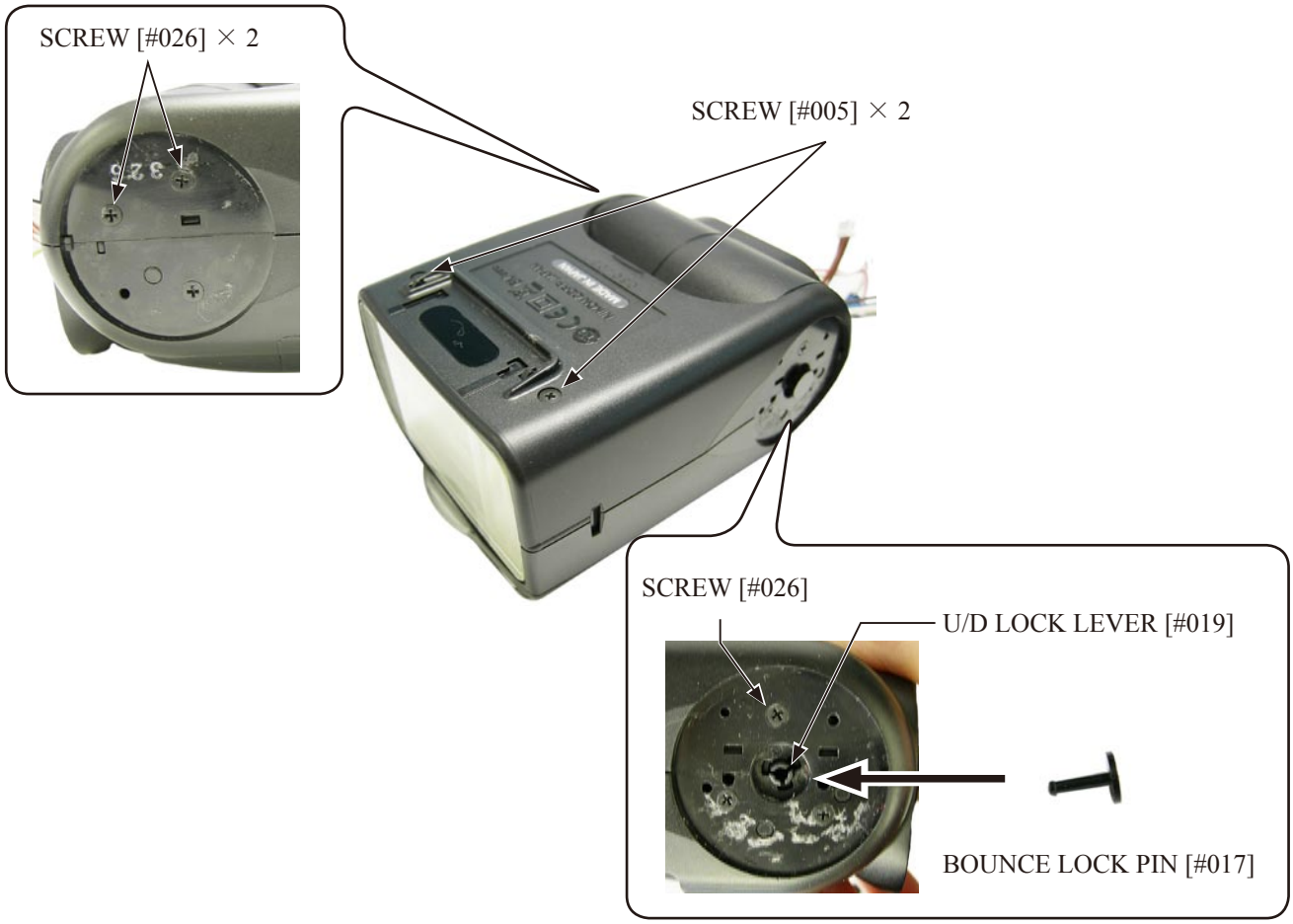
TURN PLATE / HEAD NECK HOLDER PLATE

- Remove the tetron sheet (C) [#002].
- Take out the four screws [#024].
- Remove the head neck holder plate [#023] and turn plate [#022].

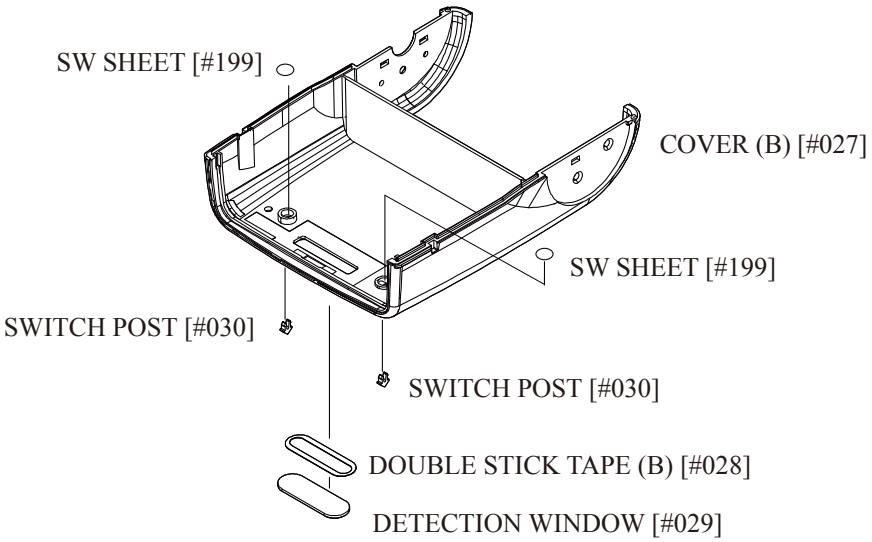


COVER (B)

- Take out the right-side screw.
- Pull out the bounce lock pin.
- Take out the left-side two screws.
- Take out the top two screws.



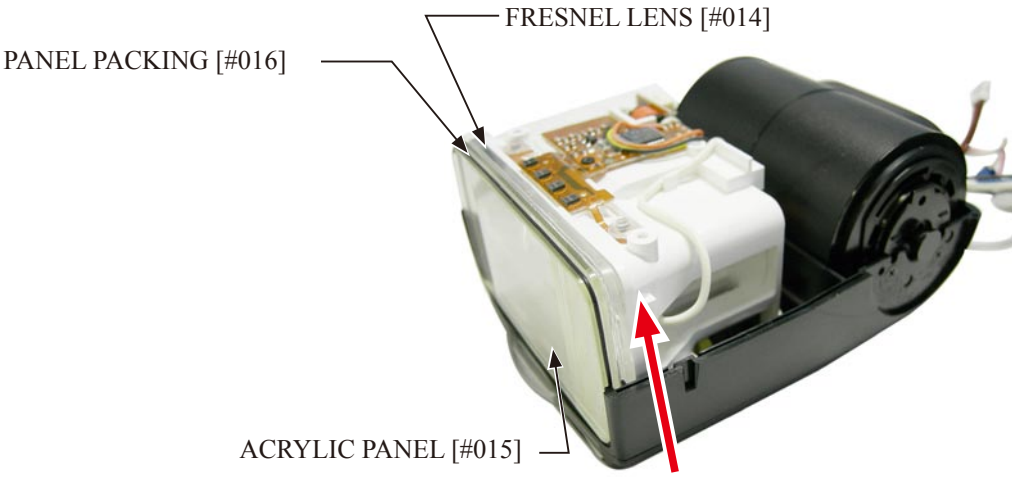
- Unhook the cover (B) [#027] from the cover (A) [#031].
- The cover (B) [#027] will come off.



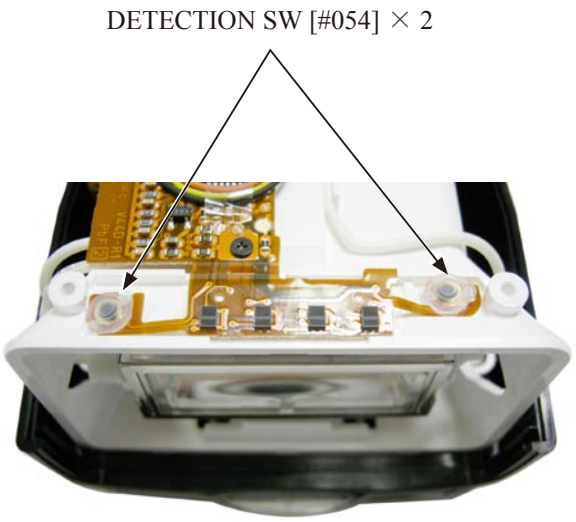
・Remove the acrylic panel [#015].

・Remove the panel packing [#016] from the acrylic panel [#015].

・Remove the fresnel lens [#014].

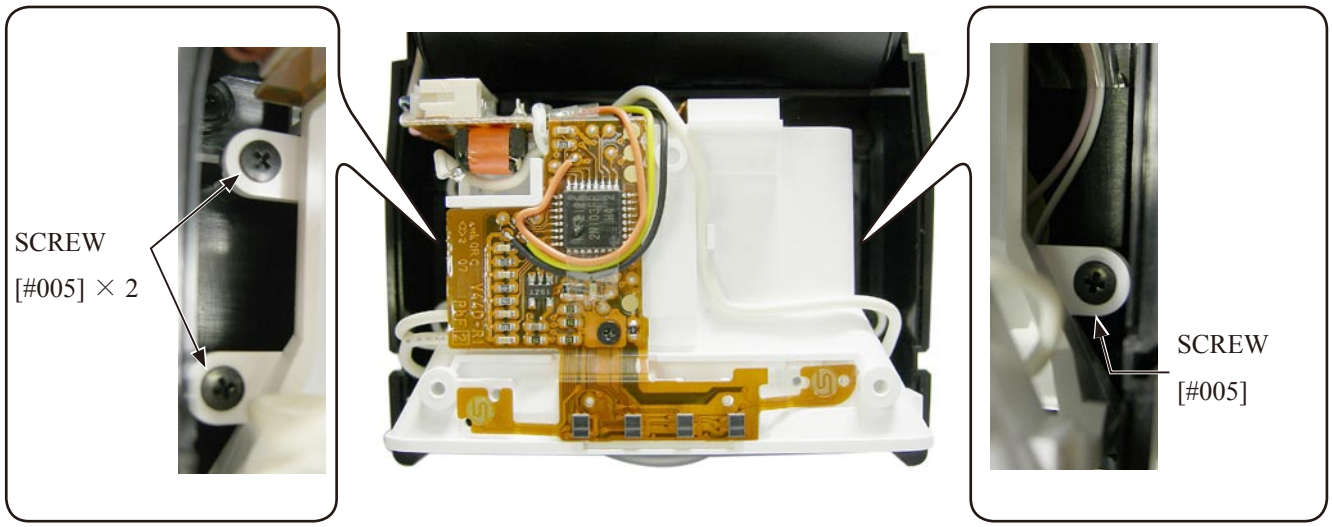


・Remove the two detection SWs [#054], (because they are so light as to be popped out easily, and they may be missing during disassembly.)

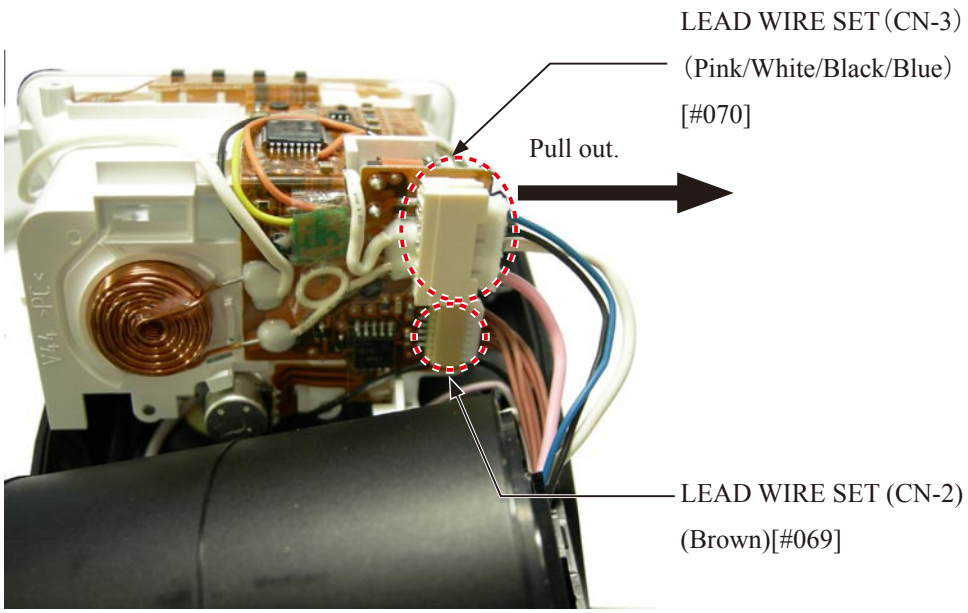


FIBER CABLE

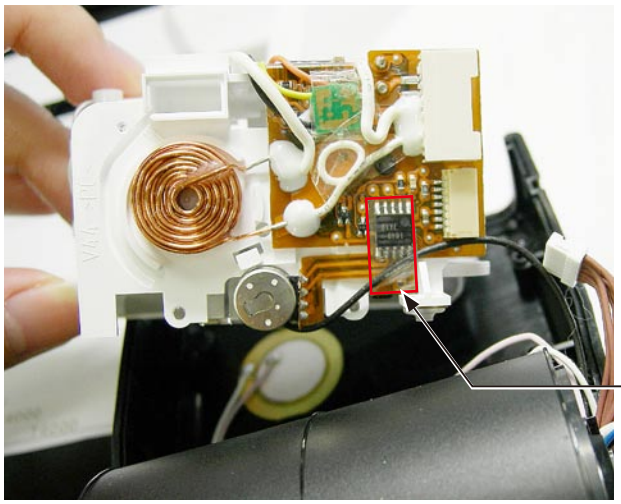
・Take out the three screws [#005].



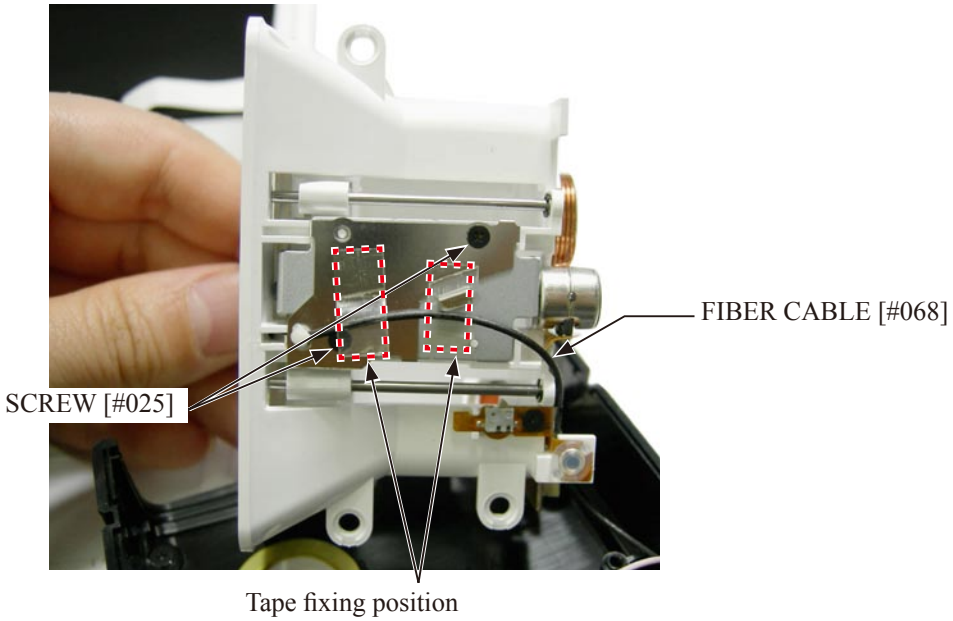
・Lift the hood slightly upward, and remove the lead wire set [(CN-3)（Pink/White/Black/Blue)][#070].
・Remove the lead wire set (CN-2) (Brown)[#069].



・Peel off the tape.

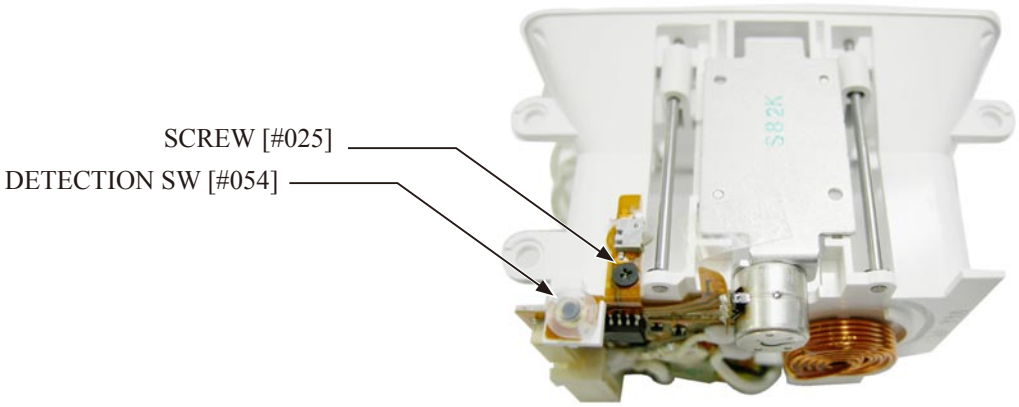


・Peel off the tape at two places.
・Remove the fiber wire [#068] from the hole.
・Take out the two screws [#025].
・The fiber retainer plate [#001] will come off.

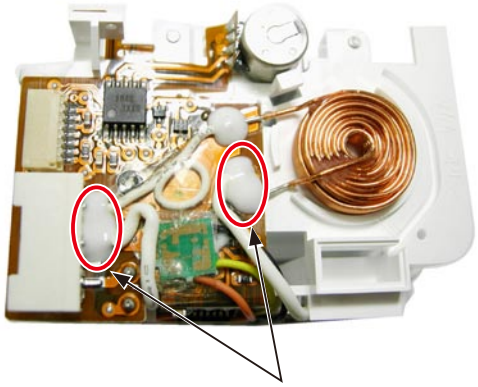


PRINTED CIRCUIT (D)

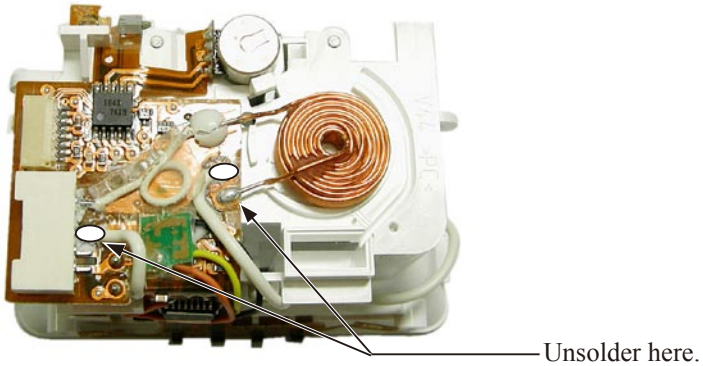
- Remove the detection SW [#054].
- Take out the screw [#025].



- Remove the bonds at two places.

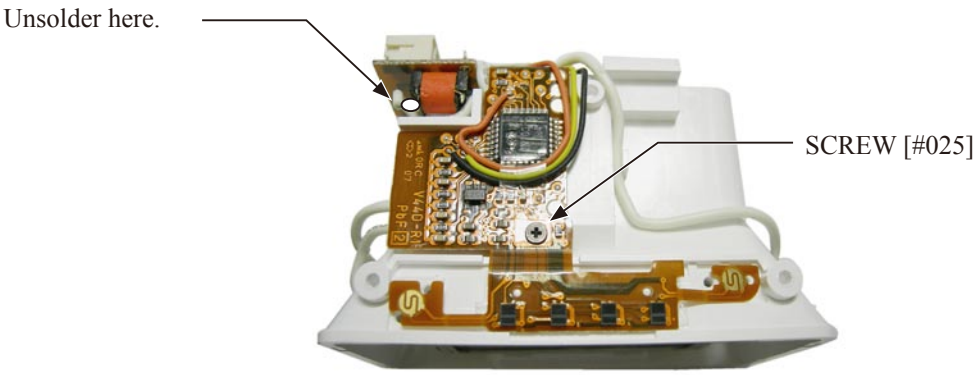


- Unsolder at two places.



・Take out the screw [#025].

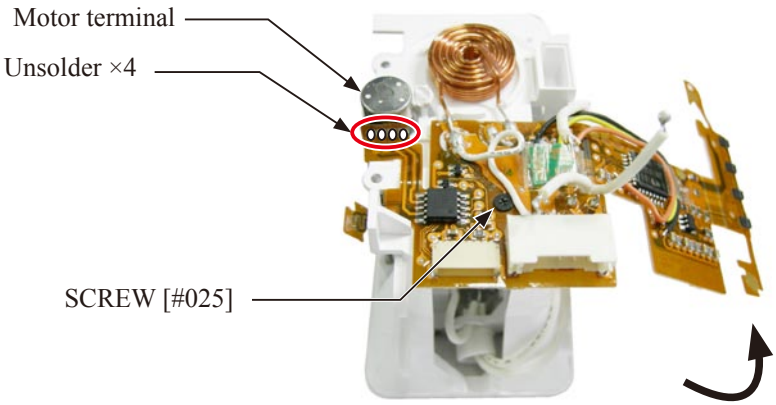
・Remove the solder.



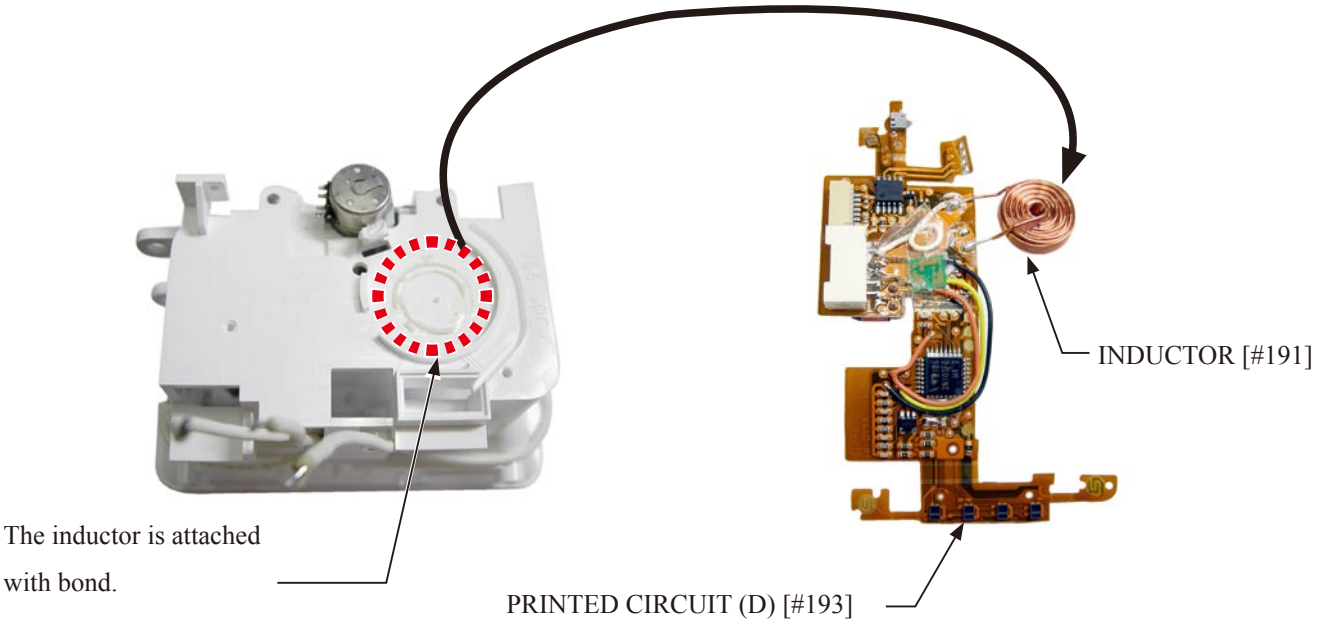
・Raise the printed circuit (D) [#193].

・Take out the screw [#025].

・Unsolder the motor terminal at four places.

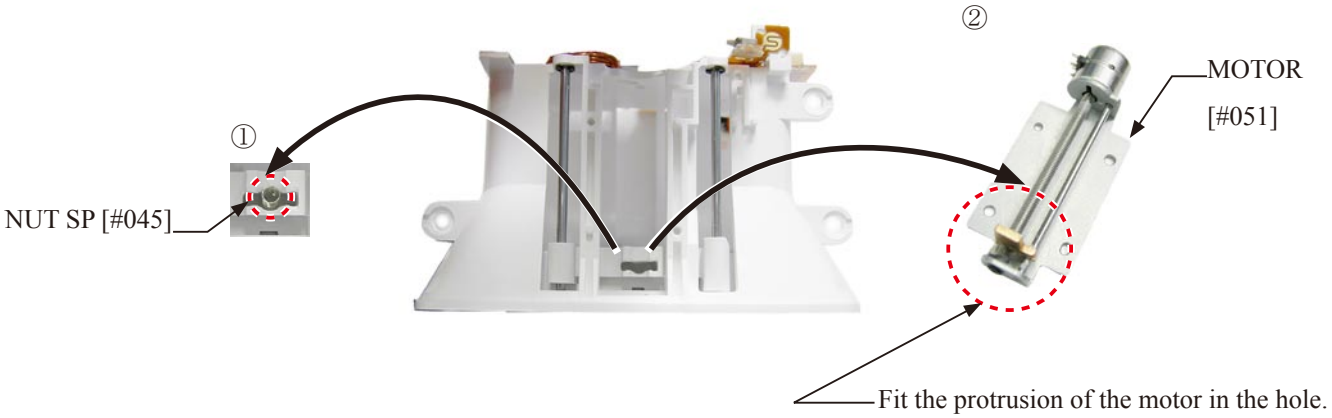


・Remove the printed circuit (D) [#193].

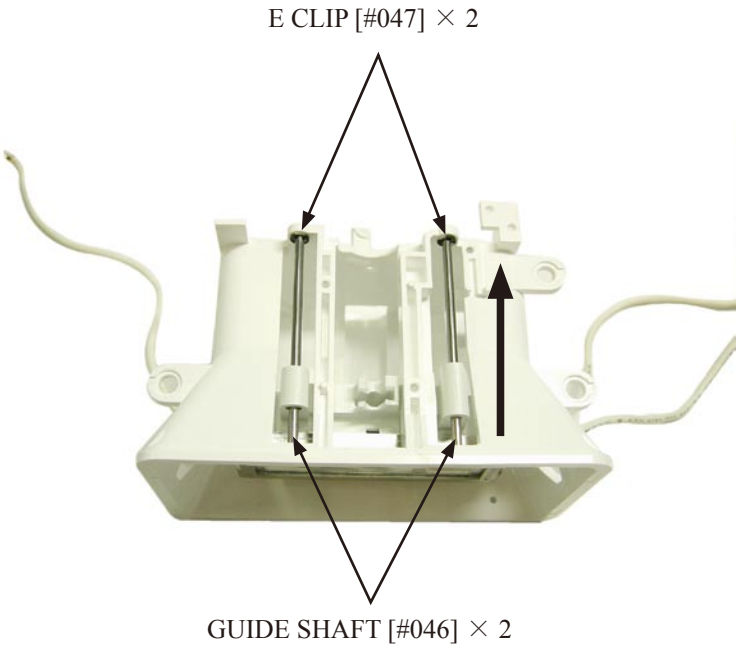


HOOD

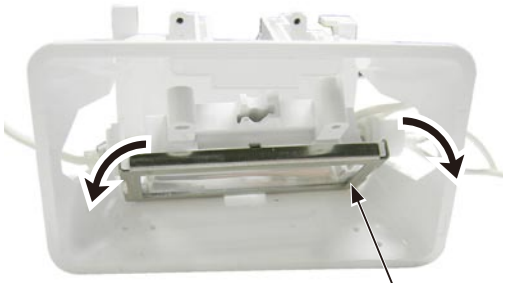
- Remove the motor [#051].
- Remove the nut SP [#045]



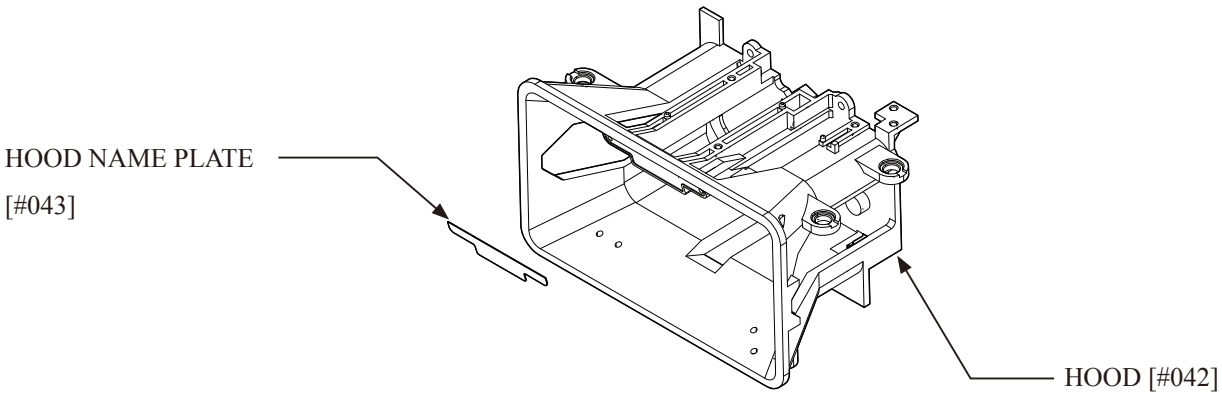
- Remove the two E clips [#047].
- Remove the two guide shaft [#046]



・Remove the Xe tube unit [#056] from the front.

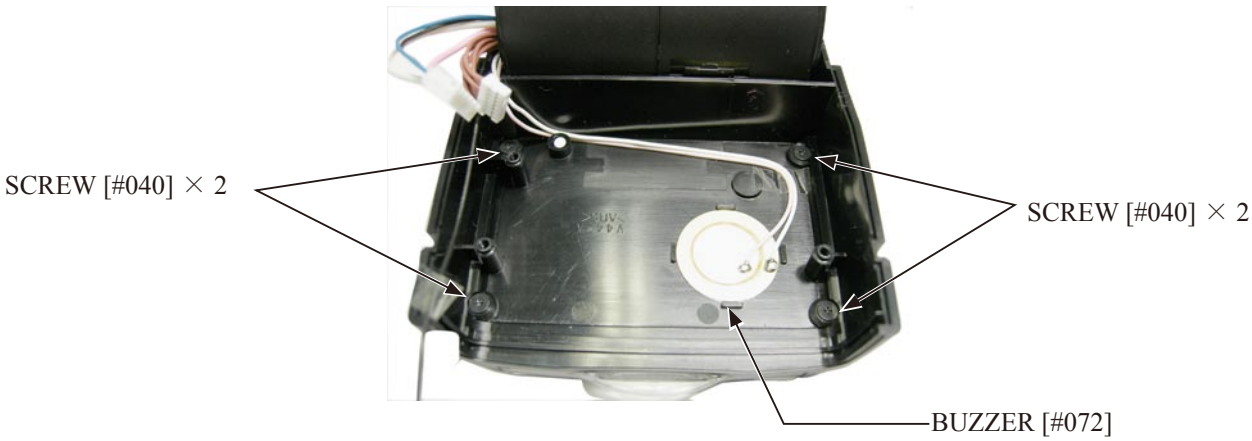


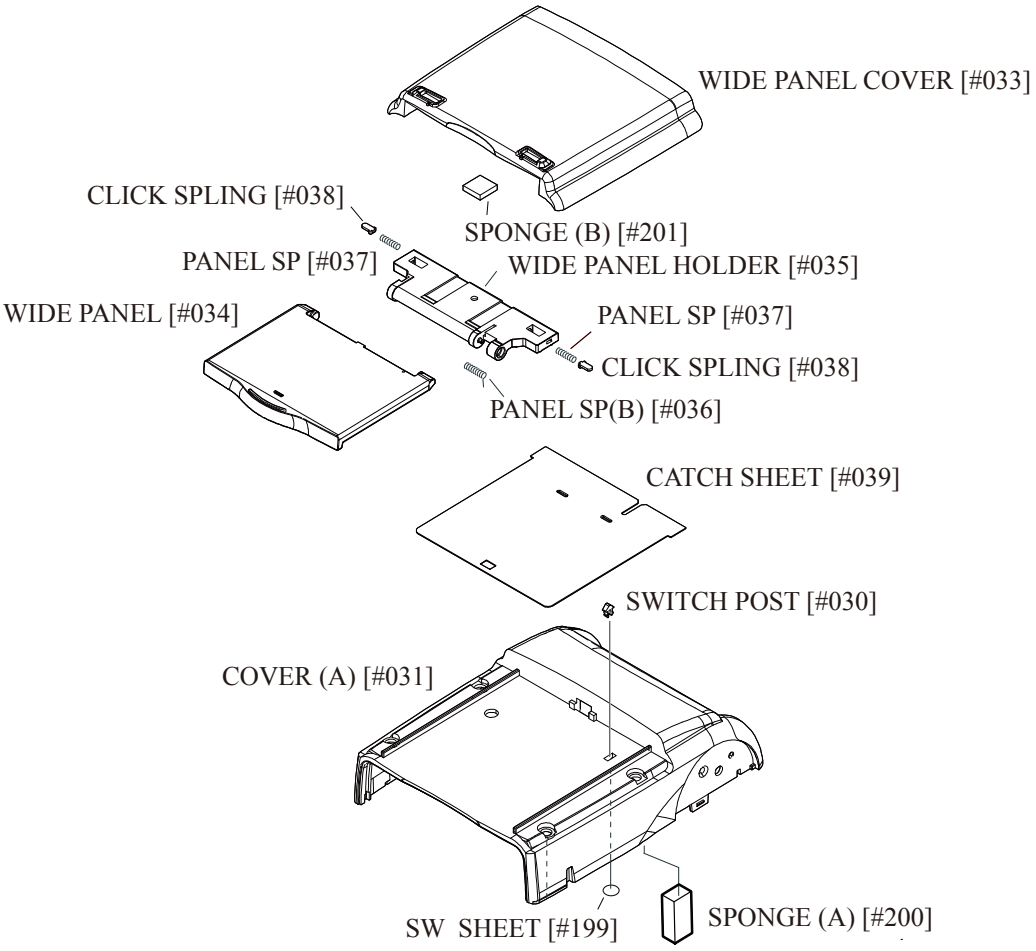
・Remove the hood name plate [#043].



COVER (A)

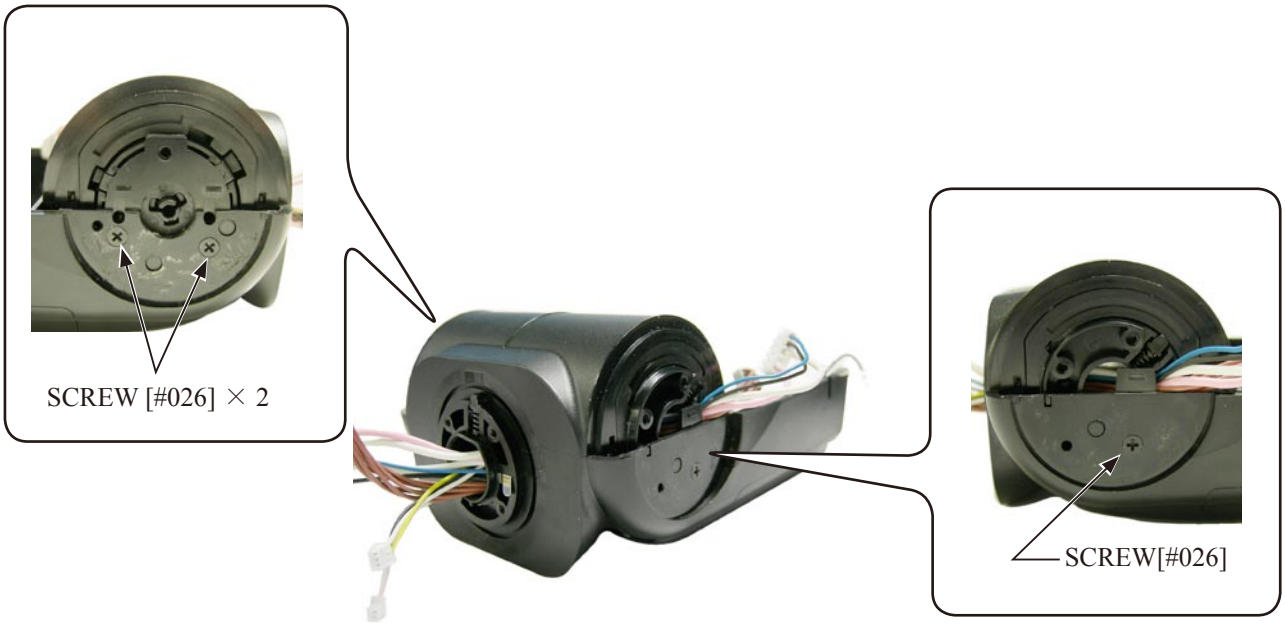
- Remove the buzzer [#072].
- Take out the four screws [#040].



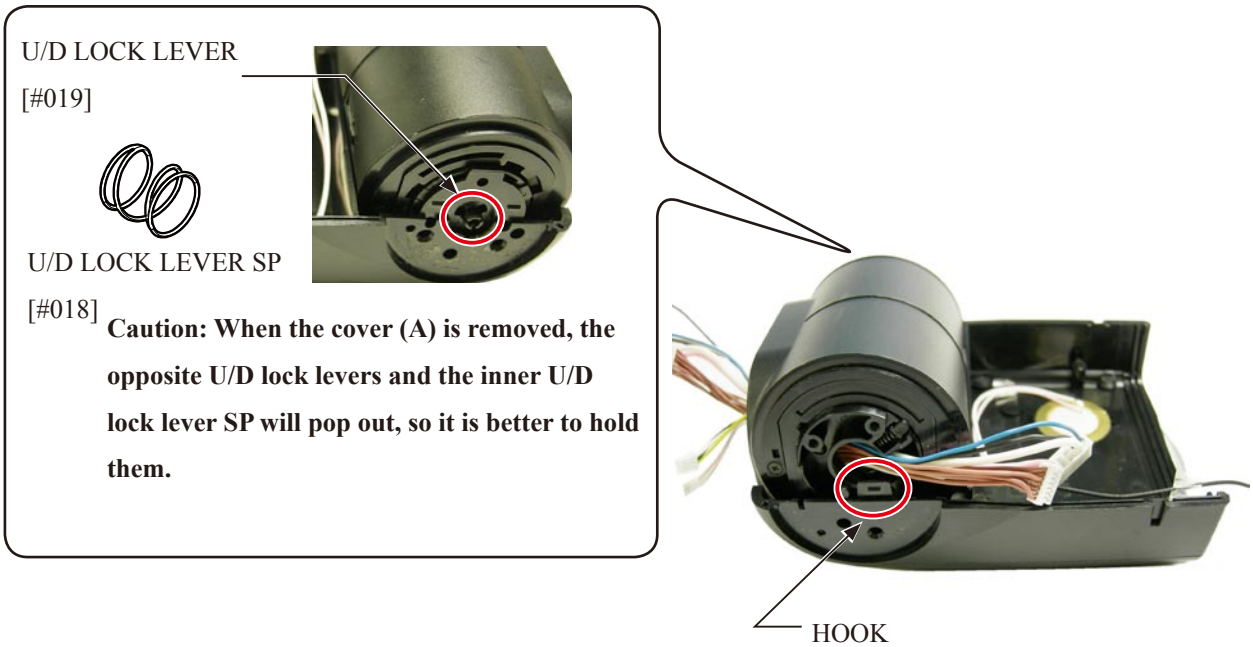


COVER (C) / (D)

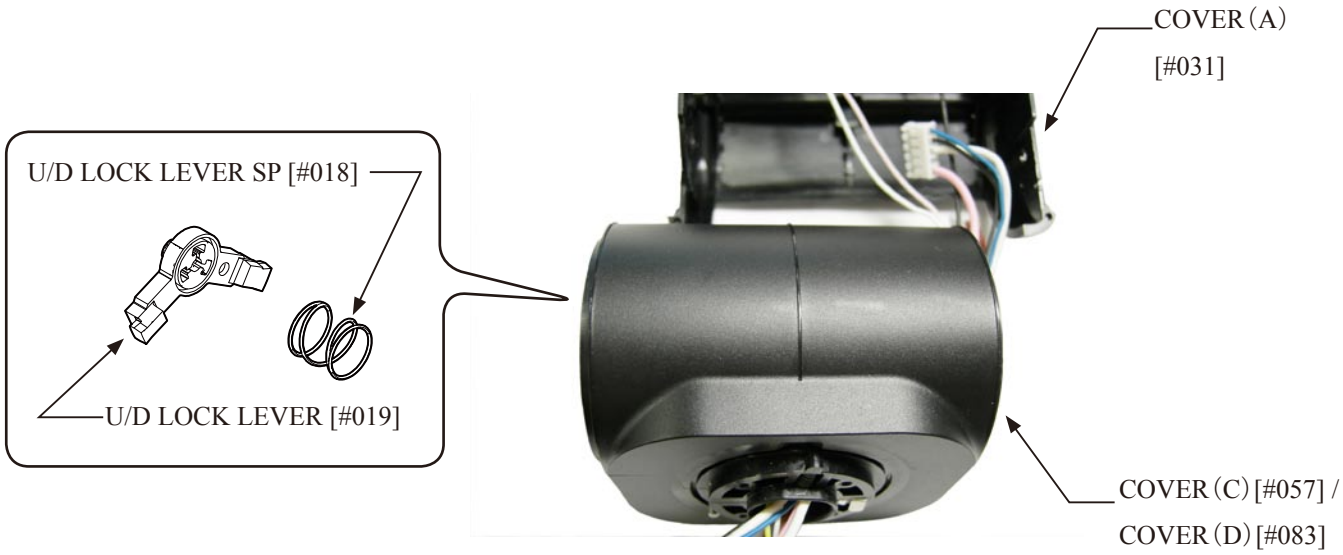
・Take out the three screws [#026].



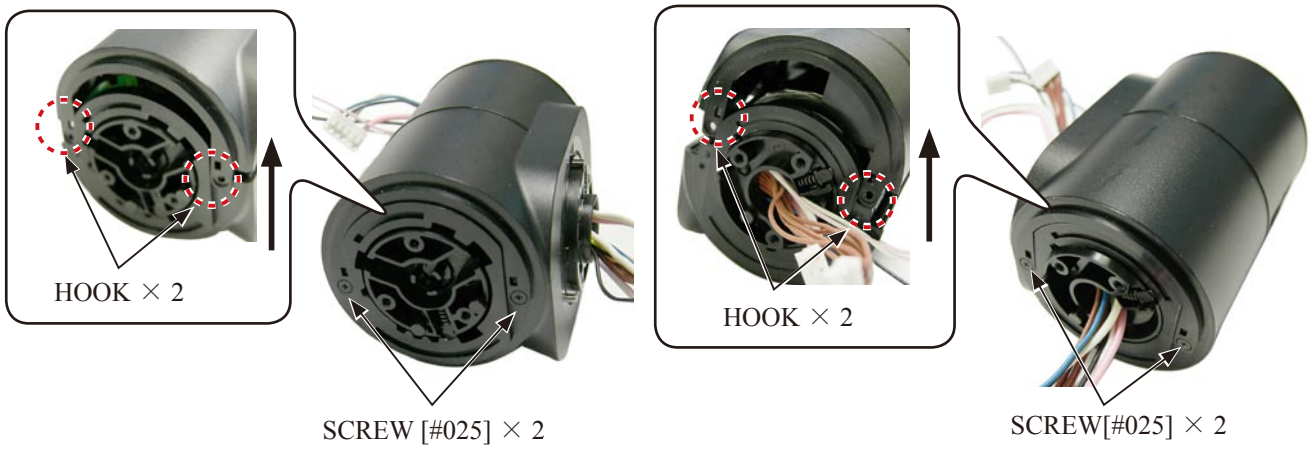
・While pulling the hook outwards, remove the cover（C）[#057] and cover（D）[#083] from the cover (A) [#031].



・The cover (C) [#057], cover (D) [#083], U/D lock lever [#019], and the U/D lock lever SP [#018] will come off from the cover (A) [#031].



・Take out the four screws [#025].
・Unhook at four places.



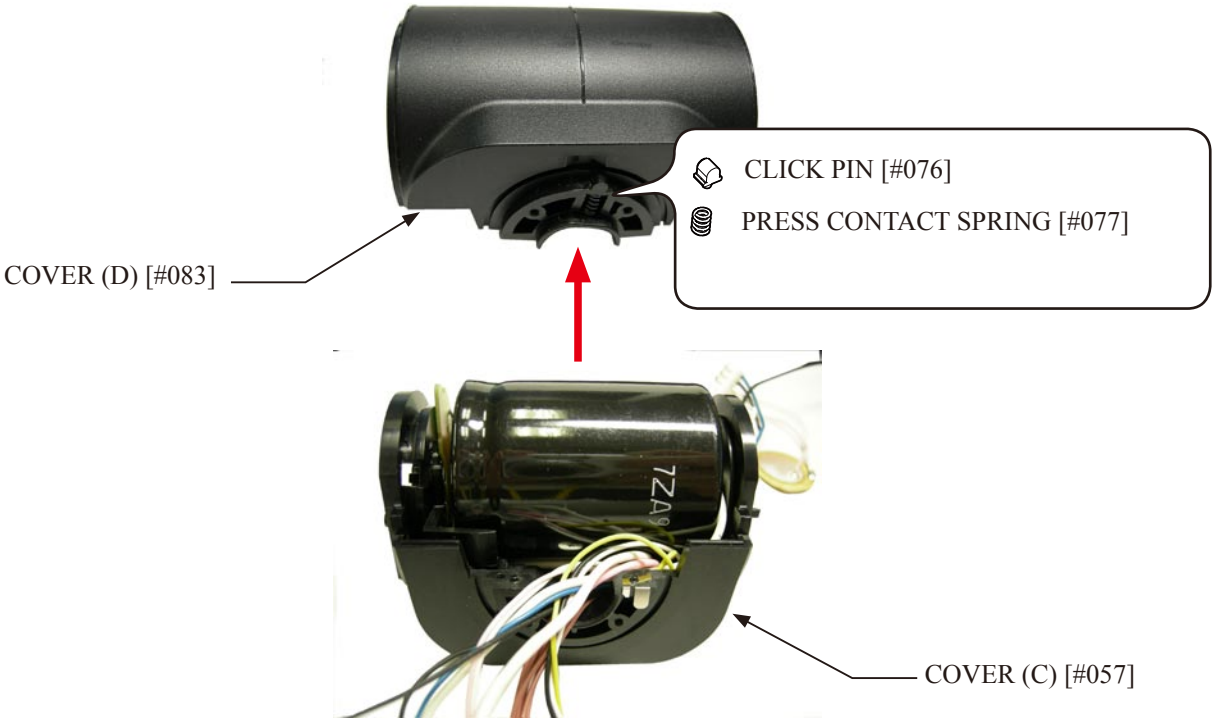
Bounce shaft (A) side

Bounce shaft (B) side

・The cover (C) [#057] is separated from the cover (D) [#083].

・Remove the press contact spring [#077] and click pin [#076] from the cover (D) [#083].

Use caution to avoid popping out of the press contact spring.



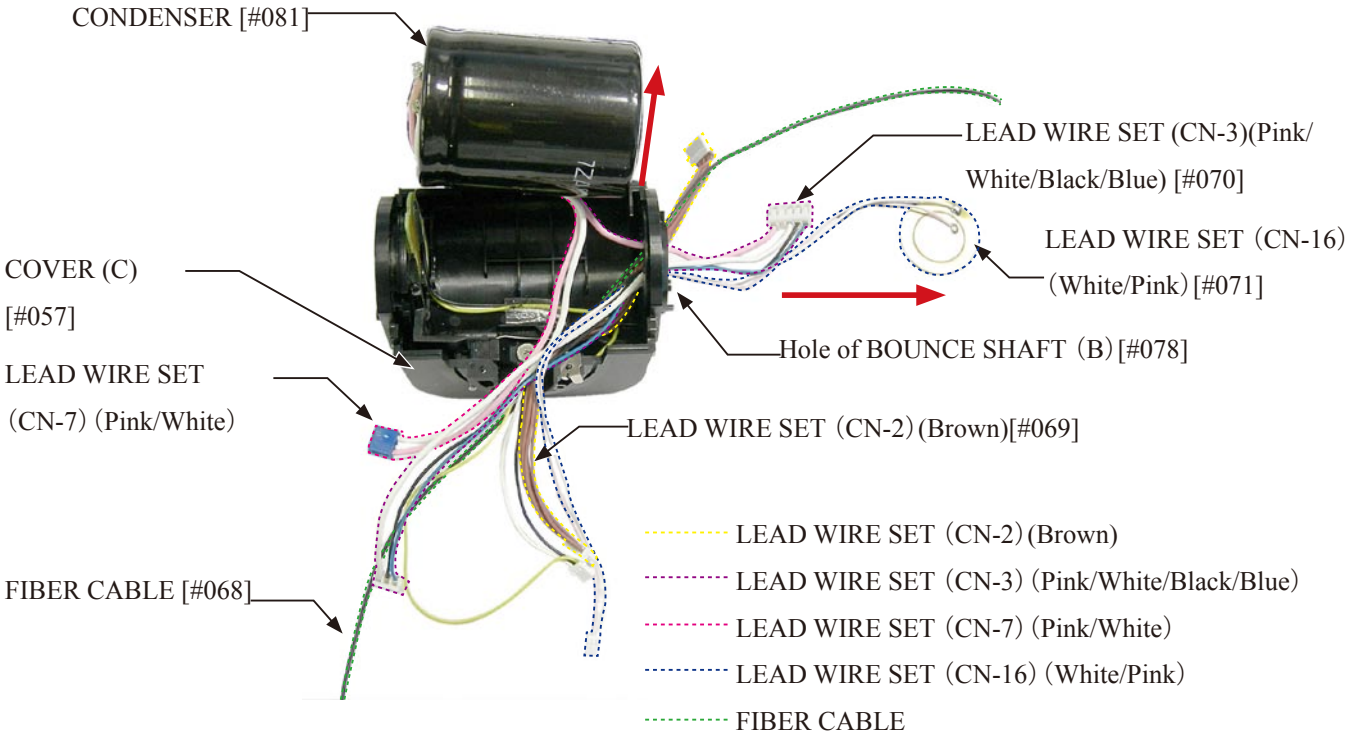
・Remove the condenser [#081] from the cover (C) [#057].

・The lead wire set (CN-3) (Pink/White/Black/Blue) [#070] and the lead wire set (CN-7) (Pink/White) [#082], which are soldered to the condenser [#81], will come off at the same time.

・Pull out the lead wire set (CN-16) (White/Pink) from the hole of the bounce shaft (B) [#078].

・Pull out the lead wire set (CN-2) (Brown)[#069] from the hole of the bounce shaft (B) [#078].

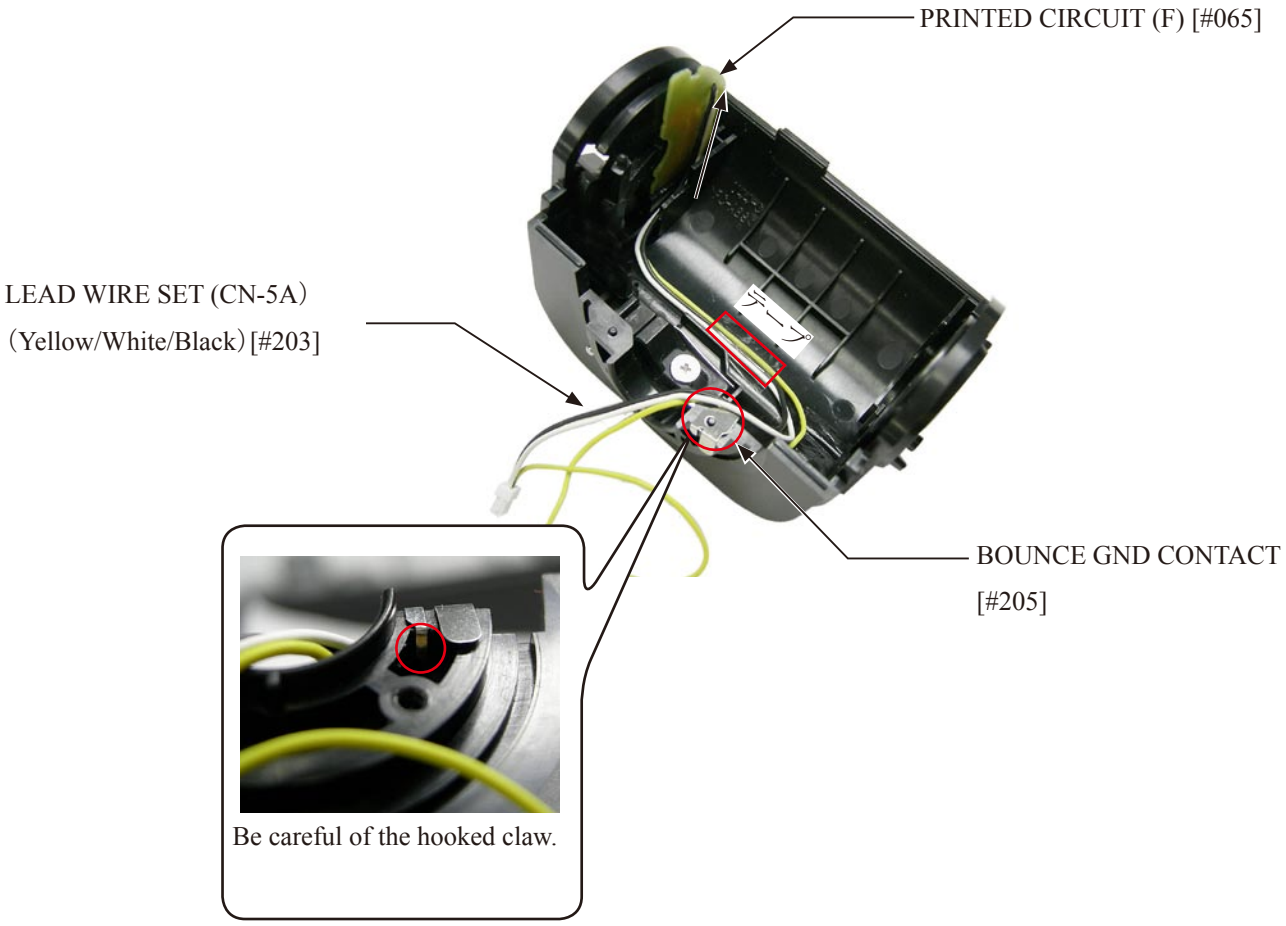
・Pull out the fiber wire [#068] from the hole of the bounce shaft (B).



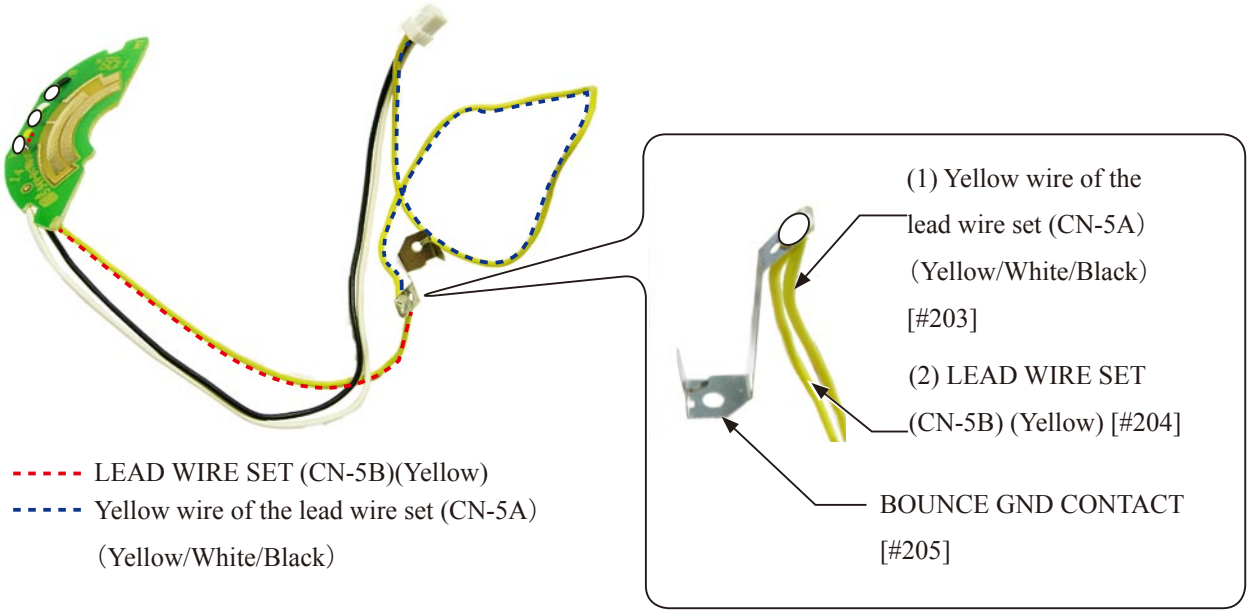
・Remove the bounce GND contact [#205] from the boss of the cover（C)[#057].

・Peel off the tape from the lead wire set (CN-5A)（Yellow/White/Black)[#203].

・Remove the printed circuit (F)[#065].



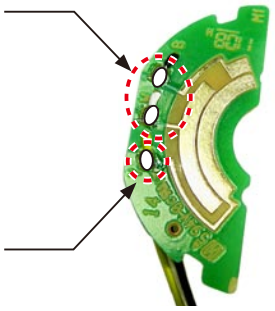
・Remove the solder that joints (1) the (Yellow) of the lead wire set (CN-5A) (Yellow/White/Black)[#203] of the bounce GND contact [#205] and (2) the lead wire set (CN-5B)（Yellow)[#204].



・Unsolder the printed circuit F [#065] at three places.

White/Black wires of the lead wire set (CN-5A) (Yellow/ White/Black) [#203]

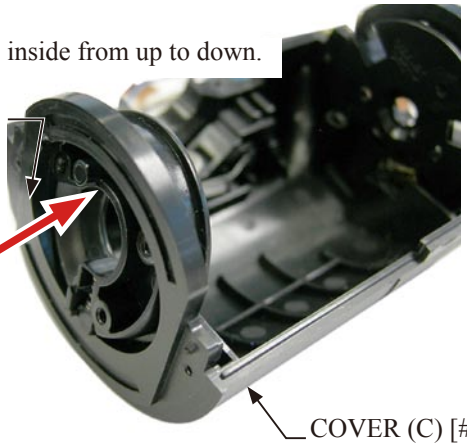
LEAD WIRE SET (CN-5B)(Yellow) [#204]



・Remove the bounce shaft (B) [#078] from the cover (C) [#057].
・Remove the bounce shaft (A) [#073] from the cover (C) [#057].

