FAA41051-R.3644.A

作成承認印	配布許可印

TEMPORARY

Nikon

F6 FAA41051

REPAIR MANUAL

Nikon | NIKON CORPORATION
Tokyo, Japan

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Specifications

Type of camera	Integral-motor autofocus 35mm single-lens reflex with electronically controlled focal-plane shutter
Exposure modes	P: Programmed Auto (Flexible Program possible) S: Shutter-Priority Auto A: Aperture-Priority Auto M: Manual
Picture format	24 x 36mm (standard 35mm film format)
Lens mount	Nikon F mount (with AF coupling, AF contacts)
Lens	・G- or D-type AF Nikkor (except for DX- and IX-Nikkor): All functions possible ・PC Micro-Nikkor 85mm f/2.8D: All functions except autofocus and exposure modes other than Manual possible without shifting and/or tilting the lens ・AF Nikkor other than G/D-type (except AF Nikkor for F3AF): All functions except 3D Color Matrix Metering possible ・AI-P Nikkor: All functions except 3D Matrix Metering and autofocus possible ・Non-CPU: Usable in Aperture-Priority Auto or Manual exposure mode, electronic rangefinder usable with lens having a maximum aperture of f/5.6 or faster, Color Matrix Metering, aperture value display, etc. usable with the lens data specified (with AI lens) ・TC-16A: Autofocus possible with lens having a maximum aperture of f/3.5 or faster (electronic rangefinder not usable) except with some lens ・Non-AI lens: Can be attached with modification (stop-down measurement)
Viewfinder	Fixed eye-level pentaprism, built-in diopter adjustment (-2.0 to +1m^{-1}), eyepiece shutter, eyepiece DK-17, eyepiece lock available
Eyepoint	18mm (at -1.0m^{-1})
Focusing screen	B-type BriteView clear Matte screen II, interchangeable with six optional focusing screens
Viewfinder frame coverage	Approx. 100%
Finder magnification	Approx. 0.74x with 50mm lens set to infinity and -1.0m^{-1}
Viewfinder information	Focus indications, metering system, AE lock, FV lock exposure mode, shutter speed lock, shutter speed, aperture step, aperture lock, apertu re, multiple exposure, battery level, frame counter/exposure compensation value, electronic analog exposure display, exposure compensation, bracketing, ready-light, 11 sets of focus brackets (area)
Reflex mirror	Automatic, instant-return type

Lens aperture	Instant-return type, with depth-of-field preview button
Autofocus	TTL phase detection, Nikon Multi-CAM2000 autofocus module ・Detection range: EV -1 to EV 19 (ISO 100, at normal temperature)
Lens servo	・Single Servo AF (S), Continuous Servo AF (C), Manual focus (M) ・Focus Tracking automatically activated in Single Servo AF (S)or Continuous Servo AF(C)
Focus area	One or group out of 11 focus areas can be selected
AF Area mode	・Single Area AF ・Dynamic AF ・Group Dynamic AF ・Dynamic AF Mode with Closest-Subject Priority
Focus lock	Focus is locked by pressing AE/AF-L button or lightly pressing shutter release button in Single Servo AF
Metering system	TTL full-aperture exposure metering system ・3D Matrix Metering: With G- or D-type lens (except for DX- or IX-Nikkor) ・Matrix Metering: With AF Nikkor lens other than G- or D-type (except AF Nikkor for F3AF), AI-P lens, non-CPU lens with lens data specified ・Center-Weighted Metering: Approx. 75% of the meter's sensitivity concentrated on the 12mm dia. circle ・Spot Metering: 4mm dia. circle (approx. 1.5% of entire frame); shifts according to focus area selected
Metering range	3D Matrix Metering: EV 0-20 Center-Weighted Metering: EV 0-20 Spot Metering: EV 2-20 (at normal temperature, ISO 100, 50mm f/1.4 lens)
Exposure meter coupling	CPU and AI combined, meter coupling lever can be modified
Exposure compensation	Exposure compensated in ±5 EV range, in 1/3, 1/2 or 1 steps
Auto Exposure Lock	Detected exposure value locked by pressing AE/AF-L button
Auto Exposure Bracketing	Number of shots: 2-7; compensation steps: 1/3, 1/2, 2/3 or 1 EV steps
Film speed setting	・DX or manual selectable (manual setting has priority over DX detected film speed) ・Film speed range: DX: ISO25-5000, Manual: ISO 6-6400 in 1/3 steps
Shutter	Electronically controlled vertical-travel focal-plane shutter (with built-in shutter monitor)

Shutter speeds	・In P, A: 30 to 1/8000 sec. ・In S: 30 to 1/8000 sec. (in 1/3 steps), X (1/250 sec.) ・In M: 30 to 1/8000 sec. (in 1/3 steps), Bulb, X (1/250 sec.) ＊Shutter speed can be prolonged to 30 min. in M mode
Sync contact	X-contact only; flash synchronization up to 1/250 sec. (up to 1/8000 sec. possible in Auto FP High-Speed Sync)
Flash control	TTL flash control by combined five-segment TTL multi sensor with single-component IC and 1,005-pixel AE sensor ・i-TTL Balanced Fill-Flash with SB-800, 600 ・Automatic Balanced Fill-Flash with TTL Multi Sensor: 3D Multi-Sensor Balanced Fill-Flash compatible with SB-800, SB-600, SB-80DX, SB-50DX, SB-28/28DX, SB-27, SB-26, SB-25 and D/G-type Nikkor lens; Multi-Sensor Balanced Fill-Flash with a Speedlight without Monitor Pre-Flash and CPU lens other than D/G-type or non-CPU lens ・Standard TTL: With Spot Metering ・Film speed range in TTL auto flash: ISO 25-1000
Flash sync mode	Front-Curtain Sync (normal sync), Red-Eye Reduction, Red-Eye Reduction with Slow Sync, Slow Sync, Rear-Curtain Sync
Ready-light	Lights up when flash fully charged with Speedlights SB-800, SB-600, SB-80DX, SB-50DX, SB-30, SB-29s/29, SB-28/28DX, SB-27, SB-26, SB-23, etc.; blinks (3 sec. after flash) for full output warning
Accessory shoe	ISO518 hot-shoe contact digital data communication (sync contact, ready-light contact, TTL auto flash contact, monitor contact, GND), safety lock provided
Sync terminal	ISO519 terminal, lock screw provided
Creative Lighting System	Advanced Wireless Lighting, Auto FP High-Speed Sync, Modeling flash, FV Lock and AF-Assist for Multi-Area AF available with Speedlights SB-800, SB-600
Self-timer	Electronically controlled; timer duration: 10 sec.
Depth-of-field preview button	Stop-down lens aperture by pressing depth-of-field button
Mirror up	Possible via film advance mode selector
Film loading	Film automatically advances to first frame when camera back is closed

Film advance	・Automatic advance with built-in motor ・Film advance speed (with Continuous Servo AF (C), Manual exposure mode, shutter speed of 1/250 sec. or faster, 36-exposure film, CR123A-type lithium batteries [AA-type alkaline-manganese or Rechargeable Li-ion Battery EN-EL4 in Multi Power Battery Pack MB-40]) S: One-frame advance CL: Continuous low-speed shooting Approx. 2 fps [Approx. 4 fps] CH: Continuous high-speed shooting Approx. 5.5 fps [Approx. 8 fps] Cs: Continuous silent-low-speed shooting Approx. 1 fps [Approx. 2 fps]
Film rewind	・Automatic rewind with built-in motor (activate by pressing two film rewind buttons), manual film rewind with film rewind crank is also possible ・Rewind speed with 36-exposure film: C: approx. 7 sec., Cs: approx. 12 sec.
Multiple exposure	Activate via shooting menu
Interval timer	Activate via shooting menu
Top LCD panel information (built-in illuminator)	Shutter speed lock, shutter speed, aperture EV step,aperture lock, Auto Exposure Bracketing, exposure mode, flexible program, exposure compensation, electronic analog exposure display, exposure compensation value, Auto Exposure Bracketing status, frame counter
Rear LCD panel information (built-in illuminator)	・Shooting display (normal, detailed, large display) ・Shooting data display (film data, frame data) ・Menu display (Custom Setting menu, set up menu, shooting menu, Non-CPU lens, language)
Data imprint	Activate via shooting menu ・In-frame imprint, between-frame imprint, O-frame imprint ・Film speed range: DX: ISO50-3200
Internal clock	Built-in clock; 24-hour type; leap year adjustment until 2099
Camera back	Hinged back; film confirmation window, AF area mode selector, mode button, INFO button, rear LCD panel, built-in data imprint unit
Shooting data	Recordable number of film roll (36-exposures): Approx. 57 rolls in basic shooting data (13 items), Approx. 31 rolls in detailed shooting data (21 items)
10-pin remote terminal	Equipped

<table>
<tr><td>Power source</td><td>Battery holder MS-41 provided (two 3V lithium batteries); optional Multi Power Battery Pack MB-40 and AA-type battery holder MS-40 available (for eight alkaline-manganese, lithium or Ni-MH batteries, or one Rechargeable Li-ion Battery EN-EL4); built-in backup battery</td></tr>
<tr><td>Power switch</td><td>Power ON, OFF and LCD panel illuminator on position</td></tr>
<tr><td>Exposure meter</td><td>Auto meter shut-off 8 sec. after power turned on if no operations are performed; activated by lightly pressing shutter release button or pressing AF start button afer power is turned on</td></tr>
<tr><td>Battery power confirmation</td><td>  for sufficient power;  indicates batteries has began exhaustion; indicates low battery power;blinking  indicates batteries are just about exhausted no indication/symbol appears when batteries are completely exhausted or improperly installed</td></tr>
<tr><td>Usable number of 36-exposure film rolls per set of fresh batteries</td><td>The usable number of film roll is tested under following conditions by Nikon

Test 1
Camera setting: Using an AF-S VR 24-120mm f/3.5-5.6G ED lens, Vibration Reduction function on, in Continuous Servo AF with film advance mode at S and shutter speed of 1/250 sec.
Autofocus operation: After lightly pressing the shutter release button for 8 sec., autofocus operation covers the full range from infinity (∞) to the closest distance and back to infinity (∞) before each shot.After the exposure meter automatically turns off, the same operation follows for the next shot.

<table>
<tr><th>Temperature / Battery</th><th>At 20° C/68° F</th><th>At-10° C/14° F</th></tr>
<tr><td>3V lithium</td><td>Approx. 15</td><td>Approx. 6</td></tr>
<tr><td>AA-type alkaline-manganese (with MB-40)</td><td>Approx. 10</td><td>Approx. 1</td></tr>
<tr><td>AA-type Ni-MH (with MB-40)</td><td>Approx. 30</td><td>Approx. 30</td></tr>
<tr><td>AA-type lithium (with MB-40)</td><td>Approx. 45</td><td>Approx. 35</td></tr>
<tr><td>Rechargeable Li-ion Battery EN-EL-4 (with MB-40)</td><td>Approx. 35</td><td>Approx.25</td></tr>
</table>
</td></tr>
</table>

Usable number of 36-exposure film rolls per set of fresh batteries

Test 2
Camera setting: Using an AF-S VR 70-200mm f/2.8G IF-ED lens,Vibration Reduction function on, in Continuous Servo AF with film advance mode at CH and shutter speed of 1/250 sec.
Autofocus operation: After lightly pressing the shutter release button for 3 sec., autofocus operation covers the full range from infinity (∞) to the closest distance and back to infinity (∞) three times before each shot. The same operation follows for the next shot.

Temperature / Battery	At 20° C/68° F	At-10° C/14° F
3V lithium	Approx. 35	Approx. 15
AA-type alkaline-manganese (with MB-40)	Approx. 55	Approx. 4
AA-type Ni-MH (with MB-40)	Approx. 55	Approx. 50
AA-type lithium (with MB-40)	Approx. 93	Approx. 70
Rechargeable Li-ion Battery EN-EL-4 (with MB-40)	Approx. 65	Approx. 50

Duration (in hours) of Long Time (Bulb) exposure

Temperature / Battery	At 20° C/68° F	At-10° C/14° F
3V lithium	Approx. 5	Approx. 3
AA-type alkaline-manganese (with MB-40)	Approx. 6	Approx. 1.5
AA-type Ni-MH (with MB-40)	Approx. 5	Approx. 4
AA-type lithium (with MB-40)	Approx. 8.5	Approx. 7
Rechargeable Li-ion Battery EN-EL-4 (with MB-40)	Approx.7	Approx. 6

Tripod socket	1/4 (ISO1222)
Custom Setting	41 Custom Setting menus are available
Two-Button Reset	Pressing the MENU and INFO buttons simultaneously and holding them for more than 2 sec. resets various settings to their original default settings (with some exceptions)
Dimensions (W x H x D)	Approx. 157 x 119 x 78.5mm (6.2 x 4.7 x 3.1 in.)
Weight (without batteries)	Approx. 975g (34.4 oz.)
Optional exclusive accessories	Multi Power Battery Pack MB-40, Rechargeable Li-ion Battery EN-EL4, Battery Chamber Cover BL-3, Quick Charger MH-21, Data Reader MV-1, six types of focusing screens, Antifog Finder Eyepiece DK-17A, Eyepiece Correction Lens DK-17C, Soft case CF-64

All specifications apply when fresh 3V lithium (CR123A-type) batteries are used at normal temperature (20°C/68° F).

Caution

① When disassembling/(re)assembling, be sure to use the conductive mat (J5033) and wrist strap (J5033-5) for static protection of electrical parts.

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

③ In the chapter of Disassembly, sometimes a large assembly unit is removed. In case such a unit is further disassembled , refer to the Parts List.

④ Refer to the Parts List regarding the drip-proof sponge, which is not described in Disassembly/(re)assembly chapters.

⑤ When disassembling and/or (re)assembling, be sure to remove batteries.

Points to notice for Lead-free solder products

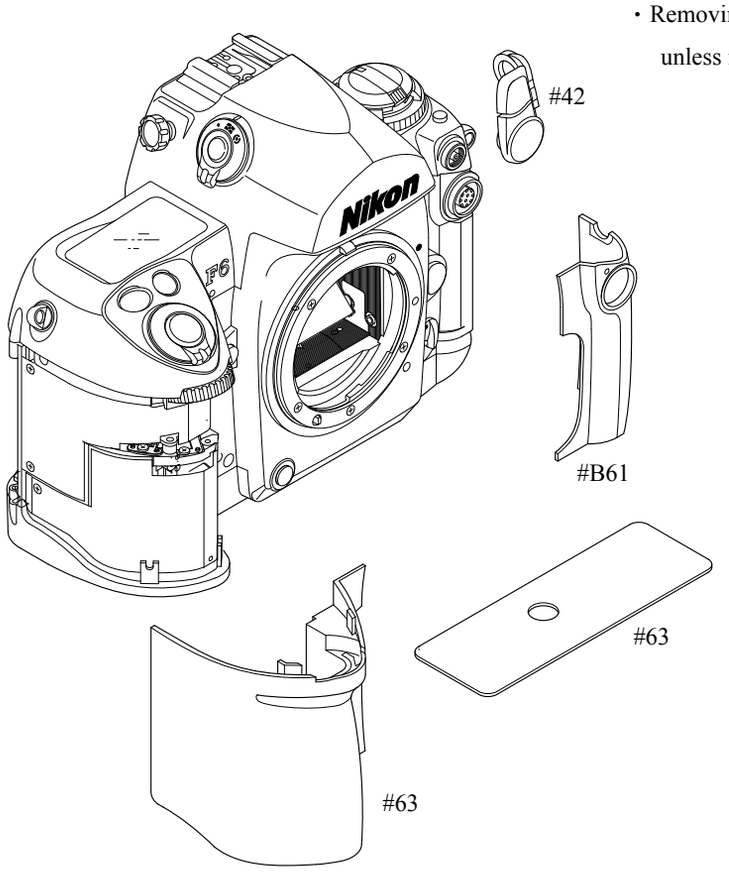
- Lead-free solder is used for this product.
- For soldering work, the special solder and soldering iron are required。
- Do NOT mix up lead-free solder with traditional solder.

Disassembly

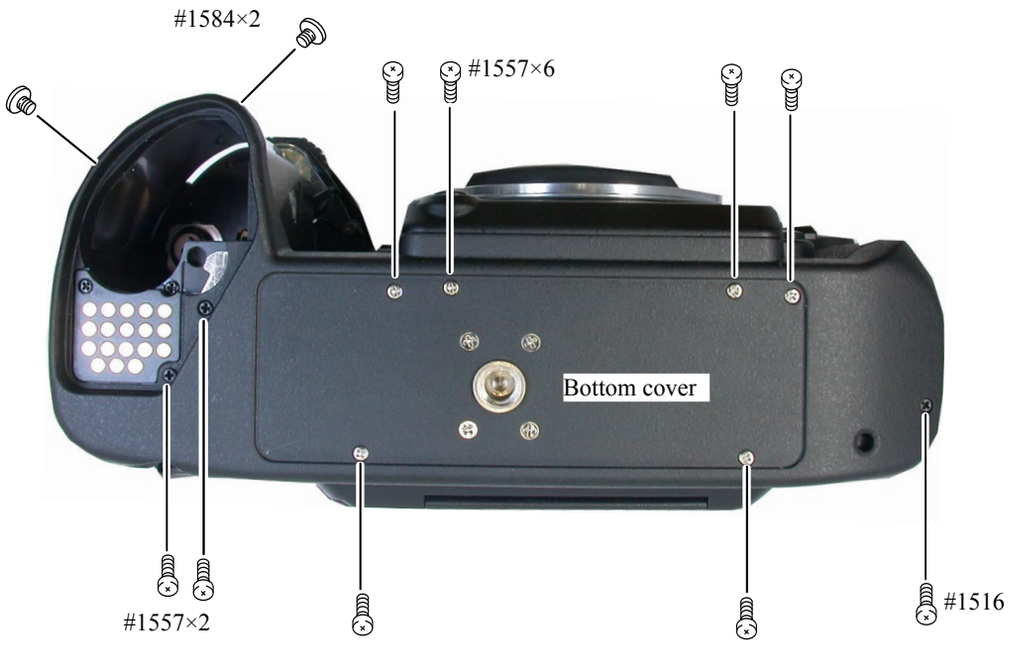
1. Separate Front body from Rear body

External rubber

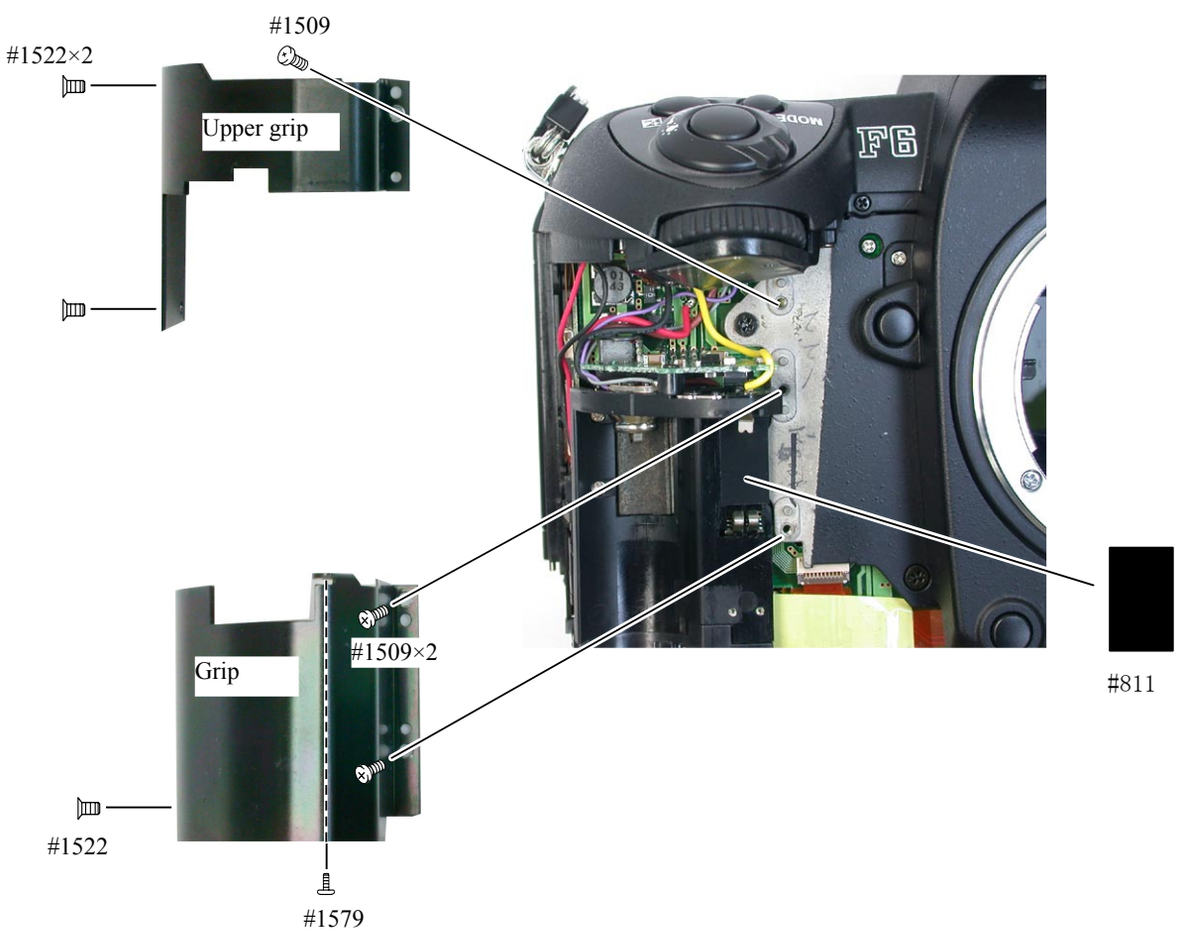
・Removing #42 is NOT necessary, unless it should be replaced.



Bottom cover



Grip



Back door unit

Remove Back door unit

① Remove the grip mold unit (#B39). (Fig.1)

② Pull out the pin (#1658) downward. (Fig.1)

③ Remove the soldering bridges to take out the screw (#1525). (Fig.1)

④ Remove the connector to detach the back door unit. (Fig.2)

Fig.1

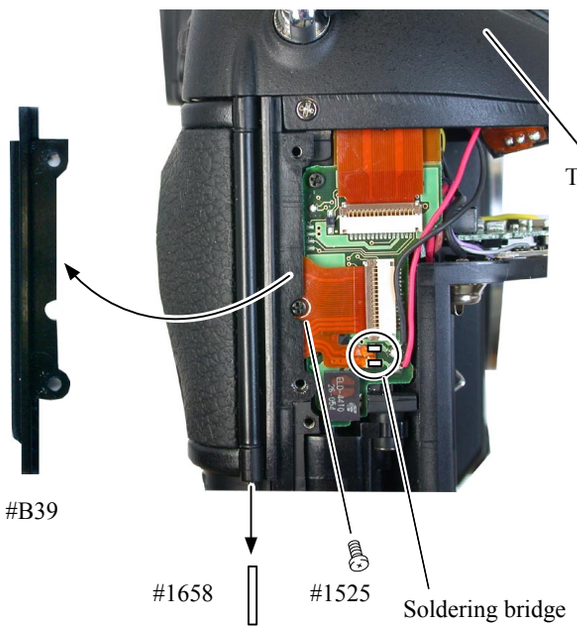
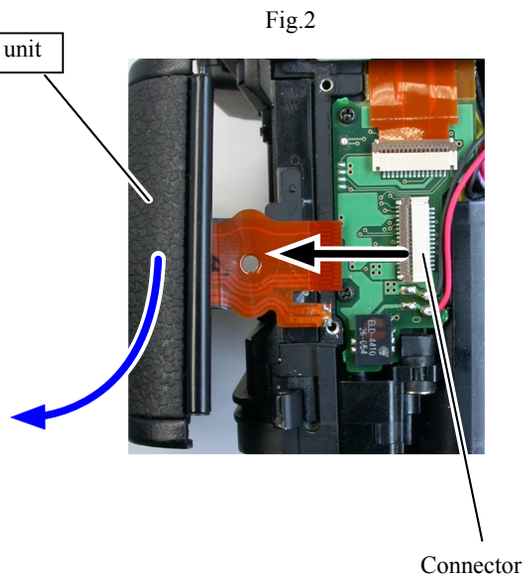


Fig.2



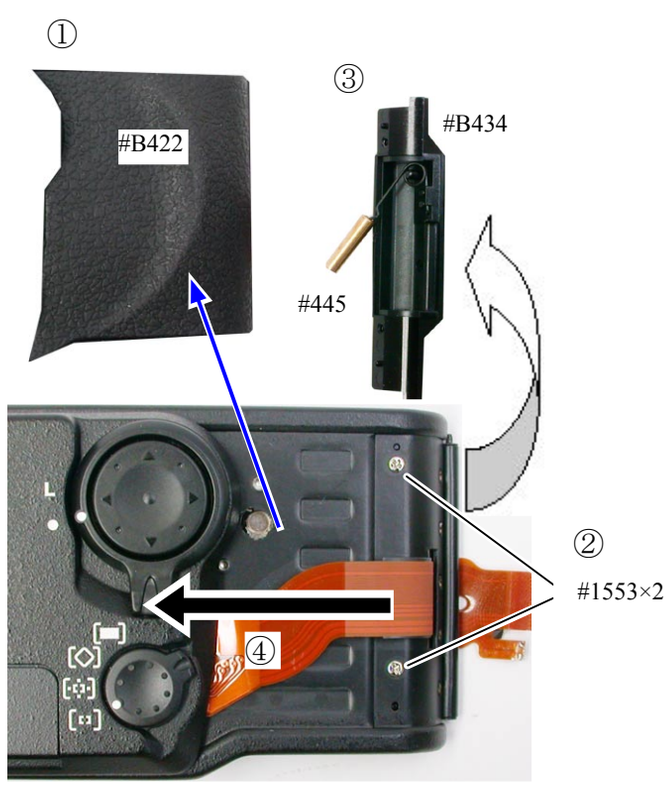
Disassemble Back door unit

① Remove the rubber (#B422).

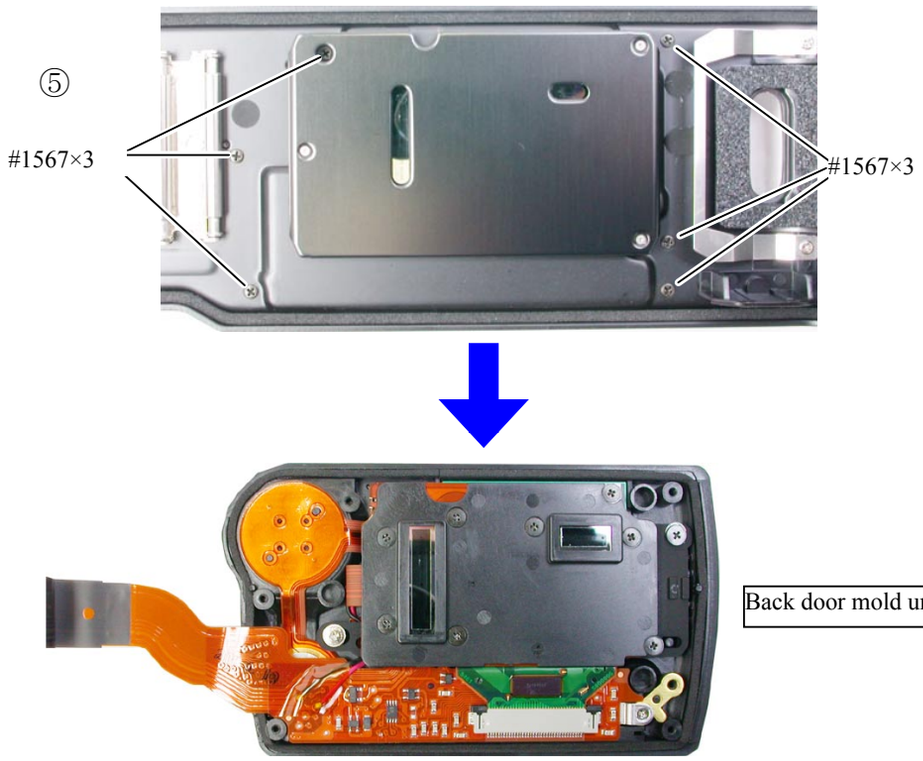
② Take out 2 screws (#1553).

③ Remove the coil cover (#B434) and the roller (#445).
(Be careful not to let the roller (#445) come out.)

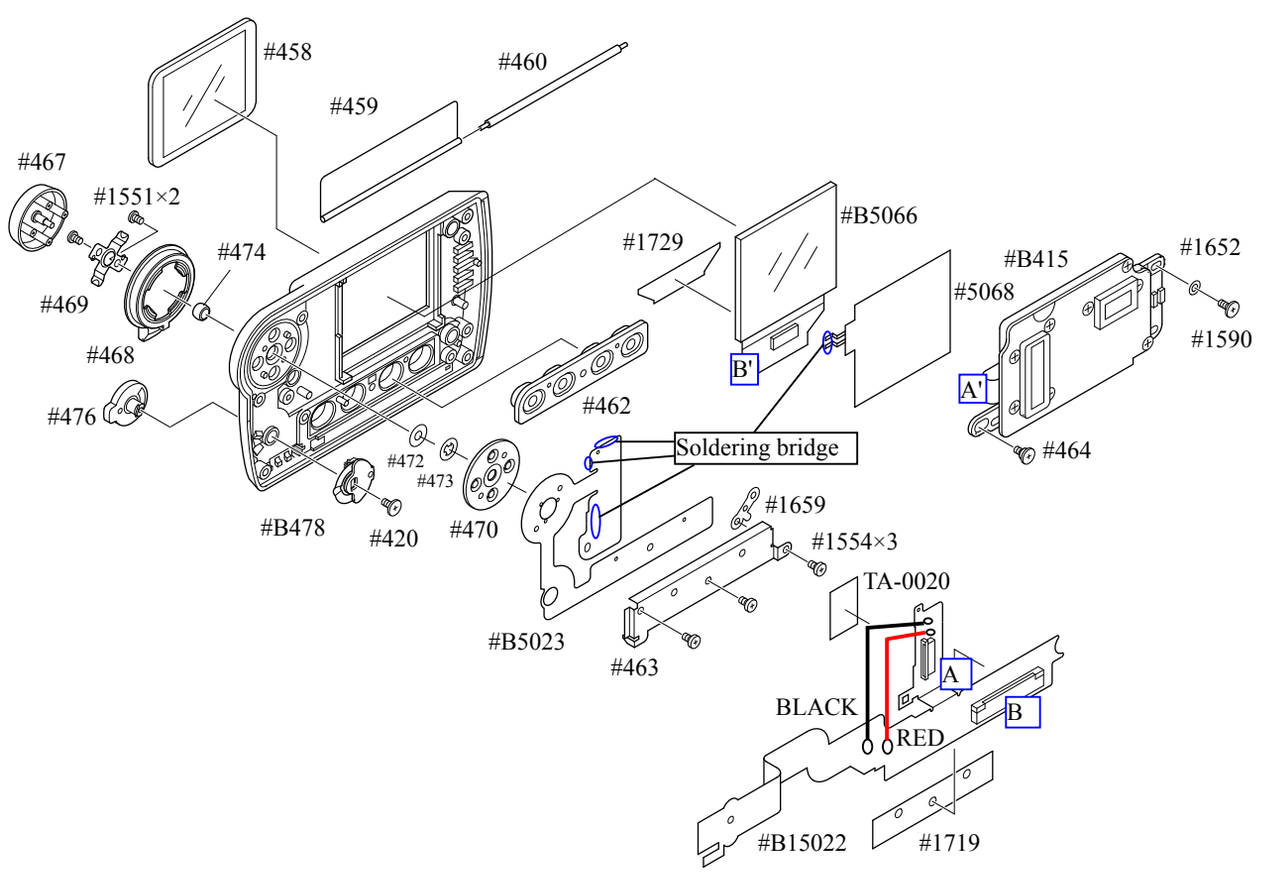
④ Pull the FPC in the direction of the arrow.



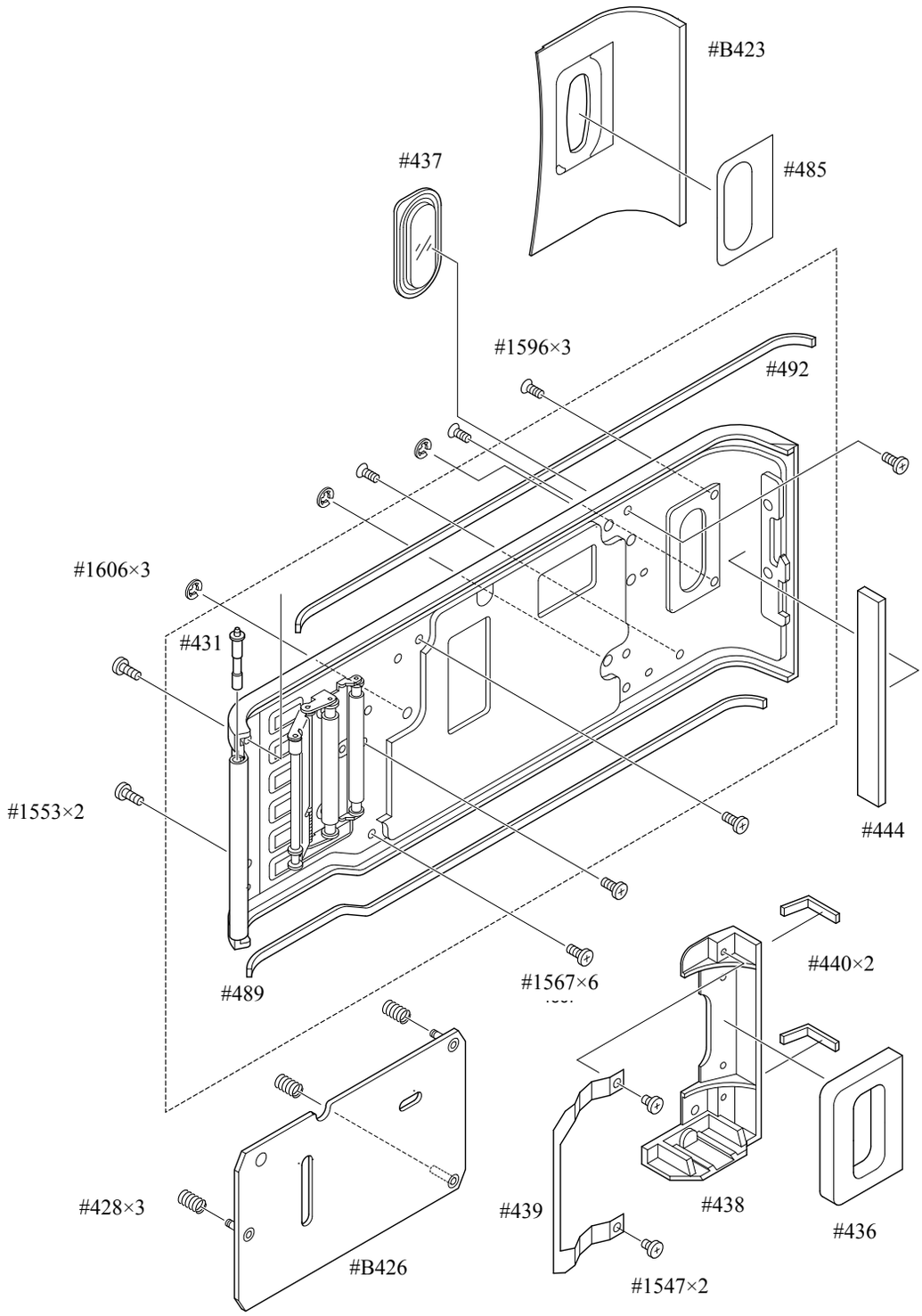
⑤ Remove 6 screws (#1567). The back door mold unit comes off.



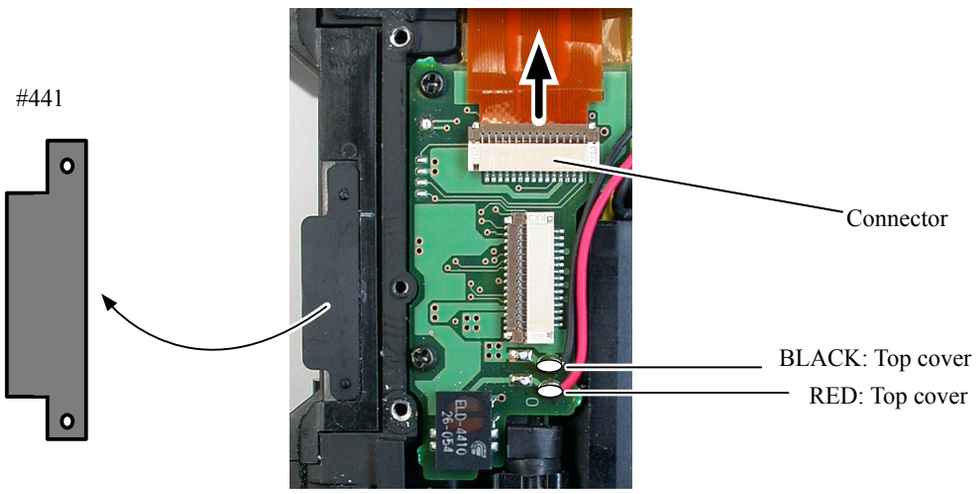
Disassemble Back door mold unit

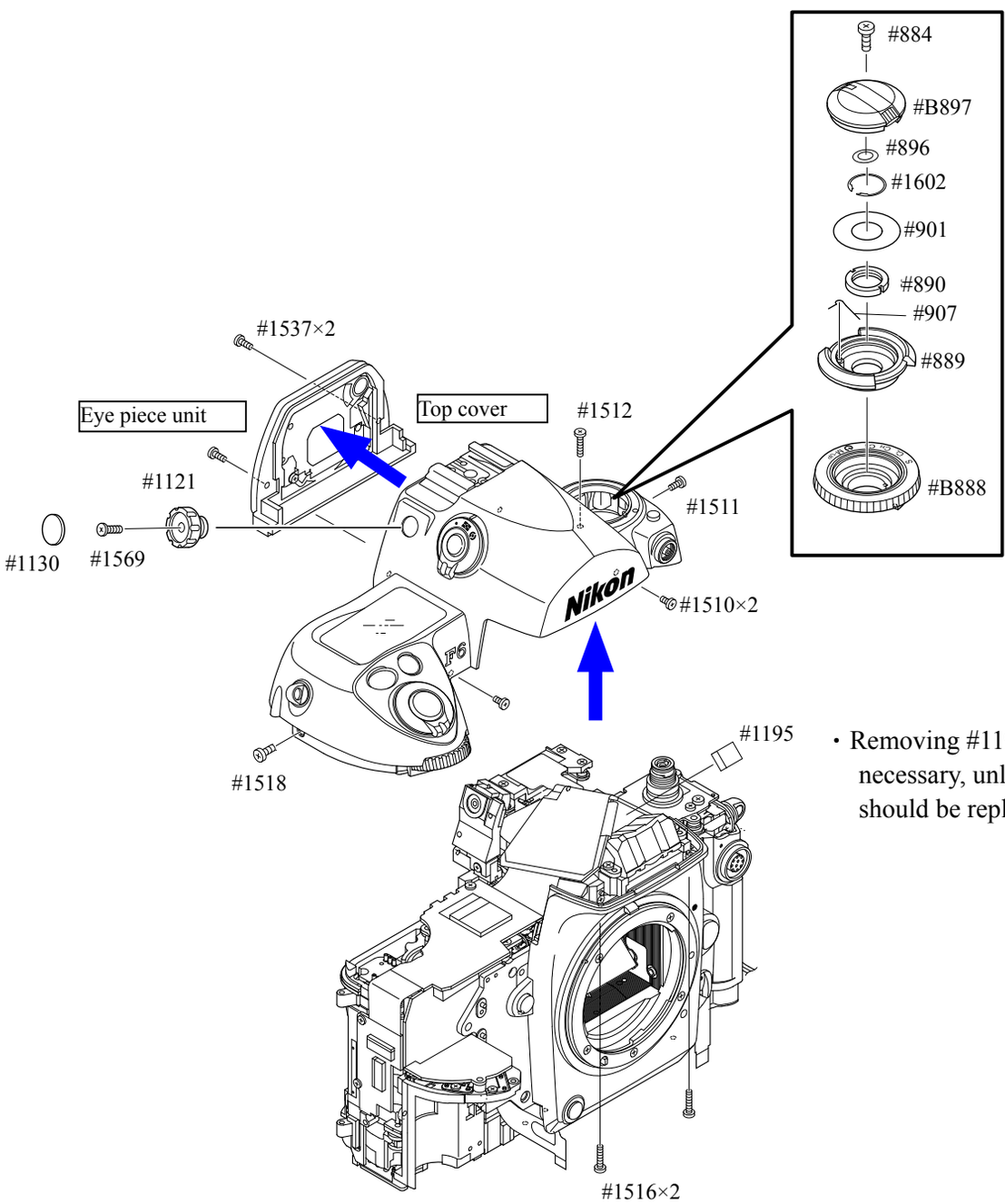


Back door small parts



Top cover

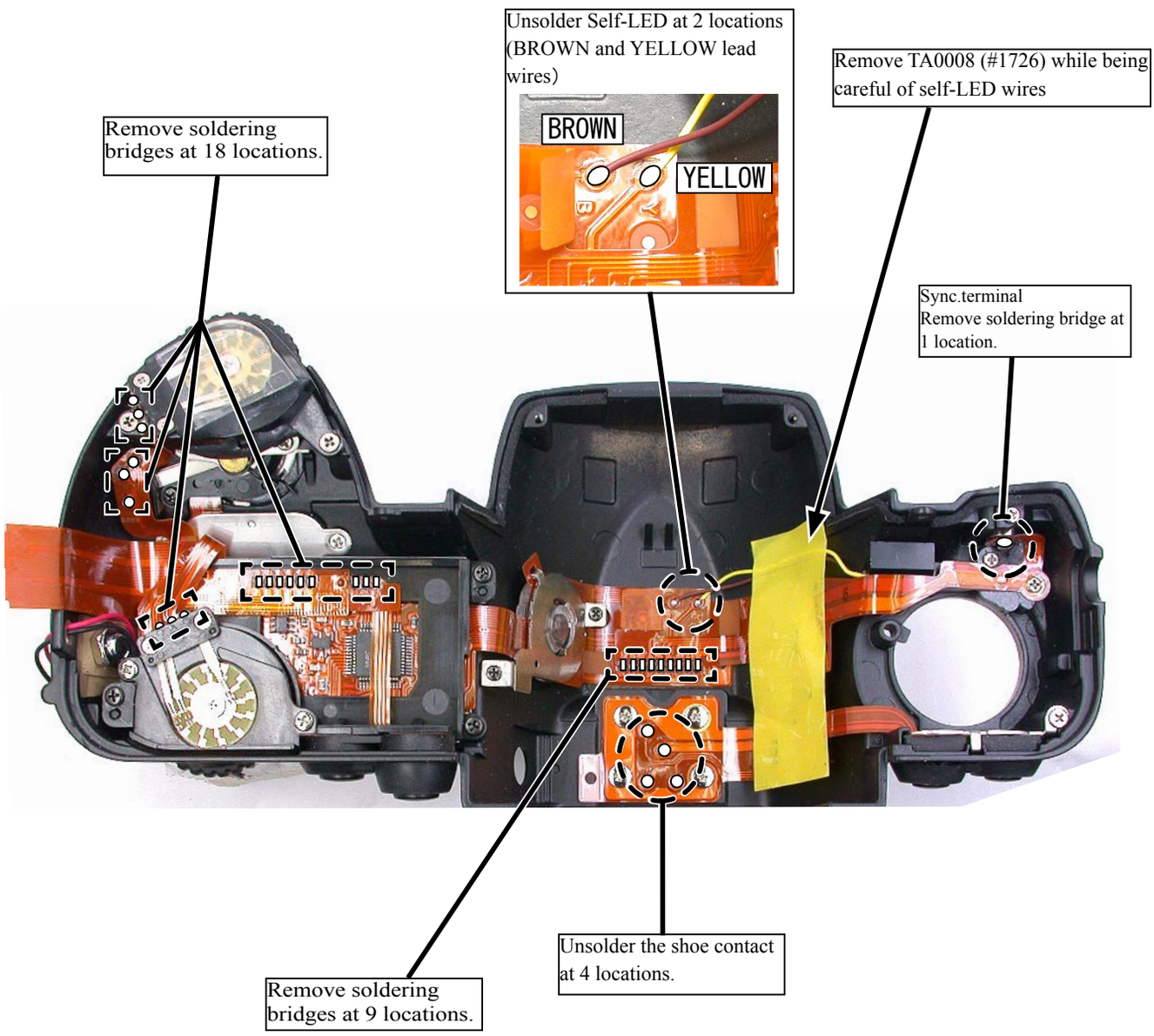




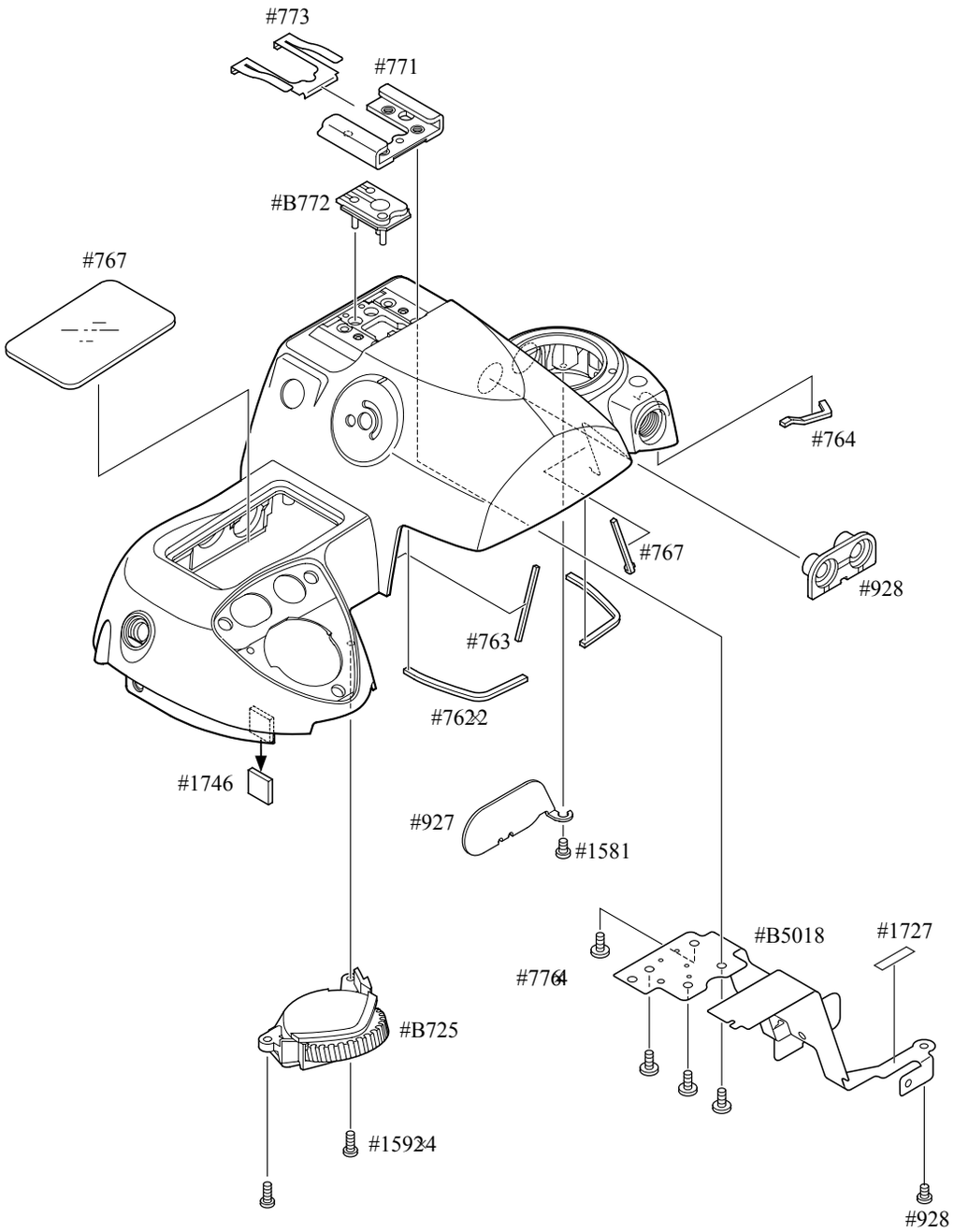
・Removing #1195 is NOT necessary, unless it should be replaced.

Disassembly of Top cover

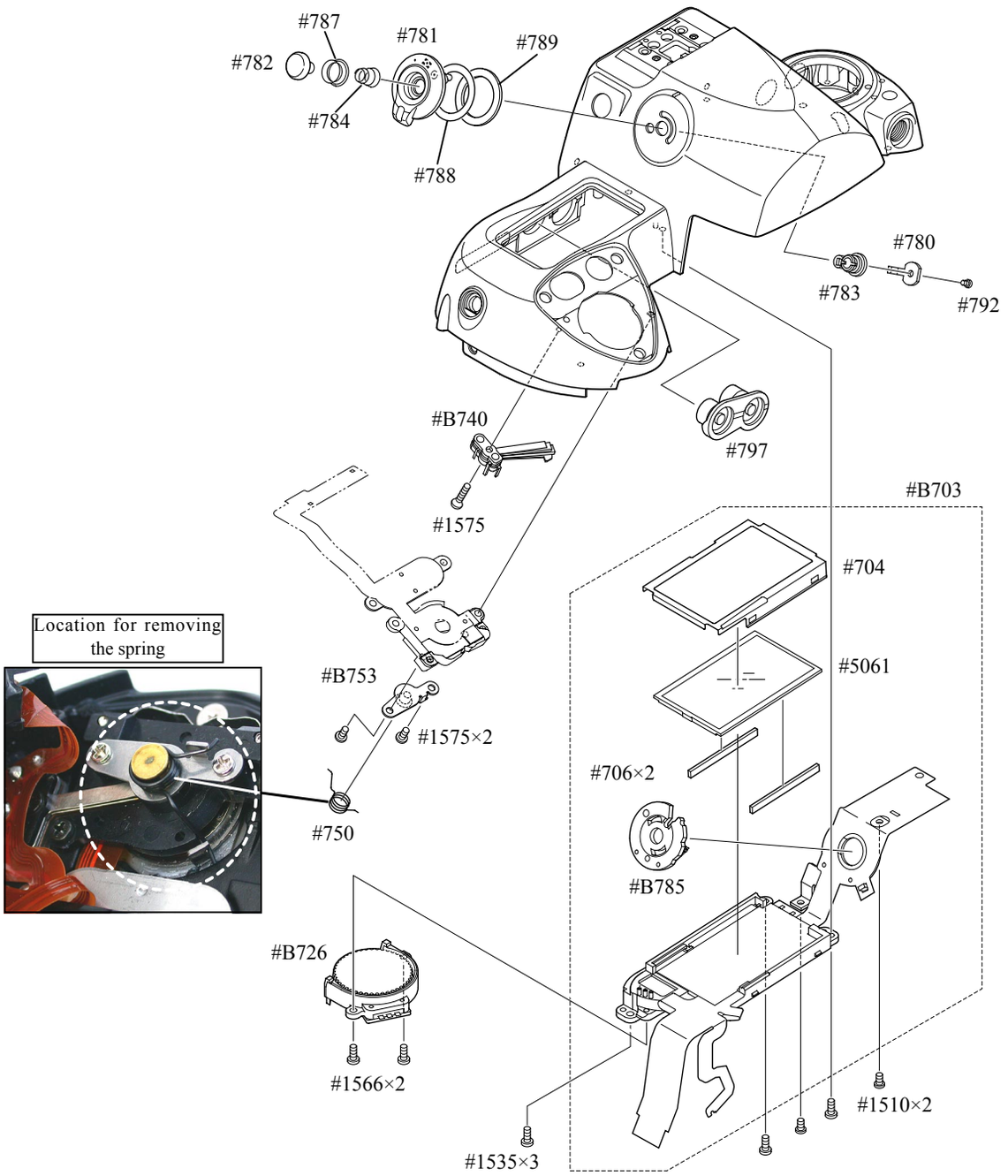
・Remove lead wires and soldering briges.



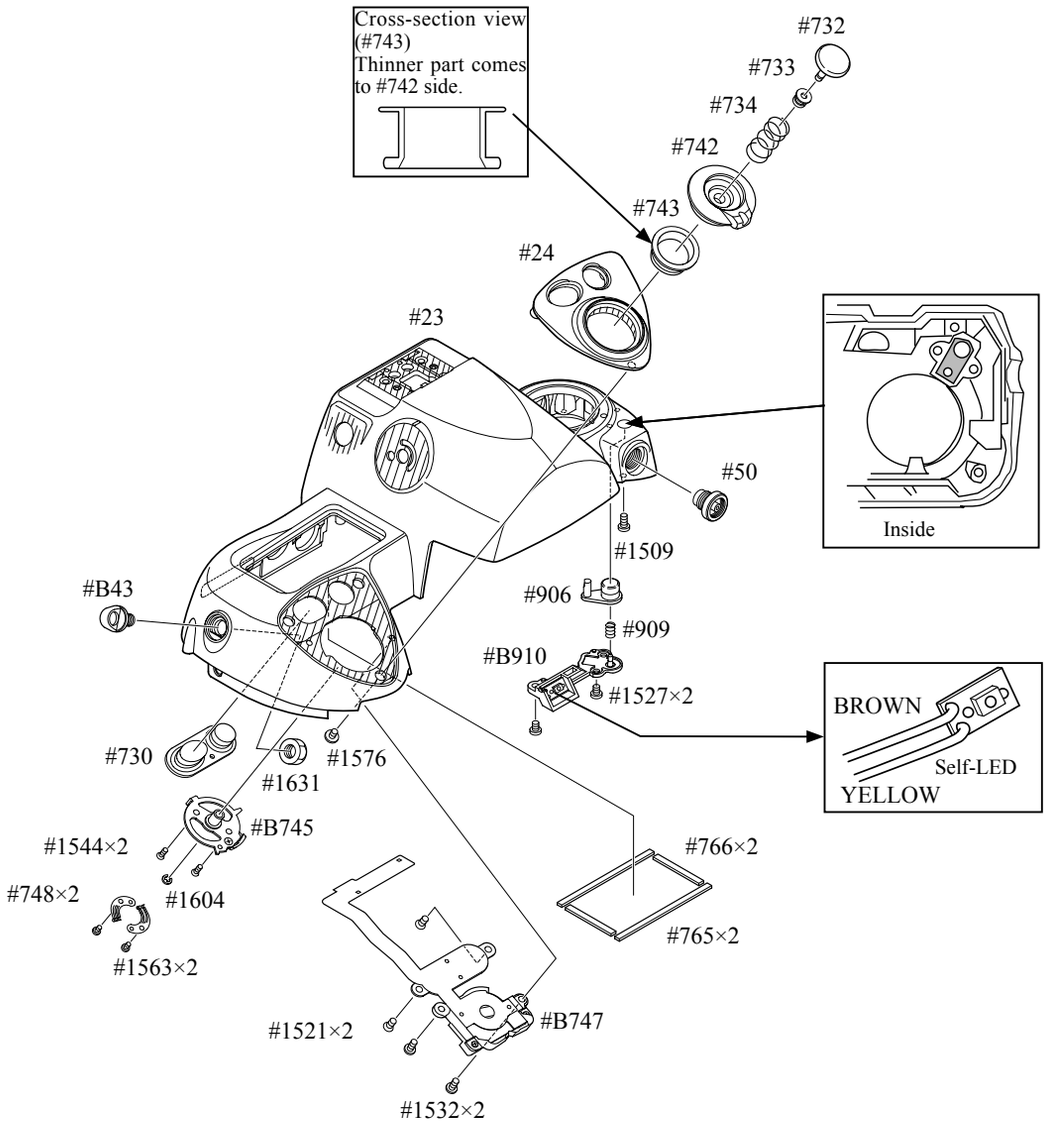
Hot shoe unit, other small parts



Outer LCD unit, other small parts

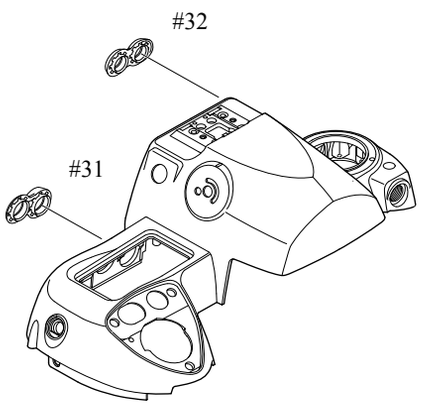


Main SW unit, other small parts



Button cover

※ Disassemble the button cover (#31 and 32) if needed.



