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# **Nikon**

# **COOLPIX4600**

VAA32001

REPAIR MANUAL

**Nikon** | **NIKON CORPORATION**  
Tokyo, Japan

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# Disassembly

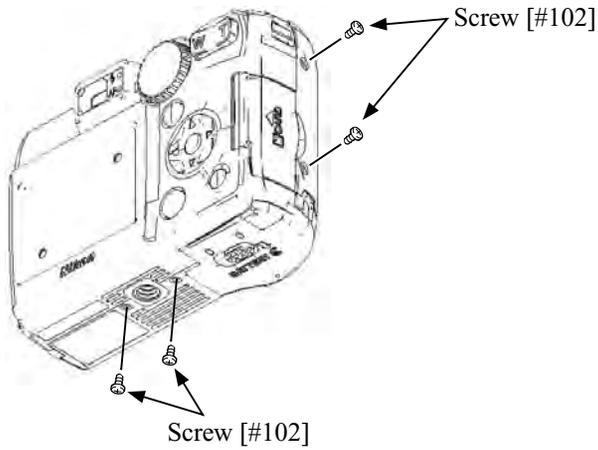
 <b>WARNING</b>	
	<ul style="list-style-type: none"><li>● There are high voltage parts inside. Be careful of this electric shock, when you remove the cover.</li><li>● You must discharge the main condenser according to the instruction of this repair manual before you remove the cover.</li></ul>

Points to notice for Lead-free solder products
<ul style="list-style-type: none"><li>▪ Lead-free solder is used for this product.</li><li>▪ For soldering work, the special solder and soldering iron are required.</li><li>▪ Do NOT mix up lead-free solder with traditional solder.</li><li>▪ Use the special soldering iron respectively for lead-free solder and lead solder. They cannot be used in common.</li></ul>

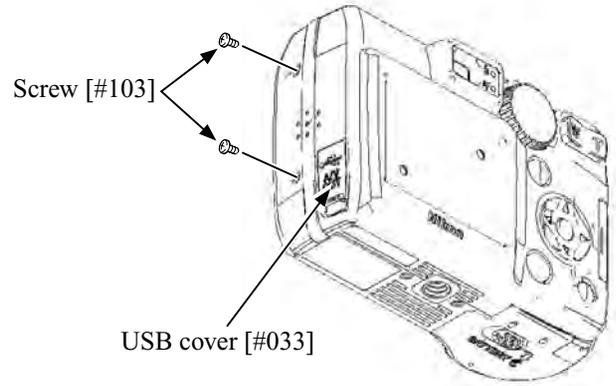
- Note :
- ① Be sure to remove the SD memory card and batteries before disassembly.
  - ② When disassembling, make sure to memorize the processing state of wires, screws to be fixed and their types, etc.
  - ③ Because electrical parts are easily damaged by static electricity, make sure that you are well earthed/grounded.

REAR COVER

- Remove the four screws [#102].



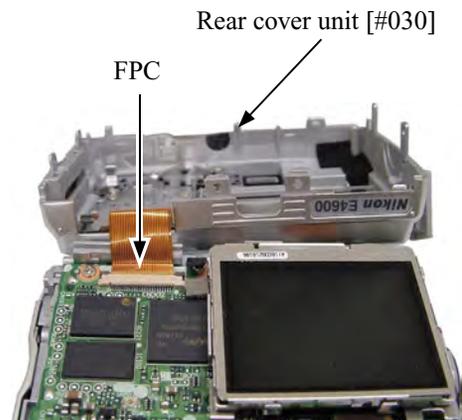
- Remove the two screws [#103].
- Open the USB cover [#033].



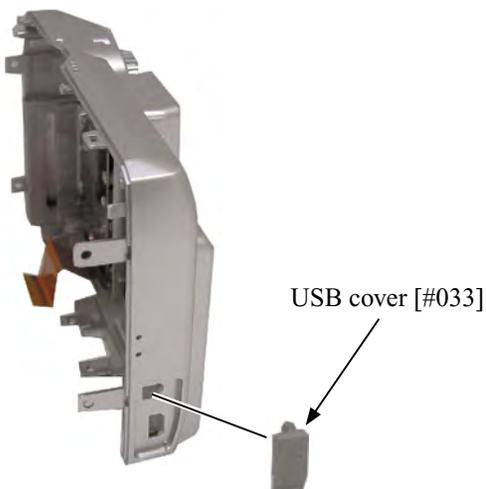
- As pushing the top side of the rear cover unit [#030] by your finger, perform unhooking.



- Open the rear cover unit [#030] slowly backward and remove the FPC.

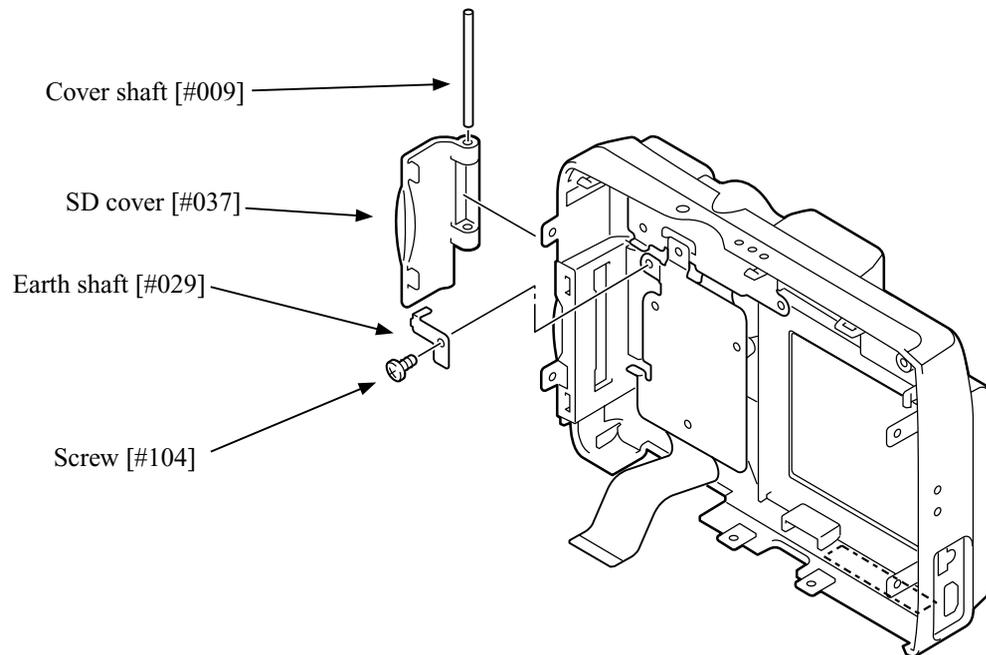


- Remove the USB cover [#033].



**DISASSEMBLY OF REAR COVER**

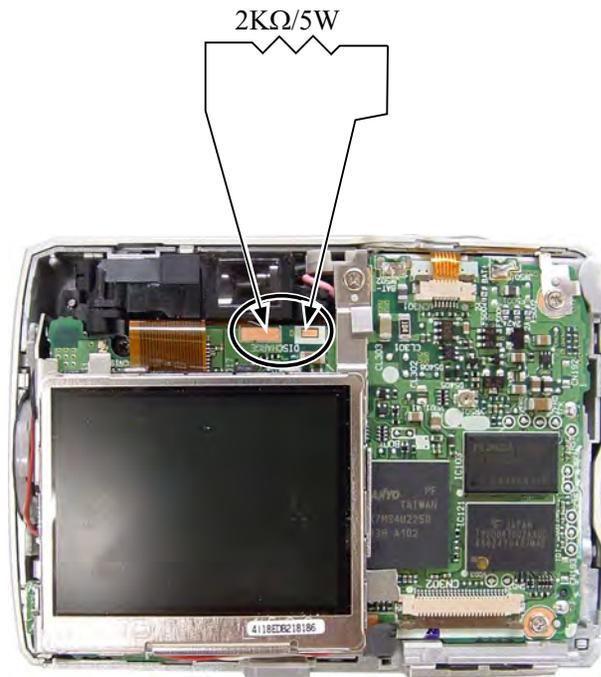
- Remove the screw [#104].
- Remove the earth shaft [#029].
- Remove the cover shaft [#009].
- Remove the SD cover [#037].



## Discharging of main condenser

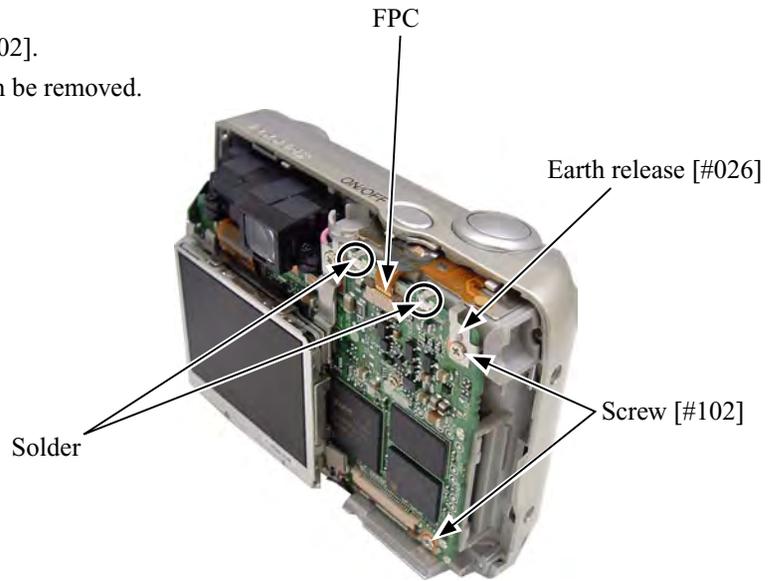
 **WARNING**

- There are high voltage 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 before you remove the cover.