Kind of press inside from up to down.

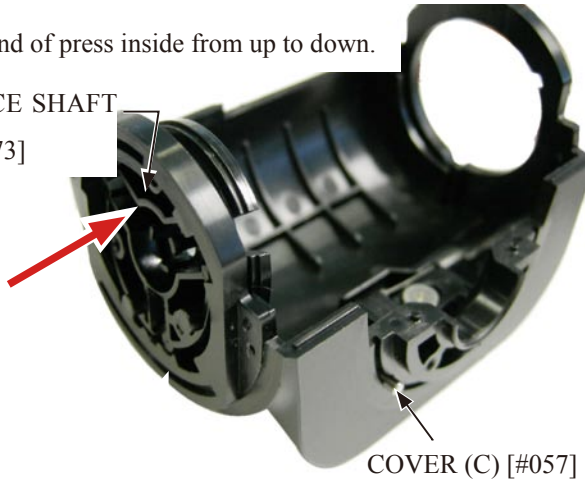
BOUNCE SHAFT (B) [#078]



COVER (C) [#057]

Kind of press inside from up to down.

BOUNCE SHAFT (A) [#073]



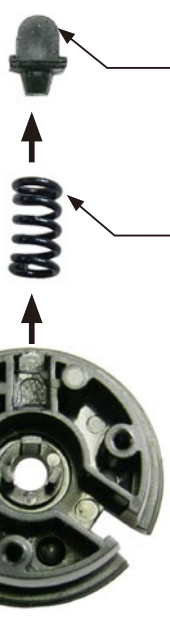
COVER (C) [#057]

・Remove the click pin [#076] and press contact spring [#077] from the bounce shaft (B) [#078].
・Remove the click pin [#076] and press contact spring [#077] from the bounce shaft (A) [#073].

Handle the click pin and the press contact spring with care, because they will easily pop out during disassembly.

CLICK PIN [#076]

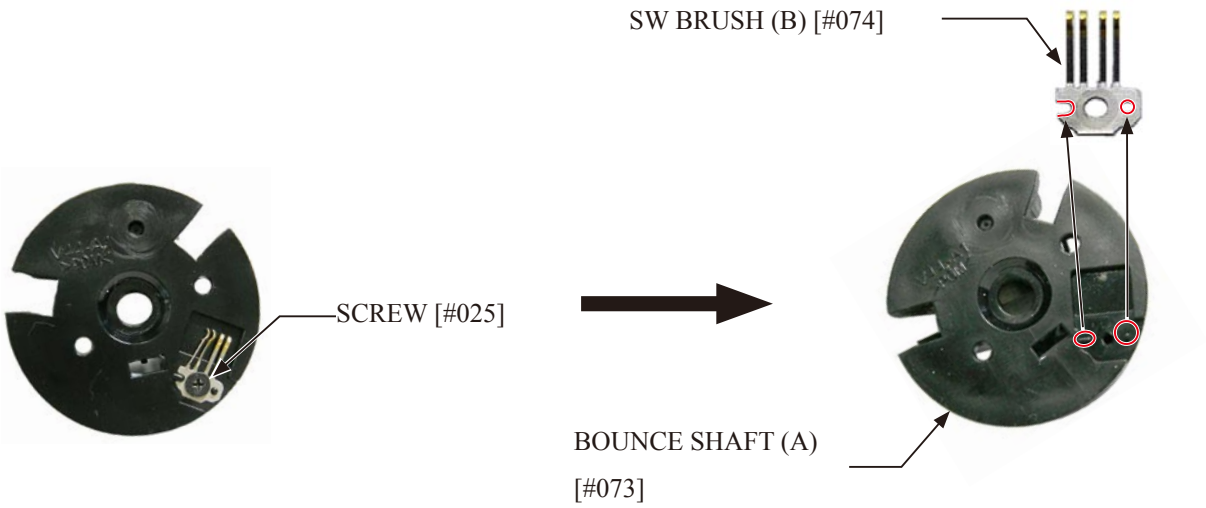
PRESS CONTACT SPRING [#077]



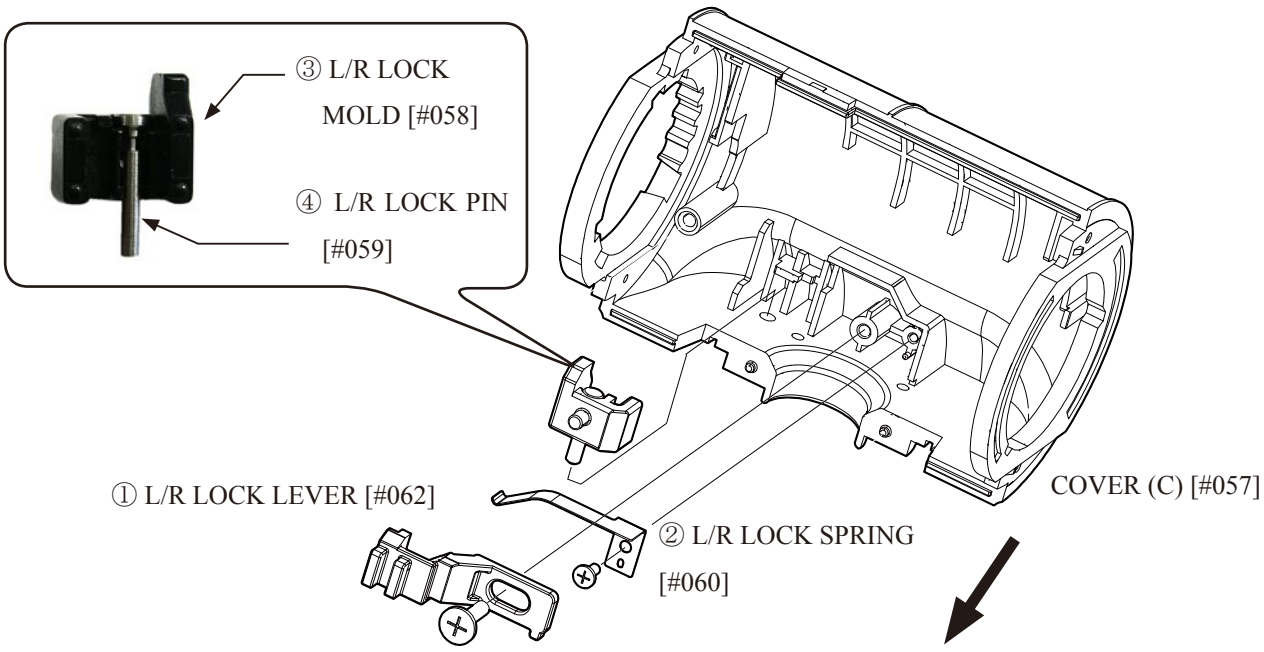
BOUNCE SHAFT (A) [#073]

BOUNCE SHAFT (B) [#078]

・Take out the screw [#025] from the back side of the bounce shaft（A）[#073].
・The switch brush（B）[#074] will come off.

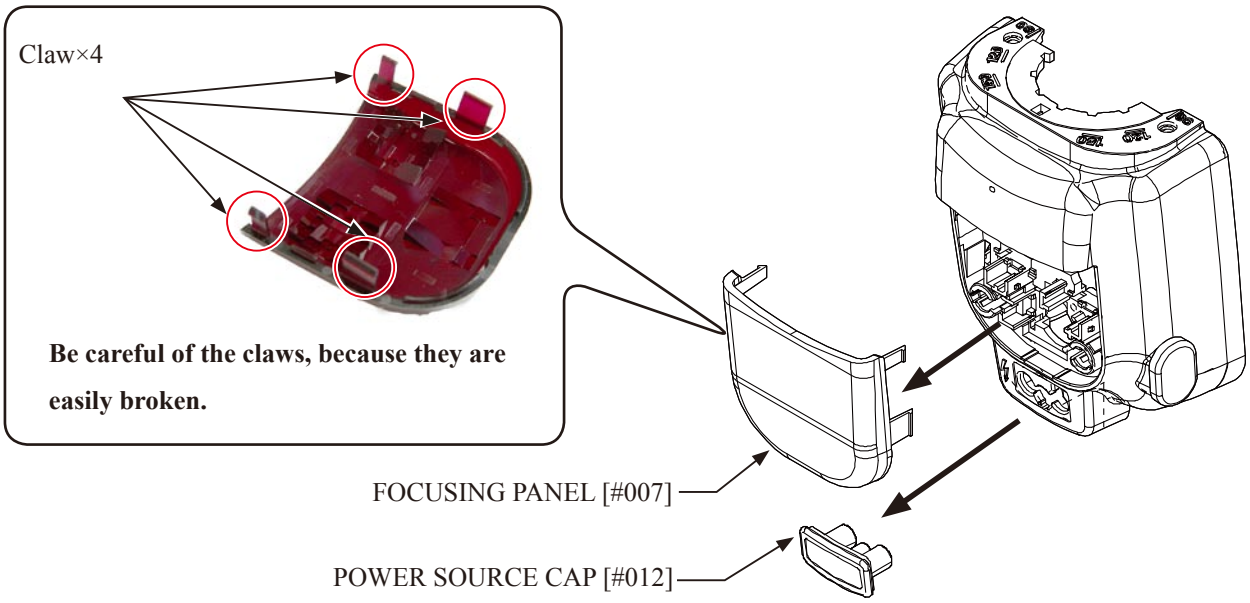


・① Take out the screw [#024], and remove the L/R lock lever [#062].
・② Take out the screw [#025], and remove the L/R lock spring [#060].
・③ Remove the L/R lock mold [#058].
・④ Remove the L/R lock pin [#059] from the L/R lock mold [#058].

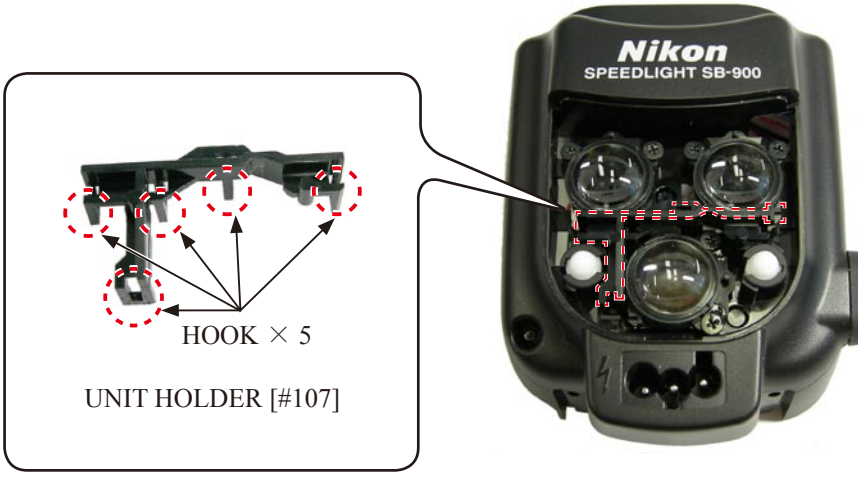


COVER (E)

・Remove the power source cap [#012].
・Remove the focusing panel [#007]].

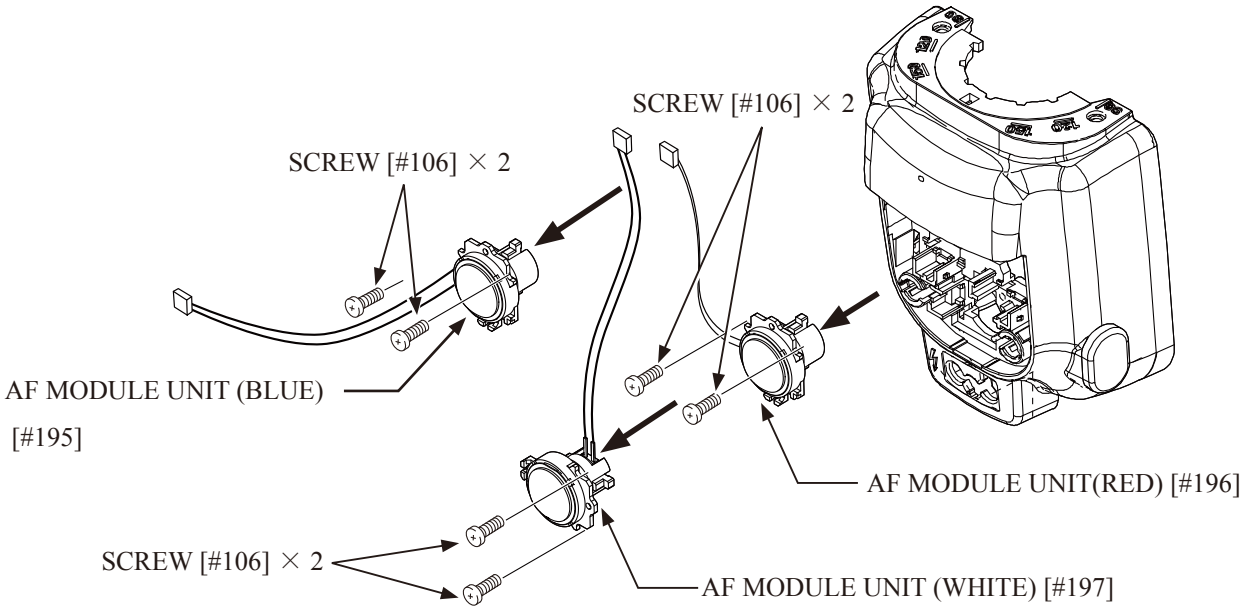


・Remove the unit holder [#107] while holding the five hooks.

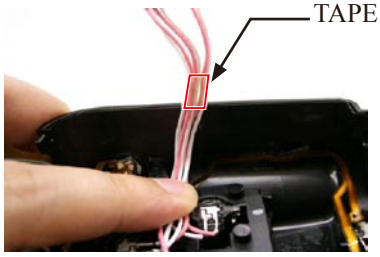


・Take out the six screws [#106].

・The AF module unit (blue wire)[#195], AF module unit (red wire) [#196], and AF module unit (white wire)[#197] will come off.

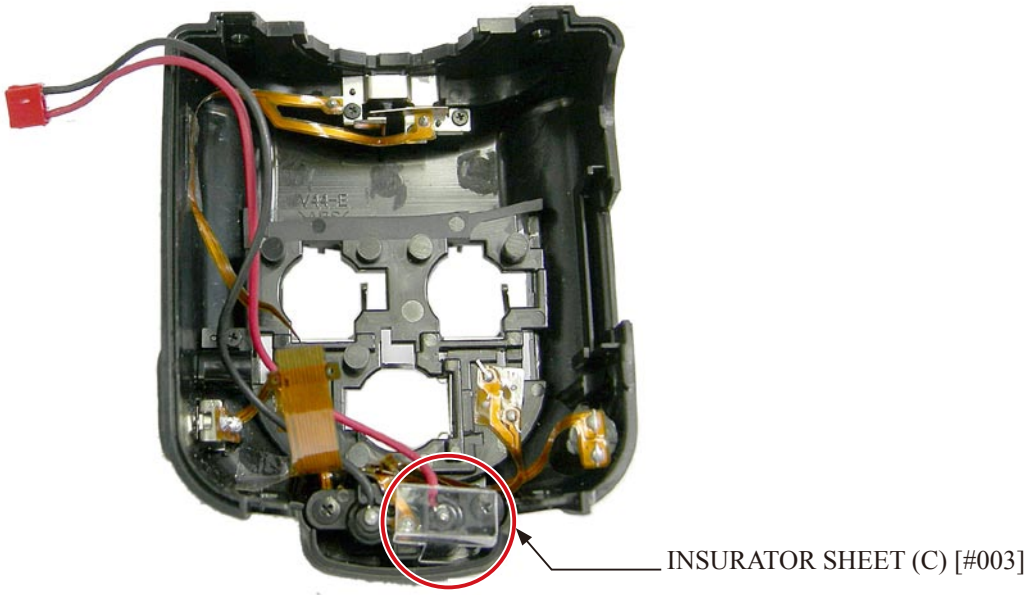


・Remove the tape that wraps up the lead wires of the AF module unit (blue wire) [#195], AF module unit (red wire) [#196] and the AF module unit (white wire) [#197].

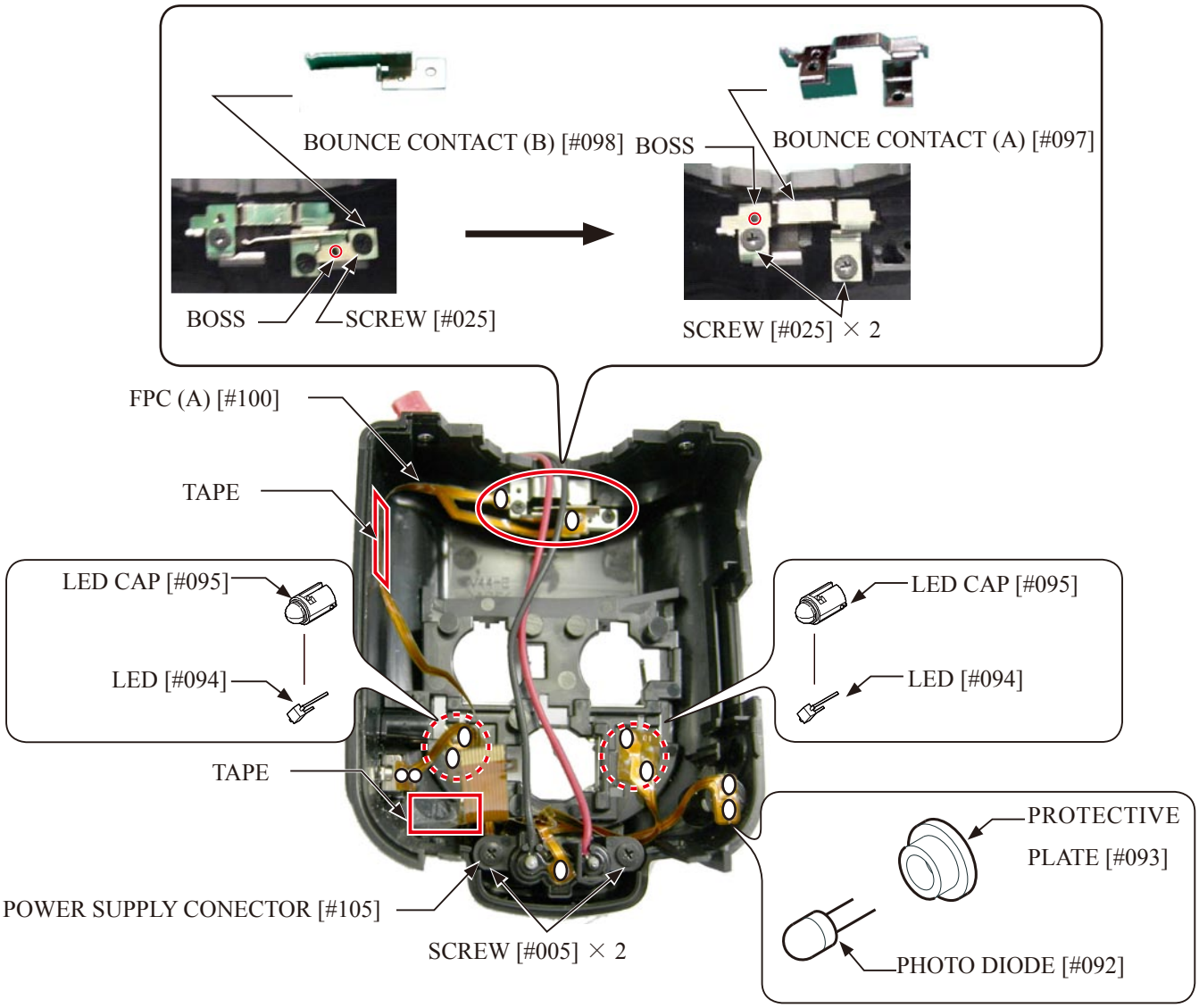


・Remove the spring [#108] at three places.

・Remove the insulator sheet (C) [#003].

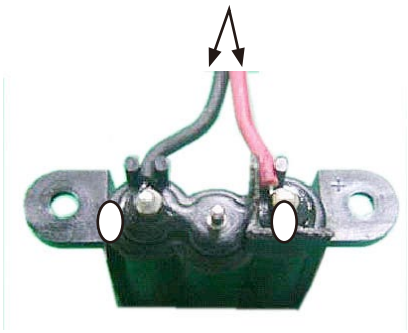


- Remove the eleven solders that joints the FPC（A）[#100].
- Peel off the TAPE at two places.
- The FPC（A）[#100] will come off.
- Remove the photo diode [#092] and protective plate [#093] and two LEDs [#094], and two LED caps [#095] from the FPC (A) [#100]
- Take out the screw [#025], and remove the bounce contact（B）[#098].
- Take out the two screws [#025], and remove the bounce contact（A）[#097].
- Take out the two screws [#005], and remove the power supply connector [#105].

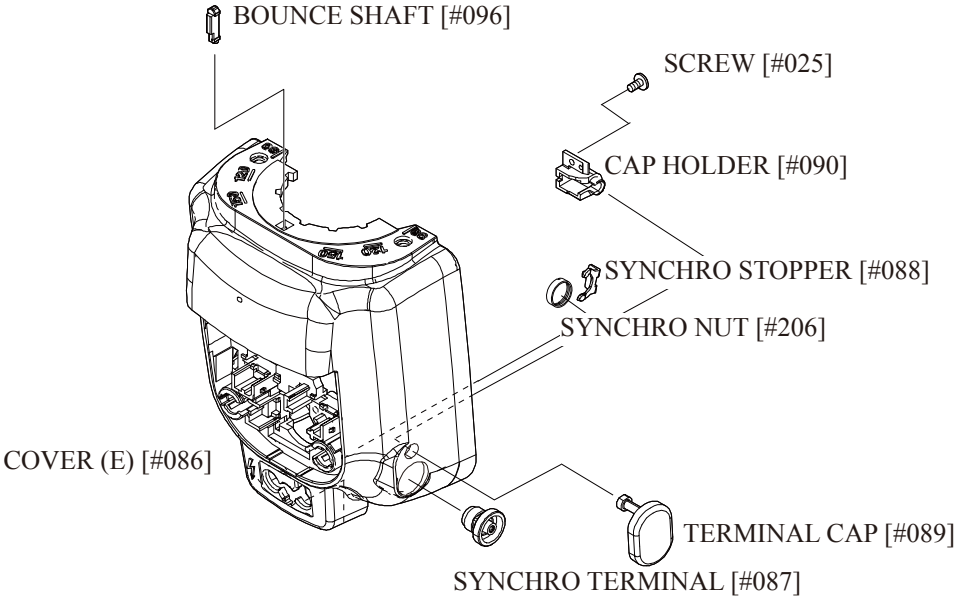


・Unsolder the lead wire set (CN-6) [Black/Red] [#104] at two places.

LEAD WIRE SET (CN-6) [Black/Red] [#104]



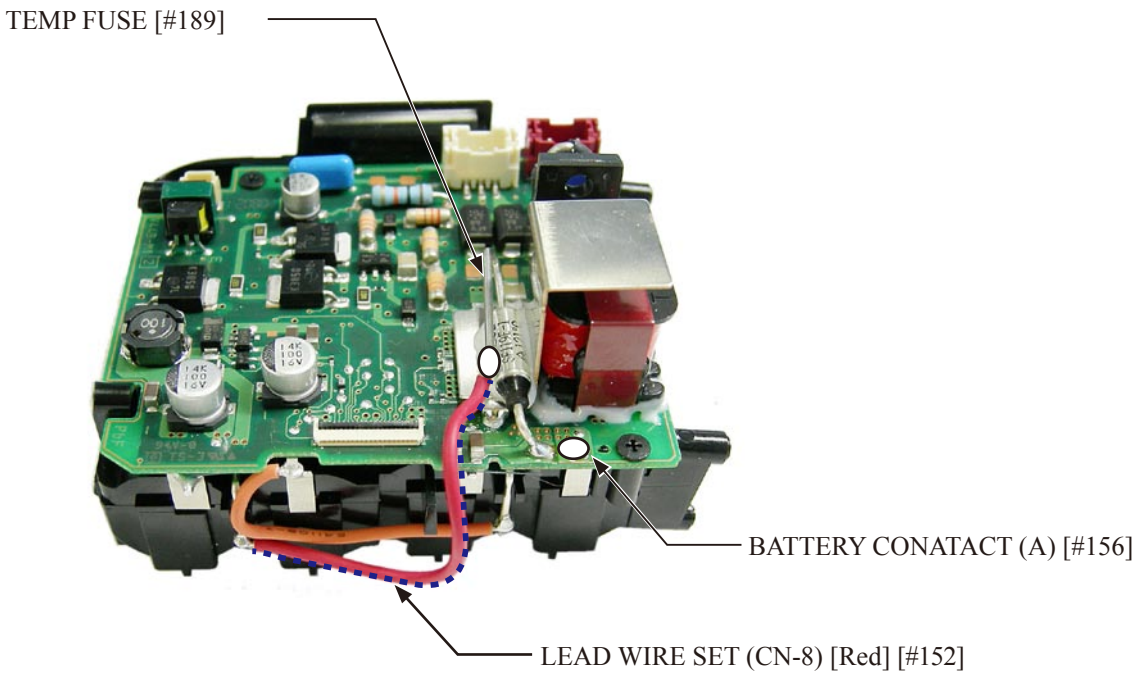
・Take out the screw [#025].
・The cap holder [#090] will come off.
・Remove the terminal cap [#089].
・Remove the synchro-stopper [#088].
・Remove the synchro-nut [#206].
・Remove the synchro-terminal [#087].
・Remove the bounce shaft [#096].



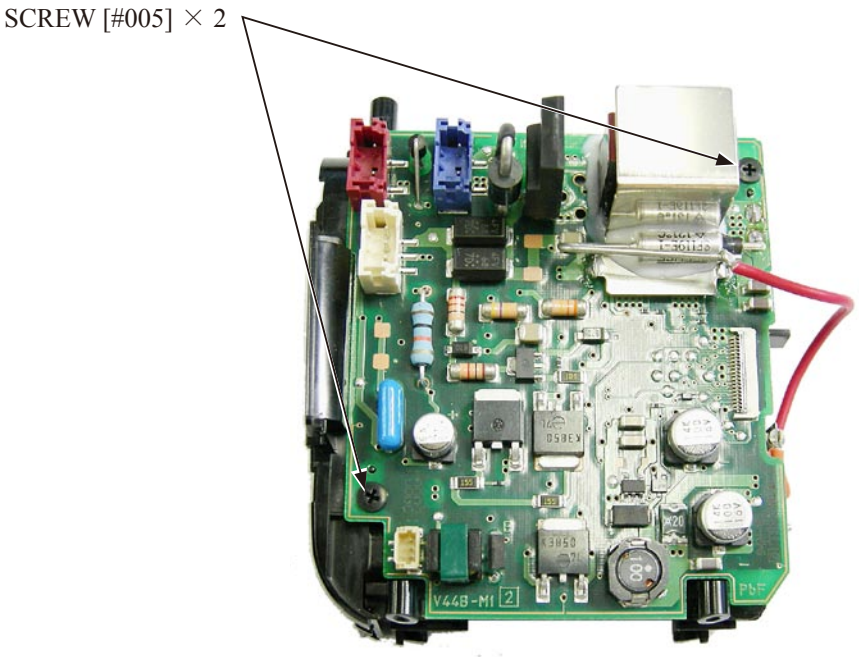
PRINTED CIRCUIT(B)

・Unsolder the LEAD WIRE SET (CN-8) [Red] [#152] from the TEMP FUSE [#189]

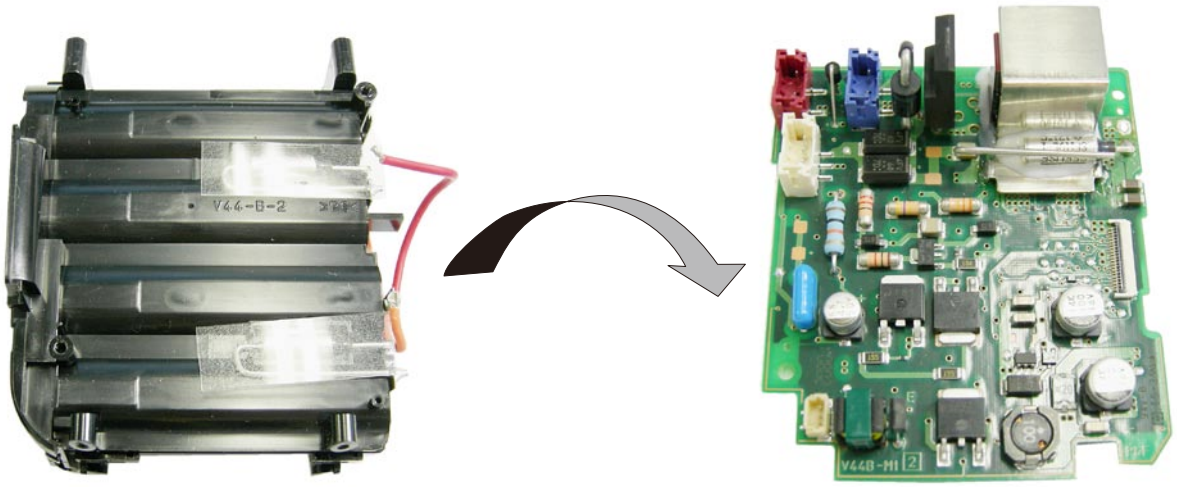
・Unsolder the BATTERY CONATACT (A) [#156]



・Take out the two screws [#005].



Remove the printed circuit (B) [#158] from the battery chamber mold (A) [#148] / (B) [#149].

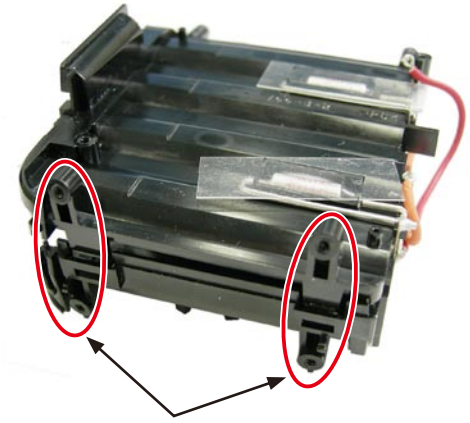


BATTERY CHAMBER MOLD (A) [#148]/
BATTERY CHAMBER MOLD (B) [#149]

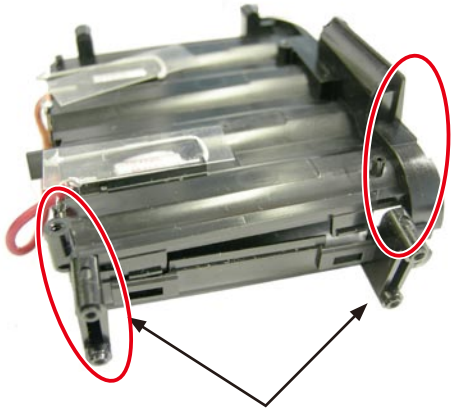
PRINTED CIRCUIT(B) [#158]

BATTERY CHAMBER MOLD (A) / (B)

・Unhook at four places, and separate the battery chamber (A) and (B).



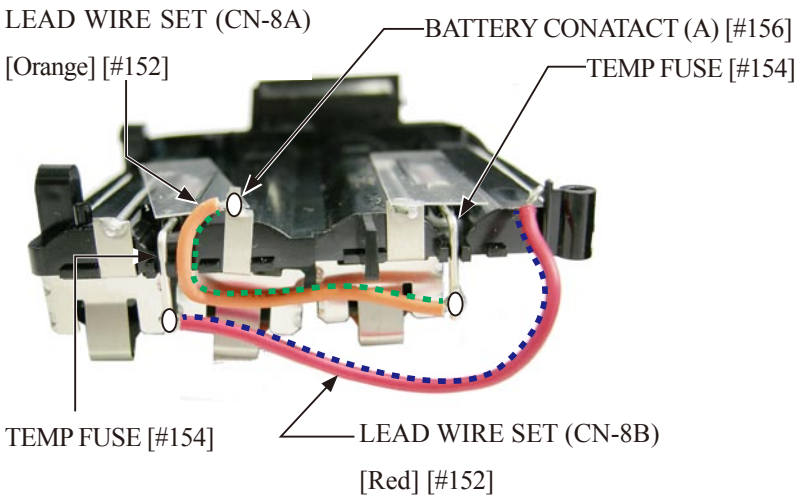
HOOK × 2



HOOK × 2

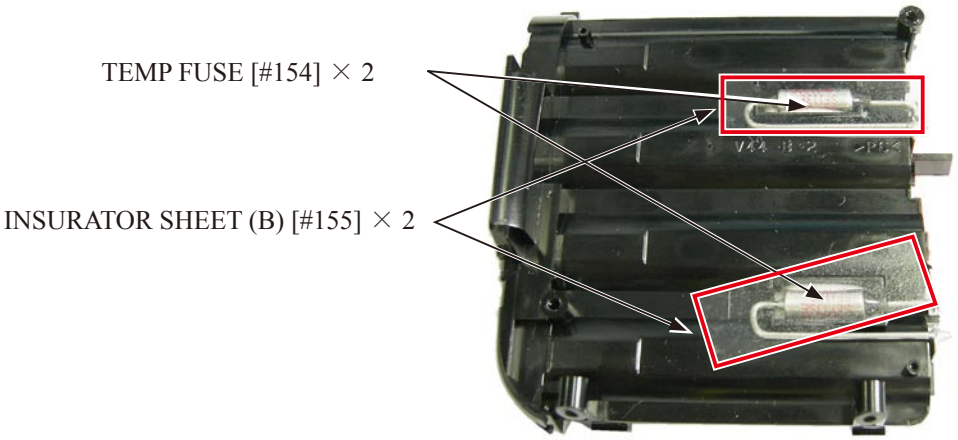
・Unsolder the lead wire set (CN-8B) [Red] [#152] and temp fuse [#154]

・Remove the solders of battery contact (A) [#156] and temp fuse [#154], which are connected by the lead wire set (CN-8B) [Orange][#152].

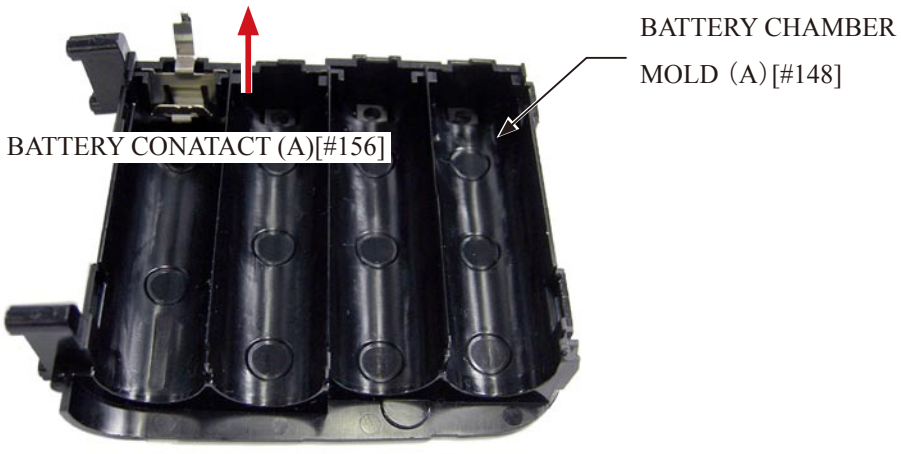


・Remove the insulator sheet (B) [#155] at two places.

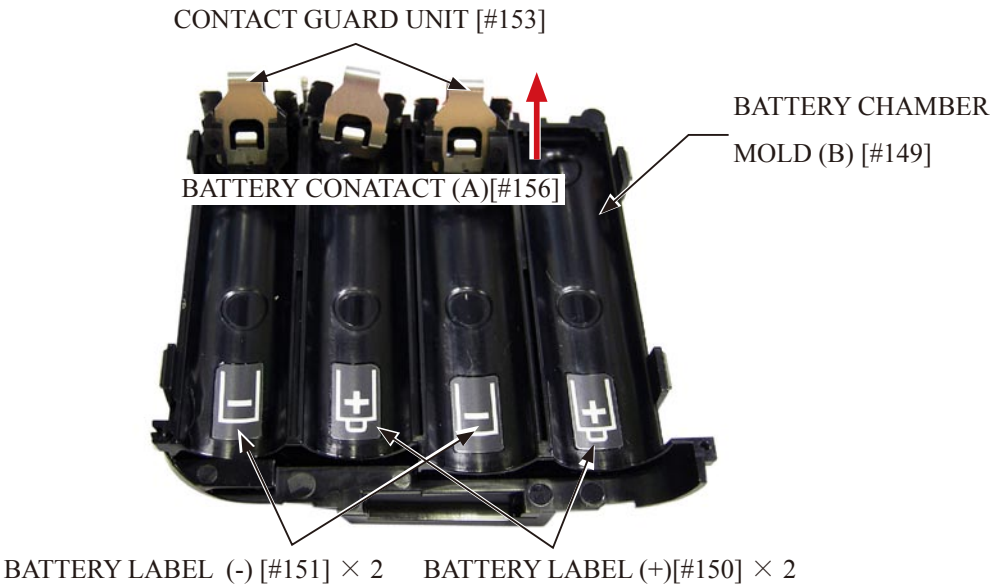
・Remove the temp fuse [#154] at two places.



・Remove the battery contact (A) [#156] from the battery chamber mold (A) [#148].



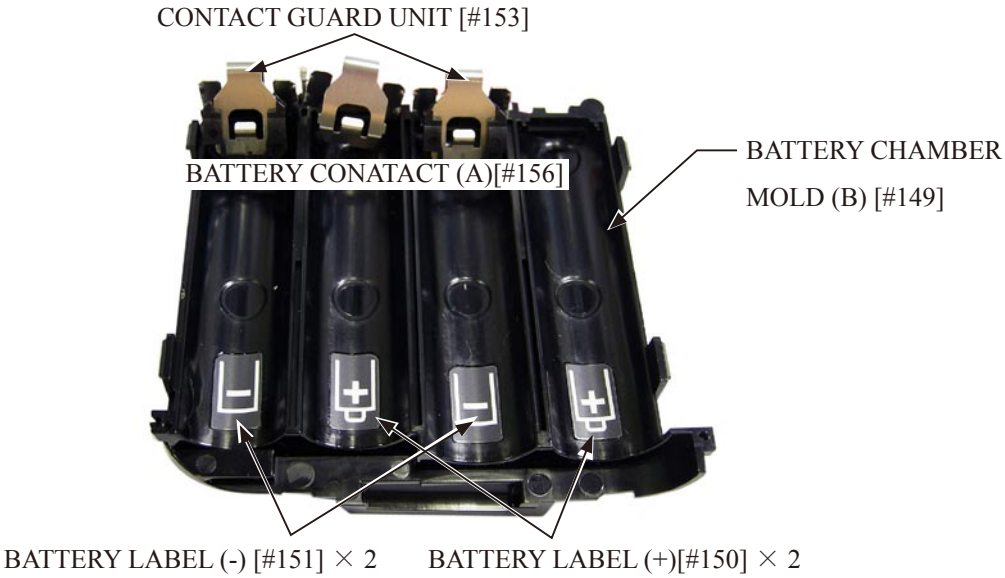
・Peel off the two battery labels (-) [#151] from the battery chamber mold (B) [#149].
・Peel off the two battery labels (+)[#150].
・Remove the battery contact (A)[#156].
・Remove the two contact guard units [#153].



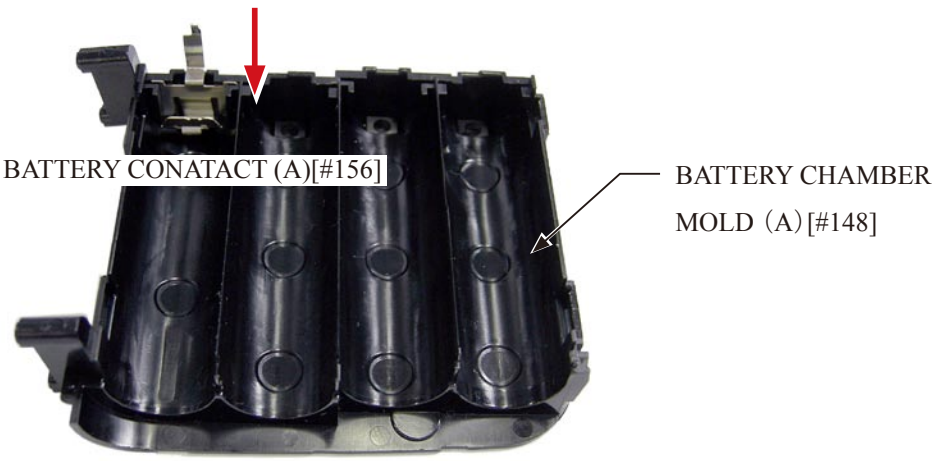
ASSEMBLY

BATTERY CHAMBER MOLD (A) / (B)

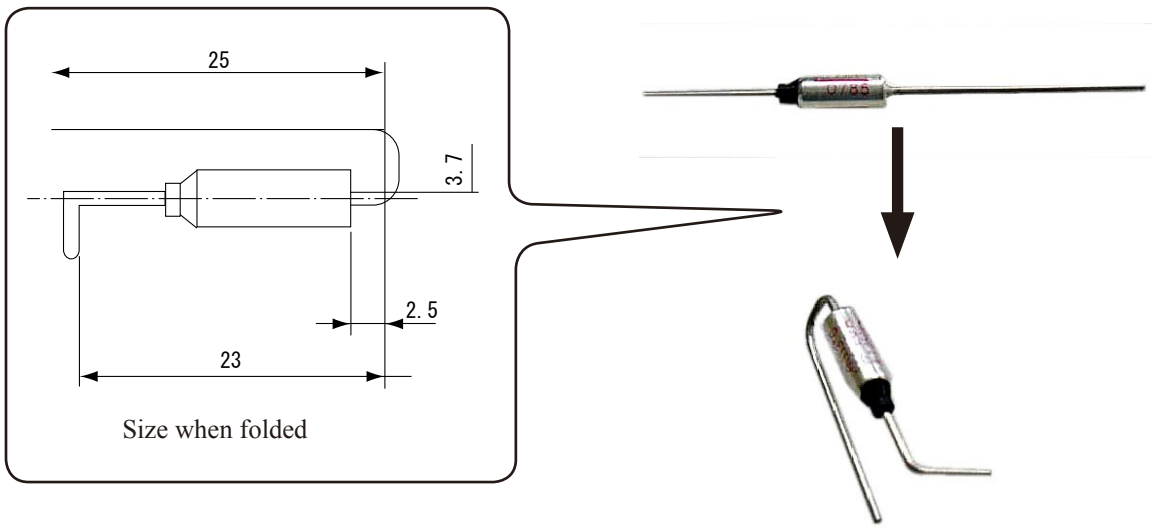
- Put the two contact guard units [#153] on the battery chamber mold（B）[#149].
- Set the battery contact (A) [#156].
- Adhere the two battery label (+) [#150].
- Adhere the two battery label (-) [#151].



- Put the battery contact (A) [#156] on the battery chamber mold (A) [#148].

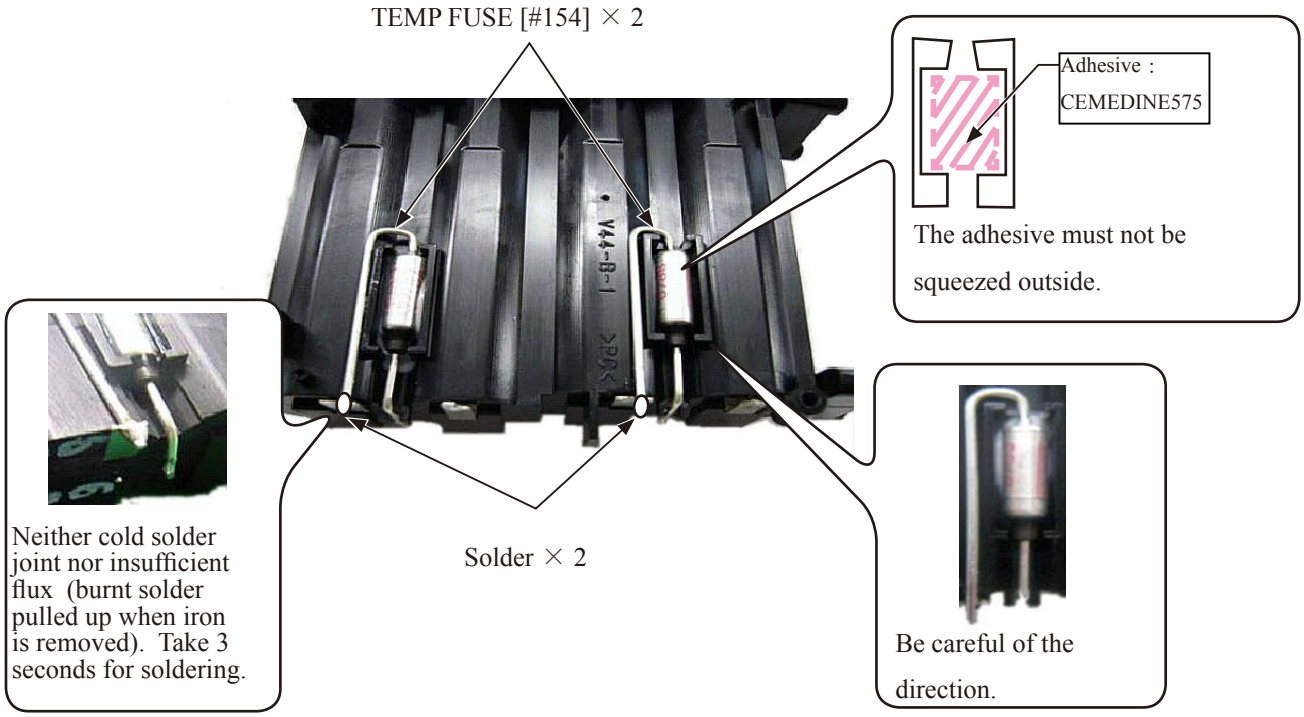


・Fold the leg of the two temperature fuses [#154] as below.

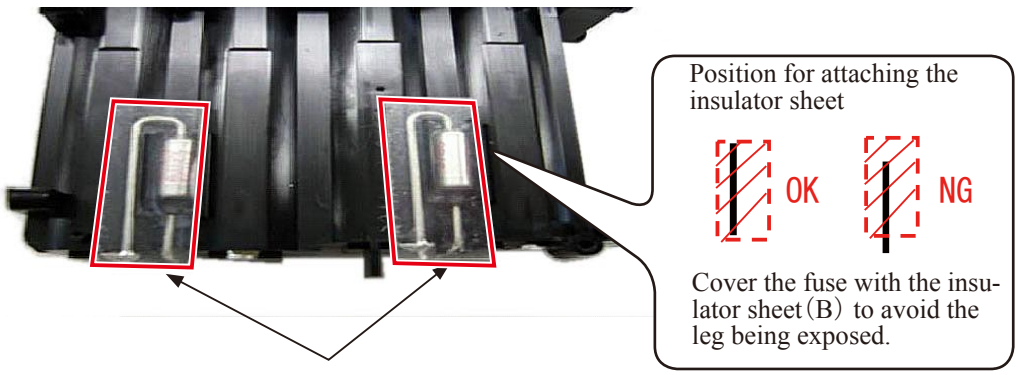


・Apply the adhesive to the bottom of the temperature fuses [#154], and adhere them at two places.

・Solder the leg of the temperature fuse [#154] at two places.

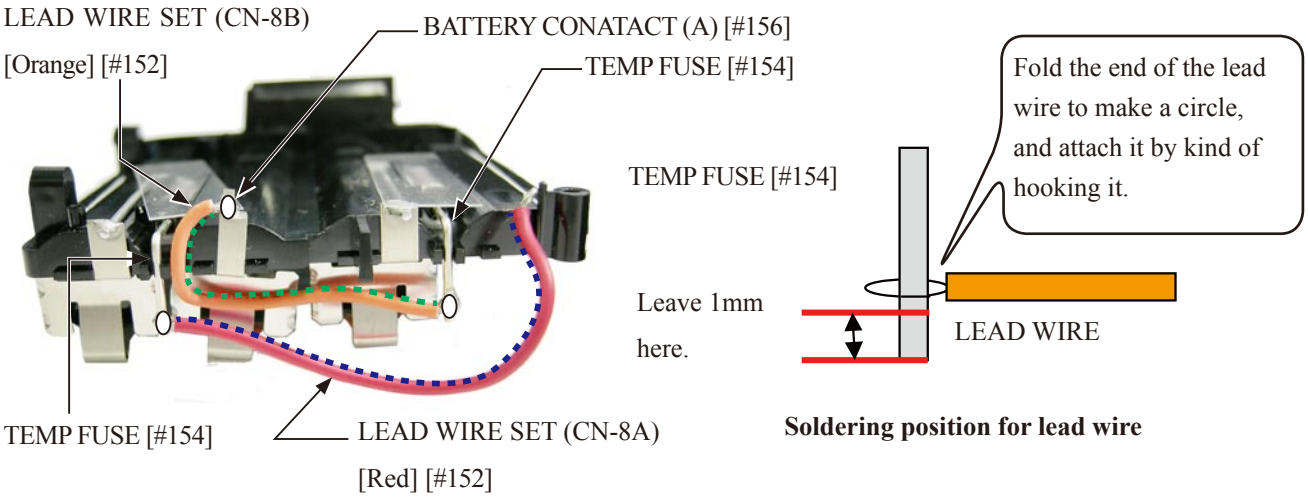


・Adhere the insulator sheet (B) [#155] at two places.



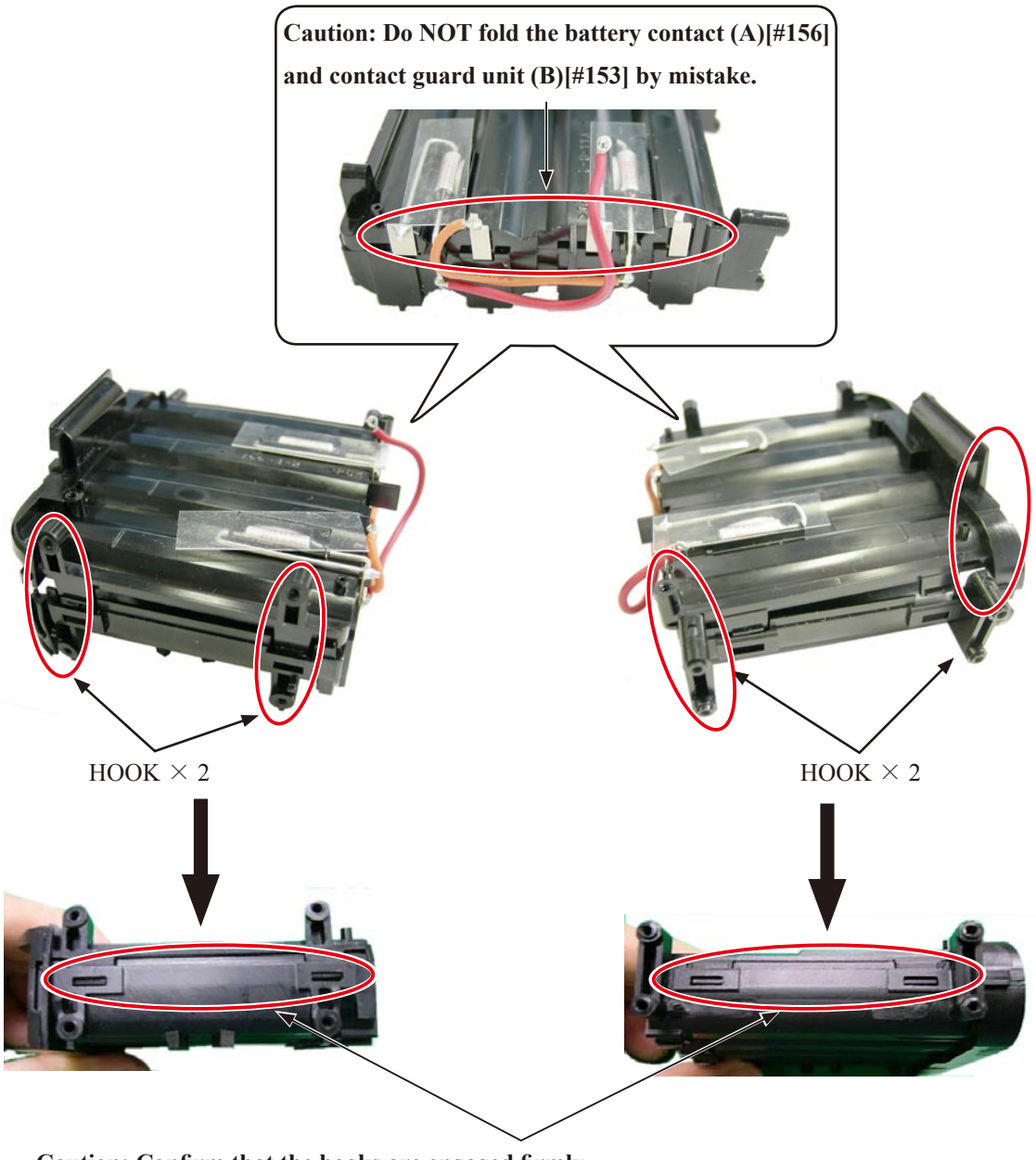
・Connect the lead wire set（CN-8B）[Orange][#152] to the battery contact（A）[#156] and temperature fuse [#154], and solder the joints.

・Soler the lead wire set（CN-8A）[Red][#152] to the temperature fuse [#154].



Soldering position for lead wire

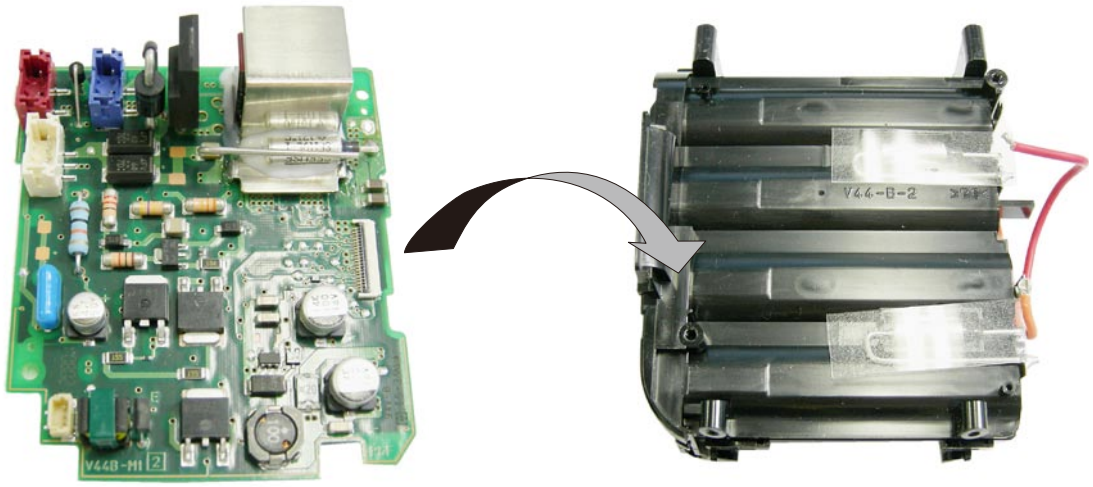
・Engage the four hooks, and joint the battery chamber mold（A）[#148] and（B）[#149].



Caution: Confirm that the hooks are engaged firmly.

PRINTED CIRCUIT (B)

・Set the printed circuit (B) [#158] to the battery chamber mold (A) [#148] / (B) [#149].

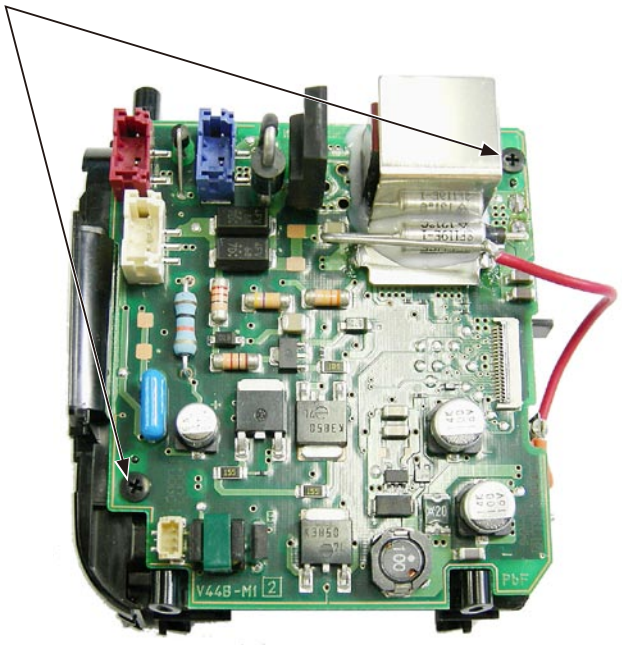


PRINTED CIRCUIT(B) [#158]

BATTERY CHAMBER MOLD (A) [#148]/
BATTERY CHAMBER MOLD (B) [#149]

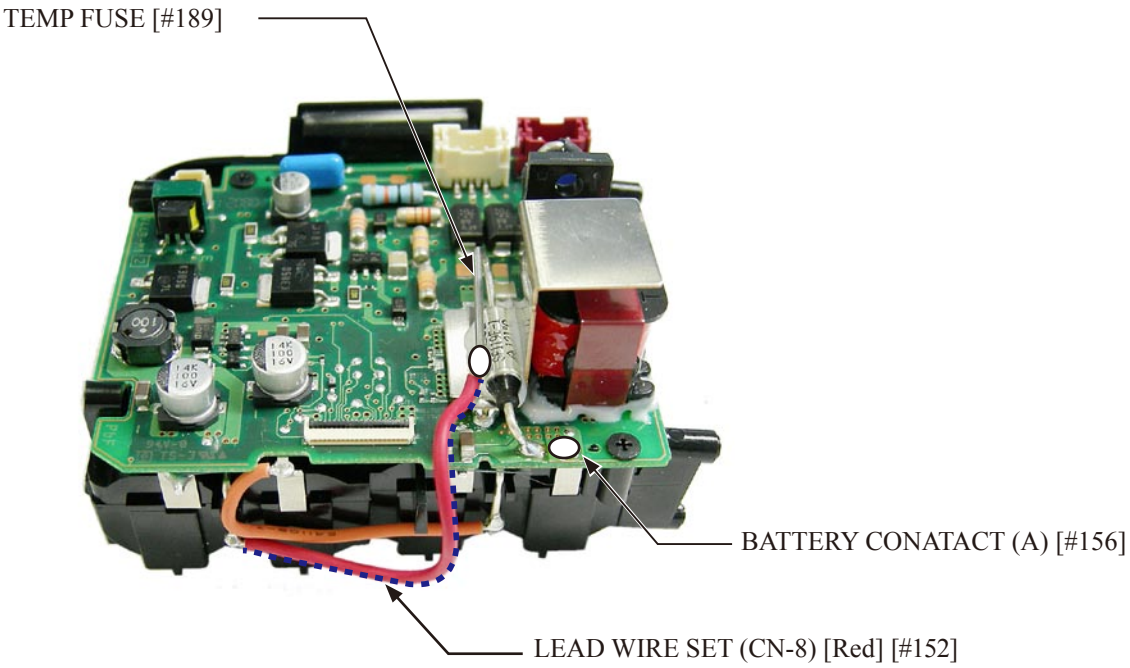
・Tighten the two screws [#005].