Main FPC

Remove the main FPC

① Remove 2 pieces of the tape (Fig.1) to detach the insulating sheet (#5034) (Fig.5).

② Remove the connector A and B. (Fig.2)

③ Remove the 3 lead wires. (Fig.3)

④ Remove the lead wire. (Fig.4)

⑤ Take out 3 screws. Then remove the connector C and D to detach the main FPC. (Fig.5)

Fig.1

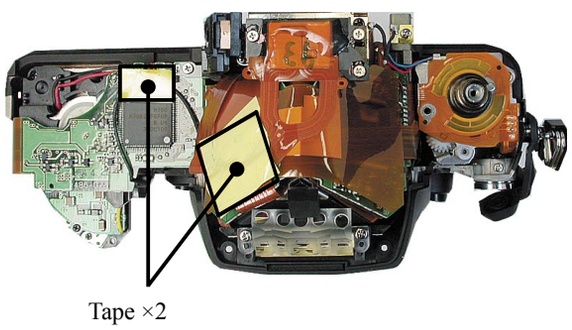


Fig.5

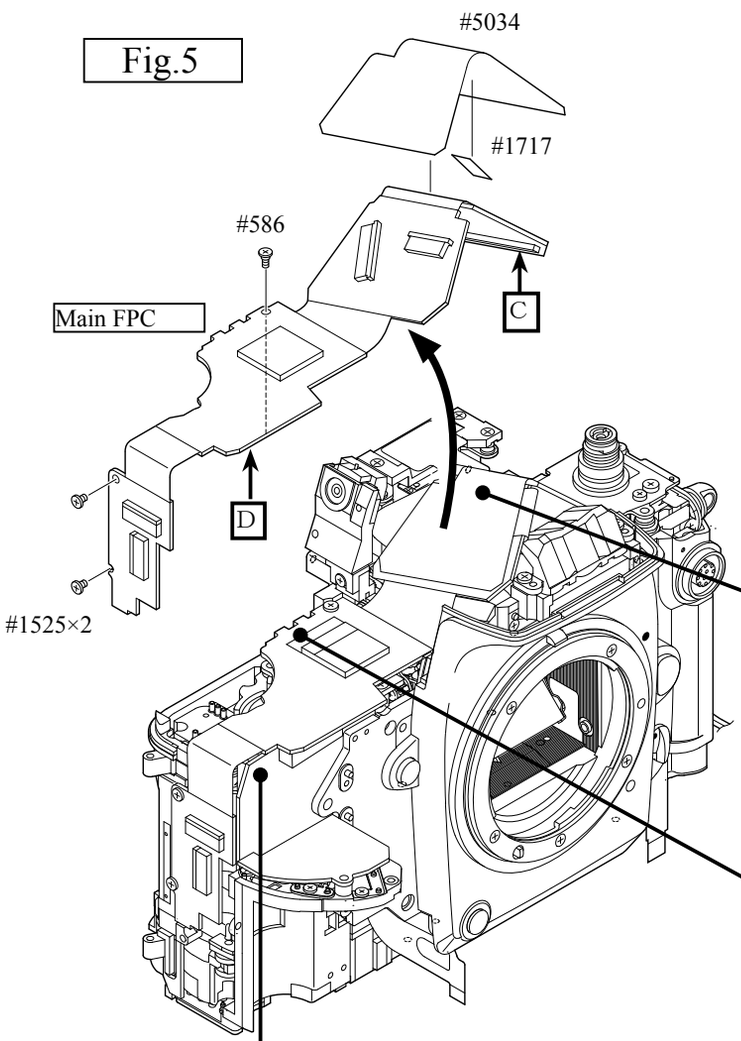


Fig.2

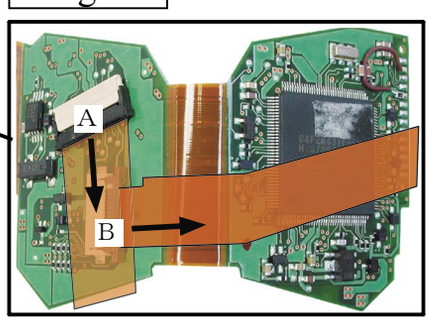


Fig.3

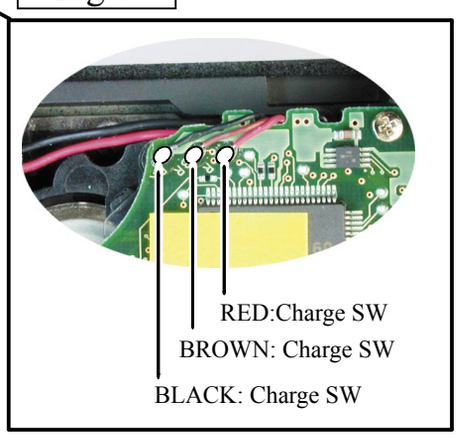
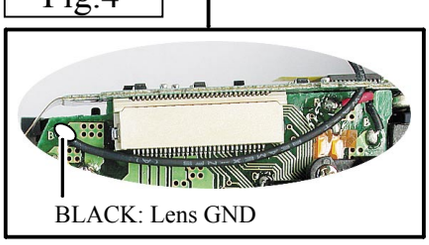
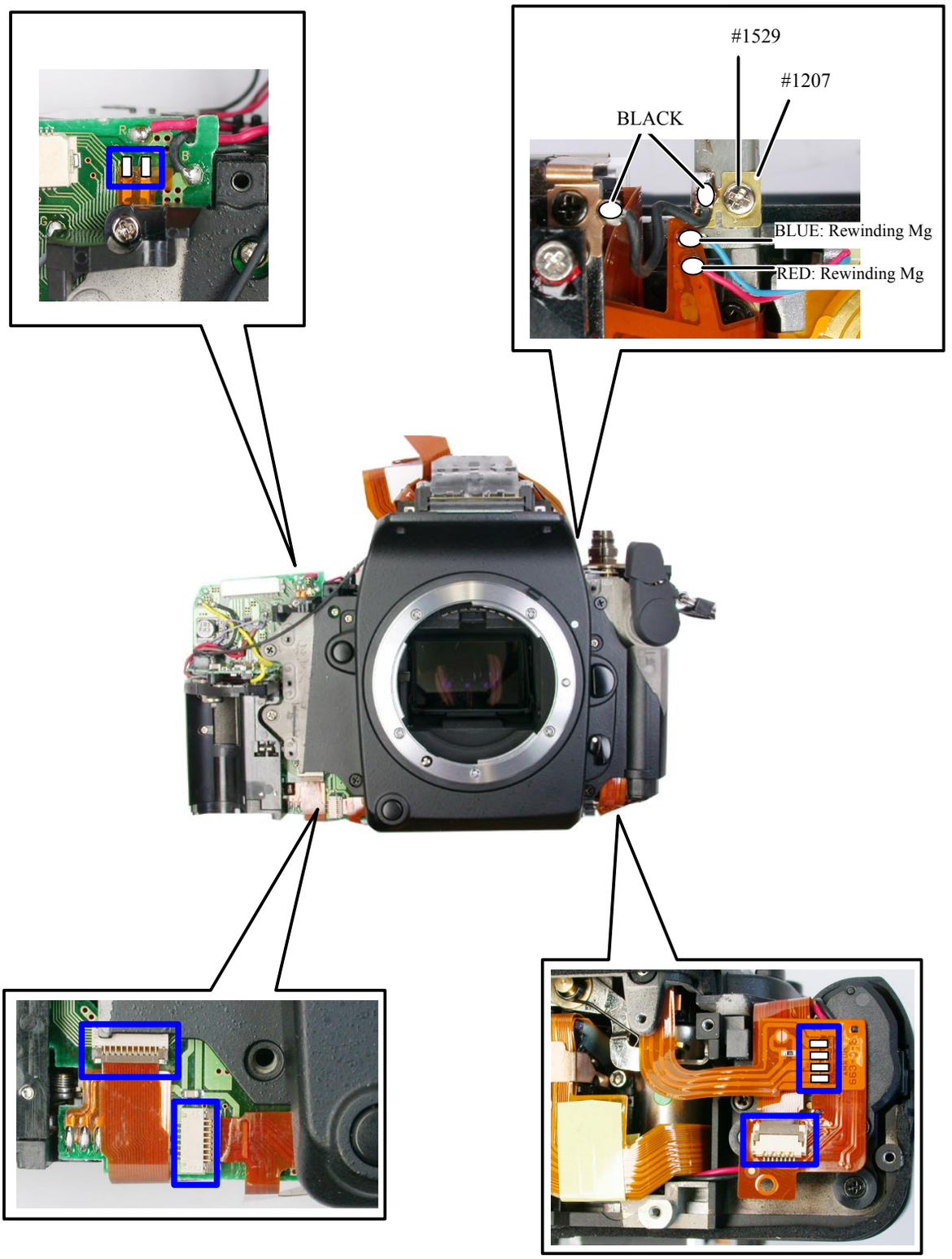


Fig.4

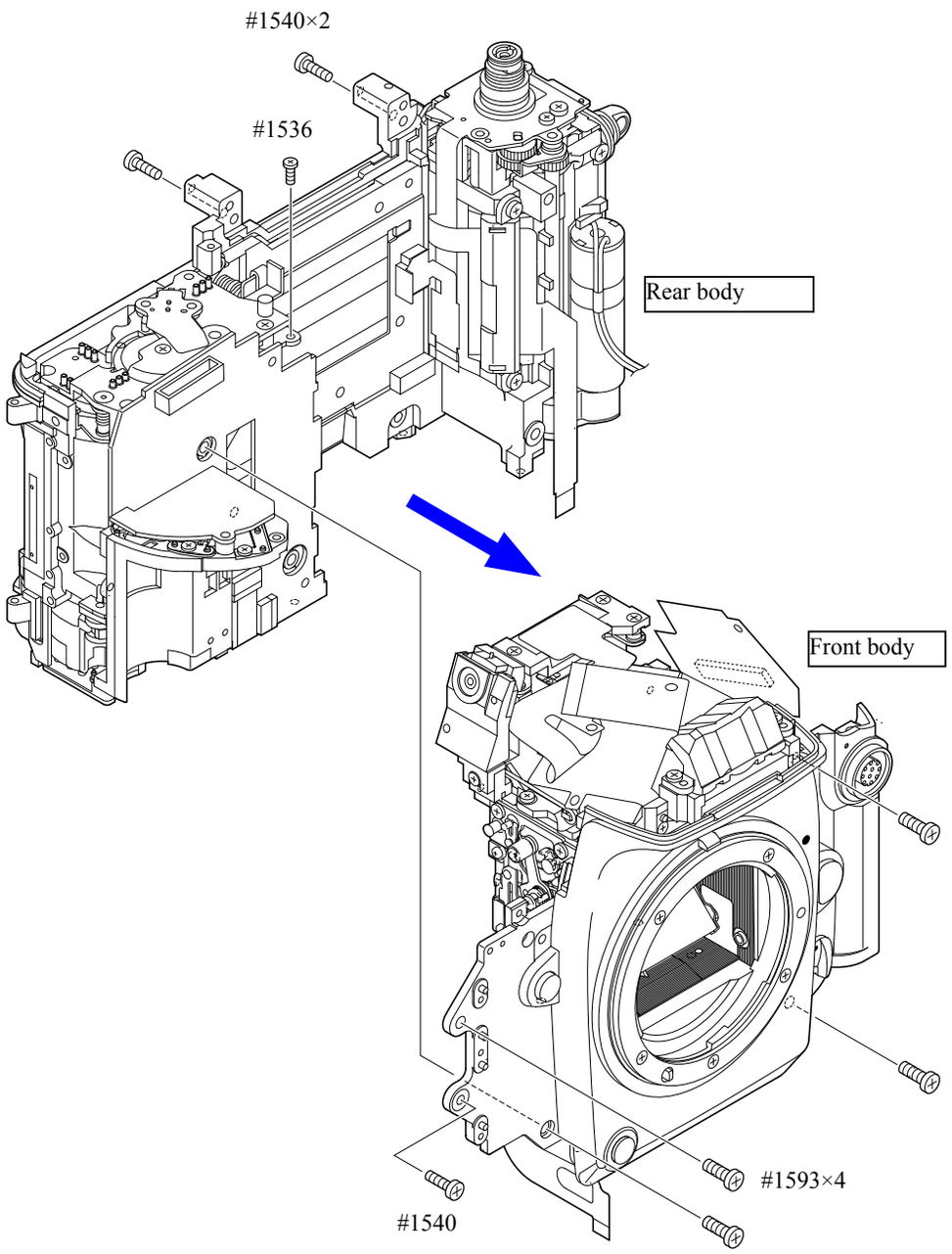


・Remove the solder/soldering bridges/connectors of each lead wire.

・Take out the screw (#1529) to remove the lug plate (#1207).



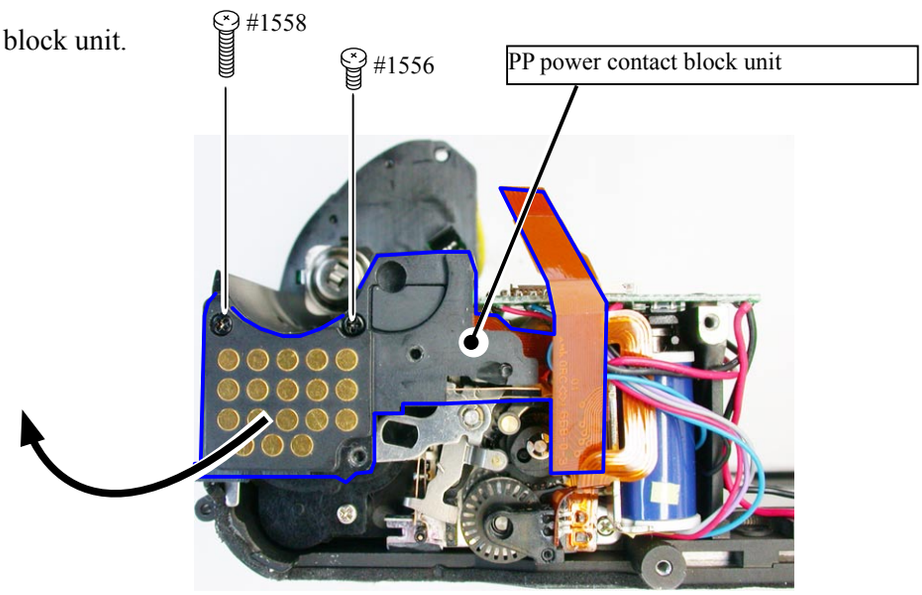
・Take out 8 screws to separate the front body from the rear body.



2. Rear body

PP power contact block unit

・Remove the PP power contact block unit.

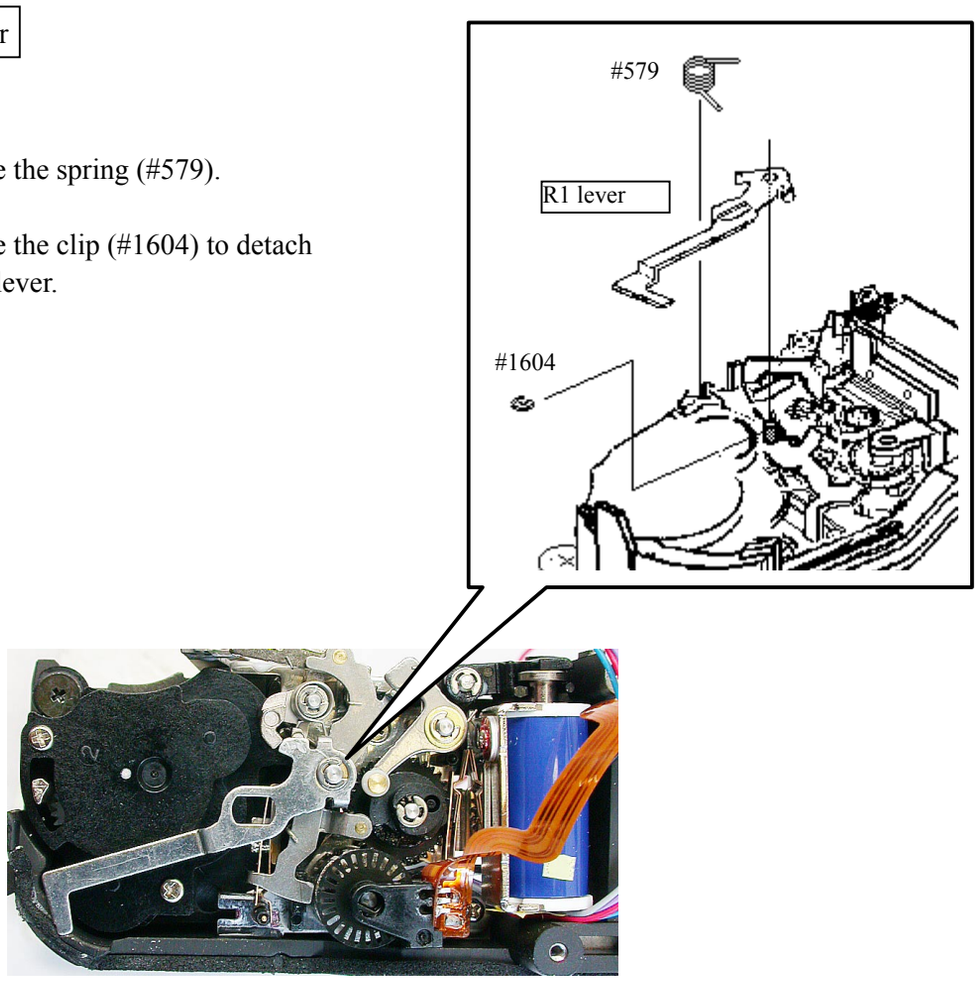


Bottom of Rear body

R1 Lever

・Remove the spring (#579).

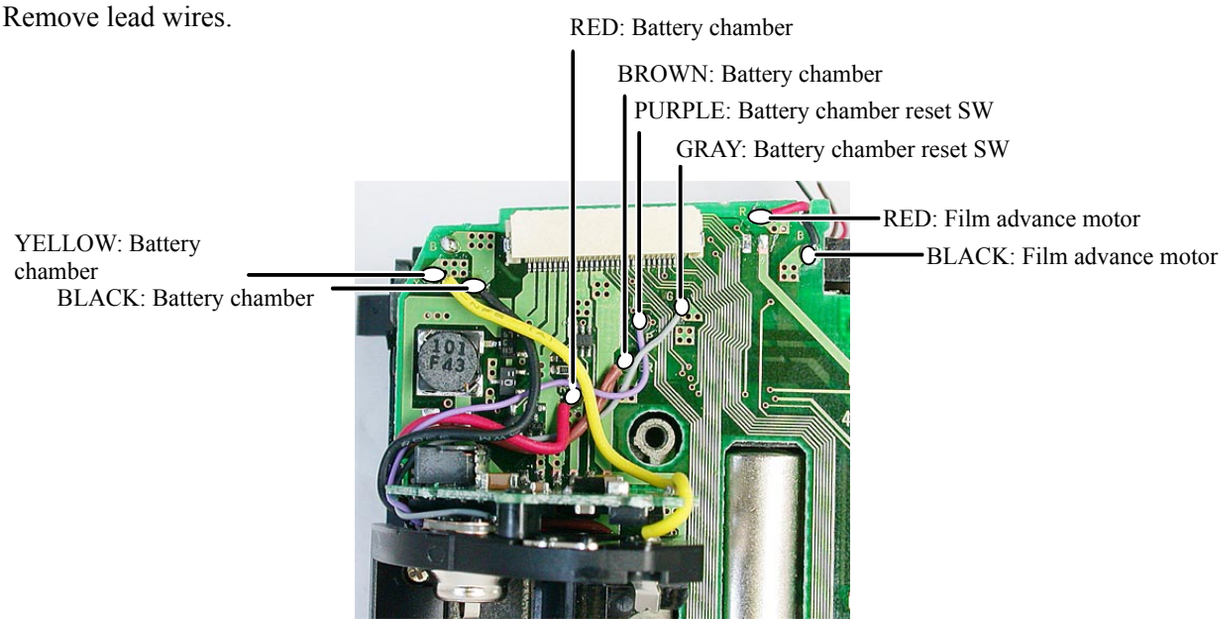
・Remove the clip (#1604) to detach the R1 lever.

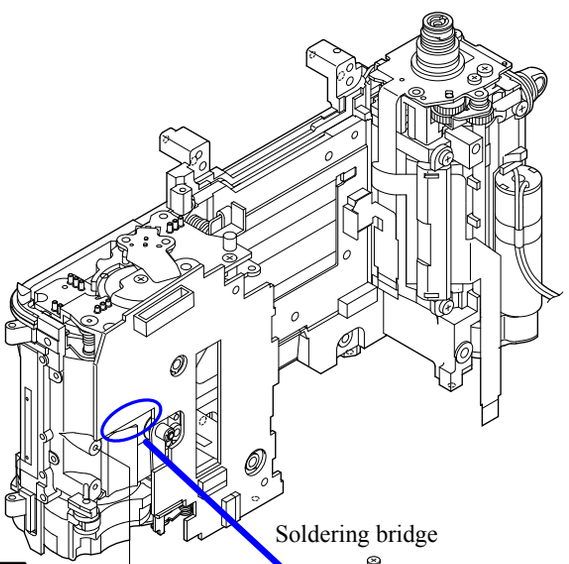


Bottom of Rear body

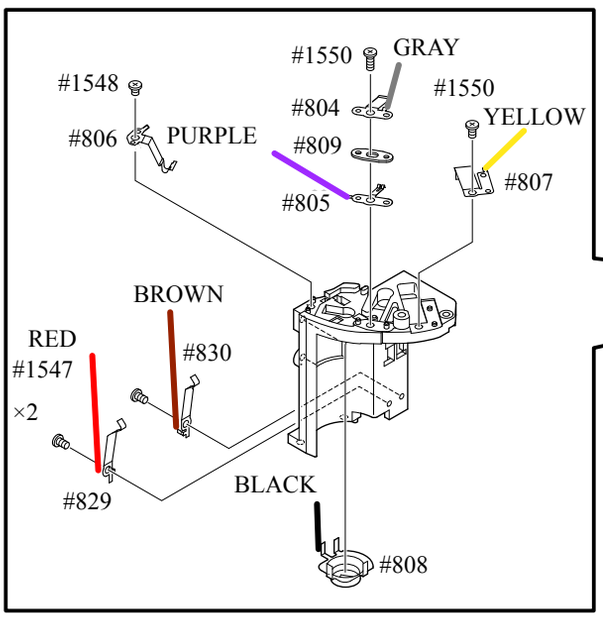
Battery contact unit/DCDC-PCB

・Remove lead wires.



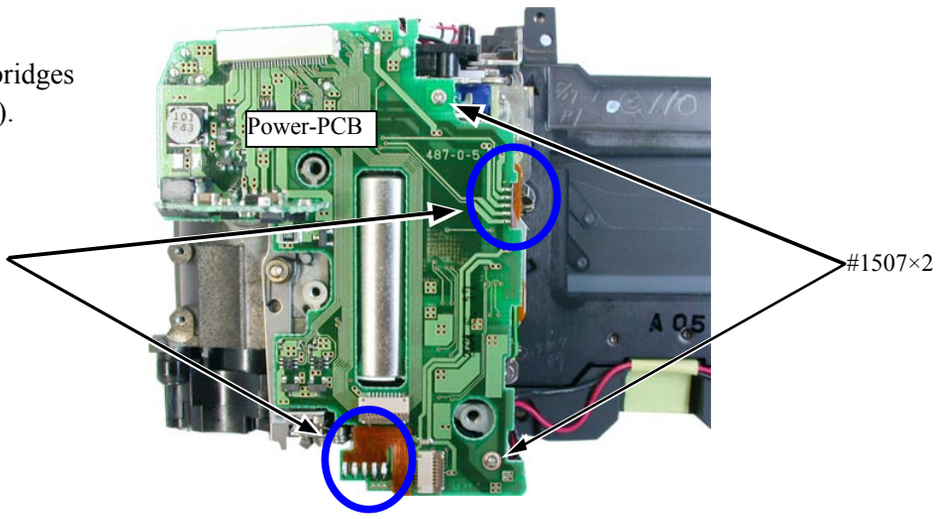


Disassemble Battery contact unit

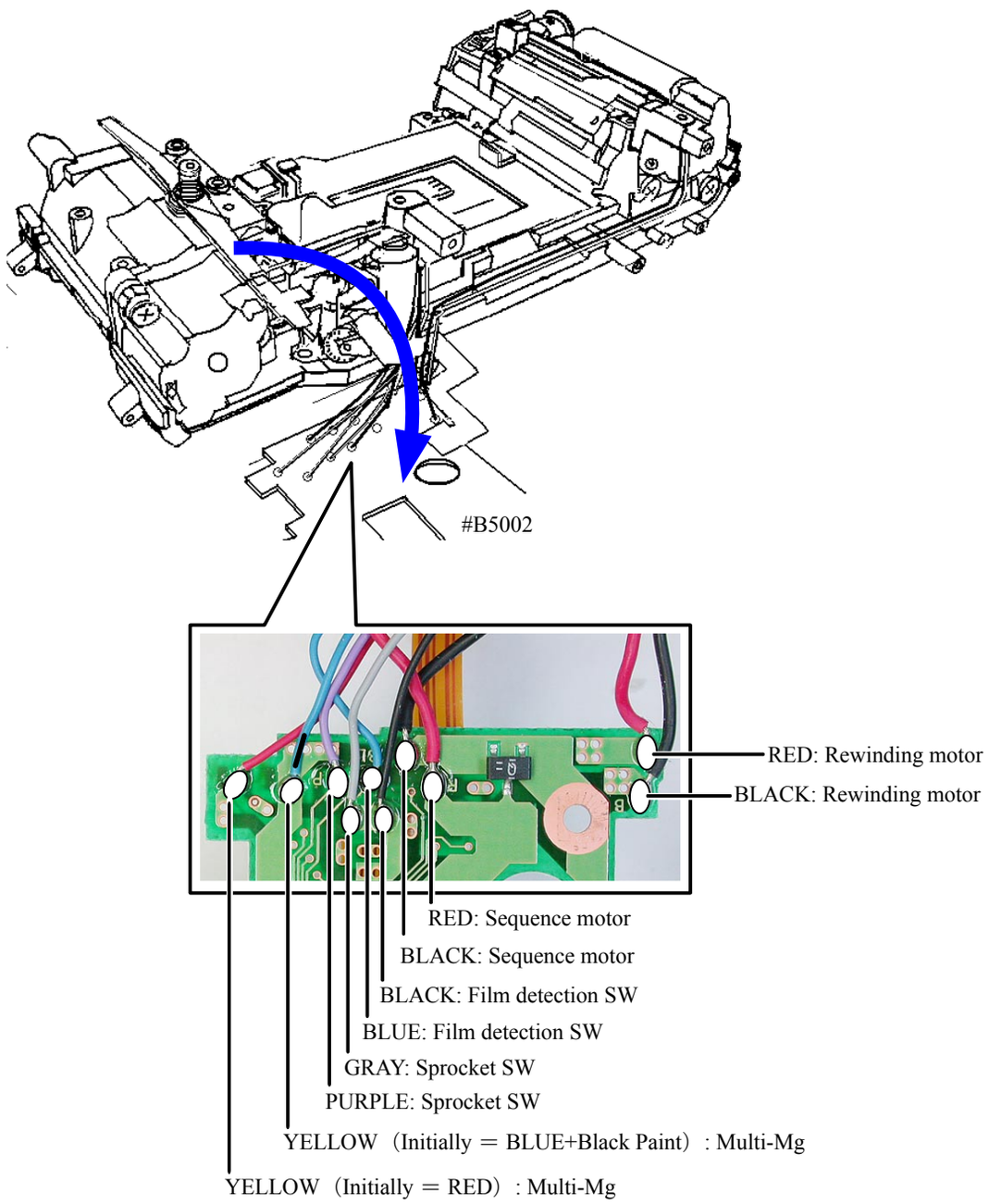


Power-PCB

・Remove 2 soldering bridges and 2 screws (#1507).

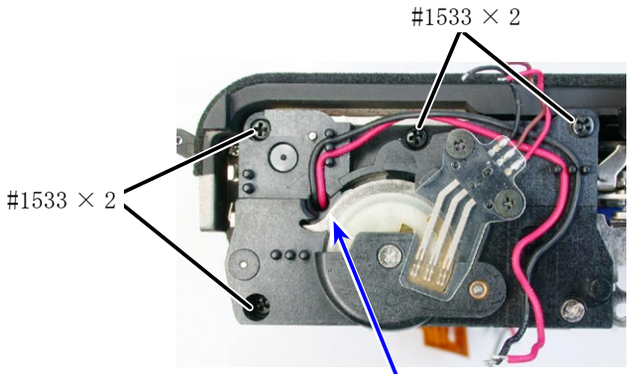


・As shown below, place the power-PCB by laying it toward the direction of the arrow, and unsolder 10 lead wires.



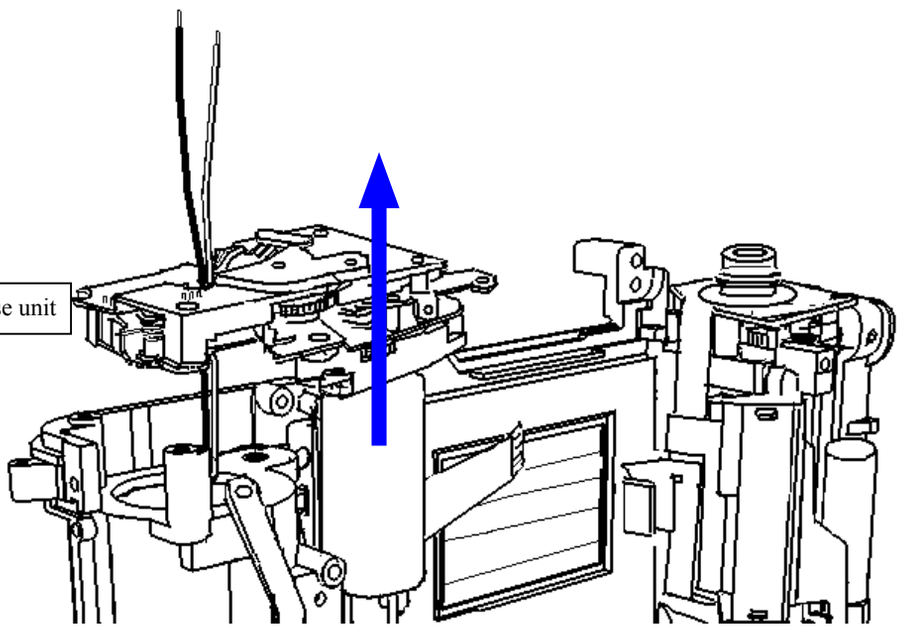
Upper/Lower base unit

・Take out 4 screws (#1533) while setting aside 2 lead wires (RED/BLACK), and remove the upper/lower base unit by pulling it upward.

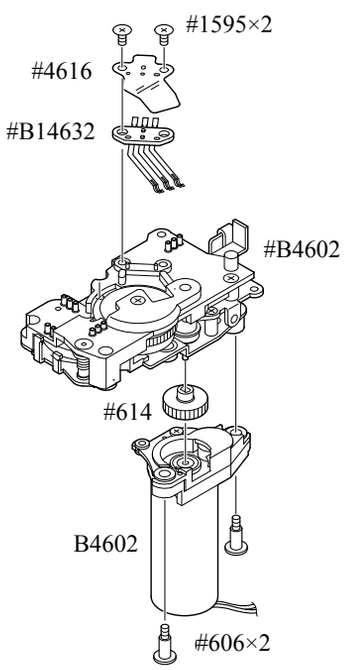


・ Pass 2 lead wires (RED/BLACK) through this hole.

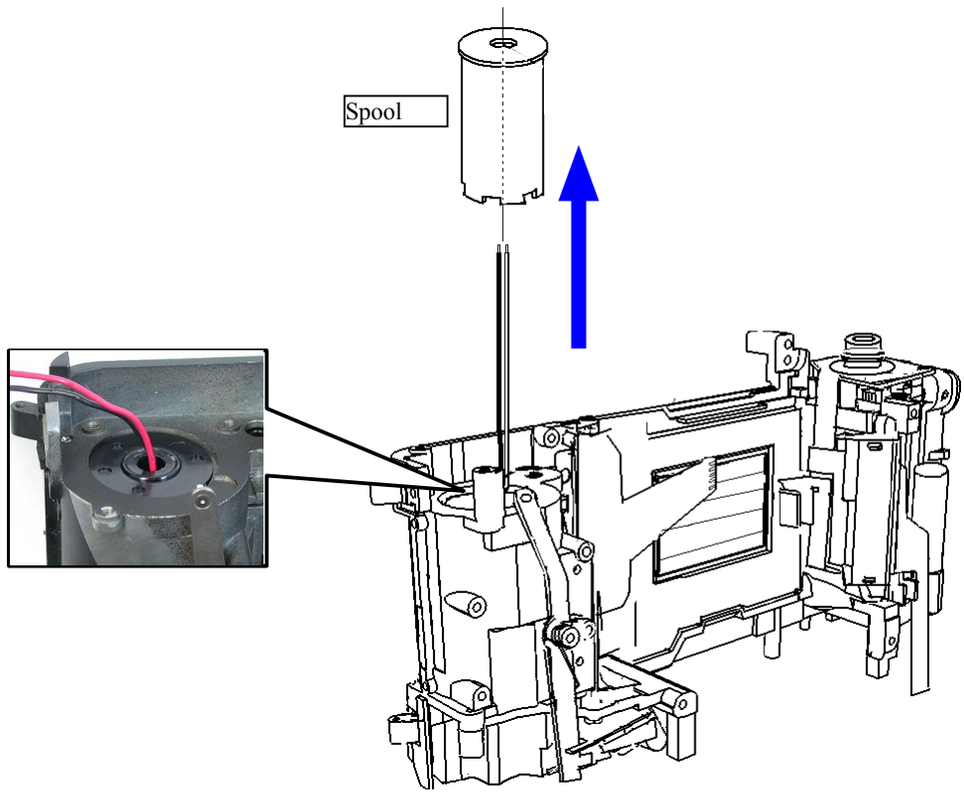
Upper/lower base unit



Disassemble Upper/lower base unit



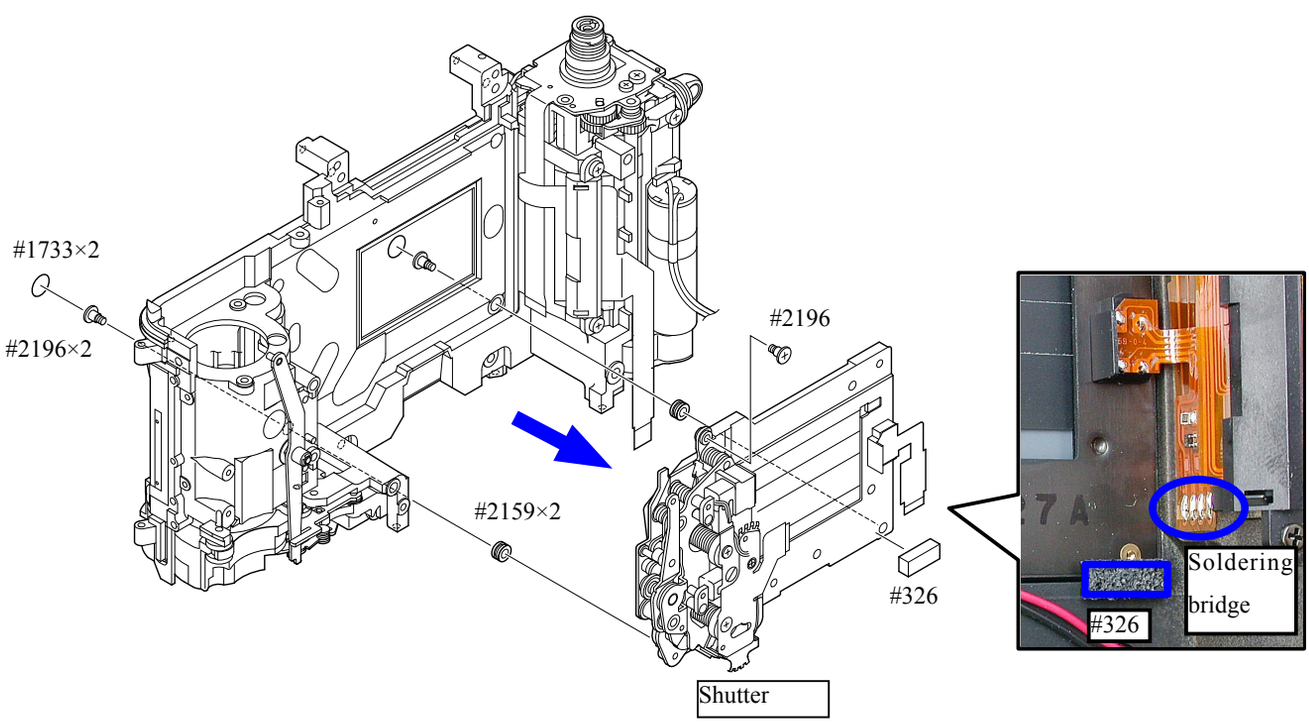
Spool



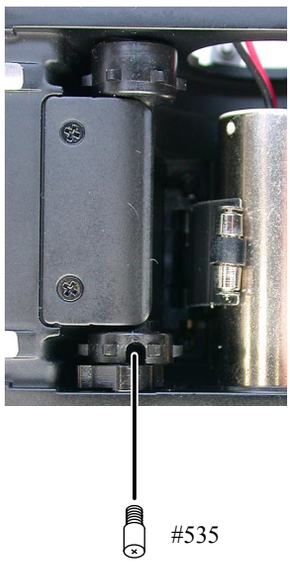
Shutter

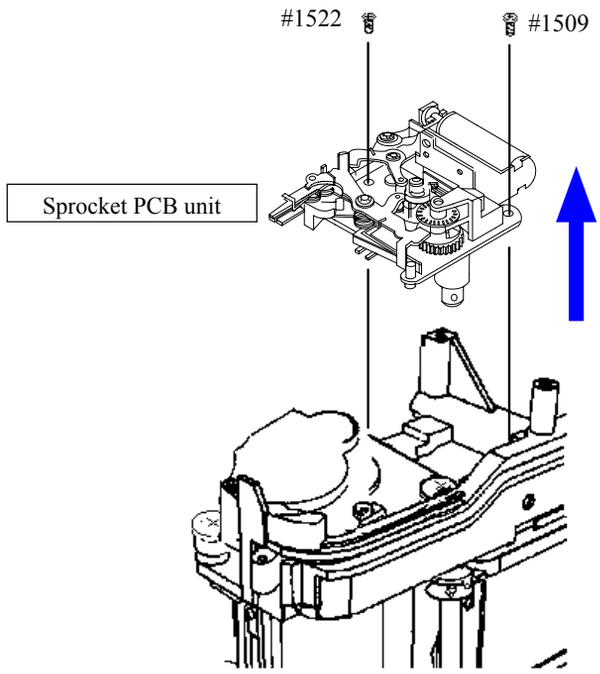
Remove the shutter

① Remove one soldering bridge.
② Remove 2 cover plates (#1733).
③ Take out 3 screws (#2196).
④ Remove the sponge (#326) and detach the shutter.
⑤ 2 rubbers (#2159) come off, too.

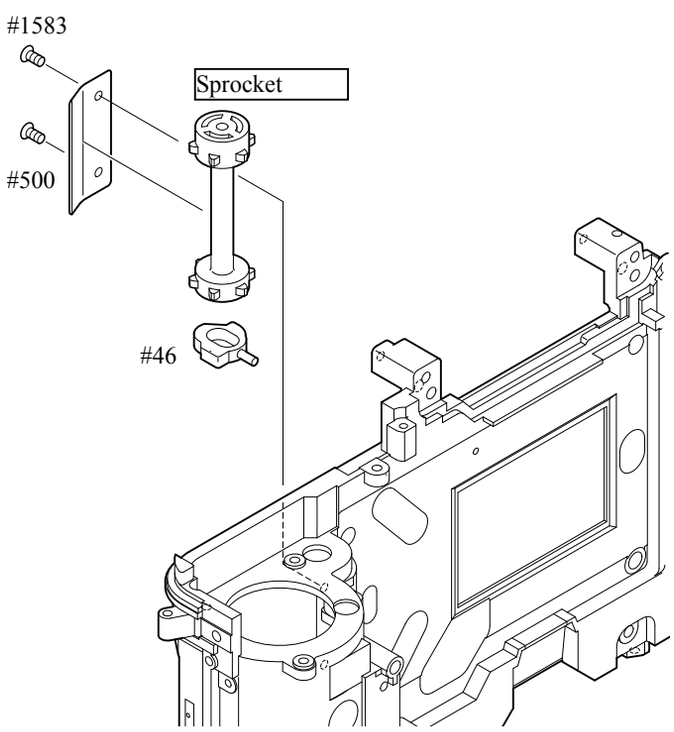


Sprocket PCB unit





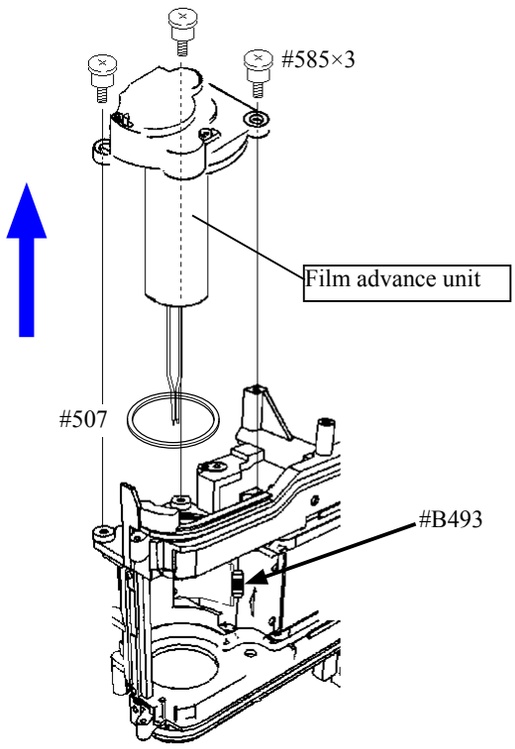
Sprocket



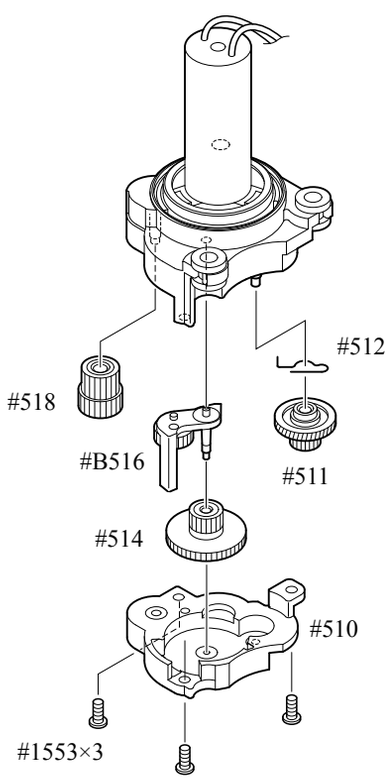
Film advance unit

・Remove the film advance unit while avoiding its hooking to the EL roller block unit (#B493).

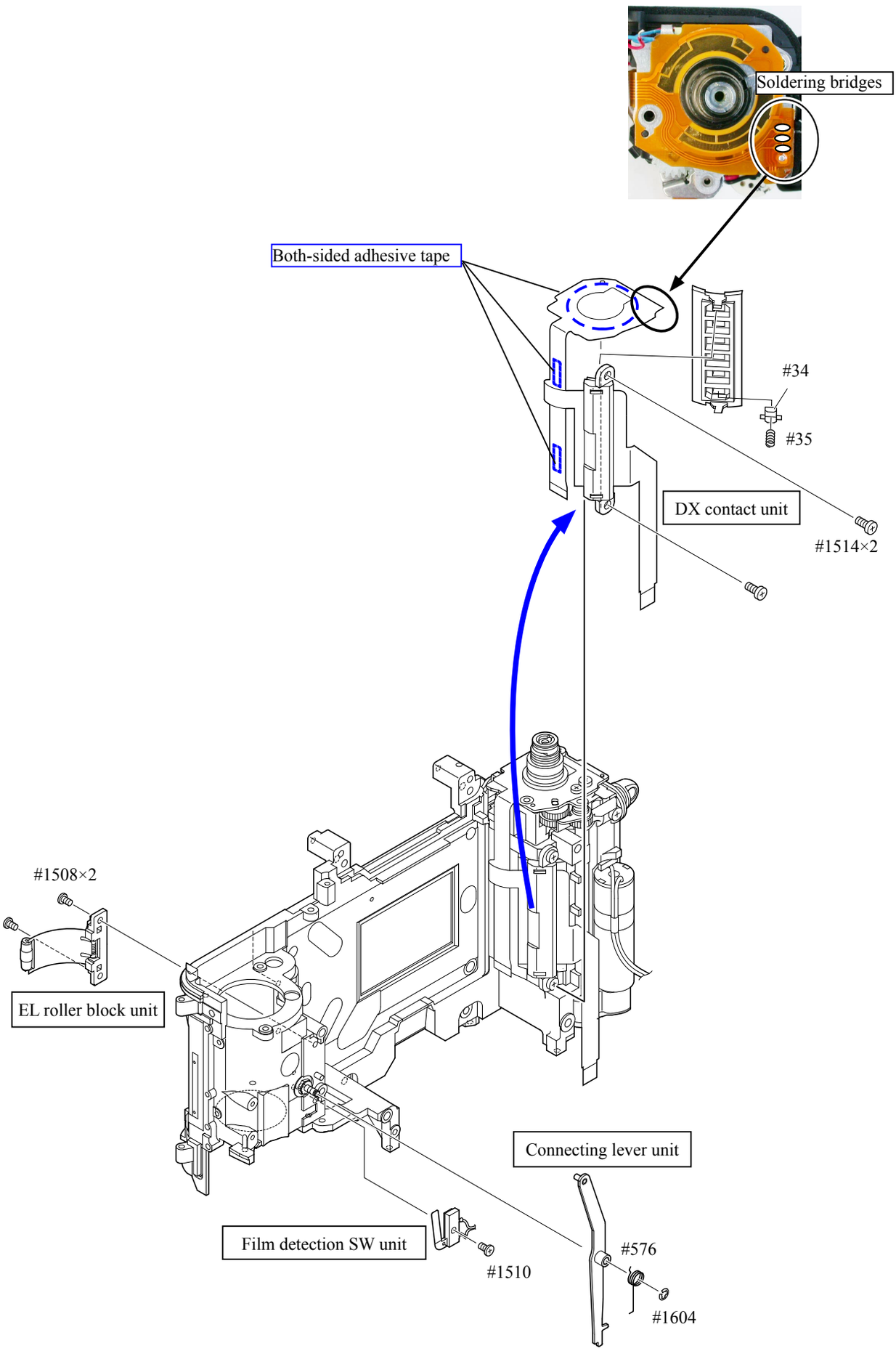
・The floating rubber (#507) comes off.



Disassemble Film advance unit

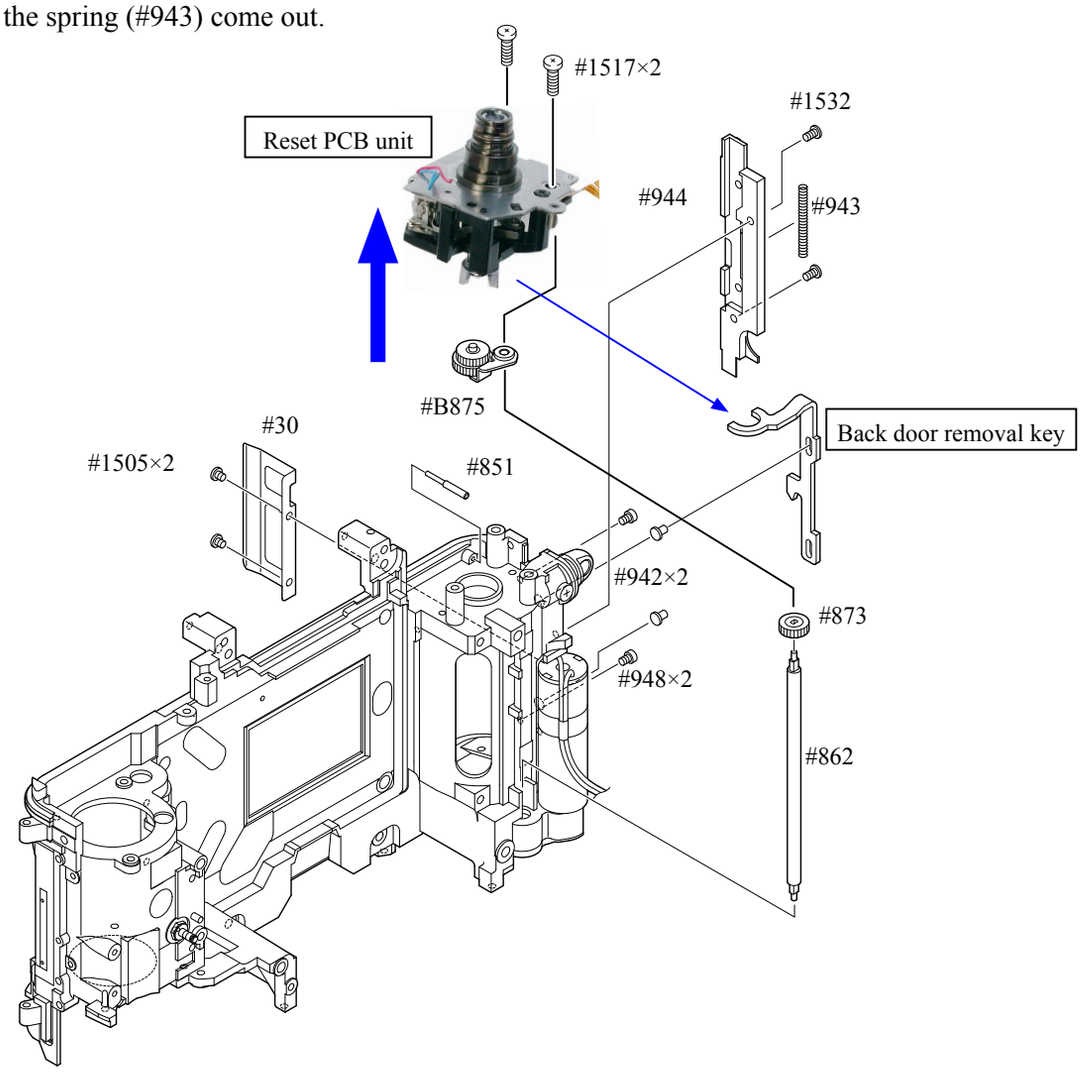


DX contact unit/Connecting lever unit/Film detection SW unit/EL roller block unit



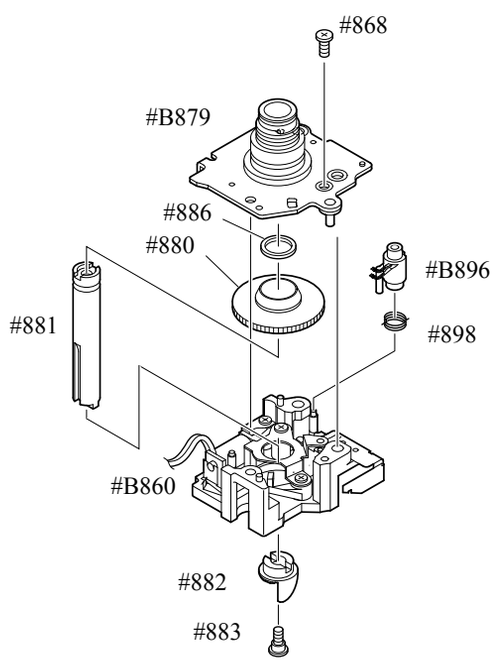
Reset PCB unit/Back door removal key

・Be careful not to let the spring (#943) come out.

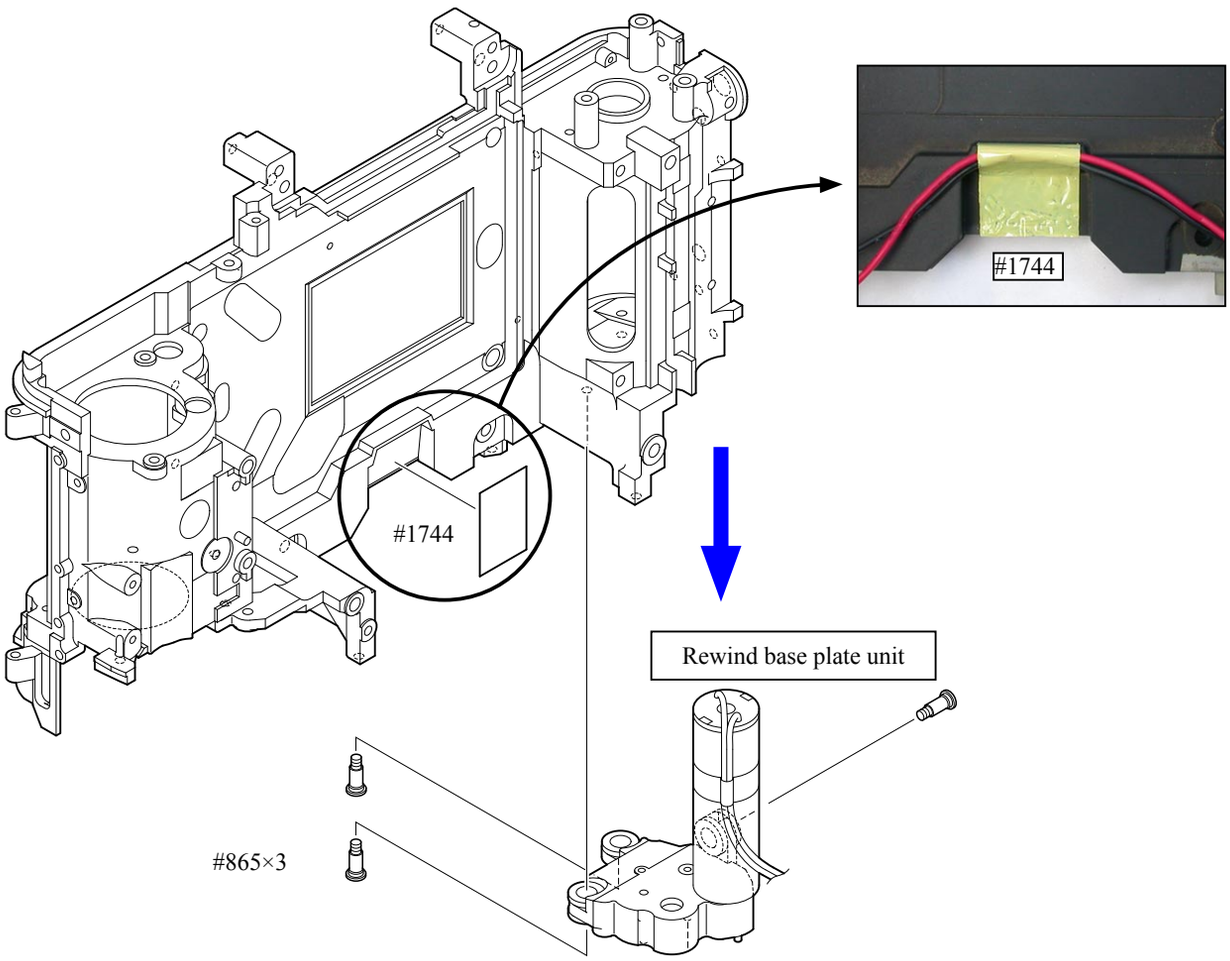


Disassemble Reset PCB unit

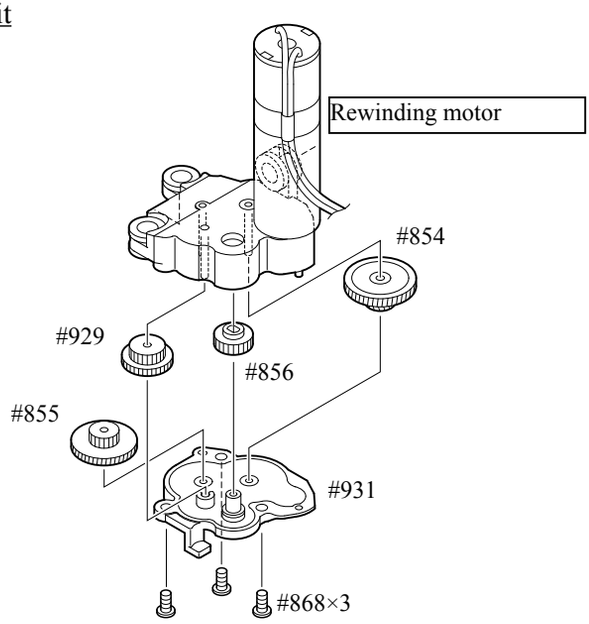
・Be careful not to let the spring (#898) come out.