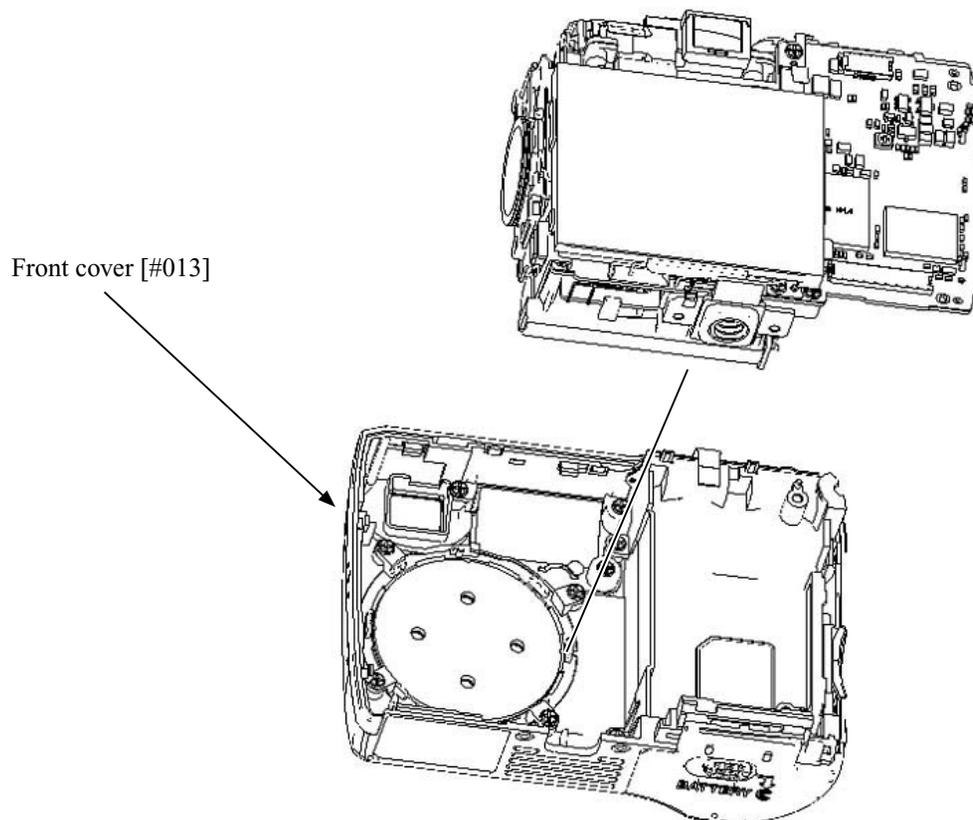


FRONT COVER

- Remove the solder at 2 places.
- Remove the FPC.
- Remove the two screws [#102].
- The earth release [#026] can be removed.

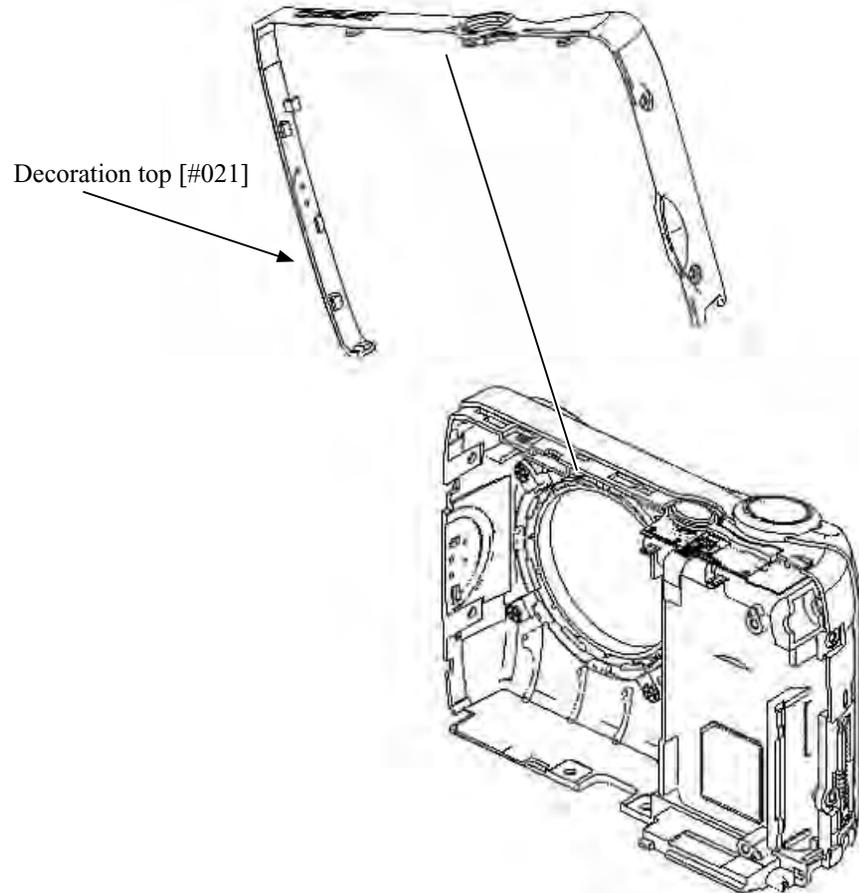


- Remove the front cover [#013].

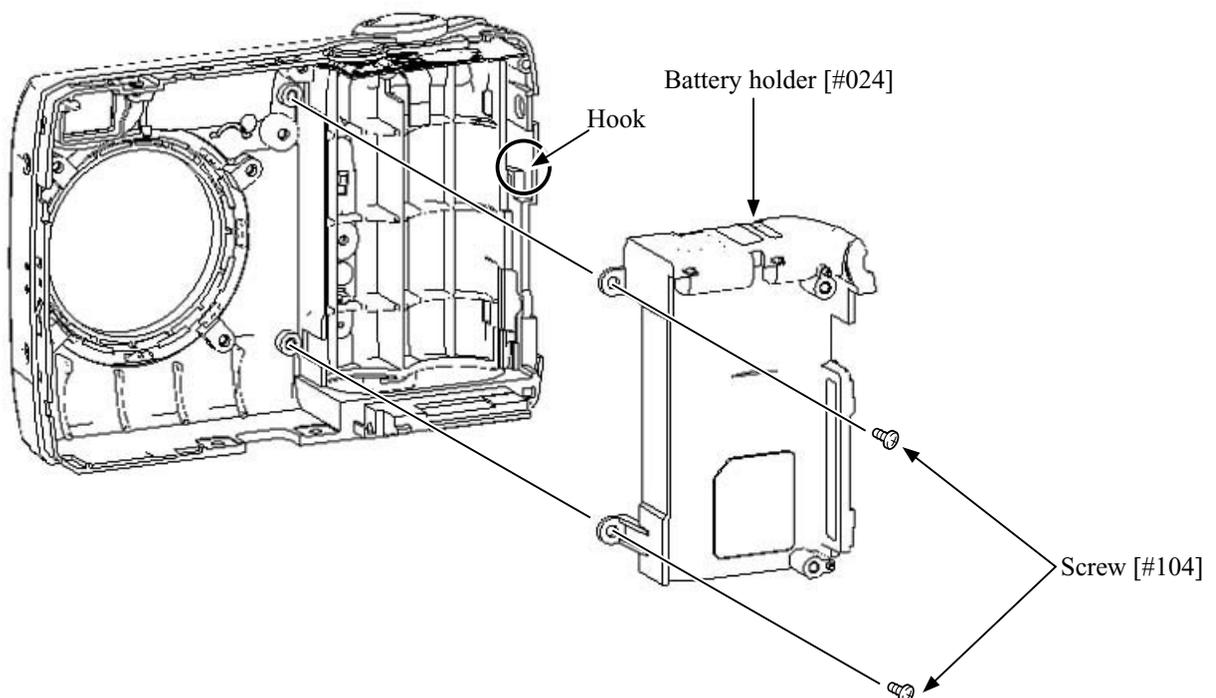


DISASSEMBLY OF FRONT COVER

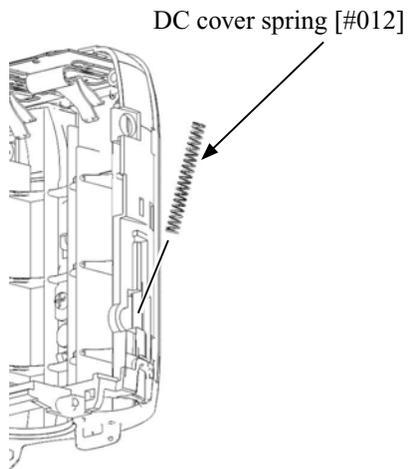
- Remove the decoration top [#021].



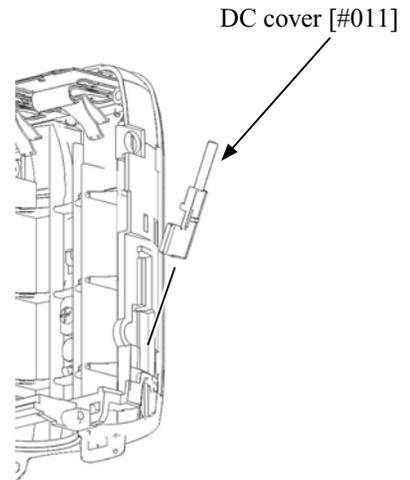
- Remove the two screws [#104].
- Unhook the battery holder [#024].



- Remove the DC cover spring [#012].

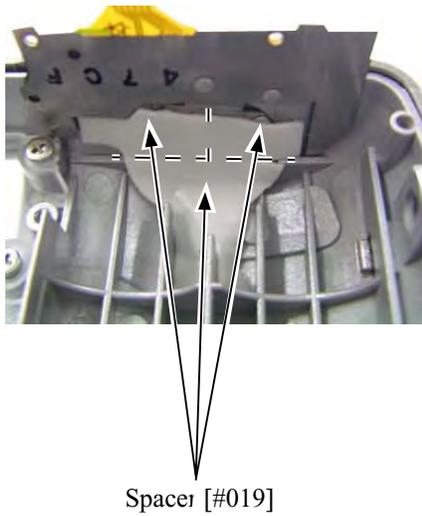


- Pull out the DC cover [#011].