SCREW [#005] × 2



・Solder the BATTERY CONATACT (A) [#156].

・Solder the lead wire set（CN-8A）[Red][#152] to the temperature fuse [#189].



COVER (E)

・Set the bounce shaft [#096].

・Set the synchro-terminal [#087].

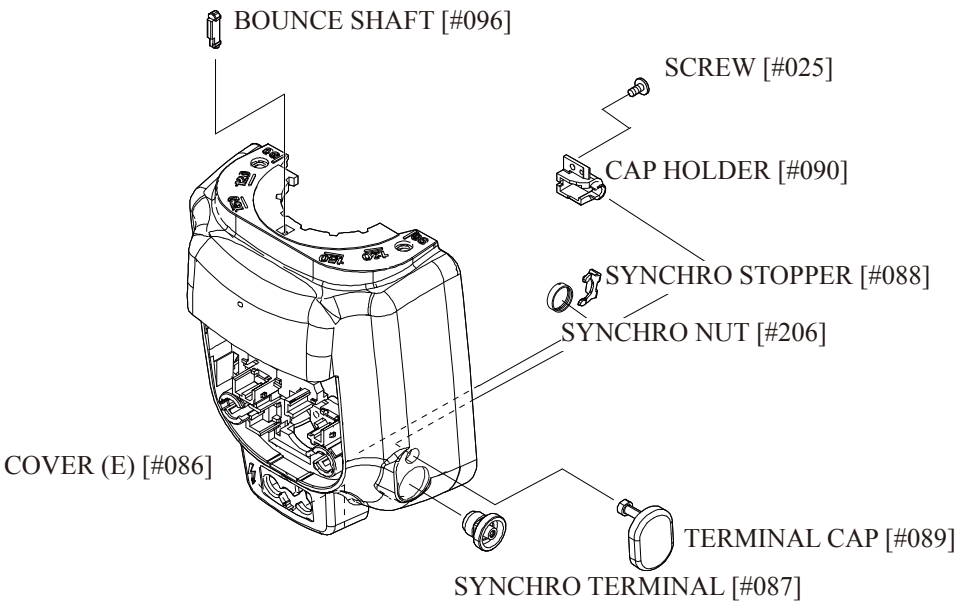
・Set the synchro-nut [#206]

・Set the synchro-stopper [#088].

・Set the terminal cap [#089].

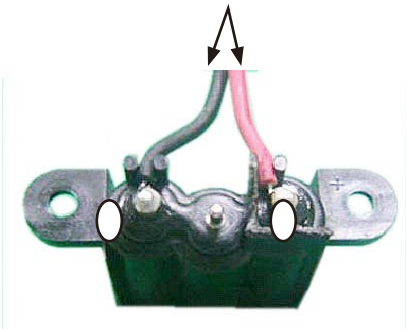
・Set the cap holder [#090].

・Tighten the screw [#025].



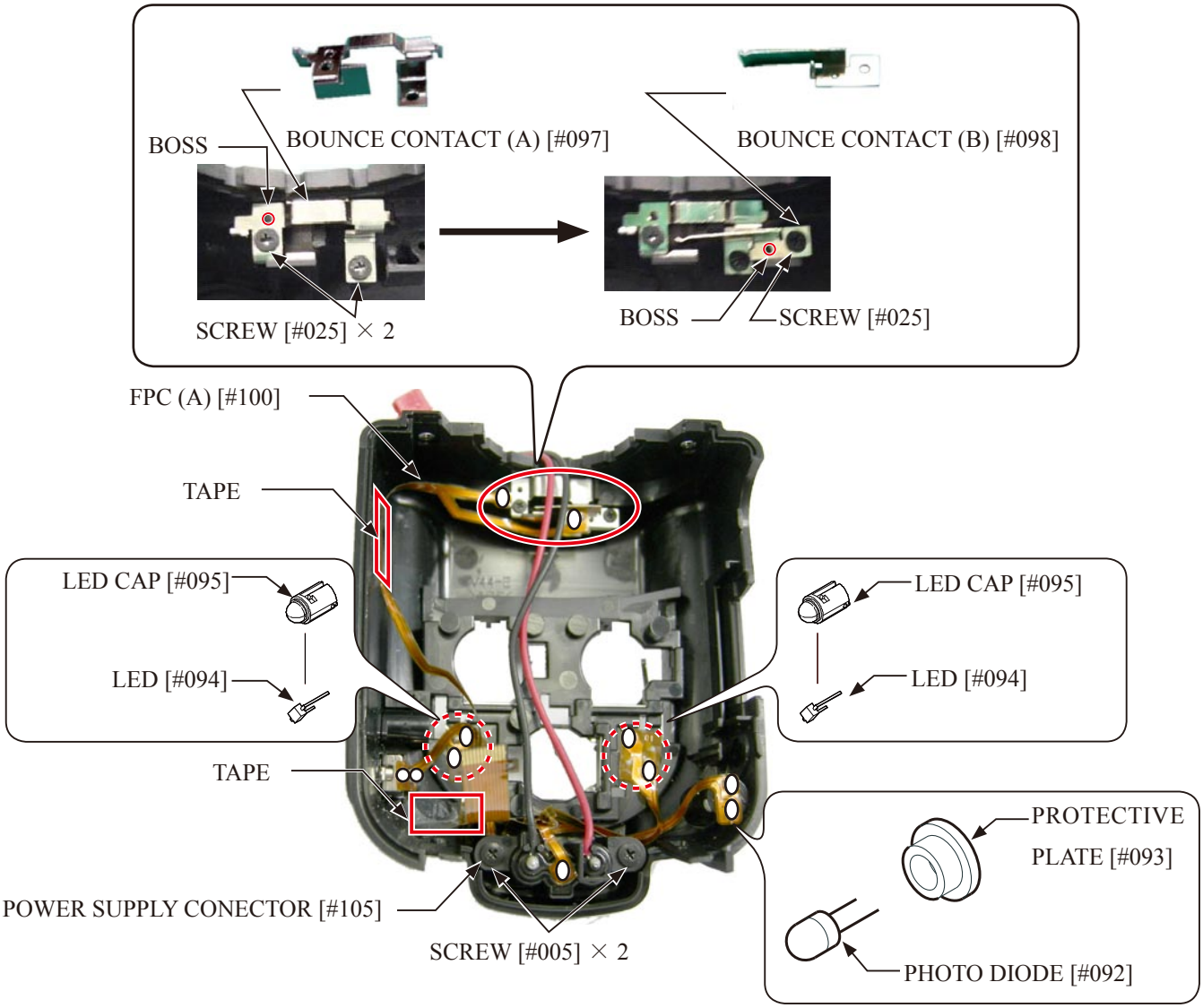
・Solder the lead wire set（CN-6）[Black/Red][#104] at two places.

LEAD WIRE SET (CN-6) [Black/Red] [#104]



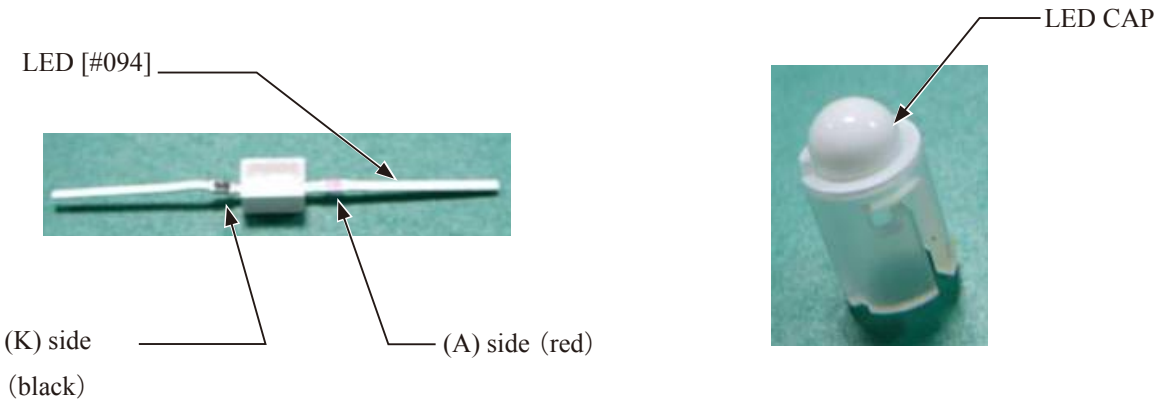
・Mount the power connector [#105], and tighten the two screws [#005].
・Mount the bounce contact（A）[#097], and tighten the two screws [#025].
・Mount the bounce contact（B）[#098], and tighten the screw [#025].
・Attach the photo diode [#092], protective plate [#093], two LEDs [#094], and two LED caps [#095] on the FPC（A）[#100] beforehand. <Fig.1>
・Set the FPC (A) [#100].
・Attach the tape at two places.
・Solder at five places.

<Fig.2>

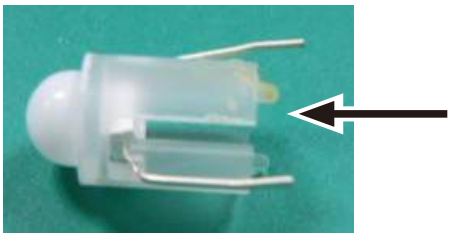


<Fig.1>

・Attach the LED cap [#095] to the LED [#094].

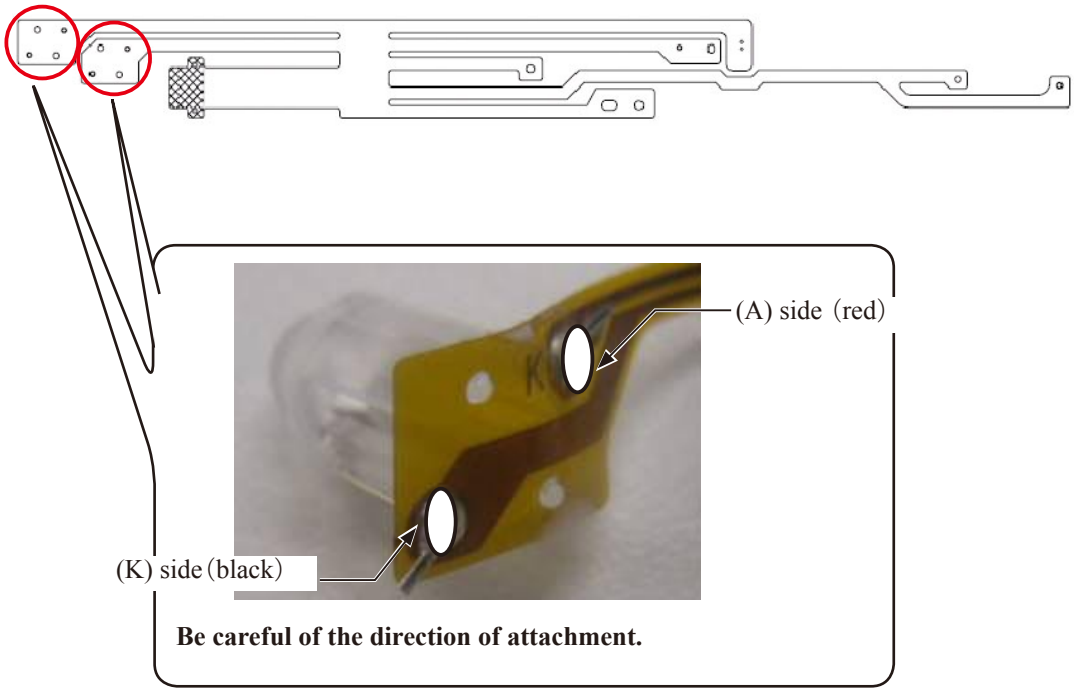


・By sliding in the direction of the arrow, bend the leg.

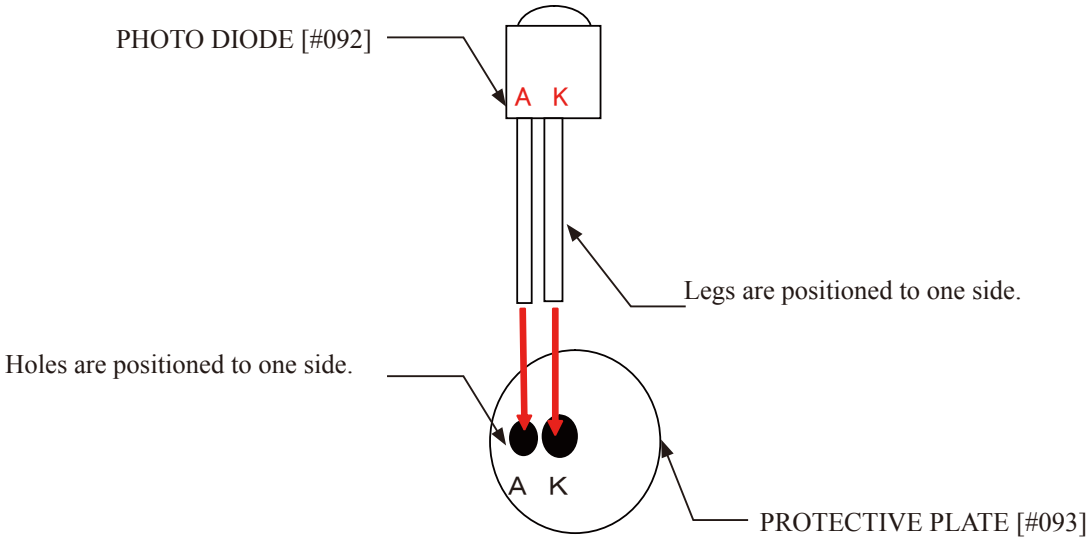


・Attach the LED [#094] to the FPC (A) [#100].

・Solder at four places.

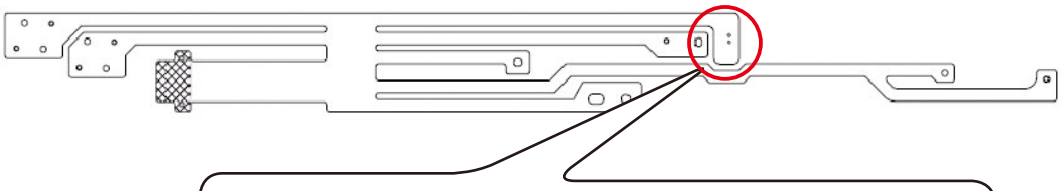


・Mount the photo diode [#092] on the protective plate [#093].

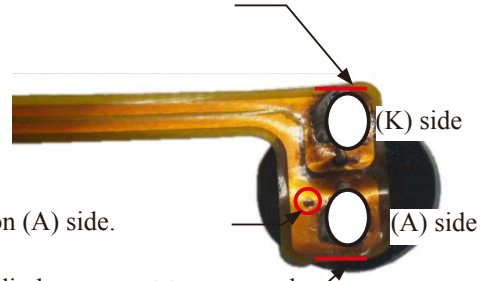


・Set the photo diode [#092] to the FPC (A) [#100].

・Solder at two places.



Cut the leg of the photo diode so as not to squeezed out from the FPC.



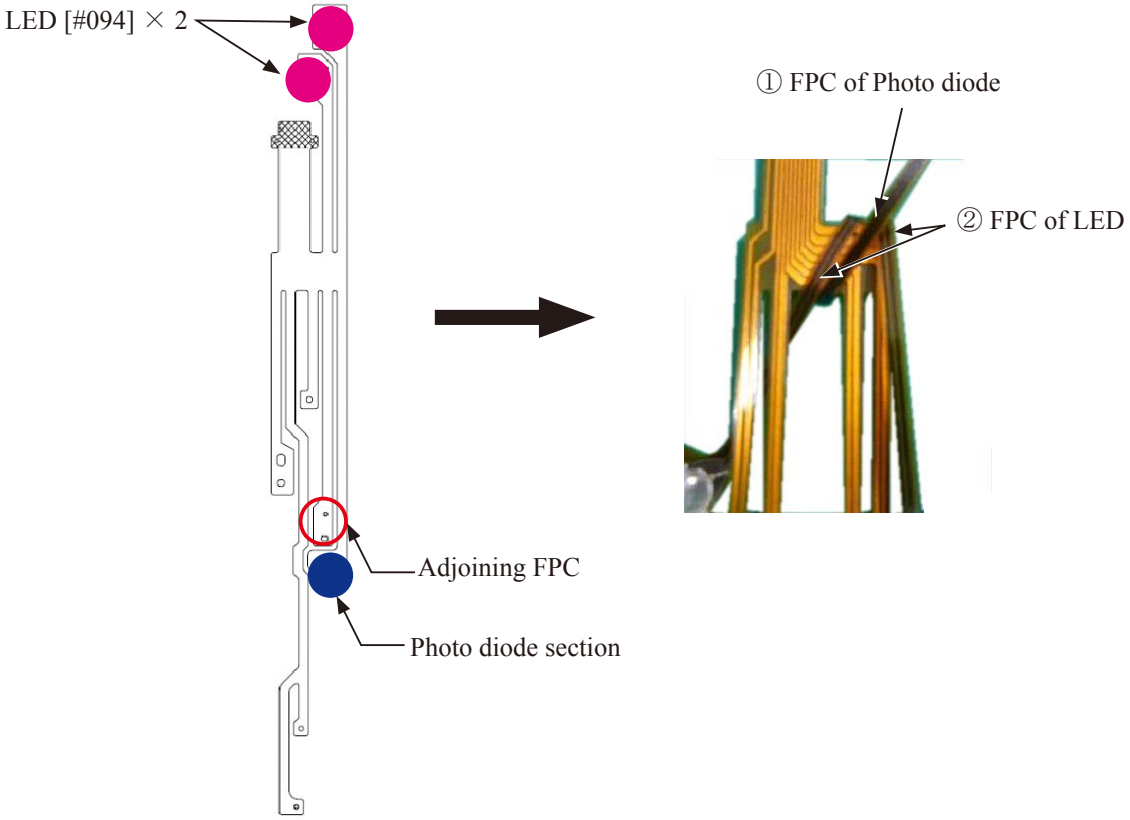
Cut the leg of the photo diode so as not to squeezed out from the FPC.

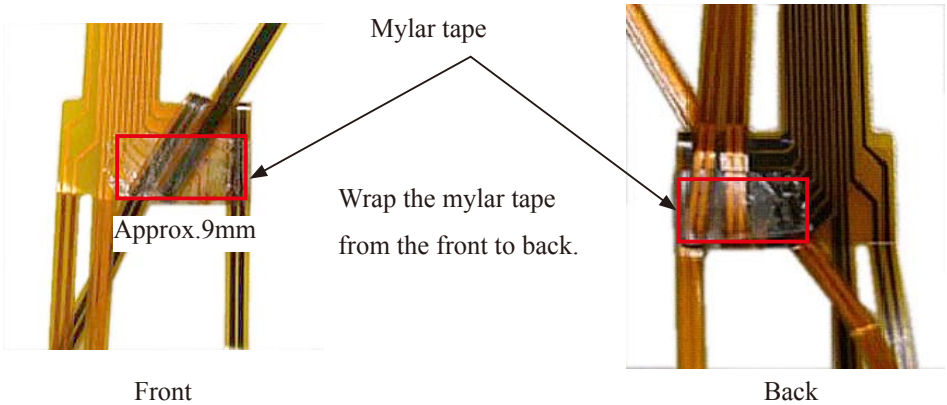
Be careful of the direction of attachment.

<Fig.2>

・Fold the FPC of the Photo diode at an angle.

・Fold the two LEDs [#094]..

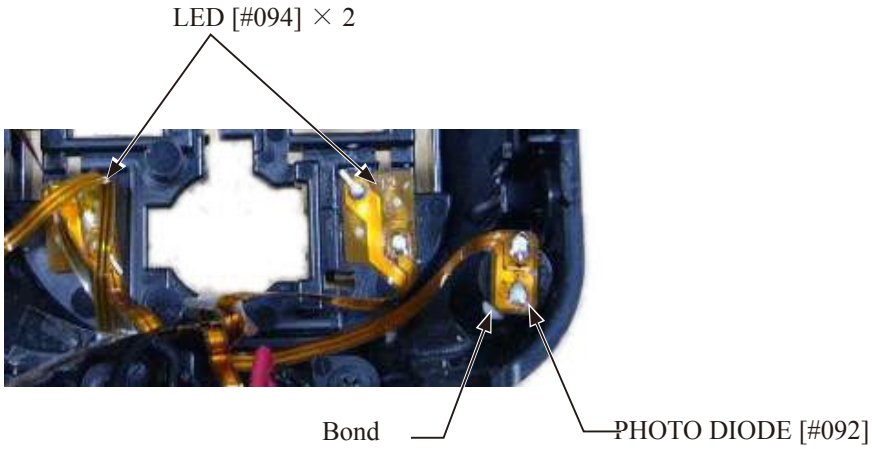




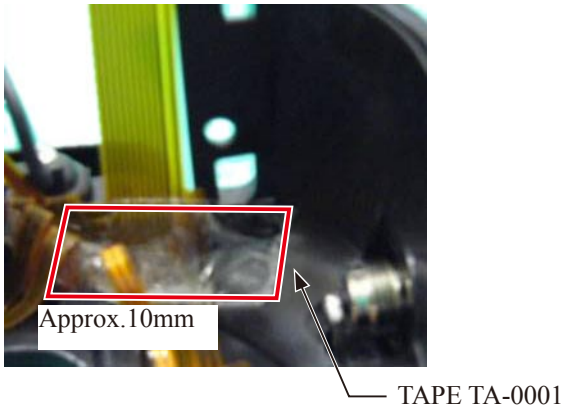
・Press the LED [#094] to fit with the claws.

・Mount the photo diode [#092].

・Fix the photo diode [#092] with bond.

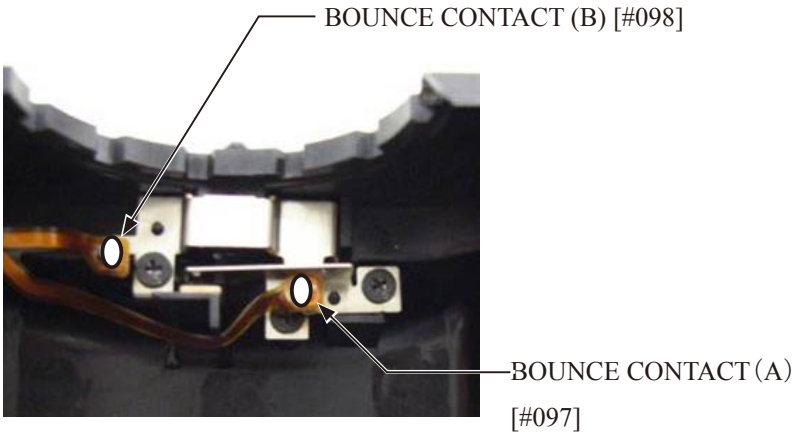


・Adhere the tape.

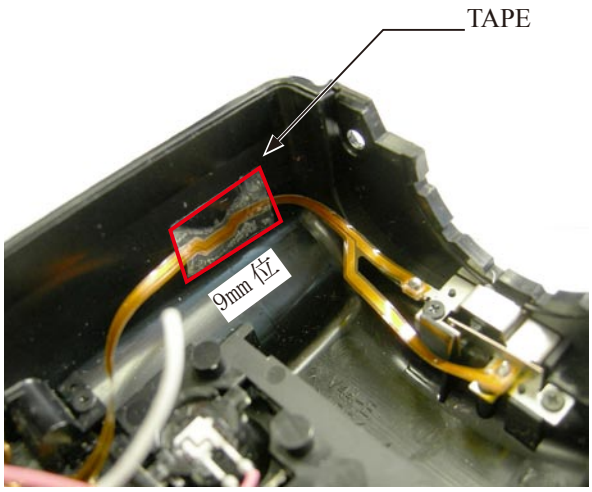


・Mount the bounce contact (B) [#098].

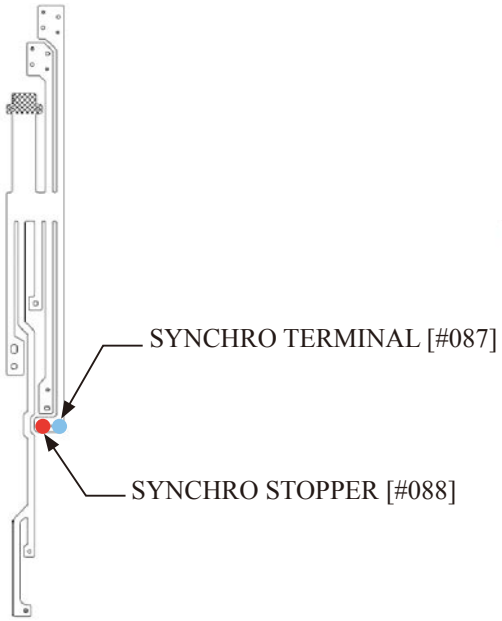
・Solder the bounce contact（A）[#097].

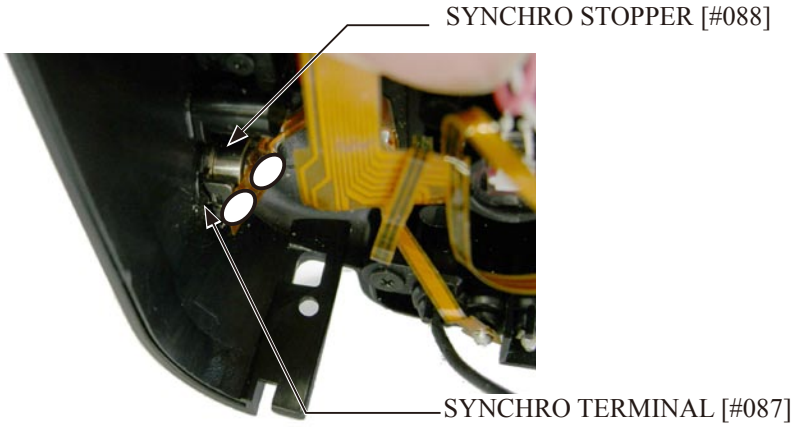


・Adhere the tape.

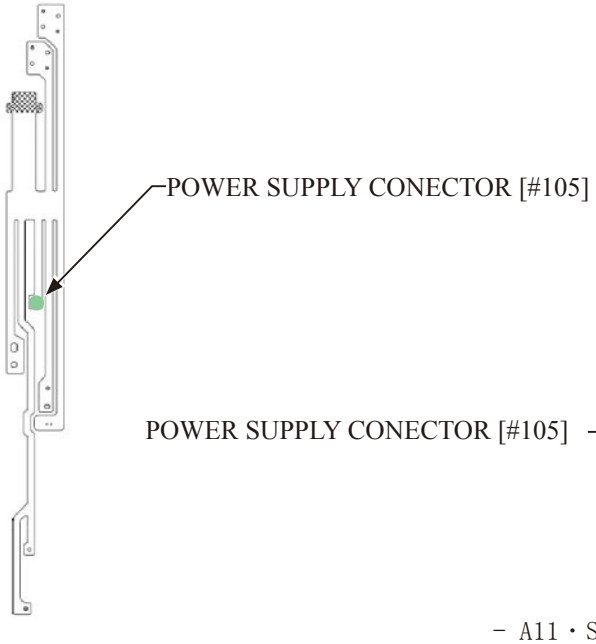


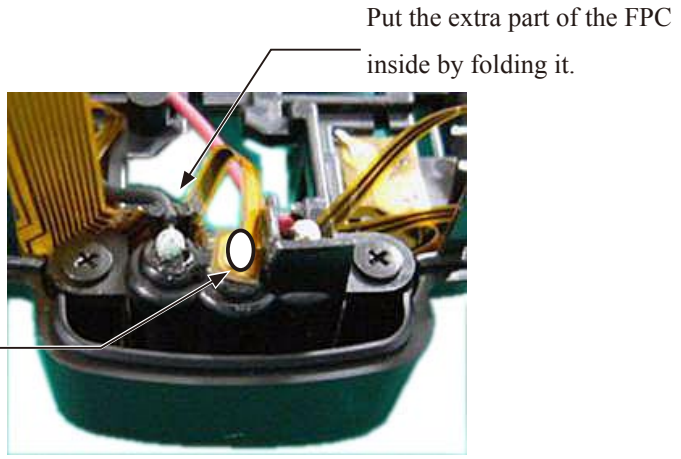
・Solder the shychro-terminal [#087] and synchro-stopper [#088].



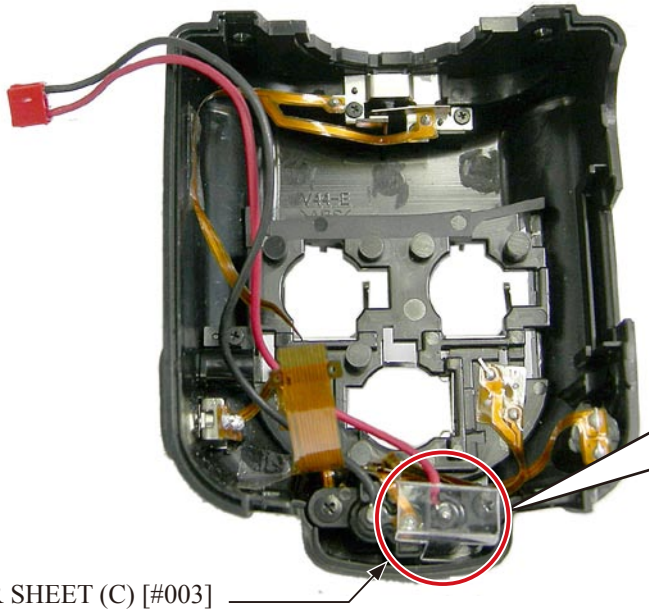


Solder the FPC on the power supply connector [#105].

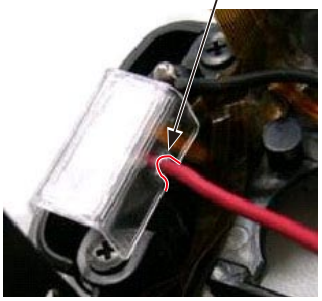




・Attach the insulator sheet (C) [#003]

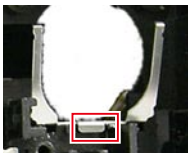


INSURATOR SHEET (C) [#003]



Fit the red lead wire into the cutout of the insulator sheet.

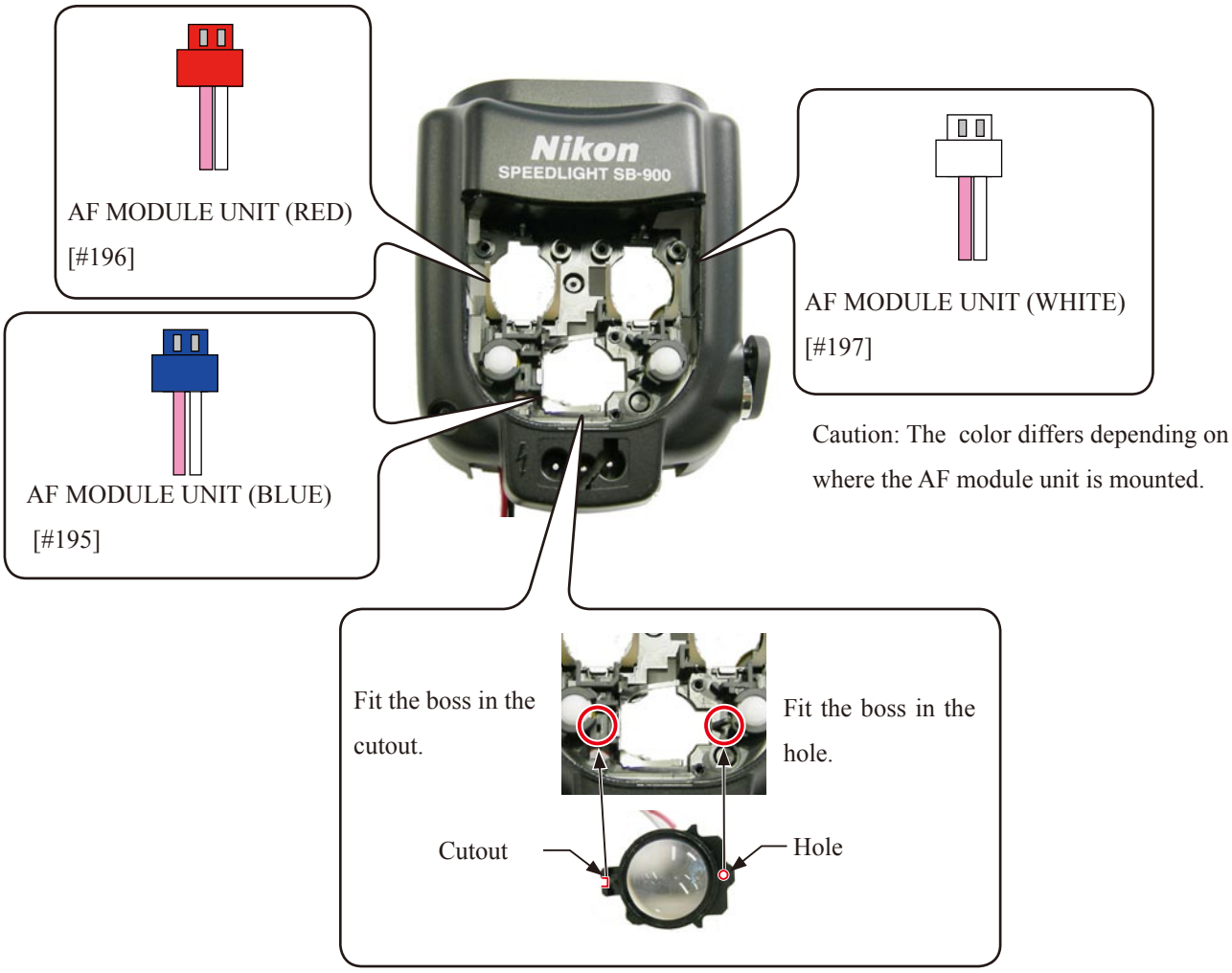
・Attach the spring [#108] at three places.



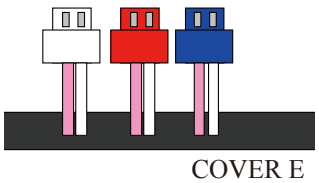
SPRING [#108]
Attach the spring by engaging the hooks.

Be careful of mounting, because only this one is sideways.

・Mount the AF module unit (blue wire) [#195], AF module unit（red wire）[#196], and AF module unit（white wire）[#197] by fitting with each two bosses.

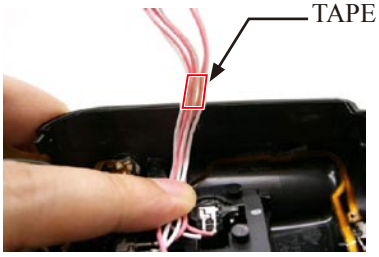


・Wrap up the lead wires of the AF module unit（blue wire）[#195], AF module unit（red wire）[#196], and AF module unit（white wire）[#197] with the tape as below.



COVER E

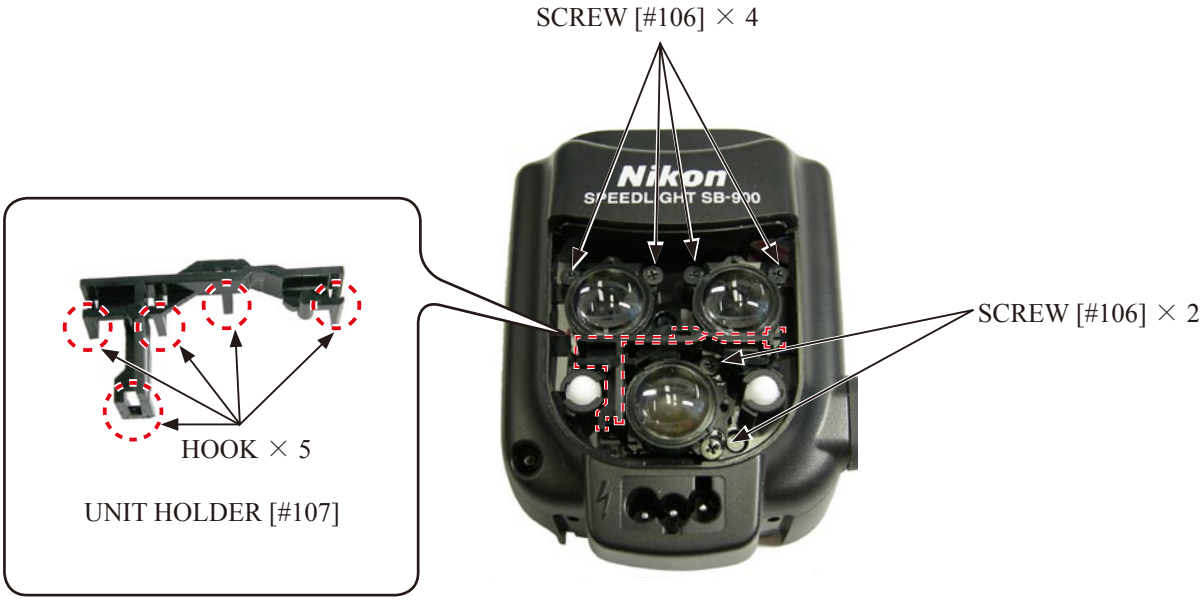
The connectors must face the above direction.



Press the lead wires against the shape of the mold, and wrap the tape at the position where the wires are stuck out.

・Tighten the screw [#106].

・Mount the unit holder [#107] by pressing the hook at five places.

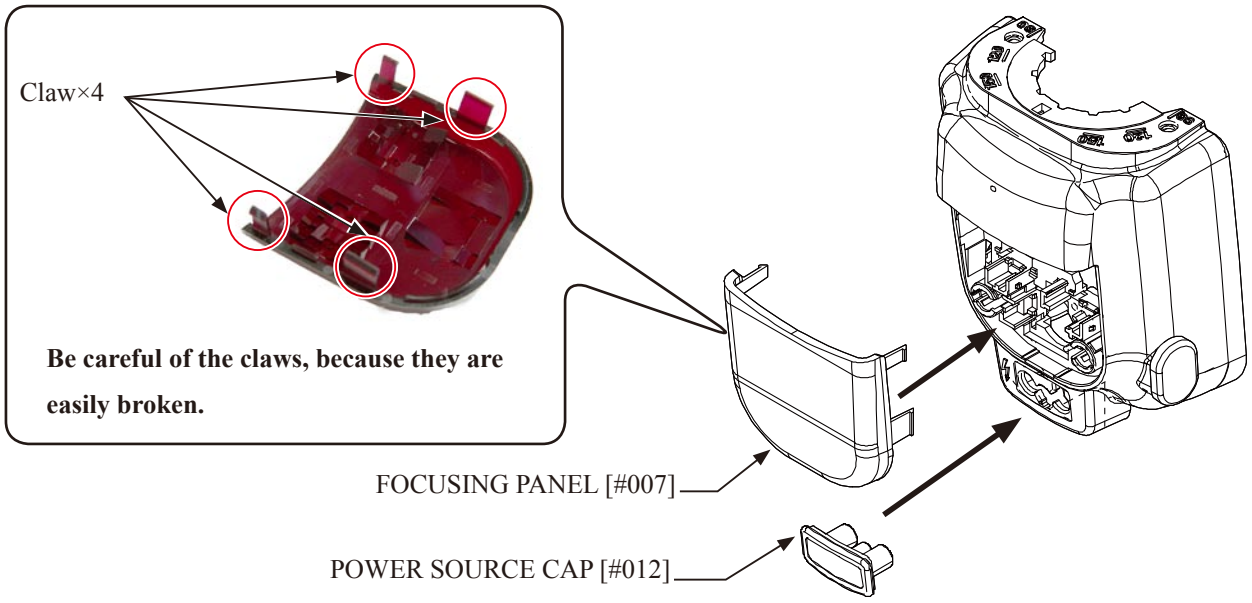


Caution: Whenever the AF module unit (blue wire) [#195], AF module unit (red wire) [#196], or AF module unit (white wire) [#197] is replaced, adjustment will be necessary.

Refer to "Adjustment" on Page A90 for the details of "Focusing adjustment".

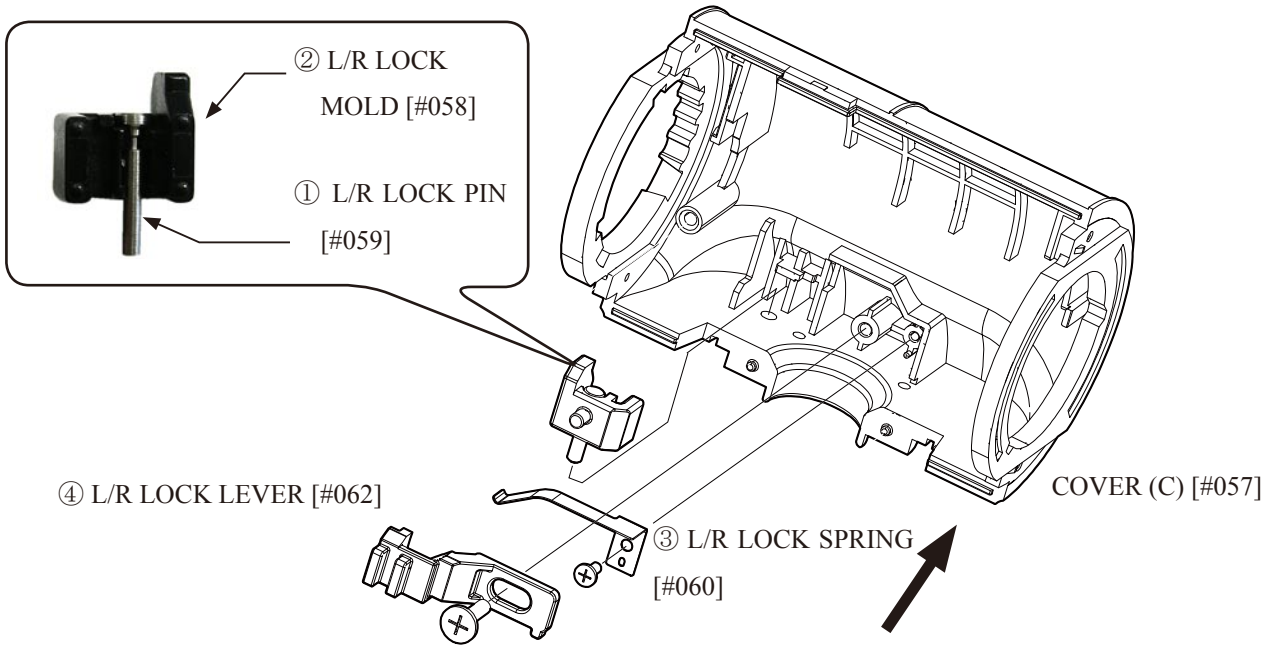
・Set the focusing panel [#007].

・Put the power source cap [#012].



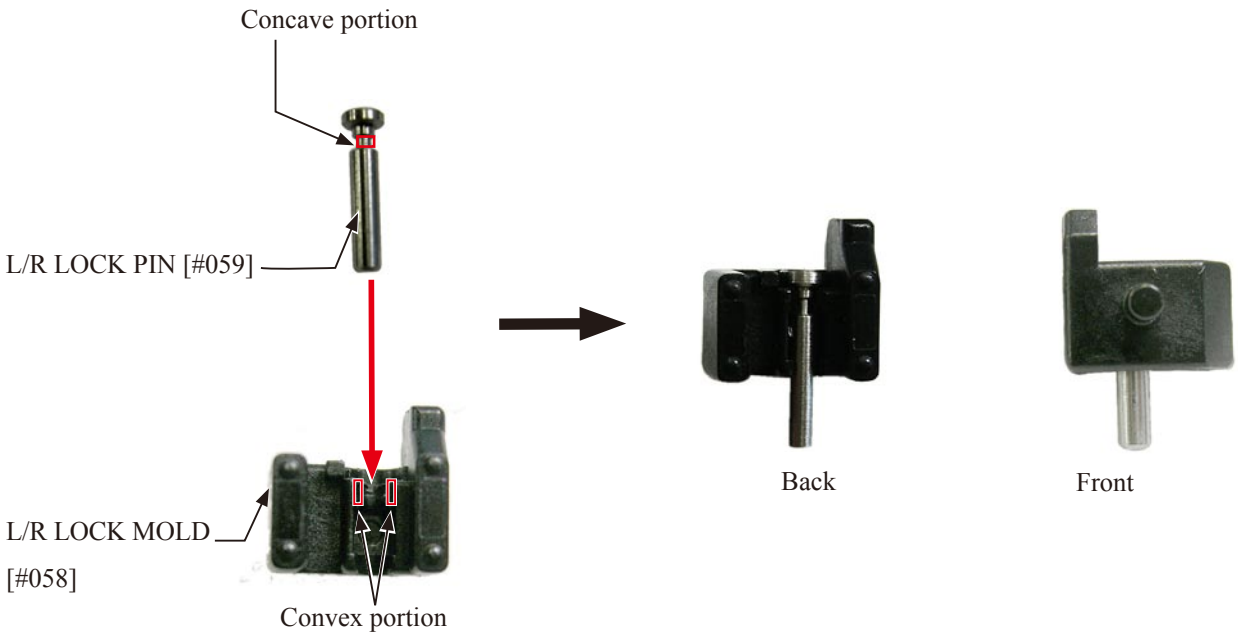
COVER (C) / (D)

- ① Put the L/R lock pin [#059] into the L/R lock mold [#058]. <Fig.1>
- ② Mount the L/R lock mold [#058]. <Fig.2>
- ③ Attach the L/R lock spring [#060], and tighten the screw [#025]. <Fig.3>
- ④ Mount the L/R lock lever [#062], and tighten the screw [#024]. <Fig.4>



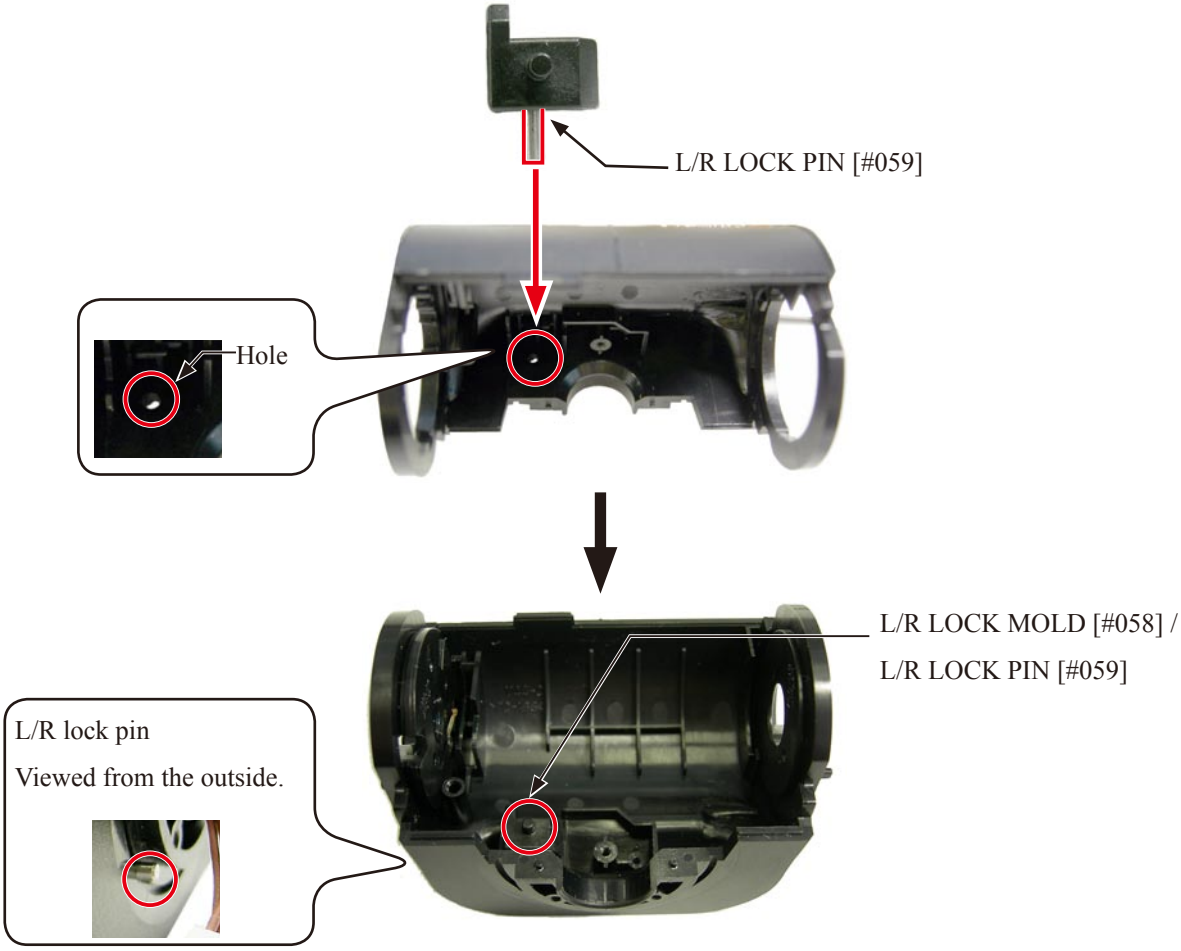
<Fig.1>

Insert the L/R lock pin [#059] into the L/R lock mold [#058] by fitting the concave portion of [#059] with the convex portion of [#058].



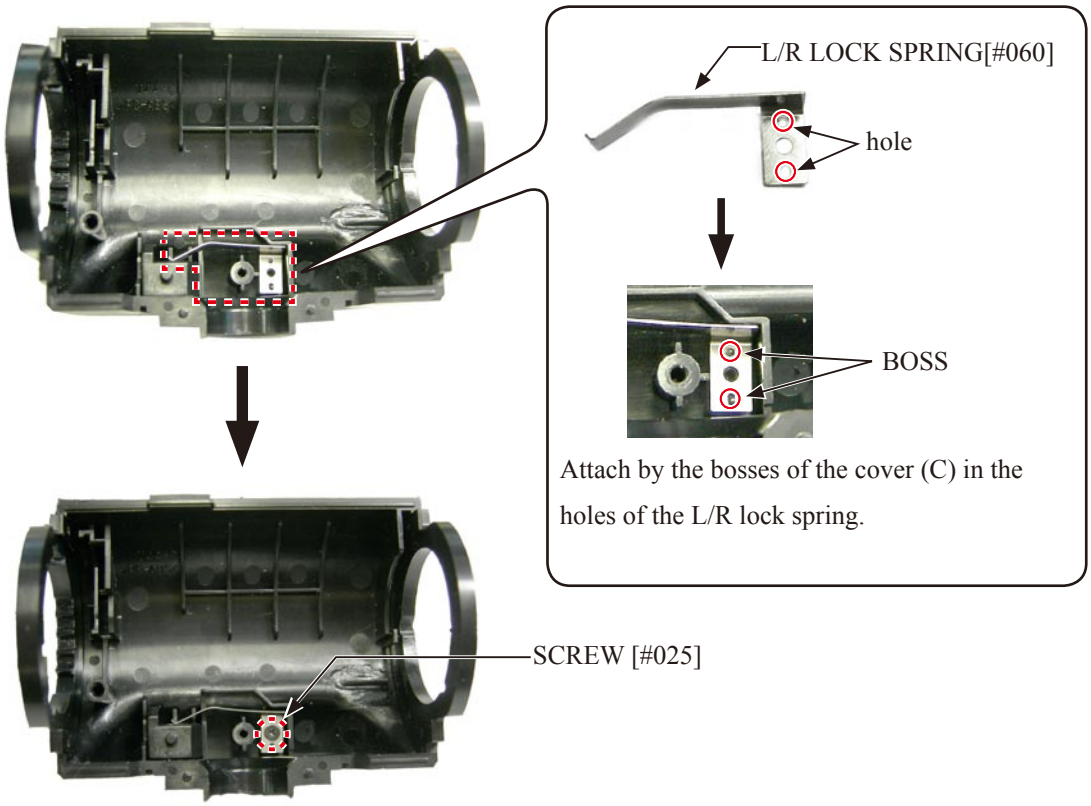
<Fig.2>

Insert the protruded part of the L/R lock pin [#059] into the hole of the cover（C)[#057].



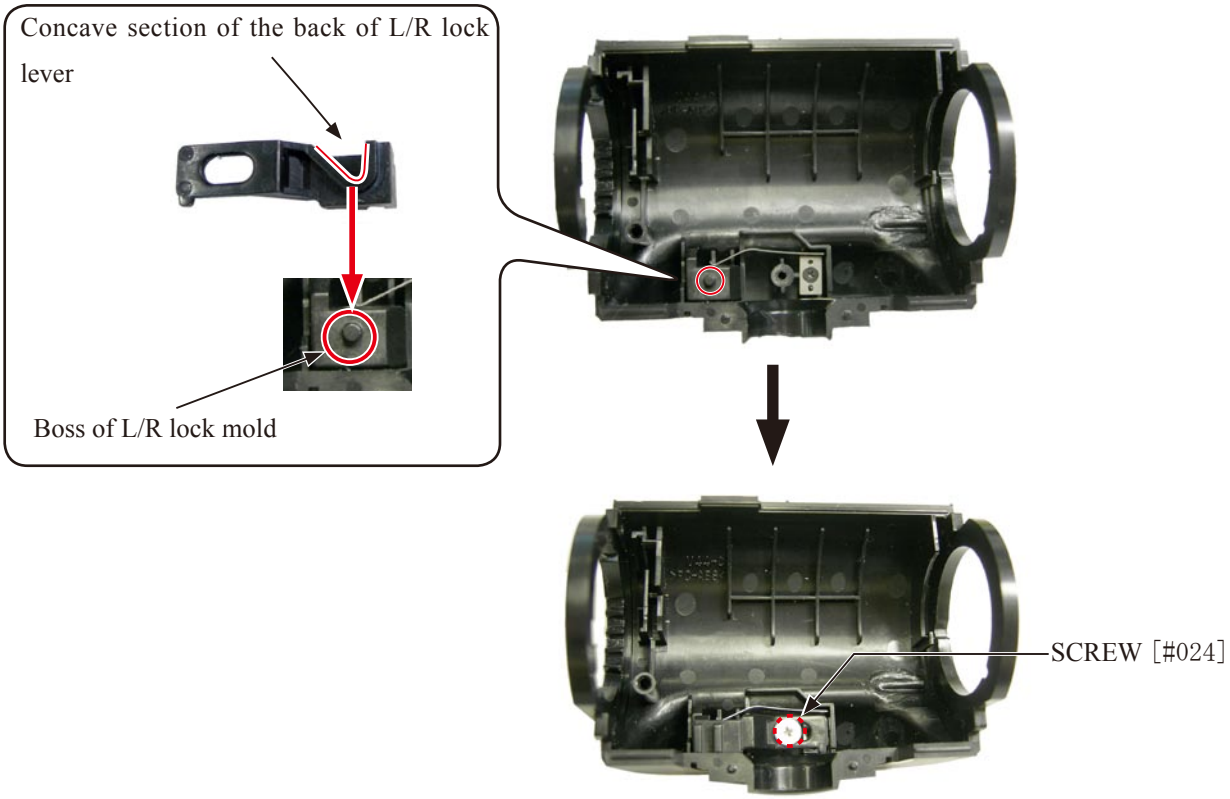
<Fig.3>

Attach the L/R lock spring [#060] to the cover（C)[#057] by fitting the bosses in the holes, and tighten the screw [#025].

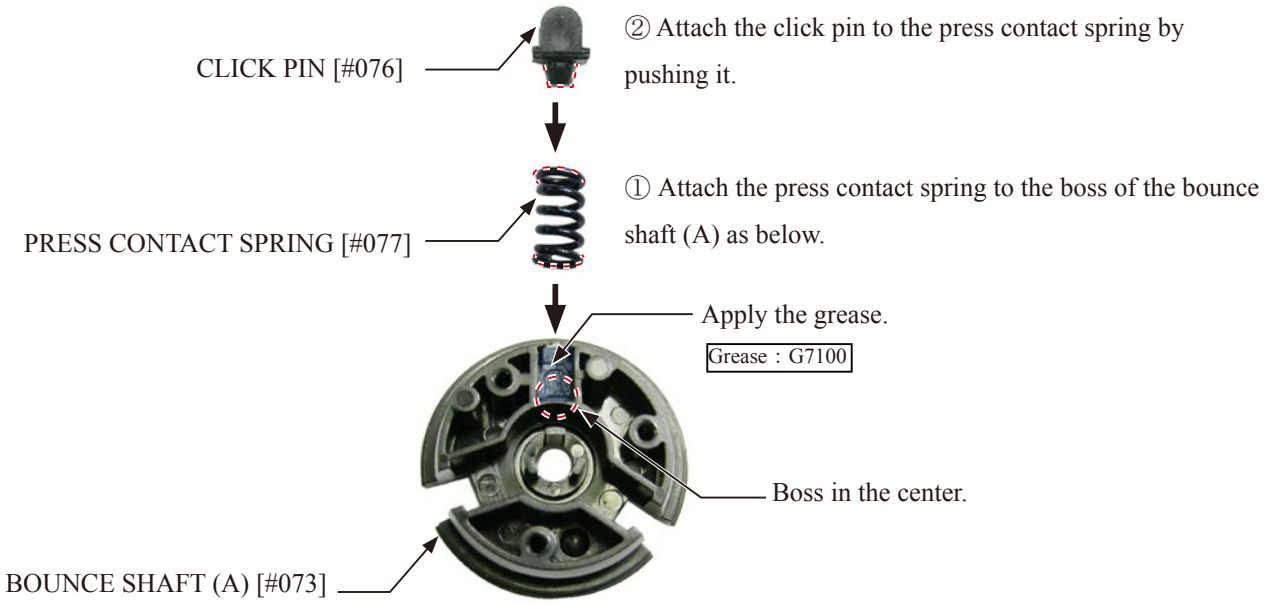


<Fig.4>

Fit the concave section of the back of the L/R lock lever [#062] with the boss of the L/R lock mold [#058], and tighten the screw [#024].