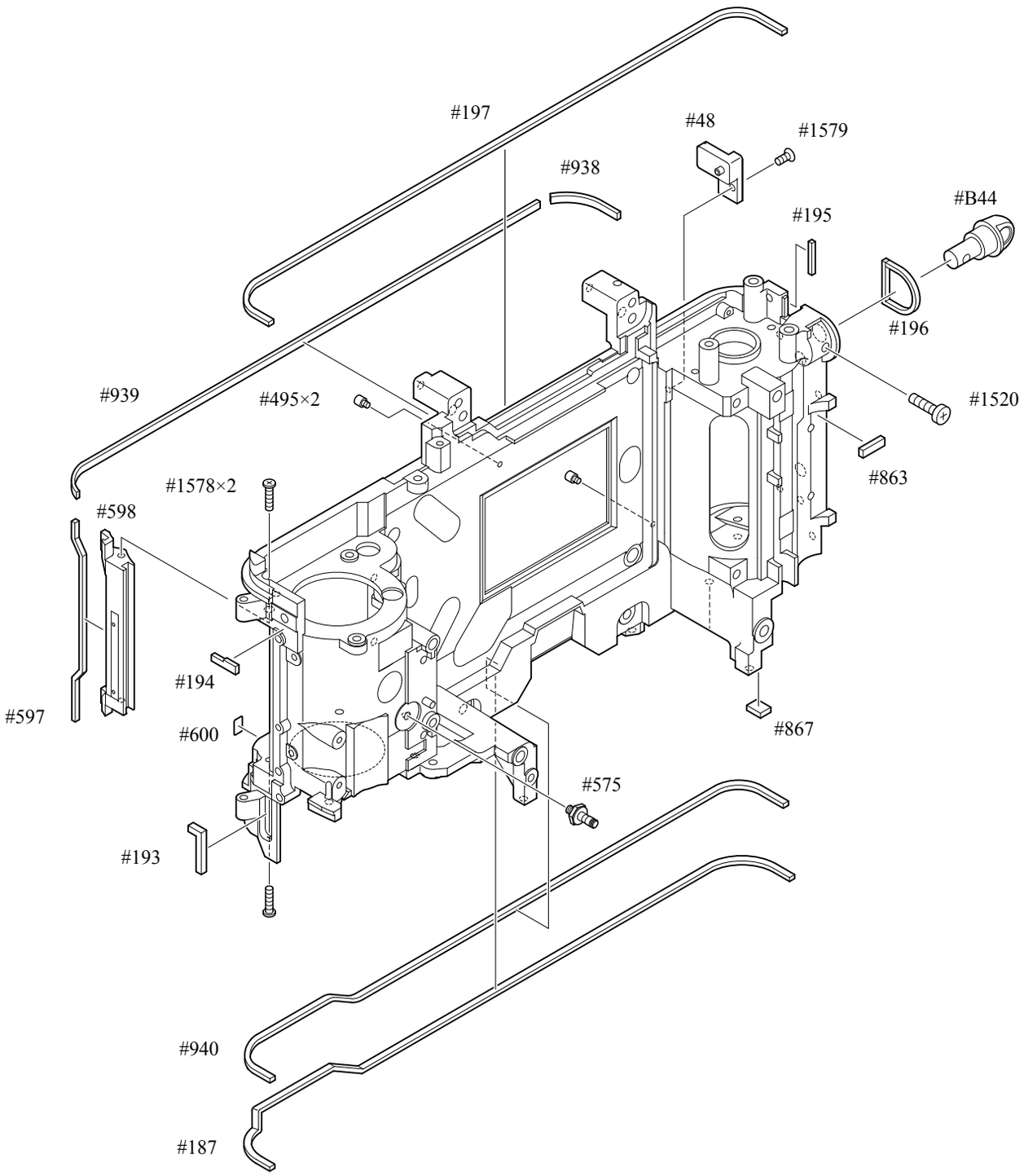
Rewind base plate unit



Disassemble Rewind base plate unit



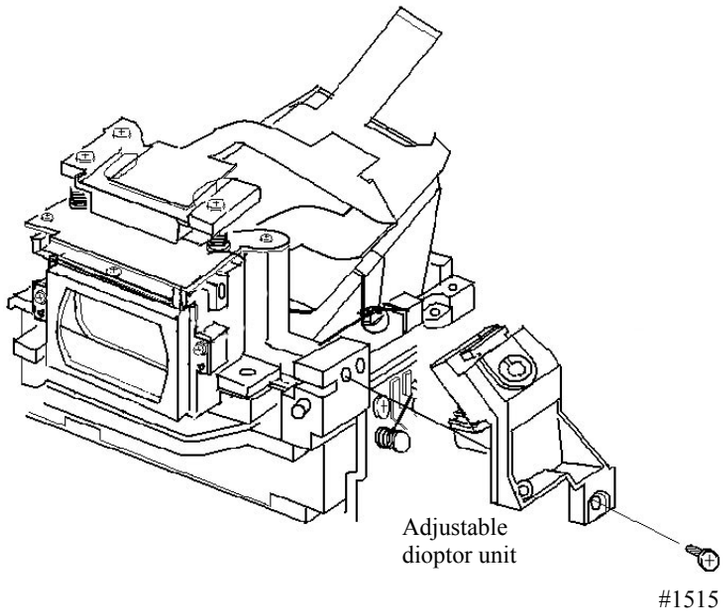
Rear body small parts



3. Front body

Adjustable diopter unit

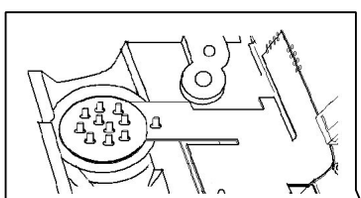
・ Unscrew #1515 to detach the adjustable diopter unit.



Front plate FPC unit, 10-pin FPC unit

Remove 10-pin FPC soldering bridge, TTL-FPC connector

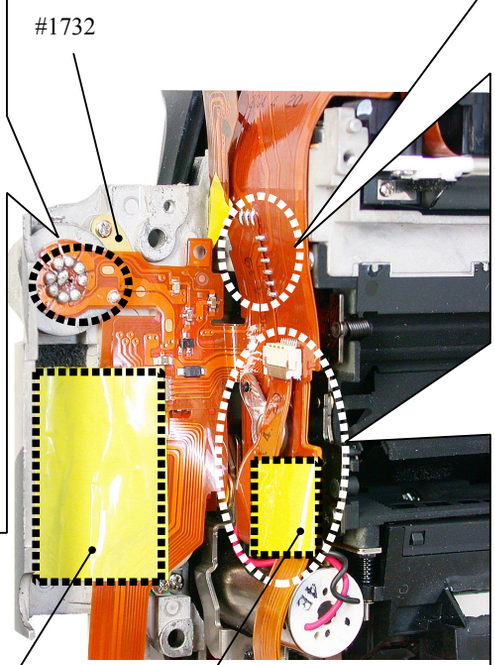
・ Remove pieces of tape (#1738 and #1722).

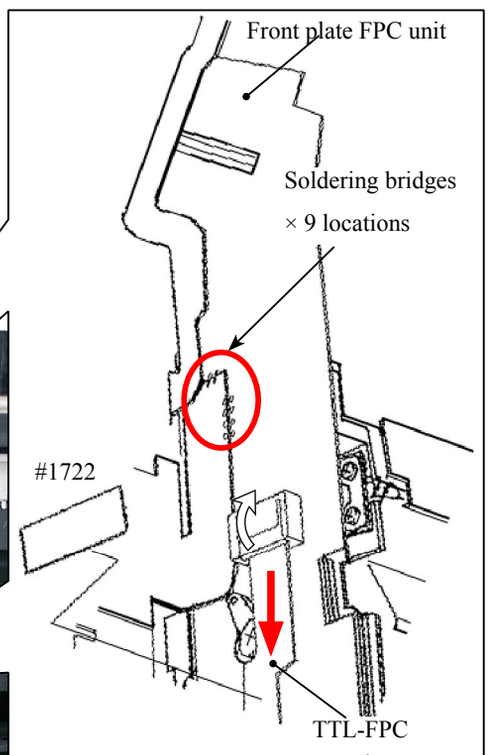


※ Only when 10-pin FPCunit/10-pin terminal is disassembled,

・ Remove the soldering bridges of 10-pin FPC and 10 pin connector.

・ Remove the soldering bridges of 10-pin FPC and lug plate (#1732).

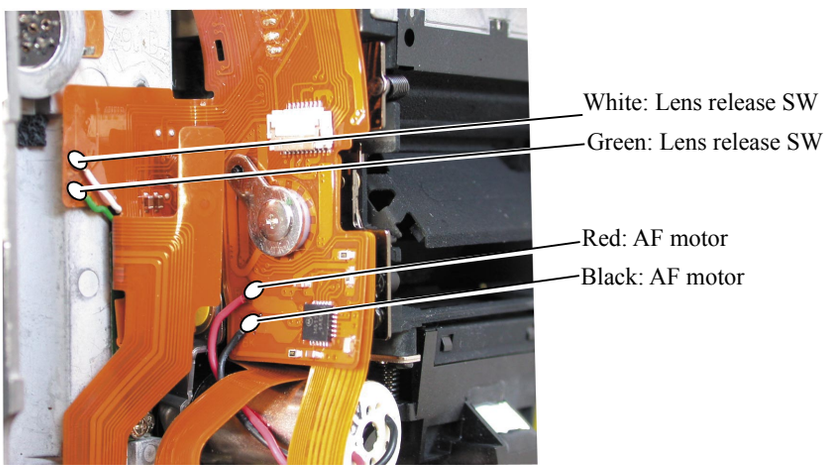




・ Remove the TTL-FPC from the connector of the front plate FPC unit.

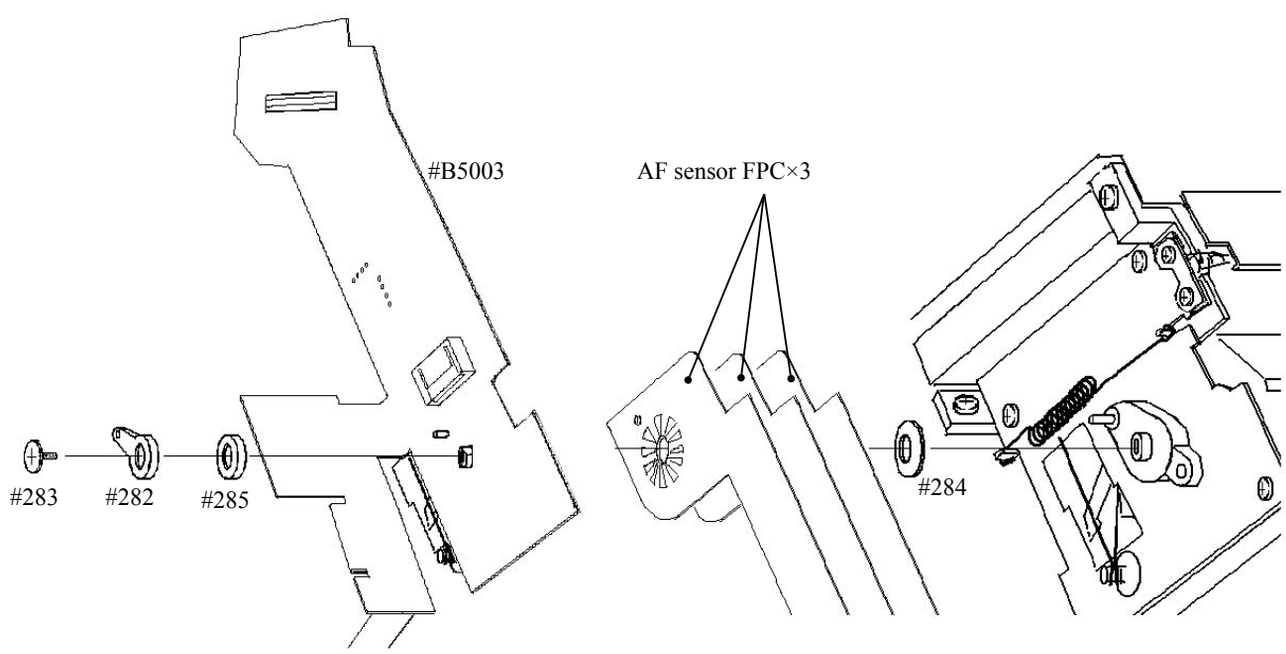
・ Remove the soldering bridges of 10-pin FPC and front plate FPC unit.

Unsolder Lens release SWs and AF motor wires



Remove Front plate FPC unit

- Take out the screw (#283) to remove the press-contact plate (#282), press-contact rubber (#285), and front plate FPC unit.
- 3 AF sensor FPCs and press-contact rubber (#284) come off.

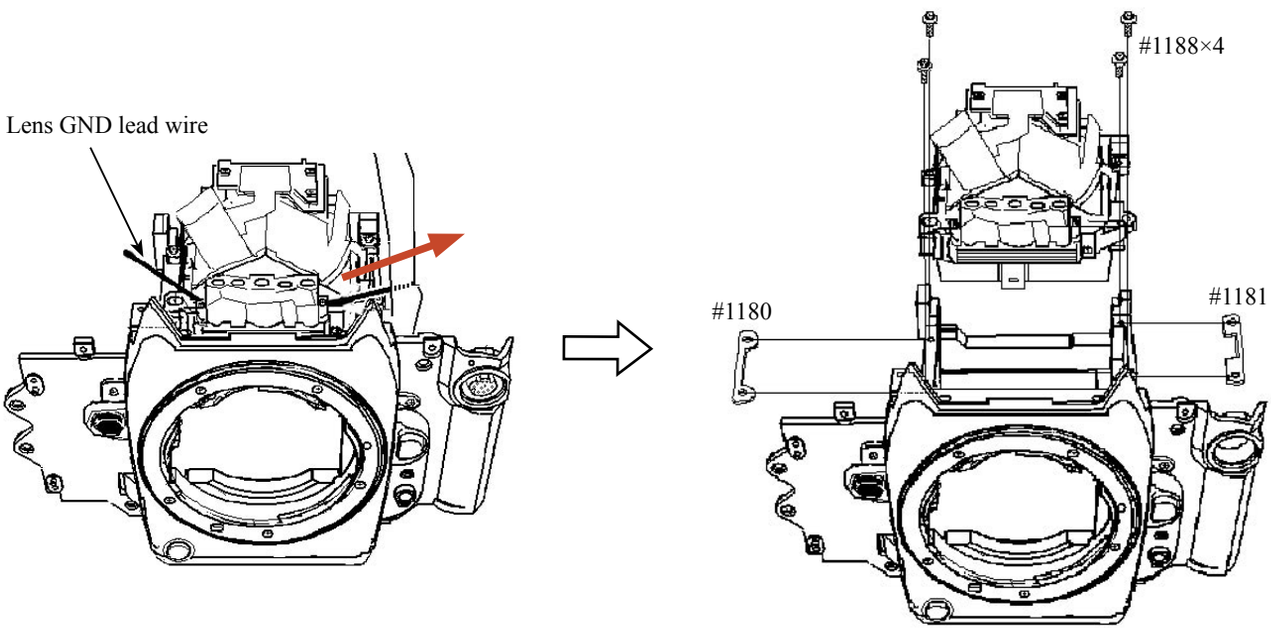


Prisim box

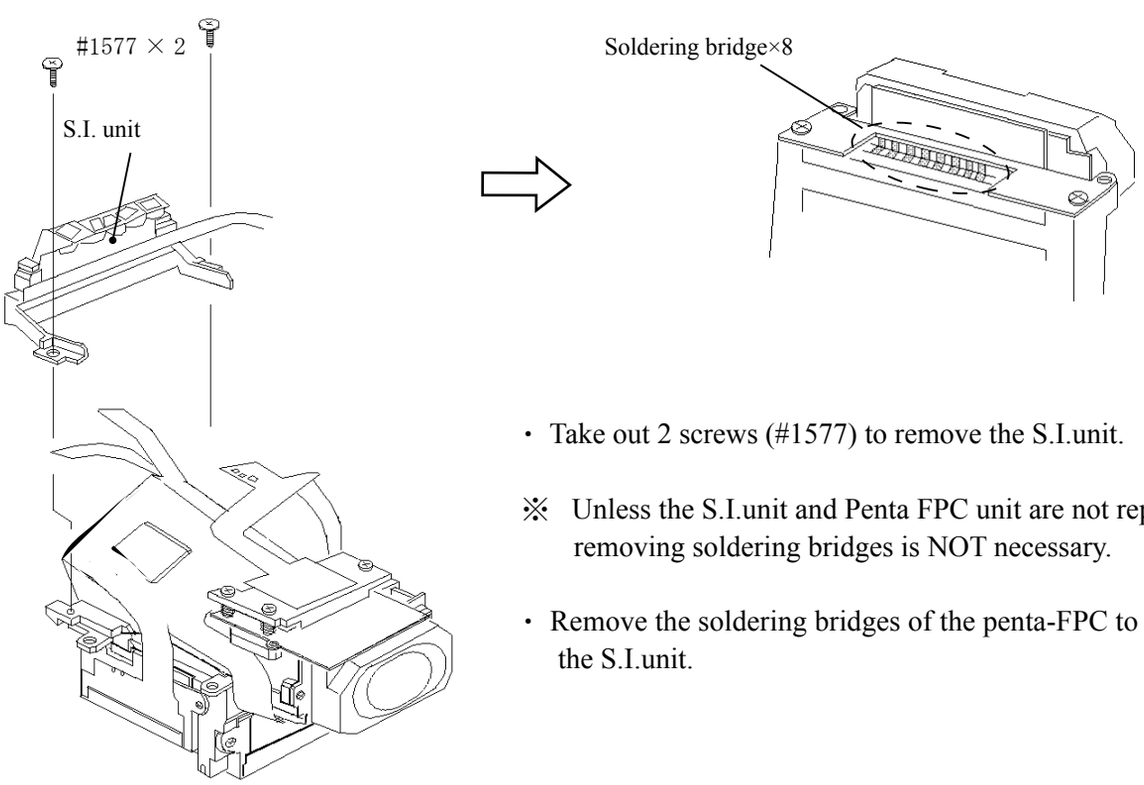
Remove Prism box unit from Front body

※ When the prism box unit is removed, be sure to make the "Parallax inspection and adjustment" of Adjustment section.

- Remove the lens GND lead wire from the prism box.
- Take out 4 screws (#1188).
- (∞)-alignment adjustable washers (#1180 and #1181) come off by removing the prism box unit.



Remove S.I. (Super Impose) unit

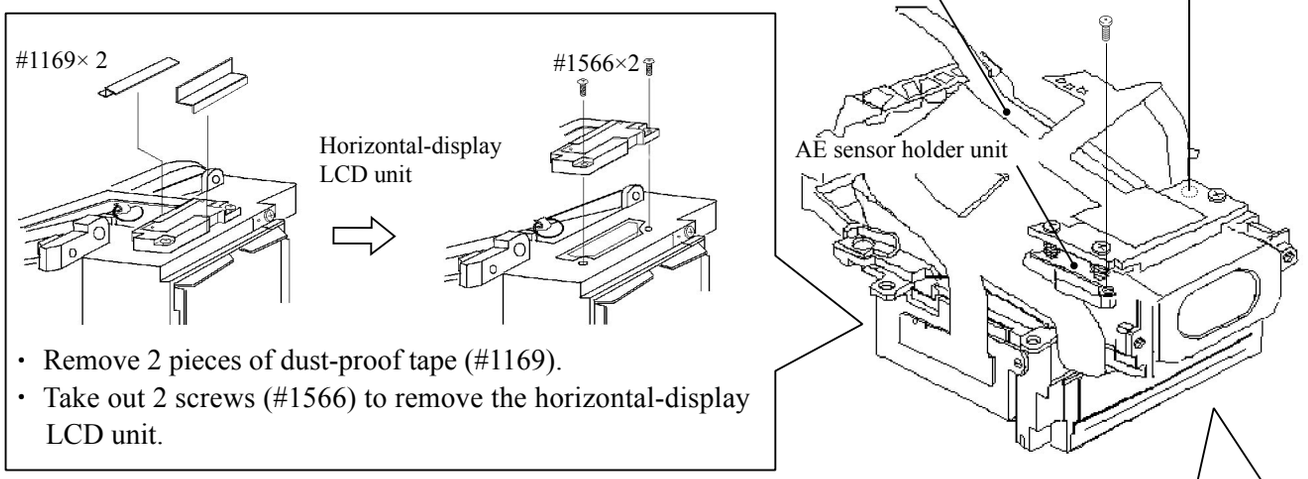


- Take out 2 screws (#1577) to remove the S.I.unit.

※ Unless the S.I.unit and Penta FPC unit are not replaced, removing soldering bridges is NOT necessary.

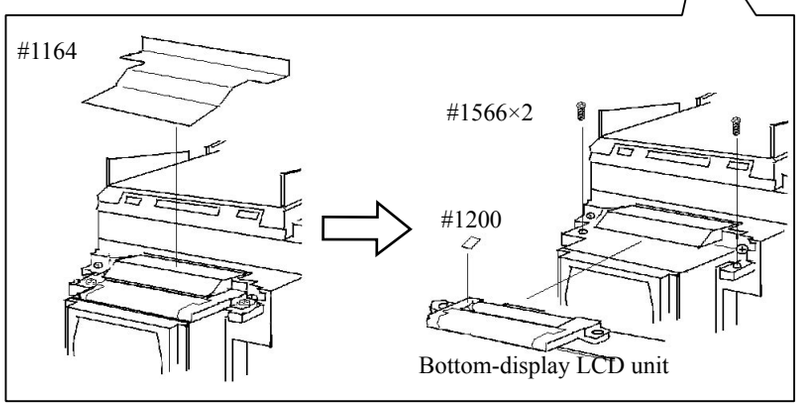
- Remove the soldering bridges of the penta-FPC to detach the S.I.unit.

Remove Penta-FPC unit (In case Penta-FPC is NOT replaced)



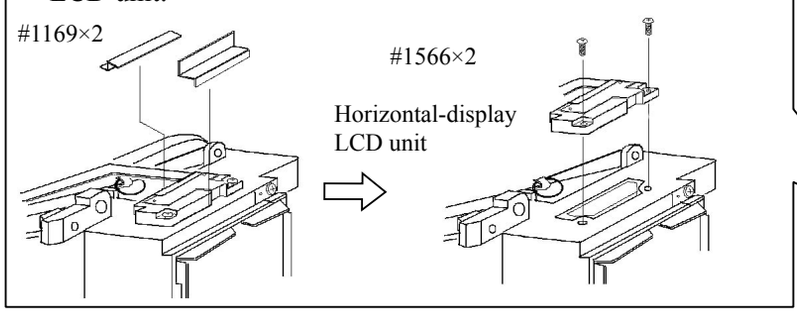
- Remove 2 pieces of dust-proof tape (#1169).
- Take out 2 screws (#1566) to remove the horizontal-display LCD unit.

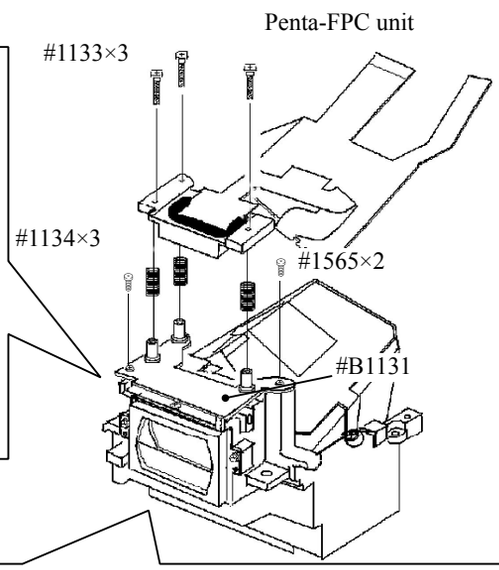
- Remove the dust-proof tape (#1164).
- Take out 2 screws (#1566) to remove the bottom-display LCD unit.
- Take out 2 screws (#1565) to remove the AE sensor holder unit.
- Remove the penta-FPC unit from the penta. (Note that it is attached with the both-sided adhesvie tape.)



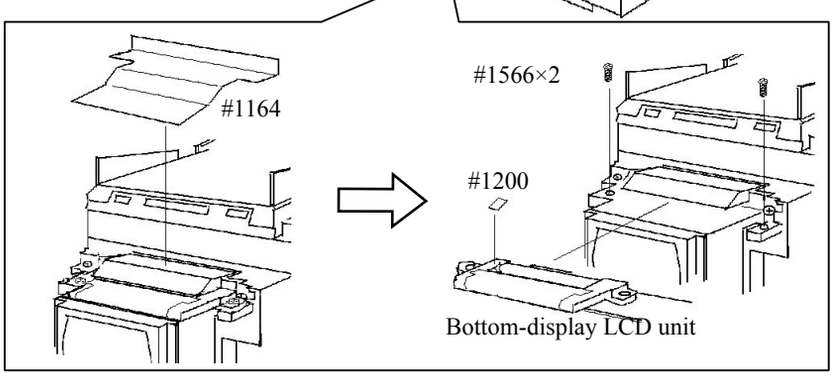
Remove Penta-FPC unit (In case Penta-FPC is replaced)

- Remove 2 pieces of dust-proof tape (#1169).
- Take out 2 screws (#1566) to remove the horizontal-display LCD unit.





- Remove the dust-proof tape (#1164).
- Take out 2 screws (#1566) to remove the bottom-display LCD unit.
- Take out 3 screws (#1133) to remove the penta-FPC unit from the penta. (Note that they are attached with the both-sided adhesive tape.)
- Remove 3 springs (#1134).
- Take out 2 screws (#1565) to remove the AE sensor holder (#B1131).

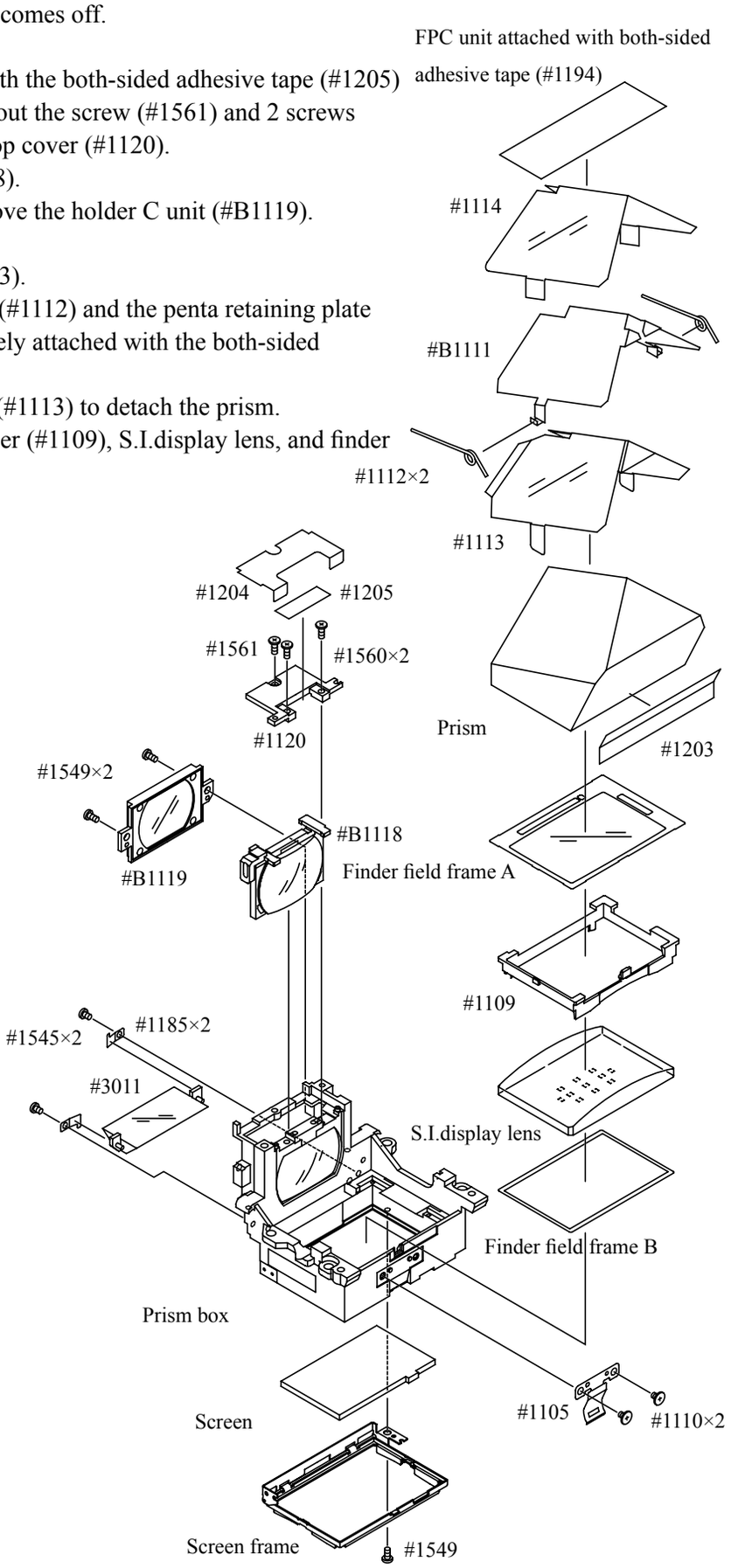


Prism, Screen and other small parts

- Remove the screen.
- Take out the screw (#1549) to remove the screen frame.
- Take out 2 screws (#1110) to remove the screen holding plate (#1105).
- Take out 2 screws (#1545) to remove 2 retaining plates (#1185). Then, the bottom-display prism (#3011) comes off.

- Detach #1204 which is attached with the both-sided adhesive tape (#1205) by removing its tape. Then, take out the screw (#1561) and 2 screws (#1560) to remove the eyepiece top cover (#1120).
- Remove the holder B unit (#B1118).
- Take out 2 screws (#1549) to remove the holder C unit (#B1119).

- Remove the dust-proof tape (#1203).
- Remove 2 penta retaining springs (#1112) and the penta retaining plate (#B1111). (#1114 is also completely attached with the both-sided adhesive tape.)
- Remove the penta retaining sheet (#1113) to detach the prism.
- The finder field frame A, lens spacer (#1109), S.I.display lens, and finder field frame come off.

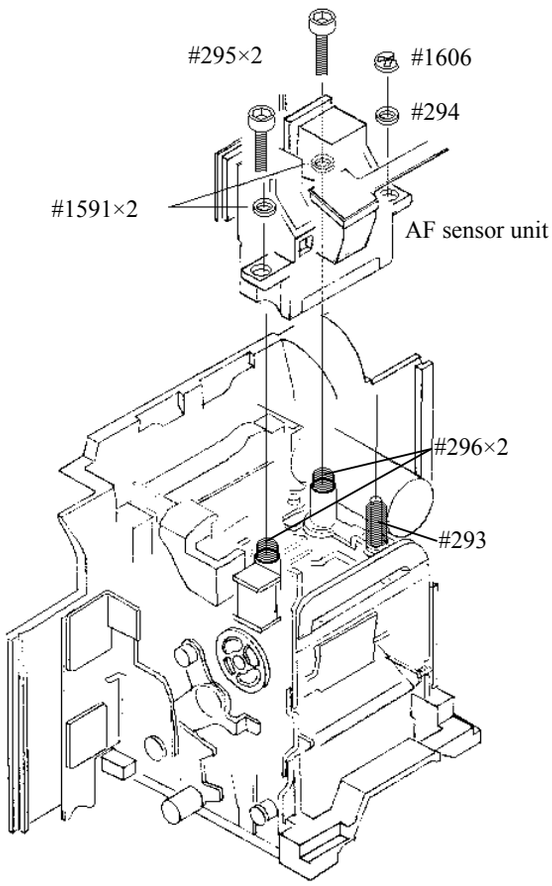


AF sensor unit

Remove AF sensor unit

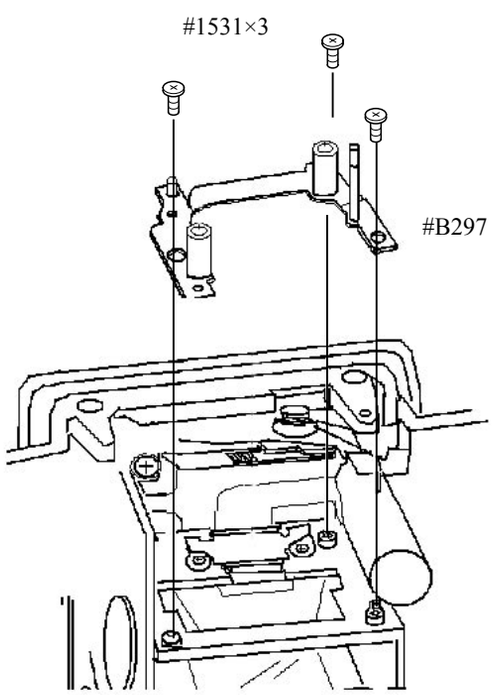
※ In case the AF sensor unit is NOT replaced, as shown below 2, it is possible to remove the AF sensor with the AF sensor mounting plate being attached.

- Detach the E-ring (#1606) to remove the washer (#294).
- Take out 2 screws (#295) with a hexagonal wrench (φ1.5 mm) and remove 2 washers (#1591).
- Remove the AF sensor unit.
- Remove 2 springs (#296) and 1 spring (#293).

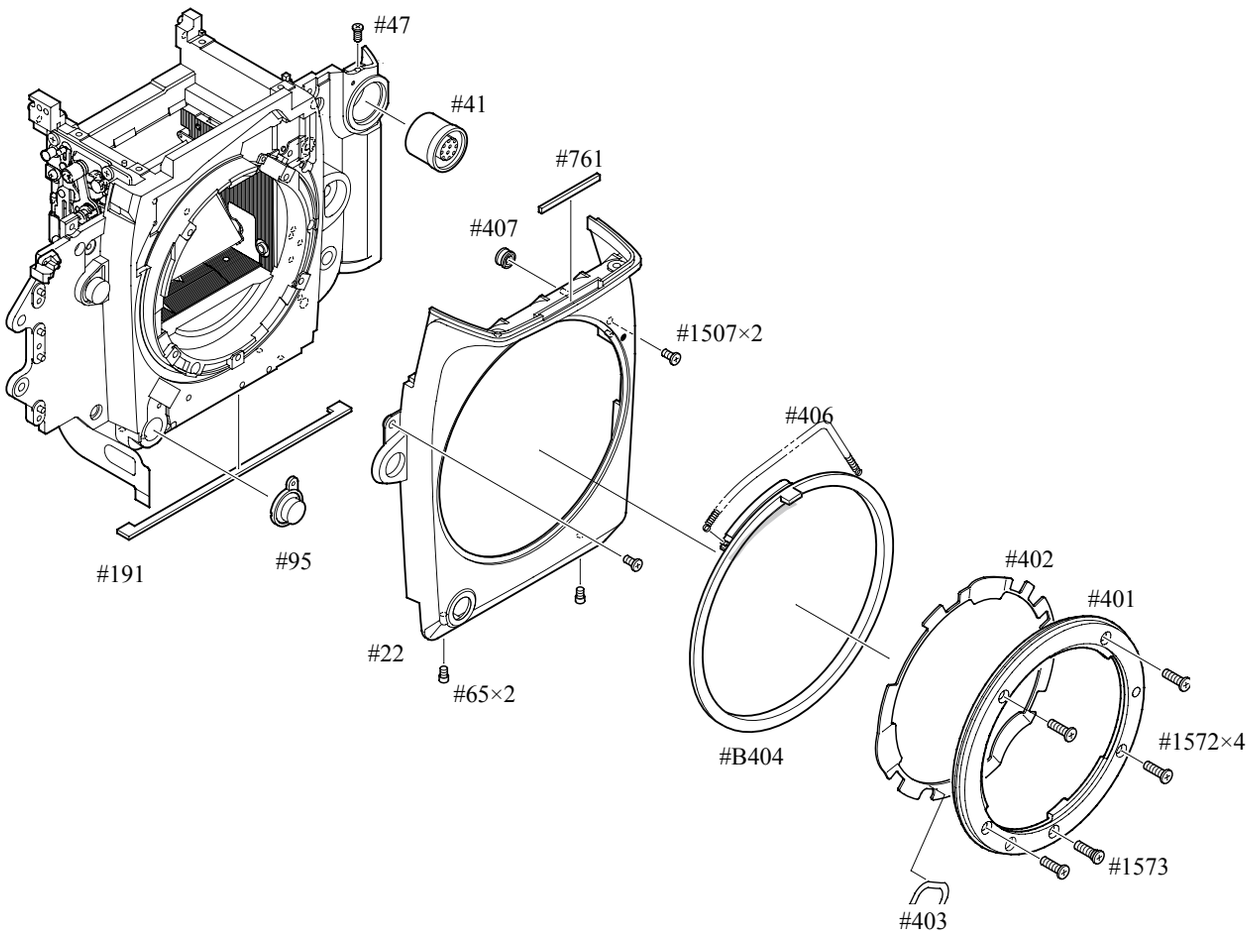


Remove AF sensor mounting plate

- Take out 3 screws (#1531) to remove the AF sensor mounting plate (#B297).

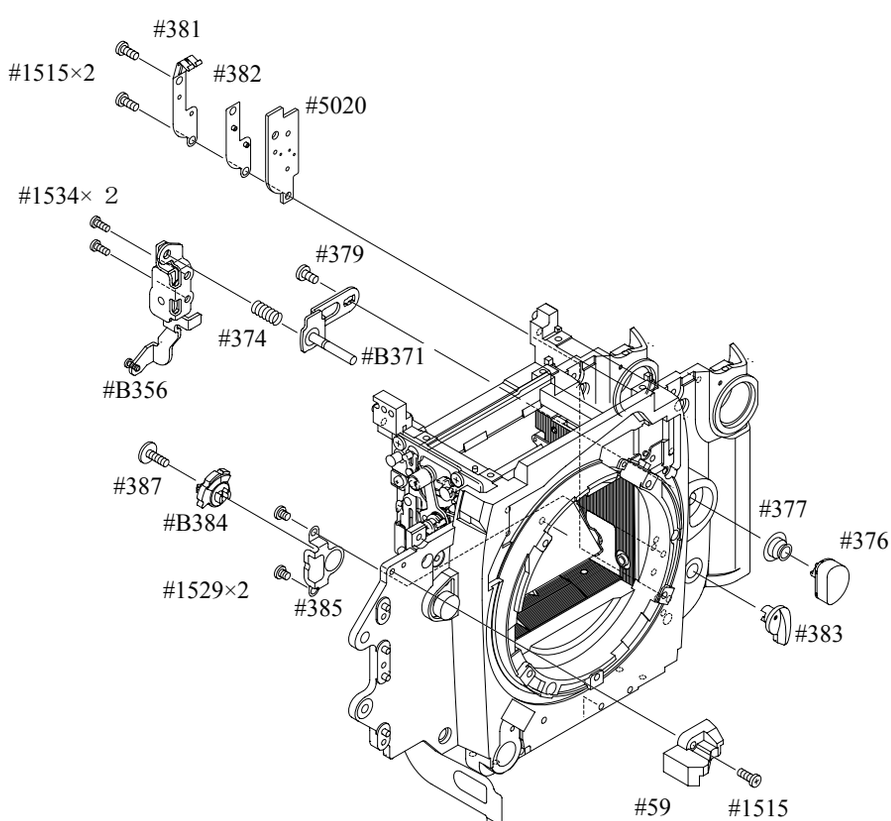


Remote connector (10 pins), Apron, Bayonet mount

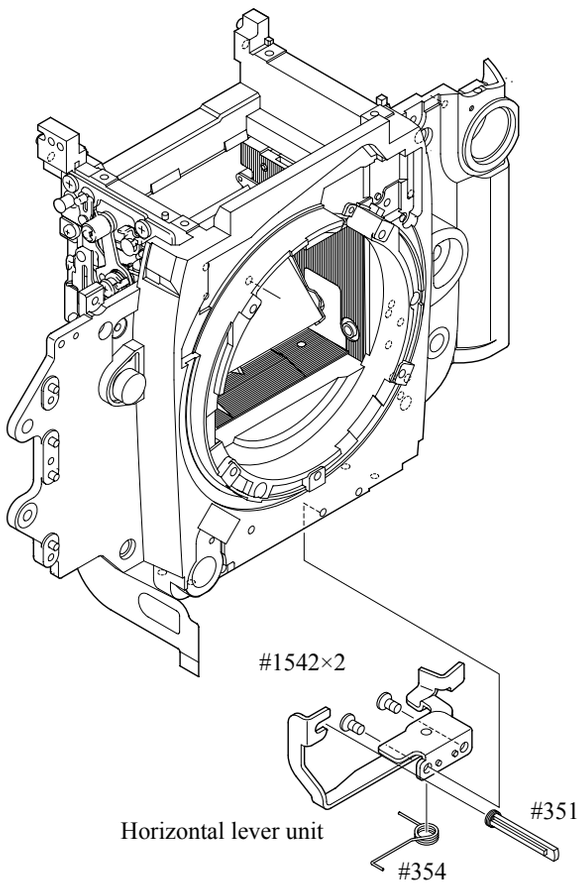


Vertical lever unit, Lens release button, SCM change unit, Lens release SW unit, small parts

- Take out 2 screws (#1515) to remove the contact (#381), plate (#382) and PCB (#5020).
- Take out the screw (#387) to remove the brush unit (#B384) and the lever (#383).
- Take out 2 screws (#1529) to remove #385.
- Take out 2 screws (#1534) to remove the vertical lever unit (#B356) and the spring (#374).
- Take out the screw (#379) to remove the pin (#B371), the tube (#377) and the lens release button (#376).
- Take out the screw (#1515) to remove the grip cover plate (#59).

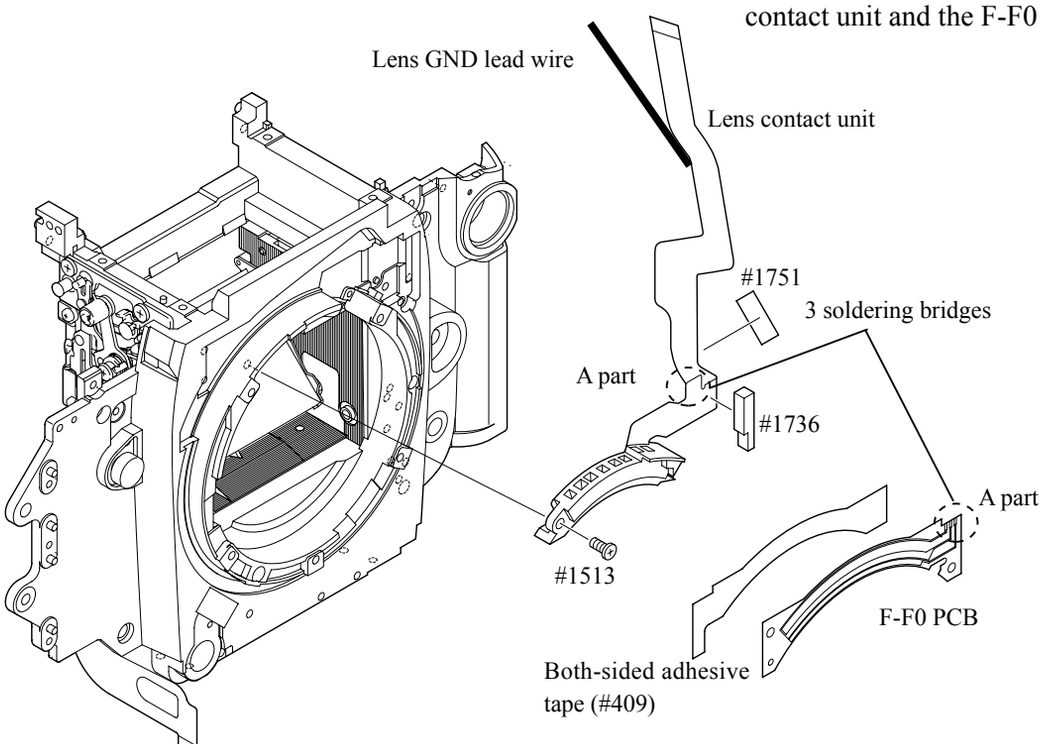


Horizontal lever unit, AF coupling shaft

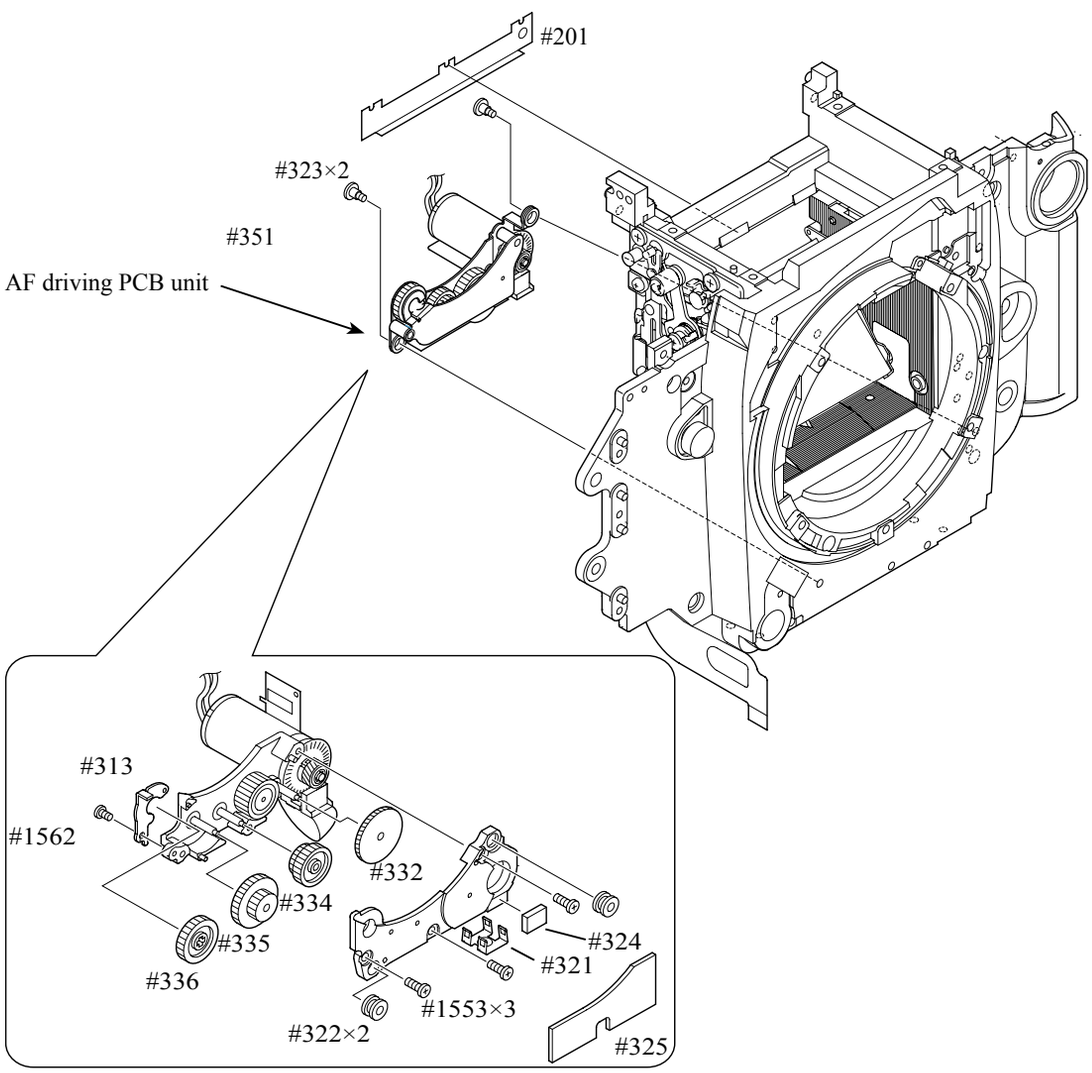


Lens contact unit, F-F0 PCB

- Remove the lens GND lead wire.
- Remove the soldering bridges of A part and take out the screw (#1513). Then detach the lens contact unit and the F-F0 PCB.

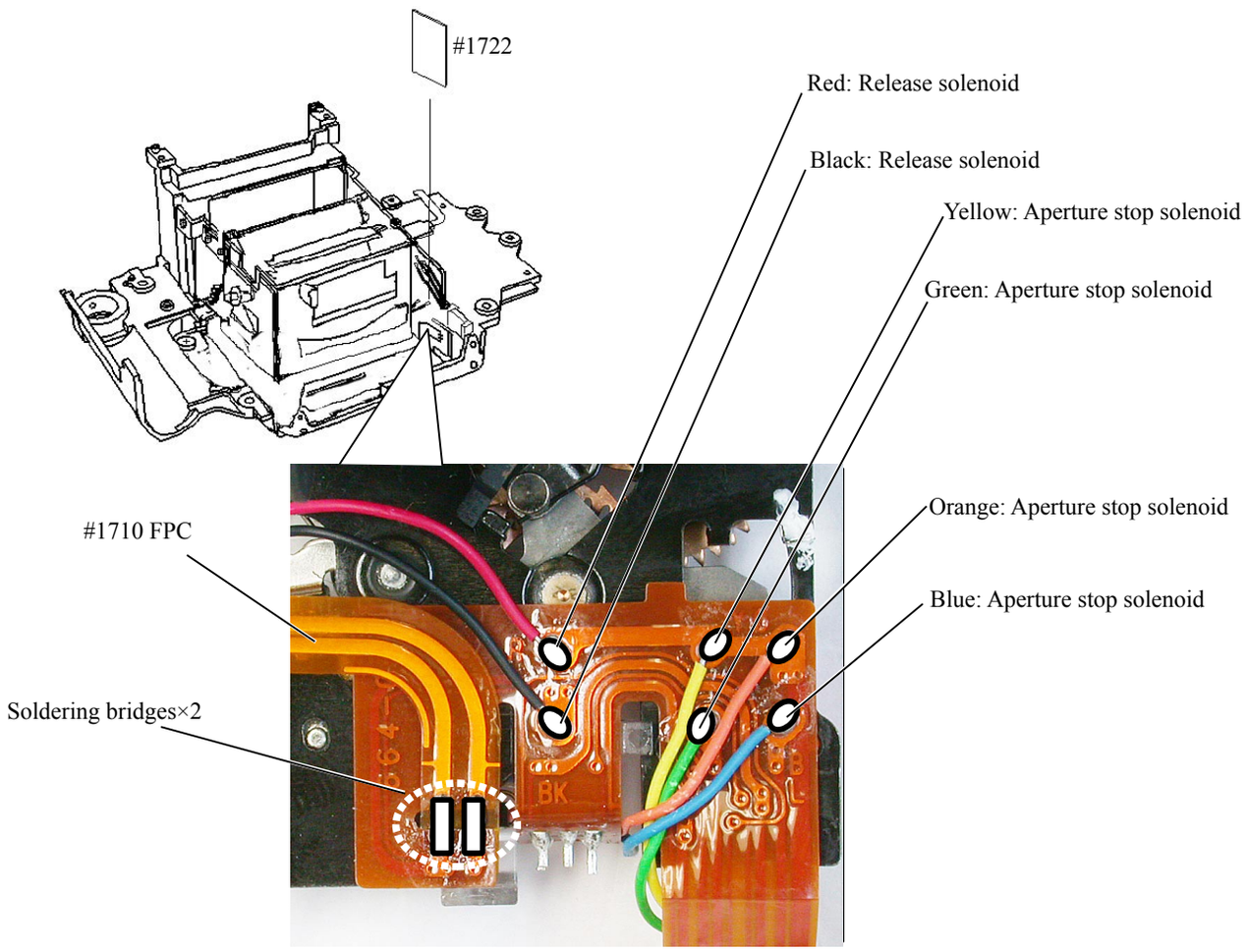


AF driving PCB unit, Light-shielding plate

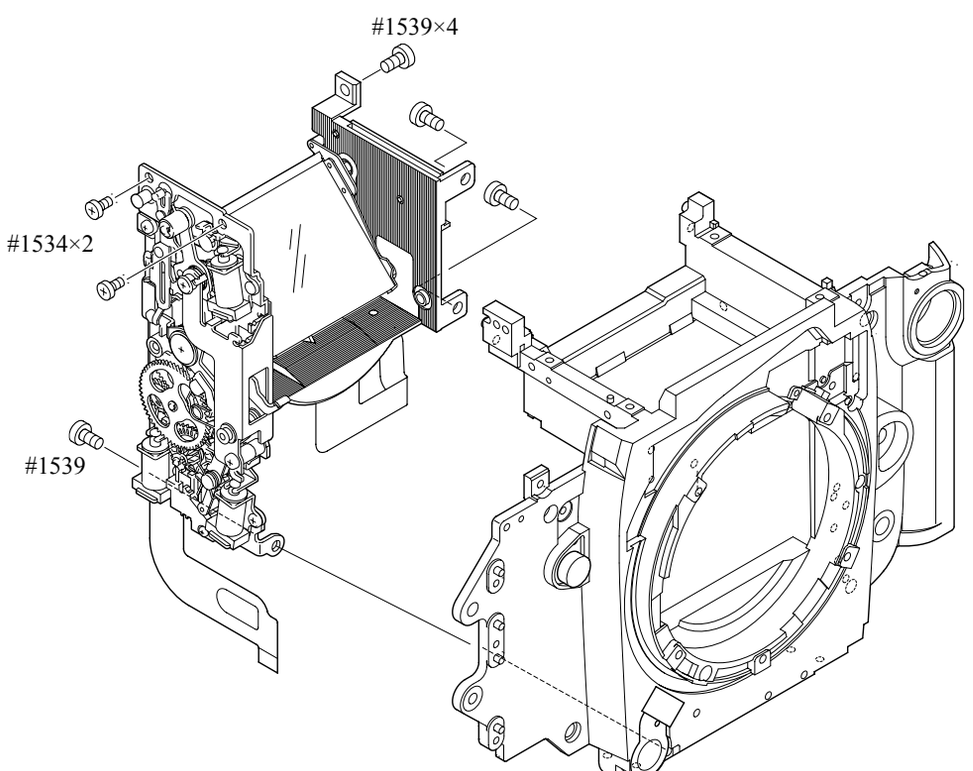


Unsolder I-board solenoid, FPC

・ Remove 2 soldering bridges of (#1710) FPC.
※ When disassembling IL-board, it is NOT necessary to unsolder the solenoid.