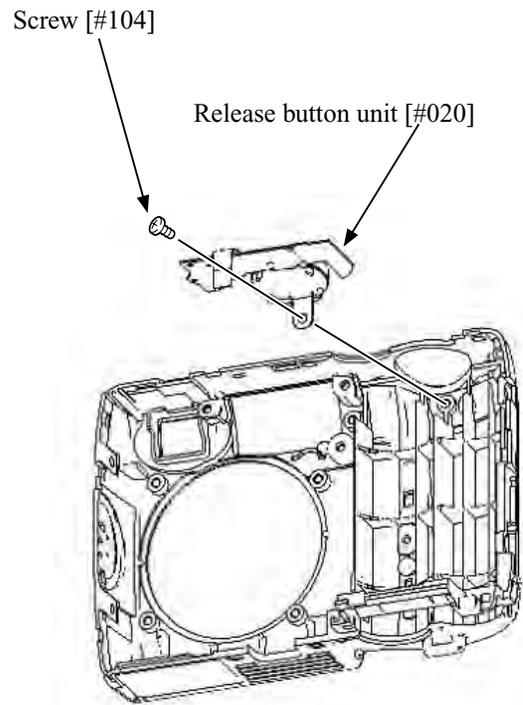


- Take off the spacer [#019] from the release button unit.

※ In the figure below, the spacer is divided into three pieces from the dotted line.

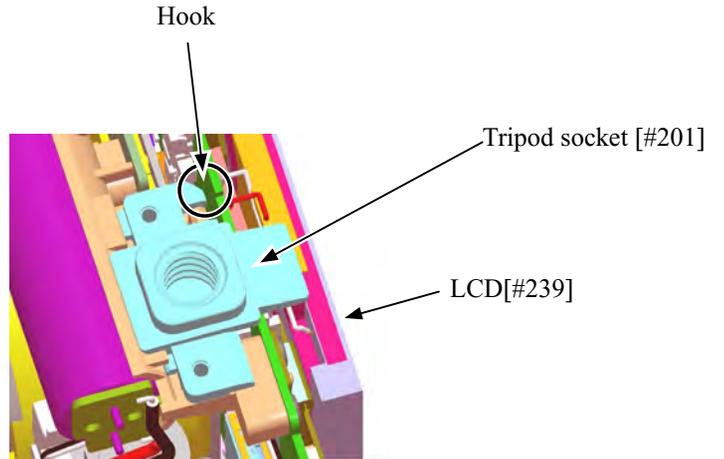


- Remove the screw [#104].
- Remove the release button unit [#020].



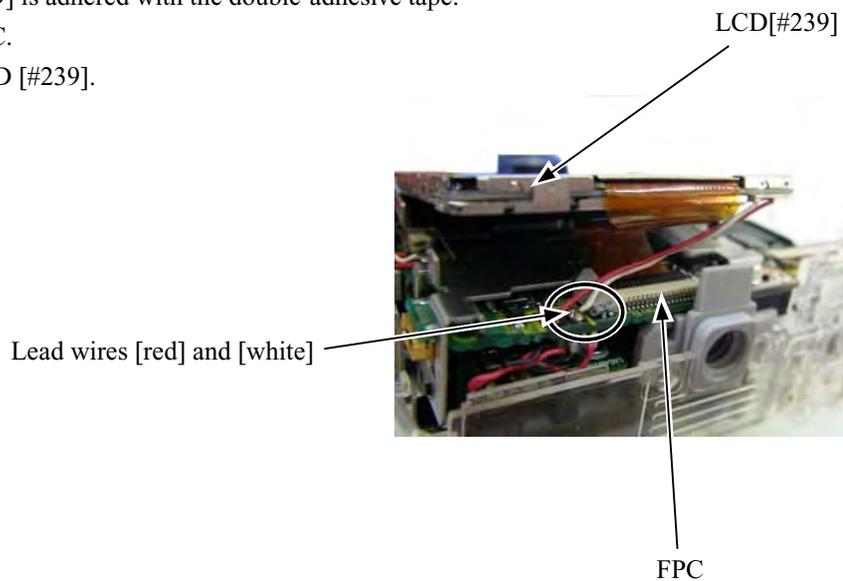
TRIPOD SOCKET

- Perform unhooking and remove the tripod socket [#201].



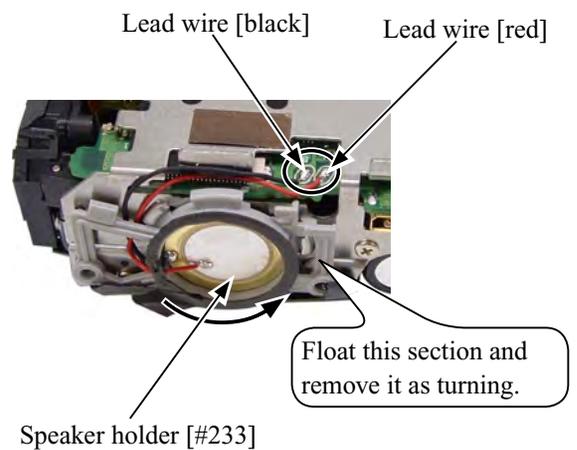
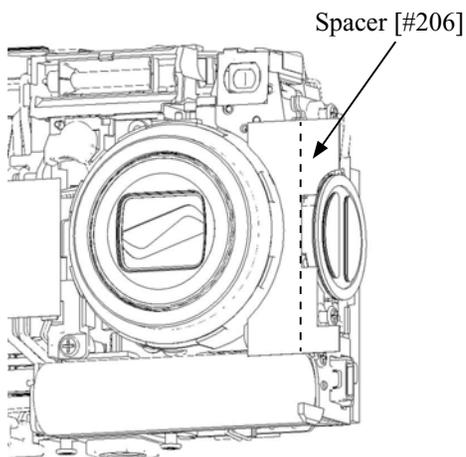
LCD

- Lift up the LCD [#239] and unsolder the lead wires [red] and [white].
- ※ The LCD [#239] is adhered with the double-adhesive tape.
- Remove the FPC.
- Remove the LCD [#239].



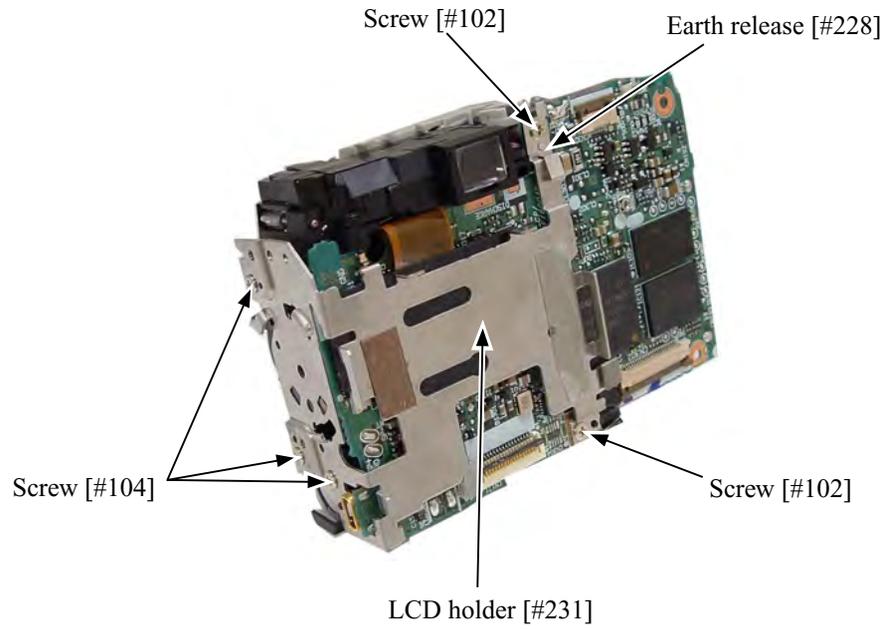
SPEAKER HOLDER

- Take off the spacer [#206].
- Unsolder the lead wires [red] and [black].
- As turning counterclockwise, remove the speaker holder [#233].



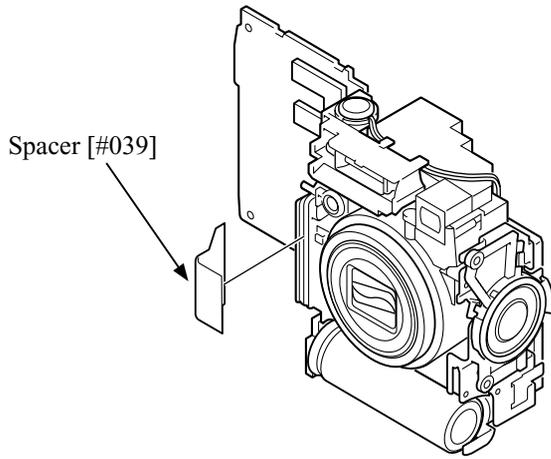
MONITOR HOLDER

- Remove the two screws [#102].
- Remove the earth release [#228].
- Remove the three screws [#104].
- Remove the LCD holder [#231].

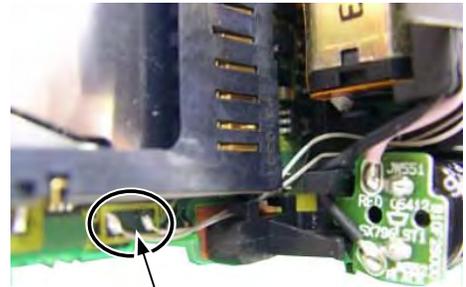


SB UNIT

- Remove the spacer [#039].

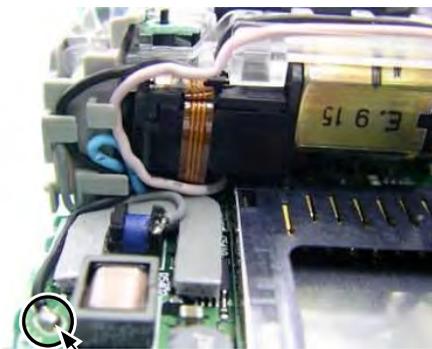


- Unsolder the lead wires [gray] and [white].



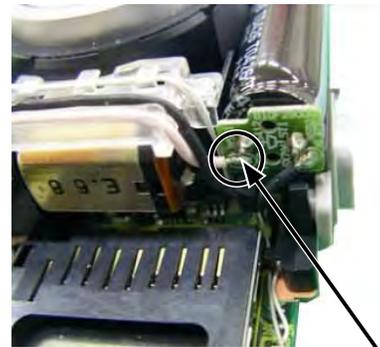
Lead wires [gray] and [white]

- Unsolder the lead wire [black].