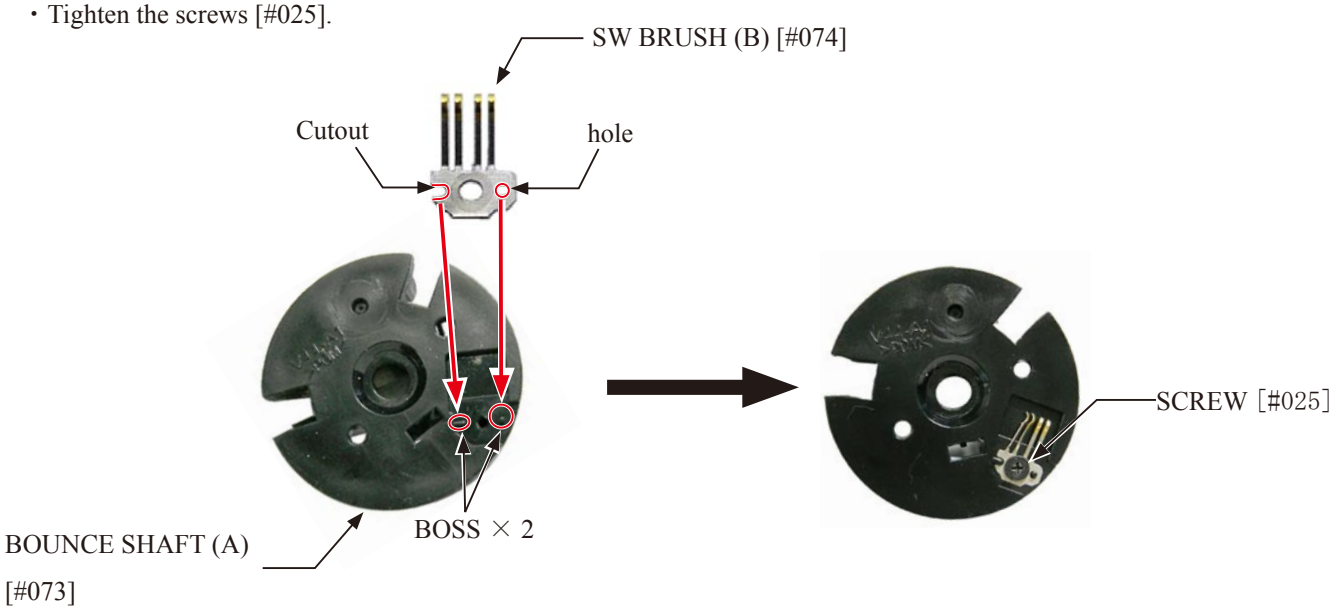


・Attach the click pin [#076] and press contact spring [#077] in the order from ① to ② to the bounce shaft (A) [#073].



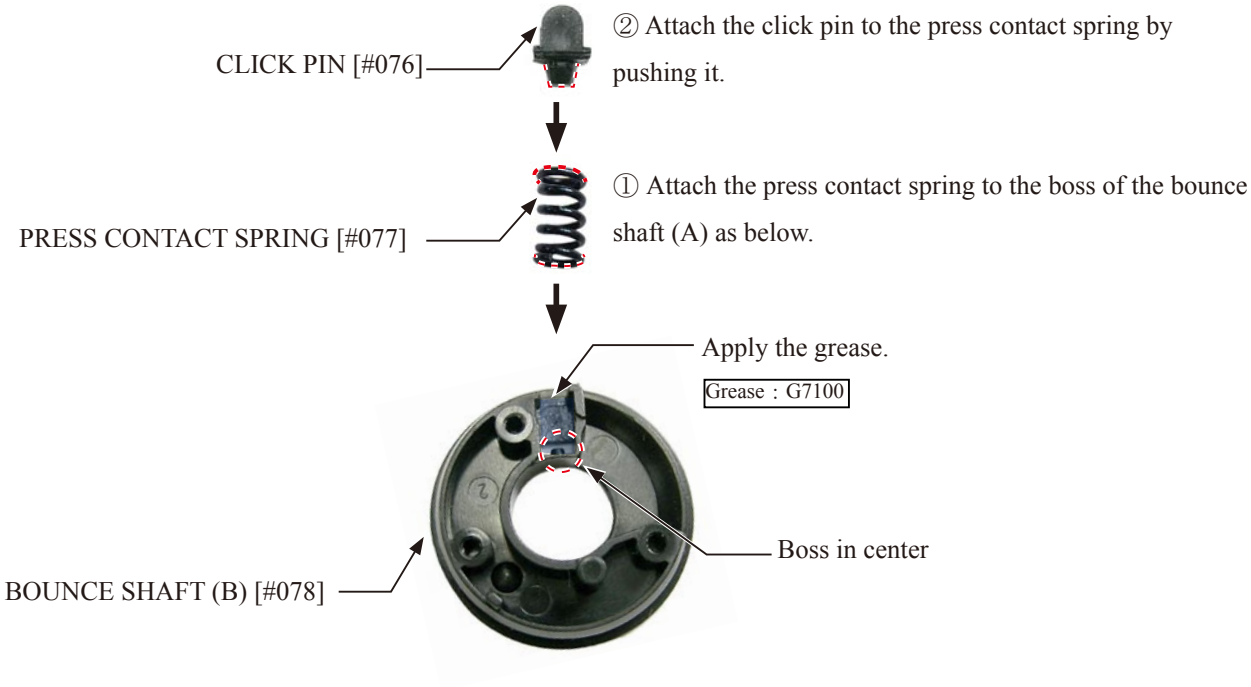
・Mount the SW brush（B）[#074] on the back of the bounce shaft（A）[#073] by fitting its two bosses with the hole and cutout of the SW brush.

・Tighten the screws [#025].



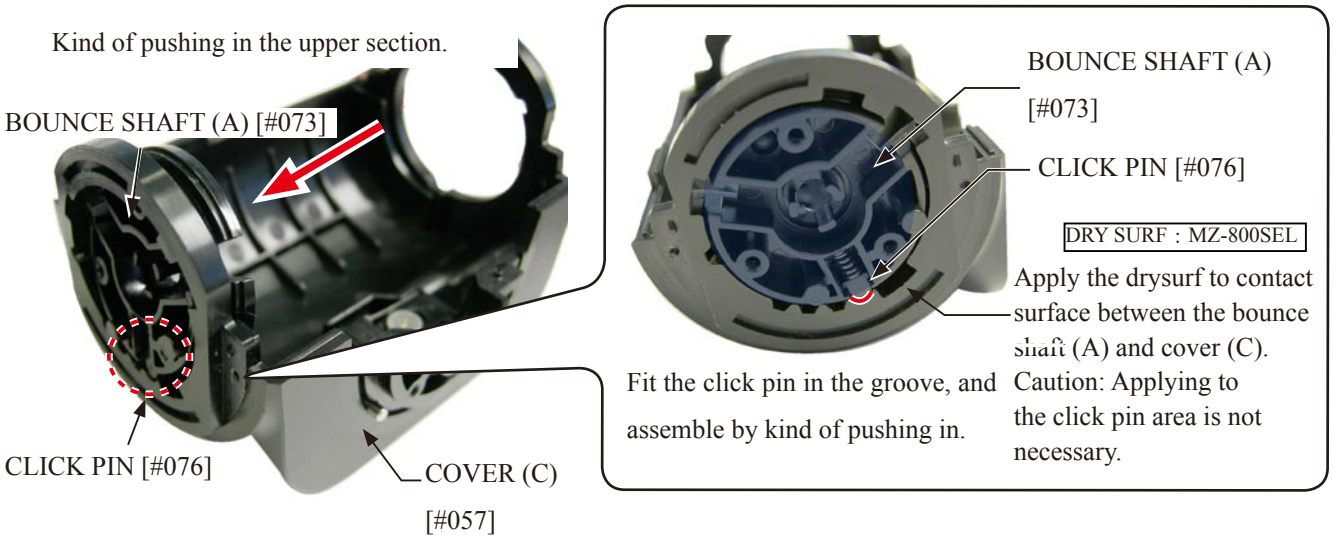
・Like the bounce shaft (A) [#073], attach the click pin [#076] and press contact spring [#077] in the order from ① to ② to the bounce shaft (B) [#078].

Handle the click pin and the press contact spring with care, because they will easily pop out during assembly.

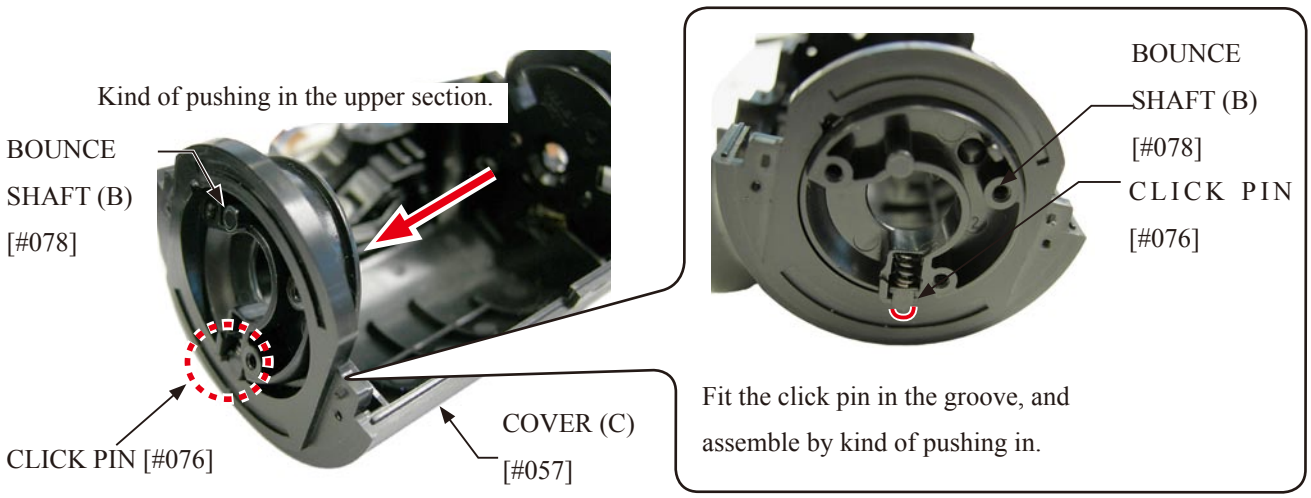


・Apply the grease to the groove of the cover（C)[#057].

・While fitting the bounce shaft（A）[#073] with the groove of the cover (C) [#057], assemble from the inside.

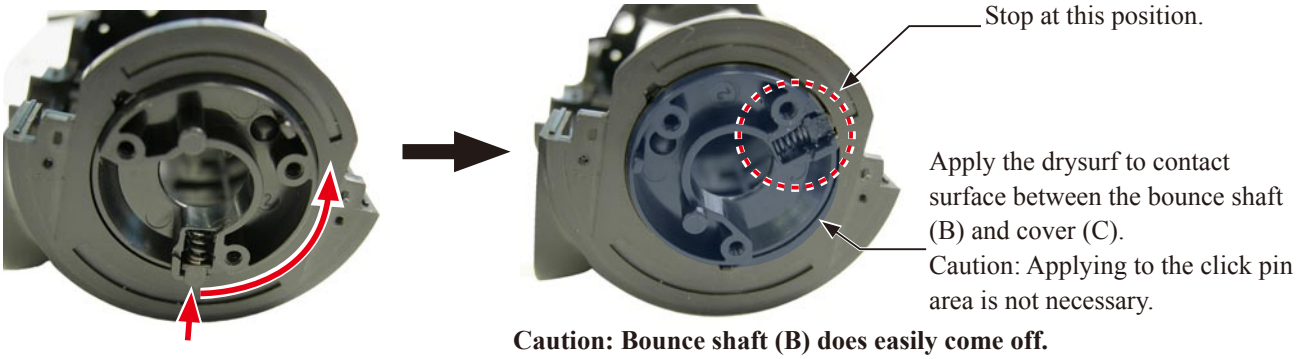


・While fitting the bounce shaft（B）[#078] with the groove of the cover (C) [#057], assemble from the inside.



・Rotate the bounce shaft（B）[#078], and move the click pin [#076] by following the arrow and stop at the below position.

Caution: Rotate carefully, because the press contact spring is rigid and hard to move, and it is easily popped out as well as the click pin.



Caution: Bounce shaft (B) does easily come off.

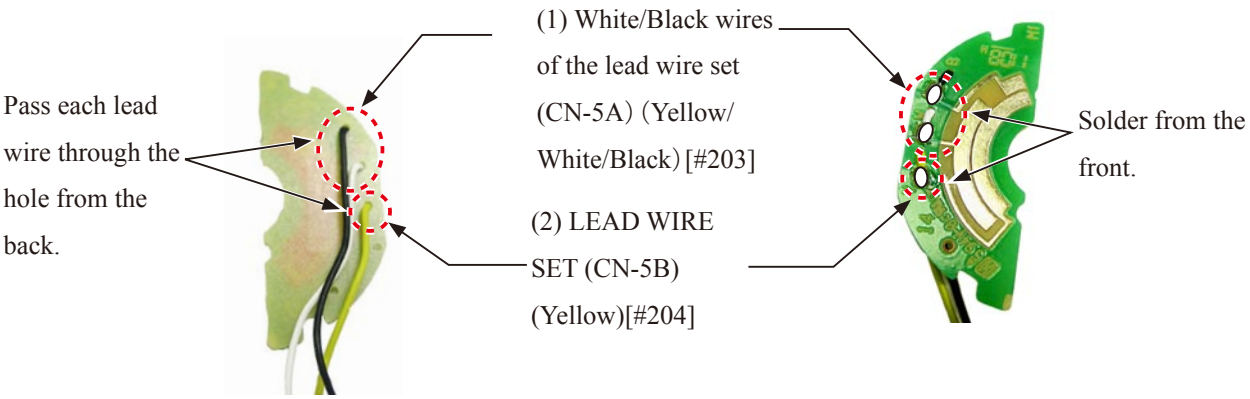
Hold the click pin with tweezers, etc, and push the press contact spring and pull it out from the groove. Then rotate the bounce shaft（B）.

・Attach (1) the white/black wires of the lead wire set (CN-5A) (Yellow/White/Black) [#203] on the printed circuit (F) [#065]. (see left picture)

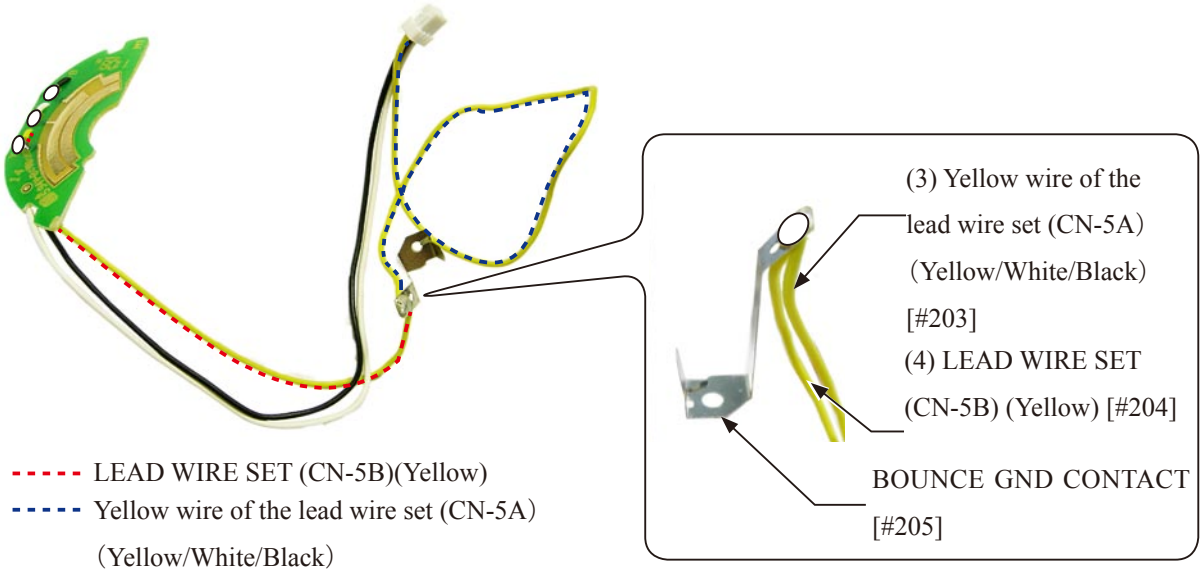
・Attach (2) the lead wire set (CN-5B) (Yellow) [#204] to the printed circuit (F) [#065]. (see left picture)

・Solder (1) the white/black wires of the lead wire set (CN-5A) (Yellow/White/Black) [#203] on the printed circuit (F)[#065]. (see right picture)

・Solder (2) the lead wire set (CN-5B) (Yellow) [#204] on the printed circuit (F) [#065]. (see right picture)

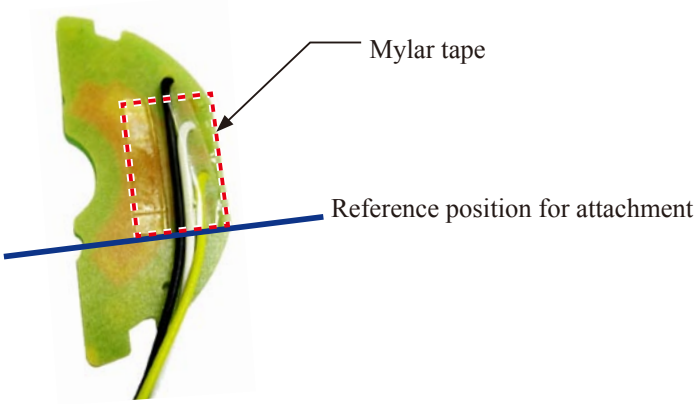


Make the solder to joint (3) the (Yellow) of the lead wire set (CN-5A) (Yellow/White/Black) [#203] of the bounce GND contact [#205] and (4) the lead wire set (CN-5B) (Yellow) [#204].



Caution: Make a distinction between the (4) lead wire set (Yellow) (CN-5B) and the (3) Yellow wire of the lead wire set (CN-5A) (Yellow/White/Black).

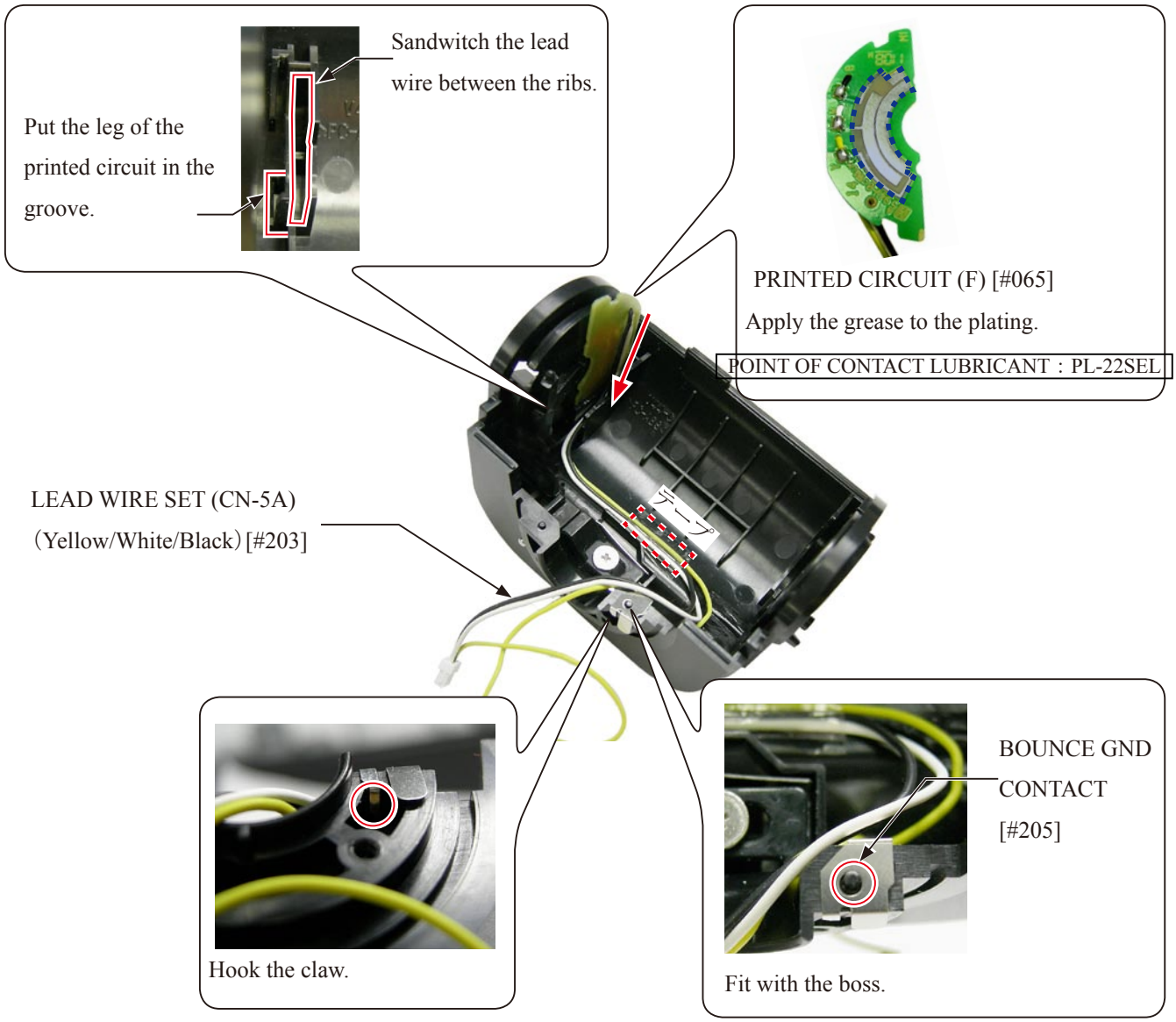
・Attach the mylar tape to the back of the printed circuit (F)[#065] as below.



・Mount the printed circuit（F)[#065] by fitting in the groove of the cover（C)[#057].

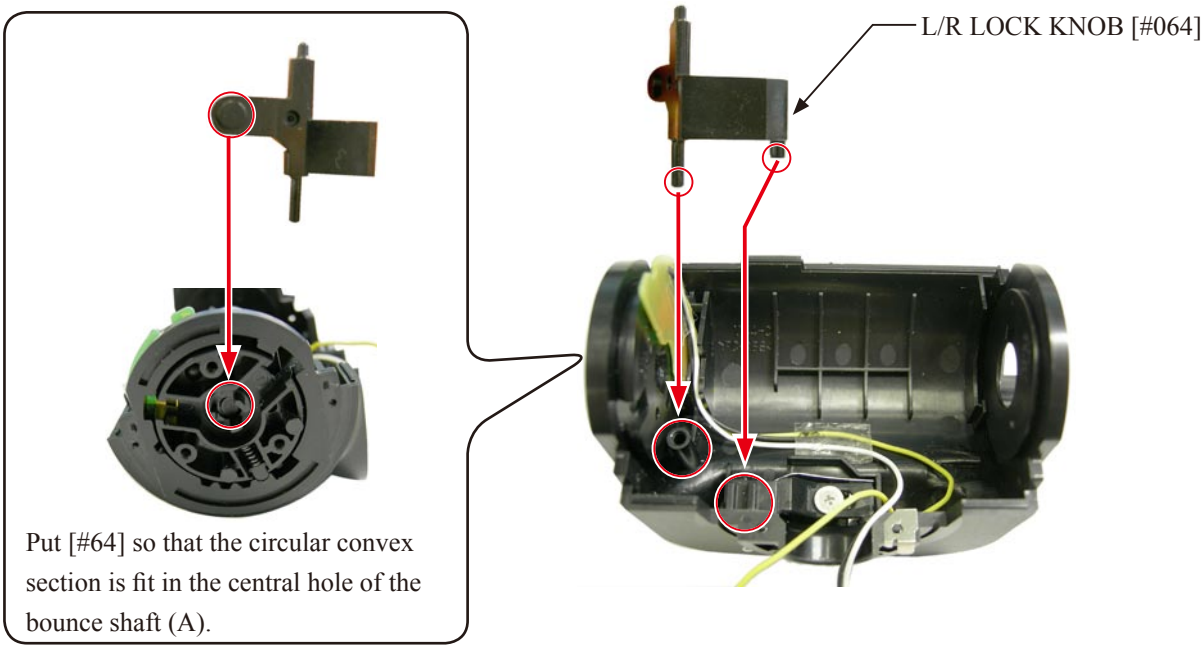
・Attach the lead wire set (CN-5A)（Yellow/White/Black)[#203] to the cover（C)[#057] with the tape.

・By fitting with the boss of the cover (C) [#057], put the bounce GND contact [#205].

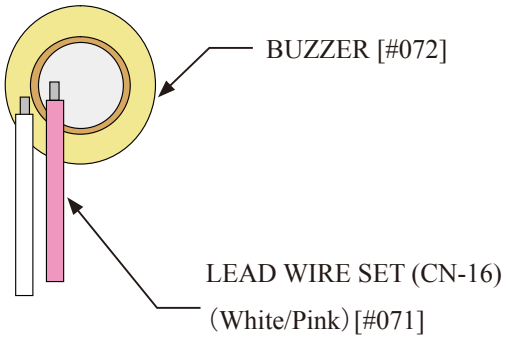


Be careful that the lead wire must NOT be placed over the rib.

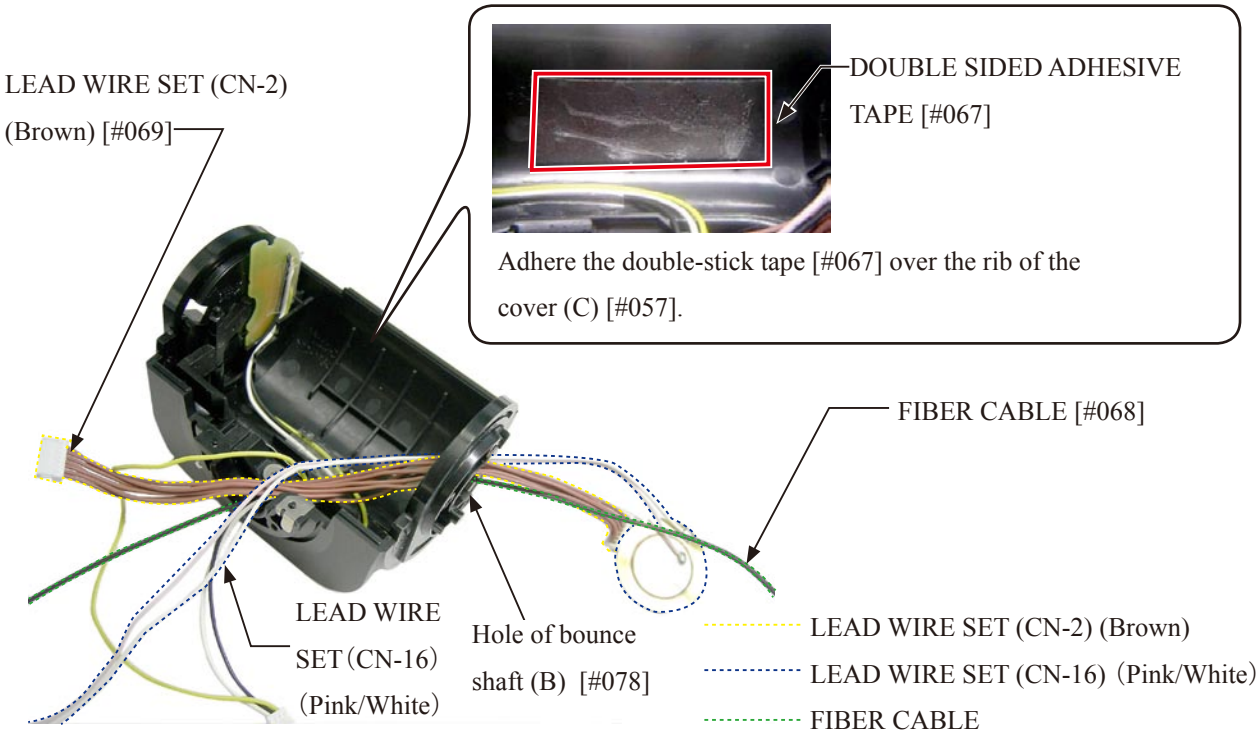
・Attach the L/R lock knob [#064].



・Solder the lead wire set（CN-16）(White/Pink）[#071] on the buzzer [#072].



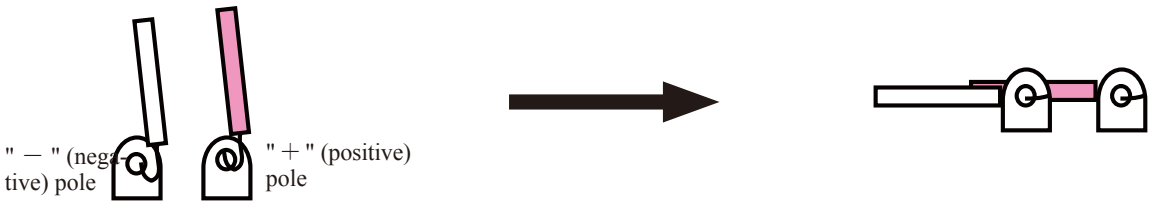
・Pass the fiber cable [#068] through the hole of the bounce shaft（B）[#078].
・Pass the lead wire set（CN-2）(Brown wire)[#069] through the hole of the bounce shaft（B）[#078].
・Pass the lead wire set（CN-16）(White/Pink wires) [#071] through the hole of the bounce shaft（B）[#078].
・Adhere the double-stick tape [#067] to the cover（C)[#057].

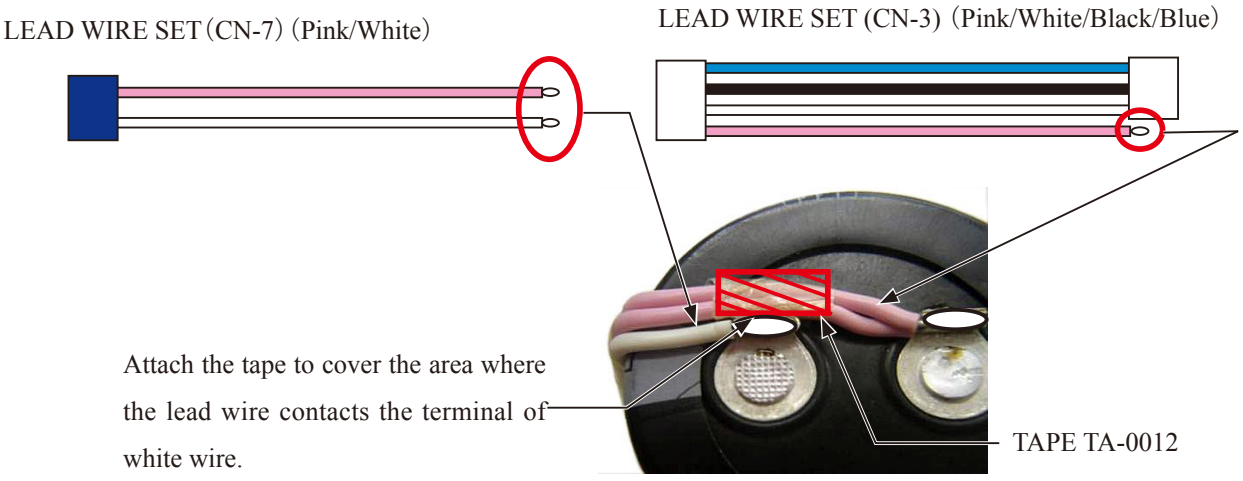


・Solder the lead wire set (CN-3) (Pink/White/Black/Blue wires) [#070], lead wire set（CN-7）(Pink/White wires) [#082] on the main condenser.

☆ How to attach Lead wire

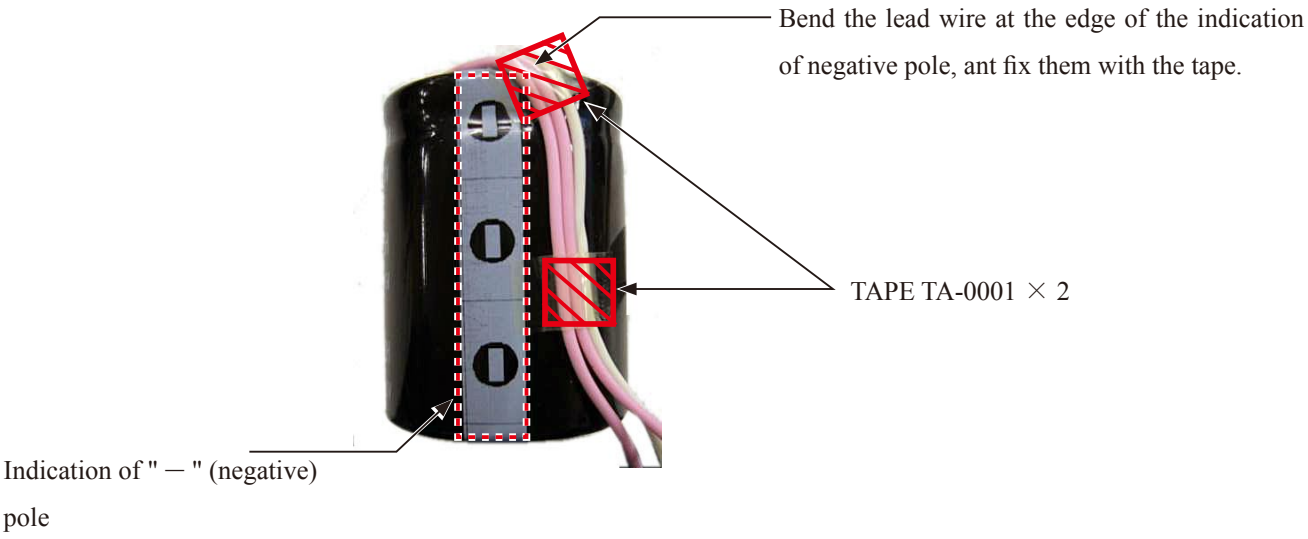
Arrange the lead wire set as follows:



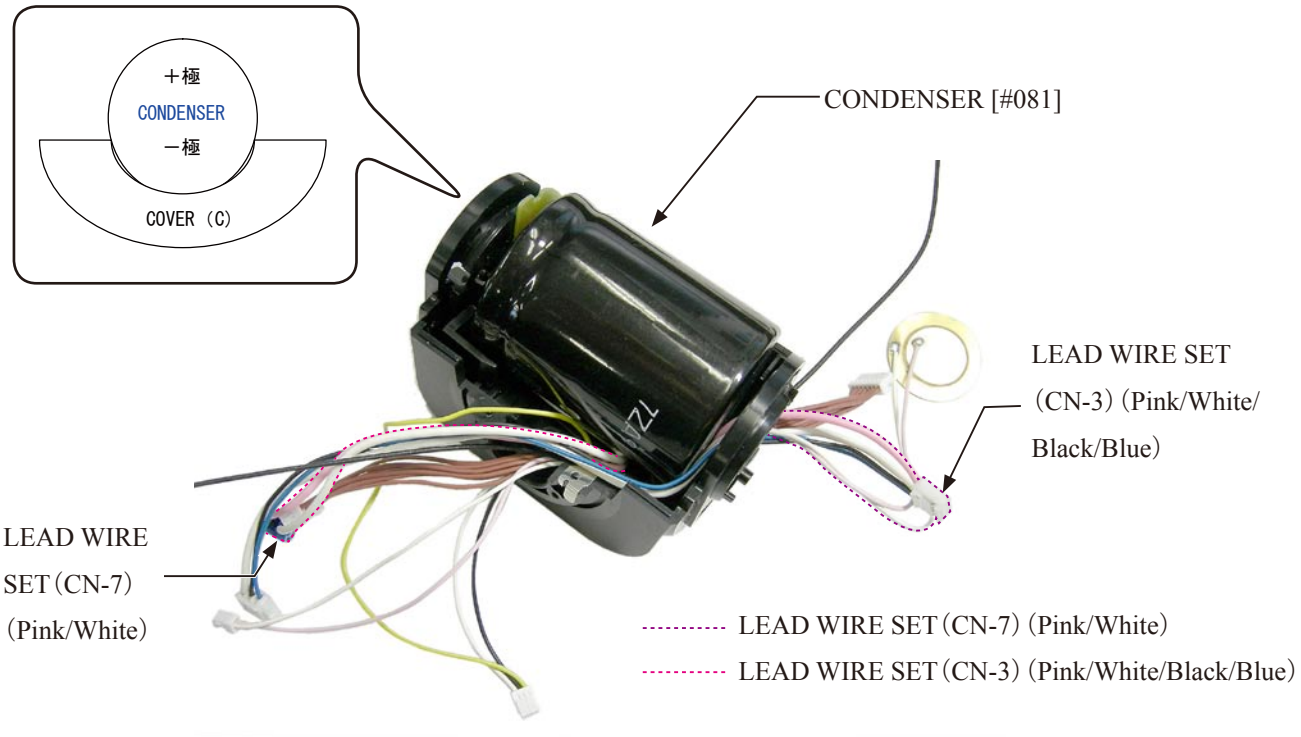


Be careful that one lead wire is NOT placed on the other.

・Tape at two places.

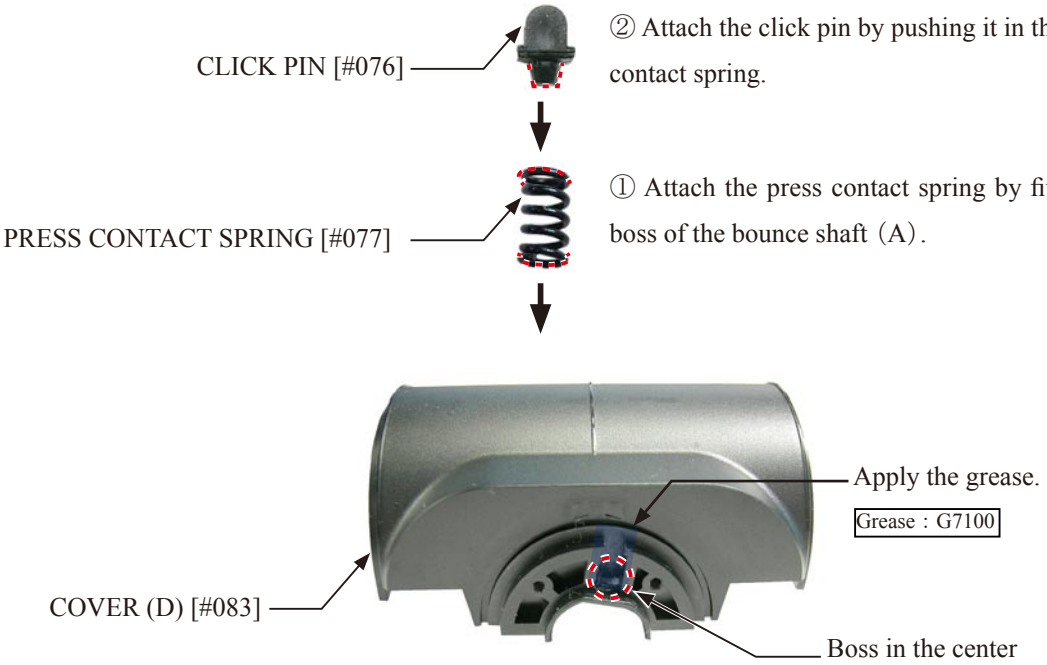


・Set the condenser [#081] to the cover (C) [#057].
・Pass the lead wire set (CN-3)（Pink/White/Black/Blue wires）[#070], which is soldered on the main condenser [#081], through the hole of the bounce shaft（B）[#078].
・Put the lead wire set（CN-7）(Pink/White) [#082], which is soldered on the main condenser [#081], outside.

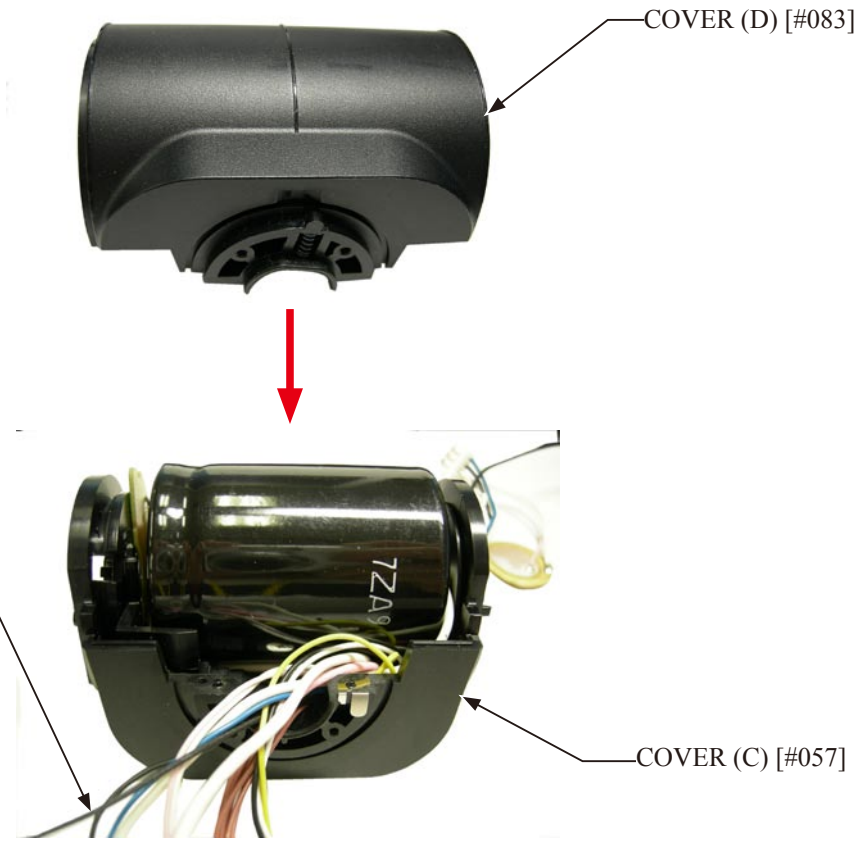


Be careful that the lead wire is NEITHER placed over the rib NOR pinched by the condenser.

・Like the bounce shaft（A）[#073] and （B）[#078], attach the click pin [#076] and press contact spring [#077] in the order from ① to ② to the cover（D）[#083].



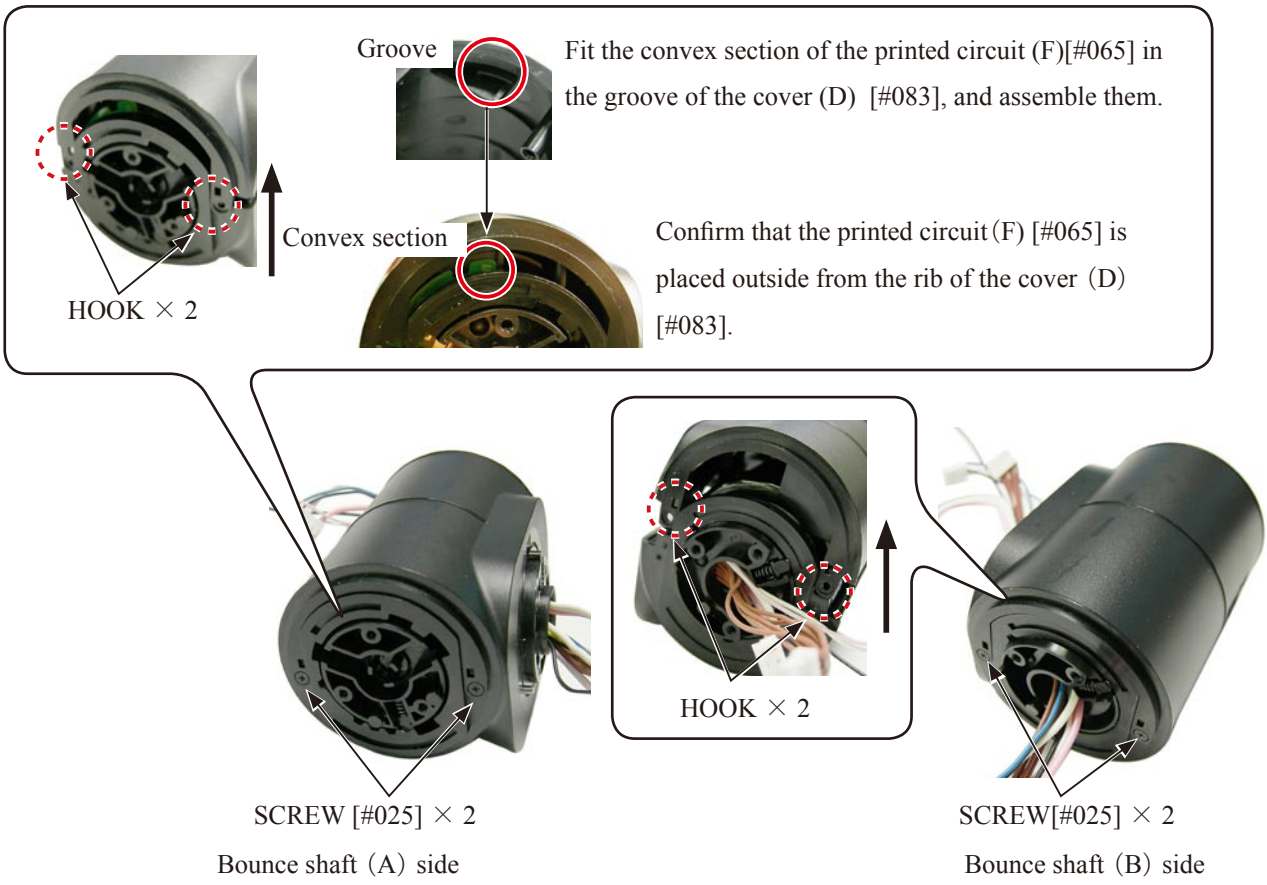
・Assemble the cover（C）[#057] and cover（D）[#083] as below.



Caution:
Adjust the length so that the fiber cable [#068] put outside from the hole of the cover (C) [#057]/cover (D) [#083] becomes approx. 16.5cm.

・Hook at four places.

・Tighten the four screws [#025].

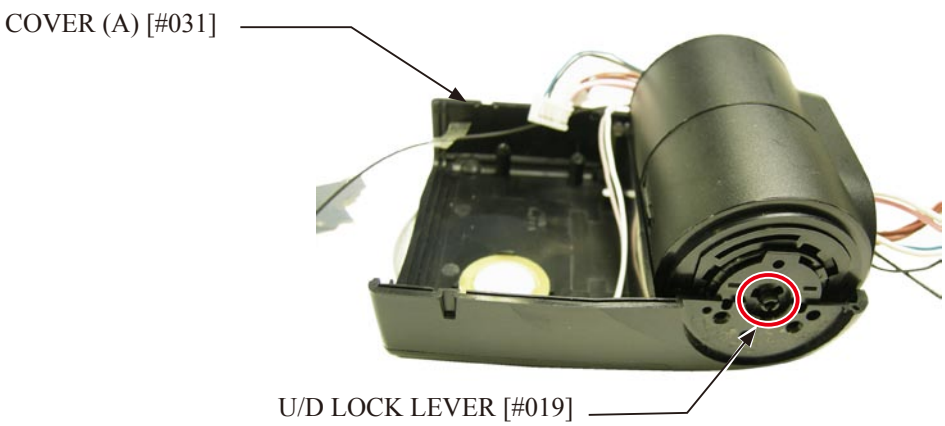


Be careful NOT to pinch the wires.

・Mount the U/D lock lever SP [#018] on the bounce shaft (A) [#073] side.

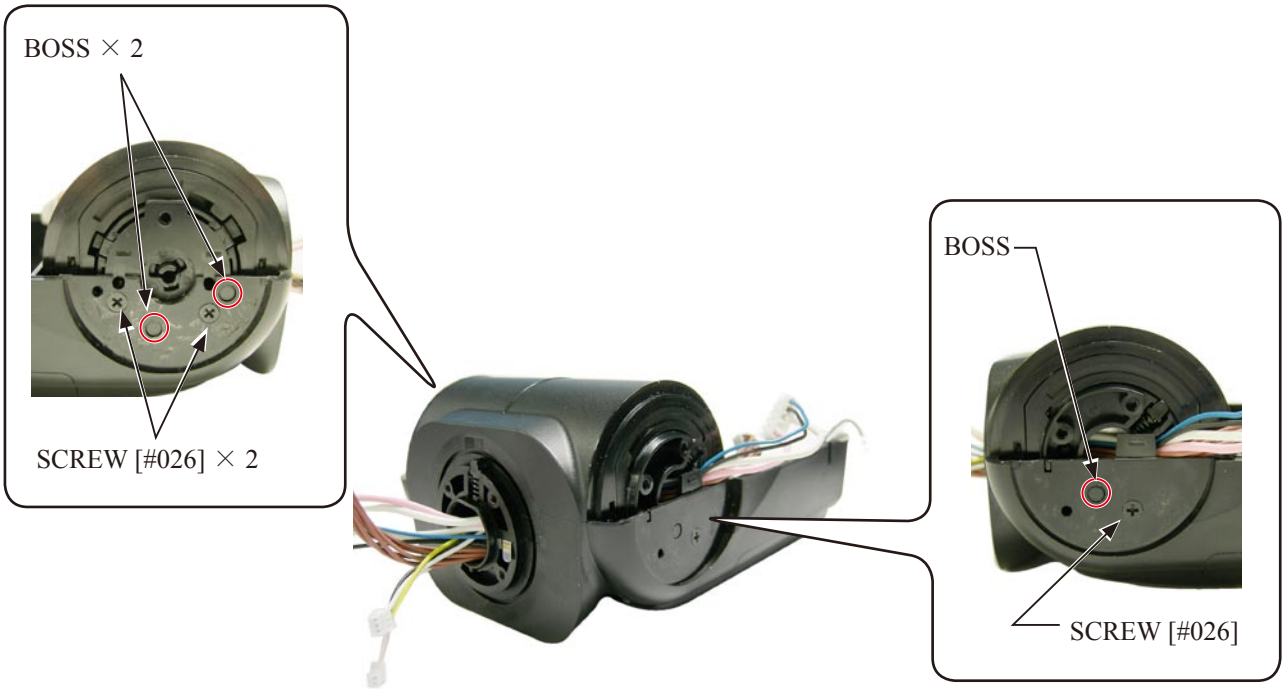
・Mount the U/D LOCK LEVER [#019].

・While holding the U/D lock lever SP [#018] and U/D lock lever [#019], assemble the cover C/D into the cover（A）[#031] from the U/D lock lever side.

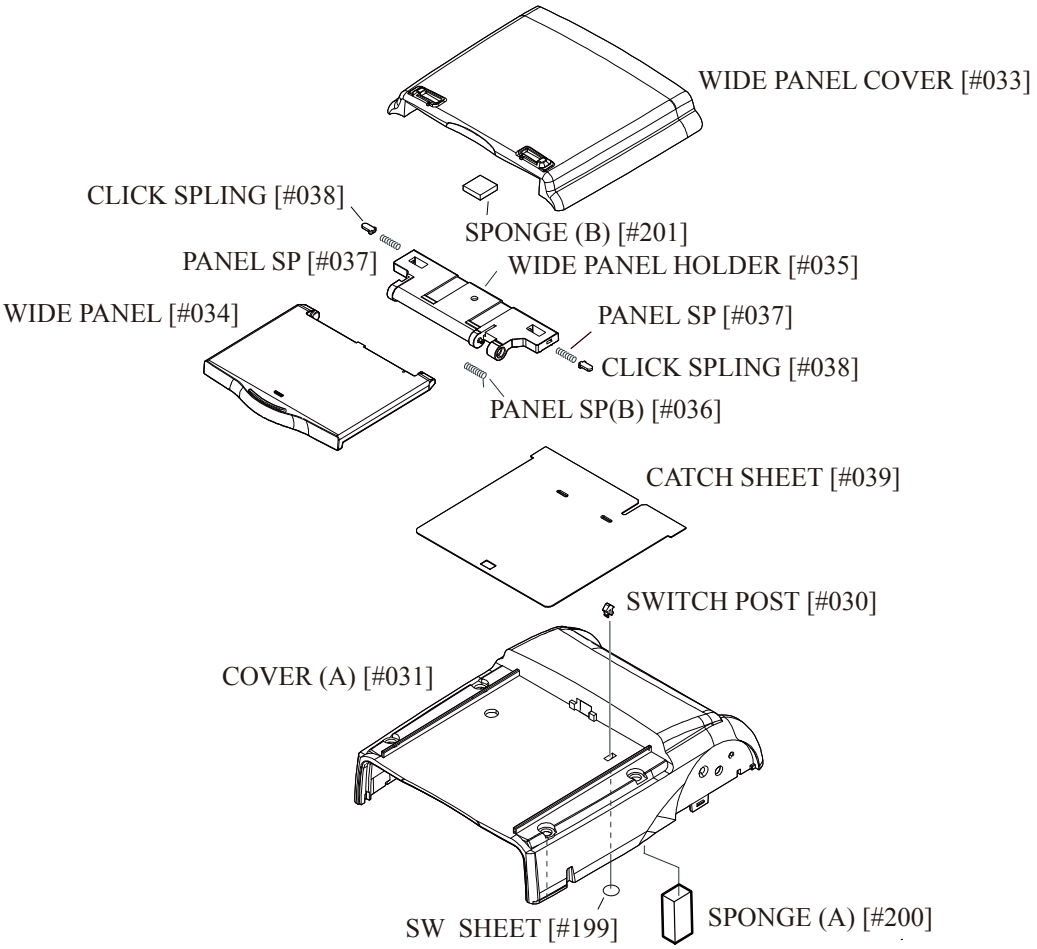


・Tighten the three screws [#026].

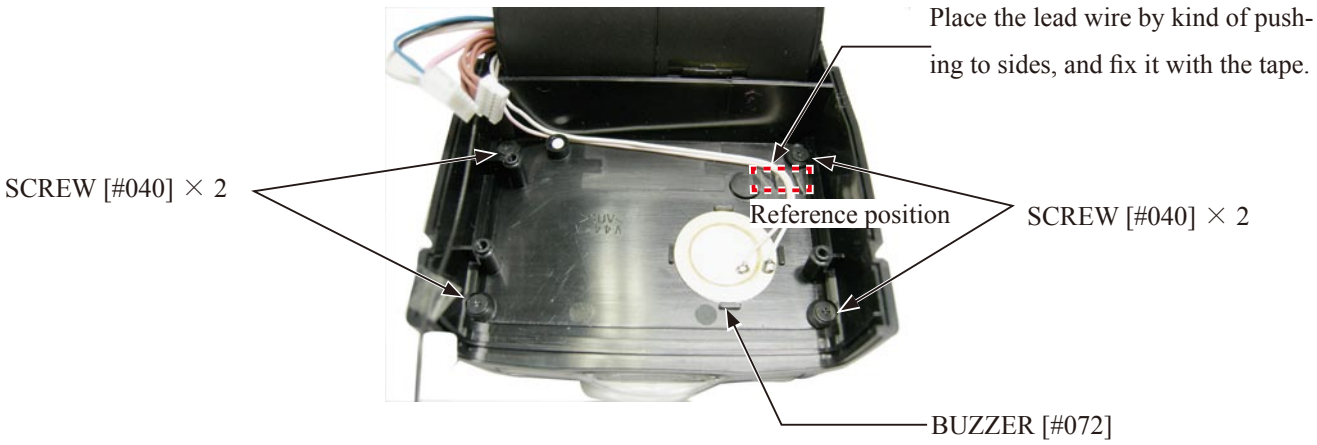
・Fit with the three bosses.



COVER (A)

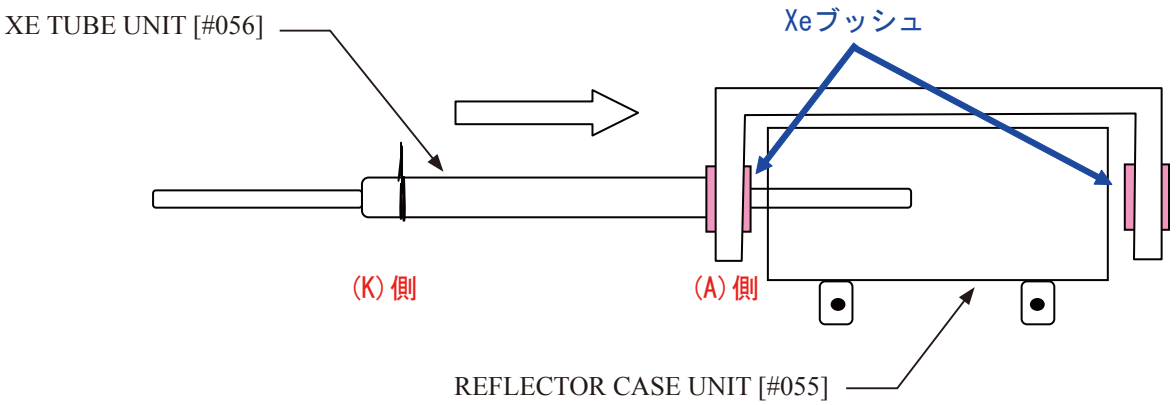


- Tighten the four screws [#040].
- Attach the buzzer [#072] with the double-stick tape (F)[#041].

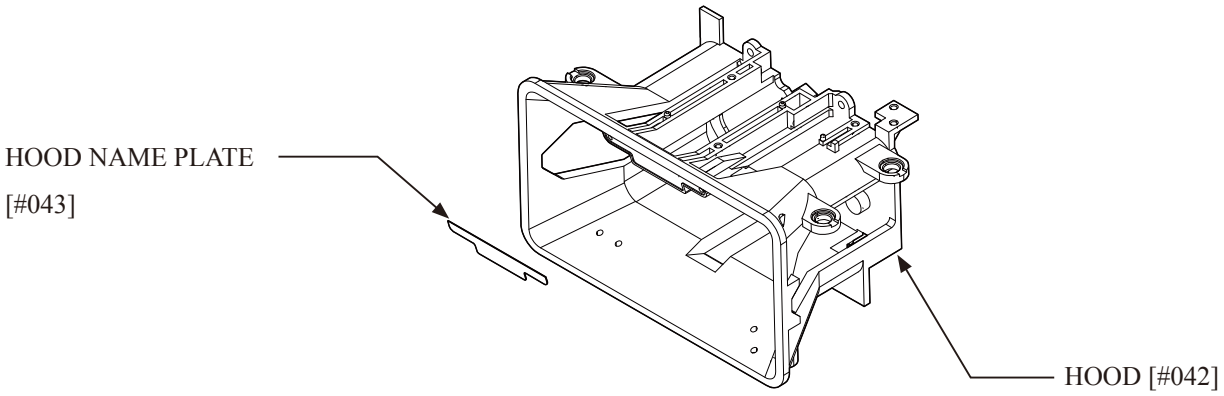


HOOD

・Insert the Xe-tube unit [#056] in the reflector case unit [#055].