IL-board unit



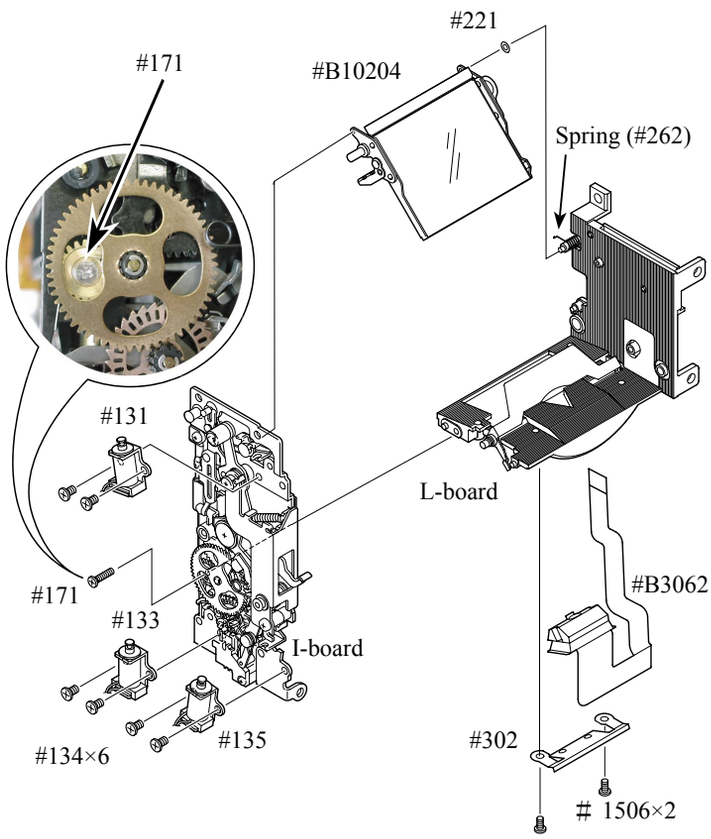
Mirror holder unit, L-board unit, I-board unit, TTL-FPC unit

- Take out 2 screws (#1506) to remove the attachment plate (#302) and TTL-FPC unit (#B3062).

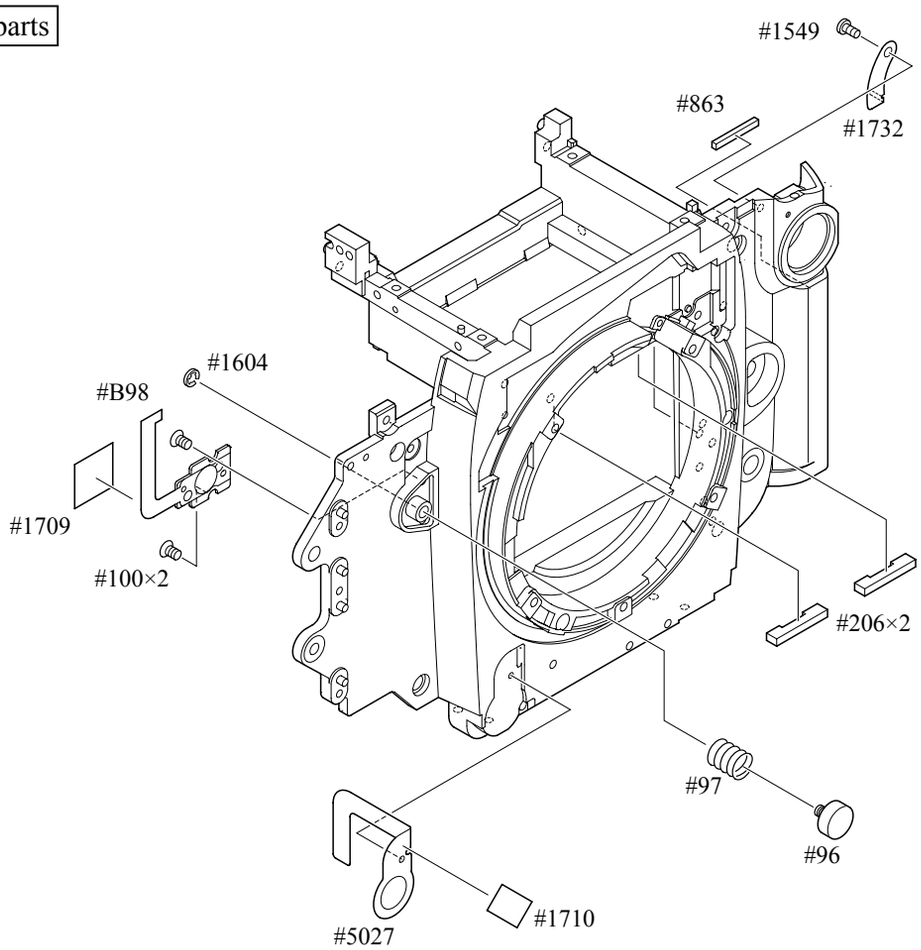
- Unhook the mirror down spring (#262) that is hooked to the mirror holder unit.

- Take out the screw (#171) to separate I-board and L-board.

Note: By separating I-board and L-board, the mirror holder (#B10204) and washers come off. Be careful not losing them.



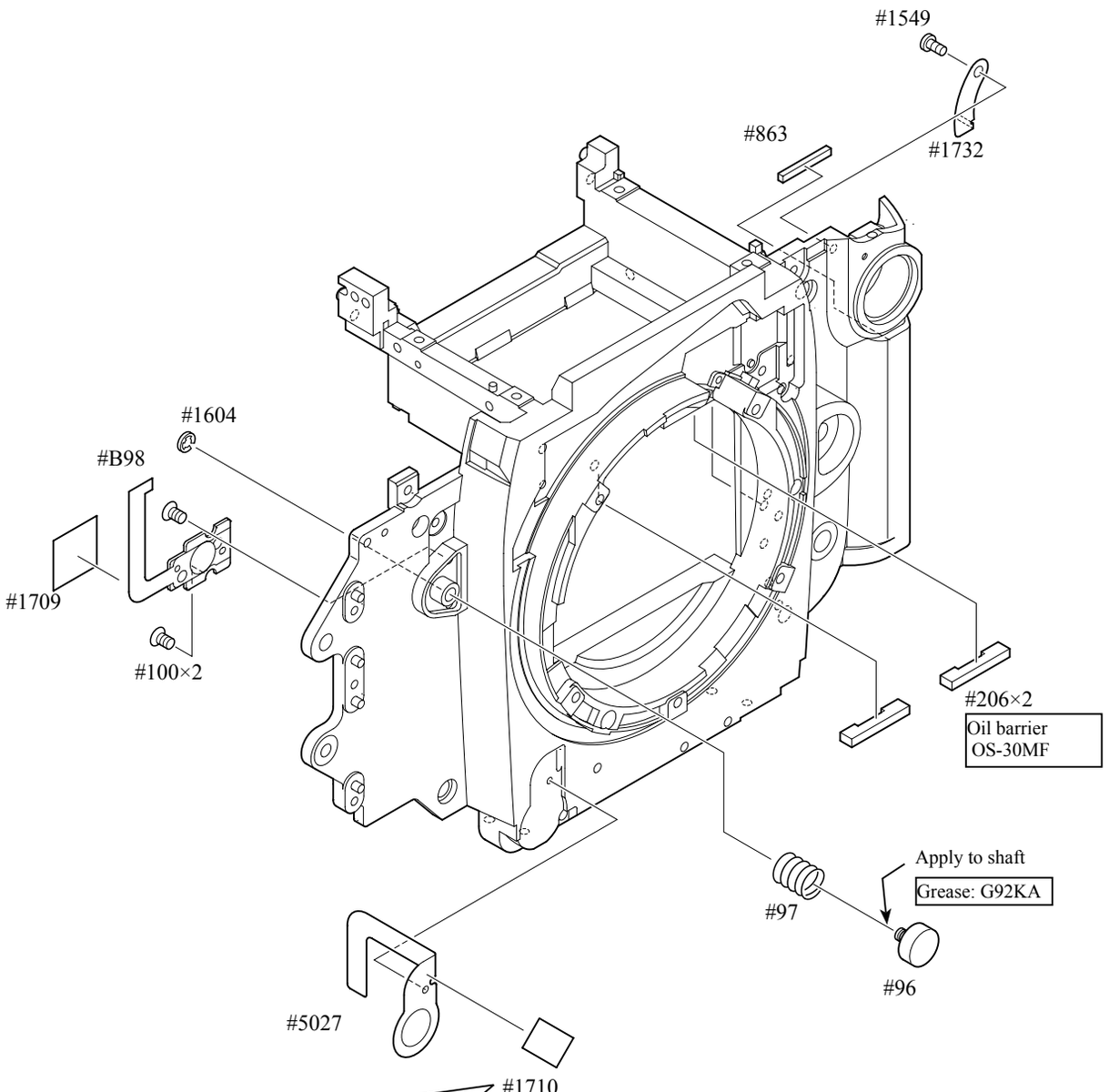
Front body small parts



Assembly / Adjustment

1. Front body

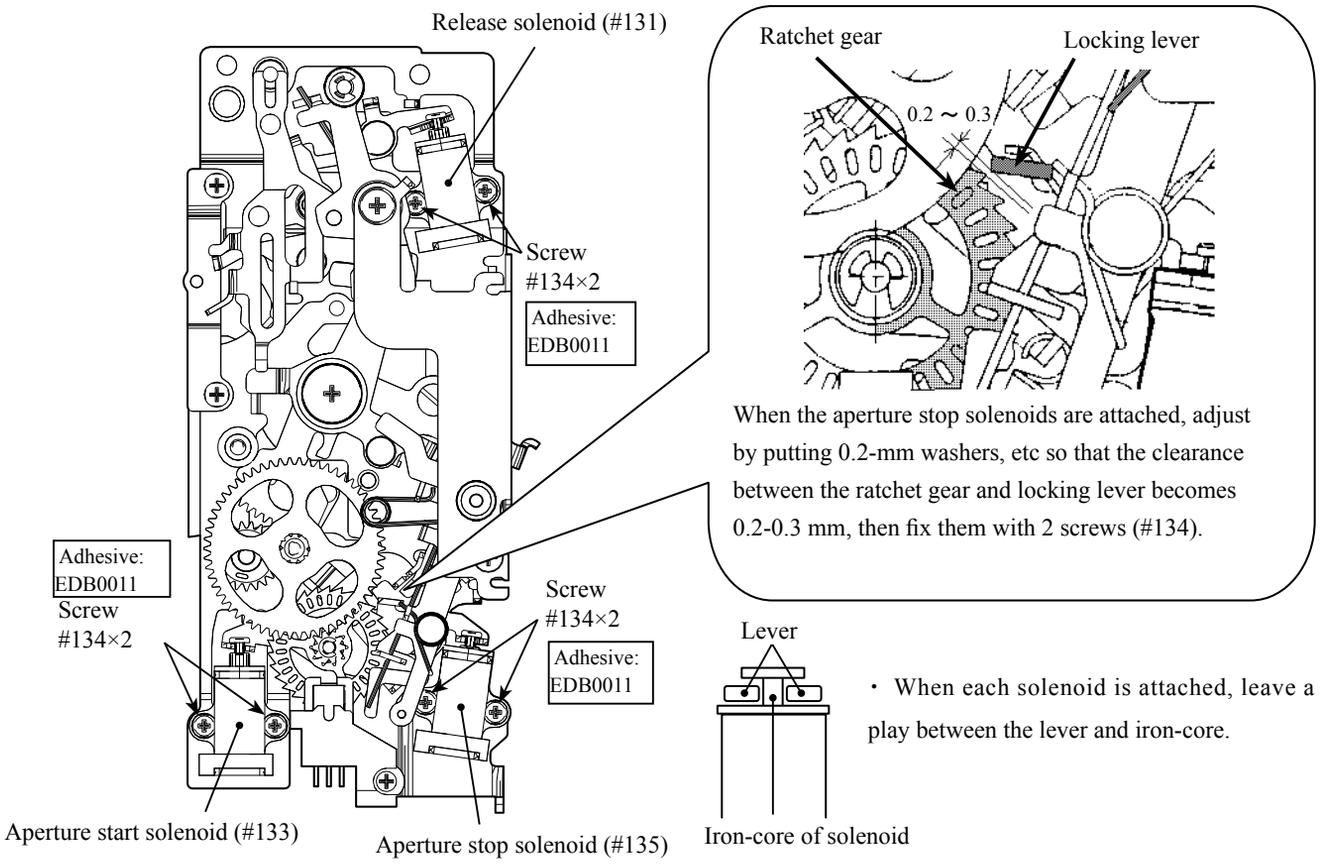
Front body small parts



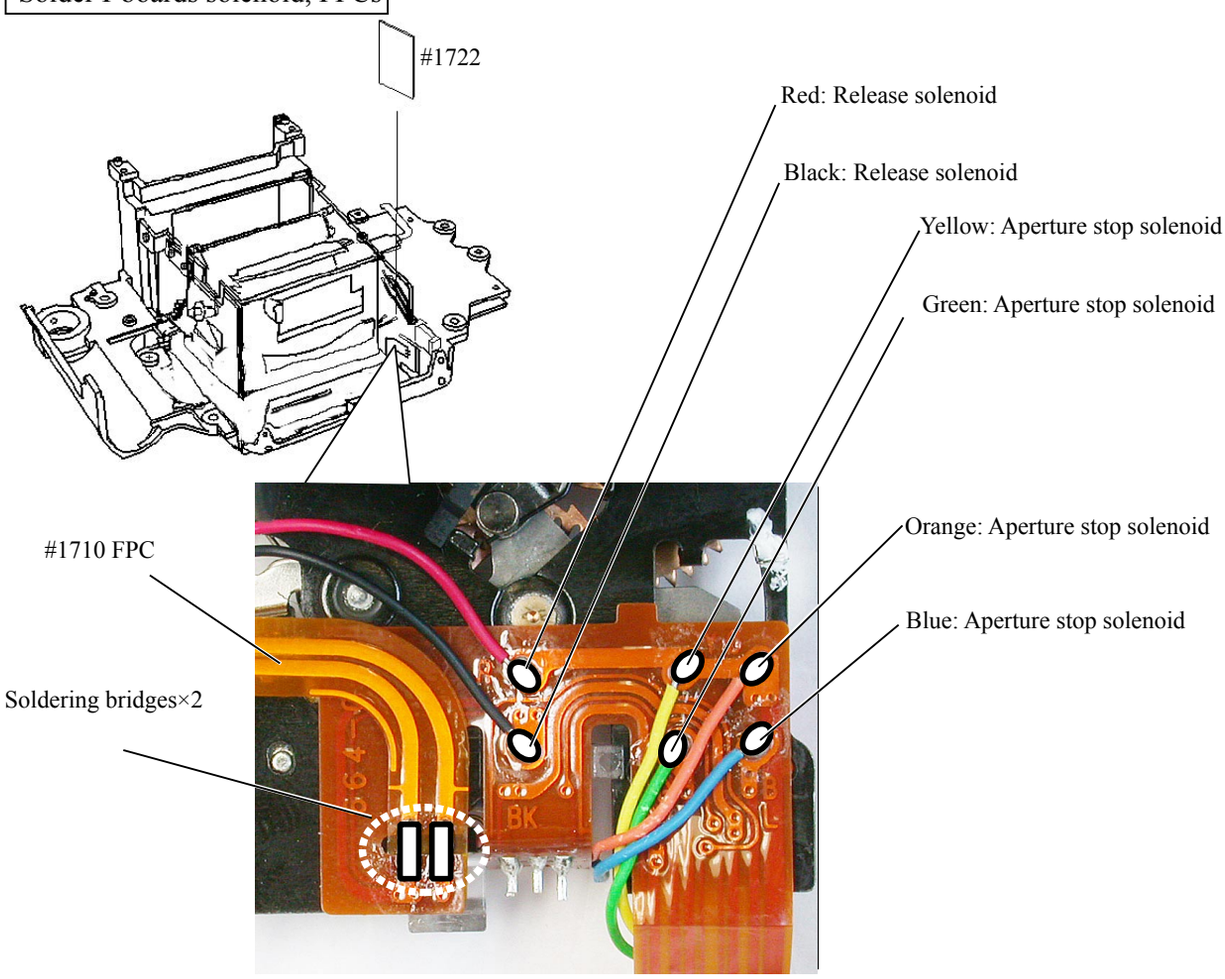
Attach #1710 so that it can close the hole (to prevent light leak).

・After assembling #96 and #97, attach #B98.

Attach solenoids to I-board



Solder I-boards solenoid, FPCs



Mirror holder unit, L-board unit, I-board unit, TTL-FPC unit

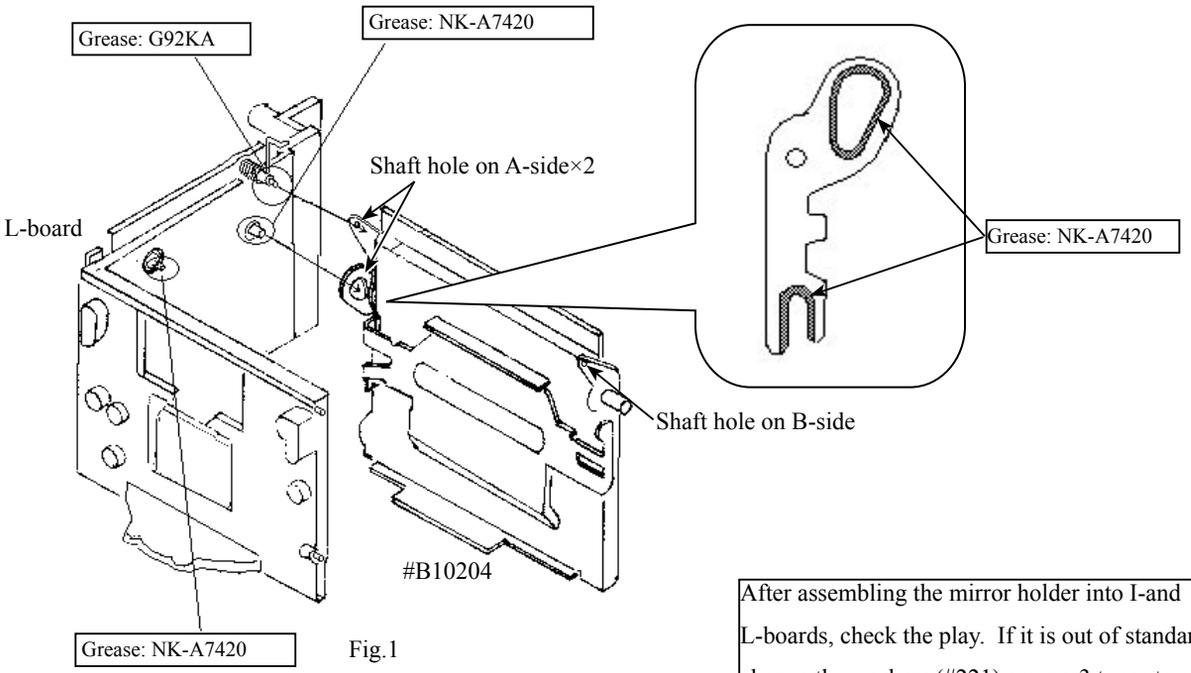
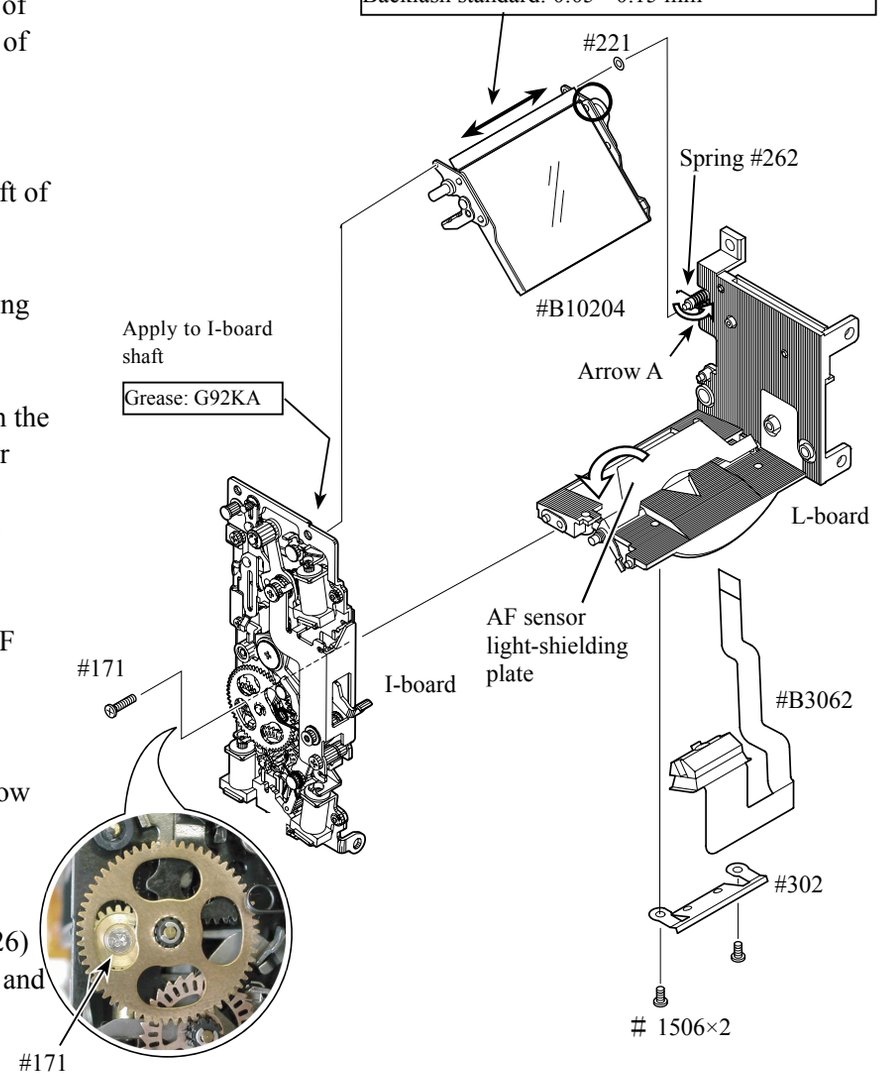


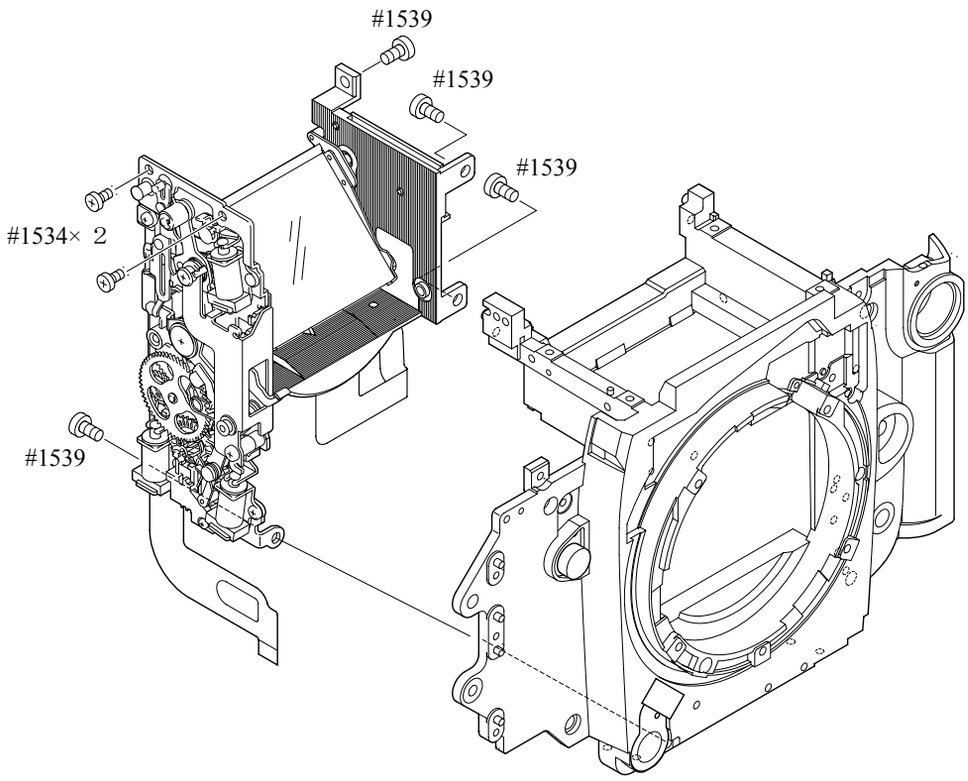
Fig.1

After assembling the mirror holder into I-and L-boards, check the play. If it is out of standard, change the washers (#221) among 3 types to adjust the thickness.
Backlash standard: 0.05 - 0.15 mm

- Align the 2 shaft holes on A side of the mirror holder with the shafts of the L-board, and assemble them. (ref. Fig.1)
- Put the washer (#221) on the shaft of the L-board.
- With the light-shielding plate being fell, fix it by tape, etc.
- Align the shaft of the I-board with the shaft hole on B-side of the mirror holder, and assemble them into L-board. Then fix them with the screw (#171).
- Remove the tape that fixed the AF sensor light-shielding plate.
- Pull out the mirror-down spring (#262) in the direction of the arrow A, and hook it to "○" part of the mirror holder.
- Attach the TTL-FPC unit (#B3026) and the attachment plate (#302), and fix them with 2 screws (#1506).

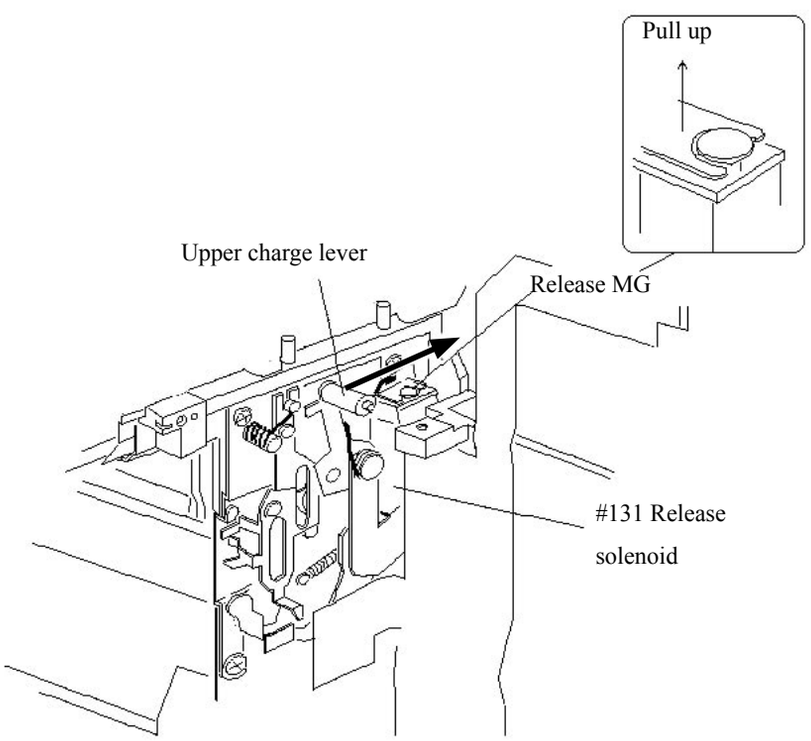


IL-board unit

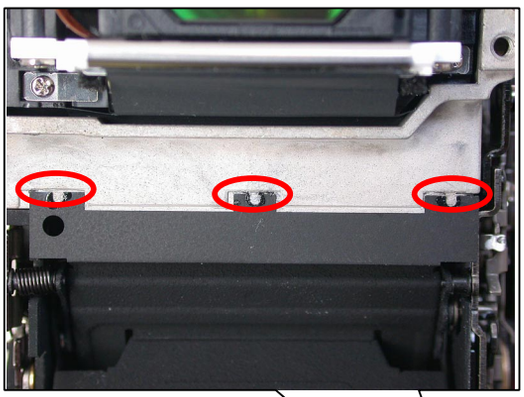


Operation check of IL-board

- Unlock the release MG, and raise the mirror (mirror up).
- Check that the AF sensor light-shielding plate can fall on the L-board.
- When pushing the upper charge lever in the direction indicated by the arrow, check that the mirror can be fell and the light-shielding plate can be raised.



AF driving unit, Light-shielding plate



Attach the light-shielding plate (#201)

Position

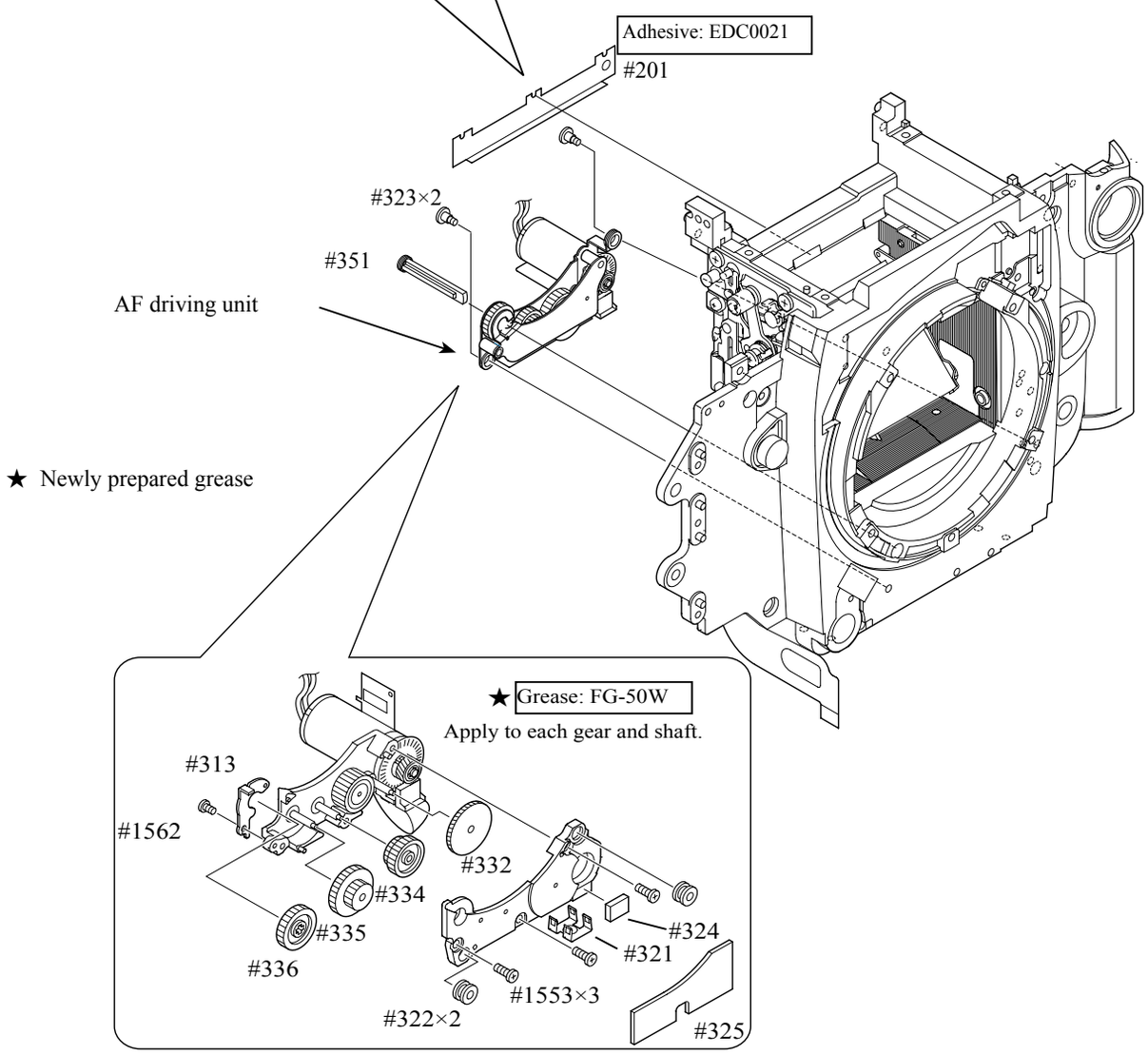
- Vertically
  Attach at the position approx. 0.5 mm downward from the upper edge of the front body.
- Horizontally
  Edges of the I-board

Adhesive

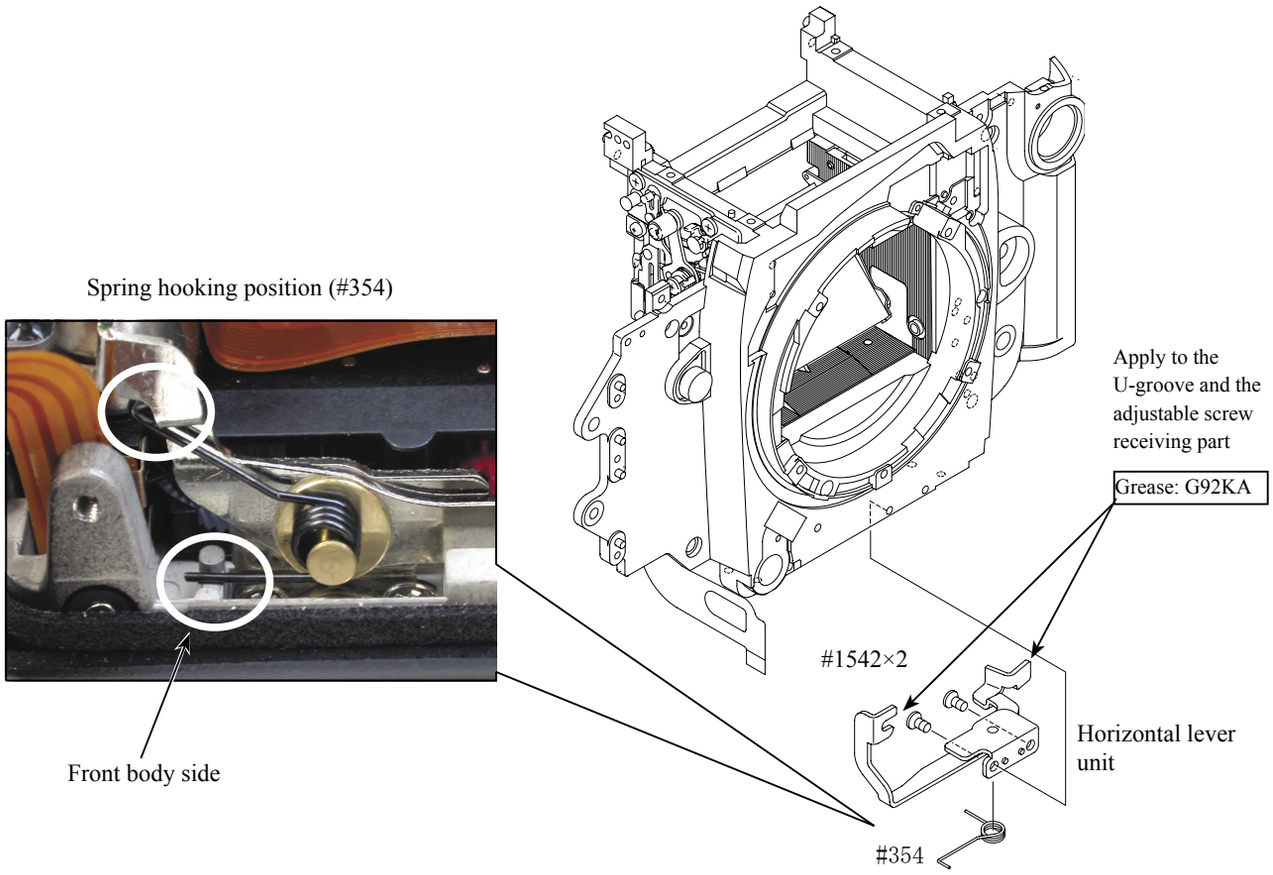
- Apply the EDC0021 to 3 locations.

Note)

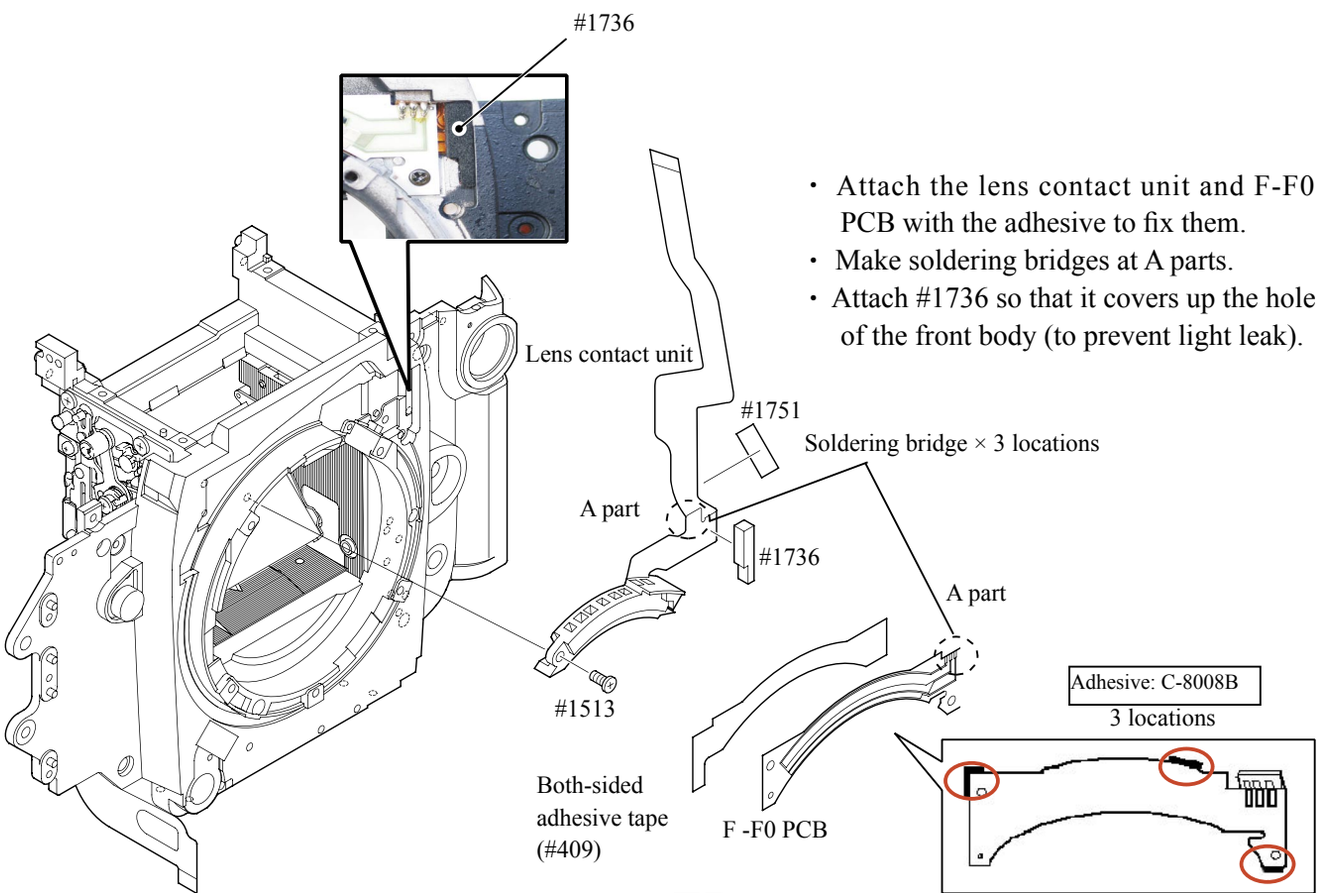
- Check that the glue is not forced out of the mirror holder surface when mirror is up.
- Check that the mirror move up and down smoothly without abnormal noise.



Horizontal lever unit



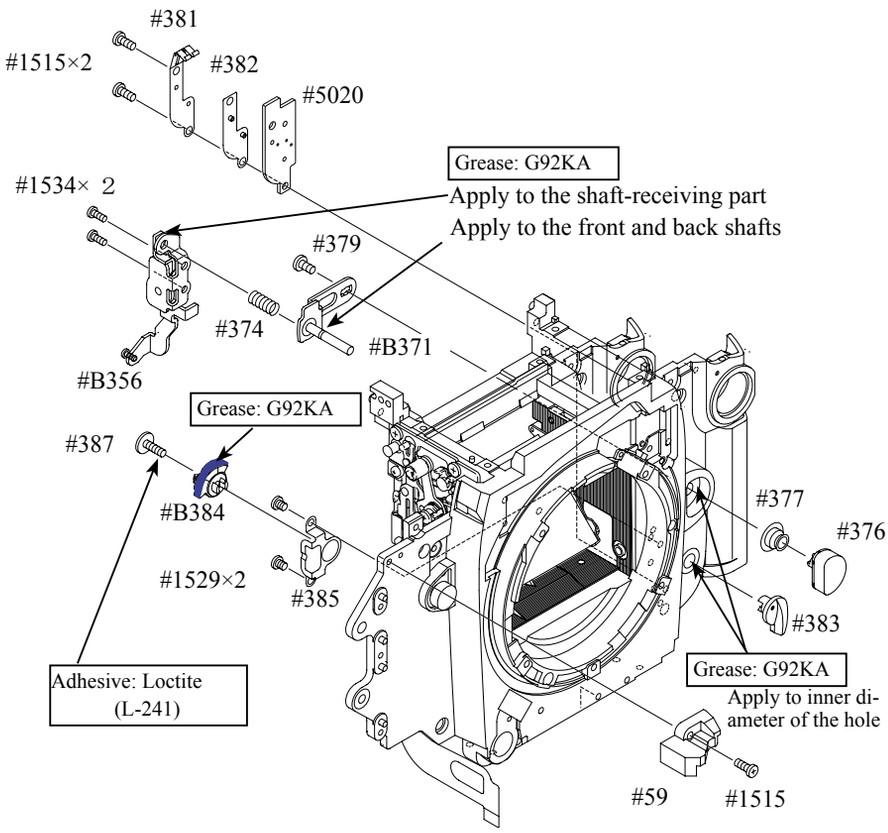
Lens contact unit, F-F0 PCB



- Attach the lens contact unit and F-F0 PCB with the adhesive to fix them.
- Make soldering bridges at A parts.
- Attach #1736 so that it covers up the hole of the front body (to prevent light leak).

Vertical lever unit, Lens release button, SCM change unit, Lens release SW unit

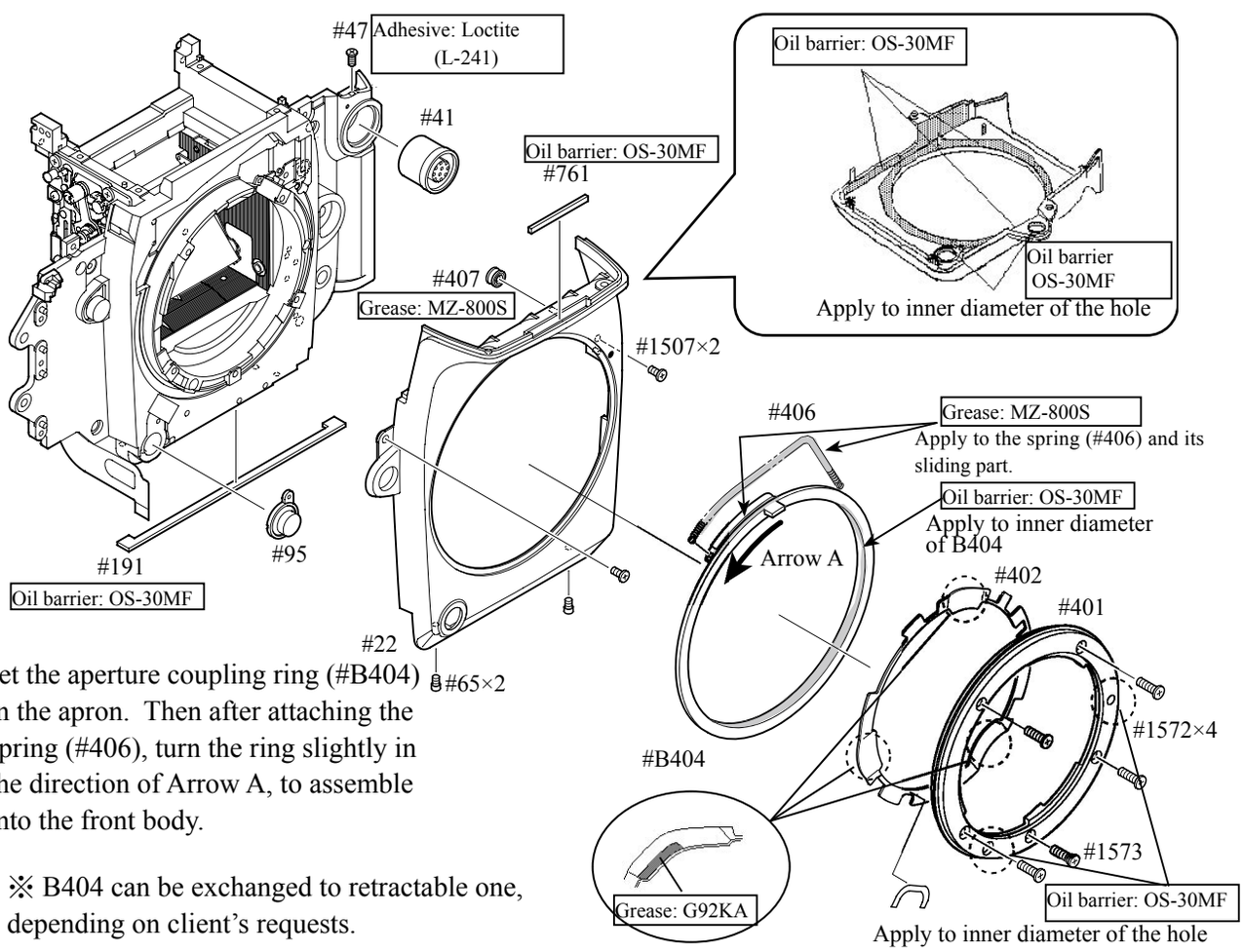
- Assemble the lens release button (#376) and the tube (#377). Then insert the pin (#B371) and attach the screw (#379).
- Put the spring (#374) in the pin (#B371), and attach the vertical lever unit (#B356) by tightening 2 screws (#1534).
- Fix #385 with 2 screws (#1529). Attach the brush unit (#B384) and assemble #383. Finally fix them with the screw (#387).
- Attache the PCB (#5020), the plate (#382), ant the contact (#381) by tightening 2 screws (#1515).
- Attach the grip-plate cover plate (#59), and fix it with the screw (#1515).



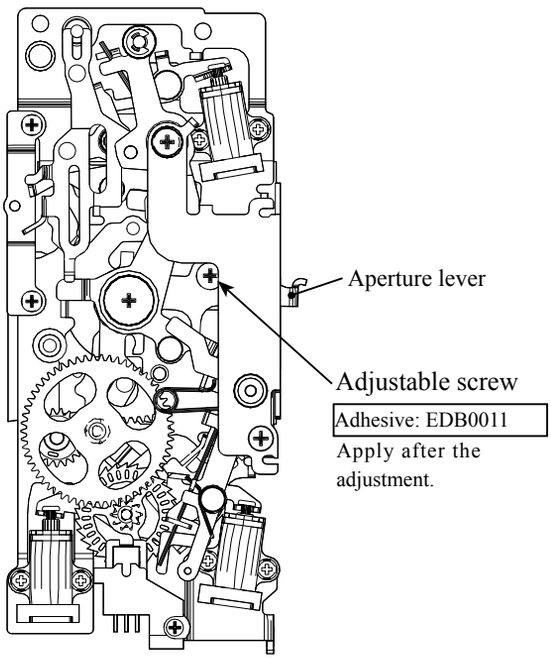
Remote connector (10 pins), Apron, Bayonet mount

- Set the aperture coupling ring (#B404) in the apron. Then after attaching the spring (#406), turn the ring slightly in the direction of Arrow A, to assemble into the front body.

※ B404 can be exchanged to retractable one, depending on client's requests.



Height adjustment of Aperture lever

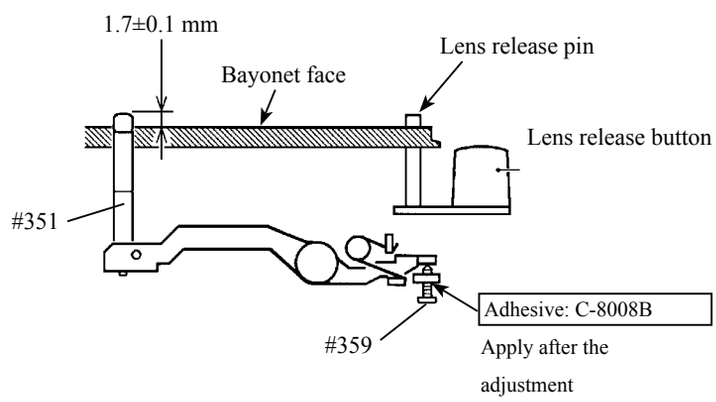


- Measure the height of the apreture lever by using the tool (J18004).

  Standard: $3.4\pm^{0.1}_{0.05}$mm

  When the height of the apreture lever is out of standard, turn the adjustable screw for adjustments.

Height adjustment of AF coupling shaft (#351)



① Set the SCM change-lever (#383) to "S". After pressing the lens release button a few times, measure the height of the AF coupling shaft (#351).

② Adjust the height of the AF coupling shaft by using the screw (#359).

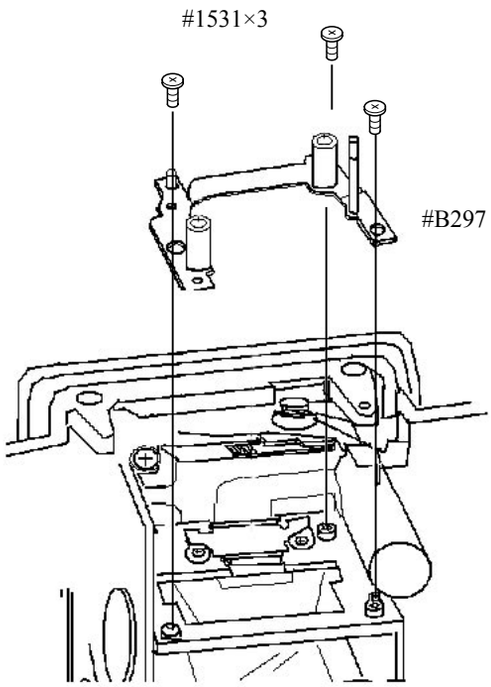
③ When the height of the lens release pin becomes 0.4 mm, do not protrude the AF coupling shaft from the bayonet face.

④ After the adjustment, fix the screw (#359) with the adhesive (C-8008B).

AF sensor unit

AF sensor mounting plate

・Fix the AF sensor mounting plate (#B297) with 3 screws (#1531).



Mount AF sensor unit

・ Turn all the way in, then back out about 3 turns.

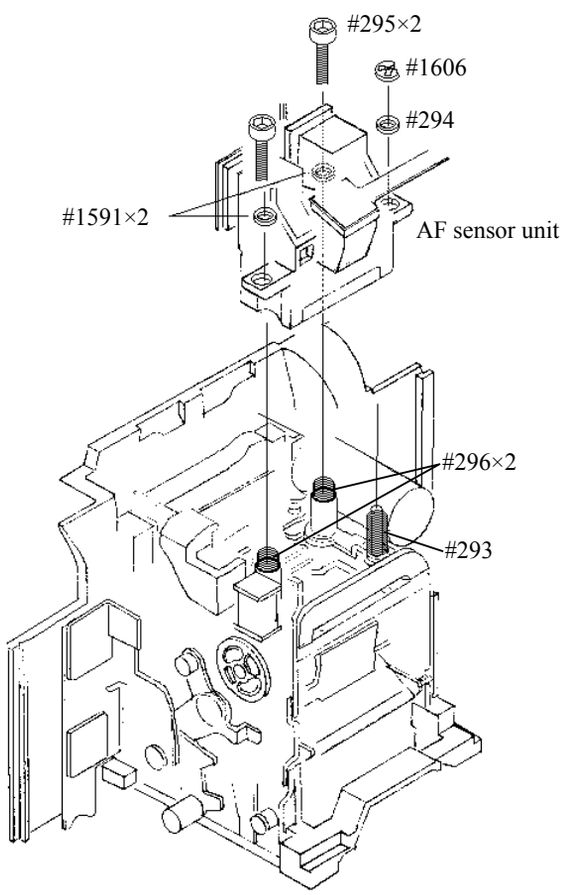
・ Put the spring (#293) and 2 springs (#296) on the AF sensor mounting plate (#B297).

・ Mount the AF sensor unit.

・ Put 2 washers (#1591), and attach 2 screws (#295) with a (φ1.5-mm) Hexagonal wrench.

・ Turn 2 screws (#295) all the way in, then back out about 3 turns.

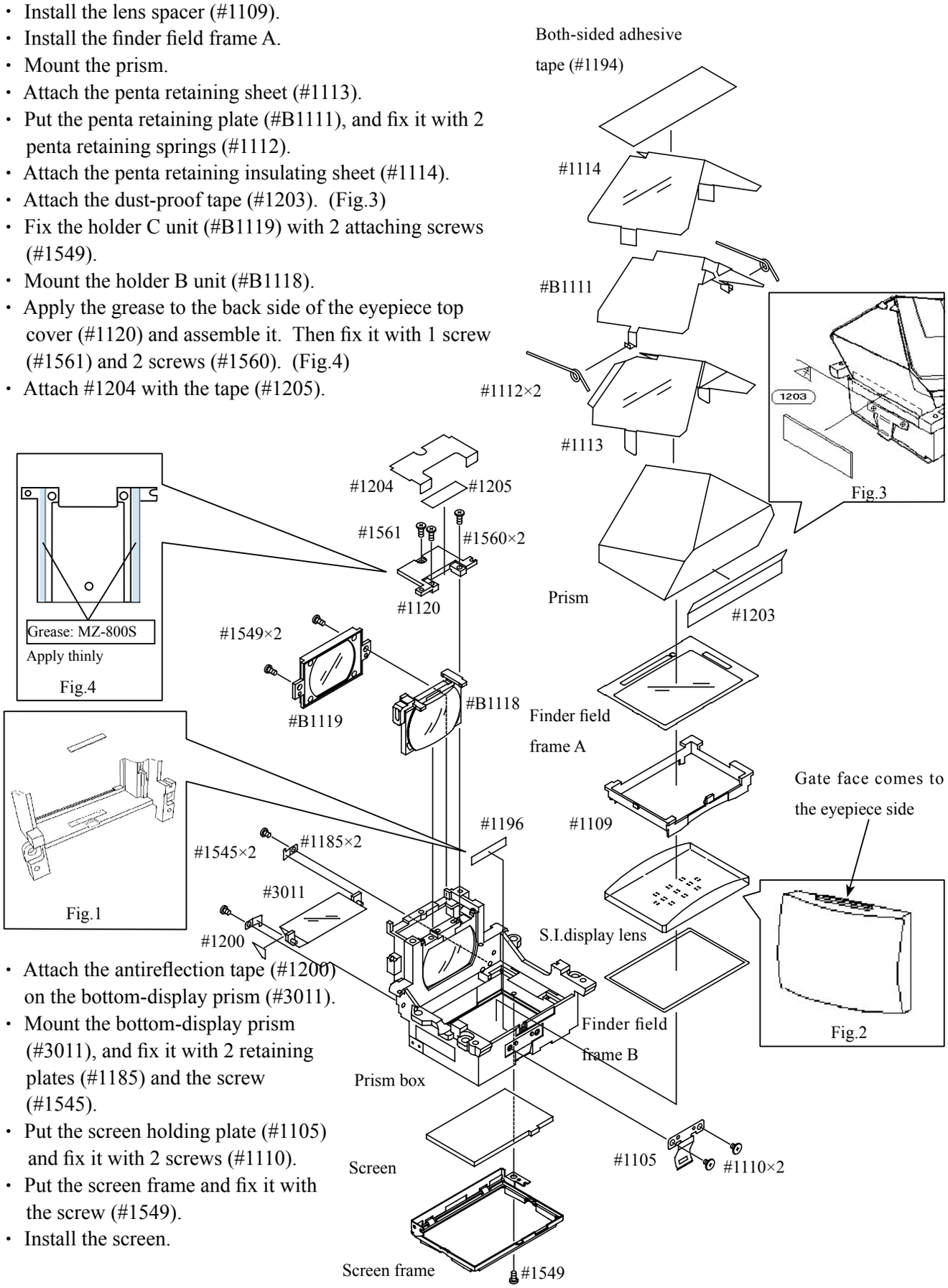
・ Put the washer (#294) and fix with the E-ring (#1606).