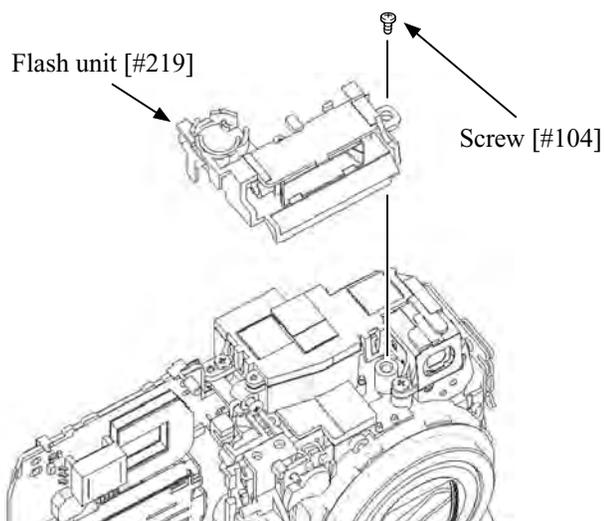
Lead wire [black]

- Unsolder the lead wire [pink].



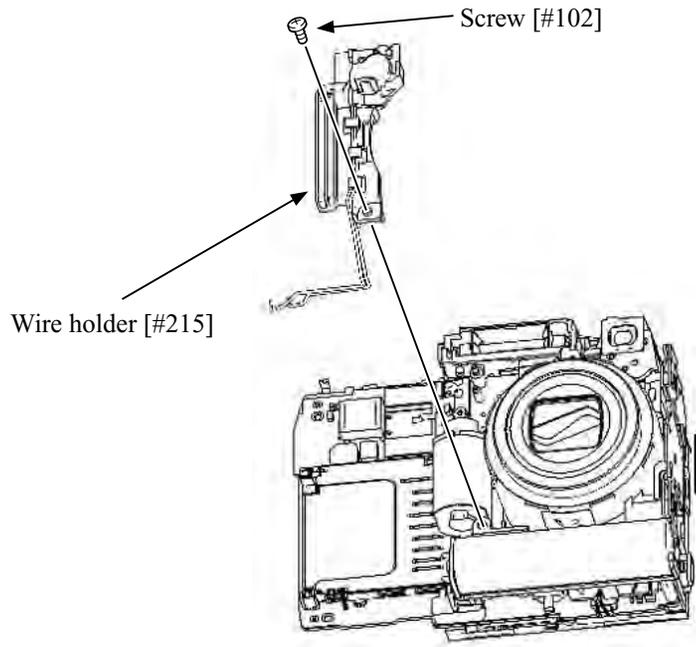
Lead wire [pink]

- Remove the screw [#104].
- Float the flash unit [#219].



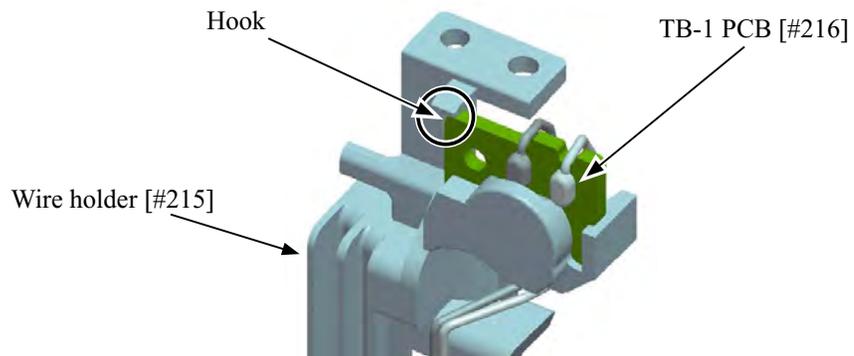
WIRE HOLDER

- Remove the screw [#102].
- Remove the wire holder [#215].



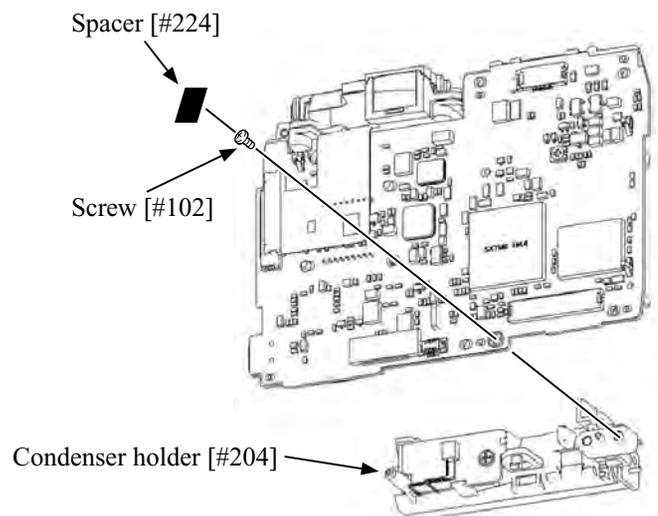
TB-1 PCB

- Perform unhooking and remove the TB-1 PCB [#216].



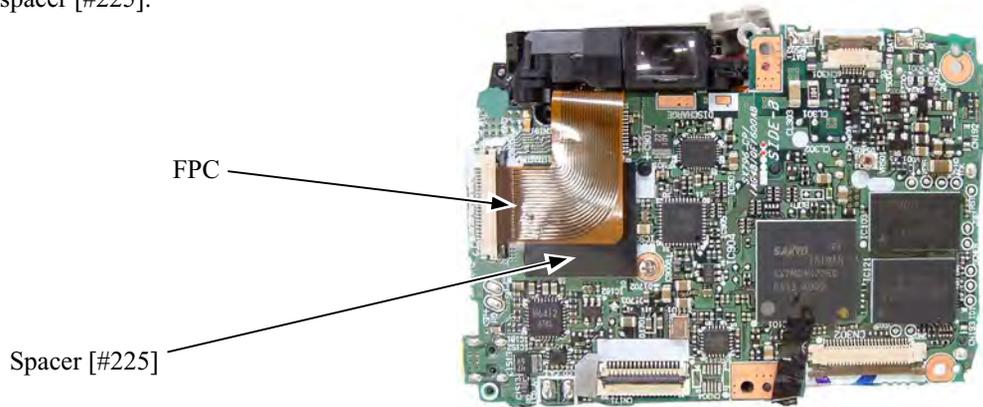
CONDENSER HOLDER

- Take off the spacer [#224].
- Remove the screw [#102].
- Remove the condenser holder [#204].

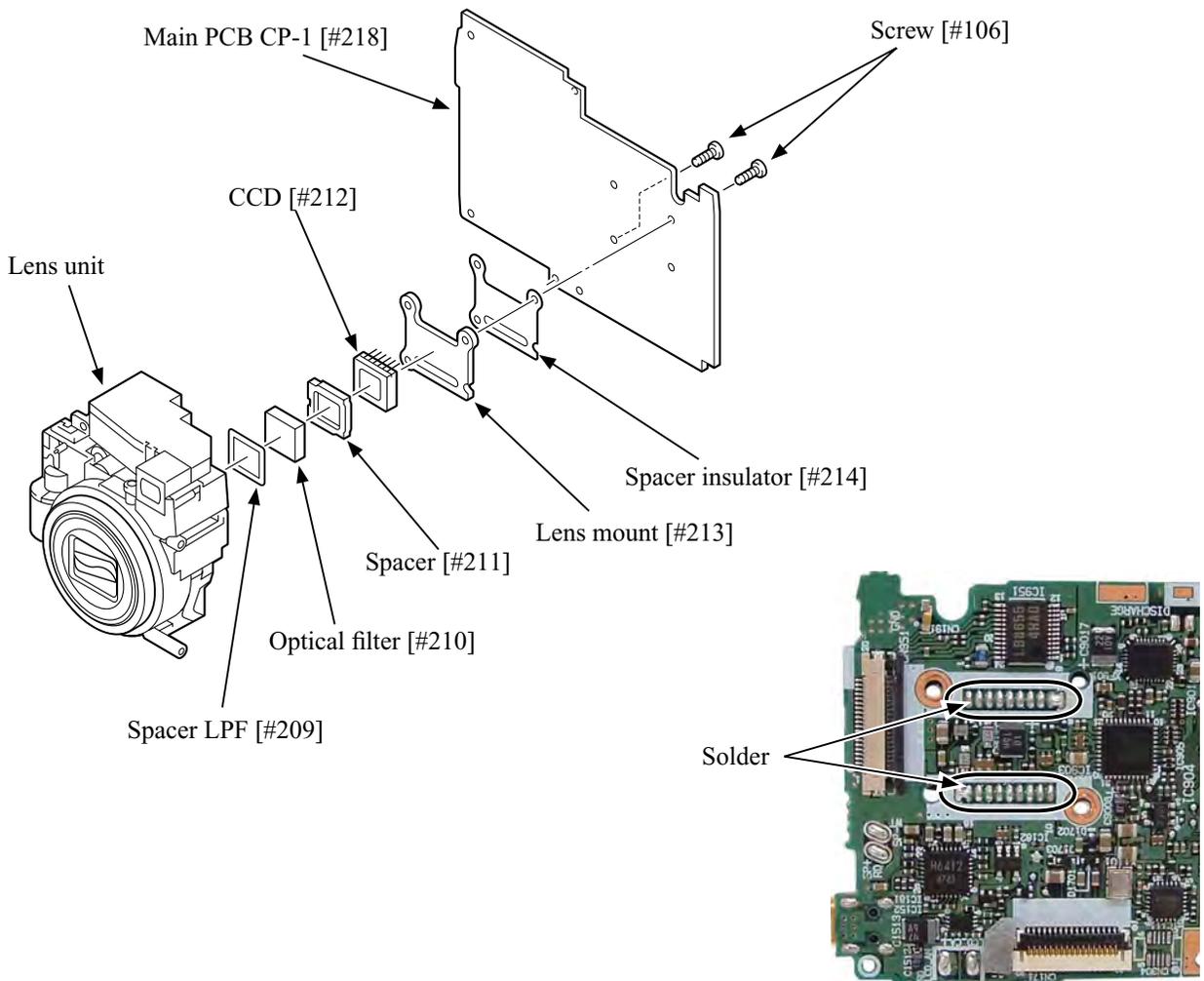


LENS UNIT

- Remove the FPC.
- Take off the spacer [#225].