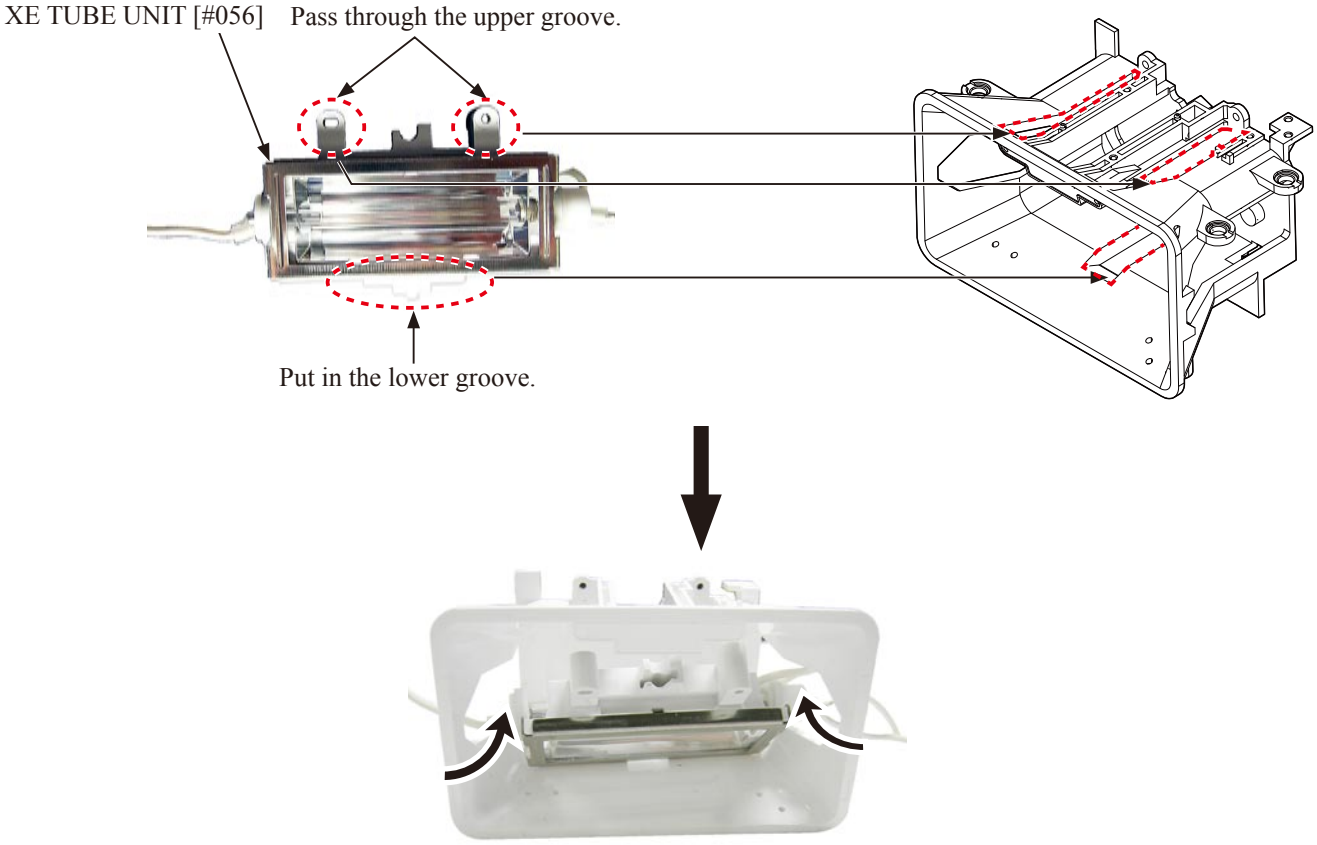
・Secure the hood name plate [#043] with the double-stick tape.



・Place the Xe-tube unit [#056] from the front as below.

Grease : G7100

Apply the grease to the grooves of the hood.

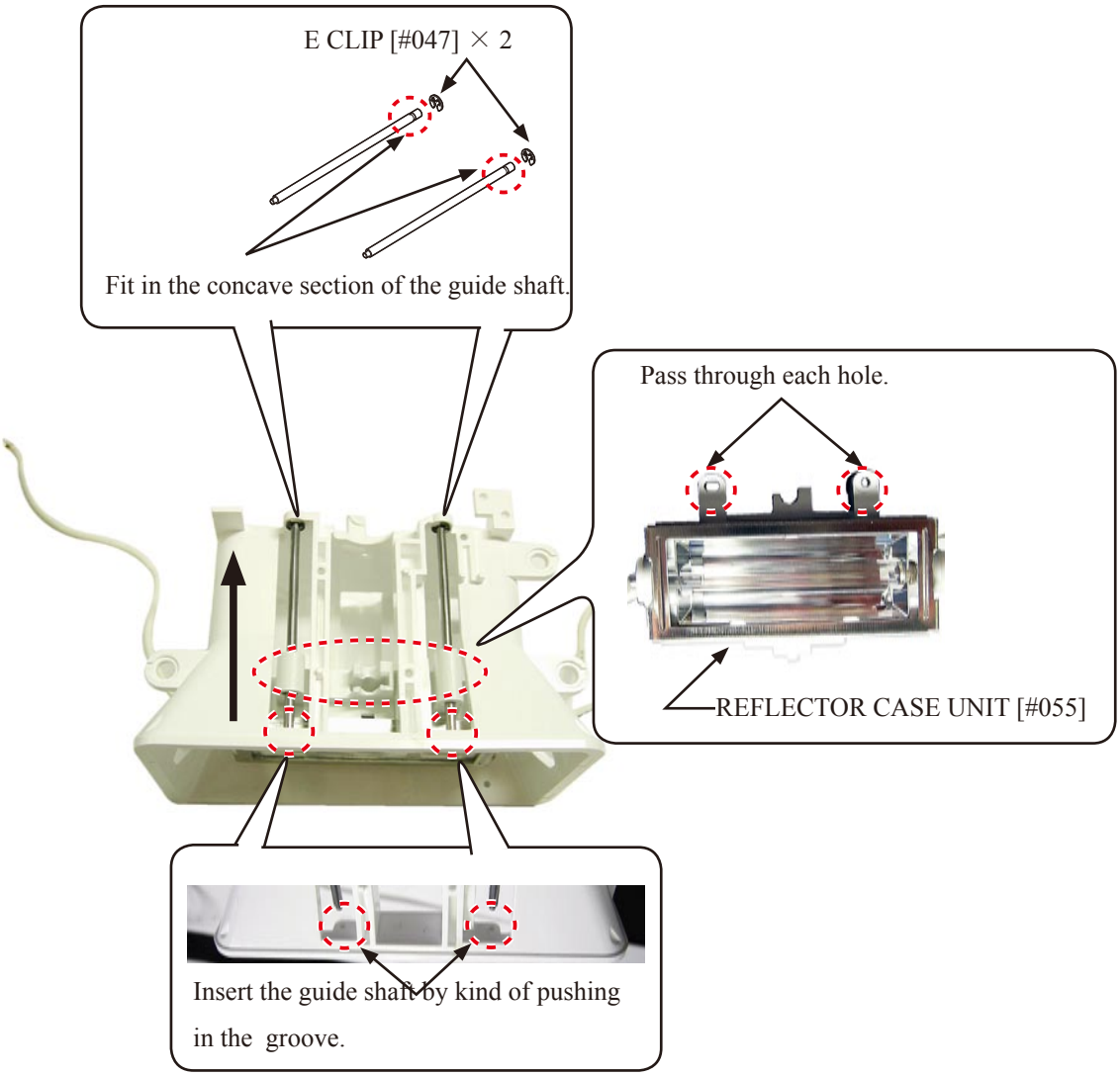


Put the right and left lead wire outside each.

・Insert the two guide shafts [#046] by passing through each hole of the reflector case unit [#055].

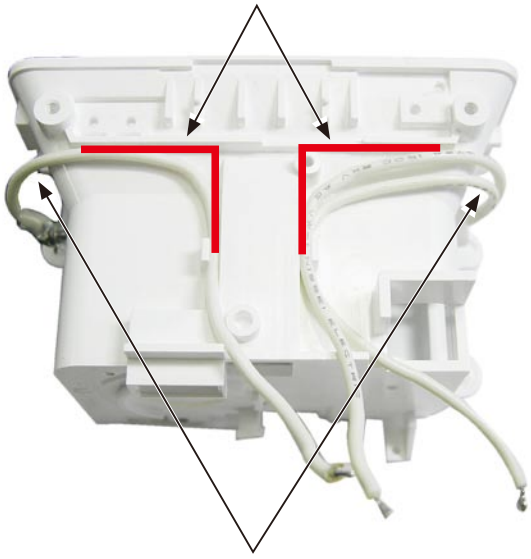
・Fit the two E clips [#047].

Caution: Do NOT fit the E clip on the guide shaft with force, in order to avoid popping out of it.



・Arrange the wires.

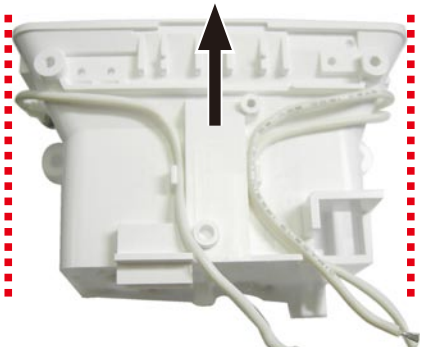
Make the lead wires to be bent easily as below.



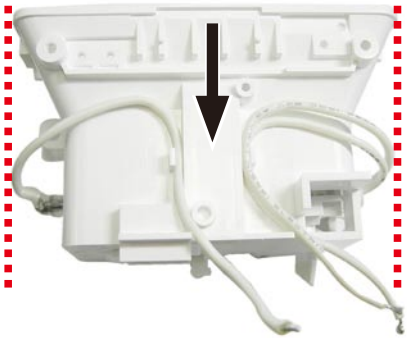
Confirm that the each lead wire at both ends does NOT contact the hood.

・Move the reflector case unit [#055] up and down, and check the movements by setting to TELE and WIDE.

Move toward WIDE

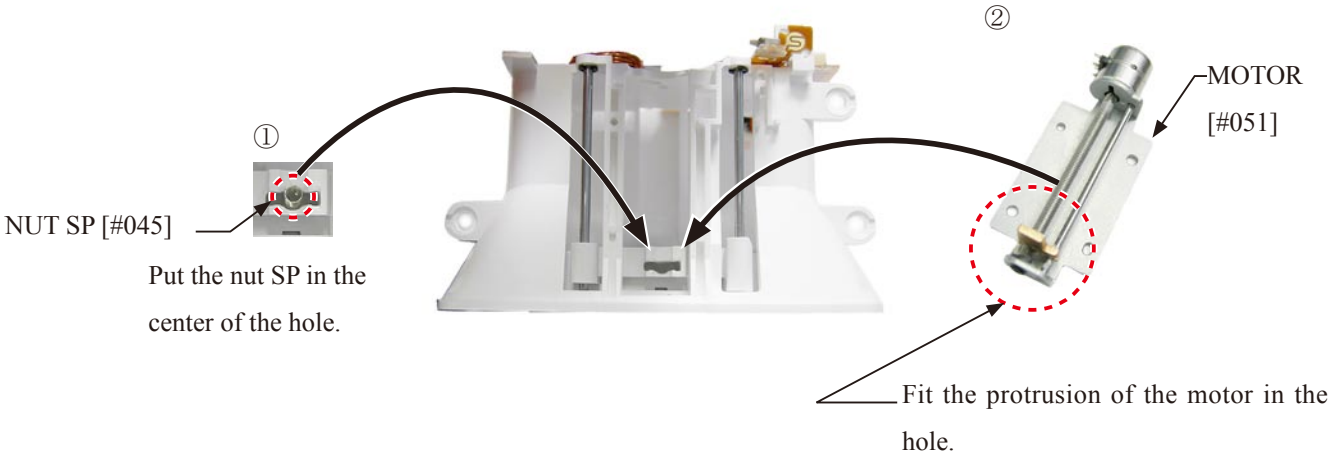


Move toward TELE

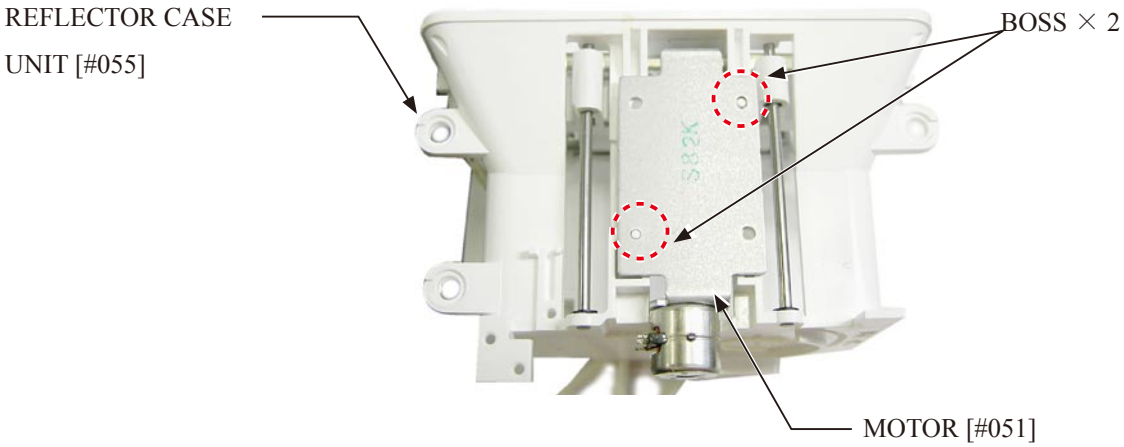


Be careful that the lead wires do NOT run off the edge from the red line.

・Insert the nut SP [#045].
・Insert the motor [#051].

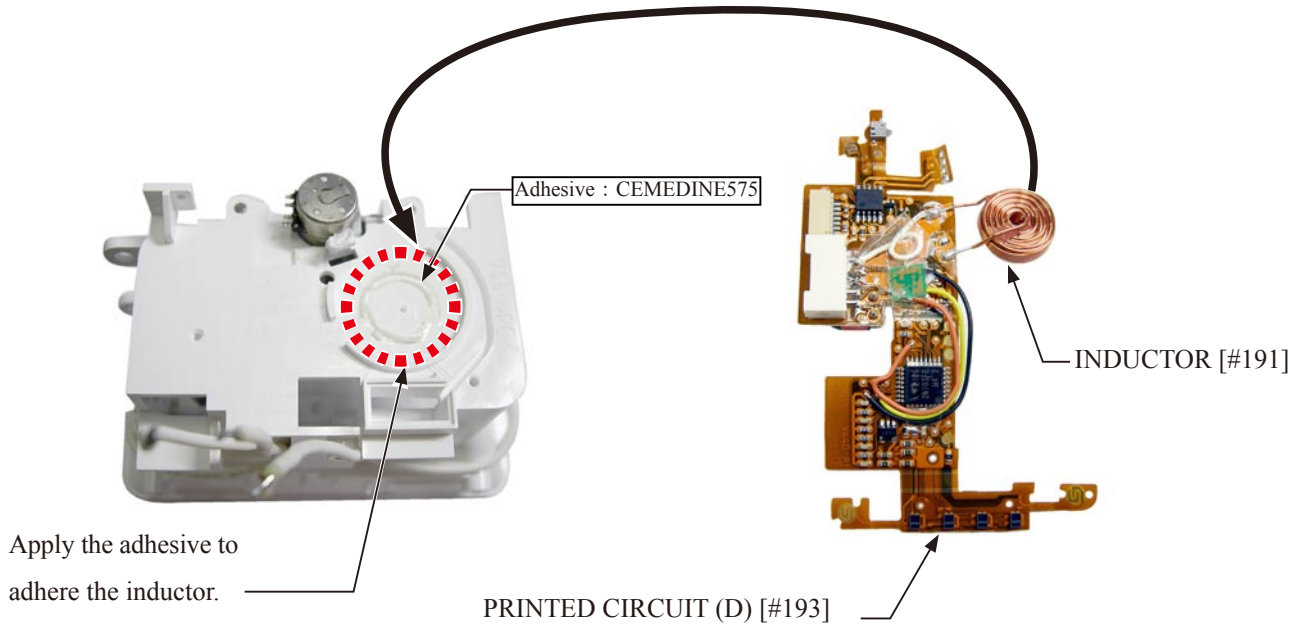


・Mount the motor [#051] on the reflector case unit [#055] by fitting with the groove and two bosses.



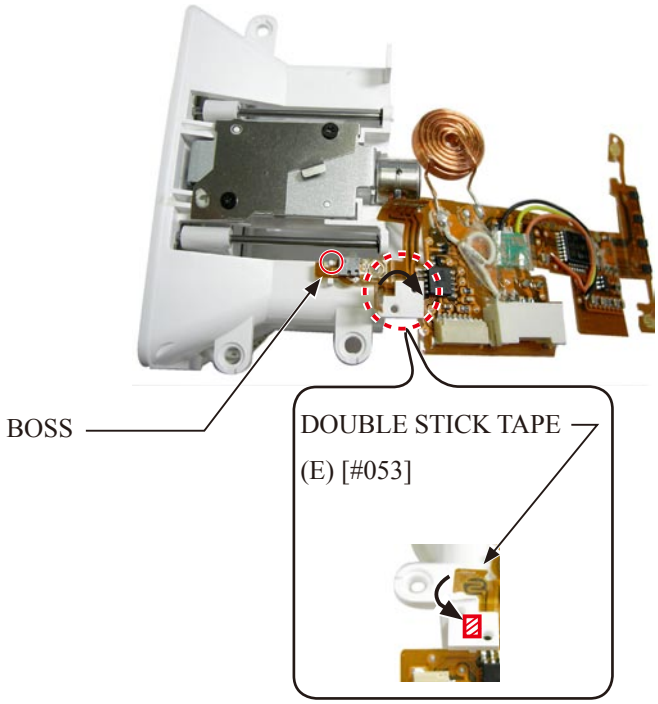
PRINTED CIRCUIT (D)

・Set the printed circuit (D) [#193].



・Fit the printed circuit (D) [#193] with the boss.

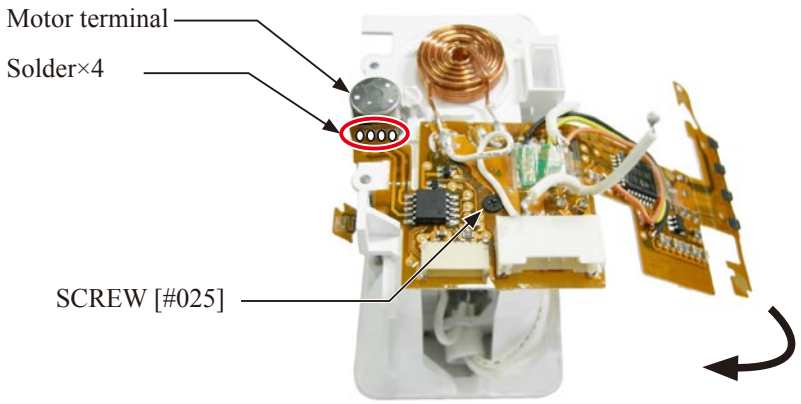
・Adhere the double-stick tape (E) [#053] to the hood, and press it.



・Solder the motor terminal at four places.

・Tighten the screw [#025].

・Fold the printed circuit（D）[#193].

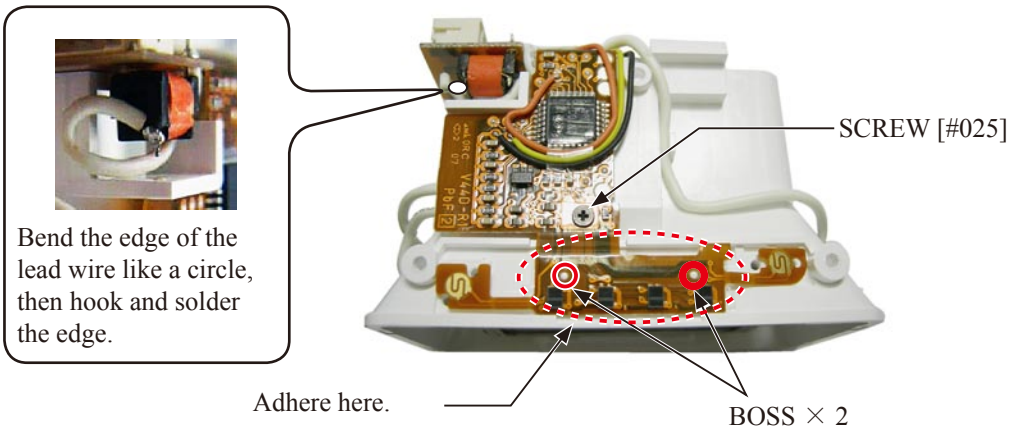


・Fit with the two bosses as below.

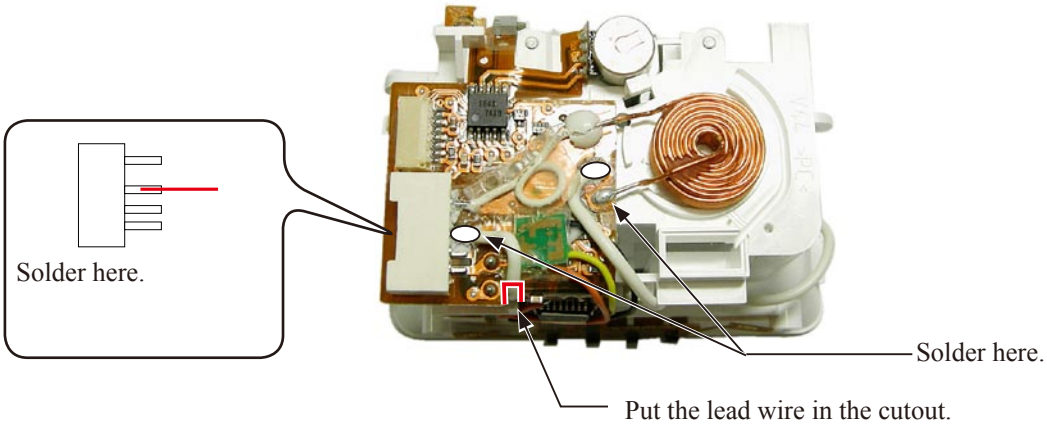
・Adhere the double-stick tape（D）[#052] to the hood, and press it.

・Tighten the screw [#025].

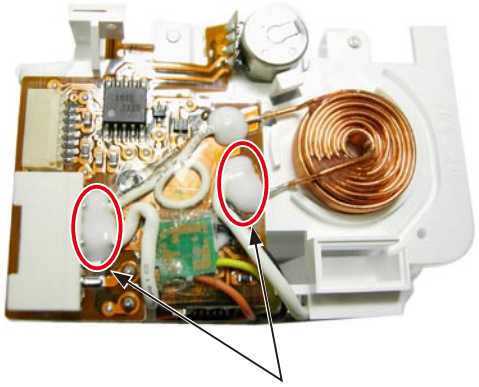
・Make solders.



・Solder at two places.

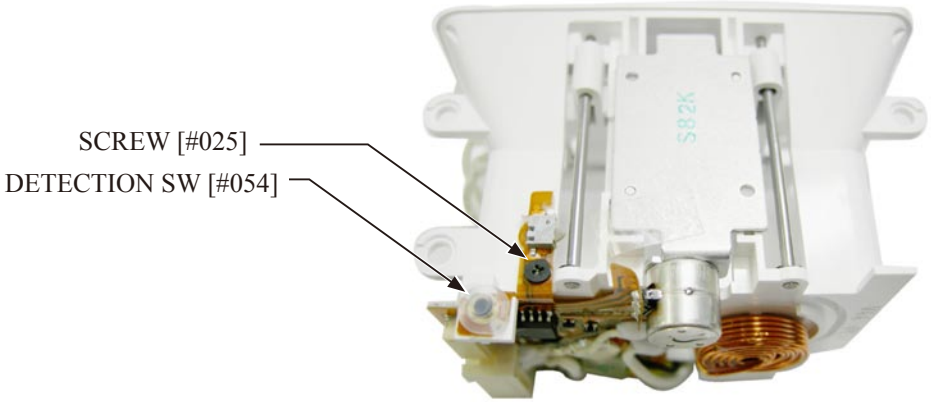


・Apply the bond to the two places.



・Tighten the screw [#025].

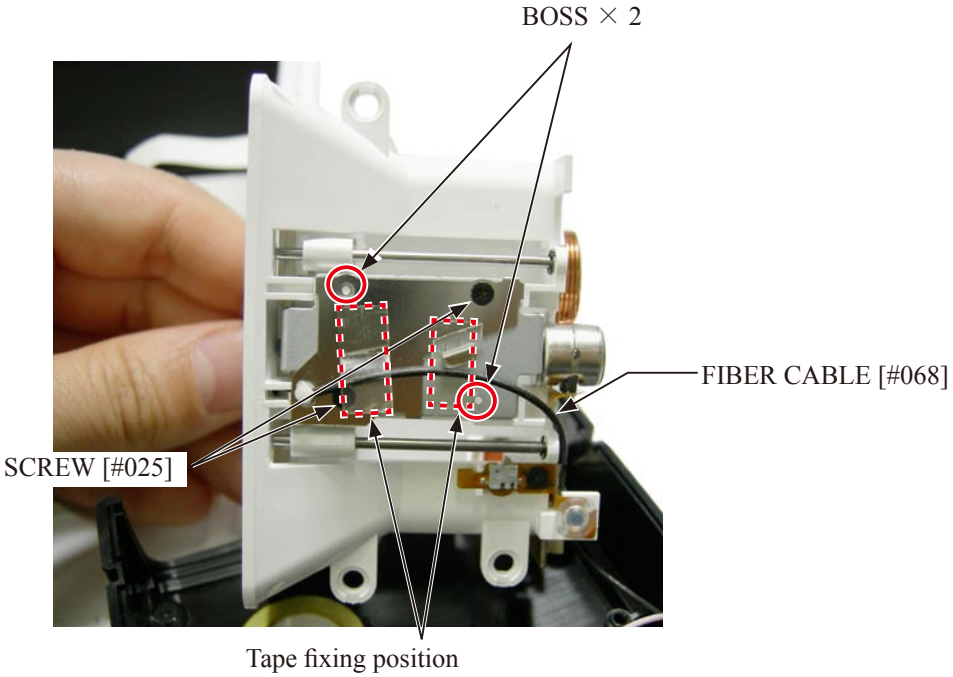
・Set the detection SW [#054].



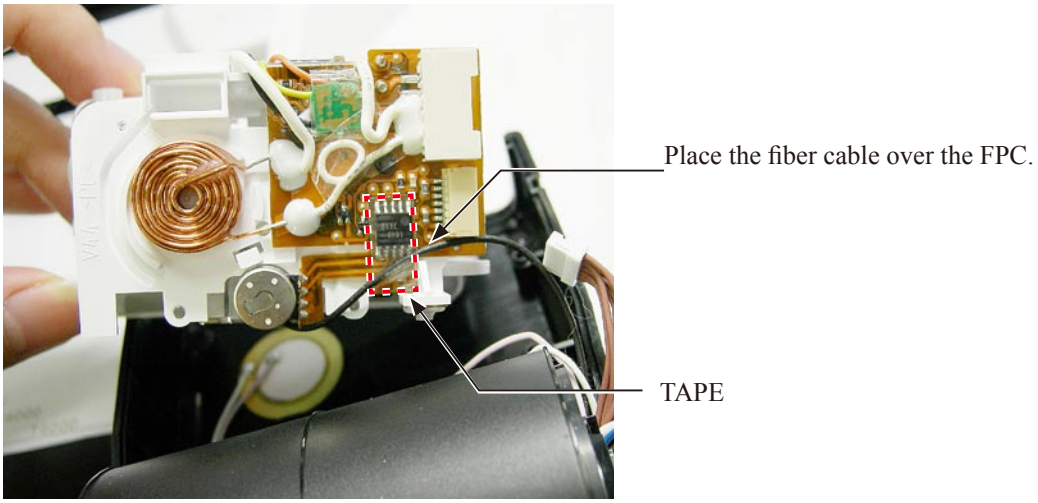
FIBER CABLE

- Mount the fiber retainer plate [#001] by fitting with the bosses.
- Tighten the two screws [#025].
- Pass the fiber cable [#068] through the hole, and bond it.
- Attach the tape at two places.

Caution: Put the fiber cable all the way to be seated.

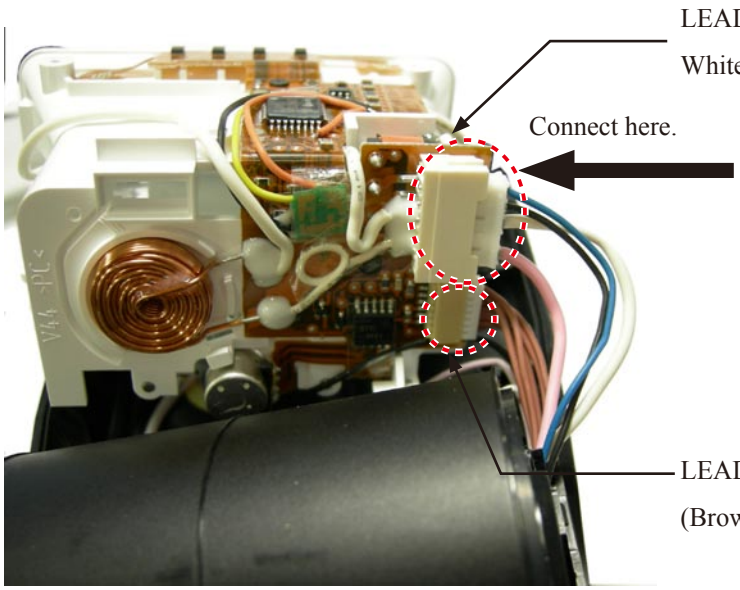


- Attach the tape.



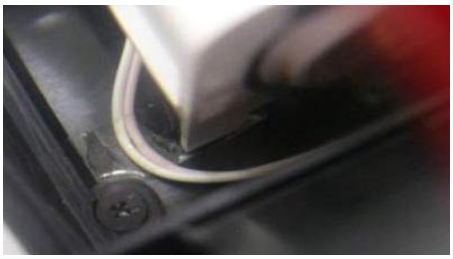
・Connect the lead wire set (CN-2) (Brown wire)[#069] to the connector.

・While covering the hood, connect the lead wire set (CN-3) (Pink/White/Black/Blue) [#070] to the connector.



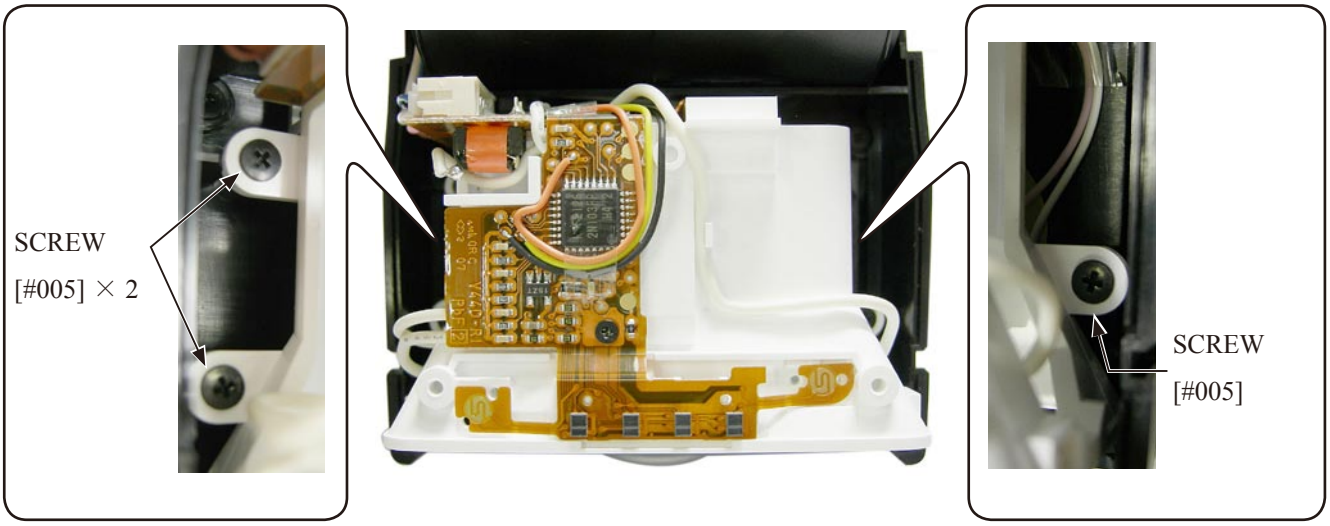
Be careful NOT to press the lead wire of the buzzer.

Arrange by putting the lead wire set (CN-16) (White/Pink) between the inductor and motor.



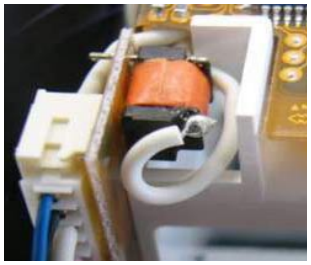
Arrange so that the lead wire set (CN-16) (White/Pink) is placed outside the rib of the hood.

・Tighten the three SCREWs [#005].

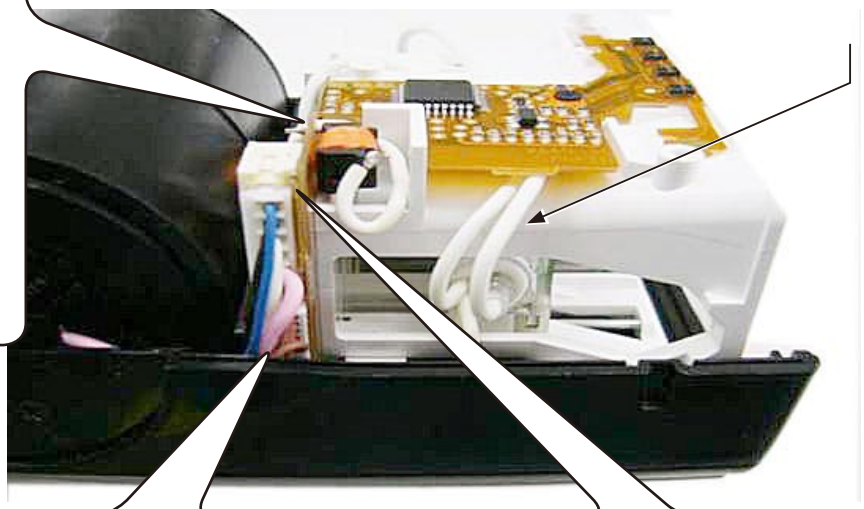


Be careful of the positions of each lead wire.

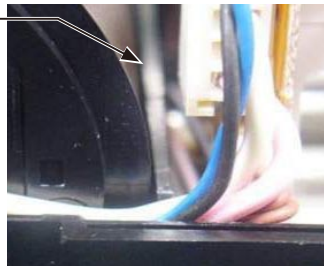
The lead wire of Xe-tube must come to the front.



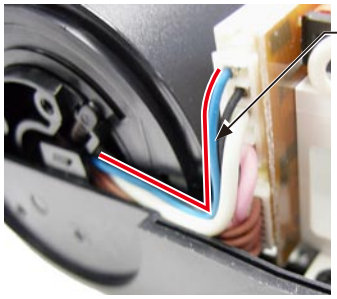
Push the lead wire backwards, and slacken it.



Rib of Cover A



Caution: Put the lead wire as high as the rib of the cover A. The lead wire must not be placed over the rib of the cover A.



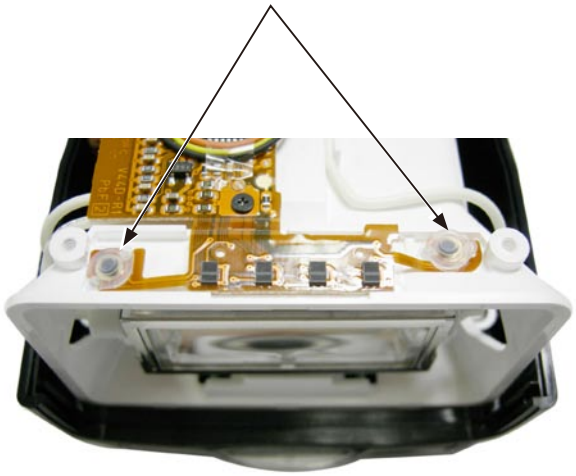
Position of bending the lead wire

Be careful NOT to break the fiber. Do NOT poke with tweezers.
The fiber cable must be positioned at the bottom.

COVER (B)

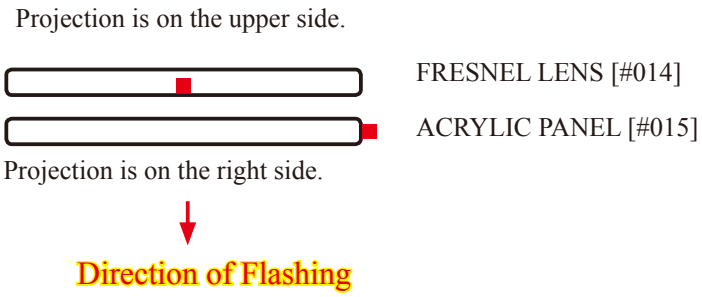
・Set the two detection SWs [#054].

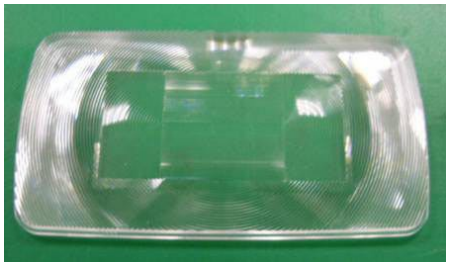
DETECTION SW [#054] × 2



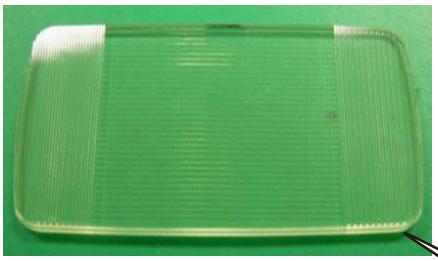
・Mount the fresnel lens [#014].
・Mount the acrylic panel [#015] to the panel packing [#016].
・Mount the acrylic panel [#015] .

Be careful of the direction of mounting.

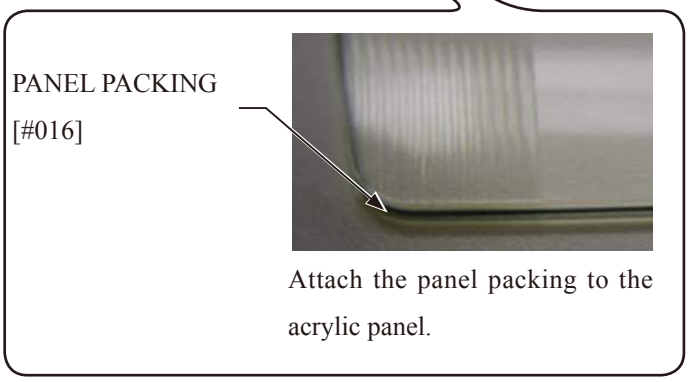


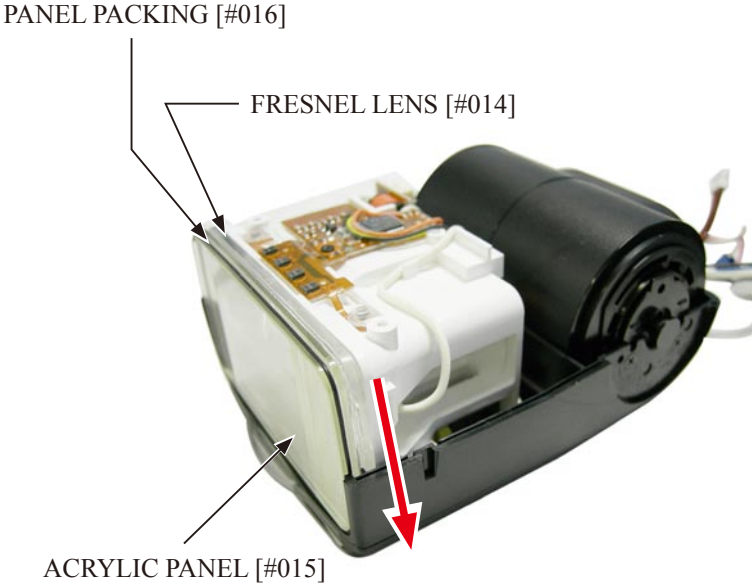


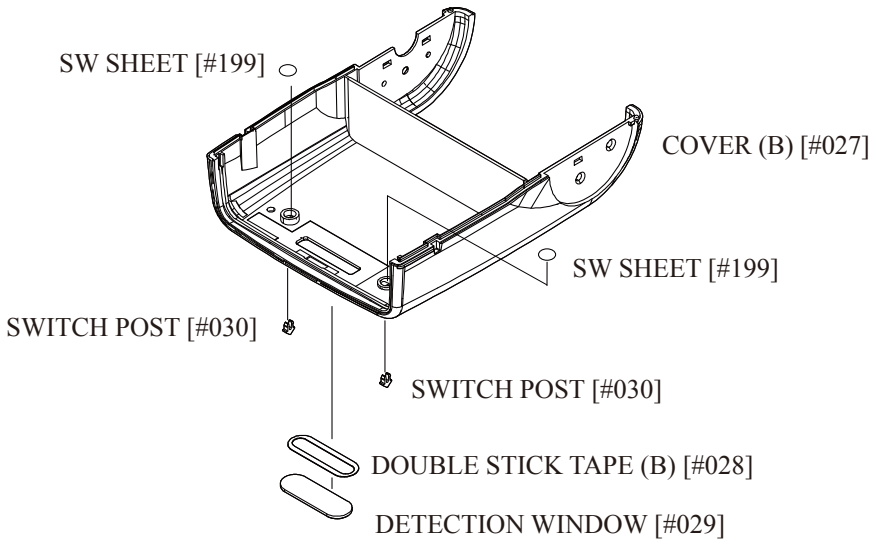
FRESNEL LENS [#014]
Jaggy side come to the front.



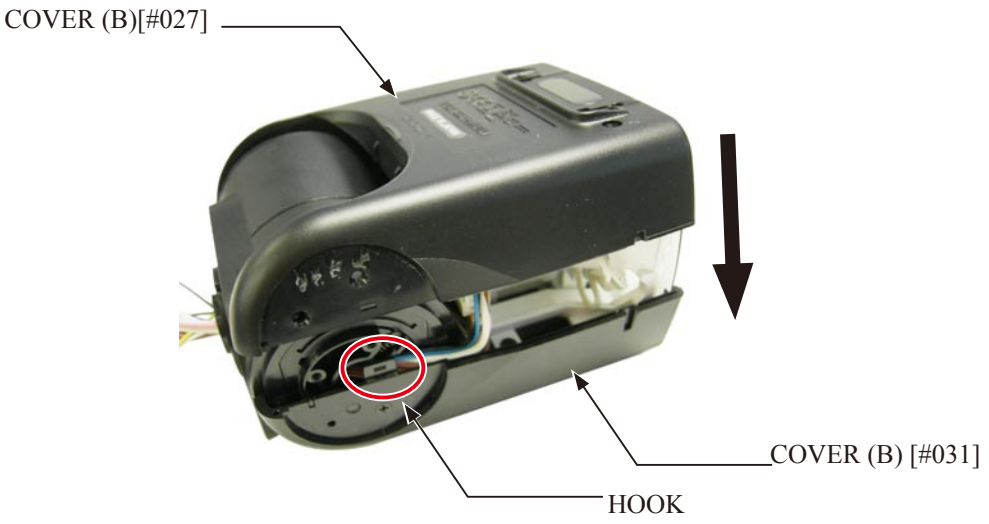
ACRYLIC PANEL [#015]







・Mount the cover（B）[#027] on the cover（A）[#031] by engaging the hook.



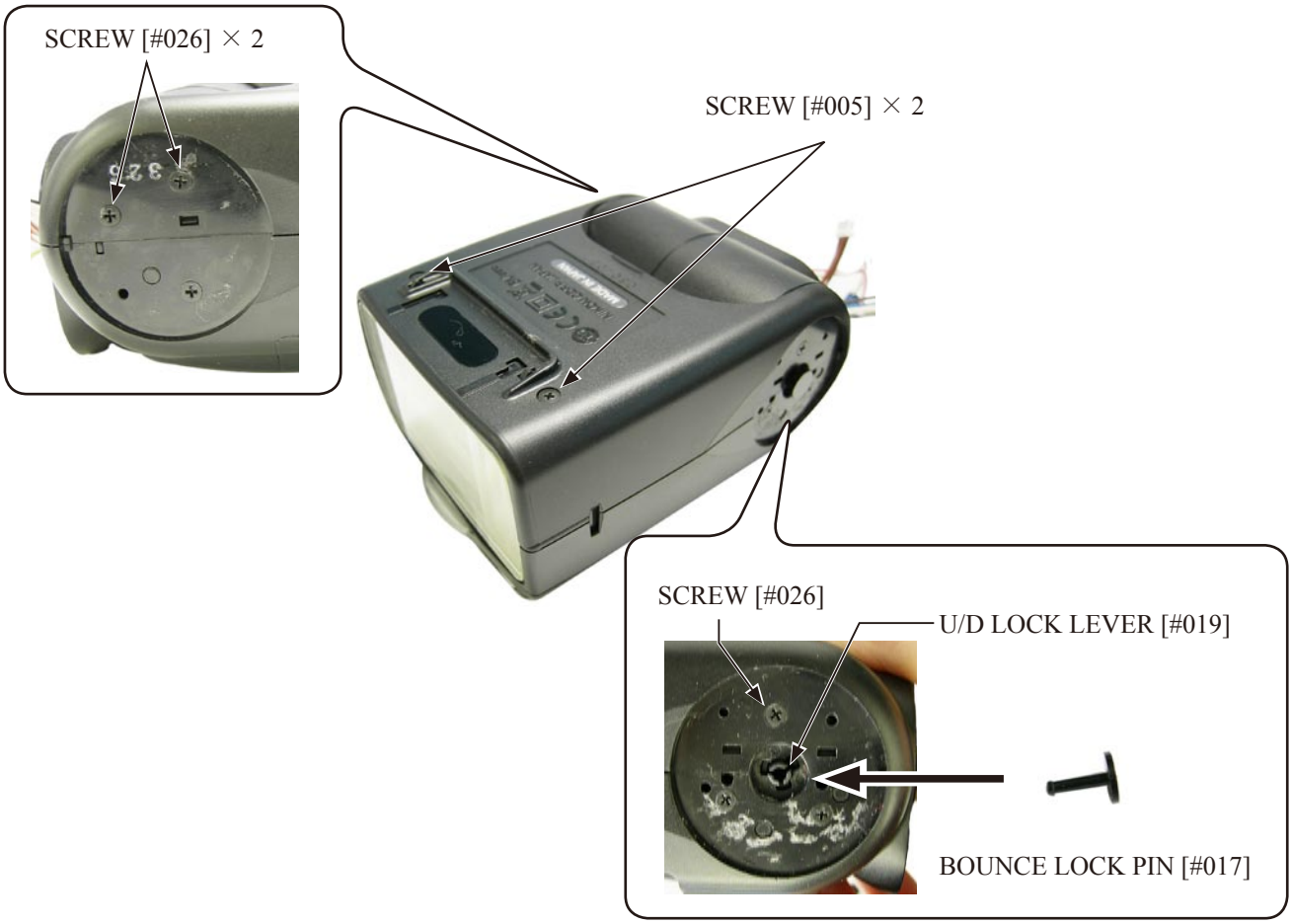
Be careful NOT to pinch the wires.

・Tighten the two [#005].

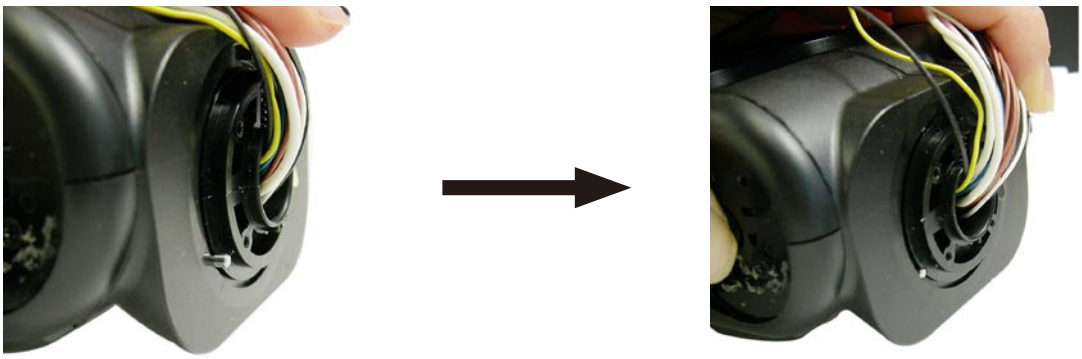
・Tighten the left two screws [#026].

・Insert the bounce lock pin [#017] in the U/D lock lever [#019] until it clicks.

・Tighten the right screw [#026].



・By pressing the bounce lock pin, check whether the spring works.



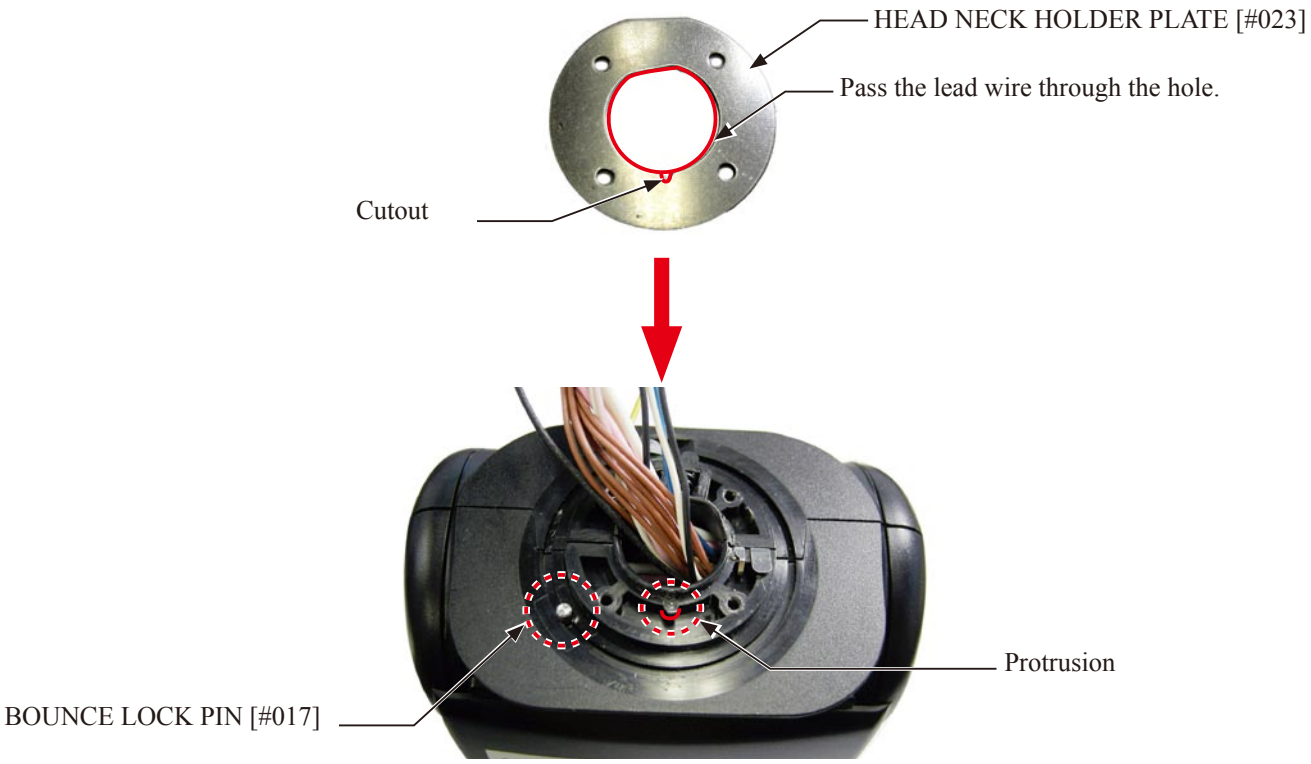
BEFORE pressing　　DURING pressing

※ As long as the spring works, the L/R bounce lock pin will be retracted.

TURN PLATE / HEAD NECK HOLDER PLATE

Caution: At the position where the bounce lock pin is located at the lower left side, perform the following:

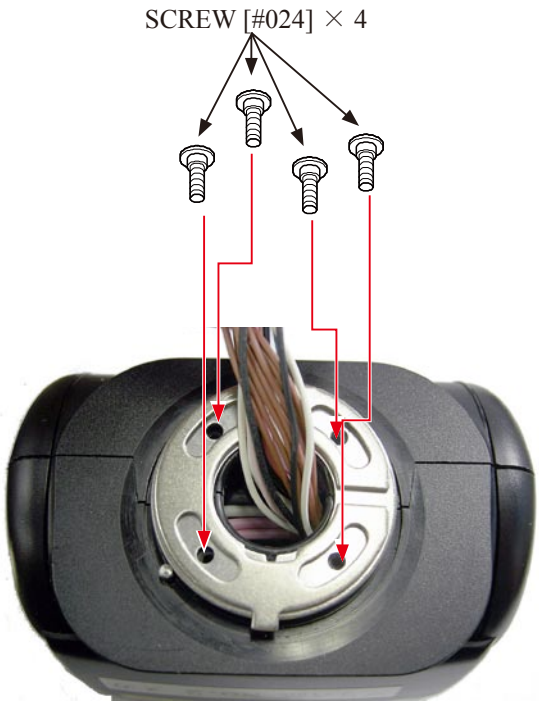
・Mount the head neck holder plate [#023].



Align the cutout of the head neck holder plate with the protrusion.

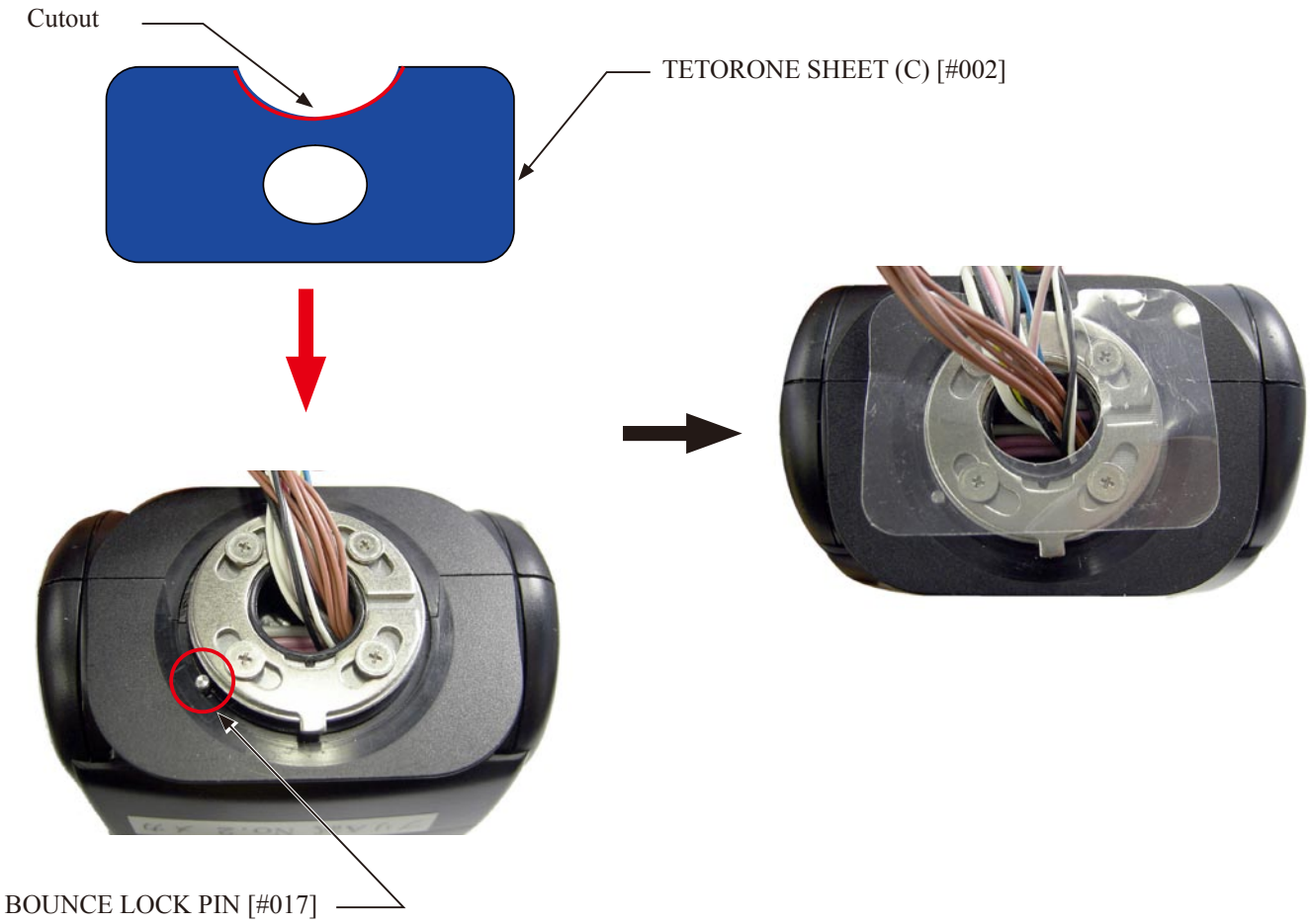
・Mount the turn plate [#022].

・Tighten the four screws [#024].