Prism box

Prism, Screen, other small parts

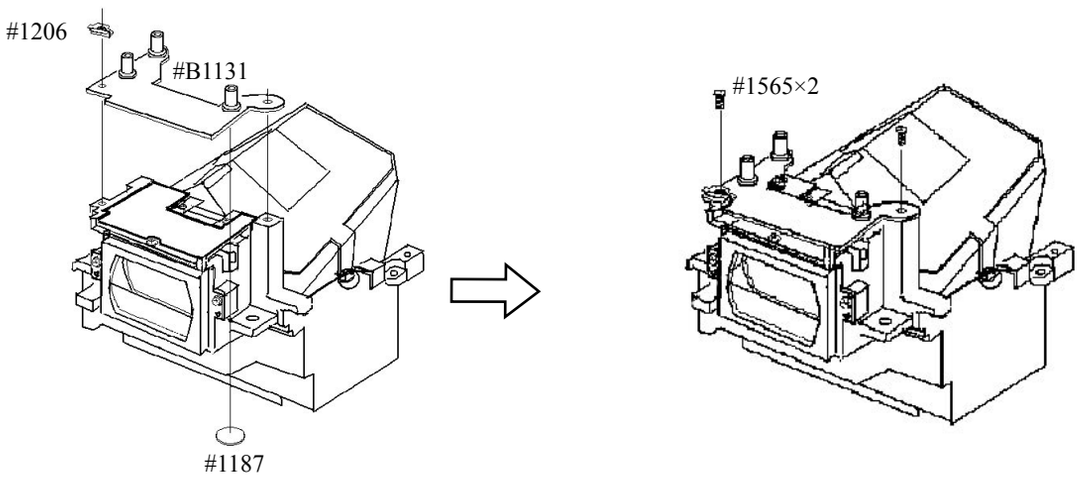
- Attach the tape (#1196) on the prism box. (Fig.1)
- Put the finder field frame B, and assemble it with the S.I.display lens by aligning their directions. (Fig.2)
- Install the lens spacer (#1109).
- Install the finder field frame A.
- Mount the prism.
- Attach the penta retaining sheet (#1113).
- Put the penta retaining plate (#B1111), and fix it with 2 penta retaining springs (#1112).
- Attach the penta retaining insulating sheet (#1114).
- Attach the dust-proof tape (#1203). (Fig.3)
- Fix the holder C unit (#B1119) with 2 attaching screws (#1549).
- Mount the holder B unit (#B1118).
- Apply the grease to the back side of the eyepiece top cover (#1120) and assemble it. Then fix it with 1 screw (#1561) and 2 screws (#1560). (Fig.4)
- Attach #1204 with the tape (#1205).



- Attach the antireflection tape (#1200) on the bottom-display prism (#3011).
- Mount the bottom-display prism (#3011), and fix it with 2 retaining plates (#1185) and the screw (#1545).
- Put the screen holding plate (#1105) and fix it with 2 screws (#1110).
- Put the screen frame and fix it with the screw (#1549).
- Install the screen.

Mount AE sensor holder

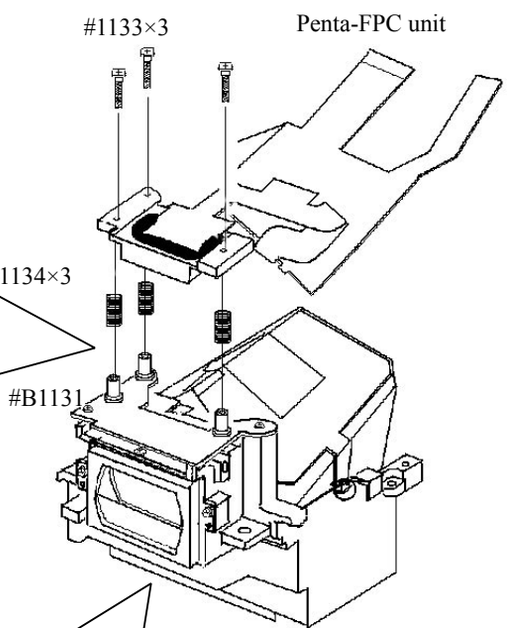
- Attach the dust-proof tape (#1187) to cover up the adjustable-screw hole of the AE sensor holder (#B1131).
- Put the lug plate (#1206) and fix it with 2 screws （#1565).



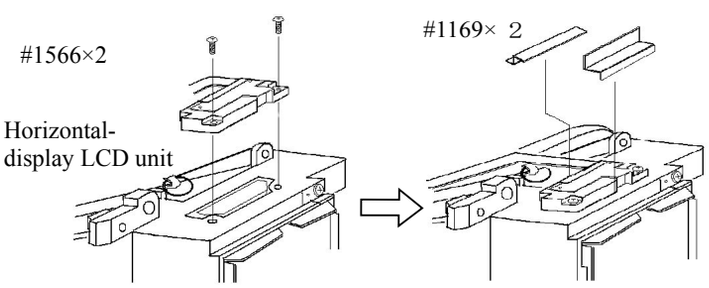
Attach Penta-FPC unit

- Attach the penta-FPC unit.
- Put 3 AE sensor adjustment springs (#1134) on 3 shafts (#B1131).
- Mount the AE sensor holder, and temporaly fix it with 3 screws (#1133) by giving them about 9 turns.

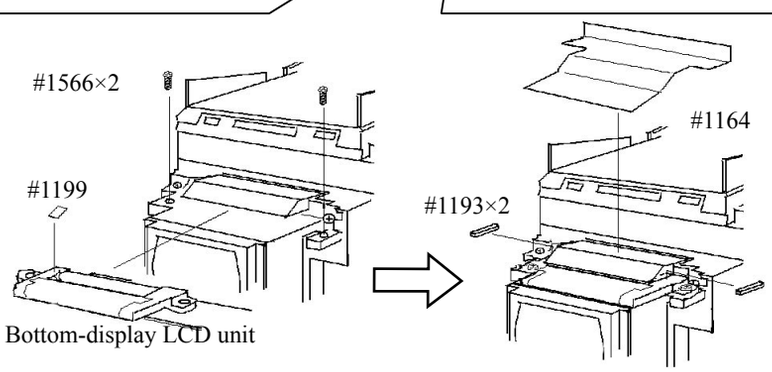
Note） Do NOT tighten 3 screws (#1133) all the way so that the AE sensor is not damaged.



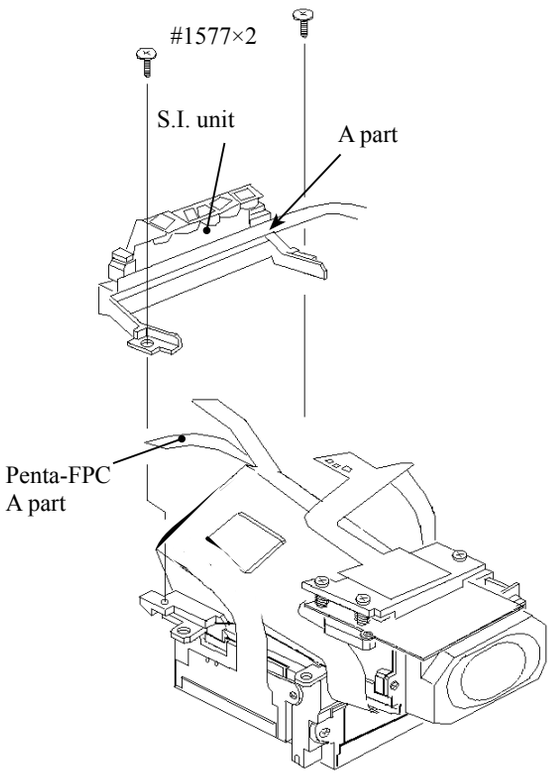
- Mount the horizontal-display LCD unit, and fix it with 2 screws (#1566).
- Attach 2 pieces of the dust-proof tape (#1169).

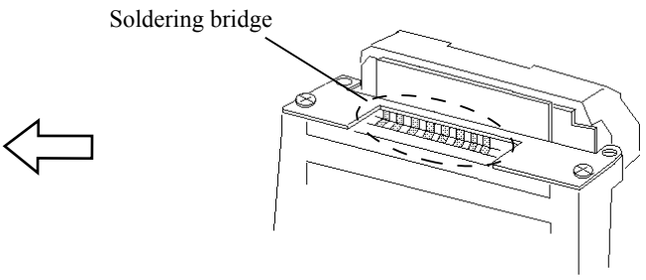


- Attach the antireflection tape (#1199) on the bottom-display LCD unit.
- Mount the bottom-display LCD unit, and fix it with 2 screws (#1566).
- Put 2 sponges (#1193), and attach the dust-proof tape (#1164).



Mount S.I. (Super Impose) unit





・ Mount the S.I. unit, and fix it with 2 screws (#1577).
・ Attach the soldering-bridge part of the penta-FPC to the A part of the S.I.unit, and solder them.

※ ① Inner LCDs (Bottom/Horizontal-display LCDs):
When the inner-LCDs are disassembled, make an inspection/adjustment of lighting by referring to "How to connect relay-FPC" of Adjustment section.
② When the S.I. unit is disassembled, check lighting before the top cover is attached.

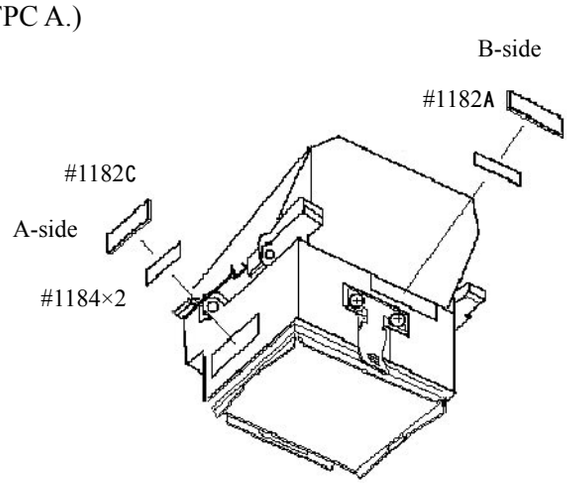
In case vignetting is caused on indications, adjust the position of mounting the S.I.unit. (Connect the top cover and body with the relay-FPC A.)

Mount Prism box unit on Front body

・ Attach 2 parallax adjustment spacers (#1182) on the prism box with 2 pieces of the both-sided adhesive tape (#1184)

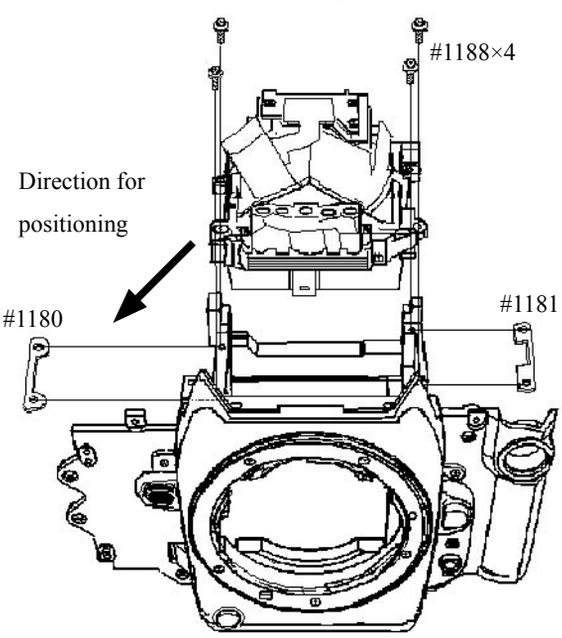
① Be sure to put 0.6-mm spacer on the A side. If not, put it without fail.

② When the prism box is replaced, be sure to attach the 0.4-mm spacer on the B side.
(The spacer is for a coarse adjustment of parallax. When the prism box unit is removed, be sure to make a fine adjustment after assemble the body. Refer to "Adjustment of parallax".



・ Put the alignment adjustment washers (#1180 and #1181).

・ Mount the prism box unit by pressing it lightly in the oblique direction of the arrow towards the bayonet and preview sides for positioning.
・ Fix the prism box unit with 4 screws (#1188).



Angle inspection / adjustment of Main mirror and Sub mirror

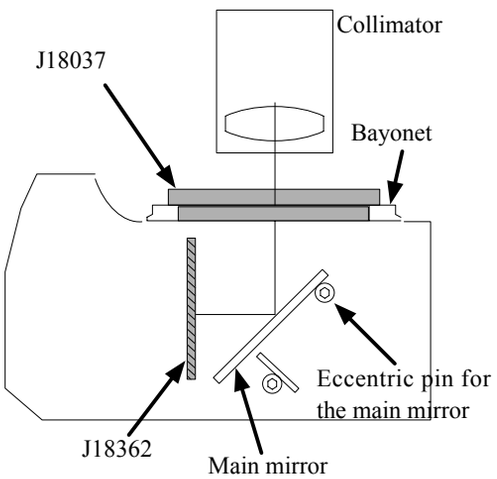
＊ Device:

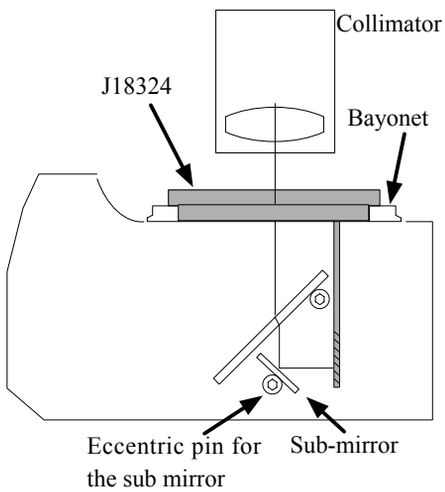
1. Angle inspection/adjustment of the main mirror to 45°

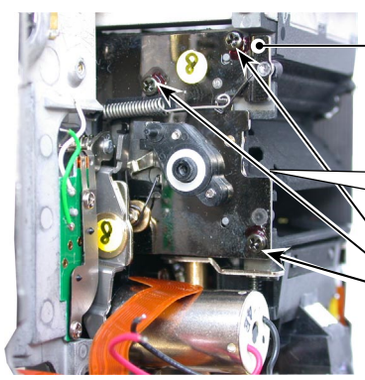
① Collimator (J19002)
② Reflection mirror (J18362)
③ Optical parallel (J18037)
④ Hexagonal wrench

2.Angle inspeciton/adjustment of the main mirror to 49°

① Collimator （J19002）
② Sub-mirror 49 deg. inspection tool (J18324)
③ Hexagonal wrench





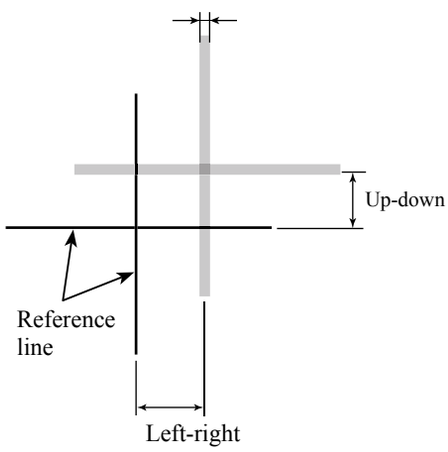


Shaft base plate for the main mirror (#B234)

Check that the two-pronged part of the sub-mirror surely fits in the eccentric pin.

#1532×3
Apply after the adjustment
Adhesive: EDB0011

The width of line indicates deviation.



Standard

	Main mirror	Sub-mirror
Left-right deviation	±25′	±15′
Up-down deviation	±20′	±18′
Distortion	6' or less	8′or less

Note：Before and after the adjustment, check the accuracy by moving the main mirror up- and downwards a few times.
If the inspection/adjustment is made only for the front body, inspect again after the rear body is assembled.

・Angle adjustment of the main mirror to 45°

① Check for the left-right deviation
In case the deviation is out of standard, make an adjustment by loosening 3 screws (#1532) and moving the shaft plate for the main mirror (#B239).

② Check for the up-down deviation
In case the deviation is out of standard, make an adjustment by turning the eccentric pin for the main mirror.

・Angle adjustment of the sub mirror to 49°
Check for the up-down deviation within the range of left and right 15′ each.
In case the deviation is out of standard, make an adjustment by turning the eccentric pin for the sub-mirror.

Infinity (∞) alignment adjustment

・ Replace the finder screen with the F6 A screen, and use the reference lens (J18010) to read its scale.

Standard: 0±2 scale

How to adjust

Make an adjustment by using the washers for prism box (#1180 A-L and #1181 A-L) .(ref. Fig. of Page A12)

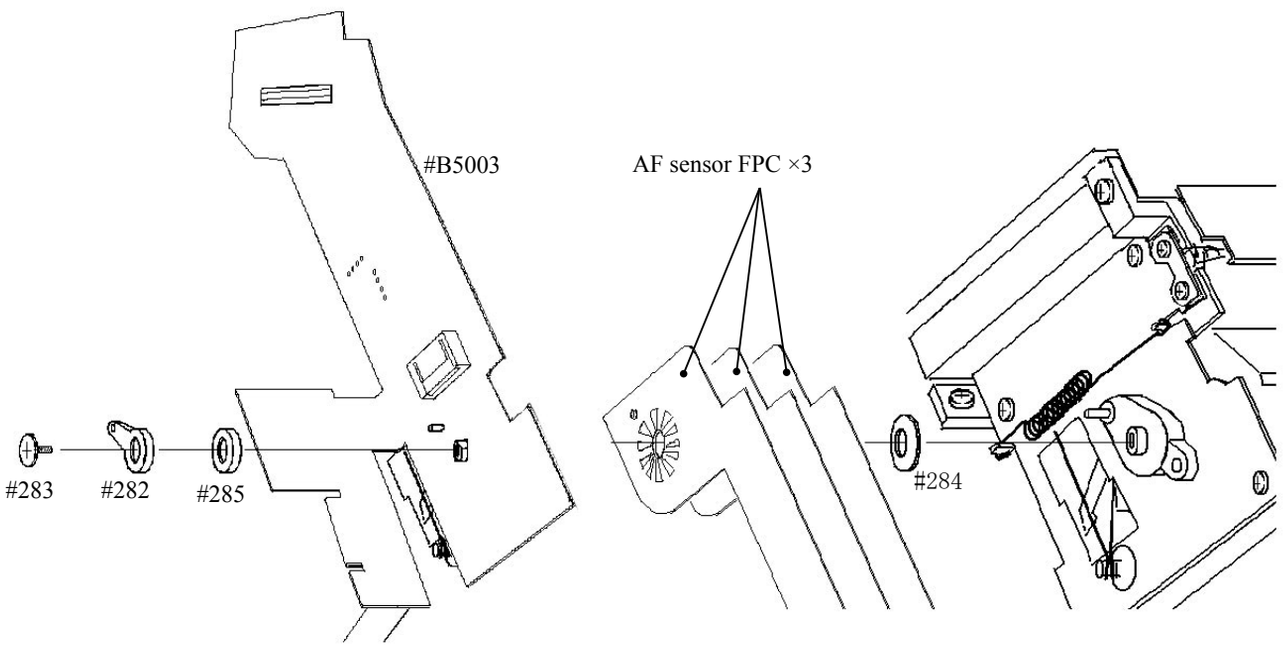
Note: Check the thickness of the washers by the micrometer.

Be sure to make this infinity (∞) alignment adjustment before parallax adjustment.

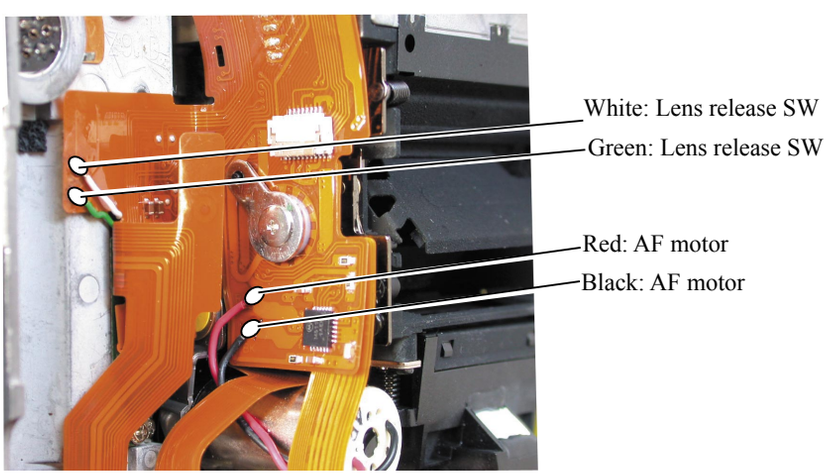
Front plate FPC unit, 10-pin FPC unit

Attach Front-FPC

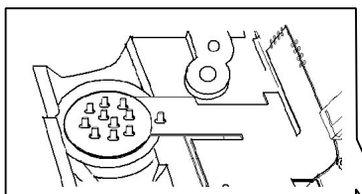
・ Attach the press-contact rubber (#284), 3 AF sensor FPCs, front plate FPC unit, press-contact rubber (#285), press-contact plate (#282) in this order, and fix them with the screw (#283).



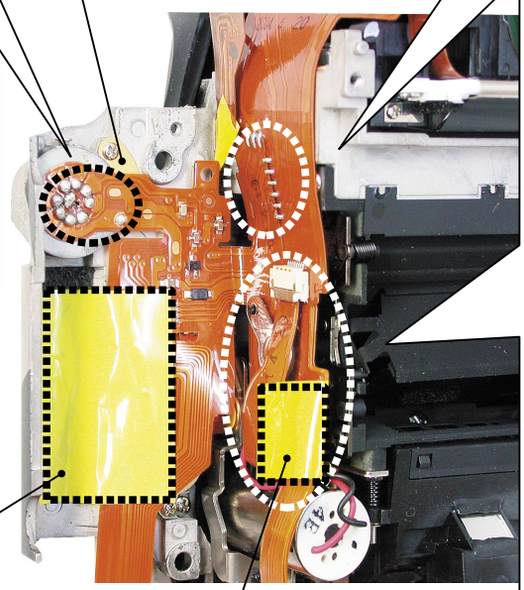
Solder Lens release SW, AF motor wires



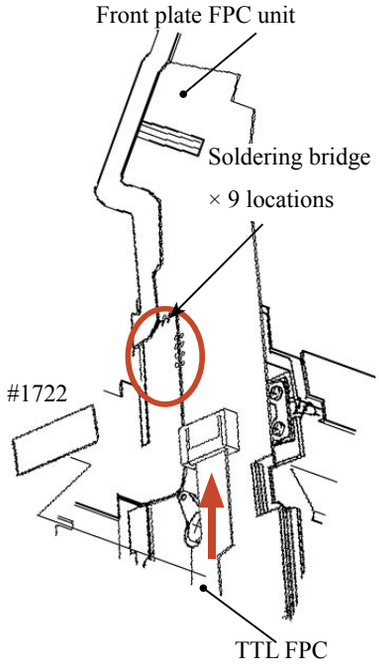
FPC, Soldering bridge, wiring



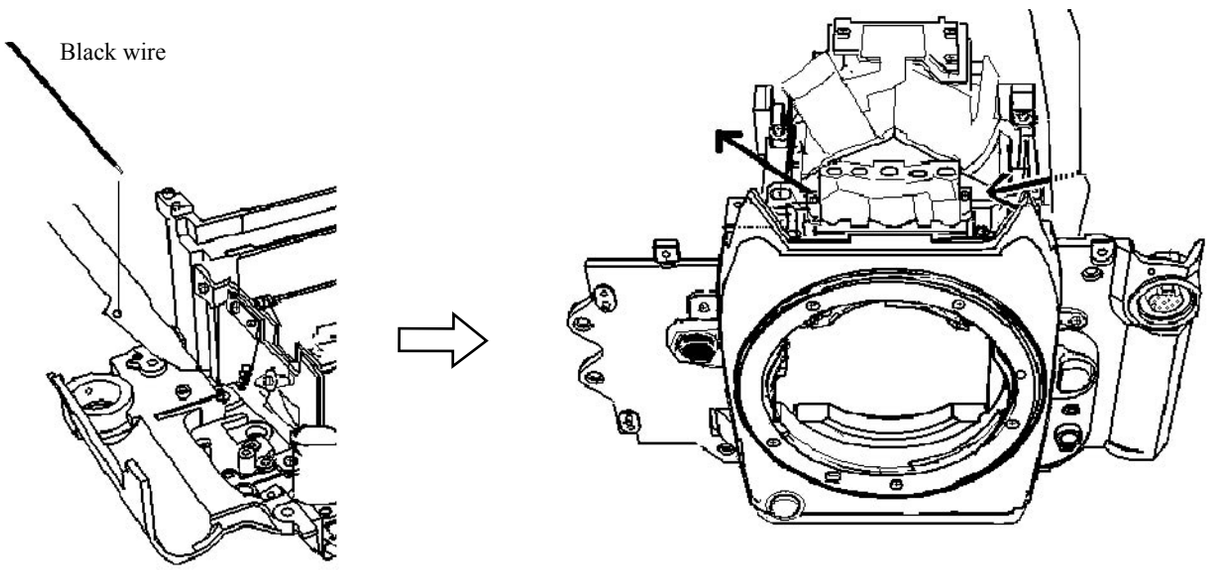
- Make soldering bridges of 10-pin FPC and lug plate (#1732).
- Make soldering bridges of 10-pin FPC and 10-pin connector.



- Attach the tape (#1738) to fix the FPC.



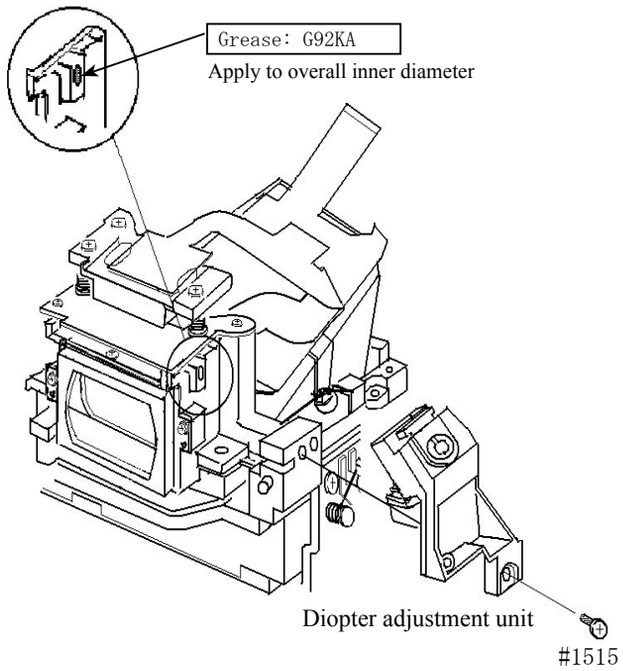
- Attach the TTL-FPC to the connector of the front plate FPC unit.
- Make soldering bridges of 10-pin FPC and front plate FPC unit.
- Attach the tape (#1722) to fix the TTL FPC and AF-FPC.



- Solder the black wire on the lens contac FPC in te direction of the above.
- Pass the black wire under the S.I unit.

Diopter adjustment unit

Holder B unit



- Align the groove of the holder B unit with the shaft of the diopter adjustment unit to assemble them. Fix them with the screw (#1515).

Apply grease on I-board

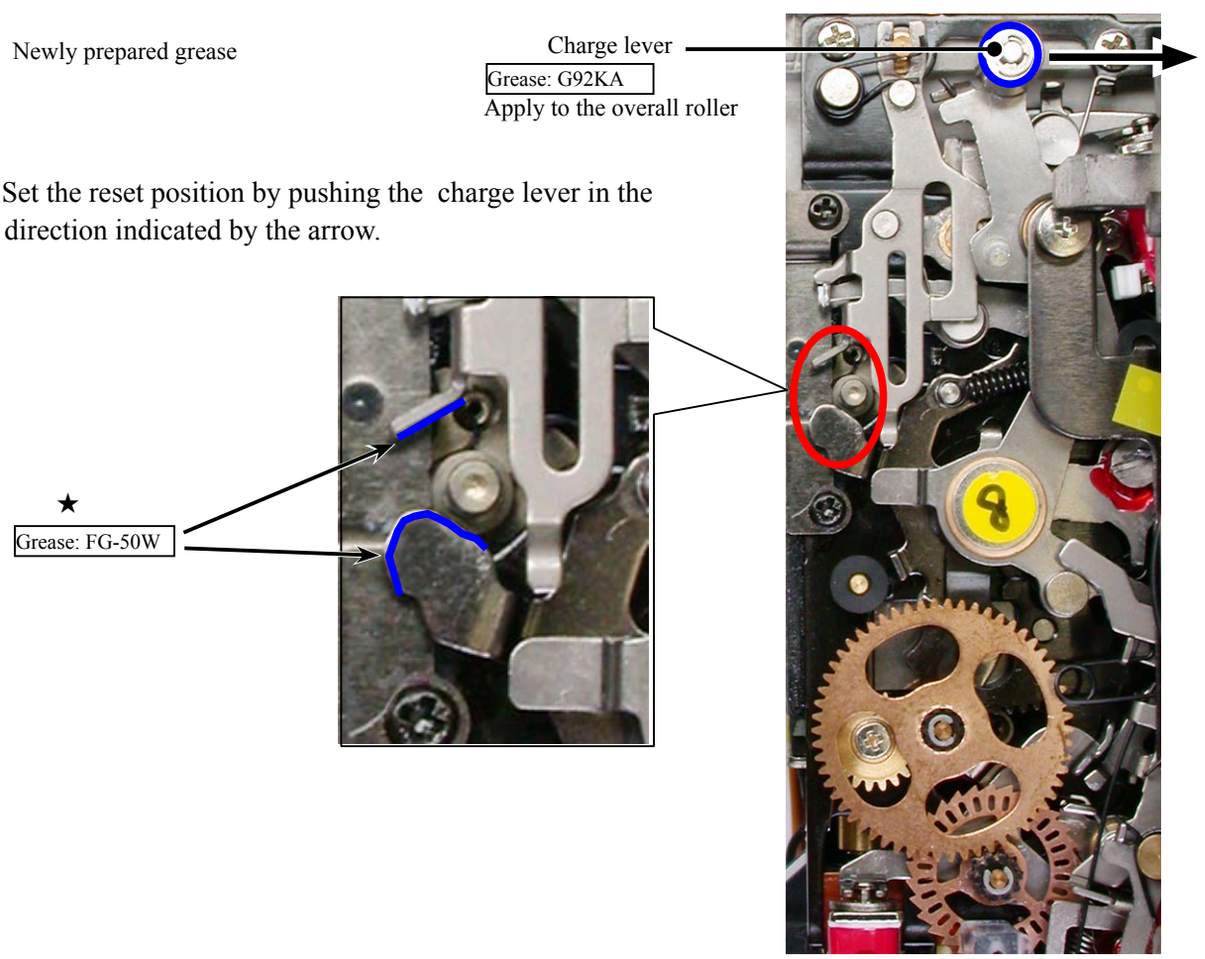
★ Newly prepared grease

Charge lever

Grease: G92KA

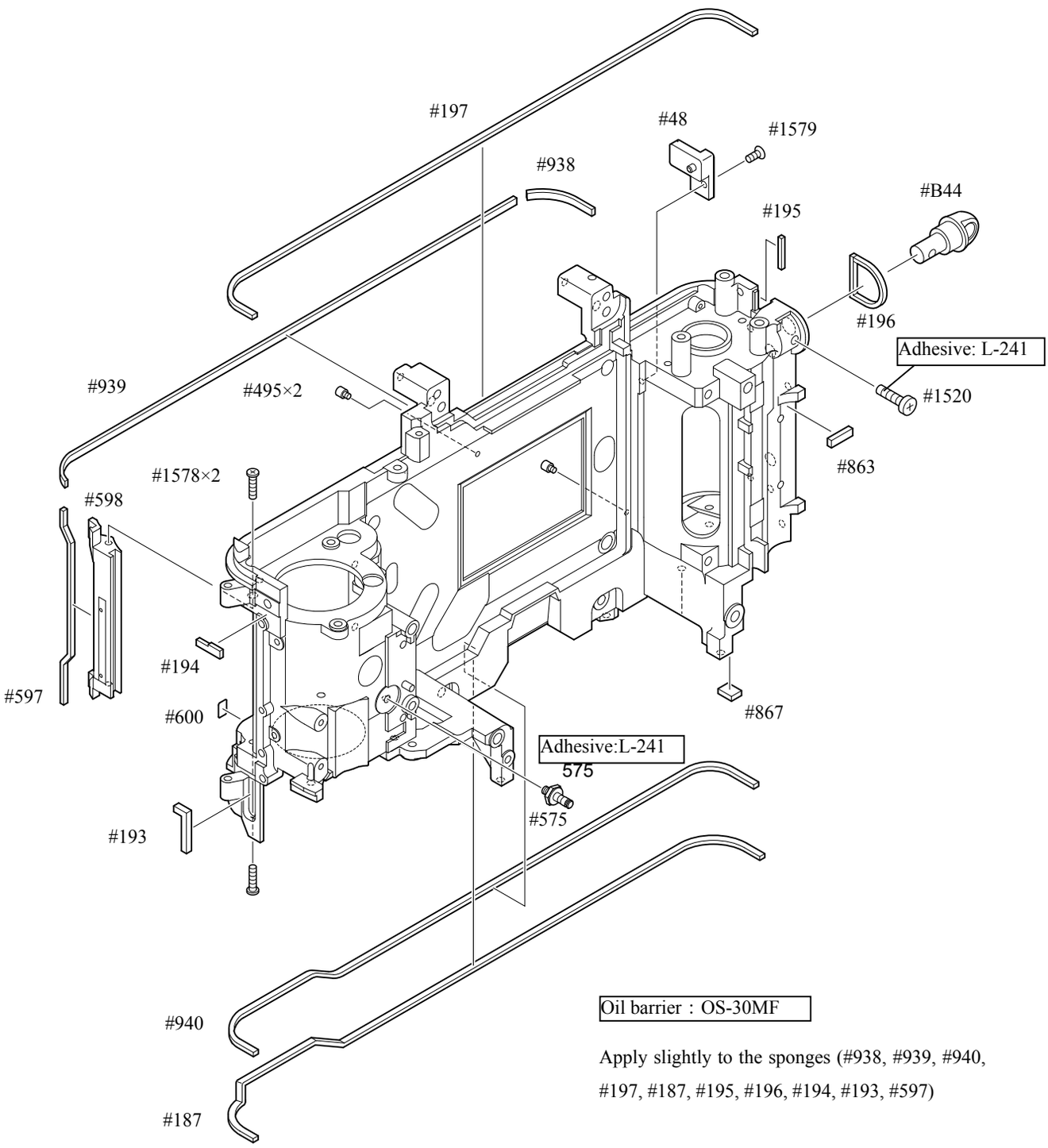
Apply to the overall roller

- Set the reset position by pushing the charge lever in the direction indicated by the arrow.

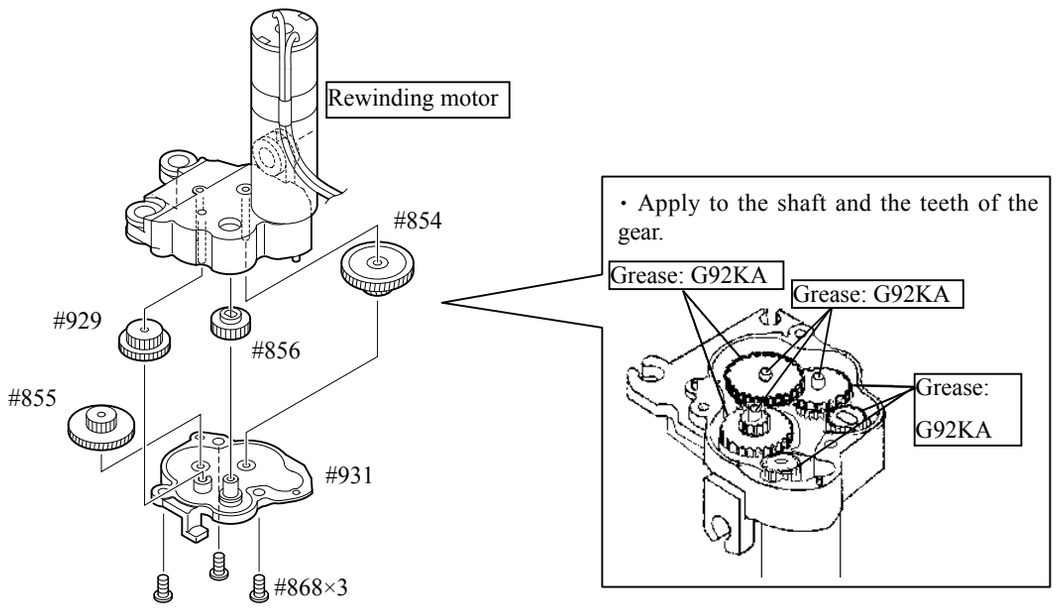


2. Rear body

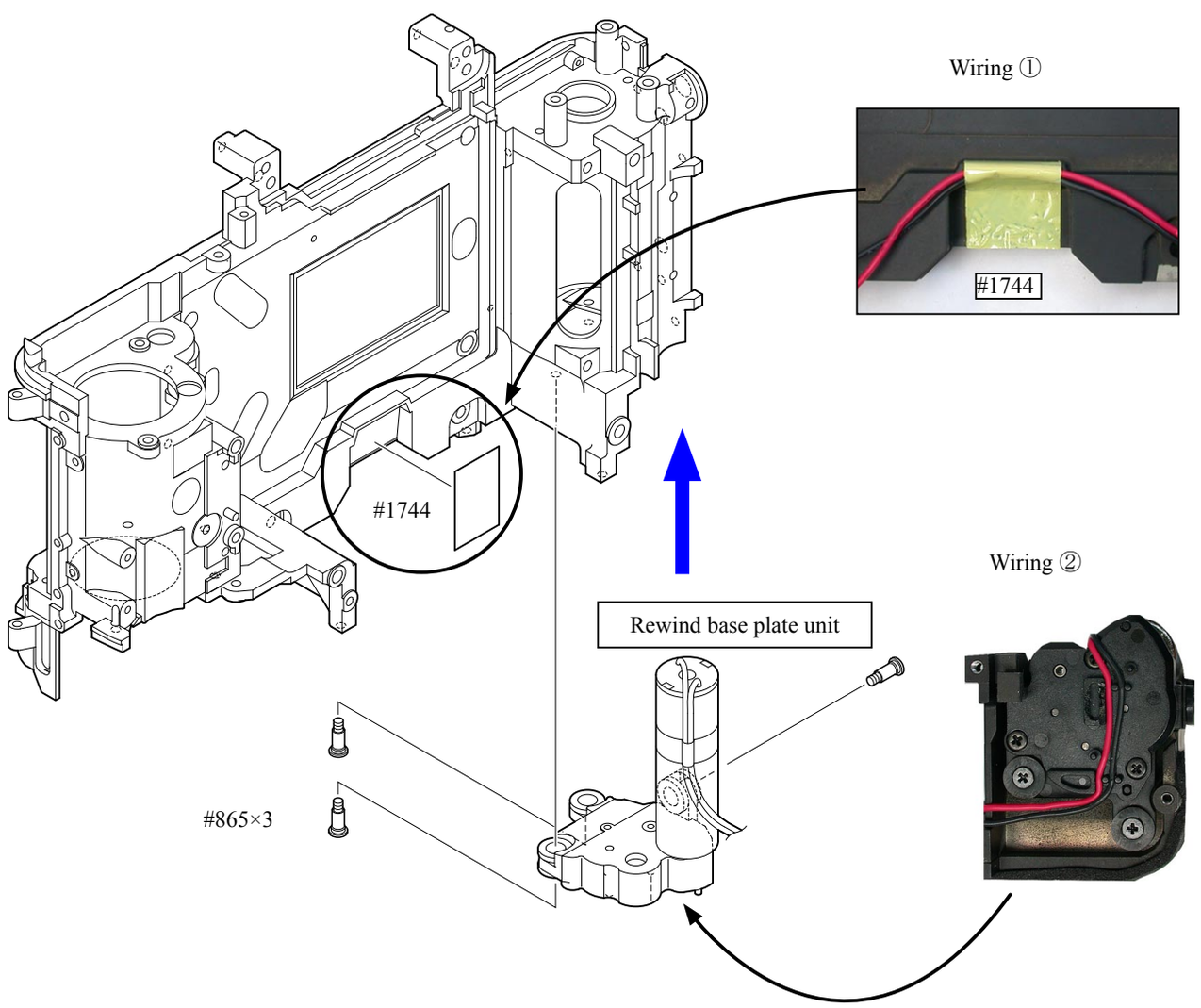
Rear body small parts



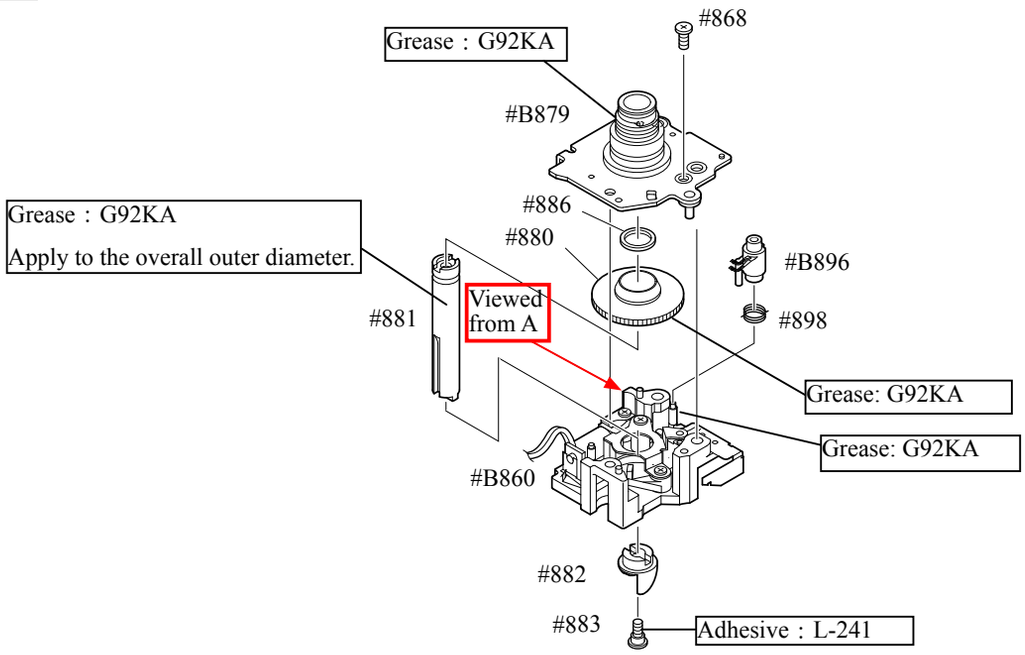
Rewind base plate unit



・Assemble the rewind base plate unit, and arrange wiring of ① and ② .



Reset base unit



Assemble Reset SW brush (#B896)

① Put the spring (#898) on the shaft B. (Fig.1)

② Put #B896 on the shaft B so that the spring surely fits in the two-pronged part of #B896. Then while holding #B896 to prevent the spring from coming off, drop and fit the C part of #B896 into the groove of the reset base plate. (Fig.2)

＊ Note: When completing assembling the reset base unit, attach the reset-Mg.

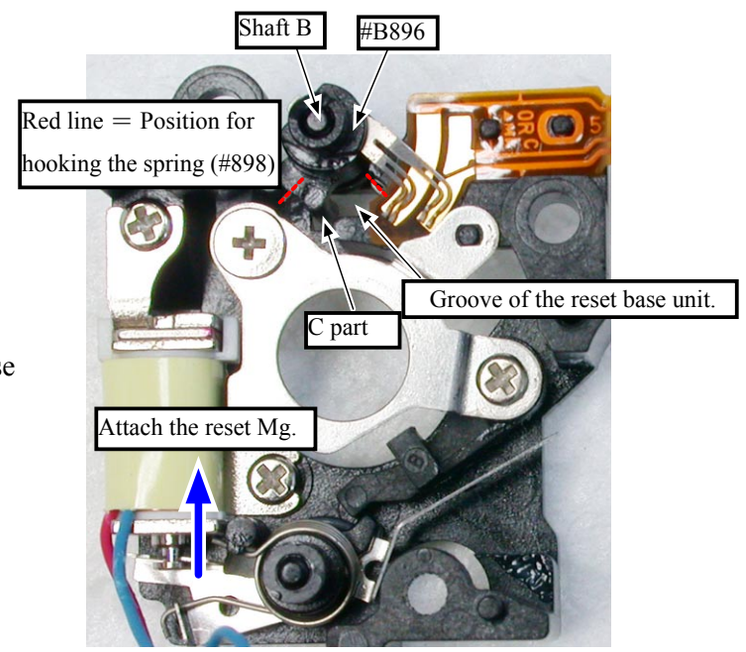


Fig.1

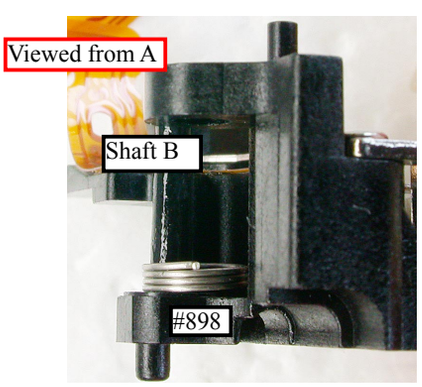
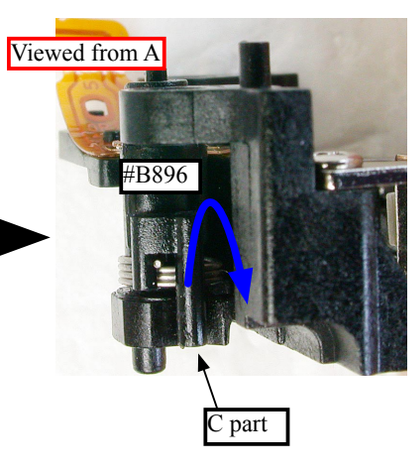
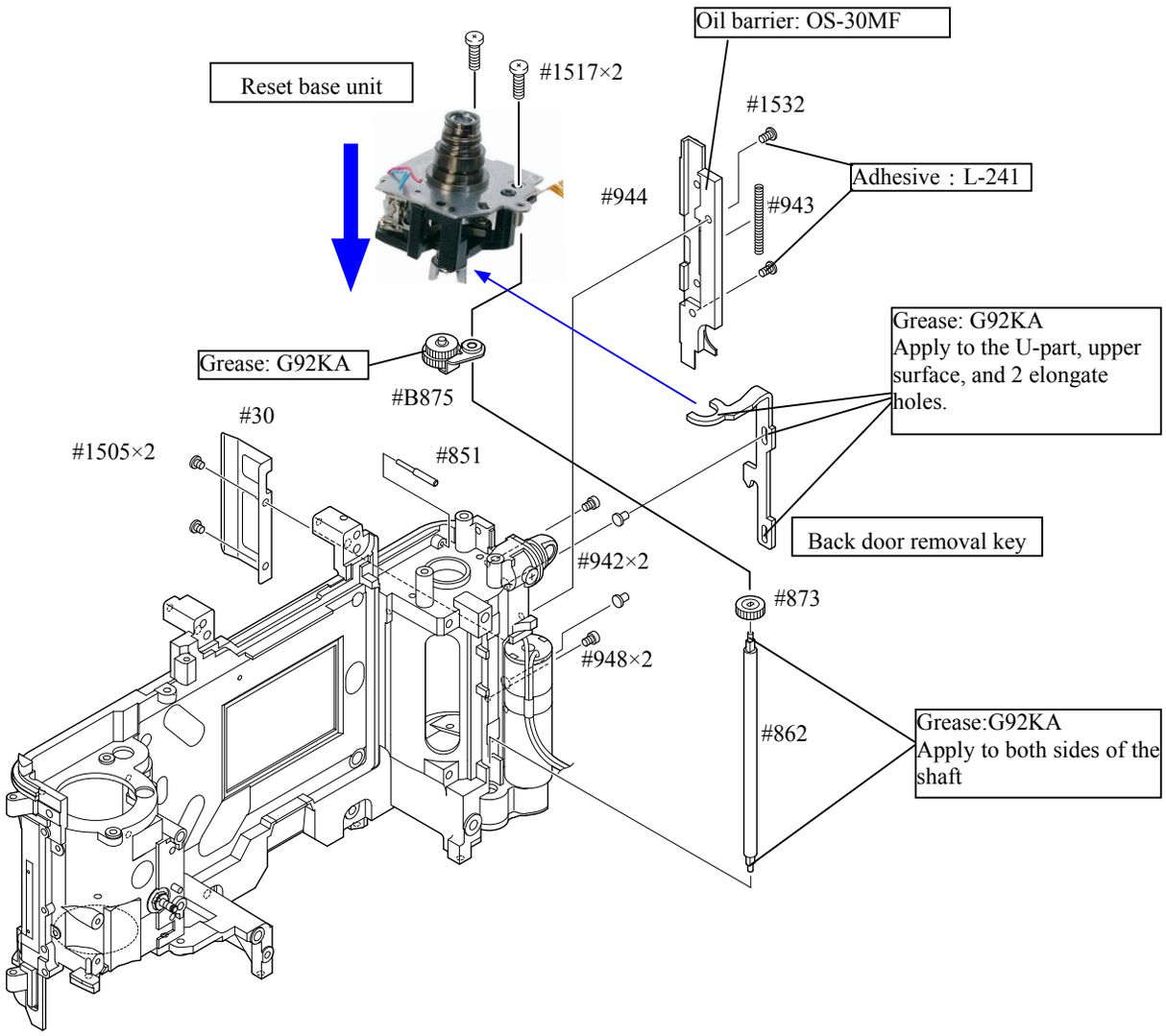


Fig.2



Assemble Reset base unit/Back door removal key



Check points after assembling Reset base unit

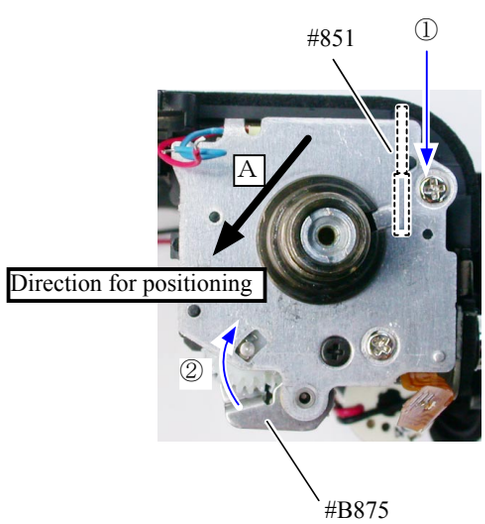
・Assemble the reset base unit by pulling it toward the direction of the arrow A for positioning.

・After assembling the reset base unit,

① Check that after pushing the back door SW pin (#851) toward the direction, it gets back to the original position.

② Check that after pushing the planetary gear unit (#B875) toward the direction, it gets back to the original position.

＊ The reset-Mg mentioned on the previous page must remain attached.



DX contact unit/Connecting lever unit/Film detection SW unit/EL roller block unit

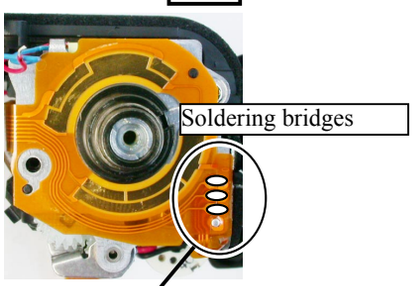
・Assemble the DX contact unit with 2 screws (#1514), and make soldering bridges. (Fig.1)

・Assemble the connecting lever unit and the spring (#576), and clip them together with #1604. Then hook the spring (#576). (Fig.2)

・Assemble the film detection SW unit with the screw (#1510).

・Assemble the EL roller block unit with 2 screws (#1508).