- Remove the two screws [#106].
- The lens unit can be removed.
- The spacer LPF [#209], the optical filter [#210] and the spacer [#211] can be removed.
- Remove the solder fixing the CCD. (Fig. 1)
- Remove the CCD [#212], the lens mount [#213] and the spacer insulator [#214].



(Fig. 1)

# Points to notice when disassembling / (re)assembling Lens unit

When the following parts are replaced for repairing the lens unit singularly, the lens unit checking tool is required for the FFD inspection and adjustment. Therefore, at service facilities where there is no tool, do NOT make a replacement

- 1st lens group unit
- 2nd lens group unit
- 3rd lens group unit

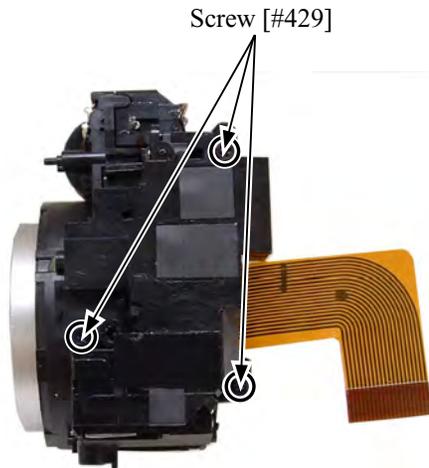
Tools required for FFD inspection and adjustment
--

Note: When the operation check and adjustment of the lens unit are made for repairing the lens unit singularly, the following tools are required.

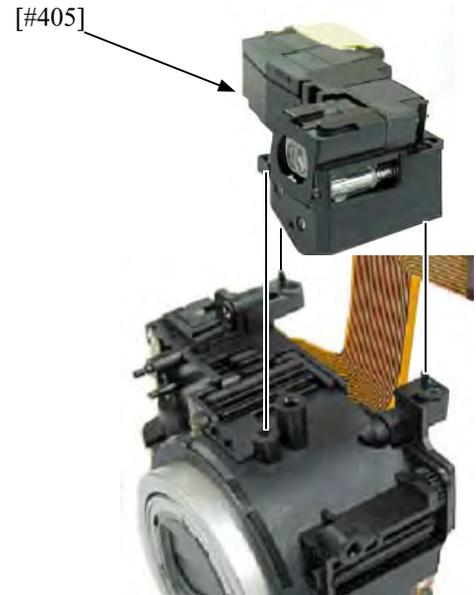
- Lens unit checking tool : J61202
- Connection cable for lens : J61202F
- PCI I/F board : J61204
- Connection cable for PC : J61204A
- Adjusting focus stand for APS : J15327
- Adapter for J15327 : J15327A + J15327D
- E4600/E5600 lens unit checking program : J65072

FINDER UNIT

- Remove the three screws [#429].

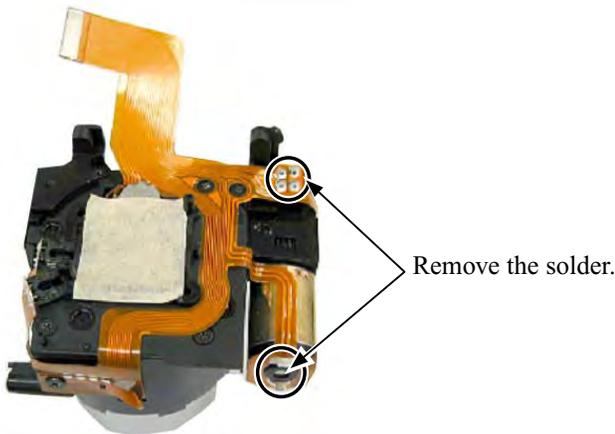


- Remove the finder unit [#405].

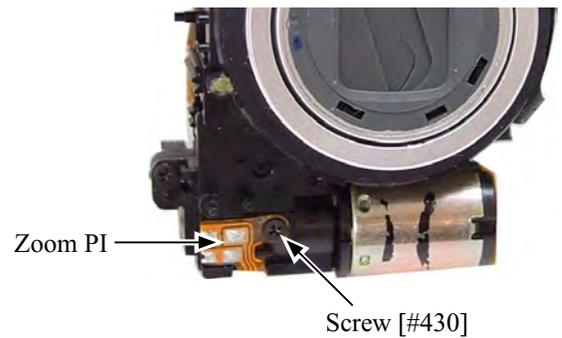


ZOOM MOTOR UNIT

- Remove the solder of the motor at 2 places.
- Remove the solder of the FPC at 4 places.

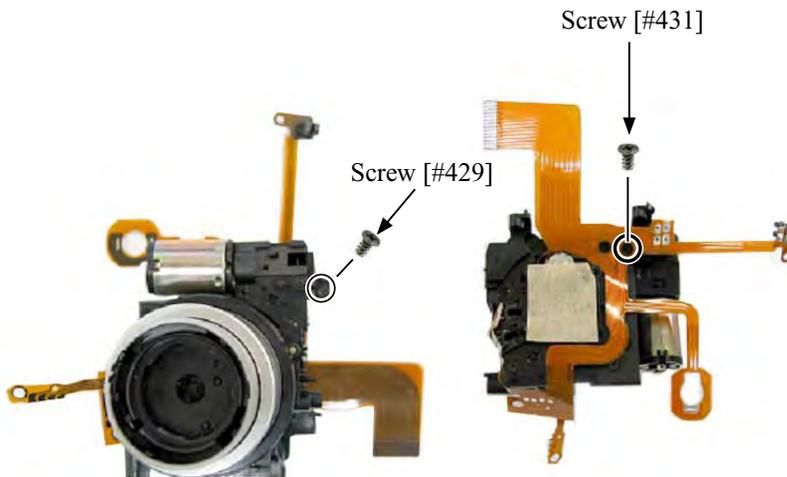


- Remove the screw [#430].
- Remove the zoom PI.



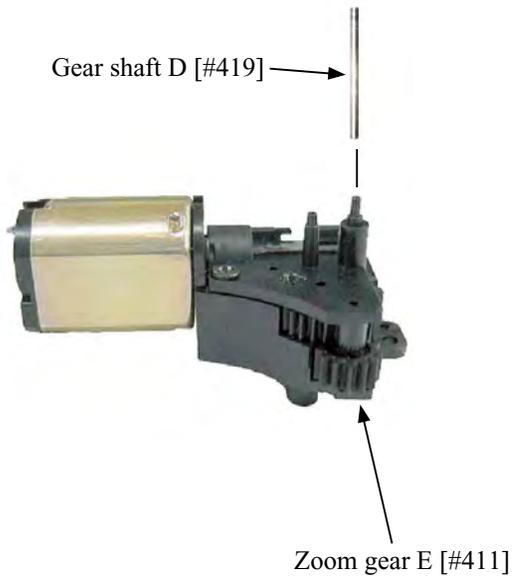
- Remove the screw [#429].
- Remove the screw [#431].

- Remove the zoom motor unit. Zoom motor unit

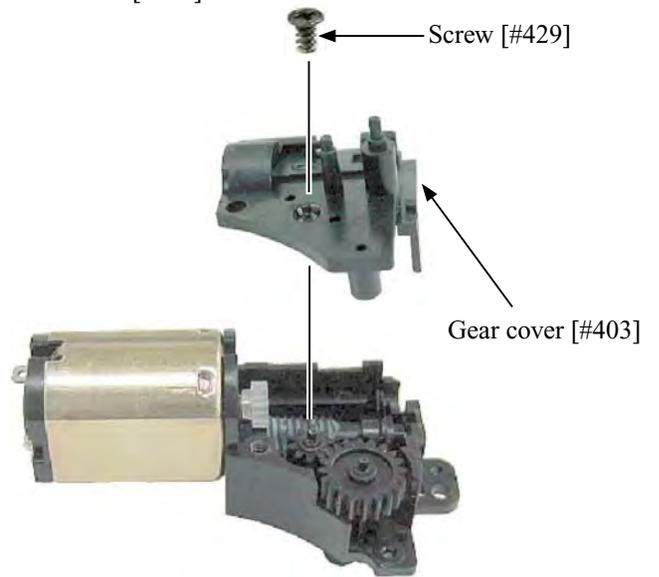


DISASSEMBLY OF ZOOM MOTOR UNIT

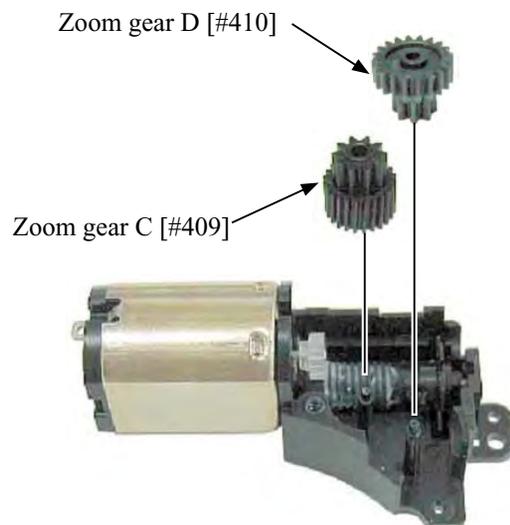
- Pull out the gear shaft D [#419].
- Remove the zoom gear E [#411].



- Remove the screw [#429] and then remove the gear cover [#403].

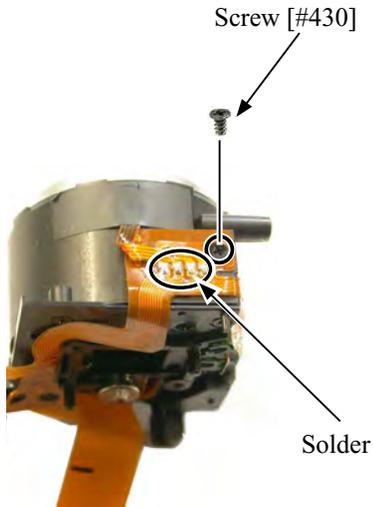


- Remove the zoom gear D [#410] and the zoom gear C [#409].