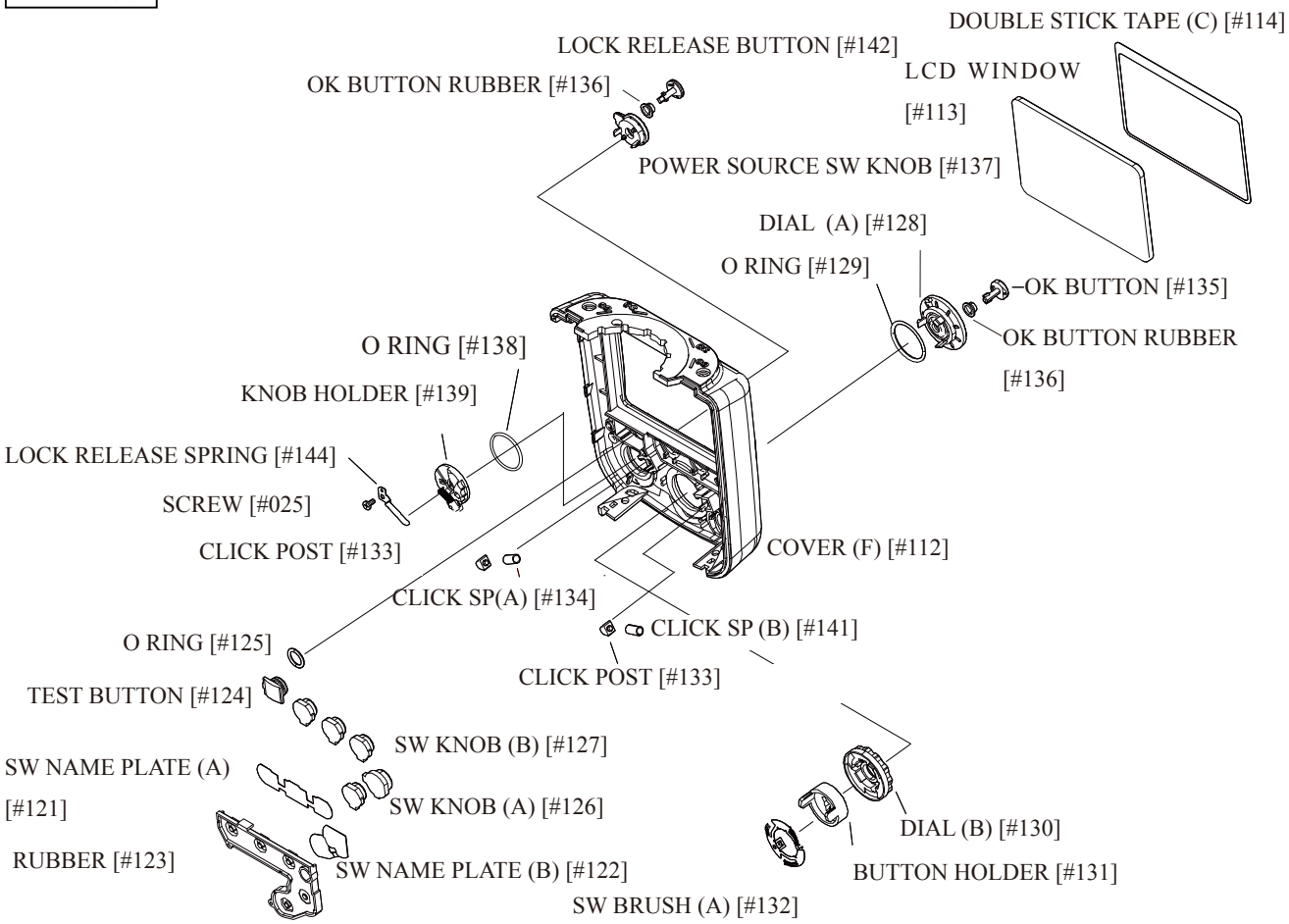


・Attach the terone sheet (C) [#002].

Caution: When the cutout of the tetrone sheet is like below, the bounce lock pin must come to the left side.



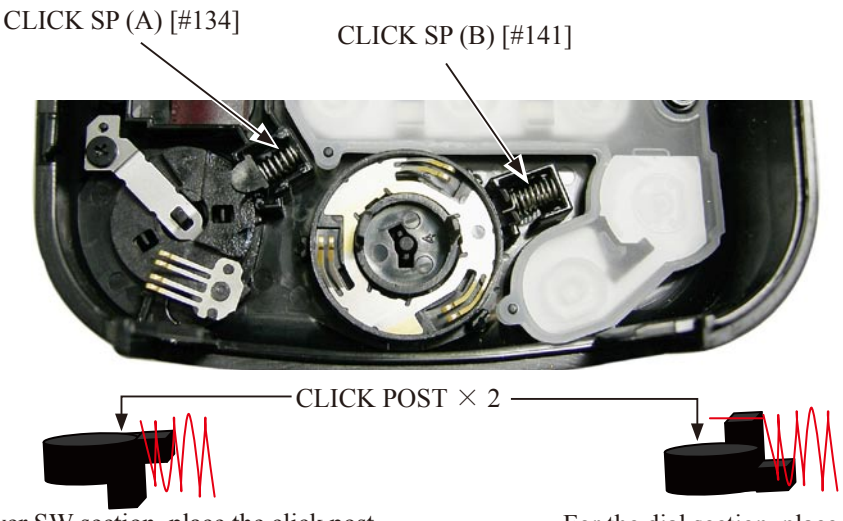
COVER (F)



Caution:

When the power button or OK button is mounted, the click SP or click post may be popped out.

Be careful of the direction of the click post, because it differs depending on whether it is used for the power SW section or the dial section.

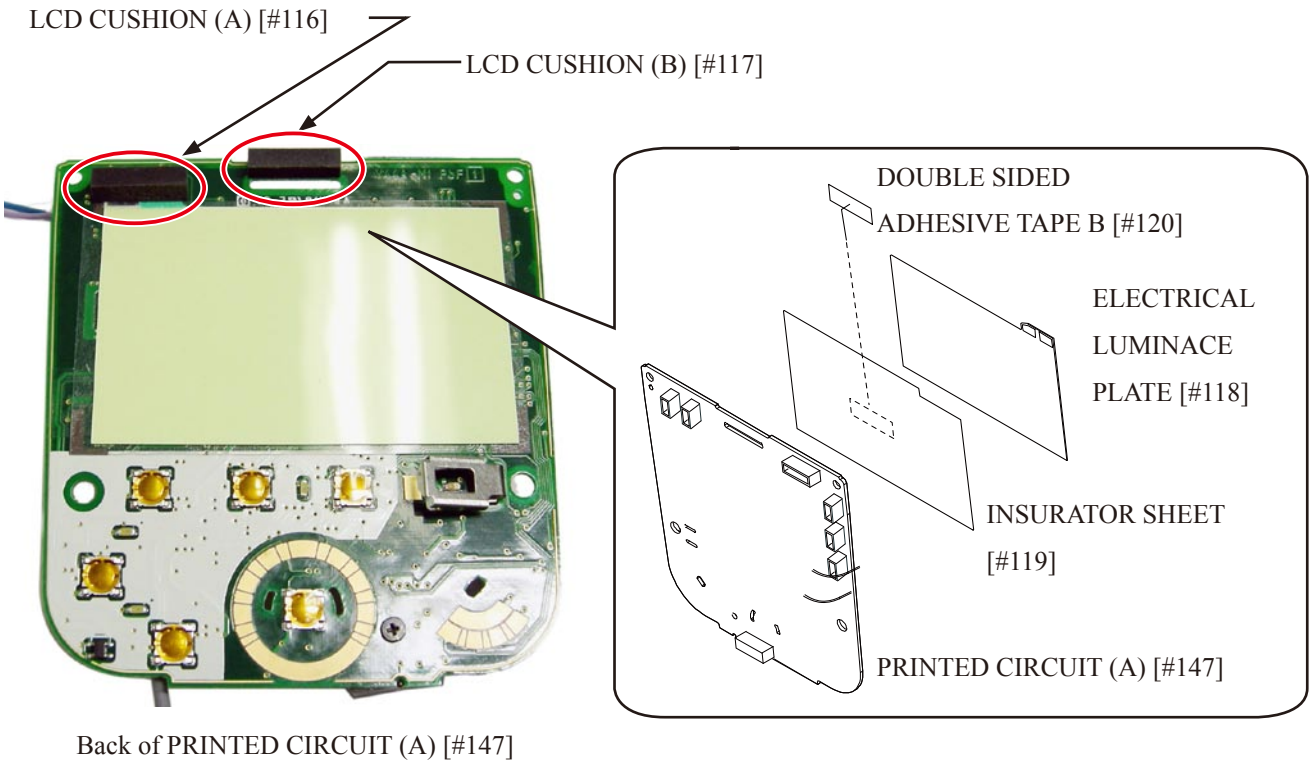


For the power SW section, place the click post with the planar surface facing upwards.

For the dial section, place the click post with the planar surface facing downwards, and put the edge of the spring in the cutout.

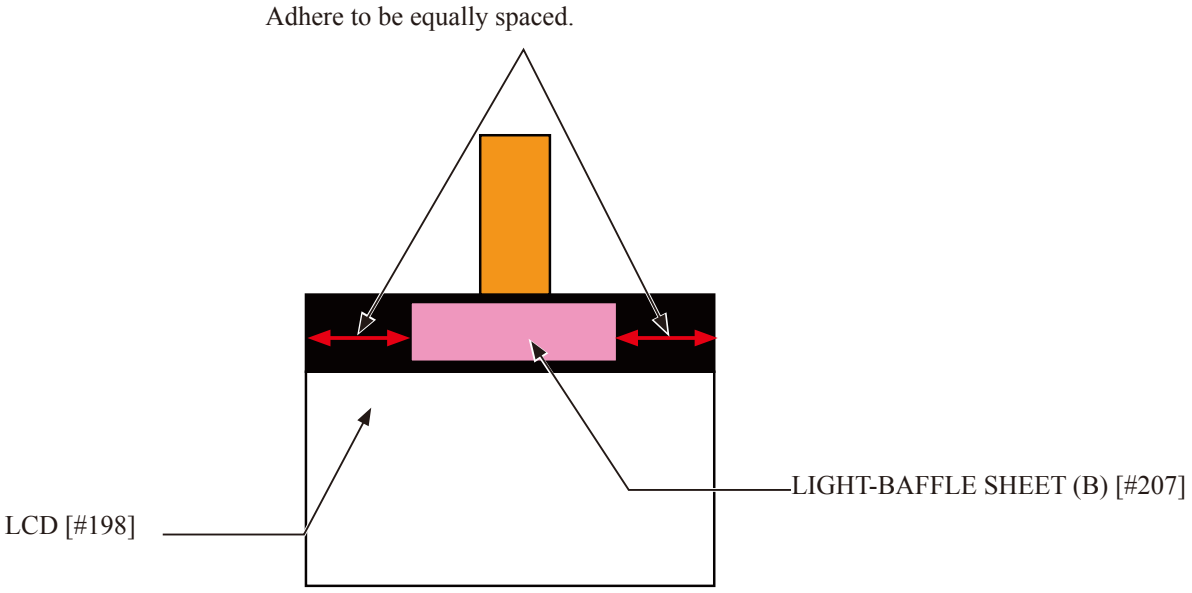
PRINTED CIRCUIT (A)

- Adhere the insurator sheet [#119].
- Adhere the EL [#118].
- Adhere the LCD cushion (B) [#117]
- Adhere the LCD cushion (A) [#116].



Back of PRINTED CIRCUIT (A) [#147]

- Adhere the light-baffle sheet B [#207] to the LCD [#198].



・Place the LCD [#198] with the liquid crystal section facing downwards, and mount on the cover (F).

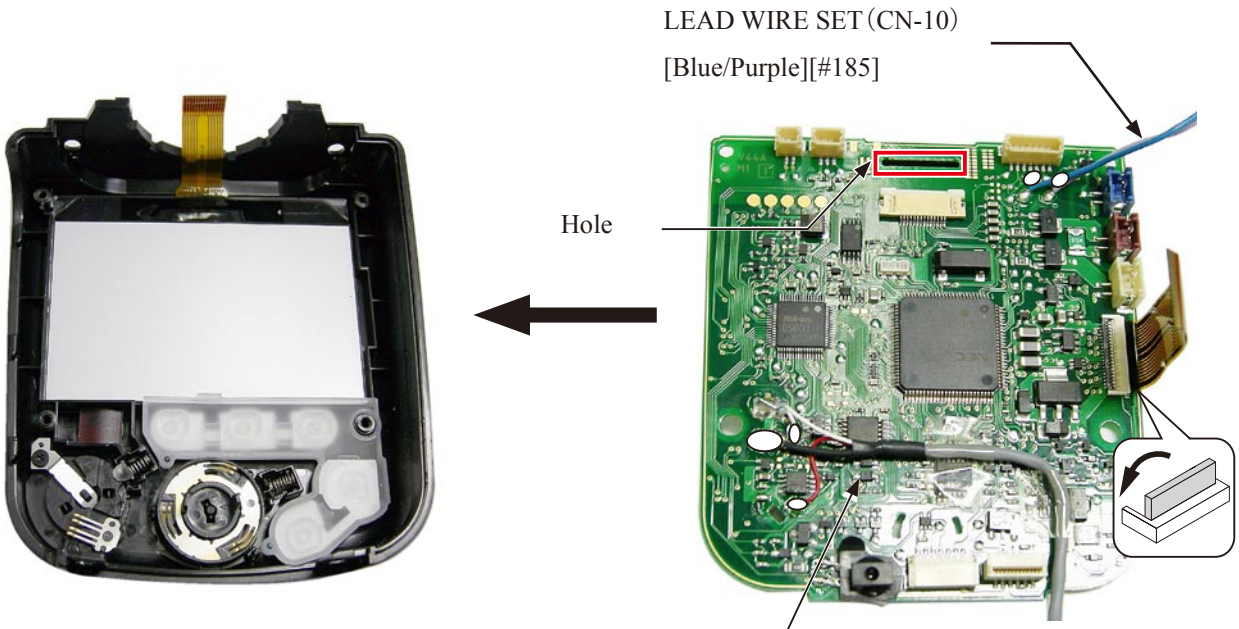
LCD [#198]

COVER (F) [#112]

・Solder the lead wire set（CN-10）[Blue/Purple][#185] at two places.

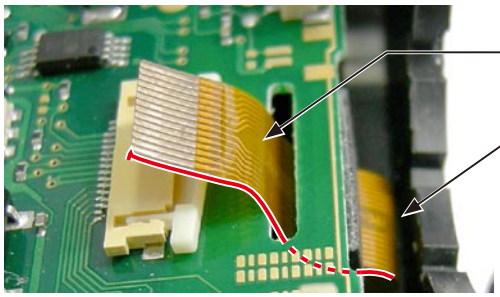
・Solder the lead wire set（CN-17）[Red/White][#194] at three places.

・While putting the FPC of the LCD [#198] into the hole of the printed circuit（A）[#147], mount the printed circuit (A) on the cover (F).



・Connect the FPC of the LCD [#198] to the connector.

・Tighten the four screws [#005].



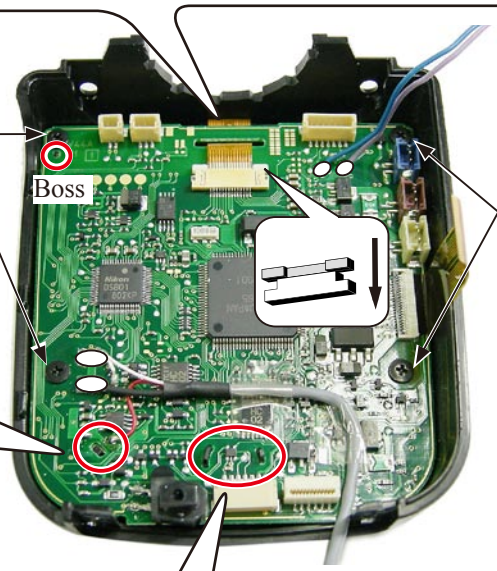
FPC of LCD[#198]

・Pass the FPC through the hole of the printed circuit (A).

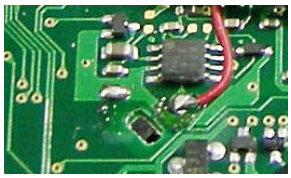
・Arrange the FPC.

SCREW [#005] × 2

Boss



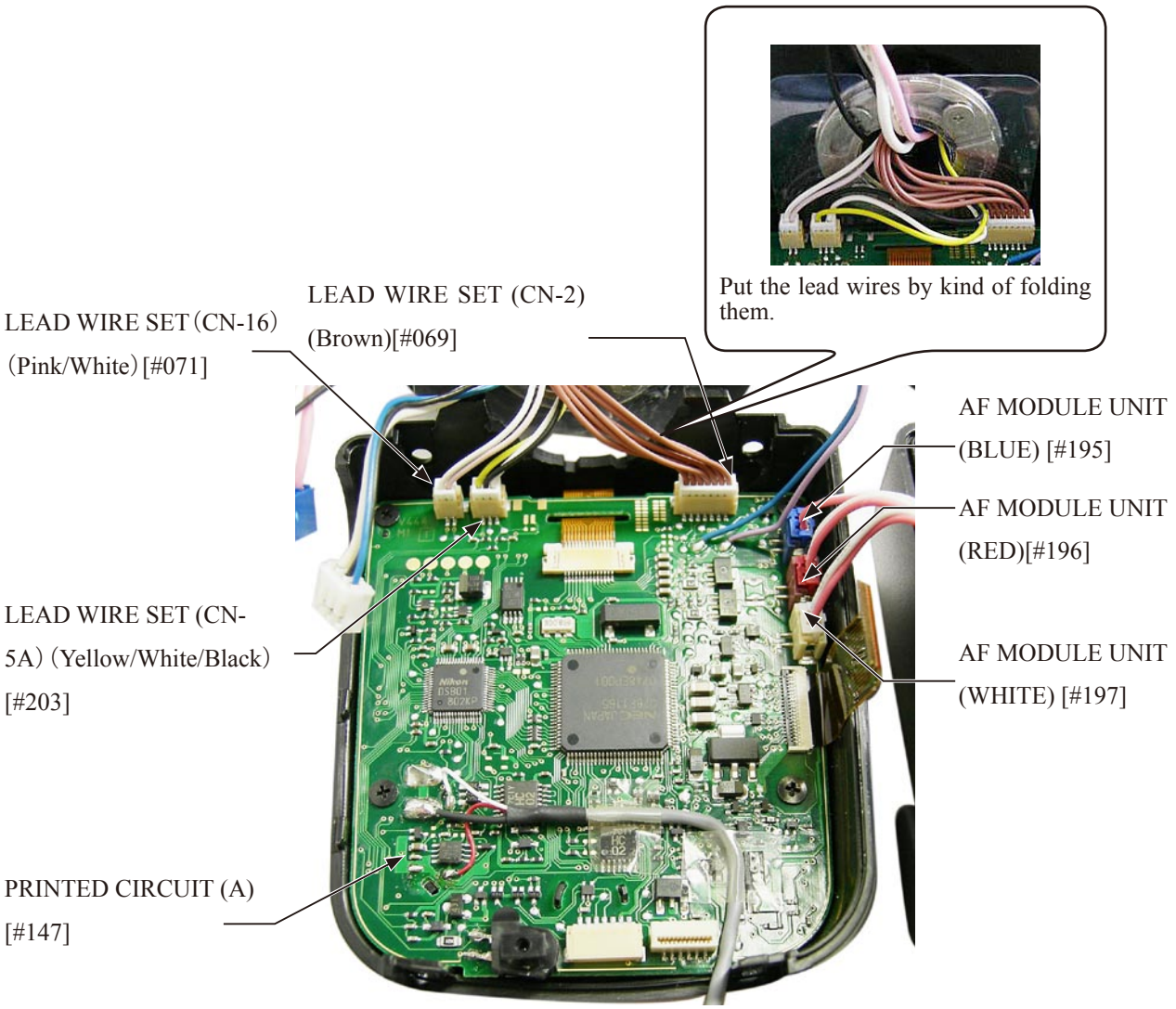
SCREW [#005] × 2



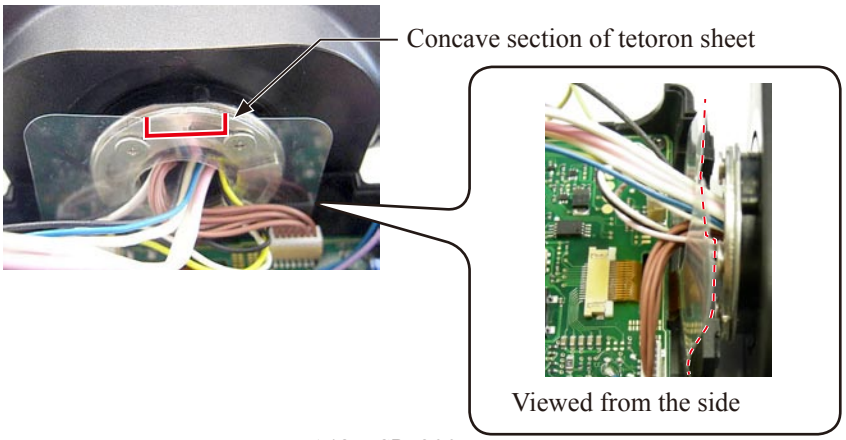
Align the protrusion of the lock release button [#142] with the hole of the printed circuit (A).

Position the position of the convex sections of the button holder as above, and align them with the holes of the printed circuit (A).

- Connect the AF module unit (blue wire) [#195], AF module unit (red wire) [#196], and AF module unit (white wire) [#197] to each connector of the cover（E）[#086].
- Connect the lead wire unit（CN-16）(Pink/White wires）[#071], lead wire set (CN-5A）(Yellow/White/Black wires）[#203], and lead wire set (CN-2）(Brown wire)[#069] to each connector of the printed circuit（A）[#147].

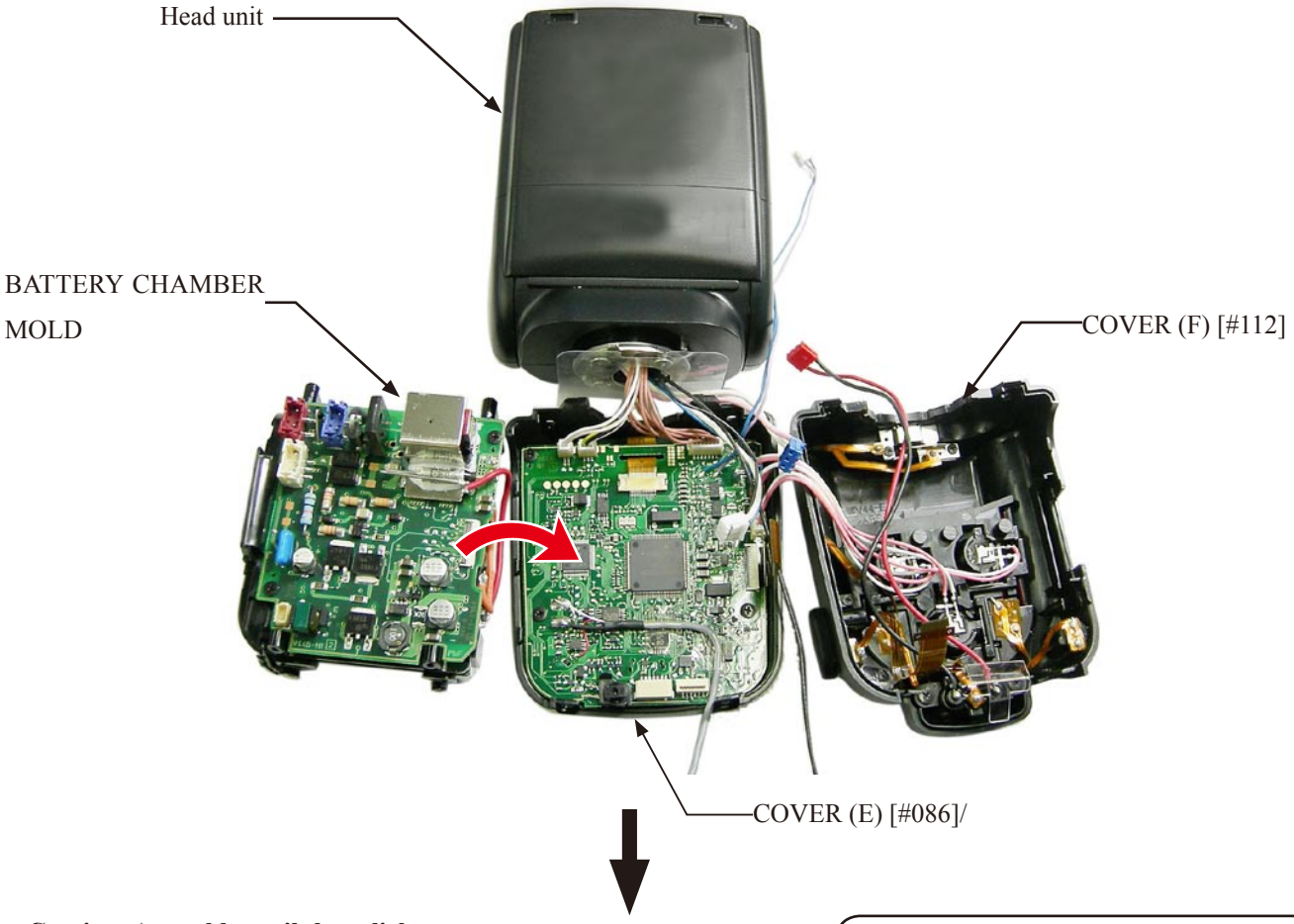


Caution: Be careful of the position of the tetoron sheet, (which must be between the connector and the turn plate.) Place the tetoron sheet with the concave section facing upwards.

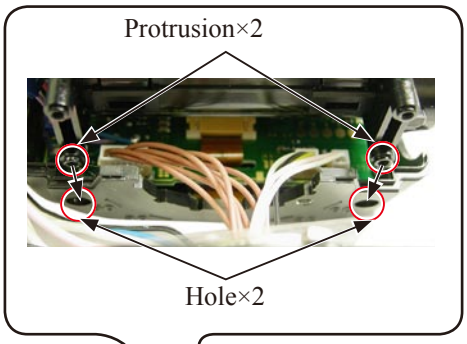


HEAD UNIT / BATTERY CHAMBER MOLD / COVER (E) / COVER (F)

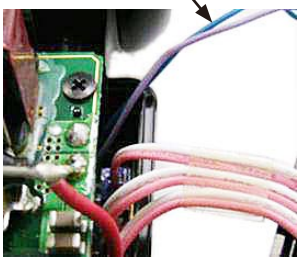
・Assemble by four protrusions of the battery chamber mold (A) [#148] with the holes of the cover (E) [#086].



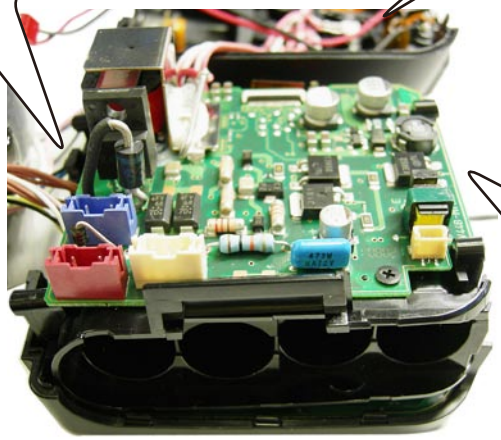
Caution: Assemble until they click.

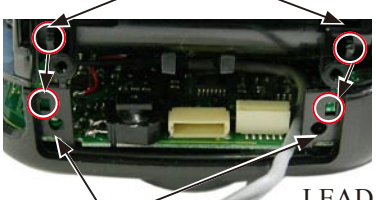


LEAD WIRE SET (CN-10) [Blue/Purple]



Be careful NOT to pinch the lead wires and make asembly by kind of pushing the wires to the sides.

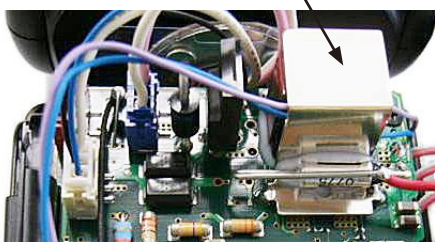




Push the lead wire set (CN-17) [Red/White] to the side of the connector.

- Put the fiber cable [#068]. <Fig.1>
- Connect the FPC lead [#004] to the connector.
- Connect the lead wire set（CN-3）[Blue/Black/White wires][#070] of the head unit to the white connector (large).
- Connect the lead wire set（CN-7）[Pink/White] [#082] of the head unit to the blue connector.
- Connect the lead wire set (CN-10）[Blue/Purple][#185] of the printed circuit (A) [#147] to the white connector (small).

Radiator plate



Put the lead wire set (CN-10) [Blue/Purple] inside the radiator plate.

LEAD WIRE SET (CN-7）
[Pink/White][#082]

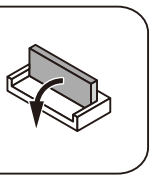
LEAD WIRE SET（CN-3）
[Blue/Black/White][#070]

LEAD WIRE SET（CN-10）
[Blue/Purple][#185]

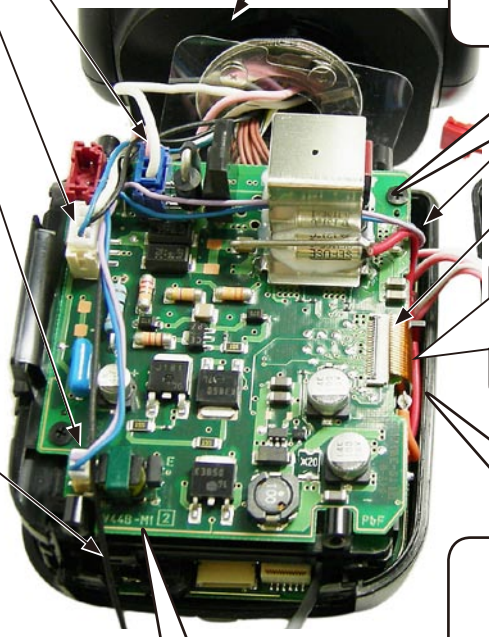
Head unit

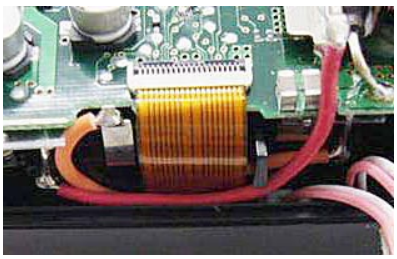
PRINTED CIRCUIT (A) [#147]

FPC LEAD [#004]



FIBER CABLE [#068]





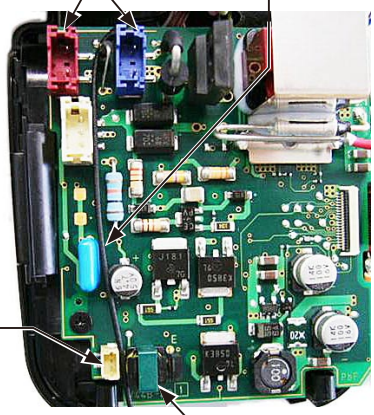
Caution: Place the FPC lead inside the red wires as above.

<Fig.1>

Red and blue connectors

FIBER CABLE [#068]

Pass the fiber cable [#068] between the red and blue connectors, and then between the EL connector and transformer.



EL connector

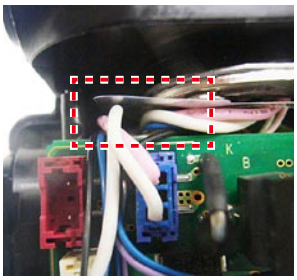
Then, allow [#068] to swing down outside.

Transformer

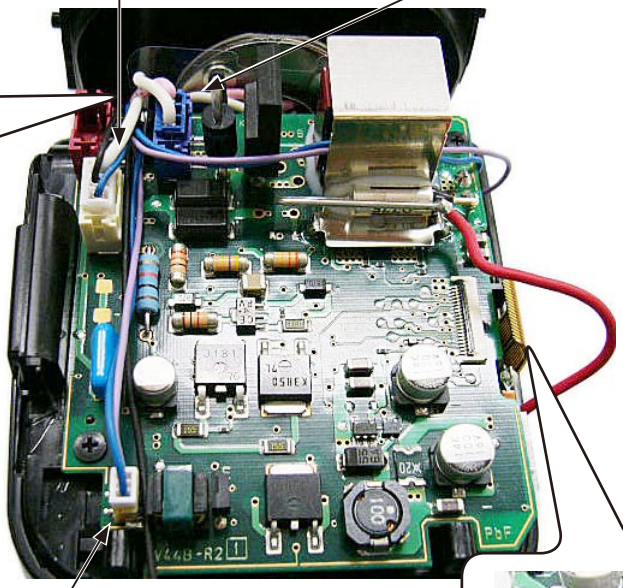
・Arrange the wires.

LEAD WIRE SET（CN-3）
[Blue/Black/White][#070]

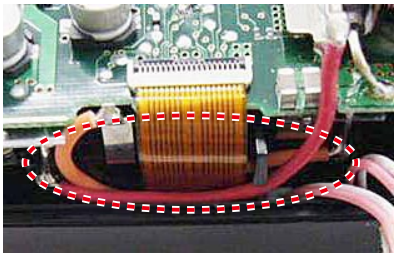
LEAD WIRE SET（CN-7）
[Pink/White][#082]



Caution: Place the lead wire set（CN-3）[Blue/Black/White] first, and then the lead wire set (CN-7) [Pink/White] inside the red dotted frame. Put the lead wire set [Blue/Purple] between the blue and red connectors.



LEAD WIRE SET（CN-10）
[Blue/Purple] [#185]

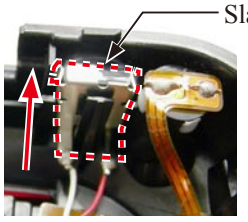


Caution: Arrange the lead wire set（CN-8A）[Red] by kind of pushing to the bottom so that it does not touch around the groove of the cover E/F.

・Put the lead wire set（CN-17）[Red/White wires] [#194] of the printed circuit (A) [#147], together with the slave plate, into the cover (F).

PRINTED
CIRCUIT (A)
[#147]

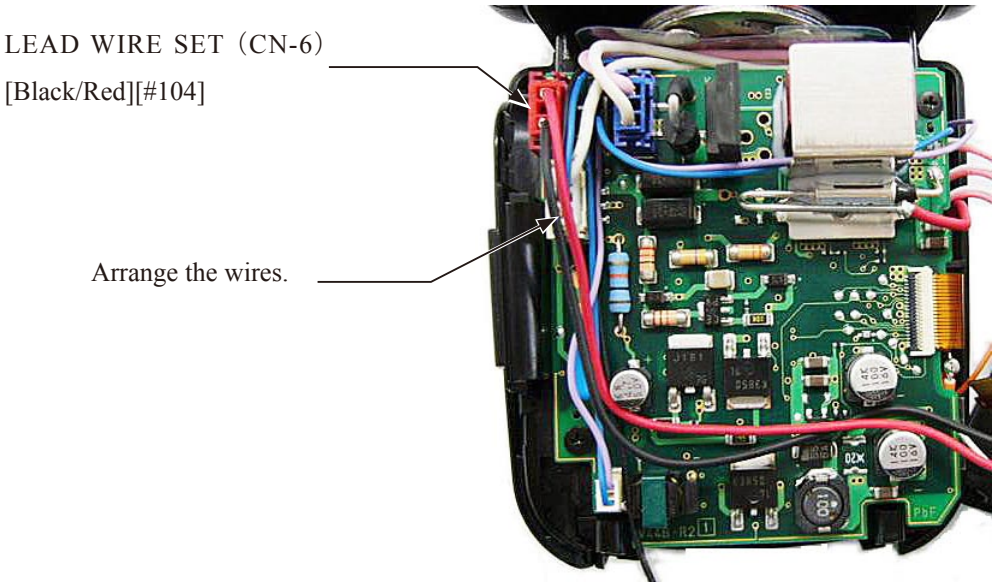
LEAD WIRE SET（CN-17）
[Red/White] [#194]



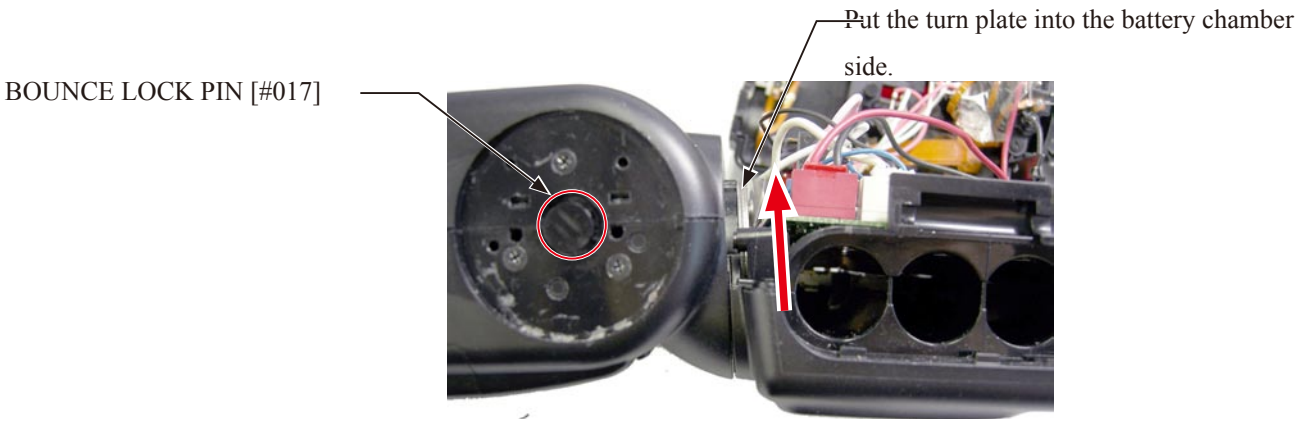
Slave plate

Insert all the way to be seated.

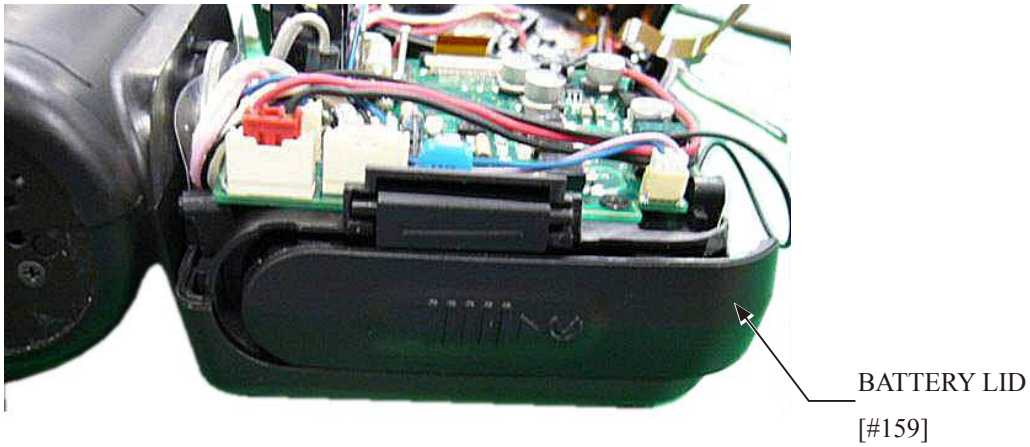
・Connect the lead wire set (CN-6) [Black/Red][#104] of the cover（F）[#112] to the red connector.



・By holding the bounce lock pin [#017], mount the battery chamber mold on the head unit.

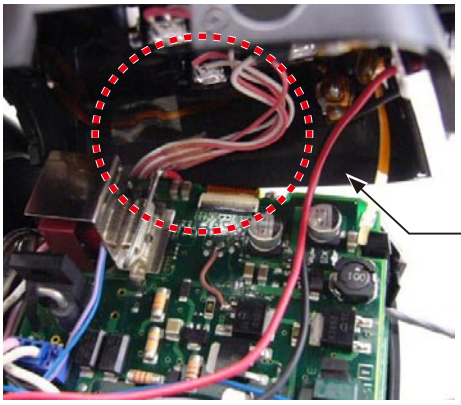


・Mount the battery lid [#159] unlocked on the cover（E）[#086].

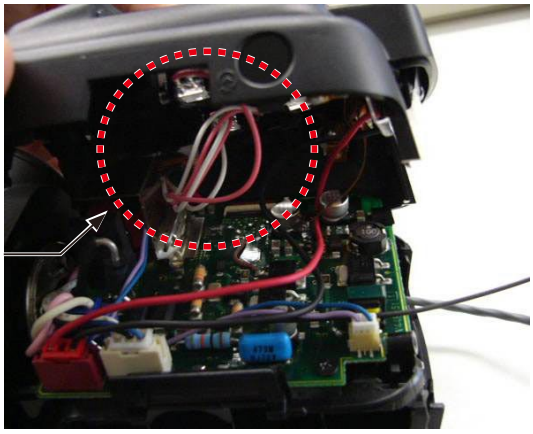


・Attach the cover（E）[#086].

Caution: Check whether the lead wires of the AF module unit are pushed to the side of the cover (see left picture), and make assembly.

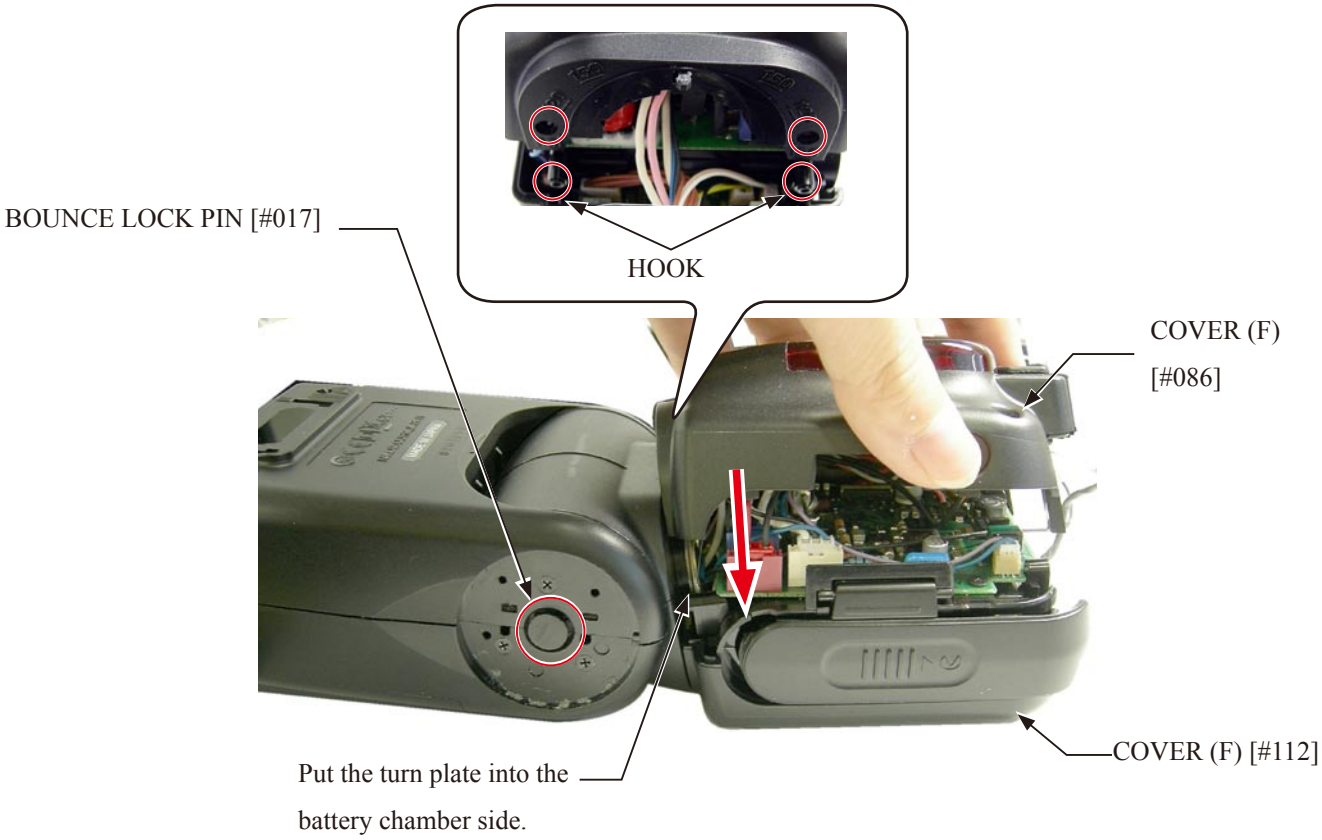


OK:
Wires are pushed towards the side of the cover.



NG: Wires are slackened and not pushed towards the side of the cover.

・While holding the bounce lock pin [#017], hook the cover（E）[#086] and cover（F）[#112] at two places, and mount them on the head unit.



・Close the battery lid [#159].

・Tighten the two screws [#005].

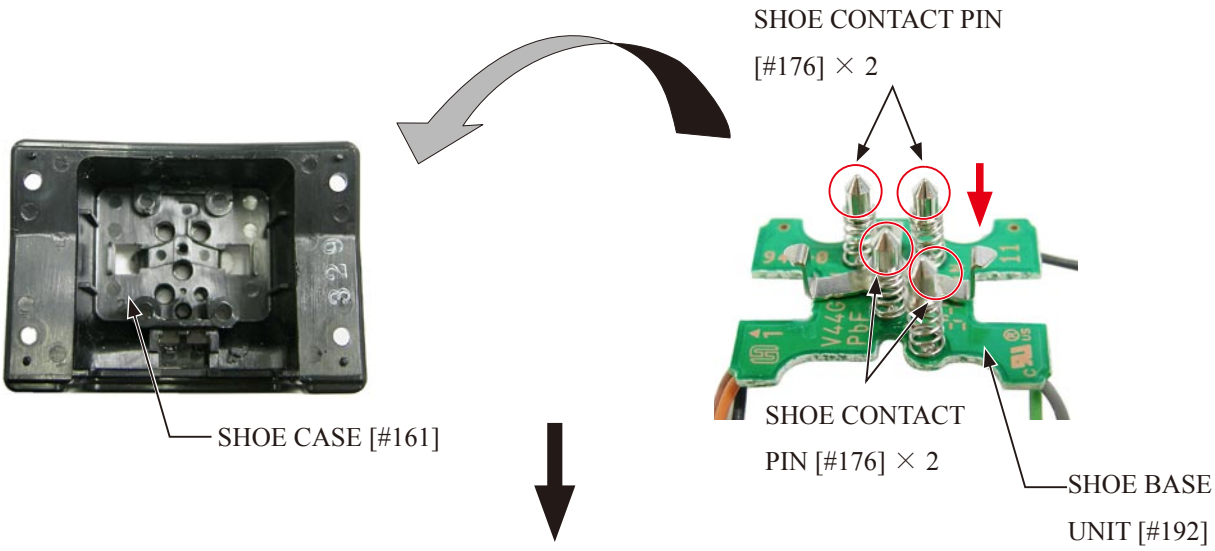
・While holding the bounce lock pin [#017], give the head unit half-turn.

・Tighten the two screws [#005].

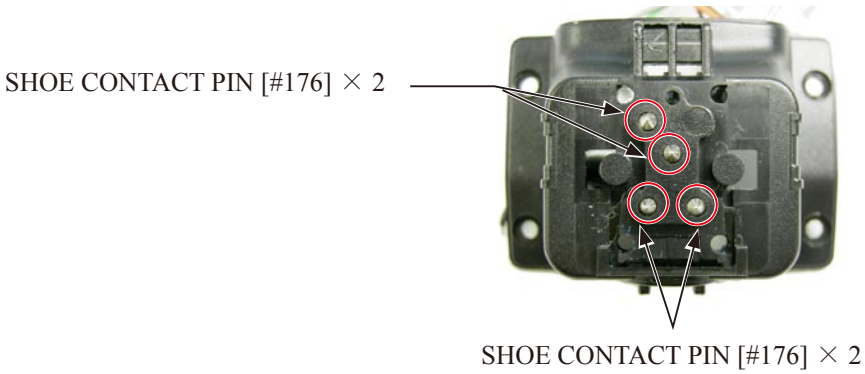
SHOE

・Mount the shoe base unit [#192] on the shoe case [#161].

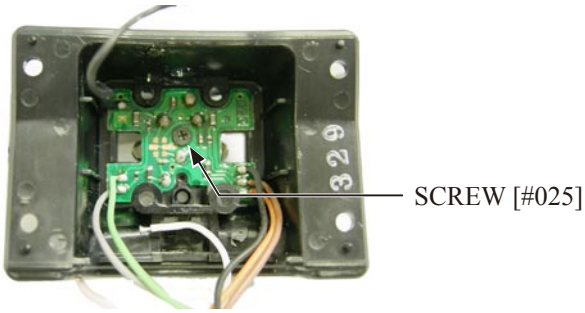
・Attach the four shoe contact pin [#176] to the shoe base unit [#192].



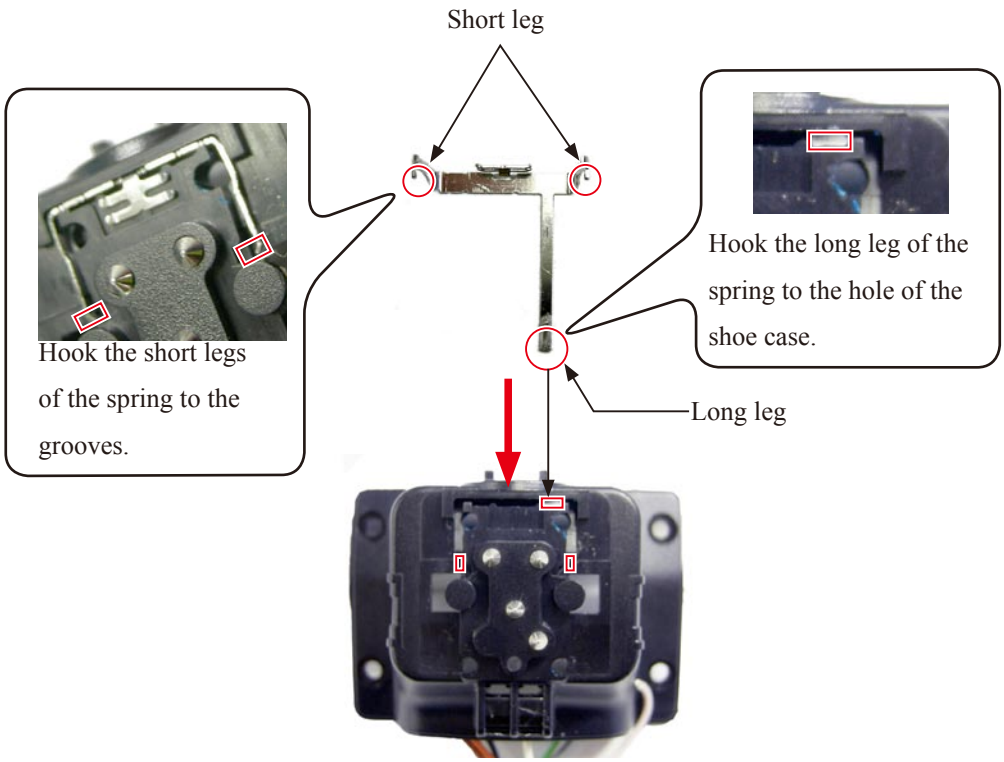
Viewed from the outside



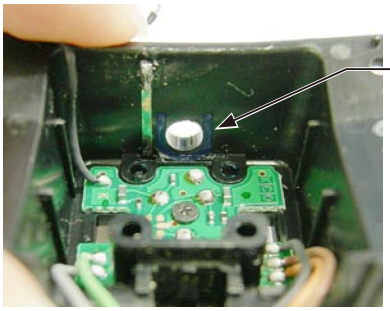
・Tighten the screw [#025].



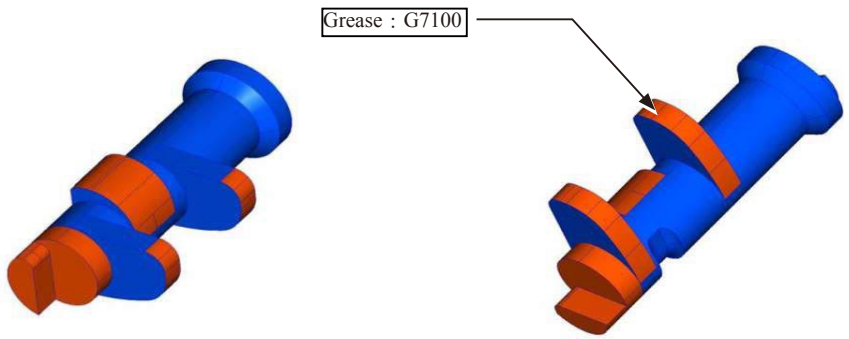
・Attach the shoe GND spring [#177].



・Apply the grease to the inside of the shoe case [#161].

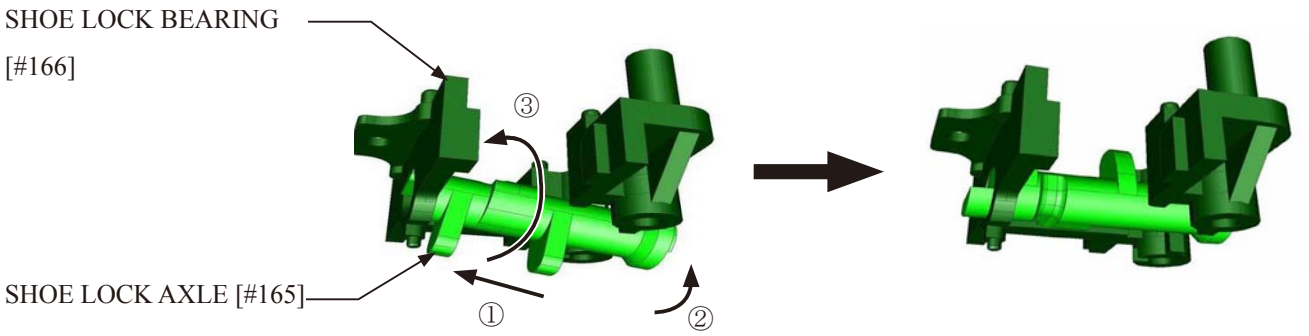


・Apply the grease to the shoe lock axle [#165].

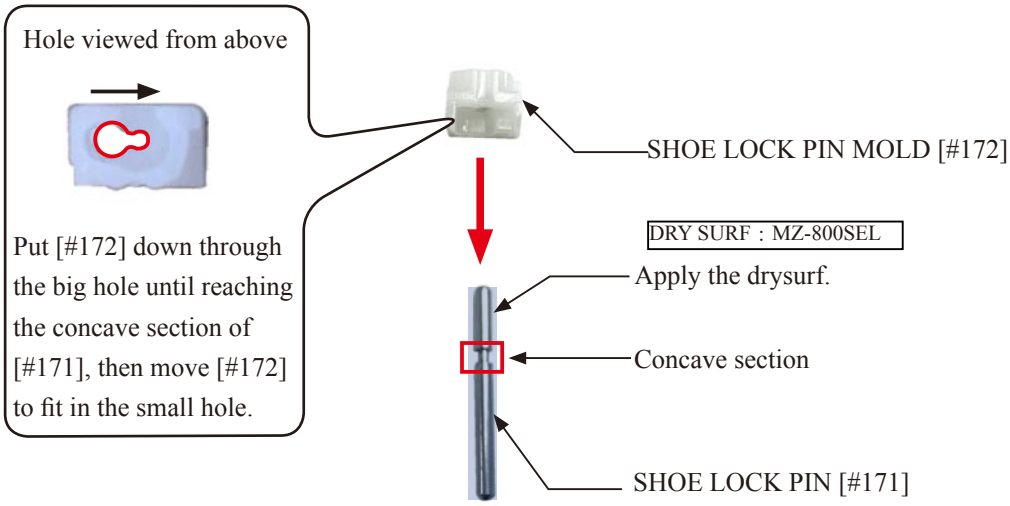


Apply to the arrange areas.

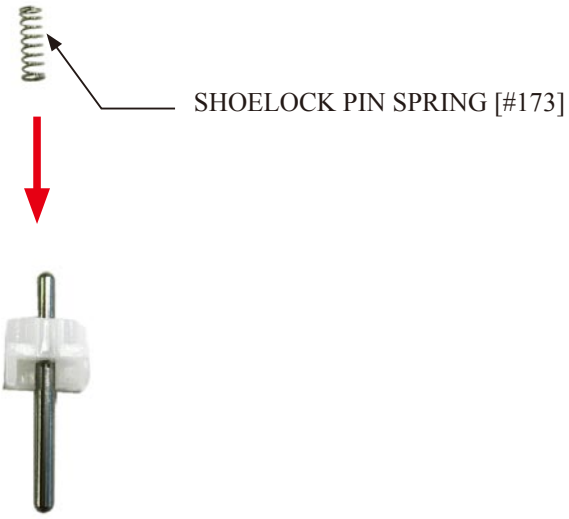
・Attach the shoe lock axle [#165] to the shoe lock bearing [#166] in the order from ① to ③



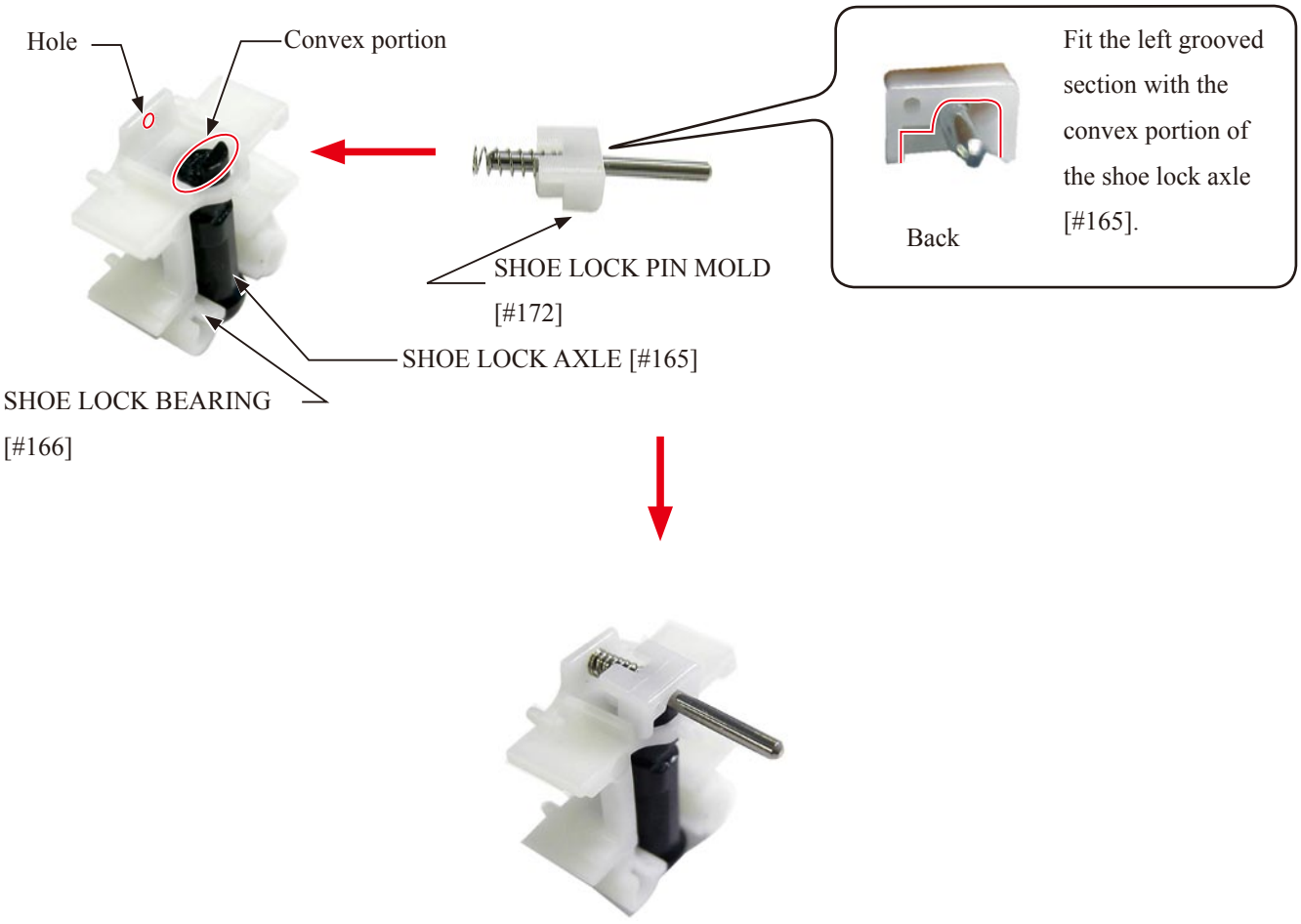
・Put the shoe lock pin mold [#172] on the shoe lock pin [#171].