Fig.1



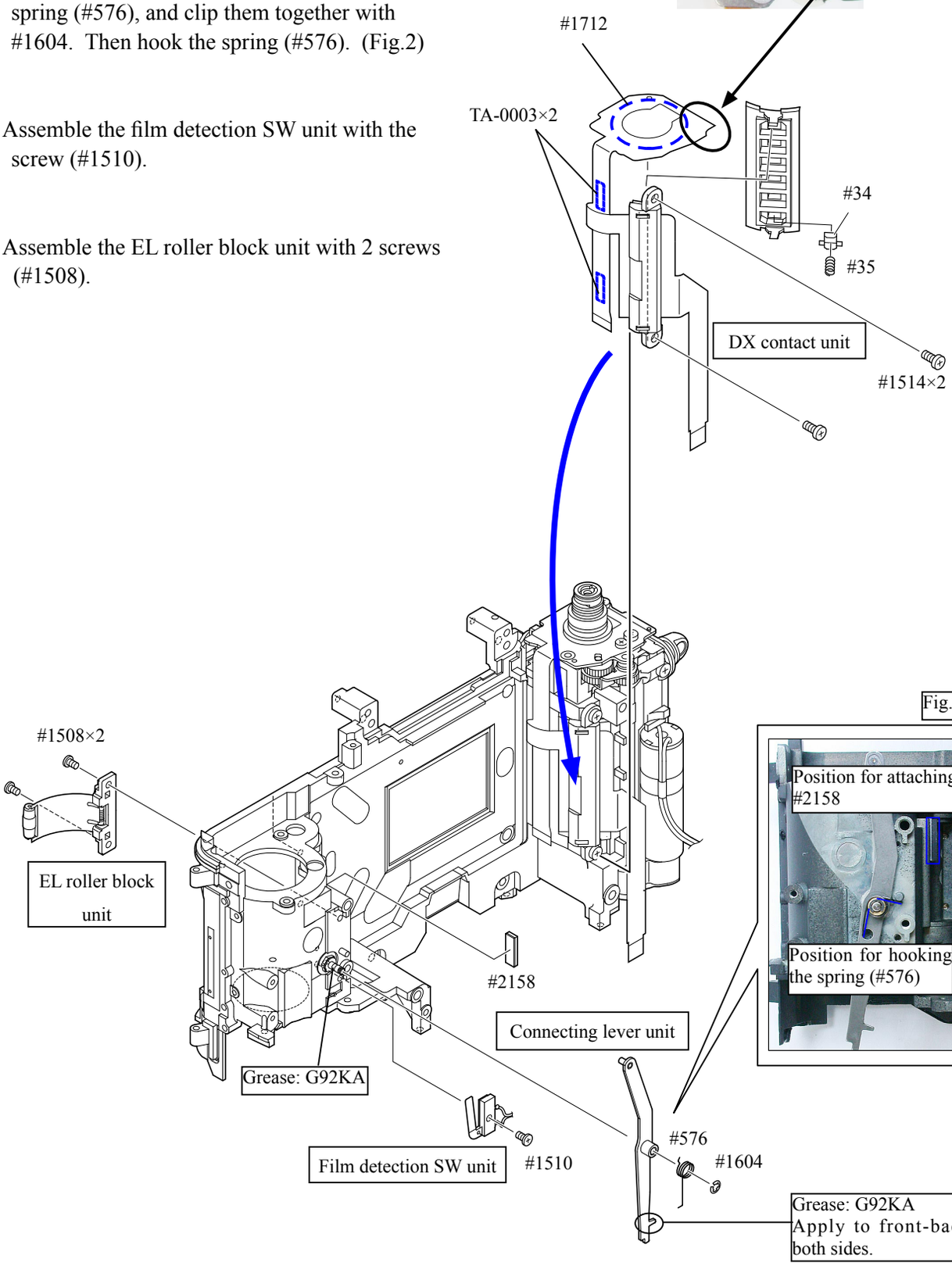
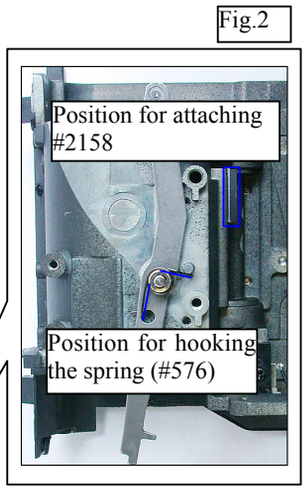
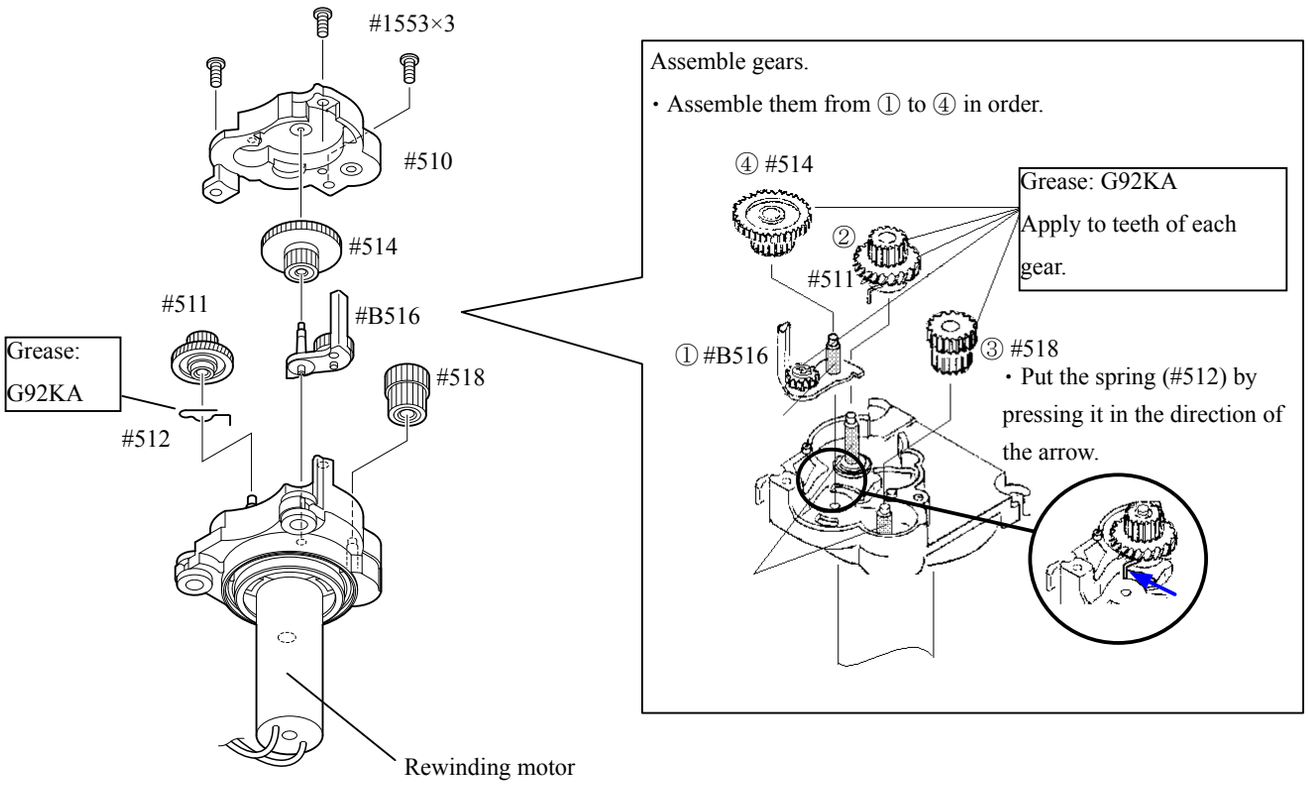


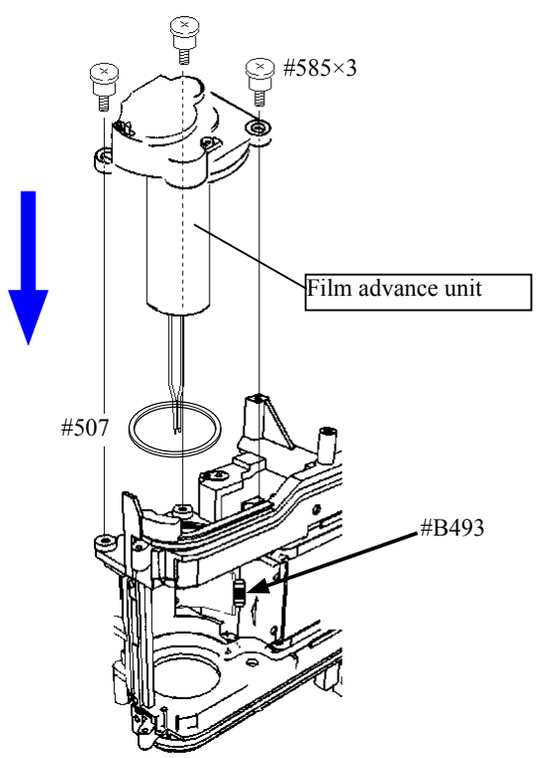
Fig.2



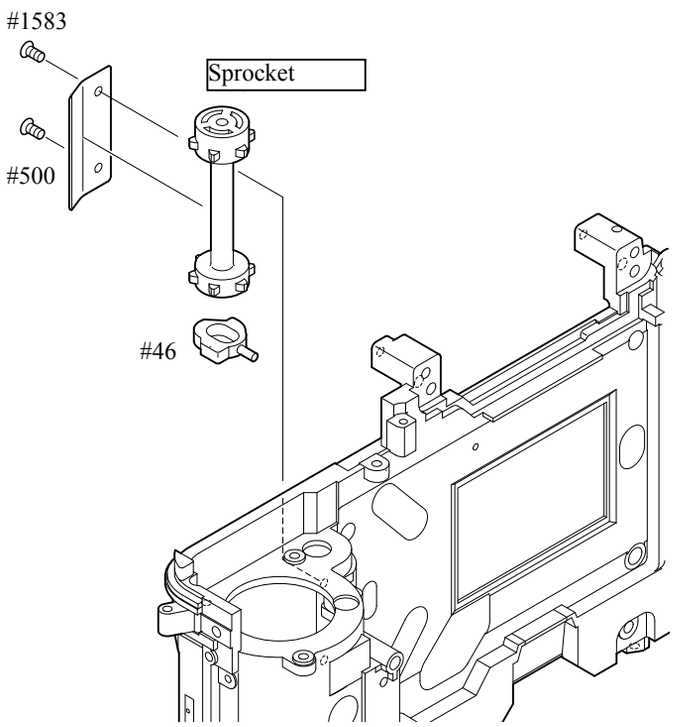
Film advance unit

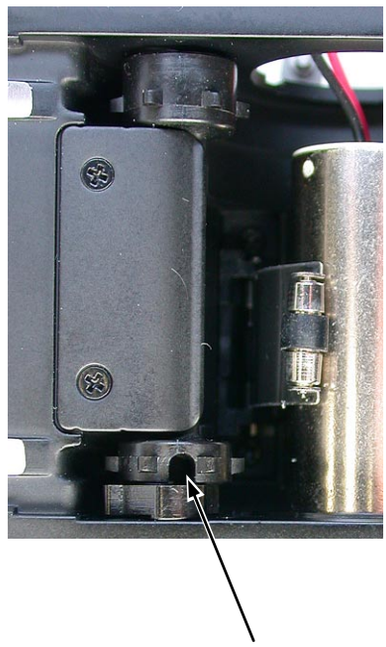


・Assemble the film advance unit, while maintaining the EL roller block unit (#B493) in position.



Sprocket



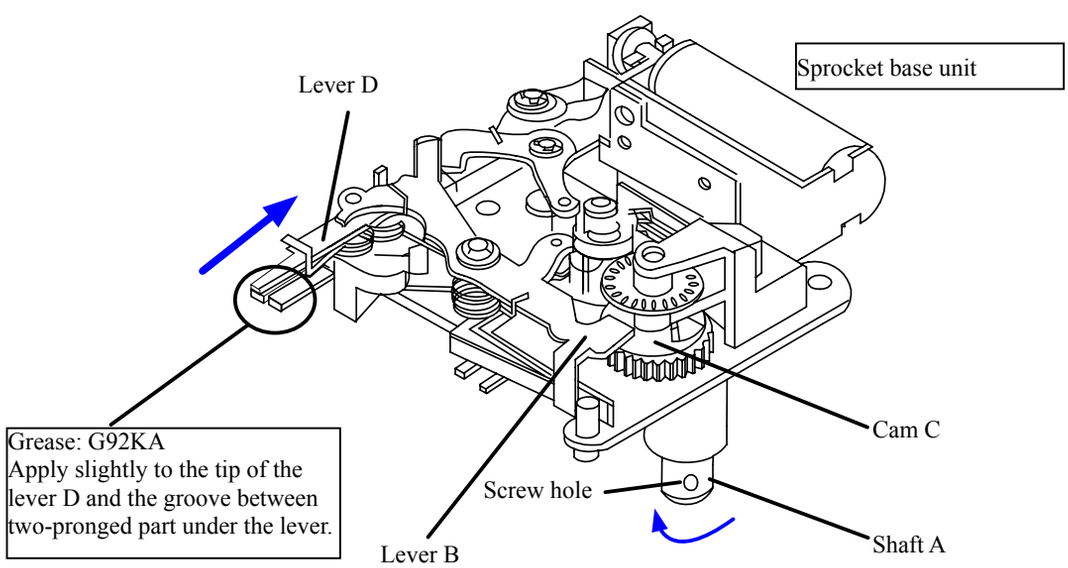


・Position the notch of the sprocket (#533) as shown above.

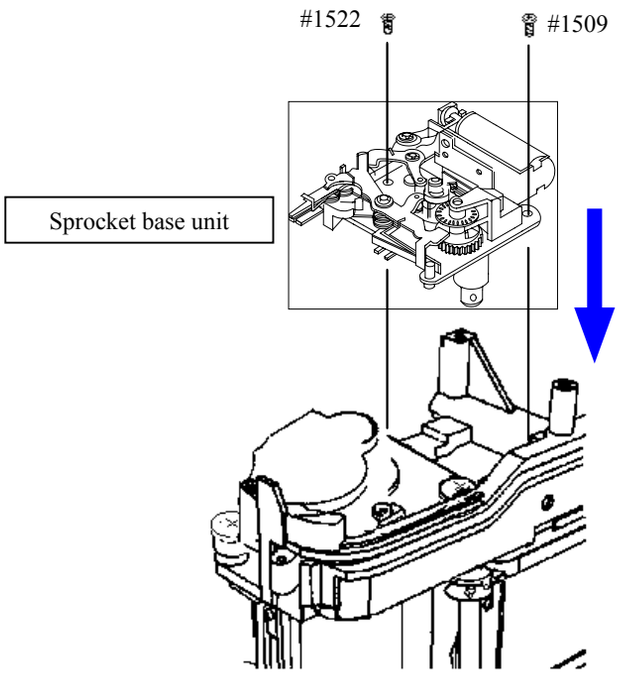
Sprocket base unit

Back the sprocket base unit to the reset position

・Turn the shaft A in the direction of the arrow so that the lever B is locked (fit) into the cam C.
Ref.: To release the lock, press the lever D in the direction indiecated by the arrow.
・Keep the position of the screw hole of the shaft A so that the hole can be seen as shown below.
(The hole comes to the below position once in 3 turns.)

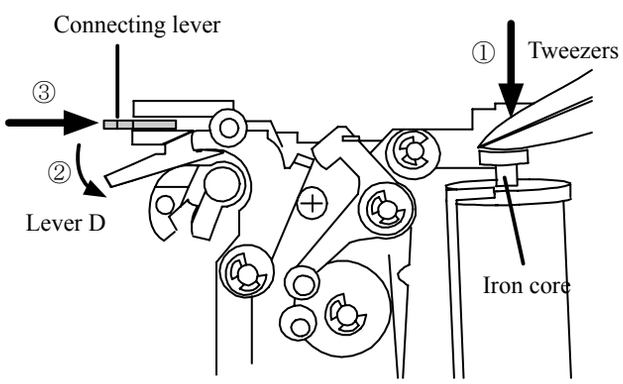


Assemble Sprocket base unit

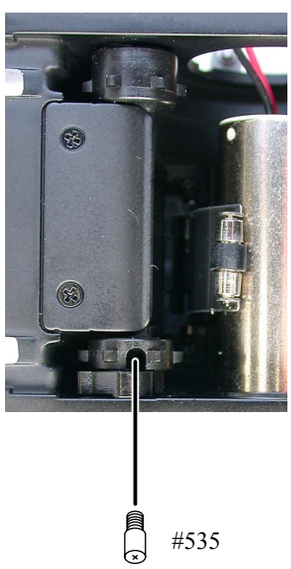


Operation check of Connecting lever

・Check that when pressing the iron core with tweezers, etc, in the direction of ① , the lever D can be released to move in the direction of ② , and when pressing the connecting lever in the directio of ③ , this does not interfere with the lever D.



・Attach the screw (#535).



Shutter

・Check that the shutter is in the charged position. Ref. Fig.1
(i.e. The grey curtain can be seen a little, on the approx. 1/5 lower part of the aperture face where pictures are reflected.)

Operation check of Shutter
① Charge → ② Rear curtain UP → ③ Front curtain RELEASE
→ ④ Rear curtain RELEASE

＊ Note: Do not check operations plural times. Otherwise, the lever may be deformed or the springs come off.
After the operation check, be sure to go back to the charged position of ① .

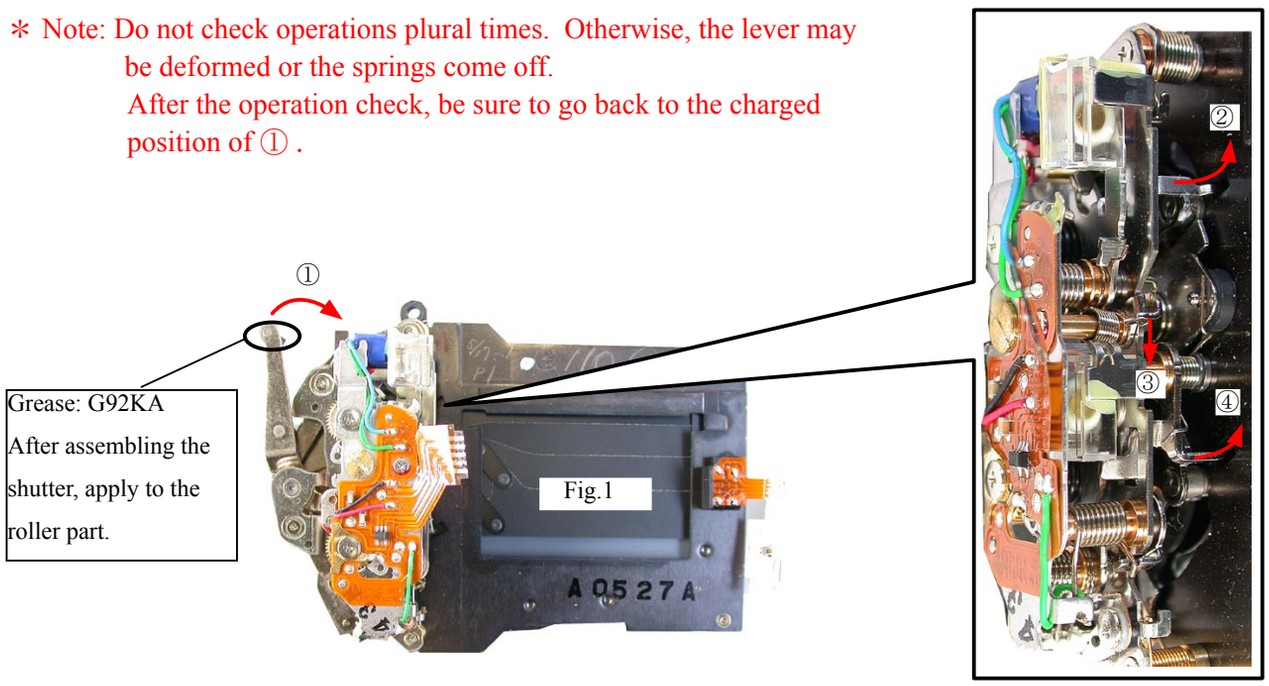
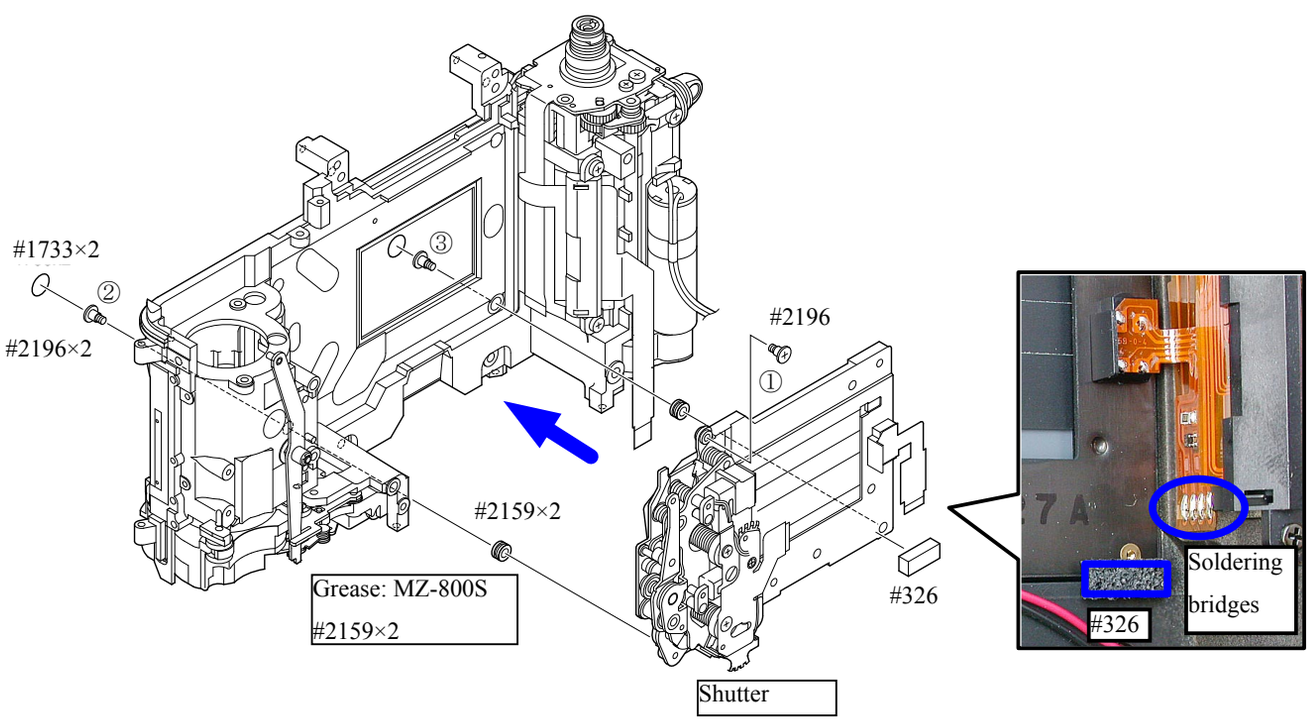
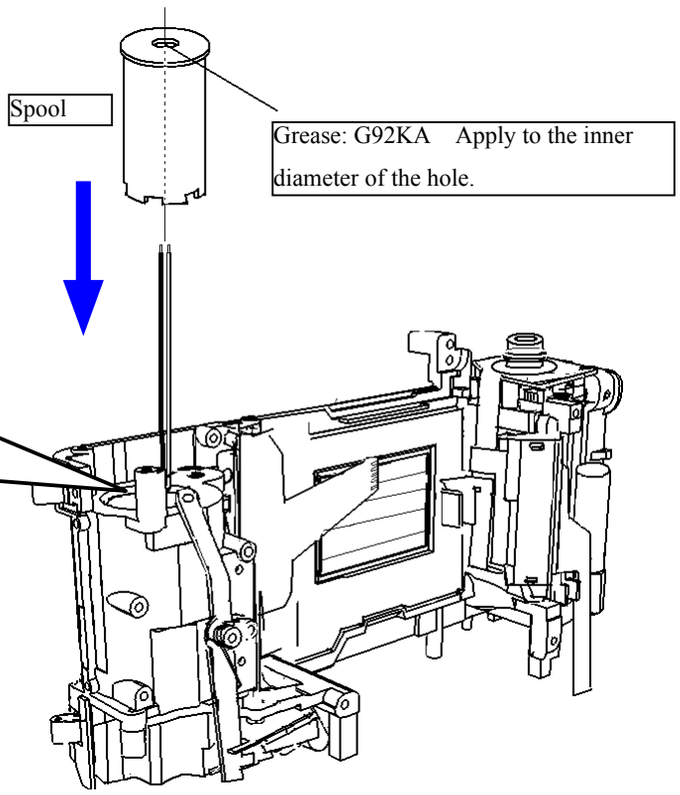


Fig.1

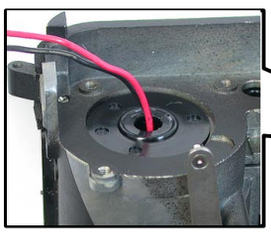
・Tighten the screws for attaching the shutter in the following order.
Attach ① temporarily. (Stop turning before screwing completely.)
→ Attach ② and ③ . → Attach ① completely.
・Attach 2 cover plates (#1733). Make soldering bridges and attach the sponge (#326).



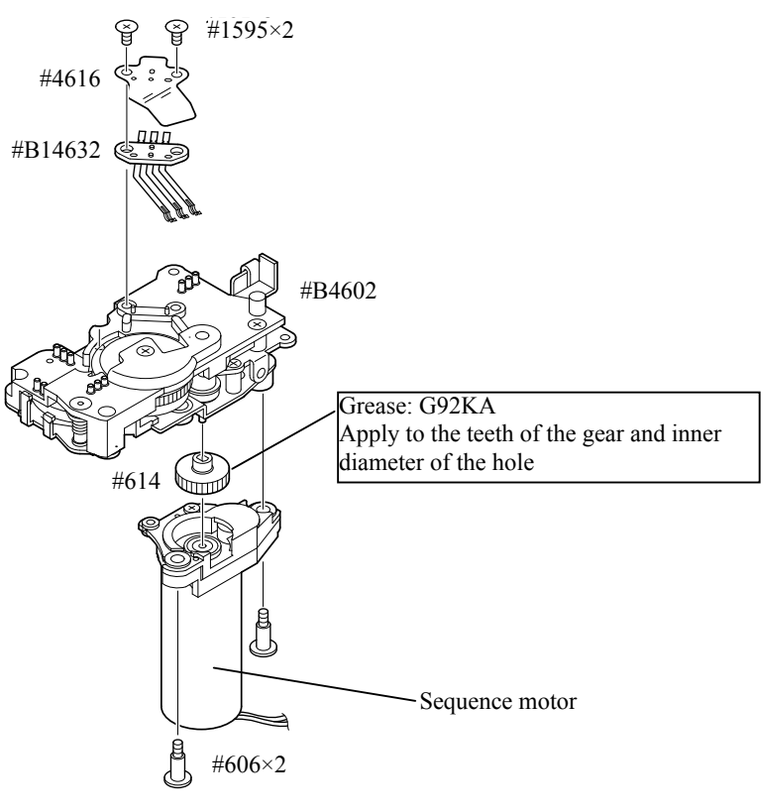
Spool



・The below is the spool assembled correctly.
The spool is positioned lower than the diecast.



Upper/Lower base unit



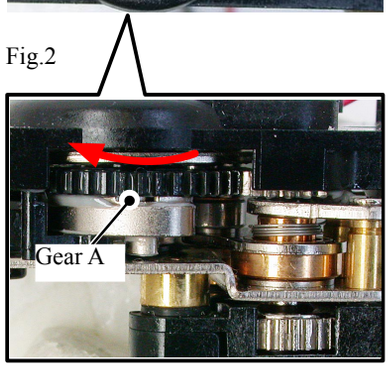
Assemble Upper/Lower base unit

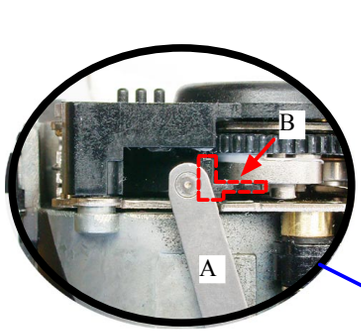
Fig.1

Set the upper/lower base unit to the reset position

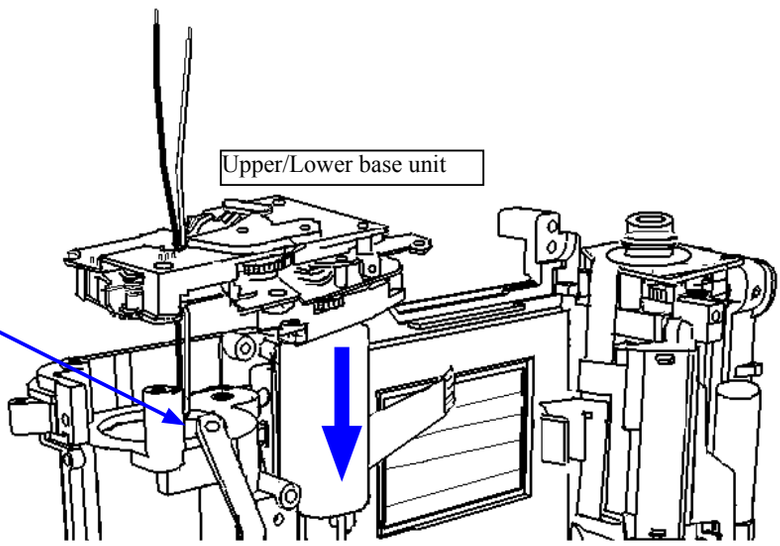
・Turn the gear A of Fig.2 in the direction indicated by the arrow so that all the 3 charge SW brushes are on the gold pattern as shown in Fig.1.

Fig.2

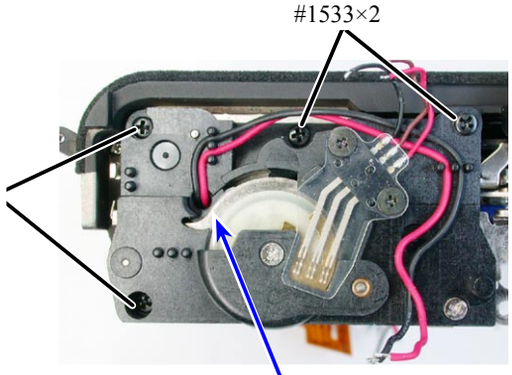




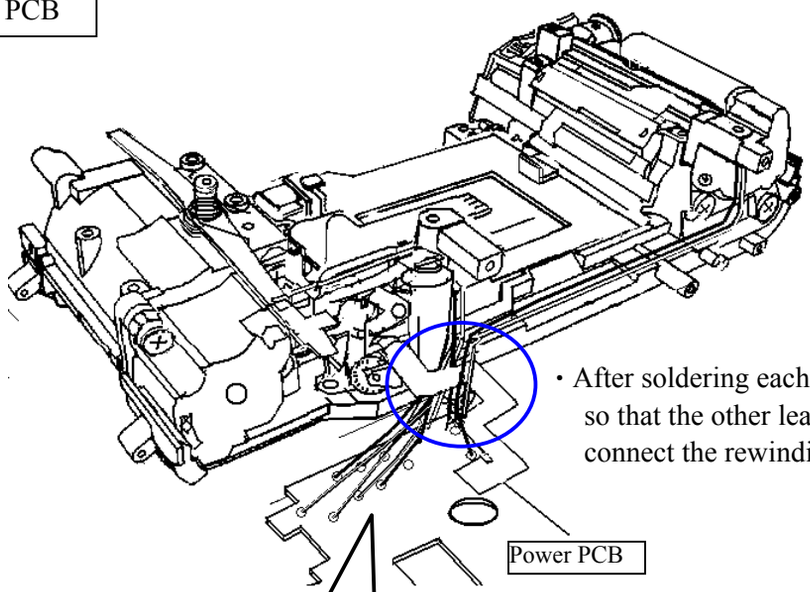
The lever A must lie to the left of B.



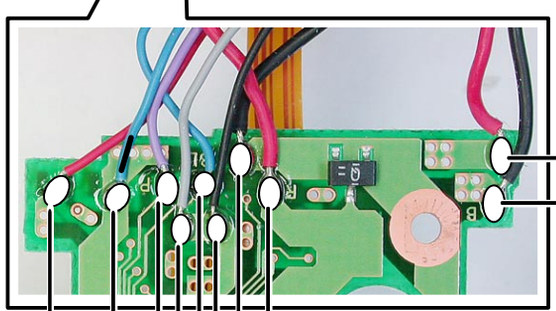
・Attach 4 screws (#1533) and arrange 2 lead wires (RED/BLACK).



Power PCB



・After soldering each lead wire, arrange wires so that the other lead wires than the wires that connect the rewinding motor are under the FPC.



RED: Rewinding motor

BLACK: Rewinding motor

RED: Sequence motor

BLACK: Sequence motor

BLACK: Film detection SW

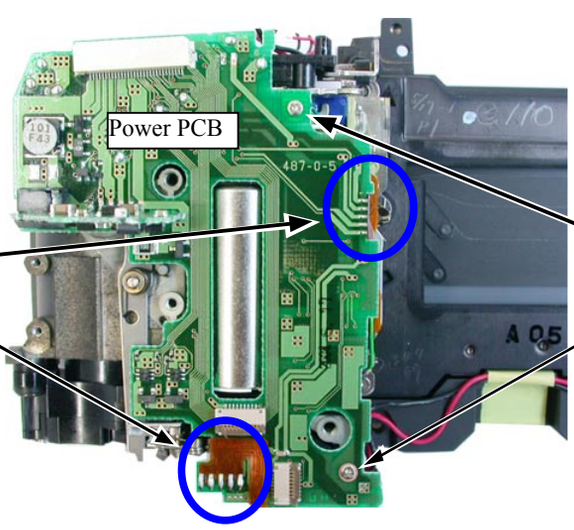
BLUE: Film detection SW

GRAY: Sprocket SW

PURPLE: Sprocket SW

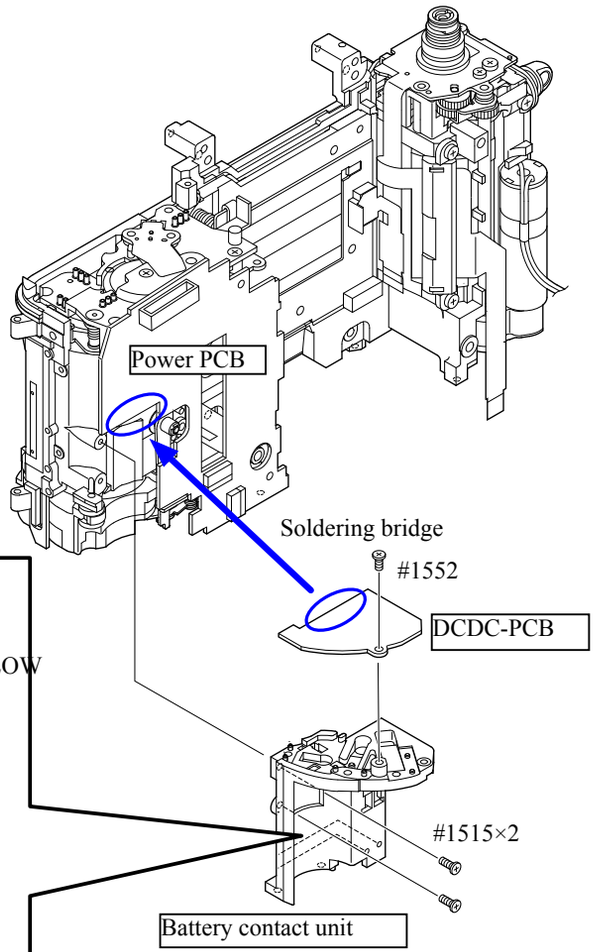
YELLOW (Initially ＝ BLUE+Black Paint)：Multi-Mg

YELLOW (Initially ＝ RED)：Multi-Mg

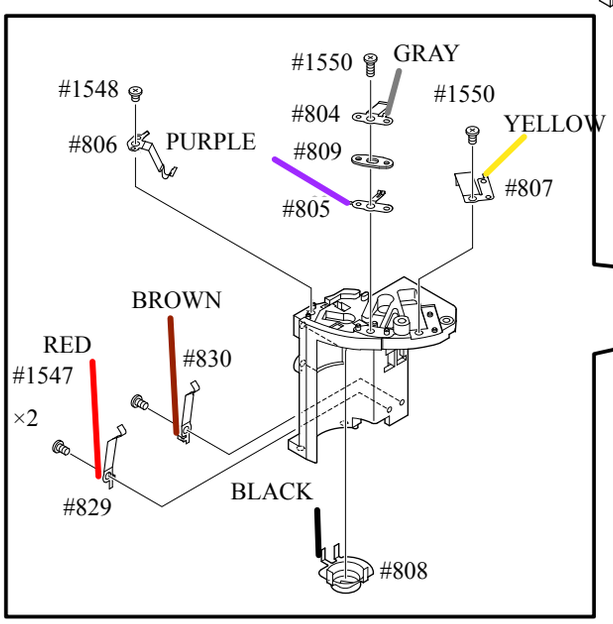


Battery contact unit/DCDC-PCB

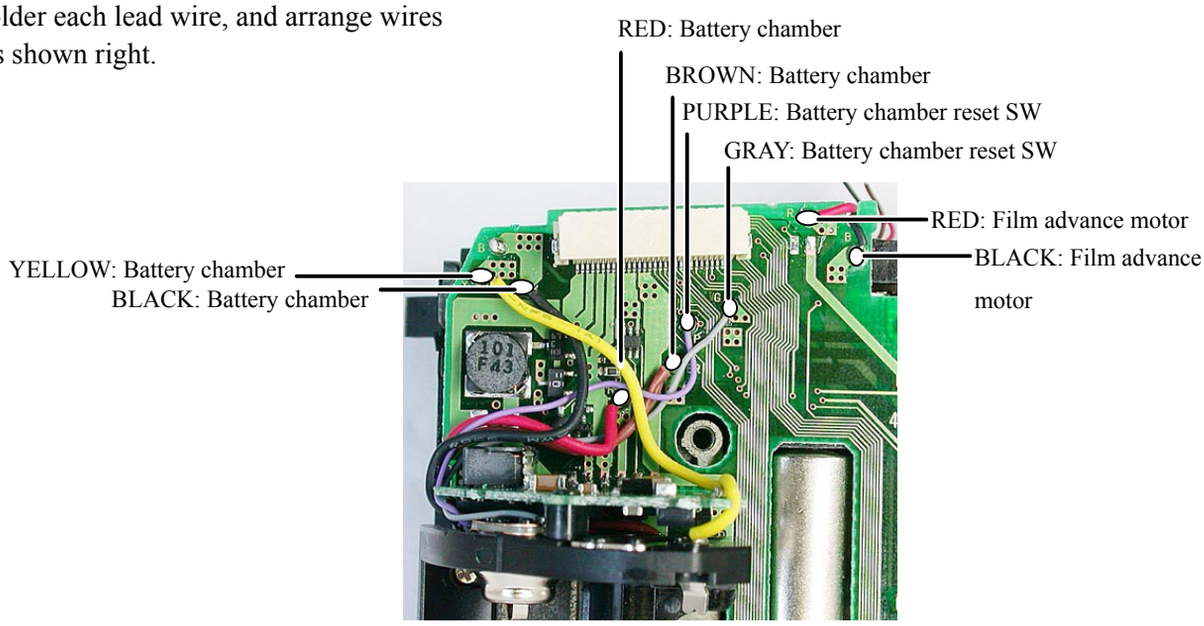
- Attach the battery contact unit with 2 screws (#1515).
- Attach the DCDC-PCB with the screw (#1552).
- Make soldering bridge of DCDC-PCB and the power PCB.



Assemble Battery contact unit

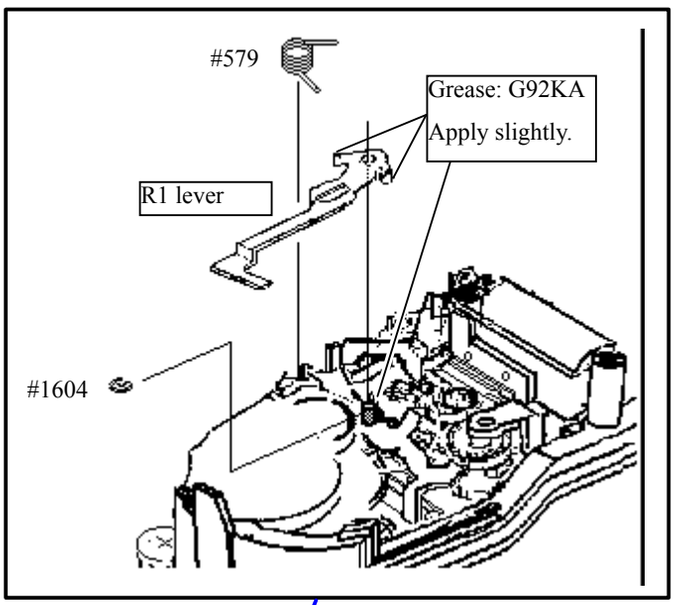


- Solder each lead wire, and arrange wires as shown right.

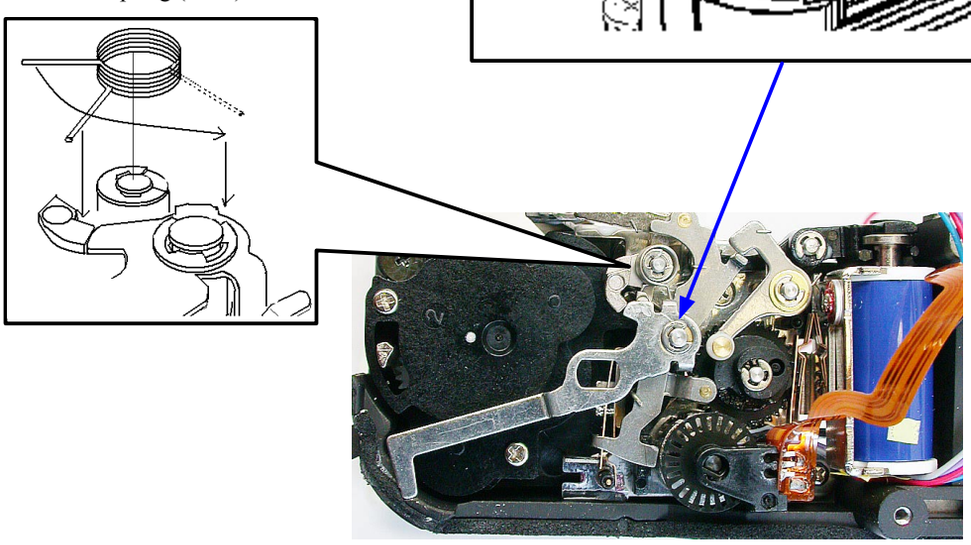


R1 lever

・Install the R1 lever and clip it with #1604. Hook the spring (#579).



Hook the spring (#579)

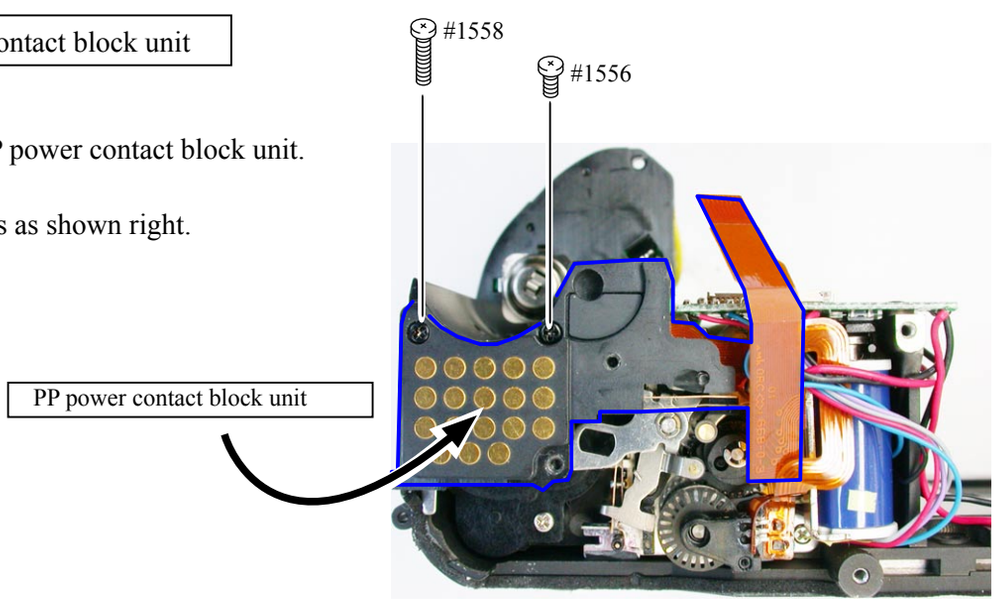


Bottom of Rear body

PP power contact block unit

・Mount the PP power contact block unit.

・Arrange wires as shown right.



Bottom of Rear body

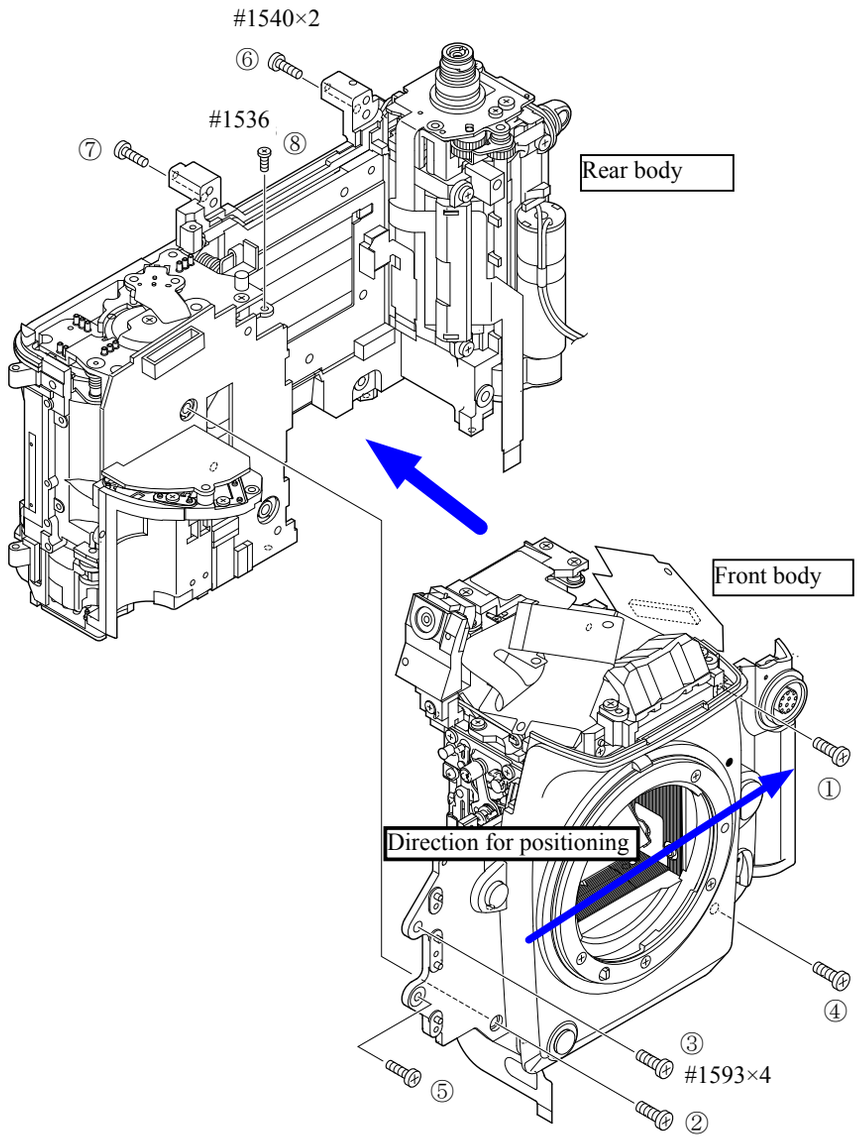
3. Mount Front body on Rear body

Mount Front body on Rear body

・Check that each wire and FPC are NOT pinched in.

・Position the front plate by pulling in the direction of film-rewinding.

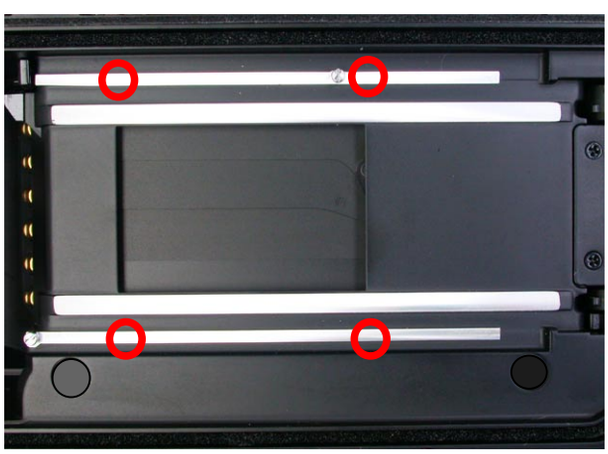
・Attach the screws from ① to ⑧ in order.



Body back inspection and adjustment

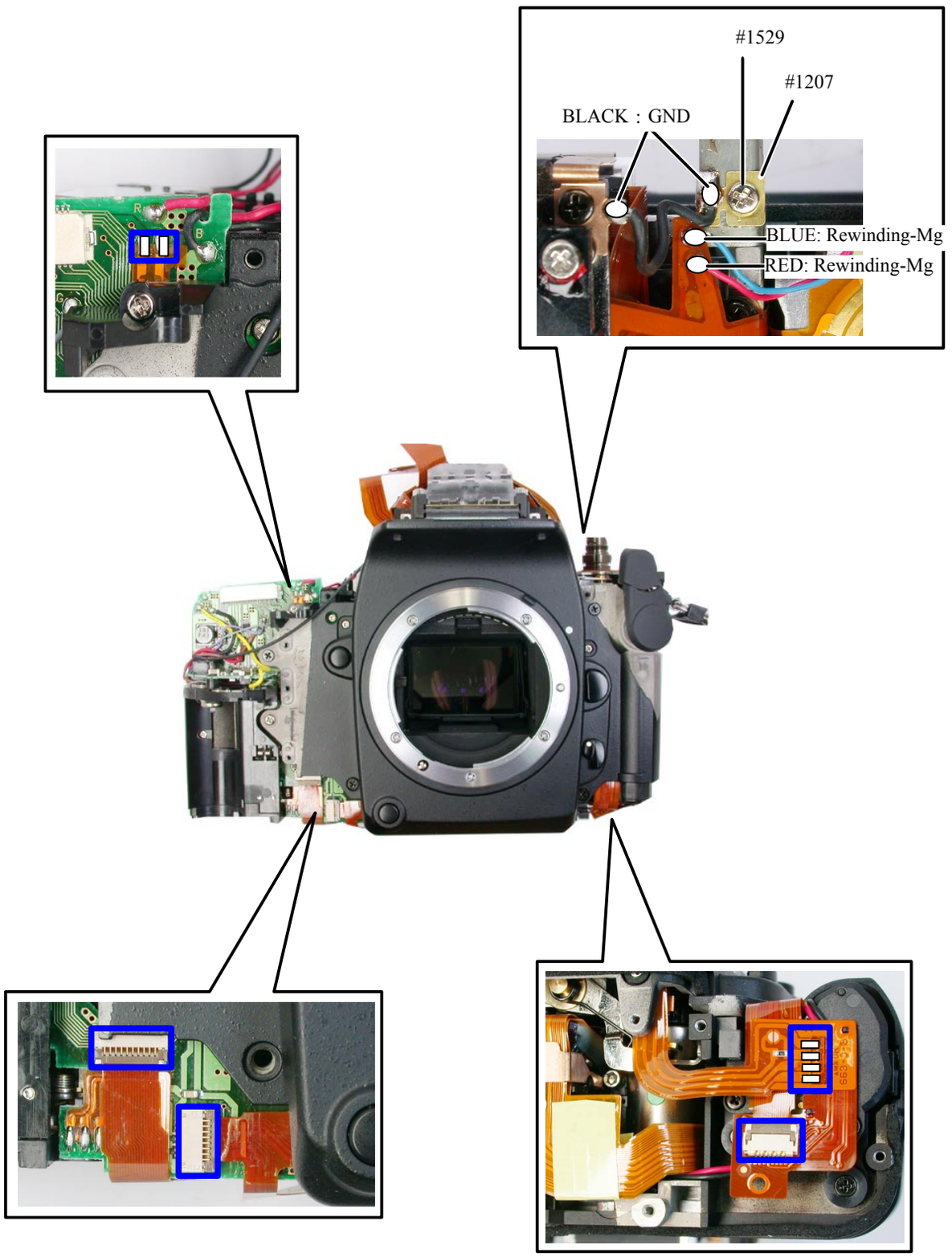
・Measure the distance from the bayonet surface to the outer rail.
○-mark ＝ Measuring points
Standard:46.67±0.02mm/
Parallelism: 0.02mm or less

・In case it is out of standard, adjust by putting washers between the front body and rear body.



・Solder each lead wire, make soldering bridges, and connect the connectors.

・Attach the lug plate (#1207) with the screw (#1529).



Main FPC

Assemble Main FPC

① Connect the connector A and B. Attach the main FPC with 3 screws. (Fig.1)

② Connect the connector C and D. (Fig.2) Attach the insulating sheet (#5034)(Fig.1) with the both-sided adhesive tape (#1717).

③ Solder 3 lead wires. (Fig.3)

④ Solder 1 lead wire. (Fig.4)

Fig.1

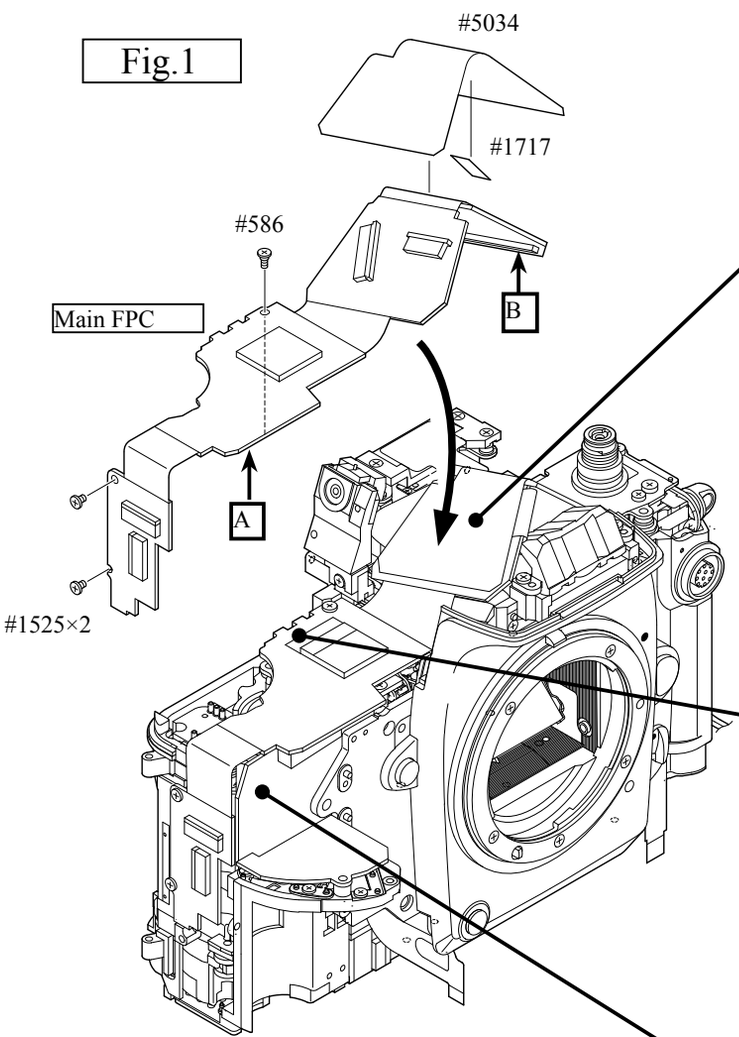


Fig.2

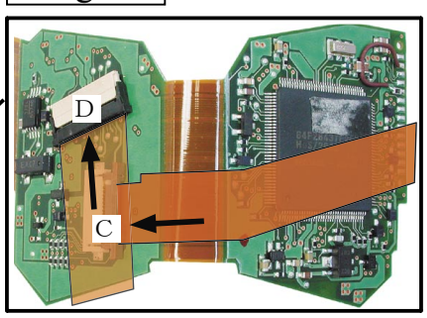


Fig.3

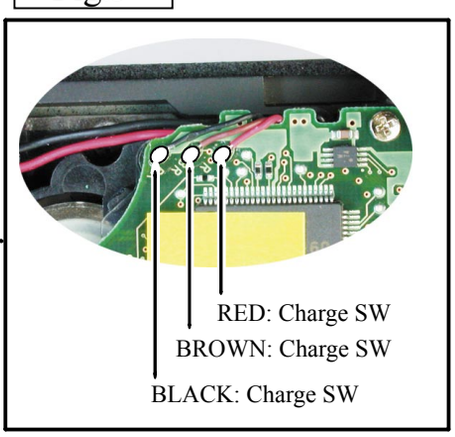
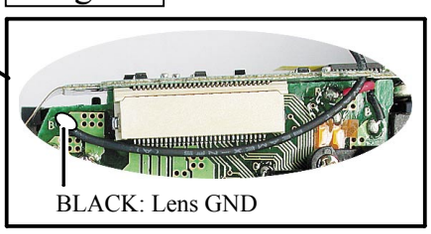


Fig.4

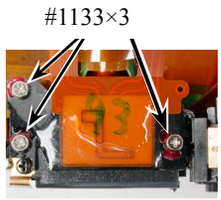


AE CCD alignment inspection and adjustment

When the penta-FPC unit or the prism box is disassembled or replaced, be sure to inspect and adjust based on the following.

Preparation

① Give 3 screws (#1133) about 9 turns to tighten them.



② Remove the finder screen. Insert the AE sensor positioning tool (J15413) instead.

J15413

③ Attach the bottom cover and grip temporarily with screws.

④ Connect the top cover and the main FPC with the relay FPC A.

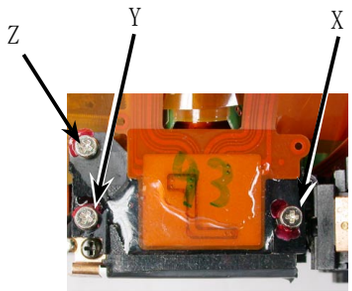
Note: Do NEVER insert the FPC twisted! The camera may be troubled. Refer to "Tool" section for how to connect them.

⑤ Supply power for camera, and connect the PC.

Procedure for Inspection/Adjustment

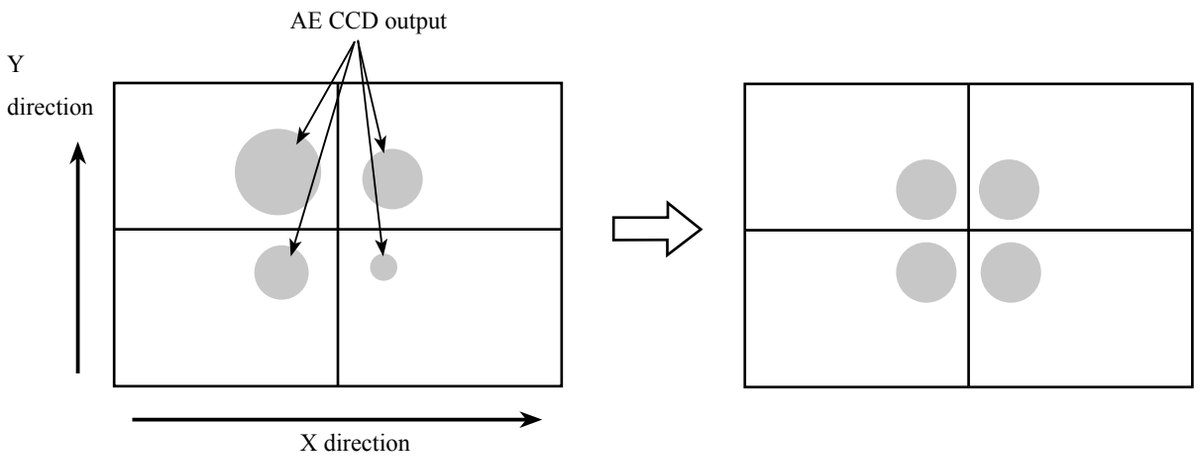
① Start the adjustment software (J18375). Select "CCD ALIGNMENT INSPECTION AND ADJUSTMENT" from the "INSPECTION AND ADJUSTMENT FOR AE CCD POSITION", and make inspections and adjustment by following the instructions shown on the PC.

Note: When measuring, darken the AE CCD unit by covering it with a black cloth, etc.

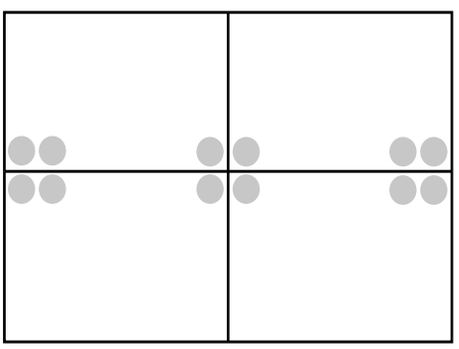


・Turn the screw of "X" or "Y", and make an adjustment until the indication on PC falls under the standard.