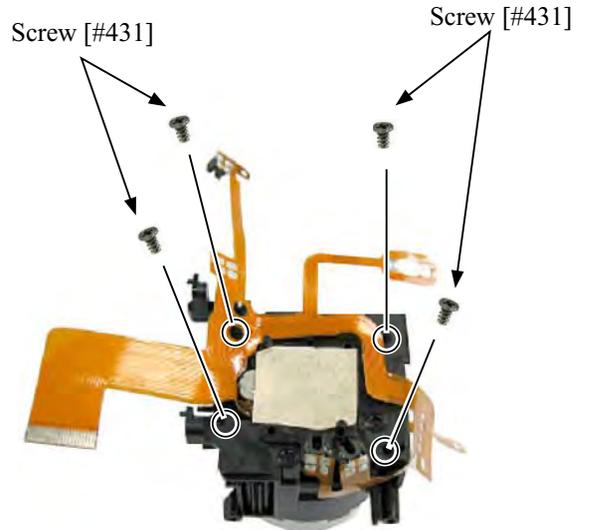


CCD FRAME

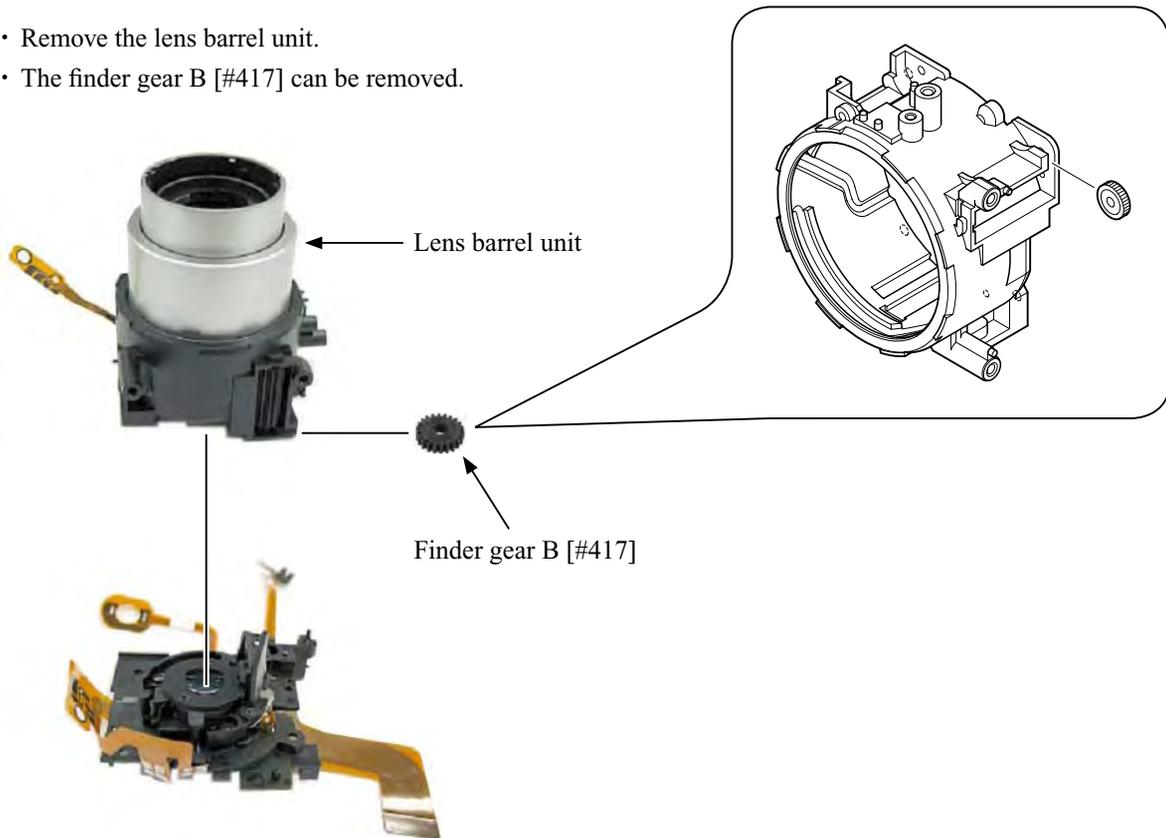
- Remove the solder.
- Remove the screw [#430].



- Remove the four screws [#431].



- Remove the lens barrel unit.
- The finder gear B [#417] can be removed.

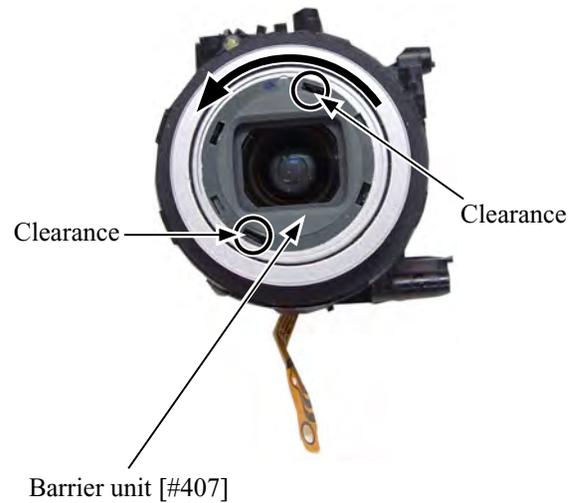


BARRIER UNIT

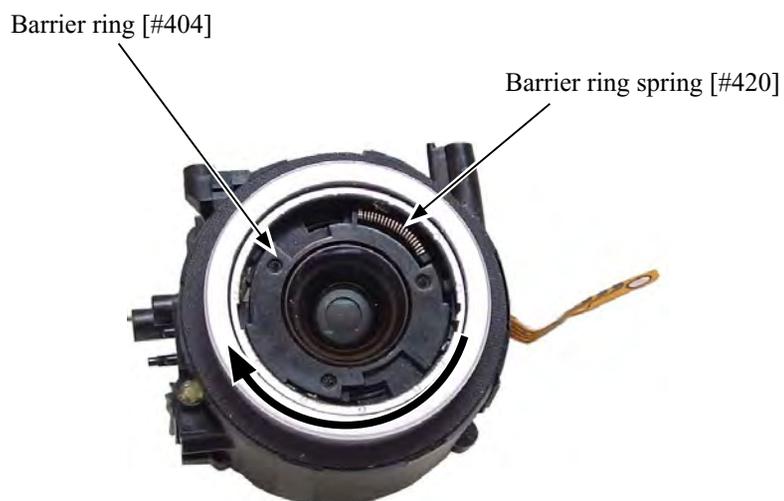
- Take off the name plate seal [#415].



- Remove the barrier unit [#407] by turning counterclockwise.
- ※ Insert tweezers into the clearance and turn the barrier unit counterclockwise. It will be removed easily.



- Remove the barrier ring spring [#420].
- Remove the barrier ring [#404] by turning clockwise.

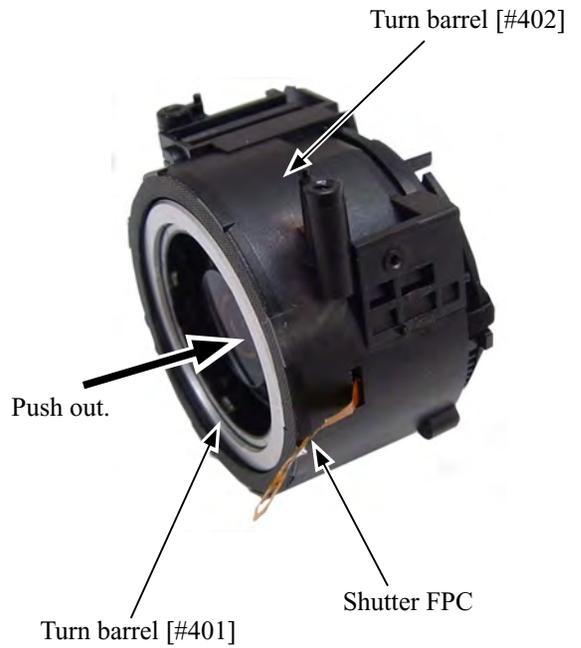


FIXED BARREL

- Take off the FPC sheet [#423].

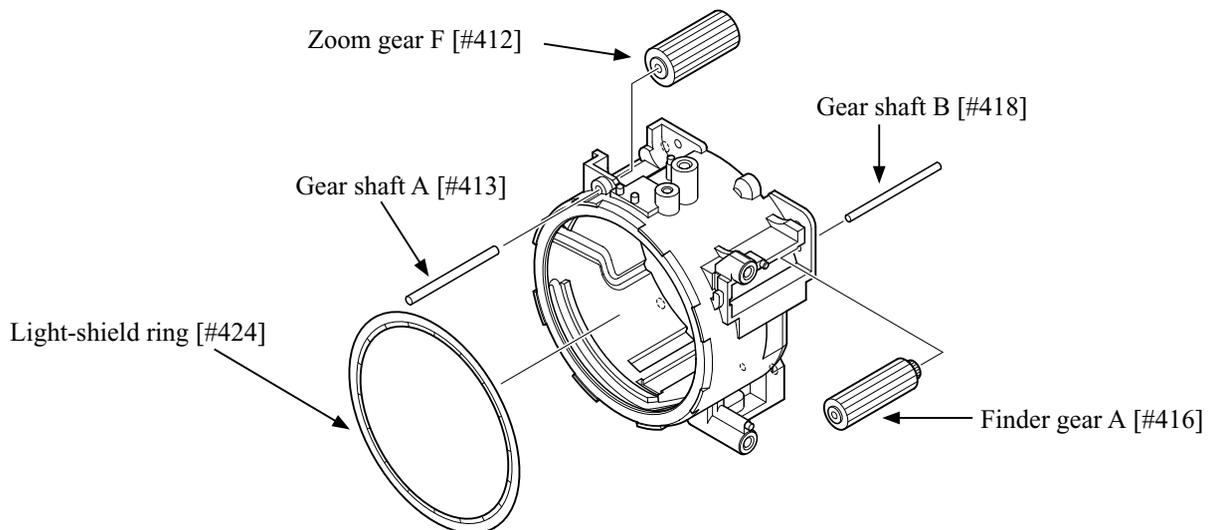


- Push out the turn barrel [#401]. As taking out the shutter FPC, remove the turn barrel [#402].