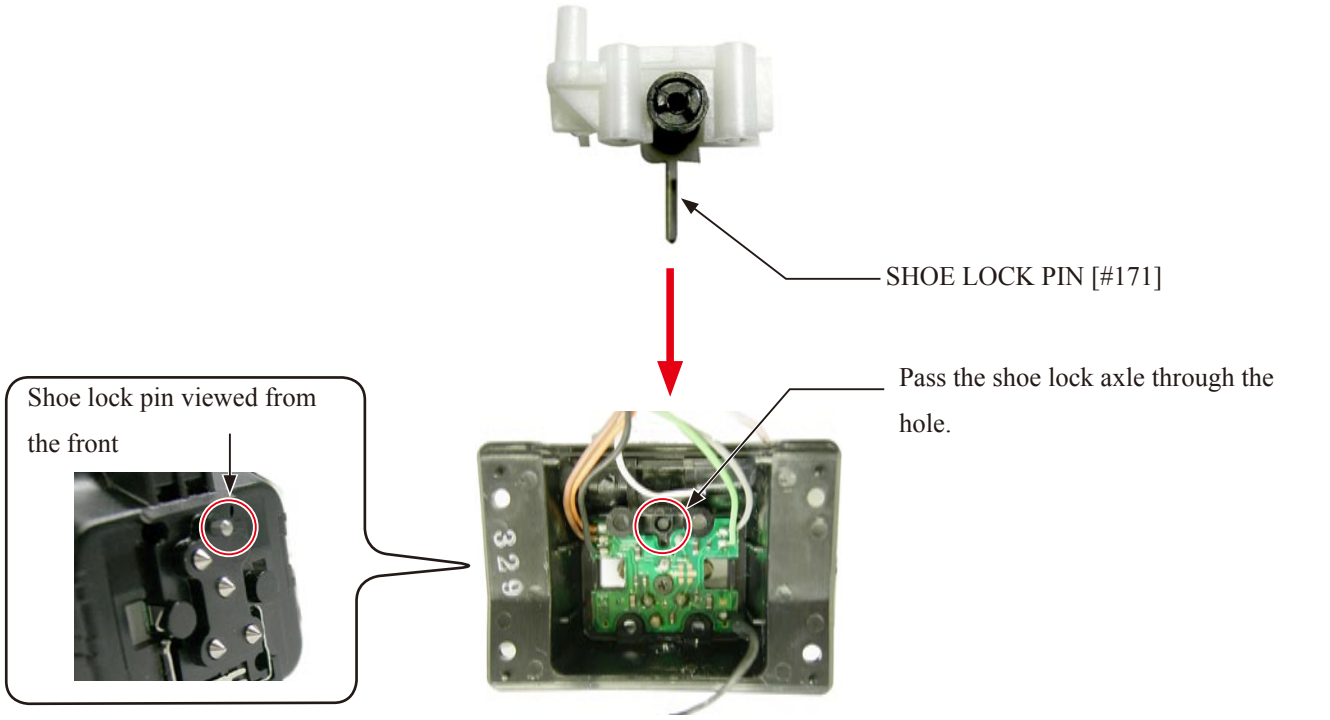
・Attach the shoe lock pin spring [#173].



・Fit the shoe lock pin mold [#172] with the convex portion of the shoe lock axle [#165], and pass it through the hole of the shoe lock bearing [#166] to assemble them as below.



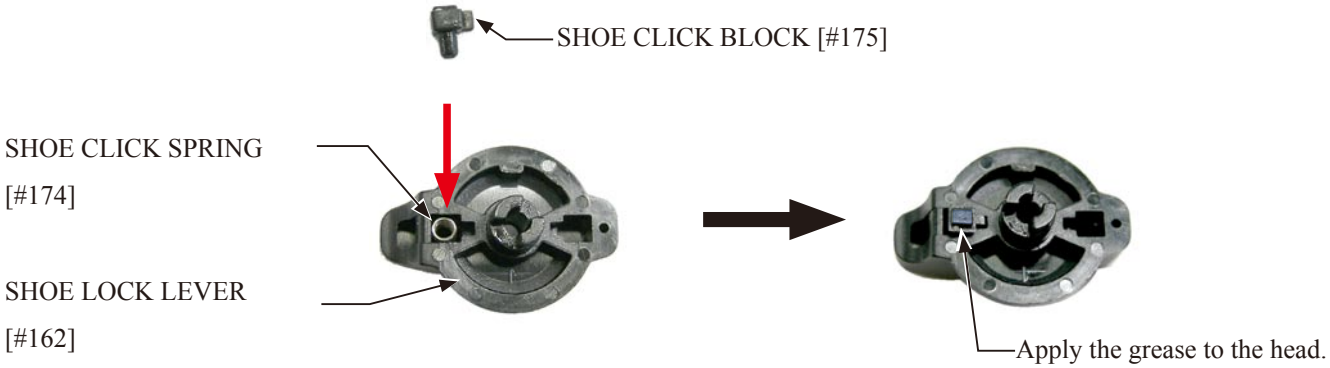
・Mount the shoe lock pin [#171] on the shoe case [#165].



・Attach the shoe click spring [#174] to the shoe lock lever [#162].

・Attach the shoe click block [#175].

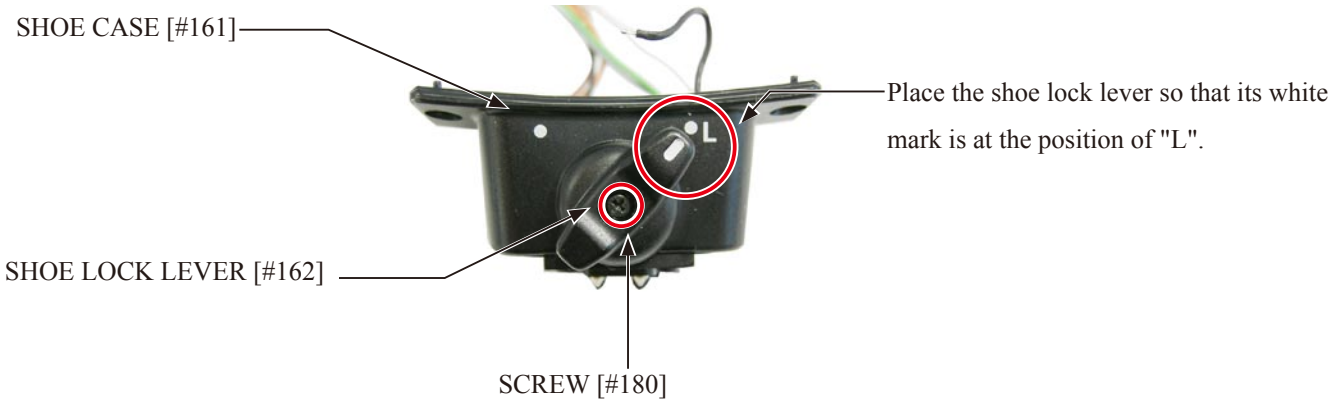
Handle the shoe click spring and shoe click block with care, because they are so small that they will be easily popped out.



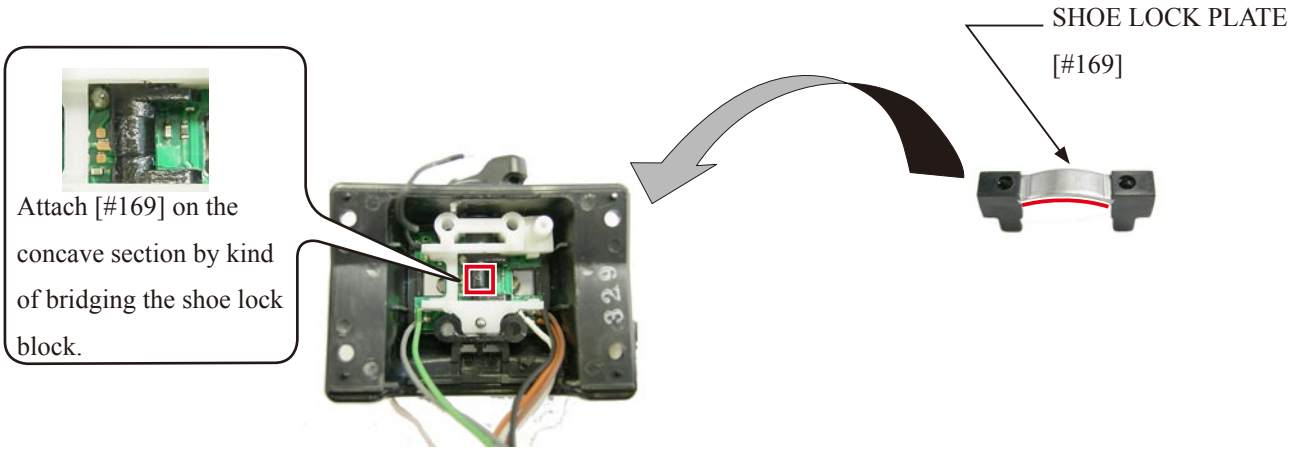
・Attach the shoe lock lever [#162] to the shoe case [#161].

・Tighten the screw [#180].

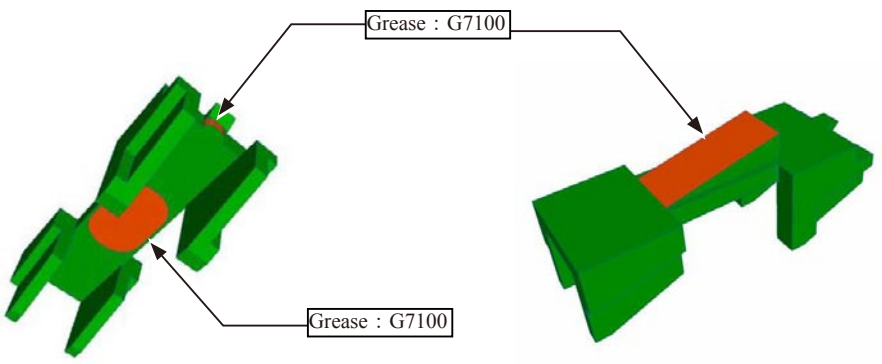
Caution: When the shoe lock lever is attached, be careful NOT to drop the shoe click spring and shoe click block.



・Attach the shoe lock plate [#169].

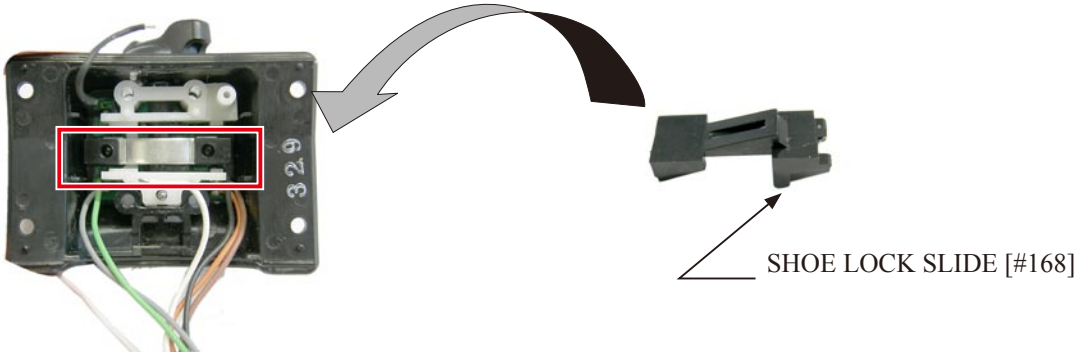


・Apply the grease to the shoe lock slide [#168].

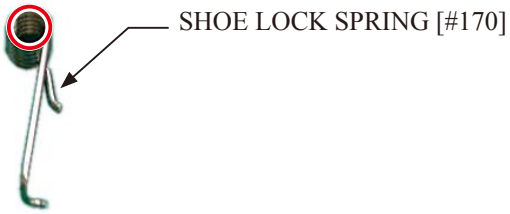


Apply the grease to the orange area (at three places in total).

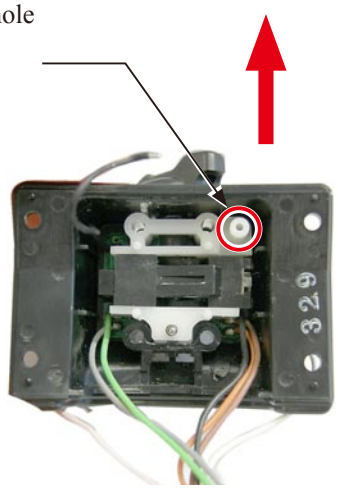
・Mount the shoe lock slide [#168].



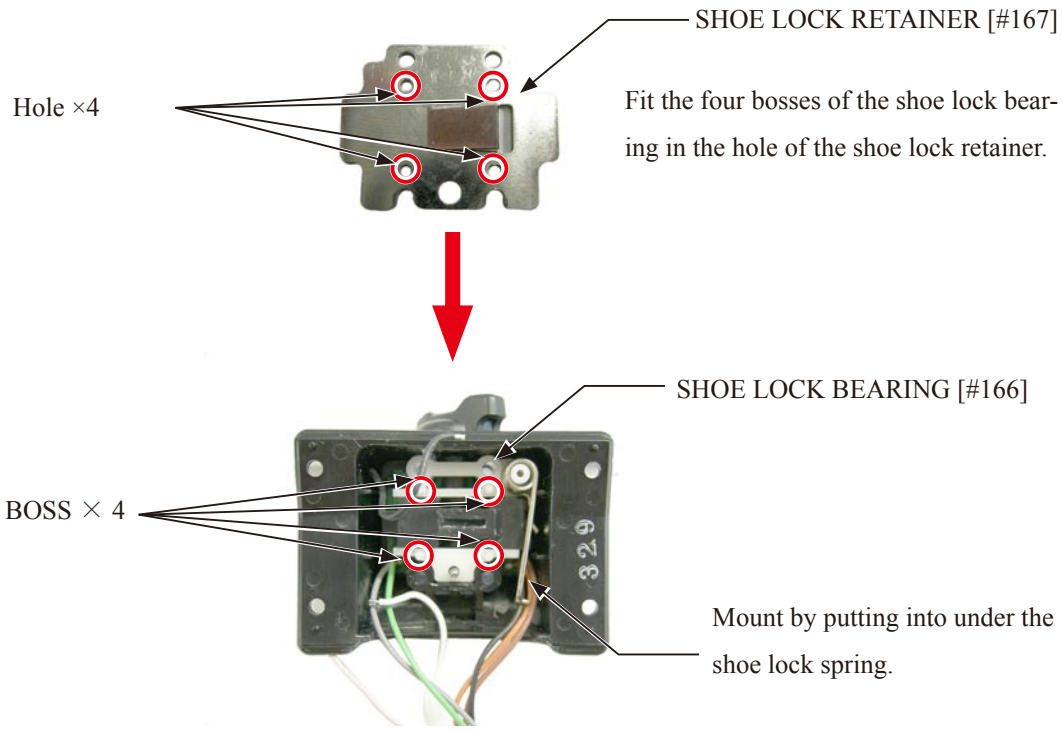
・Attach the shoe lock spring [#170].



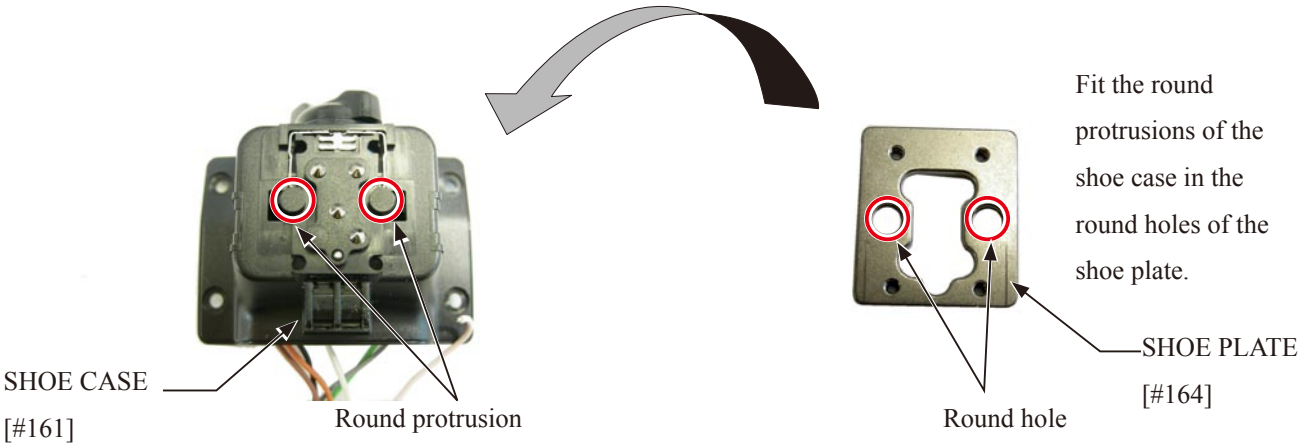
Fit this protrusion through the hole of the spring.



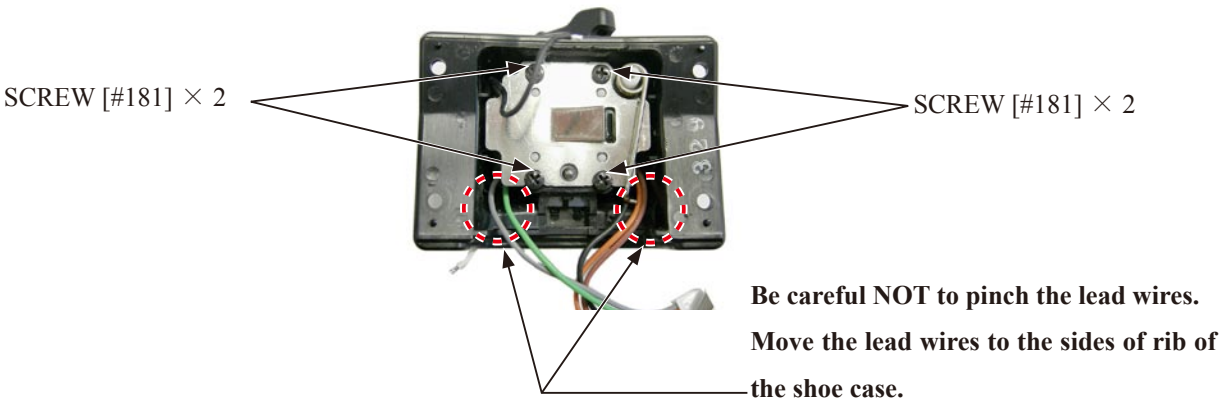
・Mount the shoe lock retainer [#167].



・Mount the shoe plate [#164] on the shoe case [#161].

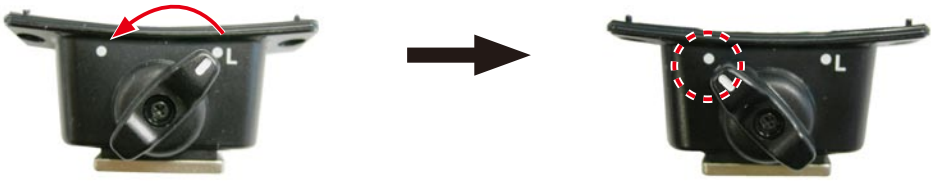


・Tighten the four screws [#181].

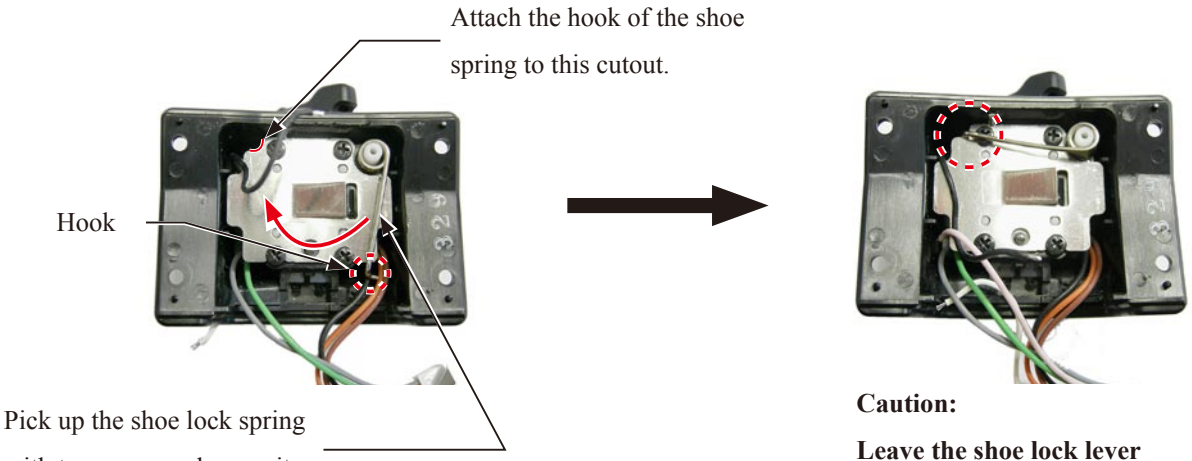


・Set the shoe lock lever [#162] to UNLOCK position.

・Pick up the edge of the shoe lock spring [#170] and attach its hook as shown in the lower right picture.

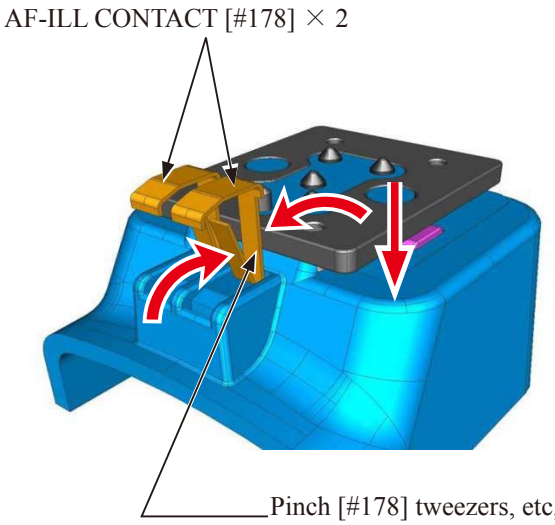


Shoe lock lever: LOCK position　　Shoe lock lever: UNLOCK position



Caution:
Leave the shoe lock lever UNLOCKED.

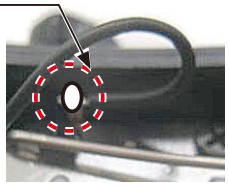
・Mount the two AF-ILL contacts [#178] on the shoe case as below.



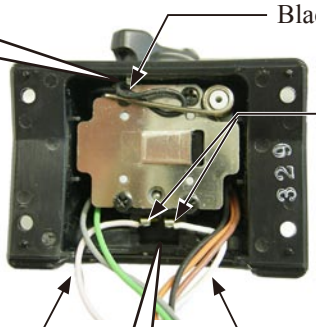
・Solder the two AF-ILL contacts [#178].

・Solder the show GND spring [#177].

Edge of the shoe GND spring



When soldering [#177], be careful that the solder does NOT touch the shoe case, in order to avoid heat transmission to the shoe case.

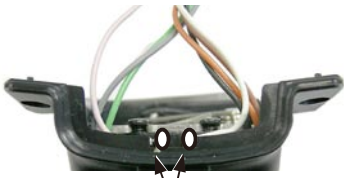


Black lead wire

AF-ILL CONTACT [#178] × 2

Pink lead wire

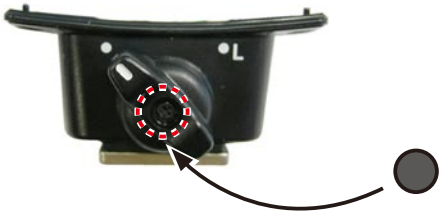
White lead wire



Solder×2

Be careful of the soldering positions because color is similar.

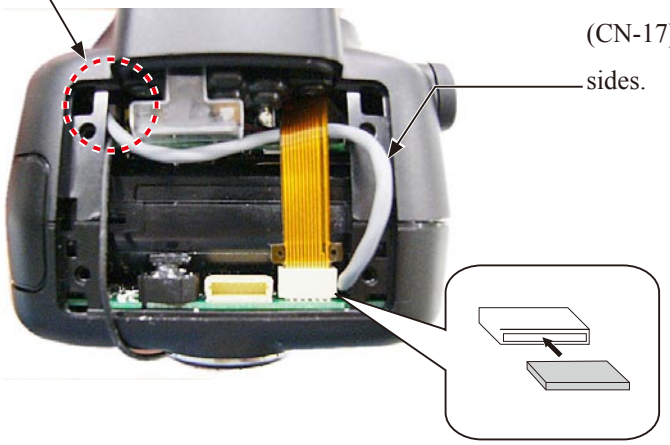
・Secure the shoe lock lever cover [#163] with the double-stick tape.



SHOE LOCK LEVER COVER [#163]

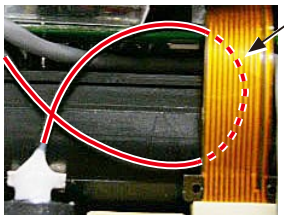
・Connect the FPC（A）[#100]of the cover（F）[#112] to the connector.

Pinch the lead wire set (CN-17) in between the mold and insulator sheet (C).



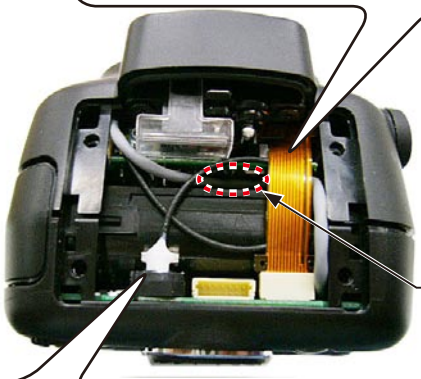
Push the lead wire set (CN-17) outwards to the sides.

・Insert the fiber cable [#068] in the fiber retainer plate [#202].
・After the insertion, attach it with bond.

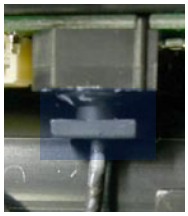


The FPC must be placed on the fiber cable (in order to hold the cable.)

Twist the fiber cable so that its head comes to the front.



Put the lead wire set (CN-17) between the battery chamber mold and B printed circuit.

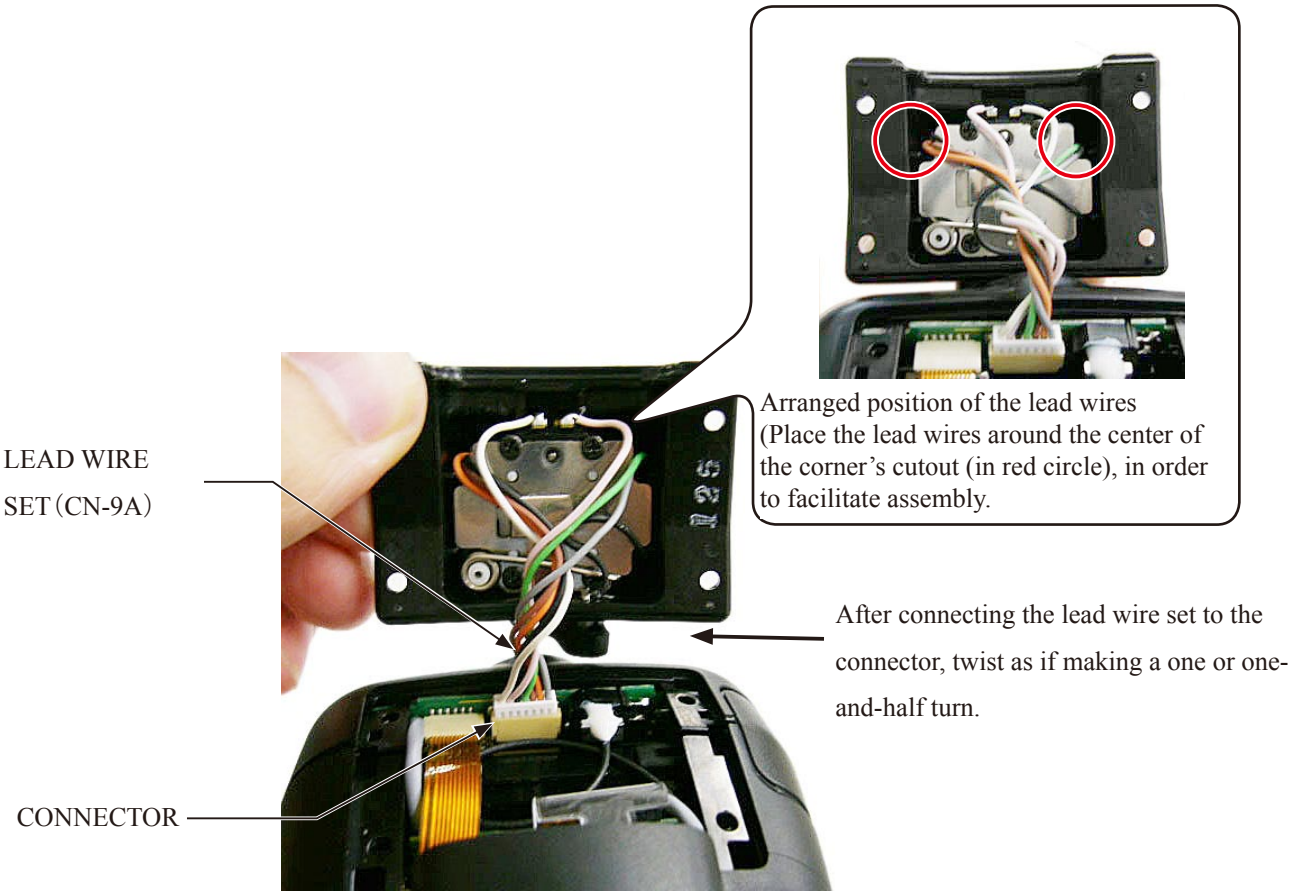


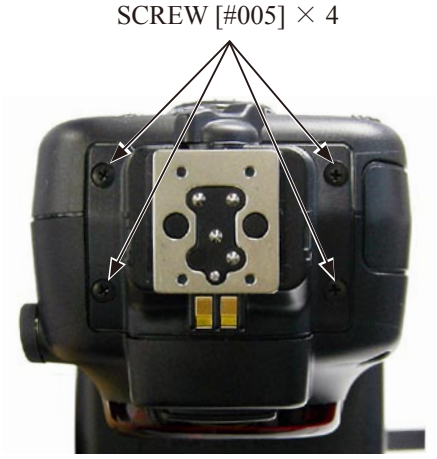
Apply the bond by covering the fiber cable and fiber retainer plate.

・Set the shoe.

・Connect the lead wire set (CN-9A), which are soldered to the shoe printed circuit [#192], to the connector.

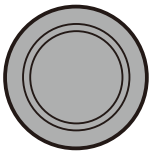
・Tighten the four screws [#005].





SIDE RUBBER

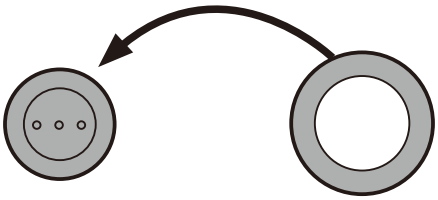
・Secure the side mold (B) [#010] with the double-stick tape [#011].



SIDE MOLD (B) [#010]

・Secure the side rubber [#008] and side mold (A) [#009] with the double-stick tape [#011].

Put side mold (A) [#009] on the side rubber [#008].



SIDE RUBBER [#008]　　SIDE MOLD (A) [#009]

Adjustment

Necessary equipment:

1. Adjustment software (J65118) *Refer to Page A71 of Repair Manual for the details.
2. Personal computer *Refer to Page A71 of Repair Manual for the details.
3. High-speed communication tool (J15405)
4. Flash meter
5. Stabilized power supply (possible to output 0-6V, 3A)
6. Standard reflector (J18360)
7. Chart of inspecting focusing light (Copy and use the Page A90 of the Repair Manual.)

Adjustment items:

1. Firmware up Procedure
2. Writing Reference Value
3. Main Condenser Voltage Insp.and Adj
4. Manual Flash light qty Insp.and Adj
5. Auto Flash light qty Insp.and Adj
6. Color filter sensor Insp.and Adj
7. CR circuit adjustment
8. Inspection & adjustment of focusing light

＊ The inspection (& adjustment) of all the Item 2-7 is made electrically by using PC, so be sure to follow the instruction of the adjustment software.

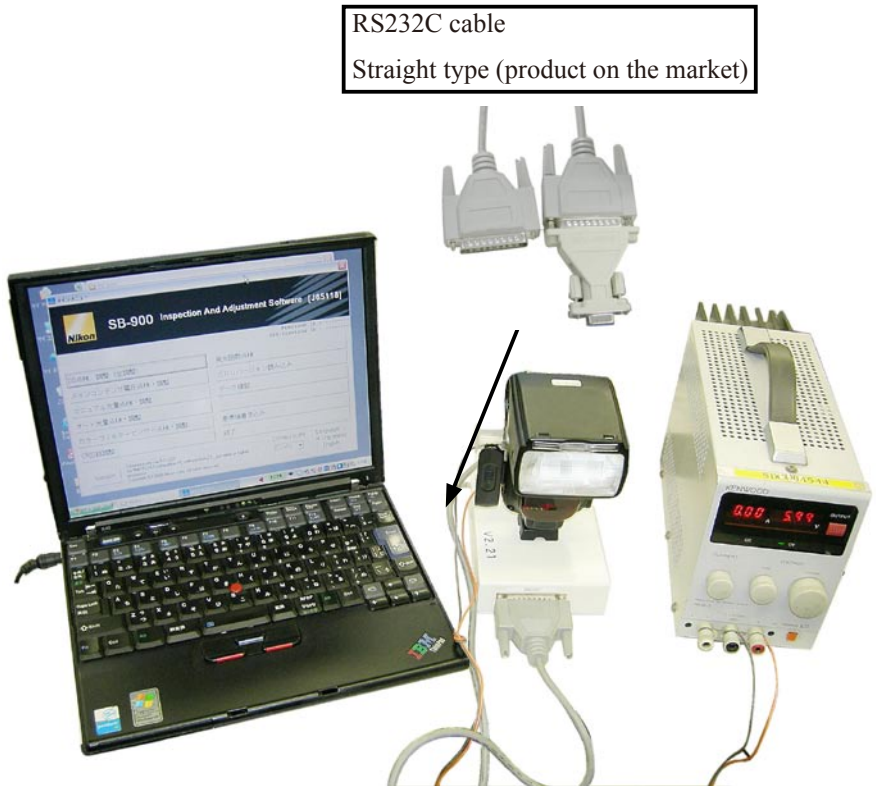
Regarding 8."Focusing light adjustment", be sure to follow the instruction of Page A90.

How to connect PC and SB-900 when adjustments are made

＊ Serial communications

1. Setup of the NEW high-speed communication tool (J15405)
   - Set "RS232C ⇔ USB change-SW" to "RS232C".
   - Remove 4 screws of the bottom-cover and insert 4 LR6-alkaline dry batteries.

2. Connection
   - Connect the serial port of PC and high-speed communication tool (J15405) via RS232C cable (product on the market).
   - Put SB-900 on high-speed communication tool (J15405).
   - Supply power for SB-900. (Stabilized power supply ＝ 6.0V)



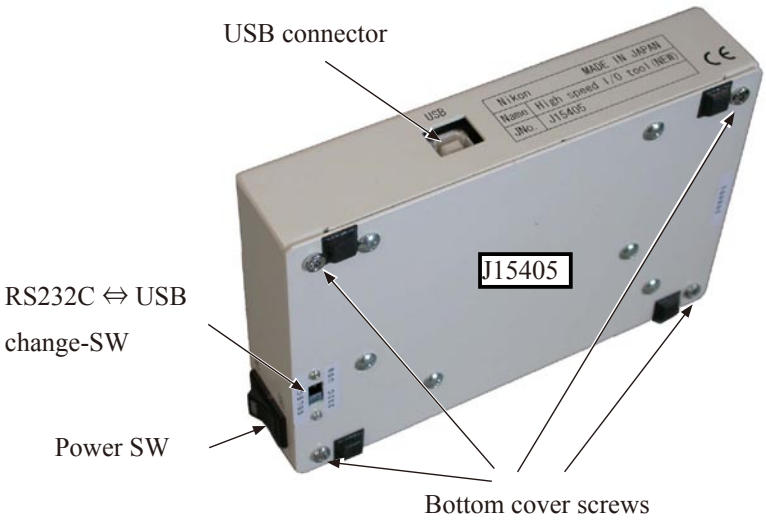
＊ USB communications

1. Setup of communication tool (J15405)

・Set "RS232C ⇔ USB change-SW" to "USB".

・In case 4 LR6-alkaline dry batteries are inserted in the tool, remove 4 screws of the bottom-cover to take out the batteries.

Note: For USB communications, batteries are NOT necessary because power is provided by PC.
Although there is no operational problem with batteries being inserted, in order to prevent liquid leakage, they should be taken out.



2. Connection

・Connect the USB port of PC and high-speed communication tool (J15405) via USB cable (product on the market).

・Put SB-900 on high-speed communication tool (J15405).

・Supply power for SB-900. (Stabilized power supply ＝ 6.0V)

USB cable
Straight type (product on the market)

Note: For USB communications, "Set the USB driver" as described on the next page.

Inspection & adjustment software （J65118）

<Operating environment> The following operating environment is required for installing this program on PC.

PC : IBM PC/AT compatible

OS : Windows XP Home Edition, Windows 2000,Windows Millennium Edition (Me),
Windows 98 Second Edition (SE)

CPU : 80486 100MHz Pentium 1.2GHz

RAM (memory) :32MB or more, HD 6MB-or-more free disk space is required when installing

Monitor resolution : 800×600 pixels or more

Interface : RS232C or USB

As long as the above hardware requirements are met, any PC such as desktop or laptop, etc is available.

<Notice on start-up>

When starting this program, close all other applications.

If some other applications are running, this program may not be activated.

<Procedure for installation>

The file (PSB900.EXE) of this program is provided via FD or e-mail.

Because this is the self-extracting file, decompress the file before installing, following the next procedure.

1. Create a folder for installation under a name you like and PC drive. (e.g.) C:\SB900
2. Copy the file (PSB900.EXE) in the created folder.
3. Double-click on the pasted file to display the following screen.
   Press the OK button, then decompression starts.
4. When the decompression of file is finished, the file (SB900.EXE) is created.
5. The installation is completed.

<Start-up of Program>

1. Double-click the file (SB900.EXE), then the Inspection & Adjustment program for SB900 starts.
2. To display in ENGLISH, select the radio button "ENGLISH" in "LANGUAGE" in the lower right-hand corner of the screen .
3. When the "HISTORY" button at the lower-left is pressed, the program version will be displayed.
4. Select each item button according to operation.
   Follow the instructions on the next screen that will be shown after pressing the item button.
5. In this program, communication port is selectable from "COM1" to "COM9".
6. To finish the program, press the "Close (×)" button in the right-hand corner of the screen or "QUIT".

Setup of USB driver

Install a decompression tool on PC beforehand to decompress ZIP files.

① Based on the below, refer to the Internet website of FTDI company, and download the compressed file to PC.
Method: "http://www.ftdichip.com" → "Drivers" → "VCP" → Select "OS" → Click "Driver Version" appropriate to OS

② Decompress the downloaded file, then move the file to a folder for the appropriate driver.

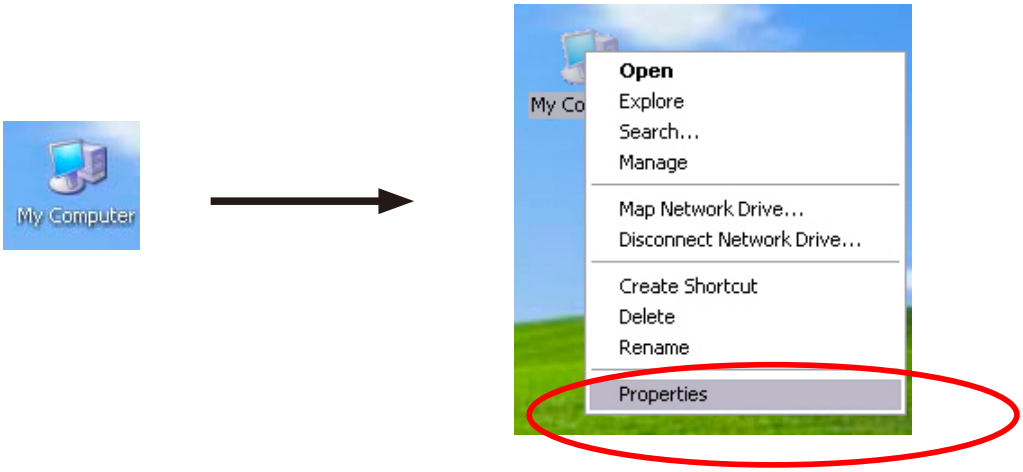
③ Again, click "setup execatable" from the website of FIDI company to download the execution file. Then, put it in the same folder of ② , and execute it.

④ Turn the power of NEW high-speed communication tool (J15405) to ON.

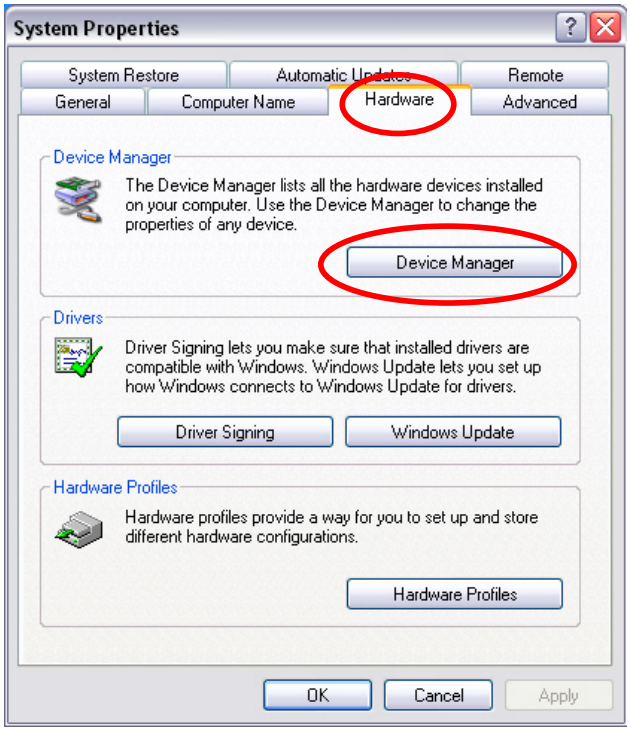
⑤ Connect the USB wire.

COM Number

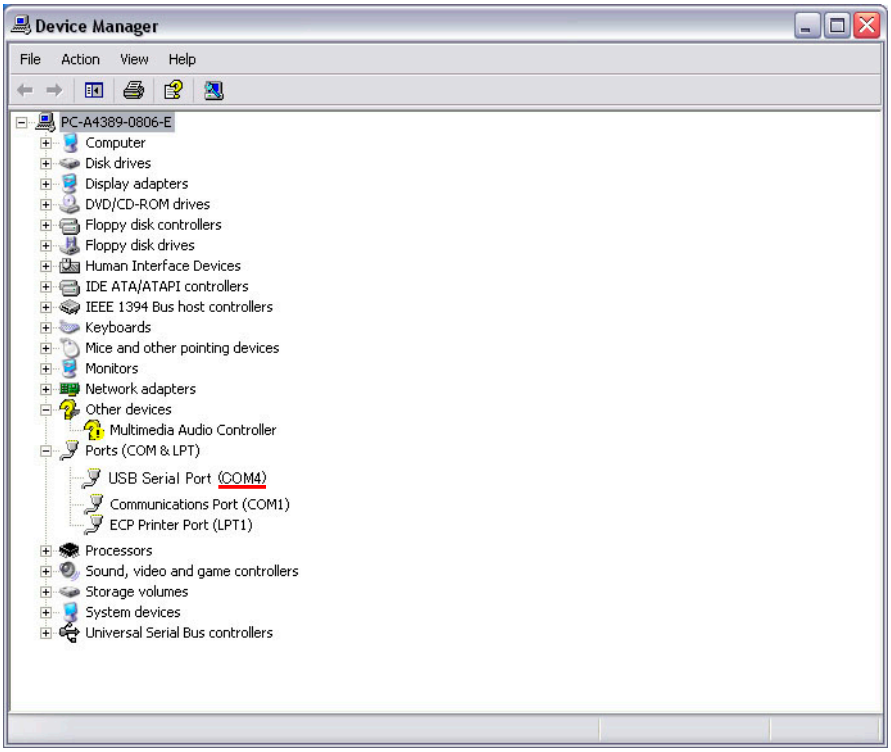
・Right-click on "My Computer", and select "Properties".



・"System Properties" dialogue box will be displayed. Select "Hardware" tab, and click "Device Manager".

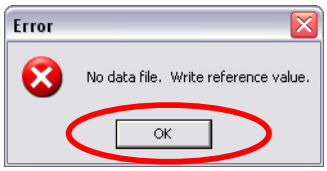


・"Device Manager" dialogue box will be displayed. Select "Ports" and check "COM number" of "USB Serial Port" as below.



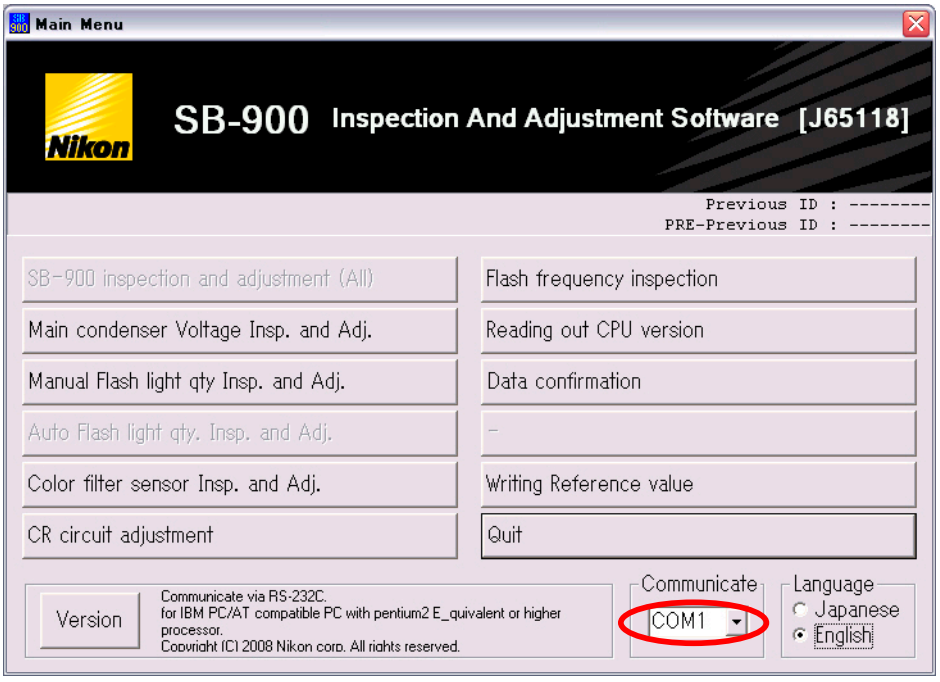
・Open Adjustment software.

・"Error" will appear, but click "OK".



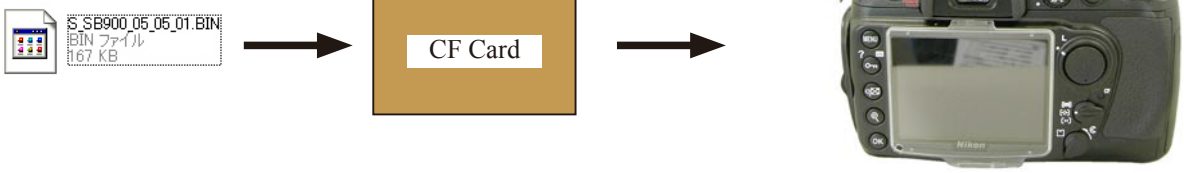
・"Main Menu" will be displayed.

・Select "COM" number.



1. Firmware up Procedure

- Turn camera OFF, and insert the updating CF-card.
- Mount "SB-900" on camera.
- Turn camera and SB-900 ON.



- Press "Menu" button. Select "Setup menu" and then "Firmware version".

- Select "Update".

・ The screen for updating comes up. Select "Yes".

Note: Do NOT turn power OFF during updating.

・When the message that indicates the completion appears, turn camera OFF and remove the CF card.

・Turn camera ON.

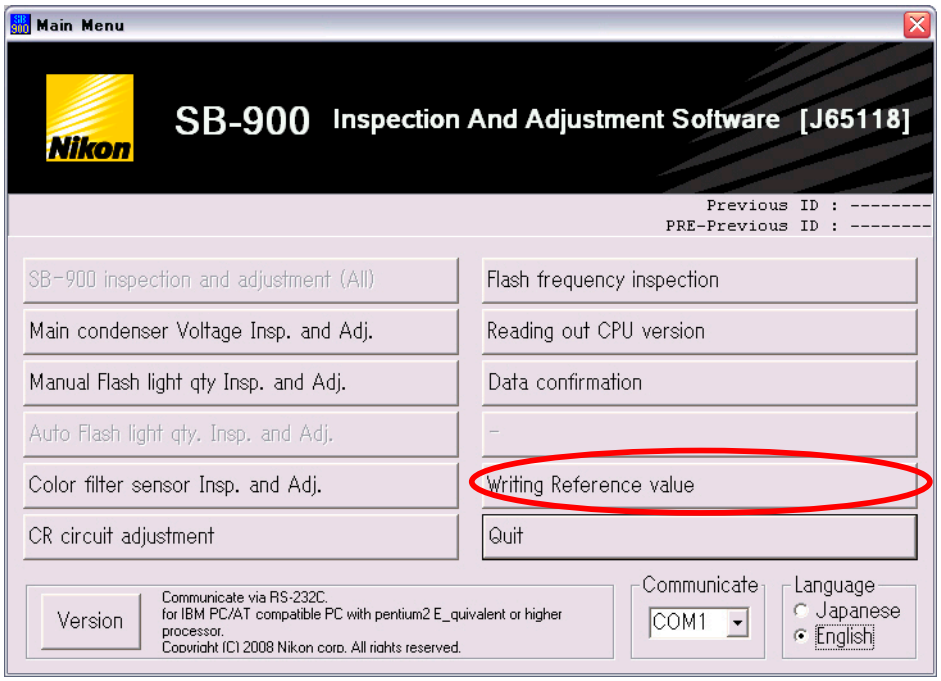
・Press "Menu" button. Select "Setup menu" and then "Firmware version". Check the firmware version.

・Press "OK" button, and turn camera OFF to end the procedure.

Caution: Set the stabilized power source to 6.0V, unless otherwise specified.

2. Writing Reference Value

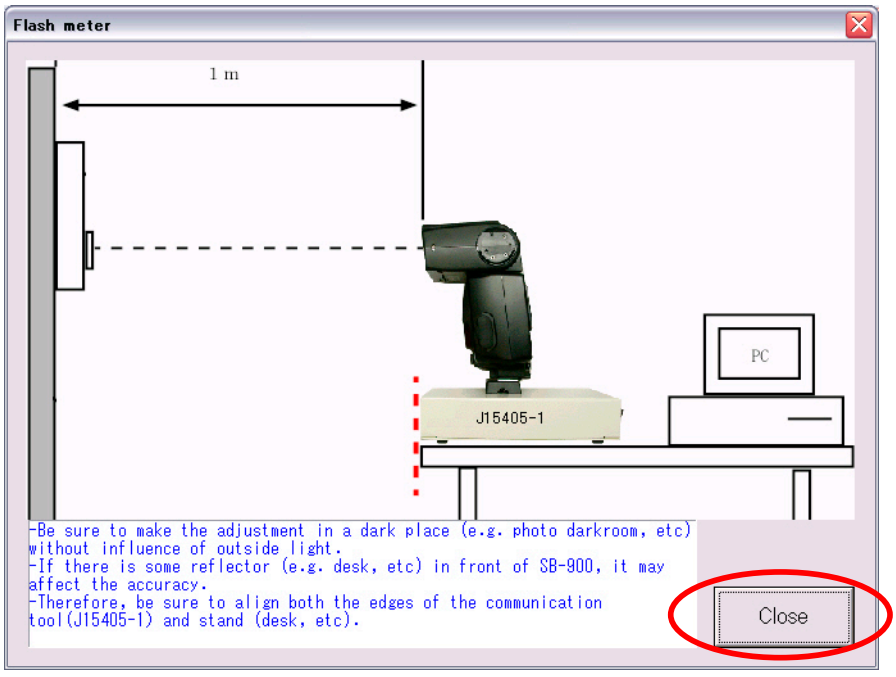
・Select "Writing Reference Value".



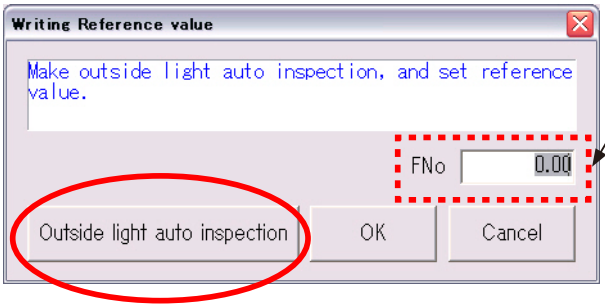
Caution: Make adjustment by setting as below, unless otherwise specified.

・Set the settings based on the instructions.

・Click "Close".



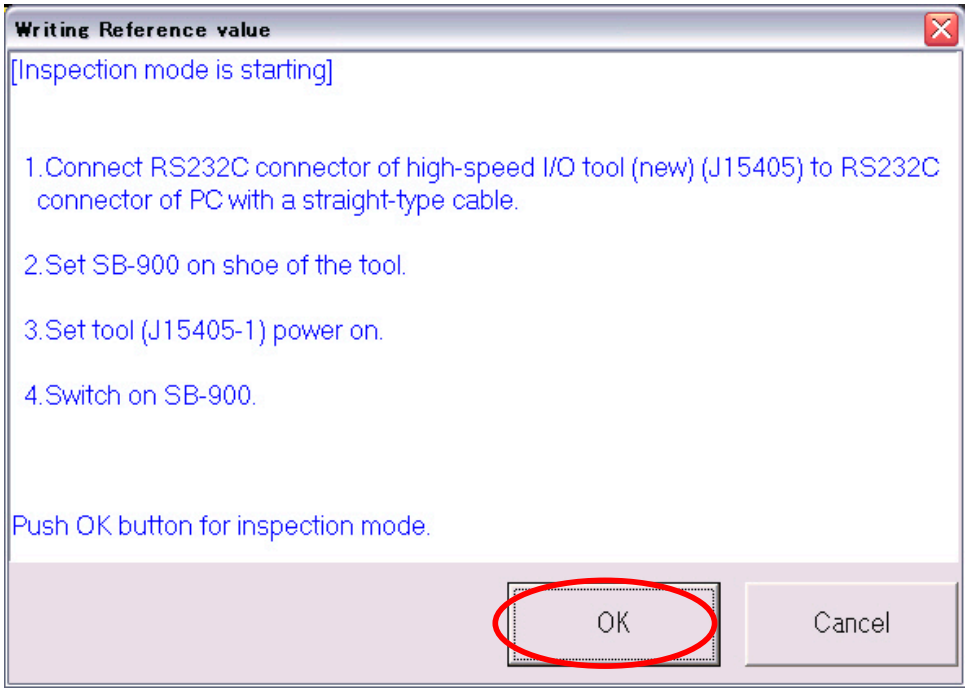
・Select "Outside light auto inspection".



Caution:

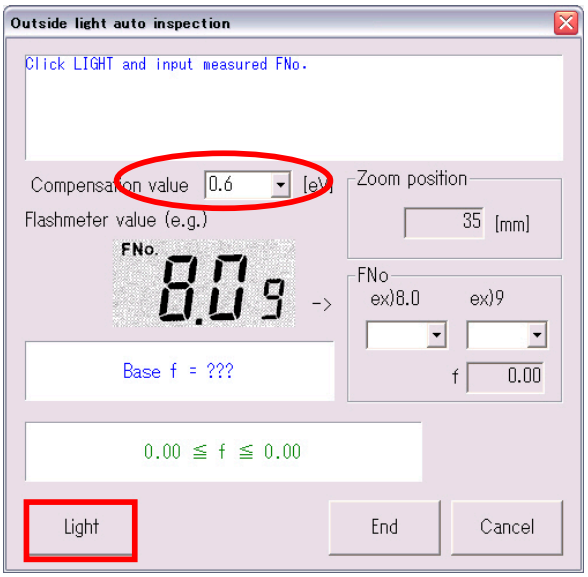
After the 2nd time, the pervious FNo. will be displayed. For the first time, do NOT input anything.

・Confirm the details, and click "OK".



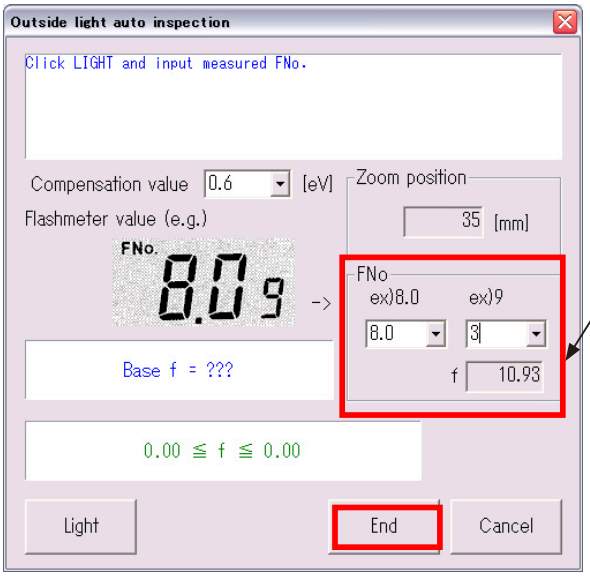
・Input the reference value of the flashmeter. (e.g. 0.6)

・Press "Light" button.