・"Z" screw is the reference screw, so it is better not to turn it. However, if there is no alternative, turn it for the adjustment.



② Select "SLANT INSPECTION", and check the slant of the AE CCD.



・This works only for the inspection, not for the adjustment.
In case the result is out of standard, perform "CCD ALIGNMENT INSPECTION AND ADJUSTMENT" again. However, if it is still out of standard, replace the penta-FPC unit.

③ After the adjustment and inspction/adjustment, fix 3 screws with Screw lock (EDB0011).

＊ Note: If the adjustment is made, make the inspection again after mounting the top cover.

Parallax inspection and adjustment

Note: When the prism box unit is removed, be sure to make this adjustment.
Make this adjustment after adjusting the infinity alignment. Otherwise, the parallax inspection/ adjustment will be necessary again.

Procedure

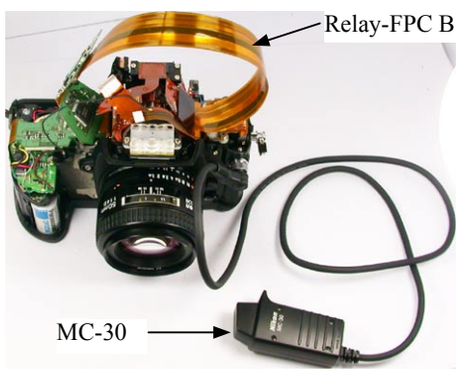
① Set the exposure mode of the camera to "M/bulb". Turn the main SW to OFF, and remove the top cover.
＊ If the top cover remains removed, connect the top cover and the main FPC temporarily with the relay-FPC A (Refer to "How to connect relay-FPC" of Tool section for details), then set the exposure mode to "M/bulb".

② If the bottom cover remains removed, attach it with screws.

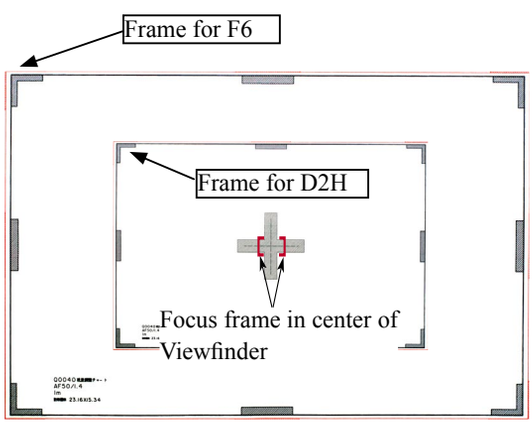
③ Connect the main FPC and the front body FPC with the relay-FPC B. (Refer to "How to connect relay-FPC" of Tool section for details.)

④ Connect MC-30 (or MC-20) to 10-pin terminal of the camera.

⑤ Insert the battery into the camera, and attach the lens (AF 50/1.4).
Set Aperture=F1.4, AF mode= M.
*Do not use exhausted batteries.



⑥ Attach the parallax inspection chart (J15404 ＝ in common with D2H) on the wall, etc.
⑦ Position the camera correctly 1m-distance from the parallax inspection chart by using the tripod, etc. (ref. Fig. 1.)
Set the optical axis of lens to come in the center of the chart, and bring the chart into focus manually.



Parallax inspection chart（J15404）

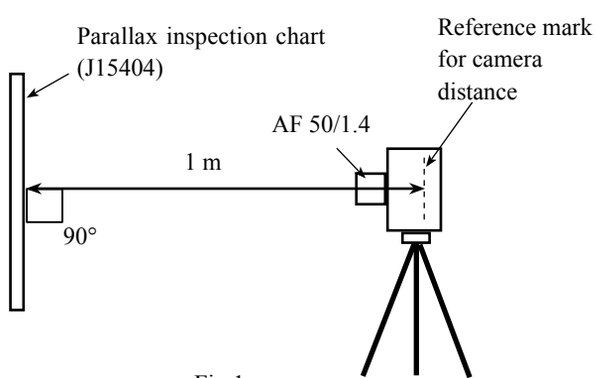
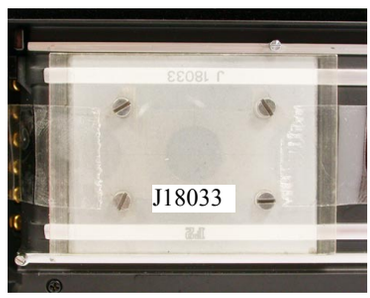


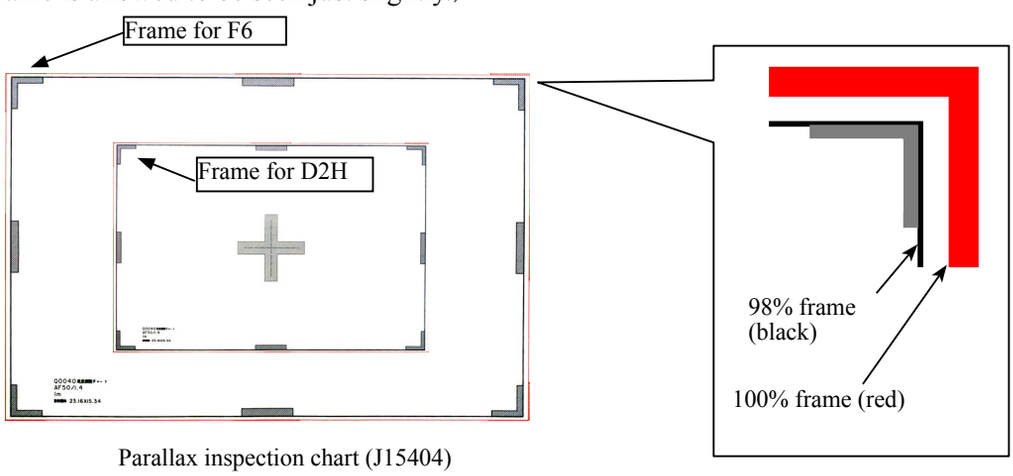
Fig.1

⑧ Set the MC-30 lever to "LOCK", and release the shutter so that the mirror is up and the shutter curtain is opened. *Push the pin of the Back door SW.

⑨ Attach the focusing screen tool (J18033) on the aperture face.



⑩ Set the camera so that the 98% (NOT 100%) frame lines of the parallax inspection chart, which are reflected on the focusing screen tool, can be viewed within the aperture frame. (However, the red part that shows 100% frame is allowed to be seen just slightly.)

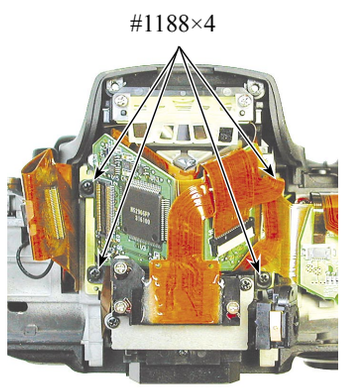


Parallax inspection chart (J15404)

⑪ Remove the focusing screen tool from the aperture face. Then, release "LOCK" of MC-30 so that the mirror is down and the shutter curtain is closed.

＊ Note: Be sure to release "LOCK" after removing the tool. Otherwise, the shutter curtain may be damaged.

⑫ Look through the viewfinder. Loosen 4 screws (#1188), and move the prism box unit so that 98% (NOT 100%) frame lines can be viewed within the finder field frame.



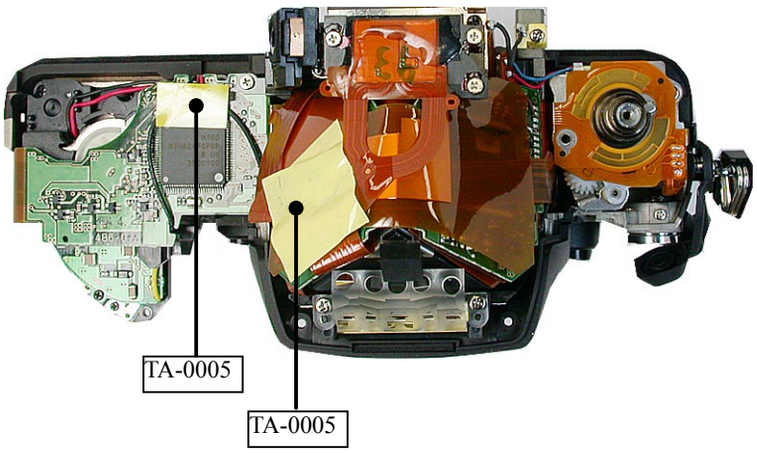
⑬ When the position is correctly adjusted in ⑫ , tighten 4 screws (#1188). (The red part that shows 100% frame is allowed to be seen just slightly.)

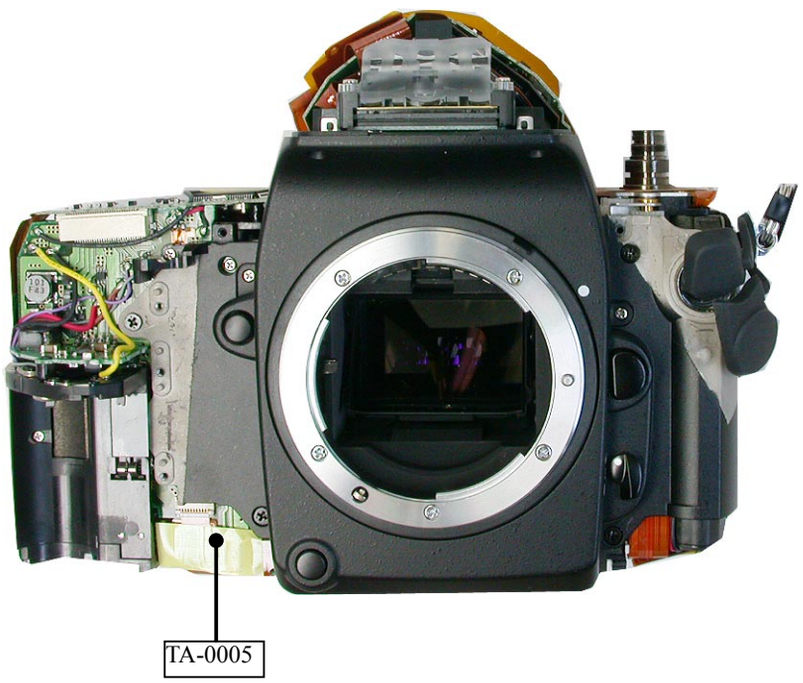
⑭ Set the MC-30 lever to "LOCK" again, and release the shutter so that the mirror is up and the shutter curtain is opened.

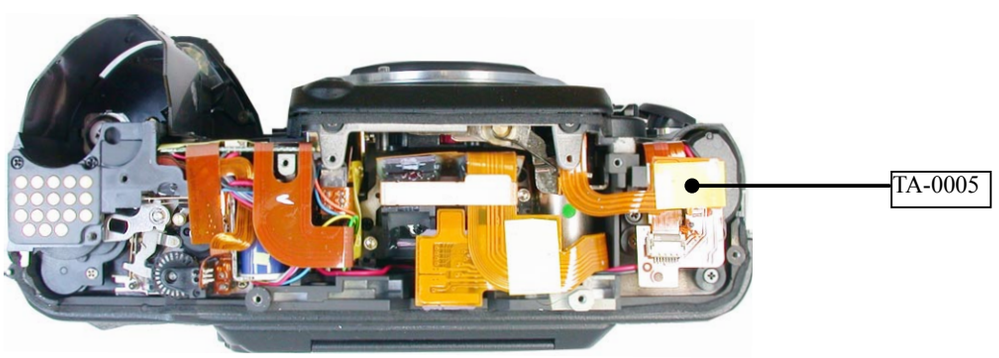
⑮ Attach the focusing screen tool on the aperture face.

⑯ If there is no misalignment is seen in ⑩ , the adjustment is completed. (In case there is, repeat the procedure from ⑩ to ⑯ .)

Tape

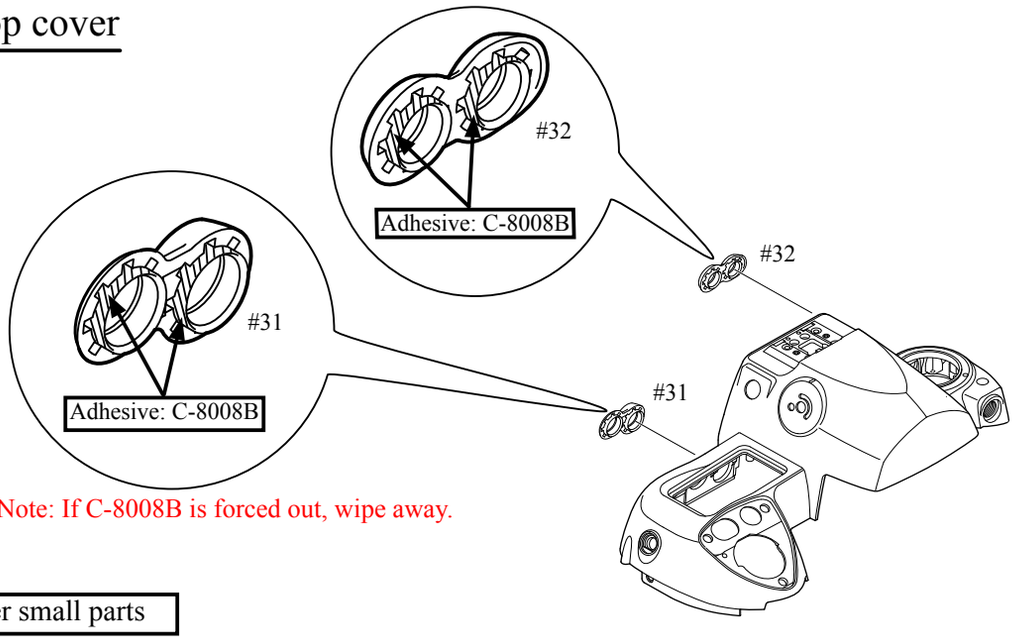






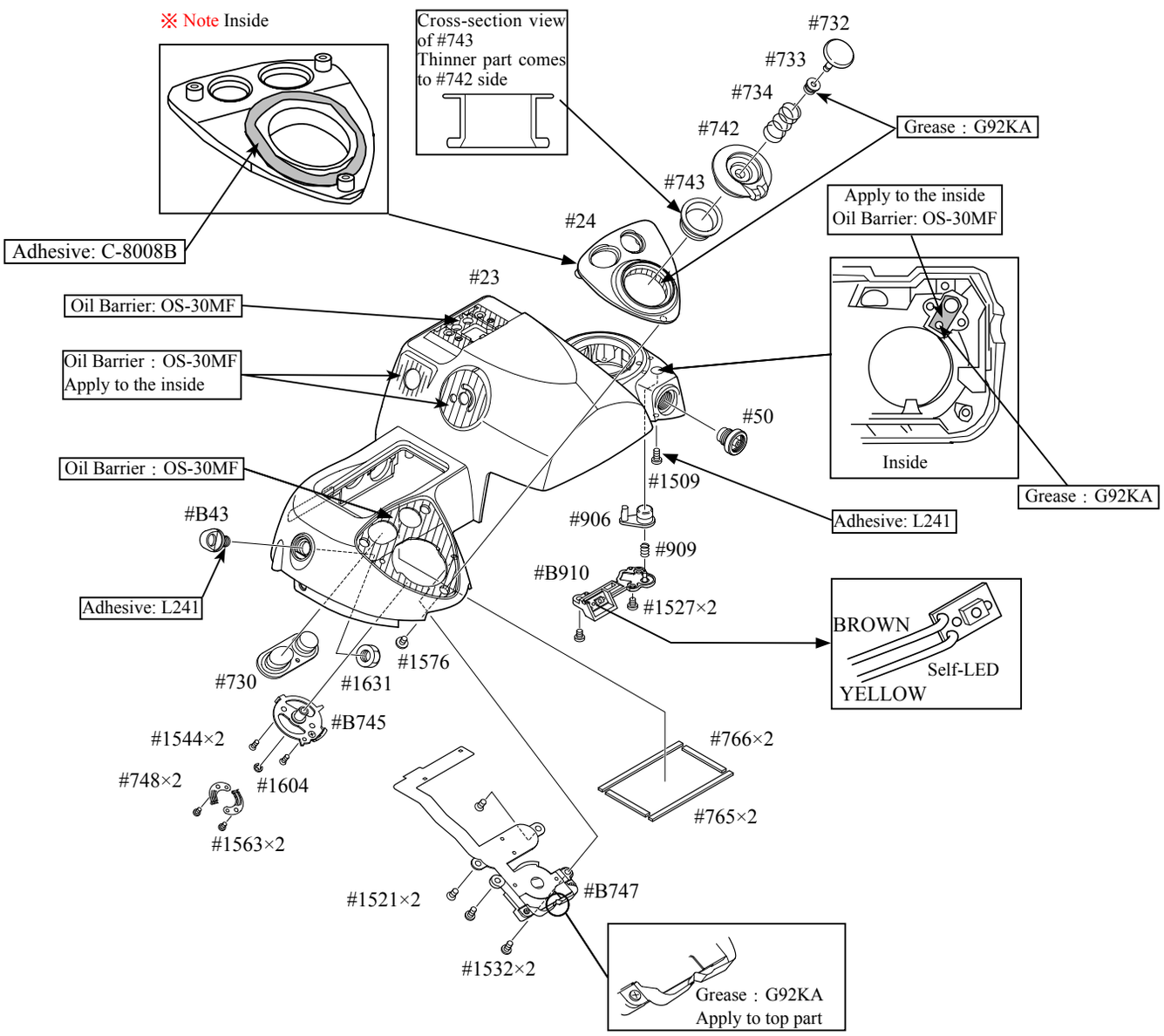
Assembly of Top cover

Button cover

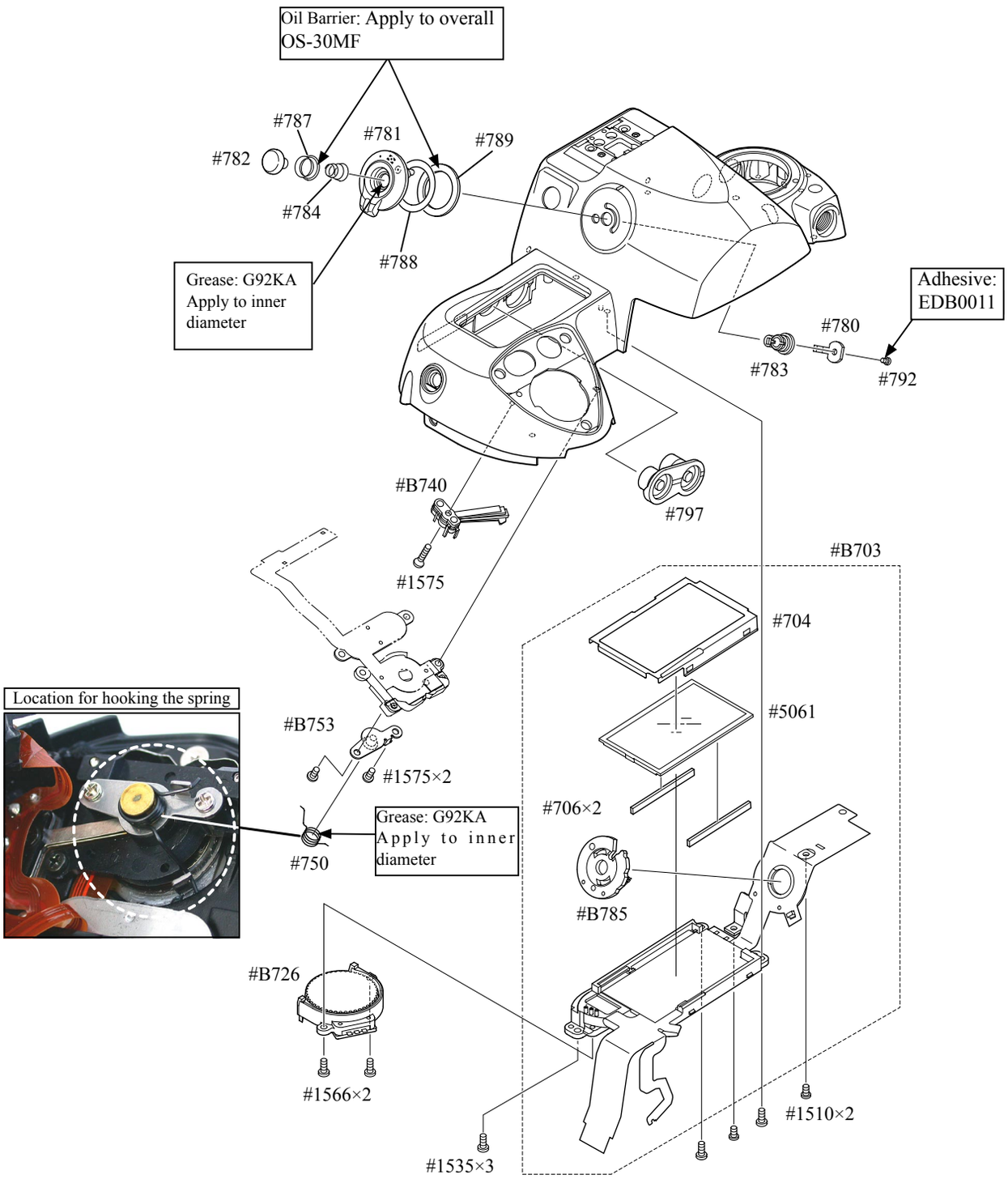


※ Note: If C-8008B is forced out, wipe away.

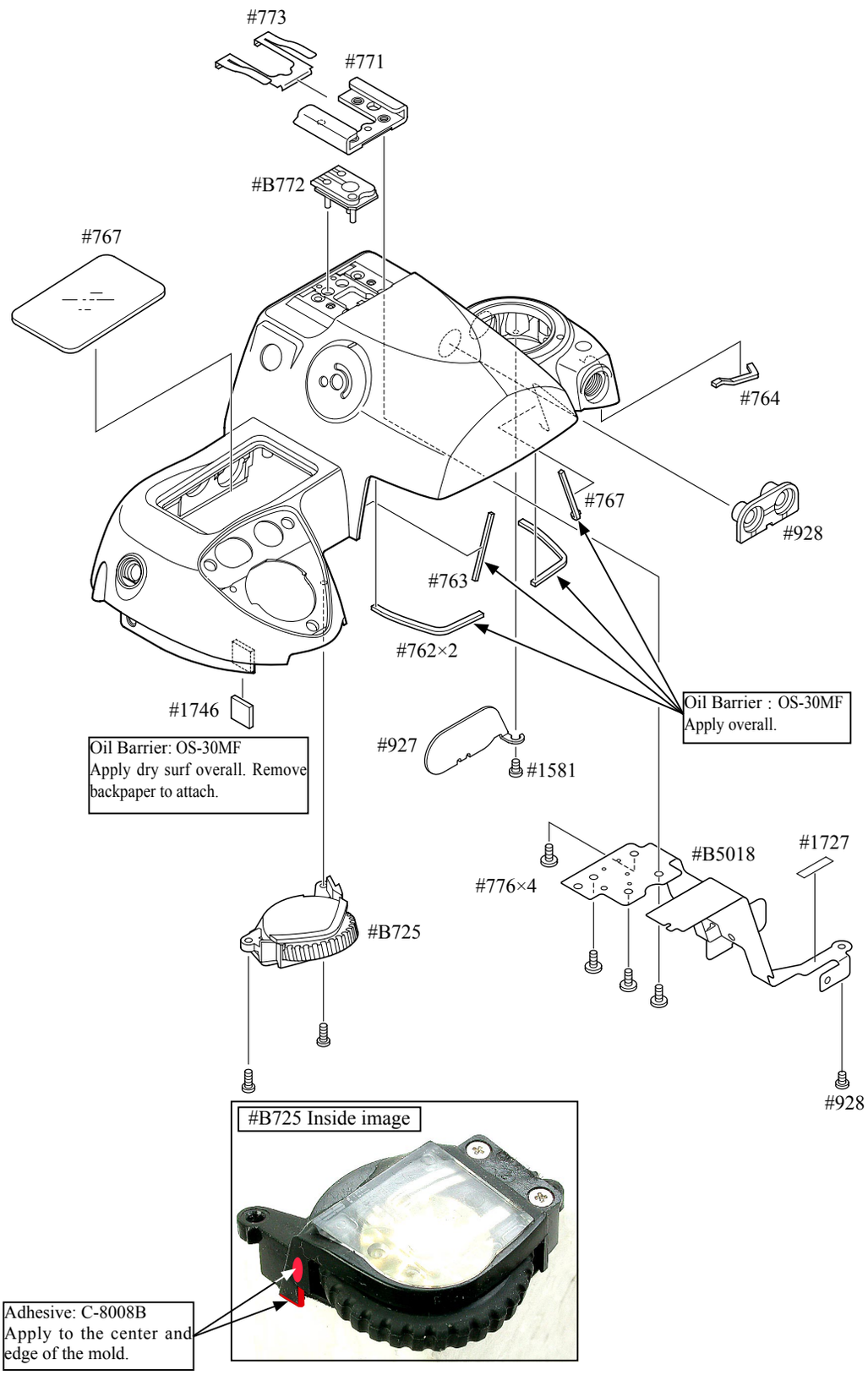
Main SW unit, other small parts



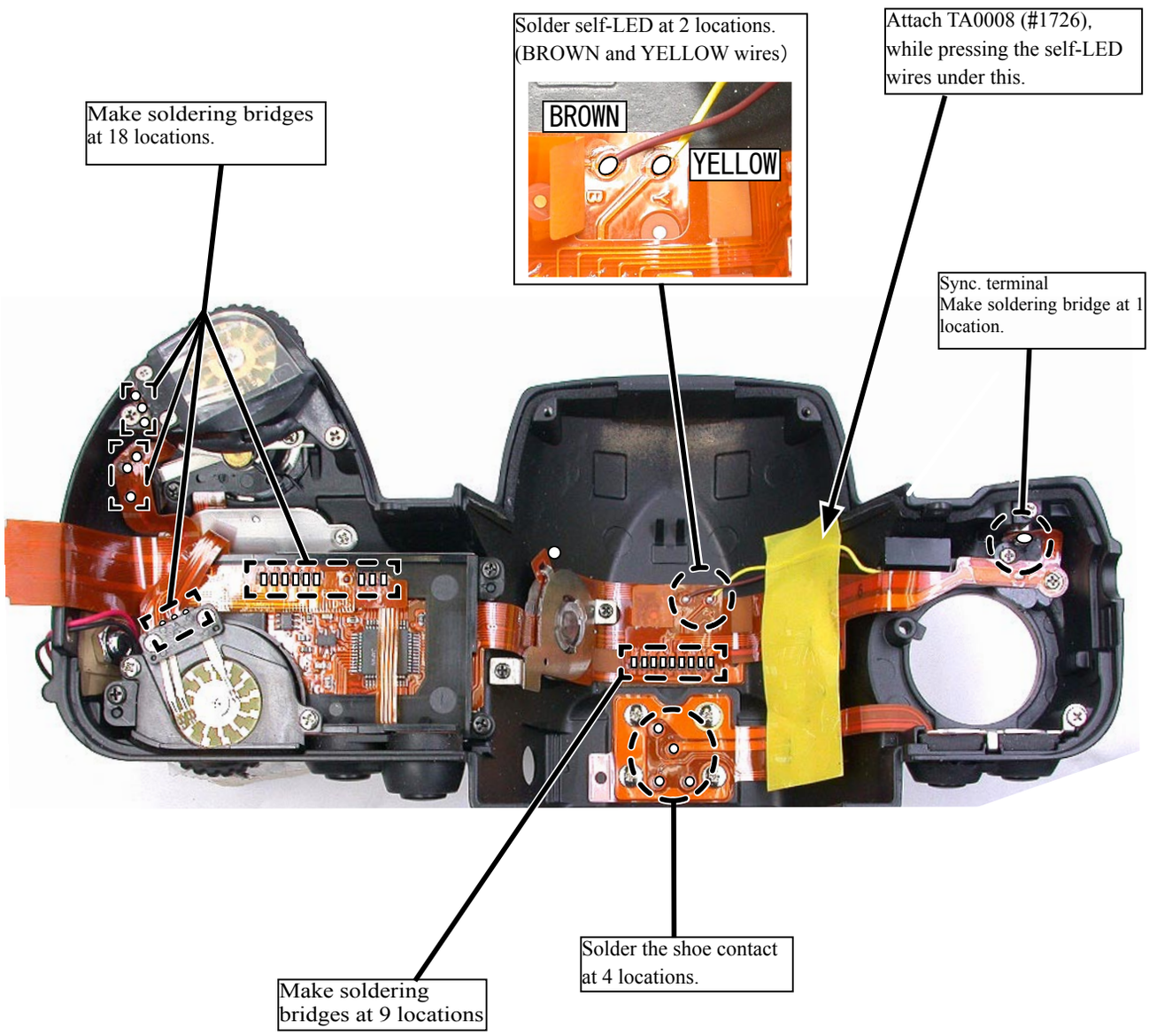
Outer-LCD unit, other small parts



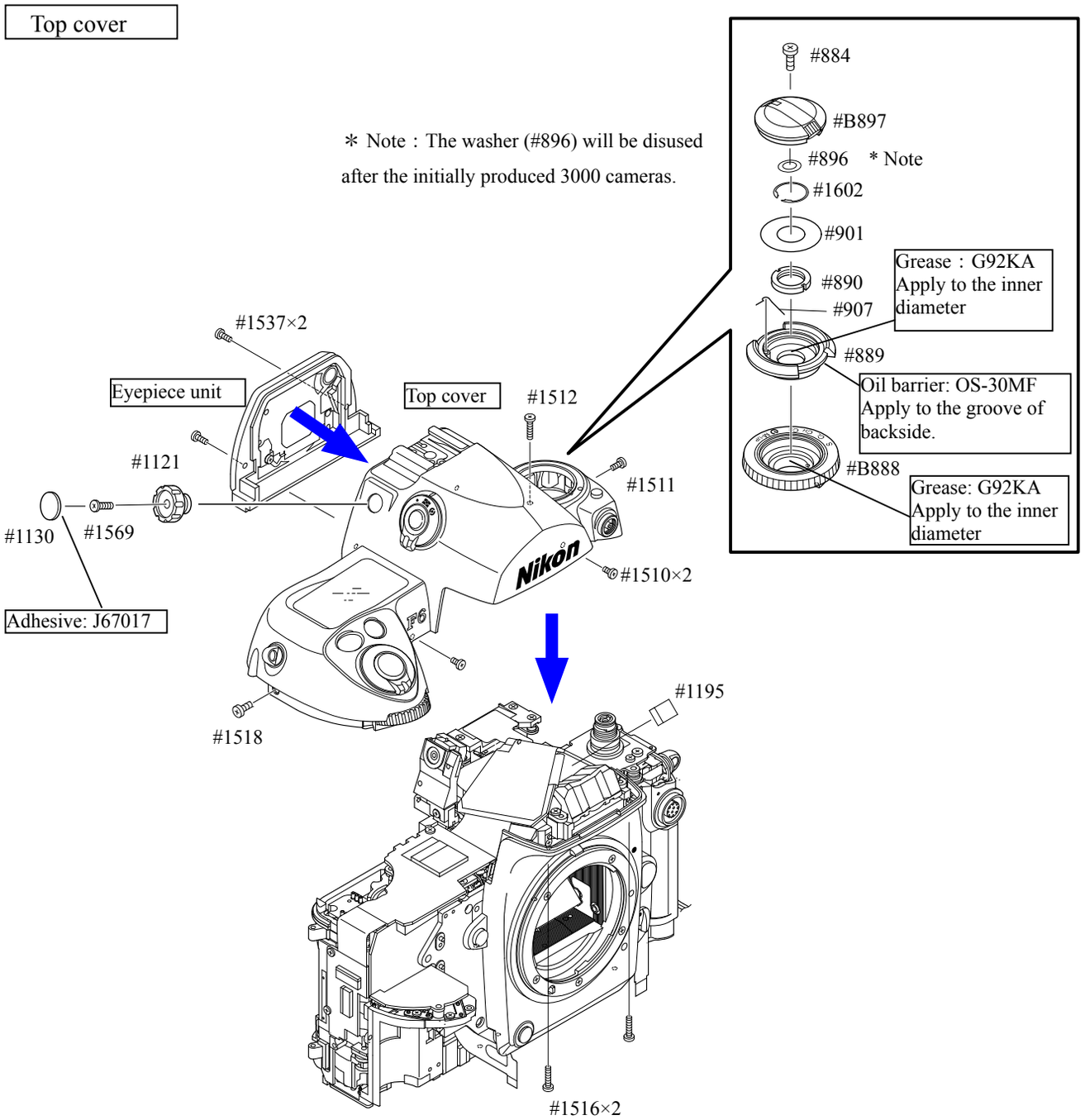
Hot shoe unit, other small parts

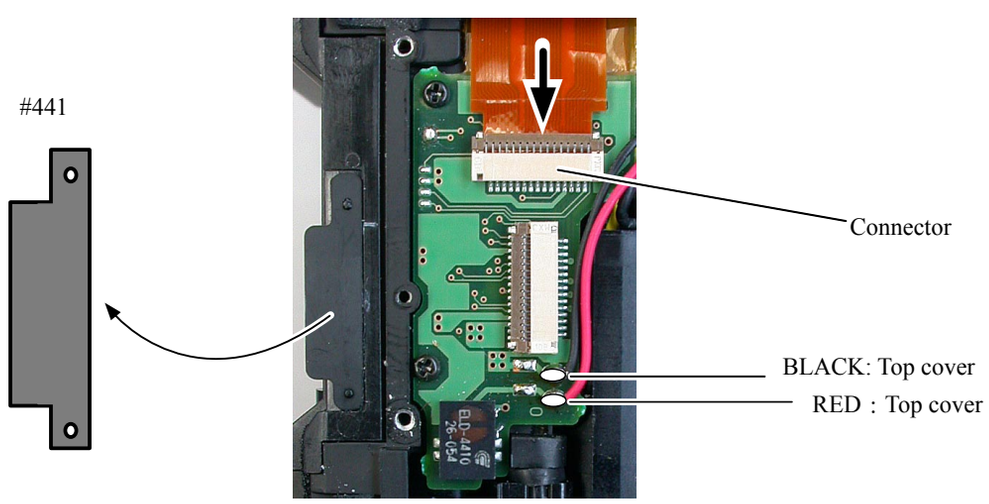


Hot shoe unit, other small parts



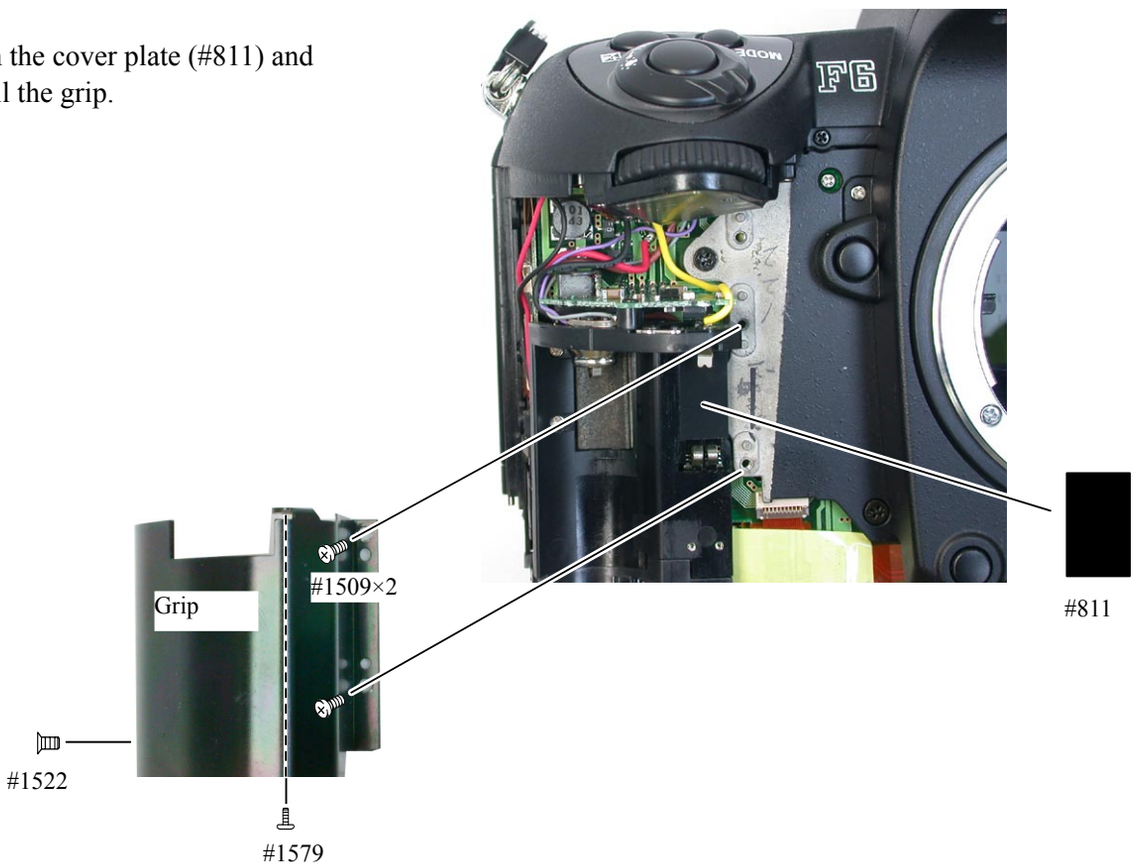
Top cover


＊ Note：The washer (#896) will be disused after the initially produced 3000 cameras.
#884
#B897
#896 ＊ Note
#1602
#901
Grease：G92KA Apply to the inner diameter
#890
#907
#889
Oil barrier: OS-30MF Apply to the groove of backside.
#B888
Grease: G92KA Apply to the inner diameter
#1537×2
Eyepiece unit
Top cover
#1512
#1121
#1511
#1130
#1569
#1510×2
Adhesive: J67017
#1195
#1518
#1516×2


#441
Connector
BLACK: Top cover
RED：Top cover

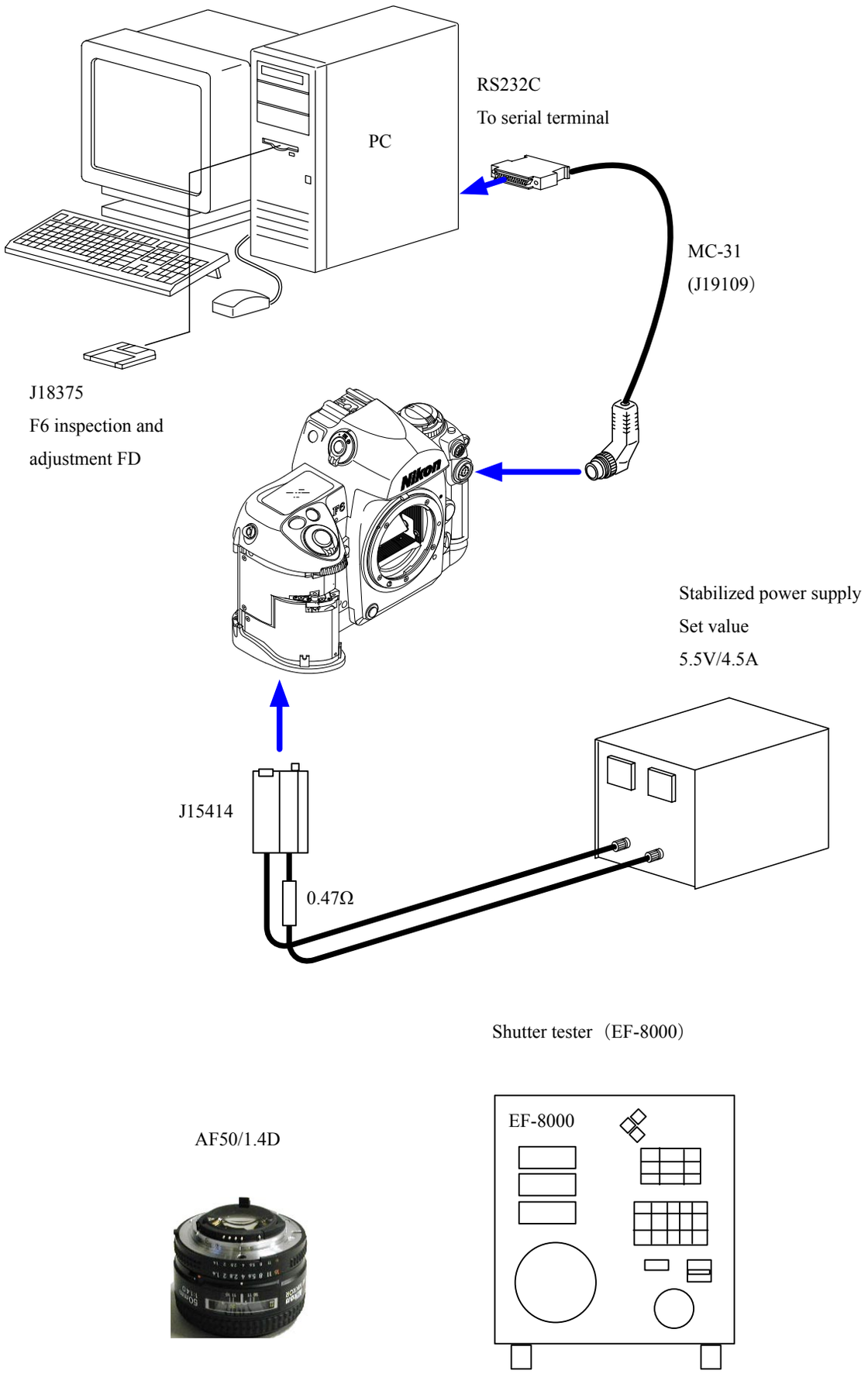
Grip

・Attach the cover plate (#811) and install the grip.



How to connect Camera and PC

・9 pin-25pin adapter is necessary for a computer with 9-pin RS-232C terminal.
(RJ is not available.)



Necessary adjustments on PC when parts are replaced

Adjustments of / Parts to be replaced	AE CCD position	AE accuracy	Aperture accuracy inspection	M1/8000 accuracy	TTL accuracy	Shutter monitor	AF duty	AF accuracy	BC voltage
Shutter unit				○		○			
Main FPC	○	○	○	○	○	○	○	○	○
I base unit			○						
AF unit								○	
AF driving unit							○		
TTL lens unit					○				
DCDC-PCB									○
Power-PCB									○
Penta-FPC unit	○	○							

F6 Inspection and Adjustment Software (J18375)

This inspection and adjustment software runs on Windows.

Install the software based on the below procedure.

<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 Millennium Edition (Me), Windows 98 Second Edition (SE), Windows 98, Windows 95
CPU	80486 100MHz ～ Pentium Ⅲ 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	Serial Interface ※ USB Interface is not available.

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 the other applications.

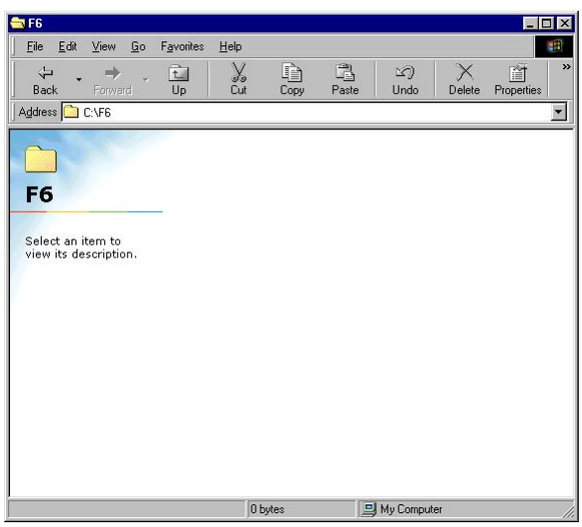
If some other applications are running, this program may not be activated.

<Procedure for installation>

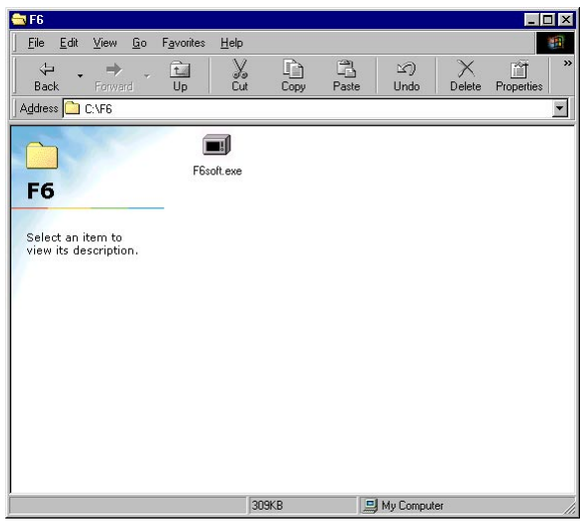
The file (F6SOFT.EXE) of this program is provided via FD or e-mail.

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

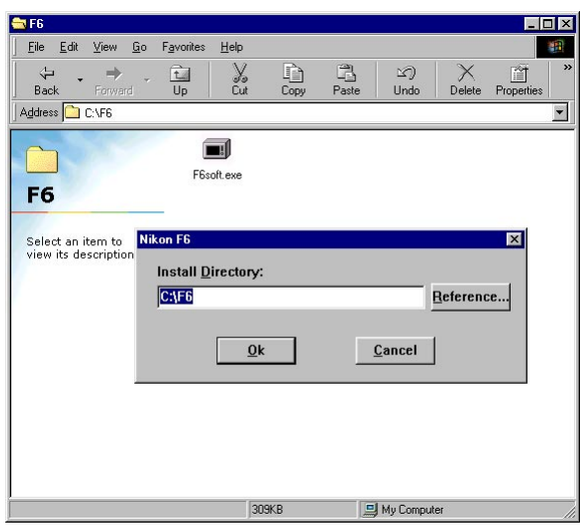
1. Create a folder for installation under a name you like and PC drive.
   (e.g.) C:\F6



2. Paste the file (F6SOFT.EXE) in the created folder.



3. Double-click on the pasted file to display the following screen.
   Press the OK button, then decompression starts.

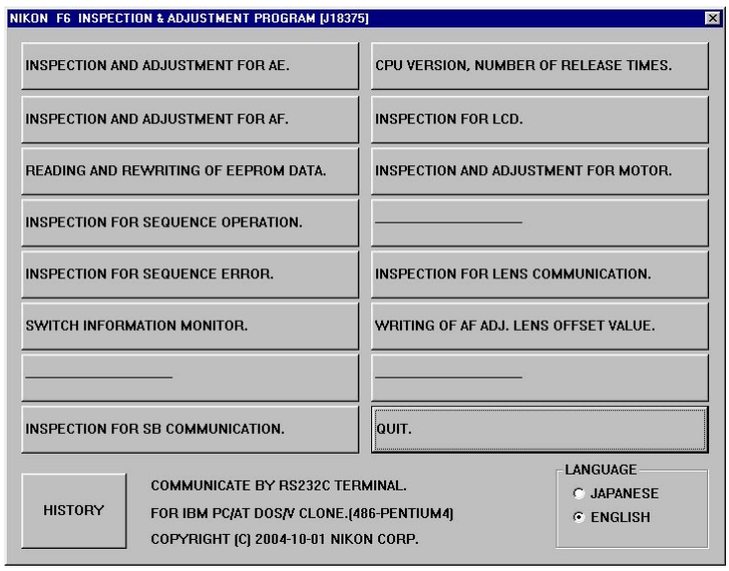


4. When the decompression of file is finished, the file (F6.EXE) is created.

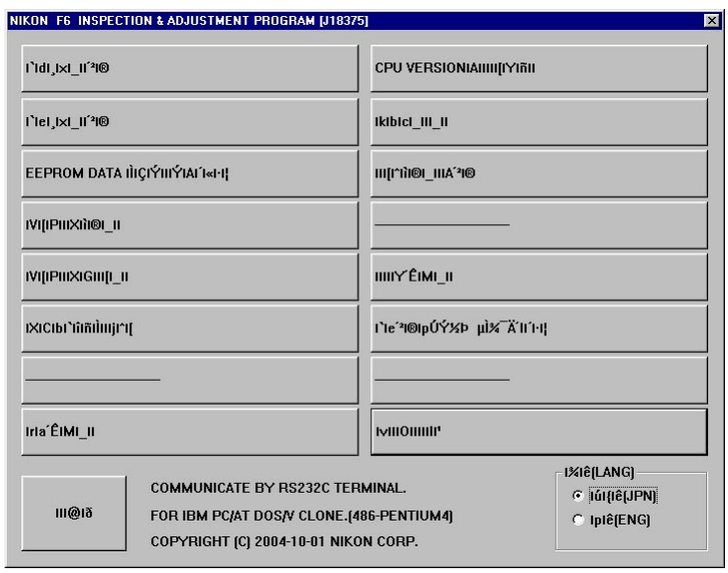
5. The installation is completed.

<Start-up of Program>

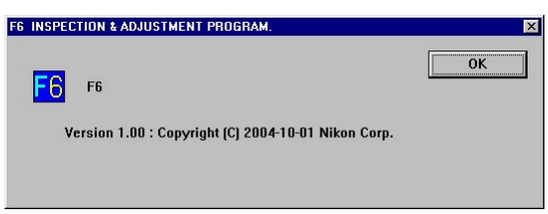
1. Double-click the file (F6.EXE), then the Inspection & Adjustment program for F6 starts.



2. To display in Japanese, select the radio button "JAPANESE" in "LANGUAGE" in the lower right-hand corner of the screen ". However, this is not properly viewed in the OS in English version.



3. When the "HISTORY" button at the lower-left is pressed, the program version will be displayed.



4. Select the appropriate item button according to operation.
   Follow the instructions on the next screen that will be shown after pressing the item button.

5. To finish the program, press the "Close (×)" button in the right-hand corner of the screen or "QUIT".

AE inspection & adjustment

1. AE CCD alignment/positioning inspection and adjustment
2. AE accuracy inspection and adjustment
3. Aperture accuracy inspection
4. M 1/8000 accuracy inspection and adjustment
5. Shutter monitor inspection and adjustment
6. TTL inspection and adjustment
   ＊ Grey shutter curtain of F90 is necessary.
7. AF PI duty adjustment
8. Battery Check inspection and adjustment

AF inspection & adjustment

Note : When using the adjustment software for the first time, prepare 5 cameras of F6. Then input the average value of the 5 cameras, which was measured in checking the AF accuracy, in "WRITING OF AF ADJ. LENS OFFSET VALUE" on the main menu.

〔Inspection/adjustment items〕

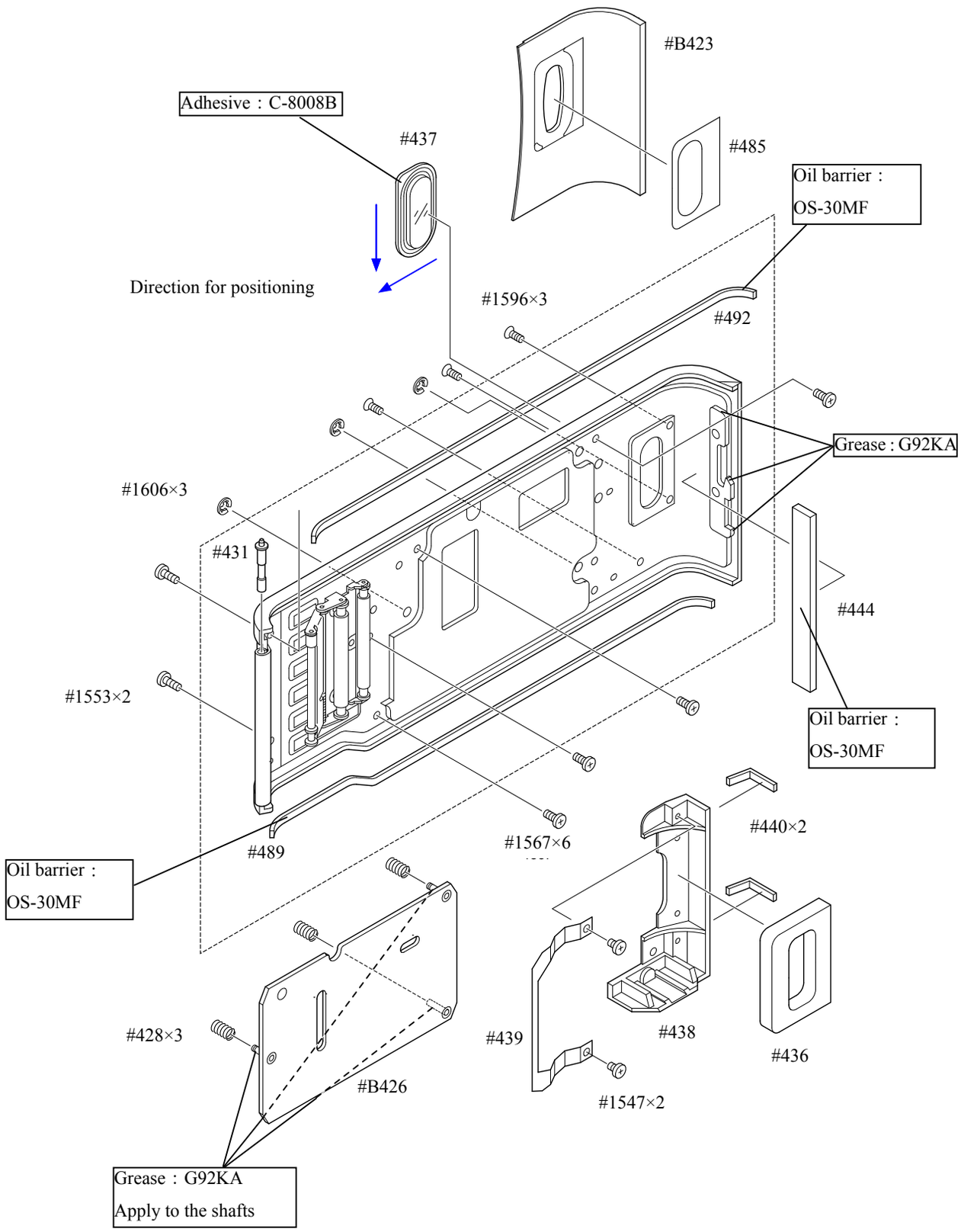
① AF accuracy inspection and adjustment (Make all the following adjustments.)
② YAW, PITCH
③ LARK adjustment
④ CCD output

〔Tools required〕

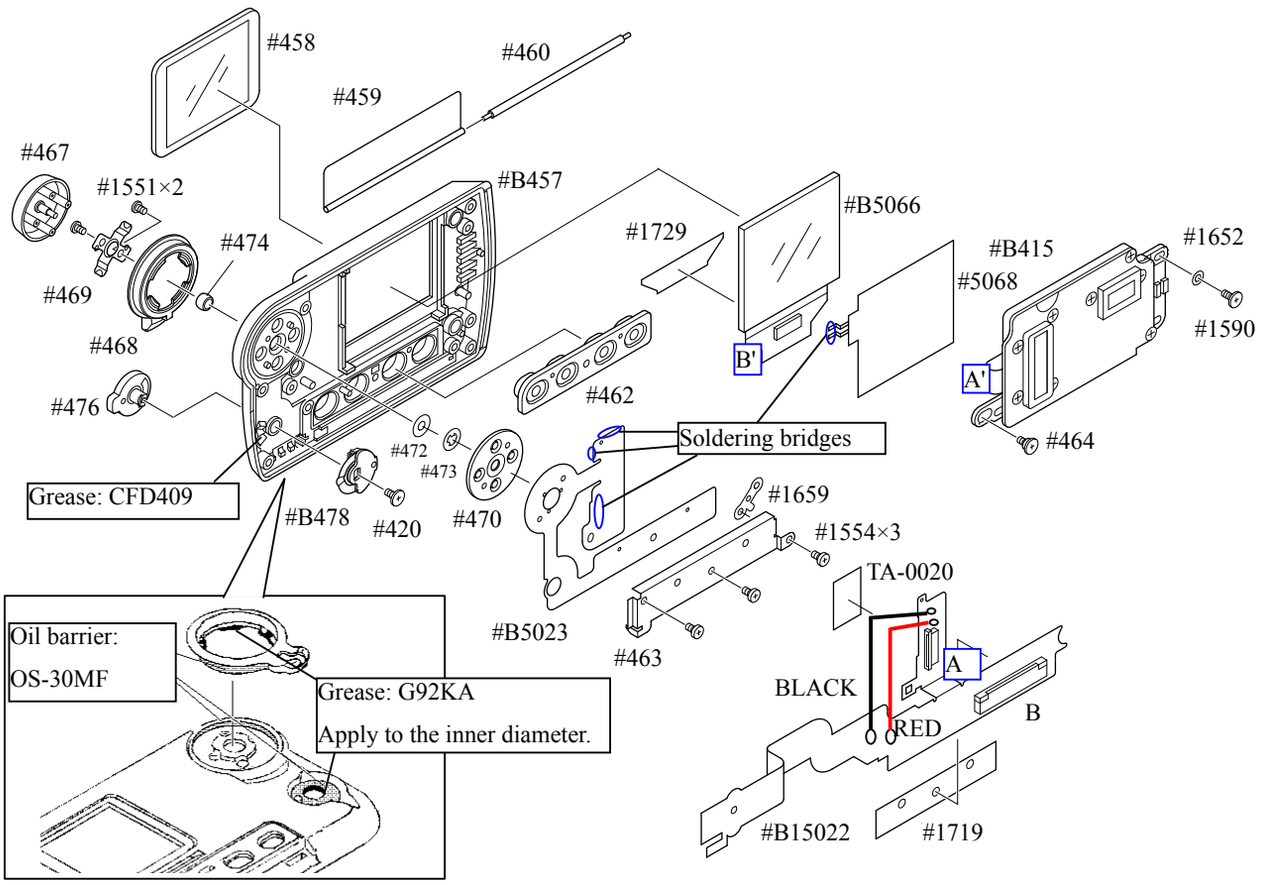
1. When adjusting for all adjustment items
   Use the same tool as AE-related.
2. When inspecting AF accuracy
   ① AF adjustment lens（J18266）
   ② AF adjusting tool（J15259）
   ③ Lens holder for F4 (J15280) or Adapter for tripod（J15271）
   ④ AF chart (J15407)
   ⑤ Chart board for J15047 (J15409)
   ⑥ Chart illuminator for AF (J15264）
3. When adjusting YAW, PITCH
   ① The above tool when inspecting AF accuracy
   ② YAW, PITCH tool（J18230）
4. When adjusting LARK
   The above tool when inspecting AF accuracy
5. When adjusting CCD output
   AF 50/1.4D lens

Assemble Back door unit

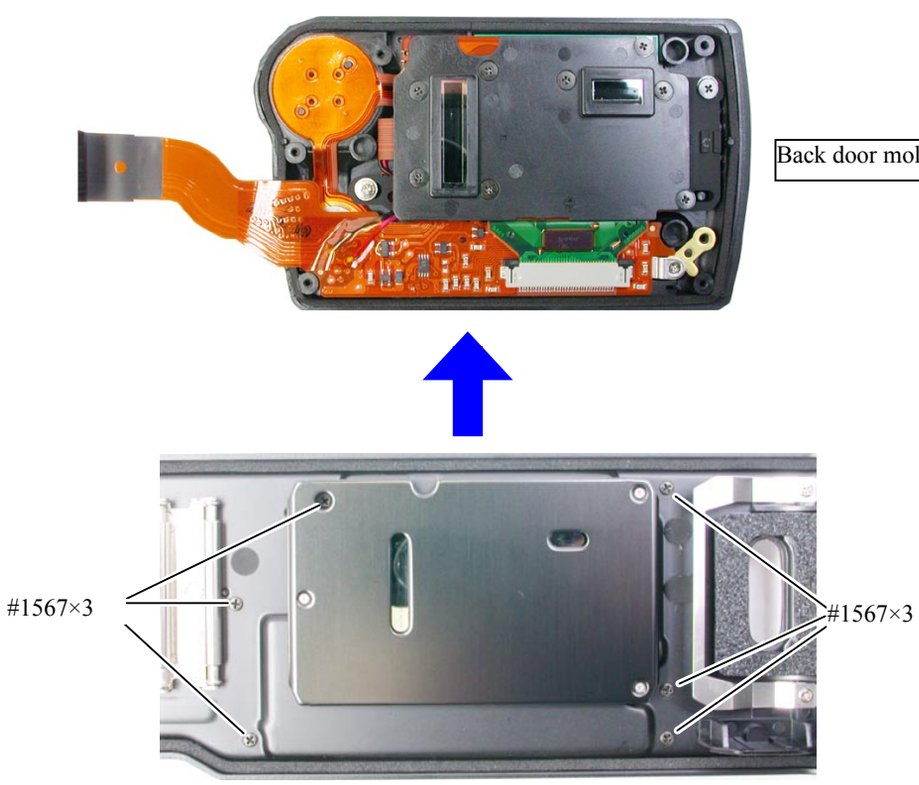
Back door small parts



Back door mold unit



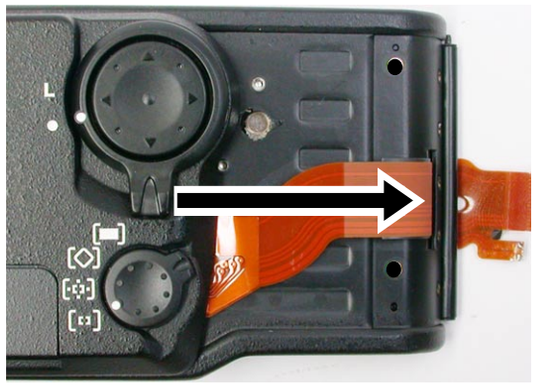
・Assemble the back door mold unit with 6 screws (#1567).