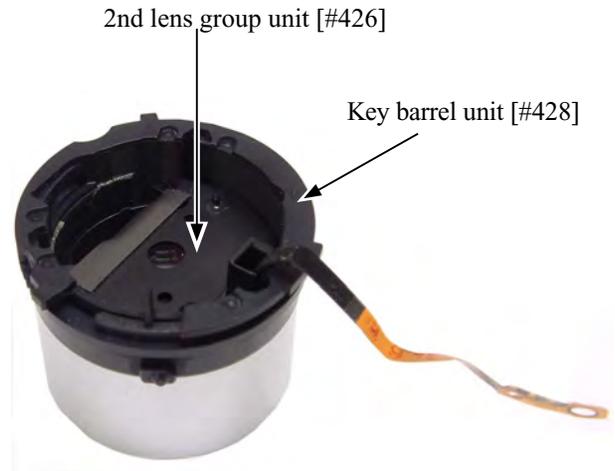
DISASSEMBLY OF FIXED BARREL

- Pull out the gear shaft A [#413] and remove the zoom gear F [#412].
- Pull out the gear shaft B [#418] and remove the finder gear A [#416].
- Remove the light-shield ring [#424].



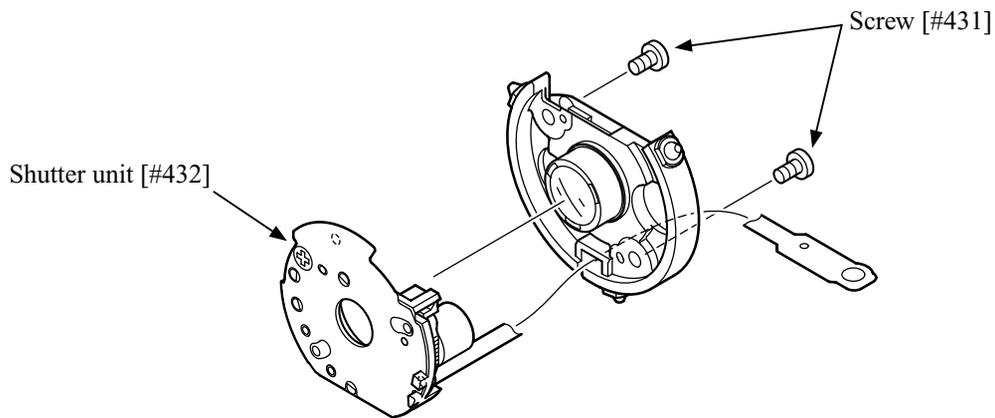
2ND LENS GROUP UNIT

- Turn the key barrel unit [#428] in the W-end direction to the limit.
- The 2nd lens group unit [#426] floats a little and can be removed.



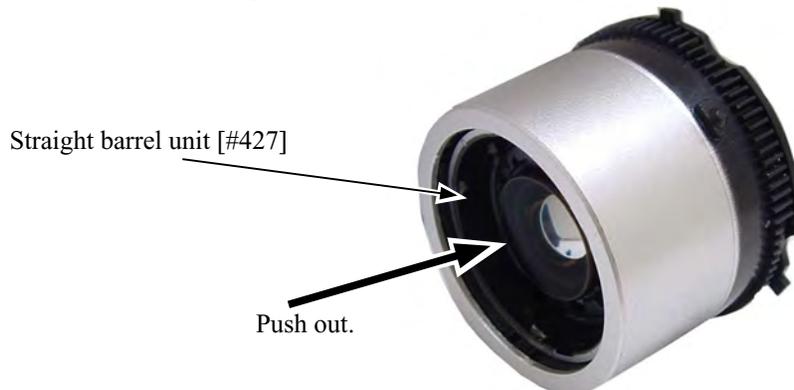
SHUTTER

- Remove the two screws [#431].
- Remove the shutter unit [#432].



STRAIGHT BARREL

- Push out and remove the straight barrel unit [#427].



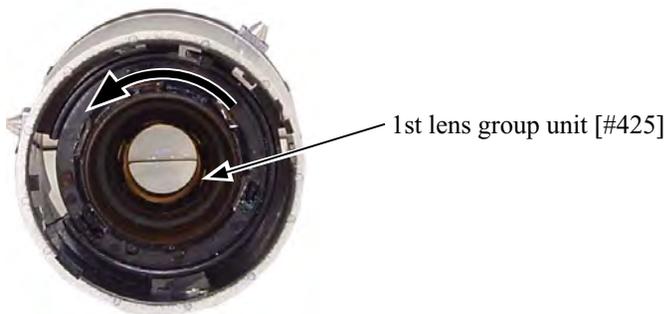
KEY BARREL • TURN BARREL

- Pull out the key barrel unit [#428] from the turn barrel [#401].



1ST LENS GROUP UNIT

- Turn the 1st lens group unit [#425] counterclockwise.
- The 1st lens group unit [#425] can be removed.



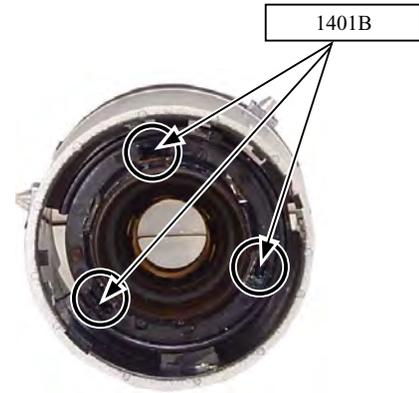
# ASSEMBLY

## 1ST LENS GROUP UNIT

- Set the 1st lens group unit [#425] into the straight barrel unit [#427]. Turn the 1st lens group unit [#425] counterclockwise to be level and turn it clockwise to be installed correctly.



- Apply the adhesive (1401B) to 3 places.



## KEY BARREL • TURN BARREL

- There is a convex section on the side without gear on the turn barrel [#401]. Fit the lever position on the key barrel unit [#428] into this convex section and set the key barrel unit [#428] into the turn barrel [#401].



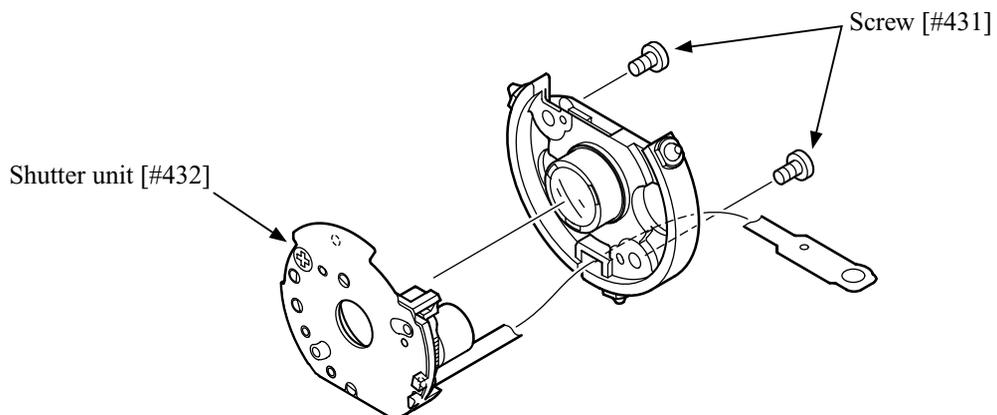
### STRAIGHT BARREL

- Set the lever of the key barrel unit [#428] at the front side. Set the long hole of the straight barrel unit [#427] at the left side. Fit the convex sections to the grooves and then set the straight barrel unit [#427] into the key barrel unit [#428].



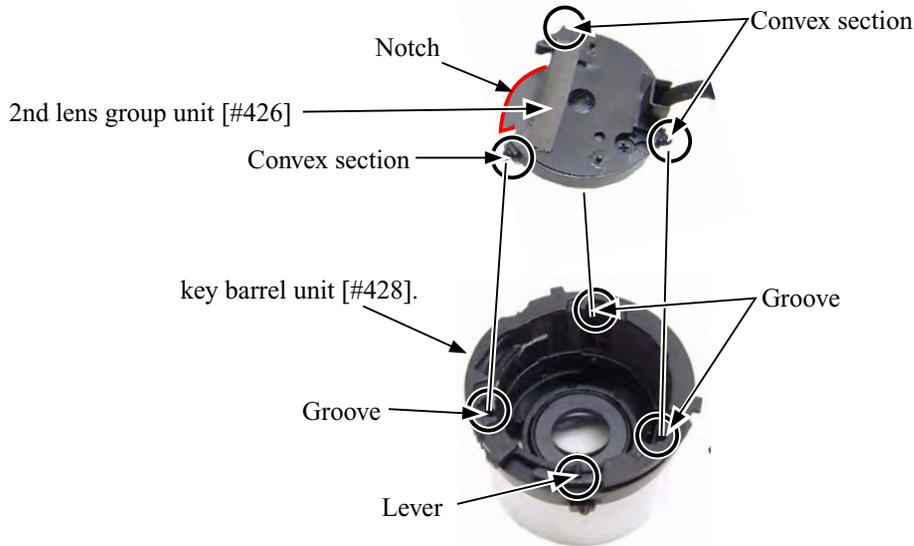
### SHUTTER

- Install the shutter unit [#432] and tighten the two screws [#431].