・Select "FNo." from the pulldown menu.

・Press "End" button.

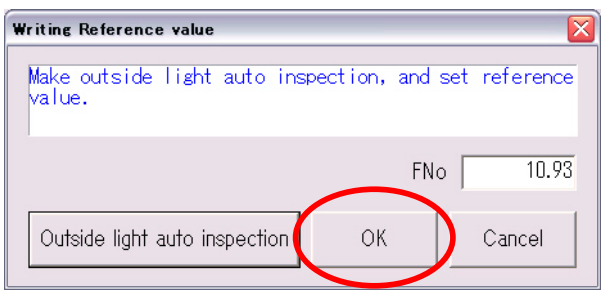


Caution:

Select the value of "FNo." from pull-down menu by clicking the selection button.

Do NOT input manually.

・"FNo." will be displayed. Click "OK".



Adjustments required after repairs

Adjustment / Details	Head	A unit (CPU PCB side)	B unit	E unit (assist-illuminator side exterior)
Main Condenser Voltage Insp.and Adj	○	○	○	×
Manual Flash light qty Insp.and Adj	○	○	○	×
Auto Flash light qty Insp.and Adj	○	○	○	×
Color filter sensor Insp.and Adj	○	○	×	×
CR circuit adjustment	×	○	×	○

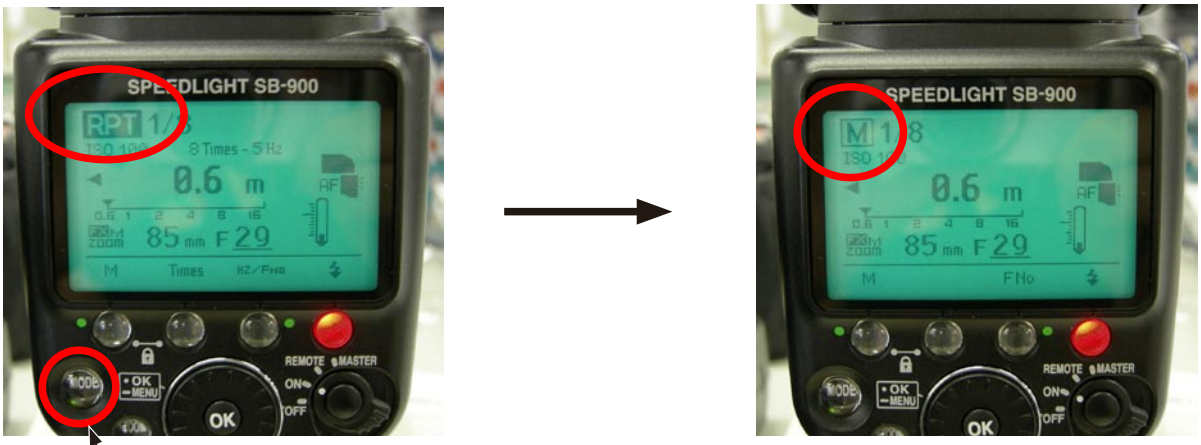
3. Main Condenser Voltage Insp.and Adj

Writing EEPROM initial value

↓

Adj. of Ready-light-up voltage and incr./stop voltage

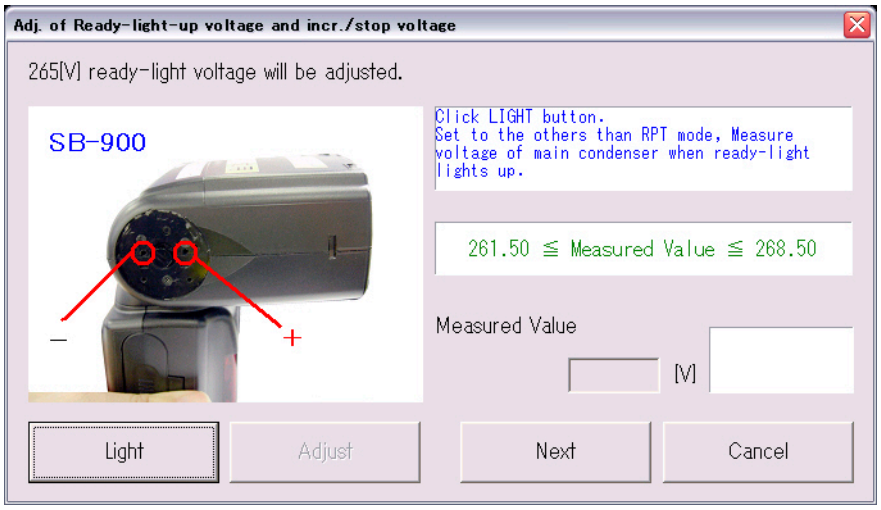
・Set the mode to the others than "RPT".



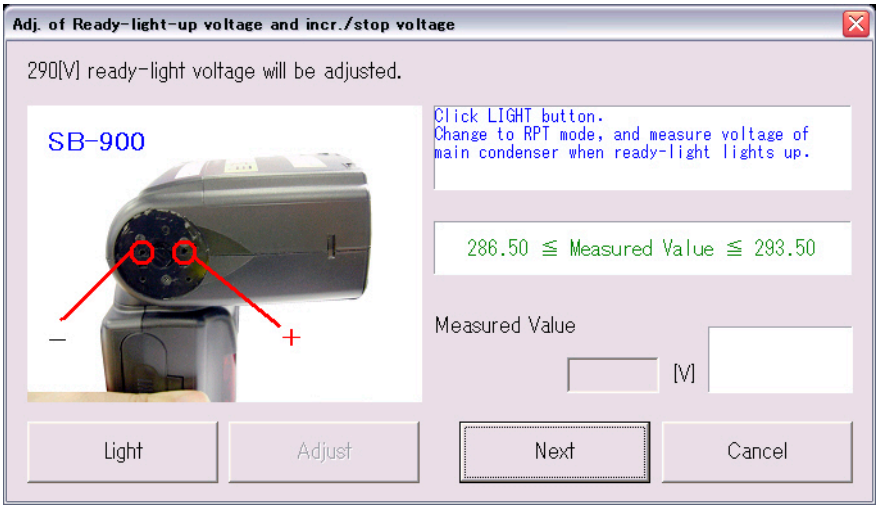
Switchable by MODE button.

Caution: The mode does not affect the adjustment, unless otherwise specified.

・Click "Light" button. Measure the condenser voltage when the ready-light lights up.
・Input the measurement value.
・After the input, if it is within standard, "OK" will appear.
・If "NG" appears, click "Adjust" to fire flash again.

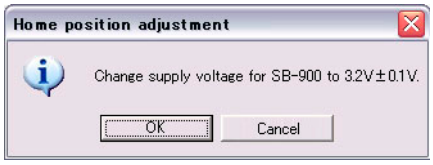


・Set the mode to "RPT".
・Click "Light" button. Measure the condenser voltage when the ready-light lights up.
・Input the measurement value.
・After the input, if it is within standard, "OK" will appear.
・If "NG" appears, click "Adjust" to fire flash again.
・Then, go on to make measurement at 330[V] in "Adj. of Ready-light-up voltage".

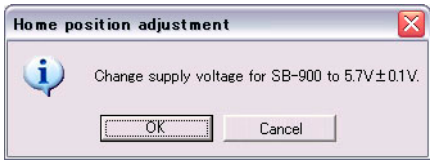


Home position adjustment

・Decrease the voltage from 6.0V to 3.2V.

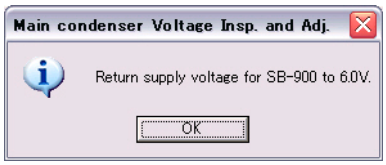


・Increase the voltage from 3.2V to 5.7V.



・Repeat twice, as instructed.

・At the end, return the voltage to 6.0V.



Writing adjustment value into Flash

4. Manual light qty adjustment

Metering gain adjustment

Zoom pulse table compensation

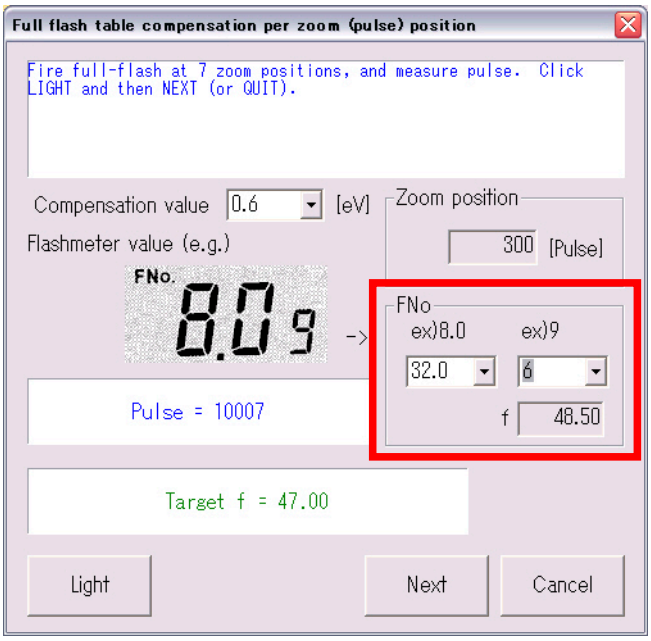
・Based on the instructions of the adjustment screen, input the value of the flashmeter.

・Also, fire full-flash at the seven zoom positions.

Caution:

For all the adjustments, select the value of "FNo." from pulldown menu by clicking the selection button.

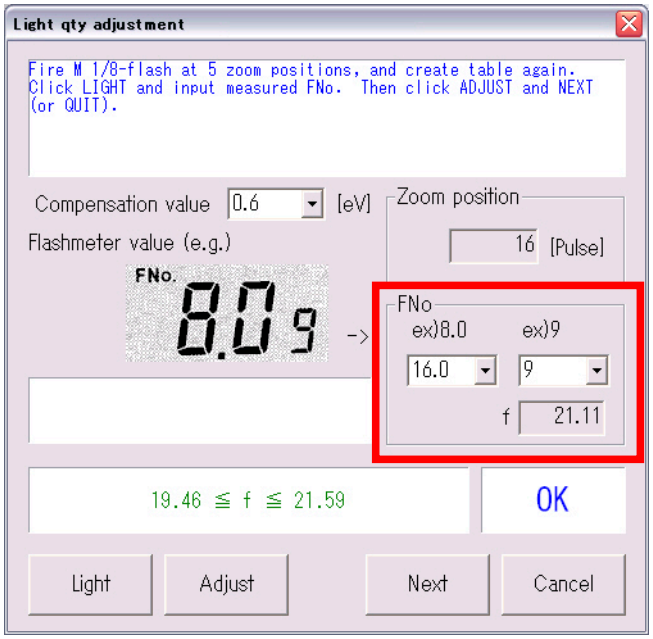
Do NOT input manually.



Writing adjustment value into Flash

Light qty adjustment

- Based on the instructions of the adjustment screen, input the value of the flashmeter.
- After the input, if it is within standard, "OK" will appear.
- If "NG" appears, click "Adjust" to fire flash again.
- Also, fire flash at the five zoom positions.



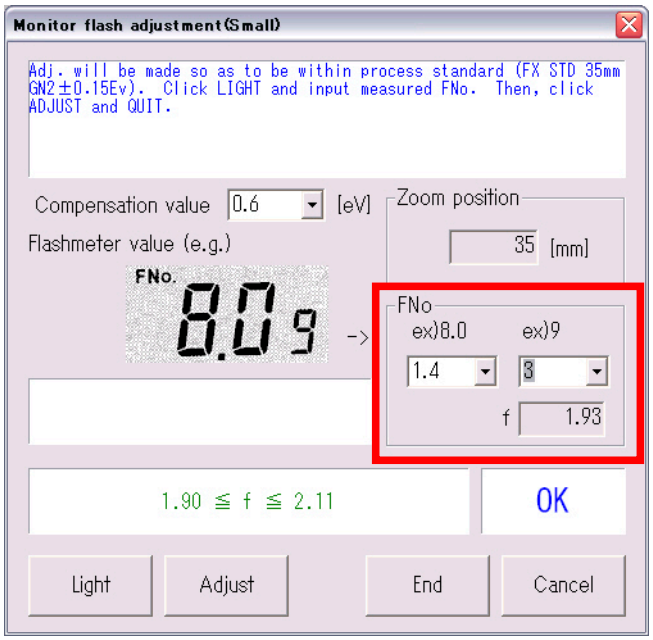
Writing adjustment value into Flash

5. Auto light qty adjustment

Monitor flash adjustment

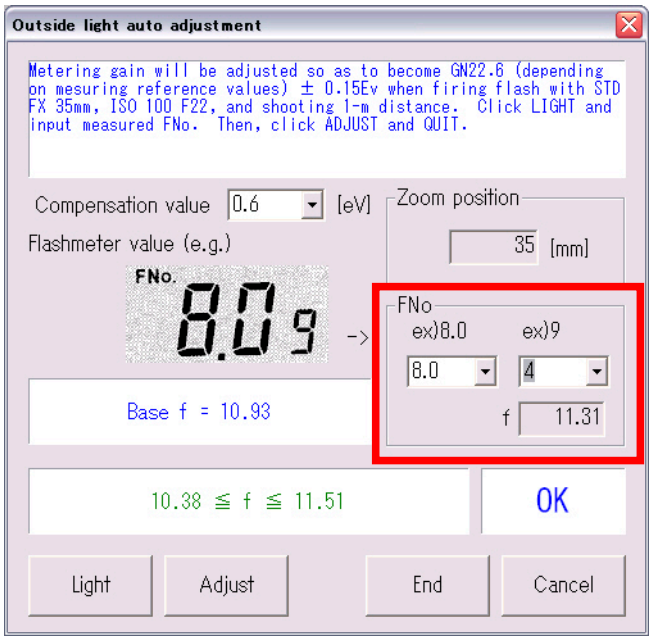
- Based on the instructions of the adjustment screen, set the mode to "M".

・Based on the instructions of the adjustment screen, input the value of the flashmeter.
・After the input, if it is within standard, "OK" will appear.
・If "NG" appears, click "Adjust" to fire flash again.
・Then, go on to fire flash in the "Monitor flash adjustment (big)".



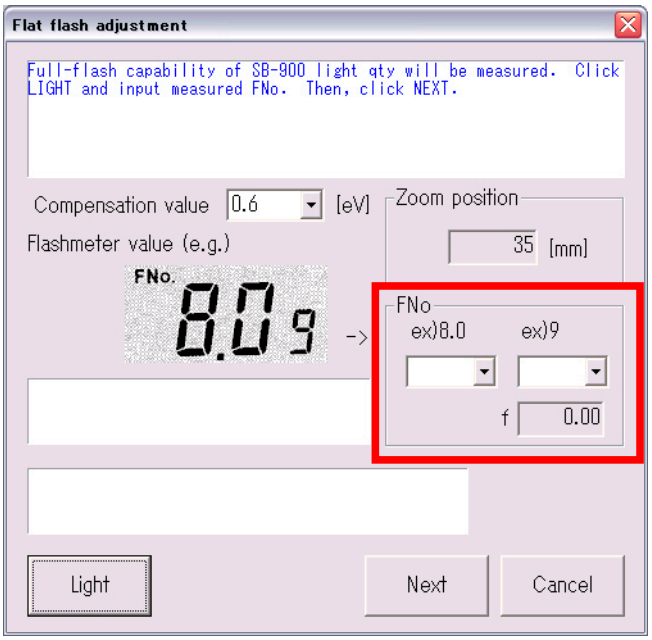
Outside light auto adjustment

・Based on the instructions of the adjustment screen, input the value of the flashmeter.



Flat flash adjustment

・Based on the instructions of the adjustment screen, input the value of the flashmeter.

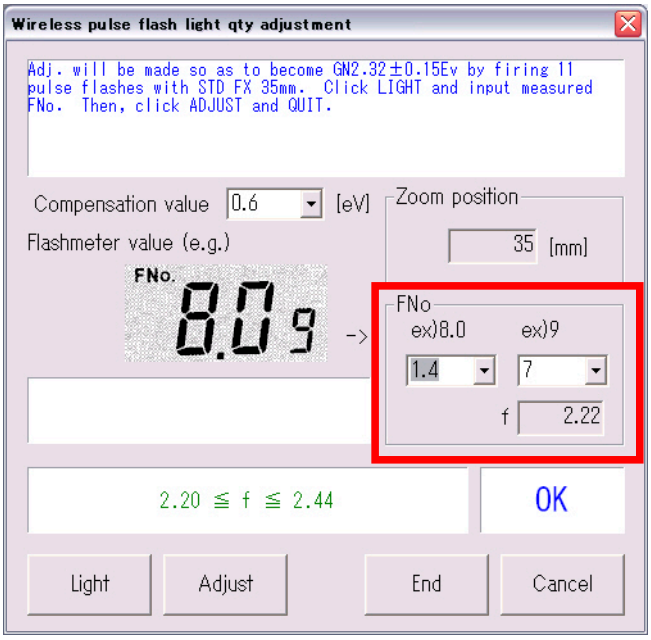


Wireless pulse flash light qty adjustment

・Based on the instructions of the adjustment screen, input the value of the flashmeter.

・After the input, if it is within standard, "OK" will appear.

・If "NG" appears, click "Adjust" to fire flash again.



Writing adjustment value into Flash

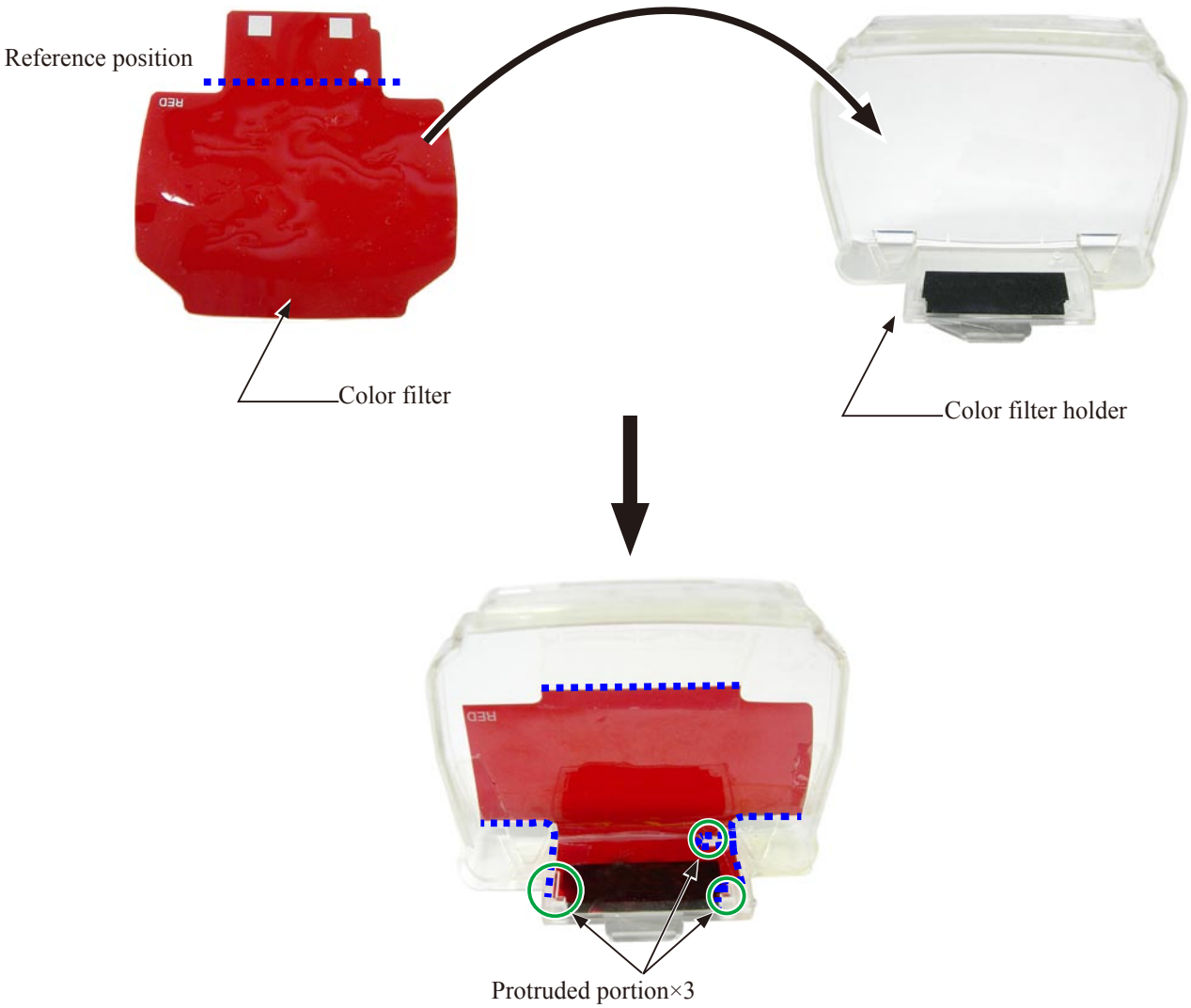
6. Color filter sensor adjustment

Color filter sensor adjustment

- Turn the SB to OFF.
- Mount the color filter adjusting tool on the head.
- Then, turn the SB to ON.

How to attach Color filter:

- Cut off the upper portion of the color filter.
- Attach the color filter to the color-filter holder.
- Cut off again the color filter along the shape of the protruded portions of the color-filter folder.
- Adhere the tape.



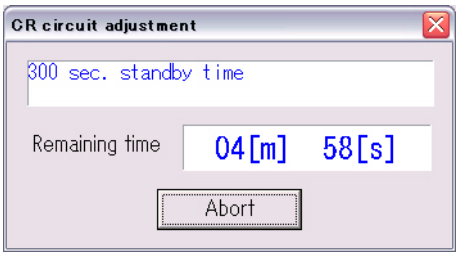
Writing adjustment value into Flash

7. CR circuit adjustment

Writing adjustment value into Flash

CR circuit adjustment

・Wait for 300 seconds.

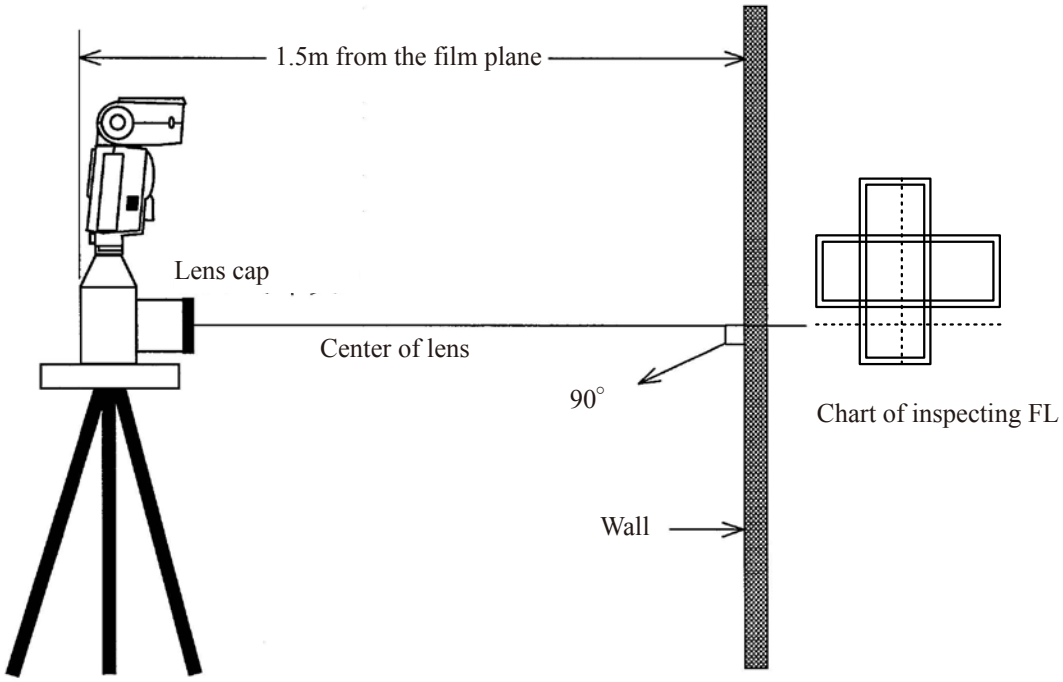


Writing adjustment value into Flash

8. Inspection & adjustment of Focusing light

Preparations

1. Camera (F5)
2. AF lens (of any type) with lens cap
3. Tripod
4. Chart of inspecting FL (Enlarge the next page to "A3" size with a copier.)



Procedure

① Arrange the equipment and materials as shown in the above, and set the AF mode of camera to S.

② In case NO AF-ILL is indicated on LCD of SB-900, have AF-ILL displayed by the custom setting.

③ Detach the FL cover (SS060-29) of SB-900, and press the release button halfway to lighten AF-Assist illuminator.

④ Adjust by using 3 screws (SG012-88) so that the light projected on the inspection chart covers the reference frames completely and fits within the allowable limits of the frame.

⑤ After the adjustment, attach 3 screws（SG012-88）with Screw Lock.

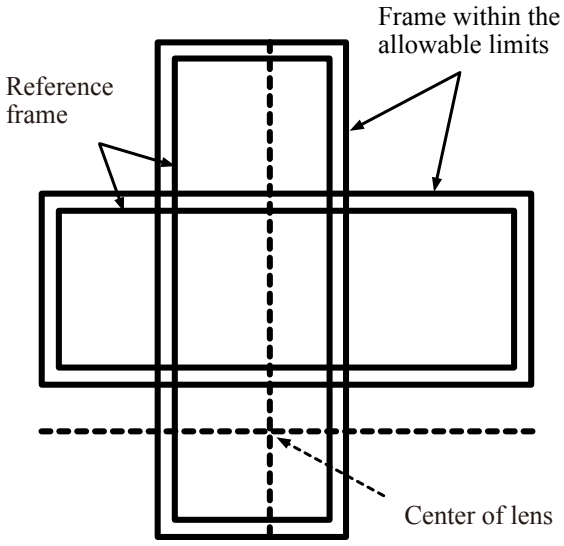
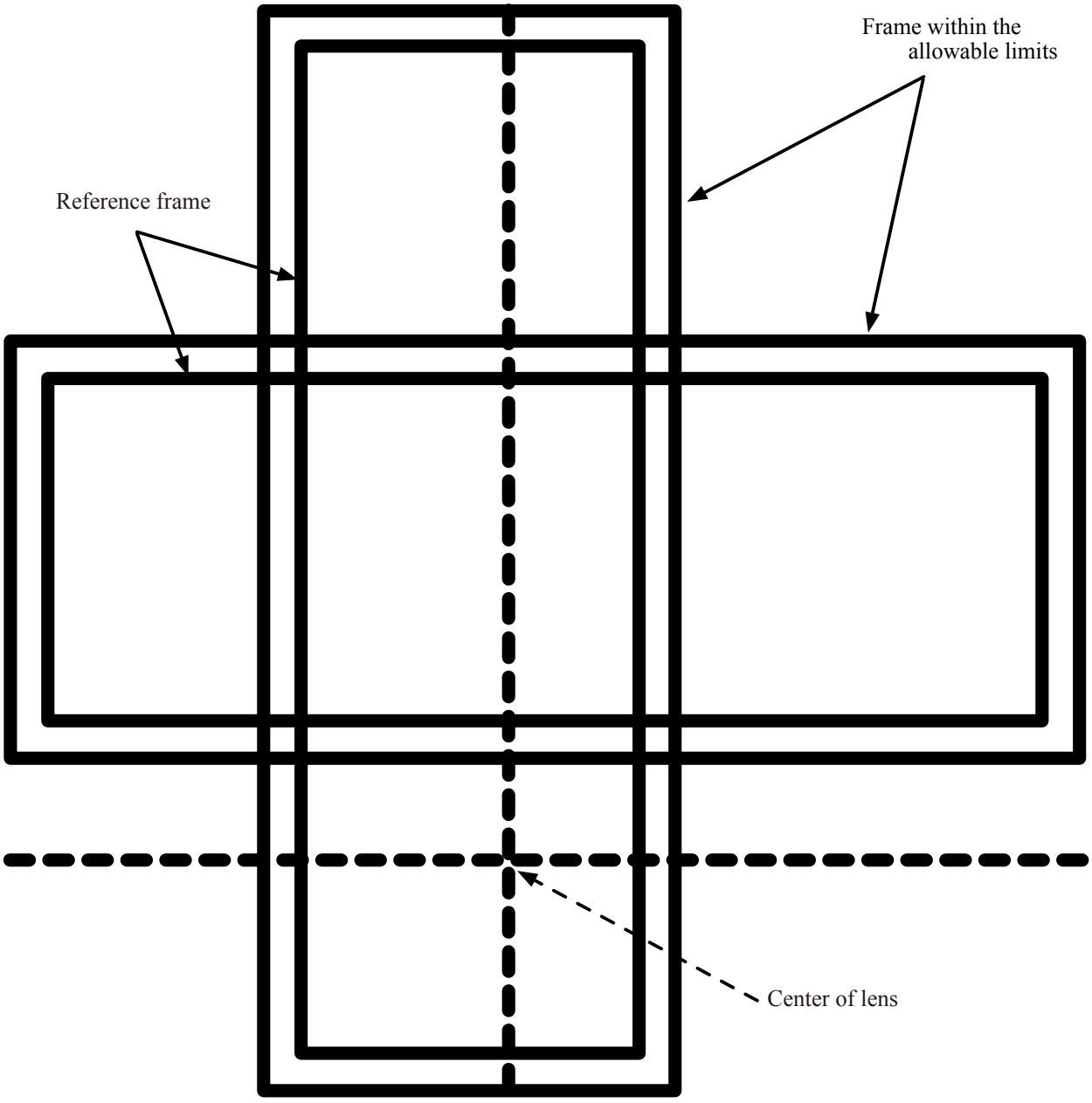


Chart of inspecting FL for SB-900

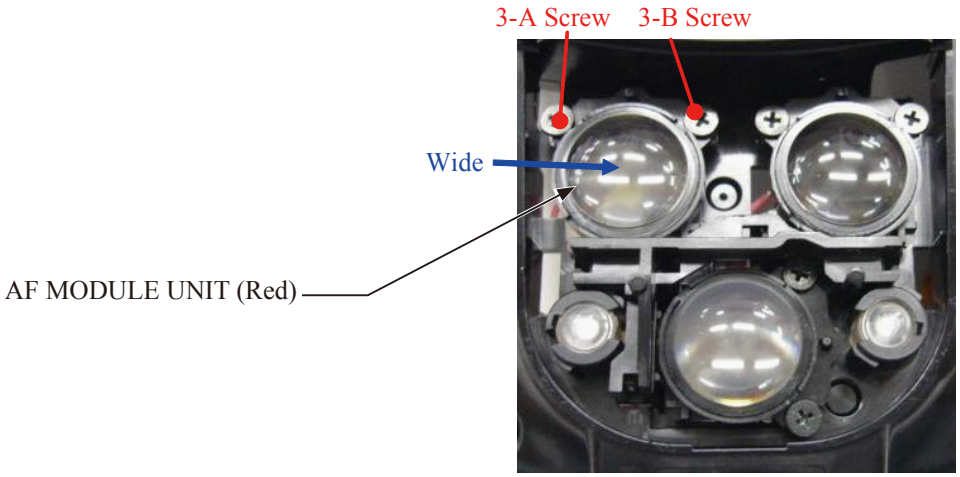
＊ Attention: Print in A4 first, and enlarge to A3 with a copier.

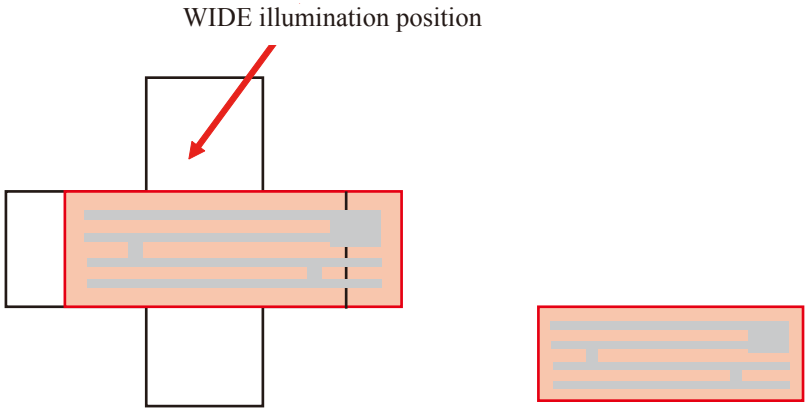


How to adjust the position of AF module unit (red wire):

Power condition:

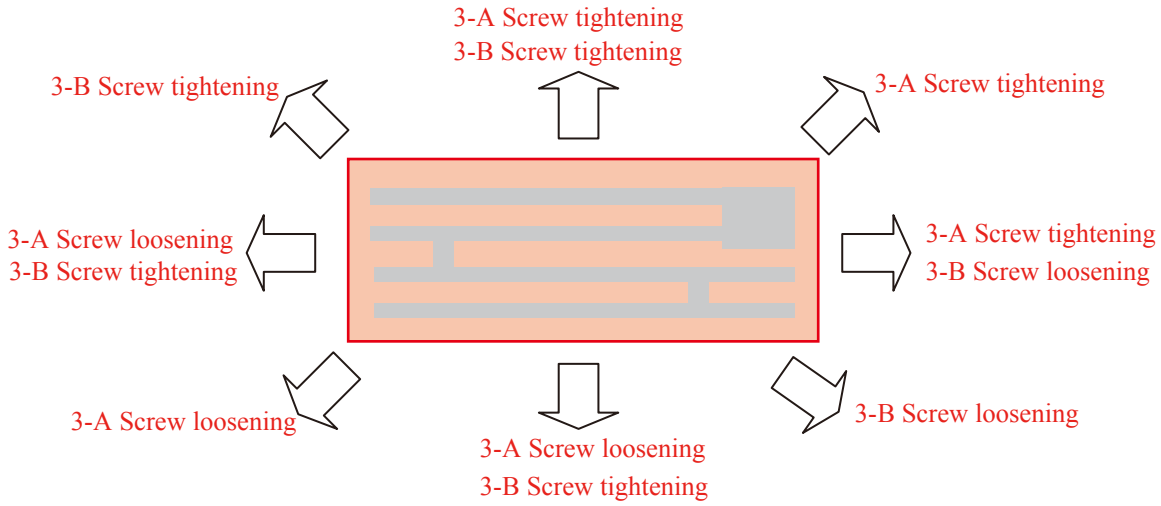
Low voltage power supply: 5.7V±0.1V/4.5A





Position so that the shaded portion of the AF-assist illuminator is inside the chart.

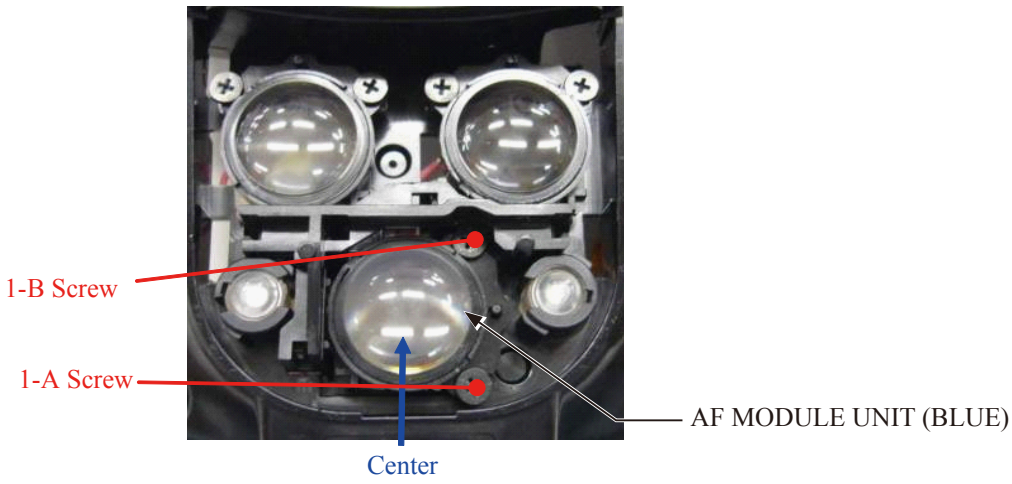
Adjust illumination position by tightening the screw(s)



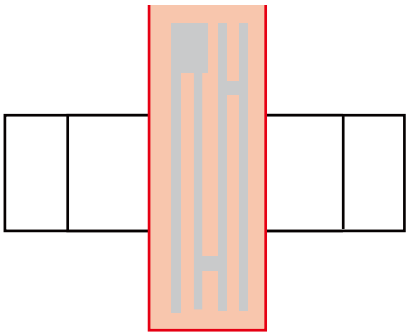
How to adjust the position of AF module unit (blue wire):

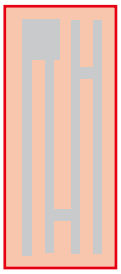
Power condition:

Low voltage power supply: 5.7V±0.1V/4.5A



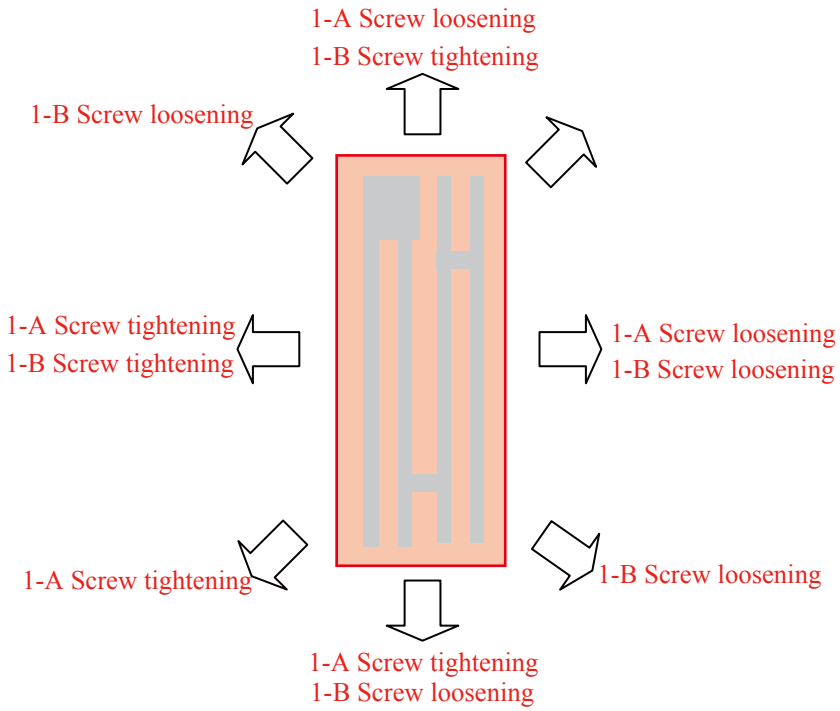
CENTER illumination position





Position so that the shaded portion of the AF-assist illuminator is inside the chart.

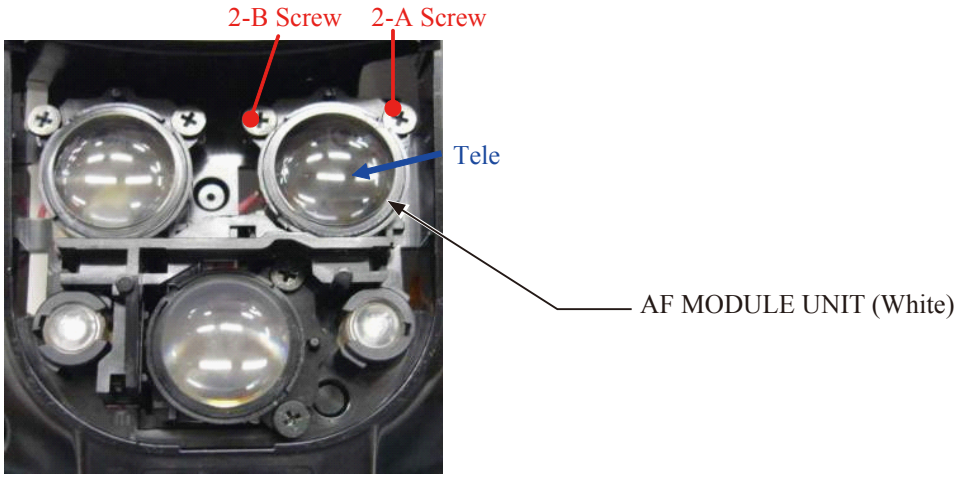
Adjust illumination position by tightening the screw(s)

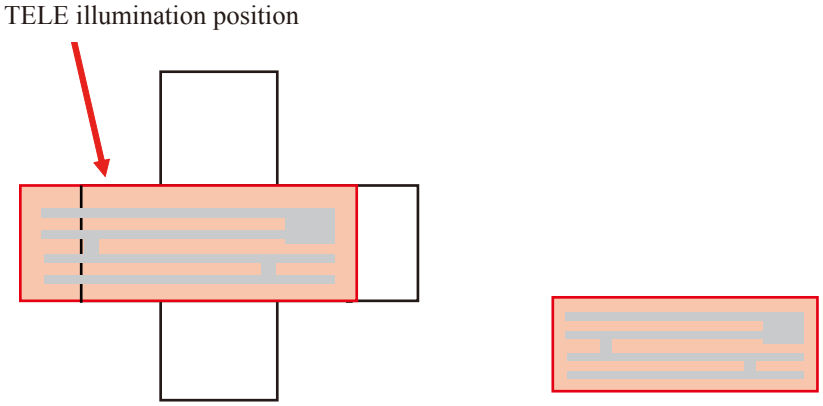


How to adjust the position of AF module unit (white wire):

Power condition:

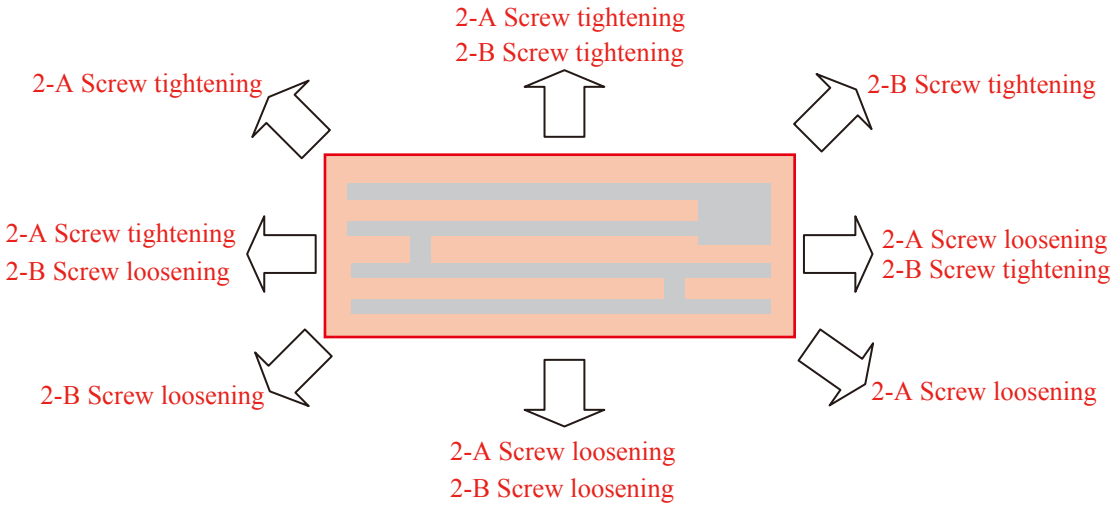
Low voltage power supply: 5.7V±0.1V/4.5A



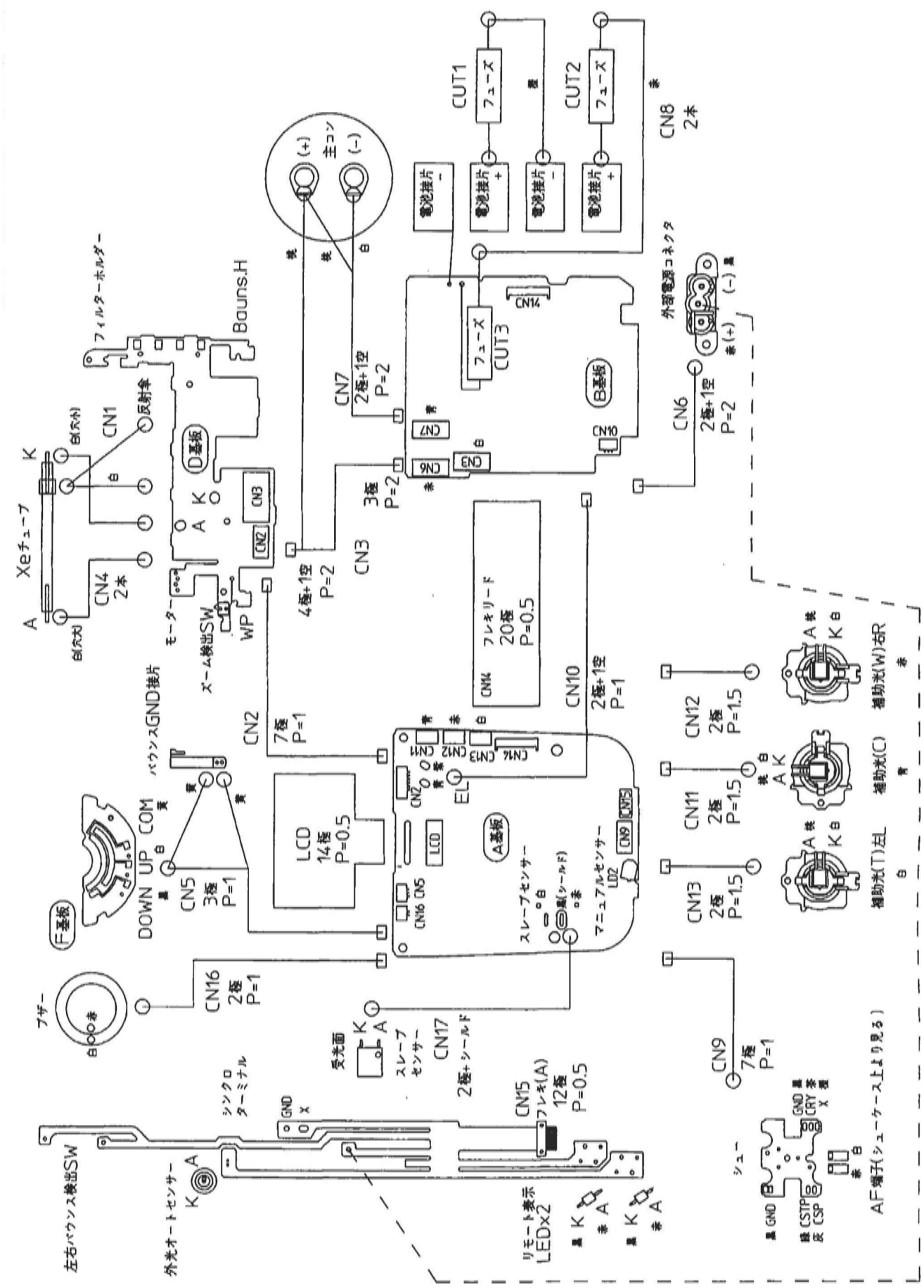


Position so that the shaded portion of the AF-assist illuminator is inside the chart.

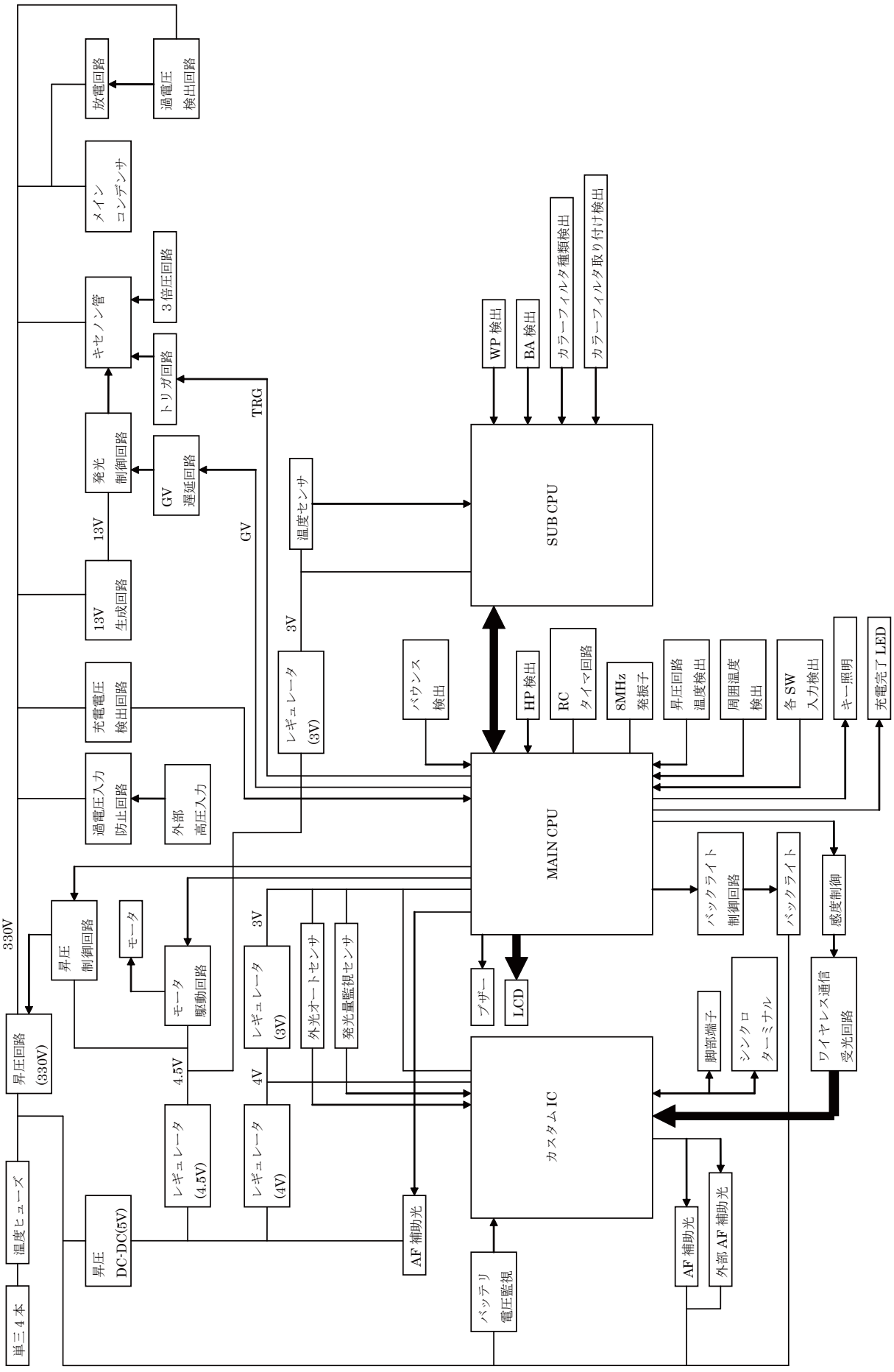
Adjust illumination position by tightening the screw(s)



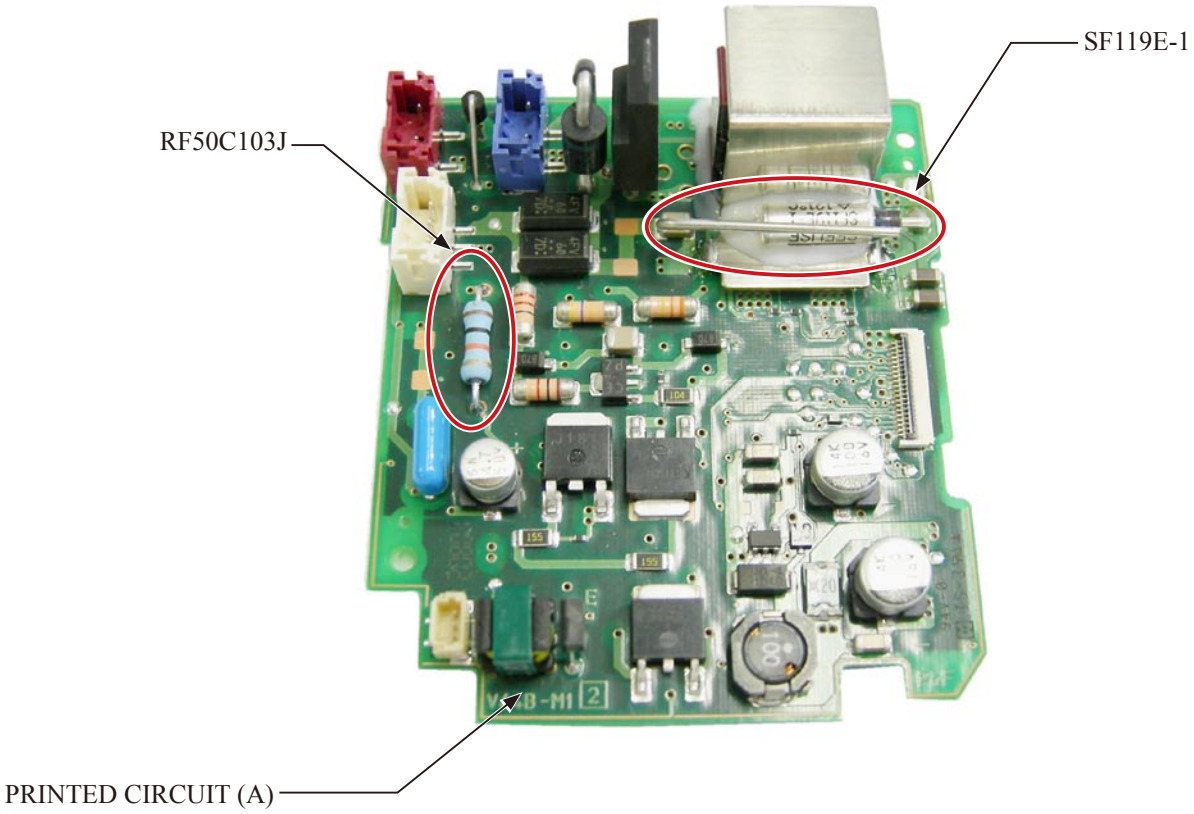
実体配線図　WIRING

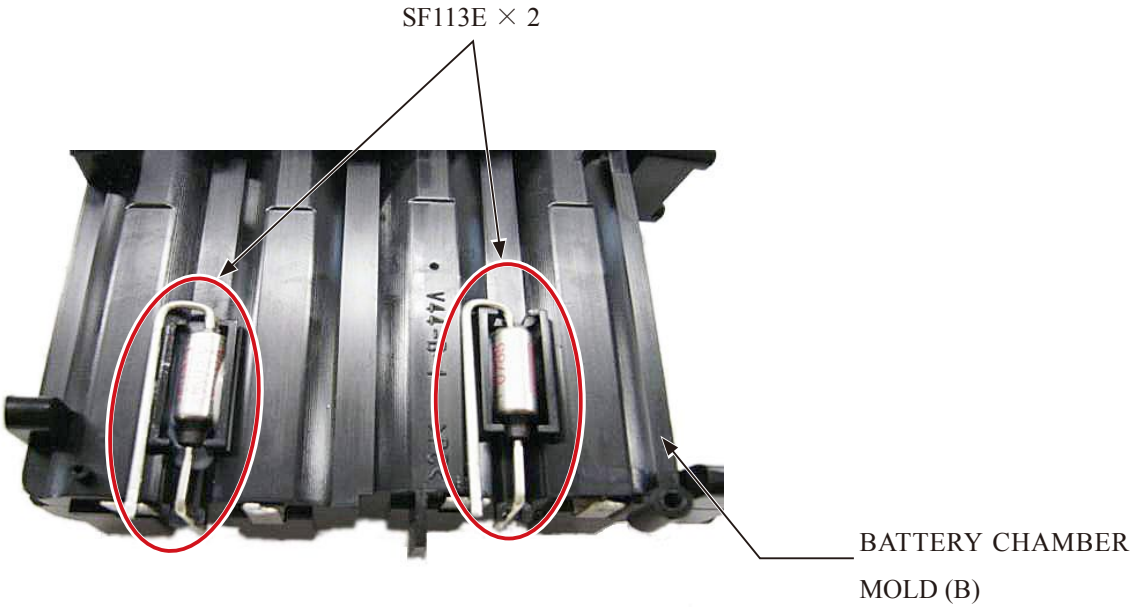


ブロック図　BLOCK DIAGRAM



FUSE ARRANGEMENT

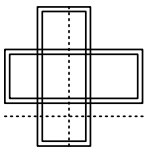
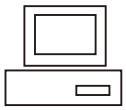




FUSE	Function of FUSE	Phenomenon when FUSE has blown out	Rating
RF50C103J	Prevention of smoking when IGBT short is broken.	Flash does not fire.	0.5W
SF119E-1	Protection when charging circuit malfunctions.	The power is not turned on.	250V/10A
SF113E	Prevention of battery's heat generation.	The power is not turned on.	250V/10A

工具一覧表　　Tool List

※：新規工具
※：New tool

	工具番号 Tool No.	名　称 Name of tool	備　考 Others
	J15405 	新高速通信工具 New high speed I/O tool	
★	J65118 	点検、調整ソフト Inspection and adjustment software	IBM 3.5 inches
	J18360 	基準反射布 Standard reflector 1.5M × 1.5M	FOR C-DSC (L15,L11 etc)
		AF 補助光用チャート Chart for AF Assist light	修理指針Ａ 90 ページ使用 Use the page Ａ 90 of the Repair Manual
		パーソナルコンピュータ Personal computer	汎用品 RJ is Not available
		RS232C ケーブル(ｽﾄﾚｰﾄﾀｲﾌﾟ) RS232C cable (straight type)	汎用品 RJ is Not available
		USB ケーブル(ｽﾄﾚｰﾄﾀｲﾌﾟ) USB cable (straight type)	汎用品 RJ is Not available
		安定化電源 （５．５Ｖ　２Ａ） Power supply(5.5V 2A)	汎用品 RJ is Not available
		デジタルマルチメータ Digital meter	汎用品 RJ is Not available
		フラッシュメータ Flash meter	汎用品 RJ is Not available

その他・Others

	工具番号 Tool No.	名　称 Name of tool	備　考 Others
	EBB0061 	グリース　G7100 Grease　G7100	NET = 100g
	TA-0001 	テープ　W＝10mm	
	TA-0012 	テープ　W＝6mm	
	J67017 	セメダイン 575 CEMEDINE　575	
	MZ-800SEL	ドライサーフ　MZ-800SEL DRY SURF　MZ-800SEL	
	PL-22SEL （接点グリス）	接点潤滑油　PL-22SEL CONTACT LUBRICANT PL-22SEL	
★	J63106 	カラーフィルターホルダー SZ-2 COLOR FILTER HOLDER SZ-2	
★	J63107 	カラーフィルター SJ3 COLOR FILTER SJ3	