Attach Coil cover and Roller

① Pass the FPC through the clearance of the back door. (Fig.1)

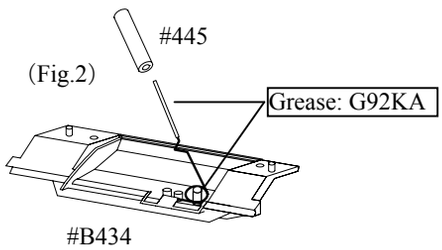
(Fig.1)



Outside of the back door

② Apply the grease to the spring and the shaft of the coil cover (#B434). (Fig.2)

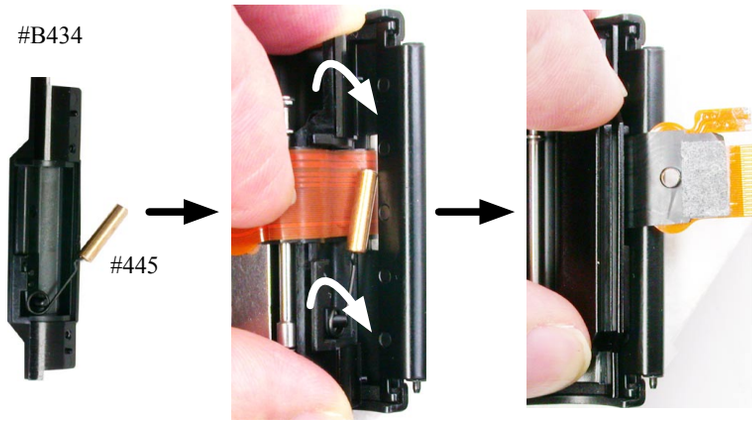
(Fig.2)



(Fig.3) (Fig.4)

③ Pinch the FPC, which comes inside of the back door, with the coil cover (#B434) and the roller (#445). (Fig.3)

④ Assemble the coil cover (#B434) and the roller (#445) into the back door. Then press them with fingers. (Fig.4)



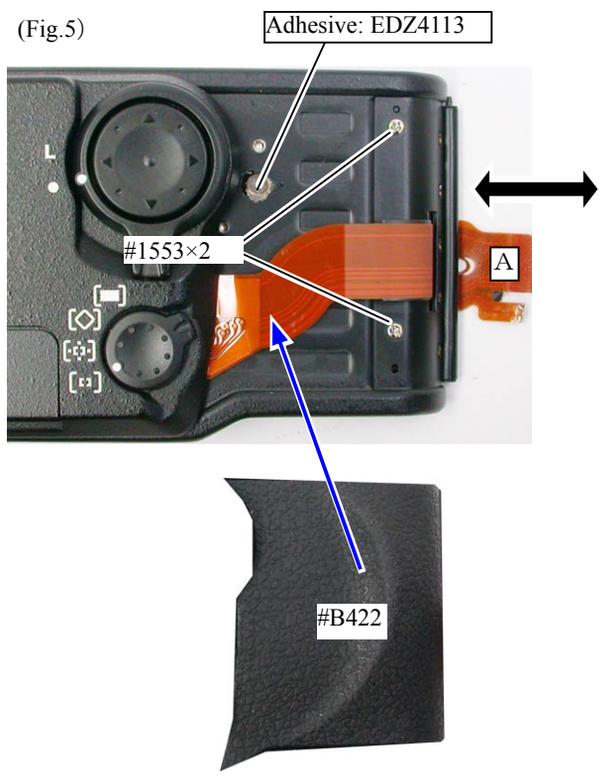
Inside of the back door

(Fig.5)

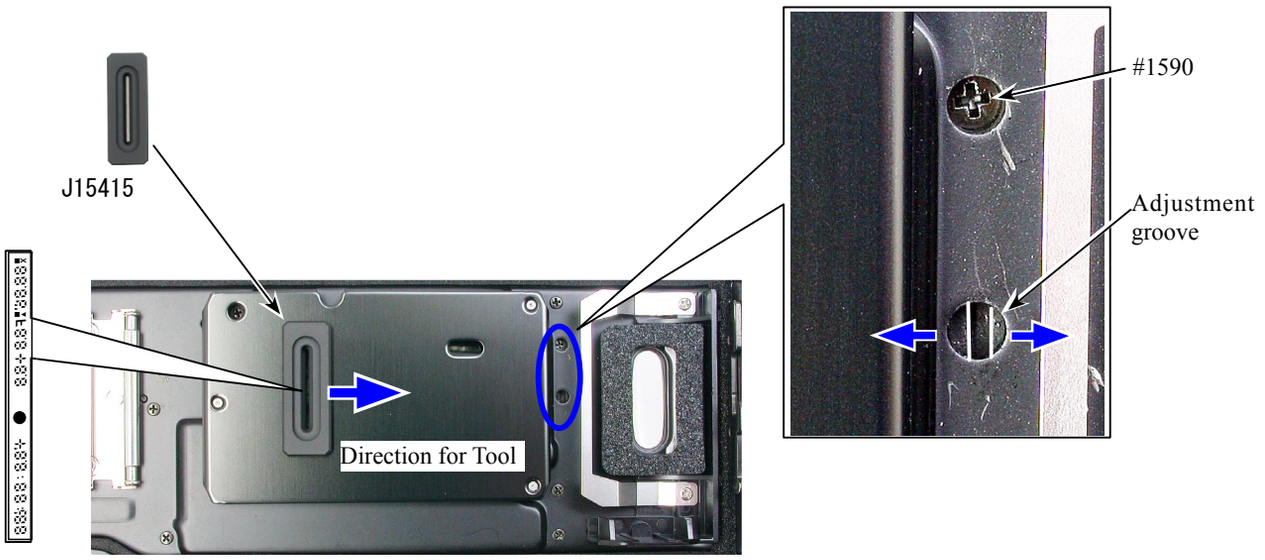
⑤ In the state of ④ , attach 2 screws (#1553). (Fig.5)

⑥ Check that when pulling A part of the FPC slightly with fingers, it is smooth and the FPC goes back to the original form by force of tension of the coil cover. (Fig.5)

⑦ Attach the rubber (#B422). (Fig.5)



Position inspection and adjustment of Imprint-LED



LED lighting part

Inspection:

・Fit the DATA between frames ADJ tool (J15415) to the pressure plate.

・Push the tool toward the direction indicated by the arrow, and check that indications of the LED lighting part is fit in the slit without vignetting.

* Check the slit by viewing from above under bright light source.

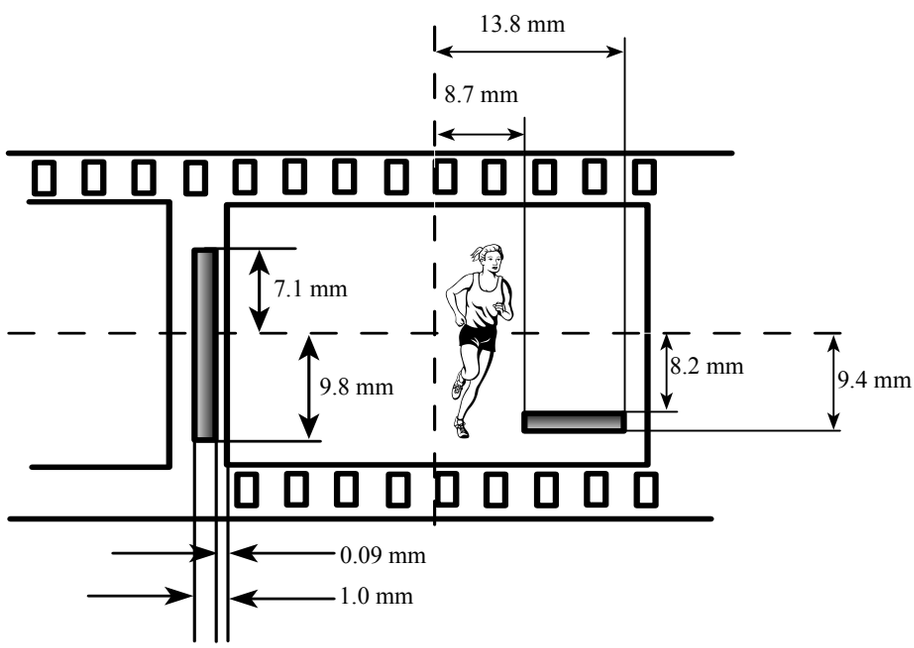
Adjustment:

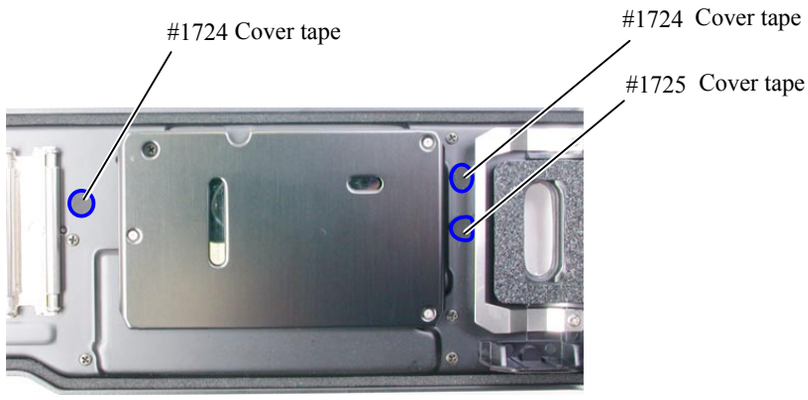
・Loosen the screw (#1590) and adjust the position of the LED lighting part by moving the adjustment groove from side to side.

・After the inspection, fix the position with the screw (#1590).

Standard:

・The standard range regarding the distance between frames and data imprinting in images must be as follows:





Imprint-LED lighting inspection

・After completing assembling the body, connect the PC and camera.
・Select "INSPCETION FOR LCD" from the menu of the adjustment software (J18375). Check the lighting of the imprint-LED.

Assemble Back door

① Insert the upper shaft of the hinge of the back door into the hinge part of the rear body. (Fig.1)
② Insert the pin (#1658) and connect the connector. (Fig.2)
③ Attach the screw (#1525) and make soldering bridges. (Fig.2)
④ Install the grip mold unit (#B39). (Fig.2)

Fig.1

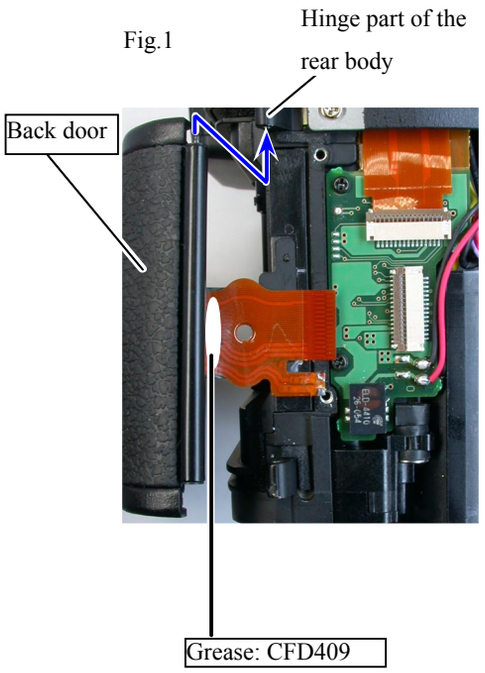
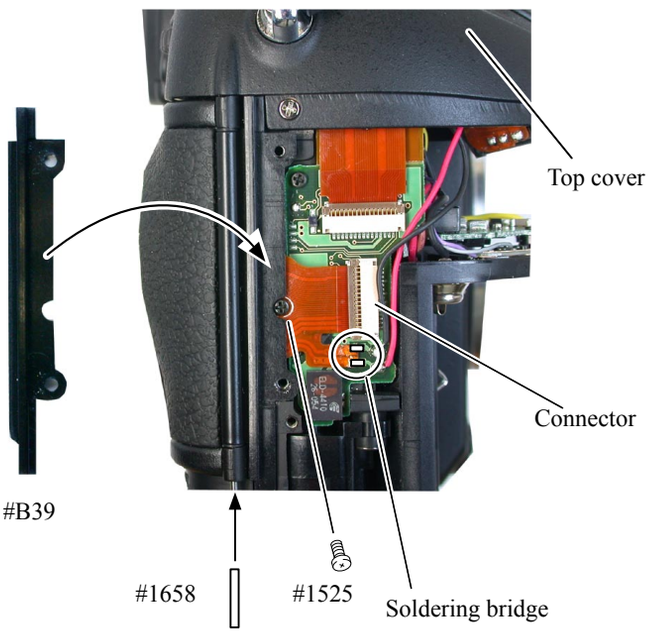


Fig.2



Upper grip

・Attach the sponge (#1745) on the upper grip. (Fig.1)

・Assemble the upper grip into the body while pressing the sponge (#1745) on the top cover. Then attach them with 3 screws. (Fig.2)

Fig.1

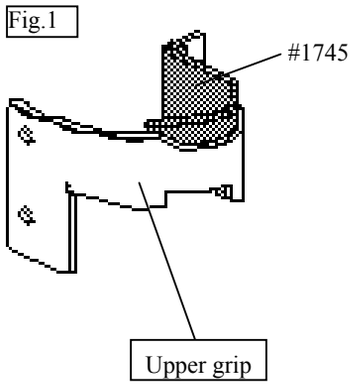
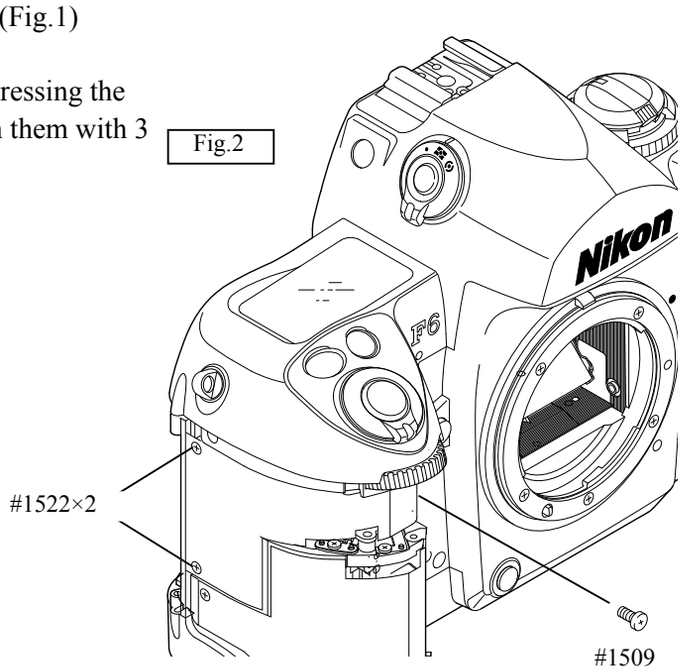


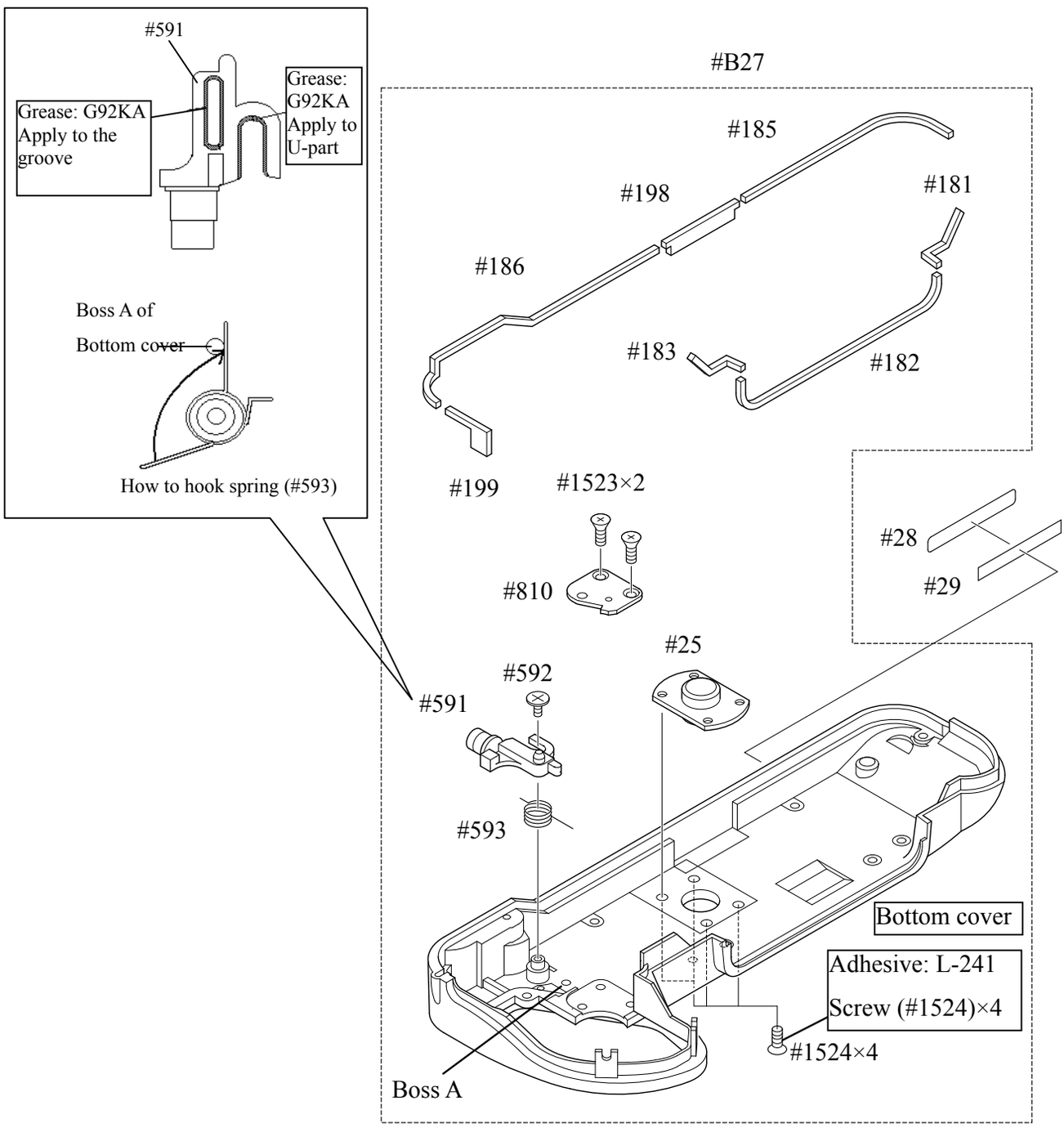
Fig.2



Bottom cover

Oil barrier : OS-30MF

Apply slightly to the sponges (#186, #198, #185, #181, #182, #183, #199).

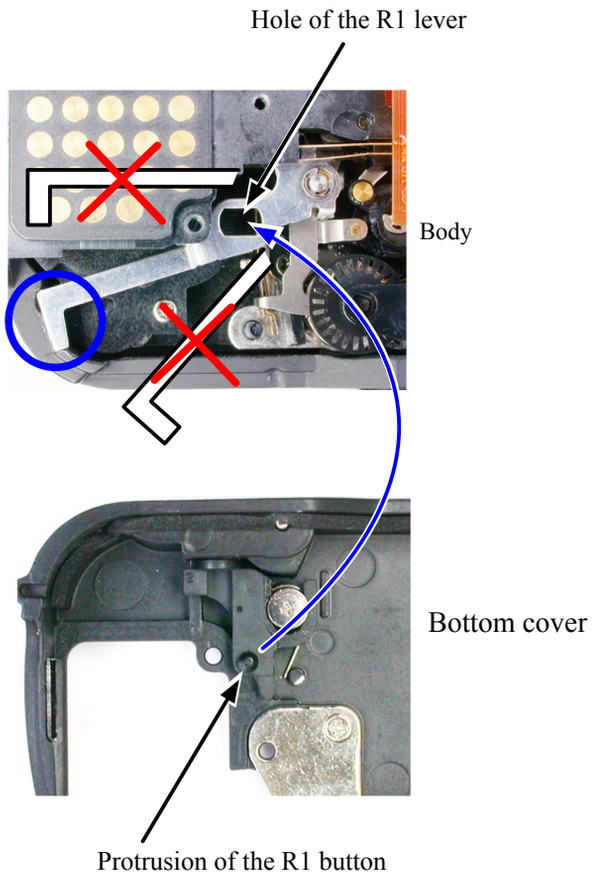


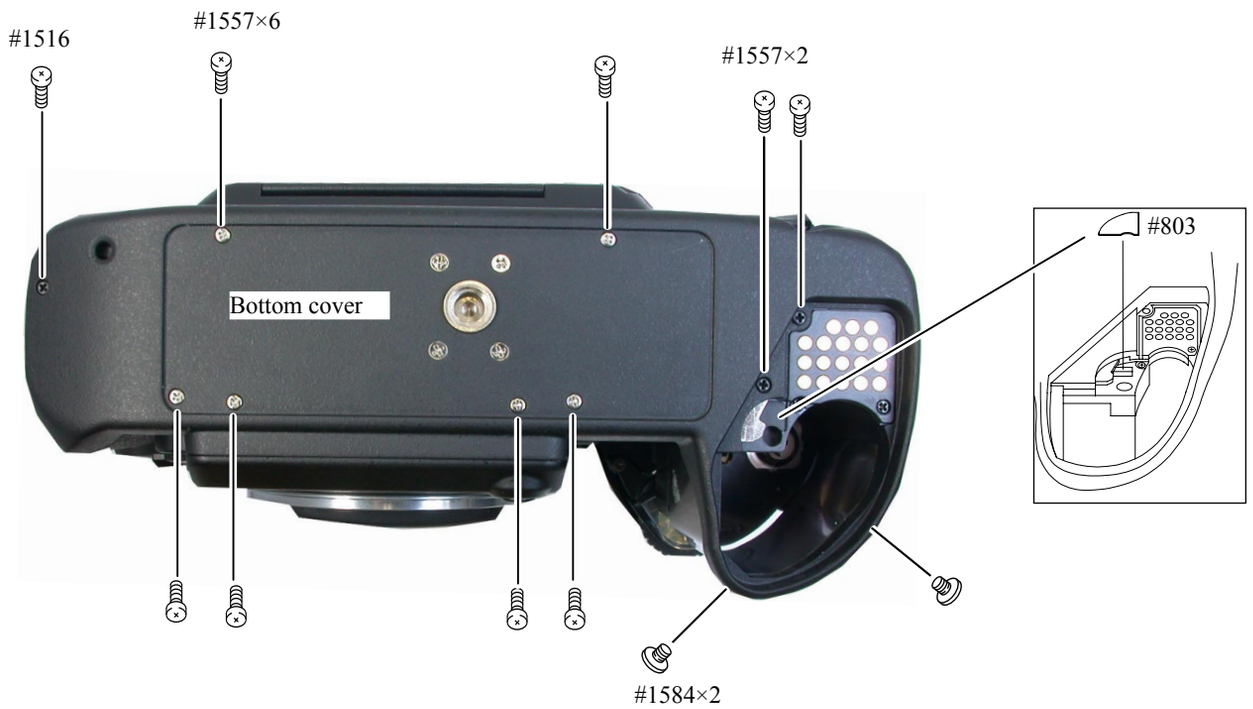
Assemble Bottom cover

・Check that the position of the R1 lever of the body is as shown right. If there are misalignements, insert the battery temporarily and release the shutter so that the lever is set to the right position.

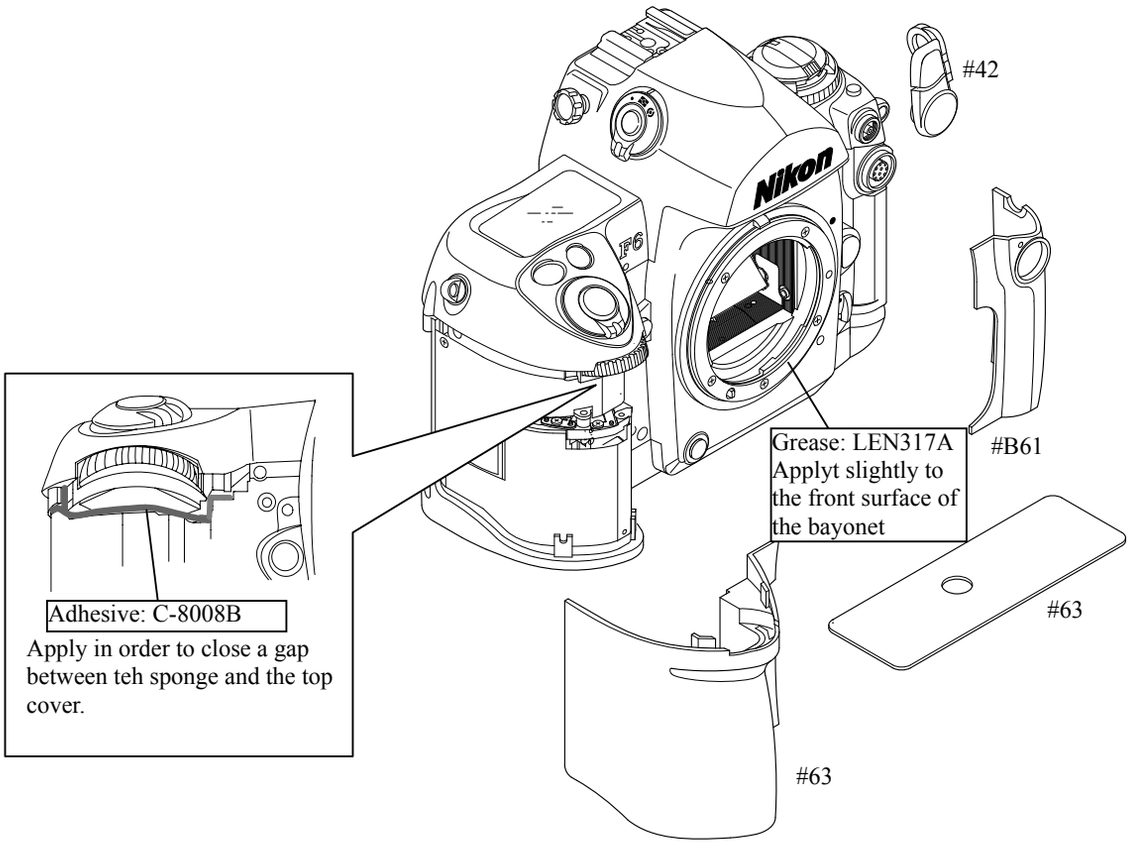
・Assemble the bottom cover into the body so that the protrusion of the R1 button puts into the hole of the R1 lever.

*Note: If the R1 lever is not in the right position, the lever may be deformed.

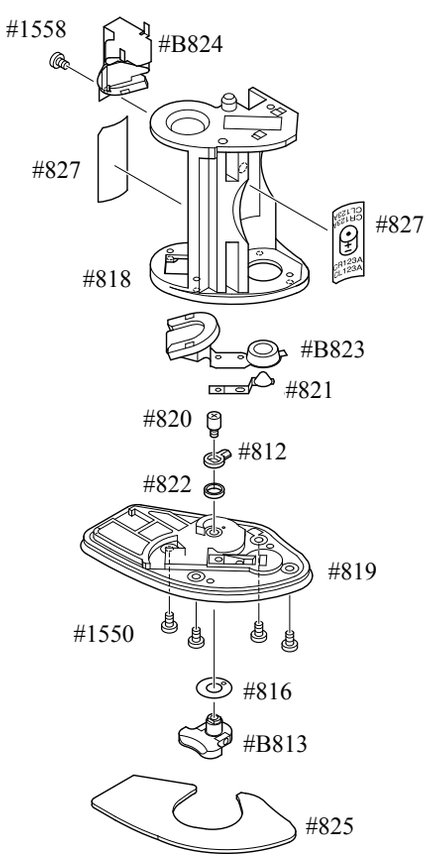




External rubber

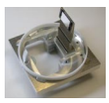
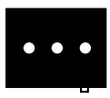
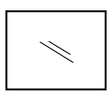


Battery holder



工　具・TOOLS

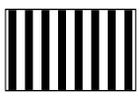
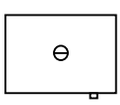
★：新規設定工具・NEW　TOOL

工具番号 Tool No.	名　称 Name of tool	備　考 Others
J18370 	サブミラー49°出し工具 Sub mirror angle adjustment tool	★
J15413 	AE センサー 位置出し工具 AE sensor positioning tool	★
J15414 	電池工具 Battery tool	★
J18371 	反射ミラー Reflection mirror	★
J18375 	F6 点検、調整ソフト Inspection and adjustment software for F6	★
J18372 	中継 FPC　A Connecting FPC A	★
J18373 	中継 FPC　B Connecting FPC B	★
J18374 	中継 FPC　C Connecting FPC C	★
J15415 	裏蓋コマ間点検工具 DATA between frames ADJ tool	★
FG-50W 	グリース　ＦＧ－５０Ｗ Grease FG-50W	★
J18033 	画角点検工具 Parallax	FOR　F2

★：新規設定工具・NEW　TOOL

工具番号 Tool No.	名　称 Name of tool	備　考 Others
J19109 	ＭＣ－３１ MC-31	
J19123 	シャッター試験機　ＥＦ－１（ＣＥ） Shutter Tester EF-1 (CE)	共立電機製 KYORITSU ELECTRIC ＥＦ-8000 usable
J19002 	縦型焦点面検査機　LT-500S Back focus collimator LT-500S	Ｊ 19110 usable Ｊ 19110 でも代用可
J15404 	視差点検調整用チャート Parallax　Chart	FOR　D2H
J18037 	オプチカルパラレル Optical parallel	
J18004 	絞りレバー高さ点検工具 Aperture lever positioning gauge	
J19004-1 	インジケータ及びスタンド （ボディバック台、ゲージ） Dial indicator and Stand	
J18001-1 	ボディバック出し工具 Body back focus gauge	
J19001 	無限合致コリメーターF=600mm Collimator　F=600mm	
J18010 	無限大合致基準レンズ　50/1.8 Infinity　Standeard　Lens　50/1.8	
J18267 	ＡＦ５０／１．４Ｄ Lens AF50/1.4D	
J15409 	J15407 用チャートボード Chart board for J15407	FOR　D2H

★：新規設定工具・NEW TOOL

工具番号 Tool No.	名　称 Name of tool	備　考 Others
J15407 	ＡＦチャート AF adjusting chart	FOR D2H
J18230 	ＹＡＷ、ＰＩＴＣＨ工具 Yaw,Pitch adjustment tool	FOR F5,F100,F90,F90X
J15259 	ＡＦ調整工具台 AF adjusting tool	
J15280 	Ｚレンズ用支持ホルダー Lens holder	
J15264 	高周波タイプ蛍光灯器具 Illumination box for AF adjustment	
J18266 	ＡＦ調整用Ｚレンズ（１ｍ用） Z adjustment lens (For 1m)	FOR F5,F100
	デジタルマルチメータ Digital meter	汎用品 RJ is Not vailable
	F6用Ａスクリーン Ａ screen for F6	汎用品 RJ is Not available
	ＭＣ－３０ MC-30	汎用品 RJ is Not available
	パーソナルコンピュータ Personal computer	汎用品 RJ is Not available
	安定化電源（10Ｖ　５Ａ） Power supply(10V 5A)	汎用品 RJ is Not available
	ヘクスキー（φ1.5mm） HEX.KEY WRENCH（φ1.5mm）	汎用品 RJ is Not available
	ＴＴＬ調整用シャッター幕（Ｆ９０） Shutter Curtain of F90 for TTL Adjustment	汎用品 RJ is Not available

★：新規設定工具・NEW TOOL

工具番号 Tool No.	名　称 Name of tool	備　考 Others
OS-30MF 	ドライサーフ　ＯＳ－３０ＭＦ DRY SURF OS-30MF(OIL BARRIER)	
LEN317A 	グリース　ＬＥＮ３１７Ａ Grease LEN317A	
EDB0011 	ネジ゛ロック（赤）1401C Screw lock 1401C	
C-8008B 	セメダイン　８００８（黒） Cemedain 8008(BLACK)	
MZ-800S 	ドライサーフ　ＭＺ－８００Ｓ DRY SURF MZ-800S	
EDC0021 	アロンアルファ Quick dry glue	
G92KA 	フロイル　Ｇ９２ＫＡ FLOIL G92KA	
NK-A7420 	ロゲネストラムダ Special Grease	
L-241 	ロックタイト　２４１ LOCTITE 241	
EDZ4113 	コニシボンド　G103 Bond G103	

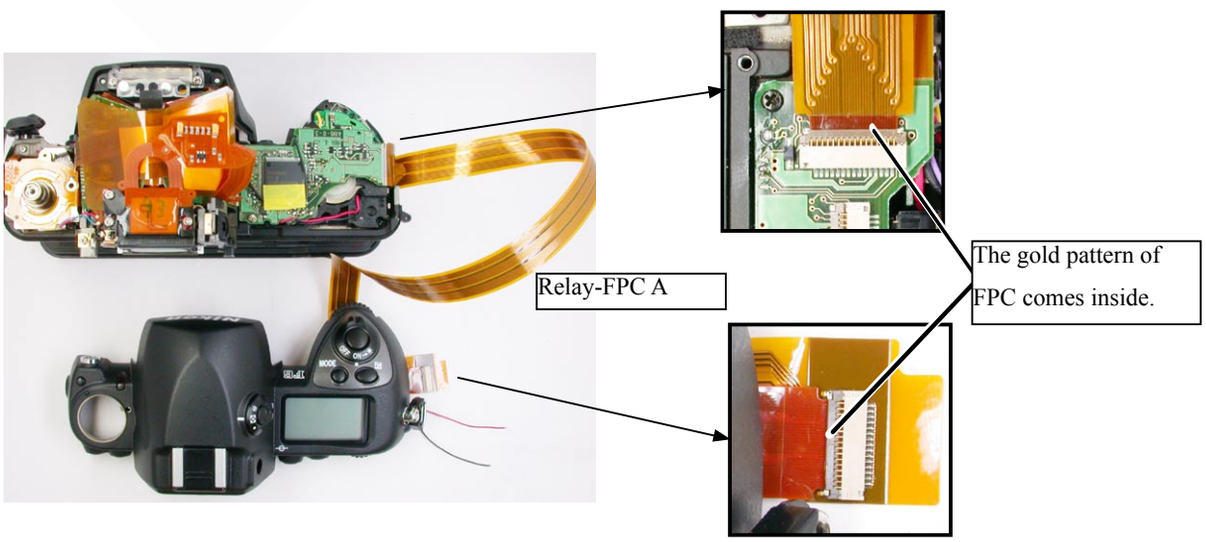
How to connect relay-FPC

＊ Note・Do NEVER insert the FPC twisted! The camera may be troubled.

・Insert the FPC into the connector all the way seated. Otherwise, the camera may be troubled.

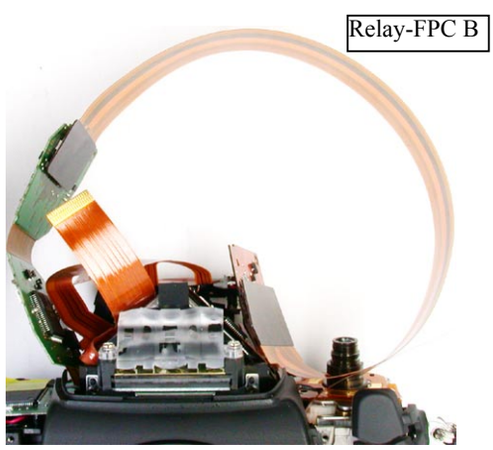
① Relay-FPC A (J18372) ＝ Connect the main FPC and the top cover

・This is used for AE CCD alignment inspection/adjustment, parallax adjustment, etc.



② Relay-FPC B (J18373) ＝ Connect the main FPC and the Front body FPC.

・This is used for parallax adjustment, etc.



③ Relay-FPC C （J18374） ＝ Connect the main FPC and the penta-FPC unit

・This is used for checking lighting of the inner LCD.

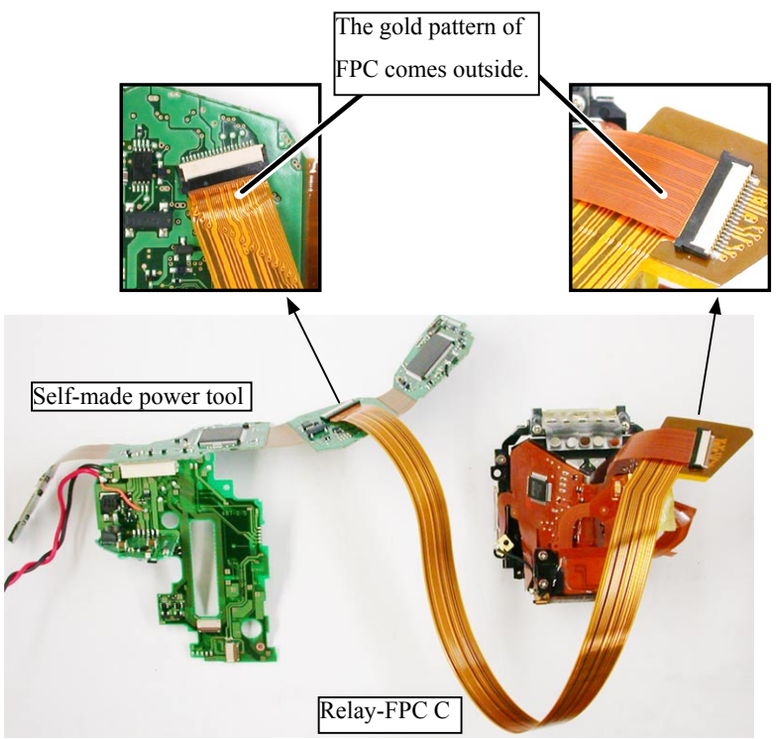
How to check lighting of the inner LCD

① Create a self-made power tool.（Refer to the next page for how to create it.）

② Connect the self-made tool and the penta-FPC with the relay-FPC C.

＊ Note・Do NEVER insert the FPC twisted! The camera may be troubled.

・Insert the FPC into the connector all the way seated. Otherwise, the camera may be troubled.



③ Supply 5.0V/1.0A for the self-made power tool through the stabilized power supply, and check the lighting of the inner LCD through the eyepiece lens unit.

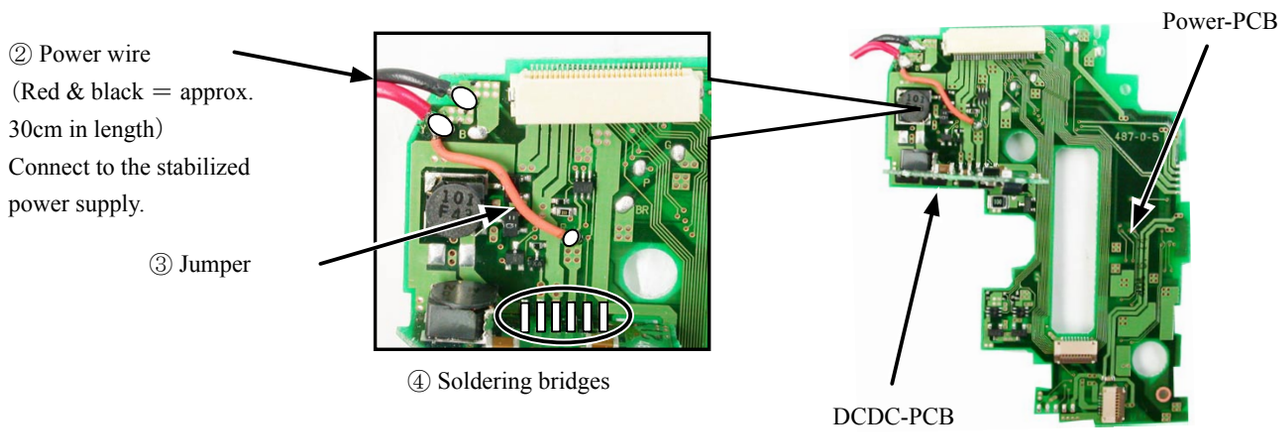
④ Adjust position of the inner LCD if necessary.

＊ Note: Be careful to prevent electric parts from being short-curcuited.

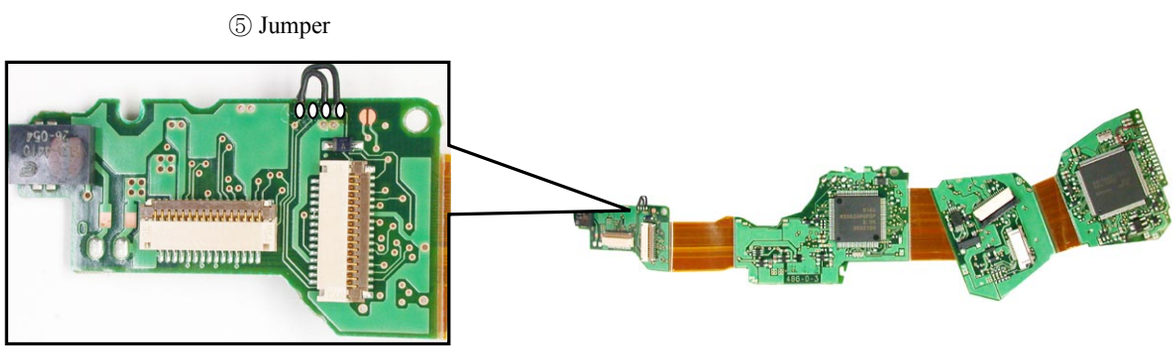
How to create self-made Power-supply tool

① Prepare the following repair parts.
- Main-PCB (1S999-153)
- Power-PCB (1S001-023)
- DCDC-PCB (1S001-024)

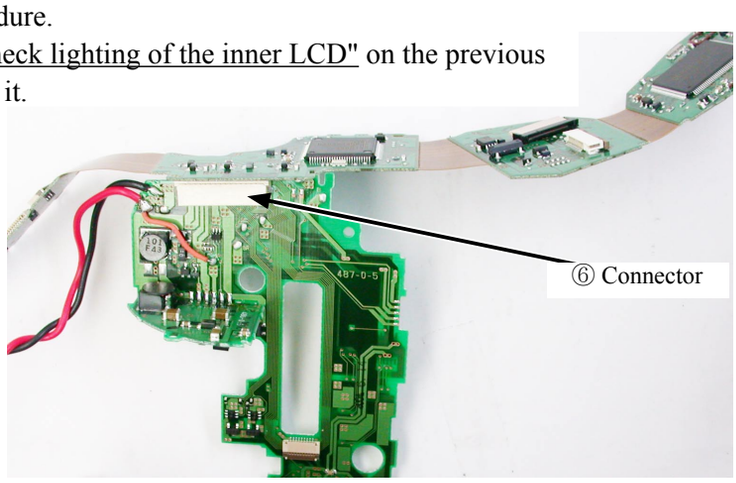
② Solder 2 power wires (Red and black ＝ Approx. 30cm in length) on the power-PCB.
③ Wire up 2 patterns of the power-PCB with a lead wire as a jumper.
④ Make soldering bridges of the power-PCB and the DCDC-PCB.

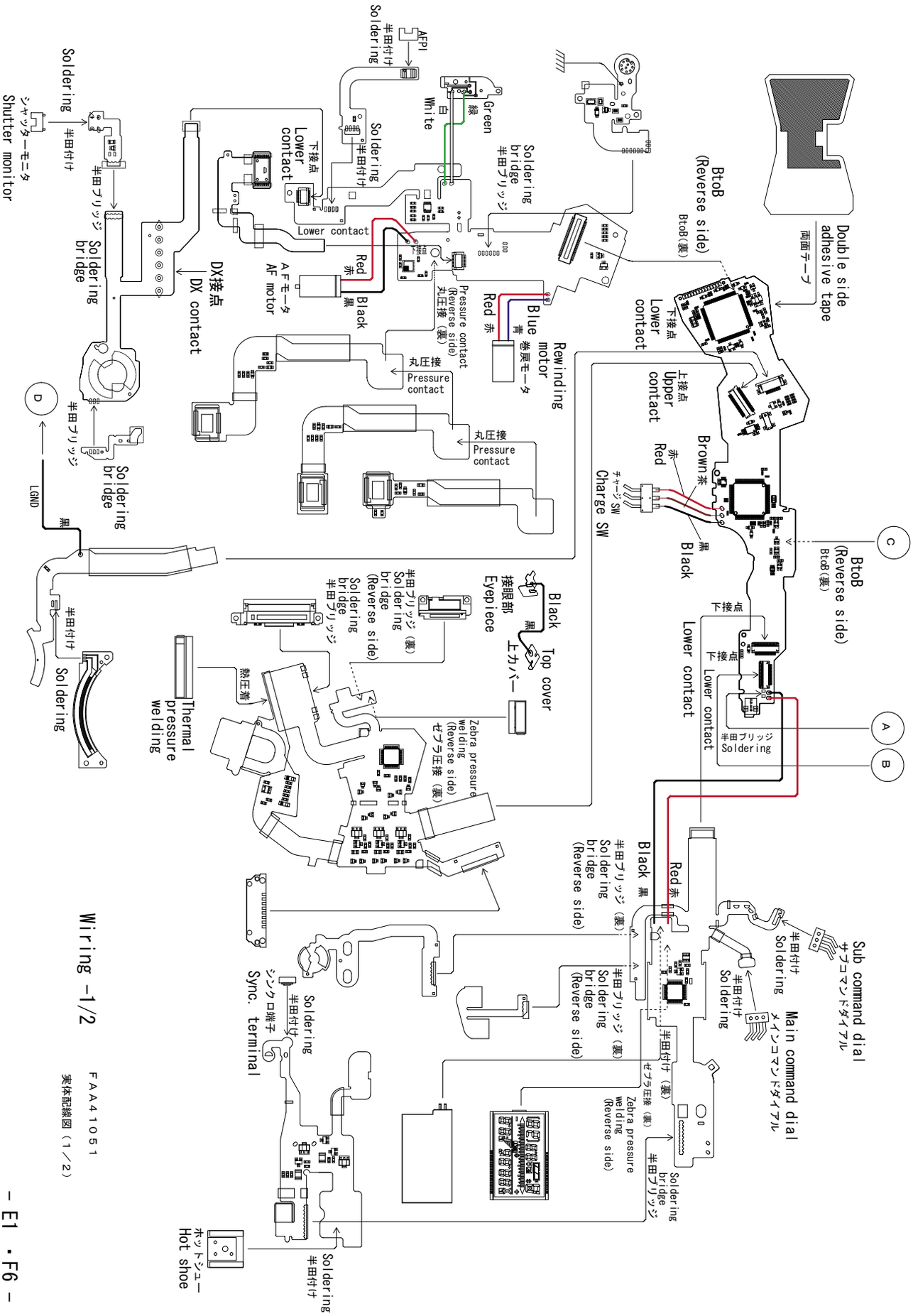


⑤ Wire up 3 patterns of the main FPC with a lead wire as a jumper.



⑥ Connect the connectors of the main FPC and the power-PCB to finish the procedure.
Refer to "How to check lighting of the inner LCD" on the previous page for how to use it.



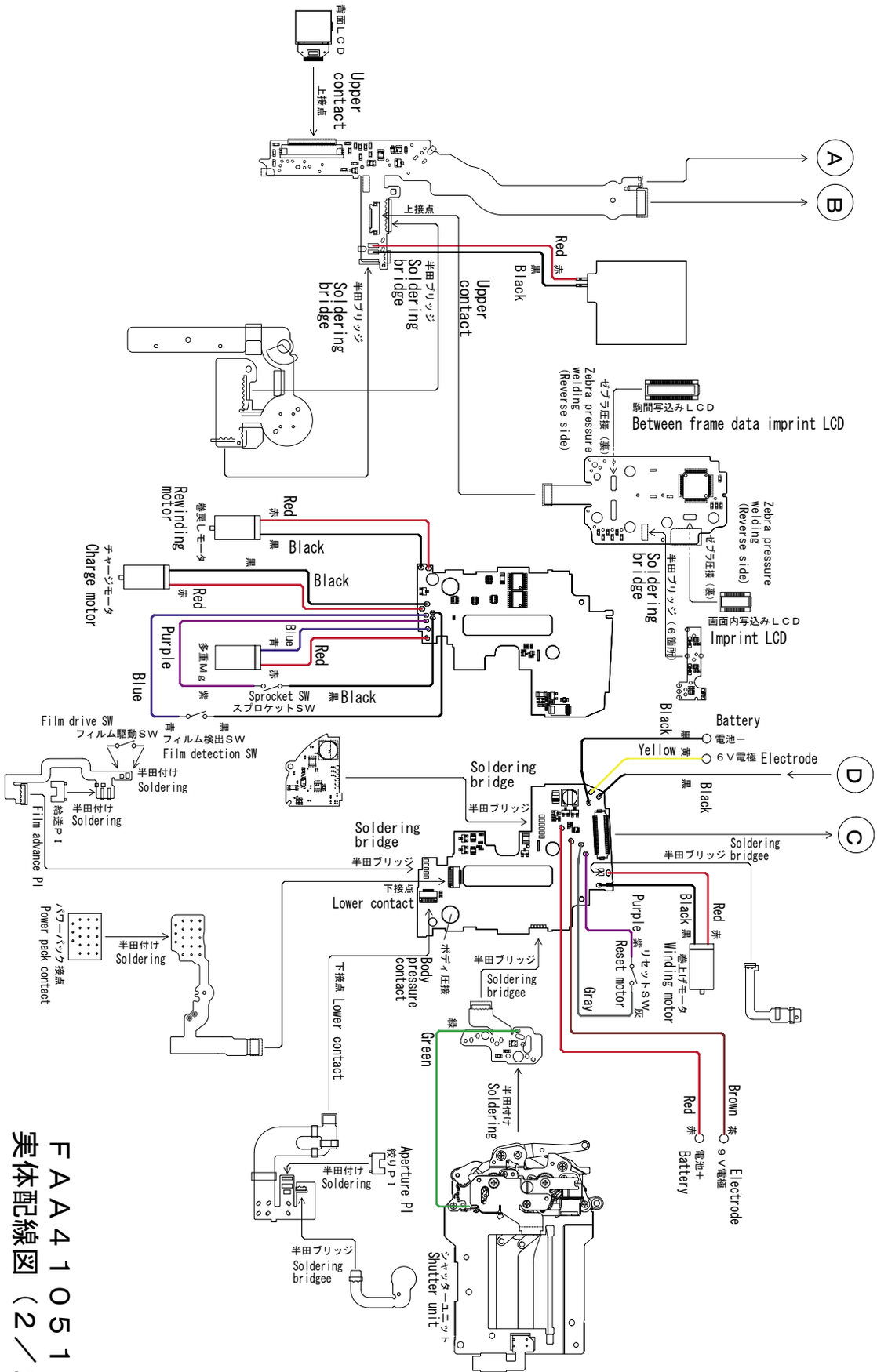


Wiring -1/2

FAA41051

実体配線図（1／2）

- E1 ・ F6 -



FAA41051 実体配線図（2／2）

Wiring-2/2

- E2 ・ F6 -