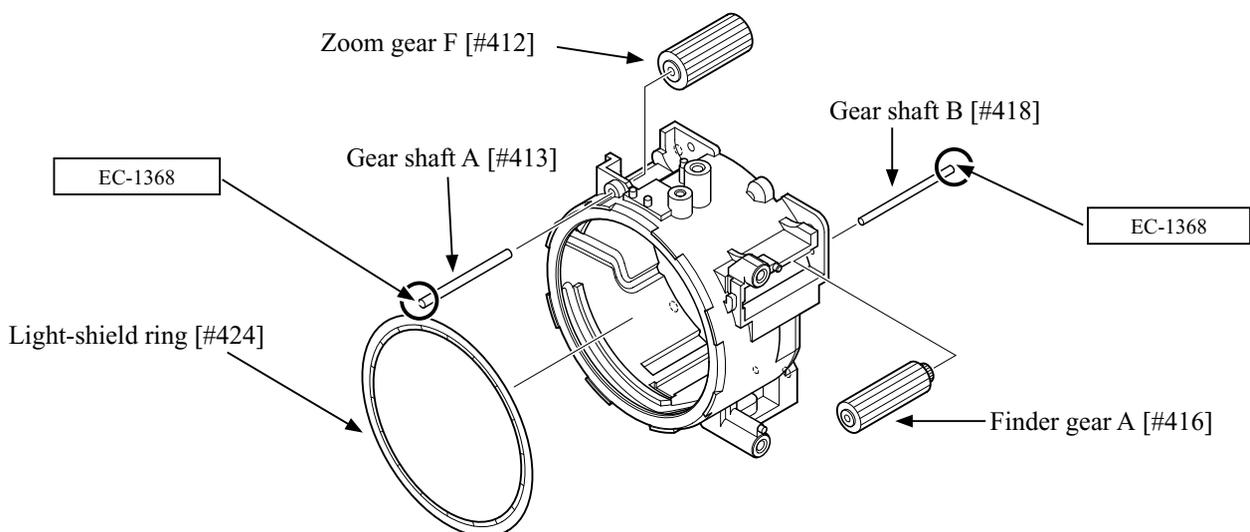
### 2ND LENS GROUP UNIT

- Set the lever of the key barrel unit [#428] at the front side. Set the notch of the 2nd lens group unit [#426] at the left side. Fit the convex sections to the grooves and set the 2nd lens group unit [#426] into the key barrel unit [#428].



### ASSEMBLY OF FIXED BARREL

- Set the light-shield ring [#424].
- Make the stepped difference side of the finder gear A [#416] face the CCD. Then, set the finder gear A [#416] and insert the gear shaft B [#418].
- Set the zoom gear F [#412] and insert the gear shaft A [#413].
- Apply the adhesive (EC-1368) to the gear shafts.



**FIXED BARREL**

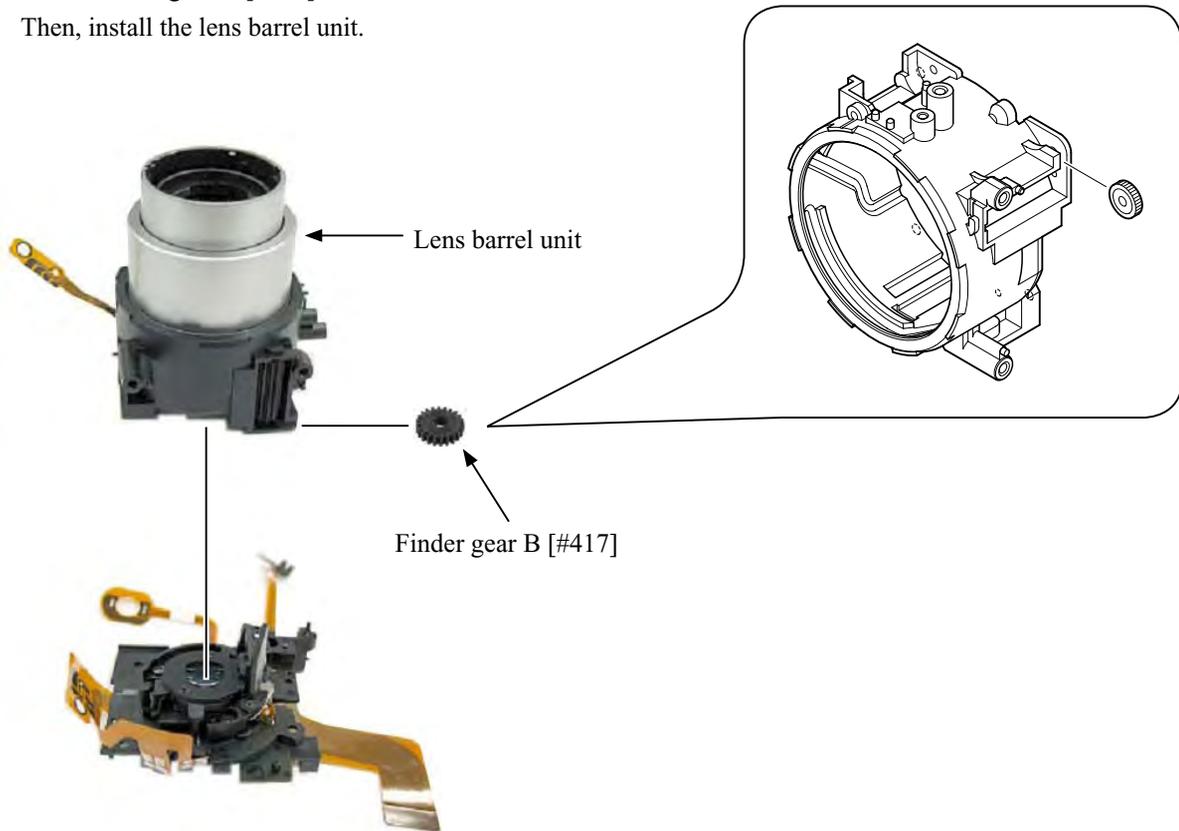
- Insert the shutter FPC into the hole on the side of the fixed barrel [#402].
- Fit the convex sections on the turn barrel [#401] to the grooves on the fixed barrel [#402]. Set the turn barrel [#401] into the fixed barrel [#402].

- Adhere the FPC sheet [#423].

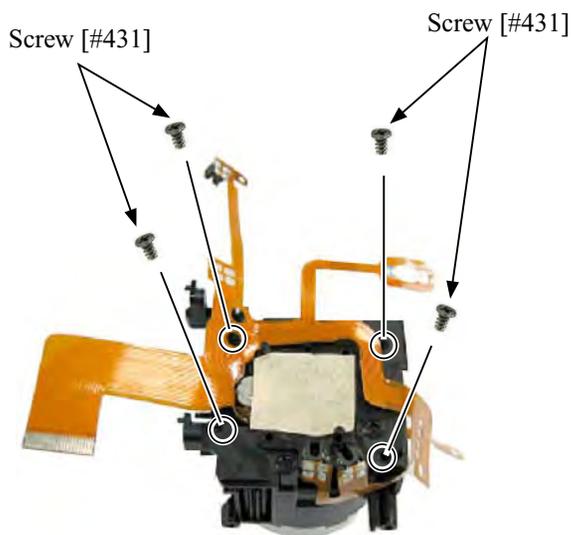


CCD FRAME

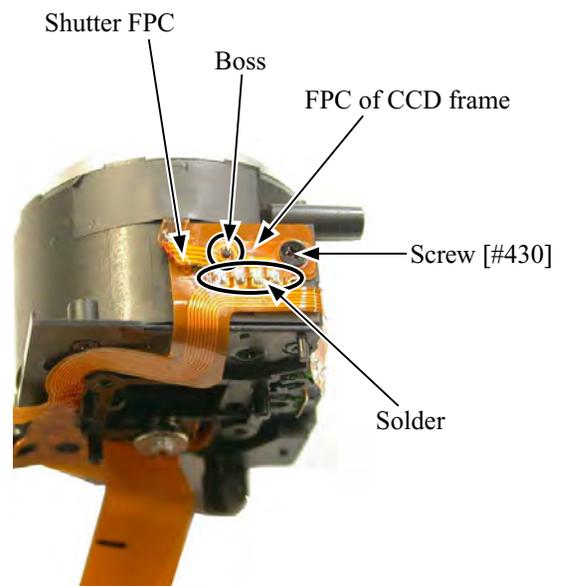
- Set the finder gear B [#417] into the lens barrel unit.  
Then, install the lens barrel unit.



- Tighten the four screws [#431].

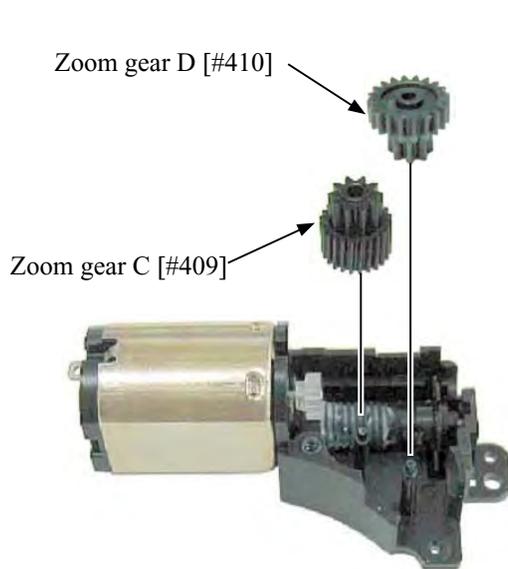


- Insert the FPC of the CCD frame into the boss.
- Insert the shutter FPC into the boss.
- Tighten the screw [#430].
- Perform soldering.

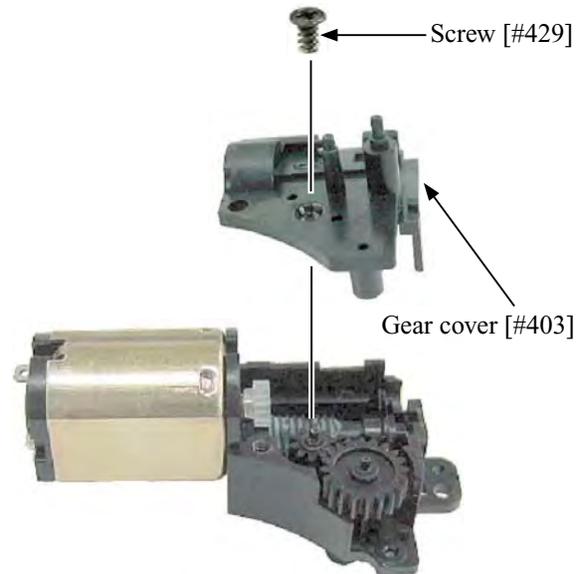


ASSEMBLY OF ZOOM MOTOR UNIT

- Set the zoom gear C [#409] and the zoom gear D [#410].



- Set the gear cover [#403] and tighten the screw [#429].



- Set the zoom gear E [#411] and insert the gear shaft D [#419].

